



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

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Wood Buffalo Environmental Association

MAY 2025 MONTHLY REPORT

CONTINUOUS MONITORING

June 27, 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association





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Alberta Ambient Air Quality Guidelines and Objectives.....

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

May 2025
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APPROVAL NUMBERS	REPORT DATE									
	MONTH	YEAR								
289664-00-00	5	2025								
241311-00-00	CONTINUOUS AMBIENT MONITORING									
20809-02-00										
149968-01-00										
237382-00-00				30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE		
48522-01-00	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	
240008-00-00										
48263-01-00	SO2(ppb)	1	100	-	-	33	0	3.7	0	
224816-00-00	SO2(ppb)	2	100	-	-	44.5	0	8.8	0	
151469-01-00	SO2(ppb)	4	100	-	-	63.5	0	8.1	0	
189942-00-00	SO2(ppb)	5	100	-	-	32.9	0	6.1	0	
206355-00-00	SO2(ppb)	6	100	-	-	8.5	0	1.4	0	
46586-00-00	SO2(ppb)	7	100	-	-	7.8	0	1.0	0	
73203-02-00	SO2(ppb)	8	100	-	-	3.1	0	0.8	0	
216466-01-00	SO2(ppb)	9	100	-	-	19.7	0	2.9	0	
137467-01-00	SO2(ppb)	11	100	-	-	32.6	0	5.0	0	
236394-00-00	SO2(ppb)	13	100	-	-	50.9	0	6.0	0	
254465-00-00	SO2(ppb)	14	100	-	-	5.0	0	1.0	0	
094-03-00	SO2(ppb)	17	100	-	-	28.8	0	4.2	0	
80105-01-00	SO2(ppb)	18	100	-	-	2.1	0	0.7	0	
305529-00-00	SO2(ppb)	19	100	-	-	20.5	0	2.4	0	
318401-00-00	SO2(ppb)	20	100	-	-	13.9	0	3.2	0	
026-03-00	SO2(ppb)	21	100	-	-	4.1	0	0.6	0	
364232-00-00	SO2(ppb)	22	100	-	-	2.0	0	0.5	0	
228044-00-00	SO2(ppb)	23	100	-	-	18.2	0	3.0	0	
247548-00-00	SO2(ppb)	25	100	-	-	34.6	0	3.7	0	
231302-00-00	SO2(ppb)	27	100	-	-	13.2	0	1.3	0	
246984-01-00	SO2(ppb)	29	100	-	-	5.6	0	0.9	0	
153125-01-00	SO2(ppb)	30	100	-	-	29.1	0	5.2	0	
	SO2(ppb)	31	100	-	-	2.7	0	0.6	0	
	SO2(ppb)	33	100	-	-	4.6	0	1.1	0	
	SO2(ppb)	505	100	-	-	5.1	0	1.4	0	
	SO2(ppb)	506	92	-	-	17.9	0	2.3	0	
	SO2(ppb)	508	100	-	-	6.9	0	1.2	0	
	SO2(ppb)	512	100	-	-	31.6	0	4.7	0	
	H2S(ppb)	1	94	-	-	2.0	0	0.7	0	
	H2S(ppb)	2	99	-	-	5.1	0	0.6	0	
	H2S(ppb)	4	100	-	-	12.3	1	0.7	0	
	H2S(ppb)	5	100	-	-	6.7	0	0.7	0	
	H2S(ppb)	11	100	-	-	2.2	0	0.8	0	
	H2S(ppb)	17	100	-	-	1.0	0	0.3	0	
	H2S(ppb)	19	100	-	-	5.3	0	0.4	0	
	H2S(ppb)	20	100	-	-	3.4	0	0.6	0	
	H2S(ppb)	25	100	-	-	1.9	0	0.7	0	
	H2S(ppb)	27	100	-	-	1.4	0	0.4	0	
	H2S(ppb)	29	100	-	-	1.2	0	0.3	0	
	H2S(ppb)	31	100	-	-	1.1	0	0.3	0	
	H2S(ppb)	33	100	-	-	4.8	0	0.7	0	
	H2S(ppb)	505	100	-	-	8.2	0	1.7	0	
	H2S(ppb)	506	92	-	-	3.5	0	0.6	0	
	H2S(ppb)	508	100	-	-	0.7	0	0.2	0	
	H2S(ppb)	512	100	-	-	2.8	0	0.4	0	
	TRS(ppb)	1	100		3.7	0	2.4	-	1.3	-
	TRS(ppb)	6	100		2.5	0	2.2	-	0.5	-
	TRS(ppb)	7	100		5.1	1	4.8	-	1.0	-
	TRS(ppb)	8	10		1.1	0	1.0	-	0.3	-
	TRS(ppb)	9	98		2.8	0	2.5	-	1.2	-
	TRS(ppb)	13	100		8.5	1	4.9	-	1.4	-
	TRS(ppb)	14	97		2.6	0	1.4	-	0.4	-
	TRS(ppb)	18	100		2.2	0	1.7	-	0.7	-
	TRS(ppb)	21	100		2.7	0	2.0	-	0.5	-
	TRS(ppb)	22	100		3.4	0	3.1	-	0.6	-
	TRS(ppb)	23	100		2.9	0	2.9	-	1.3	-
	TRS(ppb)	30	93		27.7	7	27.1	-	3.0	-
	THC(ppm)	1	100		-	-	4.0	-	2.4	-
	THC(ppm)	2	100		-	-	3.1	-	2.2	-
	THC(ppm)	4	100		-	-	3.7	-	2.2	-
	THC(ppm)	5	100		-	-	7.8	-	2.2	-
	THC(ppm)	6	73		-	-	3.2	-	2.2	-

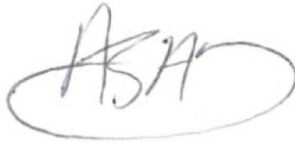
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

May 2025
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	MONTH	YEAR							
289664-00-00	5	2025							
241311-00-00	CONTINUOUS AMBIENT MONITORING								
20809-02-00									
149968-01-00			30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE		
237382-00-00	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
48522-01-00	THC(ppm)	7	100	-	-	3.2	0	2.3	-
240008-00-00	THC(ppm)	9	91	-	-	2.7	0	2.2	-
48263-01-00	THC(ppm)	11	100	-	-	2.7	0	2.2	-
224816-00-00	THC(ppm)	13	100	-	-	2.8	0	2.3	-
151469-01-00	THC(ppm)	14	100	-	-	2.9	0	2.0	-
189942-00-00	THC(ppm)	17	100	-	-	3.0	0	2.5	-
206355-00-00	THC(ppm)	18	89	-	-	2.5	0	2.1	-
46586-00-00	THC(ppm)	19	100	-	-	2.7	0	2.4	-
73203-02-00	THC(ppm)	20	100	-	-	4.0	0	2.4	-
216466-01-00	THC(ppm)	21	100	-	-	2.5	0	2.1	-
137467-01-00	THC(ppm)	22	100	-	-	2.7	0	2.1	-
236394-00-00	THC(ppm)	23	99	-	-	5.2	0	3.0	-
254465-00-00	THC(ppm)	29	100	-	-	3.4	0	2.5	-
094-03-00	THC(ppm)	30	100	-	-	7.7	0	2.7	-
80105-01-00	THC(ppm)	508	100	-	-	2.7	0	2.4	-
305529-00-00	O3(ppb)	1	100	-	-	69.4	0	39.4	-
318401-00-00	O3(ppb)	4	100	-	-	73.5	0	49.3	-
026-03-00	O3(ppb)	6	100	-	-	79.5	1	50.9	-
364232-00-00	O3(ppb)	7	100	-	-	77.9	1	48.6	-
228044-00-00	O3(ppb)	8	100	-	-	73.9	0	49.3	-
247548-00-00	O3(ppb)	13	99	-	-	69.2	0	38.6	-
231302-00-00	O3(ppb)	14	100	-	-	72.3	0	52.1	-
246984-01-00	O3(ppb)	17	100	-	-	74.8	0	54.9	-
153125-01-00	O3(ppb)	18	100	-	-	67.7	0	52.3	-
	O3(ppb)	21	100	-	-	79.0	1	48.2	-
	O3(ppb)	22	100	-	-	71.5	0	54.0	-
	NO2(ppb)	1	100	-	-	31.1	0	9.3	-
	NO2(ppb)	4	100	-	-	30.1	0	8.0	-
	NO2(ppb)	6	100	-	-	27.8	0	5.9	-
	NO2(ppb)	7	100	-	-	29.7	0	8.4	-
	NO2(ppb)	8	41	-	-	6.8	0	3.0	-
	NO2(ppb)	9	99	-	-	29.8	0	10.5	-
	NO2(ppb)	13	100	-	-	25.3	0	7.1	-
	NO2(ppb)	14	100	-	-	31.9	0	4.7	-
	NO2(ppb)	17	100	-	-	24.6	0	5.2	-
	NO2(ppb)	18	100	-	-	6.6	0	2.1	-
	NO2(ppb)	19	100	-	-	18.7	0	5.1	-
	NO2(ppb)	20	100	-	-	35.2	0	5.2	-
	NO2(ppb)	21	91	-	-	18.7	0	3.5	-
	NO2(ppb)	22	100	-	-	36.0	0	5.4	-
	NO2(ppb)	23	100	-	-	43.7	0	19.9	-
	NO2(ppb)	27	100	-	-	12.1	0	2.8	-
	NO2(ppb)	29	100	-	-	28.3	0	4.2	-
	NO2(ppb)	30	100	-	-	34.4	0	11.3	-
	NO2(ppb)	31	100	-	-	19.2	0	6.0	-
	NO2(ppb)	33	100	-	-	32.7	0	8.0	-
	NO2(ppb)	505	100	-	-	31.9	0	8.2	-
	NO2(ppb)	506	92	-	-	43.7	0	4.2	-
	NO2(ppb)	508	98	-	-	5.5	0	2.4	-
	NO2(ppb)	512	100	-	-	8.5	0	2.9	-
	CO(ppm)	1	100	-	-	4.2	0	1.9	-
	CO(ppm)	7	100	-	-	9.8	0	2.0	-
	CO(ppm)	8	100	-	-	0.1	0	0.1	-
	CO(ppm)	18	100	-	-	0.2	0	0.2	-
	CO2(ppm)	1	100	-	-	495.8	-	452.8	-
	CO2(ppm)	8	100	-	-	449.6	-	441.0	-
	CO2(ppm)	18	100	-	-	458.0	-	443.5	-
	NH3(ppb)	1	92	-	-	149.5	-	58.6	-
	NH3(ppb)	6	91	-	-	209.4	-	42.2	-
	PM2.5(ug/m3)	1	100	-	-	498.5	-	238.5	3
	PM2.5(ug/m3)	4	100	-	-	635.1	-	227.1	3
	PM2.5(ug/m3)	6	100	-	-	672.5	-	225.6	3

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

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APPROVAL NUMBERS	REPORT DATE								
	MONTH	YEAR							
289664-00-00 241311-00-00 20809-02-00 149968-01-00 237382-00-00 48522-01-00 240008-00-00 48263-01-00 224816-00-00 151469-01-00 189942-00-00 206355-00-00 46586-00-00 73203-02-00 216466-01-00 137467-01-00 236394-00-00 254465-00-00 094-03-00 80105-01-00 305529-00-00 318401-00-00 026-03-00 364232-00-00 228044-00-00 247548-00-00 231302-00-00 246984-01-00 153125-01-00	5	2025	CONTINUOUS AMBIENT MONITORING						
			30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE		
	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
	PM2.5(ug/m3)	7	100	-	-	1346.9	-	322.9	3
	PM2.5(ug/m3)	8	100	-	-	489.9	-	119.4	2
	PM2.5(ug/m3)	9	100	-	-	512	-	244.2	4
	PM2.5(ug/m3)	13	100	-	-	545.1	-	258.9	4
	PM2.5(ug/m3)	14	100	-	-	1396.6	-	247.1	3
	PM2.5(ug/m3)	17	100	-	-	341.7	-	152.6	3
	PM2.5(ug/m3)	18	100	-	-	626.1	-	129.7	3
	PM2.5(ug/m3)	21	100	-	-	750.6	-	127.8	3
	PM2.5(ug/m3)	22	100	-	-	1092.7	-	180.4	3
	PM2.5(ug/m3)	23	100	-	-	590.6	-	242.3	3
	PM2.5(ug/m3)	29	100	-	-	868.1	-	194.6	3
	PM2.5(ug/m3)	30	100	-	-	587	-	247	2
	WS(km/h)	1	100	-	-	-	-	-	-
	WS(km/h)	2	100	-	-	-	-	-	-
	WS(km/h)	4	100	-	-	-	-	-	-
	WS(km/h)	5	100	-	-	-	-	-	-
	WS(km/h)	6	100	-	-	-	-	-	-
	WS(km/h)	7	100	-	-	-	-	-	-
	WS(km/h)	8	100	-	-	-	-	-	-
	WS(km/h)	9	100	-	-	-	-	-	-
	WS(km/h)	11	100	-	-	-	-	-	-
	WS(km/h)	13	99	-	-	-	-	-	-
	WS(km/h)	14	99	-	-	-	-	-	-
	WS(km/h)	17	100	-	-	-	-	-	-
	WS(km/h)	18	100	-	-	-	-	-	-
	WS(km/h)	19	100	-	-	-	-	-	-
	WS(km/h)	20	100	-	-	-	-	-	-
	WS(km/h)	21	99	-	-	-	-	-	-
	WS(km/h)	22	100	-	-	-	-	-	-
	WS(km/h)	23	100	-	-	-	-	-	-
	WS(km/h)	25	99	-	-	-	-	-	-
	WS(km/h)	27	100	-	-	-	-	-	-
	WS(km/h)	29	100	-	-	-	-	-	-
	WS(km/h)	30	99	-	-	-	-	-	-
	WS(km/h)	31	100	-	-	-	-	-	-
	WS(km/h)	33	99	-	-	-	-	-	-
	WS(km/h)	505	100	-	-	-	-	-	-
	WS(km/h)	506	92	-	-	-	-	-	-
	WS(km/h)	508	100	-	-	-	-	-	-
	WS(km/h)	512	99	-	-	-	-	-	-
									
SIGNATURE OF ASSOCIATION REPRESENTATIVE						FOR ALBERTA ENVIRONMENT USE ONLY			



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June 27, 2025

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Alberta Environment and Protected Areas
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9820 106 Street
Edmonton, Alberta T5K 2J6

**RE: Monthly Ambient Air Quality Monitoring Report May 2025
Wood Buffalo Environmental Association**

Enclosed is the May 2025 Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Wood Buffalo Environmental Association (WBEA) regional air quality monitoring network. The WBEA works closely with Alberta Environment and Protected Areas (AEPA) and funding for this work was provided by the Oil Sands Monitoring Program (OSM). It is independent of any position of the OSM Program.

The continuous ambient air quality monitoring network stations are:

AMS 01 – Bertha Ganter – Fort McKay	AMS 20 – MacKay River
AMS 02 – Mildred Lake	AMS 21 – Conklin
AMS 03 – Lower Camp (Meteorology)	AMS 22 – Janvier
AMS 04 – Buffalo Viewpoint	AMS 23 – Fort Hills
AMS 05 – Mannix	AMS 25 – Waskōw ohci Pimâtisiwin
AMS 06 – Patricia McInnes	AMS 27 – Jackfish 2/3
AMS 07 – Athabasca Valley	AMS 29 – Surmont 2
AMS 08 – Fort Chipewyan	AMS 30 – Ells River
AMS 09 – Barge Landing	AMS 31 – Blackrod
AMS 11 – Lower Camp (Air Quality)	AMS 33 – Monday Creek
AMS 13 – Fort McKay South	AMS 505 – Sawbones Bay
AMS 14 – Anzac	AMS 506 – Jackfish 1
AMS 17 – Wapasu	AMS 508 – Kirby North
AMS 18 – Stony Mountain	AMS 512 – Hangingstone Expansion
AMS 19 – Firebag	

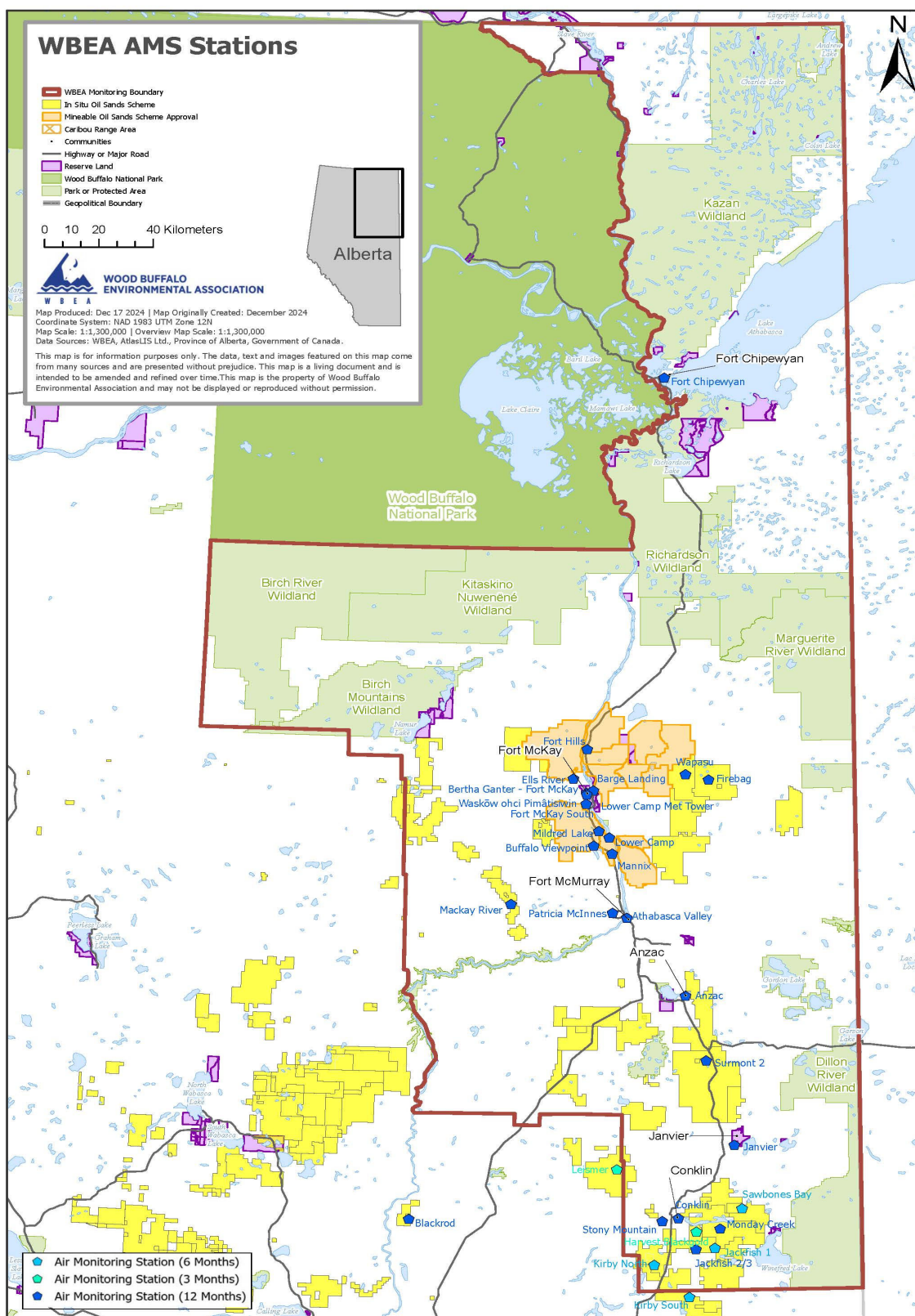


The WBEA submits this report on behalf of its members and for some members to satisfy the requirements contained in their EPEA Approvals (as amended):

Industry Operators	EPEA Approval No.
Athabasca Oil Operations	289664-01-00; 241311-01-00
Canadian Natural	153125-01-00; 20809-02-00; 149968-01-05; 224816-01-00; 237382-01-00; 308463-00-00
Cenovus Energy Inc.	48522-02-00; 206355-01-00
Chemtrade Logistics	404827-00-00
CNOOC International	137467-01-00, 236394-01-00
Connacher Oil and Gas Ltd.	240008-01-00
ConocoPhillips Company	48263-01-00
Greenfire Resources Operating Corporation	153105-01-00
H.J. Baker Sulphur Canada ULC	426549-00-00
Hammerstone Infrastructure Materials Ltd.	189942-01-00
Harvest Operations Corp.	246984-01-00
Imperial Oil Limited	46586-01-00
Inter Pipeline Limited	73203-02-00
IPC Canada Ltd.	301778-00-01
Keyera Energy Ltd.	187-03-03; 462683-00-00
MEG Energy Corp.	216466-01-00
Parsons Creek Aggregates	231302-00-00
PetroChina Canada Ltd.	254465-01-00
Suncor Energy Inc.	94-03-00; 80105-01-00; 151469-01-00; 48408-02-00
Sunshine Oilsands Ltd.	305529-00-00
Surmont Energy	318401-00-00
Syncrude Canada Ltd.	26-03-00
Titan Tire Reclamation Corporation	364232-00-00

Government and Non-Government Organizations	
Alberta Energy Regulator	Health Canada
Alberta Environment and Protected Areas	Keyano College
Alberta Health	Parks Canada
Alberta Health Services	Regional Municipality of Wood Buffalo
Environment and Climate Change Canada	

Indigenous Communities	
Athabasca Chipewyan First Nation	Fort McKay Métis Nation
Chard Métis Nation	Fort McMurray 468 First Nation
Chipewyan Prairie Dene First Nation	Lakeland Métis
Christina River Dene Nation Council	McMurray Métis
Conklin Resource Development Advisory Committee	Mikisew Cree First Nation
Fort Chipewyan Métis Nation	Smith's Landing First Nation
Fort McKay First Nation	



The following operational notes are provided as per the Air Monitoring Directive requirements.

1.0 Concentrations in Excess of Alberta Ambient Air Quality Guidelines and Objectives

There were no ambient concentrations in excess of the Alberta Ambient Air Quality Objectives or Guidelines (AAAQO/AAAQG) as indicated in the Air Monitoring Directive Section RC 15-F for CO, NH₃, NO₂ and SO₂.

There was one ambient ground-level concentrations in excess of the 1-hour H₂S objective reported to AEPA; following data validation and processing, the exceedance was confirmed.

There were four ambient ground-level concentrations in excess of the 1-hour O₃ objective reported to AEPA; following data validation and processing, three exceedances were confirmed.

There were forty-five ambient ground-level concentrations in excess of the 24-hour PM_{2.5} objective reported to AEPA; following data validation and processing, the exceedances were confirmed.

There were ten ambient ground-level concentrations in excess of the 30-minute TRS guideline reported to AEPA; following data validation and processing, eight exceedances were confirmed.

A detailed summary of ambient concentrations in excess of the Alberta Ambient Air Quality Objectives (AAAQOs) and Ambient Air Quality Guidelines (AAAQGs), including site, parameter, date & time, reference number, exceedance period, reported and final concentration and status, are included in Appendix I of the report.

2.0 Data Processing and Validation

Concentrations reported in near real-time are raw values. The final values are determined after processing data for reporting. For all parameters, except PM_{2.5}, the final 5-minute data values are determined by subtracting the daily zero responses, interpolated to the time of each raw 5-minute value, from the raw 5-minute data values. The PM_{2.5} analyzers do not have the capability of performing zero's, therefore, the raw 5-minute values are validated through a comparison with associated parameters at the same, or a nearby, AMS. The final 5-minute data values are then rounded to one decimal place greater than the reporting precision indicated in the Air Monitoring Directive (AMD). The final 1-hour data values are calculated from final 5-minute data values and then rounded to reporting precision. The final 24-hour data values are calculated from the final 1-hour values.

After data processing and validation, NO₂ concentrations are re-calculated from baseline-corrected NO_x and NO concentrations. Specifically, the NO concentration is subtracted from the NO_x concentration to determine the NO₂ concentration.

2.1 Revisions to ETS Electronic Transfer System – Data and Monthly Reports

There were no revisions to historical data stored in the Electronic Transfer System with this monthly report.



3.0 Operational Status

3.1 Continuous Monitoring

In May 2025, there were 5 instances of monitoring instruments operating less than 90% of the time.

Station	Parameter	Details
Fort Chipewyan	TRS	<p>The TRS analyzer at Fort Chipewyan AMS operated less than 90% of April and May 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on May 28, 2025 (reference number 441112).</p> <p>During the routine system check on April 13, the TRS span failed to meet AMD compliance standards. Despite extensive efforts, the issue remained unresolved for the remainder of April and most of May, during which time the WBEA continued to troubleshoot and implement a series of corrective actions. This included daily quality assurance checks, a series of recalibrations to adjust zero and span settings, and replacement of the external converter, scrubber beads, and analyzer. The issue was ultimately resolved on May 29. During the data validation process, 320 hours of data were invalidated in April and 616 hours in May.</p>
Fort Chipewyan	NO _x /NO/NO ₂	<p>The nitric monoxide (NO)/nitrogen dioxide (NO₂)/nitrogen oxides (NO_x) analyzer at Fort Chipewyan AMS operated less than 90% of May 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on May 28, 2025 (reference number 441113).</p> <p>On May 2, the daily span check for the NO/NO₂/NO_x analyzer did not meet AMD criteria. The analyzer was calibrated and the span adjusted on May 20, resolving the issue and resuming normal operation on that day. Data validation is currently in progress and 436 hours of data have been invalidated to date for the month of May due to this incident.</p>
Fort Chipewyan	PM _{2.5}	<p>The routine monthly calibration was not conducted on the PM_{2.5} analyzer at Fort Chipewyan AMS for the month of May 2025, which is a contravention of Chapter 7, Clause Cal 2-G of the Air Monitoring Directive (AMD) (2016, as amended). This incident was reported to the Alberta Environment and Protected Areas (AB EPA) on June 3, 2025 (reference number 441356).</p> <p>The routine monthly calibration for PM_{2.5} was not completed in May, as scheduled, due to an oversight by the station operator. The WBEA is currently working to complete the calibration as soon as possible and is completing additional training and procedural updates to prevent a recurrence. Based on the review conducted, there is no evidence to suggest the data from this period is invalid. Therefore, the data will be reported following standard procedures.</p>
Stony Mountain	THC/NMHC/CH ₄	<p>The THC/NMHC/CH₄ analyzer at the Stony Mountain AMS operated for less than 90% of May 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on June 24, 2025 (reference number 442193).</p> <p>During the month of May, two periods of technical issues impacted the THC/NMHC/CH₄ analyzer data quality resulting in 82 hours of invalid data and an operational time of 88.7% for the month.</p> <ul style="list-style-type: none"> - From May 16 to 20, excessive baseline noise was observed in the THC/NMHC/CH₄ analyzer output signal. In response, maintenance was initiated, including the replacement of the zero-air generator on May 21. Additional adjustments to the analyzer's chromatogram were performed on May 23, after which normal operation was restored. This incident resulted in 43 hours of invalid data. - From May 25 to 28, the analyzer again exhibited intermittent unstable baseline behavior. After further investigation and troubleshooting, the analyzer was replaced on May 28. It was allowed to stabilize overnight, and performance was verified on May 29, at which point normal operation resumed. This event resulted in 39 hours of invalid data.
Patricia McInnes	THC/NMHC/CH ₄	<p>The THC/NMHC/CH₄ analyzer at the Patricia McInnes AMS operated for less than 90% of May 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on June 26, 2025 (reference number 442296).</p> <p>Details will be provided within 7 days of the report.</p>



3.2 Intermittent Monitoring

The results for time-integrated sampling of dustfall, precipitation, PAH, TSP, VOC, PM_{2.5} ECOC, PM_{2.5}, and PM₁₀ will be submitted in the 2025 Annual Report.

3.3 General Network Notes

The Ammonia (NH₃) analyzer currently operates on a 0 to 2500 ppb operating range with a detection level of 5 ppb in the WBEA network. In data processing, values less than five ppb have been considered below detection levels and are reported as zero.

Total hydrocarbon (THC), non-methane hydrocarbon (NMHC), and methane (CH₄) measurements are collected at some air monitoring stations in the WBEA network using the Thermo Environmental model 55i direct THC/CH₄/NMHC analyzer. This analyzer uses a Gas Chromatography (GC) based system, which resets the baseline value at the start of every run. This may cause the ambient background to indicate a response below the expected 1.8 ppm background level. When all measurable criteria indicate valid data during the QAQC and validation process, the data is reported without any additional flags. However, a response below the expected 1.8 ppm triggers an investigation of the analyzer to determine if there is an issue.

Monitoring notes, including changes to monitoring locations, methods, or equipment, and any reporting or monitoring irregularities, for the continuous monitoring stations, are provided on a station-by-station basis. Notes of each interrupted event are provided in chronological order, and meteorological parameters are mentioned last.

In December 2024, the Wood Buffalo Environmental Association began reporting the new Alberta Ambient Air Quality Guideline for Total Reduced Sulfur (TRS) which is a 30-minute average limit of 5 ppb to be used for odour management.

The WBEA is reporting PM_{2.5} exceedances of the Alberta Ambient Air Quality Guideline and Objective (AAAQG&O) as per the Alberta Environment and Protected Areas Temporary Airshed Wildfire Bulk Reporting Protocol, effective from April 1 to October 31. This protocol requires only monthly notification of exceedances of the 24-hour AAAQO, removing the requirement for immediate notification and 7-day follow-up reports during this period. Fort Hills and Ells River air monitoring stations are included in this protocol for wildfire-related exceedances; however, for exceedances not attributed to wildfire smoke, these stations will continue to follow their site-specific reporting protocols as directed by the Alberta Energy Regulator.

Station 1, Bertha Ganter – Fort McKay

The NH₃ analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. Additional time is required for stabilization after exposure to high concentrations of NH₃ gas, and this is an inherent behavior in the NH₃ analyzer operations due to the properties of the NH₃ gas. Data for 1-2 hours following the daily spans have been reported as invalid for a total of 38 hours this month.



Note: As part of WBEA's revised resource planning, the CO₂ and CO analyzers will be decommissioned from Bertha Ganter – Fort Mckay AMS. The final month of data reporting will be May 2025. The removal calibrations were conducted in June for both analyzers and will be included in June 2025 calibration report.

Maintenance to complete calibration of the NH₃ analyzer over two days on May 7 and 8 resulted in 19 hours of downtime.

Cleaning of the manifold on May 14 interrupted the normal operations of all gaseous analyzers, except for SO₂ and THC/NMHC/CH₄ analyzer, for 1 hour.

A station power failure on May 22 interrupted the normal operations of all air quality analyzers for 1 hour.

Flatline in the output signal of the H₂S analyzer on May 20 throughout 22 resulted in 38 hours of invalid data. A subsequent maintenance to reboot the H₂S analyzer on May 22 resulted in additional 1 hour of downtime.

Flatlines in the output signal of the wind sensor on May 3 and 23 resulted in 2 hours of invalid data.

The surface leaf wetness sensor operated out of range on May 31 resulting in 1 hour of invalid data.

Station 2, Mildred Lake

An internal audit on May 21 interrupted the normal operations of all gaseous analyzers for 2 hours.

Cleaning of the manifold on May 16 interrupted the normal operation of the H₂S analyzer for 2 hours.

Station 3, Lower Camp – Meteorology

Failure to record data of the relative humidity and temperature sensor at 20-meter elevation on May 3 resulted in 4 hours of invalid data.

Failure to record data of all meteorological sensors on May 4 resulted in 5 hours of invalid data.

Flatlines in the output signal of the wind sensor at 163-meter elevation on May 26 and May 31 resulted in 4 hours of invalid data.

Station 4, Buffalo Viewpoint

Maintenance due to station operator activities on May 5 interrupted the normal operations of O₃ analyzer for 1 hour.

Maintenance to replace support gas cylinder of the THC/NMHC/CH₄ analyzer on May 29 resulted in 2 hours of invalid data.

Station 5, Mannix

Cleaning of the manifold on May 16 interrupted the normal operations of all gaseous analyzers for 1 hour.



Flatline in the output signal of the wind sensor at 90-meter elevation on May 31 resulted in 3 hours of invalid data.

Station 6, Patricia McInnes

The NH₃ analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. NH₃ analyzers require additional time for stabilization after being exposed to high concentrations, this is due to the physical properties of the NH₃ gas. Data for 1-2 hours following each daily span has been reported as invalid for a total of 57 hours this month.

Maintenance to verify daily QA response of the NH₃ analyzer on May 19 resulted in 6 hours of downtime.

Failure to record data of all gaseous analyzers on May 22 resulted in 1 hour of invalid data.

Cleaning of the manifold on May 22 interrupted the normal operations of all gaseous analyzers for 1-2 hours.

Unstable operation due to baseline drift of the THC/NMHC/CH₄ analyzer throughout the month of May resulted in 164 hours of invalid data. Subsequent maintenance activities were carried out on May 13 to 14, 15, 16 and 20 to address the issue including the recalibration of the analyzer, adjustment of the span and replacement of the analyzer which resulted in additional 34 hours of downtime.

Station 7, Athabasca Valley

The station power failure on May 22 interrupted the normal operations of all gaseous analyzers for 1 hour.

Cleaning of the manifold on May 30 interrupted the normal operations of the CO, NO_x/NO/NO₂, O₂, and TRS analyzers for 2 hours.

Station 8, Fort Chipewyan

Note: As part of WBEA's revised resource planning, the CO₂ and CO analyzers was removed from the Fort Chipewyan AMS on May 15, 2025. The removal calibrations are included in the May 2025 Calibration Report.

Analyzer failure due to AMD non-compliance of the TRS analyzer on May 1 to 29 resulted in 649 hours of invalid data. Subsequent maintenance activities, including the replacement of the analyzer on May 14–15 and the scrubber on May 29, resulted in an additional 22 and 2 hours of invalid data, respectively.

Unstable operation due to AMD non-compliance of the NO_x/NO/NO₂ analyzer on May 2 to 20 resulted in 436 hours of invalid data.

Failure to record data of the SO₂ analyzer on May 21 resulted in 1 hour of invalid data.



Failure to record data of all air quality analyzers except for TRS, CO and CO₂ on May 28 resulted in 1 hour of invalid data.

Flatline in the output signal of the wind sensor on May 30 resulted in 1 hour of invalid data.

Station 9, Barge Landing

Unstable operation due to excessive baseline noise of the THC/NMHC/CH₄ throughout the month resulted in 60 hours of invalid data. Subsequent maintenance to replace support gas cylinder of the THC/NMHC/CH₄ on May 21 resulted in 2 hours of downtime.

Cleaning of the manifold on May 6 interrupted the normal operations of all gaseous analyzers except for SO₂ and THC/NMHC/CH₄ analyzers for 1 hour.

The station power failure on May 29 interrupted the normal operations of all air quality analyzers for 3-4 hours.

Analyzer failure due to AMD non-compliance of the TRS analyzer on May 30 resulted in 9 hours of invalid data. Subsequent maintenance to replace the analyzer on the same day resulted in additional 3 hours of downtime.

The relative humidity sensor operated out of range on May 27 and June 1 resulting in 4 hours of invalid data.

Flatlines in the output signal of the wind sensor on May 26 resulted in 1 hour of invalid data.

Note: Elevated smoke from regional wildfires in late May impacted span check performance for NO_x/NO/NO₂ and TRS analyzers, affecting compliance with AMD criteria on several days.

Station 11, Lower Camp

An internal audit on May 13 interrupted the normal operations of all gaseous analyzers for 2 hours.

Flatlines in the output signal of the wind sensor on May 3 resulted in 2 hours of invalid data.

Station 13, Fort McKay South

Maintenance and replacement of the calibrator for the O₃ analyzer resulted in a total of 6 hours of downtime throughout the month of May.

The relative humidity sensor operated out of range on May 27 resulting in 1 hour of invalid data.

Flatlines in the output signal of the wind sensor throughout the March resulted in 4 hours of invalid data.

Station 14, Anzac

A station power failure on May 22 interrupted the normal operations of O₃ and TRS analyzers for 1 hour.



Maintenance to replace support gas cylinder of the THC/NMHC/CH₄ analyzer on May 22 resulted in 2 hours of invalid data.

Maintenance to replace the TRS converter and subsequent stabilization of the analyzer on May 28 and 29 resulted in 20 hours of downtime.

Flatlines in the output signal of the wind sensor on May 1 resulted in 4 hours of invalid data.

Station 17, Wapasu

Cleaning of the manifold on May 27 interrupted the normal operations of all gaseous analyzers except for NO_x/NO/NO₂ analyzer for 2 hours.

The relative humidity sensor operated out of range on May 20 resulting in 1 hour of invalid data.

Failure to record data of the relative humidity sensor on June 1 resulted in 1 hour of invalid data.

Station 18, Stony Mountain

Note: As part of WBEA's revised resource planning, the CO₂ analyzer was removed from the Stony Mountain AMS on May 21, 2025, followed by the CO analyzer on May 28, 2025. The removal calibrations are included in the May 2025 Calibration Report.

An internal audit on May 7 interrupted the normal operations of THC/NMHC/CH₄ and TRS analyzers for 2 hours.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH₄ throughout the month resulted in 47 hours of invalid data. Corrective maintenance to including replacement of the zero-air generator on May 21, chromatogram parameter adjustments on May 23, and full analyzer replacement on May 28–29, resulted in an additional 30 hours of downtime.

Maintenance to verify daily QA response of the SO₂ analyzer on May 22 resulted in 3 hours of downtime.

Maintenance to verify daily QA response of the THC/NMHC/CH₄ analyzer on May 22 and 26 resulted in 5 hours of downtime.

Maintenance to verify daily QA response of the NO_x/NO/NO₂ analyzer on May 24 resulted in 1 hour of downtime.

Maintenance to complete field testing of the precipitation collector sensor on May 12 resulted in 2 hours of downtime.

The relative humidity sensor operated out of range on May 20, 21, and 22 resulting in 15 hours of invalid data.

Station 19, Firebag

The station power failure on May 3 interrupted the normal operations of all gaseous analyzers for 1 hour.



Cleaning of the manifold on May 21 interrupted the normal operations of all gaseous analyzers except for NO_x/NO/NO₂ analyzer for 1 hour.

Station 20, MacKay River

Flatlines in the output signal of the wind sensor throughout the month resulted in 3 hours of invalid data.

Note: The daily zero and span checks of the NO_x/NO/NO₂ analyzer conducted from May 13 to May 15 were out of acceptable limits due to the recent replacement of the calibration gas cylinder. The analyzer required time to stabilize following the installation.

Station 21, Conklin

Unstable operation due to AMD non-compliance of the NO_x/NO/NO₂ analyzer on May 1 through 6 resulted in 65 hours of invalid data. Subsequent maintenance to replace the NO_x/NO/NO₂ analyzer on May 6 resulted in additional 1 hour of downtime.

The station power failure on May 22 interrupted the normal operations of all air quality analyzers for 1 hour.

Cleaning of the manifold on May 29 interrupted the normal operations of all gaseous analyzers, except for TRS analyzer, for 2 hours.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 9 hours of invalid data.

The relative humidity sensor operated out of range throughout the month resulting in 49 hours of invalid data.

Station 22, Janvier

Maintenance to replace the support gas cylinder of the THC/NMHC/CH₄ analyzer on May 16 resulted in 2 hours of invalid data.

The relative humidity sensor operated out of range on May 21 resulting in 4 hours of invalid data.

Station 23, Fort Hills

Maintenance to verify daily QA response of the NO_x/NO/NO₂ analyzer on May 21 resulted in 1 hour of downtime.

Maintenance to verify daily QA response of the THC/NMHC/CH₄ analyzer on May 21 resulted in 1 hour of downtime.

Maintenance to verify daily QA response of the SO₂ analyzer on May 21 resulted in 1 hour of downtime.

Cleaning of the manifold on May 22 interrupted the normal operations of all gaseous analyzers for 1 hour.



Maintenance to replace support gas cylinder of the THC/NMHC/CH₄ analyzer on May 27 resulted in 2 hours of invalid data.

Note: Automated daily span data for all gaseous analyzers were missing from May 17 to May 21 due to a calibrator malfunction. The calibrator was replaced on May 22. This replacement also affected the NO_x/NO/NO₂ analyzer, resulting in a noticeable shift in the span checks.

Station 25, Waskōw ohci Pimâtisiwin

The relative humidity sensor operated out of range throughout the month resulting in 23 hours of invalid data.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 5 hours of invalid data.

Station 27, Jackfish 2/3

The station power failure on May 23 interrupted the normal operations of all gaseous analyzers for 1 hour.

Maintenance to verify daily QA response of the H₂S analyzer on May 27 resulted in 2 hours of downtime.

A flatline in the output signal of the wind sensor on May 16 resulted in 2 hours of invalid data.

Note: Elevated temperatures, high humidity, and wildfire smoke likely affected the SO_x scrubber efficiency, leading to slower stabilization response during span checks. Therefore, H₂S span response exceeded the 10% AMD acceptance criteria on May 27. However, analyzer diagnostics remained within manufacturer specifications, and data quality was not impacted.

Station 29, Surmont 2

Cleaning of the manifold on May 1 interrupted the normal operations of the H₂S, SO₂, and THC analyzers for 1 hour.

Station 30, Ells River

Maintenance to verify daily QA response of the NO_x/NO/NO₂ analyzer on May 14 resulted in 1 hour of downtime.

Unstable operation of the TRS analyzer on May 26 to 28 due to AMD non-compliance resulted in 48 hours of downtime. Subsequent maintenance to verify daily QA response of the TRS analyzer on May 27 and 30 resulted in additional 2 hours of downtime.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 10 hours of invalid data.



Station 31, Blackrod

The station power failure on May 25 interrupted the normal operations of all gaseous analyzers for 1 hour.

Cleaning of the manifold on May 28 interrupted the normal operations of the NO_x/NO/NO₂ and SO₂ analyzers for 2 hours.

Station 33, Monday Creek

Cleaning of the manifold on May 13 interrupted the normal operations of the H₂S and SO₂ analyzers for 2 hours.

A flatline in the output signal of the wind sensor on May 16 resulted in 6 hours of invalid data.

Station 505, Sawbones Bay

Note: The QAQC checks for all gaseous analyzers were not triggered on May 30 and 31, due to an issue with the zero-air generator; however, data quality was not compromised, and all analyzer data remained valid and within acceptable performance criteria.

Cleaning of the manifold on May 27 interrupted the normal operations of the NO_x/NO/NO₂ and SO₂ analyzers for 2 hours.

Station 506, Jackfish 1

Cleaning of the manifold on May 22 interrupted the normal operations of the H₂S and SO₂ analyzers for 1 hour.

The relative humidity sensor operated out of range on May 21 and 22 resulting in 19 hours of invalid data.

The station power failure on May 29 through May 31 interrupted the normal operations of all parameters for 56 hours.

A flatline in the output signal of the wind sensor on May 28 resulted in 1 hour of invalid data.

Station 508, Kirby North

Cleaning of the manifold on May 7 interrupted the normal operations of the SO₂ and THC analyzers for 2 hours.

Maintenance to complete calibration of the NO_x/NO/NO₂ analyzer over two days on May 7 and 8 resulted in 16 hours of downtime.

The station power failure on May 23 interrupted the normal operations of all gaseous analyzers for 1 hour.



Station 512, Hangingstone Expansion

Cleaning of the manifold on May 9 interrupted the normal operations of the H₂S and NO_x/NO/NO₂ analyzers for 1 hour.

A flatline in the output signal of the wind sensor on May 1 resulted in 5 hours of invalid data.



If additional information is required, please contact the Wood Buffalo Environmental Association at (780) 799-4420.

Yours sincerely,

Wood Buffalo Environmental Association

The representative of the Person Responsible for this monitoring program is Dianne McIssac, Operations Manager, WBEA.

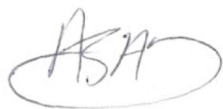
Level one (L1) data review was completed by the Field Technicians responsible for each respective air monitoring station. Level two (L2) data validation, report preparation, and submission were completed by Asad Hidayat, Denny Estador and Karina Fenwick of WBEA. The WBEA has retained the services of Air Resource Specialists (ARS) to conduct Level three (L3) review on its behalf. Contact information for WBEA staff is included below.

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I certify that I have reviewed and verified this report, and that the information is complete, accurate and representative of the monitoring results, reporting timeframe, and the specified analysis, summarization, and reporting requirements.



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WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS01 BERTHA GANTER - FORT MCKAY MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY - BERTHA GANTER (AMS01)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	35	36	99.87	-	-	32.6	0	3.7	0
H2S(ppb) Average	669	34	75	94.49	-	-	2	0	0.7	0
TRS(ppb) Average	706	36	38	99.73	3.7	0	2.4	-	1.3	-
THC(ppm) Average	708	35	36	99.87	-	-	4	-	2.4	-
NMHC(ppm) Average	708	35	36	99.87	-	-	0.469	-	0.217	-
CH4(ppm) Average	708	35	36	99.87	-	-	3.9	-	2.3	-
O3 (ppb) Average	707	35	37	99.73	-	-	69.4	0	39.4	-
NO2 (ppb) Average	705	37	39	99.73	-	-	31.1	0	9.3	-
NO (ppb) Average	705	37	39	99.73	-	-	64.1	-	8.2	-
NOX (ppb) Average	705	37	39	99.73	-	-	86.7	-	16.3	-
NH3 (ppb) Average	643	42	101	92.07	-	-	149.5	0	58.6	-
PM2.5 (ug/m3) Average	740	3	4	99.87	-	-	498.5	0	238.5	3
CO(ppm) Average	707	35	37	99.73	-	-	4.2	0	1.9	0
CO2(ppm) Average	707	35	37	99.73	-	-	495.8	0	452.8	0
Temperature 2 m (C) Average	744	0	0	100	-	-	33.1	-	24.6	-
Temperature 10 m (C) Average	744	0	0	100	-	-	32.6	-	24.7	-
Relative Humidity (%) Average	744	0	0	100	-	-	97.8	-	79.3	-
Wind Speed 10 m (km/h) Average	742	0	2	99.73	-	-	28	-	16	-
Wind Direction 10 m (deg) Average	742	0	2	99.73	-	-	-	-	-	-
Precipitation (mm) Total	744	0	0	100	-	-	9.6	-	18.5	-
Leaf Wetness (% of range) Average	743	0	1	99.87	-	-	65.5	-	17.5	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	913	-	331.7	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BERTHA GANTER FORT McKAY (AMS01)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	1.09	2.8	-	0	0	0	0.2	0.6	2.8	32.6
H2S (ppb) Average	669	0.19	0.2	-	0	0	0.1	0.1	0.2	0.5	2
TRS (ppb) Average	706	0.57	0.3	-	0.3	0.4	0.4	0.5	0.6	0.8	2.4
THC (ppm) Average	708	2.12	0.2	-	2	2	2	2.1	2.1	2.3	4
NMHC(ppm) Average	708	0.025	0.064	-	0	0	0	0	0	0.1	0.469
CH4(ppm) Average	708	2.09	0.1	-	2	2	2	2	2.1	2.2	
O3 (ppb) Average	707	27.71	11.5	-	0.3	12.8	19.9	28.1	35.9	42.5	69.4
NO2 (ppb) Average	705	4.6	5.3	-	0	0.3	1.4	2.8	5.9	11.2	31.1
NO (ppb) Average	705	1.71	5.1	-	0	0	0	0.7	1.5	2.6	64.1
NOX (ppb) Average	705	6.31	9	-	0	1.1	1.9	3.5	7.3	14	86.7
NH3 (ppb) Average	643	2.82	14.8	-	0	0	0	0	0	0	149.5
PM2.5 (ug/m3) Average	740	23.39	61	-	1.3	3	4.7	7.1	13.3	35.4	498.5
CO(ppm) Average	707	0.37	0.4	-	0.2	0.2	0.2	0.3	0.3	0.4	4.2
CO2(ppm) Average	707	445.91	10	-	431.7	436.8	439.4	442.6	449.6	460.2	495.8
Temperature 2 m (C) Average	744	14.2	6.8	-	-1.1	5.6	9.3	13.7	18.6	23.7	33.1
Temperature 10 m (C) Average	744	14.11	6.6	-	-0.3	6.1	9.5	13.8	18.2	23.3	32.6
Relative Humidity (%) Average	744	52.38	21.5	-	14.2	25.8	33.1	50.9	69.8	82.2	97.8
Wind Speed 10 m (km/h) Average	742	9.8	6	-	0	3	5	9	14	18	28
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	744	-	-	50.99	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	743	3.7	9.1	-	0	0.2	0.6	1.2	1.9	6.5	65.5
Global Solar Radiation (W/m2) Average	744	254.7	288.4	-	0	0	0.1	117.5	460.2	753.9	913

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BERTHA GANTER FORT MCKAY (AMS01)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	22 May 2025 18:00	22 May 2025 18:00	1	Station power failure
CO2, H2S, NH3, NO2, O3, TRS	14 May 2025 15:00	14 May 2025 15:00	1	Maintenance - sample manifold cleaned
H2S	20 May 2025 22:00	22 May 2025 11:00	38	Unstable Operation - flatline in analyzer output signal
H2S	22 May 2025 12:00	22 May 2025 12:00	1	Maintenance - analyzer rebooted
NH3	07 May 2025 17:00	08 May 2025 11:00	19	Maintenance - calibration in progress
NH3	01 May 2025 06:00	31 May 2025 06:00	38	Stabilization after daily QA check
Wind Speed, Wind Direction	03 May 2025 06:00	03 May 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 May 2025 05:00	23 May 2025 05:00	1	Flat line in sensor output signal
Surface Leaf Wetness	31 May 2025 23:00	31 May 2025 23:00	1	Sensor operated out of range



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

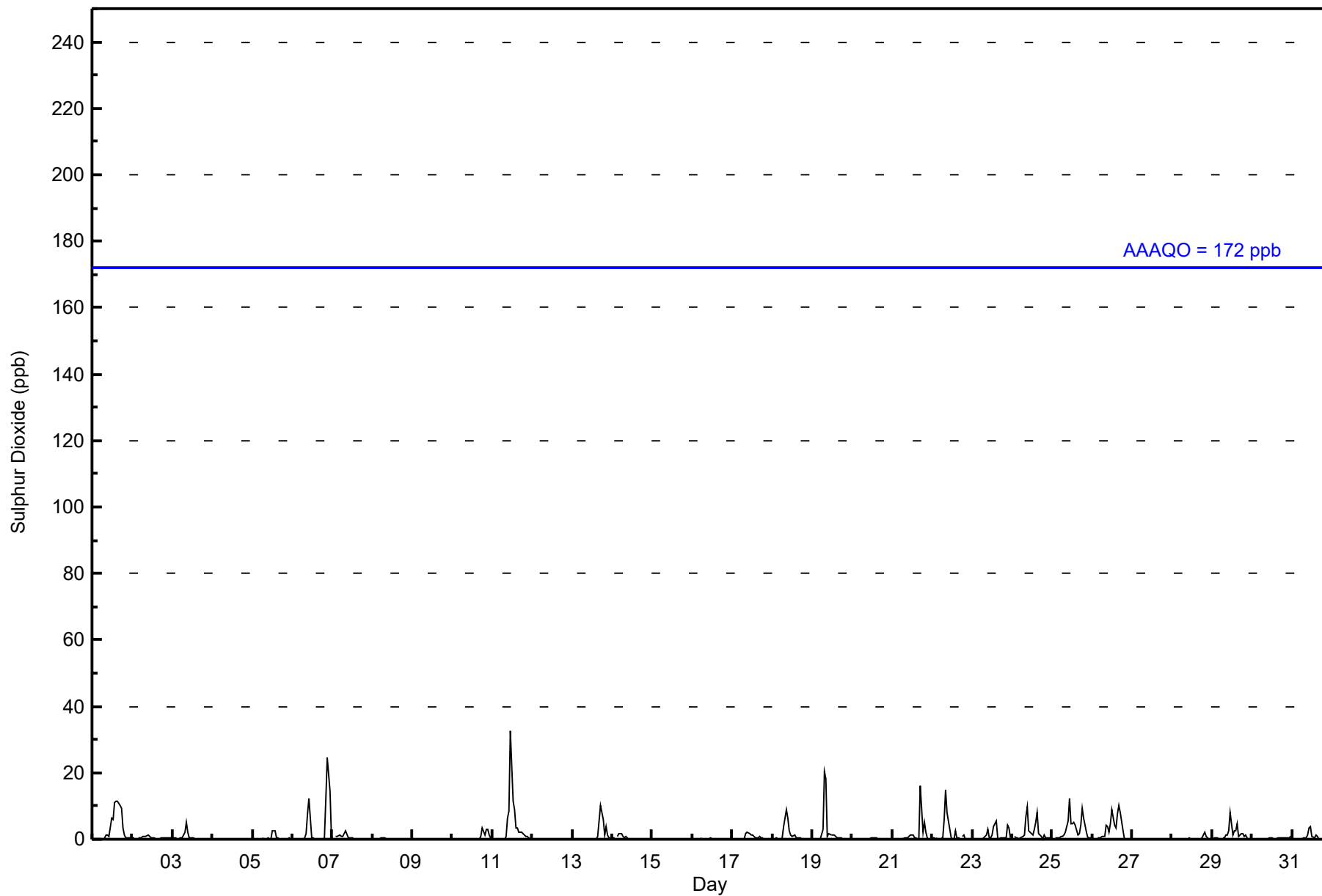
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.6 ppb on May 11 12:00 Maximum Daily Average: 3.7 ppb on May 11																			Hours in Service: 744							
Minimum Value: 0.0 ppb on May 1 01:00 Minimum Daily Average: 0.0 ppb on May 4 Maximum Diurnal Average: 2.4 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 3 Monthly Average: 1.09 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 2.8 P ₉₉ = 12.3																			Hours of Data: 708							
																			Hours of Missing Data: 36							
																			Hours of Calibration: 35							
																			Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.3	1.5	1.1	1.0	6.2	5.9	11.1	11.5	11.3	10.3	9.4	3.6	1.2	0.5	0.4	0.4	0.4	3.3	11.5
2-May	0.5	0.3	Z	0.3	0.3	0.6	0.7	1.0	0.8	1.1	0.7	0.5	0.6	0.2	0.2	0.1	0.2	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.5	1.1
3-May	0.4	0.4	0.5	Z	0.6	0.5	0.5	2.0	5.0	2.3	0.6	0.6	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.6	5.0
4-May	0.1	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
5-May	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.1	0.0	0.3	0.0	0.1	2.6	2.6	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	2.6
6-May	Z	0.1	0.1	0.0	0.0	0.1	0.2	0.3	1.6	7.5	12.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.4	12.0	24.6	14.4	0.5	3.3	24.6
7-May	0.3	Z	0.9	0.8	1.3	1.0	0.9	1.8	2.5	0.3	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.5	2.5
8-May	0.2	0.1	Z	0.2	0.2	0.5	0.5	0.3	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5
9-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
10-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	1.0	3.3	1.4	3.0	2.8	1.3	0.4	0.6	3.3
11-May	0.1	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.8	6.3	8.4	32.6	11.6	8.7	3.4	3.5	2.3	2.2	1.9	1.5	1.0	0.8	0.4	0.2	3.7	32.6
12-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.7	5.5	10.2	6.0	1.4	3.9	1.3	0.4	0.2	1.3	10.2
14-May	0.5	0.5	Z	0.6	1.6	1.5	0.9	0.5	1.0	0.4	0.1	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6
15-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
16-May	0.0	0.1	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	1.6	2.3	1.8	1.5	1.1	0.9	0.5	0.6	0.7	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.5	2.3
18-May	Z	0.2	0.4	0.1	0.1	0.1	0.5	3.7	9.1	6.3	2.6	1.2	0.7	1.2	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	1.2	9.1
19-May	0.0	Z	0.0	0.0	0.0	0.0	3.2	20.3	18.3	0.9	1.6	1.4	1.1	1.1	0.8	0.6	0.5	0.3	0.2	0.1	0.0	0.0	0.1	0.0	2.2	20.3
20-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.3	0.2	0.4	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4
21-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.6	0.4	0.7	1.3	1.2	0.4	0.3	0.0	0.0	16.0	2.3	5.1	1.9	0.3	0.2	0.1	1.4	16.0
22-May	0.6	0.2	0.1	0.3	Z	0.5	0.6	5.8	15.0	8.2	2.9	0.5	0.0	0.0	2.7	0.4	0.3	PF	0.9	1.4	0.2	0.0	0.0	0.1	1.8	15.0
23-May	0.1	0.0	0.0	0.0	0.0	Z	0.0	0.3	1.4	3.1	0.6	0.4	1.3	3.7	5.5	0.4	0.2	0.5	0.5	0.3	0.4	4.3	3.3	0.6	1.2	5.5
24-May	Z	1.0	0.5	0.3	0.1	0.4	0.8	1.3	6.8	9.7	2.5	1.8	1.3	2.8	5.0	8.2	1.8	0.9	0.2	1.3	0.5	0.4	0.4	0.4	2.1	9.7
25-May	0.5	Z	0.5	0.6	0.5	0.7	0.9	1.5	2.1	5.5	12.3	4.8	4.5	5.0	4.4	1.1	1.9	4.1	9.5	6.5	2.0	0.3	0.2	0.5	3.0	12.3
26-May	0.4	0.4	Z	0.3	0.3	0.5	0.7	1.0	4.4	3.9	2.2	4.6	8.9	4.3	3.2	7.8	10.2	8.1	2.6	0.1	0.0	0.0	0.0	0.0	2.8	10.2
27-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2
28-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.5	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.3	2.3	0.9	0.4	0.1	0.1	0.2	2.3
29-May	0.2	0.4	0.3	0.4	0.2	Z	0.3	0.6	1.1	1.1	2.5	8.0	1.4	2.4	2.4	4.8	1.0	1.6	1.6	0.6	1.5	0.6	0.0	0.0	1.4	8.0
30-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.3	0.1	0.2	0.3	0.4	0.4	0.2	0.3	0.3	0.5	0.3	0.8	0.2	0.8
31-May	0.6	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.5	1.2	3.5	3.8	0.7	0.4	1.3	0.9	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.7	3.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	694	98.02	98.02
11 - 20	12	1.69	99.72
21 - 60	2	0.28	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	42	54	21	8	4	10	63	197	76	32	37	28	18	30	33	39	692
11 - 20	0	0	0	0	0	0	0	7	5	0	0	0	0	0	0	0	12
21 - 60	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	54	21	8	4	10	63	204	83	32	37	28	18	30	33	39	706

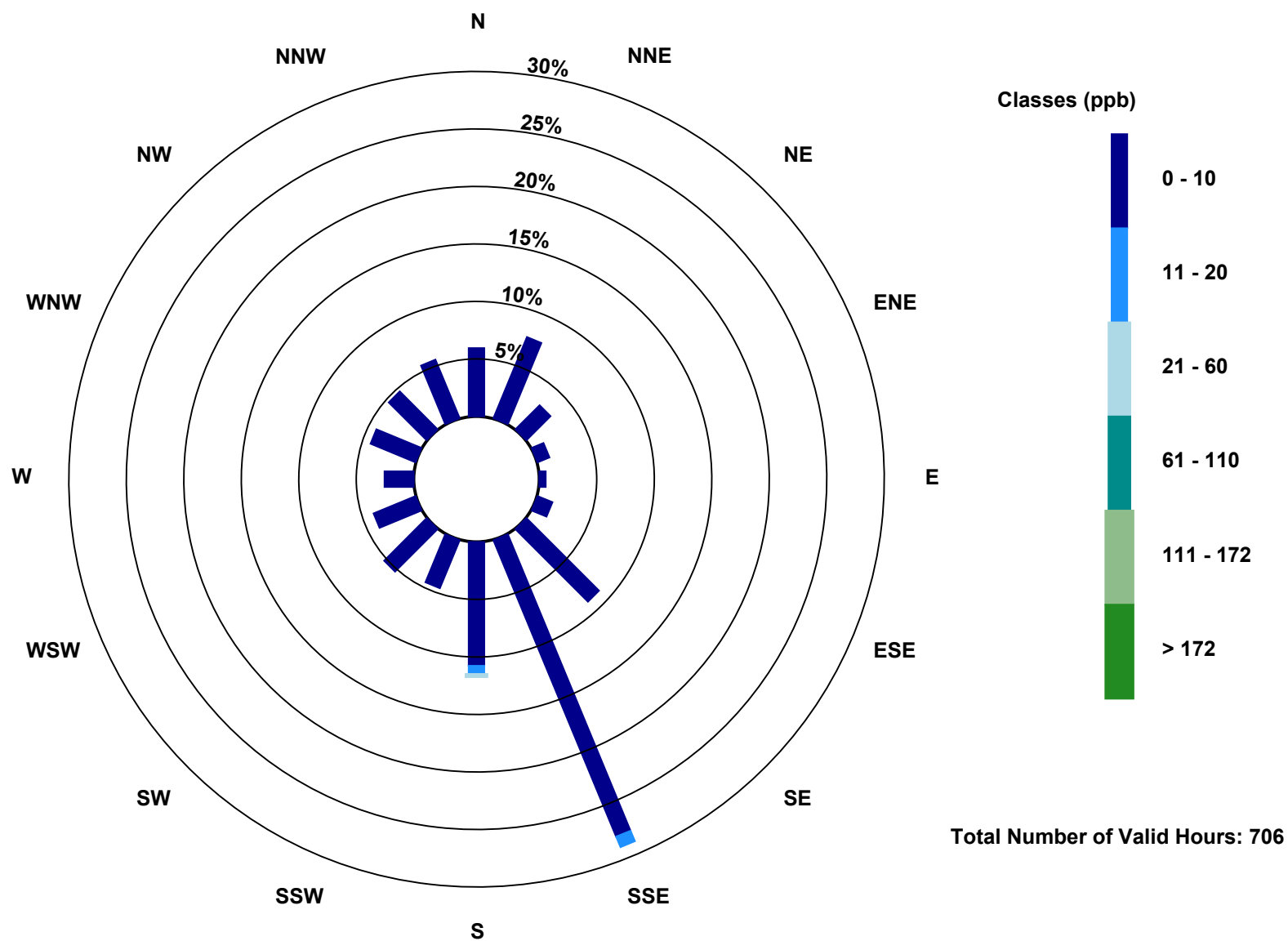
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

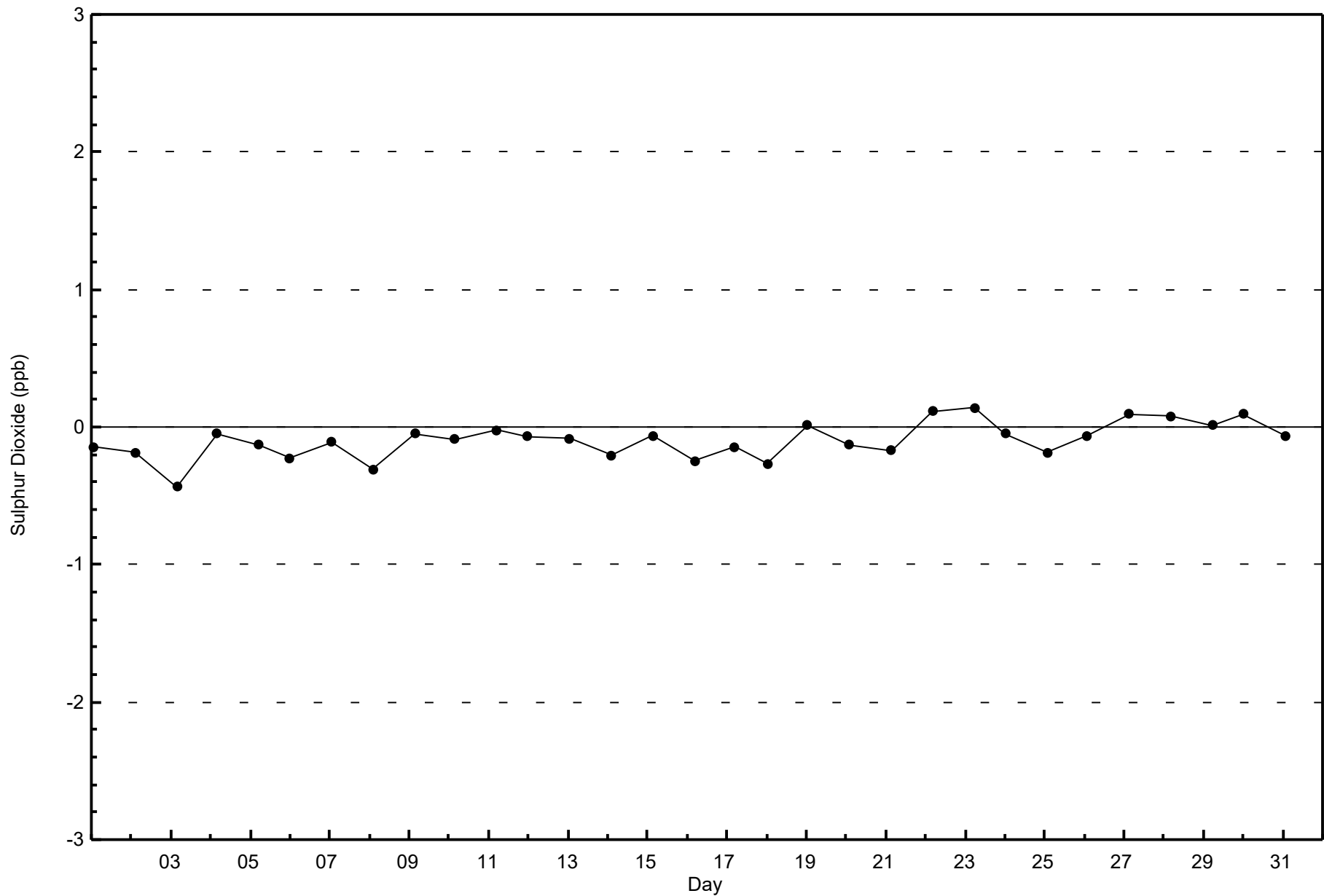
Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association
Zero Responses

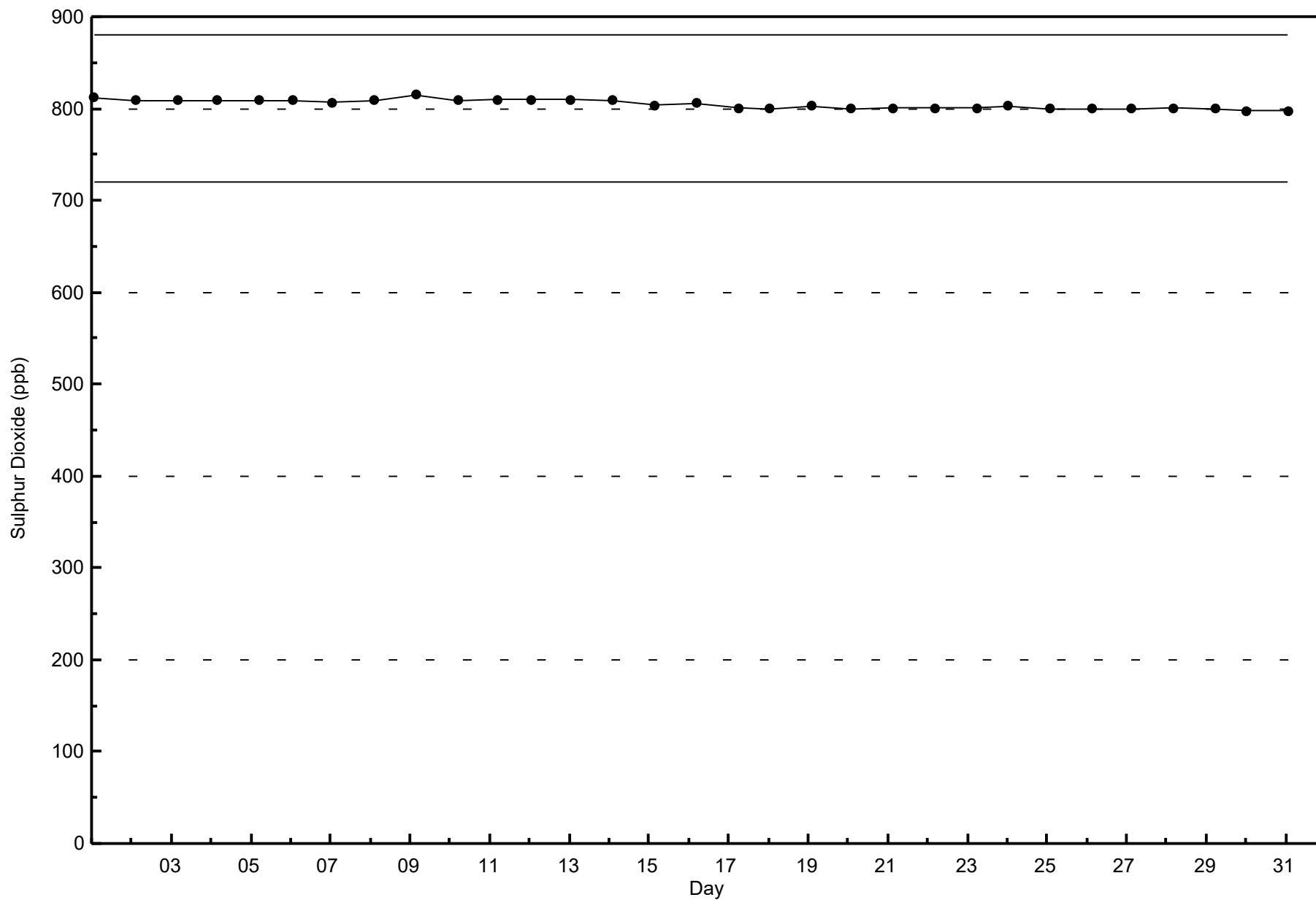
Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

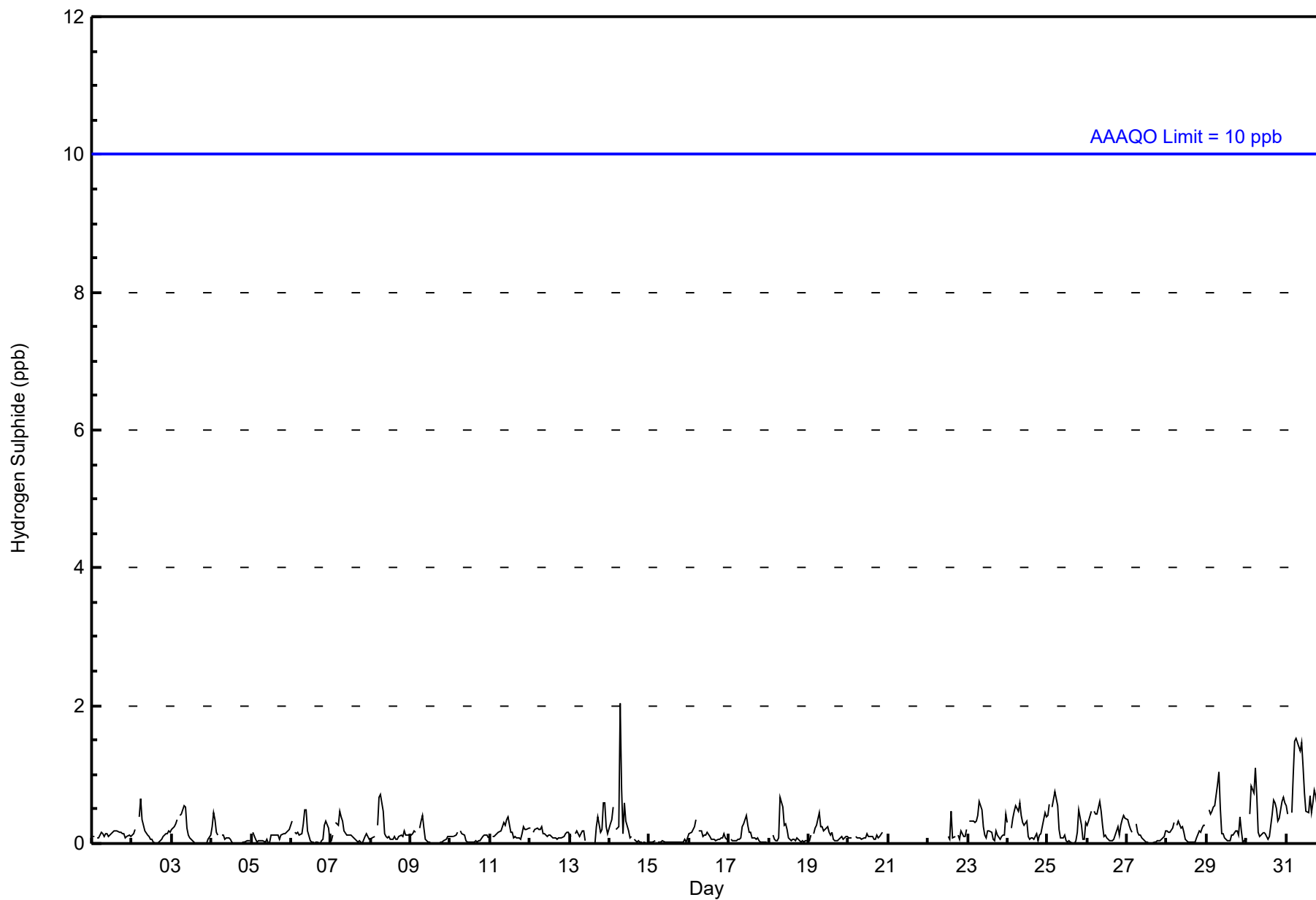
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): Maximum Value: 2.0 ppb on May 14 07:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.7 ppb on May 31						Hours in Service: 744 Hours of Data: 669		
Minimum Value: 0.0 ppb on May 3 17:00 Maximum Diurnal Average: 0.4 ppb at hour 7 Monthly Average: 0.19 ppb																			Minimum Daily Average: 0.0 ppb on May 15 Minimum Diurnal Average: 0.1 ppb at hour 16 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.1						Hours of Missing Data: 75 Hours of Calibration: 34 Percent Operational Time: 94.5		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
2-May	0.1	0.2	0.2	Z	0.4	0.7	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	
3-May	0.2	0.2	0.3	0.4	Z	0.4	0.4	0.6	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.6	
4-May	0.2	0.4	0.3	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
5-May	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	
6-May	0.3	Z	0.2	0.2	0.2	0.1	0.1	0.3	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.0	0.2	0.5	
7-May	0.0	0.1	Z	0.3	0.3	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.5	
8-May	0.1	0.1	0.1	Z	0.3	0.7	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.7	
9-May	0.1	0.1	0.2	0.2	Z	0.2	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.4	
10-May	0.1	0.1	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
11-May	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4	
12-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	
13-May	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.2	0.2	0.0	C	C	C	C	C	0.0	0.2	0.4	0.2	0.2	0.6	0.6	0.2	0.1	0.2	0.6	
14-May	0.3	0.4	0.5	Z	0.2	0.2	2.0	0.8	0.1	0.6	0.3	0.2	0.1	0.1	M	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	
15-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	
16-May	0.1	0.2	0.2	0.3	0.3	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	
17-May	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
18-May	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.7	0.5	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	
19-May	0.0	0.1	Z	0.1	0.2	0.3	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	UO	UO	UO	0.1	0.2	
21-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
22-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	0.1	0.1	0.5	0.1	0.1	PF	0.1	0.1	0.2	0.1	0.1	0.2	--	0.5
23-May	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.6	
24-May	0.3	Z	0.2	0.4	0.5	0.6	0.5	0.6	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.4	0.4	0.3	0.6	
25-May	0.4	0.6	Z	0.5	0.8	0.6	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.3	0.1	0.1	0.3	0.2	0.8	
26-May	0.3	0.3	0.5	Z	0.5	0.4	0.4	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.3	0.3	0.4	0.4	0.6	
27-May	0.3	0.3	0.2	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.3	
28-May	0.2	0.2	0.2	0.2	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.3	
29-May	Z	0.5	0.4	0.5	0.5	0.5	0.8	1.0	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.4	0.2	0.0	0.1	0.3	1.0	
30-May	0.1	Z	0.4	0.8	0.7	1.1	0.7	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	0.6	0.6	0.5	0.3	0.4	0.6	0.7	0.6	0.4	1.1	
31-May	0.5	0.4	Z	0.5	1.0	1.5	1.5	1.5	1.3	1.5	1.1	0.7	0.5	0.5	0.7	0.5	0.6	0.8	0.7	0.4	0.3	0.3	0.3	0.2	0.7	1.5	
0.2 0.2 0.2 0.2 0.3 0.4 0.4 0.4 0.3 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2																										Diurnal Average	
0.5 0.6 0.5 0.8 1.0 1.5 2.0 1.5 1.3 1.5 1.1 0.7 0.5 0.5 0.7 0.5 0.6 0.8 0.7 0.5 0.6 0.6 0.7 0.6																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	669	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	45	55	21	7	5	8	54	184	72	31	38	27	17	30	30	43	667
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	55	21	7	5	8	54	184	72	31	38	27	17	30	30	43	667

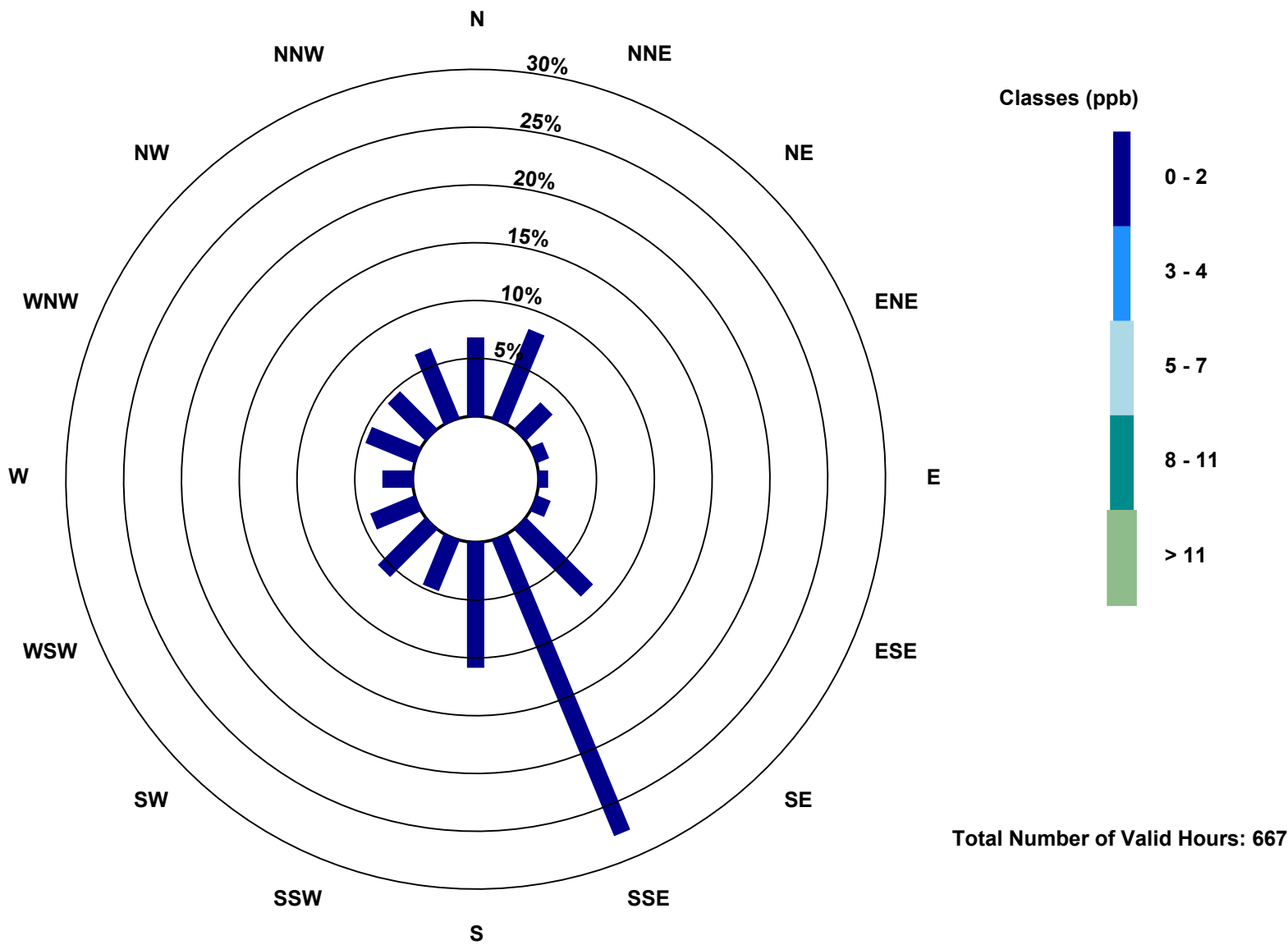
Total Number of Valid Hours: 667

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Fort McKay - Bertha Ganter



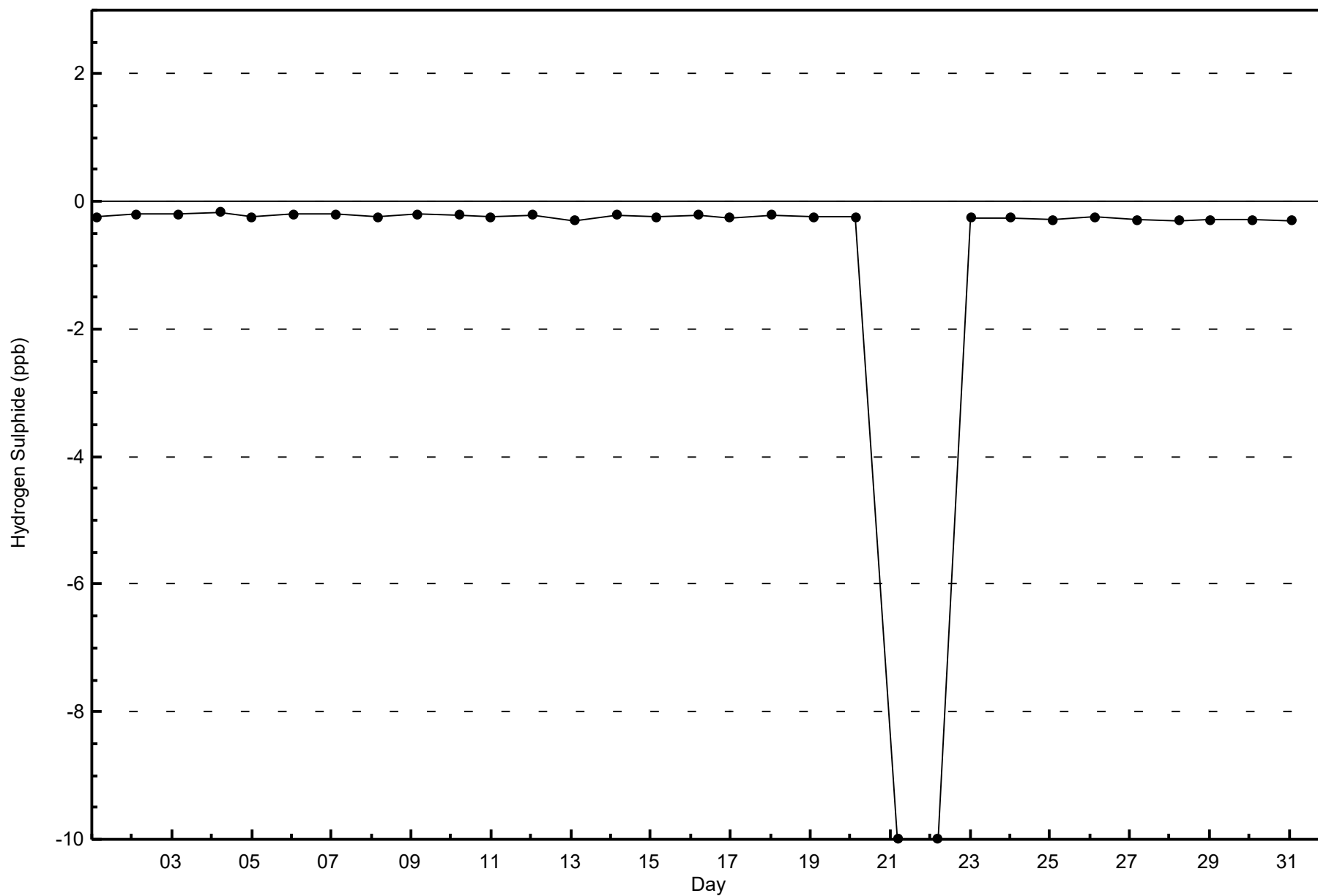


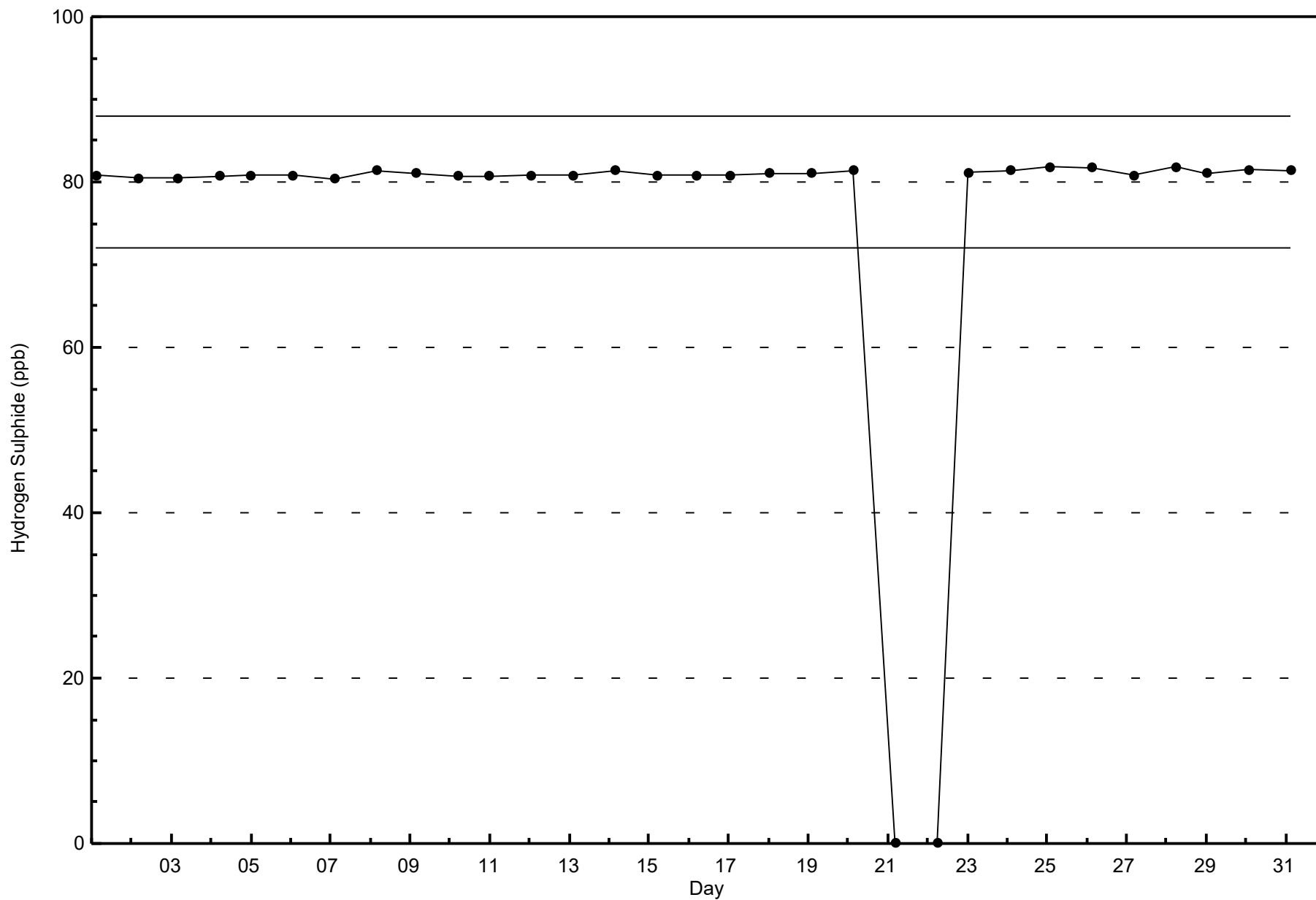
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - May 2025







Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 3.7 ppb on May 14 07:00 Maximum Daily Average: 1.3 ppb on May 31																				Periods in Service: 1488						
Minimum Value: 0.3 ppb on May 13 15:30 Minimum Daily Average: 0.4 ppb on May 15 Maximum Diurnal Average: 0.7 ppb at hour 7 Minimum Diurnal Average: 0.5 ppb at hour 16																				Periods of Valid Data: 1411						
Monthly Average: 0.57 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.9																				Periods of Invalid Data: 77						
																				Periods of Calibration: 72						
																				Percent Operational Time: 99.7						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
2-May	0.5 0.5	0.5 0.6	0.6 0.6	Z SP	0.6 0.7	0.8 0.8	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.6 0.6	0.5	0.8	
3-May	0.6 0.5	0.6 0.6	0.6 0.6	0.6 0.6	Z SP	0.7 0.6	0.6 0.7	0.7 0.9	0.8 0.8	0.6 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5	0.9	
4-May	0.6 0.7	0.8 0.9	0.8 0.6	0.5 0.5	0.5 0.5	Z SP	0.6 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5	0.9	
5-May	Z SP	0.6 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.5	0.6	
6-May	0.6 0.8	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.7 1.0	0.8 0.9	0.7 0.6	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.8 0.7	0.7 0.9	0.9 0.5	0.6	1.0	
7-May	0.5 0.5	0.5 0.7	Z SP	0.7 0.7	0.6 0.7	0.9 0.8	0.8 0.8	0.7 0.7	0.7 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.5	0.6 0.6	0.5 0.5	0.5	0.9	
8-May	0.5 0.5	0.5 0.4	0.4 0.4	Z SP	0.4 0.6	0.6 0.9	0.8 0.8	0.7 0.6	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.9	
9-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.6 0.7	0.6 0.8	0.7 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5	0.8	
10-May	0.4 0.5	0.5 0.4	0.4 0.4	0.5 0.4	0.5 0.5	Z SP	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
11-May	Z SP	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.7	0.6 0.6	0.6 0.7	0.7 0.8	0.6 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.5	0.8	
12-May	0.6 0.5	Z SP	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.5	0.5 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
13-May	0.5 0.5	0.4 0.4	Z SP	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	C C	C C	C C	C C	C C	0.3 0.3	0.4 0.7	0.7 0.8	0.6 0.4	0.6 0.5	0.7 1.1	1.0 0.9	0.7 0.5	0.6	1.1	
14-May	0.6 0.7	0.7 0.7	0.8 1.0	Z SP	0.6 0.6	0.6 3.7	0.9 0.5	1.9 0.6	0.5 0.7	1.1 0.7	0.7 0.5	0.5 0.5	0.5 M	0.5 0.4	M 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	3.7	
15-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.4	0.5	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb Fort McKay - Bertha Ganter - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.4
17-May	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6 0.6	0.6 0.6	0.8 0.8	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.8 0.4
18-May	0.4 0.4	Z SP	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	1.0 1.0	1.0 0.8	0.7 0.6	0.6 0.7	0.7 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	1.0 0.4
19-May	0.4 0.4	0.5 0.5	Z SP	0.4 0.5	0.5 0.6	0.6 0.6	0.8 0.8	0.6 0.6	0.6 0.6	0.5 0.6	0.5 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.8 0.8
20-May	0.4 0.5	0.4 0.5	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.6 0.5	0.6 0.5
21-May	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	Z SP	0.5 0.4	0.4 0.4	0.5 0.6	0.6 0.7	0.6 0.5	0.5 0.5	0.6 0.7	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.7 0.5	0.7 0.5
22-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	Z SP	0.8 0.5	0.5 0.5	0.6 0.7	0.6 0.6	0.5 0.5	0.4 0.5	0.4 0.4	0.4 1.2	0.5 0.4	0.5 PF	PF PF	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.5	0.6 0.6	1.2 0.6	
23-May	Z SP	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.5	0.6 0.8	0.9 0.9	0.9 0.7	0.7 0.5	0.4 0.5	0.4 0.4	0.5 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.7	0.6 0.4	0.4 0.5	0.4 0.5	0.4 0.5	0.4 0.6	0.5 0.5	0.6 0.6	1.0 1.0	
24-May	0.7 0.6	Z SP	0.5 0.6	0.7 0.7	0.7 0.8	0.9 0.8	0.7 0.8	0.8 1.0	0.8 0.7	0.7 0.6	0.6 0.6	0.7 0.7	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.6	0.4 0.4	0.5 0.5	0.5 0.6	0.6 0.6	0.8 0.9	0.8 0.7	1.0 0.7	
25-May	0.7 0.9	1.0 0.9	Z SP	0.8 0.9	1.2 1.1	1.0 1.0	0.9 0.9	0.7 0.5	0.4 0.4	0.5 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.6	0.5 1.1	0.6 0.6	0.8 0.5	0.5 0.4	0.5 0.4	0.7 0.7	1.2 0.7	
26-May	0.7 0.6	0.7 0.7	0.9 0.9	Z SP	0.8 0.8	0.8 0.8	0.8 1.0	1.0 1.0	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.7 0.6	0.5 0.6	0.7 0.6	0.7 0.7	0.7 0.8	0.8 0.8	0.8 0.7	1.0 0.7	
27-May	0.7 0.7	0.7 0.6	0.6 0.6	0.6 0.5	Z SP	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.7 0.5	
28-May	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.7	Z SP	0.6 0.6	0.6 0.7	0.7 0.7	0.6 0.6	0.6 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.5	0.5 0.6	0.6 0.6	0.7 0.6	0.6 0.6	0.7 0.7	0.7 0.5	
29-May	Z SP	0.9 0.8	0.8 0.8	0.9 0.8	0.9 0.9	1.0 0.9	1.1 1.3	1.4 1.3	1.1 0.7	0.6 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.6	0.6 0.6	0.6 0.7	0.6 0.6	0.6 0.6	0.5 0.9	0.8 0.5	0.8 0.5	0.5 0.5	0.5 0.5	1.4 0.5	
30-May	0.5 0.5	Z SP	0.6 1.6	1.7 1.7	1.4 1.6	1.9 2.2	1.7 1.1	0.6 0.5	0.5 0.5	0.5 0.6	0.7 0.6	0.6 0.6	0.6 0.5	0.6 0.5	0.6 0.6	0.9 1.2	1.4 1.3	1.2 1.2	1.2 0.9	0.8 0.8	0.8 0.9	1.2 1.0	1.2 1.1	1.1 1.0	2.2 1.0	
31-May	1.0 1.0	0.9 0.8	Z SP	0.7 1.1	1.5 1.9	2.3 2.5	2.5 2.4	2.4 2.2	2.0 2.3	2.1 2.2	1.9 1.6	1.5 1.2	1.0 0.9	0.9 1.0	1.2 1.3	1.0 0.9	0.9 1.4	1.4 1.4	1.3 1.2	1.0 0.8	0.8 0.8	0.7 0.7	0.7 0.7	0.7 0.6	2.5 1.3	
0.6 0.6 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.6 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.6 0.5 0.6 1.0 1.0 1.6 1.7 1.9 2.5 3.7 2.4 2.3 2.2 1.9 1.5 1.0 1.0 1.3 1.2 1.4 1.4 1.3 1.1 1.1 1.2 1.2 1.1																								Diurnal Average Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure SP - Span Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

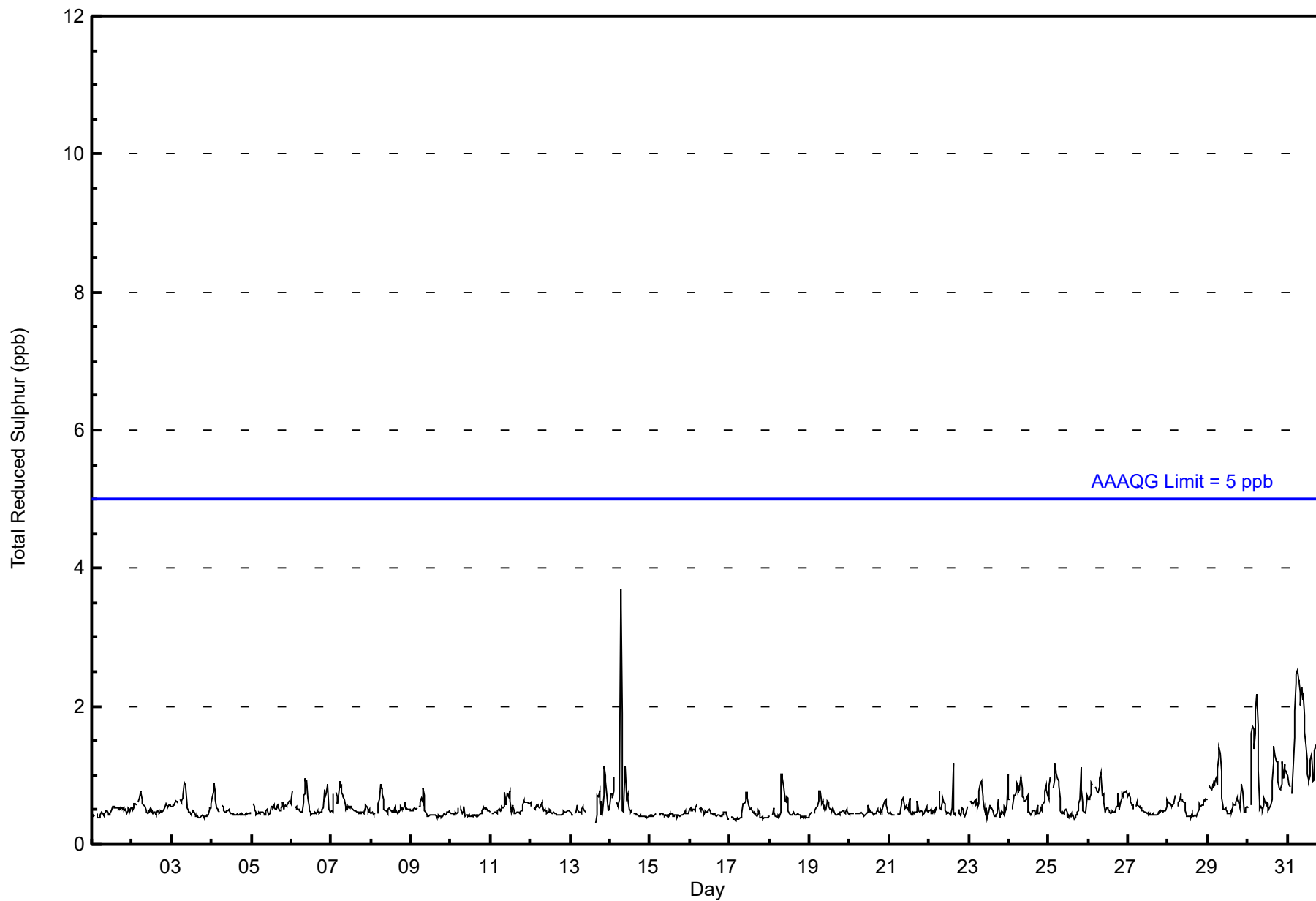
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 2.4 ppb on May 31 07:00																			Maximum Daily Average: 1.3 ppb on May 31						Hours in Service: 744	
Minimum Value: 0.3 ppb on May 13 16:00																			Minimum Daily Average: 0.4 ppb on May 15						Hours of Data: 706	
Maximum Diurnal Average: 0.7 ppb at hour 7																			Minimum Diurnal Average: 0.5 ppb at hour 16						Hours of Missing Data: 38	
Monthly Average: 0.57 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.8						Hours of Calibration: 36	
																			Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.4	0.4	Z	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2-May	0.5	0.6	0.6	Z	0.6	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.8
3-May	0.6	0.6	0.6	0.6	Z	0.6	0.7	0.8	0.8	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.8
4-May	0.6	0.8	0.7	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.8
5-May	Z	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.6
6-May	0.7	Z	0.5	0.5	0.5	0.5	0.5	0.7	0.9	0.9	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.7	0.5	0.6	0.9
7-May	0.5	0.6	Z	0.7	0.7	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.9
8-May	0.5	0.4	0.4	Z	0.5	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.8
9-May	0.5	0.5	0.5	0.5	Z	0.5	0.6	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7
10-May	0.5	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
11-May	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.7
12-May	0.6	Z	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6
13-May	0.5	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	C	C	C	C	C	0.3	0.6	0.7	0.5	0.6	0.9	1.0	0.6	0.5	0.6	1.0
14-May	0.6	0.7	0.9	Z	0.6	0.6	2.3	1.2	0.5	0.9	0.7	0.6	0.5	0.5	M	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	2.3
15-May	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.5
16-May	0.5	0.5	0.5	0.5	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.6
17-May	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.8	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
18-May	0.4	Z	0.5	0.4	0.4	0.4	0.4	1.0	0.9	0.6	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.0
19-May	0.4	0.5	Z	0.5	0.5	0.6	0.8	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.8
20-May	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.6
21-May	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.5	0.7	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.7
22-May	0.5	0.5	0.5	0.5	0.5	Z	0.7	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.8	0.4	0.5	PF	0.5	0.4	0.5	0.4	0.4	0.6	0.5	0.8
23-May	Z	0.6	0.6	0.6	0.6	0.6	0.7	0.9	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.8	0.6	0.9
24-May	0.7	Z	0.5	0.7	0.8	0.9	0.8	0.9	0.8	0.7	0.6	0.7	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.6	0.8	0.8	0.6	0.9
25-May	0.8	0.9	Z	0.9	1.1	1.0	0.9	0.6	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9	0.7	0.5	0.5	0.7	0.6	1.1
26-May	0.6	0.7	0.9	Z	0.8	0.8	0.8	1.0	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.7	0.8	0.7	0.7	1.0
27-May	0.7	0.6	0.6	0.5	Z	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.7	
28-May	0.6	0.6	0.6	0.6	0.7	Z	0.6	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.7
29-May	Z	0.8	0.8	0.9	0.9	0.9	1.2	1.4	0.9	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.8	0.6	0.5	0.5	0.7	1.4
30-May	0.5	Z	1.1	1.7	1.5	2.1	1.4	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.6	1.0	1.4	1.2	1.1	0.8	0.8	1.1	1.1	1.0	1.0	2.1
31-May	1.0	0.8	Z	0.9	1.7	2.4	2.4	2.3	2.1	2.1	1.8	1.3	1.0	1.0	1.3	1.0	1.2	1.4	1.2	0.9	0.8	0.7	0.7	0.6	1.3	2.4
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																										



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	45	55	21	7	6	8	60	205	80	31	38	28	17	30	30	43	704
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	55	21	7	6	8	60	205	80	31	38	28	17	30	30	43	704

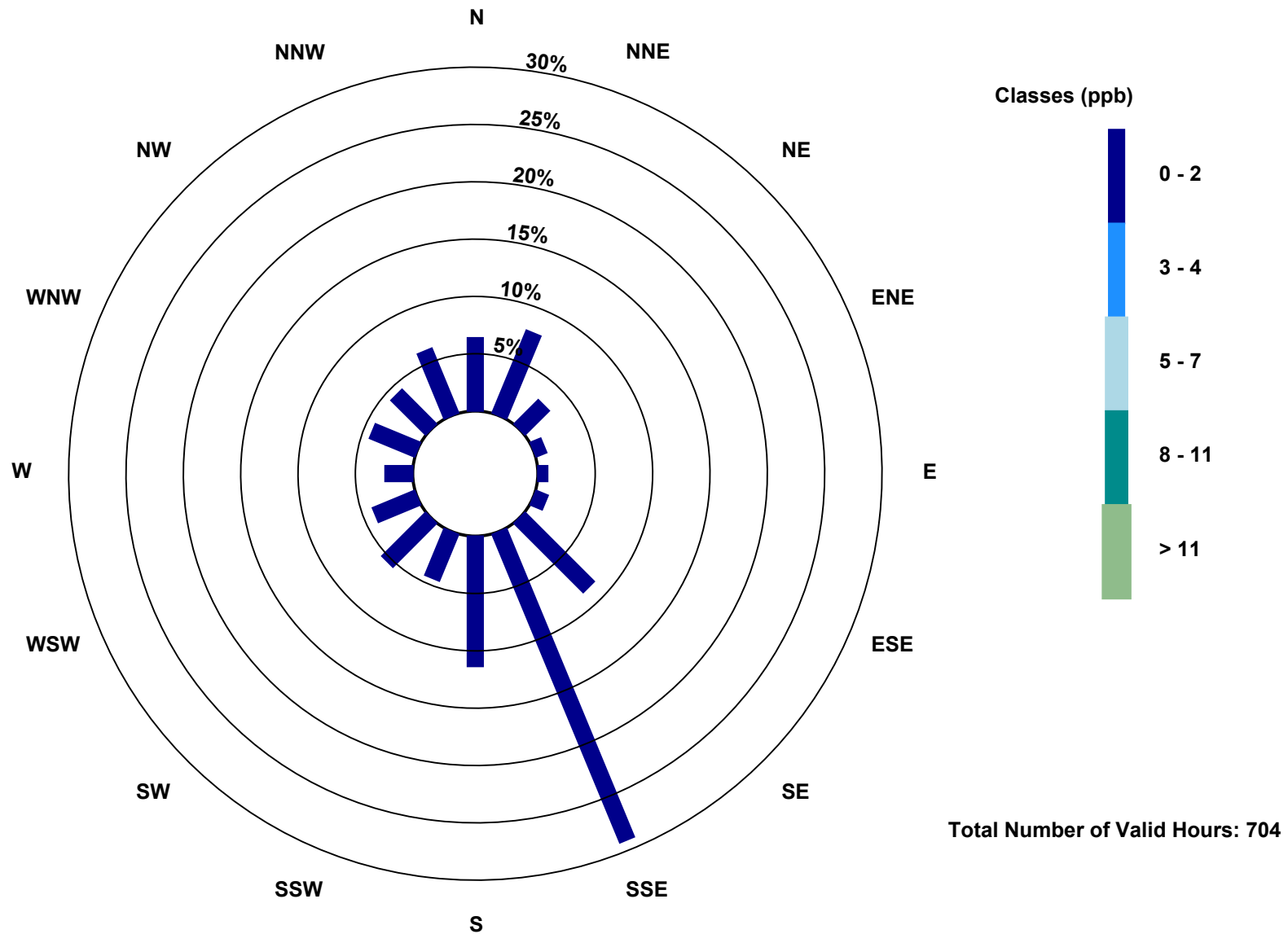
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter



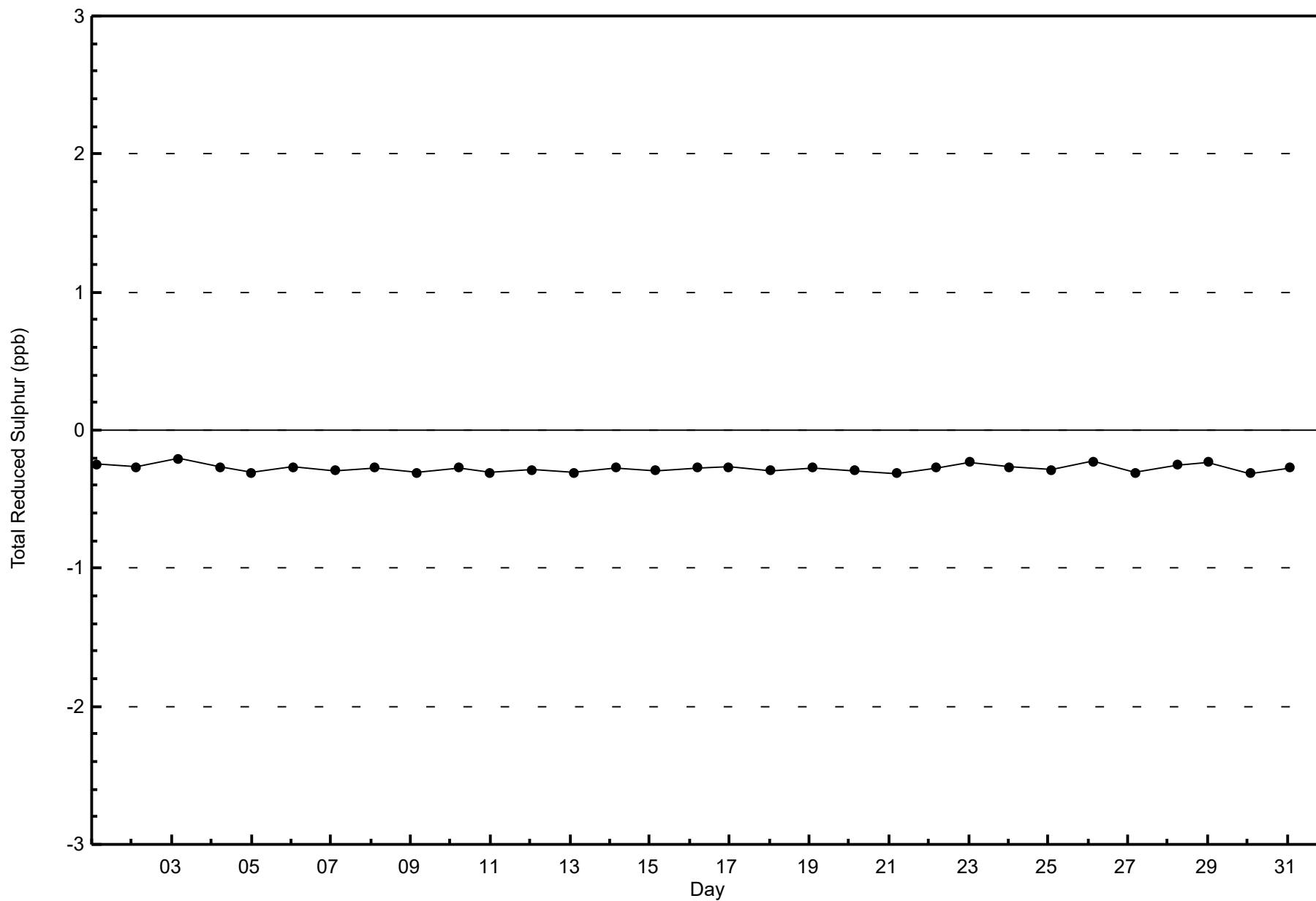


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

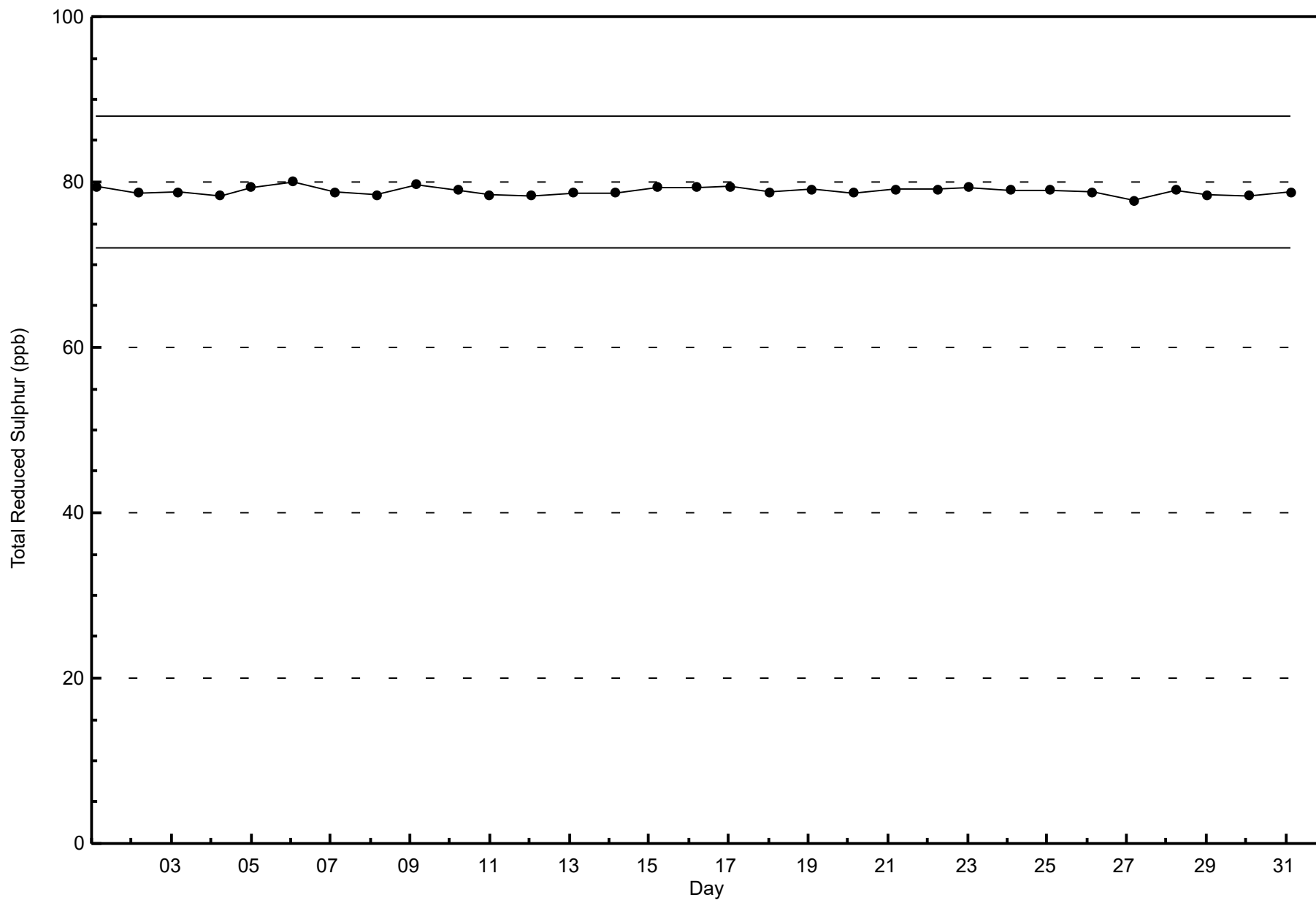
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

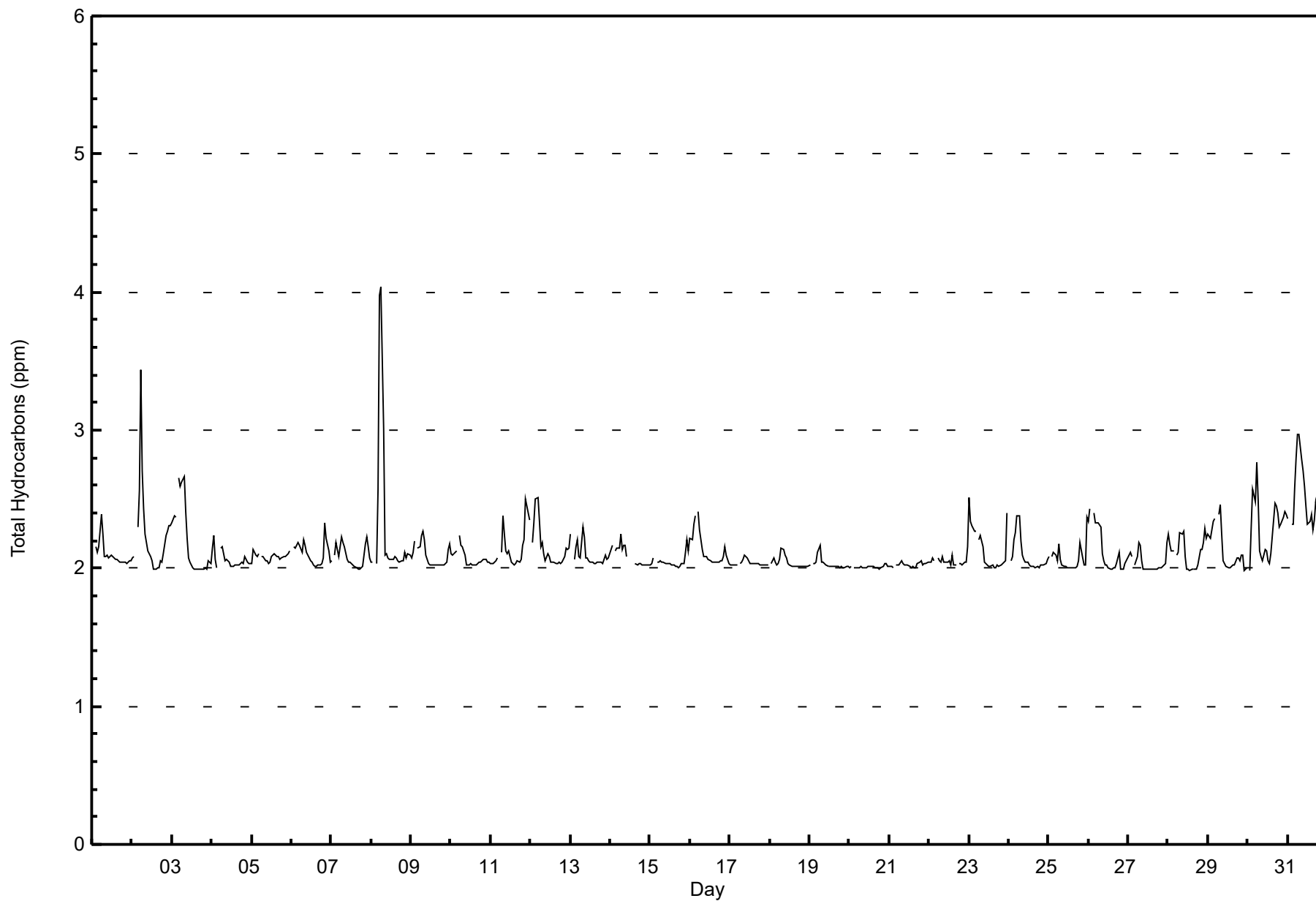
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 4.0 ppm on May 8 07:00																		Maximum Daily Average: 2.4 ppm on May 31										Hours in Service: 744	
Minimum Value: 2.0 ppm on May 30 02:00																		Minimum Daily Average: 2.0 ppm on May 20										Hours of Data: 708	
Maximum Diurnal Average: 2.3 ppm at hour 6																		Minimum Diurnal Average: 2.0 ppm at hour 14										Hours of Missing Data: 36	
Monthly Average: 2.12 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.1 P ₉₀ = 2.3 P ₉₉ = 2.8										Hours of Calibration: 35	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	2.1	Z	2.2	2.1	2.2	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4		
2-May	2.1	2.1	Z	2.3	2.6	3.4	2.7	2.4	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.2	3.4		
3-May	2.3	2.4	2.4	Z	2.7	2.6	2.6	2.7	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.7			
4-May	2.1	2.2	2.1	2.0	Z	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2			
5-May	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
6-May	Z	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.0	2.1	2.3			
7-May	2.0	Z	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.1	2.1	2.2			
8-May	2.0	2.0	Z	2.0	2.6	4.0	4.0	3.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.3	4.0			
9-May	2.1	2.1	2.2	Z	2.1	2.2	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.3			
10-May	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.2			
11-May	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.2	2.5	2.5	2.3	2.1	2.5			
12-May	Z	2.2	2.3	2.5	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.5			
13-May	2.3	Z	2.1	2.2	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.3			
14-May	2.1	2.2	Z	2.1	2.1	2.1	2.3	2.1	2.2	2.2	2.1	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3			
15-May	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.2			
16-May	2.2	2.2	2.3	2.4	Z	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.4			
17-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
18-May	Z	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
19-May	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2			
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
21-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1			
22-May	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.2			
23-May	2.5	2.3	2.3	2.3	2.3	Z	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.5			
24-May	Z	2.1	2.1	2.2	2.3	2.4	2.4	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4			
25-May	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.4	2.1	2.4			
26-May	2.3	2.4	Z	2.4	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.4			
27-May	2.1	2.1	2.1	Z	2.0	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.2			
28-May	2.2	2.2	2.1	2.1	Z	2.1	2.1	2.3	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.2	2.1	2.3			
29-May	2.2	2.2	2.3	2.3	2.4	Z	2.4	2.5	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.5			
30-May	Z	2.0	2.3	2.6	2.5	2.8	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.3	2.5	2.5	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.8			
31-May	2.4	Z	2.3	2.3	2.6	2.8	3.0	3.0	2.8	2.7	2.6	2.5	2.3	2.3	2.4	2.3	2.3	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.4	3.0			
2.1 2.1 2.1 2.2 2.2 2.3 2.3 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1																								Diurnal Average					
2.5 2.4 2.4 2.6 2.7 4.0 4.0 3.0 2.8 2.7 2.6 2.5 2.3 2.3 2.4 2.3 2.5 2.5 2.4 2.3 2.3 2.5 2.5 2.4																								Diurnal Maximum					
Z - zerospan C - Calibration PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	349	49.29	49.29
2.1 - 3.0	356	50.28	99.58
3.1 - 10.0	3	0.42	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	14	23	8	0	2	7	44	125	34	13	21	20	8	14	7	9	349
2.1 - 3.0	28	31	12	8	2	3	19	79	49	19	16	8	8	16	26	30	354
3.1 - 10.0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	54	21	8	4	10	63	204	83	32	37	28	18	30	33	39	706

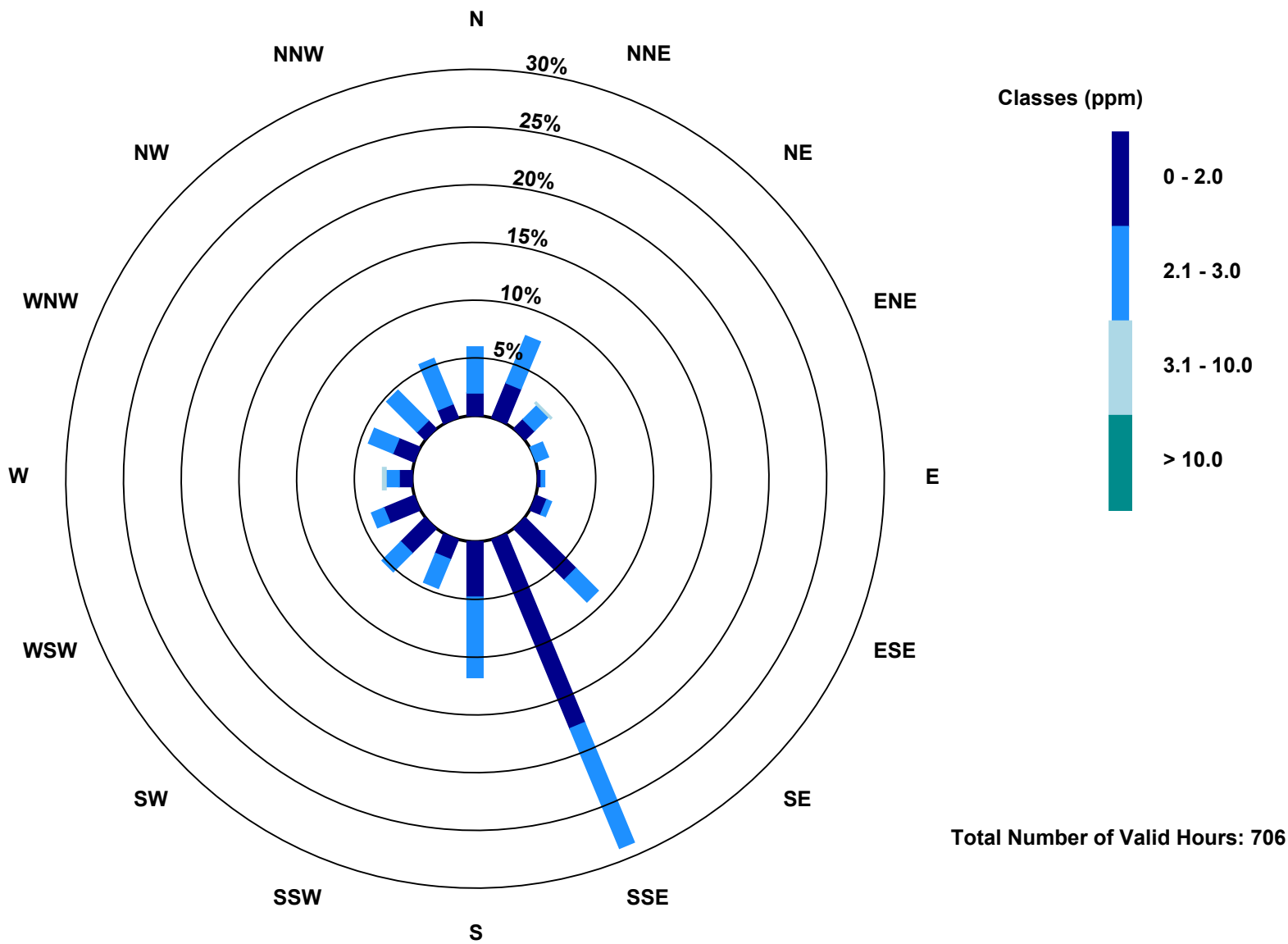
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter



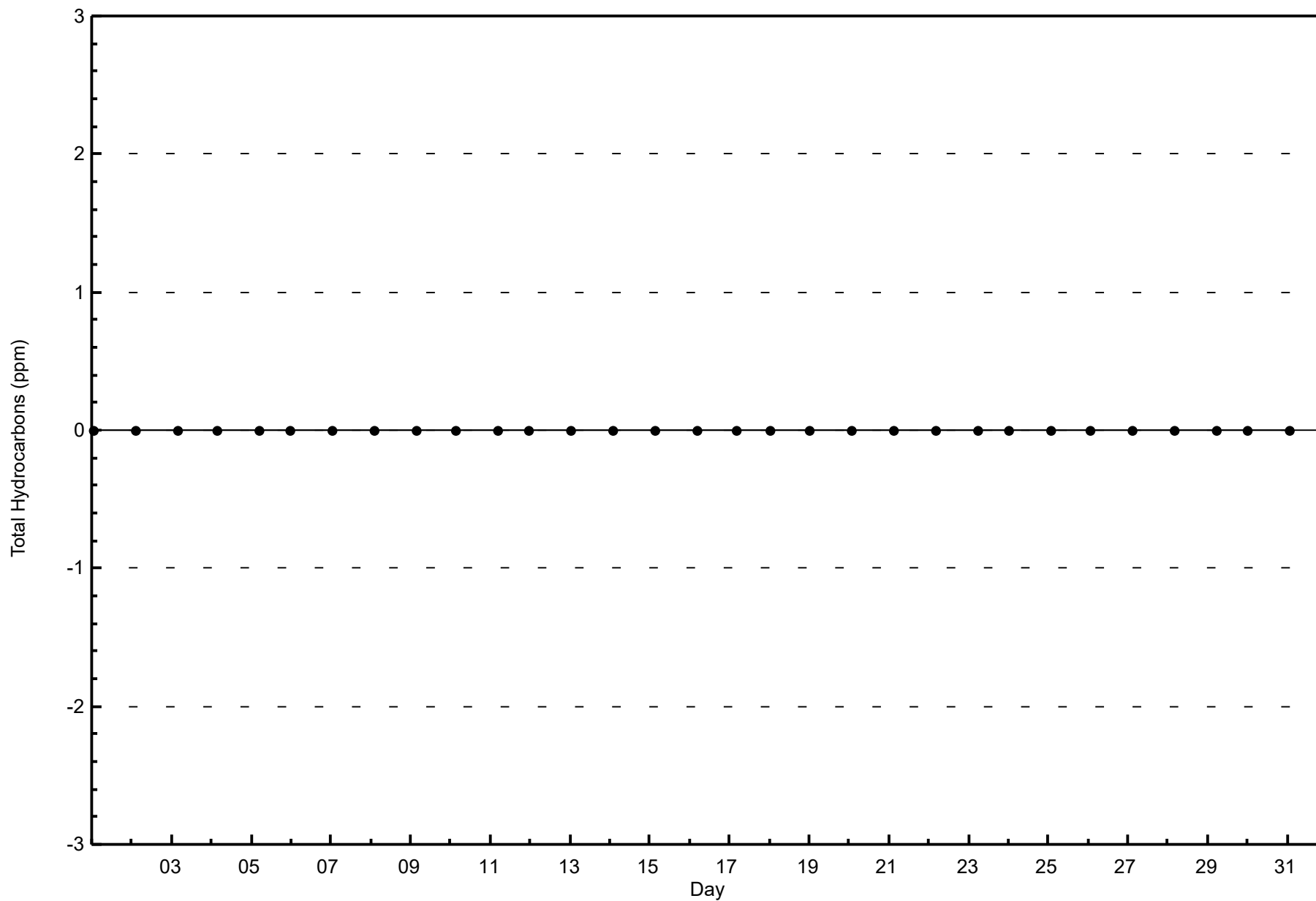


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

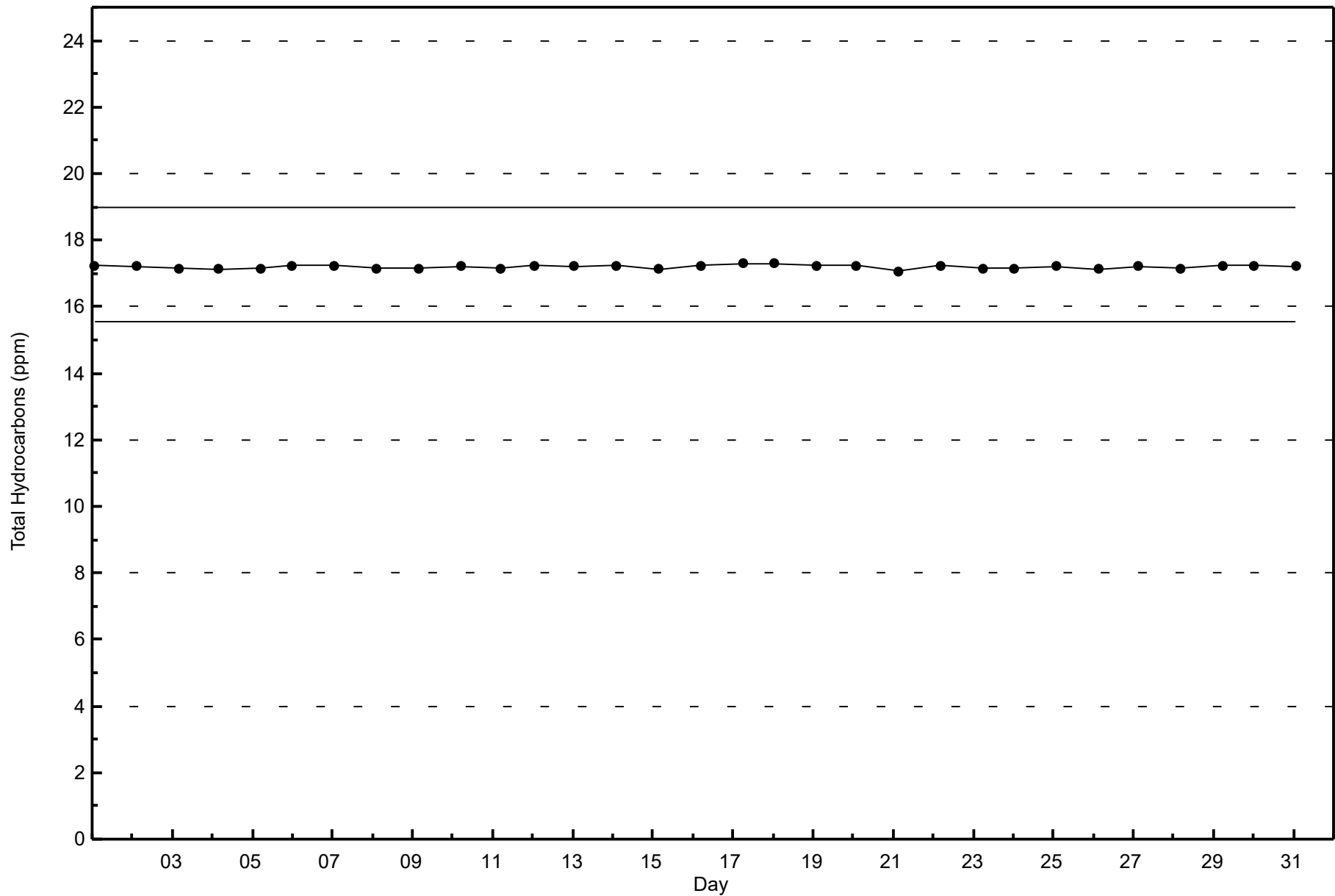
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

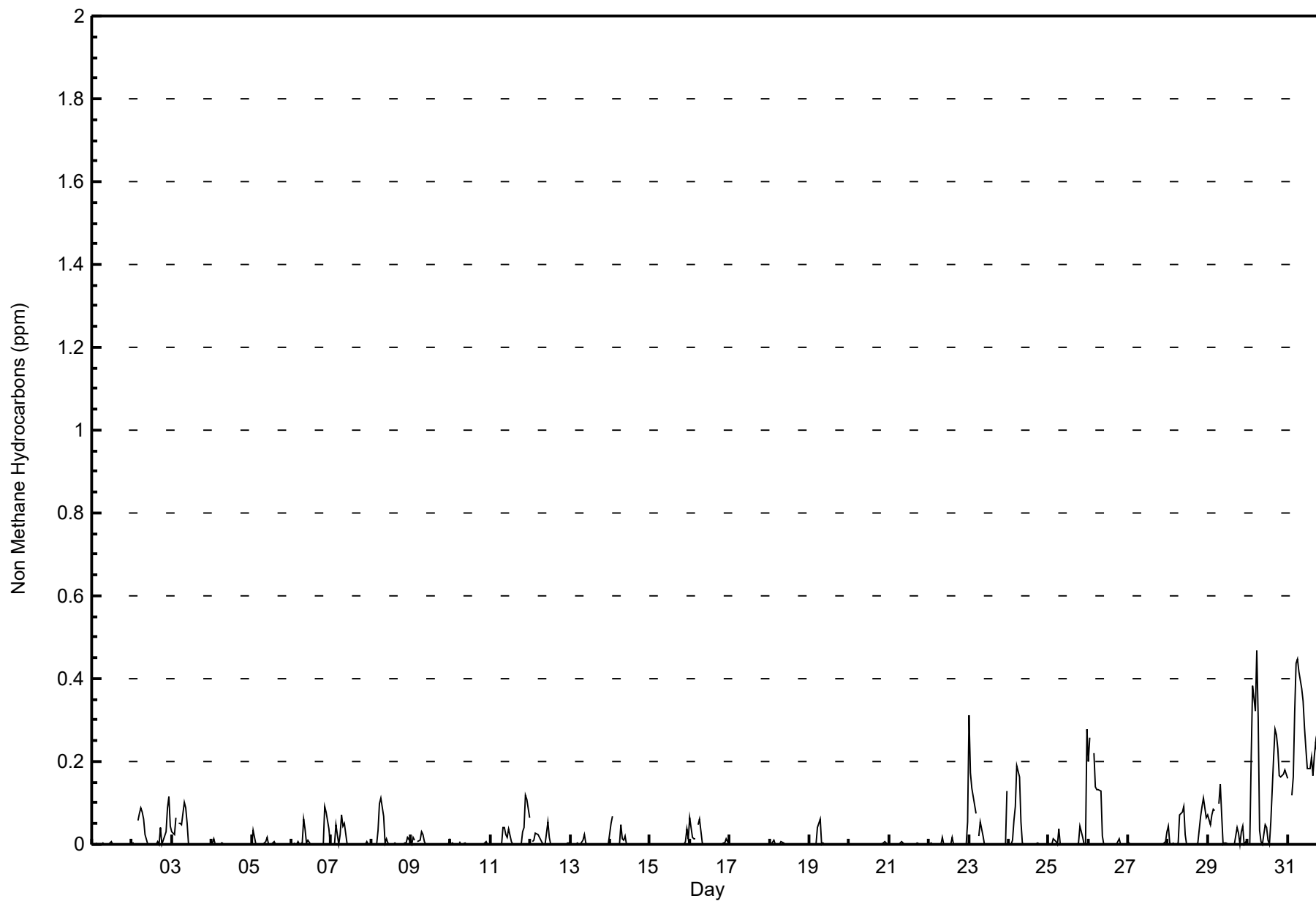
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 0.469 ppm on May 30 06:00										Maximum Daily Average: 0.217 ppm on May 31										Hours in Service: 744							
Minimum Value: 0.000 ppm on May 1 01:00										Minimum Daily Average: 0.000 ppm on May 17										Hours of Data: 708							
Maximum Diurnal Average: 0.062 ppm at hour 6										Minimum Diurnal Average: 0.006 ppm at hour 14										Hours of Missing Data: 36							
Monthly Average: 0.025 ppm										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.1 P ₉₉ = 0.3										Hours of Calibration: 35							
																				Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.000	Z	0.002	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
2-May	0.003	0.002	Z	0.058	0.076	0.089	0.079	0.062	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.042	0.001	0.011	0.030	0.088	0.114	0.044	0.032	0.114	
3-May	0.031	0.025	0.063	Z	0.050	0.049	0.047	0.102	0.088	0.052	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.002	0.000	0.022	0.102	
4-May	0.002	0.013	0.002	0.000	Z	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.013	
5-May	0.000	0.035	0.001	0.000	0.000	Z	0.000	0.000	0.007	0.016	0.000	0.000	0.000	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.003	0.035	
6-May	Z	0.003	0.001	0.000	0.007	0.001	0.003	0.062	0.038	0.002	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.091	0.077	0.038	0.000	0.015	0.091	
7-May	0.000	Z	0.001	0.047	0.002	0.024	0.071	0.044	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.001	0.000	0.011	0.071	
8-May	0.000	0.000	Z	0.000	0.034	0.100	0.111	0.068	0.002	0.013	0.002	0.001	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.004	0.017	0.008	0.016	0.111	
9-May	0.001	0.018	0.011	Z	0.006	0.010	0.029	0.024	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.011	0.005	0.029	
10-May	0.001	0.003	0.000	0.000	Z	0.007	0.002	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.005	0.008	0.000	0.000	0.001	0.008	
11-May	0.000	0.000	0.001	0.000	0.000	Z	0.000	0.040	0.040	0.023	0.016	0.038	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.042	0.119	0.108	0.064	0.023	0.119	
12-May	Z	0.008	0.010	0.027	0.025	0.017	0.011	0.005	0.000	0.000	0.055	0.017	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.004	0.003	0.000	0.008	0.055	
13-May	0.000	Z	0.000	0.000	0.003	0.000	0.000	0.010	0.023	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.002	0.023	
14-May	0.050	0.069	Z	0.000	0.000	0.000	0.049	0.015	0.012	0.021	0.001	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.069	
15-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.036	0.015	0.003	0.036	
16-May	0.063	0.018	0.013	0.015	Z	0.046	0.061	0.003	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.014	0.000	0.010	0.063	
17-May	0.000	0.000	0.001	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	
18-May	Z	0.001	0.011	0.000	0.000	0.000	0.001	0.008	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011	
19-May	0.000	Z	0.000	0.000	0.001	0.041	0.059	0.001	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.059	
20-May	0.000	0.000	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.008	0.005	0.000	0.001	0.008	
21-May	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.007	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007	
22-May	0.001	0.002	0.000	0.000	Z	0.001	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	PF	0.000	0.001	0.000	0.000	0.000	0.054	0.004	0.054	
23-May	0.311	0.172	0.135	0.096	0.075	Z	0.020	0.053	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.128	0.044	0.311	
24-May	Z	0.000	0.009	0.057	0.092	0.190	0.164	0.055	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.190	
25-May	0.000	Z	0.000	0.012	0.006	0.002	0.038	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.044	0.017	0.000	0.000	0.278	0.017	0.278	
26-May	0.198	0.256	Z	0.219	0.141	0.132	0.132	0.129	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.054	0.256	
27-May	0.003	0.000	0.000	Z	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.008	0.029	0.002	0.029	
28-May	0.044	0.003	0.000	0.005	Z	0.000	0.004	0.070	0.079	0.091	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.069	0.092	0.113	0.088	0.063	0.032	0.113	
29-May	0.070	0.049	0.072	0.084	0.082	Z	0.098	0.146	0.073	0.000	0.004	0.004	0.000	0.000	0.000	0.001	0.000	0.039	0.027	0.000	0.031	0.044	0.000	0.011	0.036	0.146	
30-May	Z	0.000	0.202	0.383	0.321	0.469	0.306	0.034	0.006	0.001	0.046	0.039	0.010	0.000	0.056	0.212	0.279	0.264	0.230	0.165	0.163	0.168	0.178	0.169	0.161	0.469	
31-May	0.158	Z	0.119	0.162	0.320	0.438	0.447	0.418	0.377	0.345	0.283	0.231	0.181	0.183	0.210	0.165	0.214	0.248	0.216	0.141	0.103	0.031	0.009	0.000	0.217	0.447	
		0.036	0.027	0.025	0.045	0.048	0.062	0.056	0.044	0.029	0.018	0.014	0.011	0.007	0.006	0.010	0.012	0.016	0.020	0.016	0.015	0.019	0.022	0.020	0.028	Diurnal Average	
		0.311	0.256	0.202	0.383	0.321	0.469	0.447	0.418	0.377	0.345	0.283	0.231	0.181	0.183	0.210	0.212	0.279	0.264	0.230	0.165	0.163	0.168	0.178	0.278	Diurnal Maximum	
Z - zerospan		C - Calibration				PF - Power Failure																					



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	509	71.89	71.89
0.006 - 0.05	106	14.97	86.86
0.06 - 0.1	54	7.63	94.49
> 0.1	39	5.51	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	28	42	18	7	4	9	53	152	53	23	28	23	12	22	16	19	509
0.006 - 0.05	6	9	1	1	0	0	6	27	16	4	4	3	2	4	8	14	105
0.06 - 0.1	4	3	2	0	0	0	3	14	10	2	1	1	3	1	6	3	53
> 0.1	4	0	0	0	0	1	1	11	4	3	4	1	1	3	3	3	39
Totals	42	54	21	8	4	10	63	204	83	32	37	28	18	30	33	39	706

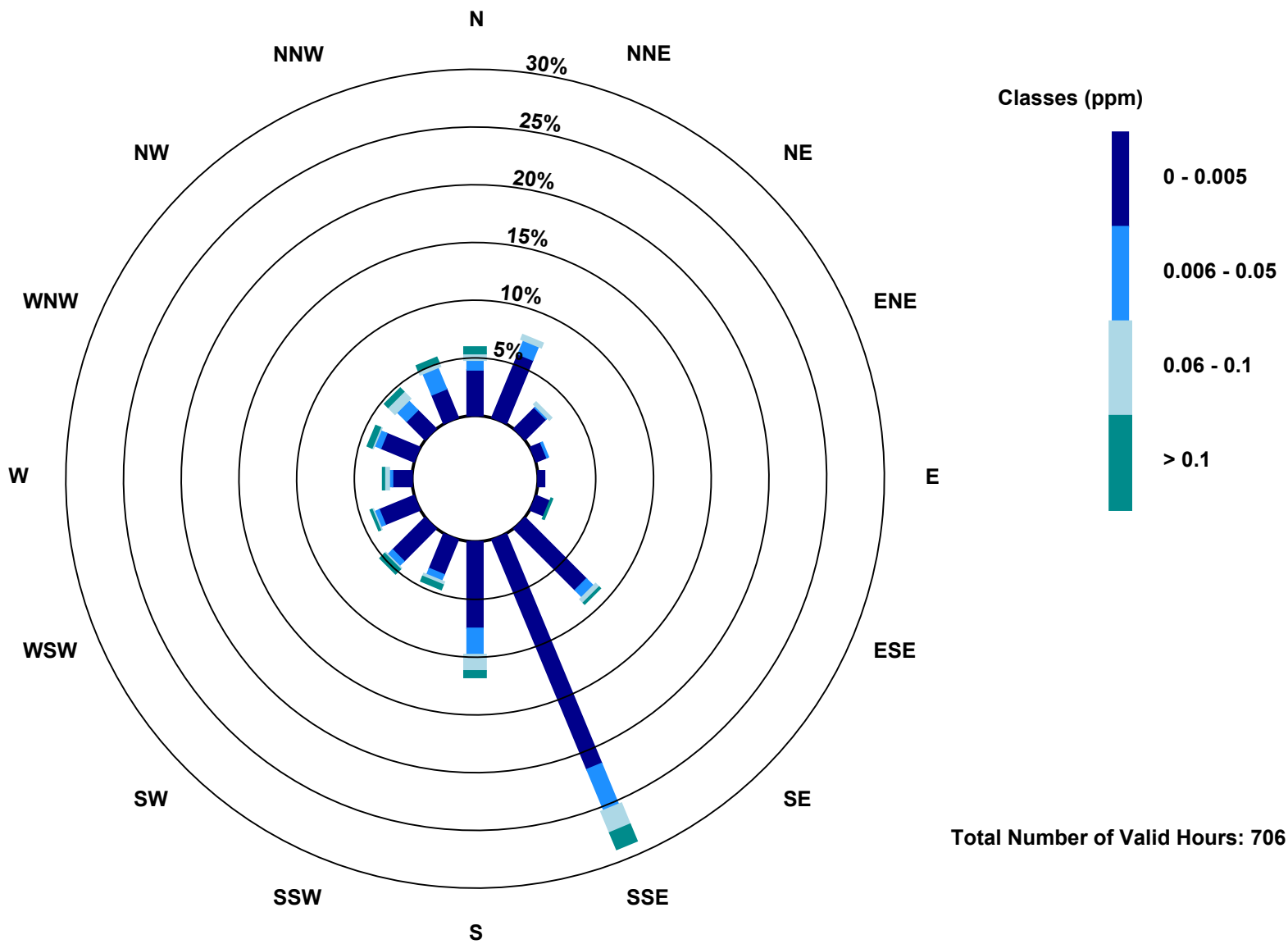
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter

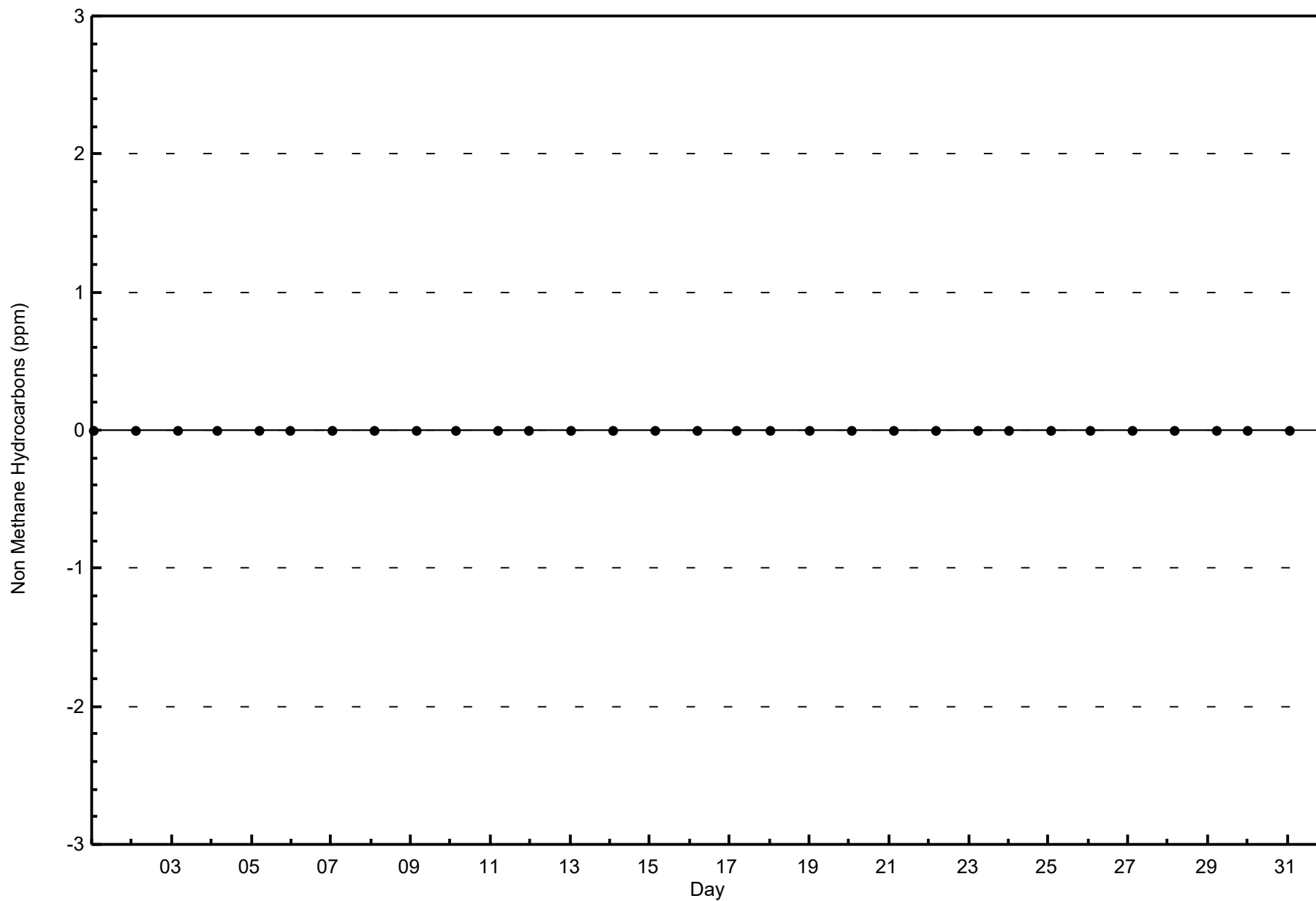


Total Number of Valid Hours: 706



Wood Buffalo Environmental Association
Zero Responses

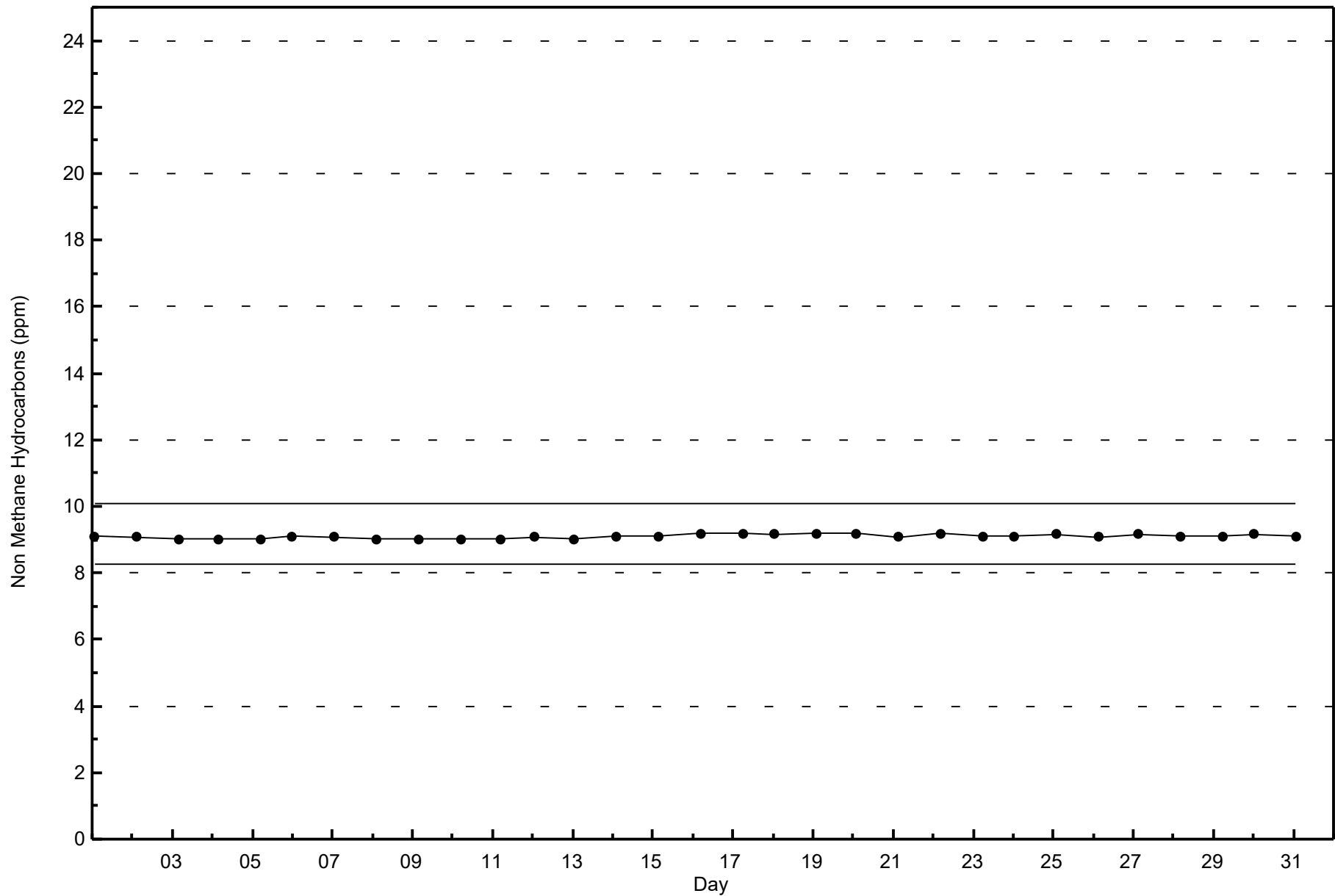
Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

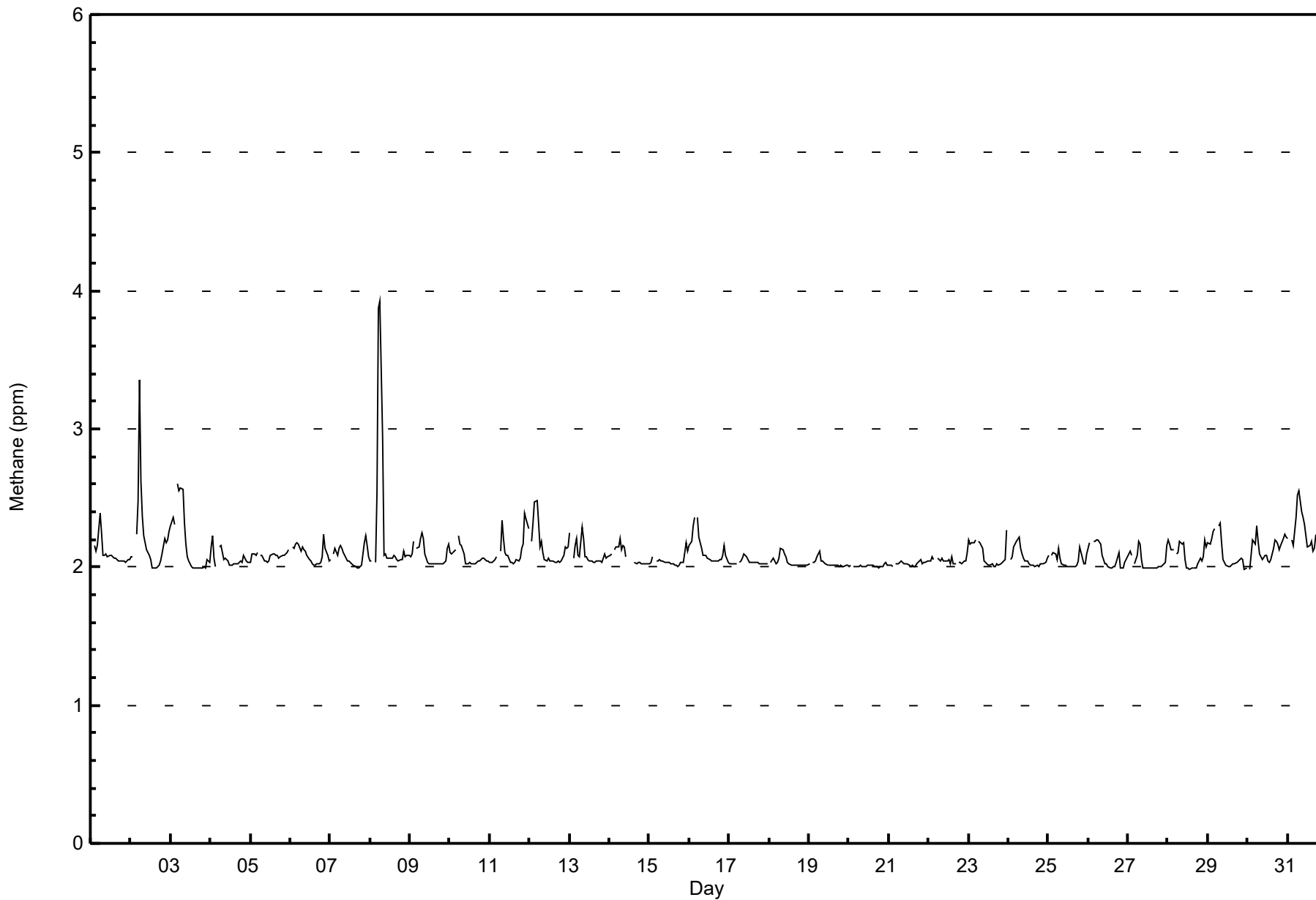
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): Maximum Value: 3.9 ppm on May 8 07:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 2.3 ppm on May 8																		Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9			
Minimum Value: 2.0 ppm on May 30 02:00 Maximum Diurnal Average: 2.3 ppm at hour 6 Monthly Average: 2.09 ppm																		Minimum Daily Average: 2.0 ppm on May 20 Minimum Diurnal Average: 2.0 ppm at hour 14 Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.6																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-May	2.1	Z	2.2	2.1	2.2	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.4											
2-May	2.1	2.1	Z	2.2	2.5	3.4	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.2	3.4												
3-May	2.3	2.4	2.3	Z	2.6	2.5	2.6	2.6	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.6												
4-May	2.1	2.2	2.1	2.0	Z	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2												
5-May	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1												
6-May	Z	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.1	2.2												
7-May	2.0	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.1	2.1	2.2												
8-May	2.0	2.0	Z	2.0	2.5	3.9	3.9	2.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	3.9												
9-May	2.1	2.1	2.2	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2												
10-May	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.2												
11-May	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.4	2.3	2.3	2.3	2.1	2.4												
12-May	Z	2.2	2.3	2.5	2.5	2.3	2.1	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.5												
13-May	2.3	Z	2.1	2.2	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3												
14-May	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.1	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2												
15-May	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.2													
16-May	2.2	2.2	2.3	2.4	Z	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.1	2.4												
17-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1												
18-May	Z	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1												
19-May	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1												
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0												
21-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1												
22-May	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1												
23-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.1	2.1	2.3												
24-May	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2												
25-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.1												
26-May	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2												
27-May	2.1	2.1	2.1	Z	2.0	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.2	2.2												
28-May	2.2	2.2	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.2												
29-May	2.2	2.2	2.2	2.3	2.3	Z	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.3												
30-May	Z	2.0	2.1	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.3												
31-May	2.2	Z	2.2	2.2	2.3	2.4	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.5												
Diurnal Average																																							
Diurnal Maximum																																							
Z - zerospan C - Calibration PF - Power Failure																																							



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	361	50.99	50.99
2.1 - 3.0	344	48.59	99.58
3.1 - 10.0	3	0.42	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	16	24	8	0	2	7	44	127	35	13	21	21	8	14	8	13	361
2.1 - 3.0	26	30	12	8	2	3	19	77	48	19	16	7	8	16	25	26	342
3.1 - 10.0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	54	21	8	4	10	63	204	83	32	37	28	18	30	33	39	706

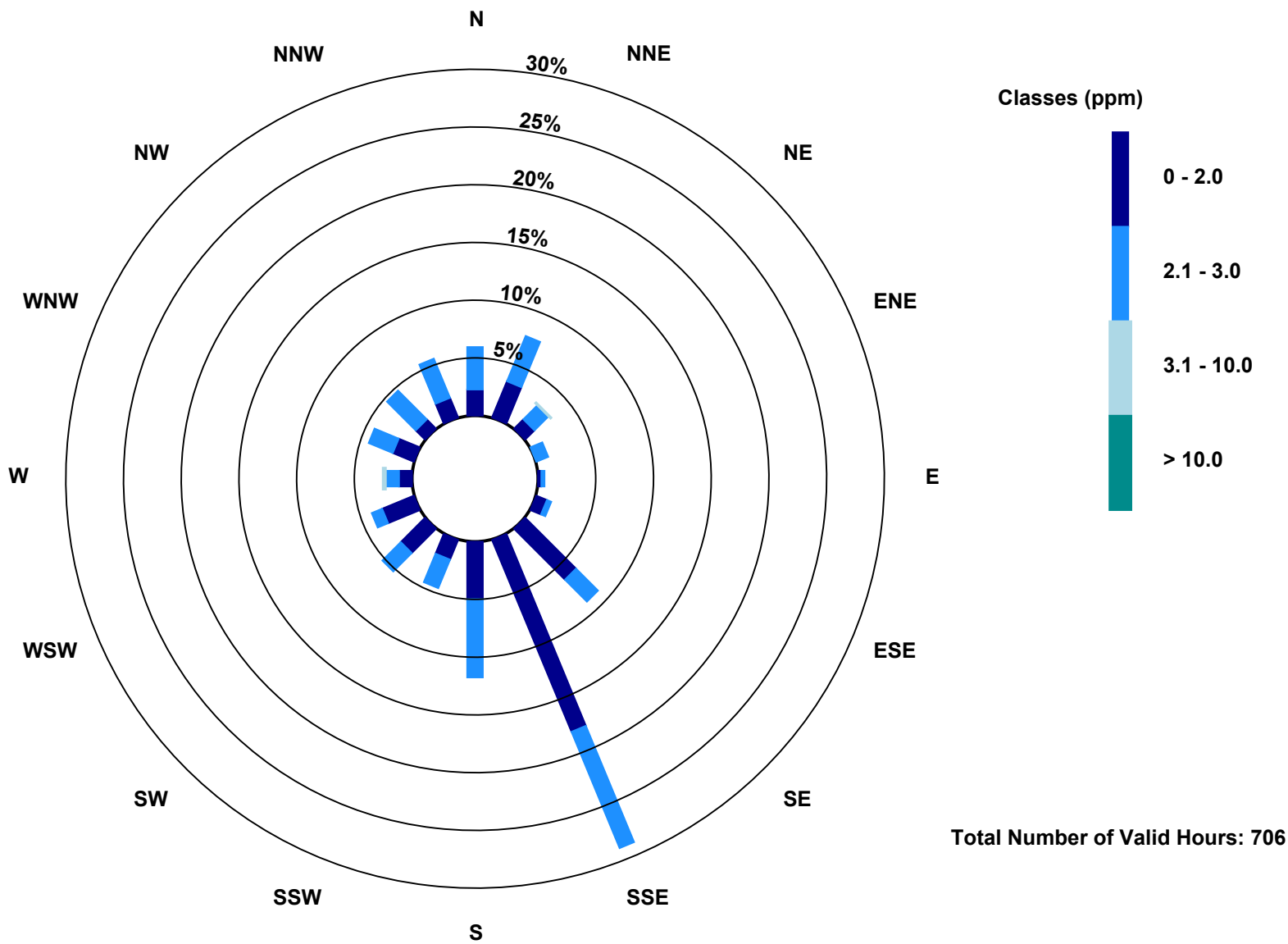
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter



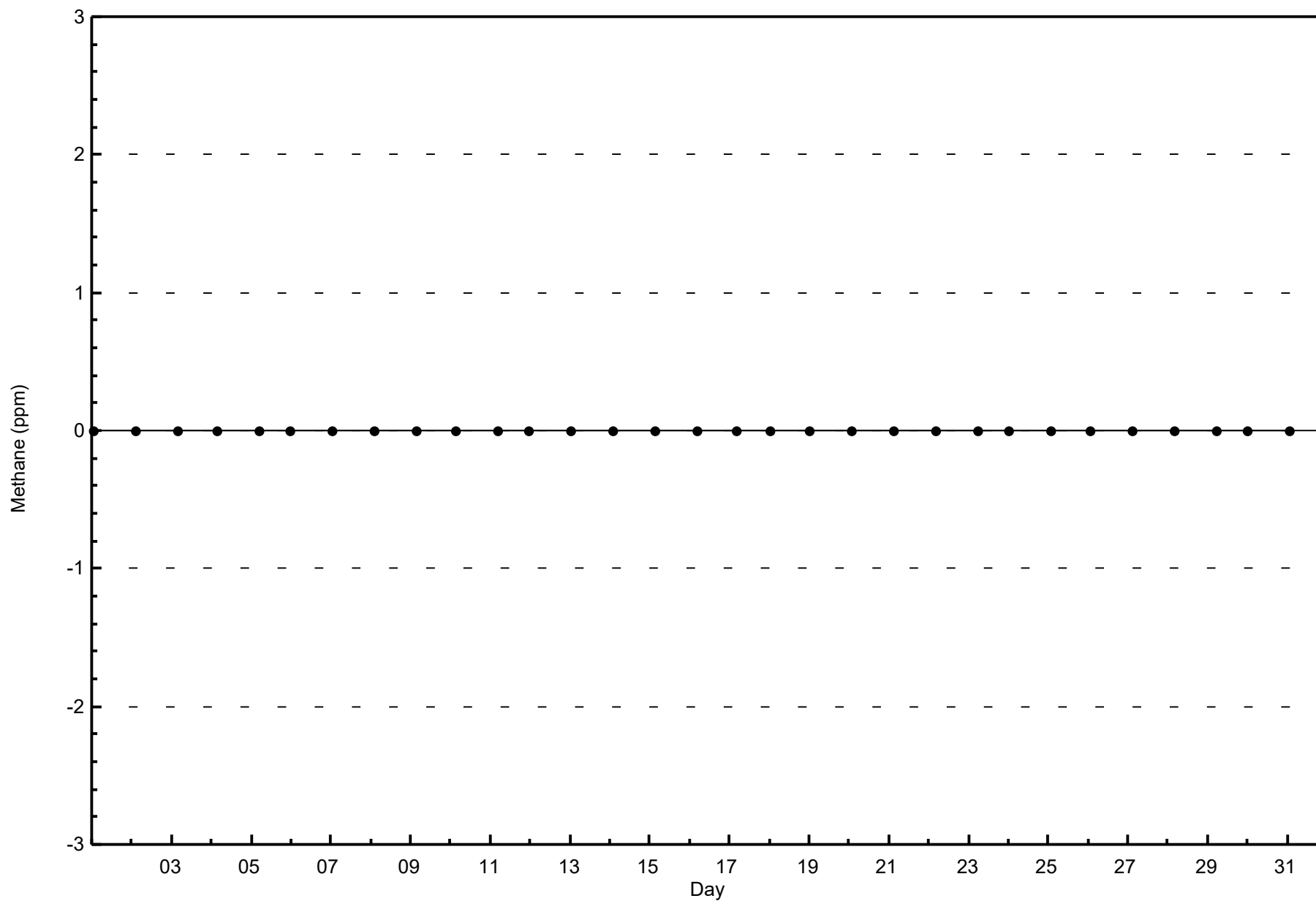


Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

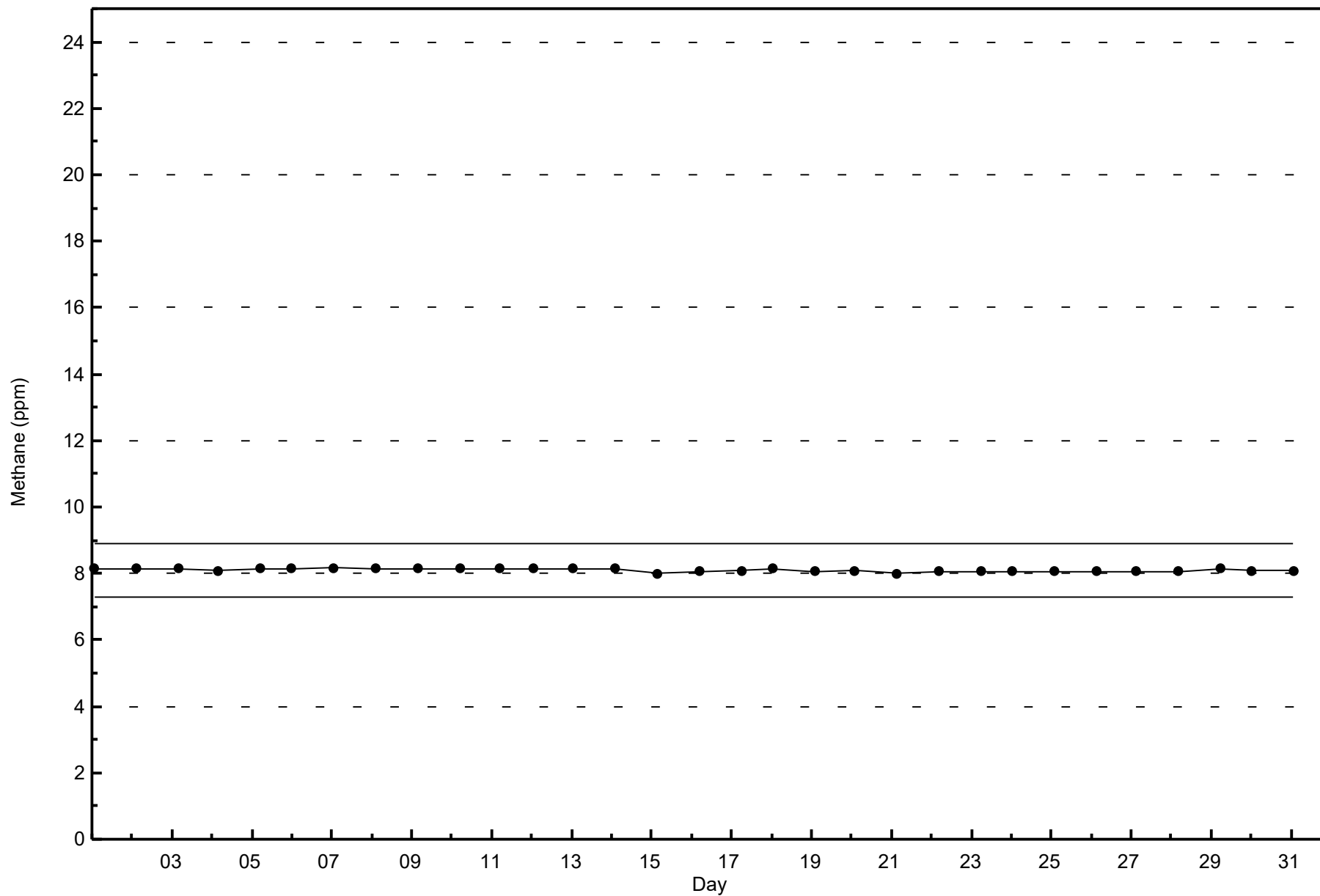
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

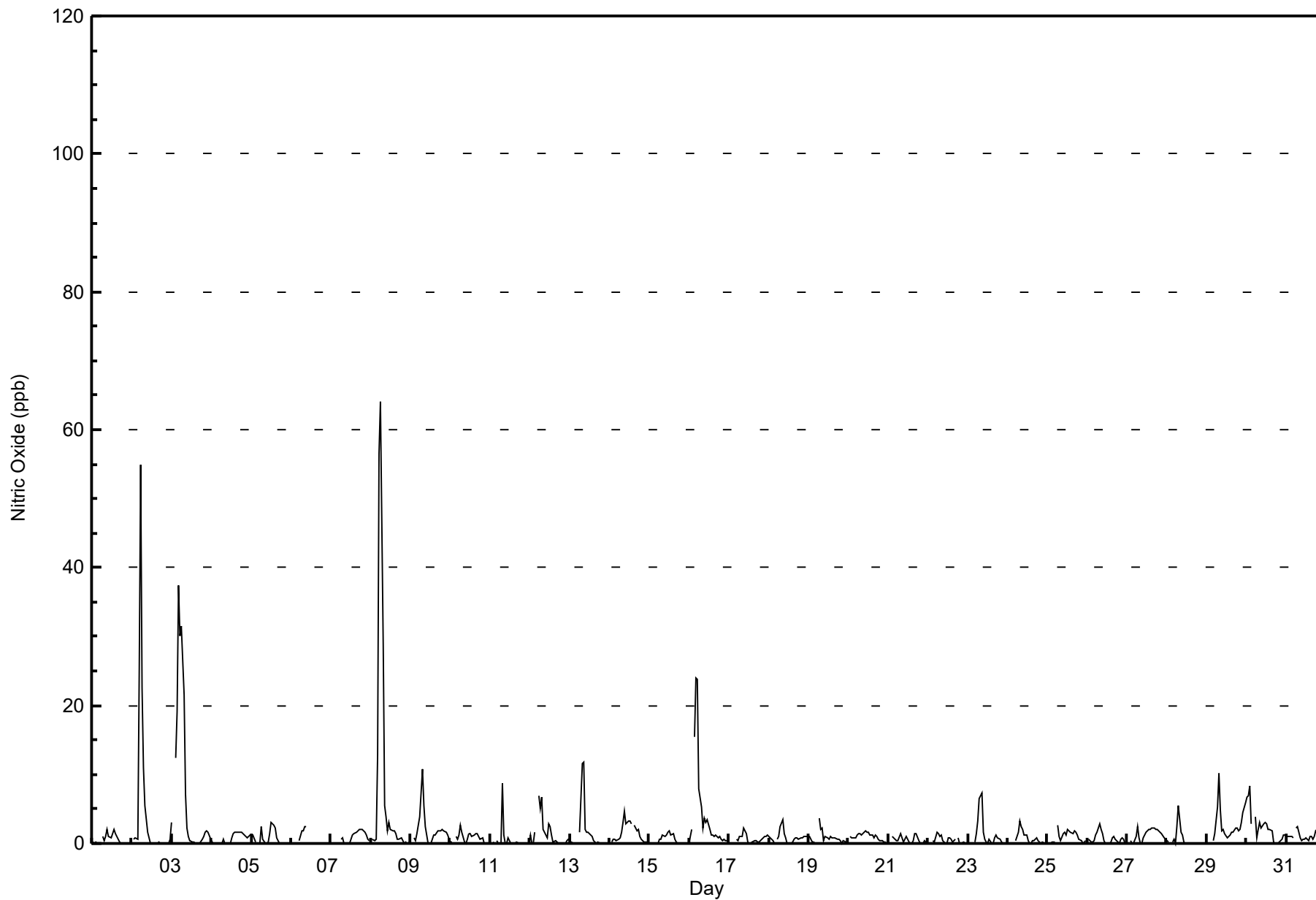
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 64.1 ppb on May 8 07:00																		Maximum Daily Average: 8.2 ppb on May 8								Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 05:00																		Minimum Daily Average: 0.5 ppb on May 22								Hours of Data: 705	
Maximum Diurnal Average: 7.7 ppb at hour 6																		Minimum Diurnal Average: 0.5 ppb at hour 21								Hours of Missing Data: 39	
Monthly Average: 1.71 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.7 Q ₃ = 1.5 P ₉₀ = 2.6 P ₉₉ = 25.1								Hours of Calibration: 37	
																										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.2	0.1	0.3	0.0	0.0	Z	0.9	0.3	1.0	2.1	1.1	0.8	1.5	2.0	1.5	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	2.1	
2-May	Z	0.7	0.8	0.6	25.2	54.9	22.5	11.1	5.4	1.6	0.9	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4	54.9	
3-May	3.1	Z	12.4	19.2	37.3	30.0	31.5	21.5	7.2	2.1	1.1	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.5	1.1	1.6	1.9	1.7	0.5	7.5	37.3	
4-May	0.2	0.0	Z	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.9	1.4	1.7	1.6	1.7	1.6	1.7	1.3	1.1	0.8	1.1	1.2	0.7	1.7	
5-May	1.3	1.1	0.3	Z	0.1	0.0	2.5	0.7	0.0	0.0	0.2	1.4	3.0	2.5	2.1	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.0	
6-May	0.0	0.0	0.0	0.0	Z	0.4	1.8	1.8	2.5	2.4	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	2.5	
7-May	0.0	0.0	0.0	0.0	0.0	Z	0.7	0.9	0.0	0.0	0.0	0.7	1.1	1.4	1.6	1.8	2.1	2.1	2.0	1.7	1.2	0.7	0.4	0.8	2.1		
8-May	Z	0.6	0.4	0.7	12.8	56.5	64.1	28.7	5.5	3.8	1.8	3.0	2.1	1.9	1.8	1.5	0.6	0.6	0.8	0.5	0.0	0.1	0.0	0.3	8.2	64.1	
9-May	0.0	Z	0.8	0.4	1.4	3.9	7.4	10.7	5.4	2.4	0.0	0.0	0.0	0.5	1.1	1.3	1.9	1.8	1.9	2.1	1.8	1.5	1.2	0.7	2.1	10.7	
10-May	0.3	0.2	Z	1.0	0.5	1.3	2.6	1.6	0.1	0.0	0.7	1.3	1.4	1.0	1.2	1.4	1.4	1.1	0.7	0.8	0.0	0.0	0.0	0.0	0.8	2.6	
11-May	0.0	0.1	0.2	Z	0.4	0.0	0.0	8.7	1.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	8.7	
12-May	1.1	0.0	0.0	1.6	Z	6.8	5.1	6.7	2.1	1.6	0.8	2.8	2.5	1.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.4	0.6	1.5	6.8	
13-May	0.5	0.3	0.1	0.0	0.0	Z	1.6	11.5	11.8	1.9	1.6	1.7	1.4	1.0	0.5	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	1.5	11.8	
14-May	Z	0.2	0.5	0.6	0.4	0.7	0.9	1.5	3.1	4.6	2.8	3.2	3.3	2.9	M	2.7	1.8	2.0	1.1	0.7	0.4	0.3	0.2	0.1	1.5	4.6	
15-May	0.0	Z	0.0	0.0	0.0	0.0	0.6	0.6	1.3	1.1	1.3	1.6	1.8	1.1	1.4	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8	
16-May	0.0	2.0	Z	15.4	23.9	23.7	7.9	5.3	2.3	3.7	3.0	3.4	2.0	1.3	1.2	1.0	1.2	0.8	1.0	0.5	0.4	0.7	0.5	0.4	4.4	23.9	
17-May	0.1	0.1	0.0	Z	0.5	0.3	0.9	1.1	0.9	2.3	1.4	0.3	0.0	0.0	0.3	0.5	0.3	0.2	0.3	0.3	0.6	1.0	1.1	1.1	0.6	2.3	
18-May	1.1	0.8	0.4	0.0	Z	0.6	1.0	2.4	3.4	1.4	0.9	0.0	0.0	0.0	0.3	0.6	0.8	0.9	0.7	0.7	0.8	1.1	1.0	1.1	0.9	3.4	
19-May	1.1	0.7	0.3	0.1	0.0	Z	3.7	2.1	2.3	0.4	1.0	0.7	0.7	1.0	0.8	0.9	0.7	0.6	0.7	0.5	0.1	0.4	0.3	0.0	0.8	3.7	
20-May	Z	1.0	0.9	0.9	0.8	1.3	1.4	1.3	1.2	1.5	1.7	1.7	1.6	1.3	1.2	0.8	1.2	1.0	0.5	0.5	0.4	0.2	0.1	0.0	1.0	1.7	
21-May	0.0	Z	1.1	0.9	0.6	0.4	0.5	1.4	0.8	0.1	0.5	1.0	0.3	0.0	0.1	0.5	1.3	1.5	0.4	0.1	0.0	0.1	0.4	0.0	0.5	1.5	
22-May	0.0	0.0	Z	0.5	0.2	1.5	1.4	1.0	1.2	0.5	0.0	0.0	0.9	0.9	0.6	0.2	0.5	PF	0.8	0.0	0.1	0.2	0.0	0.0	0.5	1.5	
23-May	0.0	0.0	0.0	Z	0.3	1.4	3.2	6.5	7.4	1.6	0.6	0.1	0.0	0.5	0.0	0.0	0.8	1.2	0.7	0.6	0.2	0.1	0.0	0.0	1.1	7.4	
24-May	0.0	0.0	0.0	0.0	Z	0.4	1.7	3.3	2.5	2.1	1.3	1.3	0.4	0.0	0.1	0.3	0.5	0.9	0.4	0.3	0.0	0.1	0.0	0.0	0.7	3.3	
25-May	0.0	0.0	0.0	0.2	0.3	Z	2.6	1.1	0.4	1.4	1.7	1.3	2.1	1.8	1.6	1.5	1.9	1.6	1.2	0.6	0.3	0.0	0.3	0.5	1.0	2.6	
26-May	Z	0.5	0.2	0.2	0.5	1.1	1.7	2.8	1.9	1.3	0.3	0.0	0.0	0.3	0.9	1.1	0.6	0.2	0.1	0.5	0.8	0.7	0.1	0.7	2.8		
27-May	0.0	Z	0.3	0.0	0.0	1.1	2.4	0.8	0.0	0.0	0.8	1.6	1.9	2.1	2.1	2.2	2.3	2.1	2.0	1.8	1.7	1.4	0.8	0.7	1.2	2.4	
28-May	0.4	0.1	Z	0.2	0.7	0.0	2.4	5.4	1.6	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4	
29-May	0.0	0.0	0.0	Z	0.5	1.4	5.2	10.2	5.0	1.8	2.1	1.4	0.9	1.0	1.3	1.6	1.6	2.2	2.2	1.8	2.0	3.1	4.4	6.0	2.4	10.2	
30-May	6.8	6.9	8.3	2.8	Z	3.9	0.9	2.0	3.0	2.2	2.8	3.0	2.8	2.1	2.1	1.8	0.2	0.0	0.0	0.0	0.1	0.5	1.2	1.2	2.4	8.3	
31-May	1.0	1.0	1.1	1.0	0.8	Z	2.3	2.4	0.9	0.5	0.6	0.5	0.8	0.4	1.0	1.0	0.6	0.9	1.8	1.3	1.5	1.2	1.0	0.3	1.0	2.4	
0.7 0.6 1.1 1.8 4.1 7.7 5.9 5.0 2.6 1.5 1.0 1.1 1.1 1.0 0.9 0.9 0.8 0.8 0.7 0.6 0.5 0.5 0.6 0.5																									Diurnal Average		
6.8 6.9 12.4 19.2 37.3 56.5 64.1 28.7 11.8 4.6 3.0 3.4 3.3 2.9 2.1 2.7 2.3 2.2 2.2 2.1 2.0 3.1 4.4 6.0																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	693	98.30	98.30
21 - 40	9	1.28	99.57
41 - 80	3	0.43	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	42	55	20	9	6	10	59	206	79	25	36	29	17	28	31	40	692
21 - 40	1	2	0	0	0	0	0	1	1	0	1	1	0	1	0	0	8
11 - 80	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	57	21	9	6	10	59	207	80	25	37	30	19	29	31	40	703

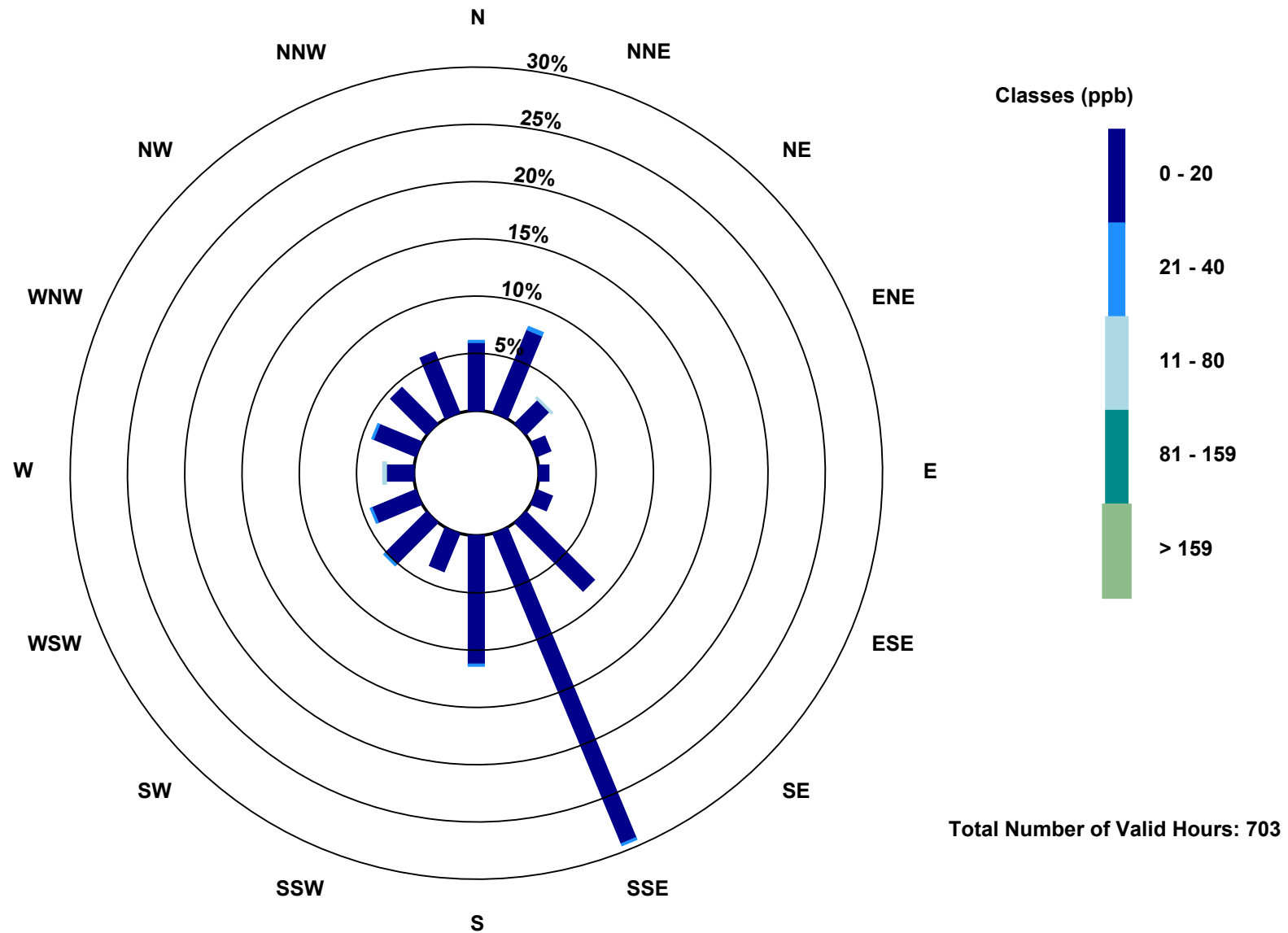
Total Number of Valid Hours: 703

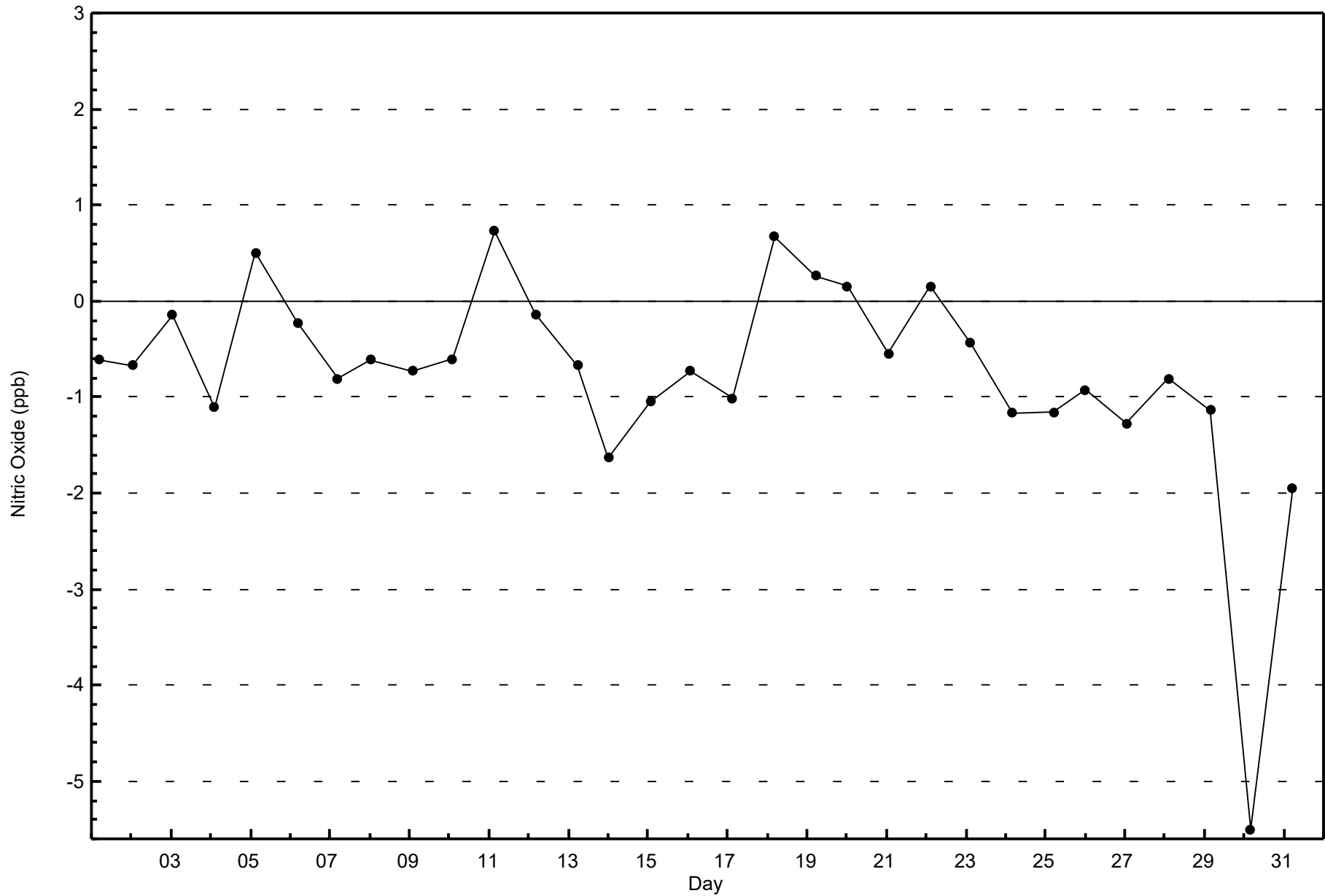
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter

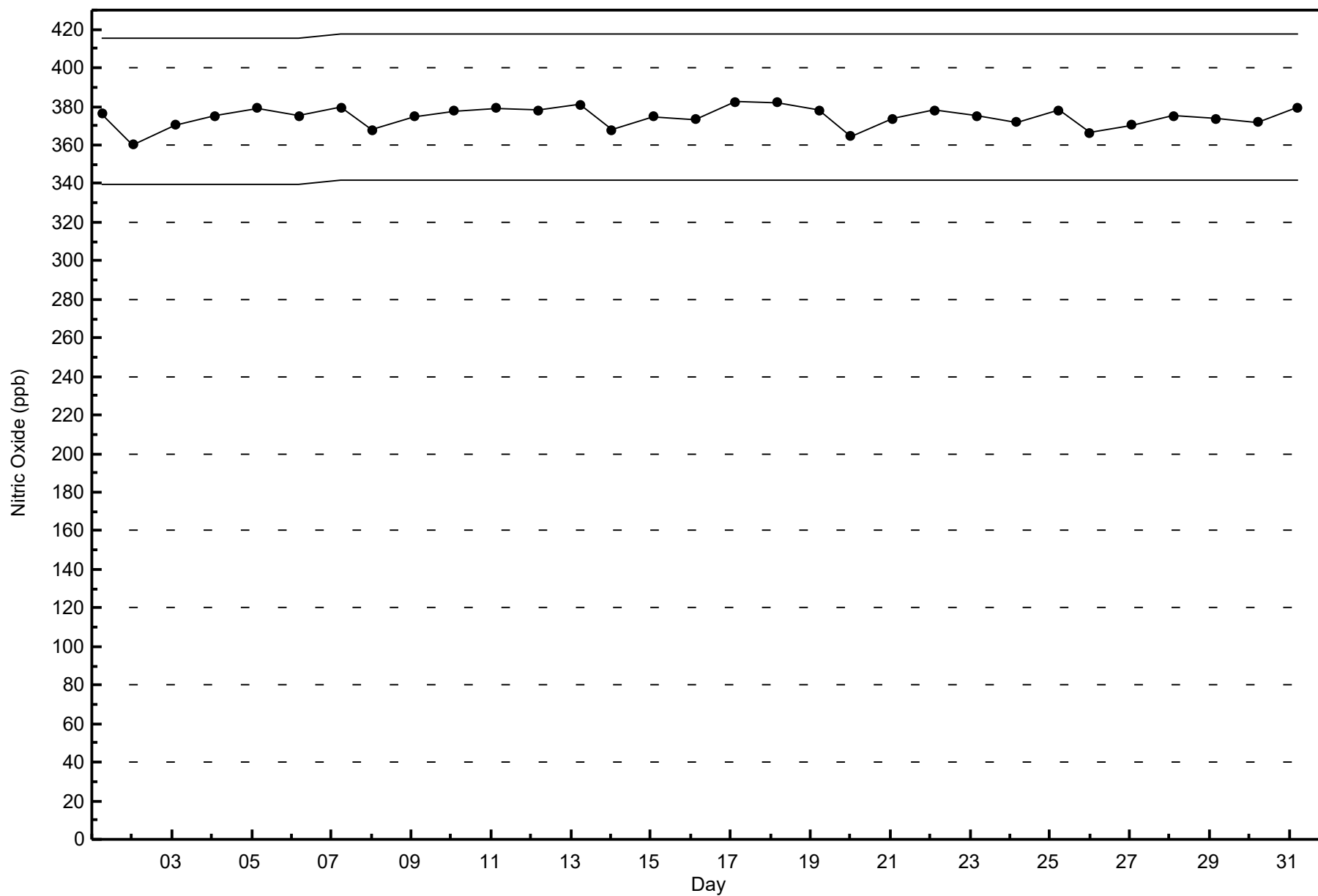






Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

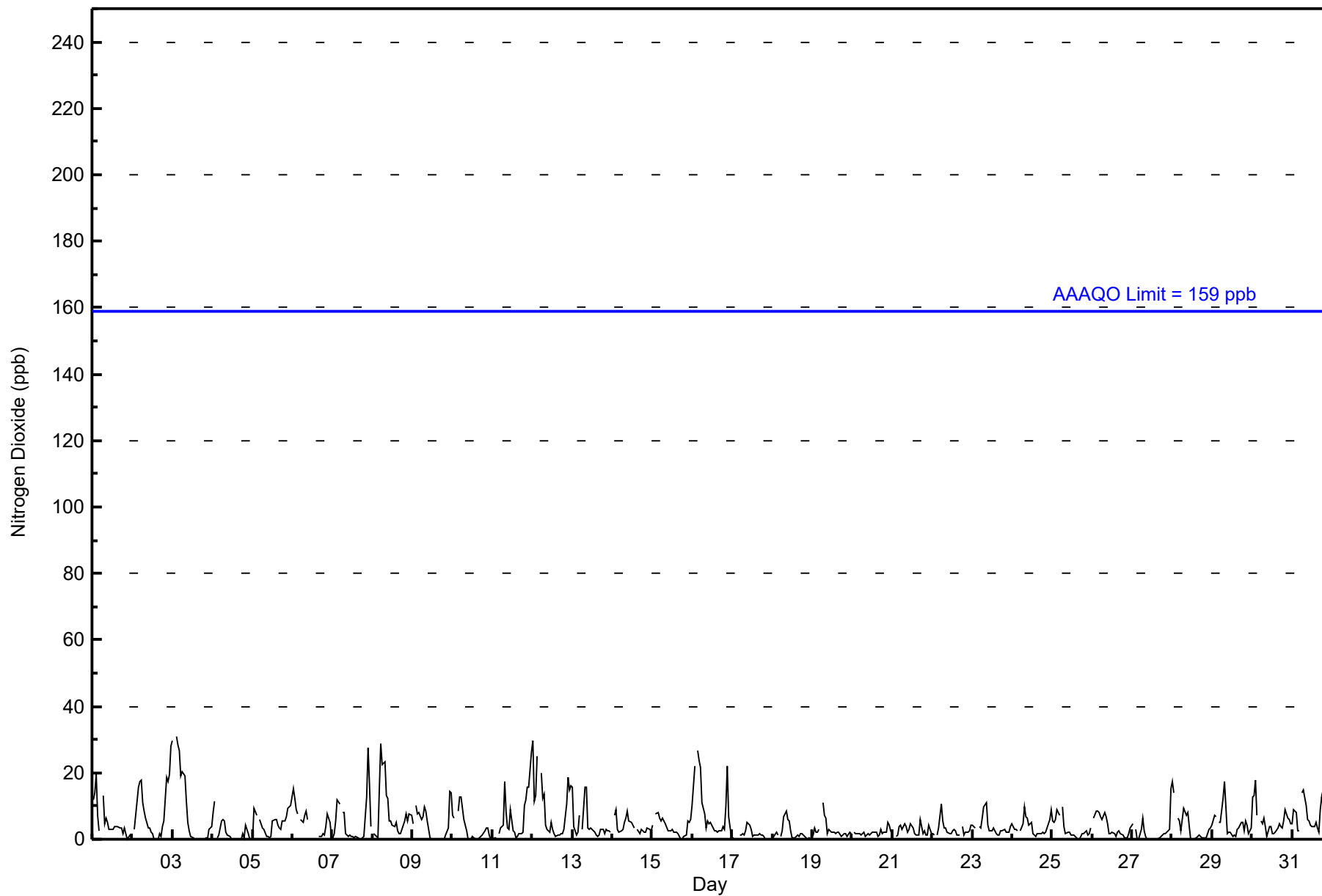
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 31.1 ppb on May 3 03:00 Maximum Daily Average: 9.3 ppb on May 12																				Hours in Service: 744						
Minimum Value: 0.0 ppb on May 2 14:00 Minimum Daily Average: 1.3 ppb on May 17 Maximum Diurnal Average: 8.6 ppb at hour 8 Minimum Diurnal Average: 1.5 ppb at hour 16 Monthly Average: 4.60 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 1.4 Median = 2.8 Q ₃ = 5.9 P ₉₀ = 11.2 P ₉₉ = 26.7																				Hours of Data: 705						
																				Hours of Missing Data: 39						
																				Hours of Calibration: 37						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	11.7	14.0	19.4	7.1	2.4	Z	13.1	4.7	6.4	5.1	2.8	2.8	2.9	4.0	3.9	3.7	3.5	3.3	1.7	3.5	1.8	0.2	1.1	1.0	5.2	19.4
2-May	Z	2.9	7.2	15.6	17.3	17.9	11.2	8.6	6.5	3.5	3.2	2.3	1.8	0.0	0.0	0.0	1.8	1.0	3.9	5.6	18.8	17.2	19.3	28.1	8.4	28.1
3-May	29.5	Z	31.1	28.3	26.6	19.2	20.2	18.9	11.4	4.9	2.6	1.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	2.8	4.0	8.8	31.1
4-May	8.1	11.5	Z	0.3	1.2	5.7	5.8	5.5	2.3	1.3	0.7	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.5	0.4	4.3	1.5	0.0	0.0	2.2	11.5
5-May	0.0	9.2	7.4	Z	6.1	4.5	3.6	3.1	1.0	0.8	0.6	1.0	5.3	5.9	6.1	4.4	3.3	2.8	5.3	5.6	6.8	9.2	9.7	10.1	4.9	10.1
6-May	15.1	12.2	8.7	7.7	Z	5.8	5.2	7.1	8.6	6.0	C	C	C	C	C	C	0.9	0.7	1.5	1.4	3.9	7.8	5.1	0.7	--	15.1
7-May	0.4	1.5	5.7	11.8	10.4	Z	7.9	8.0	1.9	0.8	1.4	0.9	0.9	0.6	0.7	0.4	0.0	0.0	0.3	1.0	12.7	27.5	16.4	3.7	5.0	27.5
8-May	Z	1.7	0.9	0.5	15.1	28.9	22.6	23.4	13.2	12.1	5.7	5.5	4.4	4.0	4.9	2.6	1.8	1.8	4.2	5.5	7.6	5.3	7.7	7.2	8.1	28.9
9-May	4.5	Z	10.1	7.6	7.9	5.9	6.9	9.6	8.5	5.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4	3.5	14.6	14.0	4.4	14.6
10-May	7.1	6.5	Z	8.4	12.7	12.7	9.2	6.1	2.7	0.0	0.1	0.2	0.7	0.3	0.2	0.1	0.5	0.7	1.1	2.6	3.3	3.6	1.2	0.0	3.5	12.7
11-May	0.0	0.6	0.5	Z	1.6	3.5	4.4	17.5	8.1	3.4	2.9	8.7	2.7	2.1	0.3	0.8	1.8	1.9	2.2	10.0	12.0	15.6	15.8	26.4	6.2	26.4
12-May	29.6	11.4	13.2	24.8	Z	20.0	12.2	13.4	4.1	2.9	2.2	5.1	3.1	1.9	1.0	1.3	1.3	1.6	1.6	3.1	10.4	18.8	14.7	16.1	9.3	29.6
13-May	15.6	4.0	1.1	2.3	7.4	Z	2.9	15.7	15.8	3.4	2.8	3.4	2.8	2.1	1.3	0.9	1.4	2.9	2.8	1.6	2.9	2.4	2.5	2.2	4.4	15.8
14-May	Z	7.1	8.7	3.1	2.0	2.7	3.1	5.0	6.3	8.4	5.3	5.2	4.3	3.5	M	3.1	1.8	2.8	2.7	2.1	2.3	3.2	2.9	2.6	4.0	8.7
15-May	4.4	Z	7.6	7.9	6.4	5.5	6.4	5.4	4.6	2.7	2.6	2.4	3.0	2.3	2.2	1.5	1.0	0.2	0.2	0.8	1.1	5.7	5.0	5.8	3.7	7.9
16-May	10.3	22.0	Z	26.7	23.8	21.4	11.2	7.5	3.6	5.3	4.5	5.1	3.2	2.6	2.4	2.3	2.5	2.7	3.8	2.9	9.6	21.9	6.9	0.5	8.8	26.7
17-May	0.3	0.1	0.0	Z	1.1	1.2	1.5	1.4	2.4	5.2	4.4	2.9	1.0	1.1	1.4	1.3	1.5	1.4	1.1	0.7	0.2	0.1	0.0	0.1	1.3	5.2
18-May	0.1	0.8	2.2	1.4	Z	0.7	2.5	6.6	8.6	5.9	5.5	2.7	0.5	0.6	1.0	1.3	1.0	1.5	1.5	0.7	0.4	0.2	0.3	0.2	2.0	8.6
19-May	1.2	3.4	2.0	2.2	3.1	Z	10.9	7.0	6.2	1.8	3.1	2.2	2.2	2.0	1.8	2.2	2.0	1.0	1.2	1.6	1.5	1.0	2.2	1.8	2.8	10.9
20-May	Z	2.1	1.6	1.8	1.5	1.1	1.6	2.1	1.0	1.6	1.4	1.8	2.0	2.2	2.1	0.9	1.3	3.0	1.7	2.0	2.0	4.9	4.3	2.4	2.0	4.9
21-May	1.9	Z	0.7	1.2	3.8	4.2	2.9	4.7	4.0	2.3	2.8	4.5	3.2	1.6	1.4	1.3	1.4	5.9	1.8	2.7	1.4	1.3	4.4	1.5	2.6	5.9
22-May	1.7	1.3	Z	1.4	3.3	10.4	5.7	3.4	3.3	2.3	1.9	1.9	2.7	2.8	2.7	1.4	1.3	PF	3.7	1.1	2.0	2.1	2.4	4.3	2.9	10.4
23-May	4.3	3.9	3.3	Z	3.8	3.3	6.3	9.8	11.1	4.2	2.7	2.4	2.4	3.6	1.8	1.1	1.1	2.6	2.4	3.1	2.2	2.1	2.0	4.0	3.6	11.1
24-May	4.8	3.1	3.0	2.6	Z	2.5	4.8	9.8	6.8	6.5	4.1	5.2	1.9	1.3	0.7	1.9	1.7	1.7	2.1	1.6	2.0	3.5	5.9	9.0	3.8	9.8
25-May	5.3	5.1	6.1	8.8	7.3	Z	9.6	3.9	1.5	2.1	2.1	1.4	1.3	1.4	0.9	0.1	0.2	0.7	1.5	1.6	2.7	1.2	1.5	3.2	3.0	9.6
26-May	Z	6.2	8.6	8.3	8.1	6.6	6.1	8.0	6.6	4.5	1.7	1.7	2.2	1.5	1.0	2.0	2.6	1.8	1.3	0.6	0.3	0.3	1.6	3.3	3.7	8.6
27-May	4.6	Z	3.0	0.0	0.0	2.9	6.4	2.5	1.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.8	1.4	1.6	1.5	2.1	2.9	15.1	2.0	15.1
28-May	17.2	14.0	Z	6.3	5.7	2.6	6.0	9.5	7.2	7.9	3.7	0.1	0.0	0.0	0.5	0.8	1.3	1.0	0.4	0.6	0.4	1.8	3.0	3.6	4.1	17.2
29-May	4.2	7.2	6.6	Z	4.9	5.2	12.1	17.3	9.8	1.9	2.2	2.1	0.7	1.3	1.0	2.8	3.3	4.9	5.2	2.4	5.4	4.1	1.8	3.5	4.8	17.3
30-May	12.7	13.2	17.7	7.2	Z	5.4	4.7	6.3	3.7	0.8	3.9	3.7	1.8	1.5	2.2	3.5	4.5	3.7	3.4	5.7	8.7	6.4	5.9	4.7	5.7	17.7
31-May	4.7	8.9	8.0	2.4	2.5	Z	13.8	14.9	10.2	6.1	5.3	4.2	3.8	3.8	5.2	3.5	2.2	8.9	12.5	7.5	6.0	0.9	1.4	1.4	6.0	14.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	688	97.59	97.59
21 - 40	17	2.41	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	41	55	20	9	6	10	59	207	80	24	37	30	18	26	28	36	686
21 - 40	2	2	1	0	0	0	0	0	0	1	0	0	1	3	3	4	17
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	57	21	9	6	10	59	207	80	25	37	30	19	29	31	40	703

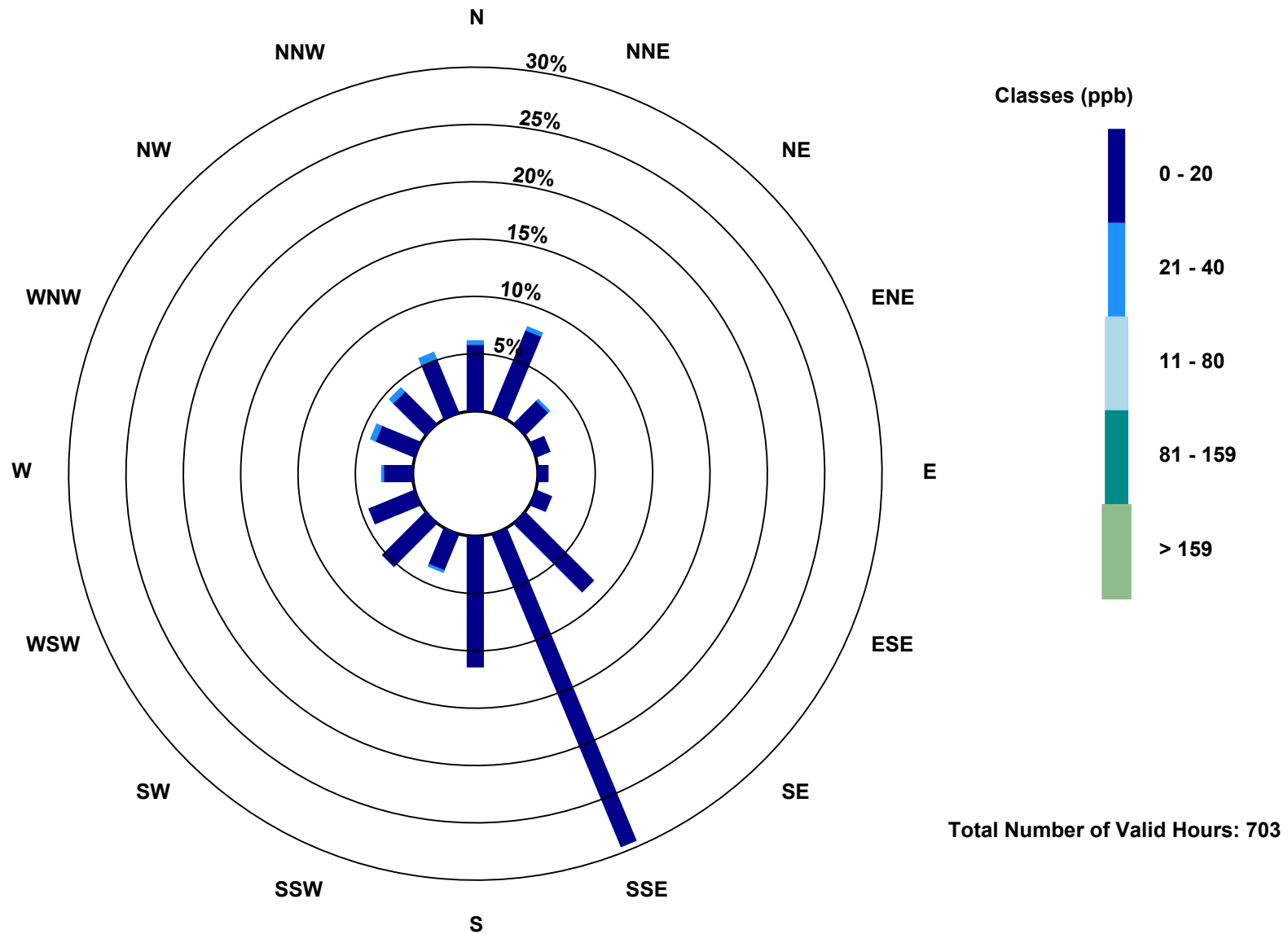
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

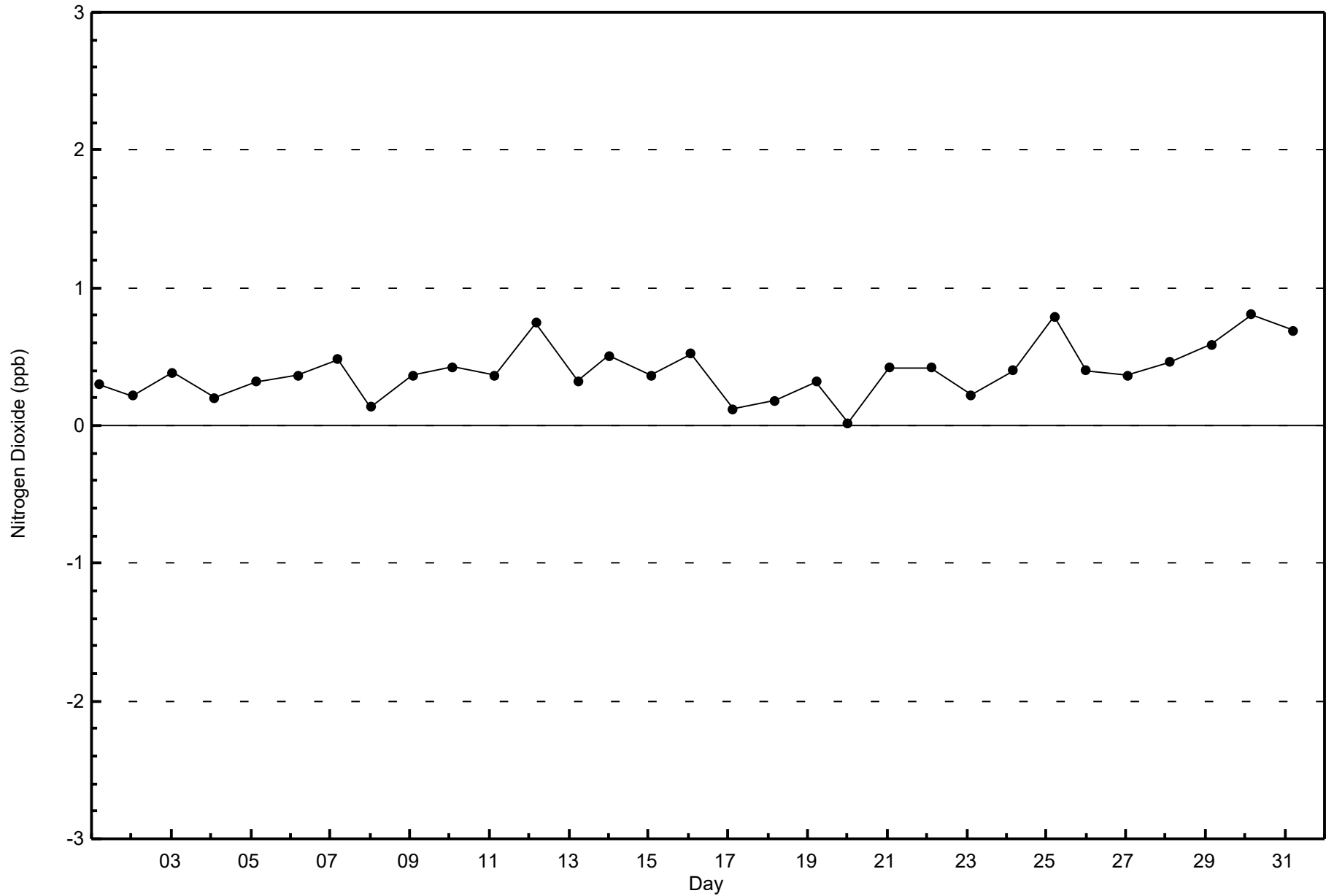
Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association
Zero Responses

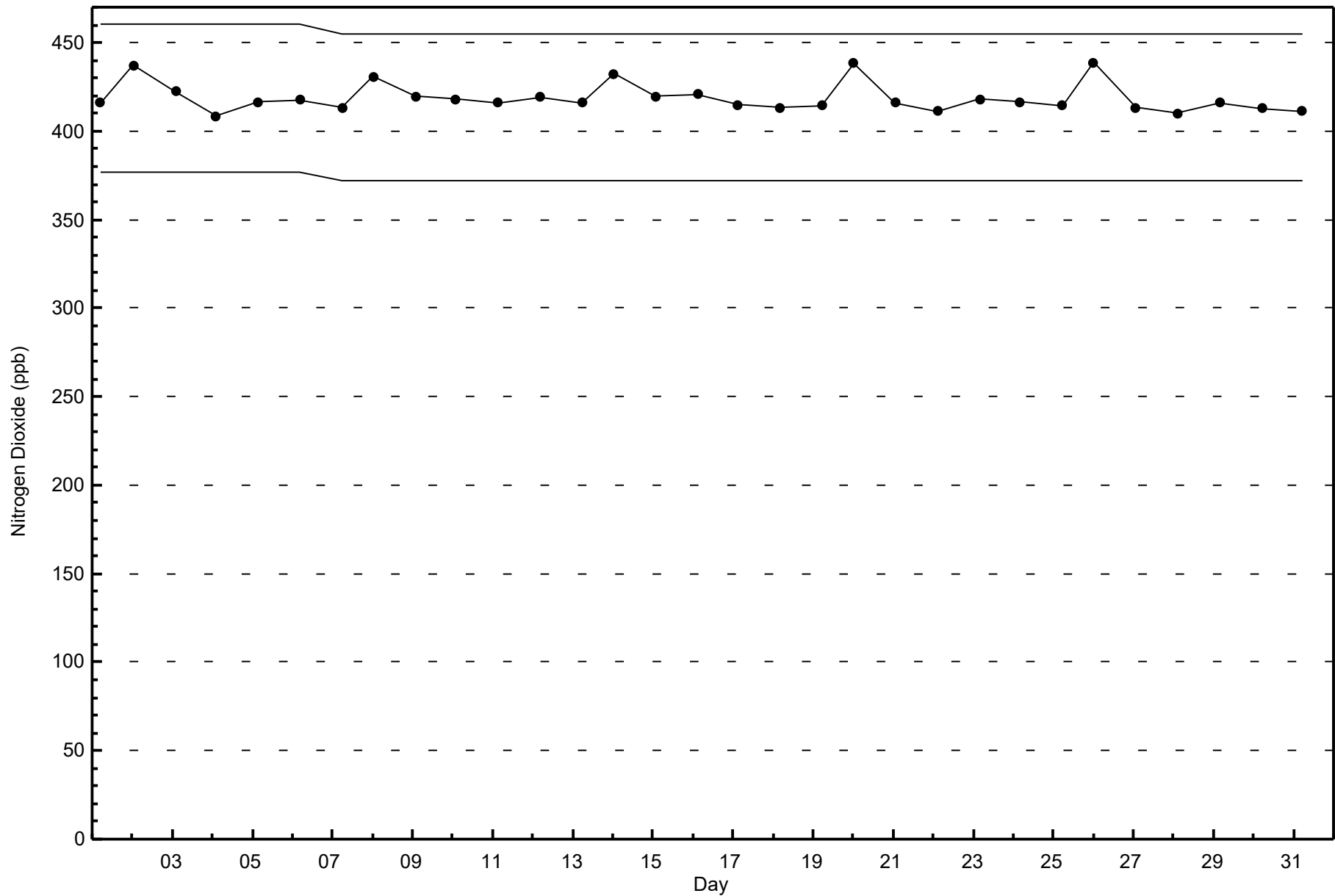
Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

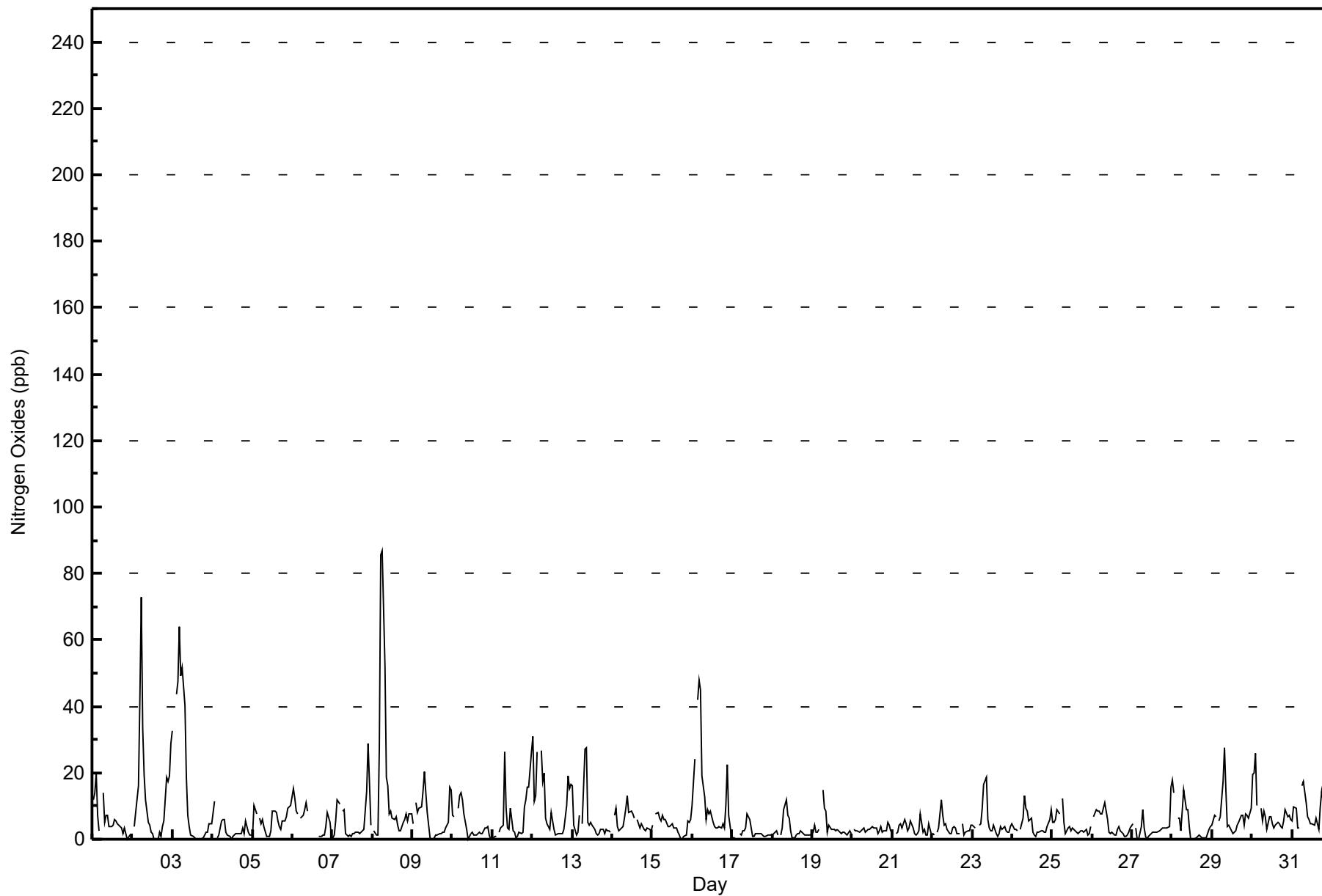
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 86.7 ppb on May 8 07:00																			Maximum Daily Average: 16.3 ppb on May 3										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 14:00																			Minimum Daily Average: 1.9 ppb on May 17										Hours of Data: 705	
Maximum Diurnal Average: 15.7 ppb at hour 6																			Minimum Diurnal Average: 2.4 ppb at hour 17										Hours of Missing Data: 39	
Monthly Average: 6.31 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 1.1 Q ₁ = 1.9 Median = 3.5 Q ₃ = 7.3 P ₉₀ = 14.0 P ₉₉ = 47.7										Hours of Calibration: 37	
																													Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	11.9	14.1	19.7	7.1	2.4	Z	14.0	5.0	7.4	7.2	3.9	3.6	4.4	6.0	5.4	4.7	3.8	3.3	1.7	3.5	1.8	0.2	1.1	1.1	5.8	19.7				
2-May	Z	3.6	8.0	16.2	42.5	72.8	33.7	19.7	11.9	5.1	4.1	2.3	1.8	0.0	0.0	0.0	2.0	1.0	3.9	5.6	18.8	17.2	19.3	28.6	13.8	72.8				
3-May	32.6	Z	43.5	47.5	63.9	49.2	51.7	40.4	18.6	7.0	3.7	1.4	0.7	0.4	0.0	0.0	0.0	0.0	0.5	1.3	1.9	2.1	4.5	4.5	16.3	63.9				
4-May	8.3	11.5	Z	0.3	1.2	5.7	5.8	6.1	2.3	1.3	0.7	0.0	1.0	1.4	1.7	1.6	1.7	1.8	3.2	1.7	5.4	2.3	1.1	1.2	2.9	11.5				
5-May	1.3	10.3	7.7	Z	6.2	4.5	6.1	3.8	1.0	0.8	0.8	2.4	8.3	8.4	8.2	5.3	3.7	2.8	5.3	5.6	6.8	9.2	9.7	10.1	5.6	10.3				
6-May	15.1	12.2	8.7	7.7	Z	6.2	7.0	8.9	11.1	8.4	C	C	C	C	C	C	0.9	0.7	1.5	1.4	3.9	7.8	5.1	0.7	--	15.1				
7-May	0.4	1.5	5.7	11.8	10.4	Z	8.6	8.9	1.9	0.8	1.4	0.9	1.6	1.7	2.1	2.0	1.8	2.1	2.4	3.0	14.4	28.7	17.1	4.1	5.8	28.7				
8-May	Z	2.3	1.3	1.2	27.9	85.4	86.7	52.1	18.7	15.9	7.5	8.5	6.5	5.9	6.7	4.1	2.4	2.4	5.0	6.0	7.6	5.4	7.7	7.5	16.3	86.7				
9-May	4.5	Z	10.9	8.0	9.3	9.8	14.3	20.3	13.9	7.8	0.4	0.0	0.0	0.5	1.1	1.3	1.9	1.8	1.9	2.3	3.2	5.0	15.8	14.7	6.5	20.3				
10-May	7.4	6.7	Z	9.4	13.2	14.0	11.8	7.7	2.8	0.0	0.8	1.5	2.1	1.3	1.4	1.5	1.9	1.8	1.8	3.4	3.3	3.6	1.2	0.0	4.3	14.0				
11-May	0.0	0.7	0.7	Z	2.0	3.5	4.4	26.2	9.3	3.4	2.9	9.5	2.7	2.1	0.3	0.8	1.9	1.9	2.2	10.0	12.0	15.6	15.8	26.4	6.7	26.4				
12-May	30.7	11.4	13.2	26.4	Z	26.8	17.3	20.1	6.2	4.5	3.0	7.9	5.6	3.2	1.3	1.6	1.5	1.6	1.6	3.1	10.4	18.9	15.1	16.7	10.8	30.7				
13-May	16.1	4.3	1.2	2.3	7.4	Z	4.5	27.2	27.6	5.3	4.4	5.1	4.2	3.1	1.8	1.1	1.5	3.2	2.8	1.6	2.9	2.4	2.5	2.3	5.9	27.6				
14-May	Z	7.3	9.2	3.7	2.4	3.4	4.0	6.5	9.4	13.0	8.1	8.4	7.6	6.4	M	5.8	3.6	4.8	3.8	2.8	2.7	3.5	3.1	2.7	5.6	13.0				
15-May	4.4	Z	7.6	7.9	6.4	5.5	7.0	6.0	5.9	3.8	3.9	4.0	4.8	3.4	3.6	2.0	1.1	0.2	0.2	0.8	1.1	5.7	5.0	5.8	4.2	7.9				
16-May	10.3	24.0	Z	42.1	47.7	45.1	19.1	12.8	5.9	9.0	7.5	8.5	5.2	3.9	3.6	3.3	3.7	3.5	4.8	3.4	10.0	22.6	7.4	0.9	13.2	47.7				
17-May	0.4	0.2	0.0	Z	1.6	1.5	2.4	2.5	3.3	7.5	5.8	3.2	1.0	1.1	1.7	1.8	1.8	1.6	1.4	1.0	0.8	1.1	1.1	1.2	1.9	7.5				
18-May	1.2	1.6	2.6	1.4	Z	1.3	3.5	9.0	12.0	7.3	6.4	2.7	0.5	0.6	1.3	1.9	1.8	2.4	2.2	1.4	1.2	1.3	1.3	1.3	2.9	12.0				
19-May	2.3	4.1	2.3	2.3	3.1	Z	14.6	9.1	8.5	2.2	4.1	2.9	2.9	3.0	2.6	3.1	2.7	1.6	1.9	2.1	1.6	1.4	2.5	1.8	3.6	14.6				
20-May	Z	3.1	2.5	2.7	2.3	2.4	3.0	3.4	2.2	3.1	3.1	3.5	3.6	3.5	3.3	1.7	2.5	4.0	2.2	2.5	2.4	5.1	4.4	2.4	3.0	5.1				
21-May	1.9	Z	1.8	2.1	4.4	4.6	3.4	6.1	4.8	2.4	3.3	5.5	3.5	1.6	1.5	1.8	2.7	7.4	2.2	2.8	1.4	1.4	4.8	1.5	3.2	7.4				
22-May	1.7	1.3	Z	1.9	3.5	11.9	7.1	4.4	4.5	2.8	1.9	1.9	3.6	3.7	3.3	1.6	1.8	PF	4.5	1.1	2.1	2.3	2.4	4.3	3.4	11.9				
23-May	4.3	3.9	3.3	Z	4.1	4.7	9.5	16.3	18.5	5.8	3.3	2.5	2.4	4.1	1.8	1.1	1.9	3.8	3.1	3.7	2.4	2.2	2.0	4.0	4.7	18.5				
24-May	4.8	3.1	3.0	2.6	Z	2.9	6.5	13.1	9.3	8.6	5.4	6.5	2.3	1.3	0.8	2.2	2.2	2.6	2.5	1.9	2.0	3.6	5.9	9.0	4.4	13.1				
25-May	5.3	5.1	6.1	9.0	7.6	Z	12.2	5.0	1.9	3.5	3.8	2.7	3.4	3.2	2.5	1.6	2.1	2.3	2.7	2.2	3.0	1.2	1.8	3.7	4.0	12.2				
26-May	Z	6.7	8.8	8.5	8.6	7.7	7.8	10.8	8.5	5.8	2.0	1.7	2.2	1.5	1.3	2.9	3.7	2.4	1.5	0.7	0.8	1.1	2.3	3.4	4.4	10.8				
27-May	4.6	Z	3.3	0.0	0.0	4.0	8.8	3.3	1.0	0.0	0.9	1.7	2.0	2.1	2.1	2.3	2.6	2.9	3.4	3.4	3.2	3.5	3.7	15.8	3.2	15.8				
28-May	17.6	14.1	Z	6.5	6.4	2.6	8.4	14.9	8.8	9.1	3.9	0.1	0.0	0.0	0.5	0.8	1.3	1.0	0.4	0.6	0.4	1.8	3.0	3.6	4.6	17.6				
29-May	4.2	7.2	6.6	Z	5.4	6.6	17.3	27.5	14.8	3.7	4.3	3.5	1.6	2.3	2.3	4.4	4.9	7.1	7.4	4.2	7.4	7.2	6.2	9.5	7.2	27.5				
30-May	19.5	20.1	26.0	10.0	Z	9.3	5.6	8.3	6.7	3.0	6.7	6.7	4.6	3.6	4.3	5.3	4.7	3.7	3.4	5.7	8.8	6.9	7.1	5.9	8.1	26.0				
31-May	5.7	9.9	9.1	3.4	3.3	Z	16.1	17.3	11.1	6.6	5.9	4.7	4.6	4.2	6.2	4.5	2.8	9.8	14.3	8.8	7.5	2.1	2.4	1.7	7.0	17.3				
8.3 7.3 8.2 9.3 11.3 15.7 13.6 13.6 8.7 5.3 3.8 3.8 3.2 2.8 2.5 2.4 2.4 2.9 3.1 3.1 4.9 6.2 5.9 6.3																										Diurnal Average				
32.6 24.0 43.5 47.5 63.9 85.4 86.7 52.1 27.6 15.9 8.1 9.5 8.3 8.4 8.2 5.8 4.9 9.8 14.3 10.0 18.8 28.7 19.3 28.6																										Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	675	95.74	95.74
21 - 40	17	2.41	98.16
41 - 80	11	1.56	99.72
81 - 159	2	0.28	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	40	53	20	9	6	10	59	205	79	24	35	29	17	25	27	36	674
21 - 40	2	2	0	0	0	0	0	2	1	1	1	0	0	2	4	2	17
11 - 80	1	2	0	0	0	0	0	0	0	0	1	1	1	2	0	2	10
81 - 159	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	57	21	9	6	10	59	207	80	25	37	30	19	29	31	40	703

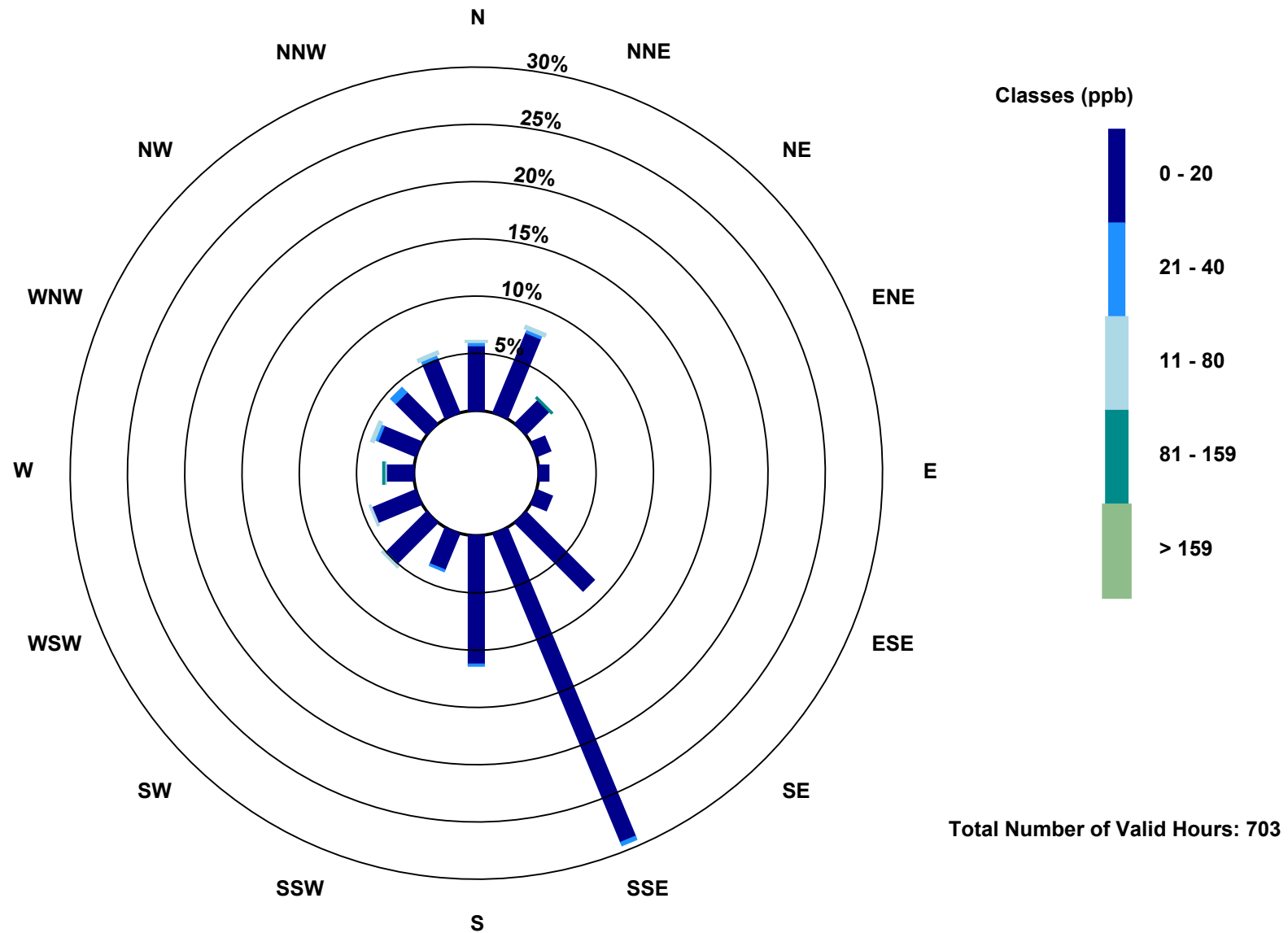
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

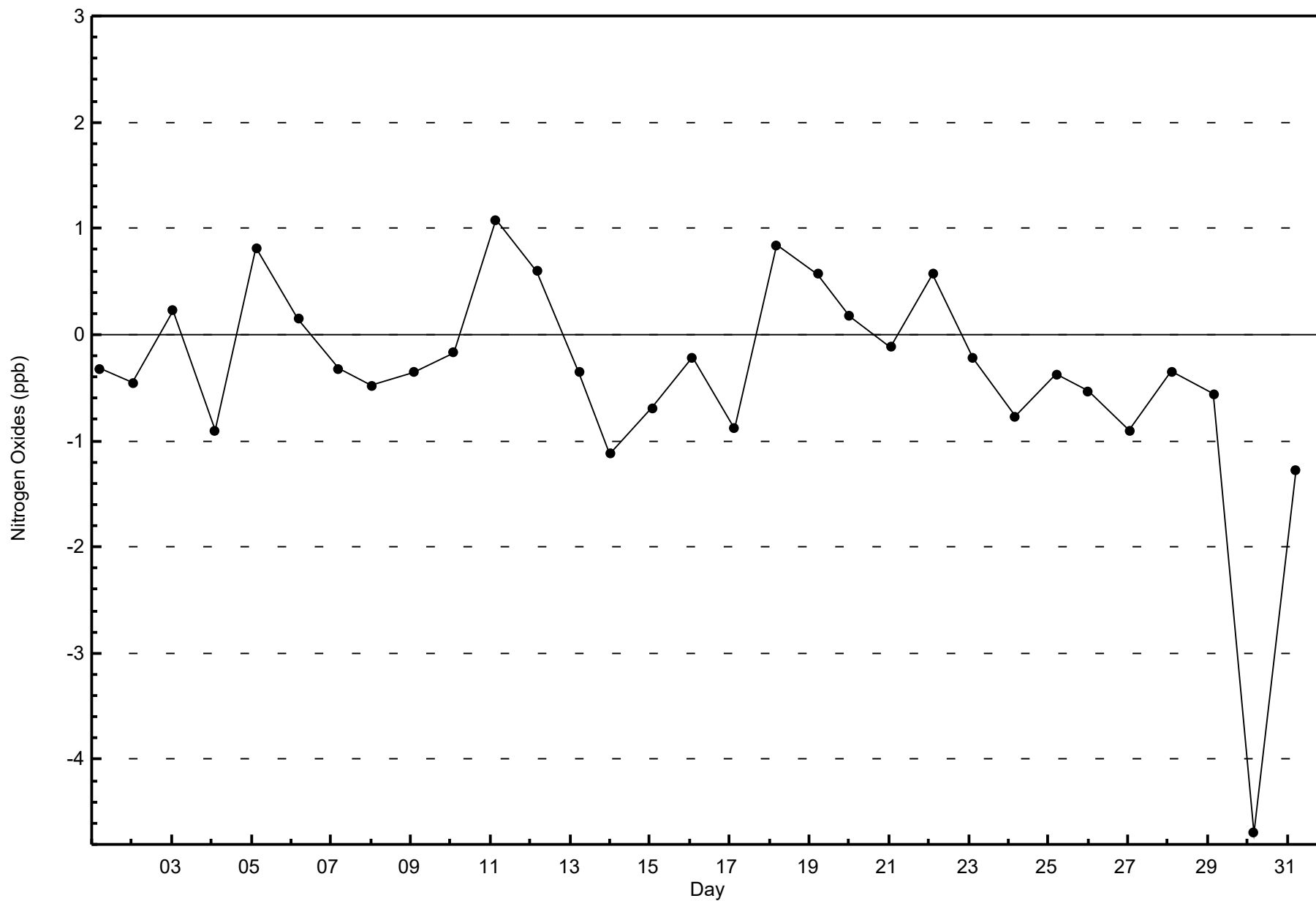
Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association
Zero Responses

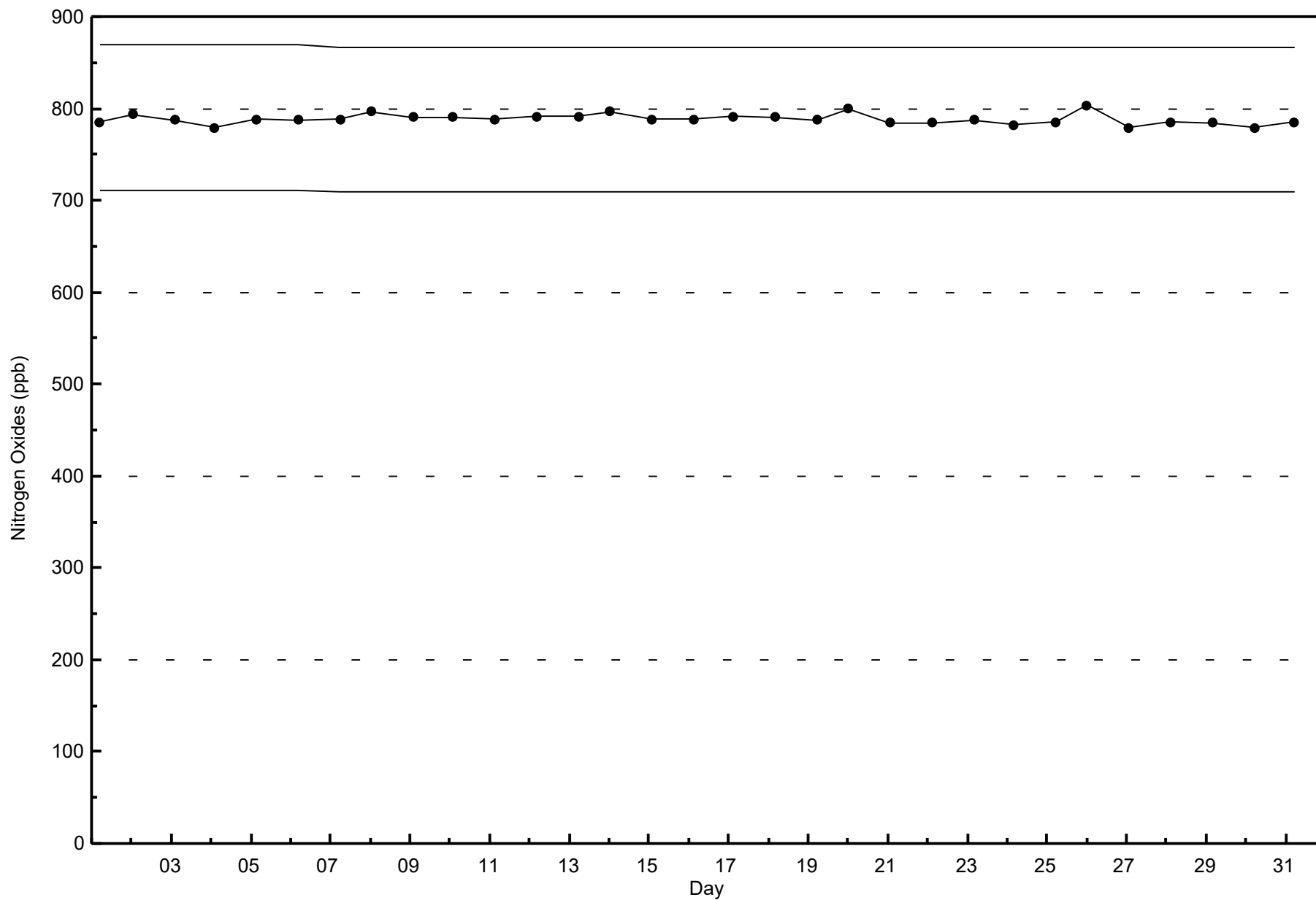
Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

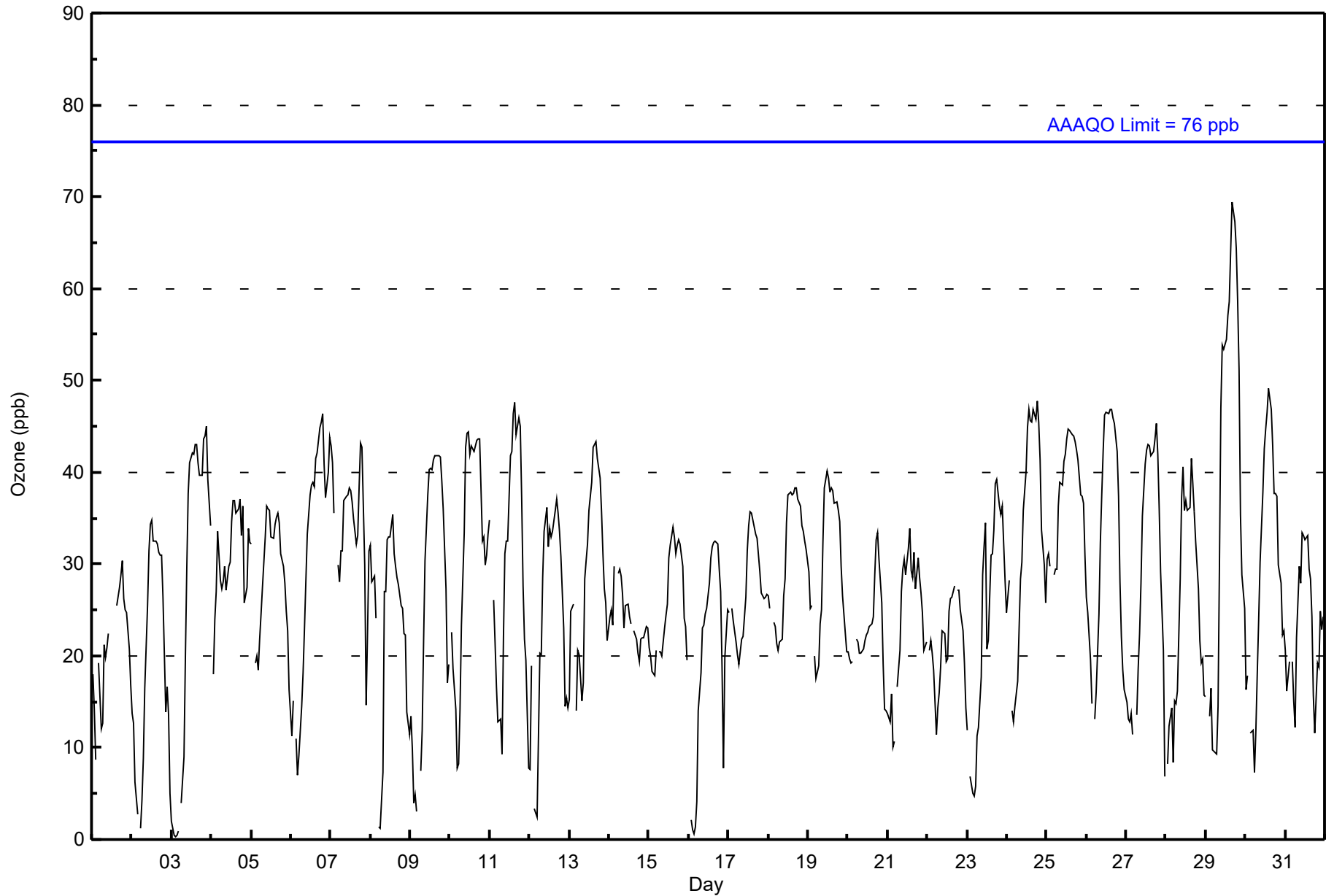
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 69.4 ppb on May 29 17:00 Maximum Daily Average: 39.4 ppb on May 29																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7						
Minimum Value: 0.3 ppb on May 3 03:00 Maximum Diurnal Average: 37.9 ppb at hour 15 Monthly Average: 27.71 ppb										Minimum Daily Average: 19.7 ppb on May 16 Minimum Diurnal Average: 14.5 ppb at hour 5 Percentiles: P ₁ = 1.2 P ₁₀ = 12.8 Q ₁ = 19.9 Median = 28.1 Q ₃ = 35.9 P ₉₀ = 42.5 P ₉₉ = 54.4																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	18.0	14.1	8.7	Z	19.2	12.1	12.6	21.2	19.9	20.9	22.5	C	C	C	C	25.5	27.4	28.9	30.4	26.3	25.1	24.6	20.8	16.8	20.8	30.4
2-May	13.7	12.6	6.2	2.7	Z	1.2	4.2	8.8	16.4	25.5	31.4	34.3	34.7	32.5	32.4	32.1	31.3	31.0	31.0	26.4	13.9	16.7	13.6	5.0	19.9	34.7
3-May	2.0	0.4	0.3	0.4	0.9	Z	4.0	9.0	19.8	29.6	37.6	41.1	42.1	42.0	43.0	43.1	41.1	39.6	39.7	43.6	43.9	45.0	39.1	34.2	27.9	45.0
4-May	Z	18.0	24.0	27.0	33.6	28.3	27.4	28.1	29.7	27.2	29.8	30.2	34.6	37.0	36.8	35.5	35.9	37.1	33.1	36.3	25.7	27.5	33.8	32.3	30.8	37.1
5-May	32.3	Z	19.3	20.0	18.4	21.8	24.5	27.4	32.9	36.3	35.9	35.9	32.9	32.8	34.3	35.2	35.5	34.5	31.1	29.8	27.9	24.8	22.7	16.3	28.8	36.3
6-May	11.3	15.1	Z	11.0	7.1	9.2	14.5	18.1	23.1	28.3	33.3	37.6	38.7	38.9	38.5	41.5	42.2	44.8	45.5	46.4	40.9	37.2	39.9	43.8	30.7	46.4
7-May	42.8	41.0	35.5	Z	29.8	28.0	31.5	31.4	36.9	37.4	37.6	38.3	38.0	36.8	34.9	32.2	33.1	38.4	43.2	42.7	29.9	14.7	22.5	31.4	34.3	43.2
8-May	32.1	28.1	28.7	24.1	Z	1.3	1.2	7.3	26.9	27.0	32.7	32.9	32.9	35.4	31.2	29.8	28.6	27.8	25.5	25.2	22.4	22.3	13.9	11.4	23.9	35.4
9-May	13.4	9.7	4.0	4.9	3.0	Z	7.5	11.9	21.5	30.4	37.5	40.3	40.4	40.2	41.4	41.8	41.8	41.8	41.6	39.1	36.0	27.3	17.1	19.1	26.6	41.8
10-May	Z	22.5	18.7	14.2	7.7	8.2	14.2	23.3	33.4	42.6	44.2	44.4	42.0	42.9	42.3	42.9	43.5	43.7	43.6	32.5	32.9	29.9	31.0	33.3	31.9	44.4
11-May	34.7	Z	26.1	21.5	16.6	12.9	13.1	9.2	22.0	31.1	32.5	32.5	41.8	42.3	46.3	47.5	44.0	46.0	45.0	37.2	27.6	21.8	19.5	7.8	29.5	47.5
12-May	7.6	18.9	Z	3.4	2.5	11.3	20.3	20.1	28.6	33.6	36.2	31.9	33.9	33.0	33.5	35.8	37.0	35.5	33.6	30.8	23.0	14.4	15.3	14.3	24.1	37.0
13-May	15.3	24.9	25.6	Z	14.1	20.6	20.1	15.1	17.1	28.4	30.4	32.1	35.9	38.8	42.7	43.0	43.4	41.5	39.3	35.7	31.1	27.3	25.8	21.7	29.1	43.4
14-May	24.3	25.0	23.3	29.7	Z	29.0	29.4	28.7	26.7	23.1	25.5	25.7	24.2	23.5	M	22.7	21.8	20.3	19.4	21.8	21.9	22.0	23.3	23.0	24.3	29.7
15-May	20.9	19.9	18.3	17.9	20.5	Z	20.5	20.4	19.9	23.1	24.5	25.7	30.7	32.1	34.0	32.9	31.1	32.0	32.7	32.2	29.7	24.1	23.2	19.5	25.5	34.0
16-May	Z	2.2	1.1	0.6	1.4	4.1	14.1	18.1	23.0	23.4	24.6	25.2	27.9	30.7	31.9	32.3	32.5	32.2	29.5	27.0	18.8	7.8	19.8	25.0	19.7	32.5
17-May	24.8	Z	25.1	23.8	21.6	20.2	19.1	20.4	21.8	22.2	26.4	31.4	34.1	35.7	35.6	34.1	33.2	32.7	30.9	29.2	26.8	26.2	26.4	26.7	27.3	35.7
18-May	26.5	25.2	Z	23.6	23.1	21.3	20.6	21.6	21.9	26.5	28.4	34.5	37.5	37.9	37.5	37.7	38.3	38.3	37.0	36.2	34.1	33.5	32.5	31.6	30.7	38.3
19-May	29.1	25.1	25.5	Z	19.9	17.6	18.9	23.4	25.1	32.3	38.3	40.1	39.4	37.8	38.3	38.0	36.6	36.8	35.9	34.6	29.8	26.5	22.4	20.4	30.1	40.1
20-May	20.4	19.7	19.2	19.4	Z	21.8	21.5	20.2	20.3	20.7	21.6	22.2	22.5	23.1	23.5	24.3	28.8	32.7	33.4	30.5	25.8	19.1	14.1	14.0	22.6	33.4
21-May	13.7	12.8	15.9	10.0	10.7	Z	16.6	20.5	27.1	29.5	30.5	28.8	31.7	33.8	29.3	28.6	31.3	27.4	30.7	28.6	26.8	24.8	20.5	21.5	24.0	33.8
22-May	Z	20.6	21.6	20.3	18.4	11.5	14.3	16.0	18.8	22.7	22.4	19.3	19.7	24.9	26.3	26.3	27.6	PF	27.1	27.2	25.0	22.7	19.2	14.3	21.2	27.6
23-May	11.9	Z	6.9	5.0	4.7	5.9	11.3	12.2	17.8	28.8	31.9	34.5	20.8	21.6	31.0	31.1	33.7	38.8	39.2	36.4	35.4	36.3	32.2	28.2	24.1	39.2
24-May	24.7	28.2	Z	14.0	12.8	14.5	17.3	22.9	28.4	30.2	35.8	40.0	44.8	46.8	45.7	45.5	46.8	45.8	47.8	45.5	41.3	33.8	29.8	25.7	33.4	47.8
25-May	30.5	31.0	29.8	Z	28.8	29.5	29.5	36.3	38.8	38.6	41.1	42.0	43.6	44.6	44.5	44.0	44.0	43.3	42.3	41.3	37.5	37.4	36.7	31.0	37.7	44.6
26-May	26.4	24.8	19.6	14.7	Z	13.1	16.0	24.6	32.3	37.5	42.3	46.2	46.6	46.4	46.8	46.9	45.9	45.3	42.3	37.3	28.1	22.1	18.4	16.4	32.2	46.9
27-May	14.9	13.1	12.8	13.7	11.5	Z	13.6	18.6	22.4	27.9	35.3	40.8	42.5	43.0	42.8	41.7	42.3	43.7	45.3	42.0	36.0	29.1	20.6	6.9	28.7	45.3
28-May	Z	8.3	12.4	14.3	8.5	15.0	14.8	16.2	28.4	37.3	40.5	35.8	36.9	35.8	36.2	41.5	38.8	35.7	32.5	27.3	21.7	19.3	19.7	15.6	25.8	41.5
29-May	15.6	Z	13.5	16.4	9.8	9.6	9.4	14.4	29.9	47.0	53.8	53.5	54.4	57.1	58.6	64.0	69.4	67.3	64.3	58.6	51.0	35.4	28.8	25.2	39.4	69.4
30-May	16.3	17.8	Z	11.6	11.9	7.4	11.8	18.2	24.0	30.3	37.9	42.5	44.8	46.6	49.1	46.9	42.9	37.6	37.6	37.4	30.0	28.0	22.3	22.8	29.4	49.1
31-May	20.6	16.1	19.4	Z	19.3	15.2	12.2	22.0	29.7	28.0	33.3	33.1	32.7	33.0	29.4	28.4	24.2	15.8	11.5	19.2	18.8	24.8	22.9	24.3	23.2	33.3
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	191	27.02	27.02
21 - 50	505	71.43	98.44
51 - 82	11	1.56	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	21	11	3	2	3	1	17	32	19	11	7	7	8	14	14	20	190
21 - 50	24	44	18	7	3	8	45	158	61	21	30	22	10	15	16	23	505
51 - 82	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	11
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	55	21	9	6	9	62	201	80	32	37	29	18	29	30	43	706

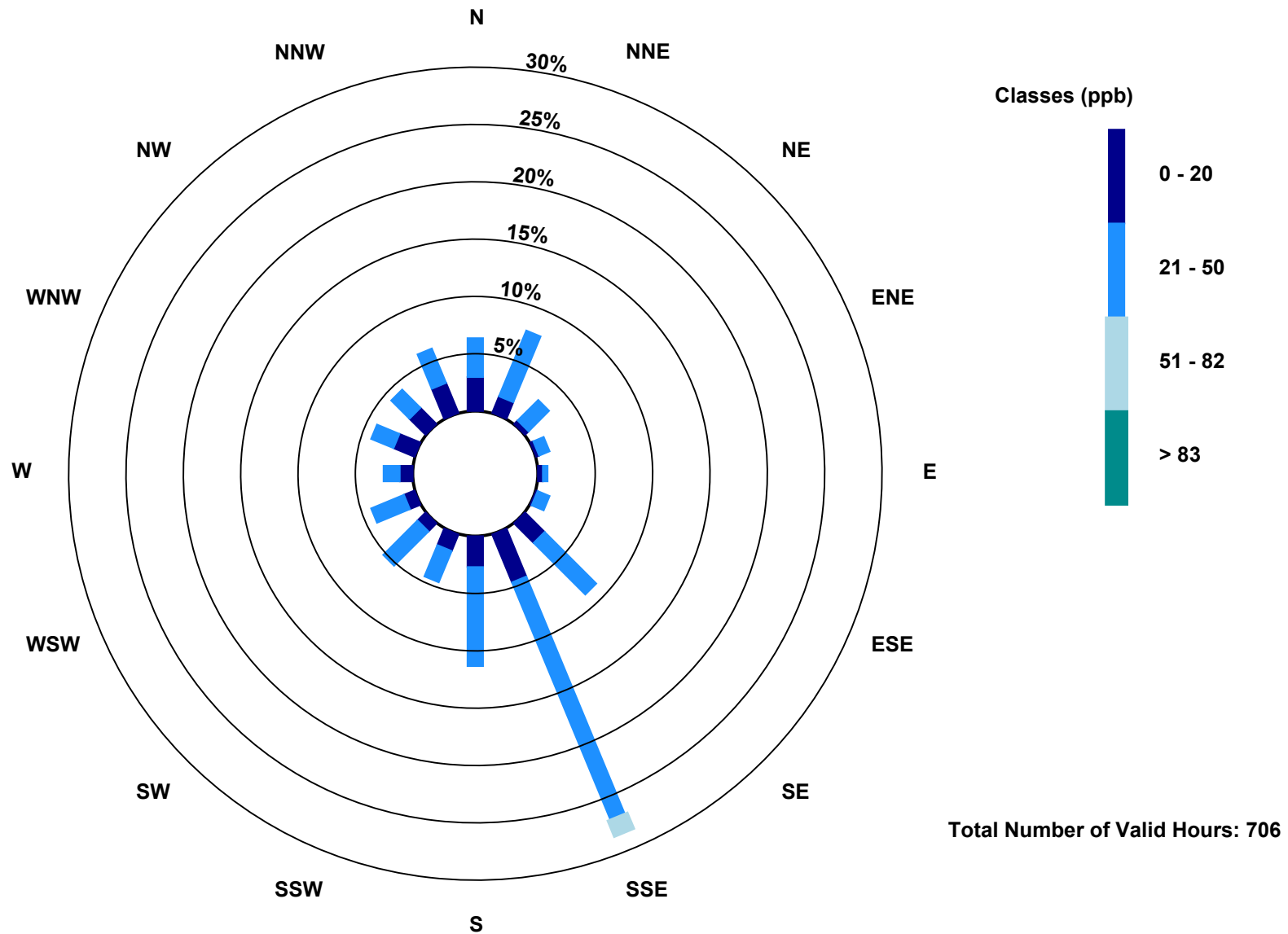
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

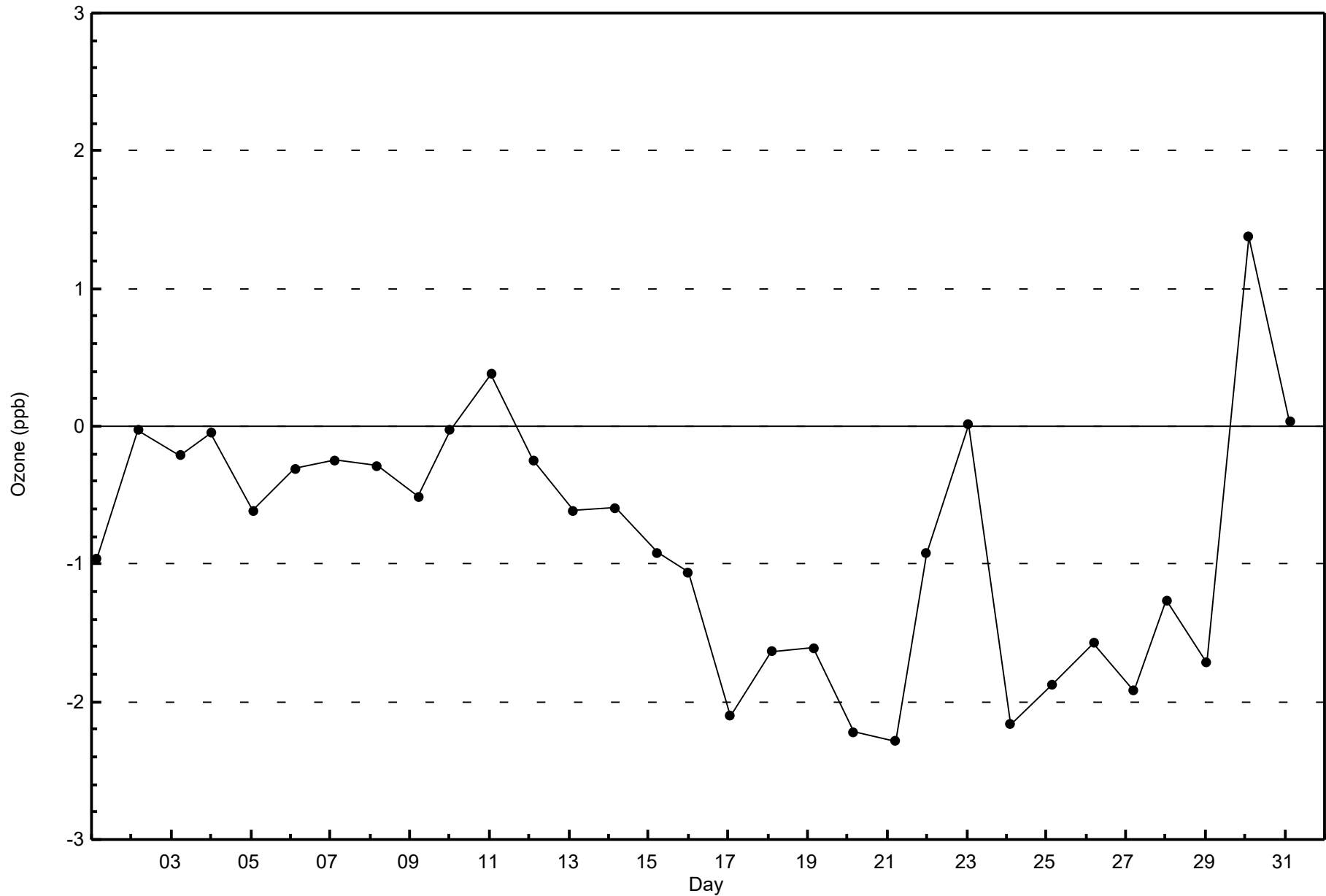
Ozone (O_3) - ppb
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association
Zero Responses

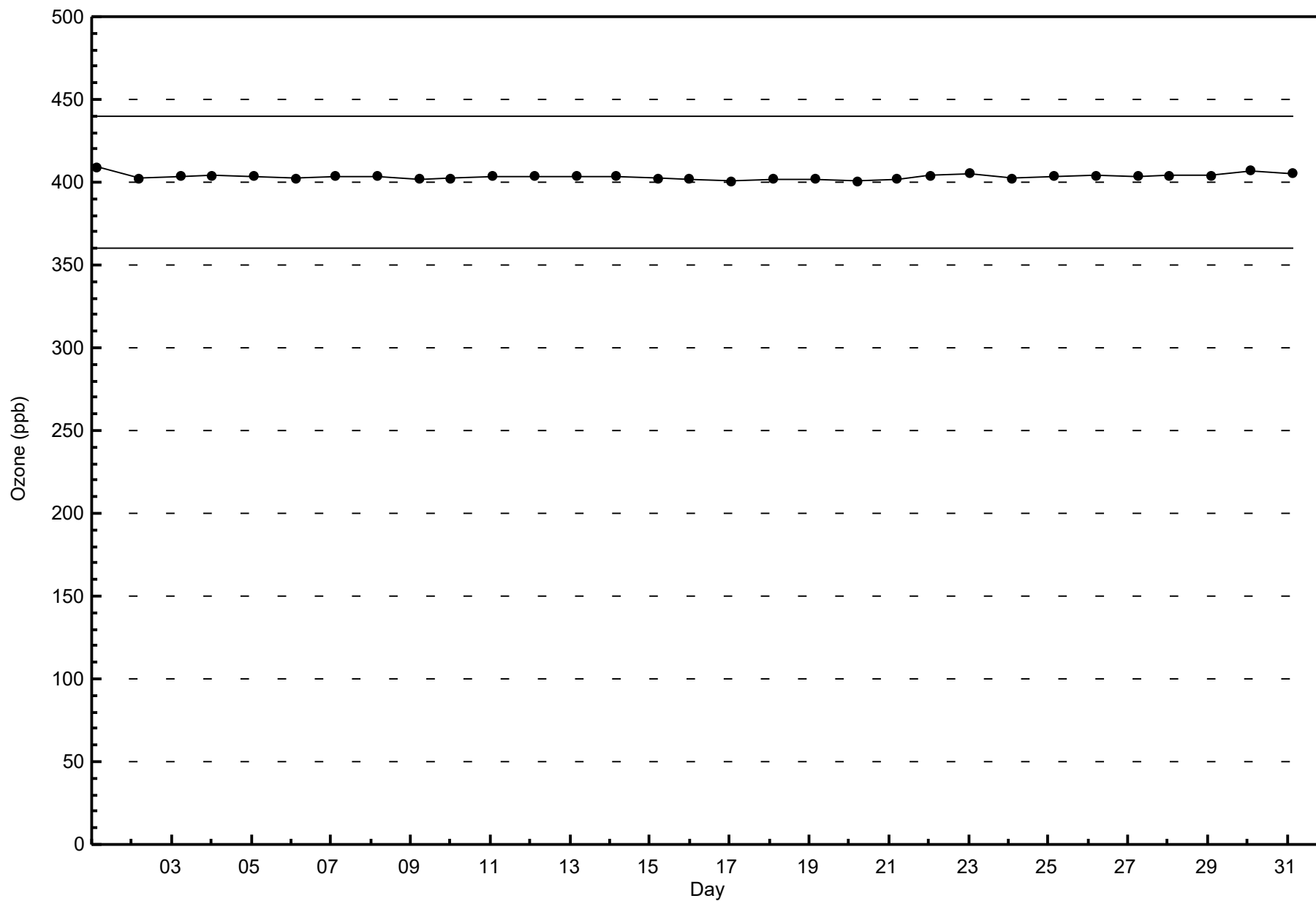
Ozone (O₃) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

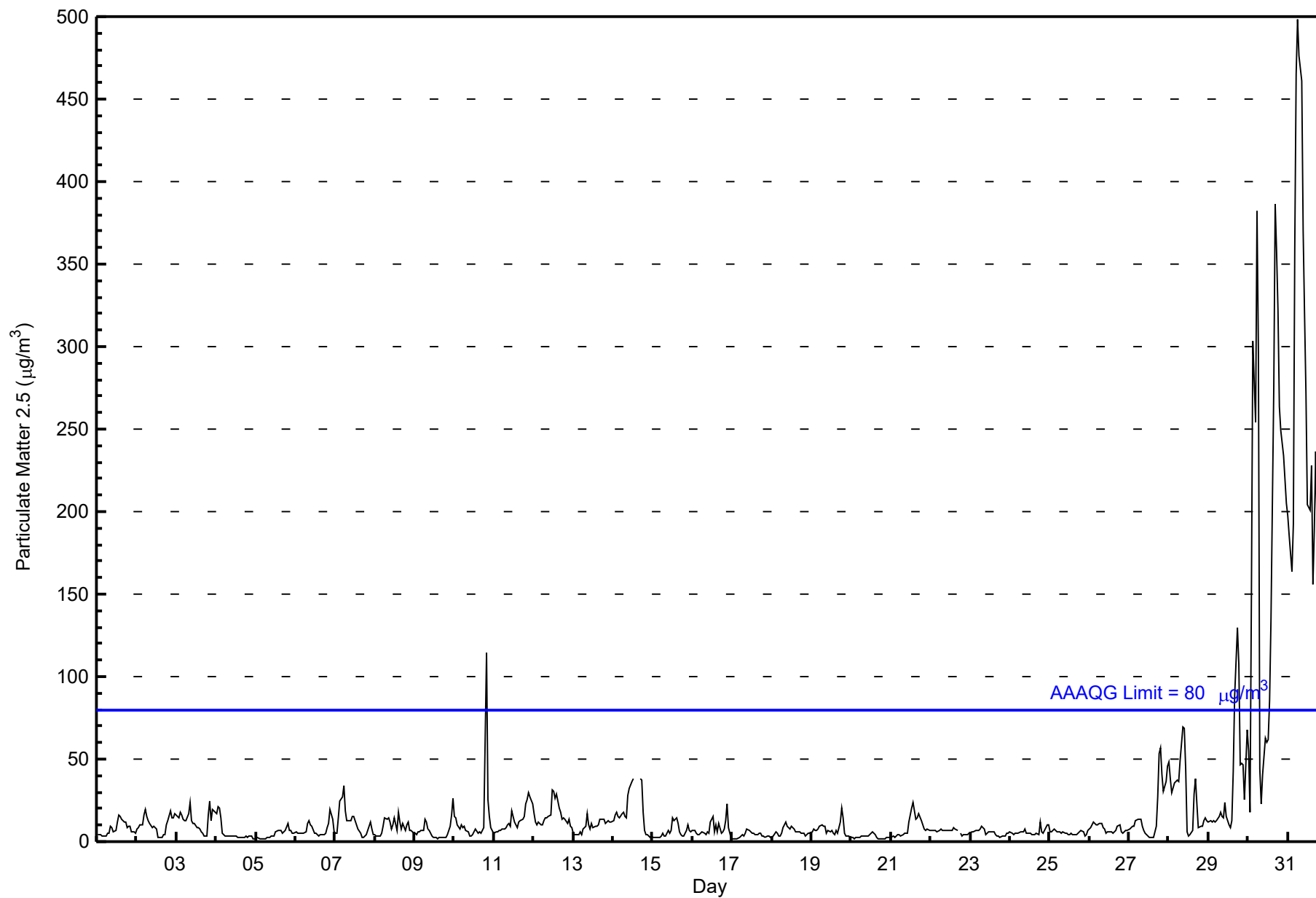
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 41 24-hr: 3 Maximum Value: 498.5 µg/m³ on May 31 07:00 Minimum Value: 1.3 µg/m³ on May 17 04:00 Maximum Diurnal Average: 36.2 µg/m³ at hour 6 Monthly Average: 23.39 µg/m³																					Maximum Daily Average: 238.5 µg/m³ on May 31 Minimum Daily Average: 2.8 µg/m³ on May 20 Minimum Diurnal Average: 14.3 µg/m³ at hour 2 Percentiles: P ₁ = 1.5 P ₁₀ = 3.0 Q ₁ = 4.7 Median = 7.1 Q ₃ = 13.3 P ₉₀ = 35.4 P ₉₉ = 358.4				Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 3 Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	4.1	4.4	4.5	3.6	3.0	3.7	5.2	4.7	9.0	8.2	5.6	7.1	11.9	16.3	15.4	13.3	11.7	11.6	8.1	9.4	9.3	5.5	5.6	5.4	7.8	16.3
2-May	8.0	8.4	10.4	10.2	15.8	19.6	15.2	12.8	11.0	8.9	9.1	8.7	7.8	2.8	2.4	2.2	4.2	4.4	10.0	12.9	18.3	14.1	14.3	17.2	10.4	19.6
3-May	16.1	14.5	17.6	16.0	13.2	12.4	12.9	16.6	24.1	13.0	11.4	11.2	8.5	8.5	8.0	6.3	4.7	3.7	3.6	15.9	24.5	13.0	19.2	17.5	13.0	24.5
4-May	17.2	20.9	20.2	14.4	5.5	3.8	3.8	3.5	3.2	3.1	3.2	3.1	3.0	2.8	2.7	2.7	2.6	2.3	3.3	2.3	3.8	3.4	1.5	1.4	5.6	20.9
5-May	1.3	2.6	2.1	1.7	2.0	1.5	1.8	2.8	2.9	3.1	3.0	3.3	5.9	6.6	7.0	6.8	5.4	5.9	6.5	10.8	6.9	6.7	4.8	4.7	4.4	10.8
6-May	6.2	5.2	4.7	4.8	5.1	5.0	5.9	10.7	12.7	10.5	9.2	5.1	5.1	4.3	3.7	4.0	4.5	4.4	5.4	8.1	10.8	19.5	13.2	5.8	7.3	19.5
7-May	4.7	4.9	14.4	24.4	27.1	34.2	18.2	12.9	12.5	12.6	15.0	15.6	12.7	10.0	8.0	5.0	2.6	2.4	3.4	3.9	9.0	11.7	7.8	4.6	11.6	34.2
8-May	4.7	3.5	3.3	3.2	4.8	8.9	14.8	13.6	14.5	11.6	7.3	10.0	14.3	6.5	17.6	11.7	7.4	10.7	6.7	9.8	12.0	6.6	7.0	5.3	9.0	17.6
9-May	4.8	4.6	5.9	5.8	6.5	7.1	13.2	11.6	7.7	6.4	3.7	2.9	2.6	2.2	1.9	2.3	2.5	2.6	2.4	2.5	3.9	9.1	15.7	25.9	6.4	25.9
10-May	15.5	14.5	10.0	7.5	10.0	8.5	9.0	6.7	5.8	3.7	3.4	4.5	6.0	7.7	5.1	6.0	5.0	6.6	8.1	14.2	25.8	14.9	8.9	6.5	13.1	114.2
11-May	5.5	6.0	6.2	6.8	6.6	7.6	7.7	8.2	10.2	11.4	9.0	18.2	11.5	10.2	8.5	11.6	12.5	13.3	15.0	23.0	25.6	29.3	27.1	22.6	13.1	29.3
12-May	17.2	11.9	10.5	11.4	10.0	10.4	12.4	14.8	14.5	15.0	15.9	31.2	30.3	26.5	29.2	20.7	18.2	13.4	14.5	13.7	10.8	13.4	9.2	8.5	16.0	31.2
13-May	5.4	4.2	4.5	4.5	5.6	4.4	8.0	9.6	16.9	9.8	8.0	11.0	8.4	9.7	9.7	10.5	13.6	13.3	13.4	11.0	11.8	12.8	11.9	11.7	9.6	16.9
14-May	12.7	15.8	17.6	15.1	14.2	16.8	17.6	15.4	14.2	28.3	32.5	36.2	37.8	C	C	C	38.3	37.4	17.9	6.7	4.0	4.3	2.8	3.0	18.5	38.3
15-May	2.2	2.2	2.5	2.6	2.8	3.7	5.0	3.8	3.7	6.8	5.2	6.9	14.7	13.0	14.1	11.4	5.7	4.1	3.4	3.6	6.4	9.8	7.2	5.6	6.1	14.7
16-May	7.0	6.8	5.1	4.3	4.6	4.8	5.8	5.3	4.3	6.1	5.5	11.9	15.6	6.2	10.3	6.0	10.9	5.4	6.0	7.4	12.3	23.0	8.8	1.8	7.7	23.0
17-May	1.4	1.3	1.8	1.3	2.1	3.5	4.6	3.5	4.8	7.6	6.9	5.6	4.7	4.9	4.1	4.1	4.8	4.9	3.7	3.4	2.8	3.1	3.1	2.9	3.8	7.6
18-May	2.8	3.3	6.0	5.5	3.4	3.5	5.0	8.3	12.1	9.3	8.6	7.9	9.4	7.5	6.1	5.9	5.6	5.7	5.4	4.8	3.8	3.8	4.7	5.2	6.0	12.1
19-May	5.5	7.4	6.4	6.7	7.8	9.6	10.0	9.0	9.1	4.8	6.7	6.2	7.0	5.5	4.6	6.6	5.2	12.2	20.2	14.8	4.8	3.8	3.4	2.6	7.5	20.2
20-May	2.2	2.3	2.1	2.5	2.3	2.5	3.1	3.6	3.0	3.2	3.4	3.9	5.2	5.8	4.0	2.5	1.6	1.4	1.5	1.5	1.5	2.1	2.7	2.9	2.8	5.8
21-May	2.8	3.5	2.7	3.2	4.0	3.8	3.8	4.4	4.9	4.7	5.3	11.7	20.3	23.5	18.4	13.8	14.2	17.0	12.7	10.3	7.7	6.5	7.7	7.1	8.9	23.5
22-May	7.0	6.7	6.8	6.5	6.2	7.2	7.2	7.0	7.1	7.2	7.1	6.5	6.9	6.9	8.8	7.4	7.0	PF	5.3	3.8	4.2	3.9	4.3	5.4	6.4	8.8
23-May	5.4	5.5	5.9	6.4	6.6	6.5	7.4	9.1	8.0	4.6	5.3	6.2	6.0	6.0	6.2	4.6	3.1	3.1	2.7	3.0	3.4	3.7	4.7	5.1	5.3	9.1
24-May	5.8	5.0	4.6	5.1	5.2	5.1	5.6	5.7	6.3	7.2	5.0	5.0	5.1	4.1	4.3	4.4	4.9	4.6	12.0	6.2	5.4	6.9	10.4	9.8	6.0	12.0
25-May	5.8	5.6	6.4	7.5	6.4	5.8	6.3	5.5	5.7	5.4	4.8	4.4	4.1	4.8	4.6	4.3	4.4	4.7	5.8	6.9	5.7	3.8	4.1	6.7	5.4	7.5
26-May	7.7	8.3	11.9	10.8	10.4	10.0	10.8	11.3	8.3	7.5	5.1	5.8	5.6	5.8	5.4	5.7	6.9	9.4	10.3	6.3	5.4	5.9	6.5	7.0	7.8	11.9
27-May	7.9	8.3	8.9	9.7	12.7	13.7	13.5	13.3	9.7	7.1	5.2	3.2	2.6	2.2	2.2	2.6	9.3	27.3	53.3	56.8	41.1	30.5	36.0	46.1	17.6	56.8
28-May	48.3	37.9	29.5	35.4	36.3	37.4	36.3	49.4	69.7	68.3	44.5	6.1	3.1	4.6	7.0	29.0	37.7	22.7	8.9	9.2	9.7	12.8	14.4	12.5	27.9	69.7
29-May	11.5	12.8	11.9	12.5	11.5	12.9	15.5	18.1	15.1	14.3	23.4	14.9	10.1	8.8	12.8	42.5	87.8	129.4	108.0	46.8	47.1	46.4	25.5	67.6	33.6	129.4
30-May	55.0	18.1	149.0	303.8	254.2	382.4	296.6	44.0	22.6	41.1	62.5	60.4	61.9	85.4	134.9	275.6	386.8	357.2	321.8	263.9	248.8	234.1	219.4	205.1	186.9	386.8
31-May	197.2	185.5	163.5	192.3	359.2	465.2	498.5	476.6	461.2	370.2	319.2	272.3	204.6	201.1	227.8	155.7	189.8	236.8	183.9	98.5	84.1	71.7	60.7	48.8	238.5	498.5
16.1 14.3 18.0 24.0 27.9 36.2 34.9 26.5 26.3 23.3 21.3 19.6 17.8 17.0 19.8 22.8 29.6 32.6 28.5 25.5 21.6 20.5 18.5 18.8																								Diurnal Average		
197.2 185.5 163.5 303.8 359.2 465.2 498.5 476.6 461.2 370.2 319.2 272.3 204.6 201.1 227.8 275.6 386.8 357.2 321.8 263.9 248.8 234.1 219.4 205.1																								Diurnal Maximum		
C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	256	34.59	34.59
6 - 15	343	46.35	80.95
16 - 25	49	6.62	87.57
26 - 80	51	6.89	94.46
> 81.0	41	5.54	100.00

Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	20	7	7	1	3	3	36	66	18	10	19	15	7	13	15	16	256
6 - 15	15	32	14	6	3	7	24	113	51	14	10	10	6	10	10	16	341
16 - 25	2	7	0	1	0	0	1	11	8	1	2	1	1	6	3	5	49
26 - 80	3	9	0	0	0	0	2	12	5	3	2	2	4	1	5	3	51
> 81.0	5	0	0	1	0	0	1	10	4	4	5	2	1	3	1	4	41
Totals	45	55	21	9	6	10	64	212	86	32	38	30	19	33	34	44	738

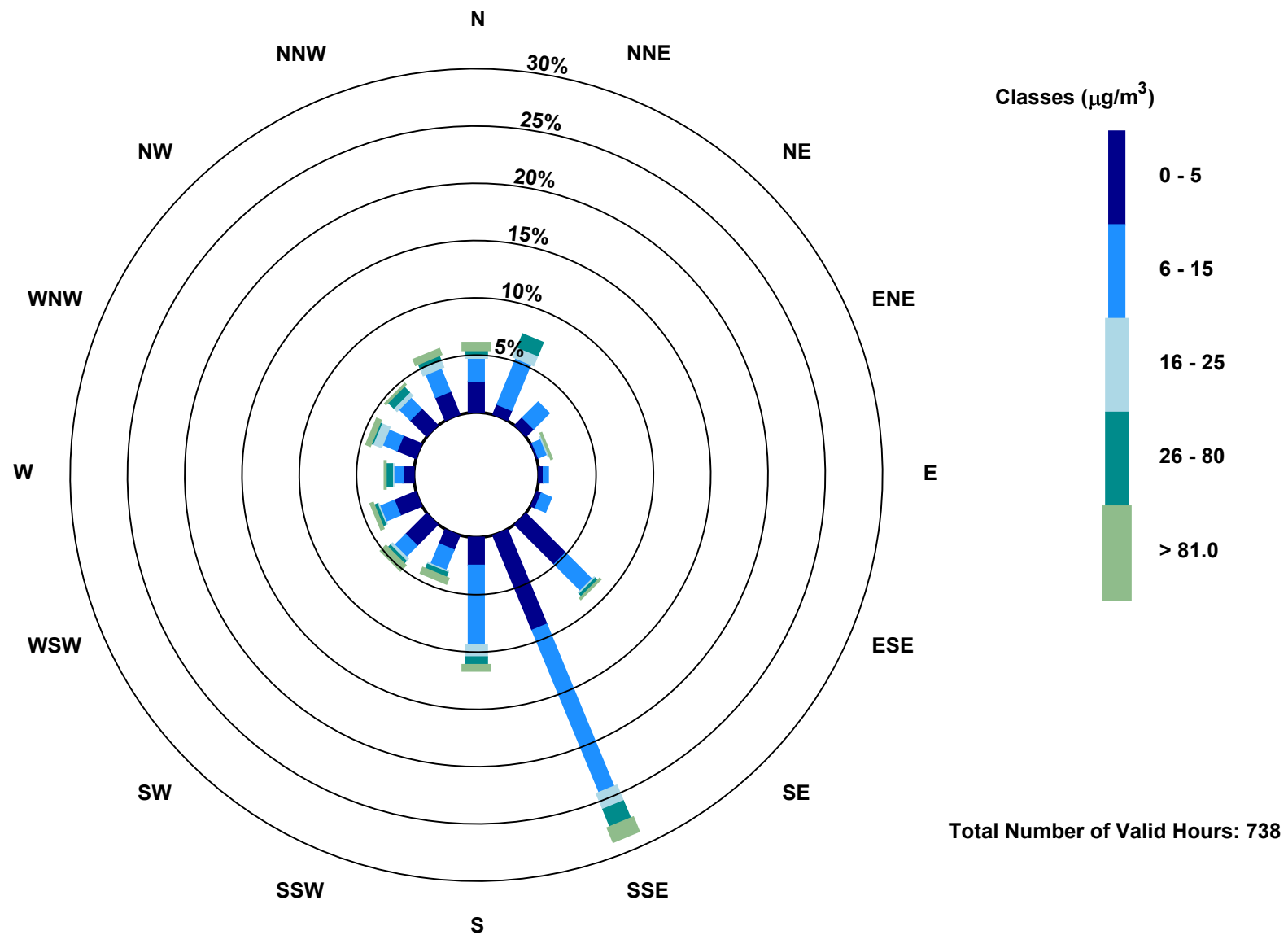
Total Number of Valid Hours: 738

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

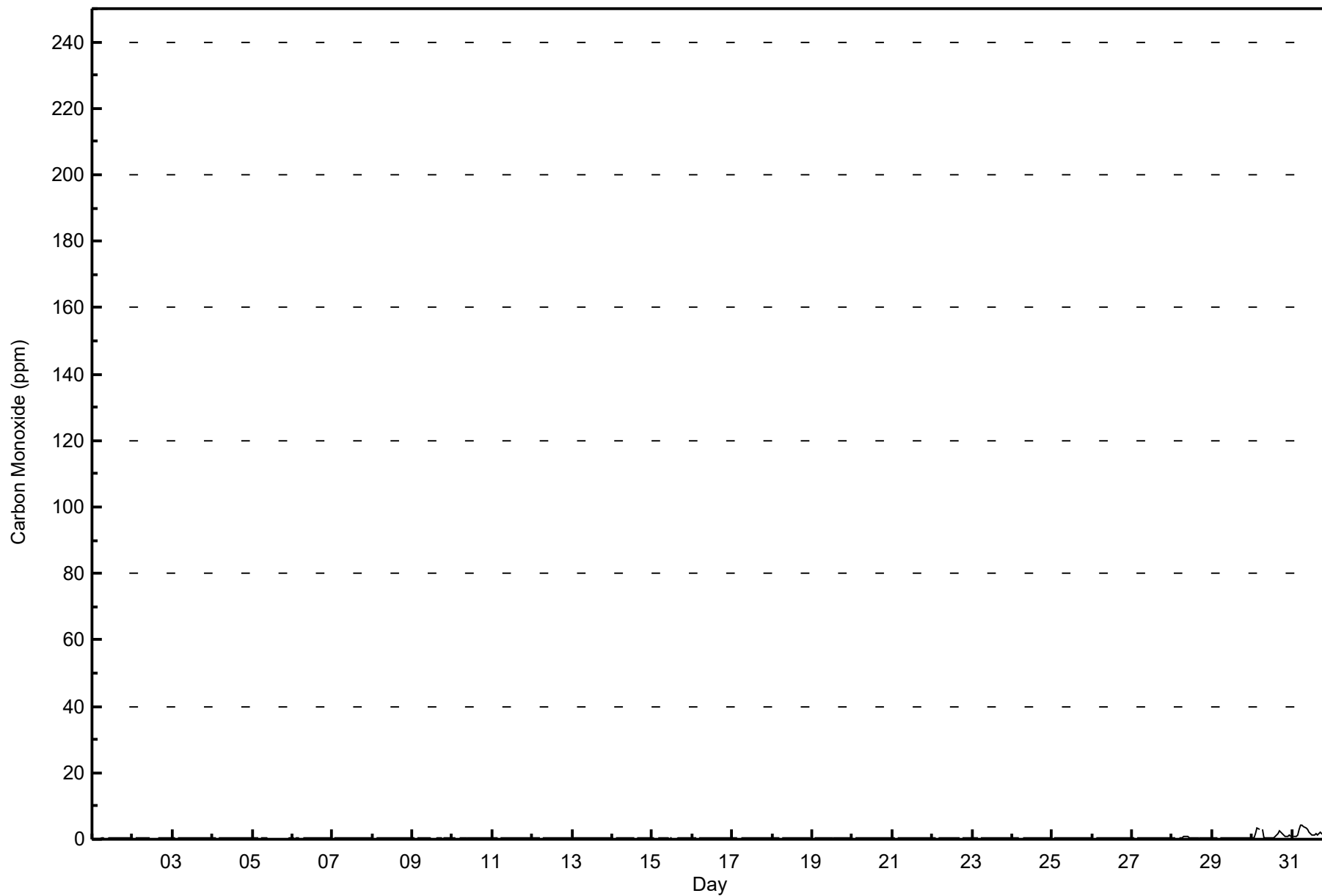
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744										
Maximum Value: 4.2 ppm on May 31 07:00																		Maximum Daily Average: 1.9 ppm on May 31		Hours of Data: 707								
Minimum Value: 0.2 ppm on May 5 11:00																		Minimum Daily Average: 0.2 ppm on May 5		Hours of Missing Data: 37								
Maximum Diurnal Average: 0.5 ppm at hour 7																		Minimum Diurnal Average: 0.3 ppm at hour 1		Hours of Calibration: 35								
Monthly Average: 0.37 ppm																		Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.3 P ₉₀ = 0.4 P ₉₉ = 2.8		Percent Operational Time: 99.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
2-May	0.3	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	C	C	C	C	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3
3-May	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
4-May	0.4	0.4	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.4	
5-May	0.3	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
6-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
7-May	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
8-May	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	
9-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	
10-May	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	
11-May	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
12-May	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	
13-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
14-May	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	M	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	
15-May	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
16-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
17-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	
18-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	
19-May	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
20-May	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
21-May	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	
22-May	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	PF	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
23-May	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	
24-May	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	
25-May	Z	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	
26-May	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
27-May	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	
28-May	0.4	0.4	0.4	Z	0.5	0.5	0.6	0.7	0.8	0.7	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	
29-May	0.4	0.4	0.4	0.4	Z	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.6	
30-May	0.3	0.2	1.8	3.3	2.9	Z	2.9	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.6	1.9	2.5	2.2	1.8	1.1	1.1	1.0	1.1	1.0	1.2	3.3		
31-May	Z	0.8	0.7	1.2	2.8	4.0	4.2	3.9	3.6	2.8	2.3	1.9	1.4	1.5	1.8	1.3	1.7	2.1	1.7	1.0	1.0	0.9	0.8	0.7	1.9	4.2		
0.3 0.3 0.4 0.4 0.5 0.4 0.5 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3																										Diurnal Average		
0.4 0.8 1.8 3.3 2.9 4.0 4.2 3.9 3.6 2.8 2.3 1.9 1.4 1.5 1.8 1.9 2.5 2.2 1.8 1.1 1.1 1.0 1.1 1.0																										Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																												



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	593	83.88	83.88
0.4 - 0.5	72	10.18	94.06
0.6 - 0.7	7	0.99	95.05
0.8 - 1.4	14	1.98	97.03
1.5 - 10	20	2.83	99.86
> 10	0	0.00	99.86

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	36	57	21	9	6	8	58	171	57	21	29	24	15	24	26	30	592
0.4 - 0.5	1	0	0	0	0	0	1	26	20	6	4	4	1	4	2	3	72
0.6 - 0.7	0	0	0	0	0	0	1	3	0	1	1	0	0	0	1	0	7
0.8 - 1.4	2	0	0	0	0	0	0	3	4	0	0	0	1	0	0	4	14
1.5 - 10	2	0	0	0	0	0	1	5	0	3	3	1	0	2	1	2	20
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	57	21	9	6	8	61	208	81	31	37	29	17	30	30	39	705

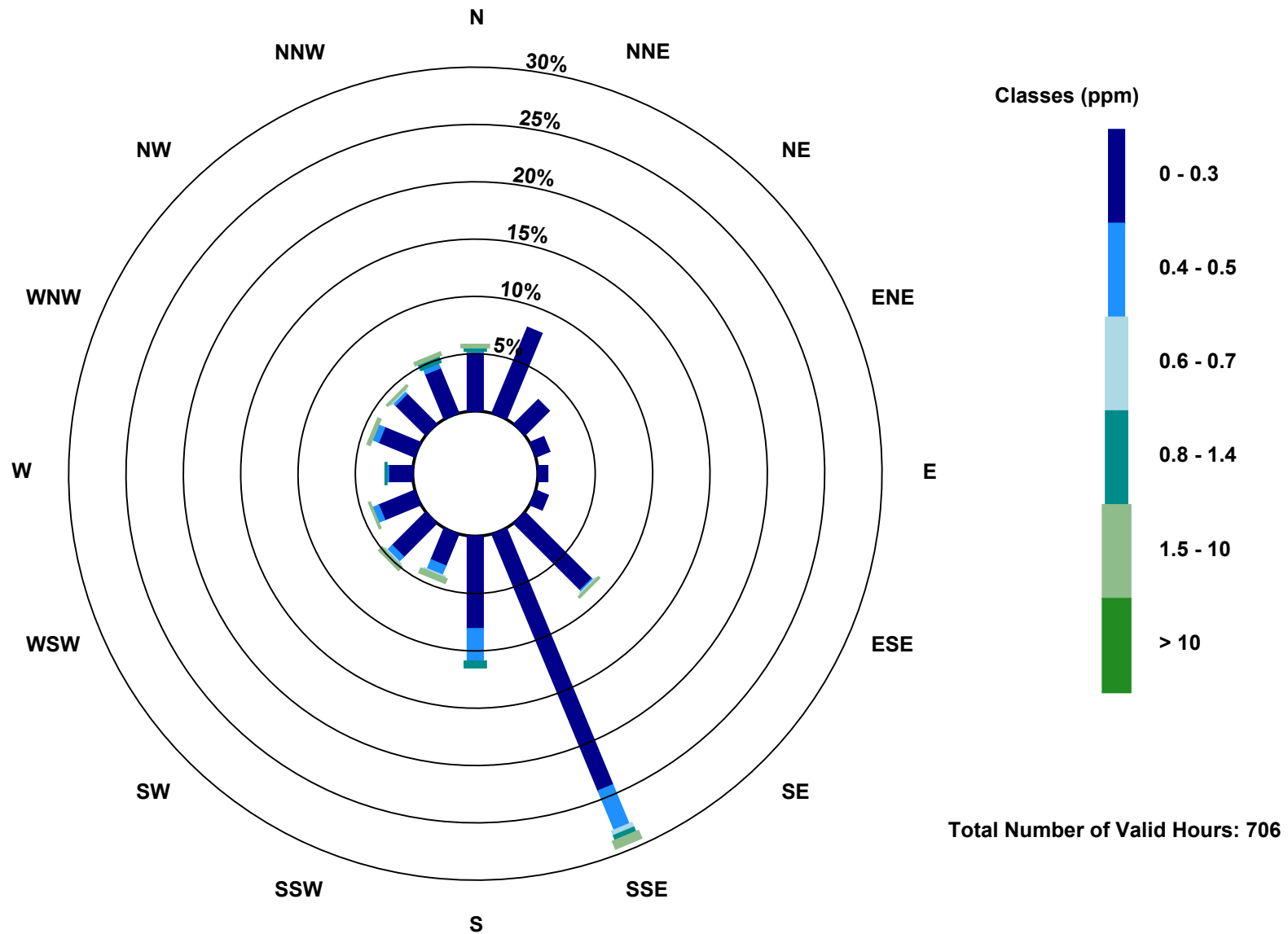
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Monoxide (CO) - ppm
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

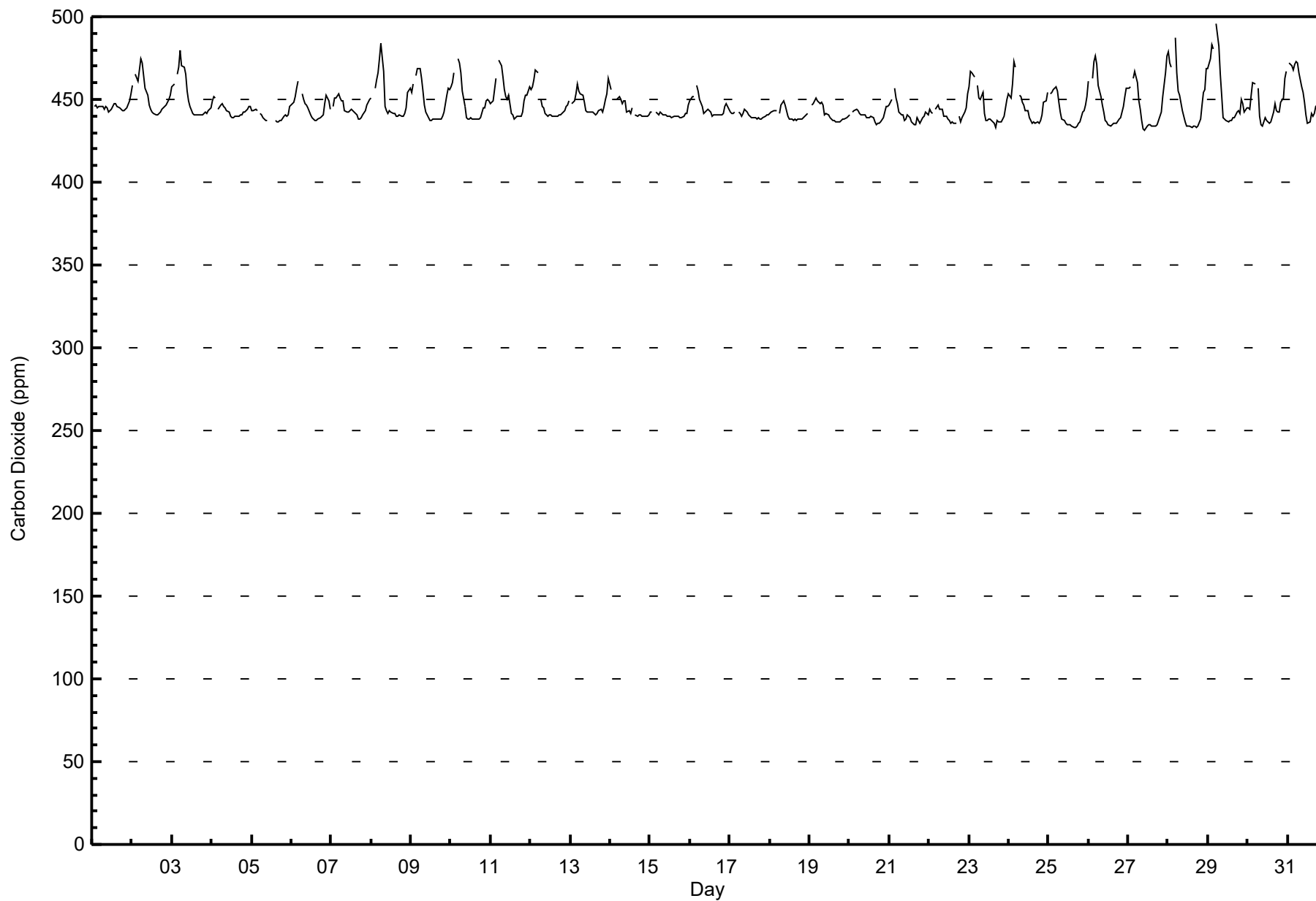
Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 495.8 ppm on May 29 06:00 Maximum Daily Average: 452.8 ppm on May 29																						Hours in Service: 744				
Minimum Value: 431.7 ppm on May 27 11:00 Minimum Daily Average: 440.1 ppm on May 20 Maximum Diurnal Average: 459.5 ppm at hour 5 Minimum Diurnal Average: 438.3 ppm at hour 16 Monthly Average: 445.91 ppm Percentiles: P ₁ = 433.5 P ₁₀ = 436.8 Q ₁ = 439.4 Median = 442.6 Q ₃ = 449.6 P ₉₀ = 460.2 P ₉₉ = 479.0																						Hours of Data: 707				
																						Hours of Missing Data: 37				
																						Hours of Calibration: 35				
																						Percent Operational Time: 99.7				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	445.3	447.0	445.1	445.4	446.0	445.5	444.4	445.8	444.9	442.7	444.2	446.1	447.7	447.7	446.1	444.9	444.4	443.1	443.6	443.7	444.6	449.4	453.5	445.7	453.5
2-May	458.6	Z	465.5	460.7	467.9	474.5	472.1	464.2	456.9	452.6	446.7	443.9	442.8	441.3	440.8	440.3	441.5	442.2	443.8	444.9	447.0	448.7	450.3	452.3	452.1	474.5
3-May	457.5	459.2	Z	464.9	469.2	479.9	470.7	469.4	465.0	455.1	448.8	445.9	441.2	441.0	440.7	440.7	440.7	440.7	440.8	441.7	442.4	441.9	443.0	444.7	451.5	479.9
4-May	448.8	451.9	451.0	Z	444.3	446.8	447.3	446.1	444.6	442.8	442.0	440.2	439.1	439.1	439.6	439.6	440.1	441.0	440.5	442.6	442.7	444.2	445.6	445.4	443.7	451.9
5-May	443.3	443.6	444.1	443.0	Z	441.8	440.7	439.2	437.5	437.3	C	C	C	C	437.3	436.6	436.7	437.6	437.2	439.9	440.5	439.8	440.7	445.7	440.1	445.7
6-May	447.2	448.6	451.9	456.7	460.8	Z	453.1	450.4	447.6	446.7	445.3	440.9	439.3	438.1	437.4	437.4	437.9	438.9	439.9	441.1	447.8	452.9	449.5	444.0	445.8	460.8
7-May	Z	445.5	450.7	450.4	453.2	451.0	448.9	448.8	443.4	442.2	442.1	443.3	443.7	443.0	442.4	440.3	437.9	438.0	439.2	440.4	442.9	447.0	448.2	449.7	444.9	453.2
8-May	451.2	Z	456.9	462.3	466.4	474.8	483.9	467.3	445.6	443.4	441.5	442.8	442.6	441.8	441.9	440.0	439.6	440.5	440.2	439.8	441.6	444.6	454.0	457.0	450.4	483.9
9-May	454.3	459.4	Z	464.5	468.8	468.8	462.5	455.0	446.5	442.2	438.9	437.3	437.5	437.7	437.7	437.7	438.0	438.1	438.4	440.0	442.0	452.8	456.7	456.0	448.3	468.8
10-May	457.6	460.4	466.1	Z	474.6	471.7	466.1	455.2	445.6	438.6	438.1	438.3	438.9	438.4	438.2	437.9	438.1	438.3	438.9	444.7	445.2	449.5	450.2	449.1	448.7	474.6
11-May	447.2	449.5	455.6	462.6	Z	473.6	470.0	463.9	456.1	451.9	450.2	452.6	441.5	441.0	438.5	439.2	440.1	439.7	439.4	442.3	448.9	452.2	452.7	457.5	450.7	473.6
12-May	455.9	457.4	461.8	467.5	465.9	Z	450.4	445.9	444.8	441.5	439.6	440.3	440.3	440.2	440.0	439.8	439.9	440.5	440.9	441.5	443.5	445.4	446.4	449.2	446.9	467.5
13-May	Z	447.6	449.2	453.6	459.1	455.2	453.2	452.3	448.7	443.2	442.6	442.3	442.0	442.4	441.6	440.7	441.3	442.9	443.9	442.7	445.6	450.1	453.7	463.0	447.7	463.0
14-May	456.4	Z	450.4	450.1	450.3	451.5	449.6	447.7	449.3	448.7	442.4	442.9	441.7	444.7	M	440.9	439.6	440.5	440.5	439.9	439.9	439.7	439.8	440.3	444.8	456.4
15-May	442.1	442.7	Z	442.5	441.2	440.5	442.3	441.3	441.1	440.5	440.0	440.2	440.0	439.2	439.9	439.8	439.4	439.6	439.3	439.2	439.8	441.3	441.7	446.2	440.9	446.2
16-May	449.0	451.6	452.1	Z	458.3	455.4	450.3	445.8	441.4	442.6	443.2	444.0	442.0	440.1	440.7	440.5	440.6	440.7	440.5	440.3	441.8	445.5	447.5	444.3	445.1	458.3
17-May	442.1	441.4	441.8	442.5	Z	442.8	441.4	439.8	441.7	444.1	442.6	440.8	439.8	439.1	438.8	438.7	438.5	438.6	438.2	438.3	439.1	440.2	440.5	440.8	440.5	444.1
18-May	441.4	442.1	443.1	443.6	443.4	Z	441.8	447.0	449.1	446.3	443.5	439.7	438.3	438.0	437.7	438.0	437.5	438.0	438.0	438.0	439.2	440.1	441.0	441.9	441.2	449.1
19-May	Z	446.4	447.8	448.9	450.9	449.0	447.2	448.3	446.7	441.0	441.3	441.0	439.4	438.5	437.6	437.4	436.8	436.3	436.8	437.0	437.7	438.2	438.9	439.8	441.9	450.9
20-May	440.7	Z	442.0	442.9	443.7	442.8	441.2	441.1	440.8	440.4	439.4	439.3	439.0	439.5	438.7	436.4	435.2	435.7	435.5	436.6	438.6	442.0	445.3	445.8	440.1	445.8
21-May	446.5	449.6	Z	456.4	450.6	447.2	442.5	440.7	440.6	437.5	438.3	440.3	439.3	436.1	435.6	434.6	434.9	439.2	435.7	437.4	438.7	439.7	442.2	440.3	441.0	456.4
22-May	443.6	442.2	441.7	Z	444.0	446.3	444.3	444.3	443.9	440.0	439.7	438.4	436.9	435.7	436.4	435.6	435.9	PF	439.6	436.7	439.0	442.1	444.8	453.2	441.1	453.2
23-May	457.5	467.0	465.9	463.4	Z	458.6	451.1	450.1	454.5	441.2	437.4	437.5	438.5	437.8	436.7	435.7	433.3	436.9	436.1	436.7	438.3	440.1	444.7	450.1	445.6	467.0
24-May	453.1	450.7	459.5	473.1	469.8	Z	452.1	451.3	448.2	446.4	443.2	443.0	438.8	437.0	435.3	436.1	435.8	436.6	435.5	437.1	440.9	448.0	449.5	453.9	446.7	473.1
25-May	Z	453.0	454.1	456.3	457.7	455.0	448.4	442.1	437.9	437.1	435.4	434.4	434.7	434.7	433.9	433.2	433.3	434.0	435.5	436.8	442.4	443.0	446.5	451.8	442.2	457.7
26-May	461.2	Z	462.9	472.5	476.5	471.3	458.5	451.6	446.7	442.6	436.9	436.1	434.7	433.9	434.3	435.8	436.0	435.3	437.8	439.1	442.2	445.8	451.5	456.7	447.8	476.5
27-May	457.1	457.4	Z	462.9	466.7	459.8	449.3	444.4	437.5	432.2	431.7	434.0	435.1	434.5	434.1	434.2	434.3	435.0	437.5	439.4	442.3	451.5	466.5	476.7	445.8	476.7
28-May	479.2	472.2	469.3	Z	487.6	466.2	455.2	452.7	443.6	439.5	436.4	434.1	433.8	433.5	433.0	433.5	433.5	433.0	434.2	438.0	446.9	454.2	455.8	468.7	449.3	487.6
29-May	468.5	474.4	483.3	480.5	Z	495.8	482.2	464.9	452.1	438.9	437.8	436.9	436.4	437.0	437.3	438.7	439.4	442.2	442.9	441.2	450.3	447.2	442.3	444.9	452.8	495.8
30-May	445.3	444.0	452.4	460.0	459.4	Z	456.9	439.9	434.5	434.2	438.9	437.2	436.2	435.6	436.1	442.5	447.3	442.8	442.3	442.6	448.0	451.2	463.0	466.8	446.0	466.8
31-May	Z	472.3	470.5	467.9	471.1	472.9	472.4	465.7	458.0	453.9	448.3	440.8	435.9	436.6	441.4	439.7	441.6	445.8	447.0	443.6	443.9	443.5	445.5	445.6	452.3	472.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Carbon Dioxide (CO₂) - ppm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	244	34.51	34.51
440 - 460	393	55.59	90.10
460 - 480	64	9.05	99.15
480 - 500	6	0.85	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	12	20	12	1	1	3	20	85	26	9	20	16	4	2	5	8	244
440 - 460	30	35	7	7	5	5	41	106	43	19	15	8	7	22	18	25	393
460 - 480	0	2	0	0	0	0	2	14	10	3	2	5	6	6	9	4	63
480 - 500	0	0	1	0	0	0	0	3	2	0	0	0	0	0	0	0	6
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	57	20	8	6	8	63	208	81	31	37	29	17	30	32	37	706

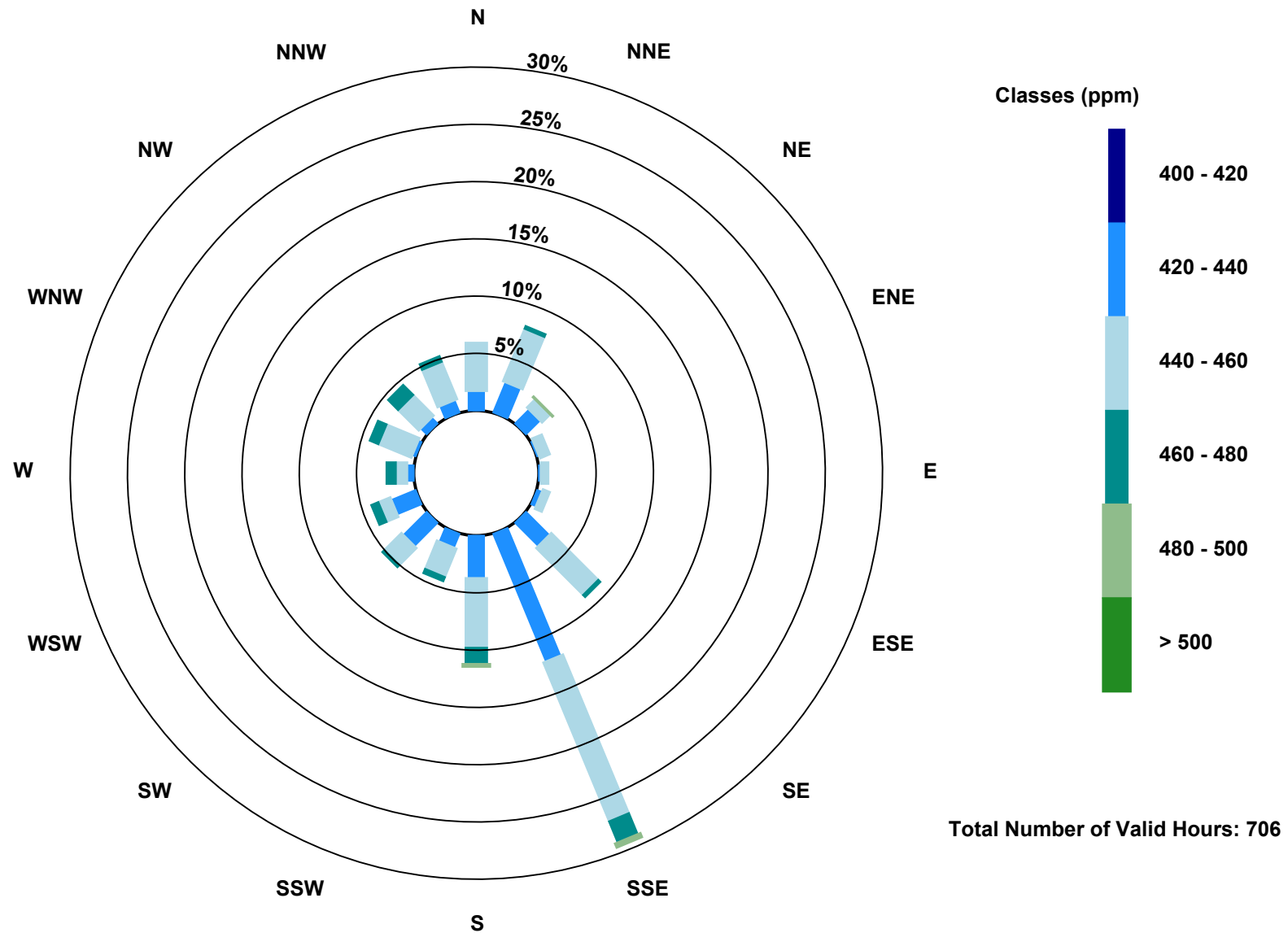
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Dioxide (CO₂) - ppm
Fort McKay - Bertha Ganter

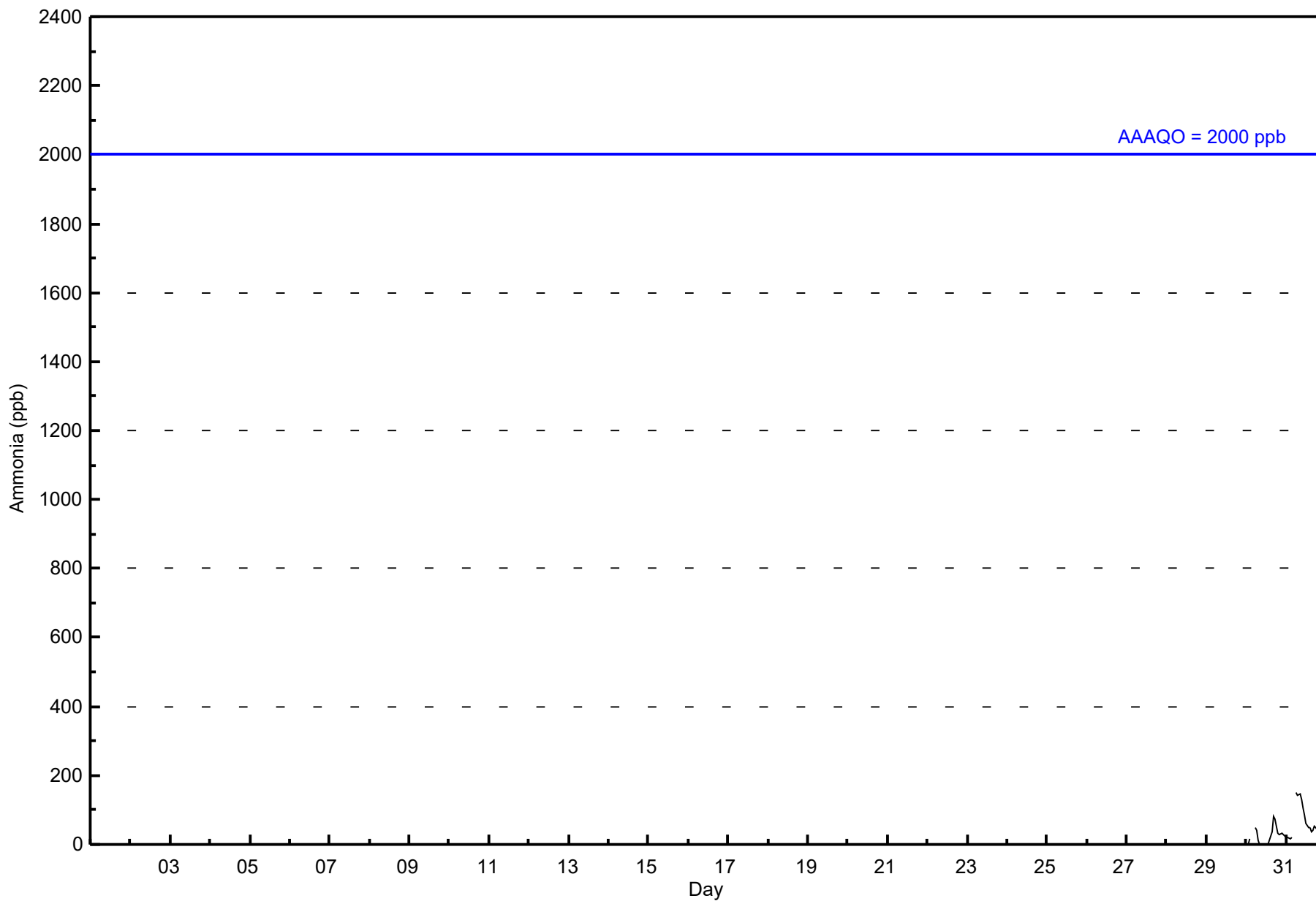


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Wood Buffalo Environmental Association
Hourly Averages

Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	607	94.40	94.40
6 - 10	0	0.00	94.40
11 - 15	4	0.62	95.02
16 - 20	4	0.62	95.65
21 - 25	2	0.31	95.96
> 26	26	4.04	100.00

Total Number of Valid Hours: 643

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	35	48	19	9	5	9	54	195	70	20	26	25	13	21	25	31	605
6 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	4
16 - 20	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	4
21 - 25	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
> 26	5	0	0	0	0	0	1	7	3	2	2	0	0	1	1	4	26
Totals	40	48	19	9	5	9	55	202	74	23	31	25	14	22	28	37	641

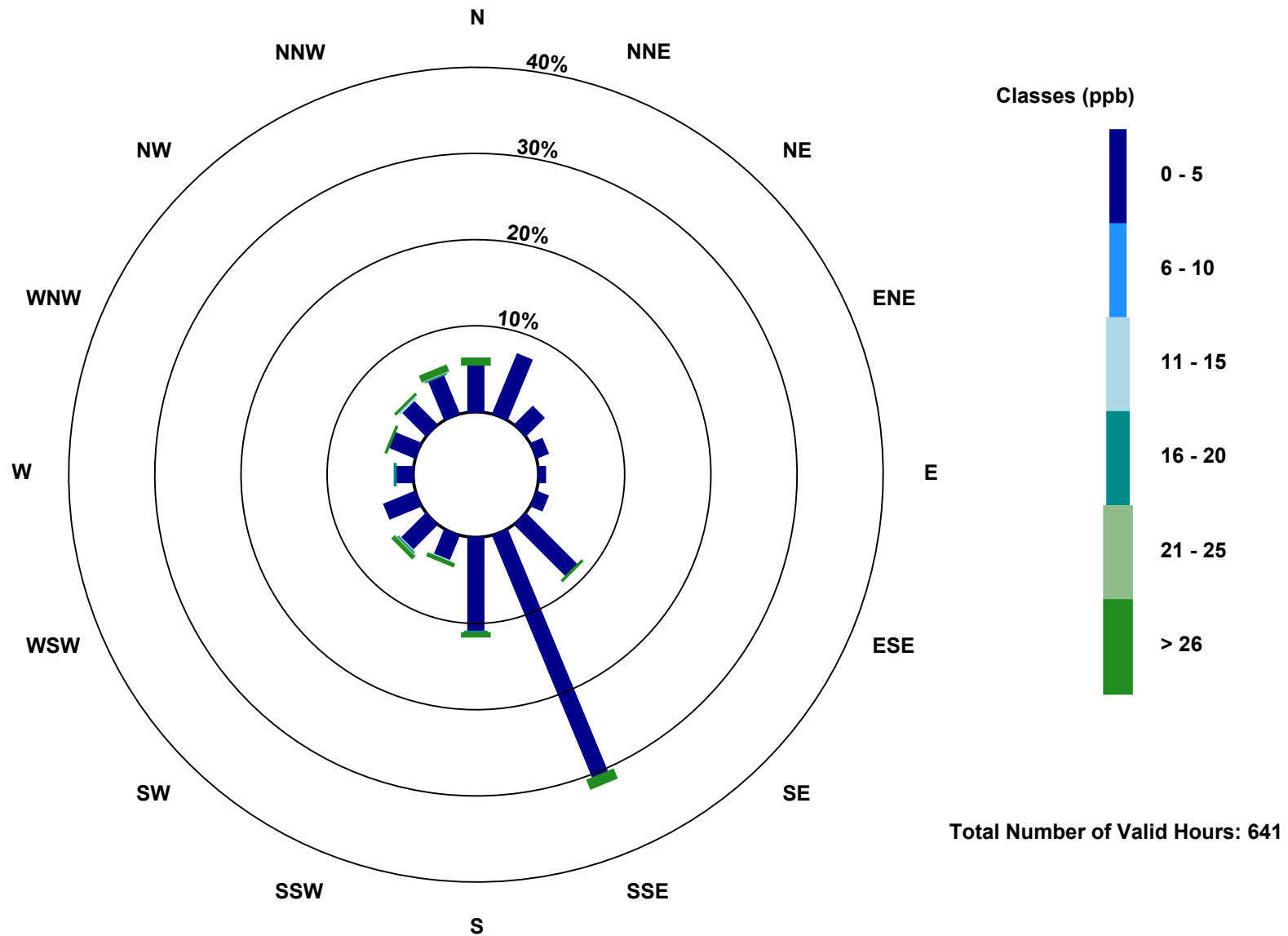
Total Number of Valid Hours: 641

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter



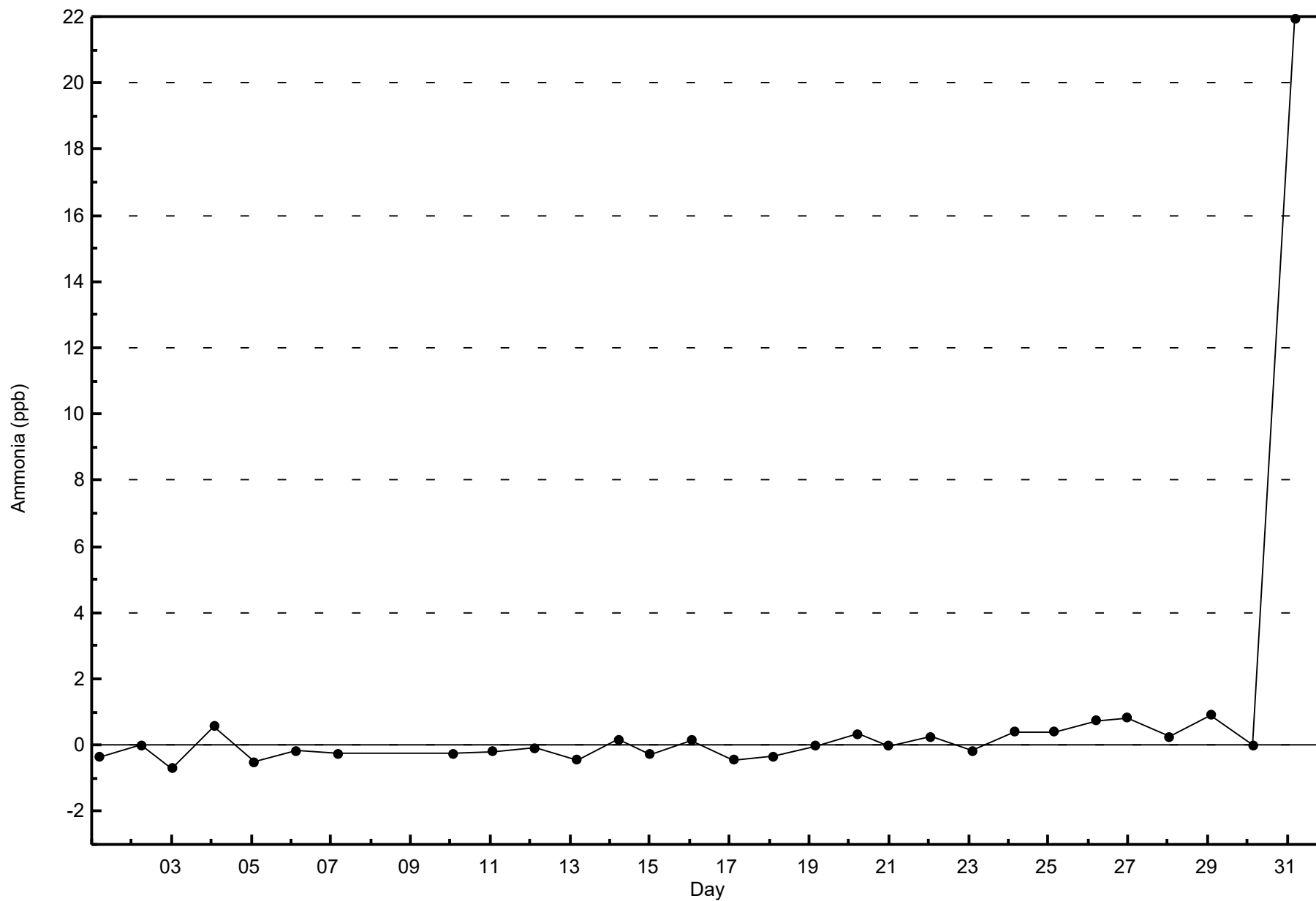


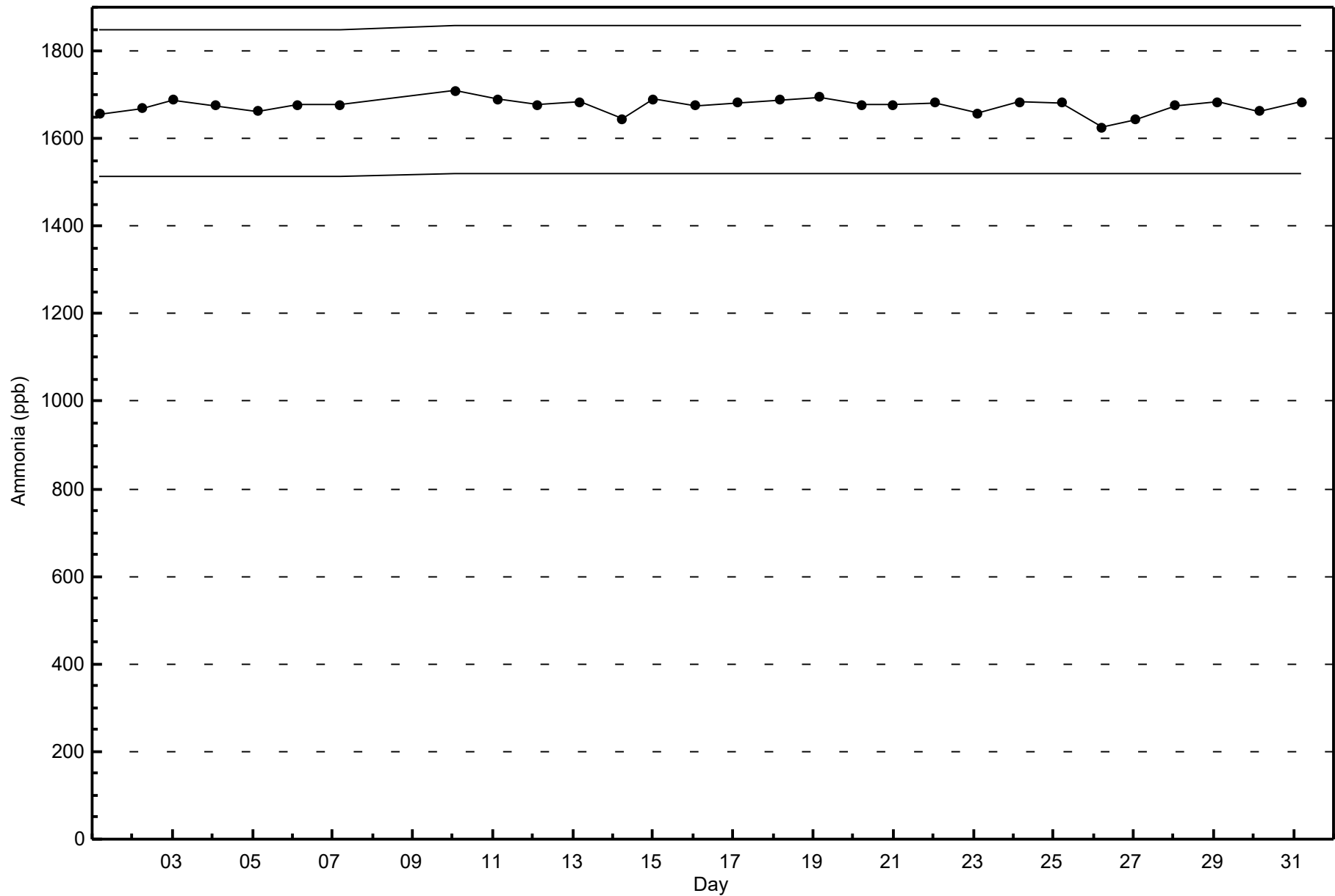
Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 10m (AT10) - C

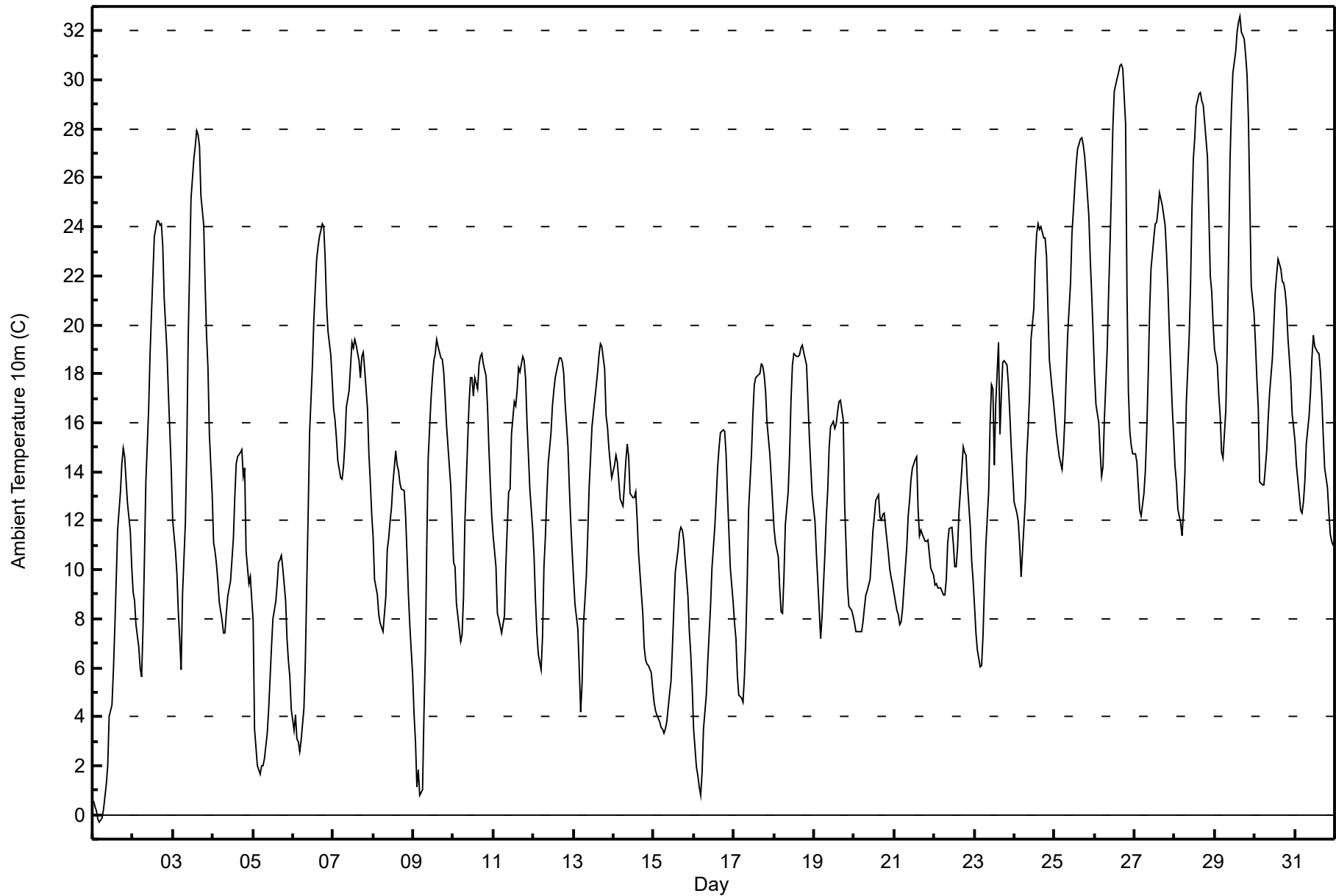
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 32.6 C on May 29 16:00																				Maximum Daily Average: 24.7 C on May 29				Hours in Service: 744			
Minimum Value: -0.3 C on May 1 05:00																				Minimum Daily Average: 5.9 C on May 5				Hours of Data: 744			
Maximum Diurnal Average: 19.1 C at hour 17																				Minimum Diurnal Average: 7.8 C at hour 5				Hours of Missing Data: 0			
Monthly Average: 14.11 C																				Percentiles: P ₁ = 0.8 P ₁₀ = 6.1 Q ₁ = 9.5 Median = 13.8 Q ₃ = 18.2 P ₉₀ = 23.3 P ₉₉ = 30.6				Hours of Calibration: 0			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.6	0.3	0.1	-0.2	-0.3	-0.1	0.2	0.7	1.3	2.0	4.0	4.5	5.9	7.6	9.6	11.6	13.1	14.3	14.9	14.6	13.6	12.7	11.5	10.1	6.4	14.9	
2-May	9.1	8.7	7.8	6.9	6.0	5.6	7.7	10.4	13.6	16.6	18.8	20.5	22.1	23.6	24.2	24.2	24.1	24.1	23.2	21.1	18.9	17.2	15.7	14.1	16.0	24.2	
3-May	12.0	10.8	9.8	8.3	7.2	5.9	9.0	11.9	15.0	19.4	22.3	25.1	26.8	27.3	27.9	27.8	27.3	25.3	24.1	21.6	19.6	18.2	15.6	13.0	18.0	27.9	
4-May	11.1	10.7	10.2	9.5	8.7	7.9	7.4	7.4	8.2	8.9	9.5	10.4	11.3	13.0	14.4	14.6	14.8	14.9	13.8	14.1	10.8	9.4	9.7	8.8	10.8	14.9	
5-May	8.0	3.5	2.0	1.8	1.7	2.0	2.0	2.3	3.3	4.3	5.6	6.8	8.0	8.7	9.3	10.3	10.4	10.6	10.1	8.7	7.2	6.3	5.6	4.3	5.9	10.6	
6-May	3.5	4.0	3.1	3.0	2.6	3.0	4.4	6.3	9.4	12.3	15.6	18.3	20.2	21.5	22.7	23.2	23.6	24.1	24.0	22.7	20.9	19.8	18.8	17.7	14.4	24.1	
7-May	16.6	16.1	15.4	14.5	13.7	13.7	14.2	15.1	16.6	17.3	18.3	19.3	19.1	19.4	19.1	18.5	17.9	18.7	18.9	18.2	16.6	14.7	13.6	12.3	16.6	19.4	
8-May	11.3	9.6	9.0	8.2	7.8	7.6	7.5	8.9	10.8	11.3	12.0	12.6	13.5	14.8	14.2	14.0	13.5	13.3	13.2	12.2	10.6	9.0	7.7	5.7	10.8	14.8	
9-May	4.0	3.0	1.2	1.8	0.8	1.0	4.0	6.6	11.1	14.5	17.0	17.9	18.5	18.8	19.4	19.1	18.7	18.6	18.1	17.0	15.9	14.2	13.4	11.8	11.9	19.4	
10-May	10.3	10.1	8.6	7.6	7.1	7.4	8.9	12.0	15.3	16.9	17.9	17.8	17.1	17.8	17.4	18.4	18.7	18.8	18.4	17.9	16.7	15.0	13.5	12.2	14.2	18.8	
11-May	11.4	10.1	8.2	8.0	7.7	7.4	8.1	10.2	11.7	13.2	13.3	15.5	16.9	16.7	17.3	18.3	18.1	18.7	18.5	17.8	16.0	14.7	13.3	11.7	13.4	18.7	
12-May	10.5	8.7	7.4	6.6	5.9	7.3	10.1	11.3	13.0	14.4	15.6	16.7	17.3	17.9	18.1	18.6	18.7	18.5	18.0	16.8	15.0	13.4	11.9	10.7	13.4	18.7	
13-May	9.6	8.5	7.6	6.0	4.2	5.3	7.8	9.7	11.4	13.4	14.6	15.8	16.4	17.5	18.1	18.8	19.2	19.1	18.2	16.3	15.8	15.0	14.4	13.8	13.2	19.2	
14-May	14.2	14.7	14.4	13.7	12.9	12.6	13.5	14.5	15.2	14.6	13.1	12.9	12.9	13.2	12.1	10.7	9.0	8.2	6.9	6.3	6.1	6.1	5.8	5.2	11.2	15.2	
15-May	4.6	4.3	4.0	3.8	3.6	3.5	3.3	3.5	3.8	4.9	5.4	6.8	8.4	9.9	10.8	11.5	11.7	11.6	11.2	10.4	8.9	7.5	6.5	5.2	6.9	11.7	
16-May	3.5	1.9	1.6	1.1	0.8	1.7	3.5	4.9	6.2	7.3	8.5	10.1	11.7	12.9	14.2	15.0	15.6	15.7	15.6	14.8	13.1	11.5	10.1	8.7	8.8	15.7	
17-May	7.8	7.2	5.7	4.9	4.8	4.6	5.6	7.2	9.6	12.5	14.7	16.4	17.5	17.9	17.9	18.0	18.4	18.3	18.0	17.3	16.0	14.7	13.8	12.7	12.6	18.4	
18-May	11.7	11.1	10.5	9.3	8.3	8.2	9.7	11.9	13.2	14.7	17.0	18.3	18.8	18.7	18.7	18.8	19.1	19.1	18.9	18.4	17.0	15.4	14.2	13.1	14.7	19.1	
19-May	11.9	10.6	9.5	8.3	7.2	8.1	10.6	12.1	13.2	15.0	15.8	16.0	15.8	16.0	16.5	16.8	16.9	16.1	12.7	11.0	9.3	8.5	8.4	8.1	12.3	16.9	
20-May	7.8	7.5	7.5	7.5	7.5	7.9	8.5	9.0	9.1	9.6	10.5	11.6	12.1	12.8	13.1	12.1	12.0	12.3	12.3	11.7	10.7	10.0	9.6	9.3	10.1	13.1	
21-May	9.0	8.3	8.1	7.7	7.9	8.4	9.3	10.9	12.2	12.8	13.7	14.1	14.5	14.6	12.5	11.4	11.6	11.4	11.2	11.2	11.2	10.6	10.0	9.8	10.9	14.6	
22-May	9.4	9.4	9.3	9.3	9.3	9.0	9.0	9.6	11.1	11.7	11.7	11.0	10.1	10.1	10.9	12.4	14.1	15.0	14.8	14.7	13.5	11.8	10.3	9.5	11.1	15.0	
23-May	8.5	7.4	6.7	6.1	6.1	7.3	9.2	11.0	13.2	15.9	17.6	17.4	14.3	16.8	19.3	15.5	17.2	18.5	18.5	18.3	17.6	16.3	15.0	13.9	13.6	19.3	
24-May	12.8	12.3	12.0	11.0	9.7	10.8	12.8	14.7	15.8	17.1	19.4	20.6	22.6	23.7	24.1	23.9	24.0	23.5	23.5	22.8	20.7	18.6	17.3	16.8	17.9	24.1	
25-May	16.2	15.5	15.1	14.6	14.1	14.9	16.2	18.0	19.7	21.7	23.7	24.7	25.6	26.5	27.2	27.6	27.7	27.4	26.9	26.2	24.4	22.6	21.3	19.7	21.6	27.7	
26-May	18.0	16.7	16.0	14.8	13.8	14.2	16.2	19.0	21.4	23.3	25.6	28.1	29.5	30.0	30.3	30.6	30.6	30.5	28.2	21.3	17.3	15.6	15.1	14.8	21.7	30.6	
27-May	14.7	14.4	13.4	12.5	12.2	13.1	14.1	15.7	17.9	20.5	22.3	23.6	24.1	24.2	24.7	25.4	24.9	24.5	24.1	22.9	21.5	19.7	16.7	15.5	19.3	25.4	
28-May	14.2	13.6	12.5	11.9	11.4	12.4	13.9	16.8	19.5	21.6	24.7	26.8	27.7	28.9	29.4	29.5	29.1	29.0	28.3	26.9	24.5	22.0	21.4	20.0	21.5	29.5	
29-May	19.0	18.4	17.2	16.3	14.8	14.6	16.5	19.1	23.0	26.8	28.9	30.3	31.2	32.0	32.4	32.6	32.0	31.7	31.1	30.2	28.4	25.1	21.6	20.4	24.7	32.6	
30-May	19.2	17.8	16.6	13.6	13.5	13.5	14.2	14.9	16.2	17.2	18.6	20.0	21.3	22.1	22.7	22.3	21.8	21.7	21.4	20.7	19.5	17.8	16.3	15.8	18.3	22.7	
31-May	15.3	14.3	13.1	12.5	12.3	12.8	13.6	15.1	16.3	17.3	18.7	19.6	19.1	18.9	18.9	18.1	17.0	15.5	14.2	13.3	12.3	11.4	11.1	11.0	15.1	19.6	
10.8 10.0 9.1 8.4 7.8 8.1 9.4 11.0 12.8 14.5 15.9 17.1 17.8 18.5 18.9 19.0 19.1 19.0 18.4 17.3 15.8 14.3 13.2 12.1																										Diurnal Average	
19.2 18.4 17.2 16.3 14.8 14.9 16.5 19.1 23.0 26.8 28.9 30.3 31.2 32.0 32.4 32.6 32.0 31.7 31.1 30.2 28.4 25.1 21.6 20.4																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 10m (AT10) - C
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 10m (AT10) - C
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.40	0.40
0 - 10	201	27.02	27.42
10 - 20	425	57.12	84.54
> 20	115	15.46	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

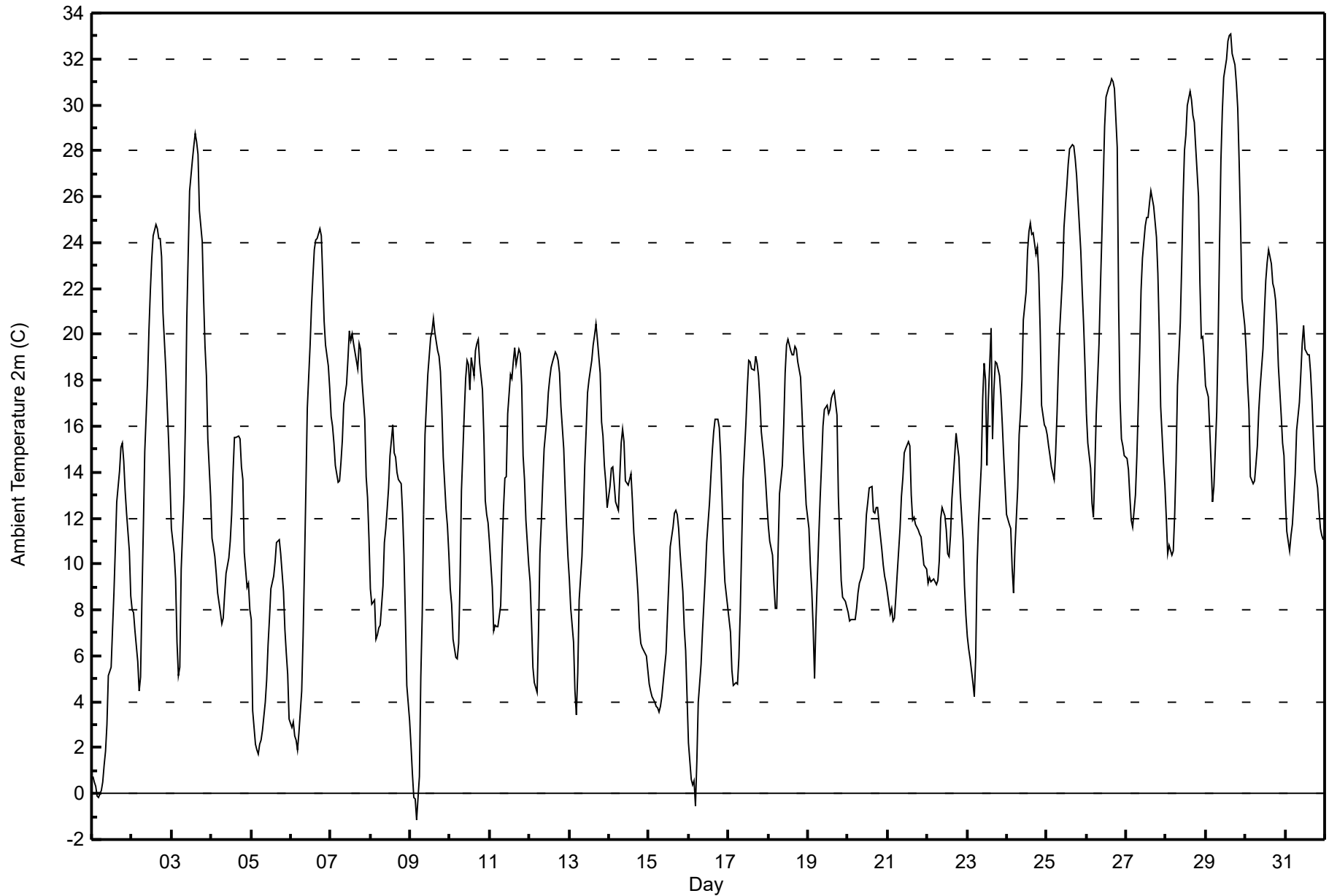
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 33.1 C on May 29 16:00																				Maximum Daily Average: 24.6 C on May 29					Hours in Service: 744	
Minimum Value: -1.1 C on May 9 05:00																				Minimum Daily Average: 6.2 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 19.7 C at hour 15																				Minimum Diurnal Average: 7.1 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 14.20 C																				Percentiles: P ₁ = 0.3 P ₁₀ = 5.6 Q ₁ = 9.3 Median = 13.7 Q ₃ = 18.6 P ₉₀ = 23.7 P ₉₉ = 31.1					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.7	0.5	0.3	-0.1	-0.2	0.1	0.5	1.2	1.8	3.0	5.1	5.5	7.2	8.8	10.7	12.7	14.0	15.1	15.2	14.5	13.2	12.2	10.6	8.6	6.7	15.2
2-May	8.0	7.9	7.1	5.8	4.5	5.1	8.6	11.6	14.9	18.0	20.2	21.9	23.3	24.3	24.8	24.6	24.2	24.2	23.4	20.9	18.5	16.9	15.4	13.6	16.1	24.8
3-May	11.6	10.4	9.3	6.6	5.1	5.5	9.8	13.0	16.1	20.7	23.5	26.2	27.6	28.2	28.8	28.4	27.9	25.4	24.0	21.5	19.4	18.2	15.5	13.0	18.2	28.8
4-May	11.1	10.7	10.3	9.6	8.7	7.9	7.4	7.6	8.7	9.6	10.3	11.0	12.1	14.0	15.5	15.5	15.5	15.5	14.2	13.7	10.5	9.0	9.2	8.0	11.1	15.5
5-May	7.6	3.6	2.1	1.9	1.7	2.2	2.3	2.8	4.0	5.0	6.5	7.7	8.9	9.5	10.1	10.9	11.0	11.1	10.4	8.8	7.1	6.1	5.2	3.2	6.2	11.1
6-May	2.9	3.1	2.5	2.3	1.9	2.7	4.5	6.8	9.9	13.3	16.8	19.6	21.3	22.5	23.7	24.1	24.2	24.6	24.3	22.5	20.6	19.6	18.6	17.6	14.6	24.6
7-May	16.5	16.0	15.3	14.3	13.6	13.6	14.4	15.4	17.0	17.8	18.9	20.1	19.7	20.0	19.6	18.9	18.5	19.6	19.4	18.0	16.3	13.8	12.9	11.1	16.7	20.1
8-May	8.9	8.3	8.4	6.7	6.9	7.2	7.3	9.0	11.0	11.5	12.4	13.3	14.7	16.1	14.8	14.7	14.0	13.7	13.5	12.2	10.4	7.7	4.7	3.2	10.4	16.1
9-May	2.1	0.9	-0.2	-0.2	-1.1	0.7	5.1	7.7	12.1	15.6	18.3	19.1	19.8	20.1	20.7	20.1	19.3	19.1	18.4	16.8	14.7	12.4	11.7	10.5	11.8	20.7
10-May	8.9	8.2	6.8	6.0	5.9	6.6	9.3	13.2	16.5	18.1	18.8	18.7	17.6	19.0	18.2	19.3	19.6	19.8	18.7	17.6	15.6	12.7	12.1	11.8	14.1	19.8
11-May	10.9	9.0	7.1	7.3	7.3	7.2	8.2	10.6	12.4	13.8	13.8	16.6	18.3	18.1	18.8	19.4	18.7	19.4	19.2	17.7	14.7	13.7	11.9	10.0	13.5	19.4
12-May	9.2	7.5	5.5	4.8	4.4	7.1	10.4	11.8	13.6	15.0	16.4	17.5	18.1	18.6	18.8	19.2	19.1	18.9	18.3	16.8	15.0	13.2	11.7	10.3	13.4	19.2
13-May	9.3	8.1	6.6	4.5	3.4	5.3	8.5	10.3	12.1	14.3	15.8	17.5	18.0	18.9	19.5	19.9	20.5	19.8	18.3	16.2	15.6	14.3	13.6	12.5	13.4	20.5
14-May	13.3	14.2	14.2	13.5	12.7	12.4	13.8	15.2	15.9	15.3	13.6	13.4	13.7	13.9	12.8	11.4	9.6	8.7	7.2	6.6	6.3	6.3	6.0	5.4	11.5	15.9
15-May	4.8	4.4	4.2	4.0	3.8	3.7	3.6	3.8	4.2	5.5	6.1	7.7	9.2	10.8	11.6	12.2	12.3	12.2	11.6	10.5	8.8	7.2	6.3	4.2	7.2	12.3
16-May	2.2	0.7	0.4	0.6	-0.6	1.4	4.0	5.6	7.0	8.3	9.5	11.0	12.6	13.8	14.9	15.8	16.3	16.3	15.9	14.7	12.8	10.6	9.2	8.1	8.8	16.3
17-May	7.6	7.0	5.4	4.7	4.8	4.8	6.0	8.0	10.9	13.7	16.1	17.7	18.9	18.8	18.5	18.5	19.1	18.7	18.2	17.2	15.8	14.6	13.7	12.6	13.0	19.1
18-May	11.6	11.0	10.4	9.1	8.0	8.1	10.6	13.0	14.3	16.1	18.3	19.5	19.8	19.3	19.1	19.1	19.4	19.4	18.8	18.1	16.7	15.1	13.9	12.6	15.1	19.8
19-May	11.5	10.0	8.8	7.2	5.0	7.6	11.2	12.9	14.3	16.0	16.8	16.9	16.6	16.7	17.2	17.4	17.5	16.5	12.9	11.1	9.3	8.5	8.4	8.1	12.4	17.5
20-May	7.9	7.5	7.6	7.6	7.6	8.0	8.7	9.2	9.3	9.9	11.0	12.2	12.7	13.3	13.4	12.3	12.2	12.5	12.5	11.8	10.6	9.9	9.5	9.2	10.3	13.4
21-May	8.7	7.8	8.1	7.5	7.6	8.5	9.6	11.5	13.0	13.8	14.9	15.0	15.3	15.2	13.0	11.9	12.1	11.7	11.5	11.3	11.2	10.6	10.0	9.8	11.2	15.3
22-May	9.2	9.4	9.2	9.3	9.3	9.1	9.3	10.2	12.0	12.5	12.1	11.5	10.5	10.3	11.2	12.9	14.7	15.7	15.1	14.7	13.1	11.1	9.1	7.8	11.2	15.7
23-May	6.9	6.3	5.9	4.8	4.2	5.9	10.0	11.8	14.3	17.2	18.8	18.0	14.3	17.2	20.2	15.5	17.6	18.8	18.7	18.2	17.3	16.1	14.7	13.4	13.6	20.2
24-May	12.2	11.7	11.6	9.8	8.7	10.7	13.3	15.6	16.6	18.0	20.6	21.8	23.6	24.5	24.9	24.3	24.4	23.5	23.8	22.7	20.2	16.9	16.1	15.9	18.0	24.9
25-May	15.6	15.1	14.7	14.2	13.7	14.8	16.5	18.5	20.3	22.6	24.6	25.6	26.5	27.4	28.1	28.3	28.2	27.6	26.9	25.8	23.6	21.9	20.5	18.6	21.7	28.3
26-May	16.6	15.3	14.1	12.6	12.0	14.0	16.5	19.6	22.1	24.3	26.6	29.0	30.3	30.8	30.9	31.1	31.0	30.7	28.1	21.2	17.1	15.5	15.1	14.7	21.6	31.1
27-May	14.6	14.1	13.0	11.9	11.6	13.0	14.6	16.9	19.2	21.9	23.3	24.7	25.1	25.1	25.7	26.3	25.6	24.9	24.2	22.6	20.1	16.8	14.4	13.4	19.3	26.3
28-May	12.1	10.5	10.8	10.4	10.5	12.2	14.5	17.8	20.5	23.0	25.9	28.0	28.7	30.0	30.6	30.2	29.5	29.2	28.2	26.0	22.3	19.8	19.9	19.0	21.2	30.6
29-May	17.7	17.3	15.9	14.4	12.7	13.4	16.6	19.7	23.8	27.6	29.7	31.2	32.0	32.8	33.1	33.1	32.2	31.7	31.0	29.9	27.5	24.9	21.5	20.4	24.6	33.1
30-May	19.3	17.9	16.7	13.8	13.5	13.6	14.4	15.2	16.7	17.7	19.3	20.9	22.4	23.2	23.7	23.1	22.2	22.0	21.5	20.4	18.6	16.5	15.3	14.7	18.4	23.7
31-May	12.8	11.4	10.6	11.2	11.7	12.7	13.9	15.8	17.0	18.2	19.6	20.4	19.4	19.1	19.1	18.3	17.1	15.5	14.1	13.3	12.3	11.5	11.2	11.1	14.9	20.4
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	6	0.81	0.81
0 - 10	203	27.28	28.09
10 - 20	409	54.97	83.06
> 20	126	16.94	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

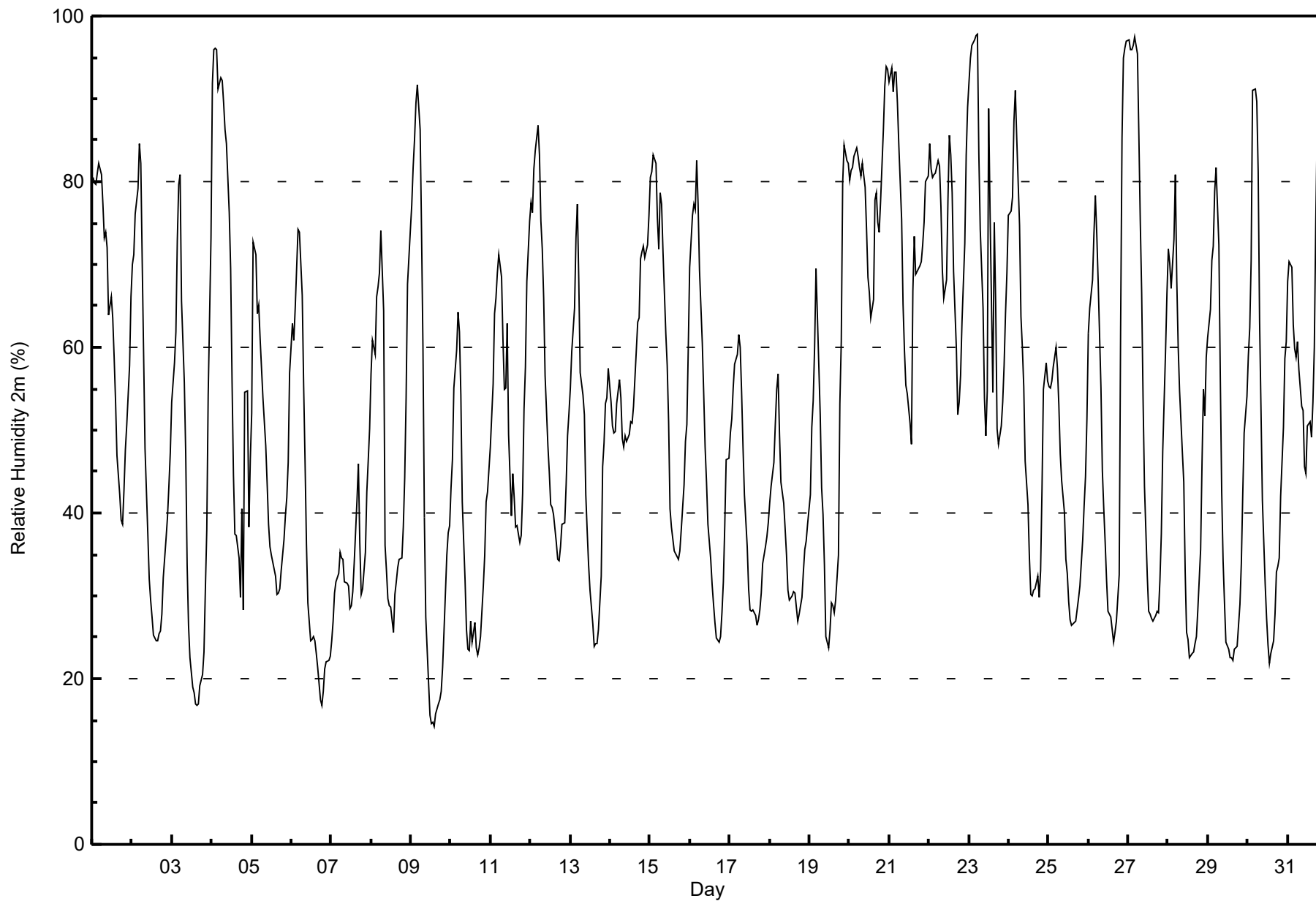
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 97.8 % on Jun 1 00:00																				Maximum Daily Average: 79.3 % on May 20					Hours in Service: 744	
Minimum Value: 14.2 % on May 9 15:00																				Minimum Daily Average: 34.4 % on May 7					Hours of Data: 744	
Maximum Diurnal Average: 75.9 % at hour 5																				Minimum Diurnal Average: 35.4 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 52.38 %																				Percentiles: P ₁ = 16.9 P ₁₀ = 25.8 Q ₁ = 33.1 Median = 50.9 Q ₃ = 69.8 P ₉₀ = 82.2 P ₉₉ = 96.8					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	80.5	79.9	79.6	81.0	82.2	80.8	77.3	73.2	73.9	72.1	63.9	66.1	63.6	58.8	53.5	47.0	42.2	39.1	38.6	42.8	47.6	50.7	57.8	66.1	63.3	82.2
2-May	69.9	71.2	76.1	79.1	84.5	82.3	70.3	59.2	47.8	37.4	32.0	29.6	27.4	25.2	24.6	24.6	25.4	25.8	27.7	32.3	36.9	39.5	43.2	47.3	46.6	84.5
3-May	53.4	58.1	61.9	72.8	79.6	80.8	65.5	55.8	47.0	33.8	26.5	22.5	19.0	18.3	17.0	16.8	16.9	19.2	20.6	23.2	30.9	37.9	54.3	73.3	41.9	80.8
4-May	91.8	96.0	96.0	95.9	91.1	92.5	92.2	89.5	86.3	84.6	76.3	69.5	56.0	44.5	37.4	37.3	34.6	29.8	40.5	28.3	54.6	54.8	38.4	46.5	65.2	96.0
5-May	52.1	72.7	71.2	64.0	65.1	61.1	57.5	53.8	48.2	43.5	38.7	36.0	35.0	33.2	32.4	30.2	30.4	30.8	33.1	36.8	39.7	41.8	46.1	57.0	46.3	72.7
6-May	62.8	60.8	64.8	69.4	74.3	73.8	66.2	55.4	46.2	36.2	29.2	24.6	24.7	25.0	24.5	23.1	21.3	17.5	16.9	18.6	21.2	22.0	22.1	22.7	38.5	74.3
7-May	24.5	27.0	30.4	31.7	32.8	35.2	34.6	34.4	31.8	31.5	31.1	28.4	28.9	30.5	33.9	41.6	45.9	36.4	30.2	30.9	35.3	42.6	46.2	50.1	34.4	50.1
8-May	56.7	60.8	59.1	66.1	67.2	69.0	74.1	64.3	36.2	33.1	29.7	28.9	28.6	25.5	30.2	31.7	33.4	34.4	34.6	38.3	44.2	53.8	67.6	74.0	47.6	74.1
9-May	77.0	81.7	85.1	89.5	91.7	86.2	74.0	60.0	39.5	27.5	19.5	15.6	14.6	14.8	14.2	15.8	16.9	17.5	18.5	21.4	25.8	34.9	37.6	38.4	42.4	91.7
10-May	43.0	46.5	55.0	59.7	64.2	61.9	54.2	41.4	31.9	25.9	23.6	23.4	27.0	24.5	26.8	23.7	22.8	23.7	25.1	31.2	34.8	41.4	42.5	45.2	37.5	64.2
11-May	48.0	55.5	64.0	65.9	68.9	71.1	68.5	60.8	54.9	55.0	62.8	49.5	39.7	44.7	41.8	38.2	38.5	36.5	37.2	42.4	52.6	57.7	68.0	75.3	54.1	75.3
12-May	77.4	76.3	81.6	83.7	86.8	83.2	75.3	71.8	65.9	56.5	48.1	44.9	41.1	40.6	39.7	36.5	34.5	34.2	35.9	38.7	38.8	43.3	49.4	52.0	55.7	86.8
13-May	55.1	59.5	64.8	73.2	77.3	68.2	57.0	54.2	51.9	42.2	37.8	33.7	30.7	26.7	23.9	24.2	24.2	26.0	32.4	45.6	48.5	53.2	53.9	57.4	46.7	77.3
14-May	53.3	50.4	49.7	49.9	53.3	56.1	53.9	49.1	47.9	49.4	48.7	49.6	51.1	50.9	53.0	56.2	63.0	63.6	70.7	71.5	72.2	70.9	72.3	76.0	57.6	76.0
15-May	80.4	81.3	83.2	82.2	75.7	71.8	78.7	77.2	71.6	61.7	57.8	50.9	40.4	38.4	35.5	35.1	34.7	34.5	35.5	38.0	43.4	48.7	50.6	59.9	57.0	83.2
16-May	69.6	76.0	77.4	76.7	82.6	77.3	69.3	60.5	54.4	48.0	43.6	38.7	34.5	31.4	28.9	26.8	24.9	24.3	25.0	28.0	31.8	38.5	46.4	46.6	48.4	82.6
17-May	49.7	51.4	55.2	57.9	59.1	61.5	60.0	54.5	47.9	42.2	36.0	30.8	28.3	28.2	28.3	27.7	26.5	27.1	28.3	30.3	33.9	35.9	37.2	38.9	40.7	61.5
18-May	41.1	43.2	46.1	50.7	54.9	56.7	49.5	43.7	41.2	38.2	35.0	30.7	29.5	30.0	30.5	30.4	28.6	26.9	27.9	29.8	32.9	35.5	36.7	38.6	37.8	56.7
19-May	42.1	50.4	53.6	60.0	69.5	63.8	51.8	43.1	39.9	33.7	25.1	23.8	26.0	29.2	28.8	27.9	29.5	34.9	53.2	60.7	79.8	84.4	82.5	82.3	49.0	84.4
20-May	80.2	81.3	81.8	83.0	84.1	83.0	81.7	80.7	82.1	79.4	74.2	68.5	66.5	63.5	65.8	77.8	78.7	75.1	73.9	77.5	86.2	91.6	93.9	93.6	79.3	93.9
21-May	92.1	93.7	90.9	93.2	93.2	89.5	84.5	75.4	65.3	59.7	55.4	54.4	50.8	48.3	66.8	73.4	68.7	69.1	69.9	70.3	72.3	75.0	80.0	80.7	73.9	93.7
22-May	84.6	81.6	80.4	80.9	81.1	82.6	81.8	76.9	69.2	66.0	68.1	77.8	85.6	83.3	78.6	69.2	59.9	51.9	53.5	56.7	63.0	72.5	83.2	89.0	74.1	89.0
23-May	92.0	94.9	96.4	97.1	97.6	97.8	83.4	74.2	64.8	54.0	49.3	54.8	88.9	76.3	54.6	75.1	65.3	50.2	48.2	50.5	53.4	57.8	64.0	69.0	71.2	97.8
24-May	76.0	76.4	78.2	87.4	91.0	85.2	74.7	63.8	60.0	55.2	46.4	41.0	34.7	30.3	30.0	30.8	30.9	32.4	29.7	33.1	42.9	54.8	58.1	55.9	54.1	91.0
25-May	55.2	55.0	55.9	57.6	60.0	57.4	53.0	47.1	43.8	40.0	34.4	32.6	29.3	27.2	26.4	26.7	26.9	28.3	29.6	31.2	36.8	40.8	44.5	51.4	41.3	60.0
26-May	61.7	64.8	68.1	73.7	78.3	73.7	68.0	55.0	45.1	40.5	36.5	31.9	28.1	27.5	26.0	24.4	25.7	26.9	32.5	62.2	85.3	95.0	96.2	97.0	55.2	97.0
27-May	97.2	95.9	96.0	96.4	97.4	95.4	85.6	75.3	66.6	53.7	43.2	32.4	28.1	27.8	27.3	27.0	27.5	28.1	28.0	31.9	37.5	47.4	59.4	66.5	57.2	97.4
28-May	71.9	70.2	67.1	73.0	80.8	68.1	60.2	54.7	47.2	43.8	33.0	25.6	24.7	22.5	23.1	23.3	24.2	25.1	28.3	35.6	46.1	54.9	51.7	58.7	46.4	80.8
29-May	61.1	64.6	70.6	72.2	78.8	81.7	72.3	56.6	42.7	34.2	29.1	24.4	23.6	22.6	22.5	22.2	23.5	23.9	26.4	29.1	33.9	42.2	49.7	54.0	44.2	81.7
30-May	58.9	62.4	70.4	91.0	91.2	89.7	81.2	63.3	52.5	41.5	31.4	27.3	24.2	21.9	23.0	24.6	27.8	32.9	33.6	34.6	42.0	50.3	58.7	60.6	49.8	91.2
31-May	68.0	70.4	69.7	62.7	59.9	58.8	60.8	57.3	52.8	52.4	45.5	44.7	50.5	51.0	49.1	53.4	60.1	74.7	86.1	86.2	91.7	95.8	97.4	97.8	66.5	97.8
65.4 68.1 70.3 73.5 75.9 74.1 68.3 60.7 53.4 47.5 42.3 39.1 38.1 36.2 35.4 36.2 35.9 35.5 37.8 41.5 48.3 53.7 57.7 62.0																										Diurnal Average
97.2 96.0 96.4 97.1 97.6 97.8 92.2 89.5 86.3 84.6 76.3 77.8 88.9 83.3 78.6 77.8 78.7 75.1 86.1 86.2 91.7 95.8 97.4 97.8																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

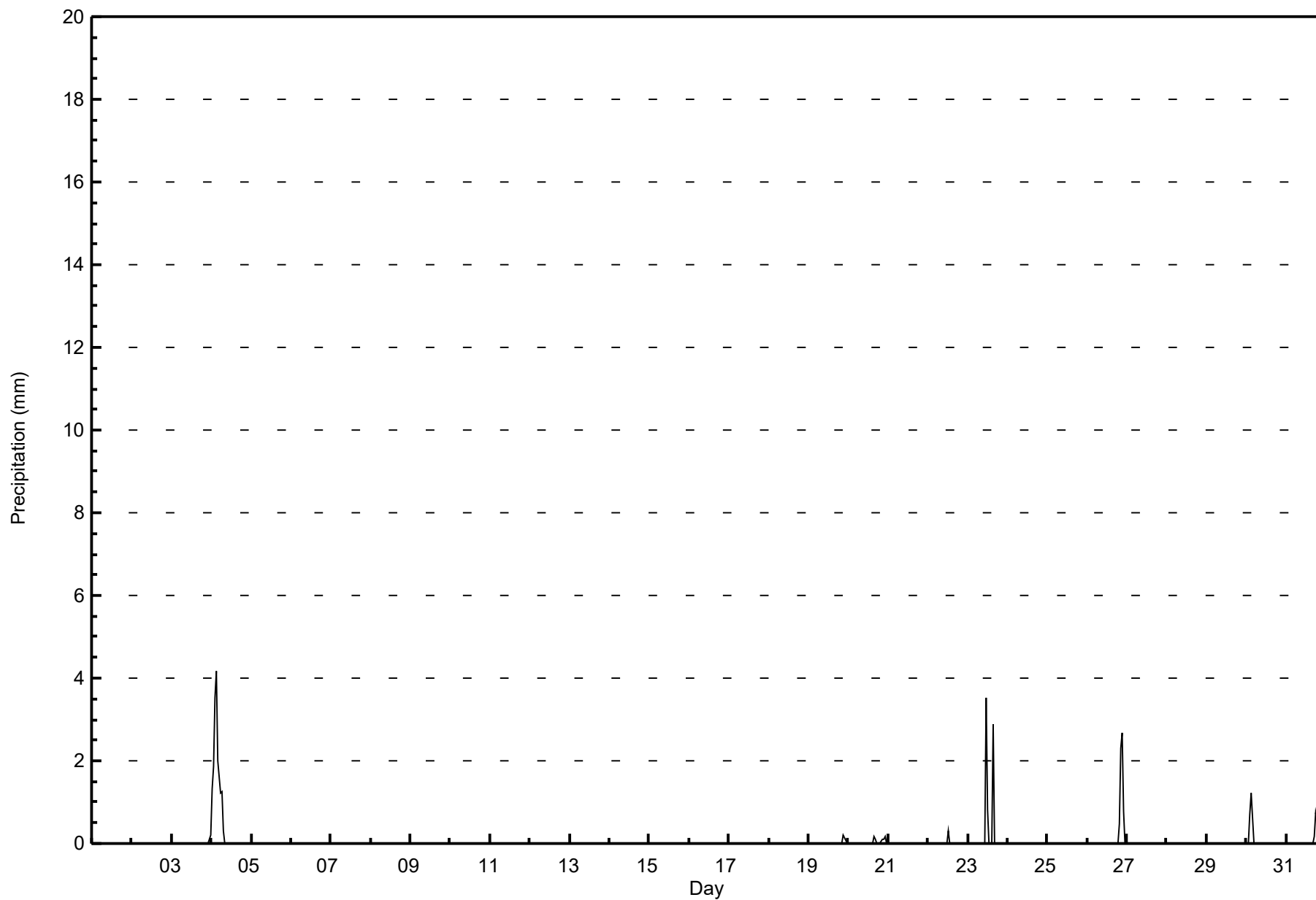
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 9.6 mm on May 31 23:00																		Maximum Daily Total: 18.5 mm on May 31										Hours in Service: 744	
Minimum Value: 0.0 mm on May 1 01:00																		Minimum Daily Total: 0.0 mm on May 1										Hours of Data: 744	
Maximum Diurnal Total: 10.6 mm at hour 23																		Minimum Diurnal Total: 0.0 mm at hour 9										Hours of Missing Data: 0	
Monthly Total: 50.99 mm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 2.3										Hours of Calibration: 0	
																		Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Total	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2			
4-May	1.3	1.9	3.5	4.2	2.0	1.2	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7			
5-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
6-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
8-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
10-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
12-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
15-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.3	0.2			
20-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.7	0.2			
21-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
22-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3			
23-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.8	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	3.5			
24-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.3	2.7	0.8	0.0	6.2	2.7			
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
30-May	0.0	0.0	0.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.2			
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.4	2.0	3.5	9.6	2.2	18.5	9.6			
1.3 1.9 4.3 5.4 2.0 1.2 1.3 0.3 0.0 0.0 0.0 3.5 1.1 0.0 0.0 3.0 0.1 0.2 0.8 0.8 4.4 6.5 10.6 2.4																								Diurnal Average					
1.3 1.9 3.5 4.2 2.0 1.2 1.3 0.3 0.0 0.0 0.0 3.5 0.8 0.0 0.0 2.9 0.1 0.2 0.8 0.5 2.3 3.5 9.6 2.2																								Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	722	97.04	97.04
0.4 - 0.5	2	0.27	97.31
0.6 - 0.7	1	0.13	97.45
0.8 - 1.4	7	0.94	98.39
1.5 - 10	12	1.61	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

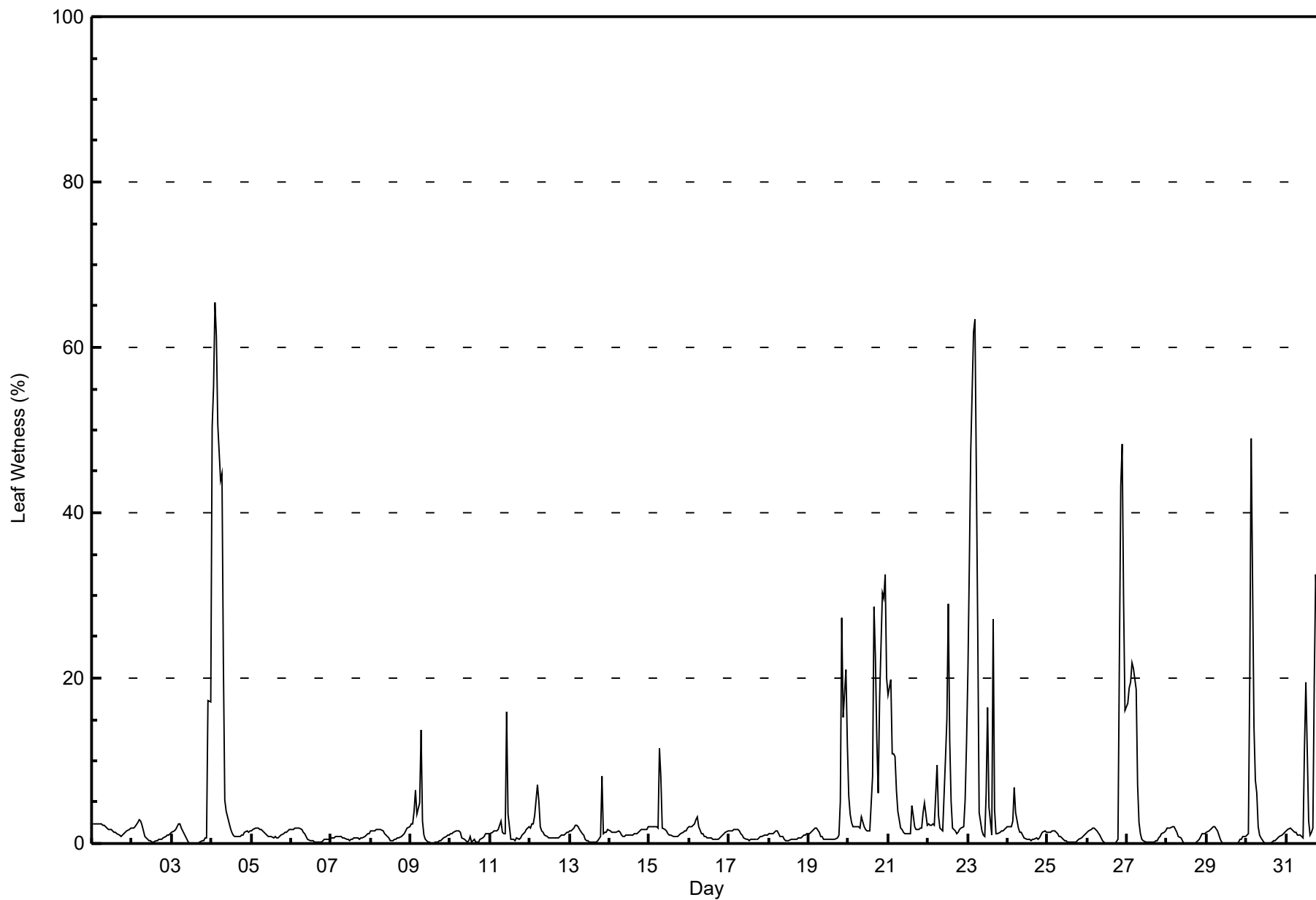
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 65.5 % on May 4 03:00																			Maximum Daily Average: 17.5 % on May 4							Hours in Service: 744	
Minimum Value: 0.0 % on May 3 13:00																			Minimum Daily Average: 0.7 % on May 29							Hours of Data: 743	
Maximum Diurnal Average: 8.4 % at hour 4																			Minimum Diurnal Average: 0.9 % at hour 10							Hours of Missing Data: 1	
Monthly Average: 3.70 %																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 1.2 Q ₃ = 1.9 P ₉₀ = 6.5 P ₉₉ = 51.2							Hours of Calibration: 0	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.1	2.1	1.8	1.7	1.6	1.5	1.4	1.3	1.1	0.9	0.9	1.1	1.3	1.4	1.5	1.6	1.8	1.7	2.4	
2-May	1.9	1.9	2.0	2.5	2.9	2.6	2.2	1.5	0.9	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.5	0.5	0.5	0.7	0.9	1.0	1.1	1.3	1.1	2.9	
3-May	1.4	1.6	1.7	2.0	2.3	2.3	1.9	1.2	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.6	0.7	17.3	17.0	2.2	17.3		
4-May	50.4	55.2	65.5	61.3	50.7	43.9	44.8	21.9	5.3	3.9	2.6	1.8	1.4	1.0	0.8	0.9	0.9	0.8	1.0	1.1	1.4	1.6	1.4	1.5	17.5	65.5	
5-May	1.6	1.8	1.8	1.8	1.8	1.8	1.7	1.4	1.3	1.0	0.9	0.9	0.8	0.7	0.8	0.7	0.7	0.8	1.0	1.2	1.3	1.4	1.5	1.7	1.3	1.8	
6-May	1.7	1.7	1.8	1.8	1.9	1.9	1.7	1.4	1.3	0.8	0.5	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.4	0.5	0.5	0.5	0.6	0.9	1.9	
7-May	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.7	0.5	0.6	0.7	0.9	1.1	1.1	1.3	0.7	1.3	
8-May	1.5	1.5	1.5	1.7	1.7	1.7	1.7	1.5	1.2	1.0	0.8	0.6	0.3	0.3	0.6	0.6	0.7	0.7	0.8	1.0	1.2	1.5	1.8	2.1	1.2	2.1	
9-May	2.3	2.5	3.9	6.5	3.5	4.9	13.7	2.6	0.9	0.5	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.0	1.1	2.0	13.7	
10-May	1.2	1.3	1.4	1.5	1.5	1.5	1.3	0.7	0.5	0.3	0.2	0.3	0.9	0.1	0.5	0.2	0.2	0.2	0.5	0.7	0.9	1.1	1.2	1.1	0.8	1.5	
11-May	1.2	1.4	1.5	1.6	1.6	1.7	2.6	1.3	1.1	1.2	15.9	3.6	0.5	0.6	0.5	0.3	0.6	0.5	0.7	0.9	1.3	1.4	1.7	2.0	1.9	15.9	
12-May	1.9	2.3	2.3	3.3	7.1	5.1	2.0	1.5	1.3	1.0	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.1	1.3	1.4	1.7	7.1	
13-May	1.5	1.6	1.8	2.2	2.2	2.0	1.7	1.1	1.1	0.6	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.8	8.2	1.3	1.3	1.4	1.7	1.3	8.2	
14-May	1.4	1.4	1.3	1.3	1.4	1.4	1.3	1.0	0.9	0.9	1.0	1.1	1.0	1.0	1.1	1.1	1.3	1.4	1.5	1.6	1.7	1.7	1.7	2.1	1.3	2.1	
15-May	2.1	2.0	2.0	2.0	2.0	1.9	11.6	7.9	1.9	1.6	1.4	1.2	1.1	1.0	0.9	0.9	0.9	0.9	1.1	1.2	1.4	1.5	1.6	1.8	2.2	11.6	
16-May	2.1	2.0	2.2	2.4	2.9	3.2	2.0	1.3	1.2	0.9	0.8	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.7	0.9	1.0	1.2	1.4	1.5	1.3	3.2	
17-May	1.5	1.5	1.6	1.7	1.6	1.6	1.5	1.3	1.0	0.8	0.6	0.4	0.3	0.5	0.5	0.6	0.5	0.5	0.6	0.8	0.9	1.0	1.0	1.1	1.0	1.7	
18-May	1.1	1.2	1.2	1.4	1.5	1.5	1.3	0.8	0.8	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.6	0.7	0.7	0.9	1.0	1.0	1.1	0.9	1.5	
19-May	1.2	1.4	1.5	1.6	1.9	1.8	1.4	0.9	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7	1.1	5.0	27.3	15.3	21.0	12.1	4.1	27.3	
20-May	5.7	3.6	2.6	2.1	2.1	2.1	2.0	1.9	3.2	2.0	1.7	1.5	1.5	1.5	8.2	28.6	22.5	12.6	6.2	17.5	30.3	29.7	32.5	20.0	10.1	32.5	
21-May	17.9	19.9	10.8	10.8	10.5	6.4	4.0	1.9	1.6	1.3	1.2	1.2	1.2	1.2	4.6	3.4	2.0	1.8	1.8	1.8	1.9	3.7	4.9	2.1	4.9	19.9	
22-May	2.3	2.2	2.2	2.3	2.3	9.5	3.4	1.9	1.6	1.5	10.3	15.1	29.0	12.6	5.1	1.8	1.5	1.3	1.4	1.6	1.8	2.1	5.2	12.3	5.4	29.0	
23-May	21.1	33.7	47.5	61.9	63.3	44.8	25.7	3.7	1.5	1.0	0.9	6.1	16.4	4.4	1.0	27.1	4.1	1.2	1.2	1.4	1.5	1.5	1.7	1.8	15.6	63.3	
24-May	2.0	2.1	2.0	2.8	6.7	3.7	1.8	1.4	1.4	1.0	0.7	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.9	1.3	1.5	1.4	1.5	6.7	
25-May	1.4	1.4	1.4	1.5	1.5	1.4	1.2	0.9	0.8	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.0	1.1	0.8	1.5	
26-May	1.4	1.6	1.7	1.8	1.9	1.7	1.4	0.9	0.8	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	22.0	43.3	48.3	29.6	16.1	7.2	48.3	
27-May	17.0	18.8	19.5	21.9	21.2	18.7	7.1	2.5	1.2	0.5	0.3	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.4	1.6	5.7	21.9	
28-May	1.8	1.9	1.9	2.0	2.0	1.7	1.4	0.8	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.9	1.2	1.2	1.2	0.8	2.0	
29-May	1.4	1.5	1.8	1.9	2.0	2.0	1.6	0.9	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.8	0.9	0.9	0.7	2.0	
30-May	1.0	1.1	20.1	48.9	14.1	7.7	6.2	2.0	1.0	0.6	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.6	0.6	0.8	1.1	1.2	1.3	4.6	48.9	
31-May	1.5	1.7	1.8	1.7	1.6	1.4	1.3	1.1	1.0	0.8	0.6	11.5	19.4	2.7	1.0	1.3	1.9	19.6	32.6	23.4	54.7	63.1	OR	51.6	12.9	63.1	
5.0 5.6 6.8 8.4 7.1 6.0 5.0 2.3 1.3 0.9 1.5 1.7 2.6 1.1 1.0 2.4 1.4 1.6 1.9 3.2 6.0 6.2 4.7 5.3																								Diurnal Average			
50.4 55.2 65.5 61.9 63.3 44.8 44.8 21.9 5.3 3.9 15.9 15.1 29.0 12.6 8.2 28.6 22.5 19.6 32.6 23.4 54.7 63.1 32.5 51.6																								Diurnal Maximum			
OR - Out of Range																											



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	100	13.46	13.46
0.4 - 0.5	63	8.48	21.94
0.6 - 0.7	65	8.75	30.69
0.8 - 1.4	215	28.94	59.62
1.5 - 10	210	28.26	87.89
> 10	66	8.88	96.77

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

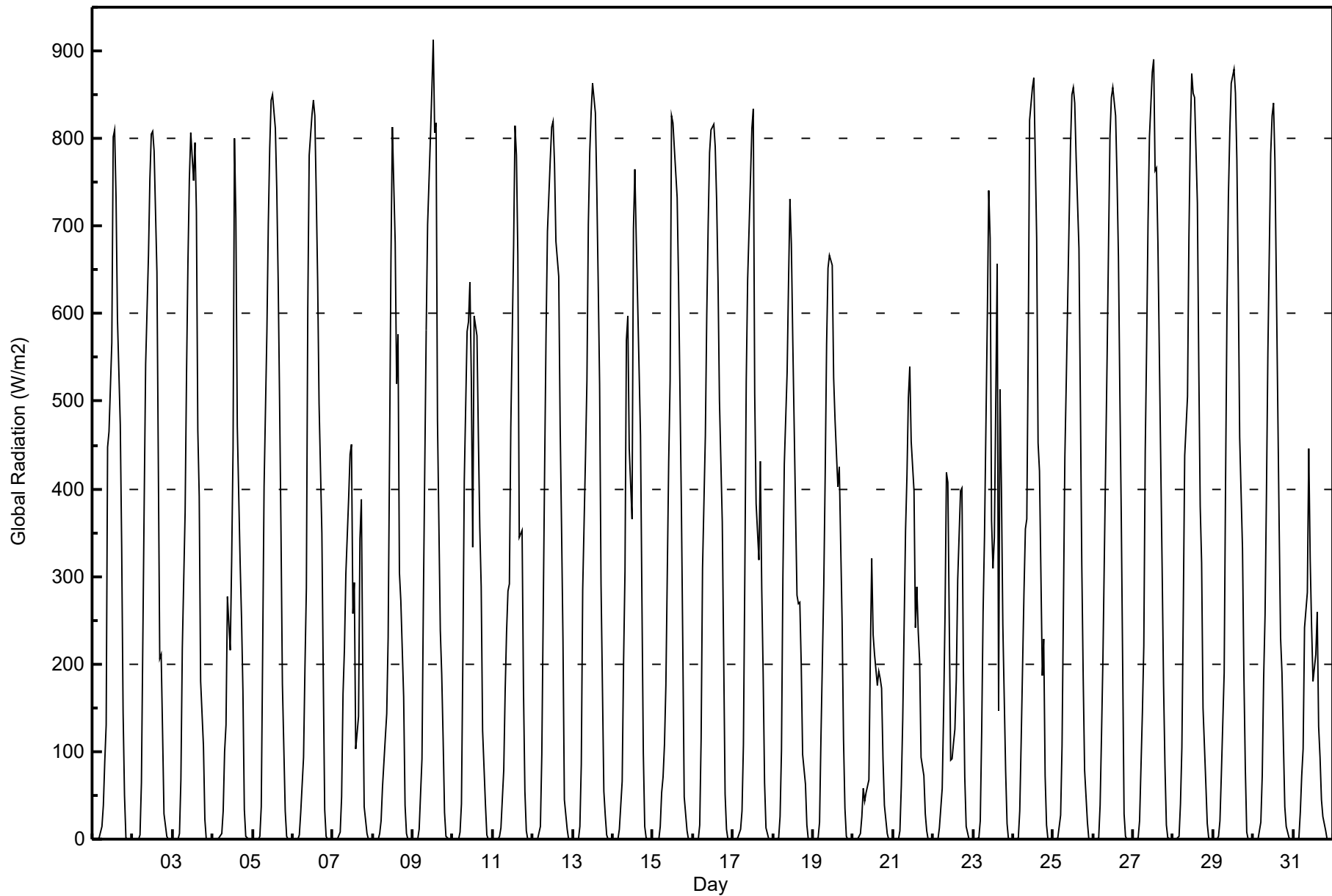
Fort McKay - Bertha Ganter - May 2025

Maximum Value: 913.0 W/m2 on May 9 13:00																					Maximum Daily Average: 331.7 W/m2 on May 25				Hours in Service: 744	
Minimum Value: 0.0 W/m2 on May 1 01:00																					Minimum Daily Average: 86.9 W/m2 on May 20				Hours of Data: 744	
Maximum Diurnal Average: 668.4 W/m2 at hour 13																					Minimum Diurnal Average: 0.0 W/m2 at hour 24				Hours of Missing Data: 0	
Monthly Average: 254.70 W/m2																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 117.5 Q ₃ = 460.2 P ₉₀ = 753.9 P ₉₉ = 860.8				Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																					Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			22	23	24
1-May	0.0	0.0	0.0	0.0	1.9	15.0	38.7	89.0	130.7	447.1	464.8	567.1	801.7	810.3	732.2	594.7	473.8	332.8	144.3	49.9	1.2	0.0	0.0	0.0	237.3	810.3
2-May	0.0	0.0	0.0	0.0	5.0	64.8	226.7	389.4	543.2	666.4	754.0	805.2	807.8	785.2	647.1	426.9	206.9	210.2	123.0	28.5	2.9	0.0	0.0	0.0	278.9	807.8
3-May	0.0	0.0	0.0	0.0	6.6	67.1	216.6	373.0	531.1	658.3	753.3	807.5	751.6	794.9	716.2	466.8	391.6	179.7	105.6	22.0	0.6	0.0	0.5	0.0	285.1	807.5
4-May	0.0	0.0	0.0	0.0	0.8	6.7	31.5	100.5	130.4	276.9	216.2	317.9	445.6	799.9	708.0	472.5	317.3	253.1	169.1	33.9	3.8	0.0	0.0	0.0	178.5	799.9
5-May	0.0	0.2	0.0	0.0	3.8	37.0	213.4	402.9	580.0	702.1	789.8	843.9	849.5	811.2	741.7	638.1	500.7	350.3	176.9	31.7	3.4	0.0	0.0	0.0	319.9	849.5
6-May	0.0	0.0	0.0	0.0	4.6	31.3	93.6	196.8	286.2	605.4	780.3	827.8	843.9	825.9	738.1	637.9	497.2	349.4	182.9	33.1	4.0	0.0	0.0	0.0	289.1	843.9
7-May	0.0	0.0	0.0	0.0	7.7	48.2	166.3	217.1	303.2	389.0	439.7	450.6	257.3	293.5	102.7	139.9	343.4	388.2	195.8	37.0	6.3	0.0	0.0	0.0	157.8	450.6
8-May	0.0	0.0	0.0	0.0	6.6	20.8	59.9	115.3	144.0	229.8	437.2	662.4	813.2	681.3	519.8	575.7	304.5	271.5	162.2	38.5	5.9	0.0	0.0	0.0	210.4	813.2
9-May	0.0	0.0	0.0	0.0	10.9	92.5	272.3	428.5	581.9	701.9	802.2	855.1	913.0	806.4	817.4	477.5	239.0	188.3	114.6	30.1	4.0	0.0	0.0	0.0	305.6	913.0
10-May	0.0	0.0	0.0	0.0	7.3	39.5	206.0	408.9	578.9	590.8	635.3	526.0	333.0	597.7	574.6	461.1	356.6	288.4	123.2	40.5	5.4	0.0	0.0	0.0	240.6	635.3
11-May	0.0	0.0	0.0	0.0	3.4	13.5	79.6	168.5	236.8	284.0	291.3	470.0	678.2	814.2	781.4	667.0	344.3	352.4	170.9	55.0	9.3	0.0	0.0	0.0	225.8	814.2
12-May	0.0	0.0	0.0	0.0	14.7	96.3	259.5	424.0	576.1	694.7	776.8	813.0	819.2	771.2	683.1	643.2	473.1	356.5	228.0	44.6	11.2	0.0	0.0	0.0	320.2	819.2
13-May	0.0	0.0	0.0	0.0	14.4	86.1	284.4	437.9	523.7	701.5	784.3	830.4	862.5	828.5	741.9	634.0	518.7	291.4	54.2	27.3	4.6	0.0	0.0	0.0	317.7	862.5
14-May	0.0	0.0	0.0	0.2	11.8	65.4	203.3	305.6	569.9	597.8	446.4	364.9	696.7	764.7	682.5	612.0	461.3	275.2	99.0	14.0	1.7	0.0	0.0	0.0	257.2	764.7
15-May	0.0	0.0	0.0	0.2	14.4	52.6	71.4	107.8	175.0	432.1	523.5	826.0	818.1	789.3	732.9	634.1	511.0	380.2	220.0	47.8	10.4	0.0	0.0	0.0	264.4	826.0
16-May	0.0	0.0	0.0	0.6	16.8	114.3	308.9	459.8	598.8	701.7	784.0	809.8	817.1	789.8	729.5	636.6	500.5	361.5	209.8	51.9	10.9	0.2	0.0	0.0	329.3	817.1
17-May	0.0	0.0	0.0	0.9	10.9	31.9	108.4	302.1	523.0	639.1	753.9	812.1	834.8	509.1	383.2	319.4	432.1	284.3	188.4	64.0	13.2	0.1	0.0	0.0	258.8	834.8
18-May	0.0	0.0	0.0	0.9	26.3	100.8	299.2	428.1	532.4	635.3	731.3	678.9	570.2	373.8	279.0	268.1	270.8	199.4	95.8	62.5	16.0	0.3	0.0	0.0	232.1	731.3
19-May	0.0	0.1	0.0	1.1	19.6	115.2	290.1	417.7	565.2	651.6	667.1	655.7	526.4	477.9	439.4	402.4	424.4	247.9	115.1	34.7	3.2	0.0	0.0	0.0	252.3	667.1
20-May	0.0	0.0	0.0	0.2	7.2	25.8	58.2	43.3	53.9	67.1	207.6	319.8	233.4	210.7	175.4	190.8	183.4	172.7	92.3	38.4	6.2	0.0	0.0	0.0	86.9	319.8
21-May	0.0	0.0	0.0	0.4	9.3	61.9	137.2	352.9	416.1	504.3	538.8	454.0	397.9	241.9	288.8	236.1	203.2	93.3	72.7	28.5	9.9	0.2	0.0	0.0	168.6	538.8
22-May	0.0	0.0	0.0	0.2	13.1	58.7	146.4	255.5	418.4	407.1	89.5	91.8	108.9	125.2	182.2	296.0	397.3	401.0	198.7	70.9	14.1	0.7	0.0	0.0	136.5	418.4
23-May	0.0	0.0	0.0	1.8	20.7	122.3	258.6	345.6	596.6	740.6	686.3	363.2	309.8	344.5	657.6	146.0	513.3	401.7	244.6	76.5	17.6	0.2	0.0	0.0	243.6	740.6
24-May	0.0	0.0	0.0	2.2	32.7	111.5	282.5	354.9	364.7	556.8	821.6	858.5	869.2	779.8	685.8	452.6	420.4	187.3	228.4	72.0	15.7	0.6	0.0	0.0	295.7	869.2
25-May	0.0	0.0	0.0	2.0	27.2	106.2	268.6	436.1	522.7	705.7	791.6	850.8	858.3	840.0	778.1	674.8	500.8	314.4	185.8	78.1	18.8	0.7	0.0	0.0	331.7	858.3
26-May	0.0	0.0	0.0	2.3	39.1	119.6	205.8	437.4	553.3	680.8	803.8	846.5	857.8	825.8	755.8	665.4	509.6	369.6	29.4	3.0	0.2	0.0	0.0	0.0	321.1	857.8
27-May	0.0	0.0	0.0	1.9	21.3	145.2	221.4	442.5	563.8	704.8	801.3	876.6	890.9	763.6	766.5	681.6	431.1	309.2	176.3	84.0	16.3	1.8	0.0	0.0	329.2	890.9
28-May	0.0	0.0	0.0	3.8	40.8	105.3	260.9	438.3	505.7	687.7	806.5	874.8	851.0	846.3	725.9	537.2	379.9	314.9	150.5	63.1	17.8	0.9	0.0	0.0	317.1	874.8
29-May	0.0	0.0	0.0	2.7	20.1	74.7	189.5	410.5	606.9	733.8	807.9	863.7	879.9	852.5	776.9	636.5	459.3	331.6	186.6	80.8	8.6	0.7	0.0	0.0	330.1	879.9
30-May	0.0	0.0	0.0	0.5	18.8	72.0	184.4	255.3	396.2	555.1	782.1	826.5	841.3	774.8	636.1	358.1	231.0	190.7	110.7	37.3	13.9	0.8	0.0	0.0	261.9	841.3
31-May	0.0	0.0	0.0	2.2	31.3	71.9	103.2	241.1	282.4	445.3	320.8	243.3	180.7	211.1	260.0	128.4	93.6	45.3	25.0	9.6	0.1	0.0	0.0	0.0	112.3	445.3
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Global Radiation (GR) - W/m2
Fort McKay - Bertha Ganter - May 2025

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	277	37.23	37.23
21 - 100	79	10.62	47.85
101 - 300	120	16.13	63.98
301 - 600	135	18.15	82.12
601 - 900	132	17.74	99.87
> 900	1	0.13	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

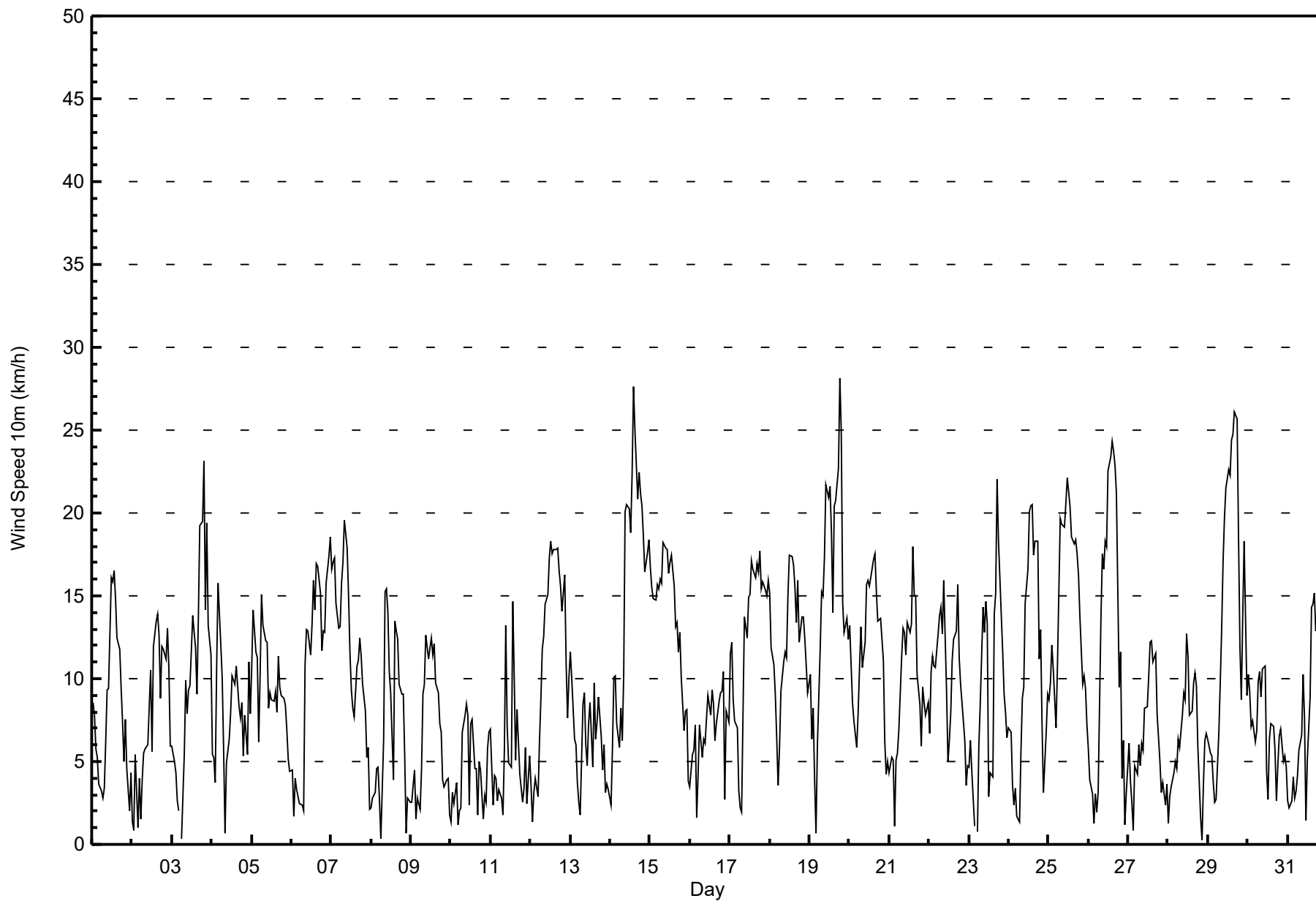
Fort McKay - Bertha Ganter - May 2025

Maximum Speed: 28 km/h on May 19 19:00										Maximum Daily Speed Average: 15.0 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 28 21:00										Minimum Daily Speed Average: 1.4 km/h on May 11										Hours of Data: 742						
Maximum Diurnal Speed Average: 5.5 km/h at hour 16										Minimum Diurnal Speed Average: 0.7 km/h at hour 6										Hours of Missing Data: 2						
Monthly Average Velocity: 3.2 km/h 161.0 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 5 Median = 9 Q ₃ = 14 P ₉₀ = 18 P ₉₉ = 24										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N9	NNW8	NNW6	NW5	WNW4	WNW3	W3	SW3	SW6	SSE9	SSW9	SSE16	SSE16	SSE17	SSE15	SSE12	SSE12	SSE9	SSE7	SE5	SE8	E5	ENE2	N4	SSE4.2	SSE17
2-May	NNW1	W1	NNW5	W1	WSW4	W2	S4	SE6	SE6	SE6	SE8	SE10	SE6	NW12	NW13	NNW14	NNW13	N9	NNE12	NNE12	N11	NNE13	N11	NNW6	N3.5	NNW14
3-May	NNW6	NNW5	NNW4	WNW3	WNW2	UO	SW0	SSE5	SSE10	SW8	WSW9	W10	NNW14	WNW13	W12	W9	WNW14	NW19	NW19	NNW23	WNW14	NW19	NNW13	NNW11	WNW8.2	WNW23
4-May	WNW5	S5	SSW4	WNW11	NNW16	NW12	NW10	NNW6	NE1	WSW5	WSW6	WSW8	W10	W10	SW10	SW11	SW8	WSW8	SW9	WSW5	SW8	W5	WNW11	WNW8	W6.0	NNW16
5-May	WNW11	NNE14	N12	N11	NW6	NNW10	NNW15	NNW13	NNW12	NW12	NNW8	NNW9	ENE9	NE9	NE9	ENE8	NE11	NE9	NE9	NE9	NNE8	NNE7	NE5	NE4	N7.9	NNW15
6-May	N4	ENE2	NNW4	WNW3	NW3	WNW2	NW2	SSW2	SSE11	SSE13	SSE13	S11	SSW13	SSW16	SSW14	S17	S17	SSW15	SSW12	S13	S13	S16	S17	S19	S8.8	S19
7-May	S17	SSE17	S17	S15	SSE13	SSE13	S16	S17	S20	S18	S15	SW11	SW9	WSW8	SW8	WSW11	WSW11	SW12	SSW11	SSW10	SSW8	SSW5	SW6	W2	SSW10.8	S20
8-May	SSW2	W3	WNW3	NW5	WNW5	W3	NE0	NNE6	NNE15	NNE15	NNE14	NE10	E9	ESE4	NNE13	NNE13	NNE12	NNE10	N9	NNE9	NE5	SSE1	SSW3	SSW3	NNE5.3	NNE15
9-May	SW3	SW4	NNW5	SW1	WSW3	S2	SSE5	SE9	S10	S13	SW11	WSW12	SW12	WSW11	SW12	SW10	WSW9	WSW7	WSW7	SW4	SSW3	SSW4	SW4	SSW2	SW5.6	S13
10-May	WNW1	SSW3	S2	SSW4	WSW1	W2	SSE2	SE7	SSW8	SW9	WSW8	S2	NNW7	ESE8	NE5	ESE5	S2	SSE5	SE4	ENE2	SE3	SE3	SSE6	S7	S2.3	SW9
11-May	S7	SSE2	NNW4	NW4	NNW3	WNW3	NNW3	NW2	SE6	SSE13	SSE7	S5	S5	SSE15	SSE10	ESE5	N8	NE4	E3	E3	N3	N6	NW2	NW5	SE1.4	SSE15
12-May	NW4	WSW1	NW3	WNW4	NNW3	N6	NNE9	NNE12	NNE13	NNE14	NNE15	NNE17	NNE18	NNE18	NNE18	NNE18	NNE18	NNE17	NNE16	NNE14	N16	N11	N8	NNW10	NNE11.1	NNE18
13-May	NNW12	NNW10	NW6	WNW6	WNW4	WNW3	NNE2	NNE8	NNE9	ENE6	ENE5	ESE7	SE9	ESE5	SE10	SE6	SSE7	SSE9	S7	SSE5	SSE6	SE3	SE4	NNE3	E1.5	NNW12
14-May	SE2	SSE6	SSE10	S10	S7	S6	S8	SSW6	NNW10	N20	NNE20	NNE20	NNE19	NNE22	NNE28	NNE25	NNE21	NNE22	NNE21	N20	N19	N16	N18	N18	NNE11.1	NNE28
15-May	N17	N15	N15	N15	NNE16	N15	N16	N16	N18	N18	N18	NNE16	NNE17	N17	NNE16	NE13	NE13	NNE12	NE13	NE10	NE7	NNE8	N8	NNW4	N13.4	N18
16-May	NW3	NW5	NNW6	NNW7	N2	NNE4	NE7	NNE5	N6	NNE6	NNE8	NNE9	NNE8	NNE9	NE8	NNE6	NNE7	N9	N9	NNW9	N10	N3	SSE8	SE7	NNE5.2	N10
17-May	SSE12	SE12	SE9	SE7	ESE7	E3	E2	SSE2	SSE8	SSE14	SSE12	SSE15	SSE15	SSE17	SSE17	SSE17	SSE16	SSE17	SSE16	SE18	SE15	SE16	SSE15	SSE16	SSE12.1	SE18
18-May	SSE15	SSE12	SSE11	SE9	SE6	ESE4	SSE6	SSE9	SSE11	SSE12	SSE11	SSE15	SSE17	SSE17	SSE17	SSE16	SSE13	SSE16	SSE12	SE14	SE14	SSE12	SSE11	SSE9	SSE11.9	SSE17
19-May	SSE10	SSE6	SSE8	SSE4	SSE1	SSE6	SSE12	SSE15	SSE15	SSE17	SSE22	SSE21	SSE22	SSE19	SSE14	SSE20	SSE21	SSE23	SSE28	SSE25	SE15	SE13	SE14	SE12	SSE15.0	SSE28
20-May	SE13	SE11	SE9	SE7	ESE6	SE8	SE11	SE13	SE11	SE12	SE16	SSE16	SE16	SSE16	SE17	SE18	SSE15	SSE13	SE14	SE14	SSE11	SSE6	SE4	SE5	SE11.6	SSE18
21-May	SE4	SE5	SSE5	E1	SE5	SE5	SSE7	SSE11	SSE13	SSE13	SSE11	SSE13	SSE13	SE13	SSE18	SSE15	SSE15	S10	S8	S6	SSE9	SSE9	SSE8	S9	SSE9.2	SSE18
22-May	SSE7	SSE10	S11	S11	SSE11	SSE13	SSE14	SSE14	S13	SSE16	S9	WSW5	SW6	S8	SSE11	SSE12	SSE13	SSE16	S11	SSE10	SSE9	SSE6	SSE4	S5	SSE9.8	SSE16
23-May	SSE5	SSE6	SE4	NW1	UO	ENE1	SE6	SSE8	SSE14	SSE13	SSE15	SSE13	WNW3	NNW4	SE4	SE14	SE15	SSE22	SSE18	SSE14	S12	SSE9	S8	S6	SSE8.4	SSE22
24-May	S7	S7	S4	NW2	WNW3	NW2	ESE1	SSE6	SE9	SSE10	SSE15	SSE17	SSE20	SSE20	SSE21	SSE17	SSE18	SSE18	S11	S13	SSE7	SE3	S7	SSE9	SSE9.6	SSE21
25-May	S9	S10	SSE12	SSE11	SSE7	SSE11	SSE15	SSE20	SSE19	SSE19	SSE21	SSE22	SSE21	SSE20	S19	S18	S18	S18	S16	SSE14	SSE10	SSE10	SSE9	SSE7	SSE14.8	SSE22
26-May	SSE6	S4	SSE3	NW1	NW3	NNW2	SSE3	SSE14	SSE18	SSE17	SSE18	SSE18	SSE23	SSE23	SSE24	SSE24	SSE23	SSE21	SW10	NNW12	NW4	S6	SSW1	SSW3	S9.9	SSE24
27-May	S6	S4	WSW3	WSW1	S5	S4	S6	S5	SSW6	SW6	W8	WSW8	WSW10	SW12	SW12	SW11	WSW12	W8	WSW6	SW5	SW3	SSW4	S2	S4	SW5.5	SW12
28-May	SSE1	W3	SSW3	S4	SSE5	SSE5	SSE6	SSE6	SSE8	SE9	SSE9	S13	S11	SW8	SSW8	S10	S10	S10	S6	S2	N0	S4	S6	SSE7	S6.0	S13
29-May	S6	S5	S5	S4	SSE3	SSE3	SSE7	SSE10	SSE13	SSE17	SSE20	SSE21	SSE23	SSE22	SSE24	SSE25	SSE26	SSE26	SSE19	SSE12	SSE9	W14	WNW18	WNW9	SSE11.4	SSE26
30-May	W10	WNW9	SW7	WNW7	WNW6	WNW7	NW10	NW10	NW9	NW11	NW11	NNW4	WSW3	WSW6	SW7	SW7	SSW6	SW3	SSW5	S7	SSE7	S5	SSE5	S5	W4.3	NW11
31-May	SW3	S2	SSW3	W4	WSW3	SSW3	SSE4	SSE6	SSE7	SSE10	SE8	SSE1	N5	N9	NNW14	NNW14	N15	N13	NNW14	N15	NNW14	NNW10	NW10	NW8	NNW4.1	N15
S2.0 S2.0 S1.6WSW1.1 SW0.7 S0.7 SSE2.1 SSE3.9 SSE4.9 SSE5.5 SSE5.1 SSE5.5 SSE5.3 SSE4.8 SSE5.0 SSE5.5 SSE5.0 SSE5.0 SSE3.5 SE2.3 SE2.1 SSE1.2 S1.4 S1.5																										
N17 SSE17 S17 N15NNW16 NNE15 N16 SSE20 S20 N20 SSE22 SSE22 SSE23 SSE23 NNE28 NNE25 SSE26 SSE26 SSE28 SSE25 N19 NW19NNW18 S19																										
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay - Bertha Ganter - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	199	26.82	26.82
6 - 11	276	37.20	64.02
12 - 19	224	30.19	94.20
20 - 28	43	5.80	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay - Bertha Ganter - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	4	7	6	5	6	16	23	26	18	11	11	11	16	18	14	199
6 - 11	17	16	11	3	1	4	28	69	36	9	22	17	6	10	9	18	276
12 - 19	19	30	3	0	0	0	20	90	23	5	5	2	2	6	7	12	224
20 - 28	2	8	0	0	0	0	0	31	1	0	0	0	0	1	0	0	43
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	58	21	9	6	10	64	213	86	32	38	30	19	33	34	44	742

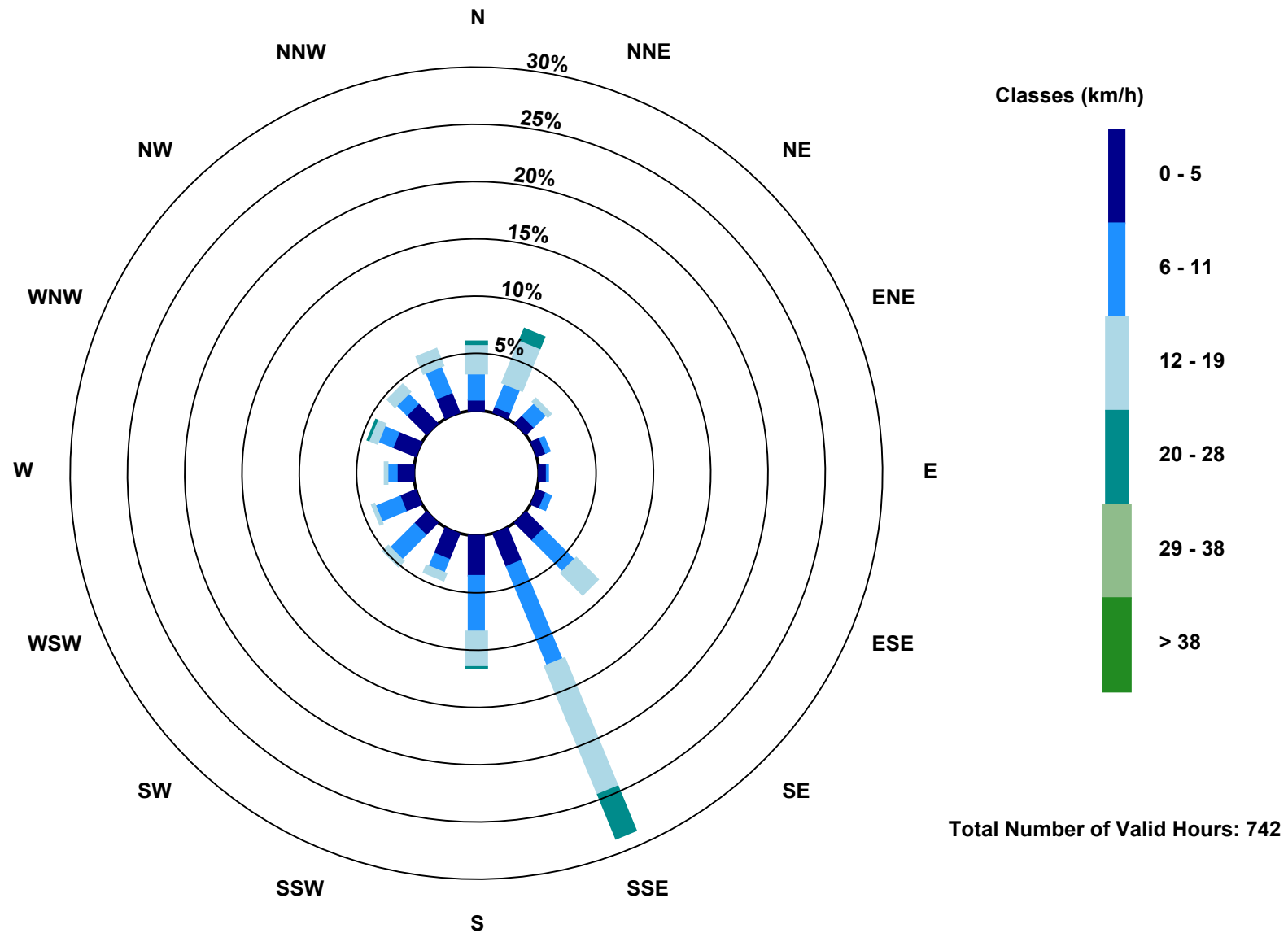
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Fort McKay - Bertha Ganter





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 1 km/h on May 9 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	1	1	1	1	1	1	2	2	4	3	3	4	3	3	3	2	2	2	2	2	1	2	1	4
2-May	3	2	2	1	1	2	1	1	1	2	2	3	4	4	5	5	3	2	4	3	2	3	3	2	5
3-May	1	1	1	1	2	UO	1	2	2	3	4	4	6	6	5	5	5	5	5	7	5	6	3	2	7
4-May	3	1	2	4	4	3	2	2	2	2	2	3	4	4	4	5	3	4	4	3	2	2	3	2	5
5-May	3	5	4	3	2	3	3	3	4	4	5	5	3	4	4	3	3	3	3	3	2	2	1	1	5
6-May	1	1	1	1	1	1	1	1	4	2	3	4	5	6	5	6	6	6	4	3	3	3	4	4	6
7-May	4	3	3	3	3	3	3	4	5	5	5	6	3	4	3	5	4	5	4	3	2	1	2	3	6
8-May	1	1	1	1	2	1	1	4	4	4	4	3	3	5	5	4	4	3	3	3	2	2	2	2	5
9-May	1	2	1	1	1	1	1	2	3	4	5	5	5	5	5	5	4	4	3	1	1	1	2	2	5
10-May	1	2	1	1	2	2	2	2	3	3	5	4	7	3	5	3	2	2	1	1	1	1	2	2	7
11-May	2	2	1	1	2	1	1	1	1	4	3	3	3	3	4	3	5	2	1	2	1	2	2	1	5
12-May	2	2	2	1	1	2	3	3	3	4	5	6	5	6	5	5	5	4	4	4	4	2	2	3	6
13-May	2	1	2	2	2	2	1	2	3	3	3	3	3	3	4	4	3	3	4	3	1	1	2	1	4
14-May	2	3	2	2	2	1	2	3	4	5	5	5	5	6	6	7	6	6	6	5	4	4	5	4	7
15-May	4	3	3	4	4	4	4	4	4	4	4	5	5	6	5	5	4	4	4	3	2	2	2	1	6
16-May	2	2	1	1	1	2	2	2	2	3	4	3	4	4	4	4	3	3	2	2	2	3	2	2	4
17-May	3	3	2	2	2	1	1	2	3	3	4	4	5	5	4	4	4	4	5	3	3	3	4	3	5
18-May	3	3	2	2	2	2	2	2	2	3	4	4	5	5	4	4	3	4	4	3	3	2	2	2	5
19-May	2	2	2	2	1	3	3	3	3	5	5	5	5	5	4	5	4	9	6	7	3	3	3	3	9
20-May	3	3	2	2	2	2	3	3	2	3	4	4	4	3	4	5	4	3	3	3	2	2	1	1	5
21-May	1	2	2	1	1	1	2	3	3	3	3	3	3	5	5	4	4	3	2	2	2	2	2	3	5
22-May	1	3	3	2	2	3	3	3	3	3	4	2	2	2	3	3	4	3	4	3	2	1	1	1	4
23-May	1	1	1	1	UO	1	2	3	3	3	4	7	2	2	3	8	6	5	4	3	3	2	2	2	8
24-May	1	2	2	2	1	2	2	2	2	3	3	4	5	5	5	4	4	5	4	5	3	1	2	2	5
25-May	1	2	2	2	2	3	4	4	4	4	5	5	5	6	5	5	5	5	5	4	2	2	2	1	6
26-May	1	1	1	1	1	1	3	5	3	4	4	5	5	6	7	6	6	6	7	6	3	4	3	2	7
27-May	3	1	1	2	2	1	2	2	2	3	4	4	4	5	5	5	5	4	3	2	1	1	2	2	5
28-May	2	1	1	1	1	2	1	2	2	2	4	4	5	4	4	4	3	3	2	2	1	2	1	1	5
29-May	2	1	1	1	1	2	1	2	2	4	4	5	5	6	6	6	6	6	5	3	2	8	6	4	8
30-May	5	5	3	3	3	3	2	2	3	3	4	3	3	4	4	3	2	1	2	1	1	1	1	2	5
31-May	1	2	2	1	2	1	1	2	2	2	2	2	3	3	2	3	3	3	3	4	4	4	3	2	4
5 5 4 4 4 4 4 5 5 5 5 7 7 6 7 8 6 9 7 7 5 8 6 4																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

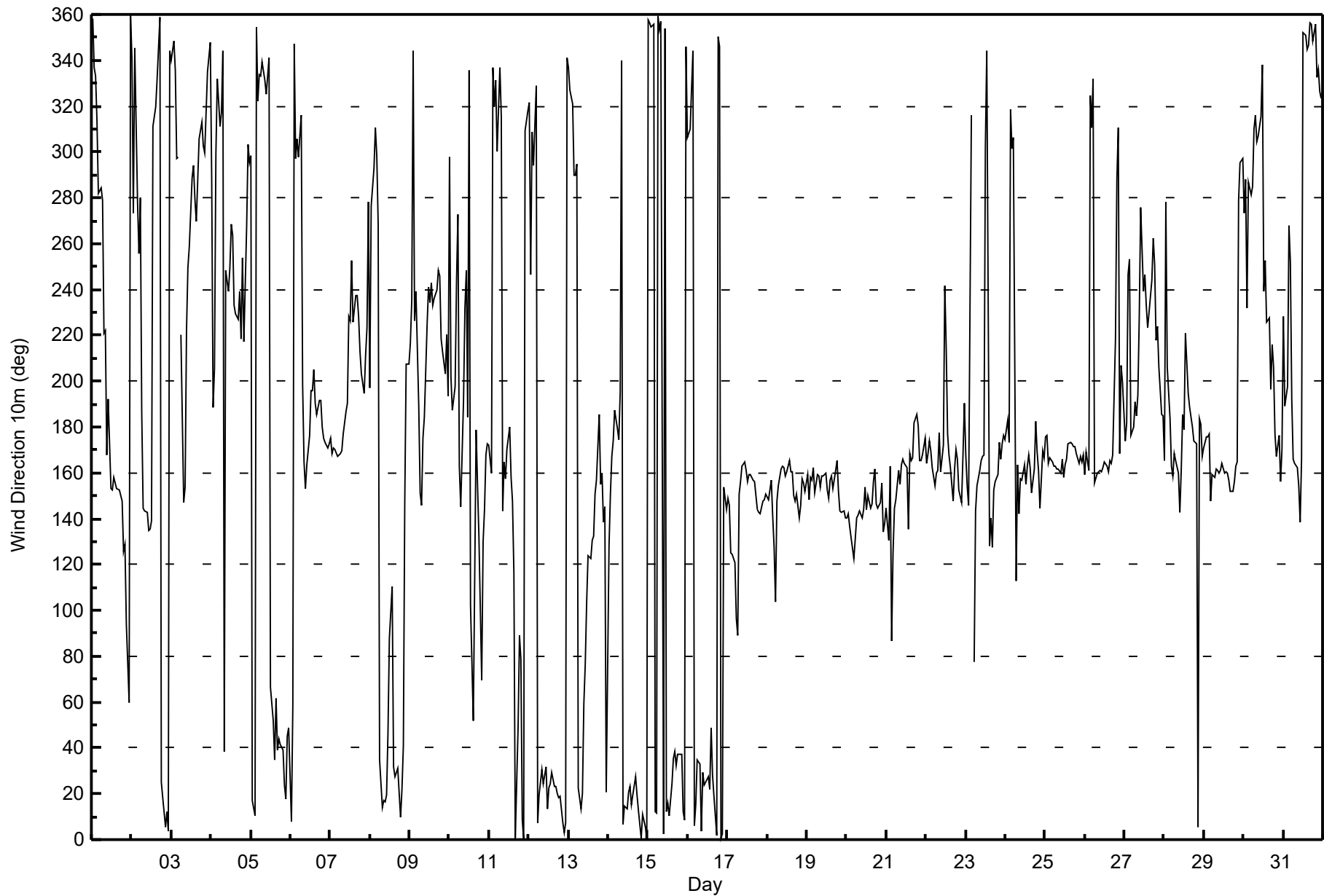
Wind Direction 10m (WD10) - deg Fort McKay - Bertha Ganter - May 2025

Direction of Maximum Speed: 166 deg on May 19 19:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 154.9 deg on May 19																				Hours of Data:		742			
Direction of Minimum Speed: 5 deg on May 28 21:00										Direction of Minimum Daily Speed Average: 1.4 deg on May 11										Hours of Missing Data:		2			
Monthly Average Direction: 161.0 deg																				Percent Operational Time:		99.7			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	358	337	333	314	282	285	279	221	222	168	193	153	152	158	156	153	152	150	148	126	129	94	60	360	158.6
2-May	340	273	346	278	256	280	186	145	144	143	135	135	139	311	320	332	345	359	25	18	6	12	3	344	1.2
3-May	340	348	335	297	298	UO	221	147	154	222	250	259	289	294	279	269	288	306	313	303	300	317	335	348	298.0
4-May	288	189	206	299	332	311	317	344	39	248	239	250	269	264	233	229	227	239	219	254	217	268	303	295	268.7
5-May	298	17	11	354	322	334	333	340	331	325	333	341	66	52	35	62	39	44	42	39	24	17	45	49	6.4
6-May	8	59	347	297	306	298	316	198	165	153	163	176	196	196	205	190	186	192	192	180	175	173	171	173	183.1
7-May	175	168	171	170	167	168	169	170	177	186	190	228	227	252	226	237	237	228	213	203	195	211	224	278	193.2
8-May	197	276	293	310	299	269	35	14	17	16	20	47	88	110	32	27	29	31	10	22	41	147	208	208	22.7
9-May	216	235	344	226	239	189	151	146	175	185	225	241	235	243	233	236	240	248	246	218	213	203	220	194	221.2
10-May	298	202	188	198	243	272	163	145	192	232	249	184	335	102	52	115	179	155	132	70	130	144	168	173	172.8
11-May	172	160	337	320	331	300	337	315	144	165	157	170	180	158	148	117	0	49	89	79	8	0	310	318	140.9
12-May	322	247	309	294	329	7	19	25	30	24	32	13	23	24	30	23	23	20	18	19	7	3	7	341	16.2
13-May	337	327	321	290	290	295	22	13	20	59	76	103	124	123	131	133	151	157	186	155	160	138	145	21	92.6
14-May	128	151	167	174	187	179	175	196	340	6	15	14	20	23	15	19	27	19	13	7	0	11	6	1	16.5
15-May	358	356	354	356	12	11	360	353	357	3	354	12	16	10	25	36	39	32	37	37	37	12	8	346	10.4
16-May	306	310	327	344	6	15	35	33	4	29	24	25	27	22	49	28	19	2	350	346	1	3	154	144	14.0
17-May	149	146	125	125	121	97	89	151	156	163	164	161	156	159	159	157	156	150	144	143	142	148	148	151	149.6
18-May	149	148	157	141	127	104	148	154	162	163	162	159	160	166	161	161	150	148	151	140	146	157	155	152	153.4
19-May	159	148	158	157	163	151	159	158	154	159	159	160	153	149	157	159	153	161	166	152	144	143	143	140	154.9
20-May	140	142	137	132	123	131	140	141	143	140	144	154	144	150	145	146	157	161	146	145	147	156	134	138	144.8
21-May	145	130	163	86	125	145	148	161	155	163	166	164	162	136	168	165	167	182	186	181	165	165	168	175	161.8
22-May	164	168	174	170	162	155	160	161	178	160	172	242	215	177	168	162	148	162	170	166	153	147	168	191	166.7
23-May	168	154	146	316	UO	78	143	154	161	165	167	168	302	344	128	140	127	153	156	159	173	166	173	176	157.2
24-May	174	183	173	318	302	306	113	164	142	158	157	164	155	163	168	162	151	162	183	169	161	144	170	167	163.6
25-May	176	176	164	167	165	163	163	162	162	160	166	158	163	166	173	173	172	171	172	168	164	167	165	168	166.4
26-May	159	169	161	325	310	332	156	160	160	161	161	163	165	163	161	165	164	168	219	288	311	169	207	199	169.0
27-May	174	182	246	253	176	180	191	185	194	228	276	239	246	233	224	230	244	262	251	218	224	206	186	185	224.2
28-May	165	278	206	184	163	159	168	165	160	143	161	185	179	221	195	189	184	180	174	172	5	183	181	167	178.3
29-May	171	176	176	177	148	160	158	161	161	160	161	164	160	161	160	157	152	152	156	163	165	279	295	297	166.3
30-May	273	288	232	287	282	285	310	316	305	307	316	338	239	252	226	227	196	216	206	177	167	176	156	170	263.5
31-May	228	189	198	268	252	192	166	164	162	154	139	166	352	351	345	347	356	356	348	356	333	336	326	324	340.9
181.6 171.1 177.4 237.0 229.0 185.1 155.7 151.6 155.5 158.5 163.7 163.1 160.2 163.4 159.6 158.3 150.6 156.8 160.2 144.5 139.6 156.2 173.8 173.6																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort McKay - Bertha Ganter - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg Fort McKay - Bertha Ganter - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744						
Maximum Value: 99 deg on May 30 13:00																			Hours of Data: 742						
Minimum Value: 9 deg on May 13 02:00																			Hours of Missing Data: 2						
Percentiles: P ₁ = 11 P ₁₀ = 14 Q ₁ = 16 Median = 22 Q ₃ = 38 P ₉₀ = 55 P ₉₉ = 90																			Hours of Calibration: 0						
																			Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-May	15	13	10	15	22	29	26	43	37	42	35	16	16	15	15	16	16	18	19	14	20	26	64	23	64
2-May	91	88	24	46	27	78	36	17	19	28	25	21	72	32	25	30	24	32	24	20	24	18	25	27	91
3-May	21	25	14	35	44	UO	98	26	20	44	46	43	32	32	37	48	26	15	13	16	18	18	24	26	98
4-May	36	18	45	21	15	11	12	28	90	40	39	41	34	40	40	43	42	47	42	43	24	38	14	16	90
5-May	15	23	21	22	16	19	18	26	28	29	65	53	38	42	42	37	25	31	31	23	19	22	25	18	65
6-May	24	57	28	18	19	15	41	62	12	13	25	38	37	31	33	27	23	24	25	15	13	13	13	13	62
7-May	14	12	13	12	12	12	13	13	17	20	24	48	38	43	35	38	40	36	31	24	18	17	26	72	72
8-May	76	44	32	21	34	40	78	28	21	23	27	33	34	86	26	28	28	25	35	22	33	79	49	29	86
9-May	50	21	33	50	17	43	22	14	25	25	46	46	46	41	45	48	48	52	41	26	12	22	35	58	58
10-May	84	50	54	49	82	68	80	21	44	44	52	99	69	53	76	66	91	39	22	38	30	48	14	14	99
11-May	16	61	21	30	48	23	57	66	14	17	26	75	70	17	33	72	65	60	30	31	46	17	75	25	75
12-May	24	69	67	22	27	23	22	27	23	25	25	26	28	27	25	25	24	24	22	21	23	24	21	20	69
13-May	14	9	12	16	44	69	64	29	33	47	66	47	37	69	44	55	37	18	44	58	13	23	24	44	69
14-May	90	55	13	16	22	16	16	46	36	24	21	23	23	22	25	22	21	22	22	23	23	20	21	21	90
15-May	20	18	17	18	18	18	20	17	18	21	22	26	27	32	28	31	29	28	23	27	31	19	23	37	37
16-May	36	15	17	19	50	23	23	46	51	72	50	44	49	38	49	74	47	38	28	22	25	87	15	14	87
17-May	13	15	14	15	21	26	41	89	25	16	21	21	22	19	14	16	18	18	15	13	12	14	14	13	89
18-May	13	13	13	16	20	41	23	21	16	18	22	24	18	19	17	15	16	15	14	12	13	14	14	12	41
19-May	14	11	11	18	71	22	15	14	16	16	15	17	16	16	19	15	16	17	15	14	13	13	13	13	71
20-May	13	15	16	17	18	14	14	13	15	14	16	16	18	16	15	14	17	15	17	13	13	16	18	21	21
21-May	15	35	28	89	24	18	14	15	19	15	20	17	17	23	19	16	16	20	21	17	16	14	14	16	89
22-May	12	16	16	15	16	14	14	14	20	17	30	47	41	24	16	17	17	18	18	17	12	10	19	26	47
23-May	17	14	11	78	UO	59	23	18	15	18	17	34	80	42	61	25	20	16	15	14	19	14	13	15	80
24-May	16	16	35	37	39	38	62	32	18	17	18	16	17	17	17	18	17	18	24	17	15	16	10	11	62
25-May	12	13	11	13	14	13	13	13	13	16	19	14	18	20	21	23	20	17	17	14	11	11	11	10	23
26-May	13	17	26	82	29	52	76	14	13	15	14	20	18	17	15	17	16	17	54	35	77	51	97	57	97
27-May	50	36	39	83	52	37	28	39	38	53	49	56	53	49	47	55	47	53	54	43	44	18	58	39	83
28-May	79	34	36	21	16	40	16	40	29	15	47	29	42	63	55	45	23	21	15	87	85	10	12	12	87
29-May	12	13	14	16	27	54	16	15	13	14	17	17	18	17	16	19	14	14	16	13	12	58	21	29	58
30-May	43	33	47	32	42	38	18	16	20	23	23	81	99	63	58	52	34	61	36	16	11	16	12	19	99
31-May	49	60	55	43	70	27	15	17	17	18	17	83	52	21	16	19	25	24	21	21	20	19	19	22	83
91 88 67 89 82 78 98 89 90 72 66 99 99 86 76 74 91 61 54 87 85 87 97 72																									
Diurnal Maximum																									
UO - Unstable Operation																									



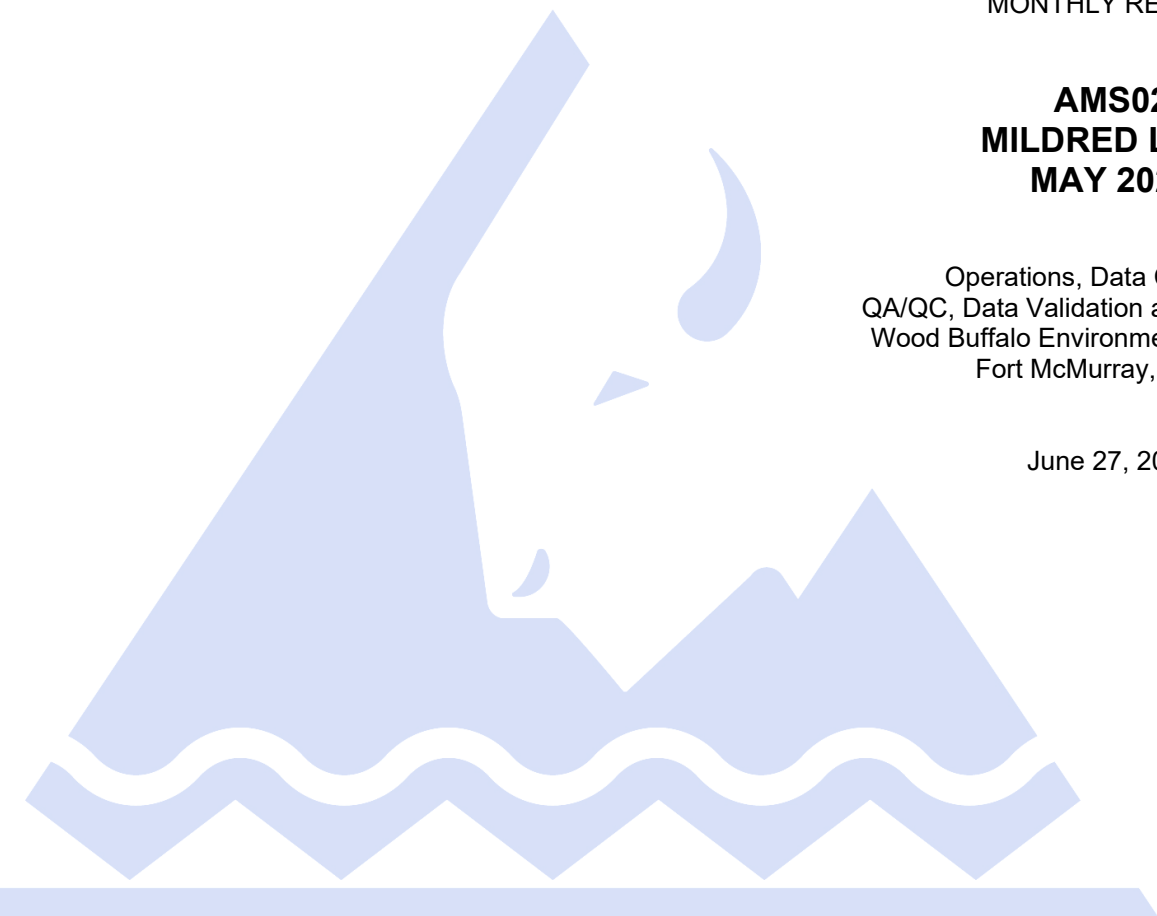
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS02 MILDRED LAKE MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	35	37	99.73	44.5	0	8.8	0
H2S (ppb) Average	704	36	40	99.46	5.1	0	0.6	0
THC (ppm) Average	707	35	37	99.73	3.1	-	2.2	-
NMHC(ppm) Average	707	35	37	99.73	0.493	-	0.098	-
CH4(ppm) Average	707	35	37	99.73	3.1	-	2.1	-
Temperature (C) Average	744	0	0	100	33.1	-	25.3	-
Relative Humidity (%) Average	744	0	0	100	100	-	78.5	-
Wind Speed 10 m (km/h) Average	744	0	0	100	27	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	1.85	4.9	-	0	0	0.1	0.3	0.7	4.3	44.5
H2S (ppb) Average	704	0.26	0.4	-	0	0	0.1	0.2	0.3	0.6	5.1
THC (ppm) Average	707	2.04	0.1	-	1.9	1.9	2	2	2.1	2.2	3.1
NMHC(ppm) Average	707	0.013	0.038	-	0	0	0	0	0	0	0.493
CH4(ppm) Average	707	2.03	0.1	-	1.9	1.9	2	2	2.1	2.2	3.1
Temperature 2 m (C) Average	744	14.48	6.5	-	0	6.5	9.9	14.1	18.6	23.5	33.1
Relative Humidity (%) Average	744	50.42	20.6	-	15.1	25.2	32.5	48.2	65.5	81.3	100
Wind Speed 10 m (km/h) Average	744	11.5	5	-	0	5	7	12	15	18	27
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	21 May 2025 12:00	21 May 2025 15:00	2	Maintenance - WBEA internal audit
H2S	16 May 2025 10:00	16 May 2025 11:00	2	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

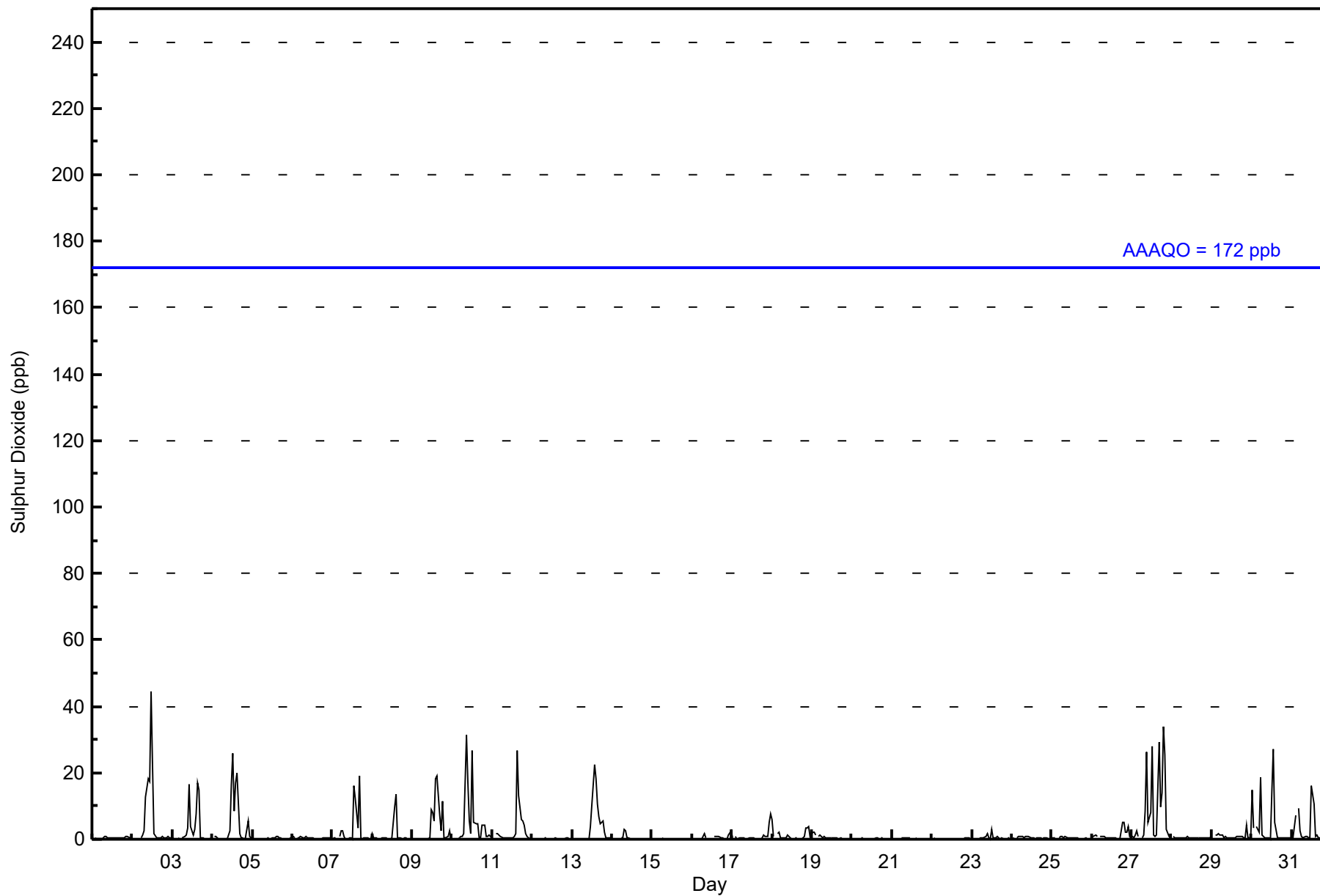
Mildred Lake - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 44.5 ppb on May 2 12:00 Maximum Daily Average: 8.8 ppb on May 27																			Hours in Service: 744							
Minimum Value: 0.0 ppb on May 2 03:00 Minimum Daily Average: 0.1 ppb on May 15 Maximum Diurnal Average: 5.6 ppb at hour 13 Minimum Diurnal Average: 0.5 ppb at hour 2 Monthly Average: 1.85 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 4.3 P ₉₉ = 26.7																			Hours of Data: 707							
																			Hours of Missing Data: 37							
																			Hours of Calibration: 35							
																			Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.8	0.7	0.6	0.5	0.5	0.5	0.3	0.3	0.4	0.5	0.4	0.4	0.2	0.8	0.7	0.4	0.4	0.4	0.8
2-May	0.2	0.1	0.0	0.0	Z	0.4	1.1	2.4	12.8	18.3	17.3	44.5	22.5	1.6	0.5	0.3	0.4	0.5	0.7	0.6	0.6	0.6	0.5	0.4	5.5	44.5
3-May	0.2	0.2	0.1	0.1	0.5	Z	0.5	0.8	1.1	3.3	16.5	4.0	1.1	3.0	7.7	16.8	14.7	0.5	0.3	0.2	0.1	0.2	0.1	0.2	3.1	16.8
4-May	Z	0.8	0.7	0.5	0.1	0.0	0.0	0.1	0.0	0.0	2.4	16.4	26.1	8.6	16.8	19.8	1.9	0.5	0.3	0.2	0.2	5.6	0.8	0.3	4.4	26.1
5-May	0.2	Z	0.1	0.2	0.1	0.1	0.0	0.1	0.2	0.3	0.1	0.1	0.4	0.3	0.7	1.0	0.5	0.3	0.1	0.1	0.0	0.0	0.1	0.6	0.2	1.0
6-May	0.8	0.4	Z	0.4	0.4	0.8	0.5	0.5	0.6	0.4	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.4	0.3	0.3	0.2	0.3	0.8
7-May	0.2	0.4	0.5	Z	0.7	2.4	2.5	0.8	0.2	0.1	0.3	0.4	0.2	16.1	12.2	3.2	19.0	0.4	0.1	0.2	0.2	0.3	0.1	0.1	2.6	19.0
8-May	1.9	0.5	0.3	0.2	Z	0.2	0.5	0.4	0.2	0.1	0.1	0.1	0.2	9.7	13.7	0.5	0.4	0.3	0.2	0.2	0.3	0.1	0.0	0.1	1.3	13.7
9-May	0.2	0.1	0.1	0.0	0.2	Z	0.2	0.2	0.2	0.1	0.4	8.9	7.9	5.4	18.3	19.3	7.3	2.4	11.4	0.5	0.3	0.8	2.4	0.2	3.8	19.3
10-May	Z	0.1	0.1	0.0	0.3	0.7	0.8	1.6	31.6	16.8	5.5	1.5	26.7	5.3	4.5	4.8	0.6	0.5	4.1	4.3	0.8	0.9	1.3	0.7	4.9	31.6
11-May	0.7	Z	1.5	1.7	1.3	0.7	0.6	0.5	0.5	0.6	0.5	0.6	0.4	0.7	1.8	26.7	13.3	5.9	5.5	4.2	1.6	1.0	0.4	0.2	3.1	26.7
12-May	0.1	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.3
13-May	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.0	0.2	3.7	10.4	22.6	18.1	10.5	7.0	4.8	5.6	2.1	0.4	0.5	0.4	0.3	3.8	22.6
14-May	0.2	0.2	0.2	0.1	Z	0.4	0.3	2.8	2.5	0.3	0.3	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.4	2.8
15-May	0.1	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2
16-May	Z	0.0	0.0	0.0	0.1	0.0	0.0	1.6	0.6	C	C	C	C	0.9	0.7	1.0	0.7	0.6	0.6	0.1	0.0	0.0	1.4	2.7	0.6	2.7
17-May	0.6	Z	0.7	0.2	0.4	0.3	0.6	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.2	0.1	0.0	0.1	0.2	1.3	1.0	1.0	5.1	7.7	0.9	7.7
18-May	5.9	0.9	Z	1.5	2.1	0.6	0.5	0.4	0.6	1.1	1.0	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.7	3.2	3.4	3.8	1.0	1.2	5.9
19-May	2.0	2.0	1.4	Z	0.7	1.2	0.5	0.6	0.5	0.5	0.6	0.3	0.3	0.3	0.3	0.2	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.5	2.0
20-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.5	0.4	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.5
21-May	0.2	0.1	0.1	0.0	0.0	Z	0.6	0.3	0.3	0.3	0.3	0.3	M	M	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.2	0.6
22-May	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.1	0.1	0.3
23-May	0.0	Z	0.2	0.2	0.2	0.3	0.5	0.5	0.8	1.5	0.3	0.1	3.1	0.3	0.5	0.7	0.4	0.1	0.2	0.0	0.2	0.1	0.3	0.1	0.4	3.1
24-May	0.2	0.2	Z	0.5	0.7	0.8	0.7	0.6	0.6	0.7	0.8	0.5	0.5	0.4	0.2	0.4	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.8
25-May	0.3	0.4	0.4	Z	0.5	0.8	0.8	0.6	0.7	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.4	0.8
26-May	0.5	0.8	1.1	1.0	Z	1.0	0.8	0.7	0.6	0.6	0.5	0.3	0.3	0.3	0.4	0.2	0.1	0.0	4.9	5.1	2.2	2.1	3.9	0.7	1.2	5.1
27-May	0.7	0.2	1.5	2.6	0.6	Z	0.4	1.1	8.6	26.1	5.1	7.9	28.0	1.2	0.9	1.1	29.0	9.9	14.1	33.8	25.6	2.8	0.7	0.6	8.8	33.8
28-May	Z	0.9	0.5	0.5	0.3	0.4	0.4	0.4	0.5	0.8	0.6	0.3	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.4	0.2	0.2	0.4	0.4	0.9
29-May	0.7	Z	1.3	1.5	1.6	1.4	1.4	0.5	0.7	0.6	0.5	0.3	0.3	0.4	0.4	0.7	0.7	1.0	0.6	0.6	0.5	4.4	0.3	0.3	0.9	4.4
30-May	14.8	3.4	Z	4.0	2.0	18.6	1.5	0.8	0.3	0.2	0.3	0.2	14.4	27.0	5.1	0.6	0.6	0.4	0.5	0.5	0.4	0.5	0.5	0.4	4.2	27.0
31-May	0.4	0.4	7.3	Z	9.3	2.4	0.8	0.5	0.8	0.7	0.5	0.5	16.1	10.5	0.7	1.4	0.6	0.3	0.3	0.2	0.0	0.0	0.0	0.0	2.3	16.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mildred Lake - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	670	94.77	94.77
11 - 20	24	3.39	98.16
21 - 60	13	1.84	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mildred Lake - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	66	45	6	4	3	26	141	131	60	47	42	13	13	20	22	31	670
11 - 20	1	1	0	0	1	0	0	1	1	1	3	5	10	0	0	0	24
21 - 60	0	0	0	0	0	0	1	1	0	2	1	3	5	0	0	0	13
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	46	6	4	4	26	142	133	61	50	46	21	28	20	22	31	707

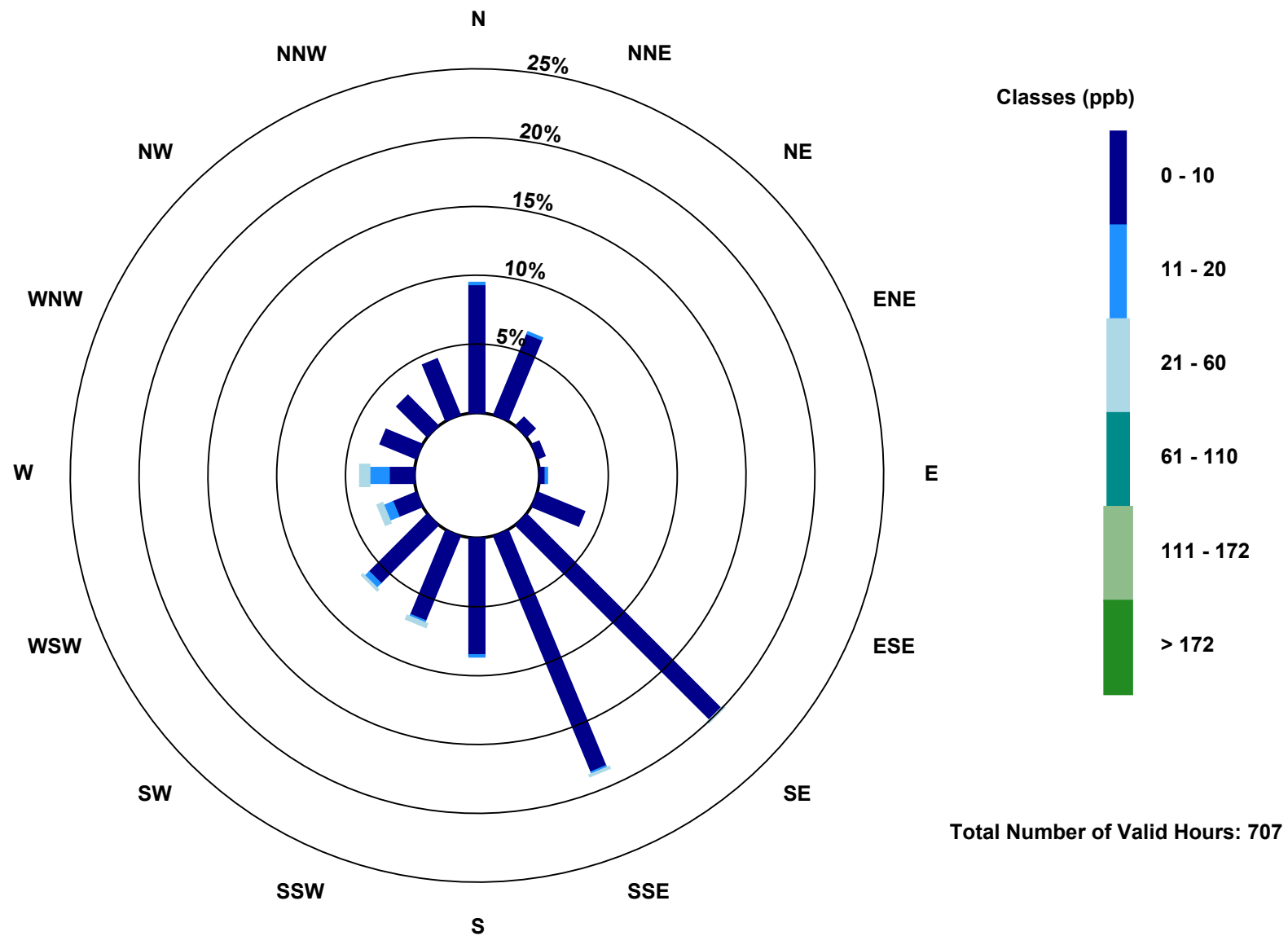
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

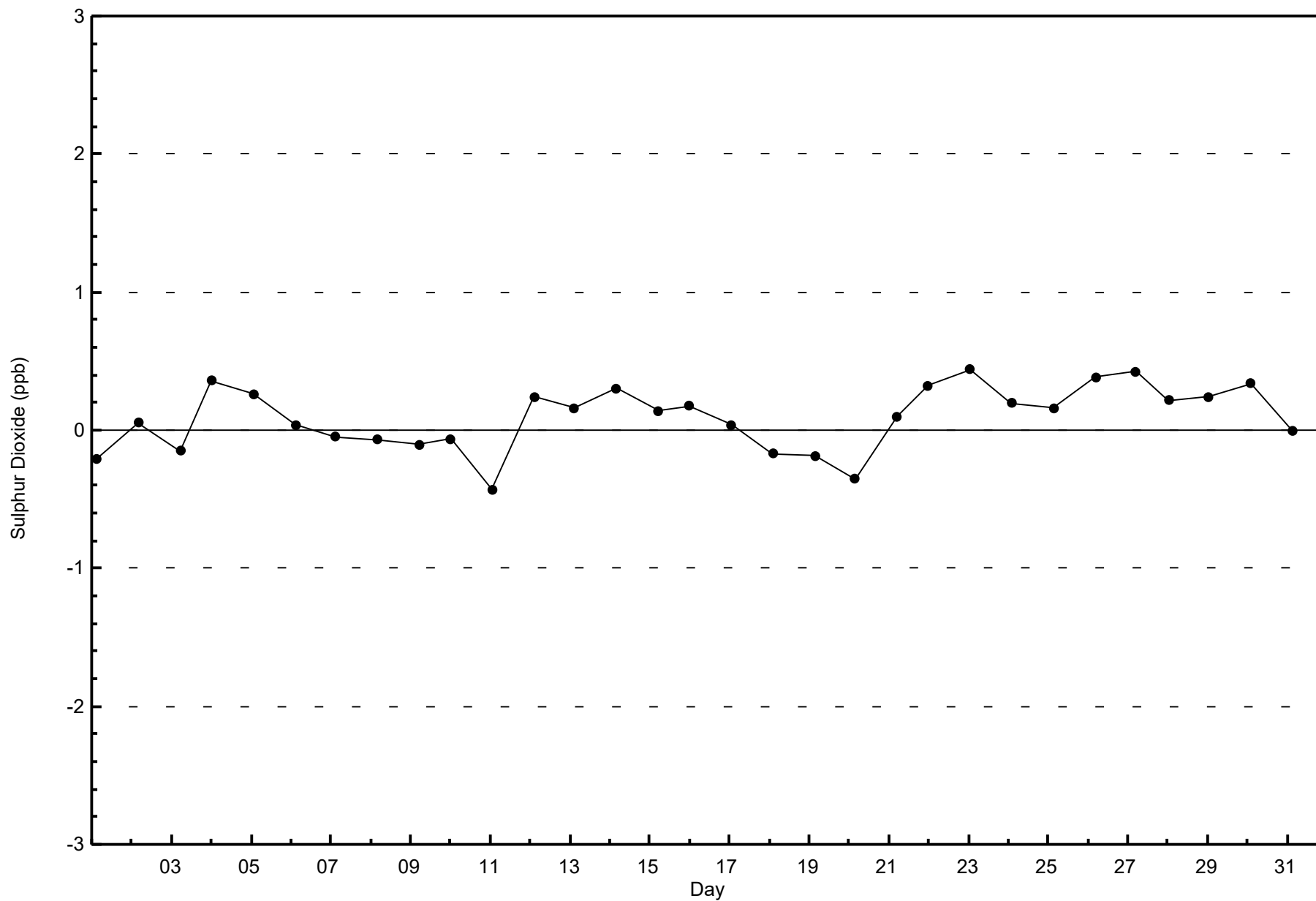
Sulphur Dioxide (SO₂) - ppb
Mildred Lake





Wood Buffalo Environmental Association
Zero Responses

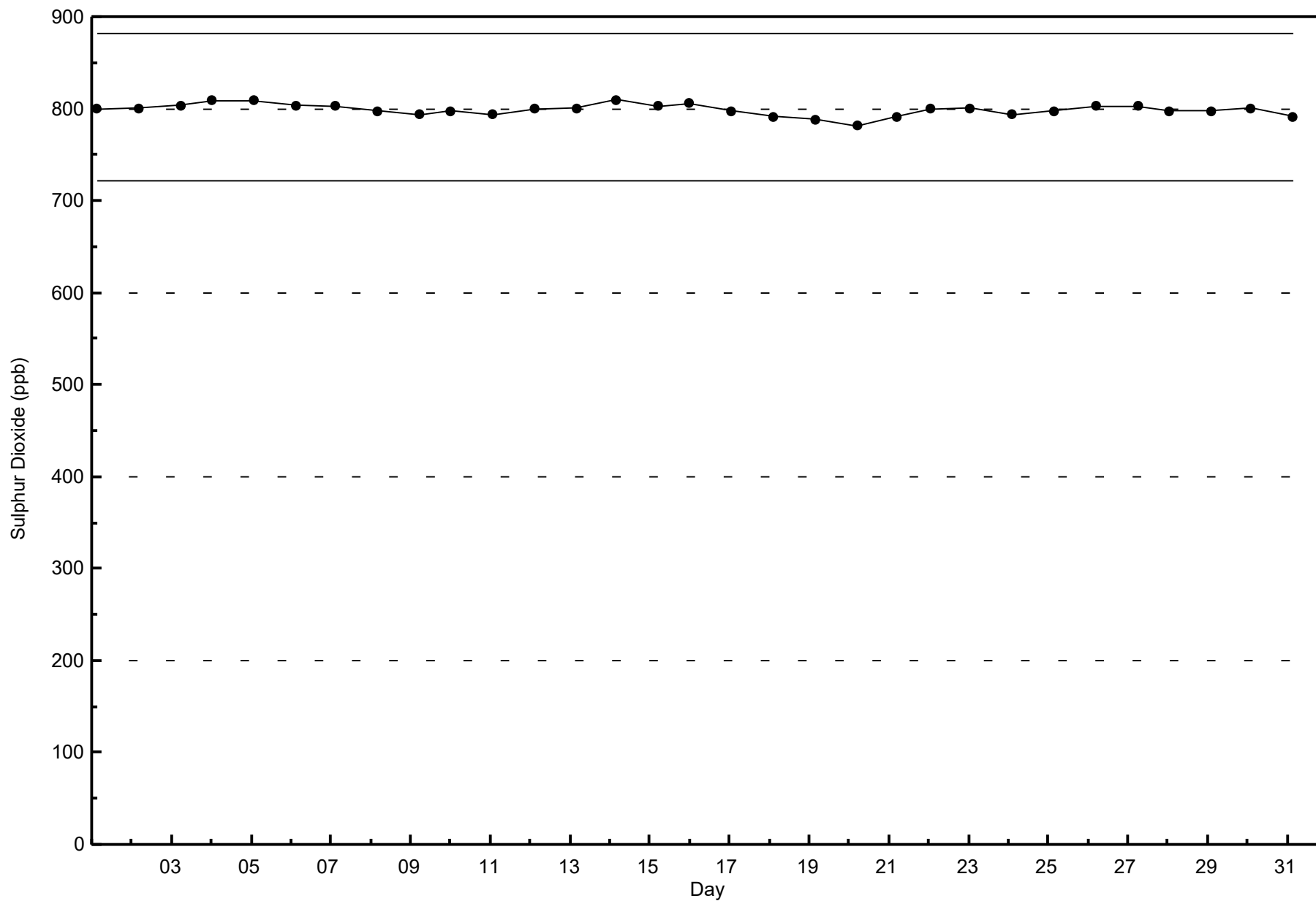
Sulphur Dioxide (SO₂) - ppb
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Mildred Lake - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

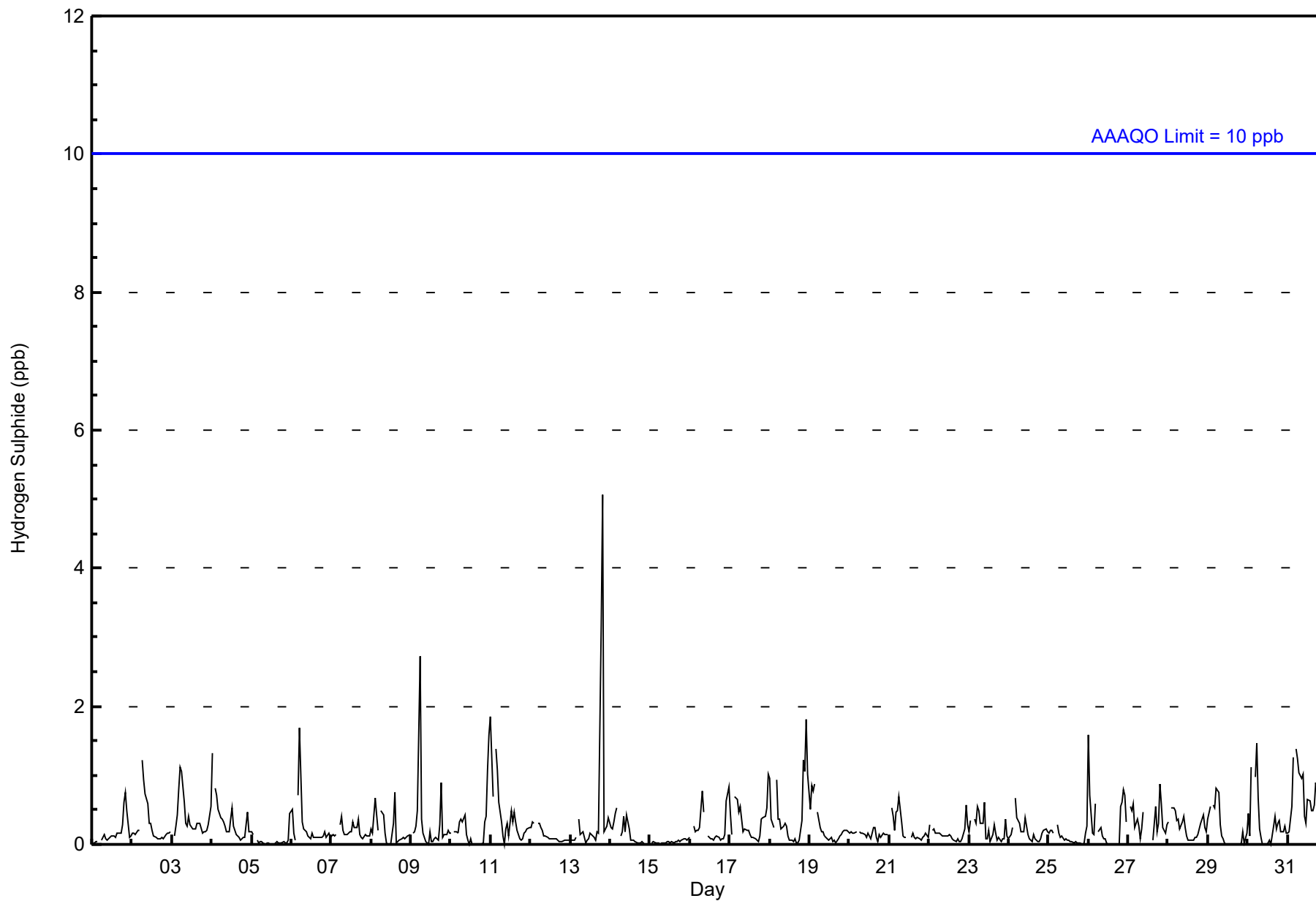
Mildred Lake - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.1 ppb on May 13 20:00 Maximum Daily Average: 0.6 ppb on May 31																			Hours in Service: 744 Hours of Data: 704							
Minimum Value: 0.0 ppb on May 5 12:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.6 ppb at hour 6 Minimum Diurnal Average: 0.1 ppb at hour 18 Monthly Average: 0.26 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.6																			Hours of Missing Data: 40 Hours of Calibration: 36 Percent Operational Time: 99.5							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.8	0.5	0.1	0.1	0.2	0.8
2-May	0.2	0.2	0.1	0.2	0.2	Z	1.2	0.9	0.7	0.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	1.2
3-May	Z	0.1	0.3	0.4	0.8	1.1	1.1	0.6	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.4	1.1
4-May	1.3	Z	0.8	0.7	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.2	0.3	1.3
5-May	0.2	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.4
6-May	0.5	0.2	0.1	Z	0.7	1.7	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	1.7
7-May	0.1	0.1	0.1	0.1	Z	0.3	0.4	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
8-May	0.2	0.2	0.7	0.4	0.2	Z	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.8
9-May	Z	0.2	0.2	0.3	0.5	2.7	0.4	0.2	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.3	0.9	0.1	0.1	0.2	0.2	0.2	0.3	2.7
10-May	0.2	Z	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.1	1.6	0.3	1.6
11-May	1.9	0.7	Z	1.4	1.1	0.6	0.3	0.1	0.0	0.2	0.3	0.1	0.5	0.3	0.5	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4	1.9
12-May	0.2	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3
13-May	0.1	0.1	0.1	0.1	Z	0.4	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	3.2	5.1	0.2	0.2	0.3	0.4	0.5	5.1
14-May	0.2	0.2	0.3	0.4	0.5	Z	0.1	0.2	0.4	0.2	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1
16-May	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.8	0.5	M	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.8	0.2	0.8
17-May	0.4	0.1	Z	0.7	0.7	0.5	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.4	0.4	0.5	1.0	0.3	1.0
18-May	1.0	0.4	0.2	Z	0.9	0.4	0.4	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.4	1.2	1.1	1.8	1.0	0.4	1.8
19-May	0.5	0.9	0.8	0.9	Z	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.9
20-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
21-May	Z	0.5	0.4	0.2	0.5	0.5	0.7	0.3	0.1	0.1	0.1	M	M	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.7
22-May	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.6	0.3	0.2	0.6
23-May	0.2	0.3	Z	0.4	0.3	0.6	0.5	0.3	0.3	0.6	0.1	0.1	0.2	0.0	0.1	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.4	0.1	0.2	0.6
24-May	0.1	0.1	0.2	Z	0.7	0.4	0.3	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.7
25-May	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.3
26-May	1.6	0.7	0.2	0.1	0.6	Z	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.8	0.7	0.3	0.3	1.6
27-May	Z	0.6	0.5	0.6	0.3	0.4	0.3	0.1	0.2	0.5	C	C	C	C	C	0.1	0.6	0.2	0.3	0.9	0.6	0.2	0.2	0.3	0.4	0.9
28-May	0.3	Z	0.5	0.5	0.5	0.3	0.4	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.2	0.2	0.3	0.5
29-May	0.4	0.6	Z	0.6	0.5	0.8	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.8
30-May	0.5	0.1	1.1	Z	1.0	1.5	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	1.5
31-May	0.2	0.2	0.6	1.3	Z	1.4	1.2	1.0	1.0	1.0	0.4	0.3	0.7	0.6	0.5	0.5	0.6	0.9	0.7	0.5	0.4	0.3	0.3	0.2	0.6	1.4
0.4 0.3 0.3 0.4 0.5 0.6 0.4 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.3 0.2 0.2 0.3 0.3																									Diurnal Average	
1.9 0.9 1.1 1.4 1.1 2.7 1.2 1.0 1.0 1.0 1.0 0.4 0.4 0.7 0.6 0.8 0.5 0.6 0.9 3.2 5.1 1.2 1.1 1.8 1.6																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mildred Lake - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	701	99.57	99.57
3 - 4	2	0.28	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mildred Lake - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	69	47	6	4	4	25	145	132	59	49	44	19	27	18	25	28	701
3 - 4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
5 - 7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	69	47	6	4	4	25	145	133	61	49	44	19	27	18	25	28	704

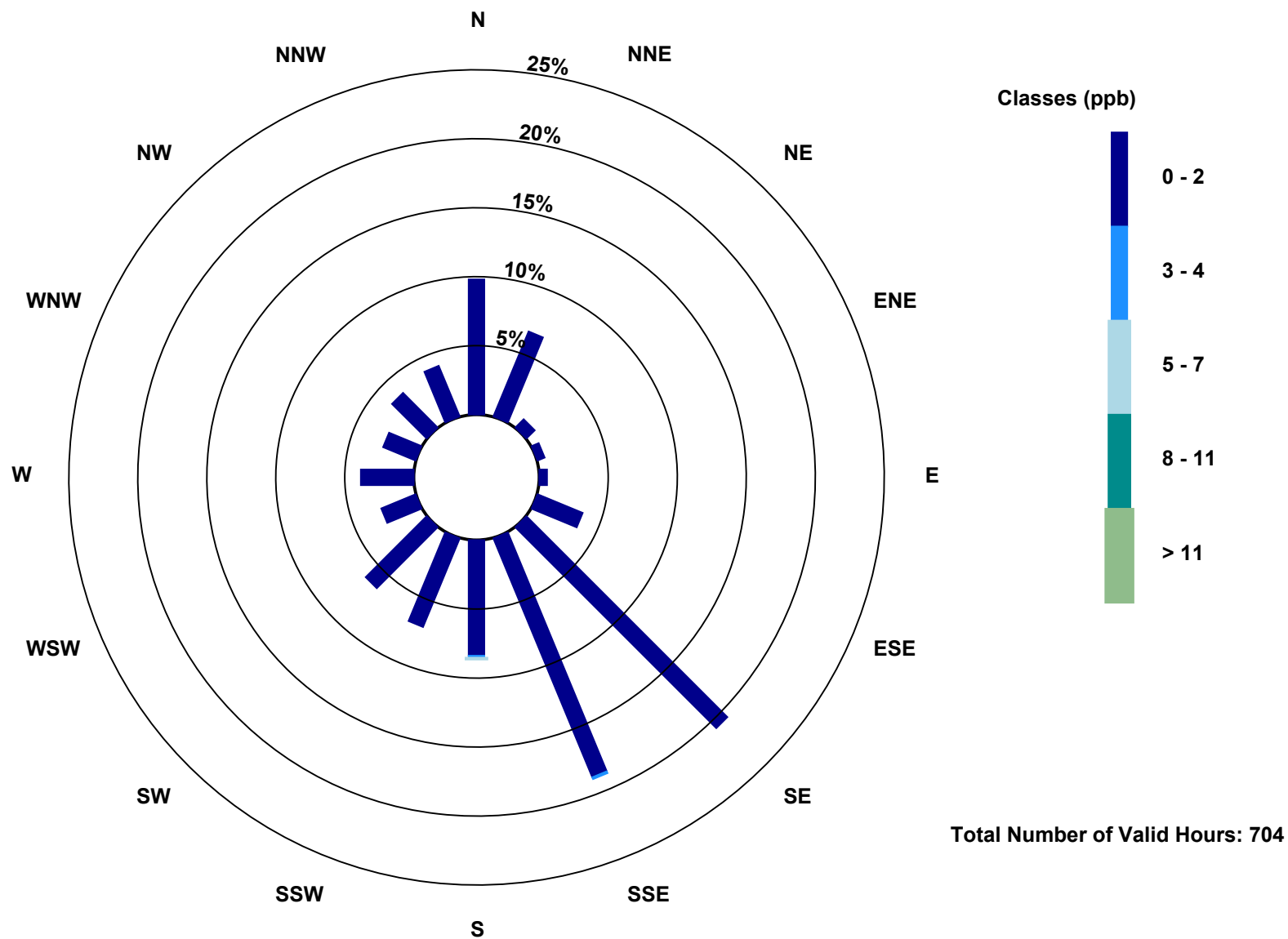
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Mildred Lake



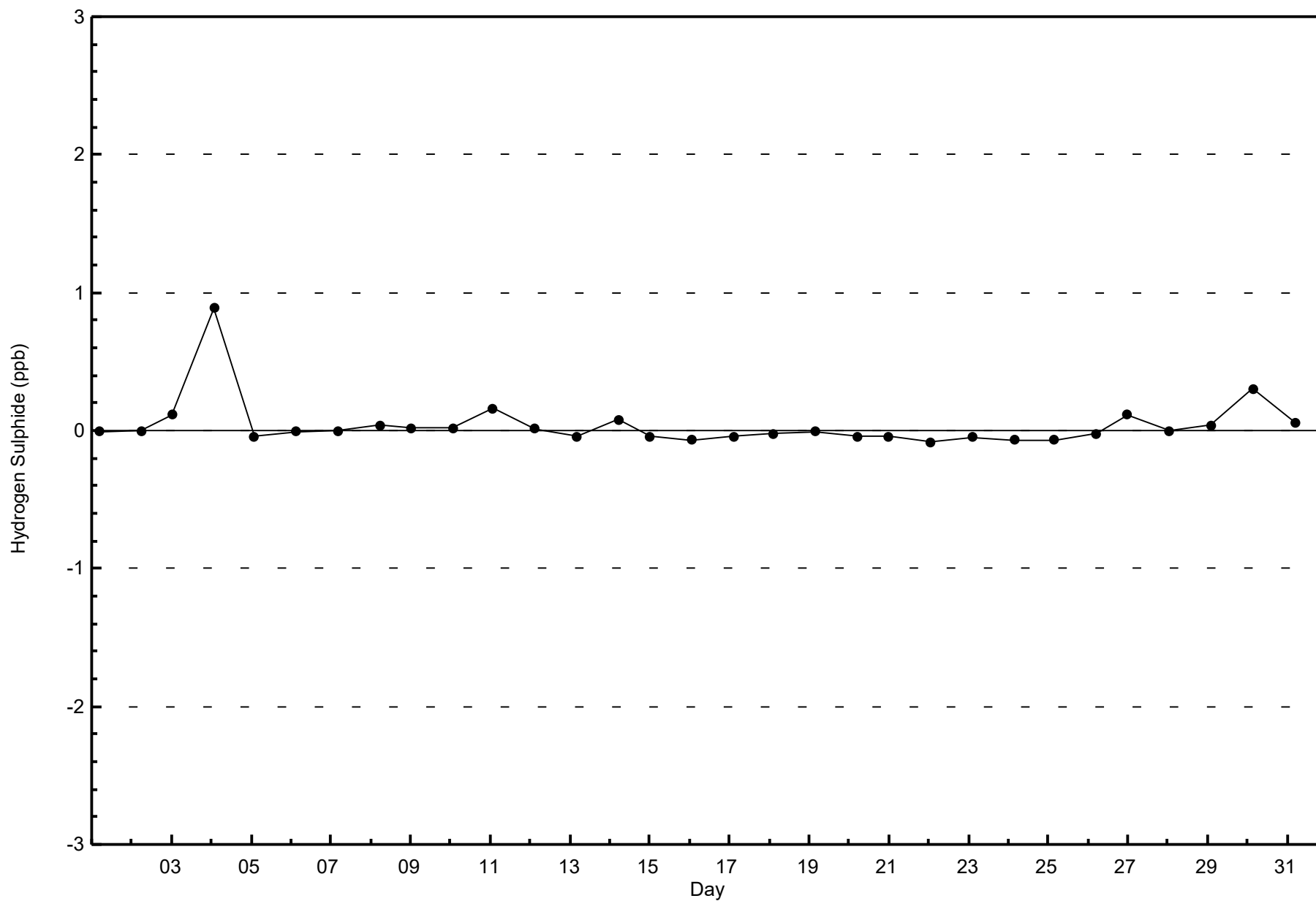


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

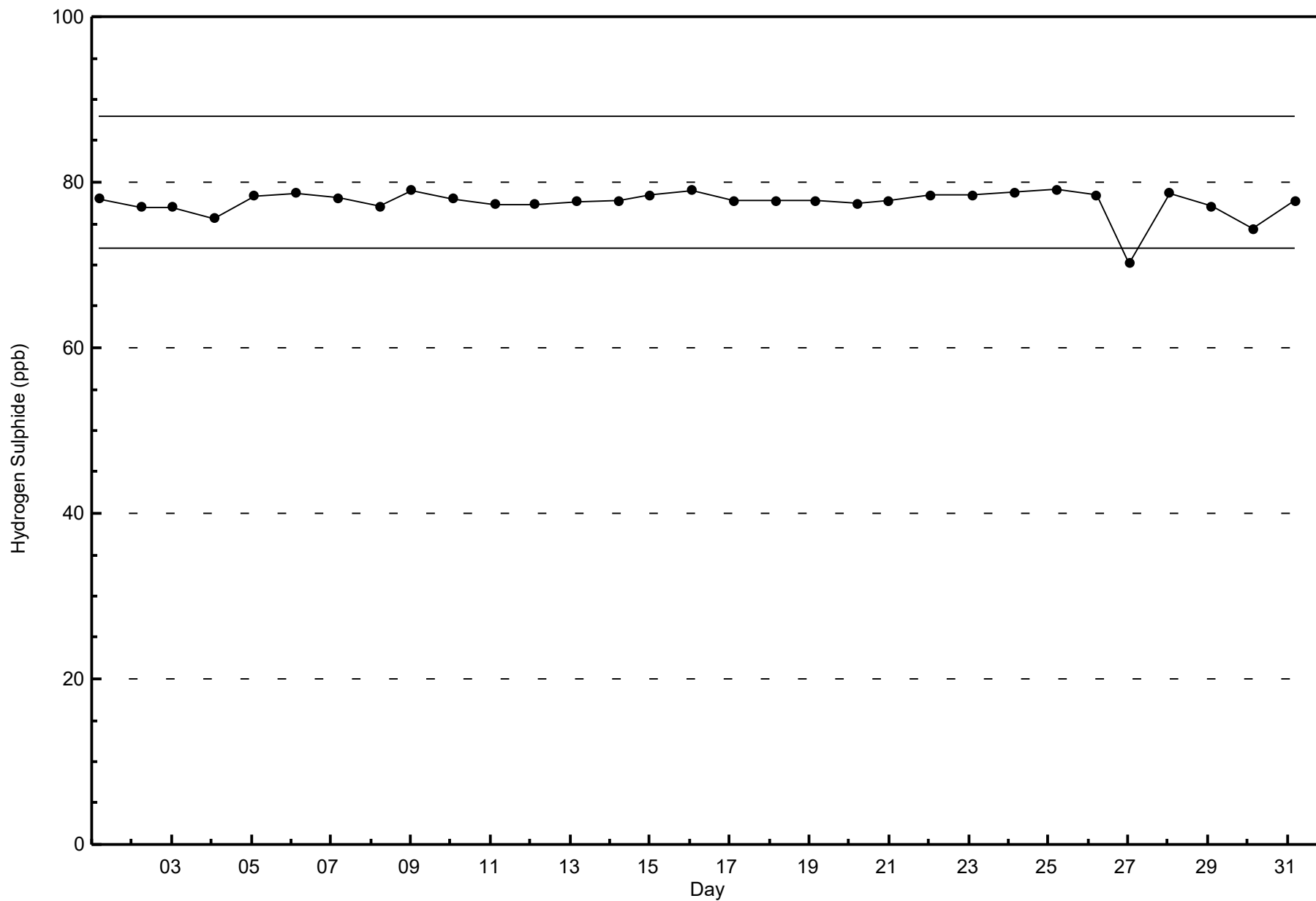
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Mildred Lake - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

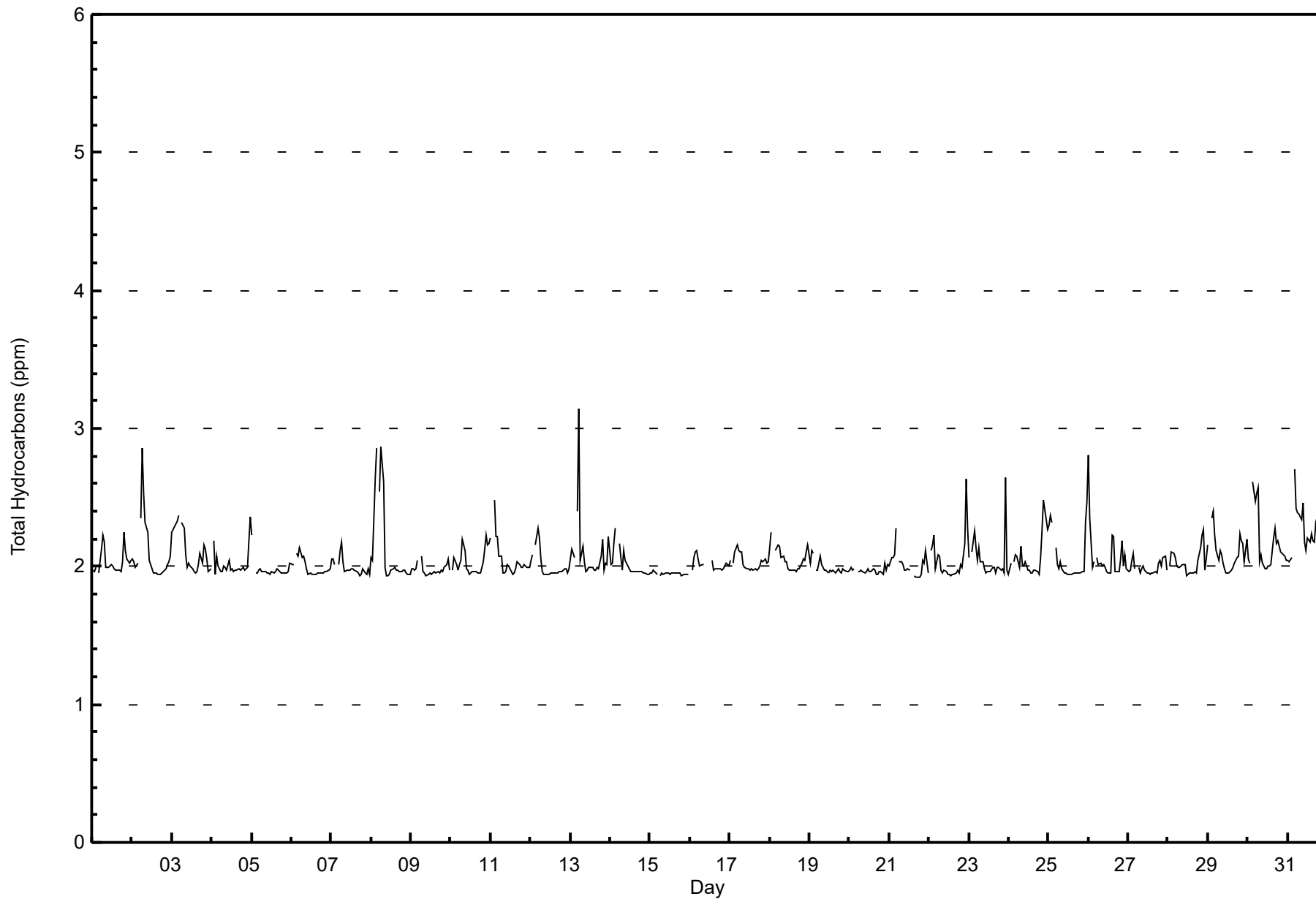
Mildred Lake - May 2025

Maximum Value: 3.1 ppm on May 13 06:00																		Maximum Daily Average: 2.2 ppm on May 31																		Hours in Service: 744	
Minimum Value: 1.9 ppm on May 21 17:00																		Minimum Daily Average: 1.9 ppm on May 15																		Hours of Data: 707	
Maximum Diurnal Average: 2.2 ppm at hour 6																		Minimum Diurnal Average: 2.0 ppm at hour 14																		Hours of Missing Data: 37	
Monthly Average: 2.04 ppm																		Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.6																		Hours of Calibration: 35	
																																				Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
1-May	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0											
2-May	2.1	2.0	2.0	2.0	Z	2.4	2.9	2.5	2.3	2.3	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.9											
3-May	2.2	2.3	2.3	2.3	2.4	Z	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.2	2.1	2.0	2.0	2.0	2.1	2.4											
4-May	Z	2.2	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.0	2.4											
5-May	2.2	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.2											
6-May	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
7-May	2.1	2.1	2.0	Z	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.2											
8-May	2.1	2.0	2.6	2.9	Z	2.5	2.9	2.6	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.1	2.9											
9-May	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1											
10-May	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.2	2.0	2.2											
11-May	2.2	Z	2.5	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5											
12-May	2.0	2.1	Z	2.2	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3											
13-May	2.1	2.1	2.1	Z	2.4	3.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.2	2.1	3.1											
14-May	2.0	2.0	2.2	2.3	Z	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.3	2.0											
15-May	2.0	1.9	2.0	2.0	1.9	Z	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0											
16-May	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
17-May	2.0	Z	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.2											
18-May	2.1	2.2	Z	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.2											
19-May	2.0	2.1	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1											
20-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0											
21-May	2.0	2.1	2.1	2.1	2.3	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.3											
22-May	Z	2.1	2.2	2.2	2.0	2.1	2.1	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.6	2.3	2.1	2.6											
23-May	2.1	Z	2.1	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	2.0	2.0	2.6											
24-May	1.9	2.0	Z	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.1	2.3	2.5	2.3	2.3	2.1	2.5											
25-May	2.3	2.4	2.3	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.3	2.5	2.1	2.1	2.5											
26-May	2.8	2.4	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.0	2.0	2.0	2.1	2.2	2.0	2.1	2.0	2.1	2.8											
27-May	2.0	2.0	2.0	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1											
28-May	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.2	2.3	2.0	2.1	2.0	2.3											
29-May	2.2	Z	2.4	2.4	2.2	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.0	2.2	2.1	2.4											
30-May	2.1	2.0	Z	2.6	2.5	2.5	2.6	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.2	2.6											
31-May	2.0	2.0	2.1	Z	2.7	2.4	2.4	2.4	2.3	2.5	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.2	2.7											
2.1 2.1 2.1 2.2 2.1 2.2 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1																								Diurnal Average													
2.8 2.4 2.6 2.9 2.7 3.1 2.9 2.6 2.3 2.5 2.2 2.1 2.2 2.2 2.2 2.2 2.3 2.3 2.3 2.2 2.3 2.5 2.6 2.5																								Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	509	71.99	71.99
2.1 - 3.0	197	27.86	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	46	46	6	3	4	14	102	83	42	41	39	17	24	8	13	21	509
2.1 - 3.0	21	0	0	1	0	12	41	49	19	9	7	4	4	12	8	10	197
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	46	6	4	4	26	143	132	61	50	46	21	28	20	22	31	707

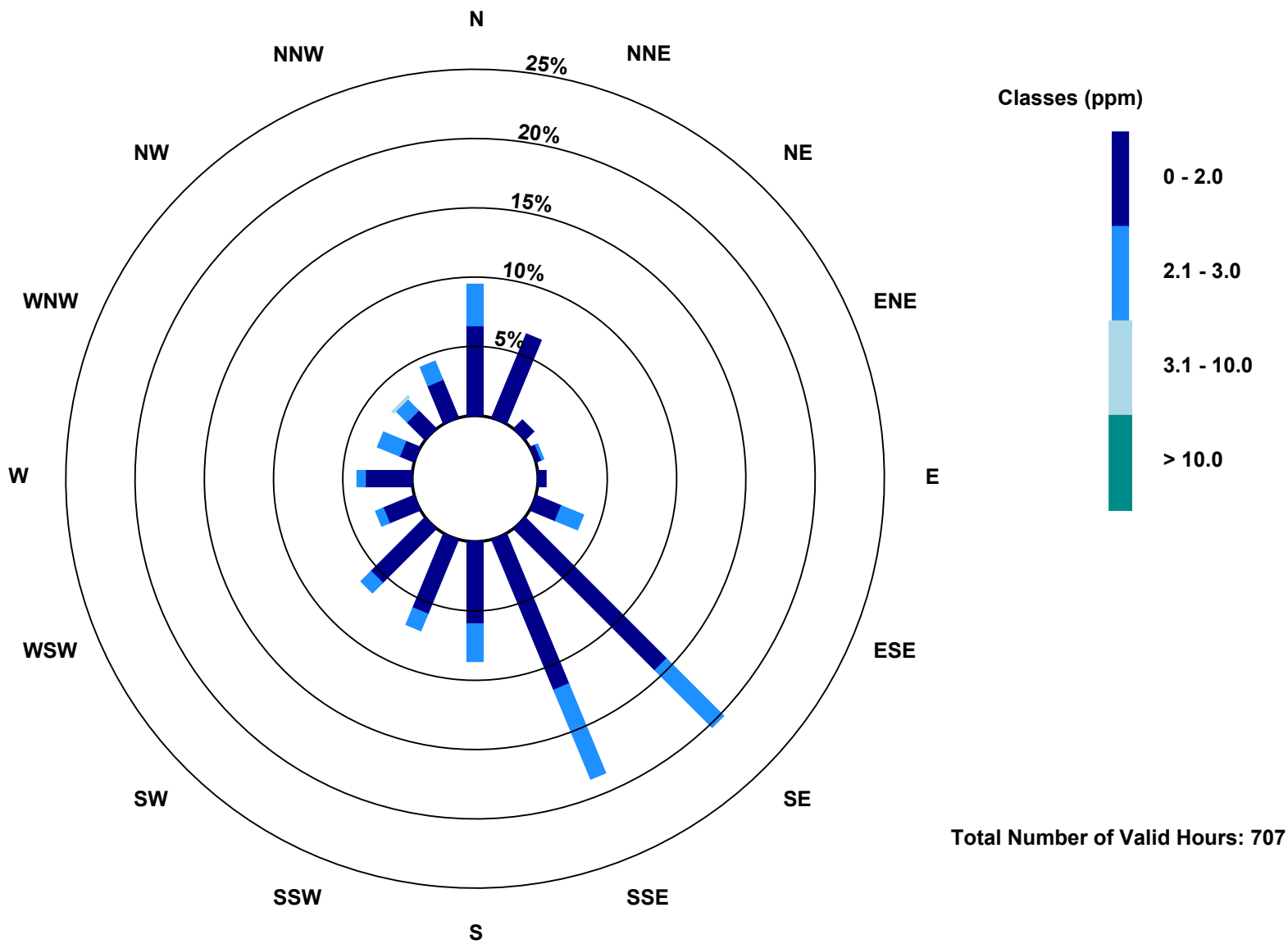
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Mildred Lake



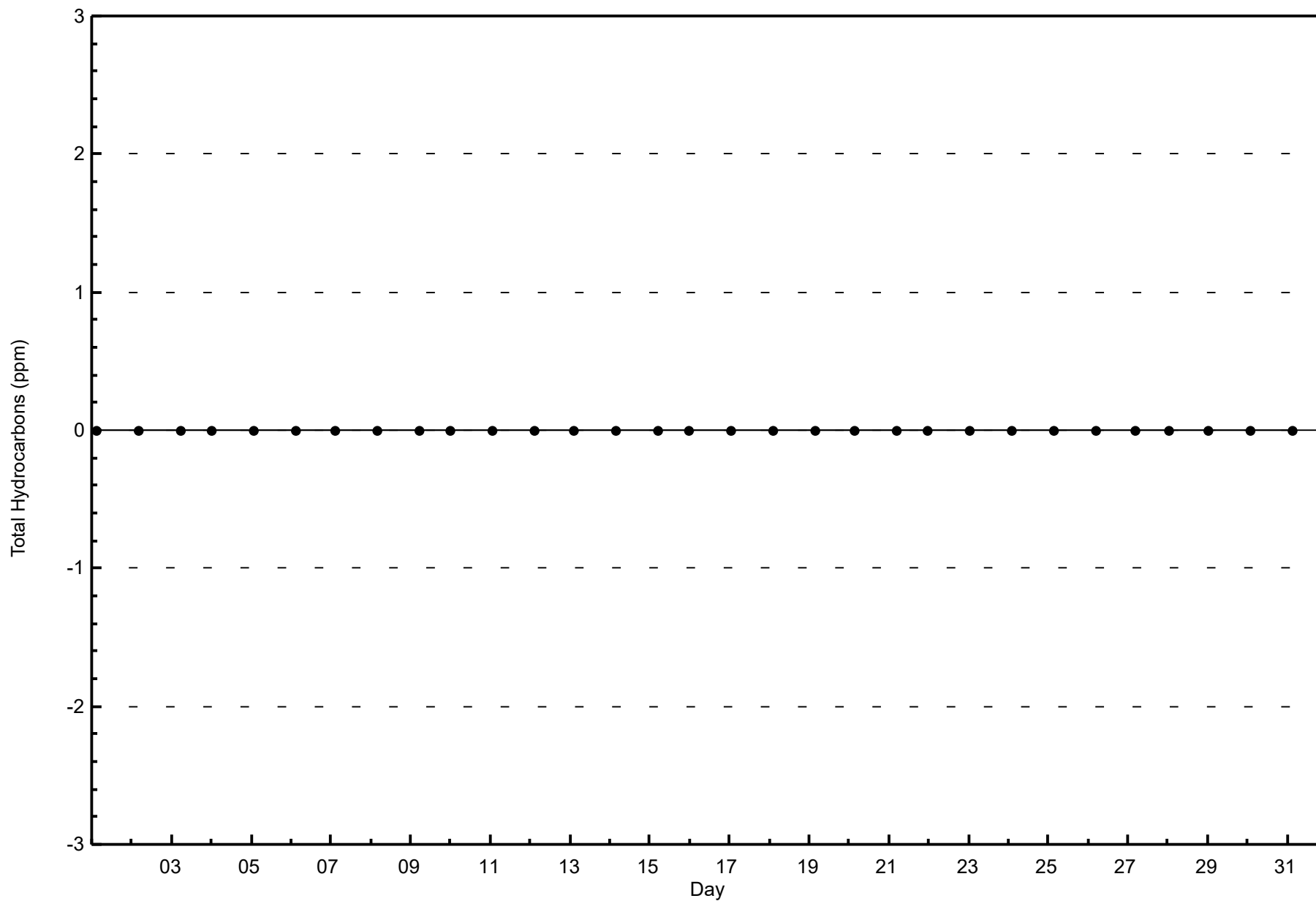


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

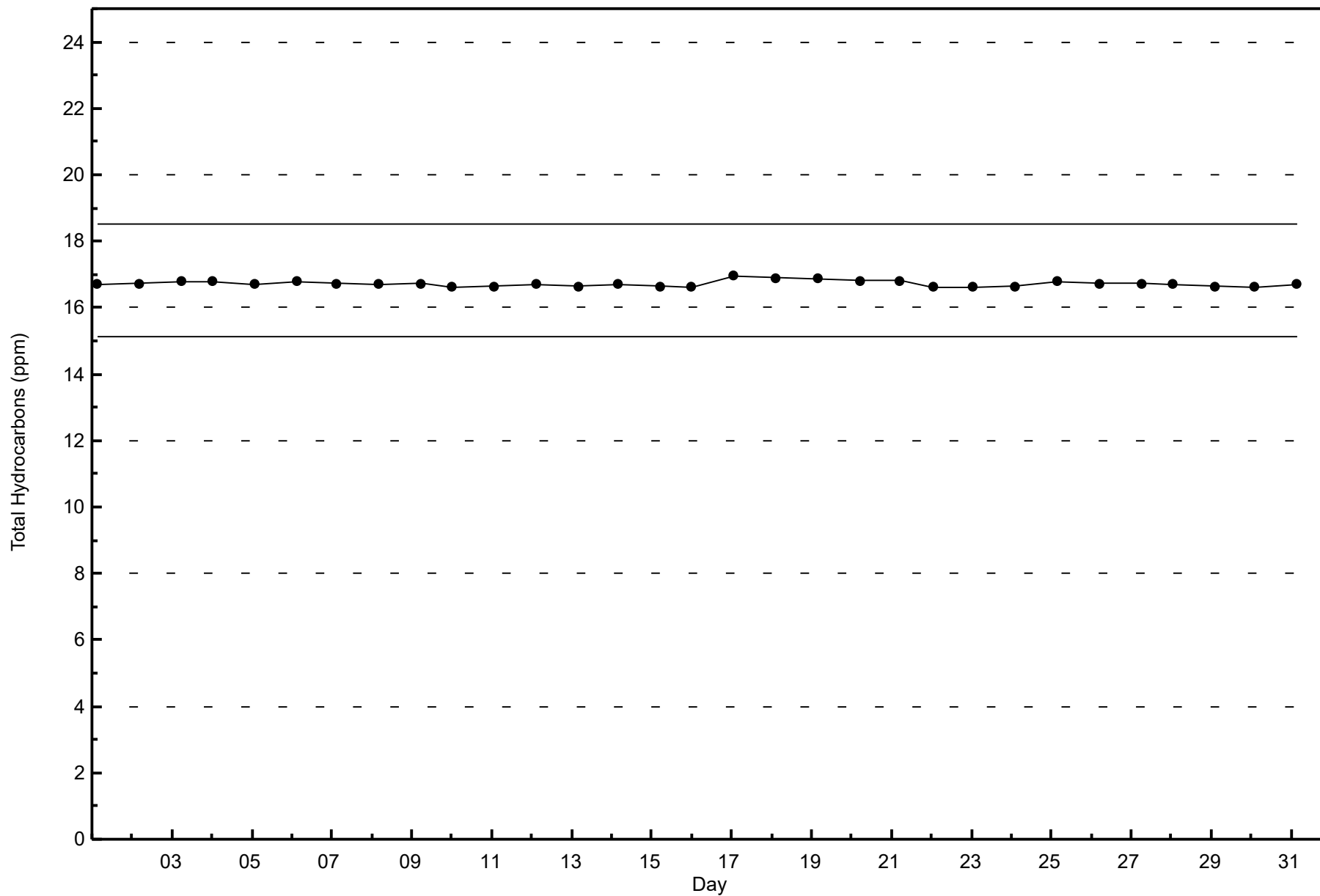
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

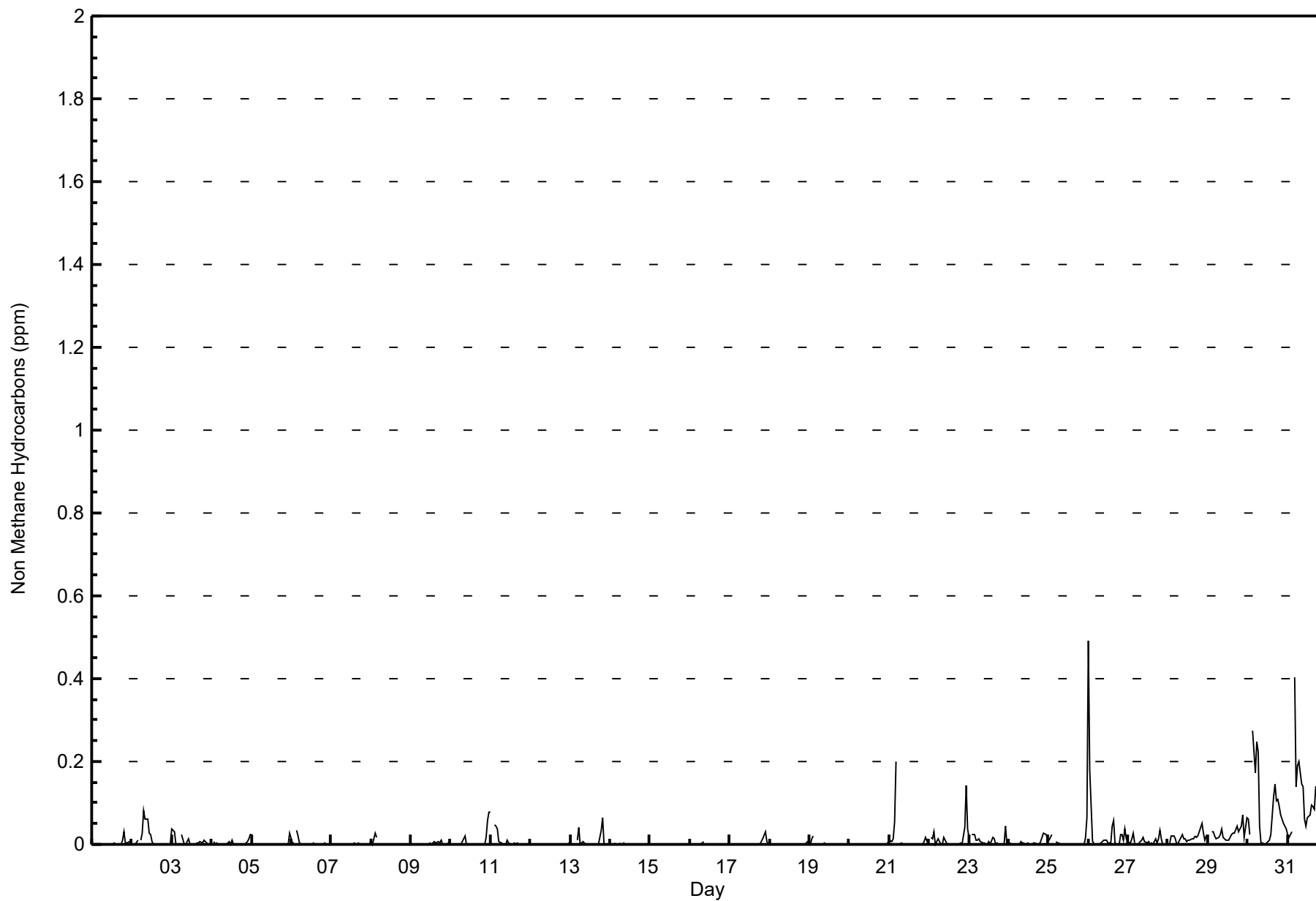
Mildred Lake - May 2025

Maximum Value: 0.493 ppm on May 26 01:00																				Maximum Daily Average: 0.098 ppm on May 31										Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 01:00																				Minimum Daily Average: 0.000 ppm on May 15										Hours of Data: 707	
Maximum Diurnal Average: 0.035 ppm at hour 5																				Minimum Diurnal Average: 0.004 ppm at hour 12										Hours of Missing Data: 37	
Monthly Average: 0.013 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.2										Hours of Calibration: 35	
																				Percent Operational Time: 99.7											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.010	0.030	0.004	0.003	0.008	0.000	0.002	0.030					
2-May	0.000	0.000	0.000	0.011	Z	0.009	0.027	0.081	0.059	0.062	0.028	0.023	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.081					
3-May	0.039	0.030	0.000	0.000	0.000	Z	0.024	0.000	0.000	0.006	0.015	0.000	0.001	0.000	0.000	0.004	0.005	0.005	0.004	0.011	0.006	0.003	0.001	0.004	0.007	0.039					
4-May	Z	0.007	0.000	0.005	0.001	0.000	0.000	0.000	0.001	0.000	0.005	0.001	0.009	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.008	0.014	0.024	0.003	0.024					
5-May	0.025	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.026	0.002	0.026					
6-May	0.003	0.004	Z	0.034	0.021	0.004	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.003	0.034					
7-May	0.000	0.000	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004					
8-May	0.011	0.001	0.029	0.016	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.029					
9-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.005	0.008	0.002	0.008	0.002	0.011	0.000	0.000	0.001	0.005	0.000	0.002	0.011					
10-May	Z	0.000	0.000	0.000	0.001	0.000	0.000	0.006	0.019	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.058	0.077	0.008	0.077					
11-May	0.078	Z	0.046	0.044	0.039	0.006	0.004	0.000	0.000	0.002	0.012	0.002	0.001	0.000	0.002	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.078					
12-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005					
13-May	0.005	0.000	0.000	Z	0.012	0.041	0.000	0.005	0.004	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.034	0.063	0.000	0.000	0.002	0.002	0.007	0.063					
14-May	0.000	0.001	0.000	0.002	Z	0.003	0.001	0.001	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003					
15-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
16-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.008	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.008						
17-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.014	0.032	0.006	0.000	0.003	0.032					
18-May	0.000	0.003	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.006	0.001	0.006					
19-May	0.000	0.012	0.021	Z	0.000	0.000	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.021					
20-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.005	0.000	0.005					
21-May	0.010	0.008	0.013	0.054	0.199	Z	0.000	0.003	0.000	0.000	0.001	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.016	0.000	0.015	0.199					
22-May	Z	0.017	0.014	0.030	0.001	0.012	0.007	0.001	0.000	0.016	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.042	0.142	0.037	0.014	0.142					
23-May	0.016	Z	0.024	0.022	0.010	0.011	0.015	0.006	0.003	0.002	0.000	0.000	0.005	0.001	0.017	0.014	0.001	0.005	0.001	0.001	0.001	0.000	0.046	0.002	0.009	0.046					
24-May	0.001	0.004	Z	0.000	0.000	0.000	0.000	0.008	0.003	0.003	0.000	0.005	0.000	0.000	0.000	0.003	0.003	0.000	0.000	0.006	0.018	0.026	0.023	0.010	0.005	0.026					
25-May	0.012	0.018	0.023	Z	0.005	0.004	0.002	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.063	0.006	0.063					
26-May	0.493	0.179	0.006	0.002	Z	0.000	0.000	0.002	0.007	0.010	0.011	0.010	0.004	0.004	0.044	0.059	0.005	0.001	0.001	0.025	0.025	0.012	0.037	0.012	0.041	0.493					
27-May	0.005	0.003	0.014	0.027	0.003	Z	0.003	0.005	0.011	0.018	0.006	0.003	0.008	0.001	0.002	0.001	0.013	0.002	0.013	0.035	0.013	0.001	0.001	0.000	0.008	0.035					
28-May	Z	0.003	0.019	0.022	0.015	0.002	0.004	0.011	0.024	0.015	0.013	0.008	0.009	0.012	0.013	0.013	0.022	0.016	0.020	0.041	0.051	0.026	0.009	0.020	0.017	0.051					
29-May	0.016	Z	0.032	0.030	0.019	0.013	0.016	0.024	0.036	0.017	0.015	0.011	0.011	0.018	0.024	0.028	0.029	0.042	0.030	0.037	0.045	0.073	0.018	0.066	0.028	0.073					
30-May	0.062	0.023	Z	0.276	0.173	0.248	0.222	0.045	0.005	0.004	0.000	0.003	0.006	0.009	0.024	0.115	0.145	0.104	0.108	0.091	0.070	0.052	0.044	0.037	0.081	0.276					
31-May	0.023	0.017	0.031	Z	0.402	0.138	0.190	0.199	0.144	0.138	0.062	0.044	0.063	0.070	0.096	0.093	0.085	0.141	0.140	0.062	0.050	0.028	0.023	0.022	0.098	0.402					
0.031 0.013 0.011 0.023 0.035 0.019 0.017 0.013 0.011 0.010 0.006 0.004 0.004 0.004 0.008 0.011 0.010 0.010 0.012 0.013 0.010 0.011 0.015 0.013																										Diurnal Average					
0.493 0.179 0.046 0.276 0.402 0.248 0.222 0.199 0.144 0.138 0.062 0.044 0.063 0.070 0.096 0.115 0.145 0.141 0.140 0.091 0.070 0.073 0.142 0.077																										Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	504	71.29	71.29
0.006 - 0.05	162	22.91	94.20
0.06 - 0.1	31	4.38	98.59
> 0.1	10	1.41	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	58	46	6	4	4	10	113	82	41	33	33	12	15	11	13	23	504
0.006 - 0.05	2	0	0	0	0	13	27	45	13	12	12	7	10	6	8	7	162
0.06 - 0.1	7	0	0	0	0	3	2	3	5	5	1	1	2	1	0	1	31
> 0.1	0	0	0	0	0	0	1	2	2	0	0	1	1	2	1	0	10
Totals	67	46	6	4	4	26	143	132	61	50	46	21	28	20	22	31	707

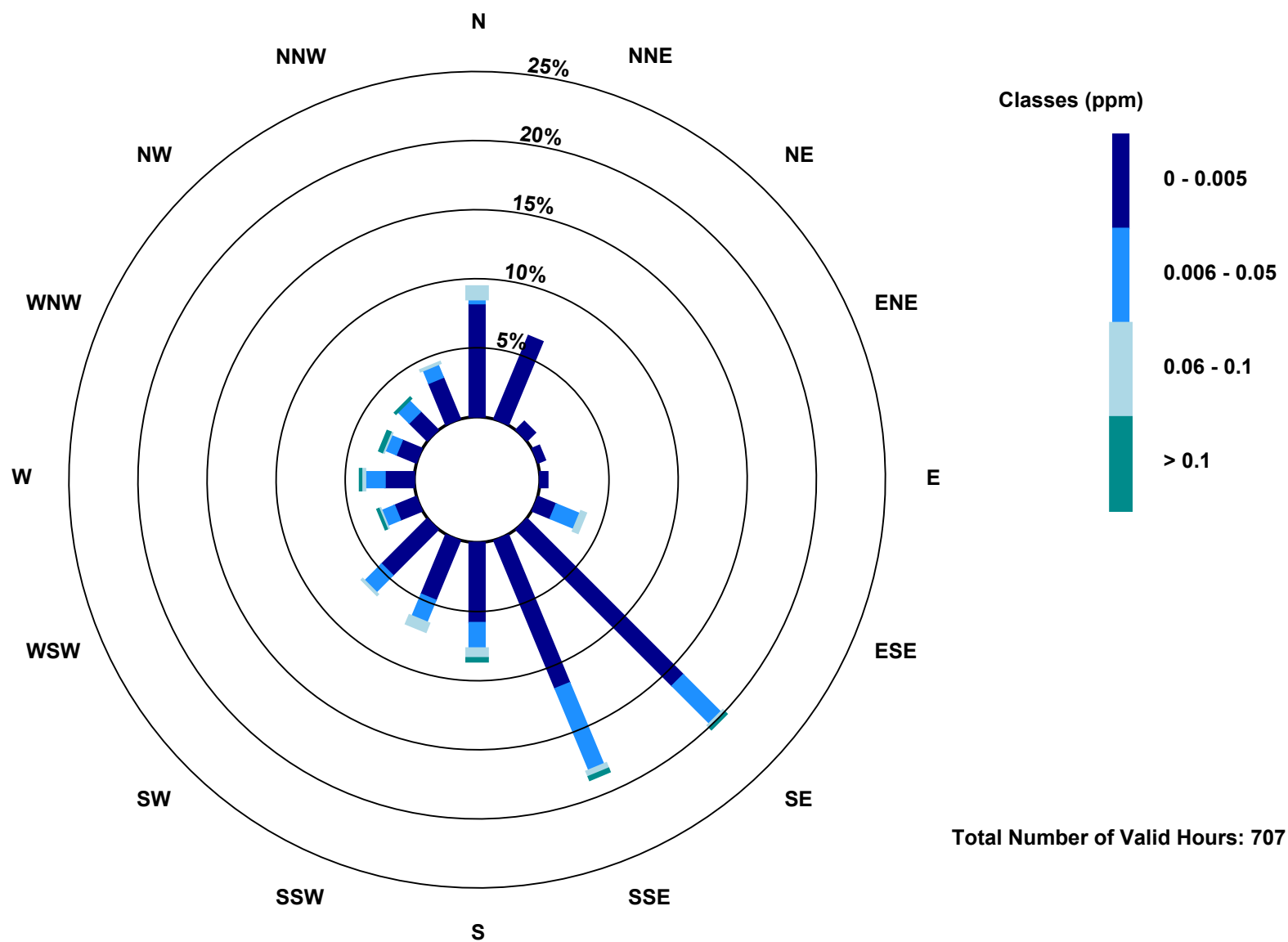
Total Number of Valid Hours: 707

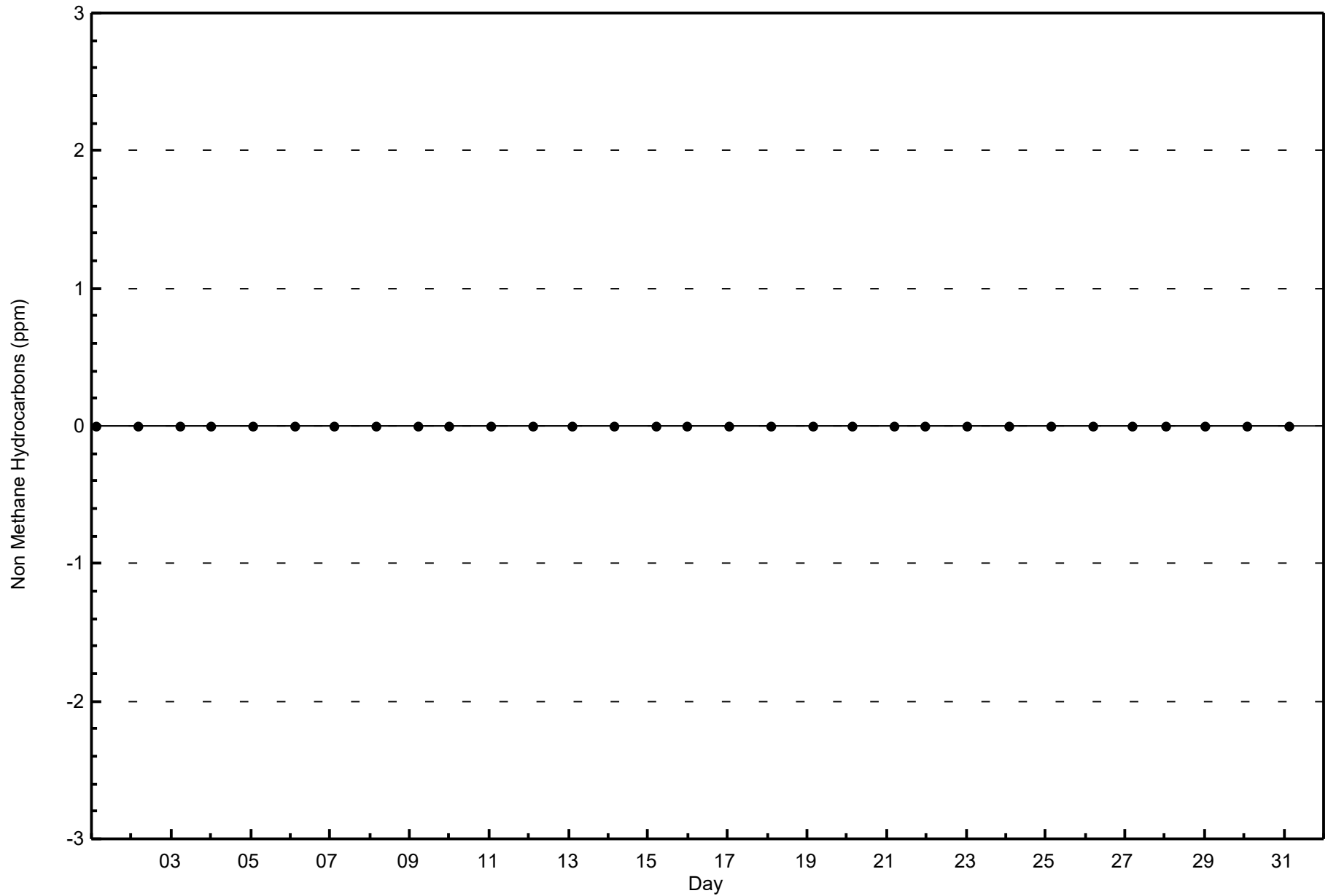
Total Number of Hours: 744

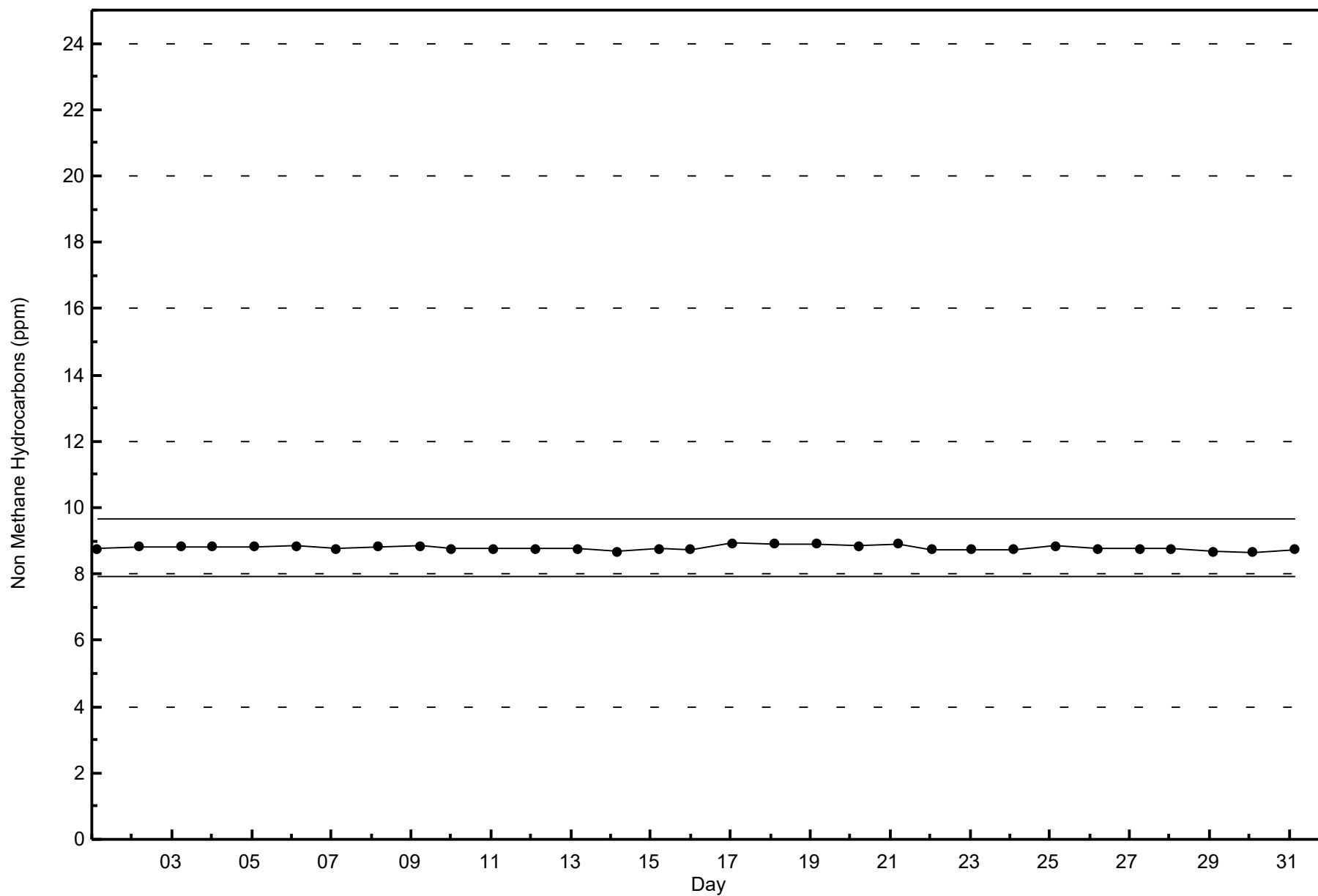


Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Mildred Lake









Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

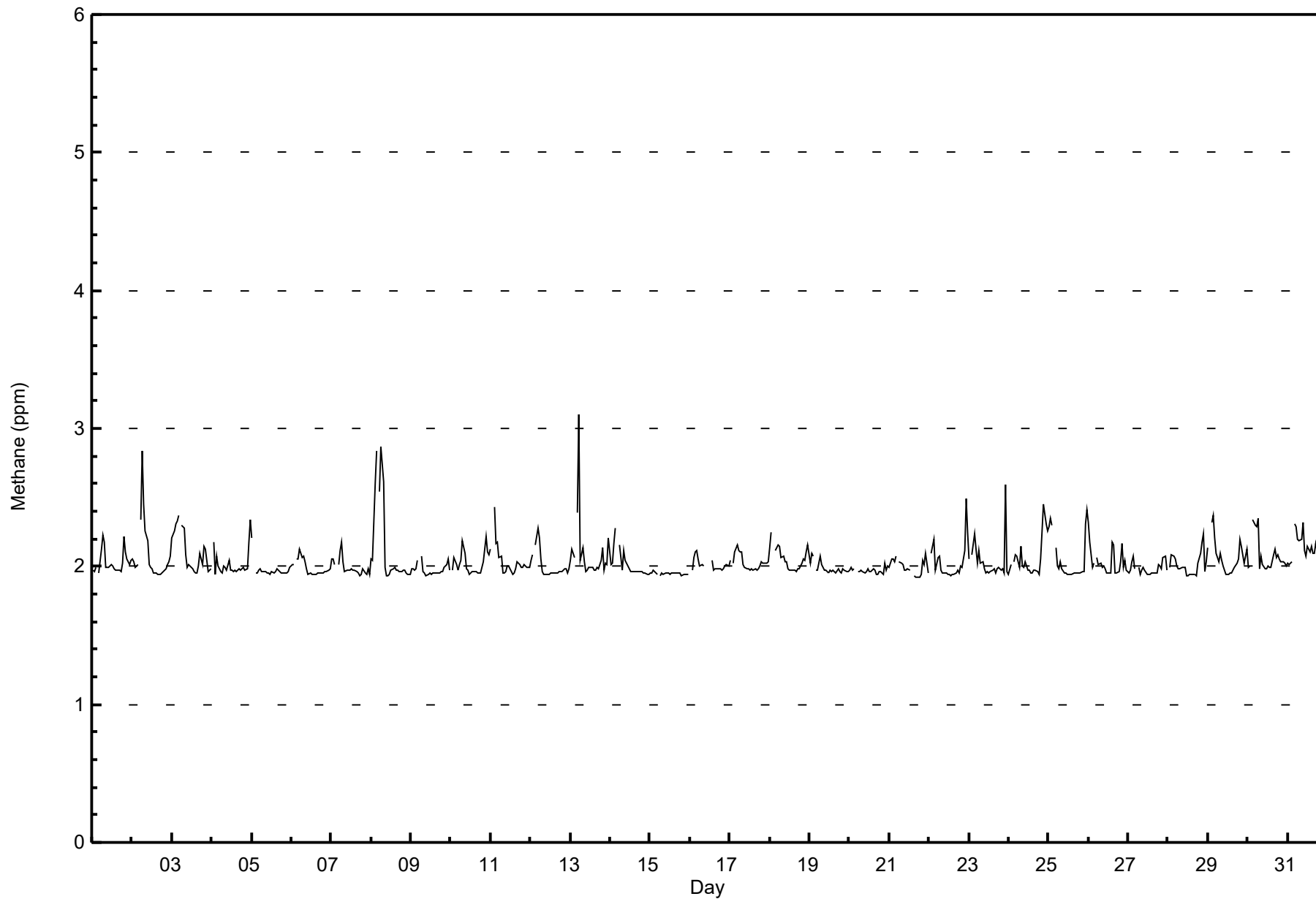
Mildred Lake - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.1 ppm on May 13 06:00 Maximum Daily Average: 2.1 ppm on May 8																			Hours in Service: 744								
Minimum Value: 1.9 ppm on May 21 17:00 Minimum Daily Average: 1.9 ppm on May 15 Maximum Diurnal Average: 2.2 ppm at hour 6 Minimum Diurnal Average: 2.0 ppm at hour 14 Monthly Average: 2.03 ppm Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.5																			Hours of Data: 707								
																			Hours of Missing Data: 37								
																			Hours of Calibration: 35								
																			Percent Operational Time: 99.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.2
2-May	2.1	2.0	2.0	2.0	Z	2.3	2.8	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.8	
3-May	2.2	2.3	2.3	2.3	2.4	Z	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.4	
4-May	Z	2.2	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.0	2.3	
5-May	2.2	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.2	
6-May	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
7-May	2.1	2.1	2.0	Z	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.2	
8-May	2.1	2.0	2.6	2.8	Z	2.5	2.9	2.6	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.9	
9-May	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	
10-May	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.2	
11-May	2.1	Z	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	
12-May	2.0	2.1	Z	2.2	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
13-May	2.0	2.1	2.1	Z	2.4	3.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.2	2.1	3.1	
14-May	2.0	2.0	2.2	2.3	Z	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.3		
15-May	2.0	1.9	2.0	2.0	1.9	Z	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
16-May	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
17-May	2.0	Z	2.0	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	
18-May	2.1	2.2	Z	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.2	
19-May	2.0	2.1	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	
20-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	
21-May	2.0	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.1	
22-May	Z	2.1	2.1	2.2	2.0	2.1	2.1	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.5	2.2	2.0	2.5	
23-May	2.1	Z	2.1	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.6	2.0	2.0	2.6	
24-May	1.9	2.0	Z	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.1	2.2	2.5	2.3	2.3	2.1	2.5	
25-May	2.3	2.3	2.3	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.3	2.4	2.4	2.1	2.4	
26-May	2.3	2.2	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.3	
27-May	2.0	2.0	2.0	2.1	2.0	Z	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	
28-May	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.0	2.0	2.0	2.2	
29-May	2.1	Z	2.3	2.4	2.2	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.1	2.1	2.4	
30-May	2.0	2.0	Z	2.3	2.3	2.3	2.3	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	
31-May	2.0	2.0	2.0	Z	2.3	2.3	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.3	
2.1 2.1 2.1 2.1 2.1 2.2 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.0																									Diurnal Average		
2.3 2.3 2.6 2.8 2.4 3.1 2.9 2.6 2.3 2.3 2.1 2.1 2.1 2.1 2.2 2.2 2.1 2.2 2.1 2.2 2.5 2.6 2.4																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	526	74.40	74.40
2.1 - 3.0	180	25.46	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Mildred Lake - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	48	46	6	3	4	15	102	88	47	41	40	17	25	9	13	22	526
2.1 - 3.0	19	0	0	1	0	11	41	44	14	9	6	4	3	11	8	9	180
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	46	6	4	4	26	143	132	61	50	46	21	28	20	22	31	707

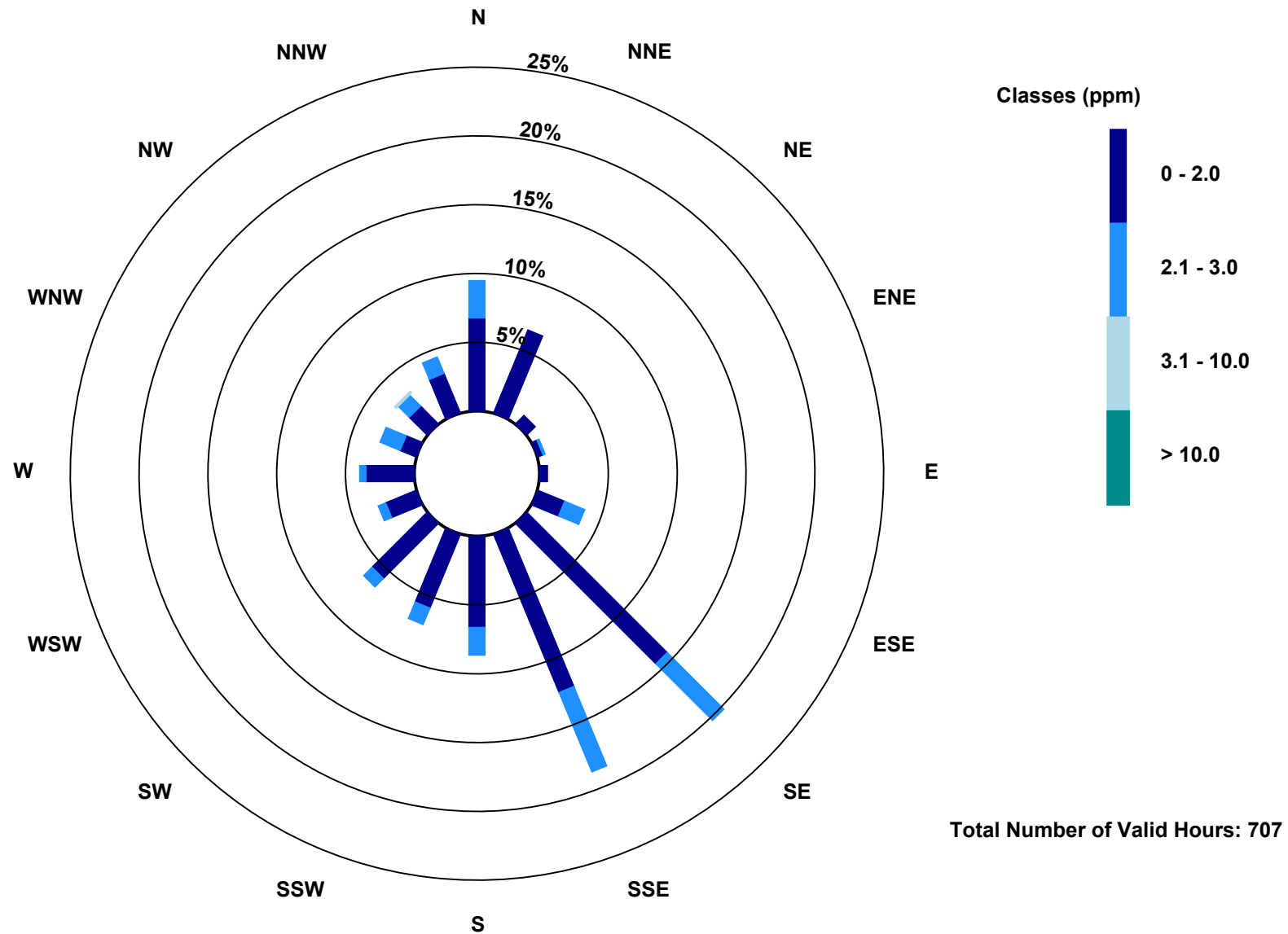
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

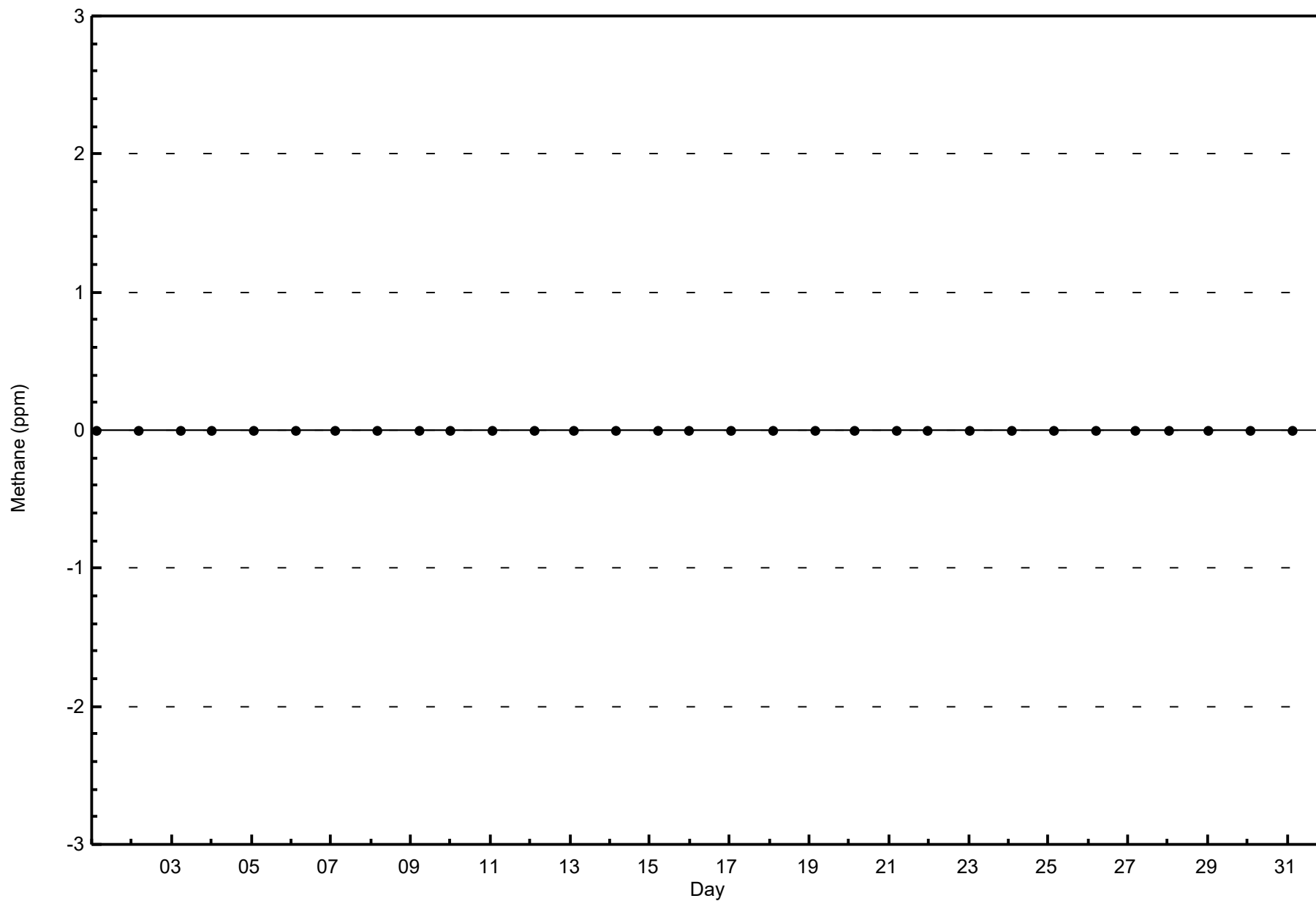
Methane (CH₄) - ppm
Mildred Lake





Wood Buffalo Environmental Association
Zero Responses

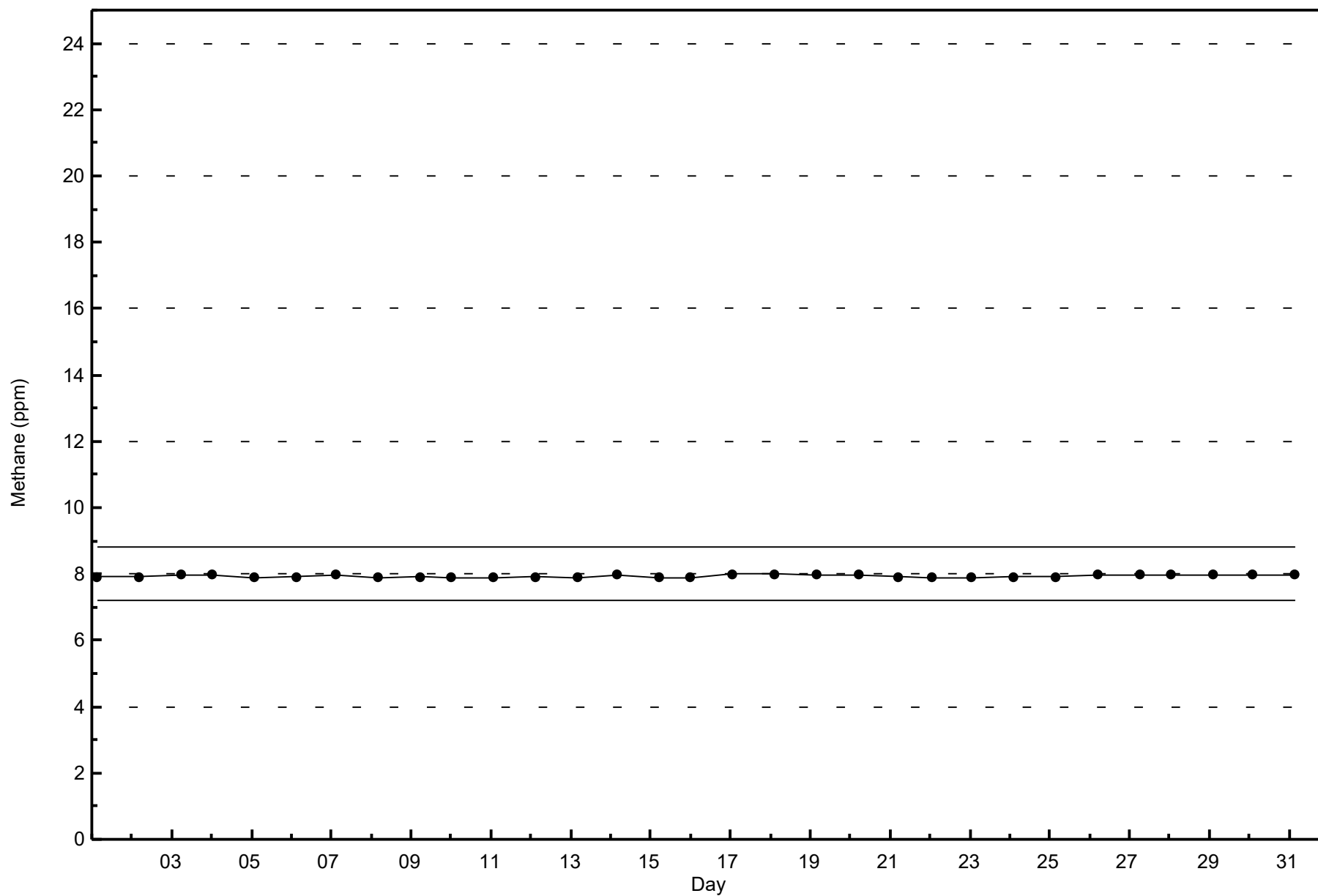
Methane (CH₄) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Mildred Lake - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

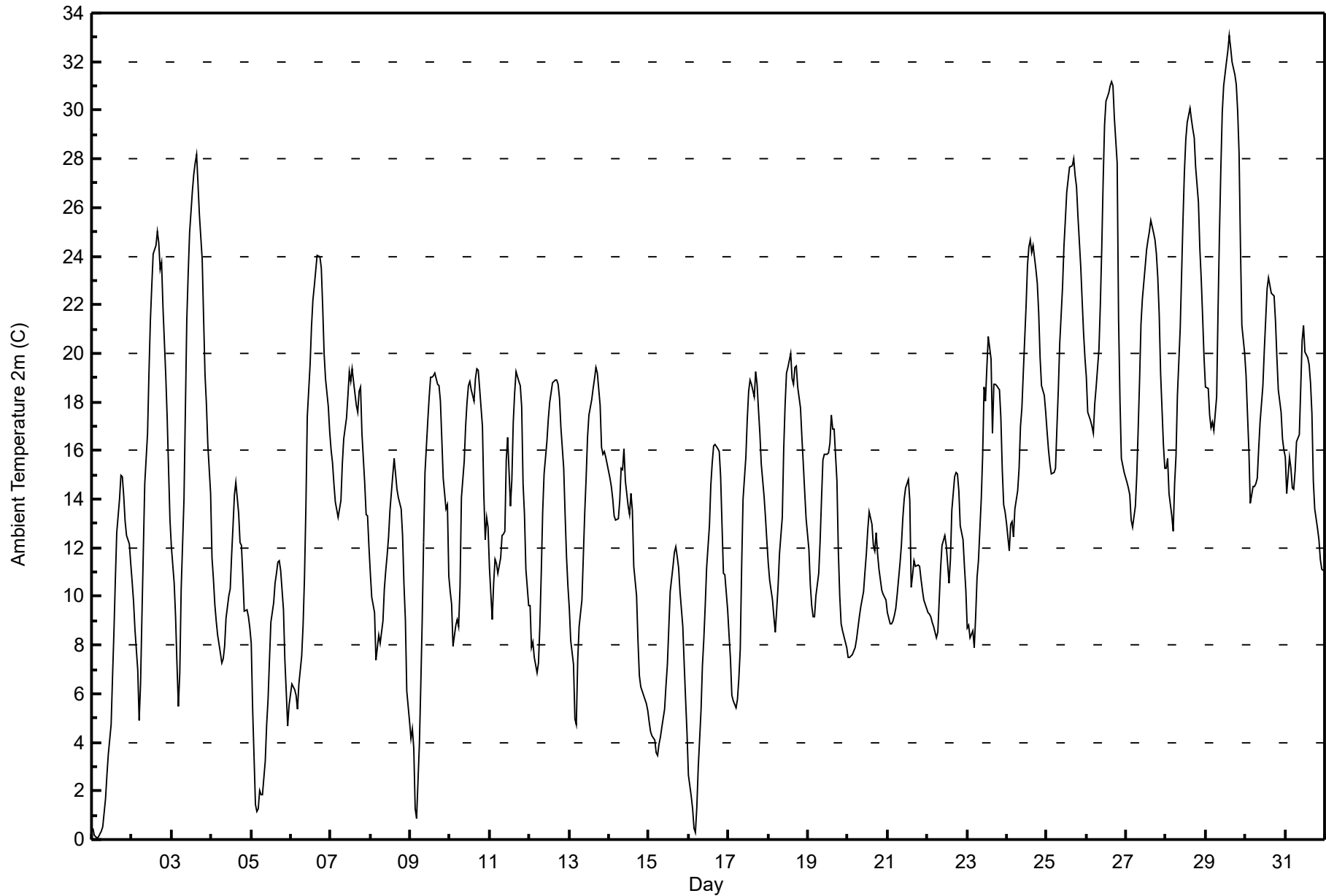
Mildred Lake - May 2025

Maximum Value: 33.1 C on May 29 15:00																				Maximum Daily Average: 25.3 C on May 29					Hours in Service: 744		
Minimum Value: 0.0 C on May 1 04:00																				Minimum Daily Average: 6.3 C on May 5					Hours of Data: 744		
Maximum Diurnal Average: 19.4 C at hour 17																				Minimum Diurnal Average: 8.7 C at hour 5					Hours of Missing Data: 0		
Monthly Average: 14.48 C																				Percentiles: P ₁ = 0.5 P ₁₀ = 6.5 Q ₁ = 9.9 Median = 14.1 Q ₃ = 18.6 P ₉₀ = 23.5 P ₉₉ = 31.0					Hours of Calibration: 0		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.5	0.2	0.1	0.0	0.1	0.3	0.5	1.1	1.7	2.6	3.5	4.7	6.7	8.5	10.6	12.6	14.0	15.0	14.9	14.1	13.1	12.5	12.2	11.4	6.7	15.0	
2-May	10.6	9.8	8.7	7.0	4.9	6.4	9.2	11.9	14.7	16.7	19.2	21.3	22.8	24.1	24.4	25.0	24.5	23.4	23.7	21.9	19.1	17.3	15.2	13.2	16.5	25.0	
3-May	12.0	10.5	9.1	7.2	5.5	6.9	10.3	14.0	17.7	21.4	23.3	24.9	26.7	27.4	27.8	28.2	27.0	25.7	23.9	21.5	19.2	17.9	16.3	14.2	18.3	28.2	
4-May	11.6	10.7	9.7	9.0	8.4	7.7	7.3	7.4	7.9	9.1	10.0	10.3	11.7	12.9	14.2	14.7	13.4	12.2	12.1	10.8	9.4	9.5	9.2	8.7	10.3	14.7	
5-May	8.1	5.3	1.4	1.2	1.3	2.0	1.8	1.8	3.2	4.7	5.7	7.4	8.9	9.8	10.5	11.0	11.4	11.4	11.0	9.4	7.3	6.0	4.7	5.5	6.3	11.4	
6-May	6.4	6.3	6.2	6.0	5.4	6.4	7.5	8.8	10.8	13.7	17.4	19.5	21.1	22.2	22.8	23.4	24.0	23.9	23.5	21.9	20.0	19.0	17.8	16.8	15.4	24.0	
7-May	16.0	15.5	14.6	13.9	13.2	13.6	13.9	15.5	16.5	17.3	18.3	19.2	18.9	19.4	18.8	17.9	17.6	18.4	18.6	16.7	14.6	13.4	13.3	12.1	16.1	19.4	
8-May	10.9	10.0	9.3	7.4	7.9	8.4	8.0	9.0	10.3	11.1	11.7	12.5	13.5	15.0	15.7	15.0	14.4	14.1	13.6	12.5	10.5	9.0	6.1	4.8	10.9	15.7	
9-May	4.2	4.6	3.8	1.3	0.8	3.9	6.3	9.0	12.2	15.1	17.2	18.2	19.0	19.0	19.1	19.2	18.7	18.7	18.0	16.5	14.9	13.6	13.8	10.9	12.4	19.2	
10-May	10.2	9.7	7.9	8.8	9.0	8.7	10.4	14.0	15.6	17.0	18.0	18.7	18.8	18.5	18.0	18.9	19.4	19.3	18.6	17.0	14.2	12.4	13.3	12.9	14.6	19.4	
11-May	11.2	9.0	10.6	11.5	11.4	11.0	11.6	12.5	12.6	12.7	15.6	16.5	13.7	14.8	17.2	18.4	19.3	18.8	18.7	17.8	14.7	13.4	11.1	9.6	13.9	19.3	
12-May	9.6	7.9	8.1	7.5	6.8	7.3	8.8	11.0	13.5	15.1	16.4	17.3	18.0	18.4	18.8	18.9	18.9	18.7	18.2	17.0	15.3	13.4	11.6	10.5	13.6	18.9	
13-May	9.5	8.2	7.2	5.0	4.7	7.4	8.7	9.9	11.6	13.4	14.9	16.6	17.5	18.1	18.6	18.9	19.4	19.2	17.9	16.1	15.8	16.0	15.8	15.4	13.6	19.4	
14-May	14.8	14.5	14.0	13.3	13.2	13.2	13.9	15.3	15.2	16.1	14.8	13.7	13.4	14.2	13.6	11.2	10.1	8.2	6.8	6.3	6.1	5.9	5.6	5.3	11.6	16.1	
15-May	4.8	4.4	4.3	4.1	3.6	3.5	3.9	4.2	4.6	5.4	6.3	7.2	8.7	10.2	11.2	11.8	12.0	11.6	11.2	10.2	8.8	7.2	5.8	4.4	7.1	12.0	
16-May	2.6	1.8	1.3	0.5	0.3	1.3	3.0	5.3	7.1	8.3	9.6	11.2	12.9	14.6	15.5	16.2	16.3	16.1	16.0	14.9	12.9	10.9	10.9	9.5	9.1	16.3	
17-May	8.4	7.4	5.9	5.7	5.4	5.7	6.6	7.8	11.2	14.0	15.7	17.3	18.4	18.9	18.7	18.2	19.3	18.7	17.7	16.7	15.4	14.1	13.2	12.3	13.0	19.3	
18-May	11.4	10.7	9.8	9.1	8.5	9.4	10.4	11.7	13.3	16.0	17.8	19.2	19.4	20.0	19.0	18.7	19.4	19.5	18.6	17.7	16.5	15.4	14.3	13.2	15.0	20.0	
19-May	11.9	10.5	9.6	9.2	9.2	10.0	10.9	12.2	14.0	15.6	15.9	15.8	15.9	16.3	17.4	16.9	16.9	14.7	11.9	10.0	8.9	8.6	8.1	7.9	12.4	17.4	
20-May	7.5	7.5	7.5	7.6	7.9	8.2	8.7	9.2	9.6	10.2	11.0	11.8	12.7	13.5	13.0	12.1	11.9	12.6	11.8	11.1	10.2	10.1	10.0	9.8	10.2	13.5	
21-May	9.3	8.9	8.9	9.0	9.2	9.5	10.1	11.4	12.1	13.2	14.0	14.5	14.8	14.0	10.4	10.9	11.5	11.2	11.3	11.2	10.7	10.2	9.9	9.5	11.1	14.8	
22-May	9.3	9.3	9.2	8.9	8.8	8.3	8.5	9.9	11.2	12.1	12.5	12.1	11.3	10.5	11.5	13.6	14.9	15.1	15.1	14.4	12.9	12.4	11.2	10.2	11.4	15.1	
23-May	8.7	8.8	8.3	8.6	7.9	9.2	10.8	11.4	14.0	15.8	18.6	18.0	19.4	20.7	19.8	16.7	18.7	18.7	18.7	18.5	17.3	15.2	13.8	13.5	14.6	20.7	
24-May	13.0	11.9	13.0	13.1	12.5	13.6	14.3	15.3	17.0	17.7	19.2	21.9	23.6	24.4	24.6	24.2	24.4	23.5	22.9	21.7	19.8	18.7	18.3	17.6	18.6	24.6	
25-May	16.8	16.0	15.4	15.0	15.1	15.3	16.9	18.5	20.4	22.7	24.3	25.5	26.6	27.1	27.7	27.7	28.0	27.3	26.8	25.6	23.6	22.2	20.9	19.8	21.9	28.0	
26-May	19.0	17.6	17.2	17.0	16.7	17.9	18.6	20.1	22.0	24.3	27.1	29.4	30.4	30.7	31.0	31.2	31.0	29.7	27.8	21.4	18.1	15.7	15.4	15.1	22.7	31.2	
27-May	14.7	14.5	14.1	13.2	12.8	13.7	15.0	16.9	18.9	21.2	22.2	23.6	24.2	24.6	25.0	25.4	25.0	24.6	24.1	23.1	21.6	19.2	16.3	15.2	19.6	25.4	
28-May	15.3	15.7	14.2	13.3	12.7	14.7	15.8	18.3	21.0	23.3	25.5	27.5	28.8	29.5	30.1	29.6	29.2	28.9	27.7	26.2	24.3	23.0	21.5	19.8	22.3	30.1	
29-May	18.6	18.5	17.5	16.9	17.2	16.8	18.2	21.8	24.9	27.6	29.9	31.0	32.0	32.4	33.1	32.5	32.0	31.5	31.0	30.0	28.2	24.4	21.2	20.0	25.3	33.1	
30-May	19.1	17.5	16.0	13.8	14.5	14.6	14.6	14.9	16.1	17.2	18.6	20.1	21.4	22.6	23.1	22.5	22.4	22.4	21.3	19.8	18.5	17.6	16.5	16.0	18.4	23.1	
31-May	15.7	14.3	15.7	15.3	14.4	14.4	15.2	16.3	16.7	18.6	20.5	21.1	20.1	19.8	19.5	18.8	17.5	14.7	13.6	12.8	12.4	11.5	11.1	11.1	15.9	21.1	
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Mildred Lake - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	191	25.67	25.67
10 - 20	431	57.93	83.60
> 20	122	16.40	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

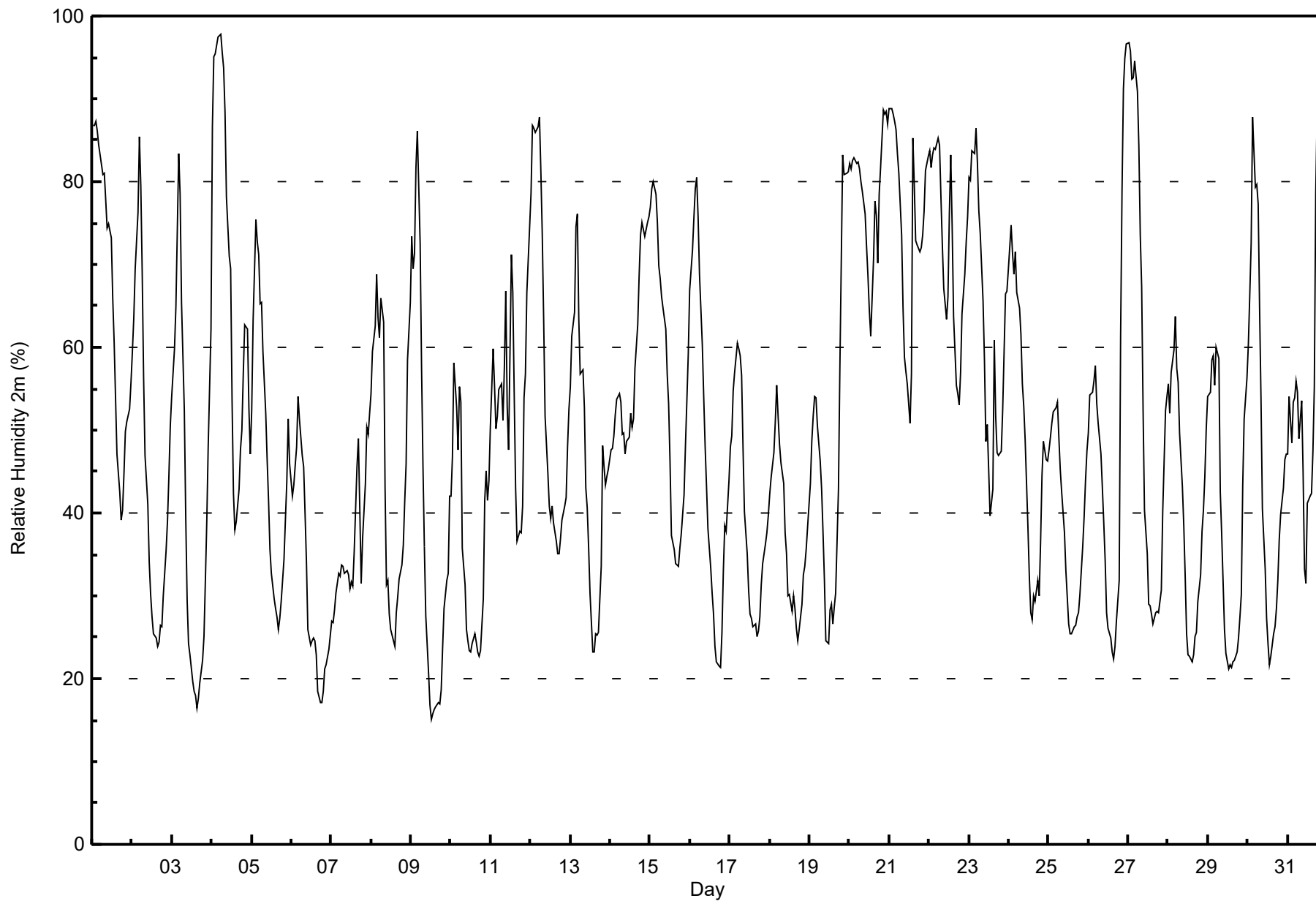
Mildred Lake - May 2025

Maximum Value: 100.0 % on Jun 1 00:00																				Maximum Daily Average: 78.5 % on May 20					Hours in Service: 744	
Minimum Value: 15.1 % on May 9 13:00																				Minimum Daily Average: 31.7 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 69.9 % at hour 5																				Minimum Diurnal Average: 34.9 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 50.42 %																				Percentiles: P ₁ = 17.1 P ₁₀ = 25.2 Q ₁ = 32.5 Median = 48.2 Q ₃ = 65.5 P ₉₀ = 81.3 P ₉₉ = 96.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	86.8	86.8	87.3	86.1	84.4	82.1	80.9	80.9	77.8	74.4	74.9	73.3	65.9	60.8	53.8	47.1	42.5	39.2	40.4	44.7	49.8	51.0	52.5	55.8	65.8	87.3
2-May	59.5	63.6	69.4	76.3	85.4	79.5	69.1	56.2	46.9	41.0	34.1	30.1	27.5	25.4	24.8	23.8	24.4	26.4	26.2	30.0	35.5	38.9	44.5	50.5	45.4	85.4
3-May	54.1	59.8	64.9	74.1	83.5	78.5	65.4	52.3	39.7	29.6	24.3	22.8	19.6	18.5	18.0	16.5	17.6	19.4	22.2	25.1	31.9	39.0	48.0	62.1	41.1	83.5
4-May	86.5	95.1	95.5	96.5	97.5	97.7	95.6	93.7	88.4	78.1	71.0	69.5	53.7	42.3	37.9	39.0	42.9	47.5	49.9	56.8	62.7	62.2	52.8	47.2	69.2	97.7
5-May	52.3	63.1	75.4	72.8	71.2	65.3	65.4	59.5	52.0	46.5	41.5	35.6	32.7	29.6	28.4	27.4	26.0	27.3	29.4	34.4	39.1	43.7	51.3	45.9	46.5	75.4
6-May	42.1	43.4	45.7	48.0	54.1	51.3	46.9	45.5	39.9	34.0	25.9	24.0	24.6	24.9	24.5	22.9	18.4	17.2	17.2	18.4	21.2	21.7	23.6	25.3	31.7	54.1
7-May	26.9	26.7	28.2	30.3	32.7	32.4	33.7	33.6	32.6	33.1	32.5	30.8	31.7	31.1	35.3	45.5	49.0	40.5	31.5	36.9	43.5	50.4	49.5	52.0	36.3	52.0
8-May	54.5	59.5	62.6	68.9	63.5	61.2	65.8	63.0	43.0	31.3	31.8	27.9	25.9	24.6	23.8	28.0	29.8	32.1	33.7	36.2	41.3	46.0	58.5	65.3	44.9	68.9
9-May	73.3	69.4	71.3	81.6	86.2	72.6	57.6	45.8	35.9	27.7	20.7	16.8	15.1	15.7	16.2	16.7	17.1	17.0	18.6	23.7	28.5	31.9	32.7	42.0	38.9	86.2
10-May	42.0	46.8	58.1	52.7	47.6	55.2	53.3	35.8	31.4	25.9	24.6	23.3	23.2	24.3	25.5	24.4	23.3	22.7	23.5	29.7	41.5	45.1	41.6	43.9	36.1	58.1
11-May	50.3	59.9	55.3	50.1	51.6	54.9	55.6	51.2	57.6	66.8	52.8	47.7	71.2	66.7	54.3	43.0	36.6	37.7	37.6	40.8	53.9	56.8	66.6	74.6	53.9	74.6
12-May	78.7	86.7	86.5	85.9	86.7	87.8	81.2	73.5	63.3	51.6	44.7	40.9	39.3	40.8	38.8	36.6	35.0	35.0	37.0	39.2	40.9	41.9	48.0	52.5	56.4	87.8
13-May	55.3	61.3	64.2	74.5	76.1	63.5	56.8	57.2	52.7	43.1	40.7	35.9	30.4	23.2	23.3	25.4	25.3	25.5	33.5	48.2	45.6	43.3	44.5	45.3	45.6	76.1
14-May	47.7	47.7	49.4	51.9	53.8	54.3	53.4	49.4	49.7	47.1	48.6	49.2	52.1	50.3	51.3	57.5	62.7	68.7	73.6	75.1	74.2	73.4	75.2	75.8	58.0	75.8
15-May	77.0	79.1	80.0	78.5	75.1	69.8	68.3	66.1	64.7	62.2	56.8	53.1	46.3	37.3	35.7	34.0	33.7	33.5	35.8	37.5	42.2	48.2	53.6	59.2	55.3	80.0
16-May	66.9	71.8	75.5	79.1	80.6	75.8	68.9	60.3	54.0	48.2	43.3	38.1	33.3	30.3	27.9	24.0	22.0	21.5	21.3	25.6	33.0	38.4	37.8	43.9	46.7	80.6
17-May	48.0	49.3	54.8	57.0	60.5	59.8	59.0	56.6	47.9	40.1	35.1	30.8	27.8	27.2	26.3	26.7	25.1	25.8	27.4	31.3	33.9	36.3	37.6	39.6	40.2	60.5
18-May	42.2	44.2	47.3	51.1	55.4	51.7	48.3	46.1	43.6	37.6	35.0	30.0	30.1	28.2	29.9	28.4	26.1	24.6	26.0	29.0	32.6	33.6	35.6	38.4	37.3	55.4
19-May	43.6	48.7	51.6	54.0	53.9	50.6	46.2	42.8	37.7	31.8	24.6	24.3	28.2	29.0	26.6	28.7	30.3	42.9	57.4	70.4	83.3	80.8	81.1	81.3	47.9	83.3
20-May	82.2	81.5	82.5	82.9	82.2	82.4	81.5	80.1	78.8	76.0	72.2	68.7	64.4	61.3	70.6	77.5	76.0	70.2	78.4	81.7	88.6	88.1	88.6	87.0	78.5	88.6
21-May	88.9	88.8	88.1	87.2	86.2	83.3	81.0	73.6	64.8	58.8	57.2	55.7	50.8	56.8	85.3	79.7	72.9	72.3	71.5	72.0	73.6	76.5	81.3	83.1	74.6	88.9
22-May	83.7	81.7	83.3	84.0	83.9	85.3	84.3	78.1	72.4	67.0	63.4	66.2	76.2	83.3	74.7	63.7	55.4	54.3	53.1	56.9	64.1	68.9	72.6	75.7	72.2	85.3
23-May	80.5	80.2	83.7	83.3	86.5	82.2	76.4	73.7	65.6	58.5	48.6	50.7	45.2	39.6	42.8	60.8	51.8	47.3	46.9	47.4	52.5	59.5	66.5	66.8	62.4	86.5
24-May	69.4	74.8	71.4	68.8	71.6	66.5	64.7	61.6	55.5	52.9	48.7	38.1	32.2	28.0	27.2	30.1	29.3	31.9	30.0	36.7	44.6	48.7	46.5	46.2	49.0	74.8
25-May	47.6	49.2	50.9	52.2	52.8	53.5	49.2	45.2	42.5	37.6	33.0	29.8	26.5	25.4	25.3	26.3	26.4	27.5	27.9	30.2	35.9	39.4	43.8	47.5	38.6	53.5
26-May	49.7	54.2	54.6	55.9	57.7	53.3	50.8	47.1	43.1	38.8	34.2	28.0	26.1	25.0	23.1	22.4	23.9	27.0	31.8	61.3	78.8	91.2	94.9	96.6	48.7	96.6
27-May	96.9	95.8	92.5	92.5	94.6	90.8	84.2	73.5	67.3	52.5	40.3	35.1	28.9	28.8	27.7	26.6	28.1	28.1	28.0	29.3	30.6	40.2	52.4	54.1	54.9	96.9
28-May	55.6	52.1	56.9	59.7	63.8	57.5	55.7	49.7	43.2	38.4	32.4	25.4	22.8	22.7	22.1	22.8	25.1	25.6	29.2	32.5	37.9	40.4	44.4	50.1	40.2	63.8
29-May	54.0	54.6	58.4	59.0	55.4	60.0	58.7	42.6	37.5	31.8	26.0	23.0	21.1	21.6	21.4	22.0	22.3	23.2	24.8	27.5	30.2	43.4	51.3	56.3	38.6	60.0
30-May	60.4	66.3	72.6	87.8	79.4	79.6	77.2	64.7	54.0	40.5	33.1	27.4	24.2	21.7	22.7	25.4	26.2	28.5	31.9	36.8	39.8	43.1	46.5	47.0	47.4	87.8
31-May	47.2	54.1	48.5	53.3	53.9	55.9	54.5	49.0	53.5	44.9	33.2	31.4	41.1	42.1	42.4	47.4	55.2	78.4	88.5	92.5	93.4	98.6	99.5	100.0	60.8	100.0
61.4 64.4 66.7 68.9 69.9 67.6 64.2 58.3 52.8 46.7 41.5 38.2 36.7 35.1 35.1 35.5 34.9 36.1 38.2 43.2 48.5 52.3 55.6 58.4																										Diurnal Average
96.9 95.8 95.5 96.5 97.5 97.7 95.6 93.7 88.4 78.1 74.9 73.3 76.2 83.3 85.3 79.7 76.0 78.4 88.5 92.5 93.4 98.6 99.5 100.0																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Mildred Lake - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - May 2025

Maximum Speed: 27 km/h on May 19 18:00										Maximum Daily Speed Average: 16.4 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 8 01:00										Minimum Daily Speed Average: 1.0 km/h on May 13										Hours of Data: 744						
Maximum Diurnal Speed Average: 5.7 km/h at hour 18										Minimum Diurnal Speed Average: 3.2 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 4.2 km/h 158.6 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 12 Q ₃ = 15 P ₉₀ = 18 P ₉₉ = 24										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N10	N10	NNE6	NNE5	NW3	NW5	N5	S3	SSW8	SSW6	SSE10	SSE13	SE15	SE14	SE13	SE10	ESE11	SE11	ESE10	ESE8	ESE10	SE13	SE20	SE14	SE6.0	SE20
2-May	SSE8	SSE6	SSE0	NNW6	NW3	WSW3	W3	WSW5	SSW4	S5	SSE3	SE5	W6	W11WNW15	NW13	NNW11	N7	NNE8	NNE9	N10	N10	N8	NNW10	NW3.3	WNW15	
3-May	NNW10	NNW10	NNW8	WNW2	S2	SE2	SSW5	SSE8	SSE10	SSW9	W14	W14WNW17	WNW15	W13WSW13	W14WNW16	NW17	NW20	NW18	NW13	NNW16	NNW13	WNW8.3	NW20			
4-May	NW7	WSW5	SW7WNW10	NW16	NW14	NNW11	NNW9	NNE5	NW3	WSW6	W15	W15	W15	W12WSW14	WSW7	SW16	SW14	SSW12	SW11WSW13	WNW14	WNW14	W8.5	SW16			
5-May	WNW15	N14	NNE12	N9	NW4	NNW9	NNW9	NW12WNW12	W10WNW11	W9	SSW7	N1	NE7	NNE7	NNE9	NNE9	NNE9	NNE9	NNE9	NNE9	NE7	ENE5	ESE11	NNW5.4	WNW15	
6-May	SE12	SE15	SE15	SSE15	SE7	SE12	SSE14	SSE10	SE14	SSE12	S12	SSW11	SSW13	SW14	SSW16	SSW17	SW15	SSW14	S16	S16	SSE16	S20	SSE16	SSE17	S12.6	S20
7-May	SSE17	SE20	SE16	SE13	SE15	SE15	SE14	SSE16	S21	S21	S18	SW15	SW14WSW12	SW12WSW16	WSW14	SW16	SW14	SSW9	SSW8	SSW9	SW7	SSW7	S11.1	S21		
8-May	N0	SW4	NW4	N2	NW5	NNW4	ENE3	N7	N15	N15	NNE11	NNE13	NNW6	SW3	NNE5	NNE13	NNE12	NNE11	NNE9	N10	NNE8	NE6	ENE4	SSE2	N6.0	N15
9-May	SSW5	S5	S5	NNE2	E4	SSE3	S7	S9	SSW11	SSW11	SW14WSW17	SW16	SW16	SW15WSW14	SW12	SW14	SW10	SW7	WSW4	W3	SW5	SSW3	SW7.7	WSW17		
10-May	SW3	SW5	S5	S4	W1	S2	ENE2	SSW4	SW6	W5	SSW7	SSW12	W9	NNW8	NNW8	S7	SSW9	S6	E2	ESE4	S3	ESE6	ESE9	ESE7	SSW2.6	SSW12
11-May	ESE6	SSE4	SE7	SE6	SE5	SE3	S6	S11	SSE12	SSE11	SSE10	SSE6	SSE8	E12	SSE9	SSW2	W6	NNW10	NNW6	NNE5	NE4	NE7	NNE4	N6	SE3.2	E12
12-May	N6	N7	N8	N8	N7	N9	N11	N12	NNE13	NNE16	N16	N18	NNE18	NNE19	NNE18	NNE19	NNE16	NNE16	N18	N15	N15	N12	N11	N13	N13.2	NNE19
13-May	N12	NNW10	N8	NW2	NW5	NW7	NNW7	N10	N9	N4	NW7	W7	WSW7	SSE4	E6	ESE7	ESE9	ESE9	S5	S5	SE8	SE12	SE13	SSE16	ENE1.0	SSE16
14-May	SE17	SE14	SE14	SE13	SE12	SE12	SSE9	SW8	WNW7	NNW10	N23	N22	N20	N21	N25	N23	NNE20	NNE19	N20	N18	N17	N15	N15	N16	NNE8.7	N25
15-May	N13	NNE8	N11	N12	N14	N15	N16	N19	N17	N17	NNW19	N18	N15	N17	NNE16	NNE15	NNE14	NNE14	NE12	NNE11	NNE7	NNE7	NNE7	NNE5	N12.9	N19
16-May	N6	NNW8	NNW7	NNW8	N7	N6	NNE5	ESE2	WSW3	NW3	NE4	NNE5	NW4	SW5	SSW6	S8	SW1	NNE3	SE5	NNE3	NNW3	SE8	SE15	SE14	NE1.3	SE15
17-May	SE16	SE15	SE13	SE17	SE16	SE20	SE16	SE15	SE14	SSE13	SSE13	SE14	SSE15	SE18	SE16	SE15	SE16	SE17	SE15	ESE14	ESE15	ESE15	SE16	SE16	SE15.2	SSE20
18-May	SE12	SE13	SE16	SE12	SE12	SSE20	SSE18	SSE14	SE13	SE12	SE10	SSE15	SSE19	SSE17	SE14	SE13	SSE14	SE14	SE13	SE14	SE15	SE18	SE15	SE13	SE14.3	SSE20
19-May	SE9	ESE7	SE8	SE11	SE14	SE13	SSE16	SSE13	SSE15	SSE17	SSE22	SE21	SE18	SE17	SSE17	SE19	SSE18	SSE27	SSE26	SE23	SE17	SE17	SE16	SE15	SE16.4	SSE27
20-May	SE14	SE14	SE14	SE14	SE14	SE13	SE13	SSE16	SE15	SE16	SE17	SE17	SE17	SSE16	SE15	SE19	SE18	SE16	SE15	SE14	SE13	SE12	SE10	SE10	SE14.6	SE19
21-May	SE8	ESE7	SSE7	SSE12	SSE10	SE9	ESE8	SE11	SSE12	SSE11	SSE12	SSE11	SE12	SE15	SSE16	SSE15	S15	S13	S11	SSE13	SSE13	SSE14	SSE13	SSE11	SSE11.1	SSE16
22-May	SSE14	SSE13	SSE13	SSE13	SE11	SE14	SSE15	SSE14	SSE14	S12	S12	SSW10	SW9	SSW10	S13	SSE14	SE16	SE16	SSE13	SSE15	SE10	SSE11	SSE10	SSE9	SSE11.9	SE16
23-May	SE7	SE8	SE9	SSE9	S6	SSE7	SSE8	SE12	SE11	ESE12	SSE15	SSE14	S10	SSE15	SE14	SE14	ESE18	SE21	SE20	SSE17	SSE14	SSE7	SSE7	S11	SE11.5	SE21
24-May	S7	SE5	SE5	SE8	SE8	SE9	SE10	SSE10	SE8	SE12	SE12	SSE18	SE21	S19	S19	SE15	SSE19	S16	SSW15	SSE16	SSE12	SSE13	SSE14	SSE15	SSE12.2	SE21
25-May	SSE16	SE16	SE14	SE13	SE11	SE8	SE12	SSE18	SSE18	SSE19	SSE21	S21	S20	S22	S20	S19	S19	S19	S19	S15	SSE11	SSE11	SSE12	SSE11	SSE15.6	S22
26-May	SSE10	SE7	SE9	SE10	SE11	SE13	SSE16	SE16	SE15	SSE14	SSE15	S22	S21	SSE24	S24	S24	S24	SSE21	SSW11	NNW18	NW7	SW6	S2	SW4	SSE12.0	S24
27-May	SSW7	SSW6	W5	S3	SSE6	SSW6	SSW7	SSW7	SW6	WSW8	NNW12	W10	W14	SW14	SW16	SW18	WSW16	SW13	W12	W12	WSW8	SW4	SW3	SW3	WSW7.9	SW18
28-May	SW7	SW6	SW5	SSW4	SSW4	SSW5	SSW7	SSW7	S7	SE7	S7	SSW9	SW11	SSW12	SSW10	SW10	SSW9	S10	SE7	SE7	SE9	SSE9	SSE8	SSE5	S6.8	SSW12
29-May	SE5	SE6	ESE5	ESE6	SE7	ESE6	ESE6	SSE14	SSE16	SSE17	SSE20	SSE22	SSE25	SSE24	SSE21	SE24	SE26	SSE26	SSE22	SSE17	SSE15	W21	NNW19	NNW13	SSE12.0	SE26
30-May	W18	W13WSW15	WNW13	WNW11	W11	NW14	NW14	NNW11	NW13	NW9	WNW8	W2	SSW8	SW11	SW12	SSW9	SSW12	SSW9	S8	S8	S9	S8	S8	WSW7.1	W18	
31-May	S11	SSW7	SW9	W6	WSW4	SSW6	S8	S6	SE6	SSE7	SE6	NW3	N7	N12	N14	NNW15	N17	N12	N13	N15	NNW14	NNW14	NNW13	NNW11	NNW4.3	N17
SSE3.7 SE3.6 SE3.6 SE3.6 SE3.3 SE3.9 SE4.3 SSE5.0 SSE5.2 SSE4.8 S4.4 S4.9 S5.3 S5.4 S4.9 S5.3 SSE5.1 SSE5.7 SSE4.2 SSE3.2 SE3.2 SSE3.5 SE3.7 SE3.7																								Diurnal Average		
W18 SE20 SE16 SE17 SE16 SSE20 SSE18 N19 S21 S21 N23 SSE22 SSE25 SSE24 N25 SE24 SE26 SSE27 SSE26 SE23 NW18 W21 SE20 SSE17																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

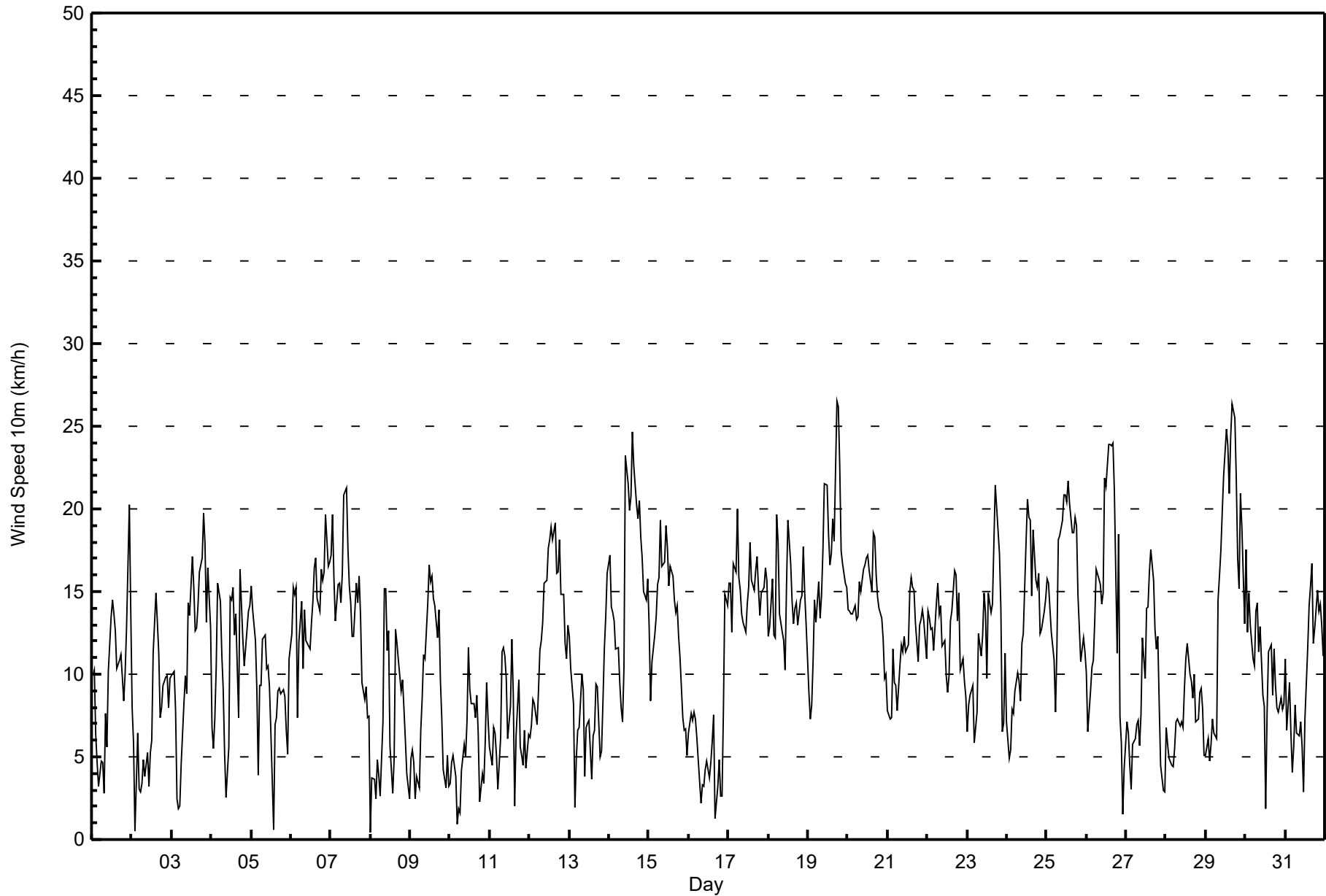
Wind Speed 10m (WS10) - km/h
Mildred Lake - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on May 29 22:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 10 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	3	2	1	1	1	2	3	3	2	3	3	3	3	3	3	3	2	3	2	3	4	4	5	5
2-May	2	2	2	2	1	1	3	1	1	1	2	2	4	4	5	4	4	3	2	2	2	2	2	2	5
3-May	2	1	1	2	1	2	2	3	3	4	5	4	5	4	4	4	4	6	5	6	5	3	4	3	6
4-May	2	2	3	4	4	3	3	2	3	1	3	5	5	4	4	5	6	5	5	4	3	4	4	4	6
5-May	4	5	4	3	2	5	6	3	3	3	4	3	3	3	3	4	3	3	2	2	2	2	2	4	6
6-May	4	4	3	3	2	4	3	2	3	3	3	3	4	5	5	5	5	4	5	3	3	4	3	3	5
7-May	3	4	4	3	4	4	4	4	5	5	5	5	4	4	4	6	5	5	4	3	1	2	2	2	6
8-May	3	2	1	1	2	2	1	3	5	5	4	3	4	3	5	4	3	3	3	3	2	2	2	2	5
9-May	2	1	1	1	2	2	2	2	3	4	5	6	5	5	5	5	4	5	4	3	2	2	2	2	6
10-May	1	1	2	2	1	2	2	2	2	3	4	4	3	5	6	4	3	4	2	1	1	1	2	2	6
11-May	2	2	1	1	1	2	3	3	3	2	3	3	3	2	3	3	3	3	2	1	1	1	1	1	3
12-May	1	2	2	2	2	2	3	3	4	4	5	5	5	5	5	5	5	5	5	4	4	3	2	2	5
13-May	2	2	2	2	2	2	2	3	3	3	3	3	3	2	4	4	4	3	5	2	3	3	3	4	5
14-May	5	4	3	3	2	2	2	2	3	6	5	5	5	5	6	6	6	6	6	4	5	4	4	4	6
15-May	4	3	3	4	5	5	5	5	4	5	5	5	5	5	5	4	4	4	3	3	2	2	2	1	5
16-May	1	1	1	1	1	1	2	2	2	3	3	4	3	3	3	3	2	3	2	2	2	5	5	5	5
17-May	4	4	4	3	4	4	5	3	3	3	3	4	4	5	4	4	4	4	4	4	4	5	5	5	5
18-May	4	4	3	3	2	4	4	3	3	3	3	5	4	4	3	3	3	4	3	4	4	5	4	3	5
19-May	3	3	2	3	3	3	3	3	3	4	5	5	5	5	5	5	4	10	6	6	4	4	4	4	10
20-May	3	4	3	3	3	3	3	4	3	4	4	4	4	4	4	5	5	4	4	3	4	3	2	3	5
21-May	2	2	3	2	2	2	2	3	2	2	3	3	3	5	4	3	4	3	3	3	3	3	3	2	5
22-May	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	4	4	4	3	4	2	2	2	2	4
23-May	2	2	2	2	2	2	3	4	3	3	4	6	5	4	4	6	5	5	5	4	4	2	2	4	6
24-May	2	4	2	2	2	2	3	2	2	3	4	5	5	6	6	4	5	5	5	4	2	2	2	3	6
25-May	3	3	3	3	2	3	4	4	4	5	5	5	5	6	5	5	5	5	5	4	2	2	2	2	6
26-May	3	1	2	2	2	4	3	3	4	3	4	7	6	6	6	6	6	6	4	6	5	3	4	2	7
27-May	3	2	2	2	2	2	2	2	2	3	4	4	5	5	6	7	6	5	4	4	3	2	1	1	7
28-May	3	2	1	2	2	2	2	2	2	2	2	4	4	4	3	4	2	3	1	1	2	2	1	1	4
29-May	2	1	1	1	2	1	2	3	3	4	5	6	6	6	6	6	5	5	5	3	3	10	7	4	10
30-May	6	5	6	5	4	4	4	4	4	3	3	4	3	4	4	4	3	3	3	2	2	3	1	1	6
31-May	2	2	4	3	2	2	1	1	1	2	2	3	2	4	3	4	4	3	3	4	3	3	3	2	4
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Mildred Lake - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mildred Lake - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	103	13.84	13.84
6 - 11	261	35.08	48.92
12 - 19	334	44.89	93.82
20 - 28	46	6.18	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mildred Lake - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	11	2	4	2	3	8	7	13	9	12	6	6	1	12	2	103
6 - 11	26	18	4	0	1	18	39	36	23	32	16	6	9	6	5	22	261
12 - 19	33	18	1	0	1	5	102	76	15	10	20	10	13	13	10	7	334
20 - 28	7	1	0	0	0	0	9	17	10	0	0	0	1	0	1	0	46
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	71	48	7	4	4	26	158	136	61	51	48	22	29	20	28	31	744

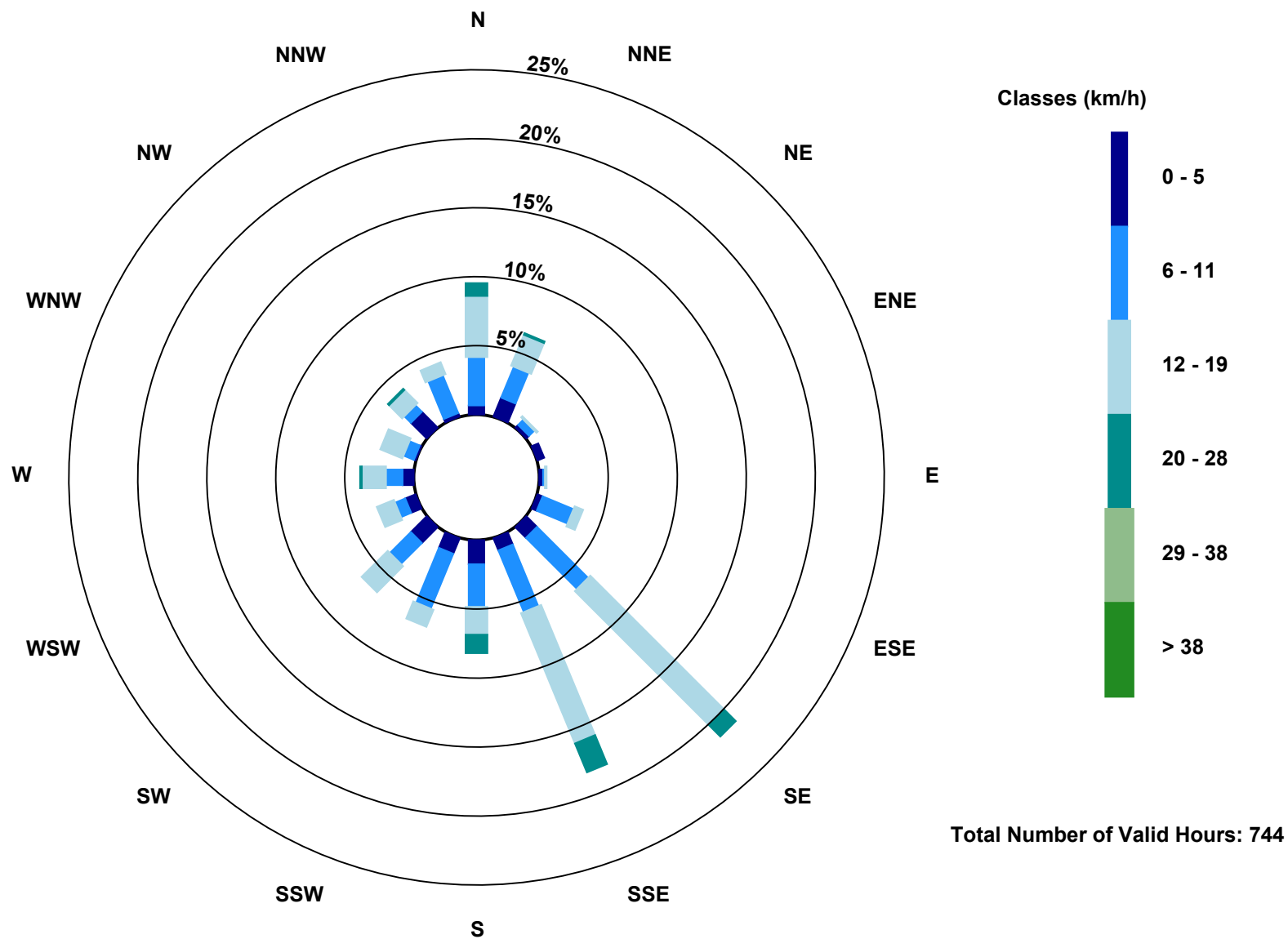
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Mildred Lake





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - May 2025

Direction of Maximum Speed: 152 deg on May 19 18:00 Direction of Maximum Daily Speed Average: 144.2 deg on May 19																				Hours in Service: 744					
Direction of Minimum Speed: 355 deg on May 8 01:00 Direction of Minimum Daily Speed Average: 1.0 deg on May 13																				Hours of Data: 744					
Monthly Average Direction: 158.6 deg																				Hours of Missing Data: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	359	18	20	326	322	350	177	213	211	161	148	145	139	128	137	122	129	114	117	120	138	143	140	130.5
2-May	147	164	149	336	304	245	276	248	193	179	162	146	279	281	298	310	329	7	19	13	4	6	3	346	324.2
3-May	348	347	348	302	177	125	200	162	159	200	267	280	296	294	280	254	272	293	311	310	310	307	329	341	295.8
4-May	317	251	234	287	322	322	333	338	21	318	241	272	271	276	271	238	237	221	220	212	235	258	289	294	271.9
5-May	296	351	17	10	322	334	335	304	298	279	296	276	193	353	38	32	33	25	25	24	17	45	73	117	348.4
6-May	131	146	145	147	128	140	147	151	141	152	191	206	211	215	208	203	214	211	183	173	168	169	163	158	172.0
7-May	154	142	137	136	139	130	131	155	179	180	187	228	223	239	230	237	239	229	226	211	197	195	221	206	186.2
8-May	355	222	315	356	319	331	68	9	8	10	12	13	333	223	19	15	18	18	14	6	18	37	71	164	9.6
9-May	195	187	185	14	82	159	170	175	195	211	230	238	233	229	236	240	226	231	231	217	241	277	234	208	220.9
10-May	216	222	172	176	279	189	65	200	229	276	199	206	271	327	333	184	202	172	87	123	173	103	112	118	194.1
11-May	102	151	142	126	128	127	172	171	160	156	155	156	166	93	155	193	277	333	347	15	44	35	25	358	132.2
12-May	5	353	352	358	355	2	2	5	21	16	11	10	12	14	13	12	19	13	2	2	358	2	355	352	6.9
13-May	354	348	350	326	308	315	347	355	1	359	320	259	246	160	79	111	119	123	186	183	133	141	146	149	75.4
14-May	143	139	146	144	143	144	168	214	288	332	352	1	5	9	2	11	21	12	8	357	360	2	7	359	15.8
15-May	8	12	2	10	11	11	10	358	8	357	342	351	4	5	13	27	22	24	40	26	24	23	17	13	9.6
16-May	351	340	348	347	1	8	21	121	255	321	36	31	307	229	197	182	215	31	130	33	336	138	125	127	48.1
17-May	139	141	135	144	144	146	141	146	141	147	150	139	152	144	142	146	146	144	138	122	117	116	127	127	139.2
18-May	131	136	140	144	143	147	148	147	146	139	143	148	155	152	146	144	149	143	141	137	130	129	132	133	142.1
19-May	132	116	125	138	143	143	148	154	151	148	147	143	144	144	147	142	152	152	149	145	144	140	139	136	144.2
20-May	136	138	137	138	139	138	138	148	144	143	145	139	142	147	137	138	143	144	141	139	141	146	140	140	141.0
21-May	138	115	151	148	148	128	121	130	152	161	152	147	131	139	163	165	176	183	183	163	151	147	151	165	152.4
22-May	148	149	149	148	139	146	148	156	165	171	170	201	228	196	170	153	142	145	151	147	139	148	148	158	156.3
23-May	132	137	131	157	174	153	153	145	139	120	150	157	181	152	136	127	119	146	142	150	163	149	157	173	146.0
24-May	175	145	133	125	137	144	140	153	144	129	128	149	146	175	176	139	152	169	195	158	150	150	153	153	153.2
25-May	149	146	143	142	144	130	141	151	155	159	167	169	173	169	171	174	182	179	178	169	164	160	152	153	161.7
26-May	147	128	130	132	131	144	147	145	144	153	152	173	171	168	169	170	174	167	192	282	307	223	184	218	164.7
27-May	194	212	266	191	167	193	204	208	223	253	283	273	260	224	227	234	249	236	281	270	245	219	218	233	238.7
28-May	225	225	232	207	196	198	199	192	183	162	170	212	216	208	209	217	204	180	152	144	145	160	154	159	190.0
29-May	135	126	112	122	135	111	120	148	151	148	165	168	168	158	165	144	146	147	151	149	147	274	293	288	158.1
30-May	270	276	247	282	289	274	304	314	300	306	325	299	263	201	219	221	200	198	207	182	169	189	187	181	253.5
31-May	178	193	235	269	244	202	173	171	142	158	134	320	356	353	351	345	352	358	353	355	339	332	329	331	332.8
147.7 143.3 142.1 138.0 139.1 141.1 142.0 156.4 157.6 160.3 171.4 185.3 191.1 179.5 178.3 170.0 164.6 163.7 160.6 150.3 137.9 147.1 140.4 146.1																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

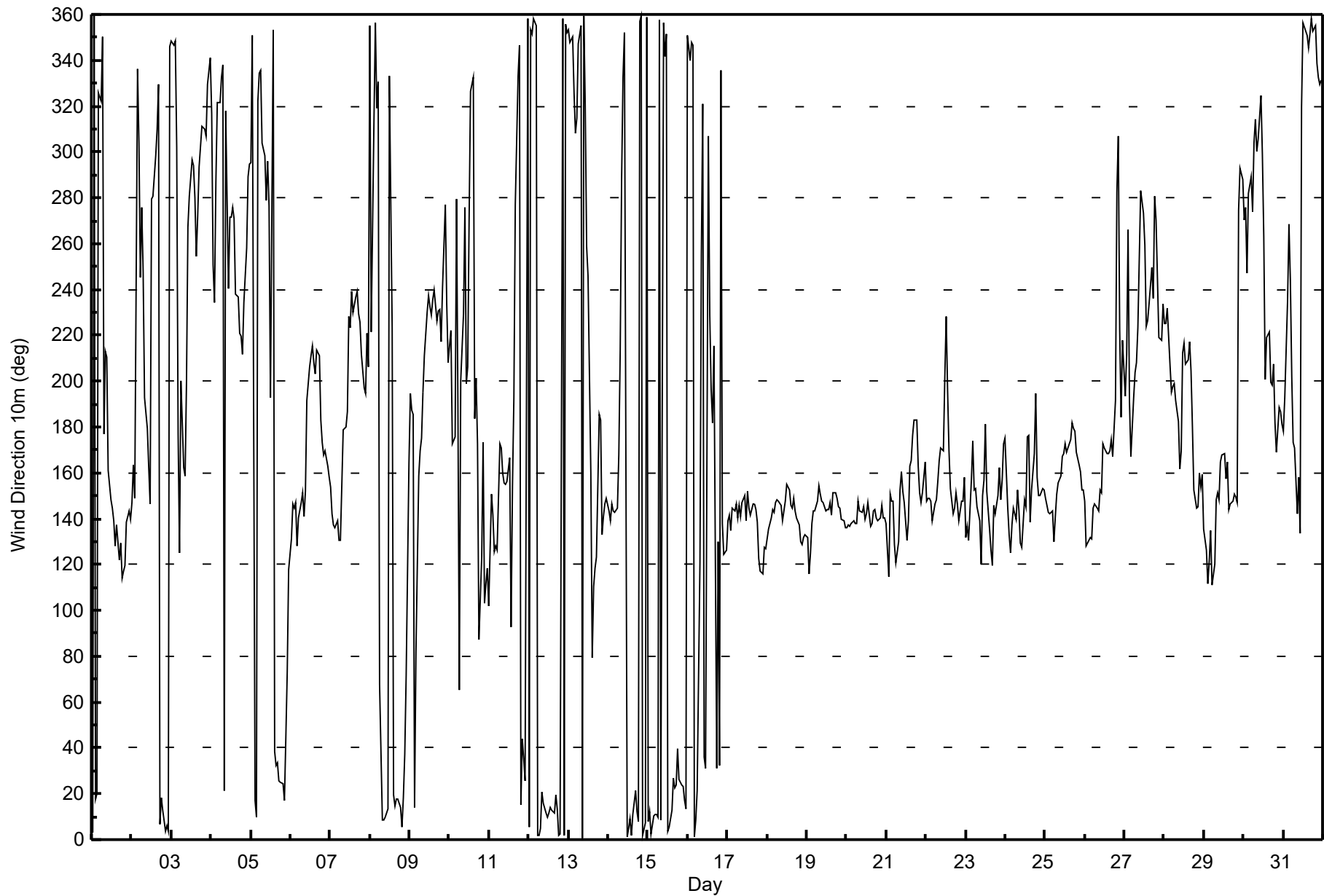
Wind Direction 10m (WD10) - deg
Mildred Lake - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 104 deg on May 5 14:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 7 deg on May 3 02:00																									
Percentiles: P ₁ = 10 P ₁₀ = 13 Q ₁ = 16 Median = 20 Q ₃ = 27 P ₉₀ = 44 P ₉₉ = 89																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	14	18	18	19	26	19	34	70	31	43	20	17	19	21	21	23	24	20	19	17	18	18	11	19	70
2-May	20	15	88	12	37	24	81	37	46	36	73	47	75	31	26	27	32	21	22	19	16	17	20	11	88
3-May	10	7	10	55	61	53	28	25	22	38	24	23	22	23	29	27	23	19	14	13	15	18	16	16	61
4-May	25	31	25	24	17	12	13	20	39	69	44	20	21	22	26	30	71	24	24	21	25	24	19	16	71
5-May	16	43	19	18	34	38	36	18	24	31	33	36	53	104	60	53	32	29	22	18	18	25	33	17	104
6-May	18	12	12	11	15	15	13	19	14	19	27	25	28	26	24	23	26	23	18	14	13	13	14	14	28
7-May	13	13	16	15	15	18	17	22	16	16	22	26	24	28	25	25	28	25	25	21	14	15	23	17	28
8-May	95	45	42	41	34	65	65	38	20	21	25	26	71	81	94	31	30	27	30	23	22	24	22	70	95
9-May	32	11	21	67	38	68	20	22	20	25	28	27	28	26	31	30	28	26	27	34	41	61	38	38	68
10-May	44	22	27	56	89	90	66	33	52	58	67	31	41	76	78	48	27	61	70	47	18	13	16	18	90
11-May	23	33	17	14	20	64	25	15	17	16	24	54	32	16	36	88	39	25	26	17	12	17	15	12	88
12-May	15	11	13	15	17	18	17	19	24	24	26	25	25	26	26	25	27	25	20	20	17	17	15	12	27
13-May	13	11	13	83	25	22	18	23	32	76	51	42	47	71	68	49	38	24	60	53	21	16	13	13	83
14-May	19	17	13	13	12	13	17	32	35	37	20	22	22	25	22	24	24	23	20	18	19	20	20	18	37
15-May	20	22	19	21	22	22	23	19	24	25	21	23	30	27	28	30	31	24	24	21	17	18	22	17	31
16-May	10	7	10	9	14	17	37	73	75	85	77	89	81	75	60	39	101	77	43	53	89	30	20	20	101
17-May	16	16	17	12	13	12	16	14	19	21	24	24	23	19	23	20	20	16	17	19	19	18	20	20	24
18-May	20	17	13	11	9	11	13	16	16	24	28	23	19	21	17	20	21	20	15	16	18	18	19	18	28
19-May	16	22	15	13	10	13	13	18	17	19	17	19	20	19	21	17	18	17	16	13	15	17	17	17	22
20-May	17	17	17	16	15	17	17	14	16	17	16	18	18	17	22	18	15	16	17	16	16	14	15	15	22
21-May	15	19	28	12	15	20	21	23	16	18	24	21	26	30	18	16	16	15	17	18	13	13	13	17	30
22-May	11	12	13	13	16	14	13	16	18	21	20	29	22	25	15	18	18	17	16	13	14	13	10	26	29
23-May	19	14	18	11	29	24	20	14	22	23	20	36	44	22	24	28	23	14	15	14	17	23	25	17	44
24-May	23	73	31	16	15	15	18	16	21	20	24	17	17	21	21	27	19	33	20	17	12	11	12	13	73
25-May	12	12	13	15	16	26	19	15	16	17	18	18	20	20	20	20	20	18	17	14	14	14	12	12	26
26-May	13	14	14	17	17	14	12	14	16	17	20	19	19	17	19	17	17	16	38	23	58	52	84	51	84
27-May	30	28	42	58	19	19	24	26	43	44	27	40	30	29	28	26	28	26	24	22	30	36	43	37	58
28-May	23	33	21	21	26	29	24	25	25	25	37	32	29	27	35	27	22	18	13	11	10	14	12	18	37
29-May	24	17	16	15	13	15	21	12	14	14	21	18	18	18	19	18	14	13	14	12	13	46	20	22	46
30-May	23	27	30	23	23	25	18	15	21	21	39	48	89	71	32	24	22	20	21	16	13	23	15	12	89
31-May	12	22	28	32	33	26	15	20	22	24	41	84	19	18	18	17	17	16	18	19	16	16	18	14	84
95 73 88 83 89 90 81 73 75 85 77 89 89 104 94 88 101 77 70 53 89 61 84 70																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Mildred Lake - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS03 LOWER CAMP METEOROLOGY MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)

MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
Temperature 20 m (C) Average	735	0	9	98.79	32.1	-	25.2	-
Temperature 45 m (C) Average	742	0	2	99.73	32	-	25.4	-
Temperature 100 m (C) Average	742	0	2	99.73	31.6	-	25.9	-
Temperature 163 m (C) Average	742	0	2	99.73	31	-	25.8	-
Relative Humidity 20 m (%) Average	735	0	9	98.79	96.7	-	75.5	-
Relative Humidity 45 m (%) Average	742	0	2	99.73	96.4	-	75.5	-
Relative Humidity 100 m (%) Average	742	0	2	99.73	97.8	-	77.6	-
Relative Humidity 163 m (%) Average	742	0	2	99.73	97.1	-	78.3	-
Wind Speed 20 m (km/h) Average	742	0	2	99.73	34	-	22.0	-
Wind Speed 45 m (km/h) Average	742	0	2	99.73	44	-	27.0	-
Wind Speed 100 m (km/h) Average	742	0	2	99.73	47	-	32.0	-
Wind Speed 163 m (km/h) Average	738	0	6	99.19	50	-	38.0	-
Wind Direction 20 m (deg) Average	742	0	2	99.73	-	-	-	-
Wind Direction 45 m (deg) Average	742	0	2	99.73	-	-	-	-
Wind Direction 100 m (deg) Average	742	0	2	99.73	-	-	-	-
Wind Direction 163 m (deg) Average	738	0	6	99.19	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	742	0	2	99.73	0.4	-	-0.1	-
Vertical Wind Speed 45 m (km/h) Average	742	0	2	99.73	1.4	-	0.5	-
Vertical Wind Speed 100 m (km/h) Average	742	0	2	99.73	2.8	-	1.2	-
Vertical Wind Speed 163 m (km/h) Average	738	0	6	99.19	3.7	-	1.7	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
Temperature 20 m (C) Average	735	14.91	6.3	-	0.5	7	10.6	14.7	18.8	23.6	32.1
Temperature 45 m (C) Average	742	14.81	6.3	-	0.4	7	10.5	14.7	18.5	23.5	32
Temperature 100 m (C) Average	742	14.55	6.3	-	-0.1	7	10.3	14.4	18.1	23	31.6
Temperature 163 m (C) Average	742	14.19	6.3	-	-0.8	6.8	10	13.9	17.6	22.6	31
Relative Humidity 20 m (%) Average	735	48.93	20.2	-	14.9	24.2	31.2	47.1	65.7	77.9	96.7
Relative Humidity 45 m (%) Average	742	48	19.9	-	14.5	24.1	30.5	45.5	64.8	77	96.4
Relative Humidity 100 m (%) Average	742	47.34	19.8	-	14.5	24.2	30.5	43.7	61.9	77.9	97.8
Relative Humidity 163 m (%) Average	742	46	19.5	-	14.4	23.9	29.8	42	59.3	77.4	97.1
Wind Speed 20 m (km/h) Average	742	12.4	7	-	0	3	7	12	17	21	34
Wind Speed 45 m (km/h) Average	742	16.7	8	-	0	5	10	17	23	27	44
Wind Speed 100 m (km/h) Average	742	20.8	10	-	1	7	12	22	29	33	47
Wind Speed 163 m (km/h) Average	738	23.7	10	-	0	9	16	25	32	37	50
Wind Direction 20 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	738	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	742	-0.38	0.3	-	-1.9	-0.9	-0.6	-0.3	-0.1	0	0.4
Vertical Wind Speed 45 m (km/h) Average	742	0.22	0.3	-	-0.8	-0.2	0	0.2	0.4	0.6	1.4
Vertical Wind Speed 100 m (km/h) Average	742	0.26	0.6	-	-1.5	-0.5	-0.2	0.2	0.7	1.1	2.8
Vertical Wind Speed 163 m (km/h) Average	738	0.75	0.8	-	-1.3	-0.2	0.1	0.6	1.2	1.9	3.7

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL METEOROLOGICAL SENSORS	04 May 2025 07:00	04 May 2025 07:00	4	DAS Failure - data not recorded
ALL METEOROLOGICAL SENSORS	04 May 2025 10:00	04 May 2025 13:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	03 May 2025 03:00	03 May 2025 06:00	4	DAS Failure - data not recorded
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	26 May 2025 22:00	26 May 2025 22:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	31 May 2025 19:00	31 May 2025 19:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	31 May 2025 22:00	31 May 2025 23:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

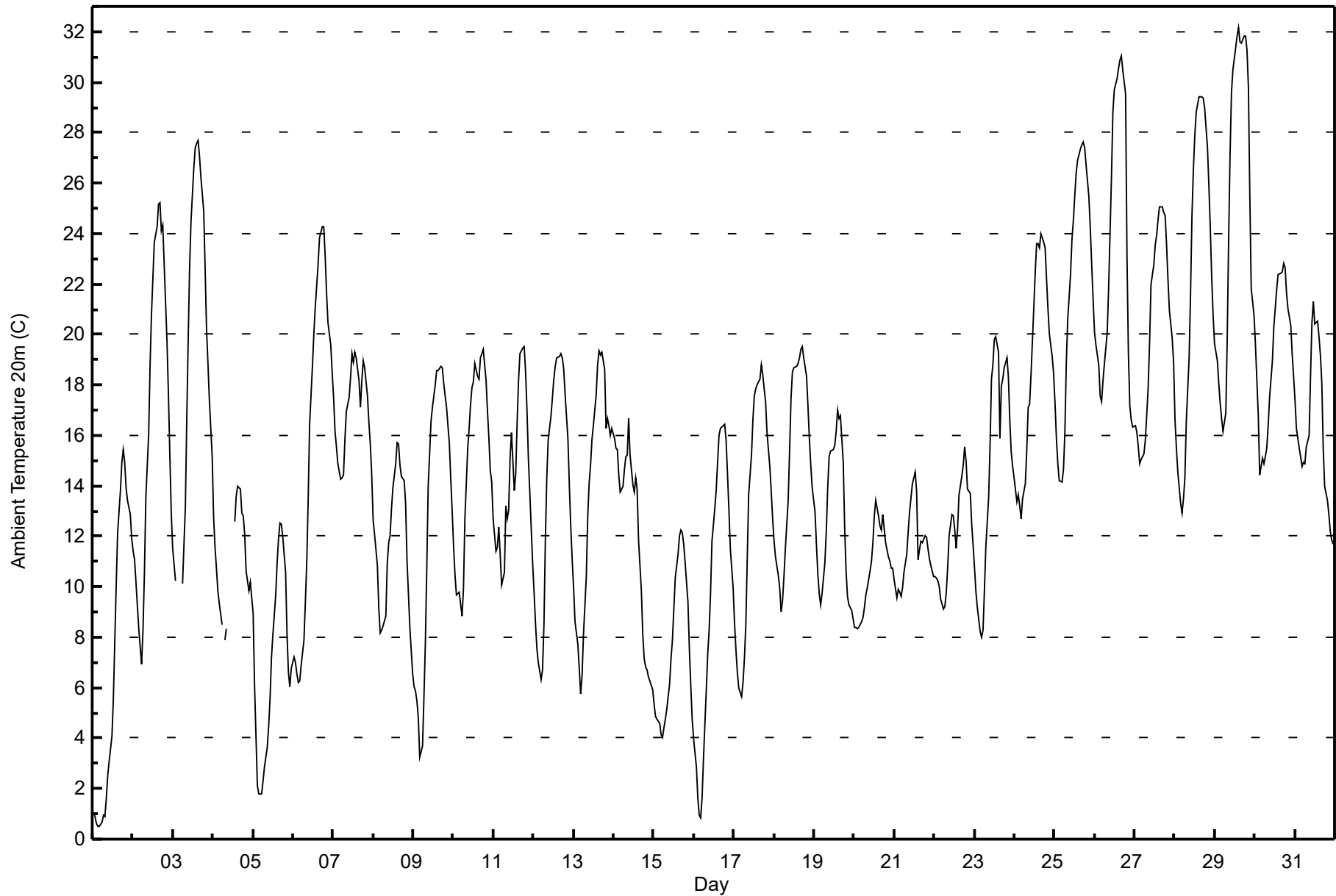
Lower Camp Met Tower - May 2025

Maximum Value: 32.1 C on May 29 15:00																				Maximum Daily Average: 25.2 C on May 29					Hours in Service: 744	
Minimum Value: 0.5 C on May 1 04:00																				Minimum Daily Average: 6.8 C on May 5					Hours of Data: 735	
Maximum Diurnal Average: 19.4 C at hour 17																				Minimum Diurnal Average: 9.4 C at hour 5					Hours of Missing Data: 9	
Monthly Average: 14.91 C																				Percentiles: P ₁ = 1.0 P ₁₀ = 7.0 Q ₁ = 10.6 Median = 14.7 Q ₃ = 18.8 P ₉₀ = 23.6 P ₉₉ = 31.2					Hours of Calibration: 0	
																									Percent Operational Time: 98.8	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.1	0.9	0.6	0.5	0.5	0.7	1.0	0.9	1.6	2.5	3.1	4.1	5.6	7.8	10.1	12.2	13.8	14.9	15.5	14.9	13.9	13.4	12.9	11.9	6.8	15.5
2-May	11.4	11.1	10.2	8.3	7.6	7.0	8.3	10.6	13.6	16.0	18.8	20.8	22.2	23.6	24.3	25.1	25.2	24.1	24.3	22.8	19.7	17.6	15.2	12.9	16.7	25.2
3-May	11.5	10.3	DF	DF	DF	DF	10.1	13.2	16.7	19.8	22.6	24.5	26.6	27.4	27.6	27.7	27.1	26.3	24.9	22.6	20.2	18.9	17.4	15.1	20.5	27.7
4-May	12.8	11.6	10.7	9.8	9.3	8.5	DF	7.9	8.4	DF	DF	DF	DF	12.6	13.6	14.0	13.8	12.9	12.8	12.1	10.6	9.8	10.2	9.6	11.1	14.0
5-May	8.9	6.1	2.1	1.8	1.8	1.8	2.3	2.9	3.6	4.5	5.6	7.2	8.1	9.7	11.0	11.9	12.5	12.5	12.0	10.6	8.1	6.6	6.1	6.8	6.8	12.5
6-May	7.2	7.0	6.5	6.2	6.3	6.9	7.9	9.4	11.0	13.5	16.4	18.7	20.0	21.1	22.0	22.8	23.8	24.3	24.3	23.2	21.6	20.5	19.6	18.4	15.8	24.3
7-May	17.5	16.2	15.6	14.9	14.2	14.3	14.4	15.8	16.9	17.5	18.3	19.2	18.9	19.3	19.1	18.2	17.1	18.2	18.9	18.7	17.6	16.5	15.7	14.4	17.0	19.3
8-May	12.7	12.1	10.9	9.2	8.2	8.3	8.5	8.9	10.9	11.7	12.0	13.1	14.0	14.9	15.7	15.7	14.8	14.4	14.2	13.3	11.0	9.7	8.4	6.5	11.6	15.7
9-May	6.1	5.9	5.5	4.8	3.3	3.7	5.7	7.8	10.7	14.0	16.6	17.1	17.6	18.0	18.5	18.6	18.7	18.7	18.1	17.6	17.1	15.6	14.2	13.0	12.8	18.7
10-May	11.6	10.5	9.7	9.8	9.3	8.9	10.0	12.7	15.5	16.3	17.2	17.9	18.1	18.9	18.3	18.2	19.1	19.2	19.4	18.2	17.0	15.9	14.6	14.2	15.0	19.4
11-May	12.7	11.4	11.6	12.4	11.3	10.0	10.6	13.2	12.7	13.0	15.1	16.1	13.8	14.5	16.5	18.2	19.3	19.4	19.5	18.5	16.9	15.1	13.7	10.9	14.4	19.5
12-May	9.8	8.6	7.6	7.0	6.3	6.7	8.5	11.8	14.3	15.8	16.8	17.5	18.2	18.8	19.1	19.1	19.2	19.1	18.6	17.6	15.8	14.0	12.4	11.0	13.9	19.2
13-May	10.0	8.6	7.7	6.7	5.7	6.5	8.1	10.4	12.8	14.1	14.8	15.8	16.4	17.6	18.8	19.3	19.2	19.3	18.6	16.3	16.7	16.4	16.0	16.3	13.8	19.3
14-May	15.9	15.5	15.4	14.4	13.8	14.0	14.6	15.2	15.2	16.7	15.2	14.0	13.8	14.3	13.9	11.9	9.9	8.1	7.2	6.8	6.7	6.4	6.1	5.9	12.1	16.7
15-May	5.4	4.9	4.7	4.6	4.2	4.0	4.4	4.7	5.1	6.2	7.2	7.9	9.1	10.4	11.3	12.0	12.2	12.1	11.7	11.0	9.4	7.5	6.1	4.8	7.5	12.2
16-May	4.0	2.8	1.6	1.0	0.9	1.6	3.2	5.9	7.3	8.3	9.7	11.8	13.1	13.8	14.9	16.0	16.3	16.4	16.4	15.9	14.5	13.1	11.5	10.0	9.6	16.4
17-May	8.6	7.5	6.6	6.0	5.7	6.2	7.1	8.5	11.1	13.6	15.2	16.6	17.6	17.8	18.0	18.2	18.8	18.4	17.8	17.3	16.1	14.8	13.8	12.7	13.1	18.8
18-May	11.8	11.2	10.5	10.0	9.0	9.4	10.4	11.5	13.4	15.4	17.5	18.5	18.7	18.8	18.8	19.1	19.4	19.5	19.1	18.4	17.2	15.9	14.8	13.9	15.1	19.5
19-May	13.0	11.7	10.5	9.7	9.3	9.7	11.0	12.2	13.9	15.2	15.4	15.4	15.6	16.2	17.0	16.7	16.8	14.9	12.3	10.6	9.6	9.3	9.1	8.7	12.7	17.0
20-May	8.4	8.4	8.3	8.4	8.6	8.8	9.2	9.7	9.9	10.6	11.0	11.7	12.8	13.4	12.8	12.4	12.3	12.8	12.3	11.8	11.2	11.0	10.8	10.8	10.7	13.4
21-May	10.3	9.6	9.9	9.8	9.6	9.9	10.6	11.3	12.2	13.0	13.6	14.1	14.5	13.8	11.1	11.5	11.8	11.7	12.0	12.0	11.5	11.2	10.8	10.4	11.5	14.5
22-May	10.4	10.3	10.2	10.0	9.5	9.1	9.3	9.8	10.8	12.0	12.9	12.8	12.2	11.5	12.3	13.7	14.4	14.8	15.5	15.0	13.9	13.7	12.5	11.6	12.0	15.5
23-May	10.8	9.8	9.2	8.2	8.0	8.3	9.9	11.6	13.5	15.6	18.2	18.8	19.8	19.9	19.3	15.9	17.9	18.2	18.7	19.1	18.3	16.6	15.4	14.7	14.8	19.9
24-May	14.3	13.4	13.6	13.2	12.7	13.5	14.1	15.4	17.1	17.2	18.4	21.1	22.5	23.6	23.6	23.4	24.0	23.6	23.5	22.2	21.0	20.0	19.1	18.5	18.7	24.0
25-May	17.3	15.9	14.9	14.2	14.1	14.7	16.1	18.9	20.6	22.4	23.7	24.5	25.5	26.4	26.9	27.4	27.5	27.6	27.4	26.7	25.4	24.2	22.7	21.4	21.9	27.6
26-May	20.1	19.6	18.8	17.5	17.3	18.2	18.9	20.1	21.8	24.1	26.2	28.8	29.7	30.2	30.5	30.9	31.0	30.5	29.5	23.0	19.2	17.2	16.6	16.3	23.2	31.0
27-May	16.4	16.1	15.5	14.9	15.1	15.3	15.8	16.8	17.9	19.7	22.0	22.8	23.5	23.9	24.5	25.1	25.0	24.9	24.7	23.6	22.2	21.0	19.9	18.9	20.2	25.1
28-May	16.6	15.5	14.5	13.3	12.9	13.5	14.3	16.6	19.1	21.6	24.7	26.5	27.8	28.8	29.4	29.4	29.4	29.4	29.0	27.4	25.9	24.2	22.3	20.8	22.2	29.4
29-May	19.6	19.0	18.1	17.3	16.7	16.1	16.9	19.9	23.8	27.1	29.6	30.5	31.4	31.8	32.1	31.6	31.5	31.8	31.8	31.3	29.8	25.5	21.8	20.8	25.2	32.1
30-May	19.6	18.2	16.8	14.4	15.1	14.9	15.2	15.5	16.4	17.5	19.0	20.3	21.0	21.8	22.4	22.4	22.5	22.8	22.7	21.7	21.0	20.4	19.2	18.4	19.1	22.8
31-May	17.4	16.3	15.5	15.2	14.7	14.9	14.9	15.5	16.0	18.3	20.5	21.3	20.4	20.5	19.9	19.2	18.1	15.5	14.0	13.4	12.9	12.2	11.8	11.7	16.3	21.3
Diurnal Average																										
Diurnal Maximum																										
DF - DAS Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 20m (AT20) - C
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 20m (AT20) - C
Lower Camp Met Tower - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	166	22.59	22.59
10 - 20	441	60.00	82.59
> 20	128	17.41	100.00

Total Number of Valid Hours: 735

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 45m (AT45) - C

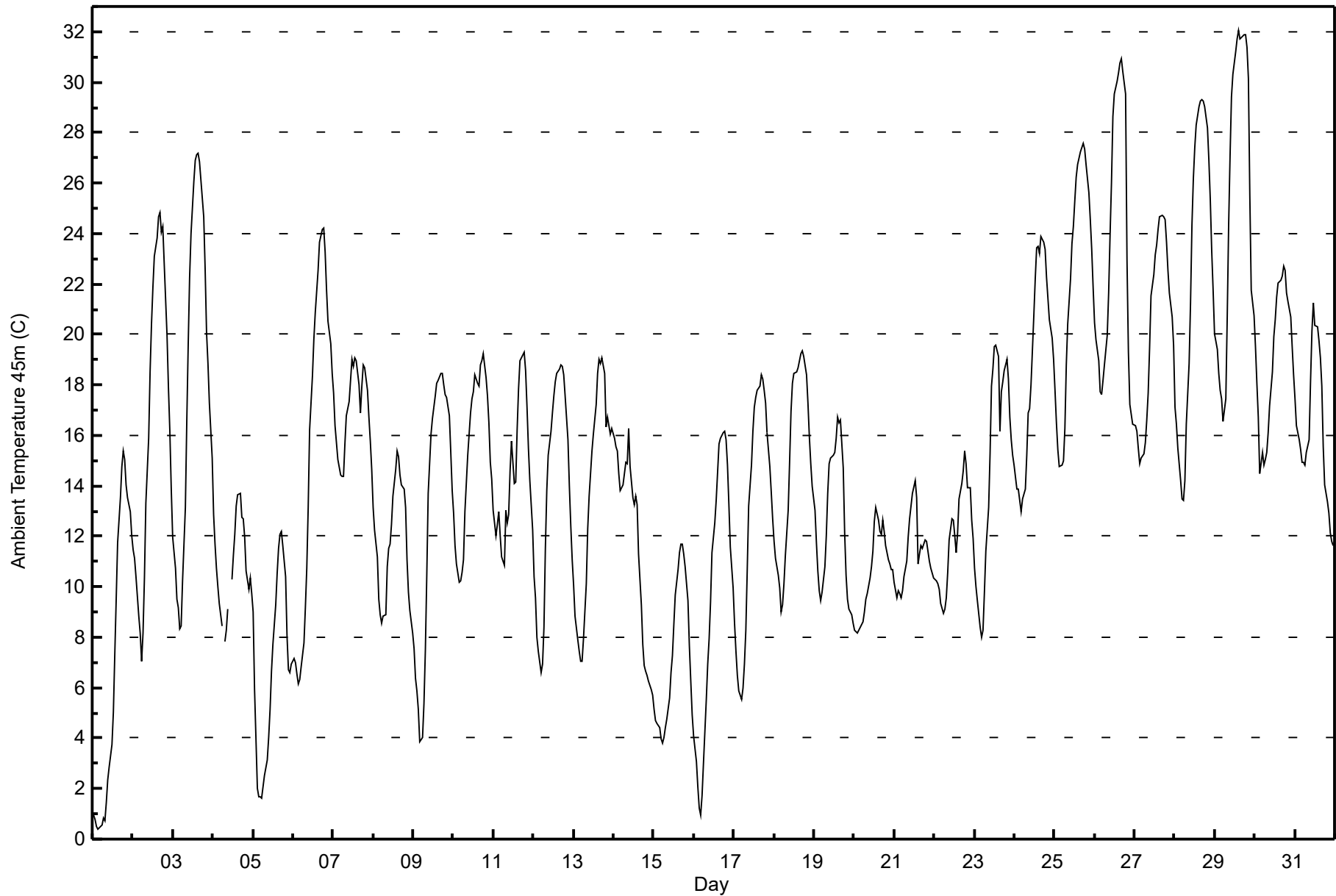
Lower Camp Met Tower - May 2025

Maximum Value: 32.0 C on May 29 15:00																				Maximum Daily Average: 25.4 C on May 29					Hours in Service: 744	
Minimum Value: 0.4 C on May 1 04:00																				Minimum Daily Average: 6.6 C on May 5					Hours of Data: 742	
Maximum Diurnal Average: 19.2 C at hour 17																				Minimum Diurnal Average: 9.6 C at hour 5					Hours of Missing Data: 2	
Monthly Average: 14.81 C																				Percentiles: P ₁ = 0.9 P ₁₀ = 7.0 Q ₁ = 10.5 Median = 14.7 Q ₃ = 18.5 P ₉₀ = 23.5 P ₉₉ = 31.1					Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.9	0.8	0.5	0.4	0.4	0.6	0.9	0.7	1.5	2.3	2.9	3.7	5.1	7.4	9.5	11.7	13.5	14.7	15.4	15.1	14.0	13.5	13.0	12.0	6.7	15.4
2-May	11.5	11.1	10.4	8.9	8.2	7.0	8.1	10.3	13.3	15.9	18.5	20.4	21.9	23.1	23.8	24.7	24.8	24.1	24.2	22.8	20.0	17.9	16.2	13.9	16.7	24.8
3-May	12.0	10.7	9.5	9.2	8.4	8.5	10.3	13.2	16.5	19.6	22.3	24.0	26.1	26.9	27.1	27.2	26.8	26.1	24.7	22.6	20.1	18.8	17.3	15.1	18.4	27.2
4-May	12.9	11.7	10.8	10.0	9.4	8.5	DF	7.8	8.3	9.1	DF	10.3	11.2	12.1	13.2	13.6	13.7	12.8	12.7	12.0	10.6	9.9	10.3	9.7	10.9	13.7
5-May	9.0	5.9	2.0	1.7	1.7	1.6	2.1	2.5	3.2	4.0	5.1	6.6	7.7	9.3	10.5	11.5	12.1	12.2	11.6	10.4	8.0	6.7	6.6	6.9	6.6	12.2
6-May	7.1	7.0	6.5	6.2	6.3	6.8	7.8	9.2	10.7	13.2	16.2	18.4	19.8	20.9	21.7	22.6	23.7	24.2	24.2	23.3	21.8	20.5	19.6	18.5	15.7	24.2
7-May	17.7	16.4	15.7	15.1	14.5	14.4	14.4	15.7	16.8	17.3	18.2	19.0	18.7	19.1	19.0	18.0	16.9	17.9	18.8	18.7	17.8	16.7	15.8	14.7	17.0	19.1
8-May	13.2	12.3	11.2	9.5	8.9	8.6	8.8	8.9	10.8	11.5	11.7	12.4	13.6	14.6	15.4	15.2	14.4	14.0	13.9	13.1	11.1	9.8	9.1	8.2	11.7	15.4
9-May	7.5	6.4	5.9	5.1	3.9	4.0	5.4	7.5	10.5	13.7	16.1	16.7	17.1	17.6	18.1	18.2	18.4	18.4	18.0	17.6	17.5	16.8	15.3	13.8	12.9	18.4
10-May	12.9	11.7	10.9	10.2	10.2	10.6	11.1	13.0	15.2	16.1	16.9	17.5	17.8	18.4	18.0	17.9	18.8	19.0	19.3	18.3	17.6	16.5	14.9	14.3	15.3	19.3
11-May	13.1	12.0	12.5	13.0	12.0	11.2	10.8	13.0	12.5	12.9	14.6	15.7	14.1	14.2	16.2	17.8	19.0	19.2	19.3	18.5	17.1	15.5	14.2	12.3	14.6	19.3
12-May	10.4	9.6	8.0	7.4	6.6	6.9	8.4	11.5	13.8	15.2	16.2	16.9	17.6	18.1	18.5	18.7	18.8	18.7	18.4	17.5	15.8	14.0	12.4	11.1	13.8	18.8
13-May	10.1	8.8	7.9	7.5	7.1	7.0	7.9	10.1	12.3	13.6	14.5	15.4	16.0	17.2	18.4	19.0	18.9	19.1	18.5	16.3	16.7	16.4	16.1	16.3	13.8	19.1
14-May	15.9	15.5	15.4	14.5	13.8	14.0	14.5	14.9	14.9	16.3	14.8	13.5	13.3	13.6	13.3	11.3	9.3	7.7	6.9	6.6	6.5	6.2	5.9	5.7	11.9	16.3
15-May	5.2	4.7	4.6	4.4	4.0	3.8	4.0	4.4	4.7	5.6	6.6	7.3	8.5	9.7	10.7	11.4	11.7	11.7	11.3	10.8	9.5	7.7	6.3	4.9	7.2	11.7
16-May	4.1	3.1	2.1	1.2	1.0	1.8	3.0	5.6	6.9	8.0	9.4	11.3	12.5	13.4	14.6	15.7	15.9	16.1	16.2	15.8	14.8	13.2	11.6	9.9	9.5	16.2
17-May	8.6	7.4	6.5	5.9	5.5	6.0	6.9	8.3	10.7	13.2	14.8	16.2	17.1	17.5	17.8	18.0	18.4	18.2	17.8	17.3	16.1	14.8	13.7	12.7	12.9	18.4
18-May	11.8	11.1	10.5	10.0	9.0	9.3	10.1	11.3	13.1	14.9	16.9	18.1	18.4	18.5	18.7	18.9	19.2	19.3	19.1	18.4	17.3	16.0	14.9	14.0	15.0	19.3
19-May	13.0	11.8	10.6	9.9	9.5	9.8	10.8	12.0	13.7	14.9	15.1	15.2	15.3	15.9	16.7	16.5	16.6	14.7	12.1	10.4	9.5	9.1	8.9	8.6	12.5	16.7
20-May	8.3	8.2	8.2	8.3	8.5	8.6	9.0	9.5	9.7	10.4	10.8	11.4	12.6	13.1	12.7	12.2	12.1	12.6	12.2	11.6	11.1	10.9	10.7	10.7	10.6	13.1
21-May	10.2	9.5	9.9	9.7	9.6	9.8	10.4	11.0	12.0	12.7	13.2	13.7	14.2	13.5	10.9	11.3	11.6	11.5	11.9	11.8	11.4	11.0	10.7	10.3	11.3	14.2
22-May	10.3	10.2	10.1	9.9	9.3	9.0	9.1	9.6	10.6	11.8	12.7	12.6	12.0	11.4	12.2	13.5	14.1	14.6	15.4	14.9	13.9	13.9	12.6	11.9	11.9	15.4
23-May	10.7	10.0	9.4	8.4	8.0	8.3	9.8	11.4	13.1	15.3	18.0	18.6	19.5	19.6	19.1	16.2	17.7	18.1	18.6	19.0	18.3	16.7	15.8	15.2	14.8	19.6
24-May	14.8	13.9	13.8	13.4	13.0	13.5	13.9	15.2	16.9	17.1	18.0	20.8	22.2	23.5	23.5	23.2	23.9	23.6	23.4	22.2	21.4	20.6	19.9	19.0	18.8	23.9
25-May	17.8	16.5	15.4	14.8	14.8	15.0	16.3	18.8	20.4	22.2	23.6	24.3	25.3	26.3	26.8	27.2	27.4	27.6	27.4	26.7	25.6	24.5	23.4	21.9	22.1	27.6
26-May	20.5	19.8	19.0	17.7	17.6	18.2	18.8	20.0	21.7	23.9	26.0	28.6	29.5	30.0	30.4	30.8	30.9	30.4	29.5	22.9	19.3	17.3	16.8	16.5	23.2	30.9
27-May	16.4	16.2	15.5	14.9	15.1	15.3	15.7	16.6	17.6	19.5	21.6	22.4	23.1	23.5	24.1	24.7	24.7	24.7	24.6	23.7	22.5	21.7	20.7	19.6	20.2	24.7
28-May	17.1	16.5	15.5	14.2	13.5	13.4	14.2	16.4	18.8	21.3	24.3	26.2	27.4	28.3	29.0	29.3	29.3	29.3	29.0	28.2	26.9	25.3	23.3	21.8	22.4	29.3
29-May	20.0	19.4	18.4	17.8	17.4	16.5	17.5	20.7	24.3	27.1	29.4	30.3	31.2	31.7	32.0	31.7	31.8	31.9	31.9	31.4	30.1	25.5	21.8	20.8	25.4	32.0
30-May	19.5	18.1	16.7	14.5	15.3	14.8	15.1	15.3	16.1	17.2	18.5	19.9	20.6	21.5	22.0	22.1	22.3	22.7	22.5	21.7	21.3	20.7	19.5	18.4	19.0	22.7
31-May	17.5	16.4	15.8	15.5	15.0	15.0	14.8	15.3	15.8	18.1	20.1	21.2	20.3	20.3	19.7	19.1	17.9	15.6	14.0	13.4	12.9	12.1	11.8	11.6	16.2	21.2
12.3 11.4 10.6 10.0 9.6 9.6 10.3 11.6 13.1 14.6 16.2 17.1 17.7 18.4 18.8 19.0 19.2 19.1 18.8 17.8 16.7 15.5 14.5 13.6																										
20.5 19.8 19.0 17.8 17.6 18.2 18.8 20.7 24.3 27.1 29.4 30.3 31.2 31.7 32.0 31.7 31.8 31.9 31.9 31.4 30.1 25.5 23.4 21.9																										
DF - DAS Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 45m (AT45) - C
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 45m (AT45) - C
Lower Camp Met Tower - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	165	22.24	22.24
10 - 20	448	60.38	82.61
> 20	129	17.39	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 100m (AT100) - C

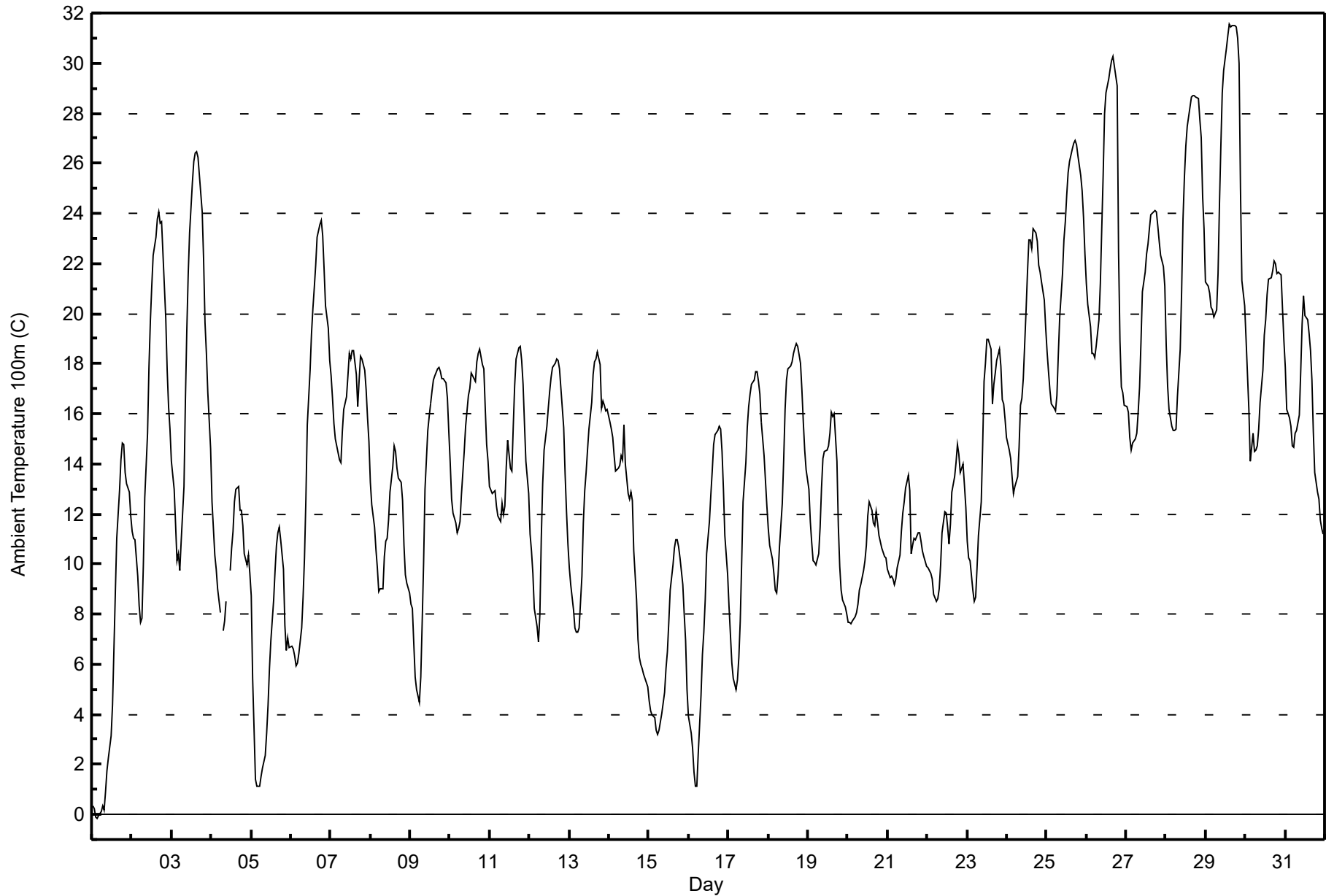
Lower Camp Met Tower - May 2025

Maximum Value: 31.6 C on May 29 15:00																				Maximum Daily Average: 25.9 C on May 29					Hours in Service: 744			
Minimum Value: -0.1 C on May 1 04:00																				Minimum Daily Average: 6.1 C on May 5					Hours of Data: 742			
Maximum Diurnal Average: 18.6 C at hour 17																				Minimum Diurnal Average: 9.7 C at hour 6					Hours of Missing Data: 2			
Monthly Average: 14.55 C																				Percentiles: P ₁ = 0.6 P ₁₀ = 7.0 Q ₁ = 10.3 Median = 14.4 Q ₃ = 18.1 P ₉₀ = 23.0 P ₉₉ = 30.5					Hours of Calibration: 0			
																				Percent Operational Time: 99.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	0.3	0.2	-0.1	-0.1	-0.1	0.1	0.3	0.2	0.9	1.7	2.3	3.1	4.4	6.6	8.8	11.0	12.9	14.2	14.8	14.8	13.6	13.2	12.9	11.9	6.2	14.8		
2-May	11.3	11.0	11.0	9.5	8.3	7.7	7.9	9.9	12.6	15.2	17.8	19.7	21.1	22.3	23.1	23.8	24.1	23.6	23.7	22.4	19.8	17.8	16.3	15.4	16.5	24.1		
3-May	14.1	13.0	11.6	10.1	10.4	9.7	10.9	13.1	16.5	19.3	21.5	23.2	25.2	26.1	26.4	26.5	26.3	25.5	24.1	22.2	19.6	18.4	16.8	14.6	18.5	26.5		
4-May	12.5	11.4	10.3	9.8	9.0	8.0	DF	7.4	7.7	8.5	DF	9.7	10.6	11.3	12.5	13.0	13.1	12.2	12.1	11.5	10.4	10.0	10.4	9.6	10.5	13.1		
5-May	8.7	5.4	1.4	1.1	1.1	1.2	1.5	1.9	2.4	3.3	4.4	5.8	7.0	8.6	9.7	10.7	11.3	11.5	11.0	9.8	7.6	6.6	7.0	6.7	6.1	11.5		
6-May	6.7	6.6	6.3	5.9	6.1	6.4	7.4	8.7	10.2	12.6	15.6	17.7	19.2	20.2	21.1	22.0	23.0	23.6	23.7	23.1	21.8	20.3	19.4	18.1	15.2	23.7		
7-May	17.5	16.6	15.6	15.0	14.5	14.2	14.1	15.3	16.2	16.7	17.5	18.4	18.2	18.5	18.5	17.6	16.3	17.3	18.3	18.2	17.7	16.9	15.9	14.9	16.7	18.5		
8-May	13.3	12.4	11.5	10.6	9.9	8.9	9.0	9.0	10.3	10.9	11.1	11.8	12.8	13.9	14.7	14.5	13.8	13.4	13.3	12.6	10.7	9.6	9.2	8.9	11.5	14.7		
9-May	8.4	8.2	6.8	5.5	5.0	4.5	5.5	7.7	10.0	13.0	15.3	15.9	16.4	16.9	17.3	17.5	17.8	17.8	17.7	17.4	17.4	17.2	16.6	15.3	13.0	17.8		
10-May	14.1	12.6	12.1	11.6	11.3	11.4	11.7	12.7	14.5	15.5	16.1	16.8	17.0	17.6	17.4	17.3	18.1	18.4	18.6	17.9	17.8	16.2	14.8	14.1	15.2	18.6		
11-May	13.1	12.8	12.9	12.9	12.3	11.9	11.7	12.4	12.0	12.3	13.9	14.9	13.8	13.7	15.5	17.1	18.2	18.6	18.7	18.1	17.2	15.6	14.1	12.8	14.4	18.7		
12-May	11.2	10.5	9.6	8.2	7.5	6.9	8.0	11.0	13.2	14.6	15.5	16.2	16.9	17.5	17.8	18.0	18.2	18.1	17.8	17.0	15.4	13.6	12.1	10.8	13.6	18.2		
13-May	9.9	9.2	8.2	7.5	7.3	7.3	7.5	9.5	11.6	12.9	13.6	14.6	15.4	16.4	17.5	18.1	18.2	18.5	18.0	16.2	16.5	16.3	16.1	16.2	13.4	18.5		
14-May	15.7	15.4	15.1	14.3	13.7	13.8	13.9	14.3	14.2	15.5	14.0	12.8	12.6	12.8	12.5	10.5	8.6	7.0	6.3	6.0	5.8	5.6	5.3	5.1	11.3	15.7		
15-May	4.6	4.1	4.0	3.8	3.3	3.2	3.4	3.7	4.0	4.9	5.8	6.5	7.7	8.9	10.0	10.6	11.0	11.0	10.7	10.2	9.2	8.0	6.9	5.0	6.7	11.0		
16-May	3.9	3.3	2.6	1.7	1.1	1.1	2.4	4.8	6.4	7.3	8.6	10.4	11.7	12.8	13.7	14.7	15.1	15.3	15.5	15.4	14.5	13.0	11.1	9.6	9.0	15.5		
17-May	8.3	7.2	6.1	5.4	5.0	5.4	6.3	7.7	10.0	12.5	14.1	15.4	16.3	16.8	17.2	17.3	17.7	17.7	17.3	16.8	15.7	14.3	13.3	12.3	12.3	17.7		
18-May	11.4	10.8	10.2	9.6	8.9	8.9	9.6	10.7	12.4	14.2	16.2	17.4	17.8	17.9	18.1	18.4	18.6	18.8	18.7	18.0	17.0	15.6	14.6	13.8	14.5	18.8		
19-May	13.0	11.7	10.9	10.2	10.1	9.9	10.4	11.4	13.0	14.2	14.5	14.6	14.7	15.2	16.1	15.9	16.0	14.1	11.6	9.9	9.0	8.6	8.3	8.0	12.1	16.1		
20-May	7.7	7.7	7.6	7.7	7.9	8.1	8.4	8.9	9.2	9.7	10.1	10.8	11.9	12.5	12.1	11.6	11.5	12.1	11.6	11.1	10.6	10.5	10.3	10.3	10.0	12.5		
21-May	9.8	9.4	9.5	9.4	9.2	9.4	9.8	10.4	11.3	12.0	12.5	13.1	13.6	12.9	10.4	10.7	11.0	10.9	11.3	11.3	10.9	10.5	10.3	9.9	10.8	13.6		
22-May	9.9	9.8	9.6	9.4	8.8	8.5	8.6	9.0	10.0	11.2	12.1	12.0	11.5	10.8	11.6	12.8	13.5	14.1	14.8	14.4	13.7	14.0	13.1	12.3	11.5	14.8		
23-May	10.9	10.3	10.1	9.0	8.5	8.7	9.8	11.1	12.5	14.7	17.3	18.0	18.9	19.0	18.6	16.4	17.2	17.6	18.1	18.6	17.9	16.5	16.4	15.8	14.7	19.0		
24-May	15.0	14.6	14.2	13.5	12.8	13.1	13.5	14.7	16.3	16.6	17.4	20.1	21.6	22.9	22.9	22.6	23.4	23.2	22.9	21.9	21.6	21.3	20.6	19.4	18.6	23.4		
25-May	18.4	17.7	17.0	16.4	16.2	16.1	16.7	18.3	19.8	21.6	22.9	23.7	24.7	25.6	26.1	26.6	26.8	26.9	26.7	26.3	25.5	24.9	23.8	22.4	22.1	26.9		
26-May	21.2	20.3	19.5	18.4	18.4	18.2	18.7	19.7	21.2	23.4	25.5	28.0	28.8	29.4	29.7	30.1	30.2	29.9	29.1	22.4	18.9	17.1	16.8	16.3	23.0	30.2		
27-May	16.3	16.1	15.1	14.6	14.8	15.0	15.2	16.1	17.1	18.9	20.9	21.7	22.4	22.8	23.4	23.9	24.0	24.1	24.1	23.5	22.9	22.3	21.8	21.1	19.9	24.1		
28-May	18.7	17.1	16.2	15.5	15.3	15.4	15.4	16.7	18.6	20.9	23.8	25.5	26.7	27.5	28.2	28.7	28.7	28.7	28.6	28.6	27.8	27.0	24.7	23.4	22.8	28.7		
29-May	21.3	21.1	20.8	20.3	20.2	19.9	20.2	21.6	24.3	26.7	28.8	29.7	30.6	31.1	31.6	31.4	31.5	31.5	31.5	31.0	30.0	25.0	21.3	20.3	25.9	31.6		
30-May	19.0	17.6	16.2	14.1	15.2	14.5	14.5	14.7	15.4	16.5	17.7	19.1	19.7	20.8	21.4	21.5	21.7	22.1	22.0	21.6	21.6	21.5	20.2	18.9	18.6	22.1		
31-May	17.9	16.2	15.8	15.5	14.7	14.7	15.2	15.3	15.9	17.7	19.6	20.7	19.9	19.8	19.2	18.5	17.4	15.3	13.6	12.9	12.6	11.7	11.4	11.2	15.9	20.7		
Diurnal Average																												
Diurnal Maximum																												
DF - DAS Failure																												



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 100m (AT100) - C
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 100m (AT100) - C
Lower Camp Met Tower - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.40	0.40
0 - 10	171	23.05	23.45
10 - 20	437	58.89	82.35
> 20	131	17.65	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 163m (AT163) - C

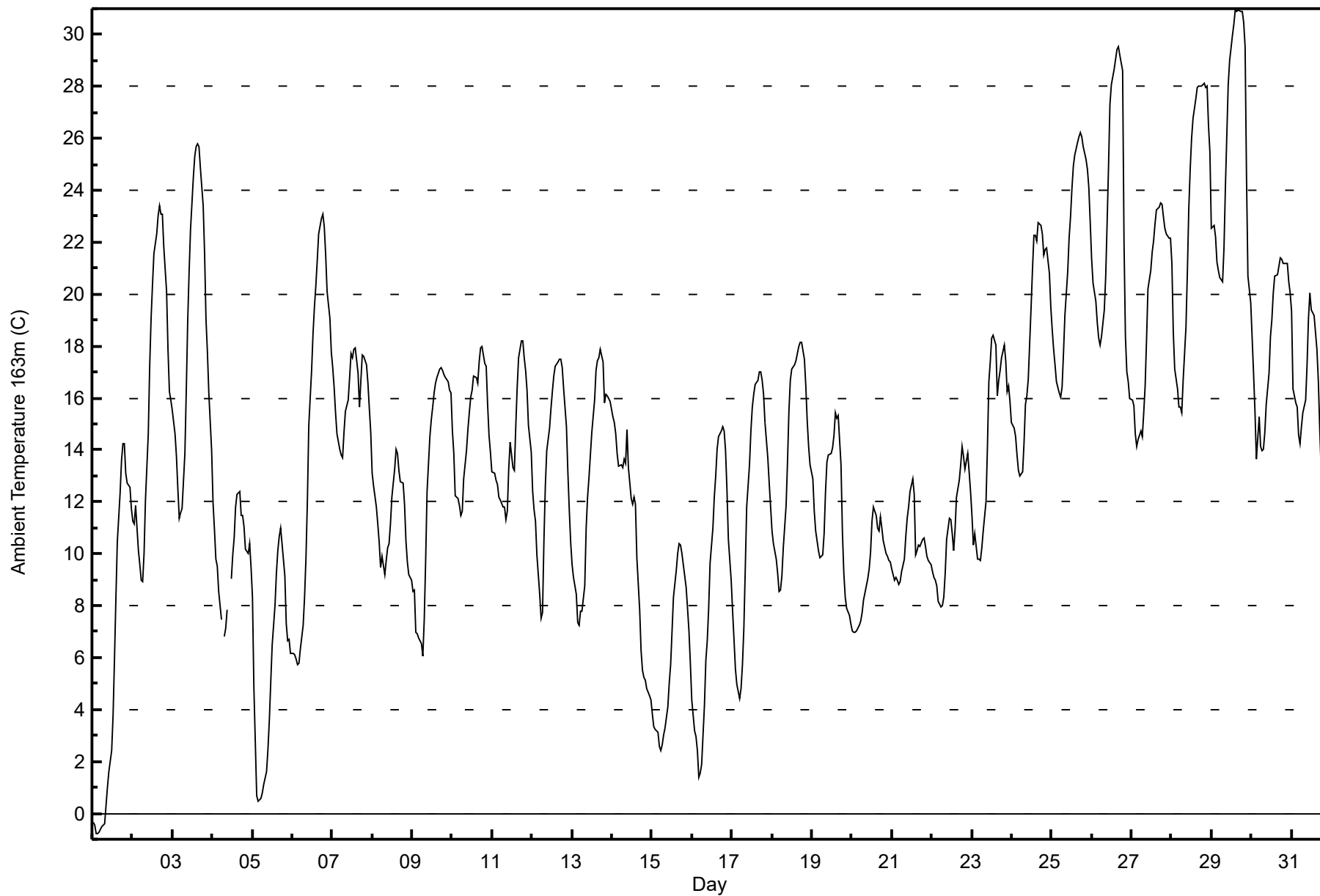
Lower Camp Met Tower - May 2025

Maximum Value: 31.0 C on May 29 17:00																				Maximum Daily Average: 25.8 C on May 29					Hours in Service: 744	
Minimum Value: -0.8 C on May 1 04:00																				Minimum Daily Average: 5.5 C on May 5					Hours of Data: 742	
Maximum Diurnal Average: 17.9 C at hour 17																				Minimum Diurnal Average: 9.8 C at hour 6					Hours of Missing Data: 2	
Monthly Average: 14.19 C																				Percentiles: P ₁ = -0.1 P ₁₀ = 6.8 Q ₁ = 10.0 Median = 13.9 Q ₃ = 17.6 P ₉₀ = 22.6 P ₉₉ = 29.8					Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
1-May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	5.6	14.2
2-May	11.2	11.2	11.8	10.1	9.6	9.0	8.9	10.0	12.1	14.6	17.2	19.1	20.4	21.6	22.3	23.0	23.4	23.1	23.1	21.8	20.1	17.9	16.2	15.9	16.4	23.4
3-May	15.6	14.6	13.8	12.5	11.3	11.6	11.8	13.9	16.3	19.0	20.9	22.5	24.5	25.3	25.7	25.8	25.7	24.9	23.4	21.6	19.0	17.8	16.2	14.0	18.6	25.8
4-May	12.0	10.9	9.8	9.5	8.5	7.5	DF	6.8	7.1	7.8	DF	9.1	10.0	10.6	11.8	12.3	12.4	11.5	11.5	11.0	10.2	10.0	10.4	9.5	10.0	12.4
5-May	8.3	4.9	0.7	0.4	0.5	0.6	0.8	1.1	1.6	2.5	3.6	5.1	6.5	8.0	9.3	10.1	10.7	11.0	10.4	9.1	7.3	6.7	6.7	6.2	5.5	11.0
6-May	6.2	6.1	6.0	5.7	5.8	6.3	7.3	8.3	9.9	12.0	14.9	17.1	18.5	19.5	20.3	21.3	22.3	22.9	23.1	22.6	21.5	20.1	19.1	17.8	14.8	23.1
7-May	17.2	16.4	15.4	14.6	14.0	13.8	13.7	14.7	15.5	15.9	16.8	17.7	17.6	17.9	17.9	17.0	15.7	16.7	17.7	17.6	17.3	16.6	15.6	14.7	16.2	17.9
8-May	13.1	12.6	11.8	11.2	10.4	9.5	9.9	9.2	9.8	10.2	10.4	11.1	12.2	13.2	14.0	13.9	13.2	12.8	12.7	11.9	10.5	9.7	9.2	9.0	11.3	14.0
9-May	8.6	8.6	7.0	6.9	6.8	6.5	6.0	7.5	9.7	12.4	14.5	15.2	15.6	16.2	16.6	16.8	17.1	17.2	17.0	16.9	16.8	16.6	16.3	16.2	12.9	17.2
10-May	14.7	13.9	12.2	12.1	11.9	11.5	11.6	12.9	14.0	14.8	15.4	16.0	16.3	16.9	16.8	16.6	17.4	17.9	18.0	17.4	17.2	15.8	14.6	13.9	15.0	18.0
11-May	13.2	13.1	12.8	12.7	12.2	12.1	11.8	11.8	11.3	11.6	13.3	14.3	13.3	13.2	14.9	16.4	17.6	18.2	18.2	17.6	17.1	16.3	15.0	13.9	14.2	18.2
12-May	12.4	11.7	11.3	9.9	8.5	7.5	7.8	10.5	12.6	14.0	14.9	15.6	16.3	16.8	17.2	17.4	17.5	17.5	17.1	16.4	14.9	13.1	11.7	10.4	13.5	17.5
13-May	9.6	9.1	8.4	7.4	7.3	7.8	7.8	8.8	11.0	12.2	12.9	13.8	14.7	15.9	17.1	17.4	17.6	17.9	17.4	15.8	16.1	16.1	16.0	15.9	13.1	17.9
14-May	15.3	15.1	14.6	13.9	13.4	13.4	13.3	13.7	13.5	14.8	13.3	12.1	11.9	12.2	11.9	9.8	7.9	6.3	5.5	5.2	5.1	4.8	4.5	4.4	10.7	15.3
15-May	3.8	3.4	3.2	3.1	2.6	2.4	2.6	3.0	3.3	4.1	5.0	5.7	7.0	8.3	9.4	10.0	10.4	10.4	10.0	9.6	8.7	7.9	7.0	5.8	6.1	10.4
16-May	4.4	3.2	3.0	2.4	1.4	1.5	1.9	4.1	5.9	6.7	7.9	9.6	11.0	12.2	13.0	14.0	14.5	14.7	14.9	14.8	14.0	12.5	10.5	9.0	8.6	14.9
17-May	7.8	6.7	5.6	4.9	4.4	4.8	5.7	7.1	9.4	11.8	13.4	14.7	15.7	16.1	16.5	16.7	17.0	17.0	16.7	16.2	15.1	13.7	12.7	11.8	11.7	17.0
18-May	10.9	10.4	9.8	9.2	8.5	8.6	9.1	10.2	11.8	13.5	15.5	16.7	17.1	17.3	17.4	17.7	18.0	18.2	18.1	17.5	16.5	15.1	14.1	13.4	13.9	18.2
19-May	12.9	11.6	10.9	10.5	10.1	9.9	10.0	10.8	12.4	13.5	13.8	13.9	14.1	14.6	15.4	15.2	15.3	13.4	10.8	9.2	8.3	7.9	7.6	7.3	11.6	15.4
20-May	7.0	7.0	6.9	7.0	7.2	7.4	7.8	8.2	8.5	9.1	9.4	10.1	11.2	11.8	11.5	11.0	10.9	11.4	11.0	10.5	10.0	9.9	9.7	9.7	9.3	11.8
21-May	9.4	9.0	9.1	9.0	8.8	8.9	9.3	9.8	10.7	11.4	11.8	12.4	12.9	12.3	10.0	10.1	10.3	10.3	10.6	10.6	10.3	9.9	9.7	9.6	10.3	12.9
22-May	9.3	9.1	9.0	8.8	8.2	7.9	8.0	8.3	9.3	10.6	11.4	11.3	10.8	10.1	10.9	12.2	12.8	13.4	14.1	13.8	13.3	13.8	13.2	12.4	10.9	14.1
23-May	11.5	10.3	10.8	9.8	9.8	9.7	10.2	10.9	12.0	14.1	16.7	17.4	18.3	18.4	18.0	16.1	16.7	17.1	17.5	18.0	17.4	16.3	16.4	15.9	14.6	18.4
24-May	15.0	14.8	14.5	13.8	13.2	13.0	13.1	14.3	15.7	16.1	16.8	19.5	21.0	22.3	22.3	22.1	22.8	22.7	22.3	21.5	21.7	21.8	20.8	19.5	18.4	22.8
25-May	18.7	17.9	17.3	16.6	16.2	16.0	16.4	17.7	19.2	20.9	22.2	23.0	24.1	24.9	25.3	25.9	26.1	26.2	26.1	25.7	25.2	24.8	24.1	22.7	21.8	26.2
26-May	21.3	20.4	19.7	18.9	18.3	18.1	18.4	19.4	20.7	22.7	24.9	27.3	28.1	28.6	29.0	29.4	29.5	29.2	28.6	22.0	18.4	17.0	16.6	16.0	22.6	29.5
27-May	15.9	15.7	14.6	14.1	14.4	14.7	14.5	15.4	16.5	18.3	20.2	20.9	21.6	22.0	22.7	23.2	23.4	23.5	23.4	23.0	22.6	22.3	22.2	22.2	19.5	23.5
28-May	21.2	18.5	17.1	16.4	15.6	15.7	15.4	16.7	18.7	20.9	23.3	24.8	26.0	26.8	27.5	28.0	28.0	28.0	28.0	28.1	28.0	28.0	26.5	25.5	23.0	28.1
29-May	22.6	22.6	22.2	21.2	20.9	20.7	20.5	21.8	24.1	26.1	28.1	29.0	30.0	30.4	30.9	30.9	31.0	30.9	30.9	30.5	29.5	24.5	20.7	19.7	25.8	31.0
30-May	18.3	16.9	15.5	13.6	15.3	14.2	13.9	14.0	14.7	15.8	17.0	18.3	19.0	20.0	20.7	20.8	21.1	21.4	21.4	21.2	21.2	21.2	20.5	20.0	18.2	21.4
31-May	19.3	16.4	15.8	15.6	14.5	14.2	14.9	15.4	15.9	17.3	19.1	20.0	19.4	19.2	18.5	17.9	16.7	14.8	13.2	12.3	12.0	11.3	11.0	10.7	15.6	20.0
Diurnal Average																										
Diurnal Maximum																										
DF - DAS Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 163m (AT163) - C
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 163m (AT163) - C
Lower Camp Met Tower - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	8	1.08	1.08
0 - 10	178	23.99	25.07
10 - 20	424	57.14	82.21
> 20	132	17.79	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

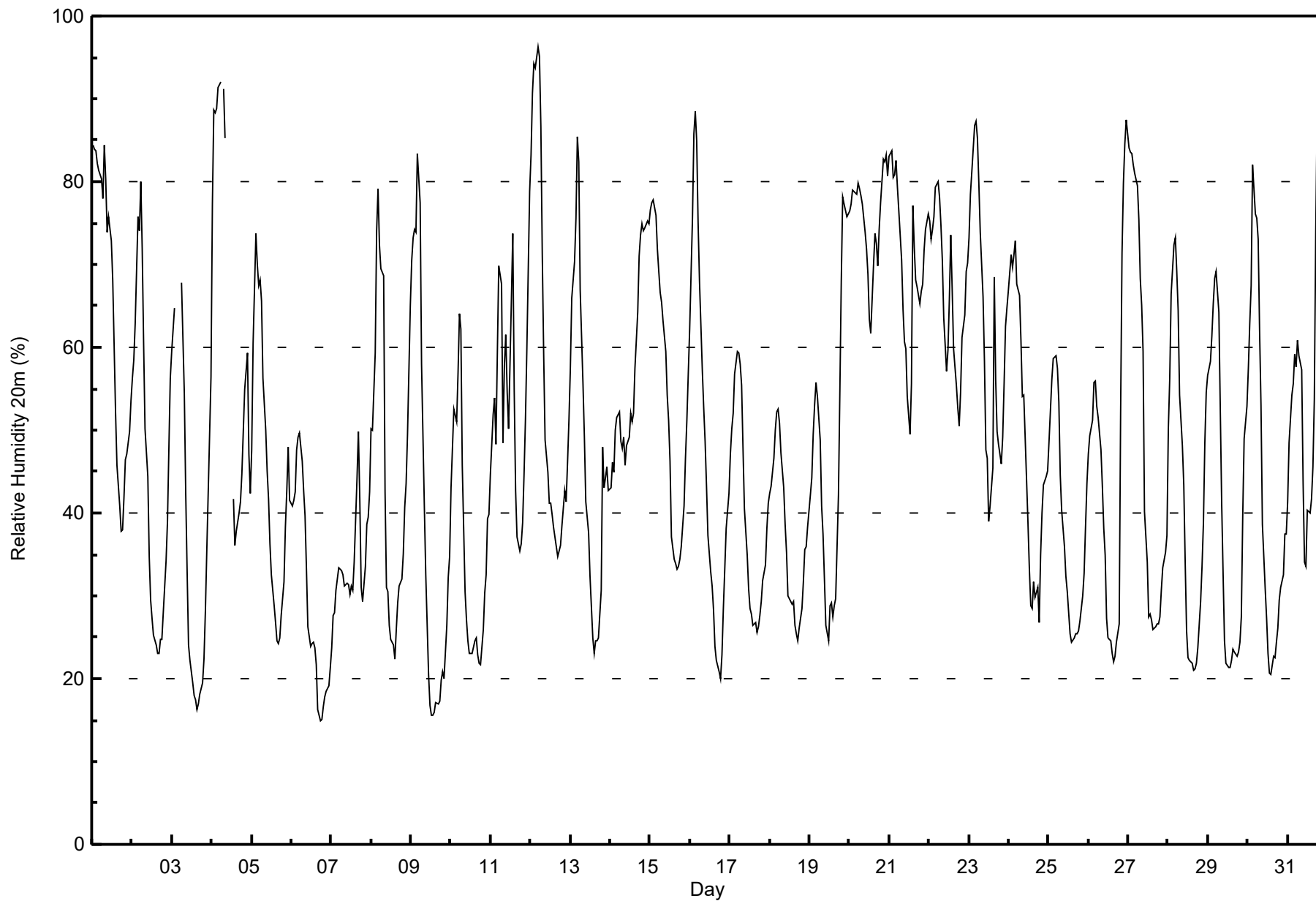
Lower Camp Met Tower - May 2025

Maximum Value: 96.7 % on May 31 23:00																					Maximum Daily Average: 75.5 % on May 20				Hours in Service: 744			
Minimum Value: 14.9 % on May 6 18:00																					Minimum Daily Average: 29.9 % on May 6				Hours of Data: 735			
Maximum Diurnal Average: 70.2 % at hour 5																					Minimum Diurnal Average: 34.0 % at hour 17				Hours of Missing Data: 9			
Monthly Average: 48.93 %																					Percentiles: P ₁ = 16.6 P ₁₀ = 24.2 Q ₁ = 31.2 Median = 47.1 Q ₃ = 65.7 P ₉₀ = 77.9 P ₉₉ = 91.8				Hours of Calibration: 0			
																					Percent Operational Time: 98.8							
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24		
1-May	84.5	84.0	83.8	82.2	81.4	80.4	77.9	84.4	80.4	74.0	75.7	72.8	68.1	60.1	52.3	45.8	40.9	37.8	38.0	41.9	46.5	47.2	49.8	53.5	64.3	84.5		
2-May	56.3	58.4	63.0	75.8	74.1	80.0	71.8	60.5	50.1	44.4	34.8	29.4	27.3	25.2	24.1	23.1	23.0	24.8	24.7	28.0	34.2	39.0	47.7	56.2	44.8	80.0		
3-May	59.5	64.7	DF	DF	DF	DF	67.8	54.4	42.3	32.9	24.2	22.1	19.5	18.0	17.5	16.3	16.9	18.1	19.6	22.4	28.2	35.4	42.4	56.5	33.9	67.8		
4-May	77.3	88.7	88.3	88.8	91.3	92.0	DF	91.2	85.3	DF	DF	DF	DF	41.6	36.0	37.7	40.0	41.3	44.8	49.8	54.9	59.4	47.2	42.4	63.1	92.0		
5-May	47.6	60.5	73.7	69.9	67.4	68.1	65.6	56.2	50.0	45.1	41.7	36.2	32.5	28.9	26.7	24.5	24.2	25.0	27.7	31.7	38.4	42.7	48.0	41.5	44.7	73.7		
6-May	40.8	41.5	42.5	47.6	49.2	49.6	46.3	42.7	39.7	33.2	26.2	23.9	24.2	24.4	23.8	21.6	16.3	14.9	15.1	16.5	17.8	18.5	19.2	21.4	29.9	49.6		
7-May	23.8	27.6	27.9	30.8	33.4	33.2	33.1	32.5	31.1	31.6	31.4	30.2	31.2	30.8	34.1	44.1	49.8	41.7	31.0	29.3	33.6	38.7	39.5	42.5	33.9	49.8		
8-May	50.1	50.0	59.3	74.0	79.2	72.5	69.5	68.6	42.6	31.1	30.4	26.4	24.8	24.1	22.3	25.9	29.1	31.2	32.0	35.0	40.8	43.6	49.5	65.1	44.9	79.2		
9-May	70.6	73.3	74.2	73.9	83.3	77.5	58.0	49.3	40.7	32.5	20.5	16.8	15.6	15.6	15.9	17.1	17.0	17.3	19.7	20.9	20.1	26.5	32.2	34.8	38.5	83.3		
10-May	43.0	47.8	52.5	50.9	57.0	64.1	62.3	45.7	30.5	27.2	24.5	23.1	23.1	23.1	24.6	24.9	22.9	21.8	21.7	25.8	30.4	32.6	39.4	39.8	35.8	64.1		
11-May	44.5	51.9	54.0	48.2	59.3	69.9	67.6	48.4	57.9	61.6	54.5	50.2	65.7	73.7	54.8	42.7	37.0	35.5	36.2	38.8	44.6	51.2	59.7	78.8	53.6	78.8		
12-May	83.3	90.8	94.2	93.7	96.3	95.0	86.6	71.1	59.2	48.8	44.9	41.2	41.2	39.8	38.2	35.9	34.8	35.4	36.0	38.5	42.7	41.4	46.1	51.2	57.8	96.3		
13-May	57.5	65.9	70.4	75.5	85.4	82.4	66.9	55.6	49.1	41.4	39.4	37.6	32.4	24.9	23.1	24.6	24.7	24.9	30.7	48.0	43.0	44.2	45.6	42.7	47.3	85.4		
14-May	43.1	46.1	44.9	50.1	51.6	52.2	48.6	47.8	49.1	45.8	48.2	49.1	52.1	51.0	52.0	57.4	64.3	71.0	73.6	74.9	74.0	74.3	75.2	75.0	57.1	75.2		
15-May	76.6	77.5	77.9	76.0	71.9	69.2	66.6	65.5	63.1	59.5	54.3	51.3	46.2	37.2	34.3	33.9	33.2	33.5	34.4	36.0	40.8	46.6	51.1	56.9	53.9	77.9		
16-May	62.2	75.6	85.8	88.5	85.0	75.1	68.0	57.4	52.8	48.6	43.1	37.3	32.9	31.2	28.3	23.9	22.1	20.9	20.0	22.9	28.4	33.2	38.1	42.3	46.8	88.5		
17-May	47.1	50.1	52.1	56.7	59.6	59.4	58.0	55.5	47.8	40.5	35.0	30.8	28.5	27.8	26.4	26.7	25.6	26.3	27.6	29.3	31.9	33.8	38.1	41.2	39.8	59.6		
18-May	42.4	43.2	46.7	50.0	52.2	52.5	50.9	47.3	43.1	38.6	35.3	30.0	29.6	29.0	29.3	26.4	25.4	24.5	26.1	28.5	31.7	35.6	35.9	38.3	37.2	52.5		
19-May	42.2	44.3	49.4	53.0	55.7	54.1	48.8	40.9	37.4	32.1	26.4	24.6	28.8	29.1	27.4	28.8	29.7	42.3	54.7	67.9	78.2	77.2	75.8	76.1	46.9	78.2		
20-May	76.4	77.2	79.0	78.7	78.5	79.8	79.1	78.4	77.3	73.9	71.8	68.8	63.4	61.8	70.1	73.8	72.5	69.8	74.3	77.5	82.7	82.3	83.3	80.6	75.5	83.3		
21-May	83.1	83.7	80.6	80.8	82.5	79.4	76.5	70.5	64.6	60.6	59.8	54.1	49.4	55.5	77.1	72.0	68.2	67.2	65.3	66.8	67.7	71.8	74.2	76.0	70.3	83.7		
22-May	75.2	73.0	74.2	75.8	79.4	80.1	78.1	74.8	70.6	63.6	57.0	59.7	65.7	73.5	67.2	59.8	55.4	52.7	50.5	54.6	61.3	63.9	69.2	70.2	66.9	80.1		
23-May	73.3	78.5	81.3	86.8	87.3	85.3	79.8	73.8	66.0	58.3	47.6	46.6	39.0	40.9	45.5	68.5	56.1	49.8	48.2	45.9	49.1	55.6	62.5	64.7	62.1	87.3		
24-May	66.8	71.3	69.6	71.2	72.9	67.7	66.3	60.9	54.0	54.2	49.2	38.7	33.1	28.8	28.5	31.6	29.8	31.0	26.8	34.9	40.0	43.4	44.5	45.2	48.3	72.9		
25-May	48.6	52.4	56.1	58.7	59.0	57.4	53.4	44.7	40.4	35.9	32.3	30.6	27.9	25.4	24.3	24.9	25.3	25.5	25.8	27.0	30.0	32.7	38.2	43.6	38.3	59.0		
26-May	47.1	49.3	51.2	55.7	56.0	52.9	51.5	47.6	43.3	38.1	34.9	27.3	25.0	24.5	23.0	22.1	22.7	24.4	26.6	52.0	71.3	79.9	84.5	87.5	45.8	87.5		
27-May	84.0	83.5	83.5	82.1	81.0	79.5	75.4	68.2	65.1	59.4	40.2	34.0	27.5	27.8	27.2	25.9	26.2	26.5	26.6	27.5	30.8	33.5	35.3	37.3	49.5	84.0		
28-May	50.1	56.3	66.5	72.3	73.2	69.2	64.3	54.2	48.1	43.4	34.2	25.8	22.6	22.2	21.9	20.9	21.3	21.9	23.8	29.3	33.5	38.9	48.5	54.6	42.4	73.2		
29-May	56.6	58.4	61.3	65.2	68.3	69.1	64.2	52.5	41.1	32.7	24.5	21.9	21.4	21.4	22.2	23.5	23.1	22.7	23.2	24.4	27.5	39.7	48.9	53.0	40.3	69.1		
30-May	57.4	62.9	67.5	82.0	76.1	75.6	73.1	62.1	53.0	38.7	30.8	27.3	23.1	20.7	20.6	22.8	22.6	24.4	26.1	29.5	30.9	32.6	37.5	37.4	43.1	82.0		
31-May	41.3	48.5	54.2	55.6	59.1	57.6	60.9	59.0	57.2	43.7	34.0	33.6	40.4	40.1	41.8	45.5	53.7	73.7	87.7	88.2	90.3	95.2	96.7	96.5	60.6	96.7		
Diurnal Average																												
Diurnal Maximum																												
DF - DAS Failure																												



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 20m (RH20) - %
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 20m (RH20) - %
Lower Camp Met Tower - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	22	2.99	2.99
20 - 40	262	35.65	38.64
40 - 60	233	31.70	70.34
60 - 80	161	21.90	92.25
80 - 100	57	7.76	100.00

Total Number of Valid Hours: 735

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

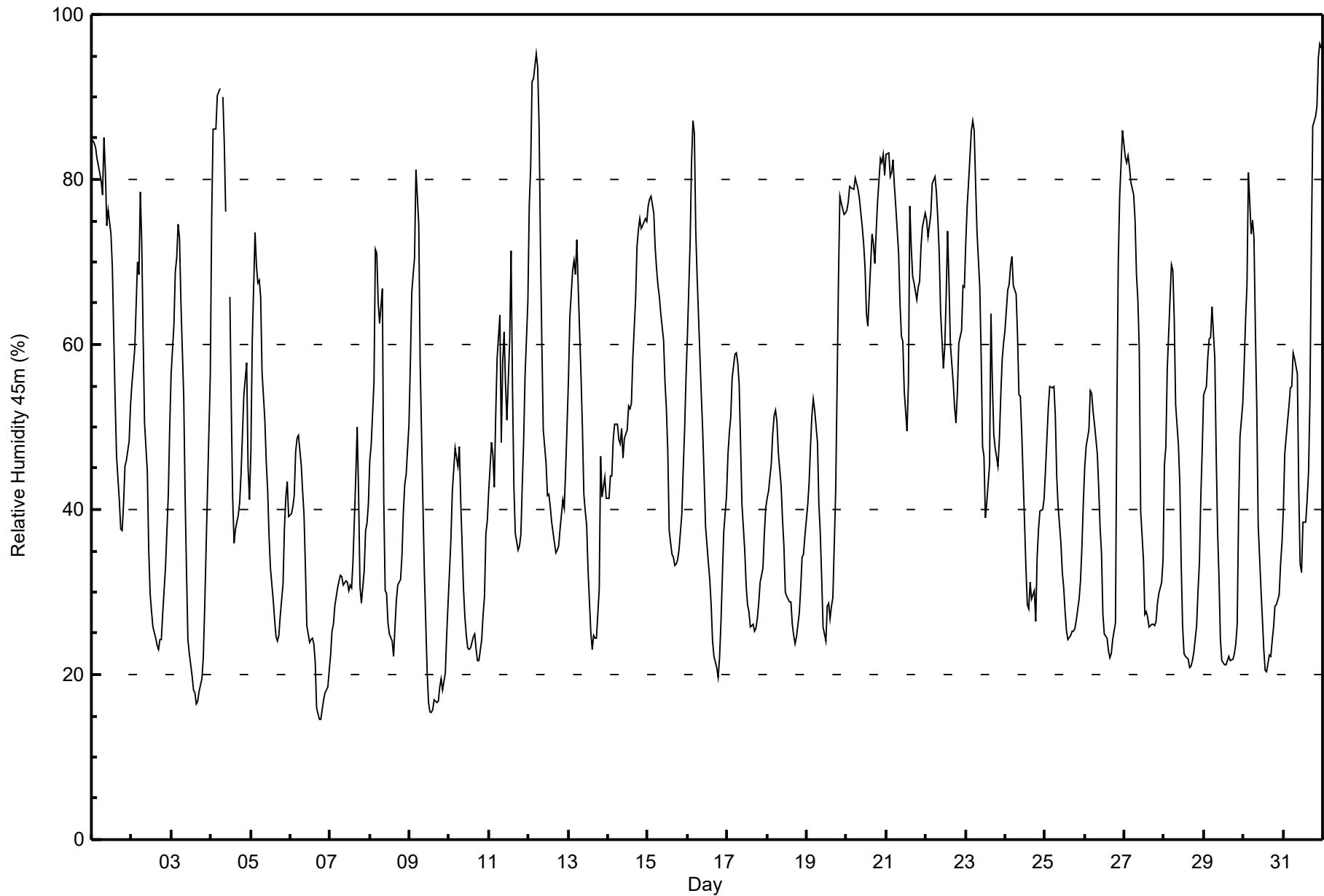
Lower Camp Met Tower - May 2025

Maximum Value: 96.4 % on May 31 23:00																				Maximum Daily Average: 75.5 % on May 20					Hours in Service: 744				
Minimum Value: 14.5 % on May 6 19:00																				Minimum Daily Average: 29.3 % on May 6					Hours of Data: 742				
Maximum Diurnal Average: 67.5 % at hour 5																				Minimum Diurnal Average: 33.8 % at hour 17					Hours of Missing Data: 2				
Monthly Average: 48.00 %																				Percentiles: P ₁ = 16.5 P ₁₀ = 24.1 Q ₁ = 30.5 Median = 45.5 Q ₃ = 64.8 P ₉₀ = 77.0 P ₉₉ = 90.7					Hours of Calibration: 0				
																				Percent Operational Time: 99.7									
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	84.8	84.4	84.0	82.5	81.6	79.9	78.1	85.1	81.0	74.3	76.2	73.5	69.3	61.1	53.2	46.4	41.1	37.7	37.4	40.7	45.3	46.0	48.3	52.7	64.4	85.1			
2-May	55.3	57.4	59.5	69.9	68.5	78.5	72.3	61.0	50.5	44.6	35.1	29.8	27.7	25.7	24.5	23.5	23.1	24.3	24.3	27.4	33.1	37.5	41.8	50.0	43.6	78.5			
3-May	56.5	62.3	68.9	70.5	74.6	72.9	65.0	53.8	41.6	32.6	24.2	22.5	19.8	18.2	17.7	16.4	16.7	17.9	19.5	22.1	28.1	35.2	42.4	56.3	39.8	74.6			
4-May	75.4	86.1	86.1	86.1	90.2	91.1	DF	90.0	84.5	76.2	DF	65.8	52.5	41.3	35.9	37.6	39.3	40.9	44.4	49.1	53.9	57.8	45.1	41.2	62.3	91.1			
5-May	46.9	60.5	73.6	69.5	67.4	67.8	65.8	56.6	50.8	45.8	42.3	36.7	32.9	28.9	26.6	24.6	24.2	24.8	27.2	31.1	37.8	41.5	43.3	39.2	44.4	73.6			
6-May	39.4	40.3	41.7	46.9	48.7	48.9	45.4	42.2	39.3	33.0	26.0	23.9	24.2	24.3	23.7	21.5	16.0	14.6	14.5	15.7	17.0	17.8	18.4	20.5	29.3	48.9			
7-May	22.3	25.2	26.1	28.3	30.5	31.4	32.0	31.8	30.8	31.3	31.2	30.1	30.9	30.6	33.7	44.0	50.0	41.9	30.6	28.7	32.6	37.5	38.3	40.7	32.9	50.0			
8-May	45.9	47.8	55.4	71.5	71.1	65.1	62.5	66.7	41.1	30.1	29.9	26.2	24.9	24.0	22.3	25.8	28.9	30.8	31.5	34.3	39.7	43.0	44.2	50.4	42.2	71.5			
9-May	57.7	66.3	68.5	70.6	81.2	74.5	57.8	49.1	40.5	32.3	20.4	16.5	15.4	15.3	15.7	16.9	16.6	16.7	18.5	19.6	18.1	20.2	24.9	28.8	35.9	81.2			
10-May	32.5	36.5	42.3	47.4	46.2	45.2	47.7	41.1	30.4	27.0	24.7	23.2	23.1	23.3	24.6	24.9	23.0	21.7	21.6	24.3	27.3	29.5	37.1	38.6	31.8	47.7			
11-May	42.2	48.1	46.7	42.7	51.3	58.2	63.5	48.2	57.8	61.5	55.2	50.9	60.6	71.3	54.9	42.8	37.1	35.1	35.5	37.0	43.0	48.4	56.3	65.3	50.6	71.3			
12-May	77.0	81.5	91.8	92.1	95.2	93.5	86.7	71.8	60.1	49.6	45.7	41.6	41.8	40.3	38.6	36.0	34.7	35.0	35.7	37.7	41.2	40.1	44.9	50.2	56.8	95.2			
13-May	55.8	63.4	69.0	70.2	68.5	72.7	66.8	56.2	49.8	41.9	39.9	38.1	32.7	25.1	23.1	24.7	24.4	24.3	30.3	46.5	41.5	42.7	43.8	41.4	45.5	72.7			
14-May	41.4	44.1	44.0	48.4	50.4	50.4	48.4	48.0	49.8	46.3	48.6	49.7	52.6	52.2	53.0	58.3	65.6	71.8	73.8	75.2	74.1	74.4	75.3	75.0	57.1	75.3			
15-May	76.7	77.7	78.0	75.9	71.8	69.2	67.2	65.7	63.7	60.6	55.4	52.3	47.1	37.5	34.5	34.2	33.2	33.4	33.9	35.1	39.3	44.8	49.4	55.7	53.8	78.0			
16-May	60.9	72.5	82.2	87.2	85.6	73.8	68.2	58.5	53.7	49.2	43.8	38.0	33.6	31.5	28.4	24.0	22.2	20.8	19.6	22.0	26.3	31.8	37.3	41.6	46.4	87.2			
17-May	46.5	49.4	51.2	55.9	58.9	59.0	57.8	55.2	48.1	40.7	35.1	30.9	28.5	27.5	25.8	26.1	25.3	25.5	26.7	28.6	31.2	33.0	36.9	40.2	39.3	59.0			
18-May	41.4	42.2	45.6	49.1	51.4	52.1	50.7	47.0	42.9	38.9	35.5	30.0	29.4	28.8	28.9	26.1	24.8	23.7	24.6	27.4	30.6	34.3	34.6	36.7	36.5	52.1			
19-May	40.5	43.2	47.7	51.4	53.4	52.0	48.2	40.7	37.2	31.6	25.7	24.1	28.3	28.6	26.7	28.3	29.4	42.2	54.6	67.8	78.0	77.1	75.8	76.0	46.2	78.0			
20-May	76.3	77.3	79.2	78.9	78.8	80.1	79.5	78.8	77.7	74.3	72.2	69.3	63.8	62.2	69.6	73.4	72.2	69.8	74.0	77.4	82.5	82.1	83.0	80.6	75.5	83.0			
21-May	83.0	83.2	80.3	80.8	82.4	79.1	76.7	71.0	65.0	61.0	60.3	54.4	49.4	55.3	76.8	71.9	68.3	67.4	65.5	67.0	67.7	71.9	74.3	76.0	70.4	83.2			
22-May	75.1	73.0	74.4	75.8	79.5	80.4	78.4	75.3	71.2	64.0	57.2	59.9	65.9	73.7	67.4	60.0	55.5	52.4	50.5	54.2	60.2	61.6	67.0	67.0	66.7	80.4			
23-May	72.4	76.8	79.7	85.9	87.1	86.0	79.6	73.8	66.9	58.6	47.7	46.4	39.0	40.9	45.4	63.7	55.3	49.2	47.5	45.2	48.5	53.7	58.2	60.2	61.2	87.1			
24-May	61.7	66.7	67.2	69.4	70.7	67.1	66.1	61.0	54.0	53.7	49.3	38.5	32.9	28.5	28.0	31.2	29.2	30.1	26.5	34.3	37.7	39.9	40.0	41.4	46.9	70.7			
25-May	44.9	48.6	52.3	54.9	54.8	54.8	51.4	44.1	40.3	35.9	32.3	30.5	27.7	25.3	24.3	24.8	25.2	25.3	25.6	26.6	29.2	31.4	35.4	40.6	36.9	54.9			
26-May	45.1	47.6	49.7	54.4	54.0	51.9	50.3	46.8	42.6	37.9	34.7	27.3	24.9	24.4	22.9	22.0	22.6	24.2	26.3	52.2	70.1	78.0	81.9	85.9	44.9	85.9			
27-May	82.8	82.1	82.9	81.5	79.7	78.1	75.1	68.4	65.4	59.5	39.9	34.0	27.4	27.6	27.0	25.8	26.0	26.1	25.9	26.4	28.7	29.8	31.2	33.9	48.6	82.9			
28-May	45.4	47.6	56.9	65.6	69.7	69.0	63.1	52.7	47.7	43.1	33.3	25.8	22.5	22.2	21.9	20.8	21.1	21.7	22.8	25.9	30.1	33.5	41.6	47.2	39.6	69.7			
29-May	53.9	55.0	58.4	60.7	60.9	64.5	58.4	46.7	37.3	31.7	24.3	21.7	21.2	21.1	21.7	22.2	21.7	21.9	22.6	23.7	26.1	39.7	48.8	52.8	38.2	64.5			
30-May	57.6	63.0	67.2	80.8	73.5	75.2	72.8	61.7	52.4	38.1	30.4	26.9	23.0	20.6	20.3	22.4	22.2	24.1	25.7	28.2	28.5	29.7	33.5	35.9	42.2	80.8			
31-May	40.0	46.8	50.7	52.5	54.8	54.9	58.9	58.3	56.5	42.4	33.4	32.3	38.5	38.6	41.2	44.6	53.4	71.7	86.4	87.6	88.9	94.7	96.4	95.9	59.1	96.4			
Diurnal Average																													
Diurnal Maximum																													
DF - DAS Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 45m (RH45) - %
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 45m (RH45) - %
Lower Camp Met Tower - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	25	3.37	3.37
20 - 40	269	36.25	39.62
40 - 60	231	31.13	70.75
60 - 80	166	22.37	93.13
80 - 100	51	6.87	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 100m (RH100) - %

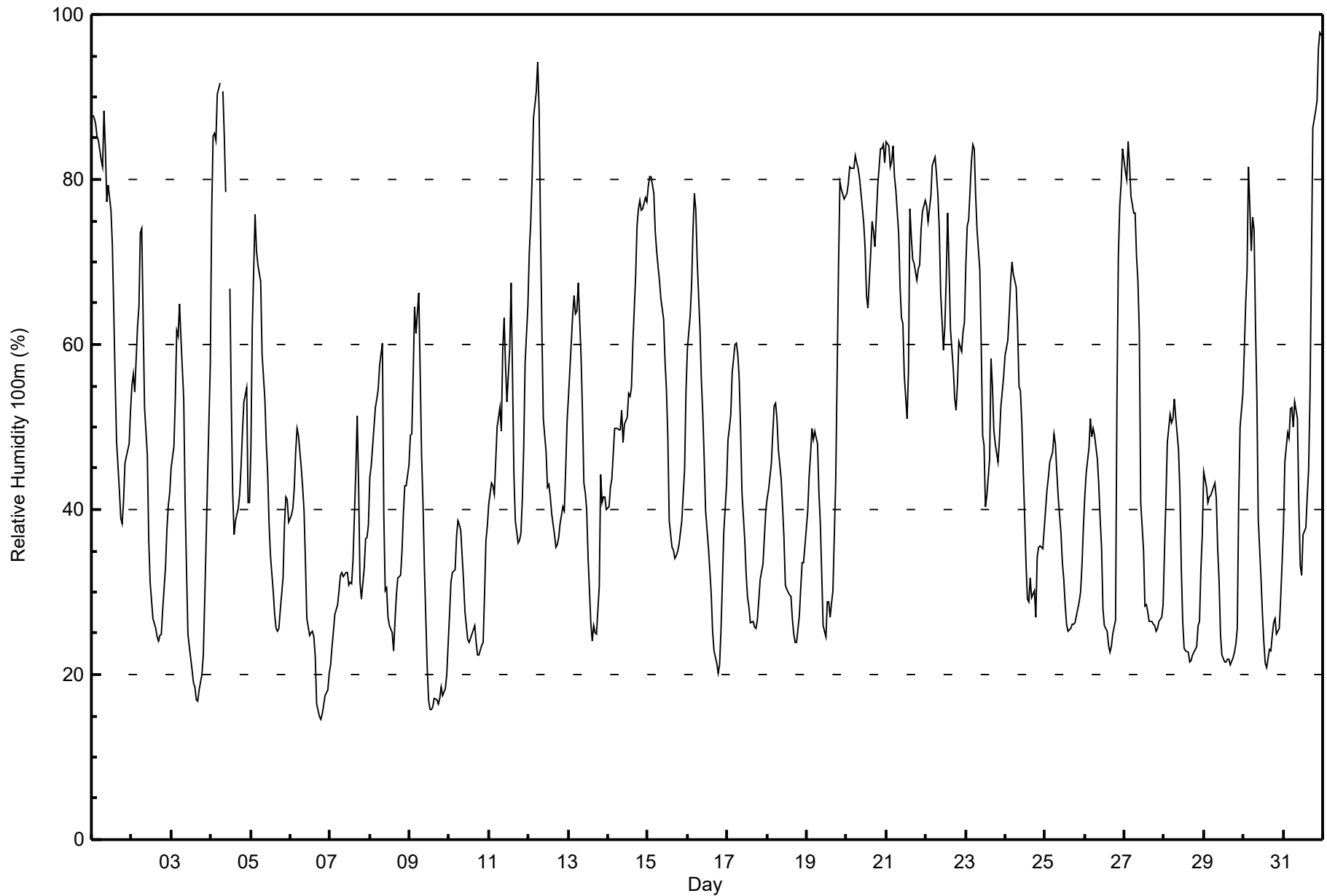
Lower Camp Met Tower - May 2025

Maximum Value: 97.8 % on May 31 23:00																					Maximum Daily Average: 77.6 % on May 20				Hours in Service: 744	
Minimum Value: 14.5 % on May 6 19:00																					Minimum Daily Average: 29.3 % on May 10				Hours of Data: 742	
Maximum Diurnal Average: 63.9 % at hour 6																					Minimum Diurnal Average: 34.6 % at hour 17				Hours of Missing Data: 2	
Monthly Average: 47.34 %																					Percentiles: P ₁ = 16.5 P ₁₀ = 24.2 Q ₁ = 30.5 Median = 43.7 Q ₃ = 61.9 P ₉₀ = 77.9 P ₉₉ = 90.0				Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	87.9	87.5	86.9	85.3	84.7	82.4	81.5	88.3	83.7	77.3	79.3	76.3	72.0	64.1	55.5	48.3	42.4	39.0	38.3	40.9	45.7	46.4	48.0	52.1	66.4	88.3
2-May	55.1	56.4	54.2	62.2	64.5	73.5	74.0	63.1	52.4	46.5	36.2	31.2	29.0	26.8	25.5	24.6	24.0	24.7	25.0	28.0	33.1	37.6	40.5	42.1	42.9	74.0
3-May	45.0	47.6	53.5	61.7	61.0	64.9	60.9	53.3	40.9	32.7	24.9	23.3	20.5	18.9	18.4	16.9	16.7	18.2	19.9	22.3	28.9	36.1	43.5	57.6	37.0	64.9
4-May	76.1	85.3	85.6	84.8	90.3	91.6	DF	90.7	85.2	78.5	DF	66.8	52.9	42.0	36.9	38.6	40.2	41.8	45.3	49.5	53.1	54.8	40.9	40.9	62.4	91.6
5-May	47.2	62.1	75.7	71.3	69.6	68.6	67.7	58.9	53.4	48.2	44.3	38.4	34.4	30.1	27.3	25.7	25.2	25.6	27.7	31.7	38.2	41.5	41.2	38.5	45.5	75.7
6-May	39.4	40.2	42.5	46.9	49.8	49.1	45.2	42.6	39.8	33.5	26.8	24.8	25.0	25.2	24.5	22.2	16.5	15.0	14.5	15.2	16.3	17.5	18.1	20.2	29.6	49.8
7-May	21.2	23.4	25.3	27.3	28.6	30.2	32.0	32.3	31.8	32.4	32.3	30.9	31.1	31.0	33.9	44.7	51.3	43.0	31.1	29.2	32.8	36.4	36.6	38.2	32.8	51.3
8-May	43.8	45.3	50.0	52.3	53.4	54.5	57.5	60.2	39.5	30.1	30.4	26.9	25.0	22.9	26.5	29.6	31.8	32.1	35.0	39.5	42.9	43.0	45.4	45.4	39.3	60.2
9-May	49.0	49.2	56.3	64.6	61.4	66.3	56.7	46.6	40.8	33.1	21.0	17.0	15.8	15.7	16.2	17.2	16.9	16.5	17.2	18.4	17.4	18.3	20.0	23.7	32.3	66.3
10-May	27.2	31.2	32.4	32.7	36.8	38.7	38.1	37.5	31.4	27.6	25.8	24.2	23.9	24.4	25.5	25.9	23.8	22.4	22.5	23.6	23.9	29.6	36.3	38.0	29.3	38.7
11-May	40.6	43.2	42.8	41.9	46.0	50.1	52.4	49.5	59.3	63.2	57.4	53.0	59.5	67.5	56.3	44.3	38.7	36.0	36.2	37.0	41.1	47.4	57.7	64.7	49.4	67.5
12-May	71.2	74.7	80.2	87.4	90.7	94.3	88.5	74.0	61.7	51.0	47.0	42.8	43.0	41.5	39.5	37.0	35.4	35.7	36.6	38.3	40.3	39.8	44.8	50.7	56.1	94.3
13-May	53.7	57.0	63.6	65.9	63.7	64.1	67.5	58.5	51.7	43.2	42.0	40.1	34.2	26.1	24.1	26.0	25.2	24.9	30.7	44.2	40.9	41.4	41.5	40.1	44.6	67.5
14-May	40.4	42.7	43.7	46.7	49.8	49.9	49.7	49.7	52.0	48.1	50.4	51.2	54.1	53.8	54.7	60.2	68.3	74.5	76.4	77.5	76.3	76.5	77.8	77.3	58.4	77.8
15-May	79.1	80.3	80.4	78.4	73.7	71.3	69.5	67.8	65.7	63.0	58.0	54.6	48.8	38.7	35.5	35.2	34.1	34.4	34.8	35.7	38.6	41.9	44.9	54.4	54.9	80.4
16-May	59.4	63.5	67.3	74.0	78.2	76.3	70.2	61.7	55.6	51.5	46.1	39.9	35.4	32.8	29.8	25.3	23.0	21.4	20.2	21.2	25.4	31.2	37.2	43.0	45.4	78.2
17-May	48.4	49.8	51.6	56.6	60.0	60.3	58.9	55.9	49.6	42.0	36.3	32.0	29.4	28.2	26.2	26.4	25.8	25.6	26.7	29.0	31.5	33.3	36.6	39.9	40.0	60.3
18-May	41.3	42.3	45.6	49.1	52.6	52.9	51.0	47.3	43.7	40.4	36.7	30.8	30.4	29.6	29.5	26.8	25.0	23.8	24.0	27.0	30.5	33.5	33.6	35.6	36.8	52.9
19-May	39.8	44.1	46.6	49.8	48.6	49.5	48.0	42.1	38.3	32.1	26.0	24.5	28.8	28.9	26.9	28.7	30.2	43.6	56.3	69.5	79.6	78.8	77.6	78.0	46.5	79.6
20-May	78.2	79.4	81.6	81.3	81.3	82.8	82.1	81.4	80.2	76.7	74.7	71.6	65.9	64.4	71.0	75.0	73.7	71.8	75.4	79.1	83.8	83.7	84.3	82.0	77.6	84.3
21-May	84.6	84.1	81.5	82.3	84.1	80.3	78.7	73.4	66.9	63.3	62.5	56.3	51.0	56.5	76.4	73.0	70.4	69.8	67.8	69.1	69.6	73.9	76.1	77.4	72.0	84.6
22-May	76.7	75.0	76.4	77.9	81.7	82.7	80.6	78.1	74.1	66.3	59.4	62.2	68.1	75.9	69.4	61.9	57.2	53.5	52.1	55.3	60.3	59.1	61.5	62.8	67.8	82.7
23-May	69.7	74.5	75.1	82.3	84.2	83.7	78.1	73.9	68.9	59.9	49.0	47.8	40.3	41.7	46.1	58.4	54.9	49.6	47.9	45.8	48.5	52.5	54.3	56.0	60.1	84.2
24-May	58.6	60.5	63.7	67.6	70.0	68.4	66.9	62.0	55.0	54.3	50.6	39.3	33.6	29.1	28.7	31.6	29.4	30.1	27.0	34.3	35.4	35.6	35.3	37.5	46.0	70.0
25-May	40.0	42.3	43.9	45.8	46.9	49.2	48.0	44.7	41.6	37.2	33.5	31.4	28.4	26.1	25.2	25.7	26.1	26.1	26.4	27.1	28.8	30.1	33.2	37.8	35.2	49.2
26-May	41.4	44.3	47.4	51.0	48.9	49.8	48.9	46.1	43.1	38.7	35.4	28.0	25.9	25.2	23.6	22.7	23.4	24.8	26.6	53.2	70.7	76.8	79.5	83.7	44.1	83.7
27-May	81.0	80.0	84.6	81.9	77.9	76.0	75.9	70.6	67.6	61.3	40.9	35.1	28.3	28.5	27.6	26.4	26.5	26.1	25.9	25.2	25.5	26.5	26.9	28.5	48.1	84.6
28-May	35.1	41.3	48.2	51.5	50.5	51.0	53.4	51.2	47.3	42.3	32.9	26.5	23.3	22.9	22.6	21.4	21.8	22.3	22.7	23.4	25.9	26.4	32.7	37.0	34.7	53.4
29-May	44.6	42.6	40.9	41.5	41.7	42.2	43.2	41.4	35.2	31.3	24.9	22.4	21.5	21.6	21.8	21.8	21.3	22.0	22.8	23.7	25.6	40.6	50.0	54.1	33.3	54.1
30-May	59.1	64.9	68.9	81.6	71.3	75.4	73.9	62.6	53.8	38.9	31.5	27.3	23.9	21.3	20.9	23.1	22.9	24.8	26.3	26.8	24.9	25.6	29.1	33.3	42.2	81.6
31-May	37.7	45.8	49.2	48.6	52.2	52.4	50.1	53.0	51.0	40.7	33.2	32.1	36.9	37.9	41.6	45.0	54.1	70.1	86.2	88.4	89.5	95.9	97.8	97.4	57.8	97.8
Diurnal Average																										
Diurnal Maximum																										
DF - DAS Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 100m (RH100) - %
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 100m (RH100) - %
Lower Camp Met Tower - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	25	3.37	3.37
20 - 40	280	37.74	41.11
40 - 60	237	31.94	73.05
60 - 80	142	19.14	92.18
80 - 100	58	7.82	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 163m (RH163) - %

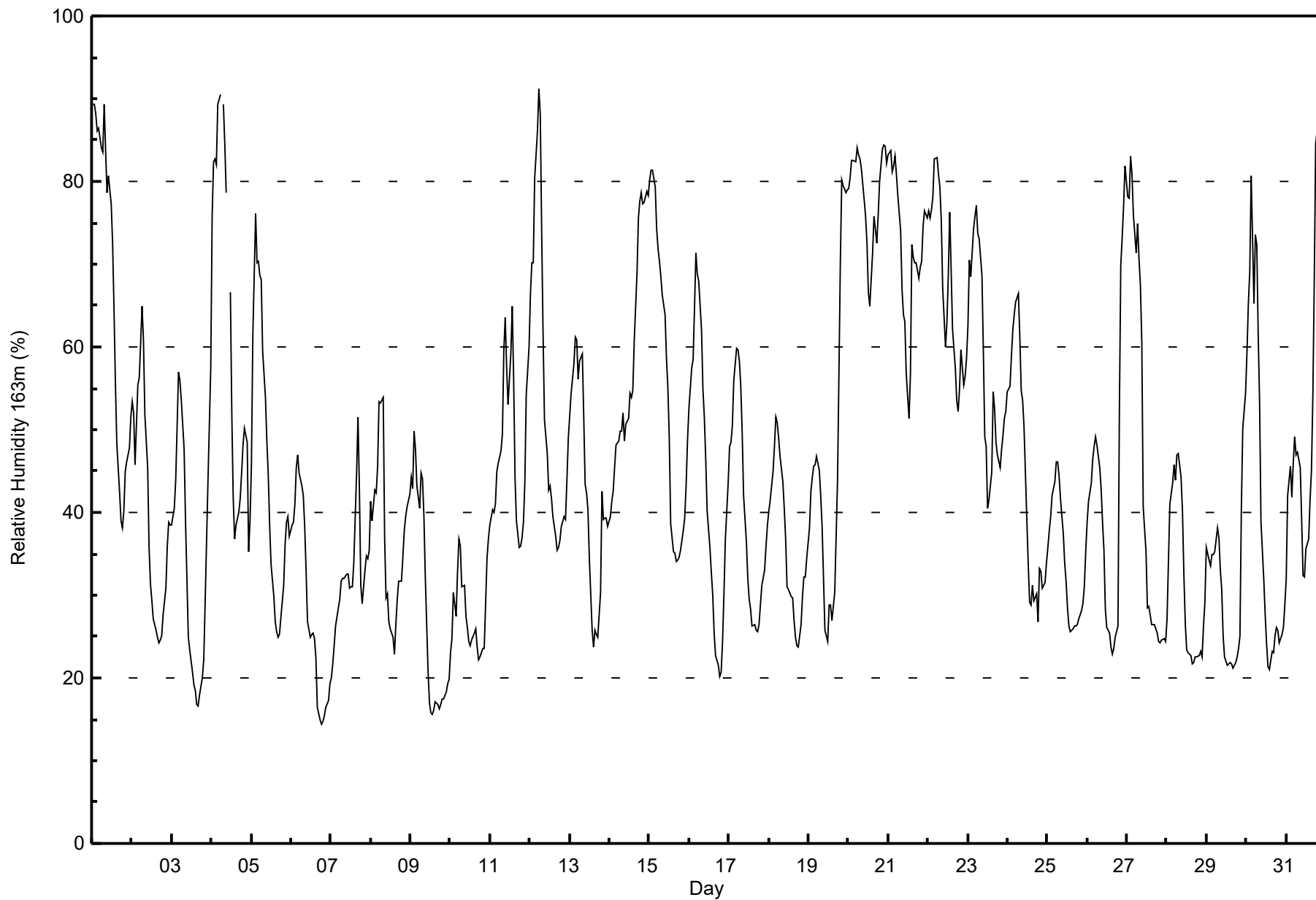
Lower Camp Met Tower - May 2025

Maximum Value: 97.1 % on May 31 23:00																				Maximum Daily Average: 78.3 % on May 20				Hours in Service: 744			
Minimum Value: 14.4 % on May 6 19:00																				Minimum Daily Average: 27.8 % on May 10				Hours of Data: 742			
Maximum Diurnal Average: 60.1 % at hour 6																				Minimum Diurnal Average: 34.6 % at hour 17				Hours of Missing Data: 2			
Monthly Average: 46.00 %																				Percentiles: P ₁ = 16.4 P ₁₀ = 23.9 Q ₁ = 29.8 Median = 42.0 Q ₃ = 59.3 P ₉₀ = 77.4 P ₉₉ = 89.3				Hours of Calibration: 0			
																				Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24	
1-May	89.3	89.3	88.2	86.2	86.4	84.0	83.5	89.3	83.7	78.6	80.7	77.3	72.6	64.7	55.7	48.2	42.3	39.0	38.2	40.2	45.0	46.0	47.9	51.5	67.0	89.3	
2-May	53.3	52.1	45.7	55.3	56.2	60.5	64.9	60.9	51.9	45.5	35.7	31.4	29.3	27.1	25.8	24.9	24.2	24.6	25.0	27.7	30.9	35.9	38.8	38.5	40.3	64.9	
3-May	38.5	40.5	43.9	50.3	56.9	55.9	53.6	47.6	39.0	32.0	24.9	23.5	20.6	19.1	18.5	16.9	16.6	18.1	19.9	22.2	29.1	36.4	43.8	57.5	34.4	57.5	
4-May	75.9	82.5	82.7	82.1	89.4	90.5	DF	89.3	84.5	78.7	DF	66.6	52.0	41.8	36.7	38.5	40.0	41.6	44.7	48.1	50.2	48.5	35.2	39.0	60.8	90.5	
5-May	45.7	61.4	76.0	70.2	70.3	68.6	68.1	59.6	53.9	48.7	44.6	38.5	33.8	29.8	26.8	25.5	25.0	25.2	27.3	31.1	36.0	38.9	39.5	37.1	45.1	76.0	
6-May	38.5	38.8	41.0	45.4	47.0	44.7	43.2	42.0	38.4	32.8	26.9	25.0	25.2	25.4	24.8	22.3	16.5	15.0	14.4	14.8	15.4	16.5	17.3	19.3	28.8	47.0	
7-May	20.0	21.7	23.9	26.2	28.5	29.6	31.8	32.1	32.0	32.6	32.6	30.9	31.0	31.1	33.9	44.8	51.5	42.8	31.1	29.0	33.1	34.8	34.4	35.5	32.3	51.5	
8-May	41.3	39.0	42.7	42.3	45.6	53.3	53.2	53.9	37.0	29.7	30.2	26.8	25.9	25.0	22.9	26.4	29.5	31.8	31.6	34.7	37.8	39.5	40.7	42.2	36.8	53.9	
9-May	44.3	42.9	49.9	47.6	43.3	40.5	44.8	44.1	39.6	32.1	20.7	16.9	15.8	15.6	16.1	17.1	16.7	16.3	16.9	17.5	17.4	18.3	19.3	19.8	28.1	49.9	
10-May	23.0	24.7	30.4	27.4	32.9	36.8	35.9	31.0	31.2	27.4	26.0	24.4	23.9	24.6	25.3	25.9	23.7	22.2	22.5	23.5	23.6	28.9	34.5	36.8	27.8	36.8	
11-May	38.5	40.3	40.1	41.0	44.9	46.0	47.4	49.5	59.4	63.6	57.7	53.0	59.2	65.0	56.2	44.3	39.0	35.8	35.9	36.9	38.9	43.6	54.3	60.0	47.9	65.0	
12-May	66.4	70.2	70.2	80.3	86.1	91.2	88.2	73.9	61.5	51.1	47.1	42.8	43.2	41.7	39.4	37.1	35.4	35.7	36.7	38.3	39.5	39.1	43.8	49.0	54.5	91.2	
13-May	51.6	54.5	57.9	61.2	60.8	56.1	58.3	59.2	51.6	43.4	42.3	40.4	34.4	25.7	23.8	25.8	25.2	24.9	30.4	42.6	39.2	39.4	39.3	38.3	42.8	61.2	
14-May	39.5	41.3	42.5	45.4	48.1	48.6	49.9	49.8	52.0	48.6	50.6	51.3	54.4	54.0	54.8	60.6	69.0	75.7	77.6	78.6	77.3	77.4	78.8	78.2	58.5	78.8	
15-May	80.2	81.3	81.4	79.3	74.2	71.9	70.3	68.6	66.3	63.8	58.7	55.1	48.9	38.6	35.3	35.0	34.0	34.2	34.6	35.4	37.8	39.3	43.3	48.7	54.8	81.4	
16-May	52.5	57.5	58.4	64.7	71.3	68.9	68.0	62.1	54.9	51.5	46.5	40.2	35.7	32.6	30.0	25.5	22.8	21.4	20.1	20.7	24.4	30.2	36.8	43.5	43.3	71.3	
17-May	48.0	48.5	50.5	55.9	59.8	59.6	58.3	55.3	49.6	42.1	36.4	32.1	29.5	28.3	26.3	26.4	25.8	25.5	26.4	28.9	31.3	33.1	35.9	38.5	39.7	59.8	
18-May	40.2	41.5	44.9	48.0	51.5	50.9	49.1	46.8	43.7	40.6	36.8	31.0	30.7	29.8	29.7	26.9	24.9	23.9	23.7	26.4	29.8	32.2	32.2	34.5	36.2	51.5	
19-May	38.2	42.6	44.3	45.6	45.7	46.7	45.1	42.0	38.3	32.0	25.8	24.5	28.8	28.8	26.9	28.7	30.4	44.0	56.7	70.2	80.2	79.5	78.7	79.0	45.9	80.2	
20-May	79.2	80.4	82.6	82.5	82.4	84.0	83.3	82.6	81.4	77.7	75.8	72.5	66.6	64.9	71.3	75.7	74.2	72.6	75.9	79.9	84.0	84.3	84.2	82.1	78.3	84.3	
21-May	83.2	83.8	81.3	81.9	83.1	80.9	78.4	74.1	66.9	63.8	63.0	56.9	51.3	56.7	72.4	70.8	70.1	70.2	68.4	69.7	70.3	74.6	76.4	75.6	71.8	83.8	
22-May	76.4	75.5	76.7	78.1	82.7	82.9	80.9	79.3	75.2	67.1	60.1	62.9	68.7	76.2	69.5	62.3	57.4	53.5	52.2	55.0	59.6	55.4	56.5	58.6	67.6	82.9	
23-May	62.5	70.5	68.5	74.3	75.8	77.1	73.8	73.1	68.7	59.6	49.2	47.9	40.5	41.5	45.0	54.6	52.6	48.5	47.0	45.5	47.6	49.3	51.4	52.2	57.4	77.1	
24-May	54.5	55.3	58.8	62.0	63.8	65.4	66.4	61.2	54.8	53.6	50.4	39.2	33.8	29.2	28.8	31.1	29.3	30.1	26.7	33.2	32.9	30.9	31.5	33.9	44.0	66.4	
25-May	35.8	37.7	39.6	42.0	43.8	46.2	46.1	44.4	41.7	37.5	33.9	31.6	28.5	26.3	25.5	25.9	26.3	26.4	26.5	27.1	28.2	28.9	31.0	35.2	34.0	46.2	
26-May	38.8	41.3	43.6	46.5	47.9	49.2	48.1	45.4	42.9	38.9	35.4	28.3	26.2	25.5	23.7	22.8	23.6	24.9	26.3	52.0	69.8	73.2	76.9	81.8	43.0	81.8	
27-May	78.2	78.0	83.0	80.8	75.9	71.3	74.8	70.7	67.5	60.5	40.7	35.2	28.5	28.6	27.6	26.4	26.4	25.9	25.5	24.4	24.2	24.6	24.7	24.4	47.0	83.0	
28-May	27.0	34.1	41.0	43.6	45.8	44.0	47.0	47.1	44.3	40.1	32.6	26.6	23.4	23.1	22.7	21.6	21.9	22.5	22.6	22.8	23.3	22.5	26.3	29.1	31.5	47.1	
29-May	35.8	34.2	33.6	34.9	35.0	35.2	38.1	36.9	33.0	30.7	25.1	22.6	21.5	21.6	21.8	21.7	21.1	21.8	22.6	23.5	25.0	40.6	50.1	54.4	30.9	54.4	
30-May	59.4	65.3	69.1	80.8	65.3	73.5	72.3	61.6	53.5	38.9	31.8	27.6	24.1	21.4	21.0	23.2	23.1	25.1	26.1	25.8	24.2	25.2	26.1	28.8	41.4	80.8	
31-May	32.0	42.0	45.6	41.9	46.0	49.1	46.9	47.3	45.4	39.1	32.4	32.2	35.6	36.8	41.5	45.1	54.2	68.0	84.6	87.6	89.5	95.6	97.1	96.7	55.5	97.1	
Diurnal Average																											
Diurnal Maximum																											
DF - DAS Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 163m (RH163) - %
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 163m (RH163) - %
Lower Camp Met Tower - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	28	3.77	3.77
20 - 40	312	42.05	45.82
40 - 60	223	30.05	75.88
60 - 80	123	16.58	92.45
80 - 100	56	7.55	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - May 2025

Maximum Speed: 34 km/h on May 19 19:00										Maximum Daily Speed Average: 21.5 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 24 06:00										Minimum Daily Speed Average: 0.5 km/h on May 13										Hours of Data: 742						
Maximum Diurnal Speed Average: 7.5 km/h at hour 18										Minimum Diurnal Speed Average: 3.7 km/h at hour 6										Hours of Missing Data: 2						
Monthly Average Velocity: 5.2 km/h 157.7 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 7 Median = 12 Q ₃ = 17 P ₉₀ = 21 P ₉₉ = 31										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N9	NNW7	N9	N6	NW4	NNW5	NNW4	ENE2	ESE2	S11	S10	SSE16	SE15	SE12	SE12	SE12	SE11	SE12	SE8	SE9	SE13	SE17	SE16	ESE8	SE5.8	SE17
2-May	SE6	SSE4	SE4	NNW4	WSW4	W2	SW4	SW6	SE2	SE4	ESE4	SSE2	SW6	NNW11	NNW14	NW11	NNW9	NNW7	NNE7	NNE9	N8	NNW6	N7	NNW7	NW2.6	NNW14
3-May	NW2	NNW3	NNW3	NW2	N1	NNW1	E1	SE3	SE14	SSE9	WSW18	W14	NNW14	NNW13	W13	W14	WSW16	NNW16	NW16	NW15	NW17	NNW12	NNW14	NNW11	NNW7.0	WSW18
4-May	NW8	WSW9	WSW12	W12	NW12	NW11	DF	NW7	N3	NNW1	DF	WSW15	WSW17	W16	WSW16	WSW20	SW20	SW27	SW24	SW21	SW19	WSW15	NNW14	NNW12	WSW11.9	SW27
5-May	WNN15	NNW14	N11	N9	NNW4	NNE4	N6	NW11	NW10	NNW9	W10	N5	NE6	NNE5	NNE8	N7	N8	N7	NNE9	NNE10	N7	NE4	ENE4	ESE12	N6.0	WNN15
6-May	ESE15	ESE11	ESE8	ESE7	ESE9	ESE11	ESE11	SE8	SE10	SE13	S16	SW16	SSW25	SSW22	SSW24	SSW21	SW23	SSW22	S24	S21	SSE23	SSE25	SSE26	SSE26	S14.0	SSE26
7-May	SSE24	SE22	SE20	SE20	SE19	SE16	SE14	SE18	S26	S30	S25	SW20	WSW19	WSW17	WSW16	WSW20	WSW23	WSW19	SW20	SSW16	S15	SSW16	SW16	SSW9	S14.0	S30
8-May	SE3	SSW2	NNW3	NW2	NNW4	NNW2	NNE2	NW5	N12	N14	NNE14	N12	N7	S2	N4	N12	NNE13	NNE13	NNE10	NNE10	N5	NNW3	ENE2	SE2	N5.6	N14
9-May	SSE2	SE2	SSE1	E2	E1	NE1	ESE7	SE10	SE10	SE6	WSW17	WSW22	WSW21	WSW18	WSW16	WSW16	WSW17	WSW11	SW8	SW9	WSW6	SW3	ESE3	SW7.0	WSW22	
10-May	SW0	S2	SE9	SE6	E1	SSE1	NNW3	SSE2	SW2	SW6	WSW7	WSW12	WSW12	NW5	NNW3	WSW8	SW5	S2	NNE1	SSE6	SE2	SE6	ESE9	ESE10	SSW2.3	WSW12
11-May	E2	E0	ESE4	E4	N2	NNW3	E1	SSE16	SSE17	SSE15	SE12	SE7	W5	E5	SE7	WSW5	NNE1	NNW6	N3	N3	NNW1	NNW1	NE2	NNW4	SE2.3	SSE17
12-May	NNW2	NNW2	NNW2	N3	NNW2	NW3	NNW4	NNW9	N12	N13	N15	N18	N16	N16	N16	NNE18	N17	N17	N18	N15	N14	N11	NNW9	NNW10	N10.7	NNE18
13-May	NNW9	NNW8	NNW3	SSW1	NNW2	N4	N4	NNW7	NNW8	N8	W6	WSW7	SW7	ENE5	N5	ENE1	SE10	SE10	SW8	WSW4	SE7	SE9	SE10	SE18	ESE0.5	SE18
14-May	SSE18	SE19	SSE23	SE13	ESE8	SE13	SSE16	SW10	WSW10	NNW5	NNW23	NNW22	N20	N18	N20	N20	NNE21	NNE21	N20	NNW17	N17	N16	N15	N15	NNE7.3	NNW23
15-May	N15	N11	N11	N14	N17	N14	N15	N17	N18	NNW16	NNW15	NNW17	N15	N16	N17	N14	N15	NNE13	NNE13	NNE12	NNE9	NNE7	NNE5	NNW3	N13.0	N18
16-May	NNW4	N4	N2	NNE1	NE2	N3	N3	ENE1	N3	SSW2	NNW4	NNW5	NW3	WSW6	WSW5	ENE2	SE3	ESE5	ESE5	ESE2	NW2	ESE9	SE13	ESE15	E1.1	ESE15
17-May	ESE13	ESE13	ESE17	SE16	SE17	SE15	SE15	SE13	SE13	SE15	SE15	SE16	ESE15	SE16	SE16	SE17	SE15	SE15	ESE15	ESE16	ESE16	SE16	SE17	SE13	SE14.9	SE17
18-May	SE15	ESE17	ESE13	ESE13	ESE9	ESE11	SE11	SE12	SE11	ESE11	ESE11	SE14	SSE23	SSE18	SSE17	SSE16	SE14	SE16	SE14	SE15	SE14	SE14	SE15	SE16	SE13.9	SSE23
19-May	SE13	ESE8	SE5	SE6	SE10	SE11	SE13	SSE22	SSE14	SE19	SSE25	SSE28	SE21	SE17	SE20	SSE22	SSE25	SSE33	SSE34	SE26	SE18	SE18	SE20	SE17	SE18.4	SSE34
20-May	SE18	SE14	SE14	SE13	SE12	SE11	SE13	SE12	SE13	SE18	SE15	SE16	SE18	SE17	SE17	SE19	SE20	SE16	SE15	SE14	SE15	SSE12	SE8	SSE12	SE14.5	SE20
21-May	SE8	ESE6	SSE9	SSE14	SE8	ESE9	ESE10	SE11	SSE11	SSE11	SE11	ESE11	ESE12	SE17	S26	S23	S21	S20	S18	SSE18	SSE18	SSE17	SSE22	SSE17	SSE13.5	S26
22-May	SSE19	SSE23	SSE21	SSE19	SE17	SSE17	SSE20	SSE21	SSE20	SSE17	S21	SSW17	SW14	SSW14	SSE15	SSE18	SE19	SE15	SSE18	SSE17	SE9	SE15	SE12	SSE10	SSE16.1	SSE23
23-May	SE7	SE7	SE6	S1	ESE2	E3	SE3	SE9	SE12	SE13	SE16	SSE22	SSE25	SE15	SE15	ESE13	SE15	SE22	SE16	SSE20	SSE20	SSE9	SE9	SSE16	SE12.1	SSE25
24-May	SSE15	SE13	SE8	NE2	SSW1	WNN0	ESE4	SE4	SSE7	SE11	ESE12	SE20	SE22	SSE24	SSE24	SE15	SSE23	S19	SSW22	SSE23	SSE17	SE17	SE19	SE20	SSE13.5	SSE24
25-May	SE21	SE18	SE17	SE17	SE17	SE13	SE16	SSE25	SSE27	SSE29	SSE29	SSE28	SSE26	SSE26	S28	SSE26	SSE28	S25	S26	SSE21	SSE18	SSE18	SSE19	SE15	SSE21.5	SSE29
26-May	SE15	SE12	SE9	SE5	SE6	SE6	SE8	SE13	SE14	SSE17	SE16	S28	S32	SSE30	SSE31	SSE31	S34	SSE31	S21	W17	NNW7	SW9	SSE5	SW5	SE14.3	S34
27-May	SSW9	S5	SW4	S4	SSE7	SSE4	SSW7	SW7	SW11	SW11	W13	WSW13	WSW20	WSW17	WSW17	WSW19	WSW19	WSW18	W12	WSW12	WSW10	SW7	SW9	WSW8	WSW10.0	WSW20
28-May	SW4	SSE2	SE7	SE11	ESE9	SE8	ESE9	SE9	SE7	SE8	ESE8	SW6	WSW11	W11	WSW8	SW17	S18	S15	SSE12	SE12	SE14	SE13	SE10	SE8	SSE7.2	S18
29-May	SE4	SE7	SE7	SE10	SE12	SE13	SE11	SE12	SE16	SSE16	SSE29	SSE30	SSE28	SSE29	SSE28	SE28	SE33	SE31	SSE26	SSE25	SE24	W21	NNW21	NNW13	SSE15.9	SE33
30-May	W19	W13	WSW17	NNW8	NNW8	W12	NNW13	NW10	NW7	NW10	NW9	NNW6	NNW4	WSW8	WSW13	WSW15	SW10	S18	SSW17	S12	SSE13	SSE13	SSE13	SSE16	WSW7.1	W19
31-May	SSE16	ESE5	SE8	SSW5	SSE4	SE6	SE8	ESE7	ESE7	SE7	ESE4	N4	NNW7	NNW12	NNW13	N13	NNW17	N12	NNW9	NNW14	NW12	NW13	NW11	NW10	N3.4	NNW17
SE5.3 SE4.8 SE5.2 SE4.3 ESE3.8 ESE3.7 SE5.0 SE5.4 SE5.8 SSE6.6 SSE5.9 S5.9 S6.5 S5.6 S6.1 S5.8 S7.2 S7.5 S6.4 SSE5.3 SSE5.3 SSE5.3 SSE5.2 SE5.5																									Diurnal Average	
SSE24 SSE23 SSE23 SE20 SE19 SSE17 SSE20 SSE25 SSE27 S30 SSE29 SSE30 S32 SSE30 SSE31 SSE31 S34 SSE33 SSE34 SE26 SSE24 SSE25 SSE26 SSE26																									Diurnal Maximum	
DF - DAS Failure																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

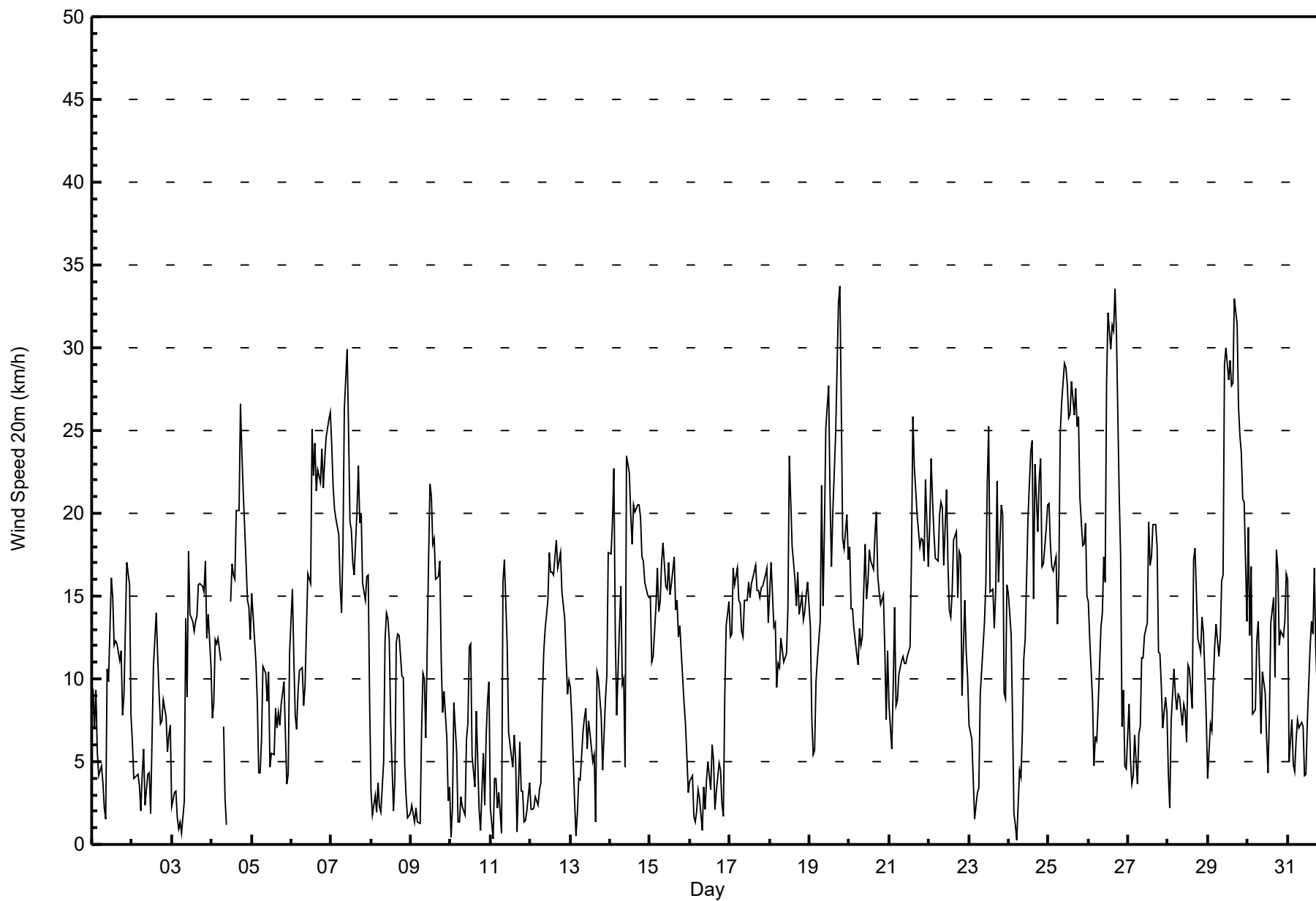
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 1 km/h on May 9 05:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	4	2	1	1	2	1	2	3	3	4	4	4	4	4	4	3	3	4	4	5	5	5	5
2-May	3	2	2	2	2	2	2	2	1	1	2	2	4	5	6	5	5	3	4	4	3	2	2	3	6
3-May	1	1	1	1	1	1	2	3	3	5	6	5	6	6	5	6	5	6	6	5	6	5	5	5	6
4-May	2	3	3	4	4	4	DF	3	3	2	DF	5	6	6	6	5	6	5	5	4	3	4	4	4	6
5-May	5	6	5	3	3	2	3	4	4	4	5	4	3	3	3	4	3	3	3	3	3	2	4	5	6
6-May	5	5	3	3	3	4	4	3	3	4	5	5	6	6	6	7	6	5	5	3	3	4	5	5	7
7-May	4	4	6	6	5	5	4	6	5	5	5	5	5	5	4	6	5	5	5	3	2	3	3	3	6
8-May	3	2	1	1	1	2	1	3	6	6	6	5	4	3	5	5	5	5	4	4	3	2	1	2	6
9-May	1	1	1	2	1	1	2	3	3	4	6	7	6	6	6	5	6	5	4	2	2	3	2	2	7
10-May	1	2	2	2	2	2	2	1	3	3	3	4	5	5	4	4	3	4	2	2	1	1	4	4	5
11-May	2	2	2	3	1	2	5	3	4	3	4	4	4	2	3	3	2	3	2	1	1	1	2	2	5
12-May	2	1	2	2	2	2	2	4	4	5	6	7	7	6	7	6	6	7	6	6	5	4	3	3	7
13-May	4	3	2	1	1	1	2	3	4	3	3	4	3	2	4	3	5	3	8	5	3	3	3	5	8
14-May	6	5	5	6	3	3	3	3	3	3	7	7	7	7	8	8	8	8	8	6	6	6	6	6	8
15-May	6	4	5	6	6	5	6	6	6	5	6	6	6	7	6	6	6	6	5	4	3	3	3	2	7
16-May	2	2	1	1	1	2	1	2	2	2	3	3	3	3	3	3	3	3	3	2	2	5	4	6	6
17-May	4	5	6	6	5	5	5	5	4	5	5	5	6	5	6	6	6	5	6	6	6	6	4	6	6
18-May	5	6	5	5	4	4	4	4	4	4	5	6	6	5	4	4	5	5	4	5	5	4	5	5	6
19-May	4	3	2	2	3	3	5	5	4	6	6	7	7	7	6	6	6	12	8	6	5	7	6	5	12
20-May	6	5	5	4	4	4	5	4	5	5	5	5	5	6	6	7	6	5	5	5	6	4	3	4	7
21-May	2	3	5	5	3	3	4	4	3	4	4	4	4	7	4	3	3	3	3	4	4	3	4	3	7
22-May	4	4	4	4	4	3	4	3	4	4	4	5	3	3	5	6	5	5	4	4	3	4	3	4	6
23-May	4	4	3	1	1	2	3	3	4	5	7	6	6	6	7	7	8	7	6	4	4	3	2	4	8
24-May	3	3	5	1	1	1	3	2	4	4	4	7	6	6	7	6	6	9	5	5	3	2	3	3	9
25-May	3	3	3	3	3	4	6	5	6	6	6	6	6	6	6	6	6	5	5	4	3	3	4	3	6
26-May	3	4	3	2	3	3	3	4	5	5	5	10	6	8	6	7	7	7	5	8	4	5	6	3	10
27-May	3	2	3	2	2	2	2	2	3	3	5	6	7	6	6	7	7	6	7	4	2	2	3	3	7
28-May	2	1	2	2	2	2	3	2	2	3	3	4	6	4	4	5	4	4	2	2	2	3	3	3	6
29-May	3	3	3	3	3	3	3	4	3	5	7	6	8	8	8	7	8	7	6	5	4	10	8	5	10
30-May	7	7	7	4	3	5	5	4	4	5	4	4	4	5	5	6	3	3	3	2	2	4	3	2	7
31-May	3	3	2	3	2	2	2	2	2	2	2	3	3	5	4	5	6	5	4	6	5	5	5	4	6
7 7 7 6 6 5 6 6 6 6 6 7 10 8 8 8 8 8 12 8 8 6 10 8 6																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Lower Camp Met Tower - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	148	19.95	19.95
6 - 11	191	25.74	45.69
12 - 19	291	39.22	84.91
20 - 28	96	12.94	97.84
29 - 38	16	2.16	100.00
> 38	0	0.00	100.00

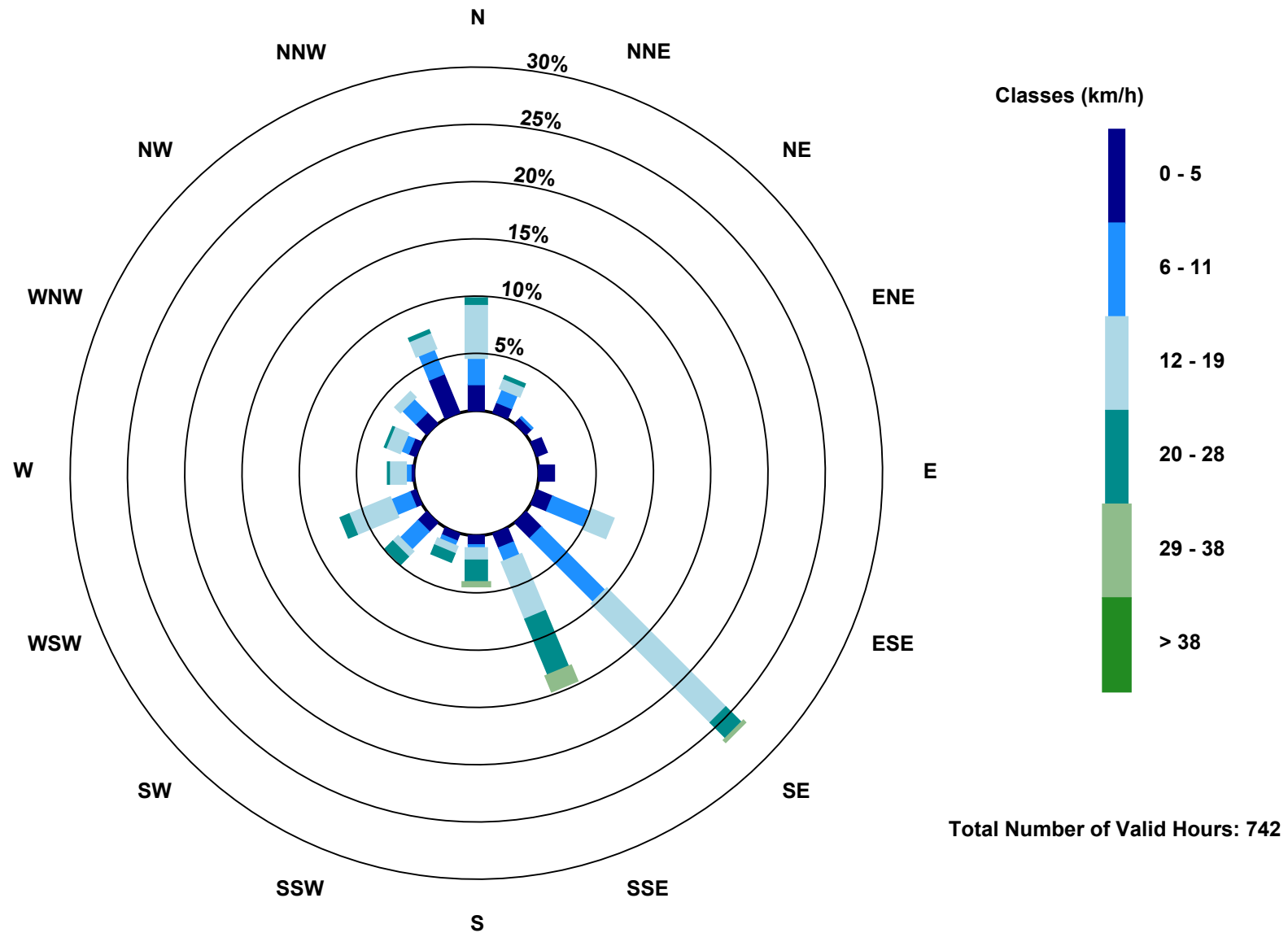
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 20m (WS20) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - May 2025

Maximum Speed: 44 km/h on May 29 17:00										Maximum Daily Speed Average: 25.7 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 3 06:00										Minimum Daily Speed Average: 1.0 km/h on May 13										Hours of Data: 742						
Maximum Diurnal Speed Average: 7.6 km/h at hour 3										Minimum Diurnal Speed Average: 5.4 km/h at hour 14										Hours of Missing Data: 2						
Monthly Average Velocity: 6.2 km/h 148.4 deg										Percentiles: P ₁ = 1 P ₁₀ = 5 Q ₁ = 10 Median = 17 Q ₃ = 23 P ₉₀ = 27 P ₉₉ = 34										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N13	NNW10	N13	N8	NW6	NW7	NNW5	ENE3	SSE1	S11	S11	SE18	SE18	SE14	SE16	SE15	SE14	SE14	ESE12	ESE16	SE21	SE28	SE27	ESE17	ESE8.1	SE28
2-May	SE10	SSE6	SE7	NNW8	WNW4	W5	SW5	SW6	SE2	SE4	ESE4	SE2	WSW7	NNW14	NNW18	NNW15	NNW12	NNW12	NNE12	NNE14	N13	NNW10	NNW8	NNW12	NNW4.2	WNW18
3-May	NNW7	NW5	NW5	W3	WNW2	N0	SSE1	ESE5	SE17	SSE9	WSW21	W19	NNW18	NNW17	W16	W18	WSW21	NNW22	NW22	NW22	NW25	NW18	NNW20	NNW16	WNW9.8	NW25
4-May	NW12	WSW11	WSW17	W19	NW18	NW16	DF	NNW11	NNW6	NNW2	DF	WSW19	WSW23	W22	WSW19	WSW23	SW23	SW30	SW27	SW25	SW23	WSW20	NNW21	NNW19	WSW15.1	SW30
5-May	WNW22	NNW20	N16	N13	N7	NNE7	N9	NW14	NW13	NNW11	W12	NNW6	NE6	NNE6	N10	N8	N10	N9	NNE12	N14	N10	NE6	ESE9	ESE20	N7.7	WNW22
6-May	ESE25	ESE18	ESE14	ESE13	ESE15	ESE17	ESE17	ESE13	SE14	SE16	S18	SW18	SSW27	SW25	SSW27	SW23	SW25	SSW24	S27	S26	SSE28	SSE29	SSE30	SSE30	SSE17.2	SSE30
7-May	SSE28	SE28	SE30	SE33	SE31	SE26	SE22	SE23	S29	S32	S26	SW24	WSW25	WSW21	SW20	WSW28	WSW28	WSW23	SW23	SSW19	SSW19	SSW21	SW20	SSW12	S17.4	SE33
8-May	SSE3	SW5	W5	NNW4	NW7	NW4	N3	NNW7	N20	N22	NNE20	N19	N9	SSW1	N6	N18	NNE18	NNE18	NNE16	NNE15	N9	NNE4	ENE3	SSE4	N8.4	N22
9-May	SSE6	SSE4	SE5	ESE4	SE3	ESE2	ESE10	SE12	SE12	SE6	WSW21	WSW26	WSW26	WSW24	WSW19	WSW20	WSW20	WSW22	WSW16	SW11	SW13	WSW13	SW8	SE6	SW9.4	WSW26
10-May	SE4	SSW3	SE12	SE9	ESE3	SSE2	NNW2	SSE2	SW3	SW7	WSW8	WSW14	WSW15	NW9	NW6	WSW9	WSW6	S3	N1	SSE8	S5	ESE9	ESE16	SE15	S3.1	ESE16
11-May	ESE5	SE4	ESE11	ESE9	E4	ENE1	SE2	SSE18	SE20	SSE16	SE15	SE8	W7	ENE7	SE7	WSW6	N1	NNW9	N5	N6	NNE3	N3	ENE3	N6	ESE3.6	SE20
12-May	N5	NNW5	NNW6	N7	NNW6	NNW6	NNW5	NNW12	N17	N20	N22	N26	N25	N26	NNE25	NNE28	N26	N27	N27	N24	N22	N18	NNW15	NNW18	N17.2	NNE28
13-May	NNW15	NNW14	NNW7	WNW2	WNW4	NNW6	N5	NNW9	NNW10	N11	WNW7	W9	SW7	ENE5	N7	NE2	SE13	SE12	SW8	WSW7	SE11	SE12	SE17	SE23	NE1.0	SE23
14-May	SE23	SE28	SE28	SE18	ESE12	SE17	SSE17	SW11	WSW11	NNW6	NNW33	N32	N29	N28	N31	N32	NNE32	NNE32	N31	N26	N26	N24	N23	N22	NNE12.2	NNW33
15-May	N23	N16	N17	N22	N26	N20	NNE22	N25	N27	N23	NNW21	NNW23	N21	N22	N25	N22	N22	NNE19	NNE20	NNE18	NNE15	NNE14	NNE11	N5	N19.5	N27
16-May	N5	NNW7	NNW6	NNW4	N4	N5	N4	E1	NNW4	WSW2	WNW5	NNW6	NW4	WSW6	W6	NNE2	SE3	ESE7	E7	ESE5	WNW1	SE14	SE20	ESE23	ENE1.8	ESE23
17-May	ESE19	ESE20	ESE25	SE25	SE26	SE23	SE22	SE19	SE18	SE20	SE18	SE19	ESE21	SE21	SE22	SE23	SE21	SE22	ESE24	ESE23	ESE24	ESE25	SE27	SE21	SE21.9	SE27
18-May	SE24	ESE27	ESE23	ESE23	ESE18	ESE19	SE17	SE18	SE16	ESE15	ESE17	ESE20	SSE26	SSE20	SSE19	SSE18	SE18	SE23	SE20	SE24	ESE22	SE23	SE24	SE25	SE20.4	ESE27
19-May	SE21	ESE14	ESE11	ESE11	SE16	SE19	SE17	SSE23	SE17	SE24	SE30	SSE31	SE26	SE22	SE27	SE27	SSE28	SE39	SE40	SE32	SE23	SE25	SE26	SE25	SE23.5	SE40
20-May	SE24	SE20	SE20	SE19	SE16	ESE16	SE18	SE17	SE18	SE25	ESE22	SE23	SE22	SE21	ESE25	SE29	SE26	SE23	SE22	SE21	SE19	SE15	SE11	SE14	SE20.1	SE29
21-May	SE12	ESE11	SSE12	SSE17	ESE13	ESE15	ESE15	ESE16	SE13	SE13	ESE15	ESE17	ESE18	SE23	S29	S25	S23	S22	S19	SSE20	SSE20	SE20	SSE25	SSE20	SSE16.3	S29
22-May	SSE22	SSE27	SSE24	SSE22	SE23	SE20	SSE22	SSE22	SSE22	SSE19	S23	SSW18	SW16	SSW15	SSE17	SE21	SE25	SE22	SSE19	SE21	SE15	SE19	SE16	SSE15	SSE18.8	SSE27
23-May	SE12	SE12	SE11	SE3	SE5	SE5	SE5	SE13	ESE17	ESE20	SE20	SE27	SSE29	SE21	ESE23	ESE21	SE23	SE28	SE24	SSE24	SSE24	SSE12	SSE12	SSE20	SE16.6	SSE29
24-May	SSE19	SE17	SE12	ESE4	SSE2	SE2	ESE8	ESE6	SSE8	ESE16	ESE17	SE27	SE28	SSE27	SSE27	SE19	SSE27	SSE23	SSW25	SSE26	SSE22	SSE21	SSE23	SE25	SSE17.0	SE28
25-May	SE25	SE24	SE24	SE24	SE25	SE23	SE25	SE29	SSE29	SSE32	SSE31	SSE31	SSE30	SSE28	S30	SSE28	SSE30	S27	S28	SSE24	SSE23	SSE24	SSE25	SE20	SSE25.7	SSE32
26-May	SE22	SE19	SE16	ESE12	ESE16	ESE13	ESE15	ESE21	SE20	SSE20	SE19	S31	S35	SSE33	SSE34	SSE34	S36	SSE34	S24	W26	NNW11	WSW13	SSE5	SW8	SSE17.1	S36
27-May	SSW12	SSW8	WSW5	SSW6	SSE9	SSE5	SSW8	SW8	SW13	SW12	W16	WSW16	WSW24	WSW21	WSW23	WSW27	WSW27	WSW24	W17	WSW18	WSW14	SW12	SW15	SW14	WSW13.7	WSW27
28-May	SW9	SSW4	SE9	SE12	SE11	SE12	SE12	ESE10	ESE8	ESE10	SW7	WSW13	W14	WSW10	SW19	S19	S16	SSE15	SE14	SE16	SE18	SE17	SE16	SSE9.2	SW19	
29-May	SE10	SE13	SE14	SE17	SE19	SE19	SE15	SE16	SE20	SE19	SSE32	SSE33	SSE32	SSE34	SE34	SE39	SE44	SE38	SSE31	SSE28	SE28	W29	NNW31	NNW20	SSE19.7	SE44
30-May	W28	W18	WSW22	NNW13	WNW14	W18	WNW20	NW15	NW10	NW15	NW13	NNW8	WNW7	WSW9	WSW16	WSW19	SW12	S19	SSW19	S15	S17	S17	S17	SSE20	WSW10.0	W28
31-May	SSE19	SE7	SSE7	SW7	SSW5	SSE7	SE11	ESE10	ESE11	SE9	ESE5	NNW6	NNW13	NNW18	NNW21	N20	N25	N20	NNW16	N21	NNW19	NNW21	NW18	NNW16	N6.1	N25
SE7.3 SE6.9 SE7.6 SE6.3 ESE5.9 ESE6.0 ESE7.2 SE6.6 SE6.7 SE7.2 SSE6.0 S5.8 S6.6 S5.4 S5.8 S5.8 SSE7.3 SSE7.6 SSE6.4 SSE5.7 SSE6.3 SSE6.6 SE7.2 SE7.4																									Diurnal Average	
W28 SE28 SE30 SE33 SE31 SE26 SE25 SE29 SSE29 S32 NNW33 SSE33 S35 SSE34 SE34 SE39 SE44 SE39 SE40 SE32 SE28 SSE29 NNW31 SSE30																									Diurnal Maximum	
DF - DAS Failure																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 45m (WS45) - km/h

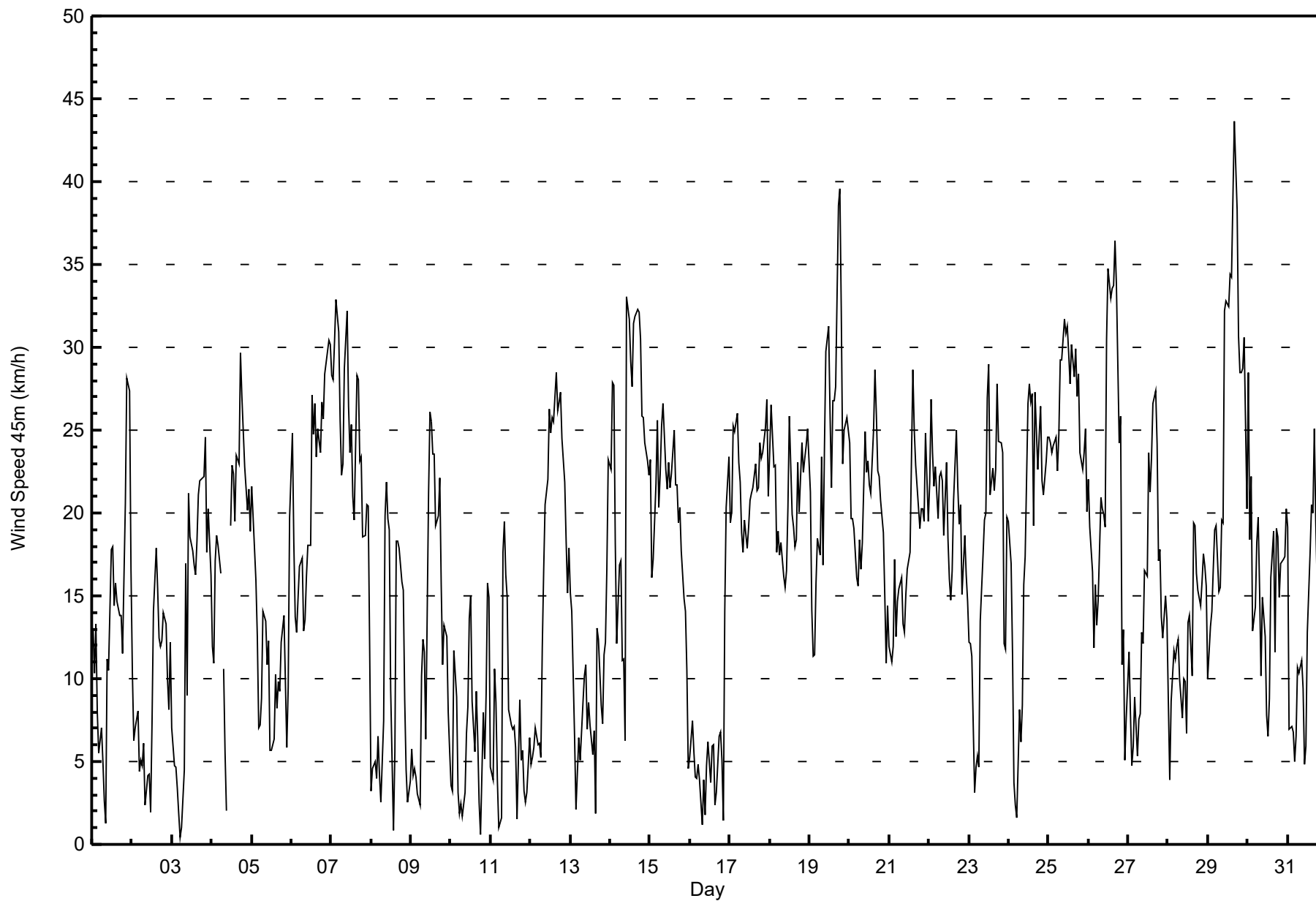
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 1 km/h on May 3 06:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	3	2	1	2	2	1	2	3	3	4	4	4	3	4	3	3	4	6	3	5	4	8	8
2-May	5	3	3	2	2	2	2	1	2	1	2	3	4	5	6	5	6	3	4	4	3	2	2	2	6
3-May	2	1	2	2	1	1	2	4	2	6	5	5	6	6	5	6	5	6	6	6	7	5	5	5	7
4-May	2	3	3	4	4	4	DF	3	5	2	DF	4	5	5	6	4	6	5	5	5	3	5	5	4	6
5-May	5	7	5	4	4	3	3	4	5	4	5	4	3	3	4	4	3	3	3	3	3	3	6	5	7
6-May	5	5	3	3	4	4	4	4	4	3	4	5	6	6	6	7	6	5	5	3	4	4	5	5	7
7-May	4	3	5	5	4	4	4	5	6	6	5	4	5	5	3	7	5	5	4	4	3	4	3	5	7
8-May	3	3	1	2	1	3	1	5	7	6	5	5	5	3	7	6	6	5	4	4	3	2	2	2	7
9-May	1	2	2	3	1	2	2	2	3	5	6	6	6	6	5	4	5	5	4	2	2	2	4	2	6
10-May	2	2	3	4	3	2	2	1	4	3	4	4	5	5	6	5	3	4	1	2	3	3	4	5	6
11-May	3	3	3	4	2	2	6	3	4	3	4	4	4	3	3	3	2	3	3	1	2	1	2	2	6
12-May	4	2	3	2	2	2	2	4	4	5	7	7	7	6	8	6	7	6	6	6	5	5	3	3	8
13-May	4	3	3	2	2	2	3	3	4	3	3	4	3	2	5	3	5	3	9	6	4	4	3	5	9
14-May	5	4	5	6	3	3	4	4	3	4	6	6	6	7	8	8	8	7	8	6	6	6	6	6	8
15-May	6	4	5	6	6	5	7	7	7	6	5	6	6	7	6	7	6	6	4	4	3	3	4	3	7
16-May	3	2	2	2	1	2	1	1	2	2	4	4	3	3	3	3	4	3	3	3	2	7	5	6	7
17-May	4	4	5	6	4	5	5	4	4	5	5	6	6	5	6	6	5	6	6	5	5	5	5	4	6
18-May	4	5	4	5	3	5	4	3	4	4	5	6	6	4	4	4	5	5	5	5	5	4	5	4	6
19-May	4	3	3	2	2	3	4	5	4	6	6	6	6	8	7	6	6	12	8	7	6	6	6	5	12
20-May	5	5	5	4	5	4	5	4	5	5	5	6	5	6	6	6	6	5	5	5	7	4	4	3	7
21-May	2	3	5	5	3	3	4	5	3	3	4	4	4	7	5	3	3	3	3	4	4	4	4	3	7
22-May	4	4	4	4	5	4	4	3	3	4	4	4	3	3	5	6	5	6	4	4	3	4	2	5	6
23-May	4	5	4	2	2	2	3	4	5	5	7	6	6	7	9	10	11	6	5	5	4	3	2	4	11
24-May	3	3	5	2	1	1	4	2	3	3	4	8	6	6	7	6	6	9	6	5	3	3	4	3	9
25-May	3	2	2	2	2	3	5	5	6	6	6	6	6	6	6	6	6	5	5	4	3	3	5	3	6
26-May	3	4	3	3	4	4	4	4	5	5	5	9	6	8	6	7	6	7	5	9	5	5	7	4	9
27-May	3	2	3	2	2	2	2	3	3	2	5	6	6	6	6	6	6	6	7	4	2	2	3	4	7
28-May	2	2	2	2	2	2	2	2	2	3	2	5	5	5	4	5	4	4	2	2	1	2	3	2	5
29-May	3	3	3	2	2	2	2	3	3	5	7	6	8	7	7	7	7	7	6	6	4	11	9	5	11
30-May	7	8	7	5	3	5	5	5	4	4	5	4	5	5	5	5	3	3	4	2	2	4	4	3	8
31-May	3	4	3	4	3	2	2	2	2	2	2	3	3	4	4	5	5	5	5	7	5	5	5	5	7
7 8 7 6 6 5 7 7 7 7 6 7 9 8 8 9 10 11 12 9 9 7 11 9 8																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 45m (WS45) - km/h
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 45m (WS45) - km/h
Lower Camp Met Tower - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	89	11.99	11.99
6 - 11	128	17.25	29.25
12 - 19	228	30.73	59.97
20 - 28	246	33.15	93.13
29 - 38	47	6.33	99.46
> 38	4	0.54	100.00

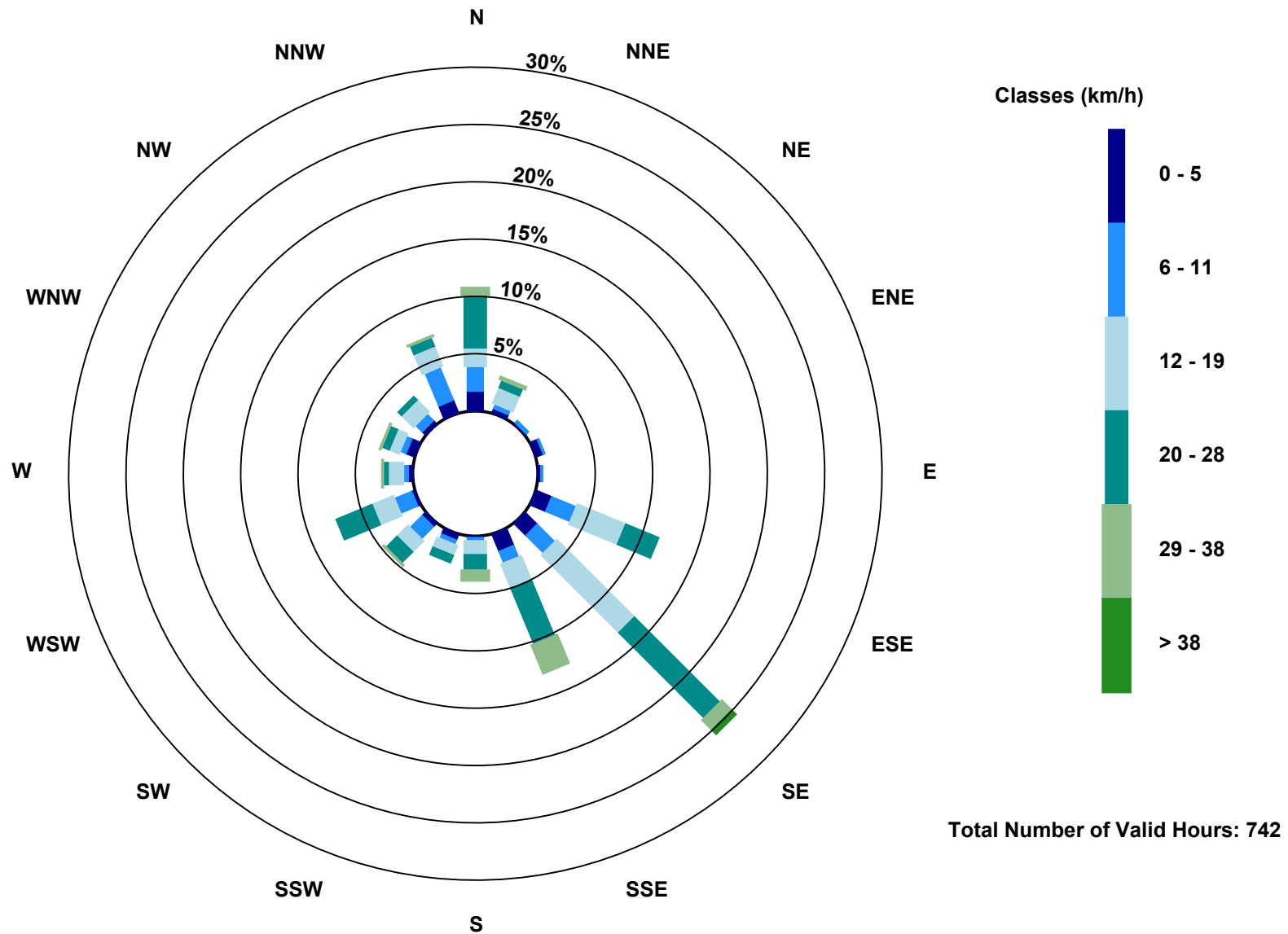
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 45m (WS45) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - May 2025

Maximum Speed: 47 km/h on May 29 17:00										Maximum Daily Speed Average: 31.8 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 10 19:00										Minimum Daily Speed Average: 1.5 km/h on May 13										Hours of Data: 742						
Maximum Diurnal Speed Average: 10.7 km/h at hour 24										Minimum Diurnal Speed Average: 5.9 km/h at hour 14										Hours of Missing Data: 2						
Monthly Average Velocity: 7.8 km/h 154.5 deg										Percentiles: P ₁ = 2 P ₁₀ = 7 Q ₁ = 12 Median = 22 Q ₃ = 29 P ₉₀ = 33 P ₉₉ = 40										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N15	N14	N16	N9	NW6	NW7	NNW5	ENE2	S3	SSW12	S11	SSE19	SE19	SE16	SE16	SE16	SE15	SE15	ESE15	ESE23	SE27	SE35	SE35	SE27	SE9.8	SE35
2-May	SE17	SSE10	SSE8	NNW9	NNE6	W8	WSW5	SW5	S3	S4	SSE4	S3	WSW8	NNW16	NNW21	NW19	NW14	NNW15	NNE15	NNE19	NNE22	N12	N10	N9	NNW4.6	NNE22
3-May	N10	N6	NNW8	WNW4	S3	ESE9	SSE7	SE11	SE17	S9	WSW24	W22	NNW21	NNW20	W18	W21	W25	NNW28	NW30	NW31	NW32	NW24	NNW26	NNW23	WNW11.6	NW32
4-May	NNW15	W11	WSW22	W25	NW26	NW24	DF	NNW14	N8	NNW2	DF	WSW23	WSW26	W27	W22	WSW26	SW25	SW34	SW31	SW32	SW31	WSW29	NNW30	NNW28	W18.5	SW34
5-May	WNNW30	NNW24	N20	N16	N9	NNE10	N11	NW16	NW16	NNW13	W13	NNW6	NE5	N7	N12	N10	N11	N9	NNE13	NNE15	NNE14	ENE9	SE20	SE27	N8.4	WNNW30
6-May	SE31	SE25	SE20	SE20	SE22	SE24	SE25	SE18	SE17	SE18	S20	SW20	SSW29	SW27	SSW30	SW25	SW28	SSW26	S32	S33	SSE40	S40	SSE39	SSE38	SSE22.4	S40
7-May	SSE36	SSE32	SE36	SE38	SE40	SE33	SE29	SSE27	S32	S36	S30	SW27	WSW30	WSW24	WSW24	WSW35	WSW33	WSW27	SW27	SSW23	SSW27	SSW30	SW28	SW19	SSW22.1	SE40
8-May	SW5	WSW11	NNW8	N5	NW8	NW8	NNW2	N9	N26	N25	NNE22	NNE21	N10	WSW1	NNW6	NNE21	NNE20	NNE20	NNE18	NNE15	NE9	E6	SE9	N10.0	N26	
9-May	SSE10	SSE14	SE14	SE10	SE13	SE11	SSE10	SSE10	SSE12	SSE6	WSW24	WSW29	WSW29	WSW27	WSW27	WSW22	WSW23	WSW27	WSW20	WSW17	SW17	WSW17	WSW17	SSW10	SW13.1	WSW29
10-May	S8	SW7	S8	SSE9	SSW4	SSW4	WNNW2	SSW3	SW6	WSW7	WSW9	WSW15	WSW17	NW11	NW7	WSW10	WSW8	SSW3	SW1	S10	S9	ESE12	SE24	SE22	SSW4.7	SE24
11-May	SE12	SE12	SE20	ESE15	ESE12	SE11	SSE12	SSE19	SSE22	SSE18	SE16	SE9	WNNW6	ENE9	SE7	W7	NNW2	NNW9	NNW5	N8	NE9	NE10	E5	NNE4	SE6.6	SSE22
12-May	NNE5	N6	N11	N10	NNW13	NNW12	NNW10	N13	N18	N23	N25	N30	N29	NNE30	NNE29	NNE32	N30	N31	N31	N29	N28	N25	N20	N23	N21.2	NNE32
13-May	NNW22	NNW24	NNW16	NNW8	NW9	NW11	NNW7	NNW10	N12	N12	WNNW7	W9	WSW8	NE5	N5	NE2	SE14	SE13	SSW9	SW11	SE18	SE18	SE23	SE29	NNE1.5	SE29
14-May	SE29	SE33	SSE33	SSE25	SE15	SSE20	SSE19	SW12	WSW12	NNW8	NNW37	N36	N33	N32	N37	N38	NNE37	NNE37	N36	N31	N31	N30	N27	N27	NNE13.7	N38
15-May	N28	N20	N21	N25	N31	N24	NNE25	N28	N30	N26	NNW24	NNW26	N25	N26	N28	N25	NNE24	NNE22	NNE23	NNE20	NNE23	NE29	NE25	NE11	N23.8	N31
16-May	NNE7	NNW11	NNW11	NNW10	N10	NNE7	NNE4	E2	N3	WNNW2	NW5	NNW7	WNNW4	W5	W6	NNE2	ESE3	ESE7	ESE9	ESE9	S2	SE21	SE28	ESE29	E2.8	ESE29
17-May	SE23	SE24	SE32	SE33	SE32	SE29	SE28	SE24	SE22	SE22	SE20	SE23	SE26	SE24	SE25	SE27	SE26	SE27	ESE31	ESE30	ESE31	ESE33	SE34	SE29	SE27.2	SE34
18-May	SE32	SE34	SE29	SE30	SE25	SE25	SE23	SE23	SE19	ESE18	ESE20	SE24	SSE29	SSE21	SSE22	SSE20	SE23	SE28	SE26	SE33	SE31	SE31	SE33	SE33	SE25.9	SE34
19-May	SE26	SE20	SE20	SE18	SE21	SE23	SE21	SSE25	SSE19	SE27	SE33	SSE34	SE30	SE25	SE31	SE30	SSE30	SE44	SE44	SE36	SE29	SE31	SE30	SE30	SE28.0	SE44
20-May	SE29	SE25	SE24	SE24	SE21	SE20	SE23	SE21	SE23	SE28	SE28	SE29	SE26	SE24	SE31	SE35	SE31	SE27	SE28	SE27	SE23	SE19	SE16	SE19	SE24.8	SE35
21-May	SE15	SE16	SSE18	SSE22	SE15	SE20	ESE19	SE19	SE16	SE15	ESE18	ESE19	ESE21	SE28	S34	S29	S25	S23	S21	SSE23	SSE23	SE23	SSE28	SSE25	SSE20.0	S34
22-May	SSE25	SSE30	SSE28	SSE25	SE27	SE23	SSE26	SSE24	SSE23	SSE20	S25	SSW20	SW17	SSW16	SSE18	SE23	SE29	SE26	SSE21	SSE24	SE21	SSE26	SSE23	SSE22	SSE22.2	SSE30
23-May	SSE18	SE18	SE20	SE11	SE13	SE12	SE13	SE19	ESE22	ESE25	SE25	SE31	SSE31	SE24	ESE29	ESE30	SE29	SE32	SE31	SSE29	SSE31	S16	SSE19	S29	SE22.2	SE32
24-May	SSE29	SSE25	SE16	ESE12	ESE11	SE7	SE14	SE9	SSE11	SE18	ESE21	SE31	SE32	SSE30	SSE30	SE23	SSE31	SSE26	SSW30	SSE30	SSE31	SSE32	SSE35	SSE34	SSE22.4	SSE35
25-May	SSE35	SSE33	SSE32	SSE33	SSE33	SE29	SE32	SSE31	SSE32	SSE35	SSE33	SSE34	SSE31	S30	S33	S31	SSE33	S31	S32	S29	S33	SSE36	SSE36	SSE30	SSE31.8	SSE36
26-May	SE30	SE28	SE23	SE22	SE29	SE22	SE21	SE26	SE24	SSE22	SE21	S34	S38	SSE35	SSE37	S37	S40	S39	S31	W34	NNW14	WSW17	S8	SW12	SSE21.6	S40
27-May	SSW16	SW14	WSW8	SW10	S11	S8	SSW9	SW8	SW13	WSW13	W19	WSW18	WSW27	WSW25	WSW28	WSW32	WSW33	WSW30	W21	W25	WSW22	WSW19	WSW23	WSW24	WSW18.2	WSW33
28-May	SW19	SW9	SW6	SW8	SSW5	S8	S8	SSE7	SE7	SE10	SE10	SW8	WSW15	WSW16	WSW11	SW21	S21	S17	SSE19	SSE22	SSE24	SSW30	SSE27	SSE24	S11.9	SSE30
29-May	SSE18	SSE22	SSE25	SSE24	SSE25	SSE26	SE23	SE22	SSE25	SSE23	SSE35	SSE35	SSE36	SSE38	SE38	SE45	SE47	SE41	SSE34	SSE33	SSE34	W35	NNW39	NNW26	SSE24.2	SE47
30-May	W34	W23	WSW27	WNNW19	WNNW22	W25	WNNW25	NW21	NW13	NW17	NW14	NNW9	WNNW8	WSW10	WSW18	WSW21	SW13	S21	SSW21	SSW22	S23	S27	SSW29	S32	WSW14.2	W34
31-May	S30	S12	SW7	WSW16	WSW10	SSW7	S11	SE10	SE12	SE11	SE5	NNW6	NNW15	NNW21	N24	N24	N31	N29	N23	N27	NNW26	NNW29	NNW23	NNW22	NNW8.3	N31
SSE10.3 SE9.5 SE9.4 SE8.0 SE7.8 SE8.0 SE9.4 SE7.9 SE7.7 SE7.8 SSE6.9 S6.5 S7.3 S5.9 S6.6 S6.5 SSE8.3 SSE8.5 SSE7.6 SSE7.3 SSE8.3 SSE9.1 SSE10.1 SSE10.7																									Diurnal Average	
SSE36 SE34 SE36 SE38 SE40 SE33 SE32 SSE31 S32 S36 NNW37 N36 S38 SSE38 SE38 SE45 SE47 SSE44 SE44 SE36 SSE40 S40 SSE39 SSE38																									Diurnal Maximum	
DF - DAS Failure																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 100m (WS100) - km/h

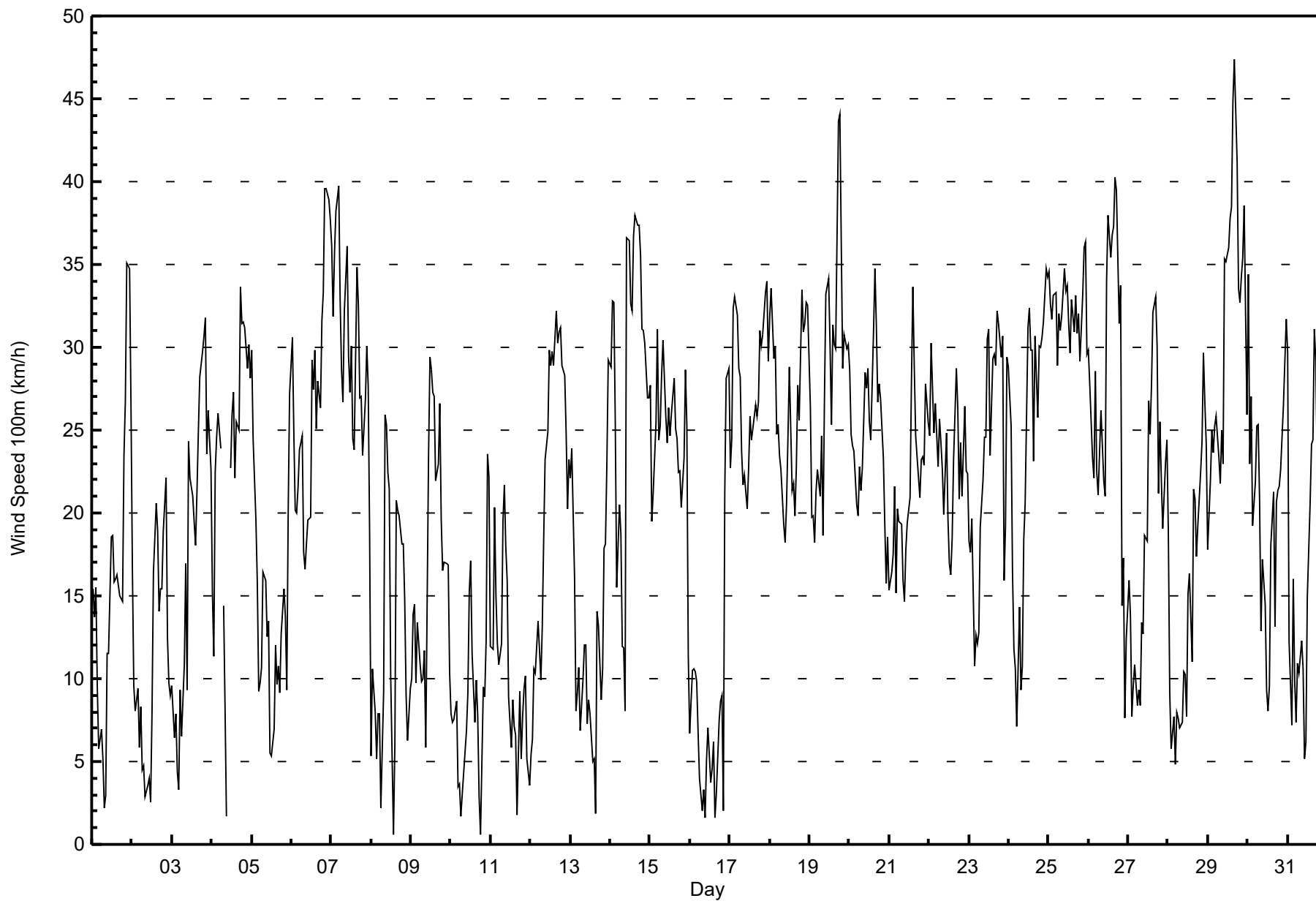
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 1 km/h on May 1 05:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	3	3	1	1	2	1	3	3	3	3	3	3	3	3	3	3	3	6	3	5	3	6	6
2-May	5	3	4	4	3	2	3	2	1	1	2	3	4	5	6	6	6	3	3	5	4	3	2	3	6
3-May	2	1	2	2	1	4	3	3	2	6	5	4	5	6	5	5	4	6	5	7	7	4	5	5	7
4-May	3	5	3	4	4	5	DF	4	6	2	DF	4	5	4	5	4	6	4	4	4	3	4	5	4	6
5-May	5	7	6	3	4	2	3	4	4	4	6	4	3	3	4	4	3	3	2	3	3	4	5	5	7
6-May	4	4	3	2	3	3	4	3	4	3	5	5	7	6	6	7	6	5	6	3	3	4	4	5	7
7-May	4	4	3	3	4	3	3	5	6	5	6	4	5	4	3	6	6	4	5	4	3	3	3	6	6
8-May	3	3	3	2	2	4	1	6	8	6	5	4	5	3	7	5	4	4	3	4	3	3	2	3	8
9-May	3	2	2	4	3	3	2	2	2	4	5	6	5	5	4	4	5	5	4	2	2	2	3	6	6
10-May	3	3	2	3	3	3	1	2	5	3	3	4	5	6	7	4	3	4	2	2	2	4	4	6	7
11-May	4	4	3	3	3	2	8	3	4	3	3	4	5	3	4	3	2	3	2	3	3	4	3	2	8
12-May	3	3	2	4	3	4	3	3	4	4	5	6	6	5	7	6	6	6	5	5	5	6	3	3	7
13-May	3	3	3	3	2	3	3	3	4	3	3	4	3	2	5	2	6	3	10	6	6	4	4	5	10
14-May	5	4	6	6	4	4	4	3	2	3	5	5	5	6	6	6	7	6	6	5	5	5	5	5	7
15-May	5	4	4	6	5	4	6	6	5	5	5	5	6	6	5	6	6	5	4	3	5	2	3	6	6
16-May	3	2	1	2	1	3	1	2	2	2	3	4	3	3	3	3	4	4	4	3	3	9	5	5	9
17-May	4	4	4	4	3	4	3	3	3	4	4	5	5	5	6	5	5	5	4	5	5	5	4	5	6
18-May	4	4	3	3	2	3	2	2	3	3	4	5	5	4	4	4	4	4	5	4	4	4	3	3	5
19-May	3	3	2	1	2	2	4	6	4	6	6	5	6	7	6	6	6	12	7	7	6	5	4	4	12
20-May	4	4	3	3	5	3	4	3	4	3	4	4	5	5	5	5	5	4	4	3	6	4	4	3	6
21-May	2	3	5	5	3	3	3	4	3	3	3	3	3	7	5	4	3	3	3	4	4	4	4	3	7
22-May	4	3	4	4	3	3	4	3	3	4	3	5	3	3	5	5	4	6	4	4	3	4	3	4	6
23-May	4	5	3	3	2	4	3	5	4	4	6	6	6	7	10	9	11	5	4	5	4	3	6	4	11
24-May	2	4	4	3	3	3	5	2	3	2	3	7	5	6	7	5	6	9	6	5	4	3	4	4	9
25-May	4	4	3	4	3	3	4	5	6	5	6	6	6	6	6	6	7	6	5	4	3	3	4	5	7
26-May	4	5	3	3	2	3	3	3	4	5	5	8	6	8	6	8	6	7	5	9	6	5	7	4	9
27-May	3	3	2	2	2	2	2	3	2	2	4	6	5	5	5	5	5	5	7	3	2	1	2	3	7
28-May	2	6	2	2	2	2	1	2	2	2	3	5	5	5	4	5	4	4	3	2	3	2	3	5	6
29-May	2	3	2	2	3	2	3	2	4	6	8	7	8	7	7	6	6	6	6	6	5	11	9	5	11
30-May	7	9	7	6	5	4	4	5	5	4	4	4	5	6	5	4	3	4	3	2	3	2	5	2	9
31-May	3	6	4	4	5	3	1	2	1	2	2	4	3	3	3	4	4	4	5	8	6	4	5	5	8
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 100m (WS100) - km/h
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 100m (WS100) - km/h
Lower Camp Met Tower - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	43	5.80	5.80
6 - 11	130	17.52	23.32
12 - 19	132	17.79	41.11
20 - 28	248	33.42	74.53
29 - 38	177	23.85	98.38
> 38	12	1.62	100.00

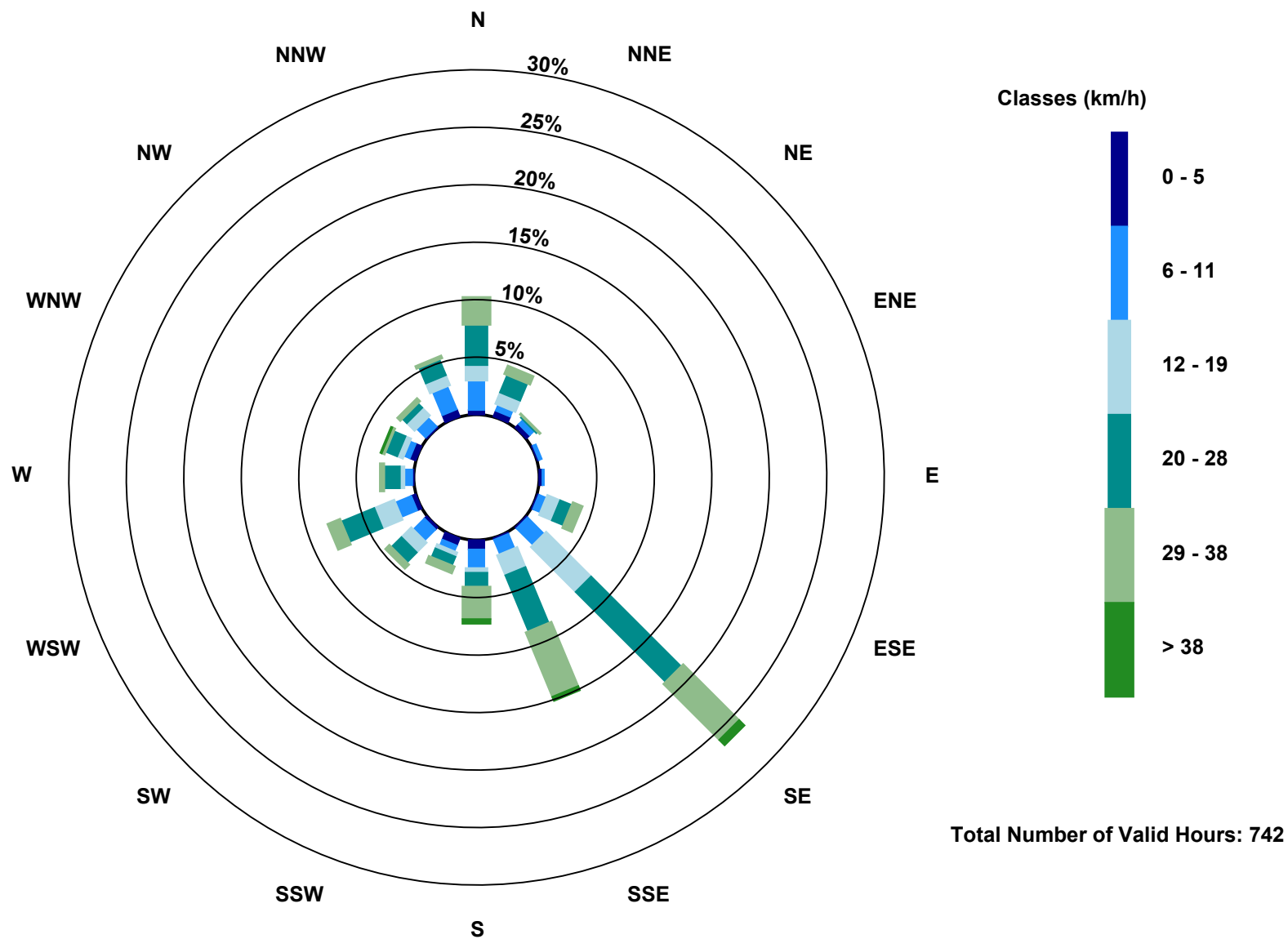
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 100m (WS100) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - May 2025

Maximum Speed: 50 km/h on May 6 22:00										Maximum Daily Speed Average: 37.3 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 1 08:00										Minimum Daily Speed Average: 3.0 km/h on May 13										Hours of Data: 738						
Maximum Diurnal Speed Average: 13.4 km/h at hour 23										Minimum Diurnal Speed Average: 6.8 km/h at hour 14										Hours of Missing Data: 6						
Monthly Average Velocity: 9.4 km/h 162.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 9 Q ₁ = 16 Median = 25 Q ₃ = 32 P ₉₀ = 37 P ₉₉ = 45										Percent Operational Time: 99.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N18	N15	N17	N11	NNW5	NW6	NNW5	ESE0	SSW5	SSW12	S13	SSE19	SSE19	SE16	SE16	SE16	SE15	SE16	SE17	SE28	SE32	SE38	SE35	SE27	SE10.5	SE38
2-May	SE19	SSE17	SSW13	NW8	NNE9	WNW6	W9	WSW6	SSW4	SSW5	S4	SW5	W9WNW18WNW22	NW20	NNW16	N17	NNE17	NE25	NE35	NE19	NE10	E9			N4.1	NE35
3-May	E7	ESE8	SE6	SSE9	SSE10	SE17	SE17	SSE18	SSE18	SSW12	W25	W24WNW23WNW21	W19	W23	W26WNW32	NW33	NW36	NW36	NW27	NNW29	N27				WNW10.3	NW36
4-May	NNW16	W13WSW26WNW28	NNW31	NNW29	DF	N18	N10	NNW2	DF	W25	W27	W28	W23WSW26	SW25	SW36	SW34	SW36	SW37WSW36WNW39	NW39						W20.5	WNW39
5-May	WNW39	NNW28	NNE24	N20	N9	N9	N11	NW17	NW16WNW13WNW14	NW6	NNE5	N6	N12	N10	N10	N8	NNE13	NNE18	NE22	E17	SE26	SE33			N8.7	WNW39
6-May	SE34	SE30	SE26	SE23	SE27	SE32	SE28	SSE18	SSE18	SSE20	S21	SW20	SW31	SW29	SSW32	SW26	SW30	SSW28	S35	S38	S49	S50	SSE47	SSE46	S26.7	S50
7-May	SSE43	SSE38	SSE38	SSE38	SE39	SE35	SE31	SSE29	S34	S38	S32	SW29WSW31WSW25WSW25WSW36WSW33WSW29	SW29	SW27	SSW32	SW35WSW32WSW23								SSW24.8	SSE43	
8-May	W10	W16	NW11	NNE11	NNW9	NNW12	NE9	NNE10	NNE31	NNE28	NNE24	NNE22	N10	WSW1	NNW4	NNE21	NNE20	NNE21	NNE19	NNE21	NNE25	NE21	ENE10	SE12	NNE12.4	NNE31
9-May	S18	SSE22	SSE19	S15	SSE11	S13	SSW10	S9	S12	SSW7WSW25WSW31WSW30WSW29WSW28WSW23WSW24WSW28WSW21WSW20WSW17WSW18WSW19	SW16													SW16.3	WSW31	
10-May	SSW14	SW15	SW11	SW12WSW12WSW10	WSW6	W3	SW8	WSW8WSW10WSW16WSW18	NW12	NW9WSW10	WSW9	SSW4	SSW2	S9	S9	SE17	SE32	SE26							SSW6.7	SE32
11-May	SE21	SSE18	SE28	SE21	SE14	SE16	SSE20	S21	SSE23	SSE19	SE16	SE8	NW5	E9	SE7	W8	W2	NNW9	N5	NNE8	NE10	ENE17	ESE14	ESE6	SE9.2	SE28
12-May	NNE2	NE4	NNE11	NNE16	NNE15	N19	NNE17	N15	NNE18	NNE22	NNE25	NNE31	NNE30	NNE31	NNE30	NNE34	NNE32	NNE32	NNE33	NNE33	N34	NNE34	NNE28	N28	NNE23.8	N34
13-May	N28	N30	N26	N15	NNW14	NNW16	N15	N12	N12	N12	WNW8	W9	WSW8	NE4	N4	ENE2	SE14	SE13	SSW10	SW12	SE23	SSE23	SSE27	SE33	NNE3.0	SSE33
14-May	SE33	SSE37	SSE38	SSE32	SSE23	SSE25	S21	SW12	W11	NNW9	N36	N37	N33	NNE33	NNE38	NNE38	NNE40	NNE40	N38	N33	N33	N33	N30	N29	NNE13.3	NNE40
15-May	N31	N22	N25	N28	N35	N27	NNE27	N29	N31	N26	NNW26	NNW28	N25	NNE26	NNE29	NNE26	NNE25	NNE23	NNE24	NNE22	NNE28	NE34	NE32	ENE21	NNE25.8	N35
16-May	ENE13	NNE10	NNE13	NNE13	NNE17	NE12	E7	ESE3	N2	NW2	NW5	NNW7	WNW4	W2	W6	N1	SE3	SE7	ESE9	ESE10	SSE5	SE27	SE32	SE31	E5.3	SE32
17-May	SE27	SE30	SE38	SE38	SE36	SE33	SE32	SE27	SE23	SE23	SE21	SE24	SE27	SE26	SE26	SE28	SE28	SE29	SE34	ESE34	ESE37	SE40	SE39	SE37	SE30.7	SE40
18-May	SE38	SE37	SE32	SE32	SE29	SE30	SE27	SE24	SE21	SE19	SE21	SE27	SSE30	SSE22	SSE23	SSE21	SE25	SE29	SE28	SE39	SE38	SE38	SE40	SE37	SE29.1	SE40
19-May	SSE28	SE24	SE23	SSE22	SSE24	SSE24	SSE26	SSE27	SSE20	SE28	SE34	SSE36	SE31	SE27	SE33	SE32	SSE31	SSE46	SSE46	SSE37	SE32	SE33	SE31	SE31	SSE30.1	SSE46
20-May	SE30	SE27	SE26	SE26	SE23	SE23	SE25	SE24	SE25	SE29	SE30	SE30	SE27	SE26	SE34	SE37	SE33	SE28	SE30	SE29	SSE25	SSE21	SE19	SSE21	SE26.8	SE37
21-May	SSE18	SE20	SSE22	SSE25	SSE18	SE22	SE21	SE19	SE17	SE15	SE18	ESE20	ESE21	SE30	S36	S32	S26	S25	S23	SSE25	SSE25	SSE25	SSE30	SSE31	SSE22.3	SSE36
22-May	SSE28	SSE32	SSE31	SSE28	SE26	SSE24	SSE29	SSE25	SSE23	SSE20	S26	SSW21	SW18	SSW18	SSE21	SSE24	SE29	SE27	SSE23	SSE26	SE24	S34	SSE31	S28	SSE24.5	S34
23-May	SSE27	SSE24	SSE29	SSE21	SSE18	SSE19	SE18	SE21	SE24	SE28	SE26	SSE31	SSE32	SE24	SE33	ESE33	SE33	SSE36	SE35	SSE32	S34	S18	S25	S34	SSE26.0	SSE36
24-May	S34	SSE32	SE24	SE21	SE22	SE17	SE15	SSE12	SSE12	SE19	SE23	SE33	SE34	SSE31	S32	SE26	SSE32	S27	SSW35	SSE33	SSE37	S40	SSE44	SSE44	SSE26.9	SSE44
25-May	SSE45	SSE43	SSE43	SSE43	SSE43	SSE36	SSE36	SSE32	SSE35	SSE37	S36	SSE35	SSE33	S32	S35	S33	S36	S34	S35	S33	S40	S45	SSE44	SSE41	SSE37.3	SSE45
26-May	SSE37	SSE36	SSE30	SSE26	SE30	SE22	SE22	SE26	SE25	SSE23	SSE22	S36	S40	SSE37	S39	S40	S43	S44	S39WNW41	NW17	UO	SSW11	SW14		SSE25.2	S44
27-May	SW16	SW17	W14WSW11	SSW9	SSW10	SW12	SW9WSW14WSW14	W19WSW19WSW28WSW27WSW29WSW33WSW35WSW32	W24	W30	W27	W22WSW24WSW26													WSW20.3	WSW35
28-May	WSW29WSW24WSW18WSW19	SW11	SW10	SW11	SSW8	S6	SSE9	SE10	SW9WSW17WSW18WSW12	SW23	S22	S18	SSE20	SSE24	SSE29	S38	S38	S38							SSW15.8	S38
29-May	S29	S32	S34	S31	SSE35	SSE33	SSE29	SSE28	SSE31	SSE26	SSE38	SSE37	SSE38	SSE39	SSE40	SE45	SE47	SSE43	SSE36	SSE36	SSE39	W40WNW44WNW29			SSE27.8	SE47
30-May	W38WNW26WSW32WNW25WNW30	W29	NW31	NW24	NW14	NW18	NNW16	NW11	WNW9WSW12WSW19WSW22	SW14	SSW21	SSW24	SSW25	SSW25	SSW29	SSW35	SSW42								WSW17.1	SSW42
31-May	SSW42	SSW23WSW18	W23WSW17	SW11	SSW11	S9	SSE9	SSE10	SSE6	NNW5	NNW15	N21	N25	N26	N33	N35	UO	N33	NNW28	UO	UO	NNW25			NW7.3	SSW42
SSE13.3SSE12.7SSE11.8SSE9.6SSE8.9SSE9.5SE10.5SSE8.2SSE8.2SSE8.1SSE7.5S7.3SSW8.0S6.8S7.6S7.4S9.0SSE9.2S10.1SSE8.1SSE9.8SSE12.6SSE13.4SSE13.3																								Diurnal Average		
SSE45SSE43SSE43SSE43SSE43SSE36SSE36SSE32SSE35S38SSE38SSE37S40SSE39SSE40SE45SE47SSE46SSE46WNW41S49S50SSE47SSE46																								Diurnal Maximum		
DF - DAS Failure UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

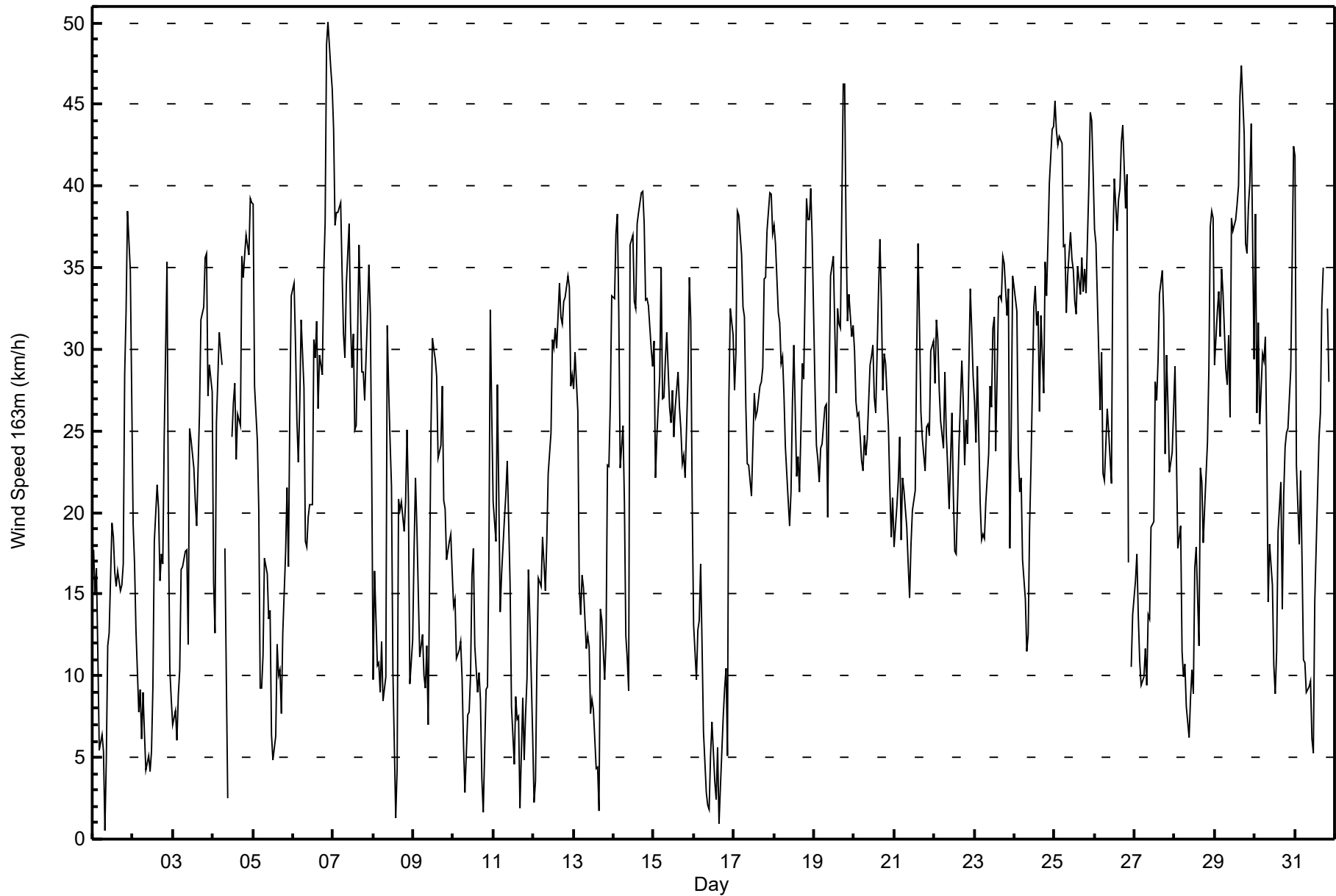
Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower - May 2025

Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 0 Percent Operational Time: 99.2							
Minimum Value: 1 km/h on May 29 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	2	3	1	1	2	2	4	3	3	3	4	3	3	3	3	2	3	6	3	4	3	5	6
2-May	3	3	4	3	3	2	2	2	1	2	2	4	4	5	6	5	5	2	3	7	2	6	4	4	7
3-May	2	2	2	2	3	3	3	3	4	6	4	4	5	6	5	4	5	5	4	7	8	5	4	5	8
4-May	3	4	3	4	4	4	DF	3	6	2	DF	3	5	4	5	4	5	4	3	4	2	2	5	4	6
5-May	4	7	6	4	4	2	3	3	4	4	5	4	2	3	4	4	3	3	2	3	4	4	4	4	7
6-May	5	3	3	3	3	3	4	3	3	3	5	5	7	6	5	7	6	5	6	5	3	3	3	4	7
7-May	3	6	5	4	4	4	3	6	6	5	5	4	5	4	2	6	5	4	4	3	3	4	4	4	6
8-May	5	3	1	1	1	5	4	8	8	8	5	4	5	4	6	4	5	4	3	6	3	5	4	3	8
9-May	4	2	2	5	2	2	1	2	3	4	5	6	4	5	4	4	5	5	4	2	2	2	3	4	6
10-May	3	4	3	2	5	3	2	2	4	3	3	3	4	6	8	4	3	4	2	2	2	3	4	4	8
11-May	4	5	3	4	3	2	7	3	4	4	2	4	5	3	3	3	2	3	2	3	3	3	3	3	7
12-May	2	2	3	2	2	3	2	3	4	4	5	5	6	5	7	6	6	5	4	5	5	5	3	3	7
13-May	3	3	3	3	1	1	2	4	3	3	3	4	3	2	5	2	6	2	9	7	6	4	5	5	9
14-May	7	4	5	5	4	2	3	3	2	4	4	4	4	6	6	5	6	6	6	5	6	5	5	5	7
15-May	5	4	4	6	6	5	6	6	5	4	5	5	5	6	5	5	6	4	4	3	5	1	3	3	6
16-May	5	1	1	1	2	5	2	2	2	2	3	4	3	2	3	3	3	3	4	3	3	9	5	4	9
17-May	3	4	4	3	3	4	3	3	3	3	4	5	5	4	6	5	5	5	3	4	4	5	4	4	6
18-May	3	4	3	3	2	2	2	2	3	3	4	5	5	4	4	4	4	4	4	3	3	4	4	5	5
19-May	4	2	3	3	3	3	5	6	4	6	6	5	5	7	6	6	6	13	7	6	6	4	4	4	13
20-May	3	4	4	3	4	4	4	3	4	4	3	4	5	5	5	4	5	4	4	3	6	4	4	3	6
21-May	2	3	5	5	3	3	2	3	3	3	3	3	7	2	3	3	3	3	3	4	4	4	4	2	7
22-May	3	2	4	4	3	4	4	3	3	4	3	5	3	3	5	5	3	6	3	4	2	4	2	2	6
23-May	2	7	3	3	2	1	3	4	4	3	6	6	5	7	12	8	8	5	5	6	5	3	7	3	12
24-May	1	2	4	3	1	4	3	2	3	2	3	7	5	6	7	4	6	10	5	5	3	2	3	2	10
25-May	3	2	2	2	2	4	4	5	6	5	6	5	6	6	6	6	6	6	5	4	3	2	2	4	6
26-May	4	3	5	4	3	4	3	3	4	5	5	8	5	8	6	7	5	6	5	7	5	UO	6	3	8
27-May	3	3	3	3	2	2	2	2	2	2	5	7	4	6	5	5	5	4	8	2	1	2	1	2	8
28-May	3	5	3	2	4	2	2	2	2	2	3	5	5	5	4	5	3	4	2	2	3	2	2	2	5
29-May	1	2	2	1	2	2	2	2	3	5	7	7	8	8	7	6	7	7	6	6	4	11	8	5	11
30-May	6	8	6	6	6	4	4	5	5	3	4	4	4	5	5	4	4	4	3	2	3	2	5	3	8
31-May	3	8	6	3	5	2	1	2	2	1	1	4	3	3	2	3	4	3	UO	9	7	UO	UO	4	9
Diurnal Maximum																									
DF - DAS Failure UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	33	4.47	4.47
6 - 11	90	12.20	16.67
12 - 19	134	18.16	34.82
20 - 28	219	29.67	64.50
29 - 38	216	29.27	93.77
> 38	46	6.23	100.00

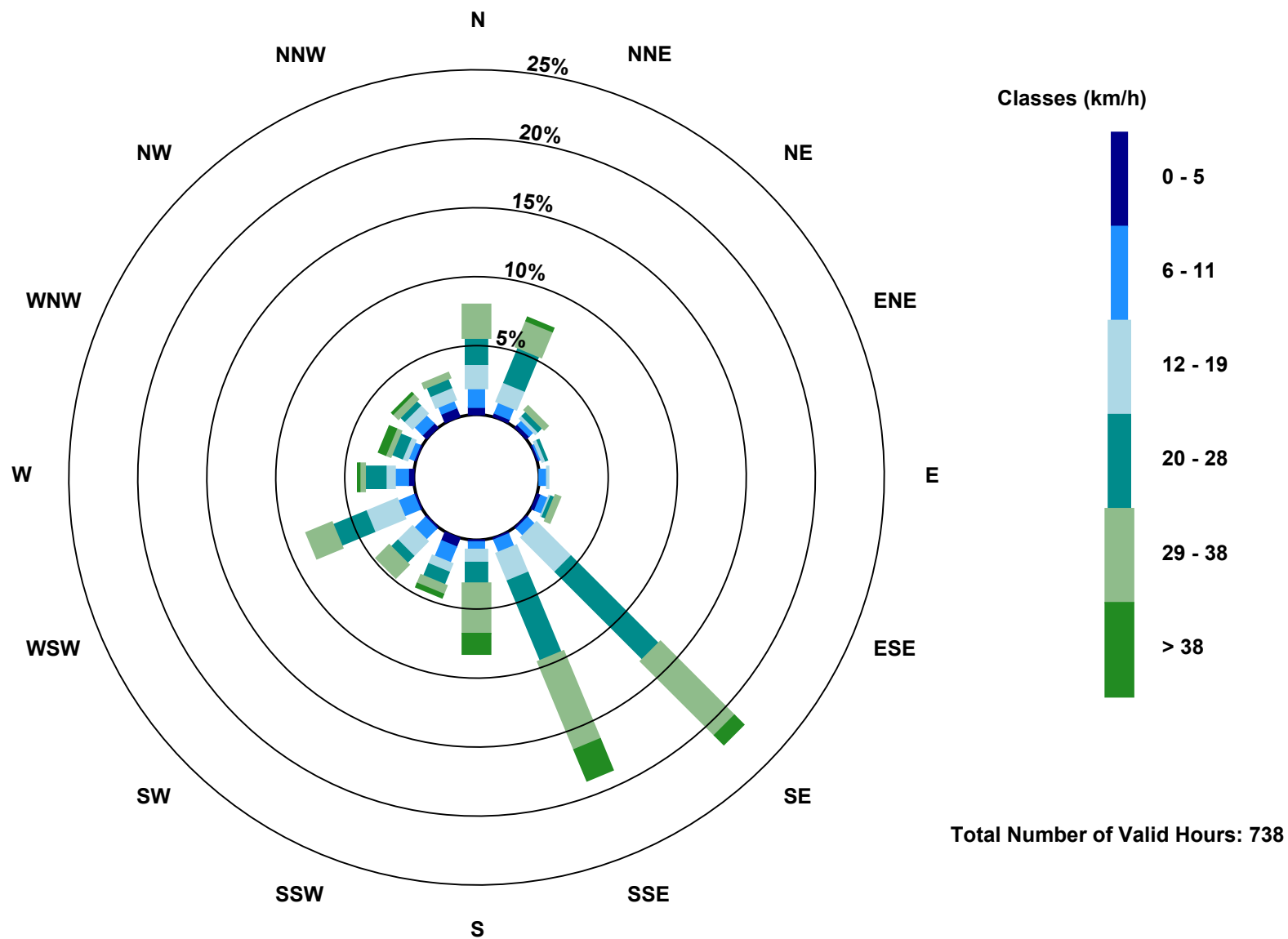
Total Number of Valid Hours: 738

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Lower Camp Met Tower - May 2025

Direction of Maximum Speed: 149 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 156.3 deg on May 25																				Hours in Service:		744			
Direction of Minimum Speed: 291 deg on May 24 06:00 Direction of Minimum Daily Speed Average: 0.5 deg on May 13																				Hours of Data:		742			
																				Hours of Missing Data:		2			
Monthly Average Direction: 157.7 deg																				Percent Operational Time:		99.7			
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	354	337	352	359	305	314	344	73	122	189	175	147	133	139	131	131	131	137	127	124	126	126	127	118	128.0
2-May	142	154	128	338	257	268	226	227	144	130	113	150	236	287	299	306	329	342	13	16	354	329	351	348	317.9
3-May	309	330	328	307	3	341	81	126	138	154	250	260	286	286	259	261	258	300	314	313	315	303	327	333	287.7
4-May	308	244	245	274	315	317	DF	324	353	328	DF	255	256	259	254	241	224	220	218	215	223	243	283	300	251.1
5-May	303	341	5	2	342	13	2	314	313	297	277	355	55	30	12	351	0	349	21	13	350	39	77	109	351.3
6-May	119	116	109	113	104	112	116	134	130	142	175	227	210	213	209	213	216	200	184	170	163	163	157	153	172.0
7-May	151	138	133	132	129	128	128	146	173	182	183	230	246	241	238	251	241	240	235	209	191	196	217	194	189.6
8-May	144	202	286	319	329	333	26	321	357	6	16	9	356	176	351	6	13	13	23	13	356	347	65	130	5.4
9-May	157	142	153	96	84	55	120	129	136	140	247	242	245	250	250	243	243	244	246	230	216	240	227	123	228.7
10-May	224	170	132	131	84	163	343	163	227	232	243	239	248	316	301	238	233	185	29	150	129	124	121	120	194.2
11-May	86	92	119	96	358	339	79	154	147	154	136	135	273	81	132	241	32	342	349	355	334	333	51	344	132.4
12-May	331	337	346	10	331	317	329	346	358	0	358	8	5	5	10	12	7	360	9	9	353	359	338	334	359.8
13-May	348	345	332	209	336	353	357	340	345	350	280	255	226	75	7	64	134	136	216	243	133	140	136	144	111.7
14-May	147	137	148	136	120	139	152	223	248	331	344	346	353	4	5	3	17	12	2	348	354	354	3	351	13.6
15-May	359	1	4	5	3	1	9	1	356	348	338	339	350	4	1	6	5	17	18	14	20	26	25	340	1.6
16-May	340	351	2	28	43	4	354	74	349	205	284	344	309	245	257	58	138	115	102	106	306	123	124	117	87.7
17-May	117	111	121	126	127	129	131	136	131	134	143	141	123	133	138	135	130	134	122	119	120	126	128	130	128.8
18-May	127	122	120	120	110	120	130	134	132	118	119	125	161	157	159	156	145	136	138	129	127	131	132	131	134.4
19-May	130	116	130	127	129	127	142	158	153	143	149	152	146	141	140	147	160	149	149	145	145	137	141	134	144.4
20-May	136	134	135	131	131	126	132	136	135	138	125	129	144	143	128	128	143	138	134	134	146	147	138	148	135.8
21-May	133	115	156	152	130	114	121	126	148	149	124	116	119	138	173	174	182	189	186	168	160	153	157	156	154.4
22-May	153	152	152	150	140	150	154	155	153	163	171	193	224	209	165	152	138	141	163	153	131	142	135	148	157.0
23-May	138	135	129	179	116	97	139	142	127	128	142	147	153	135	125	113	129	144	134	155	165	150	145	153	140.8
24-May	148	135	139	47	201	291	118	133	148	126	123	136	144	160	167	135	151	172	199	153	148	143	142	144	149.7
25-May	141	135	133	133	133	132	136	147	157	161	165	156	155	167	182	168	166	170	173	165	164	158	150	142	156.3
26-May	137	139	140	140	128	130	132	128	135	155	146	173	171	163	161	167	175	166	174	281	297	233	160	224	164.1
27-May	203	187	227	187	163	154	192	223	235	228	259	246	244	250	253	250	253	247	259	257	237	231	230	244	238.7
28-May	235	157	143	127	123	124	123	127	134	125	115	219	246	263	249	214	180	176	154	133	130	133	130	128	157.5
29-May	140	134	129	134	134	132	134	139	140	149	161	162	153	152	148	140	141	146	152	151	146	260	294	291	152.7
30-May	263	281	250	302	285	265	300	312	309	305	325	339	296	243	239	248	216	183	205	185	163	166	163	161	241.1
31-May	158	122	132	193	167	141	126	118	120	130	120	354	340	340	345	1	345	350	339	346	326	322	321	325	357.8
144.4 131.5 137.2 127.2 120.9 122.0 127.9 143.1 144.1 151.2 166.6 180.4 189.6 184.5 185.4 183.4 174.4 171.0 171.9 159.0 155.7 159.6 147.5 143.2																									
Diurnal Average																									
DF - DAS Failure																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

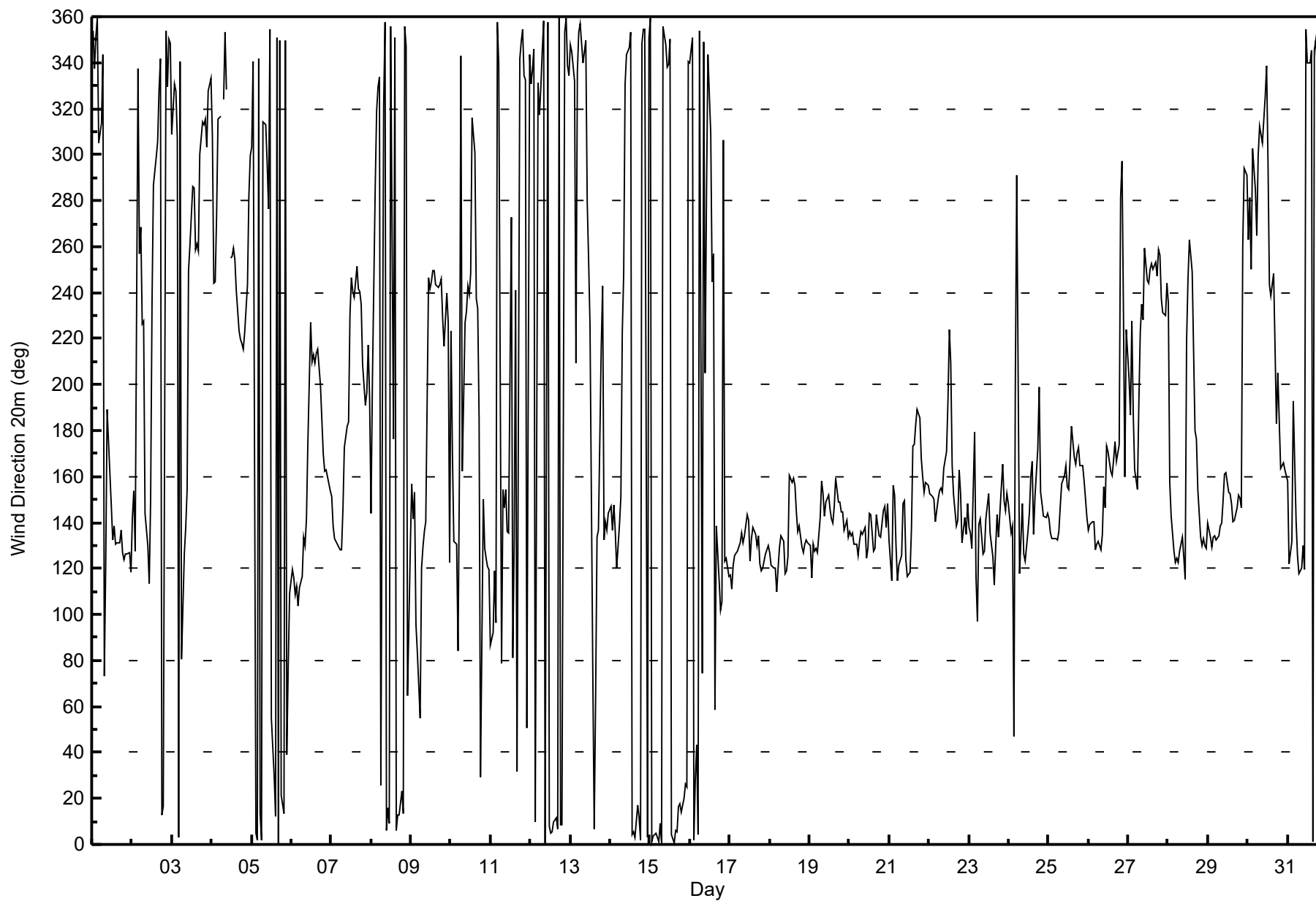
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 106 deg on May 11 02:00																			Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7						
Minimum Value: 5 deg on May 28 21:00																									
Percentiles: P ₁ = 7 P ₁₀ = 11 Q ₁ = 16 Median = 20 Q ₃ = 29 P ₉₀ = 56 P ₉₉ = 91																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	21	24	20	21	22	18	28	50	75	21	22	14	17	21	15	19	21	14	20	20	15	16	17	62	75
2-May	21	51	64	18	29	63	36	20	61	29	37	87	54	33	25	34	37	17	31	18	20	23	17	28	87
3-May	45	22	20	54	80	70	80	77	11	40	18	22	30	32	23	23	22	18	16	15	16	18	19	19	80
4-May	18	22	18	22	17	16	DF	19	87	100	DF	24	17	20	23	16	15	11	10	8	8	19	23	14	100
5-May	14	38	20	22	45	38	26	23	31	47	43	83	40	56	33	39	29	30	20	18	25	46	72	24	83
6-May	18	20	24	21	17	18	21	22	17	18	27	27	16	17	15	21	17	18	12	8	7	8	8	9	27
7-May	10	9	12	15	13	15	16	17	11	10	12	24	16	14	10	16	13	14	12	14	7	9	9	36	36
8-May	71	91	55	33	20	63	47	56	27	23	22	27	39	90	79	27	22	21	23	20	37	56	66	90	91
9-May	57	38	72	57	48	54	19	13	18	48	20	19	18	19	18	17	19	17	14	11	9	20	75	61	75
10-May	90	71	9	22	84	101	58	55	81	35	38	25	25	82	91	27	52	86	97	16	34	13	25	18	101
11-May	83	106	29	68	65	62	84	11	12	12	18	33	72	37	45	50	104	25	25	27	47	64	60	17	106
12-May	55	64	70	44	27	34	37	22	24	24	25	22	24	24	25	22	23	21	20	20	17	19	17	16	70
13-May	15	17	59	86	57	20	33	26	27	30	55	42	47	42	59	91	25	18	52	84	21	14	14	15	91
14-May	16	13	10	26	21	12	11	32	20	52	16	17	20	23	23	23	23	24	21	19	20	20	20	21	52
15-May	21	21	21	21	21	21	23	22	21	20	20	19	24	26	24	28	24	30	24	21	20	24	30	47	47
16-May	36	17	50	59	31	34	38	87	54	94	78	58	74	47	60	89	76	50	40	75	86	23	17	18	94
17-May	18	19	17	18	17	19	19	18	20	21	20	22	25	21	23	20	23	20	19	18	18	17	18	18	25
18-May	17	17	19	20	22	23	22	17	22	22	24	22	17	17	18	16	22	18	17	18	17	16	17	15	24
19-May	15	22	27	20	13	17	17	11	18	17	14	13	19	20	19	17	13	17	12	14	17	16	14	17	27
20-May	15	17	16	17	19	21	18	18	21	17	19	18	17	20	20	19	15	18	18	18	16	18	22	15	22
21-May	17	29	20	15	18	21	18	21	18	25	24	22	22	22	8	8	10	8	9	13	10	12	8	8	29
22-May	9	8	9	9	13	10	9	9	10	15	10	28	16	20	17	16	18	24	12	14	17	11	10	14	28
23-May	23	56	32	63	30	31	49	22	21	21	22	16	15	21	27	23	22	16	18	13	12	23	16	13	63
24-May	8	9	49	50	86	93	42	25	33	18	20	18	17	15	21	22	14	33	16	10	9	8	8	7	93
25-May	7	8	9	10	10	14	14	11	10	11	14	14	16	16	11	18	14	15	11	8	7	8	9	11	18
26-May	11	13	20	35	34	33	21	18	17	15	15	23	16	14	12	14	14	10	22	27	38	36	83	48	83
27-May	23	41	51	44	20	32	26	26	14	13	27	25	22	21	19	18	18	17	28	19	10	11	14	26	51
28-May	37	75	12	8	10	15	13	13	15	18	22	63	39	26	40	23	15	16	9	8	5	9	12	18	75
29-May	63	18	23	16	13	12	10	9	9	14	15	14	14	15	16	14	12	10	12	10	9	50	19	22	63
30-May	20	27	26	32	33	20	19	23	35	26	35	52	81	56	27	22	22	16	8	12	6	10	11	8	81
31-May	7	70	18	52	48	30	16	19	19	18	44	43	19	19	18	21	18	21	27	24	22	21	23	24	70
90 106 72 86 86 101 84 87 87 100 78 87 81 90 91 91 104 86 97 84 86 64 83 90																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - May 2025

Direction of Maximum Speed: 136 deg on May 29 17:00 Direction of Maximum Daily Speed Average: 154.7 deg on May 25																					Hours in Service:		744		
Direction of Minimum Speed: 349 deg on May 3 06:00																					Direction of Minimum Daily Speed Average: 1.0 deg on May 13		Hours of Data:		742
Monthly Average Direction: 148.4 deg																							Hours of Missing Data:		2
																							Percent Operational Time:		99.7
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	356	343	354	359	317	315	340	64	155	191	172	146	130	134	127	126	129	133	119	120	124	125	124	120	121.1
2-May	131	147	129	333	300	263	229	231	134	132	116	146	250	285	299	305	327	343	16	19	7	334	340	340	326.8
3-May	331	326	325	273	299	349	167	118	133	152	251	262	287	286	260	261	257	300	315	313	315	305	329	335	290.9
4-May	316	249	243	273	314	318	DF	328	348	343	DF	255	256	259	256	241	223	219	217	215	220	243	283	298	254.9
5-May	299	344	6	3	354	23	360	314	309	295	278	343	51	14	4	351	2	353	20	11	354	49	105	117	352.9
6-May	121	119	114	117	113	119	117	123	125	138	173	226	211	214	210	215	216	199	185	170	163	163	156	153	166.7
7-May	151	137	130	130	130	128	125	143	172	182	184	230	244	240	236	251	242	240	233	210	197	201	218	201	186.3
8-May	166	229	276	332	313	325	351	336	2	3	15	9	354	203	353	10	13	12	23	13	6	12	78	151	4.2
9-May	148	152	146	119	133	104	120	127	133	139	246	243	244	250	250	244	243	244	244	229	220	237	224	137	225.5
10-May	144	211	132	133	116	151	338	156	236	236	249	244	250	319	313	243	239	183	2	163	169	120	121	125	187.4
11-May	117	124	122	114	87	69	125	155	145	155	128	126	275	71	126	246	3	341	349	358	27	3	60	6	120.5
12-May	352	344	348	352	334	337	338	346	3	4	1	8	7	8	13	12	8	2	10	9	357	3	345	337	1.7
13-May	347	347	343	290	290	341	352	341	347	354	288	263	231	69	5	41	127	129	215	242	125	133	129	139	50.5
14-May	142	134	145	137	123	137	152	226	251	335	346	349	355	7	7	4	18	12	2	352	357	359	3	356	15.1
15-May	2	2	4	4	5	3	12	3	358	350	339	339	352	8	3	9	9	18	20	15	22	29	31	6	4.5
16-May	354	347	344	348	1	3	357	80	346	242	292	338	304	254	273	33	127	112	96	107	300	125	124	116	73.5
17-May	116	111	120	125	125	126	125	129	125	131	138	134	120	128	131	128	124	128	120	116	117	123	126	125	124.3
18-May	125	121	119	120	112	120	126	129	125	114	114	122	157	152	154	155	136	130	130	124	123	128	128	128	128.9
19-May	126	111	110	118	127	124	135	155	146	136	143	147	139	135	133	141	156	145	144	141	139	131	134	128	137.6
20-May	131	128	129	127	127	123	127	128	128	131	122	124	136	135	123	125	135	132	129	129	139	143	131	141	129.8
21-May	130	108	150	147	122	113	119	120	137	139	117	114	115	132	172	173	181	188	184	166	157	145	155	155	147.4
22-May	150	151	150	147	132	144	151	154	153	161	169	193	224	208	162	146	132	135	159	146	125	145	135	147	152.9
23-May	132	130	132	133	125	125	124	131	120	121	134	140	149	129	119	110	125	139	128	151	164	153	153	160	135.8
24-May	155	142	131	102	151	126	115	122	152	122	121	130	137	156	165	132	148	165	200	151	150	148	148	146	147.0
25-May	144	138	135	136	136	130	134	144	154	160	165	152	151	167	182	168	165	171	173	165	166	160	152	146	154.7
26-May	134	133	129	120	116	113	120	123	127	153	141	171	170	162	161	167	175	166	175	281	299	237	161	228	158.6
27-May	204	199	237	204	167	165	199	224	236	231	260	249	245	249	252	249	252	245	261	258	238	223	218	230	238.3
28-May	228	198	143	134	133	130	124	120	120	122	117	226	246	260	253	214	181	177	157	146	139	145	135	134	160.6
29-May	134	130	131	130	130	129	126	135	144	144	159	161	150	149	143	134	136	142	150	148	145	265	292	291	148.5
30-May	262	281	249	297	286	263	300	314	311	306	325	337	297	247	240	245	220	184	207	190	172	169	172	168	247.0
31-May	166	144	147	221	194	157	132	120	122	126	115	344	340	341	347	3	350	354	347	351	330	327	325	329	352.1
140.2 128.5 130.9 124.6 118.8 120.4 122.4 132.2 133.9 141.5 157.1 175.1 188.4 181.3 180.4 176.5 166.4 162.2 161.8 151.0 147.8 155.4 144.0 140.5																									
Diurnal Average																									
DF - DAS Failure																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 45m (WD45) - deg

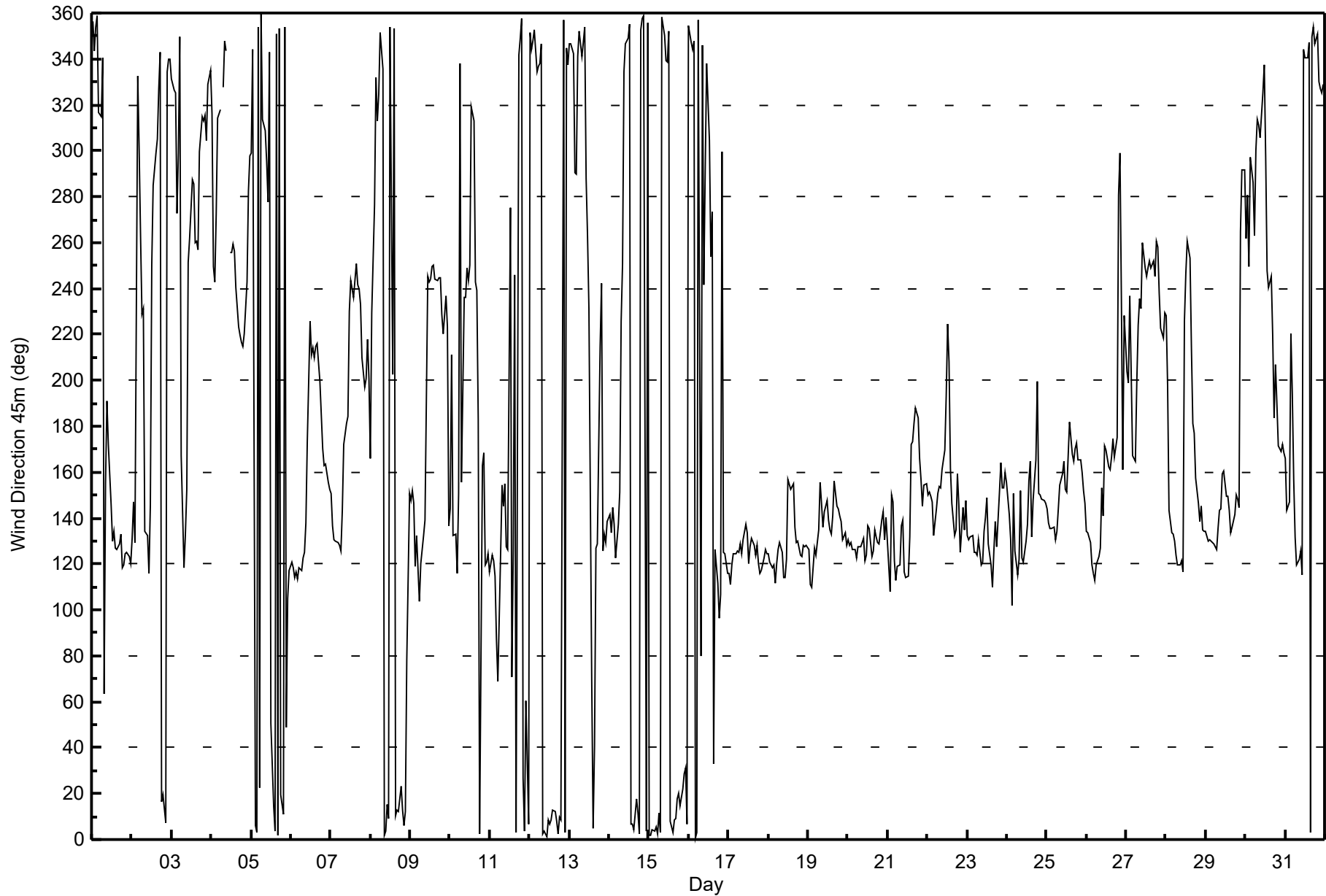
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on May 8 14:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 4 deg on May 29 07:00																									
Percentiles: P ₁ = 5 P ₁₀ = 8 Q ₁ = 11 Median = 14 Q ₃ = 20 P ₉₀ = 43 P ₉₉ = 91																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	14	18	13	16	16	12	18	40	89	19	22	12	12	17	10	13	15	10	14	11	7	7	6	20	89
2-May	15	26	49	11	32	25	27	15	64	23	35	93	43	26	20	26	30	12	23	12	12	12	13	8	93
3-May	12	12	20	32	48	88	81	57	7	43	16	15	24	29	19	16	18	14	11	11	11	13	16	13	88
4-May	16	23	12	18	15	12	DF	13	68	86	DF	20	11	12	21	13	14	9	9	7	8	17	19	10	86
5-May	11	38	13	14	33	23	19	22	26	40	36	76	39	42	20	31	20	25	15	12	18	35	35	12	76
6-May	10	11	11	12	10	11	11	14	11	14	25	26	14	14	14	19	16	17	11	7	7	7	8	8	26
7-May	8	6	7	6	6	7	8	17	11	9	11	21	10	9	7	12	10	11	10	11	6	7	8	27	27
8-May	80	51	30	20	16	71	48	36	17	13	13	19	32	100	77	19	15	12	14	13	21	38	45	67	100
9-May	15	20	26	44	16	47	11	10	12	58	13	15	13	14	14	13	14	12	9	9	7	11	33	28	58
10-May	74	46	8	14	81	97	70	72	72	34	35	20	20	70	95	24	39	81	98	13	36	11	12	11	98
11-May	61	43	12	20	49	100	80	10	11	10	14	26	62	24	36	41	95	18	18	24	39	39	50	22	100
12-May	31	17	20	12	11	16	27	12	16	14	19	14	16	16	17	13	15	13	12	11	9	11	10	8	31
13-May	9	7	18	76	14	16	23	20	25	22	40	38	43	38	48	88	19	14	55	77	13	12	9	13	88
14-May	14	8	9	15	13	10	11	30	15	45	10	12	11	16	16	13	14	16	11	12	11	12	11	13	45
15-May	12	13	13	11	12	13	15	13	12	13	14	14	18	18	17	18	17	19	14	12	10	11	16	65	65
16-May	28	10	12	15	17	22	25	82	51	92	74	50	73	41	48	85	78	47	30	57	85	16	12	9	92
17-May	9	9	10	10	8	10	11	11	14	16	17	20	16	16	18	14	17	15	11	10	10	10	9	10	20
18-May	9	8	8	10	8	11	10	9	12	15	15	16	18	19	19	16	21	13	12	11	9	8	9	8	21
19-May	7	11	11	9	5	7	15	10	18	14	14	13	18	16	15	14	14	15	12	12	15	11	9	11	18
20-May	10	12	11	10	13	13	12	13	15	12	12	11	16	17	13	11	12	13	12	12	14	17	17	14	17
21-May	10	13	21	15	11	10	11	13	18	23	16	13	14	19	7	7	8	7	8	12	9	13	6	8	23
22-May	8	7	9	8	10	11	8	8	9	14	9	27	14	20	18	15	14	20	13	15	11	10	7	11	27
23-May	14	15	12	68	15	22	53	18	12	12	18	16	15	16	20	17	16	14	12	14	12	22	19	9	68
24-May	6	10	18	28	50	71	23	18	25	13	12	13	15	17	20	18	14	33	15	10	7	7	7	7	71
25-May	7	5	5	5	5	6	9	9	10	10	13	14	15	16	11	16	13	15	10	7	6	7	6	10	16
26-May	7	9	10	14	11	14	10	9	12	13	14	22	16	13	11	14	14	9	21	20	28	30	79	35	79
27-May	14	30	44	35	13	18	19	24	10	12	19	20	17	14	12	11	11	12	22	12	7	7	11	9	44
28-May	15	43	12	10	7	8	7	8	12	13	15	60	29	19	32	20	13	15	7	9	5	9	8	8	60
29-May	15	9	8	5	4	5	4	8	9	13	14	14	14	15	15	9	8	10	12	9	8	49	13	16	49
30-May	13	21	20	23	27	13	13	14	23	16	24	46	52	51	20	17	21	15	7	9	5	6	8	7	52
31-May	7	45	29	50	45	33	11	10	10	12	35	49	9	9	12	11	12	12	18	16	16	13	18	14	50
80 51 49 76 81 100 81 82 89 92 74 93 73 100 95 88 95 81 98 77 85 49 79 67																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 45m (WD45) - deg
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - May 2025

Direction of Maximum Speed: 139 deg on May 29 17:00 Direction of Maximum Daily Speed Average: 159.9 deg on May 25																				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2					
Direction of Minimum Speed: 236 deg on May 10 19:00										Direction of Minimum Daily Speed Average: 1.5 deg on May 13										Percent Operational Time: 99.7					
Monthly Average Direction: 154.5 deg																									
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	359	350	356	1	326	315	338	58	188	196	174	152	136	138	131	128	132	134	119	123	126	129	128	129	124.8
2-May	135	151	163	343	12	271	246	226	183	181	157	187	255	285	298	305	325	348	18	26	26	1	8	1	337.6
3-May	2	2	344	291	186	121	150	143	144	180	255	264	292	290	265	261	259	299	315	313	314	308	331	343	293.9
4-May	329	261	247	276	318	324	DF	338	358	338	DF	257	258	262	259	243	226	221	219	218	224	245	290	298	260.7
5-May	296	343	10	3	358	13	354	316	309	292	278	336	35	9	1	353	4	2	23	18	13	77	126	125	355.7
6-May	127	129	128	128	126	128	128	132	135	146	177	224	212	217	211	215	215	200	188	175	168	169	159	156	168.2
7-May	155	148	140	138	137	134	133	150	175	184	186	231	242	240	238	253	243	239	233	213	205	211	228	223	191.5
8-May	233	242	286	355	321	317	342	356	7	8	15	12	353	244	347	14	15	14	21	16	21	37	91	141	7.1
9-May	163	160	144	146	136	145	149	154	152	163	244	243	246	249	251	246	244	246	246	237	233	249	238	205	223.3
10-May	171	222	175	167	194	210	283	212	233	244	250	246	252	317	323	245	246	194	236	169	173	123	124	129	198.6
11-May	127	138	127	121	117	133	157	163	152	162	128	126	291	72	127	262	329	342	348	6	47	50	79	15	124.7
12-May	21	10	352	352	338	345	348	351	10	8	5	11	10	12	16	15	11	6	11	11	1	10	358	349	5.5
13-May	347	346	346	342	319	305	338	342	355	352	295	266	238	55	360	46	124	126	208	229	129	140	138	141	21.2
14-May	142	139	149	147	142	150	160	226	258	335	348	352	357	9	8	8	19	13	2	354	358	359	5	357	16.0
15-May	2	3	5	5	6	5	13	4	0	350	341	340	354	11	6	11	12	21	22	18	26	38	42	46	8.9
16-May	28	346	344	348	356	13	29	92	351	289	306	340	296	261	279	22	120	115	104	114	175	130	129	123	78.8
17-May	129	124	126	130	129	129	127	129	128	131	136	135	124	129	132	129	126	131	123	118	118	122	127	128	127.2
18-May	129	127	127	127	126	126	128	130	127	117	119	124	156	155	154	155	138	132	132	127	125	130	129	134	132.0
19-May	136	127	130	134	135	134	144	153	147	138	143	147	140	136	136	142	155	146	145	143	140	133	135	131	140.3
20-May	133	132	132	130	128	127	129	129	130	133	124	126	138	135	125	127	137	134	131	132	141	144	135	141	131.9
21-May	137	127	151	147	135	124	122	125	137	138	120	116	117	133	171	172	182	189	183	165	155	144	153	158	148.3
22-May	150	152	151	148	138	145	151	155	157	161	170	194	223	204	162	146	135	135	159	147	134	154	154	158	154.8
23-May	147	136	143	143	134	134	136	134	123	121	135	141	150	134	120	112	128	142	131	153	167	170	163	173	140.2
24-May	163	160	141	123	113	126	125	131	156	126	121	131	140	158	167	135	149	168	202	154	155	155	154	154	150.3
25-May	154	153	152	151	149	144	144	148	155	161	166	153	155	169	182	170	168	173	175	169	170	166	156	152	159.9
26-May	146	146	141	136	127	125	127	132	132	154	144	172	171	164	164	169	176	169	178	281	302	239	181	226	162.1
27-May	212	218	252	229	188	189	210	224	234	238	263	251	247	247	249	249	250	245	262	262	252	243	237	237	242.4
28-May	227	217	228	214	206	176	175	148	125	130	126	230	245	254	252	215	184	179	160	157	155	162	160	167	182.4
29-May	147	154	158	152	149	151	146	144	153	148	161	164	152	151	145	137	139	144	152	149	147	269	292	291	156.2
30-May	263	281	249	289	288	266	303	315	312	306	326	328	292	252	240	246	220	187	210	204	191	183	192	190	248.5
31-May	185	177	231	250	238	201	170	138	140	134	135	336	343	345	351	3	352	357	354	357	338	335	333	338	339.2
152.0 145.3 144.0 139.6 130.7 135.9 135.3 138.5 139.4 145.4 158.6 177.0 189.8 183.8 181.2 176.4 167.8 164.2 164.2 157.1 150.4 158.1 151.6 153.5																									
Diurnal Average																									
DF - DAS Failure																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 100m (WD100) - deg

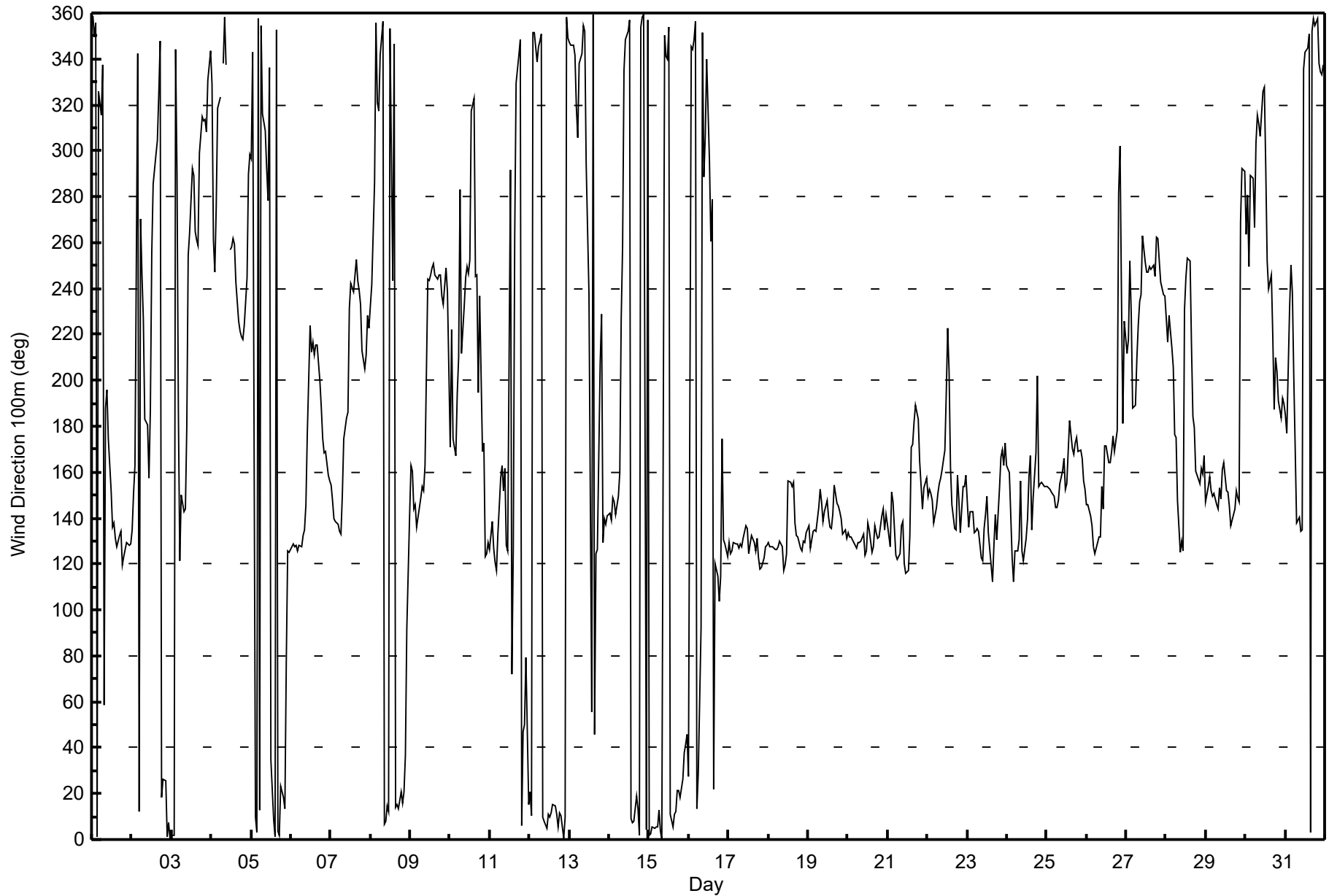
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 97 deg on May 8 14:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 3 deg on May 25 21:00																									
Percentiles: P ₁ = 4 P ₁₀ = 5 Q ₁ = 7 Median = 11 Q ₃ = 16 P ₉₀ = 30 P ₉₉ = 87																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	10	11	8	12	14	10	13	53	86	18	17	11	13	14	10	11	13	9	10	6	5	4	3	7	86
2-May	7	11	28	24	34	11	36	20	48	25	40	84	35	25	16	22	26	11	19	9	9	18	15	23	84
3-May	11	9	9	37	58	8	28	12	9	45	15	11	23	26	19	15	16	11	7	7	8	10	13	9	58
4-May	12	30	8	14	12	9	DF	12	44	82	DF	18	9	8	19	13	12	7	6	5	6	14	16	7	82
5-May	8	38	11	10	17	14	13	20	22	34	33	74	43	29	15	15	19	21	12	9	16	31	10	7	74
6-May	6	6	6	5	5	6	6	8	8	13	22	23	12	12	12	16	13	17	9	6	4	5	6	6	23
7-May	6	8	5	5	4	5	5	15	9	7	10	19	8	7	5	10	7	9	8	9	4	5	5	10	19
8-May	61	16	31	17	12	32	56	20	10	10	11	15	29	97	77	15	14	11	11	10	13	27	20	19	97
9-May	10	5	9	14	6	9	12	16	17	60	9	13	11	12	12	11	10	10	5	5	5	8	8	14	60
10-May	30	20	21	13	68	59	59	46	52	30	28	16	17	50	85	17	26	89	95	11	30	10	6	7	95
11-May	15	13	7	7	12	12	16	11	9	9	10	21	71	20	30	35	84	14	16	22	11	17	24	32	84
12-May	32	18	8	10	5	16	11	10	13	11	15	11	12	13	15	11	13	10	9	8	7	10	8	6	32
13-May	4	4	6	17	12	9	16	15	15	20	32	37	36	42	71	87	17	12	59	58	10	10	8	9	87
14-May	10	7	7	10	12	9	9	27	12	37	7	8	9	11	13	10	10	11	8	7	7	7	8	8	37
15-May	8	9	9	9	9	9	11	10	9	10	13	12	14	14	14	15	13	16	9	8	8	4	4	19	19
16-May	30	7	4	9	8	19	30	70	57	92	78	40	78	49	44	94	88	44	19	17	96	12	7	6	96
17-May	9	8	6	4	4	5	5	6	9	11	14	16	11	13	16	11	13	11	5	7	7	7	5	6	16
18-May	5	5	5	4	5	5	4	4	7	10	9	12	16	18	16	16	18	10	10	7	5	5	5	5	18
19-May	5	6	5	4	4	5	11	9	16	12	12	11	15	13	12	12	13	14	10	10	12	8	6	7	16
20-May	6	8	7	7	8	8	7	8	11	9	6	7	13	14	9	6	8	11	7	8	10	13	10	10	14
21-May	7	8	14	8	9	6	6	8	13	19	8	9	9	18	6	5	7	6	8	11	8	10	6	7	19
22-May	7	5	8	8	6	7	7	6	8	13	8	26	12	19	15	13	11	17	12	13	6	7	7	6	26
23-May	13	9	5	10	6	9	11	10	6	7	15	13	14	14	15	12	15	12	9	11	13	20	13	7	20
24-May	5	6	10	11	12	25	11	11	18	13	7	11	13	16	18	17	12	32	14	8	5	5	4	5	32
25-May	5	5	5	5	5	6	6	8	9	9	10	13	15	16	10	14	12	13	9	6	3	5	4	5	16
26-May	6	7	6	5	3	5	5	7	10	12	12	19	14	13	11	13	13	7	20	17	24	20	69	20	69
27-May	8	14	31	21	11	12	12	20	8	12	17	16	13	9	8	8	7	9	23	6	3	6	6	8	31
28-May	4	21	29	20	30	11	12	19	17	19	17	60	21	16	30	17	11	14	4	4	4	3	4	7	60
29-May	10	8	4	5	4	3	4	6	8	11	14	14	14	12	12	8	6	8	10	8	7	48	9	13	48
30-May	10	19	16	18	20	11	10	10	17	13	17	40	40	50	15	13	19	13	6	4	4	4	6	4	50
31-May	4	19	48	12	25	30	13	10	5	8	31	63	6	5	8	8	7	8	12	11	13	11	15	10	63
61 38 48 37 68 59 59 70 86 92 78 84 78 97 85 94 88 89 95 58 96 48 69 32																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 100m (WD100) - deg
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 163m (WD163) - deg

Lower Camp Met Tower - May 2025

Direction of Maximum Speed: 176 deg on May 6 22:00 Direction of Maximum Daily Speed Average: 166.0 deg on May 25																				Hours in Service: 744					
Direction of Minimum Speed: 104 deg on May 1 08:00 Direction of Minimum Daily Speed Average: 3.0 deg on May 13																				Hours of Data: 738					
																				Hours of Missing Data: 6					
Monthly Average Direction: 162.0 deg																				Percent Operational Time: 99.2					
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	8	358	1	11	340	304	333	104	209	200	177	159	147	145	144	137	138	139	125	128	129	134	138	142	132.8
2-May	145	160	194	323	15	291	275	257	208	211	191	219	265	289	302	308	328	353	22	34	42	38	56	97	350.4
3-May	97	102	129	160	155	136	143	153	165	205	259	270	296	292	268	265	264	302	317	317	315	314	335	352	288.4
4-May	343	276	256	287	327	331	DF	349	10	339	DF	263	265	267	264	247	230	225	225	225	232	252	302	305	269.9
5-May	300	345	19	10	354	0	349	322	312	299	284	314	30	11	2	354	9	8	32	31	38	97	133	130	2.9
6-May	134	136	137	140	136	137	140	149	152	156	182	224	215	218	213	217	217	201	191	179	174	176	164	163	172.9
7-May	163	158	151	148	146	143	144	161	178	186	188	234	244	243	243	256	248	240	235	217	212	221	239	239	198.1
8-May	260	259	310	12	345	347	45	30	17	16	20	19	356	242	340	19	19	17	22	22	32	48	77	133	16.5
9-May	172	165	165	189	167	171	192	191	182	196	246	245	248	252	254	249	248	248	249	246	243	255	249	216	228.4
10-May	204	233	226	217	239	240	258	278	234	255	250	248	255	318	324	247	250	203	210	171	179	128	126	136	213.4
11-May	135	147	132	129	136	143	164	175	161	168	134	132	311	79	132	264	279	346	351	13	51	60	103	118	134.1
12-May	21	46	22	22	13	6	14	10	22	16	12	17	17	19	22	21	17	13	17	16	9	20	15	4	15.8
13-May	2	358	359	359	341	327	350	351	4	355	303	269	241	55	360	77	126	128	197	222	136	148	148	146	29.7
14-May	146	147	156	155	156	159	172	227	266	338	354	358	3	16	13	15	24	19	6	359	3	5	10	3	24.4
15-May	7	7	10	11	11	11	17	9	7	355	346	346	360	19	12	18	19	26	28	24	32	45	49	65	16.1
16-May	67	25	19	22	27	54	97	102	8	311	310	340	294	267	278	11	124	126	110	119	167	136	132	132	92.7
17-May	138	133	132	134	134	134	131	134	135	137	141	139	130	134	139	133	132	137	128	123	123	125	130	131	132.2
18-May	134	137	139	135	135	137	136	138	135	125	125	130	159	161	158	160	142	136	137	132	130	133	131	140	137.8
19-May	150	140	140	147	148	150	155	156	152	142	146	151	145	141	140	146	157	150	149	148	144	139	141	137	146.4
20-May	139	136	138	135	134	133	136	134	135	137	129	131	143	139	130	132	142	140	136	137	147	148	143	148	137.2
21-May	149	136	153	152	150	136	131	135	143	143	126	122	121	136	169	170	181	189	183	166	153	149	157	168	152.7
22-May	155	157	156	154	146	153	154	161	164	164	172	195	222	201	164	152	140	138	163	153	143	169	168	169	161.0
23-May	166	152	156	154	149	148	145	143	132	125	139	147	154	142	125	120	133	147	136	156	171	187	172	185	148.8
24-May	179	168	145	136	128	133	140	150	162	133	127	137	146	164	172	142	154	174	203	160	168	169	166	164	158.1
25-May	166	166	165	161	158	153	152	154	158	163	170	156	161	173	185	174	171	176	179	174	175	174	166	158	166.0
26-May	151	150	149	148	138	141	141	146	143	157	153	175	175	168	169	172	179	173	181	282	311	UO	197	231	167.2
27-May	228	234	264	251	206	213	221	231	238	250	269	255	249	249	250	250	252	246	265	266	261	259	254	253	250.2
28-May	245	244	248	247	233	226	221	211	190	160	141	232	244	250	250	216	189	184	164	162	164	169	171	191	201.9
29-May	176	177	180	170	165	163	151	150	158	156	165	168	157	155	150	142	145	148	156	152	151	274	297	295	165.5
30-May	268	284	253	290	295	274	311	322	319	313	329	325	293	254	242	247	221	192	213	212	200	195	206	208	254.9
31-May	203	202	250	261	258	229	198	188	157	148	156	334	348	350	358	5	357	3	UO	7	347	UO	UO	347	320.9
165.5 160.5 157.9 152.5 143.9 147.4 145.7 150.5 150.2 153.7 164.0 182.3 193.1 186.9 183.3 178.6 171.2 168.1 169.1 161.3 150.6 157.8 157.2 163.0																									
Diurnal Average																									
DF - DAS Failure UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 163m (WD163) - deg

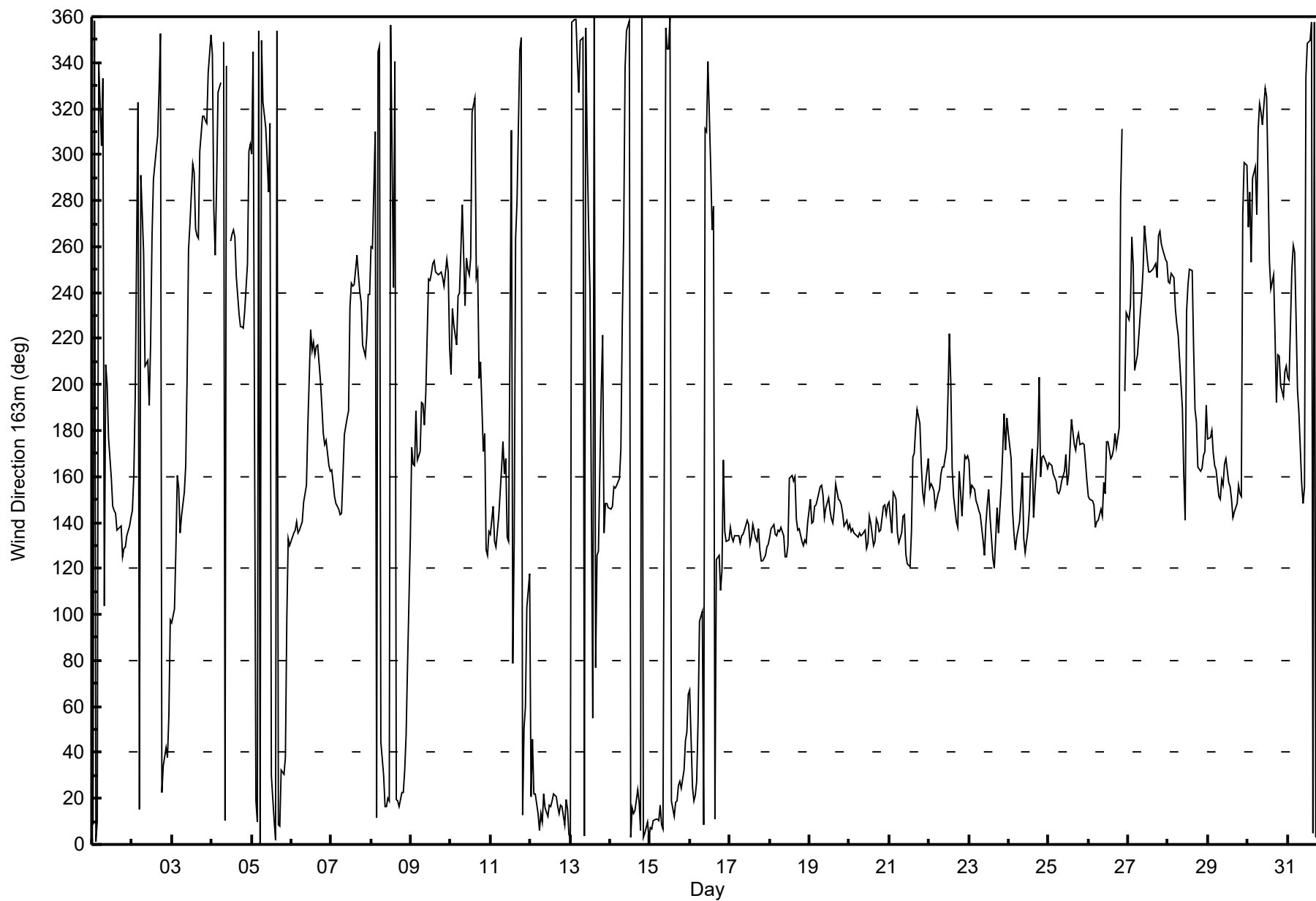
Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 104 deg on May 16 16:00																		Hours in Service: 744							
Minimum Value: 2 deg on May 28 22:00																		Hours of Data: 738							
Percentiles: P ₁ = 3 P ₁₀ = 5 Q ₁ = 6 Median = 9 Q ₃ = 14 P ₉₀ = 23 P ₉₉ = 86																		Hours of Missing Data: 6							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.2							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	9	10	6	9	20	12	18	84	80	18	17	9	15	15	14	13	14	11	9	4	4	4	5	6	84
2-May	6	8	20	45	17	20	10	24	20	18	43	62	32	22	14	20	22	10	17	6	7	13	19	19	62
3-May	13	7	11	16	15	8	9	8	10	33	13	9	20	24	19	14	16	9	6	6	7	10	12	6	33
4-May	11	32	8	9	11	8	DF	11	36	66	DF	16	9	8	17	12	11	6	5	4	4	15	10	5	66
5-May	6	37	9	9	19	13	13	17	21	28	28	68	48	35	16	23	21	27	14	7	14	23	6	5	68
6-May	5	5	5	6	5	4	6	8	9	11	18	21	10	11	11	14	12	16	8	5	3	3	5	4	21
7-May	4	8	7	7	5	6	6	13	8	6	8	17	7	8	4	9	8	9	7	8	3	5	3	4	17
8-May	38	8	24	12	22	23	46	56	9	9	9	13	27	98	79	16	14	15	10	9	6	12	12	23	98
9-May	6	5	7	10	12	11	8	14	21	53	7	12	9	10	11	9	9	9	5	4	5	7	6	7	53
10-May	16	8	14	12	14	13	18	32	39	20	19	15	13	48	70	15	25	84	91	12	27	6	4	5	91
11-May	7	9	4	5	9	8	10	12	8	7	11	22	82	19	28	27	91	14	15	22	7	11	16	23	91
12-May	56	36	12	9	7	8	5	10	12	10	14	10	12	12	14	10	11	9	7	7	6	8	6	6	56
13-May	5	3	5	9	16	9	7	13	16	19	31	37	28	50	85	87	18	12	56	44	7	10	8	8	87
14-May	8	7	7	7	9	6	8	24	12	29	6	8	9	10	11	9	8	10	8	7	7	7	7	8	29
15-May	7	9	9	8	7	8	9	9	10	10	12	11	15	14	14	13	13	14	8	8	6	2	6	6	15
16-May	15	11	3	5	6	18	13	58	77	90	78	39	87	79	48	104	86	30	19	14	53	11	6	6	104
17-May	5	6	4	4	3	4	4	6	8	10	14	14	11	12	15	11	12	11	4	5	5	5	4	5	15
18-May	4	6	6	5	3	5	4	5	7	8	9	11	14	17	13	14	16	10	10	5	3	4	4	7	17
19-May	6	5	6	7	6	7	9	8	14	11	10	11	13	13	11	12	12	13	9	8	10	8	8	7	14
20-May	7	7	8	7	7	8	7	7	11	10	5	6	12	14	9	6	9	11	7	7	10	10	9	9	14
21-May	8	5	10	6	8	6	6	9	13	17	8	8	8	17	3	4	6	6	6	9	7	8	7	7	17
22-May	6	4	7	7	6	6	6	7	8	14	7	24	11	20	12	12	11	15	10	12	7	9	4	5	24
23-May	8	8	4	5	5	5	11	7	8	6	13	12	13	14	14	10	14	11	9	9	14	16	11	6	16
24-May	5	7	9	6	3	8	9	14	15	14	7	11	13	15	15	17	12	30	14	7	8	5	3	3	30
25-May	3	3	3	3	4	6	6	9	7	8	8	12	14	15	9	13	10	12	8	5	3	3	3	4	15
26-May	5	4	6	7	5	6	7	8	11	10	12	17	12	13	11	11	12	6	19	15	21	UO	61	20	61
27-May	9	8	16	18	10	9	11	17	11	13	17	17	10	8	7	7	7	8	22	4	2	4	8	6	22
28-May	3	4	5	4	17	11	8	11	18	19	23	55	20	14	25	14	10	12	4	3	3	2	9	3	55
29-May	6	5	3	5	4	4	4	5	6	10	12	12	12	12	11	8	7	7	9	6	6	47	8	12	47
30-May	8	18	13	16	19	13	10	7	15	12	17	35	32	35	14	11	20	13	5	4	4	5	3	2	35
31-May	3	9	18	5	7	23	10	15	11	9	17	82	6	5	8	7	5	8	UO	9	12	UO	UO	9	82
56 37 24 45 22 23 46 84 80 90 78 82 87 98 85 104 91 84 91 44 53 47 61 23																									
Diurnal Maximum																									
DF - DAS Failure UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 163m (WD163) - deg
Lower Camp Met Tower - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 20m (VW20) - km/h

Lower Camp Met Tower - May 2025

Maximum Value: 0.4 km/h on May 29 00:00																				Maximum Daily Average: -0.1 km/h on May 2					Hours in Service: 744	
Minimum Value: -1.9 km/h on May 29 17:00																				Minimum Daily Average: -0.8 km/h on May 7					Hours of Data: 742	
Maximum Diurnal Average: -0.1 km/h at hour 4																				Minimum Diurnal Average: -0.6 km/h at hour 18					Hours of Missing Data: 2	
Monthly Average: -0.38 km/h																				Percentiles: P ₁ = -1.2 P ₁₀ = -0.9 Q ₁ = -0.6 Median = -0.3 Q ₃ = -0.1 P ₉₀ = 0.0 P ₉₉ = 0.2					Hours of Calibration: 0	
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	-0.1	0.0	0.0	0.1	-0.2	-0.2	0.0	0.0	-0.3	-0.6	-0.6	-0.5	-0.4	-0.2	-0.1	-0.3	-0.2	-0.4	-0.2	-0.2	-0.5	-0.5	-0.3	-0.1	-0.2	0.1
2-May	-0.1	-0.1	0.0	-0.1	0.0	0.0	-0.2	-0.4	0.0	0.4	0.3	-0.2	-0.5	-0.1	-0.7	-0.2	-0.2	-0.1	0.1	0.2	0.1	-0.2	0.0	0.1	-0.1	0.4
3-May	0.0	-0.1	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.8	-0.4	-1.1	-0.5	-0.3	-0.6	-0.9	-0.6	-0.8	-0.6	-0.4	-0.4	-0.5	-0.7	-0.4	-0.2	-0.4	0.0
4-May	-0.3	-0.3	-0.5	-0.4	-0.4	-0.3	DF	-0.2	-0.1	-0.1	DF	-0.8	-0.9	-0.6	-1.0	-1.0	-0.9	-1.2	-0.8	-0.7	-0.6	-0.5	-0.7	-0.5	-0.6	-0.1
5-May	-0.6	-0.5	0.1	0.0	0.0	0.0	0.1	-0.4	0.0	-0.4	-0.3	0.2	0.1	0.0	0.1	0.0	0.1	-0.1	0.0	0.1	0.0	-0.1	0.0	-0.2	-0.1	0.2
6-May	-0.3	-0.5	-0.3	-0.2	-0.3	-0.3	-0.4	0.0	-0.2	-0.2	-0.8	-0.6	-1.0	-0.9	-0.9	-0.9	-0.8	-1.1	-1.1	-1.2	-1.2	-1.2	-0.9	-0.9	-0.7	0.0
7-May	-0.7	-0.9	-0.7	-0.3	-0.5	-0.3	-0.4	-0.7	-1.2	-1.5	-1.0	-1.0	-0.9	-0.6	-0.6	-0.9	-1.2	-1.2	-0.9	-0.7	-0.7	-0.6	-0.4	-0.1	-0.8	-0.1
8-May	0.1	-0.2	0.0	0.0	-0.1	-0.1	0.0	-0.1	0.1	0.0	-0.3	0.1	-0.3	-0.1	-0.2	-0.1	-0.2	-0.3	-0.1	0.0	-0.1	-0.1	0.0	0.0	-0.1	0.1
9-May	0.0	-0.1	0.0	0.0	0.1	0.1	-0.2	-0.6	-0.5	-0.3	-0.7	-0.9	-1.3	-1.1	-0.9	-0.9	-0.8	-0.7	-0.6	-0.2	-0.1	-0.1	0.0	0.1	-0.4	0.1
10-May	0.0	0.0	0.3	0.1	0.1	0.0	0.0	-0.1	0.2	-0.5	-0.6	-0.7	-0.6	0.0	-0.3	-0.5	0.3	-0.3	0.1	0.1	0.1	0.1	-0.2	-0.2	-0.1	0.3
11-May	0.0	0.1	0.2	0.2	0.1	0.0	0.1	-0.4	-0.7	-0.5	-0.5	0.0	-0.4	0.0	-0.2	0.0	0.1	-0.2	0.0	0.0	0.0	0.1	0.1	0.0	-0.1	0.2
12-May	0.0	0.0	0.0	0.0	-0.1	-0.2	0.0	-0.3	-0.3	-0.2	-0.2	-0.3	-0.3	0.0	-0.2	-0.2	-0.3	-0.2	-0.3	0.0	-0.4	-0.1	-0.3	0.0	-0.2	0.0
13-May	-0.1	-0.2	-0.2	0.0	0.0	0.1	-0.3	-0.3	0.0	-0.4	-0.4	0.0	-0.5	0.0	-0.2	0.2	-0.5	-0.4	-0.4	-0.3	0.0	-0.2	-0.3	-0.5	-0.2	0.2
14-May	-0.5	-0.6	-0.8	-0.4	-0.5	-0.4	-0.3	-0.5	-0.4	0.0	-1.1	-1.0	-0.9	-0.4	-0.4	-0.1	-0.1	-0.6	-0.5	-0.5	-0.6	-0.3	-0.4	-0.4	-0.5	0.0
15-May	-0.1	-0.4	-0.2	-0.3	-0.4	-0.5	-0.2	-0.5	-0.6	-0.5	-0.6	-0.6	-0.4	-0.5	-0.6	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	0.0	0.0	-0.3	0.0
16-May	-0.2	0.0	0.0	0.1	0.0	-0.1	-0.1	-0.2	0.1	-0.4	-0.3	0.1	-0.3	-0.3	-0.2	0.1	0.0	0.1	0.0	-0.1	0.1	-0.3	-0.2	-0.6	-0.1	0.1
17-May	-0.6	-0.6	-0.6	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3	-0.4	-0.5	-0.4	-0.3	-0.3	-0.6	-0.4	-0.2	-0.3	-0.3	-0.8	-0.8	-0.5	-0.4	-0.3	-0.4	-0.2
18-May	-0.5	-0.5	-0.4	-0.4	-0.5	-0.2	-0.2	-0.4	-0.3	-0.3	-0.3	-0.4	-1.0	-0.6	-0.5	-0.5	-0.2	-0.4	-0.3	-0.2	-0.4	-0.2	-0.3	-0.3	-0.4	-0.2
19-May	-0.5	-0.4	-0.3	-0.1	-0.4	-0.6	-0.5	-0.8	-0.4	-0.6	-0.9	-1.1	-0.6	-0.3	-0.6	-0.8	-1.0	-1.0	-1.2	-0.9	-0.3	-0.5	-0.6	-0.3	-0.6	-0.1
20-May	-0.6	-0.1	-0.2	-0.4	-0.4	-0.3	-0.3	-0.1	-0.1	-0.7	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.8	-0.6	-0.4	-0.4	-0.6	-0.3	-0.3	-0.1	-0.4	-0.1
21-May	-0.1	-0.4	-0.4	-0.1	-0.3	-0.5	-0.4	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.7	-1.3	-1.0	-0.7	-1.0	-0.6	-0.6	-0.5	-0.6	-0.5	-0.4	-0.5	-0.1
22-May	-0.4	-0.5	-0.5	-0.4	-0.6	-0.5	-0.5	-0.6	-0.6	-0.7	-1.0	-0.7	-0.4	-0.5	-0.5	-0.8	-0.6	-0.4	-0.5	-0.7	-0.2	-0.3	-0.3	0.2	-0.5	0.2
23-May	-0.1	-0.2	-0.2	0.0	0.0	-0.2	0.0	-0.2	-0.4	-0.3	-0.2	-0.9	-0.8	-0.3	-0.5	-0.6	-0.7	-0.8	-0.4	-0.8	-0.7	-0.2	0.1	-0.2	-0.4	0.1
24-May	0.1	-0.2	-0.2	0.0	0.0	0.0	-0.1	0.0	0.1	-0.5	-0.4	-0.7	-0.6	-0.9	-0.8	-0.6	-0.8	-0.7	-0.8	-0.6	-0.1	0.1	0.0	-0.4	-0.3	0.1
25-May	-0.6	-0.7	-0.6	-0.8	-0.7	-0.5	-0.8	-0.8	-0.7	-1.0	-0.8	-1.1	-0.8	-0.8	-1.1	-0.7	-0.8	-0.8	-1.2	-0.8	-0.7	-0.4	-0.1	-0.1	-0.7	-0.1
26-May	-0.7	-0.5	-0.3	-0.2	-0.2	-0.2	-0.2	-0.4	-0.5	-0.5	-0.7	-1.1	-1.0	-0.9	-0.8	-1.1	-1.2	-1.2	-1.0	-1.1	-0.3	-0.2	-0.4	-0.2	-0.6	-0.2
27-May	-0.1	0.0	-0.2	-0.3	0.0	0.0	-0.2	-0.3	-0.7	-0.5	-0.8	-0.7	-1.0	-1.1	-1.0	-1.1	-1.1	-0.8	-0.6	-0.5	-0.3	0.0	0.0	-0.2	-0.5	0.0
28-May	-0.1	0.1	0.1	0.2	0.2	-0.1	-0.2	-0.4	-0.2	-0.1	-0.2	-0.4	-0.5	-0.4	-0.3	-0.8	-0.9	-0.4	-0.1	0.0	-0.1	0.3	-0.1	0.4	-0.2	0.4
29-May	0.2	0.2	0.3	-0.1	0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.9	-1.1	-0.9	-1.2	-1.0	-1.0	-1.9	-1.2	-1.0	-0.5	-0.7	-1.2	-1.2	-0.9	-0.6	0.3
30-May	-1.0	-0.6	-0.9	-0.3	-0.2	-0.7	-0.9	-0.5	0.0	-0.5	-0.6	-0.4	-0.5	-0.5	-0.5	-0.6	-0.5	-0.7	-0.7	-0.4	-0.4	-0.2	-0.2	-0.2	-0.5	0.0
31-May	0.0	0.0	0.3	0.1	-0.1	-0.1	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	-0.3	-0.6	-0.7	-0.6	-0.7	-0.6	-0.3	-0.7	-0.5	-0.6	-0.7	-0.3	-0.3	0.3
																									Diurnal Average	
																									Diurnal Maximum	
DF - DAS Failure																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 20m (VW20) - km/h

Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 km/h on May 29 17:00																				Hours in Service: 744					
Minimum Value: 0.2 km/h on May 3 04:00																				Hours of Data: 742					
Percentiles: P ₁ = 0.3 P ₁₀ = 0.8 Q ₁ = 1.5 Median = 2.2 Q ₃ = 2.8 P ₉₀ = 3.3 P ₉₉ = 4.2																				Hours of Missing Data: 2					
																				Hours of Calibration: 0					
																				Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.8	1.5	1.8	1.1	0.6	0.8	0.9	1.0	1.1	1.5	1.5	2.1	2.7	2.5	2.7	2.3	2.2	1.6	1.5	1.9	2.4	3.4	3.2	2.4	3.4
2-May	1.4	0.6	0.7	0.6	0.3	0.6	0.9	1.1	1.4	1.7	1.7	1.8	2.3	2.7	2.9	2.8	2.1	1.3	1.6	1.6	1.6	0.9	0.8	1.1	2.9
3-May	0.6	0.4	0.4	0.2	0.2	0.2	0.5	1.3	1.9	1.9	2.8	3.1	3.2	2.8	2.6	2.8	2.7	3.0	2.9	2.7	3.2	2.2	2.6	2.0	3.2
4-May	1.1	1.0	1.9	2.2	2.3	2.1	DF	1.3	1.2	1.1	DF	2.4	2.9	3.3	2.7	2.5	2.2	2.9	2.7	2.5	2.0	2.2	2.5	2.1	3.3
5-May	2.5	3.0	2.4	1.7	1.3	1.2	1.6	2.2	2.5	2.6	2.7	2.5	2.1	2.2	2.4	2.1	2.2	1.9	1.7	1.8	1.4	1.1	1.4	2.5	3.0
6-May	3.3	2.4	1.8	1.6	1.8	2.2	2.4	2.1	2.1	2.2	2.3	2.5	2.9	2.9	2.9	2.7	2.8	2.4	2.3	1.7	1.9	2.3	2.5	2.6	3.3
7-May	2.5	2.4	3.2	3.6	3.2	3.0	2.8	2.8	2.6	2.9	2.5	2.8	2.8	2.5	1.8	3.4	2.9	2.5	2.1	1.8	1.3	1.8	1.7	1.2	3.6
8-May	1.0	0.8	0.5	0.2	0.3	0.5	0.3	1.1	2.9	3.2	2.8	2.9	2.1	1.9	2.0	2.9	2.7	2.5	2.2	2.0	1.1	1.1	0.4	0.4	3.2
9-May	0.3	0.3	0.6	0.8	0.3	0.4	1.5	1.8	2.0	2.2	3.0	3.3	3.1	3.3	3.0	2.4	2.4	2.6	1.7	0.9	0.7	0.7	0.6	0.8	3.3
10-May	0.4	0.4	0.6	0.8	0.6	0.4	0.6	1.0	1.8	1.4	2.0	2.3	2.5	2.4	2.0	1.8	1.7	1.5	0.8	0.7	0.4	0.6	1.7	1.7	2.5
11-May	0.7	0.5	0.8	0.8	0.6	0.6	1.1	1.8	2.0	1.7	2.3	1.9	1.1	1.6	1.8	1.8	1.5	1.4	0.8	0.4	0.3	0.5	0.5	0.4	2.3
12-May	0.4	0.2	0.4	0.5	0.4	0.7	1.1	1.9	2.5	3.2	3.4	3.9	3.7	3.7	3.8	3.9	3.7	3.7	3.7	3.4	2.6	2.5	1.7	1.9	3.9
13-May	1.6	1.4	0.6	0.4	0.2	0.8	1.1	1.8	2.1	2.2	2.0	2.5	2.1	2.0	2.0	2.1	2.2	1.8	1.7	1.4	1.5	1.4	1.8	2.5	2.5
14-May	2.3	3.0	2.7	2.3	1.5	1.6	1.7	1.9	1.9	1.9	4.1	4.1	3.9	4.2	4.6	4.7	4.8	4.6	4.1	3.6	3.6	3.5	3.3	3.2	4.8
15-May	3.1	2.3	2.5	3.3	3.7	3.0	3.4	3.7	3.9	3.3	3.3	3.4	3.4	3.6	3.7	3.5	3.3	3.1	3.0	2.6	1.8	1.7	1.4	0.8	3.9
16-May	0.7	0.6	0.5	0.4	0.4	0.9	1.1	1.2	1.9	1.8	2.1	2.3	2.2	2.2	2.1	1.6	1.8	1.8	1.3	0.8	0.9	2.0	2.9	3.1	3.1
17-May	2.6	2.8	3.4	3.4	3.6	3.4	3.3	2.8	2.8	3.0	2.7	3.0	3.3	3.2	2.9	3.3	3.3	3.1	3.3	3.1	3.3	3.4	3.7	2.8	3.7
18-May	3.1	3.6	3.0	3.1	2.3	2.8	2.7	2.6	2.6	2.7	2.8	3.1	2.9	2.3	2.3	2.1	2.6	3.1	2.6	3.3	2.9	2.8	3.1	3.1	3.6
19-May	2.5	1.7	1.4	1.2	1.6	2.3	2.3	2.3	2.5	3.1	3.3	3.2	3.4	3.1	3.6	3.2	2.6	4.1	4.2	3.8	3.1	3.4	3.2	3.5	4.2
20-May	3.2	2.8	2.7	2.6	2.4	2.4	2.8	2.5	2.7	3.3	3.3	3.5	2.9	2.8	3.5	4.1	3.3	3.1	3.0	2.9	2.4	1.7	1.5	1.7	4.1
21-May	1.4	1.5	1.3	1.7	1.8	2.1	2.4	2.5	2.0	1.9	2.6	2.6	2.7	3.3	2.1	2.0	2.0	1.8	1.8	1.9	1.8	2.1	2.0	1.7	3.3
22-May	1.9	2.3	2.1	1.9	3.0	2.0	1.9	2.1	2.1	2.0	2.0	1.9	1.7	1.6	1.8	2.5	3.3	3.0	2.1	2.2	1.8	1.8	1.6	1.1	3.3
23-May	1.7	1.6	1.4	0.5	0.6	0.8	1.0	2.0	2.8	3.0	2.8	3.3	3.2	3.3	3.5	2.8	3.5	3.3	3.4	2.5	1.8	1.0	0.7	1.4	3.5
24-May	1.4	1.4	1.1	0.6	0.5	0.7	1.5	1.1	1.4	2.2	2.7	3.8	3.6	2.8	2.9	2.7	2.8	2.9	2.5	2.3	1.7	1.4	1.8	1.8	3.8
25-May	2.0	2.3	2.3	2.3	2.5	2.5	2.7	2.9	2.8	3.0	3.1	3.3	3.1	2.9	2.7	2.9	2.8	2.5	2.5	2.1	1.6	1.5	1.9	1.6	3.3
26-May	2.3	2.2	2.0	1.5	2.0	1.8	2.0	2.8	2.9	2.3	2.4	3.1	3.3	3.1	3.2	3.1	3.2	2.9	2.1	3.7	1.8	1.5	1.7	1.0	3.7
27-May	1.1	1.0	0.8	0.8	0.8	0.9	1.3	1.3	1.6	1.6	2.6	2.6	3.1	2.9	3.2	3.6	3.6	2.9	2.3	2.2	0.9	0.7	1.1	1.2	3.6
28-May	0.9	0.6	0.6	1.1	0.9	1.3	1.6	1.5	1.5	2.0	1.9	2.3	2.6	2.4	2.2	2.3	1.7	1.5	1.1	1.0	0.9	1.3	1.3	1.5	2.6
29-May	1.3	1.4	1.6	1.9	2.0	2.2	1.7	1.4	1.9	2.2	3.2	3.0	3.6	3.4	3.9	4.6	4.8	3.9	3.0	2.5	2.5	4.3	4.0	2.6	4.8
30-May	3.6	2.7	2.8	2.1	1.9	2.4	2.6	2.4	2.0	2.2	2.4	2.1	2.0	2.0	2.4	2.5	1.5	1.8	1.8	1.3	0.7	1.0	1.3	1.5	3.6
31-May	1.4	1.1	1.3	1.2	1.1	1.1	1.4	1.6	1.6	1.7	1.5	1.1	1.5	2.5	2.7	2.8	3.3	2.6	2.1	2.9	2.4	2.8	2.3	2.3	3.3
3.6 3.6 3.4 3.6 3.7 3.4 3.4 3.7 3.9 3.3 4.1 4.1 3.9 4.2 4.6 4.7 4.8 4.6 4.2 3.8 3.6 4.3 4.0 3.5																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 45m (VW45) - km/h

Lower Camp Met Tower - May 2025

Maximum Value: 1.4 km/h on May 29 00:00																		Maximum Daily Average: 0.5 km/h on May 20										Hours in Service: 744	
Minimum Value: -0.8 km/h on May 6 21:00																		Minimum Daily Average: -0.1 km/h on May 15										Hours of Data: 742	
Maximum Diurnal Average: 0.3 km/h at hour 24																		Minimum Diurnal Average: 0.1 km/h at hour 11										Hours of Missing Data: 2	
Monthly Average: 0.22 km/h																		Percentiles: P ₁ = -0.6 P ₁₀ = -0.2 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 0.9										Hours of Calibration: 0	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.1	0.4	0.2	0.3	-0.1	-0.1	0.3	0.3	-0.3	-0.1	-0.2	-0.1	0.3	0.3	0.2	0.7	0.3	0.0	0.5	0.6	0.3	0.4	0.9	0.7	0.2	0.9			
2-May	0.6	0.2	0.4	0.1	0.2	0.2	0.2	0.2	0.4	0.8	0.8	0.2	-0.2	0.5	-0.7	-0.1	0.2	0.1	0.4	0.5	0.6	-0.1	0.0	0.2	0.2	0.8			
3-May	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.1	0.2	0.0	-0.4	0.0	0.3	-0.1	-0.2	0.0	-0.1	-0.5	-0.4	-0.3	-0.7	-0.5	-0.3	0.2	-0.1	0.3			
4-May	-0.2	0.3	0.3	0.2	-0.4	-0.3	DF	-0.1	0.0	0.0	DF	0.0	-0.1	-0.1	-0.4	0.0	0.3	0.3	0.4	0.4	0.4	0.1	-0.4	-0.5	0.0	0.4			
5-May	-0.6	-0.2	0.2	0.6	0.3	0.4	0.3	-0.1	0.2	0.1	0.4	0.7	0.2	0.0	0.2	0.2	0.4	-0.1	0.3	0.3	0.2	0.1	0.1	0.6	0.2	0.7			
6-May	0.7	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.7	0.1	0.4	0.5	0.4	0.5	0.7	0.4	0.0	0.2	-0.5	-0.8	-0.8	-0.4	-0.1	0.2	0.7			
7-May	-0.1	0.4	0.4	0.8	0.7	0.7	0.4	0.2	-0.2	-0.3	0.4	0.1	0.1	0.2	0.3	0.0	-0.2	-0.2	0.2	0.2	0.1	0.4	0.4	0.5	0.2	0.8			
8-May	0.2	-0.2	0.1	0.1	-0.1	0.0	0.1	0.2	0.7	0.3	0.1	0.3	0.0	0.7	-0.1	0.1	0.0	0.2	0.2	0.4	0.2	0.0	0.2	0.2	0.2	0.7			
9-May	0.2	0.0	0.0	0.1	0.4	0.3	0.1	-0.1	-0.4	-0.1	0.4	0.2	-0.2	-0.2	-0.3	0.0	-0.1	0.2	0.1	0.2	0.6	0.4	0.4	0.4	0.1	0.6			
10-May	0.4	0.1	0.9	0.5	0.4	0.2	0.2	0.1	0.6	-0.2	-0.4	-0.3	-0.1	0.6	0.1	0.0	0.6	-0.2	0.4	0.5	0.4	0.4	0.5	0.0	0.3	0.9			
11-May	0.2	0.4	0.7	0.4	0.3	0.2	0.3	0.2	0.0	-0.1	0.2	0.2	0.0	0.4	0.3	0.3	0.7	-0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.7			
12-May	0.2	0.3	0.2	0.1	0.1	0.0	0.3	-0.3	0.0	0.0	0.1	0.0	0.4	0.5	0.4	0.0	0.3	0.2	0.1	0.3	0.2	0.3	0.2	0.0	0.2	0.5			
13-May	0.0	0.1	0.1	0.2	0.0	0.2	-0.1	-0.2	0.2	-0.3	-0.2	0.6	-0.2	0.1	0.1	0.6	0.1	0.2	0.3	0.1	0.4	0.3	0.4	0.6	0.1	0.6			
14-May	0.6	0.7	0.5	0.7	0.0	0.2	0.5	0.2	0.3	0.5	-0.7	-0.4	-0.4	0.5	0.4	0.5	0.2	0.0	0.0	0.0	-0.1	0.3	0.0	0.0	0.2	0.7			
15-May	0.1	0.1	0.0	-0.2	0.0	0.1	-0.2	-0.2	-0.1	-0.2	-0.4	-0.4	-0.3	-0.2	-0.5	0.2	-0.1	-0.2	-0.3	0.1	0.2	0.2	0.2	0.2	-0.1	0.2			
16-May	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.5	0.4	-0.2	0.1	0.4	0.1	0.2	0.6	0.8	0.5	0.4	0.2	0.3	0.2	0.1	0.6	0.1	0.2	0.8			
17-May	0.1	-0.1	0.1	0.7	0.1	0.3	0.6	0.3	0.3	0.3	0.3	0.2	0.5	0.4	0.3	0.5	0.5	0.4	0.3	0.2	0.3	0.2	0.5	0.2	0.3	0.7			
18-May	0.1	0.1	0.5	0.4	0.3	0.3	0.2	0.1	0.4	0.2	0.3	0.3	0.2	0.3	0.6	0.2	0.6	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.6			
19-May	0.3	0.0	-0.1	0.1	0.0	0.0	0.3	-0.3	0.4	0.4	0.5	0.2	0.3	0.8	0.5	0.2	-0.1	0.6	0.8	0.5	0.9	0.6	0.8	0.7	0.4	0.9			
20-May	0.5	0.8	0.6	0.2	0.4	0.2	0.2	0.7	0.5	0.4	0.3	0.5	0.8	0.7	0.5	0.6	0.8	0.6	0.7	0.6	0.6	0.5	0.4	0.8	0.5	0.8			
21-May	0.6	-0.1	0.1	0.7	0.3	0.2	0.3	0.1	0.5	0.4	0.3	0.0	0.3	0.0	-0.3	-0.1	0.2	0.0	0.3	0.2	0.3	0.7	0.3	0.2	0.2	0.7			
22-May	0.4	0.3	0.3	0.5	0.6	0.7	0.3	-0.3	0.1	0.2	-0.4	0.2	0.6	0.3	0.2	0.1	0.6	0.3	0.5	0.3	0.4	0.6	0.4	0.9	0.3	0.9			
23-May	0.6	0.5	0.6	0.6	0.5	0.0	0.2	0.3	0.3	0.5	0.3	0.4	0.4	0.3	0.4	0.2	0.3	0.3	0.5	0.1	-0.2	0.4	0.6	0.4	0.4	0.6			
24-May	0.4	0.5	0.2	0.2	0.1	0.1	0.2	0.1	0.5	0.2	0.1	0.6	0.3	0.4	0.4	0.2	0.5	0.6	0.3	0.2	0.8	0.8	0.6	0.5	0.4	0.8			
25-May	0.4	0.4	0.3	0.3	0.2	0.0	0.2	0.8	0.4	-0.2	0.2	0.1	0.8	0.4	0.1	0.5	0.4	0.4	-0.4	-0.3	-0.2	-0.2	0.6	0.8	0.2	0.8			
26-May	0.2	0.3	-0.1	0.0	0.7	0.5	0.4	0.4	0.3	0.4	0.5	0.4	0.1	0.3	-0.1	0.0	0.1	-0.3	-0.1	-0.4	0.0	0.5	0.1	0.4	0.2	0.7			
27-May	0.6	0.4	0.0	0.0	0.2	0.3	0.2	0.3	0.0	-0.1	0.1	0.0	0.3	0.0	0.0	0.0	-0.1	0.4	0.0	0.0	0.2	0.5	0.9	0.5	0.2	0.9			
28-May	0.4	0.2	0.6	0.8	0.9	0.3	0.2	0.0	0.2	0.4	0.1	0.1	0.3	0.2	0.1	0.1	-0.3	0.0	0.4	0.7	0.8	1.0	0.8	1.4	0.4	1.4			
29-May	0.9	1.0	1.0	0.7	0.9	0.5	0.1	0.3	0.3	0.3	0.2	0.0	0.4	-0.3	0.3	0.7	0.6	0.6	0.1	0.7	0.6	-0.4	-0.7	0.0	0.4	1.0			
30-May	0.0	-0.3	0.0	-0.3	0.2	0.1	-0.4	0.0	0.4	-0.1	-0.4	0.2	-0.5	0.0	0.2	0.2	0.0	0.1	0.1	0.2	-0.1	0.2	0.2	0.2	0.0	0.4			
31-May	0.4	0.3	0.5	0.6	0.3	0.4	0.1	0.0	-0.1	0.0	0.1	0.1	-0.2	-0.5	-0.3	-0.1	-0.3	0.1	0.2	-0.1	-0.4	-0.3	-0.6	-0.1	0.0	0.6			
																									Diurnal Average				
																									Diurnal Maximum				
DF - DAS Failure																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 45m (VW45) - km/h

Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 km/h on May 29 22:00																				Hours in Service: 744					
Minimum Value: 0.2 km/h on May 8 04:00																				Hours of Data: 742					
Percentiles: P ₁ = 0.3 P ₁₀ = 0.9 Q ₁ = 1.5 Median = 2.2 Q ₃ = 2.8 P ₉₀ = 3.2 P ₉₉ = 4.0																				Hours of Missing Data: 2					
																				Hours of Calibration: 0					
																				Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.8	1.7	1.6	1.3	0.7	0.6	1.0	1.1	1.2	2.0	1.9	2.3	2.4	2.5	2.3	2.3	2.0	1.4	1.5	1.6	1.7	2.5	2.3	2.3	2.5
2-May	1.5	0.6	0.6	0.6	0.4	0.7	0.9	1.1	1.4	1.7	1.8	2.1	2.9	3.2	3.2	3.0	2.4	1.2	1.7	1.6	1.7	1.1	0.9	1.0	3.2
3-May	0.7	0.4	0.5	0.3	0.3	0.3	0.4	1.4	1.2	1.4	2.7	3.1	3.5	3.0	2.6	2.8	2.4	3.1	3.1	3.1	3.4	2.3	2.5	2.0	3.5
4-May	1.0	1.0	1.7	2.0	2.4	2.3	DF	1.5	1.2	1.3	DF	2.3	2.7	3.2	2.9	2.3	2.4	3.2	2.9	2.6	2.2	2.0	2.3	2.0	3.2
5-May	2.5	3.0	2.3	1.8	1.4	1.2	1.6	2.5	2.7	3.0	3.0	3.0	2.3	2.3	2.5	2.3	2.2	1.8	1.6	1.7	1.6	1.3	1.5	2.3	3.0
6-May	2.4	2.1	1.6	1.5	1.5	2.0	2.4	2.2	1.7	2.2	2.8	3.0	3.7	3.7	3.6	3.4	3.3	2.9	2.7	1.9	2.3	2.8	3.0	3.2	3.7
7-May	3.0	1.8	2.4	2.6	2.1	2.2	2.1	2.8	3.1	3.4	3.1	2.8	2.4	2.0	1.6	2.8	2.5	2.5	2.0	2.0	1.7	2.1	1.7	1.4	3.4
8-May	1.1	1.1	0.6	0.2	0.3	0.4	0.5	0.9	2.9	2.9	2.7	2.7	2.3	2.1	2.1	2.6	2.4	2.1	2.1	2.0	1.4	1.4	0.8	0.6	2.9
9-May	0.4	0.5	1.1	1.1	0.5	0.5	1.3	1.3	1.7	2.0	3.0	3.2	3.0	3.0	2.9	2.4	2.3	2.3	1.5	1.1	0.7	0.6	0.9	1.0	3.2
10-May	0.6	0.5	0.8	0.8	0.8	0.5	0.6	0.9	1.8	1.5	2.4	2.6	2.4	2.7	2.2	2.2	2.0	1.8	1.2	0.8	0.7	0.9	1.5	1.7	2.7
11-May	1.1	0.9	1.1	1.0	0.9	0.8	1.3	2.0	2.1	1.8	2.2	2.0	1.0	1.6	1.8	2.1	1.6	1.4	0.9	0.4	0.6	0.8	0.8	0.3	2.2
12-May	0.3	0.3	0.5	0.6	0.4	0.8	1.2	1.7	2.2	2.6	2.9	3.5	3.3	3.7	3.4	3.5	3.4	3.3	3.0	3.1	2.3	2.3	1.6	1.8	3.7
13-May	1.2	1.0	0.9	0.5	0.2	0.7	1.0	1.9	2.1	2.2	2.3	2.7	2.7	2.4	2.3	2.3	2.1	1.6	1.5	1.2	1.5	1.5	1.6	2.2	2.7
14-May	2.1	2.2	2.8	2.4	1.5	1.5	1.8	1.9	2.3	2.1	3.2	3.3	3.2	3.9	4.0	4.3	4.3	4.2	3.6	3.1	3.3	3.3	3.0	2.9	4.3
15-May	2.9	2.3	2.5	2.8	3.2	2.8	3.0	3.1	3.5	3.1	3.1	3.4	3.3	3.2	3.5	3.2	3.1	2.7	2.5	2.1	1.6	1.8	1.7	1.3	3.5
16-May	0.9	0.7	0.8	0.6	0.7	1.2	1.2	1.2	2.3	2.1	2.5	2.4	2.5	2.6	2.4	1.9	1.8	2.0	1.5	0.9	1.3	2.1	2.7	2.7	2.7
17-May	2.1	2.3	2.7	3.1	2.7	2.9	2.9	2.5	2.6	2.9	2.8	3.1	3.4	2.9	2.8	3.2	3.1	2.8	3.0	2.8	2.9	3.2	3.0	2.6	3.4
18-May	2.5	2.9	2.3	2.7	1.9	2.4	2.4	2.1	2.2	2.4	2.7	3.1	3.5	2.6	2.5	2.4	2.8	2.8	2.4	3.1	2.6	2.4	2.7	2.4	3.5
19-May	1.9	1.6	1.6	1.1	1.0	1.7	2.3	2.7	2.6	3.0	3.5	3.5	3.4	3.0	3.5	3.2	3.1	4.0	4.5	3.6	3.2	3.1	2.9	2.9	4.5
20-May	2.8	2.8	2.6	2.5	2.3	2.3	2.6	2.6	2.6	2.8	3.0	3.1	2.9	2.8	3.0	3.3	3.1	2.8	2.7	2.8	2.5	2.0	1.5	1.8	3.3
21-May	1.3	1.4	1.5	1.8	1.7	1.7	2.1	2.2	2.1	2.3	2.5	2.3	2.4	3.0	2.5	2.5	2.3	2.1	2.2	2.2	2.3	2.3	2.2	1.9	3.0
22-May	2.1	2.3	2.5	2.0	2.6	2.2	2.3	2.3	2.4	2.4	2.3	2.3	1.9	1.6	2.3	2.7	3.0	2.8	2.4	2.3	1.6	1.9	1.3	1.2	3.0
23-May	1.7	1.4	1.2	0.7	0.8	1.1	1.2	1.9	2.6	2.6	3.0	3.2	3.5	2.8	3.5	2.2	3.0	3.1	3.0	2.7	2.2	1.0	0.8	1.4	3.5
24-May	1.5	1.3	1.1	1.0	0.8	1.0	1.7	1.2	1.7	1.7	2.3	3.1	3.5	3.3	3.2	2.5	3.0	3.0	3.0	2.5	1.8	1.5	2.0	2.0	3.5
25-May	1.9	1.4	1.3	1.4	1.5	1.8	2.5	3.0	3.5	3.8	3.9	3.5	3.4	3.6	3.4	3.6	3.6	3.2	2.8	2.3	1.8	1.7	2.3	1.8	3.9
26-May	1.8	2.1	2.1	1.9	2.1	2.2	1.8	2.3	2.5	2.6	2.3	3.8	4.1	3.9	3.9	3.7	4.0	3.5	2.4	4.0	1.8	1.6	1.4	1.0	4.1
27-May	1.2	1.3	1.0	1.0	0.9	1.0	1.5	1.5	1.6	1.7	2.6	2.8	3.1	2.8	3.2	3.2	3.1	2.7	2.4	2.3	1.0	0.9	1.4	1.2	3.2
28-May	0.8	0.8	0.9	1.2	0.8	1.4	1.1	1.1	1.2	1.8	1.7	2.3	2.7	2.7	2.6	2.8	2.0	1.9	1.3	1.2	0.8	1.3	1.4	1.3	2.8
29-May	1.4	1.3	1.5	1.3	1.2	1.4	1.0	1.0	2.0	2.5	3.8	3.8	4.1	3.7	3.7	3.9	3.7	3.8	3.1	3.0	2.7	4.8	4.1	2.6	4.8
30-May	3.6	2.8	2.9	2.4	2.0	2.4	2.6	2.5	2.1	2.6	2.5	2.2	2.3	2.5	2.8	2.3	1.9	2.2	1.9	1.4	0.7	1.1	1.4	1.7	3.6
31-May	1.6	1.5	1.6	1.6	1.3	1.4	1.2	1.4	1.2	1.5	1.3	1.1	1.1	1.9	2.3	2.4	2.8	2.3	2.2	2.7	2.2	2.7	2.1	2.2	2.8
3.6 3.0 2.9 3.1 3.2 2.9 3.0 3.1 3.5 3.8 3.9 3.8 4.1 3.9 4.0 4.3 4.3 4.2 4.5 4.0 3.4 4.8 4.1 3.2																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 100m (VW100) - km/h

Lower Camp Met Tower - May 2025

Maximum Value: 2.8 km/h on May 20 17:00																		Maximum Daily Average: 1.2 km/h on May 20																		Hours in Service: 744	
Minimum Value: -1.5 km/h on May 29 23:00																		Minimum Daily Average: -0.3 km/h on May 3																		Hours of Data: 742	
Maximum Diurnal Average: 0.4 km/h at hour 5																		Minimum Diurnal Average: 0.1 km/h at hour 15																		Hours of Missing Data: 2	
Monthly Average: 0.26 km/h																		Percentiles: P ₁ = -1.1 P ₁₀ = -0.5 Q ₁ = -0.2 Median = 0.2 Q ₃ = 0.7 P ₉₀ = 1.1 P ₉₉ = 2.0																		Hours of Calibration: 0	
																																				Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-May	-0.1	0.8	0.2	-0.1	-0.3	-0.5	0.1	0.2	-0.6	-0.3	-0.2	-0.2	0.4	0.3	-0.2	0.2	-0.2	-0.6	0.7	0.8	0.3	0.3	1.2	2.1	0.2	2.1											
2-May	1.3	0.2	0.1	0.0	0.0	-0.2	-0.1	0.3	0.2	0.2	0.5	-0.2	-0.5	0.4	-1.5	-0.6	0.0	-0.3	0.1	0.6	0.8	0.0	-0.2	0.1	0.0	1.3											
3-May	0.2	0.0	0.0	-0.1	0.0	0.1	-0.1	0.0	-0.1	-0.2	-0.4	-0.5	0.2	0.2	-0.1	-0.5	-0.2	-1.1	-1.0	-1.1	-1.3	-0.9	-0.5	0.0	-0.3	0.2											
4-May	-0.4	-0.2	0.1	0.0	-0.6	-0.8	DF	-0.3	-0.2	0.1	DF	-0.2	0.0	-0.6	-0.5	-0.4	0.2	0.4	0.5	0.6	0.4	0.0	-0.9	-1.3	-0.2	0.6											
5-May	-1.2	-0.2	0.2	0.6	1.1	0.9	0.4	0.4	-0.1	-0.1	0.1	0.4	0.1	0.1	-0.5	-0.1	-0.1	-0.3	0.4	0.2	0.1	0.3	0.7	0.7	0.2	1.1											
6-May	0.8	1.0	0.7	1.0	0.4	0.9	1.0	1.3	0.6	0.6	0.1	0.3	0.6	0.7	0.3	1.1	0.2	-0.5	-0.3	-0.9	-1.1	-1.1	-0.5	-0.4	0.3	1.3											
7-May	-0.1	0.5	1.2	1.4	1.3	1.1	0.9	0.3	-0.2	-0.6	0.1	0.0	-0.1	-0.3	0.0	-0.1	-0.3	-0.3	0.2	0.1	-0.2	0.2	0.4	0.9	0.3	1.4											
8-May	0.0	-0.5	-0.2	0.0	-0.3	-0.2	-0.3	-0.1	0.6	0.5	-0.1	0.2	-0.1	1.0	-0.5	0.0	-0.5	0.0	-0.1	0.6	0.4	-0.4	0.0	0.0	0.0	1.0											
9-May	-0.3	-0.2	-0.2	-0.1	1.0	0.7	0.2	0.2	-0.4	0.1	0.1	0.1	-0.7	-0.5	-0.8	-0.3	-0.2	-0.1	-0.1	0.0	0.2	0.1	0.2	0.1	0.0	1.0											
10-May	0.2	-0.1	0.1	-0.1	0.1	-0.1	-0.1	-0.1	0.2	-0.4	-1.0	-1.1	-0.1	0.7	0.4	-0.3	-0.1	-0.5	0.3	0.5	0.4	-0.1	0.7	-0.9	-0.1	0.7											
11-May	0.0	0.6	0.7	0.0	0.4	0.3	0.5	-0.1	-0.6	-0.7	-0.1	-0.1	-0.2	0.5	-0.3	-0.2	0.9	-0.5	-0.3	0.0	0.1	0.1	-0.1	0.1	0.0	0.9											
12-May	0.1	0.1	0.1	-0.2	0.0	-0.1	-0.1	-0.4	0.1	-0.2	0.2	-0.5	0.4	0.6	0.9	0.1	0.3	0.5	-0.2	0.1	0.2	0.4	0.0	-0.2	0.1	0.9											
13-May	-0.3	-0.1	0.0	-0.1	-0.3	-0.4	-0.1	-0.3	0.1	-0.2	-0.5	0.6	-0.4	-0.9	-0.1	0.4	0.0	0.0	0.3	0.2	0.7	0.9	1.3	1.5	0.1	1.5											
14-May	1.1	0.9	0.8	1.4	0.2	0.2	0.1	-0.1	-0.3	0.2	-1.1	-0.6	-0.2	0.8	0.7	1.1	0.3	0.1	-0.4	0.3	-0.3	0.1	-0.2	0.2	0.2	1.4											
15-May	-0.2	0.0	-0.2	-0.4	0.0	0.1	0.1	-0.4	0.4	-0.1	-0.1	-0.6	-0.3	-0.4	-0.9	-0.1	-0.5	-0.2	-0.4	0.4	0.1	0.0	0.2	0.2	-0.1	0.4											
16-May	0.1	-0.3	-0.2	-0.1	-0.2	0.1	0.2	1.1	-0.3	-0.3	0.2	0.3	0.4	0.0	0.8	1.9	0.6	0.2	-0.1	0.4	0.2	0.4	1.2	0.5	0.3	1.9											
17-May	0.9	0.7	0.1	0.9	-0.1	0.4	0.7	0.6	0.5	0.8	1.1	0.9	0.6	0.8	1.0	0.9	1.3	1.4	0.5	0.6	0.7	0.4	0.8	0.8	0.7	1.4											
18-May	0.1	0.2	0.8	0.7	0.6	0.7	0.3	-0.3	0.4	0.2	0.3	0.7	0.6	0.8	1.2	0.5	1.5	0.9	1.3	1.0	0.7	0.7	1.1	1.0	0.7	1.5											
19-May	1.1	0.4	0.8	0.4	0.3	0.3	1.0	-0.3	1.4	1.9	2.1	0.9	1.6	1.0	1.3	1.0	1.1	1.2	1.6	1.2	1.7	1.1	2.0	0.9	1.1	2.1											
20-May	0.5	1.1	0.8	0.5	0.9	0.8	0.7	1.5	1.2	1.5	0.6	1.0	1.7	1.8	0.7	0.9	2.8	1.6	1.1	1.5	2.0	1.2	1.0	1.5	1.2	2.8											
21-May	0.7	0.6	0.7	1.5	0.7	0.4	0.4	0.2	1.8	1.0	0.5	0.1	0.1	0.5	-0.6	-0.6	-0.3	-0.5	-0.2	0.0	0.4	2.2	0.3	-0.1	0.4	2.2											
22-May	0.7	-0.1	0.2	0.6	2.1	2.1	0.6	-0.8	-0.4	0.3	-0.8	-0.1	0.4	0.0	0.1	0.8	1.1	0.8	1.1	1.8	1.2	0.3	0.5	0.9	0.6	2.1											
23-May	1.1	0.6	0.8	0.7	0.6	0.0	0.7	1.1	0.6	0.1	0.8	2.0	1.1	0.6	1.3	0.4	0.6	1.4	1.1	0.5	-0.6	0.2	0.4	0.0	0.7	2.0											
24-May	0.0	0.5	0.7	0.2	0.0	-0.3	0.7	0.1	0.5	0.4	-0.1	1.0	0.7	1.6	0.4	0.0	0.8	0.7	-0.1	0.4	0.5	0.5	0.1	0.3	0.4	1.6											
25-May	0.1	0.4	0.4	0.6	0.4	0.8	0.9	1.8	1.0	-0.4	-0.3	1.0	1.8	0.8	-0.5	0.4	0.2	0.5	-0.7	-0.7	-0.9	-0.8	0.3	0.8	0.3	1.8											
26-May	0.9	1.3	1.4	1.4	1.8	1.1	0.8	0.6	0.8	0.8	1.0	0.2	0.0	0.8	-0.1	-0.1	-0.7	-0.7	-0.6	-0.8	-0.4	0.4	-0.2	0.5	0.4	1.8											
27-May	0.6	0.6	-0.2	-0.1	0.0	-0.1	0.2	-0.1	-0.3	-0.5	-0.2	-0.8	0.0	-0.1	-0.3	-0.5	-0.3	0.3	-0.2	-0.3	-0.2	0.3	0.8	0.6	0.0	0.8											
28-May	1.1	0.4	0.0	-0.4	-0.1	-0.2	0.1	-0.1	-0.3	0.1	-0.1	0.0	0.9	-0.1	0.1	-0.2	-1.1	-0.8	-0.4	0.4	0.7	0.9	1.2	1.1	0.1	1.2											
29-May	1.9	1.5	1.5	2.0	1.9	1.7	1.2	0.9	0.1	1.1	0.5	0.0	0.8	0.1	0.7	1.7	1.9	1.7	0.6	1.0	0.5	-0.7	-1.5	-0.6	0.9	2.0											
30-May	0.1	-0.4	0.0	-0.7	-0.1	0.1	-0.5	-0.4	-0.2	-0.4	-0.8	0.4	-1.2	-0.3	-0.2	-0.5	-0.4	-0.3	0.1	0.1	0.0	0.2	0.8	0.6	-0.2	0.8											
31-May	0.7	0.2	-0.1	0.5	0.4	0.0	0.0	-0.2	-0.1	-0.2	0.0	-0.3	-0.4	-0.7	-0.5	-0.2	0.0	0.3	0.2	0.2	-0.5	-0.7	-0.6	-0.3	-0.1	0.7											
Diurnal Average																																					
Diurnal Maximum																																					
DF - DAS Failure																																					



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 100m (VW100) - km/h

Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.1 km/h on May 26 14:00																				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7					
Minimum Value: 0.2 km/h on May 8 04:00																									
Percentiles: P ₁ = 0.4 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.2 Q ₃ = 2.9 P ₉₀ = 3.5 P ₉₉ = 4.7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.9	2.1	1.8	1.4	0.8	0.4	1.2	1.1	1.2	2.3	2.5	2.6	2.8	2.8	2.4	2.7	2.3	1.8	1.7	1.5	1.8	2.3	1.8	1.8	2.8
2-May	1.4	1.0	0.9	0.5	0.5	0.7	0.9	1.1	1.2	1.1	1.7	2.6	3.3	4.0	3.0	3.4	2.9	1.1	1.9	1.9	2.1	1.8	1.4	1.4	4.0
3-May	0.8	0.5	0.4	0.4	0.4	0.6	0.8	1.5	1.6	1.7	2.3	3.2	3.9	3.8	3.4	2.5	2.1	3.0	2.8	2.7	2.9	2.4	2.3	2.0	3.9
4-May	1.0	0.9	1.3	1.8	2.4	2.1	DF	1.6	1.3	1.4	DF	2.2	2.4	2.7	3.1	2.4	2.4	2.9	2.6	2.2	1.5	1.7	2.4	2.0	3.1
5-May	2.9	3.4	2.9	2.1	1.7	1.4	1.8	2.8	3.4	3.7	3.4	3.6	2.5	2.6	2.4	2.7	2.6	2.0	2.2	1.8	2.2	2.0	1.9	2.4	3.7
6-May	2.0	2.1	1.6	1.3	1.3	2.0	2.1	1.8	1.6	2.5	3.3	3.5	4.2	4.6	3.9	4.4	3.6	3.1	2.6	1.6	1.6	2.3	2.8	3.1	4.6
7-May	2.9	3.0	2.6	2.9	2.5	2.1	2.0	3.1	3.5	3.3	3.2	2.8	1.8	1.7	1.2	2.0	1.4	2.2	2.1	1.9	1.3	1.4	1.1	1.1	3.5
8-May	1.5	1.4	0.8	0.2	0.4	0.6	0.5	1.2	3.3	3.5	3.1	2.9	2.9	2.7	2.7	3.3	2.9	2.7	2.4	2.2	1.7	1.9	1.1	0.9	3.5
9-May	0.8	0.8	1.7	1.3	0.7	0.7	1.0	1.2	1.9	2.2	3.0	3.4	3.0	3.1	2.8	2.5	2.2	1.7	1.0	0.9	0.5	0.5	0.7	1.1	3.4
10-May	1.3	0.9	0.9	0.8	1.3	0.6	0.4	0.5	1.7	1.7	2.6	2.9	2.6	3.5	2.5	2.8	2.3	2.0	1.3	0.9	0.6	1.3	1.8	1.7	3.5
11-May	1.7	1.4	1.4	1.1	1.3	1.2	1.8	2.1	2.2	1.9	2.2	1.8	1.4	1.6	1.6	2.3	1.9	1.4	0.6	0.4	0.8	1.4	1.1	0.3	2.3
12-May	0.4	0.3	0.4	0.4	0.4	1.0	1.2	1.6	2.4	2.9	3.2	4.0	4.3	4.2	4.5	4.3	3.7	3.8	3.2	3.2	2.2	2.5	1.5	1.5	4.5
13-May	1.2	1.0	1.1	0.7	0.4	0.6	0.9	2.0	2.3	2.6	2.6	3.2	3.1	2.1	2.5	2.2	2.4	1.8	1.6	1.6	1.4	2.0	1.6	2.2	3.2
14-May	2.5	2.8	3.4	2.9	2.2	2.0	1.9	2.1	2.2	2.5	2.6	3.1	3.1	4.1	4.5	4.6	4.6	4.8	3.8	3.0	3.0	3.1	3.2	3.1	4.8
15-May	2.8	2.7	2.7	3.1	3.5	2.9	3.5	2.9	3.6	3.3	3.8	3.8	3.7	3.9	3.7	3.5	3.3	3.5	3.0	2.4	1.2	1.1	1.0	1.8	3.9
16-May	1.4	0.5	0.3	0.4	0.7	1.6	1.2	1.5	2.3	2.7	3.2	2.8	2.9	3.0	2.8	2.1	2.2	2.3	1.8	1.1	1.6	2.3	2.6	2.3	3.2
17-May	2.3	2.2	2.6	2.3	1.9	2.2	2.2	2.0	2.6	2.9	3.2	3.7	3.5	3.5	3.1	3.3	3.2	2.7	2.4	2.6	2.9	3.2	2.7	2.5	3.7
18-May	2.3	2.2	1.8	1.7	1.4	1.7	1.4	1.6	2.1	2.7	2.7	3.4	4.4	3.3	3.1	2.9	2.9	2.9	2.3	2.6	2.3	2.2	2.4	2.1	4.4
19-May	1.6	1.2	1.1	1.0	1.0	1.4	2.7	3.1	3.2	3.5	4.4	4.5	4.0	3.1	3.5	3.8	4.1	4.6	5.1	4.1	3.4	3.1	2.8	2.6	5.1
20-May	2.8	2.8	2.6	2.3	2.3	2.1	2.5	2.2	2.7	2.8	2.5	2.7	3.2	3.3	2.6	2.8	3.0	2.8	2.4	2.4	2.7	2.1	1.6	2.0	3.3
21-May	1.4	1.3	1.7	1.8	1.6	1.4	1.6	2.0	2.1	2.4	2.5	2.3	2.4	2.7	2.0	2.0	2.5	2.0	2.1	2.4	2.5	2.6	2.4	1.8	2.7
22-May	2.3	2.3	2.9	2.5	2.1	2.1	2.4	2.3	2.8	3.3	2.5	2.6	2.3	1.8	2.5	3.1	2.8	2.4	3.0	2.5	1.4	2.2	1.9	1.4	3.3
23-May	1.8	1.6	1.4	1.2	1.0	1.1	1.7	1.5	2.2	2.4	3.4	3.5	4.4	2.7	3.5	1.9	2.7	3.3	2.9	3.2	1.7	1.0	0.8	0.8	4.4
24-May	1.0	1.3	1.3	1.6	1.5	1.5	1.6	1.2	1.9	1.7	2.2	3.0	4.2	4.1	3.9	2.6	3.5	3.3	2.9	2.6	1.6	1.6	2.1	2.4	4.2
25-May	2.5	2.4	2.3	2.2	2.2	2.2	3.0	3.7	4.3	4.3	4.3	4.7	4.7	4.5	4.0	4.3	4.0	3.6	2.9	2.3	1.2	1.1	1.8	2.1	4.7
26-May	2.5	2.7	1.8	1.5	1.2	1.4	1.3	2.0	2.4	3.2	3.0	4.4	4.6	5.1	4.6	4.4	4.0	3.3	2.4	4.3	2.0	1.5	1.5	0.9	5.1
27-May	0.9	1.4	1.3	1.0	0.9	1.2	1.5	1.7	1.6	1.9	3.0	2.9	3.1	2.9	2.6	2.7	2.4	2.3	2.2	1.8	0.5	0.6	0.7	0.8	3.1
28-May	0.7	1.1	1.1	1.5	0.7	0.7	0.7	0.9	0.7	1.2	1.8	2.8	3.5	2.8	3.1	3.3	2.4	2.2	1.1	1.2	1.0	0.9	1.4	1.3	3.5
29-May	1.6	1.6	1.2	1.2	1.4	1.1	1.3	1.4	2.5	3.1	4.6	4.5	4.9	4.2	4.4	3.9	4.5	4.9	3.8	3.5	3.3	4.9	4.1	2.8	4.9
30-May	3.3	2.6	2.9	2.7	2.1	2.2	2.7	2.7	2.5	2.7	3.2	3.2	3.0	3.0	3.1	2.3	2.4	2.6	2.1	1.1	0.4	0.7	0.9	1.1	3.3
31-May	1.1	2.1	2.0	1.9	1.6	1.4	1.0	0.9	0.9	1.1	1.0	1.0	0.7	1.7	1.6	1.8	2.3	1.6	1.9	2.5	1.7	2.1	2.2	2.2	2.5
3.3 3.4 3.4 3.1 3.5 2.9 3.5 3.7 4.3 4.3 4.6 4.7 4.9 5.1 4.6 4.6 4.6 4.9 5.1 4.3 3.4 4.9 4.1 3.1																									
Diurnal Maximum																									
DF - DAS Failure																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 163m (VW163) - km/h

Lower Camp Met Tower - May 2025

Maximum Value: 3.7 km/h on May 20 17:00																		Maximum Daily Average: 1.7 km/h on May 19										Hours in Service: 744	
Minimum Value: -1.3 km/h on May 30 13:00																		Minimum Daily Average: -0.2 km/h on May 15										Hours of Data: 738	
Maximum Diurnal Average: 0.9 km/h at hour 24																		Minimum Diurnal Average: 0.5 km/h at hour 11										Hours of Missing Data: 6	
Monthly Average: 0.75 km/h																		Percentiles: P ₁ = -0.8 P ₁₀ = -0.2 Q ₁ = 0.1 Median = 0.6 Q ₃ = 1.2 P ₉₀ = 1.9 P ₉₉ = 2.8										Hours of Calibration: 0	
																		Percent Operational Time: 99.2											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.1	1.0	0.1	-0.1	0.0	0.0	0.3	0.3	-0.2	0.0	0.1	0.2	0.5	0.3	-0.2	-0.3	-0.4	-0.8	0.8	0.8	0.1	0.3	1.9	2.8	0.3	2.8			
2-May	1.7	0.5	0.6	0.4	0.2	0.3	0.4	0.7	0.4	0.4	0.2	-0.4	-0.4	0.7	-0.7	0.2	0.2	-0.2	0.1	0.5	0.7	0.2	-0.2	0.1	0.3	1.7			
3-May	0.2	0.1	0.2	0.3	0.4	0.8	0.6	1.1	0.1	0.4	1.3	0.6	1.3	1.3	1.0	0.7	1.8	0.0	-0.1	-0.2	-0.3	0.0	0.1	0.2	0.5	1.8			
4-May	0.1	0.7	1.5	1.7	0.4	0.1	DF	0.0	0.0	0.0	DF	1.2	1.9	0.8	0.7	0.6	1.2	1.8	1.9	2.1	2.3	1.8	0.2	0.0	1.0	2.3			
5-May	-0.2	0.5	0.1	0.4	1.2	0.8	0.8	2.0	0.6	0.3	1.4	0.8	0.0	0.0	-0.7	-0.4	-0.5	-0.2	0.0	0.5	-0.1	0.4	0.7	0.6	0.4	2.0			
6-May	1.0	1.5	1.3	1.7	0.9	1.3	1.8	1.6	0.8	0.6	1.1	1.7	1.6	1.3	1.5	2.3	1.3	0.7	0.5	-0.1	-0.5	-0.5	0.3	0.5	1.0	2.3			
7-May	0.4	0.8	1.7	1.5	1.7	1.8	1.5	1.2	0.7	0.3	1.2	1.5	1.2	0.8	1.0	1.5	1.2	1.0	1.2	1.1	0.7	1.7	1.7	2.0	1.2	2.0			
8-May	1.0	0.3	0.3	0.1	0.1	0.2	-0.2	0.2	0.6	0.6	-0.1	0.4	0.0	0.8	-0.2	0.0	-0.6	-0.1	-0.2	0.9	0.8	-0.7	-0.1	0.3	0.2	1.0			
9-May	0.1	0.4	-0.3	0.0	0.6	0.6	0.3	0.4	0.3	0.4	1.1	1.4	0.5	1.0	0.3	0.8	1.0	1.4	0.9	0.9	0.8	1.1	1.2	1.0	0.7	1.4			
10-May	0.5	1.1	0.5	0.5	0.6	0.4	0.3	0.1	0.6	0.1	-0.6	-0.7	0.7	1.1	0.6	0.2	0.2	-0.3	0.5	0.8	0.6	-0.3	0.8	-1.1	0.3	1.1			
11-May	0.0	1.1	0.5	-0.3	0.3	0.6	1.2	0.7	-0.6	-0.4	-0.1	-0.1	0.2	0.3	-0.7	-0.3	1.7	-0.4	-0.3	0.2	0.0	-0.2	0.2	0.3	0.2	1.7			
12-May	0.1	0.2	0.2	-0.1	0.1	0.0	0.4	-0.1	0.2	-0.4	0.4	-0.8	0.2	0.4	0.9	-0.4	0.3	0.6	-0.3	-0.1	0.2	0.6	0.5	-0.4	0.1	0.9			
13-May	-0.6	-0.1	0.2	0.1	0.1	0.1	0.0	0.3	0.4	0.1	-0.1	1.1	-0.2	-1.2	-0.9	0.3	-0.2	-0.4	1.0	0.7	1.5	1.6	1.8	2.0	0.3	2.0			
14-May	1.3	1.2	1.2	2.0	0.7	0.5	0.3	0.8	0.0	0.6	-0.7	-0.6	0.2	0.9	0.7	1.2	0.1	-0.1	-0.9	0.4	-0.5	-0.5	-0.3	0.1	0.4	2.0			
15-May	-0.6	-0.2	-0.3	-0.3	-0.4	0.1	0.3	-0.7	0.8	0.0	0.4	-0.3	0.0	-0.5	-1.1	-0.4	-0.6	-0.2	-0.7	0.6	-0.1	-0.4	-0.1	-0.2	-0.2	0.8			
16-May	0.6	-0.1	0.2	0.2	-0.1	0.1	0.2	1.1	-0.9	-0.3	0.5	0.3	0.8	0.0	1.7	2.3	0.7	0.0	-0.3	0.7	1.1	1.0	0.6	0.7	0.5	2.3			
17-May	1.5	0.6	-0.5	1.2	-0.1	0.3	0.6	0.5	0.4	0.6	1.5	1.0	0.3	0.7	1.7	1.0	1.1	1.5	0.3	0.4	0.3	0.1	0.5	1.0	0.7	1.7			
18-May	0.5	0.7	1.7	1.1	0.8	1.5	1.0	0.1	0.3	-0.1	0.1	0.4	1.6	1.6	1.8	0.8	2.1	1.0	2.0	1.3	0.9	0.5	1.5	1.0	1.0	2.1			
19-May	1.6	1.2	1.2	1.1	0.8	0.9	1.1	0.1	2.2	3.3	2.5	1.5	2.3	1.3	1.9	2.1	2.1	2.3	2.4	2.0	2.5	1.6	2.6	1.4	1.7	3.3			
20-May	0.5	1.3	1.2	0.8	1.4	1.3	1.1	2.3	2.1	2.1	0.4	1.2	2.6	2.5	0.7	0.6	3.7	2.5	1.5	1.9	2.8	1.9	1.6	1.9	1.7	3.7			
21-May	1.2	1.1	2.0	2.3	1.8	0.9	0.2	0.3	2.6	1.6	0.3	0.0	-0.2	0.6	0.5	0.0	0.1	0.0	0.3	0.7	1.3	2.7	0.8	0.5	0.9	2.7			
22-May	1.0	0.4	0.5	0.9	2.6	2.6	0.9	-0.4	-0.2	1.0	-0.2	0.4	1.1	0.7	0.6	1.5	1.8	1.5	1.8	2.7	2.0	0.5	1.1	1.6	1.1	2.7			
23-May	2.4	1.2	1.9	1.1	1.2	0.9	1.6	1.2	0.4	-0.2	1.1	3.1	1.6	1.1	1.5	0.1	0.9	1.9	1.2	1.2	0.0	1.0	1.1	1.1	1.2	3.1			
24-May	0.5	1.5	1.5	1.0	0.3	-0.3	0.9	0.3	0.9	0.5	-0.7	1.4	1.2	2.4	0.9	-0.1	1.2	1.7	0.5	0.9	0.8	1.0	0.6	0.8	0.8	2.4			
25-May	0.6	1.0	1.0	1.3	1.3	1.4	1.4	2.4	1.2	0.0	0.1	2.0	2.3	1.8	0.1	1.2	0.6	1.4	0.2	0.0	-0.3	0.0	1.1	1.4	1.0	2.4			
26-May	1.2	1.8	2.1	2.2	2.6	1.6	1.3	1.1	1.2	1.3	1.8	1.0	0.7	1.7	0.7	0.9	-0.1	0.2	0.3	1.1	0.2	UO	0.3	1.4	1.2	2.6			
27-May	1.2	1.5	0.5	0.8	0.6	0.3	1.0	0.6	0.6	0.1	1.0	0.1	1.3	1.3	1.2	1.0	1.5	1.7	1.0	1.0	1.2	1.6	1.8	2.1	1.0	2.1			
28-May	3.1	2.6	1.2	0.6	0.5	0.5	0.8	0.8	0.3	0.3	-0.3	0.8	2.3	0.6	1.1	0.3	-0.5	-0.2	0.0	0.6	1.4	2.1	2.7	3.1	1.0	3.1			
29-May	2.8	2.3	2.0	2.5	2.9	2.3	2.0	1.6	0.6	1.6	1.0	1.2	1.8	0.9	1.0	2.6	2.6	1.5	1.3	1.5	0.7	1.4	0.2	0.5	1.6	2.9			
30-May	1.9	1.0	1.5	0.5	1.1	1.6	0.4	0.1	0.1	0.4	-0.7	1.0	-1.3	0.0	0.4	0.6	0.0	0.1	0.8	0.8	0.5	1.1	1.9	2.4	0.7	2.4			
31-May	3.1	1.9	1.1	2.3	1.9	0.6	0.5	0.3	0.0	-0.2	0.1	0.0	-0.1	-0.6	-0.3	-0.2	0.1	0.3	UO	0.4	0.0	UO	UO	0.3	0.6	3.1			
0.9 0.9 0.9 0.9 0.9 0.8 0.8 0.7 0.5 0.5 0.5 0.7 0.8 0.8 0.6 0.7 0.8 0.6 0.6 0.8 0.7 0.8 0.9 0.9																								Diurnal Average					
3.1 2.6 2.1 2.5 2.9 2.6 2.0 2.4 2.6 3.3 2.5 3.1 2.6 2.5 1.9 2.6 3.7 2.5 2.4 2.7 2.8 2.7 2.7 3.1																								Diurnal Maximum					
DF - DAS Failure UO - Unstable Operation																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 163m (VW163) - km/h

Lower Camp Met Tower - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.5 km/h on May 26 14:00																			Hours in Service: 744 Hours of Data: 738 Hours of Missing Data: 6 Hours of Calibration: 0 Percent Operational Time: 99.2						
Minimum Value: 0.3 km/h on May 15 22:00																									
Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.5 Median = 2.3 Q ₃ = 3.1 P ₉₀ = 3.9 P ₉₉ = 5.2																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.8	2.3	1.7	1.1	0.9	0.5	0.9	1.1	1.4	2.7	2.7	2.7	2.9	2.9	2.3	2.5	2.3	2.1	1.7	1.2	1.9	2.8	2.6	2.4	2.9
2-May	1.7	1.7	1.2	0.6	0.6	0.6	0.7	1.0	1.0	0.8	1.3	2.6	3.5	4.3	3.0	3.8	3.1	1.0	1.7	1.3	0.9	1.9	1.6	1.7	4.3
3-May	0.7	0.6	0.4	0.6	0.6	0.6	0.8	1.7	1.8	2.2	2.4	3.1	4.3	4.1	3.8	2.5	2.3	2.6	2.6	2.7	2.8	2.6	2.1	1.8	4.3
4-May	1.2	1.1	1.2	1.7	2.0	1.8	DF	1.6	1.4	1.4	DF	2.3	2.5	3.0	3.2	2.5	2.6	2.7	2.3	1.6	1.3	1.6	1.8	1.4	3.2
5-May	2.3	3.3	2.7	2.0	1.9	1.5	1.9	3.1	4.0	4.0	3.8	4.5	2.5	2.7	2.5	3.0	2.7	2.0	2.0	1.5	2.0	1.7	2.1	2.4	4.5
6-May	2.3	2.2	1.8	1.7	1.5	1.8	2.2	2.1	2.2	2.8	3.8	4.0	4.4	4.8	4.1	4.9	3.6	3.3	2.4	1.6	1.3	1.7	2.1	2.4	4.9
7-May	2.2	3.9	3.6	3.7	3.2	3.0	2.5	3.6	3.3	3.1	3.3	2.8	1.7	1.6	1.1	1.5	1.5	2.4	1.9	1.8	0.8	1.1	1.0	0.8	3.9
8-May	1.6	1.7	0.5	0.3	0.3	0.5	0.6	1.7	3.5	3.8	3.3	3.1	3.1	2.7	3.2	3.7	3.2	3.1	2.3	2.0	1.1	1.7	1.3	1.1	3.8
9-May	0.8	1.0	1.4	1.1	0.6	0.8	0.8	1.2	2.2	2.3	2.9	3.4	3.1	3.2	3.0	2.7	2.2	1.7	1.0	0.8	0.7	0.7	0.9	0.9	3.4
10-May	1.5	1.1	1.0	0.7	1.7	0.8	0.7	0.5	1.6	1.9	3.1	3.2	2.8	3.6	2.7	2.9	2.6	2.4	1.4	1.2	0.7	1.1	1.9	1.9	3.6
11-May	1.8	1.9	1.5	1.3	1.5	1.5	1.7	1.8	1.8	1.9	2.5	2.1	1.8	1.5	1.5	2.2	2.3	1.5	0.7	0.5	0.7	0.9	0.9	0.4	2.5
12-May	0.4	0.3	0.6	0.7	0.6	1.0	0.8	1.7	2.7	3.2	3.6	4.7	5.2	4.8	4.9	4.9	4.4	3.9	3.3	2.9	2.2	2.1	1.5	1.7	5.2
13-May	1.1	0.7	1.1	0.7	0.4	0.5	0.8	2.1	2.2	2.8	2.9	3.7	3.3	1.9	3.0	2.3	2.7	2.0	1.9	2.0	1.5	2.4	2.6	2.6	3.7
14-May	3.2	3.2	3.2	3.0	2.6	1.9	1.6	2.2	2.0	3.2	2.6	3.1	3.5	4.6	4.8	4.9	4.8	4.8	3.8	3.3	3.1	3.0	3.4	3.3	4.9
15-May	2.9	2.7	2.6	2.9	3.4	3.4	3.7	3.1	4.2	3.7	4.2	4.1	4.2	4.5	4.1	4.3	3.9	3.9	2.8	2.5	0.9	0.3	0.4	1.2	4.5
16-May	1.8	0.8	0.5	0.5	1.0	1.4	0.7	1.7	2.1	2.8	3.9	3.3	3.1	2.8	2.9	2.4	2.4	2.7	2.1	1.4	2.1	2.4	2.9	2.6	3.9
17-May	2.4	2.5	2.3	2.1	1.8	2.0	2.0	2.1	2.6	3.3	3.8	4.3	3.9	3.9	3.9	3.9	3.7	3.2	1.9	2.4	2.6	2.8	2.7	2.5	4.3
18-May	2.0	3.0	2.6	1.9	1.4	1.6	1.4	1.8	2.3	2.6	3.0	3.8	4.8	4.0	3.7	3.1	3.2	3.5	2.6	2.0	2.0	2.3	2.4	2.5	4.8
19-May	2.2	1.5	1.7	1.9	1.9	2.0	3.3	3.2	3.6	4.1	4.9	4.9	4.7	3.7	4.3	4.5	4.4	4.5	5.2	4.2	3.6	3.3	3.1	2.9	5.2
20-May	3.0	2.8	3.0	2.6	2.3	2.4	2.5	2.3	2.7	3.1	2.2	2.7	3.4	4.2	2.6	2.8	3.5	3.2	2.7	2.5	3.2	2.4	2.0	2.3	4.2
21-May	1.6	1.6	1.8	1.9	1.9	1.8	1.6	2.2	2.3	2.8	2.4	2.5	2.4	3.1	1.6	1.6	2.1	1.9	1.9	2.4	2.7	2.9	2.5	1.4	3.1
22-May	2.1	2.0	2.9	2.6	2.3	2.2	2.3	2.3	2.9	3.9	2.5	2.5	2.0	1.7	2.7	3.7	3.3	2.8	3.3	2.8	1.8	1.5	1.3	1.0	3.9
23-May	1.4	1.9	1.3	1.6	1.2	1.1	1.7	1.9	2.2	2.4	3.8	4.6	4.9	3.1	3.7	1.8	3.0	3.7	2.6	3.6	1.6	1.3	1.0	0.8	4.9
24-May	0.6	0.8	1.4	1.7	1.0	1.5	1.9	1.6	2.1	1.9	2.1	3.7	4.8	4.7	3.8	2.8	3.7	3.9	2.5	2.5	1.2	1.1	1.3	1.5	4.8
25-May	1.5	1.6	1.5	1.4	1.6	2.6	3.1	4.0	4.4	4.0	4.5	5.2	5.3	4.9	4.1	4.4	4.0	3.9	2.7	1.9	0.8	0.6	1.1	1.8	5.3
26-May	2.2	2.3	2.4	2.4	2.0	2.2	2.0	2.7	2.8	3.4	3.6	4.3	4.7	5.5	4.8	4.9	3.5	3.2	2.1	3.6	2.1	UO	1.8	1.1	5.5
27-May	0.9	1.1	1.3	0.9	1.0	1.1	1.4	1.7	1.5	1.8	3.1	3.0	3.2	2.9	2.7	2.8	2.5	2.2	2.0	1.5	0.8	0.7	0.6	0.5	3.2
28-May	0.7	1.1	1.2	0.9	1.0	0.8	1.1	1.0	0.7	1.4	2.2	3.2	3.9	2.9	3.1	3.8	2.4	2.3	1.2	1.0	0.7	0.6	0.7	0.7	3.9
29-May	1.0	0.8	0.5	0.7	0.7	0.8	1.4	1.7	2.4	3.6	4.8	5.1	5.4	4.7	5.2	4.6	5.3	5.3	4.4	3.6	3.1	4.3	3.7	2.8	5.4
30-May	2.8	2.4	2.6	2.9	2.0	1.9	2.5	2.5	2.6	3.0	3.1	3.5	3.1	3.3	3.2	2.5	2.7	2.6	1.9	0.6	0.4	0.9	0.7	0.7	3.5
31-May	0.5	2.5	2.0	1.3	1.5	1.2	1.0	0.9	0.9	1.1	1.1	1.1	0.6	1.3	1.6	1.8	2.4	1.4	UO	2.8	1.8	UO	UO	2.1	2.8
Diurnal Maximum																									
DF - DAS Failure UO - Unstable Operation																									



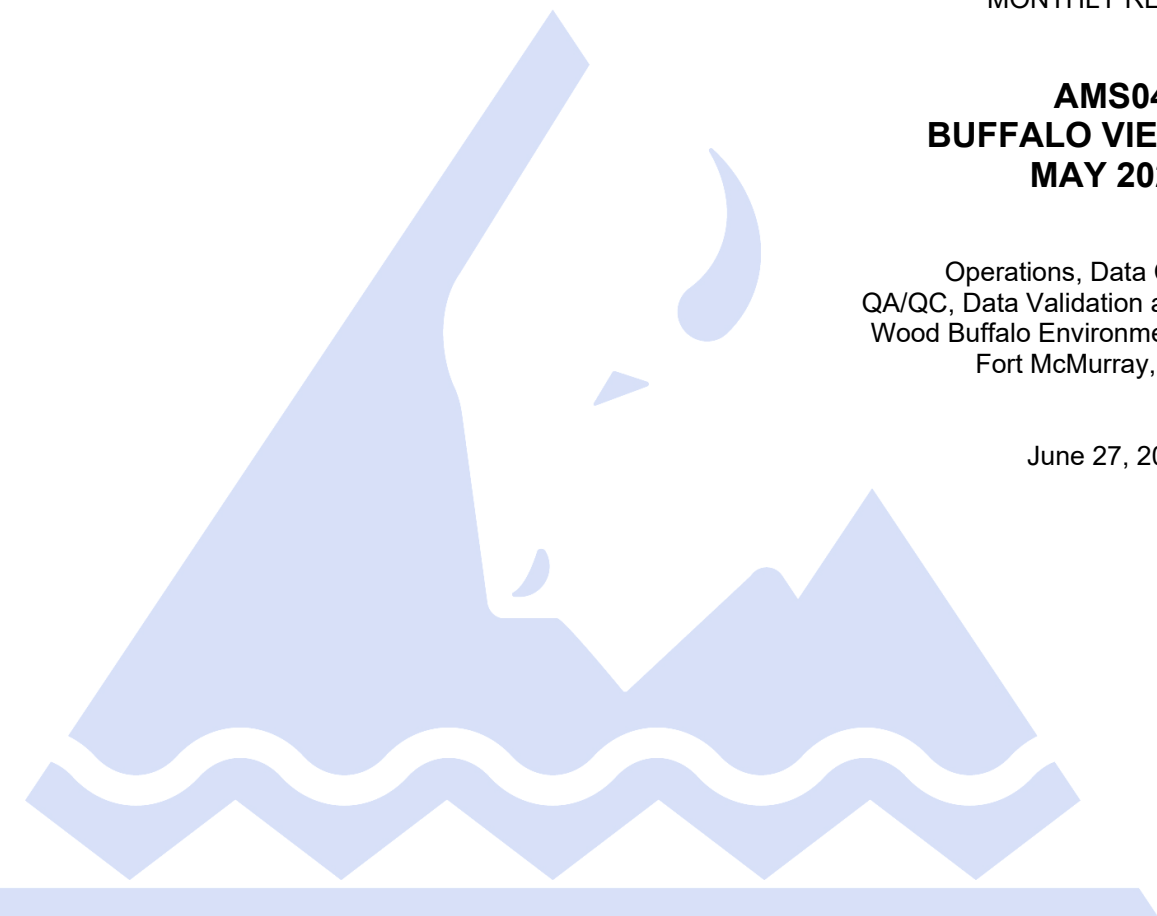
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS04 BUFFALO VIEWPOINT MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)

MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	710	34	34	100	63.5	0	8.1	0
H2S (ppb) Average	708	36	36	100	12.3	1	0.7	0
THC (ppm) Average	708	34	36	99.73	3.7	-	2.2	-
NMHC(ppm) Average	708	34	36	99.73	0.31	-	0.015	-
CH4(ppm) Average	708	34	36	99.73	3.7	-	2.2	-
O3(ppb) Average	709	34	35	99.87	73.5	0	49.3	-
NO2(ppb) Average	708	36	36	100	30.1	0	8	-
NO(ppb) Average	708	36	36	100	44.8	-	4.8	-
NOX(ppb) Average	708	36	36	100	72.9	-	11	-
PM2.5(ug/m3) Average	742	2	2	100	635.1	0	227.1	3
Temperature (C) Average	744	0	0	100	33.1	-	25.1	-
Relative Humidity (%) Average	744	0	0	100	97.6	-	79.7	-
Wind Speed 10 m (km/h) Average	744	0	0	100	26	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	710	0.7	3.6	-	0	0	0	0.1	0.3	0.7	63.5
H2S (ppb) Average	708	0.18	0.5	-	0	0	0.1	0.1	0.2	0.3	12.3
THC (ppm) Average	708	2.07	0.1	-	2	2	2	2	2.1	2.1	3.7
NMHC(ppm) Average	708	0.001	0.013	-	0	0	0	0	0	0	0.31
CH4(ppm) Average	708	2.07	0.1	-	2	2	2	2	2.1	2.1	3.7
O3(ppb) Average	709	34.36	10.3	-	3.5	21.7	27.7	35	41.7	46.8	73.5
NO2(ppb) Average	708	2.45	4.1	-	0	0.3	0.6	1.1	2.4	5.2	30.1
NO(ppb) Average	708	0.57	2.5	-	0	0	0	0.1	0.3	0.9	44.8
NOX(ppb) Average	708	3.01	6	-	0	0.4	0.6	1.2	2.7	6.1	72.9
PM2.5(ug/m3) Average	742	21.13	58.6	-	0.8	2.7	3.4	5	8.9	29.5	635.1
Temperature 2 m (C) Average	744	14.17	6.6	-	-0.1	6.2	9.4	13.9	18.4	23.2	33.1
Relative Humidity (%) Average	744	51.35	21	-	14.9	25.4	32.8	49.7	66.6	83	97.6
Wind Speed 10 m (km/h) Average	744	10.2	5	-	1	5	7	9	13	17	26
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
O3	05 May 2025 08:00	05 May 2025 08:00	1	Maintenance - station operator activities
THC/NMHC/CH4	29 May 2025 09:00	29 May 2025 10:00	2	Maintenance - replaced support gas cylinder



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

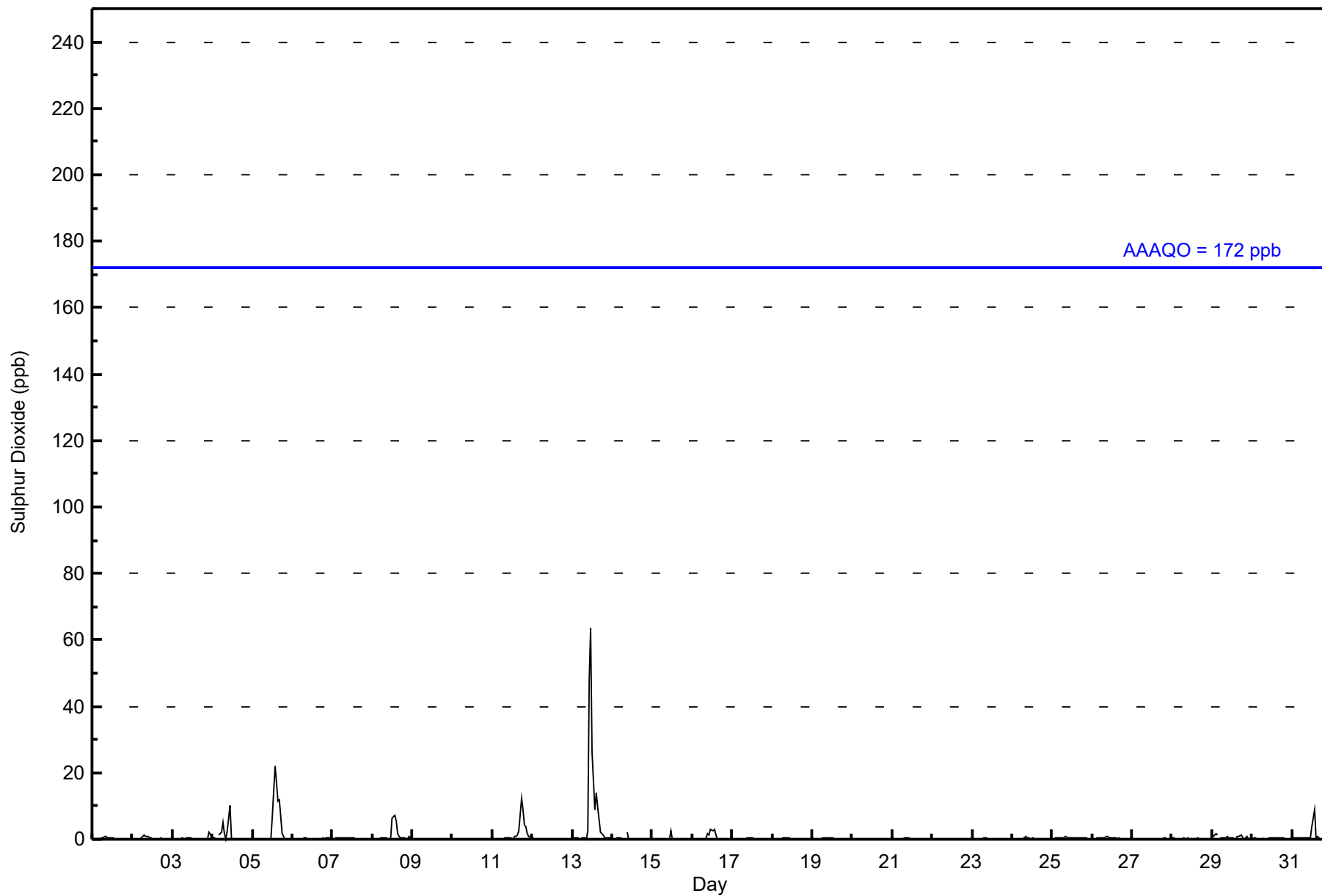
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 63.5 ppb on May 13 12:00 Maximum Daily Average: 8.1 ppb on May 13																			Hours in Service: 744 Hours of Data: 710 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0							
Minimum Value: 0.0 ppb on May 1 22:00 Maximum Diurnal Average: 2.4 ppb at hour 12 Monthly Average: 0.70 ppb																			Minimum Daily Average: 0.0 ppb on May 10 Minimum Diurnal Average: 0.1 ppb at hour 1 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 11.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	Z	0.1	0.1	0.1	0.0	0.4	0.4	0.8	0.7	0.4	0.4	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8
2-May	0.0	Z	0.0	0.0	0.2	0.6	1.0	1.4	0.9	0.8	0.4	0.2	0.2	0.0	0.1	0.1	0.0	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.3	1.4
3-May	0.1	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.1	2.3	1.0	0.3	2.3
4-May	0.5	0.3	0.1	Z	1.3	2.0	5.0	1.8	0.1	2.4	10.0	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.0
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.6	22.2	17.0	11.5	11.7	6.7	1.9	0.0	0.0	0.0	0.0	0.0	3.4	22.2
6-May	0.0	0.0	0.0	0.1	0.2	Z	0.3	0.4	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.3	0.4	0.3	0.2	0.1	0.4
7-May	Z	0.2	0.3	0.5	0.5	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.6
8-May	0.1	Z	0.0	0.1	0.1	0.2	0.3	0.5	0.2	0.1	0.1	0.1	6.5	7.4	5.4	1.5	0.7	0.4	0.6	0.2	0.1	0.2	0.6	0.2	1.1	7.4
9-May	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
10-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
11-May	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.4	0.4	0.4	0.4	0.3	0.2	0.8	0.7	1.1	2.4	12.1	8.9	4.1	3.8	1.6	0.9	0.5	1.7	12.1
12-May	0.2	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.2
13-May	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.6	48.0	63.5	26.1	8.7	14.2	9.7	6.1	2.2	1.1	0.5	0.5	0.5	0.5	0.4	8.1	63.5
14-May	0.4	Z	0.4	0.5	0.6	0.6	C	C	C	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0
15-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	2.6	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	2.6
16-May	0.1	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.6	1.9	1.2	3.0	2.5	3.1	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.1
17-May	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.3	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
18-May	0.0	0.1	0.1	0.1	0.2	Z	0.3	0.4	0.5	0.4	0.3	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
19-May	Z	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.4	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.6
20-May	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
21-May	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.3
22-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1
23-May	0.0	0.1	0.1	0.0	Z	0.2	0.2	0.2	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
24-May	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.4	0.6	0.5	0.3	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.2	0.6
25-May	Z	0.2	0.2	0.4	0.6	0.6	0.5	0.6	0.7	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.1	0.2	0.4	0.7
26-May	0.2	Z	0.3	0.4	0.3	0.3	0.4	0.6	0.7	0.7	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.3	0.7
27-May	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.1	0.0	0.0	0.1	0.4
28-May	0.3	0.4	0.1	Z	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.4
29-May	0.6	1.3	1.7	1.5	Z	0.3	0.3	0.5	0.5	0.7	0.6	0.4	0.3	0.2	0.2	0.7	0.9	1.1	0.4	0.1	0.5	0.8	0.1	0.2	0.6	1.7
30-May	0.1	0.3	0.3	0.2	0.2	Z	0.2	0.1	0.0	0.0	0.3	0.3	0.6	0.3	0.4	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.6
31-May	Z	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	3.8	8.9	0.5	0.7	0.6	0.1	0.1	0.1	2.1	5.1	3.3	1.0	1.3	8.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	701	98.73	98.73
11 - 20	5	0.70	99.44
21 - 60	3	0.42	99.86
61 - 110	1	0.14	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	70	41	9	3	1	25	125	152	74	26	28	29	32	23	36	27	701
11 - 20	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	5
21 - 60	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	43	10	3	1	25	125	152	74	26	28	29	32	25	36	29	710

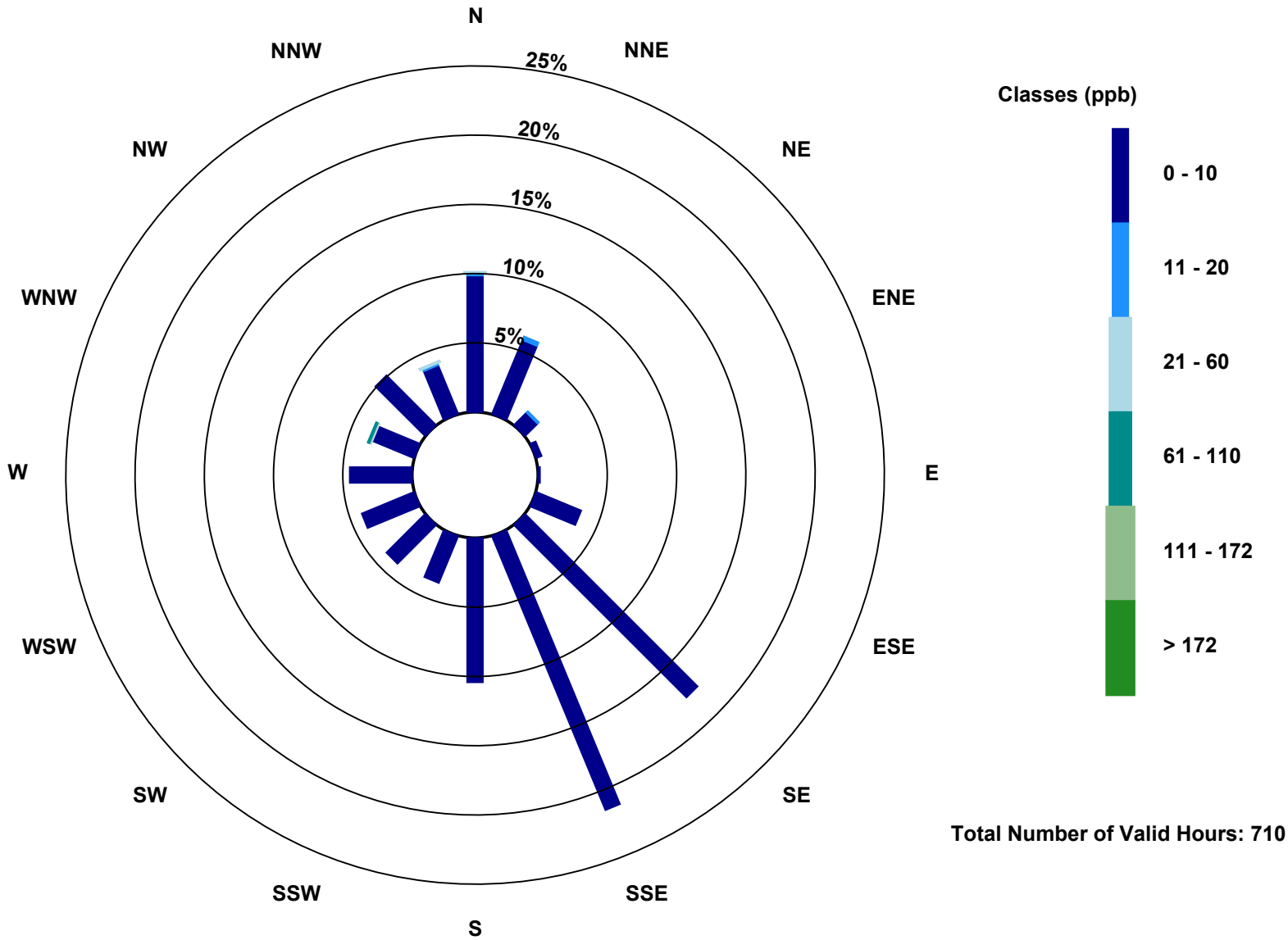
Total Number of Valid Hours: 710

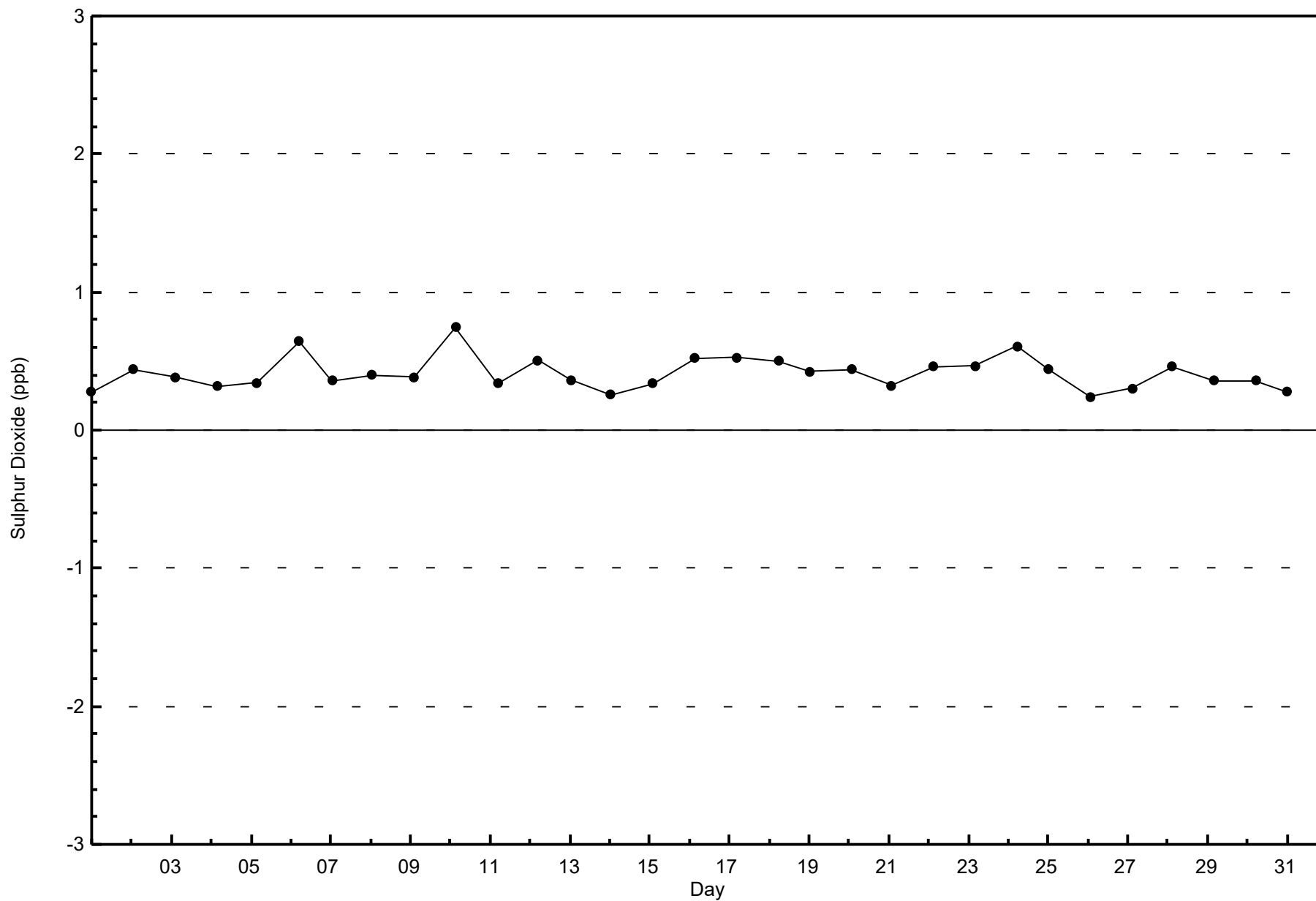
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint

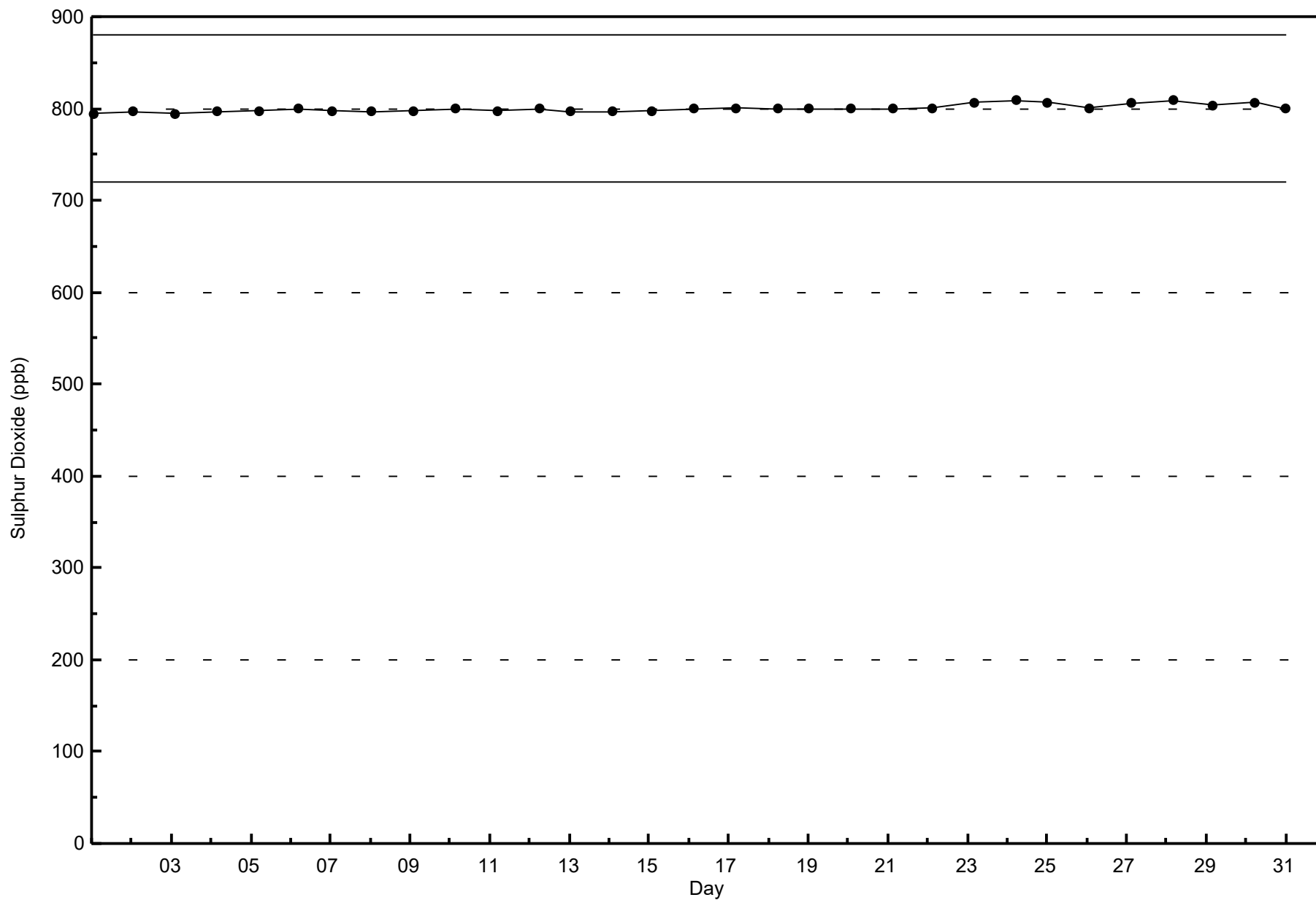






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

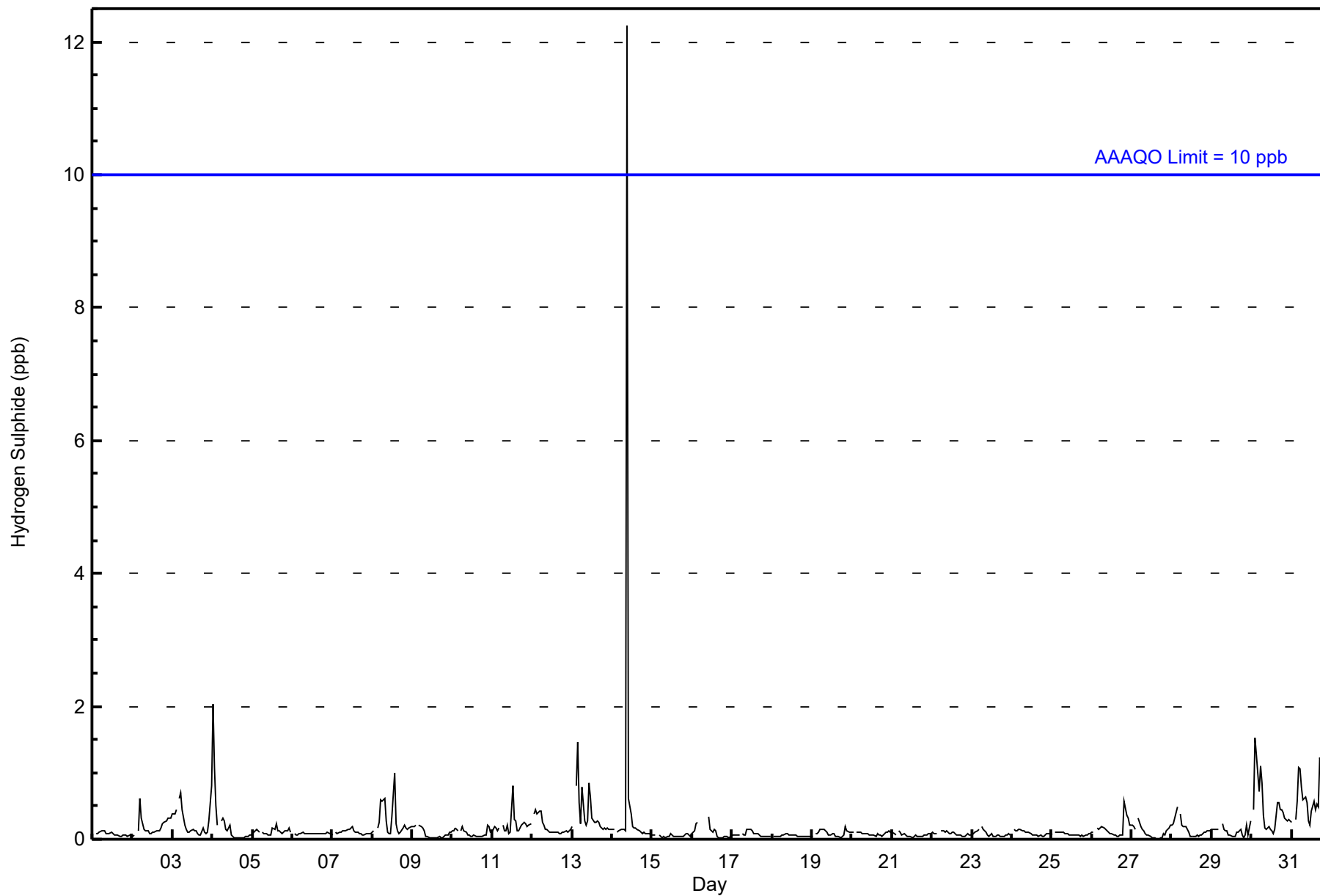
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0																			Hours in Service: 744							
Maximum Value: 12.3 ppb on May 14 10:00																			Maximum Daily Average: 0.7 ppb on May 14		Hours of Data: 708					
Minimum Value: 0.0 ppb on May 27 16:00																			Minimum Daily Average: 0.0 ppb on May 15		Hours of Missing Data: 36					
Maximum Diurnal Average: 0.5 ppb at hour 10																			Minimum Diurnal Average: 0.1 ppb at hour 17		Hours of Calibration: 36					
Monthly Average: 0.18 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.1		Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1
2-May	0.0	0.1	Z	0.1	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.6
3-May	0.4	0.4	0.4	Z	0.6	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.8	0.3	0.8
4-May	2.0	1.1	0.5	0.2	Z	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	2.0
5-May	0.1	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
6-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-May	0.1	0.1	Z	0.2	0.3	0.6	0.6	0.6	0.3	0.1	0.1	0.1	0.3	1.0	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.0
9-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
10-May	0.1	0.1	0.2	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.2
11-May	0.1	0.2	0.2	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.8	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8
12-May	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
13-May	0.2	Z	0.8	1.5	0.6	0.2	0.8	0.3	0.2	0.3	0.8	0.6	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	1.5
14-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	12.3	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
15-May	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1
16-May	0.1	0.1	0.2	0.3	Z	C	C	C	C	C	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
17-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
18-May	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
19-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
20-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
21-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
22-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
23-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
24-May	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
25-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.6	0.5	0.4	0.3	0.2	0.2	0.6
27-May	0.2	0.2	0.1	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.3
28-May	0.2	0.2	0.3	0.5	Z	0.4	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
29-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.3
30-May	Z	0.4	1.5	1.3	0.7	1.1	0.9	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	1.5
31-May	0.2	Z	0.3	0.6	1.1	1.1	0.8	0.6	0.6	0.5	0.3	0.2	0.4	0.6	0.4	0.5	0.5	1.2	1.1	0.7	0.6	0.9	0.8	0.5	0.6	1.2
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	707	99.86	99.86
3 - 4	0	0.00	99.86
5 - 7	0	0.00	99.86
8 - 11	0	0.00	99.86
> 11	1	0.14	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	71	41	10	3	1	24	125	154	76	24	28	29	34	26	34	27	707
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Totals	71	41	10	3	1	24	125	154	76	24	28	29	34	26	34	28	708

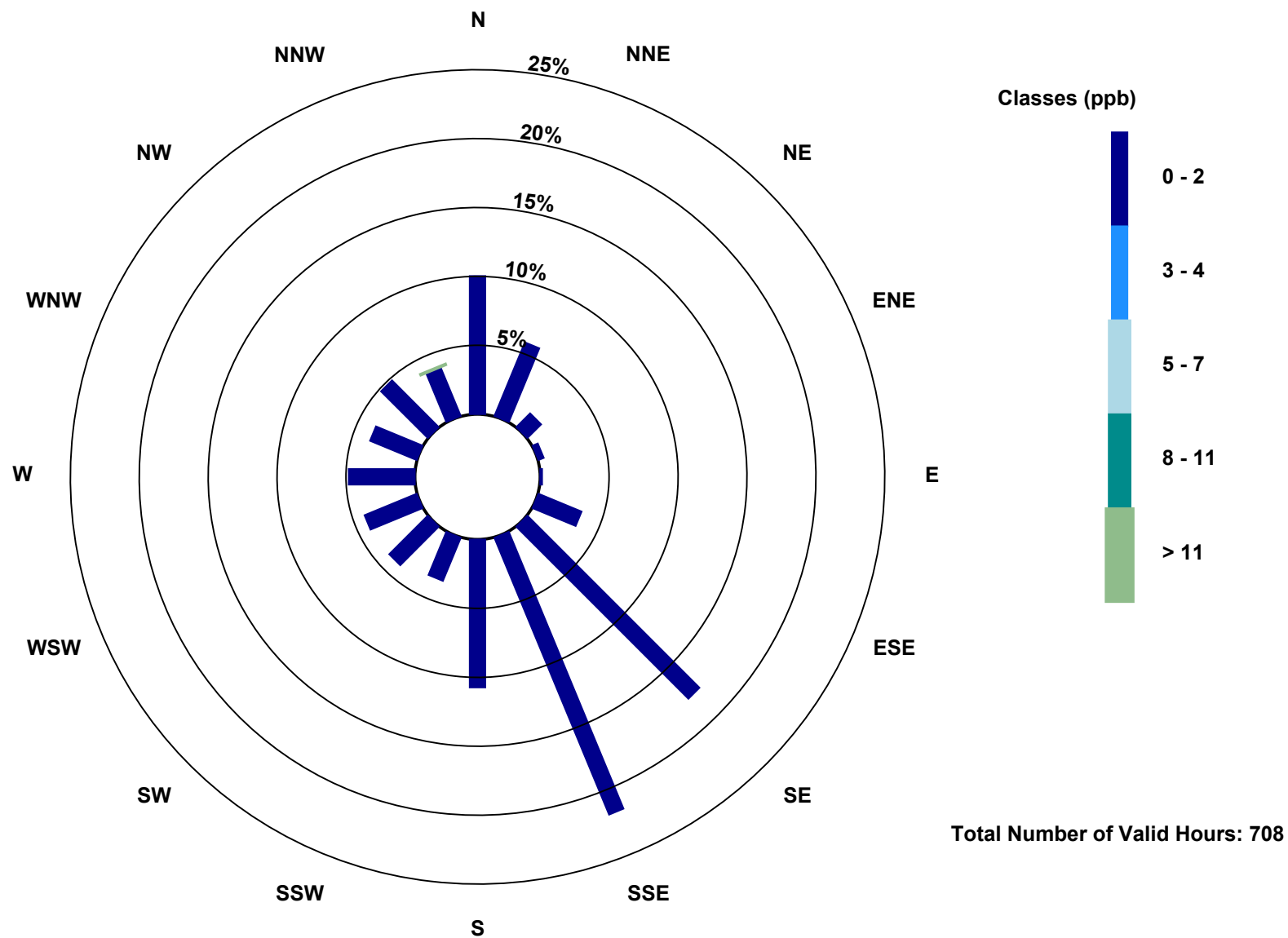
Total Number of Valid Hours: 708

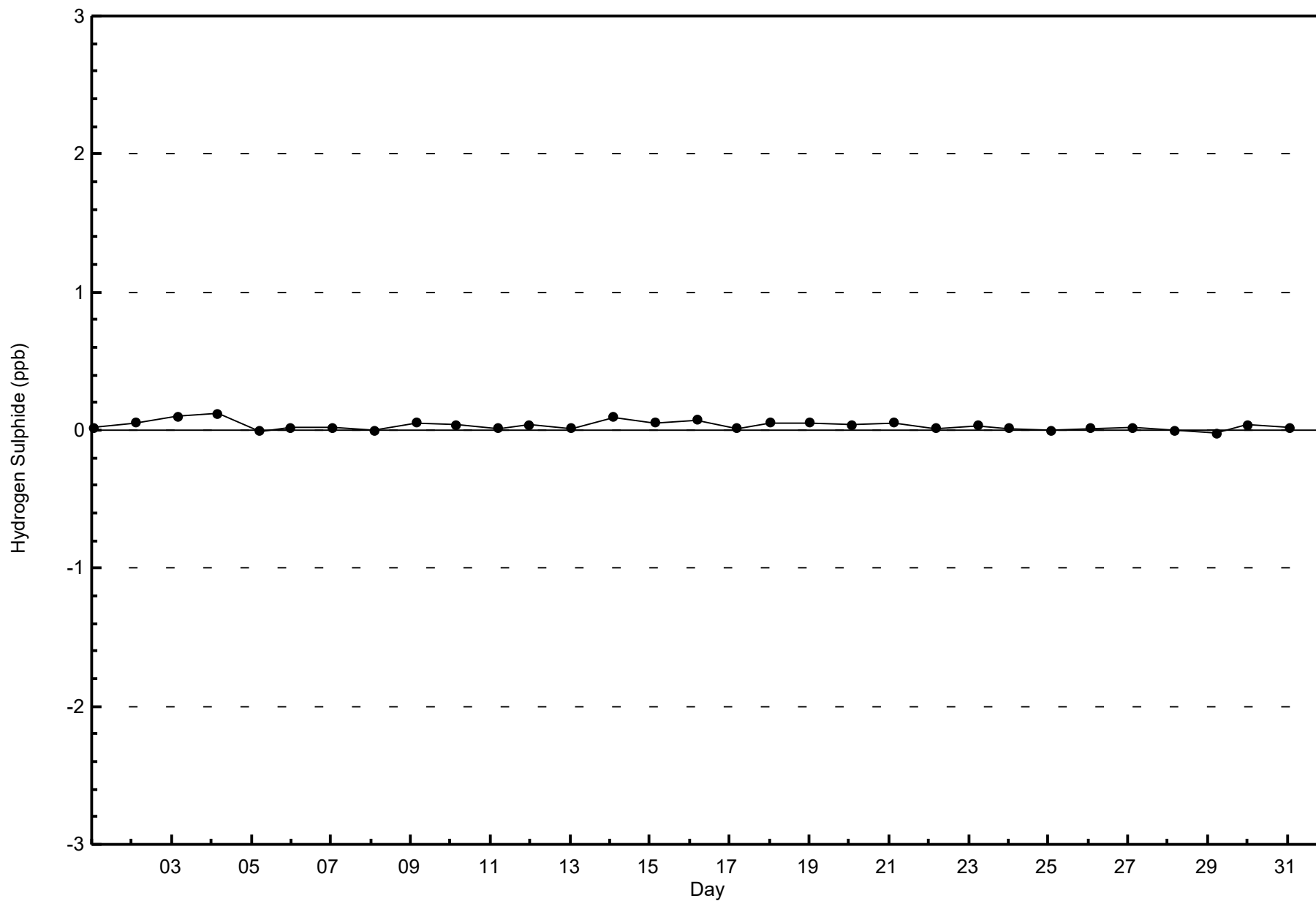
Total Number of Hours: 744

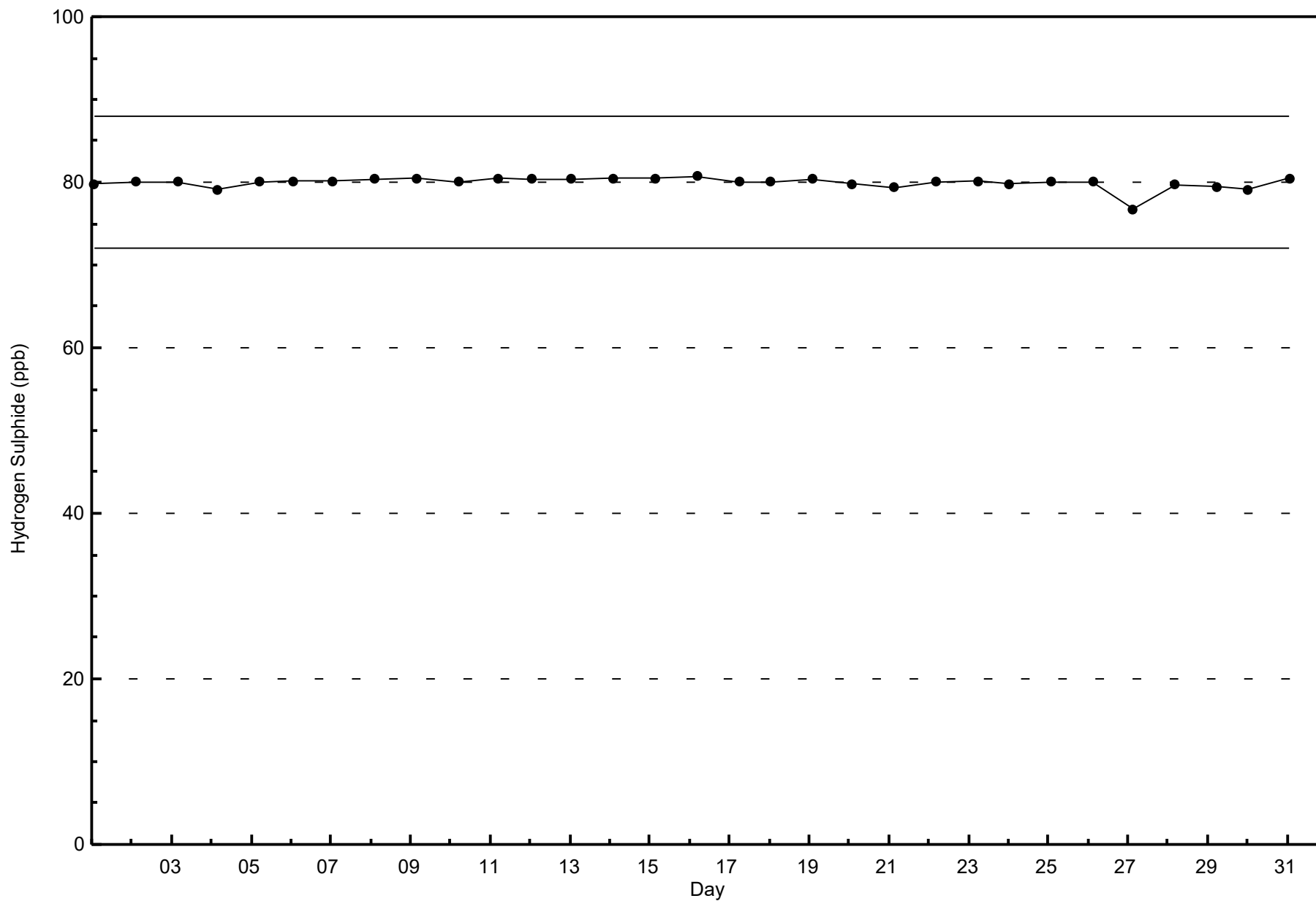


Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H_2S) - ppb
Buffalo Viewpoint









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

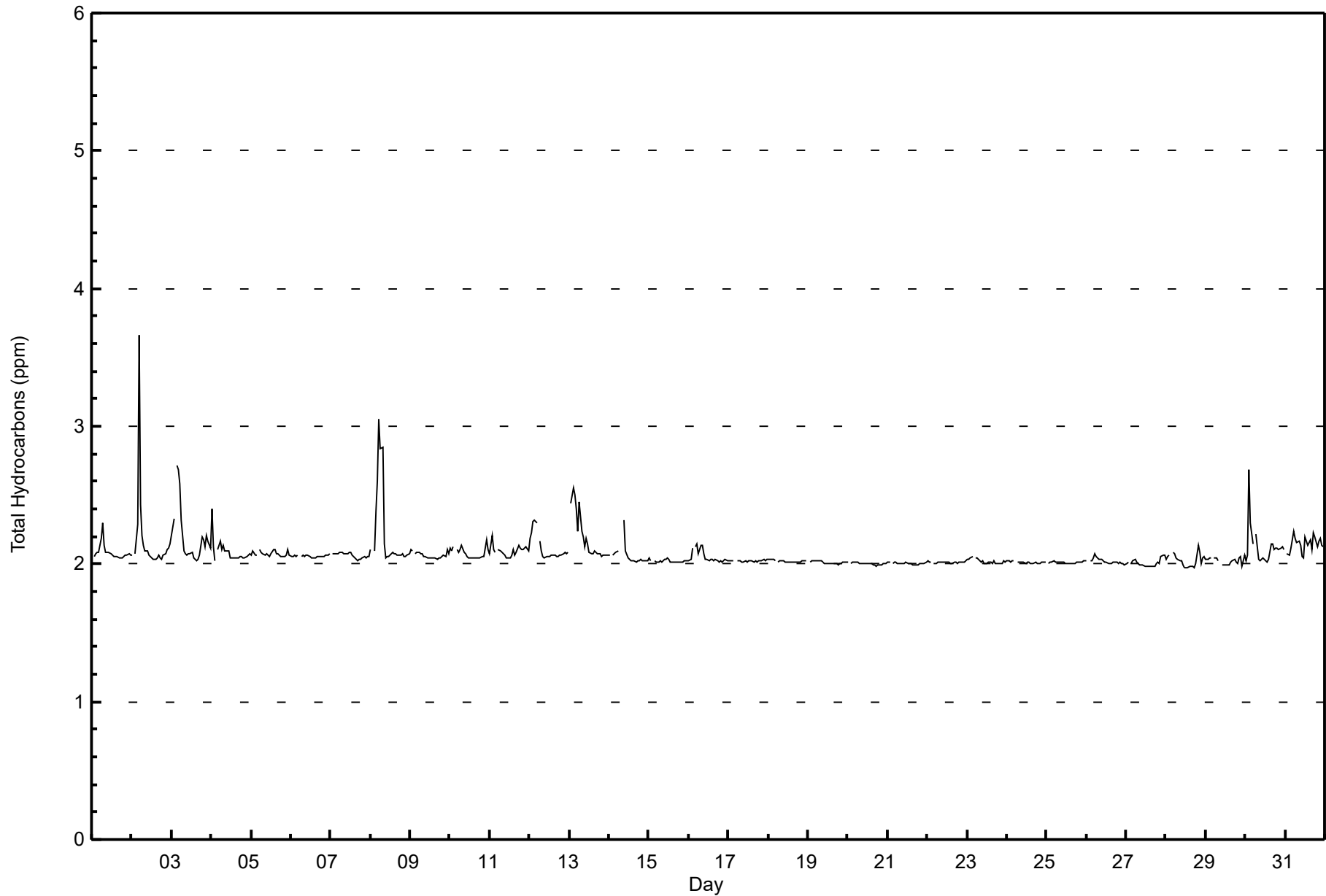
Buffalo Viewpoint - May 2025

Maximum Value: 3.7 ppm on May 2 05:00																		Maximum Daily Average: 2.2 ppm on May 8																		Hours in Service: 744	
Minimum Value: 2.0 ppm on May 28 13:00																		Minimum Daily Average: 2.0 ppm on May 20																		Hours of Data: 708	
Maximum Diurnal Average: 2.2 ppm at hour 5																		Minimum Diurnal Average: 2.0 ppm at hour 14																		Hours of Missing Data: 36	
Monthly Average: 2.07 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.6																		Hours of Calibration: 34	
																																				Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
1-May	Z	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3									
2-May	2.1	Z	2.1	2.3	3.7	2.4	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.7									
3-May	2.2	2.3	Z	2.7	2.7	2.6	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.7									
4-May	2.4	2.1	2.0	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.4									
5-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1									
6-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1									
7-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1									
8-May	2.1	Z	2.1	2.4	2.6	3.1	2.8	2.8	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.1									
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1									
10-May	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2									
11-May	2.1	2.2	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2									
12-May	2.2	2.2	2.3	2.3	2.3	Z	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3									
13-May	Z	2.4	2.6	2.5	2.4	2.2	2.4	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6									
14-May	2.1	Z	2.1	2.1	2.1	2.1	C	C	C	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3									
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
16-May	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1									
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
18-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
19-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
23-May	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1									
24-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
25-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
26-May	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1									
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1									
28-May	2.0	2.0	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1									
29-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1									
30-May	2.0	2.1	2.7	2.3	2.1	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.7									
31-May	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2									
2.1 2.1 2.1 2.1 2.2 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1																									Diurnal Average												
2.4 2.4 2.7 2.7 3.7 3.1 2.8 2.8 2.2 2.3 2.2 2.1 2.2 2.1 2.2 2.2 2.1 2.2 2.2 2.2 2.2 2.2 2.2 2.1																									Diurnal Maximum												
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	404	57.06	57.06
2.1 - 3.0	302	42.66	99.72
3.1 - 10.0	2	0.28	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	26	16	3	1	0	17	100	101	48	14	17	20	22	6	7	6	404
2.1 - 3.0	46	27	7	2	1	8	25	50	25	12	11	9	10	18	28	23	302
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	43	10	3	1	25	125	151	73	26	28	29	32	25	36	29	708

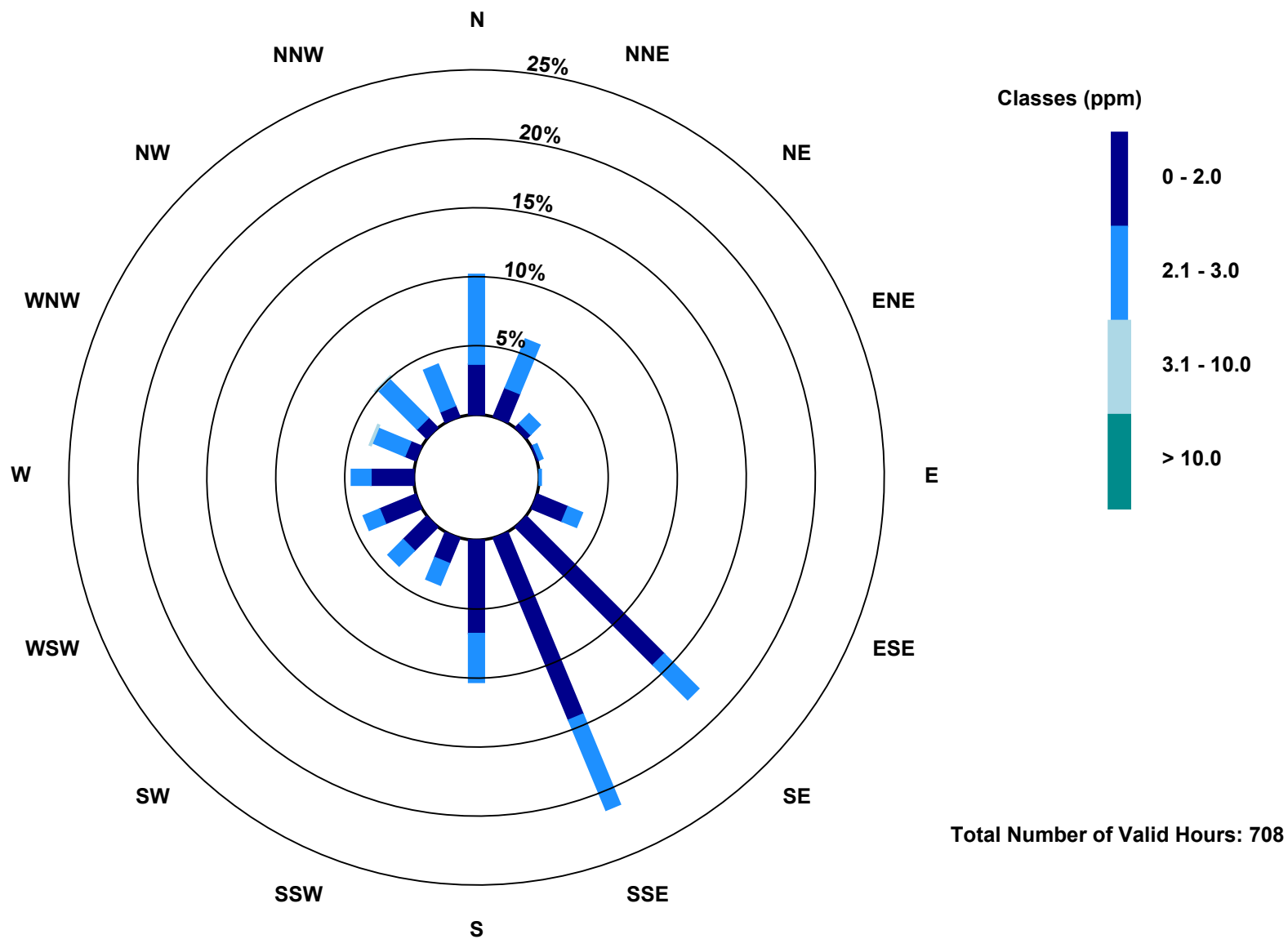
Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

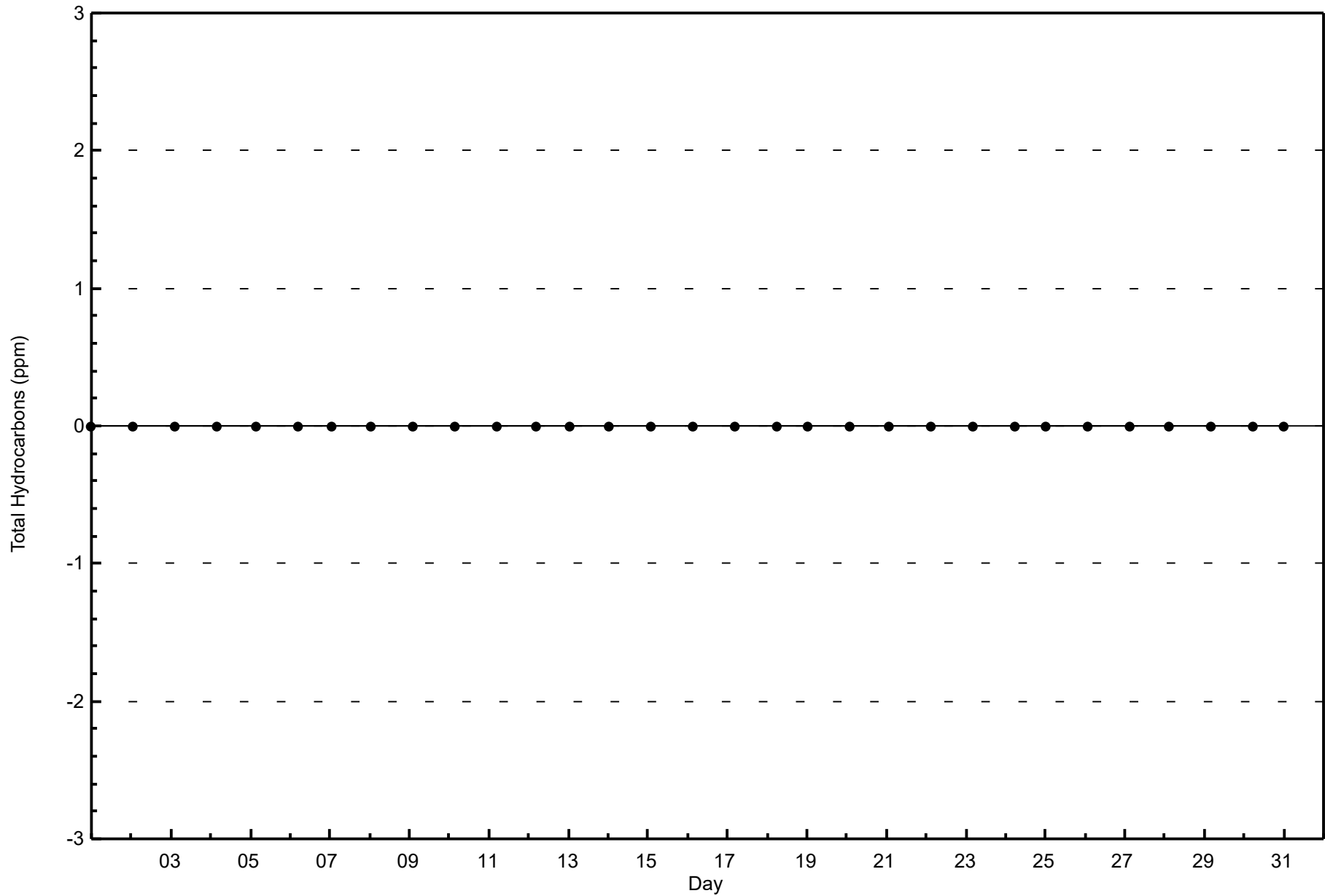
Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint





Wood Buffalo Environmental Association
Zero Responses

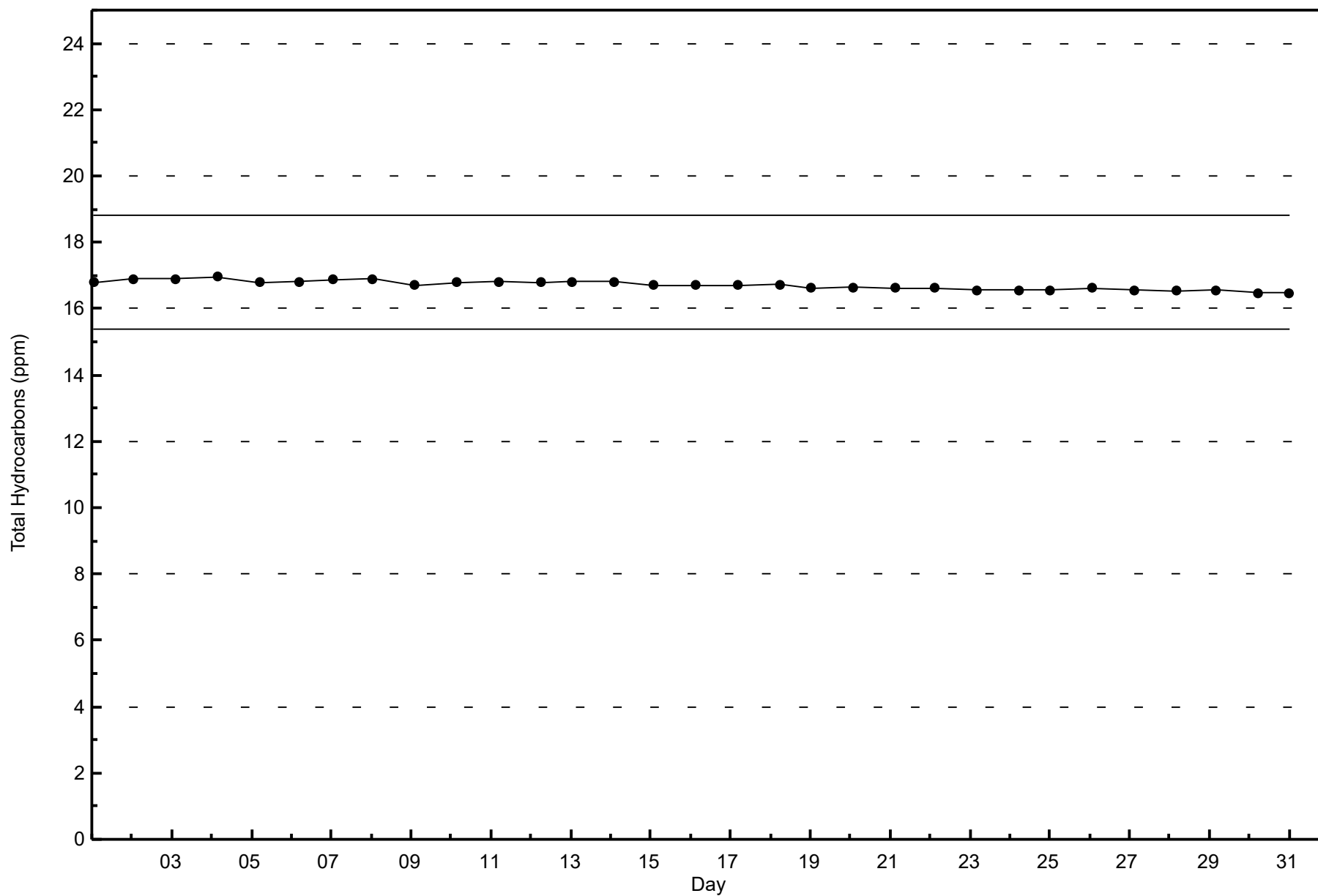
Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

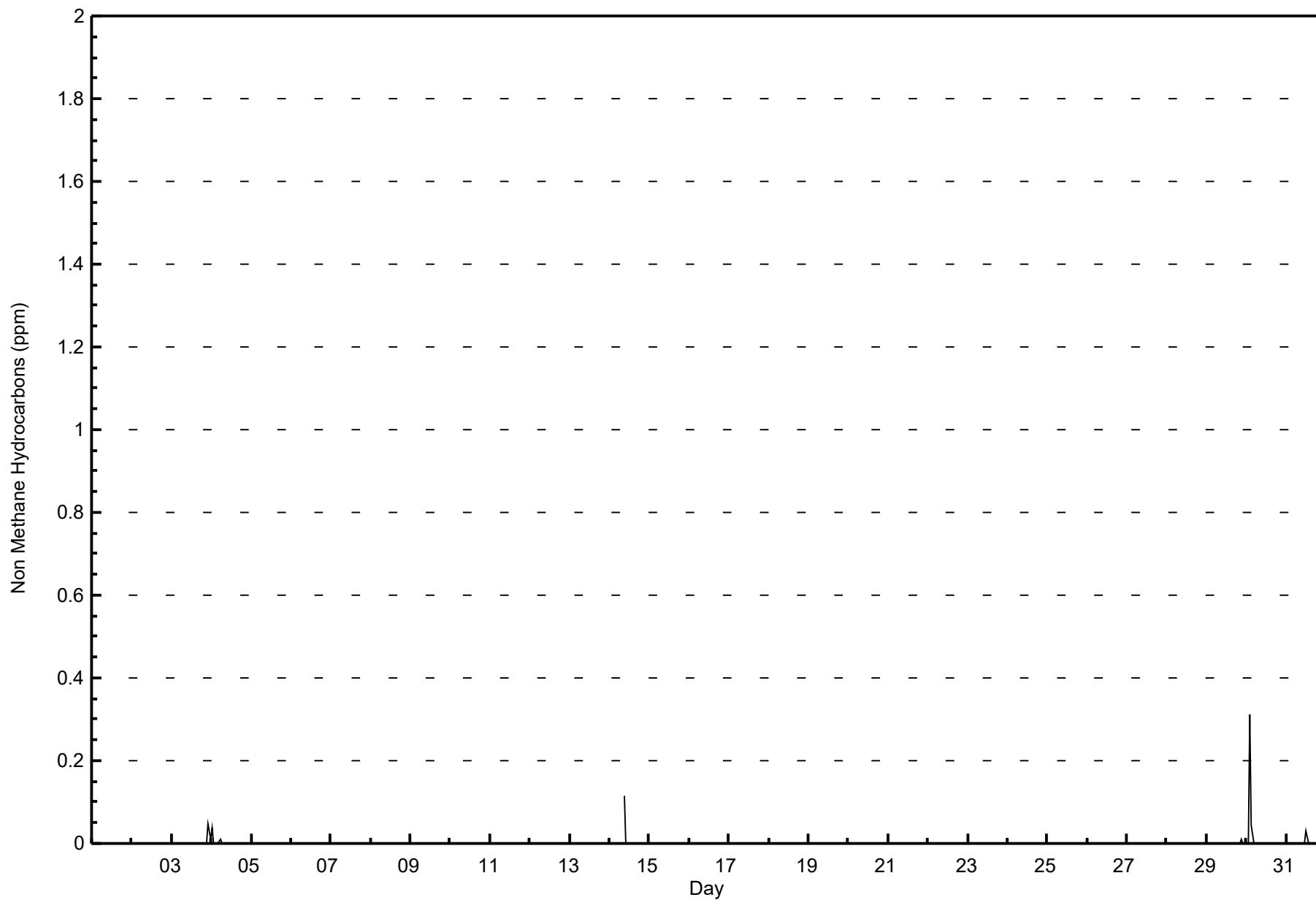
Buffalo Viewpoint - May 2025

Maximum Value: 0.310 ppm on May 30 03:00																		Maximum Daily Average: 0.015 ppm on May 30										Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 02:00																		Minimum Daily Average: 0.000 ppm on May 1										Hours of Data: 708	
Maximum Diurnal Average: 0.012 ppm at hour 3																		Minimum Diurnal Average: 0.000 ppm at hour 2										Hours of Missing Data: 36	
Monthly Average: 0.001 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0										Hours of Calibration: 34	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
2-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
3-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.011	0.003	0.047		
4-May	0.036	0.000	0.000	Z	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.036		
5-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
6-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
7-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
8-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
9-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
10-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
11-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
12-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
13-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
14-May	0.000	Z	0.000	0.000	0.000	0.000	C	C	C	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.116		
15-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
16-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
18-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
19-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
20-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
21-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
22-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
23-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
24-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
25-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
26-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
27-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
28-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
29-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.010	0.000		
30-May	0.000	0.000	0.310	0.044	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.310		
31-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.030	0.003	0.032	0.000		
0.001 0.000 0.012 0.002 0.000 0.000 0.000 0.000 0.000 0.004 0.000 0.000 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.002 0.001																									Diurnal Average				
0.036 0.000 0.310 0.044 0.000 0.011 0.000 0.000 0.000 0.116 0.000 0.000 0.032 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.016 0.047 0.030																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	697	98.45	98.45
0.006 - 0.05	9	1.27	99.72
0.06 - 0.1	1	0.14	99.86
> 0.1	1	0.14	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	72	43	10	3	1	25	125	151	73	26	28	28	30	25	34	23	697
0.006 - 0.05	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5	9
0.06 - 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
> 0.1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Totals	72	43	10	3	1	25	125	151	73	26	28	29	32	25	36	29	708

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wind rose plot showing wind direction and speed frequency. The plot is circular with concentric rings representing frequency percentages (5%, 10%, 15%, 20%, 25%). The cardinal and ordinal directions are labeled around the perimeter: N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NNW. A color scale on the right indicates wind speed classes in ppm: 0 - 0.005 (dark blue), 0.006 - 0.05 (medium blue), 0.06 - 0.1 (light blue), and > 0.1 (teal). The plot shows a dominant wind direction from the SSE, with a frequency exceeding 25%. Other notable directions include S and SSW. The total number of valid hours is 708.

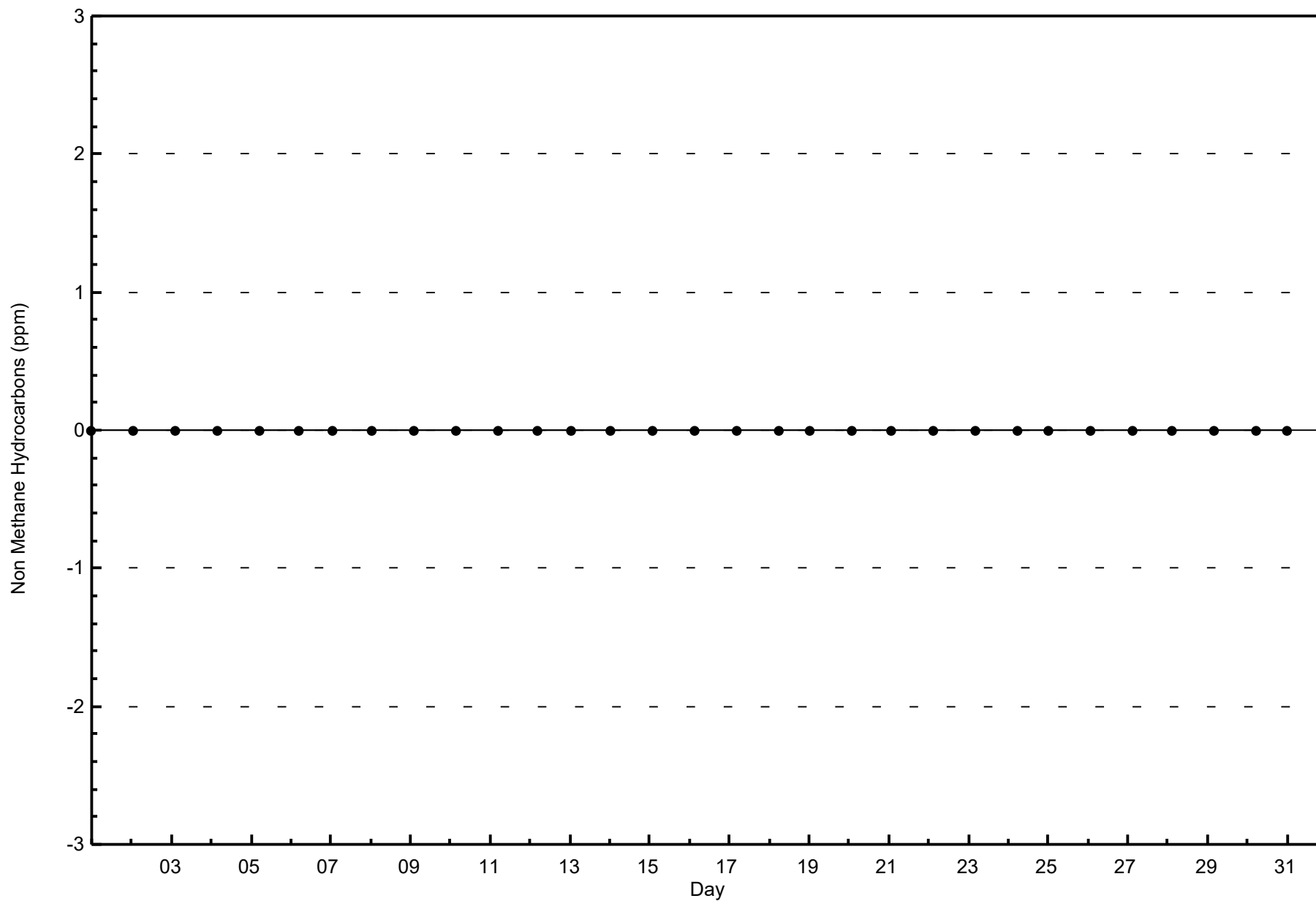


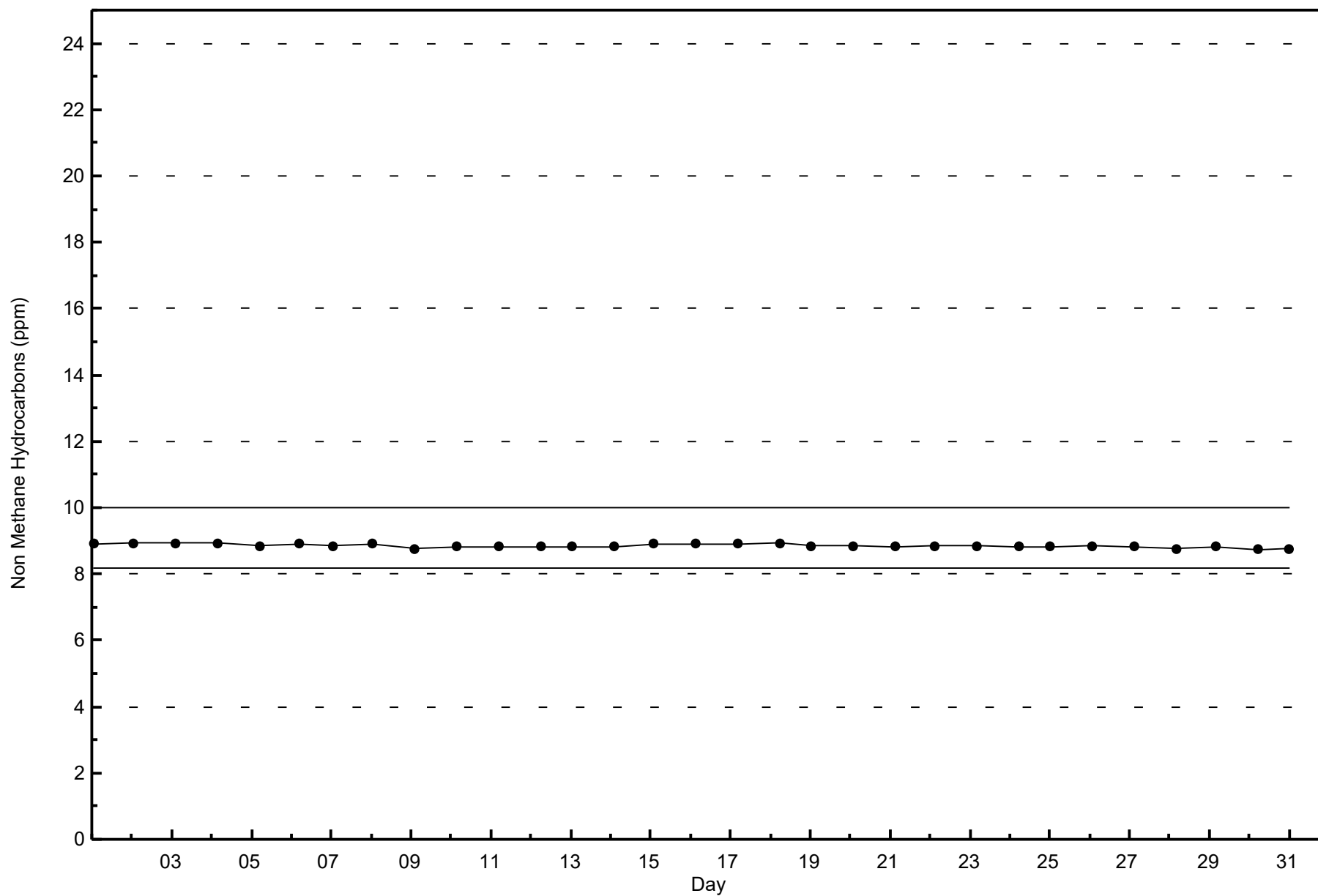
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

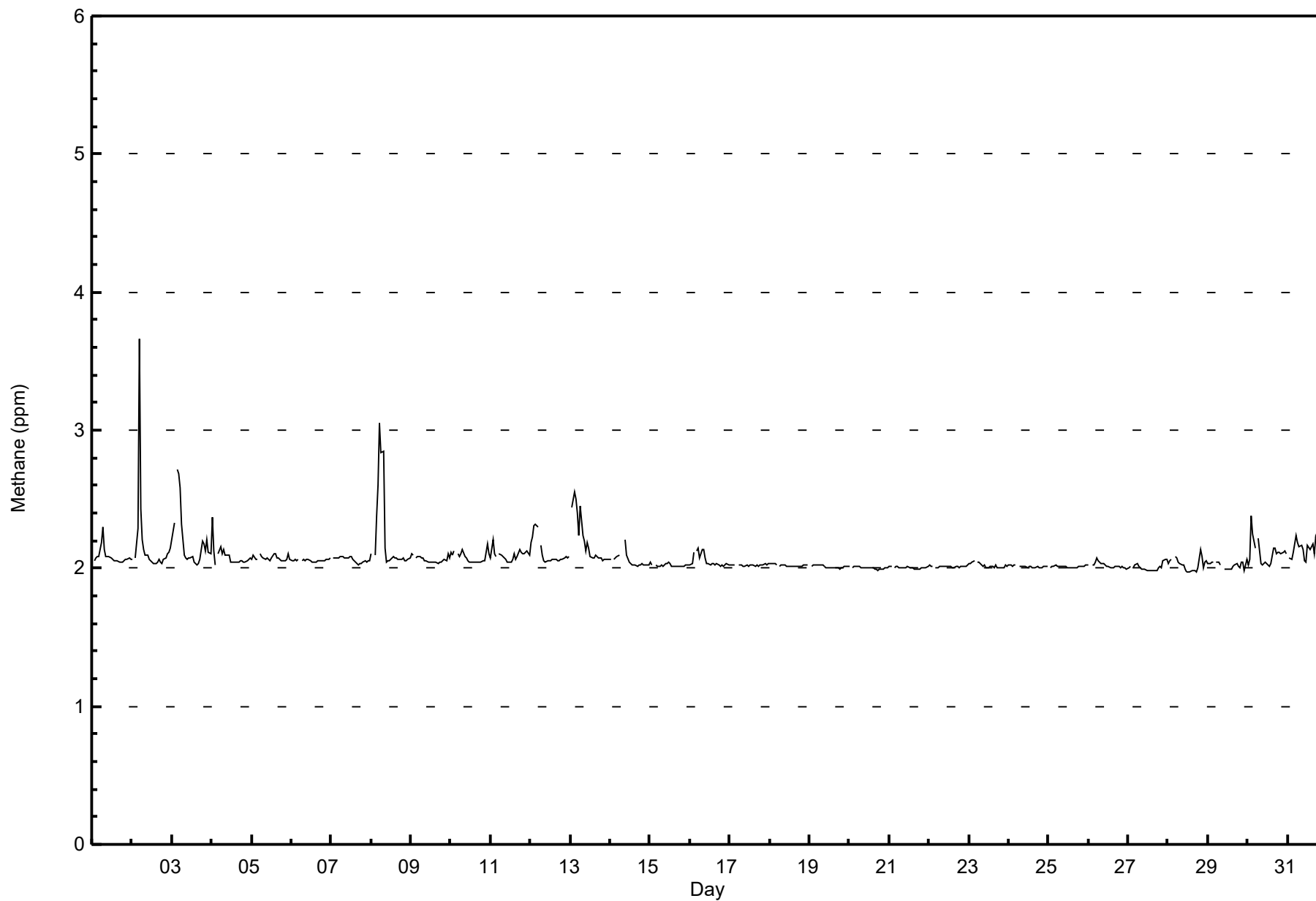
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744									
Maximum Value: 3.7 ppm on May 2 05:00 Maximum Daily Average: 2.2 ppm on May 8																		Hours of Data: 708									
Minimum Value: 2.0 ppm on May 28 13:00 Minimum Daily Average: 2.0 ppm on May 20																		Hours of Missing Data: 36									
Maximum Diurnal Average: 2.2 ppm at hour 5 Minimum Diurnal Average: 2.0 ppm at hour 14																		Hours of Calibration: 34									
Monthly Average: 2.07 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.6																		Percent Operational Time: 99.7									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3
2-May	2.1	Z	2.1	2.3	3.7	2.4	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.7
3-May	2.2	2.3	Z	2.7	2.7	2.6	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.7
4-May	2.4	2.1	2.0	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.4
5-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
6-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1
8-May	2.1	Z	2.1	2.4	2.6	3.1	2.8	2.8	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.1
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
10-May	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.2
11-May	2.1	2.2	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
12-May	2.2	2.2	2.3	2.3	2.3	Z	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
13-May	Z	2.4	2.6	2.5	2.4	2.2	2.4	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6
14-May	2.1	Z	2.1	2.1	2.1	2.1	C	C	C	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-May	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
18-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
19-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-May	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
24-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
25-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
26-May	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1
28-May	2.0	2.0	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.1
29-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
30-May	2.0	2.1	2.4	2.3	2.1	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4
31-May	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
2.1 2.1 2.1 2.1 2.2 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1																										Diurnal Average	
2.4 2.4 2.6 2.7 3.7 3.1 2.8 2.8 2.2 2.2 2.2 2.1 2.2 2.1 2.2 2.2 2.1 2.2 2.2 2.2 2.2 2.2 2.2 2.1 2.1																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	405	57.20	57.20
2.1 - 3.0	301	42.51	99.72
3.1 - 10.0	2	0.28	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Buffalo Viewpoint - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	26	16	3	1	0	17	100	101	48	14	17	20	23	6	7	6	405
2.1 - 3.0	46	27	7	2	1	8	25	50	25	12	11	9	9	18	28	23	301
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	43	10	3	1	25	125	151	73	26	28	29	32	25	36	29	708

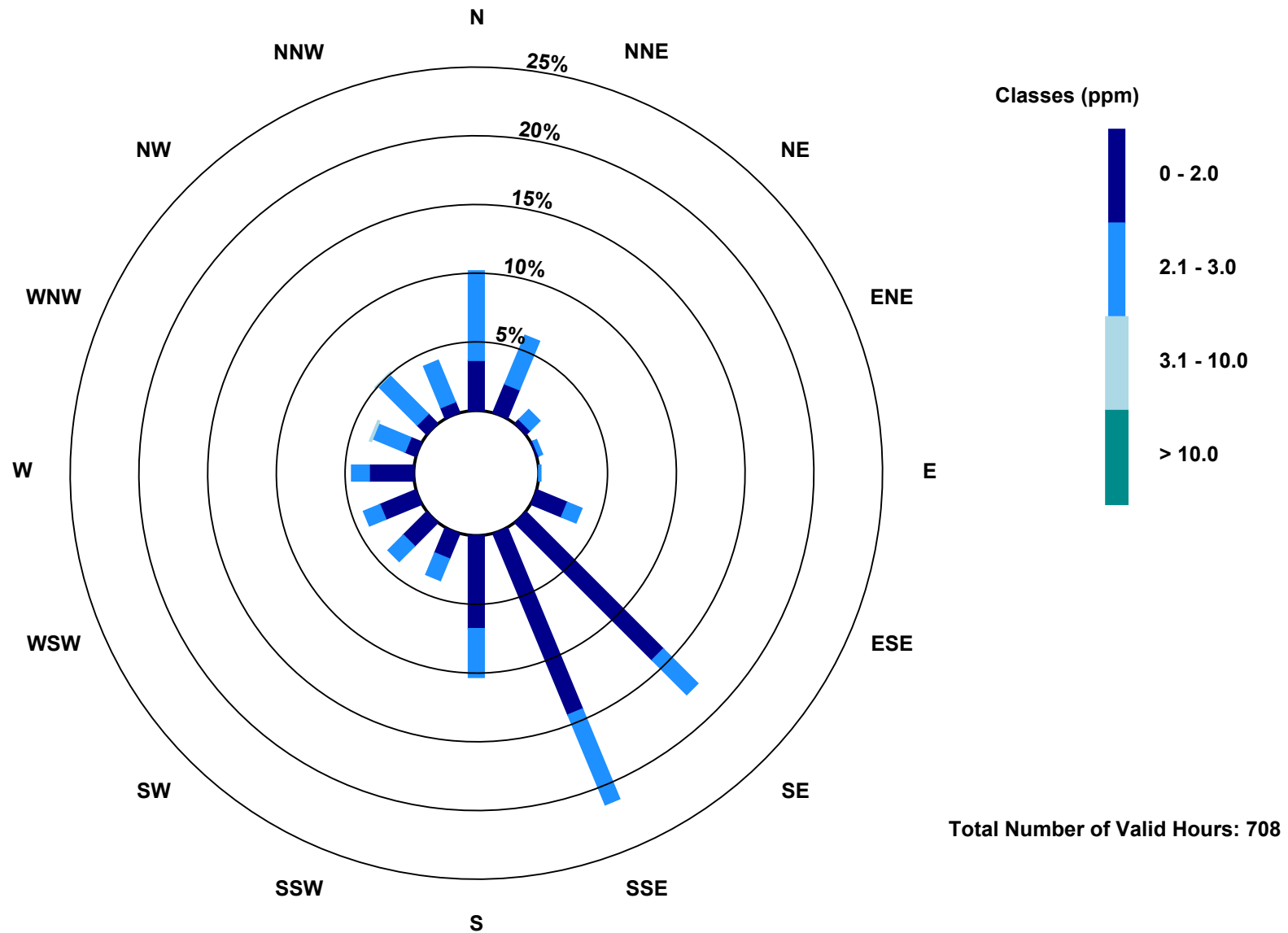
Total Number of Valid Hours: 708

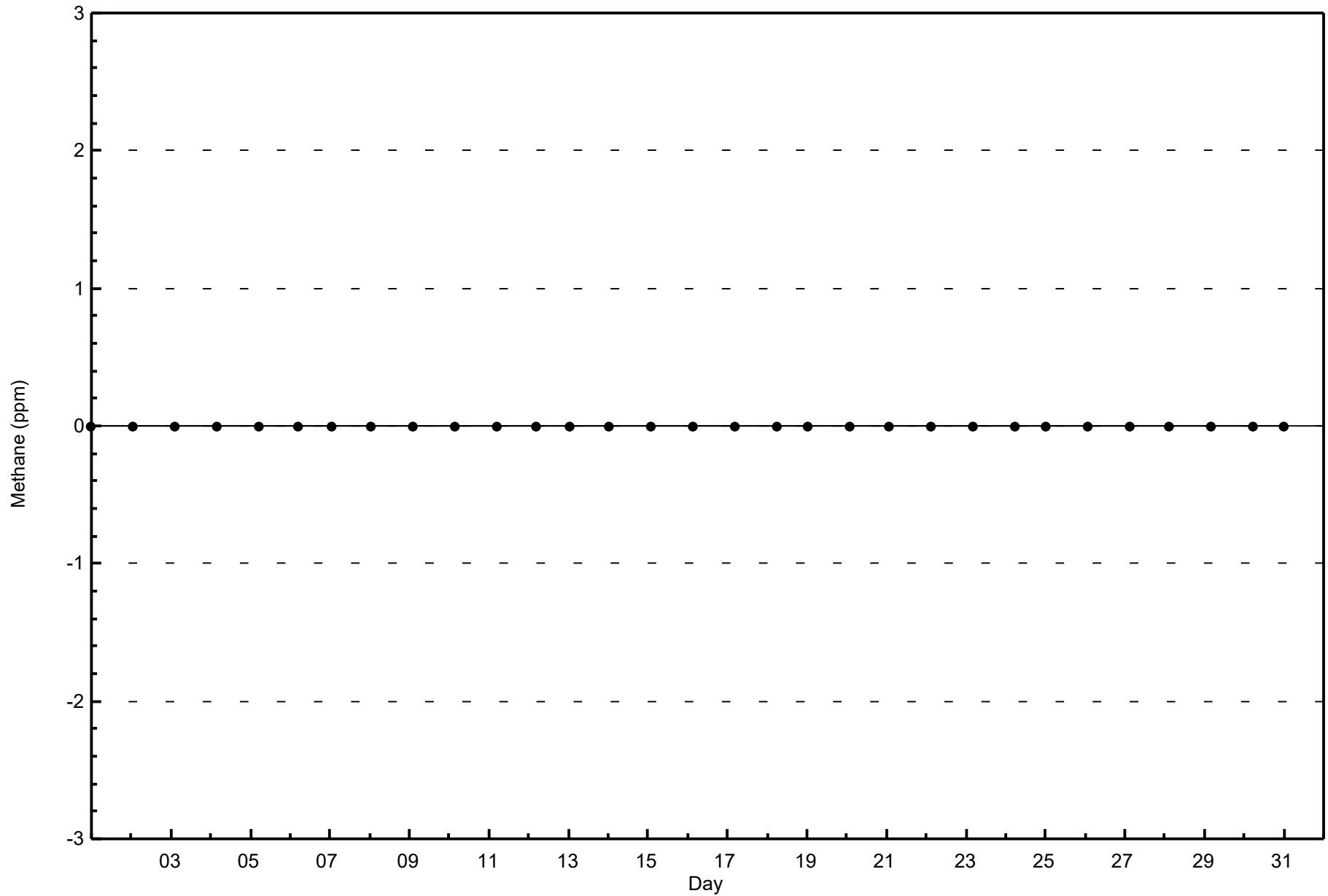
Total Number of Hours: 744

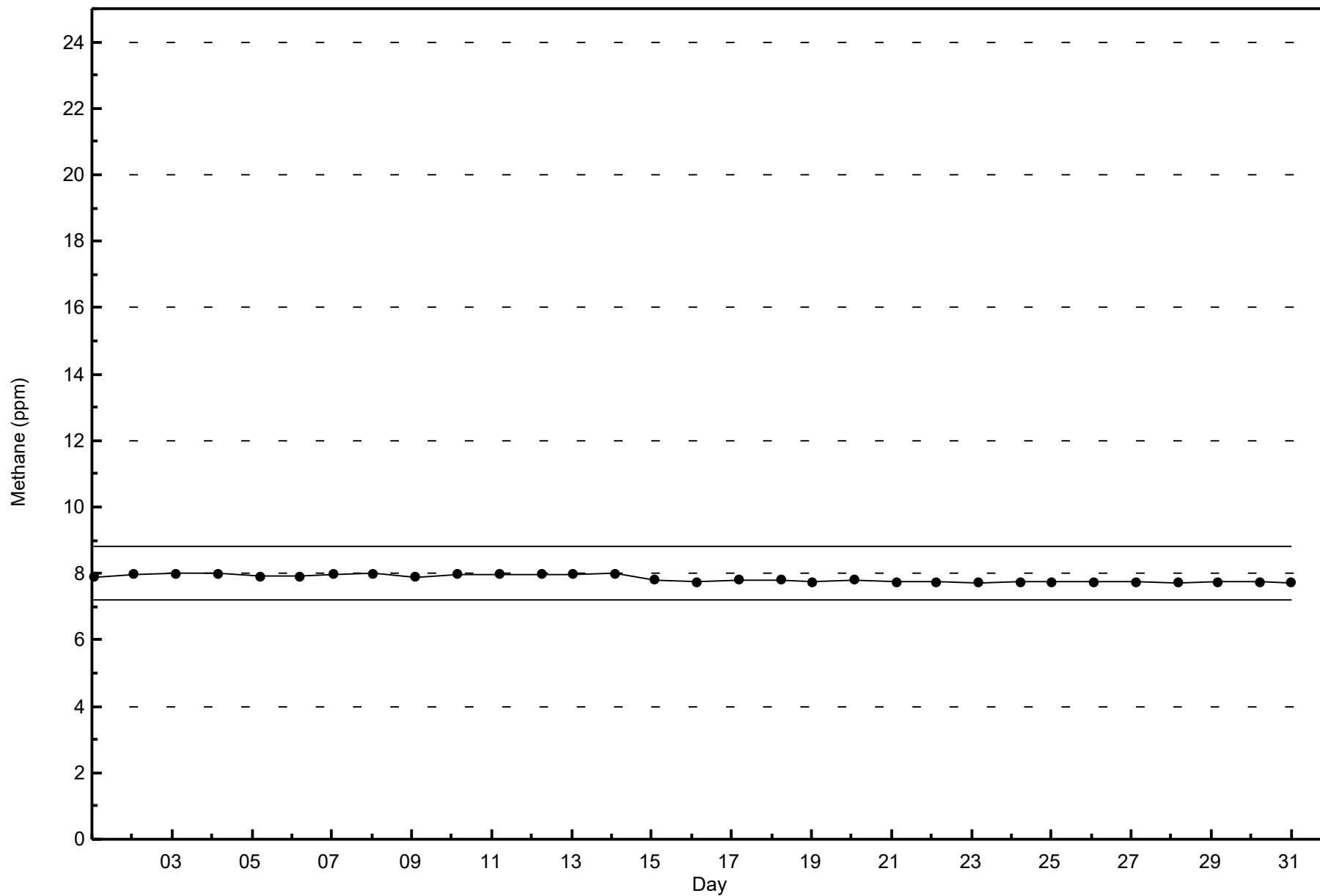


Wood Buffalo Environmental Association
Wind Rose May 2025

Methane (CH₄) - ppm
Buffalo Viewpoint









Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

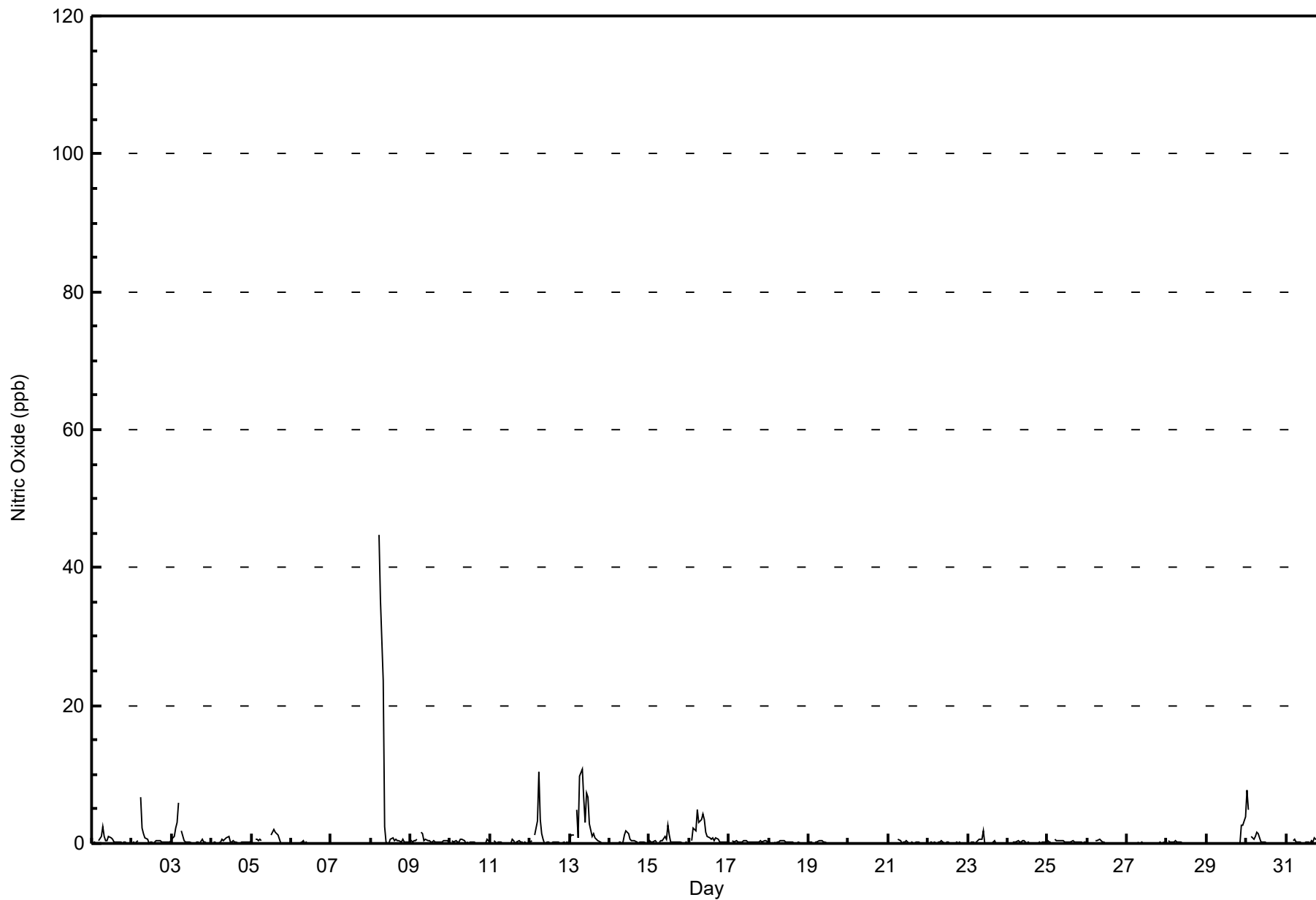
Buffalo Viewpoint - May 2025

Maximum Value: 44.8 ppb on May 8 06:00																			Maximum Daily Average: 4.8 ppb on May 8							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 7							Hours of Data: 708	
Maximum Diurnal Average: 2.8 ppb at hour 6																			Minimum Diurnal Average: 0.1 ppb at hour 20							Hours of Missing Data: 36	
Monthly Average: 0.57 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 7.3							Hours of Calibration: 36	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.2	0.0	Z	0.5	1.1	2.5	1.1	0.4	0.5	0.9	0.9	0.6	0.2	0.2	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.1	0.4	2.5		
2-May	0.0	0.1	0.1	0.4	Z	6.8	2.3	1.5	0.8	0.7	0.0	0.1	0.1	0.0	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.7	6.8		
3-May	0.6	1.1	2.3	3.0	5.8	Z	1.9	0.5	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.5	0.2	0.1	0.1	0.0	0.7	5.8		
4-May	Z	0.3	0.2	0.0	0.1	0.2	0.6	0.5	0.6	0.9	1.0	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	1.0		
5-May	0.4	Z	0.5	0.5	0.4	0.6	0.4	C	C	C	C	C	1.2	2.1	1.6	1.4	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.6	2.1		
6-May	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		
7-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
8-May	0.0	0.0	0.0	0.0	Z	44.8	35.4	23.5	2.5	0.1	0.0	0.1	0.7	0.7	0.4	0.6	0.4	0.4	0.2	0.5	0.1	0.2	0.3	0.3	4.8		
9-May	0.5	0.2	0.4	0.5	0.7	Z	1.6	1.3	0.5	0.6	0.5	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.1	1.6		
10-May	Z	0.4	0.2	0.4	0.2	0.2	0.5	0.6	0.4	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.6	0.5	0.6		
11-May	0.2	Z	0.4	0.2	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.3	0.1	0.2	0.5	0.3	0.1	0.0	0.2	0.1	0.1	0.6		
12-May	0.2	0.4	Z	1.1	3.3	10.3	3.4	1.4	0.6	0.0	0.2	0.3	0.0	0.1	0.1	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.1	10.3		
13-May	0.6	1.2	1.2	Z	4.9	0.8	9.9	10.7	6.6	3.0	7.3	6.8	2.8	1.0	1.3	0.9	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.0	10.7		
14-May	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.1	0.2	1.1	1.9	1.5	0.6	0.4	0.5	0.3	0.2	0.1	0.3	0.2	0.1	0.2	0.1	0.0	1.9		
15-May	0.3	0.2	0.3	0.3	0.3	Z	0.3	0.4	0.5	1.1	0.7	2.7	1.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.0	2.7		
16-May	Z	0.5	2.3	2.0	1.8	4.9	3.0	3.5	4.3	3.4	1.6	1.1	0.9	0.6	0.7	0.4	0.8	0.7	0.2	0.1	0.1	0.2	0.1	0.2	4.9		
17-May	0.2	Z	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.3	0.3	0.2	0.4	0.3	0.2	0.4		
18-May	0.1	0.3	Z	0.2	0.0	0.2	0.2	0.4	0.4	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.4		
19-May	0.1	0.2	0.1	Z	0.2	0.3	0.4	0.3	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		
20-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1		
21-May	0.0	0.0	0.0	0.0	0.1	Z	0.6	0.4	0.1	0.2	0.1	0.3	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.6		
22-May	Z	0.2	0.2	0.1	0.2	0.0	0.3	0.2	0.4	0.2	0.0	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.4		
23-May	0.0	Z	0.3	0.2	0.1	0.3	0.3	0.6	0.7	1.8	0.0	0.0	0.1	0.0	0.0	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.8		
24-May	0.0	0.0	Z	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.4	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.4		
25-May	0.4	0.2	0.1	Z	0.5	0.3	0.4	0.4	0.4	0.4	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.0	0.2	0.1	0.5		
26-May	0.2	0.0	0.0	0.0	Z	0.3	0.4	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.5		
27-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.2		
28-May	Z	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		
29-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.6	3.8	3.8		
30-May	7.8	4.8	Z	1.0	0.6	1.1	1.6	1.4	0.8	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8		
31-May	0.0	0.0	0.0	Z	0.5	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.8	0.7	0.4	1.8	2.3	0.7	0.5	2.3		
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	99.58	99.58
21 - 40	2	0.28	99.86
41 - 80	1	0.14	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	72	43	10	3	1	25	123	154	75	27	28	29	34	23	30	28	705
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	73	43	10	3	1	25	123	154	75	27	28	29	34	23	31	29	708

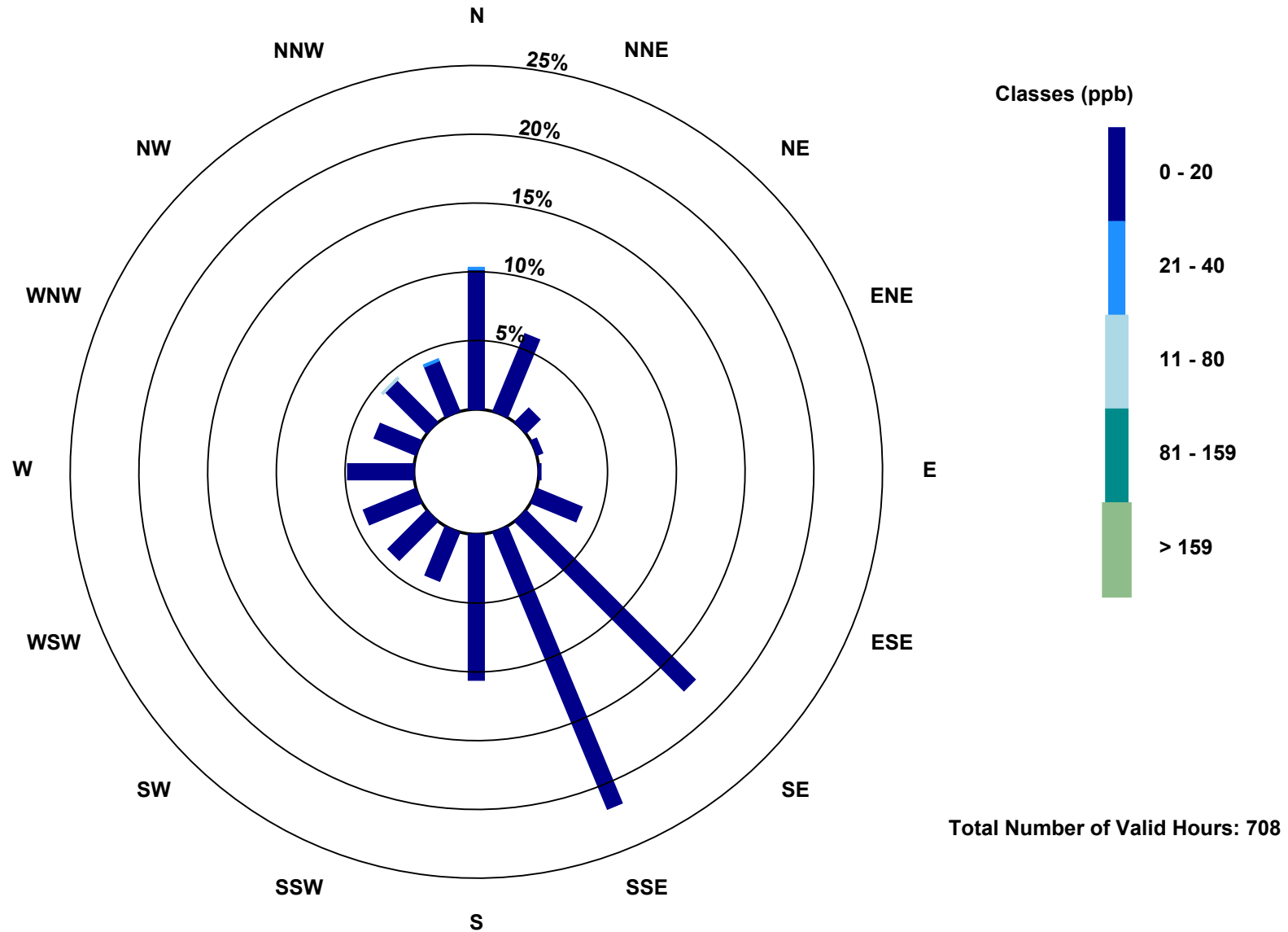
Total Number of Valid Hours: 708

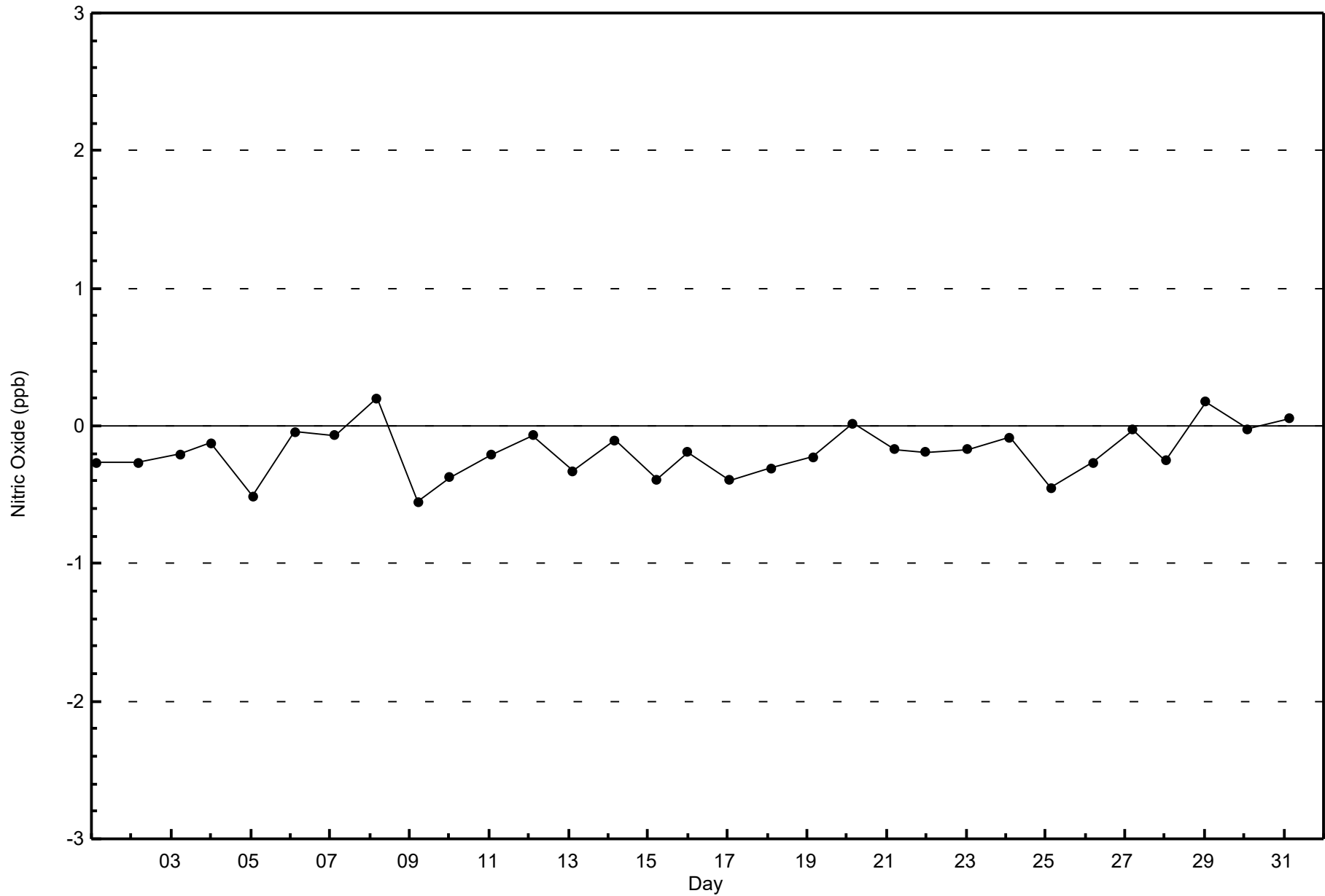
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitric Oxide (NO) - ppb
Buffalo Viewpoint

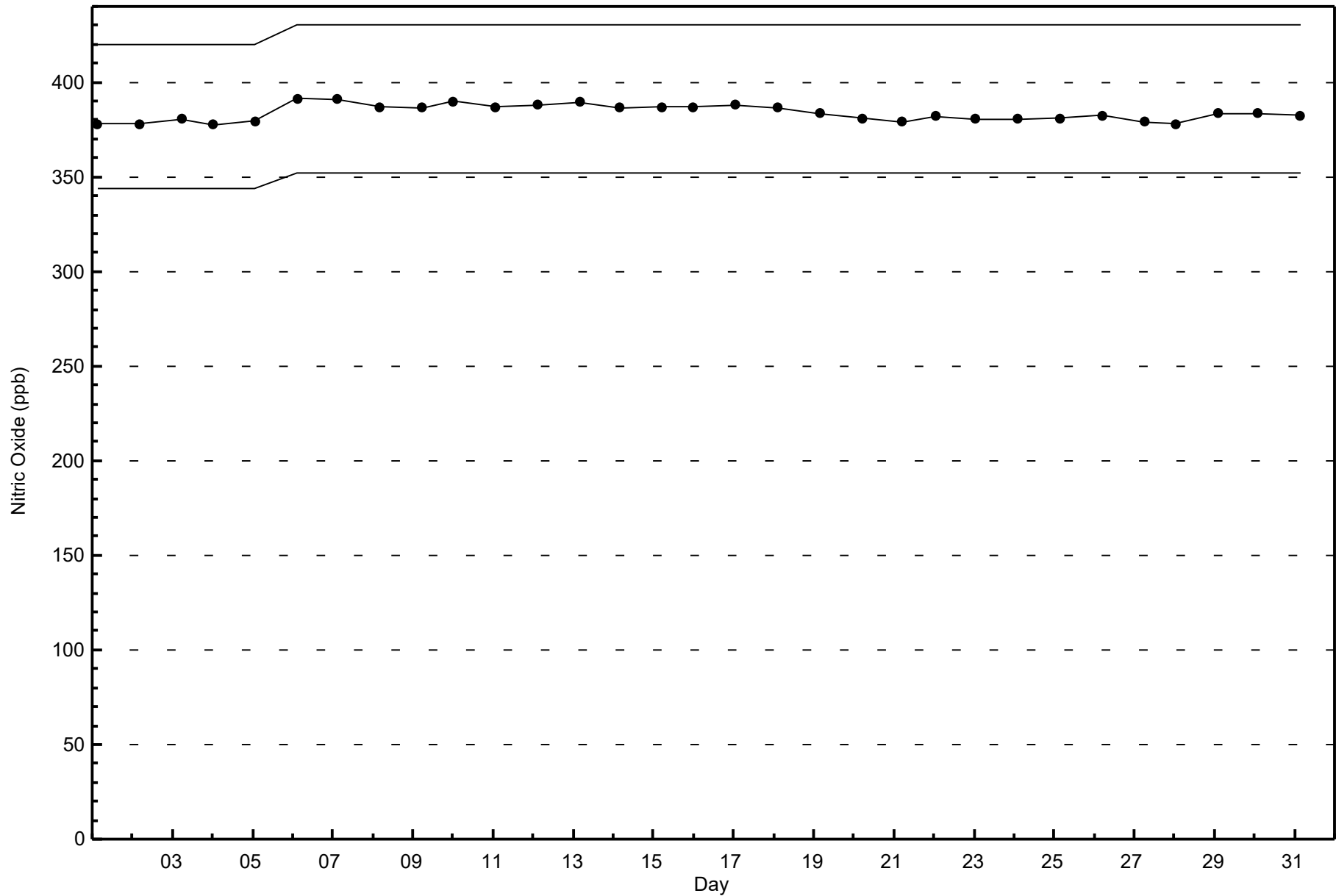






Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

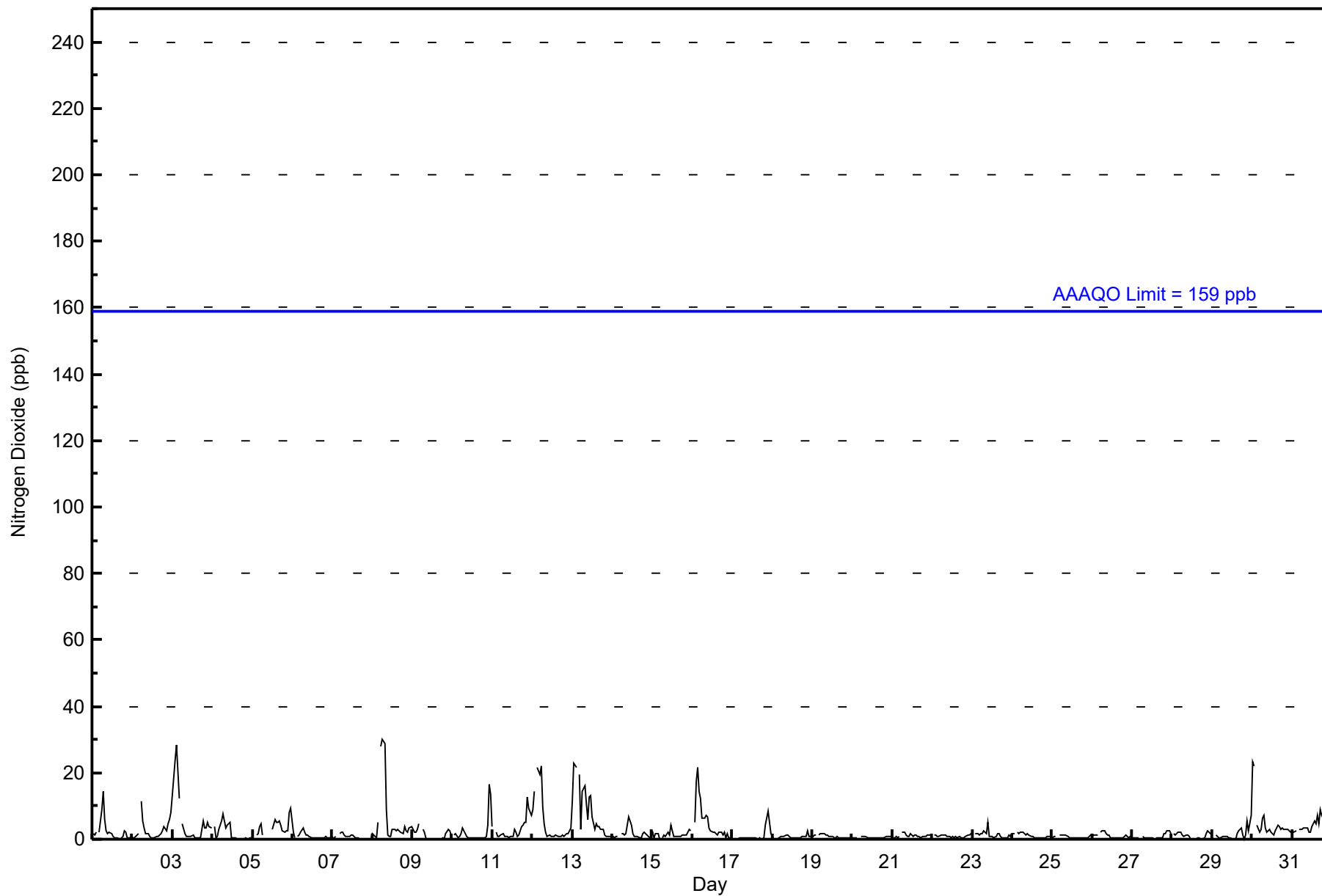
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744									
Maximum Value: 30.1 ppb on May 8 07:00 Maximum Daily Average: 8.0 ppb on May 13																		Hours of Data: 708									
Minimum Value: 0.0 ppb on May 7 18:00 Minimum Daily Average: 0.6 ppb on May 20																		Hours of Missing Data: 36									
Maximum Diurnal Average: 4.8 ppb at hour 6 Minimum Diurnal Average: 1.2 ppb at hour 14																		Hours of Calibration: 36									
Monthly Average: 2.45 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 0.6 Median = 1.1 Q ₃ = 2.4 P ₉₀ = 5.2 P ₉₉ = 22.2																		Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	1.6	1.4	2.3	Z	2.3	9.0	14.6	5.9	2.4	1.9	2.2	1.6	1.0	0.6	0.4	0.4	0.2	0.5	0.8	2.7	2.1	0.5	0.6	0.8	2.4	14.6	
2-May	0.6	0.6	0.7	1.7	Z	11.5	5.4	3.3	1.8	1.9	0.9	0.6	0.6	0.3	1.0	1.0	1.1	1.7	2.7	3.8	2.6	4.8	5.8	8.2	2.7	11.5	
3-May	13.2	23.9	28.2	20.5	12.4	Z	4.6	1.5	0.8	0.7	0.8	0.7	1.2	0.5	0.3	0.4	0.3	0.3	5.3	3.2	3.4	5.2	4.0	3.6	5.9	28.2	
4-May	Z	3.7	0.6	0.7	3.0	5.4	7.5	5.3	3.6	4.4	4.9	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.5	0.5	1.9	7.5	
5-May	0.2	Z	1.1	1.8	3.8	4.7	1.3	C	C	C	C	C	2.9	5.9	5.1	5.1	5.6	4.3	2.7	2.1	2.4	2.5	8.0	9.4	3.8	9.4	
6-May	2.3	0.5	Z	0.9	1.1	2.0	3.2	2.3	1.2	1.1	0.8	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.8	0.5	0.6	0.8	1.0	3.2	
7-May	0.6	0.6	0.9	Z	1.6	2.0	2.3	1.2	0.8	0.9	0.8	1.2	1.1	1.0	0.5	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.7	2.3	
8-May	1.5	1.2	0.6	5.1	Z	28.1	30.1	28.9	9.1	1.3	0.9	0.8	3.0	3.0	2.6	3.1	2.5	2.1	1.8	3.7	2.5	2.2	3.4	3.8	6.1	30.1	
9-May	2.8	2.0	2.0	2.9	4.7	Z	2.8	2.1	0.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	1.8	2.8	2.6	1.1	1.3	4.7	
10-May	Z	1.2	1.7	0.6	0.8	1.8	3.5	2.6	0.8	0.5	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.8	4.4	16.6	13.5	2.3	16.6	
11-May	4.0	Z	2.3	0.8	0.7	1.1	1.6	1.0	0.7	0.9	0.5	0.7	0.7	2.9	2.1	0.8	1.2	3.9	4.3	5.2	5.2	12.6	9.2	7.4	3.0	12.6	
12-May	8.8	14.2	Z	21.6	19.5	22.2	9.6	4.6	2.0	0.8	1.1	1.0	0.9	0.9	1.1	0.9	0.9	0.9	1.1	0.7	1.6	1.7	2.4	3.4	5.3	22.2	
13-May	11.6	22.7	21.4	Z	19.4	3.1	14.5	16.3	10.8	5.8	12.6	13.0	6.7	3.1	4.8	3.8	3.9	3.0	2.9	1.1	0.9	0.8	0.8	1.0	8.0	22.7	
14-May	0.7	0.3	0.8	0.8	Z	1.5	1.5	1.4	1.5	4.3	6.9	4.1	1.8	0.7	1.0	0.8	0.5	0.6	1.6	2.2	1.8	1.4	0.4	1.0	1.6	6.9	
15-May	2.0	0.3	1.8	1.6	0.1	Z	0.5	1.4	0.8	2.1	1.4	4.2	2.7	0.7	0.7	0.7	0.8	0.9	1.3	1.1	1.4	2.3	2.8	2.4	1.5	4.2	
16-May	Z	4.9	17.5	21.7	14.3	12.2	6.5	6.3	7.3	6.7	3.4	2.4	2.1	2.1	1.8	1.4	2.2	2.1	1.1	2.0	0.5	1.5	0.5	0.4	5.3	21.7	
17-May	0.5	Z	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.1	0.2	0.3	4.4	8.6	5.0	1.6	1.1	8.6	
18-May	0.7	0.0	Z	0.3	0.3	0.7	0.7	0.7	1.1	1.1	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.8	0.9	2.7	0.8	0.8	0.7	2.7	
19-May	0.7	1.1	1.1	Z	1.3	1.6	1.8	1.5	1.2	1.2	0.8	0.7	0.7	0.6	0.6	0.7	0.5	0.5	0.3	0.6	0.6	0.4	0.3	0.4	0.8	1.8	
20-May	0.5	0.6	0.5	0.3	Z	1.0	0.9	0.8	0.9	0.6	0.6	0.6	0.5	0.6	0.6	0.4	0.3	0.6	0.3	0.3	0.8	0.7	0.8	0.9	0.6	1.0	
21-May	0.6	0.5	0.8	0.6	0.7	Z	2.3	2.0	1.2	0.9	0.8	1.7	1.0	1.2	1.1	0.8	0.7	0.6	0.8	0.9	1.0	1.1	1.4	1.2	1.0	2.3	
22-May	Z	1.2	1.1	0.9	0.8	1.1	1.3	1.4	1.1	0.9	0.9	0.6	0.7	0.5	0.7	0.6	0.8	0.6	0.5	0.6	0.7	1.3	1.3	1.5	0.9	1.5	
23-May	1.4	Z	1.7	1.5	1.3	1.9	1.7	2.4	1.8	5.0	0.9	0.9	0.7	0.6	1.0	1.6	1.8	0.8	0.6	0.6	0.6	0.6	1.4	1.0	1.4	5.0	
24-May	1.8	1.5	Z	2.0	1.7	2.1	2.3	1.7	1.4	1.5	1.4	1.0	0.9	0.6	0.6	0.5	0.6	0.5	0.3	0.5	0.6	0.9	0.9	0.8	1.1	2.3	
25-May	0.6	0.7	0.8	Z	1.1	1.1	1.1	1.2	1.1	0.7	0.6	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.5	0.7	1.2	0.7	1.2	
26-May	0.8	1.1	1.3	1.3	Z	2.2	2.4	2.6	1.8	1.4	1.1	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.9	1.1	0.7	0.5	0.7	1.0	2.6	
27-May	0.6	0.3	0.5	0.3	0.6	Z	0.7	0.5	0.5	0.5	0.6	0.4	0.3	0.2	0.1	0.3	0.3	0.4	0.5	1.9	1.9	2.7	2.5	1.8	0.8	2.7	
28-May	Z	1.8	1.3	2.0	2.3	2.3	1.2	1.0	1.3	1.4	0.9	0.2	0.1	0.0	0.1	0.5	0.3	0.0	0.1	0.4	1.5	2.4	2.0	1.9	1.1	2.4	
29-May	1.5	Z	1.1	0.7	0.5	0.5	0.7	0.7	0.7	1.0	0.5	0.3	0.2	0.2	0.1	1.6	2.7	3.5	1.1	0.1	1.3	5.7	2.6	7.2	1.5	7.2	
30-May	23.5	21.9	Z	4.2	2.2	2.9	6.5	7.0	3.6	2.0	2.9	2.3	1.9	1.4	2.6	4.3	3.8	3.0	3.3	2.9	3.0	2.8	2.6	2.2	4.9	23.5	
31-May	2.5	2.2	2.4	Z	2.8	3.0	2.8	3.3	3.3	3.3	2.3	2.0	4.0	5.5	4.8	7.2	4.8	9.0	7.0	5.4	13.4	17.5	9.4	9.6	5.5	17.5	
3.3 4.2 3.6 3.8 3.8 4.8 4.4 3.7 2.2 1.8 1.8 1.5 1.3 1.2 1.2 1.3 1.2 1.4 1.4 1.5 1.9 3.0 2.9 2.9																										Diurnal Average	
23.5 23.9 28.2 21.7 19.5 28.1 30.1 28.9 10.8 6.7 12.6 13.0 6.7 5.9 5.1 7.2 5.6 9.0 7.0 5.4 13.4 17.5 16.6 13.5																										Diurnal Maximum	
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	695	98.16	98.16
21 - 40	13	1.84	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	68	42	10	3	1	25	123	154	75	27	28	28	33	22	30	26	695
21 - 40	5	1	0	0	0	0	0	0	0	0	0	1	1	1	1	3	13
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	73	43	10	3	1	25	123	154	75	27	28	29	34	23	31	29	708

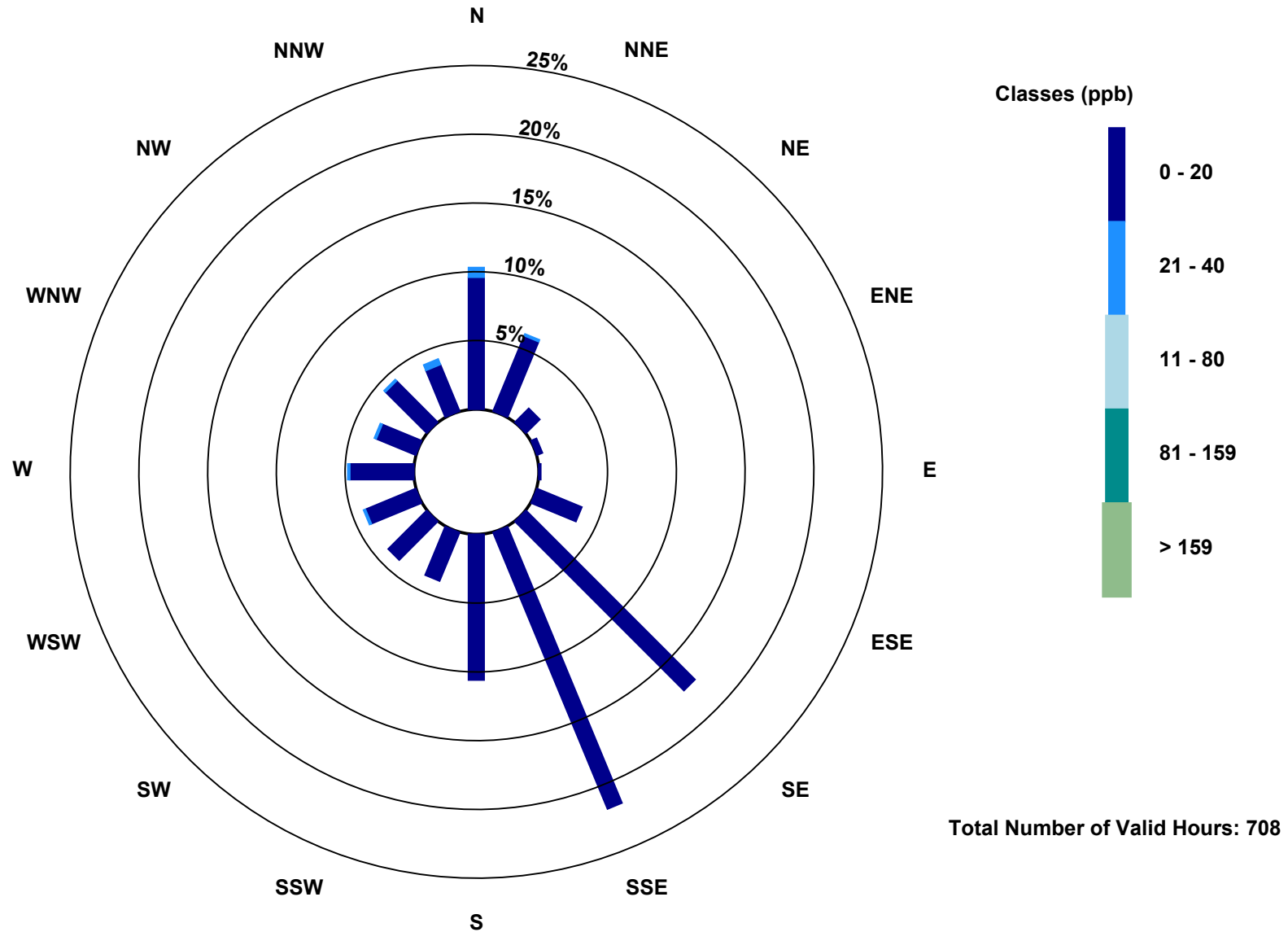
Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

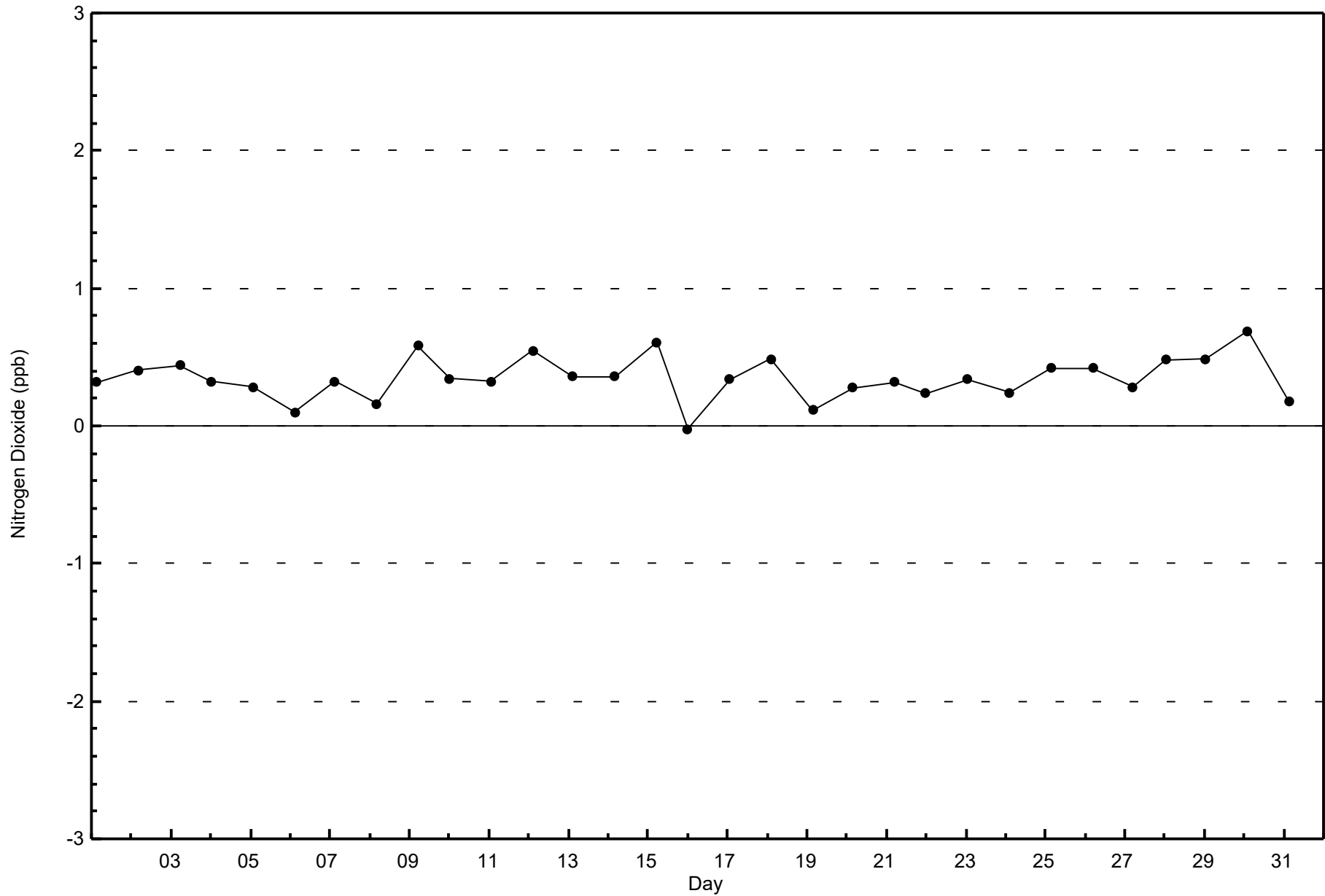
Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint





Wood Buffalo Environmental Association
Zero Responses

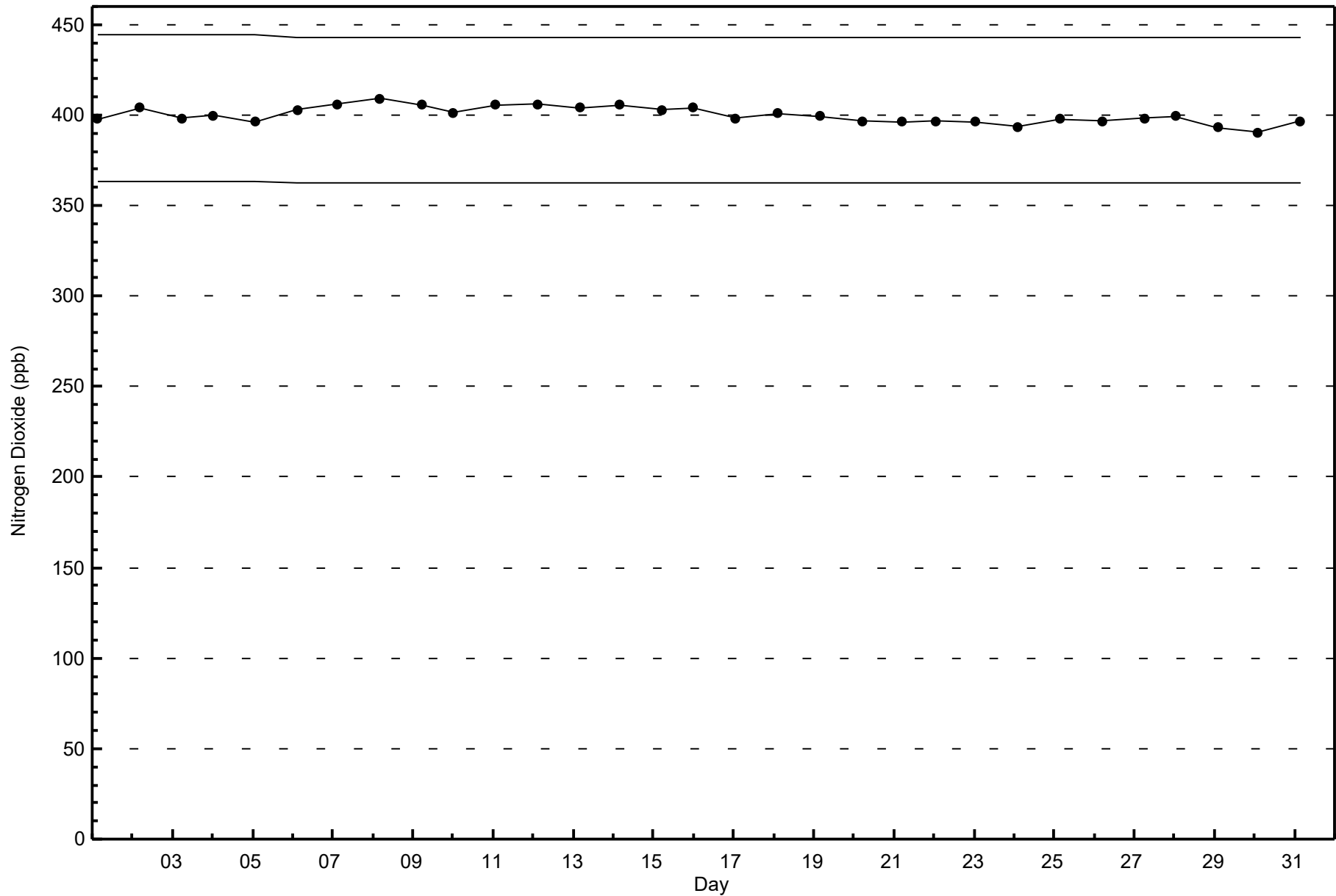
Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

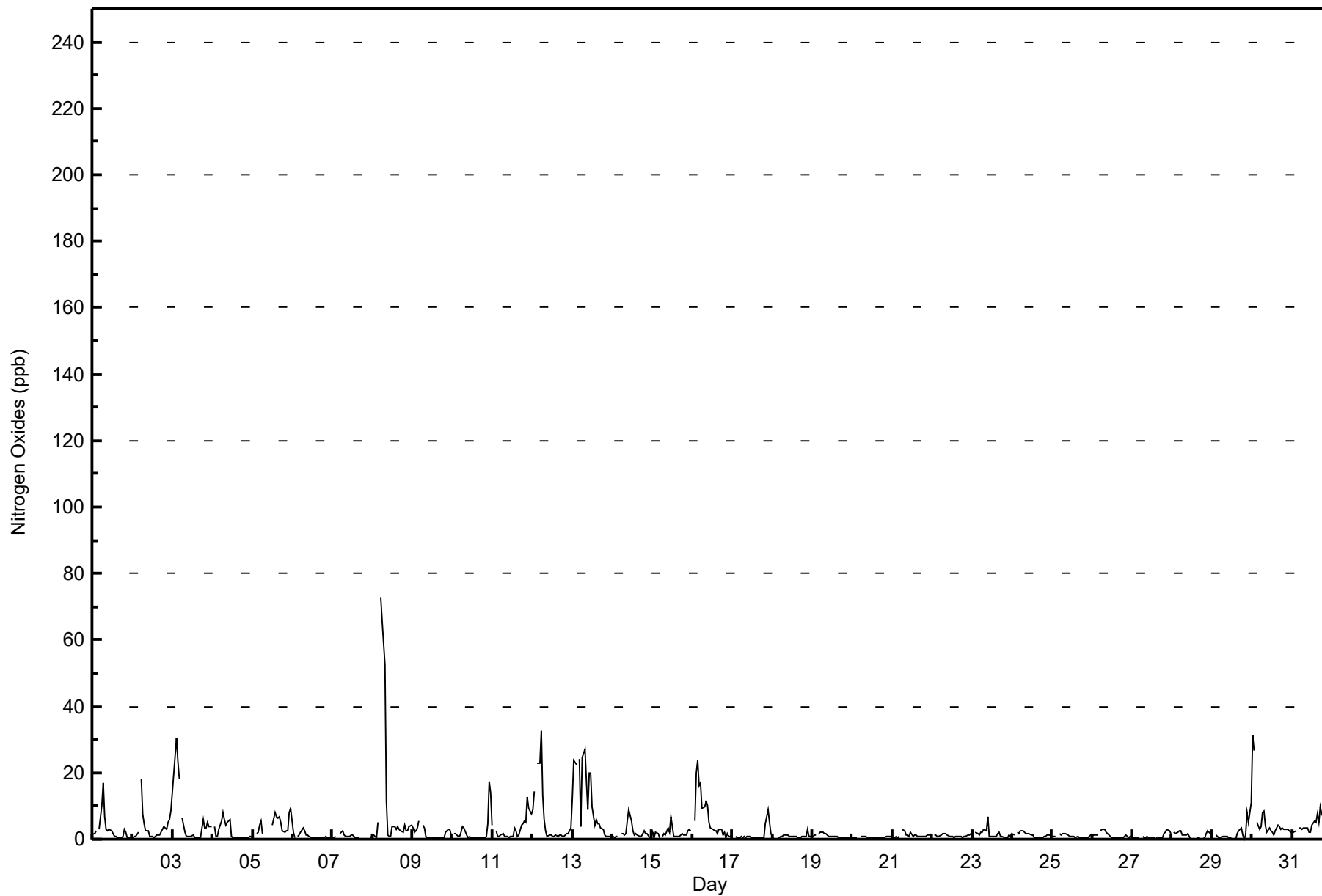
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 72.9 ppb on May 8 06:00 Maximum Daily Average: 11.0 ppb on May 8																			Hours of Data: 708							
Minimum Value: 0.0 ppb on May 7 19:00 Minimum Daily Average: 0.6 ppb on May 20																			Hours of Missing Data: 36							
Maximum Diurnal Average: 7.7 ppb at hour 6 Minimum Diurnal Average: 1.4 ppb at hour 15																			Hours of Calibration: 36							
Monthly Average: 3.01 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.2 Q ₃ = 2.7 P ₉₀ = 6.1 P ₉₉ = 26.5																			Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	1.6	1.6	2.3	Z	2.8	10.1	17.1	7.0	2.8	2.4	3.1	2.5	1.6	0.8	0.6	0.6	0.4	0.6	0.8	2.9	2.3	0.6	0.6	0.9	2.9	17.1
2-May	0.6	0.7	0.8	2.1	Z	18.3	7.7	4.8	2.6	2.6	0.9	0.7	0.7	0.3	1.3	1.4	1.4	2.0	3.0	4.0	2.8	5.0	6.0	8.4	3.4	18.3
3-May	13.8	25.0	30.5	23.5	18.2	Z	6.5	2.0	1.0	0.8	1.0	0.8	1.3	0.5	0.3	0.5	0.4	0.3	5.8	3.4	3.5	5.3	4.0	3.6	6.6	30.5
4-May	Z	4.0	0.8	0.7	3.1	5.6	8.1	5.8	4.2	5.3	5.9	0.9	0.5	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.5	0.5	0.8	0.8	2.2	8.1
5-May	0.6	Z	1.6	2.3	4.2	5.3	1.7	C	C	C	C	C	4.1	8.0	6.7	6.5	6.8	4.9	2.7	2.1	2.4	2.5	8.0	9.4	4.4	9.4
6-May	2.3	0.5	Z	1.0	1.1	2.1	3.3	2.7	1.2	1.3	0.8	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.6	0.5	0.8	0.5	0.6	0.8	1.0	3.3
7-May	0.6	0.6	0.9	Z	1.7	2.0	2.3	1.2	0.8	0.9	0.8	1.2	1.1	1.0	0.5	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.7	2.3
8-May	1.5	1.2	0.6	5.1	Z	72.9	65.5	52.4	11.6	1.4	0.9	0.9	3.7	3.7	3.0	3.7	2.9	2.5	2.0	4.2	2.6	2.4	3.7	4.1	11.0	72.9
9-May	3.3	2.2	2.4	3.4	5.4	Z	4.4	3.4	1.0	0.6	0.5	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.5	0.4	2.1	3.1	2.9	1.2	1.7	5.4
10-May	Z	1.6	1.9	1.0	1.0	2.0	4.0	3.2	1.2	0.6	0.6	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.8	4.5	17.2	14.0	2.5	17.2
11-May	4.2	Z	2.7	1.0	0.7	1.3	1.8	1.0	0.7	1.0	0.5	0.7	0.7	3.5	2.4	0.9	1.4	4.4	4.6	5.3	5.2	12.8	9.3	7.5	3.2	12.8
12-May	9.0	14.6	Z	22.7	22.8	32.5	13.0	6.0	2.6	0.8	1.3	1.3	0.9	1.0	1.2	1.1	1.1	1.1	1.1	0.8	1.7	1.7	2.5	3.5	6.3	32.5
13-May	12.2	23.9	22.6	Z	24.3	3.9	24.4	27.0	17.4	8.8	19.9	19.8	9.5	4.1	6.1	4.7	4.5	3.5	3.0	1.1	0.9	0.8	0.8	1.0	10.6	27.0
14-May	0.7	0.3	0.8	0.8	Z	1.7	1.7	1.5	1.7	5.4	8.8	5.6	2.4	1.1	1.5	1.1	0.7	0.7	1.9	2.4	1.9	1.6	0.5	1.0	2.0	8.8
15-May	2.3	0.5	2.1	1.9	0.4	Z	0.8	1.8	1.3	3.2	2.1	6.9	4.0	1.0	1.0	1.0	1.0	1.1	1.5	1.3	1.5	2.4	3.0	2.4	1.9	6.9
16-May	Z	5.4	19.8	23.7	16.1	17.1	9.5	9.8	11.6	10.1	5.0	3.5	3.0	2.7	2.5	1.8	3.0	2.8	1.3	2.1	0.6	1.7	0.6	0.6	6.7	23.7
17-May	0.7	Z	0.6	0.4	0.6	0.7	0.6	0.6	0.6	0.8	0.8	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.6	4.6	9.0	5.3	1.8	1.4	9.0	
18-May	0.8	0.3	Z	0.5	0.3	0.9	0.9	1.1	1.5	1.4	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.8	0.9	1.0	2.8	0.9	0.9	0.9	2.8
19-May	0.8	1.3	1.2	Z	1.5	1.9	2.2	1.8	1.6	1.4	0.9	0.8	0.8	0.6	0.6	0.7	0.5	0.5	0.3	0.6	0.6	0.4	0.3	0.4	0.9	2.2
20-May	0.5	0.6	0.5	0.3	Z	1.0	0.9	0.8	0.9	0.6	0.6	0.6	0.5	0.6	0.6	0.4	0.3	0.6	0.3	0.3	0.8	0.7	0.9	0.9	0.6	1.0
21-May	0.6	0.5	0.8	0.6	0.8	Z	2.9	2.4	1.3	1.1	0.9	2.0	1.0	1.2	1.2	0.8	0.8	0.8	0.9	1.0	1.0	1.2	1.5	1.2	1.1	2.9
22-May	Z	1.4	1.3	1.0	1.0	1.1	1.6	1.6	1.5	1.1	0.9	0.8	0.9	0.5	0.8	0.7	0.9	0.7	0.6	0.8	0.7	1.3	1.3	1.5	1.0	1.6
23-May	1.4	Z	2.0	1.7	1.4	2.2	2.0	3.0	2.5	6.8	0.9	0.9	0.8	0.6	1.0	1.7	2.2	0.9	0.7	0.6	0.6	0.6	1.4	1.0	1.6	6.8
24-May	1.8	1.5	Z	2.2	1.8	2.3	2.6	1.9	1.6	1.8	1.1	1.1	1.1	0.6	0.6	0.6	0.6	0.6	0.4	0.7	0.7	1.1	1.2	1.0	1.3	2.6
25-May	1.0	0.9	0.9	Z	1.6	1.4	1.5	1.6	1.5	1.1	0.7	0.7	0.7	0.7	0.5	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.9	1.3	0.9	1.6
26-May	1.0	1.1	1.3	1.3	Z	2.5	2.8	3.1	2.2	1.6	1.2	0.6	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.9	1.2	0.7	0.5	0.7	1.1	3.1
27-May	0.6	0.3	0.5	0.3	0.6	Z	0.8	0.5	0.5	0.7	0.6	0.5	0.3	0.2	0.1	0.4	0.3	0.4	0.5	1.9	2.1	2.8	2.7	1.9	0.8	2.8
28-May	Z	2.1	1.5	2.2	2.5	2.7	1.4	1.2	1.4	1.5	0.9	0.2	0.1	0.0	0.1	0.5	0.3	0.0	0.1	0.4	1.5	2.4	2.0	1.9	1.2	2.7
29-May	1.5	Z	1.1	0.7	0.5	0.5	0.7	0.7	0.7	1.0	0.5	0.3	0.2	0.2	0.1	1.6	2.7	3.5	1.1	0.1	1.3	8.2	5.2	11.0	1.9	11.0
30-May	31.3	26.7	Z	5.2	2.8	4.0	8.1	8.4	4.4	2.2	3.2	2.5	2.0	1.4	2.6	4.3	3.8	3.0	3.3	2.9	3.0	2.8	2.6	2.2	5.8	31.3
31-May	2.5	2.2	2.4	Z	3.3	3.5	3.1	3.4	3.4	3.3	2.3	2.0	4.1	5.6	4.9	7.5	5.0	9.8	7.7	5.8	15.2	19.8	10.1	10.1	6.0	19.8
3.7 4.6 4.0 4.2 4.6 7.7 6.6 5.4 2.9 2.4 2.3 2.0 1.6 1.4 1.4 1.5 1.4 1.6 1.5 1.6 2.1 3.2 3.1 3.1																										Diurnal Average
31.3 26.7 30.5 23.7 24.3 72.9 65.5 52.4 17.4 10.1 19.9 19.8 9.5 8.0 6.7 7.5 6.8 9.8 7.7 5.8 15.2 19.8 17.2 14.0																										Diurnal Maximum
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	691	97.60	97.60
21 - 40	14	1.98	99.58
41 - 80	3	0.42	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	66	42	10	3	1	25	123	154	75	27	28	28	33	22	29	25	691
21 - 40	6	1	0	0	0	0	0	0	0	0	0	1	1	1	1	3	14
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	73	43	10	3	1	25	123	154	75	27	28	29	34	23	31	29	708

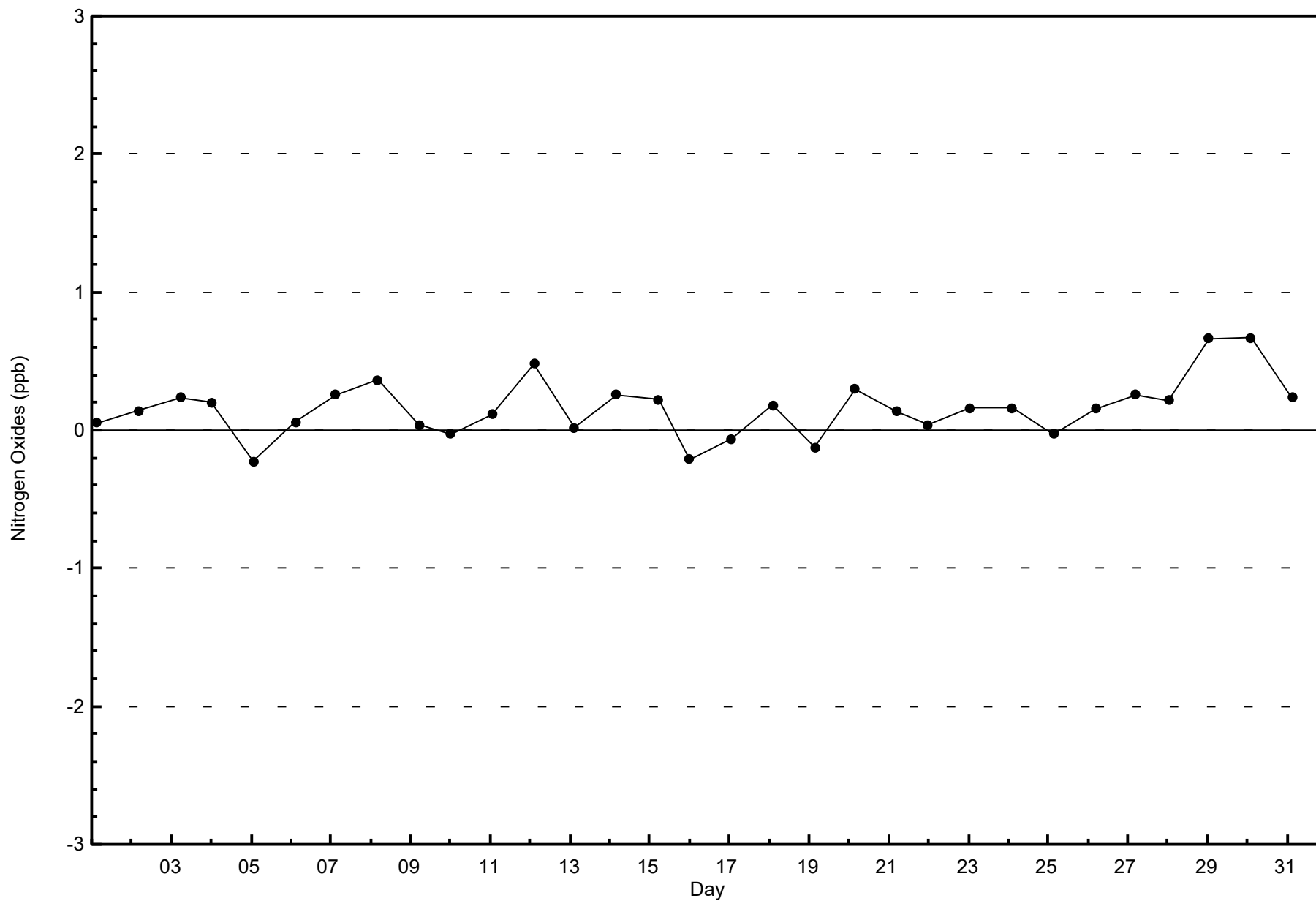
Total Number of Valid Hours: 708

Total Number of Hours: 744



Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint

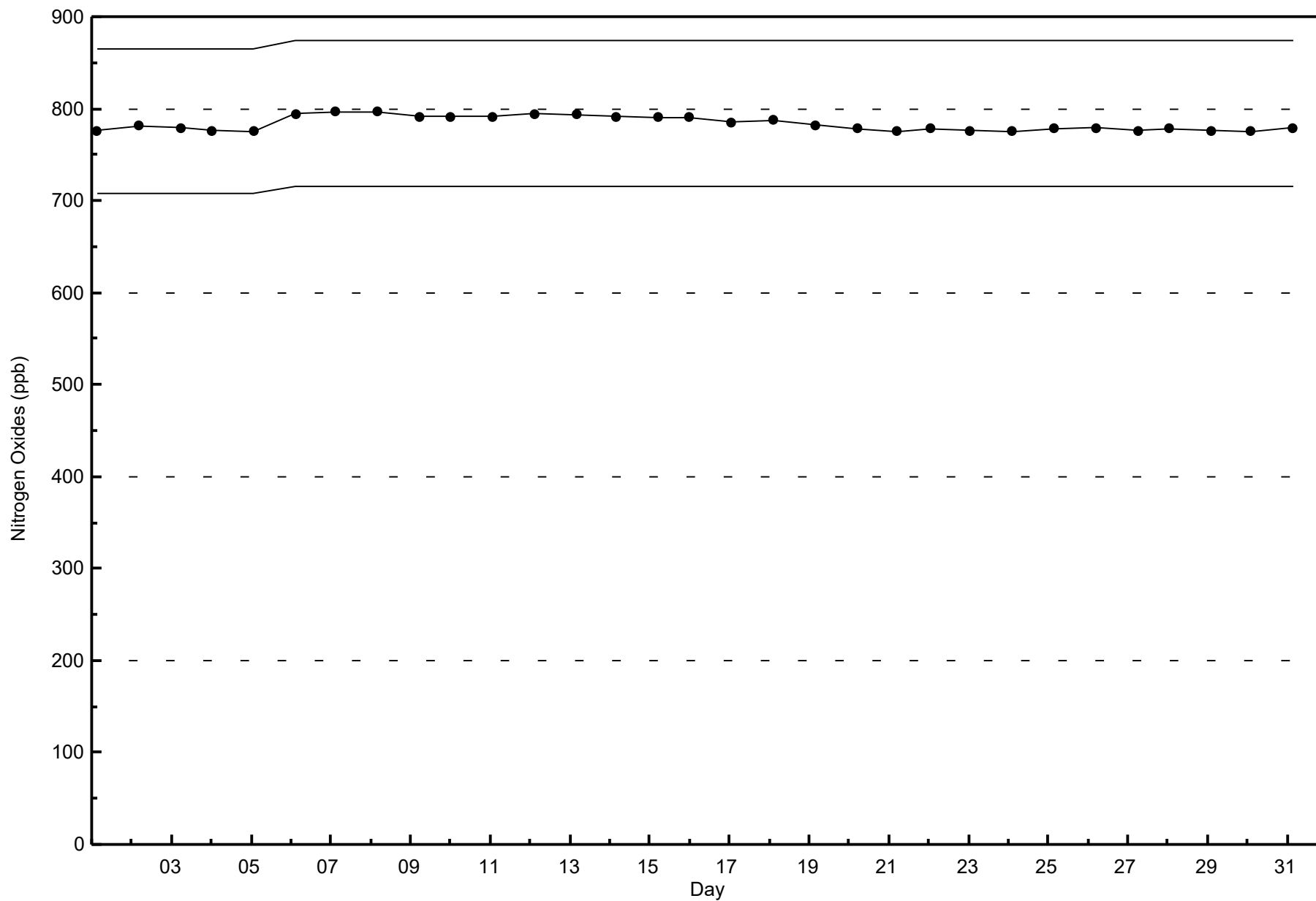






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

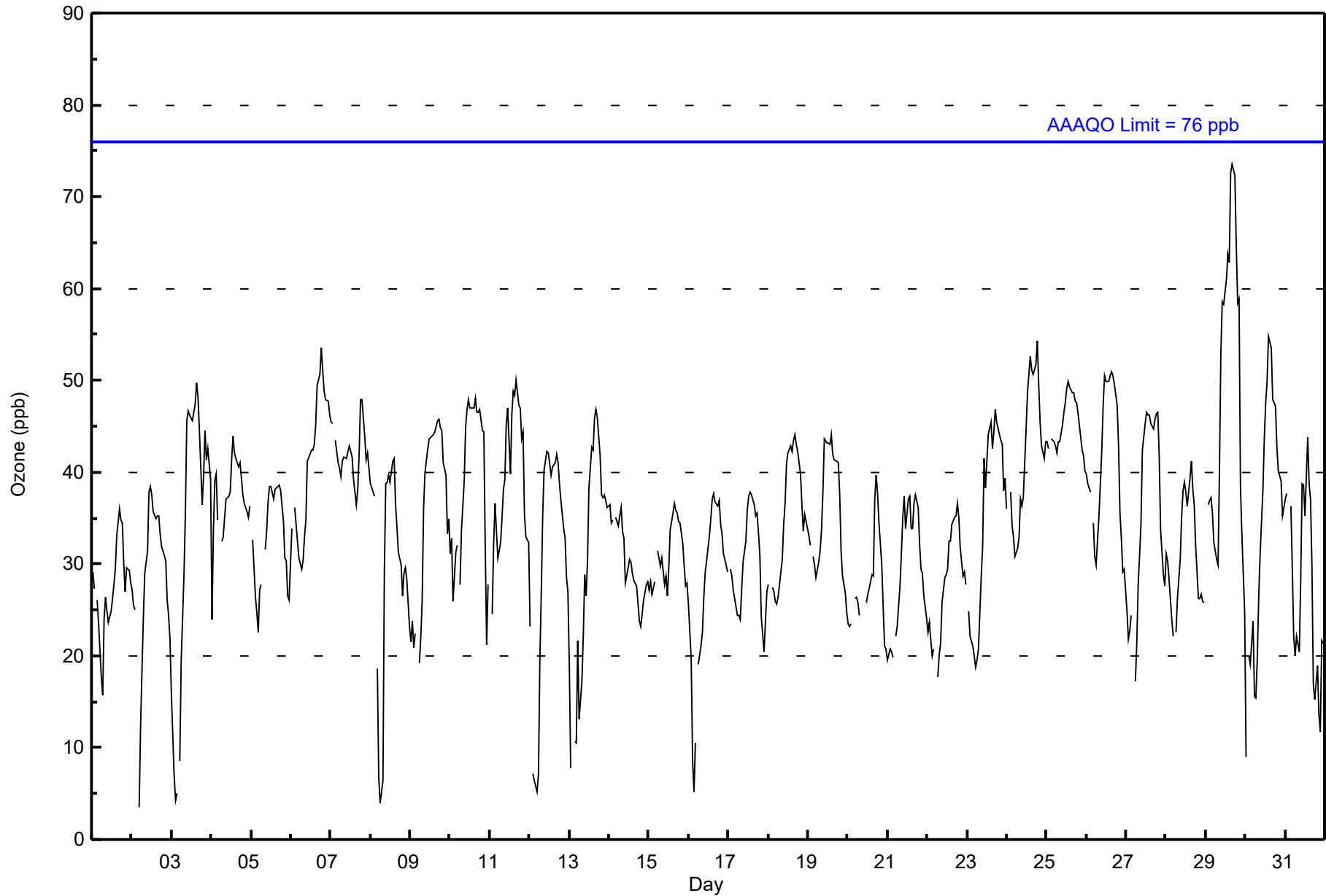
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 73.5 ppb on May 29 17:00 Maximum Daily Average: 49.3 ppb on May 29																				Hours in Service: 744 Hours of Data: 709						
Minimum Value: 3.5 ppb on May 2 05:00 Maximum Diurnal Average: 42.2 ppb at hour 17 Monthly Average: 34.36 ppb										Minimum Daily Average: 27.4 ppb on May 16 Minimum Diurnal Average: 24.1 ppb at hour 6 Percentiles: P ₁ = 6.5 P ₁₀ = 21.7 Q ₁ = 27.7 Median = 35.0 Q ₃ = 41.7 P ₉₀ = 46.8 P ₉₉ = 58.9										Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	29.1	27.3	Z	26.0	23.6	17.7	15.7	24.2	26.4	24.8	23.7	24.9	26.3	27.8	29.5	33.1	36.0	34.7	34.4	30.1	27.0	29.6	29.3	28.0	27.4	36.0
2-May	27.1	25.5	25.1	Z	3.5	12.2	18.2	24.1	29.0	31.5	37.8	38.4	37.5	35.7	35.0	35.3	35.3	33.2	31.9	31.4	30.4	26.0	24.3	21.8	28.3	38.4
3-May	15.9	6.9	4.2	5.0	Z	8.6	19.4	28.8	35.5	45.7	46.8	46.2	45.6	46.6	47.4	49.8	48.3	44.5	36.5	39.7	44.5	41.3	42.5	39.3	34.3	49.8
4-May	23.9	33.7	39.1	39.8	34.7	Z	32.5	33.0	35.1	37.0	37.3	37.8	41.4	44.0	42.0	41.6	40.5	41.0	39.4	37.5	36.7	35.7	35.1	36.3	37.2	44.0
5-May	Z	32.6	26.5	24.7	22.5	27.1	27.8	M	31.6	33.6	36.8	38.5	38.4	37.1	38.2	38.3	38.4	38.6	37.9	34.7	30.7	30.3	26.5	26.1	32.6	38.6
6-May	33.8	Z	36.1	34.3	32.4	30.7	29.4	30.3	32.9	34.8	41.1	42.0	42.4	42.4	43.0	45.1	49.4	50.7	53.5	51.1	48.9	47.9	47.8	46.1	41.1	53.5
7-May	45.4	45.3	Z	43.5	41.1	40.5	39.4	41.2	41.7	41.4	42.3	42.8	42.2	41.6	39.3	36.5	38.2	41.9	47.9	47.8	44.0	41.3	42.1	40.5	42.1	47.9
8-May	38.8	38.2	37.4	Z	18.6	6.7	3.9	6.3	29.0	38.8	38.9	39.6	38.8	41.1	41.5	36.4	34.1	31.3	29.9	26.6	29.0	29.6	28.4	23.1	29.8	41.5
9-May	21.5	23.7	20.9	22.4	Z	19.2	22.0	26.0	36.0	40.0	42.6	43.6	43.7	43.9	44.1	44.5	45.6	45.7	44.9	44.5	41.1	39.6	33.2	34.9	35.8	45.7
10-May	31.1	32.8	26.0	31.2	32.0	Z	27.8	33.5	39.0	44.9	46.9	47.9	47.0	47.0	47.0	48.1	46.5	46.5	46.8	44.5	44.4	31.9	21.1	27.8	38.8	48.1
11-May	Z	24.6	32.2	36.6	33.5	30.7	32.4	35.1	38.1	39.2	45.2	46.9	39.8	46.4	48.9	48.4	50.0	47.4	46.9	43.7	44.5	35.3	33.0	32.3	39.6	50.0
12-May	23.2	Z	7.2	6.5	5.2	7.2	19.7	26.8	35.3	40.3	42.3	42.1	40.8	39.7	40.6	41.1	42.0	41.1	38.8	36.8	33.9	32.8	28.5	27.1	30.4	42.3
13-May	19.0	7.7	Z	10.7	10.5	21.7	13.2	17.3	22.2	28.8	26.6	30.4	38.3	42.7	42.3	46.0	46.8	45.9	41.7	37.5	37.3	37.5	37.0	36.1	30.3	46.8
14-May	36.5	34.5	34.8	Z	35.1	34.1	35.2	36.2	33.6	32.8	27.9	29.6	30.5	30.2	28.9	28.3	27.5	25.8	23.7	23.2	24.6	26.1	27.8	28.1	30.2	36.5
15-May	27.2	28.0	26.7	28.1	Z	31.4	30.7	29.7	30.7	27.7	28.7	26.5	29.6	33.8	35.5	36.6	35.9	35.5	34.6	34.5	32.2	29.7	27.6	27.8	30.8	36.6
16-May	25.7	19.7	8.6	5.2	10.5	Z	19.1	21.1	22.6	26.4	29.1	30.3	33.1	34.9	37.1	37.6	36.8	36.3	36.8	34.4	33.2	31.2	30.5	29.1	27.4	37.6
17-May	Z	29.4	28.6	27.1	25.3	24.4	24.4	24.0	27.1	30.2	32.5	35.8	37.3	37.8	37.5	36.5	35.2	35.6	33.4	30.9	24.3	20.4	23.8	27.0	29.9	37.8
18-May	27.7	Z	27.5	27.1	26.0	25.7	26.4	27.8	30.5	34.3	36.6	40.8	42.1	42.8	42.2	43.5	44.1	43.0	42.3	39.9	36.5	33.6	35.3	34.6	35.2	44.1
19-May	33.1	32.1	Z	30.8	29.9	28.5	30.2	31.5	33.6	37.8	43.7	43.1	43.1	43.0	44.2	42.0	41.3	41.2	41.0	37.6	31.3	28.6	26.8	24.7	35.6	44.2
20-May	23.5	23.1	23.5	Z	26.2	26.3	25.8	24.5	C	C	C	25.8	26.7	27.4	28.8	28.7	37.1	39.7	37.7	34.5	29.9	25.3	21.1	20.7	27.8	39.7
21-May	19.5	20.8	20.5	19.8	Z	22.1	23.2	27.7	31.2	35.1	37.4	33.8	37.1	37.4	33.9	33.8	36.7	37.5	36.2	32.2	29.5	28.9	26.6	24.1	29.8	37.5
22-May	22.5	23.6	21.7	20.0	20.7	Z	17.7	20.1	21.4	25.8	28.6	28.9	29.5	32.5	32.5	34.3	35.0	35.3	36.5	35.1	31.7	28.6	29.1	27.7	27.8	36.5
23-May	Z	24.9	22.1	21.1	20.0	18.8	19.5	20.8	28.7	31.9	41.5	38.2	41.1	44.0	45.5	42.6	44.3	46.8	45.4	44.1	43.5	42.9	38.0	39.3	35.0	46.8
24-May	36.1	Z	37.9	34.2	33.0	30.9	31.7	32.9	37.1	36.4	37.2	44.6	48.6	50.6	52.6	51.1	50.7	51.7	54.3	49.6	45.5	42.8	41.4	43.3	42.4	54.3
25-May	43.3	42.6	Z	43.6	43.3	42.9	42.1	43.3	43.3	45.2	46.6	47.6	49.2	49.8	49.3	48.6	48.6	47.7	47.6	46.5	43.8	42.4	41.8	40.1	45.2	49.8
26-May	39.8	38.8	37.8	Z	34.4	30.8	30.0	35.2	38.7	42.3	47.3	50.5	49.8	49.9	50.4	50.9	50.5	49.7	47.3	42.8	35.5	32.9	29.1	29.5	41.0	50.9
27-May	24.9	21.8	22.7	24.3	Z	17.3	21.3	27.8	31.0	34.5	42.3	45.3	46.5	46.3	46.3	45.3	44.7	45.8	46.4	46.6	41.8	33.7	28.8	27.6	35.3	46.6
28-May	31.0	30.4	28.4	24.0	22.1	Z	22.6	26.2	30.5	35.1	38.0	38.9	37.8	36.3	39.4	41.2	38.2	36.5	32.0	26.2	26.2	26.6	25.9	25.8	31.3	41.2
29-May	Z	36.5	36.9	37.2	35.6	32.3	30.5	29.9	40.1	52.9	58.6	58.3	61.0	63.7	62.9	72.6	73.5	72.4	64.9	58.4	58.9	38.5	33.3	24.7	49.3	73.5
30-May	8.9	Z	19.9	19.0	23.9	15.6	15.3	19.7	26.3	31.0	37.9	43.6	47.5	49.9	54.8	53.5	47.8	47.6	47.2	42.7	40.1	39.0	35.2	36.1	34.9	54.8
31-May	37.1	37.7	Z	36.3	29.4	22.1	20.1	22.1	20.5	28.3	38.7	38.6	35.2	43.7	38.7	37.1	29.9	16.9	15.2	18.9	13.5	11.8	21.7	21.3	27.6	43.7
28.7 28.6 26.1 26.1 25.9 24.1 24.7 27.6 32.0 35.6 38.7 39.4 40.3 41.6 41.9 42.2 42.2 41.5 40.4 38.2 35.9 33.0 31.4 30.7 Diurnal Average																										
45.4 45.3 39.1 43.6 43.3 42.9 42.1 43.3 43.3 52.9 58.6 58.3 61.0 63.7 62.9 72.6 73.5 72.4 64.9 58.4 58.9 47.9 47.8 46.1 Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O_3) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	56	7.90	7.90
21 - 50	628	88.58	96.47
51 - 82	25	3.53	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Buffalo Viewpoint - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	12	6	0	0	0	0	2	11	3	0	0	2	5	4	5	6	56
21 - 50	62	37	10	3	1	23	120	134	61	24	28	26	29	20	29	21	628
51 - 82	0	0	0	0	0	0	1	7	12	3	0	1	1	0	0	0	25
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	74	43	10	3	1	23	123	152	76	27	28	29	35	24	34	27	709

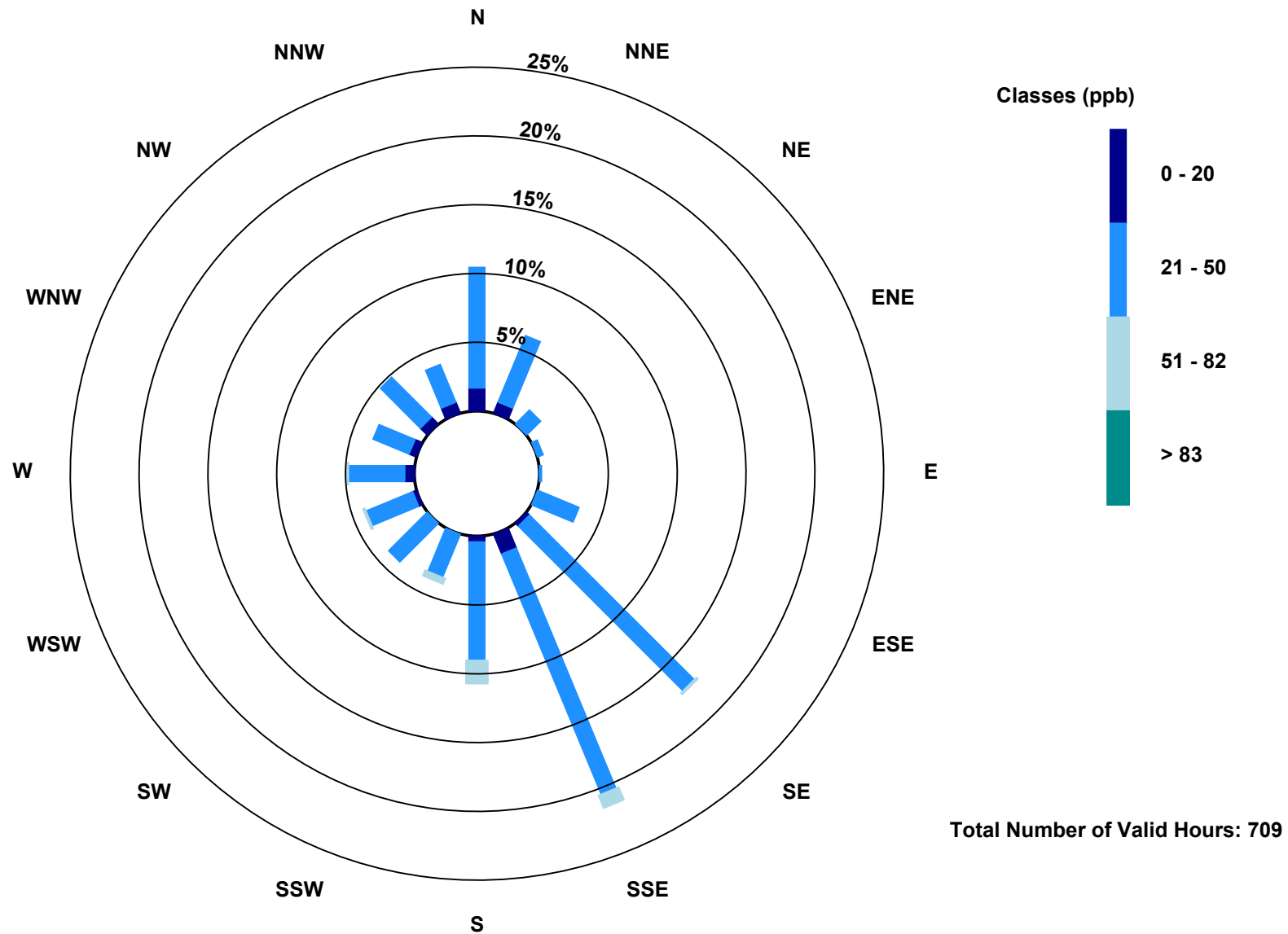
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

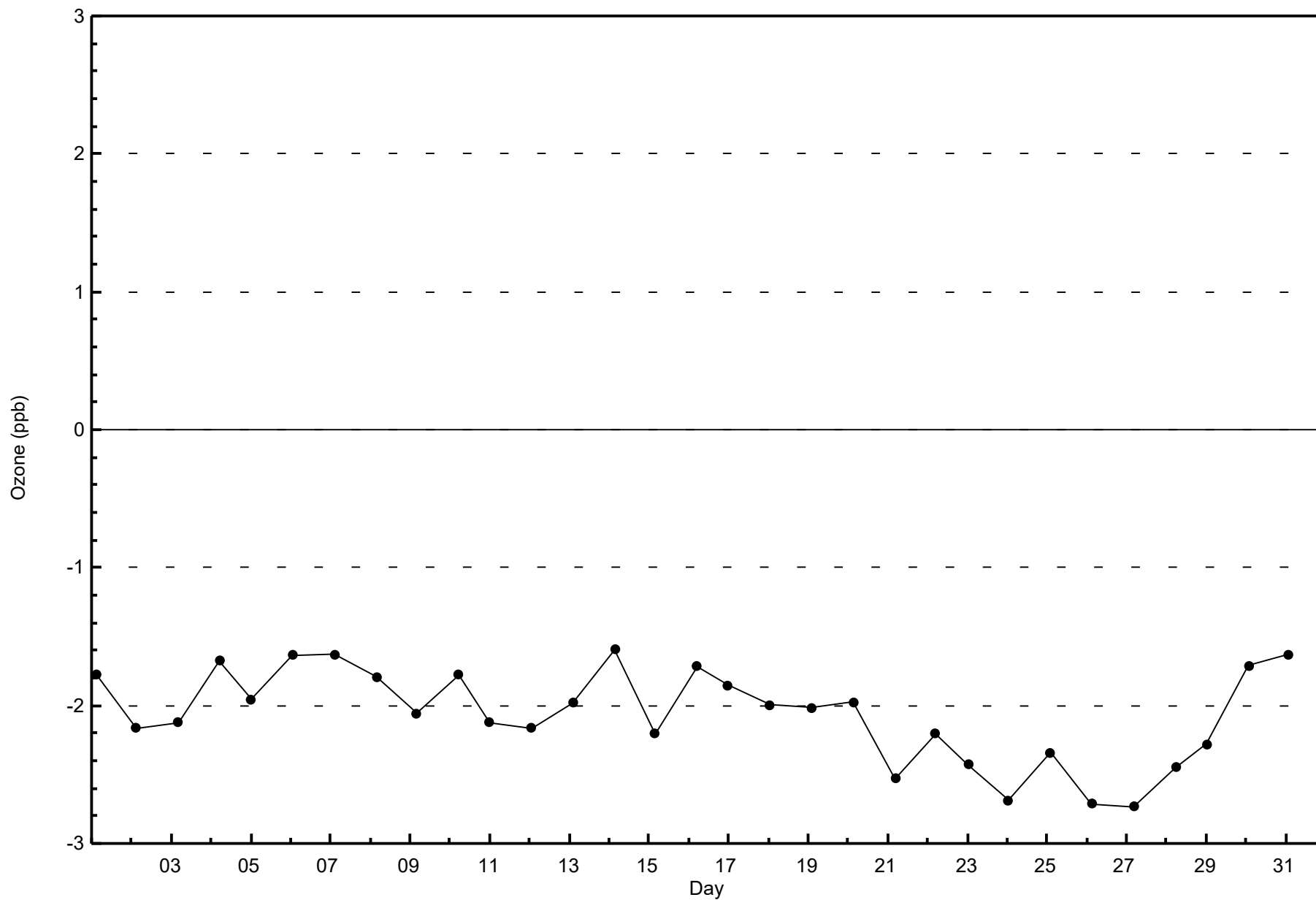
Ozone (O_3) - ppb
Buffalo Viewpoint





Wood Buffalo Environmental Association
Zero Responses

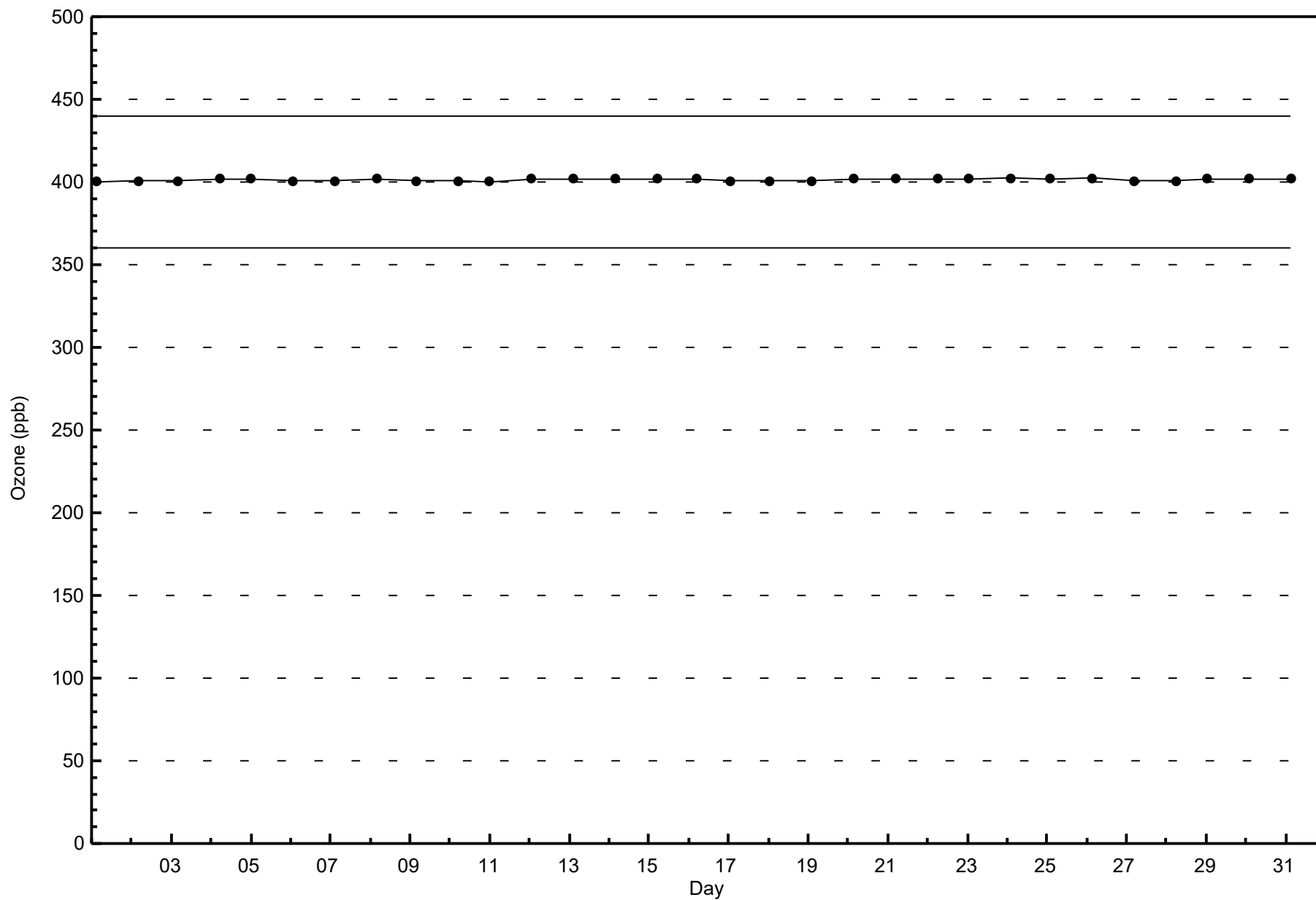
Ozone (O₃) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

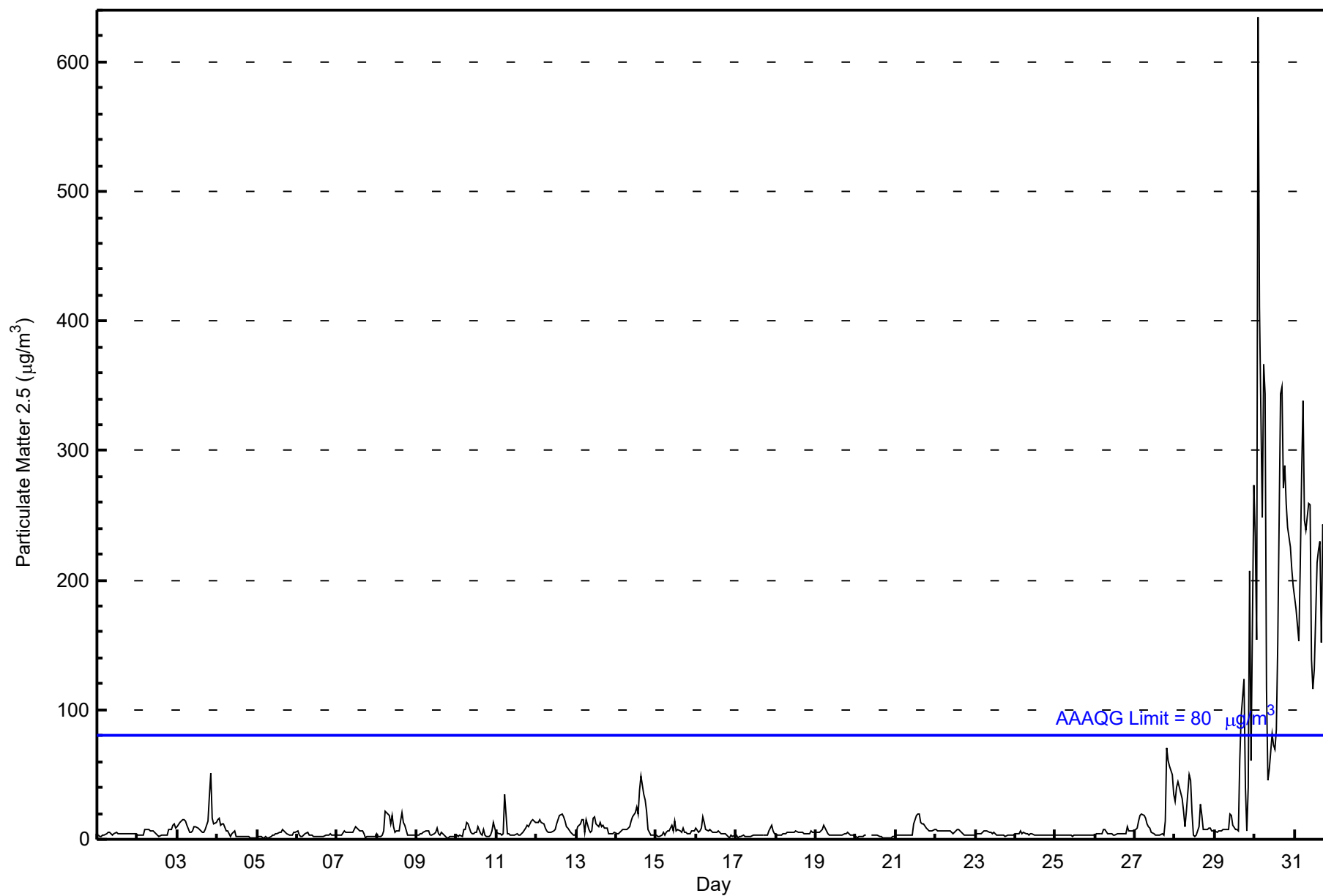
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 46 24-hr: 3 Maximum Value: 635.1 µg/m³ on May 30 03:00 Maximum Daily Average: 227.1 µg/m³ on May 30																					Hours in Service: 744 Hours of Data: 742					
Minimum Value: 0.8 µg/m³ on May 20 17:00 Minimum Daily Average: 2.1 µg/m³ on May 20 Maximum Diurnal Average: 31.8 µg/m³ at hour 3 Minimum Diurnal Average: 12.2 µg/m³ at hour 12 Monthly Average: 21.13 µg/m³ Percentiles: P ₁ = 1.4 P ₁₀ = 2.7 Q ₁ = 3.4 Median = 5.0 Q ₃ = 8.9 P ₉₀ = 29.5 P ₉₉ = 285.5																					Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	2.7	2.6	2.7	2.9	2.9	4.3	5.1	5.0	3.9	3.8	4.4	5.1	4.8	4.5	4.2	4.1	4.1	4.2	4.3	4.7	4.1	4.6	4.0	4.1	4.0	5.1
2-May	3.8	3.6	3.7	3.8	7.4	7.4	7.7	7.2	6.7	7.0	5.9	4.7	3.6	2.7	2.8	3.1	3.2	3.3	3.8	7.2	7.6	10.9	11.4	8.7	5.7	11.4
3-May	9.7	12.9	13.7	15.7	15.3	14.1	10.6	5.6	5.1	6.5	10.0	10.0	8.9	7.6	6.4	5.1	5.2	7.1	14.3	33.9	50.9	16.8	12.3	12.7	12.9	50.9
4-May	15.2	15.8	11.2	11.6	12.2	6.1	6.8	3.9	2.7	3.9	6.7	2.5	2.3	2.4	2.1	1.9	1.9	1.7	1.7	1.7	1.6	1.6	1.4	1.3	5.0	15.8
5-May	1.2	2.2	2.2	1.4	1.6	1.7	1.5	1.5	2.4	3.3	3.5	3.9	4.2	5.4	5.8	7.1	6.3	5.0	4.0	3.8	3.6	3.4	5.9	5.3	3.6	7.1
6-May	6.7	3.6	2.7	2.7	3.0	4.6	5.3	3.5	3.0	3.1	2.7	2.6	2.6	2.6	2.7	2.6	2.8	3.1	3.3	3.9	3.7	3.7	4.1	3.4	6.7	
7-May	3.6	3.5	3.4	3.5	6.1	5.6	5.8	5.2	5.3	6.0	8.1	10.0	8.5	8.1	6.0	6.4	4.2	1.6	1.8	1.7	1.7	1.7	1.9	2.0	4.7	10.0
8-May	4.7	2.7	2.6	3.6	6.7	21.7	20.6	18.4	11.4	18.4	10.1	5.3	6.5	7.0	14.5	20.9	13.4	11.3	3.6	3.7	3.5	3.1	3.4	3.1	9.2	21.7
9-May	2.8	3.5	4.3	4.2	5.4	6.8	6.1	6.2	3.5	2.7	3.9	5.7	9.2	4.5	2.9	5.9	3.2	1.8	1.4	1.4	2.2	2.6	2.3	2.7	4.0	9.2
10-May	2.9	2.1	2.9	2.5	7.1	7.3	13.0	11.4	5.4	4.1	4.3	5.2	5.6	10.2	4.0	2.8	7.8	3.7	2.7	2.6	3.4	6.5	12.7	8.4	5.8	13.0
11-May	4.9	4.9	4.2	3.5	4.3	34.4	4.8	4.3	3.8	3.6	3.6	3.7	4.0	3.7	3.7	4.3	5.6	9.0	10.9	10.1	12.3	14.0	14.7	13.0	7.7	34.4
12-May	12.5	13.1	15.3	13.3	12.1	8.3	6.5	5.6	5.9	5.7	6.6	7.8	12.4	15.7	18.6	19.5	17.2	14.0	9.7	8.4	5.4	4.7	3.0	3.2	10.2	19.5
13-May	5.4	10.1	11.7	14.8	15.5	5.7	15.6	7.9	5.8	6.6	16.2	17.8	11.7	9.6	13.1	10.0	11.1	9.2	9.2	4.6	4.1	4.4	4.4	5.1	9.6	17.8
14-May	4.6	4.8	5.6	6.2	7.5	7.5	8.1	8.2	9.8	14.6	17.7	21.1	25.1	19.9	38.4	48.5	35.1	30.3	22.1	7.8	4.9	3.4	3.1	2.9	14.9	48.5
15-May	3.0	2.1	2.5	2.8	5.6	3.8	5.8	6.2	6.7	10.5	6.5	13.9	6.6	7.7	7.0	5.9	8.5	5.9	5.2	4.2	4.9	6.6	6.2	6.1	6.0	13.9
16-May	8.9	5.7	6.0	8.2	17.1	12.7	7.8	6.0	7.7	6.9	5.1	5.1	5.0	6.6	4.9	4.5	4.9	4.6	2.7	2.7	1.5	3.0	2.7	3.7	6.0	17.1
17-May	3.4	1.5	2.4	2.2	2.8	2.7	1.7	2.7	2.5	2.7	2.8	2.9	3.1	3.1	3.0	2.9	2.8	2.9	3.4	6.7	10.5	6.8	4.7	3.5	10.5	
18-May	3.9	3.1	3.2	3.3	3.8	4.5	4.4	4.9	5.4	5.9	5.4	5.8	6.1	5.7	5.2	5.0	5.0	4.7	4.2	4.2	4.5	6.4	5.5	5.3	4.8	6.4
19-May	5.1	5.2	5.7	6.1	7.8	10.7	6.0	4.1	3.6	3.6	3.0	2.9	3.1	3.1	3.0	3.1	2.8	4.8	4.7	4.9	4.0	3.4	2.8	2.2	4.4	10.7
20-May	1.7	1.6	1.9	2.0	2.3	2.8	3.3	C	C	3.3	3.0	3.3	3.2	2.8	2.0	1.7	0.8	0.9	1.0	1.2	1.2	1.5	2.3	2.6	2.1	3.3
21-May	2.8	2.8	3.1	3.2	3.3	3.5	3.6	3.4	3.7	3.7	3.7	12.0	18.4	20.0	19.8	12.6	12.1	11.9	9.0	7.4	6.2	6.5	7.0	7.4	7.8	20.0
22-May	7.1	6.7	6.9	6.8	6.1	6.7	6.8	6.6	6.8	6.5	4.7	5.5	6.8	8.1	8.1	6.2	4.8	3.7	3.4	3.0	3.1	3.2	3.5	3.6	5.6	8.1
23-May	3.6	3.9	4.3	4.6	5.0	6.5	6.4	6.4	5.3	5.2	4.6	4.9	4.6	3.5	3.2	3.8	3.4	3.2	2.6	2.8	2.9	2.8	3.5	3.5	4.2	6.5
24-May	4.8	4.3	4.4	6.1	4.3	4.9	4.9	4.4	3.7	4.2	4.2	3.6	3.3	3.1	3.1	2.9	3.1	3.4	2.9	3.0	3.1	3.5	3.7	3.6	3.8	6.1
25-May	3.8	3.7	3.7	3.7	3.8	3.6	3.6	3.7	3.5	2.9	2.6	2.8	2.8	3.0	3.2	3.2	3.3	3.2	3.2	2.9	3.0	3.1	3.3	3.8	3.3	3.8
26-May	3.7	3.9	3.8	4.1	4.9	7.3	7.4	4.5	4.4	4.2	4.4	3.6	3.8	4.0	3.9	4.0	4.2	4.5	4.7	9.3	6.3	6.1	6.7	6.9	5.0	9.3
27-May	7.4	8.9	14.1	18.2	19.3	17.9	15.9	11.9	9.4	8.5	5.1	4.0	2.8	2.8	2.9	3.0	4.2	3.0	14.6	70.9	60.6	56.7	50.2	34.6	18.6	70.9
28-May	29.8	40.4	44.2	36.0	31.5	22.1	10.2	21.6	50.2	45.0	20.8	3.5	2.1	3.8	9.5	27.1	18.7	7.2	7.2	7.8	8.2	9.0	6.9	6.2	19.5	50.2
29-May	6.6	5.7	6.9	6.1	6.1	7.3	7.2	7.4	8.1	19.2	18.1	10.7	7.8	7.1	6.8	62.4	95.1	124.0	40.3	6.3	39.7	207.7	61.0	273.0	43.3	273.0
30-May	233.8	154.4	635.1	411.6	248.9	367.1	343.8	116.4	45.8	54.4	81.6	73.2	69.1	84.1	151.0	344.4	348.8	271.0	288.3	258.9	240.3	225.4	208.8	195.6	227.1	635.1
31-May	186.3	177.9	152.8	210.1	281.5	338.4	246.3	238.2	259.7	258.3	139.2	116.4	131.6	213.6	223.0	230.1	151.8	243.5	237.0	147.3	73.5	100.3	81.2	62.0	187.5	338.4
19.2 16.7 31.8 26.6 24.5 30.9 25.9 18.1 16.7 17.2 13.5 12.2 12.6 15.7 18.9 27.9 25.7 26.0 23.4 20.5 18.7 23.8 17.6 22.6																								Diurnal Average		
233.8 177.9 635.1 411.6 281.5 367.1 343.8 238.2 259.7 258.3 139.2 116.4 131.6 213.6 223.0 344.4 348.8 271.0 288.3 258.9 240.3 225.4 208.8 273.0																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Buffalo Viewpoint - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	404	54.45	54.45
6 - 15	227	30.59	85.04
16 - 25	35	4.72	89.76
26 - 80	30	4.04	93.80
> 81.0	46	6.20	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Buffalo Viewpoint - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	24	13	2	2	0	17	110	97	45	14	17	17	13	6	18	9	404
6 - 15	36	23	7	1	0	5	18	47	21	5	8	7	14	13	9	13	227
16 - 25	7	6	0	0	0	1	1	5	2	4	0	2	0	2	3	2	35
26 - 80	2	2	1	0	0	1	2	4	5	2	2	0	1	2	4	2	30
> 81.0	7	0	0	0	1	1	0	9	4	2	1	4	7	3	3	4	46
Totals	76	44	10	3	1	25	131	162	77	27	28	30	35	26	37	30	742

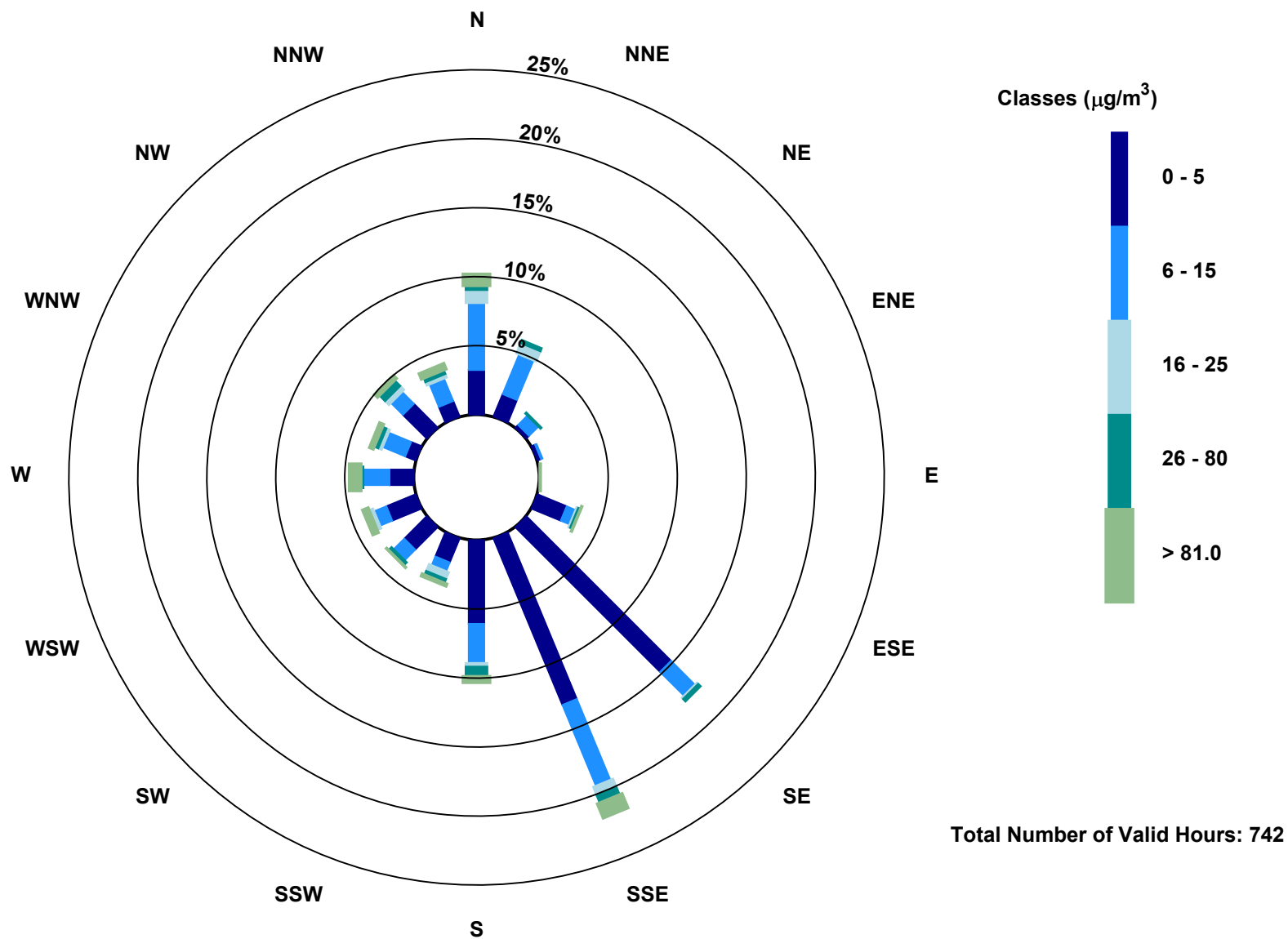
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Buffalo Viewpoint





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

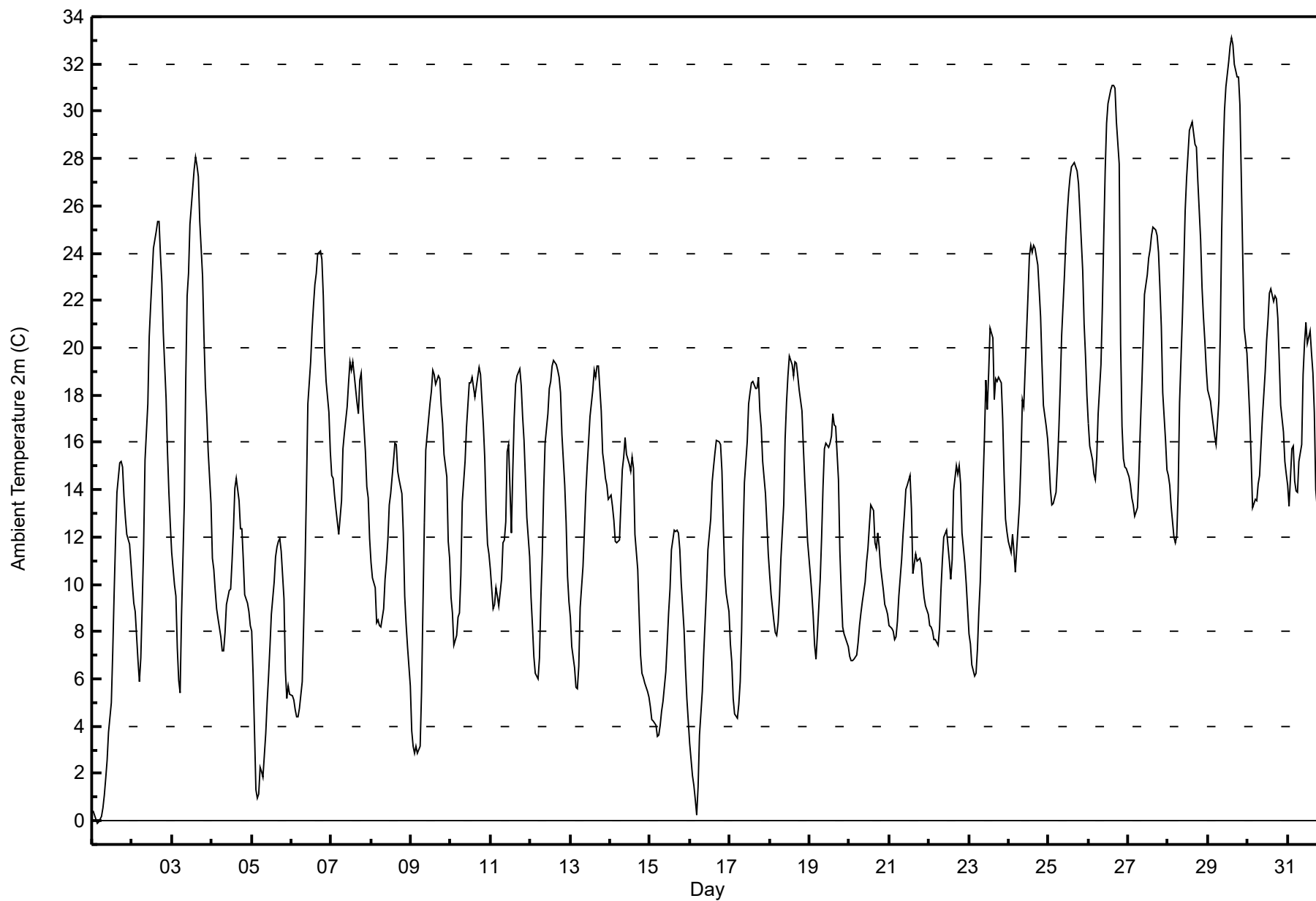
Buffalo Viewpoint - May 2025

Maximum Value: 33.1 C on May 29 15:00																			Maximum Daily Average: 25.1 C on May 29										Hours in Service: 744	
Minimum Value: -0.1 C on May 1 04:00																			Minimum Daily Average: 6.4 C on May 5										Hours of Data: 744	
Maximum Diurnal Average: 19.5 C at hour 15																			Minimum Diurnal Average: 8.1 C at hour 5										Hours of Missing Data: 0	
Monthly Average: 14.17 C																			Percentiles: P ₁ = 0.7 P ₁₀ = 6.2 Q ₁ = 9.4 Median = 13.9 Q ₃ = 18.4 P ₉₀ = 23.2 P ₉₉ = 31.1										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	0.4	0.2	0.1	-0.1	0.0	0.2	0.6	1.1	1.8	2.6	3.7	5.0	7.1	9.6	11.8	13.9	15.1	15.2	15.0	13.7	12.8	12.1	11.7	10.9	6.9	15.2				
2-May	10.0	9.2	8.8	6.8	5.9	6.9	9.1	11.6	15.2	17.6	20.5	21.8	23.0	24.2	24.9	25.4	25.3	23.9	22.7	20.6	17.8	15.6	13.9	12.5	16.4	25.4				
3-May	11.3	10.0	9.5	7.3	5.9	5.4	8.7	13.5	18.6	22.2	23.2	25.2	26.8	27.5	28.1	27.7	27.2	25.3	23.0	20.5	18.4	17.2	15.6	13.4	18.0	28.1				
4-May	11.1	10.6	9.7	8.9	8.5	7.8	7.2	7.2	7.9	9.1	9.7	9.8	11.0	12.3	14.0	14.5	13.6	12.4	12.4	11.0	9.5	9.2	8.8	8.3	10.2	14.5				
5-May	8.0	6.1	1.3	0.9	1.1	2.3	2.1	1.8	3.7	5.0	6.1	7.3	8.7	10.1	11.1	11.6	11.8	12.0	11.4	9.4	6.4	5.2	5.7	5.3	6.4	12.0				
6-May	5.3	5.1	4.7	4.4	4.4	4.7	5.9	8.2	10.8	14.0	17.6	19.4	20.7	21.8	22.6	23.2	24.0	24.1	23.7	22.2	19.8	18.6	17.3	15.6	14.9	24.1				
7-May	14.6	14.5	13.8	13.2	12.1	12.8	13.5	15.7	16.4	17.5	18.5	19.4	19.1	19.4	18.9	17.7	17.2	18.6	18.9	17.6	15.6	14.1	13.7	12.0	16.0	19.4				
8-May	10.9	10.3	9.8	8.4	8.5	8.3	8.2	9.0	10.2	10.9	11.9	13.4	13.8	15.2	16.0	15.9	14.8	14.4	13.8	12.2	9.5	8.3	7.4	5.7	11.1	16.0				
9-May	3.8	3.2	2.9	3.2	2.8	3.1	5.5	9.1	12.6	15.7	17.0	17.6	18.2	19.1	18.9	18.5	18.8	18.7	17.6	16.8	15.5	14.5	11.8	11.1	12.3	19.1				
10-May	9.4	8.8	7.4	7.8	8.6	8.8	10.4	13.5	15.2	16.6	17.6	18.5	18.5	18.7	17.9	18.4	18.8	19.2	18.9	16.8	15.4	13.1	11.7	11.3	14.2	19.2				
11-May	10.6	9.0	9.2	9.9	9.5	9.1	10.2	11.8	11.9	12.6	15.6	15.9	12.2	14.9	17.0	18.5	18.8	19.1	18.4	17.1	16.1	14.5	12.8	11.2	13.6	19.1				
12-May	9.4	8.3	7.0	6.2	6.0	6.9	9.4	11.3	13.9	16.0	17.2	18.3	18.5	19.2	19.5	19.3	19.0	18.7	18.1	16.3	14.2	12.6	10.3	9.2	13.5	19.5				
13-May	8.6	7.3	6.5	5.6	5.6	6.5	9.0	10.8	12.2	13.8	15.0	16.0	17.1	18.2	19.1	18.8	19.2	19.2	17.3	15.6	15.0	14.5	14.2	13.6	13.3	19.2				
14-May	13.8	13.3	12.7	11.8	11.8	11.9	13.3	14.8	15.4	16.2	15.5	15.1	14.8	15.4	14.9	12.1	10.6	8.7	7.0	6.2	6.1	5.8	5.5	5.3	11.6	16.2				
15-May	4.8	4.3	4.2	4.0	3.6	3.6	4.1	4.6	5.0	6.3	7.5	8.8	9.8	11.4	12.3	12.2	12.3	12.1	11.5	10.1	8.1	6.5	5.2	4.2	7.4	12.3				
16-May	3.3	1.9	1.5	0.9	0.3	1.4	3.6	5.5	7.1	8.4	9.8	11.5	12.7	14.3	15.0	15.6	16.1	16.0	15.9	14.8	12.4	10.4	9.6	8.8	9.0	16.1				
17-May	7.5	6.7	5.2	4.5	4.3	5.0	5.9	8.0	11.9	14.3	16.0	17.6	18.1	18.5	18.6	18.3	18.3	18.7	17.4	16.6	15.2	13.8	12.6	11.3	12.7	18.7				
18-May	10.4	9.6	8.4	7.9	7.8	8.4	9.5	11.1	13.4	16.2	17.7	18.8	19.6	19.3	18.8	19.4	19.3	18.8	18.2	17.3	15.8	14.4	13.1	11.8	14.4	19.6				
19-May	10.4	9.6	8.7	7.4	6.8	7.9	10.2	12.0	14.1	15.7	15.9	15.8	16.0	16.3	17.2	16.8	16.7	14.4	11.4	9.7	8.2	7.9	7.6	7.3	11.8	17.2				
20-May	6.9	6.8	6.8	6.8	7.0	7.5	8.3	8.8	9.3	10.1	10.9	11.5	12.4	13.4	13.1	11.7	11.5	12.2	11.6	10.7	9.7	9.1	8.9	8.7	9.7	13.4				
21-May	8.2	8.2	8.0	7.6	7.8	8.4	9.5	11.0	12.1	13.0	14.0	14.2	14.6	13.2	10.4	10.8	11.3	11.0	11.1	10.9	10.0	9.4	9.1	8.7	10.5	14.6				
22-May	8.2	8.2	8.0	7.7	7.7	7.4	8.1	9.7	11.0	12.0	12.3	11.6	11.0	10.2	11.1	13.9	15.0	14.7	15.0	14.3	12.2	10.9	10.0	9.0	10.8	15.0				
23-May	7.9	7.5	6.6	6.1	6.3	7.3	8.9	10.1	14.3	16.2	18.7	17.4	18.9	20.8	20.4	17.8	18.7	18.6	18.8	18.5	17.0	14.6	12.8	12.2	14.0	20.8				
24-May	11.8	11.3	12.1	11.4	10.5	11.5	13.4	15.2	17.8	17.5	19.1	22.2	23.9	24.3	24.1	24.3	24.2	23.5	22.4	21.3	19.3	17.6	16.7	16.1	18.0	24.3				
25-May	15.2	14.0	13.4	13.4	13.9	15.1	16.6	18.4	20.5	23.1	24.6	25.7	26.6	27.2	27.6	27.9	27.7	27.4	26.9	25.8	23.2	21.0	19.6	18.0	21.4	27.9				
26-May	16.8	15.9	15.2	14.7	14.4	15.4	17.2	19.3	21.7	24.8	27.4	29.5	30.3	30.9	31.1	31.1	31.0	29.6	27.8	20.2	16.7	15.3	15.0	14.9	21.9	31.1				
27-May	14.5	14.2	13.7	13.4	12.9	13.2	14.7	16.5	18.2	20.2	22.2	23.1	23.8	24.1	24.8	25.1	25.0	24.7	24.1	22.5	20.9	18.1	16.1	14.9	19.2	25.1				
28-May	14.6	14.2	13.3	12.0	11.8	12.1	14.0	17.7	21.3	23.4	25.8	27.2	28.2	29.2	29.6	29.1	28.6	28.5	27.1	24.6	22.6	21.3	20.3	19.1	21.5	29.6				
29-May	18.2	17.8	17.2	16.7	16.2	15.9	17.7	20.6	24.9	28.1	30.0	31.0	32.1	32.8	33.1	32.8	32.0	31.5	31.4	30.3	27.1	23.9	20.9	19.8	25.1	33.1				
30-May	18.4	17.1	15.3	13.2	13.6	13.5	14.2	14.6	15.9	17.0	19.0	20.3	21.2	22.3	22.5	21.9	22.2	22.1	21.2	19.4	17.6	16.4	15.2	14.6	17.9	22.5				
31-May	14.2	13.3	15.7	15.8	14.4	13.9	13.9	15.2	15.9	18.9	20.2	21.1	20.2	20.7	19.8	18.9	17.3	14.0	13.3	12.7	12.2	11.7	11.3	11.1	15.7	21.1				
																									Diurnal Average					
																									Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Buffalo Viewpoint - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	2	0.27	0.27
0 - 10	209	28.09	28.36
10 - 20	412	55.38	83.74
> 20	121	16.26	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

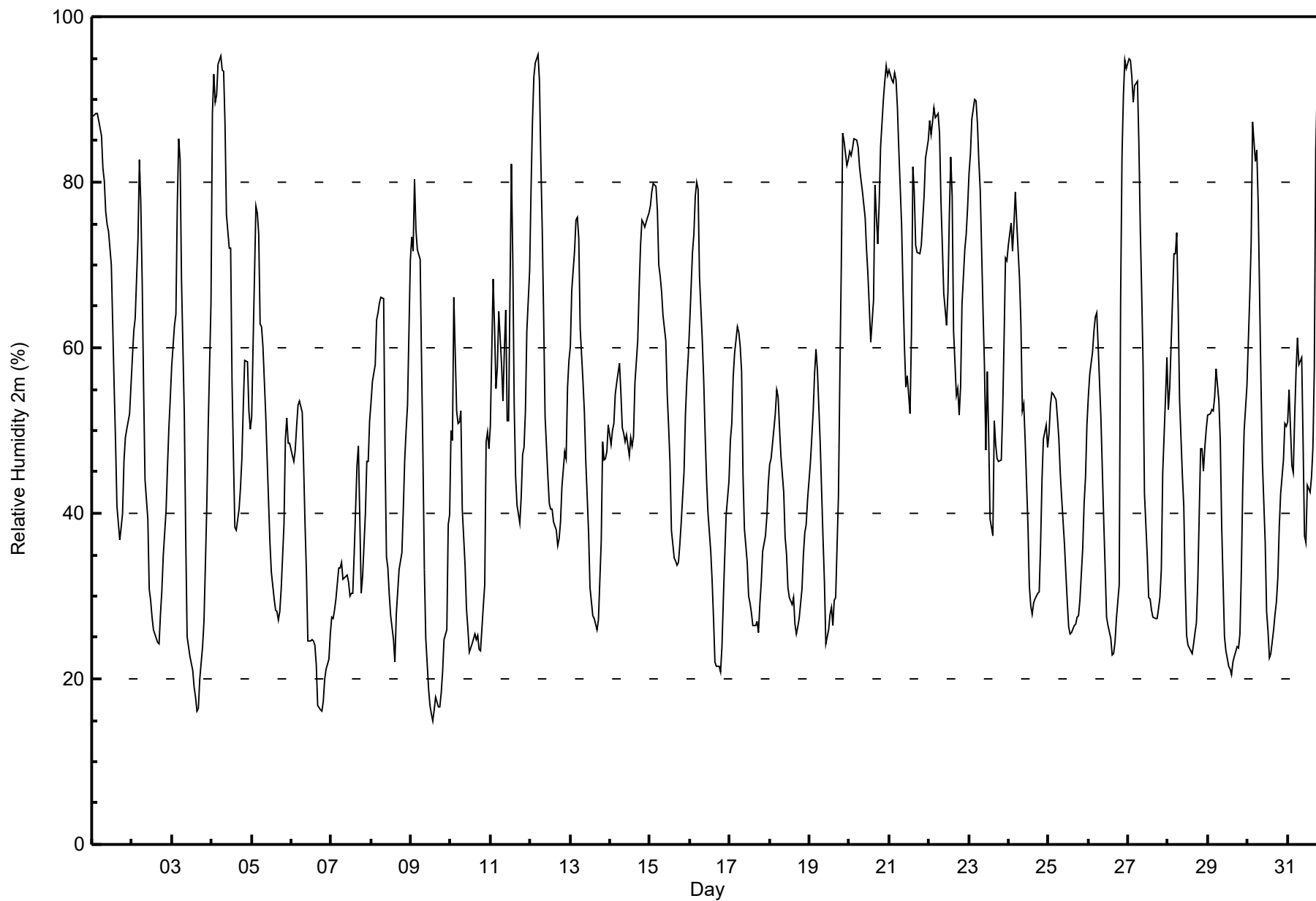
Buffalo Viewpoint - May 2025

Maximum Value: 97.6 % on Jun 1 00:00																				Maximum Daily Average: 79.7 % on May 20					Hours in Service: 744					Hours of Data: 744				
Minimum Value: 14.9 % on May 9 14:00										Minimum Daily Average: 32.0 % on May 6										Hours of Missing Data: 0					Hours of Calibration: 0									
Maximum Diurnal Average: 71.5 % at hour 5										Minimum Diurnal Average: 34.6 % at hour 15										Percent Operational Time: 100.0														
Monthly Average: 51.35 %										Percentiles: P ₁ = 16.6 P ₁₀ = 25.4 Q ₁ = 32.8 Median = 49.7 Q ₃ = 66.6 P ₉₀ = 83.0 P ₉₉ = 94.6																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1-May	88.0	88.2	88.3	88.3	87.5	85.6	81.8	80.2	76.4	74.9	74.1	70.0	62.7	55.5	48.6	40.9	36.8	38.2	40.1	46.3	49.2	50.1	52.0	55.4	65.0	88.3								
2-May	58.8	62.0	63.5	73.2	82.8	77.4	67.7	55.0	44.1	39.3	30.8	29.5	27.5	25.9	25.0	24.4	24.3	27.8	30.6	34.9	40.4	45.7	50.4	53.8	45.6	82.8								
3-May	57.8	62.8	64.1	77.4	85.2	82.7	68.1	51.8	37.2	25.1	23.8	22.7	21.1	19.1	17.7	16.2	16.4	20.0	23.9	27.0	33.8	40.8	50.3	65.4	42.1	85.2								
4-May	88.3	93.0	89.7	90.6	94.2	95.3	93.6	93.4	86.9	76.1	72.1	72.1	55.7	46.8	38.3	38.0	40.5	43.1	46.6	52.9	58.5	58.3	52.3	50.2	67.8	95.3								
5-May	51.7	60.4	77.1	76.3	73.7	62.9	62.6	60.1	51.8	46.7	41.6	36.5	32.8	29.7	28.2	28.2	27.1	28.2	30.8	38.6	48.9	51.5	48.5	48.5	47.6	77.1								
6-May	47.0	46.3	47.6	50.6	53.0	53.5	52.1	45.8	38.6	32.6	24.6	24.7	24.7	24.5	24.0	21.8	16.8	16.2	16.1	17.3	20.1	21.2	22.4	25.5	32.0	53.5								
7-May	27.5	27.2	28.3	29.7	33.4	33.4	34.1	32.1	32.3	32.6	31.6	29.9	30.4	30.4	35.0	45.8	48.2	39.5	30.4	32.4	39.9	46.3	46.3	51.1	35.3	51.1								
8-May	53.4	56.0	58.0	63.3	64.3	65.5	66.1	65.9	47.1	34.7	33.3	30.2	27.6	24.8	22.1	27.9	30.5	33.3	35.3	40.6	46.4	50.0	53.1	70.6	45.8	70.6								
9-May	73.4	71.6	80.4	74.2	71.8	70.6	58.4	46.8	33.2	24.8	18.9	16.8	15.8	14.9	16.2	17.8	16.5	16.6	18.3	20.8	24.8	25.9	38.7	39.8	37.8	80.4								
10-May	50.0	48.8	66.2	52.5	50.8	51.1	52.4	40.5	33.6	28.4	26.2	23.3	23.7	24.3	25.4	24.8	25.2	23.6	23.5	28.8	31.4	48.6	49.8	47.8	37.5	66.2								
11-May	50.5	68.4	62.3	55.1	57.7	64.4	57.9	53.6	59.8	64.6	51.2	51.1	82.3	70.5	53.0	44.4	41.0	38.9	42.1	47.1	48.0	52.3	62.0	69.3	56.1	82.3								
12-May	79.1	87.2	92.7	94.5	95.5	92.3	82.4	74.1	63.3	51.7	44.4	41.1	40.6	40.5	39.0	38.0	36.2	36.9	39.0	43.2	47.5	46.6	55.2	58.4	59.1	95.5								
13-May	60.2	66.9	71.7	75.4	75.8	73.1	62.4	55.9	52.3	46.2	42.0	37.6	31.0	27.6	27.3	26.6	26.0	27.1	36.7	48.6	46.5	46.6	47.4	50.7	48.4	75.8								
14-May	48.4	50.0	50.8	54.3	55.8	58.2	54.7	50.4	49.6	48.6	49.6	46.9	49.2	48.1	49.4	55.7	60.8	67.2	72.5	75.5	75.1	74.6	75.7	76.2	58.2	76.2								
15-May	77.1	78.8	79.8	79.5	76.5	70.1	68.6	66.7	63.8	60.8	54.5	50.6	46.1	38.0	34.7	34.2	33.7	34.0	36.2	38.9	45.0	52.1	56.1	59.0	55.6	79.8								
16-May	62.9	71.6	73.7	78.2	80.0	79.1	68.6	60.8	56.2	49.6	44.3	40.1	35.4	31.9	27.3	22.1	21.5	21.6	20.8	24.0	29.6	35.0	39.9	43.9	46.6	80.0								
17-May	48.9	50.8	56.5	59.3	62.5	61.8	60.2	57.2	44.6	38.1	34.1	29.9	29.2	28.0	26.4	26.4	27.0	25.5	29.1	31.7	35.3	37.3	39.7	43.5	41.0	62.5								
18-May	45.9	46.6	50.2	52.0	54.9	54.1	50.4	47.0	42.6	37.1	35.1	31.0	29.8	28.9	29.8	26.7	25.5	26.3	27.4	30.8	34.9	37.7	38.6	41.7	38.5	54.9								
19-May	46.1	49.2	52.3	57.0	59.8	57.3	48.4	42.7	36.9	31.6	24.2	26.0	27.8	28.6	26.5	29.4	29.8	42.3	56.6	69.7	85.9	85.0	82.1	82.6	49.1	85.9								
20-May	83.8	83.2	84.1	85.2	85.0	84.2	81.8	80.4	79.1	75.8	71.8	68.8	64.7	60.6	65.8	79.7	75.9	72.6	77.5	84.3	90.1	92.2	94.1	92.9	79.7	94.1								
21-May	93.5	92.4	92.0	93.2	92.4	89.0	83.8	74.8	66.9	60.2	55.2	56.6	52.0	61.6	81.8	78.8	72.4	71.5	71.3	72.4	75.4	78.2	82.8	85.2	76.4	93.5								
22-May	87.4	85.7	87.2	89.0	87.9	88.3	85.9	77.8	72.4	66.6	62.7	66.8	76.1	83.1	78.4	62.0	54.2	55.0	51.8	55.3	65.2	71.8	73.6	76.9	73.4	89.0								
23-May	81.0	83.5	87.6	90.0	89.9	87.1	82.5	78.9	64.4	57.9	47.7	57.1	49.4	39.4	37.2	51.1	48.4	46.6	46.2	46.5	52.5	61.1	70.8	70.5	63.6	90.0								
24-May	72.4	75.0	71.7	74.9	78.9	75.1	68.3	62.8	52.5	53.3	48.8	38.5	31.2	28.8	27.8	29.2	29.6	30.3	30.5	36.3	44.0	49.0	50.6	48.0	50.3	78.9								
25-May	49.7	53.1	54.6	54.4	53.7	51.6	49.0	44.9	41.8	36.3	32.7	29.3	26.3	25.5	25.5	26.5	26.6	27.4	27.6	29.4	35.8	41.2	44.4	50.6	39.1	54.6								
26-May	54.2	56.9	59.5	62.0	63.7	64.2	60.2	51.3	45.1	38.9	33.3	27.4	26.5	24.9	22.9	23.0	24.4	27.3	31.3	65.8	83.2	90.4	94.8	93.8	51.0	94.8								
27-May	94.9	94.8	92.8	89.7	91.7	92.2	84.8	74.7	66.8	57.9	42.4	34.7	29.9	29.7	28.3	27.4	27.4	27.2	28.4	29.8	33.2	44.9	54.1	58.8	55.7	94.9								
28-May	52.6	55.3	60.6	71.3	71.3	73.9	64.9	53.7	44.6	40.8	31.7	25.2	24.1	23.7	23.1	24.2	25.6	26.8	31.8	47.7	47.9	45.1	47.9	50.2	44.3	73.9								
29-May	51.9	52.0	52.6	52.3	54.1	57.5	53.6	48.8	38.4	31.7	25.1	23.5	21.6	21.2	20.5	22.1	22.7	23.9	23.8	25.4	32.8	43.3	50.1	55.4	37.7	57.5								
30-May	60.9	66.3	72.6	87.3	82.6	83.9	77.4	66.4	55.7	46.2	36.5	28.1	25.7	22.6	23.0	25.9	27.9	29.4	32.2	38.4	42.3	46.4	50.9	50.5	49.1	87.3								
31-May	51.1	54.9	45.7	44.9	51.8	57.3	61.1	58.0	58.9	48.4	37.3	36.5	43.4	42.5	44.4	47.9	57.6	83.9	91.2	93.2	93.7	96.0	97.1	97.6	62.3	97.6								
62.8 65.8 68.2 70.2 71.5 70.7 65.9 59.8 52.8 47.0 41.3 38.8 37.5 35.5 34.6 35.1 34.7 36.4 38.7 44.3 49.6 53.7 57.2 60.1																										Diurnal Average								
94.9 94.8 92.8 94.5 95.5 95.3 93.6 93.4 86.9 76.1 74.1 72.1 82.3 83.1 81.8 79.7 75.9 83.9 91.2 93.2 93.7 96.0 97.1 97.6																										Diurnal Maximum								



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - May 2025

Maximum Speed: 26 km/h on May 14 16:00										Maximum Daily Speed Average: 14.3 km/h on May 15										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 13 20:00										Minimum Daily Speed Average: 1.9 km/h on May 11										Hours of Data: 744						
Maximum Diurnal Speed Average: 3.1 km/h at hour 17										Minimum Diurnal Speed Average: 1.3 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 2.1 km/h 171.6 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 9 Q ₃ = 13 P ₉₀ = 17 P ₉₉ = 22										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N10	N10	N8	N5	NNW3	WNW4	WNW5	WSW3	SSW6	S7	SSE8	SSE11	SSE11	SE10	SE9	SSE8	S6	ESE9	ESE9	ESE8	SE11	SE11	SSE11	SSE10	SE4.2	SSE11
2-May	S6	S7	S5	NW5	WNW5	W7	W4	W8	NW4	NNE4	WNW3	NNW6	NW9	NW12	NW14	NW12	NW11	N9	NNE9	NNE10	NNE12	NNE10	NNE7	N6	NNW4.7	NW14
3-May	NNE8	N7	N5	SW2	S4	S5	S6	SSE8	S6WSW13	W20WNW16	NW14WNW14	W15WSW18	W18WNW15	NW16	NW18	NW18	NW13	NNW16	NNW13						WNW8.3	W20
4-May	NW7	WSW8	WSW9	W11	NW13	NW14	NNW16	NNW10	N5	NW3	SW7	W14	W17	W18	W14WSW16	SW15	SW20	SW17	SW14	SW13WSW14WNW14WNW12					W9.6	SW20
5-May	WNW17	NNW16	NNE14	N9	NW6	NW15	NW15	NW14	NW13	NW11	NW11	WNW7	NW5	N5	NNE6	NNE8	NE8	NNE9	NNE10	NNE10	NNE11	NE8	SE7	SE7	NNW7.4	WNW17
6-May	SE9	SE9	SE8	SSE8	SSE8	SSE10	SSE7	SSE5	SE9	S9	SSW13	SSW14	SW18	SW17	SSW17	SW17	SW17	SSW14	S16	S12	SSE12	SSE13	SSE12	SSE12	S10.5	SW18
7-May	SSE11	SSE13	SSE14	SSE13	SSE12	SE13	SE12	S15	S18	S16	SSW15	SW15	SW14WSW15WSW13	W21WSW20WSW16	SW15	SSW11	SSW8	S8	S7	SSE7					SSW10.1	W21
8-May	W7	SSW5	NW4	NNW5	WNW5	NW5	N2	NNW4	NNE17	NNE15	NNE13	NNE12	N7	WNW6WNW13	N14	N12	N12	N9	N9	NNE10	NE8	SE2	S5		N6.3	NNE17
9-May	SSE6	SE6	SE7	ESE5	ESE7	SSE5	SSE5	SSE5	SW8	SW10WSW18WSW18	W18WSW16	W15	W15WSW15WSW15	WSW9	SW7	SW6	SW5	S6	SSE6						SW6.9	W18
10-May	SSE6	SSW2	SE6	S5	SSW4	ESE3	S2	WNW2	W6	NW6	NNW6	W8WNW11	WNW9	W8	SE2	WSW2	NNE3	SSW4	SSE4	SSE4	SE5	SSE5	SSE5		SW2.0	WNW11
11-May	SSE4	SSE4	SE5	SSE5	SSE3	SW2	SSE6	SSE8	SSE9	SSE8	S8	ESE5	N2	ENE8	ESE3	NW6	N7	NNW6	NNE5	NE3	NE5	NE7	NE5	N5	ESE1.9	SSE9
12-May	N6	NNW5	N8	N6	N8	N9	N10	N10	NNE13	NNE14	N17	N17	N19	NNE18	N19	NNE20	NNE20	N19	N19	N17	N16	N14	N10	NNW9	N13.3	NNE20
13-May	NNW7	NNW9	NNW7	NW6	NW6	NW8	NNW6	N11	N7	NW6	WNW8	WNW7	NNW5	N8	N10	ENE6	ESE10	ESE9	SW7	S1	SE6	SE7	SSE8	SSE8	NNW2.3	N11
14-May	SE10	SE10	SSE11	SSE8	SE6	SE7	SSE7	WSW7	WNW8	NNW8	N21	N24	N22	N22	N25	N26	NNE24	NNE23	N24	N22	N19	N19	N17	N18	N10.9	N26
15-May	N19	N13	N13	N15	N17	N19	N17	N20	N19	N17	NNW18	NNW16	N16	N15	N15	NE15	NNE15	NNE14	NNE13	NNE12	NNE11	NNE8	NNE8	NE8	N14.3	N20
16-May	NNE8	NNE9	NNE8	NNE10	NNE9	NNE7	NNE5	NNW4	N7	N7	NNE5	NNW7	N5	NNW8	ENE4	SE7	ESE6	ESE7	ESE7	ESE5	SSE4	SE5	SE11	SE12	NE3.6	SE12
17-May	SSE11	SE12	SE10	SE11	SE12	SE11	SE10	SE6	SE10	SSE11	SSE10	SE12	SE13	SE13	SE13	SE10	SE12	SE12	ESE12	ESE11	ESE14	SE16	SE14	SE12	SE11.4	SE16
18-May	SE11	SE10	SE8	SE10	SE9	SE11	SE12	SE11	SE9	SE9	ESE10	SE11	SSE14	SSE13	SE12	SE12	SE12	SE9	SE8	SE9	SE11	SE11	SE10	SE9	SE10.3	SSE14
19-May	SSE8	SE8	SE8	SSE7	SSE6	SSE8	SSE10	SSE11	SSE12	SE13	SE16	SE15	SE14	SE14	SE15	SE16	SSE15	SSE19	SSE20	SE14	SE10	SE10	SE11	SE9	SE11.9	SSE20
20-May	SE9	SE9	SE9	SE8	SE7	SE7	SE9	SSE9	SSE12	SE11	SE12	SE12	SE12	SSE12	SE13	SE13	SE13	SSE11	SE10	SE9	SE9	SE7	SE6	SE6	SE9.7	SE13
21-May	SE5	SE6	SSE5	SSE5	SSE5	SE7	SE8	SE9	SSE8	SSE9	SE9	ESE12	ESE12	SSE9	SSE12	SSE10	S11	S10	S9	SSE7	SSE8	SSE8	SSE9	SSE7	SSE7.9	SSE12
22-May	SE8	SSE8	SSE8	SSE7	SSE9	SSE9	SSE9	SSE10	S10	S8	SSE10	SSW10	SW8	SSW8	S9	SSE12	SE13	SE10	SSE10	SE9	SE6	SSE8	SSE6	SSE6	SSE8.1	SE13
23-May	SSE5	SSE7	S6	S6	SSE5	SSE6	S6	SSE7	SE9	ESE10	SSE11	S7	S7	SE12	SSE10	SE10	ESE16	SE16	SE14	SSE13	S11	SE6	SSE5	SSE7	SSE8.5	ESE16
24-May	SSE7	SSE7	SSE7	SSE4	SSE3	S4	S5	S5	S8	SE11	ESE12	SE13	SSE14	S15	S14	S11	SE14	SSW16	SSW13	SSE11	SSE7	SSE7	SSE8	SSE10	SSE8.6	SSW16
25-May	SSE10	SSE10	SSE10	SSE12	SSE12	SE12	SSE12	SSE14	SSE14	S15	S16	S16	S17	S17	S16	S15	SSW16	S14	S14	S12	SSE7	SSE8	SSE8	SSE8	SSE12.4	S17
26-May	SSE9	SSE9	SSE9	SSE8	SSE6	S3	SSE5	SE11	SE12	SSE10	SSE13	S18	S18	SSE18	S19	S19	S15	SSW8	W20	WNW9	SSW5	S3	SW4		S9.3	W20
27-May	S6	S5	W6	SSW4	SSE6	S6	SSW6	SW6	W9	W10	W11	W14	W16WSW14WSW16WSW18WSW20WSW17	W10	W12	SW7	S7	S7	S8					WSW8.5	WSW20	
28-May	S8	S6	SSW3	SE6	SE8	SE6	SSE5	SSE4	SSE4	ESE4	SSW3	SW9	SW12WSW11	SW11	SW11	SSW9	S7	SE5	SE6	SSE4	SSE6	SSE7	SSE7		S5.3	SW12
29-May	SE7	SE7	SSE8	SSE8	SSE7	SSE7	SSE7	SSE5	S10	SSE13	S17	S16	S19	S19	S19	SSE17	SSE19	SSE16	SSE13	SSE11	SSE9	W24WNW21WNW12			S9.0	W24
30-May	W21WNW12WSW16	W13	W12	W8	NW14	NW13	NW11WNW11	NW10	NW8	NE6	WSW5	W12WSW11	SW8	SSW9	SSW9		S5	S4	S5	SSE5	SSE6				W6.8	W21
31-May	SSE7	SSE7WSW11	W12	WNW7	S4	SSE6	SSE4	SSE5	ESE5	E5	NNW2	NNW8	N13	N14	N16	N19	N16	N15	N17	NNW16	NNW16	NNW13	NNW13		NNW6.0	N19
SSE2.5 SSE2.9 SSE2.7 SSE2.0 SSE1.9 SSE1.9 SSE2.2 S2.1 SSE2.3 S2.3SSW2.3 SW2.6 SW2.8 SW2.9 SW3.0SSW2.6 S3.1 S2.8 S2.3 SE1.3 ESE1.8 SE1.9 SE2.4 SE2.7																								Diurnal Average		
W21NNW16 WSW16 N15 N17 N19 N17 N20 N19 N17 N21 N24 N22 N22 N25 N26 NNE24 NNE23 N24 N22 N19 W24WNW21 N18																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

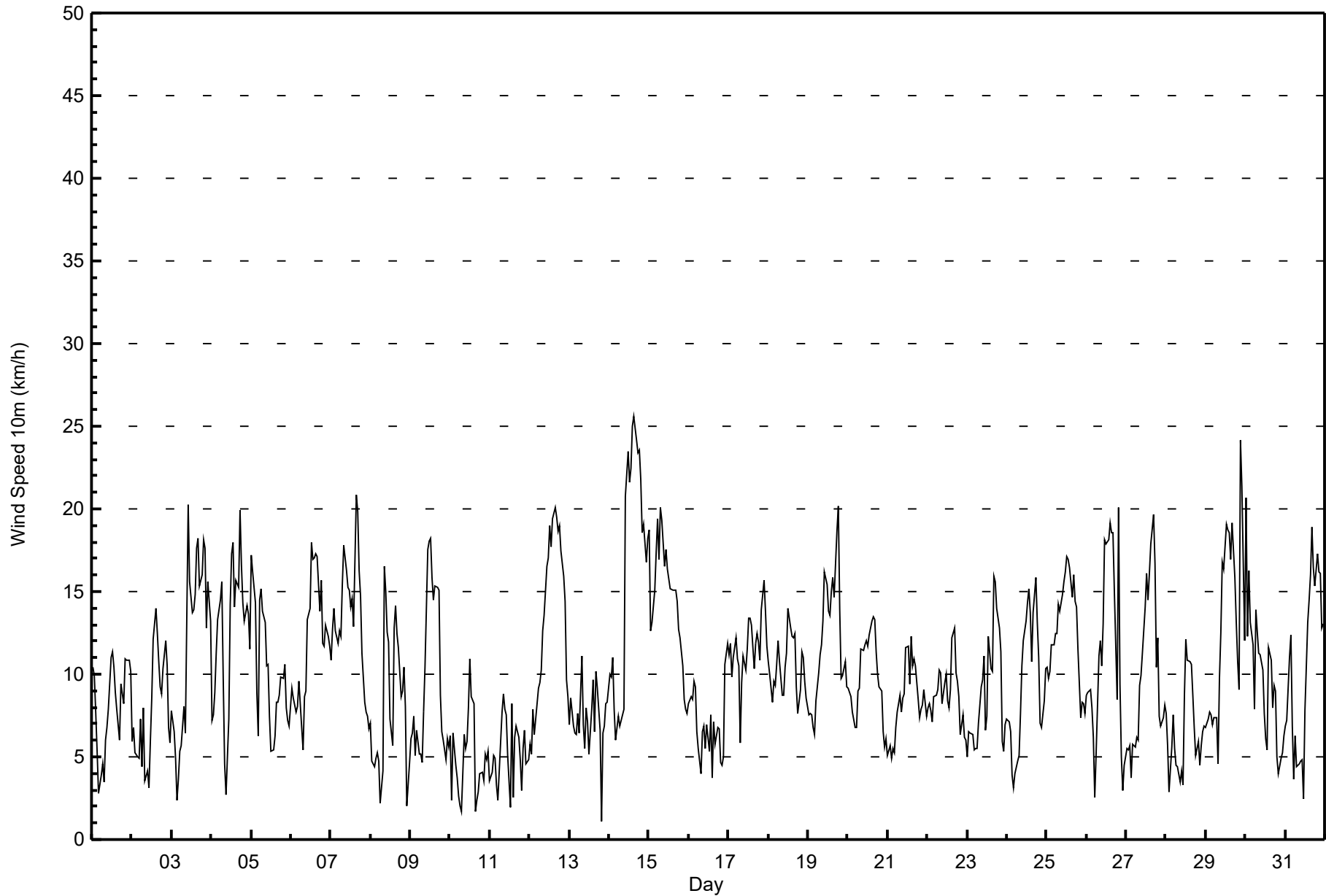
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 29 22:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 1 km/h on May 10 21:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3	3	2	1	1	2	2	2	3	3	3	3	4	4	3	3	3	3	2	3	3	3	3	3	3	4
2-May	2	2	2	1	1	2	2	2	2	2	2	3	3	4	5	4	3	3	2	3	3	2	2	1	5	
3-May	1	1	1	1	1	1	2	2	2	6	5	5	4	4	5	5	4	5	5	6	5	5	5	3	6	
4-May	2	2	3	5	4	4	4	3	4	2	3	5	4	5	5	5	5	6	4	4	4	4	4	3	6	
5-May	6	6	5	3	5	5	4	4	4	3	4	3	3	2	3	3	3	3	3	3	2	2	3	3	6	
6-May	3	3	3	2	3	3	3	2	3	3	4	4	5	5	5	6	5	4	5	4	3	4	4	3	6	
7-May	3	4	4	4	4	4	4	6	5	5	4	4	4	4	4	6	6	5	4	3	2	2	1	2	6	
8-May	3	2	2	1	1	2	2	3	5	5	4	4	4	3	8	4	4	4	3	3	3	1	2	1	8	
9-May	1	1	2	2	2	1	1	1	3	4	6	6	6	5	4	5	5	4	3	2	1	1	1	1	6	
10-May	2	1	2	2	2	2	2	1	3	2	3	4	5	5	6	2	3	2	1	1	1	1	1	1	6	
11-May	1	1	1	1	1	2	3	2	3	3	3	2	2	3	2	2	2	2	2	1	1	2	2	1	3	
12-May	2	2	2	1	2	2	2	3	4	4	5	5	5	5	6	6	5	5	5	5	4	4	2	2	6	
13-May	2	2	2	1	1	2	2	3	2	3	2	2	3	3	4	3	3	3	5	2	2	2	2	3	5	
14-May	3	3	3	3	2	2	2	3	2	3	6	6	6	6	7	7	6	7	6	5	5	5	5	5	7	
15-May	5	4	4	4	5	5	5	6	5	5	5	4	5	5	5	5	4	4	4	3	3	2	2	1	6	
16-May	1	1	1	2	2	2	2	1	2	2	3	2	3	3	3	3	3	3	3	1	1	2	4	4	4	
17-May	4	4	3	4	4	3	4	2	3	3	4	5	5	5	5	4	4	4	4	4	4	5	4	3	5	
18-May	4	3	2	3	3	4	4	3	3	3	4	5	5	5	5	4	4	3	3	3	3	3	3	3	5	
19-May	2	2	2	2	2	2	4	4	4	5	6	5	5	5	5	5	5	8	7	5	3	3	4	3	8	
20-May	3	3	3	2	2	2	3	3	4	4	4	4	4	4	5	4	5	4	3	3	3	2	1	2	5	
21-May	1	2	1	1	1	2	2	3	3	3	3	4	4	4	4	4	4	3	3	2	2	3	3	2	4	
22-May	2	2	2	2	3	3	3	3	4	3	3	3	3	2	3	4	4	3	3	3	2	2	2	2	4	
23-May	2	2	2	2	2	2	2	2	4	3	4	5	6	4	5	4	6	5	5	4	4	2	1	2	6	
24-May	2	2	2	1	1	1	2	2	3	3	3	5	6	6	6	5	5	8	4	4	2	2	2	3	8	
25-May	3	3	3	3	4	4	4	5	5	6	5	5	6	6	6	6	5	5	5	4	2	2	2	2	6	
26-May	2	3	2	2	2	2	2	4	4	4	5	6	6	6	6	6	6	6	5	6	4	4	3	2	6	
27-May	1	1	3	1	1	1	1	2	3	3	3	5	4	5	6	6	6	5	3	3	1	1	1	2	6	
28-May	1	2	2	1	1	2	1	1	1	2	3	4	5	4	4	3	3	2	1	1	1	2	2	2	5	
29-May	2	2	2	2	2	2	2	3	4	4	6	5	6	7	7	6	7	5	4	3	2	9	7	4	9	
30-May	6	5	6	5	3	3	4	4	3	3	3	4	2	4	4	4	3	3	3	1	1	1	1	2	6	
31-May	2	2	3	3	2	1	2	1	1	2	2	2	2	4	4	4	5	4	4	5	6	4	4	4	6	
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	114	15.32	15.32
6 - 11	365	49.06	64.38
12 - 19	242	32.53	96.91
20 - 28	23	3.09	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	8	5	3	1	1	7	7	31	16	9	2	4	1	6	6	7	114
6 - 11	25	21	6	2	0	12	84	100	34	10	13	7	13	10	15	13	365
12 - 19	34	14	1	0	0	6	40	32	27	8	12	17	16	9	16	10	242
20 - 28	9	4	0	0	0	0	0	1	0	0	1	2	5	1	0	0	23
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	76	44	10	3	1	25	131	164	77	27	28	30	35	26	37	30	744

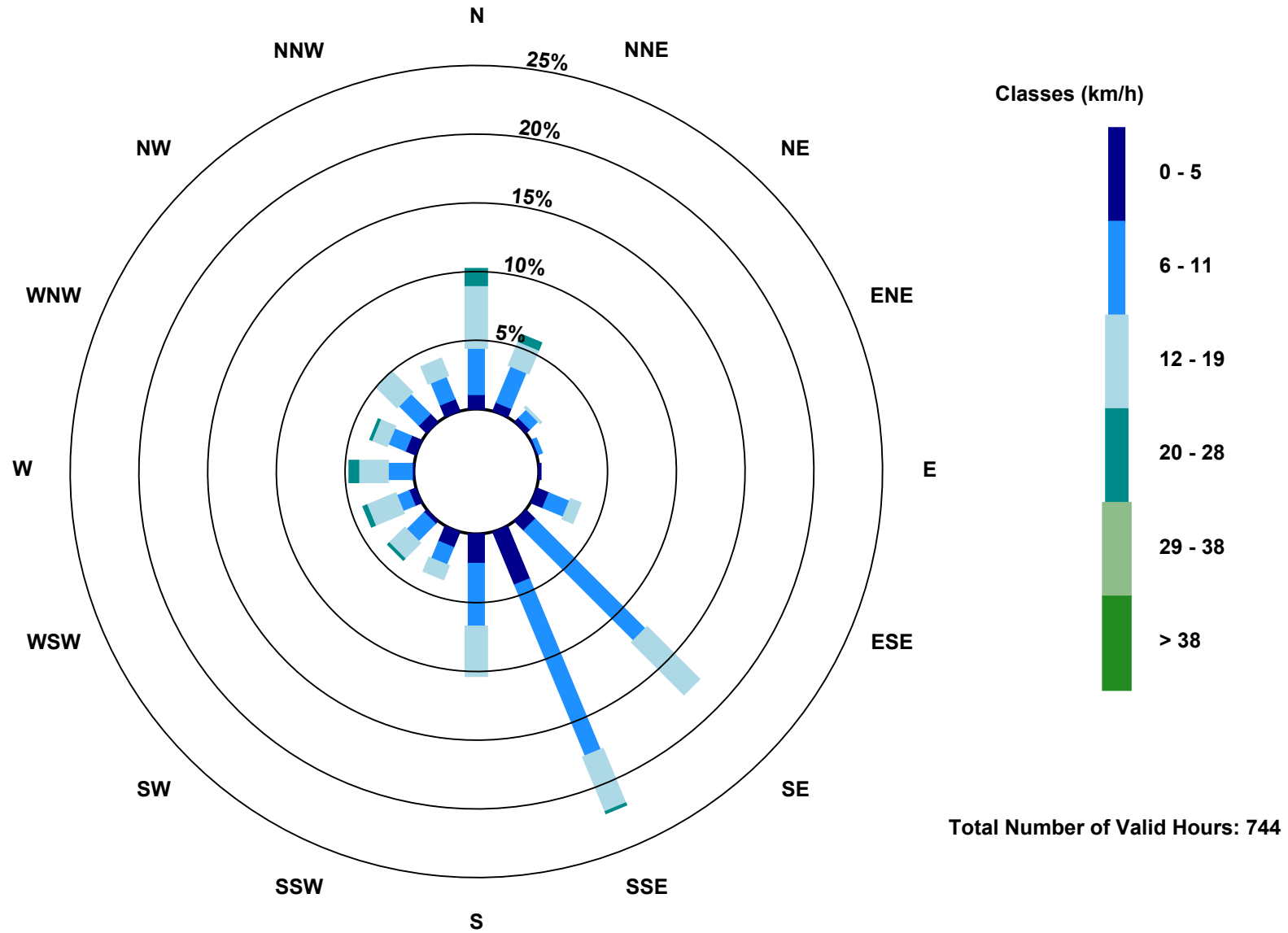
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - May 2025

Direction of Maximum Speed: 5 deg on May 14 16:00 Direction of Maximum Daily Speed Average: 8.7 deg on May 15																					Hours in Service: 744				
Direction of Minimum Speed: 190 deg on May 13 20:00 Direction of Minimum Daily Speed Average: 1.9 deg on May 11																					Hours of Data: 744				
																					Hours of Missing Data: 0				
Monthly Average Direction: 171.6 deg																					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	7	360	1	11	331	283	283	250	213	183	149	148	147	142	130	160	172	116	117	118	135	145	151	155	138.9
2-May	179	177	177	323	291	262	274	261	312	16	296	337	307	309	317	315	317	11	25	29	20	23	15	9	331.6
3-May	26	6	355	236	188	169	174	161	169	248	266	286	311	289	269	257	261	299	315	315	311	317	332	346	291.3
4-May	312	247	241	270	312	326	339	340	7	306	228	268	264	265	267	245	226	221	219	217	220	238	284	303	263.5
5-May	299	340	16	11	325	319	322	321	317	308	309	298	314	359	14	27	43	33	27	21	19	39	127	133	347.3
6-May	145	145	144	147	147	150	159	163	144	175	203	207	216	215	211	215	215	206	191	174	165	166	159	157	183.4
7-May	154	150	148	151	147	142	140	173	184	187	197	233	235	249	248	262	252	237	235	210	194	189	186	154	199.2
8-May	269	202	311	332	299	310	11	341	14	13	22	13	1	302	302	3	0	354	353	357	22	44	134	182	354.2
9-May	156	140	137	121	117	162	160	165	215	229	253	258	264	246	262	272	249	253	247	232	226	217	173	162	231.1
10-May	163	194	143	175	194	102	173	293	263	308	330	267	283	285	265	129	253	17	202	165	156	136	158	157	224.8
11-May	158	165	139	149	157	214	164	160	163	160	175	112	4	60	115	310	7	343	21	40	50	54	37	3	108.1
12-May	2	338	1	353	352	357	2	358	14	13	5	10	10	14	11	12	18	9	4	4	360	8	2	346	6.0
13-May	331	336	327	325	312	312	327	358	351	319	285	296	343	354	2	78	108	110	227	190	135	146	156	155	344.7
14-May	142	144	157	161	145	134	156	248	301	330	354	357	2	5	4	5	26	15	8	354	357	358	9	3	7.9
15-May	2	10	3	7	9	6	10	1	2	353	348	348	353	3	9	34	32	16	24	21	21	32	26	35	8.7
16-May	31	21	29	24	14	32	20	348	351	350	14	339	10	347	75	137	120	105	114	119	155	136	141	143	51.7
17-May	149	141	138	143	137	142	129	133	132	151	149	130	128	137	145	141	128	144	123	122	121	126	132	136	135.5
18-May	140	145	143	142	142	142	144	144	138	128	115	134	157	159	139	139	135	136	131	128	126	130	136	145	138.7
19-May	149	143	145	159	153	157	158	157	155	137	139	137	142	136	139	135	152	152	153	144	135	138	138	135	144.8
20-May	134	136	137	136	142	143	143	149	147	138	131	138	143	149	136	130	142	147	139	133	137	146	141	140	139.7
21-May	140	140	163	148	155	142	138	142	153	166	135	116	115	168	153	162	174	189	182	159	148	147	153	158	151.8
22-May	144	151	150	151	149	150	153	162	171	185	160	213	222	195	172	167	137	141	157	139	140	152	162	159	161.2
23-May	153	165	173	174	159	160	172	158	132	121	152	171	180	139	163	126	123	145	141	155	172	137	155	156	150.2
24-May	155	151	155	155	164	181	172	185	173	124	113	135	156	190	170	170	146	201	196	158	151	150	154	155	161.1
25-May	154	154	153	151	152	146	150	159	161	169	179	171	181	173	178	188	192	184	178	169	159	158	158	160	167.8
26-May	158	158	159	156	161	189	150	142	137	150	159	179	178	162	177	179	176	171	197	275	287	206	178	228	175.6
27-May	186	178	269	206	162	179	196	225	259	262	277	261	269	245	251	249	254	247	267	262	227	190	175	174	241.0
28-May	185	184	198	127	127	139	158	163	167	121	197	222	224	243	219	216	204	174	143	134	154	166	161	156	182.5
29-May	145	146	147	147	153	152	155	158	171	157	174	173	172	169	177	154	148	148	167	162	150	280	303	290	172.3
30-May	272	285	253	279	278	281	315	322	306	301	304	317	40	258	264	244	218	211	213	182	178	180	151	150	269.9
31-May	156	157	247	270	286	185	153	164	156	122	99	346	343	3	357	355	358	358	358	3	346	346	340	347	348.0
157.2 148.7 156.0 156.3 153.4 155.0 148.5 170.9 165.4 171.0 193.4 218.3 222.7 216.8 216.1 203.5 174.7 175.2 171.8 146.1 120.8 134.3 143.2 143.4																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

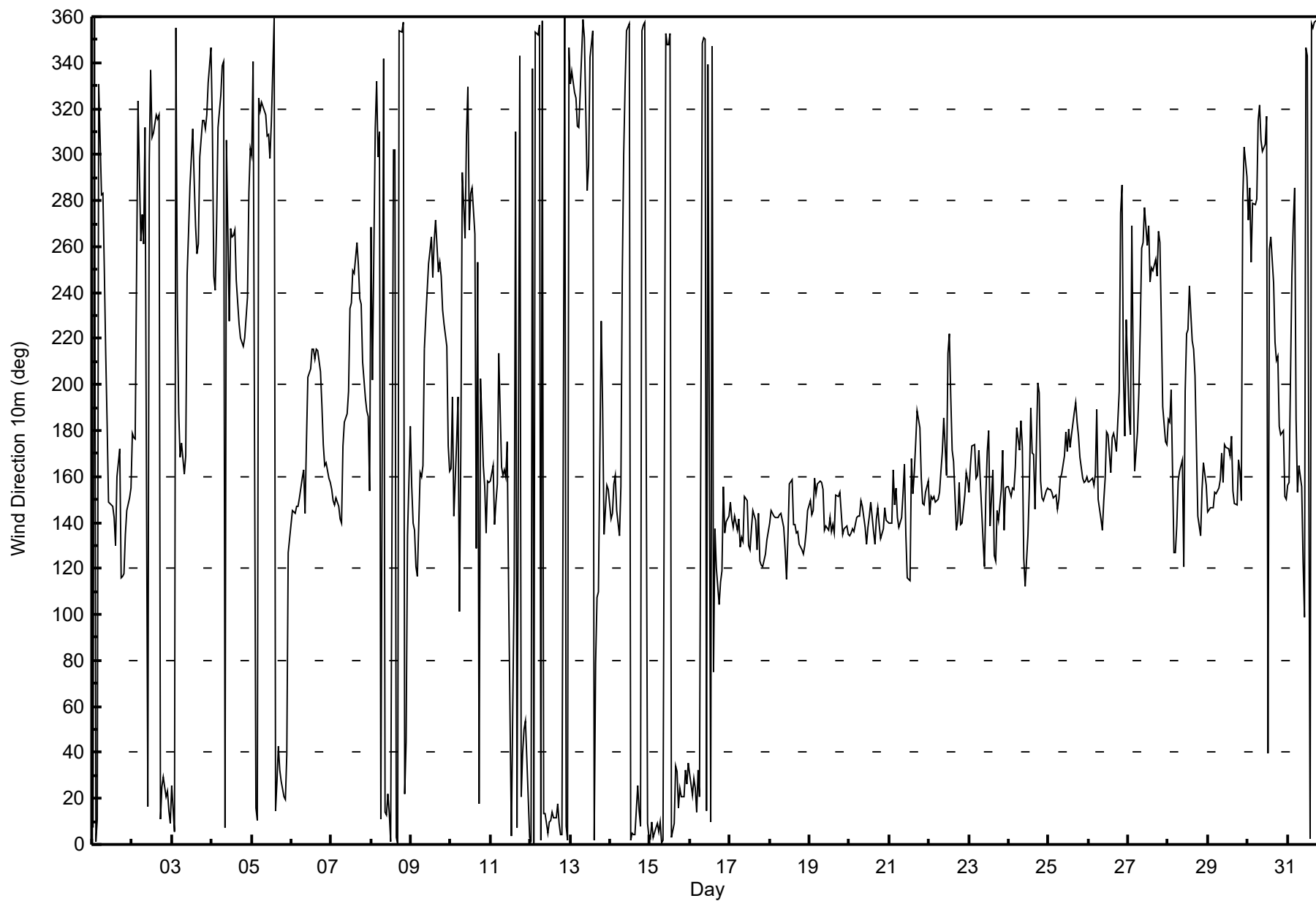
Buffalo Viewpoint - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 98 deg on May 10 16:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 8 deg on May 3 01:00																									
Percentiles: P ₁ = 14 P ₁₀ = 20 Q ₁ = 23 Median = 29 Q ₃ = 33 P ₉₀ = 43 P ₉₉ = 81																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	23	19	23	19	20	41	29	52	38	41	37	33	38	40	42	44	67	27	23	24	29	28	29	30	67
2-May	27	19	32	34	29	10	32	21	45	65	77	58	37	26	23	26	23	25	19	18	17	15	19	15	77
3-May	8	14	15	46	43	28	31	29	42	31	19	26	23	26	24	18	15	22	19	19	21	19	19	20	46
4-May	23	22	20	22	26	18	23	22	80	59	28	26	16	19	27	23	22	17	16	15	17	20	22	20	80
5-May	21	38	23	22	31	21	20	21	25	28	30	43	55	55	60	33	31	26	20	20	15	24	30	34	60
6-May	29	29	29	28	29	29	38	36	30	33	24	25	25	22	22	22	22	23	24	29	27	29	28	27	38
7-May	27	28	30	31	28	29	29	32	27	25	25	22	21	22	19	15	21	21	21	17	17	18	20	27	32
8-May	43	34	36	19	24	59	78	64	21	24	24	28	32	57	47	26	25	25	26	23	19	16	61	27	78
9-May	15	15	15	49	33	25	24	34	27	29	22	27	27	29	26	22	24	22	20	18	20	33	20	28	49
10-May	28	59	30	59	62	57	71	82	45	36	49	52	36	47	48	98	78	67	43	23	20	20	22	21	98
11-May	25	23	22	25	37	49	28	30	29	33	40	53	91	27	98	37	28	28	33	20	15	14	48	27	98
12-May	22	24	14	11	11	15	19	20	23	25	24	27	24	27	28	25	23	23	23	22	20	20	18	18	28
13-May	17	13	15	12	26	19	23	19	42	52	28	46	55	42	31	56	29	25	66	95	28	29	28	30	95
14-May	29	28	25	31	40	23	29	41	25	35	22	24	24	24	25	26	22	24	23	23	24	23	23	23	41
15-May	23	22	23	22	23	22	24	24	24	24	22	25	27	30	28	26	25	25	25	22	19	18	17	14	30
16-May	14	12	15	16	18	20	23	42	32	43	59	45	60	38	85	48	67	42	30	34	24	23	30	31	85
17-May	31	31	30	31	30	30	26	35	34	37	38	41	31	33	36	40	31	34	27	28	27	26	28	29	41
18-May	31	28	28	30	31	33	30	31	32	37	33	40	36	36	33	30	32	33	30	28	27	29	28	29	40
19-May	30	30	28	29	31	30	30	32	35	36	34	33	34	32	36	32	32	31	31	33	29	31	31	33	36
20-May	30	29	28	28	35	33	33	33	32	33	32	32	33	32	32	31	30	33	29	29	30	30	26	26	35
21-May	29	32	31	28	30	29	31	32	39	32	37	26	25	43	30	32	30	25	29	29	28	27	28	27	43
22-May	26	28	29	29	30	29	30	30	36	35	36	19	21	27	28	32	32	33	31	30	29	28	27	27	36
23-May	39	26	27	26	30	33	30	31	36	31	37	67	81	38	37	34	29	31	31	32	32	30	31	30	81
24-May	27	31	32	39	30	26	42	36	38	29	24	34	37	31	34	40	34	40	25	29	29	29	29	28	42
25-May	30	29	29	29	29	29	31	31	32	33	31	34	31	32	32	32	27	29	29	29	28	27	24	26	34
26-May	29	31	29	31	39	53	29	28	28	36	36	29	30	33	31	29	29	31	44	23	35	57	74	50	74
27-May	30	20	55	58	22	19	22	32	25	22	27	21	20	28	24	22	22	20	33	18	20	26	24	27	58
28-May	28	34	57	14	10	23	19	27	48	61	78	46	30	33	31	25	28	26	23	22	28	28	30	28	78
29-May	27	30	29	28	32	30	32	74	42	34	35	34	32	36	35	36	34	33	33	31	30	32	23	27	74
30-May	20	34	23	23	24	27	23	22	23	25	26	45	50	74	28	24	29	25	19	24	36	20	24	26	74
31-May	29	22	26	16	19	55	31	34	29	48	47	87	24	22	22	21	22	21	22	22	22	21	25	21	87
43 59 57 59 62 59 78 82 80 65 78 87 91 74 98 98 78 67 66 95 36 57 74 50																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Buffalo Viewpoint - May 2025





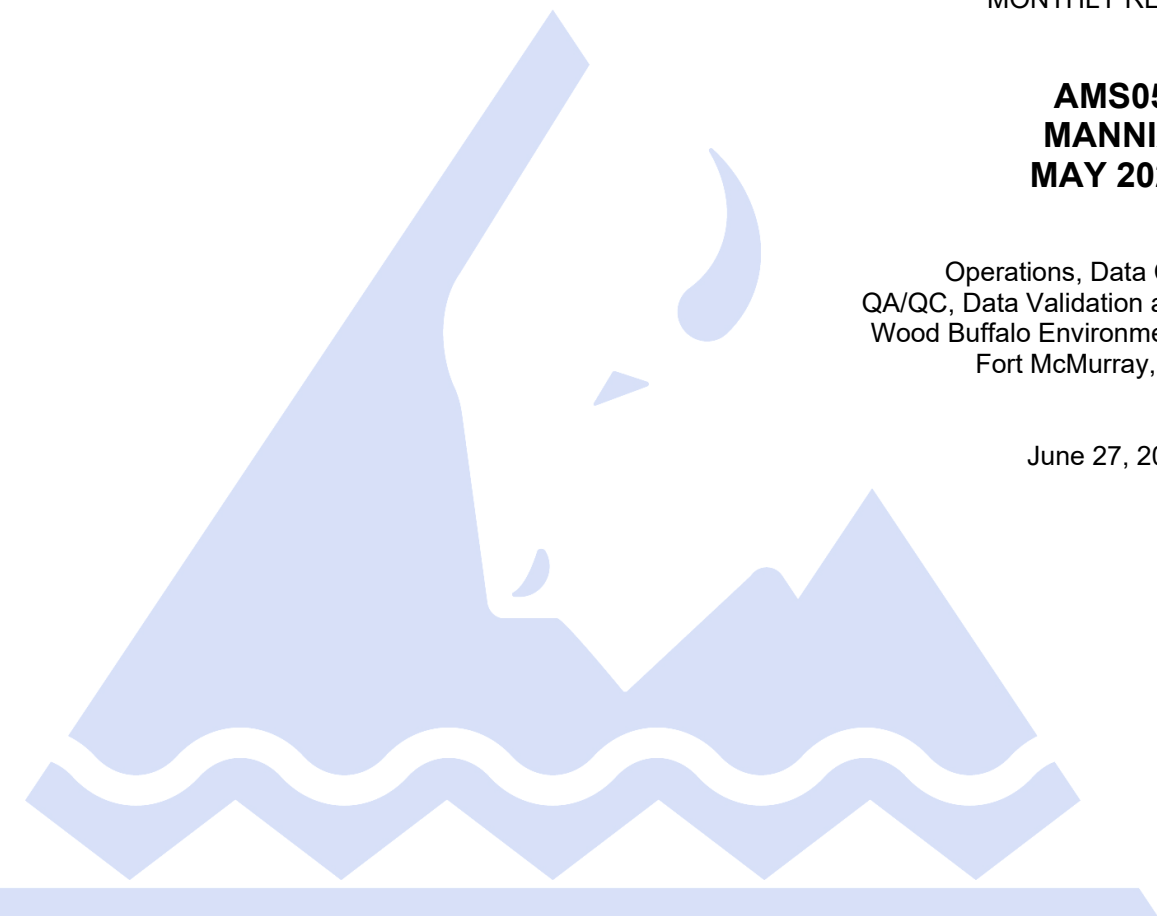
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS05
MANNIX
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	34	35	99.87	32.9	0	6.1	0
H2S (ppb) Average	707	36	37	99.87	7	0	0.7	0
THC (ppm) Average	709	34	35	99.87	7.8	-	2.2	-
NMHC(ppm) Average	709	34	35	99.87	0.339	-	0.057	-
CH4(ppm) Average	709	34	35	99.87	7.8	-	2.2	-
Temperature 2 m (C) Average	744	0	0	100	33	-	24.6	-
Temperature 20 m (C) Average	744	0	0	100	32	-	25.3	-
Temperature 45 m (C) Average	744	0	0	100	31.8	-	25.6	-
Temperature 75 m (C) Average	744	0	0	100	31.2	-	25.5	-
Temperature 90 m (C) Average	744	0	0	100	31.2	-	25.5	-
Relative Humidity 2 m (%) Average	744	0	0	100	100	-	82	-
Relative Humidity 20 m (%) Average	744	0	0	100	97	-	79	-
Relative Humidity 45 m (%) Average	744	0	0	100	96	-	79	-
Relative Humidity 75 m (%) Average	744	0	0	100	98	-	81	-
Relative Humidity 90 m (%) Average	744	0	0	100	98	-	81	-
Wind Speed 20 m (km/h) Average	744	0	0	100	30	-	19	-
Wind Speed 45 m (km/h) Average	744	0	0	100	38	-	26	-
Wind Speed 75 m (km/h) Average	744	0	0	100	42	-	31	-
Wind Speed 90 m (km/h) Average	741	0	3	99.6	44	-	32	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-
Wind Direction 45 m (deg) Average	744	0	0	100	-	-	-	-
Wind Direction 75 m (deg) Average	744	0	0	100	-	-	-	-
Wind Direction 90 m (deg) Average	741	0	3	99.6	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	744	0	0	100	1.6	-	0.9	-
Vertical Wind Speed 45 m (km/h) Average	744	0	0	100	3.5	-	2	-
Vertical Wind Speed 75 m (km/h) Average	744	0	0	100	1.8	-	0.5	-
Vertical Wind Speed 90 m (km/h) Average	741	0	3	99.6	1.7	-	0.9	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)

MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	0.91	3.4	-	0	0	0	0.1	0.3	0.9	32.9
H2S (ppb) Average	707	0.24	0.4	-	0	0.1	0.1	0.1	0.2	0.5	6.7
THC (ppm) Average	709	1.99	0.2	-	1.9	1.9	1.9	2	2	2.1	7.8
NMHC(ppm) Average	709	0.006	0.026	-	0	0	0	0	0	0	0.339
CH4(ppm) Average	709	1.99	0.2	-	1.9	1.9	1.9	2	2	2	7.8
Temperature 2 m (C) Average	744	14.34	6.7	-	-0.3	6.6	9.4	13.6	18.6	23.6	33
Temperature 20 m (C) Average	744	14.26	6.3	-	-0.4	7	9.9	13.9	17.9	22.8	32
Temperature 45 m (C) Average	744	14.11	6.4	-	-0.8	6.6	9.8	13.8	17.7	22.8	31.8
Temperature 75 m (C) Average	744	14.09	6.2	-	-0.7	6.7	9.7	14	17.5	22.4	31.2
Temperature 90 m (C) Average	744	13.71	6.4	-	-1.6	6	9.3	13.5	17.1	22.3	31.2
Relative Humidity 2 m (%) Average	744	52	22	-	14	25	33	50	68	85	100
Relative Humidity 20 m (%) Average	744	48.3	20	-	15	24	31	45	62	80	97
Relative Humidity 45 m (%) Average	744	47.5	20	-	15	24	31	44	62	80	96
Relative Humidity 75 m (%) Average	744	47.8	20	-	15	25	31	44	62	80	98
Relative Humidity 90 m (%) Average	744	47.5	20	-	15	25	30	43	62	81	98
Wind Speed 20 m (km/h) Average	744	13.8	6	-	0	6	9	14	18	22	30
Wind Speed 45 m (km/h) Average	744	18.4	7	-	1	8	13	19	23	28	38
Wind Speed 75 m (km/h) Average	744	20.5	9	-	1	8	14	21	27	32	42
Wind Speed 90 m (km/h) Average	741	21.6	9	-	1	9	15	22	28	33	44
Wind Direction 20 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 75 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 90 m (deg) Average	741	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	744	0.26	0.5	-	-1	-0.4	-0.1	0.3	0.7	0.9	1.6
Vertical Wind Speed 45 m (km/h) Average	744	0.6	1	-	-2	-0.8	-0.1	0.7	1.3	1.8	3.5
Vertical Wind Speed 75 m (km/h) Average	744	-0.01	0.6	-	-1.6	-0.8	-0.4	0	0.4	0.7	1.8
Vertical Wind Speed 90 m (km/h) Average	741	0.33	0.5	-	-1.6	-0.2	0	0.3	0.6	0.9	1.7

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	16 May 2025 13:00	16 May 2025 13:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction, Vertical Wind Speed, 90m	31 May 2025 19:00	31 May 2025 19:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 90m	31 May 2025 22:00	31 May 2025 23:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

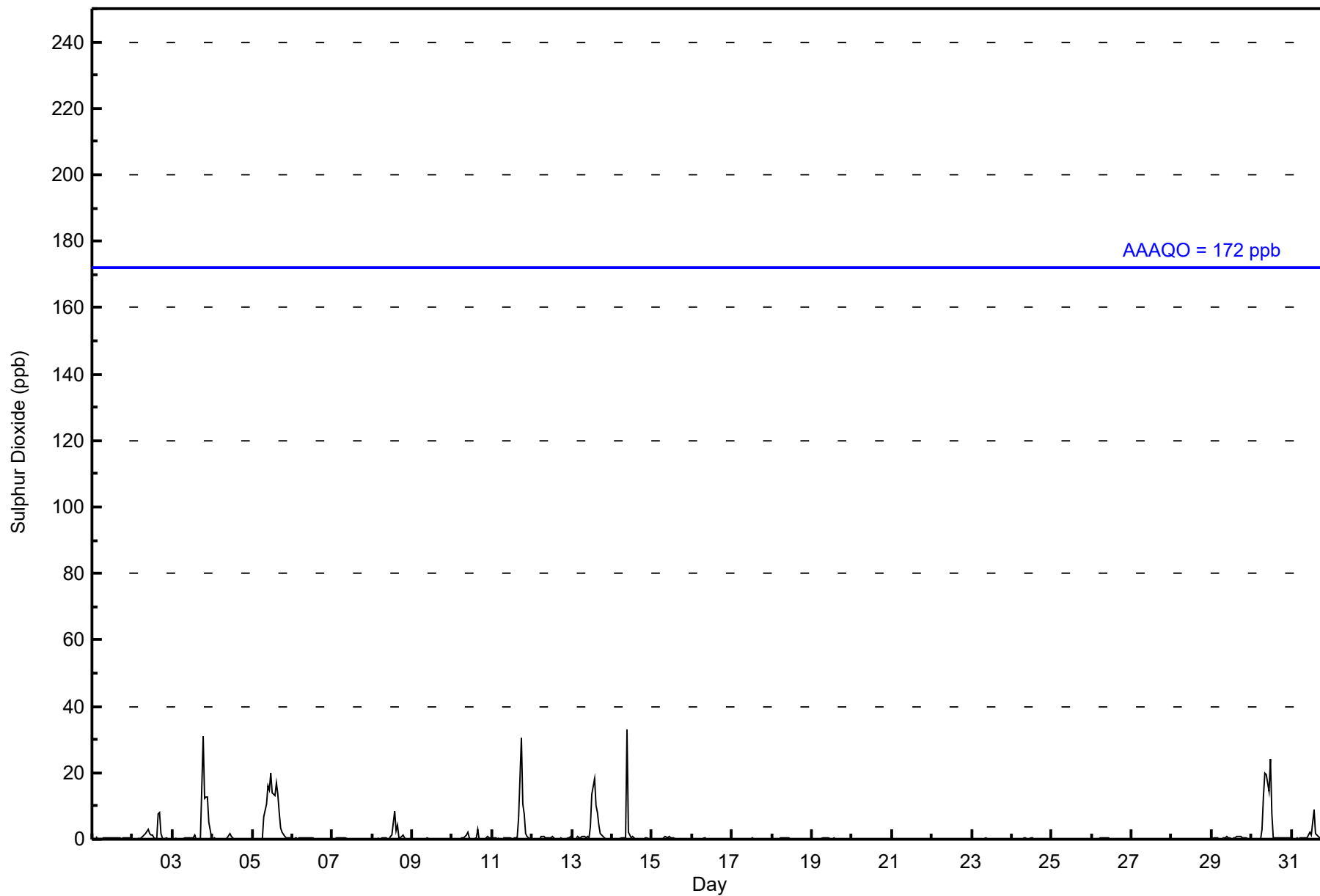
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.9 ppb on May 14 10:00 Maximum Daily Average: 6.1 ppb on May 5																			Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9								
Minimum Value: 0.0 ppb on May 4 16:00 Minimum Daily Average: 0.0 ppb on May 27 Maximum Diurnal Average: 2.7 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 2 Monthly Average: 0.91 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 18.3																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	0.5	Z	0.7	0.2	0.2	0.2	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.7
2-May	0.2	0.2	Z	0.2	0.2	0.3	0.8	1.5	1.7	2.9	1.6	1.3	1.1	0.2	0.2	7.8	8.3	1.6	0.3	0.1	0.2	0.2	0.2	0.2	0.1	1.4	8.3
3-May	0.1	0.1	0.2	Z	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	1.2	0.0	0.0	0.0	0.1	30.7	12.3	12.8	12.9	5.3	0.5	3.4	30.7	
4-May	0.2	0.4	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	1.5	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5	
5-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	6.6	10.4	15.9	14.9	19.9	14.2	13.2	16.9	13.4	7.9	3.2	2.2	0.8	0.3	0.3	0.2	0.3	6.1	19.9	
6-May	Z	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.5	
7-May	0.1	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	
8-May	0.0	0.0	Z	0.3	0.2	0.2	0.2	0.5	0.4	0.0	0.0	0.7	1.4	8.7	2.7	4.2	0.6	0.5	1.1	0.2	0.0	0.0	0.0	0.0	1.0	8.7	
9-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
10-May	0.1	0.1	0.2	0.2	Z	0.3	0.3	0.2	1.3	2.3	0.5	0.1	0.1	0.1	0.2	2.8	0.2	0.1	0.1	0.1	0.2	0.7	0.5	0.3	0.5	2.8	
11-May	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.4	0.3	0.3	6.4	30.5	10.4	7.7	1.8	0.7	0.3	0.1	2.7	30.5	
12-May	Z	0.1	0.0	0.1	0.2	0.7	1.0	0.9	0.5	0.3	0.4	0.3	0.7	0.2	0.1	0.2	0.2	0.5	0.1	0.1	0.2	0.4	0.5	1.0	0.4	1.0	
13-May	1.2	Z	0.3	0.7	0.2	0.4	0.9	1.0	0.4	0.7	0.5	3.7	13.7	18.4	10.2	8.3	4.4	1.7	0.9	0.2	0.2	0.2	0.2	0.1	3.0	18.4	
14-May	0.1	0.1	Z	0.1	0.1	0.3	0.5	0.4	0.3	32.9	2.3	0.5	0.8	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.1	1.7	32.9	
15-May	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.3	0.6	0.6	0.9	0.4	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.9	
16-May	0.1	0.1	0.1	0.0	Z	0.1	0.2	0.3	0.2	C	C	C	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.2	
18-May	Z	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	
19-May	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.5	
20-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
21-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
22-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
23-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
24-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.2	0.2	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
25-May	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	
26-May	0.1	0.2	Z	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
27-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
28-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
29-May	0.1	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.5	0.7	0.5	0.2	0.2	0.4	0.4	0.8	0.9	1.0	0.5	0.5	0.5	0.6	0.1	0.0	0.4	1.0	
30-May	Z	0.0	0.2	0.2	0.1	0.2	2.9	12.9	19.7	19.7	14.2	24.2	7.7	0.3	0.3	0.5	0.5	0.4	0.5	0.5	0.6	0.4	0.4	0.3	4.6	24.2	
31-May	0.3	Z	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.5	1.3	2.3	1.2	8.9	1.5	1.2	0.7	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.9	8.9	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mannix - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	689	97.18	97.18
11 - 20	16	2.26	99.44
21 - 60	4	0.56	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mannix - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	46	52	10	8	7	10	192	137	41	25	34	39	33	22	13	20	689
11 - 20	2	1	0	0	0	0	0	0	0	0	0	0	0	5	7	1	16
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	4
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	53	10	8	7	10	192	137	41	25	34	39	33	28	22	22	709

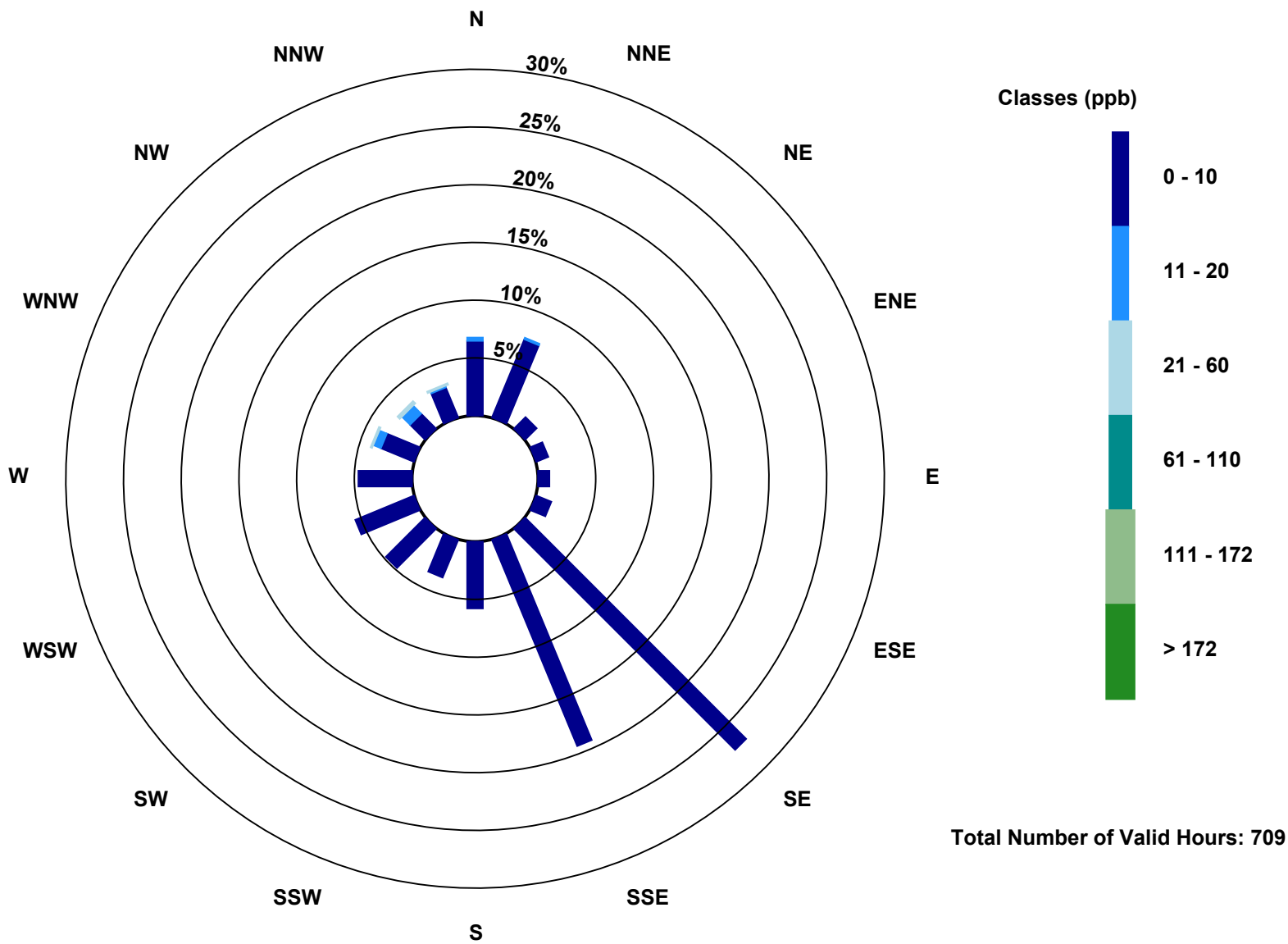
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

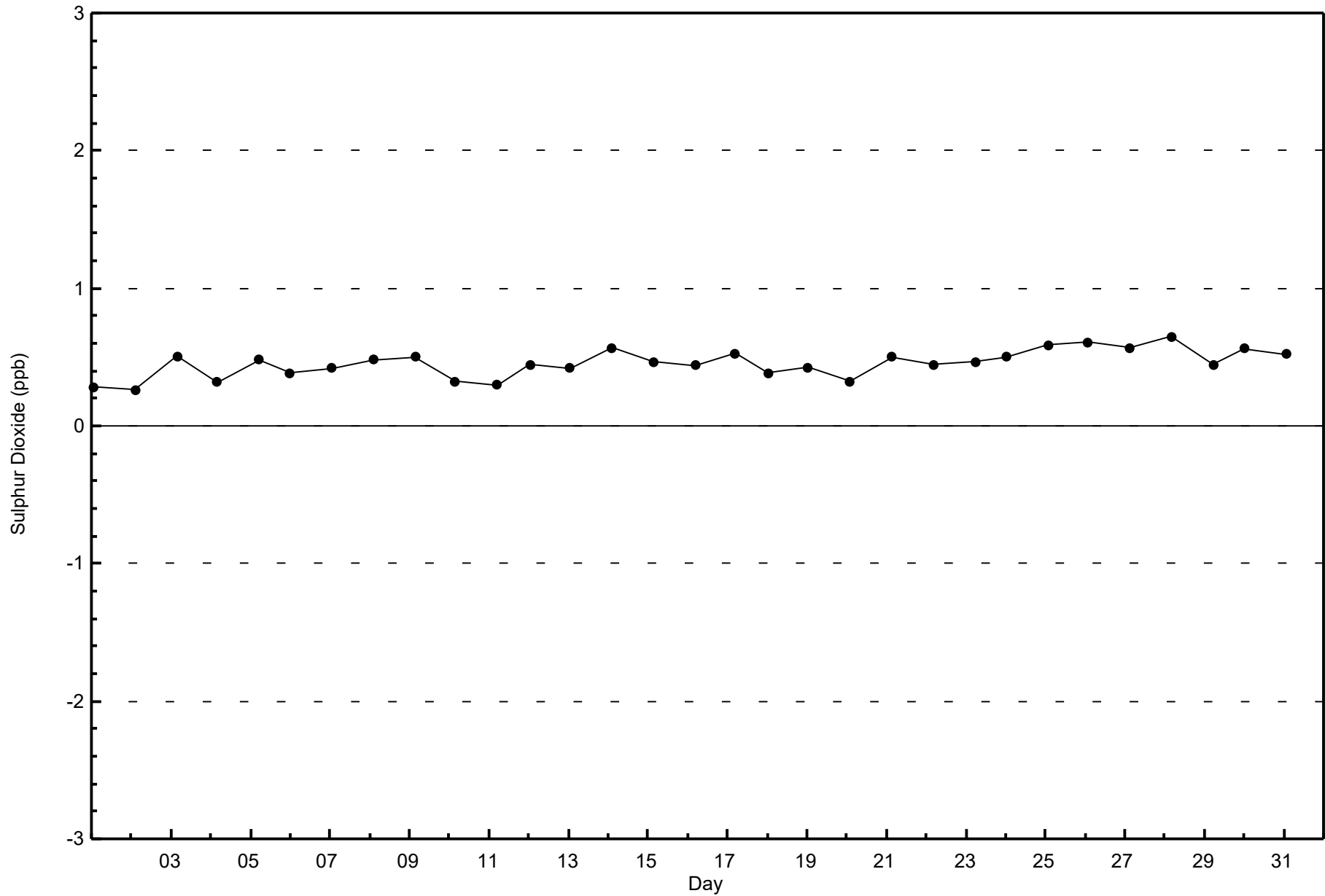
Sulphur Dioxide (SO₂) - ppb
Mannix





Wood Buffalo Environmental Association
Zero Responses

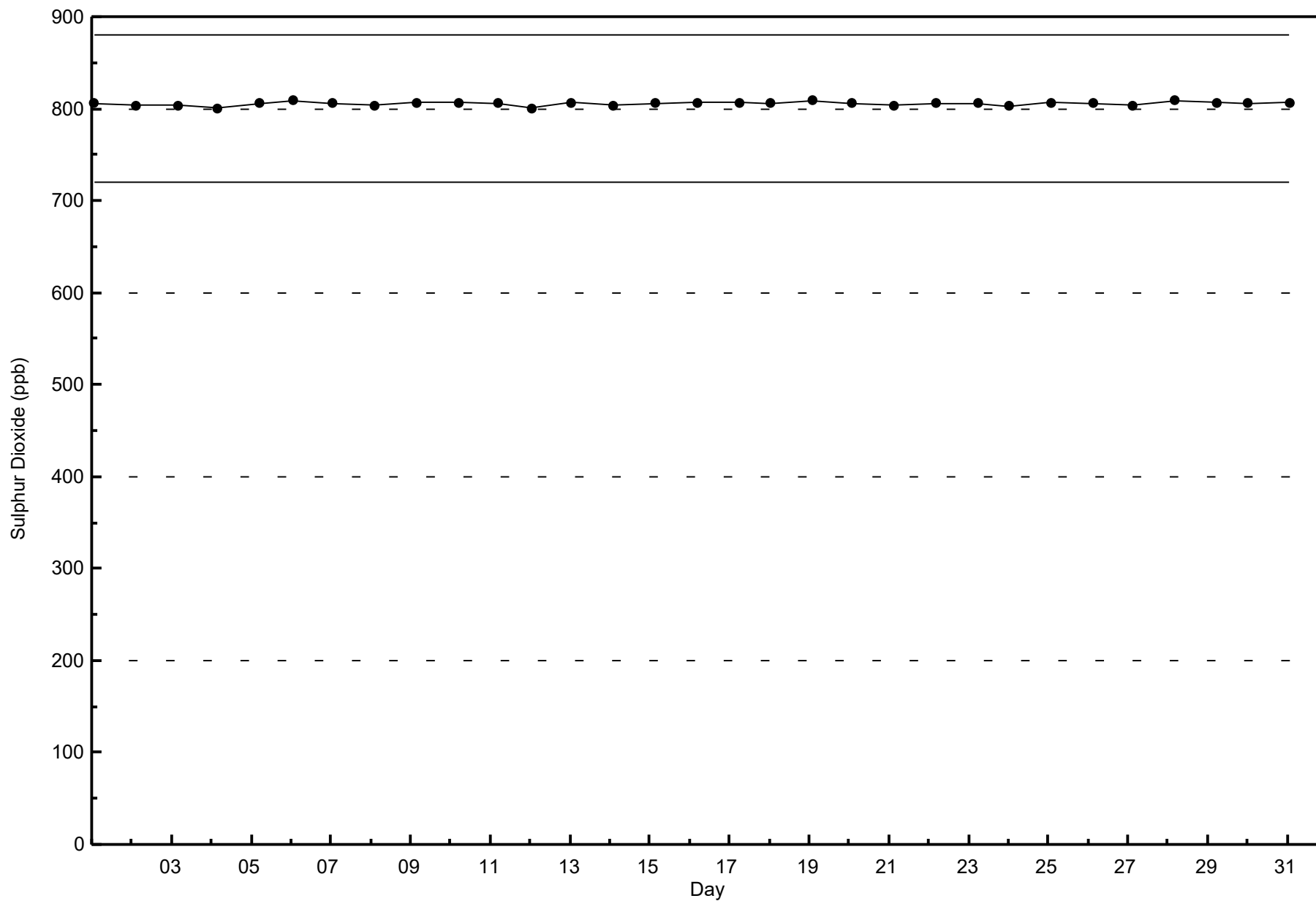
Sulphur Dioxide (SO₂) - ppb
Mannix - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

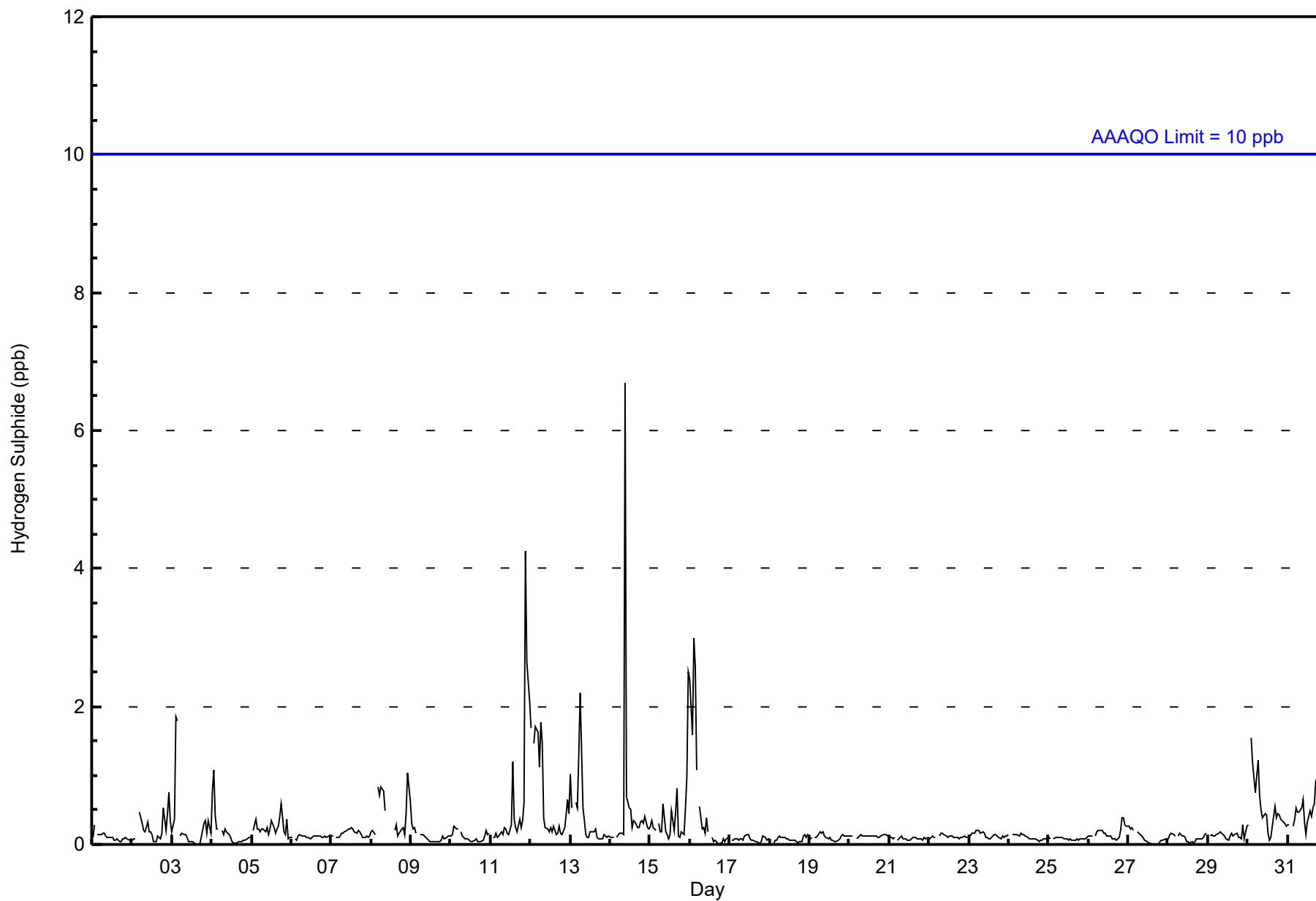
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744								
Maximum Value: 6.7 ppb on May 14 10:00 Maximum Daily Average: 0.7 ppb on May 12																			Hours of Data: 707								
Minimum Value: 0.0 ppb on May 3 16:00 Minimum Daily Average: 0.1 ppb on May 17																			Hours of Missing Data: 37								
Maximum Diurnal Average: 0.5 ppb at hour 3 Minimum Diurnal Average: 0.1 ppb at hour 15																			Hours of Calibration: 36								
Monthly Average: 0.24 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 2.2																			Percent Operational Time: 99.9								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	0.3	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
2-May	0.1	0.1	0.1	Z	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.5	0.2	0.5	0.8	0.3	0.2	0.3	
3-May	0.2	0.4	1.8	1.8	Z	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.4	0.2	0.3	1.8	
4-May	0.8	1.1	0.4	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	1.1	
5-May	Z	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.6	0.2	0.1	0.4	0.1	0.1	0.2	0.6	
6-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
7-May	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
8-May	0.2	0.2	0.2	Z	0.8	0.7	0.8	0.8	0.5	C	C	C	C	C	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.5	1.0	0.6	0.4	1.0	
9-May	0.3	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
10-May	0.1	0.1	0.3	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.3	
11-May	Z	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.3	1.2	0.4	0.3	0.2	0.4	0.2	0.3	0.6	4.3	2.6	2.1	0.6	4.3	
12-May	1.7	Z	1.5	1.7	1.6	1.1	1.8	1.5	0.4	0.2	0.2	0.2	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.1	0.2	0.4	0.7	0.5	0.7	1.8	
13-May	1.0	0.5	Z	0.6	0.5	1.3	2.2	0.5	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	2.2	
14-May	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.1	6.7	0.7	0.5	0.5	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.6	6.7	
15-May	0.3	0.3	0.3	0.2	Z	0.3	0.2	0.2	0.6	0.2	0.1	0.1	0.1	0.5	0.2	0.5	0.8	0.1	0.1	0.2	0.1	0.5	1.0	2.5	0.4	2.5	
16-May	2.4	1.6	3.0	2.6	1.1	Z	0.5	0.2	0.2	0.2	0.4	0.2	M	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.6	3.0	
17-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	
18-May	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	
19-May	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
21-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
22-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
23-May	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
24-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	
25-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
26-May	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.3	0.3	0.2	0.4
27-May	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	
28-May	0.1	0.1	0.2	0.2	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	
29-May	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.1	0.3	0.1	0.3
30-May	0.3	Z	1.5	1.2	0.7	1.0	1.2	0.7	0.5	0.4	0.4	0.4	0.2	0.1	0.1	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5	1.5
31-May	0.3	0.3	Z	0.3	0.4	0.5	0.5	0.5	0.5	0.7	0.3	0.1	0.3	0.5	0.4	0.5	0.6	0.9	1.0	0.6	0.5	0.4	0.5	0.4	0.5	1.0	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mannix - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	702	99.29	99.29
3 - 4	4	0.57	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mannix - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	44	49	8	8	7	10	191	139	43	24	34	39	33	27	23	23	702
3 - 4	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	51	10	8	7	10	191	139	43	24	34	39	33	27	24	23	707

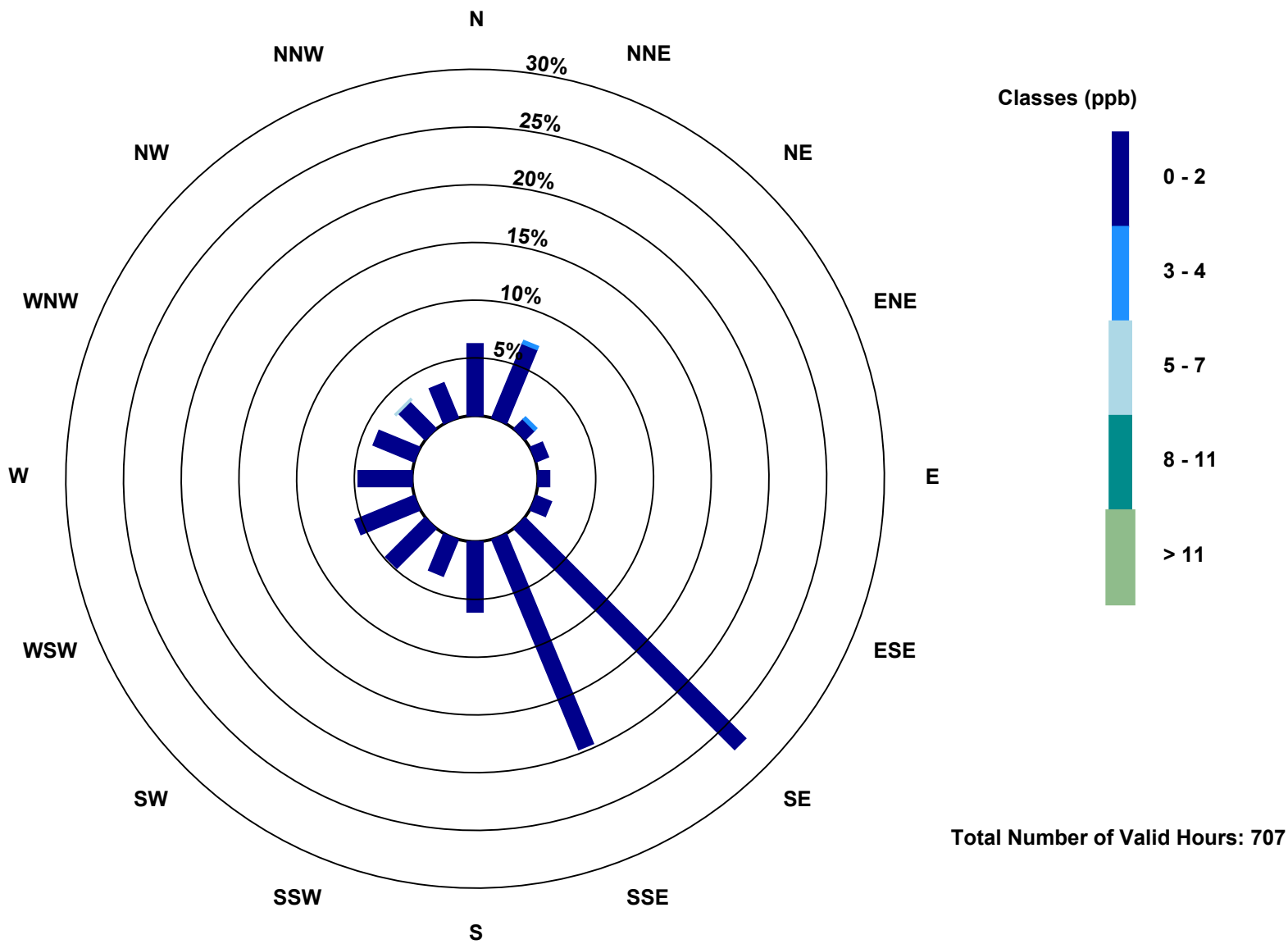
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Mannix



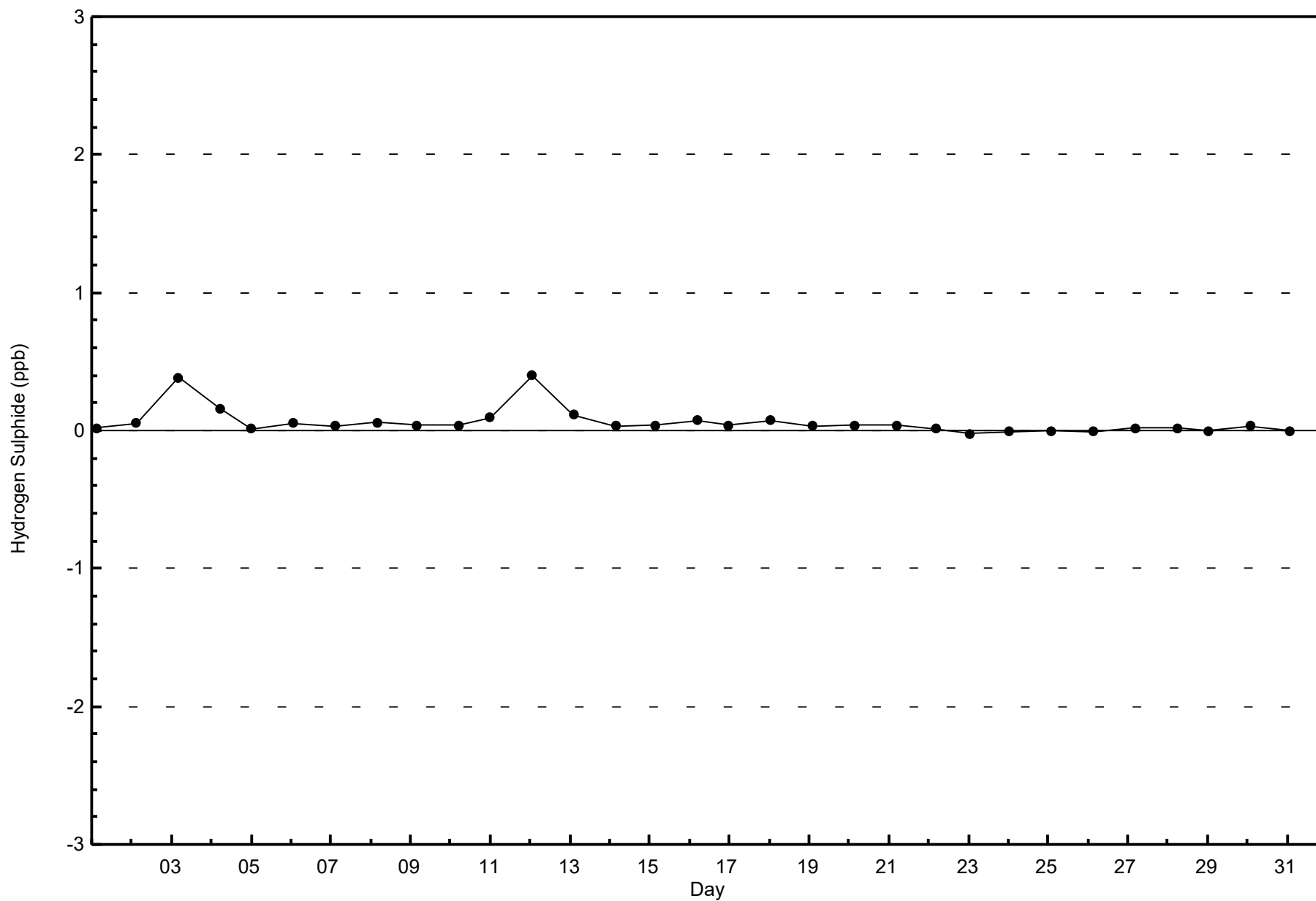


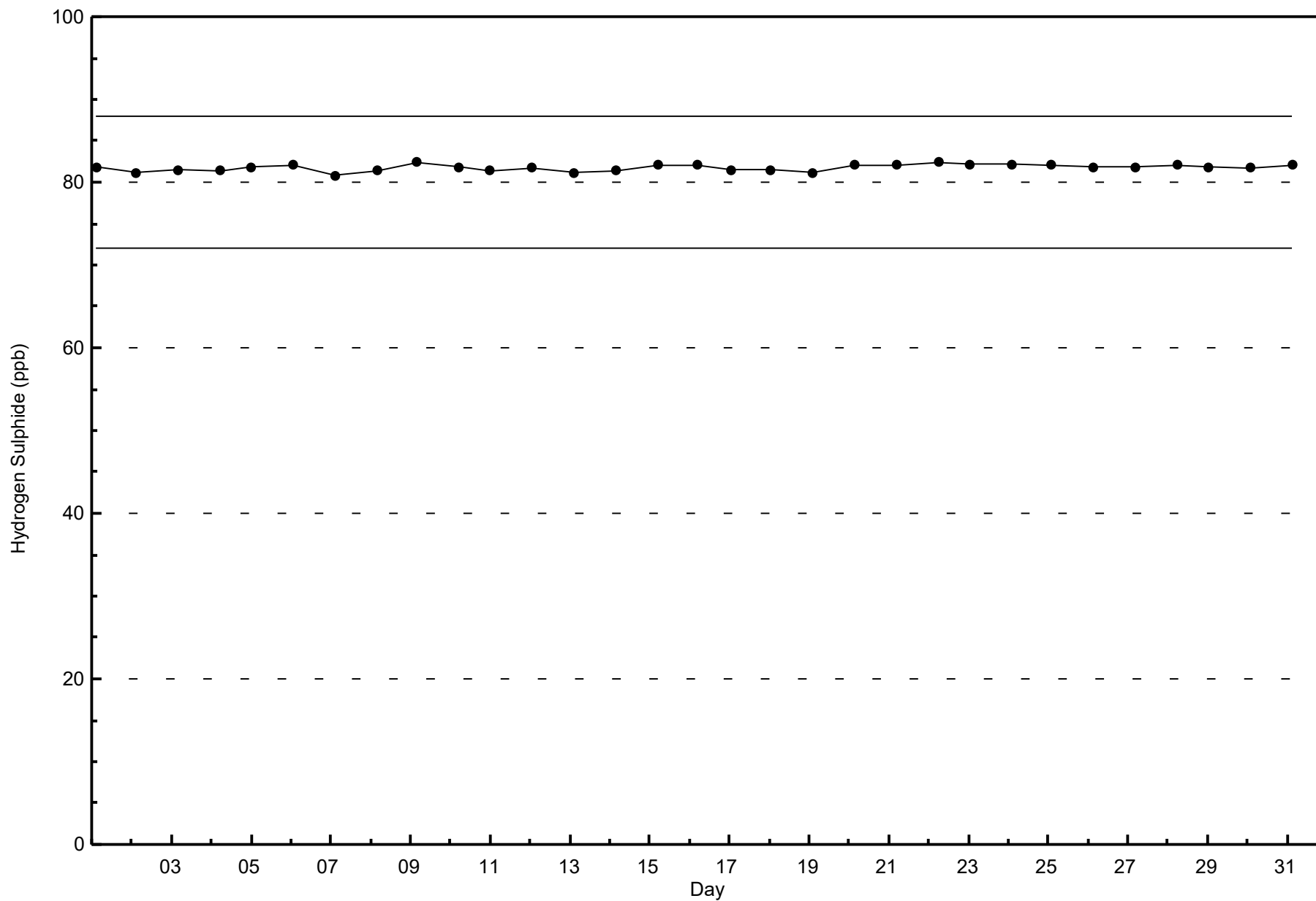
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

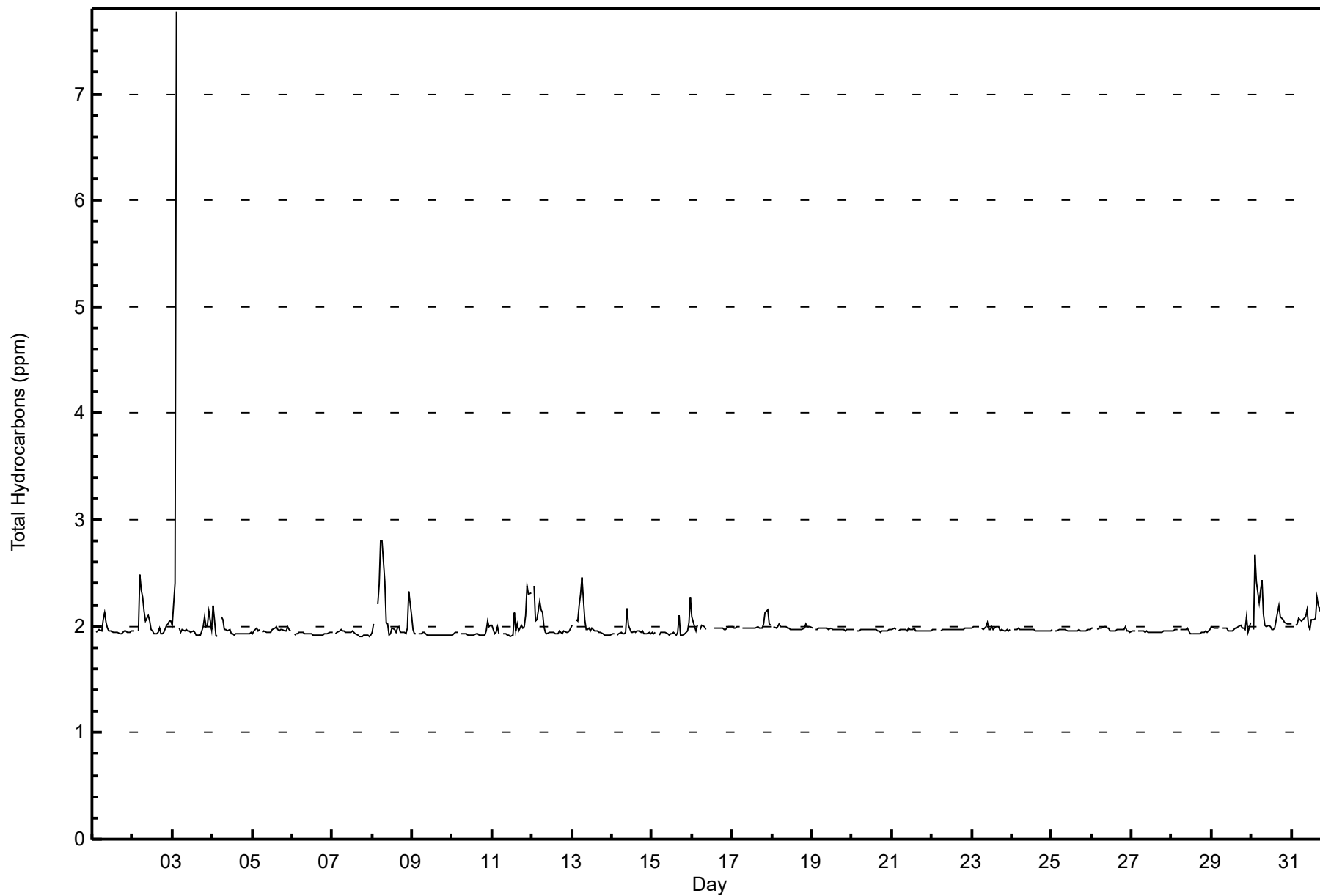
Mannix - May 2025

Maximum Value: 7.8 ppm on May 3 03:00																			Maximum Daily Average: 2.2 ppm on May 3							Hours in Service: 744			
Minimum Value: 1.9 ppm on May 4 04:00																			Minimum Daily Average: 1.9 ppm on May 9							Hours of Data: 709			
Maximum Diurnal Average: 2.2 ppm at hour 3																			Minimum Diurnal Average: 2.0 ppm at hour 12							Hours of Missing Data: 35			
Monthly Average: 1.99 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.4							Hours of Calibration: 34			
																										Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	2.0	Z	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.1			
2-May	2.0	2.0	Z	2.0	2.5	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.5			
3-May	2.0	2.4	7.8	Z	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.1	2.0	2.2	7.8			
4-May	2.2	2.1	1.9	1.9	Z	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2			
5-May	1.9	2.0	2.0	2.0	2.0	Z	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
6-May	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9			
7-May	1.9	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
8-May	1.9	2.0	Z	2.2	2.4	2.8	2.8	2.4	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.3	2.1	2.1	2.8			
9-May	2.0	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
10-May	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0			
11-May	2.0	1.9	1.9	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.3	2.3	2.0	2.4			
12-May	Z	2.4	2.0	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.4			
13-May	2.0	Z	2.1	2.1	2.2	2.3	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5			
14-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.2			
15-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.3	2.0	2.3			
16-May	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	C	C	C	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
17-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.2			
18-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
19-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
21-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
22-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
23-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
24-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
25-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
26-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0			
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
28-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0			
29-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.9	2.0	2.0	2.1			
30-May	Z	2.0	2.7	2.4	2.2	2.3	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.7			
31-May	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.3			
2.0 2.0 2.2 2.0 2.0 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0																								Diurnal Average					
2.2 2.4 7.8 2.4 2.5 2.8 2.8 2.4 2.1 2.2 2.1 2.0 2.1 2.1 2.1 2.1 2.3 2.2 2.2 2.2 2.1 2.1 2.4 2.3 2.3																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	632	89.14	89.14
2.1 - 3.0	76	10.72	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	34	50	4	6	6	8	188	132	40	22	33	34	25	23	15	12	632
2.1 - 3.0	14	3	6	2	1	2	3	5	1	3	1	5	8	5	7	10	76
3.1 - 10.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	53	10	8	7	10	192	137	41	25	34	39	33	28	22	22	709

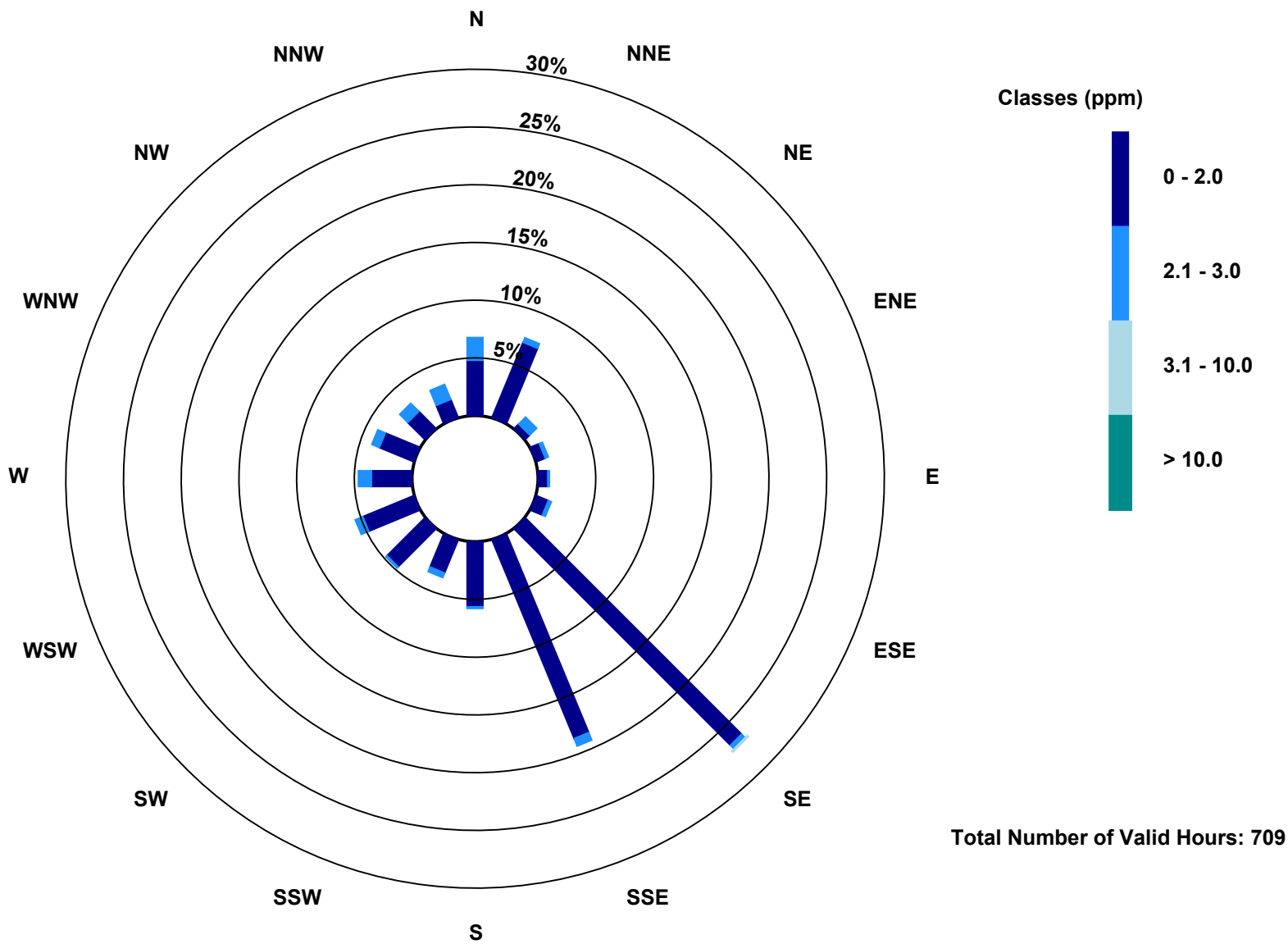
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

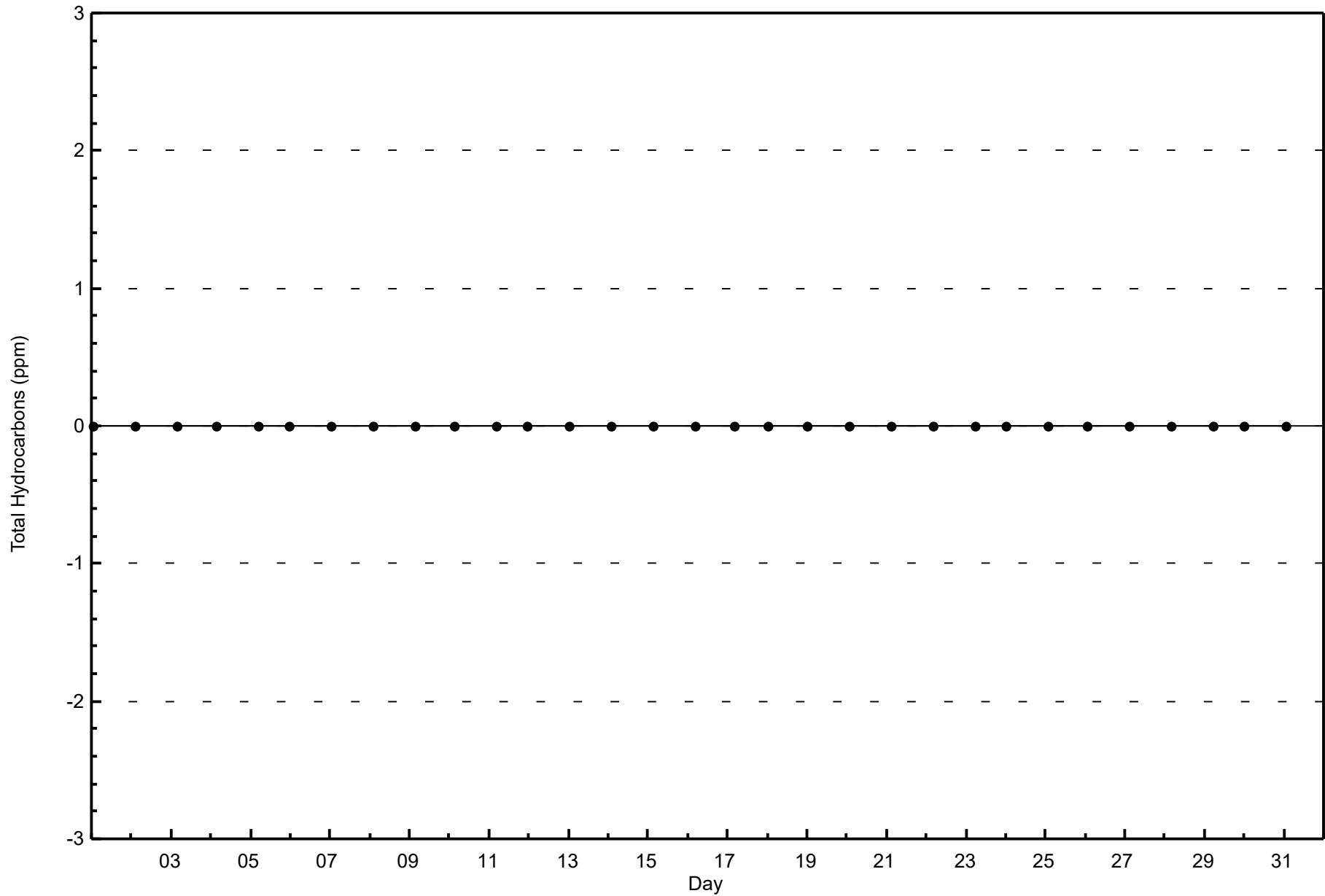
Total Hydrocarbons (THC) - ppm
Mannix

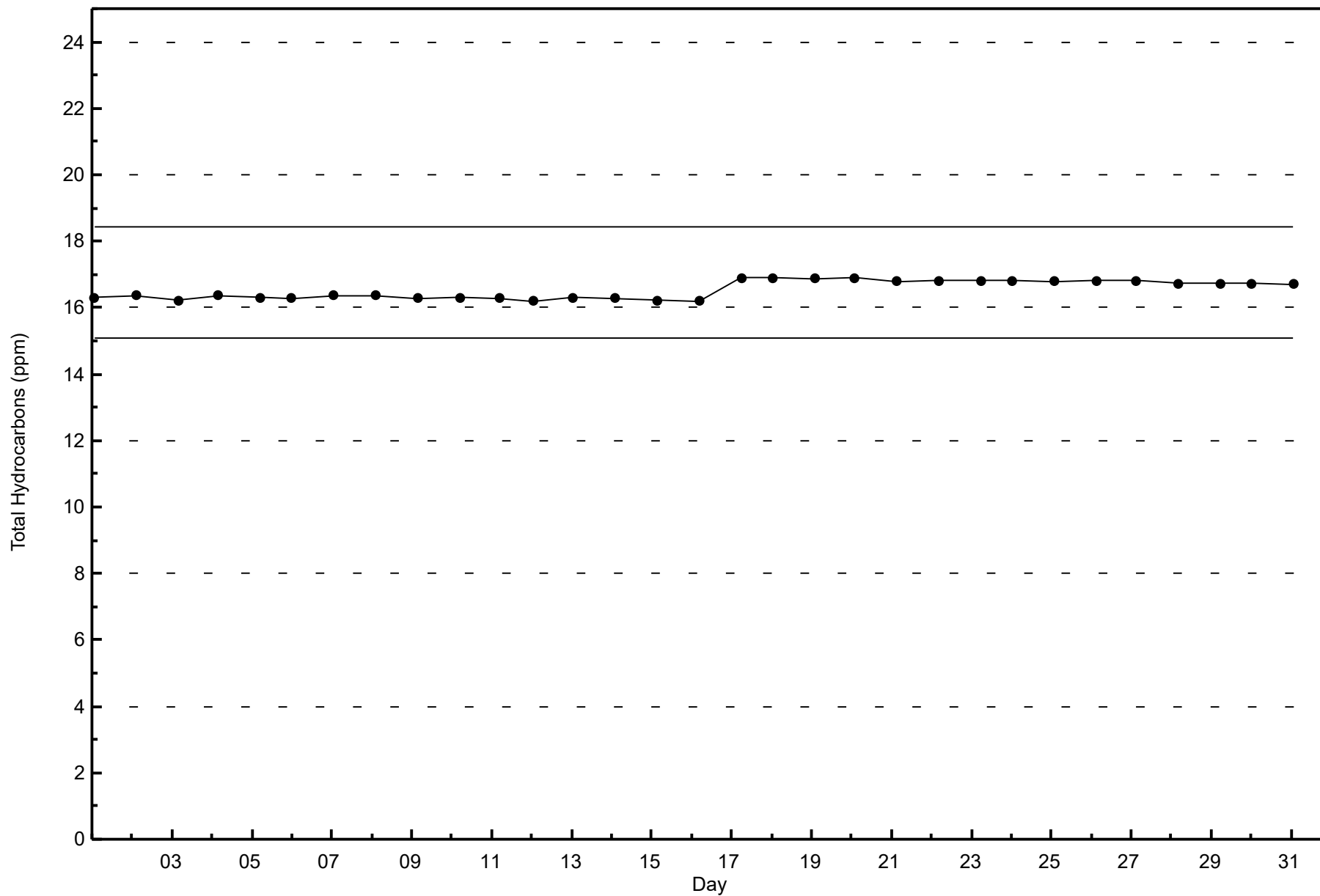




Wood Buffalo Environmental Association
Zero Responses

Total Hydrocarbons (THC) - ppm
Mannix - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

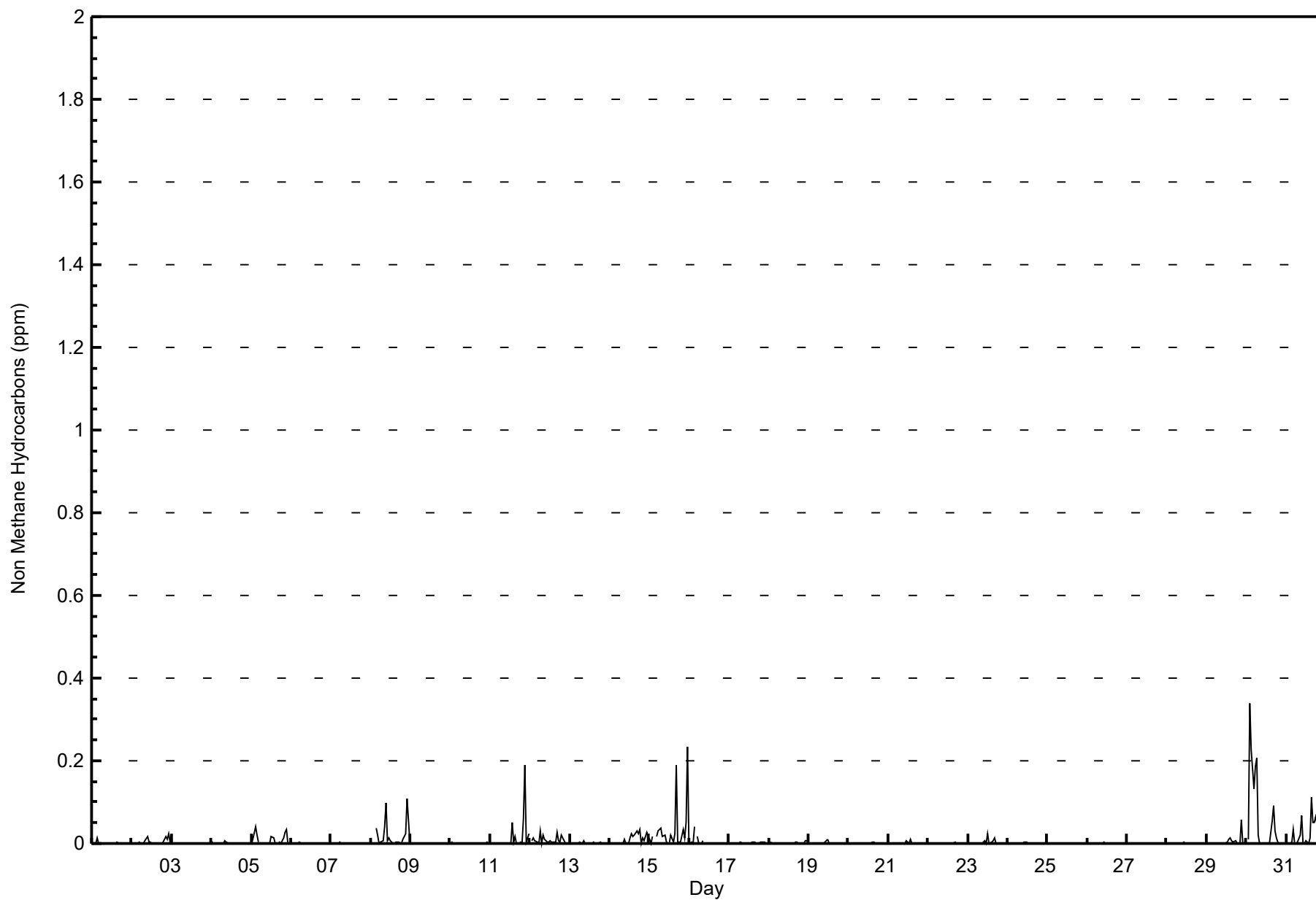
Mannix - May 2025

Maximum Value: 0.339 ppm on May 30 03:00																		Maximum Daily Average: 0.057 ppm on May 30								Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 03:00																		Minimum Daily Average: 0.000 ppm on May 9								Hours of Data: 709	
Maximum Diurnal Average: 0.016 ppm at hour 3																		Minimum Diurnal Average: 0.001 ppm at hour 1								Hours of Missing Data: 35	
Monthly Average: 0.006 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1								Hours of Calibration: 34	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.013	Z	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	
2-May	0.000	0.000	Z	0.000	0.003	0.000	0.000	0.000	0.006	0.018	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.016	0.009	0.023	0.004	0.004	0.023	
3-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	
4-May	0.002	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.006	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	
5-May	0.000	0.011	0.042	0.020	0.002	Z	0.002	0.000	0.000	0.000	0.000	0.000	0.016	0.013	0.000	0.000	0.001	0.002	0.001	0.015	0.028	0.033	0.001	0.000	0.008	0.042	
6-May	Z	0.000	0.000	0.000	0.000	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	
7-May	0.000	Z	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	
8-May	0.000	0.000	Z	0.038	0.019	0.000	0.003	0.008	0.042	0.097	0.008	0.012	0.005	0.001	0.000	0.004	0.002	0.004	0.001	0.012	0.016	0.025	0.109	0.002	0.018	0.109	
9-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10-May	0.000	0.002	0.000	0.000	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.002	
11-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.003	0.016	0.000	0.000	0.003	0.000	0.060	0.189	0.004	0.023	0.015	0.189	
12-May	Z	0.007	0.013	0.006	0.002	0.000	0.031	0.001	0.019	0.009	0.005	0.005	0.006	0.005	0.002	0.004	0.028	0.005	0.005	0.019	0.006	0.002	0.001	0.000	0.008	0.031	
13-May	0.000	Z	0.000	0.001	0.000	0.000	0.002	0.000	0.007	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.001	0.007	
14-May	0.000	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.001	0.015	0.025	0.017	0.021	0.030	0.023	0.033	0.001	0.013	0.006	0.026	0.017	0.010	0.033	
15-May	0.011	0.000	0.017	Z	0.018	0.030	0.035	0.038	0.018	0.022	0.005	0.000	0.001	0.021	0.005	0.024	0.189	0.003	0.002	0.004	0.034	0.012	0.051	0.232	0.034	0.232	
16-May	0.001	0.002	0.001	0.042	Z	0.016	0.000	0.000	0.005	C	C	C	M	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.004	0.042	
17-May	0.000	0.000	0.000	0.001	0.001	Z	0.003	0.004	0.000	0.000	0.000	0.000	0.001	0.002	0.004	0.003	0.001	0.001	0.001	0.002	0.005	0.002	0.000	0.000	0.001	0.005	
18-May	Z	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.001	0.000	0.000	0.008	0.007	0.001	0.008	
19-May	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.010	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.010	
20-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	
21-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011	
22-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	
23-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.005	0.005	0.001	0.022	0.001	0.002	0.005	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.022	
24-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	
25-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
26-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.003	
27-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	
29-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.001	0.001	0.001	0.002	0.010	0.014	0.005	0.005	0.005	0.001	0.000	0.000	0.056	0.000	0.002	0.004	0.056	
30-May	Z	0.009	0.339	0.226	0.133	0.187	0.208	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.093	0.029	0.014	0.005	0.000	0.000	0.000	0.000	0.057	0.339	
31-May	0.000	Z	0.000	0.003	0.032	0.000	0.000	0.005	0.019	0.067	0.001	0.000	0.006	0.000	0.015	0.111	0.051	0.052	0.066	0.028	0.018	0.011	0.015	0.029	0.023	0.111	
0.001 0.002 0.016 0.014 0.008 0.009 0.009 0.003 0.004 0.008 0.001 0.001 0.003 0.004 0.002 0.008 0.014 0.004 0.004 0.003 0.006 0.011 0.008 0.010																										Diurnal Average	
0.013 0.011 0.339 0.226 0.133 0.187 0.208 0.038 0.042 0.097 0.008 0.012 0.022 0.051 0.017 0.111 0.189 0.052 0.066 0.028 0.060 0.189 0.109 0.232																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	604	85.19	85.19
0.006 - 0.05	88	12.41	97.60
0.06 - 0.1	10	1.41	99.01
> 0.1	7	0.99	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	26	13	3	7	5	9	187	132	40	23	34	37	27	25	20	16	604
0.006 - 0.05	20	37	5	0	2	1	5	4	1	1	0	0	2	2	2	6	88
0.06 - 0.1	2	2	0	1	0	0	0	1	0	1	0	1	2	0	0	0	10
> 0.1	0	1	2	0	0	0	0	0	0	0	0	1	2	1	0	0	7
Totals	48	53	10	8	7	10	192	137	41	25	34	39	33	28	22	22	709

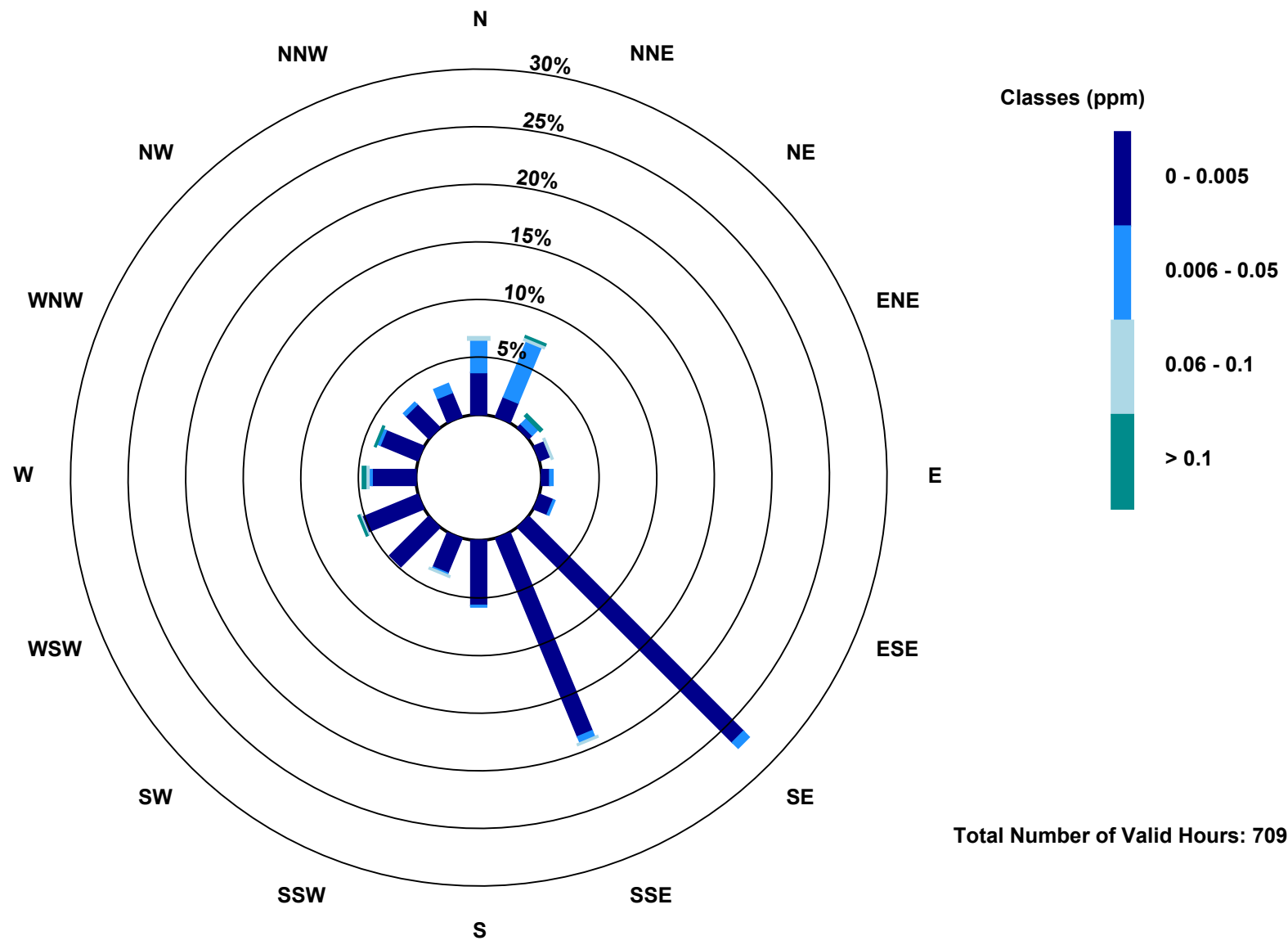
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Mannix



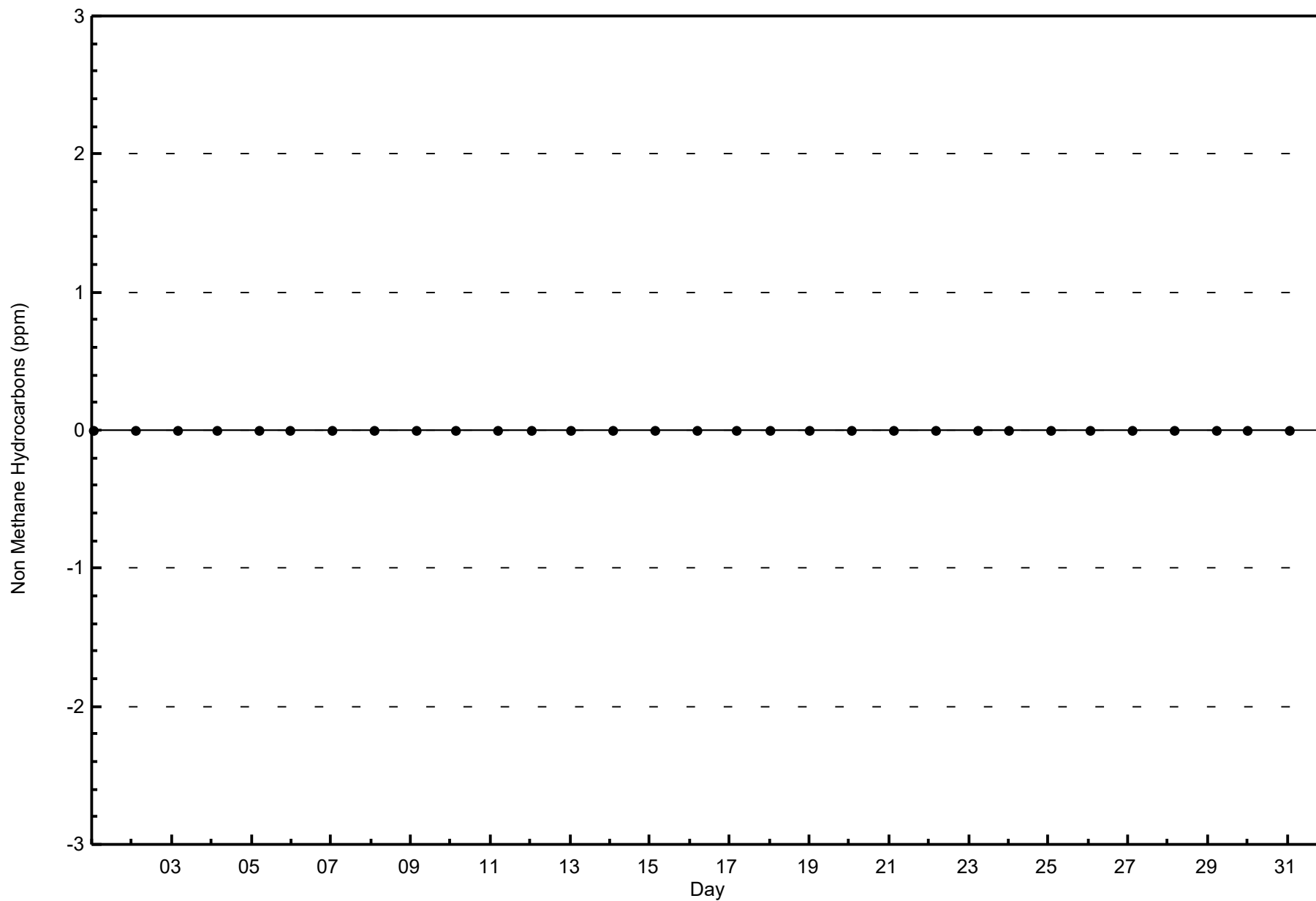


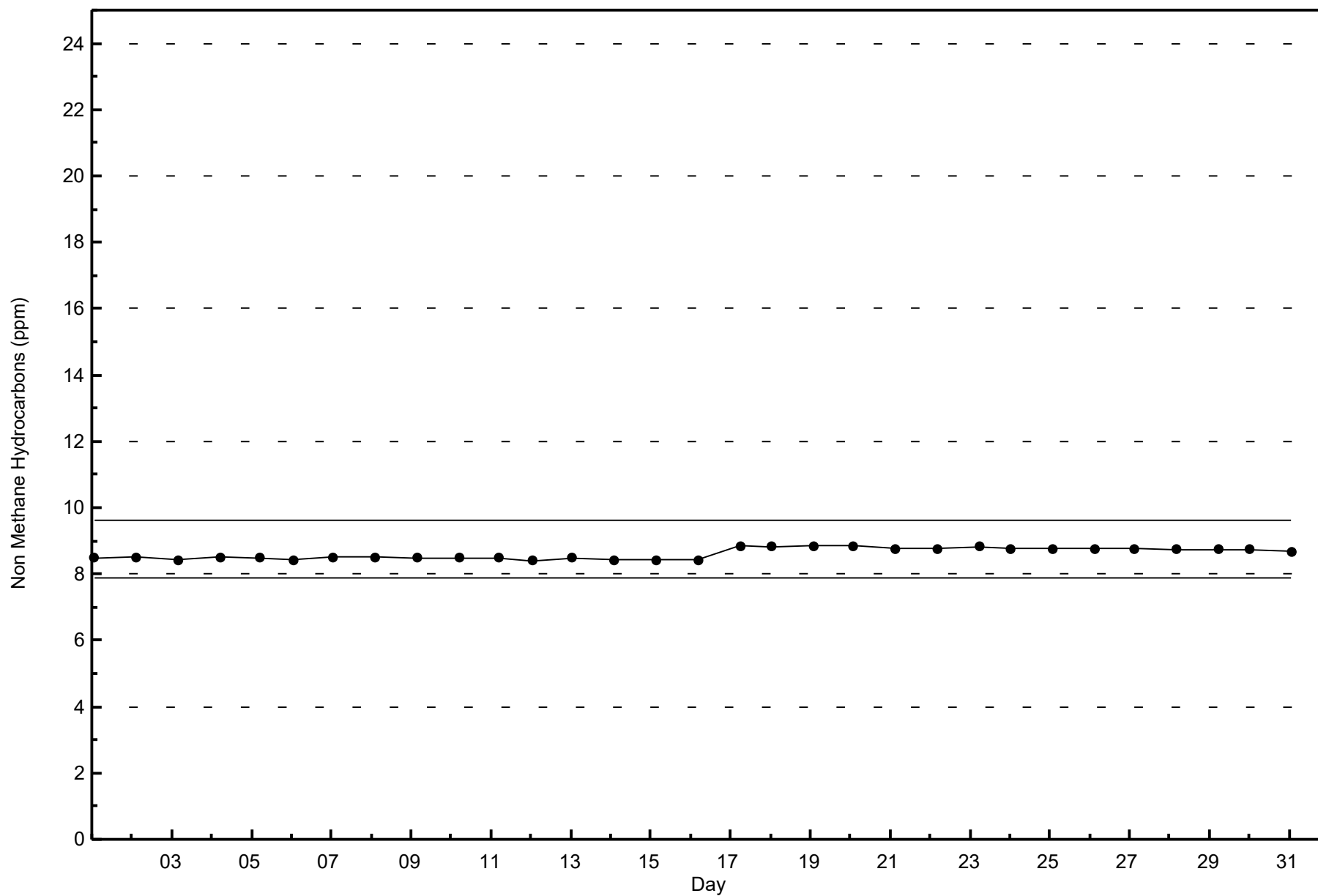
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

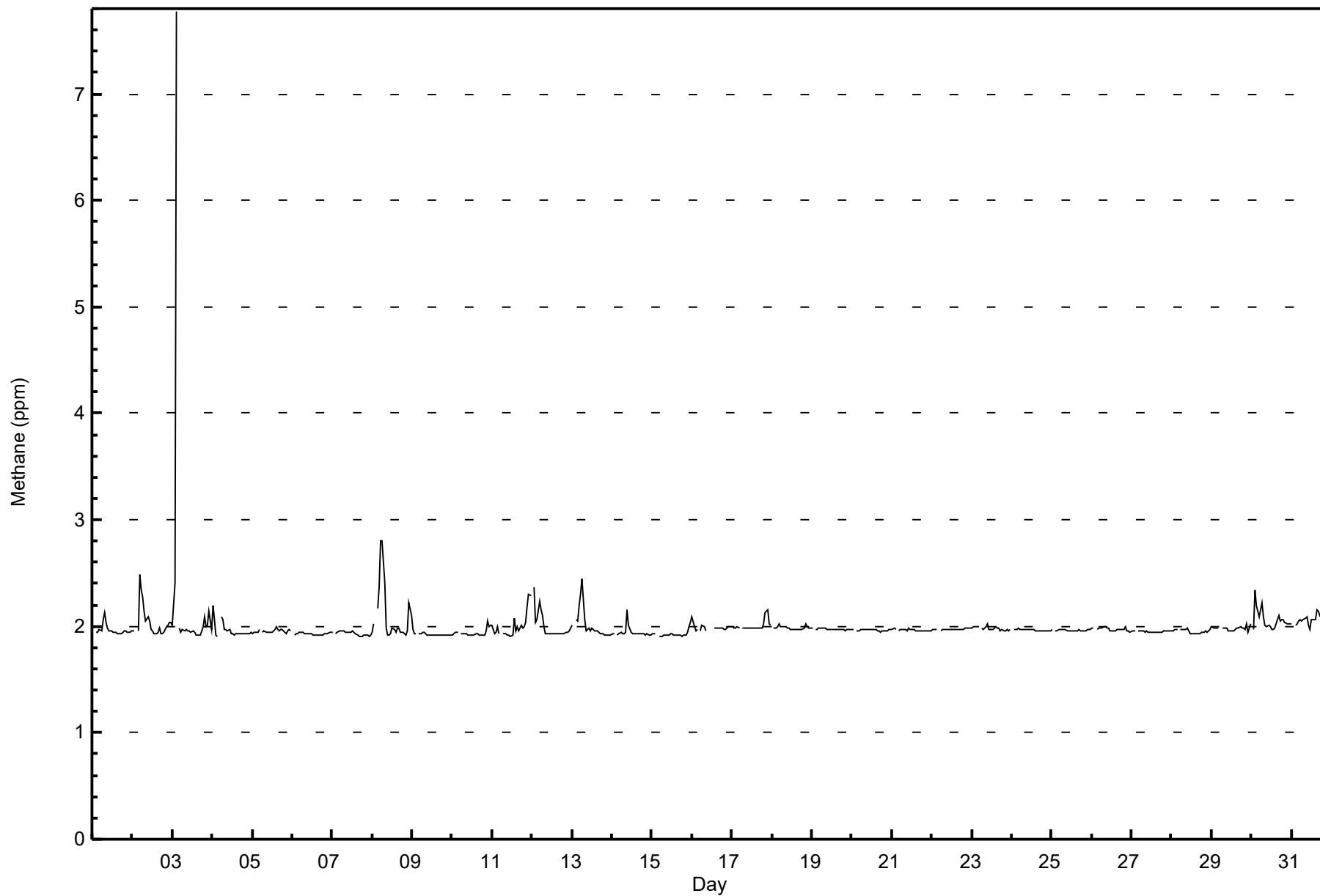
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744									
Maximum Value: 7.8 ppm on May 3 03:00 Maximum Daily Average: 2.2 ppm on May 3																		Hours of Data: 709									
Minimum Value: 1.9 ppm on May 4 04:00 Minimum Daily Average: 1.9 ppm on May 9																		Hours of Missing Data: 35									
Maximum Diurnal Average: 2.2 ppm at hour 3 Minimum Diurnal Average: 2.0 ppm at hour 12																		Hours of Calibration: 34									
Monthly Average: 1.99 ppm Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.4																		Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	1.9	Z	1.9	1.9	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1
2-May	2.0	2.0	Z	2.0	2.5	2.3	2.3	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.5
3-May	2.0	2.4	7.8	Z	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.1	2.0	2.2	7.8	
4-May	2.2	2.1	1.9	1.9	Z	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	
5-May	1.9	1.9	1.9	1.9	2.0	Z	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	
6-May	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
7-May	1.9	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
8-May	1.9	2.0	Z	2.2	2.4	2.8	2.8	2.4	2.0	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.8	
9-May	2.0	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
10-May	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	
11-May	2.0	1.9	1.9	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.3	2.0	2.3	
12-May	Z	2.4	2.0	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.4	
13-May	2.0	Z	2.1	2.1	2.2	2.3	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5	
14-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	
15-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	
16-May	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	C	C	C	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
17-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	
18-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
19-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
21-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
22-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
23-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
24-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
25-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
26-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	
28-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	
29-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	
30-May	Z	2.0	2.3	2.2	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	
31-May	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	
2.0 2.0 2.2 2.0																									Diurnal Average		
2.2 2.4 7.8 2.2 2.5 2.8 2.8 2.4 2.1 2.2 2.0 2.0 2.1 2.1 2.1 2.2 2.1 2.1 2.1 2.1 2.1 2.2 2.3 2.3																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	640	90.27	90.27
2.1 - 3.0	68	9.59	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Mannix - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	34	52	6	6	6	10	188	132	40	22	33	34	26	24	15	12	640
2.1 - 3.0	14	1	4	2	1	0	3	5	1	3	1	5	7	4	7	10	68
3.1 - 10.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	53	10	8	7	10	192	137	41	25	34	39	33	28	22	22	709

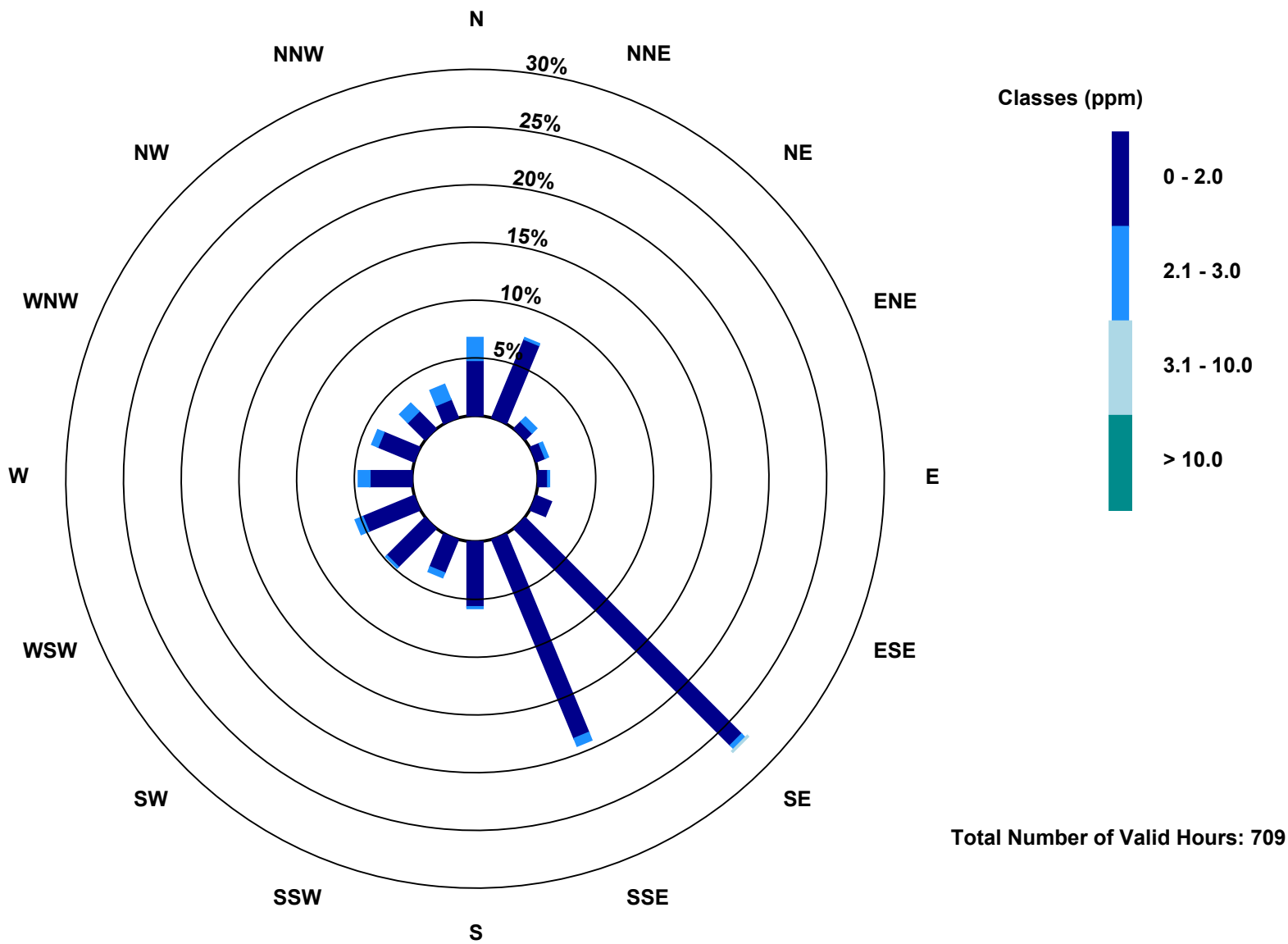
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

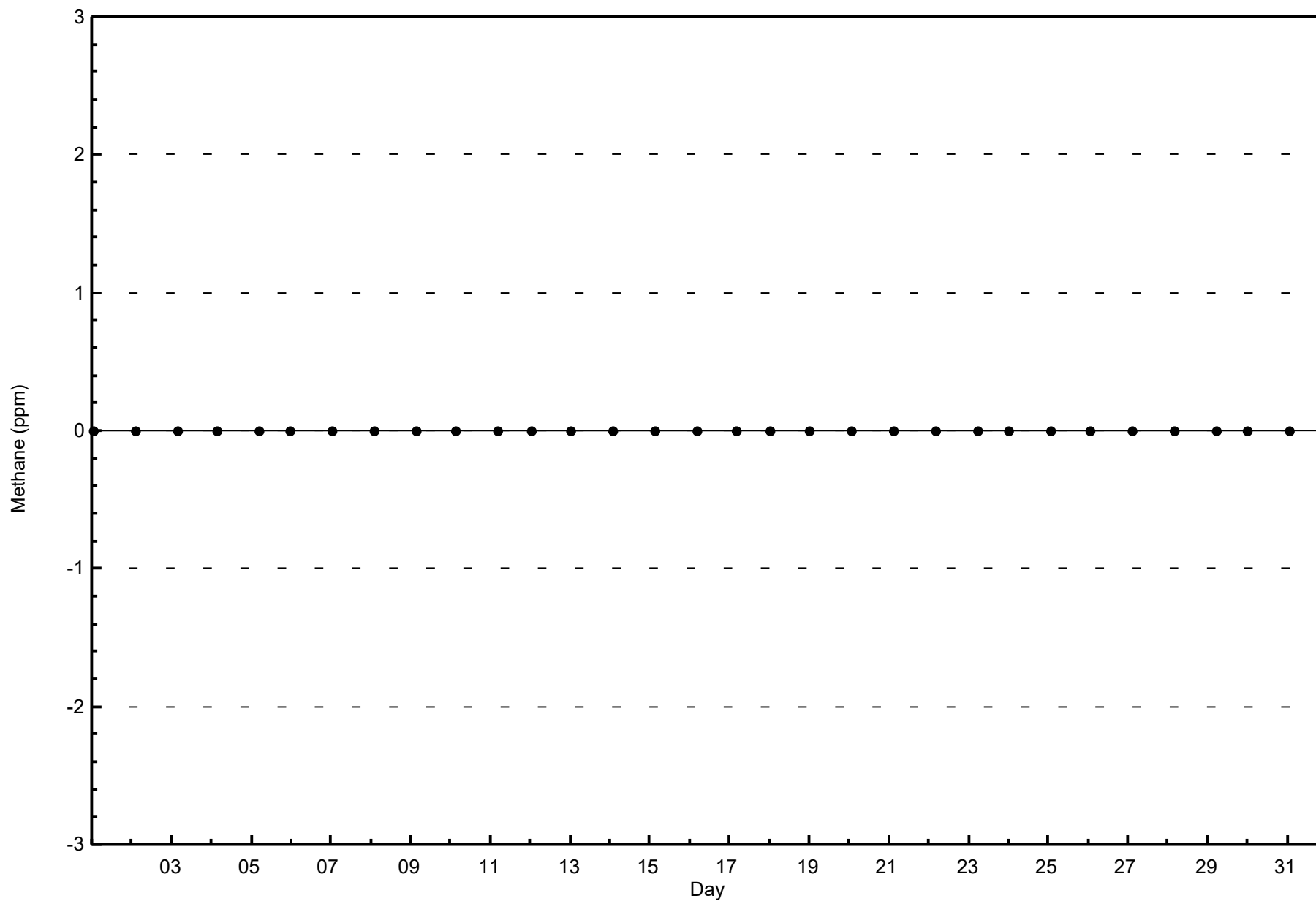
Methane (CH₄) - ppm
Mannix





Wood Buffalo Environmental Association
Zero Responses

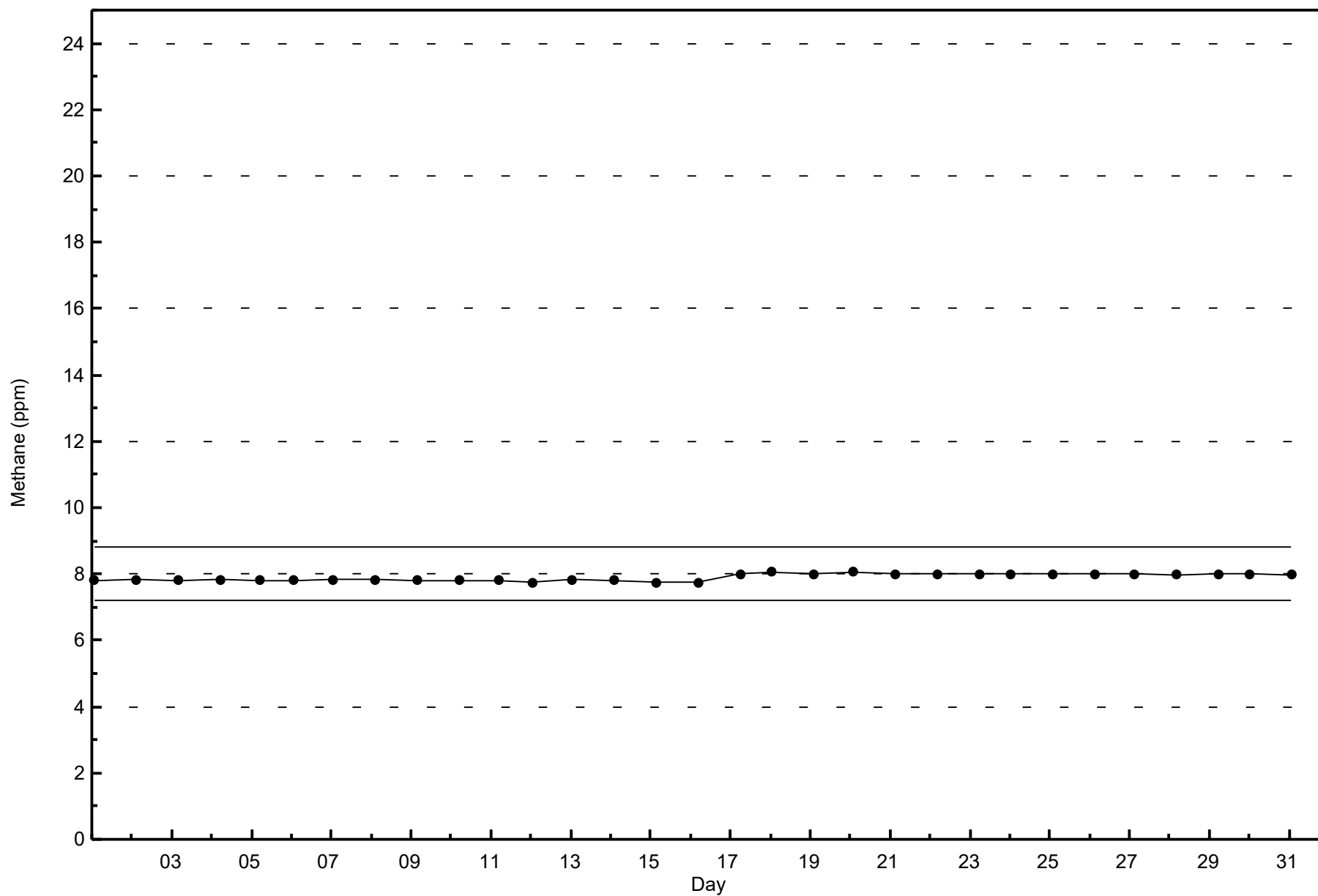
Methane (CH₄) - ppm
Mannix - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

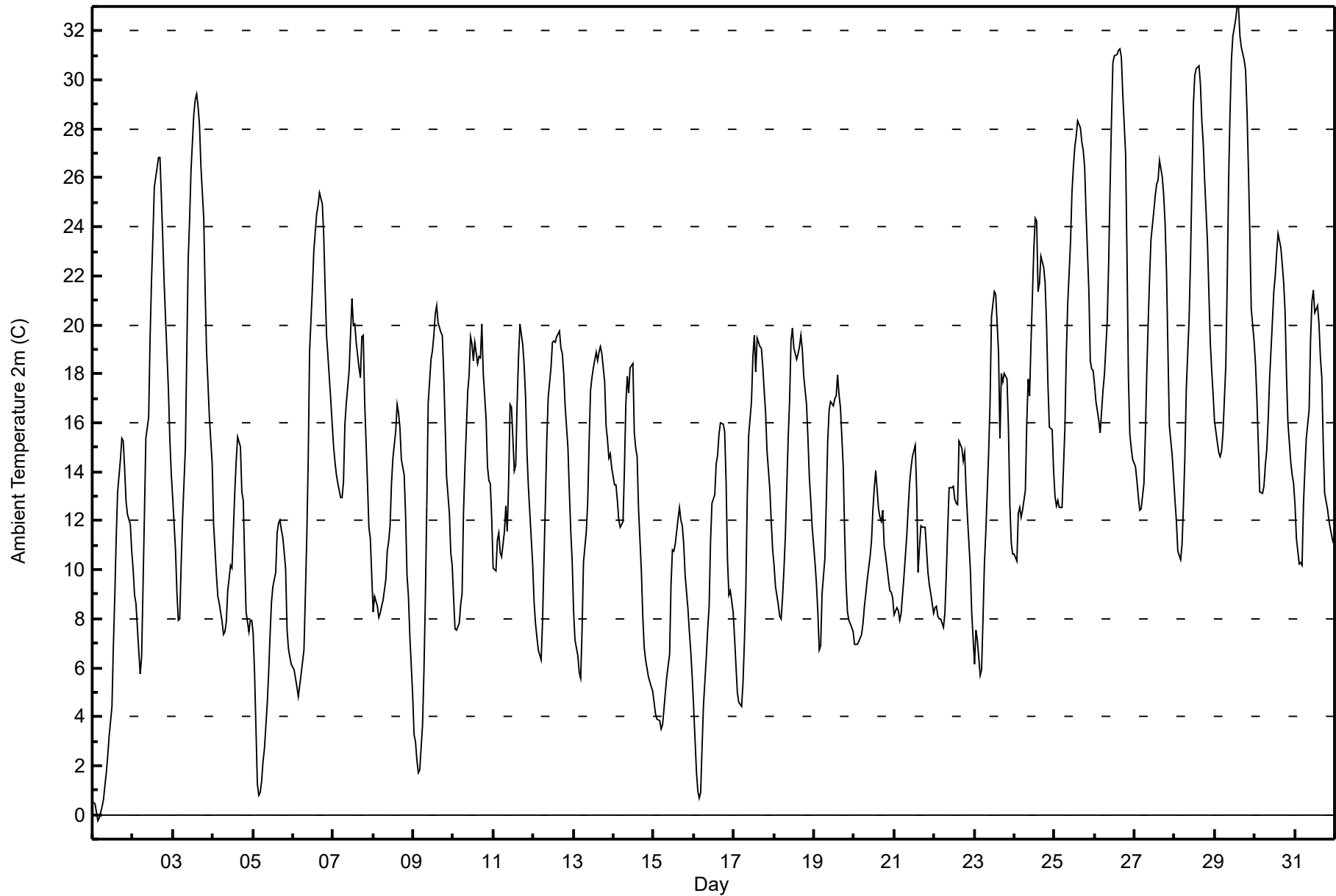
Mannix - May 2025

Maximum Value: 33.0 C on May 29 14:00																				Maximum Daily Average: 24.6 C on May 29					Hours in Service: 744			
Minimum Value: -0.3 C on May 1 04:00																				Minimum Daily Average: 6.7 C on May 1					Hours of Data: 744			
Maximum Diurnal Average: 19.8 C at hour 15																				Minimum Diurnal Average: 8.1 C at hour 5					Hours of Missing Data: 0			
Monthly Average: 14.34 C																				Percentiles: P ₁ = 0.7 P ₁₀ = 6.6 Q ₁ = 9.4 Median = 13.6 Q ₃ = 18.6 P ₉₀ = 23.6 P ₉₉ = 31.1					Hours of Calibration: 0			
																									Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	0.5	0.4	0.1	-0.3	-0.2	0.3	0.6	1.2	1.7	2.4	3.2	4.4	6.9	8.9	11.3	13.2	14.5	15.4	15.3	14.1	12.8	12.2	11.8	10.7	6.7	15.4		
2-May	10.0	9.0	8.6	6.7	5.7	6.4	9.3	12.3	15.4	16.2	19.4	21.8	23.6	25.6	26.4	26.8	26.8	25.2	23.5	21.7	18.8	17.3	15.3	13.9	16.9	26.8		
3-May	13.0	10.8	9.1	7.9	8.0	10.2	12.1	15.0	18.9	22.7	24.3	26.3	28.6	29.2	29.4	28.9	28.2	26.5	24.4	21.4	19.0	17.6	16.2	14.3	19.2	29.4		
4-May	11.8	10.8	9.8	8.9	8.6	7.9	7.4	7.4	7.9	9.1	10.2	10.1	11.6	13.2	14.4	15.4	15.0	13.2	12.8	10.4	8.3	7.5	7.9	7.9	10.3	15.4		
5-May	7.4	5.8	1.3	0.8	0.9	1.4	2.2	2.7	4.6	5.8	7.4	8.7	9.3	9.9	11.5	11.9	12.0	11.6	11.3	10.1	7.6	6.8	6.4	6.1	6.8	12.0		
6-May	5.9	5.5	5.2	4.8	5.3	5.7	6.7	9.0	11.3	14.4	19.0	21.5	23.1	23.8	24.6	24.9	25.4	24.9	23.7	21.5	19.6	18.7	16.9	15.9	15.7	25.4		
7-May	15.0	14.4	13.9	13.5	12.9	12.9	13.6	16.0	16.8	18.1	19.6	21.1	20.0	20.1	19.3	18.2	17.8	19.5	19.6	16.9	13.5	11.7	11.3	9.8	16.1	21.1		
8-May	8.3	8.9	8.5	8.1	8.2	8.5	8.7	9.6	10.7	11.2	11.8	13.5	14.5	15.7	16.7	16.4	15.8	14.5	13.9	12.2	9.8	8.9	7.3	4.9	11.1	16.7		
9-May	3.3	3.0	2.3	1.7	1.8	3.7	5.9	8.8	12.6	16.8	18.6	18.9	19.5	20.4	20.8	20.1	19.7	19.6	18.0	15.9	13.8	12.3	10.7	10.2	12.4	20.8		
10-May	8.9	7.6	7.5	7.8	8.6	9.1	12.3	14.2	17.3	18.0	19.5	19.2	18.6	19.3	18.4	18.7	18.7	20.0	18.0	16.2	14.2	13.6	13.5	12.1	14.6	20.0		
11-May	10.1	9.9	11.2	11.5	10.7	10.5	11.6	12.6	11.5	13.6	16.7	16.6	14.0	14.3	16.8	18.7	20.0	19.2	18.3	17.1	14.7	13.4	12.3	10.3	14.0	20.0		
12-May	8.7	7.8	7.3	6.7	6.3	7.9	10.3	12.7	15.2	17.0	18.3	19.3	19.3	19.3	19.5	19.8	19.1	18.8	18.0	16.7	15.0	13.2	11.5	10.4	14.1	19.8		
13-May	8.3	7.1	6.5	5.8	5.6	7.6	10.3	11.6	12.8	15.3	17.3	17.9	18.2	18.9	18.5	18.9	19.1	18.8	17.7	15.9	15.3	14.6	14.7	14.1	13.8	19.1		
14-May	13.5	13.5	12.9	12.0	11.7	12.0	14.1	16.8	17.9	17.2	18.2	18.4	15.6	14.9	14.6	12.5	10.0	8.1	6.8	6.3	6.0	5.7	5.2	5.1	12.0	18.4		
15-May	4.6	4.1	3.9	3.9	3.5	3.7	4.3	5.0	5.7	6.5	9.4	10.8	10.7	11.0	12.1	12.5	12.1	11.8	11.1	9.8	8.4	7.5	6.6	5.6	7.7	12.5		
16-May	4.4	1.8	1.0	0.6	0.9	2.7	4.5	6.4	7.6	8.5	11.2	12.7	13.0	14.3	14.7	15.5	16.0	15.9	15.7	13.6	10.4	9.0	9.1	8.3	9.1	16.0		
17-May	7.2	6.1	5.0	4.6	4.4	5.4	7.1	9.2	13.0	15.5	16.9	18.7	19.6	18.1	19.5	19.1	19.0	18.3	17.3	16.4	14.8	13.3	12.0	10.8	13.0	19.6		
18-May	10.2	9.3	8.6	8.1	8.0	8.8	10.0	11.4	15.4	16.9	19.4	19.9	19.1	18.6	18.8	19.1	19.6	19.0	17.9	16.8	15.3	13.8	12.8	11.7	14.5	19.9		
19-May	10.3	9.5	8.3	6.7	6.9	9.0	10.5	12.8	15.2	16.5	16.9	16.7	17.0	17.1	18.0	17.2	16.6	14.2	11.4	9.4	8.3	8.0	7.7	7.5	12.1	18.0		
20-May	7.0	7.0	6.9	7.1	7.3	7.8	8.5	9.0	9.6	10.5	11.1	12.4	13.4	14.1	12.5	12.1	12.0	12.4	11.0	10.6	9.6	9.1	9.1	8.8	10.0	14.1		
21-May	8.2	8.5	8.3	8.0	8.2	9.0	9.7	11.4	12.5	13.6	14.1	14.6	15.1	13.2	9.9	11.0	11.8	11.7	11.7	10.8	9.9	9.4	9.0	8.2	10.7	15.1		
22-May	8.4	8.5	8.1	8.0	8.0	7.6	8.2	9.8	11.7	13.4	13.3	13.4	12.9	12.7	12.7	15.3	14.9	14.4	14.8	13.3	12.1	10.0	8.3	7.2	11.1	15.3		
23-May	6.2	7.5	7.1	5.7	5.9	8.0	10.2	11.6	14.8	16.9	20.3	20.9	21.4	21.3	18.9	15.4	18.0	17.7	18.0	17.8	15.8	12.7	11.1	10.7	13.9	21.4		
24-May	10.6	10.3	12.3	12.6	12.2	12.4	13.3	16.0	17.8	17.1	19.3	23.1	24.4	24.2	21.3	21.7	22.8	22.3	21.7	20.0	17.5	15.8	15.7	14.1	17.4	24.4		
25-May	13.0	12.6	12.8	12.6	12.5	14.1	15.8	18.8	20.8	23.4	25.4	26.4	27.2	27.7	28.3	28.0	27.5	27.1	26.4	24.6	21.4	18.5	18.2	18.2	20.9	28.3		
26-May	17.6	16.8	16.1	15.6	16.4	17.3	17.9	20.2	22.5	25.6	28.3	30.7	31.0	31.0	31.2	31.3	30.9	29.4	27.0	22.8	17.9	15.6	15.0	14.5	22.6	31.3		
27-May	14.2	13.7	13.0	12.4	12.5	13.5	15.5	18.0	20.1	21.9	23.5	24.6	25.3	25.7	25.9	26.7	26.0	25.3	24.1	22.1	18.9	15.9	14.7	13.8	19.5	26.7		
28-May	12.8	12.0	10.8	10.4	11.1	12.7	14.6	17.4	20.2	22.7	25.8	29.0	30.2	30.5	30.6	29.8	28.3	27.4	25.9	23.4	21.3	19.3	18.1	17.1	20.9	30.6		
29-May	16.1	15.2	14.8	14.6	14.9	15.6	18.3	21.8	26.0	28.7	30.9	31.8	32.5	33.0	32.9	31.8	31.4	30.8	30.4	28.8	26.4	23.8	20.7	19.3	24.6	33.0		
30-May	18.4	17.0	15.1	13.2	13.1	13.4	14.3	14.9	16.1	17.8	20.2	21.4	22.0	22.9	23.7	23.1	22.4	21.7	20.5	17.9	16.0	14.4	13.8	13.5	17.8	23.7		
31-May	12.7	11.3	10.2	10.3	10.2	12.6	14.1	15.4	16.5	19.3	21.0	21.4	20.5	20.8	20.0	18.7	17.8	15.1	13.1	12.5	12.0	11.7	11.4	11.1	15.0	21.4		
9.9 9.2 8.6 8.1 8.1 9.0 10.4 12.2 14.2 15.9 17.8 18.9 19.3 19.7 19.8 19.8 19.7 19.0 18.0 16.3 14.3 12.9 12.1 11.2																										Diurnal Average		
18.4 17.0 16.1 15.6 16.4 17.3 18.3 21.8 26.0 28.7 30.9 31.8 32.5 33.0 32.9 31.8 31.4 30.8 30.4 28.8 26.4 23.8 20.7 19.3																										Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Mannix - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	2	0.27	0.27
0 - 10	201	27.02	27.28
10 - 20	410	55.11	82.39
> 20	131	17.61	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

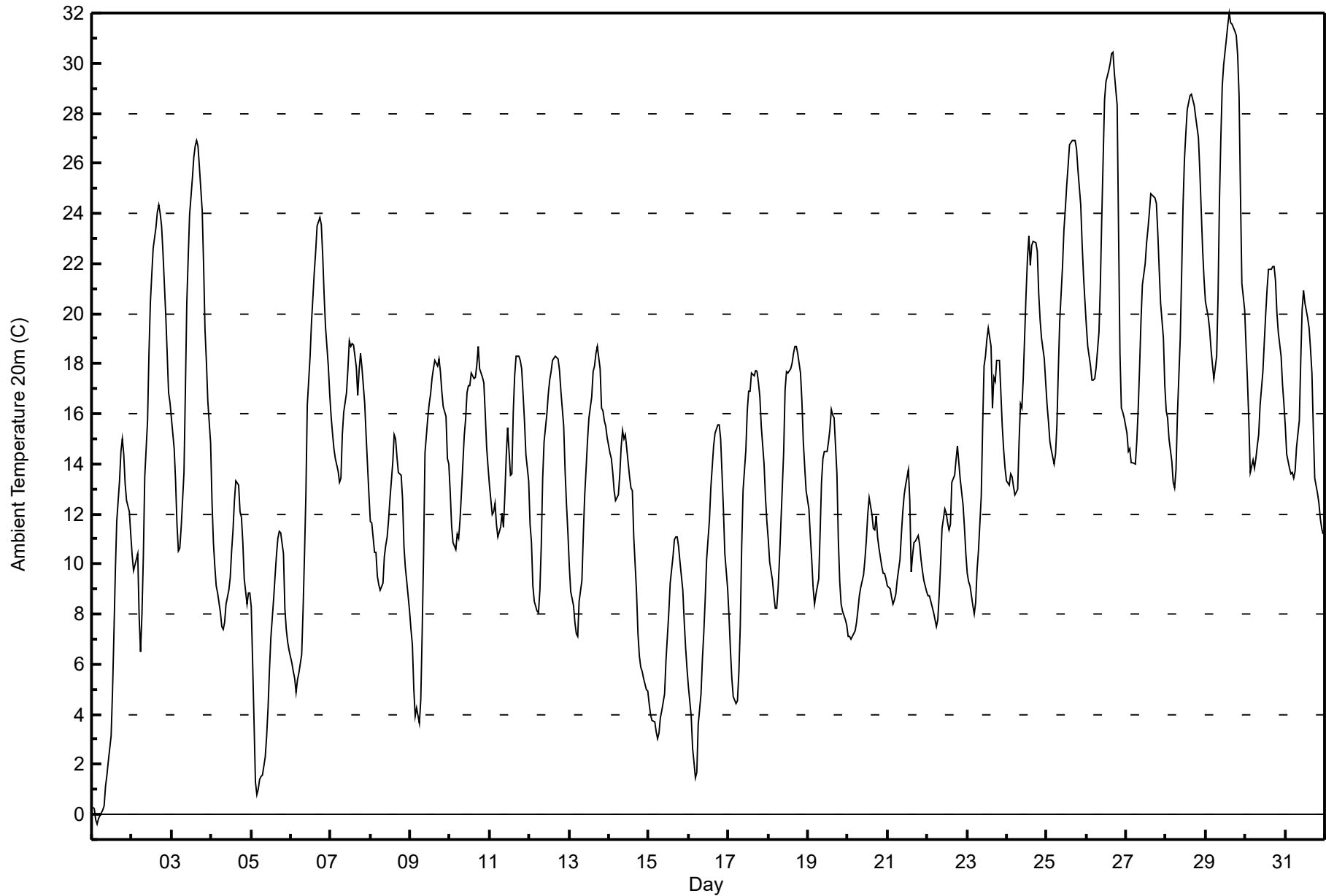
Mannix - May 2025

Maximum Value: 32.0 C on May 29 15:00																				Maximum Daily Average: 25.3 C on May 29					Hours in Service: 744		
Minimum Value: -0.4 C on May 1 04:00																				Minimum Daily Average: 6.1 C on May 5					Hours of Data: 744		
Maximum Diurnal Average: 18.7 C at hour 17																				Minimum Diurnal Average: 9.1 C at hour 6					Hours of Missing Data: 0		
Monthly Average: 14.26 C																				Percentiles: P ₁ = 0.5 P ₁₀ = 7.0 Q ₁ = 9.9 Median = 13.9 Q ₃ = 17.9 P ₉₀ = 22.8 P ₉₉ = 30.4					Hours of Calibration: 0		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.3	0.2	-0.2	-0.4	-0.2	0.0	0.2	0.4	1.1	1.6	2.1	3.1	4.9	7.2	9.7	11.7	13.3	14.5	15.0	14.4	13.2	12.6	12.1	11.2	6.2	15.0	
2-May	10.4	9.7	10.0	10.4	7.9	6.5	8.0	10.3	13.5	15.7	18.4	20.4	21.5	22.6	23.4	24.1	24.3	24.0	23.5	22.4	19.9	18.4	16.8	16.4	16.6	24.3	
3-May	15.8	14.6	13.3	11.6	10.5	10.6	11.5	13.7	17.0	20.4	22.2	24.0	25.4	26.3	26.7	26.9	26.7	25.8	24.1	21.9	19.4	18.1	16.5	14.8	19.1	26.9	
4-May	12.5	10.9	9.9	9.1	8.8	8.0	7.5	7.4	7.7	8.4	9.0	9.4	10.5	11.3	12.5	13.3	13.2	12.1	11.8	10.9	9.4	8.4	8.8	8.9	10.0	13.3	
5-May	8.3	6.1	1.3	0.8	1.0	1.4	1.5	1.6	2.3	3.1	4.3	5.7	7.0	8.6	9.5	10.3	11.1	11.3	11.2	10.4	8.3	7.4	6.9	6.5	6.1	11.3	
6-May	6.0	5.7	5.4	4.9	5.4	5.6	6.4	8.2	10.3	12.8	16.4	18.3	19.7	20.7	21.6	22.5	23.5	23.8	23.6	22.3	20.7	19.5	17.9	16.8	14.9	23.8	
7-May	15.9	15.2	14.6	14.2	13.7	13.3	13.5	15.2	16.1	16.8	17.8	18.9	18.7	18.8	18.7	17.8	16.7	17.7	18.4	17.8	16.4	15.1	13.9	12.8	16.2	18.9	
8-May	11.7	11.7	10.5	10.5	9.5	9.2	8.9	9.2	10.3	10.8	11.1	11.8	12.6	14.0	15.2	15.0	14.3	13.7	13.5	12.6	10.7	9.9	9.3	8.1	11.4	15.2	
9-May	7.4	6.8	5.0	3.9	4.3	3.7	4.6	7.3	10.4	14.4	15.8	16.4	16.8	17.4	17.8	18.2	17.9	18.2	17.7	16.9	16.3	15.9	14.2	14.0	12.6	18.2	
10-May	12.9	11.5	10.8	10.6	11.2	11.0	11.7	12.8	15.1	15.8	16.8	17.1	17.1	17.6	17.4	17.4	18.0	18.7	17.8	17.4	17.2	16.0	14.7	13.9	15.0	18.7	
11-May	13.1	12.0	12.1	12.4	11.6	11.1	11.5	12.0	11.5	12.8	14.3	15.4	13.6	13.6	16.1	17.5	18.3	18.3	18.1	17.8	16.8	15.7	14.4	13.3	14.3	18.3	
12-May	11.6	10.8	9.1	8.5	8.1	8.1	9.0	10.7	13.4	14.9	16.0	16.8	17.3	17.7	18.1	18.3	18.3	18.2	17.7	16.9	15.5	13.7	12.4	11.2	13.8	18.3	
13-May	9.9	8.9	8.3	7.7	7.2	7.1	8.5	9.3	11.2	12.8	13.8	14.9	15.8	16.7	17.7	17.9	18.4	18.7	17.8	16.2	16.1	15.7	15.5	15.1	13.4	18.7	
14-May	14.5	14.2	13.7	13.0	12.6	12.7	13.5	14.7	15.3	15.0	15.1	14.1	13.5	13.0	12.9	11.1	8.9	7.2	6.3	5.9	5.7	5.4	5.0	4.9	11.2	15.3	
15-May	4.5	4.0	3.7	3.7	3.3	3.0	3.3	3.9	4.1	4.8	6.2	7.1	8.0	9.2	10.3	10.9	11.1	11.1	10.7	10.1	8.9	7.7	6.7	5.8	6.8	11.1	
16-May	5.1	3.9	2.6	2.1	1.4	1.7	3.6	4.8	6.2	7.3	8.6	10.2	11.8	13.0	13.9	14.7	15.2	15.5	15.6	15.0	13.6	12.1	10.4	9.0	9.1	15.6	
17-May	7.9	6.6	5.4	4.7	4.4	4.6	5.7	7.5	10.6	12.9	14.5	16.1	16.9	16.9	17.7	17.5	17.7	17.7	17.2	16.7	15.5	14.0	12.7	11.7	12.2	17.7	
18-May	11.0	10.1	9.3	8.7	8.2	8.2	9.0	10.2	13.0	14.5	17.0	17.7	17.6	17.8	18.0	18.4	18.7	18.7	18.4	17.6	16.5	14.9	13.9	12.9	14.2	18.7	
19-May	12.2	11.1	10.2	9.1	8.4	8.8	9.4	11.3	13.2	14.2	14.5	14.5	14.9	15.4	16.2	16.0	15.8	13.6	11.0	9.3	8.4	8.1	7.8	7.6	11.7	16.2	
20-May	7.1	7.1	7.0	7.1	7.3	7.7	8.2	8.7	9.1	9.6	10.2	11.0	12.0	12.7	12.0	11.4	11.3	11.9	11.1	10.6	9.9	9.6	9.7	9.4	9.6	12.7	
21-May	9.1	9.0	8.7	8.4	8.6	8.8	9.3	10.2	11.2	12.1	12.7	13.2	13.8	12.5	9.7	10.3	10.9	10.9	11.2	10.8	10.2	9.7	9.3	8.9	10.4	13.8	
22-May	8.8	8.7	8.5	8.3	8.0	7.5	7.8	8.8	10.0	11.4	12.2	12.0	11.6	11.4	11.6	13.3	13.5	14.2	14.7	14.0	13.4	12.4	11.5	10.4	11.0	14.7	
23-May	9.6	9.3	9.1	8.3	8.0	8.5	9.8	10.5	12.7	15.5	17.9	18.3	19.0	19.4	18.7	16.2	17.4	17.3	18.1	18.1	16.8	15.5	14.5	13.8	14.3	19.4	
24-May	13.3	13.2	13.6	13.5	13.1	12.8	13.0	14.9	16.4	16.2	17.4	20.8	22.2	23.1	21.9	22.7	22.9	22.8	22.5	20.8	19.8	19.0	18.2	17.2	18.0	23.1	
25-May	16.4	15.7	14.9	14.6	14.0	14.4	15.6	17.7	19.7	21.9	23.3	24.2	25.1	25.9	26.7	26.9	26.9	26.9	26.6	25.7	24.3	22.7	21.5	20.5	21.3	26.9	
26-May	19.5	18.7	17.9	17.3	17.3	17.4	17.9	19.2	21.1	23.8	26.2	28.6	29.3	29.7	30.0	30.4	30.4	29.6	28.3	23.3	18.4	16.2	16.0	15.9	22.6	30.4	
27-May	15.2	14.5	14.6	14.1	14.1	14.0	14.9	16.1	17.8	19.7	21.2	22.0	22.8	23.4	24.0	24.8	24.7	24.6	24.4	23.2	21.8	20.4	19.0	17.1	19.5	24.8	
28-May	16.1	15.8	15.0	14.1	13.3	13.0	13.8	15.9	19.0	21.5	24.3	26.1	27.2	28.1	28.7	28.8	28.5	28.3	27.8	27.0	25.7	24.1	22.6	21.4	21.9	28.8	
29-May	20.5	19.9	19.4	18.6	17.9	17.4	18.3	20.7	24.5	27.0	29.1	29.9	31.0	31.6	32.0	31.6	31.6	31.3	31.1	30.3	28.7	24.8	21.2	20.1	25.3	32.0	
30-May	18.7	17.3	15.7	13.6	14.1	13.8	14.2	14.7	15.2	16.3	17.7	18.9	20.0	21.0	21.8	21.7	21.9	21.9	21.3	20.0	19.3	18.3	17.2	16.4	18.0	21.9	
31-May	15.5	14.4	13.8	13.6	13.7	13.4	13.7	14.6	15.7	18.1	20.1	20.9	20.4	19.8	19.4	18.6	17.6	15.4	13.4	12.8	12.4	11.8	11.4	11.2	15.5	20.9	
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 20m (AT20) - C
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 20m (AT20) - C
Mannix - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.40	0.40
0 - 10	186	25.00	25.40
10 - 20	436	58.60	84.01
> 20	119	15.99	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 45m (AT45) - C

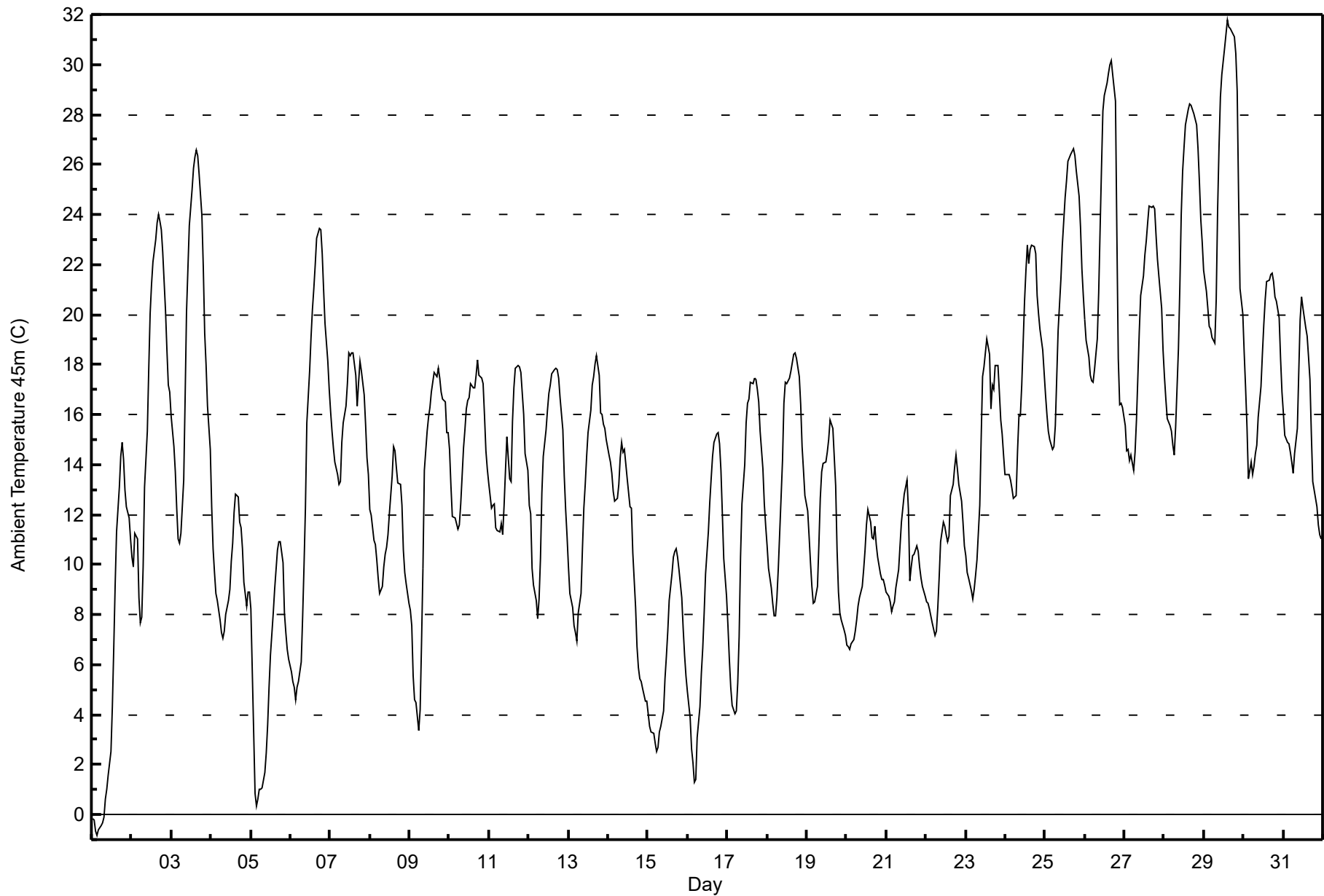
Mannix - May 2025

Maximum Value: 31.8 C on May 29 15:00																				Maximum Daily Average: 25.6 C on May 29					Hours in Service: 744	
Minimum Value: -0.8 C on May 1 04:00																				Minimum Daily Average: 5.7 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 18.3 C at hour 17																				Minimum Diurnal Average: 9.2 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 14.11 C																				Percentiles: P ₁ = 0.1 P ₁₀ = 6.6 Q ₁ = 9.8 Median = 13.8 Q ₃ = 17.7 P ₉₀ = 22.8 P ₉₉ = 30.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	-0.2	-0.2	-0.6	-0.8	-0.6	-0.5	-0.3	-0.1	0.6	1.0	1.6	2.5	4.3	6.7	9.2	11.3	13.1	14.3	14.9	14.2	13.0	12.3	11.9	11.0	5.8	14.9
2-May	10.3	9.9	11.3	11.0	8.7	7.7	7.9	9.9	13.1	15.3	17.8	20.0	21.2	22.1	23.0	23.7	24.0	23.7	23.4	22.5	20.1	18.6	17.2	16.9	16.6	24.0
3-May	15.9	14.7	13.7	12.2	11.0	10.8	11.3	13.3	16.6	20.1	21.8	23.5	25.0	25.9	26.3	26.6	26.4	25.6	24.0	21.9	19.2	18.0	16.3	14.6	18.9	26.6
4-May	12.3	10.6	9.7	8.8	8.6	7.8	7.3	7.1	7.3	8.0	8.6	9.0	10.1	10.8	12.1	12.8	12.7	11.7	11.5	10.6	9.3	8.3	8.9	8.9	9.7	12.8
5-May	8.2	5.8	0.9	0.3	0.6	1.0	1.0	1.1	1.7	2.5	3.6	5.1	6.4	8.0	9.0	9.8	10.6	10.9	10.9	10.1	8.0	7.3	6.6	6.2	5.7	10.9
6-May	5.7	5.3	5.1	4.6	5.1	5.3	6.1	7.9	10.0	12.3	15.7	17.7	19.1	20.2	21.0	22.0	23.1	23.4	23.4	22.4	21.0	19.6	18.2	17.0	14.6	23.4
7-May	16.1	15.3	14.6	14.1	13.6	13.2	13.3	14.9	15.7	16.3	17.3	18.5	18.4	18.5	18.5	17.6	16.3	17.3	18.1	17.7	16.8	15.6	14.3	13.6	16.1	18.5
8-May	12.2	12.0	11.0	10.8	10.2	9.5	8.8	9.1	9.9	10.4	10.7	11.2	12.1	13.5	14.7	14.6	13.9	13.3	13.2	12.3	10.6	9.7	9.2	8.5	11.3	14.7
9-May	8.2	7.5	5.5	4.6	4.5	3.3	4.2	6.9	9.9	13.8	15.3	15.9	16.3	16.9	17.3	17.7	17.5	17.8	17.4	16.9	16.6	16.5	15.3	15.3	12.5	17.8
10-May	14.6	13.1	11.9	11.9	11.7	11.4	11.6	12.4	14.7	15.4	16.2	16.6	16.7	17.2	17.1	17.0	17.6	18.2	17.6	17.5	17.2	16.0	14.6	13.8	15.1	18.2
11-May	13.2	12.3	12.4	12.4	11.5	11.4	11.3	11.6	11.2	12.4	13.7	15.1	13.5	13.3	15.7	17.0	17.8	18.0	17.9	17.7	16.8	16.0	14.5	13.8	14.2	18.0
12-May	12.3	12.0	9.8	9.2	8.6	7.9	8.6	10.3	12.9	14.3	15.4	16.2	16.8	17.2	17.6	17.8	17.8	17.8	17.4	16.7	15.4	13.6	12.2	11.1	13.7	17.8
13-May	9.9	8.8	8.3	7.6	7.3	6.9	8.1	8.9	10.6	12.3	13.2	14.3	15.3	16.2	17.2	17.5	18.0	18.3	17.6	16.1	16.0	15.6	15.4	15.0	13.1	18.3
14-May	14.4	14.1	13.6	12.9	12.5	12.7	13.2	14.2	14.9	14.5	14.6	13.4	12.9	12.3	12.3	10.4	8.3	6.7	5.9	5.4	5.3	5.0	4.6	4.5	10.8	14.9
15-May	4.0	3.5	3.3	3.3	2.9	2.5	2.7	3.3	3.5	4.1	5.5	6.3	7.3	8.6	9.6	10.3	10.5	10.6	10.3	9.8	8.7	7.5	6.4	5.6	6.3	10.6
16-May	4.9	3.8	2.6	2.1	1.3	1.4	3.1	4.3	5.7	6.6	8.0	9.7	11.3	12.5	13.4	14.3	14.9	15.2	15.3	14.8	13.8	12.0	10.2	8.8	8.8	15.3
17-May	7.6	6.2	5.1	4.3	4.0	4.1	5.3	7.1	10.3	12.4	14.0	15.7	16.5	16.6	17.3	17.3	17.4	17.4	17.0	16.5	15.3	13.8	12.4	11.5	11.9	17.4
18-May	10.7	9.9	9.1	8.5	8.0	7.9	8.7	9.8	12.7	14.1	16.5	17.3	17.2	17.5	17.7	18.1	18.4	18.5	18.2	17.5	16.4	14.7	13.7	12.8	13.9	18.5
19-May	12.2	11.1	10.1	9.1	8.5	8.5	9.1	10.8	12.6	13.7	14.0	14.1	14.5	15.0	15.8	15.6	15.5	13.2	10.6	8.9	8.1	7.8	7.4	7.2	11.4	15.8
20-May	6.7	6.7	6.6	6.8	7.0	7.3	7.8	8.3	8.7	9.1	9.8	10.6	11.6	12.2	11.7	11.1	11.0	11.6	10.8	10.3	9.6	9.4	9.4	9.2	9.3	12.2
21-May	8.9	8.8	8.5	8.1	8.3	8.5	9.0	9.8	10.8	11.7	12.3	12.8	13.4	12.2	9.3	9.9	10.3	10.4	10.7	10.5	9.9	9.5	9.1	8.7	10.1	13.4
22-May	8.5	8.4	8.2	8.0	7.7	7.2	7.4	8.3	9.5	10.9	11.7	11.6	11.2	10.9	11.1	12.7	13.2	13.9	14.4	13.8	13.2	12.5	11.7	10.7	10.7	14.4
23-May	10.3	9.7	9.4	8.9	8.6	9.0	9.5	10.2	12.3	15.0	17.5	17.9	18.4	19.0	18.4	16.2	17.2	17.0	17.9	18.0	16.9	15.8	15.2	14.4	14.3	19.0
24-May	13.6	13.6	13.6	13.4	13.1	12.6	12.7	14.5	16.0	16.0	17.2	20.5	21.8	22.8	22.0	22.6	22.8	22.7	22.4	20.8	20.0	19.4	18.6	17.7	17.9	22.8
25-May	16.8	16.0	15.3	15.0	14.6	14.7	15.6	17.5	19.3	21.4	22.8	23.7	24.7	25.4	26.1	26.4	26.5	26.6	26.4	25.8	24.7	23.5	21.8	20.8	21.3	26.6
26-May	19.8	19.0	18.3	17.5	17.3	17.3	17.8	19.0	20.9	23.4	25.9	28.2	28.8	29.3	29.6	30.0	30.1	29.6	28.5	23.2	18.2	16.4	16.4	16.3	22.5	30.1
27-May	15.5	14.5	14.6	14.2	14.4	13.8	14.5	15.8	17.5	19.3	20.7	21.5	22.4	22.9	23.7	24.3	24.3	24.3	24.2	23.2	22.2	21.6	20.3	18.5	19.5	24.3
28-May	17.5	16.6	15.8	15.6	15.3	14.8	14.4	15.5	18.6	21.1	24.0	25.7	26.7	27.6	28.2	28.4	28.3	28.2	28.0	27.6	26.6	25.3	23.8	22.9	22.4	28.4
29-May	21.8	20.9	20.3	19.5	19.4	19.1	18.9	20.6	24.1	26.7	28.7	29.6	30.7	31.2	31.8	31.5	31.5	31.2	31.1	30.4	28.9	24.7	21.1	20.0	25.6	31.8
30-May	18.5	17.0	15.5	13.5	14.1	13.6	13.9	14.5	14.8	15.9	17.1	18.4	19.6	20.6	21.3	21.4	21.6	21.6	21.3	20.7	20.5	19.9	18.2	16.9	17.9	21.6
31-May	16.0	15.1	14.9	14.8	14.5	14.1	13.6	14.4	15.4	17.7	19.8	20.7	20.3	19.5	19.2	18.3	17.4	15.2	13.3	12.7	12.3	11.6	11.2	11.0	15.5	20.7
11.8 11.0 10.3 9.7 9.4 9.2 9.6 10.7 12.3 13.8 15.2 16.2 16.9 17.5 18.0 18.2 18.3 18.2 17.9 17.0 15.8 14.8 13.7 13.0																										Diurnal Average
21.8 20.9 20.3 19.5 19.4 19.1 18.9 20.6 24.1 26.7 28.7 29.6 30.7 31.2 31.8 31.5 31.5 31.2 31.1 30.4 28.9 25.3 23.8 22.9																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 45m (AT45) - C
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 45m (AT45) - C
Mannix - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	8	1.08	1.08
0 - 10	193	25.94	27.02
10 - 20	419	56.32	83.33
> 20	124	16.67	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 75m (AT75) - C

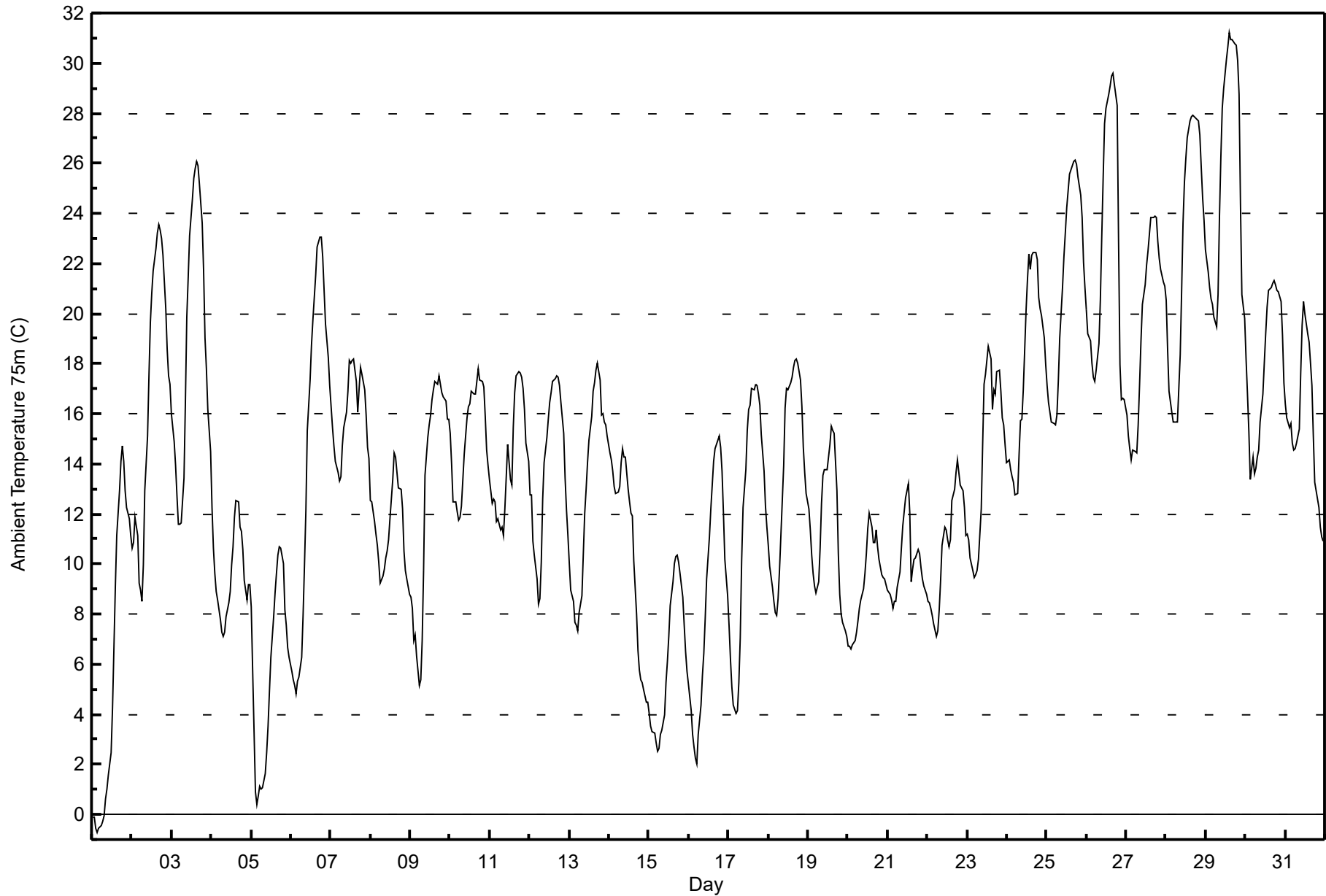
Mannix - May 2025

Maximum Value: 31.2 C on May 29 15:00																				Maximum Daily Average: 25.5 C on May 29				Hours in Service: 744			
Minimum Value: -0.7 C on May 1 04:00																				Minimum Daily Average: 5.6 C on May 5				Hours of Data: 744			
Maximum Diurnal Average: 18.0 C at hour 17																				Minimum Diurnal Average: 9.6 C at hour 6				Hours of Missing Data: 0			
Monthly Average: 14.09 C																				Percentiles: P ₁ = 0.1 P ₁₀ = 6.7 Q ₁ = 9.7 Median = 14.0 Q ₃ = 17.5 P ₉₀ = 22.4 P ₉₉ = 29.9				Hours of Calibration: 0			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	-0.1	-0.1	-0.5	-0.7	-0.5	-0.4	-0.3	-0.1	0.6	1.0	1.6	2.5	4.2	6.7	9.1	11.1	12.9	14.1	14.7	14.1	12.9	12.3	11.8	11.1	5.7	14.7	
2-May	10.6	10.8	11.9	11.1	9.2	9.0	8.5	10.0	12.9	15.1	17.5	19.7	20.8	21.7	22.6	23.2	23.6	23.3	23.0	22.3	20.2	18.6	17.5	17.2	16.7	23.6	
3-May	16.0	14.9	13.9	12.7	11.6	11.6	11.7	13.4	16.4	19.9	21.4	23.1	24.6	25.4	25.8	26.0	25.9	25.2	23.6	21.7	19.0	17.8	16.2	14.5	18.8	26.0	
4-May	12.2	10.6	9.6	8.9	8.6	7.8	7.3	7.1	7.3	7.9	8.5	8.9	10.0	10.7	11.9	12.5	12.5	11.5	11.3	10.6	9.3	8.6	9.2	9.2	9.7	12.5	
5-May	8.3	5.8	0.9	0.4	0.7	1.1	1.0	1.1	1.6	2.5	3.5	4.9	6.2	7.9	8.9	9.6	10.4	10.7	10.6	10.0	8.2	7.6	6.7	6.3	5.6	10.7	
6-May	5.7	5.4	5.2	4.8	5.3	5.5	6.3	8.0	9.9	12.1	15.3	17.4	18.7	19.7	20.6	21.5	22.6	23.0	23.1	22.3	20.9	19.6	18.3	17.1	14.5	23.1	
7-May	16.3	15.5	14.7	14.1	13.6	13.3	13.5	14.7	15.4	16.0	16.9	18.1	18.0	18.1	18.2	17.3	16.0	17.0	17.9	17.6	17.0	16.0	14.7	14.2	16.0	18.2	
8-May	12.6	12.5	11.7	11.2	10.7	10.1	9.2	9.5	9.8	10.2	10.5	10.9	11.8	13.4	14.4	14.3	13.6	13.0	13.0	12.2	10.5	9.7	9.4	8.8	11.4	14.4	
9-May	8.7	8.2	7.0	7.1	6.4	5.1	5.4	7.0	9.7	13.5	15.0	15.5	16.0	16.6	17.0	17.3	17.2	17.5	17.2	16.8	16.7	16.5	15.8	15.8	12.9	17.5	
10-May	15.2	14.0	12.5	12.5	12.1	11.7	11.9	12.3	14.4	15.1	15.8	16.3	16.4	16.9	16.8	16.8	17.3	17.8	17.4	17.3	17.1	15.9	14.5	13.9	15.1	17.8	
11-May	13.4	12.5	12.6	12.5	11.7	11.8	11.3	11.5	11.1	12.2	13.5	14.8	13.4	13.1	15.4	16.8	17.5	17.7	17.6	17.5	17.0	16.2	14.9	14.1	14.2	17.7	
12-May	12.8	12.8	10.9	10.3	9.4	8.4	8.6	10.1	12.6	14.0	15.0	15.8	16.4	16.8	17.3	17.4	17.5	17.5	17.1	16.4	15.2	13.4	12.1	11.1	13.7	17.5	
13-May	10.0	9.0	8.5	7.7	7.5	7.3	8.1	8.7	10.4	12.0	13.0	14.0	15.0	15.9	16.9	17.2	17.8	18.0	17.4	15.9	16.0	15.7	15.6	15.1	13.0	18.0	
14-May	14.4	14.1	13.7	13.1	12.8	12.8	13.1	14.0	14.6	14.3	14.3	13.0	12.5	12.0	11.9	10.1	8.0	6.5	5.7	5.4	5.3	5.0	4.5	4.5	10.7	14.6	
15-May	4.0	3.5	3.3	3.3	2.9	2.5	2.7	3.2	3.4	4.0	5.3	6.1	7.1	8.3	9.3	10.0	10.3	10.4	10.1	9.6	8.7	7.6	6.5	5.7	6.2	10.4	
16-May	5.2	4.1	3.2	2.7	2.2	2.0	3.2	4.4	5.5	6.4	7.9	9.4	11.1	12.2	13.2	14.1	14.6	15.0	15.1	14.7	13.7	12.0	10.2	8.7	8.8	15.1	
17-May	7.6	6.2	5.1	4.4	4.0	4.2	5.3	7.0	10.1	12.2	13.7	15.3	16.2	16.3	17.0	16.9	17.2	17.1	16.8	16.3	15.2	13.7	12.3	11.5	11.7	17.2	
18-May	10.7	9.9	9.1	8.5	8.1	7.9	8.6	9.7	12.5	14.0	16.2	17.0	16.9	17.2	17.5	17.8	18.1	18.2	18.0	17.3	16.3	14.7	13.7	12.8	13.8	18.2	
19-May	12.2	11.4	10.3	9.6	9.1	8.8	9.3	10.6	12.4	13.5	13.8	13.8	14.3	14.8	15.5	15.3	15.2	12.9	10.4	8.8	8.0	7.7	7.4	7.1	11.3	15.5	
20-May	6.7	6.7	6.6	6.8	7.0	7.3	7.7	8.2	8.6	9.0	9.6	10.4	11.4	12.0	11.5	10.9	10.8	11.4	10.7	10.2	9.6	9.5	9.4	9.2	9.2	12.0	
21-May	9.0	8.8	8.6	8.2	8.5	8.5	9.0	9.7	10.6	11.5	12.1	12.7	13.2	12.0	9.3	9.8	10.2	10.3	10.6	10.4	9.8	9.4	9.1	8.8	10.0	13.2	
22-May	8.5	8.4	8.2	8.0	7.6	7.1	7.3	8.2	9.4	10.7	11.5	11.4	11.0	10.7	11.0	12.5	13.0	13.7	14.2	13.6	13.2	12.9	12.3	11.1	10.6	14.2	
23-May	11.2	11.0	10.2	9.7	9.4	9.6	9.7	10.2	12.2	14.8	17.2	17.6	18.1	18.7	18.2	16.2	16.9	16.8	17.7	17.8	16.9	15.8	15.6	14.8	14.4	18.7	
24-May	14.1	14.1	13.8	13.5	13.3	12.8	12.8	14.4	15.7	15.8	17.0	20.2	21.4	22.4	21.8	22.3	22.4	22.4	22.2	20.6	20.2	19.9	19.0	18.0	17.9	22.4	
25-May	17.1	16.4	16.1	15.7	15.6	15.6	16.0	17.3	19.0	21.1	22.3	23.2	24.2	24.9	25.6	25.9	26.1	26.1	26.0	25.5	24.8	23.8	22.1	21.1	21.3	26.1	
26-May	20.1	19.2	18.9	18.0	17.5	17.3	17.7	18.8	20.6	23.0	25.4	27.6	28.2	28.7	29.1	29.5	29.6	29.2	28.3	22.9	18.0	16.6	16.6	16.6	22.4	29.6	
27-May	15.9	15.1	14.6	14.2	14.6	14.5	14.4	15.5	17.2	18.9	20.4	21.1	21.9	22.5	23.2	23.8	23.8	23.9	23.8	22.9	22.2	21.8	21.3	21.1	19.5	23.9	
28-May	20.5	18.6	16.9	16.1	15.7	15.7	15.7	15.7	18.4	20.9	23.6	25.2	26.2	27.0	27.7	27.9	27.9	27.9	27.8	27.7	27.1	25.9	24.6	23.7	22.7	27.9	
29-May	22.6	21.7	21.0	20.6	20.4	19.9	19.5	20.8	23.8	26.3	28.2	29.0	30.1	30.7	31.2	30.9	30.9	30.8	30.7	30.1	28.8	24.4	20.8	19.8	25.5	31.2	
30-May	18.2	16.8	15.3	13.4	14.3	13.6	13.8	14.3	14.5	15.6	16.8	18.0	19.2	20.2	20.9	21.0	21.2	21.3	21.1	20.9	20.9	20.5	19.1	17.2	17.8	21.3	
31-May	16.4	15.8	15.5	15.6	14.8	14.5	14.6	14.8	15.4	17.6	19.5	20.5	20.0	19.2	18.8	18.0	17.1	15.1	13.3	12.6	12.2	11.5	11.1	10.9	15.6	20.5	
12.1 11.4 10.6 10.1 9.8 9.6 9.8 10.6 12.1 13.6 14.9 15.9 16.6 17.2 17.7 17.9 18.0 17.9 17.6 16.8 15.8 14.8 13.9 13.3																										Diurnal Average	
22.6 21.7 21.0 20.6 20.4 19.9 19.5 20.8 23.8 26.3 28.2 29.0 30.1 30.7 31.2 30.9 30.9 30.8 30.7 30.1 28.8 25.9 24.6 23.7																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 75m (AT75) - C
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 75m (AT75) - C
Mannix - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	8	1.08	1.08
0 - 10	188	25.27	26.34
10 - 20	423	56.85	83.20
> 20	125	16.80	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 90m (AT90) - C

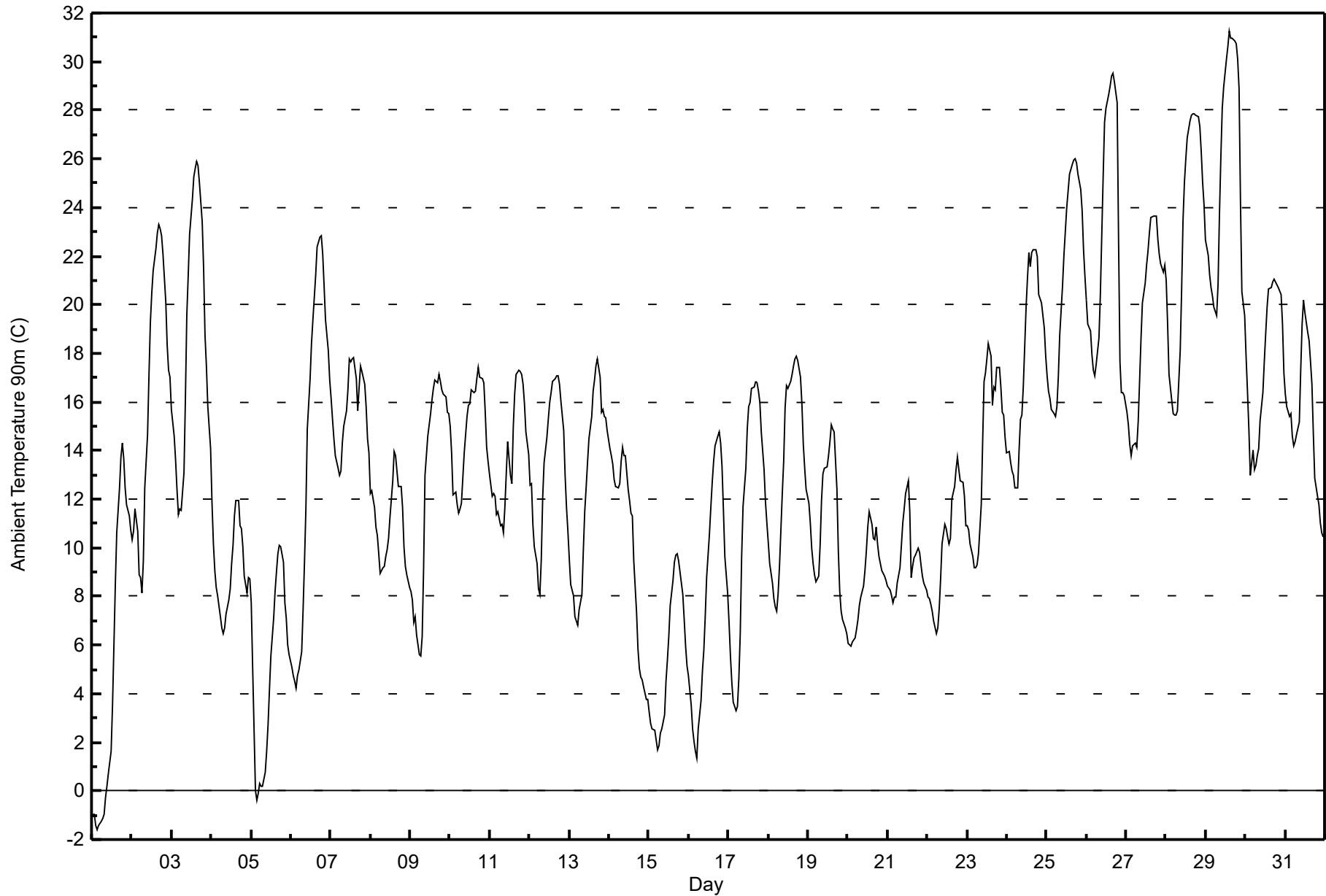
Mannix - May 2025

Maximum Value: 31.2 C on May 29 15:00																				Maximum Daily Average: 25.5 C on May 29					Hours in Service: 744	
Minimum Value: -1.6 C on May 1 04:00																				Minimum Daily Average: 4.9 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 17.7 C at hour 17																				Minimum Diurnal Average: 9.2 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 13.71 C																				Percentiles: P ₁ = -0.7 P ₁₀ = 6.0 Q ₁ = 9.3 Median = 13.5 Q ₃ = 17.1 P ₉₀ = 22.3 P ₉₉ = 29.9					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	-1.0	-1.0	-1.4	-1.6	-1.4	-1.3	-1.1	-0.9	-0.2	0.2	0.7	1.7	3.5	6.0	8.5	10.6	12.5	13.7	14.3	13.7	12.5	11.8	11.3	10.7	5.1	14.3
2-May	10.4	10.7	11.6	10.7	8.9	8.8	8.2	9.5	12.5	14.6	17.1	19.3	20.5	21.4	22.3	23.0	23.3	23.1	22.8	22.1	20.1	18.3	17.3	17.0	16.4	23.3
3-May	15.7	14.6	13.6	12.4	11.4	11.6	11.5	13.1	16.1	19.6	21.2	22.9	24.4	25.2	25.6	25.9	25.7	25.1	23.4	21.5	18.8	17.5	15.8	14.1	18.6	25.9
4-May	11.8	10.2	9.1	8.4	8.0	7.1	6.7	6.5	6.7	7.3	7.8	8.3	9.4	10.1	11.3	11.9	11.9	10.9	10.8	10.0	8.8	8.1	8.8	8.7	9.1	11.9
5-May	7.8	5.1	0.0	-0.4	-0.1	0.3	0.2	0.2	0.8	1.6	2.7	4.2	5.5	7.1	8.2	9.0	9.8	10.1	10.1	9.4	7.7	7.1	6.0	5.6	4.9	10.1
6-May	5.1	4.7	4.5	4.2	4.8	5.0	5.7	7.5	9.4	11.6	14.9	16.9	18.4	19.4	20.3	21.2	22.4	22.8	22.8	22.1	20.8	19.4	18.1	16.9	14.1	22.8
7-May	16.1	15.3	14.5	13.8	13.3	13.0	13.1	14.3	15.0	15.6	16.5	17.8	17.7	17.8	17.8	16.9	15.6	16.6	17.5	17.2	16.7	15.8	14.5	13.9	15.7	17.8
8-May	12.2	12.4	11.6	10.9	10.5	9.7	8.9	9.2	9.2	9.7	9.9	10.4	11.3	12.7	13.9	13.8	13.2	12.5	12.5	11.7	10.0	9.2	8.9	8.3	10.9	13.9
9-May	8.2	7.8	6.9	7.2	6.4	5.6	5.5	6.4	9.1	13.0	14.6	15.1	15.5	16.1	16.6	16.9	16.8	17.1	16.8	16.5	16.4	16.2	15.6	15.5	12.6	17.1
10-May	15.0	13.9	12.2	12.3	11.8	11.4	11.6	11.8	13.9	14.6	15.4	15.8	15.9	16.5	16.4	16.4	17.0	17.4	17.0	17.0	16.8	15.6	14.2	13.6	14.7	17.4
11-May	13.0	12.1	12.2	12.1	11.4	11.5	10.9	10.9	10.6	11.7	13.0	14.4	13.0	12.7	15.0	16.3	17.1	17.3	17.3	17.1	16.7	15.9	14.8	13.8	13.8	17.3
12-May	12.6	12.6	11.0	10.0	9.4	8.3	8.1	9.5	12.1	13.5	14.6	15.3	16.0	16.4	16.9	17.0	17.1	17.1	16.7	16.0	14.8	13.0	11.7	10.7	13.3	17.1
13-May	9.5	8.5	8.1	7.2	7.0	6.8	7.4	8.1	9.9	11.5	12.4	13.5	14.5	15.4	16.4	16.9	17.5	17.7	17.0	15.6	15.7	15.4	15.3	14.8	12.6	17.7
14-May	14.1	13.8	13.4	12.8	12.5	12.5	12.6	13.5	14.1	13.8	13.8	12.4	11.9	11.4	11.3	9.5	7.3	5.8	5.0	4.7	4.5	4.3	3.8	3.8	10.1	14.1
15-May	3.3	2.8	2.5	2.5	2.1	1.7	1.9	2.4	2.6	3.2	4.5	5.4	6.4	7.6	8.7	9.4	9.7	9.8	9.5	9.0	8.1	7.0	5.9	5.2	5.5	9.8
16-May	4.7	3.5	2.6	2.0	1.6	1.4	2.6	3.7	4.9	5.8	7.2	8.7	10.5	11.7	12.7	13.6	14.2	14.6	14.8	14.3	13.3	11.6	9.6	8.2	8.2	14.8
17-May	6.9	5.5	4.4	3.7	3.3	3.5	4.6	6.5	9.7	11.7	13.2	14.9	15.8	16.0	16.6	16.6	16.8	16.8	16.4	16.0	14.8	13.2	11.9	11.0	11.2	16.8
18-May	10.2	9.4	8.5	7.9	7.6	7.4	8.1	9.2	12.2	13.5	15.8	16.6	16.6	16.9	17.1	17.5	17.8	17.9	17.7	17.0	15.9	14.3	13.3	12.4	13.4	17.9
19-May	11.8	11.0	10.0	9.4	8.9	8.6	8.8	10.1	11.9	13.0	13.3	13.3	13.8	14.4	15.1	14.9	14.8	12.4	9.8	8.2	7.4	7.0	6.7	6.5	10.9	15.1
20-May	6.0	6.0	5.9	6.1	6.3	6.6	7.1	7.6	8.0	8.4	9.1	9.9	10.9	11.5	11.0	10.4	10.3	10.9	10.2	9.6	9.1	8.9	8.8	8.6	8.6	11.5
21-May	8.4	8.3	8.0	7.8	8.0	8.0	8.5	9.2	10.1	11.0	11.6	12.2	12.8	11.5	8.8	9.2	9.6	9.7	10.0	9.8	9.3	8.8	8.5	8.3	9.5	12.8
22-May	8.0	7.9	7.7	7.4	7.0	6.5	6.7	7.5	8.7	10.1	10.9	10.8	10.4	10.1	10.4	12.0	12.5	13.2	13.7	13.2	12.7	12.7	12.1	10.9	10.1	13.7
23-May	10.9	10.8	10.2	9.7	9.2	9.2	9.3	9.7	11.8	14.4	16.8	17.2	17.7	18.4	17.9	15.9	16.6	16.5	17.4	17.4	16.6	15.6	15.4	14.5	14.1	18.4
24-May	13.9	14.0	13.5	13.2	13.0	12.5	12.5	14.0	15.3	15.4	16.6	19.9	21.1	22.2	21.6	22.1	22.3	22.2	22.0	20.4	20.2	20.1	19.1	17.9	17.7	22.3
25-May	17.1	16.4	16.2	15.7	15.5	15.4	15.8	17.0	18.7	20.8	22.0	23.0	24.0	24.7	25.4	25.8	25.9	26.0	25.8	25.4	24.7	23.9	22.3	21.2	21.2	26.0
26-May	20.2	19.2	18.9	18.0	17.3	17.1	17.5	18.6	20.4	22.8	25.2	27.5	28.1	28.6	29.0	29.4	29.5	29.2	28.3	22.7	17.6	16.4	16.4	16.3	22.3	29.5
27-May	15.6	15.0	14.2	13.8	14.2	14.3	14.2	15.2	16.8	18.6	20.1	20.9	21.7	22.2	23.0	23.6	23.6	23.7	23.6	22.7	22.1	21.7	21.3	21.6	19.3	23.7
28-May	21.0	19.2	17.1	16.0	15.5	15.4	15.5	15.6	18.1	20.6	23.5	25.0	26.0	26.9	27.6	27.8	27.9	27.9	27.8	27.8	27.4	26.3	25.0	24.1	22.7	27.9
29-May	22.7	22.0	21.2	20.7	20.4	19.9	19.5	20.8	23.7	26.1	28.1	28.9	30.1	30.6	31.2	31.0	31.0	30.8	30.7	30.1	28.9	24.3	20.5	19.5	25.5	31.2
30-May	17.9	16.4	14.9	13.0	14.0	13.2	13.4	13.8	14.1	15.2	16.4	17.6	18.8	19.9	20.6	20.7	20.9	21.0	20.9	20.8	20.7	20.4	19.2	17.2	17.6	21.0
31-May	16.3	15.8	15.4	15.5	14.6	14.2	14.4	14.6	15.2	17.3	19.2	20.2	19.7	18.9	18.5	17.7	16.7	14.7	12.9	12.1	11.8	11.0	10.6	10.4	15.3	20.2
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 90m (AT90) - C
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 90m (AT90) - C
Mannix - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	11	1.48	1.48
0 - 10	208	27.96	29.44
10 - 20	401	53.90	83.33
> 20	124	16.67	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity (RH) - %

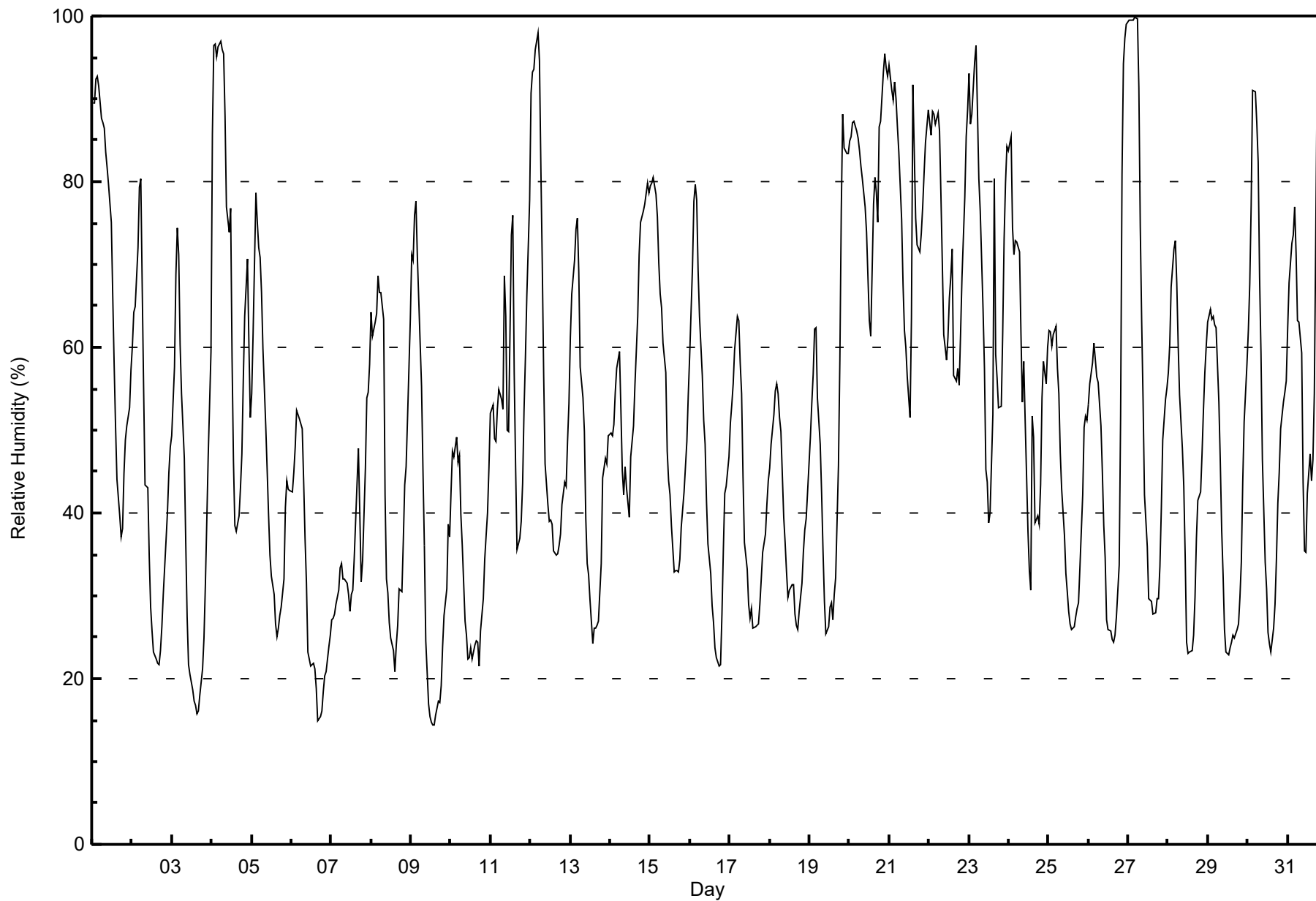
Mannix - May 2025

Maximum Value: 100 % on May 27 05:00																		Maximum Daily Average: 81.9 % on May 20										Hours in Service: 744	
Minimum Value: 14 % on May 9 14:00																		Minimum Daily Average: 30.7 % on May 6										Hours of Data: 744	
Maximum Diurnal Average: 72.7 % at hour 5																		Minimum Diurnal Average: 35.3 % at hour 14										Hours of Missing Data: 0	
Monthly Average: 52.0 %																		Percentiles: P ₁ = 16 P ₁₀ = 25 Q ₁ = 33 Median = 50 Q ₃ = 68 P ₉₀ = 85 P ₉₉ = 99										Hours of Calibration: 0	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	89	90	92	93	92	88	87	87	84	82	80	75	66	58	51	44	40	37	38	45	49	50	53	57	67.7	93			
2-May	60	64	65	72	79	80	67	55	43	43	35	29	26	23	22	22	22	23	26	30	37	40	45	48	44.1	80			
3-May	49	58	69	74	71	60	54	47	37	27	22	20	19	17	17	16	16	18	21	25	31	39	47	59	38.1	74			
4-May	86	96	97	95	96	97	96	95	88	77	74	77	59	46	38	38	40	43	47	56	64	71	61	52	70.3	97			
5-May	54	62	79	75	72	71	67	60	51	45	40	35	32	30	27	25	26	28	29	32	41	44	43	43	46.2	79			
6-May	43	45	48	52	52	51	50	44	37	31	23	22	22	22	21	19	15	15	16	19	20	21	24	25	30.7	52			
7-May	27	27	28	29	31	33	34	32	32	32	30	28	30	31	34	43	48	40	32	34	45	54	55	58	36.1	58			
8-May	64	61	63	64	69	67	67	63	42	32	30	27	25	23	21	24	27	31	31	37	43	46	51	63	44.6	69			
9-May	71	70	76	78	71	61	55	45	36	25	17	15	15	14	14	16	17	17	19	24	28	31	39	37	37.1	78			
10-May	43	47	47	49	46	47	40	36	27	25	22	23	24	22	24	25	24	22	26	30	34	37	40	45	33.5	49			
11-May	52	53	49	49	52	55	54	53	69	64	50	50	74	76	57	46	36	37	39	44	52	59	66	78	54.6	78			
12-May	91	93	94	96	98	95	82	70	57	46	41	39	39	39	35	35	35	36	38	41	44	43	49	53	57.8	98			
13-May	61	66	70	74	76	69	58	54	50	39	34	33	29	24	26	26	26	27	34	44	45	47	46	49	46.2	76			
14-May	50	49	51	55	58	59	52	45	42	46	43	40	47	49	51	55	64	71	75	76	76	77	80	79	57.8	80			
15-May	80	80	81	79	76	70	66	65	60	57	47	44	42	39	33	33	33	33	34	38	43	46	49	54	53.4	81			
16-May	59	70	78	80	78	69	64	57	51	48	41	36	33	29	27	24	23	22	22	28	36	42	43	47	46.0	80			
17-May	51	53	56	60	64	63	58	54	44	36	33	29	27	28	26	26	26	27	29	32	35	37	41	44	40.9	64			
18-May	45	48	52	55	56	54	52	50	39	36	33	30	31	31	31	28	26	26	28	32	35	38	39	42	39.1	56			
19-May	49	53	57	62	62	54	48	42	35	29	25	26	29	29	27	30	32	46	58	76	88	84	83	83	50.5	88			
20-May	85	85	87	87	86	85	84	82	80	77	74	69	63	61	77	81	79	75	87	87	93	95	94	93	81.9	95			
21-May	94	91	90	92	90	87	84	75	68	62	60	56	52	64	92	84	76	72	72	74	77	81	85	89	77.7	94			
22-May	87	86	88	88	87	88	86	78	70	62	58	61	66	68	72	57	56	58	55	62	69	78	85	89	73.1	89			
23-May	93	87	88	94	96	89	80	76	65	57	45	44	39	40	52	80	59	56	53	53	62	73	80	84	68.6	96			
24-May	84	85	74	71	73	73	72	62	53	58	51	38	33	31	52	49	39	40	39	43	54	58	56	60	56.1	85			
25-May	62	62	60	61	63	58	54	47	43	37	33	30	28	27	26	26	27	28	29	33	42	50	52	51	43.0	63			
26-May	53	56	58	61	58	56	56	51	45	38	35	27	26	26	25	24	25	27	34	52	81	94	97	99	50.2	99			
27-May	99	99	100	99	100	100	91	75	63	54	42	36	30	30	29	28	28	30	30	34	40	49	54	55	58.1	100			
28-May	57	60	67	72	73	68	60	54	48	43	35	24	23	23	23	25	30	37	42	43	47	52	57	60	46.8	73			
29-May	63	65	63	64	63	62	53	46	38	33	26	23	23	24	24	25	25	26	27	30	34	44	51	58	41.2	65			
30-May	62	68	77	91	91	87	82	68	59	46	34	31	26	24	23	26	29	34	41	45	50	53	55	56	52.5	91			
31-May	62	68	73	74	77	71	63	63	59	44	35	35	42	47	44	46	54	73	92	94	96	98	99	100	67.1	100			
65.3		67.7	70.2	72.4	72.7	69.9	65.1	59.1	52.1	46.2	40.3	37.1	36.1	35.3	36.2	36.3	35.6	37.3	40.0	44.8	51.4	55.9	58.6	61.6	Diurnal Average				
99		99	100	99	100	100	96	95	88	82	80	77	74	76	92	84	79	75	92	94	96	98	99	100	Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity (RH) - %
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity (RH) - %
Mannix - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	20	2.69	2.69
20 - 40	243	32.66	35.35
40 - 60	226	30.38	65.73
60 - 80	154	20.70	86.42
80 - 100	101	13.58	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

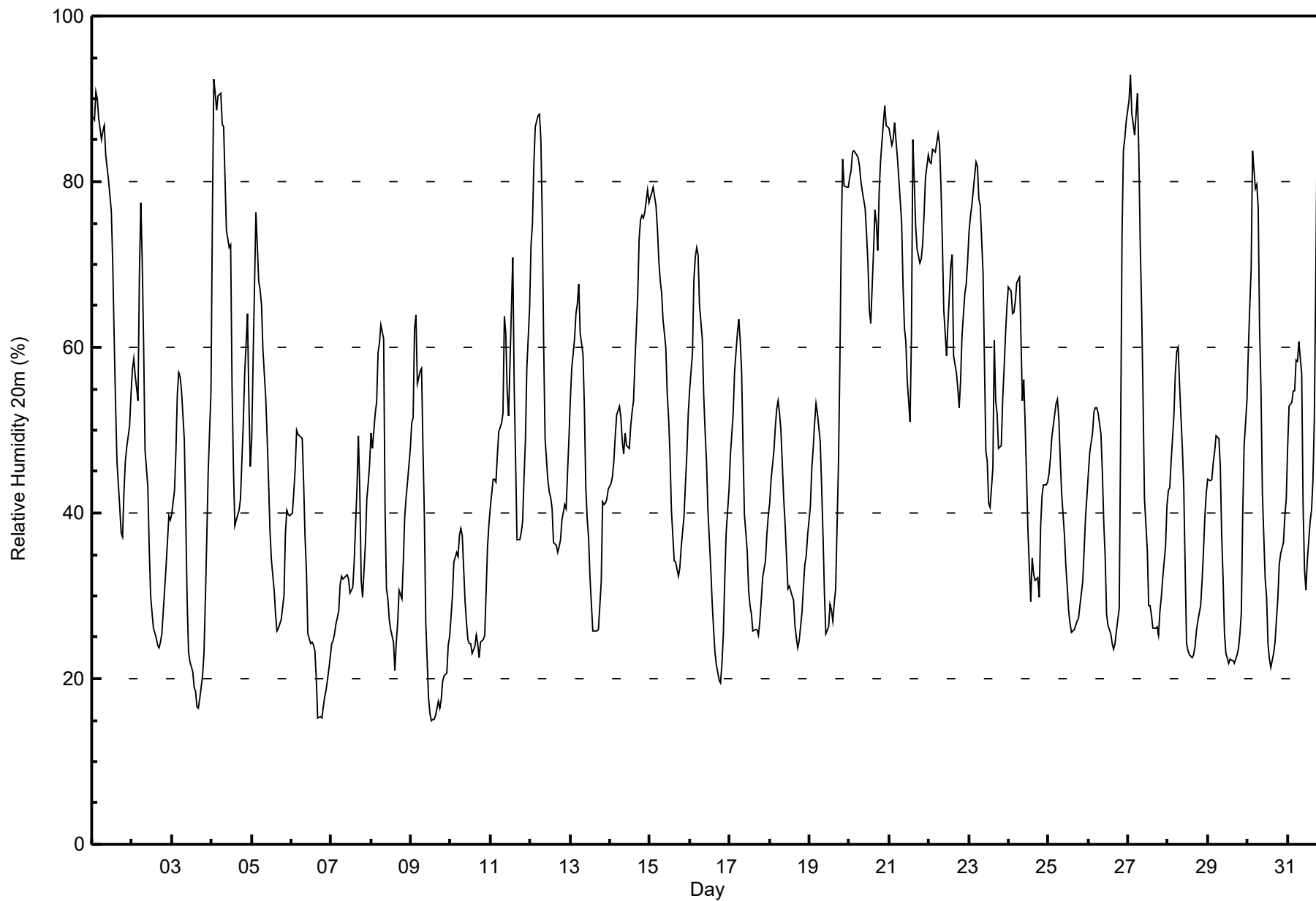
Mannix - May 2025

Maximum Value: 97 % on May 31 23:00																		Maximum Daily Average: 78.8 % on May 20								Hours in Service: 744	
Minimum Value: 15 % on May 9 13:00																		Minimum Daily Average: 29.3 % on May 10								Hours of Data: 744	
Maximum Diurnal Average: 65.4 % at hour 6																		Minimum Diurnal Average: 34.5 % at hour 17								Hours of Missing Data: 0	
Monthly Average: 48.3 %																		Percentiles: P ₁ = 16 P ₁₀ = 24 Q ₁ = 31 Median = 45 Q ₃ = 62 P ₉₀ = 80 P ₉₉ = 91								Hours of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	88	87	91	90	88	85	86	87	83	82	80	76	70	61	53	46	41	38	37	43	46	48	51	54	67.1	91	
2-May	57	59	57	54	69	78	71	60	48	43	36	30	28	26	25	24	24	24	25	28	33	37	40	39	42.2	78	
3-May	40	43	47	54	57	57	55	49	40	29	23	22	21	19	18	17	16	18	20	23	30	37	45	55	34.8	57	
4-May	76	92	91	89	90	91	87	87	80	74	72	72	55	45	39	39	40	42	46	51	57	64	53	46	65.8	92	
5-May	49	58	76	72	68	67	65	60	54	49	44	38	34	31	28	26	26	27	27	30	37	40	40	40	45.2	76	
6-May	40	43	45	50	49	49	49	44	37	33	25	24	24	24	23	20	15	15	15	17	18	19	21	23	30.2	50	
7-May	24	25	25	27	28	31	32	32	32	33	32	30	31	31	34	43	49	43	32	30	36	42	44	46	33.8	49	
8-May	50	48	52	53	59	60	63	61	41	31	30	27	26	24	21	24	27	31	30	34	40	42	44	48	40.2	63	
9-May	51	52	62	64	56	57	57	48	40	27	18	16	15	15	15	16	17	16	17	20	20	21	24	25	32.0	64	
10-May	27	30	34	35	35	37	38	37	29	27	25	24	24	23	24	25	24	22	24	25	25	31	36	39	29.3	39	
11-May	41	44	44	44	47	50	51	52	64	62	55	52	65	71	55	46	37	37	38	39	44	49	58	65	50.3	71	
12-May	72	75	82	87	88	88	85	75	60	49	44	43	42	40	36	36	35	36	37	39	41	41	45	49	55.2	88	
13-May	54	57	61	64	65	68	62	59	53	43	39	37	32	26	26	26	26	26	32	41	41	41	42	43	44.3	68	
14-May	43	44	46	49	52	53	51	49	47	50	48	48	51	52	54	58	66	73	75	76	76	76	79	77	58.1	79	
15-May	78	79	79	77	74	70	68	67	63	60	54	52	47	40	34	34	33	32	33	36	40	44	47	52	54.0	79	
16-May	55	59	68	71	72	71	65	61	54	50	46	40	33	29	26	23	22	20	20	22	25	32	38	43	43.6	72	
17-May	47	49	52	57	62	63	61	57	48	40	35	31	29	28	26	26	26	25	27	29	32	34	37	40	40.1	63	
18-May	41	44	48	50	53	54	52	50	42	39	35	31	31	30	29	26	25	24	25	28	31	34	35	37	37.2	54	
19-May	41	45	48	51	53	52	49	43	37	30	25	26	29	28	27	29	31	46	58	74	83	80	79	79	47.7	83	
20-May	80	81	84	84	83	83	82	80	79	77	74	70	65	63	72	77	75	72	79	83	87	89	87	87	78.8	89	
21-May	86	84	85	87	85	83	80	75	67	62	61	56	51	62	85	80	75	72	70	71	73	76	80	83	74.6	87	
22-May	82	82	84	84	84	86	84	79	73	65	59	63	66	70	71	59	57	55	53	56	61	66	68	70	69.9	86	
23-May	74	76	77	81	82	82	78	77	69	58	47	46	41	41	45	61	54	52	48	48	54	57	62	65	61.4	82	
24-May	67	67	64	64	66	68	69	61	53	56	51	38	33	29	35	33	32	32	30	38	42	43	43	44	48.3	69	
25-May	45	47	49	51	53	54	51	46	42	37	34	31	28	27	26	26	26	27	27	29	32	35	40	42	37.7	54	
26-May	45	47	50	52	53	53	52	49	45	39	35	28	26	25	24	24	24	26	28	49	73	84	85	87	46.0	87	
27-May	90	93	88	87	86	91	83	72	64	54	42	36	29	29	28	26	26	26	25	28	30	32	36	41	51.7	93	
28-May	43	43	46	52	57	60	60	56	48	43	33	24	23	23	23	23	24	26	27	29	32	35	39	42	37.9	60	
29-May	44	44	44	46	48	49	49	46	37	32	26	23	22	22	22	22	22	23	24	25	28	40	48	54	35.0	54	
30-May	60	65	69	84	79	80	77	62	55	42	32	30	24	22	21	23	24	27	30	34	35	36	40	42	45.6	84	
31-May	48	53	53	55	55	59	58	61	57	41	33	31	34	39	40	44	51	68	86	88	89	95	97	96	59.6	97	
		56.1	58.6	61.4	63.3	64.3	65.4	63.6	59.5	53.0	47.0	41.7	38.5	36.5	35.4	35.0	34.9	34.5	35.5	37.0	40.7	44.9	48.4	51.0	53.3	Diurnal Average	
		90	93	91	90	91	87	87	83	82	80	76	70	71	85	80	75	73	86	88	89	95	97	96		Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 20m (RH20) - %
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 20m (RH20) - %
Mannix - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	23	3.09	3.09
20 - 40	272	36.56	39.65
40 - 60	244	32.80	72.45
60 - 80	130	17.47	89.92
80 - 100	75	10.08	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

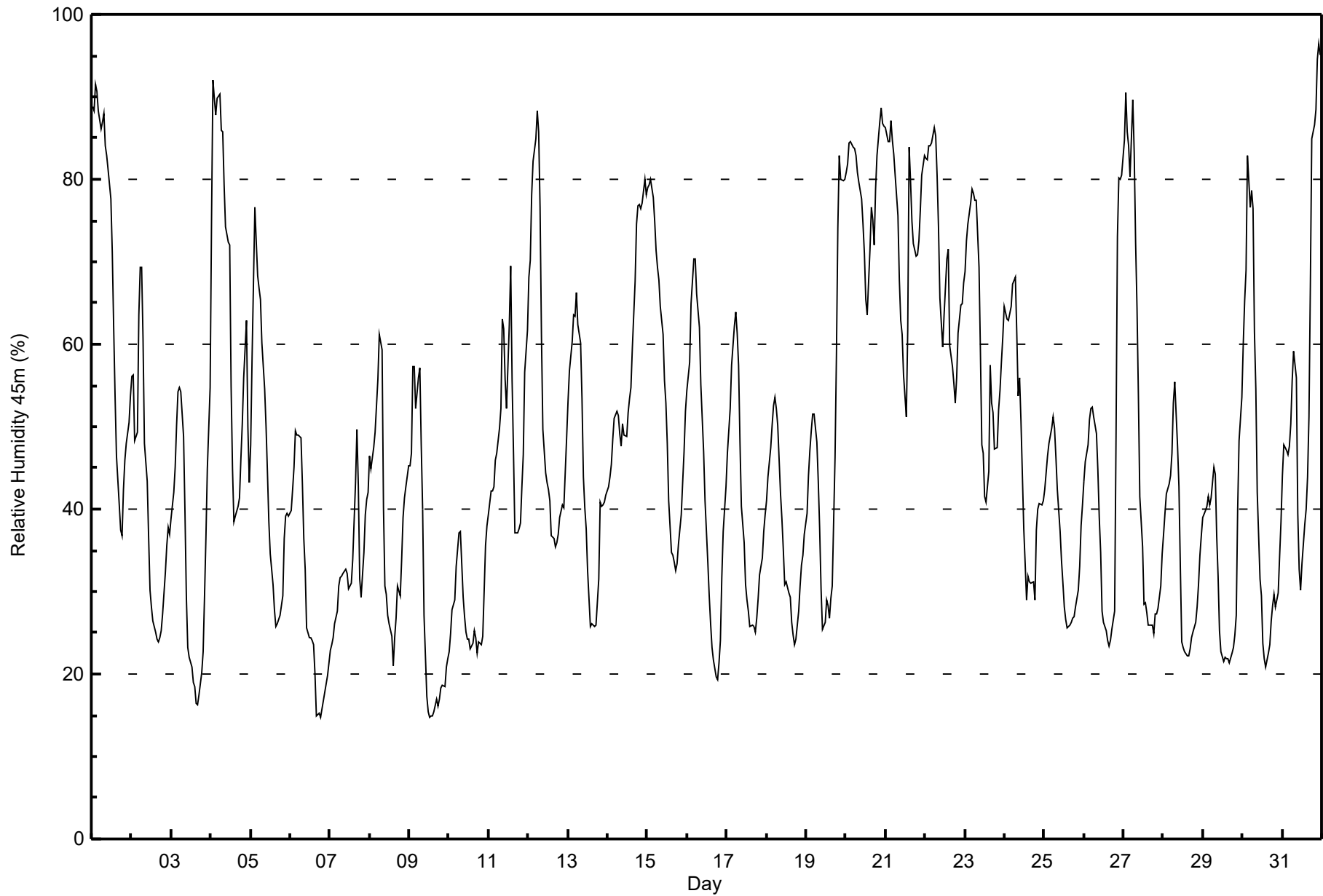
Mannix - May 2025

Maximum Value: 96 % on May 31 23:00																		Maximum Daily Average: 79.2 % on May 20										Hours in Service: 744	
Minimum Value: 15 % on May 6 19:00																		Minimum Daily Average: 28.0 % on May 10										Hours of Data: 744	
Maximum Diurnal Average: 63.4 % at hour 6																		Minimum Diurnal Average: 34.5 % at hour 17										Hours of Missing Data: 0	
Monthly Average: 47.5 %																		Percentiles: P ₁ = 16 P ₁₀ = 24 Q ₁ = 31 Median = 44 Q ₃ = 62 P ₉₀ = 80 P ₉₉ = 90										Hours of Calibration: 0	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	89	88	92	91	88	86	87	88	84	83	81	78	71	62	54	46	40	37	37	42	46	48	50	54	67.6	92			
2-May	56	56	48	49	64	69	69	61	48	43	37	30	28	26	25	24	24	24	25	27	32	36	38	37	40.8	69			
3-May	39	42	45	50	54	55	54	49	40	29	23	22	21	19	18	16	16	17	20	23	29	37	45	55	34.1	55			
4-May	75	92	90	88	90	90	86	86	79	74	72	72	55	45	38	39	40	41	46	50	56	63	50	43	65.1	92			
5-May	48	58	77	72	68	67	66	60	55	50	44	38	35	31	28	26	26	27	27	29	36	39	40	39	45.2	77			
6-May	40	42	45	49	49	49	49	43	36	33	26	24	24	24	24	20	15	15	15	16	17	18	20	21	29.8	49			
7-May	23	24	24	26	28	31	32	32	32	33	32	30	31	31	34	43	50	43	32	29	35	39	41	42	33.2	50			
8-May	46	45	47	49	53	56	61	59	40	31	30	27	26	25	21	24	27	31	30	34	39	41	43	45	38.7	61			
9-May	45	47	57	57	52	56	57	48	40	27	17	15	15	15	15	15	17	16	17	18	19	19	21	22	30.3	57			
10-May	23	25	28	29	33	35	37	37	29	27	25	24	24	23	24	25	24	23	24	24	25	30	36	38	28.0	38			
11-May	39	42	42	43	46	47	50	52	63	62	56	52	62	69	56	47	37	37	38	38	43	47	57	62	49.4	69			
12-May	68	70	78	82	85	88	86	77	61	50	44	43	42	41	37	36	35	36	37	39	40	40	44	49	54.6	88			
13-May	53	57	60	64	63	66	62	60	53	44	40	38	33	26	26	26	26	26	32	41	40	40	41	42	44.1	66			
14-May	43	44	45	48	51	52	51	49	48	50	49	49	52	53	55	59	68	75	77	77	76	77	80	78	58.6	80			
15-May	79	79	80	78	75	71	69	68	65	61	56	53	48	41	35	34	33	33	33	36	39	43	47	52	54.5	80			
16-May	54	58	65	68	70	70	66	62	55	51	47	41	34	30	26	23	22	20	19	21	24	32	37	43	43.2	70			
17-May	47	49	52	57	62	64	61	58	48	40	36	31	29	28	26	26	26	25	27	29	32	34	37	39	40.2	64			
18-May	41	44	47	50	52	54	52	50	42	39	35	31	31	30	29	26	25	24	24	28	31	33	34	37	37.1	54			
19-May	40	44	47	49	51	51	48	43	38	30	25	26	29	28	27	29	31	46	59	74	83	80	80	80	47.5	83			
20-May	81	82	84	85	84	84	83	81	80	78	75	71	65	64	72	77	75	72	79	83	87	89	87	86	79.2	89			
21-May	86	85	85	87	85	83	80	76	68	63	61	56	51	62	84	80	75	72	71	71	73	76	80	83	74.7	87			
22-May	83	82	84	84	84	86	85	81	74	66	60	64	67	70	72	60	57	55	53	56	61	65	65	67	70.0	86			
23-May	69	73	75	77	79	78	77	77	69	59	48	47	42	41	45	57	53	52	47	48	52	54	58	61	59.9	79			
24-May	65	63	63	64	65	67	68	61	54	56	51	38	33	29	32	31	31	31	29	37	40	41	41	41	47.1	68			
25-May	42	44	46	48	50	51	50	46	42	37	34	31	28	27	26	26	26	27	27	28	30	33	38	41	36.6	51			
26-May	43	46	48	51	52	52	51	49	45	39	35	28	26	25	24	23	24	25	28	49	73	80	80	81	44.9	81			
27-May	85	90	86	84	80	90	83	72	64	54	42	35	28	29	27	26	26	26	25	27	27	28	31	35	50.0	90			
28-May	37	39	42	43	44	47	53	55	48	43	33	24	23	23	22	22	23	24	25	26	28	31	34	37	34.4	55			
29-May	39	40	40	42	41	41	45	44	37	32	25	23	22	22	22	22	21	23	23	25	27	40	48	53	33.2	53			
30-May	60	65	69	83	77	79	76	62	55	42	32	29	24	22	21	23	24	27	28	30	28	30	34	39	44.0	83			
31-May	44	48	47	47	48	50	56	59	56	39	33	30	33	38	40	44	51	67	85	87	89	95	96	95	57.4	96			
54.2		56.9	59.4	61.1	62.0	63.4	63.0	59.5	53.1	47.2	42.0	38.7	36.5	35.4	34.9	34.8	34.5	35.4	36.7	40.1	43.8	47.0	49.5	51.5	Diurnal Average				
89		92	92	91	90	90	87	88	84	83	81	78	71	70	84	80	75	75	85	87	89	95	96	95	Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 45m (RH45) - %
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 45m (RH45) - %
Mannix - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	27	3.63	3.63
20 - 40	279	37.50	41.13
40 - 60	239	32.12	73.25
60 - 80	126	16.94	90.19
80 - 100	73	9.81	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 75m (RH75) - %

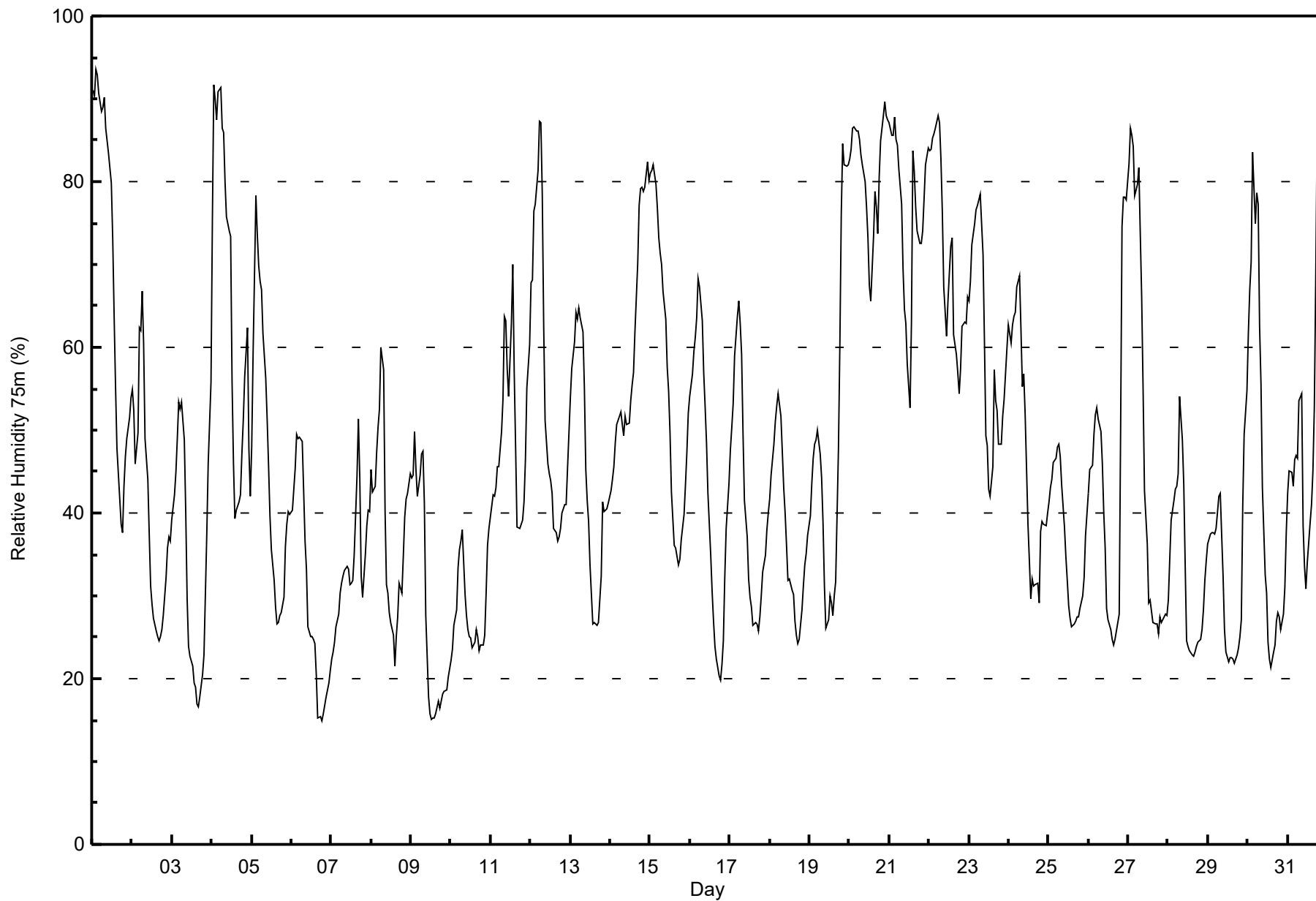
Mannix - May 2025

Maximum Value: 98 % on May 31 23:00																	Maximum Daily Average: 81.1 % on May 20										Hours in Service: 744	
Minimum Value: 15 % on May 6 19:00																	Minimum Daily Average: 28.2 % on May 9										Hours of Data: 744	
Maximum Diurnal Average: 62.4 % at hour 7																	Minimum Diurnal Average: 35.4 % at hour 17										Hours of Missing Data: 0	
Monthly Average: 47.8 %																	Percentiles: P ₁ = 16 P ₁₀ = 25 Q ₁ = 31 Median = 44 Q ₃ = 62 P ₉₀ = 80 P ₉₉ = 91										Hours of Calibration: 0	
																	Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	91	90	94	93	91	89	89	90	86	85	83	80	73	64	55	48	42	39	38	43	47	49	51	54	69.3	94		
2-May	55	52	46	50	62	62	67	61	49	44	38	31	29	27	26	25	25	25	26	28	32	36	37	37	40.4	67		
3-May	39	42	45	49	53	53	53	49	40	30	24	23	21	20	19	17	17	18	21	23	30	37	46	56	34.3	56		
4-May	75	92	90	87	91	91	86	86	80	76	74	73	56	46	39	40	41	42	47	51	56	62	48	42	65.6	92		
5-May	48	59	78	73	70	68	67	62	56	51	46	40	36	32	29	27	27	28	28	30	36	39	40	40	46.2	78		
6-May	40	43	45	50	49	49	49	43	37	33	26	25	25	25	24	20	15	15	15	16	17	18	19	21	30.0	50		
7-May	22	23	24	26	28	30	32	32	33	34	33	31	32	32	35	44	51	44	32	30	35	39	40	40	33.5	51		
8-May	45	42	43	47	50	52	60	57	40	31	30	28	27	25	22	25	28	32	30	35	40	42	42	45	38.3	60		
9-May	44	45	50	45	42	45	47	47	41	28	18	16	15	15	15	16	17	17	17	18	18	19	20	21	28.2	50		
10-May	22	24	26	28	33	36	37	38	30	28	26	25	25	24	24	26	25	23	24	24	25	30	36	38	28.3	38		
11-May	40	42	42	43	46	46	50	54	64	63	57	54	63	70	57	48	38	38	39	39	41	47	55	60	49.8	70		
12-May	68	68	77	77	81	87	87	79	63	51	46	45	44	42	38	38	37	37	38	40	41	41	45	50	55.0	87		
13-May	54	57	61	64	63	65	64	62	55	45	41	39	34	27	27	27	26	27	32	41	40	40	40	41	44.7	65		
14-May	43	44	46	48	51	52	52	51	49	52	51	51	54	55	57	62	70	77	79	79	79	79	82	80	60.1	82		
15-May	81	81	82	80	77	73	71	70	67	63	58	55	50	43	36	36	35	34	34	37	40	43	47	52	56.0	82		
16-May	54	57	60	61	63	68	67	63	57	53	49	42	35	31	27	24	22	20	20	22	25	32	38	44	43.1	68		
17-May	48	50	53	59	64	66	63	59	50	41	37	32	30	29	26	27	27	26	27	30	33	35	38	40	41.2	66		
18-May	42	45	48	51	53	54	53	52	43	40	36	32	32	31	30	27	25	24	25	28	31	34	35	37	37.8	54		
19-May	40	44	47	48	49	50	47	44	39	31	26	27	30	29	28	30	32	48	60	76	85	82	82	82	48.1	85		
20-May	83	84	86	87	86	86	85	83	82	80	77	73	67	66	73	79	77	74	80	85	88	90	88	88	81.1	90		
21-May	87	86	86	88	85	84	82	77	69	65	63	58	53	63	84	81	77	74	72	73	74	78	82	84	76.0	88		
22-May	84	84	85	86	86	88	87	83	76	67	61	66	69	72	73	62	59	57	54	57	62	63	63	66	71.3	88		
23-May	66	68	72	75	77	77	78	78	71	61	49	48	43	42	46	57	54	52	48	48	52	54	57	60	59.7	78		
24-May	63	61	63	64	64	67	69	62	55	57	52	39	34	30	32	31	31	32	29	38	39	39	38	40	47.0	69		
25-May	41	43	44	46	47	48	48	47	43	38	35	32	29	27	26	27	27	28	28	29	30	32	37	40	36.3	48		
26-May	42	45	46	49	52	53	51	50	46	40	36	28	27	26	25	24	25	26	28	50	75	78	78	78	44.9	78		
27-May	82	86	86	84	78	80	82	74	66	55	43	36	29	29	28	27	27	27	25	28	27	27	28	28	49.2	86		
28-May	30	34	39	42	43	43	45	54	49	43	34	25	24	23	23	23	23	24	24	25	26	28	32	34	32.9	54		
29-May	36	38	38	38	37	38	42	42	37	32	26	23	22	23	22	22	22	23	24	25	27	41	49	55	32.6	55		
30-May	62	67	70	84	75	79	77	62	56	43	32	30	24	22	21	23	24	27	28	28	26	28	31	38	44.1	84		
31-May	42	45	45	43	47	47	47	54	54	39	34	31	34	39	41	45	53	68	86	88	90	96	98	96	56.6	98		
		53.8	56.2	58.6	60.2	61.1	62.1	62.4	60.2	54.4	48.4	43.2	39.9	37.6	36.4	35.8	35.7	35.4	36.3	37.4	40.7	44.1	47.0	49.2	51.2	Diurnal Average		
		91	92	94	93	91	91	89	90	86	85	83	80	73	72	84	81	77	77	86	88	90	96	98	96	Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 75m (RH75) - %
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 75m (RH75) - %
Mannix - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	25	3.36	3.36
20 - 40	284	38.17	41.53
40 - 60	232	31.18	72.72
60 - 80	125	16.80	89.52
80 - 100	78	10.48	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 90m (RH90) - %

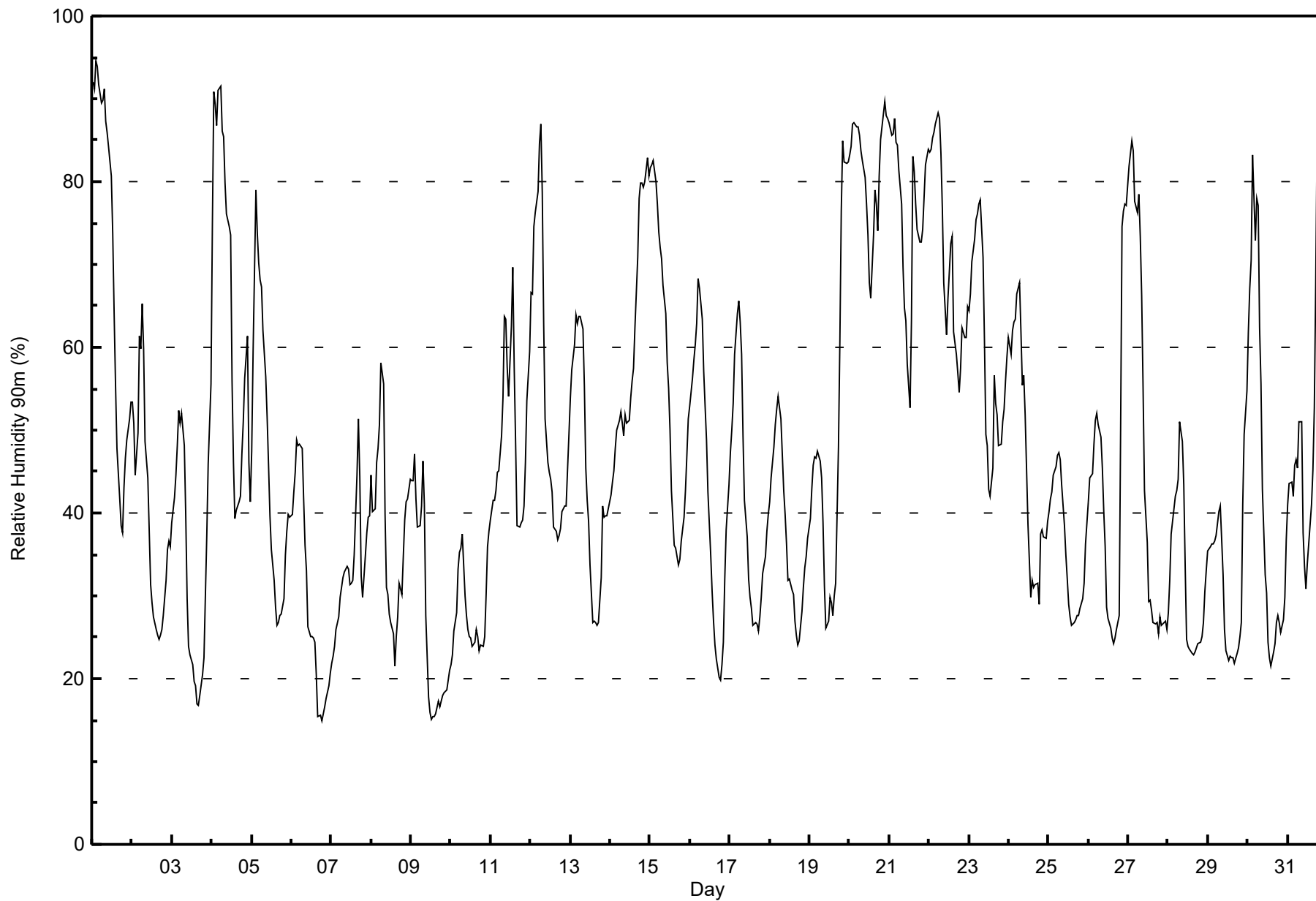
Mannix - May 2025

Maximum Value: 98 % on May 31 23:00																		Maximum Daily Average: 81.4 % on May 20										Hours in Service: 744	
Minimum Value: 15 % on May 6 19:00																		Minimum Daily Average: 27.1 % on May 9										Hours of Data: 744	
Maximum Diurnal Average: 61.6 % at hour 7																		Minimum Diurnal Average: 35.5 % at hour 17										Hours of Missing Data: 0	
Monthly Average: 47.5 %																		Percentiles: P ₁ = 16 P ₁₀ = 25 Q ₁ = 30 Median = 43 Q ₃ = 62 P ₉₀ = 81 P ₉₉ = 91										Hours of Calibration: 0	
																		Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	92	91	95	94	92	90	90	91	87	86	84	81	74	64	55	48	42	38	38	43	47	49	51	53	69.8	95			
2-May	53	51	45	50	61	60	65	60	49	44	38	31	29	27	26	25	25	25	26	28	32	36	37	36	39.9	65			
3-May	39	42	45	48	52	51	52	48	40	30	24	23	22	20	19	17	17	18	20	23	30	37	46	56	34.0	56			
4-May	75	91	89	87	91	91	86	85	80	76	74	74	56	46	39	40	41	42	47	51	56	61	46	41	65.3	91			
5-May	47	60	79	74	70	68	67	62	56	52	46	40	36	32	29	27	27	28	28	30	35	38	40	39	46.1	79			
6-May	40	43	45	49	48	48	48	42	36	33	26	25	25	25	24	21	15	16	15	16	17	18	19	21	29.7	49			
7-May	22	23	24	26	28	30	31	32	33	34	33	31	32	32	35	45	51	44	32	30	35	38	40	40	33.3	51			
8-May	45	40	40	46	48	51	58	56	40	31	30	28	27	25	22	25	27	32	30	35	39	41	42	44	37.6	58			
9-May	44	44	47	42	38	38	41	46	41	28	18	16	15	15	15	16	17	17	17	18	18	19	20	21	27.1	47			
10-May	22	23	26	28	33	35	36	37	30	28	26	25	25	24	24	26	25	23	24	24	25	30	36	38	28.1	38			
11-May	39	42	42	43	45	45	49	54	64	63	58	54	63	70	58	48	39	38	39	39	41	46	54	60	49.6	70			
12-May	67	66	75	76	79	85	87	79	63	51	46	45	44	42	38	38	37	37	38	40	41	41	45	50	54.6	87			
13-May	54	57	60	64	63	64	64	62	55	45	42	39	34	27	27	27	26	27	32	41	39	40	40	40	44.5	64			
14-May	42	44	45	48	50	51	52	51	49	52	51	51	54	56	57	62	71	78	80	80	79	80	83	81	60.3	83			
15-May	82	82	83	80	77	74	72	71	67	64	58	55	50	43	36	36	35	34	34	37	39	43	47	51	56.2	83			
16-May	53	56	58	60	63	68	67	63	57	53	49	43	35	31	27	24	22	20	20	22	24	32	38	43	42.9	68			
17-May	47	50	53	59	64	66	63	59	49	41	37	32	30	29	26	27	27	26	27	30	33	35	38	40	41.2	66			
18-May	41	44	48	51	52	54	53	51	43	40	36	32	32	31	30	27	25	24	25	28	31	33	35	37	37.7	54			
19-May	39	43	46	47	47	47	46	44	39	31	26	27	30	29	28	30	32	48	61	77	85	82	82	82	47.8	85			
20-May	83	84	87	87	87	87	86	84	83	80	77	74	68	66	74	79	77	74	81	85	88	90	88	88	81.4	90			
21-May	87	86	86	88	85	84	81	77	70	65	63	58	53	63	83	81	77	74	73	73	74	78	82	84	76.0	88			
22-May	84	84	85	86	87	88	88	83	77	68	62	66	69	73	73	62	59	57	55	57	62	61	61	65	71.3	88			
23-May	64	66	70	73	75	76	77	78	71	61	49	48	43	42	45	57	53	52	48	48	51	53	56	59	59.0	78			
24-May	61	59	62	63	63	67	68	62	55	57	52	39	34	30	32	31	31	31	29	37	38	37	37	39	46.5	68			
25-May	40	42	43	45	46	47	47	46	43	38	35	32	29	27	26	27	27	28	28	28	30	32	36	39	35.9	47			
26-May	41	44	45	48	51	52	51	49	46	40	36	29	27	26	25	24	25	26	28	50	75	76	77	77	44.5	77			
27-May	82	83	85	84	78	76	79	73	66	55	43	36	29	30	28	27	27	27	25	27	26	27	27	26	48.6	85			
28-May	28	32	37	41	42	43	44	51	49	43	34	25	24	23	23	23	23	24	24	24	25	27	31	33	32.2	51			
29-May	35	36	36	36	37	37	40	41	37	33	26	23	22	23	23	22	22	23	24	25	27	41	49	55	32.2	55			
30-May	62	67	70	83	73	78	77	62	56	43	32	30	24	22	22	23	24	27	28	27	26	27	30	37	43.8	83			
31-May	41	44	44	42	46	46	45	51	51	38	34	31	34	39	41	45	53	68	86	88	90	96	98	96	56.0	98			
		53.3	55.4	57.9	59.5	60.3	61.2	61.6	59.8	54.2	48.5	43.4	40.1	37.7	36.5	35.9	35.8	35.5	36.3	37.4	40.6	43.8	46.5	48.7	50.6	Diurnal Average			
		92	91	95	94	92	91	90	91	87	86	84	81	74	73	83	81	77	78	86	88	90	96	98	96	Diurnal Maximum			



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 90m (RH90) - %
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 90m (RH90) - %
Mannix - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	26	3.49	3.49
20 - 40	294	39.52	43.01
40 - 60	226	30.38	73.39
60 - 80	120	16.13	89.52
80 - 100	78	10.48	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Mannix - May 2025

Maximum Speed: 30 km/h on May 29 22:00										Maximum Daily Speed Average: 18.3 km/h on May 17										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 10 06:00										Minimum Daily Speed Average: 1.3 km/h on May 13										Hours of Data: 744						
Maximum Diurnal Speed Average: 6.0 km/h at hour 3										Minimum Diurnal Speed Average: 4.0 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 4.8 km/h 160.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 9 Median = 14 Q ₃ = 18 P ₉₀ = 22 P ₉₉ = 27										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE14	N9	NNW7	N7	NW4	W6	WSW4	WNNW2	S3	S8	SSE13	SSE12	SSE11	SE11	SE10	SE10	SE12	SE12	SE12	SE17	SE19	SE22	SE20	SE17	SE6.9	SE22
2-May	SSE12	SSE8	SSE8	W4	WNW5	W9	W3	WSW5	WNNW1	E5	ESE5	ENE2	W4	NW12	WNNW17	NW15	NW14	N12	NNE10	NE9	NNE15	NNE12	NE9	SW2	NNW3.1	WNNW17
3-May	ESE2	SE3	SE2	SSE6	SSE13	SSE13	SSE13	SSE13	SSE12	SSW10	W24	W22	WNNW17	WNNW19	WNNW16	W20	W22	WNNW21	NW25	NW23	NW25	WNNW18	NW19	NNW18	W9.0	NW25
4-May	NW10	WSW10	WSW14	W17	NW17	NW18	NNW18	NNW14	N9	N4	SW10	W15	W20	W21	W19	WSW18	SW21	SW26	SW24	SW19	SW18	WSW17	W15	WNNW16	W13.0	SW26
5-May	WNNW19	NNW17	NNE19	NNE14	NNW7	NNW7	N10	NW16	WNNW16	WNNW13	WNNW12	NW9	N7	NNE3	N7	NNW5	NNE7	ENE10	ENE8	NNE11	NNE12	E10	SE17	SE15	N6.1	NNE19
6-May	SE22	SE19	SE18	SE15	SE17	SE19	SE15	SE12	SSE13	SSE15	S15	SSW16	SW21	SW25	SSW21	SW21	SSW21	SSW16	S19	S19	S22	S22	SSE20	SSE22	S16.0	SW25
7-May	SSE18	SSE18	SE20	SE21	SE20	SE19	SE17	SSE20	S25	S20	S20	SW18	WSW22	WSW18	WSW16	W22	WSW24	SW22	WSW19	SW13	SSW11	SSW12	SSW10	SSW10	SSW13.3	S25
8-May	SW4	WSW10	W6	N5	W7	W3	ENE1	NNW7	NNE18	NNE16	NNE14	N16	N9	NNW2	WNNW8	N14	N13	N14	N12	N11	NNE12	NE9	ENE5	SW4	N6.8	NNE18
9-May	S10	SSE10	SSE9	SE9	SE10	SE9	SE8	SE7	SSE8	SSW8	WSW21	W25	WSW23	SW23	SW21	WSW20	SW17	WSW20	WSW14	SW7	SW9	WSW6	SW8	SSW6	SW9.9	W25
10-May	SSW8	SW6	SSE7	S6	S5	E0	WSW2	WSW3	WSW5	WNNW7	WSW8	SW5	WSW11	WNNW8	NW9	NW4	SW4	SW7	SSE8	S8	SSE6	ESE8	SE14	SE12	SSW3.8	SE14
11-May	SSE9	SSE10	SE13	SE11	SE9	SSE10	SSE12	S12	SSE14	SSE10	SSE11	ESE8	SW3	NE8	E4	WNNW4	NW8	NNW6	NNE6	N5	NNE5	NE7	NE5	NNE4	SE4.1	SSE14
12-May	NW4	N6	NNE9	N4	NNW6	N7	N10	N13	NNE15	N17	NNE19	N20	NNE22	NNE24	NNE23	N25	NNE24	NNE23	NNE24	NNE21	N23	N21	N18	N18	N16.3	N25
13-May	N13	NNW11	N11	NNW4	NW8	WNNW6	NNW5	NNW9	NNE8	NNW7	NW9	WNNW6	NW3	NW5	ENE5	ESE8	ESE8	E10	S10	SSE13	SE13	SE13	SE16	SE15	ENE1.3	SE16
14-May	SE12	SE16	SSE16	SSE14	SE11	SE9	SSE11	SW9	W9	NW13	NNW20	NNW23	NNE25	NNE27	NNE27	NNE29	NNE29	NNE28	N22	N20	N20	N20	NNE22	NNE19	NNE10.8	NNE29
15-May	N21	N22	NNE19	N24	N24	NNE21	NNE23	NNE18	N20	NNE19	N18	NNW16	N16	NNE18	NNE19	NNE17	NNE18	NNE16	NNE16	NNE16	NNE14	NE14	NE13	NE11	NNE17.5	N24
16-May	NE8	N10	NNE9	NNE9	NNE12	NNE7	E5	SSE4	ENE4	E7	NNW4	NW4	E6	ESE5	E8	ENE5	ESE5	SE6	SE8	SSE9	SSE11	SE12	SE15	SE20	E4.4	SE20
17-May	SE22	SE22	SE23	SE21	SE18	SE19	SE20	SE19	SE13	SE15	SE13	SE14	SE16	SE18	SE16	SE20	SE19	SE18	SE19	SE18	SE17	SE18	SE20	SE20	SE18.3	SE23
18-May	SE21	SE19	SE19	SE19	SE21	SE20	SE18	SE15	SE14	SE14	SE12	SE18	SSE18	SSE14	SE14	SSE15	SE16	SE19	SE15	SE19	SE18	SE17	SE19	SE17	SE17.0	SE21
19-May	SE12	SE14	SE14	SE12	SE13	SE14	SE14	SSE14	SSE16	SE20	SE23	SE23	SE22	SE17	SE21	SE20	SSE20	SSE30	SSE27	SE21	SE16	SE18	SE16	SE17	SE18.0	SSE30
20-May	SE16	SE14	SE13	SE11	SE13	SE13	SE14	SSE14	SE15	SE18	SE18	SE18	SE19	SSE17	SE18	SE23	SE18	SE17	SE17	SE15	SE13	SE11	SE12	SE11	SE15.2	SE23
21-May	SE11	SE13	SSE11	SE11	SE11	SE13	SE14	SE12	SSE11	SSE10	SE9	SE12	SE13	SE18	S17	S17	S13	S11	S11	SSE14	SSE13	SE14	SSE13	SSE11	SSE12.2	SE18
22-May	SE12	SSE12	SE10	SE12	SE14	SSE11	SSE14	SSE16	SSE16	SSE17	SSE19	SSW14	SW14	SSW12	SSE12	SSE19	SE18	SE17	SSE15	SE14	SE14	SSE10	SSE10	SSE9	SSE12.7	SSE19
23-May	SSE11	SSE15	SSE12	SSE9	SSE9	SSE10	SE12	SE12	SE12	SE13	SE18	SSE22	SSE21	SE14	SE16	SE11	SE17	SE19	SE20	SSE15	S13	SSE8	S9	SSE12	SSE13.5	SSE22
24-May	SSE11	SSE11	SE13	SE15	SE16	SE13	SE11	SSE8	SSE13	SE11	SE14	SE19	SSE23	SSE20	S10	SSE13	SE16	S15	SSW15	SSE16	SSE11	SE12	SSE13	SSE15	SSE13.4	SSE23
25-May	SSE15	SSE12	SE14	SSE14	SE13	SE13	SE14	SE17	SSE24	SSE24	S22	SSE22	SSE22	SSE24	S17	S20	SSE23	S19	S18	S17	S16	SSE14	SSE14	SSE14	SSE17.2	SSE24
26-May	SE14	SSE13	SE13	SE14	SE19	SE16	SE12	SE12	SE11	SSE14	SE14	S22	S25	SSE24	SSE25	SSE25	S25	S24	S15	W26	WNNW12	W17	S7	WSW8	SSE13.3	W26
27-May	SW8	SSW6	WSW4	S6	S6	S5	SSW7	SW7	WSW7	W11	W13	W16	W19	WSW18	WSW18	WSW20	WSW23	WSW21	WSW19	W13	WSW10	SW8	WSW8	SW10	WSW10.8	WSW23
28-May	WSW9	SW7	S7	SSE9	SSE9	SSE8	SSE6	SE5	SE5	SE6	SE7	SW12	SW14	SSW15	SSW13	SSW13	SSW10	S7	SSE8	SE9	SSE11	SSE14	SSE15	SSE14	S8.2	SSW15
29-May	SSE12	SSE12	SSE10	SE11	SE11	SSE11	SE10	SSE10	SSE14	SSE16	SSE23	SSE26	SSE26	SSE23	SSE22	SE26	SSE25	SSE24	SSE21	SSE18	SE15	W30	WNNW27	WNNW14	SSE13.5	W30
30-May	W27	W18	WSW21	W18	W13	W16	WNNW16	NW17	WNNW13	WNNW16	NW14	WNNW10	WNNW6	W7	WSW14	WSW15	SW9	S11	SSW10	SSW8	SSE10	SSE10	S9	SSE11	WSW9.9	W27
31-May	SSE10	S8	SSW6	SSE4	ESE3	SSE8	SSE8	SSE4	SSE6	SSE7	SE5	ESE1	N8	N15	N15	N18	N17	N20	N18	N20	NNW17	NNW19	NNW13	NNW15	N5.2	N20
SSE5.6 SSE5.5 SE6.0 SE5.7 SE5.6 SE5.7 SE5.6 SSE4.6 SSE5.0 SSE5.1 S4.8 SSW4.9 SSW5.4 SSW4.3 S4.1 S4.3 S5.1 S5.2 SSE5.0 SSE4.1 SE4.0 SSE4.0 SE5.3 SSE5.5																									Diurnal Average	
W27 SE22 SE23 N24 N24 NNE21 NNE23 SSE20 S25 SSE24 W24 SSE26 SSE26 NNE27 NNE27 NNE29 NNE29 SSE30 SSE27 W26 NW25 W30 WNNW27 SSE22																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

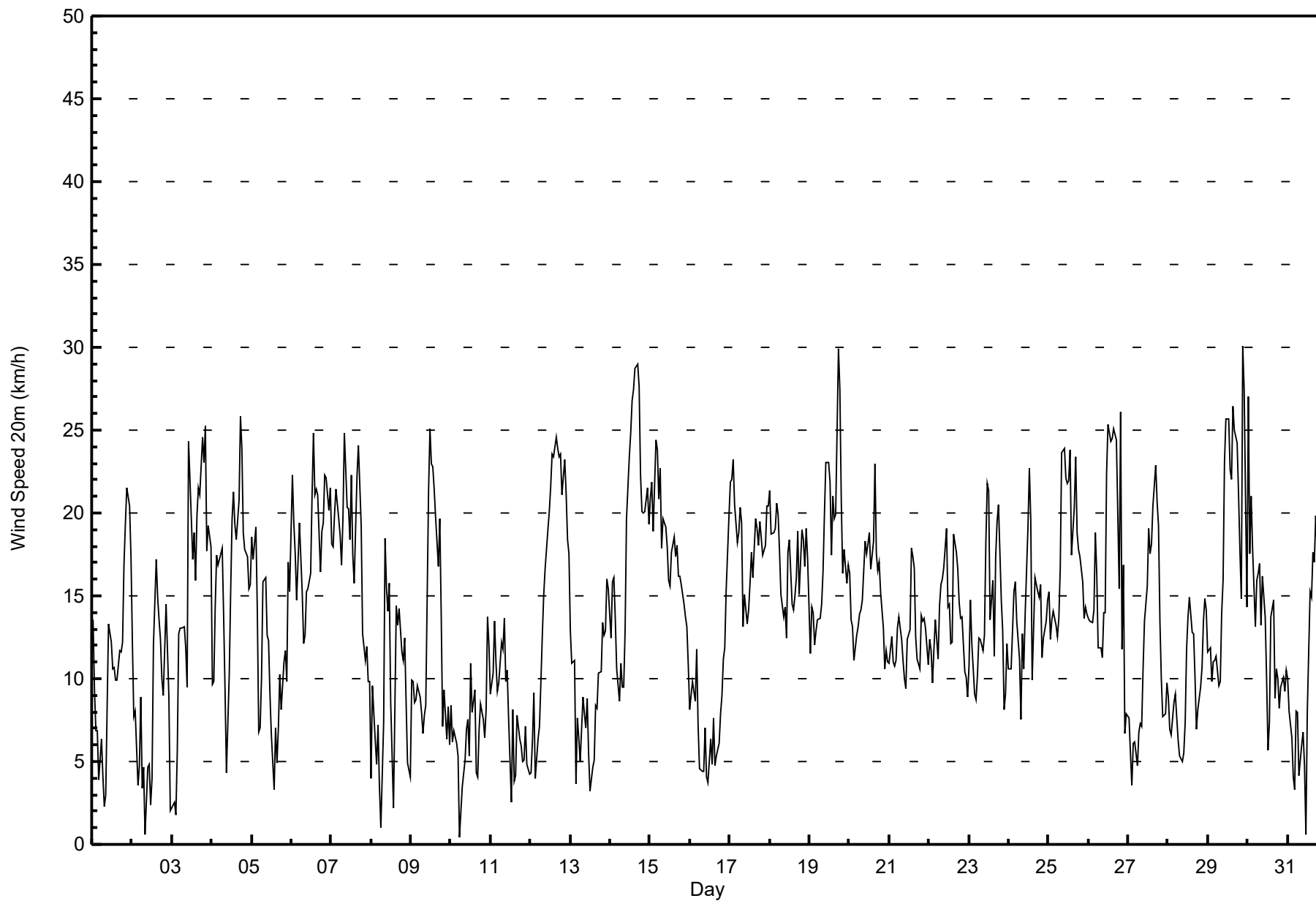
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on May 29 22:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 28 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 6 P ₉₀ = 7 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	4	3	2	2	2	2	2	2	3	3	3	4	4	4	4	4	4	3	4	5	5	5	5	4	5
2-May	3	2	2	2	3	3	2	2	2	2	2	3	4	5	5	5	4	4	3	2	3	3	3	3	5
3-May	2	1	1	3	4	3	3	3	4	8	5	6	5	7	7	6	5	5	5	7	6	6	6	5	8
4-May	3	2	3	3	5	5	5	4	4	3	4	5	5	5	5	5	5	7	6	4	4	4	3	3	7
5-May	6	6	6	4	3	3	4	5	5	5	5	4	4	3	4	4	3	4	2	3	2	5	5	6	6
6-May	6	6	4	3	5	5	5	3	3	4	6	6	7	8	8	8	8	6	7	5	5	5	4	4	8
7-May	4	4	5	5	5	5	4	7	8	8	7	7	6	5	5	7	7	6	5	4	2	3	2	2	8
8-May	3	2	3	2	5	4	2	5	5	5	5	5	3	7	5	5	4	5	3	4	2	2	2	3	7
9-May	2	1	2	2	2	3	3	2	3	6	6	7	7	7	8	7	5	6	5	2	2	1	2	3	8
10-May	2	2	2	1	2	2	1	2	3	4	4	4	7	6	8	5	4	4	3	3	2	4	5	3	8
11-May	3	4	3	4	3	3	4	4	4	3	4	4	4	2	3	3	4	3	2	1	2	2	2	2	4
12-May	2	2	2	2	2	3	4	4	4	5	5	6	6	7	7	7	7	6	6	6	7	7	5	5	7
13-May	3	3	3	3	3	3	3	4	3	4	4	3	3	4	4	4	4	3	6	4	3	4	4	5	6
14-May	4	5	5	3	3	2	3	3	4	4	7	7	6	8	7	7	7	7	7	6	6	7	6	6	8
15-May	6	6	5	6	7	6	6	6	6	6	6	5	5	6	5	6	5	5	4	4	3	4	4	3	7
16-May	3	1	2	2	3	2	2	2	4	3	3	4	4	4	4	4	4	4	3	2	2	4	5	5	5
17-May	6	6	6	6	5	5	5	6	5	5	5	6	6	6	6	7	6	6	5	6	6	6	5	5	7
18-May	6	6	5	5	5	5	5	4	4	5	5	7	6	5	4	5	5	6	5	5	5	5	6	5	7
19-May	3	3	4	3	3	4	4	5	5	7	8	8	7	7	8	7	7	10	8	8	5	5	5	5	10
20-May	5	4	4	3	4	4	4	5	5	5	6	6	5	5	7	7	6	6	5	5	5	3	4	3	7
21-May	3	4	3	3	4	4	4	4	4	4	4	5	4	6	5	5	5	5	4	5	4	4	4	3	6
22-May	4	3	3	4	4	4	4	5	5	6	6	5	4	4	4	6	6	6	5	4	4	2	2	2	6
23-May	2	3	3	2	1	2	4	4	5	6	7	7	7	5	6	4	7	6	6	4	4	2	2	3	7
24-May	2	2	4	4	5	4	4	3	4	4	5	7	8	7	7	8	6	11	6	6	3	3	4	3	11
25-May	3	3	3	3	3	4	5	5	7	8	8	8	8	8	7	8	8	8	7	5	4	3	4	4	8
26-May	4	3	3	4	5	6	4	5	4	5	6	9	9	9	8	9	9	8	6	10	5	9	4	3	10
27-May	2	2	2	2	1	2	2	3	3	4	5	6	7	6	7	7	7	7	6	3	2	2	1	2	7
28-May	1	1	1	1	1	2	2	3	2	2	4	6	6	7	6	6	4	2	2	2	2	3	3	3	7
29-May	2	2	2	2	2	2	3	3	5	6	8	9	9	8	8	9	8	8	7	6	4	11	9	4	11
30-May	8	7	6	6	3	5	5	6	4	5	6	4	5	5	6	5	4	4	3	2	2	2	2	2	8
31-May	2	2	1	1	1	3	3	2	3	3	2	2	3	5	5	5	7	7	7	7	6	6	5	6	7
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	66	8.87	8.87
6 - 11	207	27.82	36.69
12 - 19	335	45.03	81.72
20 - 28	132	17.74	99.46
29 - 38	4	0.54	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	3	1	6	4	6	5	3	3	0	6	6	4	4	6	5	66
6 - 11	14	9	7	2	5	4	31	54	16	14	11	11	7	7	6	9	207
12 - 19	18	25	2	0	0	0	137	63	14	9	8	12	13	15	10	9	335
20 - 28	14	15	0	0	0	0	28	26	11	2	9	10	10	2	3	2	132
29 - 38	0	2	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	54	10	8	9	10	201	147	44	25	34	39	35	28	25	25	744

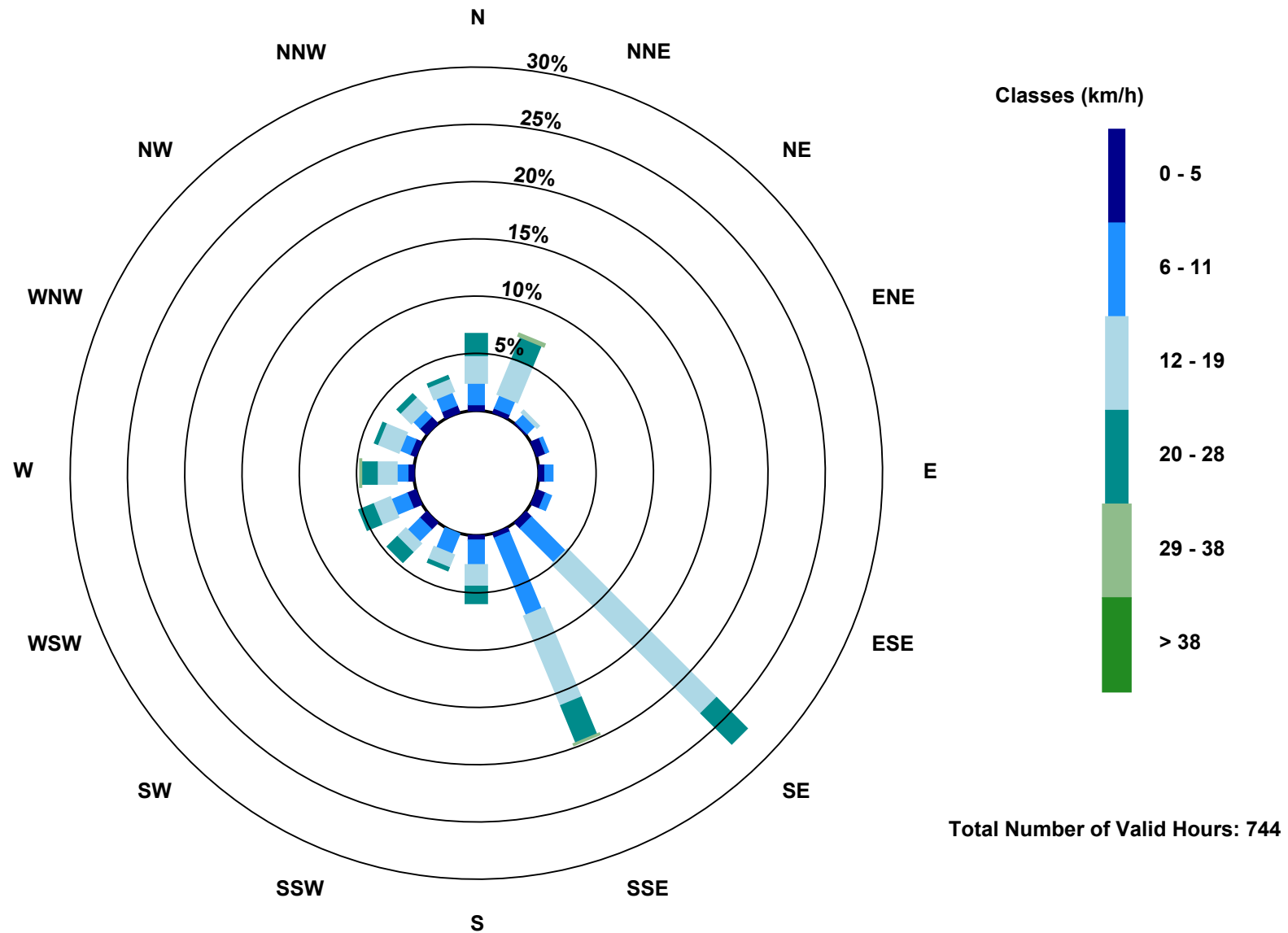
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 20m (WS20) - km/h
Mannix





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Mannix - May 2025

Maximum Speed: 38 km/h on May 19 18:00										Maximum Daily Speed Average: 25.2 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 31 12:00										Minimum Daily Speed Average: 1.9 km/h on May 13										Hours of Data: 744						
Maximum Diurnal Speed Average: 8.9 km/h at hour 1										Minimum Diurnal Speed Average: 5.6 km/h at hour 16										Hours of Missing Data: 0						
Monthly Average Velocity: 6.6 km/h 158.4 deg										Percentiles: P ₁ = 3 P ₁₀ = 8 Q ₁ = 13 Median = 19 Q ₃ = 23 P ₉₀ = 28 P ₉₉ = 35										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N17	N13	N10	N8	NW5	W7	W5	WNW3	S4	S10	SSE16	SSE15	SSE13	SE13	SE11	SE11	SE12	SE13	SE14	SE20	SE23	SE27	SE25	SE23	SE8.2	SE27
2-May	SE18	SSE13	SSE14	W5	NNW8	W14	W5	WSW5	W2	E4	ESE4	NE2	W5WNW15WNW21	NW19	NW17	N15	N13	NNE14	NNE21	NNE16	NE14	SE2	NNW3.9	WNW21		
3-May	ESE4	SE4	SE4	SE10	SSE19	SE18	SE18	SSE16	SSE14	SSW12	W27	W25WNW20WNW22WNW19	W22	W25WNW26WNW31	NW30WNW33WNW24	NW25	NNW24	W10.4	WNW33							
4-May	NW13	W12WSW18	W21	NW22	NW23	NNW24	NNW19	N13	N6	SW11WSW18	W22	W23	W21WSW21	SW24	SW32	SW30	SW25	SW25WSW24	W21WNW22	W15.8	SW32					
5-May	WNW25	NW23	NNE25	NNE18	NNW10	NNW10	NNW13	NW19WNW19WNW15WNW15	NW11	N8	N4	N8	NNW7	NNE8	ENE11	NE9	NNE13	NNE15	ENE13	SE19	SE18	N8.0	NNE25			
6-May	SE27	SE24	SE23	SE20	SE21	SE25	SE20	SE15	SSE16	SSE18	S20	SSW21	SSW27	SW31	SSW29	SSW28	SSW30	SSW24	S29	S27	SSE30	S30	SSE28	SSE30	S21.4	SW31
7-May	SSE25	SSE26	SE28	SE28	SE26	SE26	SE23	SSE26	S35	S32	S29	SW24WSW27WSW21WSW19	W26WSW29	SW27	SW24	SW19	SSW21	SSW22	SSW18	SSW19	SSW18.9	S35				
8-May	SW8WSW16	W12	N8	NW9	NW6	ENE2	NNW10	NNE23	NNE20	NNE17	N20	NNW11	NW3	W11	N17	NNW17	N17	N14	N15	NNE17	NE12	ENE8	S5	N9.0	NNE23	
9-May	SSE17	SSE16	SSE15	SSE16	SE15	SE13	SSE9	SE8	SSE9	SSW11WSW24	W28WSW27	SW28	SW26WSW24	SW22	SW24WSW17	SW11	SW15WSW11	SW13	SSW11	SW13.2	W28					
10-May	SSW15	SW12	S9	SSW9	SSW8	SW2	W4	WSW4	WSW6	W8	WSW9	SW7	SW13	WNW9	NW12	NW6	SW5	SW9	SSE11	S10	SSE8	ESE10	SE16	SE15	SSW5.3	SE16
11-May	SE13	SSE16	SE18	SE15	SE14	SE16	SSE17	SSE16	SSE18	SSE12	SSE12	ESE8	SW3	NE9	ESE4	WNW5	NW10	NNW8	NNE7	N6	NNE8	NE11	ENE7	ENE3	SE5.9	SE18
12-May	NNW6	N7	NNE14	N8	NNW11	N11	N12	N16	N19	N20	N23	N25	N25	NNE28	NNE29	N31	NNE29	N30	N29	N28	N31	N28	N25	N25	N21.1	N31
13-May	N20	NNW17	N17	NNW8	NW12WNW10	NNW7	NNW11	N9	NNW9	NW11	WNW7	NW4	NW6	NE6	ESE10	ESE9	E11	S15	SSE19	SE17	SE19	SE22	SE22	NE1.9	SE22	
14-May	SE19	SE21	SSE24	SSE20	SE17	SE14	SSE15	SSW12	W11	NW16	NNW25	NNW30	N30	NNE34	NNE34	NNE37	NNE37	NNE34	N30	N26	N26	N27	NNE28	N24	NNE13.2	NNE37
15-May	N27	N29	N25	N31	N32	N27	NNE28	N23	N25	NNE23	N22	NNW21	N19	NNE21	NNE23	NNE21	NNE23	NNE20	N20	NNE20	NNE20	NE20	NE18	NE14	NNE22.4	N32
16-May	NE11	NNE11	N13	NNE13	NNE16	NNE9	ENE5	SSE5	NE4	ENE8	NW5	NW5	E7	ESE5	E9	ENE5	ESE6	SE7	SE9	SSE12	SSE16	SE17	SE19	SE24	E5.5	SE24
17-May	SE28	SE27	SE29	SE25	SE22	SE23	SE24	SE22	SE15	SE18	SE16	SE16	SE19	SE21	SE19	SE22	SE23	SE22	SE23	SE22	SE19	SE21	SE24	SE24	SE21.9	SE29
18-May	SE26	SE23	SE24	SE25	SE25	SE24	SE22	SE19	SE16	SE17	SE15	SE22	SSE23	SSE17	SE17	SSE18	SE20	SE23	SE19	SE24	SE22	SE21	SE23	SE22	SE20.9	SE26
19-May	SE16	SE20	SE19	SE18	SE20	SE20	SE18	SSE19	SSE21	SE25	SE29	SE29	SE26	SE21	SE26	SE25	SSE25	SSE38	SE34	SE26	SE21	SE22	SE21	SE21	SE23.2	SSE38
20-May	SE21	SE17	SE17	SE15	SE16	SE17	SE18	SE19	SE19	SE23	SE21	SE22	SE23	SE21	SE23	SE28	SE22	SE21	SE22	SE20	SE18	SE15	SE16	SE15	SE19.5	SE28
21-May	SE16	SE17	SSE16	SE16	SE17	SE19	SE17	SE15	SSE14	SE12	SE12	SE14	SE15	SE22	SSE23	SSE21	S18	S17	S15	SSE18	SSE18	SE19	SSE18	SSE17	SSE16.4	SSE23
22-May	SE17	SSE16	SE15	SE16	SE18	SE16	SSE19	SSE20	SSE20	SSE21	SSE24	SSW18	SW19	SSW16	SSE15	SSE23	SE21	SE21	SSE19	SE18	SE19	SSE18	SSE18	SSE16	SSE17.3	SSE24
23-May	SSE20	SSE24	SSE21	SSE17	SSE16	SE16	SE18	SE16	SE14	ESE15	SE22	SSE27	SSE27	SE17	SE20	SE15	SE21	SE24	SE26	SSE20	S21	SSE13	SSE16	SSE21	SE19.0	SSE27
24-May	SSE18	SSE18	SE18	SE21	SE22	SE19	SE16	SSE10	SSE16	SE13	SE16	SE23	SSE29	SSE26	S14	SSE17	SE21	S21	SSW23	SSE22	SSE19	SSE21	SSE22	SSE23	SSE18.8	SSE29
25-May	SSE24	SSE21	SSE23	SSE24	SSE23	SE21	SE22	SE21	SSE30	SSE30	SSE29	SSE29	SSE29	SSE32	S26	S30	SSE31	S28	S27	SSE24	SSE25	SSE23	SSE23	SSE22	SSE25.2	SSE32
26-May	SE22	SSE22	SE22	SE22	SE27	SE23	SE17	SE15	SE14	SE18	SE18	S31	SSE35	SSE32	SSE32	SSE33	S35	S35	S25	W31WNW16WSW23	S12	SW12			SSE19.1	S35
27-May	SW14	SSW10	WSW7	SSW8	S11	S10	SSW9	SW9	WSW9	W13	W16	W19	W22WSW22WSW22WSW26WSW28WSW27WSW25	W17WSW16	SW15	SW17	SW20	WSW15.1	WSW28							
28-May	SW19	SW15	SW10	S9	SSE11	SSE11	SSE9	SSE7	SE6	SE7	SE9	SW16	SW18	SSW21	SSW19	SSW19	SSW17	S12	SSE13	SE17	SE19	SSE23	SSE25	SSE24	S12.8	SSE25
29-May	SSE22	SSE21	SSE19	SSE21	SE21	SE20	SE15	SSE14	SSE19	SSE21	SSE31	SSE35	SSE34	SSE30	SE29	SE34	SE33	SE32	SSE29	SSE26	SE23	W37WNW37WNW20			SSE19.6	WNW37
30-May	W32	W23WSW27	W23WNW19	W21WNW23	NW24WNW18WNW21	NW18WNW12	WNW8	W9WSW17WSW18	SSW13	S16	SSW17	SSW16	S19	SSE20	S20	S19									WSW13.5	W32
31-May	SSE18	S17	SW13	SW5	SE2	SSE11	SSE12	SSE6	SE8	SSE9	SE6	SSE1	N11	NNW21	N21	N24	N25	N29	N27	N28	NNW25	NNW27	NNW21	NNW23	NNW7.5	N29
SSE8.9 SSE8.4 SE8.6 SE7.9 SE7.8 SE8.0 SE7.4 SSE5.7 SSE6.2 SSE6.4 S6.0 S6.2 S6.9 S5.7 S5.6 S5.6 S6.7 S7.1 S7.0 SSE5.6 SSE5.7 SSE6.0 SE7.8 SSE8.3																								Diurnal Average		
W32 N29 SE29 N31 N32 N27 NNE28 SSE26 S35 S32 SSE31 SSE35 SSE35 NNE34 NNE34 NNE37 NNE37 SSE38 SE34 W31WNW33 W37WNW37 SSE30																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 45m (WS45) - km/h

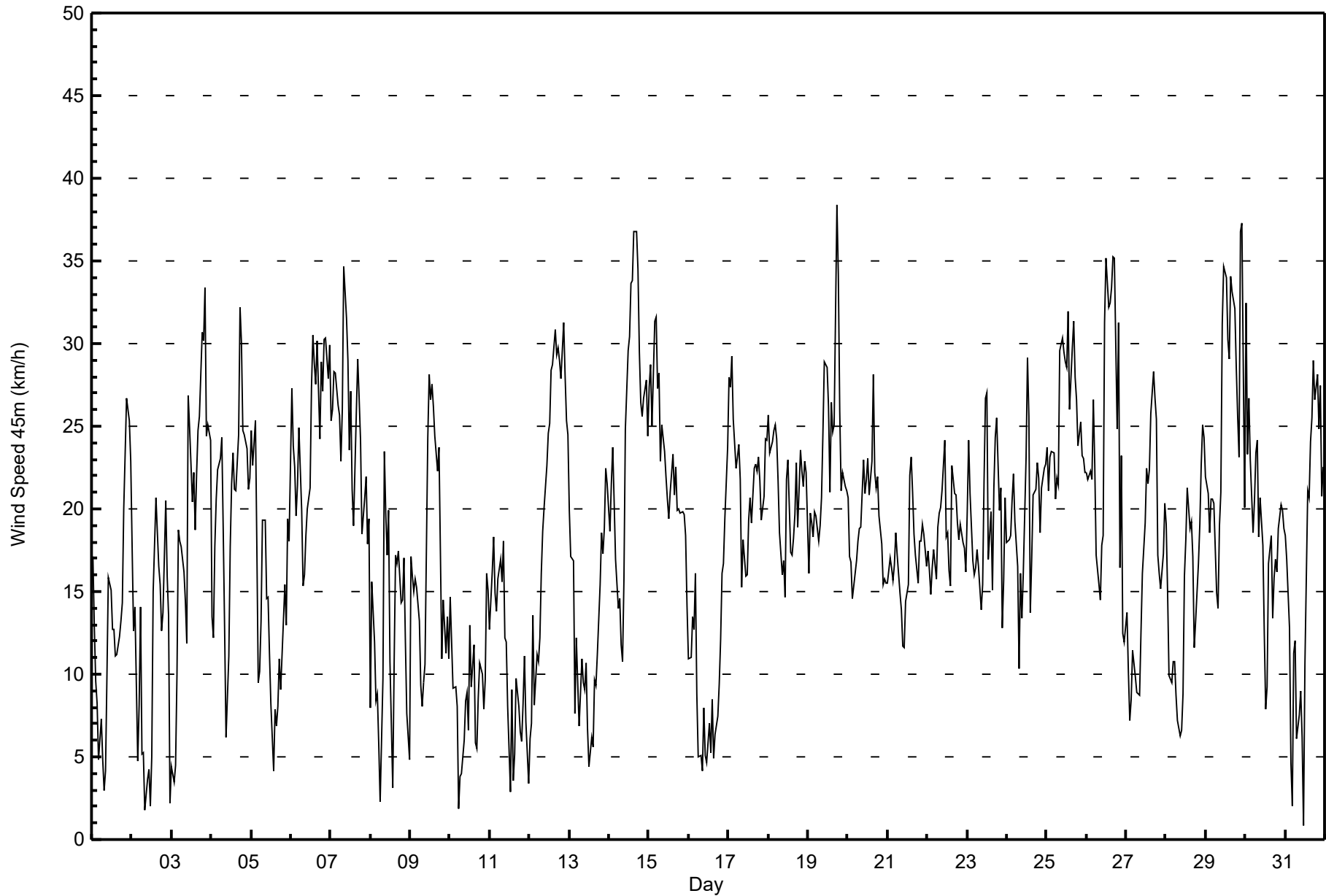
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on May 24 18:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 30 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 7 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	4	3	2	2	2	2	1	2	4	3	3	4	4	4	4	4	4	3	4	5	5	5	5	3	5
2-May	3	2	2	2	3	3	4	2	2	2	2	3	4	5	4	5	4	3	3	2	3	2	3	4	5
3-May	3	1	2	4	3	3	3	3	4	8	5	5	5	7	7	6	4	4	5	7	6	6	6	5	8
4-May	3	3	3	3	5	4	4	4	4	3	4	5	5	5	5	6	5	6	5	4	3	4	4	3	6
5-May	6	5	6	4	2	3	4	4	4	5	5	5	4	3	4	4	3	4	2	3	2	4	6	7	7
6-May	6	6	4	3	4	4	4	3	3	3	6	6	7	7	7	8	7	5	6	4	4	4	3	4	8
7-May	3	4	5	5	4	4	4	9	6	6	5	6	5	5	5	7	7	6	5	3	2	2	2	3	9
8-May	4	2	3	2	4	4	3	7	5	5	5	4	5	3	7	5	5	4	4	4	3	3	2	3	7
9-May	2	1	1	2	2	3	2	2	2	6	6	6	7	7	7	6	5	7	6	2	2	1	1	4	7
10-May	2	3	2	3	3	2	3	2	3	4	4	4	8	7	9	5	5	4	3	3	3	3	5	3	9
11-May	3	3	4	4	3	2	3	3	3	3	3	4	5	2	3	3	4	3	2	2	2	2	3	2	5
12-May	2	3	2	3	2	4	4	4	4	4	5	5	5	6	6	6	6	5	5	5	7	7	5	5	7
13-May	3	3	3	4	2	4	4	4	4	3	4	3	4	4	4	4	3	3	9	3	3	3	4	5	9
14-May	4	5	4	3	3	2	3	3	4	3	7	6	5	7	7	7	7	7	7	6	6	7	6	6	7
15-May	5	5	5	5	7	6	5	5	6	5	5	5	4	6	5	5	5	4	4	3	3	3	4	3	7
16-May	3	2	2	2	3	2	2	2	4	3	4	4	4	4	4	4	4	5	3	3	2	3	5	4	5
17-May	6	5	5	5	5	4	5	5	5	4	4	5	6	6	5	6	5	6	5	6	6	6	5	5	6
18-May	5	4	4	5	4	4	4	4	4	4	5	7	5	4	4	4	5	5	4	5	5	5	5	5	7
19-May	3	3	3	2	2	4	3	4	5	7	7	7	6	6	8	6	6	9	7	8	5	5	5	4	9
20-May	4	4	3	3	3	3	4	4	5	5	5	5	5	5	7	6	5	5	4	4	5	2	3	3	7
21-May	2	3	3	3	3	3	3	3	3	3	4	4	4	6	4	4	4	4	3	4	3	4	3	3	6
22-May	3	3	2	3	4	3	3	4	4	4	4	4	3	3	3	4	4	5	5	4	3	2	2	2	5
23-May	3	2	3	2	1	2	3	4	4	6	7	6	6	5	6	5	7	5	5	4	3	2	3	3	7
24-May	2	3	2	3	4	3	4	3	3	3	4	7	6	6	8	9	6	12	5	6	2	2	3	3	12
25-May	3	3	3	3	3	3	3	4	6	6	6	7	7	7	7	7	6	6	5	5	3	3	3	3	7
26-May	3	3	2	3	4	5	3	4	4	4	7	7	8	8	7	7	7	6	5	9	5	11	5	2	11
27-May	2	2	3	2	1	2	2	2	3	3	4	6	6	6	7	6	7	6	6	3	2	2	1	2	7
28-May	2	2	1	1	2	1	1	2	2	2	5	5	5	6	6	6	4	2	2	2	1	2	2	2	6
29-May	2	3	2	1	2	2	2	3	4	5	8	7	8	7	7	8	7	7	6	5	4	10	9	4	10
30-May	7	7	6	6	3	4	4	5	3	4	5	4	6	5	6	5	4	3	2	1	1	1	2	1	7
31-May	2	2	2	2	1	5	3	2	2	2	2	2	4	4	4	4	6	6	6	7	6	5	4	6	7
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 45m (WS45) - km/h
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 45m (WS45) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	39	5.24	5.24
6 - 11	111	14.92	20.16
12 - 19	254	34.14	54.30
20 - 28	272	36.56	90.86
29 - 38	68	9.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



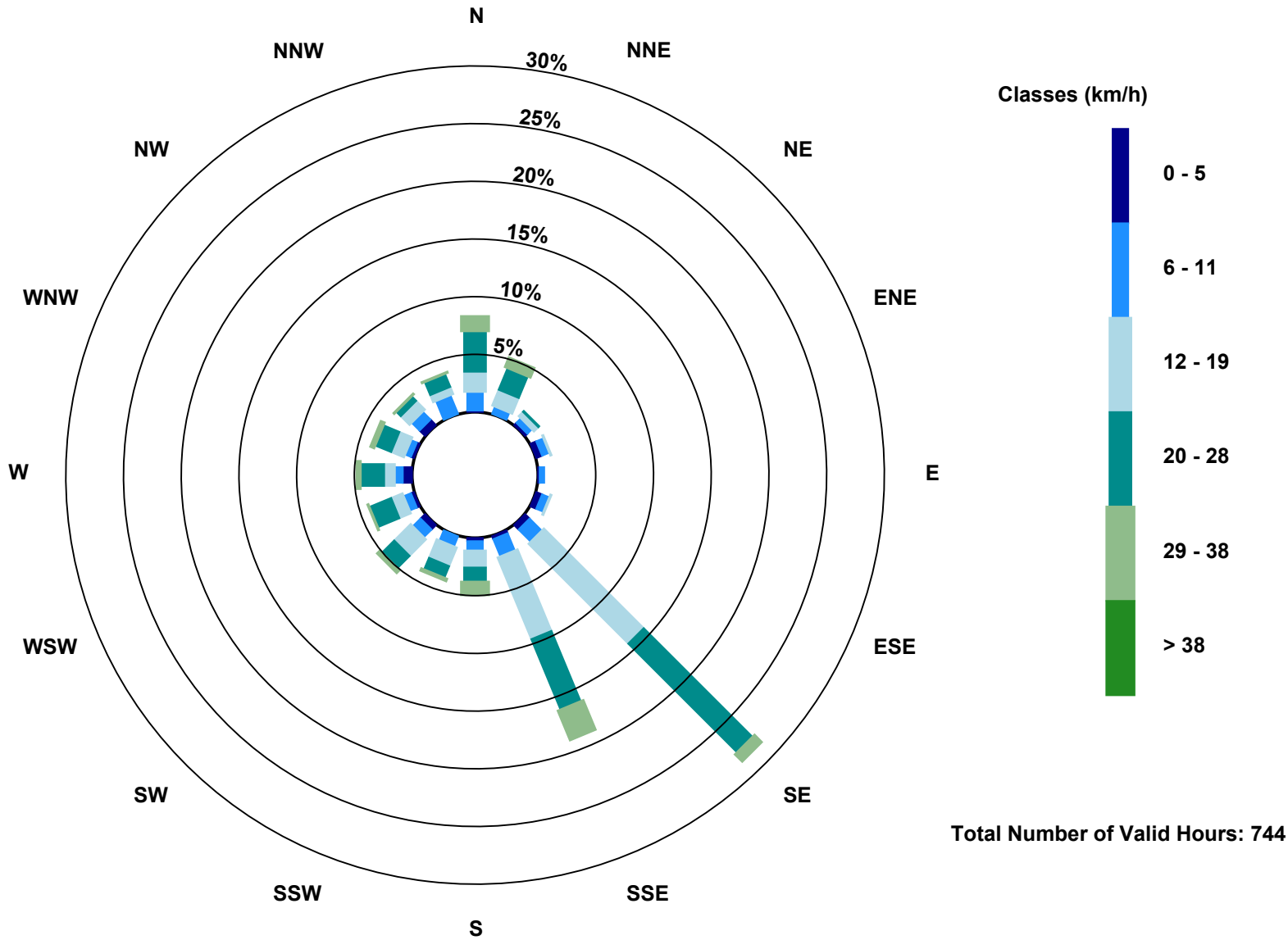
Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 45m (WS45) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1	0	2	4	1	4	4	2	2	0	4	2	6	2	5	0	39
6 - 11	12	5	4	5	3	5	11	12	6	7	7	5	5	4	7	13	111
12 - 19	13	11	4	1	0	1	91	57	11	13	15	8	7	9	8	5	254
20 - 28	26	15	1	0	0	0	99	49	9	8	11	15	15	11	4	9	272
29 - 38	10	7	0	0	0	0	7	21	9	2	3	1	3	3	1	1	68
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	38	11	10	4	10	212	141	37	30	40	31	36	29	25	28	744

Total Number of Valid Hours: 744

Total Number of Hours: 744





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 75m (WS75) - km/h

Mannix - May 2025

Maximum Speed: 42 km/h on May 19 18:00										Maximum Daily Speed Average: 30.5 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 31 12:00										Minimum Daily Speed Average: 2.9 km/h on May 13										Hours of Data: 744						
Maximum Diurnal Speed Average: 10.9 km/h at hour 1										Minimum Diurnal Speed Average: 5.8 km/h at hour 16										Hours of Missing Data: 0						
Monthly Average Velocity: 7.4 km/h 163.3 deg										Percentiles: P ₁ = 3 P ₁₀ = 8 Q ₁ = 14 Median = 21 Q ₃ = 27 P ₉₀ = 32 P ₉₉ = 39										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE19	N15	N11	NNE9	NNW5	W7	W5	WNW3	S5	S10	SSE17	S16	SSE13	SSE13	SE10	SE10	SE11	SE13	SE12	SE15	SE19	SE27	SE27	SE26	SE7.9	SE27
2-May	SSE22	SSE18	S14	WNW7	N9WNW11	WNW7	W7	W2	ESE2	SE4	NNE1	W6	NW15WNW22	NW19	NW17	N17	NNE14	NE17	NNE25	NE19	ENE17	SE5			N3.8	NNE25
3-May	ESE5	ESE4	SE3	SE12	SE19	SE19	SE20	SSE19	SSE16	SW14	W28	W26WNW21WNW23WNW20	W23	W26WNW27	NW33	NW34	NW37	NW27	NNW29	N29					WNW10.7	NW37
4-May	NNW16	W14	W20	W24	NW25	NNW27	NNW28	NNW22	N15	NNE7WSW11	W19	W22	W24	W22WSW23	SW26	SW35	SW33	SW29	SW29WSW29WNW25WNW26						W17.1	SW35
5-May	WNW28	NNW26	NNE30	NNE21	N11	NNW12	N15	NW20WNW19WNW15WNW14	NW11	N9	N4	N8	NNW7	NNE9	ENE12	ENE10	NNE15	NNE18	E14	SE16	SE16				N9.1	NNE30
6-May	SE26	SE25	SE25	SE22	SE19	SE23	SE22	SSE19	SSE19	SSE20	S22	SSW23	SW29	SW34	SSW31	SW30	SSW33	SSW27	S33	S32	S37	S37	SSE34	SSE37	S24.1	S37
7-May	SSE33	SSE34	SSE36	SSE34	SE31	SE30	SE29	SSE31	S39	S35	S32	SW25WSW29WSW23WSW21	W27WSW31	SW29WSW26	SW21	SSW27	SW29	SW23	SW21						SSW22.3	S39
8-May	WSW11	W21WNW17	N11	NNW9	NNW7	NE5	N10	NNE27	NNE22	NNE19	NNE21	N11	N3WNW11	N19	N17	N19	N15	NNE16	NNE20	NE16	ENE10	SSE7			N10.2	NNE27
9-May	SSE20	SSE19	S20	S15	SSE12	SSE17	S10	SSE8	SSE10	SSW11WSW26	W29WSW28WSW29	SW28WSW26	SW24WSW25WSW19WSW13WSW16	W13WSW13	SSW12										SW15.2	W29
10-May	SSW15	SSW14	SSW10	SW14	SW12	WSW6	W7	WSW5	SW6	WNW8	WSW9	WSW7	SW13	WNW9	NW12	NW6	SW6	SW9	SSE12	S11	SSE8	ESE8	SE12	SE13	SW6.0	SSW15
11-May	SE11	SSE20	SE16	SE15	SE17	SSE21	SSE22	S17	SSE21	SSE14	SSE12	ESE8	SW2	NE9	ESE4	WNW5	NW10	N8	NNE7	NNE7	NE12	ENE14	E8	SE3	SE7.0	SSE22
12-May	N3	N5	NNE14	NNE12	NNE14	N14	N15	N19	NNE21	NNE22	NNE25	NNE27	NNE28	NNE31	NNE31	NNE34	NNE33	NNE33	NNE32	NNE32	NNE37	NNE33	NNE30	N29	NNE23.7	NNE37
13-May	N24	N21	N22	N12	NNW16	NW12	N7	N11	NNE11	NNW9	NW11	NW7	NW5	NNW6	ENE6	ESE9	ESE9	E11	S17	SSE22	SE20	SSE24	SE27	SE26	ENE2.9	SE27
14-May	SE24	SE25	SSE31	SSE27	SSE24	SSE19	S17	SW12	W10	NW16	N27	N32	NNE33	NNE36	NNE37	NNE41	NNE41	NNE38	NNE33	N30	N29	N30	NNE32	NNE28	NNE14.1	NNE41
15-May	NNE31	NNE32	NNE29	NNE35	NNE35	NNE30	NNE31	NNE26	NNE28	NNE26	N23	N22	N21	NNE23	NNE25	NNE23	NE25	NNE22	NNE22	NNE22	NNE25	NE26	NE23	ENE18	NNE25.2	NNE35
16-May	ENE14	NE11	NNE14	NNE15	NNE17	NE11	E5	SSE5	NE5	E9	NNW5	NNW5	E8	ESE6	E8	ENE6	ESE7	SE8	SE10	SSE14	SSE20	SE19	SE20	SE22	E7.0	SE22
17-May	SE29	SE28	SE29	SE23	SE22	SE24	SE21	SE19	SE13	SE18	SE16	SE14	SE18	SE18	SSE19	SE19	SE21	SE22	SE19	SE17	SE15	SE17	SE20	SE18	SE19.9	SE29
18-May	SE21	SE23	SE26	SE25	SE23	SE25	SE22	SE17	SE15	SE14	SE14	SSE21	SSE25	SSE18	SSE18	SSE19	SE20	SE21	SE20	SE21	SE19	SE21	SE18	SE23	SE20.2	SE26
19-May	SE19	SE22	SE22	SE23	SE25	SE25	SSE23	SSE21	SSE22	SSE25	SSE30	SE29	SSE26	SSE21	SE26	SE25	SSE27	SSE42	SSE37	SSE28	SE23	SE24	SE24	SE22	SSE25.3	SSE42
20-May	SE23	SE19	SE19	SE16	SE18	SE18	SSE20	SSE22	SE20	SE23	SE21	SE20	SSE23	SSE22	SE22	SE28	SE23	SE22	SE24	SE21	SSE22	SE19	SE18	SE19	SE20.9	SE28
21-May	SE18	SE18	SSE21	SSE21	SE21	SE19	SE15	SE15	SSE14	SSE12	SE12	SE13	SE14	SSE22	S27	S23	S20	S19	S17	SSE21	SSE21	SSE23	SSE23	SSE21	SSE18.3	S27
22-May	SSE22	SSE21	SSE19	SSE20	SE19	SSE20	SSE22	SSE21	SSE21	SSE23	SSE26	SSW20	SW19	SSW17	SSE17	SSE24	SE19	SE20	SSE21	SE20	SE23	SSE25	SSE24	SSE23	SSE19.9	SSE26
23-May	SSE26	SSE33	SSE29	SSE25	SSE21	SE19	SE20	SE18	SE12	SE14	SE19	SSE29	SSE29	SE17	SE18	SE14	SE23	SSE26	SE25	SSE23	S26	S14	SSE20	S27	SSE21.5	SSE33
24-May	SSE25	SSE25	SE22	SE23	SE22	SE23	SE21	SSE12	SSE17	SE13	SE14	SE22	SSE31	SSE28	S16	SSE18	SE23	SSW24	SSW27	SSE26	SSE26	SSE29	SSE31	SSE30	SSE22.0	SSE31
25-May	SSE32	SSE30	SSE32	SSE33	SSE33	SE29	SSE29	SSE26	SSE32	SSE33	S32	SSE31	SSE31	S35	S28	S32	S34	S31	S30	S28	S32	SSE31	SSE30	SSE30	SSE30.5	S35
26-May	SSE30	SSE29	SE29	SE26	SE30	SE26	SE18	SE16	SE15	SSE19	SSE19	S34	S39	SSE35	SSE36	SSE37	S39	S40	S30	W33WNW18WSW27	S15	SW14			S22.0	S40
27-May	SW15	SW14	W10	SW8	SSW12	SSW12	SW10	SW9	WSW9	W13WNW16	W19	W23WSW23WSW24WSW28WSW30WSW29WSW28	W19WSW20WSW19WSW23WSW29											WSW17.3	WSW30	
28-May	SW32WSW24WSW16	SW11	SSW8	SSW7	SSW8	S7	SSE6	SE6	SSE8	SW17	SW19	SSW22	SSW20	SSW21	SSW19	S14	SSE16	SSE21	SSE25	SSE29	SSE32	S30			SSW14.9	SSE32
29-May	S28	SSE30	S28	SSE28	SSE28	SSE26	SE21	SSE19	SSE21	SSE23	SSE34	SSE38	SSE36	SSE33	SSE31	SE36	SSE38	SSE36	SSE32	SSE31	SSE29	W39WNW41WNW22			SSE23.4	WNW41
30-May	W35	W26WSW29WNW26WNW23	W24WNW26	NW26WNW19WNW21	NW18WNW13	WNW7	W9WSW17WSW19	SSW14	SSW17	SSW21	SW21	SSW21	SW21	SSW21	SW21	SSW21	SW21	SSW21	SW21	SSW21	S25	SSW28	S24		WSW15.3	W35
31-May	S23	SSW23WSW18	W12	W4	S9	S13	SSE8	SSE9	SSE10	SSE6	SE1	N11	N22	N23	NNE27	N29	N34	N31	N32	N29	NNW32	NNW24	NNW26		N9.0	N34
SSE10.SSE10.SSE10.1 SSE8.7 SE8.6 SE9.2 SE8.2 SSE6.4 SSE6.6 SSE6.6 S6.1SSW6.3SSW7.3 S6.0 S6.0 S5.8 S7.2 S7.7 S7.8 SSE6.2 SSE6.7 SSE7.4 SSE8.8 SSE9.6																								Diurnal Average		
W35 SSE34 SSE36 NNE35 NNE35 NNE30 NNE31 SSE31 S39 S35 SSE34 SSE38 S39 NNE36 NNE37 NNE41 NNE41 SSE42 SSE37 NW34 NW37 W39WNW41 SSE37																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 75m (WS75) - km/h

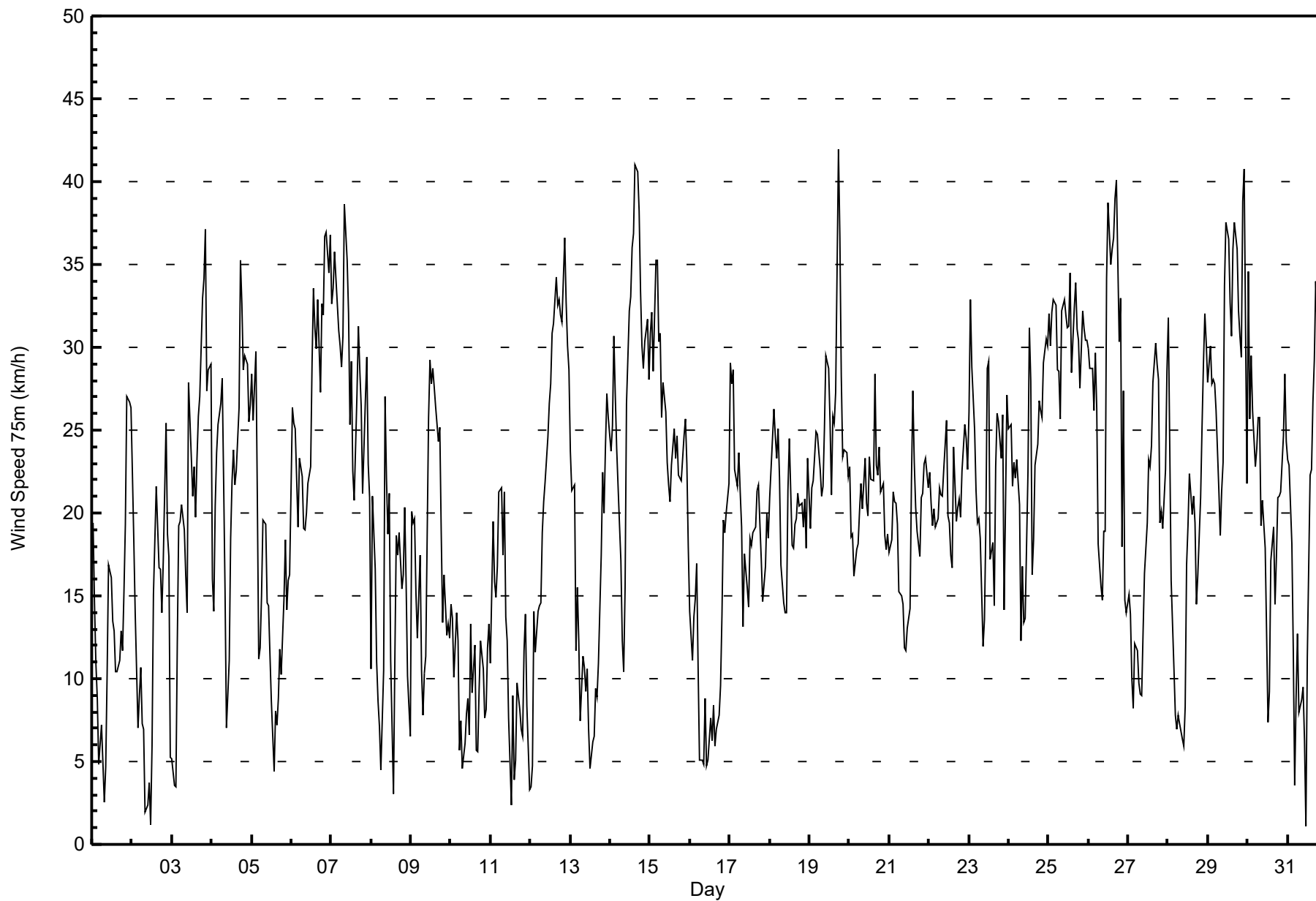
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on May 24 18:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 28 06:00 Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 6 P ₉₀ = 7 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	2	3	2	2	1	1	4	3	3	3	4	4	4	4	4	4	4	7	7	7	7	4	7
2-May	2	2	4	3	3	3	4	3	2	2	2	3	5	5	4	5	4	4	4	2	3	3	3	4	5
3-May	3	2	2	5	4	7	4	4	4	8	4	5	5	7	6	6	4	4	5	7	6	6	6	5	8
4-May	4	3	2	3	6	4	4	4	4	4	5	5	5	5	5	5	5	6	5	3	3	5	4	3	6
5-May	6	5	5	4	3	4	4	5	4	4	5	4	4	3	4	4	3	4	2	3	1	4	7	9	9
6-May	9	6	5	4	6	6	5	3	3	3	5	6	7	7	8	8	7	6	6	4	4	4	3	4	9
7-May	3	4	4	5	5	5	3	8	5	6	5	6	5	5	4	6	7	5	4	3	2	2	2	2	8
8-May	3	2	3	2	3	4	3	8	5	4	5	4	5	3	8	5	4	3	4	4	3	3	3	3	8
9-May	3	2	2	4	3	4	2	2	2	6	6	6	7	6	8	6	5	7	6	2	2	1	2	3	8
10-May	2	4	2	5	3	3	4	2	2	4	4	4	8	7	8	5	5	3	3	3	3	3	5	5	8
11-May	4	4	7	7	2	2	3	3	3	3	3	4	5	2	3	3	3	3	2	2	2	2	4	2	7
12-May	2	2	4	3	3	3	4	4	4	3	4	5	5	6	6	6	6	5	5	5	6	7	5	4	7
13-May	3	3	3	4	2	5	4	4	4	3	4	3	4	4	5	4	3	3	11	3	4	3	3	5	11
14-May	4	8	4	2	3	3	3	3	4	3	8	6	4	6	6	6	6	7	6	6	6	7	5	6	8
15-May	5	5	5	4	7	5	5	5	6	5	5	5	5	6	5	5	5	4	4	3	3	3	3	4	7
16-May	4	1	1	1	1	2	2	2	4	3	3	4	4	3	4	4	4	5	3	3	2	5	6	7	7
17-May	7	7	8	8	7	6	7	6	5	5	5	6	7	7	6	7	7	7	7	7	6	7	8	7	8
18-May	8	7	5	6	7	5	5	5	5	5	5	8	5	5	5	4	5	7	5	8	7	7	7	7	8
19-May	4	3	3	2	2	3	3	4	5	8	8	9	8	8	9	7	6	10	8	8	5	5	5	6	10
20-May	5	4	4	4	3	4	4	5	5	6	6	7	6	6	7	7	6	5	5	5	5	3	3	3	7
21-May	3	4	2	3	2	4	5	3	3	3	4	5	5	9	4	4	3	4	3	4	3	3	3	2	9
22-May	2	3	2	3	4	3	3	3	4	4	4	4	3	3	3	5	6	6	5	4	3	2	2	2	6
23-May	2	1	2	2	2	4	4	5	5	7	8	6	6	6	6	7	9	7	7	4	4	3	5	3	9
24-May	3	3	3	4	5	4	5	4	3	4	5	8	7	6	8	9	6	13	6	5	2	2	3	3	13
25-May	3	2	2	2	2	2	3	5	5	6	6	6	7	7	7	6	5	6	5	5	3	2	3	2	7
26-May	2	2	2	3	5	6	4	5	5	4	8	7	8	8	6	7	8	6	5	8	6	12	7	2	12
27-May	2	3	4	2	1	2	2	3	3	4	5	6	6	7	6	7	6	6	3	2	2	2	2	2	7
28-May	1	3	3	2	1	1	1	2	2	2	5	5	5	6	6	6	4	2	2	2	1	2	2	2	6
29-May	1	2	2	1	1	1	3	3	4	5	8	7	8	8	8	10	8	8	7	5	3	9	9	4	10
30-May	7	7	6	6	4	3	4	5	3	4	4	4	5	6	6	5	4	3	3	1	1	1	3	2	7
31-May	2	2	2	5	3	4	2	3	2	2	2	2	4	4	4	4	6	5	6	8	7	6	5	6	8
9 8 8 8 7 7 7 8 6 8 8 9 8 9 9 10 9 13 11 8 7 12 9 9																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 75m (WS75) - km/h
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 75m (WS75) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	30	4.03	4.03
6 - 11	100	13.44	17.47
12 - 19	199	26.75	44.22
20 - 28	268	36.02	80.24
29 - 38	138	18.55	98.79
> 38	9	1.21	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 75m (WS75) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	1	2	0	1	4	5	1	1	0	1	1	3	2	1	3	30
6 - 11	11	6	3	5	4	6	7	10	5	5	6	7	7	7	5	6	100
12 - 19	12	12	4	5	1	0	67	31	13	9	11	10	6	8	7	3	199
20 - 28	9	23	3	0	0	0	77	69	13	14	7	16	14	13	4	6	268
29 - 38	11	24	0	0	0	0	9	50	16	2	10	8	3	0	3	2	138
> 38	0	2	0	0	0	0	0	1	4	0	0	0	1	1	0	0	9
Totals	47	68	12	10	6	10	165	162	52	30	35	42	34	31	20	20	744

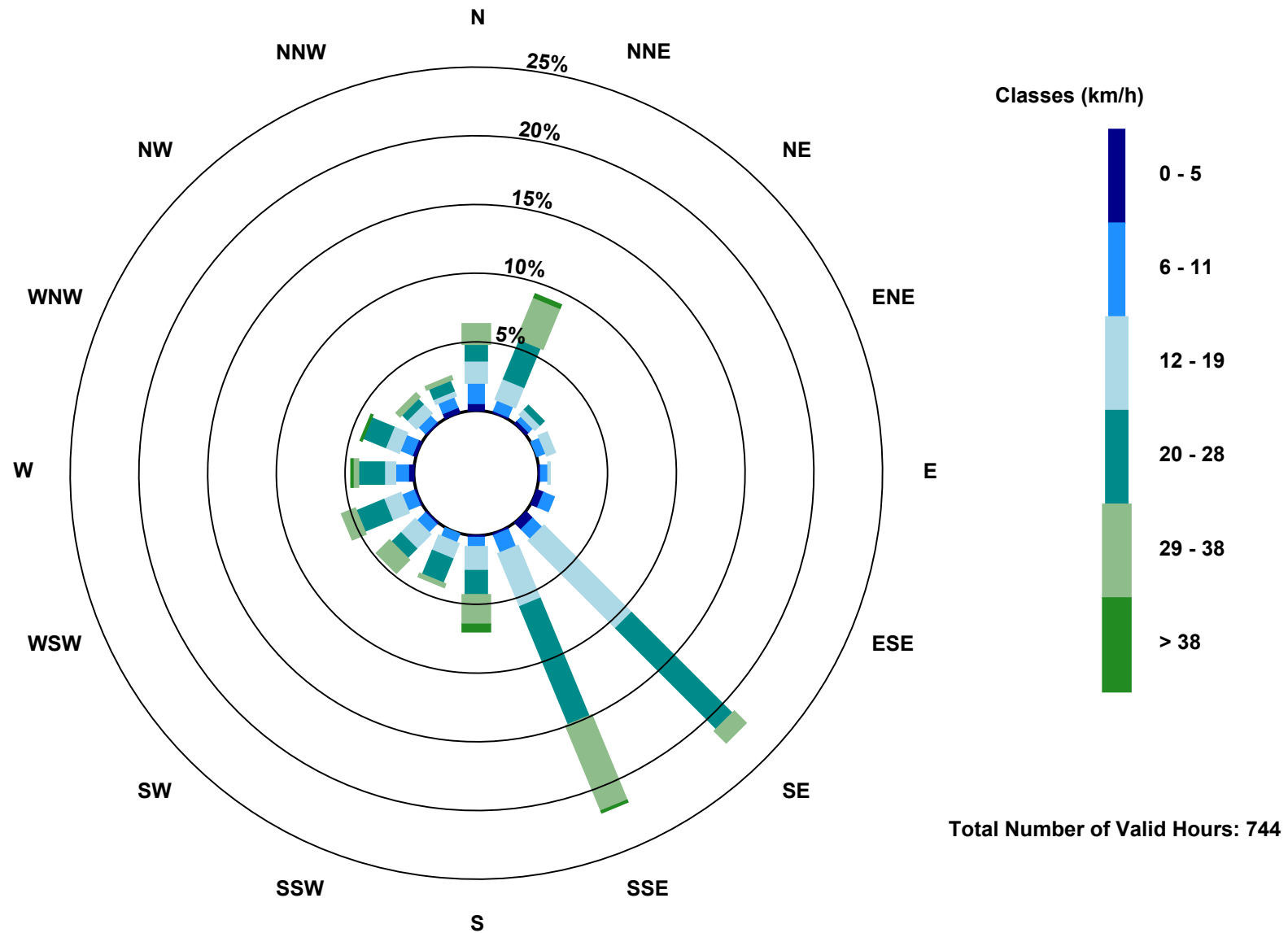
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 75m (WS75) - km/h
Mannix





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 90m (WS90) - km/h

Mannix - May 2025

Maximum Speed: 44 km/h on May 29 23:00										Maximum Daily Speed Average: 31.7 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 31 12:00										Minimum Daily Speed Average: 3.1 km/h on May 13										Hours of Data: 741						
Maximum Diurnal Speed Average: 11.4 km/h at hour 1										Minimum Diurnal Speed Average: 5.9 km/h at hour 16										Hours of Missing Data: 3						
Monthly Average Velocity: 7.8 km/h 164.0 deg										Percentiles: P ₁ = 4 P ₁₀ = 9 Q ₁ = 15 Median = 22 Q ₃ = 28 P ₉₀ = 33 P ₉₉ = 39										Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE20	N15	N11	NNE9	NNW5	W7	W5	WNW3	S5	S10	SSE17	S16	SSE14	SSE13	SE11	SE11	SE12	SE14	SE14	SE19	SE23	SE29	SE29	SE28	SE8.5	SE29
2-May	SSE24	SSE21	S13	WNW8	NNW9	NNW10	WNW9	W8	W3	ESE2	SE4	NNW1	W6	NW16	NNW23	NW20	NW17	N17	NNE15	NE18	NE27	NE19	E19	SE7	N3.9	NE27
3-May	ESE8	ESE5	ESE5	SE14	SE18	SE22	SE21	SSE20	SSE16	SW15	W29	W27	NNW22	NNW24	NNW21	W24	W27	NNW28	NW35	NW37	NW40	NW30	NNW31	N31	NNW11.1	NW40
4-May	NNW18	W15	W22	W26	NW27	NNW29	NNW30	NNW24	N16	N7	WSW11	W19	W23	W25	W22	WSW23	SW27	SW36	SW33	SW30	SW32	WSW32	NNW28	NNW30	W18.4	SW36
5-May	WNW31	NNW28	NNE31	NNE22	N12	NNW13	N16	NW20	NNW20	NNW15	WNW15	NW12	NNW9	N5	N8	NNW7	NNE9	ENE12	NE10	NNE15	NNE19	E17	SE19	SE21	N9.3	WNW31
6-May	SE30	SE28	SE27	SE24	SE23	SE27	SE26	SSE21	SSE20	SSE20	S22	SSW23	SW30	SW35	SSW32	SW30	SSW33	SSW28	S33	S33	S38	S39	SSE36	SSE39	S25.0	S39
7-May	SSE35	SSE36	SSE38	SSE36	SE33	SE32	SE30	SSE32	S39	S36	S32	SW26	WSW30	WSW23	WSW22	W28	WSW32	SW29	WSW27	SW22	SW29	SW32	SW25	SW21	SSW23.2	S39
8-May	WSW12	W23	NNW18	N12	NNW9	NNW8	NE6	N11	NNE28	NNE23	NNE19	NNE21	N11	NNW3	NNW12	N19	N18	N19	N16	N17	NNE22	NE17	ENE11	SSE7	N10.8	NNE28
9-May	SSE20	SSE20	S21	SSW16	S9	S15	S9	S8	SSE10	SSW12	WSW27	W30	WSW28	WSW29	SW28	WSW28	SW25	WSW26	WSW20	WSW15	WSW17	W13	WSW13	SSW13	SW16.0	W30
10-May	SSW14	SW15	SW11	SW17	SW14	SW8	W9	WSW5	SW6	WNW8	WSW9	WSW7	SW14	WNW9	NW13	NW6	SW6	SW10	SSE12	S11	SSE8	ESE12	ESE16	SE15	SW6.4	SW17
11-May	SE12	SE20	SE18	SE17	SSE18	SSE23	SSE23	S17	SSE22	SSE14	SSE12	ESE9	SW2	NE8	ESE5	WNW6	NW10	NNW8	NNE7	NNE7	NE12	ENE15	E10	SE5	SE7.6	SSE23
12-May	NNW2	NNW5	NNE13	NNE12	NNE15	N16	N16	N20	NNE21	NNE22	NNE25	N27	NNE29	NNE31	NNE32	NNE35	NNE33	NNE33	NNE33	NNE32	N38	NNE34	N31	N30	NNE24.3	N38
13-May	N25	N23	N24	N14	NNW17	NW14	NNW8	NNW11	NNE11	NNW10	NW11	NW7	NW5	NNW7	ENE7	ESE10	ESE9	E12	S18	SSE24	SE22	SSE25	SE29	SE28	NE3.1	SE29
14-May	SE26	SE28	SSE33	SSE29	SSE26	SSE21	S18	SW12	W11	NW16	NNW28	N33	NNE34	NNE36	NNE38	NNE42	NNE41	NNE39	N34	N31	N30	N31	NNE33	NNE29	NNE13.9	NNE42
15-May	NNE32	N33	NNE30	NNE36	NNE36	NNE31	NNE31	NNE27	N29	NNE27	N24	NNW22	N21	NNE23	NNE25	NNE24	NNE25	NNE23	NNE23	NNE23	NNE26	NE28	NE24	ENE20	NNE25.9	NNE36
16-May	ENE16	NE11	NNE13	NNE14	NNE16	ENE11	E5	SSE5	NE5	ENE9	NNW5	NNW5	E8	ESE6	E9	ENE6	ESE8	SE8	SE10	SSE14	SSE20	SE21	SE22	SE24	E7.6	SE24
17-May	SE31	SE30	SE31	SE26	SE24	SE25	SE24	SE22	SE15	SE18	SE17	SE17	SE20	SE21	SSE20	SE23	SE23	SE24	SE22	SE21	ESE19	SE22	SE24	SE24	SE22.5	SE31
18-May	SE26	SE26	SE28	SE27	SE26	SE28	SE24	SE19	SE16	SE16	SE15	SE23	SSE24	SSE19	SE19	SSE19	SE21	SE24	SE22	SE24	SE23	SE24	SE24	SE27	SE22.5	SE28
19-May	SE21	SE24	SE24	SE24	SE26	SE26	SSE24	SSE21	SSE21	SE26	SE31	SE31	SE27	SE22	SE27	SE27	SSE27	SSE42	SSE38	SSE29	SE25	SE25	SE25	SE24	SE26.4	SSE42
20-May	SE24	SE20	SE20	SE18	SE19	SE19	SE21	SSE22	SE21	SE24	SE22	SE22	SE24	SSE23	SE24	SE30	SE24	SE23	SE25	SE23	SE23	SE20	SE19	SE20	SE22.1	SE30
21-May	SE19	SE20	SSE23	SSE23	SE22	SE21	SE18	SE16	SSE14	SSE12	SE13	SE14	SE16	SSE24	S29	SSE23	S20	S19	S18	SSE22	SSE22	SSE24	SSE25	SSE23	SSE19.3	S29
22-May	SSE24	SSE22	SSE21	SSE21	SE20	SSE21	SSE22	SSE21	SSE21	SSE23	SSE25	SSW20	SW20	SSW18	SSE17	SSE24	SE21	SE21	SSE21	SE21	SE23	SSE27	SSE26	SSE25	SSE20.7	SSE27
23-May	SSE26	SSE32	SSE30	SSE28	SSE23	SE22	SE21	SE21	SE14	SE16	SE22	SSE29	SSE29	SE18	SE22	SE17	SE25	SE27	SE27	SSE24	S27	S14	S22	S29	SSE22.8	SSE32
24-May	SSE27	SSE27	SE23	SE25	SE25	SE25	SE23	SSE13	SSE17	SE14	SE16	SE24	SSE31	SSE28	S17	SSE19	SE24	SSW25	SSW28	SSE27	SSE28	SSE32	SSE33	SSE33	SSE23.3	SSE33
25-May	SSE35	SSE33	SSE35	SSE36	SSE35	SSE31	SSE30	SSE27	SSE32	SSE33	S32	SSE31	SSE31	S34	S28	S32	S34	S32	S31	S28	S34	SSE34	SSE33	SSE33	SSE31.7	SSE36
26-May	SSE32	SSE31	SE30	SE29	SE34	SE30	SE21	SE18	SE15	SSE19	SSE20	S34	S39	SSE35	SSE36	SSE37	S39	S41	S32	W35	NNW19	WSW30	S15	SW15	SSE22.8	S41
27-May	SW15	SW15	W12	SW9	SSW12	SSW10	SW11	SW10	WSW9	W13	NNW17	W20	W24	WSW23	WSW25	WSW29	WSW31	WSW30	WSW29	W21	WSW22	WSW21	WSW24	WSW29	WSW18.3	WSW31
28-May	WSW32	WSW28	WSW20	WSW13	SW8	SW7	SW9	SSW8	SSE6	SE7	SSE9	SW17	SW20	SW22	SSW20	SSW21	SSW20	S15	SSE17	SSE22	SSE27	SSE31	SSE33	S32	SSW15.5	SSE33
29-May	S28	S30	S30	SSE29	SSE29	SSE27	SE24	SSE20	SSE22	SSE23	SSE34	SSE37	SSE37	SSE33	SSE31	SE38	SSE39	SSE37	SSE33	SSE32	SSE31	W40	NNW44	NNW24	SSE24.1	NNW44
30-May	W36	W28	WSW31	NNW29	NNW26	W26	NNW28	NW27	NNW20	NNW21	NW19	NNW13	WNW8	W10	WSW17	WSW20	SSW15	SSW18	SW22	SW22	SSW22	S25	SSW31	S27	WSW16.7	W36
31-May	S25	SSW25	WSW21	W16	W6	SSW8	S11	S8	SSE10	SSE9	SSE6	SE1	N11	N23	N23	NNE27	N31	N36	UO	N34	NNW31	UO	UO	NNW29	NNW7.0	N36
SSE11.4SSE11.1SSE10.4SSE9.1SE8.8SE9.6SE8.4SSE6.6SSE6.6SSE6.6S6.2SSW6.4SSW7.3SSW6.1S6.2S5.9S7.3S7.8S9.2SSE6.5SSE7.1SSE9.4SSE10.7SSE10.3																								Diurnal Average		
W36SSE36SSE38NNE36NNE36SE32NNE31SSE32S39S36SSE34SSE37S39NNE36NNE38NNE42NNE41SSE42SSE38NW37NW40W40NNW44SSE39																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 90m (WS90) - km/h

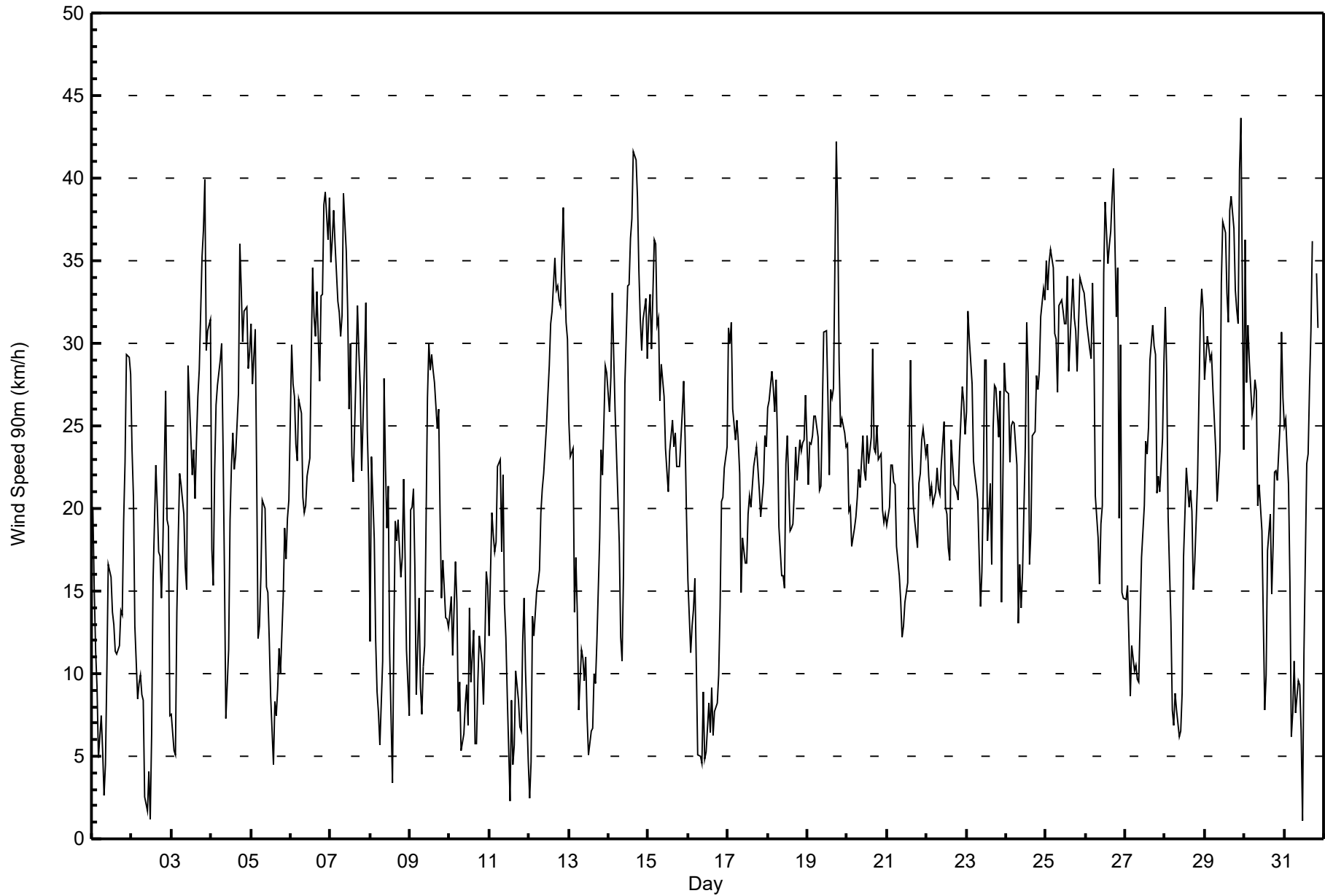
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on May 24 18:00																		Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6							
Minimum Value: 1 km/h on May 29 06:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	2	3	2	2	1	1	4	2	3	3	4	4	4	4	4	3	4	5	5	6	5	3	6
2-May	2	2	5	3	3	2	2	4	2	2	2	3	5	5	5	5	4	3	4	2	3	3	4	5	5
3-May	4	2	1	5	5	6	3	4	4	8	4	5	5	7	7	6	4	4	5	7	6	6	6	5	8
4-May	4	3	2	3	6	4	4	4	5	4	5	5	5	5	5	5	5	5	4	4	3	5	4	3	6
5-May	6	4	5	4	3	4	4	5	4	4	5	4	4	3	4	4	3	4	2	3	1	3	5	7	7
6-May	6	5	4	3	5	4	4	3	3	3	5	6	7	6	8	8	7	6	6	4	4	4	3	4	8
7-May	3	4	4	4	3	4	3	8	5	6	5	5	5	4	4	6	7	5	4	3	3	2	2	2	8
8-May	3	2	3	2	3	4	4	9	5	5	5	4	5	3	8	5	4	3	4	4	3	3	3	3	9
9-May	3	3	2	3	2	5	2	2	2	6	6	6	7	6	8	6	5	7	6	2	2	1	2	3	8
10-May	2	3	2	5	3	3	5	2	2	4	4	4	8	7	8	5	5	3	3	3	3	4	4	4	8
11-May	3	5	5	5	2	2	3	3	3	3	3	4	5	3	3	4	3	3	2	2	3	2	3	2	5
12-May	2	2	4	3	2	3	4	4	3	3	4	5	5	6	6	6	5	5	5	5	6	7	5	4	7
13-May	3	3	3	4	2	5	4	4	4	3	4	3	4	4	4	4	3	3	11	3	2	2	3	4	11
14-May	3	6	4	2	3	3	3	3	4	3	8	6	4	6	6	5	5	7	6	6	6	7	5	6	8
15-May	5	5	5	4	7	5	4	5	6	5	5	5	5	6	5	5	5	4	3	3	3	3	3	4	7
16-May	4	2	1	1	1	2	2	2	4	3	4	4	4	3	4	4	4	4	3	3	2	4	5	5	5
17-May	5	5	6	6	5	4	5	5	4	4	4	5	6	5	5	6	5	5	5	5	6	6	6	5	6
18-May	6	5	4	4	5	4	3	4	4	4	5	6	5	4	4	4	4	5	4	5	5	5	5	6	6
19-May	3	2	2	1	1	2	3	4	4	7	6	7	6	7	7	6	6	10	7	7	4	5	5	5	10
20-May	4	3	3	3	3	3	4	4	4	5	5	5	5	4	6	6	5	4	4	4	5	2	2	2	6
21-May	2	3	2	3	2	3	4	3	3	3	4	4	4	7	4	4	3	4	3	3	3	3	3	2	7
22-May	2	2	2	3	3	3	3	3	4	4	4	4	3	3	3	4	4	5	4	3	2	2	2	2	5
23-May	2	1	1	2	1	2	3	5	4	6	6	5	5	5	6	5	8	5	5	4	4	3	5	3	8
24-May	2	3	3	3	3	3	4	3	3	3	4	7	6	6	8	9	5	13	6	5	3	1	3	3	13
25-May	2	2	2	2	2	2	3	5	5	6	6	6	6	6	7	6	5	6	5	4	2	2	2	2	7
26-May	2	2	2	2	3	4	2	4	4	4	7	7	7	7	6	6	7	6	5	8	6	13	7	2	13
27-May	2	3	4	2	1	1	2	2	3	3	4	5	6	6	7	6	6	6	6	3	2	2	2	1	7
28-May	2	2	3	2	1	1	1	2	2	2	5	5	5	6	6	6	4	1	1	2	2	2	1	2	6
29-May	2	2	2	1	2	1	1	2	4	5	8	7	8	7	8	8	7	8	7	5	3	9	9	4	9
30-May	7	8	6	6	4	4	4	5	3	4	4	4	5	6	6	5	4	3	3	2	2	2	2	2	8
31-May	2	2	2	4	4	4	2	2	2	1	2	2	4	4	4	3	6	5	UO	7	8	UO	UO	6	8
7 8 6 6 7 6 5 9 6 8 8 7 8 7 8 9 8 13 11 8 8 13 9 7																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 90m (WS90) - km/h
Mannix - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 90m (WS90) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	25	3.37	3.37
6 - 11	96	12.96	16.33
12 - 19	153	20.65	36.98
20 - 28	291	39.27	76.25
29 - 38	162	21.86	98.11
> 38	14	1.89	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 90m (WS90) - km/h
Mannix - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1	0	1	0	1	4	3	1	0	1	1	1	2	1	1	7	25
6 - 11	6	5	4	5	3	6	6	8	6	4	11	4	7	7	4	10	96
12 - 19	14	10	4	3	3	3	38	19	12	8	10	6	6	7	7	3	153
20 - 28	9	20	3	1	0	0	106	66	11	10	12	18	15	12	4	4	291
29 - 38	13	22	0	0	0	0	18	50	19	4	9	12	4	3	3	5	162
> 38	0	3	0	0	0	0	0	3	5	0	0	0	1	1	1	0	14
Totals	43	60	12	9	7	13	171	147	53	27	43	41	35	31	20	29	741

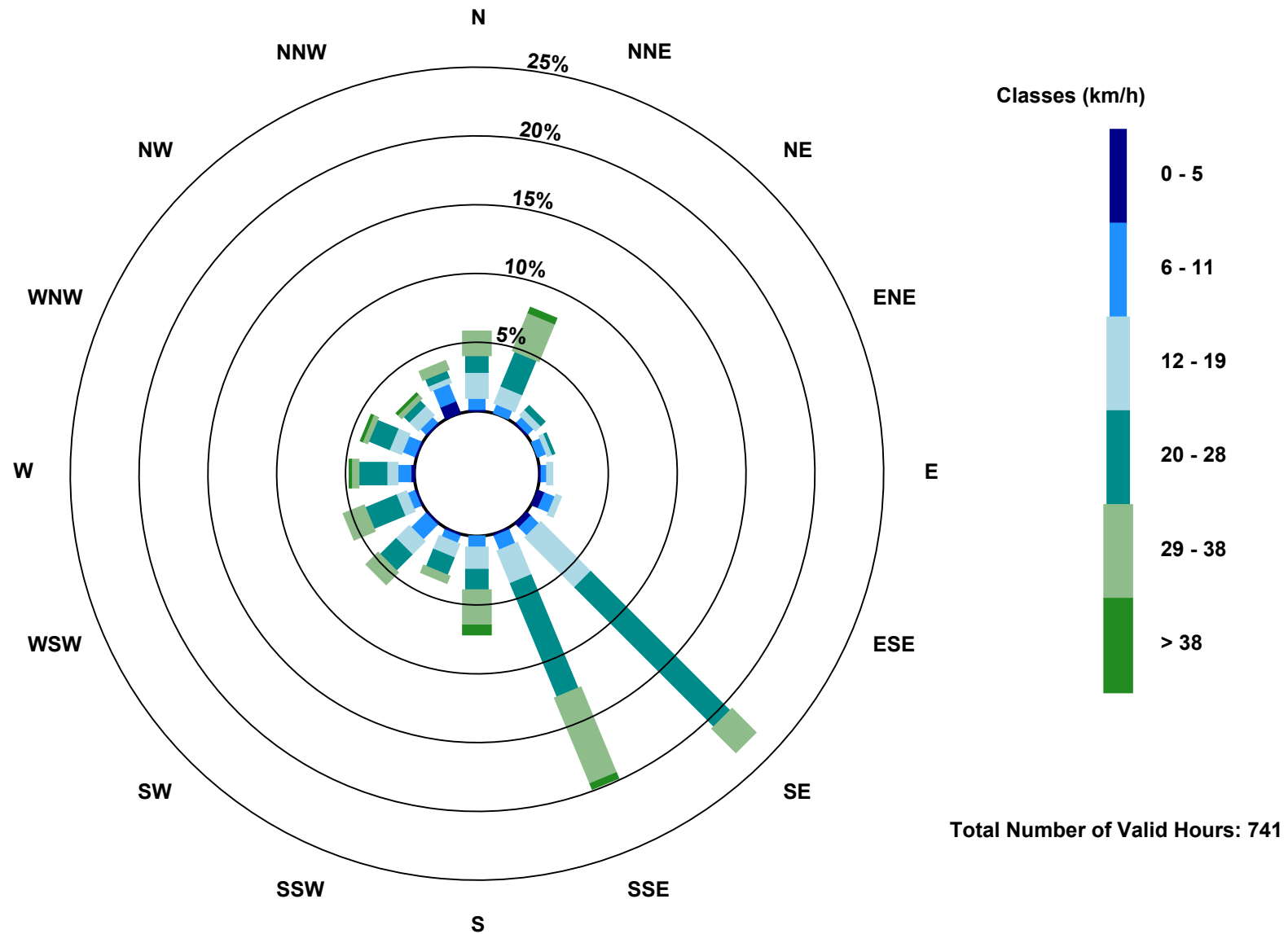
Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 90m (WS90) - km/h
Mannix





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Mannix - May 2025

Direction of Maximum Speed: 267 deg on May 29 22:00 Direction of Maximum Daily Speed Average: 136.8 deg on May 17																				Hours in Service: 744						
Direction of Minimum Speed: 82 deg on May 10 06:00 Direction of Minimum Daily Speed Average: 1.3 deg on May 13																				Hours of Data: 744						
Direction of Minimum Speed: 82 deg on May 10 06:00 Direction of Minimum Daily Speed Average: 1.3 deg on May 13																				Hours of Missing Data: 0						
Monthly Average Direction: 160.0 deg																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	13	357	348	7	321	270	253	284	181	171	159	168	150	146	139	137	136	137	135	137	137	137	137	137	137	138.6
2-May	148	165	151	269	300	272	263	253	294	93	111	61	265	305	301	307	318	350	14	34	18	31	45	225	335.9	
3-May	114	144	145	166	156	149	149	150	147	205	267	274	299	287	287	263	269	285	305	307	306	300	323	341	278.3	
4-May	313	258	257	269	304	323	333	335	7	6	235	261	261	273	262	249	236	227	225	223	229	240	274	285	264.8	
5-May	290	327	23	18	345	334	350	314	295	292	296	316	359	15	356	340	25	66	59	22	19	79	136	129	353.1	
6-May	136	139	140	143	135	136	136	146	147	152	187	211	216	226	209	217	205	198	187	173	169	171	159	159	172.5	
7-May	156	148	145	142	138	133	138	161	178	186	187	225	243	243	252	263	250	234	237	222	207	211	204	198	195.6	
8-May	233	258	274	10	278	275	66	336	17	29	23	10	351	342	285	2	352	5	357	5	14	36	71	215	356.9	
9-May	177	163	147	146	138	146	146	141	149	210	254	263	247	236	234	243	217	238	243	231	235	255	225	204	220.6	
10-May	208	216	167	188	180	82	242	256	244	289	244	233	237	297	310	308	219	228	153	169	159	123	132	142	203.3	
11-May	147	156	146	140	142	151	164	169	163	155	154	115	228	39	96	293	313	348	20	5	31	55	40	30	133.0	
12-May	320	9	16	11	332	350	6	1	13	11	12	8	13	18	19	7	17	12	14	13	7	9	4	359	9.4	
13-May	353	342	350	331	310	287	329	347	18	344	310	297	320	321	64	111	122	91	181	162	139	141	142	138	64.6	
14-May	141	138	150	148	145	142	164	214	272	307	343	346	12	14	21	21	16	16	10	352	7	4	16	13	16.8	
15-May	11	9	14	11	10	13	16	12	7	16	359	341	4	19	20	20	33	17	13	16	21	40	51	54	15.5	
16-May	44	11	15	18	16	16	82	158	60	89	329	320	95	102	87	60	118	132	133	161	158	145	142	140	95.7	
17-May	140	138	136	134	136	137	136	134	137	145	142	135	140	133	145	133	138	138	137	135	133	135	134	134	136.8	
18-May	132	132	138	137	138	138	138	135	136	136	139	144	158	152	143	158	145	136	144	138	137	141	130	134	139.6	
19-May	130	137	140	145	144	143	142	150	163	144	144	140	145	143	145	144	154	157	147	144	142	142	144	140	145.1	
20-May	140	141	140	141	143	141	145	149	141	139	137	137	146	147	139	139	143	141	140	139	143	145	140	142	141.4	
21-May	137	140	156	144	143	136	135	142	152	147	138	136	137	146	170	169	180	189	178	156	150	146	152	157	151.6	
22-May	144	151	145	145	139	148	152	156	157	154	165	203	222	213	161	150	136	139	151	140	139	149	147	164	156.0	
23-May	153	149	150	158	157	151	144	141	132	125	138	151	154	141	142	128	134	145	137	153	176	156	170	165	146.9	
24-May	160	158	143	138	137	141	141	149	161	142	136	142	154	159	176	154	144	190	199	150	149	146	149	156	152.7	
25-May	157	149	146	150	146	143	142	146	157	161	169	160	158	168	182	178	168	178	178	169	169	160	151	148	161.2	
26-May	145	147	144	138	137	136	133	136	142	150	145	170	171	163	165	163	175	173	176	269	282	263	177	245	167.5	
27-May	224	194	238	183	179	179	212	228	253	268	278	276	266	242	243	242	250	244	246	272	242	223	238	236	244.7	
28-May	242	221	176	155	154	156	151	143	142	135	142	223	228	212	200	204	194	179	150	145	149	164	162	162	178.2	
29-May	162	160	156	145	142	147	145	155	155	152	164	166	158	155	148	141	147	149	154	149	145	267	291	288	162.4	
30-May	266	275	250	277	280	268	292	305	292	290	307	282	292	266	250	241	214	190	210	196	167	167	173	166	257.7	
31-May	165	177	201	150	116	162	165	150	147	153	140	119	355	350	355	11	349	355	355	3	341	332	333	337	354.9	
155.0 151.6 144.7 140.2 140.3 144.3 139.9 151.8 149.6 151.4 176.4 194.4 193.5 192.8 188.6 182.6 175.8 172.0 168.6 158.0 145.9 156.2 143.7 149.7																										
Diurnal Average																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

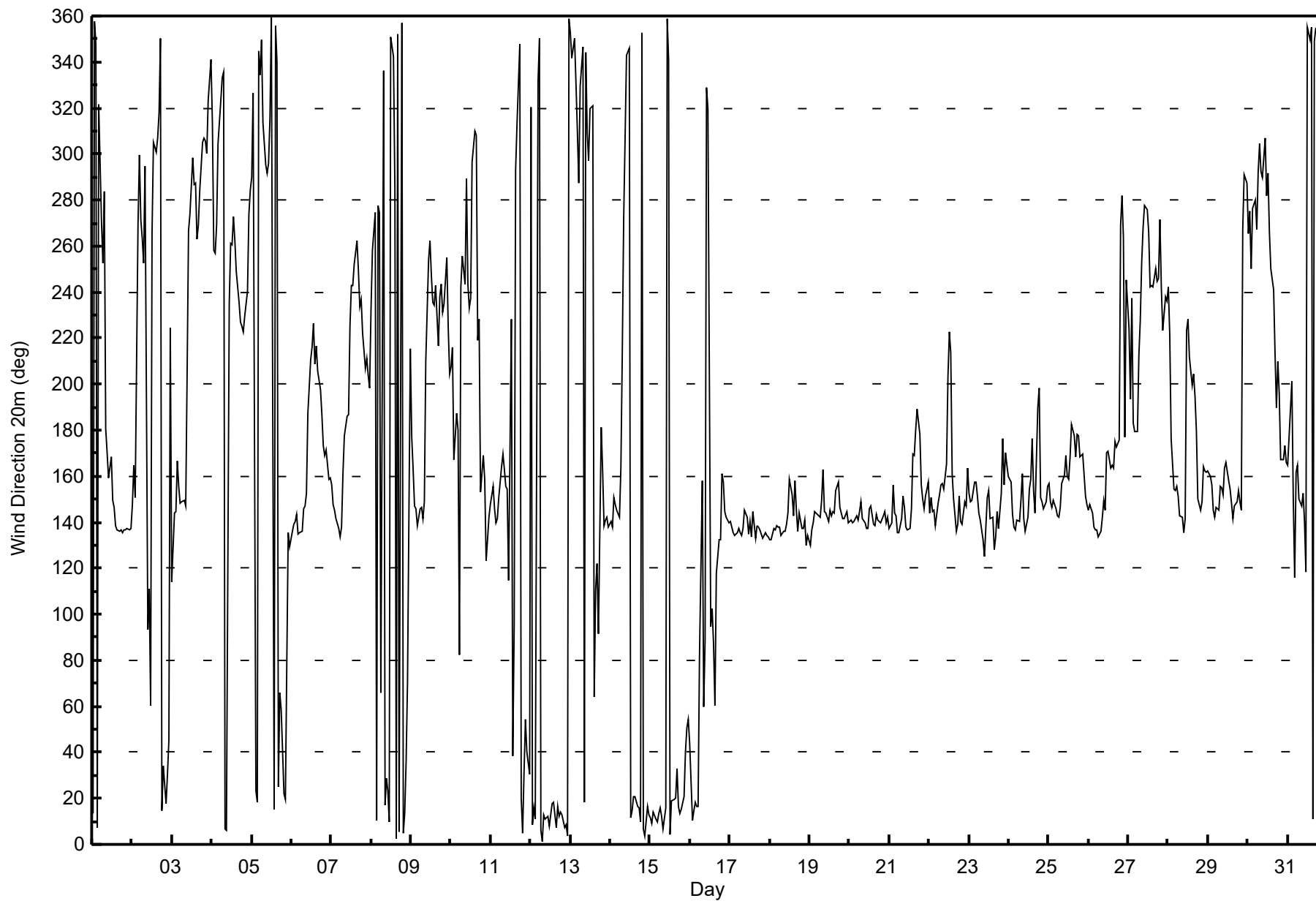
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on May 2 09:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on May 9 02:00																									
Percentiles: P ₁ = 7 P ₁₀ = 9 Q ₁ = 11 Median = 15 Q ₃ = 20 P ₉₀ = 36 P ₉₉ = 89																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	11	17	16	12	38	23	28	55	58	28	14	19	25	18	22	19	15	11	10	9	8	9	8	8	58
2-May	8	18	9	58	50	16	34	24	102	22	37	98	91	35	24	21	18	17	17	12	8	11	25	84	102
3-May	90	21	47	24	11	12	11	10	13	51	11	15	18	23	25	18	16	16	9	10	10	14	14	12	90
4-May	25	17	13	9	20	13	16	15	25	56	18	17	11	14	15	16	17	12	11	10	9	13	15	8	56
5-May	10	41	11	12	18	33	18	19	16	24	25	37	55	87	49	61	40	19	18	12	8	45	9	15	87
6-May	9	8	9	9	8	8	10	10	10	11	27	21	18	20	21	17	17	20	16	11	8	9	7	7	27
7-May	8	9	9	9	8	8	8	18	14	16	17	22	13	20	17	14	14	14	12	15	10	10	14	11	22
8-May	63	11	38	35	22	73	96	59	12	15	16	21	36	94	60	24	21	16	20	20	13	14	31	56	96
9-May	9	4	10	9	8	11	12	13	20	44	18	17	17	23	24	25	18	16	11	9	16	16	18	27	44
10-May	34	26	21	33	29	95	65	44	40	52	39	66	42	56	42	78	63	36	11	16	24	15	11	12	95
11-May	15	13	11	11	10	10	10	15	10	19	19	42	83	29	77	68	35	33	17	13	14	11	20	17	83
12-May	34	8	10	65	21	15	18	16	15	14	16	15	17	17	16	13	14	14	13	12	11	12	13	13	65
13-May	12	11	13	70	27	32	39	31	30	45	28	53	79	87	68	39	34	17	42	19	9	10	9	10	87
14-May	12	11	9	10	11	11	17	28	26	17	15	16	14	13	15	15	13	14	16	15	15	16	13	15	28
15-May	12	12	14	11	12	14	13	17	19	16	24	24	28	20	20	23	19	16	14	12	11	16	12	13	28
16-May	17	7	7	11	8	16	31	33	69	32	87	78	43	64	39	70	71	48	31	18	6	10	12	9	87
17-May	10	9	9	10	10	9	10	10	15	16	20	23	20	15	20	13	12	13	10	12	13	12	10	8	23
18-May	9	9	8	9	8	9	10	10	12	13	20	20	16	18	14	15	15	10	12	10	10	10	8	10	20
19-May	8	8	9	8	9	10	10	15	17	14	14	14	16	17	16	14	13	12	13	12	11	11	12	11	17
20-May	11	11	10	11	10	12	12	13	14	12	12	12	15	15	13	12	12	13	11	12	12	11	10	10	15
21-May	10	10	12	12	11	10	10	12	16	23	25	16	18	21	13	12	18	18	19	12	11	12	11	11	25
22-May	11	10	11	12	11	12	12	12	15	19	14	29	15	22	20	15	12	14	16	11	10	10	9	18	29
23-May	12	8	9	12	9	8	12	13	18	22	15	15	15	19	24	19	24	15	10	13	20	14	8	9	24
24-May	11	11	10	9	10	10	12	20	14	14	13	15	15	19	71	24	13	41	28	12	10	9	11	9	71
25-May	9	10	10	10	10	11	12	12	12	14	16	17	18	18	22	20	17	18	17	11	10	10	10	10	22
26-May	11	10	10	10	10	11	11	13	15	16	18	21	17	18	17	17	15	15	16	21	29	33	45	25	45
27-May	21	26	50	35	13	20	19	18	26	19	18	23	22	21	20	21	18	15	12	13	9	15	8	10	50
28-May	6	14	10	7	7	10	13	20	22	22	27	30	25	27	27	23	21	17	10	8	8	8	8	7	30
29-May	8	7	8	9	9	8	12	14	15	15	17	18	16	18	15	12	13	12	13	12	11	39	11	16	39
30-May	13	27	16	14	14	12	14	16	15	15	23	28	72	54	22	18	33	19	15	12	10	9	10	10	72
31-May	10	10	16	24	20	11	13	20	17	18	32	101	18	16	17	14	17	18	19	18	19	17	24	17	101
90 41 50 70 50 95 96 59 102 56 87 101 91 94 77 78 71 48 42 21 29 45 45 84																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Mannix - May 2025

Direction of Maximum Speed: 153 deg on May 19 18:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 159.6 deg on May 25																					Hours of Data:		744		
Direction of Minimum Speed: 150 deg on May 31 12:00											Direction of Minimum Daily Speed Average: 1.9 deg on May 13										Hours of Missing Data:		0		
Monthly Average Direction: 158.4 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	11	356	351	9	321	273	259	283	184	170	158	166	149	144	136	133	134	134	129	129	131	134	133	136	133.8
2-May	146	159	150	263	334	280	278	258	266	96	111	42	263	303	298	305	317	349	11	30	19	33	54	146	339.7
3-May	108	125	133	145	147	141	145	149	153	206	264	272	296	285	285	260	266	283	302	304	302	299	322	342	276.2
4-May	318	260	254	268	304	322	333	336	3	3	234	258	259	271	260	246	233	224	221	221	226	237	275	286	264.5
5-May	287	323	19	15	346	330	347	312	294	289	292	313	349	359	349	335	21	59	52	21	17	75	130	126	348.8
6-May	131	135	137	139	130	131	132	143	147	152	185	207	211	222	204	213	203	194	184	171	167	169	156	157	169.9
7-May	154	148	145	141	136	133	137	161	176	181	184	221	241	241	250	259	248	230	235	219	206	211	205	201	192.1
8-May	226	254	273	359	306	313	57	343	14	23	19	7	348	320	278	360	348	2	355	3	15	36	67	178	353.8
9-May	167	156	151	152	139	145	153	143	152	205	251	259	244	233	231	241	216	235	241	233	235	255	226	200	214.6
10-May	199	216	176	211	211	228	264	245	239	281	242	236	231	295	307	307	224	225	149	170	153	114	125	135	205.6
11-May	137	148	134	134	137	143	161	167	161	155	153	114	225	35	104	291	313	343	12	4	29	56	61	66	129.9
12-May	343	7	21	10	348	352	0	359	10	7	8	5	9	15	15	5	13	9	11	10	4	6	2	358	7.0
13-May	355	342	351	340	322	294	336	340	11	339	309	301	309	321	56	108	119	88	182	160	135	141	140	136	50.0
14-May	139	137	148	147	145	142	164	211	271	304	341	347	9	12	17	17	14	14	7	351	4	1	13	10	16.3
15-May	8	6	11	8	7	10	12	10	4	13	355	339	2	14	17	17	29	14	11	13	19	34	44	54	12.5
16-May	52	16	11	16	13	27	78	154	44	76	326	318	86	106	89	60	110	135	133	157	152	141	137	135	92.6
17-May	136	134	132	130	131	135	131	130	134	141	140	132	137	130	143	129	136	135	131	129	125	128	129	128	132.6
18-May	127	129	134	132	133	135	134	131	134	131	135	142	156	149	142	156	141	132	140	132	131	136	127	132	135.9
19-May	130	132	136	139	138	140	143	150	161	142	142	138	142	142	142	141	151	153	143	142	139	139	142	137	142.3
20-May	138	137	139	137	139	138	142	146	138	136	135	134	143	145	135	136	140	138	138	137	143	142	137	140	138.8
21-May	135	136	154	143	140	132	131	139	147	145	135	132	132	144	167	166	177	184	175	153	148	143	149	155	149.1
22-May	143	150	145	145	136	146	150	155	156	153	163	201	218	207	162	148	134	137	150	138	137	150	149	159	154.2
23-May	155	149	150	151	149	136	139	139	127	121	135	149	151	140	138	128	134	143	135	152	176	162	162	165	145.6
24-May	156	155	139	134	132	137	137	150	160	139	132	139	154	159	175	152	141	187	195	148	149	147	149	153	150.8
25-May	153	149	149	151	147	140	141	146	155	159	168	158	156	166	181	177	167	176	175	168	167	159	149	148	159.6
26-May	144	147	142	134	132	132	130	132	141	148	144	169	168	162	162	161	174	171	174	265	283	257	176	234	164.4
27-May	218	205	253	193	184	182	212	227	247	266	279	275	263	237	238	239	246	241	244	270	246	234	230	230	240.3
28-May	232	230	215	190	164	166	163	147	143	133	139	217	224	208	198	200	193	178	149	144	148	156	156	162	180.4
29-May	158	156	157	149	143	141	133	151	153	150	162	164	156	152	145	139	145	146	152	147	144	265	290	288	158.7
30-May	264	275	247	276	282	268	294	305	293	290	308	282	291	264	244	238	207	189	208	203	177	168	178	170	251.0
31-May	164	184	225	236	146	163	163	156	144	148	143	150	353	348	353	8	349	353	354	0	341	332	333	336	347.0
153.3 153.4 145.4 139.9 135.4 140.1 137.6 149.9 150.0 150.7 173.5 190.8 189.3 189.6 185.7 179.2 174.8 170.9 168.8 156.8 148.1 156.9 145.3 151.7																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 45m (WD45) - deg

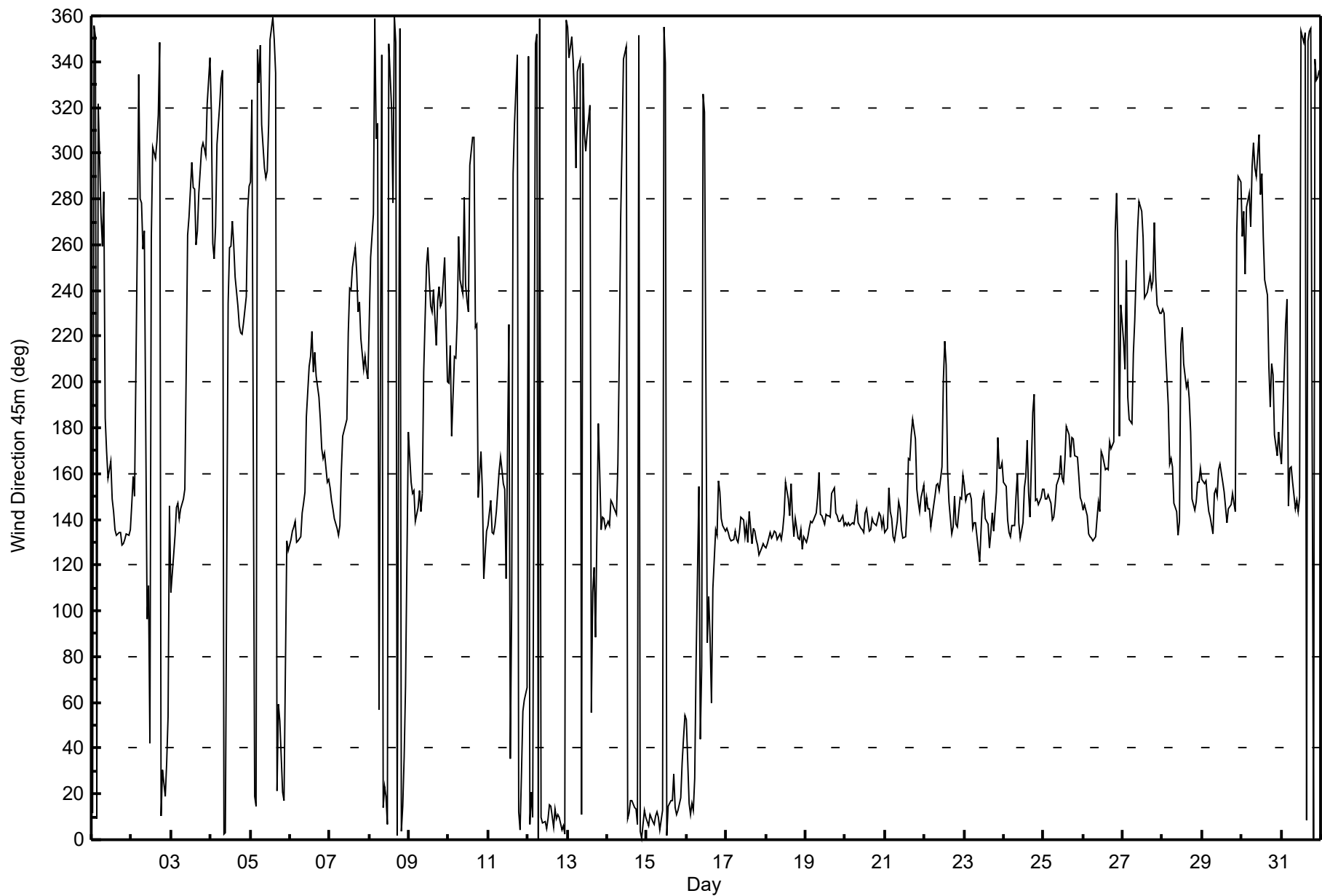
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on May 3 00:00																		Hours in Service: 744							
Minimum Value: 2 deg on May 9 02:00																		Hours of Data: 744							
Percentiles: P ₁ = 3 P ₁₀ = 6 Q ₁ = 8 Median = 11 Q ₃ = 17 P ₉₀ = 30 P ₉₉ = 83																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	9	12	11	9	35	16	19	44	49	25	11	14	21	17	21	17	16	9	10	7	6	7	6	6	49
2-May	5	10	6	58	22	5	34	25	80	41	50	98	89	30	19	18	15	13	15	7	6	10	21	100	100
3-May	52	12	17	12	6	9	8	8	11	46	11	13	17	20	22	16	13	14	7	7	8	10	12	8	52
4-May	21	16	10	8	19	11	14	11	22	48	17	15	10	12	13	13	14	9	8	7	7	11	13	6	48
5-May	8	40	8	9	13	27	14	17	14	22	22	29	51	81	43	44	33	17	17	9	6	41	9	13	81
6-May	6	6	7	7	6	6	7	9	8	9	22	17	14	19	17	14	11	15	11	7	5	6	6	5	22
7-May	5	6	7	7	6	5	6	14	8	9	11	20	11	18	15	12	11	11	10	12	5	5	11	8	20
8-May	55	8	27	21	29	66	84	57	9	11	13	17	31	87	53	22	17	14	16	19	9	11	21	55	87
9-May	8	2	5	4	6	9	12	10	18	38	17	14	15	19	22	23	15	14	9	6	11	6	12	24	38
10-May	28	13	17	28	24	69	61	49	27	39	32	70	42	62	35	72	50	29	8	17	24	13	10	10	72
11-May	11	8	8	9	6	6	7	10	7	17	16	42	84	27	68	60	28	27	15	13	9	7	11	30	84
12-May	17	11	9	17	9	10	12	10	10	11	11	11	14	14	13	9	11	11	9	8	6	9	9	9	17
13-May	8	8	11	30	21	26	27	22	24	37	23	40	71	73	64	35	31	16	40	16	7	6	6	8	73
14-May	8	10	7	6	6	8	14	24	26	13	11	12	11	8	11	11	9	11	14	12	12	13	9	12	26
15-May	8	8	10	7	8	9	10	13	16	13	21	20	23	16	16	19	14	14	10	8	7	11	8	9	23
16-May	12	8	4	5	5	14	27	26	86	30	78	69	40	62	31	69	57	45	28	15	5	8	10	6	86
17-May	7	7	6	7	7	7	7	7	12	13	17	21	17	13	18	10	10	10	7	9	11	11	6	6	21
18-May	6	6	6	5	5	6	6	6	10	9	17	18	13	16	12	12	13	8	10	7	8	8	7	8	18
19-May	4	4	5	4	4	6	6	11	13	11	12	11	14	14	14	11	10	10	11	9	8	8	8	8	14
20-May	7	8	8	8	7	8	8	9	10	8	9	10	13	12	11	9	9	9	7	8	8	8	6	7	13
21-May	6	6	8	8	5	5	5	9	12	17	23	13	17	20	8	8	10	10	12	10	7	8	8	7	23
22-May	7	7	7	8	7	8	7	7	11	13	10	26	10	19	14	12	9	11	14	7	6	6	5	11	26
23-May	8	4	4	5	4	5	8	8	13	20	13	11	12	15	22	16	22	13	8	10	16	14	7	6	22
24-May	6	7	7	5	5	6	8	15	8	11	9	11	12	14	63	21	10	38	25	9	6	4	5	5	63
25-May	5	6	4	5	6	5	7	8	8	11	12	15	15	14	15	13	12	11	10	6	5	6	5	5	15
26-May	5	5	5	5	5	5	5	8	10	11	15	16	12	13	14	13	10	9	9	22	25	29	39	23	39
27-May	15	19	31	36	8	9	13	13	23	16	14	19	20	16	16	18	15	12	9	12	6	8	5	6	36
28-May	3	4	9	9	6	9	10	11	16	15	23	25	19	18	19	15	13	12	6	3	3	3	3	5	25
29-May	3	4	4	4	5	5	8	11	8	10	13	14	13	14	11	9	10	8	10	7	7	40	8	13	40
30-May	10	26	13	12	12	9	10	11	10	11	17	24	54	41	20	15	27	13	7	5	8	6	5	3	54
31-May	4	9	19	49	55	10	7	14	9	10	22	93	15	7	12	8	11	13	13	12	13	12	21	12	93
55 40 31 58 55 69 84 57 86 48 78 98 89 87 68 72 57 45 40 22 25 41 39 100																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 45m (WD45) - deg
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 75m (WD75) - deg

Mannix - May 2025

Direction of Maximum Speed: 158 deg on May 19 18:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 163.9 deg on May 25																				Hours of Data:		744			
Direction of Minimum Speed: 131 deg on May 31 12:00										Direction of Minimum Daily Speed Average: 2.9 deg on May 13										Hours of Missing Data:		0			
Monthly Average Direction: 163.3 deg																				Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	20	6	5	22	334	280	270	294	184	174	164	170	155	149	141	140	142	140	132	132	135	139	140	144	137.4
2-May	148	158	171	285	351	294	295	274	265	109	130	29	268	307	303	311	324	357	18	39	33	51	75	137	357.5
3-May	112	118	124	142	143	139	144	153	164	215	269	279	302	290	289	264	270	288	308	311	308	306	330	351	284.6
4-May	332	272	259	275	311	331	342	347	10	12	240	264	265	275	265	248	236	227	226	224	228	240	284	295	270.8
5-May	294	330	25	21	356	334	354	320	300	296	298	318	352	5	358	346	30	64	57	31	31	79	134	132	356.5
6-May	137	140	141	141	136	137	140	147	154	159	189	210	215	225	208	216	207	198	188	176	172	173	162	163	174.9
7-May	160	154	151	147	144	141	145	167	180	185	187	224	244	245	254	262	252	233	238	223	212	217	216	218	195.6
8-May	243	262	282	7	335	339	49	3	21	31	25	15	358	350	285	8	355	9	3	12	25	47	74	160	3.7
9-May	168	162	169	185	162	163	174	160	162	209	254	262	248	238	235	245	220	239	246	239	241	259	237	207	220.6
10-May	200	213	203	229	221	237	272	241	236	285	248	240	233	300	313	317	227	228	152	176	158	116	126	136	216.2
11-May	137	148	136	137	146	148	166	173	167	161	158	116	226	45	116	297	321	351	18	19	39	66	85	136	134.8
12-May	354	358	28	28	12	7	9	7	19	15	16	13	18	24	22	14	21	17	19	17	12	15	12	9	15.8
13-May	7	354	2	358	339	314	349	349	16	348	318	309	313	341	63	109	122	93	188	164	141	147	145	143	58.0
14-May	145	145	154	154	153	152	172	217	273	311	350	355	16	19	24	24	21	21	14	359	11	8	20	16	27.3
15-May	15	13	18	15	14	17	19	17	12	19	3	349	10	21	24	24	35	23	19	21	26	41	52	65	20.5
16-May	68	40	26	28	33	56	88	154	55	79	341	339	88	108	99	66	111	137	136	159	154	142	141	138	98.2
17-May	140	140	138	136	137	140	137	137	138	145	145	138	143	136	149	134	140	140	135	132	126	129	134	132	137.8
18-May	133	137	141	138	138	140	140	137	138	135	139	148	160	152	147	158	145	138	144	135	134	138	132	140	141.2
19-May	140	140	141	142	142	144	151	154	164	147	147	144	147	147	146	145	155	158	148	147	144	144	146	143	147.2
20-May	143	142	142	142	143	143	147	150	145	141	141	140	148	149	141	142	144	143	142	143	147	145	141	145	143.7
21-May	141	140	157	149	144	139	136	145	151	150	140	136	136	152	170	169	179	186	176	157	151	148	155	160	154.0
22-May	149	155	151	151	143	151	155	161	160	157	167	203	219	209	167	153	140	142	155	144	143	160	158	163	159.4
23-May	164	155	157	157	148	140	142	142	131	128	140	154	156	145	145	135	142	148	141	157	180	174	168	172	152.4
24-May	164	161	143	141	138	142	142	153	163	142	136	143	158	162	180	160	146	192	198	153	156	154	156	158	156.5
25-May	159	156	156	158	154	146	147	152	160	163	171	162	161	170	184	180	173	180	179	172	173	166	155	153	163.9
26-May	149	151	145	140	140	139	138	138	145	152	149	173	171	166	166	166	179	175	178	269	288	258	185	229	168.9
27-May	219	226	265	215	196	195	220	232	249	268	286	279	267	240	240	242	250	245	248	274	255	247	241	240	246.1
28-May	236	242	242	229	197	201	208	175	154	139	148	220	225	213	205	204	197	182	155	153	154	159	164	177	192.6
29-May	172	167	169	161	159	151	141	153	157	154	166	168	161	157	149	143	150	151	156	153	150	269	295	294	164.6
30-May	269	280	251	283	289	273	302	313	301	297	317	288	297	263	246	241	209	195	213	214	193	181	192	184	254.2
31-May	177	202	244	270	265	181	172	167	151	149	149	131	2	356	1	16	358	1	2	8	350	342	344	346	349.7
160.7 162.2 155.0 148.2 141.3 145.2 144.0 153.5 153.2 154.7 177.3 194.3 191.5 190.9 189.1 182.2 178.1 174.2 172.9 162.3 152.2 162.2 153.4 160.1																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 75m (WD75) - deg

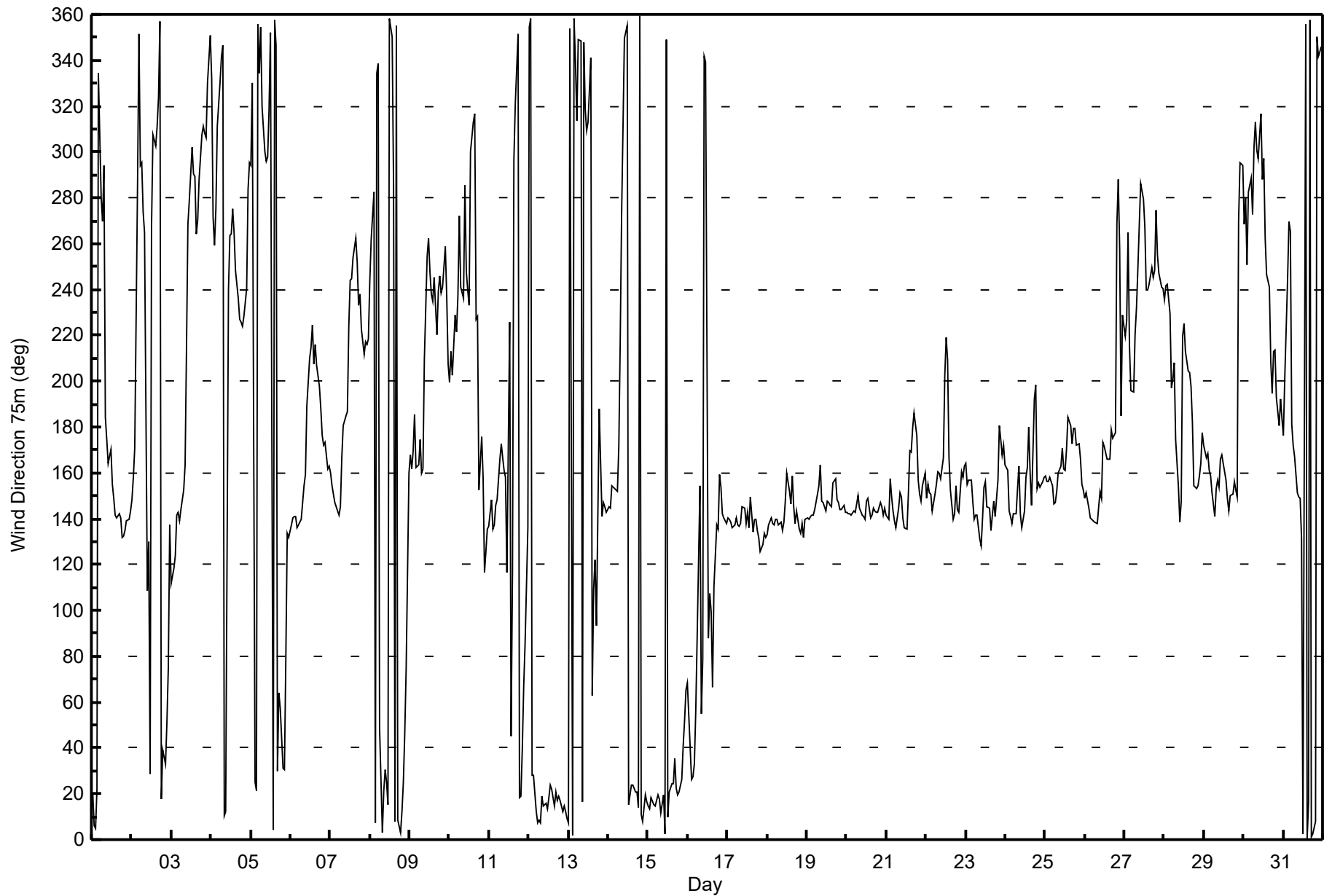
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 106 deg on May 2 12:00																		Hours in Service: 744		Hours of Data: 744					
Minimum Value: 2 deg on May 23 02:00																		Hours of Missing Data: 0		Hours of Calibration: 0					
Percentiles: P ₁ = 3 P ₁₀ = 5 Q ₁ = 7 Median = 10 Q ₃ = 16 P ₉₀ = 27 P ₉₉ = 79																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	7	10	9	10	36	14	22	44	52	25	10	13	18	15	19	17	18	10	12	10	9	7	5	5	52
2-May	4	8	12	43	12	15	27	24	88	68	61	106	78	28	17	18	15	12	15	6	7	10	16	67	106
3-May	23	17	15	9	5	10	7	10	10	40	10	13	16	21	20	16	12	14	7	7	8	9	12	7	40
4-May	17	19	10	7	20	9	13	10	20	45	21	16	10	12	14	13	13	8	7	6	6	10	13	5	45
5-May	7	40	7	7	11	24	13	17	15	22	20	27	50	79	37	39	31	15	14	8	6	34	11	14	79
6-May	7	5	5	4	7	5	6	7	7	8	21	15	13	19	16	12	10	14	11	6	5	5	5	4	21
7-May	4	5	5	5	4	3	4	13	7	8	10	20	10	17	14	11	11	10	9	11	3	4	7	7	20
8-May	44	7	24	19	32	67	71	61	8	10	11	15	33	87	54	21	17	13	16	18	8	9	20	16	87
9-May	5	4	3	12	7	11	15	12	16	35	17	14	14	20	21	21	13	14	10	5	11	5	8	21	35
10-May	18	15	18	14	14	30	44	39	26	36	31	68	45	66	35	77	44	28	7	16	26	14	13	11	77
11-May	12	6	10	12	6	5	7	9	6	14	15	36	89	27	65	63	26	26	14	11	7	9	17	26	89
12-May	66	32	8	14	7	7	11	9	9	9	10	9	13	13	12	8	10	9	8	7	4	8	8	8	66
13-May	6	7	10	21	19	24	19	20	19	34	23	33	67	68	53	32	28	14	40	16	6	5	5	6	68
14-May	6	10	5	5	4	6	12	22	27	12	10	11	9	8	10	9	8	9	12	10	10	11	7	10	27
15-May	7	6	7	5	6	8	9	11	14	13	19	19	21	14	13	17	13	12	8	7	5	8	7	7	21
16-May	8	10	5	4	7	9	23	23	73	22	80	69	32	51	26	60	40	40	25	13	5	8	9	7	80
17-May	5	6	6	8	7	6	8	8	13	13	16	21	17	14	18	11	9	9	9	11	13	14	9	10	21
18-May	8	7	4	5	6	5	6	7	11	11	16	19	11	14	11	11	12	8	9	9	10	9	10	9	19
19-May	5	4	4	3	2	3	5	9	12	10	10	10	13	13	14	10	9	10	9	7	7	7	7	7	14
20-May	6	7	7	7	6	7	7	8	9	7	9	10	11	11	10	7	8	7	5	8	7	7	5	6	11
21-May	5	6	8	7	4	6	8	9	11	14	20	13	16	20	6	7	9	8	11	8	6	6	6	5	20
22-May	5	5	5	7	6	6	6	7	10	11	8	25	8	19	13	10	9	10	12	6	4	6	4	8	25
23-May	5	2	2	3	4	4	6	7	14	19	14	10	11	13	23	16	20	12	8	9	15	15	9	6	23
24-May	5	8	6	5	5	4	6	13	7	11	11	11	10	13	58	23	9	37	24	8	4	3	4	4	58
25-May	3	4	3	3	5	3	5	7	7	10	11	13	13	13	15	12	10	10	8	6	4	5	4	3	15
26-May	3	3	3	3	3	4	5	8	10	10	15	15	10	13	13	12	11	8	7	25	24	26	38	22	38
27-May	13	12	23	37	8	5	12	13	23	15	14	18	20	15	15	16	13	11	8	11	5	6	4	7	37
28-May	4	3	3	10	11	10	10	17	17	16	24	23	18	16	18	15	11	10	6	2	3	2	6	5	24
29-May	4	3	4	4	3	5	4	10	7	8	11	13	12	13	11	8	8	7	9	5	5	40	7	14	40
30-May	9	25	13	11	13	10	10	10	8	11	16	22	59	43	18	14	25	12	5	2	8	7	5	4	59
31-May	3	13	16	15	91	29	7	13	9	8	22	96	14	5	12	7	9	11	11	10	12	11	20	11	96
66 40 24 43 91 67 71 61 88 68 80 106 89 87 65 77 44 40 40 25 26 40 38 67																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 75m (WD75) - deg
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 90m (WD90) - deg

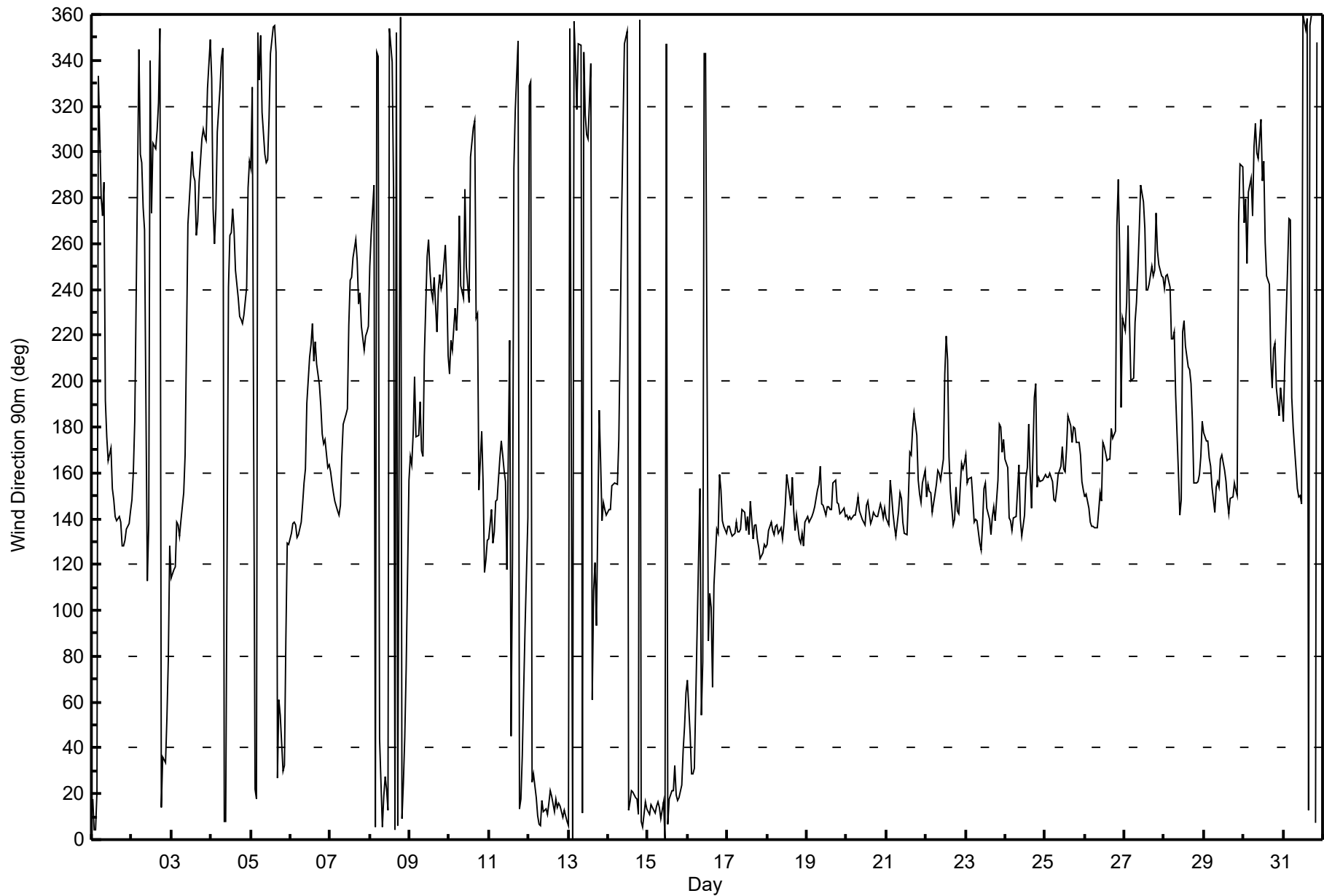
Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on May 2 12:00																		Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6							
Minimum Value: 1 deg on May 23 02:00																									
Percentiles: P ₁ = 2 P ₁₀ = 4 Q ₁ = 7 Median = 10 Q ₃ = 15 P ₉₀ = 26 P ₉₉ = 77																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	7	9	9	10	36	13	19	39	59	25	10	13	18	15	17	18	19	9	10	7	6	6	5	6	59
2-May	3	8	17	34	13	13	15	23	74	86	61	99	77	26	16	17	14	12	15	6	8	10	15	61	99
3-May	17	12	10	8	7	7	6	12	10	35	9	12	15	20	17	16	12	13	7	6	7	8	11	6	35
4-May	15	19	9	7	19	9	13	9	19	47	22	16	9	12	13	12	12	7	7	5	5	10	12	5	47
5-May	7	39	6	7	11	22	13	15	15	21	18	25	49	73	35	37	31	16	15	8	7	30	9	11	73
6-May	6	5	5	4	5	4	5	7	7	9	20	15	12	18	16	12	10	13	10	6	4	5	5	4	20
7-May	3	4	4	5	5	4	4	12	7	7	10	20	8	16	14	11	10	9	9	11	3	4	5	6	20
8-May	39	7	22	19	29	65	64	66	7	10	10	15	34	82	50	20	17	13	17	18	8	8	20	15	82
9-May	5	6	4	10	16	15	17	14	16	34	16	13	13	18	20	20	13	13	9	5	11	5	8	19	34
10-May	14	12	17	12	12	25	34	33	24	32	29	61	43	68	33	76	40	26	7	17	27	10	10	9	76
11-May	12	6	8	10	6	5	8	9	6	14	16	35	90	30	57	59	24	26	15	10	7	10	17	17	90
12-May	55	37	8	15	7	7	10	8	9	8	10	9	12	12	11	7	9	9	8	6	4	8	7	7	55
13-May	6	6	9	18	19	18	15	18	19	32	22	32	63	66	51	30	26	13	39	16	5	4	5	6	66
14-May	5	10	4	4	3	6	12	22	25	12	9	10	9	7	9	8	7	8	11	10	10	10	7	10	25
15-May	6	6	7	5	6	7	8	11	13	12	18	18	21	13	12	17	12	11	8	6	5	7	6	7	21
16-May	7	10	6	5	8	10	23	23	74	23	83	67	29	50	27	56	37	37	23	13	5	8	9	7	83
17-May	5	6	5	6	6	6	7	7	13	12	16	19	16	12	19	9	9	9	7	9	10	11	7	6	19
18-May	6	6	4	4	4	4	5	6	10	10	16	19	12	14	11	12	12	7	9	8	7	8	7	9	19
19-May	4	3	4	2	2	3	5	9	12	10	10	10	14	13	14	10	9	10	9	8	7	7	7	7	14
20-May	6	7	6	7	6	7	7	8	9	7	9	10	11	11	11	8	8	8	6	7	7	7	6	5	11
21-May	5	5	7	6	4	5	6	9	11	14	19	12	14	20	6	7	9	8	11	8	6	6	5	4	20
22-May	4	5	4	6	6	6	6	7	10	11	9	25	7	19	13	10	9	11	12	7	4	6	4	8	25
23-May	6	1	3	3	4	4	6	6	12	17	13	10	10	13	23	14	18	12	8	9	16	14	11	6	23
24-May	5	9	6	4	4	4	5	13	7	11	9	11	11	14	55	26	9	38	24	7	5	3	3	3	55
25-May	3	3	2	3	4	3	4	7	7	10	11	13	14	13	15	12	10	11	8	6	3	5	3	3	15
26-May	2	3	3	3	2	2	3	6	9	10	14	15	10	13	13	12	11	8	7	25	23	24	37	21	37
27-May	13	10	17	35	8	7	12	12	22	14	13	18	19	14	14	15	13	10	8	10	4	5	4	6	35
28-May	3	2	2	6	13	11	9	16	19	18	24	22	18	16	18	15	11	10	6	2	2	2	8	5	24
29-May	4	3	3	4	3	5	2	9	7	8	12	14	12	13	12	7	9	8	9	5	4	40	7	13	40
30-May	9	24	12	11	13	10	9	9	8	11	14	21	57	39	17	13	24	12	5	3	7	8	4	4	57
31-May	3	13	13	7	79	28	10	13	9	8	21	92	15	5	11	6	8	10	UO	9	12	UO	UO	11	92
55 39 22 35 79 65 64 66 74 86 83 99 90 82 57 76 40 38 39 25 27 40 37 61																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 90m (WD90) - deg
Mannix - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 20m (VW20) - km/h

Mannix - May 2025

Maximum Value: 1.6 km/h on May 19 18:00										Maximum Daily Average: 0.9 km/h on May 17										Hours in Service: 744							
Minimum Value: -1.0 km/h on May 12 21:00										Minimum Daily Average: -0.5 km/h on May 12										Hours of Data: 744							
Maximum Diurnal Average: 0.3 km/h at hour 9										Minimum Diurnal Average: 0.2 km/h at hour 21										Hours of Missing Data: 0							
Monthly Average: 0.26 km/h										Percentiles: P ₁ = -0.8 P ₁₀ = -0.4 Q ₁ = -0.1 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 0.9 P ₉₉ = 1.2										Hours of Calibration: 0							
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	-0.4	-0.3	-0.2	-0.3	-0.2	0.0	0.0	-0.1	0.4	0.3	0.5	0.5	0.5	0.4	0.7	0.7	0.5	0.5	0.7	0.9	0.7	0.9	0.9	1.0	0.4	1.0	
2-May	0.6	0.3	0.4	0.0	-0.2	-0.1	-0.1	-0.1	0.0	0.1	0.5	0.7	0.0	-0.2	-0.5	-0.1	-0.5	-0.5	-0.2	-0.1	-0.3	-0.1	0.2	0.3	0.0	0.7	
3-May	0.3	0.1	0.1	0.2	0.5	0.7	0.5	0.7	0.7	0.3	-0.3	-0.2	-0.4	-0.3	-0.3	-0.1	0.0	-0.3	-0.8	-0.9	-0.8	-0.4	-0.8	-0.9	-0.1	0.7	
4-May	-0.4	0.0	-0.1	0.0	-0.3	-0.7	-0.8	-0.6	-0.2	0.0	-0.3	0.0	-0.3	-0.3	-0.5	0.0	-0.3	-0.1	-0.3	-0.1	-0.1	0.0	-0.3	-0.4	-0.2	0.0	
5-May	-0.4	-0.4	-0.1	-0.2	-0.3	-0.1	-0.3	-0.6	-0.1	-0.2	-0.2	0.1	0.2	0.4	-0.1	-0.3	0.0	0.3	0.7	-0.3	-0.3	0.3	0.7	1.1	0.0	1.1	
6-May	1.0	0.6	0.8	0.5	0.7	1.0	0.7	0.5	0.6	0.9	0.4	-0.1	-0.2	-0.1	0.0	-0.2	0.2	0.2	0.2	0.5	0.8	0.5	1.0	1.1	0.5	1.1	
7-May	1.0	1.1	1.1	0.9	1.0	1.0	0.8	0.9	0.4	0.5	0.2	-0.2	-0.1	0.0	0.1	-0.1	-0.3	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.1	0.3	1.1	
8-May	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.1	-0.3	-0.3	-0.3	-0.2	-0.4	0.0	0.4	0.1	-0.3	-0.2	-0.4	-0.5	-0.2	-0.4	-0.2	0.1	-0.1	-0.2	0.4	
9-May	0.2	0.4	0.4	0.5	0.5	0.6	0.3	0.5	0.6	0.2	-0.4	-0.1	-0.4	-0.3	-0.3	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	0.0	0.1	0.6	
10-May	0.0	-0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	-0.3	0.0	-0.1	0.1	0.0	0.6	0.3	0.4	0.6	1.1	0.8	0.2	1.1	
11-May	0.8	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.6	0.3	0.3	0.4	0.1	0.0	0.9	0.4	0.1	0.0	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.3	0.9	
12-May	-0.1	-0.1	-0.3	-0.2	-0.3	-0.2	-0.3	-0.2	-0.2	-0.4	-0.6	-0.5	-0.7	-0.7	-0.6	-0.8	-0.9	-0.9	-0.8	-0.6	-1.0	-0.7	-0.5	-0.4	-0.5	-0.1	
13-May	-0.4	-0.5	-0.5	-0.1	-0.2	-0.3	0.0	-0.2	-0.1	0.1	-0.1	-0.1	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.6	0.5	0.7	0.8	0.7	0.1	0.8	
14-May	0.6	0.7	1.0	0.7	0.5	0.5	0.5	-0.2	-0.2	-0.1	-0.7	-0.7	-0.8	-0.7	-0.5	-0.5	-0.7	-0.9	-0.4	-0.9	-0.6	-0.5	-0.5	-0.6	-0.2	1.0	
15-May	-0.6	-0.8	-0.5	-0.9	-0.8	-0.6	-0.8	-0.1	-0.3	-0.4	-0.5	0.1	-0.1	-0.1	-0.3	-0.1	-0.1	-0.2	-0.4	-0.4	-0.3	0.0	0.2	0.2	-0.3	0.2	
16-May	0.1	-0.3	-0.2	-0.2	-0.3	-0.2	0.2	0.1	0.4	0.1	-0.1	0.4	-0.1	0.4	0.3	0.1	0.1	0.4	0.4	0.3	0.6	0.5	0.5	0.7	0.2	0.7	
17-May	0.9	0.9	1.0	0.7	1.0	0.5	0.8	0.6	0.7	0.7	0.9	1.0	1.0	1.0	1.0	1.0	0.8	1.0	0.8	0.9	1.0	1.1	0.7	0.9	0.9	1.1	
18-May	0.9	0.8	0.6	0.8	0.7	0.6	0.7	0.5	0.7	0.6	0.8	0.9	1.0	0.6	0.5	0.6	0.9	0.7	0.6	0.7	0.6	0.3	0.6	0.7	0.7	1.0	
19-May	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.9	0.5	0.8	1.2	1.2	0.9	0.8	1.0	1.0	1.2	1.6	1.3	1.0	0.7	0.7	0.8	0.7	0.8	1.6	
20-May	0.6	0.5	0.4	0.5	0.5	0.4	0.7	0.8	0.8	1.0	0.6	0.9	0.8	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.6	0.5	0.4	0.4	0.7	1.0	
21-May	0.5	0.4	0.6	0.5	0.5	0.7	0.5	0.7	0.5	0.2	0.6	0.6	0.7	0.9	0.3	0.3	0.3	-0.1	0.3	0.6	0.7	0.7	0.8	0.6	0.5	0.9	
22-May	0.5	0.6	0.6	0.5	0.5	0.7	0.8	0.8	0.5	0.5	0.5	0.0	-0.2	-0.1	0.3	0.7	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.4	0.5	0.9	
23-May	0.5	0.8	0.7	0.3	0.4	0.4	0.6	0.4	0.9	1.0	0.8	0.9	1.1	0.7	0.9	0.8	0.9	0.8	0.9	0.8	0.3	0.4	0.3	0.5	0.7	1.1	
24-May	0.5	0.5	0.5	0.5	0.7	0.7	0.4	0.4	0.5	0.4	0.4	0.9	1.0	1.0	0.6	0.5	0.9	0.4	0.1	0.8	0.5	0.6	0.7	0.8	0.6	1.0	
25-May	0.8	0.8	0.7	0.7	0.7	0.6	0.7	0.8	1.1	0.9	0.6	0.9	1.0	0.8	0.3	0.5	0.8	0.3	0.1	0.4	0.5	0.7	0.8	0.7	0.7	1.1	
26-May	0.6	0.7	0.6	0.6	1.0	0.8	0.5	0.6	0.7	0.5	0.8	0.7	0.6	1.0	0.9	1.0	0.4	0.5	0.3	0.0	-0.1	0.0	0.4	0.0	0.5	1.0	
27-May	0.0	0.0	0.0	0.1	0.1	0.2	-0.2	-0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.2	0.1	0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.2	
28-May	-0.2	-0.1	-0.1	0.1	0.2	0.1	0.0	0.3	0.2	0.5	0.2	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.4	0.4	0.5	0.6	0.7	0.8	0.2	0.8	
29-May	0.7	0.7	0.6	0.6	0.4	0.4	0.3	0.4	0.9	0.9	0.9	0.6	1.2	1.2	1.2	1.4	1.6	1.4	1.3	1.1	0.8	-0.2	-0.6	-0.1	0.7	1.6	
30-May	0.0	-0.1	0.2	0.0	-0.1	0.1	-0.4	-0.6	-0.2	-0.3	-0.6	0.1	-0.2	0.0	-0.1	0.1	0.2	0.0	-0.1	0.0	0.4	0.4	0.3	0.5	0.0	0.5	
31-May	0.5	0.2	-0.1	0.0	0.1	0.4	0.3	0.3	0.3	0.3	0.2	0.1	-0.3	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.8	-0.8	-0.4	-0.5	-0.2	0.5	
0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.3 0.3 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3																										Diurnal Average	
1.0 1.1 1.1 0.9 1.0 1.0 0.8 0.9 1.1 1.0 1.2 1.2 1.2 1.2 1.2 1.4 1.6 1.6 1.3 1.1 1.0 1.1 1.1 1.1																										Diurnal Maximum	



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 20m (VW20) - km/h

Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.2 km/h on May 14 16:00																				Hours in Service: 744					
Minimum Value: 0.2 km/h on May 12 00:00																				Hours of Data: 744					
Percentiles: P ₁ = 0.4 P ₁₀ = 0.9 Q ₁ = 1.4 Median = 2.0 Q ₃ = 2.4 P ₉₀ = 3.0 P ₉₉ = 3.8																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.9	1.4	1.1	0.9	0.6	0.9	0.9	1.0	1.1	1.3	1.6	2.1	2.1	2.0	2.0	1.8	1.5	1.4	1.5	2.0	2.1	2.4	2.2	1.8	2.4
2-May	1.2	0.6	0.6	0.5	0.5	0.7	0.8	1.2	1.5	1.6	1.8	2.0	1.9	2.4	2.5	2.3	2.2	2.0	1.4	1.1	1.4	1.3	1.4	1.3	2.5
3-May	0.7	0.4	0.3	0.7	1.0	1.3	1.6	1.6	1.6	2.0	2.4	2.6	2.3	2.4	2.3	2.5	2.3	2.3	2.4	2.6	2.9	2.1	2.5	2.6	2.9
4-May	1.3	1.0	1.5	1.3	2.2	2.3	2.5	2.1	1.8	1.4	1.3	1.9	2.0	2.3	2.3	2.5	2.4	2.9	2.6	2.2	1.9	1.7	1.4	1.4	2.9
5-May	2.1	2.7	2.7	1.9	1.1	1.4	1.8	1.9	2.2	2.0	2.4	2.5	2.5	2.3	2.3	2.2	2.0	1.6	1.6	1.2	1.1	1.7	2.0	2.1	2.7
6-May	2.7	2.1	2.0	1.7	1.9	2.3	1.9	1.5	1.6	1.9	2.8	2.8	3.0	3.5	3.3	3.1	3.4	2.8	3.1	2.3	2.1	2.4	1.8	2.0	3.5
7-May	1.7	2.1	2.4	2.5	2.1	1.9	1.9	2.7	3.6	3.5	3.3	2.8	2.7	2.1	2.0	2.2	3.0	2.7	2.2	1.5	1.3	1.4	1.1	1.0	3.6
8-May	0.8	0.6	0.4	0.4	0.5	0.8	0.7	1.5	2.6	2.4	2.0	2.6	2.2	2.2	2.5	2.4	2.2	2.2	1.9	1.6	1.5	1.2	0.6	0.2	2.6
9-May	0.6	0.4	0.9	0.9	1.0	1.2	1.0	1.4	1.7	2.3	2.4	2.8	2.8	3.0	2.7	3.0	2.5	2.4	1.8	0.6	0.8	0.2	0.4	0.6	3.0
10-May	0.5	0.4	0.4	0.5	0.4	0.4	0.9	1.1	1.8	1.8	2.2	1.8	2.2	2.1	2.0	1.7	1.5	1.9	0.9	0.8	0.8	1.3	1.9	1.4	2.2
11-May	1.1	1.2	1.5	1.4	1.1	1.0	1.3	1.7	1.4	1.7	1.9	1.9	1.3	1.8	1.9	1.9	1.8	1.4	1.0	0.3	0.6	0.6	0.6	0.2	1.9
12-May	0.2	0.4	0.7	0.4	0.6	1.2	1.8	2.4	2.6	2.6	2.8	3.2	3.3	3.4	3.3	3.6	3.0	3.2	3.0	2.7	3.1	3.0	2.6	2.7	3.6
13-May	2.0	1.5	1.6	1.1	0.9	0.9	1.4	1.9	1.9	2.1	2.3	2.1	2.2	2.2	2.2	2.0	1.8	1.6	2.1	1.7	1.4	1.5	1.8	1.7	2.3
14-May	1.7	2.0	2.0	1.6	1.4	1.1	1.6	1.8	1.8	1.9	3.0	3.7	3.4	3.8	3.9	4.2	3.8	3.8	3.4	3.1	3.0	3.0	3.0	2.7	4.2
15-May	2.8	2.9	2.6	3.1	3.3	3.1	3.1	3.0	3.4	3.0	3.1	3.0	2.9	3.0	3.0	3.0	2.9	2.5	2.2	2.0	1.9	2.0	1.9	1.5	3.4
16-May	1.1	0.5	0.7	0.8	1.2	1.0	1.3	1.7	1.9	2.1	2.1	2.2	2.3	2.3	2.1	2.2	1.7	1.6	1.4	1.1	0.7	1.4	2.0	2.1	2.3
17-May	2.4	2.5	2.6	2.5	2.4	2.2	2.2	2.1	2.1	2.1	2.2	2.5	2.6	2.3	2.4	2.5	2.3	2.3	2.3	2.4	2.7	2.7	2.3	2.2	2.7
18-May	2.4	2.0	2.2	2.2	2.1	2.2	2.0	1.8	1.9	2.0	2.1	2.6	2.3	1.9	2.0	1.9	2.2	2.3	1.9	2.4	2.3	2.1	2.2	2.0	2.6
19-May	1.2	1.5	1.6	1.3	1.5	1.8	1.7	2.1	2.5	2.5	2.9	3.0	2.7	2.2	2.7	2.6	2.6	3.4	3.3	2.5	2.2	2.3	2.2	2.1	3.4
20-May	2.1	1.6	1.7	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.3	2.5	2.7	2.2	2.3	2.2	2.0	1.9	1.3	1.4	1.4	2.7
21-May	1.4	1.5	1.4	1.4	1.5	1.7	1.6	1.6	1.6	1.7	1.8	1.8	1.8	2.3	2.4	2.1	2.3	2.2	2.0	1.7	1.6	1.9	1.7	1.3	2.4
22-May	1.6	1.5	1.3	1.6	1.7	1.6	1.9	2.0	2.2	2.3	2.4	2.2	2.0	2.0	1.8	2.4	2.2	2.0	1.9	1.8	1.7	1.3	1.1	0.8	2.4
23-May	1.0	1.6	1.5	1.0	0.7	0.9	1.7	1.8	2.1	2.2	2.7	2.7	2.8	2.3	2.5	1.7	2.5	2.5	2.5	1.9	1.8	0.8	0.7	1.3	2.8
24-May	1.1	1.1	1.5	1.8	2.0	1.7	1.7	1.5	1.7	1.5	1.8	2.6	2.8	2.7	2.1	2.0	2.2	2.8	2.7	2.1	1.4	1.6	1.7	1.6	2.8
25-May	1.6	1.7	1.7	1.8	1.7	1.7	2.1	2.3	2.8	2.9	3.2	3.1	3.2	3.4	3.4	3.6	3.3	3.2	2.9	2.2	2.1	1.5	1.8	1.9	3.6
26-May	1.8	1.7	1.7	1.8	2.4	2.3	1.7	1.9	1.8	2.1	2.4	3.6	3.8	3.5	3.4	3.4	3.8	3.5	2.4	2.8	2.0	2.0	1.4	0.7	3.8
27-May	0.9	0.8	0.7	0.8	0.7	0.9	1.2	1.3	1.6	1.8	2.2	2.3	2.6	2.7	2.7	3.1	2.9	3.0	2.7	1.5	0.8	0.5	0.5	0.7	3.1
28-May	0.6	0.4	0.4	0.4	0.7	0.9	0.9	1.3	1.4	1.5	1.8	2.7	2.5	3.0	2.7	2.6	2.1	1.3	0.9	1.0	1.0	1.3	1.5	1.3	3.0
29-May	1.1	1.2	0.9	1.3	1.2	1.2	1.4	1.5	2.2	2.5	3.4	3.8	3.4	3.1	3.2	3.6	3.4	3.1	2.8	2.4	2.1	3.8	3.7	2.0	3.8
30-May	2.9	2.5	2.6	2.2	1.6	1.7	2.4	2.5	2.1	2.3	2.4	2.2	2.1	2.0	2.2	2.2	2.0	1.9	1.6	0.9	1.0	1.0	1.1	1.3	2.9
31-May	1.2	0.9	0.5	0.3	0.4	1.2	1.2	0.8	1.1	1.4	1.5	1.2	1.3	2.6	2.6	2.8	3.1	3.3	3.2	3.4	2.9	3.0	2.5	2.6	3.4
2.9 2.9 2.7 3.1 3.3 3.1 3.1 3.0 3.6 3.5 3.4 3.8 3.8 3.8 3.9 4.2 3.8 3.8 3.4 3.4 3.1 3.8 3.7 2.7																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 45m (VW45) - km/h

Mannix - May 2025

Maximum Value: 3.5 km/h on May 19 18:00																				Maximum Daily Average: 2.0 km/h on May 25					Hours in Service: 744	
Minimum Value: -2.0 km/h on May 12 21:00																				Minimum Daily Average: -1.0 km/h on May 12					Hours of Data: 744	
Maximum Diurnal Average: 0.7 km/h at hour 9																				Minimum Diurnal Average: 0.5 km/h at hour 21					Hours of Missing Data: 0	
Monthly Average: 0.60 km/h																				Percentiles: P ₁ = -1.6 P ₁₀ = -0.8 Q ₁ = -0.1 Median = 0.7 Q ₃ = 1.3 P ₉₀ = 1.8 P ₉₉ = 2.8					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	-0.8	-0.6	-0.4	-0.3	-0.2	0.1	0.1	0.1	0.4	0.9	1.1	1.1	1.0	0.4	1.1	0.8	0.5	0.6	0.9	0.9	0.9	1.3	1.2	1.6	0.5	1.6
2-May	1.3	0.8	1.0	0.1	-0.3	0.0	-0.1	-0.2	0.4	0.1	0.8	1.1	0.2	-0.3	-0.7	0.1	-1.0	-0.7	-0.4	-0.2	-0.9	-0.4	0.5	0.9	0.1	1.3
3-May	0.6	0.2	0.4	1.0	1.2	1.2	1.1	1.1	1.5	0.8	-0.3	-0.1	-0.5	-0.6	-0.1	0.0	0.0	-0.4	-1.1	-1.2	-1.3	-0.7	-1.3	-1.6	0.0	1.5
4-May	-0.8	0.1	0.1	0.0	-0.6	-1.1	-1.8	-1.2	-0.5	-0.1	0.0	0.4	-0.1	-0.1	-0.5	0.5	0.3	0.8	0.3	0.4	0.3	0.1	-0.4	-0.6	-0.2	0.8
5-May	-0.6	-0.9	-0.6	-0.6	-0.5	-0.3	-0.6	-0.9	0.0	-0.1	-0.5	0.1	0.1	1.0	0.1	-0.6	-0.1	0.4	0.9	-0.4	-0.6	0.2	0.9	1.6	-0.1	1.6
6-May	1.4	1.2	1.2	1.1	1.1	1.2	1.1	1.0	1.1	1.4	1.7	0.7	0.6	1.0	1.0	0.8	1.0	1.1	1.3	1.8	2.0	2.0	2.1	2.3	1.3	2.3
7-May	2.0	2.0	2.2	2.0	1.8	1.6	1.6	2.2	1.9	1.9	1.4	0.5	0.0	0.1	0.2	0.0	-0.1	0.4	0.3	0.2	0.4	0.3	0.3	0.3	1.0	2.2
8-May	0.1	-0.1	-0.2	-0.3	-0.2	0.0	0.1	-0.4	-0.9	-0.6	-0.8	-1.1	-0.1	0.8	0.4	-0.2	-0.8	-0.8	-0.8	-0.4	-0.8	-0.3	0.0	0.2	-0.3	0.8
9-May	1.0	1.2	1.2	1.2	1.1	1.1	0.6	0.6	0.8	0.8	-0.2	-0.1	-0.2	-0.2	0.2	0.4	0.4	0.4	0.1	0.1	0.0	0.0	0.1	0.3	0.4	1.2
10-May	0.6	0.2	0.4	0.2	0.1	0.2	0.1	-0.1	0.2	-0.1	0.4	0.3	0.4	-0.2	-0.1	-0.2	0.0	0.1	1.0	0.8	0.8	1.3	1.5	1.2	0.4	1.5
11-May	1.3	1.4	1.0	1.3	0.8	1.1	1.2	1.2	1.3	1.0	0.7	0.7	0.1	0.1	1.0	0.7	0.1	-0.2	-0.3	-0.3	-0.3	-0.1	0.1	0.2	0.6	1.4
12-May	-0.2	-0.1	-0.5	-0.4	-0.5	-0.6	-0.5	-0.8	-0.6	-0.9	-1.2	-0.9	-1.4	-1.2	-1.5	-1.4	-1.3	-1.6	-1.7	-1.3	-2.0	-1.5	-1.1	-1.0	-1.0	-0.1
13-May	-1.1	-0.9	-0.8	-0.2	-0.4	-0.3	-0.3	-0.4	-0.2	0.2	-0.2	-0.3	0.3	0.1	0.8	0.8	0.9	0.1	0.8	1.3	0.9	1.4	1.7	1.4	0.2	1.7
14-May	1.3	1.3	1.9	1.6	1.3	1.1	1.1	0.0	-0.2	-0.3	-1.3	-1.3	-1.4	-1.3	-0.6	-1.2	-1.7	-1.4	-0.9	-1.3	-0.8	-1.0	-1.3	-1.2	-0.3	1.9
15-May	-1.3	-1.9	-1.2	-1.9	-1.7	-1.3	-1.5	-0.5	-0.4	-0.7	-0.8	0.1	-0.3	-0.4	-0.9	-0.5	-0.6	-0.4	-0.7	-0.7	-0.9	-0.4	-0.2	0.1	-0.8	0.1
16-May	0.2	-0.4	-0.3	-0.5	-0.6	-0.4	0.3	0.0	0.6	-0.3	0.0	0.7	-0.2	0.9	0.1	0.3	0.1	0.7	0.6	0.8	1.1	0.8	0.9	1.1	0.3	1.1
17-May	1.5	1.4	1.5	1.0	1.1	0.9	0.8	0.5	1.1	1.2	1.4	1.8	1.7	1.2	1.8	1.1	1.2	1.3	0.8	1.3	1.9	1.6	1.0	0.8	1.2	1.9
18-May	0.9	1.1	1.3	1.3	1.5	1.2	1.1	0.5	1.0	0.6	1.6	1.4	1.9	1.2	0.9	1.3	1.3	0.7	1.0	0.8	0.8	0.6	0.6	1.2	1.1	1.9
19-May	0.9	1.3	1.2	1.1	1.3	1.4	1.2	2.0	1.6	1.8	2.0	1.9	1.5	1.4	1.9	1.7	2.4	3.5	2.5	1.9	1.4	1.5	1.6	1.2	1.7	3.5
20-May	1.2	0.9	1.0	0.8	0.8	0.9	1.1	1.8	1.6	1.3	1.1	1.4	1.3	1.9	1.2	1.2	1.5	1.4	1.1	1.3	1.5	1.0	0.9	1.0	1.2	1.9
21-May	0.9	0.8	1.3	1.1	1.1	1.2	0.7	1.0	0.8	0.7	1.1	0.9	1.2	1.7	1.6	1.5	1.6	0.8	1.3	1.5	1.3	1.5	1.6	1.4	1.2	1.7
22-May	1.4	1.4	1.2	1.3	1.1	1.4	1.6	1.6	1.7	1.4	1.9	0.8	0.3	0.3	1.2	1.7	1.0	1.4	1.8	1.2	1.3	1.4	1.3	1.2	1.3	1.9
23-May	1.5	2.0	1.6	1.2	1.1	1.2	1.1	1.0	1.3	1.8	1.0	1.8	2.4	1.5	1.9	1.6	1.3	1.6	1.1	1.5	1.3	0.9	1.0	1.3	1.4	2.4
24-May	1.3	1.3	1.2	1.4	1.3	1.2	1.0	0.9	1.3	0.9	0.4	1.7	2.1	2.4	1.7	1.2	1.6	1.4	1.1	1.8	1.4	1.6	1.8	1.9	1.4	2.4
25-May	2.0	1.8	1.8	1.9	1.8	1.5	1.6	1.8	2.1	2.8	2.4	2.5	2.6	2.4	2.0	1.8	2.3	1.9	1.6	1.7	1.7	1.9	1.8	1.7	2.0	2.8
26-May	1.5	1.4	1.4	1.4	1.8	1.5	0.8	0.7	1.2	1.4	1.5	2.5	2.3	2.9	2.8	3.0	2.5	2.1	1.5	-0.1	-0.2	0.1	1.0	0.2	1.5	3.0
27-May	0.3	0.2	0.1	0.4	0.6	0.6	0.2	0.0	0.1	0.1	-0.1	0.0	0.3	0.1	0.1	0.7	0.3	0.2	0.3	0.1	0.0	0.1	0.0	0.0	0.2	0.7
28-May	0.0	0.0	0.1	0.2	0.4	0.2	0.1	0.5	0.5	0.7	0.5	0.6	0.3	0.9	1.0	0.6	0.7	0.7	1.0	1.3	1.4	1.6	2.0	1.9	0.7	2.0
29-May	1.9	1.6	1.4	1.6	1.5	1.5	0.7	1.2	2.1	2.0	3.0	2.4	2.9	2.8	2.6	2.6	3.0	2.8	2.5	2.2	1.9	0.4	-0.7	-0.2	1.8	3.0
30-May	0.0	0.0	0.2	0.1	-0.1	0.0	-0.4	-0.8	-0.1	-0.3	-0.8	0.4	-0.3	0.0	0.2	0.3	0.7	0.7	0.2	0.2	1.0	1.3	1.2	1.2	0.2	1.3
31-May	1.4	0.9	0.1	0.1	0.2	0.9	0.9	0.6	0.5	0.8	0.2	0.0	-0.4	-1.5	-1.1	-1.2	-1.3	-1.6	-1.6	-1.5	-1.5	-1.5	-0.8	-1.0	-0.4	1.4
0.7 0.6 0.7 0.6 0.6 0.6 0.5 0.5 0.7 0.7 0.6 0.7 0.6 0.6 0.7 0.6 0.6 0.6 0.5 0.5 0.5 0.5 0.6 0.7																									Diurnal Average	
2.0 2.0 2.2 2.0 1.8 1.6 1.6 2.2 2.1 2.8 3.0 2.5 2.9 2.9 2.8 3.0 3.0 3.5 2.5 2.2 2.0 2.0 2.1 2.3																									Diurnal Maximum	



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 45m (VW45) - km/h

Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.3 km/h on May 29 16:00																				Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0					
Minimum Value: 0.2 km/h on May 12 02:00																									
Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.5 Median = 2.2 Q ₃ = 2.7 P ₉₀ = 3.2 P ₉₉ = 3.9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.9	1.5	1.1	1.0	0.7	1.0	1.0	1.2	1.4	1.6	2.0	2.3	2.6	2.8	2.7	2.3	2.2	1.8	1.8	2.3	2.3	2.6	2.2	1.8	2.8
2-May	1.2	0.6	0.8	0.7	0.5	0.4	0.9	1.1	1.6	1.6	2.1	2.5	2.5	2.8	3.0	2.8	2.5	2.3	1.5	1.0	1.4	1.4	1.8	1.8	3.0
3-May	1.1	0.7	0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.2	2.8	2.9	2.9	2.8	2.9	2.9	2.5	2.3	2.6	2.6	2.8	2.0	2.6	2.7	2.9
4-May	1.5	1.0	1.6	1.4	2.5	2.5	2.7	2.3	2.0	1.7	1.5	2.4	2.4	2.8	2.6	3.0	3.0	3.4	2.6	2.3	1.9	1.8	1.5	1.5	3.4
5-May	2.3	2.8	2.8	2.1	1.3	1.7	2.2	2.2	2.6	2.7	2.8	3.1	3.0	2.6	2.9	2.5	2.3	2.0	1.7	1.3	1.0	1.9	2.4	2.7	3.1
6-May	2.7	2.3	2.3	1.7	1.8	2.1	2.0	1.7	1.7	2.1	3.1	3.2	3.3	4.0	3.6	3.4	3.5	2.9	2.7	2.3	2.3	2.5	1.9	2.1	4.0
7-May	1.8	2.4	2.7	2.9	2.3	1.7	2.0	2.8	3.3	3.3	3.1	3.1	3.0	2.4	2.1	2.3	2.9	2.9	2.5	1.4	1.1	1.1	0.7	0.5	3.3
8-May	1.1	0.5	0.4	0.5	0.3	1.2	0.8	1.7	2.8	2.5	2.0	2.6	2.7	2.5	3.1	3.2	2.5	2.3	2.2	1.7	1.6	1.3	0.9	0.4	3.2
9-May	0.5	0.3	0.7	0.9	0.8	1.3	1.0	1.3	1.8	2.7	3.0	3.3	3.4	3.3	3.1	3.2	2.5	2.8	1.8	0.7	0.6	0.2	0.3	0.7	3.4
10-May	0.4	0.7	0.7	0.8	0.6	0.4	0.7	1.3	1.8	2.1	2.8	2.3	2.7	2.5	2.4	2.1	1.8	2.2	1.1	1.0	1.2	1.7	2.6	1.7	2.8
11-May	1.5	1.4	1.8	1.6	1.0	0.9	1.5	1.7	1.5	2.1	2.4	2.5	1.8	2.0	2.1	2.2	2.3	1.8	1.2	0.5	0.7	0.6	0.5	0.4	2.5
12-May	0.3	0.2	0.6	0.5	0.5	1.1	1.9	2.4	2.7	2.8	3.1	3.5	3.5	3.6	3.4	3.6	3.2	3.1	2.8	2.7	2.8	2.8	2.6	2.6	3.6
13-May	1.9	1.6	1.6	1.4	1.0	0.9	1.5	2.3	2.4	2.7	2.9	2.7	2.7	2.9	2.8	2.5	2.4	2.0	2.1	1.7	1.4	1.6	1.8	1.7	2.9
14-May	1.9	2.2	2.2	1.7	1.4	1.2	1.6	2.0	2.1	2.1	3.2	4.1	3.3	3.9	4.2	4.1	3.8	3.8	3.6	3.5	3.1	3.6	3.0	2.9	4.2
15-May	2.7	2.7	2.7	2.7	3.2	2.9	3.1	3.2	3.7	3.4	3.6	3.5	3.5	3.7	3.3	3.3	3.0	2.9	2.4	2.0	1.9	2.0	1.7	1.6	3.7
16-May	1.1	0.6	0.5	0.7	1.0	0.9	1.5	1.9	2.2	2.3	2.5	2.8	2.7	3.0	2.5	2.7	2.2	2.1	1.8	1.1	0.9	1.7	2.4	2.4	3.0
17-May	2.7	2.7	2.7	2.5	2.5	2.4	2.5	2.3	2.5	2.9	3.0	3.3	3.4	2.8	3.1	3.1	2.9	2.5	2.6	3.0	3.5	3.3	2.6	2.3	3.5
18-May	2.4	2.1	2.1	2.1	1.9	2.3	2.2	1.9	2.5	2.6	3.0	3.3	2.7	2.2	2.4	2.1	2.5	2.5	2.2	2.7	2.6	2.7	2.5	2.2	3.3
19-May	1.0	1.2	1.4	1.1	1.4	1.8	1.8	2.4	2.6	3.3	3.4	3.5	3.2	2.7	3.3	3.2	2.9	4.0	3.9	3.1	2.6	2.7	2.7	2.4	4.0
20-May	2.2	1.9	1.9	1.7	1.6	1.9	2.3	2.4	2.6	2.4	2.7	2.8	2.7	2.8	2.7	2.8	2.7	2.5	2.3	2.4	2.1	1.2	1.3	1.3	2.8
21-May	1.1	1.5	1.4	1.5	1.3	1.4	1.5	1.7	1.8	2.3	2.3	2.3	2.3	2.7	2.1	2.1	2.3	2.0	1.9	1.9	1.9	2.1	1.9	1.3	2.7
22-May	1.7	1.6	1.5	1.7	1.8	1.9	2.1	2.0	2.5	2.7	2.5	2.3	1.9	1.8	2.0	3.0	2.5	2.4	2.3	1.7	1.7	1.2	1.0	0.8	3.0
23-May	0.7	1.3	1.3	1.1	0.6	0.7	1.5	2.0	2.7	2.7	3.0	3.3	3.2	2.7	2.9	1.8	3.2	2.7	2.8	2.0	1.5	0.5	0.4	1.0	3.3
24-May	1.1	0.9	1.3	1.5	1.6	1.7	1.7	1.6	1.8	1.5	2.2	3.2	3.3	3.1	2.7	2.2	2.5	2.9	2.6	2.0	1.3	1.3	1.6	1.5	3.3
25-May	1.5	1.7	1.6	1.7	1.4	1.4	2.0	2.7	3.2	3.3	3.3	3.5	3.4	3.4	3.3	3.3	3.1	3.1	2.8	1.9	1.6	1.2	1.8	1.7	3.5
26-May	1.8	1.5	1.3	1.4	1.8	2.1	1.2	1.9	2.2	2.5	2.9	3.8	3.8	3.6	3.8	3.7	3.7	3.1	2.2	2.9	2.1	1.7	1.4	0.6	3.8
27-May	0.6	0.8	1.0	0.9	0.5	0.8	1.2	1.5	2.0	2.2	2.5	2.7	3.2	3.1	2.8	3.3	3.1	3.0	2.9	1.7	0.9	0.3	0.4	0.4	3.3
28-May	0.5	0.5	0.4	0.4	0.5	0.5	0.8	1.1	1.6	1.7	2.2	3.2	2.9	3.1	2.8	2.4	2.0	1.1	0.7	0.7	0.6	0.7	0.8	0.8	3.2
29-May	0.8	1.1	1.1	0.8	0.8	0.5	1.2	1.6	2.4	2.9	3.4	3.5	3.7	3.5	3.9	4.3	4.3	3.8	3.1	2.5	2.1	3.9	3.7	1.9	4.3
30-May	3.0	2.5	2.8	2.3	1.4	1.8	2.3	2.5	2.2	2.2	2.5	2.7	2.4	2.4	2.8	2.4	2.1	1.8	1.4	0.5	0.4	0.4	0.7	0.8	3.0
31-May	0.6	0.8	0.6	0.7	0.7	0.8	0.8	0.9	1.2	1.6	2.1	1.5	1.4	2.2	2.5	2.5	3.0	3.2	3.2	3.2	2.8	3.2	2.5	2.8	3.2
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 75m (VW75) - km/h

Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.4 km/h on May 14 15:00																				Hours in Service: 744					
Minimum Value: 0.2 km/h on May 12 02:00																				Hours of Data: 744					
Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 1.3 Median = 2.2 Q ₃ = 2.9 P ₉₀ = 3.4 P ₉₉ = 4.1																				Hours of Missing Data: 0					
																				Hours of Calibration: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.8	1.4	1.0	1.0	0.8	1.1	1.1	1.1	1.5	1.8	2.0	2.5	3.1	3.2	2.9	2.5	2.6	2.1	2.5	2.4	2.3	2.6	2.1	1.6	3.2
2-May	0.8	0.8	1.1	0.8	0.5	0.5	0.8	1.0	1.7	1.3	2.3	2.8	2.8	3.1	3.4	3.2	2.7	2.1	1.5	0.8	1.3	1.6	2.2	2.5	3.4
3-May	1.6	1.0	0.8	1.1	1.0	1.6	1.3	1.6	1.8	2.2	3.0	3.5	3.4	3.2	3.3	2.9	2.7	2.3	2.5	2.5	2.5	2.0	2.4	2.3	3.5
4-May	1.2	0.9	1.6	1.5	2.4	2.6	2.5	2.2	1.9	1.9	1.6	2.4	2.6	3.1	2.9	3.4	2.9	3.1	2.5	2.0	2.0	1.6	1.5	1.5	3.4
5-May	2.5	2.7	2.6	1.9	1.3	1.8	2.3	2.4	2.9	3.1	3.2	3.6	3.4	3.0	3.2	2.9	2.4	2.4	1.9	1.1	0.7	2.0	2.6	3.2	3.6
6-May	2.5	2.1	2.0	1.4	1.7	1.8	1.8	1.5	1.6	2.0	3.4	3.4	3.7	4.1	3.7	3.5	3.5	3.0	2.7	2.2	2.1	2.4	1.7	1.7	4.1
7-May	1.4	2.1	2.3	2.5	2.1	1.6	1.6	2.6	3.2	3.2	3.0	3.2	2.7	2.6	2.0	2.4	2.8	3.1	2.5	1.3	0.8	0.9	0.6	0.3	3.2
8-May	1.1	0.4	0.4	0.5	0.3	1.6	1.0	1.6	2.9	2.6	2.0	2.6	3.2	2.8	3.4	3.5	2.7	2.2	2.4	1.8	1.5	1.4	1.2	0.5	3.5
9-May	0.4	0.3	0.4	0.9	0.6	1.0	0.7	1.1	1.8	3.0	3.3	3.5	3.5	3.5	3.6	3.4	2.6	3.1	1.7	0.6	0.8	0.4	0.3	0.7	3.6
10-May	0.4	0.7	0.8	1.1	0.9	0.5	0.6	1.3	2.2	2.3	3.3	2.5	2.9	2.7	2.6	2.2	2.1	2.7	1.1	1.1	1.0	2.2	2.9	2.2	3.3
11-May	2.0	1.2	2.0	1.9	0.9	0.7	1.3	1.7	1.4	2.1	2.6	3.0	2.2	2.1	2.5	2.4	2.6	2.2	1.3	0.6	0.5	0.6	0.9	0.6	3.0
12-May	0.3	0.2	0.4	0.3	0.4	1.0	2.0	2.2	2.6	2.7	3.0	3.6	3.7	3.8	3.8	3.3	3.1	2.9	2.8	2.5	2.3	2.7	2.3	2.7	3.8
13-May	1.8	1.4	1.4	1.6	0.9	0.9	1.6	2.6	2.6	3.0	3.3	3.0	3.4	3.3	3.5	3.0	2.9	2.5	2.1	1.6	1.3	1.2	1.5	1.7	3.5
14-May	1.8	2.0	1.9	1.3	1.1	1.0	1.7	2.2	2.4	2.5	3.1	3.6	3.1	3.8	4.4	3.9	3.2	3.8	3.5	3.4	3.1	3.3	2.8	2.8	4.4
15-May	2.5	2.4	2.6	2.3	2.9	3.0	2.9	3.2	3.6	3.3	4.0	4.0	3.8	3.9	3.1	3.4	3.1	2.8	2.2	1.7	1.4	1.6	1.4	1.5	4.0
16-May	1.1	0.8	0.7	0.6	0.6	0.7	1.5	2.0	2.5	2.4	2.7	3.0	3.0	3.7	3.1	2.9	2.5	2.5	2.0	1.2	1.0	2.0	2.6	2.3	3.7
17-May	2.6	2.5	2.3	2.4	2.3	2.3	2.4	2.4	2.7	3.2	3.4	3.7	4.1	3.2	3.8	3.5	3.4	2.7	2.4	3.2	3.9	3.7	2.7	2.3	4.1
18-May	2.3	2.3	1.9	1.9	1.8	2.2	2.0	1.9	2.7	2.6	3.5	3.8	2.8	2.3	2.5	2.2	2.6	2.4	2.0	2.5	2.7	2.7	2.7	2.1	3.8
19-May	1.3	1.1	1.2	0.8	0.9	1.3	1.4	2.9	2.8	3.4	3.6	3.3	3.4	2.9	3.7	3.2	3.0	3.9	4.0	3.1	2.5	2.8	2.8	2.3	4.0
20-May	2.1	1.9	2.0	1.7	1.7	2.1	2.3	2.6	2.6	2.4	2.7	3.2	2.8	2.8	2.8	2.7	2.7	2.4	2.0	2.3	2.0	1.1	1.3	1.2	3.2
21-May	1.1	1.4	1.4	1.2	0.9	1.5	1.6	1.8	1.8	2.6	2.9	2.7	2.8	2.9	1.9	2.1	2.3	2.3	1.9	1.9	1.7	2.0	1.6	1.0	2.9
22-May	1.3	1.4	1.3	1.4	1.7	1.8	1.9	1.9	2.7	2.8	2.7	2.3	1.9	1.8	2.1	3.1	2.6	2.6	2.4	1.7	1.4	0.9	0.7	0.6	3.1
23-May	0.4	0.7	0.8	0.9	0.4	0.9	1.3	1.8	3.0	3.3	3.3	3.6	3.4	3.0	3.6	2.3	3.2	2.8	2.7	2.0	1.2	0.5	0.5	0.8	3.6
24-May	0.8	0.8	1.1	1.3	1.5	1.4	1.5	1.7	1.9	1.9	2.5	3.5	3.6	3.3	2.9	2.1	2.5	2.9	2.6	1.9	1.0	0.9	1.3	1.3	3.6
25-May	1.3	1.4	1.1	1.2	1.0	1.0	1.5	2.7	3.1	3.5	3.5	3.7	3.9	3.8	3.6	3.6	3.1	3.2	2.7	1.8	1.4	1.1	1.4	1.3	3.9
26-May	1.2	1.2	0.9	1.2	1.5	1.6	1.3	1.9	2.3	3.0	3.2	4.2	3.9	4.1	3.8	3.8	3.8	2.9	2.1	3.2	2.1	1.6	1.4	0.7	4.2
27-May	0.6	0.7	1.2	1.0	0.5	0.5	1.0	1.5	2.1	2.3	3.0	3.2	3.5	3.3	3.0	3.8	3.2	3.1	2.7	1.6	0.9	0.5	0.3	0.3	3.8
28-May	0.4	0.2	0.5	0.5	0.5	0.4	0.6	0.7	1.5	1.7	2.5	3.6	3.4	3.5	3.3	2.5	1.9	0.9	0.5	0.2	0.4	0.6	0.7	0.9	3.6
29-May	0.6	0.7	0.9	0.5	0.6	0.5	1.0	1.4	2.4	3.1	3.6	3.5	3.9	4.0	4.1	4.2	4.2	3.9	3.1	2.3	1.8	4.1	3.8	2.0	4.2
30-May	3.1	2.4	2.9	2.4	1.4	1.7	2.4	2.8	2.4	2.5	2.6	2.9	2.8	2.6	3.3	2.6	2.2	1.8	1.1	0.4	0.4	0.5	0.5	0.9	3.3
31-May	0.7	0.7	0.7	0.9	1.0	0.8	0.6	0.8	1.0	1.5	2.3	1.7	1.3	1.9	2.3	2.2	2.9	2.8	3.0	3.3	2.7	2.9	2.3	2.7	3.3
3.1 2.7 2.9 2.5 2.9 3.0 2.9 3.2 3.6 3.5 4.0 4.2 4.1 4.1 4.4 4.2 4.2 3.9 4.0 3.4 3.9 4.1 3.8 3.2																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Vertical Wind Speed 90m (VW90) - km/h

Mannix - May 2025

Maximum Value: 1.7 km/h on May 29 11:00																		Maximum Daily Average: 0.9 km/h on May 29										Hours in Service: 744	
Minimum Value: -1.6 km/h on May 18 01:00																		Minimum Daily Average: -0.2 km/h on May 18										Hours of Data: 741	
Maximum Diurnal Average: 0.5 km/h at hour 15																		Minimum Diurnal Average: 0.2 km/h at hour 8										Hours of Missing Data: 3	
Monthly Average: 0.33 km/h																		Percentiles: P ₁ = -1.1 P ₁₀ = -0.2 Q ₁ = 0.0 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.5										Hours of Calibration: 0	
																												Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	0.3	0.2	0.3	0.5	0.1	0.3	0.3	0.0	0.3	0.6	0.2	0.4	0.6	-0.2	0.8	0.1	0.2	-0.2	0.3	-0.7	-0.9	0.0	0.5	0.6	0.2	0.8			
2-May	0.8	0.4	0.1	0.3	0.3	0.3	0.3	0.0	0.4	0.2	0.6	1.5	0.4	0.7	0.1	1.2	-0.2	0.2	0.4	0.3	0.4	0.1	1.5	1.5	0.5	1.5			
3-May	0.7	0.1	0.3	0.7	0.2	0.1	0.6	0.5	0.8	0.5	-0.3	0.4	0.4	-0.2	0.5	0.1	0.3	0.6	0.4	0.5	0.4	0.5	0.2	-0.2	0.3	0.8			
4-May	0.0	0.2	0.1	0.3	0.5	-0.1	-0.1	0.0	0.5	0.3	-0.1	0.7	0.0	0.4	-0.3	0.6	0.0	0.0	-0.3	-0.2	-0.2	0.0	0.3	0.4	0.1	0.7			
5-May	0.5	0.4	0.5	0.6	0.5	0.3	0.2	0.2	0.9	0.8	0.2	0.4	0.1	1.3	0.6	-0.6	-0.3	1.0	1.4	0.4	0.4	0.1	-0.5	0.7	0.4	1.4			
6-May	-0.6	0.3	0.2	0.3	-0.5	-0.6	0.4	0.5	0.6	0.4	1.1	0.0	-0.1	0.6	0.3	0.0	-0.4	0.1	0.1	0.7	0.5	0.6	0.8	0.8	0.2	1.1			
7-May	0.7	1.0	1.2	0.9	1.2	1.0	1.1	0.8	0.0	0.4	-0.3	-0.1	0.1	0.1	0.2	0.4	-0.2	0.1	0.0	-0.2	-0.3	-0.3	-0.2	-0.1	0.3	1.2			
8-May	-0.1	0.0	0.3	0.3	0.2	0.4	0.2	0.3	0.4	0.3	0.0	-0.2	0.9	1.6	0.8	0.6	-0.1	0.3	0.2	0.7	0.3	0.2	0.1	0.4	0.3	1.6			
9-May	0.3	0.4	0.6	0.1	0.2	0.3	-0.1	0.1	0.7	0.7	0.0	0.7	-0.4	-0.3	0.2	0.8	-0.1	0.5	0.2	0.1	0.0	0.1	0.0	0.0	0.2	0.8			
10-May	0.0	0.0	0.0	0.0	-0.1	0.2	0.3	-0.2	0.3	0.1	0.6	0.3	0.4	0.1	0.5	0.1	-0.3	0.1	0.7	0.3	0.6	1.3	0.5	0.2	0.2	1.3			
11-May	0.5	0.7	-0.5	0.4	0.4	0.6	0.4	0.4	0.5	0.4	-0.1	0.8	0.0	0.6	1.3	1.0	0.8	0.4	0.1	0.0	0.2	0.3	0.1	0.3	0.4	1.3			
12-May	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.0	0.6	0.0	-0.2	0.5	0.2	0.5	0.2	0.5	0.4	0.4	0.1	0.5	-0.2	0.2	0.2	0.6	0.2	0.6			
13-May	0.4	0.6	0.6	0.6	0.4	0.0	0.1	0.3	0.2	1.1	0.0	0.3	0.5	0.2	1.4	1.3	1.1	-0.2	0.3	0.2	0.1	0.8	1.0	0.3	0.5	1.4			
14-May	0.8	0.5	1.0	0.7	0.8	0.7	0.4	-0.2	-0.1	0.6	0.0	0.5	0.5	0.5	1.3	0.5	0.5	0.9	1.5	0.4	1.5	1.4	-0.2	0.4	0.6	1.5			
15-May	0.2	-0.5	-0.1	-0.4	0.0	0.0	0.0	1.4	1.6	0.6	0.3	1.5	0.8	0.6	0.2	0.9	0.3	0.5	0.3	0.4	0.3	0.5	0.3	0.4	0.4	1.6			
16-May	0.6	0.0	0.4	0.2	0.5	-0.1	0.4	-0.3	1.0	-0.6	-0.1	0.9	-0.3	0.4	0.0	0.5	-0.2	0.3	0.3	0.2	0.4	-0.1	-0.4	-0.7	0.1	1.0			
17-May	-0.2	-0.5	-0.3	-0.7	-0.4	-0.2	-0.7	-1.1	0.4	0.2	0.8	1.0	1.1	0.0	1.5	-0.5	0.2	-0.2	-1.0	-0.1	1.1	0.4	-1.4	-1.4	-0.1	1.5			
18-May	-1.6	-0.4	0.5	-0.4	-0.4	0.4	0.2	-1.0	0.3	-0.7	1.4	0.2	0.7	0.5	0.2	0.9	0.1	-0.9	-0.1	-0.8	-1.2	-1.3	-1.4	-0.1	-0.2	1.4			
19-May	0.4	0.5	0.7	0.6	0.9	0.8	0.6	1.2	1.0	0.4	0.5	0.1	-0.1	0.1	0.2	0.2	1.1	1.6	1.0	0.7	0.3	0.3	0.4	0.1	0.6	1.6			
20-May	0.1	-0.3	0.1	-0.4	-0.1	0.1	0.0	0.6	0.8	-0.3	0.0	0.5	0.2	0.6	-0.4	-0.4	0.2	0.1	-0.1	0.1	0.3	0.4	0.1	0.3	0.1	0.8			
21-May	0.3	-0.2	0.5	0.6	0.8	0.1	-0.9	0.2	0.1	0.2	0.5	-0.1	0.4	0.8	0.2	0.5	0.7	0.0	1.0	0.5	0.4	0.6	0.7	0.6	0.4	1.0			
22-May	0.7	0.6	0.6	0.7	0.5	0.7	0.7	0.3	0.8	0.0	0.7	0.0	-0.2	-0.5	0.4	0.5	-0.4	0.1	0.7	0.5	0.6	0.6	0.4	0.5	0.4	0.8			
23-May	0.4	0.8	0.7	0.5	0.9	0.9	0.7	0.2	0.3	1.2	0.3	0.5	1.0	0.5	1.3	1.1	0.7	0.2	-0.3	0.7	0.2	0.1	0.3	0.3	0.6	1.3			
24-May	0.4	0.5	0.5	0.7	-0.1	0.6	0.5	0.4	0.5	0.0	-1.1	0.4	0.1	1.6	1.1	0.2	0.6	0.1	0.5	0.8	0.7	0.8	0.8	0.8	0.5	1.6			
25-May	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.7	0.3	1.6	1.0	1.1	1.5	1.0	0.6	0.3	0.4	0.7	0.5	0.7	0.5	0.7	0.8	0.8	0.8	1.6			
26-May	0.8	0.7	1.0	0.8	0.7	0.6	-0.2	-0.5	0.3	0.4	0.6	1.4	0.3	1.7	1.2	1.2	0.6	0.3	0.3	0.5	0.4	0.0	0.5	0.0	0.6	1.7			
27-May	0.0	0.0	0.4	0.1	0.0	0.0	0.1	-0.2	-0.1	0.1	0.2	0.7	0.6	-0.5	-0.1	0.6	-0.2	0.2	0.1	0.3	0.3	0.2	-0.1	-0.1	0.1	0.7			
28-May	-0.3	0.0	0.2	0.1	0.0	-0.1	-0.2	0.2	0.4	0.0	0.2	0.2	-0.4	0.1	0.6	-0.3	0.0	0.1	0.4	0.5	0.5	0.4	0.6	0.5	0.2	0.6			
29-May	0.8	0.6	0.5	0.5	0.6	0.9	0.9	0.7	1.0	0.7	1.7	0.4	1.0	1.1	1.2	0.7	1.4	1.0	1.2	0.9	0.9	1.0	0.7	0.8	0.9	1.7			
30-May	0.5	0.4	0.2	0.7	0.3	0.3	0.8	0.3	0.6	0.7	-0.3	0.8	-0.2	0.1	0.4	0.2	0.4	0.0	-0.2	-0.1	-0.1	0.3	0.0	0.0	0.2	0.8			
31-May	0.4	0.0	0.1	0.5	0.5	0.2	0.1	0.1	-0.1	0.0	-0.2	-0.7	0.4	-0.7	0.2	0.7	0.7	0.2	UO	0.3	0.0	UO	UO	0.2	0.1	0.7			
0.3 0.3 0.4 0.4 0.3 0.3 0.3 0.2 0.5 0.4 0.3 0.5 0.3 0.4 0.5 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.3																								Diurnal Average					
0.9 1.0 1.2 0.9 1.2 1.0 1.1 1.4 1.6 1.6 1.7 1.5 1.5 1.7 1.5 1.3 1.4 1.6 1.5 0.9 1.5 1.4 1.5 1.5																								Diurnal Maximum					
UO - Unstable Operation																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Vertical Wind Speed 90m (VW90) - km/h

Mannix - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.5 km/h on May 29 16:00																				Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6					
Minimum Value: 0.2 km/h on May 28 00:00																									
Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 1.2 Median = 2.3 Q ₃ = 3.0 P ₉₀ = 3.6 P ₉₉ = 4.2																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1.7	1.4	1.0	1.0	0.7	1.0	1.1	1.2	1.6	2.0	2.2	2.6	3.2	3.2	3.0	2.5	2.7	2.2	2.5	2.5	2.3	2.6	2.0	1.7	3.2
2-May	0.8	0.9	1.2	0.9	0.5	0.5	0.9	1.0	1.7	1.2	2.4	2.8	2.9	3.3	3.6	3.3	2.8	2.1	1.5	0.7	1.3	1.7	2.2	2.6	3.6
3-May	1.6	1.0	0.8	1.1	1.1	1.5	1.1	1.6	1.9	2.4	3.0	3.5	3.5	3.2	3.5	3.2	2.7	2.4	2.4	2.5	2.4	2.0	2.2	2.2	3.5
4-May	1.2	0.8	1.4	1.4	2.2	2.3	2.4	2.2	1.9	1.9	1.6	2.5	2.6	3.2	3.0	3.5	3.0	3.3	2.6	2.0	1.9	1.7	1.6	1.6	3.5
5-May	2.4	2.5	2.5	1.8	1.4	1.9	2.3	2.5	3.1	3.3	3.3	3.7	3.5	3.1	3.4	3.1	2.5	2.4	1.9	1.0	0.6	1.8	2.7	3.1	3.7
6-May	2.3	2.0	1.7	1.1	1.4	1.4	1.6	1.5	1.6	2.0	3.6	3.6	3.9	4.2	3.9	3.7	3.7	3.2	2.8	2.2	2.0	2.4	1.7	1.8	4.2
7-May	1.4	1.9	2.3	2.6	2.0	1.6	1.6	2.7	3.2	3.2	3.0	3.4	2.7	2.6	2.0	2.4	2.9	3.1	2.5	1.3	0.8	0.8	0.6	0.3	3.4
8-May	1.2	0.4	0.4	0.5	0.3	1.9	1.1	1.6	3.0	2.7	2.0	2.6	3.5	3.0	3.5	3.5	2.8	2.4	2.5	1.7	1.4	1.3	1.1	0.5	3.5
9-May	0.3	0.3	0.4	0.9	0.8	0.9	0.6	1.0	1.9	3.0	3.4	3.6	3.6	3.6	3.8	3.5	2.7	3.2	1.7	0.7	0.9	0.5	0.4	0.8	3.8
10-May	0.4	0.8	0.9	1.2	1.0	0.6	0.7	1.2	2.2	2.2	3.4	2.5	3.0	2.8	2.7	2.3	2.2	2.8	1.1	1.1	1.2	2.1	3.1	2.4	3.4
11-May	2.1	1.2	2.1	1.9	0.9	0.7	1.4	1.7	1.4	2.1	2.7	3.1	2.3	2.1	2.6	2.5	2.6	2.3	1.4	0.6	0.4	0.7	0.7	0.6	3.1
12-May	0.4	0.2	0.3	0.4	0.4	1.0	2.1	2.0	2.6	2.8	3.0	3.7	3.8	3.9	3.7	3.4	3.2	2.9	2.8	2.4	2.3	2.7	2.3	2.6	3.9
13-May	1.9	1.4	1.4	1.5	0.9	0.9	1.7	2.6	2.5	3.2	3.3	3.3	3.6	3.3	3.6	3.1	3.1	2.3	2.0	1.5	1.1	1.1	1.5	1.7	3.6
14-May	1.8	2.0	1.7	1.2	1.0	1.1	1.7	2.2	2.4	2.6	3.1	3.7	3.2	3.8	4.3	4.0	3.2	3.9	3.6	3.5	3.2	3.4	2.7	2.9	4.3
15-May	2.6	2.5	2.5	2.5	2.9	3.2	3.1	3.3	3.8	3.3	4.1	4.2	3.9	4.0	3.4	3.7	3.1	2.9	2.3	1.7	1.2	1.3	1.4	1.5	4.2
16-May	1.1	0.8	0.7	0.7	0.5	0.6	1.4	1.9	2.5	2.5	2.8	3.0	3.2	3.9	3.1	3.2	2.6	2.5	2.1	1.2	1.0	2.1	2.7	2.4	3.9
17-May	2.5	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.8	3.4	3.5	3.8	4.3	3.4	3.9	3.5	3.5	2.8	2.5	3.4	4.0	3.8	2.7	2.3	4.3
18-May	2.3	2.3	1.7	1.6	1.6	1.8	1.9	1.8	2.8	2.8	3.5	3.9	2.9	2.4	2.6	2.4	2.7	2.4	2.1	2.6	2.8	2.8	2.8	2.3	3.9
19-May	1.1	0.8	1.0	0.6	0.7	1.1	1.4	3.0	3.1	3.6	3.7	3.5	3.5	3.0	3.8	3.2	3.0	4.1	4.1	3.1	2.5	2.9	2.7	2.5	4.1
20-May	2.2	2.0	2.1	1.8	1.7	2.1	2.3	2.6	2.7	2.4	2.9	3.3	3.0	2.9	2.8	2.8	2.8	2.4	2.1	2.3	2.0	1.0	1.3	1.2	3.3
21-May	1.0	1.3	1.4	1.1	0.9	1.4	1.5	1.8	1.9	2.7	2.9	2.8	3.0	2.9	1.8	2.1	2.4	2.3	2.0	1.9	1.7	2.0	1.6	0.9	3.0
22-May	1.2	1.3	1.2	1.4	1.7	1.8	1.9	2.0	2.8	2.9	2.8	2.3	1.8	1.7	2.1	3.2	2.8	2.8	2.4	1.7	1.4	0.8	0.6	0.4	3.2
23-May	0.3	0.5	0.7	0.8	0.4	0.7	1.2	1.7	3.1	3.1	3.5	3.8	3.6	3.1	3.4	2.3	3.3	2.8	2.8	2.0	1.3	0.5	0.5	0.8	3.8
24-May	0.7	0.6	1.0	1.2	1.3	1.3	1.4	1.7	2.0	1.9	2.6	3.7	3.6	3.5	3.2	2.2	2.5	2.9	2.6	1.8	0.9	0.8	1.1	1.2	3.7
25-May	1.1	1.2	1.0	1.1	0.9	1.0	1.6	2.6	3.1	3.8	3.7	4.0	4.0	4.0	3.7	3.8	3.3	3.2	2.7	1.9	1.3	1.0	1.2	1.1	4.0
26-May	1.1	1.1	1.0	0.8	1.1	1.1	1.0	1.7	2.3	3.1	3.4	4.3	3.9	4.3	4.1	3.9	4.0	2.9	2.0	3.3	2.1	1.6	1.4	0.8	4.3
27-May	0.6	0.7	1.2	1.1	0.5	0.4	1.0	1.5	2.0	2.5	3.1	3.4	3.5	3.4	3.1	3.9	3.3	3.1	2.7	1.7	0.8	0.4	0.2	0.2	3.9
28-May	0.3	0.2	0.5	0.6	0.6	0.5	0.7	0.7	1.4	1.5	2.5	3.7	3.5	3.7	3.6	2.6	1.9	0.7	0.4	0.2	0.3	0.5	0.6	1.0	3.7
29-May	0.6	0.5	0.7	0.6	0.7	0.4	0.7	1.3	2.4	3.1	4.0	3.7	4.1	4.2	4.2	4.5	4.1	4.1	3.2	2.3	1.7	4.0	3.6	2.0	4.5
30-May	3.2	2.5	2.9	2.4	1.4	1.7	2.5	2.9	2.3	2.6	2.7	3.0	2.8	2.9	3.6	2.8	2.3	1.7	1.1	0.4	0.3	0.5	0.4	0.8	3.6
31-May	0.8	0.8	0.8	0.9	1.1	0.9	0.6	0.7	0.9	1.4	2.3	1.8	1.4	1.9	2.3	2.3	2.9	2.7	UO	3.2	2.5	UO	UO	2.6	3.2
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS06
PATRICIA MCINNES
MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)

MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	36	38	99.73	-	-	8.5	0	1.4	0
TRS (ppb) Average	705	37	39	99.73	2.5	0	2.2	0	0.5	0
THC (ppm) Average	509	34	235	72.98	-	-	3.2	-	2.2	-
NMHC(ppm) Average	509	31	235	72.58	-	-	0.501	-	0.064	-
CH4(ppm) Average	509	31	235	72.58	-	-	2.7	-	2.2	-
O3 (ppb) Average	707	35	37	99.73	-	-	79.5	3	50.9	-
NO2 (ppb) Average	706	37	38	99.87	-	-	27.8	0	5.9	-
NO (ppb) Average	706	37	38	99.87	-	-	12.3	-	1.5	-
NOX (ppb) Average	706	37	38	99.87	-	-	31.5	-	6.7	-
NH3 (ppb) Average	635	44	109	91.26	-	-	209.4	0	42.2	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	672.5	0	225.6	3
Temperature 2 m (C) Average	744	0	0	100	-	-	33.1	-	24.7	-
Relative Humidity (%) Average	744	0	0	100	-	-	98.6	-	81.5	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	30	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.39	0.9	-	0	0	0	0.1	0.3	0.8	8.5
TRS (ppb) Average	705	0.18	0.2	-	0	0.1	0.1	0.1	0.2	0.3	2.2
THC (ppm) Average	509	2.05	0.1	-	1.8	1.9	2	2	2.1	2.1	3.2
NMHC(ppm) Average	509	0.005	0.032	-	0	0	0	0	0	0	0.501
CH4(ppm) Average	509	2.04	0.1	-	1.8	1.9	2	2	2.1	2.1	2.7
O3 (ppb) Average	707	38.3	10.6	-	8	24.5	30.8	38.7	45.7	52.2	79.5
NO2 (ppb) Average	706	2.47	3.2	-	0	0.2	0.8	1.5	2.7	5.8	27.8
NO (ppb) Average	706	0.46	0.9	-	0	0	0.1	0.3	0.5	1	12.3
NOX (ppb) Average	706	2.93	3.8	-	0	0.3	1	1.9	3.3	6.5	31.5
NH3 (ppb) Average	635	2.45	13	-	0	0	0	0	0	0	209.4
PM2.5 (ug/m3) Average	742	18.69	54.1	-	0.9	2.5	3.7	5.3	8.6	18.6	672.5
Temperature 2 m (C) Average	744	14.13	6.7	-	-1	5.8	9.5	13.7	18.1	23.5	33.1
Relative Humidity (%) Average	744	50.76	21.6	-	15.7	24.7	31.4	48.5	66.4	83.3	98.6
Wind Speed 10 m (km/h) Average	744	12.6	6	-	0	5	8	12	17	21	30
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA MCINNES (AMS06)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	22 May 2025 13:00	22 May 2025 13:00	1-2	Maintenance - sample manifold cleaned
ALL GASEOUS ANALYZERS	22 May 2025 16:00	22 May 2025 16:00	1	DAS Failure - data not recorded
NH3	01 May 2025 06:00	31 May 2025 06:00	57	Stabilization after daily QA check
NH3	19 May 2025 09:00	19 May 2025 14:00	6	Maintenance - reinitiated daily QA check
THC/NMHC/CH4	12 May 2025 02:00	13 May 2025 10:00	33	Unstable Operation - excessive baseline drift
THC/NMHC/CH4	13 May 2025 11:00	14 May 2025 11:00	25	Maintenance - analyzer replaced
THC/NMHC/CH4	14 May 2025 15:00	15 May 2025 09:00	19	Unstable Operation - excessive baseline drift
THC/NMHC/CH4	15 May 2025 10:00	15 May 2025 13:00	4	Maintenance - analyzer recalibrated
THC/NMHC/CH4	15 May 2025 14:00	16 May 2025 09:00	20	Unstable Operation - excessive baseline drift
THC/NMHC/CH4	16 May 2025 10:00	16 May 2025 12:00	3	Maintenance - analyzer recalibrated
THC/NMHC/CH4	16 May 2025 13:00	20 May 2025 09:00	93	Unstable Operation - excessive baseline drift
THC/NMHC/CH4	20 May 2025 10:00	20 May 2025 11:00	2	Maintenance - analyzer replaced



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

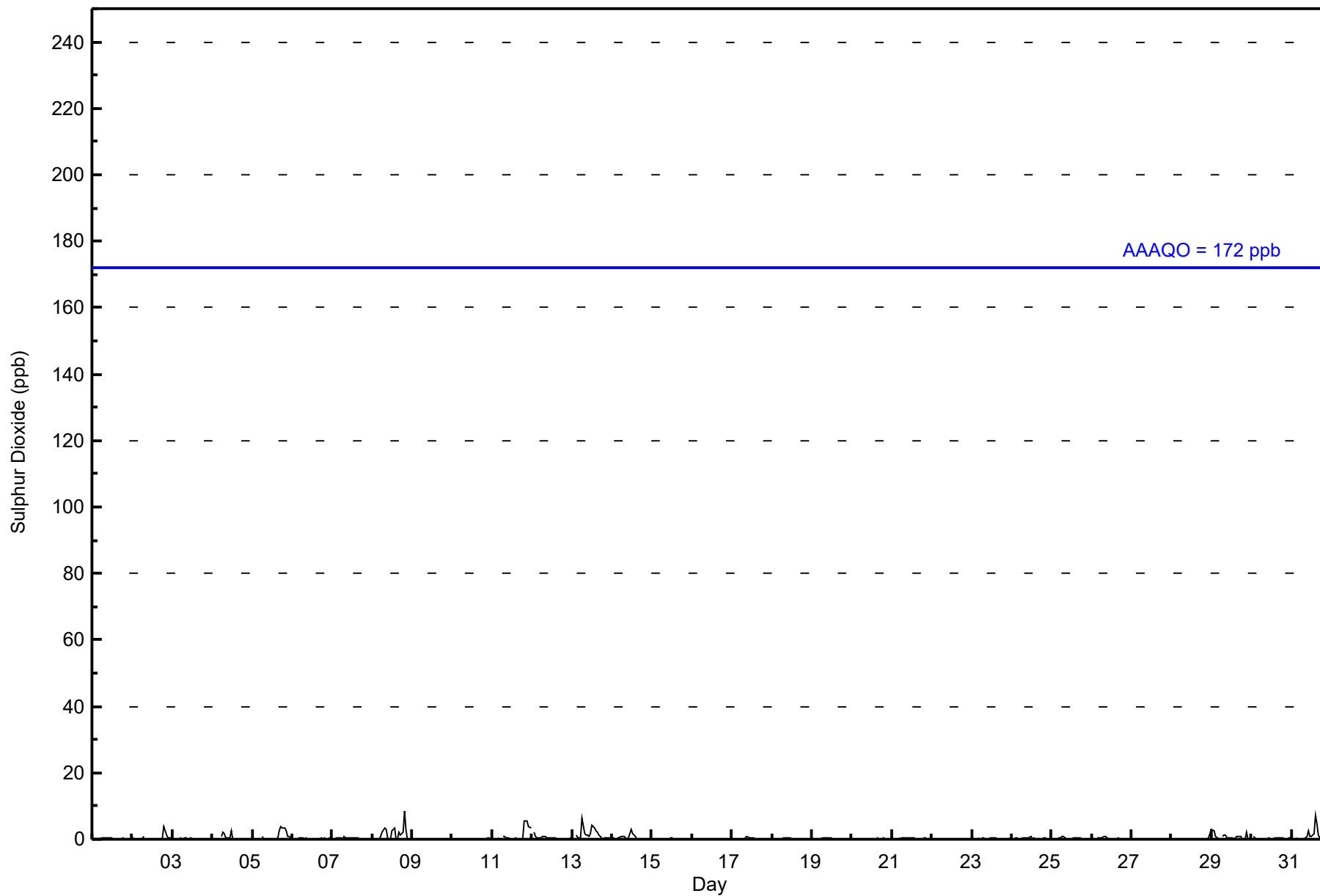
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): Maximum Value: 8.5 ppb on May 8 20:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 1.4 ppb on May 8						Hours in Service: 744 Hours of Data: 706	
Minimum Value: 0.0 ppb on May 2 14:00 Maximum Diurnal Average: 0.8 ppb at hour 20 Monthly Average: 0.39 ppb																			Minimum Daily Average: 0.0 ppb on May 16 Minimum Diurnal Average: 0.2 ppb at hour 4 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.8 P ₉₉ = 4.3						Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.3	Z	0.1	0.1	0.1	0.3	0.5	0.6	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.5	0.2	0.6
2-May	0.4	0.2	Z	0.2	0.1	0.2	0.5	1.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.6	3.8	1.2	0.4	0.3	0.4	0.5	3.8
3-May	0.1	0.0	0.1	Z	0.2	0.2	0.2	0.3	0.4	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4
4-May	0.1	0.0	0.0	0.0	Z	0.6	2.0	1.7	0.3	0.4	0.6	2.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.7
5-May	0.0	0.0	0.0	0.0	0.0	Z	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.3	3.8	3.6	3.4	2.5	0.7	0.9	0.3	0.8	3.8
6-May	Z	0.0	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.4
7-May	0.1	Z	0.4	0.6	0.6	0.5	0.2	0.9	0.5	0.3	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.3	0.9
8-May	0.1	0.1	Z	0.1	0.0	0.9	1.9	3.3	3.1	0.4	0.0	0.0	2.6	3.4	0.0	0.0	2.0	1.4	2.2	8.5	2.9	0.1	0.0	0.0	1.4	8.5
9-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
10-May	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.2	0.2	0.1	0.4
11-May	0.1	0.2	0.2	0.2	0.3	Z	0.7	0.9	0.5	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	5.5	5.7	5.6	4.0	3.6	1.3	5.7
12-May	Z	2.2	0.9	0.4	0.3	0.3	0.8	1.0	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.4	2.2
13-May	0.2	Z	1.2	0.6	0.5	0.5	6.2	1.9	1.4	1.3	1.0	1.8	4.3	3.6	2.7	2.0	1.2	0.7	0.2	0.2	0.3	0.2	0.3	0.4	1.4	6.2
14-May	0.5	0.4	Z	0.4	0.5	1.0	0.9	0.7	0.4	0.1	0.2	2.8	1.5	1.1	0.6	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.5	2.8
15-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
16-May	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
17-May	0.1	0.0	0.1	0.0	0.0	Z	0.2	0.2	0.3	0.6	0.6	0.5	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
18-May	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.6	0.6	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
19-May	0.0	Z	0.0	0.0	0.1	0.0	0.2	0.3	0.2	0.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.6
20-May	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2
21-May	0.1	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.4
22-May	0.1	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	M	0.1	0.2	DF	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2
23-May	0.1	0.1	0.1	0.1	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.4	0.2	0.4
24-May	Z	0.1	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.5	0.4	0.7	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.5	0.2	0.1	0.1	0.1	0.2	0.7
25-May	0.0	Z	0.1	0.2	0.3	0.6	0.7	0.7	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.7
26-May	0.3	0.4	Z	0.5	0.6	0.6	0.6	0.7	0.7	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
27-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2
28-May	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	1.7	0.2	1.7
29-May	3.2	2.4	0.9	0.4	0.4	Z	0.8	1.2	1.3	0.5	0.4	0.3	0.2	0.2	0.3	1.0	0.9	0.8	0.1	0.1	0.1	1.9	0.1	0.3	0.8	3.2
30-May	Z	0.8	0.5	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.4	0.2	0.1	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.8
31-May	0.5	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.4	0.7	2.6	0.8	0.7	1.5	7.2	4.8	1.1	0.4	0.1	0.1	0.1	2.5	3.7	2.8	1.3	7.2
0.3 0.3 0.2 0.2 0.2 0.3 0.6 0.6 0.5 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.8 0.5 0.4 0.4 0.4																								Diurnal Average		
3.2 2.4 1.2 0.6 0.6 1.0 6.2 3.3 3.1 1.3 2.6 2.8 4.3 3.6 7.2 4.8 2.3 3.8 3.6 8.5 5.7 5.6 4.0 3.6																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	706	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	57	44	10	10	11	70	151	50	66	27	45	50	35	23	26	31	706
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	44	10	10	11	70	151	50	66	27	45	50	35	23	26	31	706

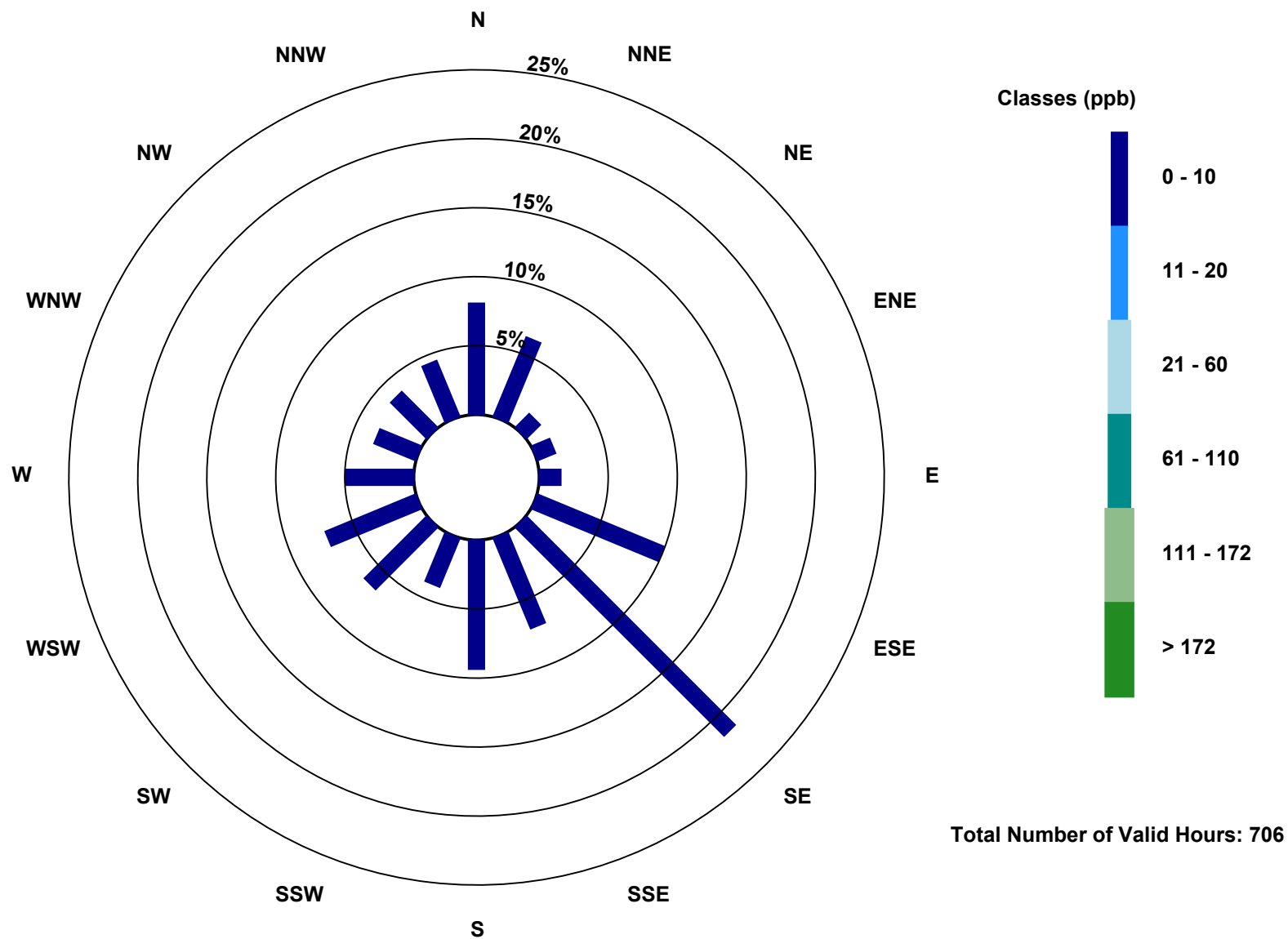
Total Number of Valid Hours: 706

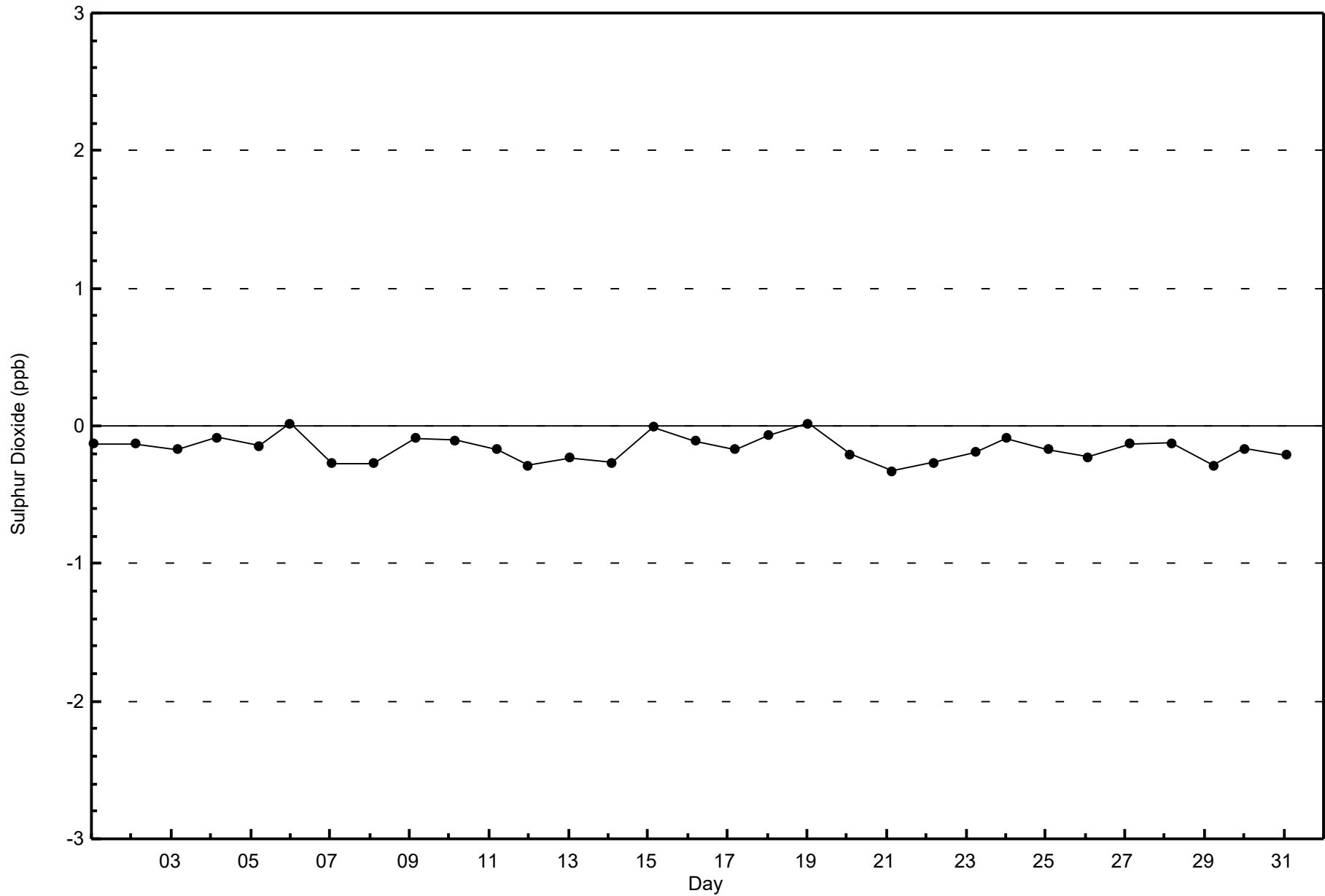
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Patricia McInnes

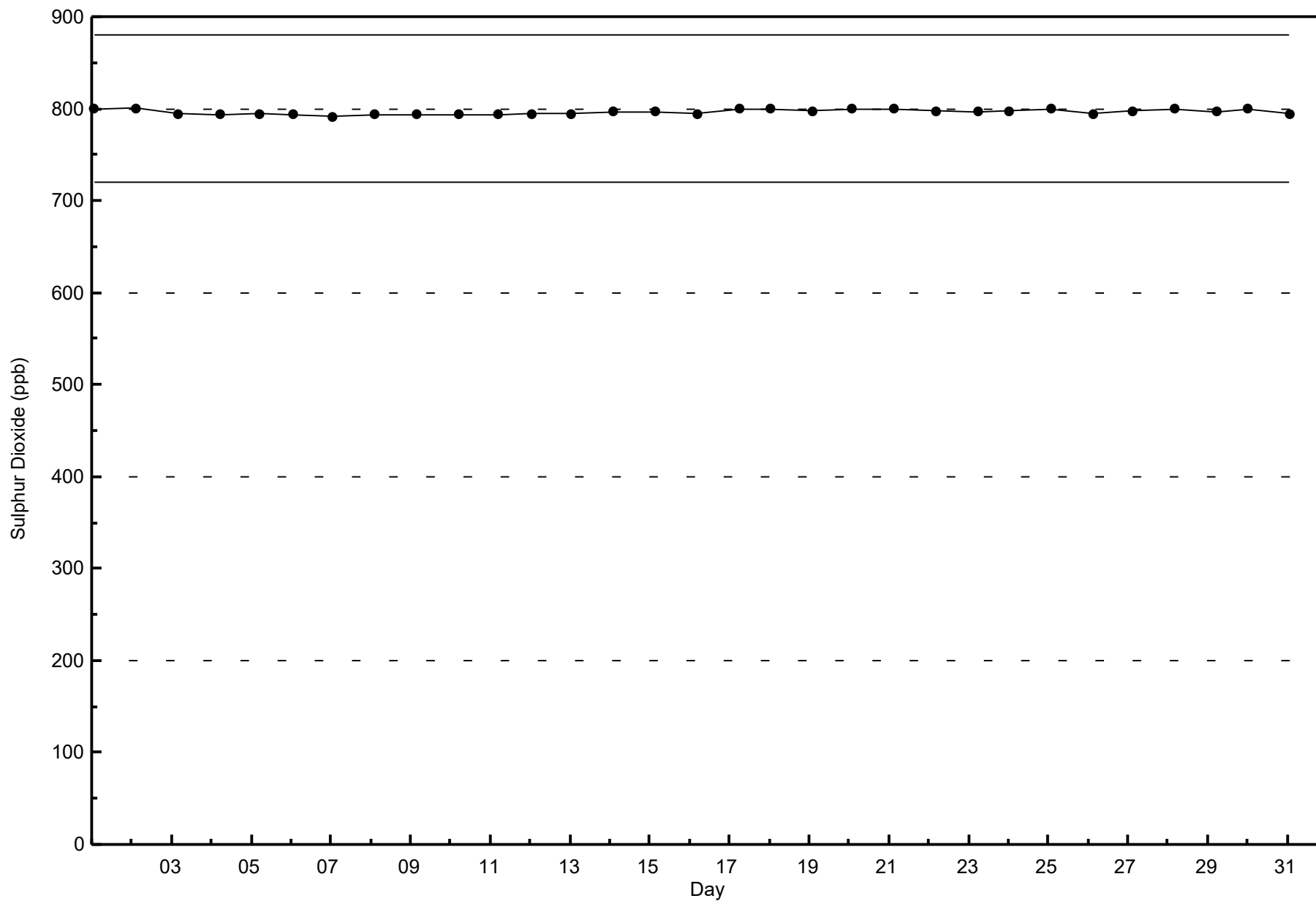






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - May 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1488							
Maximum Value: 2.5 ppb on May 30 02:30 Maximum Daily Average: 0.5 ppb on May 30																			Periods of Valid Data: 1409							
Minimum Value: 0.0 ppb on May 29 19:00 Minimum Daily Average: 0.1 ppb on May 10																			Periods of Invalid Data: 79							
Maximum Diurnal Average: 0.3 ppb at hour 4 Minimum Diurnal Average: 0.1 ppb at hour 15																			Periods of Calibration: 73							
Monthly Average: 0.18 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.1																			Percent Operational Time: 99.6							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1	0.2
2-May	0.2 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.1	0.3
3-May	0.3 0.3	0.4 0.4	0.4 0.4	0.2 0.3	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2	0.4
4-May	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.3
5-May	Z SP	0.2 0.2	0.2 0.3	0.2 0.3	0.3 0.2	0.3 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.1	0.2	0.3
6-May	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
7-May	0.1 0.1	0.1 0.2	Z SP	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
8-May	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.3 0.1	0.1 0.2	0.2 0.2	0.2 0.6	0.2 0.2	0.4 0.2	0.2 0.1	0.1 0.1	0.2 0.3	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.3 0.3	0.3 0.2	0.2	0.6
9-May	0.2 0.3	0.5 0.2	0.2 0.1	0.2 0.2	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.5
10-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.2
11-May	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.3	0.3 0.3	0.5 0.4	0.5 0.4	0.5 0.5	0.2	0.5
12-May	0.6 0.4	Z SP	0.5 0.4	1.1 0.9	0.6 0.6	0.6 0.7	0.5 0.6	0.6 0.5	0.5 0.3	C C	C C	C C	C C	C C	C 0.3	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.3	--	1.1	
13-May	0.2 0.2	0.2 0.2	Z SP	0.3 0.3	0.3 0.6	0.3 0.3	2.1 2.2	1.4 1.1	1.3 0.5	0.3 0.3	0.2 0.2	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.4	2.2
14-May	0.1 0.1	0.2 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.9 0.6	0.7 0.6	0.4 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.9
15-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1	0.2



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.1 0.1	0.6 0.5	0.4 0.4	0.4 0.6	0.6 0.5	Z SP	0.5 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.6	
17-May	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.3	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.3	
18-May	0.1 0.1	Z SP	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
19-May	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
20-May	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
21-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
22-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	Z SP	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 M	M M	0.1 0.1	0.1 0.1	DF DF	0.1 DF	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
23-May	Z SP	0.1 0.1	0.1 0.2	0.5 0.4	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.5	
24-May	0.1 0.2	Z SP	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	
25-May	0.2 0.5	0.4 0.6	Z SP	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.6	
26-May	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.0	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1	0.2	
27-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.0	0.1 0.1	0.0 0.1	0.1 0.1	0.0 0.1	0.0 0.1	0.0 0.1	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.2 0.3	0.1 0.3	0.1	0.3	
28-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.3	0.3 0.2	0.3 0.2	0.2	0.3	
29-May	Z SP	0.2 0.8	1.6 1.1	1.9 1.2	1.7 0.6	0.4 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.0	0.9 0.1	0.1 0.3	0.4 0.4	0.3	
30-May	0.4 1.2	Z SP	2.5 1.6	1.3 0.8	0.5 0.6	0.7 0.8	1.3 1.0	0.6 0.4	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.6 0.5	0.5 0.4	0.3 0.4	0.4 0.3	0.3 0.3	0.5 0.4	0.4 0.4	0.3 0.3	0.5	2.5	
31-May	0.3 0.3	0.3 0.3	Z SP	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.4	0.4 0.4	0.5 0.6	0.5 0.4	0.3 0.3	0.3 0.1	0.2 0.2	0.2 0.2	0.3 0.5	0.5 0.3	0.5 0.6	0.5 0.7	0.8 0.9	0.8 0.7	0.5 0.4	0.5 0.5	0.7 0.7	0.6 0.6	0.4	0.9
0.2 0.2 0.3 0.3 0.3 0.2 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2																								Diurnal Average		
1.2 0.8 2.5 1.9 1.7 0.8 2.2 1.4 1.3 0.5 0.3 0.9 0.7 0.4 0.5 0.6 0.6 0.7 0.9 0.8 0.5 0.9 0.7 0.6																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

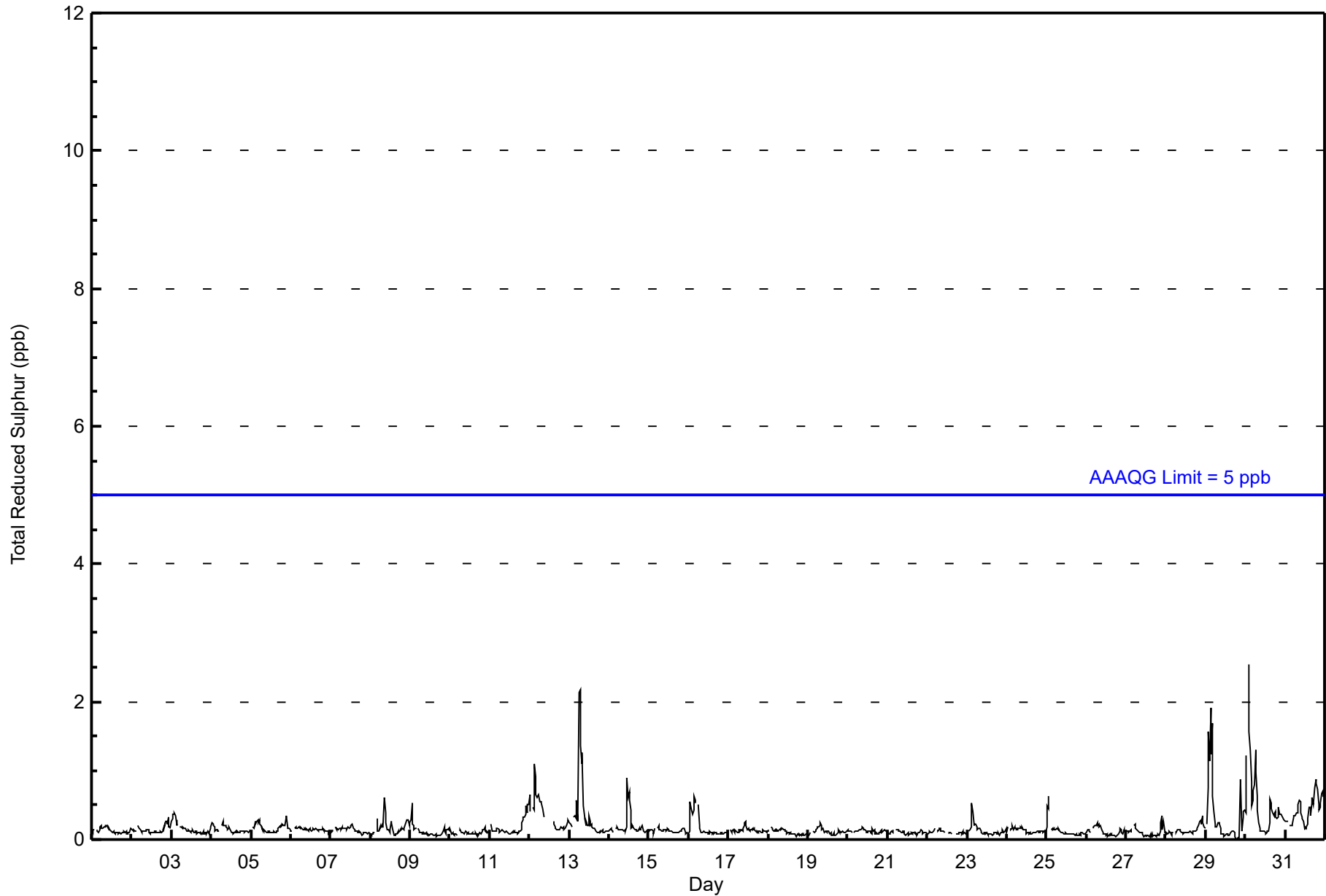
Patricia McInnes - May 2025

Maximum Value: 2.2 ppb on May 13 07:00																	Maximum Daily Average: 0.5 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 29 20:00																	Minimum Daily Average: 0.1 ppb on May 10										Hours of Data: 705	
Maximum Diurnal Average: 0.3 ppb at hour 4																	Minimum Diurnal Average: 0.1 ppb at hour 15										Hours of Missing Data: 39	
Monthly Average: 0.18 ppb																	Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.1										Hours of Calibration: 37	
																											Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
2-May	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.2		
3-May	0.3	0.4	0.4	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4		
4-May	0.2	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
5-May	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3		
6-May	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2		
7-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
8-May	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.4	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.4		
9-May	0.3	0.4	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4		
10-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2		
11-May	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.2	0.5		
12-May	0.5	Z	0.4	1.0	0.6	0.6	0.5	0.5	0.4	C	C	C	C	C	C	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	--	1.0		
13-May	0.2	0.2	Z	0.3	0.4	0.3	2.2	1.2	0.9	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	2.2		
14-May	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.7	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.7		
15-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2		
16-May	0.1	0.5	0.4	0.5	0.5	Z	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5		
17-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
18-May	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
19-May	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
21-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
22-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	M	0.1	0.1	DF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
23-May	Z	0.1	0.2	0.5	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5		
24-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
25-May	0.3	0.5	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5		
26-May	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
27-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.3		
28-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.3		
29-May	Z	0.5	1.3	1.6	1.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0.2	0.4	0.3	1.6		
30-May	0.8	Z	2.1	1.1	0.5	0.7	1.1	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.5	2.1		
31-May	0.3	0.3	Z	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.4	0.4	0.6	0.6	0.8	0.8	0.5	0.5	0.7	0.6	0.4	0.8		
0.2 0.2 0.3 0.3 0.3 0.2 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2																								Diurnal Average				
0.8 0.5 2.1 1.6 1.2 0.7 2.2 1.2 0.9 0.5 0.3 0.7 0.6 0.3 0.4 0.6 0.6 0.6 0.6 0.8 0.8 0.5 0.5 0.7 0.6																								Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure																												
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																												



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	705	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	55	38	10	10	11	73	146	54	63	29	46	51	35	25	27	32	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	55	38	10	10	11	73	146	54	63	29	46	51	35	25	27	32	705

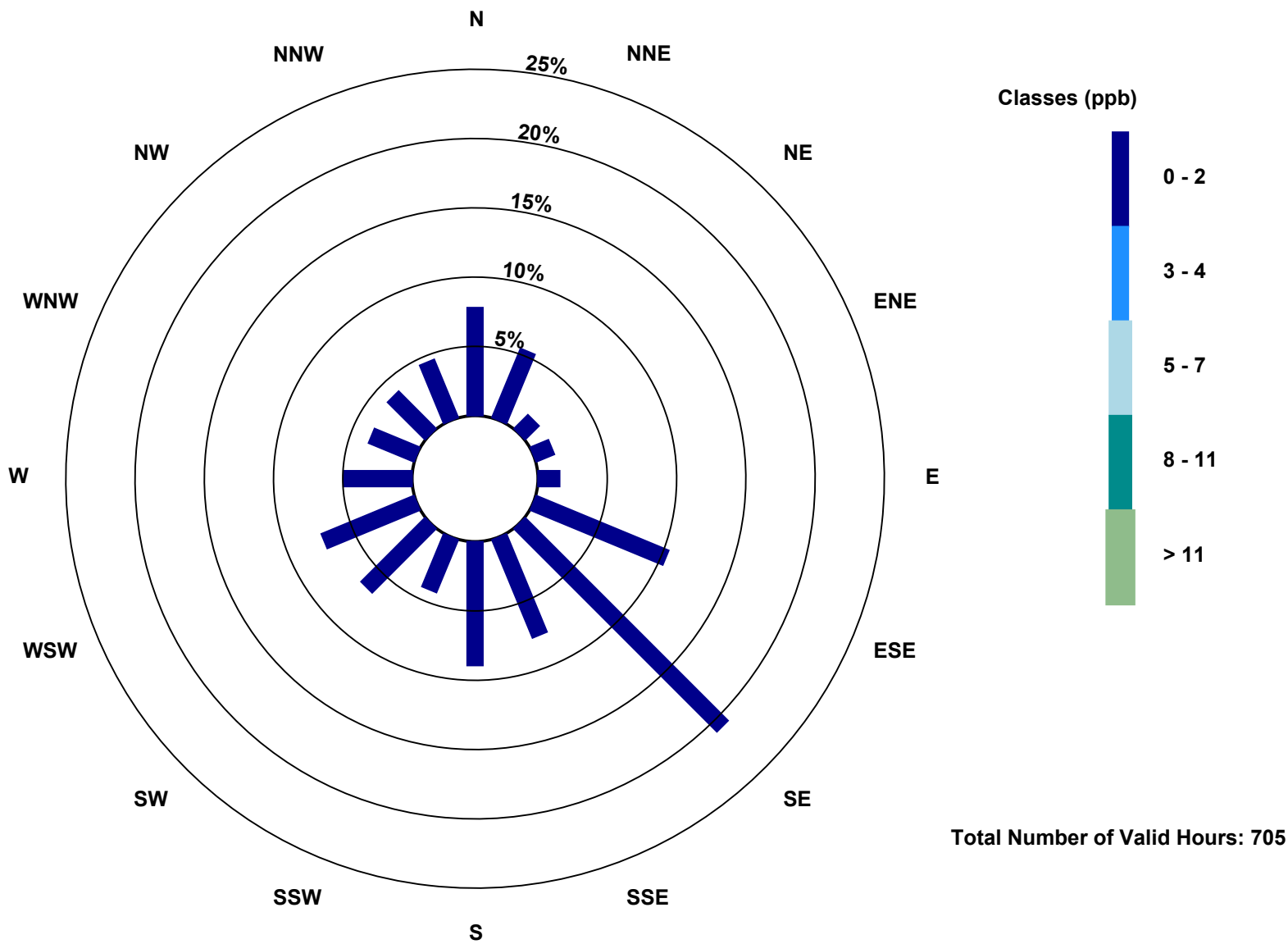
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Patricia McInnes



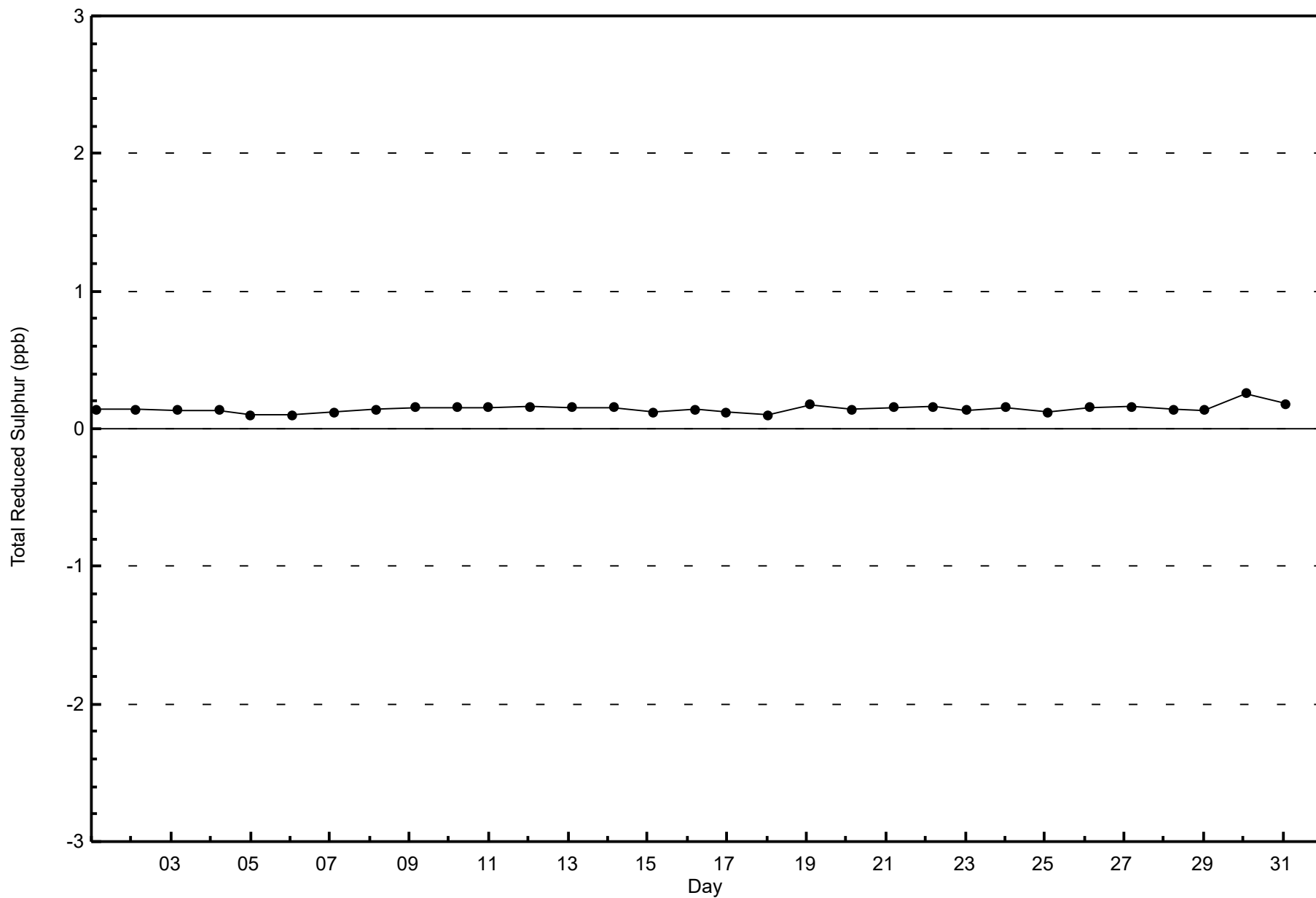


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

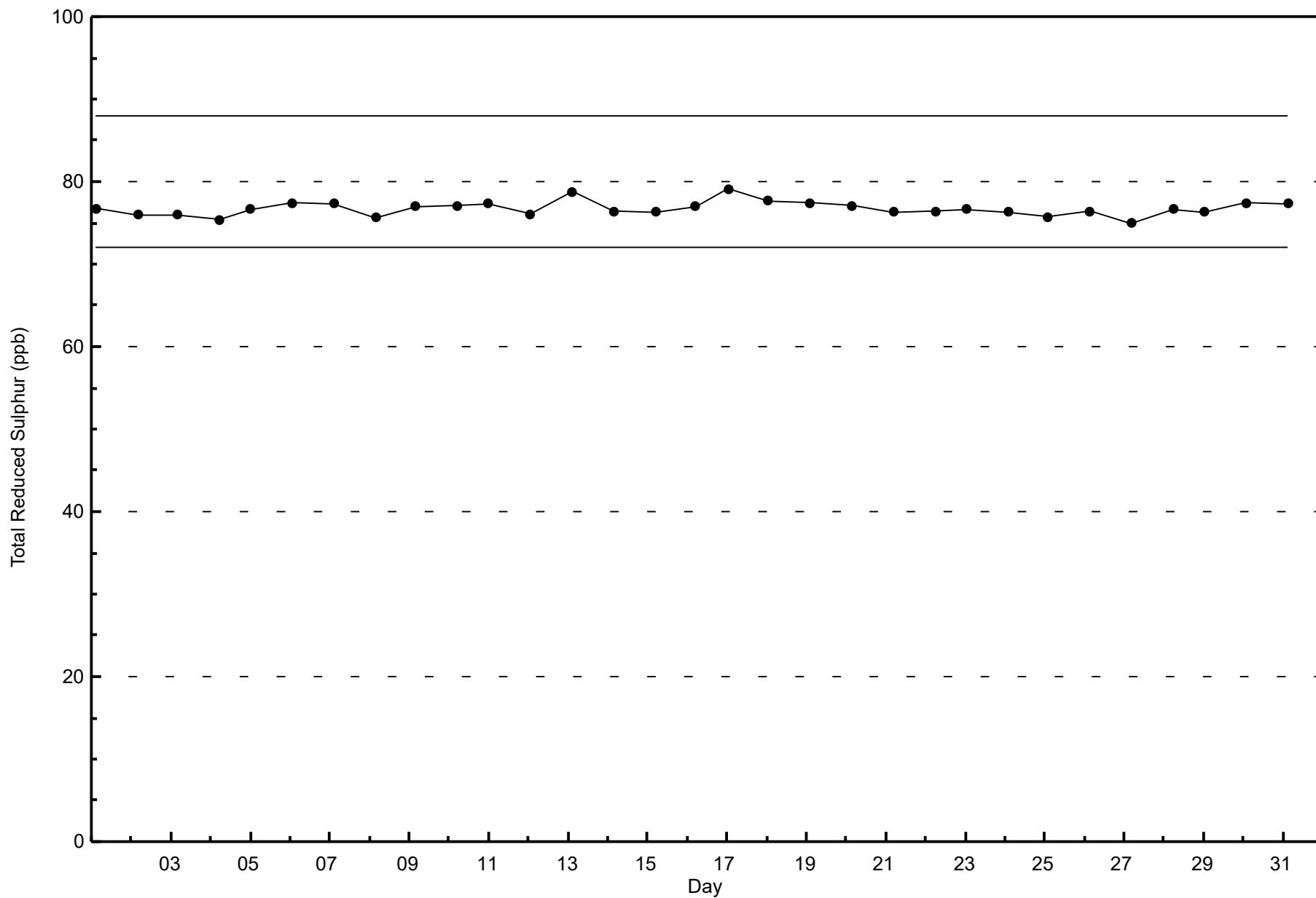
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

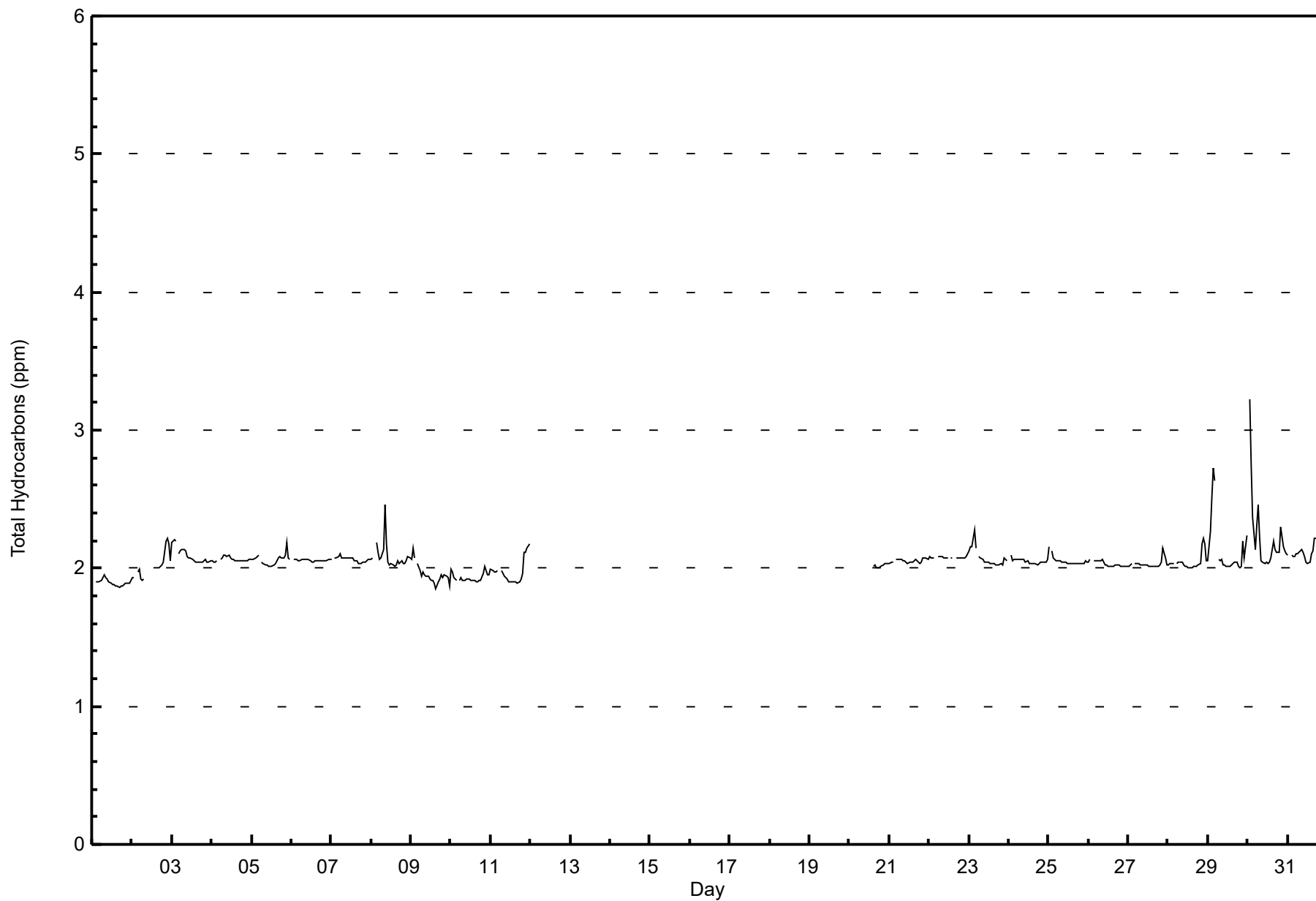
Patricia McInnes - May 2025

Maximum Value: 3.2 ppm on May 30 02:00																			Maximum Daily Average: 2.2 ppm on May 30						Hours in Service: 744	
Minimum Value: 1.8 ppm on May 9 16:00																			Minimum Daily Average: 1.9 ppm on May 1						Hours of Data: 509	
Maximum Diurnal Average: 2.1 ppm at hour 2																			Minimum Diurnal Average: 2.0 ppm at hour 13						Hours of Missing Data: 235	
Monthly Average: 2.05 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.5						Hours of Calibration: 34	
																									Percent Operational Time: 73.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2-May	1.9	1.9	Z	2.0	2.0	1.9	1.9	1.9	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.1	2.0	2.2
3-May	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1
4-May	2.1	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-May	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1
6-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
8-May	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.5	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1
9-May	2.1	2.1	2.1	Z	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0
10-May	2.0	2.0	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0
11-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.2	2.0	2.2
12-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--
14-May	M	M	M	M	M	M	M	M	M	M	M	C	C	C	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--
21-May	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
22-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	DF	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
23-May	2.1	2.2	2.2	2.3	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
24-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
25-May	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
26-May	2.0	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
28-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.0	2.0	2.2
29-May	2.1	2.3	2.5	2.7	2.6	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.2	2.1	2.7
30-May	Z	3.2	2.8	2.4	2.1	2.3	2.5	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.2	3.2
31-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2
2.1																								Diurnal Average		
2.2																								Diurnal Maximum		
Z - zerospan																										
C - Calibration																										
M - Maintenance																										
DF - DAS Failure																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	271	53.24	53.24
2.1 - 3.0	237	46.56	99.80
3.1 - 10.0	1	0.20	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 509

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	7	10	3	4	3	18	35	26	42	9	25	33	20	12	13	11	271
2.1 - 3.0	15	4	2	5	5	21	50	13	24	17	20	16	13	11	10	11	237
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	14	5	9	8	39	85	39	66	26	45	49	34	23	23	22	509

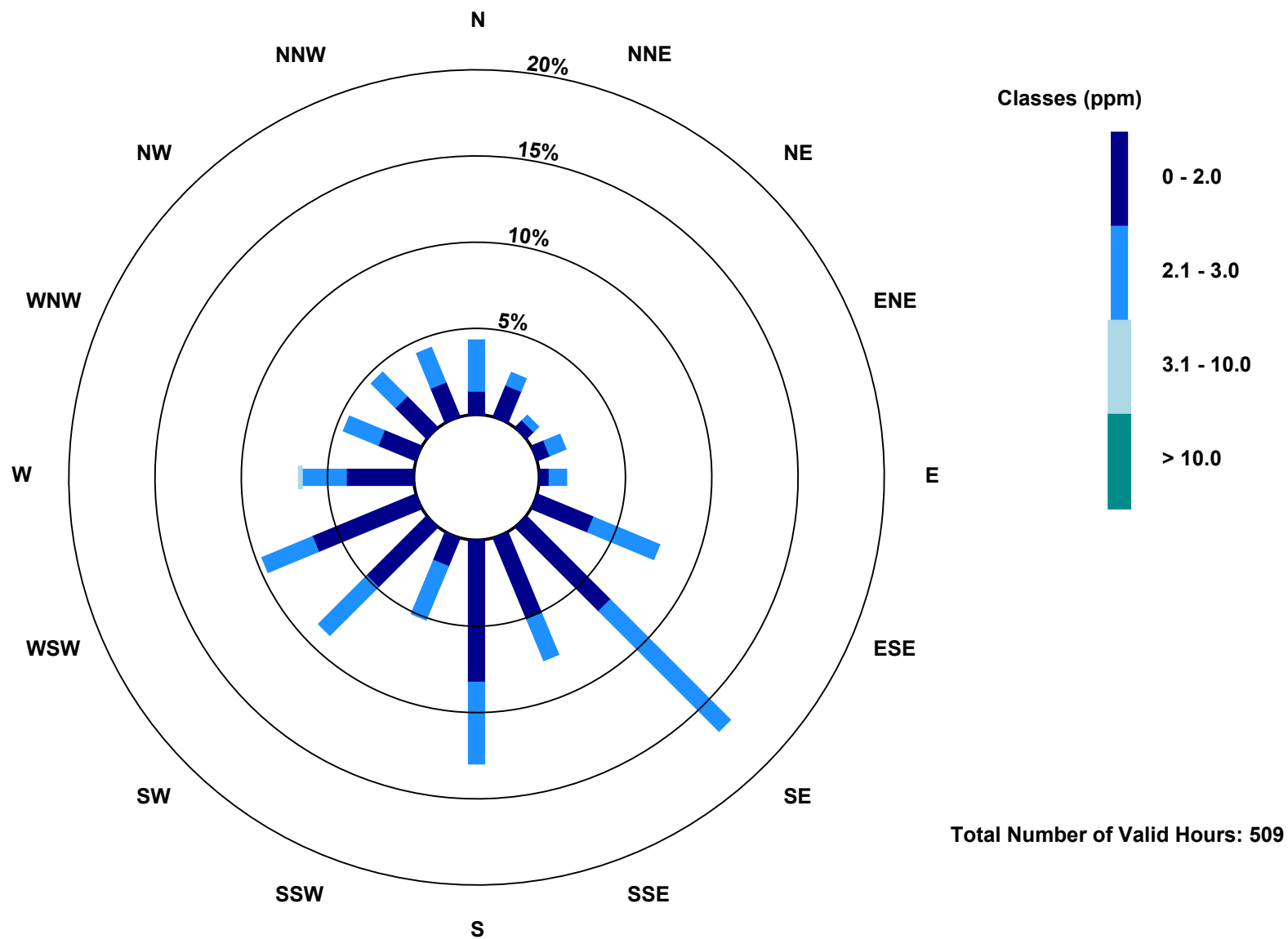
Total Number of Valid Hours: 509

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

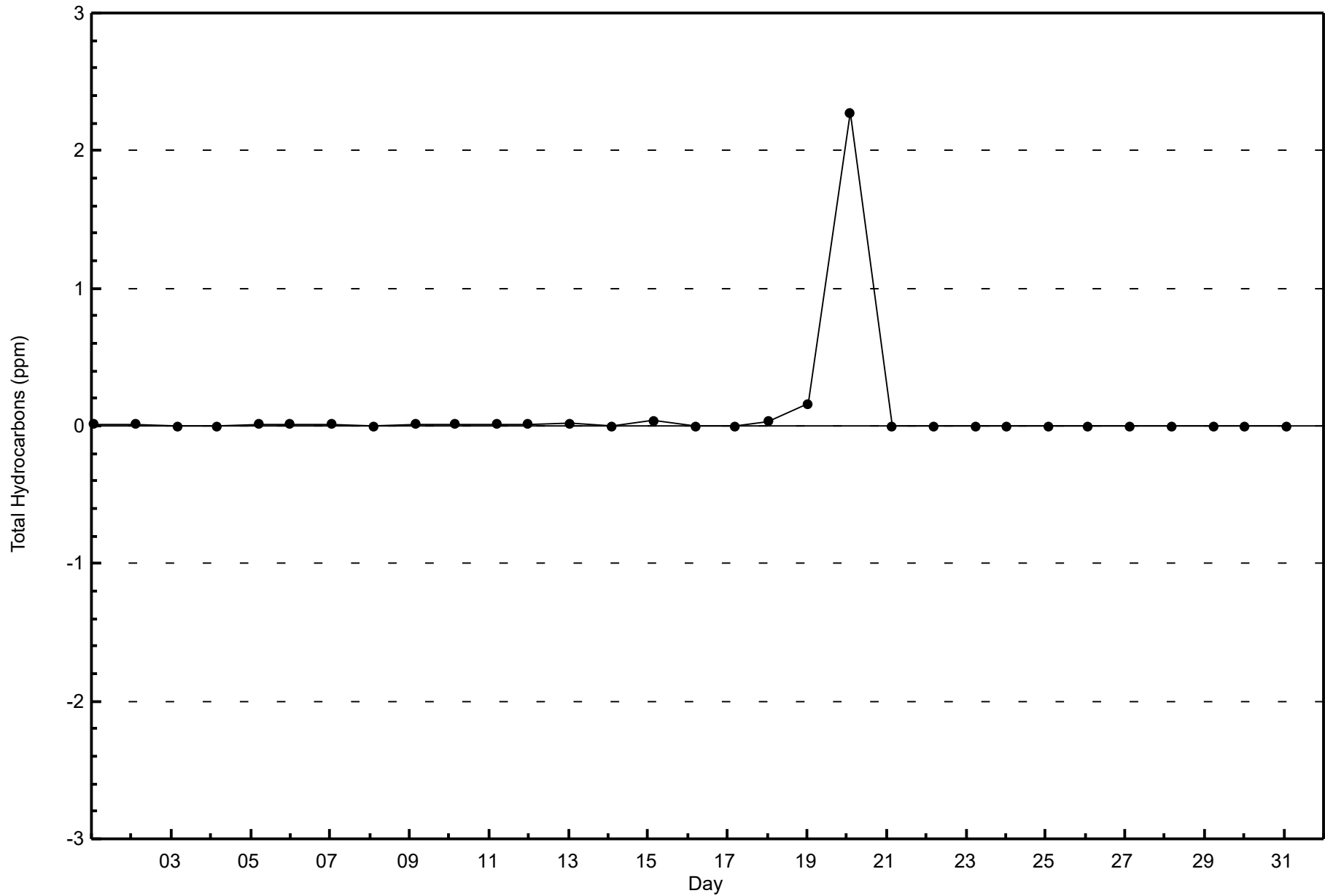
Total Hydrocarbons (THC) - ppm
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

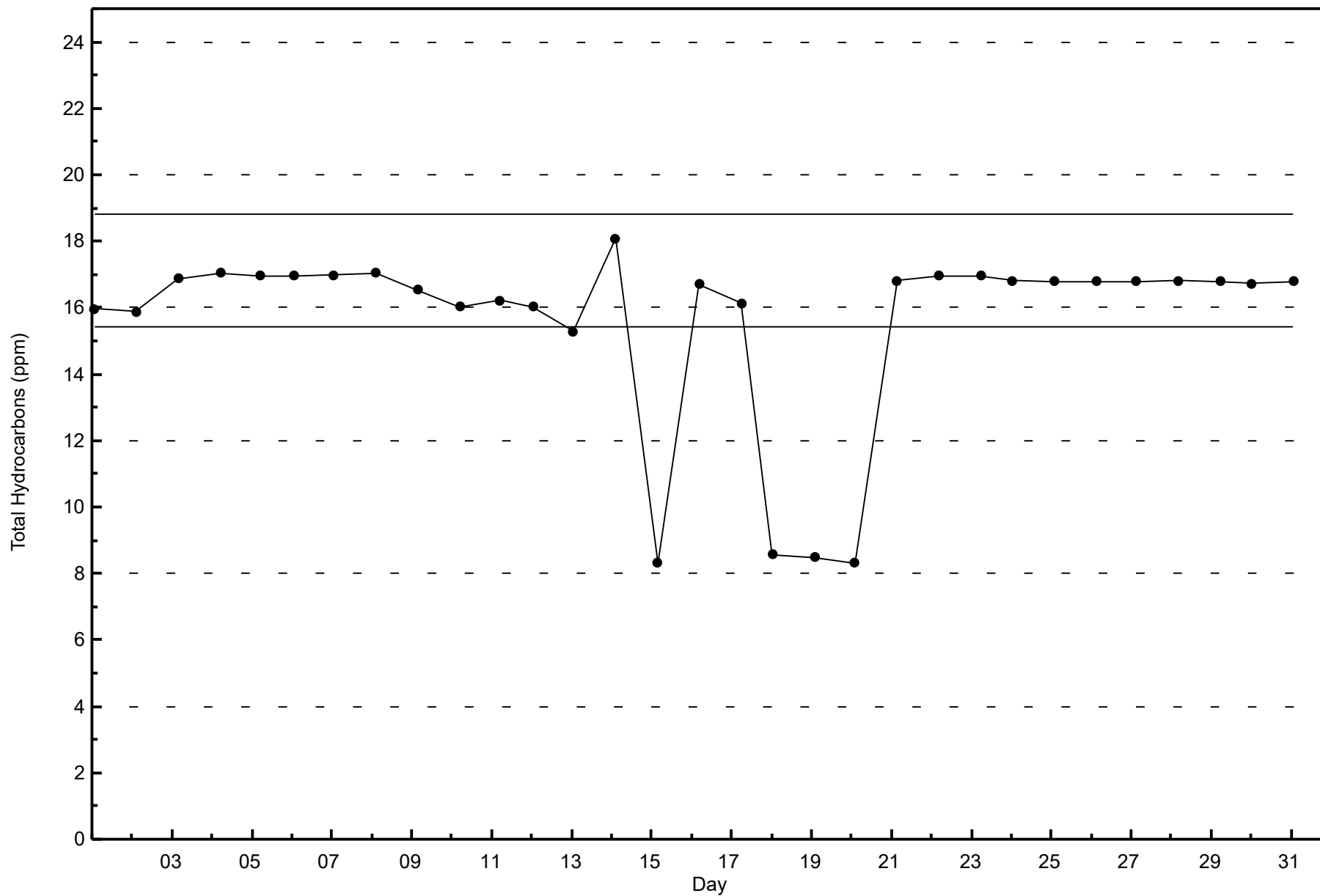
Total Hydrocarbons (THC) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

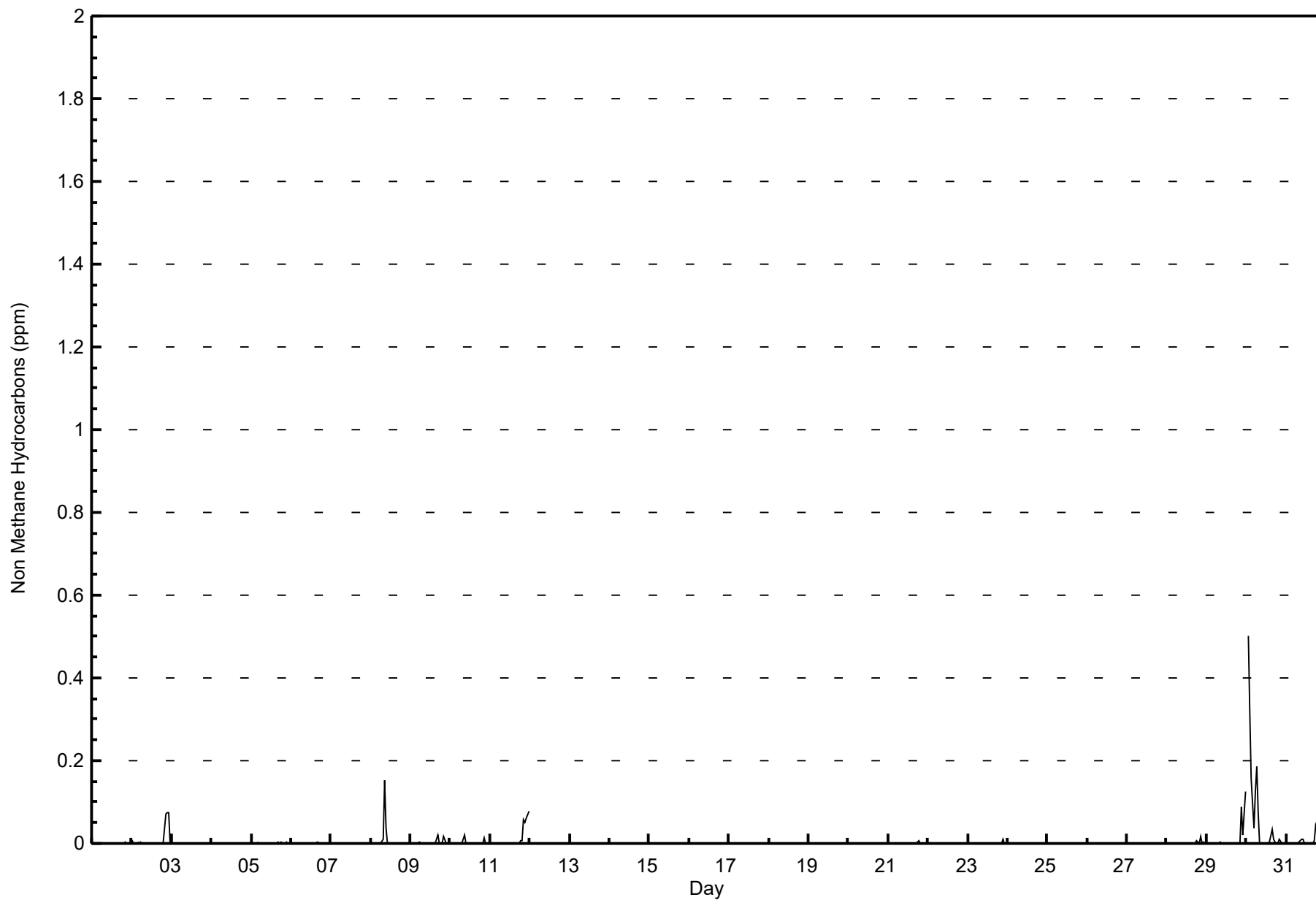
Patricia McInnes - May 2025

Maximum Value: 0.501 ppm on May 30 02:00										Maximum Daily Average: 0.064 ppm on May 30										Hours in Service: 744						
Minimum Value: 0.000 ppm on May 1 01:00										Minimum Daily Average: 0.000 ppm on May 22										Hours of Data: 509						
Maximum Diurnal Average: 0.028 ppm at hour 2										Minimum Diurnal Average: 0.000 ppm at hour 14										Hours of Missing Data: 235						
Monthly Average: 0.005 ppm										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1										Hours of Calibration: 31						
																				Percent Operational Time: 72.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.004	0.000	0.004
2-May	0.008	0.000	Z	0.004	0.000	0.004	0.000	0.000	0.000	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.074	0.076	0.000	0.013	0.076
3-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
5-May	0.000	0.000	0.000	0.000	0.004	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.002	0.000	0.000	0.003	0.000	0.000	
6-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
7-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
8-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.010	0.153	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.009	
9-May	0.000	0.000	0.000	Z	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.016	0.002	0.001	0.000	0.002	
10-May	0.001	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.002	
11-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.008	0.058	0.051	0.062	0.077	0.011	
12-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
14-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
21-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	
22-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	0.000	0.000	DF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
23-May	0.000	0.002	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.001	
24-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
25-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
26-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
27-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.017	0.000	0.002	0.000	0.001	
29-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.021	0.124	0.010	
30-May	Z	0.501	0.320	0.157	0.037	0.126	0.187	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.035	0.012	0.002	0.001	0.000	0.011	0.000	0.000	0.000	0.064	
31-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.045	0.024	0.000	0.000	0.000	0.000	0.004	
0.000 0.028 0.017 0.009 0.002 0.007 0.009 0.004 0.009 0.002 0.000 0.000 0.000 0.000 0.000 0.002 0.002 0.000 0.003 0.001 0.008 0.010 0.007 0.009																								Diurnal Average		
0.008 0.501 0.320 0.157 0.037 0.126 0.187 0.074 0.153 0.039 0.010 0.000 0.001 0.000 0.002 0.035 0.022 0.005 0.045 0.024 0.072 0.089 0.076 0.124																								Diurnal Maximum		
Z - zerospan				C - Calibration				M - Maintenance				DF - DAS Failure				UO - Unstable Operation										



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	471	92.53	92.53
0.006 - 0.05	23	4.52	97.05
0.06 - 0.1	10	1.96	99.02
> 0.1	5	0.98	100.00

Total Number of Valid Hours: 509

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	16	13	3	7	7	38	84	38	63	25	42	48	29	20	17	21	471
0.006 - 0.05	4	0	2	1	1	1	1	1	3	1	3	0	2	1	1	1	23
0.06 - 0.1	2	1	0	1	0	0	0	0	0	0	0	0	2	1	3	0	10
> 0.1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	5
Totals	22	14	5	9	8	39	85	39	66	26	45	49	34	23	23	22	509

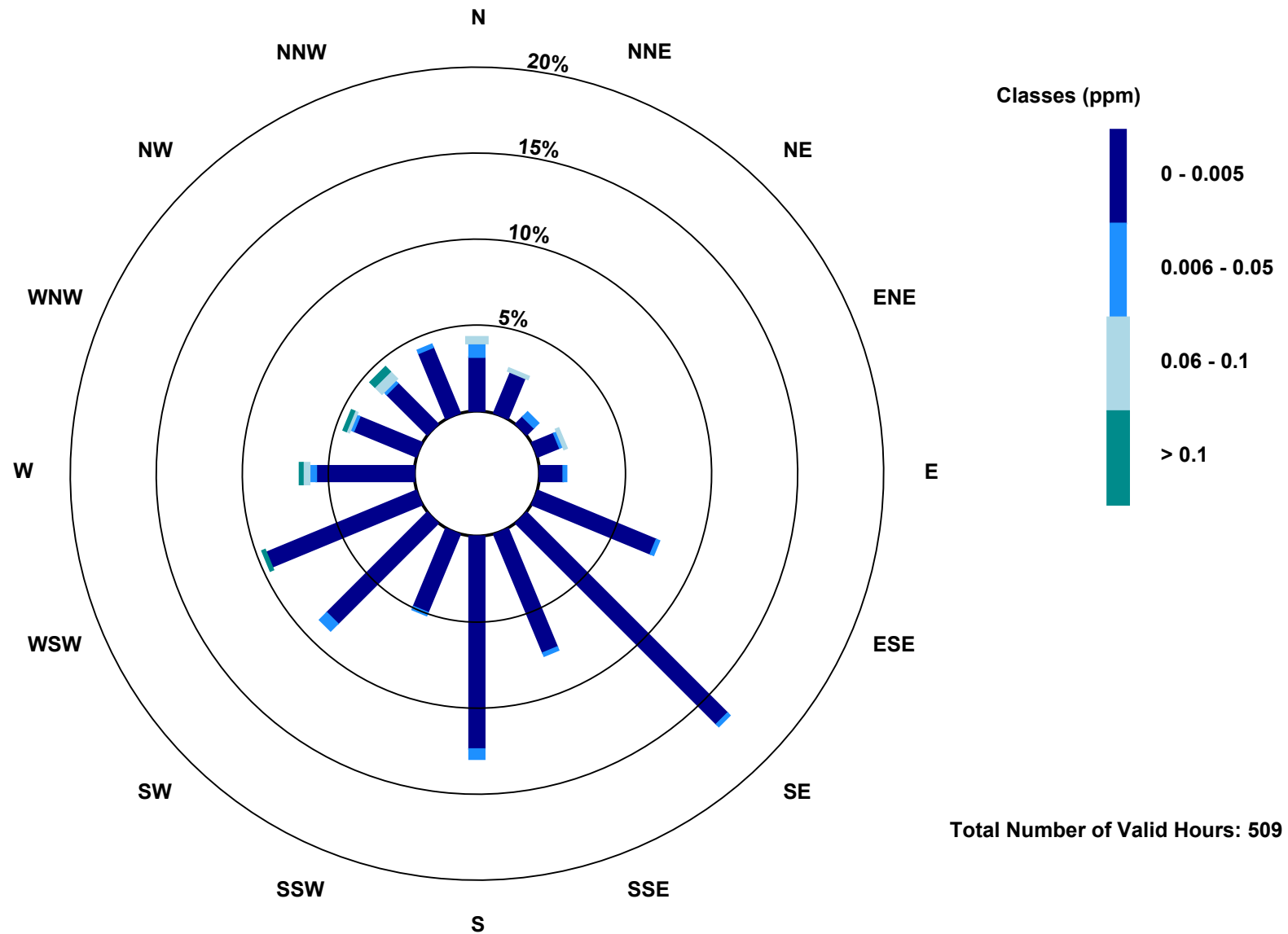
Total Number of Valid Hours: 509

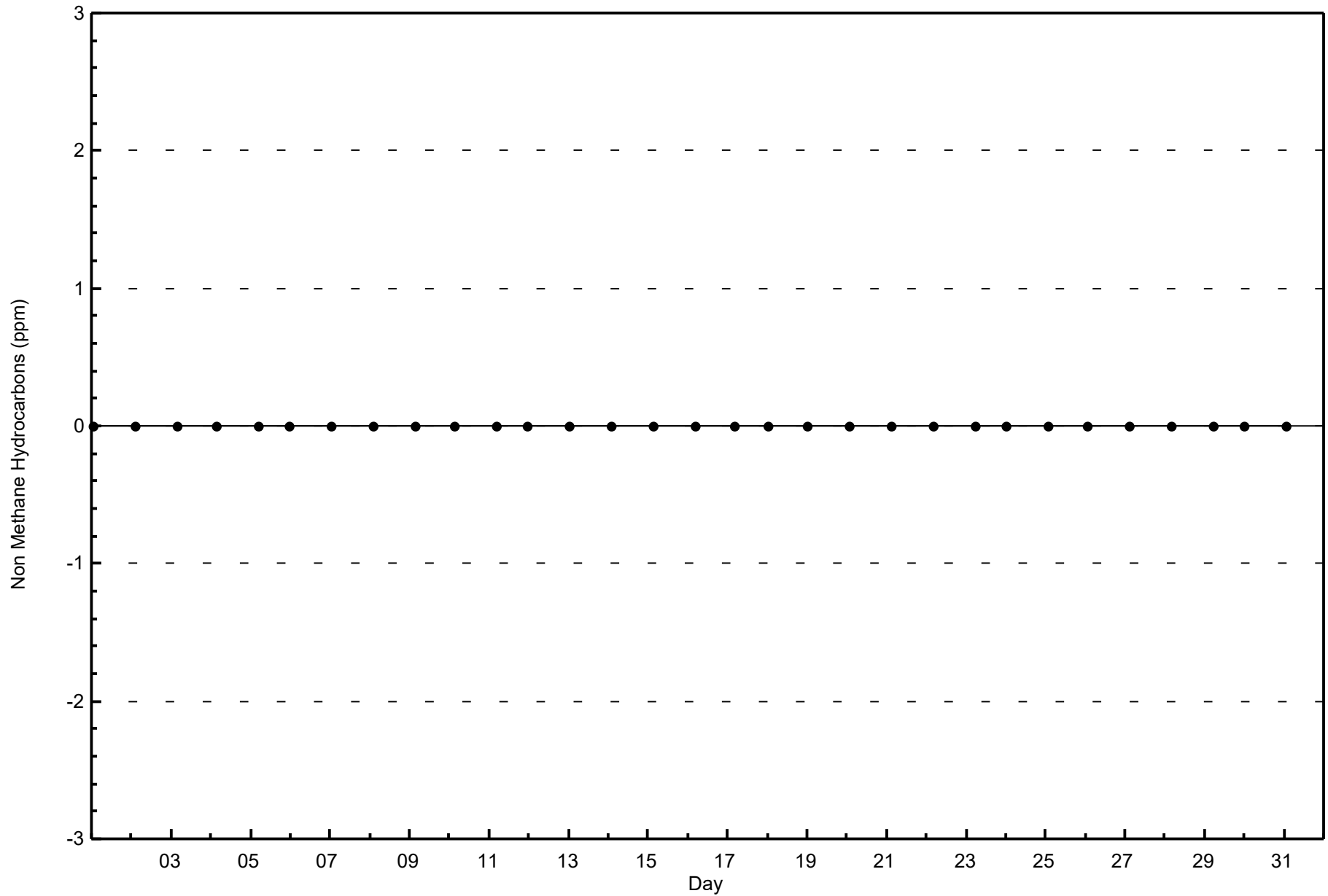
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes

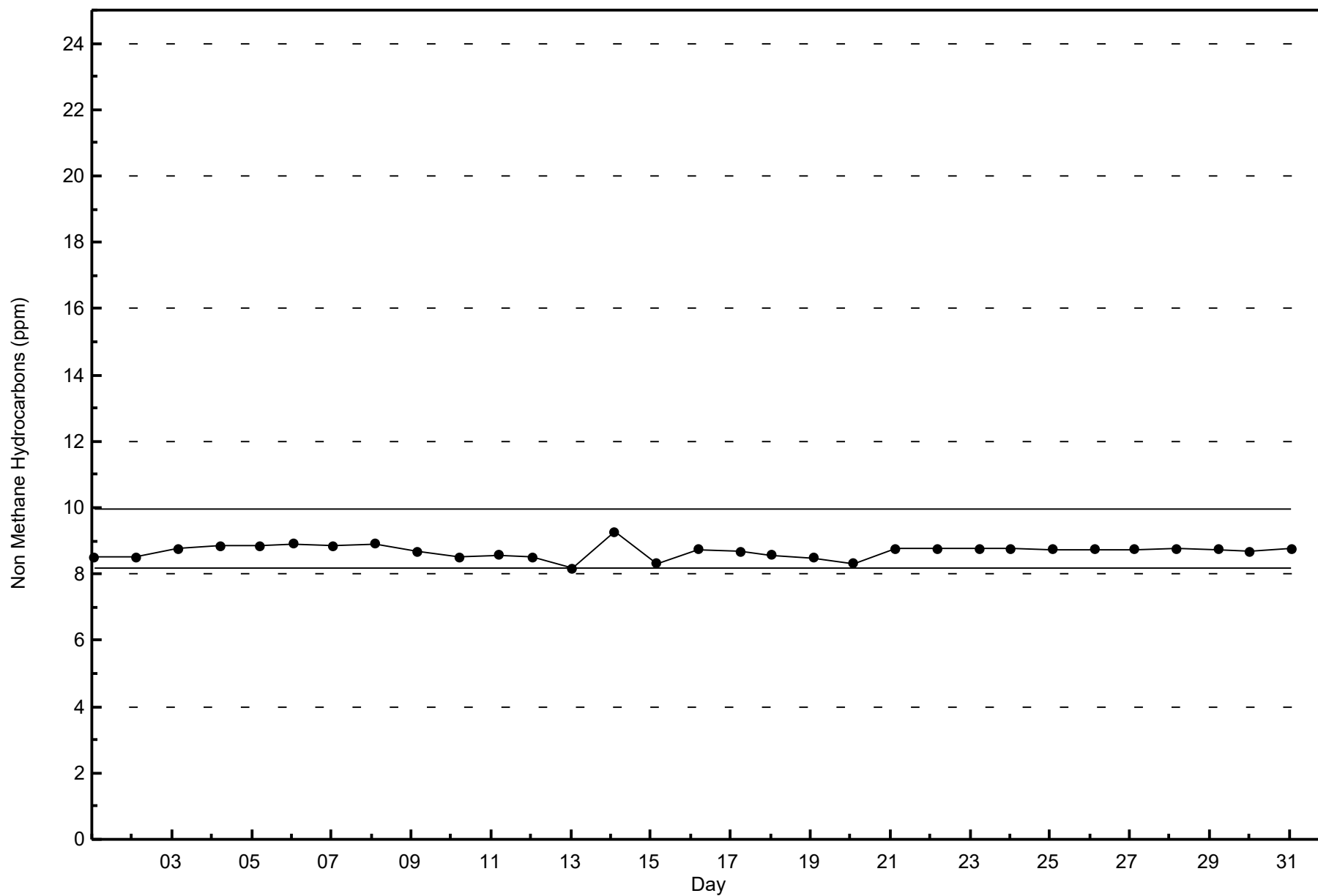






Wood Buffalo Environmental Association
Span Responses

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

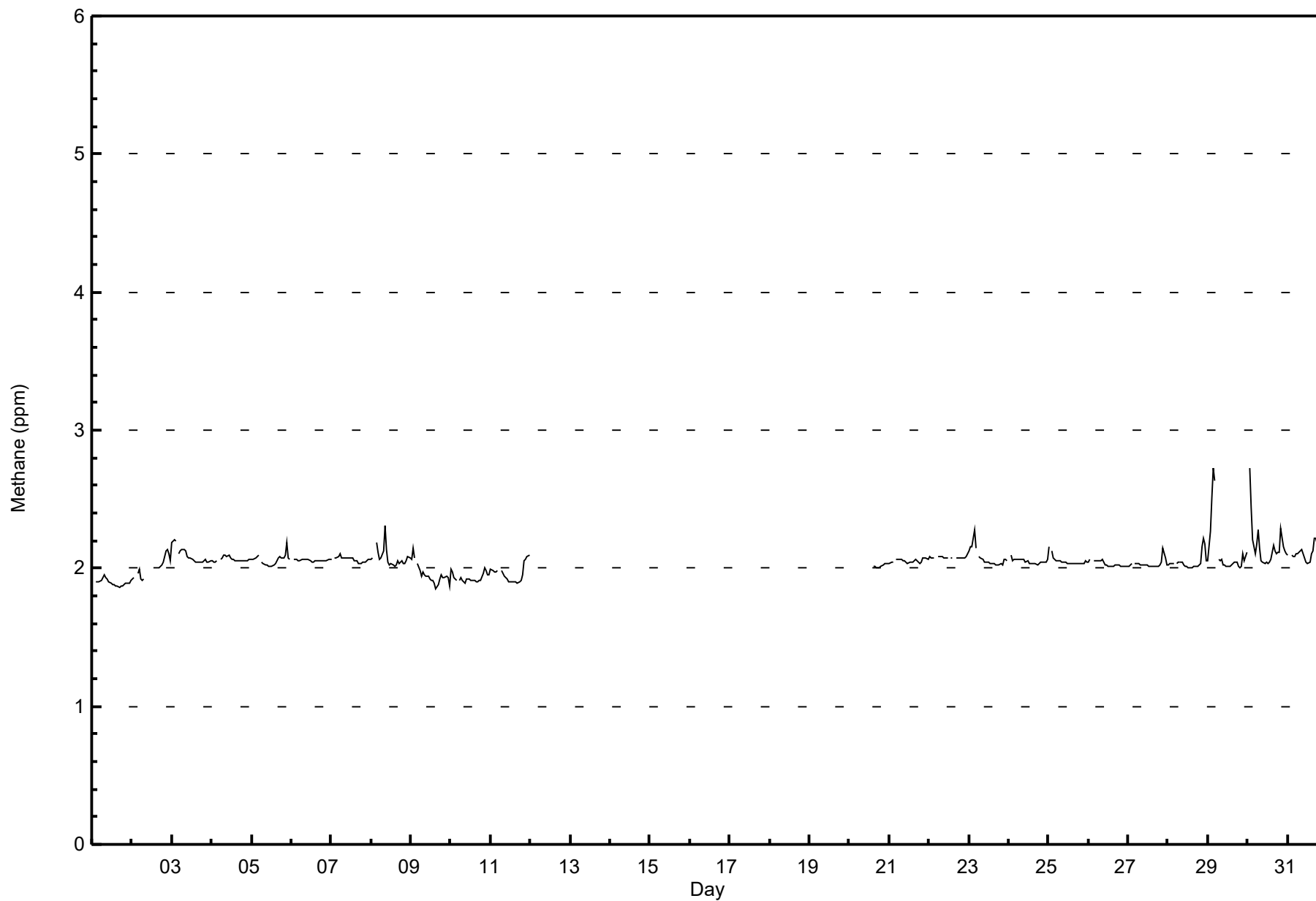
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744								
Maximum Value: 2.7 ppm on May 29 04:00 Maximum Daily Average: 2.2 ppm on May 30																		Hours of Data: 509								
Minimum Value: 1.8 ppm on May 9 16:00 Minimum Daily Average: 1.9 ppm on May 1																		Hours of Missing Data: 235								
Maximum Diurnal Average: 2.1 ppm at hour 2 Minimum Diurnal Average: 2.0 ppm at hour 13																		Hours of Calibration: 31								
Monthly Average: 2.04 ppm Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3																		Percent Operational Time: 72.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2-May	1.9	1.9	Z	2.0	2.0	1.9	1.9	1.9	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0
3-May	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1
4-May	2.1	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-May	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1
6-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
8-May	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1
9-May	2.1	2.1	2.1	Z	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0
10-May	2.0	2.0	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0
11-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.1	2.0	2.1
12-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--
14-May	M	M	M	M	M	M	M	M	M	M	M	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--
21-May	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
22-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	DF	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
23-May	2.1	2.2	2.2	2.3	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
24-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
25-May	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2
26-May	2.0	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
28-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.0	2.0	2.2
29-May	2.1	2.3	2.5	2.7	2.6	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
30-May	Z	2.7	2.4	2.2	2.1	2.2	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.7
31-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.2
2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.0																								Diurnal Average		
2.2 2.7 2.5 2.7 2.6 2.2 2.3 2.1 2.3 2.1 2.1 2.1 2.1 2.1 2.1 2.2 2.2 2.2 2.2 2.1 2.3 2.2 2.2 2.1																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	271	53.24	53.24
2.1 - 3.0	238	46.76	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 509

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Patricia McInnes - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	7	10	3	4	3	18	35	26	42	9	25	33	20	12	13	11	271
2.1 - 3.0	15	4	2	5	5	21	50	13	24	17	20	16	14	11	10	11	238
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	14	5	9	8	39	85	39	66	26	45	49	34	23	23	22	509

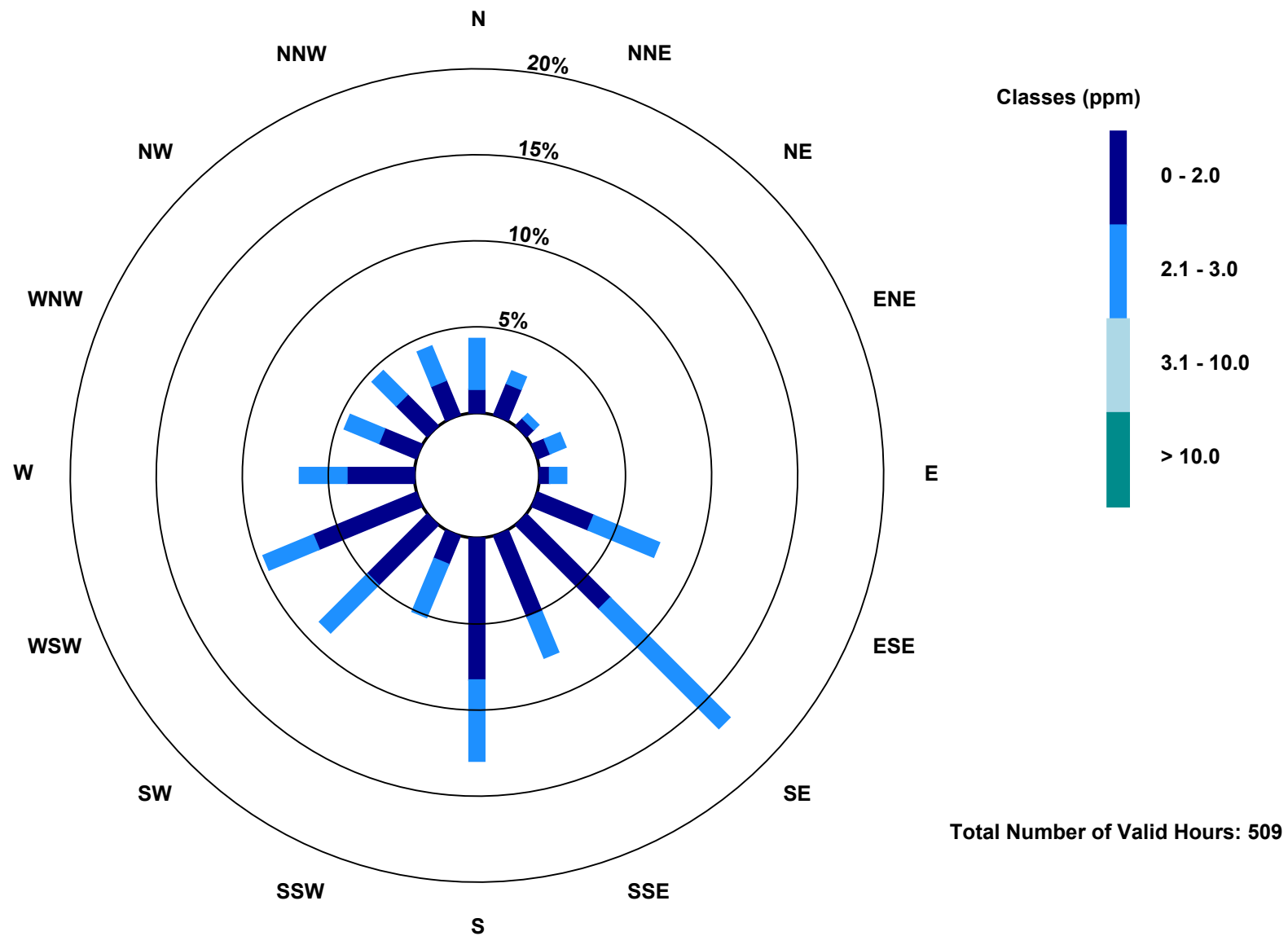
Total Number of Valid Hours: 509

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

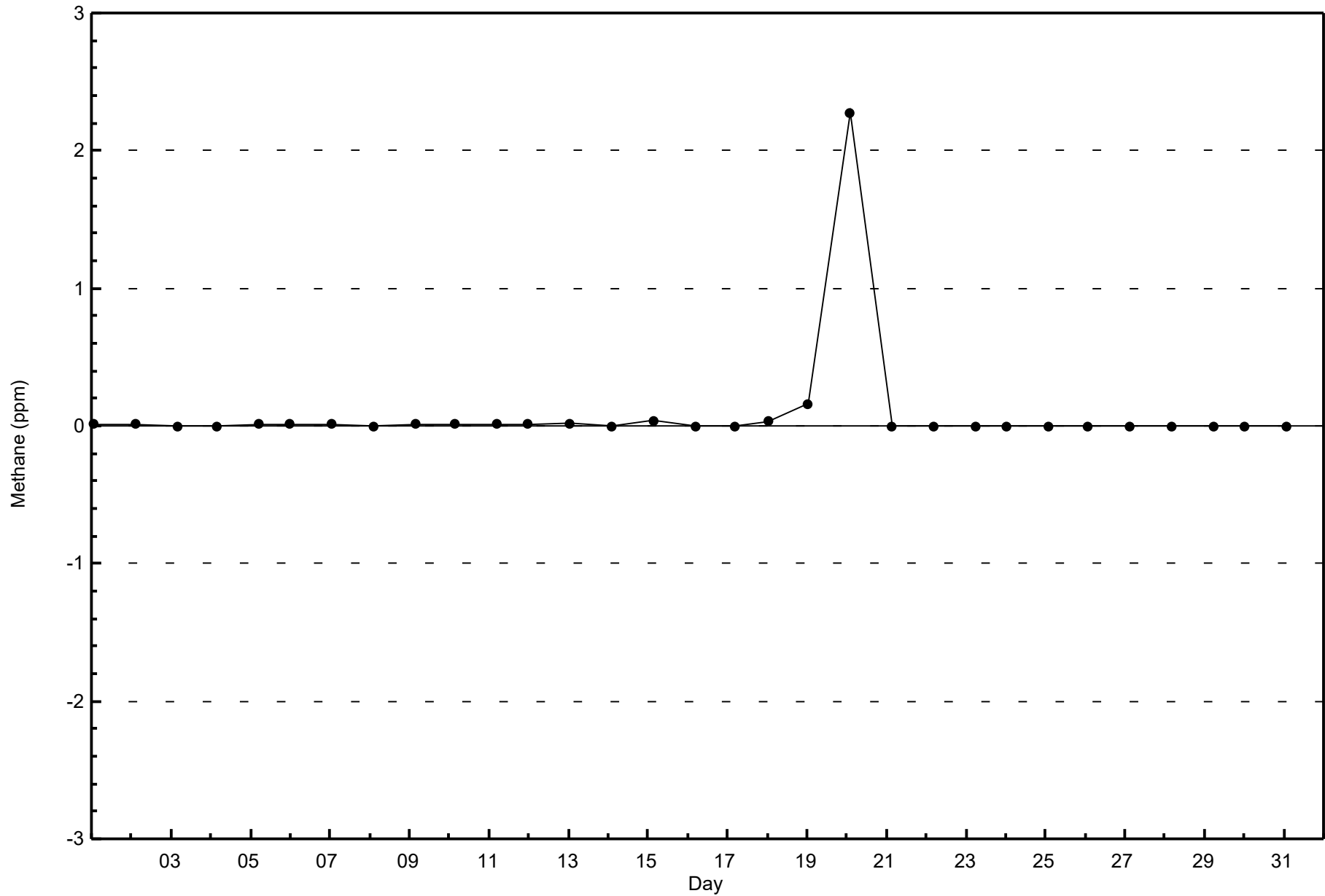
Methane (CH₄) - ppm
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

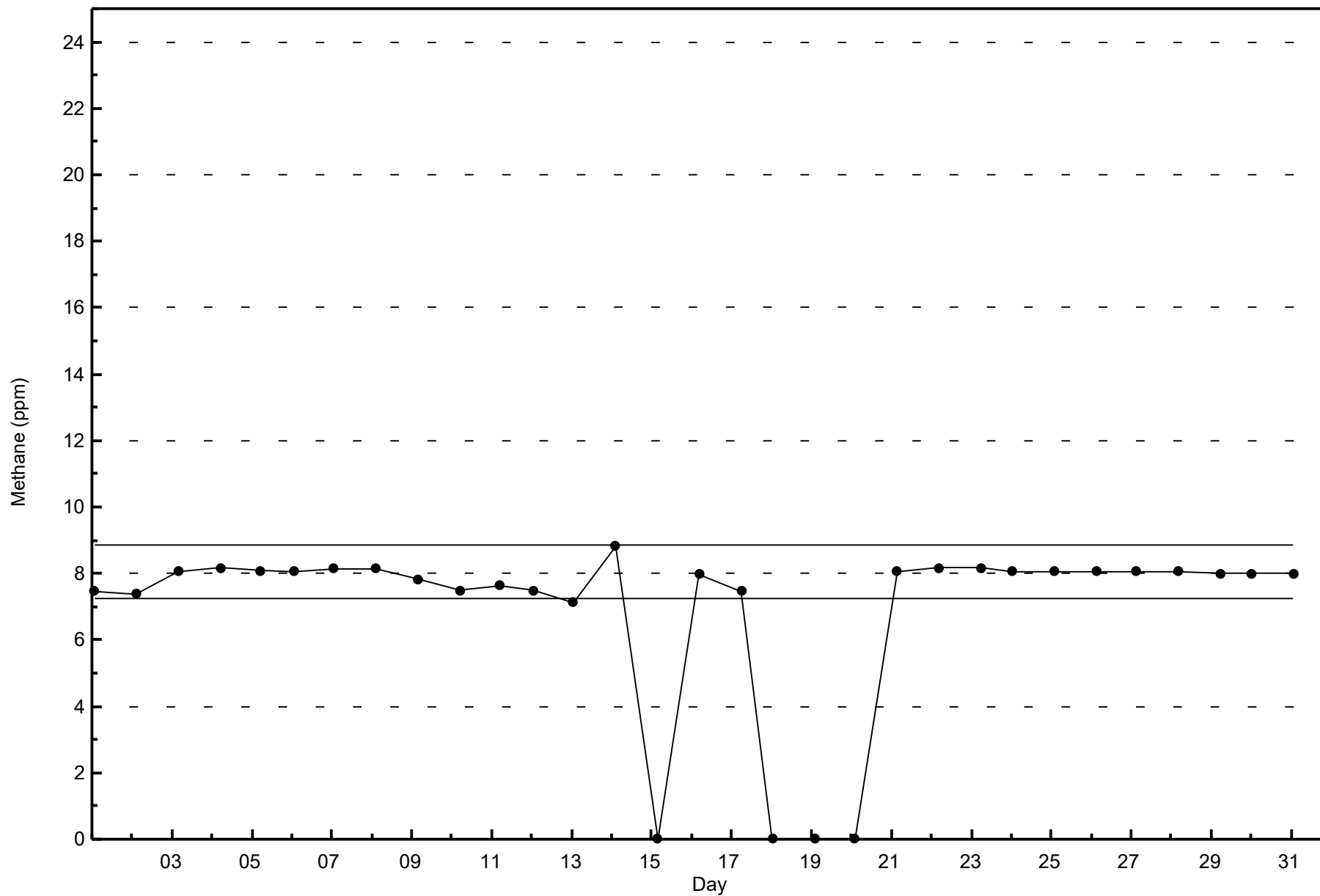
Methane (CH₄) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Span Responses

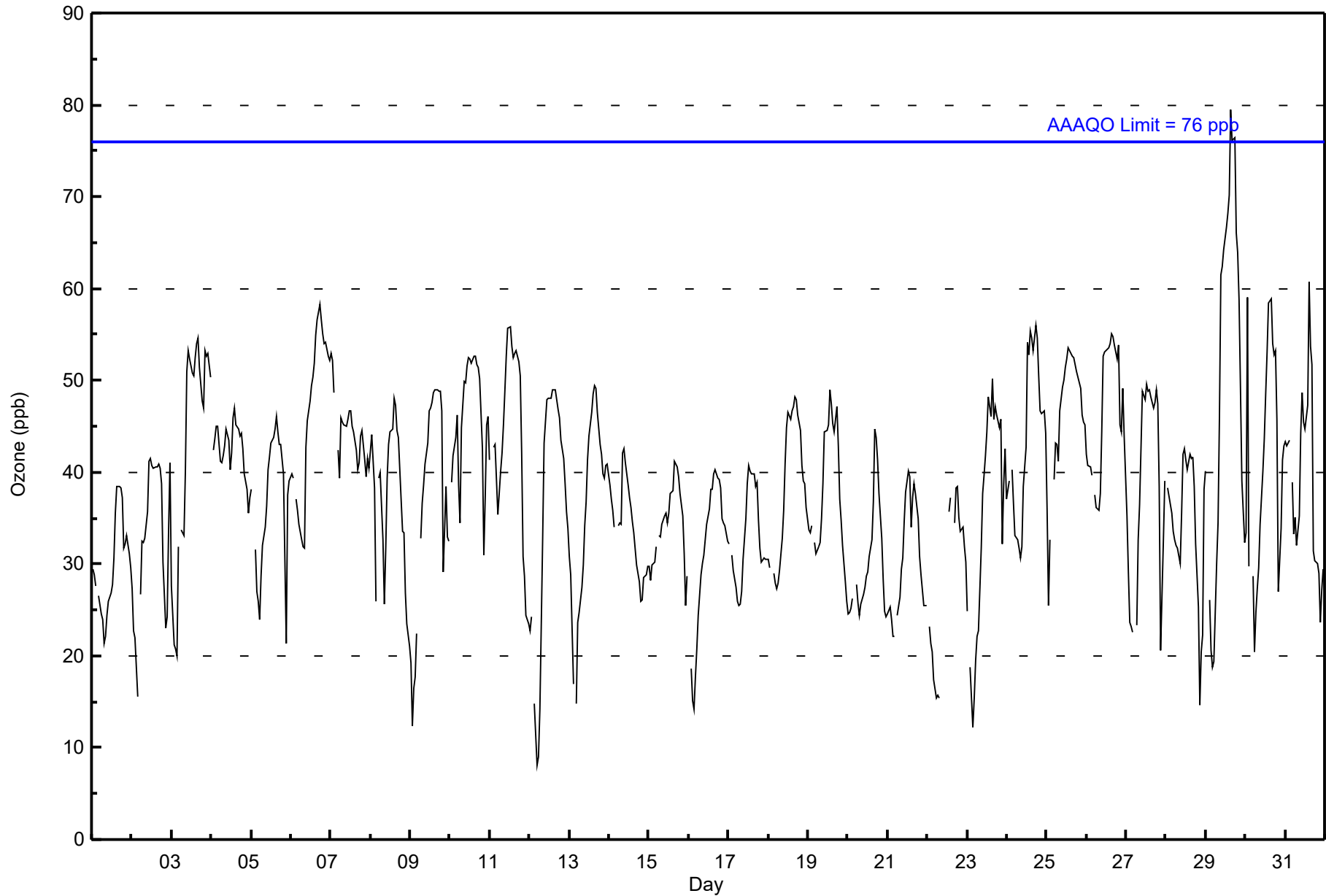
Methane (CH₄) - ppm
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	30	4.24	4.24
21 - 50	590	83.45	87.69
51 - 82	87	12.31	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	1	1	0	0	0	4	7	1	2	2	2	1	1	0	2	6	30
21 - 50	53	38	9	10	9	68	136	43	30	24	36	44	22	18	25	25	590
51 - 82	3	4	0	0	2	1	4	8	32	3	6	4	13	4	2	1	87
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	43	9	10	11	73	147	52	64	29	44	49	36	22	29	32	707

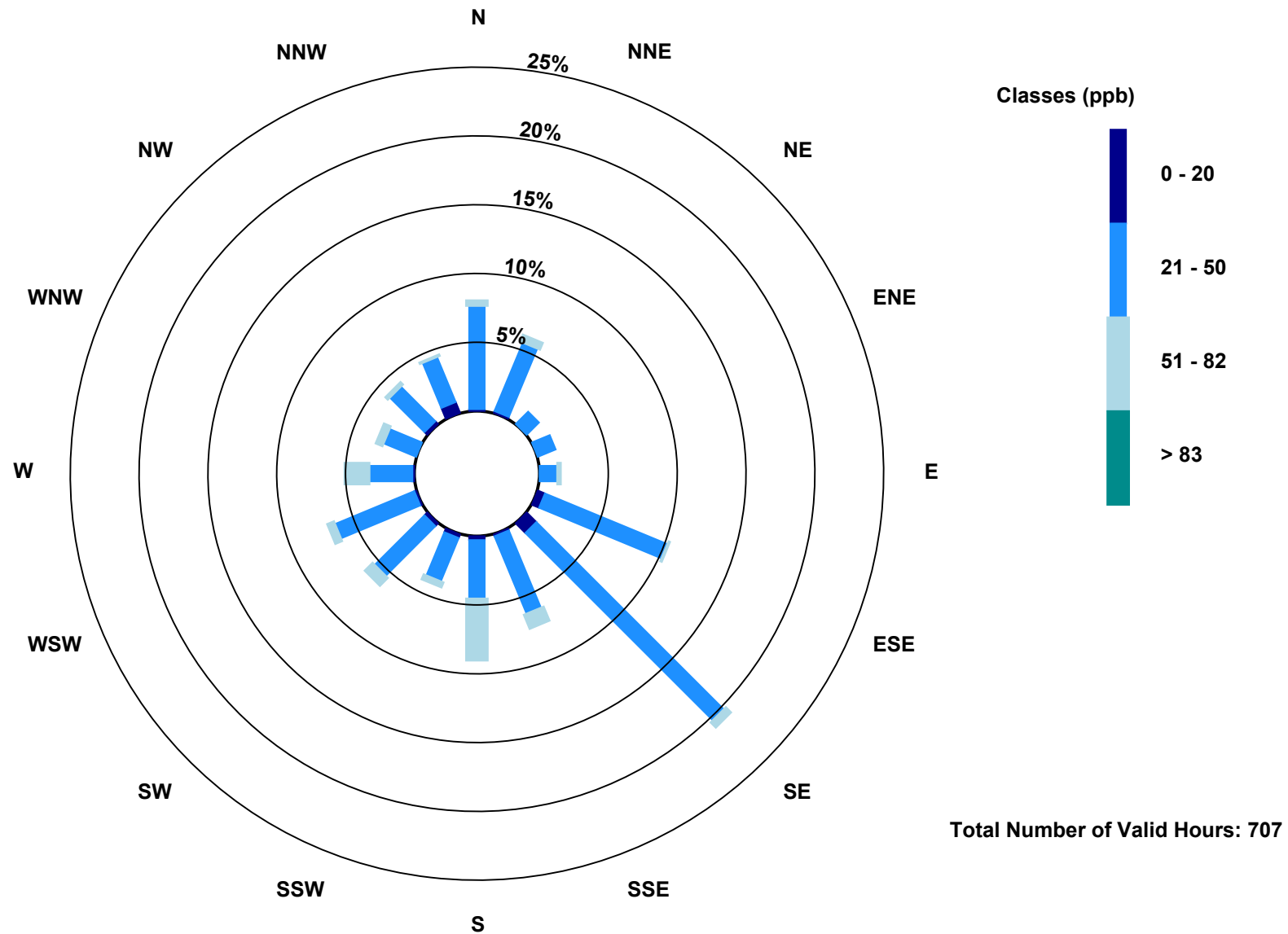
Total Number of Valid Hours: 707

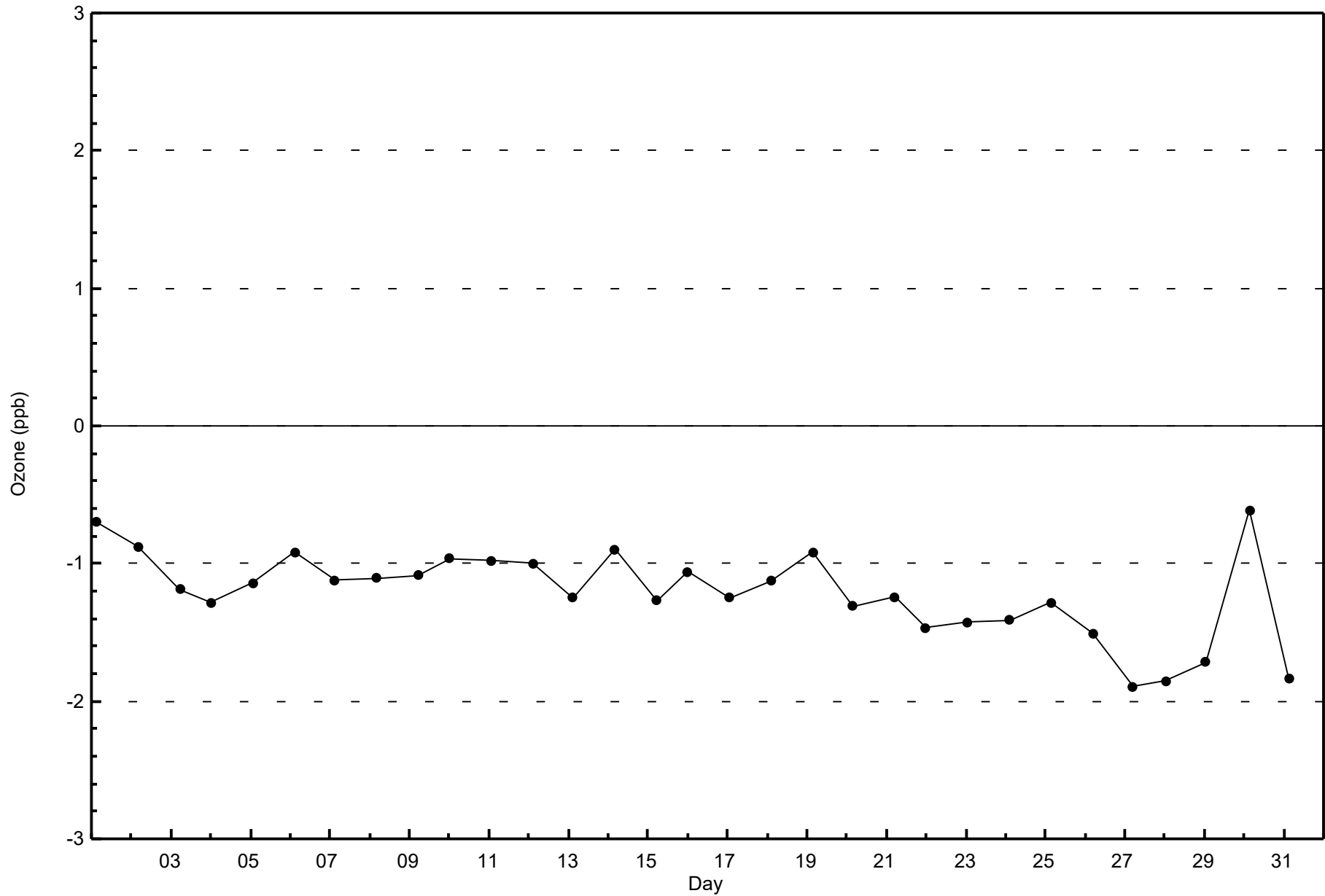
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Ozone (O_3) - ppb
Patricia McInnes

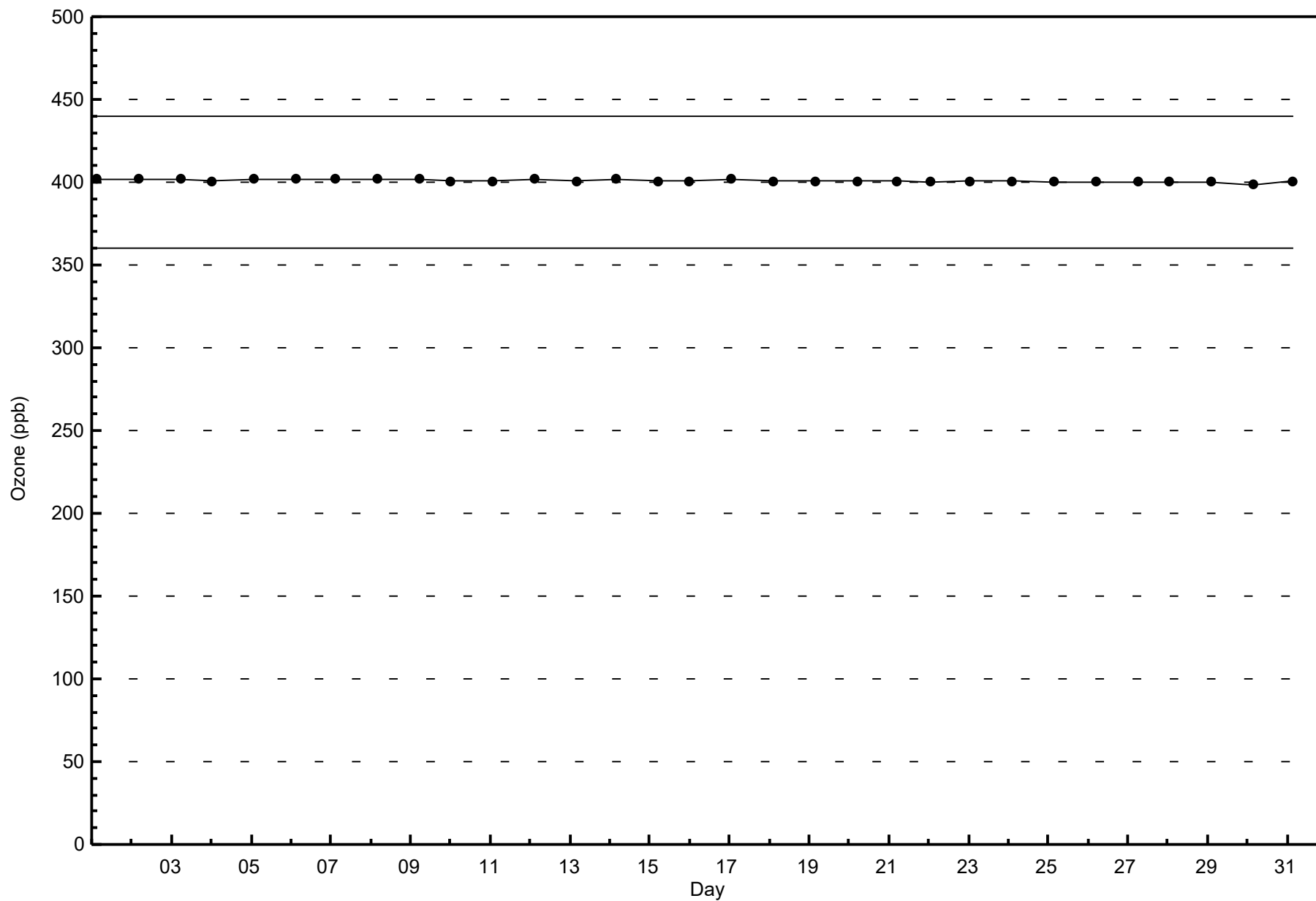






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

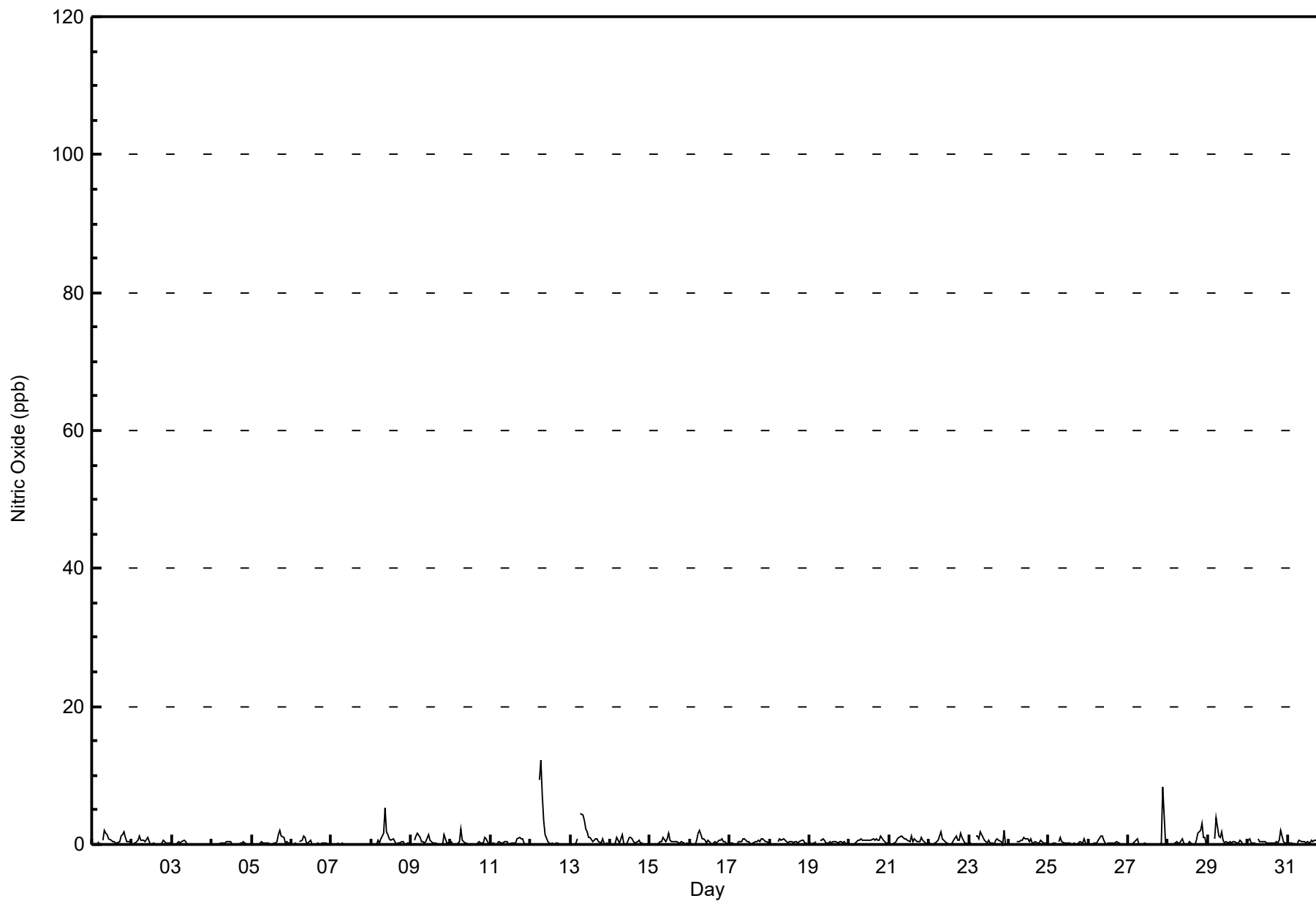
Patricia McInnes - May 2025

Maximum Value: 12.3 ppb on May 12 07:00																		Maximum Daily Average: 1.5 ppb on May 12										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 12:00																		Minimum Daily Average: 0.1 ppb on May 3										Hours of Data: 706	
Maximum Diurnal Average: 1.2 ppb at hour 7																		Minimum Diurnal Average: 0.1 ppb at hour 3										Hours of Missing Data: 38	
Monthly Average: 0.46 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 1.0 P ₉₉ = 3.9										Hours of Calibration: 37	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.0	0.1	0.1	0.1	0.4	Z	0.6	2.1	1.7	1.5	0.8	0.5	0.4	0.3	0.2	0.1	0.5	1.2	1.3	1.8	0.9	0.4	0.3	0.6	0.7	2.1			
2-May	Z	0.3	0.2	0.5	1.2	0.6	0.5	0.5	0.5	1.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.5	0.3	0.1	0.1	0.2	0.3	1.2			
3-May	0.0	Z	0.0	0.2	0.4	0.3	0.3	0.7	0.4	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.7			
4-May	0.1	0.0	Z	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.3	0.0	0.1	0.1	0.2	0.4			
5-May	0.0	0.0	0.0	Z	0.0	0.3	0.4	0.1	0.1	0.2	0.1	0.1	0.0	0.2	0.3	0.3	1.4	2.0	1.2	1.0	0.3	0.4	0.2	0.3	0.4	2.0			
6-May	0.1	0.1	0.2	0.1	Z	0.4	0.7	1.2	1.0	0.2	0.2	0.7	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.3	1.2			
7-May	0.0	0.0	0.0	0.0	0.2	Z	0.1	0.3	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	-	0.3			
8-May	Z	0.0	0.0	0.0	0.7	0.2	0.8	1.6	5.3	1.9	1.4	0.9	0.6	0.8	0.4	0.0	0.2	0.2	0.5	0.3	0.0	0.0	0.2	0.2	0.7	5.3			
9-May	0.1	Z	0.6	1.3	1.6	1.0	0.4	0.3	0.2	0.5	1.4	0.5	0.4	0.2	0.3	0.2	0.0	0.1	0.0	0.0	1.4	0.3	0.1	0.1	0.5	1.6			
10-May	0.3	0.1	Z	0.0	0.2	0.5	2.2	0.7	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.3	1.0	0.8	0.3	0.1	0.3	2.2			
11-May	0.0	0.2	0.1	Z	0.2	0.5	0.3	0.3	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.8	1.1	0.8	0.8	0.1	0.0	0.0	0.0	0.3	1.1			
12-May	0.0	0.0	0.0	0.0	Z	9.3	12.3	7.0	3.4	1.4	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	12.3			
13-May	0.0	0.0	0.0	0.2	0.8	Z	4.5	4.2	3.6	2.3	1.9	0.9	1.0	0.4	0.5	0.8	0.8	0.5	0.2	0.7	0.2	0.1	0.1	0.0	1.0	4.5			
14-May	Z	0.0	0.0	0.3	0.9	0.3	0.9	1.4	0.2	0.0	0.0	1.0	1.0	0.9	0.4	0.2	0.4	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.4	1.4			
15-May	0.0	Z	0.0	0.0	0.1	0.2	0.4	0.5	0.9	0.4	0.8	1.5	0.6	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.0	0.4	1.5			
16-May	0.1	0.0	Z	0.0	0.6	1.6	2.1	0.9	0.7	0.5	0.1	0.6	0.2	0.1	0.1	0.4	0.2	0.7	0.5	0.8	0.5	0.4	0.2	0.1	0.5	2.1			
17-May	0.2	0.2	0.1	Z	0.3	0.4	0.5	0.5	0.7	0.8	0.4	0.5	0.3	0.1	0.2	0.4	0.3	0.5	0.3	0.9	0.7	0.3	0.3	0.1	0.4	0.9			
18-May	0.1	0.0	0.0	0.0	Z	0.5	0.7	0.5	0.8	0.7	0.5	0.1	0.4	0.5	0.2	0.5	0.3	0.2	0.3	0.5	0.5	0.2	0.1	0.0	0.3	0.8			
19-May	0.1	0.0	0.1	0.3	0.3	Z	0.7	0.7	0.7	0.6	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.2	0.5	0.4	0.2	0.3	0.0	0.0	0.3	0.7			
20-May	Z	0.0	0.0	0.0	0.5	0.6	0.6	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.7	0.8	0.6	0.6	1.1	0.6	0.5	0.3	0.3	0.5	1.1			
21-May	0.3	Z	0.2	0.3	0.4	0.8	1.1	1.2	1.0	0.8	0.7	0.6	0.4	1.1	0.5	0.9	0.6	0.4	0.5	1.0	0.6	0.4	0.2	0.0	0.6	1.2			
22-May	0.2	0.0	Z	0.2	0.2	0.6	1.3	1.8	0.7	0.6	0.2	0.1	M	0.1	0.3	0.7	1.3	0.6	0.6	1.6	1.0	0.2	0.1	0.0	0.6	1.8			
23-May	0.2	0.2	0.0	Z	1.3	1.2	0.8	1.9	1.1	0.6	0.5	0.3	0.6	0.3	0.3	0.1	0.6	0.7	0.5	0.4	0.1	2.0	0.1	0.0	0.6	2.0			
24-May	0.0	0.1	0.0	0.0	Z	0.4	0.4	0.7	0.5	1.1	0.8	0.7	0.5	0.8	0.2	0.3	0.5	0.1	0.3	0.6	0.5	0.2	0.2	0.2	0.4	1.1			
25-May	0.1	0.0	0.1	0.1	0.3	Z	0.4	1.0	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.9	0.3	0.0	0.2	1.0			
26-May	Z	0.0	0.0	0.2	0.2	0.3	0.6	1.2	1.2	0.5	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.0	0.0	0.1	0.0	0.0	0.3	1.2			
27-May	0.0	Z	0.1	0.2	0.4	0.8	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	8.4	0.2	0.0	0.5	8.4			
28-May	0.0	0.1	Z	0.2	0.2	0.3	0.2	0.3	0.9	0.3	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.7	1.6	2.0	3.1	1.1	1.0	0.0	0.5	3.1			
29-May	0.0	0.0	0.0	Z	0.8	3.9	1.3	1.1	1.9	0.5	0.3	0.4	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.7	0.4	0.1	0.0	0.1	0.6	3.9			
30-May	0.7	0.8	0.2	0.2	0.2	Z	0.8	0.4	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.6	2.1	0.3	0.2	0.2	0.4	2.1			
31-May	0.2	0.2	0.1	0.1	0.3	Z	0.3	0.6	0.3	0.4	0.4	0.3	0.3	0.3	0.5	0.5	0.6	0.6	0.3	0.3	0.1	0.1	0.1	0.2	0.3	0.6			
Diurnal Average																										Diurnal Maximum			
0.1 0.1 0.1 0.2 0.5 1.0 1.2 1.1 1.0 0.6 0.5 0.4 0.3 0.3 0.2 0.3 0.4 0.4 0.4 0.6 0.5 0.6 0.2 0.1																													
0.7 0.8 0.6 1.3 1.6 9.3 12.3 7.0 5.3 2.3 1.9 1.5 1.0 1.1 0.8 0.9 1.4 2.0 1.6 2.0 3.1 8.4 1.0 0.6																													
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	56	43	10	10	10	73	147	54	65	28	45	46	34	25	28	32	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	43	10	10	10	73	147	54	65	28	45	46	34	25	28	32	706

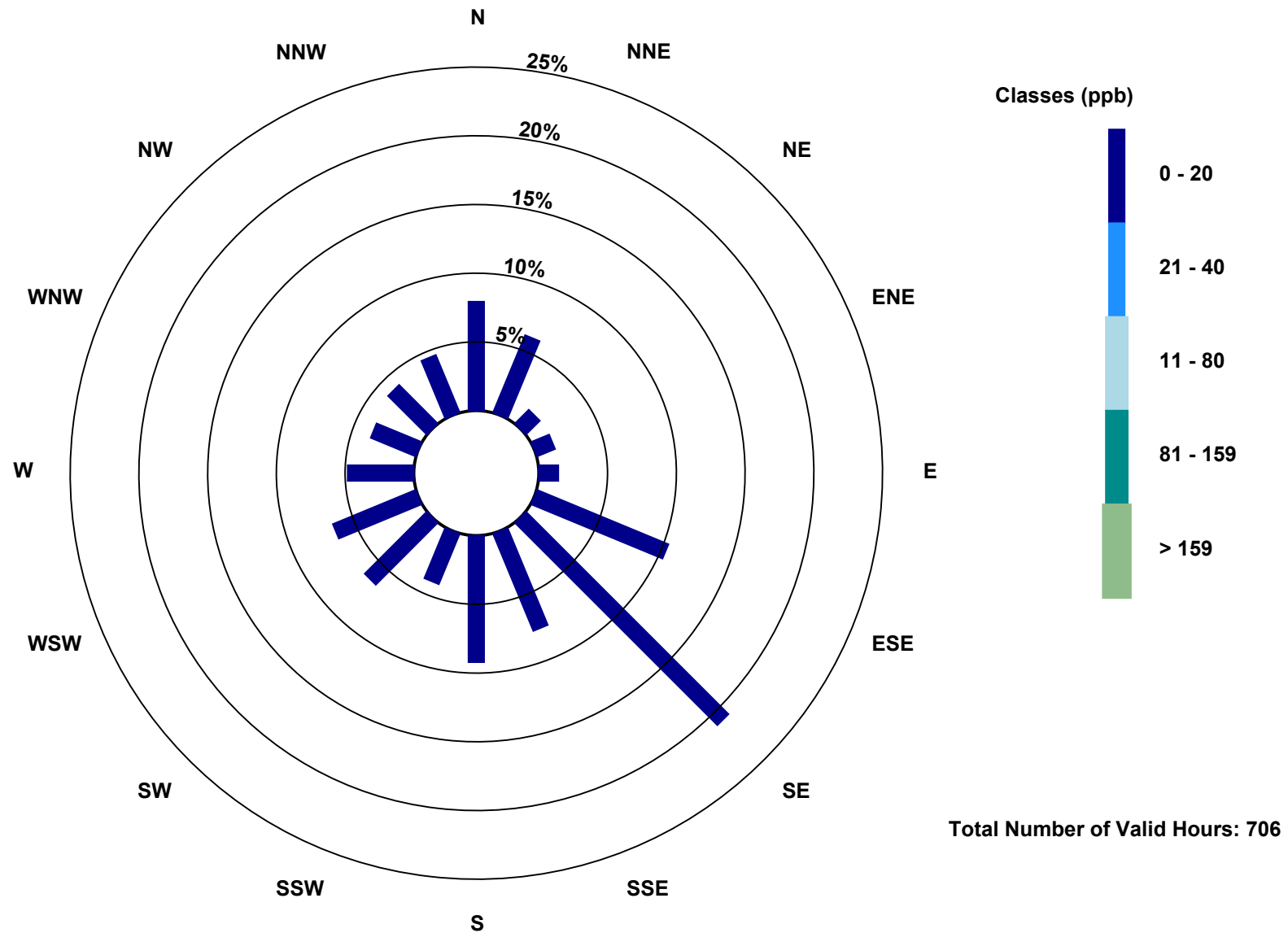
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

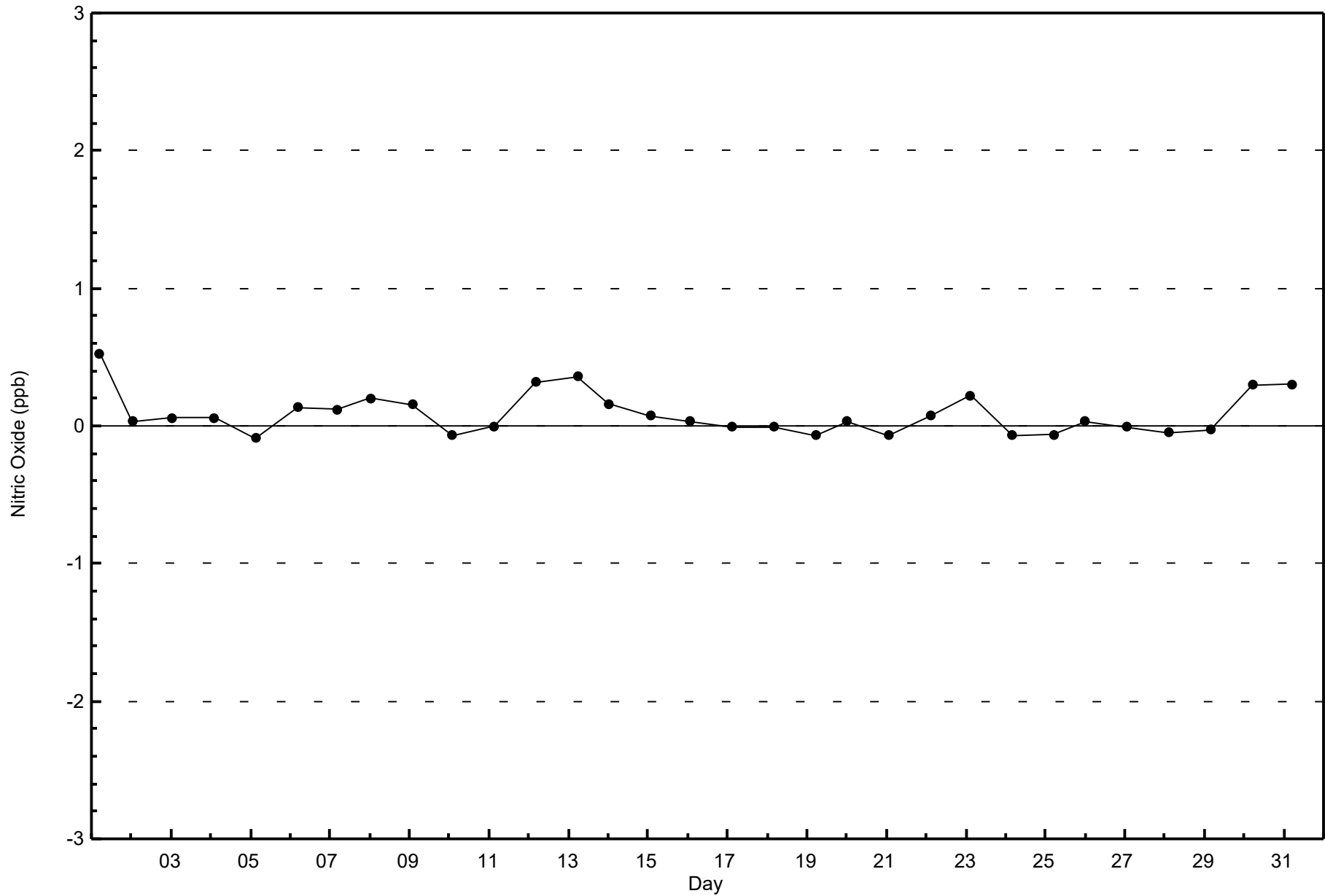
Nitric Oxide (NO) - ppb
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

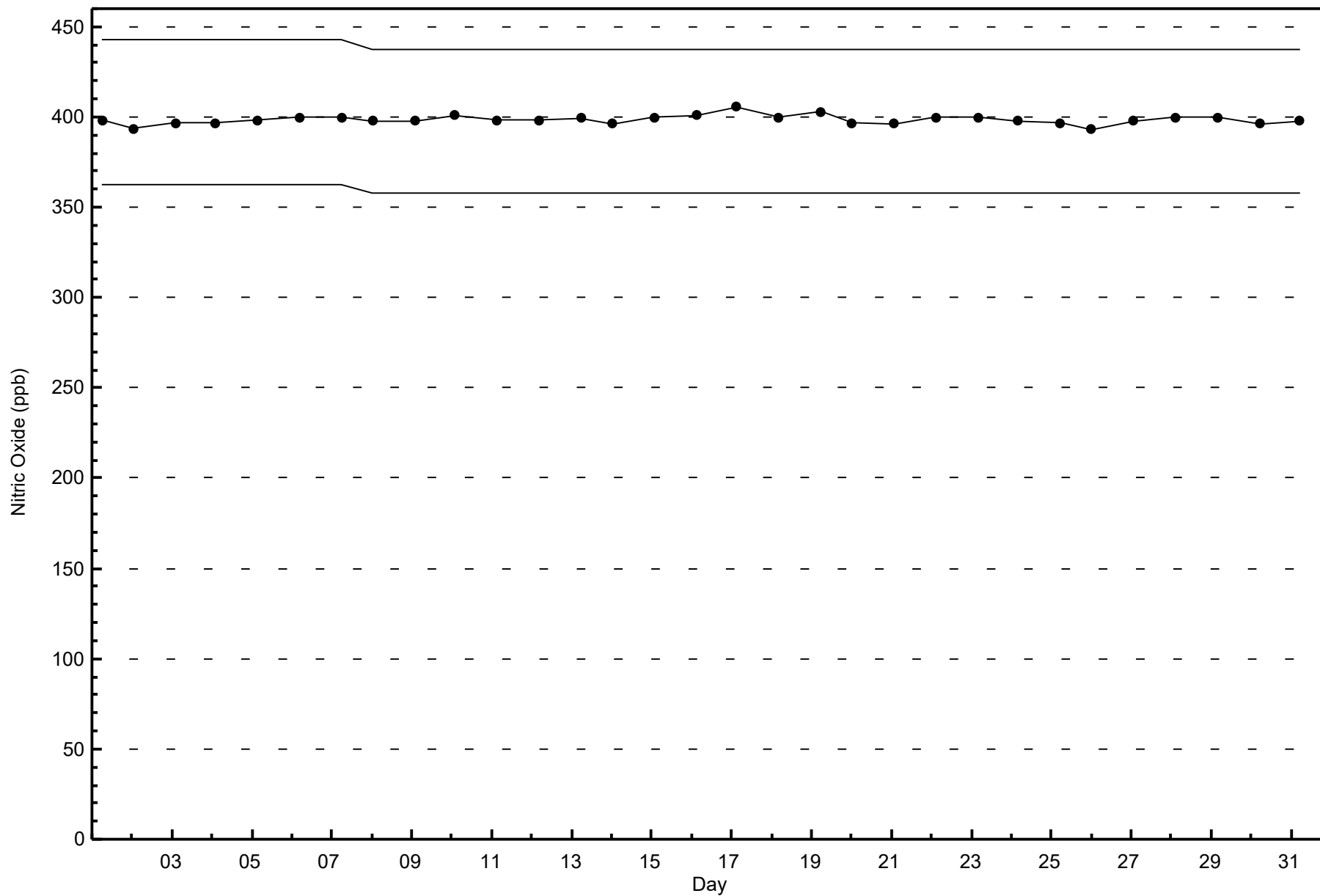
Nitric Oxide (NO) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

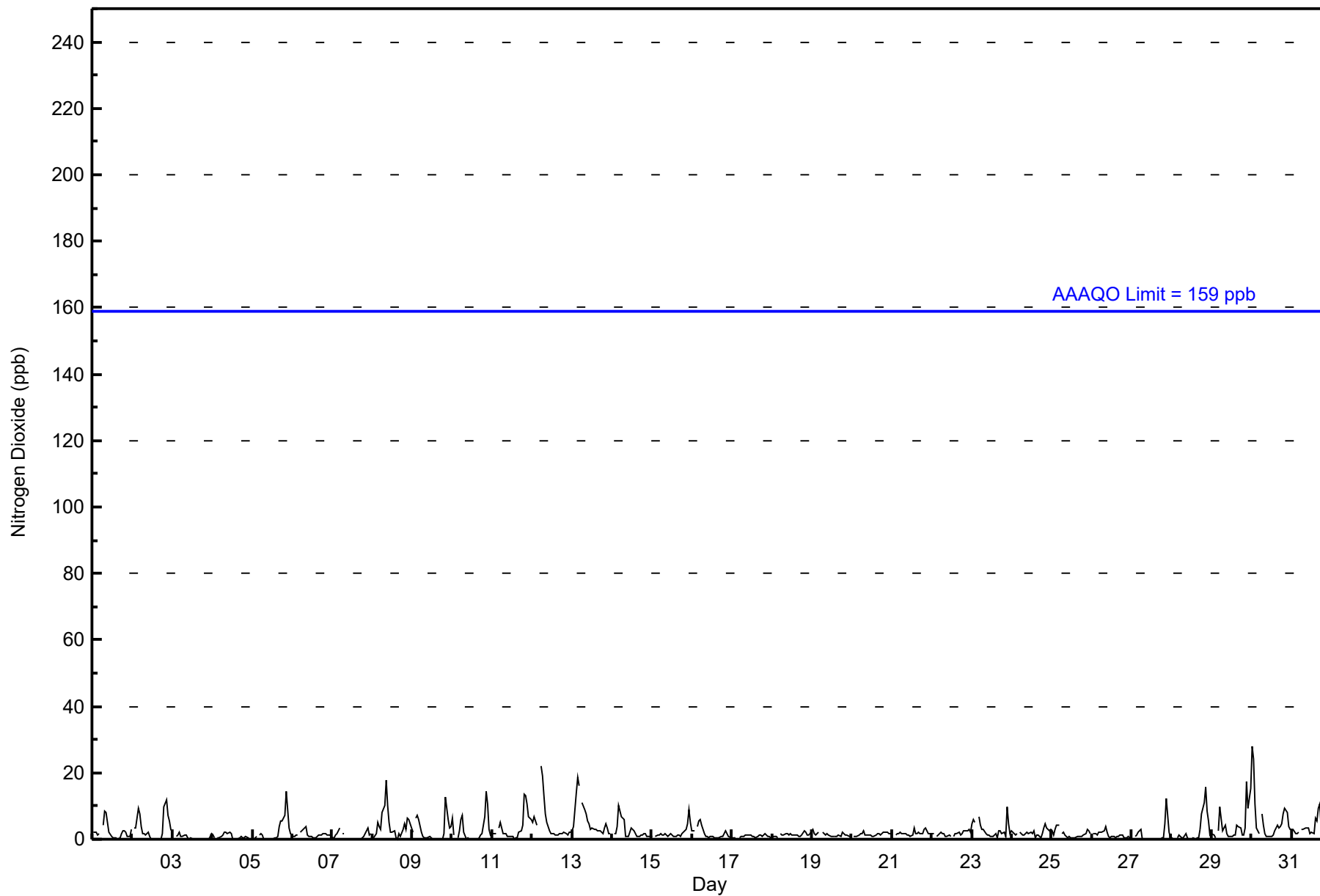
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.8 ppb on May 30 01:00 Maximum Daily Average: 5.9 ppb on May 30																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 37 Percent Operational Time: 99.9						
Minimum Value: 0.0 ppb on May 2 12:00 Maximum Diurnal Average: 4.8 ppb at hour 22 Monthly Average: 2.47 ppb										Minimum Daily Average: 0.6 ppb on May 3 Minimum Diurnal Average: 0.9 ppb at hour 13 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.8 Median = 1.5 Q ₃ = 2.7 P ₉₀ = 5.8 P ₉₉ = 16.3																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	2.0	2.0	2.2	1.4	1.8	Z	4.4	8.5	8.0	5.0	2.1	0.8	0.5	0.5	0.4	0.2	0.6	1.9	2.4	2.4	2.1	0.9	0.9	3.0	2.3	8.5
2-May	Z	3.5	3.3	9.4	7.6	3.9	1.8	1.7	1.4	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6	9.6	11.9	7.4	5.4	2.8	3.2	11.9
3-May	2.2	Z	0.7	1.4	2.0	0.8	0.8	1.2	1.3	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	1.6	0.6	2.2
4-May	1.3	0.4	Z	0.4	0.4	0.7	1.3	2.1	2.1	1.9	2.1	1.5	0.1	0.2	0.1	0.1	0.4	0.7	0.6	0.6	1.0	0.3	0.0	0.0	0.8	2.1
5-May	0.0	0.0	0.9	Z	1.2	1.9	1.3	0.2	0.2	0.0	0.1	0.1	0.1	0.3	0.5	1.0	3.7	5.3	5.3	7.4	14.4	8.7	3.2	1.5	2.5	14.4
6-May	1.0	0.9	1.1	1.3	Z	2.3	2.9	3.2	3.7	1.3	0.8	1.0	0.3	0.4	0.4	0.8	1.2	1.3	1.5	1.7	1.7	1.3	1.3	1.0	1.4	3.7
7-May	0.5	0.4	1.1	1.8	3.2	Z	1.7	1.6	C	C	C	C	C	C	0.2	0.1	0.0	0.0	0.3	1.0	2.4	3.6	1.2	1.5	-	3.6
8-May	Z	0.3	1.6	4.9	3.8	2.9	7.9	10.3	18.0	10.3	5.1	2.1	2.2	2.4	0.5	0.0	1.7	1.0	3.0	4.7	3.1	6.3	6.0	3.3	4.4	18.0
9-May	2.1	Z	6.5	7.1	6.0	2.2	0.7	0.5	0.3	0.5	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.0	1.5	12.7	5.9	3.5	3.9	2.4	12.7
10-May	6.3	1.2	Z	0.4	2.7	6.1	7.3	2.0	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.1	0.4	1.1	1.8	6.9	14.2	10.4	2.9	1.4	2.9	14.2
11-May	1.8	1.5	1.5	Z	3.3	5.1	1.8	1.6	1.6	0.8	0.7	0.7	0.7	0.2	0.6	0.6	2.0	2.5	4.3	13.6	13.0	10.8	6.6	6.1	3.5	13.6
12-May	4.9	6.9	5.7	4.3	Z	22.0	19.2	13.1	7.5	4.9	2.7	1.7	1.5	1.5	1.4	1.4	1.5	1.6	1.5	2.3	1.5	1.4	2.0	2.1	4.9	22.0
13-May	2.7	3.9	14.1	18.6	16.3	Z	11.1	8.9	7.5	5.3	4.7	3.1	3.6	3.1	2.8	2.7	2.6	2.7	1.7	3.4	4.7	3.2	1.9	1.5	5.7	18.6
14-May	Z	1.7	1.9	3.7	10.3	6.9	6.2	5.8	1.0	0.9	0.8	3.6	2.8	2.4	1.5	1.0	1.0	1.4	1.2	1.7	1.6	0.9	1.0	0.9	2.6	10.3
15-May	1.0	Z	0.8	1.2	1.1	1.6	1.2	1.4	1.5	0.8	1.4	1.7	1.2	1.0	1.0	1.2	1.2	1.0	1.6	2.3	3.1	4.6	9.1	5.0	2.0	9.1
16-May	2.5	2.4	Z	3.7	5.4	6.1	4.1	1.5	1.0	0.9	0.5	1.0	0.8	0.3	0.4	0.3	0.4	0.9	0.9	1.7	2.6	1.5	0.9	0.6	1.8	6.1
17-May	0.5	0.4	0.5	Z	0.6	0.9	0.8	1.0	1.3	1.3	1.3	1.2	0.9	0.7	0.6	0.8	1.2	1.3	0.9	1.3	1.5	0.9	0.9	0.5	0.9	1.5
18-May	0.6	0.7	0.7	0.6	Z	1.5	1.2	1.4	1.5	1.7	1.1	1.5	1.1	1.2	1.1	1.1	1.0	1.0	1.2	2.4	2.3	1.3	1.2	1.7	1.3	2.4
19-May	3.0	1.9	1.2	1.5	2.2	Z	2.1	1.7	1.4	1.9	1.2	1.0	1.0	0.8	0.9	0.9	1.1	0.9	2.0	1.6	1.1	1.1	0.8	0.8	1.4	3.0
20-May	Z	1.0	0.8	0.7	1.2	1.8	1.7	2.4	1.4	1.4	1.3	1.1	1.0	1.0	1.3	1.8	1.7	1.3	1.7	2.3	2.1	2.0	1.8	1.8	1.5	2.4
21-May	1.3	Z	1.2	1.8	1.9	2.1	1.6	1.7	1.7	1.2	1.1	1.0	1.2	3.3	1.6	1.8	2.1	1.6	1.5	2.9	3.6	2.7	1.9	1.5	1.8	3.6
22-May	1.6	1.6	Z	0.8	1.4	2.3	1.8	1.9	0.8	0.7	1.1	0.8	M	0.9	1.5	1.5	2.3	1.4	1.6	2.4	2.6	2.6	3.1	2.3	1.7	3.1
23-May	4.8	5.8	5.2	Z	6.8	4.3	2.8	2.8	1.7	1.1	1.2	0.8	0.8	0.8	1.6	0.5	2.6	2.7	1.9	2.0	0.8	9.9	4.6	1.5	2.9	9.9
24-May	2.7	1.8	1.3	1.5	Z	2.2	1.2	1.4	1.8	2.2	1.6	2.1	1.7	2.7	0.5	1.2	1.4	0.3	1.5	3.4	4.5	3.5	2.7	2.9	2.0	4.5
25-May	2.5	1.3	2.9	4.3	4.3	Z	1.9	2.2	1.1	0.6	0.7	0.5	0.6	0.5	0.5	0.7	0.7	0.8	0.9	1.3	1.7	3.1	2.4	1.9	1.6	4.3
26-May	Z	1.9	1.6	1.4	2.0	2.2	2.3	2.6	3.7	2.1	0.7	0.5	0.7	0.7	0.6	0.7	0.9	1.2	1.4	0.4	0.3	0.3	0.8	0.4	1.3	3.7
27-May	0.0	Z	0.7	1.4	2.3	2.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	4.7	12.2	2.3	0.5	1.2	12.2
28-May	0.5	0.2	Z	0.5	1.2	0.9	0.3	0.6	1.5	0.3	0.2	0.1	0.1	0.5	0.1	0.4	0.4	3.0	7.6	11.2	15.7	8.3	5.4	1.4	2.6	15.7
29-May	1.9	1.1	0.5	Z	2.6	9.9	2.7	3.3	4.1	1.9	0.9	1.0	0.8	1.1	1.4	4.2	3.8	3.3	1.1	1.4	3.5	17.5	9.3	15.2	4.0	17.5
30-May	27.8	24.1	10.4	3.3	1.5	Z	7.5	4.2	1.5	0.8	0.9	0.9	0.8	1.2	2.6	4.4	3.4	3.7	4.5	7.8	9.2	7.9	3.7	3.1	5.9	27.8
31-May	3.0	2.8	1.8	1.8	2.2	Z	2.9	3.0	3.2	3.4	3.4	1.7	2.0	1.9	6.5	5.6	9.3	10.6	3.5	2.5	2.0	7.4	5.8	4.3	3.9	10.6
3.0 2.7 2.7 3.0 3.5 3.9 3.4 3.0 2.7 1.9 1.3 1.1 0.9 1.0 1.0 1.1 1.6 1.8 1.9 3.4 4.7 4.8 3.0 2.5																								Diurnal Average		
27.8 24.1 14.1 18.6 16.3 22.0 19.2 13.1 18.0 10.3 5.1 3.6 3.6 3.3 6.5 5.6 9.3 10.6 7.6 13.6 15.7 17.5 9.3 15.2																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	703	99.58	99.58
21 - 40	3	0.42	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	56	43	10	10	10	73	147	54	65	28	45	46	33	24	28	31	703
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	43	10	10	10	73	147	54	65	28	45	46	34	25	28	32	706

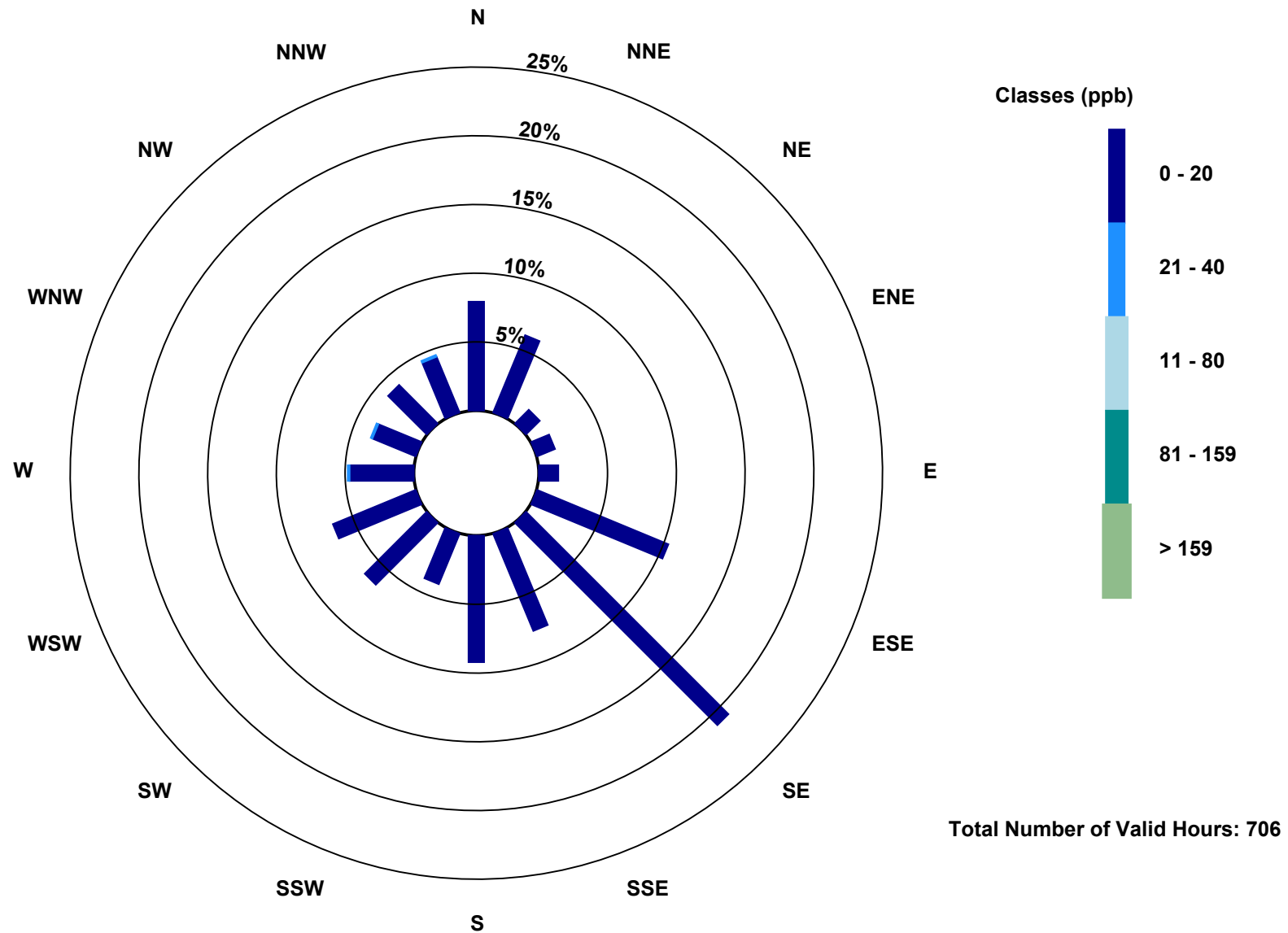
Total Number of Valid Hours: 706

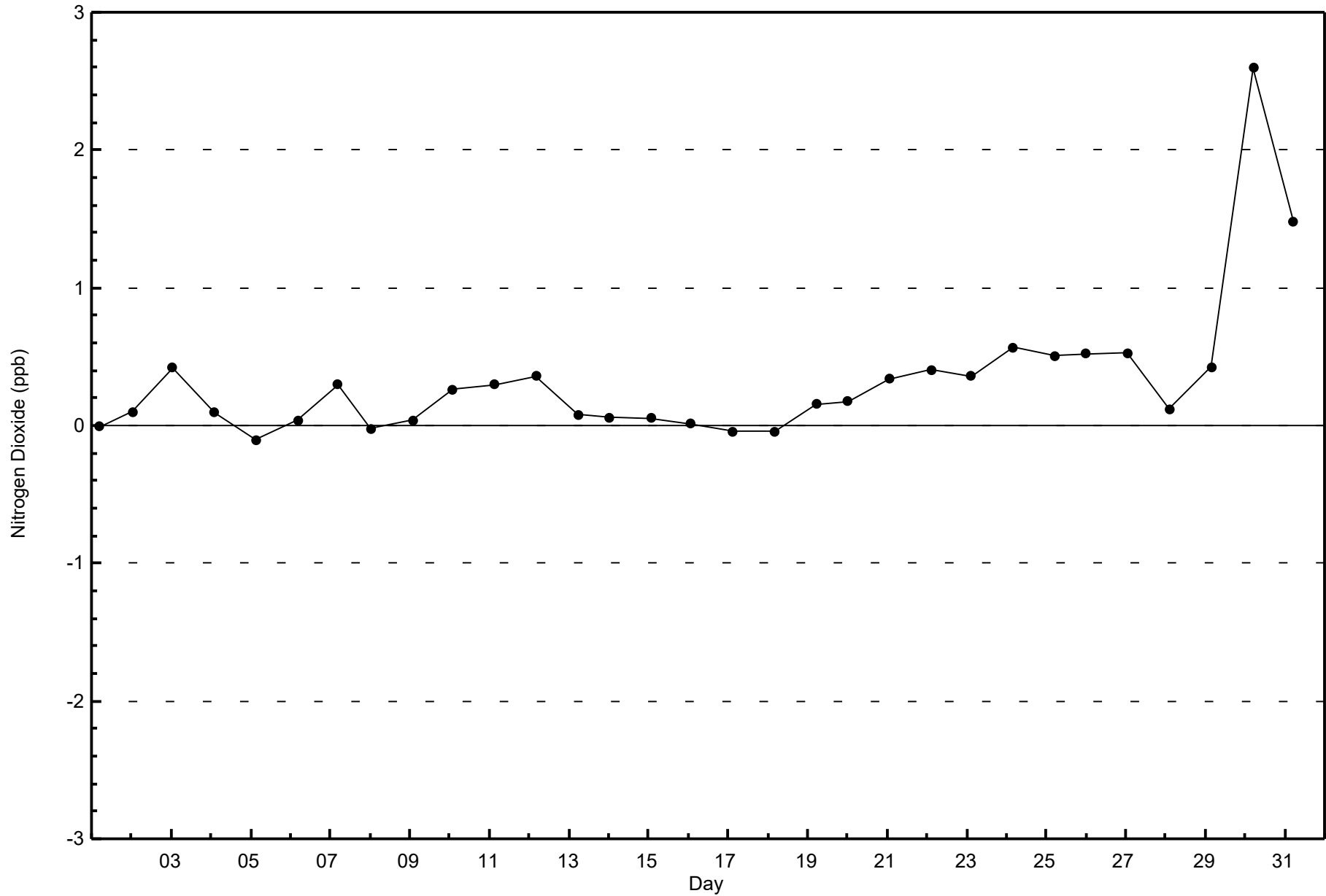
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes

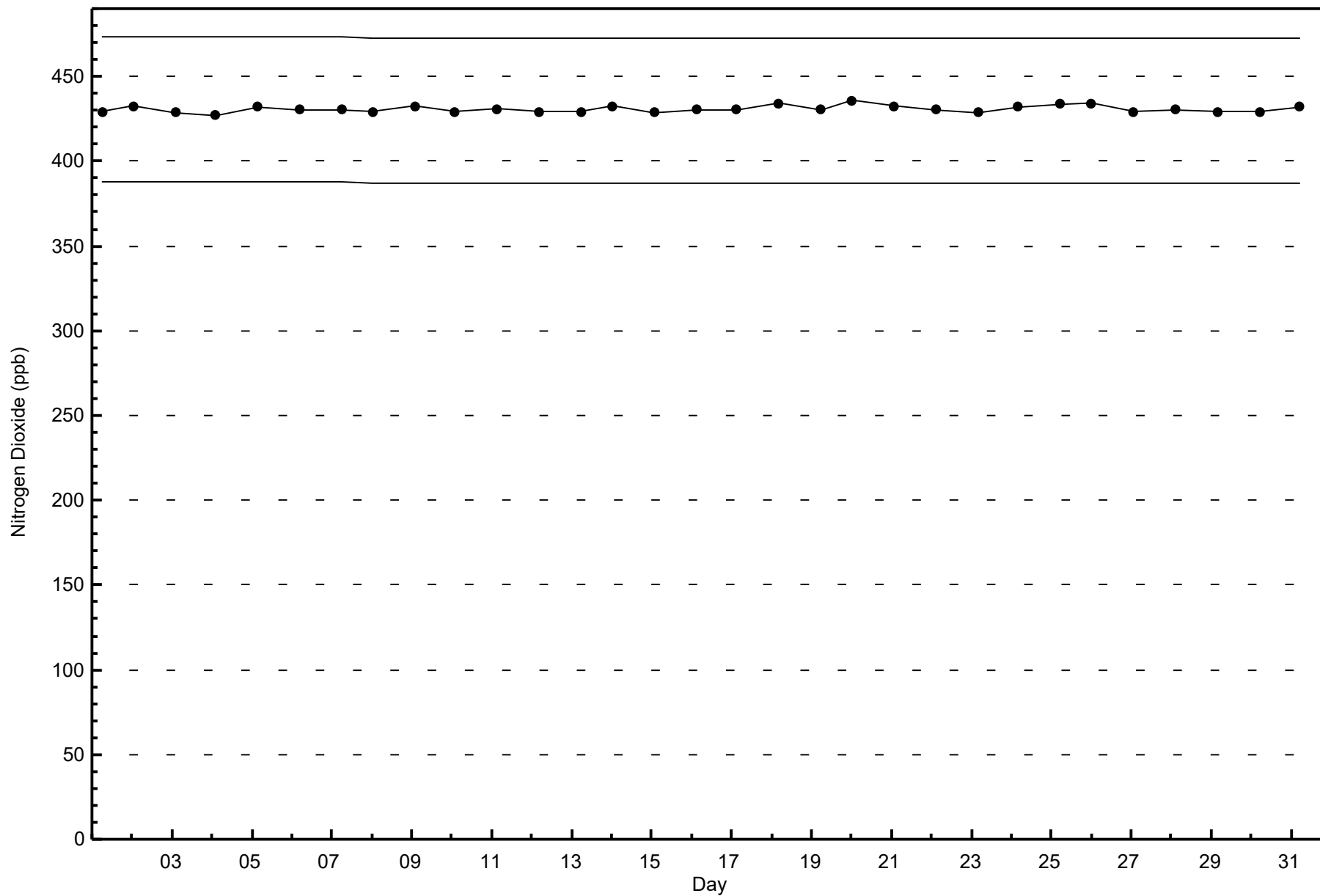






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

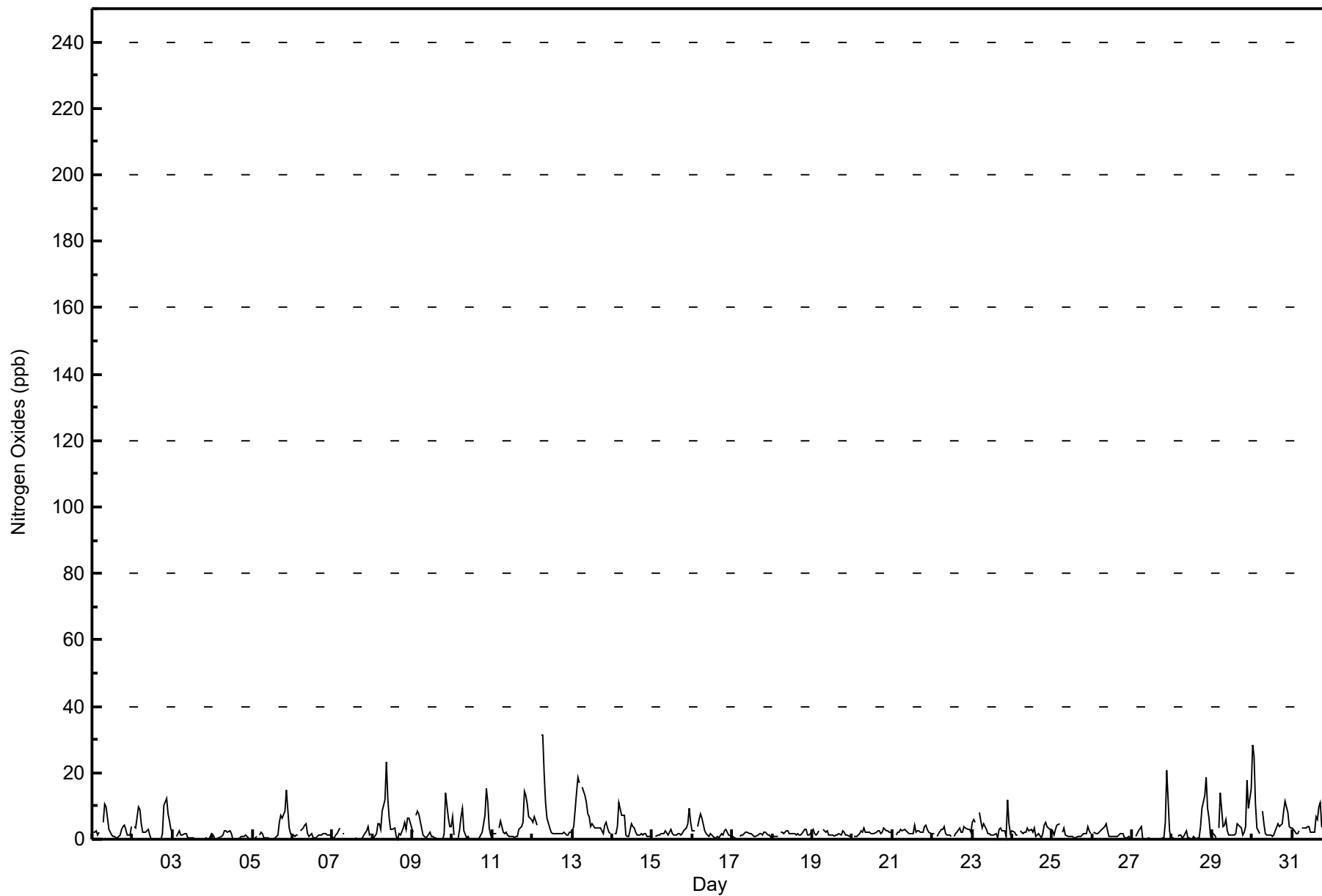
Patricia McInnes - May 2025

Maximum Value: 31.5 ppb on May 12 07:00																		Maximum Daily Average: 6.7 ppb on May 13										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 12:00																		Minimum Daily Average: 0.7 ppb on May 3										Hours of Data: 706	
Maximum Diurnal Average: 5.4 ppb at hour 22																		Minimum Diurnal Average: 1.2 ppb at hour 15										Hours of Missing Data: 38	
Monthly Average: 2.93 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 1.0 Median = 1.9 Q ₃ = 3.3 P ₉₀ = 6.5 P ₉₉ = 18.8										Hours of Calibration: 37	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	2.0	2.1	2.3	1.5	2.2	Z	5.0	10.6	9.7	6.5	2.9	1.3	0.9	0.8	0.6	0.3	1.1	3.1	3.7	4.2	3.0	1.3	1.2	3.6	3.0	10.6			
2-May	Z	3.8	3.5	9.9	8.8	4.5	2.3	2.2	1.9	3.0	1.4	0.0	0.0	0.2	0.0	0.0	0.0	0.2	1.8	10.1	12.2	7.5	5.5	3.0	3.6	12.2			
3-May	2.2	Z	0.7	1.6	2.4	1.1	1.1	1.9	1.7	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2	1.6	0.7	2.4			
4-May	1.4	0.4	Z	0.4	0.5	0.8	1.4	2.4	2.4	2.2	2.4	1.9	0.2	0.2	0.1	0.1	0.4	0.9	0.9	1.0	1.3	0.3	0.1	0.1	1.0	2.4			
5-May	0.0	0.0	0.9	Z	1.2	2.2	1.7	0.3	0.3	0.2	0.2	0.2	0.1	0.5	0.8	1.3	5.1	7.3	6.5	8.4	14.7	9.1	3.4	1.8	2.9	14.7			
6-May	1.1	1.0	1.3	1.4	Z	2.7	3.6	4.4	4.7	1.5	1.0	1.7	0.3	0.4	0.4	0.8	1.3	1.4	1.6	1.9	1.9	1.4	1.4	1.0	1.7	4.7			
7-May	0.5	0.4	1.1	1.8	3.4	Z	1.8	1.9	C	C	C	C	C	C	0.2	0.1	0.0	0.0	0.3	1.1	2.4	3.7	1.2	1.5	-	3.7			
8-May	Z	0.3	1.6	4.9	4.5	3.1	8.7	11.9	23.3	12.2	6.5	3.0	2.8	3.2	0.9	0.0	1.9	1.2	3.5	5.0	3.1	6.3	6.2	3.5	5.1	23.3			
9-May	2.2	Z	7.1	8.4	7.6	3.2	1.1	0.8	0.5	1.0	2.2	0.9	0.6	0.2	0.3	0.2	0.0	0.2	0.0	1.5	14.1	6.2	3.6	4.0	2.9	14.1			
10-May	6.6	1.3	Z	0.4	2.9	6.6	9.5	2.7	0.2	0.7	0.1	0.0	0.0	0.1	0.0	0.2	0.5	1.4	2.0	7.2	15.2	11.2	3.2	1.5	3.2	15.2			
11-May	1.8	1.7	1.6	Z	3.5	5.6	2.1	1.9	2.0	1.1	1.0	0.8	0.8	0.3	0.7	0.8	2.8	3.6	5.1	14.4	13.1	10.8	6.6	6.1	3.8	14.4			
12-May	4.9	6.9	5.7	4.3	Z	31.3	31.5	20.1	10.9	6.3	3.2	1.9	1.6	1.6	1.5	1.5	1.6	1.6	1.5	2.3	1.5	1.4	2.0	2.1	6.4	31.5			
13-May	2.7	3.9	14.1	18.8	17.1	Z	15.6	13.1	11.1	7.6	6.6	4.0	4.6	3.5	3.3	3.5	3.4	3.2	1.9	4.1	4.9	3.3	2.0	1.5	6.7	18.8			
14-May	Z	1.7	1.9	4.0	11.2	7.2	7.1	7.2	1.2	0.9	0.8	4.6	3.8	3.3	1.9	1.2	1.4	1.9	1.4	1.9	1.7	0.9	1.0	0.9	3.0	11.2			
15-May	1.0	Z	0.8	1.2	1.2	1.8	1.6	1.9	2.4	1.2	2.2	3.2	1.8	1.3	1.4	1.6	1.6	1.3	1.9	2.6	3.3	4.7	9.3	5.0	2.4	9.3			
16-May	2.6	2.4	Z	3.7	6.0	7.7	6.2	2.4	1.7	1.4	0.6	1.6	1.0	0.4	0.5	0.7	0.6	1.6	1.4	2.5	3.1	1.9	1.1	0.7	2.2	7.7			
17-May	0.7	0.6	0.6	Z	0.9	1.3	1.3	1.5	2.0	2.1	1.7	1.7	1.2	0.8	0.8	1.2	1.5	1.8	1.2	2.2	2.2	1.2	1.2	0.6	1.3	2.2			
18-May	0.7	0.7	0.7	0.6	Z	2.0	1.9	1.9	2.3	2.4	1.6	1.6	1.5	1.7	1.3	1.6	1.3	1.2	1.5	2.9	2.8	1.5	1.3	1.7	1.6	2.9			
19-May	3.1	1.9	1.3	1.8	2.5	Z	2.8	2.4	2.1	2.5	1.5	1.3	1.4	1.1	1.3	1.3	1.5	1.1	2.5	2.0	1.3	1.4	0.8	0.8	1.7	3.1			
20-May	Z	1.0	0.8	0.7	1.7	2.4	2.3	3.2	2.0	2.0	1.9	1.7	1.6	1.6	2.1	2.5	2.5	1.9	2.3	3.4	2.7	2.5	2.1	2.1	2.0	3.4			
21-May	1.6	Z	1.4	2.1	2.3	2.9	2.7	2.9	2.7	2.0	1.8	1.6	1.6	4.4	2.1	2.7	2.7	2.0	2.0	3.9	4.2	3.1	2.1	1.5	2.4	4.4			
22-May	1.8	1.6	Z	1.0	1.6	2.9	3.1	3.7	1.5	1.3	1.3	0.9	M	1.0	1.8	2.2	3.6	2.0	2.2	4.0	3.6	2.8	3.2	2.3	2.2	4.0			
23-May	5.0	6.0	5.2	Z	8.1	5.5	3.6	4.7	2.8	1.7	1.7	1.1	1.4	1.1	1.9	0.6	3.2	3.4	2.4	2.4	0.9	11.9	4.7	1.5	3.5	11.9			
24-May	2.7	1.9	1.3	1.5	Z	2.6	1.6	2.1	2.3	3.3	2.4	2.8	2.2	3.5	0.7	1.5	1.9	0.4	1.8	4.0	5.0	3.7	2.9	3.1	2.4	5.0			
25-May	2.6	1.3	3.0	4.4	4.6	Z	2.3	3.2	1.4	0.8	0.9	0.7	0.7	0.6	0.6	0.8	0.8	0.9	1.1	1.7	1.9	4.0	2.7	1.9	1.9	4.6			
26-May	Z	1.9	1.6	1.6	2.2	2.5	2.9	3.8	4.9	2.6	0.9	0.6	0.9	0.9	0.8	0.8	1.1	1.6	1.7	0.4	0.3	0.4	0.8	0.4	1.6	4.9			
27-May	0.0	Z	0.8	1.6	2.7	3.6	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.3	0.4	4.9	20.6	2.5	0.5	1.7	20.6			
28-May	0.5	0.3	Z	0.7	1.4	1.2	0.5	0.9	2.4	0.6	0.3	0.2	0.2	0.9	0.2	0.5	0.4	3.7	9.2	13.2	18.8	9.4	6.4	1.4	3.2	18.8			
29-May	1.9	1.1	0.5	Z	3.4	13.8	4.0	4.4	6.0	2.4	1.2	1.4	1.1	1.4	1.7	4.7	4.2	3.5	1.3	2.1	3.9	17.6	9.3	15.3	4.6	17.6			
30-May	28.5	24.9	10.6	3.5	1.7	Z	8.3	4.6	1.9	1.1	1.3	1.1	1.0	1.4	2.8	4.6	3.6	4.1	4.7	8.4	11.3	8.2	3.9	3.3	6.3	28.5			
31-May	3.2	3.0	1.9	1.9	2.5	Z	3.2	3.6	3.5	3.8	3.8	2.0	2.3	2.2	7.0	6.1	9.9	11.2	3.8	2.8	2.1	7.5	5.9	4.5	4.3	11.2			
3.1 2.8 2.8 3.2 4.0 4.9 4.5 4.1 3.7 2.5 1.8 1.5 1.2 1.3 1.2 1.4 1.9 2.2 2.3 3.9 5.2 5.4 3.2 2.5																								Diurnal Average					
28.5 24.9 14.1 18.8 17.1 31.3 31.5 20.1 23.3 12.2 6.6 4.6 4.6 4.4 7.0 6.1 9.9 11.2 9.2 14.4 18.8 20.6 9.3 15.3																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	700	99.15	99.15
21 - 40	6	0.85	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	55	43	10	10	10	73	147	54	65	28	45	45	33	24	27	31	700
21 - 40	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	6
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	43	10	10	10	73	147	54	65	28	45	46	34	25	28	32	706

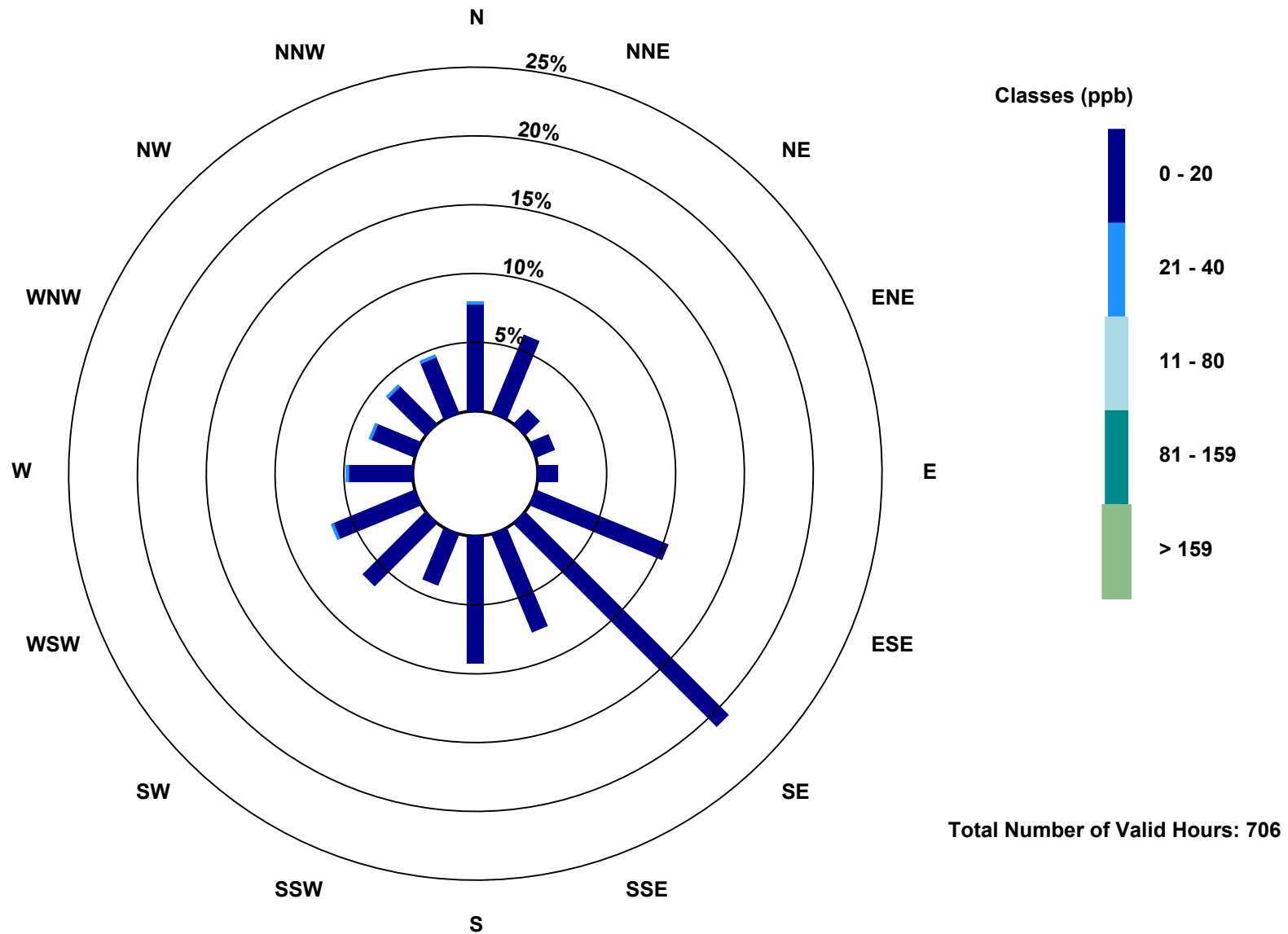
Total Number of Valid Hours: 706

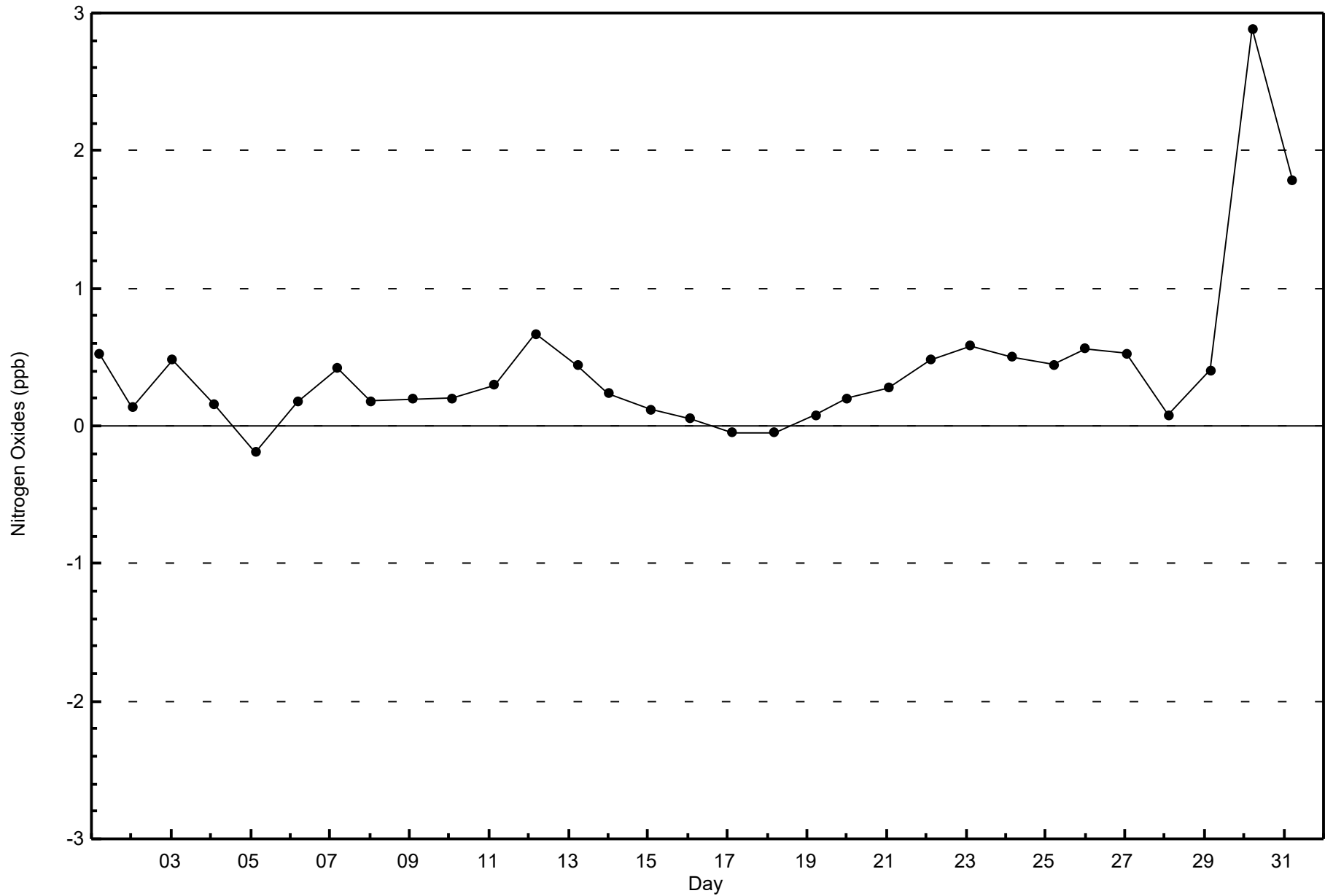
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes

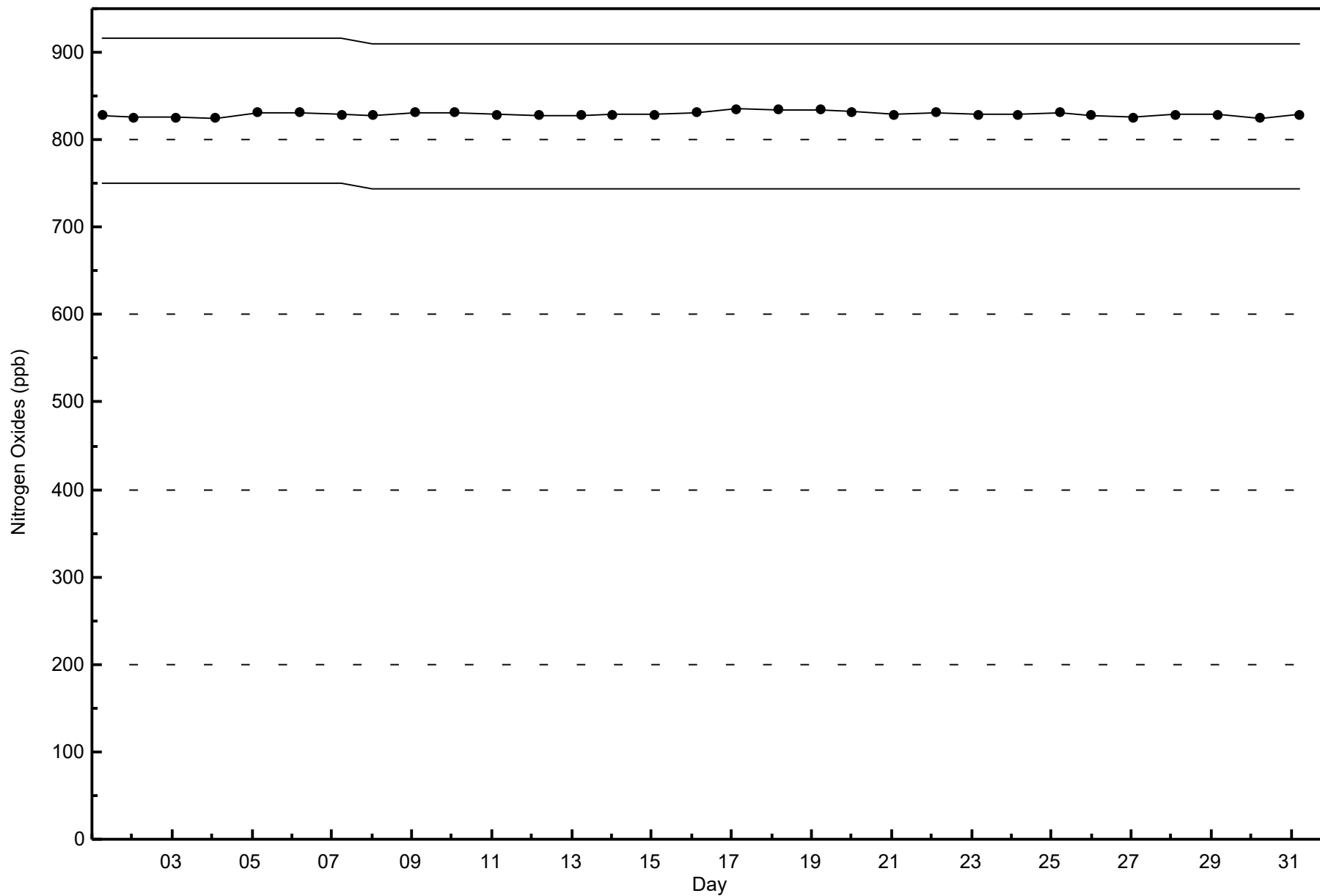






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH₃) - ppb

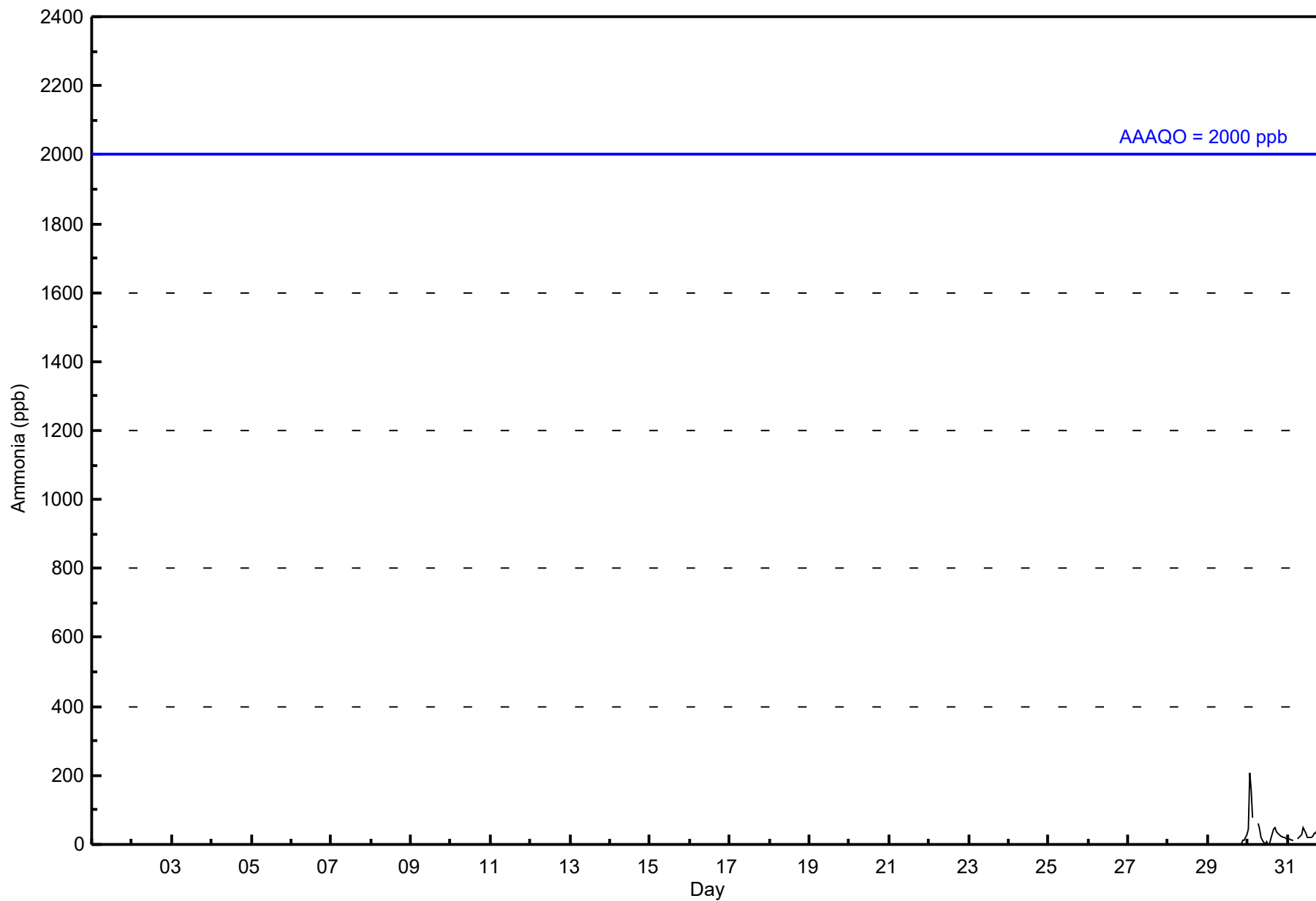
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 Maximum Value: 209.4 ppb on May 30 02:00																				Maximum Daily Average: 42.2 ppb on May 30					Hours in Service: 744 Hours of Data: 635	
Minimum Value: 0.0 ppb on May 1 01:00 Maximum Diurnal Average: 10.7 ppb at hour 2 Monthly Average: 2.45 ppb																				Minimum Daily Average: 0.0 ppb on May 1 Minimum Diurnal Average: 0.0 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 46.1					Hours of Missing Data: 109 Hours of Calibration: 44 Percent Operational Time: 91.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-May	0.0	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-May	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-May	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-May	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6-May	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7-May	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8-May	0.0	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9-May	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-May	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11-May	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-May	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-May	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-May	0.0	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-May	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-May	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-May	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-May	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19-May	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	M	M	M	M	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-May	0.0	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-May	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	C	C	C	C	C	0.0	0.0	0.0	--	0.0
22-May	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	0.0	0.0	DF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23-May	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24-May	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25-May	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26-May	0.0	0.0	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27-May	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-May	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29-May	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	13.2	26.9	2.5	26.9
30-May	44.7	209.4	159.1	78.9	Z	RE	60.4	43.4	20.3	11.9	0.0	10.0	0.0	0.0	14.6	46.7	48.4	37.7	33.0	27.4	24.6	21.5	19.4	17.4	42.2	209.4
31-May	15.8	14.6	12.8	11.7	Z	RE	17.5	19.9	30.4	48.4	39.9	30.6	21.5	20.8	21.1	23.6	30.8	34.5	42.9	40.1	30.3	24.1	22.2	18.5	26.0	48.4
2.3 10.7 10.1 5.3 0.0 0.0 3.7 2.4 1.7 2.1 1.4 1.4 0.8 0.7 1.2 2.4 2.6 2.4 2.5 2.3 1.8 1.9 1.8 2.0 Diurnal Average																										
44.7 209.4 159.1 78.9 0.0 0.0 60.4 43.4 30.4 48.4 39.9 30.6 21.5 20.8 21.1 46.7 48.4 37.7 42.9 40.1 30.3 24.1 22.2 26.9 Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure RE - Recovery																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ammonia (NH₃) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ammonia (NH₃) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	591	93.07	93.07
6 - 10	1	0.16	93.23
11 - 15	7	1.10	94.33
16 - 20	7	1.10	95.43
21 - 25	8	1.26	96.69
> 26	21	3.31	100.00

Total Number of Valid Hours: 635

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ammonia (NH₃) - ppb
Patricia McInnes - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	47	39	10	8	8	61	121	48	58	24	36	40	28	21	22	20	591
6 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11 - 15	0	0	0	0	0	0	0	0	0	0	1	2	1	2	0	1	7
16 - 20	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	2	7
21 - 25	1	3	0	0	0	0	0	0	1	1	0	0	0	0	0	2	8
> 26	3	1	0	1	1	1	0	0	1	1	4	1	2	2	2	1	21
Totals	51	43	10	9	9	62	121	48	62	29	41	43	31	25	25	26	635

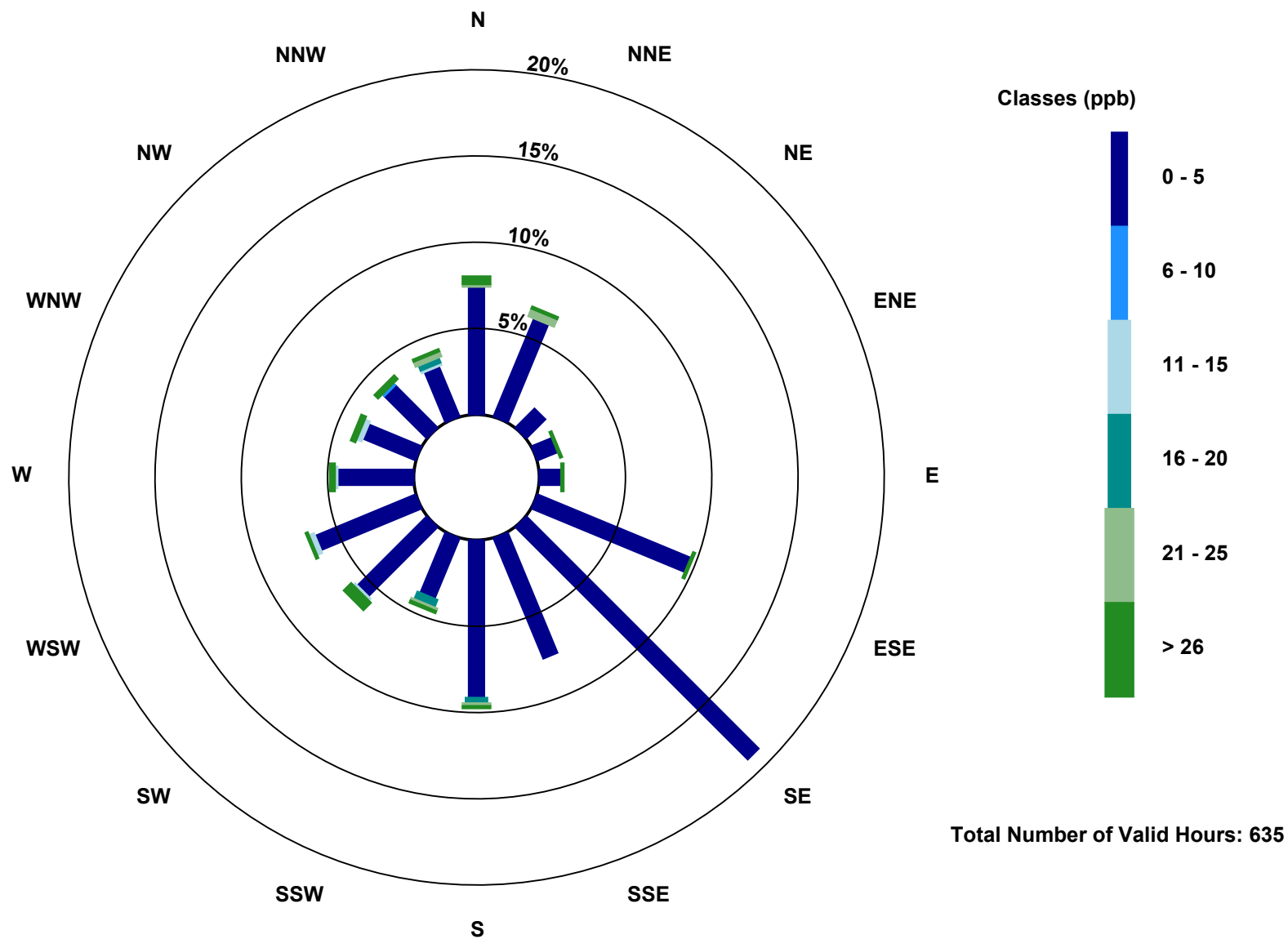
Total Number of Valid Hours: 635

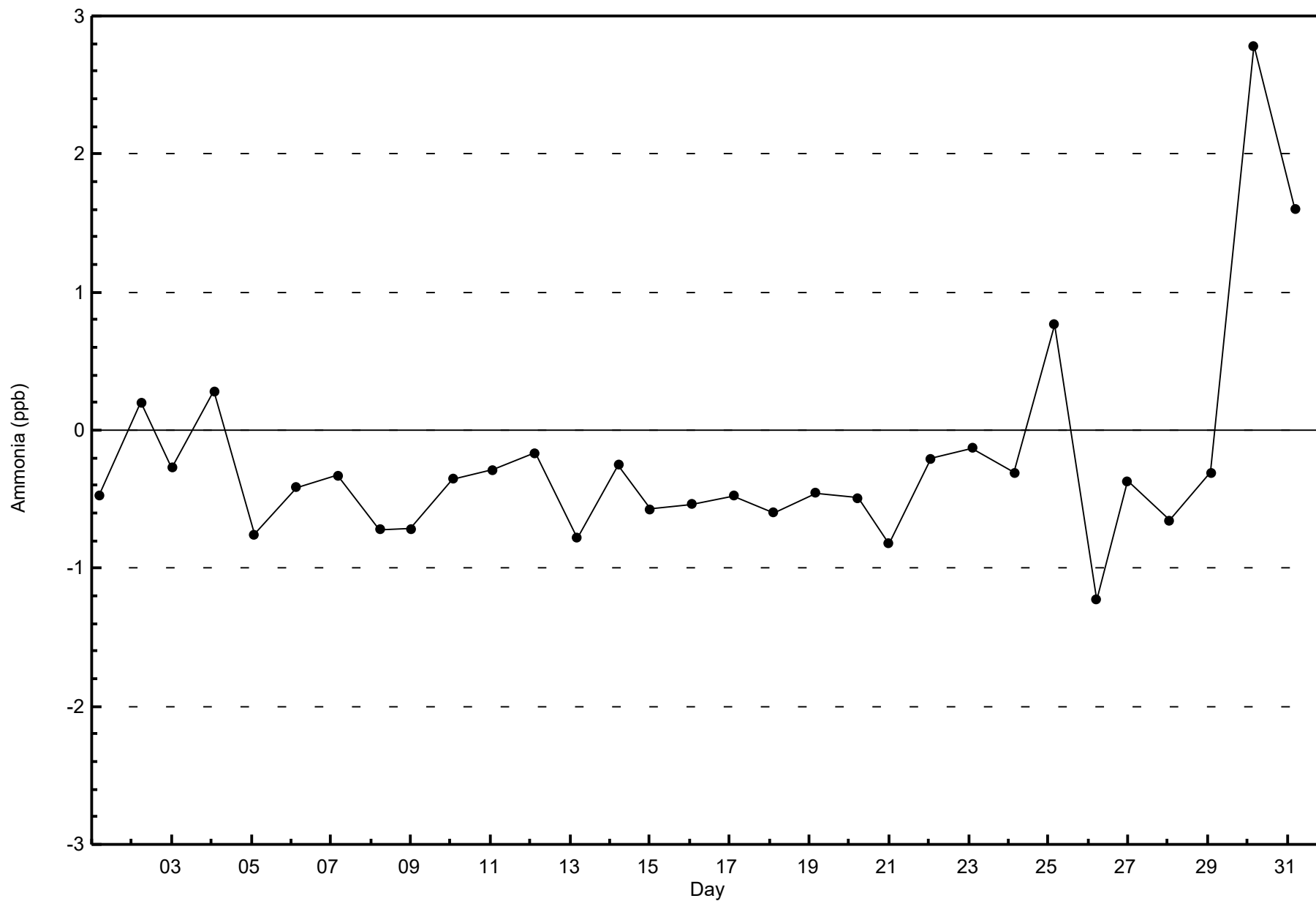
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Ammonia (NH₃) - ppb
Patricia McInnes

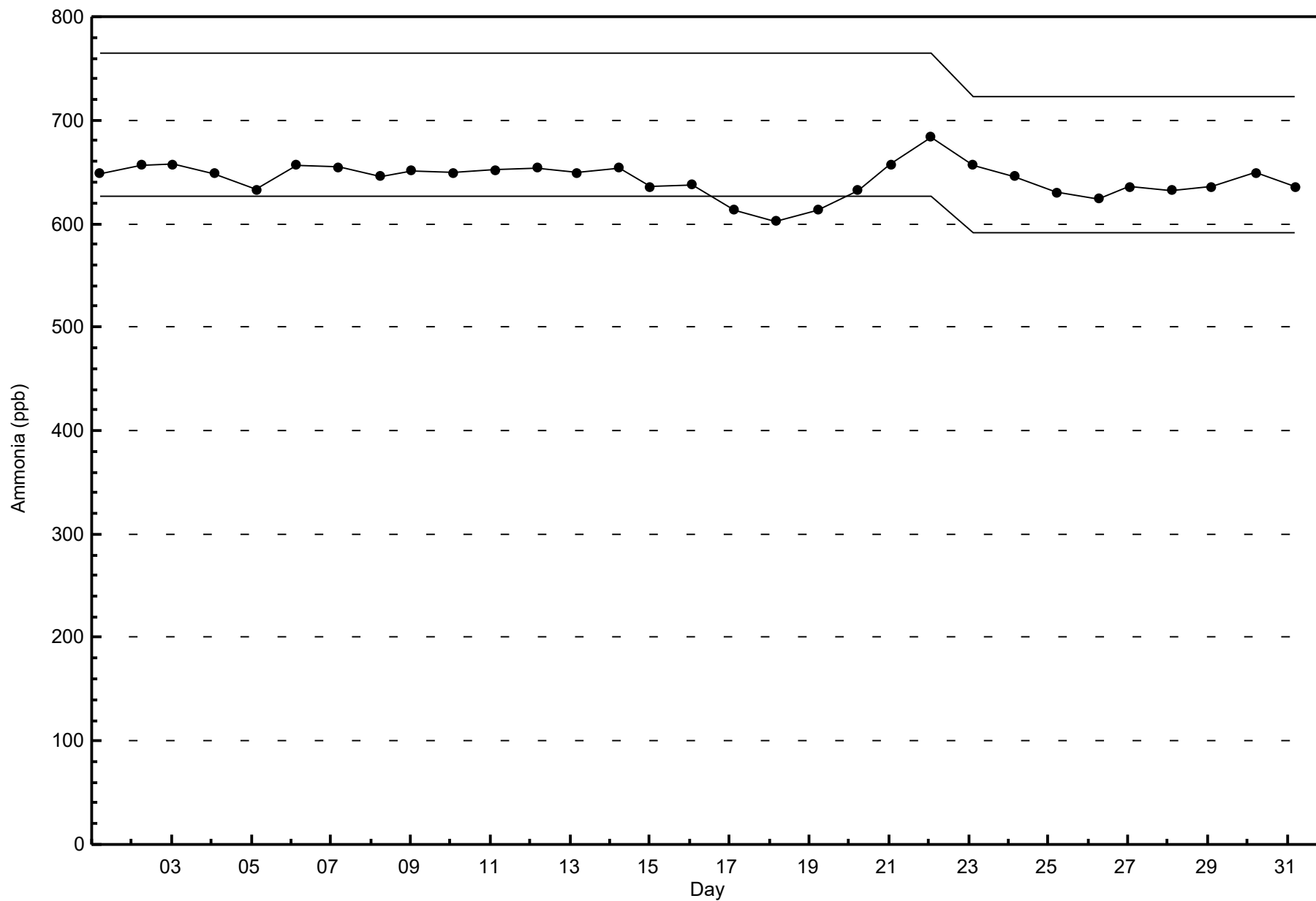






Wood Buffalo Environmental Association
Span Responses

Ammonia (NH₃) - ppb
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

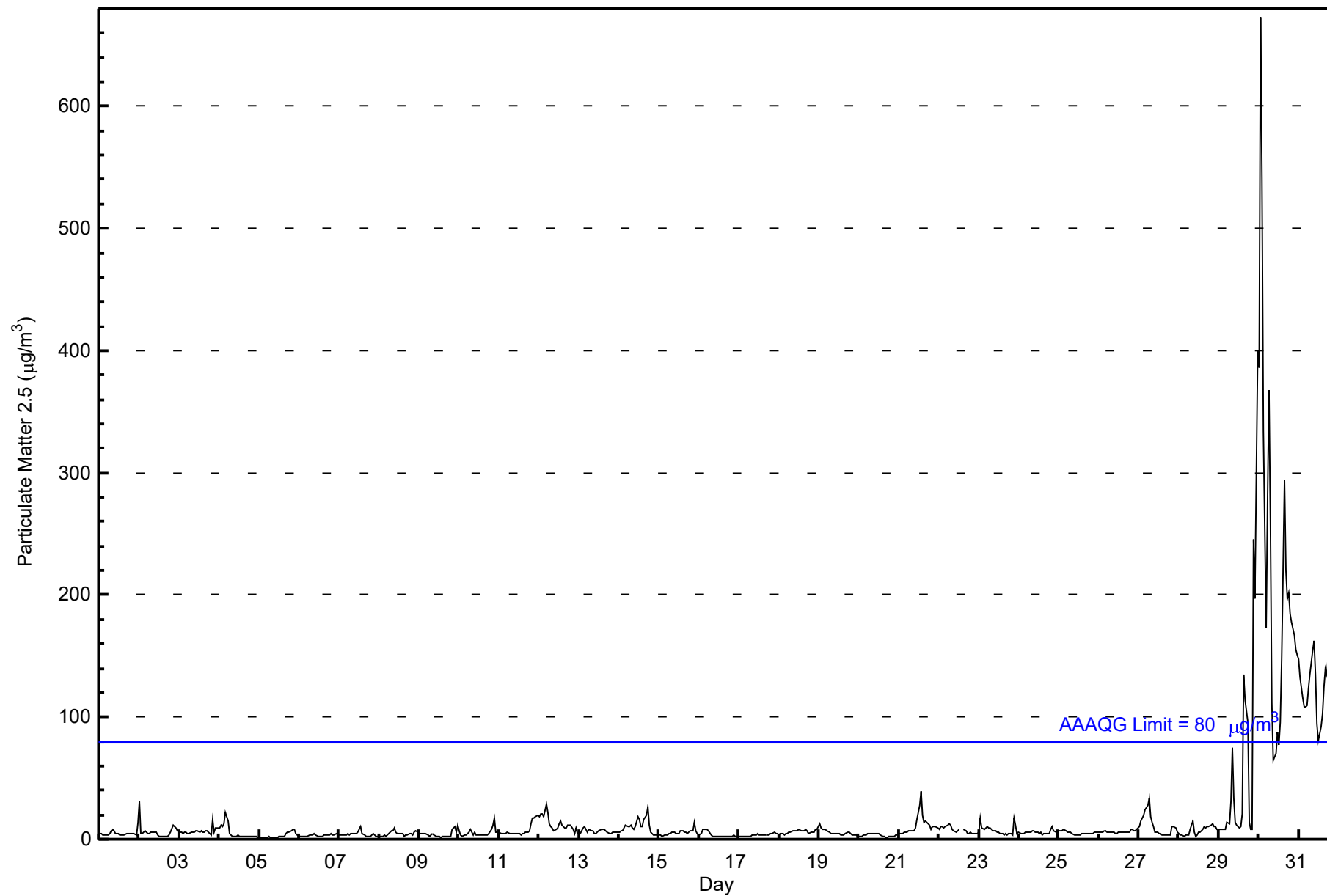
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 51 24-hr: 3 Maximum Value: 672.5 µg/m ³ on May 30 02:00 Minimum Value: 0.9 µg/m ³ on May 5 09:00 Maximum Diurnal Average: 31.8 µg/m ³ at hour 2 Monthly Average: 18.69 µg/m ³																				Maximum Daily Average: 225.6 µg/m ³ on May 30 Minimum Daily Average: 3.0 µg/m ³ on May 5 Minimum Diurnal Average: 10.9 µg/m ³ at hour 13 Percentiles: P ₁ = 1.3 P ₁₀ = 2.5 Q ₁ = 3.7 Median = 5.3 Q ₃ = 8.6 P ₉₀ = 18.6 P ₉₉ = 271.7				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	4.0	4.1	3.4	3.1	3.2	3.6	4.6	7.0	7.5	6.4	4.8	4.1	4.0	3.9	3.7	3.9	4.4	4.8	5.0	4.7	4.5	4.4	4.0	14.3	4.9	14.3
2-May	30.8	4.6	4.1	6.5	5.7	5.1	4.9	5.3	5.7	6.1	5.4	3.0	2.0	2.1	2.2	2.3	2.2	2.4	3.0	5.5	11.3	9.9	9.2	6.5	6.1	30.8
3-May	6.3	5.4	5.1	5.8	5.4	5.1	5.2	5.2	6.2	6.1	7.0	6.7	6.2	6.4	6.0	5.4	6.8	6.7	4.4	3.9	16.2	6.1	9.5	9.1	6.5	16.2
4-May	9.6	11.9	10.7	12.6	21.8	15.1	4.2	3.9	2.6	2.5	2.7	3.9	2.3	2.3	2.2	1.9	2.1	2.2	1.9	1.9	2.0	1.9	1.9	1.3	5.2	21.8
5-May	0.9	0.9	1.6	1.4	1.2	1.2	1.8	0.9	0.9	1.1	1.5	1.7	1.9	2.2	2.3	2.9	4.8	5.6	5.2	6.5	8.5	8.0	4.6	4.0	3.0	8.5
6-May	2.9	2.7	2.7	2.7	2.8	2.8	3.1	3.4	3.5	4.1	3.5	2.8	2.7	2.7	2.8	3.0	3.3	3.5	3.6	4.0	3.8	3.8	4.4	3.5	3.3	4.4
7-May	3.3	3.2	3.3	3.5	3.7	4.4	3.7	4.0	4.3	4.8	5.0	5.4	8.2	10.1	4.4	3.9	2.3	2.0	2.0	2.2	4.2	2.9	2.5	2.6	4.0	10.1
8-May	2.4	2.2	2.5	3.1	2.7	2.9	4.7	6.5	6.7	8.8	5.2	4.9	4.7	4.4	5.0	2.1	3.2	2.9	4.5	4.7	4.0	5.9	6.5	5.7	4.4	8.8
9-May	4.9	4.5	4.1	4.3	4.4	3.0	2.9	3.2	4.4	3.6	2.9	2.8	2.8	1.5	2.0	1.8	1.8	2.0	2.1	2.8	8.5	10.1	6.1	11.7	4.1	11.7
10-May	7.0	3.2	2.7	2.9	3.3	4.5	5.6	8.4	3.4	5.4	3.0	3.3	3.3	3.3	3.1	3.2	3.3	3.6	4.3	8.4	11.4	17.5	6.2	5.3	5.2	17.5
11-May	5.7	4.9	4.3	4.3	5.0	5.5	4.6	5.1	4.2	4.2	4.4	4.2	4.0	3.7	4.5	4.6	5.2	5.6	6.5	12.4	17.0	17.2	18.6	19.2	7.3	19.2
12-May	17.9	20.4	20.4	18.6	28.5	22.2	13.2	10.4	9.3	7.5	7.7	9.8	13.1	15.2	11.3	9.2	9.7	11.7	12.1	11.7	7.8	5.0	8.9	4.8	12.8	28.5
13-May	4.4	4.6	9.4	10.1	8.3	5.3	8.1	6.4	6.8	4.9	4.5	5.4	7.5	7.8	8.1	7.9	7.2	6.3	5.0	5.2	5.9	5.6	5.4	5.4	6.5	10.1
14-May	6.0	6.4	7.3	9.3	11.4	10.3	10.8	11.3	8.8	8.6	9.8	18.5	16.0	10.4	10.7	16.4	19.7	27.0	11.1	5.5	4.5	3.7	3.9	3.5	10.5	27.0
15-May	3.0	3.2	2.7	3.0	3.1	3.4	4.2	4.4	5.5	6.0	4.6	4.6	5.0	6.7	6.4	6.2	5.3	4.9	6.3	6.5	6.8	13.5	7.3	4.3	5.3	13.5
16-May	3.0	4.7	7.5	8.5	7.7	8.1	6.7	3.0	2.5	2.3	2.3	2.7	2.5	1.8	1.8	1.9	2.0	2.3	2.3	2.4	2.7	2.9	2.4	2.2	3.6	8.5
17-May	1.9	1.9	1.8	2.0	2.3	2.2	2.4	2.6	2.9	3.3	3.8	4.2	3.9	3.8	3.7	4.0	3.9	4.0	4.0	4.4	4.8	5.4	4.8	4.3	3.4	5.4
18-May	3.8	4.1	4.2	4.0	4.4	4.8	5.8	6.3	6.5	6.3	6.4	7.2	8.4	7.4	7.2	7.2	7.5	6.5	4.7	5.6	5.6	6.3	8.6	7.6	6.1	8.6
19-May	12.4	9.3	8.0	8.5	8.1	6.9	5.7	5.1	4.7	4.6	4.2	4.2	4.3	3.8	3.9	3.7	4.0	5.4	5.2	4.7	3.5	3.1	3.3	2.5	5.4	12.4
20-May	2.3	2.5	2.8	3.2	3.7	4.9	5.0	4.9	4.6	4.4	4.3	4.4	4.2	3.5	2.5	1.8	1.4	1.5	1.9	2.0	2.3	2.6	3.3	3.5	3.2	5.0
21-May	4.1	4.7	4.7	5.3	5.7	6.2	6.5	6.9	6.7	6.6	8.8	16.6	27.1	39.6	19.5	14.0	15.3	14.0	11.3	8.6	10.7	10.8	10.5	8.8	11.4	39.6
22-May	8.6	10.3	10.0	8.7	10.1	11.5	12.1	11.9	8.3	6.5	6.1	6.6	8.6	C	C	7.9	6.4	5.1	5.0	5.6	4.9	4.3	4.6	4.7	7.6	12.1
23-May	6.1	17.8	8.7	7.8	9.3	10.4	9.5	8.8	7.3	6.7	7.4	6.3	5.7	4.3	4.7	3.6	4.5	4.0	4.3	4.6	3.9	17.5	12.0	4.8	7.5	17.8
24-May	5.6	4.9	4.7	4.6	5.5	5.6	5.7	6.3	6.6	6.7	6.2	5.2	4.2	5.7	3.8	4.1	4.6	4.2	5.0	8.0	10.3	7.4	6.2	6.3	5.7	10.3
25-May	6.4	6.4	6.8	7.7	7.2	5.8	5.8	5.7	4.0	3.0	3.3	3.3	3.5	3.8	4.1	4.7	5.1	4.8	4.6	4.5	5.0	5.7	5.5	5.4	5.1	7.7
26-May	5.6	5.8	6.2	6.4	6.4	6.3	6.0	6.2	6.3	6.3	5.2	4.5	5.2	5.2	5.3	5.6	6.2	6.2	6.2	7.7	8.0	7.5	6.4	7.6	6.2	8.0
27-May	10.5	14.7	17.2	20.1	23.8	28.0	33.7	18.6	14.0	10.8	5.7	5.4	4.1	4.0	3.9	3.5	3.1	3.9	4.0	3.6	9.9	10.3	9.5	5.6	11.2	33.7
28-May	4.3	3.3	2.9	2.8	2.9	3.1	3.3	8.3	14.7	5.2	2.6	3.9	5.8	6.2	7.8	10.7	9.2	10.0	9.8	11.3	12.4	9.9	10.2	8.2	7.0	14.7
29-May	7.7	7.7	7.7	8.2	8.6	14.1	13.2	30.6	74.8	33.1	14.3	11.6	9.7	9.8	20.4	134.5	114.0	95.2	13.9	7.7	8.6	245.9	197.4	399.6	62.0	399.6
30-May	386.5	672.5	540.6	333.7	172.3	280.0	367.3	259.6	112.2	64.0	70.5	87.1	77.1	95.6	147.1	293.4	220.1	197.1	201.7	184.3	177.2	166.9	155.2	151.4	225.6	672.5
31-May	147.0	132.7	115.7	108.7	108.1	109.0	123.2	134.9	154.8	162.2	134.5	95.0	80.7	92.8	102.4	123.9	139.8	134.6	149.6	126.9	92.9	87.9	98.5	87.2	118.5	162.2
23.4 31.8 26.9 20.4 16.0 19.4 22.4 19.5 16.5 13.3 11.5 11.3 10.9 12.3 13.8 22.6 20.3 19.0 16.5 15.4 15.5 22.9 20.6 26.2																										Diurnal Average
386.5 672.5 540.6 333.7 172.3 280.0 367.3 259.6 154.8 162.2 134.5 95.0 80.7 95.6 147.1 293.4 220.1 197.1 201.7 184.3 177.2 245.9 197.4 399.6																										Diurnal Maximum
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Patricia McInnes - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	387	52.16	52.16
6 - 15	266	35.85	88.01
16 - 25	25	3.37	91.37
26 - 80	13	1.75	93.13
> 81.0	51	6.87	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Patricia McInnes - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	28	18	3	3	5	42	83	27	35	16	29	34	16	13	19	16	387
6 - 15	21	17	7	6	5	30	69	25	19	8	13	13	13	8	3	9	266
16 - 25	5	3	0	0	0	3	1	1	4	0	0	1	1	0	4	2	25
26 - 80	0	2	0	0	0	0	3	1	3	0	0	1	0	1	0	2	13
> 81.0	4	4	0	1	1	1	3	1	4	5	6	3	6	4	3	5	51
Totals	58	44	10	10	11	76	159	55	65	29	48	52	36	26	29	34	742

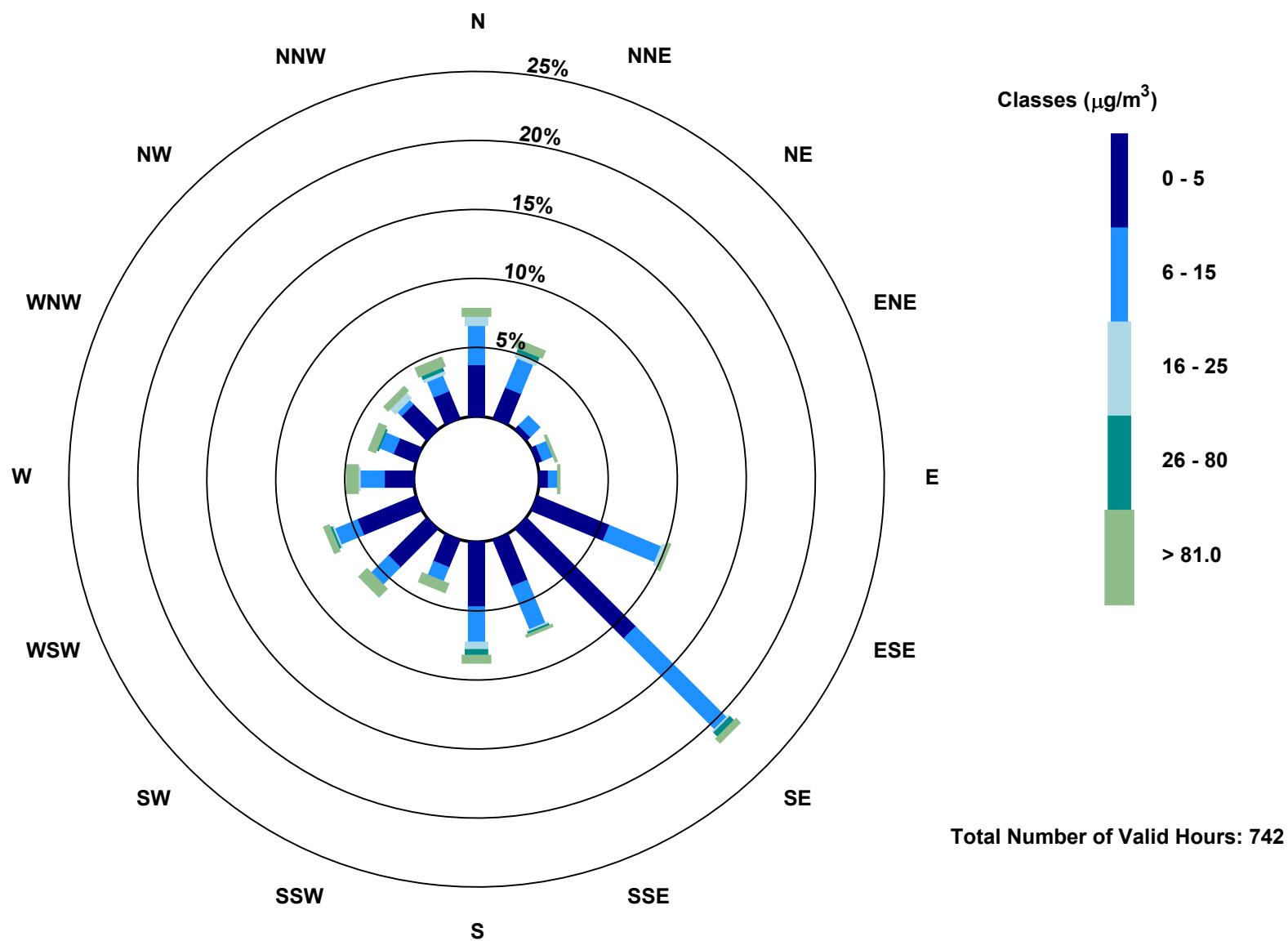
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Patricia McInnes





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

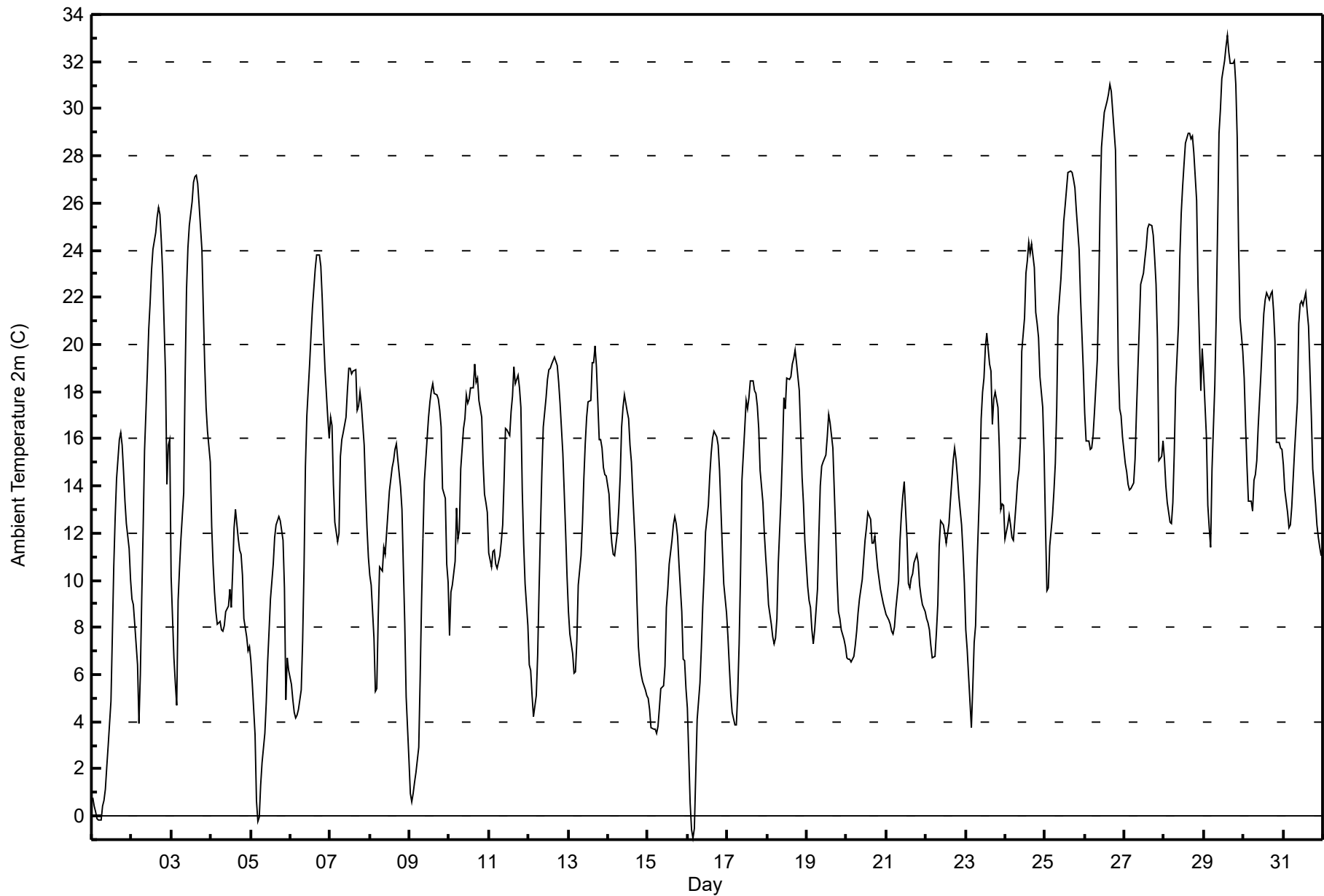
Patricia McInnes - May 2025

Maximum Value: 33.1 C on May 29 15:00																				Maximum Daily Average: 24.7 C on May 29				Hours in Service: 744		
Minimum Value: -1.0 C on May 16 04:00																				Minimum Daily Average: 6.8 C on May 5				Hours of Data: 744		
Maximum Diurnal Average: 19.5 C at hour 16																				Minimum Diurnal Average: 7.7 C at hour 4				Hours of Missing Data: 0		
Monthly Average: 14.13 C																				Percentiles: P ₁ = 0.1 P ₁₀ = 5.8 Q ₁ = 9.5 Median = 13.7 Q ₃ = 18.1 P ₉₀ = 23.5 P ₉₉ = 31.2				Hours of Calibration: 0		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.8	0.4	0.2	-0.1	-0.2	-0.1	0.4	0.7	1.1	2.1	3.0	4.9	7.7	10.6	12.7	14.3	16.0	16.3	15.7	14.6	13.4	12.4	11.3	10.0	7.0	16.3
2-May	9.2	9.0	8.1	6.4	3.9	6.0	9.2	12.2	15.5	18.8	20.7	21.8	23.2	24.1	24.7	25.4	25.8	25.5	24.4	23.0	18.7	14.1	15.7	16.0	16.7	25.8
3-May	10.1	6.7	5.6	4.7	9.1	10.5	11.7	13.7	18.5	22.3	24.1	25.1	26.1	26.9	27.1	27.2	26.8	25.9	24.0	21.6	19.1	17.3	16.3	15.0	18.1	27.2
4-May	12.3	10.7	9.5	8.7	8.2	8.3	7.9	7.8	8.1	8.7	8.9	9.6	8.9	10.4	12.3	13.0	11.7	11.3	11.1	10.2	8.4	7.6	7.0	7.2	9.5	13.0
5-May	6.6	5.6	3.5	0.6	-0.2	0.0	1.3	2.3	3.5	4.8	6.5	7.9	9.2	10.7	11.8	12.3	12.5	12.7	12.5	11.7	9.7	4.9	6.7	6.2	6.8	12.7
6-May	5.6	4.9	4.4	4.2	4.3	4.5	5.4	7.4	10.5	14.8	17.0	19.2	20.4	21.5	22.4	23.2	23.8	23.8	23.3	22.0	20.3	19.0	16.9	16.0	14.8	23.8
7-May	16.9	16.5	14.1	12.5	11.6	12.0	15.2	15.9	16.3	16.9	18.1	19.0	19.0	18.8	18.9	18.9	17.2	17.4	18.0	17.5	15.7	13.8	12.2	11.0	16.0	19.0
8-May	10.2	9.8	7.5	5.3	5.4	8.4	10.6	10.4	11.4	11.1	12.0	12.9	13.7	14.8	15.1	15.6	15.8	15.1	14.0	13.0	10.6	8.2	5.0	2.4	10.8	15.8
9-May	0.9	0.6	1.0	1.4	1.9	2.9	5.8	9.1	11.8	14.2	16.0	16.9	17.6	18.0	18.3	17.9	17.9	17.7	17.2	16.5	13.9	13.5	10.7	9.9	11.3	18.3
10-May	7.7	9.5	9.8	10.8	13.1	11.8	12.1	14.7	16.5	16.8	17.9	17.5	17.7	18.1	18.1	19.2	18.4	18.6	17.6	16.9	15.0	13.6	13.3	12.9	14.9	19.2
11-May	11.2	10.6	11.2	11.3	10.7	10.5	11.1	11.6	12.3	14.2	16.4	16.4	16.1	17.2	17.8	19.0	18.3	18.7	18.2	17.3	13.8	11.5	9.8	8.1	13.9	19.0
12-May	6.4	6.2	5.1	4.2	5.1	6.8	9.6	12.1	14.6	16.5	17.7	18.5	19.0	19.0	19.2	19.5	19.3	19.1	18.4	17.5	15.4	13.7	12.0	10.2	13.5	19.5
13-May	8.7	7.7	6.9	6.1	6.1	7.4	9.8	11.0	12.4	14.3	15.8	16.9	17.6	17.6	19.2	19.3	19.9	19.0	16.0	16.0	15.6	14.8	14.5	14.4	13.6	19.9
14-May	13.6	12.3	11.6	11.1	11.0	12.1	13.1	14.4	16.5	17.3	17.9	17.2	16.9	15.7	15.0	13.6	11.1	9.0	7.2	6.4	6.0	5.7	5.4	5.1	11.9	17.9
15-May	5.0	4.5	3.8	3.7	3.7	3.5	3.8	4.5	5.4	5.5	6.4	8.8	9.6	10.7	11.7	12.3	12.7	12.4	11.9	10.7	8.7	6.6	6.6	5.4	7.4	12.7
16-May	4.6	0.5	-0.6	-1.0	-0.5	1.8	4.1	5.7	7.1	8.9	10.3	12.1	13.2	14.4	15.4	16.0	16.3	16.1	15.7	14.6	13.0	11.3	9.9	8.6	9.1	16.3
17-May	7.6	6.4	5.2	4.4	3.9	3.8	5.2	7.3	10.3	14.3	16.4	17.6	17.3	17.8	18.5	18.5	18.1	17.9	17.4	16.5	14.7	13.3	12.0	11.0	12.3	18.5
18-May	10.1	9.0	8.1	7.6	7.3	7.5	8.3	10.8	13.6	15.5	17.7	17.3	18.6	18.5	18.7	19.2	19.4	19.7	19.2	18.0	16.2	14.4	13.2	11.6	14.1	19.7
19-May	9.7	9.2	8.9	7.9	7.3	7.9	9.6	12.0	14.0	14.9	15.0	15.3	16.1	17.0	16.7	16.2	15.6	12.1	10.1	8.7	8.4	7.9	7.5	7.2	11.5	17.0
20-May	6.7	6.7	6.6	6.6	6.8	7.2	7.8	8.6	9.2	10.0	10.8	11.7	12.2	12.9	12.6	11.6	11.6	11.9	11.2	10.5	9.6	9.3	9.0	8.8	9.6	12.9
21-May	8.5	8.3	8.2	7.8	7.7	8.0	8.8	10.0	11.7	12.8	13.6	14.2	11.8	9.9	9.7	10.1	10.3	10.7	11.1	10.7	9.8	9.3	8.9	8.7	10.0	14.2
22-May	8.4	8.2	7.9	7.2	6.7	6.8	7.8	9.0	11.5	12.5	12.4	12.0	11.6	12.0	12.4	13.3	15.0	15.6	15.2	14.4	13.6	12.4	11.2	9.8	11.1	15.6
23-May	7.9	7.1	6.0	3.7	5.5	7.3	8.1	10.6	14.1	16.9	18.0	18.6	19.9	20.5	19.2	18.9	16.6	17.7	18.0	17.3	15.6	13.0	13.2	13.2	13.6	20.5
24-May	11.8	12.4	12.8	12.4	11.8	11.7	13.3	14.2	14.6	15.8	19.7	21.1	23.0	23.5	24.3	23.9	24.3	23.2	21.4	20.9	20.3	18.6	17.4	15.3	17.8	24.3
25-May	12.2	9.5	9.7	11.5	12.8	13.8	15.0	17.3	21.2	22.8	24.0	25.2	25.9	26.6	27.3	27.4	27.3	27.0	26.6	25.7	24.0	22.0	20.5	18.9	20.6	27.4
26-May	17.1	15.9	15.9	15.5	15.6	16.1	17.2	19.4	22.1	25.9	28.3	29.1	29.9	30.3	30.6	31.0	30.8	29.9	28.2	24.0	19.2	17.3	17.0	16.1	22.6	31.0
27-May	14.9	14.6	14.1	13.8	13.9	14.1	15.2	17.1	18.9	20.7	22.6	23.0	23.6	24.2	24.9	25.1	25.0	24.6	23.7	22.5	20.2	15.1	15.3	15.9	19.3	25.1
28-May	15.1	14.0	13.3	12.5	12.4	13.3	15.4	18.2	20.8	23.8	25.6	26.7	27.6	28.5	28.9	29.0	28.7	28.8	28.1	26.1	22.5	20.2	18.0	19.8	21.6	29.0
29-May	18.7	16.1	13.2	12.3	11.4	14.7	18.3	21.2	25.0	29.0	30.0	31.3	32.0	32.6	33.1	32.4	31.9	31.9	32.0	31.1	28.8	24.2	21.1	19.7	24.7	33.1
30-May	18.6	16.5	14.9	13.3	13.4	12.9	14.3	14.5	15.1	16.5	18.8	20.1	21.3	21.9	22.2	21.9	22.1	22.2	21.4	20.1	15.9	15.9	15.6	15.5	17.7	22.2
31-May	14.9	13.8	12.9	12.2	12.4	13.1	14.3	15.5	17.5	20.9	21.7	21.9	21.7	22.2	21.4	20.7	18.9	17.0	14.7	13.3	12.3	11.8	11.4	11.0	16.1	22.2
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Patricia McInnes - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	8	1.08	1.08
0 - 10	199	26.75	27.82
10 - 20	411	55.24	83.06
> 20	126	16.94	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

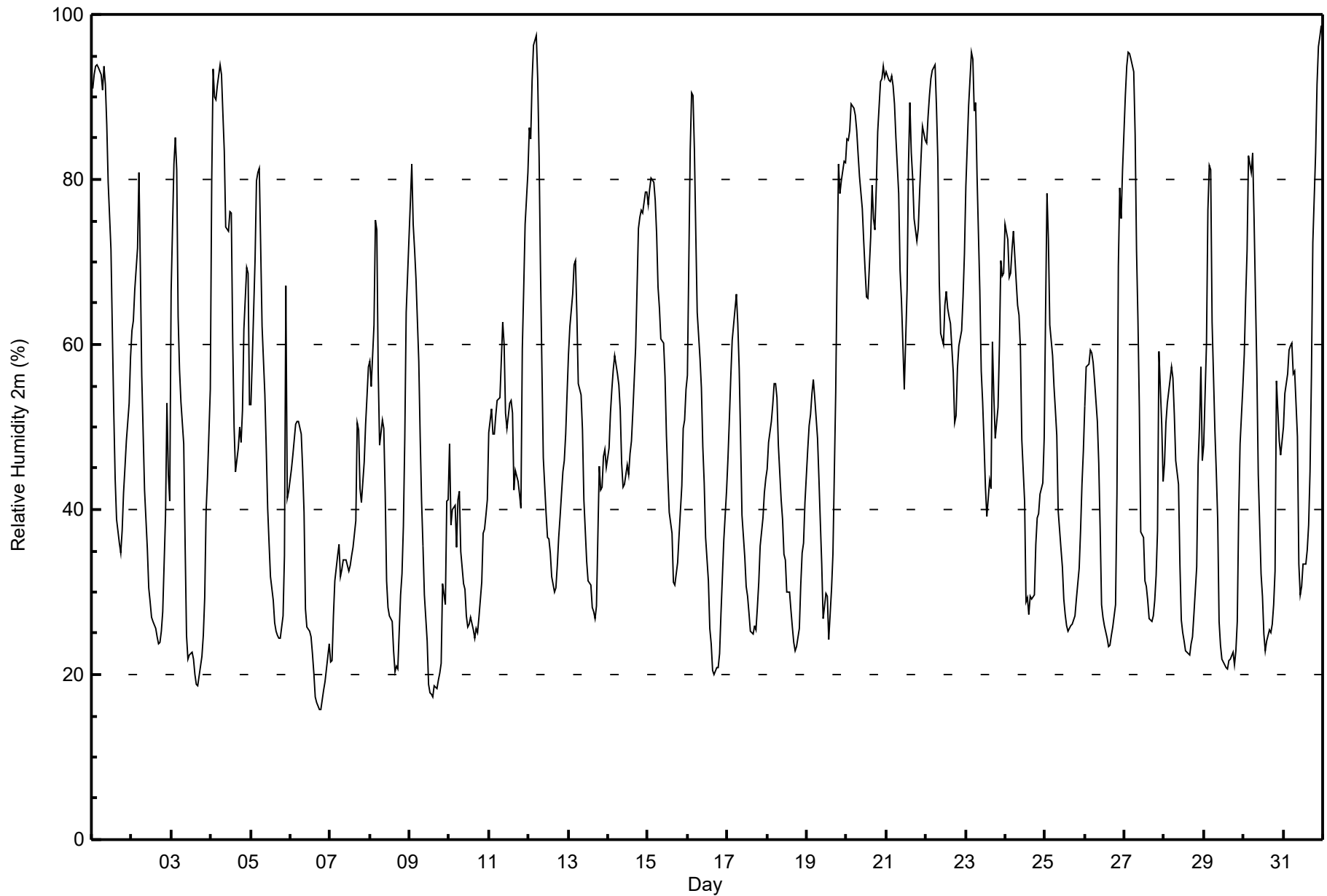
Patricia McInnes - May 2025

Maximum Value: 98.6 % on Jun 1 00:00																				Maximum Daily Average: 81.5 % on May 20					Hours in Service: 744	
Minimum Value: 15.7 % on May 6 19:00																				Minimum Daily Average: 30.7 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 71.9 % at hour 4																				Minimum Diurnal Average: 33.4 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 50.76 %																				Percentiles: P ₁ = 18.0 P ₁₀ = 24.7 Q ₁ = 31.4 Median = 48.5 Q ₃ = 66.4 P ₉₀ = 83.3 P ₉₉ = 95.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	91.0	92.7	93.8	93.9	93.5	92.7	90.8	93.7	91.6	86.7	79.7	71.5	61.5	51.8	43.8	38.8	35.9	34.8	37.5	42.1	45.1	48.2	52.9	58.4	67.6	93.9
2-May	61.8	62.9	66.7	71.6	80.9	69.1	56.2	49.4	42.4	35.2	30.5	28.8	27.0	26.4	25.6	24.5	23.7	23.9	25.3	27.7	39.3	52.9	44.2	41.0	43.2	80.9
3-May	66.4	81.8	85.1	81.2	63.4	56.9	53.1	48.0	35.7	24.8	21.9	22.4	22.7	21.8	19.9	18.8	18.7	19.9	22.1	24.8	29.3	39.8	43.9	54.6	40.7	85.1
4-May	79.6	93.4	90.0	89.7	91.3	93.9	92.7	87.9	83.4	74.2	73.8	76.1	76.0	60.7	50.0	44.5	47.4	50.0	48.1	52.1	61.8	69.2	68.6	52.8	71.1	93.9
5-May	52.7	58.2	70.4	79.8	80.9	81.4	71.9	62.3	54.0	47.3	40.2	36.0	31.9	28.9	26.3	25.2	24.8	24.4	24.4	27.0	34.4	67.2	41.3	42.2	47.2	81.4
6-May	44.9	46.6	48.5	50.3	50.6	50.7	49.2	44.9	39.7	27.9	25.7	25.2	24.5	22.5	20.1	17.2	16.6	15.8	15.7	16.9	18.2	19.2	22.3	23.7	30.7	50.7
7-May	21.4	21.7	27.2	31.4	34.3	35.8	31.9	32.7	33.9	33.9	33.3	32.5	33.3	34.4	35.4	38.7	50.6	49.6	42.6	40.8	45.8	50.4	53.8	57.2	37.6	57.2
8-May	57.9	54.9	62.4	75.0	73.9	56.8	47.8	50.8	49.9	41.8	31.4	28.1	27.1	26.5	22.9	20.4	21.0	20.7	29.6	32.3	38.0	48.6	63.9	72.8	43.9	75.0
9-May	77.3	81.9	74.6	71.6	68.0	58.0	48.8	41.1	35.5	29.7	24.1	18.8	17.8	17.6	17.2	18.6	18.4	19.4	20.2	21.3	31.1	28.5	41.1	41.3	38.4	81.9
10-May	47.9	38.2	39.9	40.5	35.3	41.1	42.1	35.0	30.9	30.4	27.1	25.7	26.1	27.0	25.3	24.4	25.6	25.2	26.9	31.1	37.2	37.7	39.3	41.3	33.4	47.9
11-May	49.3	52.2	49.1	49.1	51.3	53.2	53.5	58.2	62.6	60.0	51.7	49.8	52.9	53.3	51.7	42.4	44.7	43.4	41.9	40.1	59.5	66.8	74.5	80.9	53.8	80.9
12-May	86.3	84.9	92.1	96.3	97.5	92.3	82.7	69.0	57.4	46.4	39.5	36.6	36.4	34.7	31.8	30.1	30.6	33.2	36.7	39.2	44.6	45.9	49.2	54.0	56.1	97.5
13-May	58.9	62.2	66.2	69.7	70.2	63.6	55.2	53.8	49.7	41.2	37.5	33.8	31.4	30.9	28.1	27.7	26.7	28.3	45.3	42.4	42.8	46.4	47.3	45.2	46.0	70.2
14-May	47.4	51.7	54.6	56.9	58.7	56.5	55.1	52.0	45.7	42.7	43.1	45.3	44.3	46.8	48.3	51.8	59.7	66.7	74.1	75.4	76.2	75.9	78.5	78.5	57.7	78.5
15-May	76.9	78.9	80.2	79.6	77.5	73.5	67.0	64.4	60.8	60.2	56.1	49.0	44.1	39.7	37.1	31.2	30.8	32.2	33.5	36.8	42.8	49.8	50.9	54.6	54.5	80.2
16-May	56.3	83.5	90.5	90.1	83.6	73.3	63.9	58.3	54.8	47.7	43.2	36.7	31.4	25.6	23.7	20.6	19.9	20.9	20.8	22.5	27.5	31.8	36.3	42.4	46.1	90.5
17-May	46.3	51.1	56.1	60.6	64.2	66.1	62.6	57.0	48.7	39.3	34.2	30.6	29.6	27.4	25.3	24.8	25.9	25.4	28.2	31.1	35.6	39.0	42.0	43.8	41.5	66.1
18-May	45.0	48.1	50.6	52.7	55.3	55.3	53.5	47.8	41.2	38.9	34.5	33.9	30.1	30.0	27.7	25.7	23.9	22.8	23.4	25.6	30.9	34.8	36.0	40.9	37.9	55.3
19-May	47.3	50.1	51.5	54.1	55.7	53.6	48.6	43.8	38.5	33.4	26.8	29.8	29.5	24.2	27.2	30.3	34.6	54.2	69.3	81.8	78.2	79.8	82.2	82.1	50.3	82.2
20-May	85.0	84.7	86.0	89.1	88.6	87.7	86.0	83.1	80.4	76.4	72.6	69.0	65.8	65.6	73.1	79.2	75.2	73.9	79.2	85.7	91.9	92.3	93.7	92.5	81.5	93.7
21-May	93.0	92.0	91.8	92.6	91.4	89.2	85.2	78.2	68.9	65.3	59.9	54.6	66.6	81.7	89.3	83.2	80.1	75.2	72.6	74.1	78.7	82.8	86.5	84.8	79.9	93.0
22-May	84.4	87.6	90.2	92.1	93.2	93.9	88.8	82.4	67.6	61.4	60.0	64.8	66.4	64.4	63.4	62.5	56.6	50.4	51.4	57.1	59.9	61.7	65.7	70.9	70.7	93.9
23-May	79.2	84.1	89.1	95.5	94.6	88.3	89.3	80.5	66.4	56.8	53.0	48.1	42.7	39.1	43.5	42.5	60.3	53.8	48.7	52.4	59.9	70.2	68.3	68.6	65.6	95.5
24-May	74.6	72.8	68.1	68.7	71.6	73.8	67.6	64.7	63.5	59.6	48.5	41.0	28.8	29.3	27.2	29.4	29.2	29.7	35.8	38.9	39.5	41.9	43.2	48.7	49.8	74.6
25-May	64.1	78.3	72.6	62.4	58.6	54.9	52.1	48.9	39.8	35.3	33.0	29.1	27.2	25.9	25.2	25.9	26.1	26.7	27.1	29.2	32.8	37.4	43.0	47.1	41.8	78.3
26-May	52.5	57.3	57.6	59.3	59.0	57.7	55.6	50.6	45.5	37.7	28.5	27.0	25.9	24.4	23.3	23.6	24.7	25.8	28.4	41.8	69.5	79.1	75.3	81.2	46.3	81.2
27-May	90.2	93.8	95.4	95.3	94.6	93.0	85.5	71.3	63.1	52.3	37.2	36.6	31.4	30.7	28.9	26.8	26.5	27.0	29.0	32.0	37.5	59.2	50.4	43.5	55.5	95.4
28-May	45.7	50.5	52.9	55.8	57.2	55.8	51.6	45.9	43.0	33.3	26.6	25.0	24.0	22.9	22.6	22.4	23.8	24.6	27.2	33.1	45.3	50.2	57.3	45.9	39.3	57.3
29-May	47.7	60.2	76.2	81.7	81.2	62.7	49.6	44.6	38.7	26.4	23.6	21.8	21.2	20.8	20.7	21.7	21.8	22.7	21.2	22.8	26.5	39.5	48.0	54.9	39.8	81.7
30-May	58.9	65.5	71.3	83.0	80.8	83.2	75.2	66.0	56.8	44.2	32.2	29.5	25.0	23.0	24.1	25.5	25.0	26.1	28.5	32.5	55.6	48.3	46.6	48.4	48.1	83.2
31-May	50.0	54.1	56.5	59.4	59.8	60.1	56.4	56.8	48.8	33.4	29.6	30.7	33.4	33.3	35.2	38.2	44.6	56.3	72.4	83.2	91.4	96.1	97.3	98.6	57.3	98.6
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Patricia McInnes - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - May 2025

Maximum Speed: 30 km/h on May 14 16:00										Maximum Daily Speed Average: 17.2 km/h on May 15										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 14 08:00										Minimum Daily Speed Average: 1.7 km/h on May 10										Hours of Data: 744						
Maximum Diurnal Speed Average: 4.5 km/h at hour 15										Minimum Diurnal Speed Average: 1.6 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 2.6 km/h 165.8 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 12 Q ₃ = 17 P ₉₀ = 21 P ₉₉ = 27										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N14	NNW14	NNW11	NNW9	NW7	WNW7	N4	ENE5	SE4	SE7	S10	SSE9	SSE9	SSE8	S9	SSW8	SSE5	ESE11	ESE13	ESE15	ESE15	ESE18	SE14	SE10	ESE4.1	ESE18
2-May	SE7	SSE7	SSW4	ESE4	WNW4	WSW8	SW8	SW5	SSW5	ESE5	NW2	WNW11	NW15	NW13	WNW12	NNW11	NW11	N11	NNE10	NNE7	NNE5	N7	ENE8	E8	NW2.9	NW15
3-May	E2	NNW3	NNW4	SW3	SE12	SE14	SE11	SSE9	SSW12	WSW21	W23	WNW18	W16	W18	W20	NNW16	W17	WNW19	NW21	NW20	NW25	WNW14	NNW15	NNW15	W9.2	NW25
4-May	WNW13	W13	W15	W18	W17	NW14	NNW16	N15	N13	N7	WSW8	WSW15	NNW20	W16	W17	W19	SW19	SW14	SW21	SW18	SW14	WSW16	WSW17	WNW14	W12.4	SW21
5-May	WNW16	NNW12	NNW13	N12	NW6	WSW8	NNW13	NW16	NW17	NW14	NNW14	NW12	NNW11	ENE4	NNE8	NNE8	ENE10	ENE9	ENE8	NE8	NE7	ENE2	E10	ESE13	NNW6.1	NW17
6-May	ESE14	SE13	SE12	ESE14	SE14	SE16	SE13	ESE9	SE6	SSW18	SSW17	SW17	SW20	SW25	SW24	SW24	SSW20	SSW22	S21	S18	S19	S17	SSE13	SSE14	S13.0	SW25
7-May	S18	SSE18	SE16	SE14	SE13	SE10	S16	S22	S22	SSW23	SSW20	SW21	SW23	WSW19	W15	W18	W24	WSW19	WSW17	SW13	SW9	SW8	SW7	SSW9	SSW12.4	W24
8-May	WSW12	WNW7	WNW2	S1	WSW6	SSW10	N2	NNW3	NW9	N16	NNE19	NNE18	N18	NNW14	WNW19	NNW19	NW19	NW22	N14	NNW9	NNW9	N6	WNW2	WSW4	NNW8.1	NW22
9-May	WSW3	SW4	SSW7	SSW7	SSW8	SW12	SW16	SW14	SW13	SW18	WSW22	WSW24	WSW23	WSW22	SW23	W15	W18	WSW14	W11	WSW6	SW3	SW6	WSW4	W4	WSW11.9	WSW24
10-May	SSW5	SW10	WSW11	WSW9	SSE6	NW1	E3	S5	NW2	N3	WSW2	W10	W12	W10	W14	NW9	N10	NNE8	NNE4	NE3	ENE6	ESE9	ESE8	ESE10	W1.7	W14
11-May	SSE3	SE7	ESE8	SE8	SE6	SSE7	S8	SSE9	SSE7	SSE11	SE11	SSE10	WSW7	N11	NNE9	E5	E7	ESE6	NE7	NE5	N4	N4	NW3	NW5	ESE3.5	SSE11
12-May	NW6	N5	NNE5	NNW6	NNE6	NNW6	N11	N10	NNE13	NNE15	NNE18	NNE20	NNE21	NNE23	NNE23	NNE21	NNE22	NNE22	N22	NNE21	N16	N18	N14	NNW15	NNE14.4	NNE23
13-May	NNW13	NNW14	NNW12	NNW12	NNW10	NW9	N11	N13	NNE11	NNE7	N5	N3	NE8	NNE5	ESE6	E11	ESE6	SSE8	SSW15	SE11	SE9	SE9	SE11	SE14	NNE2.9	SSW15
14-May	SE12	SE10	SE8	SE6	SSE8	SSE7	SE5	ENE0	WSW10	W7	NNW11	N23	N24	N27	NNE27	NNE30	NNE29	NNE28	NNE26	N24	N20	NNE22	N19	NNE21	NNE12.0	NNE30
15-May	N17	N15	N17	N17	N19	N20	NNE24	NNE22	N24	N22	N20	N18	N20	N19	N18	N19	NNE17	N17	N19	N15	N12	N9	NNE9	NNE7	N17.2	NNE24
16-May	NE5	NW4	NNW4	NW4	NNW7	N8	NE4	E5	ESE3	E5	NNE3	NE2	NE6	ESE7	SE10	SE8	SE8	SE9	ESE11	SE12	SE11	SE13	SE16	SE16	ESE4.9	SE16
17-May	SE17	SE18	SE18	ESE16	ESE17	ESE17	ESE16	ESE14	ESE14	ESE15	ESE17	ESE16	SE17	SSE15	SSE16	SE15	SE15	SE16	ESE19	ESE17	ESE16	ESE18	ESE17	ESE18	SE16.1	ESE19
18-May	ESE19	SE13	SE13	ESE16	ESE14	ESE14	ESE13	ESE12	ESE13	ESE13	ESE15	SE15	SE16	SSE14	SE14	SE13	SSE15	SSE14	SE18	SE15	ESE15	SE15	SE15	SE10	SE13.8	ESE19
19-May	SE6	SE8	SE10	SE10	SE9	SE8	SE11	SE12	SE12	SE17	SE22	SE20	SE20	SE22	SE22	SE19	SSE20	SSE29	SE21	SE14	SE16	SE13	SE15	SE16	SE15.4	SSE29
20-May	SE13	SE12	ESE13	ESE12	ESE13	ESE13	SE15	SE13	SE15	SE15	SE16	SE17	SE17	SE16	ESE19	SE19	SE18	SE17	SE13	SE14	SE10	SE9	SE9	SE8	SE13.9	SE19
21-May	SE9	SE12	SE8	ESE6	SE8	ESE10	ESE12	ESE11	ESE9	ESE7	ESE10	ESE12	S11	SSE11	SE13	SSE14	SSE12	S11	SSE11	SE10	SE11	SE11	SE9	SSE6	SE9.5	SSE14
22-May	SE7	SE6	SE9	SE12	SE11	ESE9	ESE10	SE11	SSE13	SSE15	S14	SW13	SW17	SSW13	S13	SE13	ESE13	SE16	SE14	ESE12	SSE10	S8	SSE7	S6	SSE9.5	SW17
23-May	SE6	ESE6	ESE5	SE5	SE6	SE8	SE11	SE9	ESE14	ESE17	ESE20	SE15	SSE11	S12	SSE13	S2	SE12	ESE15	SE13	SSE11	WSW9	S4	S7	S7	SE8.8	ESE20
24-May	SSE4	SE8	SE9	ESE9	ESE7	SE9	SE10	SE10	SE9	ESE11	ESE16	ESE19	S18	S18	S18	S14	SSE11	WSW18	SSE13	SSE10	SSE9	SSE9	SSE9	SE6	SSE9.7	ESE19
25-May	SE5	SE4	SE7	SE7	SE7	SE12	SE14	SE12	SSE18	S19	S20	SSE21	S20	S19	S18	S20	SSW19	S19	S17	S15	S12	SSE9	SSE9	SE8	SSE12.7	SSE21
26-May	SE7	SE9	SE11	SE12	SE16	SE16	SE15	SE13	ESE9	SE11	S22	S23	S23	S22	S24	S20	S21	S21	S16	W22	NNW11	SW3	SSW6	SSW8	SSE12.0	S24
27-May	WSW10	WSW5	S4	SSE6	S5	S4	WSW8	WSW6	WSW9	W12	NNW15	W15	W15	WSW16	WSW18	WSW23	WSW24	W23	WSW17	WSW10	W6	WSW4	WSW8	WSW10	WSW10.6	WSW24
28-May	WSW12	WSW12	WSW12	WSW12	WSW13	SW13	SW13	SW8	S10	SSW10	SW13	SW16	SW15	SW15	WSW14	SW13	SW11	S7	SSE5	SE5	S3	S5	SSW5	SSW5	SW9.5	SW16
29-May	S5	SW5	SW2	E2	SSE1	SE6	SE9	SE12	SE12	S19	S22	S21	S21	S22	S20	SE26	SE28	SE23	S20	S14	SSE10	NNW28	NNW21	W16	S10.4	SE28
30-May	WNW23	W16	W22	NNW16	W9	W12	NW17	NW17	NNW15	NNW16	NNW16	NW8	WNW8	W13	W13	SW15	SW11	SW10	SW11	S4	S3	SSW5	SSW7	SSW7	W9.2	WNW23
31-May	SSW7	SW9	WSW13	WSW11	SW10	SSE3	S4	S5	SSW4	E7	ESE10	ENE6	NNE9	NNE14	NNE19	N22	NNE23	N23	N23	N22	NNW17	NNW18	NNW16	NNW14	N6.7	NNE23
S2.2 S2.4 SSE2.2 SE2.4 SE3.2 SSE3.7 SE3.3 SE3.4 SE3.0 SSE3.5 SSE3.6 SSW3.7 SW4.2 SW4.3 SSW4.5 SSW2.9 S2.8 S3.3 SSE3.3 SE2.6 SE1.6 SE1.8 SE2.6 SE2.7																									Diurnal Average	
WNW23 SE18 WSW22 W18 N19 N20 NNE24 NNE22 N24 SSW23 W23 WSW24 N24 N27 NNE27 NNE30 NNE29 SSE29 NNE26 N24 NW25 WNW28 WNW21 NNE21																									Diurnal Maximum	
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

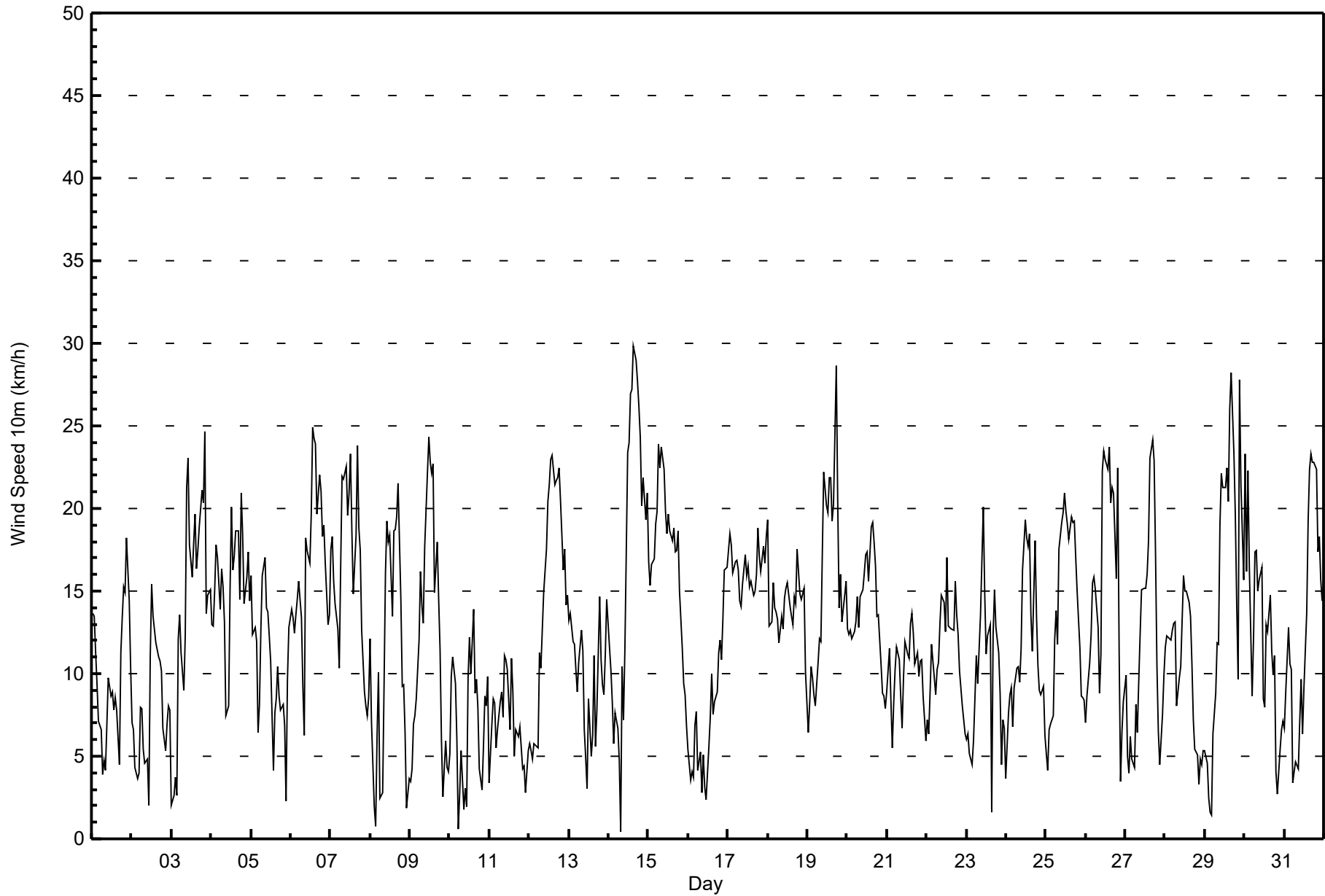
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on May 29 22:00																		Hours in Service: 744							
Minimum Value: 1 km/h on May 28 20:00																		Hours of Data: 744							
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 5 P ₉₉ = 7																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	3	1	1	1	1	1	1	2	3	3	4	3	3	3	3	3	3	3	3	4	3	3	4
2-May	1	1	1	1	2	2	1	2	2	3	4	5	5	5	6	6	5	4	2	1	1	1	4	3	6
3-May	2	1	1	1	3	3	3	2	5	4	5	5	5	6	5	5	5	4	5	7	6	4	4	4	7
4-May	2	2	3	4	3	3	4	3	3	2	3	4	5	4	4	5	4	6	4	4	2	3	3	2	6
5-May	3	3	5	4	2	2	3	3	4	5	5	5	4	4	4	4	3	3	2	2	2	1	2	4	5
6-May	3	3	3	3	3	3	3	3	2	4	5	4	6	6	6	6	5	5	5	5	5	5	3	3	6
7-May	4	4	4	3	3	2	5	6	5	5	5	5	5	4	4	6	5	4	4	3	3	1	1	1	6
8-May	3	4	1	2	2	3	4	2	3	3	4	4	4	4	4	6	6	6	4	2	1	2	1	1	6
9-May	1	2	1	1	2	3	3	3	3	4	6	6	6	6	7	4	4	4	3	2	1	2	2	2	7
10-May	2	1	2	4	4	2	1	2	2	3	3	5	5	5	5	4	3	3	2	1	1	3	2	3	5
11-May	2	4	3	4	2	2	2	2	2	3	4	4	6	4	3	3	2	3	2	2	1	1	2	1	6
12-May	1	2	2	2	2	2	3	2	3	3	4	5	5	5	6	5	5	6	5	4	4	4	3	2	6
13-May	2	2	2	2	2	2	2	3	4	3	3	4	3	4	3	3	3	7	6	3	2	2	2	3	7
14-May	3	2	2	2	1	1	2	2	4	3	6	5	6	6	5	6	6	6	6	6	5	5	4	5	6
15-May	4	4	3	4	5	5	6	5	5	5	5	5	5	5	5	5	4	4	4	3	2	1	2	2	6
16-May	1	1	1	1	1	1	2	2	2	2	3	3	3	5	4	5	4	5	3	3	2	3	4	4	5
17-May	4	4	4	4	4	4	4	3	3	4	4	5	5	5	5	4	4	4	5	4	4	4	4	3	5
18-May	4	3	3	4	3	3	3	3	3	3	4	5	4	4	3	3	4	5	5	4	4	3	3	4	5
19-May	1	2	2	2	2	2	3	3	3	5	5	6	5	5	5	5	6	8	6	4	4	3	4	4	8
20-May	3	3	3	3	3	3	4	3	4	4	4	4	5	4	5	5	5	4	3	3	3	2	2	2	5
21-May	2	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	1	3
22-May	2	2	2	3	2	2	2	2	4	4	4	3	4	4	3	3	4	4	3	3	2	2	2	2	4
23-May	1	1	1	2	2	2	2	3	4	4	5	4	4	6	5	5	5	4	4	3	2	2	2	2	6
24-May	1	3	2	2	2	2	3	3	2	3	6	7	5	6	5	4	6	6	6	2	2	2	2	1	7
25-May	1	1	1	1	1	3	3	3	5	5	5	6	5	6	5	5	5	5	4	4	3	2	2	1	6
26-May	2	2	2	3	4	3	3	3	2	3	6	6	6	6	6	5	6	6	4	6	6	7	3	3	7
27-May	2	2	2	2	1	1	2	2	3	5	4	5	4	5	7	6	5	5	4	2	3	1	1	1	7
28-May	1	2	2	2	2	2	3	2	2	3	4	5	5	6	5	4	3	2	1	1	1	2	1	1	6
29-May	1	1	1	1	1	2	2	3	3	6	6	6	6	6	6	7	7	7	6	4	3	8	7	4	8
30-May	6	4	5	4	3	3	5	3	3	4	4	5	4	5	5	4	3	3	3	2	2	1	2	2	6
31-May	2	2	2	2	3	2	1	1	1	3	2	3	2	3	4	5	5	5	6	6	5	5	3	3	6
6 4 5 4 5 5 6 6 5 6 6 7 6 6 7 7 7 7 8 6 7 6 8 7 5																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Patricia McInnes - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Patricia McInnes - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	93	12.50	12.50
6 - 11	246	33.06	45.56
12 - 19	306	41.13	86.69
20 - 28	96	12.90	99.60
29 - 38	3	0.40	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Patricia McInnes - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	8	5	5	4	6	4	6	6	14	7	7	6	1	3	7	4	93
6 - 11	11	12	5	6	5	25	68	30	10	13	13	18	6	5	8	11	246
12 - 19	25	8	0	0	0	46	76	16	22	6	21	19	24	14	10	19	306
20 - 28	14	17	0	0	0	1	9	2	20	4	7	9	5	4	4	0	96
29 - 38	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	44	10	10	11	76	159	55	66	30	48	52	36	26	29	34	744

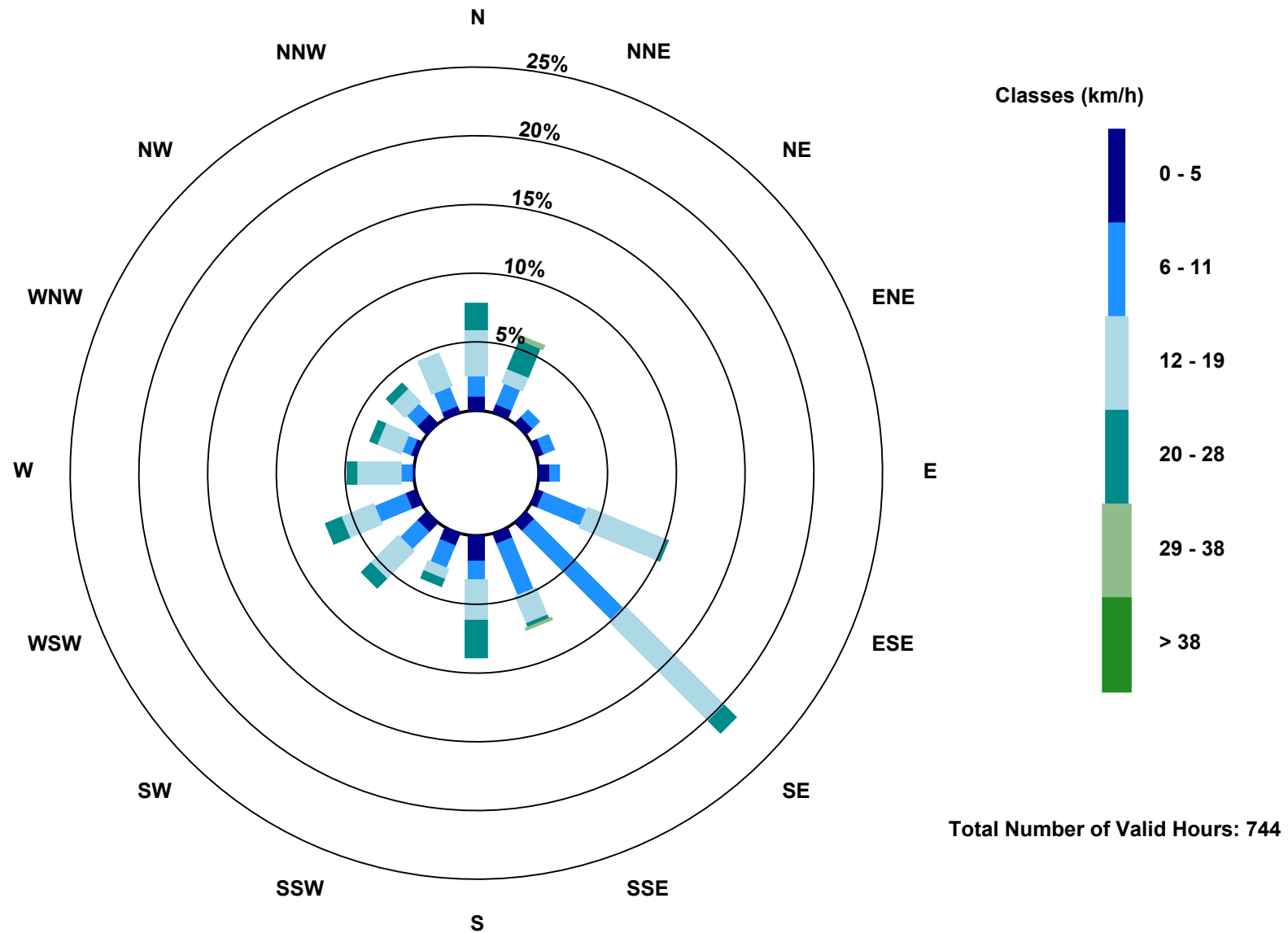
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Patricia McInnes





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Patricia McInnes - May 2025

Direction of Maximum Speed: 12 deg on May 14 16:00 Direction of Maximum Daily Speed Average: 7.3 deg on May 15																				Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0					
Direction of Minimum Speed: 57 deg on May 14 08:00										Direction of Minimum Daily Speed Average: 1.7 deg on May 10										Percent Operational Time: 100.0					
Monthly Average Direction: 165.8 deg																									
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-May	356	341	346	343	324	292	355	63	130	138	171	167	154	152	173	198	154	104	110	113	119	122	124	132	117.5
2-May	138	165	193	115	284	252	234	215	196	112	319	303	316	307	294	328	315	351	19	33	27	353	70	95	321.3
3-May	87	332	336	223	136	133	139	155	198	248	273	283	273	265	264	283	275	295	304	311	313	303	332	334	280.8
4-May	286	281	269	272	273	316	337	354	354	359	253	251	285	263	267	263	232	221	228	230	235	246	257	287	269.6
5-May	300	294	345	360	320	257	292	309	323	322	331	322	332	70	23	25	64	78	61	39	36	67	100	119	346.0
6-May	123	127	126	123	127	126	128	123	140	208	211	215	220	228	234	219	211	203	186	180	177	174	158	155	181.9
7-May	169	166	136	136	137	139	179	189	190	193	205	216	236	249	261	263	281	247	237	217	216	218	225	209	208.3
8-May	245	297	292	174	246	209	359	341	318	352	12	19	7	347	287	300	320	320	2	346	342	360	287	244	328.9
9-May	240	217	211	199	197	219	226	225	221	223	241	238	238	246	236	275	260	257	263	251	228	220	240	263	237.2
10-May	204	221	250	254	150	317	89	184	319	354	250	271	264	277	281	307	2	28	23	53	76	106	111	121	265.0
11-May	149	125	120	128	130	149	178	157	166	147	135	150	256	358	33	96	88	107	53	52	3	8	315	321	117.1
12-May	314	1	15	339	13	345	356	6	14	18	17	15	14	19	27	31	30	20	8	14	359	2	355	341	11.3
13-May	336	335	335	334	328	323	352	5	16	14	354	359	40	29	106	82	105	165	195	132	135	130	137	138	33.3
14-May	134	125	128	143	155	153	142	57	245	268	345	354	356	9	12	12	16	16	15	5	3	13	7	14	13.4
15-May	10	6	355	10	2	1	14	13	7	360	11	358	9	7	5	10	18	10	6	1	3	3	27	25	7.3
16-May	45	315	328	325	344	8	47	101	119	99	24	36	39	120	145	133	136	140	123	126	132	128	127	129	111.0
17-May	136	131	124	122	120	120	119	116	115	113	107	121	146	152	155	143	126	131	120	117	112	118	122	121	125.0
18-May	123	131	124	122	119	122	118	117	110	105	112	146	138	149	144	144	165	154	137	133	122	126	129	142	130.6
19-May	132	137	130	133	136	137	140	127	143	126	133	136	131	134	134	145	149	147	136	137	139	132	127	126	135.9
20-May	124	126	123	121	121	123	126	133	135	136	136	125	131	134	121	135	135	141	139	125	134	136	130	134	130.2
21-May	125	129	137	119	133	122	120	122	111	123	121	120	187	161	135	152	160	174	155	137	126	128	143	155	137.9
22-May	132	133	128	128	126	123	121	127	160	153	172	222	230	201	181	131	123	134	137	120	157	172	166	180	152.7
23-May	141	120	122	130	134	125	126	126	116	118	121	145	167	179	154	183	136	112	137	147	252	171	180	178	140.0
24-May	150	135	126	123	116	130	129	126	129	114	115	118	190	182	181	176	166	239	157	147	157	154	148	138	151.1
25-May	128	127	127	138	144	132	129	124	154	175	172	167	184	185	186	189	194	191	179	175	171	160	147	134	167.0
26-May	132	135	131	127	128	130	127	127	121	135	172	187	170	178	173	179	190	178	177	263	286	226	192	204	168.6
27-May	250	243	191	166	186	189	240	251	248	261	290	279	274	248	244	245	258	262	256	257	278	238	244	245	252.9
28-May	238	243	241	237	237	233	232	216	191	207	215	223	231	226	237	225	233	171	148	140	173	173	209	208	221.6
29-May	185	215	218	92	155	130	132	131	124	174	174	174	177	178	177	139	141	144	184	171	158	282	296	279	173.6
30-May	286	267	259	289	271	263	311	326	329	327	334	320	298	277	262	228	221	220	229	190	185	200	199	193	276.2
31-May	200	218	237	238	222	156	190	178	211	100	115	68	23	24	21	9	12	358	1	5	344	335	342	338	356.4
169.5 170.1 159.1 140.1 146.1 146.5 134.3 126.0 144.1 156.3 164.3 194.2 225.6 214.8 207.8 202.0 186.6 174.6 154.5 129.7 130.1 142.9 137.0 145.4																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Summary of Hour Standard Deviations

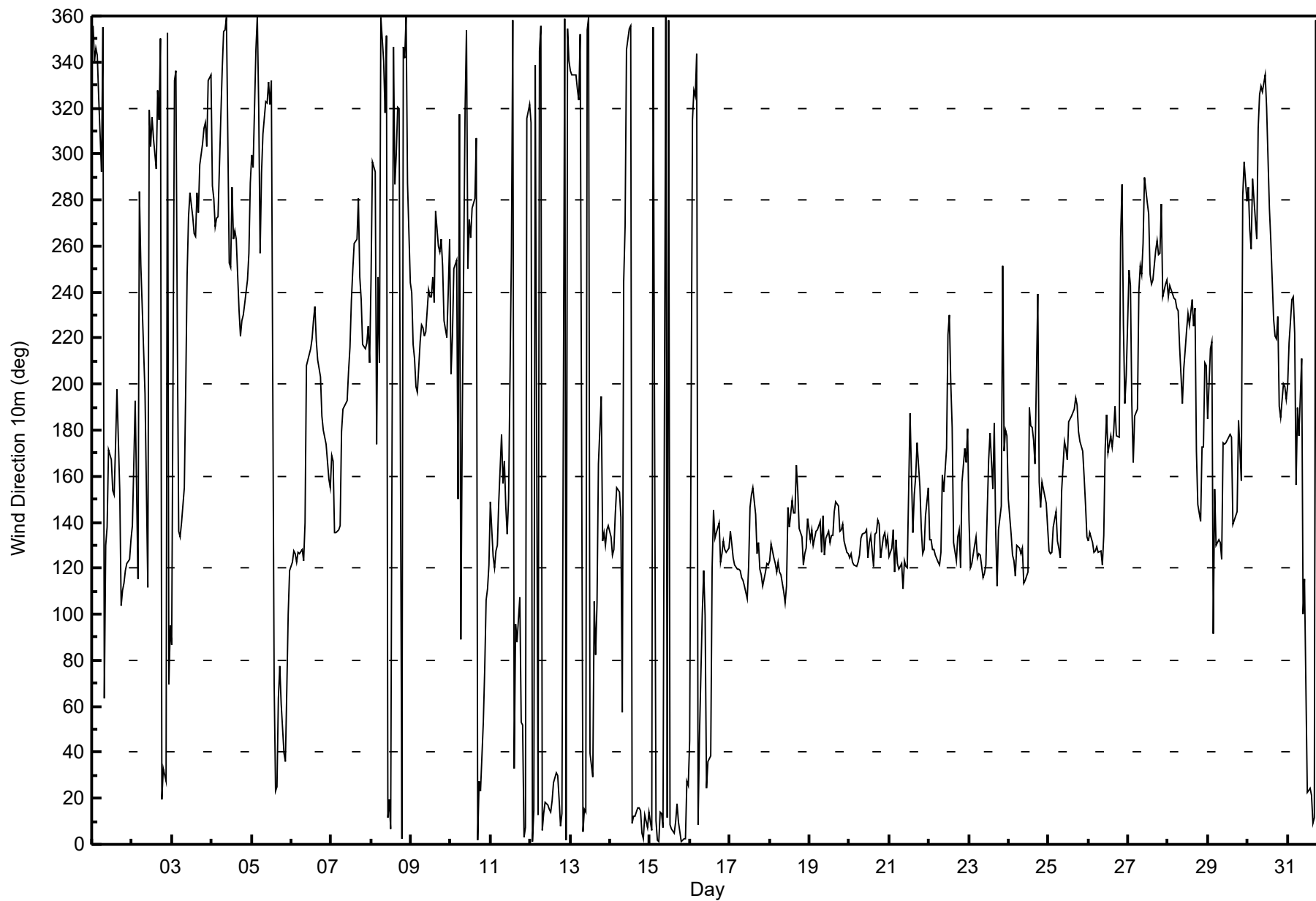
Wind Direction 10m (WD10) - deg
Patricia McInnes - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on May 26 22:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 6 deg on May 25 03:00																									
Percentiles: P ₁ = 8 P ₁₀ = 12 Q ₁ = 14 Median = 17 Q ₃ = 24 P ₉₀ = 39 P ₉₉ = 92																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	14	13	11	9	14	15	36	30	27	29	18	32	37	49	33	40	66	19	12	13	12	11	12	12	66
2-May	12	19	61	44	45	10	10	28	54	51	93	39	24	33	40	42	31	29	15	10	12	16	33	16	93
3-May	48	47	23	50	11	14	14	17	23	16	16	17	24	21	19	21	19	12	11	10	11	21	17	22	50
4-May	10	12	11	11	12	21	13	15	16	25	28	18	14	15	18	14	16	56	11	10	10	11	12	10	56
5-May	9	10	41	15	22	8	19	15	18	23	25	35	47	84	57	48	31	28	21	13	11	31	14	18	84
6-May	13	13	13	11	12	12	12	13	28	17	19	23	23	22	17	18	19	16	14	13	13	14	12	13	28
7-May	14	14	18	12	13	12	16	14	14	14	15	19	17	22	15	18	13	20	14	12	12	11	11	9	22
8-May	11	57	64	91	29	36	93	74	33	18	15	18	20	33	19	24	21	23	16	17	13	20	72	31	93
9-May	19	18	7	13	10	14	10	15	17	16	18	22	22	20	19	27	18	15	12	14	38	33	41	40	41
10-May	18	11	19	30	52	94	60	35	88	83	97	43	31	47	26	45	25	34	35	16	14	9	12	12	97
11-May	50	37	14	26	19	13	20	15	16	19	33	28	72	33	35	56	40	57	22	24	20	39	74	17	74
12-May	18	21	22	17	21	20	14	20	18	19	19	18	16	18	14	15	15	21	17	13	17	17	19	10	22
13-May	8	7	7	6	14	17	18	19	24	47	83	93	39	78	57	24	65	34	36	13	11	14	12	14	93
14-May	15	14	10	19	10	13	49	85	30	49	28	18	19	18	17	18	15	14	16	16	17	14	15	13	85
15-May	15	16	16	14	17	16	15	15	17	17	21	24	20	21	23	19	21	20	16	16	14	13	13	15	24
16-May	24	20	13	12	14	13	52	38	74	55	94	97	69	64	36	57	51	41	17	14	13	12	13	13	97
17-May	13	13	13	14	13	13	14	14	16	18	19	23	24	22	25	27	18	16	14	13	14	13	12	11	27
18-May	12	14	13	12	12	12	13	16	17	15	23	25	22	24	19	21	21	23	16	14	13	12	13	14	25
19-May	10	12	14	12	12	13	14	15	19	20	16	19	18	19	18	18	19	15	15	15	14	15	14	13	20
20-May	13	14	11	12	12	14	14	16	15	15	17	17	17	17	16	16	16	15	16	14	14	12	12	14	17
21-May	15	12	16	17	14	12	11	11	18	39	29	22	37	26	14	15	15	16	16	18	12	11	14	14	39
22-May	16	14	12	13	14	12	13	15	24	19	21	23	14	23	20	18	22	19	18	12	24	13	16	18	24
23-May	25	10	12	15	14	14	13	17	16	16	18	20	39	40	24	91	25	14	15	15	13	25	21	24	91
24-May	24	13	14	11	13	13	15	14	17	16	16	28	22	19	23	33	51	30	37	17	16	11	10	11	51
25-May	10	10	6	7	13	12	13	14	17	20	20	20	18	20	28	21	19	17	16	14	13	13	13	8	28
26-May	15	12	12	12	12	12	12	14	17	21	20	17	19	18	20	19	19	15	15	20	34	102	39	25	102
27-May	19	38	47	21	21	25	16	27	22	19	26	22	22	28	26	20	15	14	12	11	13	14	13	7	47
28-May	8	8	9	8	9	11	13	19	21	25	26	26	25	30	28	23	24	21	16	9	18	17	17	14	30
29-May	15	16	33	55	59	14	14	15	17	25	19	21	22	18	24	17	15	19	17	16	22	20	13	16	59
30-May	13	25	14	13	34	20	13	12	14	16	21	51	55	30	34	21	25	26	14	22	32	14	15	17	55
31-May	16	20	9	10	17	41	39	27	41	37	24	49	20	18	12	18	14	18	18	21	24	27	21	17	49
50 57 64 91 59 94 93 85 88 83 97 97 72 84 57 91 66 57 37 24 38 102 74 40 Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Patricia McInnes - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS07 ATHABASCA VALLEY MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	-	-	7.8	0	1	0
TRS (ppb) Average	705	36	39	99.6	5.1	1	4.8	0	1	0
THC (ppm) Average	709	35	35	100	-	-	3.2	-	2.3	-
NMHC (ppm) Average	709	35	35	100	-	-	0.467	-	0.119	-
CH4(ppm) Average	709	35	35	100	-	-	2.7	-	2.2	-
O3 (ppb) Average	707	35	37	99.73	-	-	77.9	2	48.6	-
NO2 (ppb) Average	704	37	40	99.6	-	-	29.7	0	8.4	-
NO (ppb) Average	704	37	40	99.6	-	-	10.9	-	1.2	-
NOX (ppb) Average	704	37	40	99.6	-	-	31	-	8.8	-
PM2.5 (ug/m3) Average	743	1	1	100	-	-	1346.9	0	322.9	3
CO(ppm) Average	707	35	37	99.73	-	-	9.8	0	2	-
Temperature 2 m (C) Average	744	0	0	100	-	-	33.6	-	25.2	-
Relative Humidity (%) Average	744	0	0	100	-	-	94.2	-	76.6	-
Barometric Pressure (inHg) Average	744	0	0	100	-	-	29.3	-	29.2	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	29	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.32	0.7	-	0	0	0.1	0.1	0.3	0.6	7.8
TRS (ppb) Average	705	0.22	0.3	-	0.1	0.1	0.1	0.2	0.2	0.4	4.8
THC (ppm) Average	709	2.04	0.1	-	2	2	2	2	2.1	2.1	3.2
NMHC (ppm) Average	709	0.004	0.027	-	0	0	0	0	0	0	0.467
CH4(ppm) Average	709	2.04	0.1	-	2	2	2	2	2.1	2.1	2.7
O3 (ppb) Average	707	36.21	11.5	-	6.6	21.8	28.2	35.9	44.8	51.3	77.9
NO2 (ppb) Average	704	3.76	3.3	-	0.3	1.1	1.7	2.8	4.6	7.4	29.7
NO (ppb) Average	704	0.53	0.8	-	0	0	0.1	0.3	0.7	1.2	10.9
NOX (ppb) Average	704	4.29	3.7	-	0.3	1.3	2	3.2	5.2	8.5	31
PM2.5 (ug/m3) Average	743	22.38	82.2	-	1.1	2.5	3.5	4.9	7.2	15.9	1346.9
CO(ppm) Average	707	0.22	0.5	-	0.1	0.1	0.1	0.1	0.1	0.2	9.8
Temperature 2 m (C) Average	744	14.99	6.6	-	1	7.1	10.2	14.5	19.1	24.3	33.6
Relative Humidity (%) Average	744	49.96	21	-	13.9	23.1	30.1	48.8	66.2	80.5	94.2
Barometric Pressure (inHg) Average	744	28.96	0.2	-	28.6	28.7	28.8	29	29.1	29.2	29.3
Wind Speed 10 m (km/h) Average	744	11.2	6	-	0	3	6	11	16	19	29
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	22 May 2025 13:00	22 May 2025 13:00	1	Station power failure
CO, NOx, O2, TRS	30 May 2025 11:00	30 May 2025 12:00	2	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

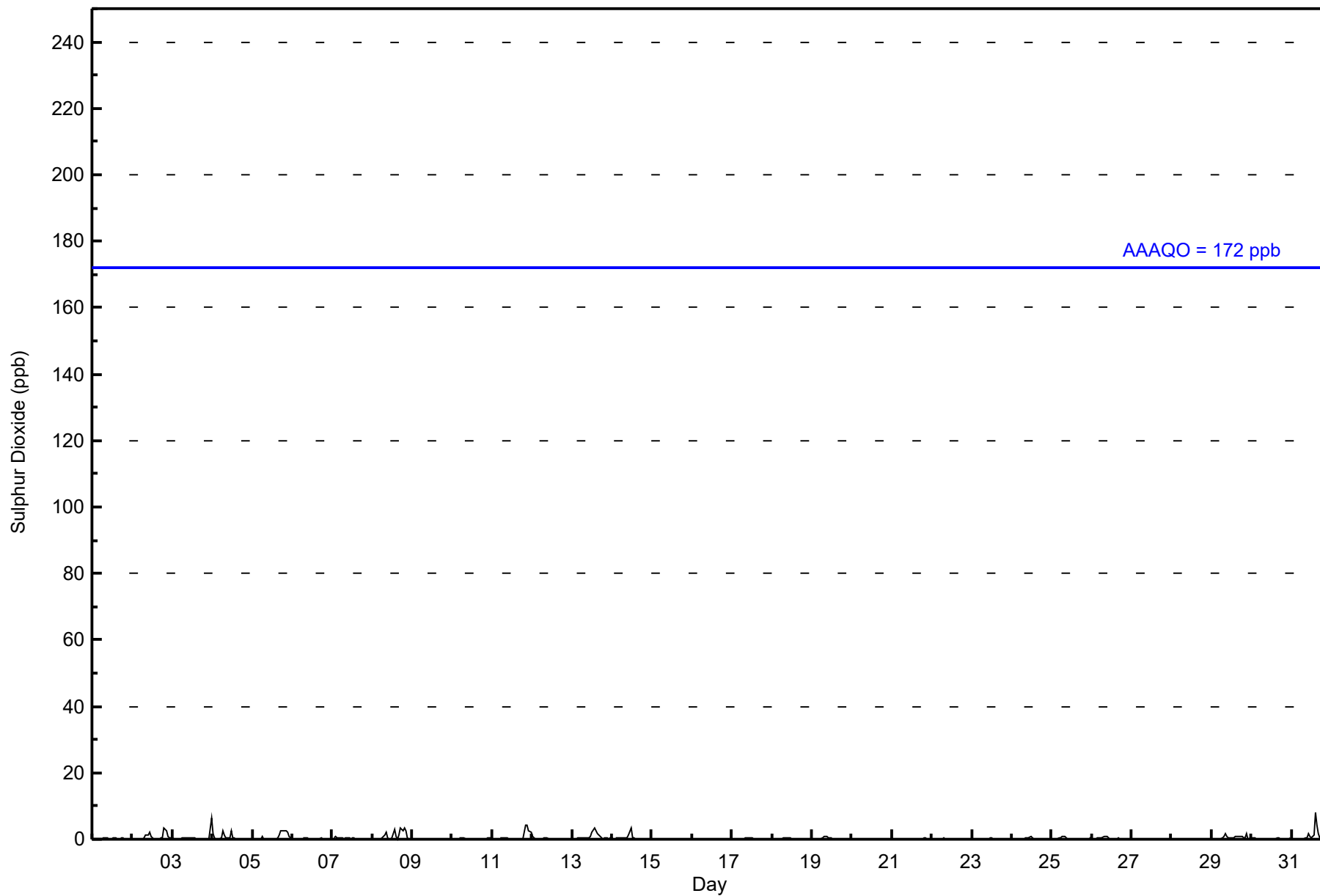
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7.8 ppb on May 31 15:00 Maximum Daily Average: 1.0 ppb on May 8																			Hours in Service: 744 Hours of Data: 708							
Minimum Value: 0.0 ppb on May 16 02:00 Minimum Daily Average: 0.0 ppb on May 16 Maximum Diurnal Average: 0.5 ppb at hour 15 Minimum Diurnal Average: 0.1 ppb at hour 3 Monthly Average: 0.32 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 3.4																			Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.2	0.4
2-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.5	1.1	1.4	1.9	0.9	0.2	0.1	0.1	0.1	0.1	0.3	0.4	3.6	2.7	1.0	0.5	0.4	0.7	3.6
3-May	0.3	0.2	Z	0.2	0.1	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	6.3	0.5	6.3
4-May	1.9	0.2	0.2	Z	0.1	0.3	2.5	1.4	0.5	0.4	0.3	2.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	2.6
5-May	0.0	0.0	0.0	0.0	Z	0.1	0.7	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	1.4	2.8	2.7	2.5	2.7	2.0	0.7	0.3	0.7	2.8
6-May	0.2	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3
7-May	Z	0.6	0.7	0.6	0.5	0.6	0.4	0.1	0.2	0.6	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
8-May	0.1	Z	0.1	0.1	0.1	0.1	0.3	1.1	2.2	0.5	0.2	0.1	0.3	2.8	1.0	0.0	1.2	3.4	2.3	3.4	2.6	0.3	0.1	0.1	1.0	3.4
9-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
10-May	0.1	0.1	0.2	Z	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.3
11-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	2.2	4.1	4.4	2.7	2.0	0.8	4.4
12-May	0.7	0.4	0.2	0.1	0.1	Z	0.2	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.7
13-May	Z	0.2	0.2	0.5	0.4	0.4	0.5	0.6	0.4	0.3	0.4	0.8	2.3	3.3	2.6	1.8	1.1	0.7	0.2	0.2	0.3	0.2	0.2	0.4	0.8	3.3
14-May	0.3	Z	0.3	0.3	0.4	0.6	0.6	0.6	0.6	0.5	1.1	3.3	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.4	3.3
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1
17-May	0.0	0.1	0.0	0.0	Z	0.1	0.1	0.2	0.4	0.6	0.6	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.6
18-May	0.1	0.1	0.1	0.0	0.0	Z	0.1	0.4	0.6	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.6
19-May	Z	0.1	0.0	0.0	0.1	0.2	0.5	0.7	0.7	0.8	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2
21-May	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.3
22-May	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	PF	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
23-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.4
24-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.4	0.5	0.6	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.8
25-May	Z	0.1	0.1	0.1	0.3	0.4	0.7	0.9	0.6	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.9
26-May	0.2	Z	0.2	0.2	0.3	0.5	0.6	0.8	0.9	0.7	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.9
27-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
29-May	0.2	0.1	0.1	0.1	Z	0.2	0.3	1.0	1.5	1.0	0.3	0.3	0.4	0.5	0.8	0.9	1.0	0.7	0.7	0.6	0.5	1.5	0.2	0.2	0.6	1.5
30-May	0.3	0.5	0.3	0.1	0.1	Z	0.1	0.1	0.2	C	C	C	C	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.6	0.2	0.6
31-May	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	1.6	1.0	0.5	1.2	7.8	4.4	1.5	0.2	0.1	0.1	0.0	0.1	0.3	0.1	0.9	7.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	708	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	24	14	9	13	33	206	94	40	18	25	38	37	24	21	47	65	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	14	9	13	33	206	94	40	18	25	38	37	24	21	47	65	708

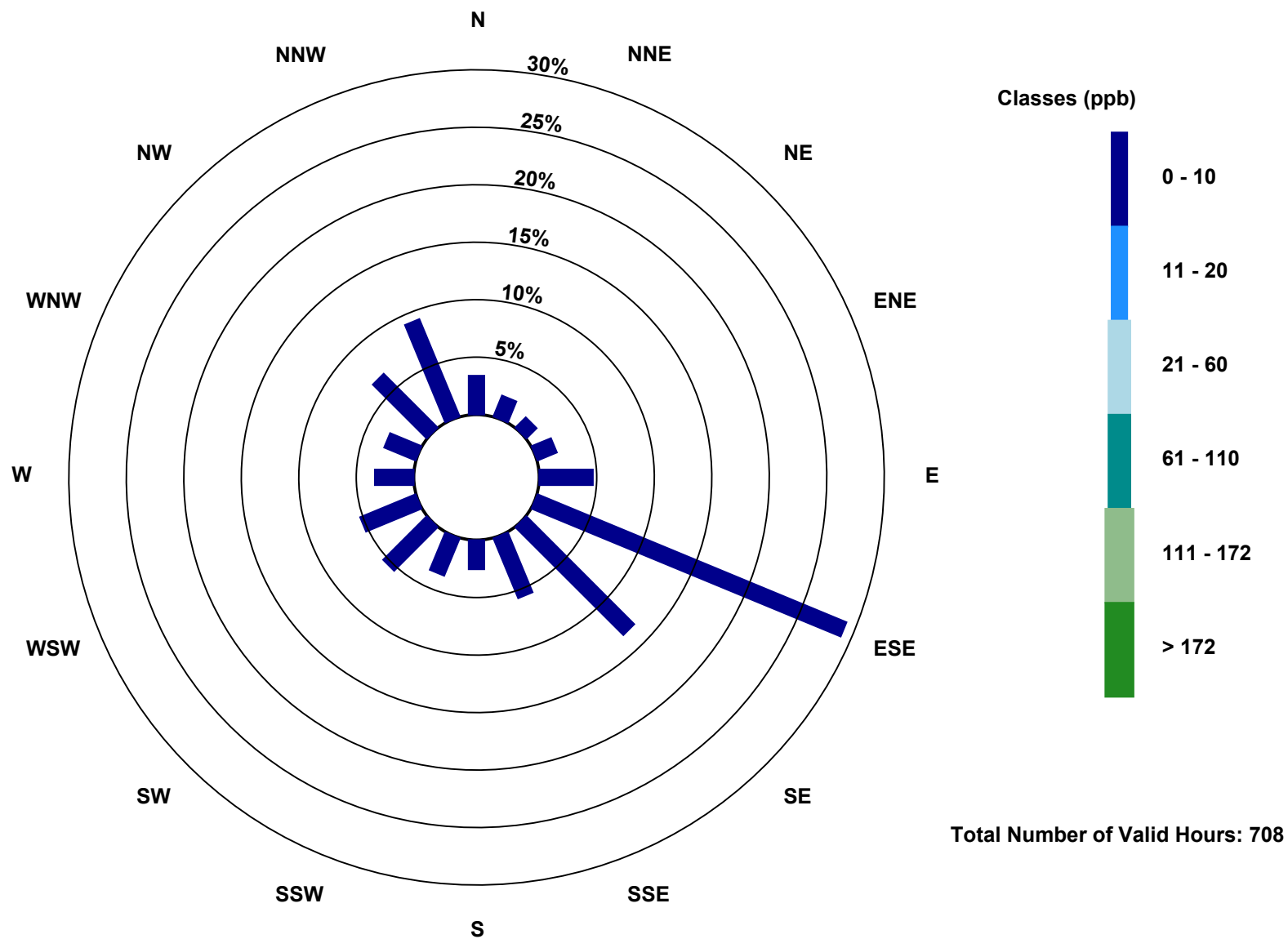
Total Number of Valid Hours: 708

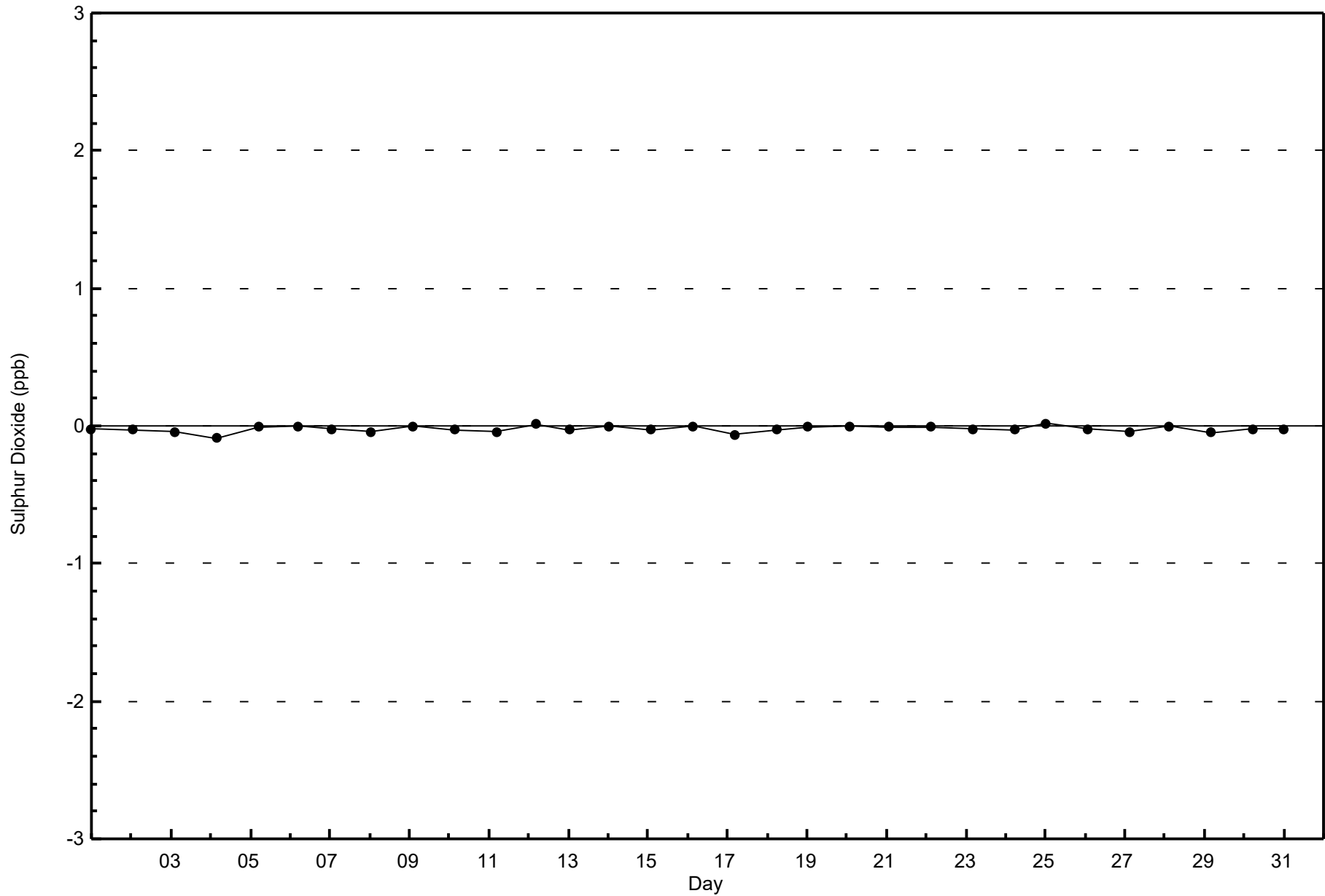
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Athabasca Valley

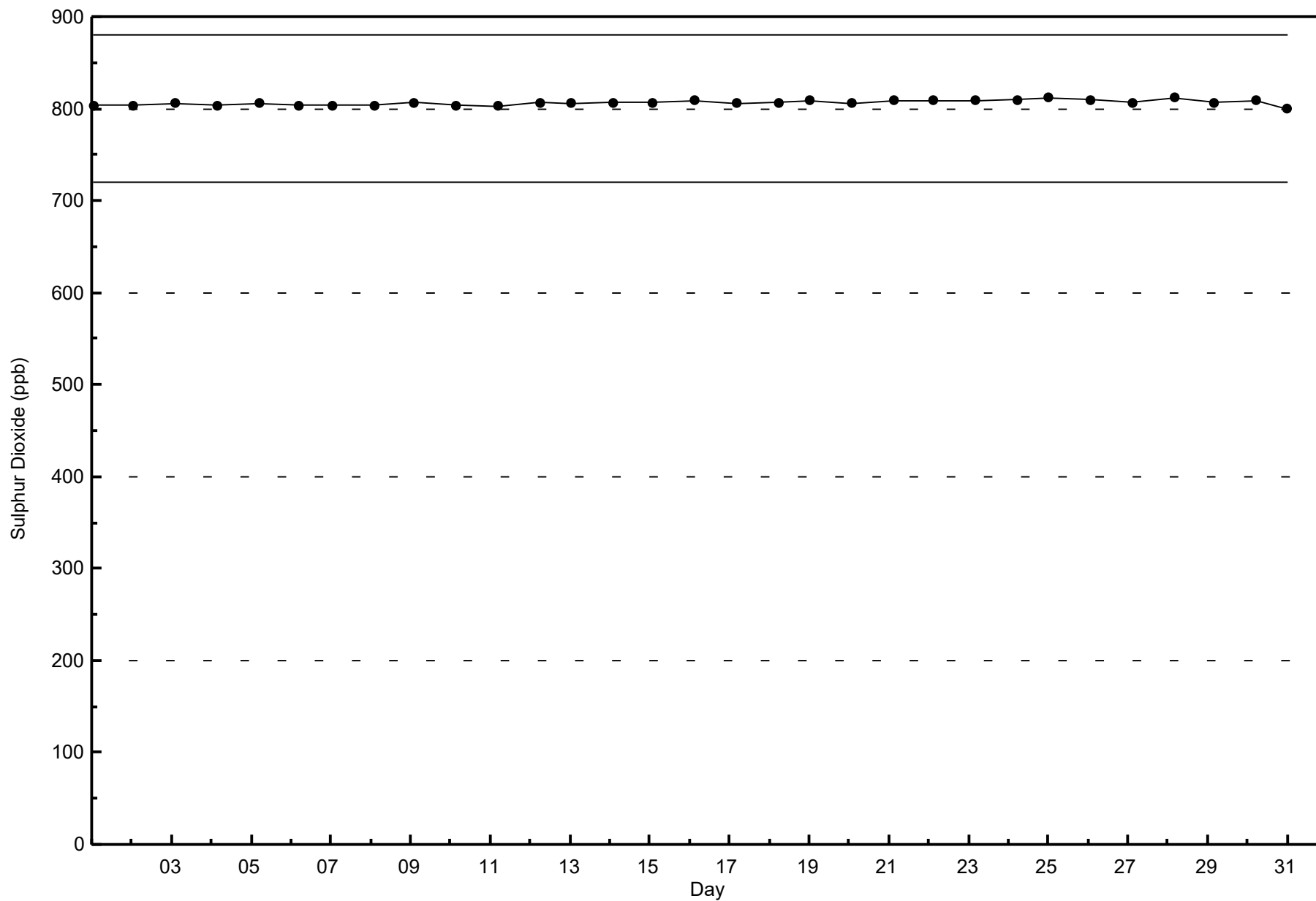






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - May 2025

Number of Exceedences (AAAQG): 30-Min: 1 Maximum Value: 5.1 ppb on May 30 01:30 Maximum Daily Average: 1.0 ppb on May 30																				Periods in Service: 1488 Periods of Valid Data: 1409 Periods of Invalid Data: 79 Periods of Calibration: 72 Percent Operational Time: 99.5						
Minimum Value: 0.0 ppb on May 5 14:00 Maximum Diurnal Average: 0.4 ppb at hour 2 Monthly Average: 0.22 ppb										Minimum Daily Average: 0.1 ppb on May 5 Minimum Diurnal Average: 0.2 ppb at hour 15 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.1																
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.2 0.2	Z SP	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.3
2-May	0.1 0.1	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.3	0.4 0.3	0.2	0.2	0.4
3-May	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.4	0.1	0.4
4-May	0.4 0.4	0.2 0.2	0.2 0.1	0.1 0.1	Z SP	0.2 0.2	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.4
5-May	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.2	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.0	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1	0.2
6-May	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
7-May	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
8-May	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.4	0.5 0.3	C C	C C	C C	C C	C C	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.5 0.3	0.2 0.2	0.2 0.2	0.2	0.5	
9-May	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.1	0.2 0.3	0.2	0.3
10-May	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2	0.3
11-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.3 0.3	0.4 1.0	0.8 0.5	0.8 0.8	0.2	1.0	
12-May	Z SP	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.4	0.4 0.5	0.5 0.6	0.6 0.6	0.5 0.3	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.4	0.2	0.6	
13-May	0.4 0.3	Z SP	0.5 0.4	0.5 0.4	0.5 0.4	0.5 0.4	0.4 0.7	1.1 0.7	0.6 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3	1.1	
14-May	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.3 0.3	0.2 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.5	1.6 0.7	0.7 0.7	0.4 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.3	1.6
15-May	0.2 0.1	0.1 0.1	0.2 0.2	Z SP	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	Z SP	0.4 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.4
17-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.3
18-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2	0.2
19-May	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.3
20-May	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
21-May	0.2 0.2	0.2 0.1	0.2 0.2	Z SP	0.3 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
22-May	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	PF 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 PF	0.1 PF	0.1 0.1	PF 0.1	0.2 PF	0.2 0.2	0.2 0.1	0.1 0.2	0.2	0.2
23-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.4 0.4	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
24-May	Z SP	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.2	0.3 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
25-May	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
26-May	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.3 0.3	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2	0.4
27-May	0.2 0.2	0.2 0.3	0.3 0.3	Z SP	0.4 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.2	0.2	0.4
28-May	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.2	Z SP	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.2	0.4
29-May	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.4	Z SP	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.3	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.3	0.2 0.2	0.3 0.3	0.9 0.5	0.3 0.4	0.6 0.7	0.4	0.9
30-May	Z SP	5.1 4.5	3.9 2.0	1.8 1.5	1.2 1.0	1.2 1.1	1.1 1.3	1.0 0.8	0.6 0.4	0.3 0.3	0.3 M	0.3 M	0.4 0.3	0.3 0.3	0.3 0.3	0.7 0.8	0.7 0.7	0.7 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	1.0	5.1
31-May	0.5 0.5	Z SP	0.5 0.4	0.4 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.7	0.8 0.5	0.5 0.4	0.5 0.3	0.4 0.4	0.6 0.6	0.5 0.5	0.4 0.6	0.6 0.8	0.9 1.1	1.1 0.9	0.8 0.6	0.6 0.6	0.7 0.7	0.6 0.7	0.6	1.1
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

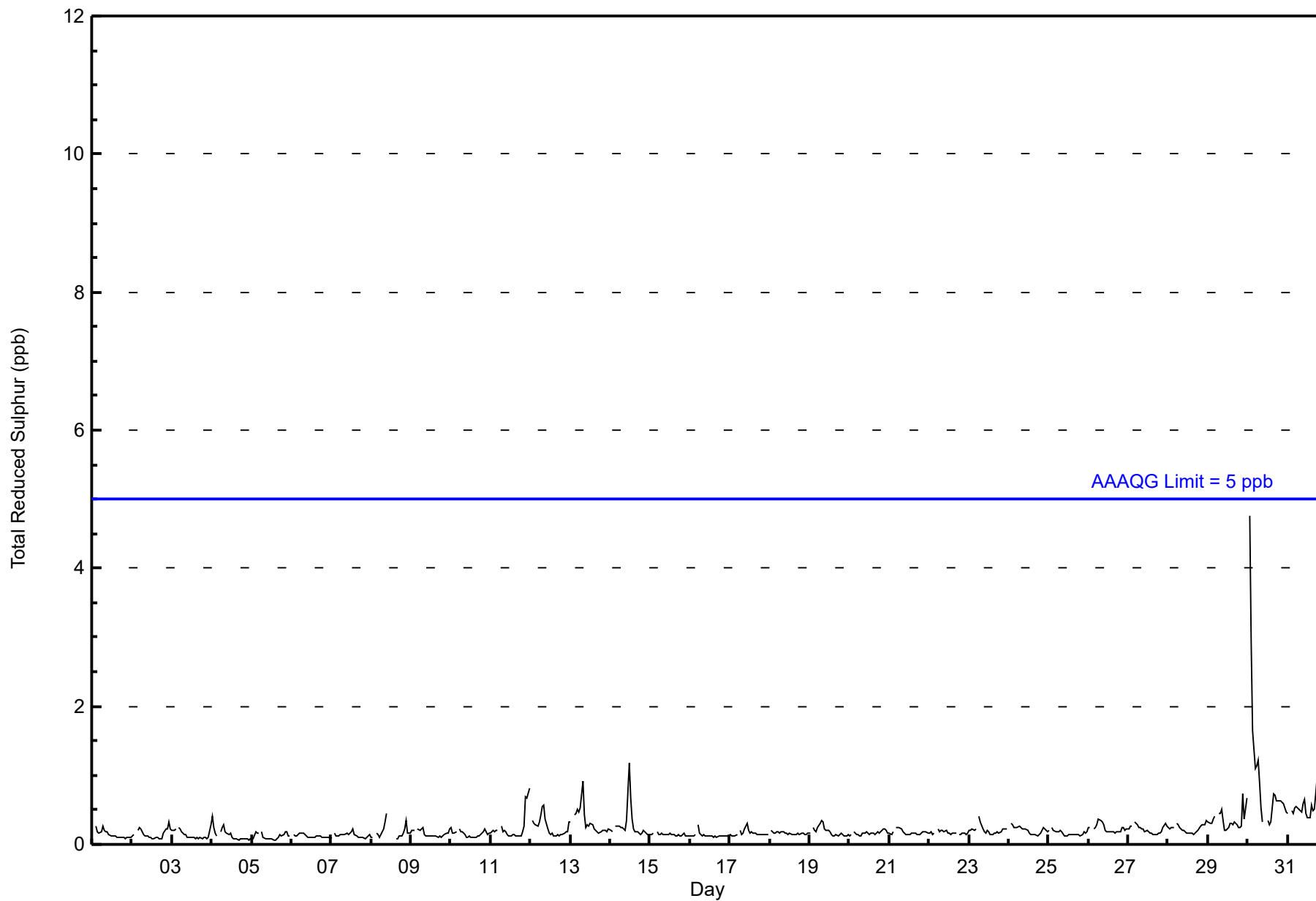
Athabasca Valley - May 2025

Maximum Value: 4.8 ppb on May 30 02:00																	Maximum Daily Average: 1.0 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.1 ppb on May 5 14:00																	Minimum Daily Average: 0.1 ppb on May 5										Hours of Data: 705	
Maximum Diurnal Average: 0.4 ppb at hour 2																	Minimum Diurnal Average: 0.2 ppb at hour 15										Hours of Missing Data: 39	
Monthly Average: 0.22 ppb																	Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.0										Hours of Calibration: 36	
																	Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
2-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3	
3-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.3	
4-May	0.4	0.2	0.2	0.1	Z	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	
5-May	0.1	0.1	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	
6-May	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
7-May	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
8-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.3	0.4	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.4	
9-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	
10-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	
11-May	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	0.7	0.8	0.2	0.8	
12-May	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.4	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.6	
13-May	0.3	Z	0.4	0.5	0.5	0.5	0.5	0.9	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9	
14-May	0.2	0.2	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	1.2	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.3	1.2	
15-May	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
16-May	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
17-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	
18-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	
19-May	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3	
20-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
21-May	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
22-May	0.2	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	PF	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	
23-May	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	
24-May	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
25-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	
26-May	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	
27-May	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	
28-May	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	
29-May	0.3	0.3	0.3	0.4	0.4	Z	0.4	0.4	0.5	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.7	0.4	0.7	0.4	0.7	
30-May	Z	4.8	3.0	1.6	1.1	1.1	1.2	0.9	0.5	0.3	M	M	0.4	0.3	0.3	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	1.0	4.8	
31-May	0.5	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.6	0.5	0.5	0.7	1.0	1.0	0.7	0.6	0.7	0.6	0.6	0.6	1.0	
Diurnal Average																										Diurnal Maximum		
0.2 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.8																												
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																												
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																												



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	703	99.72	99.72
3 - 4	1	0.14	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	24	14	10	13	31	207	93	42	18	26	37	34	23	22	48	61	703
3 - 4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	14	10	13	31	207	93	42	18	26	37	36	23	22	48	61	705

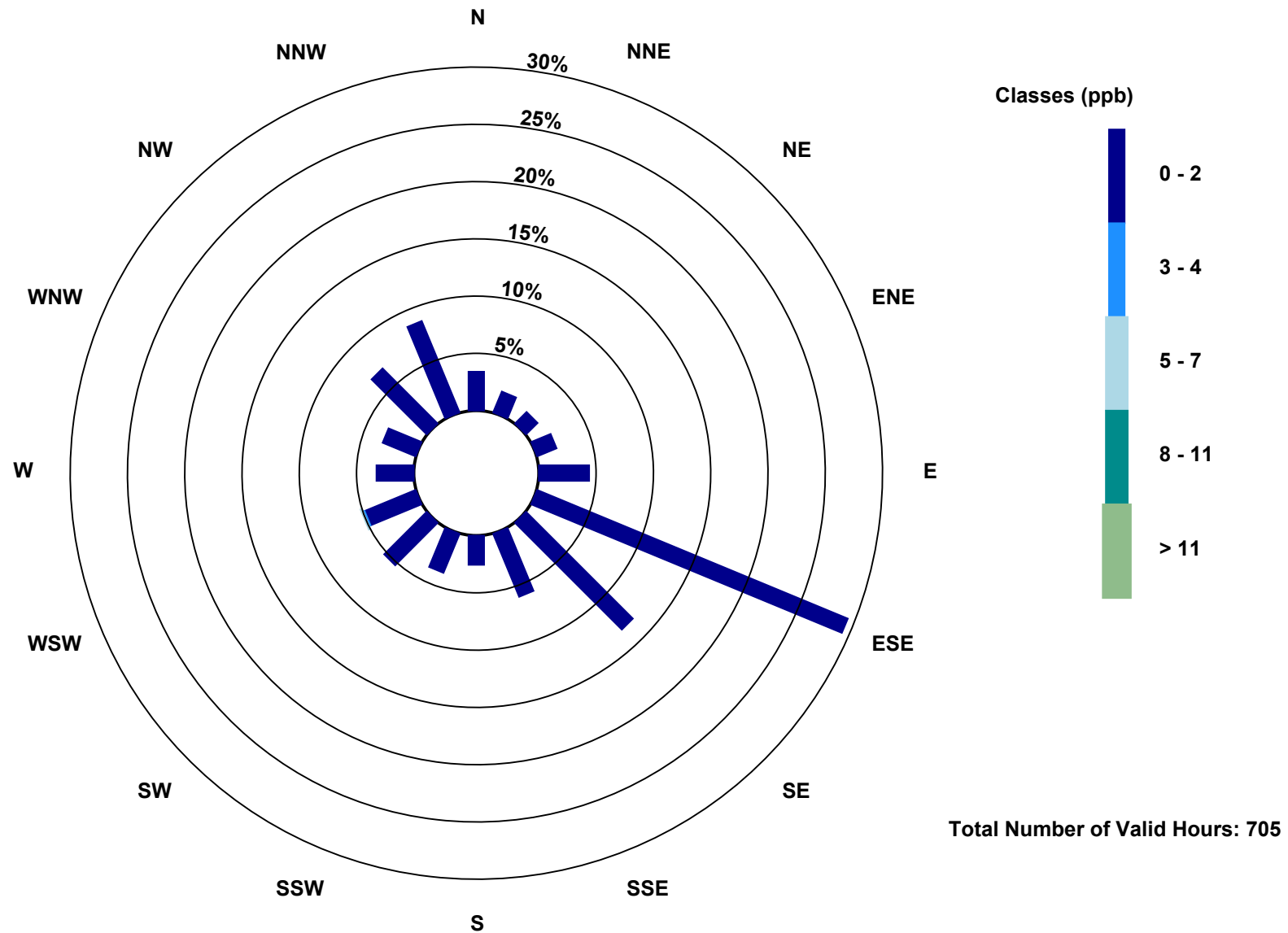
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley



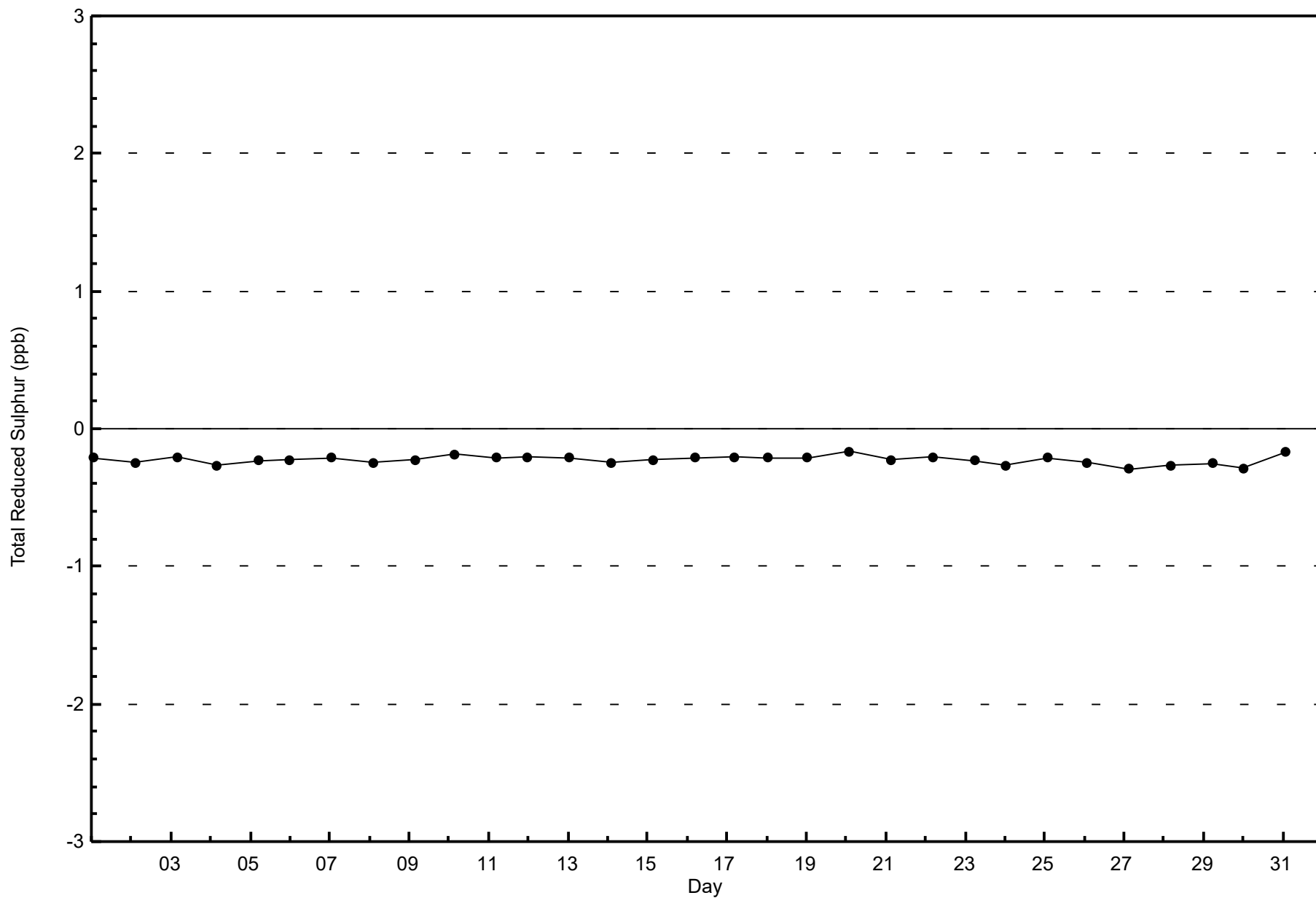


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

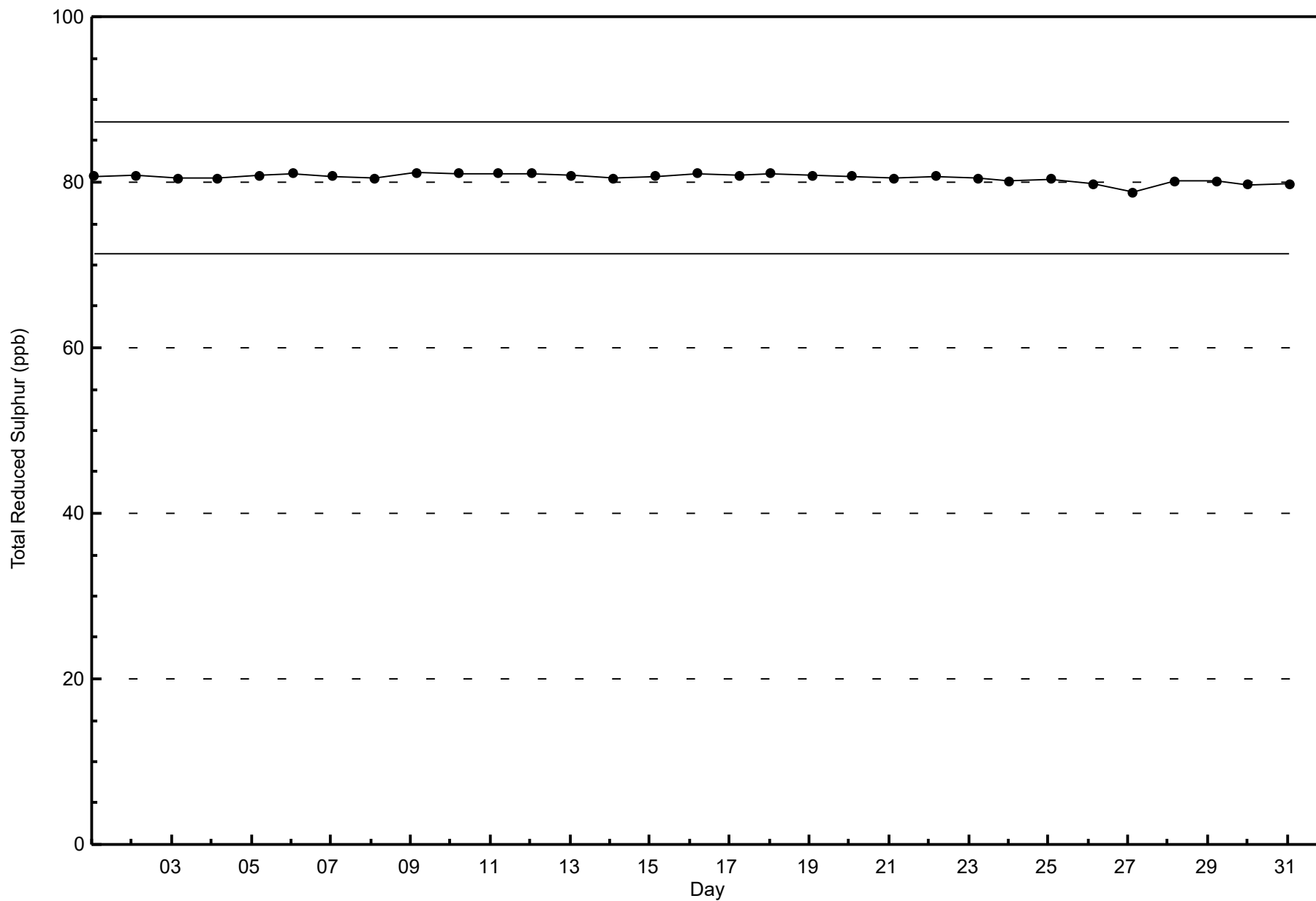
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

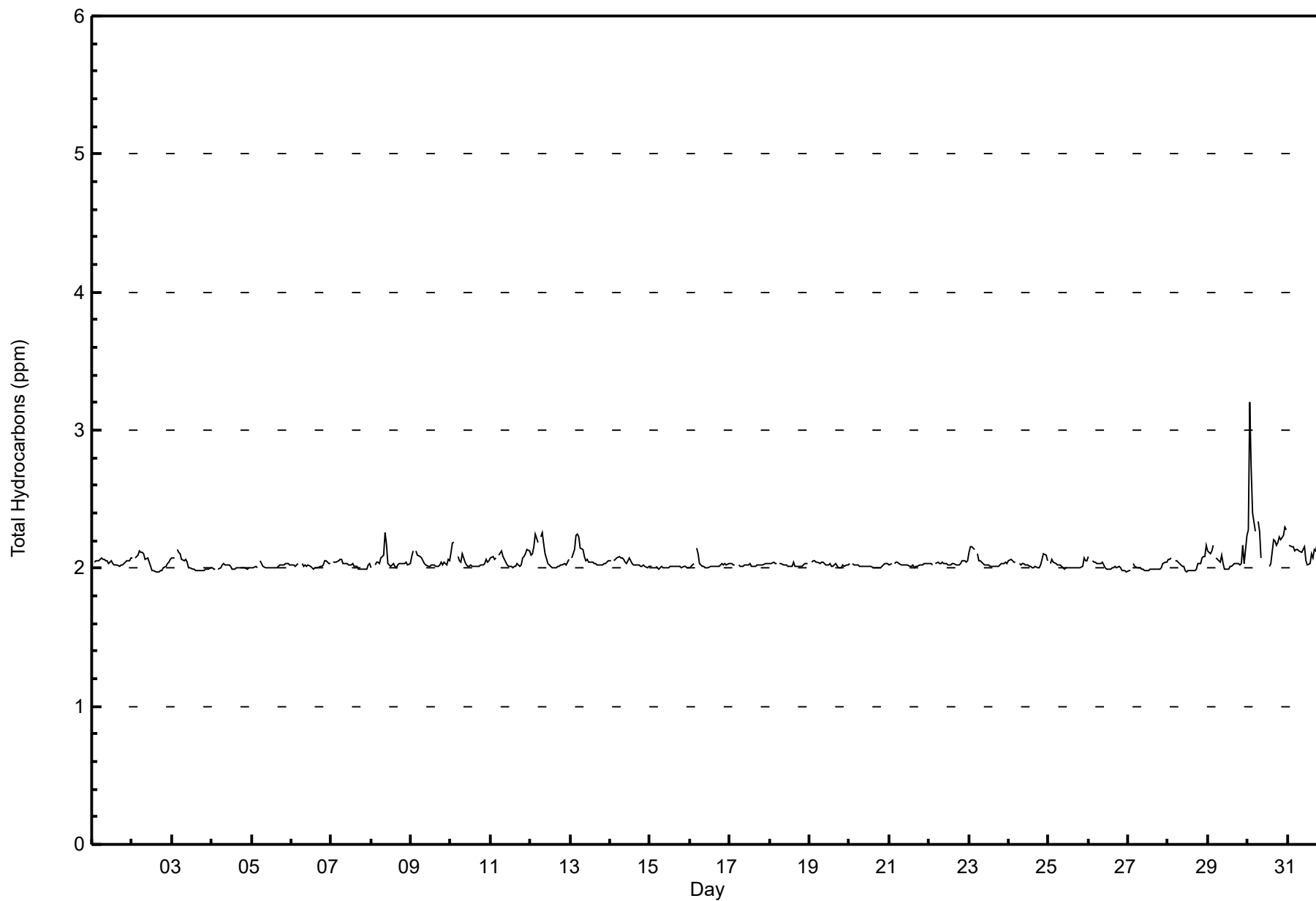
Athabasca Valley - May 2025

Maximum Value: 3.2 ppm on May 30 02:00																			Maximum Daily Average: 2.3 ppm on May 30							Hours in Service: 744	
Minimum Value: 2.0 ppm on May 28 12:00																			Minimum Daily Average: 2.0 ppm on May 27							Hours of Data: 709	
Maximum Diurnal Average: 2.1 ppm at hour 2																			Minimum Diurnal Average: 2.0 ppm at hour 14							Hours of Missing Data: 35	
Monthly Average: 2.04 ppm																			Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3							Hours of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
2-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
3-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-May	2.0	2.0	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
7-May	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-May	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
10-May	2.1	2.2	2.2	Z	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2
11-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
12-May	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3
13-May	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2
14-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-May	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
18-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
19-May	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1
23-May	2.1	2.2	2.2	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
24-May	2.1	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
25-May	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
26-May	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-May	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.0	2.2
29-May	2.1	2.1	2.1	2.2	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.2	2.1	2.2
30-May	2.3	3.2	2.7	2.4	2.3	Z	2.3	2.3	2.1	C	C	C	C	2.0	2.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	3.2
31-May	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.0 2.1																								Diurnal Average			
2.3 3.2 2.7 2.4 2.3 2.2 2.3 2.3 2.3 2.2 2.2 2.1 2.1 2.0 2.1 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.3 2.3																								Diurnal Maximum			
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	526	74.19	74.19
2.1 - 3.0	182	25.67	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	21	10	6	9	19	156	56	35	16	20	35	32	18	18	30	45	526
2.1 - 3.0	3	4	3	4	14	51	38	5	2	5	3	4	6	3	17	20	182
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	14	9	13	33	207	94	40	18	25	38	37	24	21	47	65	709

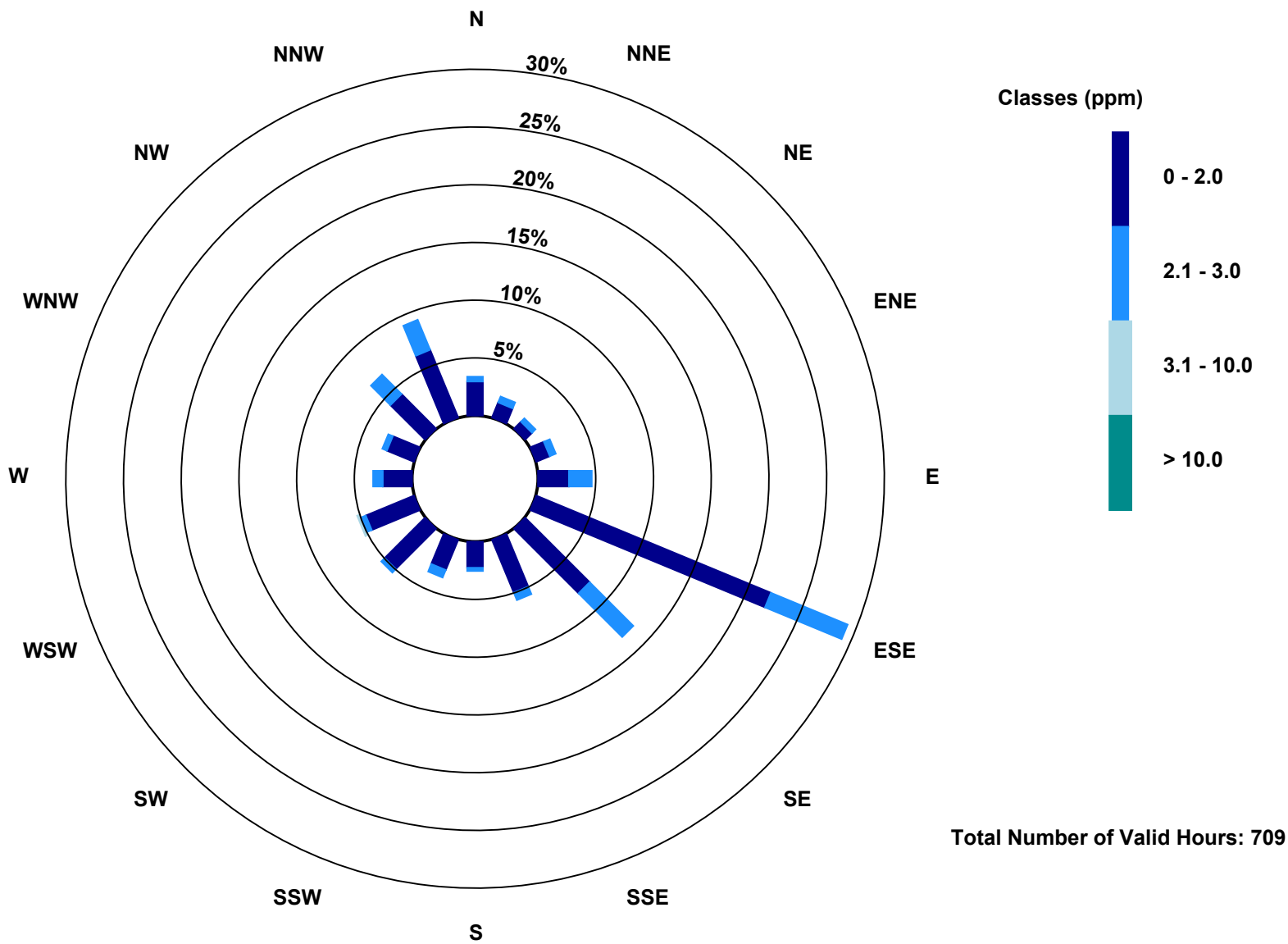
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

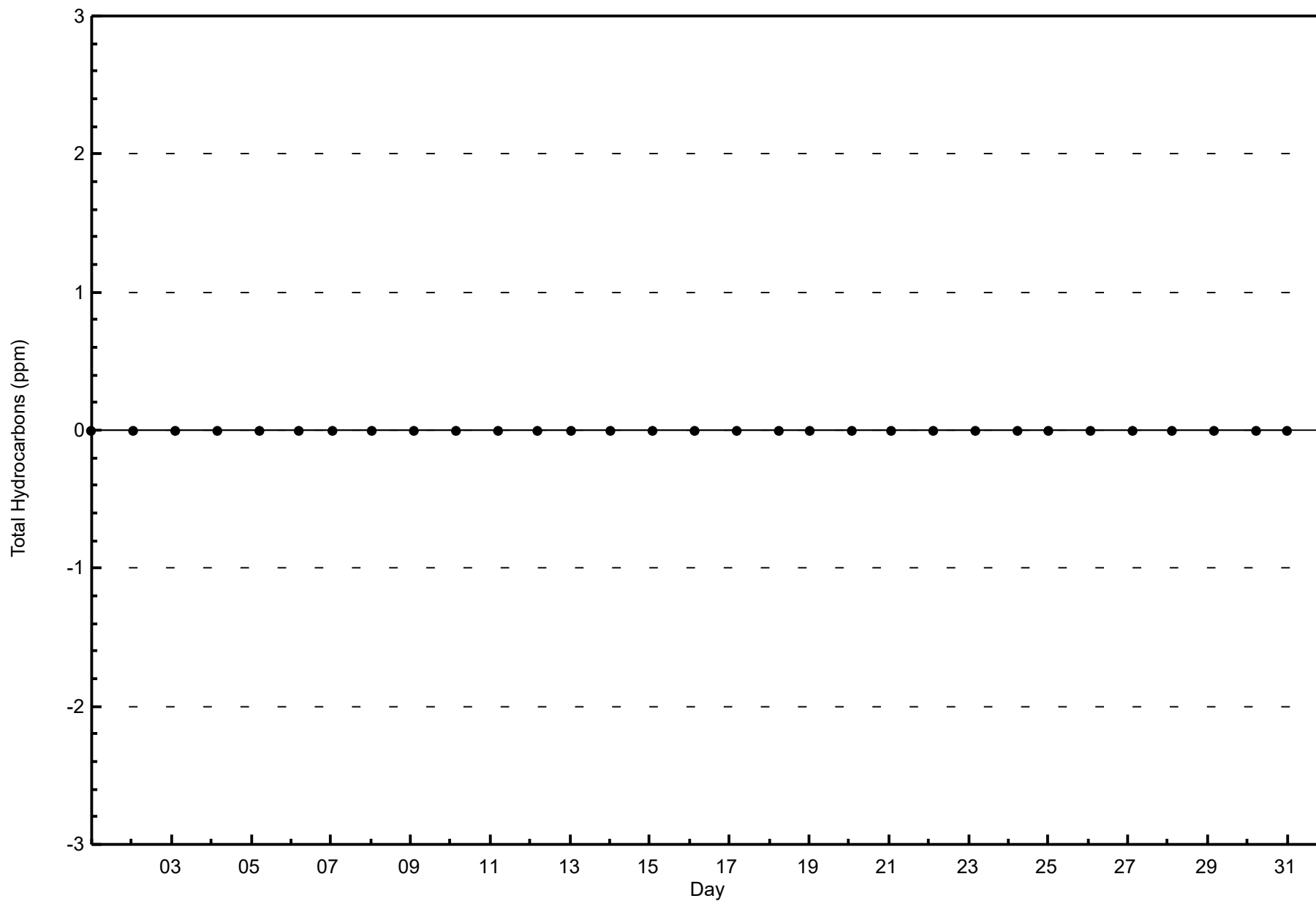
Total Hydrocarbons (THC) - ppm
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

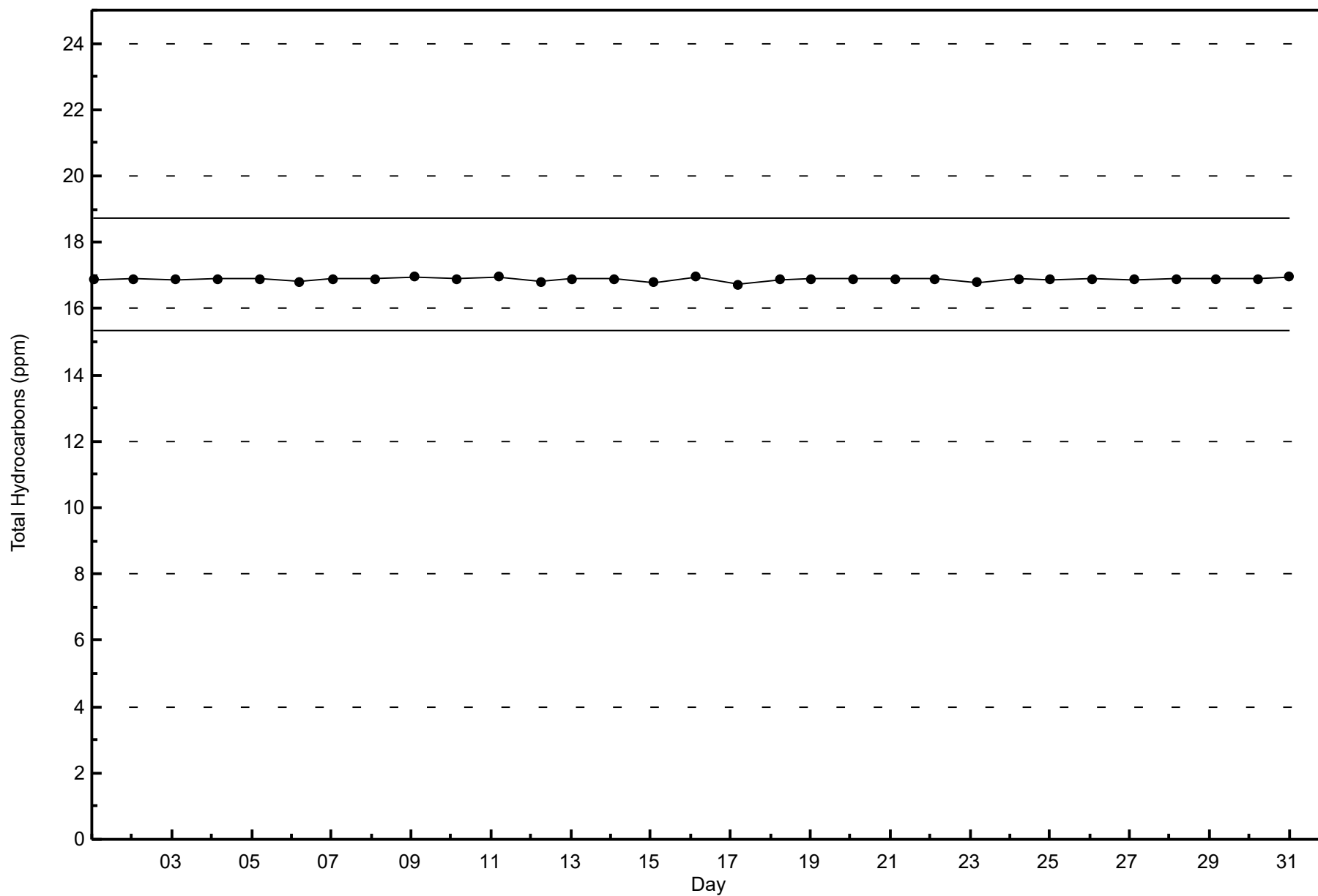
Total Hydrocarbons (THC) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

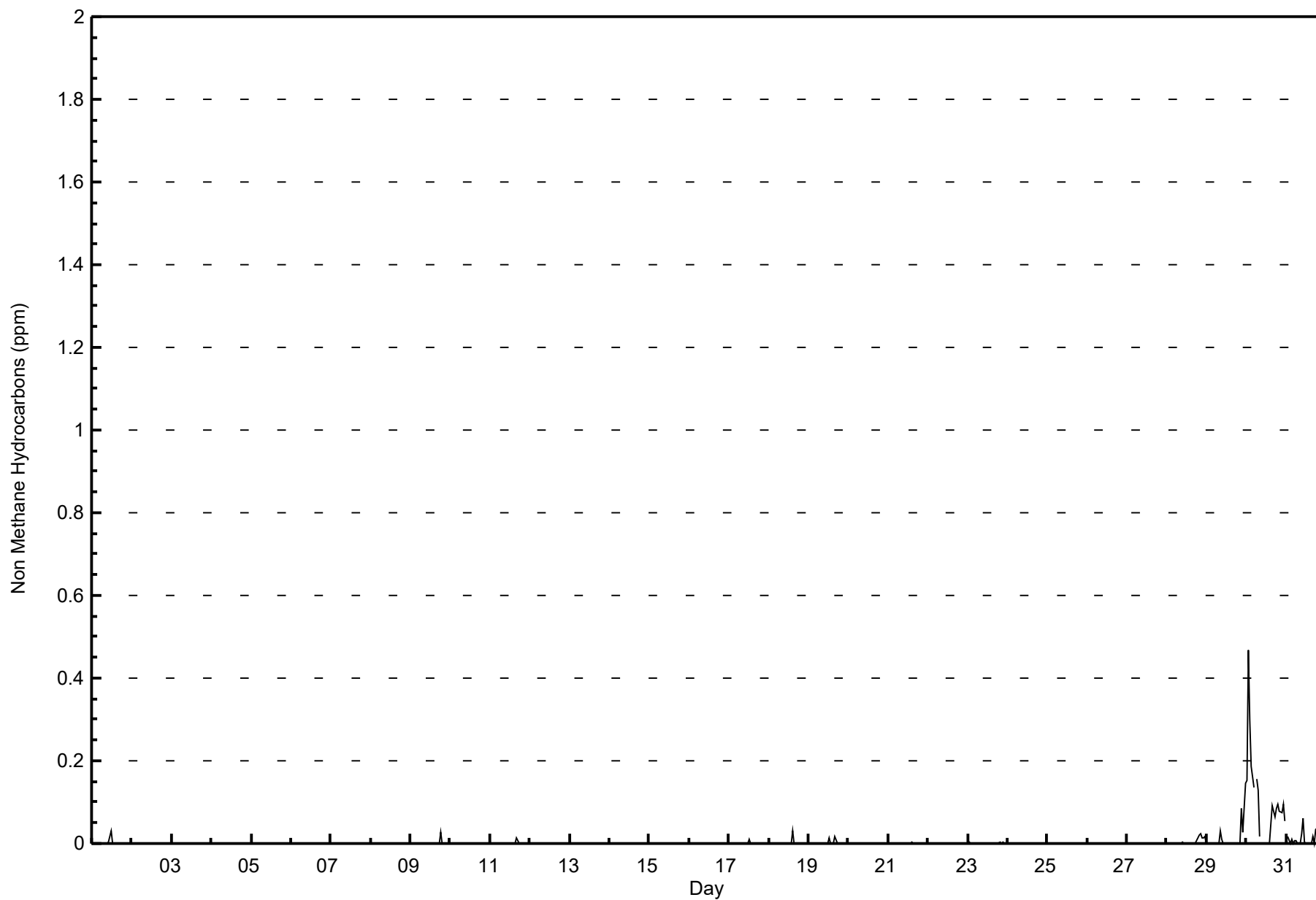
Athabasca Valley - May 2025

Maximum Value: 0.467 ppm on May 30 02:00																				Maximum Daily Average: 0.119 ppm on May 30					Hours in Service: 744		
Minimum Value: 0.000 ppm on May 1 02:00																				Minimum Daily Average: 0.000 ppm on May 2					Hours of Data: 709		
Maximum Diurnal Average: 0.019 ppm at hour 2																				Minimum Diurnal Average: 0.000 ppm at hour 14					Hours of Missing Data: 35		
Monthly Average: 0.004 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1					Hours of Calibration: 35		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.029	
2-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
3-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
5-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
6-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
7-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
8-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
9-May	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.001	0.029	
10-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
11-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.015	
12-May	0.000	0.000	0.000	0.000	0.000	Z	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	
13-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
14-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
15-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
16-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	
18-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.031	
19-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.016	
20-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
21-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	
22-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	
23-May	0.000	0.002	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.001	0.003	0.000	0.000	0.000	0.004	
24-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
25-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
26-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
27-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.002	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.022	0.025	0.014	0.014	0.017	0.005	0.025	
29-May	0.001	0.000	0.000	0.000	Z	0.000	0.000	0.001	0.032	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.085	0.027	0.144	0.013	0.144	
30-May	0.152	0.467	0.298	0.185	0.134	Z	0.156	0.128	0.018	C	C	C	C	0.000	0.000	0.091	0.078	0.066	0.086	0.095	0.077	0.076	0.095	0.056	0.119	0.467	
31-May	Z	0.017	0.001	0.009	0.000	0.008	0.008	0.000	0.001	0.024	0.060	0.002	0.000	0.000	0.000	0.000	0.018	0.000	0.033	0.040	0.000	0.002	0.000	0.000	0.010	0.060	
0.006 0.019 0.012 0.007 0.005 0.000 0.005 0.004 0.002 0.001 0.002 0.001 0.001 0.000 0.001 0.003 0.004 0.002 0.005 0.005 0.003 0.006 0.004 0.007																										Diurnal Average	
0.152 0.467 0.298 0.185 0.134 0.008 0.156 0.128 0.032 0.024 0.060 0.029 0.012 0.000 0.031 0.091 0.078 0.066 0.086 0.095 0.077 0.085 0.095 0.144																										Diurnal Maximum	
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	665	93.79	93.79
0.006 - 0.05	25	3.53	97.32
0.06 - 0.1	14	1.97	99.29
> 0.1	5	0.71	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	23	13	9	10	31	200	86	37	18	22	36	34	18	19	46	63	665
0.006 - 0.05	1	1	0	3	1	7	5	1	0	0	0	1	1	2	0	2	25
0.06 - 0.1	0	0	0	0	1	0	3	2	0	3	2	0	2	0	1	0	14
> 0.1	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	5
Totals	24	14	9	13	33	207	94	40	18	25	38	37	24	21	47	65	709

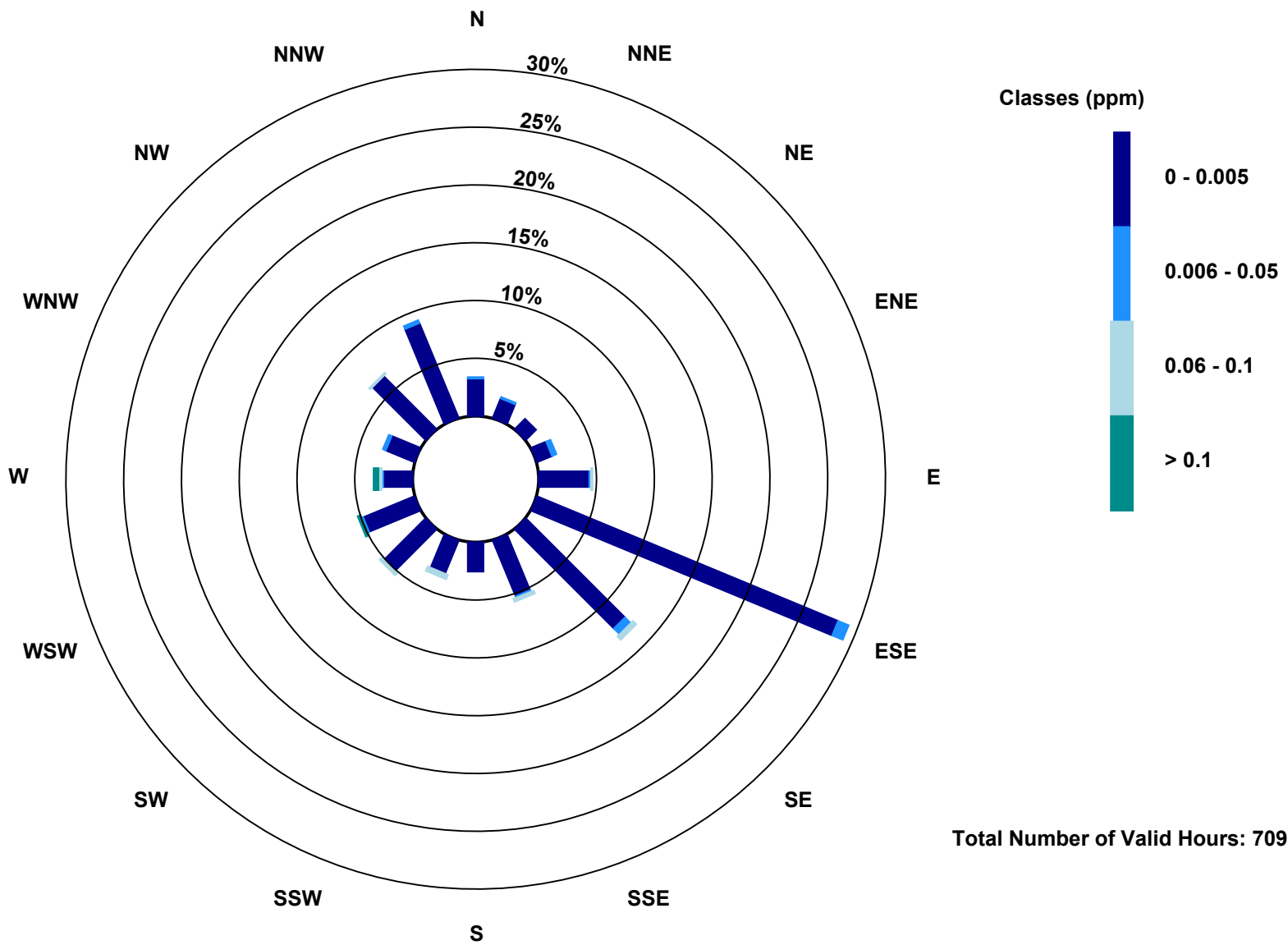
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Athabasca Valley



Total Number of Valid Hours: 709

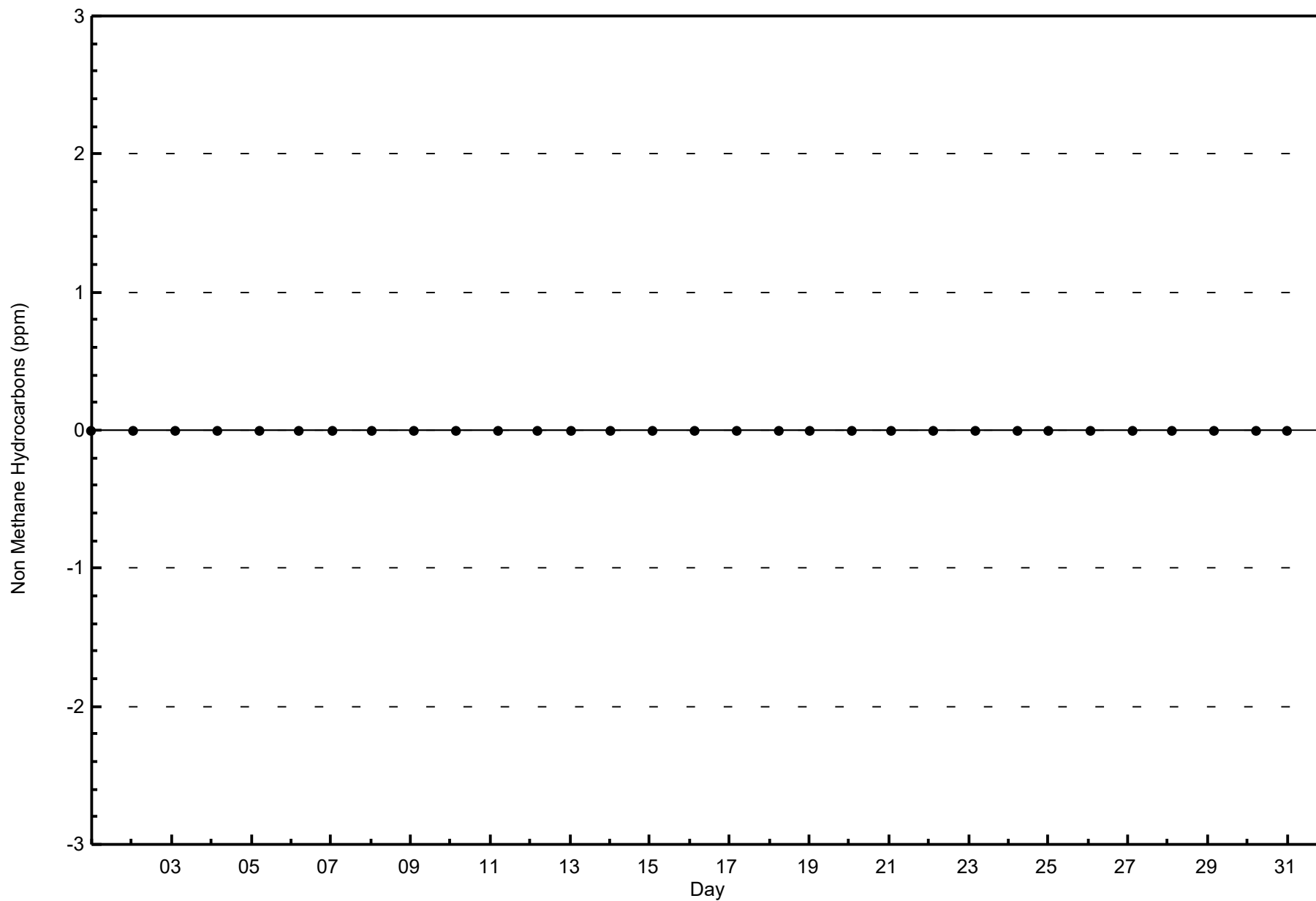


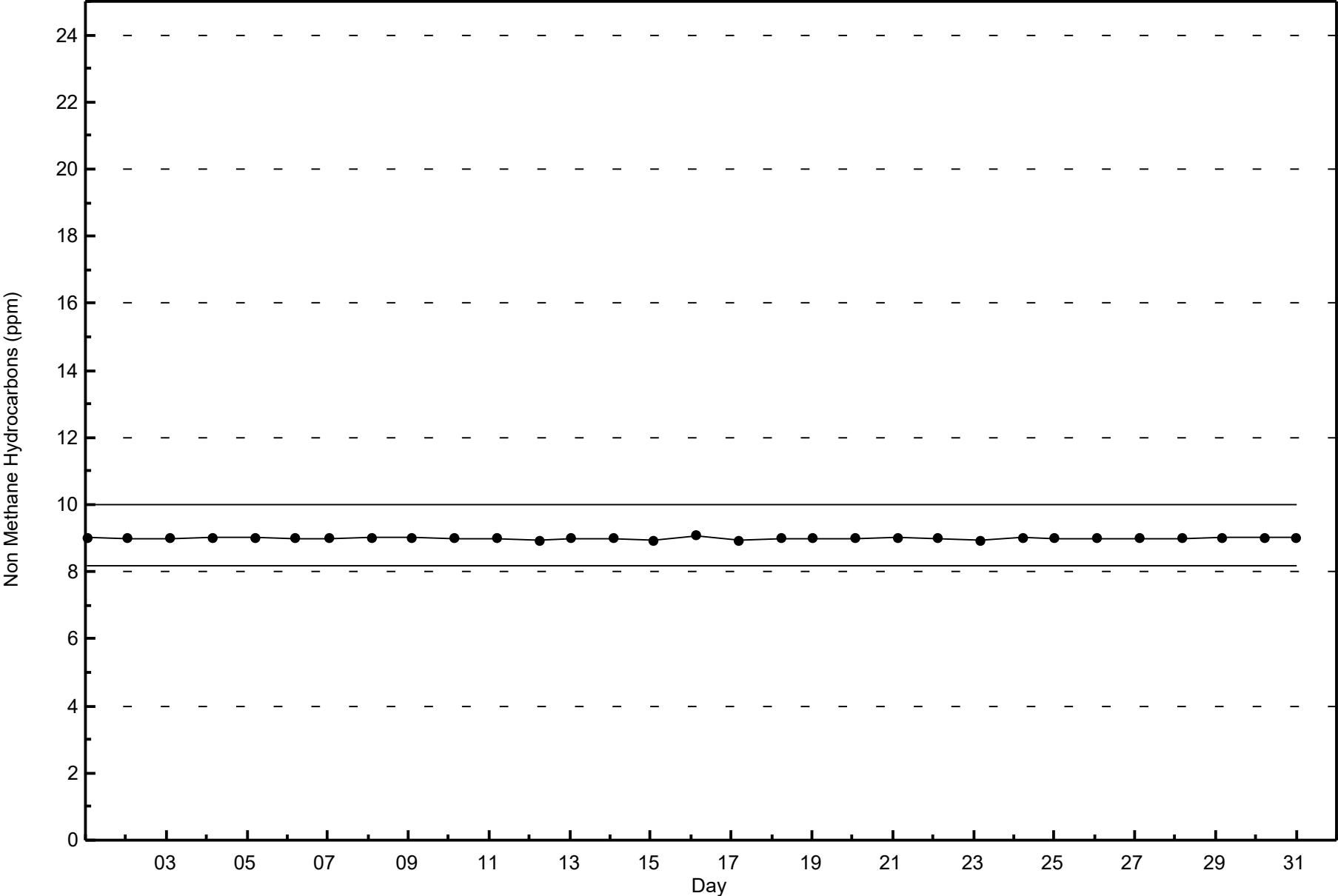
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

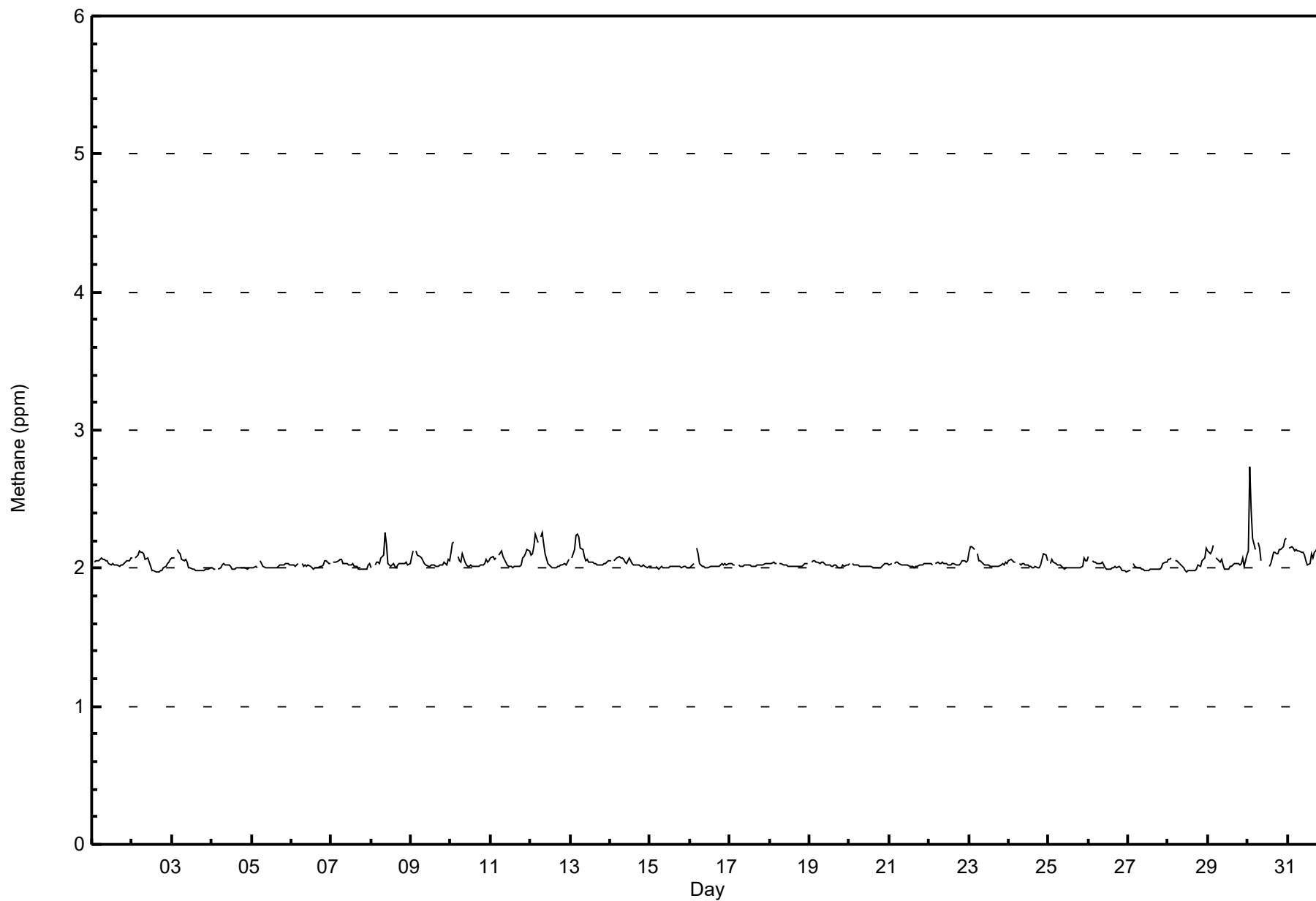
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppm on May 30 02:00 Maximum Daily Average: 2.2 ppm on May 30																			Hours in Service: 744							
Minimum Value: 2.0 ppm on May 28 12:00 Minimum Daily Average: 2.0 ppm on May 27 Maximum Diurnal Average: 2.1 ppm at hour 2 Minimum Diurnal Average: 2.0 ppm at hour 14 Monthly Average: 2.04 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.2																			Hours of Data: 709							
																			Hours of Missing Data: 35							
																			Hours of Calibration: 35							
																			Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
2-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
3-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-May	2.0	2.0	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
7-May	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-May	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
10-May	2.1	2.2	2.2	Z	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.2
11-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
12-May	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3
13-May	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2
14-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-May	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
18-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
19-May	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1
23-May	2.1	2.2	2.2	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
24-May	2.1	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
25-May	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
26-May	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-May	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
29-May	2.1	2.1	2.1	2.2	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.2
30-May	2.1	2.7	2.4	2.2	2.1	Z	2.2	2.1	2.1	C	C	C	C	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.7
31-May	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2.1																									Diurnal Average	
2.1																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	527	74.33	74.33
2.1 - 3.0	182	25.67	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	21	10	6	9	19	156	56	36	16	20	35	32	18	18	30	45	527
2.1 - 3.0	3	4	3	4	14	51	38	4	2	5	3	5	6	3	17	20	182
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	14	9	13	33	207	94	40	18	25	38	37	24	21	47	65	709

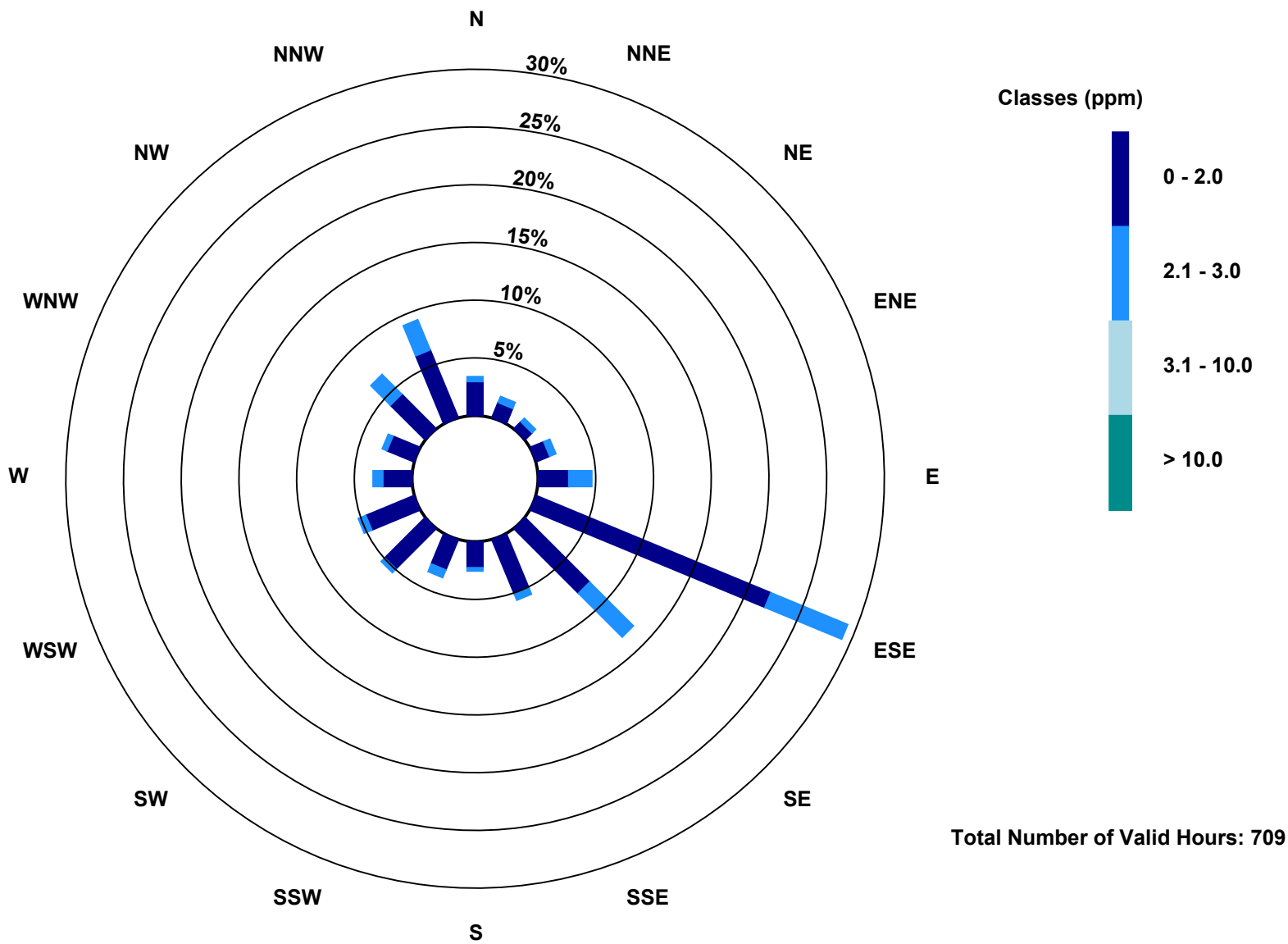
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

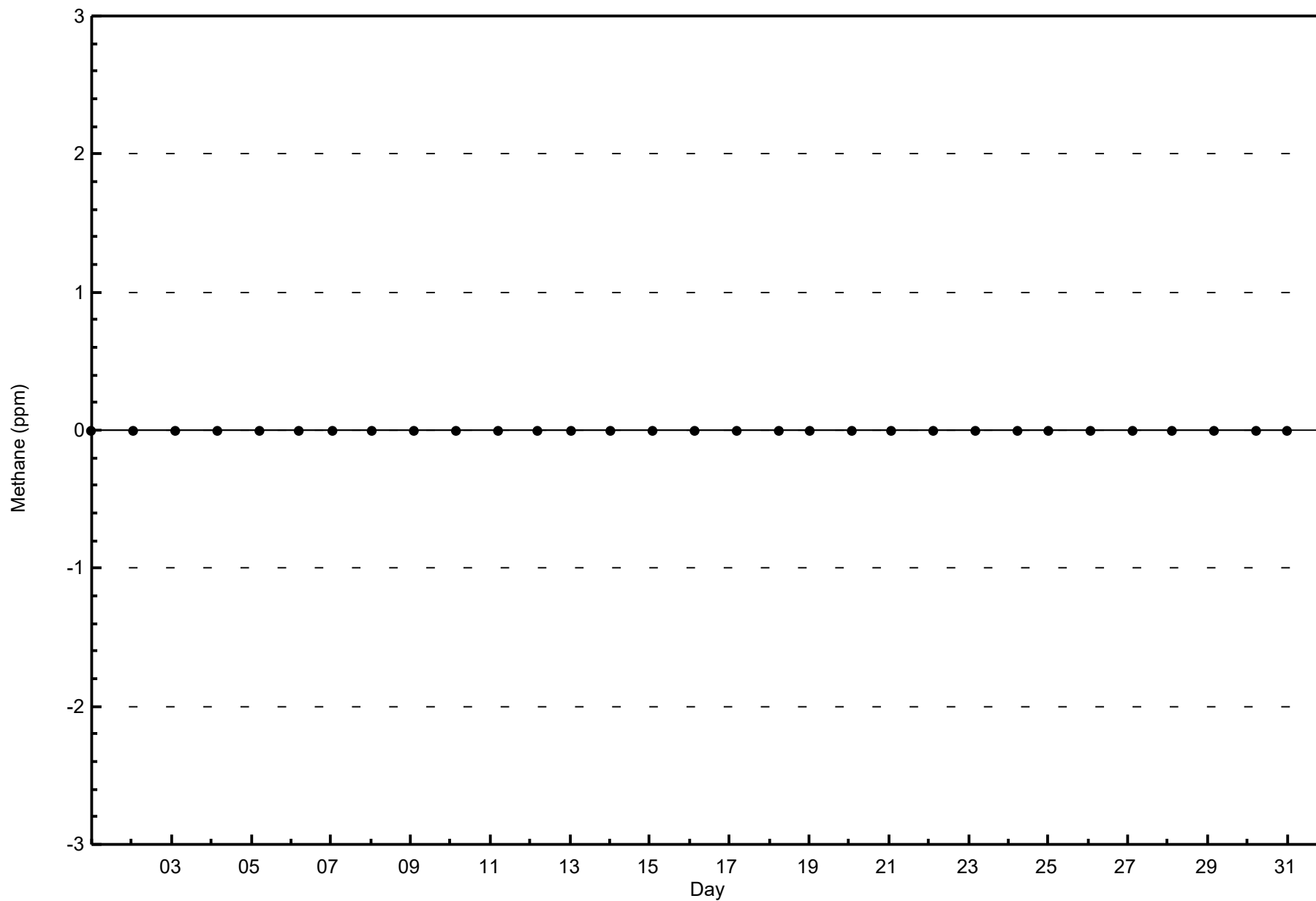
Methane (CH₄) - ppm
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

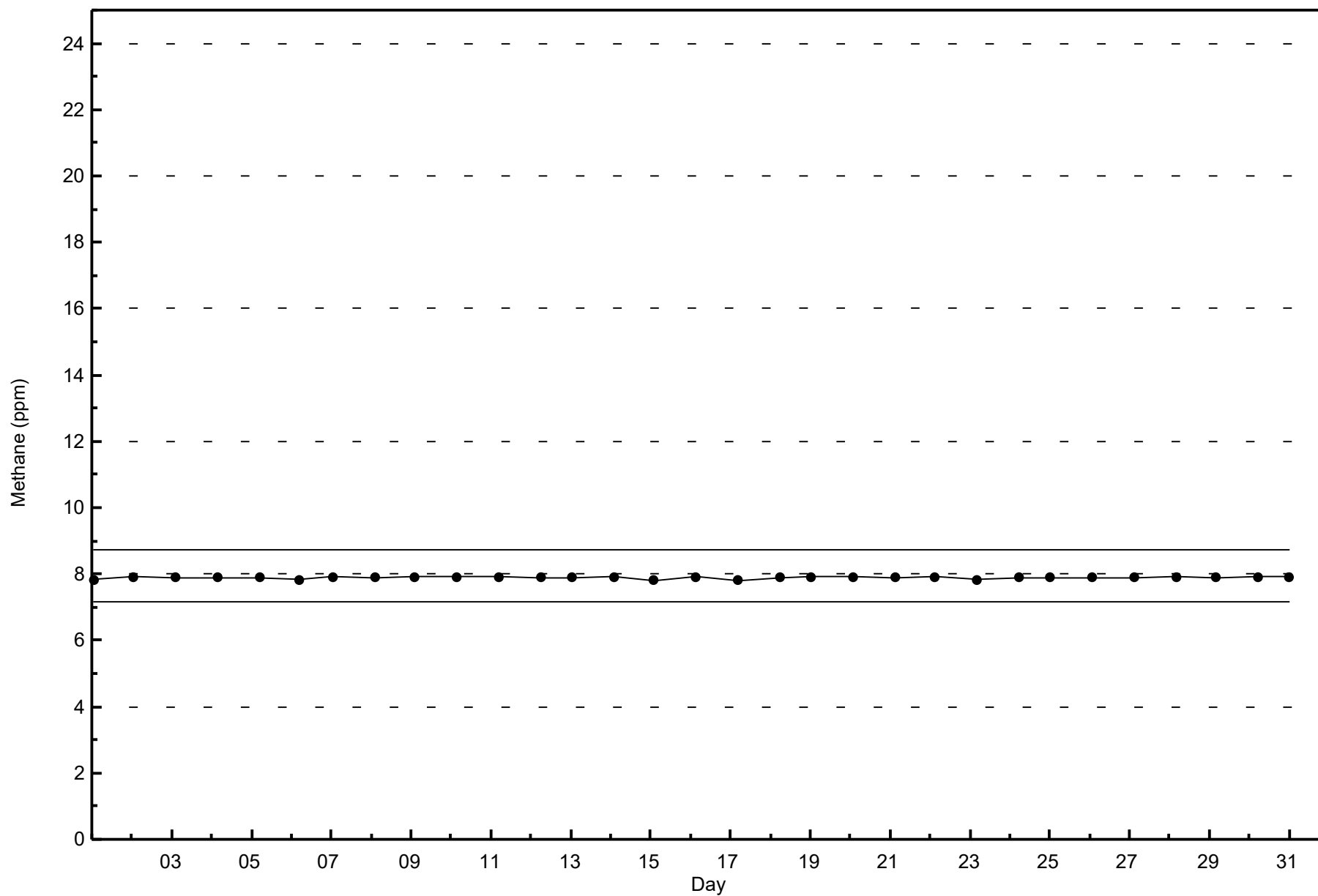
Methane (CH₄) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

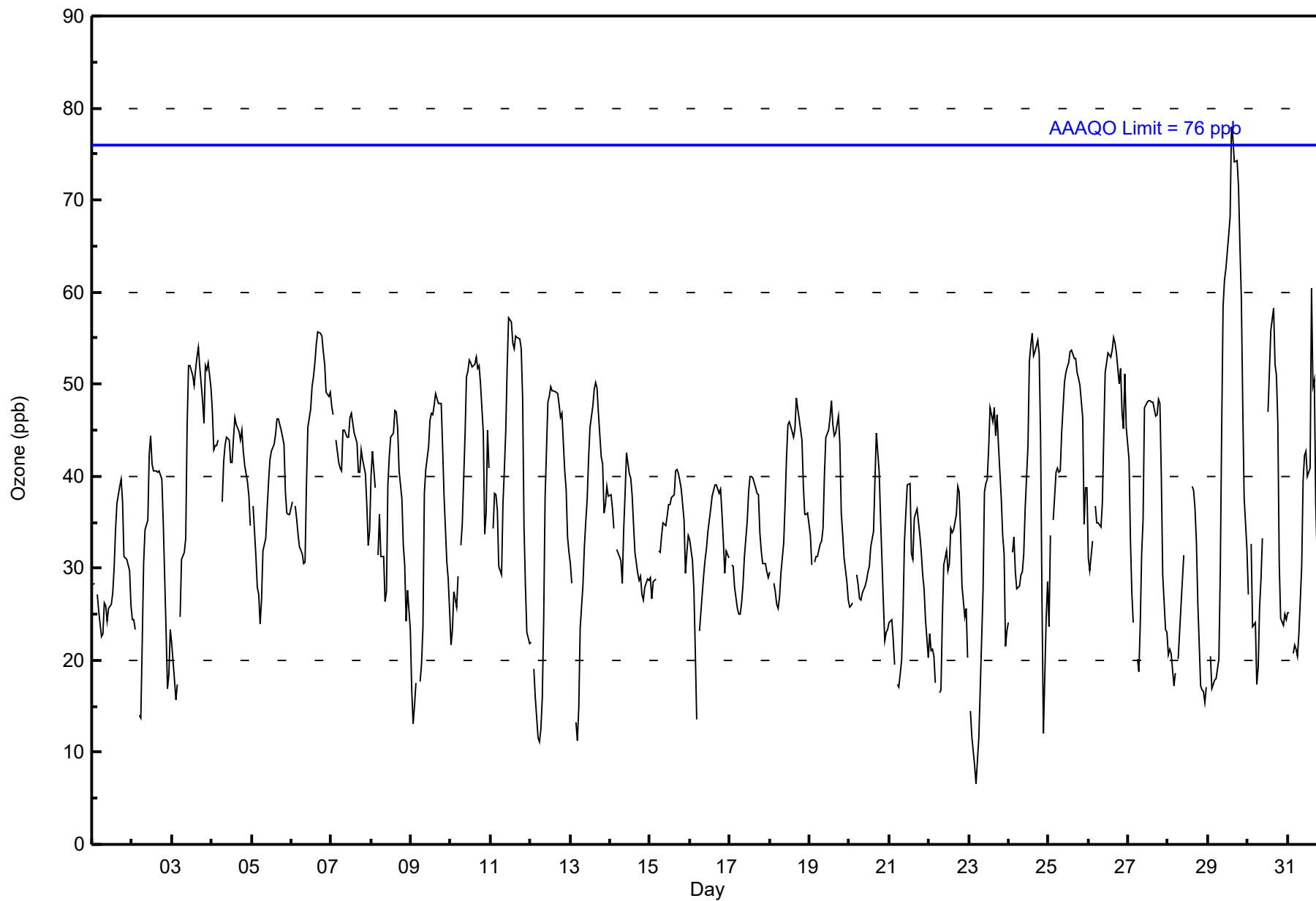
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 2 24-hr: 0 Maximum Value: 77.9 ppb on May 29 15:00 Maximum Daily Average: 48.6 ppb on May 29																					Hours in Service: 744					
Minimum Value: 6.6 ppb on May 23 05:00 Maximum Diurnal Average: 46.8 ppb at hour 16 Monthly Average: 36.21 ppb																					Hours of Data: 707					
Minimum Daily Average: 24.1 ppb on May 28 Minimum Diurnal Average: 24.9 ppb at hour 6 Percentiles: P ₁ = 11.7 P ₁₀ = 21.8 Q ₁ = 28.2 Median = 35.9 Q ₃ = 44.8 P ₉₀ = 51.3 P ₉₉ = 64.9																					Hours of Missing Data: 37					
																					Hours of Calibration: 35					
																					Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	28.2	28.3	Z	27.2	25.3	22.6	22.9	26.2	25.9	24.3	25.7	26.0	27.3	30.0	34.1	37.1	38.9	39.6	37.2	31.3	31.0	31.0	29.7	26.0	29.4	39.6
2-May	24.4	24.3	23.4	Z	14.0	13.7	21.8	30.5	34.2	35.2	42.4	44.4	41.4	40.6	40.6	40.4	40.6	40.1	39.7	34.9	23.2	16.9	18.4	23.4	30.8	44.4
3-May	21.9	17.9	15.7	17.5	Z	24.7	31.0	31.8	33.2	45.5	52.1	52.0	50.9	49.9	51.6	52.9	54.0	51.8	48.2	45.8	52.1	51.6	52.2	49.5	41.5	54.0
4-May	46.9	42.9	43.3	43.3	43.9	Z	37.2	41.4	43.4	44.2	43.9	41.4	41.5	44.0	46.3	45.6	44.8	44.0	45.0	42.8	41.2	39.3	37.8	34.7	42.6	46.9
5-May	Z	36.7	31.3	27.9	27.1	23.9	26.5	31.8	33.2	36.5	39.3	41.8	42.6	43.5	44.5	46.2	46.2	45.6	45.0	43.4	38.3	36.0	35.9	35.8	37.4	46.2
6-May	37.2	Z	36.8	35.4	33.6	32.3	31.6	30.5	30.6	39.1	45.3	47.2	49.7	50.8	52.4	54.2	55.7	55.6	55.2	53.6	52.1	49.2	48.7	49.2	44.6	55.7
7-May	47.6	46.7	Z	43.9	41.5	40.9	40.6	44.9	45.0	44.3	44.2	46.3	46.9	45.8	44.6	43.7	40.4	40.4	42.8	41.8	40.3	36.9	32.6	34.1	42.4	47.6
8-May	39.9	42.8	38.7	Z	31.5	35.8	31.2	31.3	26.3	27.5	39.1	42.1	44.2	44.7	47.1	47.0	45.1	40.5	37.6	32.5	30.3	24.3	27.6	23.4	36.1	47.1
9-May	16.8	13.1	15.2	17.6	Z	17.6	19.7	23.6	38.1	40.7	43.2	46.1	46.9	46.7	47.8	48.9	47.9	47.9	48.0	43.1	38.0	30.6	28.8	25.2	34.4	48.9
10-May	21.7	23.3	27.4	25.7	29.1	Z	32.4	34.8	44.5	50.8	51.4	52.6	52.3	51.8	52.1	52.9	51.7	52.1	50.1	44.7	33.8	36.0	45.1	40.8	41.6	52.9
11-May	Z	34.3	38.2	37.9	36.4	30.1	29.3	37.1	40.7	45.0	51.8	57.2	56.7	54.4	53.8	55.2	55.0	54.9	53.9	48.5	34.4	28.0	23.0	21.8	42.5	57.2
12-May	22.0	Z	19.1	15.9	11.6	11.1	12.5	15.8	24.3	37.7	48.1	48.7	49.7	49.3	49.2	49.2	48.9	47.8	46.4	46.8	40.6	38.5	33.4	31.7	34.7	49.7
13-May	30.5	28.4	Z	13.2	11.2	14.9	23.5	28.2	32.3	35.0	37.6	42.0	45.3	47.6	49.4	50.1	49.6	46.9	42.0	41.3	35.9	37.0	38.8	37.8	35.6	50.1
14-May	38.0	36.5	34.3	Z	32.0	31.3	30.8	28.3	34.1	38.2	42.5	40.3	39.7	38.1	34.8	31.7	29.5	28.7	29.2	27.1	26.5	27.9	28.8	28.7	32.9	42.5
15-May	29.0	26.7	28.5	28.8	Z	31.9	31.7	33.6	34.9	34.6	35.7	36.9	36.8	37.6	37.9	40.6	40.7	40.3	39.5	38.7	35.2	29.4	31.8	33.5	34.5	40.7
16-May	33.1	30.8	27.7	21.1	13.6	Z	23.3	27.3	29.2	30.9	32.1	34.0	36.5	37.9	38.4	39.0	39.1	38.1	38.6	35.9	32.9	29.5	32.0	31.2	31.8	39.1
17-May	Z	30.4	30.2	28.0	25.7	25.1	25.0	26.2	28.2	31.2	35.2	38.4	40.0	40.0	39.9	38.8	38.1	38.0	33.9	31.9	30.5	30.5	29.6	29.0	32.3	40.0
18-May	29.7	Z	28.3	27.5	26.1	25.6	26.9	29.4	32.7	37.0	42.0	45.7	45.9	44.8	44.2	45.2	48.5	47.4	46.3	44.0	38.9	35.8	35.8	36.0	37.6	48.5
19-May	33.5	30.3	Z	30.7	31.3	31.3	32.6	32.9	34.3	40.2	44.2	44.9	46.3	48.1	45.7	44.3	44.8	46.5	43.4	36.0	33.8	31.1	28.5	26.6	37.5	48.1
20-May	25.8	26.0	26.3	Z	29.2	28.3	26.8	26.5	27.3	28.1	28.7	29.5	30.1	32.4	34.0	39.6	44.7	42.6	40.4	35.4	26.2	22.2	23.0	23.3	30.3	44.7
21-May	24.2	24.4	22.3	19.5	Z	17.5	17.1	20.0	25.1	32.9	36.0	39.0	39.2	31.5	30.9	35.4	36.0	36.4	33.6	31.7	29.2	27.7	24.4	20.3	28.4	39.2
22-May	22.9	21.0	21.2	20.5	17.6	Z	16.4	16.8	24.5	30.4	31.9	29.8	30.4	34.4	33.9	34.2	35.9	38.9	38.2	33.9	28.1	24.7	25.6	20.3	27.5	38.9
23-May	Z	14.5	11.7	8.5	6.6	9.2	11.6	16.9	27.7	38.3	39.2	39.7	43.0	47.5	46.0	47.5	44.3	46.7	43.4	37.5	33.6	31.6	21.5	23.2	30.0	47.5
24-May	24.1	Z	31.8	33.4	29.6	27.8	28.0	29.2	29.6	31.6	36.5	43.3	52.5	54.1	55.6	53.2	53.5	54.8	53.2	43.9	26.4	12.0	24.7	28.5	37.3	55.6
25-May	23.7	33.5	Z	35.3	40.4	40.9	40.4	40.5	44.6	50.3	51.2	51.9	52.4	53.5	53.7	52.8	52.8	51.3	50.7	49.9	46.3	34.8	38.8	38.7	44.7	53.7
26-May	31.1	29.7	33.0	Z	36.7	34.9	34.9	34.5	37.1	44.4	51.2	52.3	53.4	53.0	53.7	55.0	54.4	53.4	50.0	51.8	47.0	45.2	51.0	45.2	44.9	55.0
27-May	41.9	33.2	27.4	24.1	Z	20.2	18.8	23.9	31.6	35.2	47.5	48.1	48.2	48.1	48.0	48.1	46.5	46.7	48.3	47.9	40.0	29.4	23.3	23.1	36.9	48.3
28-May	20.6	21.2	20.8	17.3	18.6	Z	20.1	23.0	28.6	31.5	C	C	C	C	38.9	38.5	36.4	32.8	26.2	17.2	16.8	16.7	15.5	17.1	24.1	38.9
29-May	Z	20.4	17.0	17.3	17.8	18.0	20.1	29.6	45.2	58.4	61.3	62.5	66.1	68.3	77.9	76.8	74.2	74.2	71.4	65.0	59.3	47.7	37.7	32.0	48.6	77.9
30-May	27.2	Z	32.6	23.7	24.1	17.4	19.3	25.8	28.8	33.2	M	M	47.0	51.4	55.8	58.2	52.2	51.0	45.8	30.5	24.6	23.8	25.1	24.3	34.4	58.2
31-May	25.2	25.2	Z	20.7	21.6	21.2	20.5	22.9	30.2	39.5	42.3	42.7	40.0	40.9	60.5	49.8	50.5	36.8	30.9	29.3	28.7	24.4	26.2	29.2	33.0	60.5
29.5 28.6 27.3 25.5 26.0 24.9 26.0 28.9 33.1 37.8 42.1 43.7 44.8 45.4 46.6 46.8 46.5 45.5 43.7 39.9 35.3 31.6 31.5 30.4																									Diurnal Average	
47.6 46.7 43.3 43.9 43.9 40.9 40.6 44.9 45.2 58.4 61.3 62.5 66.1 68.3 77.9 76.8 74.2 74.2 71.4 65.0 59.3 51.6 52.2 49.5																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	59	8.35	8.35
21 - 50	567	80.20	88.54
51 - 82	81	11.46	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	2	1	1	3	4	23	9	2	2	2	1	1	2	0	4	2	59
21 - 50	21	12	8	9	27	174	74	24	9	19	30	28	15	17	42	58	567
51 - 82	2	1	0	2	0	8	13	14	8	4	5	6	7	5	2	4	81
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	14	9	14	31	205	96	40	19	25	36	35	24	22	48	64	707

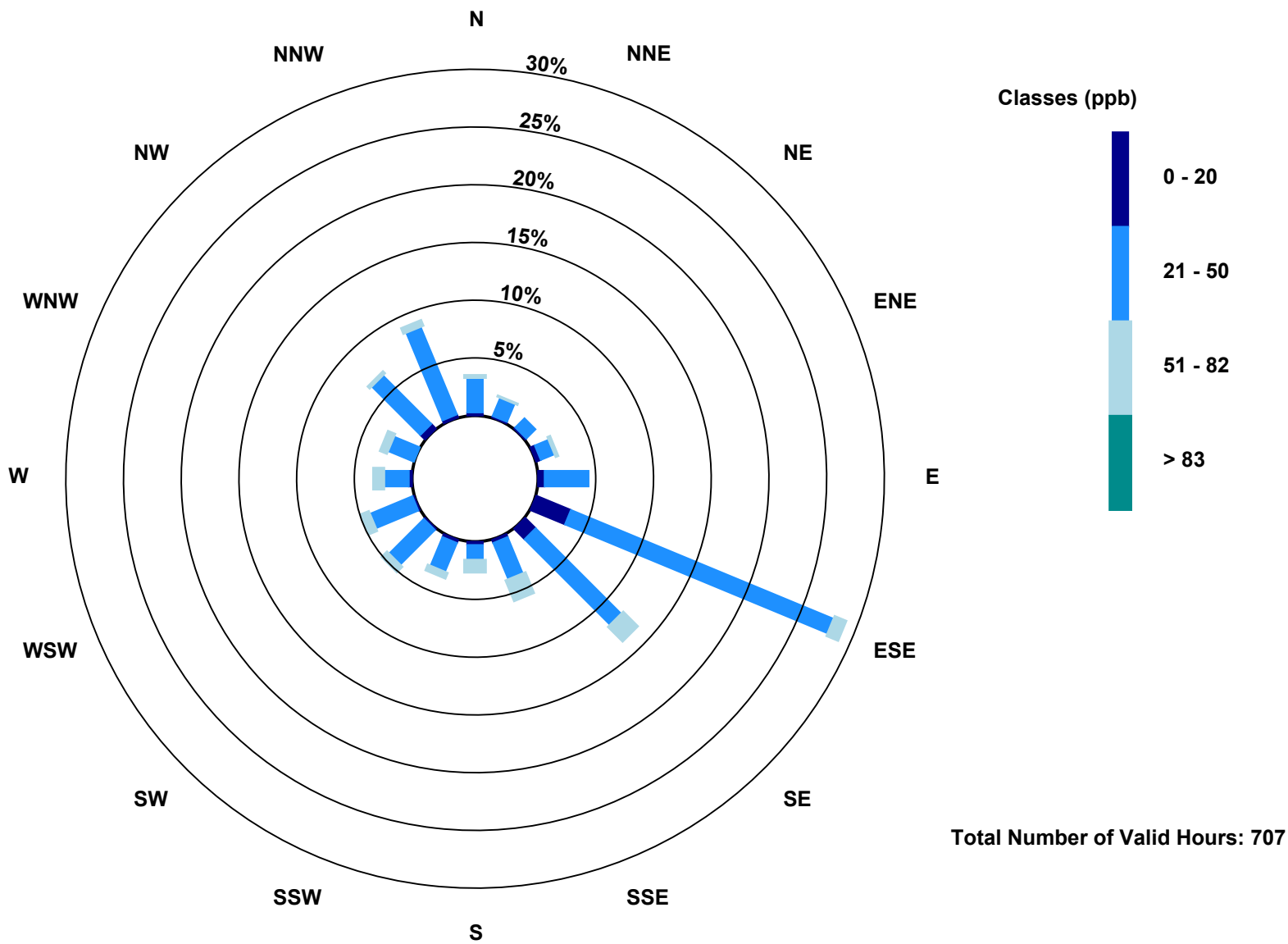
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Ozone (O₃) - ppb
Athabasca Valley

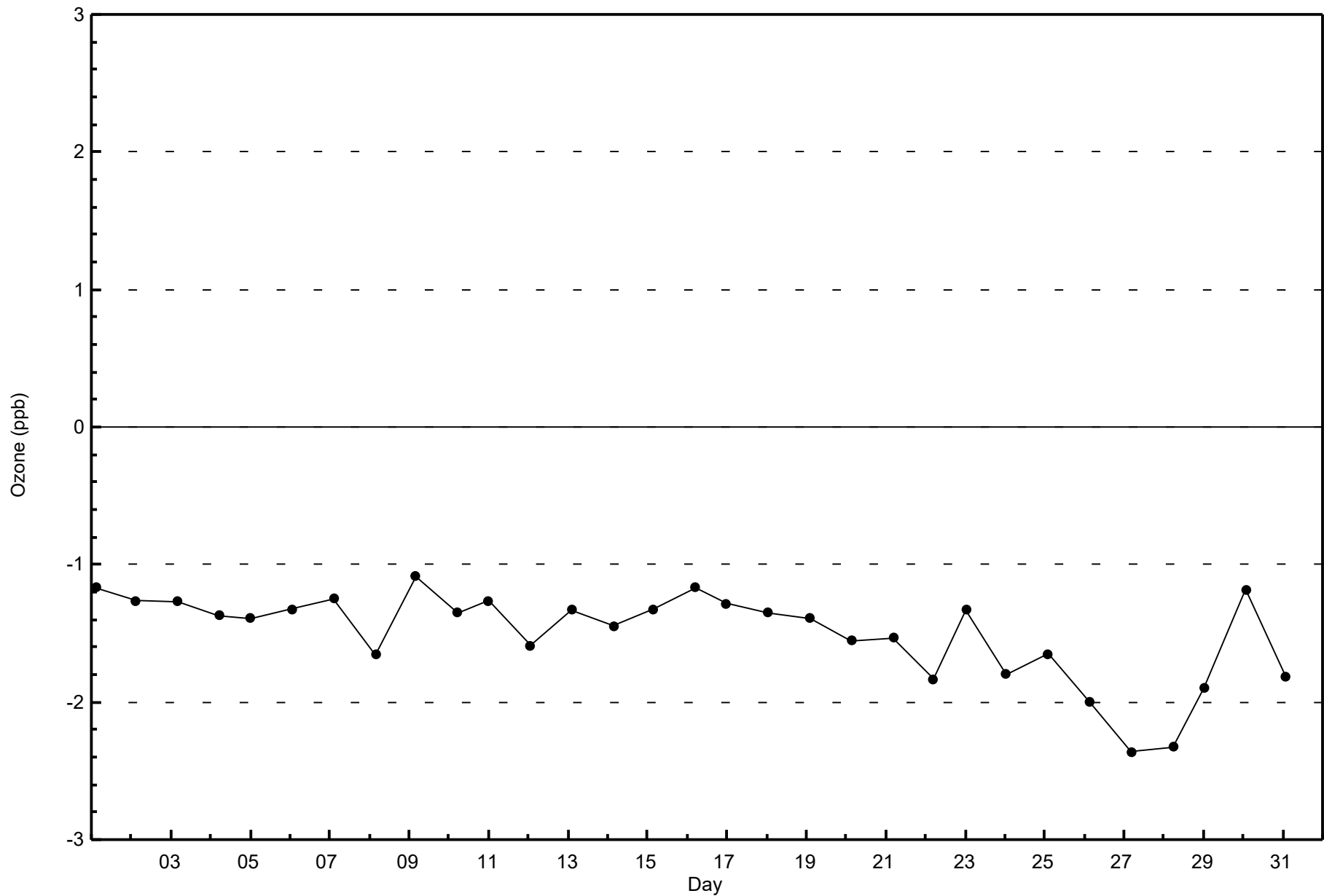


Total Number of Valid Hours: 707



Wood Buffalo Environmental Association
Zero Responses

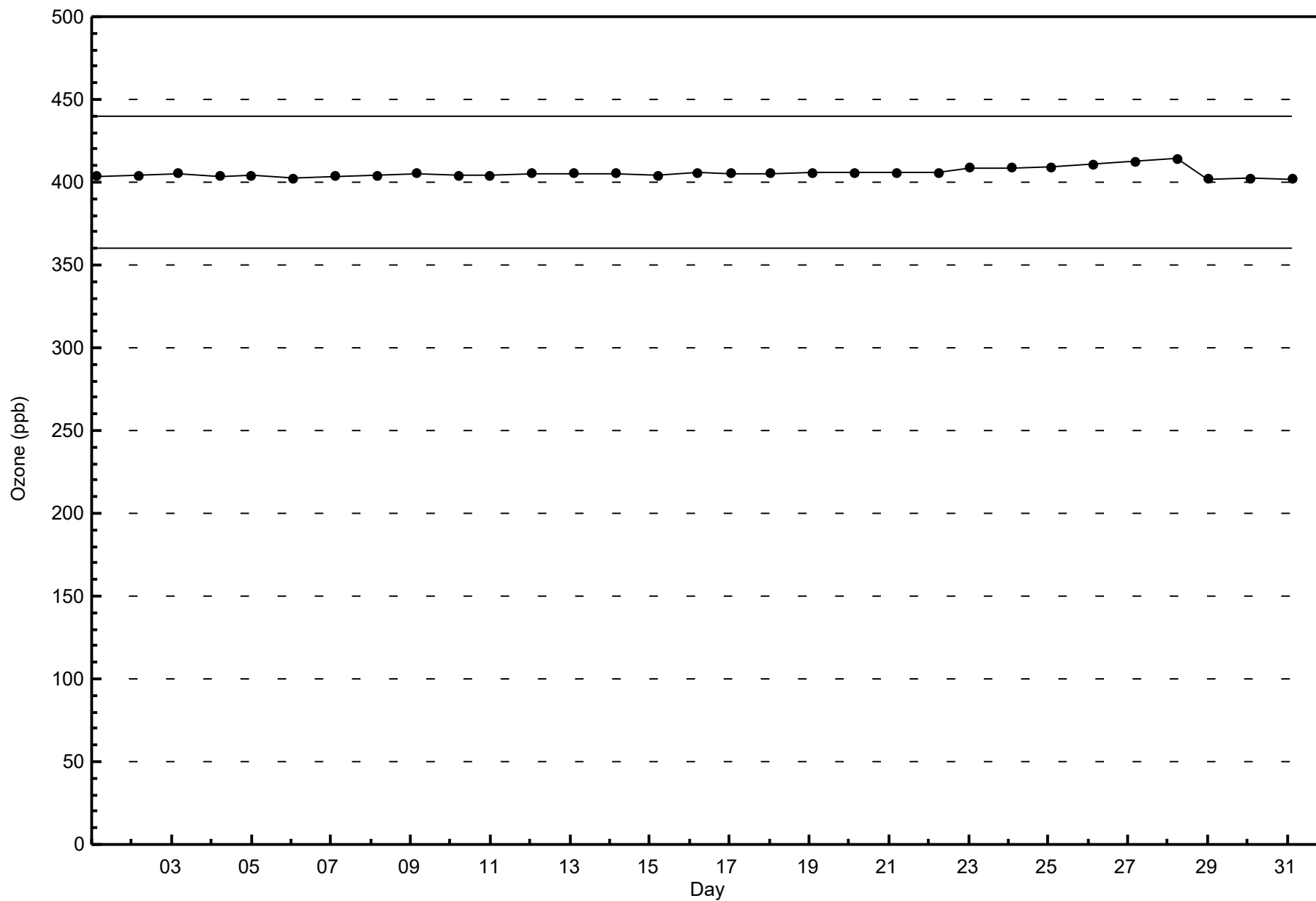
Ozone (O₃) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

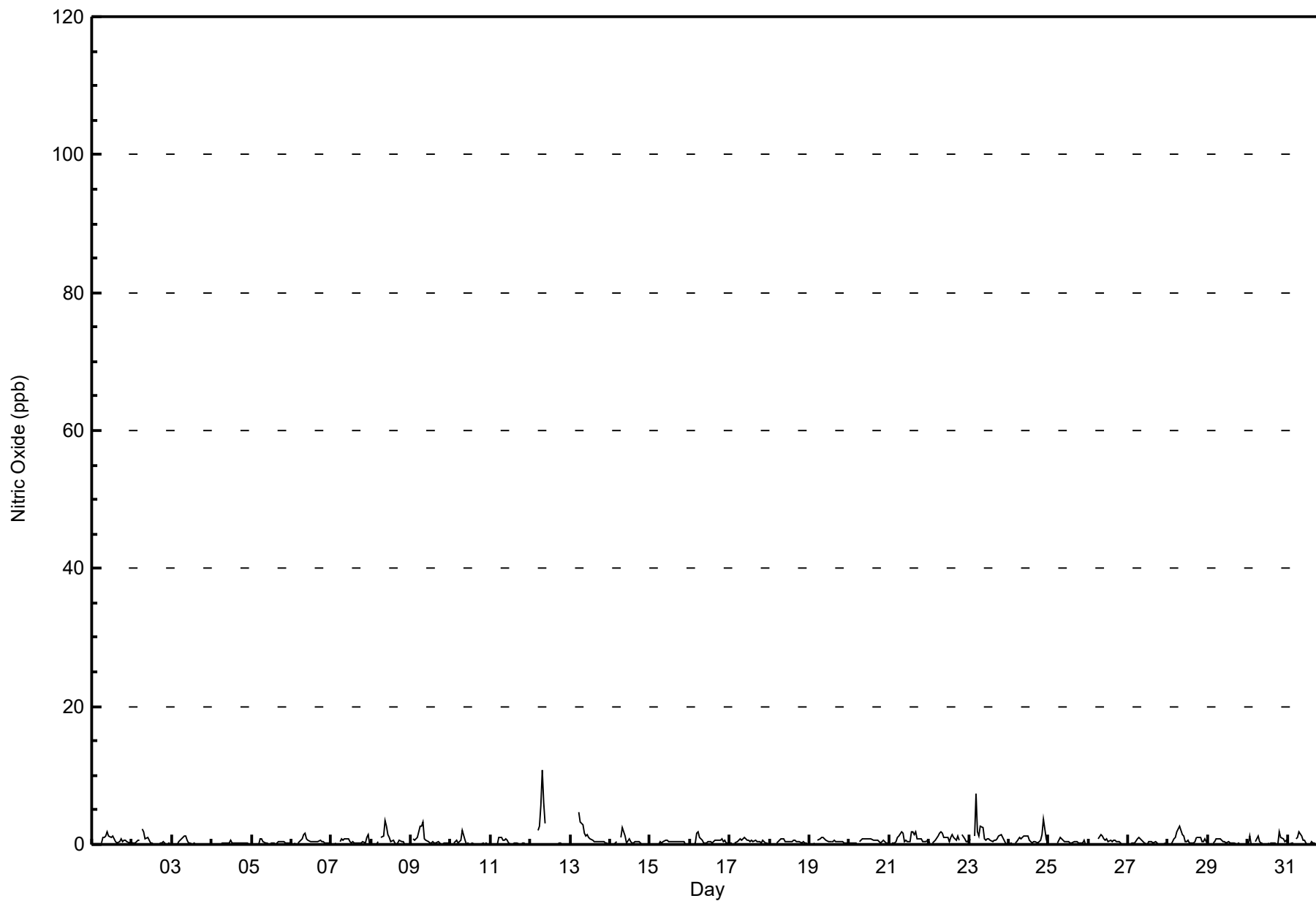
Athabasca Valley - May 2025

Maximum Value: 10.9 ppb on May 12 08:00										Maximum Daily Average: 1.2 ppb on May 23										Hours in Service: 744						
Minimum Value: 0.0 ppb on May 1 01:00										Minimum Daily Average: 0.2 ppb on May 4										Hours of Data: 704						
Maximum Diurnal Average: 1.6 ppb at hour 8										Minimum Diurnal Average: 0.1 ppb at hour 3										Hours of Missing Data: 40						
Monthly Average: 0.53 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 1.2 P ₉₉ = 3.3										Hours of Calibration: 37						
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	0.0	0.0	0.0	Z	0.2	1.0	1.1	1.1	1.8	1.3	1.1	1.1	0.8	0.3	0.2	0.5	0.8	0.5	0.6	0.6	0.3	0.3	0.3	0.6	1.8
2-May	0.3	0.3	0.2	0.6	0.7	Z	2.2	1.8	0.9	1.0	0.7	0.3	0.1	0.0	0.0	0.1	0.1	0.3	0.1	0.4	0.1	0.1	0.2	0.0	0.5	2.2
3-May	Z	0.0	0.1	0.1	0.5	0.6	0.8	1.2	1.2	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.2	0.6
5-May	0.0	0.0	Z	0.0	0.0	0.7	0.7	0.4	0.3	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.1	0.2	0.7
6-May	0.0	0.1	0.1	Z	0.3	0.5	0.7	1.4	1.7	0.9	0.6	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.5	1.7
7-May	0.1	0.1	0.1	0.1	Z	0.5	0.9	0.6	0.7	0.7	0.8	0.4	0.3	0.4	0.2	0.2	0.1	0.2	0.2	0.4	0.2	1.0	1.4	0.1	0.4	1.4
8-May	0.0	0.0	0.0	0.0	0.3	Z	1.0	1.3	3.5	2.7	1.5	1.0	0.4	0.6	0.2	0.1	0.2	0.6	0.4	0.4	0.1	0.0	0.1	0.1	0.6	3.5
9-May	Z	0.7	0.6	0.8	1.1	2.7	2.7	3.3	0.8	0.7	0.5	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.7	3.3
10-May	0.2	Z	0.1	0.5	0.3	0.4	0.6	1.9	0.5	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.0	0.2	1.9
11-May	0.0	0.0	Z	0.0	0.0	1.1	1.1	0.7	0.6	0.8	0.5	0.2	0.1	0.1	0.3	0.2	0.1	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.3	1.1
12-May	0.0	0.0	0.0	Z	1.9	2.6	5.7	10.9	6.1	3.1	C	C	C	C	C	C	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	-	10.9
13-May	0.0	0.0	0.0	0.1	Z	4.7	3.2	2.8	1.7	1.3	1.4	0.9	0.7	0.6	0.4	0.4	0.3	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.9	4.7
14-May	0.0	0.1	0.1	0.1	0.4	Z	1.1	2.5	1.8	1.3	0.3	0.7	0.3	0.2	0.2	0.5	0.3	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.5	2.5
15-May	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.4	0.7	0.5	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.1	0.0	0.0	0.3	0.7
16-May	0.0	Z	0.1	0.1	1.5	1.8	1.1	0.6	0.3	0.2	0.3	0.4	0.3	0.3	0.5	0.6	0.6	0.7	0.6	0.8	0.3	0.6	0.2	0.2	0.5	1.8
17-May	0.2	0.2	Z	0.2	0.4	0.5	0.7	0.7	0.8	1.0	0.6	0.7	0.4	0.5	0.4	0.6	0.4	0.4	0.4	0.2	0.6	0.2	0.1	0.1	0.4	1.0
18-May	0.1	0.1	0.1	Z	0.2	0.5	0.7	0.8	0.8	0.4	0.4	0.3	0.4	0.5	0.6	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.4	0.8
19-May	0.1	0.0	0.0	0.1	Z	0.6	0.9	1.0	1.1	0.9	0.6	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.2	0.2	0.2	0.4	1.1
20-May	0.2	0.1	0.2	0.2	0.2	Z	0.5	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.3	0.7	0.5	0.3	0.2	0.5	0.8
21-May	Z	0.1	0.1	0.1	0.5	0.9	1.2	1.7	1.6	0.5	0.5	0.5	0.5	1.7	1.8	1.4	1.7	0.9	0.7	0.8	0.5	0.3	0.4	0.5	0.8	1.8
22-May	0.2	Z	0.2	0.3	0.6	1.2	1.5	1.8	1.7	1.1	1.0	1.0	0.5	1.1	1.5	1.1	0.6	1.2	0.6	PF	1.5	0.8	0.3	0.3	0.9	1.8
23-May	0.7	0.6	Z	1.3	7.3	1.9	1.3	2.6	2.4	0.8	0.5	0.8	0.7	0.5	0.4	0.6	0.7	0.9	1.2	1.4	1.1	0.7	0.2	0.0	1.2	7.3
24-May	0.0	0.2	0.0	Z	0.1	0.5	1.0	0.8	1.1	1.2	1.2	1.3	0.5	0.5	0.3	0.5	0.5	0.1	0.5	0.6	1.5	3.7	0.8	0.0	0.7	3.7
25-May	0.0	0.0	0.0	0.0	Z	0.3	0.5	1.0	0.8	0.4	0.4	0.4	0.3	0.3	0.2	0.4	0.3	0.5	0.3	0.2	0.3	0.6	0.1	0.0	0.3	1.0
26-May	0.3	0.0	0.0	0.0	0.1	Z	0.7	1.4	1.2	0.7	0.6	0.8	0.5	0.6	0.5	0.5	0.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.4	1.4
27-May	Z	0.0	0.1	0.2	0.3	0.7	1.1	0.8	0.5	0.4	0.1	0.0	0.4	0.3	0.5	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.3	1.1
28-May	0.2	Z	0.1	0.7	0.9	1.9	2.2	2.6	1.5	1.2	0.4	0.4	0.5	0.2	0.3	0.2	0.3	0.9	1.0	1.1	0.5	0.3	0.8	0.3	0.8	2.6
29-May	0.0	0.0	Z	0.2	0.4	0.8	0.8	0.8	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.8
30-May	0.1	1.3	0.0	Z	0.3	0.7	1.2	0.3	0.2	0.2	M	M	0.1	0.1	0.1	0.2	0.3	0.1	0.1	1.7	1.1	0.7	0.4	0.5	0.5	1.7
31-May	0.2	0.1	0.2	0.3	Z	0.8	1.0	1.7	1.2	0.7	0.5	0.1	0.1	0.1	0.4	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4	1.7
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	23	10	9	13	31	204	97	42	18	25	38	38	23	22	46	65	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	10	9	13	31	204	97	42	18	25	38	38	23	22	46	65	704

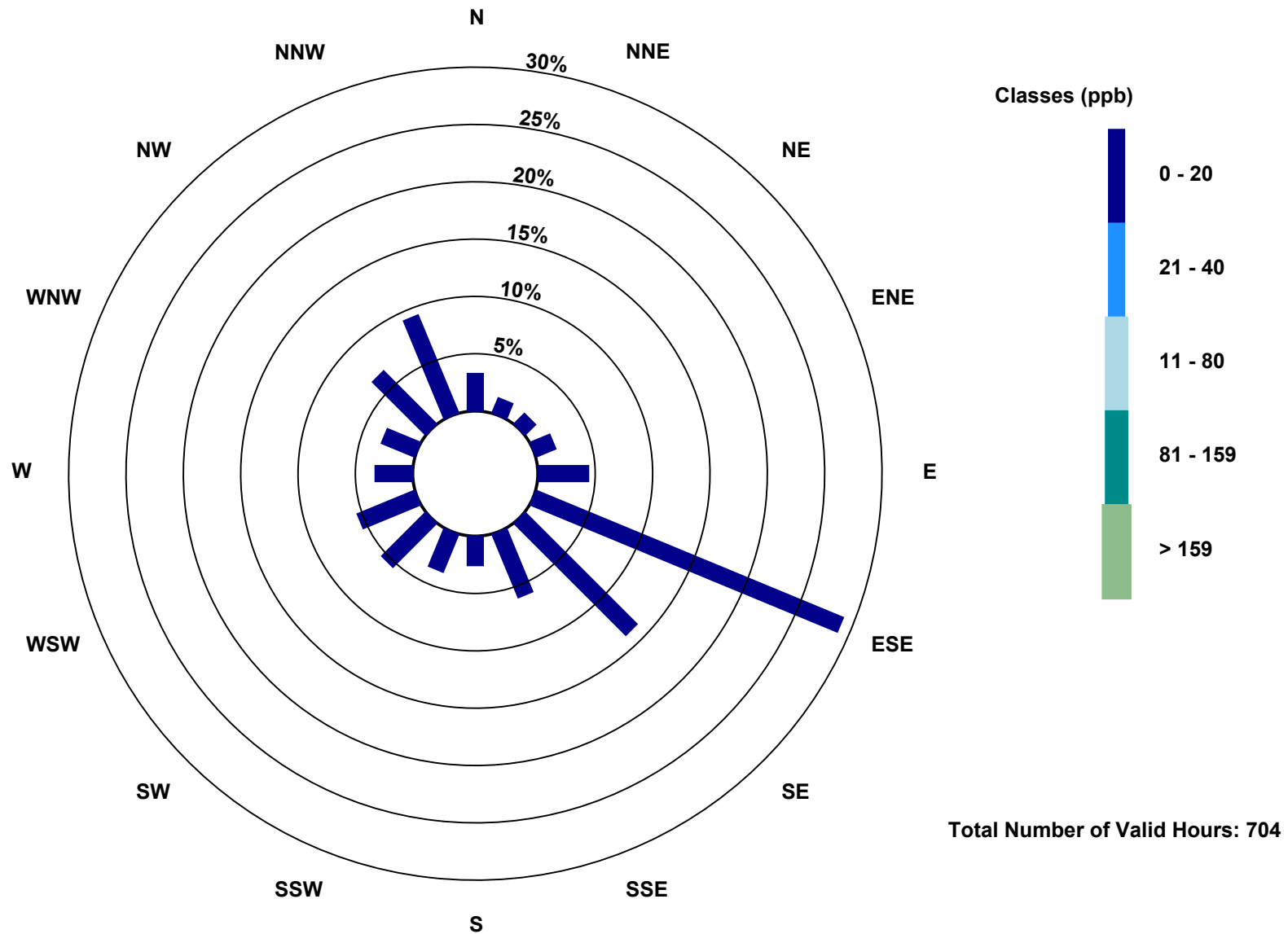
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

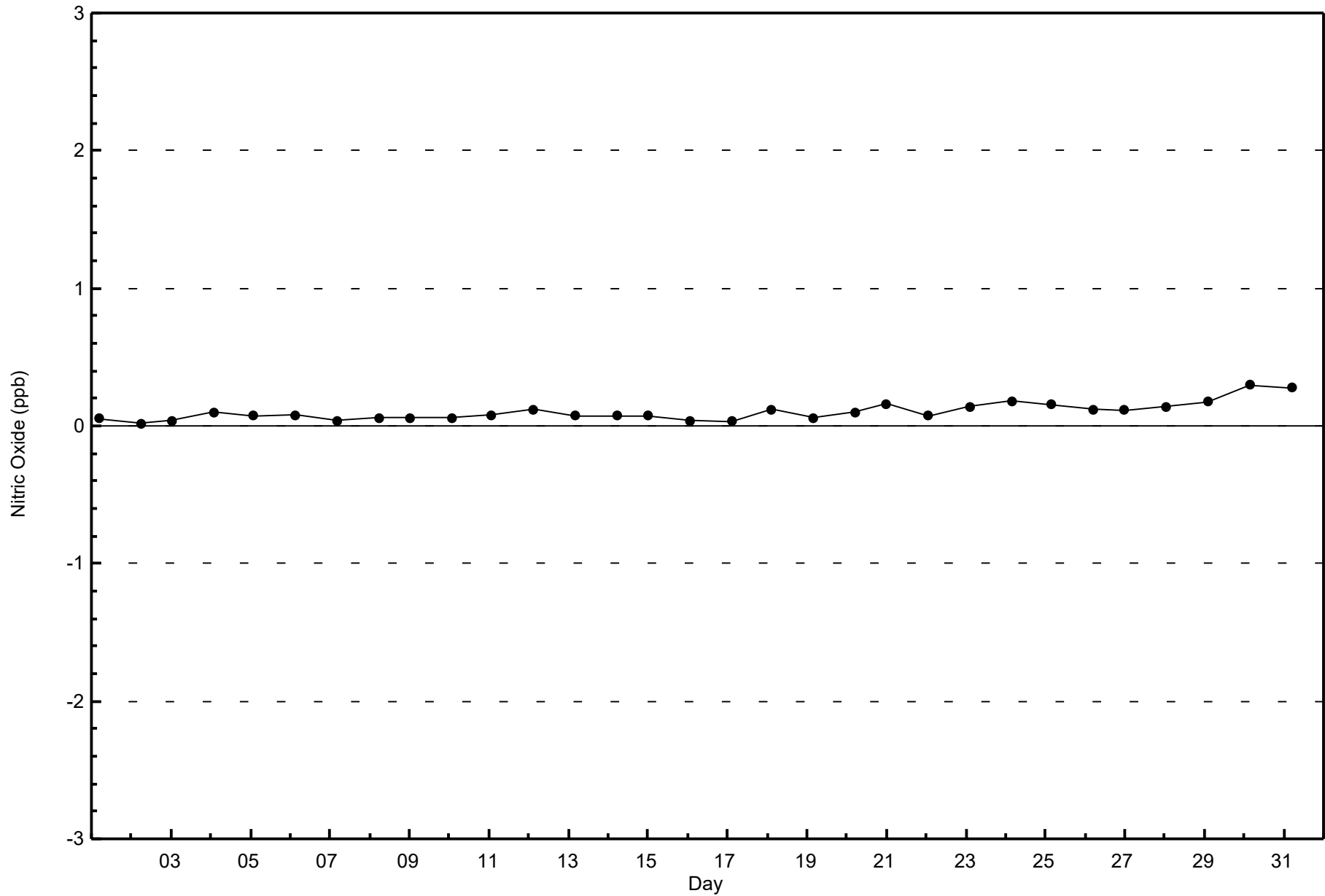
Nitric Oxide (NO) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

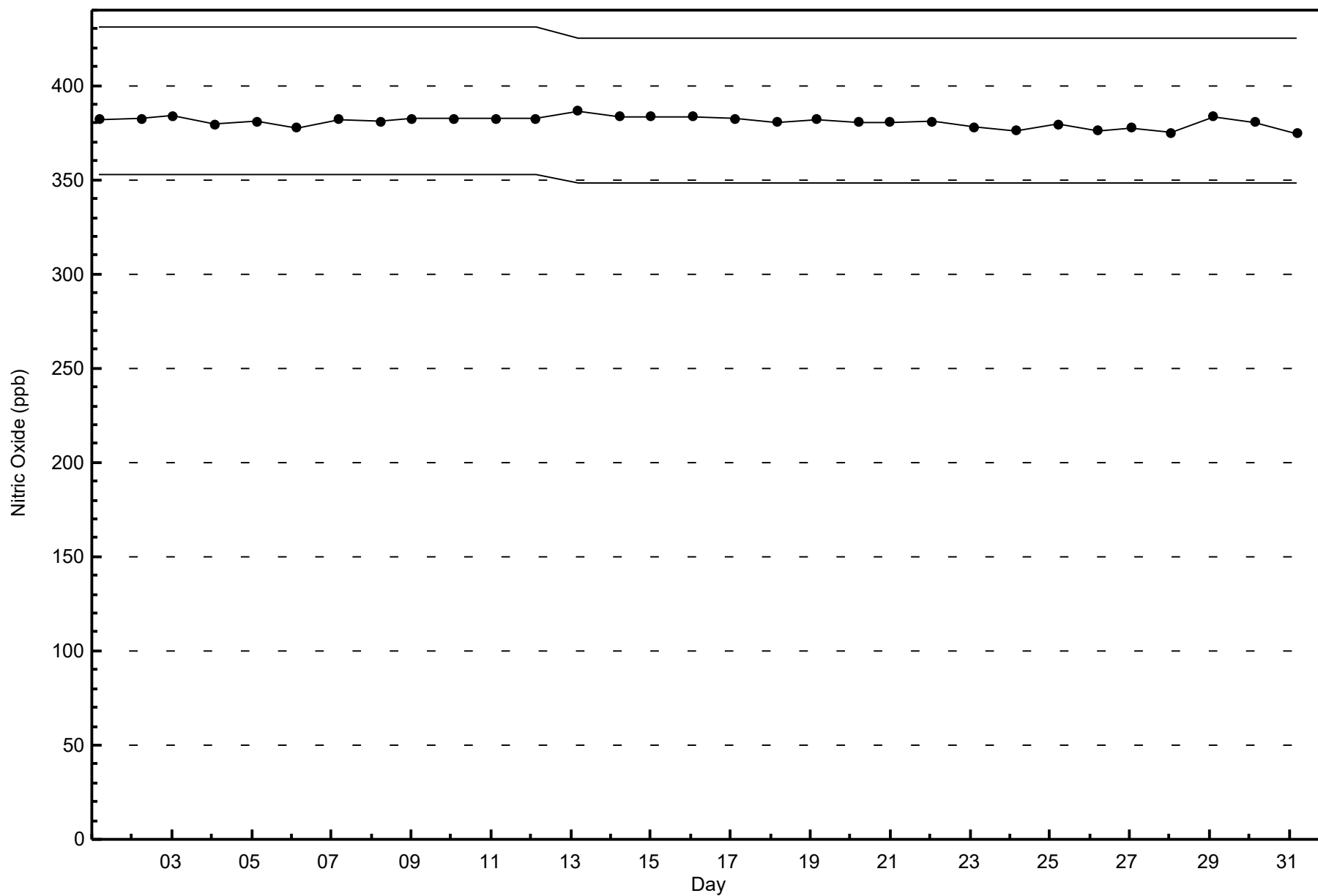
Nitric Oxide (NO) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

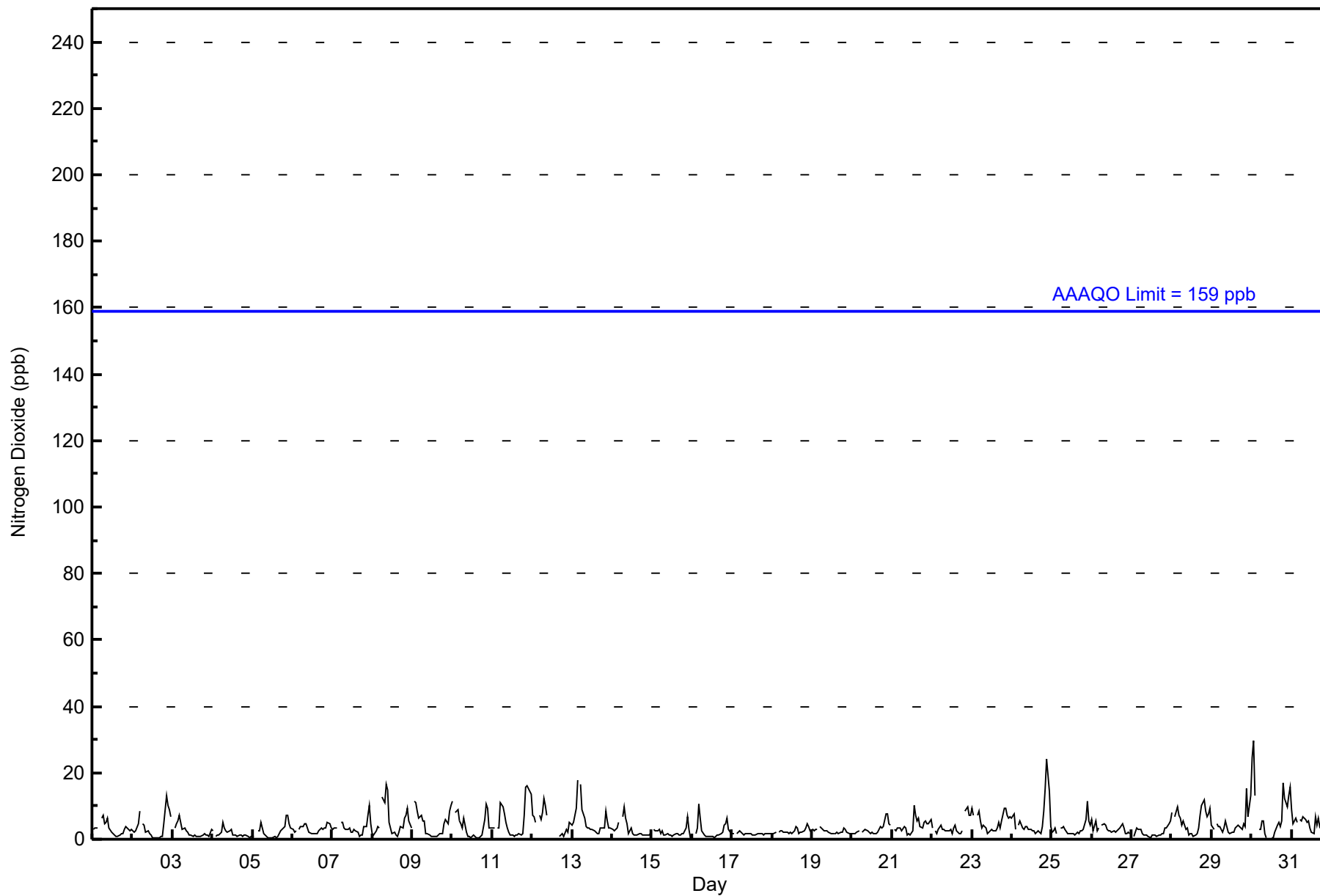
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.7 ppb on May 30 02:00 Maximum Daily Average: 8.4 ppb on May 30																				Hours in Service: 744						
Minimum Value: 0.3 ppb on May 2 15:00 Minimum Daily Average: 1.7 ppb on May 4 Maximum Diurnal Average: 6.9 ppb at hour 22 Minimum Diurnal Average: 1.6 ppb at hour 13 Monthly Average: 3.76 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 1.1 Q ₁ = 1.7 Median = 2.8 Q ₃ = 4.6 P ₉₀ = 7.4 P ₉₉ = 16.2																				Hours of Data: 704						
																				Hours of Missing Data: 40						
																				Hours of Calibration: 37						
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	3.0	3.4	3.4	3.4	Z	6.5	7.1	4.8	5.0	6.2	3.3	2.1	1.7	1.3	1.0	0.8	1.1	1.8	1.9	2.9	3.9	3.2	2.5	2.8	3.2	7.1
2-May	2.5	2.2	2.4	4.6	8.6	Z	4.6	4.3	2.3	2.4	1.9	1.2	0.6	0.4	0.3	0.3	0.3	0.7	0.8	4.8	13.2	10.2	8.8	6.8	3.7	13.2
3-May	Z	3.5	4.6	5.5	7.0	5.1	3.0	3.5	2.6	2.1	1.3	1.3	0.9	1.1	1.0	0.8	0.8	0.9	1.1	1.5	1.1	1.2	1.0	2.9	2.3	7.0
4-May	2.7	Z	0.9	1.1	1.4	2.0	4.9	3.2	2.6	2.1	2.5	2.8	1.1	1.1	1.1	0.8	1.2	1.4	1.0	1.1	1.1	0.8	0.6	0.7	1.7	4.9
5-May	0.9	0.9	Z	2.5	2.6	5.2	3.3	1.7	0.8	0.5	0.5	0.4	0.6	0.7	0.5	0.7	1.8	2.6	3.0	3.8	7.4	7.2	4.5	3.5	2.4	7.4
6-May	2.8	2.1	2.5	Z	3.1	3.7	3.8	4.7	4.8	3.2	2.0	1.8	1.8	1.6	1.5	1.7	2.6	3.5	3.1	3.6	3.4	5.1	4.7	3.6	3.1	5.1
7-May	3.0	3.3	3.4	3.5	Z	5.2	5.2	3.2	2.8	3.1	3.2	2.2	2.1	3.0	2.4	2.0	1.0	1.2	1.4	3.7	3.9	7.4	10.0	4.6	3.5	10.0
8-May	1.9	1.2	2.6	3.9	3.2	Z	12.8	11.0	16.5	15.0	5.2	3.3	1.6	2.2	1.3	1.0	2.2	3.7	3.5	6.2	7.1	9.5	5.6	3.5	5.4	16.5
9-May	Z	11.6	11.2	8.6	6.2	7.1	5.4	5.5	1.8	1.6	1.1	0.9	0.7	1.0	1.0	0.9	1.8	1.9	1.8	4.7	6.0	4.8	8.3	10.2	4.5	11.6
10-May	11.3	Z	7.9	8.7	5.4	4.8	3.4	6.4	2.1	0.7	1.0	0.6	0.7	1.2	0.6	0.6	0.4	0.7	1.4	6.1	10.5	9.5	3.3	3.6	4.0	11.3
11-May	3.6	3.2	Z	3.4	3.2	10.9	9.7	7.5	4.9	3.6	2.1	1.4	1.2	0.9	1.2	1.3	1.5	1.4	1.7	7.3	15.5	16.2	15.1	13.6	5.7	16.2
12-May	7.1	6.7	5.0	Z	7.1	6.0	8.1	12.3	10.3	7.3	C	C	C	C	C	C	0.7	1.3	1.6	1.0	2.9	2.0	5.0	4.8	--	12.3
13-May	4.3	4.9	9.5	18.0	Z	16.5	8.7	6.5	4.0	3.2	3.6	2.9	2.8	2.5	2.1	1.9	1.8	3.3	3.2	3.5	8.4	5.4	3.3	3.2	5.4	18.0
14-May	2.8	2.5	2.8	3.3	5.0	Z	6.9	9.6	6.3	4.5	1.8	3.3	1.8	1.3	1.1	1.4	1.6	1.9	1.3	1.1	1.4	1.3	1.4	2.1	2.9	9.6
15-May	Z	3.1	2.4	2.5	2.8	1.6	2.4	1.1	1.3	1.9	1.3	1.1	1.0	1.1	1.5	1.5	1.4	1.3	1.7	1.7	3.4	6.8	3.0	0.6	2.0	6.8
16-May	0.4	Z	1.6	3.5	10.6	6.4	2.5	1.2	0.7	0.7	0.7	1.0	0.8	0.5	1.0	1.4	1.3	1.7	2.0	4.2	4.5	6.3	3.0	1.8	2.5	10.6
17-May	1.7	1.6	Z	1.9	2.7	2.3	1.7	1.4	1.5	1.9	1.5	1.7	1.1	1.4	1.3	1.6	1.6	1.7	1.5	1.3	1.9	1.6	1.9	1.9	1.7	2.7
18-May	1.6	1.7	2.1	Z	2.2	2.4	2.5	2.3	2.3	2.0	1.7	2.1	1.7	2.5	4.0	3.2	1.7	2.1	2.0	2.6	3.6	4.7	3.9	2.7	2.5	4.7
19-May	3.0	2.4	2.9	2.8	Z	3.7	2.9	2.5	2.5	2.7	2.1	1.7	1.5	1.6	1.6	2.1	1.9	2.1	2.3	3.5	2.9	2.1	1.7	1.7	2.4	3.7
20-May	1.7	1.8	1.7	2.0	2.6	Z	2.3	2.5	2.8	2.4	2.0	1.8	2.1	1.8	1.7	2.3	3.0	3.7	3.5	3.9	7.6	7.5	4.6	4.1	3.0	7.6
21-May	Z	3.0	2.7	3.3	3.5	3.6	2.7	3.7	3.2	1.4	1.5	1.4	2.5	10.0	7.4	5.7	6.3	3.9	3.3	4.9	5.5	4.7	4.6	6.0	4.1	10.0
22-May	3.3	Z	2.4	1.8	3.0	4.1	3.1	2.8	2.7	2.4	2.5	2.9	1.6	3.6	4.3	2.7	1.7	1.8	2.4	PF	8.5	9.9	7.0	7.3	3.7	9.9
23-May	9.2	7.0	Z	7.2	8.4	5.7	3.6	4.1	3.6	1.8	2.1	2.5	3.1	2.7	2.6	3.6	5.0	3.3	5.5	9.5	9.3	7.3	6.3	6.8	5.2	9.5
24-May	6.3	7.8	3.0	Z	4.4	5.4	3.6	2.9	3.7	3.8	2.8	3.0	2.7	2.4	1.7	2.3	2.6	1.9	3.7	8.4	15.1	24.0	14.6	3.7	5.6	24.0
25-May	2.0	2.4	3.3	1.7	Z	3.3	3.4	4.0	3.1	1.9	1.6	1.6	1.6	1.7	1.4	2.0	1.9	2.7	2.4	3.0	6.1	11.3	5.5	4.2	3.1	11.3
26-May	5.9	2.7	5.7	2.4	3.3	Z	4.1	4.6	4.3	3.0	2.6	2.4	2.2	2.7	2.2	2.5	3.1	3.2	4.8	3.5	1.7	1.8	2.2	1.5	3.1	5.9
27-May	Z	0.9	2.0	3.6	2.8	3.0	1.8	1.4	1.4	1.2	0.7	0.4	1.2	1.2	1.4	0.9	1.3	1.2	1.5	1.8	3.6	3.5	4.5	5.4	2.0	5.4
28-May	7.9	Z	6.6	9.6	7.1	6.2	4.4	5.3	3.1	3.3	1.4	1.5	1.6	1.0	1.3	1.8	3.2	7.4	10.1	11.8	8.5	6.6	7.7	9.2	5.5	11.8
29-May	4.3	2.8	Z	4.5	3.9	3.7	2.0	3.5	5.5	3.9	2.1	1.7	2.0	2.0	3.2	3.9	4.1	3.4	3.1	4.8	4.0	15.2	6.9	13.2	4.5	15.2
30-May	24.5	29.7	13.3	Z	3.0	2.8	5.5	5.4	1.6	0.3	M	M	0.5	0.4	2.0	4.4	5.2	3.7	5.6	17.0	12.4	9.8	13.2	15.7	8.4	29.7
31-May	9.1	4.6	6.4	5.2	Z	6.0	5.7	6.9	5.8	4.9	5.6	3.2	2.0	1.6	6.8	4.4	6.4	4.0	4.5	3.5	2.8	5.6	5.9	4.2	5.0	9.1
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	701	99.57	99.57
21 - 40	3	0.43	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	23	10	9	13	31	204	96	42	18	25	38	37	22	22	46	65	701
21 - 40	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	10	9	13	31	204	97	42	18	25	38	38	23	22	46	65	704

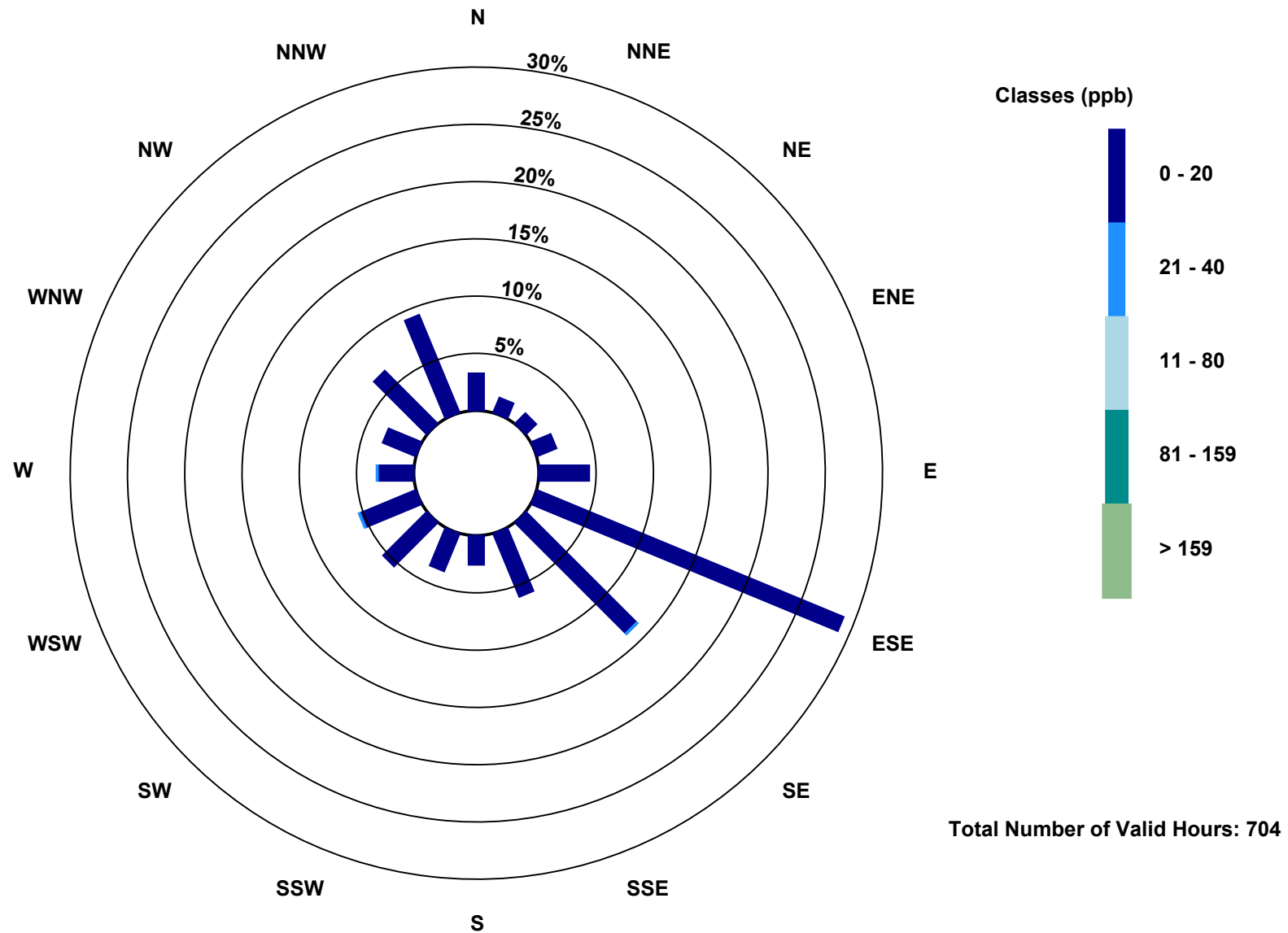
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

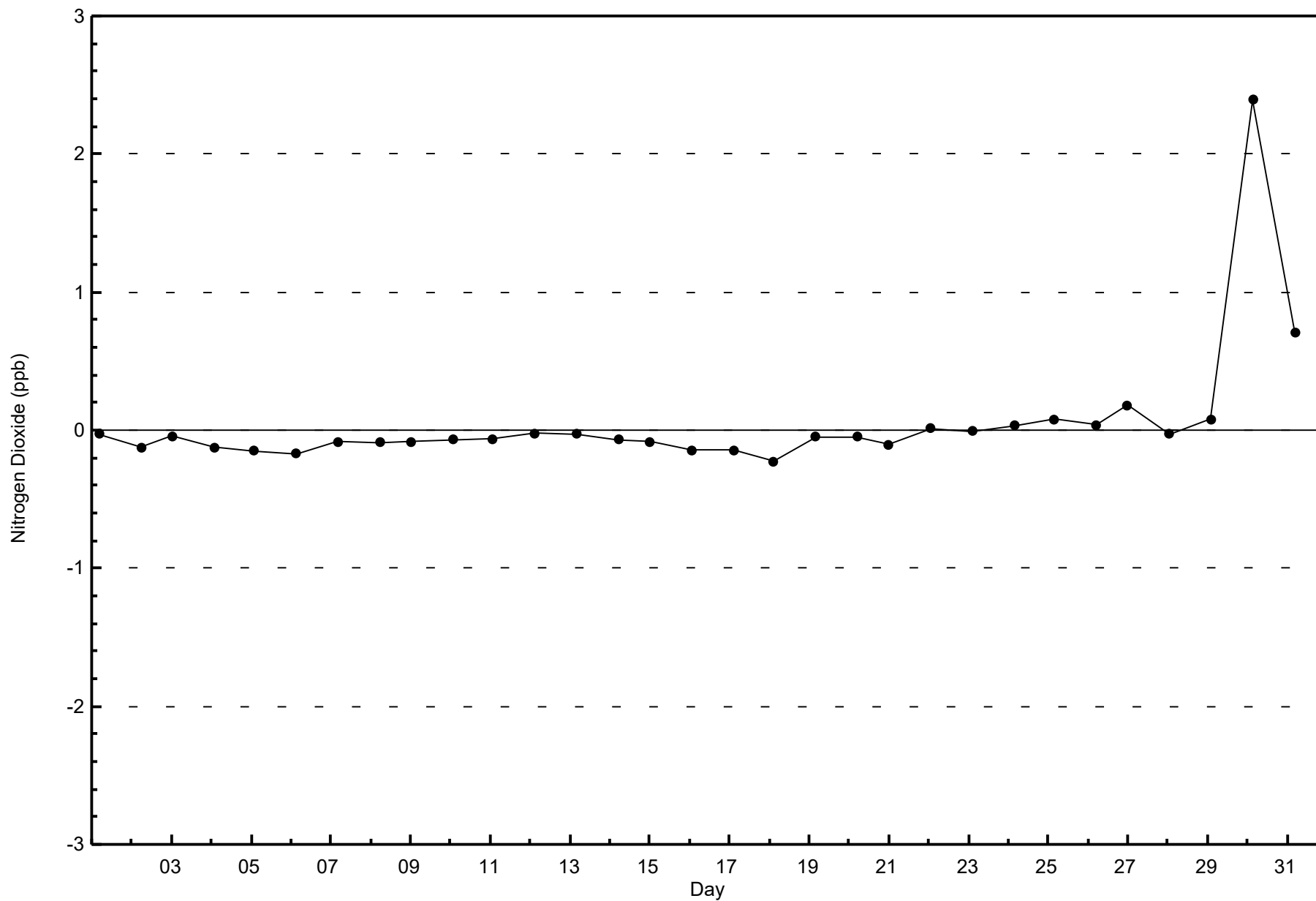
Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

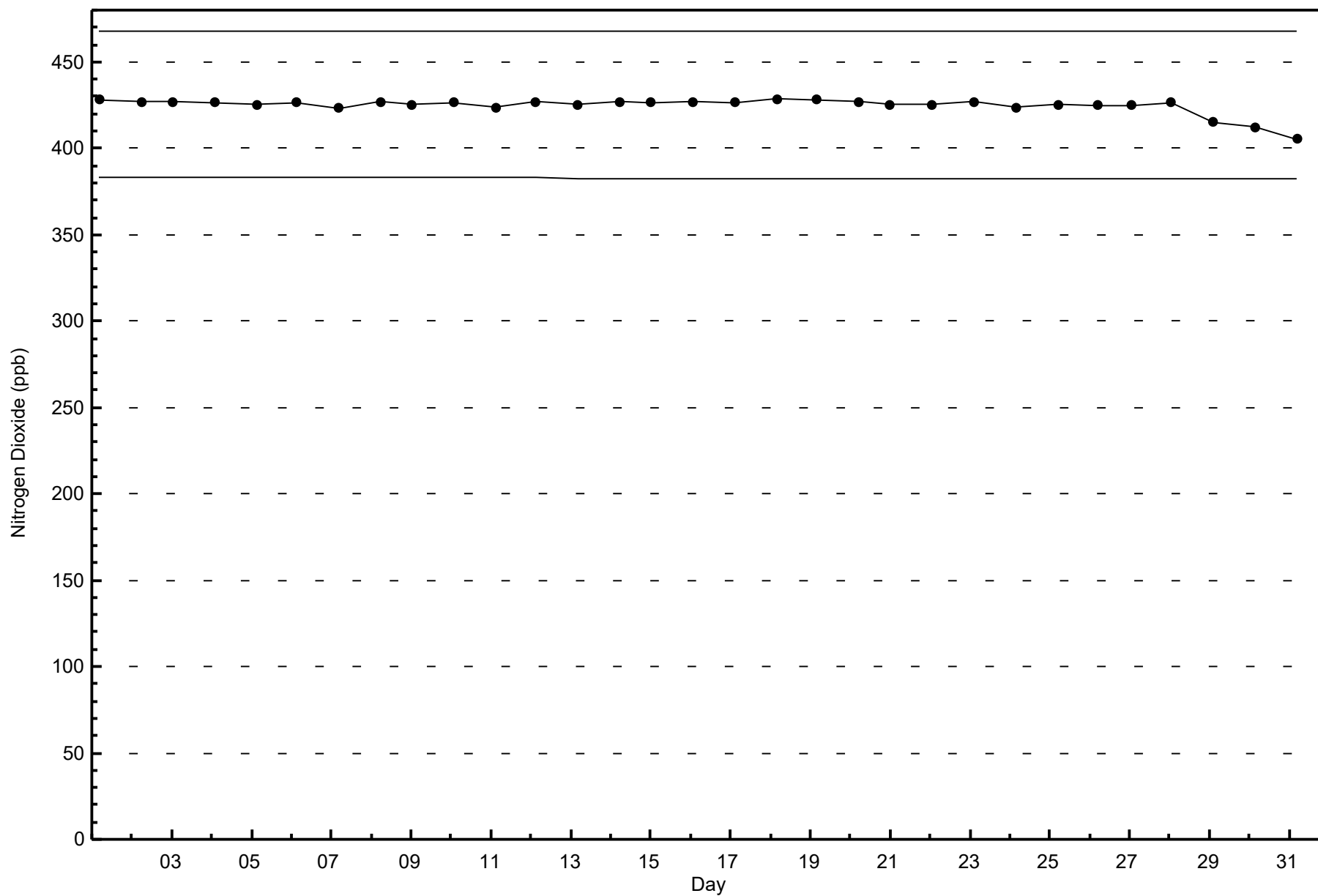
Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

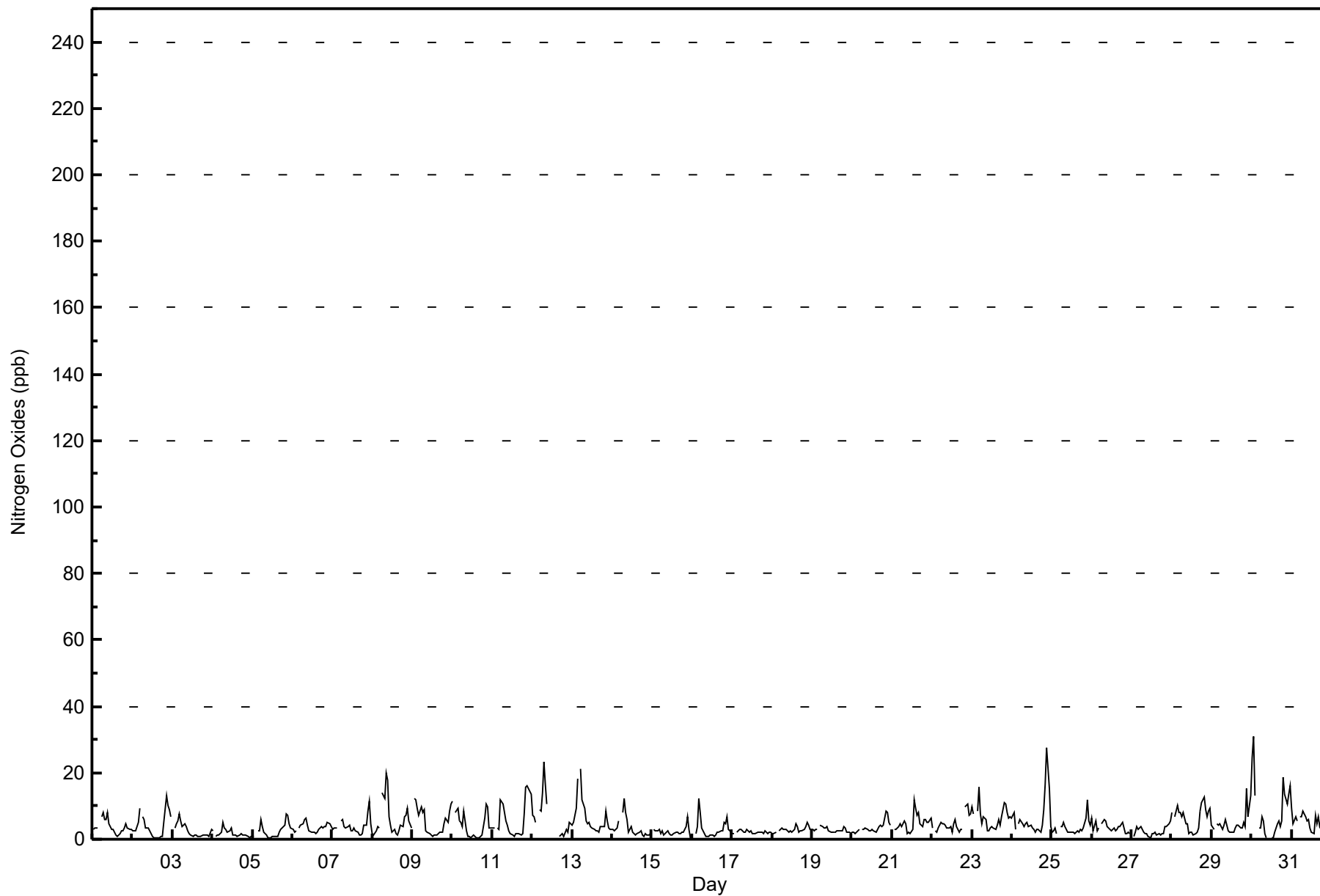
Athabasca Valley - May 2025

Maximum Value: 31.0 ppb on May 30 02:00																		Maximum Daily Average: 8.8 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.3 ppb on May 2 15:00																		Minimum Daily Average: 1.8 ppb on May 4										Hours of Data: 704	
Maximum Diurnal Average: 7.2 ppb at hour 22																		Minimum Diurnal Average: 1.9 ppb at hour 13										Hours of Missing Data: 40	
Monthly Average: 4.29 ppb																		Percentiles: P ₁ = 0.5 P ₁₀ = 1.3 Q ₁ = 2.0 Median = 3.2 Q ₃ = 5.2 P ₉₀ = 8.5 P ₉₉ = 18.1										Hours of Calibration: 37	
																												Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	3.0	3.4	3.4	3.4	Z	6.7	8.1	5.9	6.1	8.0	4.6	3.2	2.8	2.1	1.3	1.0	1.6	2.6	2.4	3.5	4.5	3.5	2.8	3.1	3.8	8.1			
2-May	2.8	2.5	2.6	5.2	9.3	Z	6.8	6.1	3.2	3.4	2.6	1.5	0.7	0.4	0.3	0.4	0.4	1.0	0.9	5.2	13.3	10.3	9.0	6.8	4.1	13.3			
3-May	Z	3.5	4.7	5.6	7.5	5.7	3.8	4.7	3.8	2.7	1.5	1.4	1.0	1.2	1.1	0.8	0.8	0.9	1.1	1.5	1.1	1.2	1.0	2.9	2.6	7.5			
4-May	2.7	Z	0.9	1.1	1.4	2.0	5.1	3.5	2.8	2.3	2.7	3.4	1.3	1.3	1.3	1.0	1.4	1.7	1.2	1.3	1.2	0.9	0.6	0.7	1.8	5.1			
5-May	0.9	0.9	Z	2.5	2.6	5.9	4.0	2.1	1.1	0.6	0.5	0.5	0.7	0.9	0.6	0.8	2.2	3.1	3.5	4.1	7.6	7.4	4.7	3.6	2.6	7.6			
6-May	2.8	2.2	2.6	Z	3.4	4.2	4.5	6.1	6.5	4.1	2.6	2.3	2.3	2.0	1.8	2.1	3.1	4.0	3.5	3.9	3.6	5.2	4.8	3.7	3.5	6.5			
7-May	3.1	3.4	3.5	3.6	Z	5.7	6.1	3.8	3.5	3.8	4.0	2.6	2.4	3.4	2.6	2.2	1.1	1.4	1.6	4.1	4.1	8.4	11.4	4.7	3.9	11.4			
8-May	1.9	1.2	2.6	3.9	3.5	Z	13.8	12.3	20.0	17.7	6.7	4.3	2.0	2.8	1.5	1.1	2.4	4.3	3.9	6.6	7.2	9.5	5.7	3.6	6.0	20.0			
9-May	Z	12.3	11.8	9.4	7.3	9.8	8.1	8.8	2.6	2.3	1.6	1.2	0.9	1.3	1.3	1.1	2.1	2.1	1.9	4.8	6.3	5.0	8.5	10.4	5.3	12.3			
10-May	11.5	Z	8.0	9.2	5.7	5.2	4.0	8.3	2.6	0.7	1.1	0.6	0.7	1.4	0.6	0.6	0.4	0.8	1.4	6.3	10.5	9.7	3.3	3.6	4.2	11.5			
11-May	3.6	3.2	Z	3.4	3.2	12.0	10.8	8.2	5.5	4.4	2.6	1.6	1.3	1.0	1.5	1.5	1.6	1.4	1.8	7.6	15.7	16.2	15.1	13.6	5.9	16.2			
12-May	7.1	6.7	5.0	Z	9.0	8.6	13.8	23.2	16.4	10.4	C	C	C	C	C	C	0.8	1.5	1.8	1.0	2.9	2.0	5.0	4.8	--	23.2			
13-May	4.3	4.9	9.5	18.1	Z	21.2	11.9	9.3	5.7	4.5	5.0	3.8	3.5	3.1	2.5	2.3	2.1	3.8	3.7	3.9	8.7	5.6	3.4	3.2	6.3	21.2			
14-May	2.8	2.6	2.9	3.4	5.4	Z	8.0	12.1	8.1	5.8	2.1	4.0	2.1	1.5	1.3	1.9	1.9	2.4	1.5	1.1	1.5	1.3	1.4	2.1	3.4	12.1			
15-May	Z	3.1	2.4	2.5	2.8	1.7	2.7	1.4	1.7	2.6	1.8	1.4	1.4	1.5	2.0	2.0	1.8	1.6	2.0	2.1	3.7	6.9	3.0	0.6	2.3	6.9			
16-May	0.4	Z	1.7	3.6	12.1	8.2	3.6	1.8	1.0	0.9	1.0	1.4	1.1	0.8	1.5	2.0	1.9	2.4	2.6	5.0	4.8	6.9	3.2	2.0	3.0	12.1			
17-May	1.9	1.8	Z	2.1	3.1	2.8	2.4	2.1	2.3	2.9	2.1	2.4	1.5	1.9	1.7	2.2	2.0	2.1	1.9	1.5	2.5	1.8	2.0	2.0	2.1	3.1			
18-May	1.7	1.8	2.2	Z	2.4	2.9	3.2	3.1	3.1	2.4	2.1	2.4	2.1	3.0	4.6	3.7	2.0	2.4	2.4	2.9	3.9	5.0	4.1	2.8	2.9	5.0			
19-May	3.1	2.4	2.9	2.9	Z	4.3	3.8	3.5	3.6	3.6	2.7	2.1	1.9	2.1	2.0	2.6	2.4	2.5	2.7	3.8	3.3	2.3	1.9	1.9	2.8	4.3			
20-May	1.9	1.9	1.9	2.2	2.8	Z	2.8	3.1	3.6	3.1	2.7	2.6	2.9	2.6	2.3	2.9	3.6	4.3	4.0	4.2	8.3	8.0	4.9	4.3	3.5	8.3			
21-May	Z	3.1	2.8	3.4	4.0	4.5	3.9	5.4	4.8	1.9	2.0	1.9	3.0	11.7	9.2	7.1	8.0	4.8	4.0	5.7	6.0	5.0	5.0	6.5	4.9	11.7			
22-May	3.5	Z	2.6	2.1	3.6	5.3	4.6	4.6	4.4	3.5	3.5	3.9	2.1	4.7	5.8	3.8	2.3	3.0	3.0	PF	10.0	10.7	7.3	7.6	4.6	10.7			
23-May	9.9	7.6	Z	8.5	15.7	7.6	4.9	6.7	6.0	2.6	2.6	3.3	3.8	3.2	3.0	4.2	5.7	4.2	6.7	10.9	10.4	8.0	6.5	6.8	6.5	15.7			
24-May	6.3	8.0	3.0	Z	4.5	5.9	4.6	3.7	4.8	5.0	4.0	4.3	3.2	2.9	2.0	2.8	3.1	2.0	4.2	9.0	16.6	27.7	15.4	3.7	6.4	27.7			
25-May	2.0	2.4	3.3	1.7	Z	3.6	3.9	5.0	3.9	2.3	2.0	2.0	1.9	2.0	1.6	2.4	2.2	3.2	2.7	3.2	6.4	11.9	5.6	4.2	3.5	11.9			
26-May	6.2	2.7	5.7	2.4	3.4	Z	4.8	6.0	5.5	3.7	3.2	3.2	2.7	3.3	2.7	3.0	3.7	3.6	5.1	3.6	1.7	1.8	2.2	1.5	3.5	6.2			
27-May	Z	0.9	2.1	3.8	3.1	3.7	2.9	2.2	1.9	1.6	0.8	0.4	1.6	1.5	1.9	1.1	1.6	1.3	1.6	1.8	3.6	3.6	4.6	5.6	2.3	5.6			
28-May	8.1	Z	6.7	10.3	8.0	8.1	6.6	7.9	4.6	4.5	1.8	1.9	2.1	1.2	1.6	2.0	3.5	8.3	11.1	12.9	9.0	6.9	8.5	9.5	6.3	12.9			
29-May	4.3	2.8	Z	4.7	4.3	4.5	2.8	4.3	6.0	4.4	2.4	2.0	2.3	2.3	3.4	4.1	4.2	3.5	3.3	4.9	4.0	15.2	6.9	13.2	4.8	15.2			
30-May	24.6	31.0	13.3	Z	3.3	3.5	6.7	5.7	1.8	0.5	M	M	0.6	0.5	2.1	4.6	5.5	3.8	5.7	18.7	13.5	10.5	13.6	16.2	8.8	31.0			
31-May	9.3	4.7	6.6	5.5	Z	6.8	6.7	8.6	7.0	5.6	6.1	3.3	2.1	1.7	7.2	4.6	6.6	4.0	4.5	3.6	2.8	5.6	5.9	4.3	5.4	9.3			
5.0 4.7 4.4 4.8 5.3 6.2 5.8 6.1 5.0 3.9 2.7 2.4 1.9 2.3 2.4 2.4 2.6 2.8 3.2 5.0 6.4 7.2 5.7 5.1																								Diurnal Average					
24.6 31.0 13.3 18.1 15.7 21.2 13.8 23.2 20.0 17.7 6.7 4.3 3.8 11.7 9.2 7.1 8.0 8.3 11.1 18.7 16.6 27.7 15.4 16.2																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	699	99.29	99.29
21 - 40	5	0.71	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	23	10	9	13	31	204	96	42	18	25	38	37	22	22	45	64	699
21 - 40	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	1	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	10	9	13	31	204	97	42	18	25	38	38	23	22	46	65	704

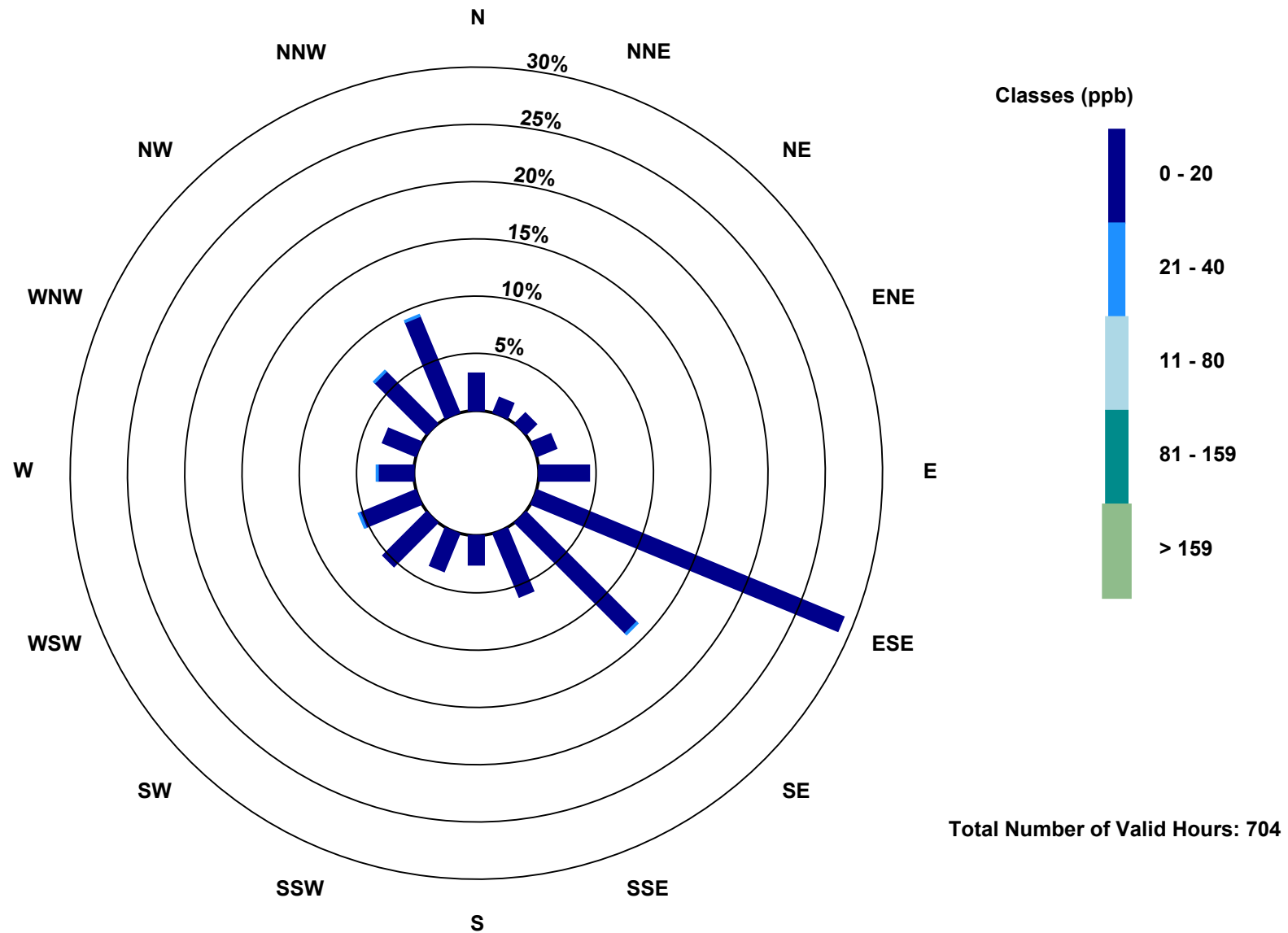
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

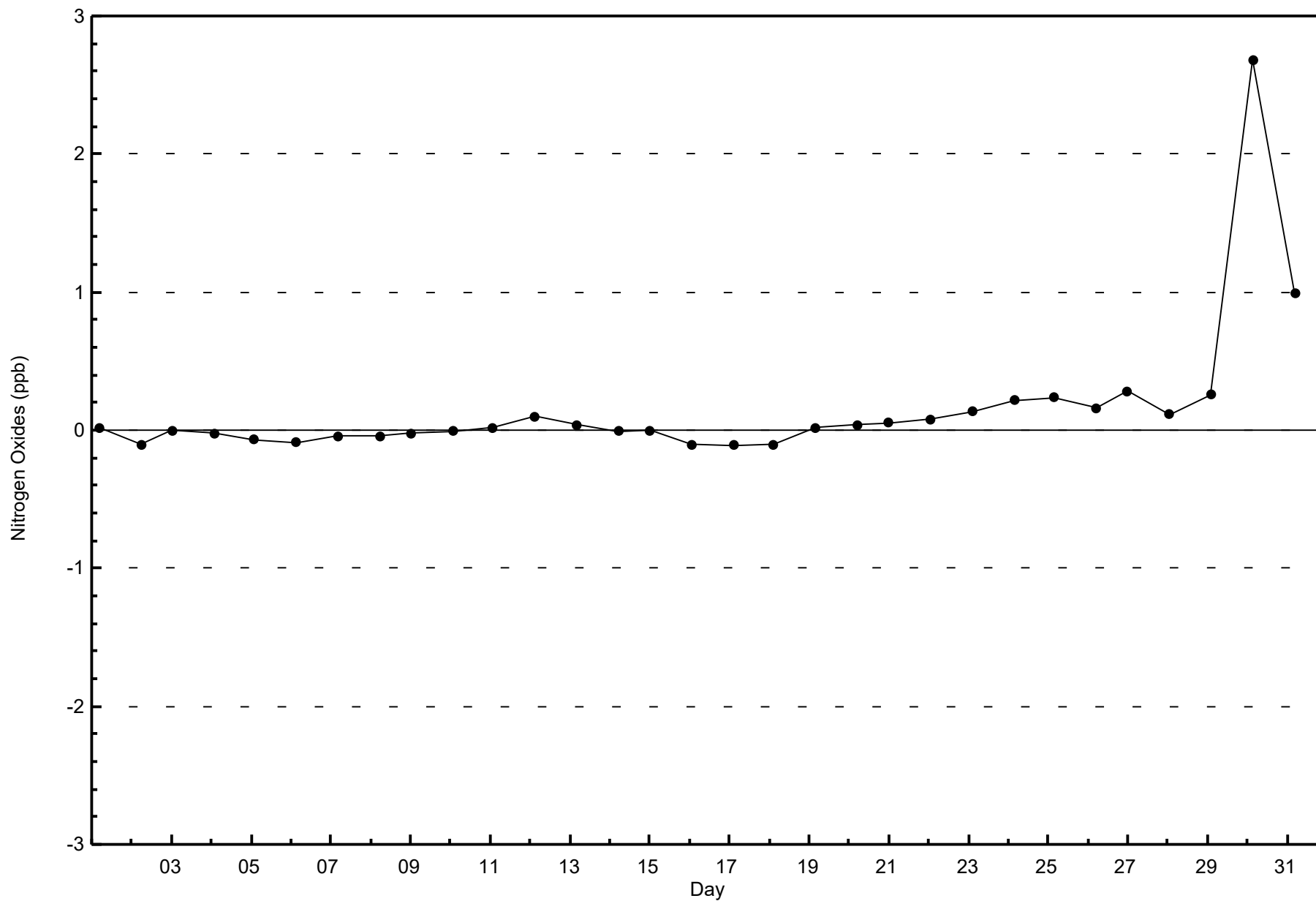
Nitrogen Oxides (NO_x) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

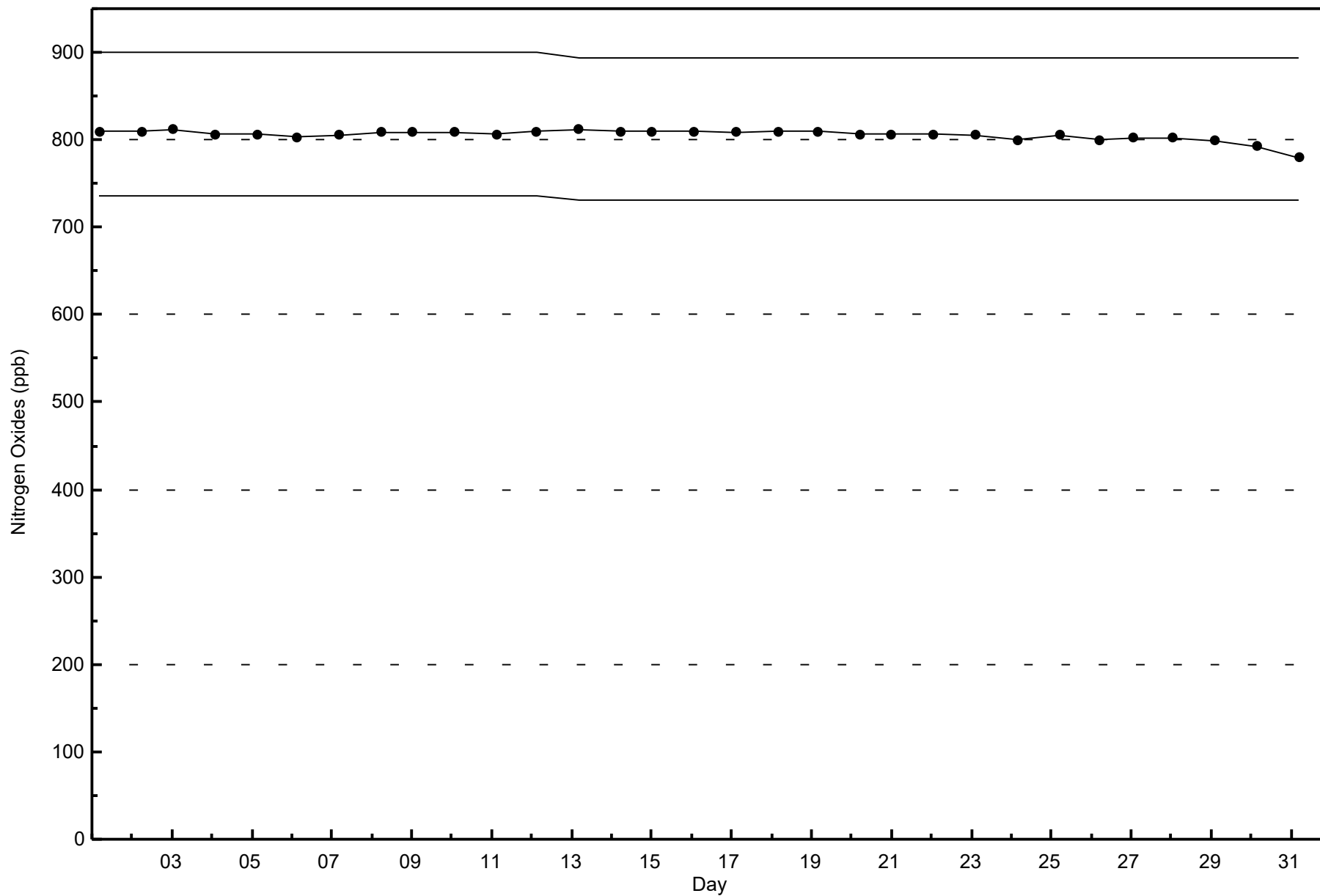
Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

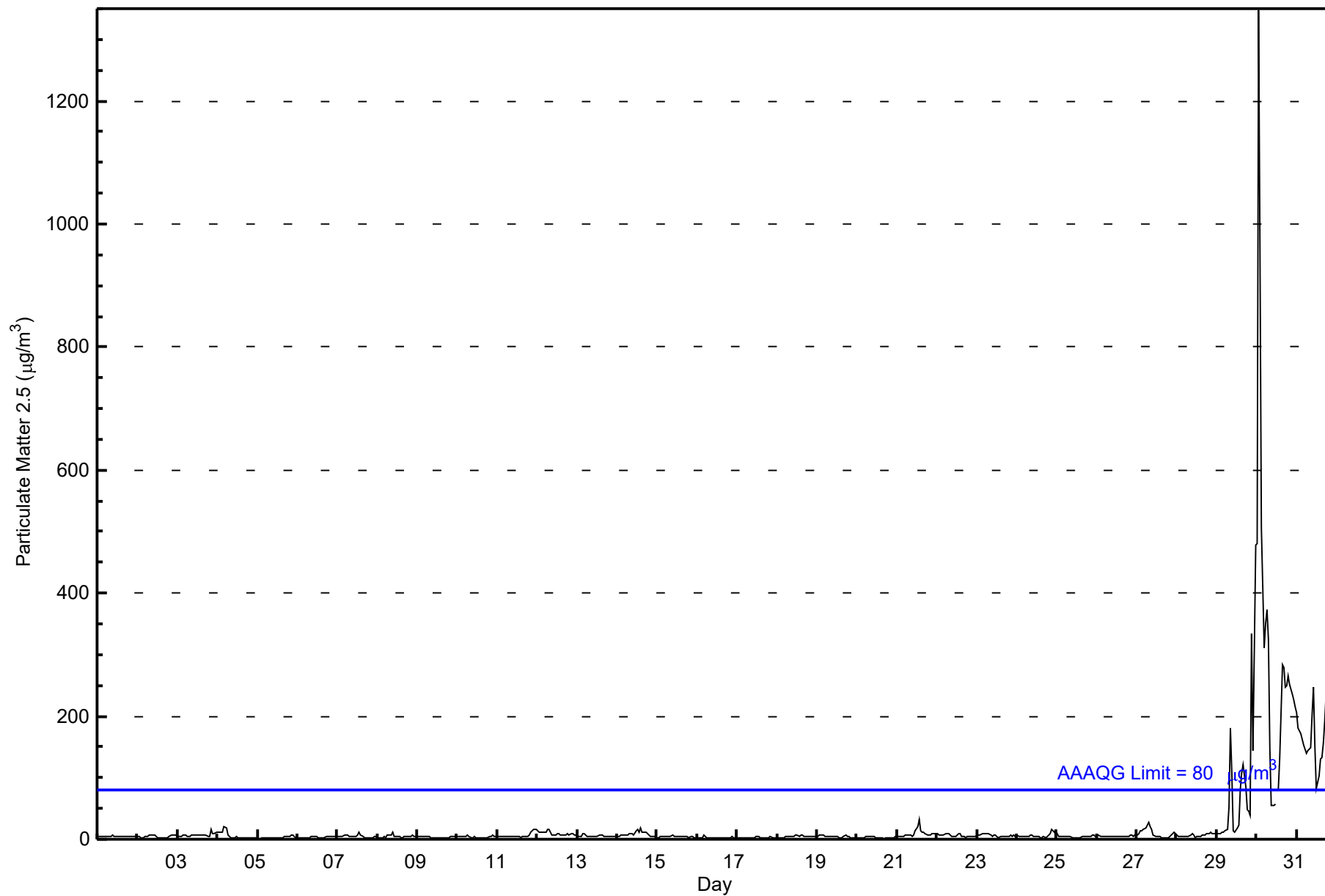
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 50 24-hr: 3 Maximum Value: 1346.9 µg/m ³ on May 30 02:00 Minimum Value: 1.1 µg/m ³ on May 20 17:00 Maximum Diurnal Average: 54.1 µg/m ³ at hour 2 Monthly Average: 22.38 µg/m ³																					Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 1 Percent Operational Time: 100.0					
Maximum Daily Average: 322.9 µg/m ³ on May 30 Minimum Daily Average: 2.4 µg/m ³ on May 16 Minimum Diurnal Average: 8.2 µg/m ³ at hour 13 Percentiles: P ₁ = 1.4 P ₁₀ = 2.5 Q ₁ = 3.5 Median = 4.9 Q ₃ = 7.2 P ₉₀ = 15.9 P ₉₉ = 330.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	4.1	4.5	4.7	4.3	4.9	5.4	5.7	4.9	5.4	6.1	4.5	4.3	4.4	4.4	4.1	4.2	4.6	4.5	4.3	4.2	5.2	5.5	4.5	3.9	4.7	6.1
2-May	3.6	3.6	3.2	3.4	4.7	5.0	5.0	5.8	5.9	6.5	6.7	5.5	3.1	2.1	2.3	2.5	2.4	2.9	2.8	5.2	6.7	7.3	7.2	6.4	4.6	7.3
3-May	5.6	5.4	5.4	5.9	6.4	5.8	5.7	5.6	6.0	6.6	7.5	7.4	6.9	7.1	6.6	6.3	7.0	7.2	5.6	3.9	17.1	8.3	9.4	10.9	7.1	17.1
4-May	11.0	12.4	12.1	11.8	21.6	19.3	6.3	3.9	2.8	2.9	3.1	4.4	2.7	2.7	2.8	2.3	2.3	2.4	2.0	2.0	2.0	2.0	2.2	2.0	5.8	21.6
5-May	1.5	1.1	1.5	1.3	1.9	2.4	2.4	1.6	1.2	1.3	1.8	2.2	2.2	2.4	2.4	2.7	3.8	4.6	4.4	4.8	5.8	5.9	4.1	3.4	2.8	5.9
6-May	3.0	2.7	2.7	2.8	2.9	2.9	3.0	3.2	3.5	4.4	4.4	3.5	3.4	3.1	3.1	3.2	3.3	3.9	4.0	4.7	4.2	4.7	4.6	3.9	3.5	4.7
7-May	4.0	3.9	3.7	3.7	5.9	6.7	6.6	4.7	4.4	4.5	4.7	5.4	7.7	11.9	6.2	5.3	2.9	2.5	2.3	2.6	2.8	3.1	4.5	3.8	4.7	11.9
8-May	3.1	2.6	2.7	3.3	4.2	3.2	6.1	5.8	7.4	11.4	5.6	4.4	5.1	4.9	3.2	2.6	3.5	5.0	4.8	5.1	4.9	7.9	4.6	4.4	4.8	11.4
9-May	4.9	5.2	4.0	3.9	3.4	3.6	3.7	4.0	3.2	2.8	2.6	2.1	1.7	1.6	1.6	2.0	2.1	2.0	2.3	3.0	3.8	3.8	4.8	5.1	3.2	5.2
10-May	5.6	4.6	3.7	3.6	3.7	4.6	6.6	4.9	3.4	2.6	3.5	2.9	3.0	3.0	3.0	2.7	2.8	2.9	3.0	4.1	5.2	6.5	3.8	4.5	3.9	6.6
11-May	4.6	4.4	3.8	3.9	4.0	4.7	5.4	4.7	4.3	4.0	3.9	3.5	3.5	3.5	3.3	3.5	3.6	4.0	4.4	7.6	11.0	12.8	14.9	16.0	5.8	16.0
12-May	13.3	11.8	11.9	11.5	11.1	11.6	15.6	16.9	11.5	7.3	5.9	7.3	8.3	8.9	7.9	6.7	6.2	6.9	8.3	6.8	9.4	8.5	6.8	6.8	9.5	16.9
13-May	5.4	4.3	5.2	8.4	9.8	7.7	5.5	5.5	5.1	4.8	4.7	4.2	5.5	6.3	6.8	6.4	5.6	5.2	4.8	5.4	5.6	4.9	4.8	4.7	5.7	9.8
14-May	4.8	5.0	6.1	7.0	7.4	7.7	7.5	8.1	8.6	8.2	7.3	13.8	15.2	12.0	17.6	11.7	11.1	11.2	8.7	5.9	5.1	5.2	4.1	3.0	8.4	17.6
15-May	2.9	3.1	3.7	3.5	3.5	4.0	3.7	4.9	5.3	5.8	4.8	4.9	5.1	5.0	5.1	5.1	4.0	3.7	3.8	3.3	4.6	5.1	2.8	2.1	4.2	5.8
16-May	2.1	2.1	2.5	2.8	6.6	5.2	3.1	2.2	1.8	1.5	1.6	1.8	1.5	1.3	1.6	1.8	2.0	2.0	2.0	2.5	3.1	3.6	2.7	1.7	2.4	6.6
17-May	1.5	1.4	1.3	1.5	1.6	1.9	2.0	2.2	2.5	3.0	3.3	3.5	3.7	3.5	3.1	3.1	3.1	3.3	3.0	3.2	3.5	3.4	3.3	3.2	2.7	3.7
18-May	3.3	3.2	3.3	3.1	3.1	3.5	4.4	4.9	5.3	5.2	5.5	6.0	6.2	5.6	5.8	6.1	5.2	4.6	3.9	3.9	4.5	5.2	5.5	5.4	4.7	6.2
19-May	5.7	6.3	6.6	6.7	6.1	5.3	4.5	4.1	4.1	3.9	4.0	3.7	3.5	3.2	3.4	3.2	4.7	7.2	4.7	4.1	3.3	3.3	2.7	2.0	4.4	7.2
20-May	1.8	1.9	2.5	2.6	3.2	3.8	3.8	3.8	3.6	3.5	3.5	3.4	3.0	2.3	1.7	1.2	1.1	2.0	1.7	1.9	2.5	3.1	3.4	3.5	2.7	3.8
21-May	3.8	4.0	4.3	4.8	5.3	6.3	7.3	7.2	6.0	5.3	8.0	13.3	19.5	31.3	14.1	12.0	12.1	9.9	7.1	7.8	8.0	8.1	8.7	8.7	9.3	31.3
22-May	8.3	7.8	6.8	6.5	7.9	9.1	8.8	8.0	6.4	5.2	4.9	4.8	6.3	8.3	9.3	5.0	4.3	3.3	3.5	3.7	4.4	4.5	4.0	4.9	6.1	9.3
23-May	5.9	5.9	6.9	8.1	8.1	9.0	9.9	9.3	7.0	5.4	6.1	5.9	4.9	3.4	3.7	3.8	3.7	3.6	3.9	4.8	6.1	5.1	6.3	5.7	5.9	9.9
24-May	7.9	5.3	4.9	4.6	4.9	4.9	5.2	5.0	6.1	6.0	5.2	4.2	3.8	3.6	3.2	3.4	3.7	3.4	4.2	6.1	9.3	16.0	11.4	7.9	5.8	16.0
25-May	8.2	5.5	5.3	5.1	4.9	4.9	4.9	4.9	4.4	3.3	3.4	3.2	3.2	3.4	3.3	3.6	3.8	3.9	3.7	3.7	4.3	7.3	5.8	5.1	4.5	8.2
26-May	5.4	6.2	5.0	4.9	5.0	5.1	5.0	5.5	5.1	4.6	4.2	4.4	4.7	4.6	4.8	4.8	5.3	5.2	5.3	5.3	6.2	6.2	5.2	6.1	5.2	6.2
27-May	7.2	10.1	12.6	14.6	15.4	17.4	23.8	28.1	19.5	15.6	6.3	4.0	3.7	3.6	3.7	3.0	2.9	2.8	2.5	2.4	5.1	6.7	10.7	8.2	9.6	28.1
28-May	5.8	4.5	3.8	3.7	4.1	4.7	4.8	5.0	6.2	8.6	7.4	2.9	4.5	4.9	5.5	7.9	7.9	7.8	8.3	9.4	10.6	10.1	9.3	9.0	6.5	10.6
29-May	8.5	9.1	9.9	10.3	11.8	13.7	15.0	52.7	180.1	107.0	13.2	12.5	17.9	22.3	79.4	108.0	120.3	84.9	48.9	45.7	38.6	334.7	145.2	477.2	81.9	477.2
30-May	480.2	1346.9	956.9	506.5	310.4	349.7	372.5	325.5	149.7	54.5	54.9	57.0	C	79.4	130.9	284.7	278.1	246.3	248.5	265.8	252.6	235.0	226.0	215.4	322.9	1346.9
31-May	206.1	181.5	170.9	161.6	153.2	145.4	139.8	144.2	149.4	202.3	248.2	150.9	81.4	103.3	131.0	131.8	155.2	191.1	238.1	209.8	106.4	89.6	100.2	77.5	152.9	248.2
27.1 54.1 41.2 26.6 20.9 22.1 22.7 22.5 20.5 16.6 14.5 11.5 8.2 11.7 15.5 21.0 21.9 21.0 21.1 20.9 18.1 26.9 20.4 29.8																									Diurnal Average	
480.2 1346.9 956.9 506.5 310.4 349.7 372.5 325.5 180.1 202.3 248.2 150.9 81.4 103.3 131.0 284.7 278.1 246.3 248.5 265.8 252.6 334.7 226.0 477.2																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	460	61.91	61.91
6 - 15	206	27.73	89.64
16 - 25	15	2.02	91.66
26 - 80	12	1.62	93.27
> 81.0	49	6.59	99.87

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Athabasca Valley - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	16	7	6	6	23	152	56	28	13	15	26	25	10	12	31	34	460
6 - 15	6	7	4	7	7	54	34	10	5	4	9	9	9	5	12	24	206
16 - 25	1	0	0	0	0	0	3	1	1	3	0	1	1	2	0	2	15
26 - 80	0	0	0	0	0	3	2	1	0	1	0	1	0	1	2	1	12
> 81.0	1	0	0	1	3	10	5	2	0	3	4	1	5	2	6	6	49
Totals	24	14	10	14	33	219	100	42	19	26	39	37	25	22	51	67	742

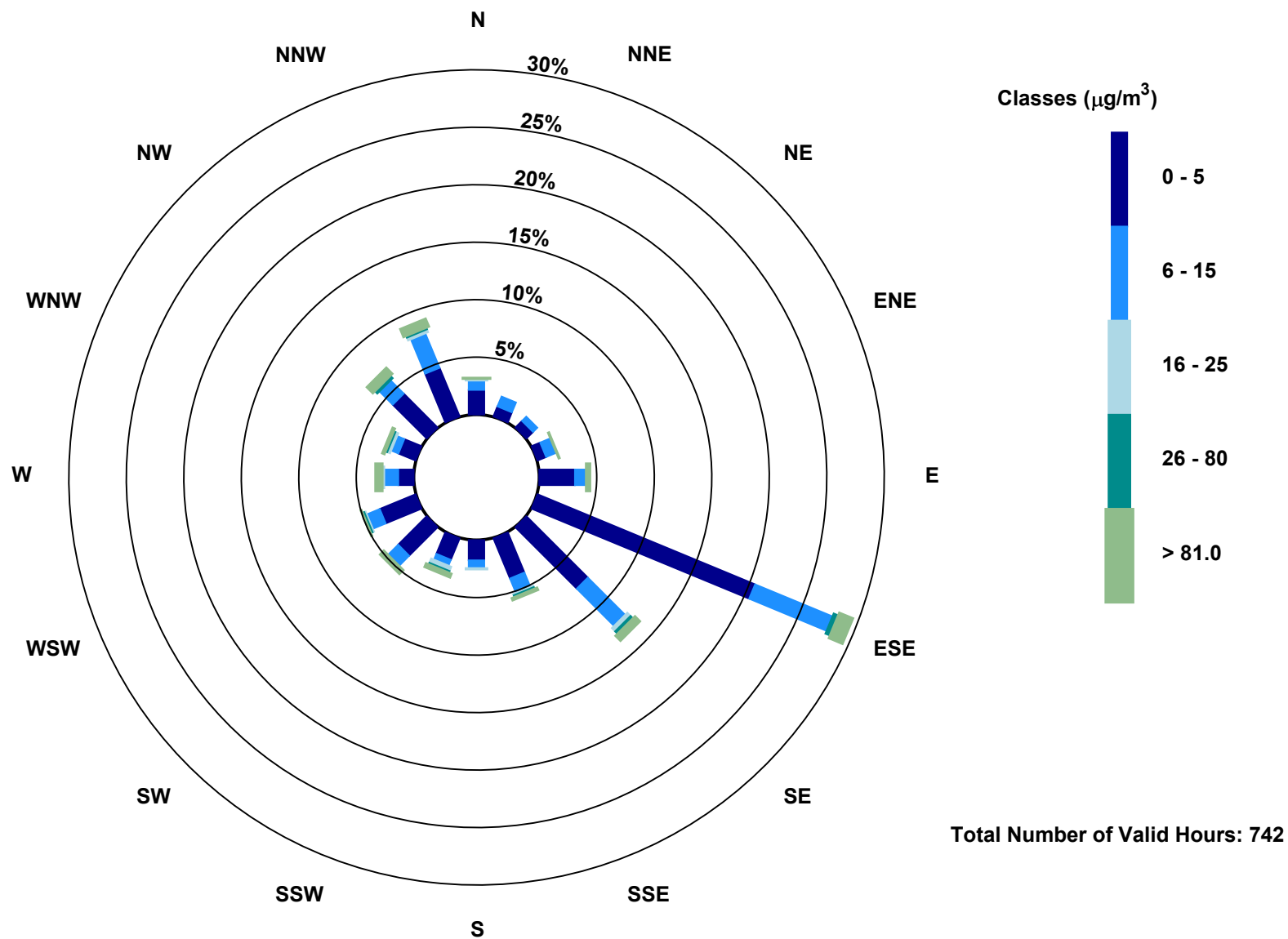
Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley

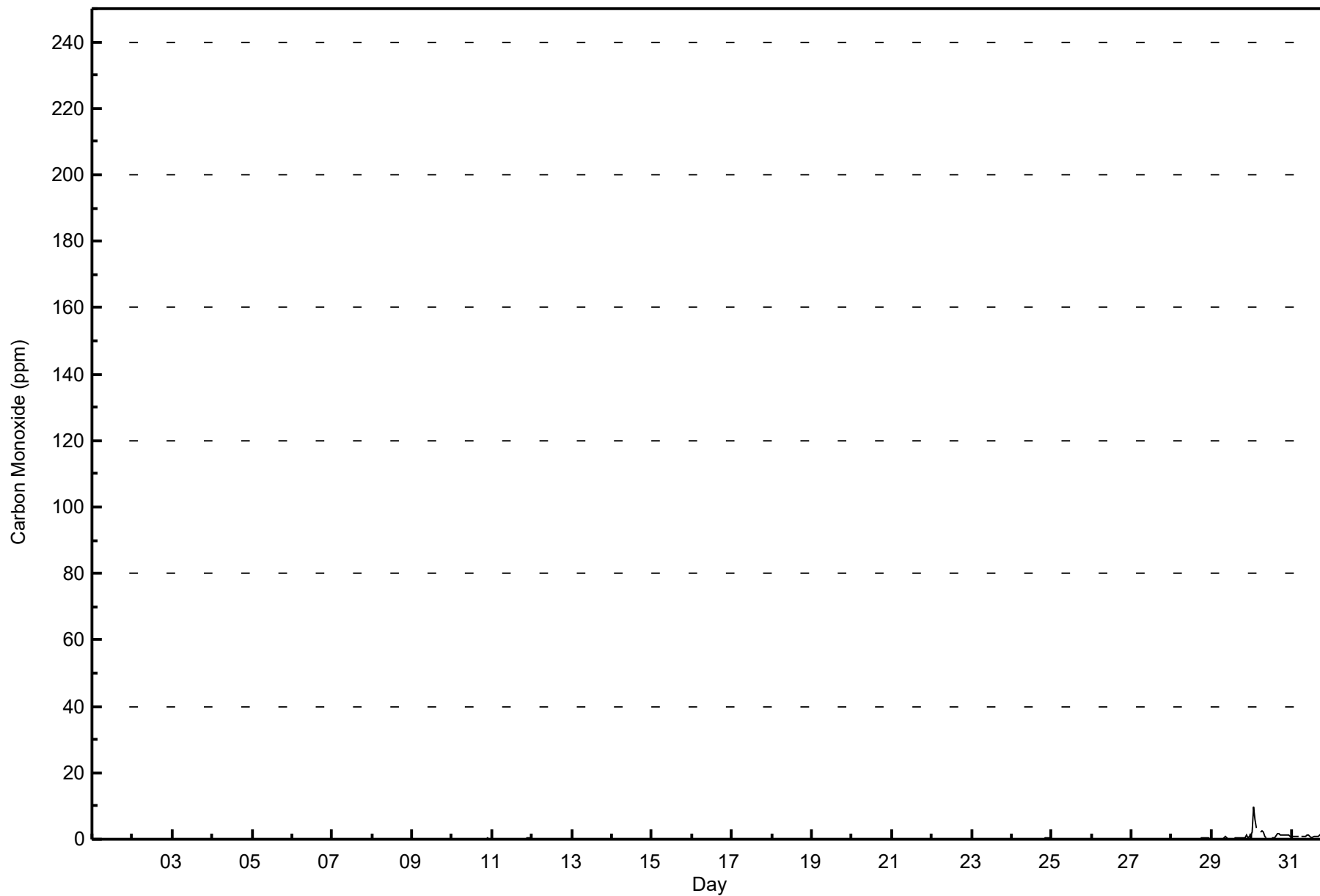


Number of Exceedences (AAAQO): Maximum Value: 9.8 ppm on May 30 02:00																	1-hr: 0 24-hr: 0 Maximum Daily Average: 2.0 ppm on May 30										Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7			
Minimum Value: 0.1 ppm on May 22 04:00 Maximum Diurnal Average: 0.5 ppm at hour 2 Monthly Average: 0.22 ppm																	Minimum Daily Average: 0.1 ppm on May 15 Minimum Diurnal Average: 0.2 ppm at hour 5 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 1.7													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2			
2-May	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2			
3-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
4-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
5-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2				
6-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2				
7-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2				
8-May	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
9-May	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2				
10-May	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2				
11-May	0.1	0.2	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2				
12-May	0.2	0.2	0.2	0.2	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
13-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2				
14-May	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
15-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
16-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2				
17-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
18-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2				
19-May	0.1	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
20-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
21-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
22-May	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2				
23-May	0.2	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2				
24-May	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3				
25-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2				
26-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
27-May	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2				
28-May	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2				
29-May	0.2	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.9	0.5	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.2	1.2	0.5	1.5	0.4	1.5				
30-May	2.1	9.8	5.7	3.2	Z	2.3	2.6	2.2	0.9	0.3	M	M	0.5	0.4	0.6	1.7	1.6	1.4	1.2	1.3	1.2	1.1	1.1	0.9	2.0	9.8				
31-May	0.9	0.9	0.8	0.8	0.8	Z	0.7	0.8	0.8	1.1	1.3	0.9	0.5	0.6	0.7	0.8	0.9	1.2	1.6	1.4	0.8	0.7	0.7	0.7	0.9	1.6				
Diurnal Average																									Diurnal Maximum					
Diurnal Maximum																									Diurnal Average					
Z - zerospan C - Calibration M - Maintenance																														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																														



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	657	92.93	92.93
0.4 - 0.5	7	0.99	93.92
0.6 - 0.7	7	0.99	94.91
0.8 - 1.4	25	3.54	98.44
1.5 - 10	10	1.41	99.86
> 10	0	0.00	99.86

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Athabasca Valley - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	23	14	9	13	28	198	89	39	18	21	34	32	19	20	42	58	657
0.4 - 0.5	1	0	0	0	0	2	1	0	0	0	0	1	0	1	1	0	7
0.6 - 0.7	0	0	0	0	1	0	0	0	0	0	1	0	0	0	3	2	7
0.8 - 1.4	1	0	0	1	2	6	4	2	0	1	1	0	1	1	2	3	25
1.5 - 10	0	0	0	0	0	0	0	0	0	2	1	2	3	0	1	1	10
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	14	9	14	31	206	94	41	18	24	37	35	23	22	49	64	706

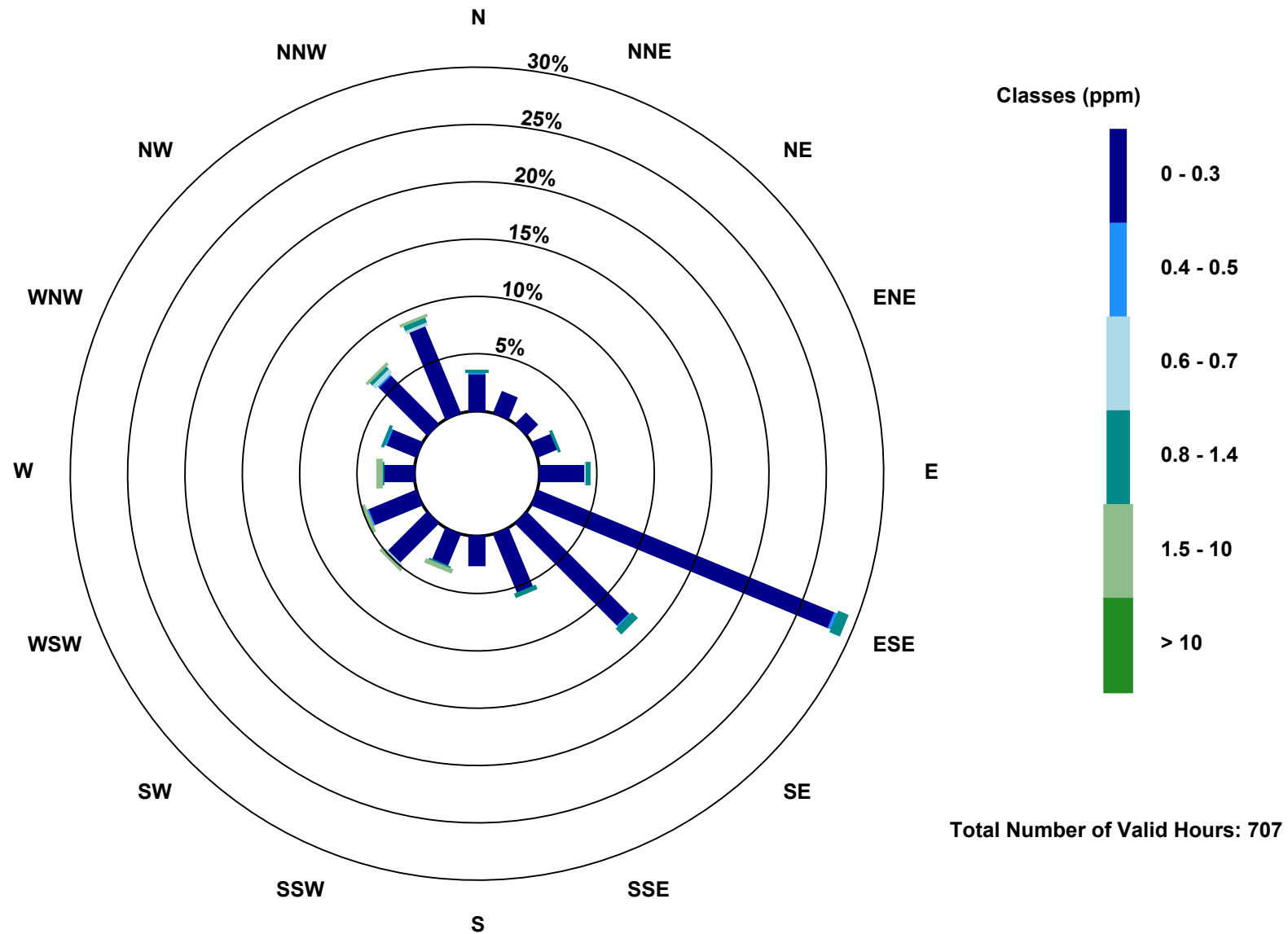
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

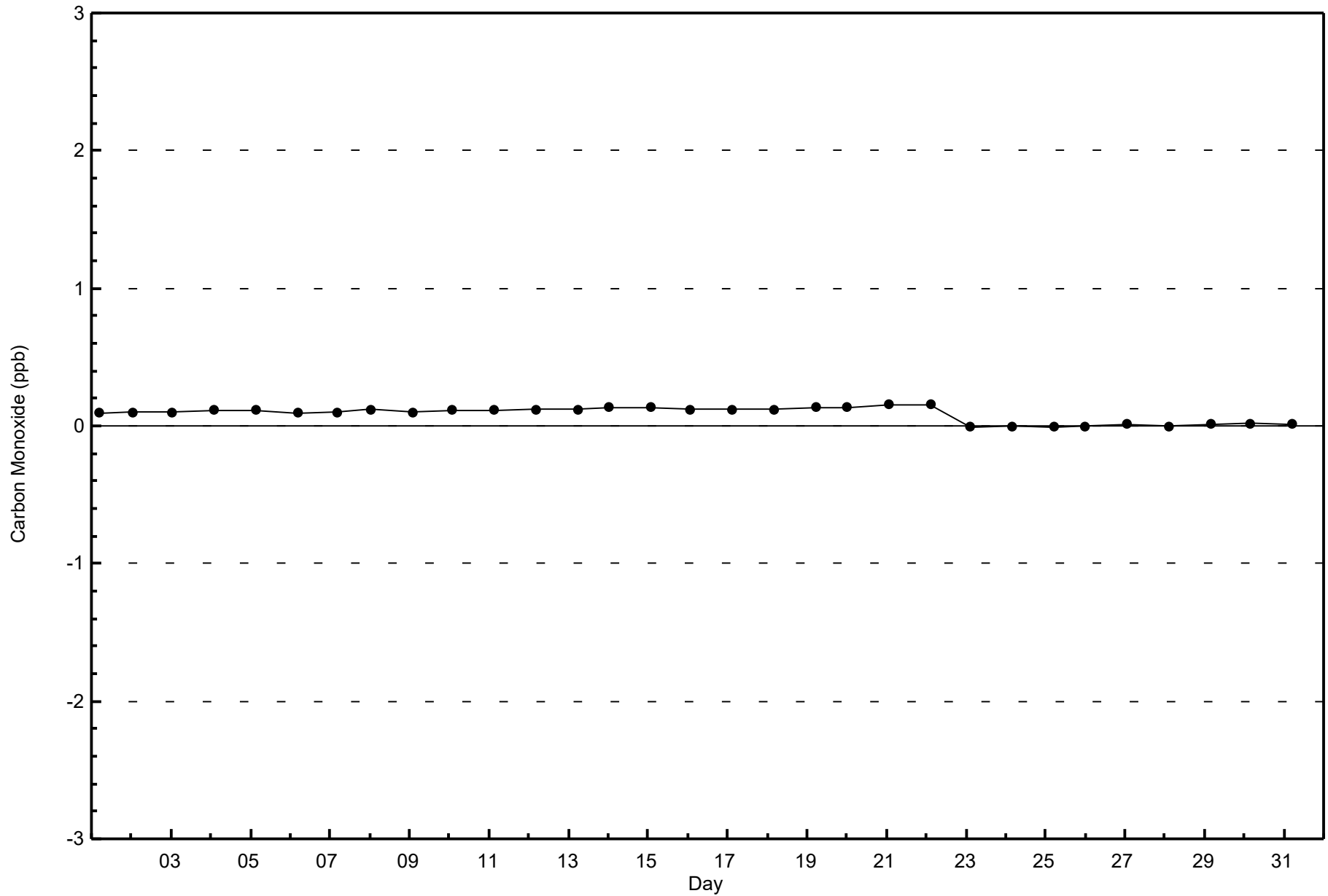
Carbon Monoxide (CO) - ppm
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

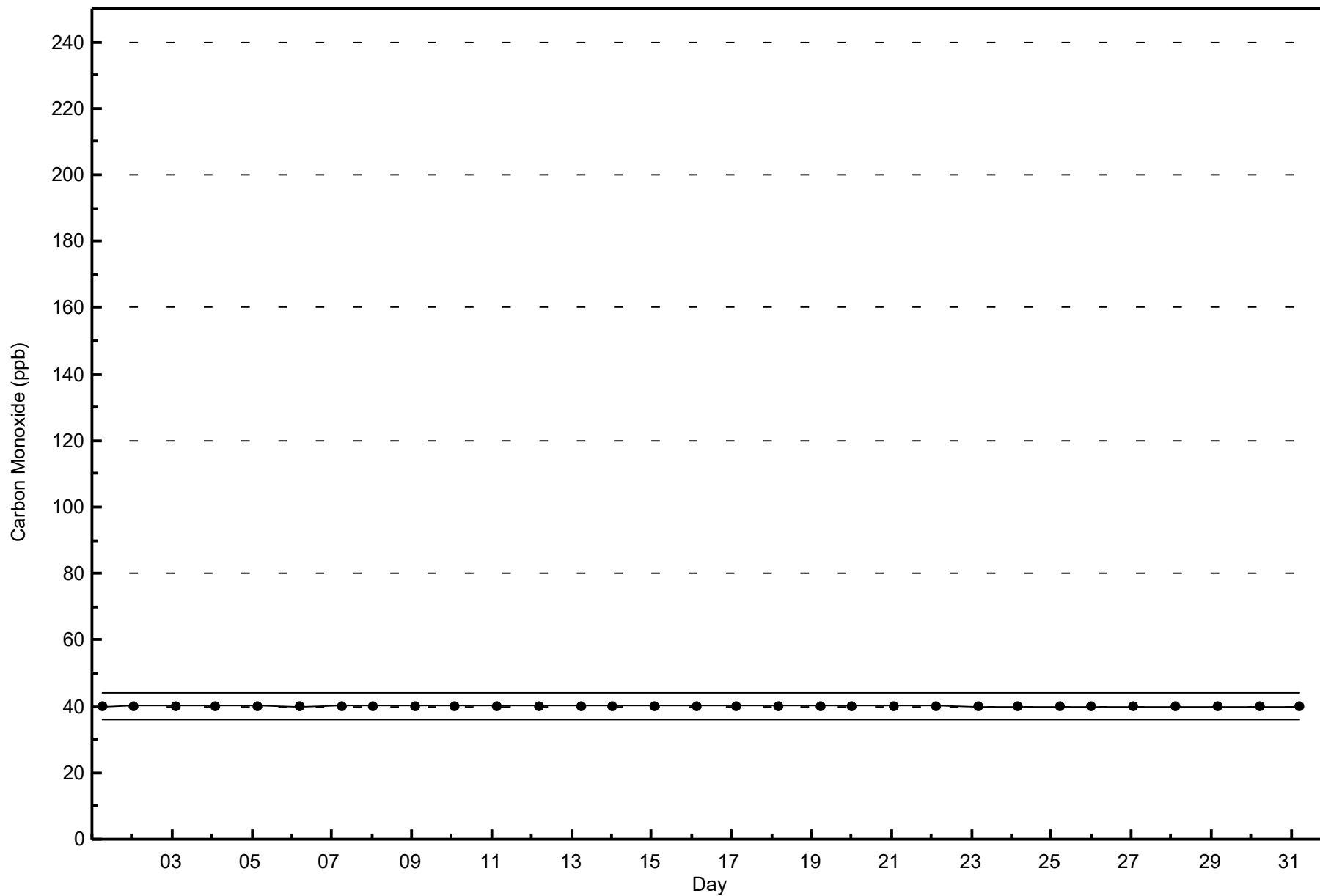
Carbon Monoxide (CO) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Span Responses

Carbon Monoxide (CO) - ppb
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

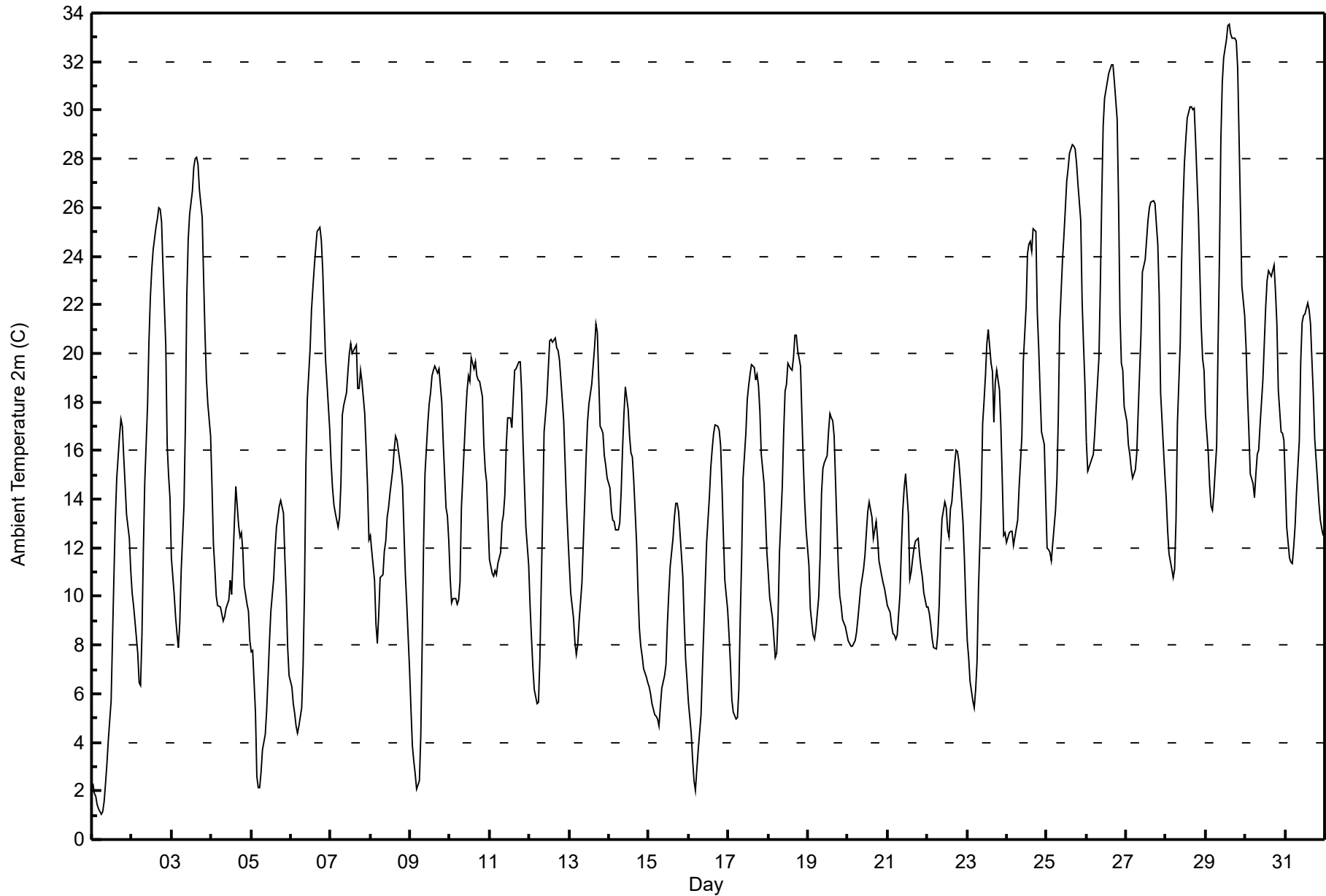
Athabasca Valley - May 2025

Maximum Value: 33.6 C on May 29 15:00																				Maximum Daily Average: 25.2 C on May 29				Hours in Service: 744		
Minimum Value: 1.0 C on May 1 06:00																				Minimum Daily Average: 8.0 C on May 1				Hours of Data: 744		
Maximum Diurnal Average: 20.4 C at hour 16																				Minimum Diurnal Average: 8.5 C at hour 5				Hours of Missing Data: 0		
Monthly Average: 14.99 C																				Percentiles: P ₁ = 2.0 P ₁₀ = 7.1 Q ₁ = 10.2 Median = 14.5 Q ₃ = 19.1 P ₉₀ = 24.3 P ₉₉ = 32.0				Hours of Calibration: 0		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	2.3	1.9	1.8	1.5	1.2	1.0	1.1	1.6	2.3	3.1	4.1	5.7	8.3	10.9	13.2	14.9	16.6	17.3	17.0	15.7	14.6	13.4	12.4	11.1	8.0	17.3
2-May	10.1	9.6	9.0	7.6	6.4	6.3	8.4	11.9	14.7	17.9	20.5	22.3	23.5	24.2	25.2	25.5	26.0	25.9	25.4	23.6	20.3	16.3	15.0	14.0	17.1	26.0
3-May	11.6	10.1	9.1	8.5	7.9	8.9	11.1	13.8	17.1	22.4	24.7	25.7	26.7	27.6	28.0	28.1	27.8	26.8	25.6	23.1	20.8	19.0	17.9	16.6	19.1	28.1
4-May	14.5	12.2	11.2	10.0	9.6	9.6	9.3	9.0	9.2	9.5	9.9	10.7	10.1	11.5	13.1	14.5	12.9	12.5	12.6	11.8	10.4	9.7	9.4	8.2	10.9	14.5
5-May	7.7	7.8	5.3	2.6	2.2	2.1	2.8	3.7	4.3	5.3	6.7	8.1	9.4	10.7	11.9	12.9	13.3	13.7	13.9	13.4	11.6	10.0	7.9	6.8	8.1	13.9
6-May	6.3	5.6	5.2	4.7	4.4	4.7	5.4	7.1	10.2	15.4	18.1	20.2	21.8	22.7	23.6	24.3	25.0	25.2	24.7	23.5	21.6	19.8	17.8	16.9	15.6	25.2
7-May	15.5	14.5	13.8	13.4	12.9	13.3	14.6	17.5	17.8	18.4	19.3	20.0	20.4	20.0	20.1	20.3	18.6	18.6	19.3	18.9	17.5	16.1	14.5	12.3	17.0	20.4
8-May	12.5	11.9	10.7	8.9	8.1	9.3	10.8	10.9	11.9	12.2	13.3	13.7	14.2	15.2	16.0	16.6	16.4	16.0	15.2	14.5	12.7	10.9	9.7	7.0	12.4	16.6
9-May	5.3	3.9	3.2	2.7	2.1	2.4	4.3	8.1	12.2	15.0	17.1	17.9	18.4	19.1	19.3	19.5	19.2	19.3	18.7	18.0	16.4	13.7	13.3	12.3	12.6	19.5
10-May	10.7	9.7	9.9	9.9	9.7	9.9	10.6	13.7	16.1	17.4	18.4	19.1	18.9	19.8	19.3	19.7	19.1	18.9	18.9	18.2	16.2	15.2	14.7	13.1	15.3	19.8
11-May	11.5	10.9	10.8	11.1	10.9	11.4	11.8	13.0	13.4	14.2	16.2	17.4	17.3	17.0	18.1	19.3	19.3	19.6	19.6	18.4	16.3	14.5	12.8	11.3	14.8	19.6
12-May	9.6	8.3	7.1	6.2	5.6	5.6	7.4	10.5	13.4	16.7	18.2	19.4	20.5	20.6	20.5	20.6	20.2	20.1	19.7	18.9	17.2	15.5	13.8	12.5	14.5	20.6
13-May	11.3	10.2	9.1	8.1	7.6	8.0	9.0	10.5	12.2	13.9	15.8	17.2	17.9	18.7	19.5	20.2	21.2	20.9	17.0	16.9	16.7	15.8	15.4	14.9	14.5	21.2
14-May	14.5	13.6	13.2	13.1	12.7	12.8	13.0	14.3	16.1	17.5	18.6	17.7	16.6	15.9	15.7	14.7	12.2	10.3	8.7	7.9	7.5	7.0	6.7	6.4	12.8	18.6
15-May	6.3	6.0	5.6	5.1	5.1	4.9	4.7	5.5	6.2	6.7	7.2	8.8	10.1	11.2	12.4	13.3	13.8	13.9	13.5	12.6	10.8	9.0	7.4	6.6	8.6	13.9
16-May	5.6	4.4	3.3	2.4	2.0	2.9	3.7	5.2	7.0	8.7	10.5	12.2	14.1	15.3	16.1	16.7	17.1	17.0	16.8	16.2	14.5	12.4	10.6	9.5	10.2	17.1
17-May	8.4	7.2	5.8	5.3	5.0	5.0	6.2	9.1	11.6	14.8	16.7	18.1	18.7	19.1	19.5	19.4	18.9	19.1	18.7	17.7	15.8	14.7	13.3	11.8	13.3	19.5
18-May	11.0	10.0	9.1	8.3	7.5	7.7	9.2	11.8	14.5	16.7	18.4	18.7	19.6	19.3	19.3	19.8	20.7	20.7	20.1	19.5	17.5	15.5	13.9	12.8	15.1	20.7
19-May	11.3	9.5	8.9	8.4	8.3	8.7	10.0	11.7	14.2	15.3	15.5	15.8	16.8	17.5	17.4	17.2	16.6	12.9	11.2	10.0	9.6	9.0	8.8	8.5	12.2	17.5
20-May	8.2	8.1	8.0	8.0	8.2	8.5	9.1	9.8	10.3	11.1	11.7	12.6	13.5	13.9	13.2	12.4	12.8	13.1	12.4	11.5	10.8	10.5	10.3	10.0	10.7	13.9
21-May	9.6	9.3	8.8	8.5	8.4	8.2	8.4	10.1	12.0	13.5	14.5	15.0	13.4	10.7	11.0	11.5	12.0	12.3	12.4	11.7	11.2	10.8	10.2	9.6	11.0	15.0
22-May	9.6	9.3	8.8	8.2	7.9	7.8	8.5	9.7	12.0	13.2	13.9	13.7	12.7	12.5	13.6	13.9	15.5	16.0	16.0	15.6	14.8	13.0	11.5	9.7	12.0	16.0
23-May	8.2	7.5	6.5	5.7	5.4	6.2	7.3	10.3	14.0	17.1	18.0	19.1	20.4	21.0	19.6	19.2	17.2	18.8	19.3	18.5	17.0	14.8	12.5	12.6	14.0	21.0
24-May	12.2	12.6	12.7	12.7	12.1	12.4	13.1	14.4	15.5	16.6	19.7	21.9	24.1	24.5	24.6	24.2	25.1	25.0	21.7	20.2	18.4	16.8	16.3	14.1	18.0	25.1
25-May	12.0	12.0	11.8	11.5	12.9	13.6	14.8	17.4	21.2	23.9	24.9	25.9	27.1	27.6	28.2	28.6	28.5	28.4	27.8	27.0	25.5	22.1	20.3	18.8	21.3	28.6
26-May	16.4	15.2	15.5	15.7	15.9	16.7	17.8	19.8	22.8	26.4	29.3	30.5	30.8	31.5	31.7	31.8	31.8	31.2	29.6	26.2	21.6	19.6	19.3	17.8	23.5	31.8
27-May	17.2	16.3	15.8	15.3	14.9	15.2	15.9	17.6	19.2	20.8	23.3	23.8	24.7	25.4	26.0	26.2	26.3	26.1	25.3	24.5	22.3	18.4	16.2	15.1	20.5	26.3
28-May	14.0	12.7	11.8	11.1	10.8	11.1	13.1	17.1	20.4	23.8	26.2	27.8	28.8	29.7	30.2	30.2	30.0	30.1	28.7	25.6	23.3	21.1	19.7	19.3	21.5	30.2
29-May	17.5	15.9	14.6	13.7	13.5	14.2	16.2	20.3	24.0	28.8	31.1	32.2	32.9	33.5	33.6	33.2	33.0	33.0	32.8	31.7	28.9	25.9	22.7	21.5	25.2	33.6
30-May	20.2	18.3	16.8	15.0	14.7	14.1	15.0	15.9	16.0	17.0	18.9	20.4	21.9	23.0	23.4	23.2	23.4	23.6	22.5	21.2	18.5	16.7	16.7	16.4	18.9	23.6
31-May	14.7	12.8	11.6	11.4	11.3	12.0	12.9	14.3	16.4	19.6	21.3	21.6	21.6	22.1	21.8	21.2	19.7	18.3	16.5	14.7	13.9	13.2	12.8	12.5	16.2	22.1
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Athabasca Valley - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	175	23.52	23.52
10 - 20	422	56.72	80.24
> 20	147	19.76	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

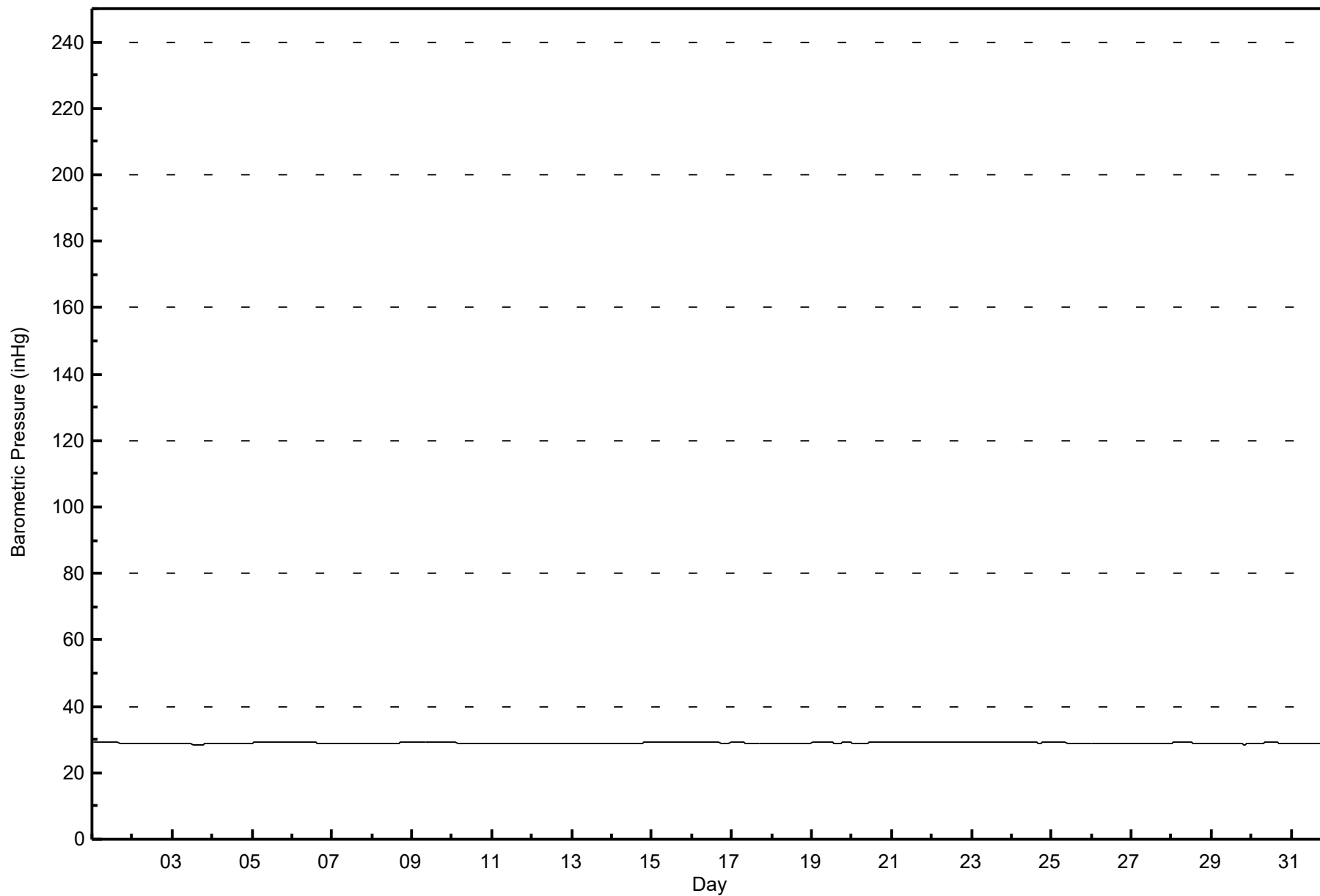
Athabasca Valley - May 2025

Maximum Value: 29.3 inHg on May 5 12:00																				Maximum Daily Average: 29.2 inHg on May 5				Hours in Service: 744			
Minimum Value: 28.6 inHg on May 3 18:00																				Minimum Daily Average: 28.6 inHg on May 3				Hours of Data: 744			
Maximum Diurnal Average: 29.0 inHg at hour 9																				Minimum Diurnal Average: 28.9 inHg at hour 19				Hours of Missing Data: 0			
Monthly Average: 28.96 inHg																				Percentiles: P ₁ = 28.6 P ₁₀ = 28.7 Q ₁ = 28.8 Median = 29.0 Q ₃ = 29.1 P ₉₀ = 29.2 P ₉₉ = 29.3				Hours of Calibration: 0			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	29.1	29.2
2-May	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	
3-May	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.6	28.7	
4-May	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	28.8	29.0	
5-May	29.0	29.0	29.1	29.1	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.3	
6-May	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	28.9	28.9	28.9	29.0	29.0	28.9	28.9	29.1	29.3	
7-May	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.9	
8-May	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.0	29.2	
9-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	
10-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	
11-May	28.9	28.9	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	
12-May	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	
13-May	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.7	28.8	28.8	
14-May	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	28.9	29.1	
15-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	
16-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	
17-May	29.0	29.0	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1	
18-May	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	
19-May	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	
20-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.1	
21-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2	
22-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	
23-May	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	
24-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	
25-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1	
26-May	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.9	
27-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	28.9	29.0	
28-May	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	29.0	29.1	
29-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.8	28.8	28.9	
30-May	28.8	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	
31-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.8	28.7	28.8	28.7	29.0	
29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9																										Diurnal Average	
29.3 29.3 29.3 29.3 29.3 29.2 29.2 29.2 29.2 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

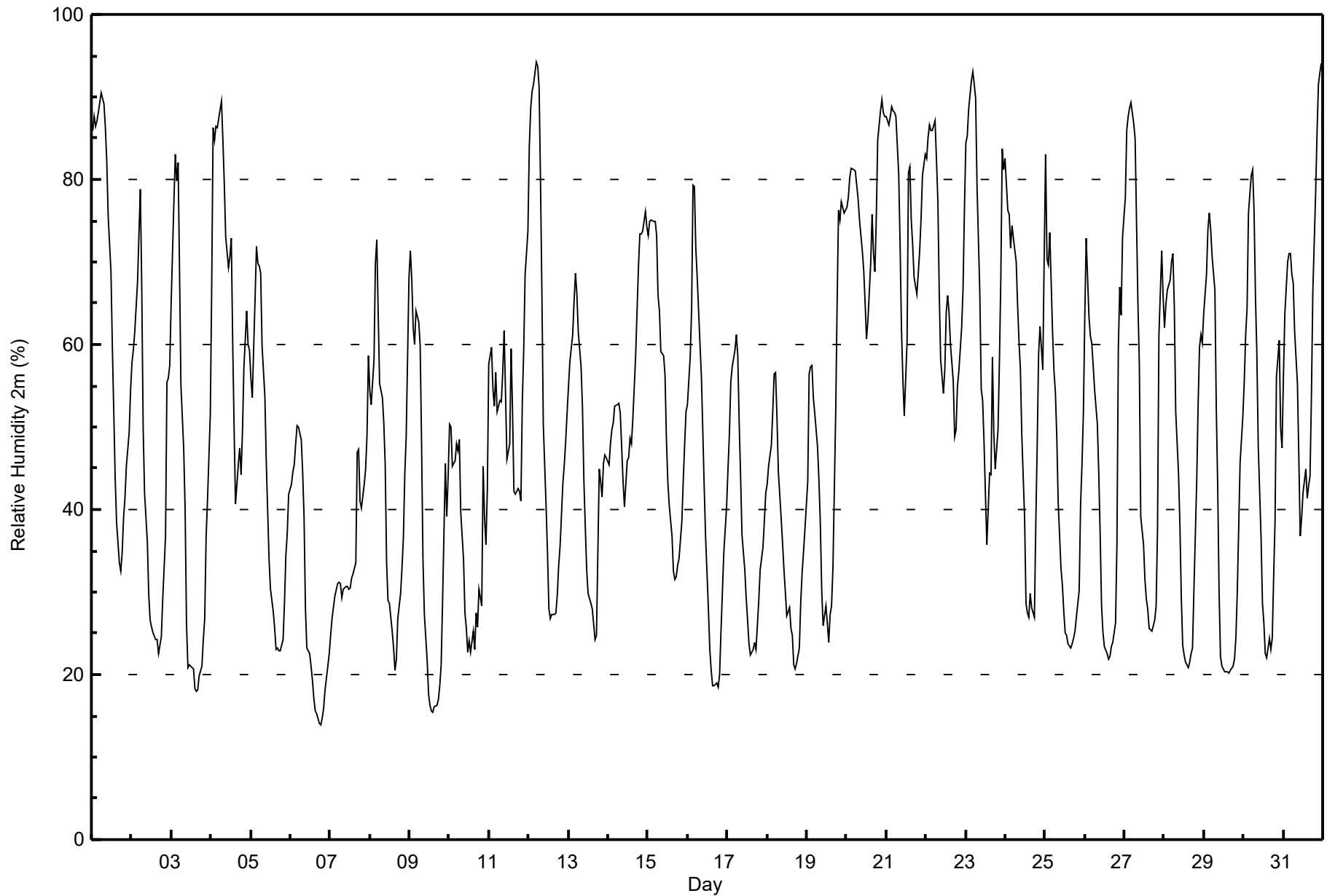
Athabasca Valley - May 2025

Maximum Value: 94.2 % on May 12 05:00																				Maximum Daily Average: 76.6 % on May 20					Hours in Service: 744	
Minimum Value: 13.9 % on May 6 19:00																				Minimum Daily Average: 29.0 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 70.7 % at hour 5																				Minimum Diurnal Average: 32.0 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 49.96 %																				Percentiles: P ₁ = 16.0 P ₁₀ = 23.1 Q ₁ = 30.1 Median = 48.8 Q ₃ = 66.2 P ₉₀ = 80.5 P ₉₉ = 91.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	86.0	87.7	86.4	87.1	88.1	90.4	89.9	89.1	86.3	82.2	75.6	68.9	59.6	51.9	43.8	38.4	33.6	32.5	34.7	39.0	41.4	45.2	49.3	54.5	64.2	90.4
2-May	57.9	59.3	61.6	67.6	73.5	78.9	66.9	50.0	42.1	36.0	29.7	26.6	25.8	25.1	24.3	24.2	22.6	23.5	24.7	29.2	36.8	55.5	55.9	57.5	44.0	78.9
3-May	65.0	77.4	83.1	79.8	82.1	69.0	55.0	47.3	39.9	26.2	20.9	21.2	20.9	20.7	18.4	17.9	18.1	19.8	20.9	24.2	26.8	36.6	41.3	51.6	41.0	83.1
4-May	67.2	86.3	84.7	86.4	86.2	88.4	89.6	84.7	79.5	73.0	69.3	70.6	72.8	60.3	49.9	40.7	45.4	47.5	44.2	49.5	57.1	64.0	60.0	59.3	67.4	89.6
5-May	55.8	53.5	65.6	71.8	69.8	69.5	68.6	59.8	53.8	45.8	39.9	33.9	30.3	27.7	25.5	23.0	23.2	22.9	22.8	24.3	28.6	34.5	37.1	41.9	42.9	71.8
6-May	43.1	44.5	45.5	47.9	50.2	50.0	48.5	44.6	39.1	28.0	23.2	22.6	21.1	19.4	17.1	15.6	15.3	14.1	13.9	14.7	16.0	18.2	21.0	22.5	29.0	50.2
7-May	24.8	26.7	28.2	29.5	31.0	31.1	31.0	29.2	30.3	30.7	30.6	30.3	30.5	31.6	32.3	33.6	47.0	47.2	41.0	40.2	43.1	44.9	48.9	58.7	35.5	58.7
8-May	54.3	52.7	58.1	69.9	72.7	63.7	55.2	53.5	50.5	45.4	33.5	29.0	28.7	25.2	23.2	20.5	21.9	26.7	29.8	32.9	36.7	44.3	48.8	68.2	43.6	72.7
9-May	71.4	67.7	62.1	60.1	64.0	62.8	59.8	48.0	33.9	27.4	21.7	17.7	16.2	15.5	15.4	16.0	16.3	16.9	18.6	21.2	28.8	45.5	39.1	44.1	37.1	71.4
10-May	50.3	50.0	45.2	46.0	48.0	47.2	48.4	39.6	33.9	27.5	25.6	22.7	24.1	22.7	25.3	23.0	27.4	25.8	30.4	28.3	45.3	39.0	35.7	42.3	35.6	50.3
11-May	57.5	59.7	54.5	52.6	56.7	51.8	53.2	53.0	56.6	61.7	54.1	46.2	47.9	59.4	52.1	42.1	41.9	42.6	42.2	41.0	53.0	59.3	68.5	73.7	53.4	73.7
12-May	84.1	88.7	90.7	91.6	94.2	93.7	91.2	79.8	66.3	50.4	40.3	34.8	28.0	26.7	27.4	27.3	27.5	29.6	33.3	35.5	43.3	45.4	48.3	51.7	55.4	94.2
13-May	54.9	58.0	61.1	65.2	68.6	66.1	61.5	57.4	52.4	43.6	37.9	32.6	29.9	28.7	27.9	26.2	24.3	24.7	45.0	43.4	41.6	45.6	46.7	46.3	45.4	68.6
14-May	45.4	48.0	49.6	50.5	52.5	52.7	52.8	51.7	47.7	43.3	40.3	46.0	46.2	48.6	47.9	51.0	58.7	64.0	69.3	73.3	73.4	73.8	76.2	74.2	55.7	76.2
15-May	73.3	75.0	75.1	74.9	75.0	73.2	65.9	64.0	59.2	58.7	56.3	48.5	43.4	40.4	36.7	32.5	31.5	31.9	33.3	34.0	38.5	43.5	47.9	51.9	52.7	75.1
16-May	52.7	58.5	64.2	79.3	79.2	71.8	68.1	59.9	56.2	49.6	42.8	36.6	27.9	23.1	20.5	18.6	18.7	19.1	18.5	20.1	25.3	30.1	34.7	40.3	42.3	79.3
17-May	44.9	49.2	55.4	57.3	59.3	61.1	58.6	50.5	44.1	37.0	32.8	29.4	26.7	23.7	22.4	23.1	23.9	23.0	25.9	29.0	32.6	35.3	38.7	42.1	38.6	61.1
18-May	43.0	45.3	47.8	51.8	56.4	56.6	51.3	44.5	39.0	36.0	32.7	30.0	27.1	28.1	25.6	24.7	21.1	20.8	21.4	23.2	28.9	32.3	34.9	37.7	35.8	56.6
19-May	43.4	56.4	57.4	57.5	53.6	51.7	47.6	43.6	38.2	30.2	25.9	28.3	26.3	23.9	27.3	28.4	32.9	51.8	64.9	76.2	75.1	77.4	76.0	76.2	48.8	77.4
20-May	76.6	77.8	80.1	81.4	81.1	81.1	79.4	77.6	75.0	71.4	68.9	65.1	60.7	62.9	69.9	75.7	71.0	68.9	75.5	84.8	88.3	89.6	88.2	87.6	76.6	89.6
21-May	87.6	86.6	87.6	88.8	88.3	88.1	87.6	80.6	72.1	61.8	55.7	51.3	60.4	80.9	81.5	75.1	72.0	68.2	66.1	68.7	71.4	75.3	80.4	83.0	75.8	88.8
22-May	82.5	85.2	86.6	85.9	85.9	87.1	82.4	77.5	66.1	58.2	54.1	57.1	63.8	66.0	64.0	60.0	55.5	48.8	49.6	55.0	56.7	62.0	66.8	76.4	68.0	87.1
23-May	84.4	85.3	88.5	92.0	93.1	91.5	89.8	79.1	66.1	54.6	53.2	48.1	41.8	35.8	44.4	44.3	58.5	49.2	44.9	49.7	58.0	68.0	83.7	81.2	66.0	93.1
24-May	82.6	76.3	75.7	71.7	74.4	72.8	70.1	64.8	60.4	57.0	49.0	39.0	28.6	27.4	27.0	29.9	28.2	27.0	38.3	47.7	58.7	62.2	57.0	70.8	54.0	82.6
25-May	83.1	70.3	69.7	73.6	61.3	56.9	54.3	48.9	40.8	33.0	30.8	27.6	25.1	24.7	23.7	23.2	23.8	24.3	25.3	27.0	30.1	40.6	45.5	51.5	42.3	83.1
26-May	63.2	72.9	63.4	61.0	60.3	57.5	54.5	50.4	44.4	36.9	28.4	25.1	23.4	22.6	21.9	22.3	23.4	23.9	26.3	36.0	59.7	67.0	63.5	73.0	45.0	73.0
27-May	77.7	85.9	87.7	88.7	89.3	86.9	85.0	74.8	64.9	57.5	39.2	35.7	31.5	29.1	27.9	25.7	25.2	25.9	26.6	28.3	37.6	61.3	71.4	65.8	55.4	89.3
28-May	62.1	64.9	66.6	67.8	69.9	71.0	64.6	51.9	44.5	38.2	29.3	23.6	22.3	21.6	20.9	21.6	22.6	23.1	30.1	43.3	52.6	59.7	61.2	60.2	45.6	71.0
29-May	63.7	68.5	73.9	75.9	74.0	70.8	66.6	52.3	43.0	30.0	22.2	20.9	20.3	20.4	20.3	20.2	20.4	21.0	21.9	24.4	30.0	37.6	45.6	51.3	41.5	75.9
30-May	55.6	61.2	64.4	76.0	80.5	81.2	76.1	65.8	58.8	47.5	36.6	28.7	26.4	22.6	22.0	24.4	23.0	24.4	31.9	38.7	56.2	60.5	49.8	47.4	48.3	81.2
31-May	56.2	63.8	69.9	71.1	71.1	68.4	67.4	61.5	55.2	46.3	36.7	39.0	42.0	45.0	41.4	42.8	44.0	53.7	66.5	78.3	85.7	91.5	92.9	94.1	61.9	94.1
Diurnal Average																										Diurnal Maximum
87.6 88.7 90.7 92.0 94.2 93.7 91.2 89.1 86.3 82.2 75.6 70.6 72.8 80.9 81.5 75.7 72.0 68.9 75.5 84.8 88.3 91.5 92.9 94.1																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Athabasca Valley - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - May 2025

Maximum Speed: 29 km/h on May 14 14:00										Maximum Daily Speed Average: 16.2 km/h on May 15										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 23 23:00										Minimum Daily Speed Average: 0.8 km/h on May 10										Hours of Data: 744						
Maximum Diurnal Speed Average: 4.4 km/h at hour 6										Minimum Diurnal Speed Average: 1.0 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 2.2 km/h 142.3 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 6 Median = 11 Q ₃ = 16 P ₉₀ = 19 P ₉₉ = 25										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NW17	NW15	NW14	NW11	NW8	W7	NNW4	NNE4	SE0	ESE2	SSE8	SSE7	ESE7	NNE3	NNW4	N4	ENE6	E8	E12	ESE13	ESE12	ESE13	ESE9	SE11	ENE2.1	NW17
2-May	ESE12	ESE10	ESE9	ESE7	NE0	ENE1	ESE2	SE3	SSW7	E4	ENE6	NE7	W13WNW15WNW13	NW12	NNW7	NNE6	N7	N5	WNW4	NW4	N0	SE3			N1.2	WNW15
3-May	ESE2	WSW1	SSE1	ESE2	WSW1	SE7	SE14	SE14	ESE10	SSW13WSW22	W17WSW19WSW17WSW20	W16	W16	W20WNW25WNW22WNW26WNW16WNW16	NW18										W9.0	WNW26
4-May	W21	W20WSW17WSW10WSW17	W17	NW16	NW19	NW15	NW8	WSW7	SW14	W22WSW17	SW14WSW17	SW20	SW17	SW21	SW21	SW19	SW20	SW21	SW16						WSW14.4	WSW22
5-May	WSW13WSW14	NW11	NNW16	NW11	WSW9WSW15WNW18WNW18WNW14	NW15	NW11	N10	NNE7	N9	N8	N7	NW7	NNW5	NE6	N4	E6	ESE9	ESE9						NW6.4	WNW18
6-May	SE8	SE9	SE10	ESE12	ESE11	ESE15	ESE17	ESE16	ESE10	SSW7	SSW15	SSW13	SSW19	SW23	SW24	SW23	SSW19	S18	SSE18	SSE17	SE16	SE12	SE13	SE13	SSE11.3	SW24
7-May	ESE15	ESE15	ESE17	ESE17	SE17	SE17	SE14	SSE19	SSE19	SSE16	S16	SSW21	SW20	SW17WSW14WSW18	W29WSW17	SW17	SSW10	S7	S6	SSE7	SSE3				S9.8	W29
8-May	SSW6	SSW5	SW2	SSE1	SSW7	S4	ESE2	N6	NNW8	NW13	NNW16	NNW18	NW19	N12	W15WNW23	NW21	NW18	NNW13	NW9	NW8	NNW6	NW1	ESE1		NW7.4	WNW23
9-May	E3	ESE3	SE5	ESE9	ESE12	ESE11	ESE9	SE8	SSW14	SW15	SSW21WSW23WSW25	SW22	SW19WSW20	SW17WSW15WSW14	WSW6	SSW4	SE1	SE3	SE1						SW8.0	WSW25
10-May	SSE3	ESE3	E5	ESE7	ESE10	ESE5	NE2	NNE3	NW3	NNW7	S5	W9	W10	WSW8	WNW8WNW10	NNW9	NW5	NW6	NNW4	WNW1	ESE6	ESE8	E4		NW0.8	ESE10
11-May	E2	E4	NE4	SE4	ESE3	SE6	SE4	SSE7	SE7	ESE9	ESE11	E10	N3	NNW11	NW11	SE4	ENE2	W3	NNE3	NNE5	NW2	NNW6	WNW1	WNW3	ENE2.1	NNW11
12-May	SW2	NNW1	ESE1	SSW2	S2	S2	N4	NNW5	NNW9	NNW13	NW21	NNW16	NNE15	NNE17	NNE17	NNE18	NNE17	N17	N17	NE15	NNW13	NNW17	NNW12	NW16	N9.5	NW21
13-May	NW15	NW14	NW12	NW9	NW8	NW8	NNW8	NNW11	NNW14	NNW10	NNW9	NNE9	N7	NNW8	NNW3	ENE9	E4	SE8	S16	E6	SE7	ESE9	ESE10	ESE12	N3.6	S16
14-May	ESE10	ESE11	SE10	SE9	ESE11	ESE13	ESE10	ESE6	ESE6	SE6	NW7	NNW23	NNW29	NNW29	NNW23	NNW23	NNW24	N21	NNW22	NNW25	NNW18	NNW17	NNW18	N15	N9.3	NNW29
15-May	N14	NNW14	NNW18	NNW16	NNW16	NNW18	N18	NNW24	NNW23	NNW20	NNW20	NNW17	NW20	NW21	NW19	NNW19	NNW19	NNW16	NNW16	N13	N12	N9	NNW7	NW5	NNW16.2	NNW24
16-May	NNW4	N5	NE3	W1	NNW2	NE4	ENE5	NW3	WNW5	WNW6	WSW5	W6	ESE2	E8	SE12	SE12	SSE9	SE12	ESE10	ESE10	ESE9	ESE9	ESE10	ESE12	ESE3.6	SE12
17-May	ESE11	ESE11	E8	ESE8	ESE9	ESE11	ESE12	ESE12	ESE15	ESE14	E16	E16	ESE17	SE16	SE14	ESE14	ESE14	ESE16	ESE15	E12	ESE13	ESE16	ESE13	ESE13	ESE13.0	ESE17
18-May	ESE15	ESE11	ESE9	ESE10	ESE8	ESE9	ESE9	ESE9	E9	E10	ESE15	SE18	ESE15	ESE13	SE10	ESE10	ESE15	ESE17	ESE16	ESE14	ESE11	ESE10	ESE12	SE13	ESE11.8	SE18
19-May	SE6	SE2	SE4	ESE7	ESE9	SE9	ESE13	ESE14	E12	ESE17	ESE22	ESE21	ESE18	SE19	SE18	SE18	SE21	SE25	ESE19	SE12	ESE13	ESE13	ESE14	ESE12	ESE14.0	SE25
20-May	ESE12	ESE10	ESE11	ESE12	ESE12	ESE11	ESE13	ESE13	ESE14	ESE16	ESE17	ESE16	ESE14	ESE16	ESE20	ESE17	ESE14	ESE15	ESE12	ESE11	SE7	ESE6	ESE8	ESE9	ESE12.7	ESE20
21-May	ESE9	ESE9	ESE8	ESE5	ESE6	ESE7	ESE9	ESE9	ESE9	E8	ESE10	E12	S10	SSE10	SE9	SSE13	SSE11	SSE11	SE11	ESE12	ESE11	ESE10	ESE7	SE5	SE8.2	SSE13
22-May	ESE7	ESE9	ESE9	ESE11	ESE10	ESE8	ESE10	ESE11	ESE12	SE14	SE15	SSW12	SW15	SSE9	SE7	ESE12	E13	ESE16	ESE13	ESE10	SE9	ESE7	SE6	SE3	SE9.0	ESE16
23-May	ESE3	ESE6	SE4	SE2	SE3	E4	ENE4	ESE6	ESE9	ESE18	ESE18	ESE14	SE11	SE11	E15	SE14	ESE9	E11	ESE12	SSE7	S2	SE2	ESE0	NW1	ESE7.2	ESE18
24-May	S1	SE6	E4	ESE3	ESE4	SE6	SE7	ESE9	ESE8	ESE8	ESE15	E19	SE17	SSE18	ESE20	ESE15	SE12	SW17	SE17	ESE8	ESE7	SE5	SE5	ESE5	SE8.6	ESE20
25-May	ENE5	ENE6	E8	ENE7	ESE11	ESE12	ESE11	ESE13	ESE14	SE19	SE18	SSE18	S17	SSE18	S19	SSE17	S17	S16	S15	SSE15	SSE13	SE8	SE8	ESE6	SE11.2	SE19
26-May	E4	NE1	SE4	ESE7	ESE7	ESE8	ESE10	ESE11	ESE10	ESE10	SSE16	SSE19	SSE23	SSE19	SE21	SSE22	SSE22	SSE20	SSE14WSW18	W14	SW6	S5	S8		SSE9.8	SSE23
27-May	SW12	WSW3	SSE6	SE6	SSE5	SSE4	SSW8	SSW8	SSW9	SSW8	W12	W16WSW15	SSW18	SW17	SW22WSW21WSW20WSW17	SW11	WSW8	SE1	ENE2	SE5				SW8.9	SW22	
28-May	SE5	SE5	SE5	SE6	SE8	ESE9	ESE8	SE6	SSE3	NE4	SSW5	SW12	SW12	SW13	SW12	SW11	SW7	SSE6	SE3	W1	NNE2	ENE2	ESE5	SE5	S4.0	SW13
29-May	ESE6	ESE5	ESE2	ESE4	ESE7	E6	E6	ESE8	ESE12	SE15	SSE18	SE19	SE19	SE19	ESE23	ESE25	ESE24	ESE21	SE18	SE13	ESE10	W29WNW21	W18	SE9.2	W29	
30-May	W27WSW22WSW22	W7	SW7	SW8	W10	NW18WNW15WNW14	NW11	NNW10	N5WSW10	SW13	SSW16	SSW8	SSW4	SW6	SSE3	SSE2	E4	SE5	SE6						W6.9	W27
31-May	SE8	ESE7	ESE6	ESE8	ESE9	ESE7	E6	ESE6	E5	ENE6	SE2	NW5	NW9	NNW10	NNW15	NNW20	N19	NNW20	NNW21	NNW19	NW19	NW19	NW17	NW20	NNW6.6	NNW21
SE1.7 SE1.9 ESE2.3 ESE3.5 ESE3.9 ESE4.4 ESE4.4 E3.4 ESE2.6 ESE2.7 SSE3.2 S1.9 SW3.4SSW3.4SSW3.2SSW3.0																								Diurnal Average		
W27WSW22WSW22 ESE17 SE17NNW18 N18 NNW24 NNW23 NNW20 ESE22WSW23NNW29 NNW29 SW24 ESE25 W29 SE25WNW25NNW25WNW26 W29WNW21 NW20																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

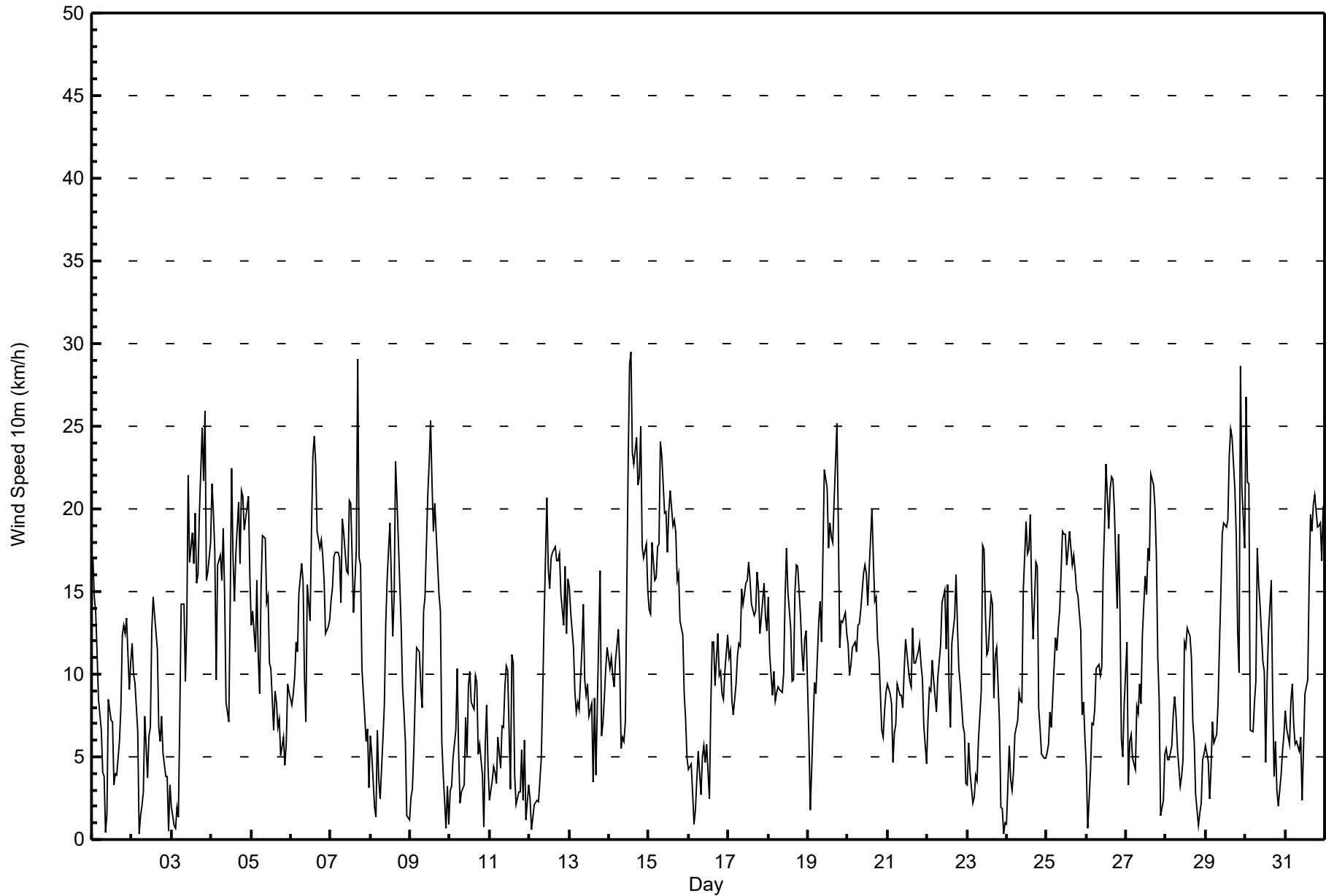
Wind Speed 10m (WS10) - km/h
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on May 29 22:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 28 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	2	1	1	2	2	2	1	2	3	3	3	3	2	2	2	2	3	3	3	3	2	3	3
2-May	3	2	2	2	1	1	1	2	2	2	3	3	7	6	6	5	4	3	2	2	2	1	1	2	7
3-May	2	1	2	1	1	4	3	3	2	6	5	5	5	5	6	6	5	4	5	7	5	4	4	3	7
4-May	3	3	4	5	4	3	3	4	3	3	2	3	5	4	4	6	4	4	4	4	4	4	5	3	6
5-May	2	2	4	4	3	2	3	3	5	4	5	5	4	3	2	3	3	3	1	2	1	3	3	3	5
6-May	2	2	2	2	3	3	3	3	3	6	5	5	6	7	6	5	6	5	4	4	3	4	3	3	7
7-May	3	3	4	4	3	4	4	5	5	5	5	5	4	5	4	6	5	5	4	3	2	1	1	2	6
8-May	2	3	2	2	5	3	4	2	4	3	5	4	4	3	8	6	7	4	4	2	2	2	1	1	8
9-May	2	1	2	2	2	2	2	2	3	4	5	6	8	5	6	7	4	5	4	1	1	1	2	2	8
10-May	2	2	2	3	5	5	2	1	2	2	3	5	4	5	4	4	3	3	2	1	1	4	3	2	5
11-May	1	2	1	2	2	1	3	2	2	2	3	4	6	3	3	3	3	1	2	2	1	2	1	1	6
12-May	2	1	2	2	2	1	3	1	2	4	5	4	5	5	5	6	5	5	5	5	3	5	4	2	6
13-May	2	2	2	3	2	2	2	3	3	3	2	3	4	3	2	3	3	3	9	3	3	2	2	3	9
14-May	3	2	3	2	2	2	2	1	2	2	4	7	5	6	6	6	7	6	6	6	5	4	5	4	7
15-May	4	4	4	4	4	5	6	6	6	5	6	5	5	5	5	5	5	5	5	4	3	2	2	2	6
16-May	2	2	2	1	1	1	1	1	1	2	2	2	4	5	4	4	3	4	3	3	3	3	2	3	5
17-May	3	3	3	3	3	3	4	4	4	4	4	4	6	4	4	4	4	5	5	4	4	4	3	3	6
18-May	3	4	3	2	3	2	2	2	3	3	4	4	4	3	2	3	5	4	5	4	3	2	3	3	5
19-May	3	1	2	3	2	2	3	3	3	6	6	6	5	5	6	5	8	7	6	3	3	3	3	3	8
20-May	3	2	3	2	3	2	3	3	4	4	4	4	4	4	5	5	4	4	3	3	3	2	2	2	5
21-May	2	2	3	2	2	1	2	2	2	3	3	4	4	3	3	3	2	3	3	4	3	3	2	2	4
22-May	2	2	2	3	3	2	3	3	3	4	4	4	3	2	4	3	4	4	4	3	2	3	2	1	4
23-May	1	1	2	1	2	1	1	2	4	5	5	4	4	5	6	6	3	5	4	2	2	2	1	1	6
24-May	1	3	2	1	1	2	2	2	3	3	6	5	5	5	6	6	6	5	6	2	2	1	1	1	6
25-May	1	1	1	1	3	3	3	3	4	5	5	5	5	5	5	5	5	4	4	3	3	3	2	2	5
26-May	2	1	2	2	2	2	3	3	3	3	6	5	6	5	5	6	6	6	4	8	4	5	3	2	8
27-May	4	3	2	2	2	2	1	1	2	2	7	6	6	5	5	6	5	5	4	3	2	2	1	2	7
28-May	1	2	2	2	2	2	1	2	2	1	2	4	4	4	4	3	2	2	2	1	1	2	2	2	4
29-May	2	2	1	2	2	2	1	3	2	5	6	5	6	5	6	6	7	6	4	3	2	13	6	5	13
30-May	6	5	6	6	5	2	6	4	3	3	4	4	4	6	4	4	3	2	2	1	2	2	1	1	6
31-May	3	2	3	2	2	2	1	1	1	1	2	2	3	3	4	5	5	5	6	5	5	5	5	4	6
6 5 6 6 5 5 6 6 6 6 7 7 8 7 8 7 8 7 9 8 5 13 6 5																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Athabasca Valley - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Athabasca Valley - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	145	19.49	19.49
6 - 11	259	34.81	54.30
12 - 19	270	36.29	90.59
20 - 28	66	8.87	99.46
29 - 38	4	0.54	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Athabasca Valley - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	8	6	7	7	12	23	29	9	7	5	2	4	3	5	9	9	145
6 - 11	8	3	2	7	13	109	35	12	4	10	7	7	6	3	17	16	259
12 - 19	8	5	1	0	8	79	33	17	8	9	19	17	10	9	20	27	270
20 - 28	1	0	0	0	0	8	3	4	0	2	11	10	4	5	5	13	66
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	14	10	14	33	219	100	42	19	26	39	38	25	22	51	67	744

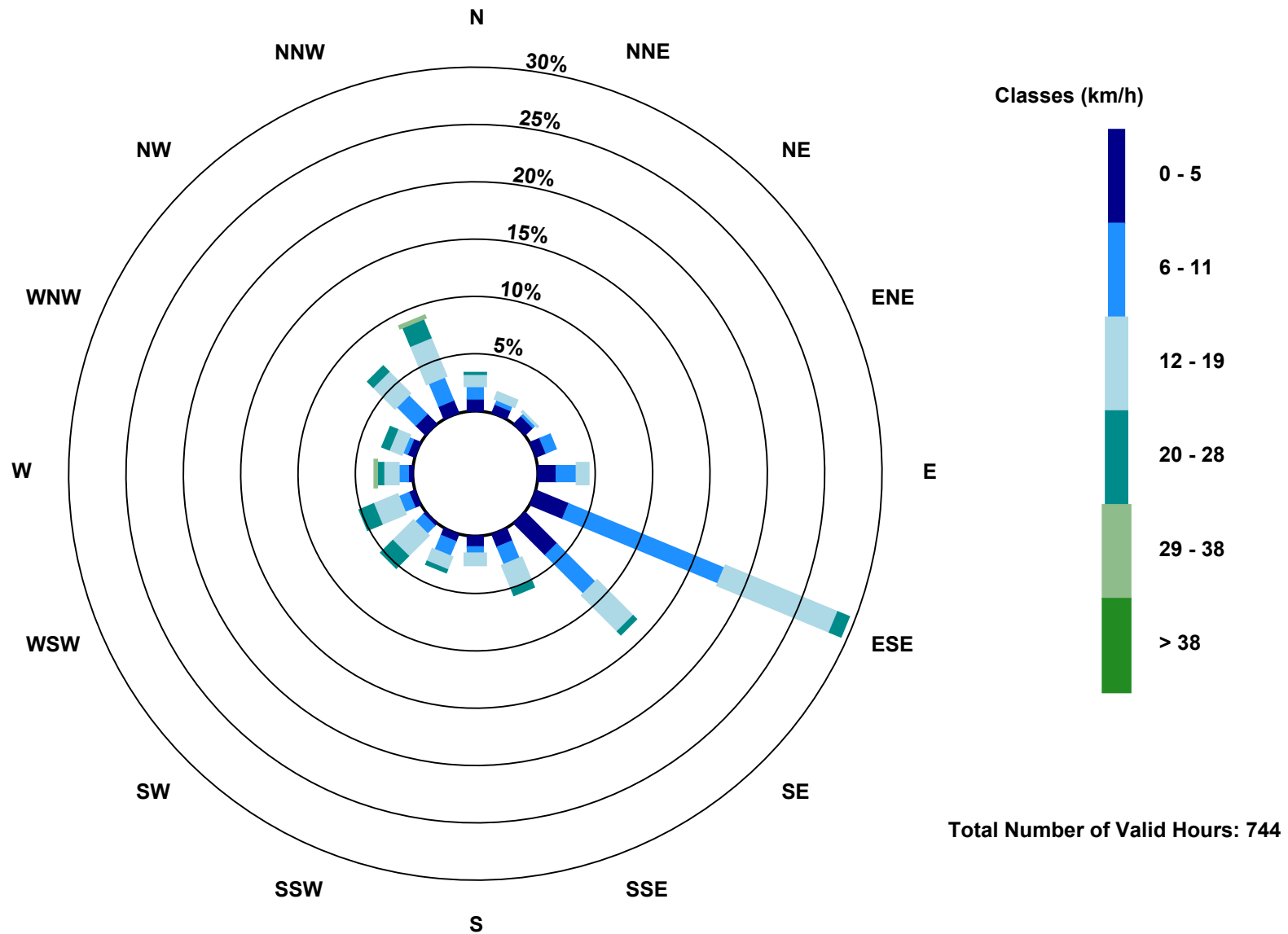
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Athabasca Valley





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - May 2025

Direction of Maximum Speed: 327 deg on May 14 14:00 Direction of Maximum Daily Speed Average: 336.9 deg on May 15																					Hours in Service: 744				
Direction of Minimum Speed: 103 deg on May 23 23:00 Direction of Minimum Daily Speed Average: 0.8 deg on May 10																					Hours of Data: 744				
Direction of Minimum Speed: 103 deg on May 23 23:00 Direction of Minimum Daily Speed Average: 0.8 deg on May 10																					Hours of Missing Data: 0				
Monthly Average Direction: 142.3 deg																					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	318	312	319	315	305	262	328	14	142	115	159	149	114	33	346	9	67	86	98	102	105	104	121	124	58.9
2-May	122	119	114	117	38	75	123	131	194	88	57	42	280	287	300	311	330	23	349	9	302	310	3	126	359.0
3-May	104	253	156	112	242	124	129	132	119	207	246	261	250	251	244	267	276	280	291	297	298	283	299	304	265.5
4-May	264	261	253	244	248	276	308	322	326	323	243	224	259	237	232	240	225	216	222	218	214	221	232	227	247.0
5-May	238	253	308	338	315	253	252	293	302	300	314	322	7	12	360	360	349	322	337	51	359	92	111	114	314.3
6-May	126	128	125	115	114	119	117	122	116	208	209	207	198	216	219	222	207	173	160	152	145	137	127	126	164.4
7-May	122	122	121	123	127	125	124	155	156	165	181	208	227	229	242	245	269	249	225	212	187	176	165	159	182.8
8-May	209	213	216	162	208	182	104	349	330	310	346	332	326	349	273	283	306	318	340	315	316	333	315	104	312.0
9-May	100	121	126	121	120	122	120	129	208	218	211	243	248	234	228	247	225	241	256	243	198	146	125	141	214.9
10-May	154	122	100	115	113	103	51	30	314	328	190	262	267	258	294	293	330	325	317	346	286	106	107	84	316.9
11-May	89	84	56	125	102	140	129	150	124	110	107	79	359	344	322	133	57	265	32	20	311	333	301	297	72.2
12-May	236	348	123	192	187	185	352	343	328	332	326	345	24	20	23	16	18	360	8	34	347	340	338	318	356.4
13-May	313	315	324	319	311	322	328	336	329	337	335	17	6	336	343	63	90	135	185	86	131	118	116	117	350.3
14-May	123	115	126	127	117	120	123	105	108	144	308	330	327	327	342	344	340	350	345	329	339	347	345	353	352.1
15-May	350	341	338	344	343	339	350	332	338	333	330	332	325	325	325	329	334	339	337	349	356	357	338	326	336.9
16-May	343	1	41	271	332	45	57	313	291	283	258	260	122	84	136	144	152	128	115	113	112	117	113	110	115.6
17-May	111	111	83	103	117	111	112	108	104	103	93	96	106	127	134	116	104	118	102	98	105	108	112	112	108.4
18-May	109	116	114	107	111	119	114	112	97	90	108	125	109	118	134	110	115	112	114	111	107	117	123	125	113.4
19-May	132	129	124	115	120	127	119	117	101	107	113	112	117	124	128	136	130	125	119	124	115	110	110	111	119.1
20-May	111	113	108	108	110	111	111	111	112	111	107	110	116	112	106	106	122	122	116	109	130	118	118	121	112.4
21-May	108	115	108	110	108	114	115	116	117	98	105	84	187	153	139	156	168	166	129	108	107	112	113	145	124.5
22-May	121	122	106	104	115	114	111	113	120	130	133	195	226	155	136	111	101	109	112	103	129	118	136	124	125.0
23-May	121	116	128	142	137	80	59	107	122	109	109	109	131	146	101	124	108	97	121	152	189	126	103	314	116.2
24-May	177	127	82	116	117	125	125	107	113	109	107	100	140	160	120	111	144	221	135	116	113	126	139	113	127.3
25-May	73	72	85	77	102	112	113	115	123	145	142	157	170	149	184	162	171	173	172	160	153	126	124	102	142.9
26-May	85	35	137	107	104	112	115	110	108	112	153	161	157	157	145	150	154	155	150	237	266	227	181	186	152.3
27-May	230	242	159	136	158	166	206	194	198	194	266	276	249	208	219	229	243	245	239	236	248	137	60	143	226.1
28-May	133	128	124	127	130	121	110	125	160	49	210	217	217	216	219	227	216	152	130	273	17	57	109	128	170.3
29-May	114	103	122	102	109	98	84	103	113	138	164	145	141	138	118	122	117	121	139	127	113	261	286	264	136.6
30-May	276	249	241	276	218	214	272	308	300	296	310	343	354	255	229	212	208	203	216	150	162	86	130	130	259.0
31-May	126	121	102	121	118	106	96	109	88	61	129	305	324	336	338	331	353	342	335	337	315	304	311	310	342.6
146.2 136.9 112.5 105.3 120.9 122.2 109.8 101.0 109.1 122.2 154.3 175.3 217.4 202.3 193.9 196.8 189.6 163.2 149.9 117.3 130.3 118.6 119.0 127.3																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

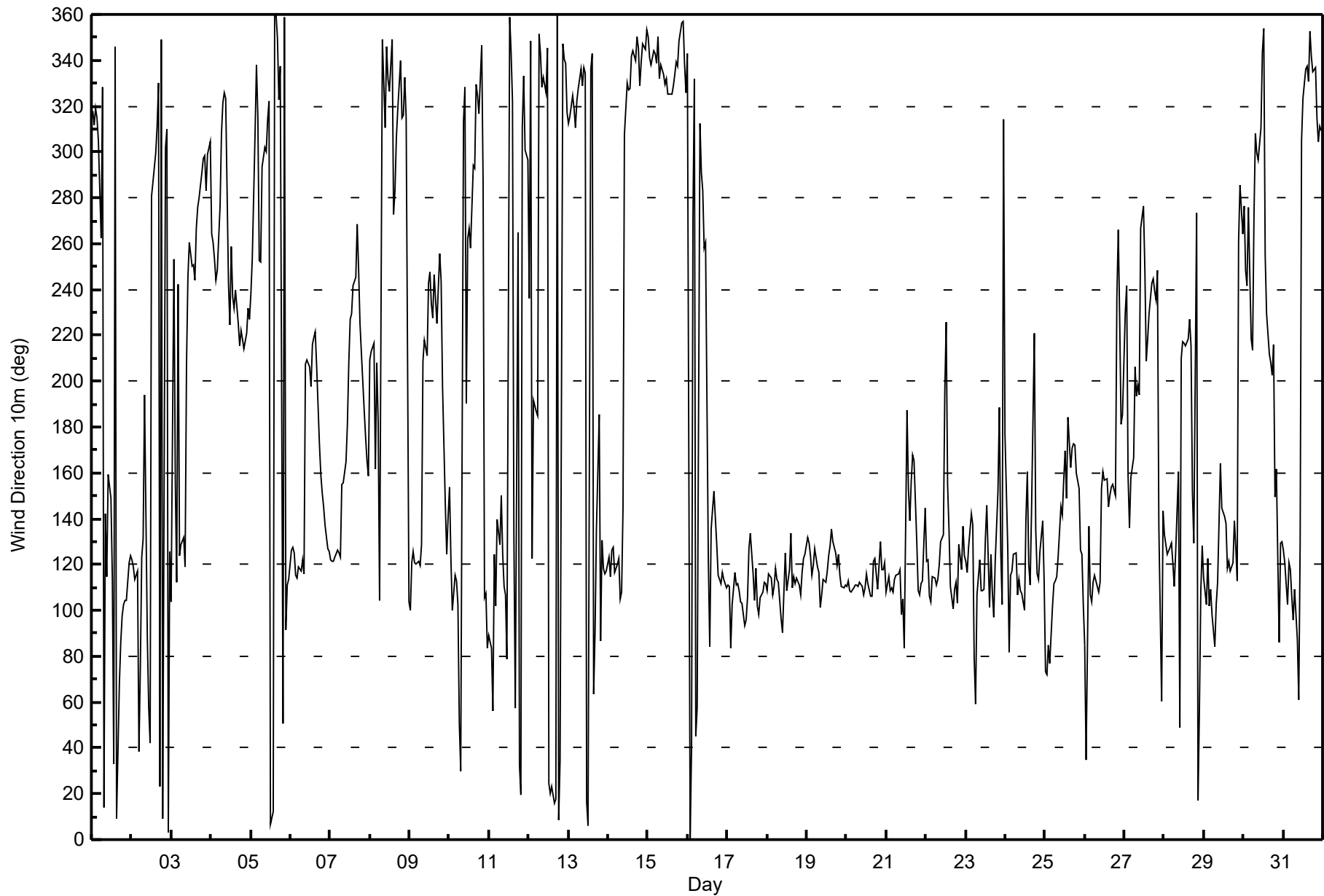
Athabasca Valley - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on May 2 05:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 7 deg on May 13 01:00																									
Percentiles: P ₁ = 9 P ₁₀ = 14 Q ₁ = 17 Median = 22 Q ₃ = 32 P ₉₀ = 63 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	8	10	9	9	13	18	39	52	87	96	28	37	50	78	56	63	26	24	20	16	15	14	20	14	96
2-May	14	14	22	32	103	81	69	68	19	75	38	44	55	28	30	30	46	43	29	26	30	49	97	51	103
3-May	68	82	97	82	61	45	13	14	18	42	21	23	21	27	16	26	20	14	13	9	10	18	22	22	97
4-May	9	9	14	26	14	23	10	10	15	24	26	16	17	14	21	20	13	18	11	11	11	10	10	9	26
5-May	21	12	54	18	22	21	16	22	21	23	23	41	34	67	33	40	50	33	33	16	32	37	19	32	67
6-May	22	20	16	13	16	13	12	12	23	83	20	29	27	19	19	17	21	21	20	14	13	16	12	14	83
7-May	14	13	14	13	13	15	16	16	16	23	23	16	15	15	19	17	12	27	13	18	22	17	17	62	62
8-May	39	53	87	83	70	81	81	29	39	18	22	18	13	22	39	24	24	17	20	24	21	32	93	85	93
9-May	63	51	23	12	13	10	11	34	15	15	16	25	23	20	18	22	18	20	13	23	36	92	67	94	94
10-May	57	47	32	43	33	71	64	63	56	29	85	51	29	65	47	32	22	69	17	24	91	38	19	37	91
11-May	38	43	27	45	39	19	51	21	25	21	27	27	72	24	14	90	80	52	85	28	59	31	82	52	90
12-May	82	88	76	72	49	65	63	27	15	17	14	21	30	27	21	25	23	20	22	27	17	18	23	8	88
13-May	7	7	13	13	26	20	18	16	14	23	25	29	50	40	82	36	76	44	32	25	30	16	16	16	82
14-May	21	16	22	21	15	11	13	31	23	50	54	15	12	12	20	20	19	20	21	16	19	20	19	20	54
15-May	21	19	17	20	19	19	22	17	20	19	19	18	18	16	17	16	18	24	20	21	17	14	26	44	44
16-May	47	39	72	87	84	36	20	73	37	27	64	49	90	54	40	29	39	26	28	20	17	17	16	15	90
17-May	15	15	26	24	18	19	19	24	20	21	22	23	26	29	29	28	21	19	19	20	19	15	15	14	29
18-May	14	19	19	15	24	16	16	20	30	28	21	22	22	20	23	21	23	17	16	17	15	15	14	17	30
19-May	36	65	49	22	15	19	15	15	21	19	17	16	21	22	25	21	21	19	18	19	16	15	14	15	65
20-May	15	17	17	14	15	15	15	16	16	17	17	19	20	17	16	16	20	18	19	15	25	20	16	15	25
21-May	13	16	30	34	22	17	15	17	18	32	29	26	51	23	30	13	14	23	23	16	14	15	16	30	51
22-May	26	16	19	18	19	20	17	18	19	20	20	25	13	25	55	20	22	17	18	18	14	32	28	39	55
23-May	41	12	32	47	38	26	28	31	25	17	17	22	32	33	21	35	33	25	24	25	85	80	97	93	97
24-May	80	33	71	56	35	25	25	16	21	28	21	20	25	28	20	26	45	23	27	20	17	12	19	22	80
25-May	23	20	15	18	19	15	15	16	23	18	20	28	30	25	26	27	23	22	20	14	14	22	16	28	30
26-May	45	86	45	22	26	21	16	15	17	24	32	21	22	23	22	20	21	19	13	35	28	78	61	17	86
27-May	20	68	36	31	32	44	15	14	13	22	52	24	25	20	22	15	19	17	13	11	19	86	79	51	86
28-May	22	33	23	19	14	13	14	25	68	49	46	23	31	28	23	19	19	20	84	86	66	78	43	43	86
29-May	31	31	46	37	18	22	23	26	15	28	23	22	29	26	19	19	18	18	18	17	16	30	14	16	46
30-May	14	21	15	56	79	20	37	11	12	16	28	36	89	63	30	13	19	57	16	68	61	34	17	13	89
31-May	18	24	34	19	16	23	25	21	32	24	93	18	22	20	19	17	19	20	20	22	33	34	27	16	93
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Athabasca Valley - May 2025





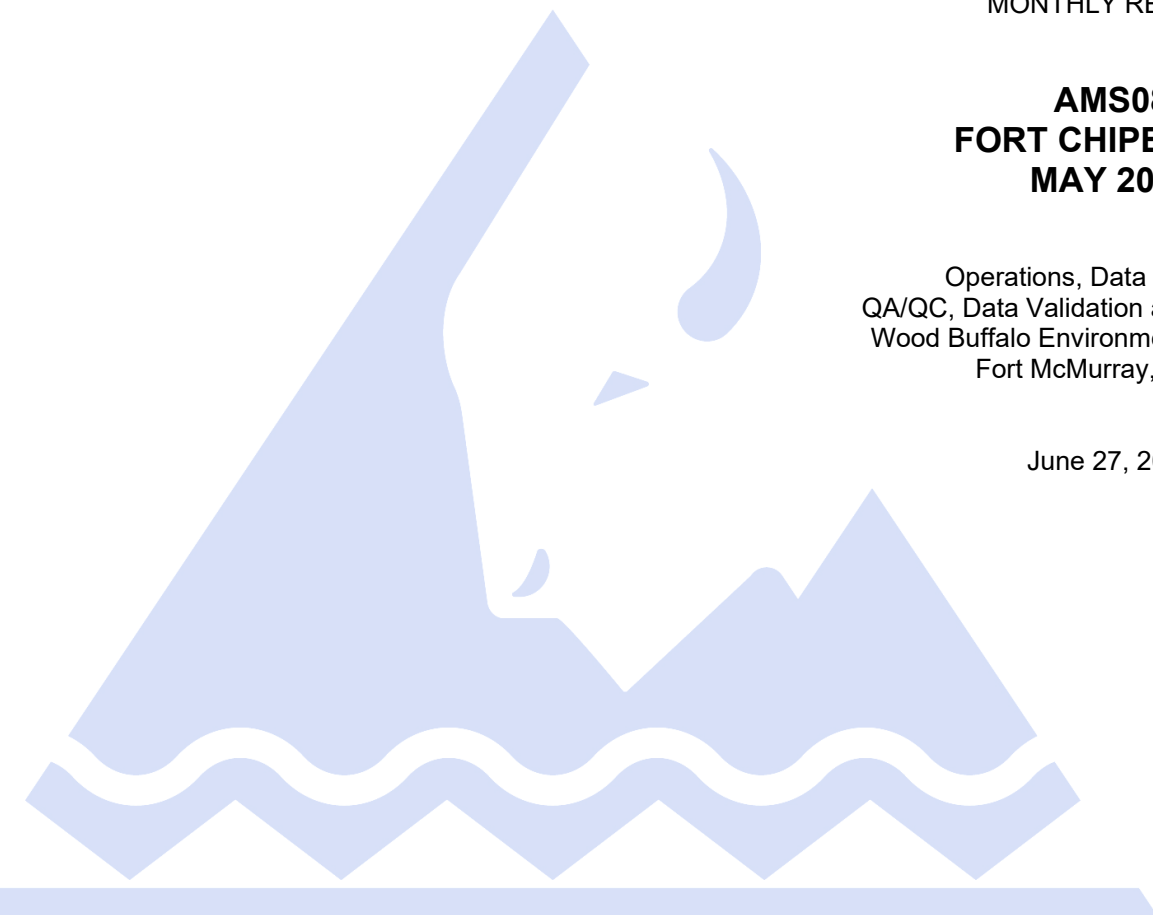
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS08 FORT CHIPEWYAN MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	34	36	99.73	-	-	3.1	0	0.8	0
TRS (ppb) Average	59	12	685	9.54	1.1	0	1	0	0.3	0
O3(ppb) Average	708	35	36	99.87	-	-	73.9	0	49.3	-
NO2(ppb) Average	289	18	455	41.26	-	-	6.8	0	3	-
NO(ppb) Average	289	18	455	41.26	-	-	2.6	-	0.3	-
NOX(ppb) Average	289	18	455	41.26	-	-	7.9	-	3	-
PM2.5(ug/m3) Average	743	0	1	99.87	-	-	489.9	0	119.4	2
CO(ppm) Average	336	17	17	100	-	-	0.1	0	0.1	-
CO2(ppm) Average	337	18	18	100	-	-	449.6	-	441	-
Temperature 2 m (C) Average	744	0	0	100	-	-	33.1	-	24.6	-
Relative Humidity (%) Average	744	0	0	100	-	-	94.2	-	73	-
Wind Speed 10 m (km/h) Average	741	2	3	99.87	-	-	41	-	28	-
Wind Direction 10 m (deg) Average	741	2	3	99.87	-	-	-	-	-	-
PC(mm) Total	741	0	3	99.6	-	-	8.8	-	9.6	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	24.3	-	6.8	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	870.9	-	361.6	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	708	0.17	0.4	-	0	0	0	0	0.1	0.5	3.1
TRS (ppb) Average	59	0.22	0.3	-	0	0	0.1	0.1	0.2	0.6	1
O3(ppb) Average	708	35.49	8.4	-	19.2	26.5	29.6	33.7	40.5	45.5	73.9
NO2(ppb) Average	289	1.3	1.2	-	0.2	0.3	0.5	0.9	1.6	3	6.8
NO(ppb) Average	289	0.08	0.3	-	0	0	0	0	0.1	0.2	2.6
NOX(ppb) Average	289	1.38	1.3	-	0.2	0.3	0.5	1	1.7	3.2	7.9
PM2.5(ug/m3) Average	743	11.45	48.7	-	0.4	1.3	1.9	3.1	5.4	10.6	489.9
CO(ppm) Average	336	0.01	0	-	0	0	0	0	0	0.1	0.1
CO2(ppm) Average	337	438.4	2.8	-	433.2	434.9	436.1	438.2	440.3	441.7	449.6
Temperature 2 m (C) Average	744	11.74	7.2	-	-3.8	3.2	6.3	11.3	16.4	20.9	33.1
Relative Humidity (%) Average	744	57.26	17.2	-	13.2	31.4	45.3	59.2	70.7	78	94.2
Wind Speed 10 m (km/h) Average	741	18.7	8	-	1	8	13	18	25	29	41
Wind Direction 10 m (deg) Average	741	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	741	-	-	15.34	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	1.73	2.9	-	0.1	0.6	0.9	1.2	1.4	1.7	24.3
Global Solar Radiation (W/m2) Average	744	270.4	288.6	-	0	0	0.5	162.9	519.4	742.2	870.9

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	28 May 2025 13:00	28 May 2025 13:00	1	DAS Failure - data not recorded
CO	15 May 2025 18:00	01 Jun 2025 00:00	391	Analyzer removed from service.
CO2	15 May 2025 20:00	01 Jun 2025 00:00	389	Analyzer removed from service.
NO2	02 May 2025 07:00	20 May 2025 10:00	436	Unstable Operation - AMD noncompliance
SO2	21 May 2025 14:00	21 May 2025 14:00	1	DAS Failure - data not recorded
TRS	01 May 2025 01:00	02 May 2025 10:00	34	Analyzer Failure - AMD noncompliance
TRS	02 May 2025 15:00	14 May 2025 12:00	286	Analyzer Failure - AMD noncompliance
TRS	14 May 2025 13:00	15 May 2025 10:00	22	Maintenance - analyzer replaced
TRS	15 May 2025 17:00	29 May 2025 09:00	329	Analyzer Failure - AMD noncompliance
TRS	29 May 2025 10:00	29 May 2025 11:00	2	Maintenance - scrubber replaced
Wind Speed, Wind Direction	30 May 2025 19:00	30 May 2025 19:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

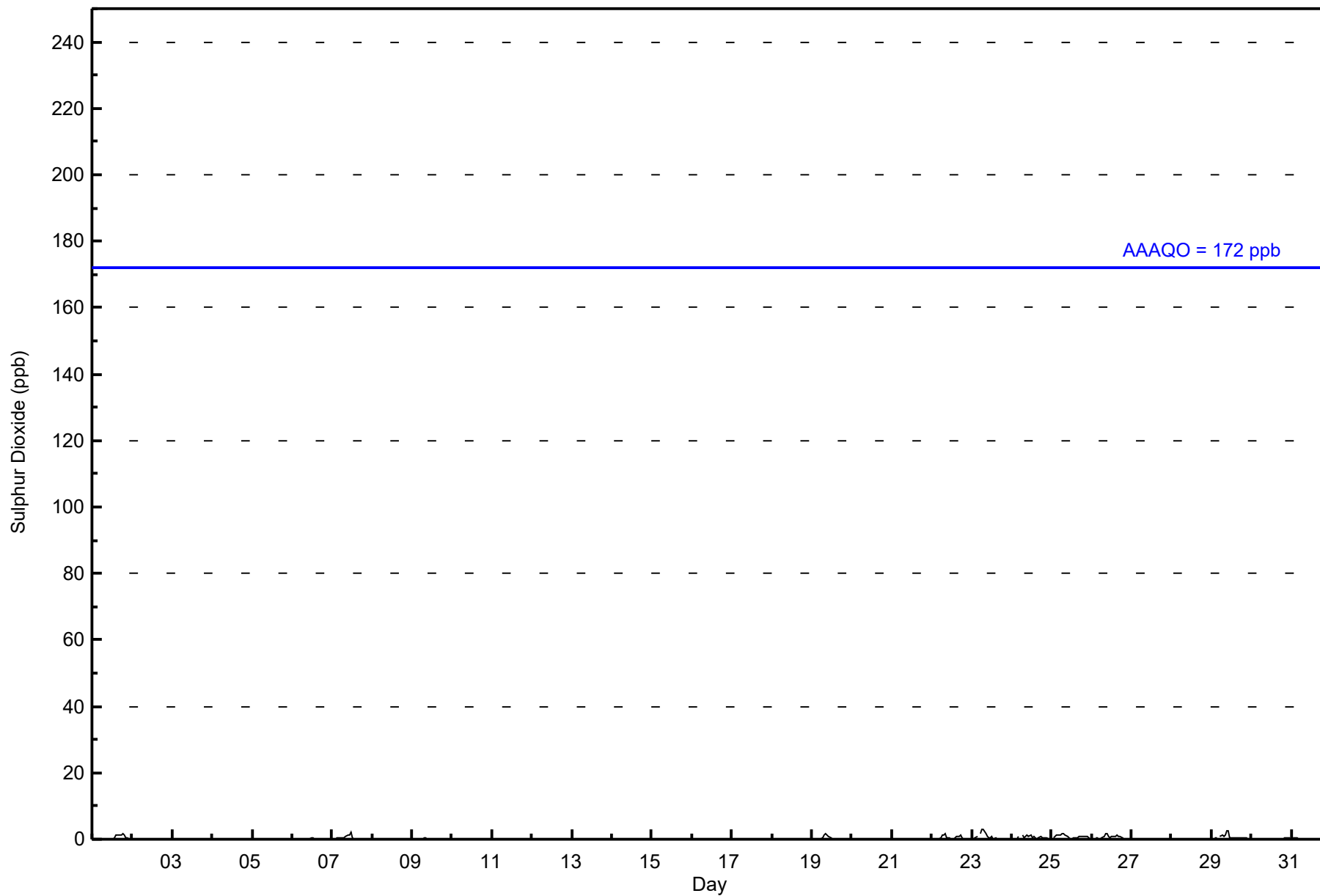
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.1 ppb on May 23 07:00 Maximum Daily Average: 0.8 ppb on May 25																		Hours in Service: 744 Hours of Data: 708									
Minimum Value: 0.0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 5 Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 1 Monthly Average: 0.17 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.5 P ₉₉ = 1.7																		Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	1.5	1.2	1.3	1.6	1.1	0.5	0.3	0.2	0.1	0.4	1.6	
2-May	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
3-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
7-May	Z	0.2	0.2	0.5	0.3	0.4	0.4	0.5	1.0	1.2	1.4	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.1	
8-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1		
9-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4	
10-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11-May	0.0	0.0	0.0	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-May	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	
19-May	Z	0.0	0.0	0.0	0.0	0.1	0.5	1.3	1.5	1.2	0.9	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5	
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	DF	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
22-May	0.0	0.0	0.0	Z	0.1	0.3	1.4	1.5	1.7	0.5	0.3	0.2	0.1	0.0	0.6	0.8	0.8	1.3	0.4	0.1	0.1	0.1	0.1	0.0	0.4	1.7	
23-May	0.1	0.2	0.4	0.7	Z	1.5	3.1	2.8	1.8	0.8	0.4	0.4	0.7	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.6	3.1	
24-May	0.0	0.0	0.1	0.1	0.7	Z	1.1	0.4	0.7	1.1	0.9	1.3	0.5	0.7	0.4	0.1	0.6	0.6	0.5	0.3	0.3	0.2	0.2	0.4	0.5	1.3	
25-May	Z	0.2	1.0	1.1	1.2	1.4	1.7	1.6	1.1	1.0	0.4	0.1	0.1	0.2	0.5	0.5	0.6	0.8	0.9	0.9	0.9	0.8	0.4	0.1	0.8	1.7	
26-May	0.2	Z	0.2	0.3	0.2	0.2	0.3	0.9	1.6	1.5	0.9	0.6	0.8	0.7	0.8	1.4	0.9	0.7	0.3	0.2	0.1	0.0	0.0	0.0	0.6	1.6	
27-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
29-May	0.0	0.1	0.3	0.5	Z	1.1	1.1	0.8	1.3	2.6	2.4	0.6	0.4	0.3	0.2	0.2	0.4	0.4	0.5	0.4	0.5	0.2	0.0	0.0	0.6	2.6	
30-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.3	0.1	0.4	
31-May	Z	0.3	0.4	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
0.0 0.0 0.1 0.2 0.1 0.2 0.3 0.3 0.4 0.3 0.3 0.2 0.1 0.1 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.0																										Diurnal Average	
0.2 0.3 1.0 1.1 1.2 1.5 3.1 2.8 1.8 2.6 2.4 2.1 0.8 0.7 1.2 1.5 1.2 1.3 1.6 1.1 0.9 0.8 0.4 0.4																										Diurnal Maximum	
Z - zerospan C - Calibration DF - DAS Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	708	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	2	2	24	101	152	33	49	79	69	21	16	54	36	22	22	23	705
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	2	2	24	101	152	33	49	79	69	21	16	54	36	22	22	23	705

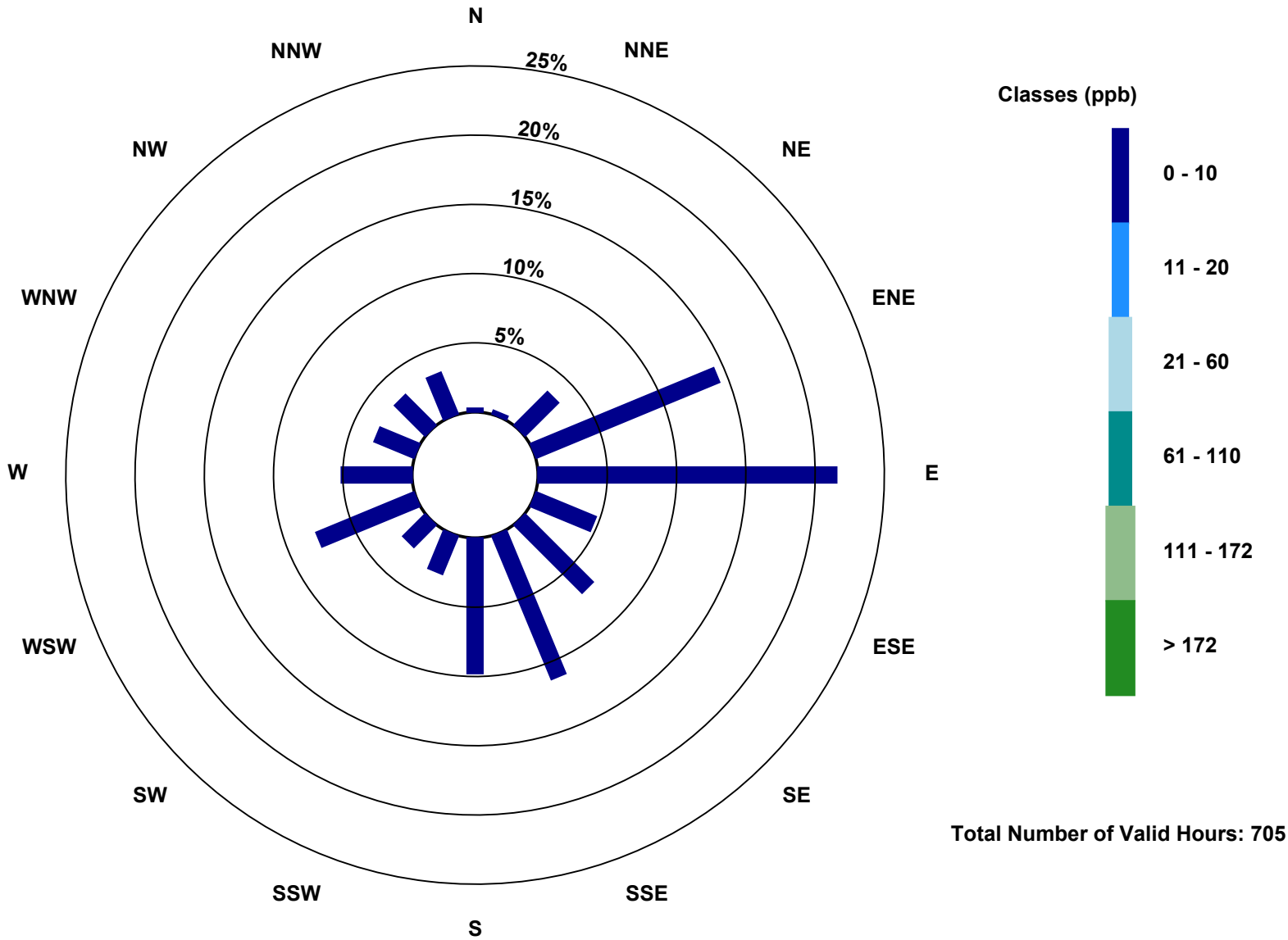
Total Number of Valid Hours: 705

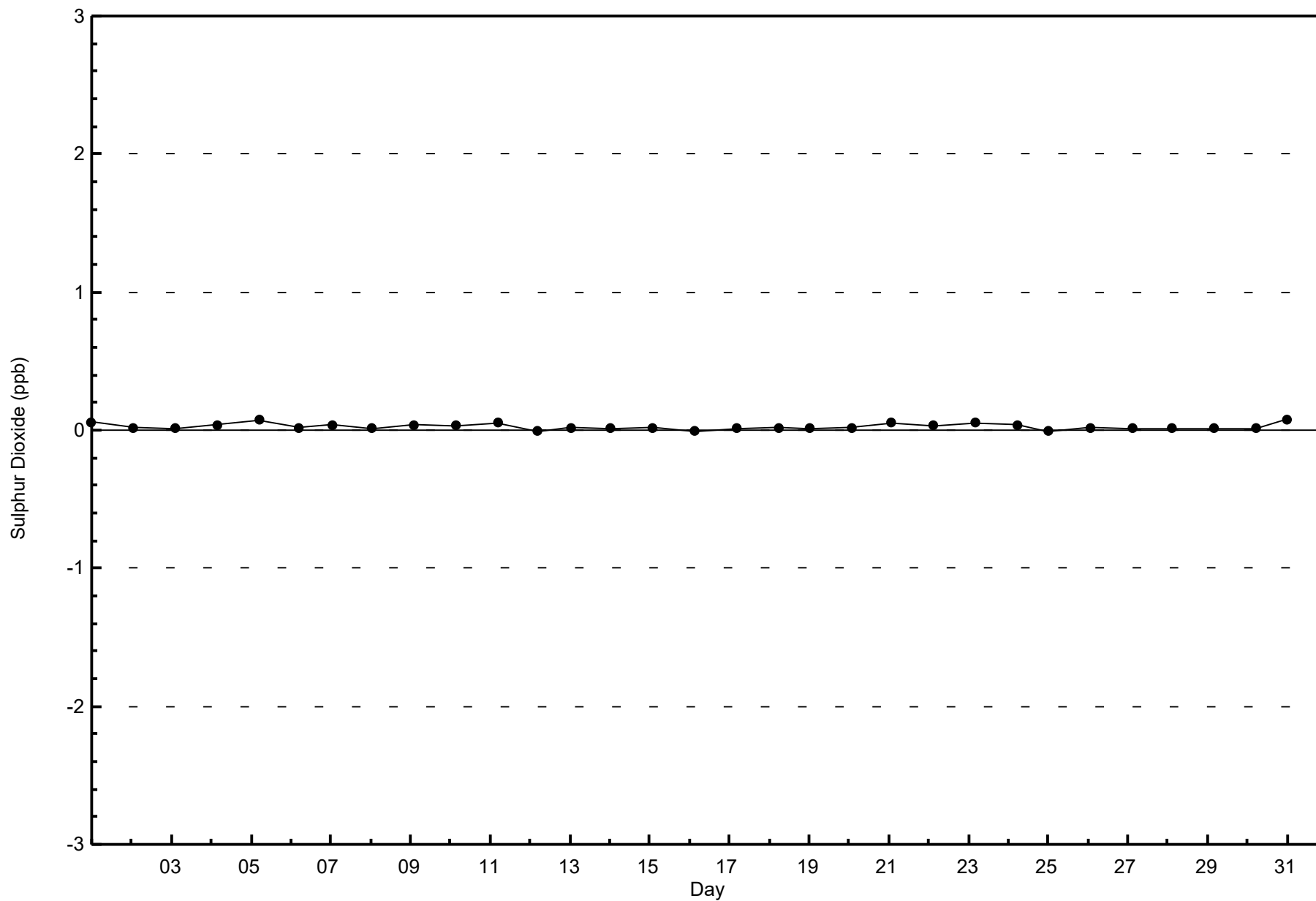
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan

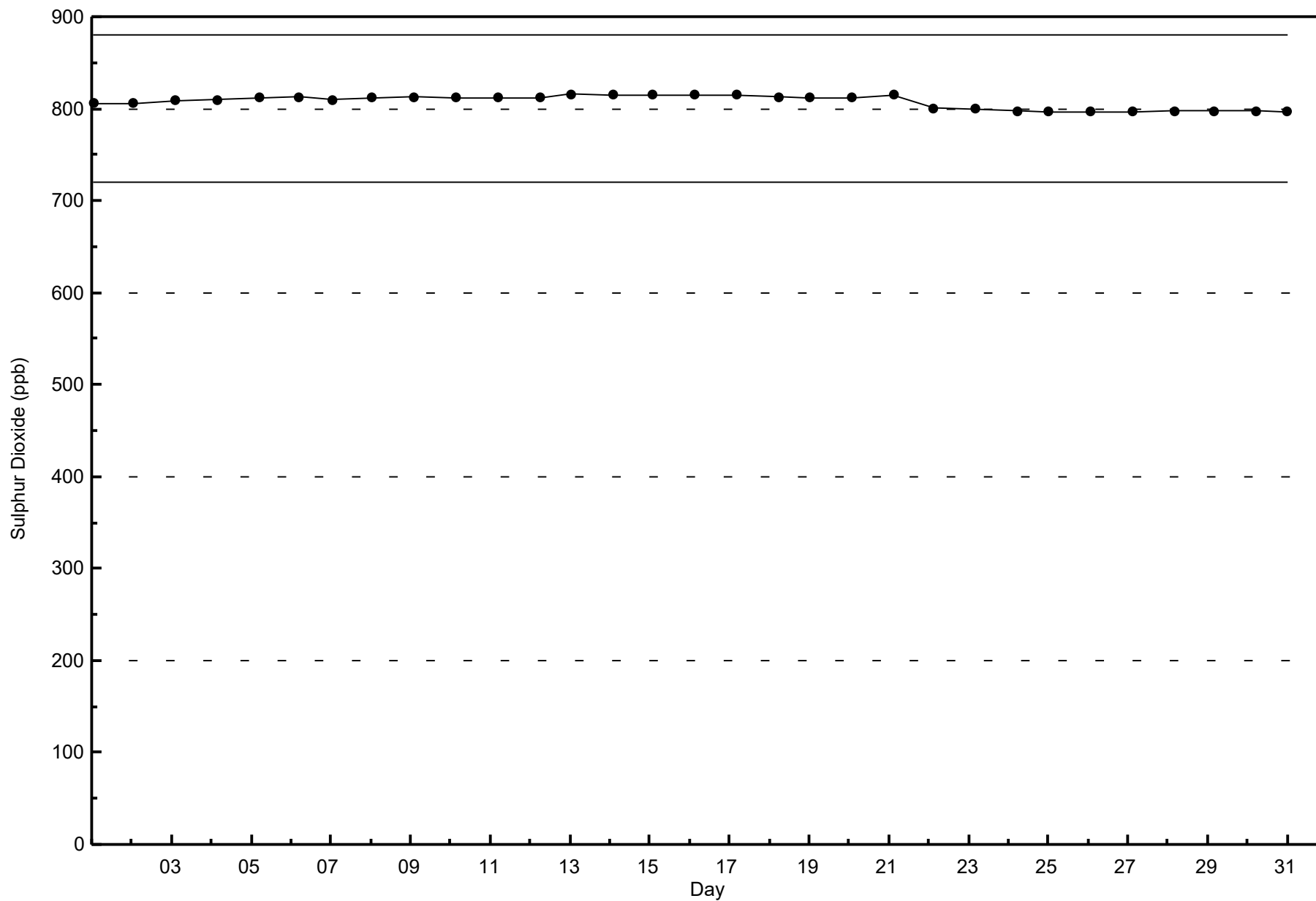






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 1.1 ppb on May 31 03:00 Maximum Daily Average: 0.3 ppb on May 31																				Periods in Service: 1488						
Minimum Value: 0.0 ppb on May 30 10:00 Minimum Daily Average: 0.2 ppb on May 30 Maximum Diurnal Average: 0.9 ppb at hour 1 Minimum Diurnal Average: 0.0 ppb at hour 11																				Periods of Valid Data: 117						
Monthly Average: 0.22 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.7 P ₉₉ = 1.0																				Periods of Invalid Data: 1371						
																				Periods of Calibration: 24						
																				Percent Operational Time: 9.5						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
2-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF DF	AF AF	AF AF	AF C	C C	C C	C C	C C	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
3-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
4-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
5-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
6-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
7-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
8-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
9-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
10-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
11-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
12-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
13-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
14-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	--	--
15-May	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	C C	C C	C C	C C	C C	C AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
17-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
18-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
19-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
20-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
21-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
22-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
23-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
24-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
25-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
26-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
27-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
28-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
29-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF M	M M	M M	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	--	0.2
30-May	Z SP	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.4 0.7	0.8 0.9	0.9 0.9	0.9 0.9	0.2	0.9
31-May	1.0 0.9	Z SP	1.0 1.1	1.0 0.9	0.6 0.5	0.4 0.4	0.4 0.3	0.2 0.1	0.1 0.1	0.1 0.1	0.0 0.0	0.1 0.1	0.0 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3	1.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure AF - Analyzer Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

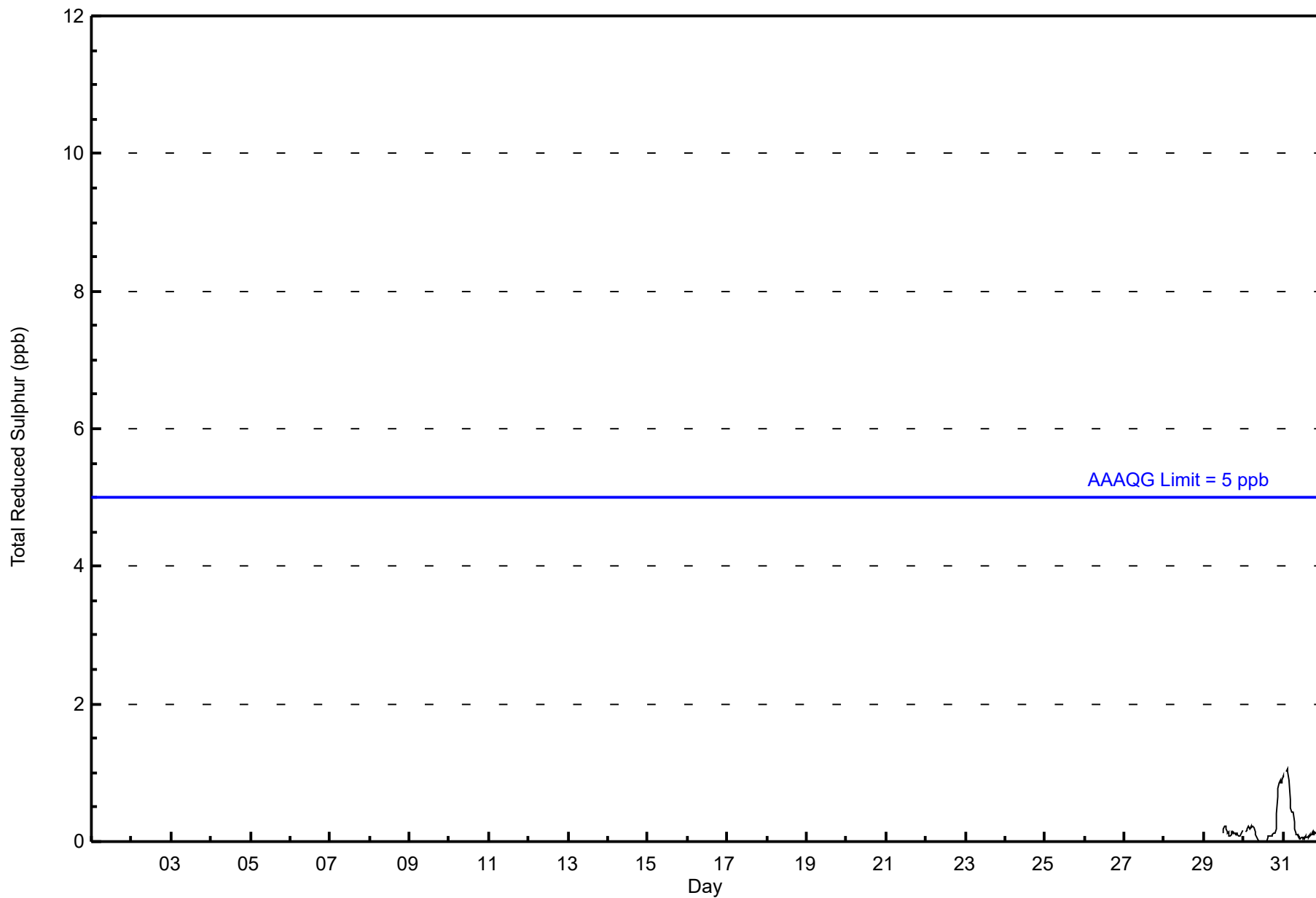
Fort Chipewyan - May 2025

Maximum Value: 1.0 ppb on May 31 03:00																	Maximum Daily Average: 0.3 ppb on May 31										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 30 10:00																	Minimum Daily Average: 0.2 ppb on May 30										Hours of Data: 59	
Maximum Diurnal Average: 0.9 ppb at hour 1																	Minimum Diurnal Average: 0.0 ppb at hour 11										Hours of Missing Data: 685	
Monthly Average: 0.22 ppb																	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.6 P ₉₉ = 1.0										Hours of Calibration: 12	
																											Percent Operational Time: 9.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
2-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	C	C	C	C	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
3-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
4-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
5-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
6-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
7-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
8-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
9-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
10-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
11-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
12-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
13-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
14-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	M	M	M	M	M	M	M	M	M	M	M	--	--		
15-May	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
16-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
17-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
18-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
19-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
20-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
21-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
22-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
23-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
24-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
25-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
26-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
27-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
28-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--		
29-May	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	M	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	--	0.2		
30-May	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.5	0.8	0.9	0.9	0.2	0.9		
31-May	0.9	Z	1.0	1.0	0.6	0.4	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	1.0		
0.9 0.1 0.6 0.6 0.4 0.3 0.3 0.1 0.1 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.3 0.4 0.4 0.4																										Diurnal Average		
0.9 0.1 1.0 1.0 0.6 0.4 0.4 0.2 0.1 0.1 0.0 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.5 0.8 0.9 0.9																										Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure																												
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																												



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	59	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 59

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	0	0	0	0	0	1	1	12	5	7	2	12	12	6	0	0	58
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	1	1	12	5	7	2	12	12	6	0	0	58

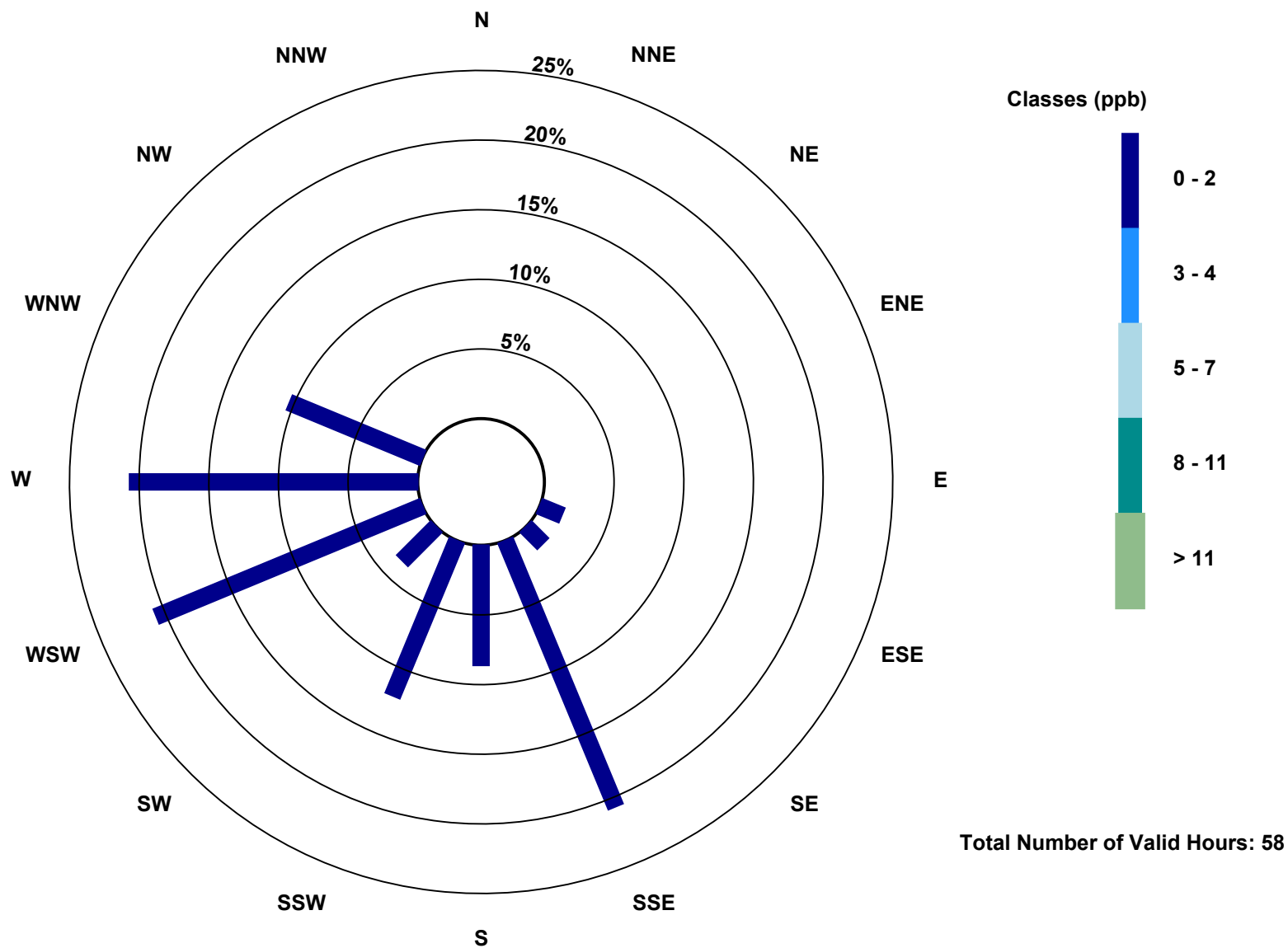
Total Number of Valid Hours: 58

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

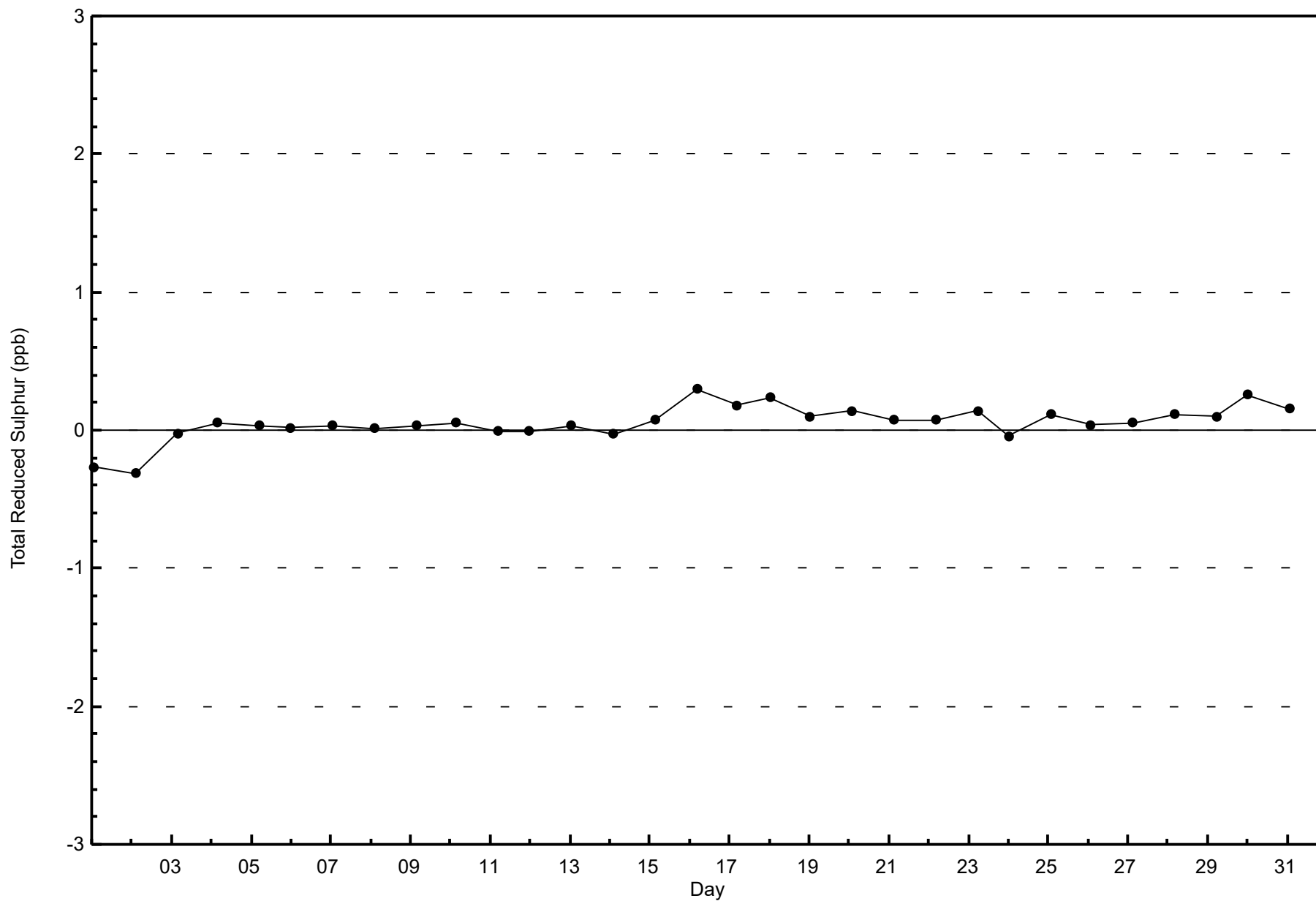
Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

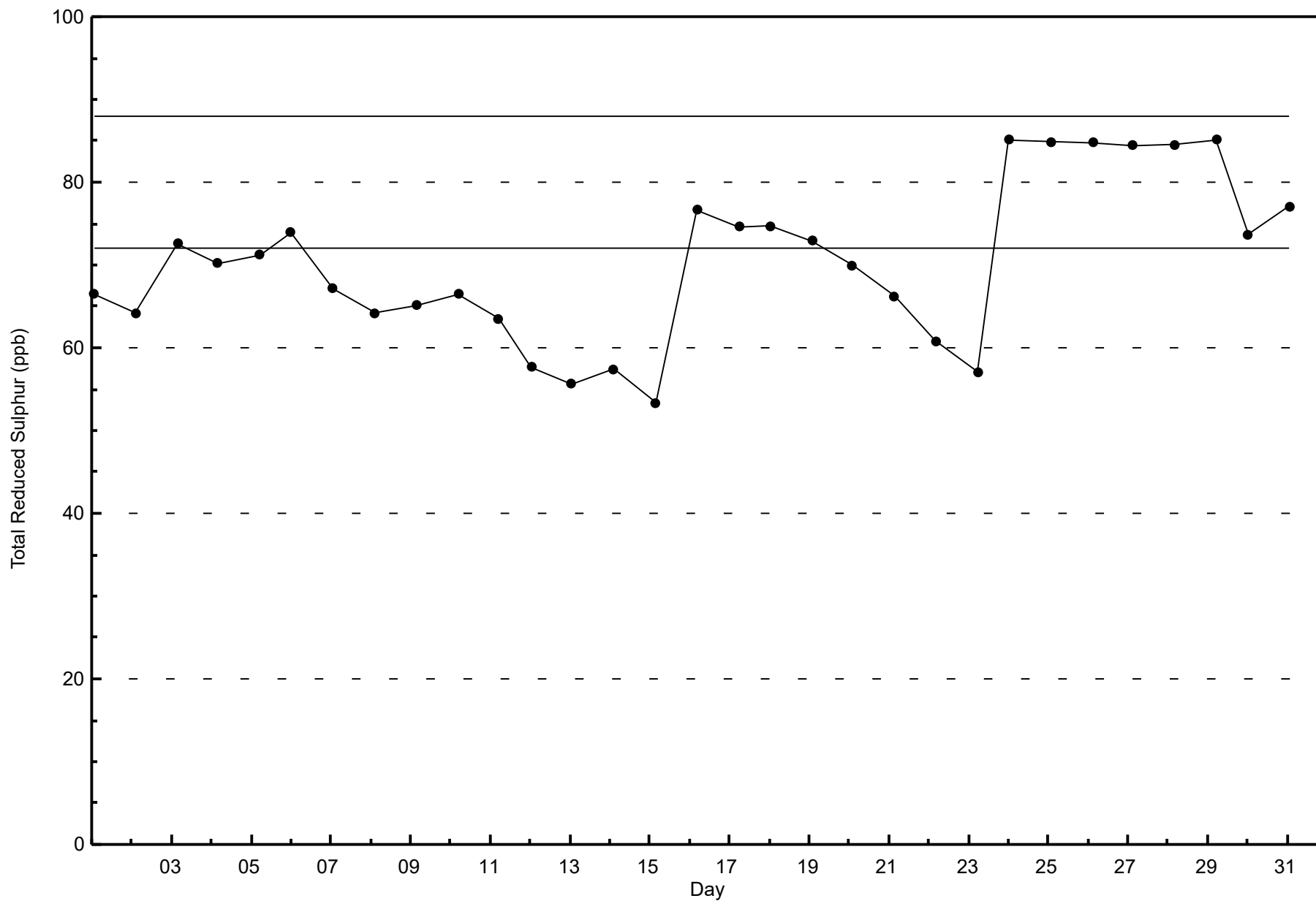
Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

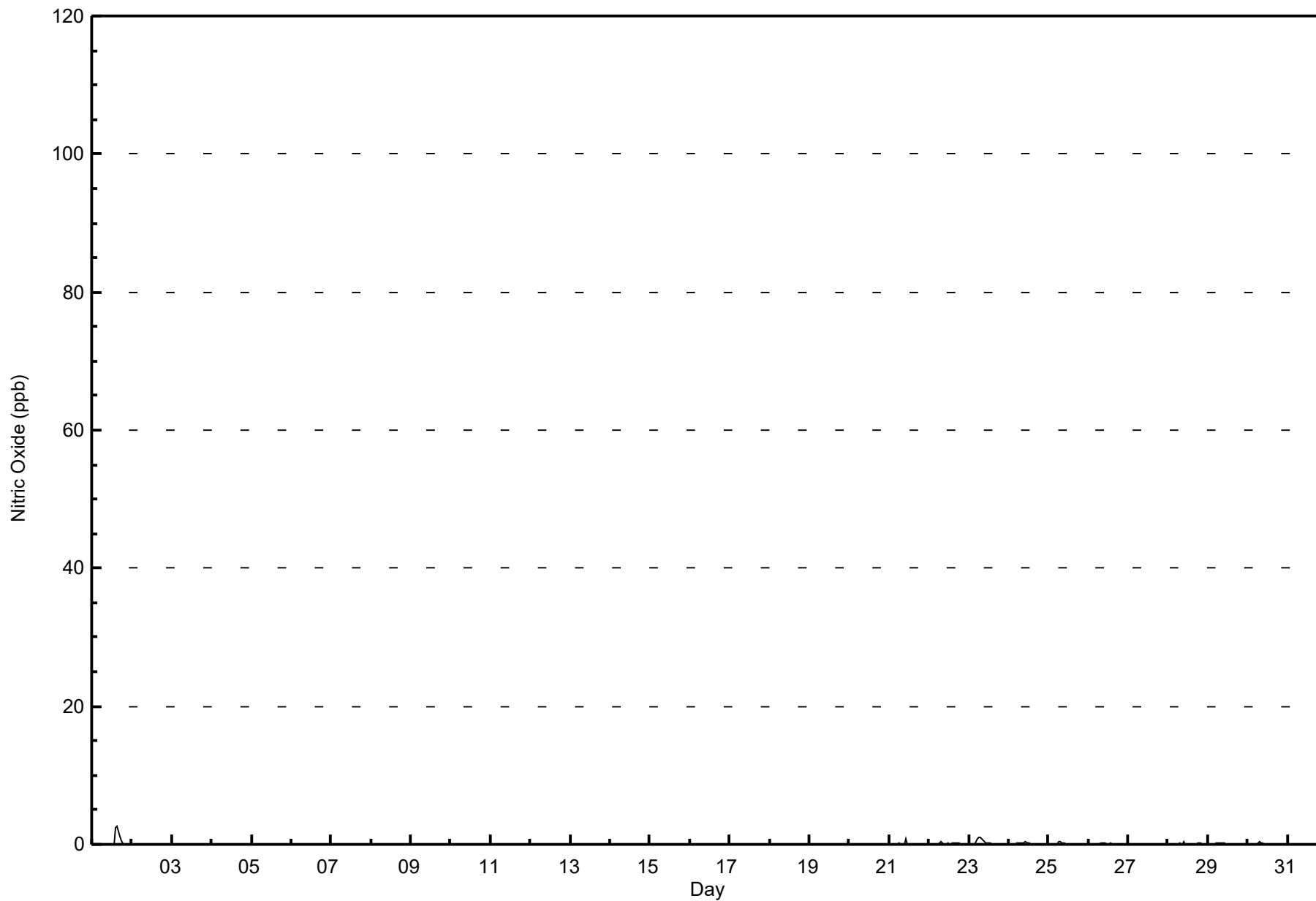
Fort Chipewyan - May 2025

Maximum Value: 2.6 ppb on May 1 16:00																			Maximum Daily Average: 0.3 ppb on May 1							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 27							Hours of Data: 289	
Maximum Diurnal Average: 0.2 ppb at hour 15																			Minimum Diurnal Average: 0.0 ppb at hour 1							Hours of Missing Data: 455	
Monthly Average: 0.08 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 1.1							Hours of Calibration: 18	
																										Percent Operational Time: 41.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.5	2.6	1.2	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.3	2.6	
2-May	0.0	0.0	0.0	0.0	0.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.0	
3-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
4-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
5-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
7-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
8-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
9-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
10-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
11-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
12-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
14-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	
21-May	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	
22-May	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4	
23-May	0.0	0.0	Z	0.0	0.3	0.8	1.0	1.0	0.7	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	
24-May	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
25-May	0.0	0.0	0.0	0.0	Z	0.2	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
26-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
27-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	0.0	DF	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	
29-May	0.0	0.0	Z	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
30-May	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.3	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
31-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan																									C - Calibration		
DF - DAS Failure																									UO - Unstable Operation		



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	289	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
> 300	0	0.00	100.00

Total Number of Valid Hours: 289

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288

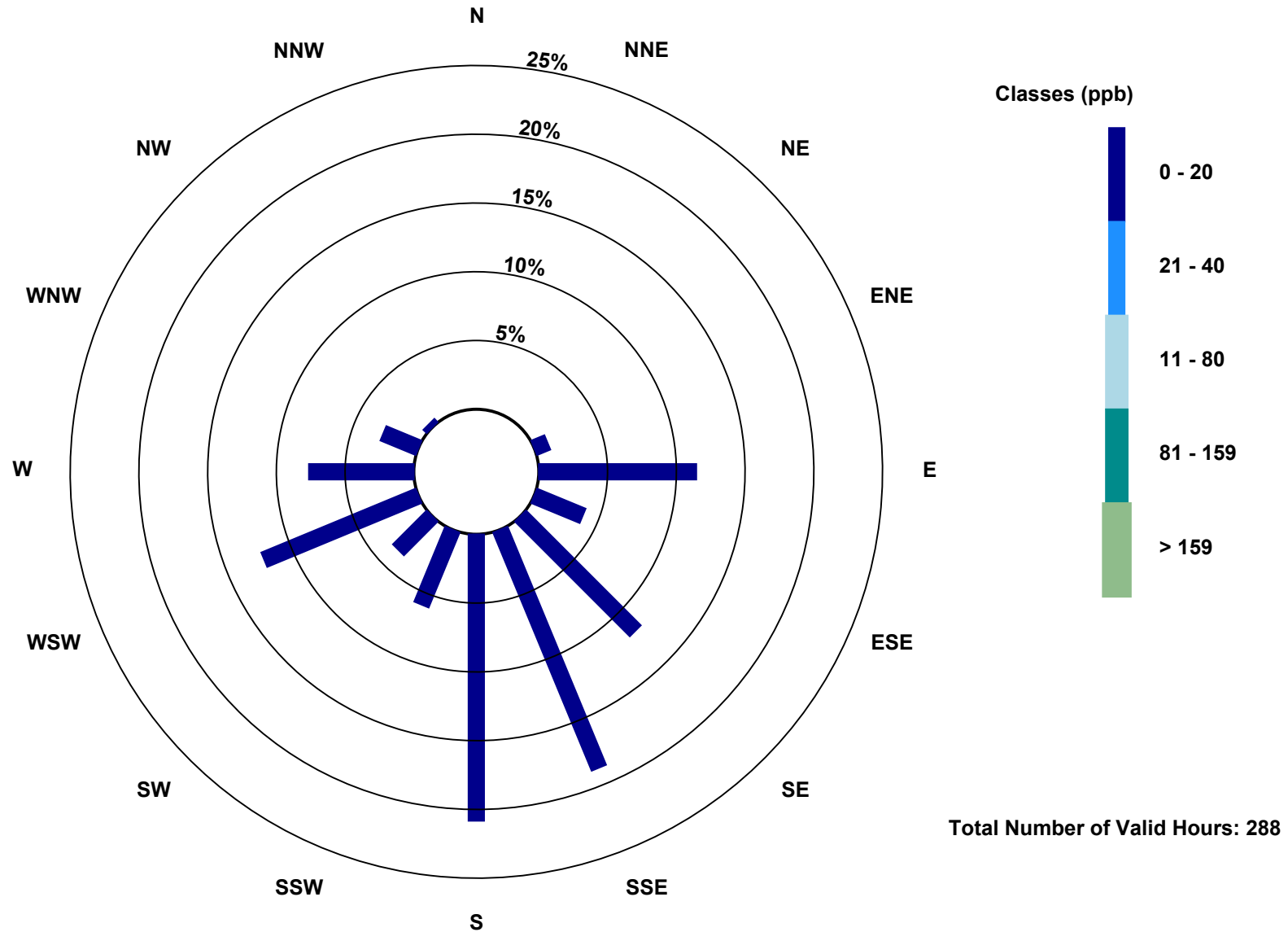
Total Number of Valid Hours: 288

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

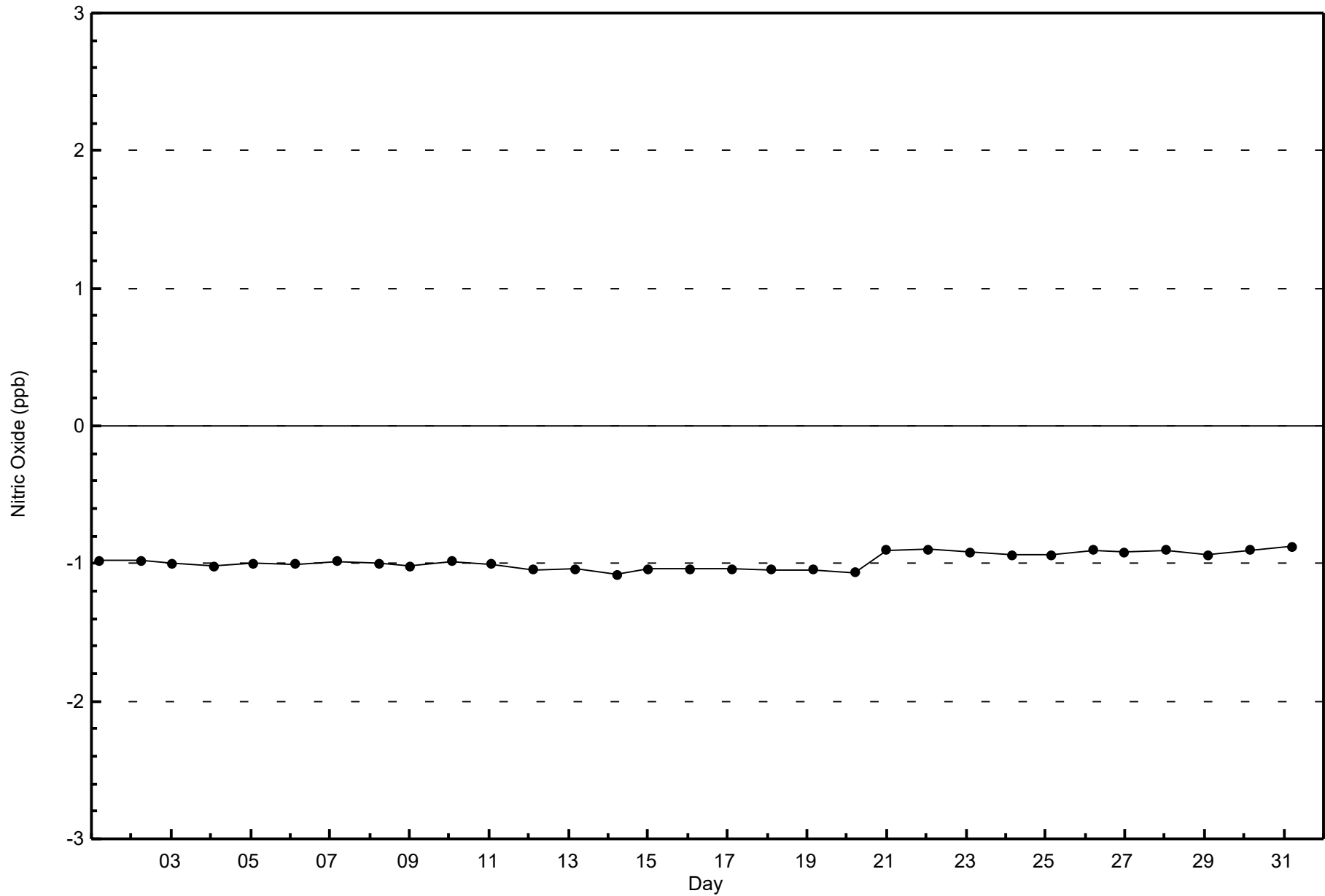
Nitric Oxide (NO) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

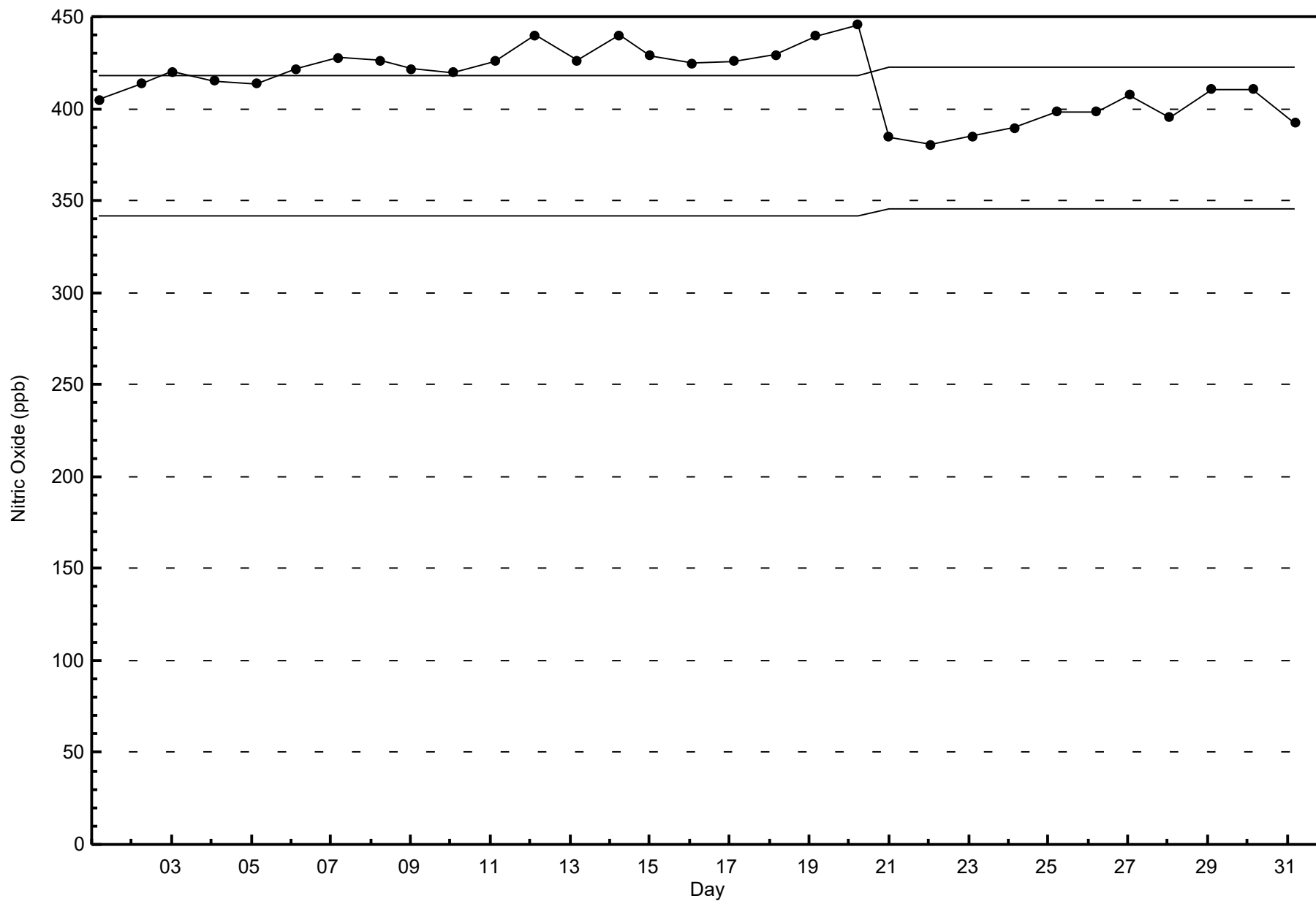
Nitric Oxide (NO) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

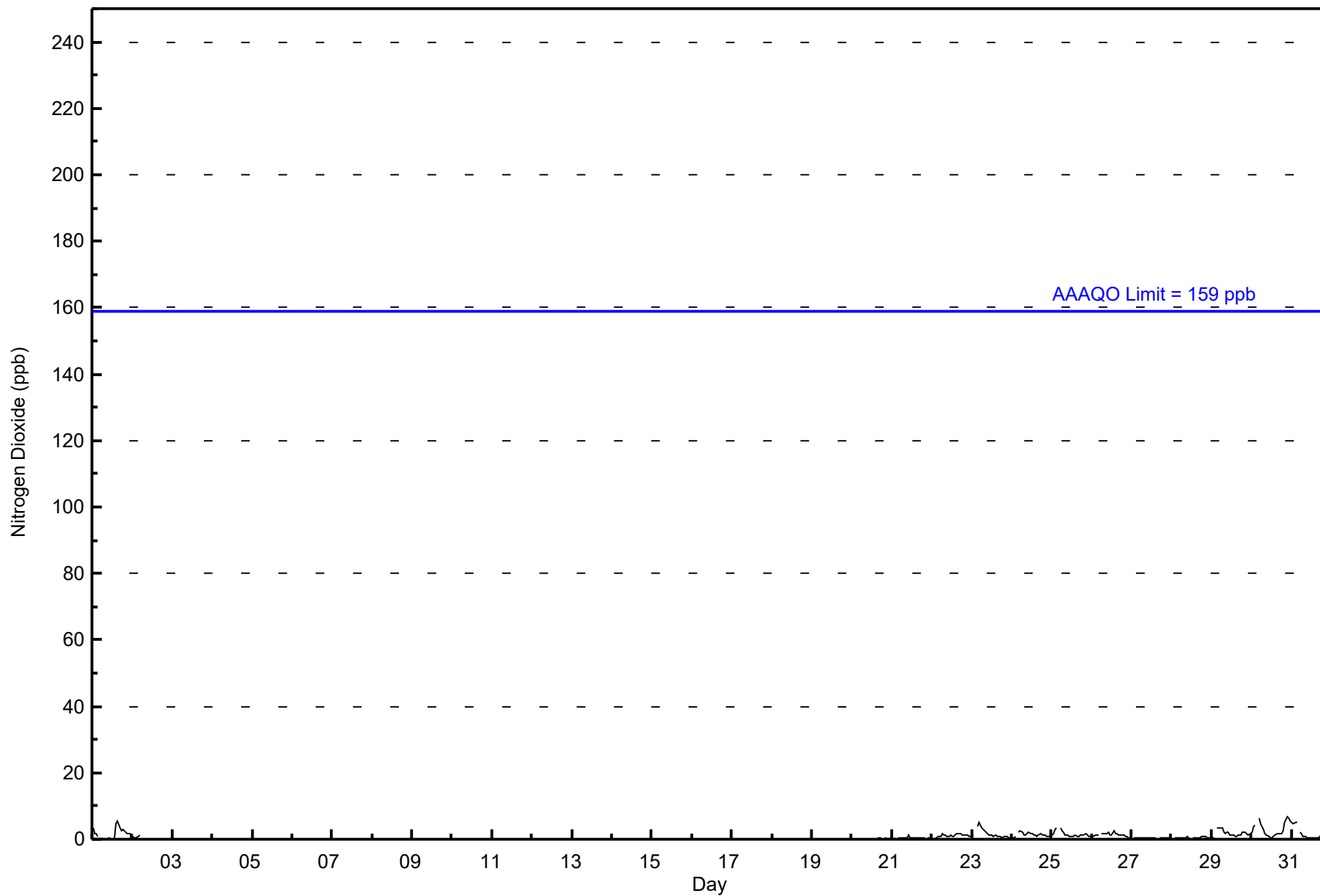
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.8 ppb on May 30 22:00 Maximum Daily Average: 3.0 ppb on May 30																		Hours in Service: 744 Hours of Data: 289 Hours of Missing Data: 455 Hours of Calibration: 18 Percent Operational Time: 41.3								
Minimum Value: 0.2 ppb on May 1 07:00 Minimum Daily Average: 0.4 ppb on May 27 Maximum Diurnal Average: 2.1 ppb at hour 5 Minimum Diurnal Average: 0.8 ppb at hour 12 Monthly Average: 1.30 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.6 P ₉₀ = 3.0 P ₉₉ = 5.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3.6	1.9	1.7	0.9	Z	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	4.6	5.3	3.2	2.6	3.0	2.5	2.1	1.6	1.7	1.3	1.7	5.3
2-May	0.8	0.5	0.4	0.8	1.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	1.2
3-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
4-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
5-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
7-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
8-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
9-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
10-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
12-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
14-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	--	0.4
21-May	Z	0.3	0.2	0.2	0.3	0.4	0.6	0.6	0.6	0.4	1.4	0.5	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.4	1.4
22-May	0.4	Z	0.5	0.5	0.7	0.9	1.5	1.2	1.3	0.8	0.9	1.2	0.8	0.9	1.4	1.8	1.5	1.9	1.4	1.3	1.1	1.1	0.9	0.9	1.1	1.9
23-May	1.2	1.0	Z	4.0	5.1	4.1	3.2	2.8	2.0	1.5	1.2	1.1	1.1	0.8	1.1	0.9	0.8	0.8	0.6	0.9	0.9	0.9	0.6	0.6	1.6	5.1
24-May	0.6	0.6	1.0	Z	2.0	2.5	2.3	1.3	1.2	1.6	2.1	1.8	1.5	1.2	1.1	0.9	1.4	1.6	1.1	1.1	1.2	0.9	0.8	1.1	1.3	2.5
25-May	1.3	1.6	3.0	3.2	Z	3.2	2.7	2.1	1.4	1.2	1.0	0.9	0.9	1.0	1.1	1.0	1.0	1.1	1.3	1.3	1.5	1.3	1.0	0.8	1.5	3.2
26-May	0.8	1.0	1.4	1.4	1.1	Z	1.5	1.8	1.9	1.6	2.0	1.3	1.4	2.5	1.8	1.7	1.4	1.3	1.2	1.4	0.9	0.7	0.6	0.6	1.4	2.5
27-May	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.6
28-May	0.3	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.8	0.4	0.2	DF	0.3	0.4	0.3	0.3	0.3	0.7	0.9	0.9	0.5	0.3	0.3	0.4	0.9
29-May	0.3	0.4	Z	3.4	3.3	3.4	3.2	2.1	1.7	2.2	2.0	1.1	1.4	1.1	0.8	0.9	1.4	1.4	2.2	2.0	2.2	1.7	1.1	1.8	1.8	3.4
30-May	2.2	3.8	4.4	Z	6.5	4.5	3.9	3.1	1.6	1.4	1.0	0.5	0.6	0.8	1.4	1.6	1.7	1.7	1.9	2.5	5.2	6.8	6.4	5.4	3.0	6.8
31-May	5.0	4.8	5.2	5.0	Z	2.2	1.6	0.9	0.7	0.5	0.5	0.4	0.6	0.5	0.4	0.4	0.5	0.8	0.6	0.5	0.5	0.5	0.6	0.6	1.4	5.2
1.5 1.5 1.7 1.8 2.1 2.0 1.8 1.4 1.1 1.1 1.1 0.8 0.8 0.9 1.2 1.2 1.1 1.1 1.1 1.2 1.3 1.3 1.1 1.1 Diurnal Average																										
5.0 4.8 5.2 5.0 6.5 4.5 3.9 3.1 2.0 2.2 2.1 1.8 1.5 2.5 4.6 5.3 3.2 2.6 3.0 2.5 5.2 6.8 6.4 5.4 Diurnal Maximum																										
Z - zerospan C - Calibration DF - DAS Failure UO - Unstable Operation																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	289	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
> 300	0	0.00	100.00

Total Number of Valid Hours: 289

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288

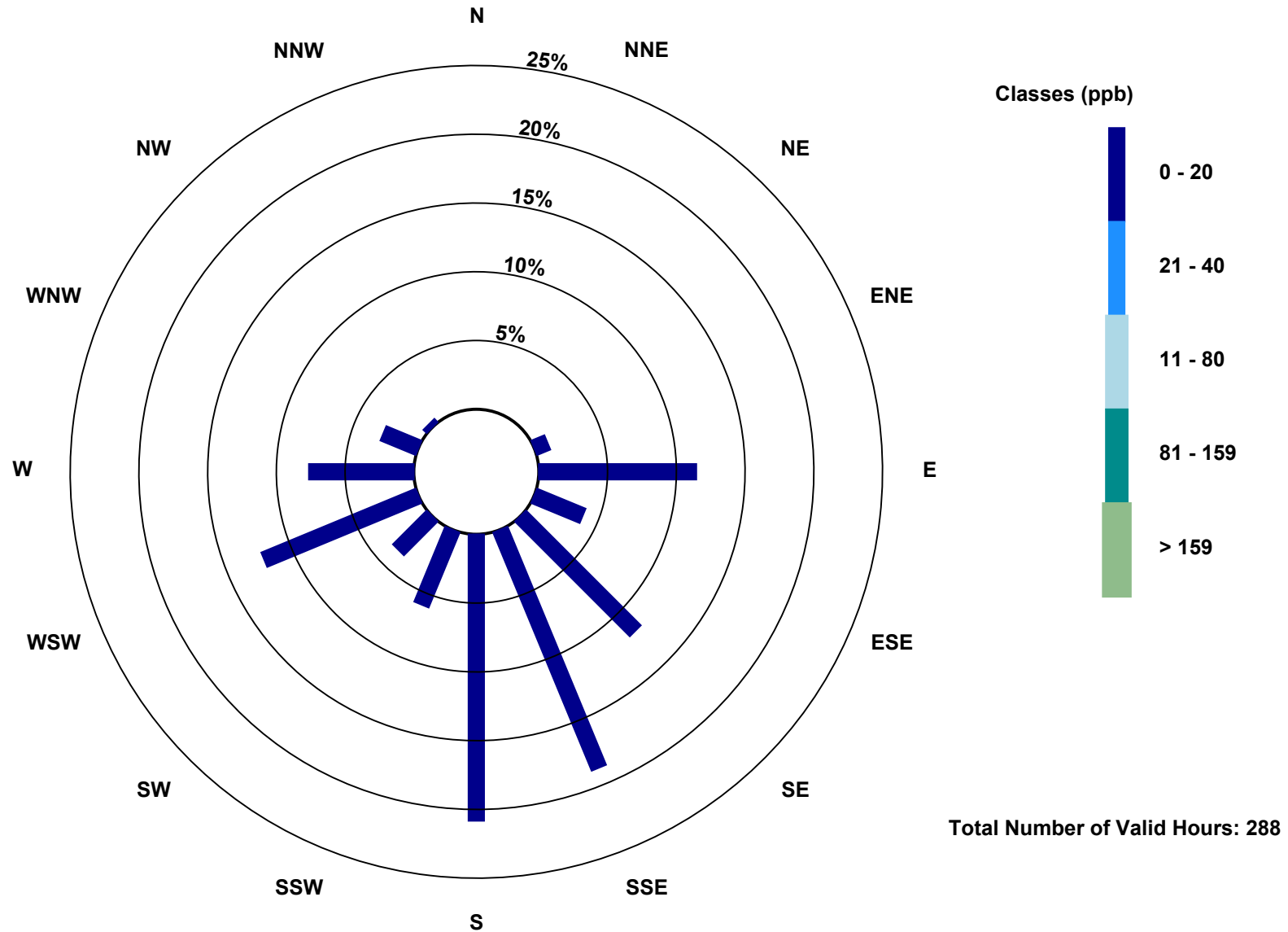
Total Number of Valid Hours: 288

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

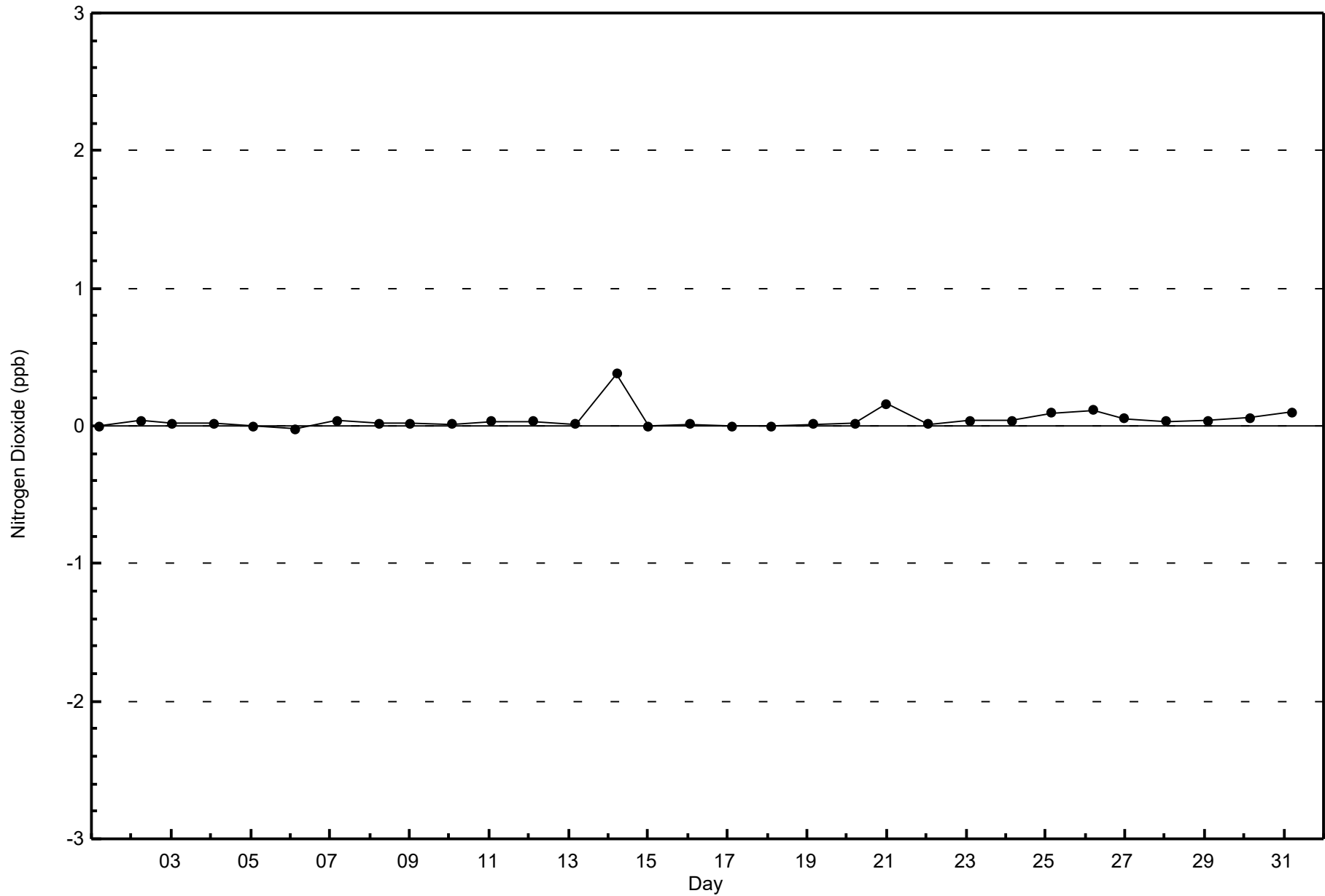
Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

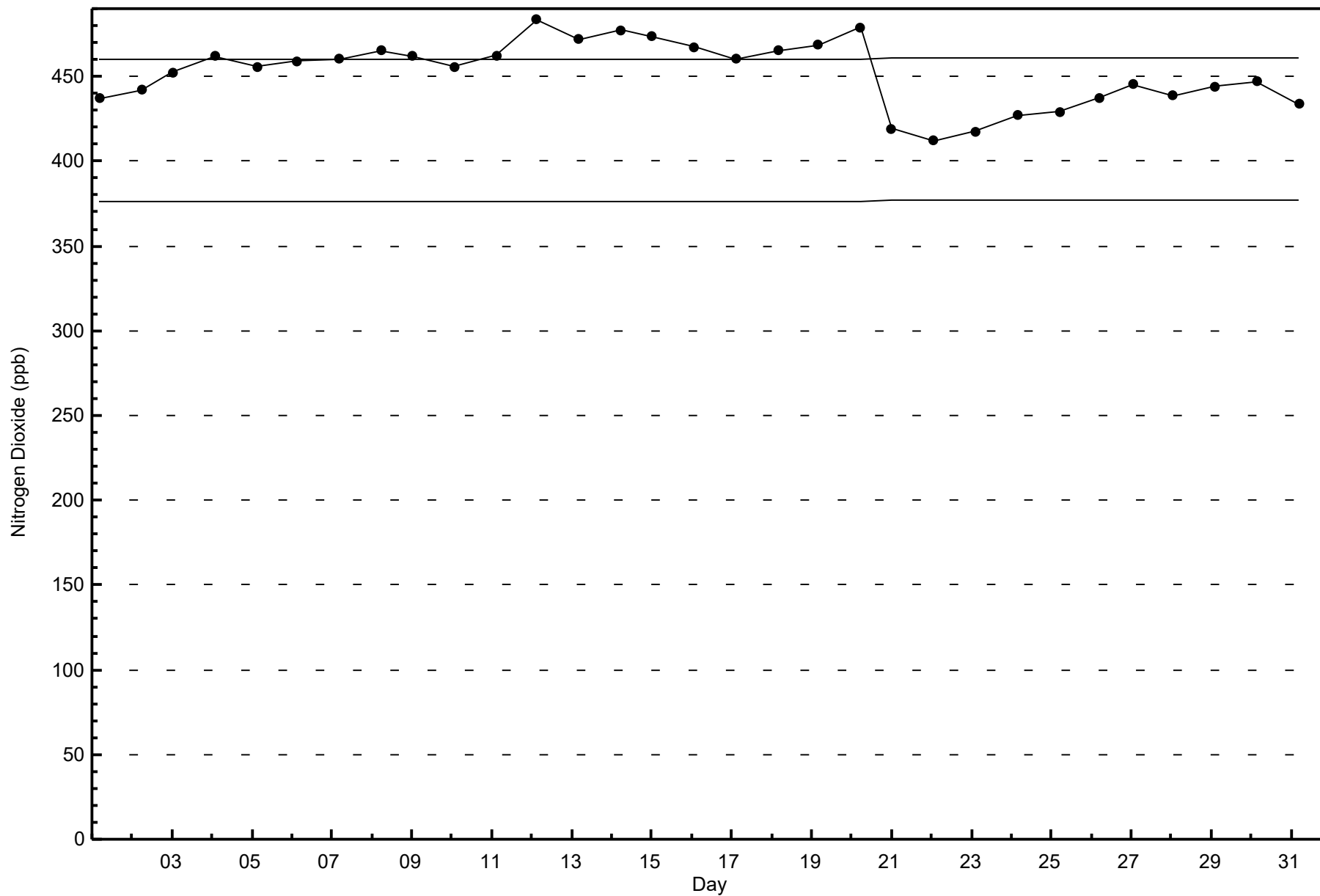
Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

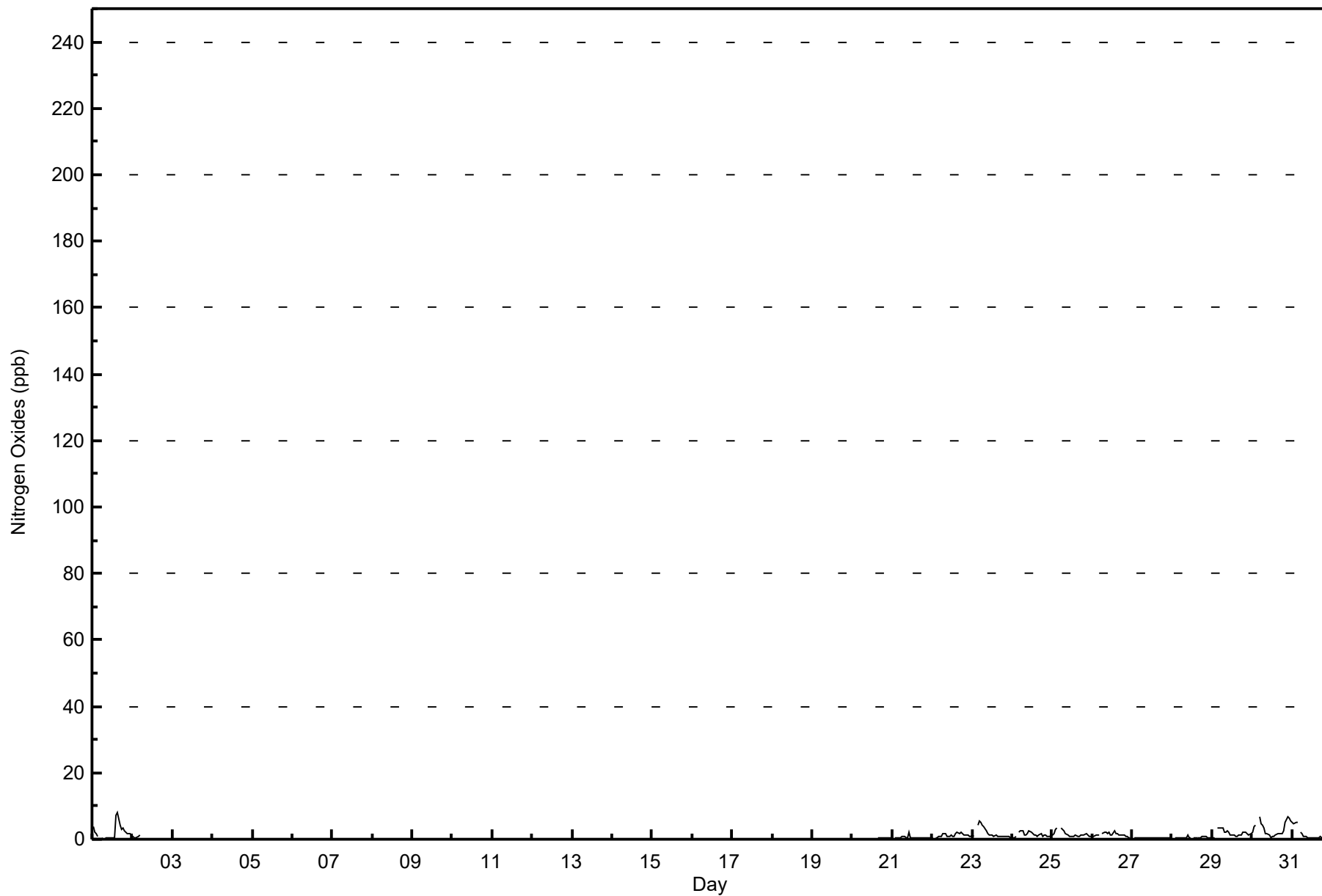
Fort Chipewyan - May 2025

Maximum Value: 7.9 ppb on May 1 16:00																			Maximum Daily Average: 3.0 ppb on May 30							Hours in Service: 744	
Minimum Value: 0.2 ppb on May 1 08:00																			Minimum Daily Average: 0.4 ppb on May 27							Hours of Data: 289	
Maximum Diurnal Average: 2.2 ppb at hour 6																			Minimum Diurnal Average: 0.8 ppb at hour 12							Hours of Missing Data: 455	
Monthly Average: 1.38 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 3.2 P ₉₉ = 6.6							Hours of Calibration: 18	
																										Percent Operational Time: 41.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	3.6	1.9	1.7	0.9	Z	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.6	7.1	7.9	4.4	3.1	3.3	2.6	2.1	1.6	1.7	1.3	2.0	7.9	
2-May	0.8	0.5	0.4	0.8	1.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	1.2	
3-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
4-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
5-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
7-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
8-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
9-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
10-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
11-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
12-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
13-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
14-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
15-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
16-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
17-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
18-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
19-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
20-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	--	0.4	
21-May	Z	0.3	0.2	0.2	0.3	0.4	0.8	0.7	0.6	0.4	2.1	0.5	0.4	0.5	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.5	2.1	
22-May	0.4	Z	0.5	0.5	0.7	1.0	1.7	1.6	1.6	0.9	1.0	1.3	0.9	1.0	1.6	2.1	1.7	2.1	1.5	1.4	1.1	1.1	0.9	0.9	1.2	2.1	
23-May	1.2	1.0	Z	4.0	5.4	4.9	4.2	3.8	2.7	1.8	1.4	1.2	1.2	1.0	1.2	1.0	0.8	0.8	0.6	0.9	0.9	0.9	0.6	0.6	1.8	5.4	
24-May	0.6	0.6	1.0	Z	2.1	2.7	2.6	1.4	1.3	1.8	2.4	2.0	1.6	1.3	1.2	0.9	1.4	1.6	1.1	1.1	1.2	0.9	0.8	1.1	1.4	2.7	
25-May	1.3	1.6	3.0	3.2	Z	3.4	3.0	2.4	1.5	1.3	1.1	0.9	0.9	1.0	1.1	1.0	1.0	1.1	1.3	1.3	1.5	1.3	1.0	0.8	1.6	3.4	
26-May	0.8	1.0	1.4	1.4	1.1	Z	1.6	2.0	2.1	1.8	2.1	1.3	1.4	2.6	1.9	1.7	1.4	1.3	1.2	1.4	0.9	0.7	0.6	0.6	1.4	2.6	
27-May	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.6	
28-May	0.3	Z	0.3	0.3	0.3	0.3	0.4	0.5	0.5	1.1	0.5	0.2	DF	0.3	0.4	0.3	0.3	0.3	0.8	1.0	0.9	0.5	0.3	0.3	0.5	1.1	
29-May	0.3	0.4	Z	3.4	3.4	3.5	3.4	2.2	1.9	2.4	2.1	1.2	1.4	1.1	0.8	0.9	1.4	1.4	2.2	2.0	2.2	1.7	1.1	1.8	1.8	3.5	
30-May	2.2	3.8	4.4	Z	6.6	4.6	4.1	3.4	1.7	1.6	1.1	0.5	0.7	0.8	1.4	1.6	1.7	1.7	1.9	2.5	5.2	6.8	6.4	5.4	3.0	6.8	
31-May	5.0	4.8	5.2	5.0	Z	2.2	1.6	0.9	0.7	0.5	0.5	0.4	0.6	0.5	0.4	0.4	0.5	0.8	0.6	0.5	0.5	0.5	0.6	0.6	1.5	5.2	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration DF - DAS Failure UO - Unstable Operation																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	289	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 289

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	3	33	11	34	54	60	17	10	35	22	8	1	0	288

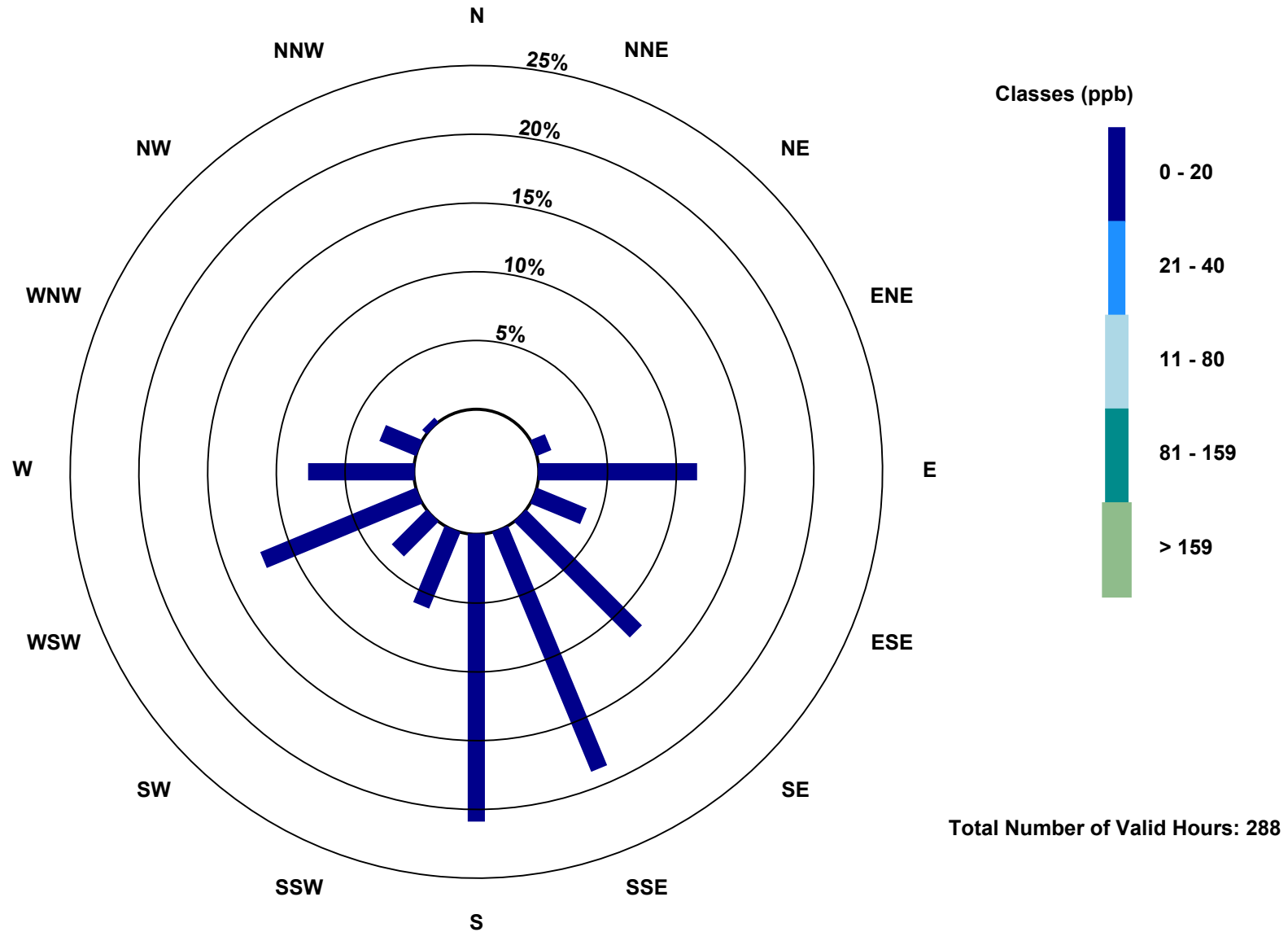
Total Number of Valid Hours: 288

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

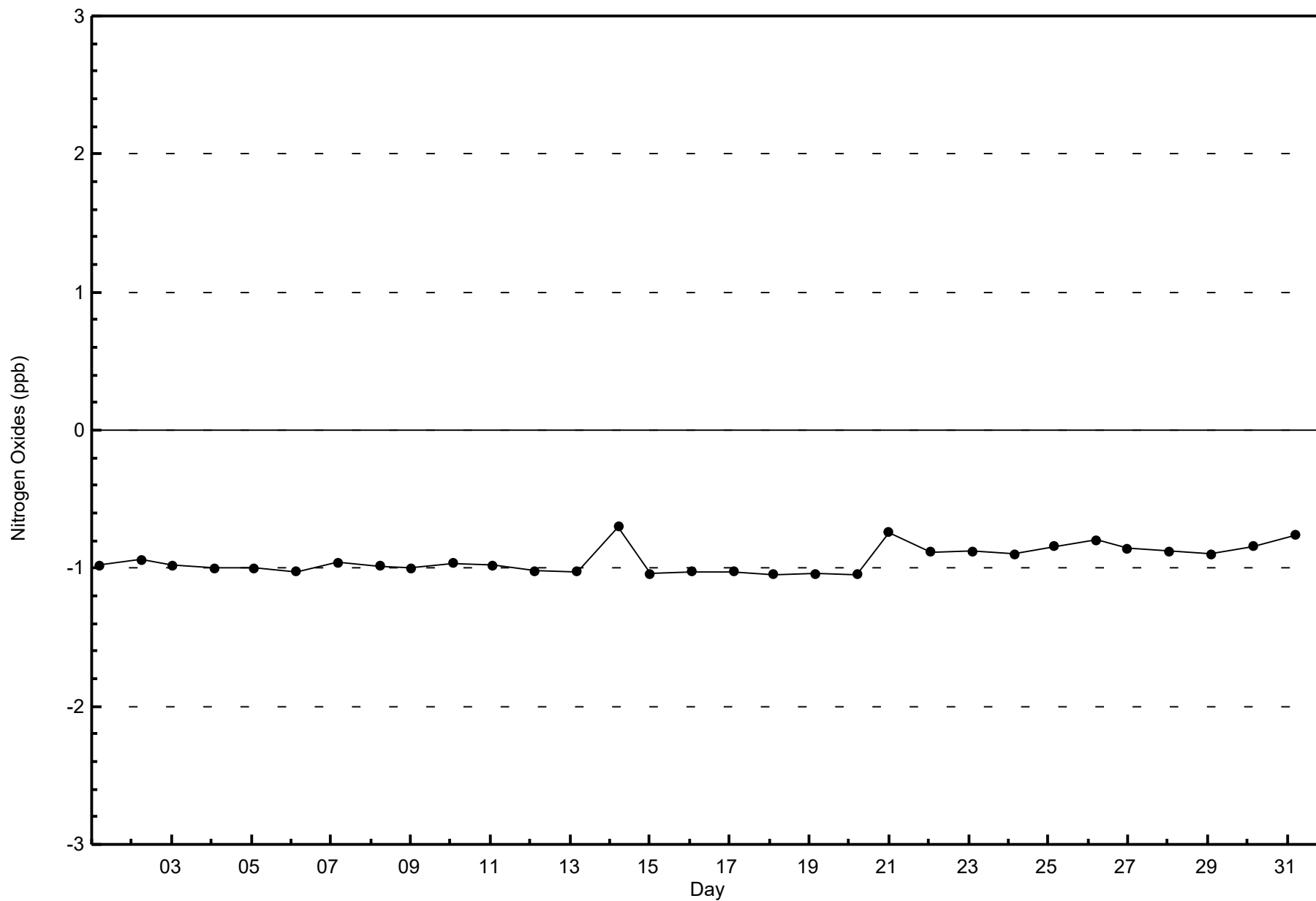
Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

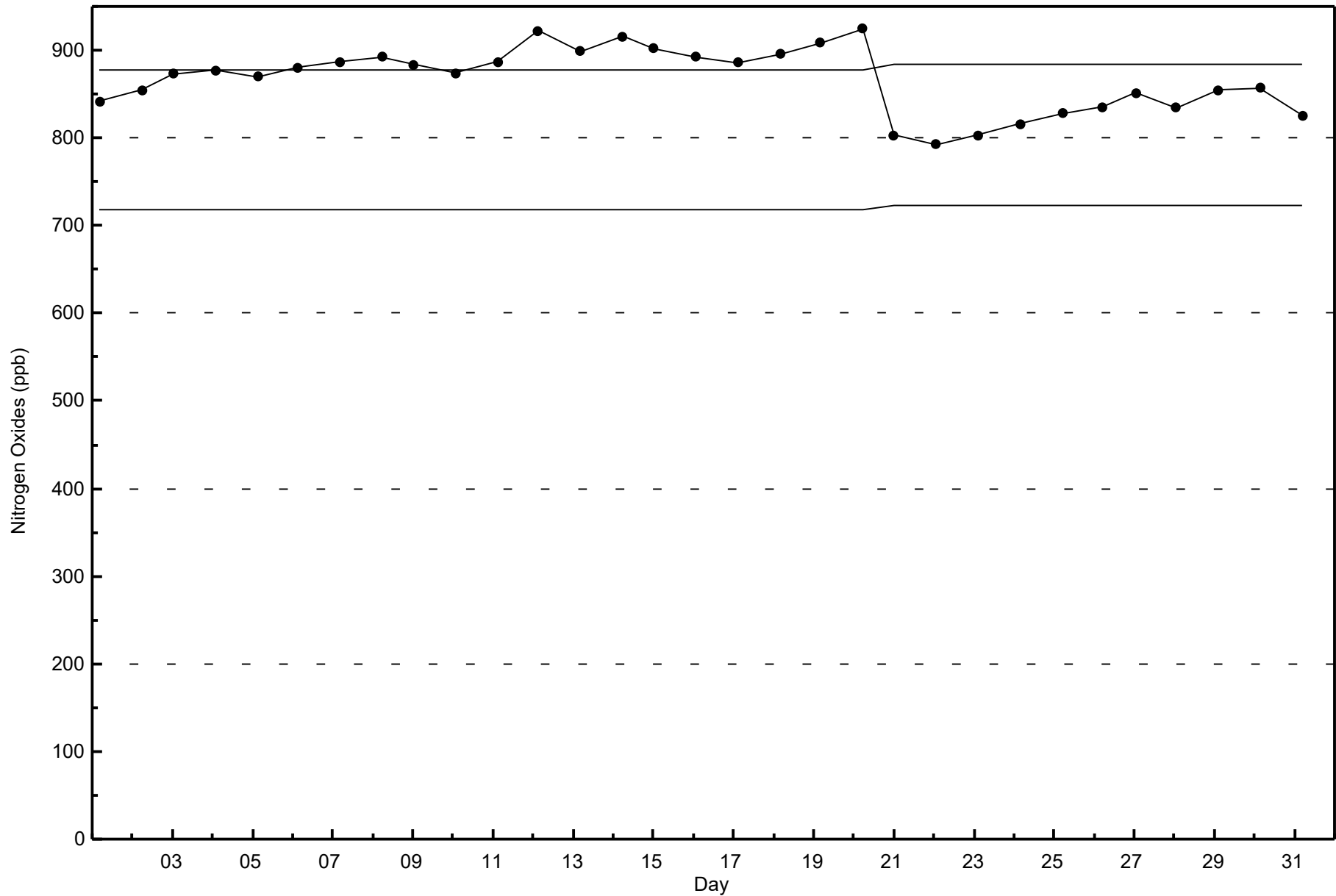
Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

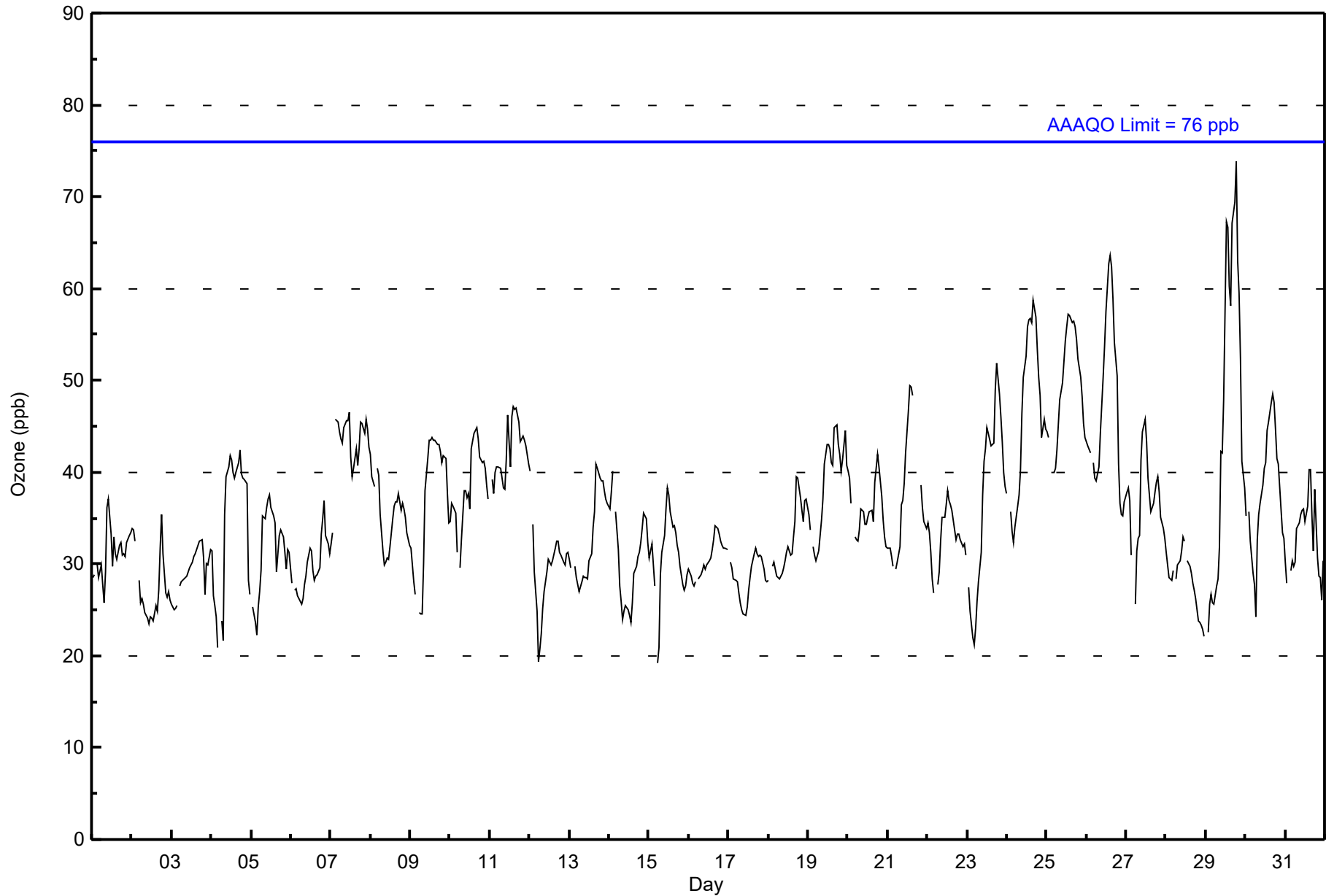
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 73.9 ppb on May 29 19:00 Maximum Daily Average: 49.3 ppb on May 25																				Hours in Service: 744 Hours of Data: 708							
Minimum Value: 19.2 ppb on May 15 06:00 Maximum Diurnal Average: 40.1 ppb at hour 18 Monthly Average: 35.49 ppb																				Minimum Daily Average: 27.5 ppb on May 2 Minimum Diurnal Average: 29.7 ppb at hour 7 Percentiles: P ₁ = 21.9 P ₁₀ = 26.5 Q ₁ = 29.6 Median = 33.7 Q ₃ = 40.5 P ₉₀ = 45.5 P ₉₉ = 62.7		Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	28.6	28.8	Z	30.0	28.5	29.9	27.7	25.8	29.2	36.2	37.0	33.3	29.8	33.0	31.2	30.5	32.0	32.4	30.9	31.1	30.8	32.3	33.1	33.4	31.1	37.0	
2-May	33.9	33.6	32.6	Z	28.2	25.8	26.2	25.7	24.7	24.0	23.4	24.3	24.1	23.8	25.4	24.9	27.1	31.8	35.4	31.1	26.8	26.4	27.1	26.1	27.5	35.4	
3-May	25.7	25.0	25.1	25.5	Z	27.5	28.1	28.4	28.6	28.6	29.1	29.6	30.2	30.8	31.1	31.6	32.1	32.6	32.6	30.7	26.8	30.0	29.9	31.6	29.2	32.6	
4-May	31.4	26.5	25.5	24.3	20.8	Z	23.7	21.6	35.4	39.5	40.6	41.7	41.4	40.0	39.4	39.9	41.1	42.3	39.8	39.4	39.2	38.8	28.2	26.7	34.2	42.3	
5-May	Z	25.4	23.7	22.3	25.3	27.0	29.2	35.2	35.0	36.1	37.0	37.5	36.1	35.2	34.6	29.2	31.1	33.1	33.7	33.0	31.3	29.5	31.6	31.3	31.4	37.5	
6-May	28.0	Z	27.1	27.3	26.5	26.2	25.7	26.3	27.7	28.6	30.3	31.7	31.4	29.3	28.2	28.7	28.9	29.5	33.2	34.9	36.8	33.1	32.1	31.2	29.7	36.8	
7-May	32.2	33.3	Z	45.7	45.4	44.4	43.6	43.2	44.9	45.6	45.7	46.5	41.7	39.5	40.5	42.6	40.7	42.5	45.5	45.4	44.2	45.8	44.8	42.7	42.9	46.5	
8-May	41.9	39.6	38.5	Z	40.5	39.7	35.5	31.3	29.8	30.2	30.6	30.5	31.9	34.9	36.2	36.7	36.8	37.6	35.8	36.7	36.0	35.1	33.5	32.1	35.3	41.9	
9-May	31.8	29.9	28.0	26.7	Z	24.7	24.6	24.6	30.0	38.0	41.5	43.5	43.5	43.7	43.5	43.5	43.1	43.1	42.3	41.0	41.8	41.5	37.7	34.4	36.6	43.7	
10-May	34.6	36.5	36.4	35.5	31.2	Z	29.6	32.6	38.0	38.0	37.1	37.7	36.0	42.5	44.3	44.6	44.8	43.6	41.7	41.0	41.2	40.5	38.6	37.0	38.4	44.8	
11-May	Z	39.2	37.6	40.0	40.6	40.6	40.4	39.3	38.2	38.1	41.3	46.1	40.6	46.1	47.2	46.9	46.9	45.4	43.3	43.6	44.0	43.5	42.8	40.8	42.3	47.2	
12-May	40.1	Z	34.3	29.1	24.9	19.4	20.7	22.4	25.2	26.9	29.1	30.4	30.2	29.9	30.3	31.8	32.6	32.4	31.3	31.0	30.3	29.8	31.1	31.3	29.3	40.1	
13-May	30.5	29.5	Z	29.8	28.5	27.7	27.1	28.1	28.6	28.5	28.5	28.4	30.4	31.2	34.1	35.7	40.9	40.5	39.3	39.1	39.0	38.0	37.1	36.6	32.9	40.9	
14-May	35.9	37.8	40.1	Z	35.7	31.5	27.7	26.0	24.0	24.9	25.5	25.0	24.5	23.6	25.7	29.1	29.8	30.8	31.3	32.4	33.9	35.6	35.0	32.3	30.3	40.1	
15-May	30.6	31.4	32.2	27.6	Z	19.2	20.9	28.8	31.3	33.1	36.1	38.3	37.5	35.7	34.1	34.2	33.4	32.0	31.3	29.7	27.8	27.2	27.7	28.8	30.8	38.3	
16-May	29.4	28.6	27.9	27.7	28.0	Z	28.3	28.9	29.3	30.0	29.5	29.8	30.4	30.7	31.5	32.7	34.2	33.9	33.3	32.5	32.1	31.8	31.8	31.6	30.6	34.2	
17-May	Z	30.2	29.6	28.4	28.3	28.1	26.9	25.8	25.0	24.5	24.5	25.3	27.1	28.5	29.8	31.2	31.7	31.1	30.9	30.9	30.8	29.4	28.2	28.1	28.4	31.7	
18-May	28.3	Z	29.7	30.2	29.4	28.7	28.5	28.4	28.9	29.6	30.4	31.2	31.8	31.0	31.1	32.9	34.6	39.5	39.4	37.2	35.9	34.7	36.9	37.0	32.4	39.5	
19-May	35.5	33.7	Z	31.9	31.0	30.4	31.4	33.1	34.8	37.1	40.8	43.1	43.0	42.6	41.0	40.7	44.8	45.2	43.0	42.0	40.2	41.4	44.6	40.7	38.8	45.2	
20-May	40.1	39.4	36.7	Z	33.0	32.6	32.5	33.7	36.0	35.6	34.3	34.3	35.1	35.7	35.8	34.6	38.8	40.4	42.0	40.6	37.4	34.7	33.0	31.8	36.0	42.0	
21-May	31.7	31.8	30.8	29.7	Z	29.4	30.2	31.9	36.5	36.9	38.8	42.0	46.7	49.5	49.2	48.4	C	C	C	C	38.7	36.1	34.6	33.9	37.2	49.5	
22-May	34.5	33.4	31.2	28.3	26.9	Z	27.8	29.2	32.4	35.1	35.1	36.4	38.0	36.9	36.4	35.8	33.7	32.6	33.3	33.3	32.6	31.8	32.2	30.9	33.0	38.0	
23-May	Z	27.4	24.8	21.9	21.2	23.1	26.0	28.1	31.3	37.5	41.2	42.6	44.9	44.2	42.8	42.9	43.2	49.0	51.9	48.6	46.1	43.4	39.9	38.5	37.4	51.9	
24-May	37.7	Z	35.7	33.6	32.3	34.1	36.3	37.5	40.2	46.4	50.3	52.7	55.8	56.6	56.7	56.2	58.8	56.8	53.4	50.4	48.4	43.7	45.8	44.7	46.3	58.8	
25-May	44.4	43.7	Z	40.0	39.9	40.4	42.3	45.2	47.9	49.7	52.0	54.4	55.8	57.2	57.1	56.4	56.5	55.8	54.5	52.3	50.3	48.2	45.3	43.8	49.3	57.2	
26-May	43.4	42.9	42.0	Z	41.0	39.4	39.1	40.6	44.3	47.2	50.3	53.8	57.4	62.7	63.6	62.5	58.9	54.2	50.5	40.9	36.7	35.4	35.2	36.8	46.9	63.6	
27-May	37.8	38.2	36.8	30.9	Z	25.6	31.4	32.8	33.1	41.3	44.5	45.7	43.4	39.3	37.6	35.7	36.6	37.8	38.9	39.5	37.8	35.1	33.9	32.7	36.8	45.7	
28-May	31.3	29.9	28.5	28.3	29.3	Z	28.3	29.8	30.4	31.4	32.9	32.6	DF	30.4	29.8	29.0	27.9	27.1	26.2	23.9	23.6	23.3	22.8	22.2	28.1	32.9	
29-May	Z	22.6	25.6	26.7	25.8	25.6	27.7	28.3	31.9	42.2	42.2	47.9	67.2	66.7	60.3	58.1	67.1	69.5	73.9	62.9	59.5	52.3	41.1	38.3	46.2	73.9	
30-May	35.2	Z	35.7	32.5	28.9	27.8	24.2	32.6	35.4	36.6	38.6	40.4	41.0	44.6	45.5	47.5	48.5	47.6	44.7	41.5	40.9	35.8	33.5	32.7	37.9	48.5	
31-May	30.3	27.9	Z	29.3	30.4	29.8	30.2	33.8	34.4	35.3	35.8	36.0	34.7	36.3	40.2	40.2	35.2	31.5	38.2	30.6	28.7	28.5	26.1	30.3	32.8	40.2	
34.0 32.5 31.9 30.1 30.8 30.0 29.7 30.9 33.0 35.2 36.6 37.8 38.7 39.1 39.2 39.2 39.7 40.1 40.1 38.2 37.1 35.9 34.7 33.9																										Diurnal Average	
44.4 43.7 42.0 45.7 45.4 44.4 43.6 45.2 47.9 49.7 52.0 54.4 67.2 66.7 63.6 62.5 67.1 69.5 73.9 62.9 59.5 52.3 45.8 44.7																										Diurnal Maximum	
Z - zerospan C - Calibration DF - DAS Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	2	0.28	0.28
21 - 50	670	94.63	94.92
51 - 82	36	5.08	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Fort Chipewyan - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
21 - 50	2	2	22	99	156	31	51	69	51	15	17	53	34	20	23	22	667
51 - 82	0	0	0	0	0	0	0	9	19	6	0	0	1	1	0	0	36
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	2	2	23	99	156	31	51	78	70	21	17	53	35	21	23	23	705

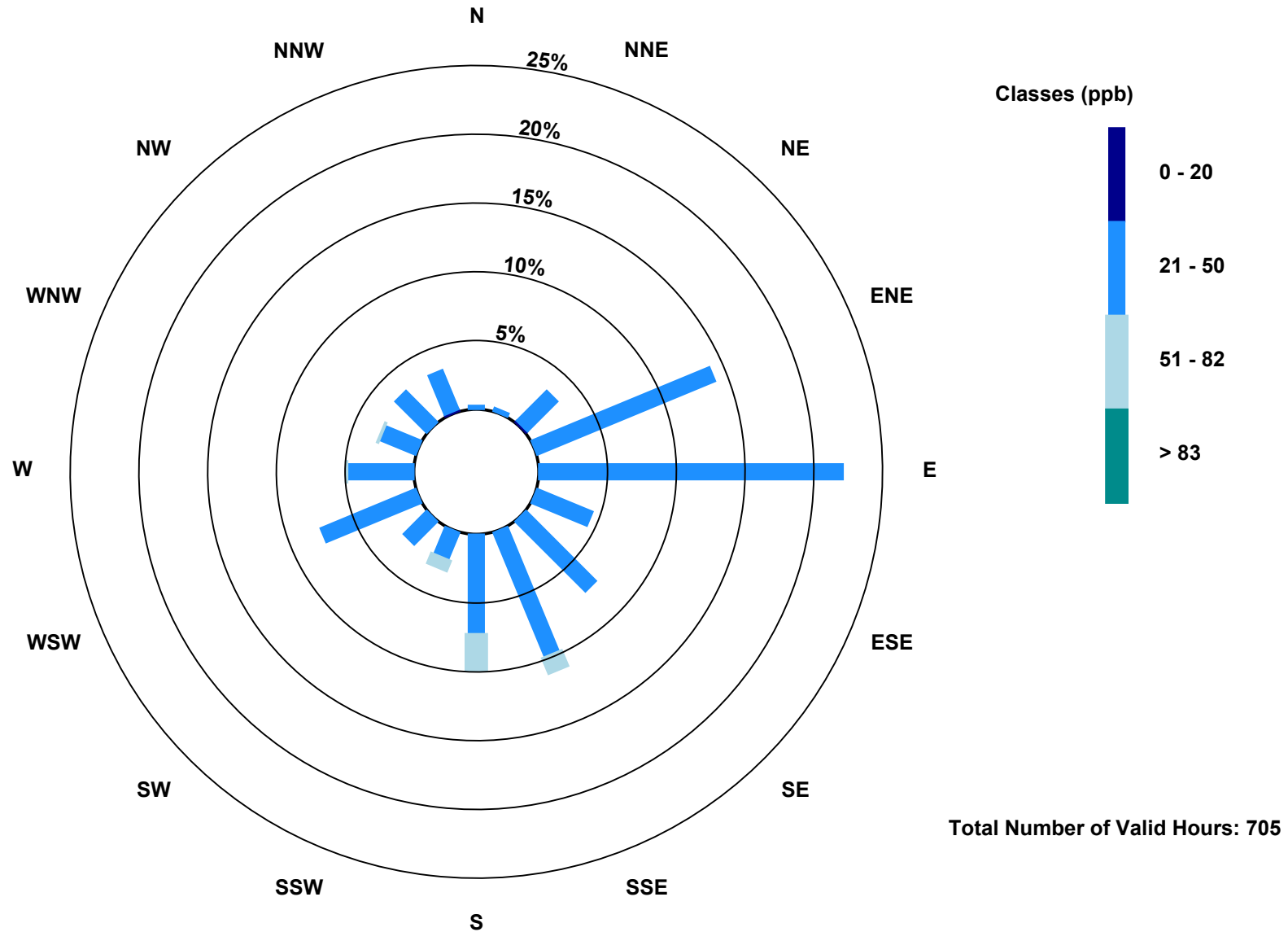
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

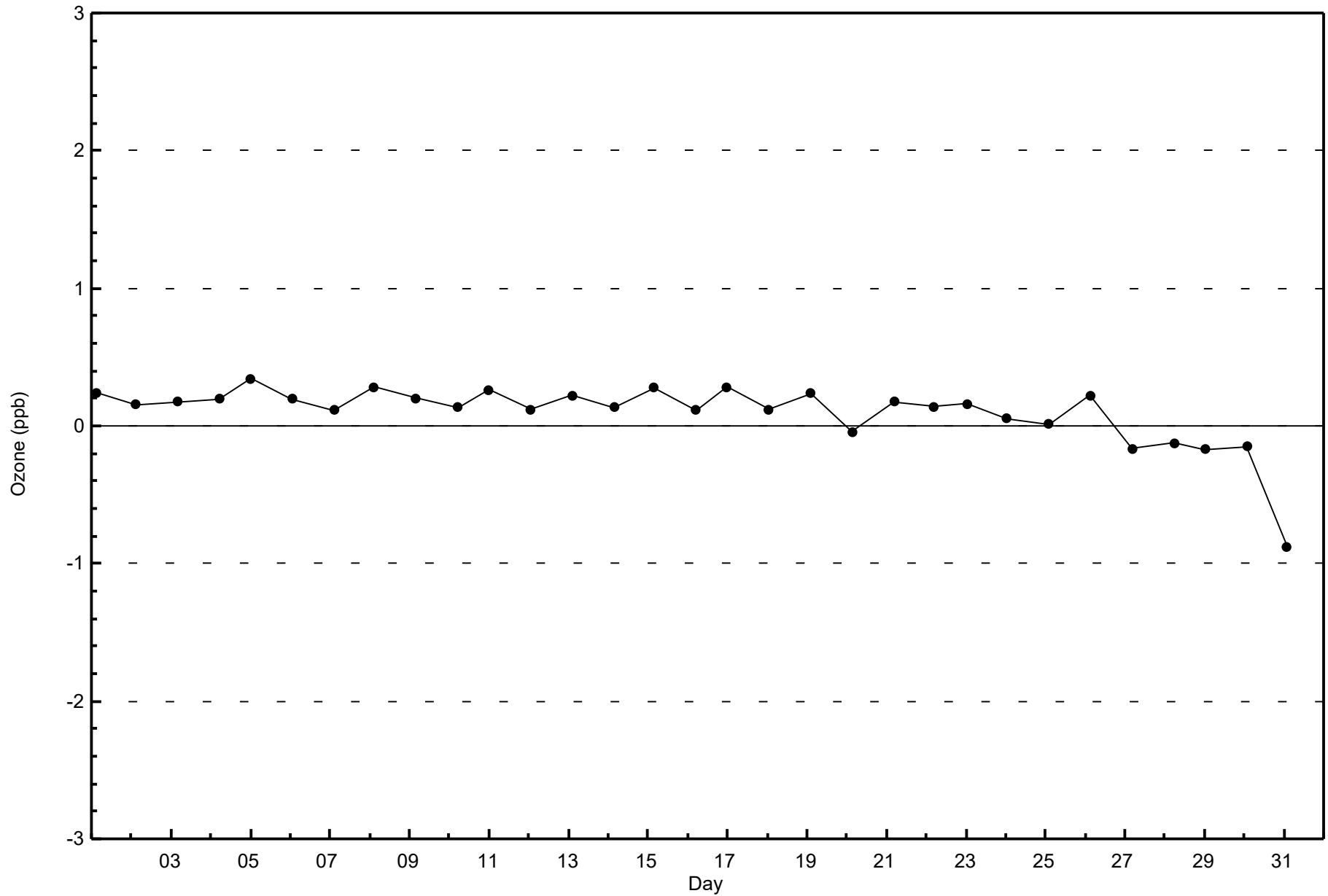
Ozone (O_3) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

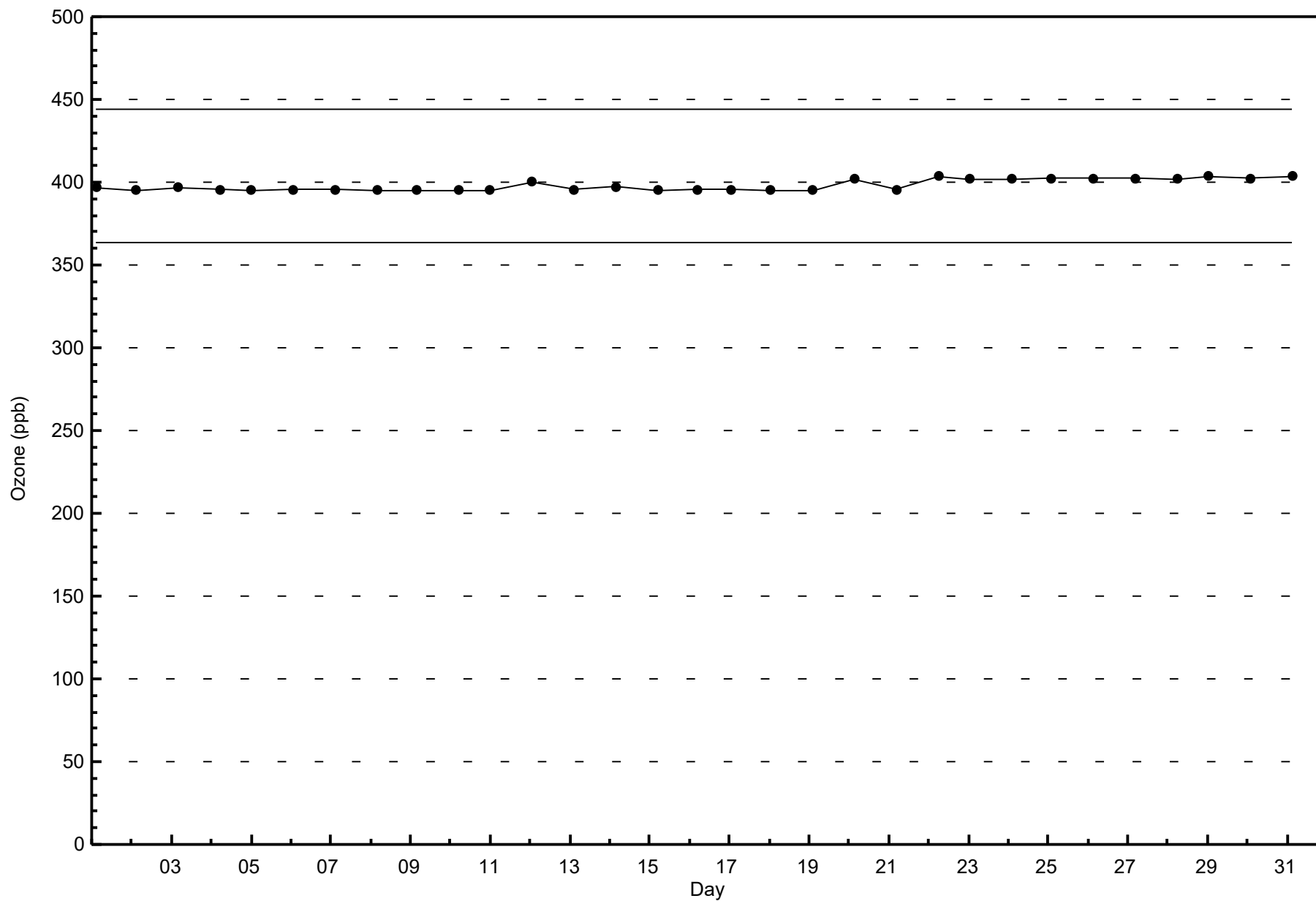
Ozone (O₃) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

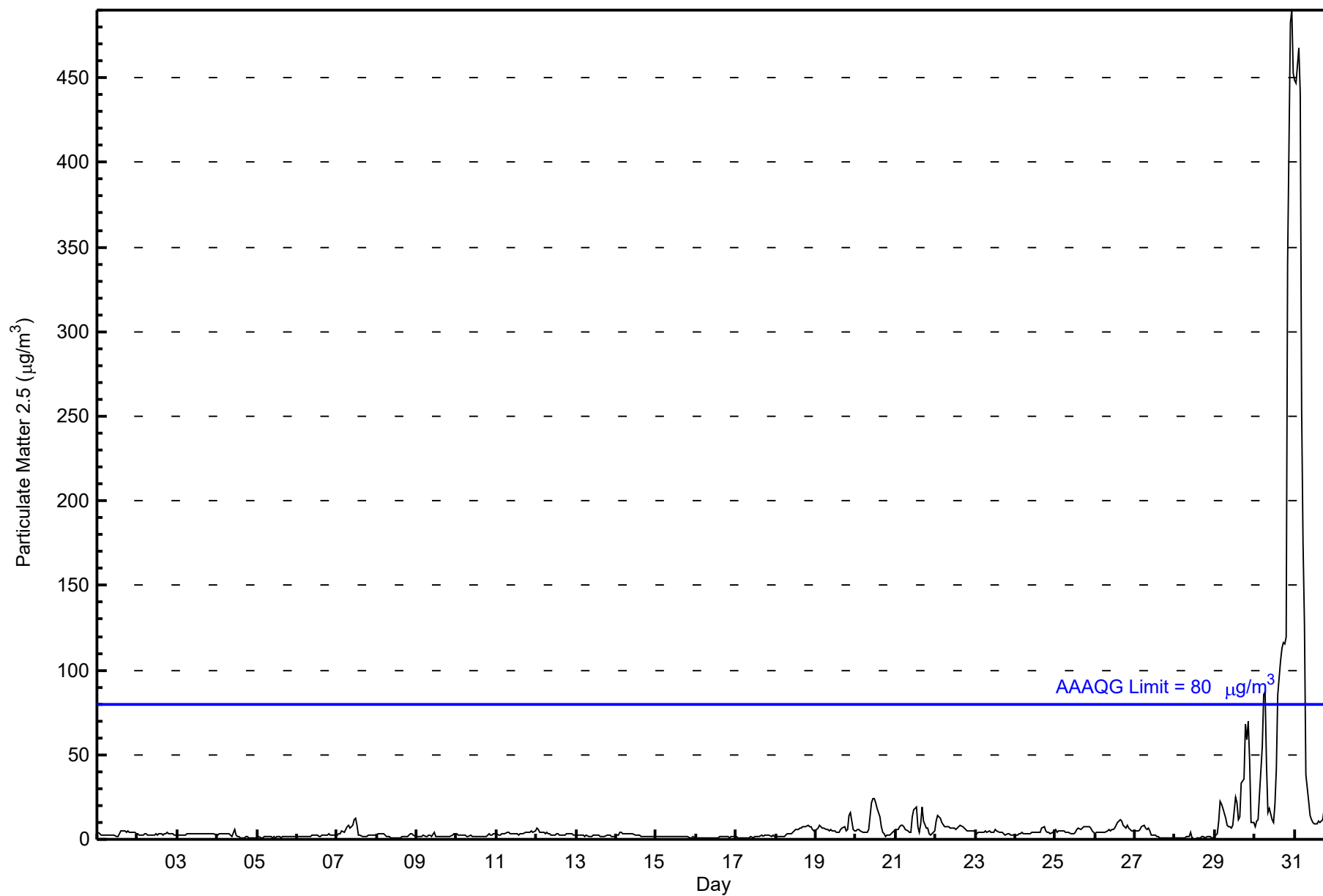
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 19 24-hr: 2 Maximum Value: 489.9 µg/m³ on May 30 23:00 Maximum Daily Average: 119.4 µg/m³ on May 30																					Hours in Service: 744 Hours of Data: 743					
Minimum Value: 0.4 µg/m³ on May 5 00:00 Minimum Daily Average: 1.2 µg/m³ on May 16 Maximum Diurnal Average: 20.8 µg/m³ at hour 22 Minimum Diurnal Average: 4.5 µg/m³ at hour 9 Monthly Average: 11.45 µg/m³ Percentiles: P ₁ = 0.8 P ₁₀ = 1.3 Q ₁ = 1.9 Median = 3.1 Q ₃ = 5.4 P ₉₀ = 10.6 P ₉₉ = 303.3																					Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	3.8	3.3	2.8	2.6	2.7	2.5	2.5	2.5	2.4	2.4	2.1	1.6	1.5	3.1	5.3	5.1	4.7	4.2	4.9	4.5	4.3	3.9	4.0	3.7	3.4	5.3
2-May	3.0	2.8	2.7	2.8	3.5	3.3	2.6	2.4	2.4	2.5	2.6	2.9	2.9	3.0	3.6	2.9	3.3	3.7	3.9	3.4	3.1	2.9	2.7	2.7	3.0	3.9
3-May	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.2	3.4	3.5	3.3	3.2	3.4	3.2	3.0	3.1	3.0	3.0	3.3	3.0	3.3	3.1	2.8	3.1	3.5
4-May	2.8	3.1	3.0	3.0	3.0	3.2	3.1	3.0	2.1	1.8	5.7	2.7	1.4	1.4	1.1	1.2	1.1	1.3	2.0	1.1	1.1	0.7	0.7	0.4	2.1	5.7
5-May	0.6	1.3	1.2	1.2	2.0	2.1	1.9	1.3	1.3	1.2	1.3	1.2	1.3	1.3	1.1	1.5	1.5	1.4	1.9	1.7	2.0	1.7	1.5	1.5	1.5	2.1
6-May	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.7	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.1	2.7	3.1	2.8	2.6	2.8	2.7	2.1	3.1
7-May	2.9	3.1	3.7	4.8	4.4	5.5	7.1	7.9	6.7	8.0	11.6	12.7	8.0	2.9	2.2	1.7	1.9	1.8	2.0	2.5	2.8	2.8	2.7	2.8	4.7	12.7
8-May	2.8	3.0	3.2	3.2	3.2	2.6	1.9	1.4	0.8	1.0	1.0	1.0	0.9	1.0	1.1	1.6	1.6	1.3	1.6	2.6	3.2	3.0	2.2	2.1	2.0	3.2
9-May	1.7	1.6	1.9	1.6	2.2	1.7	1.9	2.3	2.4	1.9	3.8	2.0	2.0	2.0	1.6	1.3	1.4	1.3	1.4	1.8	1.7	2.3	3.2	3.5	2.0	3.8
10-May	3.7	2.4	2.3	2.4	2.8	2.4	2.0	1.9	2.1	1.9	2.0	1.9	1.8	1.6	1.5	1.4	1.6	1.4	1.8	2.9	2.6	2.2	3.6	3.1	2.2	3.7
11-May	3.0	2.6	2.9	3.4	3.7	3.6	3.8	4.3	3.5	3.3	3.2	3.2	3.1	2.9	3.0	3.2	3.4	4.0	4.5	4.5	3.9	4.7	4.5	5.4	3.6	5.4
12-May	6.9	5.5	4.1	4.3	4.3	3.6	3.8	3.5	3.0	2.6	2.7	2.6	3.1	3.1	2.7	2.6	2.6	2.7	3.3	3.4	3.2	2.9	2.8	2.6	3.4	6.9
13-May	2.6	2.5	2.2	2.1	2.1	2.0	2.1	1.9	2.0	2.0	2.1	2.1	2.3	2.2	2.0	1.8	2.1	2.0	2.1	2.3	2.1	2.0	2.0	1.9	2.1	2.6
14-May	2.1	2.7	3.8	4.0	3.6	3.2	3.0	3.0	3.0	3.0	2.9	2.6	2.7	2.3	2.4	1.9	1.6	1.4	1.6	1.8	1.9	1.8	1.8	1.8	2.5	4.0
15-May	1.8	1.7	1.6	1.6	1.5	1.5	1.6	1.8	1.8	1.8	1.8	1.7	2.0	1.9	1.8	1.6	1.7	1.7	1.5	1.3	1.1	1.0	1.3	1.1	1.6	2.0
16-May	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.2	1.0	1.4	1.5	1.6	1.5	1.5	1.4	1.2	1.5	1.6	1.7	1.2	1.7
17-May	1.4	1.2	1.1	1.1	1.0	1.1	1.1	1.0	1.1	1.4	1.2	1.6	1.9	1.9	1.9	2.1	1.8	2.1	2.6	2.8	2.1	1.7	2.2	2.0	1.6	2.8
18-May	1.9	1.9	1.7	1.8	1.8	2.0	2.3	3.0	3.6	3.6	4.2	4.9	5.6	6.2	6.7	7.0	7.2	7.7	7.7	8.1	7.9	7.1	5.5	5.4	4.8	8.1
19-May	5.8	7.0	8.0	7.7	7.0	6.3	6.1	5.8	5.4	5.7	5.1	5.1	4.3	3.9	4.5	5.5	6.4	7.8	5.4	5.8	14.0	15.4	6.2	5.0	6.6	15.4
20-May	5.4	6.2	5.8	4.6	4.5	3.8	4.0	4.5	5.8	21.2	24.4	24.0	22.0	18.3	13.6	7.6	4.5	3.0	2.0	2.2	2.8	3.4	3.9	4.9	8.4	24.4
21-May	5.7	5.9	7.2	8.4	8.4	7.9	5.7	4.8	4.0	3.8	13.0	17.5	19.4	7.7	3.9	9.2	19.3	11.2	7.0	6.9	3.7	2.9	3.1	5.3	8.0	19.4
22-May	10.6	14.2	13.0	12.1	9.8	7.8	7.7	7.5	7.5	6.6	6.4	6.5	5.7	6.4	7.5	8.0	7.3	7.0	6.0	4.9	4.8	4.6	4.8	4.9	7.6	14.2
23-May	3.9	3.7	4.1	4.0	4.4	4.4	4.9	4.6	4.7	4.0	3.9	4.5	5.5	5.2	4.5	4.2	4.1	3.3	2.5	3.0	3.0	2.9	2.8	2.7	3.9	5.5
24-May	2.8	2.9	3.1	3.6	3.9	3.7	3.5	3.1	3.2	3.7	4.4	4.3	3.8	4.5	4.2	4.1	6.6	7.3	5.0	4.4	4.2	3.7	3.9	4.8	4.1	7.3
25-May	5.7	4.4	4.7	5.0	4.9	5.0	4.6	4.3	3.9	3.7	3.5	3.6	4.3	5.7	6.8	6.1	6.8	7.3	7.6	7.6	7.5	6.3	5.3	4.1	5.4	7.6
26-May	3.5	3.8	4.2	4.2	4.0	4.0	4.3	4.7	5.5	5.3	5.7	5.9	6.4	10.2	10.4	11.9	11.0	8.4	6.3	8.7	6.7	5.4	5.3	4.8	6.3	11.9
27-May	5.2	5.1	5.0	5.5	7.6	8.1	6.8	6.2	6.2	4.7	2.9	2.5	2.6	1.7	1.5	1.2	1.1	1.2	1.1	1.0	0.8	0.9	0.8	0.9	3.4	8.1
28-May	1.0	1.1	1.1	1.2	1.2	1.1	1.0	1.6	1.4	3.8	1.0	0.7	DF	0.9	0.9	1.1	1.9	1.6	1.1	1.7	1.7	1.3	1.1	1.2	1.3	3.8
29-May	1.3	3.2	10.4	22.3	21.1	18.0	12.8	8.3	7.7	7.3	6.3	8.1	25.0	21.9	11.6	13.1	33.1	36.1	67.8	59.3	69.9	46.4	10.0	9.8	22.1	69.9
30-May	7.8	11.1	11.5	26.5	54.9	85.2	87.2	44.4	15.5	18.0	12.0	10.2	20.9	41.7	85.5	105.4	112.6	115.9	115.6	119.5	339.4	482.9	489.9	452.7	119.4	489.9
31-May	448.7	447.2	467.6	440.9	253.4	174.6	127.4	38.6	22.7	13.8	11.6	9.8	9.3	8.8	10.5	10.1	10.5	11.2	18.3	15.2	19.1	22.2	36.6	40.7	111.2	467.6
17.9 18.1 19.0 19.1 14.0 12.1 10.4 6.0 4.5 4.7 5.0 5.0 5.9 5.8 6.8 7.5 8.7 8.6 9.5 9.4 17.0 20.8 20.1 19.0																									Diurnal Average	
448.7 447.2 467.6 440.9 253.4 174.6 127.4 44.4 22.7 21.2 24.4 24.0 25.0 41.7 85.5 105.4 112.6 115.9 115.6 119.5 339.4 482.9 489.9 452.7																									Diurnal Maximum	
DF - DAS Failure																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Fort Chipewyan - May 2025

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	563	75.77	75.77
6 - 15	128	17.23	93.00
16 - 25	20	2.69	95.69
26 - 80	13	1.75	97.44
> 81.0	19	2.56	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Fort Chipewyan - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	2	24	101	147	28	24	49	43	6	11	40	24	15	22	23	561
6 - 15	0	0	1	2	13	5	23	24	26	11	5	6	7	3	1	1	128
16 - 25	0	0	0	0	1	2	8	4	1	0	0	1	1	2	0	0	20
26 - 80	0	0	0	0	0	0	0	6	1	1	0	0	3	2	0	0	13
> 81.0	0	0	0	0	0	0	1	0	1	4	1	8	2	1	0	0	18
Totals	2	2	25	103	161	35	56	83	72	22	17	55	37	23	23	24	740

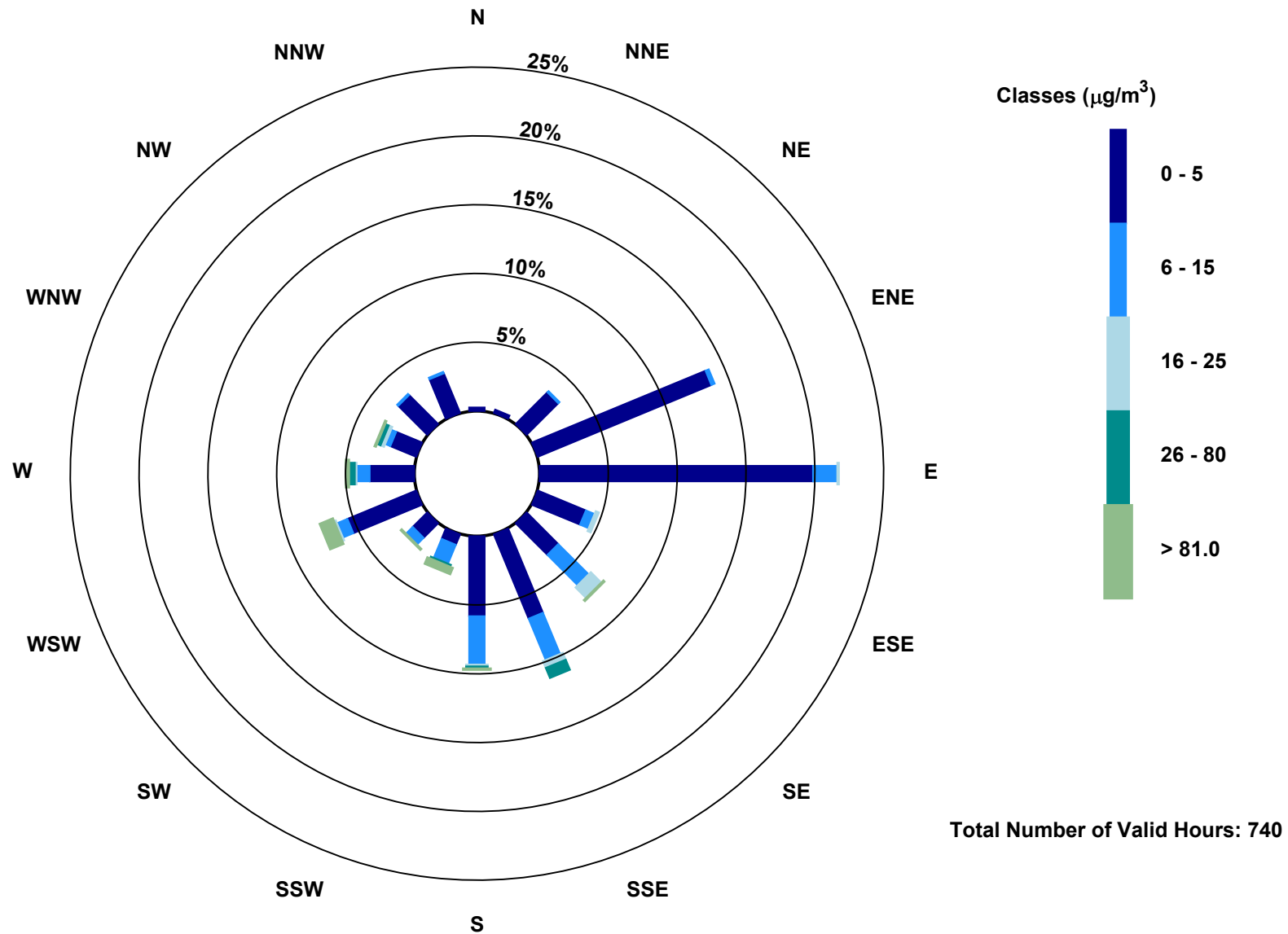
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

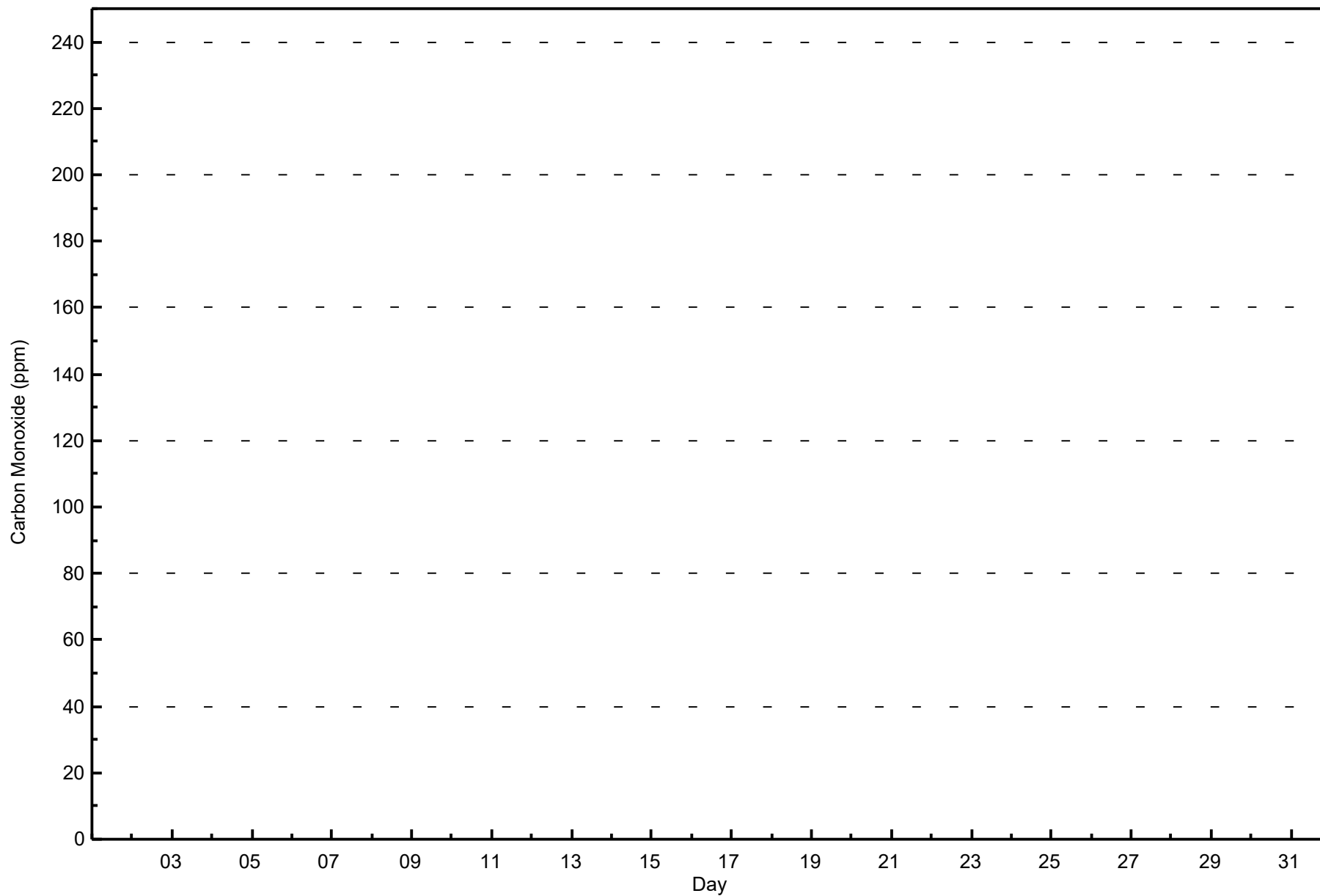
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 353									
Maximum Value: 0.1 ppm on May 4 18:00																		Maximum Daily Average: 0.1 ppm on May 5		Hours of Data: 336							
Minimum Value: 0.0 ppm on May 1 09:00																		Minimum Daily Average: 0.0 ppm on May 12		Hours of Missing Data: 17							
Maximum Diurnal Average: 0.0 ppm at hour 15																		Minimum Diurnal Average: 0.0 ppm at hour 4		Hours of Calibration: 17							
Monthly Average: 0.01 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.1 P ₉₉ = 0.1		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
5-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6-May	0.1	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
10-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.1
16-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
17-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
18-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
19-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
20-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
21-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
22-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
23-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
24-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
25-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
26-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
27-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
28-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
29-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
30-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
31-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
0.0 0.0																										Diurnal Average	
0.1 0.1 0.1 0.0 0.1																										Diurnal Maximum	
Z - zerospan C - Calibration NS - Not in Service																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																											



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort Chipewyan - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	336	100.00	100.00
0.4 - 0.5	0	0.00	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 336

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort Chipewyan - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	2	2	21	63	109	13	4	13	6	5	6	20	11	15	21	23	334
0.4 - 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	2	2	21	63	109	13	4	13	6	5	6	20	11	15	21	23	334

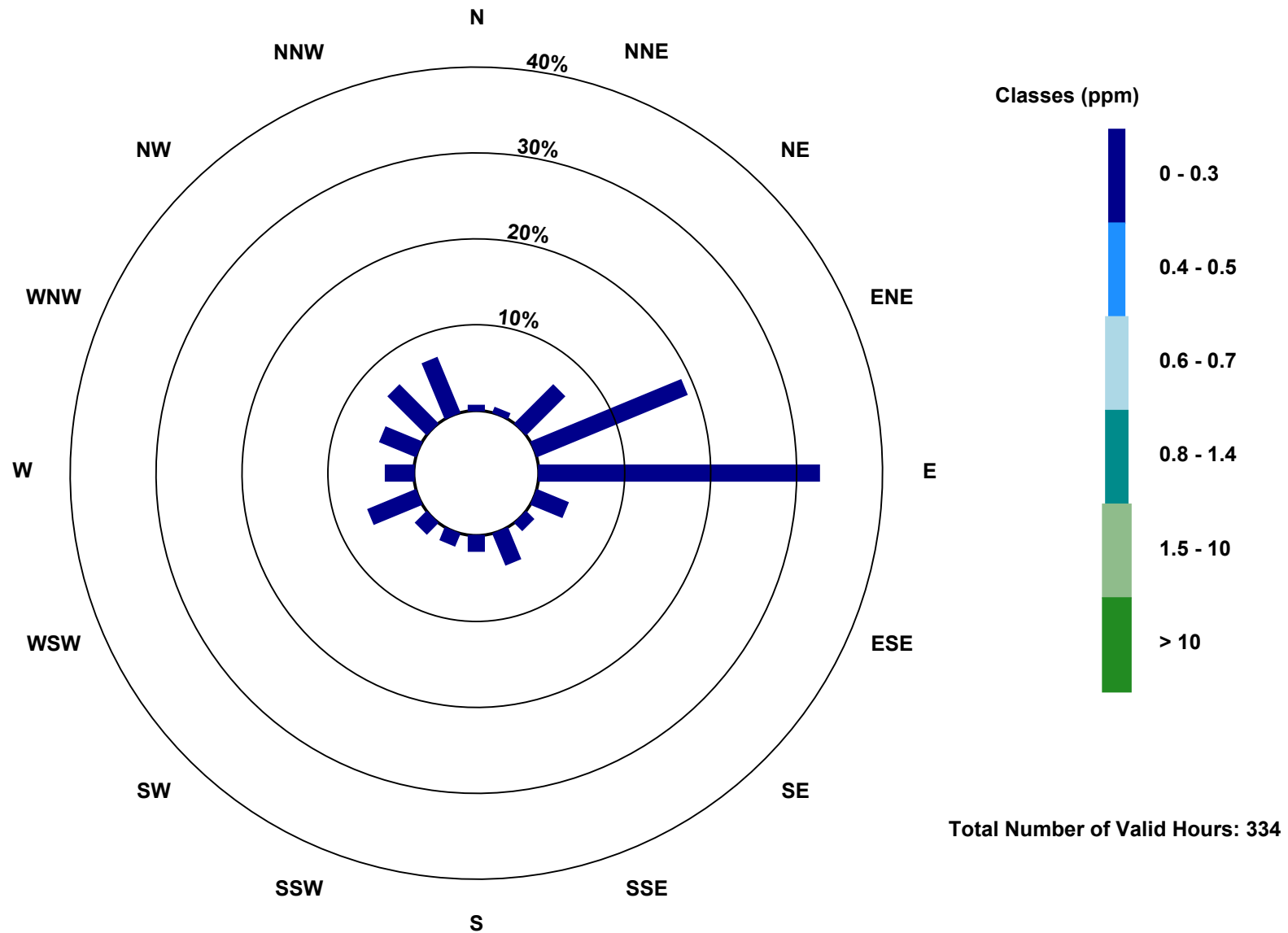
Total Number of Valid Hours: 334

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Monoxide (CO) - ppm
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

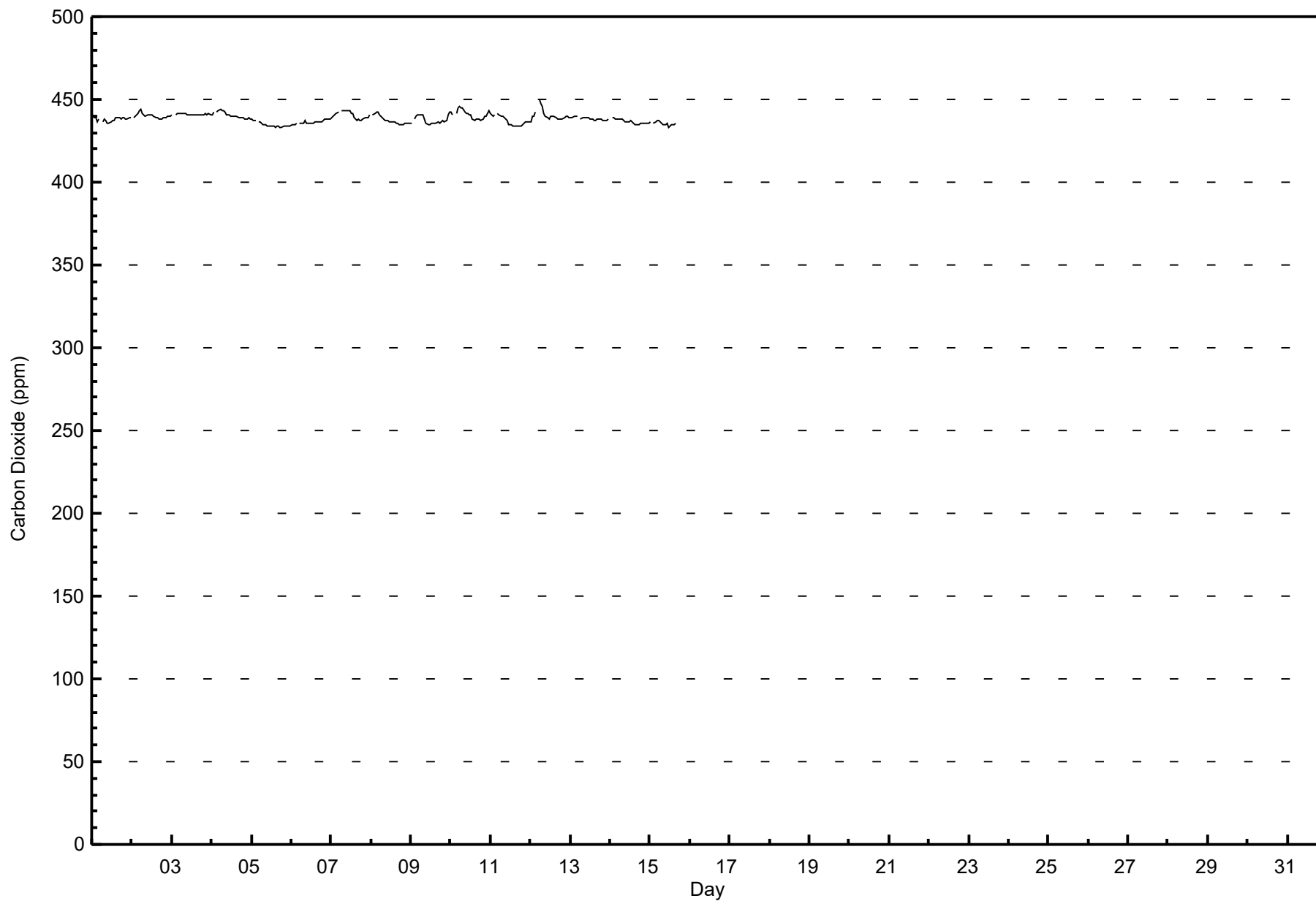
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 449.6 ppm on May 12 06:00 Maximum Daily Average: 441.0 ppm on May 3																							Hours in Service: 355			
Minimum Value: 433.2 ppm on May 15 12:00 Minimum Daily Average: 434.6 ppm on May 5 Maximum Diurnal Average: 441.3 ppm at hour 6 Minimum Diurnal Average: 436.9 ppm at hour 18 Monthly Average: 438.40 ppm Percentiles: P ₁ = 433.5 P ₁₀ = 434.9 Q ₁ = 436.1 Median = 438.2 Q ₃ = 440.3 P ₉₀ = 441.7 P ₉₉ = 445.4																							Hours of Data: 337 Hours of Missing Data: 18 Hours of Calibration: 18 Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	440.4	439.3	438.7	436.6	437.8	Z	436.8	437.8	436.9	435.6	435.7	436.1	437.0	437.5	439.2	439.2	438.6	438.3	438.6	438.7	438.5	438.4	438.7	438.9	438.0	440.4
2-May	Z	439.4	440.0	441.5	443.1	444.1	441.4	440.7	440.1	440.3	440.4	440.9	440.6	439.6	438.8	438.9	438.2	438.1	438.1	438.7	439.3	439.7	439.8	440.0	440.1	444.1
3-May	440.3	Z	441.0	441.3	441.5	441.6	441.8	441.7	441.4	440.8	440.7	440.8	440.9	440.9	440.9	440.9	440.8	440.8	440.6	441.0	441.7	440.9	441.4	440.3	441.0	441.8
4-May	440.5	442.7	Z	442.4	443.5	444.2	443.6	443.0	442.4	441.1	440.9	440.0	439.9	439.7	439.6	439.7	439.3	439.1	438.9	438.7	438.5	438.1	438.9	438.3	440.6	444.2
5-May	438.1	437.6	437.4	Z	436.3	436.1	435.6	434.8	434.6	434.3	433.9	433.7	433.6	433.6	433.4	433.7	433.5	433.4	433.3	433.6	433.7	434.0	434.0	434.2	434.6	438.1
6-May	434.7	434.9	435.1	435.5	Z	435.7	435.8	435.9	437.1	435.9	435.4	435.6	435.7	435.8	436.1	436.3	436.4	436.7	436.8	437.5	438.0	437.9	438.1	438.2	436.3	438.2
7-May	439.0	439.6	440.3	441.6	442.1	Z	443.6	443.6	443.0	443.0	443.2	443.3	441.9	441.6	439.3	437.5	437.8	437.3	437.5	438.1	438.8	439.0	439.4	440.5	440.5	443.6
8-May	Z	441.1	441.8	442.3	442.0	441.0	439.8	438.5	437.7	437.5	437.1	436.9	436.7	436.5	436.1	435.8	435.4	435.1	434.9	435.0	435.9	435.8	435.4	435.2	437.5	442.3
9-May	435.7	Z	437.9	439.4	440.8	440.7	440.9	440.4	438.3	435.8	435.0	435.1	435.3	435.5	435.7	435.9	436.0	436.0	436.1	436.9	436.8	437.5	441.1	442.1	437.6	442.1
10-May	442.6	440.3	Z	441.5	445.2	445.6	444.6	444.9	442.2	441.6	441.4	440.4	440.4	437.9	437.6	437.7	437.8	437.7	437.0	438.1	439.6	439.8	441.8	442.9	440.8	445.6
11-May	441.2	440.0	441.0	Z	441.6	440.9	440.2	440.2	439.4	438.1	437.2	434.5	435.1	434.0	434.2	434.1	434.1	433.9	434.0	434.8	435.4	436.2	436.2	436.4	437.1	441.6
12-May	436.8	439.9	439.7	442.8	Z	449.6	447.8	445.7	441.7	439.7	438.8	438.5	439.7	439.5	440.2	439.1	437.8	437.9	438.2	438.4	439.2	439.5	439.7	439.1	440.4	449.6
13-May	439.0	438.8	439.4	439.9	440.0	Z	438.5	438.6	438.9	439.0	438.8	438.7	438.1	438.0	437.6	437.7	437.9	437.8	437.8	437.5	437.3	437.3	437.5	438.0	438.4	440.0
14-May	Z	439.2	438.6	438.2	438.1	438.5	437.8	437.8	437.5	436.7	436.4	436.6	437.4	436.8	435.5	435.0	434.7	434.8	435.3	435.4	435.5	435.6	435.5	435.7	436.6	439.2
15-May	436.1	Z	436.0	436.6	437.3	437.2	436.7	435.2	434.8	434.9	435.9	433.2	434.1	434.5	435.0	435.9	C	C	C	NS	NS	NS	NS	NS	--	437.3
16-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
17-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
18-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
19-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
20-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
21-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
22-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
23-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
24-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
25-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
26-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
27-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
28-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
29-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
30-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
31-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
438.7 439.4 439.0 440.0 440.7 441.3 440.3 439.9 439.1 438.3 438.1 437.6 437.8 437.4 437.3 437.1 437.0 436.9 436.9 437.3 437.7 437.8 438.4 438.6																									Diurnal Average	
442.6 442.7 441.8 442.8 445.2 449.6 447.8 445.7 443.0 443.0 443.2 443.3 441.9 441.6 440.9 440.9 440.8 440.8 440.6 441.0 441.7 440.9 441.8 442.9																									Diurnal Maximum	
Z - zerospan C - Calibration NS - Not in Service																										



Wood Buffalo Environmental Association
Hourly Averages

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	259	76.85	76.85
440 - 460	78	23.15	100.00
460 - 480	0	0.00	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 337

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	0	1	20	45	88	9	3	9	3	3	4	16	7	12	18	19	257
440 - 460	2	1	1	18	22	4	1	4	3	2	2	4	4	3	3	4	78
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	2	2	21	63	110	13	4	13	6	5	6	20	11	15	21	23	335

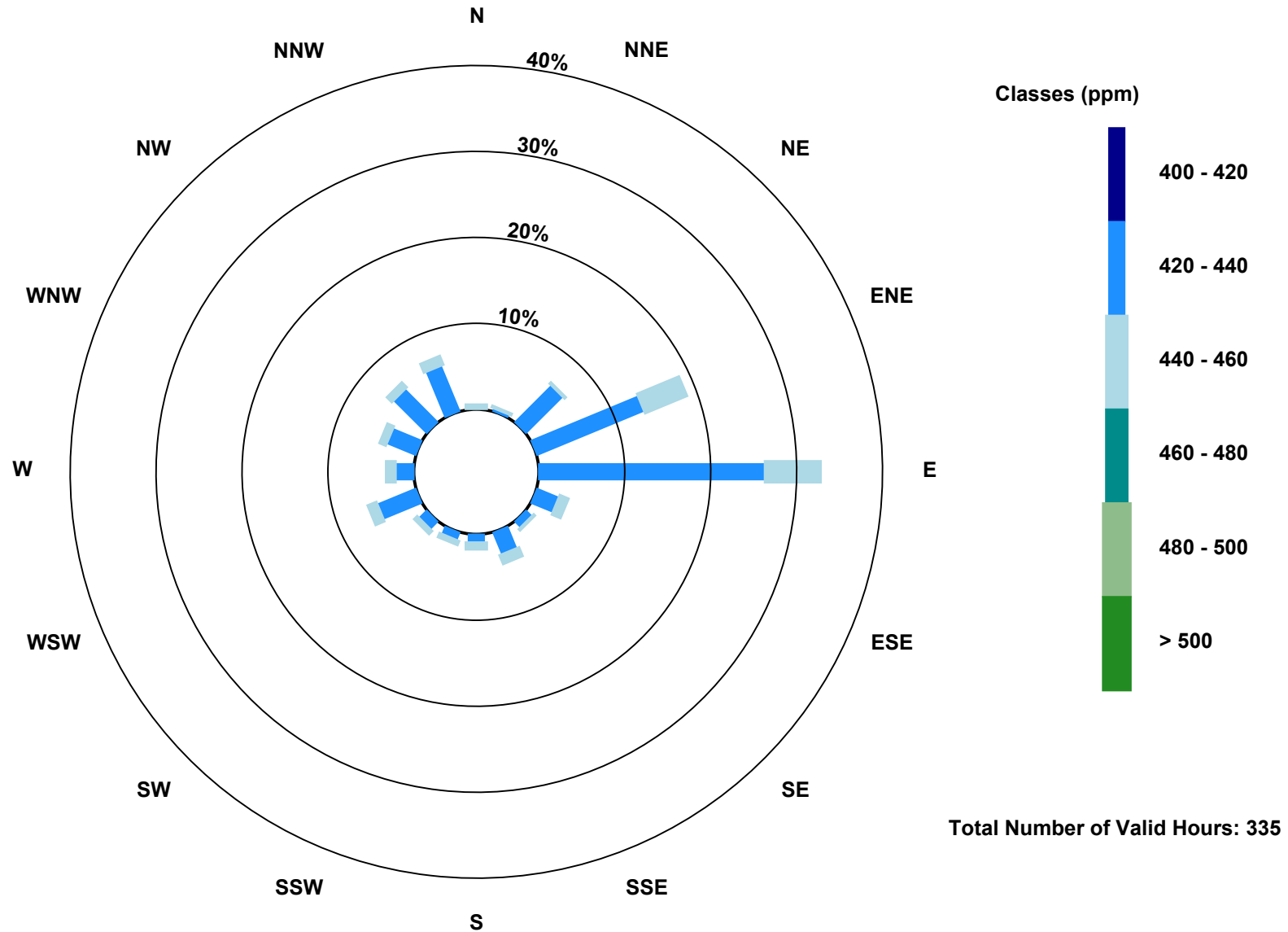
Total Number of Valid Hours: 335

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

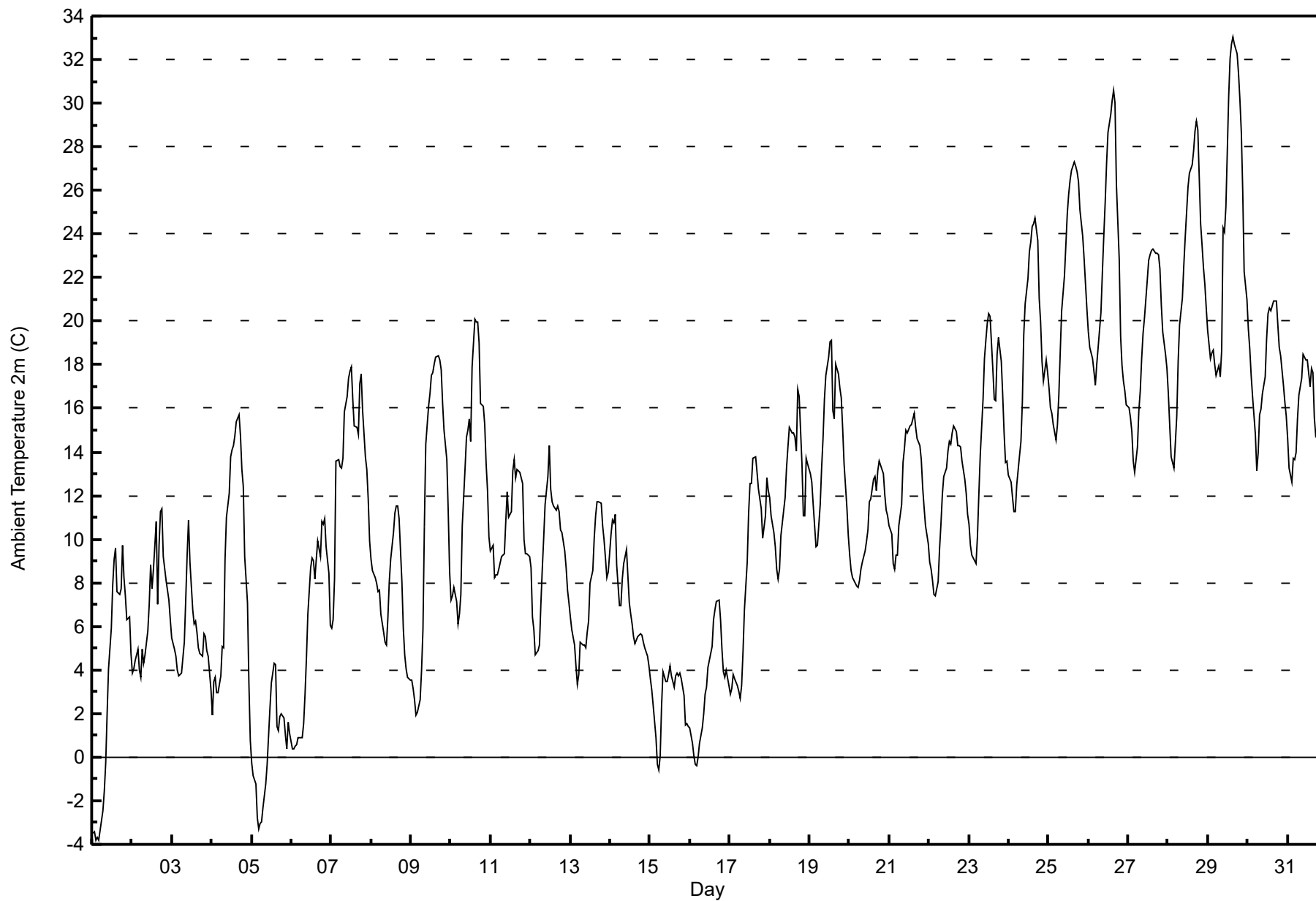
Fort Chipewyan - May 2025

Maximum Value: 33.1 C on May 29 16:00																				Maximum Daily Average: 24.6 C on May 29				Hours in Service: 744			
Minimum Value: -3.8 C on May 1 05:00																				Minimum Daily Average: 0.4 C on May 5				Hours of Data: 744			
Maximum Diurnal Average: 15.4 C at hour 15																				Minimum Diurnal Average: 7.4 C at hour 5				Hours of Missing Data: 0			
Monthly Average: 11.74 C																				Percentiles: P ₁ = -3.0 P ₁₀ = 3.2 Q ₁ = 6.3 Median = 11.3 Q ₃ = 16.4 P ₉₀ = 20.9 P ₉₉ = 30.3				Hours of Calibration: 0			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	-3.5	-3.4	-3.8	-3.7	-3.8	-2.9	-2.5	-1.6	-0.3	2.0	4.1	5.9	7.9	9.1	9.6	7.6	7.5	7.8	9.8	8.2	7.4	6.3	6.5	4.8	3.3	9.8	
2-May	3.8	4.1	4.4	4.9	4.0	3.7	5.0	4.3	4.7	5.8	7.0	8.8	7.7	8.6	10.8	7.0	9.7	11.3	11.4	9.2	8.1	7.7	7.2	6.3	6.9	11.4	
3-May	5.5	4.9	4.6	4.0	3.8	3.8	3.9	5.3	7.2	9.3	10.9	8.9	6.8	6.1	6.2	5.7	5.0	4.8	4.6	5.7	5.6	4.9	4.6	3.1	5.6	10.9	
4-May	1.9	3.5	3.7	3.0	3.0	3.8	5.1	5.0	9.0	11.0	12.1	13.8	14.1	14.3	14.8	15.4	15.7	14.7	13.2	12.4	9.2	7.1	3.4	0.7	8.7	15.7	
5-May	-0.3	-0.9	-1.3	-2.8	-3.3	-3.0	-3.0	-2.3	-1.3	-0.3	0.9	2.2	3.4	4.3	4.3	1.4	1.2	1.9	2.0	1.8	1.0	0.4	1.6	1.1	0.4	4.3	
6-May	0.4	0.4	0.5	0.6	0.9	0.9	0.9	1.6	2.9	4.6	6.6	8.7	9.1	9.0	8.2	9.1	9.9	9.2	10.8	10.7	11.0	9.7	8.4	6.0	5.8	11.0	
7-May	5.9	6.3	8.2	13.6	13.6	13.3	13.3	13.7	15.8	16.5	17.4	17.7	17.9	16.4	15.2	15.2	14.8	17.2	17.6	15.9	13.8	13.2	11.8	9.9	13.9	17.9	
8-May	9.1	8.6	8.3	8.0	7.6	7.7	6.6	5.7	5.2	5.1	6.4	8.0	9.1	10.3	11.2	11.5	11.5	10.9	8.0	5.9	4.7	4.1	3.7	3.5	7.5	11.5	
9-May	3.6	3.1	2.7	1.9	2.1	2.6	4.0	5.9	10.5	14.3	16.1	16.7	17.5	17.7	18.0	18.4	18.4	18.2	17.7	16.2	15.0	13.6	11.3	8.5	11.4	18.4	
10-May	7.2	7.4	7.8	7.1	6.1	6.5	7.5	10.6	13.3	14.7	15.0	15.5	14.5	17.9	20.1	19.9	19.9	19.0	16.2	16.1	15.3	13.5	12.2	10.1	13.1	20.1	
11-May	9.4	9.7	8.2	8.4	8.4	8.6	9.2	9.3	9.3	10.8	12.2	11.0	11.3	13.2	13.6	12.8	13.2	13.1	12.8	12.5	10.0	9.3	9.3	9.2	10.6	13.6	
12-May	8.7	6.4	5.9	4.7	4.9	5.2	7.0	8.6	10.0	11.6	12.9	14.3	12.3	11.7	11.6	11.3	11.5	11.3	10.4	10.3	9.5	8.7	7.7	7.1	9.3	14.3	
13-May	6.4	5.8	5.1	4.2	3.4	3.8	5.3	5.2	5.1	5.0	5.7	6.2	8.0	8.5	10.0	11.1	11.7	11.7	11.6	10.6	9.9	9.2	8.2	8.5	7.5	11.7	
14-May	10.3	10.9	10.7	11.1	8.8	7.0	6.9	8.1	8.9	9.2	9.5	7.1	6.6	6.1	5.5	5.2	5.5	5.6	5.7	5.6	5.3	5.0	4.7	4.2	7.2	11.1	
15-May	3.6	3.1	2.4	0.9	-0.3	-0.6	0.1	2.4	3.9	3.5	3.5	3.8	4.2	3.7	3.2	3.7	3.8	3.7	3.8	3.6	2.8	1.5	1.5	1.4	2.6	4.2	
16-May	1.3	0.6	0.0	-0.3	-0.4	0.0	0.7	1.4	2.0	2.9	3.2	4.1	4.7	5.1	6.3	6.7	7.2	7.2	6.3	5.0	4.0	3.6	4.0	3.3	3.3	7.2	
17-May	2.9	3.1	3.8	3.6	3.3	3.0	2.7	3.3	4.8	6.8	9.0	11.2	12.6	12.6	13.7	13.8	13.1	12.3	11.9	11.4	10.1	11.1	12.8	12.2	8.5	13.8	
18-May	11.9	11.1	10.3	9.7	8.6	8.2	8.6	10.2	11.3	11.9	13.3	14.2	15.1	14.9	14.9	14.7	14.0	16.9	16.6	13.4	11.1	11.1	13.7	13.5	12.5	16.9	
19-May	13.0	12.6	11.6	10.6	9.6	9.7	11.6	13.3	14.6	16.4	17.5	18.3	19.1	19.1	15.9	15.5	18.1	17.6	17.0	16.5	15.1	13.5	11.5	10.2	14.5	19.1	
20-May	9.3	8.5	8.2	8.1	7.8	7.8	8.1	8.6	9.0	9.5	9.9	10.5	11.7	11.8	12.8	12.9	12.2	13.1	13.6	13.4	13.0	12.1	11.3	11.1	10.6	13.6	
21-May	10.6	10.2	8.9	8.6	9.3	9.3	10.7	11.6	13.5	14.1	15.0	14.9	15.2	15.3	15.5	15.8	15.1	14.6	14.3	13.6	12.4	11.5	10.6	9.8	12.5	15.8	
22-May	8.9	8.6	8.1	7.5	7.4	8.1	9.6	10.7	12.0	12.9	13.3	14.0	14.5	14.4	14.9	15.2	14.9	14.3	14.3	14.3	13.6	12.8	12.1	11.1	12.0	15.2	
23-May	10.7	9.7	9.3	9.0	8.9	10.1	12.0	13.8	16.4	18.3	19.2	19.9	20.3	20.2	17.8	16.4	16.4	18.5	19.2	18.1	16.6	14.9	13.5	13.6	15.1	20.3	
24-May	12.9	12.6	11.9	11.2	11.3	12.5	13.9	14.5	16.3	19.4	20.8	21.9	23.2	23.7	24.3	24.5	24.7	23.7	21.1	19.9	18.1	17.2	18.2	17.6	18.1	24.7	
25-May	16.9	16.0	15.8	15.3	14.6	15.3	16.6	18.6	20.5	22.1	23.5	24.9	25.8	26.5	26.9	27.3	27.1	26.9	26.4	25.1	23.9	22.9	21.7	20.6	21.7	27.3	
26-May	19.5	18.8	18.3	17.7	17.1	18.1	18.8	20.4	22.2	23.9	25.4	27.2	28.7	29.5	30.2	30.6	30.0	26.3	22.9	19.3	17.9	17.3	16.8	16.1	22.2	30.6	
27-May	16.1	15.6	14.9	13.6	13.0	14.2	15.9	16.8	18.3	19.4	20.1	21.9	22.8	23.0	23.2	23.3	23.1	23.1	23.1	22.4	20.7	19.5	18.5	17.9	19.2	23.3	
28-May	16.7	15.2	13.8	13.3	14.4	15.6	18.1	19.8	21.0	22.5	23.8	25.0	26.2	26.8	27.2	27.8	28.7	29.2	28.8	24.5	23.5	22.5	21.7	20.6	21.9	29.2	
29-May	19.6	18.3	18.5	18.7	18.0	17.5	18.0	17.4	18.7	24.2	24.1	25.3	30.3	32.1	32.7	33.1	32.7	32.3	31.4	30.1	28.7	26.0	22.3	21.0	24.6	33.1	
30-May	19.6	18.7	17.5	16.6	14.8	13.2	14.0	15.7	16.0	16.7	17.4	19.2	20.3	20.6	20.5	20.9	20.9	20.9	19.8	18.8	18.4	17.1	16.3	15.7	17.9	20.9	
31-May	14.6	13.3	12.6	13.7	13.6	14.0	15.5	16.6	17.4	18.5	18.4	18.2	18.2	17.0	17.8	17.6	15.6	14.8	14.9	14.1	13.7	13.2	12.5	11.9	15.3	18.5	
8.9 8.5 8.1 7.8 7.4 7.6 8.5 9.5 10.9 12.3 13.4 14.2 14.8 15.1 15.4 15.2 15.3 15.2 14.7 13.7 12.6 11.6 11.0 10.0																										Diurnal Average	
19.6 18.8 18.5 18.7 18.0 18.1 18.8 20.4 22.2 24.2 25.4 27.2 30.3 32.1 32.7 33.1 32.7 32.3 31.4 30.1 28.7 26.0 22.3 21.0																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort Chipewyan - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	24	3.23	3.23
0 - 10	296	39.78	43.01
10 - 20	336	45.16	88.17
> 20	88	11.83	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

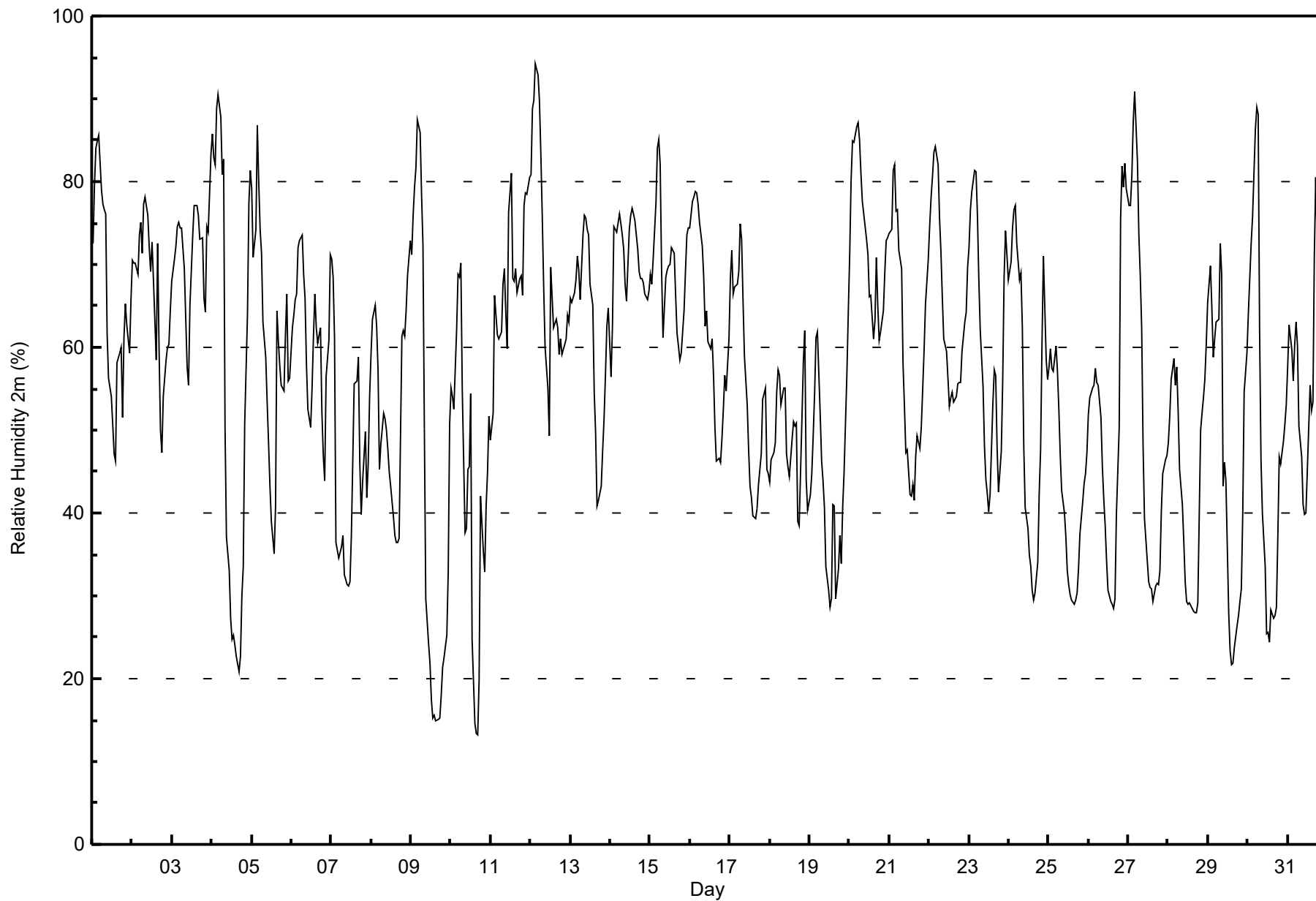
Fort Chipewyan - May 2025

Maximum Value: 94.2 % on May 12 04:00																				Maximum Daily Average: 73.0 % on May 20					Hours in Service: 744	
Minimum Value: 13.2 % on May 10 17:00																				Minimum Daily Average: 42.6 % on May 9					Hours of Data: 744	
Maximum Diurnal Average: 72.5 % at hour 5																				Minimum Diurnal Average: 45.8 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 57.26 %																				Percentiles: P ₁ = 16.4 P ₁₀ = 31.4 Q ₁ = 45.3 Median = 59.2 Q ₃ = 70.7 P ₉₀ = 78.0 P ₉₉ = 89.4					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	72.5	79.7	84.2	84.9	85.6	79.1	77.2	76.6	76.1	61.7	56.2	54.1	50.6	47.1	46.4	58.1	59.4	60.0	51.5	61.3	65.2	62.8	59.3	65.8	65.6	85.6
2-May	70.5	70.1	70.1	68.8	73.5	75.1	71.4	77.3	78.1	75.9	72.1	69.2	72.6	68.2	58.5	72.6	59.9	50.0	47.4	54.1	58.4	59.9	60.4	64.4	66.6	78.1
3-May	67.9	70.6	72.3	74.5	75.1	74.4	74.4	69.4	63.5	57.6	55.5	65.0	73.6	77.1	77.1	77.1	75.9	73.0	73.2	66.0	64.2	74.6	73.8	83.4	71.2	83.4
4-May	85.7	82.8	82.0	88.8	90.5	87.9	80.9	82.8	50.3	37.1	33.0	27.3	24.7	25.2	24.1	22.8	20.9	22.7	29.9	33.6	50.6	64.0	77.5	81.4	54.4	90.5
5-May	79.1	70.9	74.3	86.9	80.0	74.3	71.3	63.1	58.7	53.4	48.5	43.2	38.9	35.1	40.8	64.3	60.6	57.7	55.4	54.8	61.4	66.5	55.9	56.3	60.5	86.9
6-May	62.4	63.9	65.7	66.5	72.1	72.9	73.6	68.9	65.9	57.9	52.6	50.3	55.1	61.3	66.4	62.4	60.6	62.3	52.2	46.9	43.9	56.4	60.8	71.1	61.3	73.6
7-May	70.7	68.5	61.2	36.5	34.7	35.3	35.9	37.3	32.6	31.4	31.2	31.6	37.3	46.3	55.6	55.9	58.9	46.1	39.8	43.8	49.8	41.9	45.9	54.0	45.1	70.7
8-May	59.1	63.5	65.1	62.5	57.2	45.2	48.3	52.1	51.4	49.9	47.6	45.0	43.3	39.4	37.3	36.4	36.5	36.9	61.3	62.0	61.3	64.4	68.7	72.8	52.8	72.8
9-May	71.2	75.9	79.3	81.7	87.5	85.9	78.5	72.4	50.1	29.7	24.2	21.9	17.4	15.3	15.6	15.0	15.1	15.3	18.0	21.4	22.6	25.2	32.9	50.6	42.6	87.5
10-May	55.1	54.0	52.5	62.2	68.8	68.5	70.1	55.0	37.7	38.1	45.3	45.6	54.4	24.8	14.5	13.4	13.2	19.9	42.1	35.4	32.9	40.9	44.9	51.6	43.4	70.1
11-May	48.8	52.1	66.3	63.9	61.6	61.0	61.9	67.6	69.4	64.3	59.9	76.2	80.9	68.2	68.0	69.5	66.5	68.3	68.6	66.2	77.1	78.6	78.5	80.4	67.7	80.9
12-May	80.8	88.8	89.9	94.2	92.9	89.6	83.3	75.8	67.3	60.0	55.2	49.4	69.7	66.1	62.3	63.4	62.4	59.1	61.1	59.2	60.4	61.0	63.8	63.1	69.9	94.2
13-May	65.9	65.5	66.7	68.1	71.0	69.3	65.7	73.6	75.9	75.6	74.3	73.6	67.6	65.0	54.6	49.7	40.9	41.5	43.2	47.4	51.4	56.5	62.6	64.8	62.1	75.9
14-May	56.4	62.6	74.6	74.2	74.0	76.0	74.9	73.5	71.9	67.7	65.5	74.2	75.9	76.8	76.0	75.3	71.8	69.2	68.3	68.4	67.7	66.4	65.7	66.8	70.6	76.8
15-May	68.8	67.7	70.7	77.4	84.0	85.0	82.0	69.2	61.2	68.5	69.2	69.8	70.0	72.0	71.4	66.2	61.6	60.1	58.4	59.4	64.5	69.1	73.6	74.5	69.8	85.0
16-May	74.4	77.5	78.1	78.9	78.6	77.2	75.1	72.3	68.5	62.6	64.5	60.6	59.8	61.0	56.6	50.3	46.3	46.6	46.2	48.9	52.6	56.6	54.7	61.1	62.9	78.9
17-May	68.3	71.7	66.4	67.2	67.6	69.2	75.0	73.0	65.7	59.0	53.1	47.7	43.3	41.9	39.7	39.3	40.5	43.4	45.3	47.1	53.7	55.1	45.3	44.7	55.1	75.0
18-May	43.8	46.4	47.2	48.4	54.5	57.3	56.7	53.1	55.0	55.0	47.1	45.6	44.4	49.0	51.1	50.4	50.8	39.1	38.5	51.5	58.3	62.1	44.1	40.3	49.6	62.1
19-May	42.1	44.8	49.4	54.5	61.2	61.8	51.9	46.3	44.0	40.8	33.6	30.6	28.7	29.6	41.0	40.8	29.7	33.2	37.2	34.0	40.7	44.9	56.9	64.3	43.4	64.3
20-May	71.2	80.2	84.9	84.7	86.6	87.0	85.1	81.0	77.7	74.6	73.1	71.1	66.1	66.2	61.0	63.2	70.9	65.0	60.8	61.9	64.5	69.0	72.9	73.1	73.0	87.0
21-May	73.7	74.2	81.4	82.0	76.5	76.6	71.8	69.5	58.0	52.9	47.3	47.6	42.2	42.1	43.3	41.6	46.8	49.3	47.8	50.4	55.0	59.6	65.2	70.7	59.4	82.0
22-May	74.8	78.1	80.6	83.6	84.2	82.1	75.7	71.5	65.9	61.0	59.5	56.2	52.8	54.0	54.6	53.4	54.0	55.5	55.7	55.7	59.4	63.1	64.2	69.6	65.2	84.2
23-May	72.1	76.6	78.9	81.3	81.2	75.9	68.2	62.1	55.3	48.2	44.0	42.4	40.2	42.1	53.1	57.4	56.6	47.9	42.5	47.4	55.9	68.4	74.1	71.2	60.1	81.3
24-May	68.1	70.4	74.4	76.7	77.0	72.6	68.2	69.0	62.4	48.1	40.7	38.1	35.0	33.6	30.6	29.5	30.3	34.1	42.4	47.6	60.4	71.0	58.4	56.2	53.9	77.0
25-May	57.6	59.8	57.5	57.1	60.1	57.1	52.5	46.9	42.8	40.1	37.0	33.1	31.3	30.2	29.5	29.0	29.5	30.4	33.2	37.5	41.4	43.5	44.7	47.3	42.9	60.1
26-May	51.8	53.9	55.1	55.4	57.4	55.8	55.4	51.6	45.5	41.8	38.4	34.3	30.7	29.4	29.0	28.6	29.7	39.8	50.3	75.6	81.9	79.4	82.2	79.2	51.3	82.2
27-May	77.0	77.1	80.7	87.3	90.8	82.4	73.6	68.6	62.4	48.2	39.4	34.3	31.8	31.0	30.8	29.3	31.1	31.6	31.3	33.1	40.2	44.7	46.4	47.0	52.1	90.8
28-May	48.5	51.7	56.1	58.6	55.4	57.7	52.2	45.3	41.0	36.6	31.7	29.3	28.9	29.1	28.5	28.1	27.9	28.0	29.2	50.0	52.0	53.9	56.1	60.3	43.2	60.3
29-May	65.4	69.8	64.7	58.8	61.0	63.1	63.4	72.5	68.9	43.1	46.2	43.9	27.9	23.4	21.7	21.9	23.7	26.4	27.6	29.3	30.9	39.8	54.6	59.4	46.1	72.5
30-May	64.1	68.4	72.5	75.8	86.2	89.0	88.1	62.1	46.5	40.1	33.5	25.5	25.7	24.5	28.4	27.2	27.6	28.6	37.1	46.7	46.0	48.7	50.7	53.0	49.8	89.0
31-May	57.6	62.8	59.7	55.9	60.3	63.1	60.2	50.5	46.8	41.1	39.8	39.9	45.0	55.5	52.4	53.4	71.0	80.5	72.7	86.3	88.3	89.2	93.1	93.7	63.3	93.7
65.3 67.7 69.8 70.9 72.5 71.2 68.5 64.8 58.6 52.3 49.0 47.6 47.3 46.1 45.8 46.6 46.1 45.9 47.4 51.1 55.2 59.3 60.9 64.3 Diurnal Average																										
85.7 88.8 89.9 94.2 92.9 89.6 88.1 82.8 78.1 75.9 74.3 76.2 80.9 77.1 77.1 77.1 75.9 80.5 73.2 86.3 88.3 89.2 93.1 93.7 Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Fort Chipewyan - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	11	1.48	1.48
20 - 40	119	15.99	17.47
40 - 60	255	34.27	51.75
60 - 80	299	40.19	91.94
80 - 100	60	8.06	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

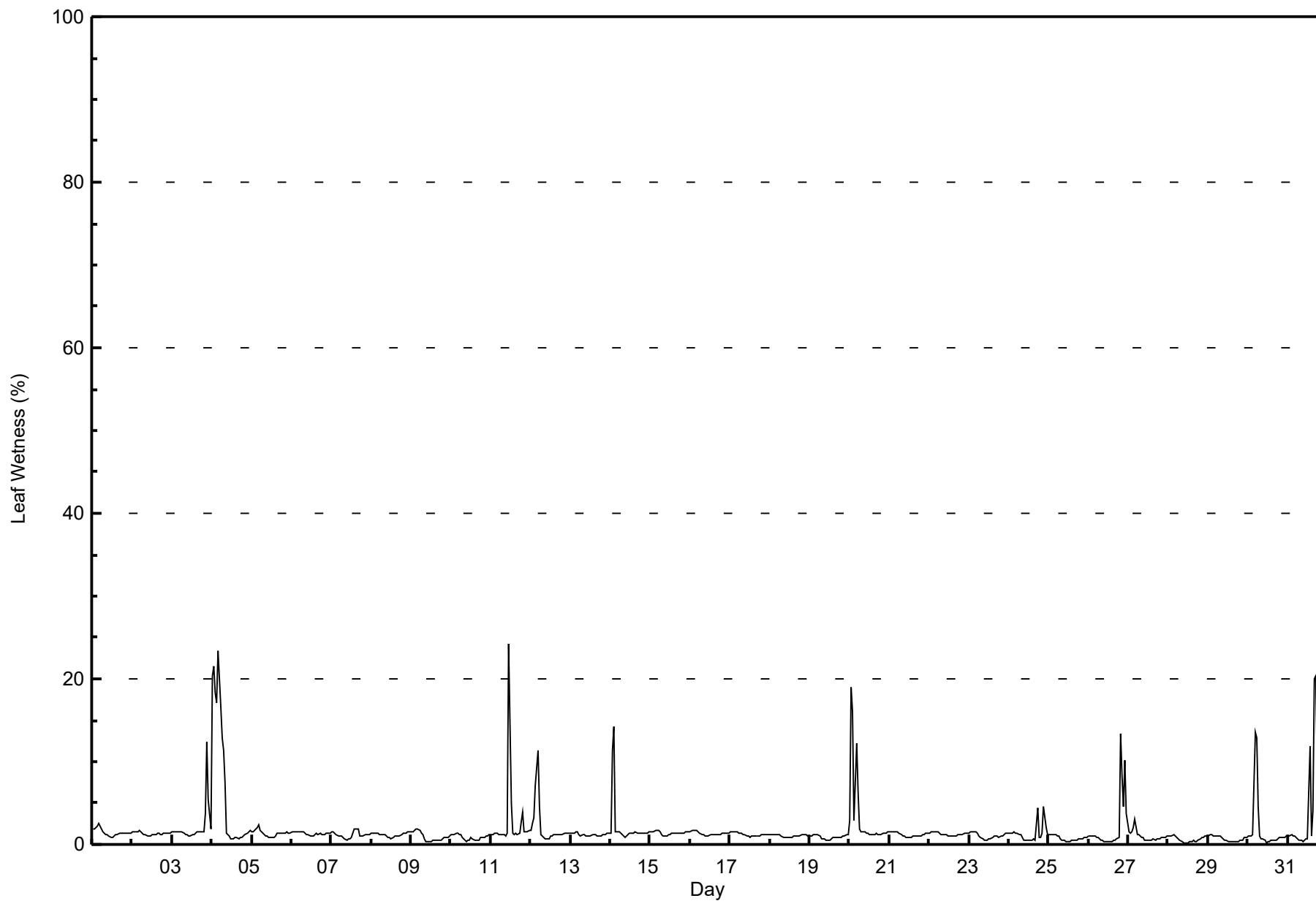
Fort Chipewyan - May 2025

Maximum Value: 24.3 % on May 11 12:00																			Maximum Daily Average: 6.8 % on May 4							Hours in Service: 744	
Minimum Value: 0.1 % on May 28 11:00																			Minimum Daily Average: 0.6 % on May 28							Hours of Data: 744	
Maximum Diurnal Average: 3.3 % at hour 5																			Minimum Diurnal Average: 0.8 % at hour 11							Hours of Missing Data: 0	
Monthly Average: 1.73 %																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.2 Q ₃ = 1.4 P ₉₀ = 1.7 P ₉₉ = 18.7							Hours of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	1.9	1.9	2.1	2.3	2.5	1.9	1.4	1.3	1.2	1.1	1.0	0.9	0.9	1.0	1.1	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
2-May	1.5	1.5	1.5	1.5	1.7	1.6	1.3	1.2	1.1	1.1	1.0	1.0	1.2	1.3	1.2	1.4	1.3	1.2	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.3	
3-May	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.3	1.2	1.1	1.0	1.0	1.1	1.3	1.4	1.4	1.5	1.5	1.5	1.5	3.8	12.3	5.4	1.9	2.1		
4-May	20.3	21.5	18.3	17.2	23.4	16.5	12.8	11.4	7.4	1.3	1.0	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.9	0.9	1.1	1.3	1.5	1.6	6.8		
5-May	1.6	1.5	1.9	2.0	2.3	1.7	1.6	1.3	1.1	1.0	0.9	0.8	0.8	0.9	1.1	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.4	1.4	1.4		
6-May	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.2	1.2	1.0	1.0	1.1	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	1.4	1.3		
7-May	1.4	1.4	1.4	1.1	1.1	1.0	1.0	0.9	0.6	0.6	0.7	0.7	0.8	1.4	1.8	1.8	1.9	1.1	1.0	1.1	1.2	1.1	1.2	1.2	1.1		
8-May	1.3	1.3	1.4	1.4	1.3	1.2	1.2	1.2	1.1	1.1	0.9	0.8	0.8	0.8	1.0	1.0	0.9	1.0	1.2	1.3	1.3	1.4	1.5	1.5	1.2		
9-May	1.5	1.6	1.7	1.8	1.9	1.7	1.3	1.1	0.7	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.1	0.9		
10-May	1.2	1.3	1.2	1.3	1.3	1.2	1.2	0.9	0.6	0.4	0.5	0.6	0.8	0.6	0.5	0.6	0.5	0.6	0.8	0.9	0.9	1.0	1.1	1.2	0.9		
11-May	1.2	1.2	1.3	1.3	1.3	1.2	1.1	1.1	1.2	1.1	1.4	24.3	4.9	1.3	1.2	1.3	1.2	1.3	2.8	3.9	1.5	1.6	1.6	1.6	2.6		
12-May	1.7	2.5	3.2	7.1	11.4	4.5	1.2	1.0	0.8	0.7	0.6	0.6	0.9	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	2.1		
13-May	1.4	1.4	1.4	1.5	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.2		
14-May	1.3	11.4	14.2	1.5	1.5	1.5	1.3	1.3	1.0	0.9	1.0	1.3	1.3	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.3		
15-May	1.5	1.5	1.6	1.6	1.8	1.7	1.5	1.2	0.9	1.1	1.1	1.1	1.2	1.3	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.4		
16-May	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.3		
17-May	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.1	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.2		
18-May	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.0	0.9	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.0	0.9	1.1	1.2	1.3	1.1	1.1	1.0		
19-May	1.1	1.1	1.1	1.2	1.2	1.1	1.0	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.8	0.9	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.2	0.9		
20-May	2.9	19.0	16.2	2.9	12.2	6.4	1.9	1.6	1.6	1.5	1.4	1.4	1.2	1.3	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.4	3.5		
21-May	1.4	1.5	1.5	1.6	1.5	1.5	1.4	1.2	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.3	1.3	1.2		
22-May	1.4	1.5	1.5	1.6	1.6	1.5	1.4	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.3		
23-May	1.4	1.5	1.5	1.6	1.5	1.3	1.1	0.8	0.7	0.5	0.6	0.6	0.6	0.7	0.9	1.0	1.0	1.0	0.9	1.0	1.1	1.3	1.3	1.4	1.1		
24-May	1.3	1.4	1.4	1.4	1.4	1.3	1.3	1.2	0.8	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.6	4.3	0.8	0.9	1.3	4.6	2.0	1.3		
25-May	1.2	1.2	1.2	1.2	1.2	1.1	1.0	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.7		
26-May	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.6	0.5	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.9	13.4	8.4	4.6	10.1	3.6	2.2		
27-May	1.4	1.4	1.5	2.0	3.1	1.3	1.1	1.1	0.8	0.8	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.9	0.9	0.9	1.0		
28-May	1.0	1.0	1.1	1.2	1.0	0.8	0.7	0.5	0.3	0.2	0.1	0.1	0.2	0.3	0.4	0.5	0.4	0.4	0.5	0.7	0.8	0.9	0.9	1.0	0.6		
29-May	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.6	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.9	0.7		
30-May	1.0	1.0	1.1	1.3	13.5	12.9	4.6	1.0	0.7	0.7	0.5	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.9	0.9	1.0	1.9		
31-May	1.0	1.1	1.1	1.1	1.0	0.9	0.8	0.6	0.5	0.3	0.5	0.6	0.7	11.9	1.0	4.1	20.0	20.3	9.1	13.2	4.7	6.6	13.8	19.0	5.6		
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Fort Chipewyan - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	22	2.96	2.96
0.4 - 0.5	53	7.12	10.08
0.6 - 0.7	55	7.39	17.47
0.8 - 1.4	461	61.96	79.44
1.5 - 10	94	12.63	92.07
> 10	26	3.49	95.56

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

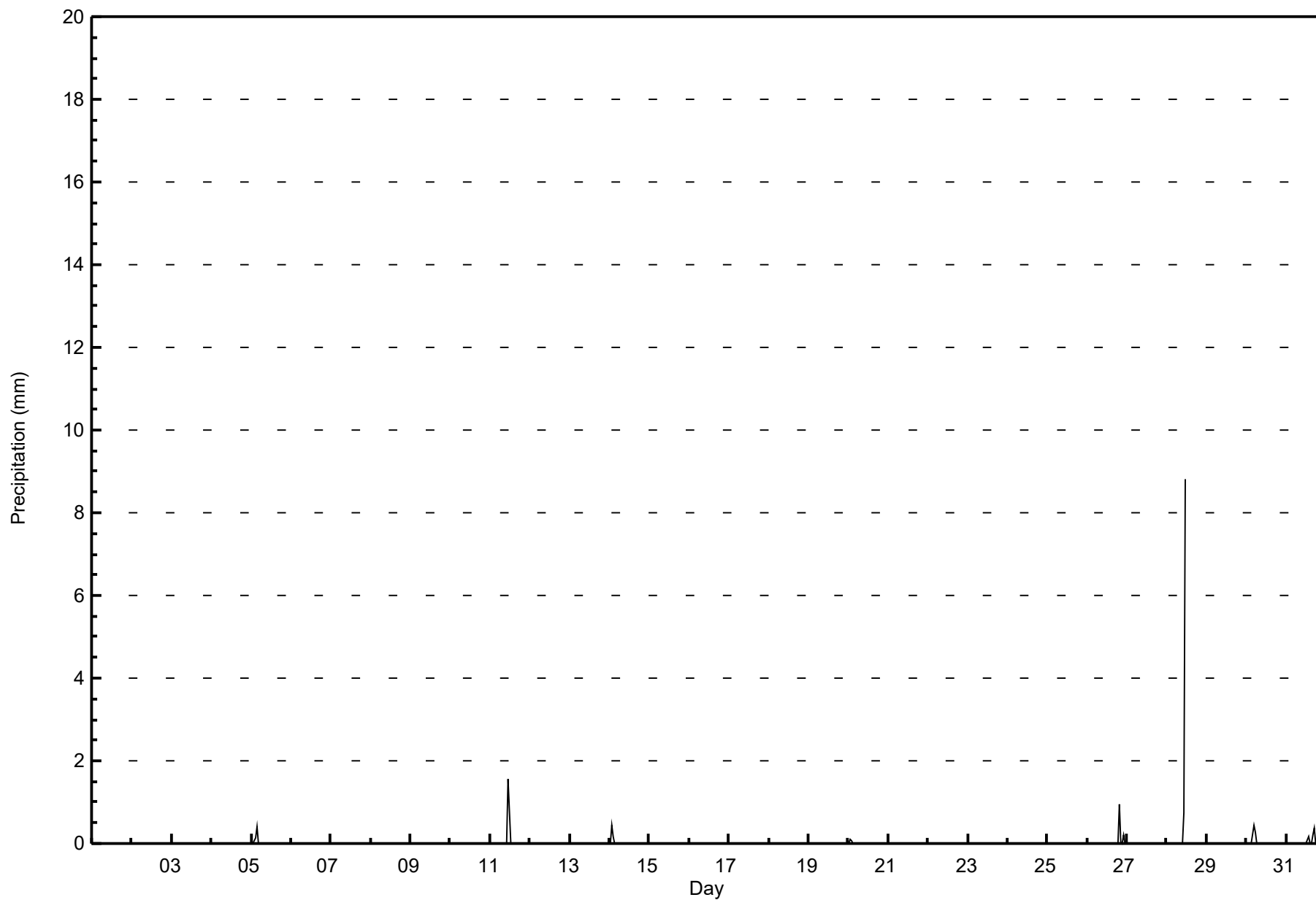
Fort Chipewyan - May 2025

Maximum Value: 8.8 mm on May 28 12:00																				Maximum Daily Total: 9.6 mm on May 28					Hours in Service: 744		
Minimum Value: 0.0 mm on May 1 01:00																				Minimum Daily Total: 0.0 mm on May 1					Hours of Data: 741		
Maximum Diurnal Total: 10.4 mm at hour 12																				Minimum Diurnal Total: 0.0 mm at hour 1					Hours of Missing Data: 3		
Monthly Total: 15.34 mm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.3					Hours of Calibration: 0		
																									Percent Operational Time: 99.6		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5-May	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	
6-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	
12-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-May	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5		
15-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20-May	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	
21-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
23-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.2	0.0	1.2	0.9	
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	8.8	DF	DF	DF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	8.8	
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30-May	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.4	
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.4	0.0	0.1	0.0	0.0	0.0	0.2	1.0	0.4	0.4	
																									Diurnal Average		
																									Diurnal Maximum		
DF - DAS Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Fort Chipewyan - May 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	733	98.92	98.92
0.4 - 0.5	4	0.54	99.46
0.6 - 0.7	1	0.13	99.60
0.8 - 1.4	1	0.13	99.73
1.5 - 10	2	0.27	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

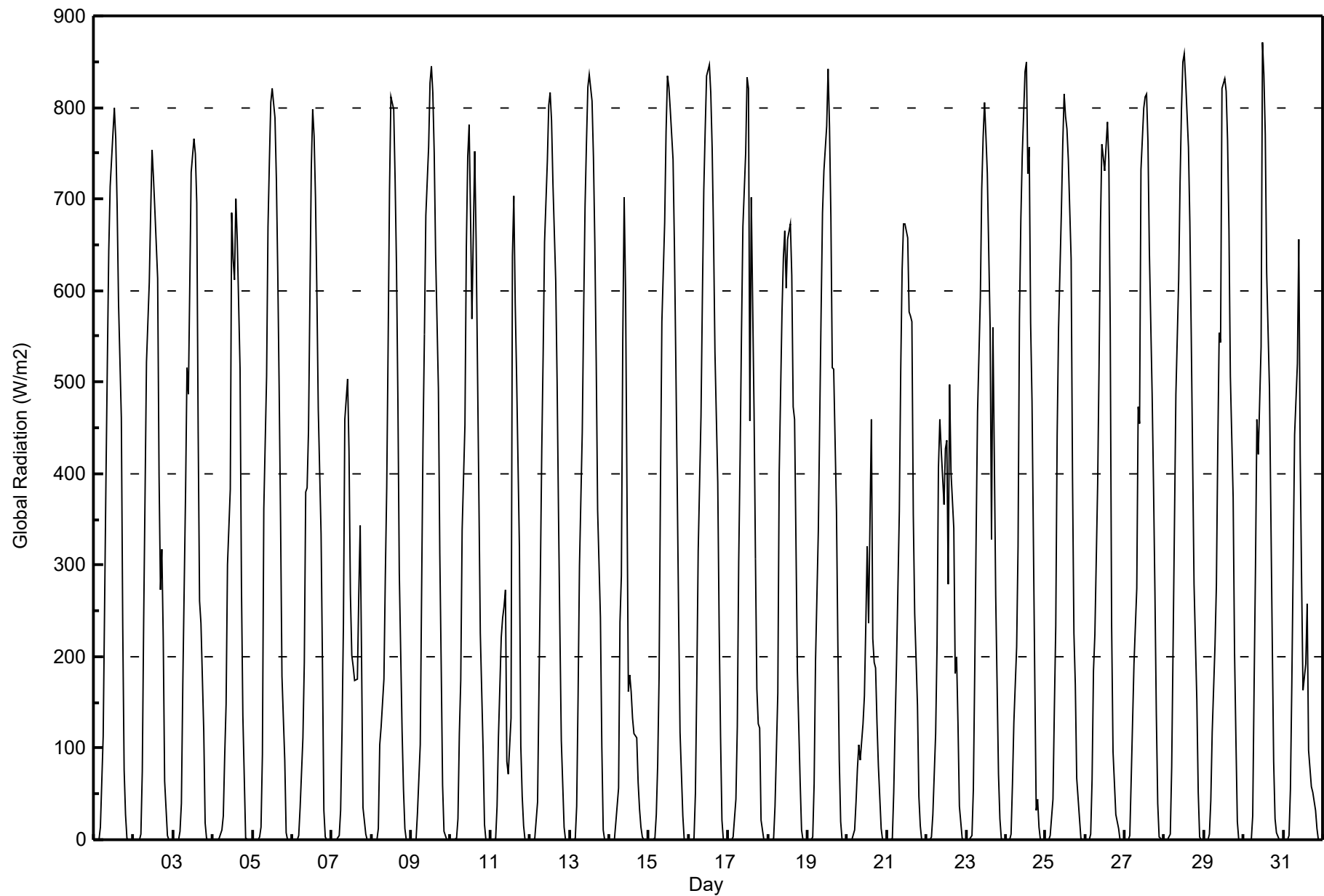
Fort Chipewyan - May 2025

Maximum Value: 870.9 W/m2 on May 30 12:00																					Maximum Daily Average: 361.6 W/m2 on May 28				Hours in Service: 744	
Minimum Value: 0.0 W/m2 on May 1 22:00																					Minimum Daily Average: 111.5 W/m2 on May 20				Hours of Data: 744	
Maximum Diurnal Average: 680.3 W/m2 at hour 13																					Minimum Diurnal Average: 0.0 W/m2 at hour 1				Hours of Missing Data: 0	
Monthly Average: 270.40 W/m2																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.5 Median = 162.9 Q ₃ = 519.4 P ₉₀ = 742.2 P ₉₉ = 837.3				Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	0.0	0.0	0.0	0.2	14.0	113.5	253.1	394.6	523.1	643.9	714.6	771.9	798.7	765.9	690.9	585.5	460.5	233.1	75.5	28.0	2.1	0.0	0.0	0.0	294.6	798.7
2-May	0.0	0.0	0.0	0.0	6.6	75.3	240.9	379.2	521.6	609.4	684.5	753.4	723.7	688.3	613.6	397.8	272.5	317.6	219.8	63.6	4.1	0.0	0.0	0.0	273.8	753.4
3-May	0.0	0.0	0.0	0.0	9.1	40.0	170.0	381.6	515.7	487.3	606.2	729.7	766.5	748.4	695.5	447.0	260.6	236.3	119.4	18.3	1.0	0.0	0.0	0.0	259.7	766.5
4-May	0.0	0.0	0.0	0.0	1.7	11.1	26.2	92.1	148.2	300.1	382.9	684.3	634.7	611.8	699.5	655.0	514.6	276.3	135.3	69.4	2.2	0.0	0.0	0.0	218.6	699.5
5-May	0.0	0.0	0.0	0.0	2.5	14.4	93.8	362.1	507.0	669.7	741.1	805.8	820.3	788.4	721.3	618.8	491.2	349.3	178.0	86.5	7.2	0.0	0.0	0.0	302.4	820.3
6-May	0.0	0.0	0.0	0.1	4.8	35.0	112.1	193.3	380.4	384.2	447.5	734.1	798.5	769.4	701.8	596.7	470.0	333.6	190.2	31.4	2.8	0.0	0.0	0.0	257.7	798.5
7-May	0.0	0.0	0.0	0.0	4.2	31.5	119.0	235.6	458.6	502.9	423.9	268.8	202.1	189.1	174.5	176.1	267.7	343.3	196.8	35.4	6.8	0.0	0.0	0.0	151.5	502.9
8-May	0.0	0.0	0.0	0.4	12.9	103.2	122.8	175.6	288.3	384.7	539.8	709.1	811.1	798.1	721.2	624.9	480.7	291.0	119.3	54.9	12.2	0.1	0.0	0.0	260.4	811.1
9-May	0.0	0.0	0.0	0.6	28.7	104.3	274.3	438.0	551.9	682.6	756.8	826.7	844.9	815.8	749.9	640.7	492.6	312.2	190.1	60.1	8.6	0.2	0.0	0.0	324.1	844.9
10-May	0.0	0.0	0.0	0.9	23.0	115.5	174.4	339.0	453.1	647.5	745.4	781.2	683.5	569.1	751.8	654.1	513.9	372.5	226.1	98.4	16.7	0.2	0.1	0.0	298.6	781.2
11-May	0.0	0.0	0.0	1.6	36.6	112.7	220.4	242.2	254.4	273.0	85.7	71.5	133.1	637.3	703.5	585.9	505.3	318.7	101.6	47.9	15.2	0.2	0.0	0.0	181.1	703.5
12-May	0.0	0.0	0.0	1.1	40.9	164.9	288.2	425.3	531.4	653.1	742.1	803.0	816.6	785.7	716.5	610.6	498.8	354.9	226.4	108.1	14.2	0.2	0.0	0.0	324.3	816.6
13-May	0.0	0.0	0.0	1.2	36.5	155.9	298.4	445.8	577.4	692.6	761.9	821.8	835.8	806.9	746.0	650.9	520.0	360.1	242.0	102.3	11.3	0.2	0.0	0.0	336.1	835.8
14-May	0.0	0.0	0.0	0.5	17.8	56.0	237.9	288.1	544.0	701.6	599.5	161.9	179.4	161.2	132.3	116.5	111.7	62.1	34.0	13.6	3.7	0.1	0.0	0.0	142.6	701.6
15-May	0.0	0.0	0.0	1.5	27.1	81.7	178.0	390.3	565.4	673.9	773.8	833.9	822.3	798.2	742.2	646.7	520.7	385.1	243.8	117.1	26.3	0.5	0.0	0.0	326.2	833.9
16-May	0.0	0.0	0.0	2.2	50.4	172.6	315.9	462.4	592.0	709.7	775.6	834.7	846.2	816.3	754.7	658.4	531.8	390.0	234.0	113.6	22.0	0.4	0.0	0.0	345.1	846.2
17-May	0.0	0.0	0.0	2.5	44.5	124.0	303.9	418.0	553.0	669.2	751.0	832.3	820.2	458.0	701.6	466.2	307.0	164.4	126.6	121.8	21.0	0.5	0.0	0.0	286.9	832.3
18-May	0.0	0.0	0.0	1.8	37.1	97.2	160.5	401.7	575.9	636.6	665.0	602.2	655.9	672.2	615.7	473.5	458.7	324.3	184.3	62.2	11.0	0.3	0.0	0.0	276.5	672.2
19-May	0.0	0.0	0.0	2.8	60.9	195.9	337.5	458.2	577.1	685.6	730.3	780.1	841.3	779.6	680.7	515.9	514.7	357.8	212.5	86.8	19.9	0.7	0.0	0.0	326.6	841.3
20-May	0.0	0.0	0.0	0.8	10.0	40.9	78.4	103.6	86.5	126.9	157.0	234.6	320.1	236.3	459.6	219.2	193.9	187.2	127.7	81.6	12.3	0.1	0.0	0.0	111.5	459.6
21-May	0.0	0.0	0.0	2.2	51.9	126.6	193.6	357.9	511.8	622.1	673.0	673.1	657.2	575.9	571.8	566.0	356.1	247.3	146.2	47.0	15.4	0.6	0.0	0.0	266.5	673.1
22-May	0.0	0.0	0.0	2.3	27.8	116.4	212.2	405.3	458.7	425.9	366.6	427.2	436.8	278.4	497.0	401.4	339.8	181.8	199.6	126.1	36.9	1.3	0.0	0.0	205.9	497.0
23-May	0.0	0.0	0.0	4.7	54.2	186.2	334.5	467.4	592.5	711.0	766.9	805.0	769.1	727.6	560.1	328.3	560.2	419.2	267.0	72.1	22.8	1.3	0.0	0.0	318.8	805.0
24-May	0.0	0.0	0.0	5.7	61.4	128.1	210.8	320.4	569.2	677.8	748.2	838.3	849.2	727.6	755.9	564.4	479.4	172.6	31.3	43.7	13.4	0.2	0.0	0.0	299.9	849.2
25-May	0.0	0.0	0.0	3.8	43.6	143.2	233.7	441.8	558.1	685.5	759.8	813.9	790.0	776.9	742.2	635.3	394.4	226.2	169.6	67.2	22.9	1.3	0.0	0.0	312.9	813.9
26-May	0.0	0.0	0.0	6.2	65.1	184.6	223.8	388.5	519.2	671.9	759.0	745.7	731.0	784.6	742.0	556.3	232.9	95.9	27.3	20.1	11.6	0.4	0.0	0.0	281.9	784.6
27-May	0.0	0.0	0.0	4.2	65.2	192.0	233.7	275.3	472.8	455.3	731.5	799.6	812.0	814.0	762.8	643.3	486.6	386.3	269.9	137.1	40.3	3.0	0.0	0.0	316.0	814.0
28-May	0.0	0.0	0.1	6.5	78.7	211.9	347.5	486.8	611.2	717.9	797.1	850.3	859.2	828.0	757.3	674.0	550.5	414.7	279.5	152.6	51.9	3.1	0.0	0.0	361.6	859.2
29-May	0.0	0.0	0.1	5.9	42.0	118.1	212.4	278.3	430.0	554.0	542.3	820.7	831.3	817.4	764.5	666.6	506.2	373.8	205.2	108.2	20.2	0.4	0.0	0.0	304.1	831.3
30-May	0.0	0.0	0.0	0.0	0.6	26.2	168.3	299.5	459.0	421.3	538.8	870.9	836.0	771.0	619.3	493.3	355.2	216.0	86.2	23.6	7.7	0.3	0.0	0.0	258.0	870.9
31-May	0.0	0.0	0.1	5.0	54.3	169.5	305.7	442.9	520.8	655.5	420.2	284.3	163.8	191.5	257.9	97.9	77.1	57.8	52.1	32.0	12.3	0.6	0.0	0.0	158.4	655.5



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Global Radiation (GR) - W/m2
Fort Chipewyan - May 2025

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	256	34.41	34.41
21 - 100	74	9.95	44.35
101 - 300	128	17.20	61.56
301 - 600	135	18.15	79.70
601 - 900	151	20.30	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - May 2025

Maximum Speed: 41 km/h on May 25 12:00										Maximum Daily Speed Average: 27.6 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 4 08:00										Minimum Daily Speed Average: 3.8 km/h on May 10										Hours of Data: 741						
Maximum Diurnal Speed Average: 10.8 km/h at hour 17										Minimum Diurnal Speed Average: 7.0 km/h at hour 8										Hours of Missing Data: 3						
Monthly Average Velocity: 8.2 km/h 126.7 deg										Percentiles: P ₁ = 3 P ₁₀ = 8 Q ₁ = 13 Median = 18 Q ₃ = 25 P ₉₀ = 29 P ₉₉ = 38										Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	E3	E7	E8	E9	ENE6	ESE8	E9	E11	E13	SE16	SSE17	SSE16	SSE14	S15	SSE14	E16	E16	E14	SE15	E13	E18	E18	E18	E18	ESE11.1	E18
2-May	E17	E19	E18	ENE10	ENE5	E8	E13	E11	E12	E11	E10	E11	E23	E27	E26	E27	ENE21	ENE28	ENE27	ENE27	ENE30	ENE29	ENE30	ENE31	ENE19.2	ENE31
3-May	ENE28	ENE27	ENE30	ENE33	ENE34	ENE38	ENE37	ENE34	ENE34	ENE23	ENE20	E16	ESE14	E14	E21	E25	E26	E26	E21	NE8	NNE4	E9	ENE7	ESE15	ENE22.1	ENE38
4-May	ENE10	NW3	ESE4	SE6	SW4	WNW9	N2	NW1	W8	W12WSW15	WSW23	WSW26	WSW27	WSW28	WSW28	W26WNW19	WNW15	WNW13	NW19	WNW17	NW23	NW20	NW20	W12.1	WSW28	
5-May	WNW19	NW20WNW19	NW18	NW17	NW14	NW19	NW21	NW19	NW21WNW19	WNW16	NW13	NNW12	NE10	E26	E25	E24	E24	E25	ENE21	ENE19	ESE27	E29	N7.1	ESE29		
6-May	E25	ESE26	ESE25	E28	E32	E38	E36	E33	E31	ENE27	E22	E20	E17	E19	E22	E21	E20	E18	ENE13	ENE9	ENE8	E11	E22	E22	E22.4	E38
7-May	E19	E20	ESE17	SSE27	SSE27	SSE26	SSE25	S28	S32	S37	SSW32	SSW28	WSW21	WSW22	WSW18	SW14	SSW18	SW21	WSW19	WSW14	WNW13	WNW11	W10	WSW9	SSW14.1	S37
8-May	W10	W8WNW12	W11WNW10	NW14	NNW15	NW15	NW15	NW15	NW15	NW15	NW15	NNW16	NNW15	NNW14	NNW14	NW13	NNW11	ENE13	ENE17	ENE12	ENE9	ENE12	ENE12	NNW8.1	ENE17	
9-May	E14	E12	E9	ESE6	E10	E10	E9	E8	SSW5	SW16WSW16	W18	W20	W24WSW23	W20	W21	W17WSW12	WSW7	WSW4	WSW3	E5	ENE8	E5	ENE8	WSW5.0	W24	
10-May	ENE6	E6	E4	SSE1	E4	ESE3	E3	WSW5	SW6	ESE6	ESE11	E13	E13	WNW1	SW6	S9	SSW9	SSE5	E8	ENE6	ENE4	ENE5	ENE7	ENE9	ESE3.8	E13
11-May	ENE9	E9	E12	E11	E11	E13	E15	E17	E11	E5	SSE11	SSE6	NE9	E15	ESE23	E28	ENE28	ENE25	NE16	NE13	ENE10	ENE11	NE10	NE8	E12.5	ENE28
12-May	NE7	NNW8	NNW8	NNW6	NNW10	NNW7	N5	NNW8	NW11	NNW12	NNW10	NNW10	E18	E25	E21	E24	E24	E22	ENE18	ENE16	NE11	NNE10	NE12	NE17	NE9.1	E25
13-May	NE13	NE11	NE9	NE8	NE7	NE8	ENE7	E18	E24	E23	E21	E22	E23	E26	E24	E27	ENE26	ENE26	ENE30	ENE31	ENE32	ENE30	E27	E26	ENE20.2	ENE32
14-May	E19	SE10	E23	E19	ENE24	NE19	NNW12	NNW15	NNW16	NNW15	NNW18	NNW15	NNW15	NW14	WNW6	ENE16	ENE14	E13	E13	ENE13	ENE12	E12	E12	ESE14	NE9.0	ENE24
15-May	E8	E12	E8	NE7	NE6	NE8	NE9	E9	E8	SSE12	S17	SSE19	C	C	E28	E28	ENE27	ENE27	ENE26	ENE22	ENE17	NE13	ENE16	ENE15	E12.9	E28
16-May	ENE19	ENE18	ENE19	ENE20	ENE19	ENE18	ENE17	E18	E19	E21	E22	E24	E28	E27	ENE24	ENE26	ENE26	ENE25	ENE24	NE23	NE24	ENE27	ENE30	ENE29	ENE22.3	ENE30
17-May	E26	E25	E25	E26	E31	E31	E29	ENE28	ENE32	ENE35	ENE36	ENE35	ENE34	ENE30	ENE29	ENE27	ENE25	ENE23	ENE19	ENE22	E23	E19	SE25	SSE23	E26.1	ENE36
18-May	SSE22	SSE19	SSE21	SSE20	ESE18	ESE18	ESE20	SE18	ESE18	E21	E26	E27	E26	E25	E24	E24	E24	ENE21	ENE18	E16	E18	E15	SSE21	SSE22	ESE18.1	E27
19-May	SSE21	SSE23	SSE22	SE17	ESE13	ESE12	SSE13	S19	SSE21	SSE25	S29	S29	SSE26	SE23	E25	E23	SE31	SE32	SE26	SSE24	SE25	S30	S32	S30	SSE21.7	SE32
20-May	SSE26	SE23	SE26	ESE28	ESE27	ESE28	ESE27	SE29	SE29	SE28	SE26	SE26	SE23	SE30	SE28	SE30	SE34	SE25	SSE26	SSE19	SE16	SE13	SE12	SE16	SE24.3	SE34
21-May	SE18	SE17	E17	ESE17	SE21	SE18	SSE14	SE13	SE22	SE23	SE24	SE29	SE28	SE28	SE28	SE28	SE33	SE31	SE20	SSE22	SSE24	SSE20	SSE18	SSE19	SE21.5	SE33
22-May	SSE19	SE23	SE25	SSE21	SE22	SE20	SSE24	SSE26	SSE28	SSE31	SSE31	S31	S33	S30	S29	S34	S34	S31	SSE27	SSE25	S24	SSE19	SSE20	S21	SSE25.5	S34
23-May	SSE18	SSE13	S19	S19	S18	S18	S19	S16	SSE13	S18	S23	SSE24	S25	SE17	E21	ESE21	E24	SSE27	S25	S20	SE12	ESE16	ESE17	SE20	SSE16.6	SSE27
24-May	SSE20	S18	SSE14	SSE10	SE12	SSE15	SSE14	ESE16	SSE15	S27	SSW29	S28	S29	S30	S28	SSW24	S20	SSW5	W14	ENE4	E7	ESE14	SE18	S22	S15.9	S30
25-May	S24	S22	S22	S19	S16	S19	S25	S34	S36	S38	S39	S41	S39	S35	S32	S32	S32	S26	S24	S22	S21	SSE21	SSE23	SSE25	S27.6	S41
26-May	S25	S24	S24	SSE20	SSE19	SSE15	S12	S17	S21	S24	SSE24	S27	SSW34	S39	SSW38	SSW31	S28WNW14	NW13WNW11	SW14	SW8WSW19	WSW15	WSW15	WSW15	WSW15	S17.7	S39
27-May	W18WSW14	WSW11	SW9	SSW9	SW12	SSW12	SSW13	SW17	WSW23	WSW24	SW28WSW28	WSW24	WSW23	W24	W22	W20	W18	W14WSW12	WSW14	WSW14	WSW13	WSW13	WSW13	WSW13	WSW16.5	WSW28
28-May	WSW11	SW12	SW10	SW9WSW10	WSW12	W15WSW15	W15WSW15	W15WSW16	WSW20	WSW22	WSW17	W14	W14WSW14	WSW9	W5	SSW3	E7	E9	E12	E15	E15	E15	E15	E15	WSW7.6	WSW22
29-May	E13	E16	E16	ESE14	ESE15	E11	E13	E17	E19	SE19	ESE19	ESE21	SSE31	SSE36	SSE38	S36	SSE31	SSE23	SSE24	SSE25	SSE29	SSW21	W29	W22	SSE15.6	SSE38
30-May	W17	W18	W24	W19WNW18	WNW11	W11WNW18	WNW18	WNW15	W16	W16WSW20	W23WSW22	WSW17	WSW11	WSW4	UO	SE8	S17	SSW16	SSW9	SSW8	SSW8	SSW8	SSW8	SSW8	W13.1	W24
31-May	SSW12	SW14WSW12	WSW15	W12WSW12	WSW13	W18	W17WSW18	WSW18	WSW14	SW11	SSW12	S16	SSW16	SW8	WNW3	SSE8	SSE10	SSE11	S10	S12	SSE15	S10	S12	SSE15	SW10.4	W18
ESE8.5 SE8.0 ESE8.5 ESE8.1 ESE7.9 ESE7.7 ESE7.2 ESE7.0 SE7.4 SSE8.2 SSE9.1 SSE9.4 SSE9.2 SSE8.7 SE9.2 SE10.6 ESE10.8 ESE9.3 ESE8.6 ESE8.4 ESE8.5 ESE7.8 ESE8.8 ESE9.7																								Diurnal Average		
ENE28 ENE27 ENE30 ENE33 ENE34 ENE38 ENE37 ENE34 S36 S38 S39 S41 S39 S39 SSE38 S36 SE34 SE32 ENE30 ENE31 ENE32 S30 S32 ENE31																								Diurnal Maximum		
C - Calibration UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

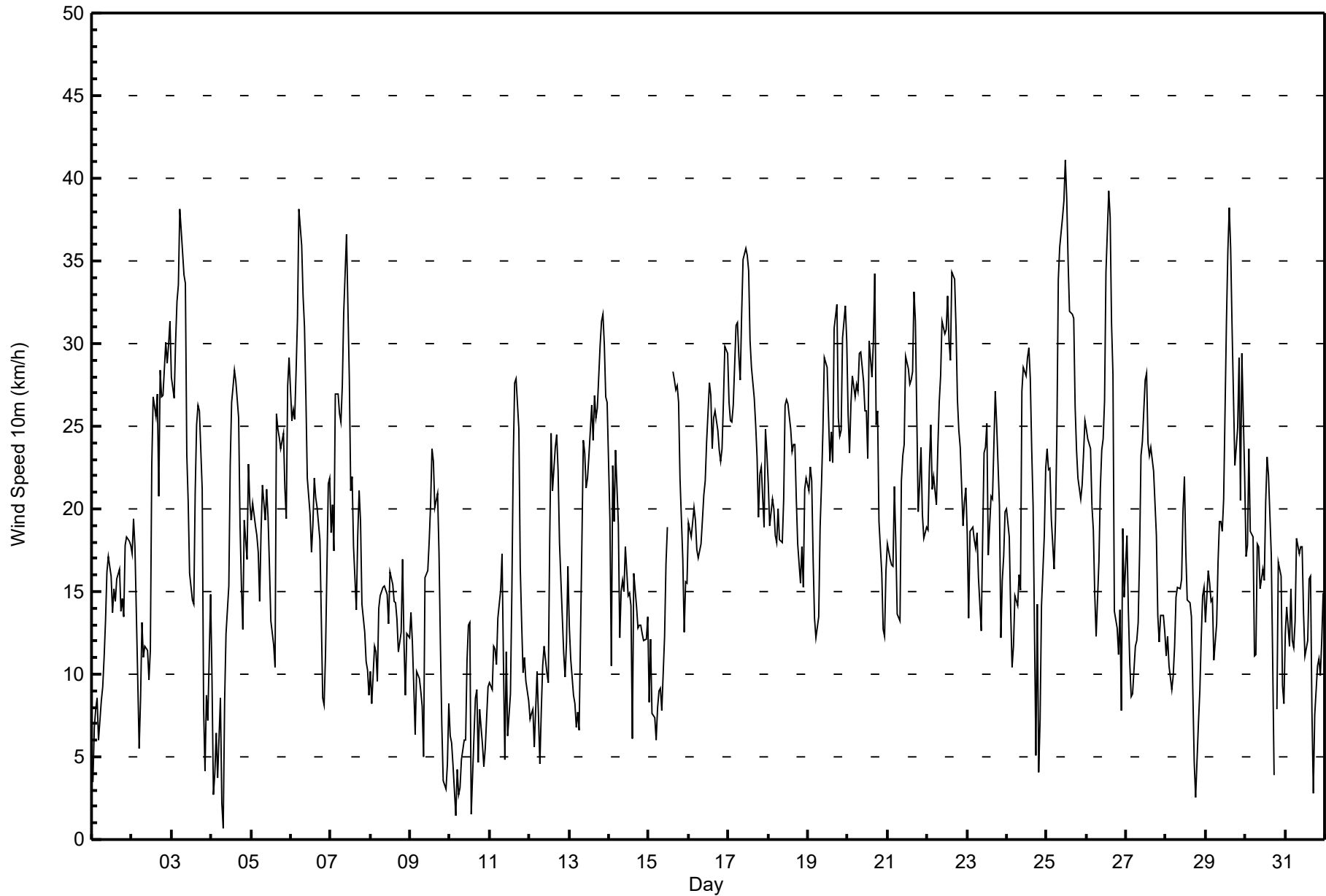
Wind Speed 10m (WS10) - km/h
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on May 11 11:00																		Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 2 Percent Operational Time: 99.9							
Minimum Value: 1 km/h on May 10 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1	1	2	1	2	1	1	1	2	3	3	3	4	4	4	2	2	2	2	2	1	2	2	2	4
2-May	3	4	2	2	1	3	1	1	1	2	2	3	3	2	3	3	4	5	5	4	5	4	4	4	5
3-May	4	3	4	4	4	5	5	5	5	5	3	3	3	3	2	3	3	5	6	4	3	4	3	6	6
4-May	7	2	2	1	3	2	3	3	3	4	4	6	7	8	7	7	6	7	7	3	8	6	7	7	8
5-May	6	6	5	6	5	4	6	7	6	7	6	6	5	4	7	2	2	2	2	2	3	2	3	3	7
6-May	2	2	2	4	4	3	4	3	4	5	2	2	2	2	2	2	3	2	3	3	3	6	3	4	6
7-May	3	2	1	4	3	3	4	4	5	5	5	4	7	7	5	3	3	5	5	4	4	3	3	2	7
8-May	2	2	2	3	2	5	5	5	6	5	5	5	6	6	6	5	5	5	4	3	1	2	2	1	6
9-May	1	1	2	1	1	1	1	1	4	4	4	5	6	6	6	6	5	4	3	2	1	2	3	2	6
10-May	1	1	2	2	1	1	2	3	2	2	1	1	1	5	3	4	3	3	2	1	1	1	1	1	5
11-May	1	1	2	3	1	2	2	2	4	3	11	10	1	3	4	3	4	4	5	4	2	1	1	1	11
12-May	1	2	1	2	3	3	2	4	4	4	4	4	4	3	2	3	3	4	3	3	2	2	3	2	4
13-May	3	4	2	2	2	2	2	3	3	2	1	1	2	2	2	3	3	4	4	4	3	3	3	2	4
14-May	2	4	10	9	4	4	5	5	6	5	7	6	6	5	6	6	5	5	4	5	5	4	4	4	10
15-May	3	4	2	2	2	3	3	3	3	2	2	2	C	C	2	3	3	3	4	4	4	2	2	2	4
16-May	2	3	3	3	3	3	2	2	2	2	2	3	3	3	3	4	4	3	4	4	4	4	4	3	4
17-May	2	2	3	2	2	3	3	3	3	4	3	4	4	4	3	3	3	2	3	2	2	3	3	3	4
18-May	3	3	4	3	2	2	1	2	2	3	3	3	2	2	2	2	4	4	4	3	2	2	3	3	4
19-May	3	3	3	3	2	2	3	4	4	4	5	5	5	5	3	4	4	4	3	4	3	6	5	5	6
20-May	4	3	2	2	2	2	2	2	3	4	3	4	3	3	4	6	4	4	4	5	2	2	2	2	6
21-May	1	2	2	4	2	3	3	3	3	3	4	4	4	4	4	6	5	5	3	4	4	3	3	2	6
22-May	2	3	3	2	3	2	3	4	5	5	5	5	5	5	5	5	5	4	5	4	4	2	3	3	5
23-May	4	2	4	3	2	2	4	5	3	4	5	4	6	3	3	5	3	6	5	4	2	2	2	2	6
24-May	3	3	2	4	3	3	2	2	6	4	5	5	6	5	5	6	5	6	2	2	4	3	3	3	6
25-May	2	2	2	3	2	3	3	5	4	5	6	6	6	6	5	5	5	3	3	3	2	3	3	3	6
26-May	3	4	3	3	4	3	3	3	4	3	4	5	8	5	6	6	5	6	5	5	4	4	4	3	8
27-May	4	5	2	2	2	2	2	2	4	6	6	7	7	6	6	6	5	6	5	3	2	3	3	3	7
28-May	2	2	2	2	2	3	4	4	4	4	5	5	5	4	4	4	4	2	2	2	2	2	3	2	5
29-May	2	1	2	2	2	1	1	3	2	4	2	4	8	6	6	6	7	4	4	4	4	8	7	6	8
30-May	4	6	6	4	5	3	3	5	5	4	4	5	6	6	6	6	4	2	UO	4	2	2	3	2	6
31-May	2	2	3	3	2	3	4	5	5	5	4	3	2	5	3	3	4	2	2	1	1	3	3	2	5
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	30	4.05	4.05
6 - 11	120	16.19	20.24
12 - 19	266	35.90	56.14
20 - 28	241	32.52	88.66
29 - 38	80	10.80	99.46
> 38	4	0.54	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	1	0	4	6	2	0	2	0	3	1	4	1	2	2	0	30
6 - 11	0	1	16	16	31	4	3	6	2	4	7	8	6	6	0	10	120
12 - 19	0	0	7	25	53	17	17	25	18	7	7	26	19	15	16	14	266
20 - 28	0	0	2	34	63	11	26	42	25	3	2	18	10	0	5	0	241
29 - 38	0	0	0	24	8	1	10	8	23	5	0	0	1	0	0	0	80
> 38	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
Totals	2	2	25	103	161	35	56	83	72	22	17	56	37	23	23	24	741

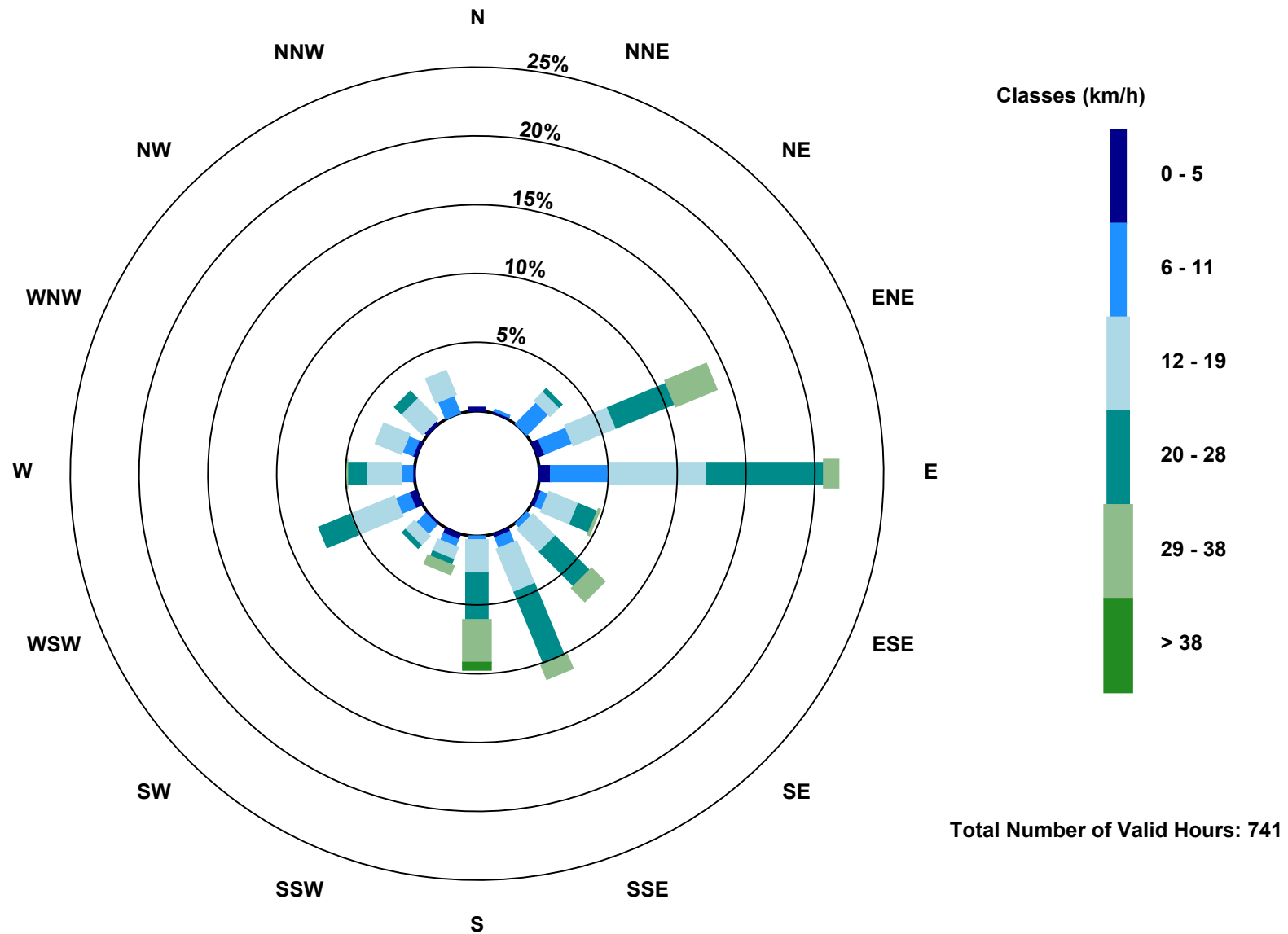
Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - May 2025

Direction of Maximum Speed: 176 deg on May 25 12:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 174.6 deg on May 25																				Hours of Data:		741			
Direction of Minimum Speed: 309 deg on May 4 08:00										Direction of Minimum Daily Speed Average: 3.8 deg on May 10										Hours of Missing Data:		3			
Monthly Average Direction: 126.7 deg																				Percent Operational Time:		99.9			
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	90	87	82	82	76	107	100	88	90	135	153	165	163	173	151	98	92	89	137	95	85	84	81	82	109.4
2-May	86	83	84	72	72	79	83	95	94	90	86	87	85	85	80	89	73	58	60	62	59	61	70	70	75.0
3-May	71	68	68	68	66	69	70	67	65	57	66	84	107	95	90	88	86	83	84	44	21	97	69	102	74.4
4-May	78	318	104	128	235	292	350	309	266	273	256	255	254	256	258	254	259	291	300	291	305	294	316	314	275.4
5-May	303	306	293	309	307	305	312	310	308	304	303	301	312	328	41	84	84	89	80	80	77	74	104	101	8.1
6-May	101	102	107	96	88	84	79	79	80	75	79	84	87	88	88	83	82	83	68	63	71	80	81	85	85.2
7-May	87	96	108	160	164	163	163	175	183	190	192	203	250	256	254	229	206	227	238	255	290	291	271	256	196.9
8-May	262	262	282	275	299	322	327	317	313	311	309	324	330	328	339	333	326	328	74	78	74	69	73	76	333.3
9-May	88	97	99	109	95	100	98	89	203	226	244	262	263	260	257	259	264	265	249	243	249	251	88	72	240.2
10-May	78	83	91	156	93	116	82	248	231	123	109	99	99	282	218	189	207	164	80	57	65	69	73	75	108.8
11-May	73	80	85	91	86	94	91	83	86	94	157	148	45	84	106	81	70	73	46	50	70	60	55	50	79.6
12-May	43	338	342	333	335	333	359	330	326	330	332	343	92	88	88	85	85	80	77	64	56	25	41	48	49.0
13-May	46	39	42	50	46	53	74	90	88	89	95	91	86	86	79	80	65	66	63	73	75	77	79	82	75.7
14-May	86	144	95	88	72	54	341	343	335	345	329	331	329	323	300	60	68	81	82	77	78	79	92	102	49.0
15-May	98	97	86	51	51	49	56	96	94	164	173	168	C	C	83	83	77	72	68	60	57	46	62	65	81.5
16-May	67	66	67	64	66	69	68	81	85	89	89	82	79	80	74	62	63	65	57	51	52	61	71	77	69.9
17-May	79	82	96	100	96	90	83	76	75	76	77	76	77	75	78	76	76	75	74	78	84	100	145	152	85.6
18-May	156	152	153	148	116	105	118	125	112	84	80	81	82	84	84	84	84	76	70	84	86	100	149	156	105.0
19-May	157	154	150	138	108	107	154	169	160	164	170	170	161	143	87	95	138	126	129	147	140	173	172	176	148.2
20-May	150	143	124	123	114	109	113	125	129	134	137	136	132	126	135	131	127	139	153	156	143	142	138	135	131.8
21-May	136	142	94	109	141	146	155	126	141	140	141	129	133	129	127	133	132	130	143	163	157	157	157	152	137.8
22-May	150	142	144	147	144	145	156	159	157	165	167	169	170	183	190	180	177	170	163	157	169	166	153	169	163.6
23-May	163	156	169	177	180	181	180	179	168	175	170	168	176	146	89	105	85	149	170	171	141	109	106	129	153.2
24-May	155	171	161	147	142	164	151	122	148	191	195	176	181	176	185	192	190	202	264	62	96	121	145	172	170.7
25-May	171	174	179	180	180	175	176	178	175	169	175	176	175	188	188	180	175	169	169	169	170	167	154	168	174.6
26-May	172	171	170	155	149	155	179	178	175	173	162	171	195	190	192	195	184	286	308	287	231	230	241	253	188.3
27-May	266	255	241	236	209	217	210	213	214	239	241	236	244	246	258	264	264	265	265	261	247	238	240	239	244.8
28-May	238	232	226	224	245	251	261	258	263	251	238	245	250	268	269	246	242	274	205	80	80	85	96	89	243.0
29-May	81	81	98	106	104	89	87	84	100	137	110	110	161	165	165	171	163	163	159	164	165	204	261	270	148.3
30-May	272	270	273	279	290	296	273	283	284	282	274	266	249	260	249	247	256	249	UO	135	172	202	212	210	259.7
31-May	213	215	239	249	262	254	242	259	260	244	238	239	214	207	180	202	216	291	154	166	158	169	169	163	219.2
122.3 126.7 122.9 123.2 112.6 109.4 115.7 122.7 132.1 153.0 159.4 157.9 157.7 154.0 138.1 127.3 121.6 108.4 107.7 105.4 107.2 111.4 117.6 121.1																									
Diurnal Average																									
C - Calibration UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

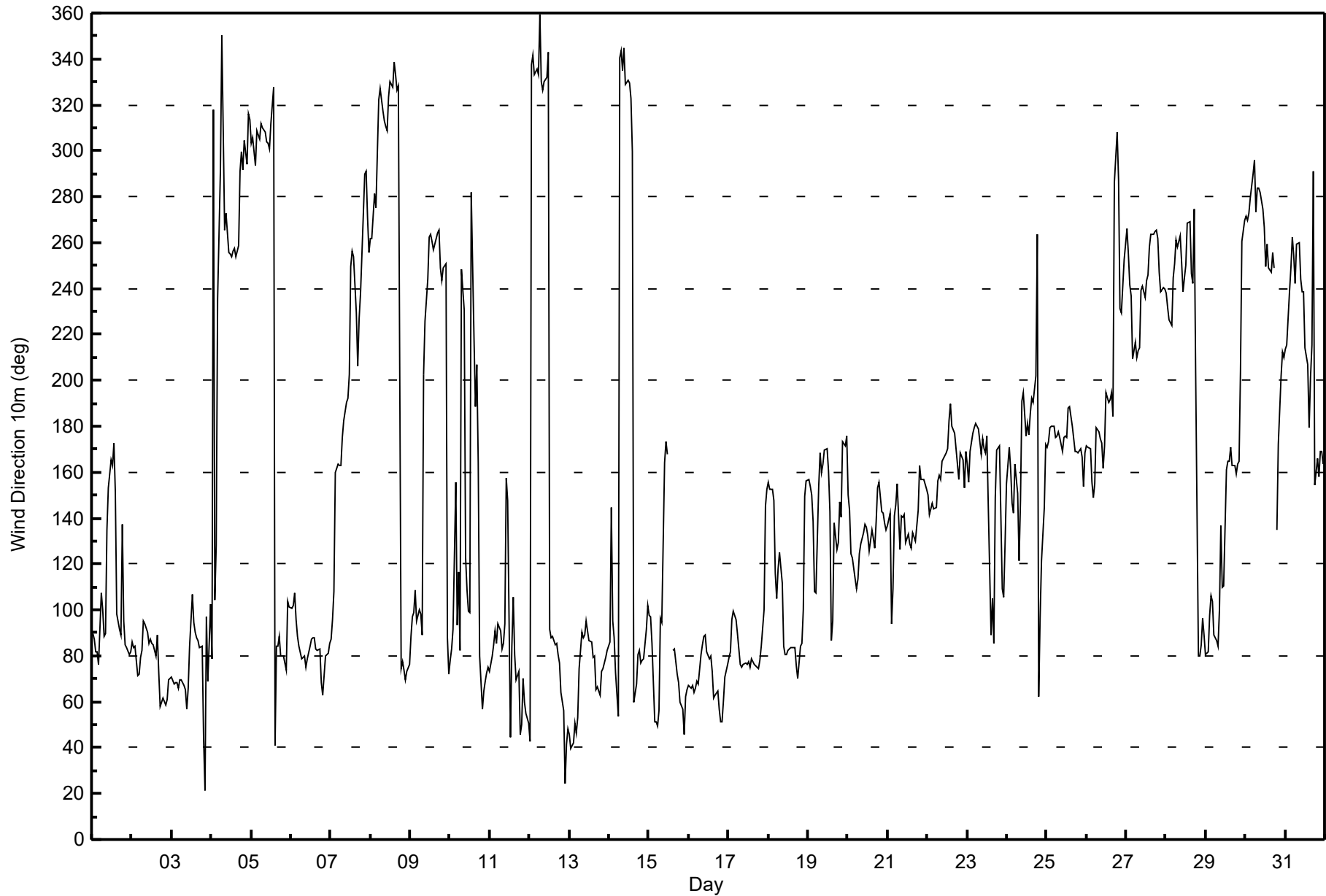
Wind Direction 10m (WD10) - deg
Fort Chipewyan - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 94 deg on May 11 12:00																		Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 2 Percent Operational Time: 99.9							
Minimum Value: 4 deg on May 17 05:00																									
Percentiles: P ₁ = 5 P ₁₀ = 6 Q ₁ = 8 Median = 11 Q ₃ = 18 P ₉₀ = 26 P ₉₉ = 74																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	12	7	8	7	15	10	10	7	14	21	17	23	20	24	24	15	8	8	13	16	5	5	6	6	24
2-May	7	12	8	10	13	9	7	6	6	7	7	8	5	5	7	6	14	11	15	10	9	8	8	8	15
3-May	8	8	9	9	9	8	9	10	9	12	14	11	11	10	6	5	5	7	20	24	64	39	36	11	64
4-May	78	85	50	35	57	16	83	93	24	15	20	18	17	16	16	18	16	22	18	15	19	17	22	22	93
5-May	17	18	18	19	19	19	19	20	22	22	23	25	32	35	54	7	6	6	6	6	7	7	6	5	54
6-May	6	5	6	5	7	6	7	8	8	9	7	7	6	5	4	9	8	6	16	21	46	34	7	7	46
7-May	8	10	12	11	7	7	8	7	9	8	9	10	18	15	17	18	8	19	15	19	24	20	15	17	24
8-May	12	15	10	12	15	21	25	25	27	22	24	32	29	32	35	30	30	31	16	7	8	10	7	9	35
9-May	4	7	18	20	12	7	11	8	64	18	22	19	19	17	18	18	17	17	18	31	24	49	20	12	64
10-May	17	18	37	67	13	61	67	46	37	41	7	8	7	91	60	34	35	51	10	10	10	9	8	11	91
11-May	9	9	9	12	13	11	13	6	9	26	48	94	17	7	15	13	8	8	24	13	15	7	7	12	94
12-May	14	18	17	28	21	54	49	37	28	27	32	38	24	7	5	7	6	6	7	9	10	16	11	8	54
13-May	18	18	18	12	12	13	19	5	6	6	6	5	5	5	8	7	9	8	8	9	7	7	6	6	19
14-May	8	41	21	21	12	18	26	24	26	29	28	26	25	27	81	24	25	23	20	21	21	21	19	15	81
15-May	19	17	17	21	19	16	22	30	49	12	9	9	C	C	6	7	8	8	9	9	10	9	9	8	49
16-May	8	8	8	8	8	8	10	11	8	7	5	11	7	7	13	9	8	8	11	9	10	8	8	6	13
17-May	5	5	10	5	4	8	6	8	6	6	7	7	7	6	6	6	6	6	7	5	4	15	8	8	15
18-May	9	9	9	9	10	7	5	7	13	5	6	6	6	5	4	6	12	9	9	7	5	17	11	9	17
19-May	9	9	7	14	13	22	14	10	13	12	11	13	18	25	7	20	13	7	12	15	7	14	7	10	25
20-May	10	9	7	6	5	5	7	6	6	8	8	10	17	7	9	9	6	11	11	13	6	7	9	7	17
21-May	6	10	13	21	6	7	10	25	9	11	13	8	11	10	16	15	7	7	14	10	9	9	9	8	25
22-May	8	7	7	7	6	8	11	10	11	12	11	11	11	15	12	11	12	10	11	10	9	9	8	9	15
23-May	10	12	9	7	7	8	9	11	16	12	14	16	16	34	9	31	6	25	15	10	13	12	12	9	34
24-May	10	8	10	37	18	11	13	21	47	13	16	13	18	15	15	17	19	82	27	54	16	10	10	8	82
25-May	5	6	6	6	6	6	7	7	7	8	11	10	10	15	13	12	9	9	7	6	5	10	8	7	15
26-May	5	7	6	11	10	17	11	8	9	10	14	11	13	11	11	12	10	36	38	30	17	42	15	14	42
27-May	15	16	13	13	12	10	14	13	14	15	18	15	18	18	18	17	16	16	15	16	13	13	13	13	18
28-May	14	10	12	15	11	13	15	17	17	20	16	17	21	22	21	21	32	44	52	25	12	9	13	9	52
29-May	5	5	8	10	10	13	9	8	15	17	25	25	24	11	11	10	13	11	9	10	8	46	15	15	46
30-May	16	16	15	16	18	25	15	16	16	18	17	22	19	17	20	24	25	22	UO	16	12	11	18	13	25
31-May	10	11	13	13	12	14	16	17	16	20	16	15	11	32	14	10	39	59	24	9	13	25	10	15	59
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort Chipewyan - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS09 BARGE LANDING MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	35	38	99.6	-	-	19.7	0	2.9	0
TRS(ppb) Average	690	37	54	97.72	2.8	0	2.5	0	1.2	0
THC(ppm) Average	645	33	99	91.13	-	-	2.7	-	2.2	-
NMHC(ppm) Average	645	33	99	91.13	-	-	0.571	-	0.13	-
CH4(ppm) Average	645	33	99	91.13	-	-	2.7	-	2.1	-
NO2 (ppb) Average	703	36	41	99.33	-	-	29.8	0	10.5	-
NO (ppb) Average	703	36	41	99.33	-	-	70.5	-	9.5	-
NOX (ppb) Average	703	36	41	99.33	-	-	91.5	-	18.6	-
PM2.5(ug/m3) Average	740	1	4	99.6	-	-	512	0	244.2	4
Temperature (C) Average	744	0	0	100	-	-	34.5	-	25.1	-
Relative Humidity (%) Average	740	0	4	99.46	-	-	100	-	80.2	-
Barometric Pressure (inHg) Average	744	0	0	100	-	-	29.2	-	29.1	-
Wind Speed 10 m (km/h) Average	743	0	1	99.87	-	-	18	-	11	-
Wind Direction 10 m (deg) Average	743	0	1	99.87	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	744	0	0	100	-	-	33	-	19	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)

MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Min	P10	Percentile					Max
							Q1	Median	Q3	P90		
SO2 (ppb) Average	706	0.71	1.9	-	0	0	0	0.2	0.5	1.4	19.7	
TRS(ppb) Average	690	0.41	0.3	-	0.2	0.3	0.3	0.3	0.4	0.6	2.5	
THC(ppm) Average	645	2.02	0.1	-	1.9	1.9	1.9	2	2	2.2	2.7	
NMHC(ppm) Average	645	0.016	0.045	-	0	0	0	0	0	0	0.571	
CH4(ppm) Average	645	2	0.1	-	1.9	1.9	1.9	2	2	2.1	2.7	
NO2 (ppb) Average	703	5.76	6	-	0.2	0.8	1.8	3.4	7.4	14.6	29.8	
NO (ppb) Average	703	2.01	5.3	-	0	0	0.1	0.3	1.3	4.8	70.5	
NOX (ppb) Average	703	7.77	9.5	-	0.2	0.9	2.3	4.3	9.5	19.1	91.5	
PM2.5(ug/m3) Average	740	24.02	66.7	-	1	3	4.5	6.8	12	29.4	512	
Temperature (C) Average	744	14.37	7.1	-	-1.3	5.9	9.3	14	18.9	24.1	34.5	
Relative Humidity (%) Average	740	53	22.4	-	15.1	25.4	33.2	51.1	70.1	85	100	
Barometric Pressure (inHg) Average	744	28.85	0.2	-	28.5	28.6	28.7	28.9	29	29.1	29.2	
Wind Speed 10 m (km/h) Average	743	7.2	4	-	0	2	4	7	10	12	18	
Wind Direction 10 m (deg) Average	743	124.9	-	-	-	-	-	-	-	-	-	
Wind Speed 20 m (km/h) Average	744	12.7	6	-	1	5	8	12	17	21	33	
Wind Direction 20 m (deg) Average	744	128.9	-	-	-	-	-	-	-	-	-	

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	29 May 2025 20:00	29 May 2025 22:00	3-4	Station power failure
TRS	06 May 2025 11:00	06 May 2025 11:00	1	Maintenance - sample manifold cleaned
TRS	30 May 2025 00:00	30 May 2025 08:00	9	Analyzer Failure - AMD non-compliance
TRS	30 May 2025 09:00	30 May 2025 11:00	3	Maintenance - analyzer replaced
THC/ NMHC/ CH4	01 May 2025 02:00	02 May 2025 09:00	32	Unstable Operation - AMD non-compliance
THC/ NMHC/ CH4	06 May 2025 11:00	06 May 2025 11:00	1	Maintenance - sample manifold cleaned
THC/ NMHC/ CH4	21 May 2025 10:00	21 May 2025 11:00	2	Maintenance - replaced support gas cylinder
THC/ NMHC/ CH4	26 May 2025 17:00	26 May 2025 22:00	6	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	27 May 2025 14:00	27 May 2025 19:00	6	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	27 May 2025 21:00	27 May 2025 21:00	1	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	28 May 2025 13:00	28 May 2025 18:00	6	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	28 May 2025 21:00	29 May 2025 00:00	4	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	29 May 2025 16:00	29 May 2025 20:00	5	Unstable Operation - excessive baseline noise
NO2	06 May 2025 11:00	06 May 2025 11:00	1	Maintenance - sample manifold cleaned
Relative Humidity	27 May 2025 00:00	27 May 2025 01:00	2	Sensor operated out of range
Relative Humidity	27 May 2025 06:00	27 May 2025 06:00	1	Sensor operated out of range
Relative Humidity	01 Jun 2025 00:00	01 Jun 2025 00:00	1	Sensor operated out of range
Wind Speed, Wind Direction 10m	26 May 2025 06:00	26 May 2025 06:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

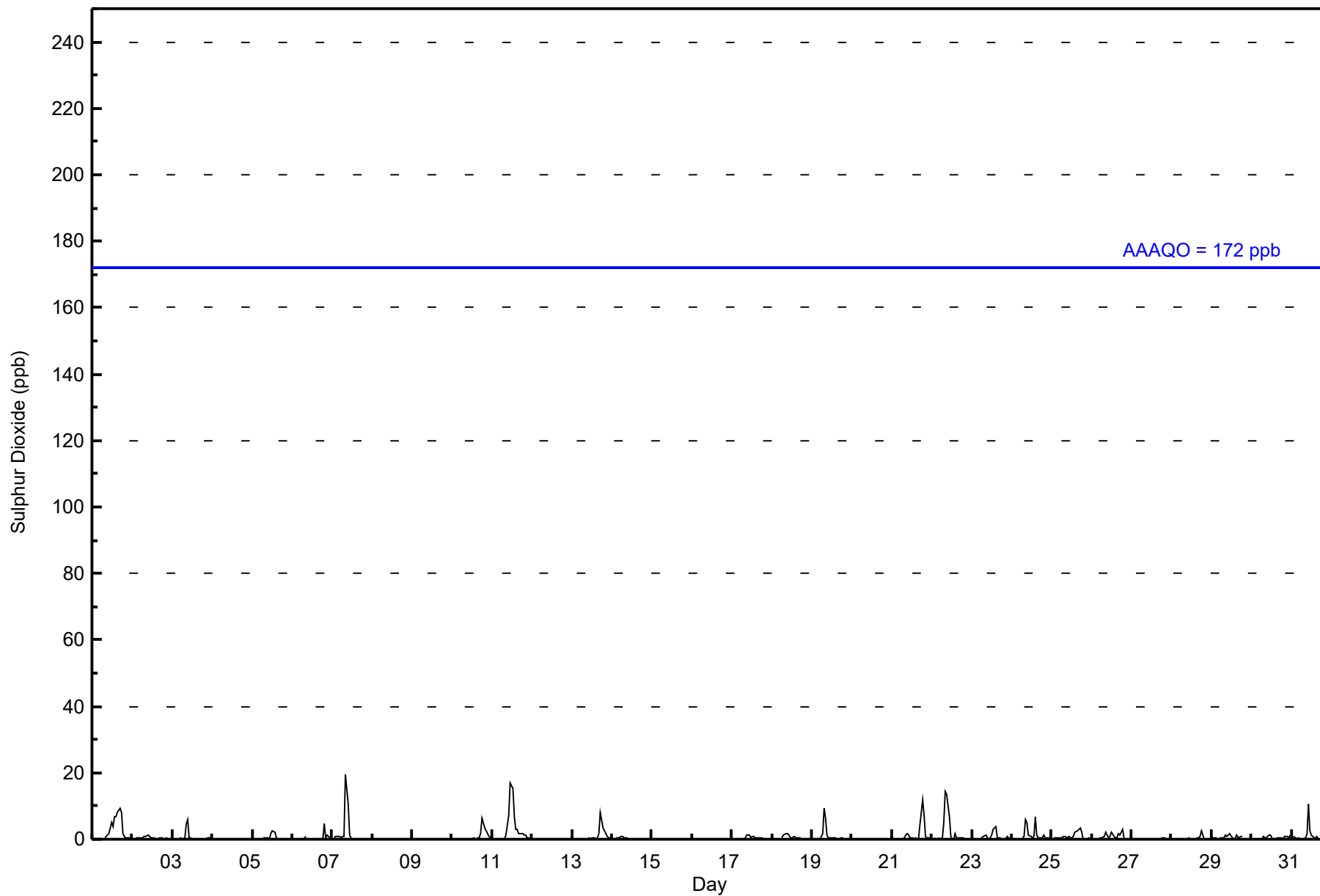
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 19.7 ppb on May 7 09:00 Maximum Daily Average: 2.9 ppb on May 11																			Hours in Service: 744							
Minimum Value: 0.0 ppb on May 3 04:00 Minimum Daily Average: 0.0 ppb on May 8 Maximum Diurnal Average: 2.1 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 1 Monthly Average: 0.71 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.4 P ₉₉ = 10.7																			Hours of Data: 706							
																			Hours of Missing Data: 38							
																			Hours of Calibration: 35							
																			Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.9	1.4	1.7	5.0	3.7	6.9	6.6	8.1	9.3	8.2	1.8	0.8	0.5	0.4	0.3	0.3	2.5	9.3
2-May	0.3	Z	0.3	0.3	0.3	0.3	0.6	1.0	0.8	1.1	0.8	0.5	0.5	0.3	0.2	0.1	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.4	1.1
3-May	0.0	0.1	Z	0.0	0.1	0.2	0.2	0.4	4.8	6.1	0.5	0.4	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.6	6.1
4-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
5-May	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.4	0.3	0.4	0.0	1.7	2.5	2.1	0.3	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.4	2.5
6-May	0.0	0.0	0.1	0.1	0.2	Z	0.1	0.2	1.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.5	1.2	0.2	0.1	0.4	4.6
7-May	Z	0.6	0.8	0.8	0.8	0.3	0.7	0.9	19.7	10.8	1.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	19.7
8-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
9-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-May	0.0	0.0	0.0	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.4	1.7	6.2	3.4	2.6	1.8	0.8	0.6	0.8	6.2
11-May	0.4	0.2	0.1	0.2	Z	0.1	0.1	0.1	1.2	4.2	7.2	17.1	15.2	6.9	2.8	2.9	1.7	1.8	1.6	1.2	1.1	0.6	0.3	0.2	2.9	17.1
12-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1
13-May	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.5	1.6	8.0	3.3	2.4	1.7	0.8	0.3	0.3	0.9	8.0
14-May	0.3	Z	0.3	0.5	0.5	0.7	0.7	0.6	0.4	0.4	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
16-May	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
17-May	0.1	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.5	1.2	1.1	0.6	0.7	0.7	0.5	0.6	0.4	0.5	0.2	0.2	0.1	0.1	0.2	0.1	0.3	1.2
18-May	0.1	0.2	0.2	0.2	0.1	Z	0.3	1.3	1.7	1.6	1.3	0.6	0.4	0.8	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.5	1.7
19-May	Z	0.1	0.1	0.1	0.1	0.1	1.5	9.5	6.5	1.2	0.3	0.4	0.5	0.5	0.3	0.2	0.1	0.3	0.5	0.0	0.0	0.0	0.0	0.0	1.0	9.5
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
21-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	1.3	1.7	1.2	0.4	0.2	0.1	0.5	0.1	0.2	4.1	11.7	7.4	0.8	0.3	0.3	0.2	1.3	11.7
22-May	0.2	0.2	0.2	Z	0.3	0.1	0.3	4.9	14.4	13.5	6.7	0.8	0.2	0.2	1.7	0.6	0.5	0.3	0.4	0.2	0.1	0.1	0.1	0.1	2.0	14.4
23-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	1.0	1.1	0.4	0.2	0.6	1.1	2.8	3.7	0.4	0.2	0.3	0.0	0.1	0.1	0.7	0.3	0.1	0.6	3.7
24-May	0.2	0.2	0.2	0.2	0.1	Z	0.4	1.0	6.0	4.9	1.1	0.8	0.6	0.9	6.9	1.1	0.5	0.6	0.2	1.2	0.5	0.3	0.3	0.5	1.2	6.9
25-May	Z	0.5	0.5	0.5	0.4	0.5	0.6	0.9	0.7	0.5	0.7	0.4	0.6	0.7	2.1	2.7	3.1	3.2	2.1	0.2	0.2	0.1	0.3	0.2	0.9	3.2
26-May	0.1	Z	0.1	0.1	0.1	0.3	0.3	0.8	2.3	1.2	0.6	0.9	2.1	0.7	0.4	0.6	1.5	1.1	2.9	0.2	0.1	0.1	0.0	0.1	0.7	2.9
27-May	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.4
28-May	0.1	0.1	0.1	Z	0.1	0.0	0.2	0.1	0.2	0.2	0.6	0.1	0.2	0.1	0.2	0.2	0.2	1.0	2.5	0.1	0.1	0.1	0.0	0.1	0.3	2.5
29-May	0.2	0.3	0.6	0.5	Z	0.3	0.2	0.3	1.2	0.7	1.1	1.8	0.3	0.2	0.4	1.1	0.5	0.8	0.8	PF	PF	PF	0.0	0.0	0.6	1.8
30-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.7	0.4	0.2	1.3	1.3	0.4	0.1	0.2	0.3	0.5	0.3	0.2	0.2	0.9	0.8	0.4	1.1	0.4	1.3
31-May	Z	0.8	0.2	0.0	0.2	0.1	0.1	0.1	0.4	1.6	10.7	2.7	1.3	0.5	0.6	1.0	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.9	10.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	698	98.87	98.87
11 - 20	8	1.13	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	46	56	30	7	7	30	107	147	56	41	40	38	15	17	18	43	698
11 - 20	0	0	0	0	0	0	0	2	2	2	1	0	1	0	0	0	8
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	56	30	7	7	30	107	149	58	43	41	38	16	17	18	43	706

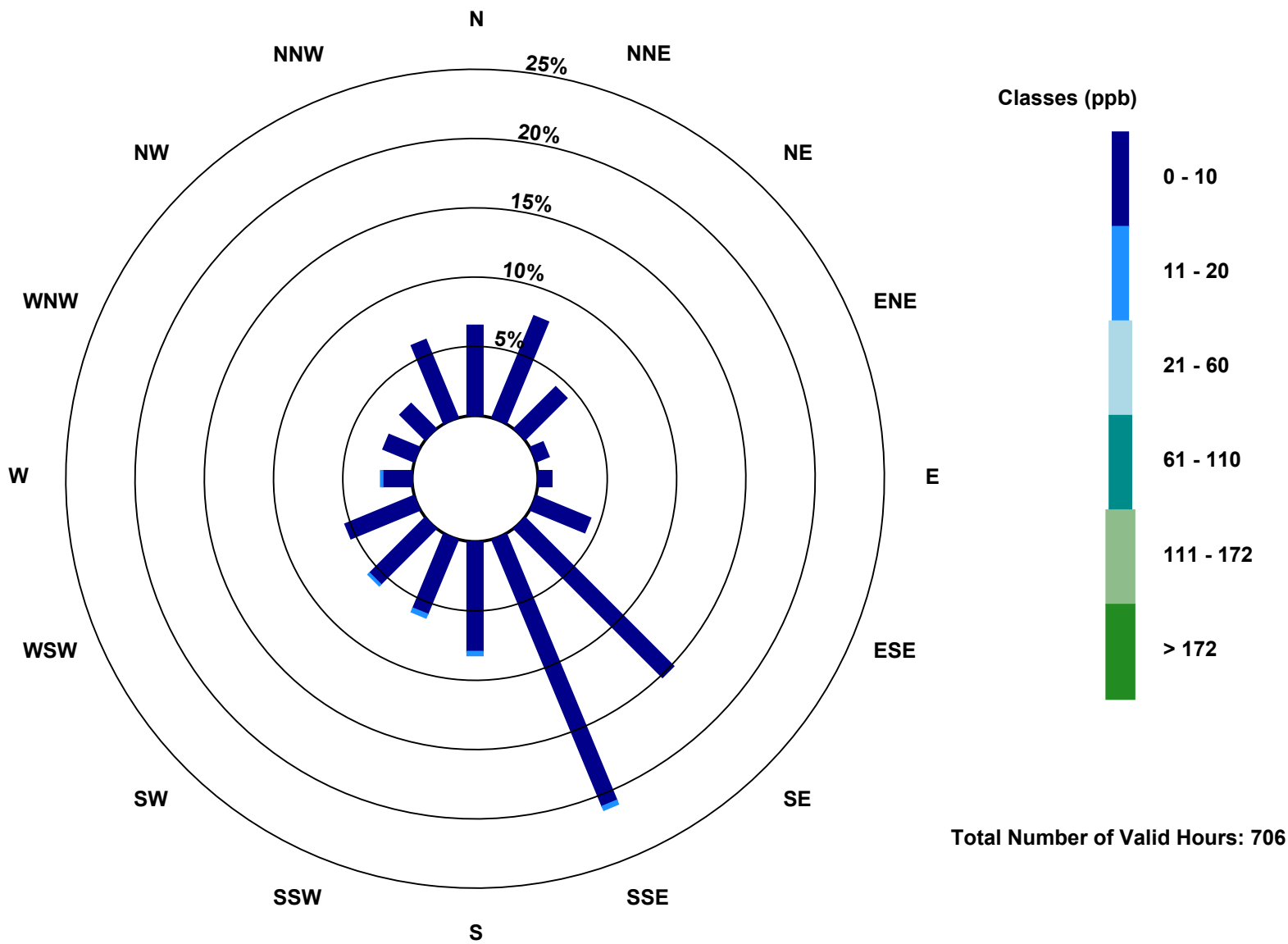
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

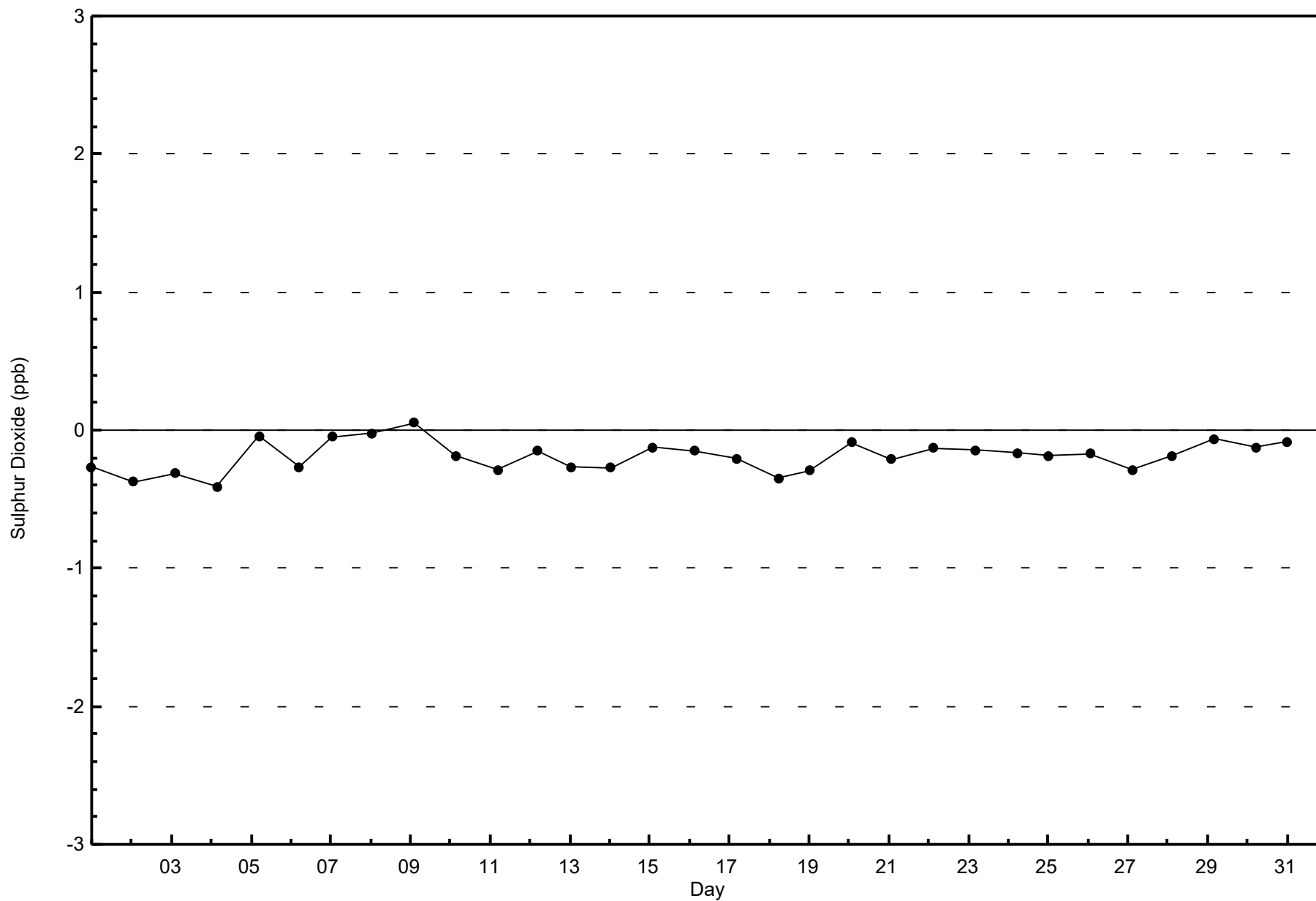
Sulphur Dioxide (SO₂) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

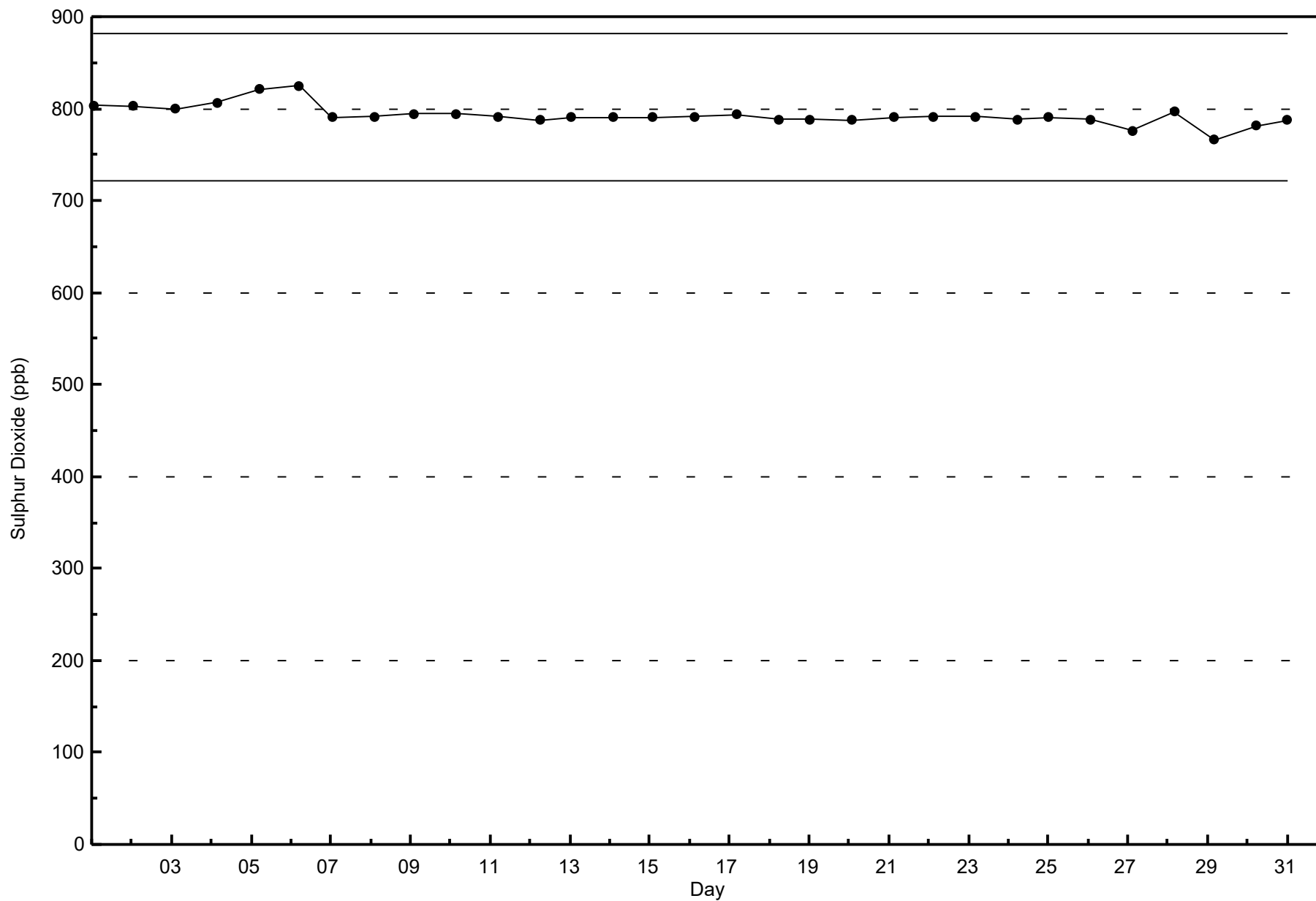
Sulphur Dioxide (SO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - May 2025

Number of Exceedences (AAAQG): 30-Min: 0																				Periods in Service: 1488						
Maximum Value: 2.8 ppb on May 14 07:30										Maximum Daily Average: 1.2 ppb on May 31										Periods of Valid Data: 1379						
Minimum Value: 0.2 ppb on May 9 18:30										Minimum Daily Average: 0.3 ppb on May 15										Periods of Invalid Data: 109						
Maximum Diurnal Average: 0.6 ppb at hour 8										Minimum Diurnal Average: 0.3 ppb at hour 14										Periods of Calibration: 74						
Monthly Average: 0.41 ppb										Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 1.5										Percent Operational Time: 97.7						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4	0.5
2-May	0.3 0.3	0.3 0.4	Z SP	0.4 0.5	0.6 0.5	0.6 0.7	0.7 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.3 0.3	0.4 0.3	0.3 0.4	0.3 0.4	0.4 0.4	0.5 0.4	0.5 0.6	0.6 0.4	0.3 0.4	0.4	0.7
3-May	0.3 0.4	0.5 0.5	0.5 0.5	Z SP	0.4 0.5	0.8 1.0	0.8 0.6	0.8 1.1	1.3 0.8	0.6 0.5	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.4	0.3 0.5	0.4 0.4	0.4	1.3
4-May	0.5 0.5	0.6 0.7	0.6 0.5	0.5 0.4	Z SP	0.4 0.6	0.5 0.5	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.3	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.7
5-May	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.3	0.5 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.3 0.4	0.3 0.4	0.3 0.3	0.3	0.5
6-May	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.3	0.3 0.3	0.4 0.6	0.7 1.0	0.7 M	M M	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.2	0.3 0.3	0.4 0.5	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	1.0
7-May	0.3 0.5	Z SP	0.5 0.4	0.3 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.3	0.3 0.4	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.5
8-May	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.5	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.6
9-May	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.5 0.6	0.5 0.6	0.6 0.6	0.7 0.8	0.5 0.4	C C	C C	C C	C C	C 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.4 0.3	0.4 0.4	0.4	0.8
10-May	0.4 0.4	0.4 0.3	0.3 0.4	0.4 0.4	Z SP	0.7 0.8	0.6 0.5	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.3 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.3	0.8
11-May	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.5	0.5 0.5	0.6 0.5	0.4 0.4	0.4 0.4	0.4	0.6
12-May	Z SP	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.4	0.5 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4	0.6	
13-May	0.4 0.4	Z SP	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.3 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.5	0.4 0.3	0.7 0.6	0.6 0.7	0.7 0.6	0.4 0.3	0.3 0.3	0.4	0.7
14-May	0.3 0.3	0.3 0.3	Z SP	0.4 0.5	0.6 0.6	0.6 0.7	0.8 1.8	2.8 0.5	0.3 0.4	1.3 0.6	0.5 0.6	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.5	2.8
15-May	0.3 0.2	0.2 0.2	0.3 0.2	Z SP	0.2 0.2	0.3 0.3	0.3 0.3	0.2 0.2	0.3 0.3	0.2 0.3	0.3 0.2	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3	0.4	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.5 0.6	0.5 0.5	0.4 0.3	0.4 0.4	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.3	0.3 0.4	0.3 0.3	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.3	0.6
17-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.3 0.3	0.2 0.3	0.3 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3	0.5
18-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.4 0.5	0.7 0.5	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.3	0.7
19-May	0.2 0.2	Z SP	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.5 0.6	0.5 0.4	0.4 0.5	0.5 0.4	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.6
20-May	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.4 0.3	0.4 0.3	0.3	0.4
21-May	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.8	0.4 0.7	0.9 0.4	0.5 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.5	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.4 0.5	0.6 0.4	0.6 0.4	0.4	0.9
22-May	0.3 0.4	0.4 0.4	0.5 0.5	0.5 0.5	Z SP	0.3 0.4	0.5 0.6	0.6 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.5 0.4	0.3 0.5	0.5 0.4	0.3 0.3	DF 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.4	0.4 0.5	0.4	0.6	
23-May	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.5 0.6	1.5 1.3	0.6 0.5	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.3 0.4	0.3 0.4	0.4 0.5	0.4	1.5
24-May	Z SP	0.5 0.5	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.6	0.7 0.7	0.7 0.8	0.8 0.6	0.5 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.5 0.5	0.8 0.6	0.6 0.6	0.5	0.8
25-May	0.9 0.9	Z SP	0.6 0.6	0.6 0.6	0.7 0.8	0.8 0.6	0.4 0.4	0.5 0.6	0.5 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.5	0.9 0.8	0.8 0.7	0.4	0.9
26-May	0.6 0.4	0.3 0.3	Z SP	0.3 0.3	0.5 0.5	0.6 0.5	0.5 0.5	0.4 0.5	0.6 0.6	0.6 0.5	0.4 0.3	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.6 0.6	0.6 0.7	0.7 0.7	0.4	0.7
27-May	0.6 0.6	0.7 0.6	0.5 0.4	Z SP	0.4 0.4	0.4 0.7	0.6 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.3	0.3 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.5 0.5	0.4	0.7
28-May	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.5 0.6	0.6 0.7	0.4	0.7
29-May	0.8 1.0	1.0 0.9	0.8 0.8	0.9 1.0	1.0 1.0	Z SP	0.5 0.5	0.5 0.7	0.6 0.6	0.5 0.6	0.5 0.4	0.3 0.3	0.3 0.3	0.4 0.3	0.4 0.4	0.4 0.4	0.5 0.6	0.5 0.5	PF PF	PF PF	PF PF	PF AF	AF AF	0.6	1.0	
30-May	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF M	M M	M M	M C	C C	C C	0.3 0.2	0.3 0.4	0.6 1.0	1.3 1.2	1.2 1.2	1.2 1.0	0.8 0.8	0.8 0.9	0.9 0.9	0.8 0.8	0.8 0.9	--	1.3
31-May	0.9 0.8	Z SP	0.4 0.3	0.4 0.6	1.2 1.8	2.0 2.3	2.4 2.3	2.3 2.3	2.3 2.6	2.3 2.5	1.5 1.4	1.2 1.1	1.0 0.9	0.8 0.9	1.0 1.1	0.9 0.8	0.9 1.3	1.3 1.3	1.3 1.0	0.8 0.6	0.7 0.7	0.7 0.6	0.6 0.6	0.6 0.5	1.2	2.6
0.4 1.0 0.4 1.0 0.4 0.8 0.4 1.0 0.5 1.8 0.5 2.3 0.5 2.4 0.6 2.8 0.5 2.6 0.5 2.5 0.4 1.5 0.4 1.2 0.3 1.0 0.3 0.9 0.3 1.1 0.3 1.0 0.4 1.3 0.4 1.3 0.4 1.3 0.4 0.8 0.4 0.9 0.4 0.9 0.4 0.9 0.4 0.9																								Diurnal Average Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure AF - Analyzer Failure PF - Power Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

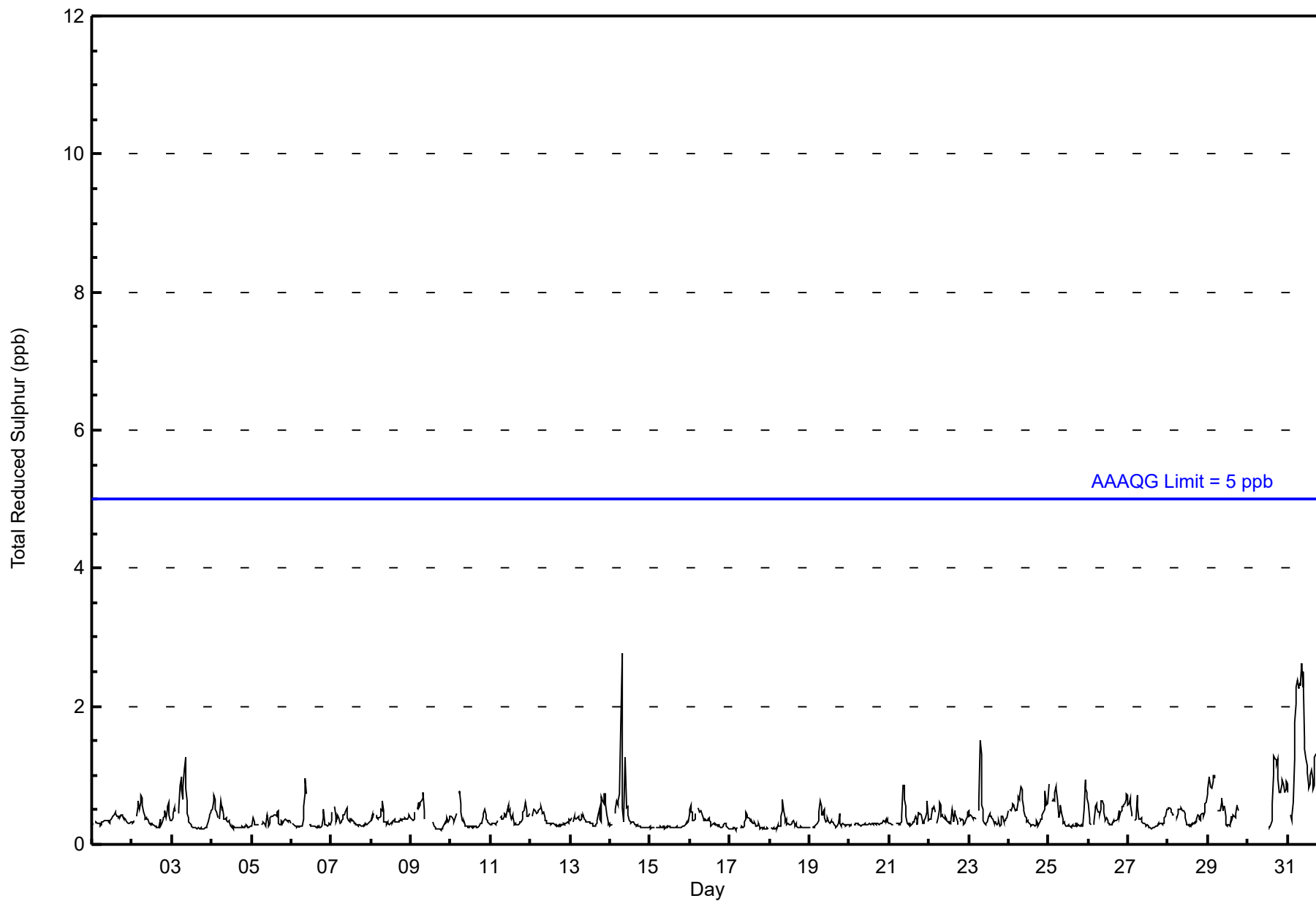
Barge Landing - May 2025

Maximum Value: 2.5 ppb on May 31 09:00																		Maximum Daily Average: 1.2 ppb on May 31										Hours in Service: 744	
Minimum Value: 0.2 ppb on May 9 19:00																		Minimum Daily Average: 0.3 ppb on May 15										Hours of Data: 690	
Maximum Diurnal Average: 0.6 ppb at hour 8																		Minimum Diurnal Average: 0.3 ppb at hour 14										Hours of Missing Data: 54	
Monthly Average: 0.41 ppb																		Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.6 P ₉₉ = 1.5										Hours of Calibration: 37	
																												Percent Operational Time: 97.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5			
2-May	0.3	0.3	Z	0.5	0.6	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.3	0.4	0.7			
3-May	0.4	0.5	0.5	Z	0.5	0.9	0.7	1.0	1.0	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	1.0			
4-May	0.5	0.7	0.6	0.4	Z	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7			
5-May	0.3	0.4	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4			
6-May	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.7	M	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.8			
7-May	0.4	Z	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5			
8-May	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6			
9-May	0.4	0.4	0.4	Z	0.6	0.5	0.6	0.7	0.4	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.7			
10-May	0.4	0.4	0.4	0.4	Z	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.7			
11-May	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.5			
12-May	Z	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5			
13-May	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.7	0.7	0.7	0.4	0.3	0.7			
14-May	0.3	0.3	Z	0.5	0.6	0.7	1.3	1.6	0.4	0.9	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.5	1.6			
15-May	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.4			
16-May	0.5	0.5	0.3	0.4	Z	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.5			
17-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5			
18-May	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.6			
19-May	0.2	Z	0.3	0.3	0.3	0.3	0.6	0.5	0.4	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.6			
20-May	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
21-May	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.6	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.8			
22-May	0.4	0.4	0.5	0.5	Z	0.3	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.6			
23-May	0.4	0.4	0.4	0.4	0.4	Z	0.6	1.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	1.4			
24-May	Z	0.5	0.6	0.6	0.5	0.6	0.7	0.8	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.7	0.6	0.5	0.8			
25-May	0.9	Z	0.6	0.6	0.8	0.7	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.9	0.7	0.4	0.9			
26-May	0.5	0.3	Z	0.3	0.5	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.4	0.7			
27-May	0.6	0.6	0.4	Z	0.4	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.6			
28-May	0.5	0.5	0.5	0.4	Z	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.7	0.4	0.7			
29-May	0.9	0.9	0.8	1.0	1.0	Z	0.5	0.5	0.6	0.5	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	PF	PF	PF	PF	AF	0.6	1.0			
30-May	AF	AF	AF	AF	AF	AF	AF	AF	M	M	M	C	C	0.3	0.3	0.8	1.3	1.2	1.1	0.8	0.8	0.9	0.8	0.9	--	1.3			
31-May	0.8	Z	0.4	0.5	1.5	2.2	2.3	2.3	2.5	2.4	1.5	1.2	0.9	0.8	1.0	0.9	1.1	1.3	1.2	0.7	0.7	0.6	0.6	0.6	1.2	2.5			
0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.6 0.5 0.5 0.4 0.4 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4																										Diurnal Average			
0.9 0.9 0.8 1.0 1.5 2.2 2.3 2.3 2.5 2.4 1.5 1.2 0.9 0.8 1.0 0.9 1.3 1.3 1.2 0.8 0.8 0.9 0.9 0.9																										Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure PF - Power Failure																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																													



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	690	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 690

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	47	56	29	7	6	31	106	151	56	44	41	35	12	15	13	41	690
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	47	56	29	7	6	31	106	151	56	44	41	35	12	15	13	41	690

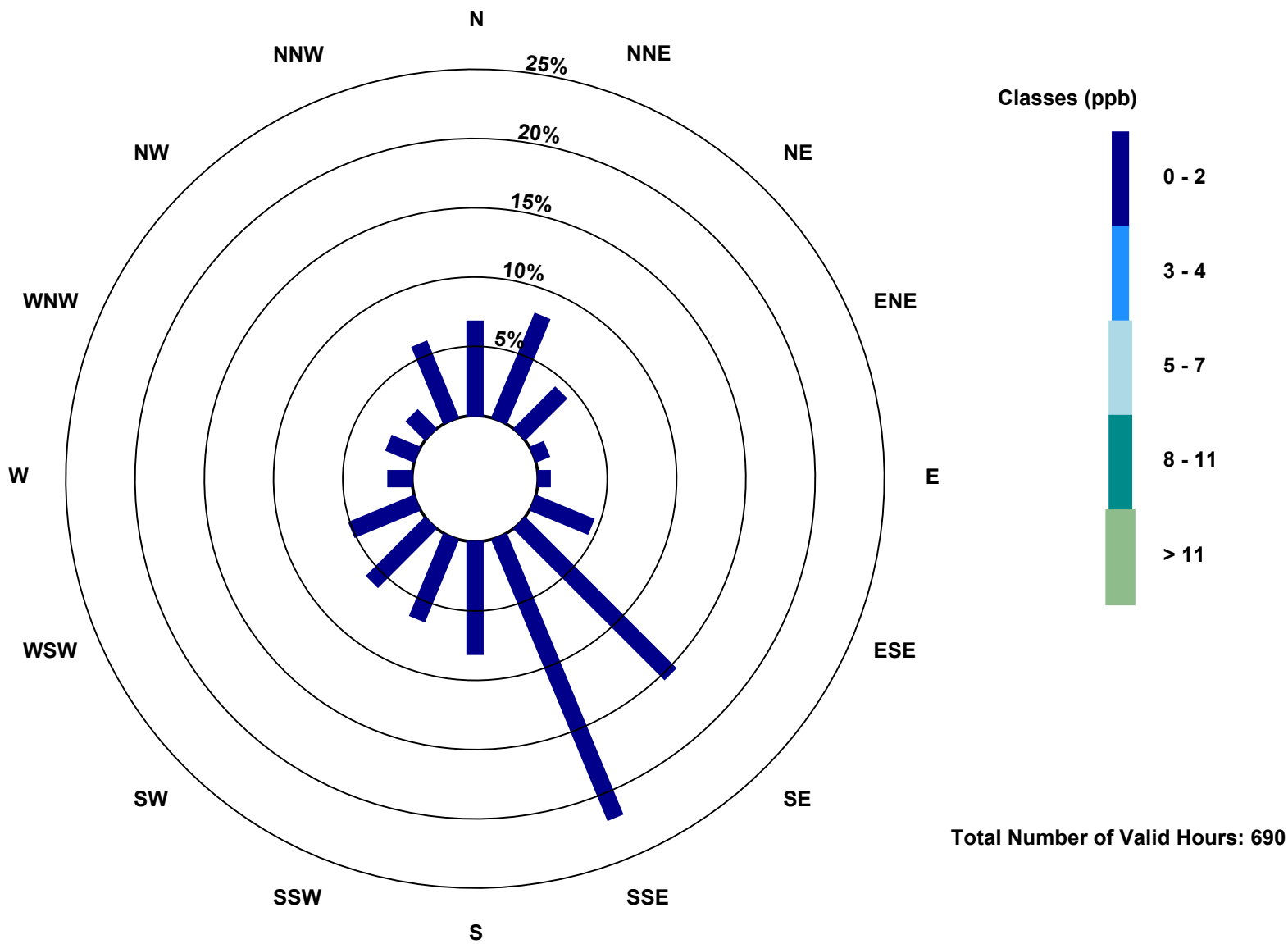
Total Number of Valid Hours: 690

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

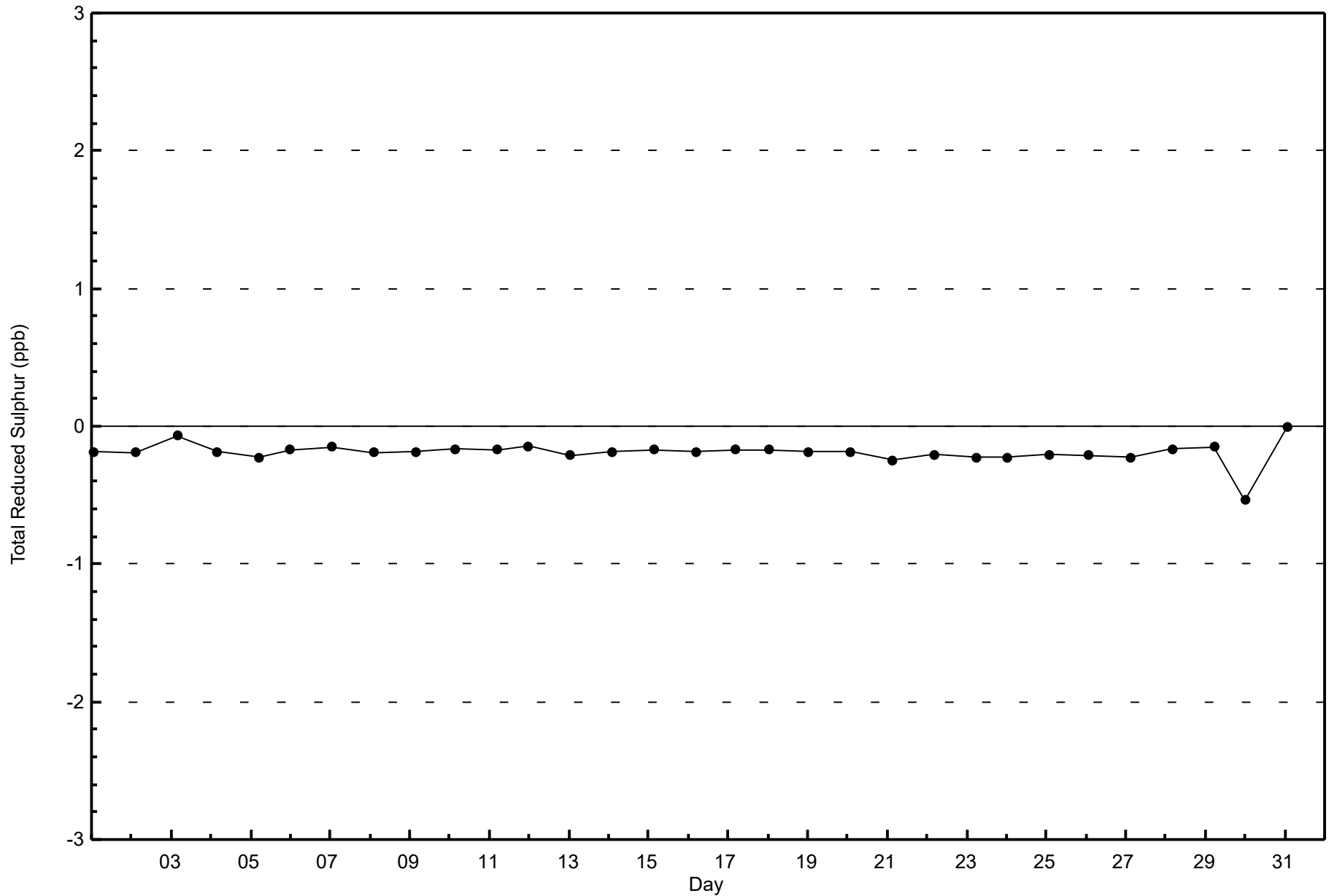
Total Reduced Sulphur (TRS) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

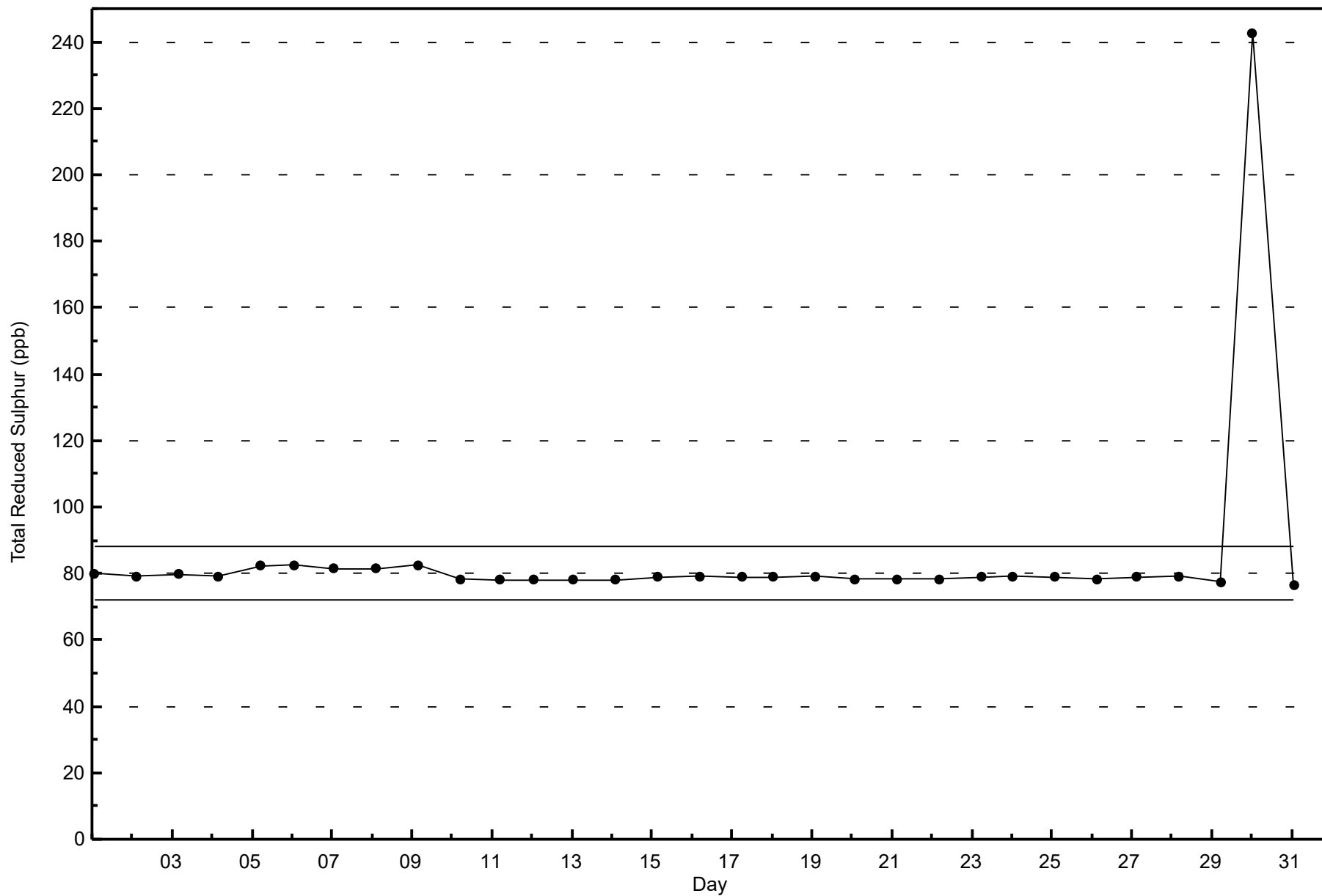
Total Reduced Sulphur (TRS) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

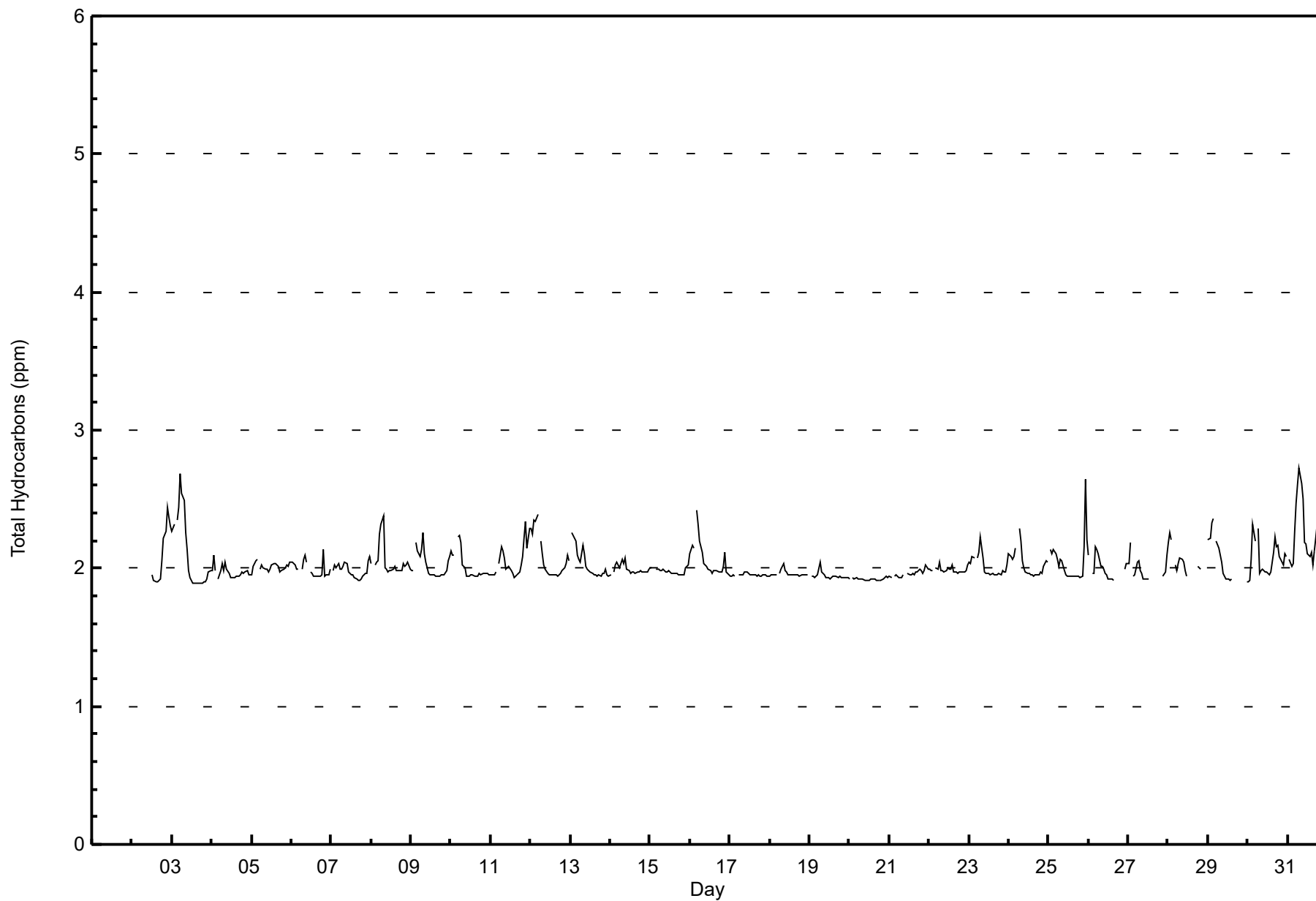
Barge Landing - May 2025

Maximum Value: 2.7 ppm on May 31 08:00																			Maximum Daily Average: 2.2 ppm on May 31						Hours in Service: 744	
Minimum Value: 1.9 ppm on May 3 16:00																			Minimum Daily Average: 1.9 ppm on May 20						Hours of Data: 645	
Maximum Diurnal Average: 2.1 ppm at hour 7																			Minimum Diurnal Average: 2.0 ppm at hour 14						Hours of Missing Data: 99	
Monthly Average: 2.02 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.2 P ₉₉ = 2.5						Hours of Calibration: 33	
																									Percent Operational Time: 91.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.3	--	2.4
3-May	2.3	2.3	Z	2.3	2.4	2.7	2.5	2.5	2.3	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.7
4-May	2.0	2.1	2.0	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-May	1.9	2.0	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.0	M	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	2.0	2.0	2.0	2.1
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	2.1
8-May	2.0	Z	2.0	2.0	2.1	2.3	2.3	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4
9-May	2.0	2.0	Z	2.2	2.1	2.1	2.1	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.0	2.3
10-May	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
11-May	2.0	2.0	2.0	2.0	Z	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.3	2.1	2.3	2.0	2.3
12-May	2.3	2.2	2.3	2.3	2.4	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4
13-May	Z	2.3	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.3
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0
16-May	2.1	2.2	2.1	Z	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.4
17-May	1.9	1.9	1.9	1.9	Z	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
18-May	1.9	1.9	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0
19-May	Z	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
20-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
21-May	1.9	1.9	Z	1.9	2.0	1.9	1.9	1.9	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-May	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
24-May	2.1	2.1	2.1	2.1	2.1	Z	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.0	2.0	2.3
25-May	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.6	2.2	2.0	2.6
26-May	2.1	Z	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	UO	2.0	2.0	--	2.2
27-May	2.0	2.2	Z	1.9	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	UO	2.0	UO	1.9	2.0	2.1	--	2.2
28-May	2.2	2.3	2.2	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	UO	UO	UO	UO	UO	UO	UO	2.0	2.0	UO	UO	UO	--	2.3
29-May	2.2	2.2	2.3	2.4	Z	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	PF	PF	PF	1.9	--	2.4
30-May	1.9	1.9	2.1	2.3	2.2	Z	2.3	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.3
31-May	Z	2.1	2.0	2.0	2.3	2.5	2.6	2.7	2.6	2.5	2.2	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.0	1.9	2.0	2.0	2.2	2.7
2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0																										Diurnal Average
2.3 2.3 2.3 2.4 2.4 2.7 2.6 2.7 2.6 2.5 2.2 2.2 2.1 2.1 2.1 2.1 2.2 2.2 2.3 2.2 2.3 2.4 2.6 2.3 2.3 2.3																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	499	77.36	77.36
2.1 - 3.0	146	22.64	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	29	44	24	6	4	18	91	109	37	22	29	28	9	12	12	25	499
2.1 - 3.0	15	11	5	1	2	5	11	28	17	13	9	3	5	1	4	16	146
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	55	29	7	6	23	102	137	54	35	38	31	14	13	16	41	645

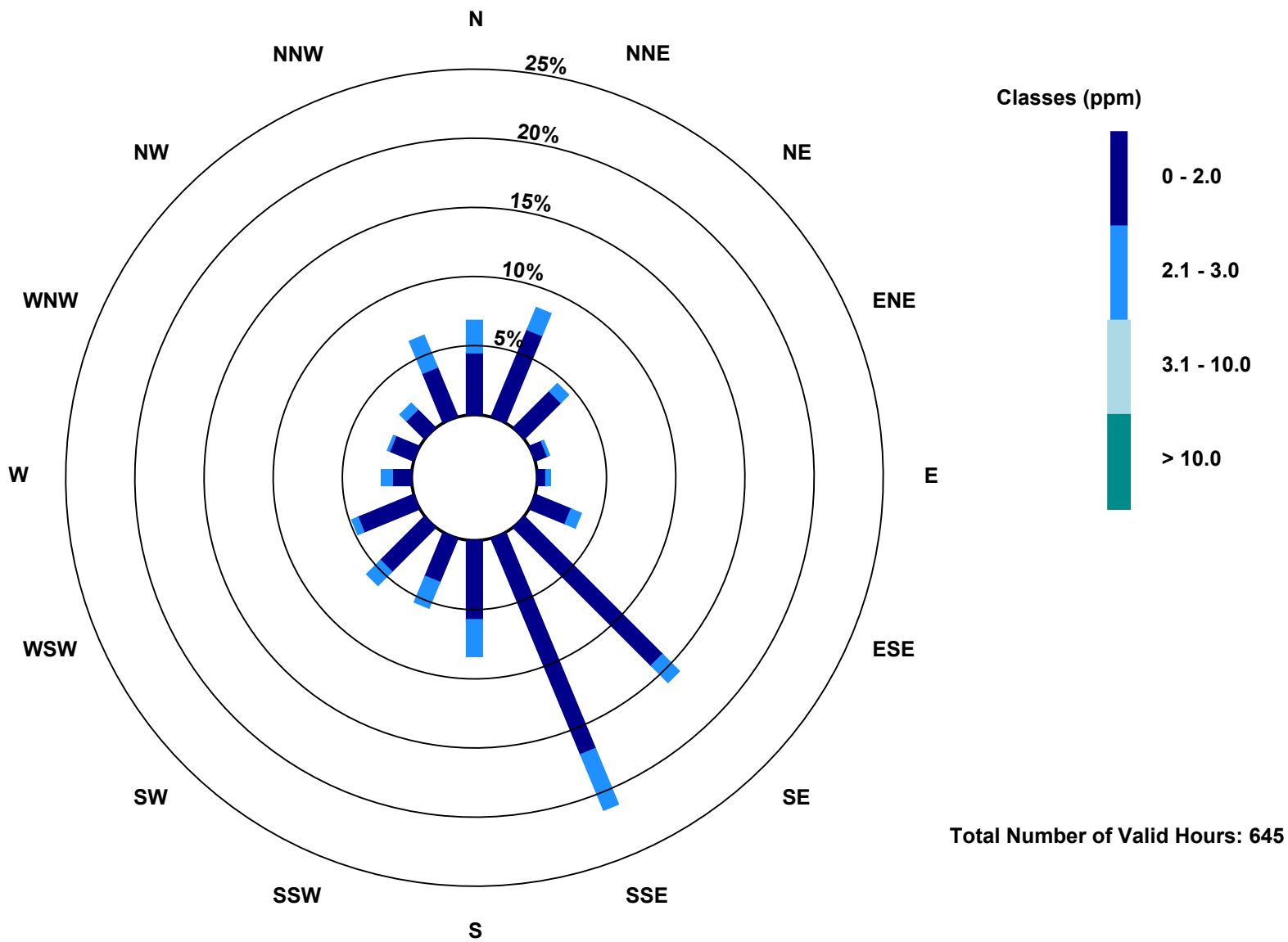
Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

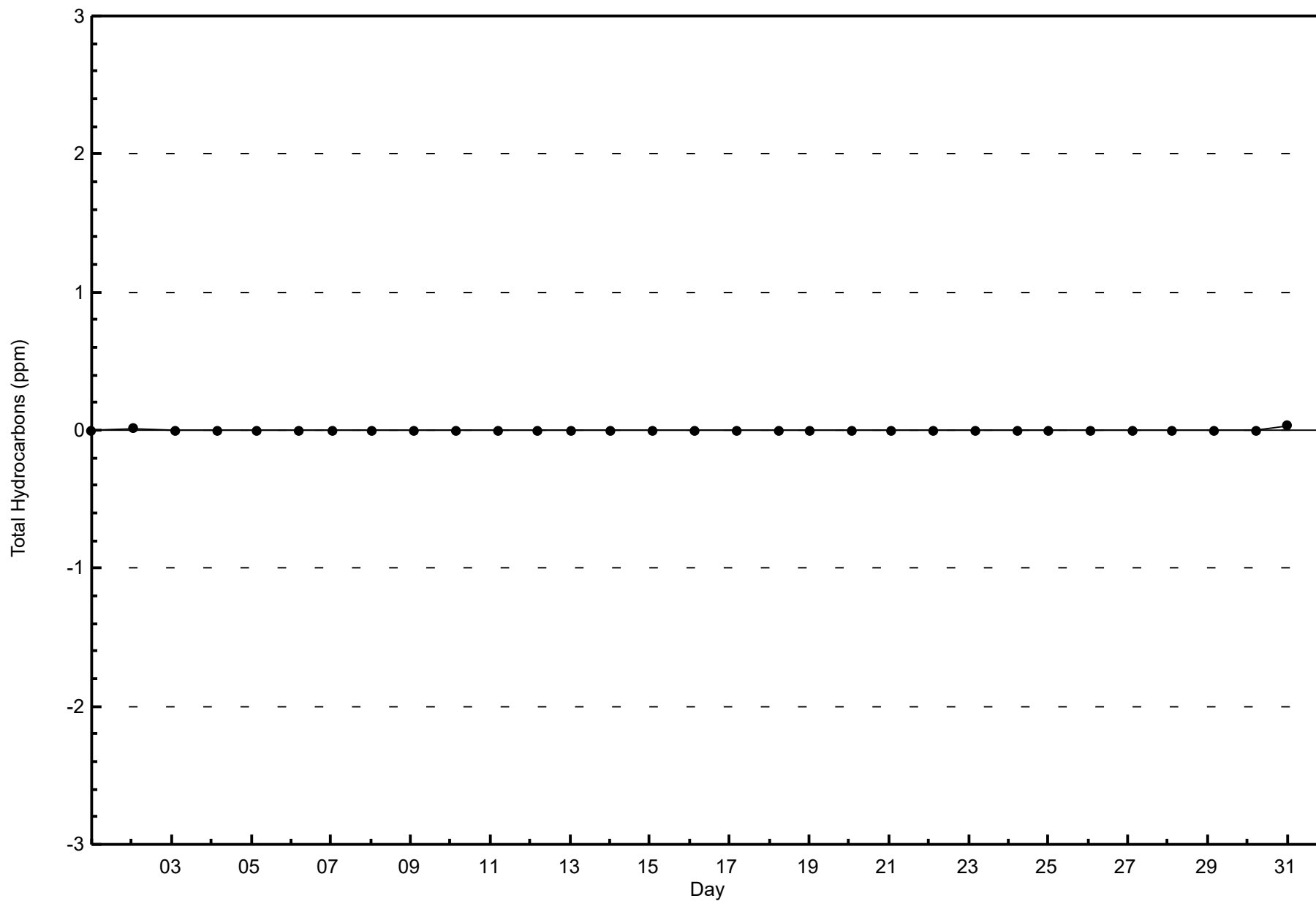
Total Hydrocarbons (THC) - ppm
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

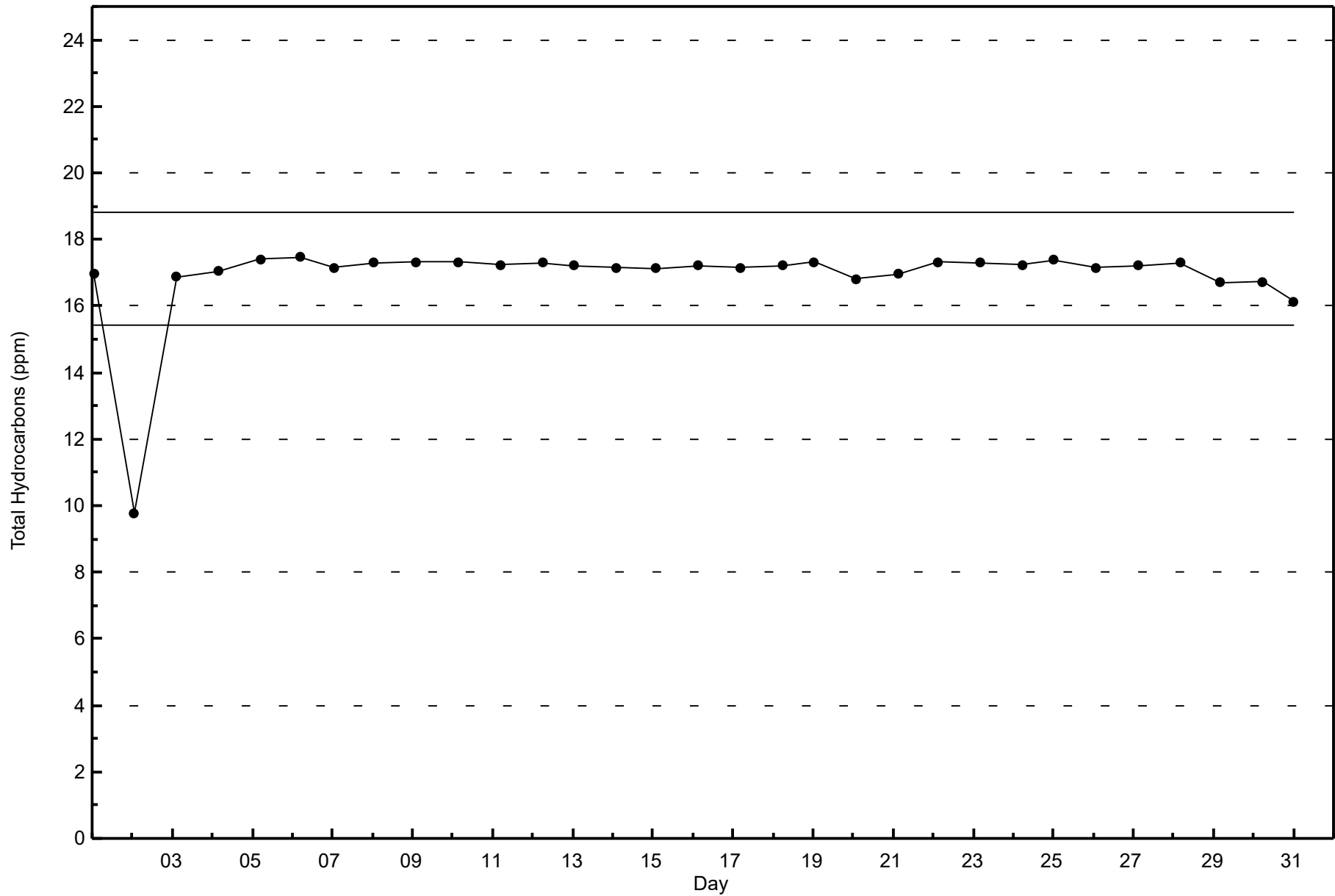
Total Hydrocarbons (THC) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

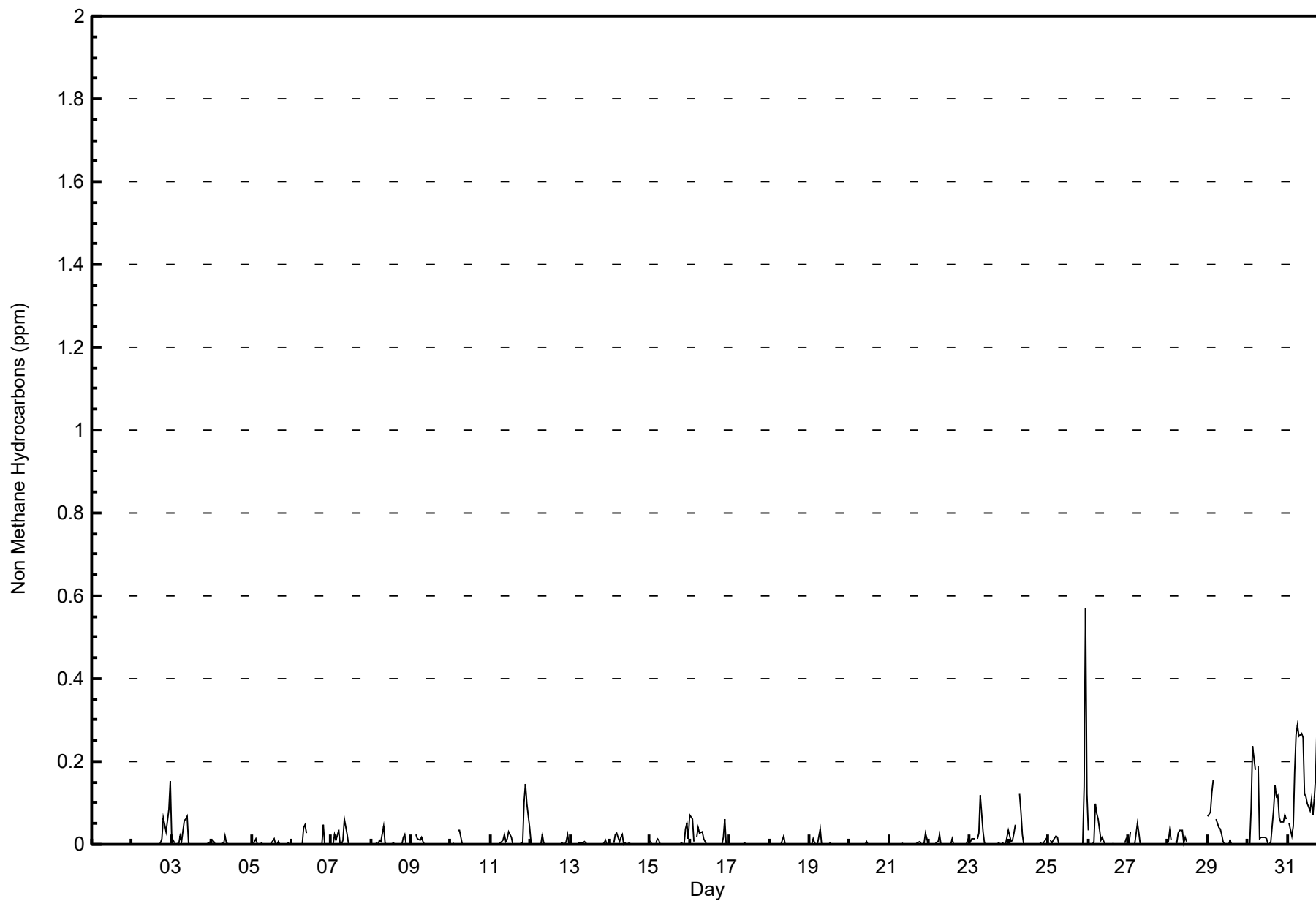
Barge Landing - May 2025

Maximum Value: 0.571 ppm on May 25 23:00																		Maximum Daily Average: 0.130 ppm on May 31								Hours in Service: 744	
Minimum Value: 0.000 ppm on May 2 13:00																		Minimum Daily Average: 0.000 ppm on May 17								Hours of Data: 645	
Maximum Diurnal Average: 0.034 ppm at hour 23																		Minimum Diurnal Average: 0.004 ppm at hour 14								Hours of Missing Data: 99	
Monthly Average: 0.016 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.2								Hours of Calibration: 33	
																										Percent Operational Time: 91.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.014	0.064	0.029	0.057	0.085	0.153	--	0.153
3-May	0.018	0.004	Z	0.003	0.000	0.022	0.008	0.058	0.062	0.066	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.008	0.011	0.066	
4-May	0.011	0.005	0.000	Z	0.000	0.002	0.003	0.000	0.021	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.021	
5-May	0.000	0.001	0.013	0.000	Z	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.004	0.015	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.002	0.015	
6-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.041	0.048	0.026	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.007	0.048	
7-May	Z	0.000	0.025	0.011	0.033	0.000	0.000	0.012	0.060	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.060	
8-May	0.000	Z	0.001	0.002	0.001	0.009	0.007	0.044	0.003	0.001	0.000	0.000	0.000	0.004	0.001	0.000	0.000	0.000	0.000	0.017	0.023	0.000	0.000	0.000	0.005	0.044	
9-May	0.000	0.000	Z	0.024	0.013	0.011	0.018	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.024	
10-May	0.001	0.000	0.003	Z	0.033	0.033	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.033	
11-May	0.000	0.000	0.000	0.000	Z	0.001	0.007	0.009	0.022	0.006	0.013	0.030	0.016	0.000	0.000	0.000	0.000	0.000	0.005	0.001	0.102	0.145	0.098	0.042	0.022	0.145	
12-May	0.003	0.001	0.002	0.001	0.000	Z	0.000	0.024	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.000	0.008	0.025	0.000	0.003	0.025	
13-May	Z	0.000	0.000	0.000	0.000	0.004	0.004	0.005	0.007	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.011	0.000	0.000	0.002	0.011	
14-May	0.000	Z	0.003	0.024	0.026	0.007	0.016	0.023	0.000	0.004	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.003	0.005	0.026	
15-May	0.007	0.002	Z	0.002	0.015	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.036	0.050	0.014	0.006	0.050	
16-May	0.071	0.062	0.007	Z	0.016	0.039	0.026	0.029	0.012	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.061	0.001	0.000	0.015	0.071	
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	
18-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.019	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.019	
19-May	Z	0.001	0.013	0.003	0.000	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.036	
20-May	0.003	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	
21-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.004	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.006	0.001	0.000	0.005	0.026	0.001	0.002	0.026	
22-May	0.000	0.000	0.000	Z	0.004	0.006	0.024	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.011	0.003	0.024	
23-May	0.018	0.006	0.013	0.014	Z	0.013	0.029	0.117	0.030	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.004	0.000	0.000	0.019	0.012	0.117	
24-May	0.035	0.006	0.010	0.029	0.046	Z	0.124	0.079	0.023	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.002	0.013	0.009	0.016	0.124	
25-May	Z	0.012	0.003	0.010	0.021	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.138	0.571	0.122	0.039	0.571	
26-May	0.035	Z	0.000	0.006	0.098	0.074	0.060	0.010	0.017	0.007	0.000	0.001	0.000	0.000	0.000	0.002	UO	UO	UO	UO	UO	UO	UO	0.003	0.013	--	0.098
27-May	0.003	0.031	Z	0.000	0.000	0.051	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	UO	UO	UO	UO	UO	UO	0.000	0.000	0.000	0.000	--	0.051	
28-May	0.008	0.033	0.010	Z	0.006	0.004	0.027	0.033	0.033	0.004	0.018	0.007	UO	UO	UO	UO	UO	UO	UO	0.000	0.000	UO	UO	UO	UO	--	0.033
29-May	0.069	0.079	0.125	0.154	Z	0.059	0.042	0.036	0.025	0.007	0.001	0.001	0.001	0.009	0.000	UO	UO	UO	UO	UO	PF	PF	PF	0.000	--	0.154	
30-May	0.000	0.000	0.087	0.237	0.180	Z	0.190	0.014	0.018	0.018	0.019	0.012	0.002	0.001	0.006	0.085	0.141	0.114	0.120	0.063	0.054	0.054	0.072	0.062	0.067	0.237	
31-May	Z	0.052	0.020	0.043	0.177	0.264	0.290	0.261	0.267	0.256	0.122	0.116	0.097	0.082	0.108	0.071	0.113	0.166	0.302	0.122	0.023	0.018	0.010	0.014	0.130	0.302	
0.012 0.012 0.014 0.023 0.028 0.026 0.033 0.028 0.023 0.016 0.007 0.006 0.004 0.004 0.005 0.006 0.010 0.011 0.017 0.012 0.010 0.020 0.034 0.016																										Diurnal Average	
0.071 0.079 0.125 0.237 0.180 0.264 0.290 0.261 0.267 0.256 0.122 0.116 0.097 0.082 0.108 0.085 0.141 0.166 0.302 0.122 0.102 0.145 0.571 0.153																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	459	71.16	71.16
0.006 - 0.05	131	20.31	91.47
0.06 - 0.1	41	6.36	97.83
> 0.1	14	2.17	100.00

Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	29	41	19	7	4	17	85	89	36	20	26	28	9	12	11	26	459
0.006 - 0.05	7	12	7	0	2	5	11	40	12	10	7	1	1	1	4	11	131
0.06 - 0.1	5	2	3	0	0	1	4	5	5	4	4	2	2	0	0	4	41
> 0.1	3	0	0	0	0	0	2	3	1	1	1	0	2	0	1	0	14
Totals	44	55	29	7	6	23	102	137	54	35	38	31	14	13	16	41	645

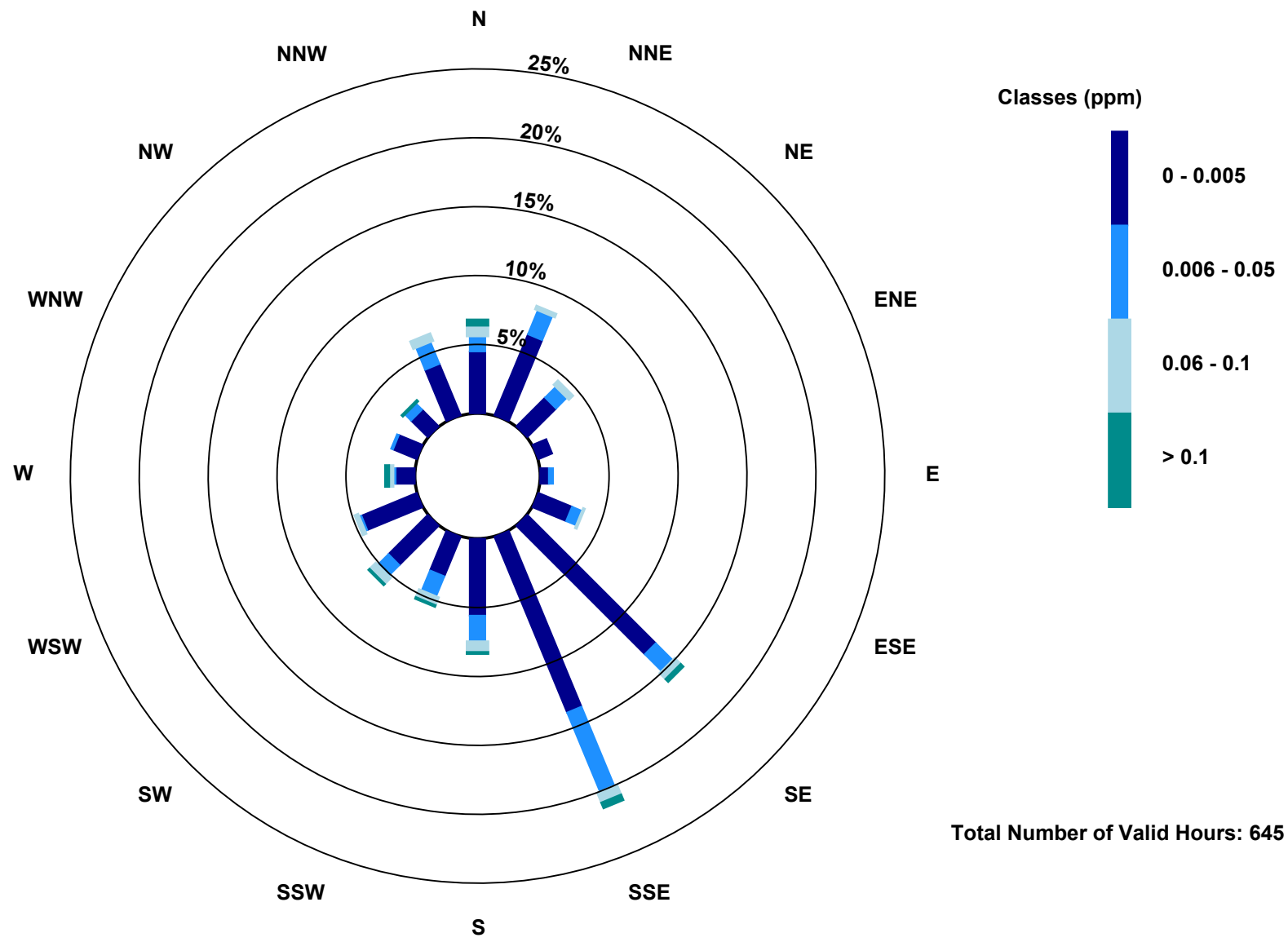
Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing



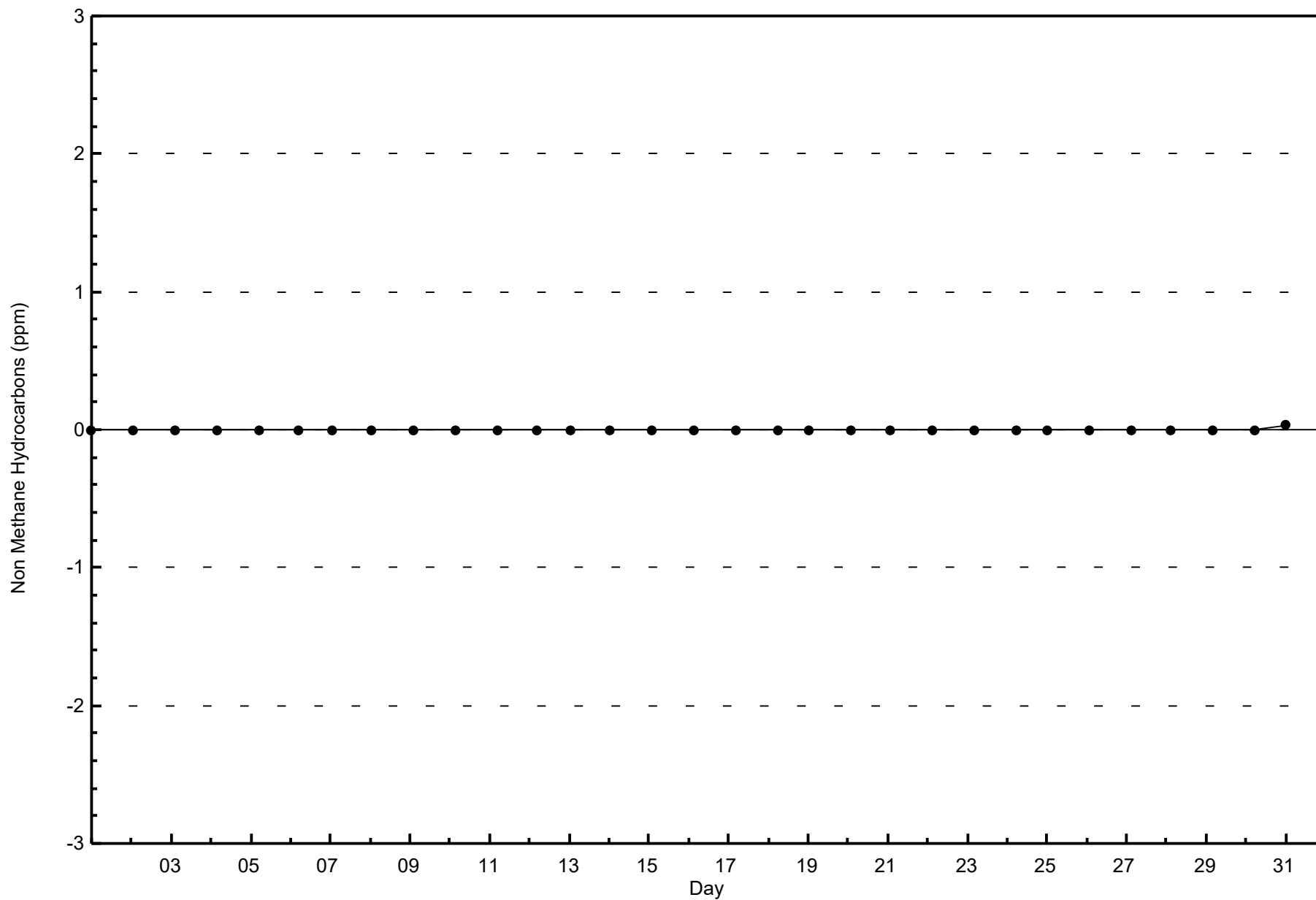


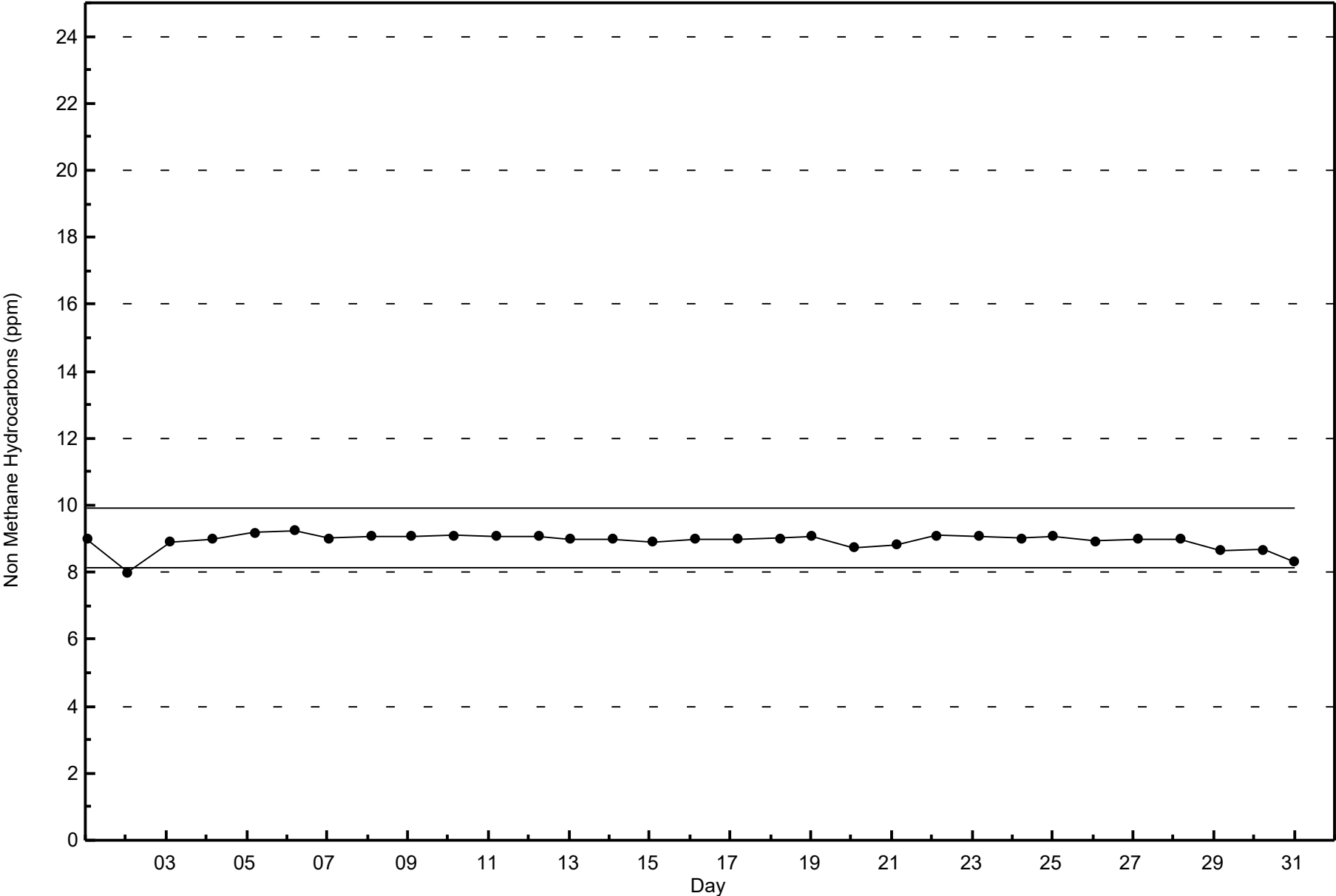
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

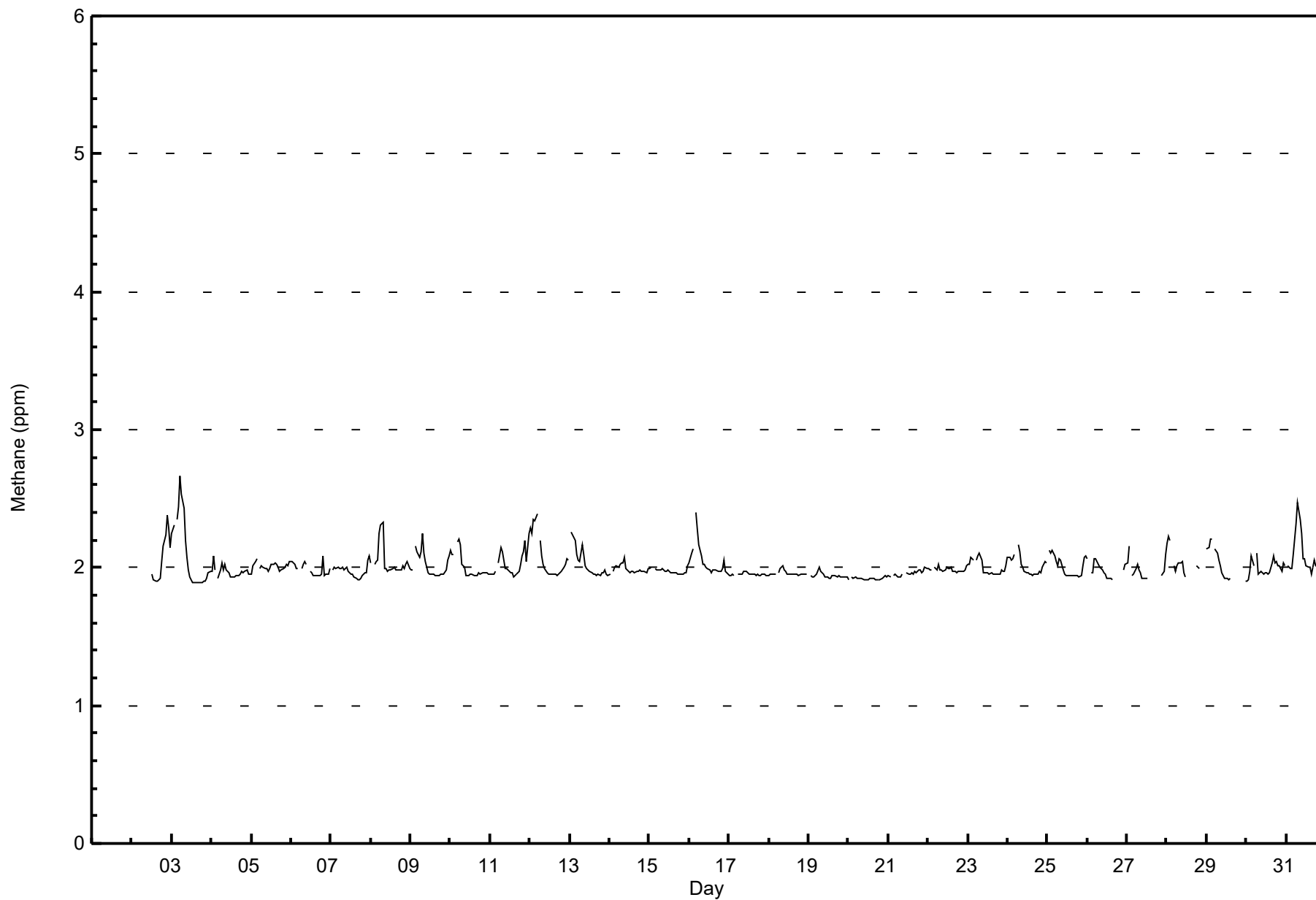
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744								
Maximum Value: 2.7 ppm on May 3 06:00																			Maximum Daily Average: 2.1 ppm on May 3		Hours of Data: 645						
Minimum Value: 1.9 ppm on May 3 16:00																			Minimum Daily Average: 1.9 ppm on May 20		Hours of Missing Data: 99						
Maximum Diurnal Average: 2.1 ppm at hour 7																			Minimum Diurnal Average: 1.9 ppm at hour 16		Hours of Calibration: 33						
Monthly Average: 2.00 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.4		Percent Operational Time: 91.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.4	2.3	2.2	--	2.4
3-May	2.3	2.3	Z	2.3	2.4	2.7	2.5	2.4	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.7	
4-May	2.0	2.1	2.0	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
5-May	1.9	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	M	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.9	1.9	2.0	2.0	2.0	2.1	
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	2.1	
8-May	2.0	Z	2.0	2.0	2.1	2.2	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
9-May	2.0	2.0	Z	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.0	2.2	
10-May	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	
11-May	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.2	2.0	2.2	
12-May	2.3	2.2	2.3	2.3	2.4	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4	
13-May	Z	2.3	2.2	2.2	2.1	2.1	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.3	
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	
16-May	2.0	2.1	2.1	Z	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.4	
17-May	1.9	1.9	1.9	1.9	Z	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	
18-May	1.9	1.9	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	
19-May	Z	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
20-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
21-May	1.9	1.9	Z	1.9	2.0	1.9	1.9	1.9	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
23-May	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
24-May	2.1	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.2	
25-May	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	2.1	
26-May	2.1	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	UO	2.0	2.0	--	2.1	
27-May	2.0	2.2	Z	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	UO	2.0	UO	1.9	2.0	2.1	--	2.2	
28-May	2.2	2.2	2.2	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	UO	UO	UO	UO	UO	UO	UO	2.0	2.0	UO	UO	UO	UO	--	2.2
29-May	2.1	2.1	2.2	2.2	Z	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	UO	UO	UO	UO	UO	PF	PF	PF	1.9	--	2.2	
30-May	1.9	1.9	2.0	2.1	2.0	Z	2.1	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
31-May	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.5	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.1	2.5	
2.0 2.1 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 1.9 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0																										Diurnal Average	
2.3 2.3 2.3 2.3 2.4 2.7 2.5 2.5 2.3 2.2 2.1 2.1 2.0 2.0 2.0 2.0 2.1 2.1 2.0 2.2 2.2 2.4 2.3 2.2																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	532	82.48	82.48
2.1 - 3.0	113	17.52	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Barge Landing - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	34	46	25	6	4	18	91	119	41	27	31	29	10	12	12	27	532
2.1 - 3.0	10	9	4	1	2	5	11	18	13	8	7	2	4	1	4	14	113
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	55	29	7	6	23	102	137	54	35	38	31	14	13	16	41	645

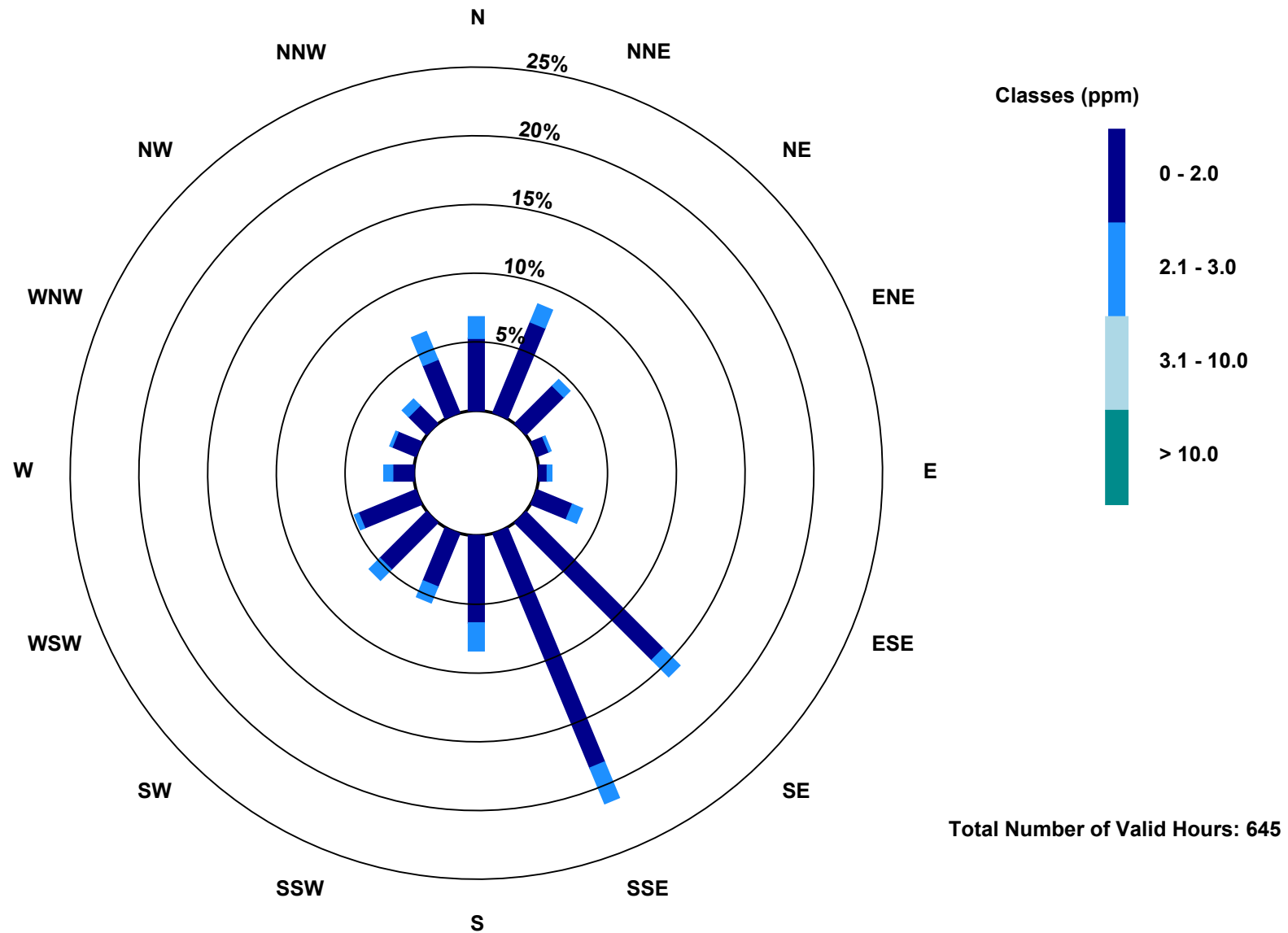
Total Number of Valid Hours: 645

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

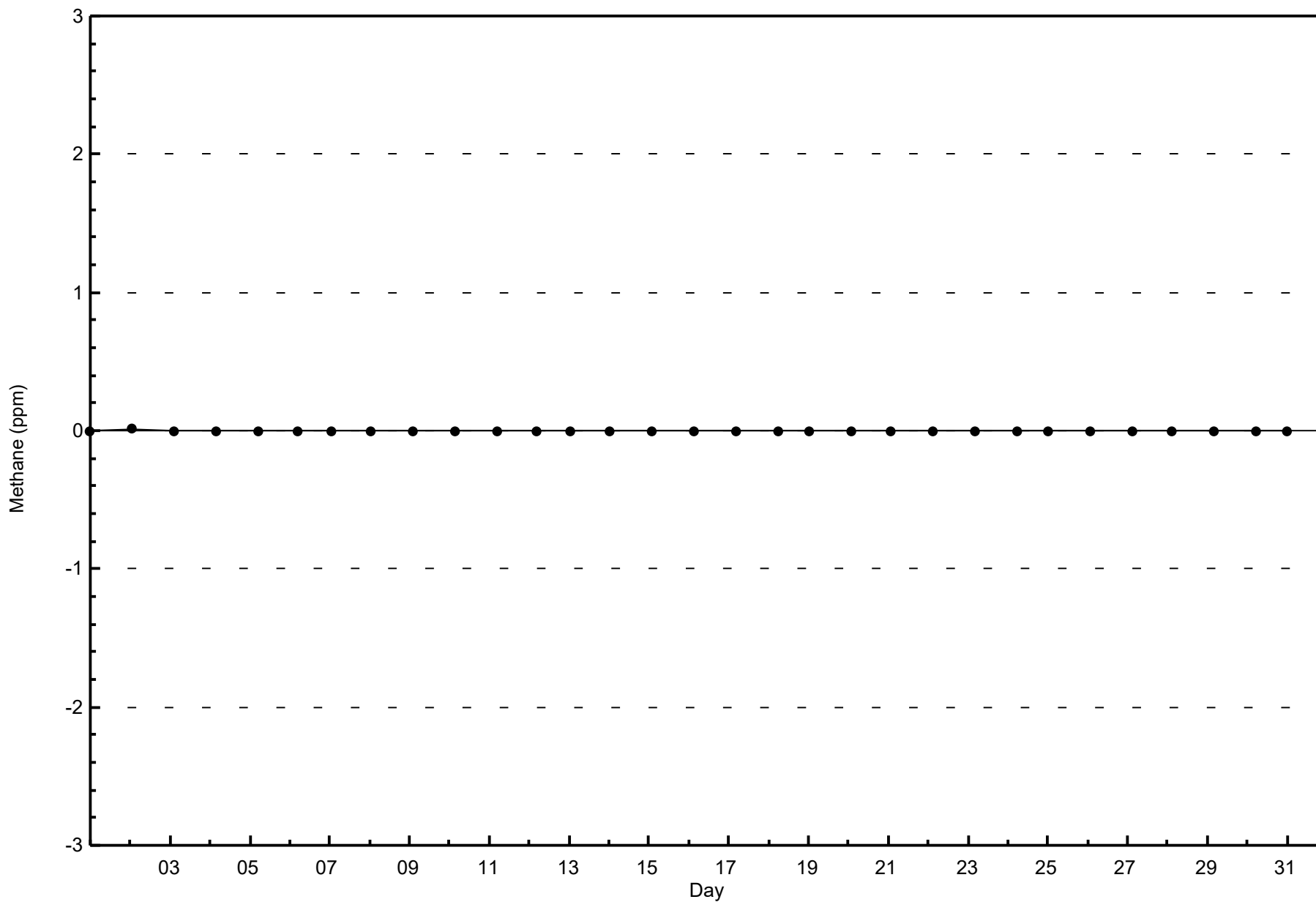
Methane (CH₄) - ppm
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

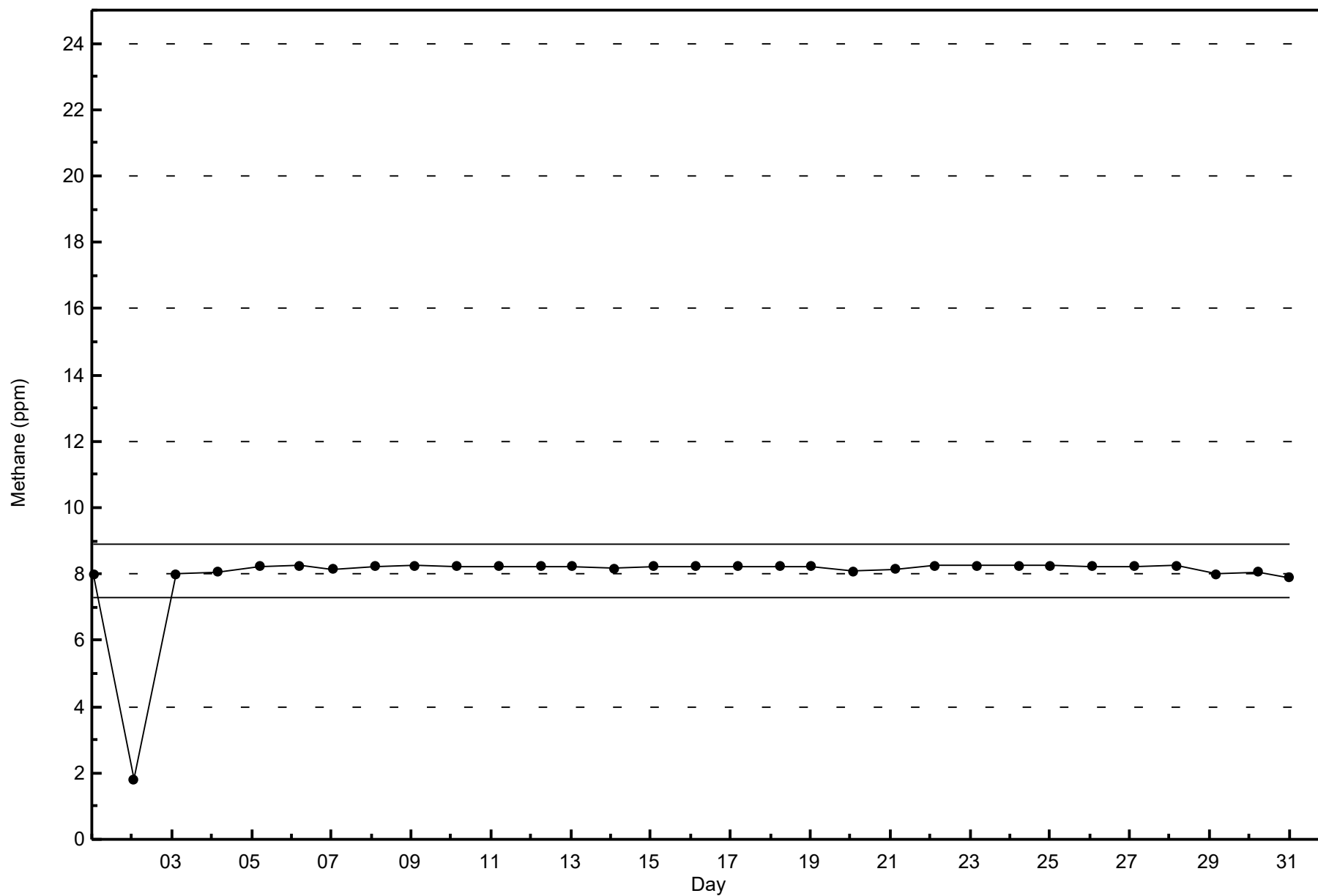
Methane (CH₄) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

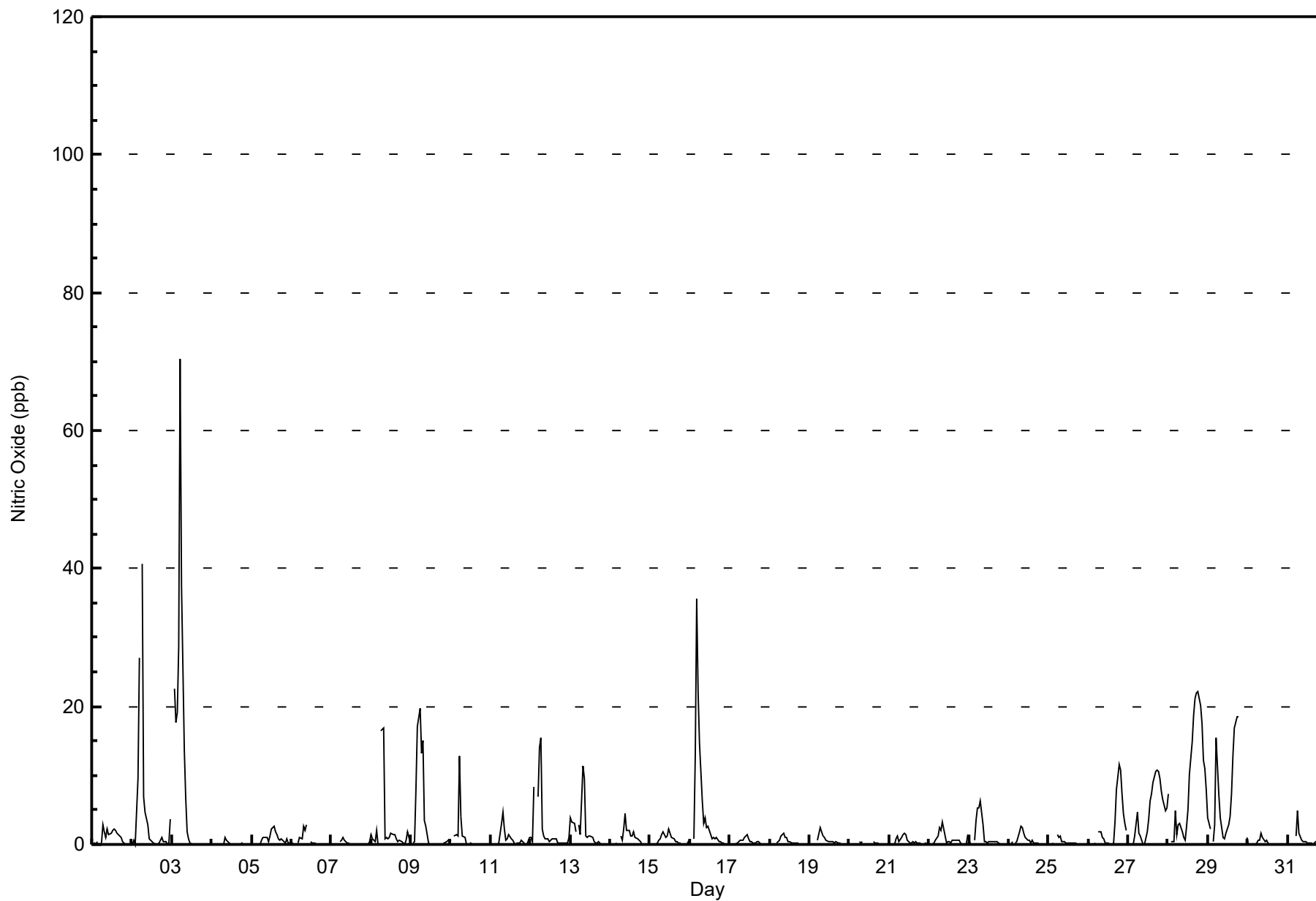
Barge Landing - May 2025

Maximum Value: 70.5 ppb on May 3 06:00																			Maximum Daily Average: 9.5 ppb on May 3										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 21:00																			Minimum Daily Average: 0.1 ppb on May 4										Hours of Data: 703	
Maximum Diurnal Average: 6.9 ppb at hour 6																			Minimum Diurnal Average: 0.8 ppb at hour 23										Hours of Missing Data: 41	
Monthly Average: 2.01 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.3 P ₉₀ = 4.8 P ₉₉ = 22.1										Hours of Calibration: 36	
																			Percent Operational Time: 99.3											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	0.1	0.2	0.1	0.4	Z	0.1	2.9	1.8	1.1	2.2	1.4	1.6	2.0	2.3	2.0	1.5	1.3	0.9	0.4	0.2	0.0	0.0	0.0	0.0	1.0	2.9				
2-May	0.0	0.6	0.0	9.5	27.1	Z	40.7	6.8	4.6	2.9	0.8	0.5	0.4	0.1	0.1	0.1	0.2	0.5	1.1	0.4	0.4	0.1	0.1	3.6	4.4	40.7				
3-May	Z	22.5	17.7	19.1	28.6	70.5	37.4	13.7	6.7	1.8	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	70.5				
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	1.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	1.0				
5-May	0.0	0.0	Z	0.0	0.0	0.1	0.5	1.0	1.0	1.0	0.5	1.3	2.2	2.6	1.9	1.3	0.8	0.7	0.7	0.4	0.2	0.9	0.1	0.2	0.8	2.6				
6-May	0.2	0.1	0.0	Z	0.2	1.1	0.7	2.6	2.0	2.8	M	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.8				
7-May	0.0	0.0	0.0	0.0	Z	0.4	0.6	1.0	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	1.0				
8-May	1.4	0.8	0.4	2.0	0.1	Z	16.5	16.9	0.9	0.9	0.9	1.0	1.6	1.5	1.5	0.9	0.5	0.5	0.4	0.2	0.0	0.5	1.9	0.1	2.2	16.9				
9-May	Z	0.2	0.3	8.0	17.2	19.8	13.2	15.0	3.4	2.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.5	3.6	19.8				
10-May	0.7	Z	1.1	1.5	1.2	12.9	4.1	1.3	0.9	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.1	12.9				
11-May	0.0	0.0	Z	0.0	0.0	0.1	3.0	4.7	2.2	0.7	0.9	1.4	0.9	0.6	0.2	0.1	0.1	0.3	0.5	0.4	0.1	0.1	0.1	0.9	0.8	4.7				
12-May	1.1	0.5	8.3	Z	7.0	14.1	15.4	2.3	1.2	0.8	0.8	0.4	0.6	0.8	0.8	0.8	0.3	0.2	0.1	0.1	0.2	0.1	0.3	1.0	2.5	15.4				
13-May	3.9	3.2	3.1	1.8	Z	2.7	1.3	11.5	9.5	1.3	1.1	1.3	1.2	0.9	0.3	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	1.9	11.5				
14-May	0.0	0.0	0.0	0.1	0.2	Z	1.2	0.5	2.2	4.5	2.0	2.0	1.1	1.3	1.9	1.1	0.8	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.9	4.5				
15-May	Z	0.0	0.0	0.0	0.2	0.7	0.9	1.3	1.9	1.1	1.3	2.3	1.6	1.0	0.9	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.4	0.6	2.3				
16-May	0.1	Z	0.8	13.1	35.5	22.1	14.7	6.4	3.0	3.8	2.5	2.6	1.4	0.9	1.0	0.9	1.0	0.5	0.4	0.1	0.2	0.1	0.1	0.0	4.8	35.5				
17-May	0.0	0.0	Z	0.0	0.1	0.4	0.5	0.6	0.6	1.0	1.5	0.8	0.5	0.3	0.2	0.3	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.3	1.5				
18-May	0.0	0.1	0.1	Z	0.2	0.4	0.5	1.3	1.7	1.0	0.9	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.4	1.7				
19-May	0.0	0.0	0.0	0.0	Z	0.6	2.4	1.9	1.3	1.1	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.5	2.4				
20-May	0.0	0.0	0.0	0.0	0.1	Z	0.5	0.2	0.3	C	C	C	C	C	0.3	0.2	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5				
21-May	Z	0.1	0.1	0.1	0.7	1.1	0.5	1.0	1.3	1.6	1.4	0.5	0.3	0.2	0.4	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.5	1.6				
22-May	0.1	Z	0.0	0.2	0.5	1.1	2.5	2.0	3.2	2.3	0.3	0.3	0.4	0.3	0.7	0.7	0.7	0.5	0.5	0.2	0.0	0.1	0.0	1.3	0.8	3.2				
23-May	0.9	0.1	Z	0.5	3.5	5.2	5.2	6.3	2.9	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	1.2	6.3				
24-May	0.1	0.0	0.3	Z	0.2	0.4	1.8	2.7	2.4	1.6	1.1	0.6	0.5	0.2	0.5	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.6	2.7				
25-May	0.1	0.0	0.1	0.1	Z	1.5	1.0	1.1	0.5	0.4	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.5				
26-May	0.3	0.0	0.0	0.0	0.2	Z	1.8	1.7	1.0	0.9	0.2	0.2	0.2	0.1	0.1	0.3	3.3	7.9	11.6	10.7	7.3	4.5	3.0	2.1	2.5	11.6				
27-May	Z	0.0	0.0	0.0	1.2	4.6	1.5	1.2	0.5	0.0	0.0	1.9	3.7	6.4	7.4	8.9	10.5	10.8	10.6	9.6	7.7	6.5	5.0	5.3	4.5	10.8				
28-May	7.3	Z	0.4	0.4	4.8	1.5	2.8	3.1	1.8	1.1	0.7	2.7	5.1	10.1	14.8	18.7	21.1	22.0	22.1	20.2	17.5	12.3	11.0	8.0	9.1	22.1				
29-May	3.9	2.2	Z	0.5	2.9	15.5	7.2	3.8	2.5	1.0	0.8	1.6	2.9	4.1	7.3	12.9	16.8	18.5	18.5	PF	PF	PF	PF	1.1	6.5	18.5				
30-May	0.0	0.0	0.1	Z	0.0	0.3	0.7	0.5	1.5	0.9	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.2	1.5				
31-May	0.0	0.0	0.0	0.0	Z	1.3	4.9	1.6	0.5	0.3	0.4	0.3	0.1	0.3	0.2	0.1	0.3	0.4	0.5	0.2	0.1	0.0	0.0	0.0	0.5	4.9				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan																														
C - Calibration																														
M - Maintenance																														
PF - Power Failure																														



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	692	98.44	98.44
21 - 40	9	1.28	99.72
41 - 80	2	0.28	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	56	29	7	8	29	102	149	53	42	41	39	15	15	17	42	692
21 - 40	0	1	1	0	0	0	0	0	1	2	0	1	1	0	0	2	9
11 - 80	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	57	30	7	8	30	102	149	54	45	41	40	16	15	17	44	703

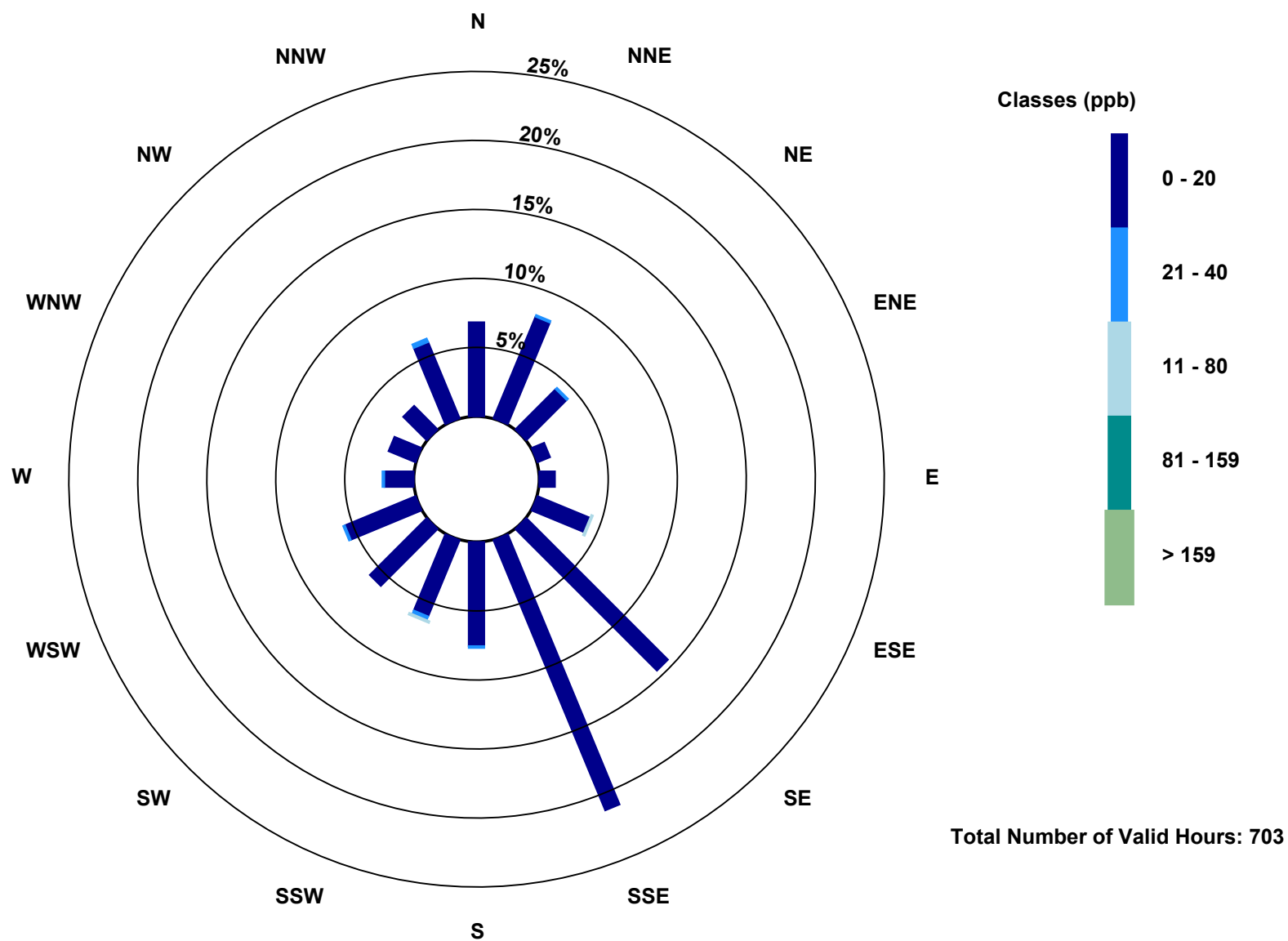
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

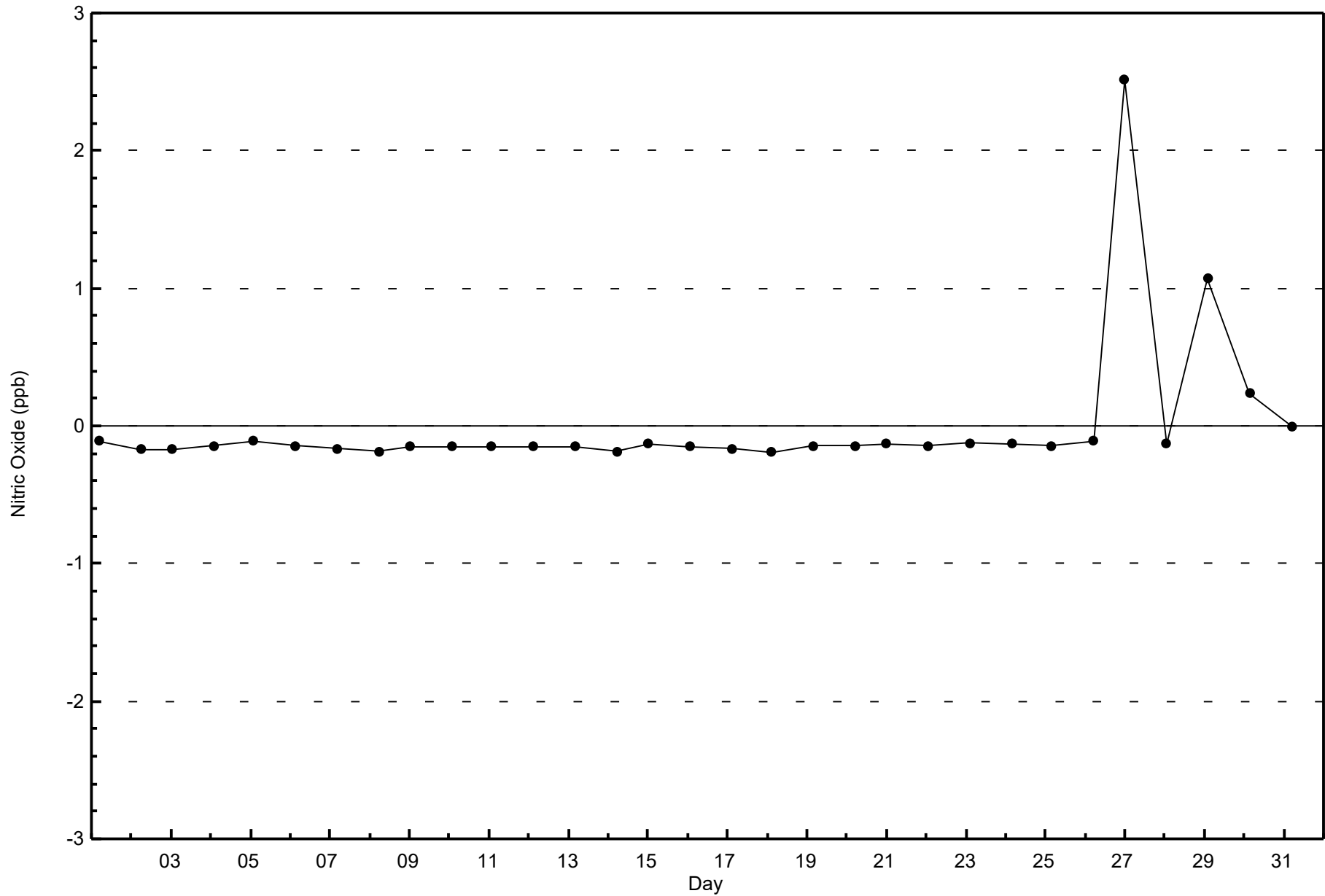
Nitric Oxide (NO) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

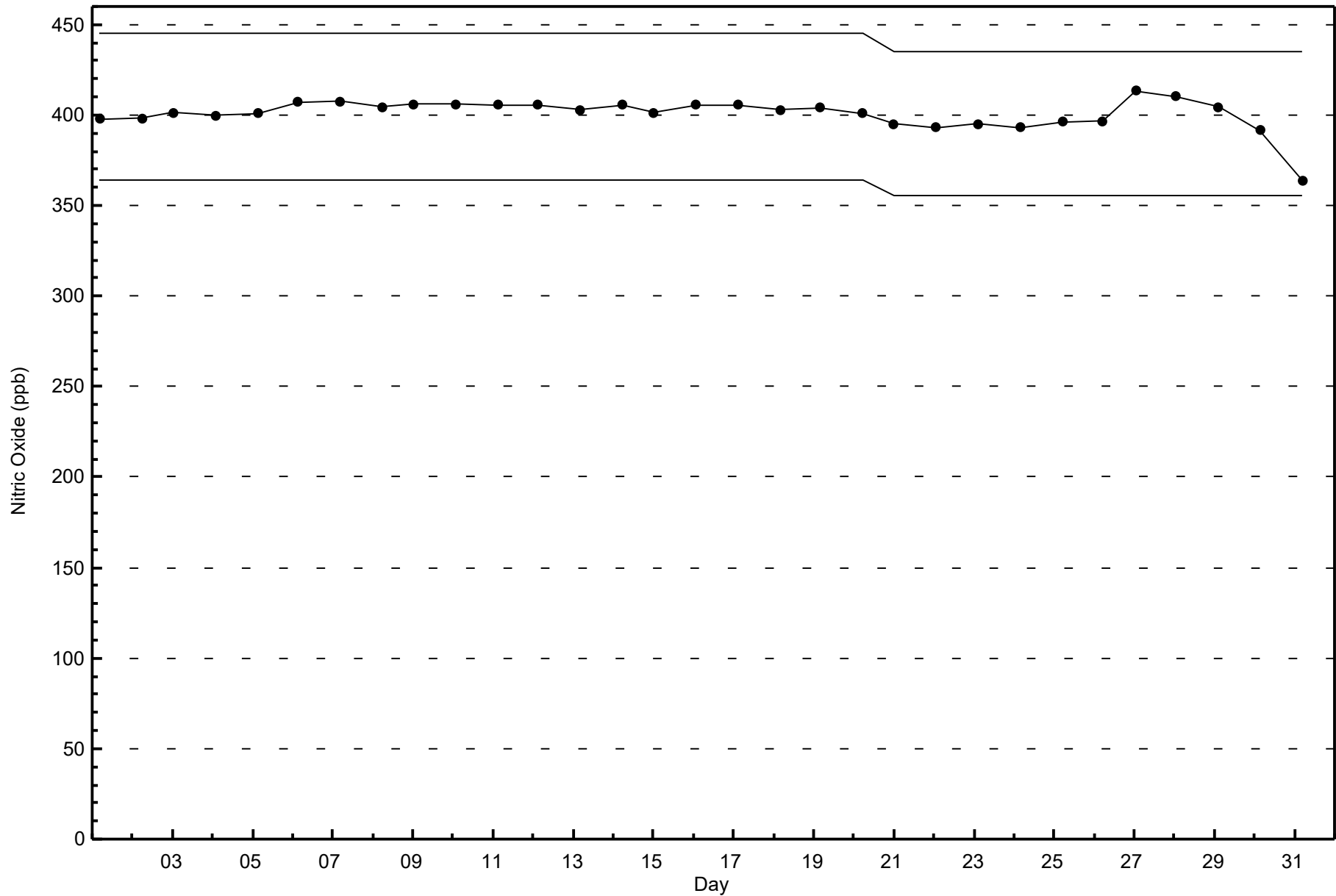
Nitric Oxide (NO) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Barge Landing - May 2025

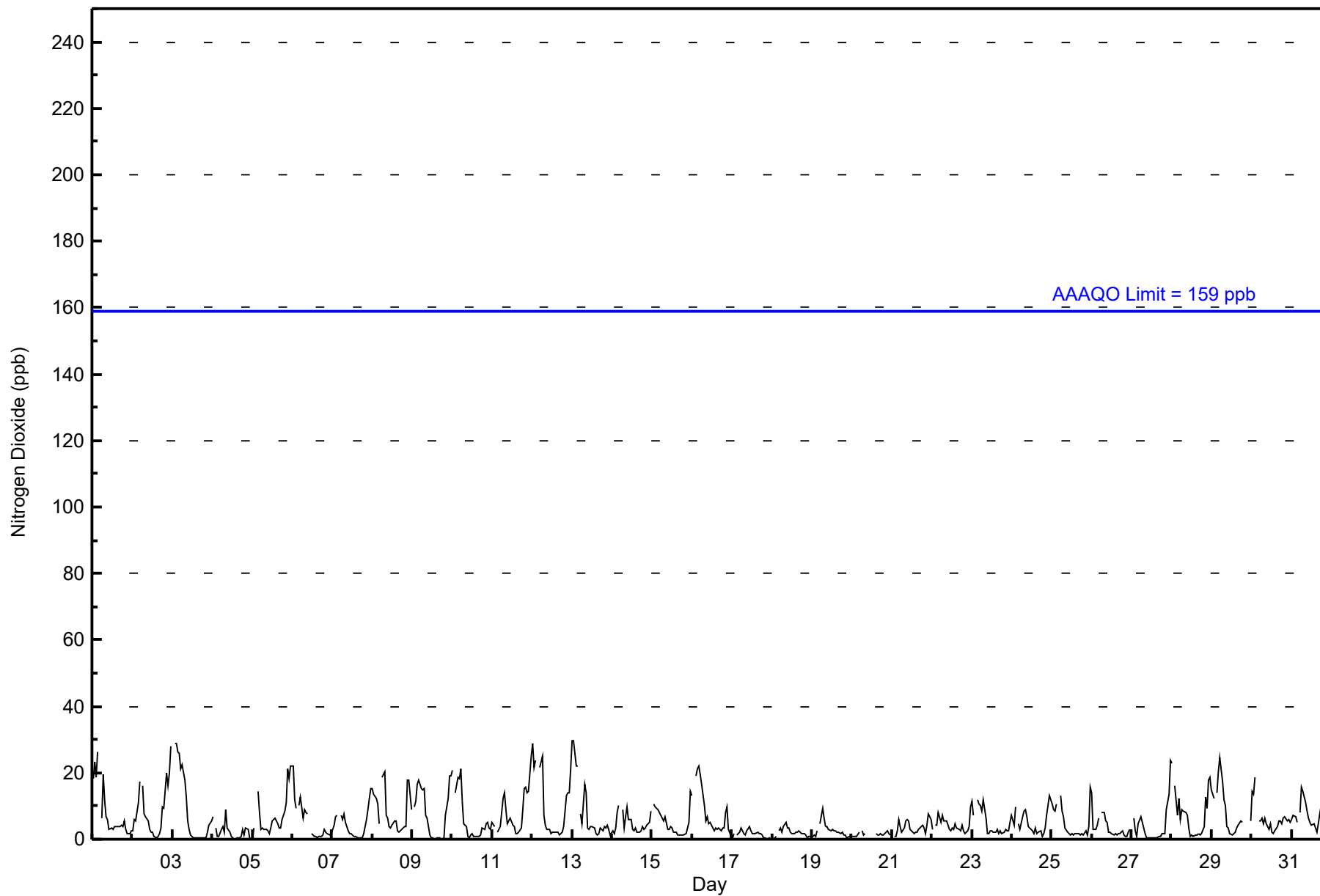


Number of Exceedences (AAAQO): Maximum Value: 29.8 ppb on May 13 02:00																			1-hr: 0 Maximum Daily Average: 10.5 ppb on May 12						Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 36 Percent Operational Time: 99.3																								
Minimum Value: 0.2 ppb on May 18 02:00 Maximum Diurnal Average: 10.5 ppb at hour 1 Monthly Average: 5.76 ppb																			Minimum Daily Average: 1.5 ppb on May 20 Minimum Diurnal Average: 1.9 ppb at hour 16 Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 1.8 Median = 3.4 Q ₃ = 7.4 P ₉₀ = 14.6 P ₉₉ = 26.2																														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-May	18.2	23.2	18.8	26.2	Z	6.4	19.4	11.9	6.7	5.9	3.0	3.3	3.1	3.7	3.9	3.9	4.0	4.1	3.7	5.5	3.1	1.5	1.7	2.4	8.0	26.2																							
2-May	2.5	5.8	5.4	11.2	17.3	Z	16.2	7.6	6.9	5.3	2.9	2.3	2.1	0.8	0.6	0.7	1.9	3.4	9.7	9.2	20.0	15.9	19.8	27.9	8.5	27.9																							
3-May	Z	28.9	28.9	26.3	25.8	21.0	22.3	17.8	12.5	5.7	3.1	1.3	0.6	0.5	0.3	0.3	0.3	0.5	0.3	0.4	0.6	2.0	4.3	5.4	9.1	28.9																							
4-May	6.6	Z	3.5	0.9	0.8	2.8	3.8	2.2	9.1	3.6	2.3	0.8	0.3	0.2	0.2	0.4	0.3	0.9	2.8	1.2	3.4	2.8	0.6	0.2	2.2	9.1																							
5-May	0.2	3.6	Z	14.4	7.9	2.8	3.5	3.1	2.9	2.6	1.5	3.2	5.4	6.5	5.6	4.5	3.5	3.4	5.8	8.5	11.2	21.0	18.1	22.1	7.0	22.1																							
6-May	22.2	11.7	9.4	Z	10.0	12.7	6.5	9.1	7.9	7.7	M	1.9	1.4	0.9	0.7	0.6	0.7	1.0	1.2	2.8	2.1	1.7	1.2	1.8	5.2	22.2																							
7-May	3.0	4.4	6.9	7.3	Z	7.4	6.0	7.8	5.0	2.4	1.8	1.7	1.2	1.0	0.8	0.6	0.4	0.3	0.5	1.9	6.1	8.7	12.4	15.1	4.5	15.1																							
8-May	15.3	13.5	12.1	10.6	4.5	Z	18.5	20.4	7.4	6.4	3.9	3.4	4.3	5.3	5.6	2.6	2.0	2.6	3.2	3.8	3.7	17.8	17.6	9.1	8.4	20.4																							
9-May	Z	9.6	11.4	16.5	17.7	15.3	14.7	15.2	7.0	6.4	1.1	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	7.4	12.1	19.2	19.2	7.6	19.2																							
10-May	20.9	Z	14.1	18.7	18.1	21.3	11.5	4.8	3.7	0.7	0.5	1.2	1.6	0.8	0.8	0.7	0.8	1.3	3.3	3.1	4.7	5.1	3.4	2.9	6.3	21.3																							
11-May	5.1	3.8	Z	2.3	2.9	3.9	12.1	14.1	9.0	4.5	5.3	6.4	4.4	3.7	1.9	1.7	2.1	3.4	9.1	15.2	15.6	13.8	14.4	24.8	7.8	24.8																							
12-May	28.7	21.5	23.6	Z	21.7	23.4	24.8	7.2	4.2	2.9	2.9	1.8	2.0	2.2	2.1	2.3	1.4	1.7	2.0	3.7	13.0	13.9	14.0	21.3	10.5	28.7																							
13-May	29.7	29.8	21.9	22.0	Z	7.5	4.7	16.6	14.0	3.4	3.0	3.9	3.9	3.6	1.8	1.3	1.5	3.5	2.7	4.0	3.3	4.4	2.8	1.4	8.3	29.8																							
14-May	2.7	1.6	3.2	8.0	10.1	Z	8.8	3.5	6.7	9.6	5.9	5.8	2.9	2.4	3.6	2.3	2.0	2.5	4.0	3.1	3.2	4.3	4.9	8.3	4.8	10.1																							
15-May	Z	10.5	9.8	8.8	8.2	7.3	6.3	5.6	6.8	3.0	3.0	3.9	3.2	2.0	2.2	1.1	1.3	1.2	1.1	1.3	1.8	3.4	5.1	14.2	4.8	14.2																							
16-May	13.2	Z	19.2	21.0	22.1	19.4	16.6	10.0	5.3	6.7	4.8	5.2	3.4	2.5	3.2	3.0	3.3	2.7	3.2	3.2	7.9	9.9	2.9	0.9	8.2	22.1																							
17-May	0.3	1.6	Z	1.3	2.3	3.5	2.6	1.7	1.3	2.4	3.7	2.6	1.8	1.6	1.7	2.1	1.7	1.8	1.3	0.5	0.6	0.2	0.3	0.2	1.6	3.7																							
18-May	0.2	0.2	0.7	Z	2.6	3.4	2.2	4.0	5.1	3.3	3.3	2.0	1.8	1.7	2.1	2.3	2.4	2.1	1.7	1.8	1.4	0.6	0.8	0.7	2.0	5.1																							
19-May	0.7	1.2	0.9	2.7	Z	4.8	9.4	6.4	4.0	3.7	3.0	2.4	2.8	2.4	2.4	2.1	2.1	1.7	2.2	1.2	1.1	0.6	0.9	0.8	2.6	9.4																							
20-May	0.8	0.7	0.8	0.9	2.1	Z	2.7	1.3	1.9	C	C	C	C	C	1.8	1.3	1.2	1.9	1.4	1.4	2.1	2.4	1.8	1.2	1.5	2.7																							
21-May	Z	1.0	0.8	2.6	6.1	3.7	2.3	3.6	5.3	5.8	5.5	3.1	2.1	1.8	2.3	2.0	2.9	3.6	4.2	3.2	1.8	4.2	7.8	5.8	3.5	7.8																							
22-May	2.8	Z	4.2	4.4	7.9	4.9	7.4	5.3	5.7	5.5	2.8	2.5	3.3	2.9	4.5	3.6	3.1	2.5	4.2	2.6	1.9	2.4	4.0	9.9	4.3	9.9																							
23-May	11.3	7.0	Z	11.8	10.4	10.2	8.3	11.8	6.4	1.8	1.7	2.4	2.4	2.3	2.1	3.0	1.7	2.5	1.8	2.0	3.0	2.6	2.6	5.1	5.0	11.8																							
24-May	7.1	4.1	9.8	Z	4.8	2.8	6.9	8.6	9.0	6.7	3.8	3.1	2.6	1.6	3.3	1.6	2.2	2.4	1.0	1.9	3.3	7.0	13.2	11.7	5.2	13.2																							
25-May	10.7	8.7	8.5	10.6	Z	13.2	8.3	6.6	3.4	2.3	1.5	1.2	1.7	1.3	1.9	1.6	1.6	1.4	1.7	1.3	2.7	1.3	4.0	15.5	4.8	15.5																							
26-May	14.0	3.0	3.0	4.3	6.5	Z	7.9	8.2	5.4	5.0	2.3	2.1	1.8	1.3	1.5	1.3	1.9	1.7	2.4	1.2	0.9	1.0	2.3	3.0	3.6	14.0																							
27-May	Z	6.5	2.6	0.8	4.5	6.7	4.9	3.4	1.9	0.6	0.6	0.4	0.3	0.4	0.5	0.7	1.0	1.6	1.7	1.5	8.9	13.6	23.8	3.8	23.8																								
28-May	22.7	Z	16.0	7.1	12.4	5.8	8.8	8.5	7.9	7.3	3.5	0.9	1.1	0.7	1.1	1.4	1.7	1.2	1.8	3.9	12.5	9.5	17.6	18.7	7.5	22.7																							
29-May	14.7	12.1	Z	13.9	20.2	24.7	17.4	12.0	10.2	3.7	3.5	1.6	1.2	1.6	2.3	3.2	4.2	5.3	4.9	PF	PF	PF	PF	5.6	8.5	24.7																							
30-May	14.2	13.6	18.7	Z	5.3	5.7	6.5	4.5	6.2	4.7	3.1	4.6	2.3	1.6	2.6	3.9	5.4	5.7	4.8	6.2	6.6	5.4	5.9	5.0	6.2	18.7																							
31-May	6.1	7.0	6.7	5.0	Z	8.0	15.6	14.3	11.0	8.6	6.5	5.0	4.1	4.8	3.6	2.0	4.5	7.8	10.3	9.3	8.8	1.5	3.7	3.8	6.9	15.6																							
																								10.5	9.0	10.0	10.0	10.1	9.6	9.9	8.3	6.4	4.6	3.1	2.7	2.3	2.1	2.2	1.9	2.0	2.4	3.2	3.5	5.2	6.2	7.4	9.3	Diurnal Average	
																								29.7	29.8	28.9	26.3	25.8	24.7	24.8	20.4	14.0	9.6	6.5	6.4	5.4	6.5	5.6	4.5	5.4	7.8	10.3	15.2	20.0	21.0	19.8	27.9	Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																																																	



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	672	95.59	95.59
21 - 40	31	4.41	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	43	55	29	6	7	29	100	149	53	44	40	39	16	15	16	31	672
21 - 40	5	2	1	1	1	1	2	0	1	1	1	1	0	0	1	13	31
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	57	30	7	8	30	102	149	54	45	41	40	16	15	17	44	703

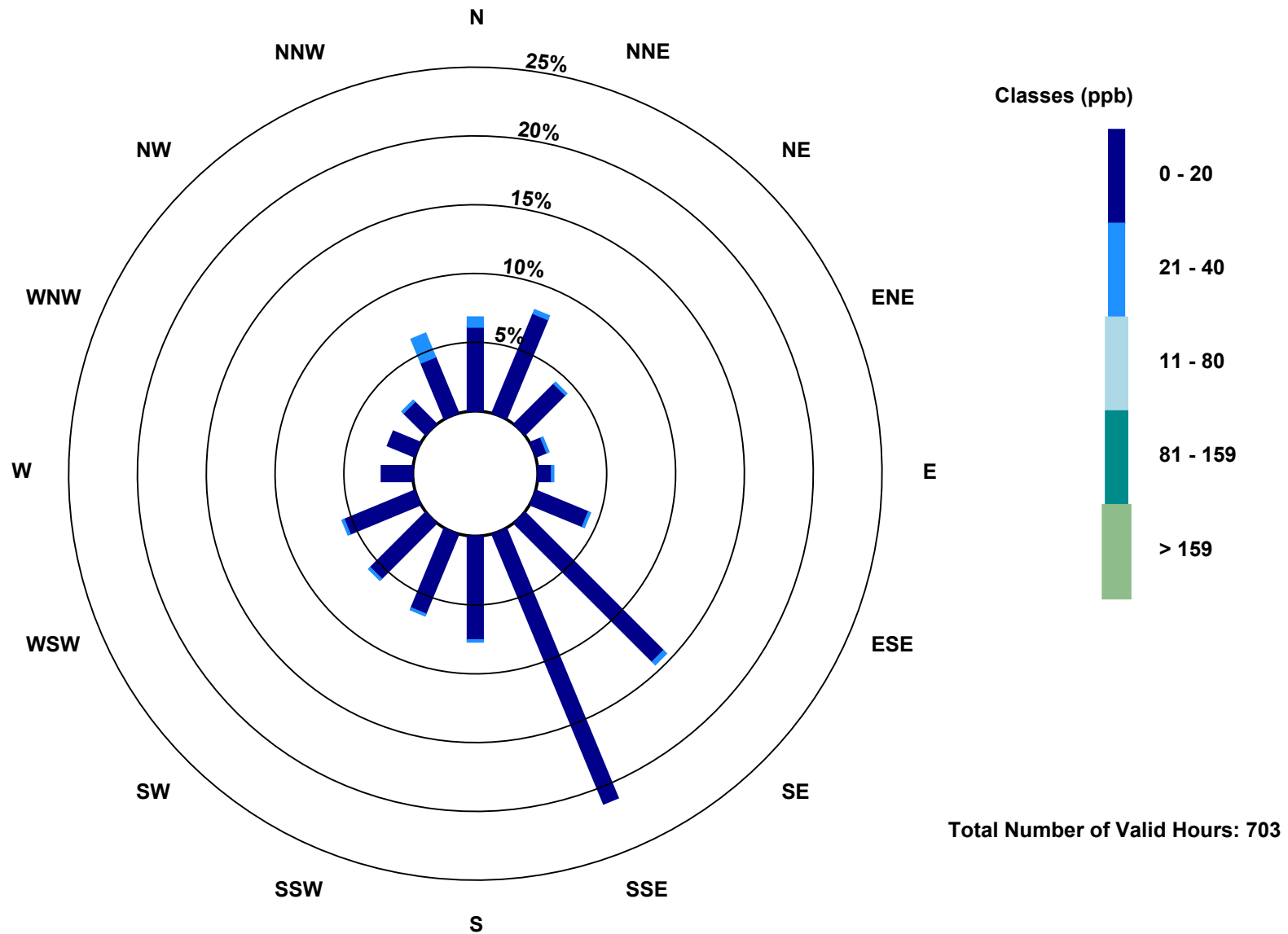
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

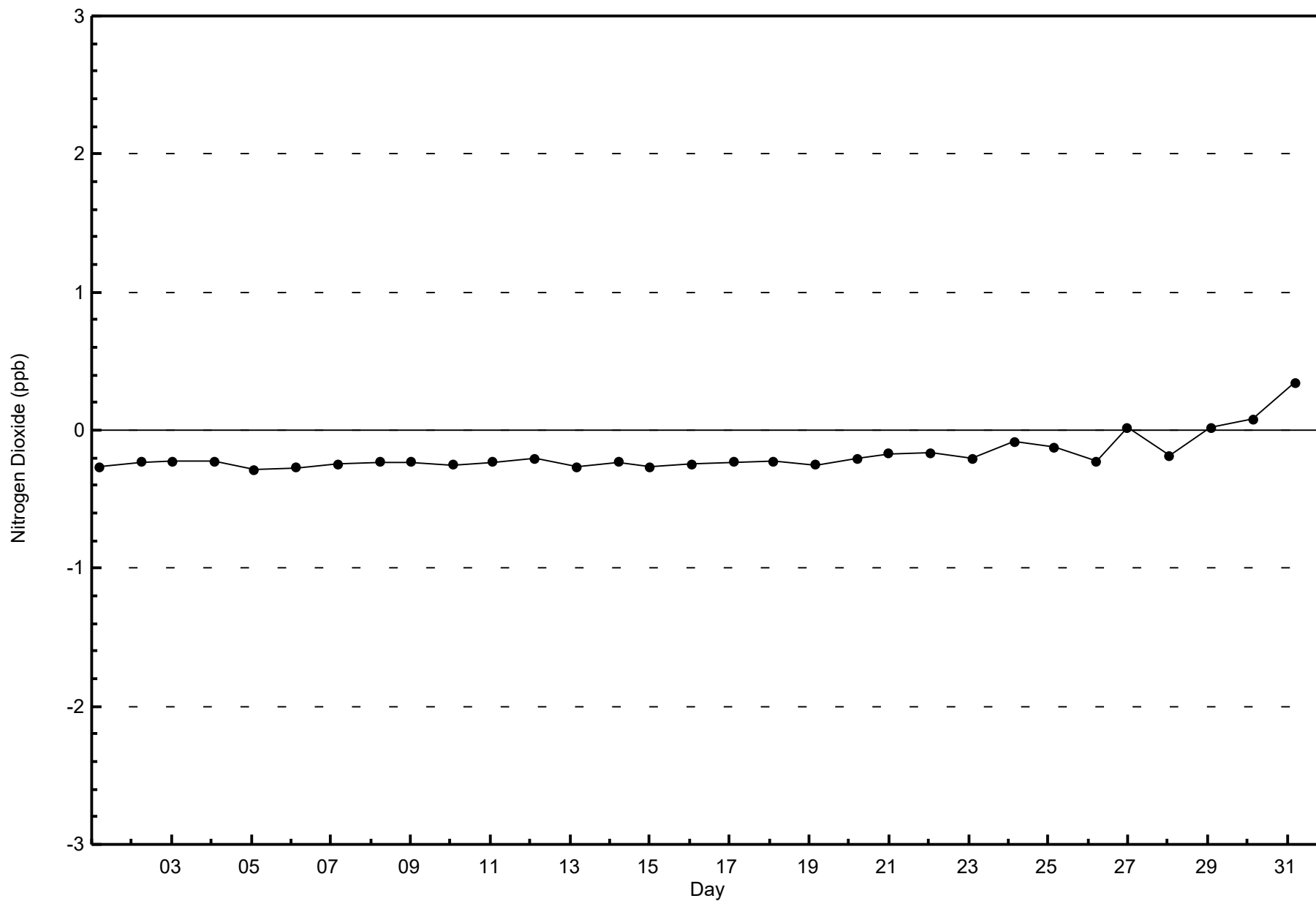
Nitrogen Dioxide (NO₂) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

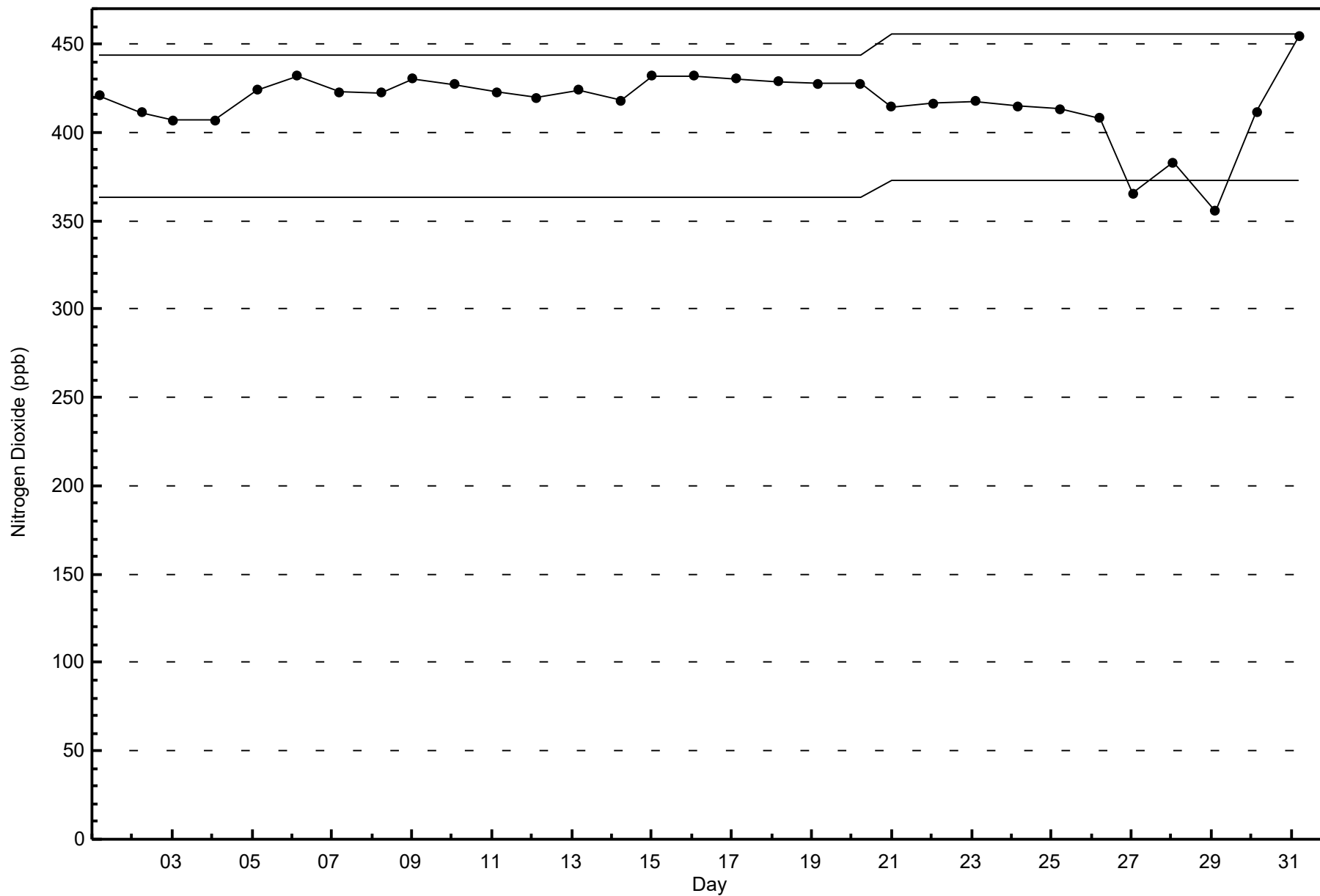
Nitrogen Dioxide (NO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

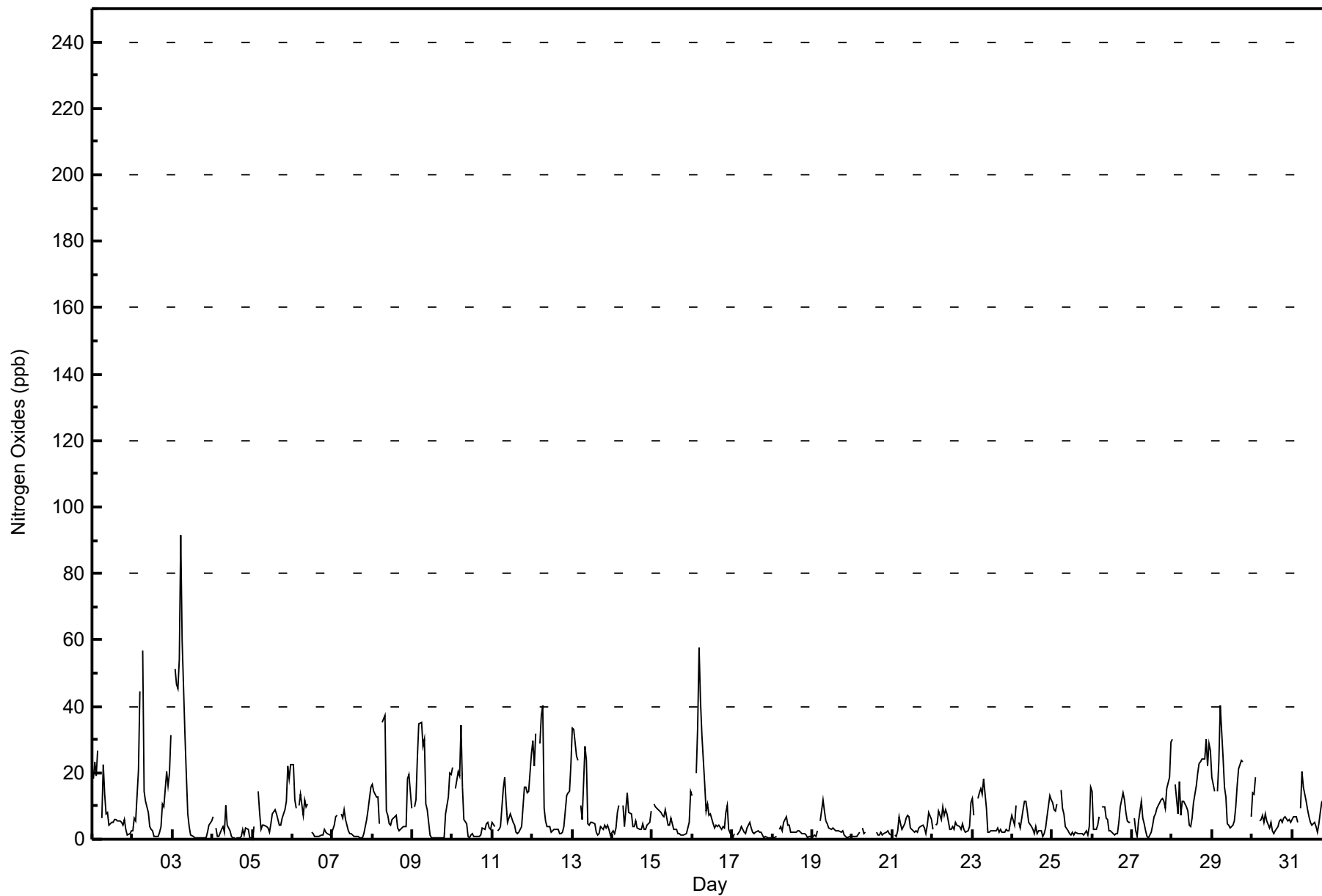
Barge Landing - May 2025

Maximum Value: 91.5 ppb on May 3 06:00																				Maximum Daily Average: 18.6 ppb on May 3										Hours in Service: 744	
Minimum Value: 0.2 ppb on May 5 01:00																				Minimum Daily Average: 1.7 ppb on May 20										Hours of Data: 703	
Maximum Diurnal Average: 16.4 ppb at hour 6																				Minimum Diurnal Average: 3.3 ppb at hour 14										Hours of Missing Data: 41	
Monthly Average: 7.77 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.9 Q ₁ = 2.3 Median = 4.3 Q ₃ = 9.5 P ₉₀ = 19.1 P ₉₉ = 45.4										Hours of Calibration: 36	
																														Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-May	18.3	23.4	18.9	26.6	Z	6.5	22.3	13.7	7.8	8.1	4.4	4.9	5.1	6.0	5.9	5.4	5.3	5.0	4.1	5.7	3.1	1.5	1.7	2.4	9.0	26.6					
2-May	2.5	6.4	5.4	20.7	44.4	Z	56.9	14.4	11.5	8.2	3.7	2.8	2.5	0.9	0.7	0.8	2.1	3.9	10.8	9.6	20.4	16.0	19.9	31.5	12.9	56.9					
3-May	Z	51.4	46.6	45.4	54.4	91.5	59.7	31.5	19.2	7.5	3.8	1.4	0.7	0.5	0.3	0.3	0.3	0.5	0.3	0.4	0.6	2.0	4.3	5.4	18.6	91.5					
4-May	6.6	Z	3.5	0.9	0.8	2.8	3.9	2.3	10.1	4.2	2.6	0.8	0.3	0.2	0.2	0.4	0.3	0.9	3.1	1.2	3.4	2.8	0.6	0.2	2.3	10.1					
5-May	0.2	3.6	Z	14.4	7.9	2.9	4.0	4.1	3.9	3.6	2.0	4.5	7.6	9.1	7.5	5.8	4.3	4.1	6.5	8.9	11.4	21.9	18.2	22.3	7.8	22.3					
6-May	22.4	11.8	9.4	Z	10.2	13.8	7.2	11.7	9.9	10.5	M	2.3	1.7	1.0	0.8	0.7	0.8	1.1	1.2	2.8	2.1	1.7	1.2	1.8	5.7	22.4					
7-May	3.0	4.4	6.9	7.3	Z	7.8	6.6	8.8	5.7	2.7	1.9	1.8	1.2	1.0	0.8	0.6	0.4	0.3	0.5	1.9	6.1	8.7	12.4	15.5	4.6	15.5					
8-May	16.7	14.3	12.5	12.6	4.6	Z	35.0	37.3	8.3	7.3	4.8	4.4	5.9	6.8	7.1	3.5	2.5	3.1	3.6	4.0	3.7	18.3	19.5	9.2	10.7	37.3					
9-May	Z	9.8	11.7	24.5	34.9	35.1	27.9	30.2	10.4	9.0	1.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	7.6	12.5	19.8	19.7	11.2	35.1					
10-May	21.6	Z	15.2	20.2	19.3	34.2	15.6	6.1	4.6	0.8	0.5	1.3	1.7	0.9	0.8	0.7	0.8	1.4	3.4	3.1	4.7	5.1	3.4	2.9	7.3	34.2					
11-May	5.1	3.8	Z	2.3	2.9	4.0	15.1	18.8	11.2	5.2	6.2	7.8	5.3	4.3	2.1	1.8	2.2	3.7	9.6	15.6	15.7	13.9	14.5	25.7	8.6	25.7					
12-May	29.8	22.0	31.9	Z	28.7	37.5	40.2	9.5	5.4	3.7	3.7	2.2	2.6	3.0	2.9	3.1	1.7	1.9	2.1	3.8	13.2	14.0	14.3	22.3	13.0	40.2					
13-May	33.6	33.0	25.0	23.8	Z	10.2	6.0	28.1	23.5	4.7	4.1	5.2	5.1	4.5	2.1	1.4	1.6	3.9	2.8	4.1	3.3	4.4	2.8	1.4	10.2	33.6					
14-May	2.7	1.6	3.2	8.1	10.3	Z	10.0	4.0	8.9	14.1	7.9	7.8	4.0	3.7	5.5	3.4	2.8	3.1	4.5	3.2	3.2	4.3	4.9	8.3	5.6	14.1					
15-May	Z	10.5	9.8	8.8	8.4	8.0	7.2	6.9	8.7	4.1	4.3	6.2	4.8	3.0	3.1	1.5	1.6	1.4	1.2	1.4	1.8	3.4	5.1	14.6	5.5	14.6					
16-May	13.3	Z	20.0	34.1	57.6	41.5	31.3	16.4	8.3	10.5	7.3	7.8	4.8	3.4	4.2	3.9	4.3	3.2	3.6	3.3	8.1	10.0	3.0	0.9	13.1	57.6					
17-May	0.3	1.6	Z	1.3	2.4	3.9	3.1	2.3	1.9	3.4	5.2	3.4	2.3	1.9	1.9	2.4	2.0	2.1	1.5	0.5	0.7	0.2	0.3	0.2	1.9	5.2					
18-May	0.2	0.3	0.8	Z	2.8	3.8	2.7	5.3	6.8	4.3	4.2	2.3	2.1	2.0	2.3	2.5	2.6	2.3	1.8	1.9	1.4	0.6	0.8	0.7	2.4	6.8					
19-May	0.7	1.2	0.9	2.7	Z	5.4	11.8	8.3	5.3	4.8	3.6	2.9	3.3	2.8	2.7	2.4	2.4	1.9	2.4	1.2	1.1	0.6	0.9	0.8	3.0	11.8					
20-May	0.8	0.7	0.8	0.9	2.2	Z	3.2	1.5	2.2	C	C	C	C	C	2.1	1.5	1.3	2.1	1.4	1.5	2.1	2.4	1.8	1.2	1.7	3.2					
21-May	Z	1.1	0.9	2.7	6.8	4.8	2.8	4.6	6.6	7.4	6.9	3.6	2.4	2.0	2.7	2.3	3.2	3.9	4.4	3.3	1.8	4.2	7.9	5.9	4.0	7.9					
22-May	2.9	Z	4.2	4.6	8.4	6.0	9.9	7.3	8.9	7.8	3.1	2.8	3.7	3.2	5.2	4.3	3.8	3.0	4.7	2.8	1.9	2.5	4.0	11.2	5.1	11.2					
23-May	12.2	7.1	Z	12.3	13.9	15.4	13.5	18.1	9.3	2.2	2.1	2.7	2.7	2.6	2.5	3.3	2.0	2.9	2.0	2.1	3.0	2.6	2.6	5.1	6.2	18.1					
24-May	7.2	4.1	10.1	Z	5.0	3.2	8.7	11.3	11.4	8.3	4.9	3.7	3.1	1.8	3.8	1.8	2.4	2.6	1.0	1.9	3.3	7.0	13.3	11.8	5.7	13.3					
25-May	10.8	8.7	8.6	10.7	Z	14.7	9.3	7.7	3.9	2.7	1.7	1.3	1.9	1.4	2.1	1.8	1.7	1.5	1.7	1.3	2.7	1.3	4.0	15.6	5.1	15.6					
26-May	14.3	3.0	3.0	4.3	6.7	Z	9.7	9.9	6.4	5.9	2.5	2.3	2.0	1.4	1.6	1.6	5.2	9.6	14.0	11.9	8.2	5.5	5.3	5.1	6.1	14.3					
27-May	Z	6.5	2.6	0.8	5.7	11.3	6.4	4.6	2.4	0.6	0.6	2.3	4.1	6.7	7.8	9.4	11.2	11.8	12.2	11.3	9.2	15.4	18.6	29.1	8.3	29.1					
28-May	30.0	Z	16.4	7.5	17.2	7.3	11.6	11.6	9.7	8.4	4.2	3.6	6.2	10.8	15.9	20.1	22.8	23.2	23.9	24.1	30.0	21.8	28.6	26.7	16.6	30.0					
29-May	18.6	14.3	Z	14.4	23.1	40.2	24.6	15.8	12.7	4.7	4.3	3.2	4.1	5.7	9.6	16.1	21.0	23.8	23.4	PF	PF	PF	PF	6.7	15.1	40.2					
30-May	14.2	13.6	18.8	Z	5.3	6.0	7.2	5.0	7.7	5.6	3.5	5.2	2.4	1.6	2.6	3.9	5.4	5.8	4.9	6.3	6.7	5.4	6.0	5.0	6.4	18.8					
31-May	6.1	7.0	6.7	5.0	Z	9.3	20.5	15.9	11.5	8.9	6.9	5.3	4.2	5.1	3.8	2.1	4.8	8.2	10.8	9.5	8.9	1.5	3.7	3.8	7.4	20.5					
11.3 10.2 11.3 12.2 15.4 16.4 15.9 12.0 8.5 6.0 3.9 3.5 3.3 3.3 3.6 3.5 4.0 4.6 5.4 5.0 6.3 7.0 8.1 10.1																										Diurnal Average					
33.6 51.4 46.6 45.4 57.6 91.5 59.7 37.3 23.5 14.1 7.9 7.8 7.6 10.8 15.9 20.1 22.8 23.8 23.9 24.1 30.0 21.9 28.6 31.5																										Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																															



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	642	91.32	91.32
21 - 40	51	7.25	98.58
41 - 80	9	1.28	99.86
81 - 159	1	0.14	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Barge Landing - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	42	53	26	6	5	27	95	141	52	40	40	39	15	14	16	31	642
21 - 40	6	3	3	1	3	2	7	8	2	4	1	0	0	1	1	9	51
11 - 80	0	1	1	0	0	0	0	0	0	1	0	1	1	0	0	4	9
81 - 159	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	57	30	7	8	30	102	149	54	45	41	40	16	15	17	44	703

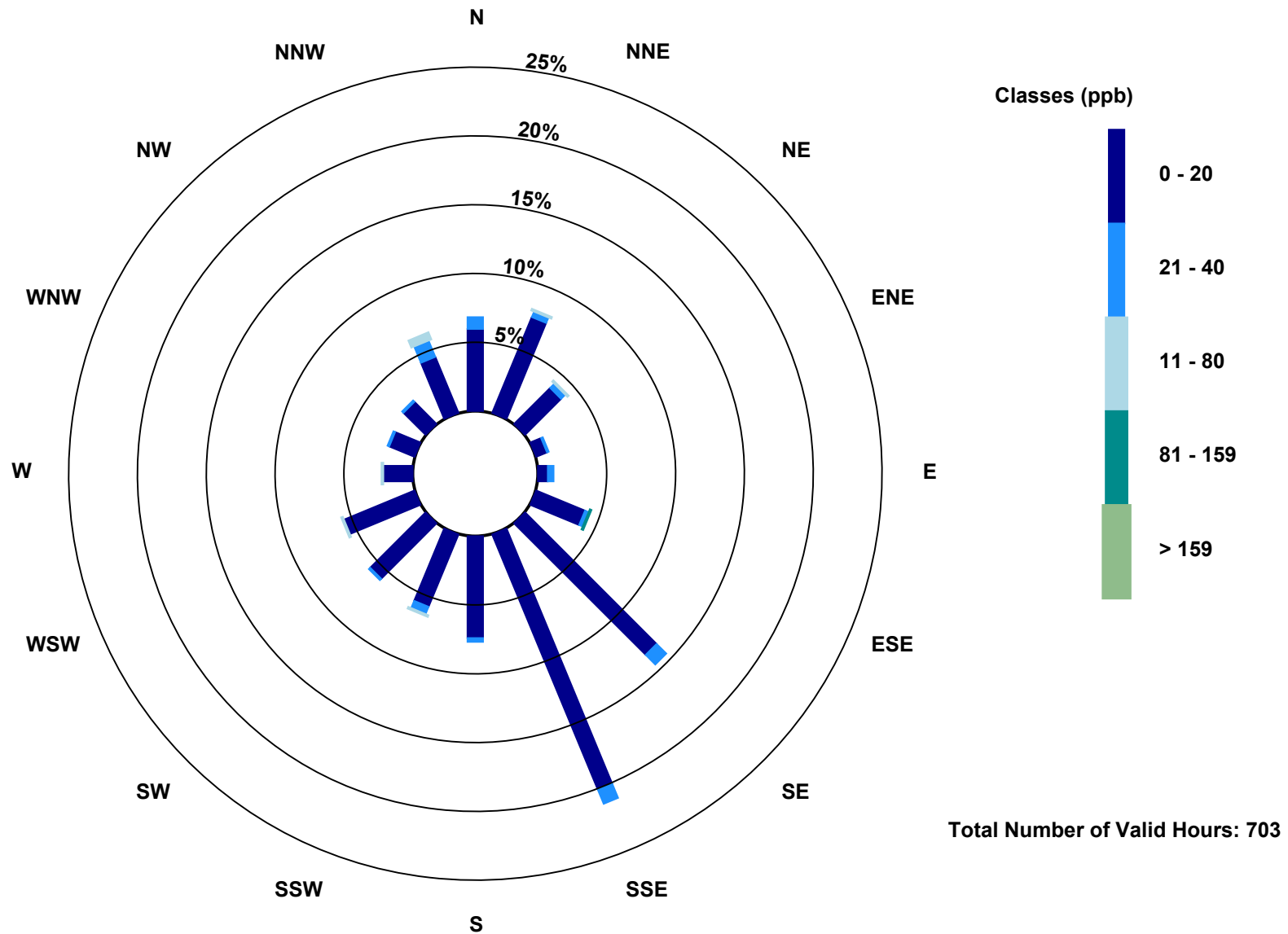
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

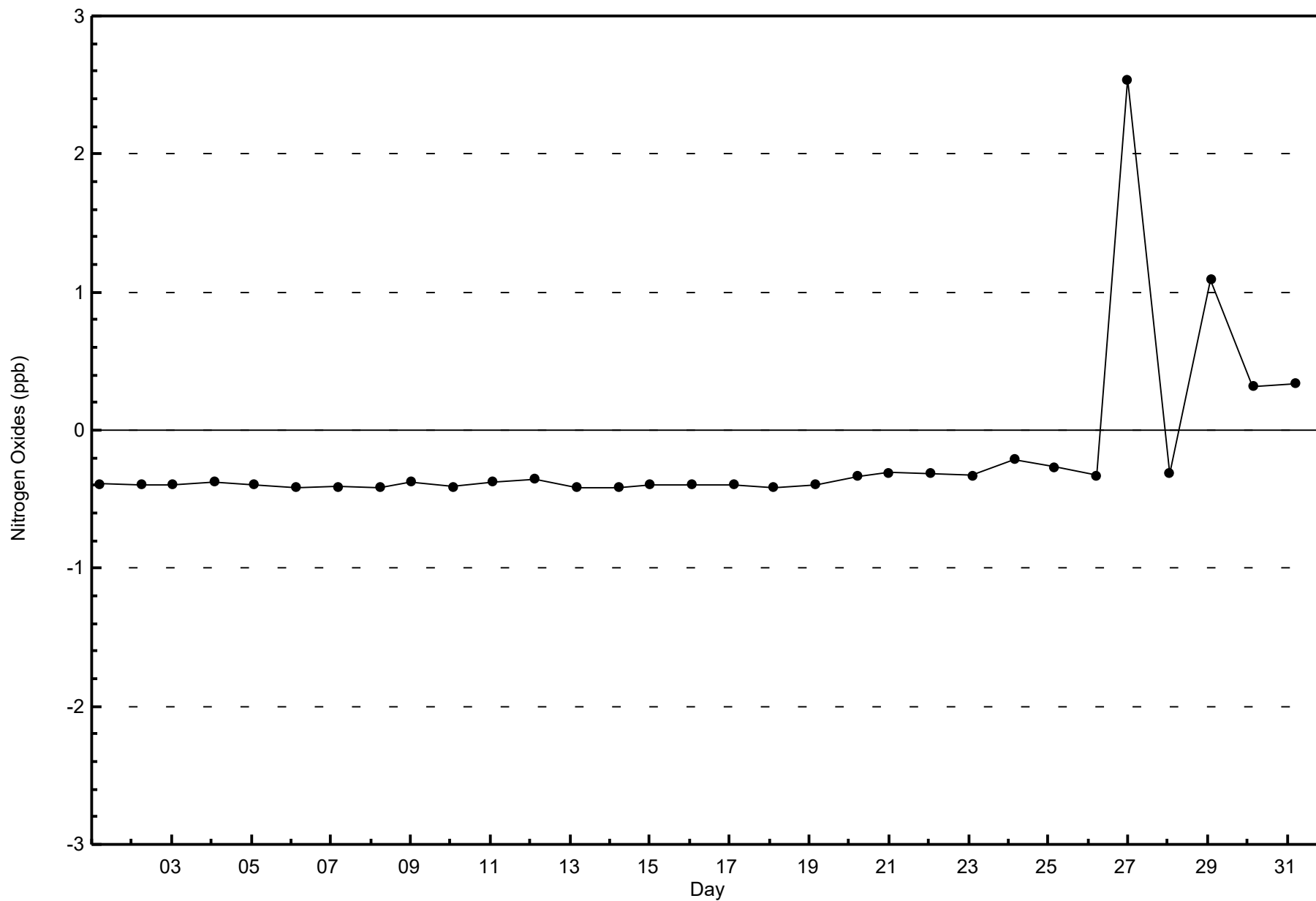
Nitrogen Oxides (NO_x) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

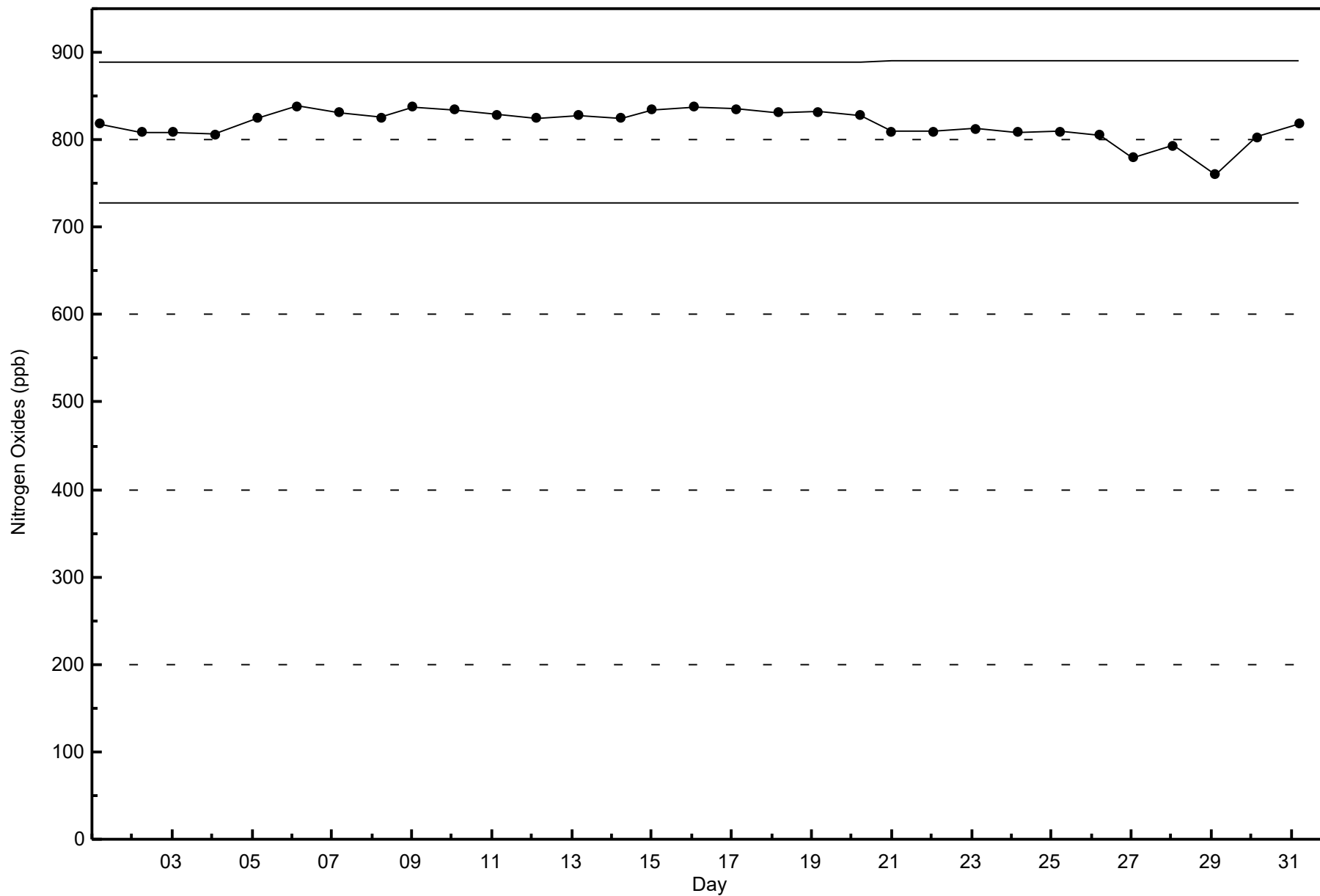
Nitrogen Oxides (NO_x) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

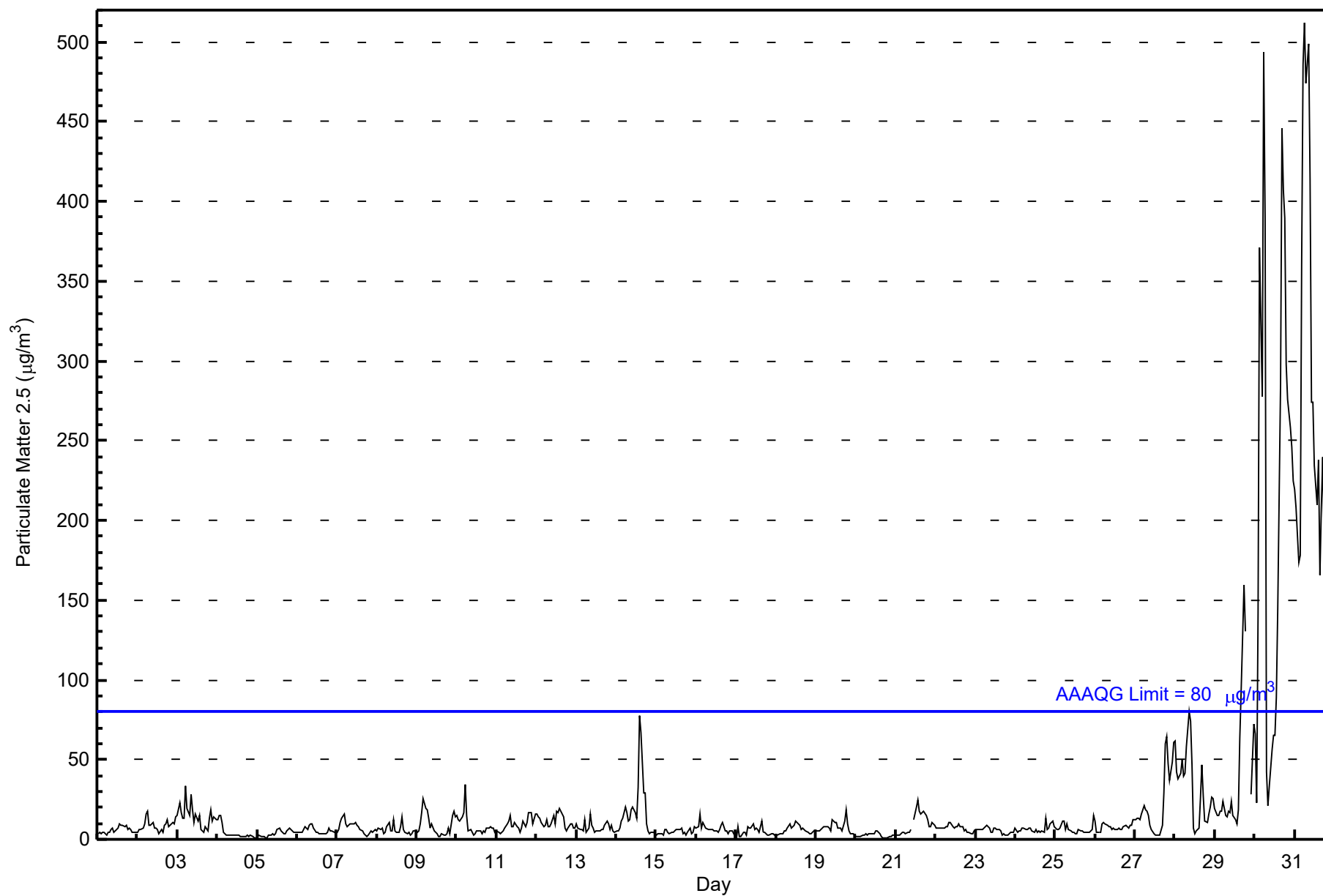
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 39 24-hr: 4 Maximum Value: 512.0 µg/m³ on May 31 07:00 Minimum Value: 1.0 µg/m³ on May 5 06:00 Maximum Diurnal Average: 42.8 µg/m³ at hour 6 Monthly Average: 24.02 µg/m³																					Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 1 Percent Operational Time: 99.6					
Maximum Daily Average: 244.2 µg/m³ on May 31 Minimum Daily Average: 2.5 µg/m³ on May 20 Minimum Diurnal Average: 15.4 µg/m³ at hour 2 Percentiles: P ₁ = 1.2 P ₁₀ = 3.0 Q ₁ = 4.5 Median = 6.8 Q ₃ = 12.0 P ₉₀ = 29.4 P ₉₉ = 400.6																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3.9	4.2	3.8	4.3	4.8	2.8	4.0	4.6	6.2	6.6	4.5	5.9	7.5	9.4	8.9	8.5	8.3	8.7	6.0	7.1	5.8	4.1	4.3	4.6	5.8	9.4
2-May	4.7	6.5	5.8	7.3	9.5	15.9	17.8	9.1	8.4	10.3	7.2	7.2	6.2	3.7	6.0	4.8	8.6	10.0	12.0	8.4	9.6	10.2	9.9	14.4	8.9	17.8
3-May	14.8	22.5	16.6	13.6	13.3	33.7	19.5	15.0	27.8	18.1	10.6	15.6	11.4	14.7	6.1	5.6	4.2	7.8	5.2	13.0	18.7	11.7	14.4	11.9	14.4	33.7
4-May	12.2	14.8	14.7	10.9	4.7	3.0	3.0	2.9	2.8	2.7	2.7	2.5	2.4	2.3	2.0	2.0	1.9	1.9	2.7	2.0	2.7	2.2	1.2	1.0	4.2	14.8
5-May	1.0	2.4	1.8	1.8	1.7	1.0	1.2	2.2	2.8	3.1	2.8	3.3	6.2	6.9	5.6	4.5	3.7	3.5	5.6	6.8	6.5	5.3	4.6	4.5	3.7	6.9
6-May	4.2	4.3	4.2	4.2	5.9	8.2	6.6	8.9	10.1	9.7	7.1	4.1	4.5	3.4	3.8	3.3	3.4	3.6	4.2	6.6	5.0	4.9	4.6	5.2	5.4	10.1
7-May	4.6	5.8	10.3	12.8	15.5	9.3	7.7	8.7	9.4	9.6	10.0	10.9	8.6	7.7	6.0	5.0	3.1	2.5	2.1	3.0	5.4	4.7	4.9	6.4	7.3	15.5
8-May	5.6	6.6	6.0	7.4	3.9	4.7	7.6	10.7	5.5	5.5	12.7	5.1	4.8	4.8	7.5	14.2	6.2	4.2	3.5	4.1	2.6	3.9	5.3	5.0	6.1	14.2
9-May	4.3	5.7	9.4	16.3	25.8	19.2	18.6	12.9	6.9	9.5	5.2	4.1	3.9	1.7	1.5	3.8	2.9	2.4	3.4	7.3	3.9	14.9	17.6	14.2	9.0	25.8
10-May	14.9	12.1	11.2	14.5	16.9	34.6	15.3	5.6	6.2	4.6	2.8	3.9	5.6	5.2	5.6	3.3	5.3	4.2	7.1	6.7	8.0	6.8	7.3	4.5	8.8	34.6
11-May	4.9	4.8	3.8	4.4	5.7	7.4	9.3	11.1	15.0	7.9	8.2	10.4	8.0	7.2	4.8	6.9	11.5	7.5	10.7	16.6	17.0	17.0	10.0	15.9	9.4	17.0
12-May	16.2	14.0	13.1	10.4	8.3	8.7	12.1	7.9	8.0	9.4	15.2	10.1	17.2	16.5	19.0	16.2	13.9	6.8	5.5	6.8	9.3	9.4	7.1	6.6	11.2	19.0
13-May	9.8	6.8	6.3	6.3	5.1	11.9	4.1	7.4	15.5	8.9	7.1	4.5	5.3	5.4	5.0	6.1	6.2	8.7	11.1	9.5	6.5	8.4	5.3	4.5	7.3	15.5
14-May	5.3	5.7	7.1	11.8	13.6	20.2	16.7	11.8	12.5	18.1	20.5	17.0	13.2	32.9	77.8	66.6	29.0	28.8	9.3	5.4	4.0	4.0	4.7	3.6	18.3	77.8
15-May	3.0	3.1	3.3	3.3	3.1	5.8	6.0	4.3	3.7	4.5	4.3	5.5	6.1	6.2	6.4	7.4	3.8	4.2	2.6	4.7	7.2	3.8	4.8	7.5	4.8	7.5
16-May	7.3	7.9	15.7	7.1	10.7	9.1	7.4	6.0	6.3	5.8	6.2	5.1	4.9	4.1	6.3	8.4	11.0	4.9	5.4	3.4	5.1	5.5	5.1	1.6	6.7	15.7
17-May	1.2	7.6	1.4	1.4	4.2	4.5	2.4	8.1	7.3	7.1	10.0	6.2	6.8	5.8	4.8	11.8	4.5	4.1	3.6	2.7	2.7	3.2	3.2	3.0	4.9	11.8
18-May	2.8	2.8	3.2	3.4	3.6	5.1	5.4	7.3	9.6	7.3	7.7	8.5	11.2	9.6	8.9	6.5	7.1	6.0	5.2	4.2	3.8	3.8	4.5	4.9	5.9	11.2
19-May	5.1	5.4	5.6	6.1	6.8	7.5	8.2	7.8	7.2	5.6	12.5	10.6	10.4	7.5	7.1	7.1	5.7	11.6	18.3	10.1	5.0	3.8	3.1	2.5	7.5	18.3
20-May	1.6	1.6	1.7	2.1	2.8	3.0	3.2	3.0	3.1	3.1	3.2	3.3	5.3	5.5	3.5	1.9	1.2	1.1	1.3	1.1	1.4	2.1	2.5	2.5	2.5	5.5
21-May	2.7	2.8	2.8	3.1	4.0	4.0	3.9	4.0	4.8	6.2	C	12.4	20.6	24.4	17.7	15.4	16.3	17.3	15.3	12.0	8.2	8.3	10.2	8.8	9.8	24.4
22-May	7.2	7.2	7.4	6.6	7.2	6.7	8.0	7.6	10.2	11.0	8.3	7.1	7.6	7.9	9.7	8.1	7.6	5.2	5.8	4.2	4.3	3.4	3.8	5.0	7.0	11.0
23-May	5.8	6.0	6.4	6.1	6.0	6.9	7.9	8.9	7.4	4.2	4.8	6.7	6.6	6.5	5.9	5.2	3.0	3.5	3.0	2.9	3.5	4.4	4.6	4.7	5.5	8.9
24-May	6.6	4.8	5.5	5.7	7.0	7.4	6.2	6.4	7.1	6.8	5.0	4.6	5.8	4.3	5.1	4.5	5.4	4.5	12.9	6.0	6.9	9.8	11.4	8.2	6.6	12.9
25-May	6.7	6.1	6.2	6.7	11.9	11.4	6.1	9.7	6.3	5.5	4.1	4.0	3.8	3.8	6.0	5.1	4.9	4.6	4.3	4.3	4.0	5.0	6.2	14.7	6.3	14.7
26-May	11.6	4.7	4.7	4.5	9.7	10.8	9.8	8.9	7.7	7.9	5.8	6.6	6.0	6.5	6.8	6.0	6.4	7.8	8.8	7.9	7.4	8.7	9.0	12.1	7.8	12.1
27-May	12.5	12.9	13.2	12.5	15.9	20.9	18.6	17.6	15.0	9.0	6.1	3.4	2.8	2.4	2.7	2.7	8.8	28.7	60.0	64.3	48.0	36.6	48.2	60.4	21.8	64.3
28-May	61.9	42.3	38.2	41.6	50.2	39.7	41.6	58.5	80.6	73.8	47.1	7.5	3.4	5.0	6.7	25.1	46.3	27.2	11.6	10.9	16.1	20.4	26.9	25.5	33.7	80.6
29-May	19.1	14.8	14.9	17.8	17.5	23.4	15.0	14.4	17.6	17.1	24.1	15.4	12.1	10.0	18.1	63.6	94.4	159.6	130.3	PF	PF	PF	27.9	72.4	38.1	159.6
30-May	66.1	22.6	142.0	371.4	277.8	493.5	389.8	42.3	21.4	33.6	56.2	65.4	65.3	89.1	144.2	285.5	445.7	407.6	389.2	297.7	275.7	258.4	245.7	225.1	213.0	493.5
31-May	219.4	208.4	173.3	178.0	360.6	485.9	512.0	474.3	498.5	412.9	274.1	273.9	234.6	210.1	238.3	165.6	207.8	239.6	184.5	76.2	63.7	64.9	56.9	47.6	244.2	512.0
17.6 15.4 18.1 25.9 30.1 42.8 38.5 26.1 27.4 24.1 19.9 17.8 16.7 17.1 21.2 25.2 31.9 33.5 30.7 20.5 18.9 18.3 18.6 19.6																										Diurnal Average
219.4 208.4 173.3 371.4 360.6 493.5 512.0 474.3 498.5 412.9 274.1 273.9 234.6 210.1 238.3 285.5 445.7 407.6 389.2 297.7 275.7 258.4 245.7 225.1																										Diurnal Maximum
C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Barge Landing - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	272	36.76	36.76
6 - 15	333	45.00	81.76
16 - 25	53	7.16	88.92
26 - 80	43	5.81	94.73
> 81.0	39	5.27	100.00

Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Barge Landing - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	22	16	14	4	4	15	72	37	8	15	14	23	2	6	8	12	272
6 - 15	19	33	14	2	3	13	35	91	37	17	16	8	10	8	6	21	333
16 - 25	3	4	2	1	1	2	3	17	4	3	2	2	0	2	1	6	53
26 - 80	1	5	0	0	0	2	2	1	6	6	4	4	2	2	2	6	43
> 81.0	4	0	0	0	0	0	1	9	4	5	6	3	3	0	1	3	39
Totals	49	58	30	7	8	32	113	155	59	46	42	40	17	18	18	48	740

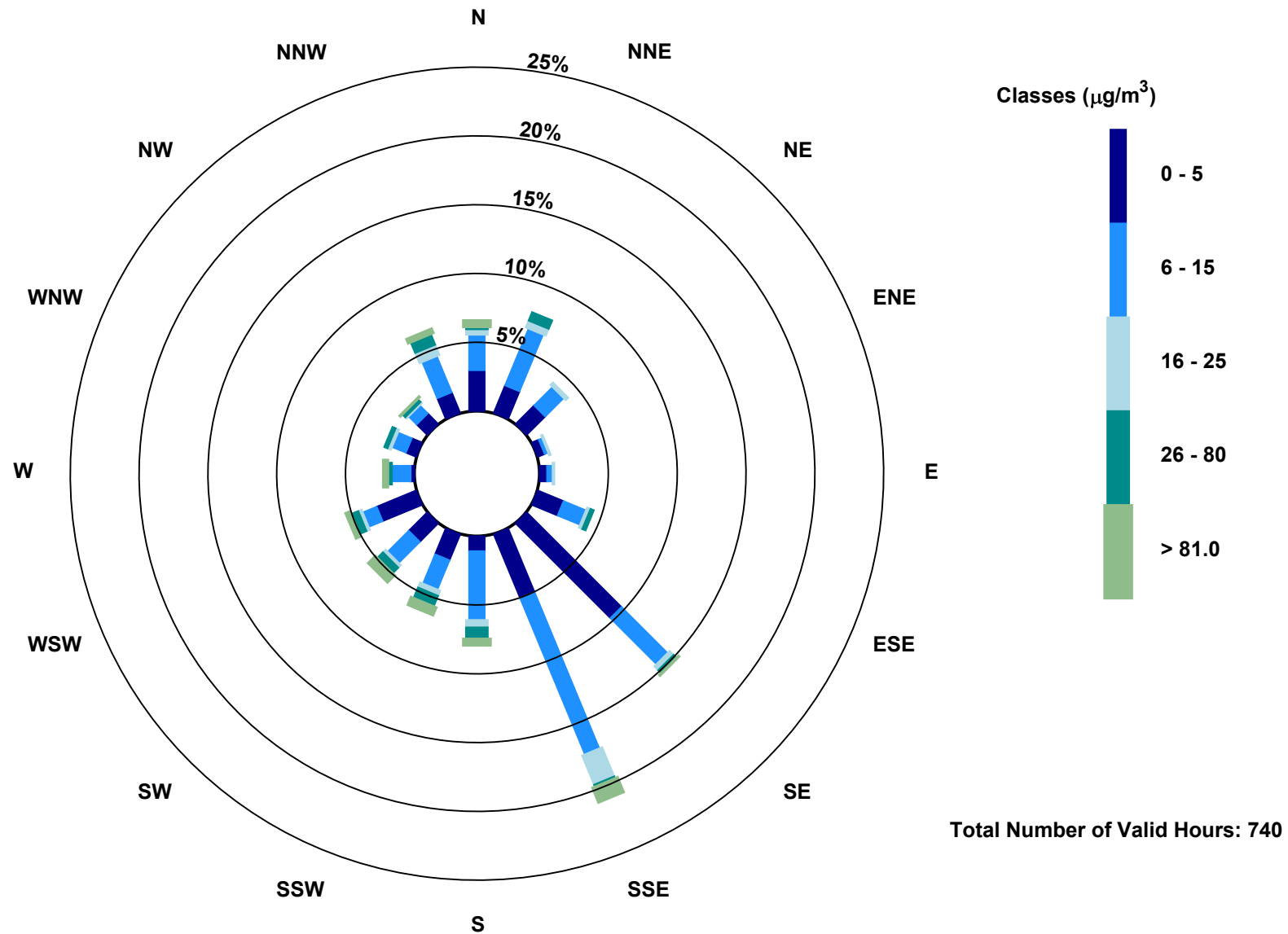
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Barge Landing





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

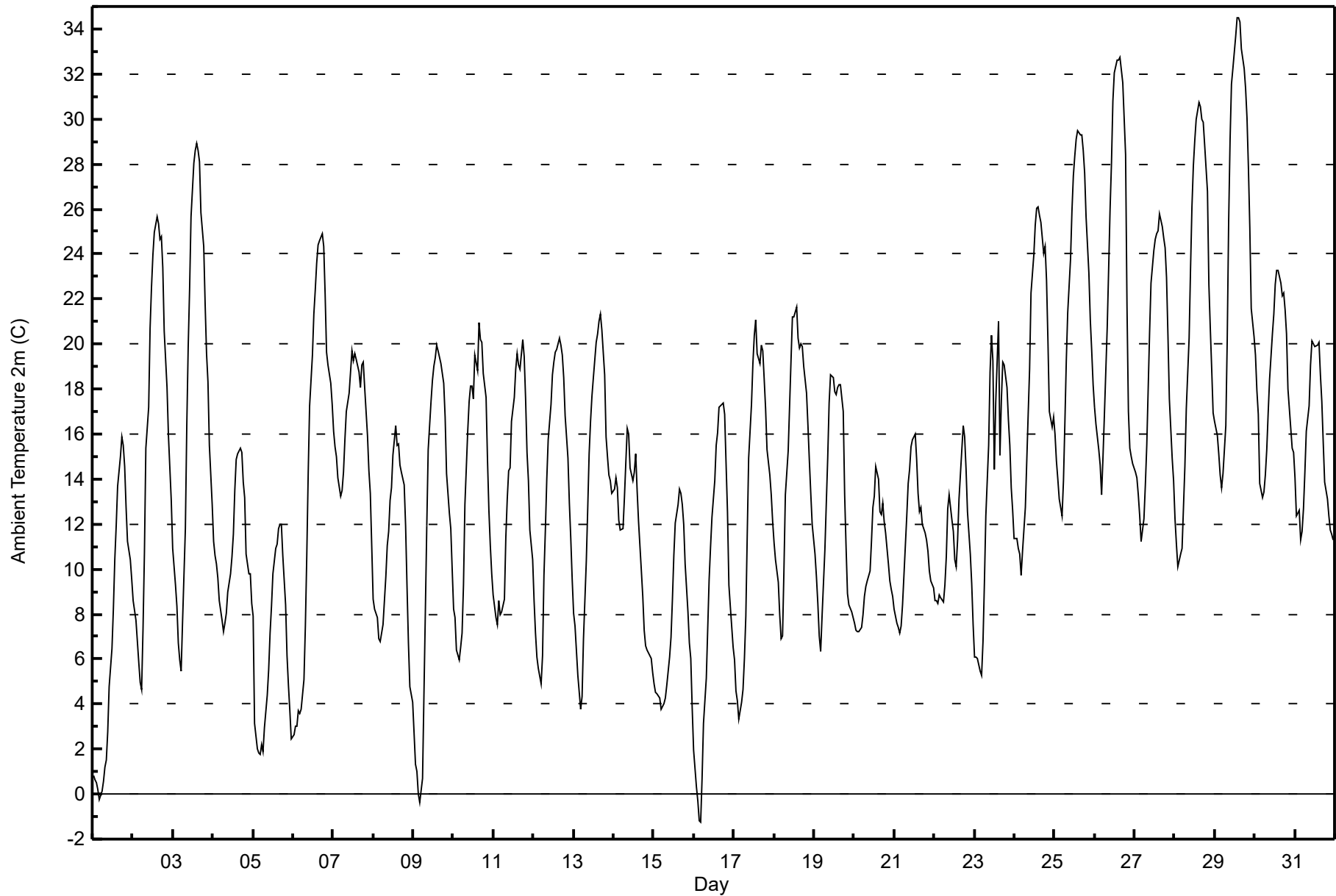
Barge Landing - May 2025

Maximum Value: 34.5 C on May 29 15:00																			Maximum Daily Average: 25.1 C on May 29										Hours in Service: 744	
Minimum Value: -1.3 C on May 16 05:00																			Minimum Daily Average: 6.4 C on May 5										Hours of Data: 744	
Maximum Diurnal Average: 20.4 C at hour 15																			Minimum Diurnal Average: 7.2 C at hour 5										Hours of Missing Data: 0	
Monthly Average: 14.37 C																			Percentiles: P ₁ = 0.2 P ₁₀ = 5.9 Q ₁ = 9.3 Median = 14.0 Q ₃ = 18.9 P ₉₀ = 24.1 P ₉₉ = 32.5										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-May	0.8	0.6	0.5	0.2	-0.2	0.1	0.6	1.2	1.5	2.7	4.8	6.5	8.3	10.4	11.9	13.7	15.0	15.9	15.5	14.6	12.8	11.2	10.4	9.5	7.0	15.9				
2-May	8.6	8.2	7.7	5.9	4.9	4.7	7.3	10.8	15.4	17.2	20.7	22.5	23.9	25.0	25.7	25.4	24.6	24.8	23.4	20.6	18.1	16.0	14.5	13.0	16.2	25.7				
3-May	10.9	9.3	8.4	6.7	6.0	5.5	7.7	11.8	16.4	19.9	22.4	25.7	28.0	28.6	28.9	28.6	28.1	25.8	24.3	21.8	19.6	18.3	15.5	12.9	18.0	28.9				
4-May	11.2	10.6	10.2	9.6	8.6	7.7	7.2	7.6	8.0	9.0	9.8	10.5	11.5	13.5	14.9	15.1	15.4	15.2	13.9	13.2	10.7	9.8	9.8	8.5	10.9	15.4				
5-May	7.9	3.2	2.0	1.8	1.8	2.2	1.9	3.0	4.4	5.5	7.2	8.3	9.8	10.9	11.1	11.8	12.0	12.0	10.6	8.4	6.1	4.8	3.7	2.4	6.4	12.0				
6-May	2.7	3.0	3.0	3.7	3.6	3.8	5.1	7.5	10.6	14.2	17.3	19.5	21.4	22.4	23.6	24.4	24.6	24.9	24.4	22.2	19.6	19.1	18.2	17.3	14.8	24.9				
7-May	16.1	15.5	15.0	14.0	13.2	13.5	14.3	15.8	17.0	17.8	18.8	19.7	19.3	19.6	19.3	18.8	18.1	19.0	19.2	18.0	15.9	14.4	13.3	11.0	16.5	19.7				
8-May	8.7	8.2	7.9	6.9	6.8	7.2	7.5	9.7	11.1	11.7	13.1	13.6	15.1	16.4	15.5	15.5	14.6	14.3	13.7	11.9	9.2	6.7	4.8	4.1	10.6	16.4				
9-May	2.7	1.3	1.0	0.0	-0.4	0.7	4.5	8.2	11.9	15.3	17.5	18.4	19.0	19.4	20.0	19.7	19.1	18.7	18.2	16.7	14.3	12.5	11.8	10.0	11.7	20.0				
10-May	8.2	7.9	6.4	6.0	6.5	7.2	9.3	12.9	16.1	17.4	18.1	18.1	17.6	19.5	18.8	20.9	20.2	20.0	18.7	17.6	14.9	12.6	11.0	9.8	14.0	20.9				
11-May	8.8	7.8	7.6	8.6	8.0	8.1	8.7	11.4	13.1	14.4	14.5	16.6	17.6	18.9	19.5	19.1	18.9	20.2	19.5	17.6	15.2	14.0	11.7	10.4	13.8	20.2				
12-May	8.6	7.1	6.1	5.6	4.9	6.1	9.7	11.7	14.0	15.7	17.3	18.6	19.2	19.6	19.7	20.3	19.9	19.5	18.5	16.8	14.9	13.0	11.3	9.5	13.7	20.3				
13-May	8.0	7.5	5.3	4.5	3.7	4.3	6.9	10.3	12.7	15.1	16.5	17.7	18.5	20.1	20.4	21.0	21.3	20.7	18.6	15.9	15.0	14.2	13.9	13.4	13.6	21.3				
14-May	13.6	14.0	13.6	12.2	11.7	11.8	13.2	14.7	16.3	16.0	14.5	13.9	14.3	15.1	13.5	12.1	9.9	8.8	7.3	6.6	6.4	6.3	6.0	5.4	11.6	16.3				
15-May	4.9	4.5	4.4	4.2	3.8	3.9	4.0	4.3	4.8	6.1	7.0	8.6	10.6	12.1	12.9	13.6	13.4	12.8	12.0	10.2	8.1	6.7	6.0	3.9	7.6	13.6				
16-May	2.0	0.3	-0.3	-1.2	-1.3	0.7	3.2	5.2	7.4	9.5	11.0	12.3	13.9	15.5	16.1	17.2	17.2	17.4	16.9	14.7	12.6	9.3	8.3	6.5	8.9	17.4				
17-May	5.9	4.6	4.1	3.3	4.1	4.6	6.0	7.9	11.6	14.9	17.3	19.1	20.4	21.1	19.5	19.1	19.9	19.7	18.5	17.1	15.3	14.2	13.3	12.1	13.1	21.1				
18-May	11.1	10.4	9.4	8.0	6.9	7.0	10.0	13.3	15.3	17.2	19.2	21.2	21.2	21.6	20.3	19.8	20.0	19.9	19.0	17.8	16.4	14.8	13.4	12.0	15.2	21.6				
19-May	10.7	9.6	8.4	7.0	6.3	7.9	10.8	12.9	14.9	17.4	18.7	18.5	17.9	17.8	18.1	18.2	18.2	17.0	13.3	11.0	8.9	8.4	8.1	7.9	12.8	18.7				
20-May	7.6	7.3	7.2	7.2	7.4	8.0	8.8	9.2	9.5	9.9	11.2	12.7	13.3	14.6	14.0	12.6	12.4	13.0	12.1	11.6	10.2	9.5	9.1	8.8	10.3	14.6				
21-May	8.2	7.6	7.4	7.2	7.5	8.4	9.7	12.4	13.8	14.4	15.5	15.8	16.0	14.9	13.4	12.6	12.8	12.0	11.6	11.3	10.8	9.9	9.5	9.2	11.3	16.0				
22-May	8.6	8.6	8.5	8.8	8.7	8.6	9.3	10.5	12.7	13.3	12.1	11.7	10.4	10.1	11.3	13.1	15.3	16.4	15.9	14.5	12.5	10.7	9.3	7.5	11.2	16.4				
23-May	6.1	6.1	6.0	5.4	5.3	6.8	9.4	12.4	15.5	18.8	20.4	19.3	14.4	17.4	21.0	15.0	17.5	19.2	19.1	18.1	16.6	15.5	13.6	12.6	13.8	21.0				
24-May	11.4	11.3	10.9	10.7	9.7	10.8	12.7	14.8	16.9	18.9	22.3	24.0	25.3	26.1	26.1	25.7	25.4	24.0	24.3	22.8	20.2	17.0	16.3	16.7	18.5	26.1				
25-May	16.0	14.8	14.0	13.1	12.3	13.9	16.5	19.3	21.4	23.8	25.9	27.5	28.4	29.1	29.5	29.3	29.3	28.6	27.6	25.7	23.2	21.1	19.7	18.2	22.0	29.5				
26-May	17.2	16.4	15.3	14.6	13.3	15.0	16.8	20.8	23.3	26.0	28.1	30.8	32.0	32.6	32.6	32.7	32.2	31.6	28.4	21.6	17.0	15.4	15.0	14.7	22.6	32.7				
27-May	14.3	14.1	13.3	12.4	11.2	12.3	13.7	15.5	18.0	20.5	22.7	24.2	24.7	24.9	25.1	25.8	25.2	24.7	24.3	23.0	20.4	17.6	15.0	13.9	19.0	25.8				
28-May	12.3	11.1	10.1	10.6	10.9	12.8	14.5	17.2	20.2	23.3	26.1	27.9	29.1	30.0	30.7	30.6	30.0	29.9	28.9	26.8	22.6	20.7	18.9	16.9	21.3	30.7				
29-May	16.6	15.9	15.1	14.2	13.6	14.2	16.4	20.2	25.4	29.1	31.5	32.3	33.7	34.5	34.5	34.3	33.1	32.2	31.4	30.1	27.8	25.2	21.6	20.3	25.1	34.5				
30-May	19.5	18.0	16.9	13.8	13.2	13.4	14.2	15.3	16.9	18.4	20.5	21.3	22.7	23.3	23.3	22.7	22.2	22.3	21.5	20.4	18.0	16.2	15.4	15.2	18.5	23.3				
31-May	14.0	12.4	12.6	11.3	11.7	12.7	14.3	16.1	17.3	19.1	20.1	20.0	19.9	20.0	20.1	18.6	17.5	15.7	13.9	13.1	12.4	11.7	11.6	11.3	15.3	20.1				
9.8 8.9 8.3 7.6 7.2 7.9 9.5 11.7 14.0 15.9 17.5 18.6 19.3 20.1 20.4 20.2 20.1 19.9 18.8 17.1 15.0 13.4 12.3 11.1																								Diurnal Average						
19.5 18.0 16.9 14.6 13.6 15.0 16.8 20.8 25.4 29.1 31.5 32.3 33.7 34.5 34.5 34.3 33.1 32.2 31.4 30.1 27.8 25.2 21.6 20.3																								Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Barge Landing - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	5	0.67	0.67
0 - 10	209	28.09	28.76
10 - 20	389	52.28	81.05
> 20	141	18.95	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

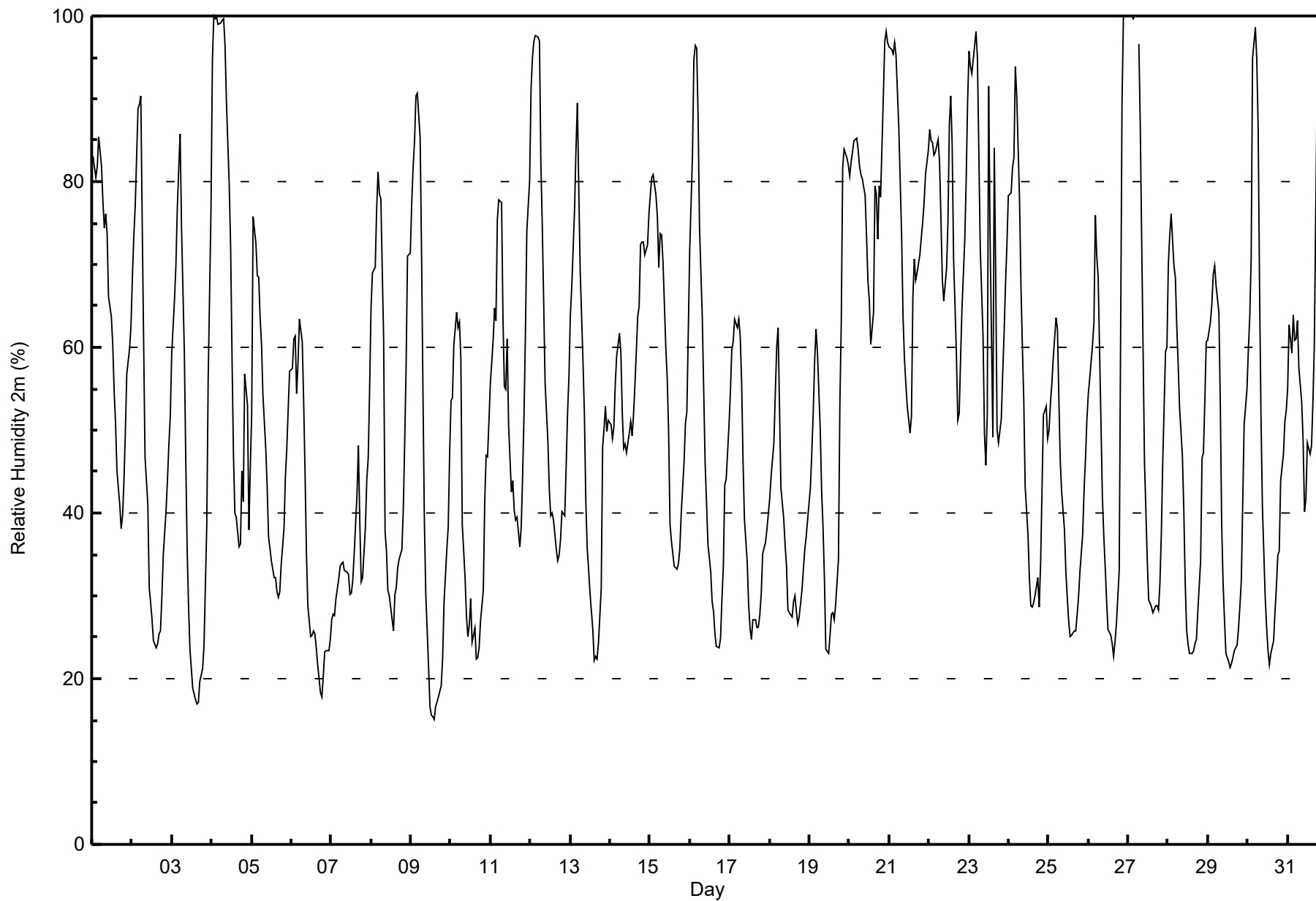
Barge Landing - May 2025

Maximum Value: 100.0 % on May 4 02:00																				Maximum Daily Average: 80.2 % on May 20				Hours in Service: 744		
Minimum Value: 15.1 % on May 9 15:00																				Minimum Daily Average: 35.4 % on May 7				Hours of Data: 740		
Maximum Diurnal Average: 78.0 % at hour 5																				Minimum Diurnal Average: 34.9 % at hour 15				Hours of Missing Data: 4		
Monthly Average: 53.00 %																				Percentiles: P ₁ = 17.6 P ₁₀ = 25.4 Q ₁ = 33.2 Median = 51.1 Q ₃ = 70.1 P ₉₀ = 85.0 P ₉₉ = 99.9				Hours of Calibration: 0		
																								Percent Operational Time: 99.5		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	83.1	81.7	80.6	81.9	85.4	81.8	77.7	74.5	76.1	73.7	66.2	63.7	60.3	54.7	50.9	45.1	41.1	38.2	39.6	43.8	49.9	56.8	59.8	62.5	63.7	85.4
2-May	68.4	73.4	76.9	88.8	89.3	90.4	75.0	60.8	46.8	41.1	31.0	29.1	27.1	24.6	23.8	24.3	25.4	25.8	29.8	34.8	40.3	44.0	48.3	51.7	48.8	90.4
3-May	59.2	65.8	69.8	76.8	81.5	85.8	74.6	59.5	46.8	35.7	28.9	23.6	18.8	18.2	17.4	17.0	17.1	19.6	21.2	23.9	31.1	38.7	56.2	76.7	44.3	85.8
4-May	94.7	100.0	99.6	99.8	98.9	99.2	99.5	99.6	96.4	89.7	79.5	72.0	58.6	47.1	40.0	39.5	36.0	36.3	45.0	41.3	56.8	53.0	37.9	45.3	69.4	100.0
5-May	52.0	75.8	72.5	68.6	68.5	63.6	60.3	54.2	47.9	43.2	37.1	35.8	34.2	32.3	32.2	30.5	29.8	30.4	33.7	38.2	44.3	47.8	52.5	57.1	47.6	75.8
6-May	57.5	61.0	61.3	54.5	58.2	63.4	60.7	53.6	44.9	35.0	28.9	25.0	25.3	25.8	25.4	23.7	21.8	18.3	17.7	20.3	23.3	23.3	23.5	24.8	36.5	63.4
7-May	27.1	27.9	27.7	29.7	32.0	33.5	34.0	34.1	33.0	32.9	32.5	30.2	30.3	31.9	35.1	42.2	48.2	39.0	31.8	32.2	38.4	44.1	46.5	54.9	35.4	54.9
8-May	64.7	68.9	69.7	76.6	81.3	78.4	78.0	60.9	37.8	35.3	30.7	30.0	28.7	25.8	30.1	30.9	33.5	34.5	35.5	40.5	48.6	57.8	71.0	71.3	50.9	81.3
9-May	77.5	81.6	84.9	90.3	90.7	85.3	71.4	54.6	39.1	30.3	21.3	16.6	15.5	15.5	15.1	16.5	17.7	18.4	19.2	22.4	29.2	35.7	38.3	47.2	43.1	90.7
10-May	53.6	53.9	60.3	64.2	62.4	63.0	58.6	38.6	32.3	27.5	25.1	26.5	29.6	24.4	26.0	22.3	22.6	23.6	26.9	30.7	41.4	46.9	46.8	50.9	39.9	64.2
11-May	55.5	60.9	64.8	63.1	75.4	77.8	77.5	63.6	55.2	54.9	60.9	50.6	42.6	43.9	40.3	39.2	39.5	35.9	38.4	44.5	51.9	61.7	74.1	80.2	56.4	80.2
12-May	91.2	95.0	96.9	97.6	97.4	96.9	82.2	74.7	65.3	55.8	48.6	42.8	39.7	39.9	39.2	35.6	34.2	34.8	36.8	40.2	39.7	45.5	52.0	56.4	59.9	97.6
13-May	63.9	67.3	76.7	83.9	89.4	79.1	69.4	58.2	52.0	41.5	35.8	33.2	30.4	25.9	22.2	22.6	22.3	24.2	30.8	48.0	50.2	52.9	49.8	51.2	49.2	89.4
14-May	50.6	49.0	50.3	55.7	59.0	61.7	59.3	52.1	47.8	48.3	47.3	49.7	51.1	49.4	51.8	55.4	63.7	64.9	72.4	72.7	72.8	71.2	72.4	76.1	58.5	76.1
15-May	78.4	80.4	80.8	78.3	75.8	69.7	73.7	73.6	70.3	60.0	56.2	49.9	38.6	36.7	33.5	33.4	33.3	33.9	35.8	40.1	46.1	50.8	52.2	61.8	56.0	80.8
16-May	71.5	83.3	94.7	96.4	96.2	87.8	74.6	63.6	54.8	46.1	41.3	36.2	32.9	29.3	28.1	25.4	24.0	23.7	25.0	29.7	33.5	43.3	44.1	50.5	51.5	96.4
17-May	54.5	59.7	60.6	63.4	62.3	63.4	61.4	55.9	46.4	39.4	34.1	29.0	26.1	24.7	27.1	27.2	26.1	26.2	27.8	30.3	35.0	36.5	37.9	39.9	41.5	63.4
18-May	41.7	44.4	48.5	54.3	59.9	62.4	52.7	43.0	39.3	36.2	33.6	28.3	28.0	27.5	29.3	30.1	28.2	26.6	27.5	30.7	33.2	35.7	37.0	39.1	38.2	62.4
19-May	43.0	47.4	52.1	58.2	62.2	59.4	50.1	42.8	38.4	32.1	23.5	23.1	25.3	27.7	28.0	27.1	29.0	34.4	53.0	63.0	81.8	83.9	82.8	82.0	47.9	83.9
20-May	80.8	82.3	83.6	85.0	85.3	83.9	81.8	80.8	80.3	78.4	73.4	68.0	65.5	60.3	64.3	79.4	78.5	73.1	79.5	78.1	90.5	96.9	98.2	96.8	80.2	98.2
21-May	96.3	96.0	95.4	96.8	95.3	90.8	86.4	73.4	63.8	58.7	55.5	52.9	49.6	51.7	66.0	70.7	68.1	69.0	71.2	73.2	75.0	77.4	80.8	83.8	74.9	96.8
22-May	86.2	85.0	84.8	83.2	83.6	85.0	82.4	75.7	68.2	65.7	69.5	75.1	87.0	90.3	84.4	70.9	59.4	51.1	52.1	58.6	64.7	73.1	80.3	89.6	75.2	90.3
23-May	95.8	93.9	93.0	96.5	98.2	95.0	83.6	72.0	61.4	49.7	45.7	51.8	91.5	73.4	49.1	84.0	69.1	50.0	48.5	51.4	57.0	61.7	67.7	72.4	71.3	98.2
24-May	78.3	78.6	81.7	82.9	93.8	90.3	77.9	67.5	60.2	53.8	43.3	37.4	32.2	28.9	28.7	29.2	30.0	32.2	28.6	33.9	42.8	51.9	52.8	48.9	53.6	93.8
25-May	50.0	53.1	55.6	58.7	63.6	62.2	53.9	46.3	42.5	38.0	32.9	29.8	27.0	25.1	25.3	25.8	25.8	27.7	29.8	32.8	37.5	42.9	46.6	51.4	41.0	63.6
26-May	54.3	56.3	60.3	63.1	75.9	71.0	68.4	51.0	42.0	37.4	33.5	29.4	25.9	25.2	24.2	22.8	24.4	26.7	33.1	61.2	89.5	99.9	100.0	OR	51.1	100.0
27-May	OR	100.0	100.0	99.7	100.0	OR	96.6	86.9	73.0	59.8	46.2	34.2	29.4	29.2	28.6	28.0	28.9	28.8	28.4	31.5	37.5	46.1	59.5	60.0	56.0	100.0
28-May	70.0	73.6	76.1	69.8	68.4	62.5	58.0	52.7	47.0	40.5	31.6	26.0	24.2	23.1	23.0	23.4	24.3	24.8	28.2	34.3	46.7	47.4	53.6	60.7	45.4	76.1
29-May	60.9	63.1	65.3	68.7	69.8	67.5	64.2	53.3	38.7	31.5	27.0	23.1	22.1	21.3	21.9	22.6	23.4	24.1	26.1	28.8	31.9	41.4	50.6	55.0	41.8	69.8
30-May	59.7	63.7	70.7	95.0	98.7	94.8	86.2	66.8	51.7	40.9	29.9	26.3	23.3	21.6	23.0	24.6	28.2	31.1	34.9	35.5	44.0	47.1	51.0	52.3	50.0	98.7
31-May	55.1	62.7	59.3	64.0	60.8	61.0	63.1	57.4	53.4	48.8	40.2	41.7	48.5	47.1	48.1	53.4	60.3	76.3	91.2	91.4	97.1	100.0	100.0	OR	64.4	100.0
Diurnal Average																										
Diurnal Maximum																										
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

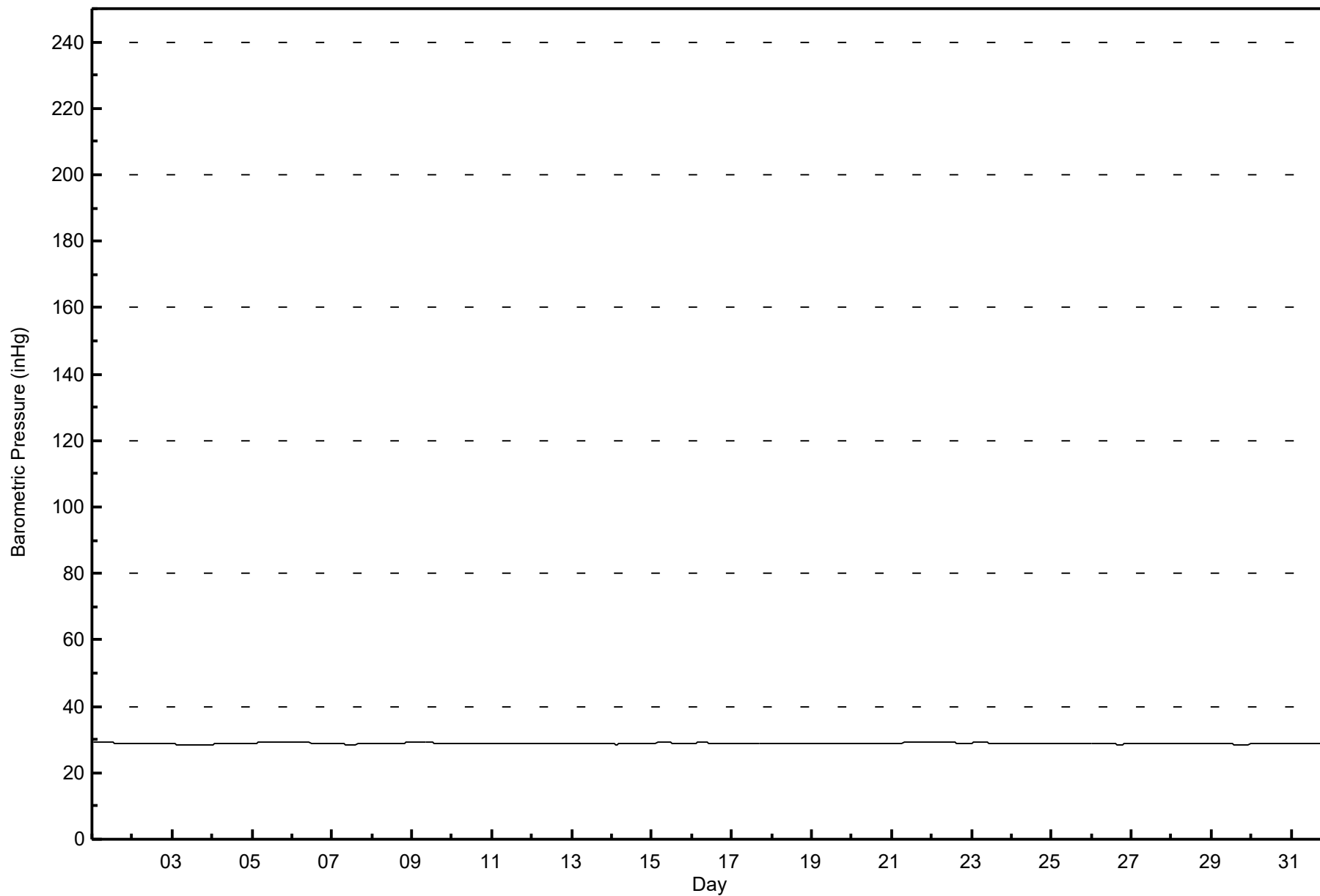
Barge Landing - May 2025

Maximum Value: 29.2 inHg on May 5 23:00																				Maximum Daily Average: 29.1 inHg on May 5					Hours in Service: 744	
Minimum Value: 28.5 inHg on May 29 20:00																				Minimum Daily Average: 28.5 inHg on May 3					Hours of Data: 744	
Maximum Diurnal Average: 28.9 inHg at hour 8																				Minimum Diurnal Average: 28.8 inHg at hour 19					Hours of Missing Data: 0	
Monthly Average: 28.85 inHg																				Percentiles: P ₁ = 28.5 P ₁₀ = 28.6 Q ₁ = 28.7 Median = 28.9 Q ₃ = 29.0 P ₉₀ = 29.1 P ₉₉ = 29.2					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	29.0	29.1
2-May	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7
3-May	28.6	28.6	28.6	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.6	28.5	28.6
4-May	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.7	28.9
5-May	28.9	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2
6-May	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	29.0	29.2
7-May	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.6	28.7
8-May	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.9	28.8	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	28.9	29.1
9-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	29.0	29.1
10-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9
11-May	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8
12-May	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7
13-May	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.7	28.7	28.6	28.6	28.7	28.7
14-May	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	28.8	29.0
15-May	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1
16-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0
17-May	28.9	28.9	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
18-May	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
19-May	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
20-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	29.0
21-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.1
22-May	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1
23-May	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1
24-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0
25-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
26-May	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.8	28.7	28.7	28.7	28.8
27-May	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.8	28.9
28-May	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.9	29.0
29-May	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.7	28.8
30-May	28.7	28.7	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
31-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.8	28.9
28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8 28.8																										Diurnal Average
29.2 29.2 29.2 29.2 29.1 29.1 29.1 29.1 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - May 2025

Maximum Speed: 18 km/h on May 19 19:00										Maximum Daily Speed Average: 10.5 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 8 02:00										Minimum Daily Speed Average: 1.1 km/h on May 11										Hours of Data: 743						
Maximum Diurnal Speed Average: 3.7 km/h at hour 15										Minimum Diurnal Speed Average: 1.3 km/h at hour 5										Hours of Missing Data: 1						
Monthly Average Velocity: 2.4 km/h 158.7 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 7 Q ₃ = 10 P ₉₀ = 12 P ₉₉ = 15										Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE5	N5	NNW4	N2	WNW2	NW2	W1	SSW2	SW7	SSW7	SSW8	SSE9	SSE10	SSE9	SSE10	SSE8	SSE8	SSE7	ESE8	ESE5	ESE6	E2	ESE4	E3	SSE3.2	SSE10
2-May	E2	E2	N3	NE1	W2	NE0	SW4	SW4	SE1	WSW7	SSW3	ESE3	ENE2	NW6	NW10	NNW9	NNW7	N6	NNE8	NNE8	NNE6	N6	NNW6	N5	NNW2.6	NW10
3-May	NNW5	N4	NNW4	NNW3	N2	ESE3	WSW2	SW5	SSW7	SW9	WSW12	WSW12	NNW12	NNW11	W11	W11	W11	NW12	NW11	NW14	NW9	NW12	NNW8	NNW6	WNW6.1	NW14
4-May	WNW3	S4	SW5	WNW6	NNW7	NW6	NNW4	N3	NE3	SW6	WSW8	WSW12	WSW14	WSW13	WSW12	WSW13	WSW12	SW7	SW11	SW7	SW7	WSW9	WNN9	WNN7	WSW6.1	WSW14
5-May	WNN9	NNE10	NNE7	N5	NNW2	NNW6	NNW8	NNW8	NNW7	NNW7	NNW8	N4	NE6	NNE7	NE8	NE8	NE8	ENE7	NE7	NE8	NE6	NE5	NNE3	NE3	NNE5.4	NNE10
6-May	ENE2	NE2	ESE3	SE5	ESE4	ESE1	WNN2	SSE3	S7	S9	SSW9	SSW9	SSW11	SW13	SW13	SSW13	SSW13	SSW12	SSW9	S9	SSE9	SSE12	SSE12	SSE13	S6.9	SSW13
7-May	SSE11	SSE12	SE12	SSE11	SE9	SE9	SE10	SSE12	S14	S13	SSW12	SW13	SW12	WSW11	SW9	WSW13	WSW15	SW15	SW12	SW9	SSW7	SSW6	SW4	ESE1	SSW8.4	SW15
8-May	SE1	SE0	NNW1	NNW1	NW3	WNN1	E2	NNE5	NNE10	NNE9	NNE8	NNE8	NE5	N2	NNE9	NE9	NE9	NE7	NNE6	NE7	ENE4	E3	ESE3	SE3	NE4.2	NNE10
9-May	ESE2	ESE1	NNE2	ESE4	ESE3	SSE3	SSE4	S5	SSW7	SSW10	SW13	WSW15	WSW15	WSW15	WSW14	SW12	WSW12	WSW10	WSW11	SW4	SSW3	S3	S3	SSE3	SW5.8	WSW15
10-May	ENE1	S2	SE1	SE3	E1	ESE2	SW1	SSW4	SW7	SW9	WSW8	NE1	N5	N3	SW4	SSW5	WSW6	SSW4	ESE4	E2	E4	E5	SE4	SSE3	S1.6	SW9
11-May	SSE3	SE3	ESE4	E2	NNW2	NNW1	NNW2	SE1	S4	SSE8	SSE5	W3	SW5	SE9	SE7	WNN3	NNW6	NNW3	ENE3	E3	NE3	NE5	ENE1	NNW3	ESE1.1	SE9
12-May	NNW2	NE1	N2	NNW3	N2	N3	NNE4	NNE7	NNE9	NNE9	NNE10	NNE10	NNE11	NNE12	NNE12	NNE12	NNE12	NNE10	NNE11	NNE9	N9	N7	N5	N4	NNE7.3	NNE12
13-May	NNW4	NNW5	N2	NW1	WSW2	W2	NW3	N5	NNE6	N6	NNE5	ENE4	NE3	ENE6	ESE6	SE4	ESE5	SE6	S4	SSE4	SE5	ESE5	SE7	E3	ENE1.8	SE7
14-May	SE5	SSE5	SE8	SE5	SSE5	SSE4	S5	SSW6	NNW5	N12	N11	NNE11	NNE12	NNE13	NNE15	NNE15	NNE14	NNE14	N13	N12	N10	NNE10	NNE11	N10	NNE6.4	NNE15
15-May	N9	N8	N9	N8	N9	NNE10	N10	N9	N9	N10	NNW10	N9	NNE10	NNE10	NNE9	NE10	NNE9	NNE8	NE8	NE8	NE7	NE6	NE6	NE3	NNE8.1	NNE10
16-May	NNW2	NNW2	NW2	N2	E1	E3	NE4	N3	N4	NNE5	N6	NNE6	N8	NE6	NNE6	NNE6	N7	NNE6	NNW5	N5	N6	SE2	SE7	SE6	NNE3.3	N8
17-May	SE6	SE5	SE7	SE6	ESE6	ESE4	SE4	S1	SSE6	SSE7	SSE8	SSE9	SSE10	SSE10	SSE10	S9	SE11	SE11	SE12	SE12	SE12	SE13	SE14	SE12	SE8.2	SE14
18-May	SE12	SE9	SE7	SE6	ESE3	ESE3	SE4	SSE6	SSE7	S7	SE6	SSE9	SSE11	SSE13	SSE10	SE10	SE9	SE11	SE10	SE9	SE12	SE12	SE10	SE10	SE8.3	SSE13
19-May	SE9	SE9	SE8	SE6	SE4	SE6	SSE8	S11	SSE9	SSE11	SSE13	SE13	SSE13	SSE12	SSE10	SE13	SE14	SE15	SSE18	SE15	SE11	SE10	SE10	SE10	SSE10.5	SSE18
20-May	SE10	SE8	SE6	ESE6	ESE4	ESE7	SE9	SE9	SE10	SE11	SE12	SE10	SE12	SSE10	SE12	SE10	SE11	SE11	SE10	SE11	SE8	SE4	ESE5	SE6	SE8.7	SE12
21-May	ESE5	ESE7	SE5	E2	ESE5	ESE6	SE5	SSE7	SSE8	S8	SSE7	SSE7	SE7	ESE8	SSE11	S10	S9	SSW8	SSW7	S4	SE5	SE6	SE6	SSE5	SSE6.1	SSE11
22-May	SE6	SSE7	SSE7	SSE8	SE8	SE8	SE8	S9	S9	SSE9	SSW6	WSW7	SW7	SSW5	S7	S7	SE9	SE11	S9	SSE8	SE9	SE8	SE6	SE4	SSE6.6	SE11
23-May	ESE5	SE7	SE6	SE4	SE5	SSW2	SSW3	SSE7	SSE8	SE10	SE13	S8	NW2	NNW4	S3	SE10	ESE13	SE17	SE14	SE10	S7	SE6	SE6	SE5	SE6.4	SE17
24-May	SSE6	S4	SE3	ESE2	NNW3	NNW2	WSW2	W4	S5	SSE6	SE11	SSE10	SSE14	SSE14	S14	SSE12	SSE12	SSE13	SSW10	SSE9	SE6	SE5	SE8	SE9	SSE6.7	SSE14
25-May	SSE9	SSE7	SE7	SE6	SE5	SE6	SSE8	SSE12	SSE11	SSE14	S13	SSE14	S14	S13	S13	S12	S12	S12	S11	SSE8	SSE7	SE7	SE7	SE8	SSE9.4	SSE14
26-May	SE8	SE8	SE6	SE2	NNW2	UO	SSW2	SSE9	SSE11	SSE11	S12	SSE14	S16	SSE16	S15	S15	S15	S13	SW8	WNN9	NW5	S3	SSW2	S2	S7.4	S16
27-May	S4	SSW4	WSW4	W3	SSE3	SSE3	SW5	SSW4	SW6	SW7	WSW9	WSW10	WSW13	WSW13	WSW15	WSW15	WSW15	W10	WSW10	WSW7	WSW4	S3	SE4	SSE4	SW6.4	WSW15
28-May	ESE4	SE2	SSW1	SSW3	SSE3	S4	SSW5	SW5	SSW5	S5	SW7	SW10	SSW9	SW9	SSW8	SW9	SW8	SSW8	S5	ESE3	ESE4	SE5	SE5	ESE5	SSW4.3	SW10
29-May	SE6	SE5	SE5	SE5	SE3	SE5	SE5	SSE6	SSE8	SSE12	SSE13	S14	S14	SSE15	SSE15	SSE16	SE17	SE18	SSE14	SE11	SE11	W9	WNN11	WNN7	SSE8.0	SE18
30-May	W11	WNN7	WSW9	W5	W2	W6	NW5	NW6	NW5	NW5	NNW6	NW4	W3	WSW8	WSW9	SW10	SW5	SSW4	SW4	S5	SSE5	S5	SE5	SE4	WSW3.7	W11
31-May	SE3	S2	SSW3	S2	SW4	S2	SE4	SSE5	S5	S7	SSW5	W3	NNW3	N4	NNW6	NNW8	N7	N6	N7	N8	NNW7	NNW6	NNW6	NNW5	NNW1.4	N8
SE2.4 SE2.4 SE2.2 SE1.6 ESE1.3 SE1.5 SSE1.5 S2.6 S3.3 S3.7 S3.5 S3.4 S3.2 S3.2 S3.7 S3.6 S3.0 SSE3.5 SSE2.9 SE2.3 ESE2.8 ESE2.4 ESE2.6 ESE2.5																								Diurnal Average		
SE12 SSE12 SSE12 SSE11 N9 NNE10 SE10 SSE12 S14 SSE14 S13 WSW15 S16 SSE16 SSE15 SSE16 SE17 SE18 SSE18 SE15 SE12 SE13 SE14 SSE13																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

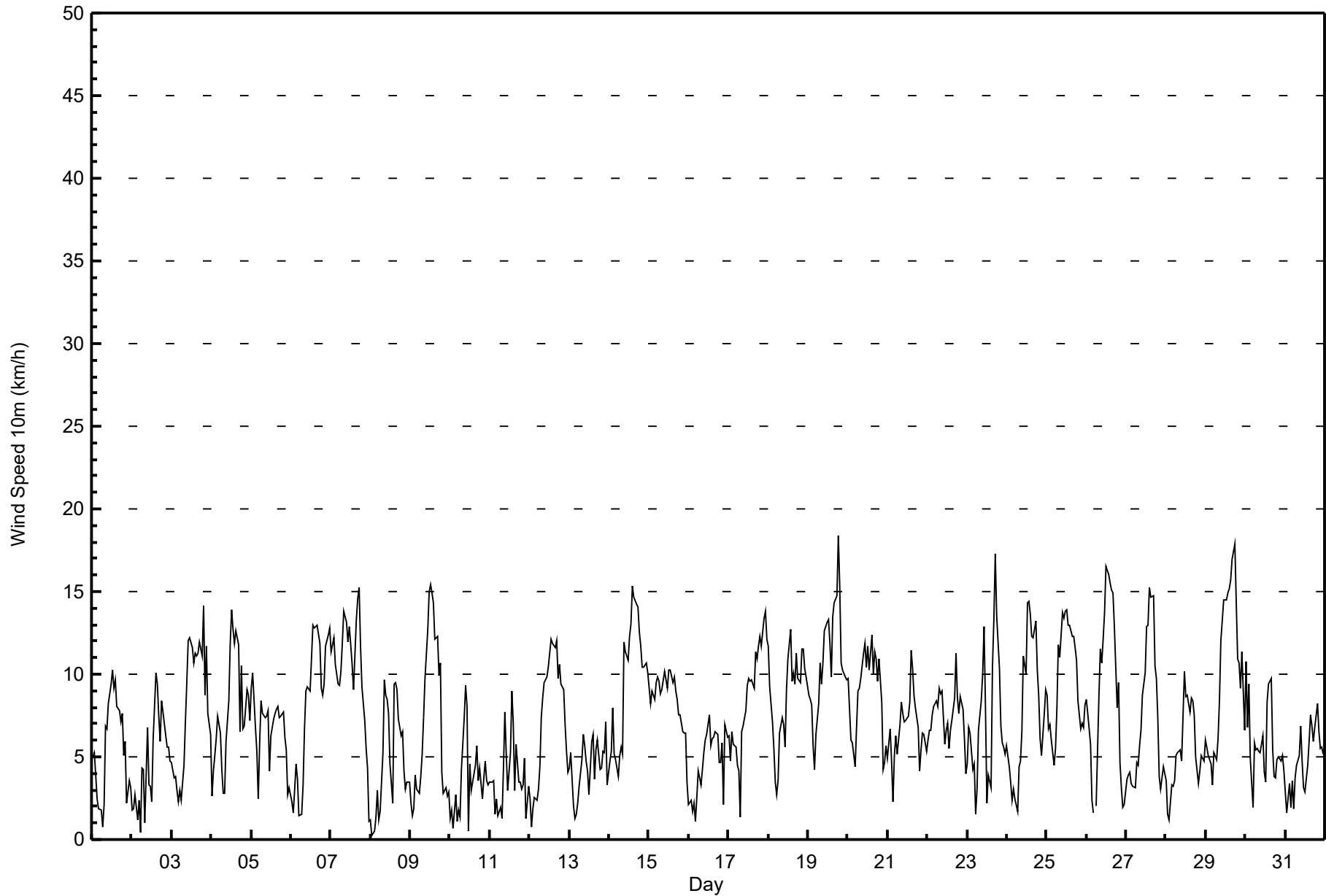
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 19 19:00																		Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9							
Minimum Value: 0 km/h on May 3 03:00 Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	1	1	2	1	1	1	1	2	3	3	4	4	4	3	3	3	3	3	1	2	1	2	1	4
2-May	2	1	1	1	1	1	2	1	2	2	2	2	3	3	4	4	3	2	2	2	2	2	1	1	4
3-May	1	1	0	1	1	1	1	2	4	3	4	4	5	5	4	4	4	4	4	5	4	5	3	2	5
4-May	1	1	1	3	3	2	1	1	2	2	3	4	4	4	4	4	4	4	4	2	2	3	3	3	4
5-May	4	3	2	2	1	2	3	3	3	3	3	3	2	3	2	3	3	3	3	2	2	2	1	1	4
6-May	2	1	1	1	1	1	1	2	3	3	4	4	5	5	5	5	5	5	4	3	3	4	5	5	5
7-May	4	4	4	4	3	3	3	4	6	5	5	4	4	4	3	5	5	5	4	3	2	2	2	2	6
8-May	2	1	1	1	2	1	1	3	3	3	3	2	2	3	3	3	3	2	2	2	2	1	1	1	3
9-May	1	1	0	1	1	1	1	3	3	4	5	5	5	5	5	5	5	4	4	2	1	1	1	1	5
10-May	1	1	2	2	1	1	1	2	3	3	4	3	3	3	3	3	2	2	1	1	1	1	1	1	4
11-May	1	1	1	2	1	1	1	2	2	3	2	2	2	4	3	3	3	2	1	1	1	2	1	1	4
12-May	1	2	1	1	1	1	2	2	3	3	3	3	4	4	4	4	4	3	3	3	3	2	2	2	4
13-May	1	1	2	1	2	2	1	2	2	2	2	2	2	2	3	3	3	3	5	3	1	1	2	2	5
14-May	2	3	3	1	2	1	2	2	2	4	4	4	4	4	5	5	5	5	4	4	3	3	3	3	5
15-May	3	3	3	3	3	3	3	3	3	4	3	3	4	4	3	3	3	3	3	3	2	2	2	2	4
16-May	1	1	1	1	1	2	1	1	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	1	3
17-May	2	1	2	2	1	1	2	3	3	3	3	4	4	5	4	4	5	4	4	4	3	4	4	3	5
18-May	3	3	2	2	1	2	1	2	3	3	3	4	4	5	4	4	4	4	3	3	3	3	3	3	5
19-May	2	2	2	1	1	2	4	4	4	4	5	6	5	5	4	6	5	6	7	7	4	3	4	3	7
20-May	3	3	3	2	1	2	3	3	3	3	4	4	4	4	5	4	4	4	3	3	2	1	1	1	5
21-May	1	2	2	2	1	2	2	3	3	3	3	3	3	4	5	4	4	3	2	2	2	2	2	2	5
22-May	1	2	2	2	2	3	3	4	3	4	3	2	2	2	3	3	4	4	3	3	2	1	1	1	4
23-May	1	1	1	1	1	1	2	3	3	4	5	4	2	1	5	6	4	6	5	4	3	2	1	1	6
24-May	2	2	1	1	1	1	1	1	3	3	4	4	6	6	6	6	5	5	5	4	2	1	2	2	6
25-May	3	2	1	1	1	2	3	5	5	6	6	6	6	5	5	6	5	5	5	3	2	2	2	1	6
26-May	1	2	1	2	1	UO	2	5	5	4	5	6	6	7	6	6	6	6	6	5	2	2	2	2	7
27-May	2	1	2	2	1	1	2	2	2	2	3	4	5	5	5	5	5	4	4	2	1	1	1	1	5
28-May	1	1	1	1	1	1	2	2	2	2	3	4	4	4	4	4	3	3	2	1	1	1	1	1	4
29-May	1	1	1	1	1	1	1	3	3	5	5	6	6	7	6	7	6	7	6	4	3	7	5	3	7
30-May	4	4	4	3	2	2	2	3	2	2	2	2	3	4	4	3	3	2	2	2	1	1	1	1	4
31-May	1	2	1	1	1	1	1	2	2	2	2	1	1	2	2	3	3	2	2	3	2	2	2	2	3
4 4 4 4 3 3 4 5 6 6 6 6 6 7 6 7 6 7 7 7 7 4 7 5 5																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Barge Landing - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	280	37.69	37.69
6 - 11	346	46.57	84.25
12 - 19	117	15.75	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Barge Landing - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	22	8	14	8	15	31	45	19	24	21	14	6	9	5	11	28	280
6 - 11	26	36	17	2	0	9	83	57	18	19	21	16	7	10	5	20	346
12 - 19	3	10	0	0	0	1	21	30	16	4	8	20	0	1	3	0	117
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	51	54	31	10	15	41	149	106	58	44	43	42	16	16	19	48	743

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wind Speed 10m (WS10) - km/h

Barge Landing





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Barge Landing - May 2025

Direction of Maximum Speed: 152 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 147.2 deg on May 19																				Hours in Service: 744					
Direction of Minimum Speed: 135 deg on May 8 02:00 Direction of Minimum Daily Speed Average: 1.1 deg on May 11																				Hours of Data: 743					
																				Hours of Missing Data: 1					
Monthly Average Direction: 158.7 deg																				Percent Operational Time: 99.9					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	13	352	348	349	288	312	272	213	231	194	198	159	158	163	167	161	154	147	122	114	113	79	113	92	155.3
2-May	96	93	357	48	268	37	217	216	127	253	205	116	69	319	319	335	341	7	27	30	17	10	347	352	348.2
3-May	345	349	347	344	359	114	243	220	195	225	242	250	292	285	273	267	277	311	315	313	304	325	337	345	289.7
4-May	292	176	219	303	337	322	329	350	55	234	240	247	256	252	238	239	240	235	221	229	226	250	301	296	254.9
5-May	303	25	13	7	335	340	327	333	342	339	335	11	49	31	41	39	42	59	55	52	50	47	31	55	15.7
6-May	72	45	105	131	113	116	303	165	176	169	199	210	204	219	214	206	205	202	203	177	163	168	164	162	186.0
7-May	167	156	146	150	146	141	142	161	186	189	206	233	234	245	234	241	238	234	226	215	196	207	219	108	197.6
8-May	142	135	330	333	324	292	94	29	25	23	30	29	54	11	32	40	36	35	25	34	59	88	117	138	36.4
9-May	117	116	31	112	122	159	149	174	198	195	236	241	242	247	245	230	243	251	246	233	198	173	188	157	224.6
10-May	76	172	134	136	101	114	226	198	215	236	239	51	354	3	217	203	256	203	109	84	97	96	130	153	189.9
11-May	154	129	102	94	347	338	340	127	179	164	167	278	225	133	139	284	335	347	74	81	55	49	59	344	119.9
12-May	345	56	355	347	2	357	18	31	27	22	19	25	20	21	20	20	18	23	23	21	8	7	9	351	17.6
13-May	346	339	349	308	244	276	325	354	17	8	20	69	51	76	109	139	115	131	186	164	136	117	126	97	77.4
14-May	126	148	142	144	167	162	179	213	327	4	360	12	25	27	15	28	31	17	10	4	4	15	15	7	21.9
15-May	5	358	1	7	5	12	6	6	351	1	348	358	24	33	31	41	28	30	35	56	56	46	46	48	18.2
16-May	343	343	317	351	80	81	53	359	3	17	6	24	4	54	28	18	1	12	346	349	359	130	135	135	21.6
17-May	142	141	125	127	115	121	126	187	164	166	164	158	166	164	154	170	136	137	137	128	125	129	129	130	141.7
18-May	134	144	144	136	118	109	137	166	168	170	153	148	150	163	161	141	143	135	132	125	129	132	131	131	142.3
19-May	139	134	134	133	134	141	160	174	166	159	153	146	158	157	165	146	141	145	152	143	137	128	134	131	147.2
20-May	128	128	125	123	110	121	128	130	133	127	133	133	133	156	141	145	136	146	135	133	134	131	119	124	133.0
21-May	116	116	142	94	119	122	145	158	163	177	167	154	142	120	157	173	174	194	206	191	146	142	146	156	154.1
22-May	137	147	147	147	130	140	146	169	172	165	192	249	230	197	171	170	144	136	173	151	134	128	127	137	157.0
23-May	111	129	134	136	129	204	205	165	158	139	137	169	310	330	179	129	114	134	140	144	169	145	142	130	141.3
24-May	154	169	129	108	342	340	251	259	169	152	142	161	151	160	178	166	149	150	196	166	139	128	140	143	158.1
25-May	149	149	139	137	136	139	151	161	166	164	175	164	169	175	171	184	186	179	174	168	157	144	132	131	162.6
26-May	133	135	138	137	339	UO	192	157	166	159	177	161	171	164	169	172	174	170	215	289	311	176	211	186	170.3
27-May	174	195	247	265	152	159	216	200	225	225	252	243	245	241	246	244	249	262	249	243	237	188	131	164	234.5
28-May	106	141	203	199	150	181	202	214	199	191	224	223	207	229	207	226	215	203	178	118	109	136	126	120	193.5
29-May	126	128	133	129	142	136	136	156	166	167	159	184	170	165	166	151	145	146	147	141	135	278	302	301	158.2
30-May	265	287	241	280	273	264	316	313	310	316	339	326	262	249	238	234	225	202	233	186	147	169	144	140	254.1
31-May	139	173	195	169	215	172	135	165	172	171	207	259	336	358	342	347	357	2	356	3	336	337	332	329	333.8
131.0 128.7 135.1 124.0 115.3 126.6 154.3 171.7 173.9 175.0 189.7 189.8 187.0 186.1 187.0 183.8 170.4 156.5 163.5 132.8 120.6 122.2 121.4 122.5																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

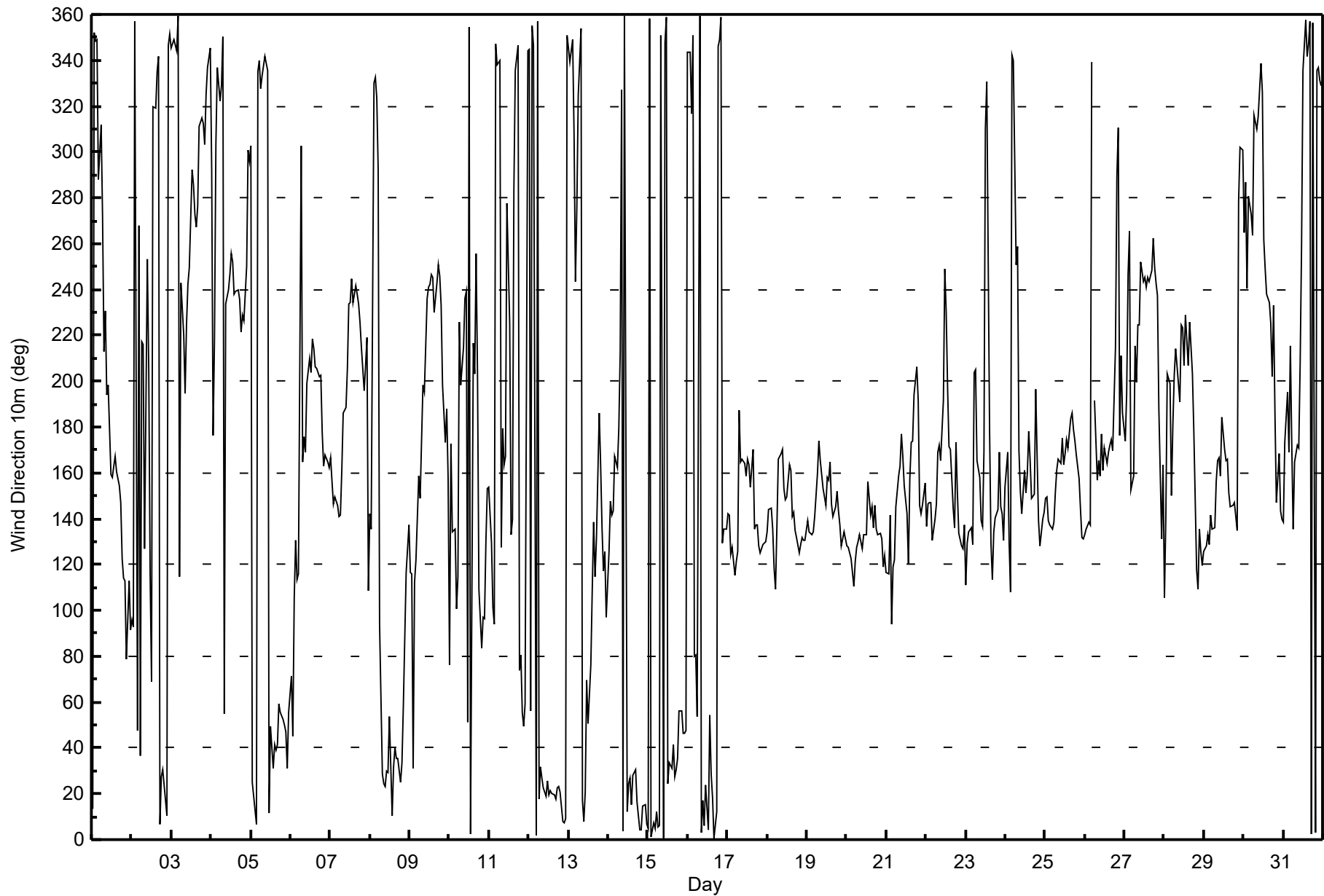
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on May 17 08:00																			Hours in Service: 744 Hours of Data: 743 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9						
Minimum Value: 7 deg on May 22 23:00																									
Percentiles: P ₁ = 9 P ₁₀ = 15 Q ₁ = 22 Median = 29 Q ₃ = 37 P ₉₀ = 56 P ₉₉ = 92																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	20	20	19	33	73	33	56	51	26	45	44	34	36	37	35	37	35	36	16	13	14	37	35	26	73
2-May	75	44	41	58	45	75	29	36	92	26	71	89	92	50	32	23	25	35	18	18	21	23	13	10	92
3-May	12	12	10	25	23	30	45	31	46	31	23	32	34	37	36	36	32	25	23	25	26	24	29	25	46
4-May	54	27	26	35	21	20	19	31	73	24	22	23	23	25	25	23	28	70	29	26	22	23	29	28	73
5-May	30	21	20	21	36	39	23	30	31	41	32	75	47	45	34	28	24	28	23	20	22	33	45	18	75
6-May	37	25	35	10	13	45	43	53	37	34	41	44	40	32	33	32	31	29	30	25	23	25	24	25	53
7-May	24	22	20	22	20	18	19	27	29	32	31	28	23	24	25	20	22	23	25	27	24	24	32	85	85
8-May	68	100	76	39	27	61	51	35	18	20	26	28	71	90	24	25	24	27	23	21	28	39	22	13	100
9-May	36	50	35	12	22	30	42	39	36	35	31	31	29	26	30	28	29	26	20	25	22	19	45	37	50
10-May	77	78	93	53	90	82	78	45	35	33	41	95	52	94	75	74	45	60	22	25	11	13	28	22	95
11-May	23	19	19	70	24	62	63	82	43	30	43	85	46	36	53	71	32	58	32	21	16	20	74	14	85
12-May	20	66	61	41	28	28	33	26	25	24	25	25	24	24	24	24	21	23	21	21	19	20	26	22	66
13-May	15	15	78	80	67	39	25	32	32	39	56	62	83	47	62	71	52	30	57	59	16	10	15	29	83
14-May	36	51	18	17	30	26	31	38	44	25	24	25	24	22	23	22	22	23	23	23	23	23	23	24	51
15-May	22	22	22	22	22	22	23	22	23	25	26	32	30	28	28	29	28	27	25	21	20	20	21	60	60
16-May	26	15	26	14	74	50	32	54	55	45	44	45	38	53	51	46	36	29	30	20	21	93	11	15	93
17-May	18	18	14	14	14	16	41	102	48	43	45	45	43	46	33	39	29	28	25	16	14	16	16	16	102
18-May	17	21	22	19	20	34	41	39	40	47	57	41	36	37	35	32	29	20	19	14	15	15	14	15	57
19-May	16	14	12	20	17	20	31	32	40	33	33	31	30	34	36	27	24	27	25	23	19	16	17	18	40
20-May	15	16	17	15	16	15	17	19	19	17	22	29	24	30	24	24	23	27	23	18	16	20	11	13	30
21-May	11	16	27	56	15	15	24	34	35	37	42	41	37	35	38	35	37	32	28	30	22	18	21	25	56
22-May	14	21	20	21	14	19	26	31	42	34	37	23	27	34	32	34	37	28	32	25	14	10	7	24	42
23-May	8	9	12	13	9	57	50	33	38	35	30	52	80	23	89	25	17	20	21	23	34	25	13	17	89
24-May	20	29	25	48	15	21	49	33	57	40	29	40	30	36	36	35	30	26	33	33	20	9	14	17	57
25-May	20	18	13	10	11	17	27	30	34	34	38	32	35	36	36	38	38	35	36	30	23	17	15	8	38
26-May	10	12	12	70	14	UO	45	31	31	34	35	34	33	34	34	33	33	33	53	37	46	71	92	66	92
27-May	59	34	30	56	19	45	27	38	31	31	36	34	29	31	28	27	27	33	25	23	27	28	10	24	59
28-May	10	59	72	29	27	33	35	33	39	48	43	35	47	45	56	43	35	32	32	22	18	9	10	8	72
29-May	7	9	13	14	11	11	14	31	34	33	34	35	37	36	37	32	29	24	25	21	16	69	30	38	69
30-May	27	39	29	41	68	32	30	31	29	39	35	62	92	45	37	28	33	57	41	31	17	22	13	17	92
31-May	64	79	40	46	23	46	20	32	34	34	40	40	30	25	26	24	25	22	25	26	29	28	24	26	79
77 100 93 80 90 82 78 102 92 48 71 95 92 94 89 74 52 70 57 59 46 93 92 85																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Barge Landing - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - May 2025

Maximum Speed: 33 km/h on May 19 19:00										Maximum Daily Speed Average: 17.7 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 8 00:00										Minimum Daily Speed Average: 2.5 km/h on May 11										Hours of Data: 744						
Maximum Diurnal Speed Average: 5.4 km/h at hour 10										Minimum Diurnal Speed Average: 2.0 km/h at hour 5										Hours of Missing Data: 0						
Monthly Average Velocity: 3.9 km/h 157.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 12 Q ₃ = 17 P ₉₀ = 21 P ₉₉ = 28										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE10	N9	N7	NNW6	WNW4	NW4	WNW2	SSW3	SW9	S9	SSW12	SSE14	SSE14	SSE14	SSE14	SSE11	SSE12	SE11	ESE11	ESE9	ESE11	ESE6	SE7	ESE7	SSE4.7	SSE14
2-May	E4	E5	N5	NE5	W4	NNW4	SSW6	SSW5	SE2	WSW7	SSW5	ESE4	ENE3	NW9	NW17	NNW16	NNW13	N11	NNE18	NNE18	NNE14	NNE12	N12	N11	N5.3	NNE18
3-May	NNW11	NNW9	NNW10	NNW9	NNW6	ESE4	WSW3	SSW5	S10	SW12	WSW16	WSW17	NNW19	NNW17	W17	W16	W19	NNW21	NW20	NNW25	NNW16	NW21	NNW14	NNW12	NNW10.5	NNW25
4-May	WNW6	S8	SW9	WNW11	NNW14	NW12	NNW8	N6	NE6	SW8	WSW12	WSW17	W20	WSW17	WSW16	WSW18	WSW16	SW10	SW16	SW10	SW12	WSW15	NNW17	WNW14	WSW9.4	W20
5-May	WNW17	NNE21	NNE13	N10	NNW5	NNW10	NW15	NNW13	NNW11	NNW11	NNW12	N7	NE10	NNE12	NE12	NE13	NE14	NE12	NE14	NE15	NE14	NE13	NE7	ENE8	NNE9.7	NNE21
6-May	E6	E6	ESE8	SE9	ESE8	SE4	W2	SSE5	S11	SSE14	SSW13	SSW12	SSW16	SW18	SSW19	SSW19	SSW19	SSW18	SSW15	S15	SSE18	SSE21	SSE22	SSE23	S11.6	SSE23
7-May	SSE21	SSE21	SSE21	SSE19	SSE16	SE16	SSE16	SSE21	S22	S21	SSW18	SW19	SW17	WSW15	SW14	WSW20	WSW21	SW22	SW18	SW15	SSW13	SSW11	SW10	S1	SSW13.9	S22
8-May	SW5	WSW4	NW4	NNW7	NW8	NW4	E2	NNE12	NNE21	NNE19	NNE17	NNE14	NE8	NNE6	NNE17	NE18	NNW17	NNE14	NNE12	NNE15	NE10	ENE8	ESE7	SSE8	NNE8.4	NNE21
9-May	SSE7	S6	NNE3	E9	ESE8	SSE5	SSE5	SSE8	S11	S14	SW17	WSW22	WSW22	WSW21	WSW20	SW17	WSW18	WSW15	WSW16	SW8	SW7	S7	SSW8	SSW6	SW9.1	WSW22
10-May	SW3	S5	SW4	S7	SSE3	SSW3	SW2	S6	SSW10	SW12	WSW11	NE2	N8	N4	SW5	SSW6	WSW7	SSW5	ESE7	E5	ESE9	ESE11	SE8	SSE8	S3.1	SW12
11-May	SSE9	SSE9	SE9	ESE5	N3	NE3	N4	ESE2	S7	SSE13	SSE8	W5	SW7	SE13	SE10	WNW4	NNW10	NNW5	ENE6	ENE7	NE10	NE13	NE6	NNW9	ESE2.5	NE13
12-May	NNW8	NNW4	N7	NNW8	NNW7	N7	NNE8	NNE14	NNE16	NNE18	NNE19	NNE21	NNE22	NNE24	NNE24	NNE23	NNE24	NNE20	NNE22	NNE21	N18	N14	N13	N10	NNE15.1	NNE24
13-May	NNW11	NNW13	NNW11	NW5	WNW4	W5	NW5	N8	NNE11	N9	NNE7	ENE6	NE4	ENE9	E9	SE6	ESE7	SE8	S7	SSE8	SE10	ESE11	SE13	ESE7	ENE2.7	NNW13
14-May	SE9	SSE10	SSE14	SSE10	S10	SSE9	S9	SSW9	NW9	N22	N22	N21	NNE25	NNE27	NNE31	NNE31	NNE30	NNE29	N24	N22	N20	NNE21	NNE22	N20	NNE12.8	NNE31
15-May	N17	N15	N17	N17	N18	NNE19	N18	N17	N17	N19	NNW17	N17	NNE19	NNE19	NNE19	NE19	NNE18	NNE16	NNE15	NE15	NE15	NE15	NE15	NE11	NNE16.0	NNE19
16-May	N6	NNW8	NNW7	NNW8	NNE4	NE5	NE7	N5	N7	NNE9	N10	NNE10	N12	NE9	NNE10	NNE11	N11	N12	NNW9	N10	N13	ESE3	SE13	SE12	NNE6.4	SE13
17-May	SE12	SE10	SE12	SE10	ESE9	SE8	SE7	S2	SSE9	SSE11	SSE12	SSE15	SSE16	SSE15	SSE16	SSE16	SE18	SE17	SE18	SE18	SE19	SE21	SE21	SE19	SE13.3	SE21
18-May	SE18	SSE16	SSE13	SE10	SE7	ESE6	SE5	SSE10	SSE11	SSE10	SE9	SSE15	SSE18	SSE21	SSE16	SE17	SE15	SE17	SE15	SE15	SE18	SE18	SE16	SE16	SE13.5	SSE21
19-May	SE15	SE14	SE14	SE10	SE8	SSE12	SSE15	S18	SSE16	SSE17	SSE21	SSE21	SSE23	SSE20	SSE17	SSE22	SE22	SSE24	SSE33	SE25	SE17	SE16	SE15	SE15	SSE17.7	SSE33
20-May	SE15	SE12	SE9	SE9	ESE8	SE10	SE13	SE14	SE15	SE17	SE19	SE18	SE17	SSE18	SE20	SE17	SE18	SSE18	SE15	SE16	SE13	SE8	ESE9	SE10	SE14.0	SE20
21-May	ESE10	ESE12	SE9	ESE5	ESE9	SE10	SSE8	SSE11	SSE14	S13	SSE11	SSE12	SSE12	ESE14	SSE19	S18	S15	S12	SSW10	S7	SSE10	SSE11	SSE12	SSE11	SSE10.6	SSE19
22-May	SE10	SSE12	SSE12	SSE13	SE12	SE13	SSE14	SSE16	SSE14	SSE16	S9	WSW10	SW11	SSW10	S12	SSE12	SE14	SE18	S15	SSE14	SE14	SE13	SE10	SSE8	SSE11.6	SE18
23-May	SE9	SE12	SE12	SE9	SE9	S3	S4	SSE11	SSE13	SE15	SE19	S13	W4	NNW7	SSE5	SE18	ESE21	SE27	SE22	SSE18	SSE13	SSE11	SSE12	SE10	SE11.2	SE27
24-May	SSE13	S10	SSE8	ESE7	NNW4	NNW3	W2	W5	SSE8	SSE10	SE18	SSE17	SSE24	SSE25	S24	SSE22	SSE21	SSE24	SSW17	SSE16	SE11	SE10	SSE15	SSE17	SSE12.4	SSE25
25-May	SSE17	SSE14	SSE14	SSE12	SSE10	SSE11	SSE15	SSE21	SSE20	SSE23	S23	SSE24	SSE24	S22	S22	S21	S20	S20	S20	SSE16	SSE14	SSE15	SE13	SE14	SSE17.4	SSE24
26-May	SE14	SE13	SE12	SSE8	SSW2	S3	S4	SSE16	SSE20	SSE19	S20	SSE23	S28	SSE27	SSE27	S26	S26	SSE23	SSW14	NNW17	NW10	S7	SSW3	SSW6	S13.0	S28
27-May	S8	SSW9	WSW8	W8	SSE8	SSE7	SSW8	S6	SW8	SW8	WSW12	WSW14	WSW18	WSW19	WSW23	WSW21	WSW22	W16	WSW16	WSW12	WSW9	SW8	S7	S9	SW10.7	WSW23
28-May	SE6	S6	SW6	SW8	S7	SSW8	SSW9	SSW7	S8	S7	SW10	SW15	SSW12	SW12	SSW11	SW13	SSW13	SSW12	S9	SE7	ESE9	SSE10	SE10	SE10	S8.1	SW15
29-May	SE12	SE11	SSE10	SSE10	SSE8	SE11	SE9	SSE10	SSE14	SSE21	SSE23	S24	S25	SSE26	SSE26	SSE27	SSE29	SSE31	SSE25	SE19	SE17	W17	NNW21	NNW13	SSE14.6	SSE31
30-May	W18	NNW12	WSW15	W10	W5	W10	NW10	NW11	NW10	NW9	NNW11	NNW6	WSW5	WSW12	SW14	SW15	SW8	SSW7	SW7	S9	SSE12	S11	SSE12	SSE10	WSW6.4	W18
31-May	SSE7	SSW6	SSW8	SW5	SW7	SSW5	SE6	SSE7	S8	S11	SSW7	WSW4	NNW6	N9	NNW12	NNW16	N14	N13	N15	N18	NNW15	NNW12	NNW12	NNW10	NNW3.6	N18
SE4.2 SE4.2 SSE3.4 SE2.4 SE2.0 SE2.3 SSE2.4 SSE4.0 SSE4.9 SSE5.4 S5.1 S5.0 S4.9 S4.6 S5.3 S5.2 SSE4.3 SSE5.3 SSE4.3 SE3.6 ESE4.6 SE4.2 SE4.1 SE4.1																										Diurnal Average
SSE21 NNE21 SSE21 SSE19 N18 NNE19 N18 SSE21 S22 SSE23 S23 S24 S28 NNE27 NNE31 NNE31 NNE30 SSE31 SSE33 SSE25 N20 NW21 SSE22 SSE23																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

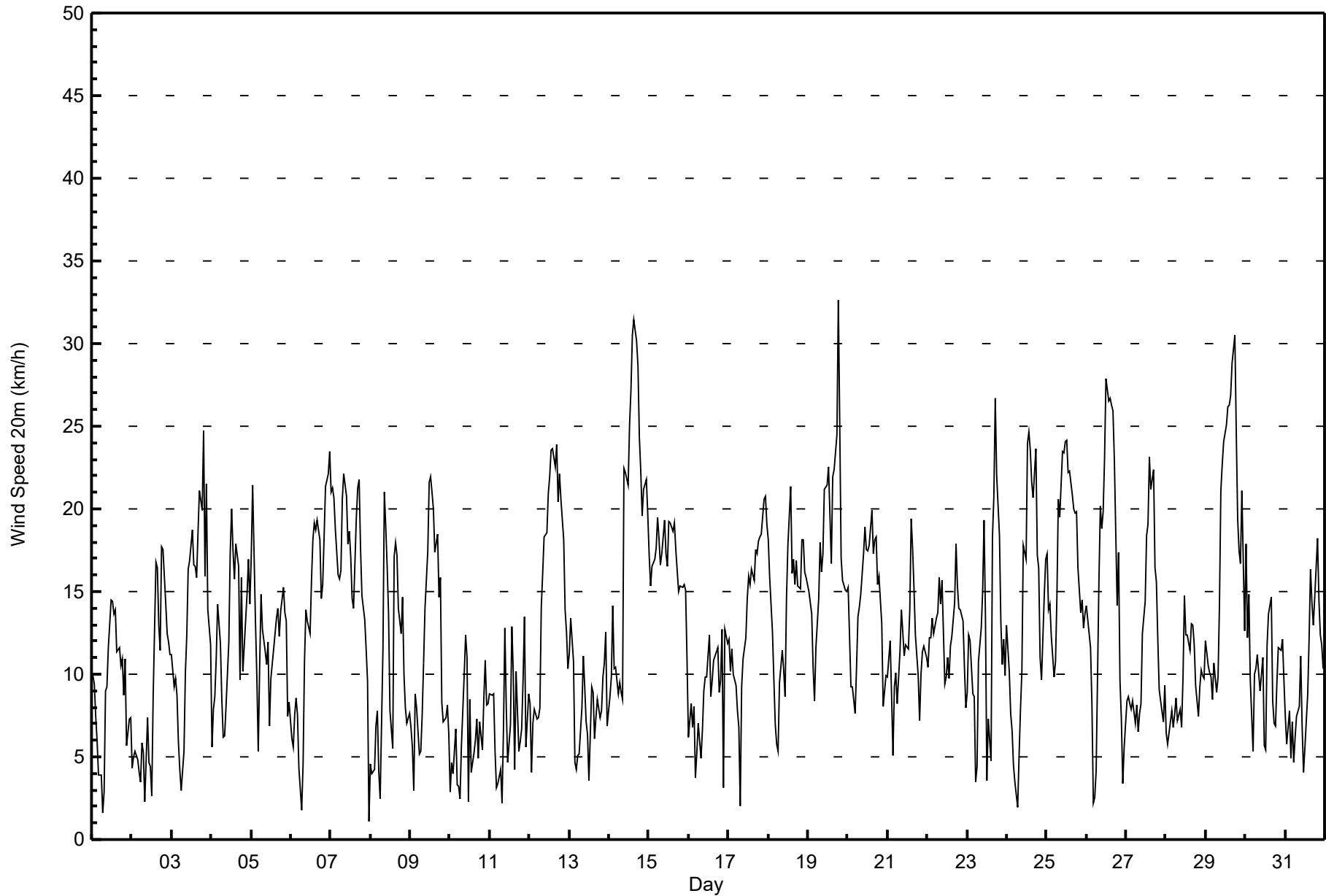
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on May 29 22:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 9 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	2	2	2	2	1	2	3	3	4	4	4	4	4	4	4	3	3	1	2	1	3	1	4
2-May	3	1	2	2	3	2	2	2	2	2	3	4	3	4	6	6	4	5	5	4	4	4	2	2	6
3-May	1	1	1	1	2	2	2	2	5	4	4	5	7	6	6	5	6	6	6	7	6	8	4	3	8
4-May	3	1	2	4	4	3	2	2	4	2	3	5	5	4	5	5	5	6	6	3	3	3	5	4	6
5-May	5	6	4	3	2	4	4	4	4	4	4	4	4	5	4	4	4	4	3	3	3	3	2	2	6
6-May	2	1	2	1	2	1	1	3	4	4	4	5	6	6	6	6	7	6	4	4	3	4	4	5	7
7-May	4	4	4	4	3	3	4	5	6	6	5	5	4	5	4	6	7	6	5	4	2	2	3	3	7
8-May	1	2	2	1	3	2	2	6	5	5	5	4	4	6	5	5	4	4	4	3	3	2	1	1	6
9-May	1	2	2	1	1	1	1	3	3	4	6	6	7	7	6	6	5	5	5	2	1	1	2	1	7
10-May	1	2	2	2	3	2	2	2	4	3	6	4	5	4	6	3	2	2	1	2	1	2	1	1	6
11-May	2	1	1	2	1	1	3	2	3	4	3	3	2	5	4	3	6	3	2	1	3	2	2	2	6
12-May	2	3	2	2	1	2	3	4	4	5	5	6	6	7	6	7	6	5	5	5	5	4	3	3	7
13-May	2	2	2	2	2	1	2	3	4	3	3	3	3	4	4	3	4	3	6	4	2	1	2	2	6
14-May	3	4	3	2	2	2	2	3	4	6	6	6	6	8	8	8	8	8	7	6	6	6	6	6	8
15-May	5	4	5	5	5	5	6	5	5	6	5	5	7	6	6	5	5	5	4	4	3	3	3	3	7
16-May	1	1	1	1	2	2	2	2	3	3	4	4	5	5	4	5	4	4	3	3	3	4	3	2	5
17-May	2	2	2	2	1	2	3	3	3	3	5	5	5	6	5	5	5	4	5	4	4	4	4	4	6
18-May	3	3	3	2	1	2	2	3	3	3	4	5	5	6	4	5	4	4	3	4	3	4	3	3	6
19-May	3	2	2	2	1	2	4	4	4	4	6	6	6	6	6	6	5	9	8	8	4	3	4	3	9
20-May	3	3	3	2	1	2	3	3	4	3	4	5	4	4	5	5	4	4	3	4	2	2	1	1	5
21-May	1	2	2	3	1	3	2	4	3	3	3	4	3	5	5	5	4	4	3	2	2	2	2	2	5
22-May	1	2	2	3	2	3	3	4	4	4	3	2	3	3	3	3	5	5	4	3	2	1	2	1	5
23-May	2	1	2	1	2	1	2	3	3	5	5	5	3	2	7	8	5	7	5	5	3	2	2	1	8
24-May	2	2	1	2	2	1	2	1	3	3	4	5	6	7	6	7	6	6	6	5	3	1	2	2	7
25-May	3	2	2	2	1	2	4	5	5	6	6	7	7	7	7	6	5	6	5	4	2	2	2	1	7
26-May	1	2	2	4	1	1	3	6	5	6	5	6	7	8	7	6	7	7	9	7	4	4	3	2	9
27-May	3	2	1	3	2	3	2	2	2	2	4	5	6	6	6	7	7	5	5	3	2	1	1	1	7
28-May	1	1	1	1	2	2	2	2	2	2	4	5	5	5	5	5	4	3	3	1	1	1	1	1	5
29-May	1	1	1	1	1	1	2	4	4	6	6	7	7	8	7	7	7	7	7	5	3	10	7	4	10
30-May	5	6	5	4	3	3	3	4	3	3	4	3	5	4	5	4	4	2	3	2	2	1	1	2	6
31-May	2	2	2	1	2	1	1	2	2	3	2	1	2	3	4	4	5	4	4	6	5	4	3	3	6
5 6 5 5 5 5 6 6 6 6 6 7 7 8 8 8 8 9 9 8 6 10 7 6																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Barge Landing - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Barge Landing - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	80	10.75	10.75
6 - 11	270	36.29	47.04
12 - 19	290	38.98	86.02
20 - 28	97	13.04	99.06
29 - 38	7	0.94	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Barge Landing - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	3	5	1	4	6	3	5	7	9	6	4	8	4	5	6	80
6 - 11	18	9	10	6	4	23	42	44	28	20	19	6	3	2	8	28	270
12 - 19	20	27	15	0	0	2	63	67	10	17	16	21	6	9	3	14	290
20 - 28	7	15	0	0	0	1	6	38	14	0	1	9	1	3	2	0	97
29 - 38	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0	0	7
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	49	58	30	7	8	32	114	157	59	46	42	40	18	18	18	48	744

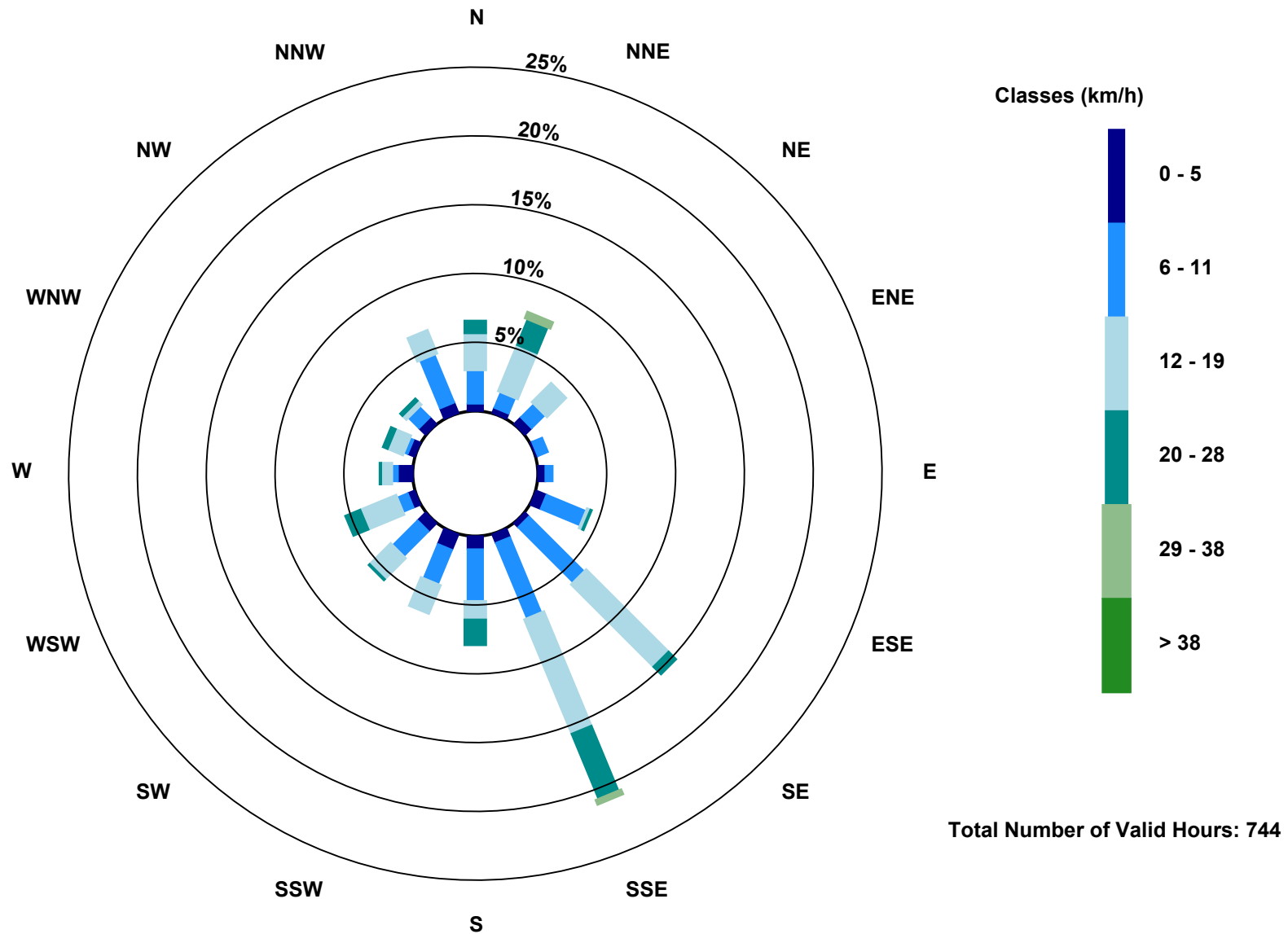
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 20m (WS20) - km/h
Barge Landing





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Barge Landing - May 2025

Direction of Maximum Speed: 153 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 149.5 deg on May 19																				Hours in Service: 744					
Direction of Minimum Speed: 174 deg on May 8 00:00 Direction of Minimum Daily Speed Average: 2.5 deg on May 11																				Hours of Data: 744					
																				Hours of Missing Data: 0					
Monthly Average Direction: 157.0 deg																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	12	353	349	348	295	310	283	211	228	191	195	158	158	163	163	162	154	146	123	116	116	115	126	104	150.4
2-May	96	90	11	36	275	327	209	201	133	247	200	108	71	318	312	329	336	3	25	28	22	20	352	349	356.6
3-May	341	347	342	340	346	103	249	209	187	216	242	251	286	284	273	267	277	302	305	302	296	317	329	347	292.6
4-May	297	180	217	297	335	318	331	353	51	234	238	246	259	257	237	237	238	235	217	231	221	252	293	291	257.9
5-May	293	21	12	4	327	336	323	328	337	336	327	11	47	26	37	35	36	55	49	47	49	50	43	63	14.7
6-May	86	80	119	138	122	134	259	164	169	167	194	204	200	214	207	203	203	198	199	176	163	166	164	162	178.9
7-May	164	156	149	152	149	146	148	160	182	186	201	231	230	244	232	240	237	231	224	214	197	206	221	174	194.1
8-May	235	243	322	335	324	306	83	24	21	20	23	29	48	13	30	36	31	30	22	29	51	76	114	158	27.1
9-May	148	180	23	87	108	167	163	168	190	189	233	241	242	245	243	229	244	249	247	235	217	189	208	208	221.5
10-May	222	189	221	171	163	203	223	188	208	234	240	39	349	10	220	204	257	196	109	87	104	105	132	153	183.4
11-May	160	155	130	116	7	55	355	105	176	161	164	272	219	135	138	288	333	348	67	75	52	46	34	342	105.6
12-May	337	348	351	335	347	355	13	26	26	20	18	22	18	18	18	16	19	20	18	9	9	11	351		13.5
13-May	341	336	335	322	292	274	325	356	15	7	21	64	53	71	97	130	113	134	182	167	142	121	128	109	58.6
14-May	131	149	148	154	169	166	177	208	325	1	357	11	22	23	13	24	27	14	9	5	4	14	13	5	19.2
15-May	5	358	1	8	6	12	7	8	351	360	344	357	21	30	25	36	26	25	31	50	48	40	43	53	17.5
16-May	357	334	328	340	32	47	44	3	359	14	1	22	7	56	27	17	2	9	345	352	4	118	140	139	15.6
17-May	145	146	128	134	120	125	129	179	157	163	163	157	164	161	155	167	140	141	140	130	127	131	134	135	143.5
18-May	138	147	150	142	132	115	134	161	167	166	145	148	149	162	162	146	145	139	135	129	132	136	134	134	144.1
19-May	142	138	139	139	144	147	161	171	164	158	155	149	155	157	161	150	145	147	153	146	143	131	138	134	149.5
20-May	131	131	130	127	114	124	132	135	136	129	137	136	135	154	144	146	140	147	139	138	138	136	123	127	136.1
21-May	121	117	144	110	122	125	147	160	160	173	163	152	148	122	159	172	171	187	203	187	153	148	151	161	154.0
22-May	144	153	153	153	135	142	150	164	168	165	186	246	228	193	169	166	145	140	169	155	138	132	134	162	158.6
23-May	129	140	141	145	145	172	188	165	156	142	141	174	263	330	157	133	114	139	144	148	167	152	153	143	146.0
24-May	162	170	147	120	342	328	260	261	167	153	144	160	151	160	174	164	152	153	192	168	145	139	148	148	159.0
25-May	153	156	149	148	155	153	155	161	165	163	171	162	166	172	170	178	183	175	171	165	162	153	142	137	163.0
26-May	139	140	145	149	209	188	180	158	162	157	172	161	170	164	168	169	172	168	210	284	312	181	210	200	170.0
27-May	183	197	244	264	164	165	209	189	216	218	256	242	243	240	242	242	248	260	251	240	238	214	181	185	231.3
28-May	146	183	229	218	190	193	196	203	190	181	218	216	200	225	203	219	210	198	177	128	114	151	146	142	190.5
29-May	145	145	149	147	152	145	145	156	165	164	158	180	169	164	166	153	149	149	151	146	141	270	294	295	162.0
30-May	265	283	238	280	277	261	311	315	310	311	338	334	243	247	235	232	222	194	232	190	160	176	158	157	248.5
31-May	159	205	205	222	222	206	144	163	169	169	200	256	333	356	340	345	356	2	358	4	338	340	333	329	331.0
145.9 141.6 147.4 135.0 133.5 142.2 157.9 163.3 165.6 167.1 184.7 183.2 181.5 178.4 180.8 176.1 165.2 153.6 159.6 129.4 119.7 125.4 130.9 133.9																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

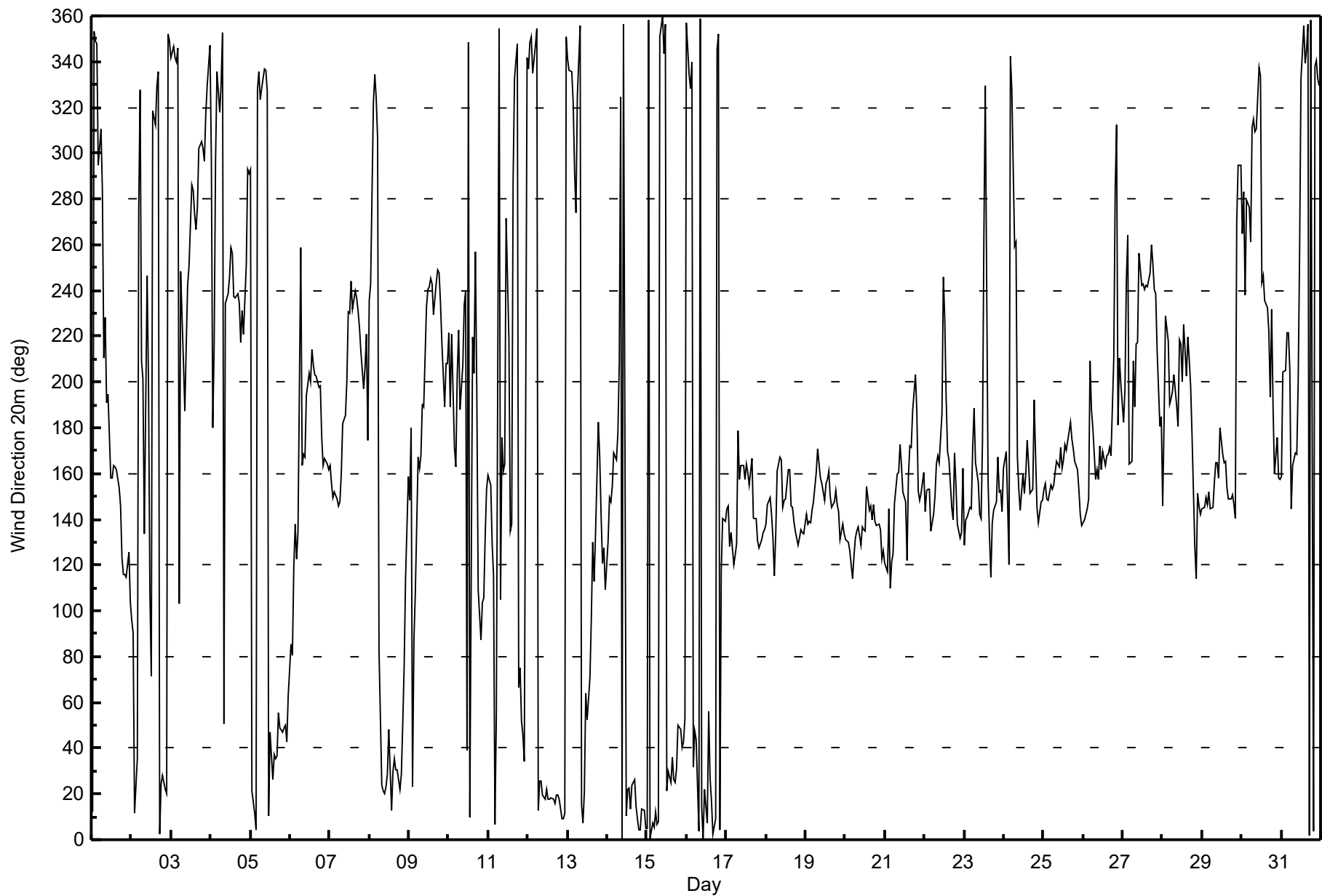
Barge Landing - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on May 8 00:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on May 29 05:00																									
Percentiles: P ₁ = 6 P ₁₀ = 10 Q ₁ = 14 Median = 19 Q ₃ = 25 P ₉₀ = 42 P ₉₉ = 84																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	14	16	14	12	39	20	49	43	19	34	33	20	23	25	22	26	23	27	13	9	10	15	18	16	49
2-May	67	29	49	39	67	43	19	31	77	23	58	89	90	47	20	18	22	29	13	12	15	16	11	7	90
3-May	7	7	5	9	12	36	43	32	43	27	19	25	22	25	25	26	21	17	15	16	16	20	26	23	43
4-May	44	14	17	29	16	16	13	23	64	19	16	18	18	20	19	20	21	56	22	24	13	18	16	16	64
5-May	18	13	15	17	27	24	16	24	25	34	25	65	36	32	25	20	17	20	16	14	13	16	24	8	65
6-May	25	17	15	6	7	17	51	32	22	20	29	37	33	25	24	23	23	21	20	15	11	13	12	12	51
7-May	11	12	11	12	12	12	12	15	19	20	22	21	18	21	20	17	17	18	18	18	13	12	16	99	99
8-May	36	36	25	11	13	43	60	24	13	13	19	20	47	84	16	16	16	20	16	14	16	23	16	14	84
9-May	16	14	70	14	6	23	27	26	25	25	27	25	23	22	21	22	20	19	15	14	14	12	23	23	70
10-May	61	52	50	19	72	66	61	38	29	27	40	90	51	95	71	59	36	47	15	24	8	9	20	11	95
11-May	11	11	10	18	33	36	51	82	33	18	26	69	38	29	45	61	26	53	25	17	18	11	48	10	82
12-May	8	56	19	11	11	19	23	17	16	16	17	16	17	17	16	16	16	16	14	15	16	16	19	16	56
13-May	10	10	11	51	51	24	17	24	22	28	42	51	83	42	51	58	52	30	51	56	12	6	12	23	83
14-May	19	37	11	9	15	12	16	29	38	19	20	18	15	15	16	15	14	16	18	17	18	16	16	19	38
15-May	17	17	18	17	17	16	18	17	18	19	21	25	20	20	18	20	19	18	17	15	12	12	12	16	25
16-May	30	5	10	8	41	29	21	48	44	33	30	35	30	43	44	32	25	22	25	18	18	79	7	9	79
17-May	10	10	9	10	12	11	19	98	30	28	31	32	29	35	20	21	21	18	18	12	10	12	12	11	98
18-May	11	13	12	14	13	21	33	26	26	28	48	28	26	21	21	20	17	14	14	10	10	10	10	10	48
19-May	9	8	7	10	9	11	17	16	22	20	19	21	18	20	23	17	15	17	13	13	13	11	12	12	23
20-May	11	12	11	10	11	12	12	14	14	11	16	20	18	17	14	14	15	14	15	11	10	14	6	11	20
21-May	7	12	17	28	12	13	15	20	18	22	30	26	27	23	24	18	20	19	18	22	13	11	11	13	30
22-May	10	12	11	12	10	11	14	16	23	17	23	17	18	20	17	20	24	20	17	13	8	7	5	20	24
23-May	9	7	9	7	6	29	46	20	24	23	19	42	64	15	89	18	14	14	13	13	23	19	8	14	89
24-May	8	14	16	14	41	24	40	30	48	22	17	25	16	21	20	19	18	15	19	18	11	7	7	9	48
25-May	10	8	7	6	7	9	15	14	17	19	23	19	19	22	21	22	23	19	17	13	10	8	11	6	23
26-May	6	7	6	14	54	31	32	15	16	19	19	20	18	19	19	18	17	18	44	23	38	53	85	49	85
27-May	42	20	19	29	16	31	20	27	28	26	26	28	23	22	20	19	19	19	17	14	13	9	14	15	42
28-May	17	24	25	15	17	16	19	23	24	33	35	28	37	39	49	30	24	21	16	17	16	6	8	6	49
29-May	5	5	6	6	4	6	7	16	20	18	19	21	21	21	23	20	16	13	13	12	10	62	18	24	62
30-May	18	25	22	27	43	21	21	17	17	26	21	60	82	36	30	21	24	45	31	21	10	11	7	10	82
31-May	31	35	18	21	13	23	15	19	20	17	29	31	32	18	19	17	19	17	20	20	19	20	19	21	35
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Barge Landing - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS11 LOWER CAMP MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	35	37	99.73	32.6	0	5	0
H2S (ppb) Average	706	36	38	99.73	2.2	0	0.8	0
THC (ppm) Average	707	35	37	99.73	2.7	-	2.2	-
CH4(ppm) Average	707	35	37	99.73	2.7	-	2.2	-
NMHC(ppm) Average	707	35	37	99.73	0.376	-	0.1	-
Temperature (C) Average	744	0	0	100	33.3	-	25.5	-
Relative Humidity (%) Average	744	0	0	100	98.4	-	79.5	-
Barometric Pressure (inHg) Average	744	0	0	100	29.4	-	29.3	-
Wind Speed 10 m (km/h) Average	742	0	2	99.73	29	-	21	-
Wind Direction 10 m (deg) Average	742	0	2	99.73	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	1.16	2.9	-	0	0	0.1	0.3	0.9	2.7	32.6
H2S (ppb) Average	706	0.34	0.4	-	0	0	0.1	0.2	0.5	0.8	2.2
THC (ppm) Average	707	2.08	0.1	-	2	2	2	2	2.1	2.2	2.7
CH4(ppm) Average	707	2.07	0.1	-	2	2	2	2	2.1	2.2	2.7
NMHC(ppm) Average	707	0.011	0.034	-	0	0	0	0	0	0	0.376
Temperature 2 m (C) Average	744	15.16	6.5	-	0.5	7.4	10.5	14.6	19.2	24	33.3
Relative Humidity (%) Average	744	53.6	21	-	15.2	25.7	36.1	52.3	71.4	83	98.4
Barometric Pressure (inHg) Average	744	29.04	0.2	-	28.7	28.8	28.9	29.1	29.2	29.2	29.4
Wind Speed 10 m (km/h) Average	742	11.8	6	-	0	3	7	11	17	20	29
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	13 May 2025 13:00	13 May 2025 14:00	2	Maintenance - WBEA internal audit
Wind Speed, Wind Direction	03 May 2025 03:00	03 May 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	03 May 2025 05:00	03 May 2025 05:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

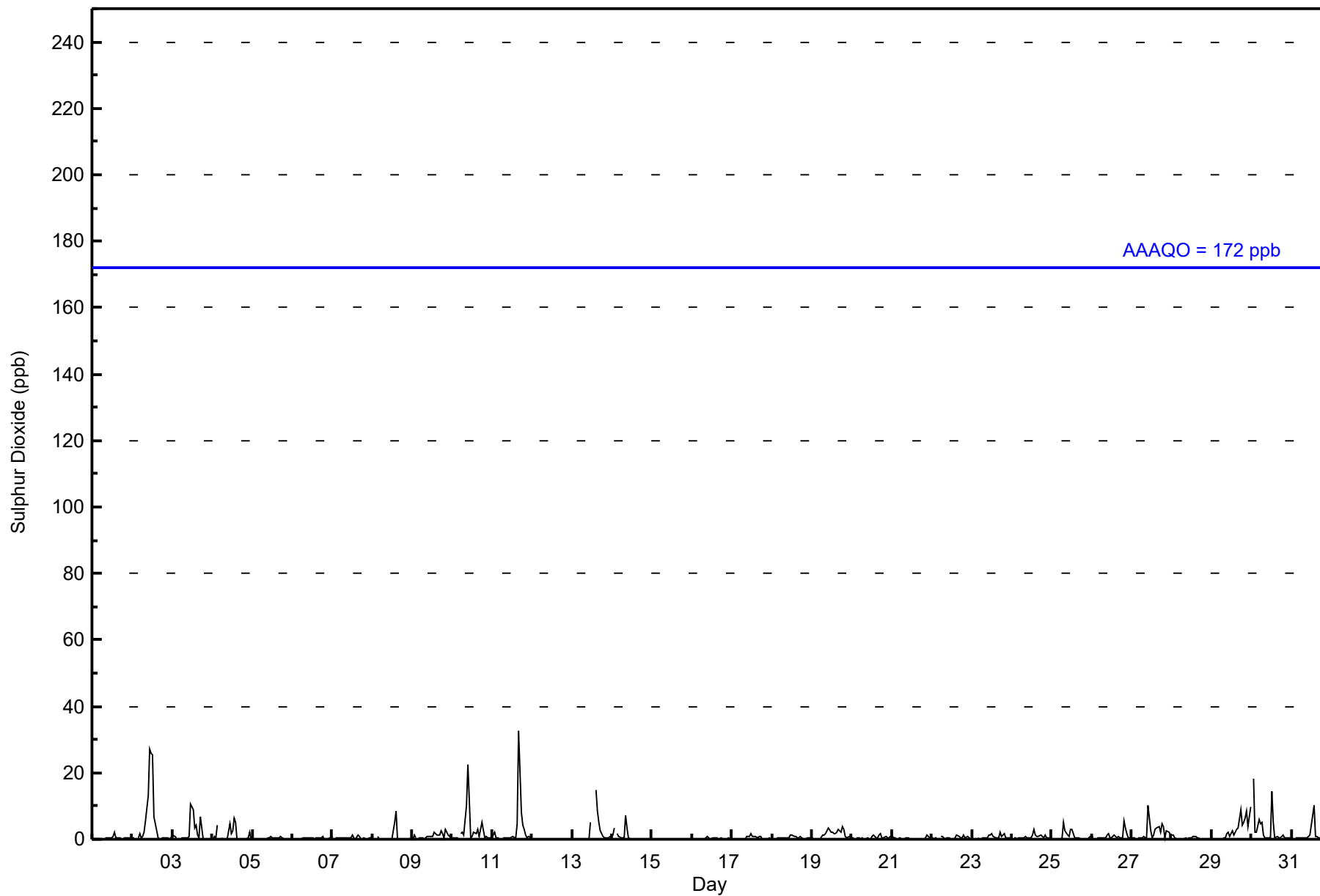
Lower Camp - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.6 ppb on May 11 17:00 Maximum Daily Average: 5.0 ppb on May 2																				Hours in Service: 744 Hours of Data: 707							
Minimum Value: 0.0 ppb on May 1 01:00 Maximum Diurnal Average: 2.5 ppb at hour 13 Monthly Average: 1.16 ppb																				Minimum Daily Average: 0.0 ppb on May 12 Minimum Diurnal Average: 0.3 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.9 P ₉₀ = 2.7 P ₉₉ = 14.3		Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.8	2.0	0.5	0.4	0.2	0.1	0.2	0.3	0.2	0.5	0.2	0.2	0.3	0.3	2.0
2-May	0.3	0.4	Z	0.3	1.5	0.6	1.0	2.1	5.6	13.1	27.1	25.9	25.5	6.7	2.5	0.3	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	5.0	27.1
3-May	1.1	0.8	0.4	Z	0.1	0.1	0.2	0.3	0.5	0.4	1.0	10.5	9.0	3.3	4.3	1.2	0.6	6.9	0.0	0.0	0.1	0.0	0.0	0.1	1.8	10.5	
4-May	0.1	0.7	0.2	4.2	Z	0.2	0.1	0.1	0.0	0.0	4.9	1.7	2.6	6.5	4.9	0.1	0.0	0.1	0.0	0.1	0.2	0.3	2.2	0.1	1.3	6.5	
5-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.4	0.6	0.7	0.4	0.2	0.5	0.6	0.3	0.8	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.8	
6-May	Z	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.7	0.2	0.2	0.2	0.3	0.6	0.3	0.7	
7-May	0.7	Z	0.3	0.5	0.4	0.3	0.2	0.5	0.2	0.3	0.3	0.6	1.1	0.2	0.1	1.3	0.8	0.2	0.0	0.3	0.2	0.0	0.6	0.3	0.4	1.3	
8-May	0.9	0.7	Z	1.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	8.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	8.4	
9-May	0.2	1.2	0.3	Z	0.4	0.3	0.2	0.2	0.5	0.9	0.9	0.9	1.0	2.0	1.8	1.4	1.5	2.5	1.6	0.5	2.9	1.3	0.8	0.4	1.0	2.9	
10-May	0.3	0.4	0.3	0.3	Z	1.6	2.0	1.4	10.1	22.4	12.0	0.4	1.0	2.2	1.6	2.9	0.9	3.0	5.1	0.4	1.0	0.6	0.5	0.4	3.1	22.4	
11-May	0.3	2.2	0.5	0.3	0.3	Z	0.3	0.4	0.4	0.4	0.4	0.4	0.7	0.3	0.3	4.7	32.6	7.9	4.2	3.0	1.4	0.6	0.7	0.2	2.7	32.6	
12-May	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
13-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	M	M	14.7	8.3	4.9	2.6	1.0	0.4	0.3	0.5	0.3	1.0	1.9	14.7	
14-May	1.4	3.2	Z	1.6	0.8	0.5	0.5	0.5	7.4	3.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	7.4	
15-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	
16-May	0.1	0.2	0.1	0.1	Z	0.2	0.1	0.1	0.5	0.6	0.3	0.1	0.4	0.6	0.6	0.5	0.1	0.5	0.1	0.0	0.1	0.0	0.3	0.0	0.2	0.6	
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.0	0.9	1.6	0.7	1.0	0.7	0.3	0.7	0.9	0.0	0.1	0.2	0.1	0.3	0.1	0.4	1.6	
18-May	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.4	1.2	1.5	0.8	0.8	0.4	0.5	0.9	0.5	0.2	0.2	0.2	0.2	0.2	0.5	1.5	
19-May	0.2	Z	0.2	0.2	0.1	0.2	1.1	1.5	1.7	2.7	3.4	1.9	2.0	1.7	1.7	2.0	2.8	2.2	3.9	2.9	0.9	0.6	0.9	0.5	1.5	3.9	
20-May	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.7	1.3	0.6	0.2	1.2	1.5	0.4	0.3	1.0	0.6	0.5	1.0	0.5	1.5	
21-May	0.7	0.3	0.3	Z	0.3	0.3	0.1	0.2	0.3	0.5	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.2	1.3	0.7	0.1	0.3	1.3	
22-May	0.3	0.1	0.2	0.5	Z	0.9	0.7	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.3	1.2	0.7	0.3	0.5	1.4	0.5	0.7	0.4	0.2	0.4	1.4	
23-May	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.5	0.4	0.3	1.1	1.5	1.8	0.8	0.4	0.4	0.5	2.1	0.9	1.8	0.5	0.4	0.3	0.2	0.7	2.1	
24-May	Z	0.2	0.3	0.2	0.2	0.3	0.4	0.6	0.8	0.6	0.4	0.5	1.4	2.9	1.1	0.7	1.0	1.3	0.6	0.6	1.1	0.5	0.3	0.4	0.7	2.9	
25-May	0.3	Z	0.1	0.1	0.1	0.2	0.5	5.1	2.6	1.3	0.7	3.1	3.0	1.6	0.4	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.5	0.8	0.9	5.1	
26-May	0.3	0.8	Z	0.2	0.2	0.2	0.2	0.4	0.4	1.3	1.6	0.6	0.3	1.4	0.9	0.6	1.0	0.2	0.3	5.7	3.2	1.8	0.6	0.5	1.0	5.7	
27-May	0.5	0.5	0.4	Z	0.4	0.6	0.6	0.7	0.4	0.4	10.3	2.7	0.4	1.4	3.0	3.3	4.0	2.2	4.5	3.7	0.4	2.4	2.1	1.5	2.0	10.3	
28-May	1.4	1.1	0.3	0.1	Z	0.1	0.1	0.2	0.3	0.2	0.5	0.5	0.3	0.7	0.6	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.3	1.4	
29-May	0.0	0.1	0.0	0.0	0.1	Z	0.2	0.2	0.5	1.9	1.9	0.7	2.4	1.2	2.1	2.9	3.2	8.9	4.2	4.9	6.2	8.3	3.6	9.6	2.7	9.6	
30-May	Z	18.1	2.2	2.1	5.7	4.5	5.2	1.3	0.6	0.2	0.5	0.3	14.3	5.1	0.4	0.6	0.6	0.6	0.9	1.3	0.5	0.2	0.4	0.2	2.9	18.1	
31-May	0.2	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.9	1.4	4.2	10.1	0.8	0.8	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	1.0	10.1	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Lower Camp - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	697	98.59	98.59
11 - 20	5	0.71	99.29
21 - 60	5	0.71	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Lower Camp - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	57	28	10	7	12	70	203	67	22	11	25	43	38	36	35	31	695
11 - 20	0	0	1	0	0	0	1	0	0	0	0	0	2	0	1	0	5
21 - 60	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	5
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	28	12	7	12	71	204	67	22	11	25	43	41	37	36	31	705

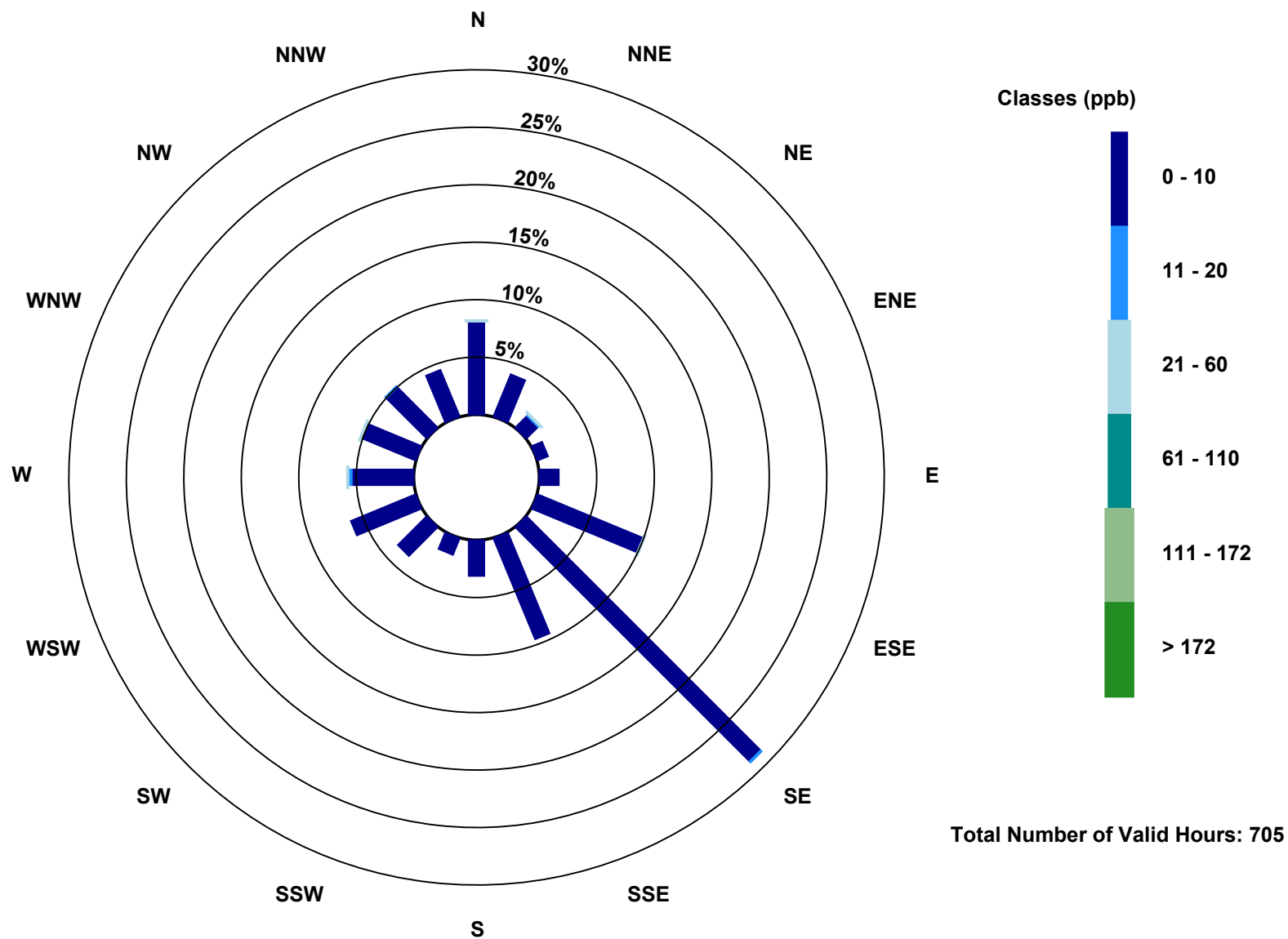
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

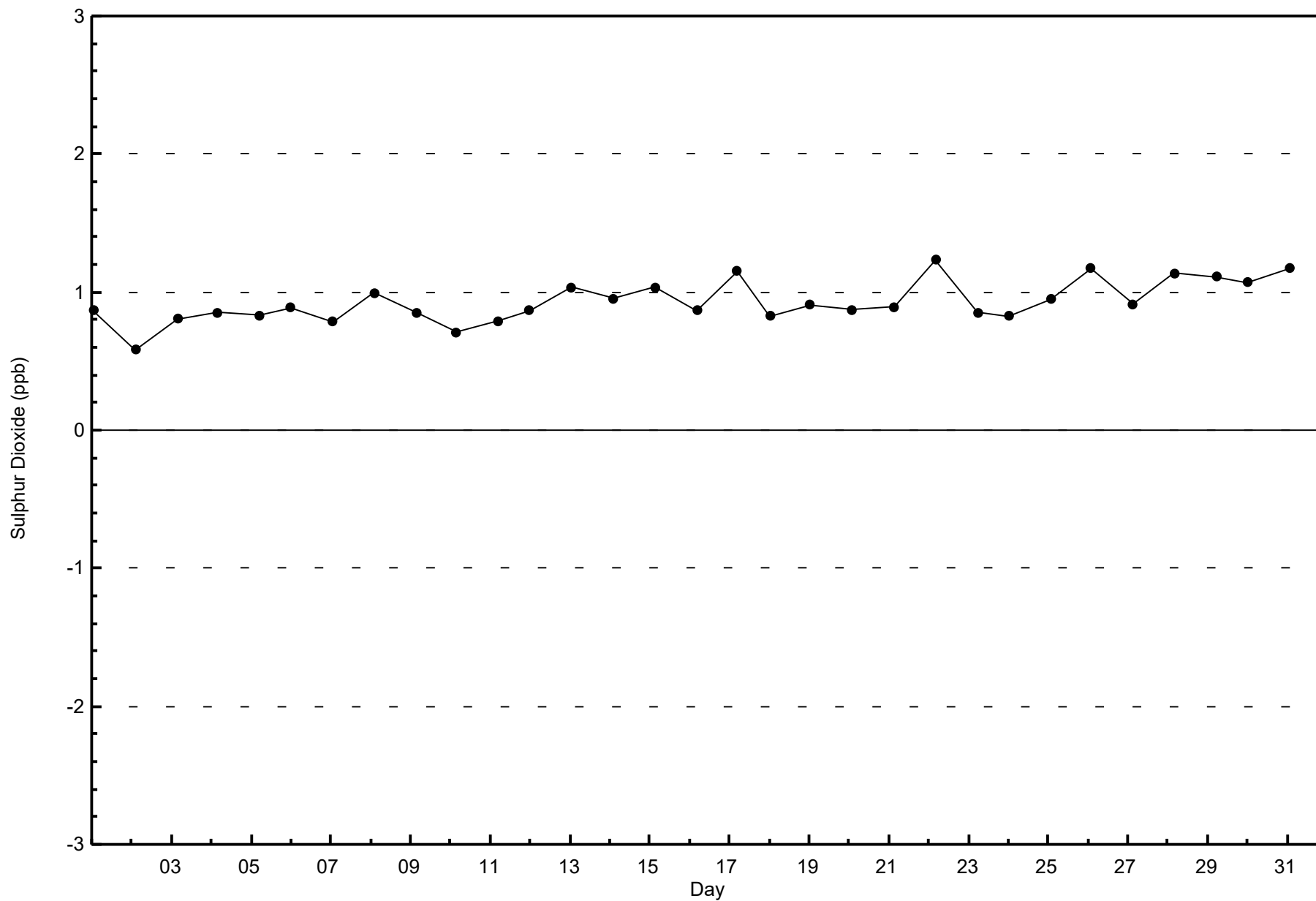
Sulphur Dioxide (SO₂) - ppb
Lower Camp





Wood Buffalo Environmental Association
Zero Responses

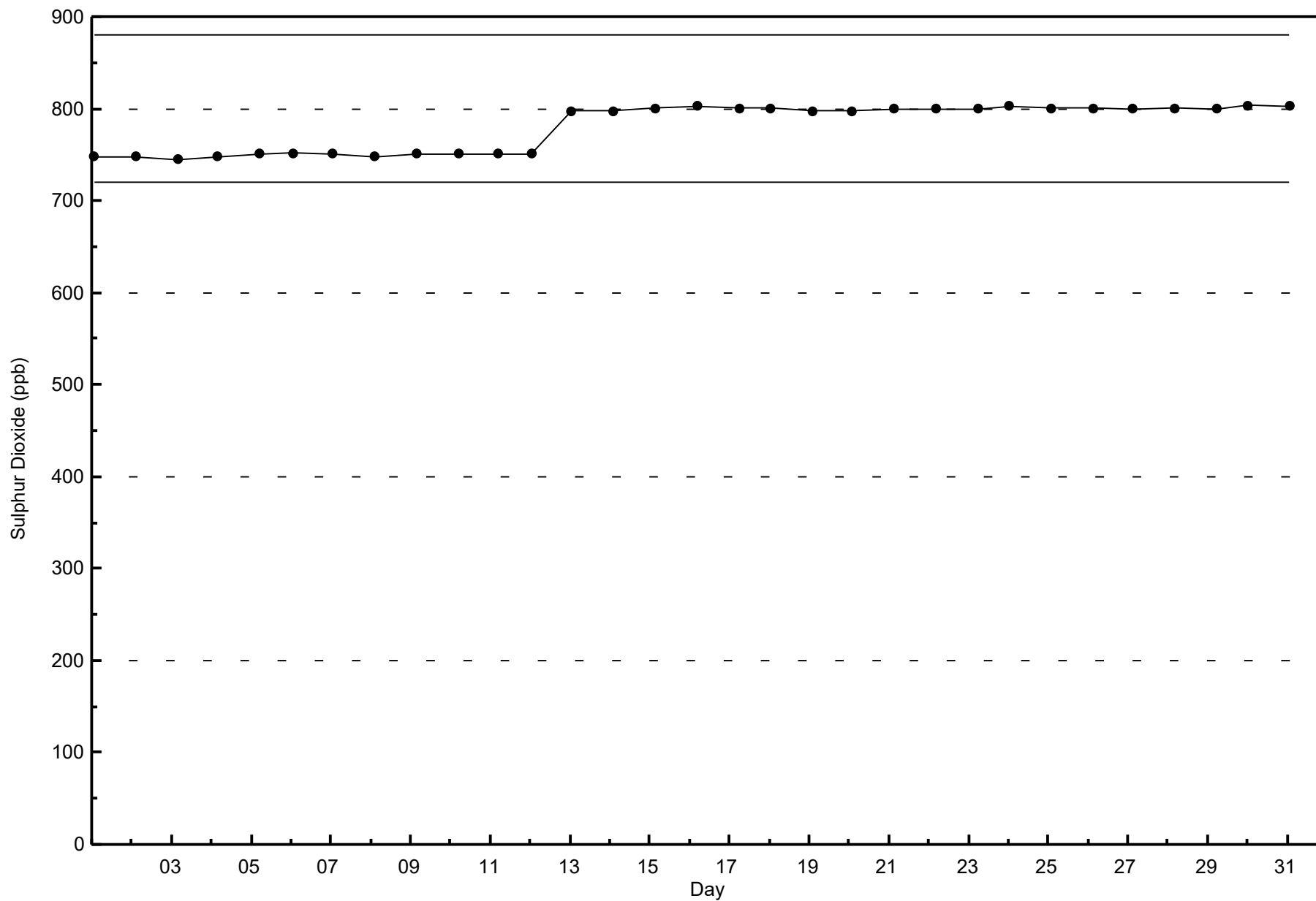
Sulphur Dioxide (SO₂) - ppb
Lower Camp - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

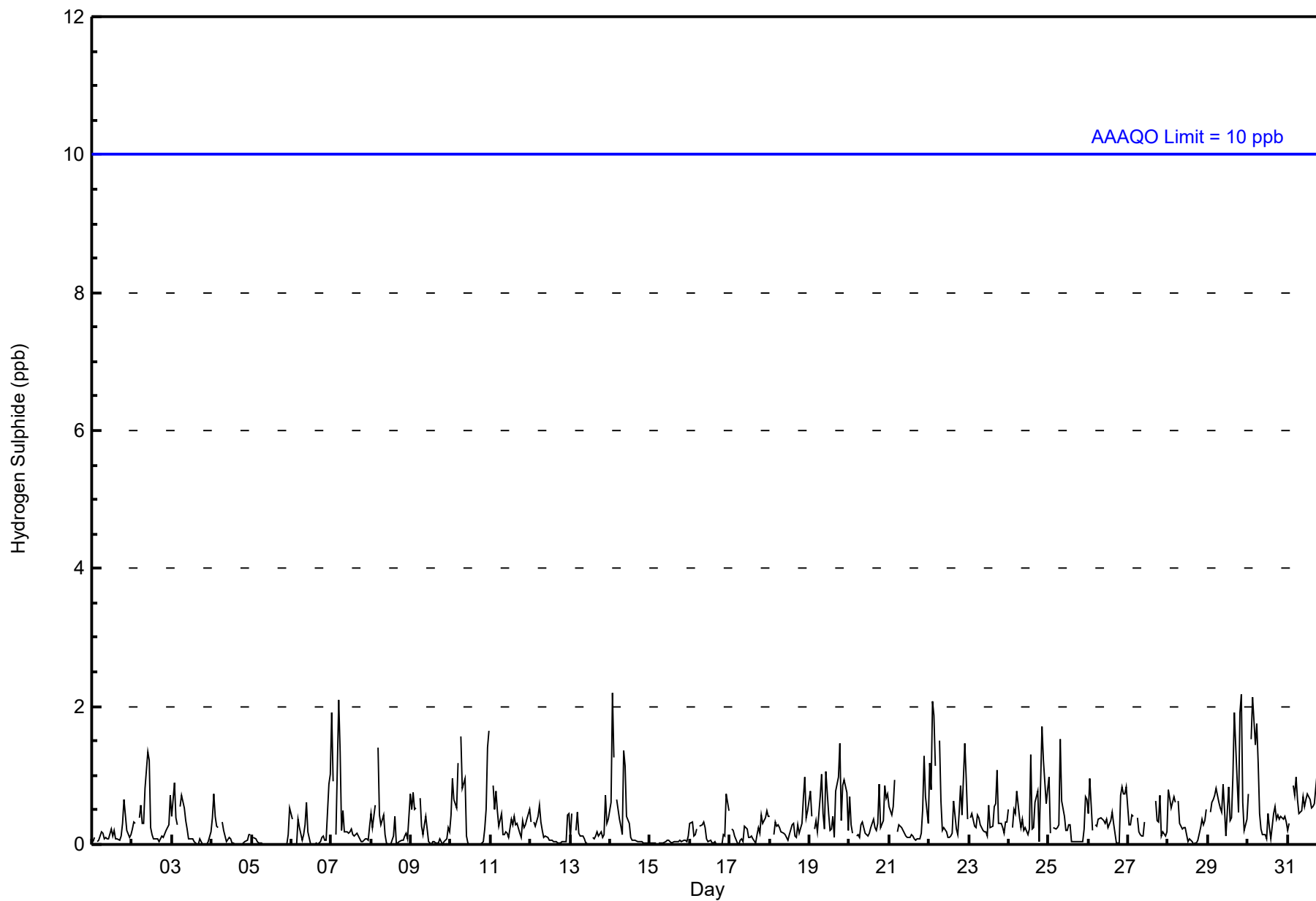
Lower Camp - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.2 ppb on May 14 02:00 Maximum Daily Average: 0.8 ppb on May 29																			Hours in Service: 744 Hours of Data: 706							
Minimum Value: 0.0 ppb on May 3 19:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.6 ppb at hour 5 Minimum Diurnal Average: 0.1 ppb at hour 12 Monthly Average: 0.34 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.9																			Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.1	0.1	Z	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.7	0.4	0.2	0.1	0.1	0.2	0.7
2-May	0.2	0.3	0.3	Z	0.4	0.6	0.3	0.3	0.8	1.3	1.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.7	0.4	1.3
3-May	0.4	0.9	0.4	0.3	Z	0.5	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.9
4-May	0.4	0.7	0.4	0.3	0.2	Z	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.7
5-May	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.5
6-May	0.4	Z	0.0	0.0	0.4	0.3	0.1	0.1	0.3	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.9	1.0	0.2	1.0
7-May	1.9	0.9	Z	0.1	2.1	1.3	0.2	0.5	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.4	2.1
8-May	0.4	0.2	0.6	Z	1.4	0.4	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.7	0.3	1.4
9-May	0.5	0.8	0.5	0.5	Z	0.7	0.3	0.1	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.8
10-May	0.4	1.0	0.6	0.5	1.2	Z	1.6	0.8	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	1.4	1.7	0.5	1.7
11-May	Z	0.9	0.5	0.8	0.5	0.3	0.4	0.1	0.1	0.2	0.2	0.1	0.4	0.3	0.4	0.3	0.3	0.2	0.1	0.4	0.2	0.3	0.4	0.5	0.3	0.9
12-May	0.3	Z	0.3	0.3	0.4	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.6
13-May	0.1	0.5	Z	0.2	0.5	0.2	0.1	0.1	0.1	0.0	0.0	M	M	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.7	0.3	0.4	0.2	0.7
14-May	0.6	2.2	1.3	Z	0.7	0.4	0.3	0.1	1.4	1.1	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2
15-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1
16-May	0.3	0.3	0.1	0.1	0.2	Z	0.3	0.3	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.7	0.5	0.2	0.7
17-May	Z	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.4	0.3	0.4	0.5	0.4	0.2	0.5
18-May	0.4	Z	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.1	0.3	0.2	0.3	0.7	1.0	0.4	0.5	0.3	1.0
19-May	0.8	0.4	Z	0.2	0.3	0.2	0.7	1.0	0.4	0.2	1.1	0.5	0.2	0.2	0.4	0.1	0.8	1.0	1.5	0.3	0.8	0.9	0.8	0.2	0.6	1.5
20-May	0.7	0.3	0.2	Z	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.4	0.2	0.2	0.3	0.9	0.2	0.4	0.9	0.7	0.7	0.3	0.9
21-May	0.5	0.4	0.5	0.9	Z	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	1.3	0.7	0.3	0.3	1.3
22-May	1.2	0.8	2.1	1.9	1.1	Z	1.5	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.6	0.2	0.1	0.5	0.9	0.4	1.5	1.0	0.4	0.7	2.1
23-May	Z	0.4	0.4	0.3	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.6	0.2	0.3	0.5	0.6	1.1	0.3	0.3	0.2	0.2	0.3	0.3	0.4	1.1
24-May	0.5	Z	0.2	0.5	0.5	0.8	0.4	0.2	0.4	0.2	0.2	0.2	0.2	1.3	0.2	0.2	0.6	0.8	0.0	0.9	1.7	1.2	0.6	0.8	0.6	1.7
25-May	1.0	0.2	Z	0.3	0.2	0.2	0.3	1.5	0.6	0.4	0.2	0.2	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.7	0.6	0.3	1.5
26-May	0.4	1.0	0.2	Z	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.2	0.3	0.5	0.3	0.2	0.0	0.0	0.7	0.8	0.7	0.7	0.8	0.4	1.0
27-May	0.3	0.3	0.4	0.4	Z	0.4	0.2	0.1	0.1	0.1	0.3	C	C	C	C	C	0.6	0.3	0.3	0.7	0.1	0.2	0.1	0.2	0.3	0.7
28-May	0.8	0.7	0.5	0.7	0.6	Z	0.6	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.4	0.5	0.3	0.8
29-May	Z	0.5	0.6	0.6	0.7	0.8	0.6	0.5	0.5	0.9	0.5	0.1	0.8	0.3	0.4	1.0	1.9	0.9	0.5	1.9	2.2	0.6	0.2	0.4	0.8	2.2
30-May	0.7	Z	1.5	2.1	1.4	1.7	1.2	0.4	0.2	0.1	0.2	0.1	0.5	0.3	0.1	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.6	2.1
31-May	0.2	0.3	Z	0.9	0.7	1.0	0.6	0.5	0.5	0.7	0.5	0.7	0.7	0.7	0.5	0.5	0.6	0.8	1.0	0.6	1.0	1.0	0.6	1.0	0.7	1.0
0.5 0.5 0.5 0.5 0.6 0.5 0.4 0.3 0.3 0.3 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.4 0.4 0.4 0.5																									Diurnal Average	
1.9 2.2 2.1 2.1 2.1 1.7 1.6 1.5 1.4 1.3 1.2 0.7 0.8 1.3 0.5 1.0 1.9 1.1 1.5 1.9 2.2 1.5 1.4 1.7																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	58	30	14	7	11	72	205	68	21	12	24	40	37	36	37	33	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	30	14	7	11	72	205	68	21	12	24	40	37	36	37	33	705

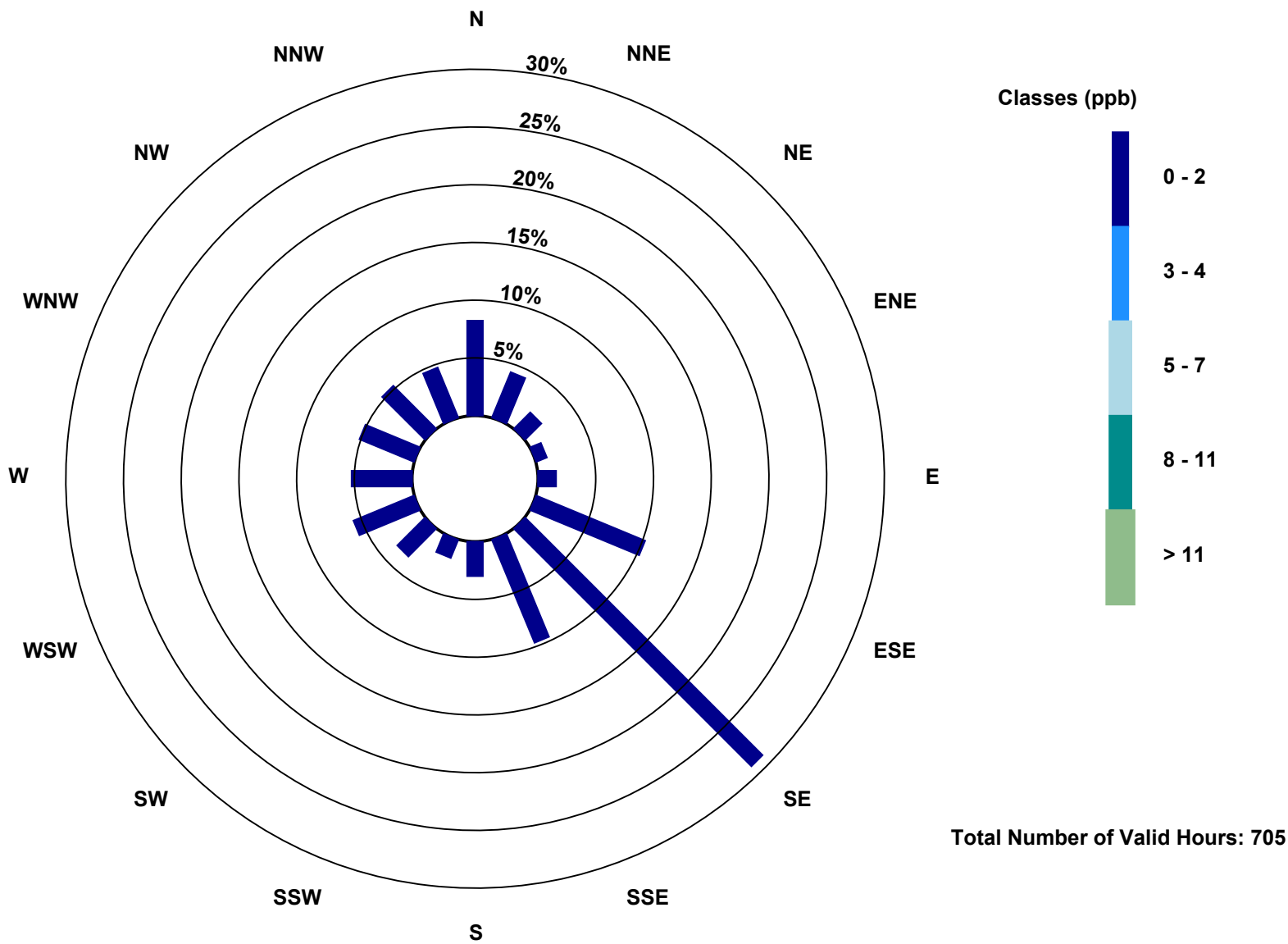
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Lower Camp



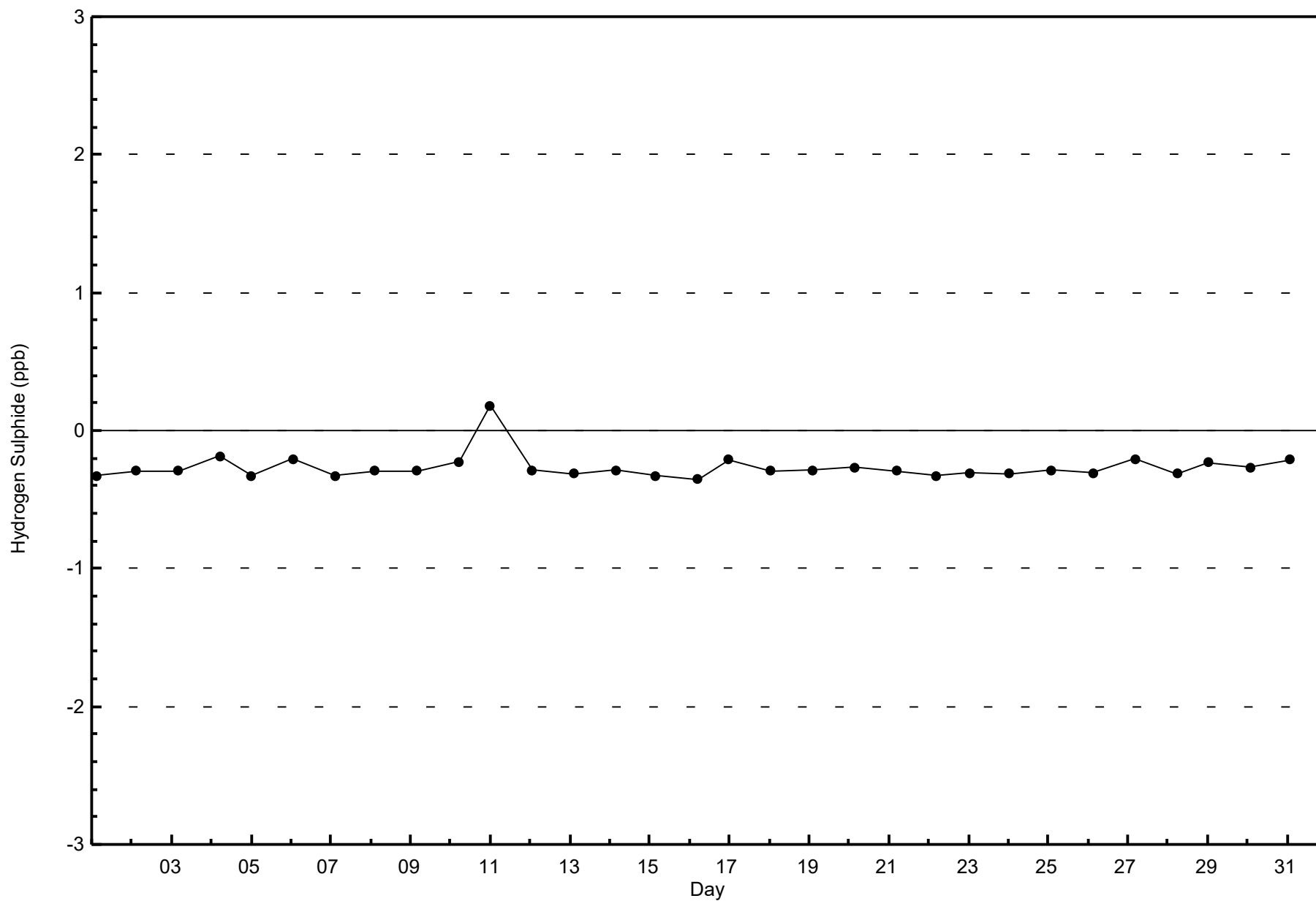


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

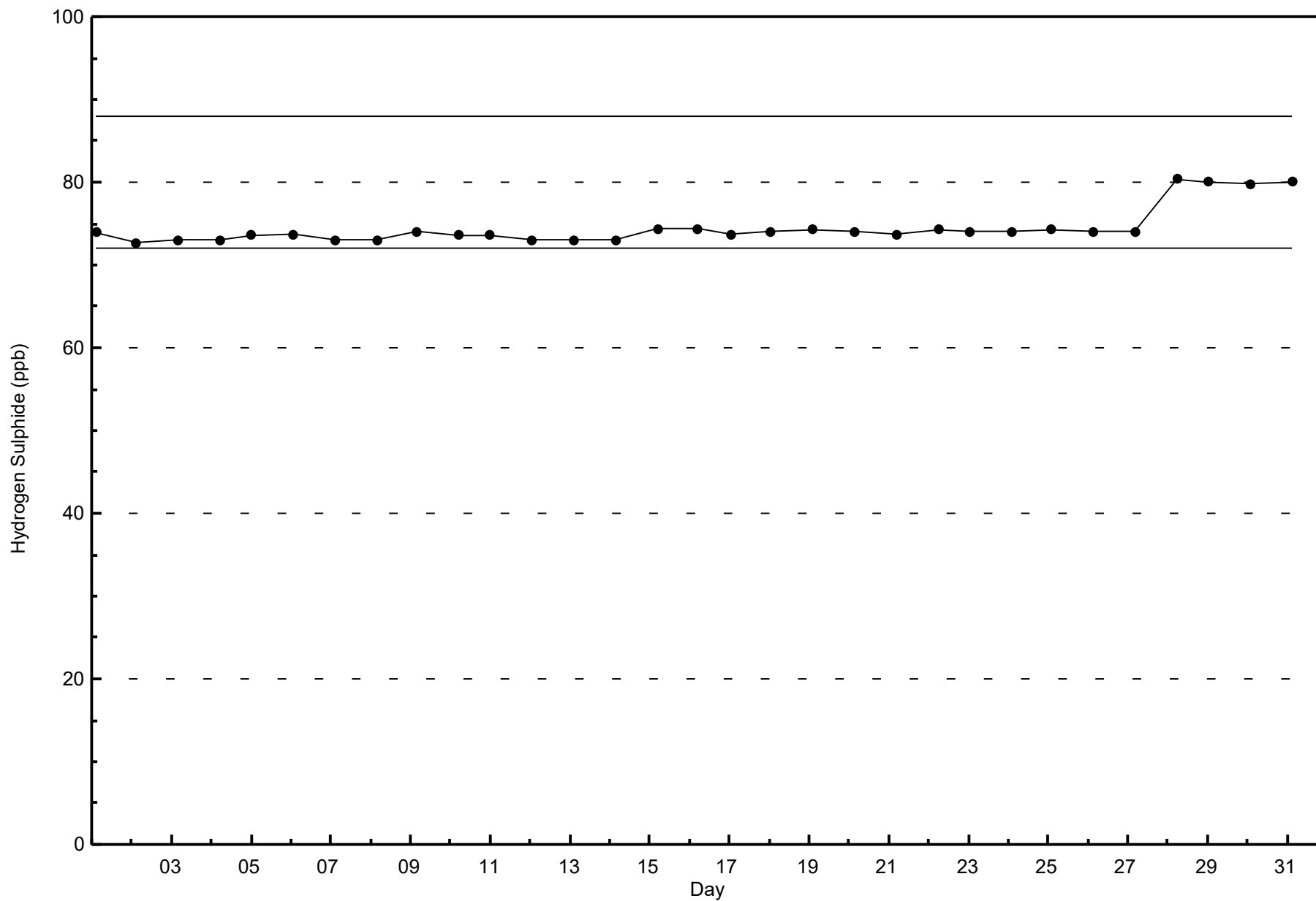
Lower Camp - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H_2S) - ppb
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

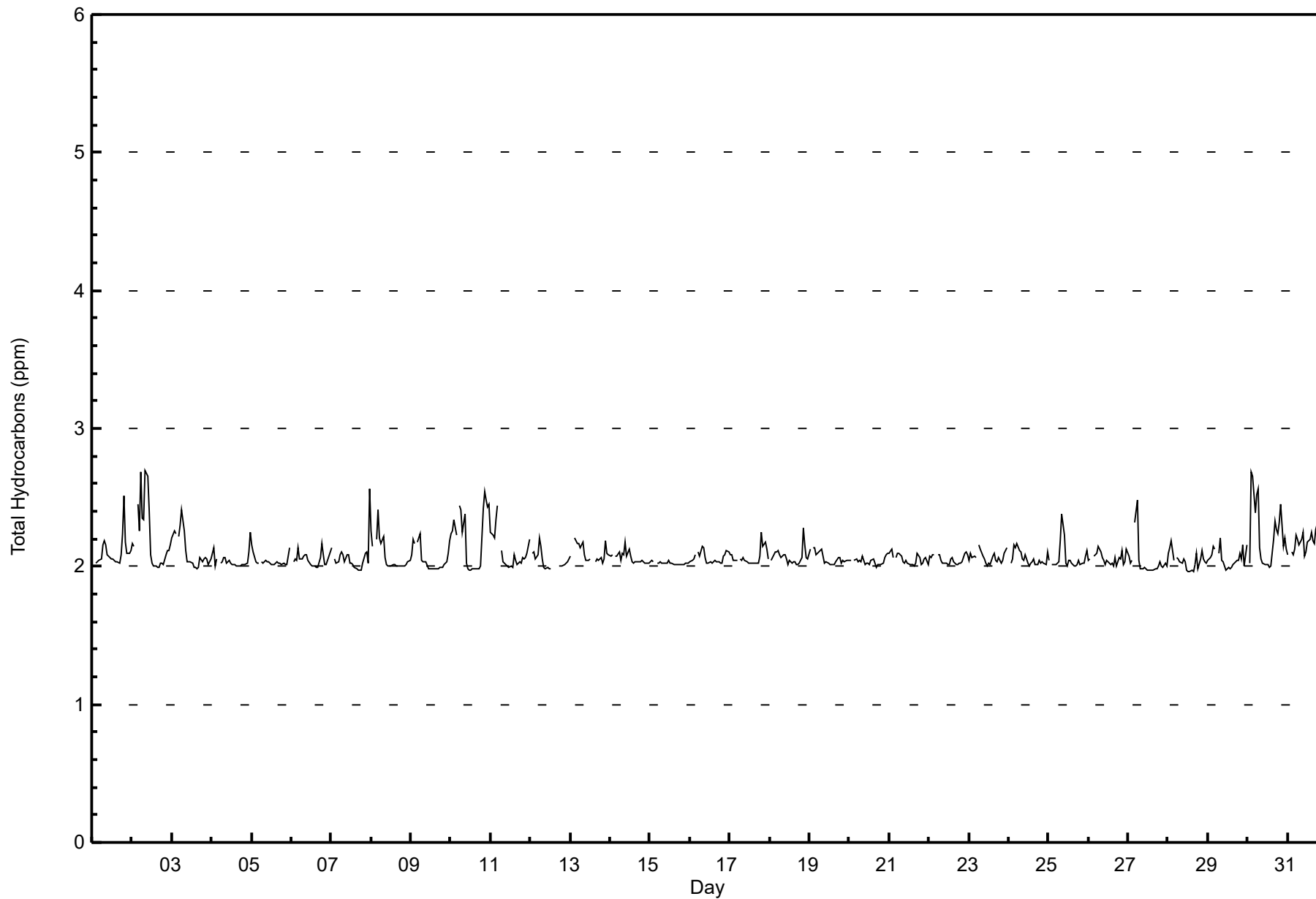
Lower Camp - May 2025

Maximum Value: 2.7 ppm on May 2 09:00																	Maximum Daily Average: 2.2 ppm on May 30										Hours in Service: 744	
Minimum Value: 2.0 ppm on May 28 14:00																	Minimum Daily Average: 2.0 ppm on May 15										Hours of Data: 707	
Maximum Diurnal Average: 2.2 ppm at hour 6																	Minimum Diurnal Average: 2.0 ppm at hour 14										Hours of Missing Data: 37	
Monthly Average: 2.08 ppm																	Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.5										Hours of Calibration: 35	
																											Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	2.0	Z	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.5
2-May	2.2	2.1	Z	2.5	2.3	2.7	2.4	2.3	2.7	2.7	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.7	
3-May	2.2	2.3	2.2	Z	2.2	2.3	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.4		
4-May	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.0	2.3		
5-May	2.2	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.2		
6-May	Z	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.2		
7-May	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.6	2.1	2.6		
8-May	2.3	2.1	Z	2.2	2.4	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4		
9-May	2.1	2.2	2.2	Z	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2		
10-May	2.2	2.3	2.3	2.2	Z	2.4	2.4	2.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.5	2.5	2.4	2.5	2.2	2.5		
11-May	2.2	2.2	2.2	2.3	2.4	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.4		
12-May	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2		
13-May	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.1	M	M	2.0	2.1	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.2		
14-May	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2		
15-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
16-May	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1		
17-May	2.1	2.1	2.0	2.0	2.0	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.1	2.2		
18-May	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.1	2.1	2.3		
19-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1		
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1		
21-May	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1		
22-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1		
23-May	2.0	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2		
24-May	Z	2.0	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2		
25-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4		
26-May	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1		
27-May	2.1	2.0	2.0	Z	2.3	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5		
28-May	2.1	2.1	2.2	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.2		
29-May	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.2	2.1	2.2		
30-May	Z	2.0	2.7	2.7	2.4	2.5	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.3	2.2	2.3	2.5	2.1	2.2	2.1	2.2	2.7		
31-May	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.3		
2.1 2.1 2.1 2.1 2.1 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1 2.1																									Diurnal Average			
2.3 2.3 2.7 2.7 2.4 2.7 2.6 2.3 2.7 2.7 2.4 2.1 2.2 2.2 2.3 2.2 2.3 2.3 2.3 2.5 2.5 2.5 2.4 2.6																									Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance																												



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	385	54.46	54.46
2.1 - 3.0	322	45.54	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	43	25	6	2	3	19	109	40	6	7	17	38	27	12	19	12	385
2.1 - 3.0	15	3	5	5	9	52	95	27	16	4	8	5	15	25	17	19	320
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	28	11	7	12	71	204	67	22	11	25	43	42	37	36	31	705

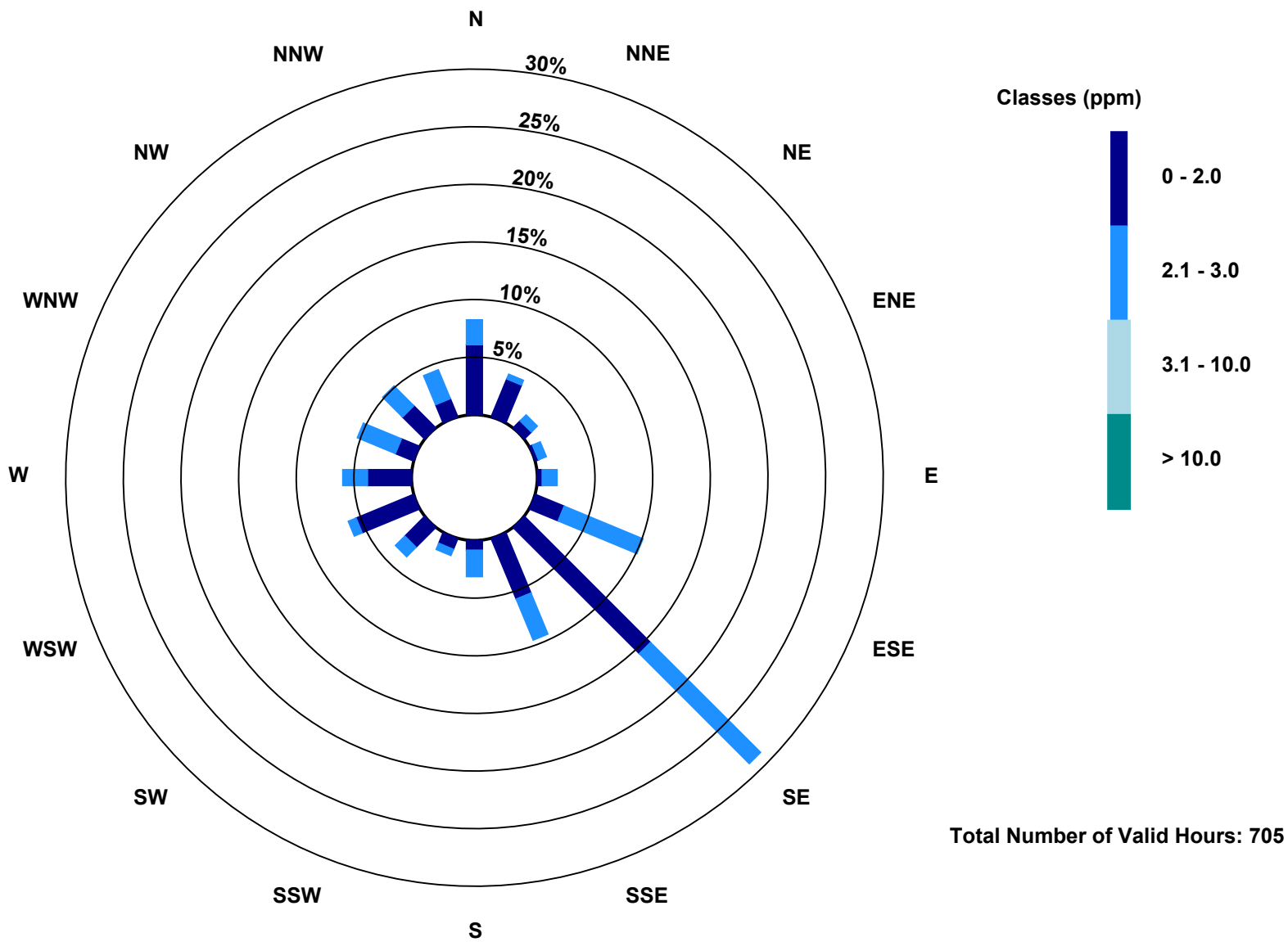
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

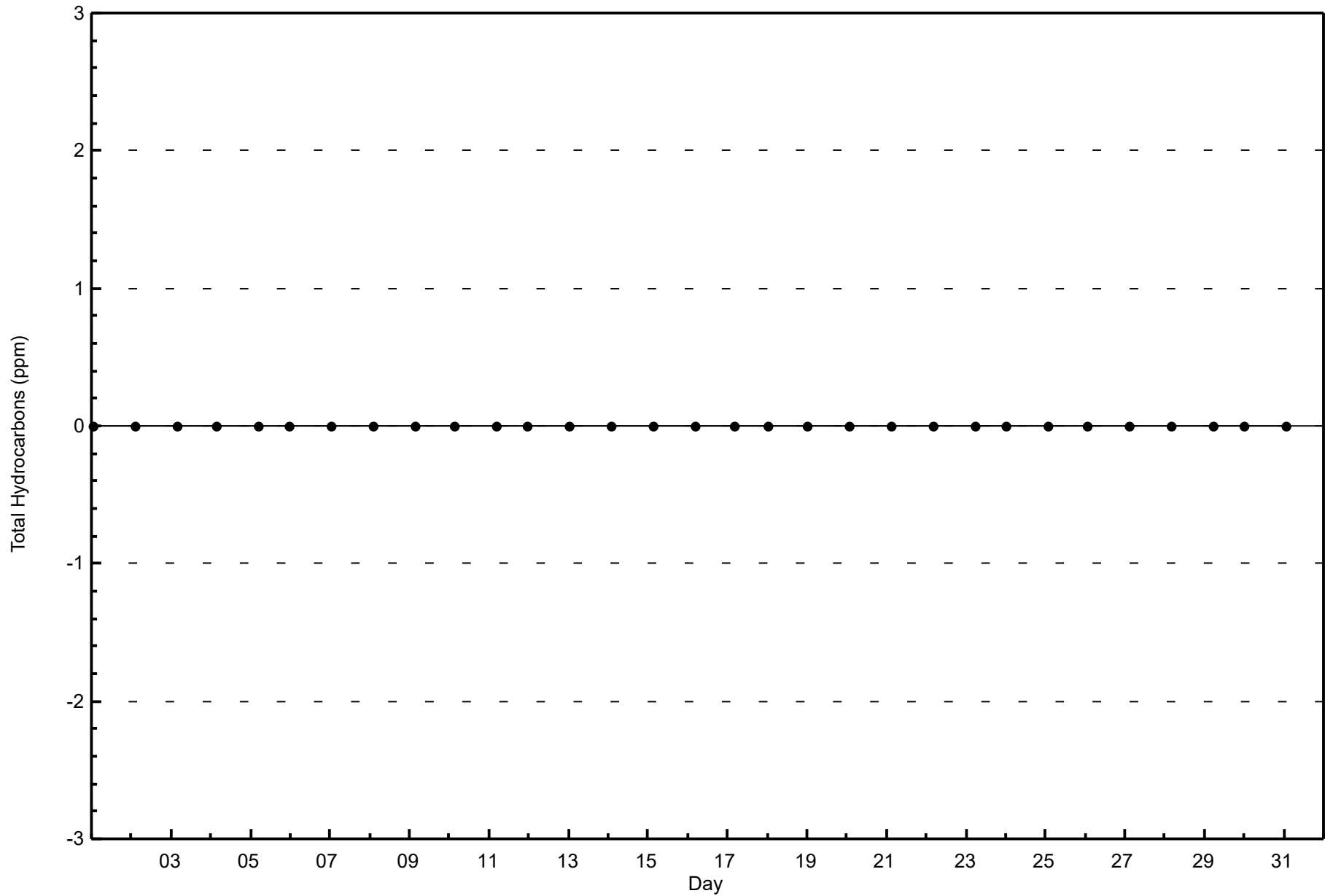
Total Hydrocarbons (THC) - ppm
Lower Camp





Wood Buffalo Environmental Association
Zero Responses

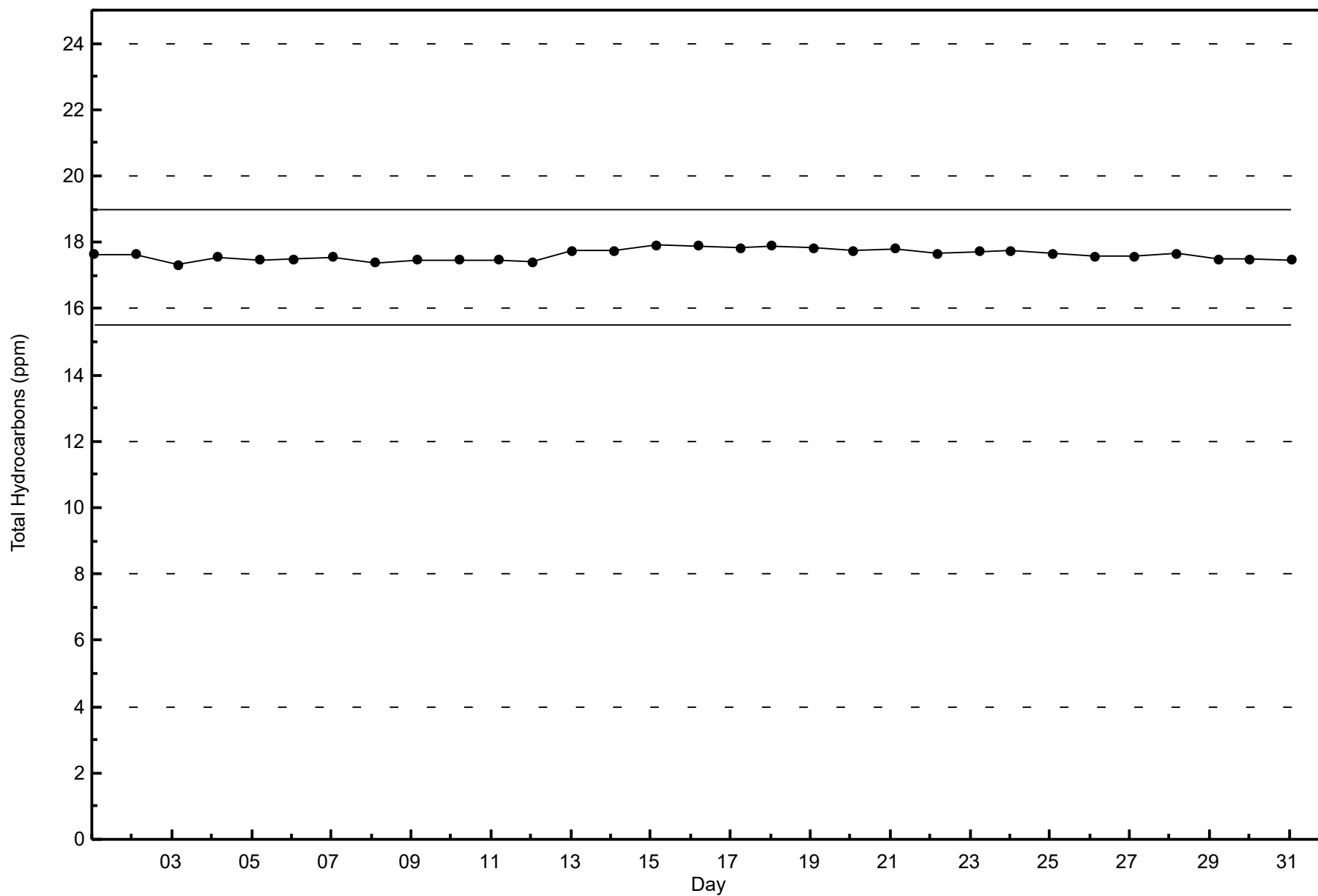
Total Hydrocarbons (THC) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

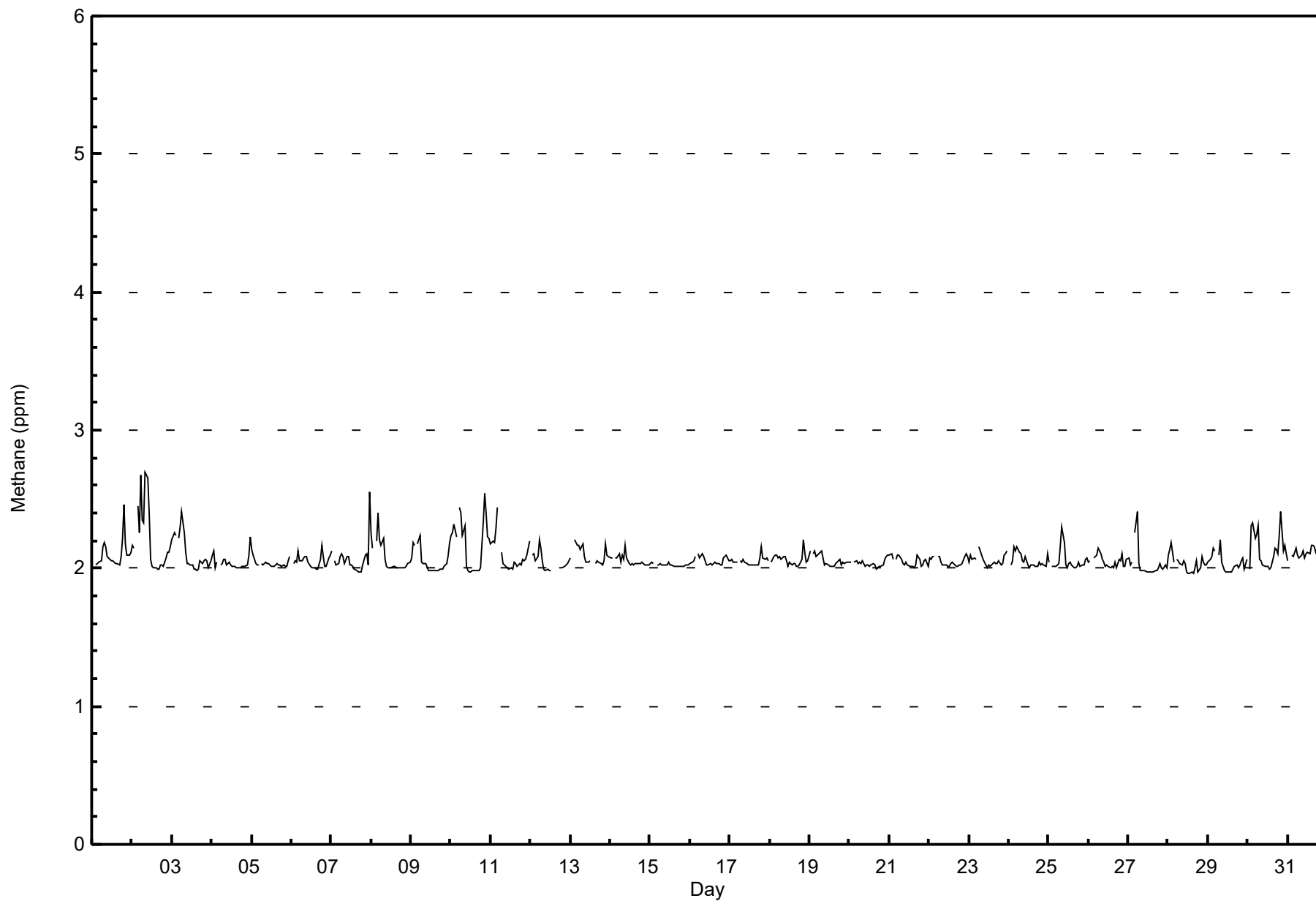
Lower Camp - May 2025

Number of Exceedences (AAAQO): Maximum Value: 2.7 ppm on May 2 09:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 2.2 ppm on May 2																		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7			
Minimum Value: 2.0 ppm on May 28 14:00 Maximum Diurnal Average: 2.2 ppm at hour 6 Monthly Average: 2.07 ppm																		Minimum Daily Average: 2.0 ppm on May 15 Minimum Diurnal Average: 2.0 ppm at hour 14 Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.4																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-May	2.0	Z	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.2	2.1	2.1	2.1	2.1	2.1													
2-May	2.2	2.1	Z	2.5	2.3	2.7	2.4	2.3	2.7	2.7	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.7													
3-May	2.2	2.3	2.2	Z	2.2	2.3	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.4													
4-May	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.2													
5-May	2.1	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1													
6-May	Z	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.2													
7-May	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.6	2.1	2.6													
8-May	2.3	2.1	Z	2.2	2.4	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4													
9-May	2.1	2.2	2.2	Z	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2													
10-May	2.2	2.3	2.3	2.2	Z	2.4	2.4	2.2	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.5	2.4	2.2	2.2	2.5													
11-May	2.2	2.2	2.2	2.3	2.4	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.4													
12-May	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2													
13-May	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.1	M	M	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.2													
14-May	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2													
15-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0													
16-May	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1													
17-May	2.1	2.1	2.0	2.0	2.0	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2													
18-May	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.1	2.2													
19-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1													
20-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1													
21-May	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1													
22-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1													
23-May	2.0	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2													
24-May	Z	2.0	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2													
25-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3													
26-May	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1													
27-May	2.1	2.0	2.0	Z	2.3	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4													
28-May	2.1	2.1	2.2	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.2													
29-May	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.2													
30-May	Z	2.0	2.3	2.3	2.2	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.4	2.1	2.2	2.1	2.1	2.4													
31-May	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2													
2.1 2.1 2.1 2.1 2.1 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1																										Diurnal Average													
2.3 2.3 2.3 2.5 2.4 2.7 2.4 2.3 2.7 2.7 2.4 2.1 2.1 2.1 2.2 2.2 2.2 2.1 2.2 2.5 2.5 2.4 2.2 2.6																										Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																							



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	403	57.00	57.00
2.1 - 3.0	304	43.00	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	44	25	6	2	3	22	115	41	7	7	19	38	28	13	19	14	403
2.1 - 3.0	14	3	5	5	9	49	89	26	15	4	6	5	14	24	17	17	302
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	28	11	7	12	71	204	67	22	11	25	43	42	37	36	31	705

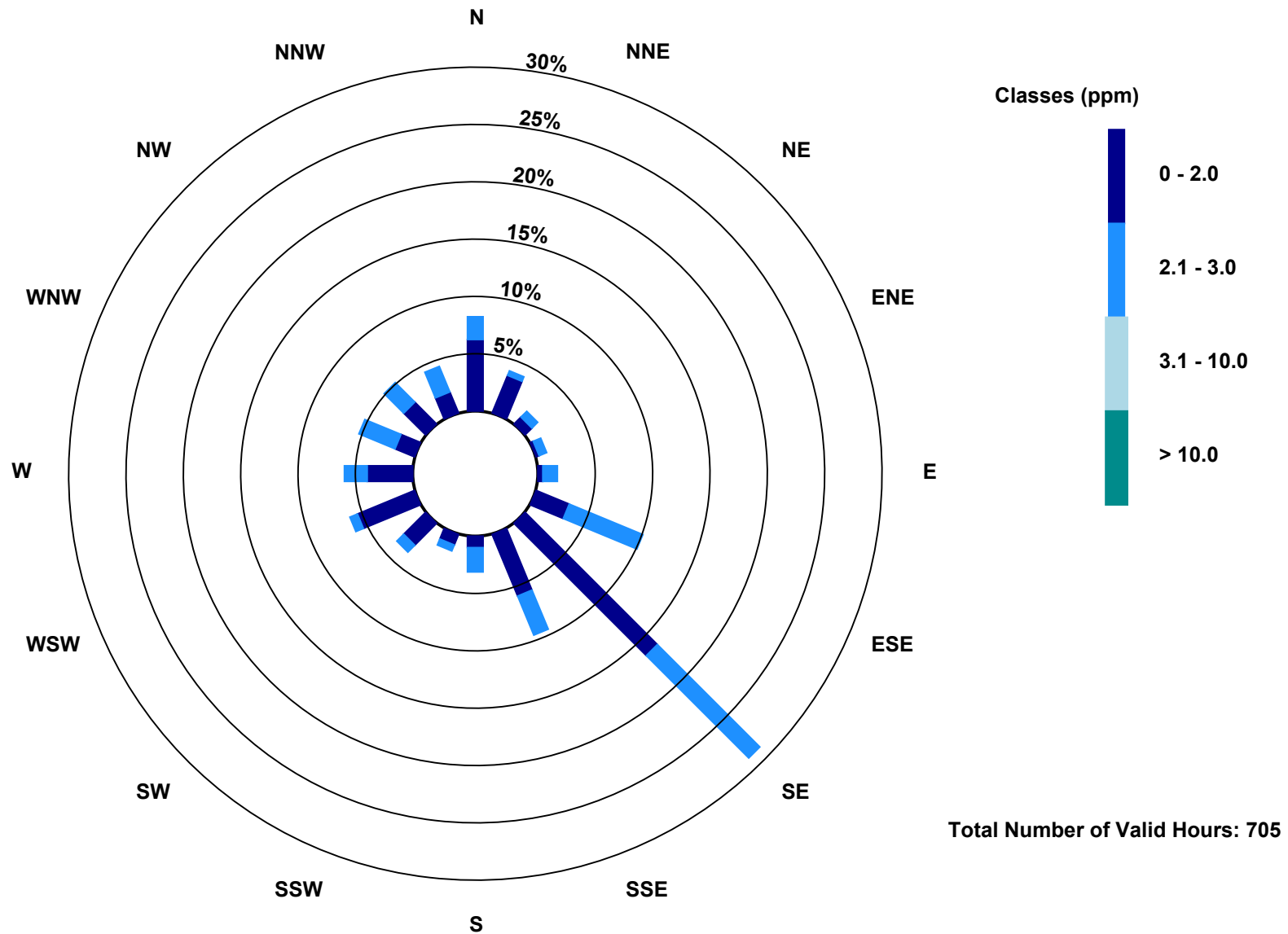
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

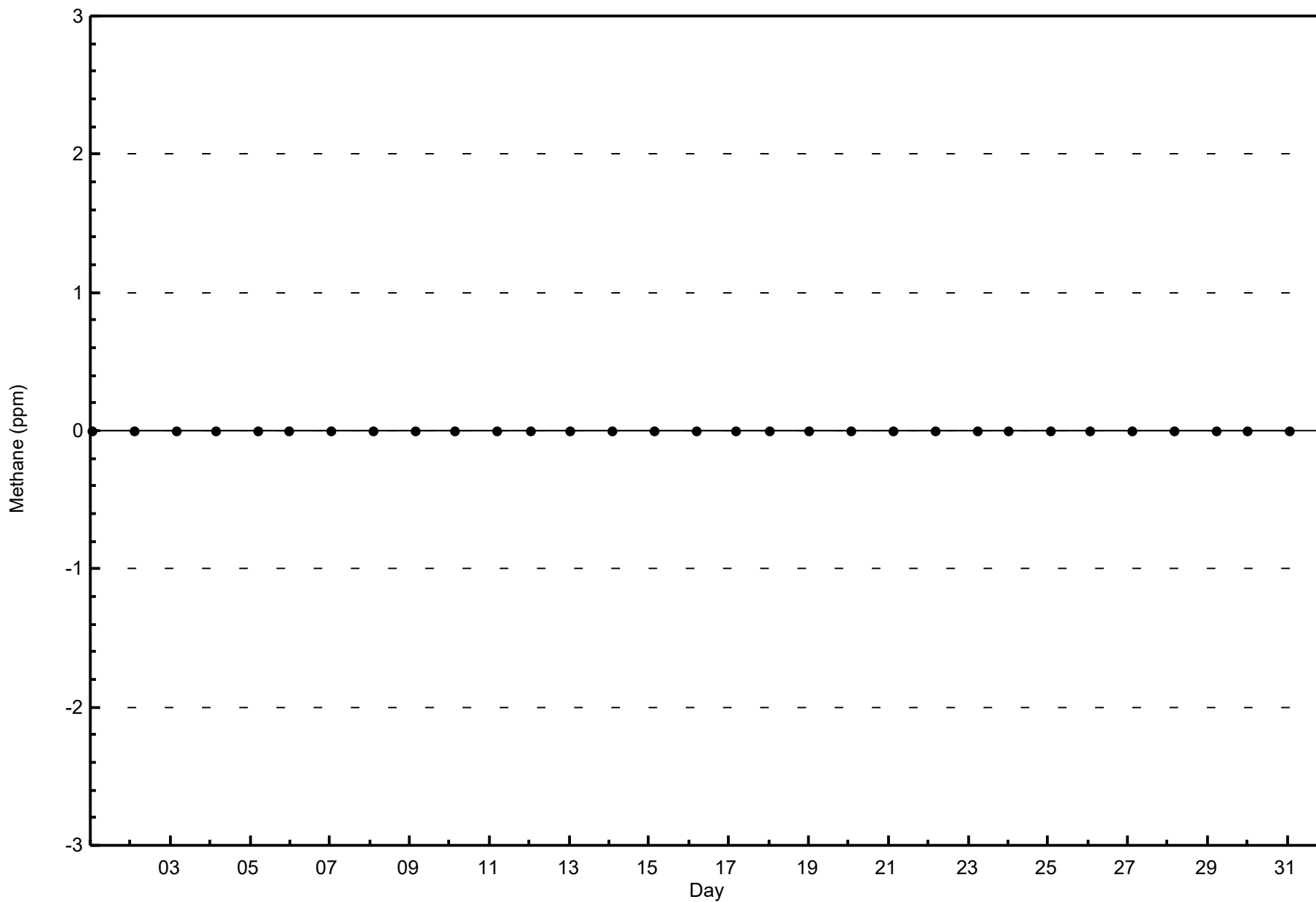
Methane (CH₄) - ppm
Lower Camp





Wood Buffalo Environmental Association
Zero Responses

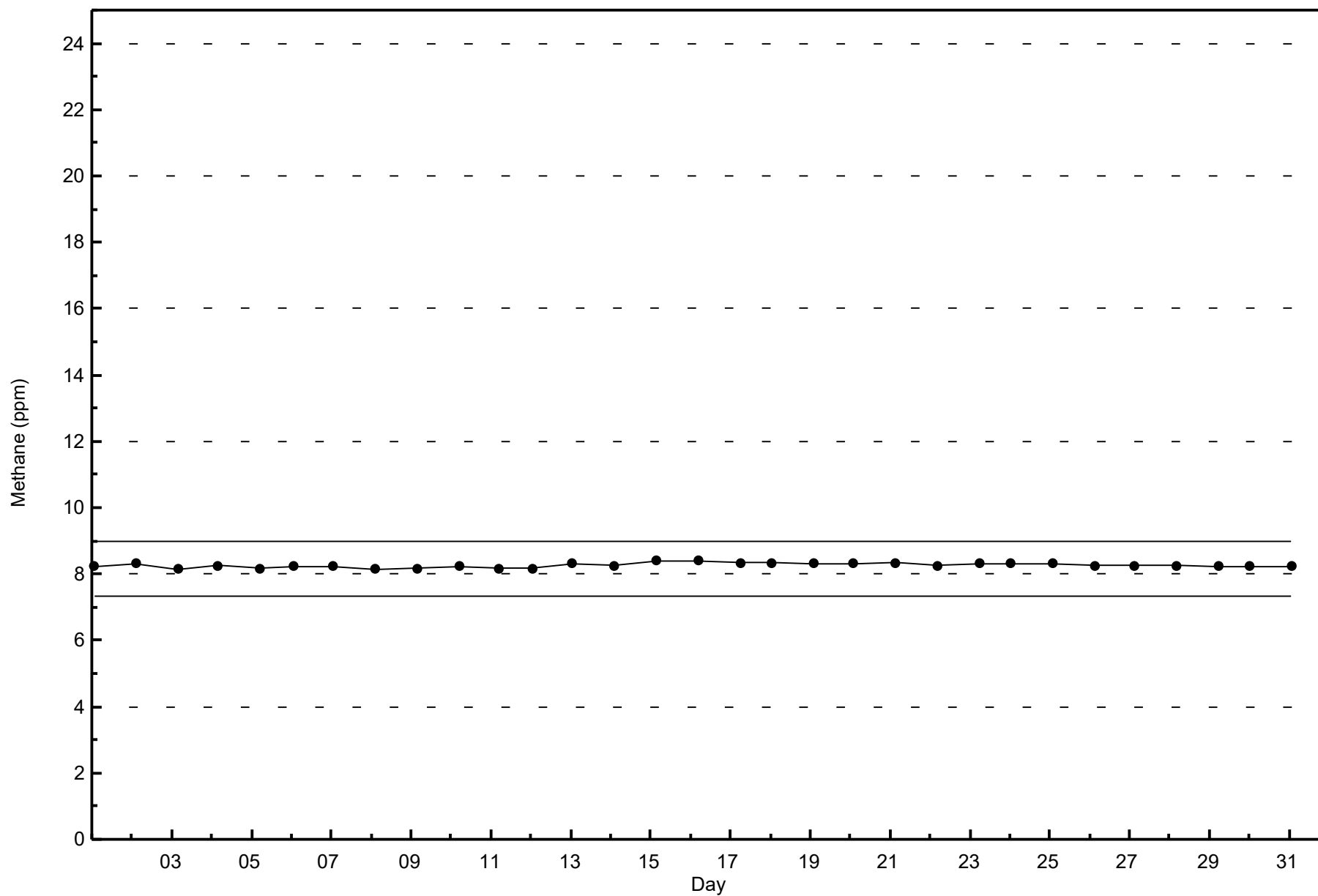
Methane (CH₄) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

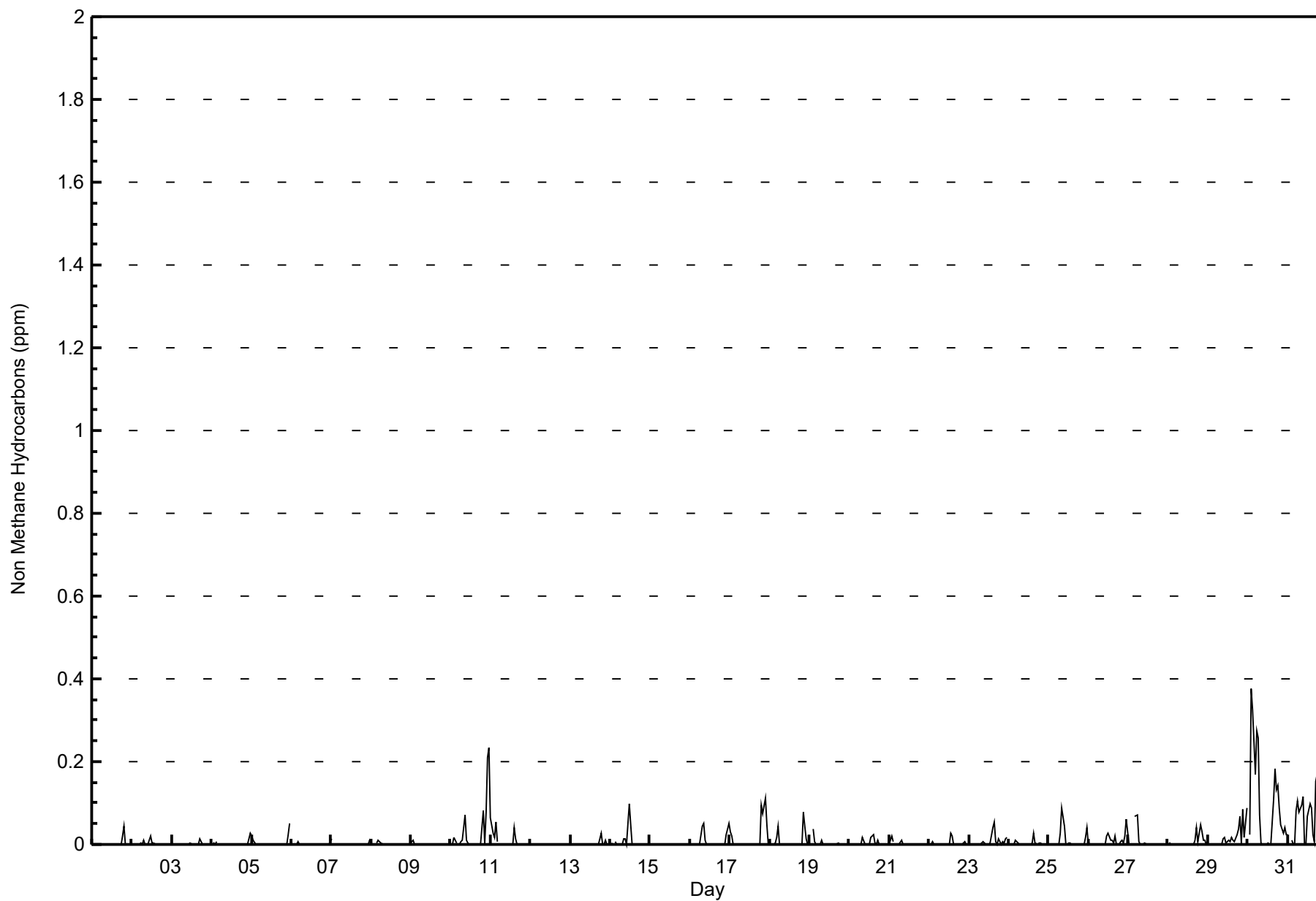
Lower Camp - May 2025

Maximum Value: 0.376 ppm on May 30 03:00																			Maximum Daily Average: 0.100 ppm on May 30										Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 01:00																			Minimum Daily Average: 0.000 ppm on May 12										Hours of Data: 707	
Maximum Diurnal Average: 0.022 ppm at hour 24																			Minimum Diurnal Average: 0.001 ppm at hour 11										Hours of Missing Data: 37	
Monthly Average: 0.011 ppm																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.2										Hours of Calibration: 35	
																													Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.045	0.000	0.000	0.000	0.000	0.003	0.045				
2-May	0.000	0.000	Z	0.000	0.000	0.004	0.000	0.010	0.000	0.000	0.010	0.019	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.019				
3-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.002	0.001	0.000	0.001	0.013				
4-May	0.002	0.004	0.000	0.007	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.027	0.002	0.027				
5-May	0.021	0.010	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.050	0.005	0.050				
6-May	Z	0.001	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.001	0.008				
7-May	0.012	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.001	0.012				
8-May	0.004	0.000	Z	0.002	0.009	0.008	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.009				
9-May	0.006	0.010	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.010				
10-May	0.000	0.000	0.018	0.003	Z	0.000	0.006	0.010	0.070	0.010	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.081	0.004	0.080	0.209	0.234	0.032	0.234			
11-May	0.065	0.028	0.017	0.056	0.006	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.012	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.065				
12-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
13-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	M	M	0.000	0.000	0.001	0.029	0.000	0.000	0.012	0.000	0.000	0.002	0.029				
14-May	0.000	0.004	Z	0.007	0.000	0.000	0.000	0.000	0.014	0.012	0.000	0.097	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.097				
15-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
16-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.044	0.050	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.051	0.008	0.051					
17-May	0.029	0.021	0.000	0.002	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.095	0.074	0.112	0.049	0.001	0.017	0.112				
18-May	Z	0.000	0.000	0.004	0.018	0.043	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.076	0.044	0.014	0.000	0.009	0.076				
19-May	0.000	Z	0.036	0.008	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.036				
20-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.001	0.000	0.017	0.025	0.003	0.000	0.009	0.000	0.001	0.000	0.000	0.000	0.000	0.003	0.025				
21-May	0.000	0.022	0.007	Z	0.000	0.000	0.000	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.022				
22-May	0.001	0.000	0.005	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.003	0.027				
23-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.006	0.004	0.000	0.000	0.002	0.040	0.053	0.006	0.001	0.015	0.000	0.006	0.003	0.013	0.016	0.007	0.007	0.053				
24-May	Z	0.000	0.000	0.000	0.012	0.005	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.004	0.029	0.004	0.001	0.003	0.002	0.000	0.000	0.000	0.003	0.003	0.029				
25-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.026	0.087	0.043	0.000	0.000	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.039	0.010	0.087					
26-May	0.000	0.004	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.027	0.009	0.011	0.002	0.019	0.000	0.001	0.008	0.011	0.005	0.022	0.060	0.009	0.060				
27-May	0.000	0.001	0.001	Z	0.068	0.071	0.005	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.071				
28-May	0.000	0.002	0.002	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.040	0.008	0.047	0.031	0.010	0.011	0.000	0.007	0.047				
29-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.013	0.018	0.002	0.012	0.008	0.017	0.012	0.006	0.025	0.038	0.068	0.002	0.083	0.019	0.090	0.018	0.090				
30-May	Z	0.024	0.376	0.326	0.169	0.276	0.256	0.073	0.003	0.000	0.000	0.000	0.004	0.000	0.000	0.109	0.183	0.133	0.141	0.087	0.047	0.026	0.041	0.025	0.100	0.376				
31-May	0.024	Z	0.011	0.000	0.003	0.080	0.104	0.078	0.097	0.117	0.002	0.000	0.067	0.097	0.088	0.024	0.007	0.152	0.170	0.049	0.038	0.003	0.083	0.076	0.059	0.170				
0.006 0.005 0.018 0.016 0.011 0.019 0.012 0.008 0.011 0.007 0.001 0.005 0.005 0.006 0.009 0.008 0.008 0.012 0.014 0.016 0.009 0.012 0.017 0.022																									Diurnal Average					
0.065 0.028 0.376 0.326 0.169 0.276 0.256 0.078 0.097 0.117 0.018 0.097 0.067 0.097 0.088 0.109 0.183 0.152 0.170 0.095 0.076 0.112 0.209 0.234																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	555	78.50	78.50
0.006 - 0.05	110	15.56	94.06
0.06 - 0.1	32	4.53	98.59
> 0.1	10	1.41	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	52	26	10	5	8	48	163	48	13	10	20	40	32	26	32	20	553
0.006 - 0.05	4	2	1	1	3	14	37	18	4	1	3	0	7	7	2	6	110
0.06 - 0.1	1	0	0	1	1	7	4	1	5	0	1	2	1	2	2	4	32
> 0.1	1	0	0	0	0	2	0	0	0	0	1	1	2	2	0	1	10
Totals	58	28	11	7	12	71	204	67	22	11	25	43	42	37	36	31	705

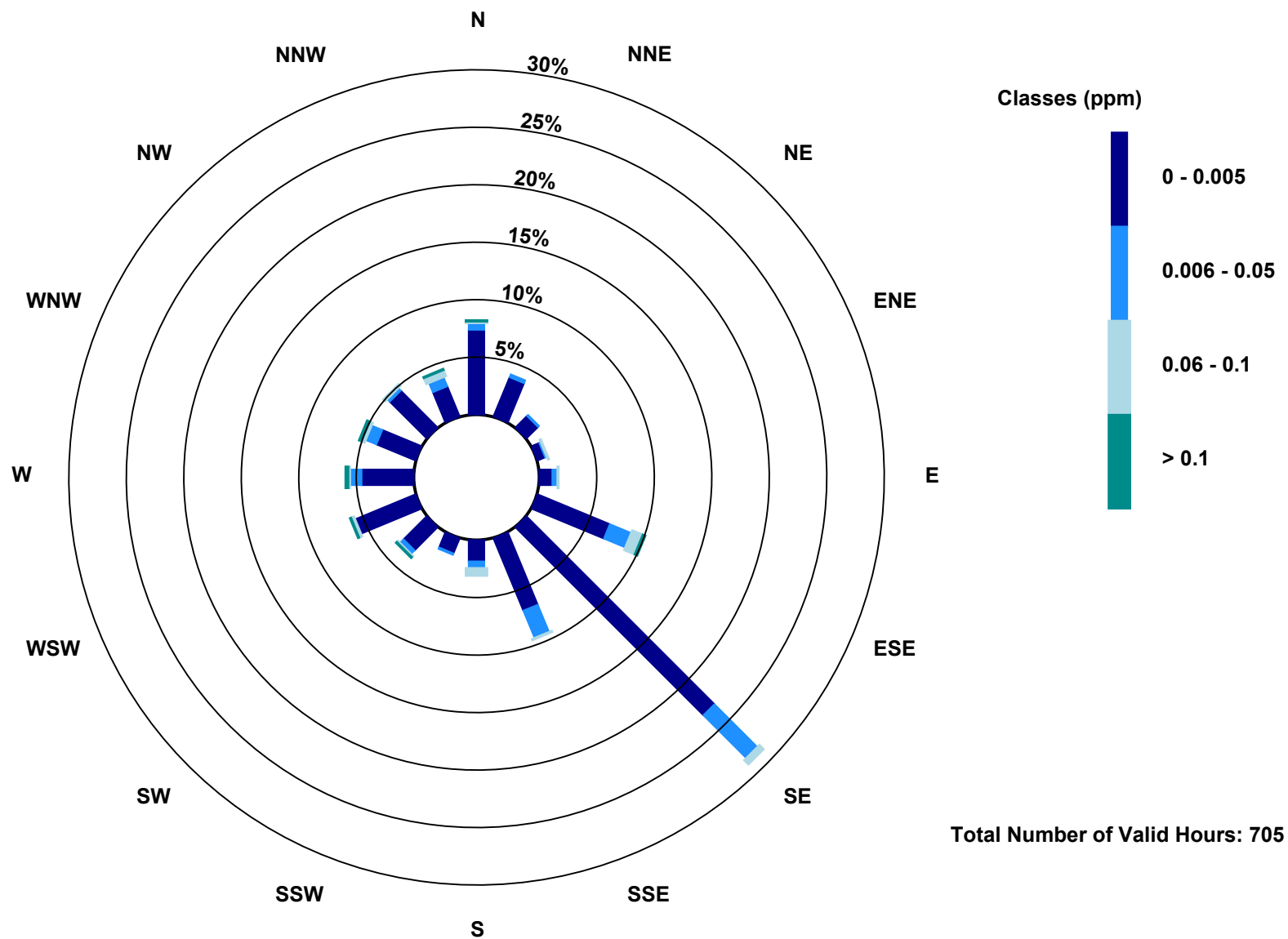
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp



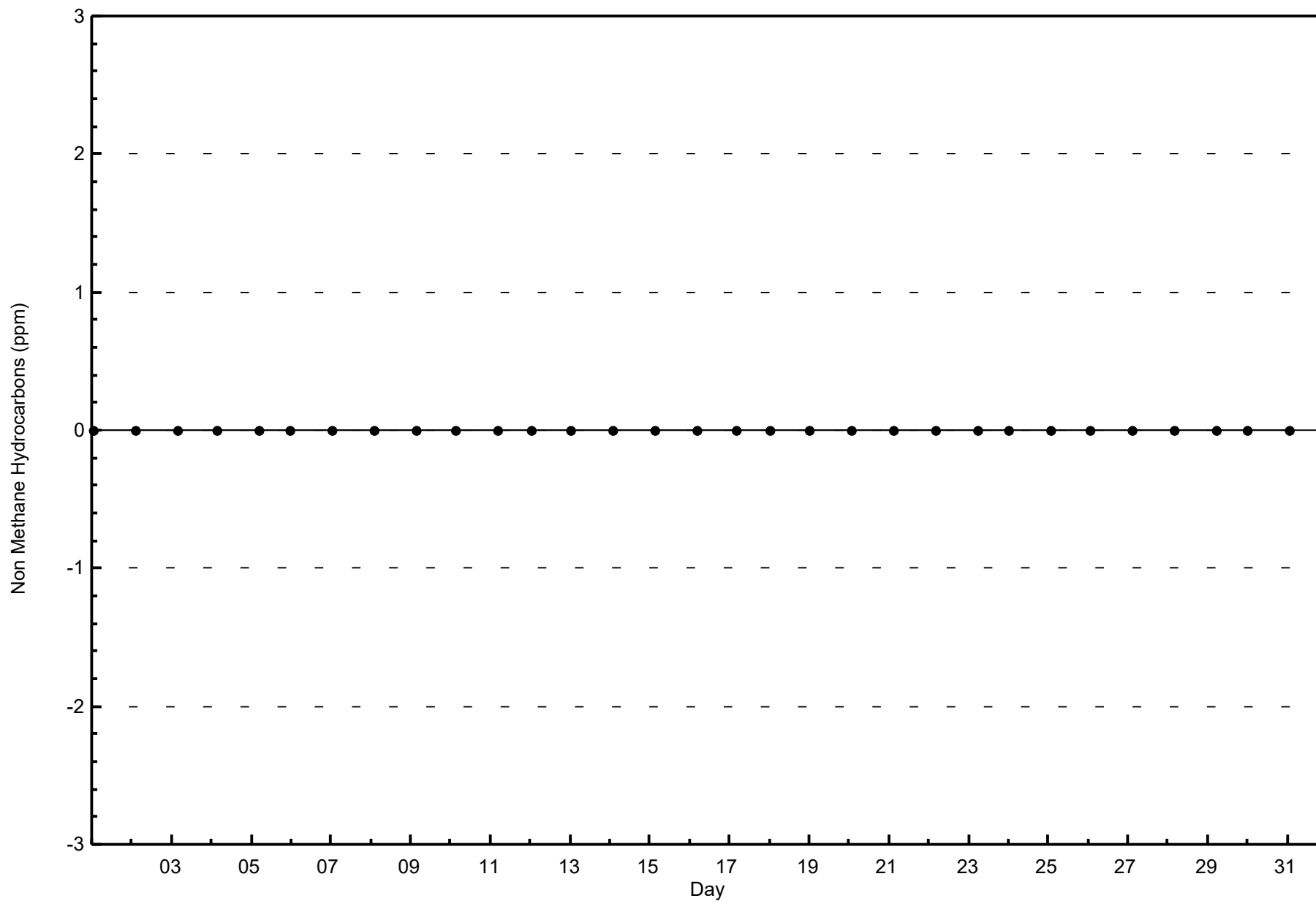


Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

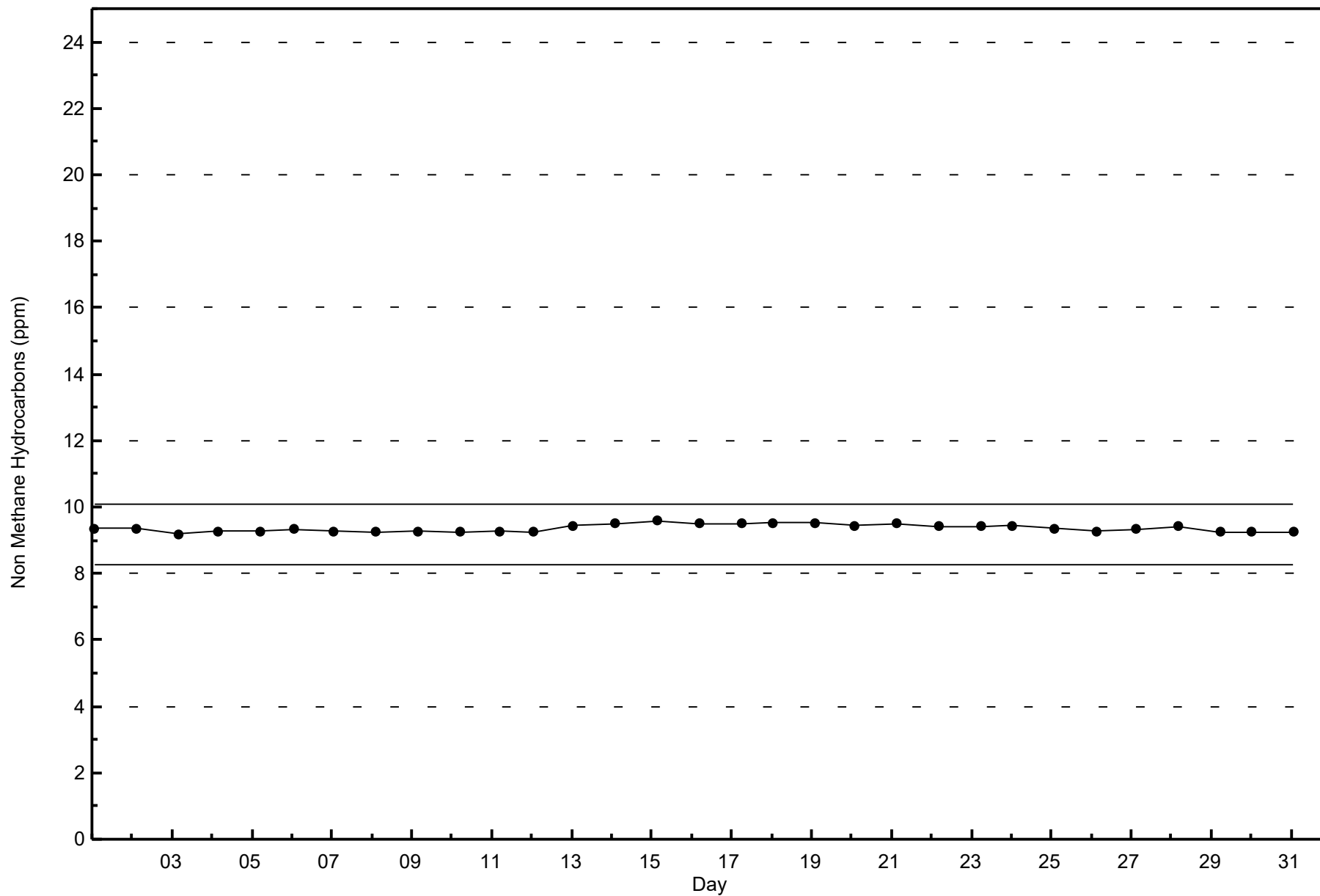
Lower Camp - May 2025





Wood Buffalo Environmental Association
Span Responses

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

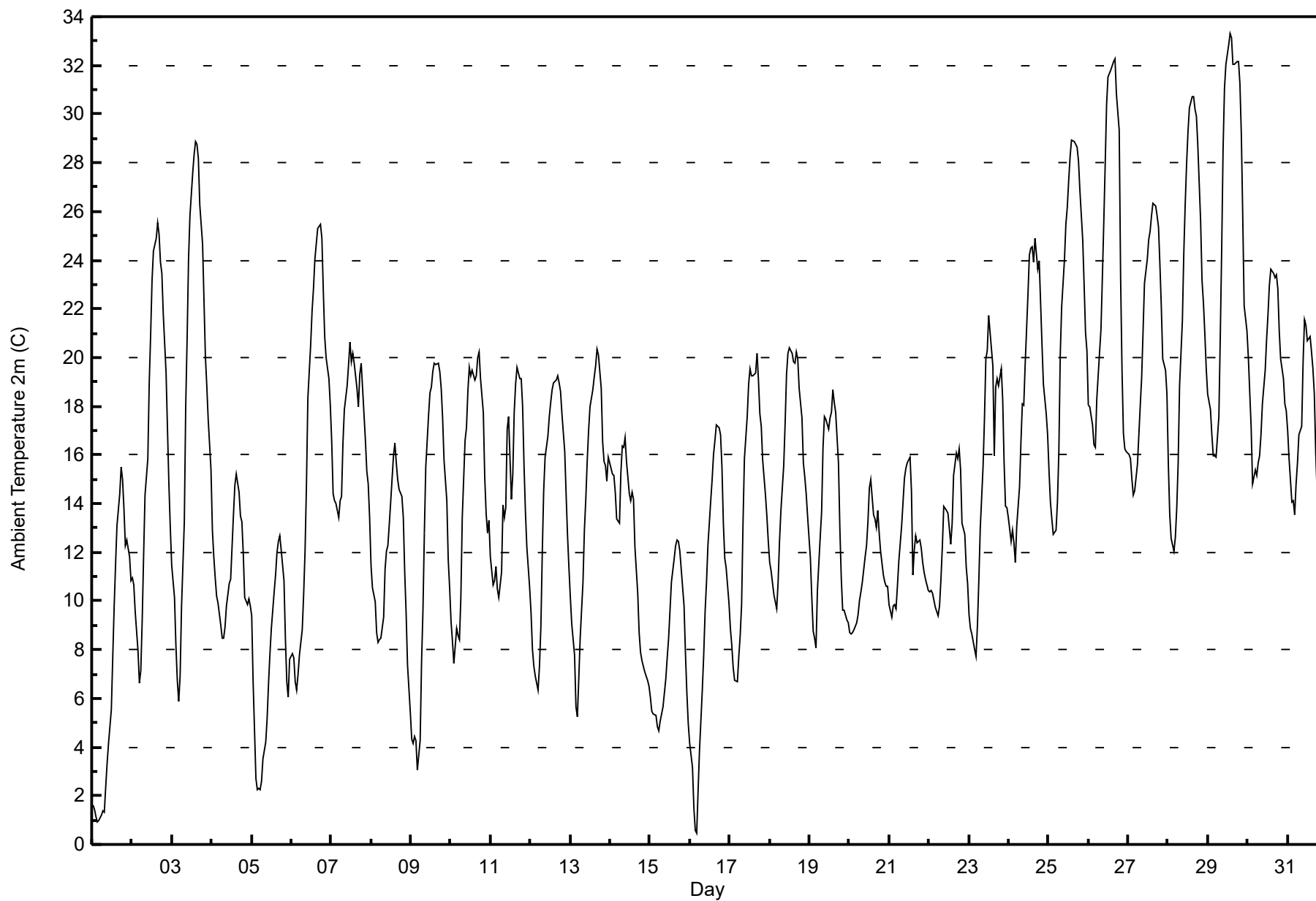
Lower Camp - May 2025

Maximum Value: 33.3 C on May 29 14:00																				Maximum Daily Average: 25.5 C on May 29					Hours in Service: 744				744
Minimum Value: 0.5 C on May 16 05:00																				Minimum Daily Average: 7.2 C on May 1					Hours of Data: 744				744
Maximum Diurnal Average: 20.2 C at hour 17																				Minimum Diurnal Average: 9.0 C at hour 5					Hours of Missing Data: 0				0
Monthly Average: 15.16 C																				Percentiles: P ₁ = 1.4 P ₁₀ = 7.4 Q ₁ = 10.5 Median = 14.6 Q ₃ = 19.2 P ₉₀ = 24.0 P ₉₉ = 32.0					Hours of Calibration: 0				0
																				Percent Operational Time: 100.0				100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	1.6	1.4	1.1	0.9	1.0	1.2	1.4	1.3	2.3	3.4	4.1	5.6	7.7	9.7	11.5	13.1	14.4	15.5	15.0	13.8	12.3	12.5	11.8	10.8	7.2	15.5			
2-May	10.9	10.7	9.5	8.0	6.6	7.1	9.2	11.9	14.4	15.8	18.9	20.9	23.2	24.4	24.9	25.5	25.1	23.9	23.5	21.8	19.3	17.1	14.8	13.0	16.7	25.5			
3-May	11.5	10.1	8.2	6.8	5.9	6.9	9.7	13.3	18.0	20.8	24.0	25.8	27.6	28.3	28.9	28.8	28.2	26.3	24.7	22.3	20.0	18.8	17.5	15.4	18.7	28.9			
4-May	12.9	11.8	11.0	10.2	9.9	9.0	8.5	8.5	8.9	9.8	10.7	10.9	12.2	13.6	14.7	15.2	14.5	13.5	13.3	11.9	10.1	9.9	10.1	9.8	11.3	15.2			
5-May	9.4	6.7	2.7	2.3	2.3	2.3	2.6	3.5	4.2	5.2	6.6	7.8	8.9	10.4	11.1	12.0	12.4	12.7	12.1	10.8	8.5	6.7	6.0	7.6	7.3	12.7			
6-May	7.8	7.7	6.7	6.3	7.0	7.8	8.8	10.3	12.1	14.8	18.4	20.5	21.9	22.8	24.0	24.7	25.3	25.5	24.9	22.8	20.9	20.0	19.1	18.0	16.6	25.5			
7-May	16.5	14.4	14.1	14.0	13.4	14.1	14.3	16.5	17.9	18.9	19.7	20.6	19.8	20.1	19.8	18.7	18.0	19.3	19.7	18.7	16.6	15.3	14.8	13.4	17.0	20.6			
8-May	11.4	10.5	10.0	8.7	8.3	8.4	8.5	9.3	11.3	12.1	12.3	13.2	14.1	16.0	16.5	15.7	15.0	14.6	14.3	13.4	11.2	9.5	7.3	5.4	11.5	16.5			
9-May	4.3	4.2	4.5	4.3	3.0	4.2	7.5	9.6	12.8	15.5	17.7	18.5	18.8	19.4	19.8	19.7	19.8	19.4	18.7	17.5	15.8	14.1	11.7	10.5	13.0	19.8			
10-May	9.2	8.4	7.4	8.9	8.6	8.4	10.2	13.4	16.6	17.1	18.6	19.6	19.2	19.5	19.1	19.3	20.0	20.2	19.1	17.8	15.1	13.6	12.8	13.3	14.8	20.2			
11-May	11.8	10.7	10.8	11.4	10.5	10.1	11.2	13.9	13.4	13.8	17.1	17.6	14.2	15.2	17.7	18.9	19.6	19.1	19.2	18.0	15.5	13.6	12.2	10.5	14.4	19.6			
12-May	9.5	8.0	7.3	6.9	6.4	7.3	9.0	12.0	14.5	15.9	16.8	17.6	18.1	18.7	18.9	19.1	19.3	19.0	18.6	17.7	16.1	14.4	12.7	11.4	14.0	19.3			
13-May	10.1	9.0	7.8	5.6	5.2	6.8	8.5	10.8	12.9	14.2	15.7	17.0	18.0	18.7	19.2	19.6	20.3	20.1	18.7	16.5	15.8	15.6	14.9	15.9	14.0	20.3			
14-May	15.4	15.2	15.2	14.5	13.3	13.2	15.3	16.4	16.3	16.7	15.7	14.4	14.1	14.4	14.2	12.2	10.3	8.7	7.9	7.5	7.3	7.1	6.7	6.5	12.4	16.7			
15-May	6.1	5.5	5.3	5.3	4.8	4.7	5.1	5.4	5.7	6.8	7.7	8.5	9.6	10.8	11.8	12.3	12.5	12.4	12.0	11.3	9.8	7.8	6.2	4.9	8.0	12.5			
16-May	4.1	3.2	1.5	0.6	0.5	2.2	3.9	6.3	7.8	9.6	10.7	12.3	14.1	15.0	16.0	16.6	17.2	17.1	16.8	15.5	13.2	11.7	11.4	9.9	9.9	17.2			
17-May	8.9	8.2	7.2	6.7	6.7	7.7	8.6	9.9	13.2	15.9	17.6	18.9	19.5	19.3	19.2	19.3	20.2	19.1	17.7	17.2	15.8	14.3	13.5	12.5	14.0	20.2			
18-May	11.6	11.2	10.2	10.0	9.7	10.8	12.5	13.7	15.5	17.3	19.3	20.1	20.4	20.2	19.8	19.8	20.3	19.9	18.7	17.5	15.7	15.1	14.4	13.5	15.7	20.4			
19-May	11.8	10.1	8.8	8.5	8.1	10.4	12.6	13.7	16.3	17.6	17.5	17.1	17.5	17.7	18.7	18.1	17.7	15.7	13.0	10.9	9.6	9.6	9.2	9.1	13.3	18.7			
20-May	8.7	8.7	8.7	8.8	9.1	9.4	10.0	10.4	10.8	11.8	12.3	13.3	14.6	15.0	13.5	13.4	13.0	13.7	12.8	12.1	11.0	10.8	10.6	10.6	11.4	15.0			
21-May	9.9	9.4	9.8	9.9	9.7	10.6	11.6	13.1	14.0	15.0	15.4	15.7	15.9	14.5	11.0	12.1	12.7	12.4	12.5	12.2	11.6	11.2	10.9	10.4	12.1	15.9			
22-May	10.4	10.4	10.3	10.0	9.8	9.4	9.8	10.9	12.2	13.9	13.7	13.6	13.0	12.3	13.2	15.2	16.1	15.9	16.3	15.4	13.2	12.7	11.4	10.7	12.5	16.3			
23-May	9.4	8.9	8.6	8.0	7.7	9.0	10.8	13.0	15.5	17.5	19.9	20.3	21.7	21.0	19.6	16.0	18.8	19.1	18.8	19.5	18.2	15.7	13.9	13.9	15.2	21.7			
24-May	13.4	12.4	12.9	12.4	11.6	13.1	14.7	16.5	18.1	18.0	19.7	22.6	24.2	24.5	24.6	23.9	24.9	23.6	24.0	22.2	20.5	18.9	17.7	16.8	18.8	24.9			
25-May	15.3	14.1	13.4	12.7	12.9	14.1	16.1	20.1	22.1	24.0	25.5	26.2	27.2	28.3	28.9	28.9	28.8	28.6	28.1	26.9	24.8	23.0	21.1	20.3	22.1	28.9			
26-May	18.1	18.0	17.2	16.4	16.3	18.3	19.2	21.2	23.3	25.5	27.9	30.3	31.5	31.8	32.0	32.1	32.2	30.8	29.3	23.3	19.5	16.9	16.3	16.1	23.5	32.2			
27-May	16.0	15.9	15.0	14.3	14.5	15.6	16.9	18.0	19.2	21.1	23.1	24.0	24.8	25.2	25.8	26.3	26.2	25.8	25.4	23.8	22.1	20.0	19.5	18.5	20.7	26.3			
28-May	15.6	13.6	12.6	12.1	12.6	13.9	15.7	18.9	21.5	24.2	26.3	28.0	29.3	30.3	30.7	30.7	30.2	29.9	28.7	25.6	23.2	22.2	21.0	19.5	22.3	30.7			
29-May	18.5	17.8	16.8	16.0	16.0	15.9	17.6	20.9	24.4	28.6	31.1	32.0	32.9	33.3	33.2	32.0	32.0	32.2	32.1	31.2	29.1	25.8	22.1	21.1	25.5	33.3			
30-May	20.0	18.6	17.1	14.8	15.4	15.1	15.7	15.9	16.9	18.1	19.5	20.7	21.8	23.0	23.6	23.4	23.3	23.4	22.8	21.1	19.9	19.1	18.1	17.8	19.4	23.6			
31-May	17.0	15.8	14.1	14.1	13.5	14.8	15.7	16.8	17.2	19.8	21.6	21.3	20.7	20.9	20.2	19.5	18.5	16.1	14.4	13.9	13.3	12.7	12.4	12.2	16.5	21.6			
Diurnal Average																													
Diurnal Maximum																													



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Lower Camp - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	164	22.04	22.04
10 - 20	437	58.74	80.78
> 20	143	19.22	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

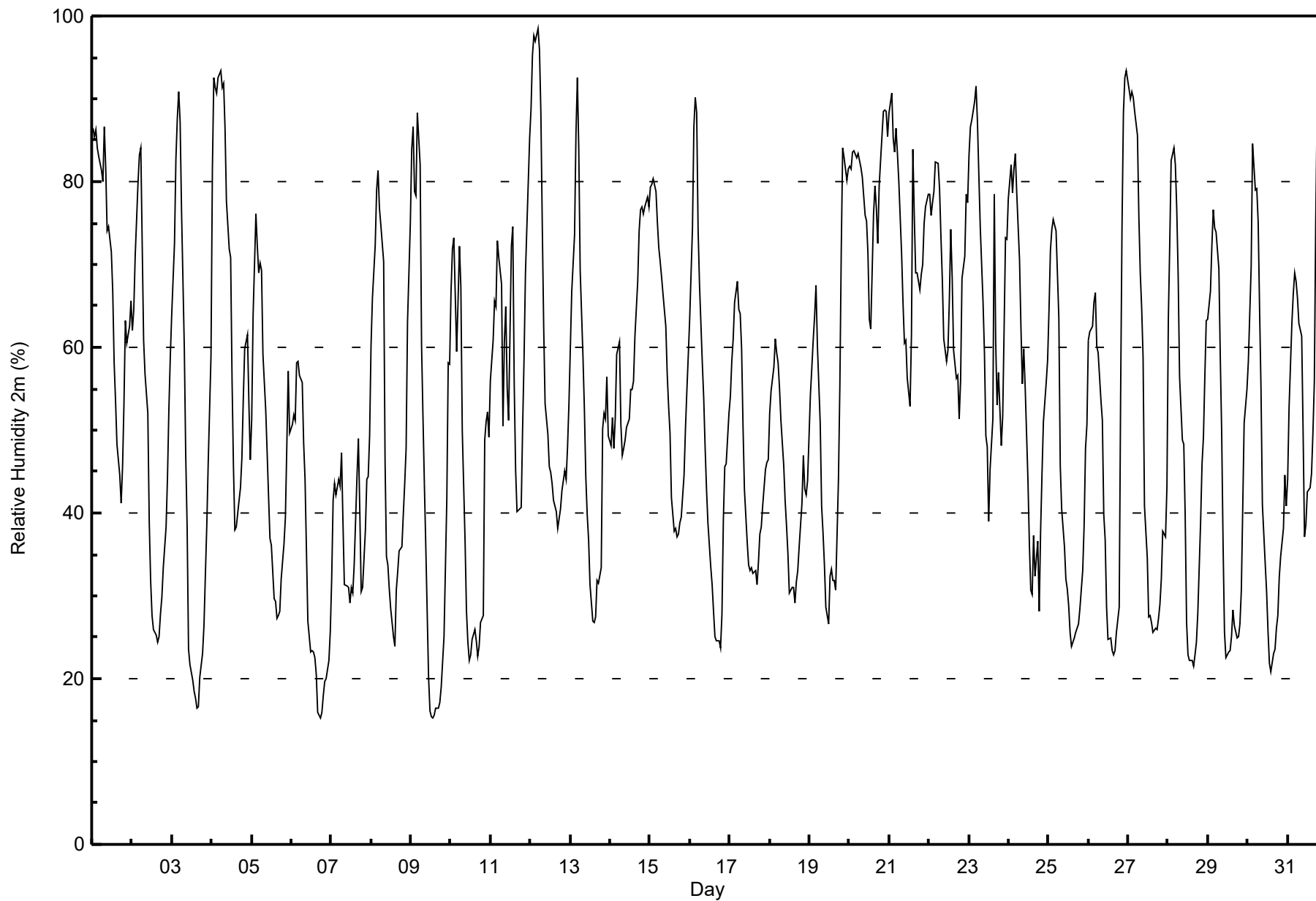
Lower Camp - May 2025

Maximum Value: 98.4 % on May 12 05:00																				Maximum Daily Average: 79.5 % on May 20					Hours in Service: 744	
Minimum Value: 15.2 % on May 9 14:00																				Minimum Daily Average: 33.5 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 77.3 % at hour 5																				Minimum Diurnal Average: 36.3 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 53.60 %																				Percentiles: P ₁ = 16.5 P ₁₀ = 25.7 Q ₁ = 36.1 Median = 52.3 Q ₃ = 71.4 P ₉₀ = 83.0 P ₉₉ = 94.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	86.4	85.4	86.3	84.1	83.1	81.4	79.9	86.7	81.7	74.1	74.5	71.6	66.8	58.1	53.5	48.3	44.6	41.2	45.7	53.2	63.2	60.5	62.5	65.5	68.3	86.7
2-May	62.0	64.5	71.0	79.8	83.1	84.0	72.4	60.8	56.7	52.0	39.0	31.9	27.6	25.9	25.3	24.4	25.0	27.9	29.9	33.4	38.3	44.2	52.5	58.9	48.8	84.0
3-May	64.0	72.5	82.6	87.6	90.9	87.3	76.6	59.8	46.9	38.3	23.6	21.7	19.8	18.5	17.6	16.4	16.5	20.2	23.1	26.4	32.5	38.5	45.9	59.0	45.3	90.9
4-May	81.5	92.5	91.4	90.6	92.5	93.4	91.4	91.9	86.4	77.5	71.8	70.9	56.1	45.6	38.0	38.3	41.5	43.0	46.6	53.7	59.9	61.5	53.2	46.4	67.3	93.4
5-May	51.4	64.0	76.1	72.3	69.0	70.2	69.4	59.1	52.3	47.2	42.1	37.0	36.1	29.7	29.4	27.3	27.7	28.2	32.1	36.2	39.5	48.0	57.0	49.7	48.0	76.1
6-May	50.7	51.9	51.2	58.2	58.2	56.6	55.8	48.5	44.1	35.5	26.9	23.2	23.3	23.3	22.6	20.5	15.9	15.2	15.9	18.0	19.6	20.1	22.2	25.7	33.5	58.2
7-May	32.2	41.6	43.6	42.2	44.0	43.1	47.3	39.0	31.3	31.2	31.0	29.2	31.0	30.3	33.8	44.4	48.9	40.4	30.6	31.0	37.9	44.0	44.4	49.3	38.4	49.3
8-May	60.1	66.0	72.4	78.9	81.4	76.7	74.8	70.4	46.3	34.7	33.8	30.9	28.5	25.1	23.9	30.7	33.0	35.5	36.0	39.9	43.5	47.7	63.0	74.9	50.3	81.4
9-May	83.8	86.6	78.8	78.4	88.3	82.0	60.4	51.7	43.5	36.1	20.1	16.1	15.5	15.2	15.5	16.5	16.5	17.1	18.9	22.0	25.1	41.6	58.1	58.0	43.6	88.3
10-May	66.9	71.8	73.3	59.6	65.6	72.3	67.3	50.0	36.6	28.2	24.5	22.2	22.9	24.8	26.0	24.6	22.7	24.0	26.7	27.7	48.8	51.0	52.3	49.1	43.3	73.3
11-May	55.9	60.8	65.6	64.8	72.9	70.9	67.7	50.5	60.7	64.9	55.1	51.2	72.1	74.5	55.8	45.3	40.2	40.5	40.7	50.3	58.4	68.7	74.4	85.3	60.3	85.3
12-May	88.8	95.2	97.7	96.9	98.4	95.9	88.4	74.7	62.6	53.2	49.5	45.7	45.0	43.5	41.5	40.2	38.2	39.3	40.6	42.7	45.2	44.1	48.0	53.1	61.2	98.4
13-May	60.0	66.7	73.5	85.7	92.5	84.0	69.4	58.8	52.6	44.3	39.8	36.8	31.3	27.0	26.7	27.5	31.8	31.6	33.4	50.2	52.0	51.4	56.5	49.3	51.4	92.5
14-May	48.1	51.5	47.9	51.5	59.1	60.7	50.6	47.0	47.7	48.8	50.3	51.4	54.9	54.9	56.0	61.3	68.0	74.1	76.6	77.0	76.1	76.9	78.1	76.9	60.2	78.1
15-May	79.3	79.7	80.3	78.9	75.1	72.0	70.3	68.4	66.4	62.5	56.8	52.9	49.7	41.8	37.9	38.1	37.1	37.5	38.9	39.6	44.5	50.1	54.8	59.0	57.2	80.3
16-May	63.4	74.4	86.7	90.2	88.4	74.3	67.6	58.1	54.0	47.9	42.9	38.8	33.6	31.3	28.1	25.1	24.5	24.5	23.8	27.9	39.2	45.6	45.9	52.1	49.5	90.2
17-May	54.1	58.3	61.0	65.3	68.0	64.5	64.1	59.9	50.5	42.8	36.5	33.7	33.1	33.5	32.7	33.1	31.3	34.0	37.5	38.4	40.9	45.2	46.1	46.4	46.3	68.0
18-May	52.1	54.7	57.6	61.0	59.3	58.1	55.0	51.1	45.8	41.6	38.5	35.1	30.4	30.9	31.1	29.2	31.7	33.0	35.9	41.2	47.0	42.8	42.1	43.9	43.7	61.0
19-May	54.2	57.4	60.9	63.8	67.5	60.2	50.8	40.9	37.6	33.7	28.6	26.6	32.3	33.3	31.9	31.9	30.7	44.1	55.5	71.9	84.1	82.9	80.3	81.6	51.8	84.1
20-May	81.8	81.5	83.6	83.7	82.9	83.4	82.6	81.7	80.5	76.0	75.3	71.4	63.4	62.2	76.2	79.4	76.8	72.6	79.5	82.6	88.4	88.6	88.4	85.4	79.5	88.6
21-May	88.3	90.7	85.2	83.6	86.4	83.4	80.1	71.3	65.3	60.4	60.9	56.2	52.8	61.5	84.0	75.9	69.0	69.0	67.0	68.9	70.0	75.0	77.0	78.5	73.3	90.7
22-May	78.5	75.9	77.5	78.8	82.3	82.3	79.2	73.4	68.1	61.0	58.3	59.7	65.8	74.3	68.4	59.6	56.2	56.6	51.4	55.9	68.3	71.0	78.4	77.5	69.1	82.3
23-May	83.2	86.6	87.5	89.7	91.5	87.2	80.8	74.6	65.5	59.4	49.3	47.9	39.0	45.3	51.3	78.4	60.6	53.1	57.0	48.1	51.7	62.2	73.2	73.0	66.5	91.5
24-May	77.9	82.1	78.6	81.5	83.4	78.6	70.6	62.4	55.7	59.9	55.3	43.9	36.3	30.7	30.2	37.3	32.5	36.7	28.1	37.7	44.8	51.1	55.8	58.4	54.6	83.4
25-May	64.7	71.7	74.2	75.3	74.1	68.8	63.6	45.7	40.5	35.9	32.1	30.8	28.9	25.7	23.9	24.9	25.6	26.1	26.6	28.5	33.0	38.4	47.7	50.8	44.1	75.3
26-May	60.8	61.8	62.6	65.4	66.6	60.2	59.4	53.6	51.2	39.8	36.8	28.6	24.8	25.0	23.5	22.9	23.3	25.7	28.6	54.1	74.5	88.2	92.5	93.5	51.0	93.5
27-May	91.1	90.1	90.8	90.1	88.4	85.6	75.8	69.0	64.8	58.8	40.8	34.7	27.5	27.7	26.8	25.6	26.2	26.0	27.3	29.0	32.0	37.8	37.1	43.2	51.9	91.1
28-May	63.3	72.5	82.6	84.1	82.0	76.6	68.7	56.5	48.9	48.3	39.7	26.9	22.9	22.1	22.2	21.6	22.9	24.5	28.0	39.0	46.0	49.2	56.5	63.2	48.7	84.1
29-May	63.4	66.9	72.1	76.6	74.4	73.9	69.6	58.8	49.6	36.1	25.6	22.6	23.2	23.4	25.1	28.3	26.4	25.0	25.2	26.5	30.6	40.7	50.8	54.9	44.6	76.6
30-May	58.3	64.1	69.7	84.7	78.9	79.2	75.2	64.6	55.0	41.1	33.9	30.5	25.8	21.8	20.9	23.0	23.5	26.1	27.7	32.2	34.8	38.1	44.6	40.8	45.6	84.7
31-May	44.2	52.7	62.9	66.4	69.0	68.0	66.0	63.0	61.4	49.9	37.1	38.7	42.5	43.0	44.7	49.6	55.8	75.0	88.8	90.2	92.0	96.5	98.3	97.5	64.7	98.3
66.1 70.7 73.7 75.8 77.3 74.7 69.4 61.3 55.2 49.1 42.9 39.3 37.5 36.4 36.3 37.1 36.3 37.7 39.5 44.3 50.4 54.9 59.3 61.3																										
91.1 95.2 97.7 96.9 98.4 95.9 91.4 91.9 86.4 77.5 75.3 71.6 72.1 74.5 84.0 79.4 76.8 75.0 88.8 90.2 92.0 96.5 98.3 97.5																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

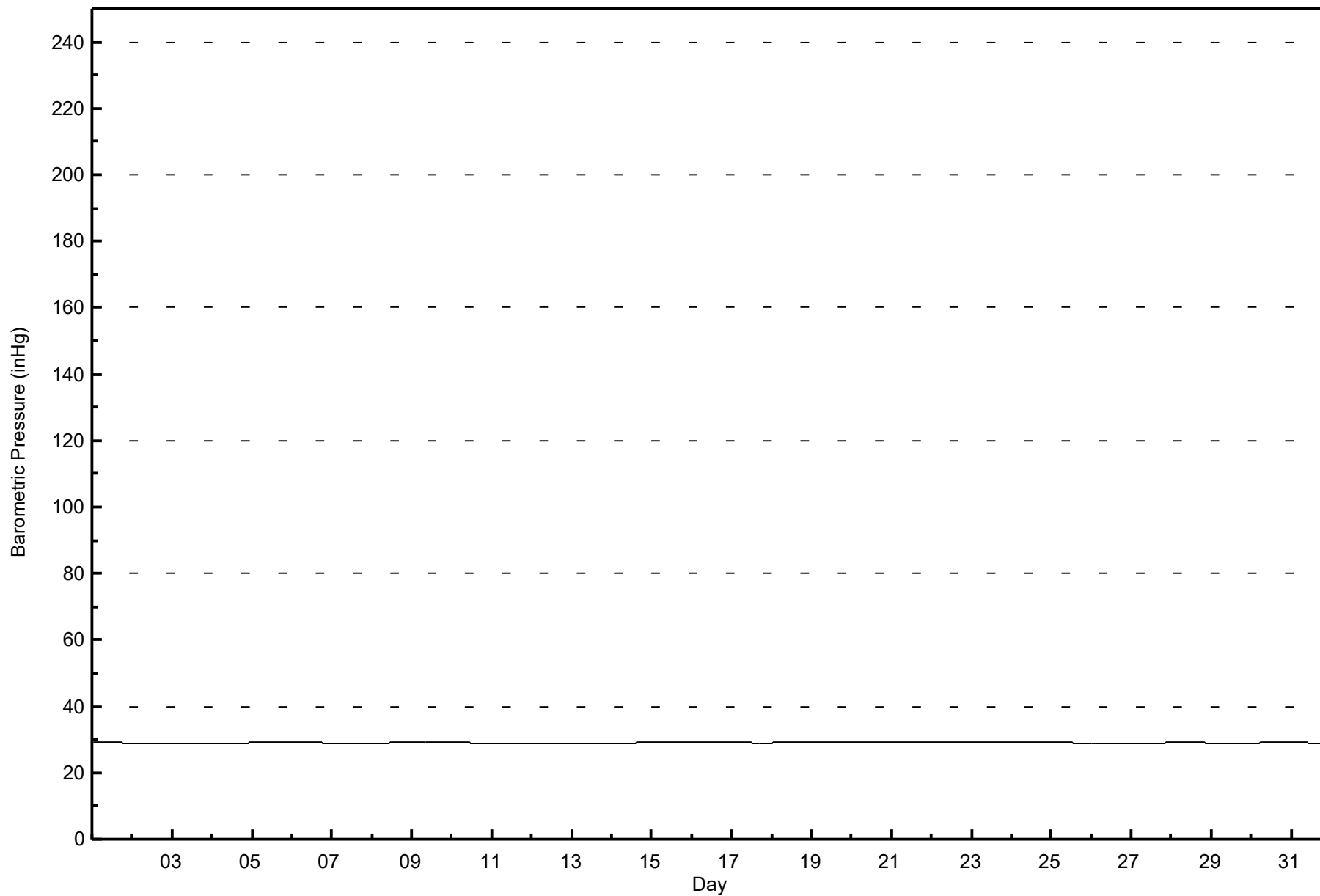
Lower Camp - May 2025

Maximum Value: 29.4 inHg on May 5 11:00																				Maximum Daily Average: 29.3 inHg on May 5					Hours in Service: 744					Hours of Data: 744				
Minimum Value: 28.7 inHg on May 3 17:00																				Minimum Daily Average: 28.7 inHg on May 3					Hours of Missing Data: 0					Hours of Calibration: 0				
Maximum Diurnal Average: 29.1 inHg at hour 7																				Minimum Diurnal Average: 29.0 inHg at hour 19					Percent Operational Time: 100.0									
Monthly Average: 29.04 inHg																				Percentiles: P ₁ = 28.7 P ₁₀ = 28.8 Q ₁ = 28.9 Median = 29.1 Q ₃ = 29.2 P ₉₀ = 29.2 P ₉₉ = 29.4														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1-May	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	28.9	28.9	29.2	29.3								
2-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8								
3-May	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.7	28.7	28.8								
4-May	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.1	28.9	29.1								
5-May	29.1	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.4								
6-May	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.2	29.4								
7-May	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.8	28.9								
8-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.0	29.3								
9-May	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.2	29.3								
10-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1								
11-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9								
12-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9								
13-May	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9								
14-May	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.0	29.2								
15-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2								
16-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2								
17-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1								
18-May	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.0	29.1								
19-May	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2								
20-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2								
21-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.2	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.3								
22-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2								
23-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2								
24-May	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2								
25-May	29.1	29.2	29.2	29.1	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2								
26-May	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9								
27-May	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.0	29.1								
28-May	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2								
29-May	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	29.0								
30-May	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2								
31-May	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.9	28.9	28.8	28.8	29.0	29.1								
29.0 29.1 29.1 29.1 29.1 29.1 29.1 29.1 29.1 29.1 29.1 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0																									Diurnal Average									
29.4 29.4 29.4 29.3 29.3 29.3 29.3 29.3 29.3 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4																									Diurnal Maximum									



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Lower Camp - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - May 2025

Maximum Speed: 29 km/h on May 14 17:00										Maximum Daily Speed Average: 21.1 km/h on May 17										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 10 21:00										Minimum Daily Speed Average: 0.9 km/h on May 13										Hours of Data: 742						
Maximum Diurnal Speed Average: 5.9 km/h at hour 7										Minimum Diurnal Speed Average: 2.2 km/h at hour 16										Hours of Missing Data: 2						
Monthly Average Velocity: 3.6 km/h 137.2 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 7 Median = 11 Q ₃ = 17 P ₉₀ = 20 P ₉₉ = 26										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N11	NNW9	N10	NNW6	WNW6	NW7	N5	ENE4	E2	SW7	SSE7	SE13	SE19	SE15	SE17	SE15	SE14	SE12	SE11	SE12	ESE18	SE25	ESE22	ESE18	ESE7.5	SE25
2-May	SE8	SE2	SE4	W5	W4	NW4	W3	S0	SE8	SE9	ESE5	NE4	WNW6	WNW14	WNW15	WNW16	NW10	NW6	N7	NNE8	NW6	WNW7	WNW4	WNW5	NW3.0	WNW16
3-May	W5	NW4	UO	NNW0	UO	NE1	N2	E3	SE17	SE10	W18	W17	WNW17	WNW16	W15	W15	W18	WNW19	NW20	WNW18	NW19	WNW14	NW14	NW12	WNW9.1	NW20
4-May	WNW9	WSW8	WSW12	W15	NW16	NW14	NW13	NW9	NNW4	N3	WSW8	WSW16	WSW19	W19	W16	WSW18	SW16	SW19	SW17	SW13	SW13	WSW14	W17	WNW15	W11.5	SW19
5-May	WNW20	NNW14	N11	N9	N8	NNE8	NE7	NW14	WNW13	WNW10	W13	WNW8	NE7	ENE4	N7	N7	NNE8	NNW7	NNE11	NNE11	NNW7	NE6	E9	ESE23	N5.9	ESE23
6-May	ESE26	ESE22	ESE13	ESE15	ESE16	SE24	ESE21	ESE15	ESE13	SE13	SSE11	SW12	SW18	SW18	SSW15	SW14	SW15	SSW12	S10	SSE9	SSE9	SSE10	SSE13	SE15	SSE11.2	ESE26
7-May	SE14	SE16	SE21	SE26	SE24	SE22	SE19	SE16	SSE12	S12	S11	SW15	WSW17	WSW17	WSW14	WSW19	WSW20	WSW17	WSW17	SSW9	S6	SSW7	SW10	S5	S9.2	SE26
8-May	S1	WSW1	NW3	WNW2	WNW4	NNW2	ENE1	NW5	N14	NNE15	NNE18	NNE16	N7	ESE0	NW5	NNE16	NNE14	N14	NNE13	NNE12	N6	NNW3	NE1	SSE1	N6.4	NNE18
9-May	ENE1	N0	SE6	SE2	E1	NE1	ESE14	ESE15	SE14	ESE11	W16	WSW20	WSW20	WSW18	W19	WSW17	WSW16	WSW16	WSW11	SW6	SW6	W3	N1	E2	SW5.4	WSW20
10-May	N1	SE1	ESE5	SE5	SSE1	SW1	NNW2	E2	S3	W5	W8	WSW10	W14	NW7	NW6	W9	W6	E1	N1	S4	E0	SE4	ESE11	ESE9	WSW1.5	W14
11-May	N1	WNW3	ESE3	ENE2	W4	WNW5	S1	SE11	SE12	SE8	SE16	SE10	W6	E7	SE8	NW2	N3	NNW7	NNW4	NW3	WNW2	WNW2	WNW2	WNW4	SE1.4	SE16
12-May	WNW3	WNW1	NW2	NNW2	NW3	WNW5	NW6	NNW8	N14	N16	N19	N20	N21	NNE22	NNE22	N23	N21	N22	N21	N19	N14	N12	NW9	NW11	N12.5	N23
13-May	NNW7	NW7	NW2	NE0	NE1	N4	N5	NNW8	N9	N10	NW7	W8	W7	NE6	NE4	NNE3	SE14	SE11	SW7	WSW4	SE6	SE6	SE9	SE13	NNE0.9	SE14
14-May	SE12	SE18	SE13	SE12	ESE8	SE9	SE10	SW8	W11	NW7	NNW21	NNW22	N22	NNE24	NNE26	NNE27	NNE29	NNE25	N22	N19	N18	N18	N15	N15	NNE10.2	NNE29
15-May	N18	N14	N13	N15	N19	N16	NNE19	N19	NNE22	N17	NNW17	NNW17	N15	NNE18	N17	N18	N17	NNE17	NNE17	NNE14	NNE10	NE9	NNE7	NNW5	N15.0	NNE22
16-May	NNW4	NNW4	N1	ENE1	NE3	NNE4	N4	NNE2	N3	NNE2	NW5	NNW6	W4	N4	ENE1	NE1	ESE7	ESE8	E7	SE4	W1	ESE9	SE23	ESE19	E2.5	SE23
17-May	SE18	ESE21	ESE24	SE26	ESE24	SE23	SE24	SE19	ESE18	SE19	SE15	SE17	ESE22	SE21	SE19	SE21	SE21	SE19	ESE23	ESE23	ESE23	ESE22	SE25	SE20	SE21.1	SE26
18-May	SE19	ESE24	ESE20	ESE21	ESE18	ESE21	SE19	SE17	SE16	ESE16	ESE17	ESE20	SSE14	SE13	SSE11	SSE10	SE15	SE18	SE14	SE20	SE16	SE19	SE23	SE19	SE17.3	ESE24
19-May	SE12	ESE10	SE5	SE4	SE7	ESE12	SE11	SSE11	SE13	SE18	SE20	SE19	SE20	SE19	SE21	SE18	SSE14	SE24	SE23	SE19	SE15	SE21	SE17	SE20	SE15.4	SE24
20-May	SE19	SE17	SE16	SE16	SE15	SE15	SE17	SE15	SE16	SE20	ESE22	SE24	SE16	SE17	ESE23	SE26	SE17	SE17	SE18	SE19	SE11	SE8	SE7	SE8	SE16.6	SE26
21-May	SE7	E8	SSE6	SSE9	SE7	ESE12	ESE15	ESE15	SE11	SE11	ESE16	ESE17	ESE17	SE20	S12	S10	S10	SSW10	S8	SSE9	SSE10	SE10	SSE10	SSE9	SE10.1	SE20
22-May	SSE9	SSE11	SSE10	SSE10	SE15	SE10	SSE10	SSE11	SSE12	SSE10	SSE10	SSW10	WSW12	SW8	SSE9	SE14	SE20	SE17	SSE9	SE12	SE9	SE7	SE7	SSE6	SSE9.6	SE20
23-May	SE9	SE9	SE10	SSE5	SE7	SE8	SE8	SE10	ESE17	SE17	SE16	SE19	SE17	SE18	ESE22	ESE17	SE18	SE18	SE18	SSE12	SSE9	SSE5	SE5	SE8	SE12.5	ESE22
24-May	SE8	SE9	SE6	W2	SW2	WNW2	ESE9	SE6	SE5	ESE13	ESE17	SE22	SE21	SE14	SSE13	SE15	SE15	SSE11	SSW11	SE11	SE8	SE8	SE9	SE11	SE9.5	SE22
25-May	SE11	SE12	SE12	SE12	SE13	SE13	SE15	SE18	SSE15	SSE14	SSE14	SE18	SE17	SSE13	S14	SSE13	SSE14	SSE12	SSE11	SSE9	SSE7	SSE8	SE8	SE9	SSE12.2	SE18
26-May	SE11	SE11	SE10	ESE10	ESE12	ESE11	ESE10	ESE16	SE16	SE11	SE13	SSE14	SSE15	SSE16	SSE15	SSE15	S14	SSE13	S9	W21	WNW9	WSW7	SSW2	WSW4	SSE8.7	W21
27-May	SSW6	S2	WSW3	SSW2	S4	E2	SSW4	WSW5	WSW9	WSW9	W15	W13	WSW19	WSW17	WSW18	W22	W21	WSW19	W14	W13	WSW9	SW6	SW9	WSW5	WSW9.6	W22
28-May	NW1	ESE2	ESE2	SE7	ESE7	SE9	SE11	SE11	SE10	SE11	ESE11	SSW5	WSW9	WSW11	WSW10	SW11	S8	SSE6	SSE6	SE6	SE7	SE8	SE10	SE10	SSE5.7	SE11
29-May	SE9	SE9	SE10	SE11	SE11	SE11	SE12	SE11	SE11	SE11	SSE16	SSE15	SE18	SE19	SE20	SE26	SE27	SE20	SE14	SE14	SE13	W25	WNW28	WNW18	SSE10.8	WNW28
30-May	W22	W17	WSW15	WNW12	W11	W14	WNW17	WNW15	WNW11	WNW14	NW10	NW7	NW8	W8	WSW12	WSW16	SW8	S8	SW8	S5	SSE6	SSE6	SE7	SSE8	W7.8	W22
31-May	SSE9	ESE4	SE6	SSE5	SSE5	SE7	SE9	ESE11	ESE9	ESE9	ESE6	NNW6	NNW8	NNW11	NNW13	N15	NNW17	N14	NNW10	NNW13	NW13	NW16	NW13	NW12	N3.8	NNW17
SE4.0 ESE4.6 SE5.1 SE4.7 ESE4.4 ESE4.7 ESE5.9 SE5.2 ESE5.6 SE5.2 SE3.5 SSE3.1 SSW3.1 SSE2.5 S2.6 SSE2.2 SSE3.5 SSE3.5 SSE2.5 SE2.5 SE2.4 SSE2.9 SE4.0 SE4.3																									Diurnal Average	
ESE26 ESE24 ESE24 SE26 SE24 SE24 SE24 N19 NNE22 SE20 ESE22 SE24 ESE22 NNE24 NNE26 NNE27 NNE29 NNE25 SE23 ESE23 ESE23 SE25 WNW28 ESE23																									Diurnal Maximum	
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

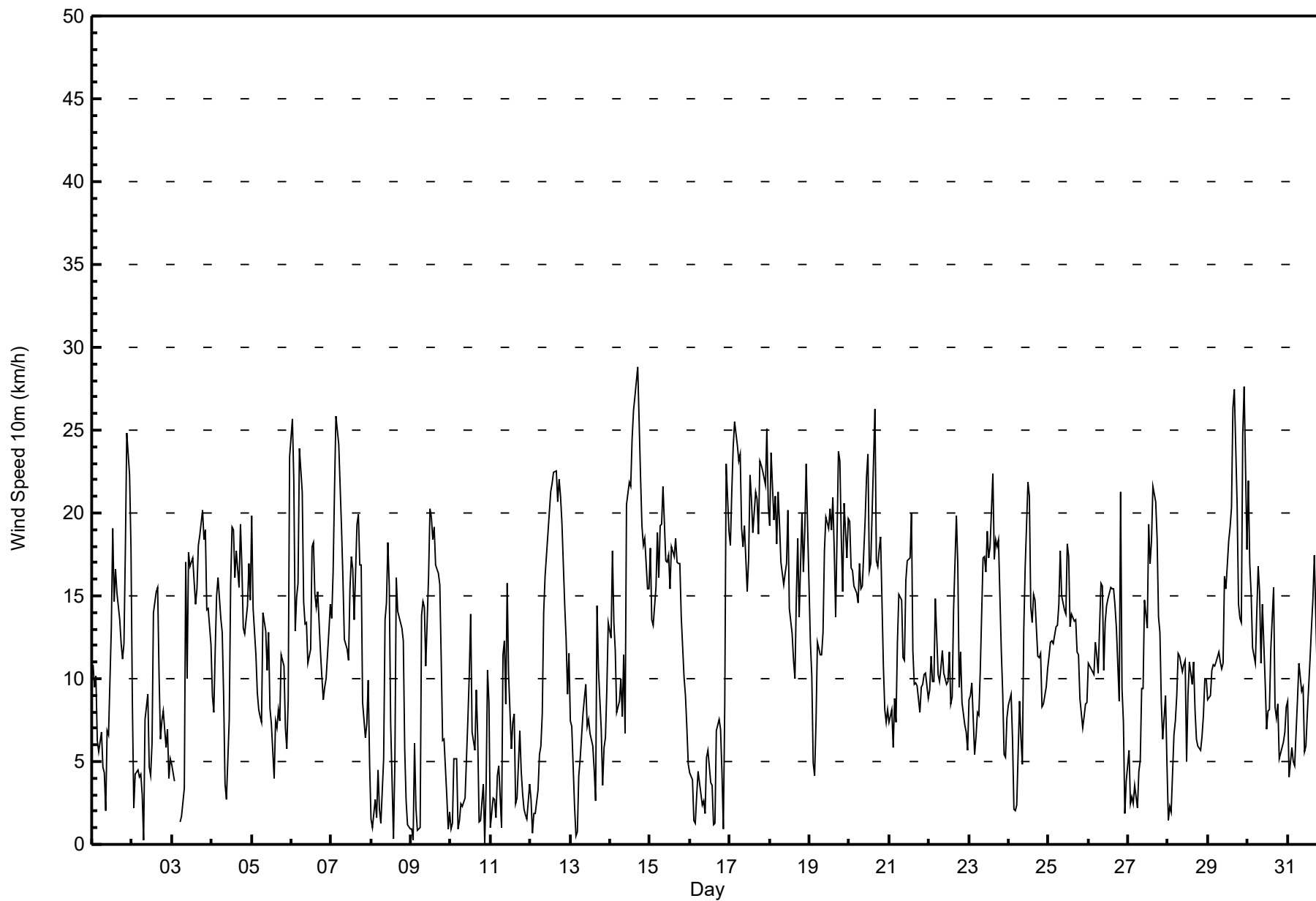
Lower Camp - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on May 29 22:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 1 km/h on May 3 02:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	3	2	2	1	1	1	2	2	3	3	4	4	4	3	3	3	2	3	7	2	4	3	4	7
2-May	4	2	3	1	2	2	2	2	2	1	2	2	3	4	5	4	5	2	4	3	2	2	2	2	5
3-May	1	1	UO	2	UO	2	2	4	3	3	4	4	4	4	4	4	4	5	5	4	5	4	4	3	5
4-May	2	2	3	3	3	3	3	3	3	2	3	4	4	4	4	4	5	6	5	4	3	3	4	3	6
5-May	5	5	4	2	2	2	2	3	3	4	4	4	3	2	3	3	3	2	2	2	2	2	6	4	6
6-May	5	4	3	3	4	2	4	2	3	3	4	5	6	6	6	5	5	5	4	3	3	3	4	4	6
7-May	3	3	3	4	4	3	2	5	5	5	5	5	5	4	3	5	5	4	4	4	2	2	3	3	5
8-May	3	2	1	2	2	3	2	3	5	5	4	5	4	2	4	4	4	3	4	3	3	1	2	2	5
9-May	2	2	4	3	2	3	2	2	2	4	6	6	5	5	5	4	4	5	5	1	1	3	2	1	6
10-May	2	2	2	3	3	2	2	1	3	3	3	4	4	4	5	4	3	2	2	1	1	1	3	5	5
11-May	1	1	1	2	2	2	4	3	4	3	3	4	4	2	3	2	2	2	3	1	1	1	1	1	4
12-May	2	2	1	2	2	1	2	3	4	4	5	6	5	5	6	5	5	5	4	4	4	3	2	2	6
13-May	3	2	1	2	1	2	2	2	3	3	3	3	3	2	3	2	5	3	7	5	4	3	3	5	7
14-May	4	4	5	4	2	2	4	4	2	2	6	5	5	5	6	5	6	6	5	4	4	4	3	4	6
15-May	3	3	3	4	4	4	5	5	5	4	5	4	5	6	5	5	5	4	4	3	2	2	2	2	6
16-May	2	2	1	2	2	2	1	1	2	2	3	3	3	2	2	2	4	4	3	2	2	6	5	4	6
17-May	4	4	4	5	4	3	3	3	3	4	4	6	5	6	6	6	5	5	4	4	4	3	5	4	6
18-May	4	4	3	3	2	3	3	3	3	3	4	5	6	4	4	3	6	5	4	4	3	4	5	4	6
19-May	3	2	3	2	2	2	3	4	4	5	6	6	7	6	7	7	5	10	8	7	6	5	5	5	10
20-May	4	4	3	3	3	3	4	4	4	5	4	4	5	5	5	4	5	5	4	4	4	3	3	3	5
21-May	2	3	3	3	3	2	3	3	3	3	3	3	4	8	4	4	4	3	3	4	3	4	4	3	8
22-May	3	4	3	3	4	4	3	3	4	4	4	4	3	4	3	4	5	7	3	4	3	2	2	2	7
23-May	2	3	2	2	2	2	2	3	4	3	6	6	6	7	8	8	7	5	4	4	3	2	1	2	8
24-May	2	2	3	1	1	1	4	2	2	3	3	5	7	5	6	4	5	6	6	4	2	2	2	2	7
25-May	2	2	2	2	2	2	3	5	5	5	5	6	6	5	6	5	5	4	4	3	2	2	2	2	6
26-May	3	2	3	3	3	2	3	3	3	3	4	6	6	6	6	6	6	5	4	6	4	4	6	3	6
27-May	2	2	2	2	1	2	2	3	3	3	4	5	5	5	5	6	5	4	4	3	2	2	3	3	6
28-May	2	1	2	2	2	2	2	2	1	2	2	5	5	5	5	4	3	2	2	1	1	2	2	2	5
29-May	2	2	2	2	2	3	2	2	2	4	6	6	7	7	7	7	7	6	5	5	4	11	6	4	11
30-May	5	7	5	5	3	4	4	4	2	3	4	4	3	4	5	4	3	3	3	2	1	2	2	2	7
31-May	2	3	2	3	1	2	2	2	2	2	2	2	2	3	3	4	4	4	3	5	3	4	4	4	5
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Lower Camp - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Lower Camp - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	134	18.06	18.06
6 - 11	246	33.15	51.21
12 - 19	277	37.33	88.54
20 - 28	84	11.32	99.87
29 - 38	1	0.13	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Lower Camp - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	15	4	9	7	8	7	11	6	9	4	2	6	10	14	12	10	134
6 - 11	11	7	5	0	4	18	75	41	9	6	12	11	9	8	15	15	246
12 - 19	27	12	0	0	0	29	96	22	4	2	11	23	19	15	11	6	277
20 - 28	8	7	0	0	0	21	35	0	0	0	0	3	5	2	1	2	84
29 - 38	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	31	14	7	12	75	217	69	22	12	25	43	43	39	39	33	742

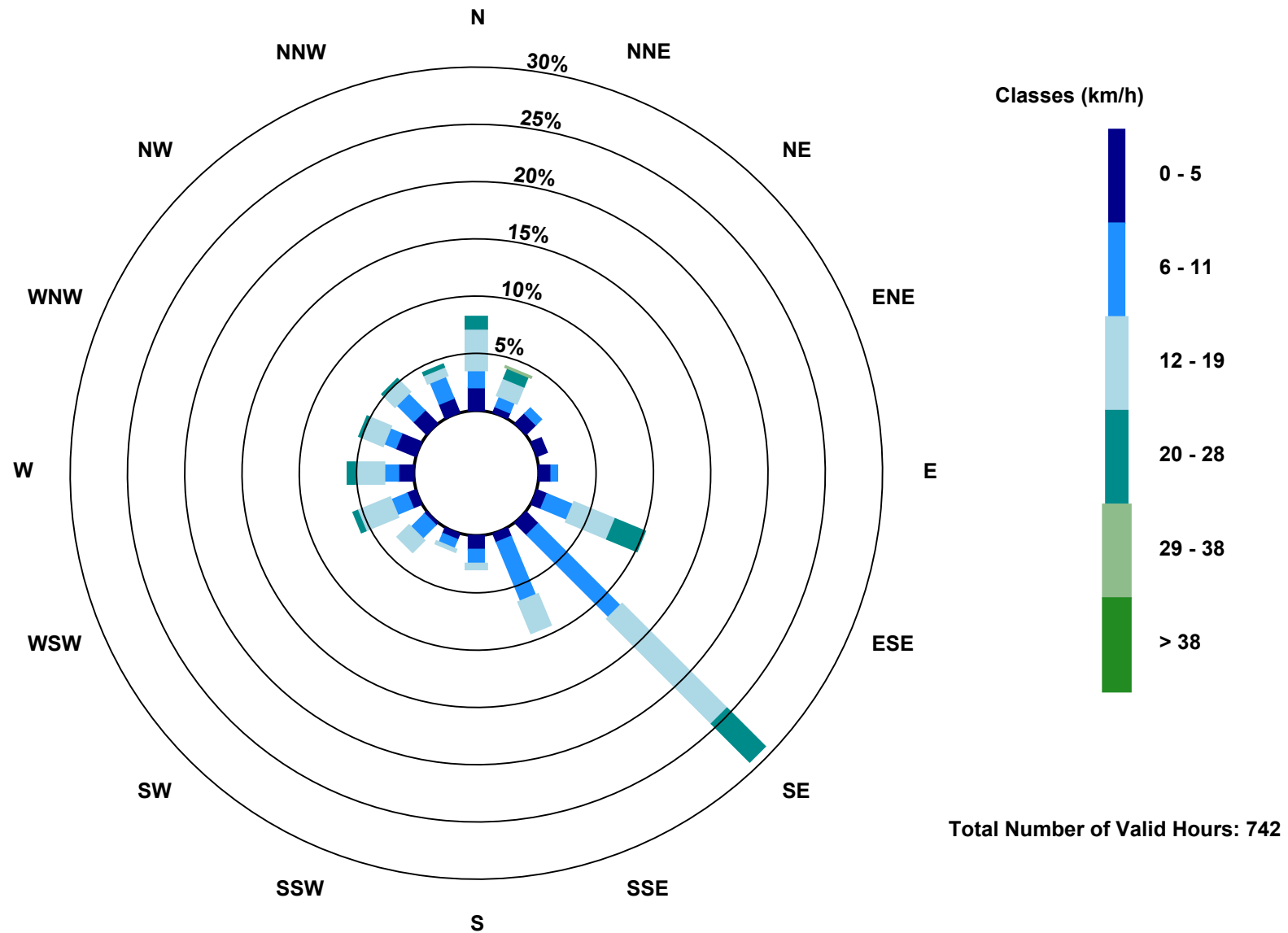
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Lower Camp





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Lower Camp - May 2025

Direction of Maximum Speed: 26 deg on May 14 17:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 124.1 deg on May 17																					Hours of Data:		742		
Direction of Minimum Speed: 90 deg on May 10 21:00										Direction of Minimum Daily Speed Average: 0.9 deg on May 13											Hours of Missing Data:		2		
Monthly Average Direction: 137.2 deg																					Percent Operational Time:		99.7		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	359	341	353	348	303	321	349	72	95	216	162	137	126	127	124	127	127	132	127	127	123	125	122	119	118.1
2-May	133	135	124	279	264	310	272	188	127	128	102	41	298	290	297	302	322	324	9	15	317	287	294	301	311.2
3-May	269	307	UO	330	UO	39	6	92	131	144	260	272	284	285	271	266	259	291	307	302	306	293	316	321	285.1
4-May	295	247	248	266	304	305	314	311	342	3	247	256	256	262	264	255	233	225	221	217	225	249	276	290	261.5
5-May	295	342	11	4	9	29	36	305	297	298	272	288	41	78	2	355	14	344	28	12	342	43	94	119	353.4
6-May	123	122	104	119	114	126	122	119	123	133	149	220	224	227	213	217	221	199	183	168	159	155	152	145	154.3
7-May	140	131	127	129	128	127	124	136	160	174	180	234	254	248	246	256	251	245	241	211	189	194	216	185	182.9
8-May	184	256	323	282	302	336	78	306	357	14	13	23	9	114	320	17	13	10	26	18	353	334	40	161	6.9
9-May	60	358	139	131	94	53	116	123	125	115	260	249	256	257	259	258	255	255	254	234	217	260	351	91	233.3
10-May	1	135	119	138	162	215	329	84	186	280	277	257	264	315	307	260	267	98	2	170	90	133	119	120	239.4
11-May	9	290	108	63	278	282	185	141	137	146	124	126	278	82	129	323	11	346	334	308	282	293	282	285	128.4
12-May	283	289	324	335	319	297	317	330	9	3	8	7	5	17	16	10	8	8	9	10	354	0	324	321	1.0
13-May	339	322	308	35	40	356	1	334	349	351	306	278	267	50	35	31	124	127	221	240	130	137	126	135	32.5
14-May	141	134	141	138	123	136	145	230	267	326	341	345	355	18	17	16	26	14	5	355	356	3	8	359	15.0
15-May	0	5	5	7	3	8	21	5	17	355	341	335	0	15	6	9	10	25	20	28	26	39	29	342	8.3
16-May	346	341	357	63	37	13	4	31	6	23	308	328	265	9	72	35	117	105	98	134	279	115	127	121	87.0
17-May	127	120	116	125	120	125	124	127	122	126	133	130	121	125	126	125	125	128	120	118	117	121	129	131	124.1
18-May	127	120	116	121	105	119	126	126	124	117	119	123	148	142	148	147	133	129	131	125	124	131	131	130	126.3
19-May	125	108	125	134	125	119	131	151	135	133	137	141	134	131	132	137	150	139	141	139	140	130	135	130	134.5
20-May	131	132	130	128	127	125	128	129	128	131	123	124	134	132	123	126	135	131	129	130	143	144	138	143	129.8
21-May	133	99	158	149	129	110	121	122	132	129	122	117	118	127	174	177	190	198	188	166	159	146	157	156	140.3
22-May	150	151	151	148	136	146	151	155	152	150	165	208	238	221	158	140	132	133	157	143	129	142	140	154	152.5
23-May	132	137	140	154	139	134	135	129	122	124	131	135	141	128	123	116	129	135	130	148	165	151	142	146	133.0
24-May	140	135	143	271	220	301	105	128	137	123	123	128	134	145	155	126	142	165	210	146	144	142	141	137	140.2
25-May	134	129	129	128	128	126	129	138	147	153	158	145	140	155	185	160	160	158	168	163	164	150	146	139	146.5
26-May	131	130	127	121	115	112	121	121	128	144	135	161	163	152	155	157	172	160	169	279	290	244	197	237	150.4
27-May	212	185	252	194	177	99	208	241	247	248	271	260	254	251	257	261	261	253	262	262	244	229	221	245	250.3
28-May	311	117	112	134	123	128	127	126	128	129	122	207	237	249	257	214	182	164	151	141	140	140	136	135	153.5
29-May	137	137	132	132	141	142	135	138	136	139	150	153	142	141	139	133	134	138	145	144	140	266	290	287	148.8
30-May	263	278	258	294	280	263	291	303	294	299	321	324	324	275	251	255	225	188	216	181	152	151	146	147	267.5
31-May	149	120	141	153	147	134	127	122	121	120	111	344	331	335	344	4	347	352	335	344	315	312	312	316	356.1
136.4 122.7 125.3 127.8 118.5 117.7 116.8 125.3 123.1 125.4 141.9 167.8 192.9 166.3 172.8 167.9 155.3 147.4 147.6 134.8 143.8 150.7 141.4 136.4																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

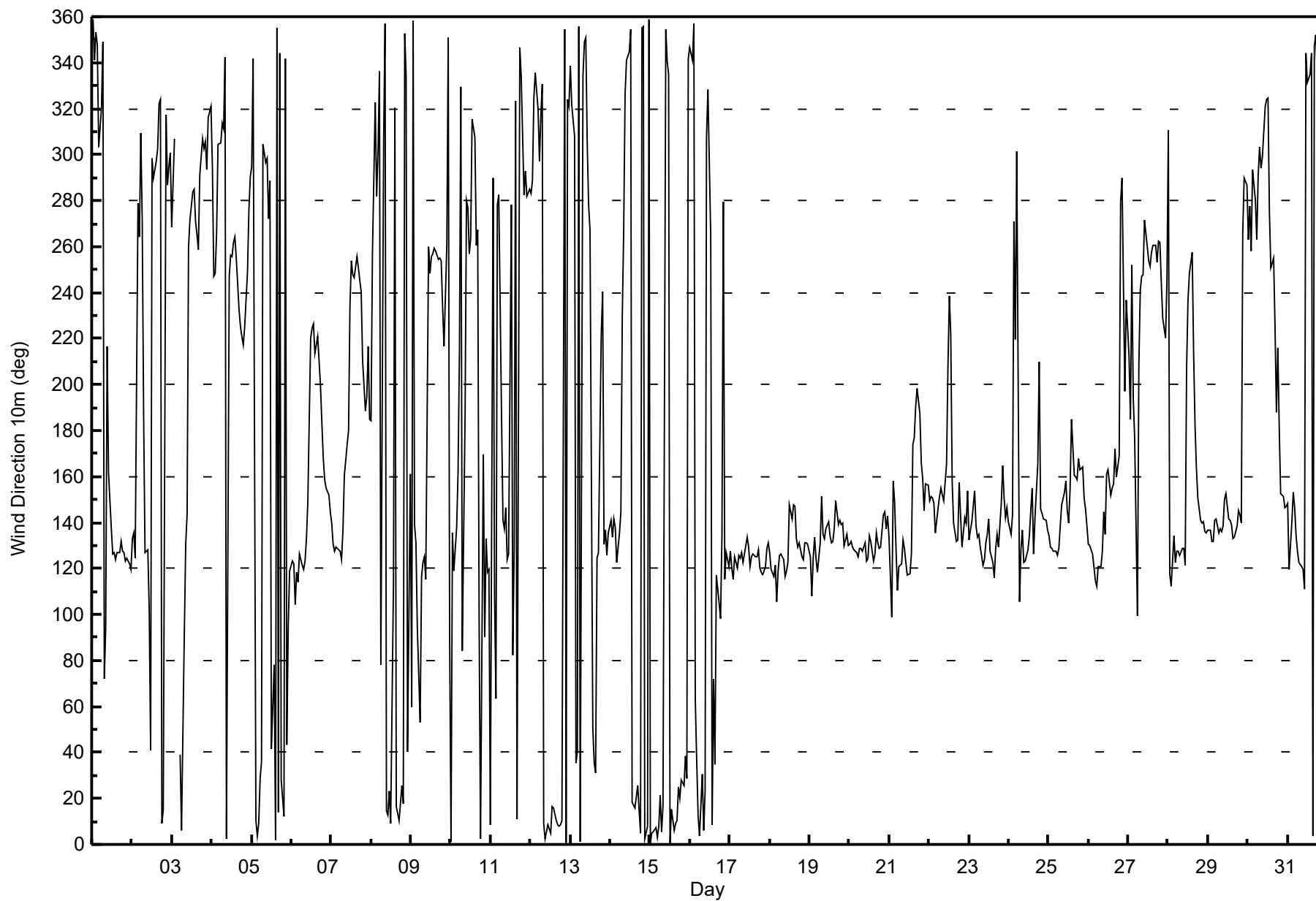
Lower Camp - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 101 deg on May 8 14:00																									Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7
Minimum Value: 6 deg on May 3 09:00																									
Percentiles: P ₁ = 8 P ₁₀ = 12 Q ₁ = 16 Median = 22 Q ₃ = 35 P ₉₀ = 60 P ₉₉ = 95																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	20	23	20	23	19	18	39	41	88	32	41	21	8	20	7	10	12	9	14	20	6	6	6	10	88
2-May	31	69	61	21	35	30	71	97	14	8	47	56	53	26	21	23	32	21	49	21	36	21	26	22	97
3-May	18	13	UO	85	UO	50	65	81	6	46	18	15	20	22	20	17	16	14	11	12	12	13	20	19	85
4-May	14	17	16	15	14	13	13	18	88	67	37	17	13	16	20	18	22	19	21	22	19	22	19	10	88
5-May	11	42	24	19	23	17	23	23	27	41	24	47	30	55	50	45	35	30	19	18	27	34	51	11	55
6-May	11	10	10	12	11	6	9	10	12	15	38	46	23	22	33	33	24	36	33	27	24	24	24	22	46
7-May	18	9	8	8	8	8	7	23	32	37	38	29	16	15	15	16	15	18	17	26	24	26	21	44	44
8-May	90	83	49	56	26	66	71	43	34	24	19	26	40	101	70	20	21	19	18	16	38	63	89	93	101
9-May	74	80	37	98	87	62	9	6	8	33	48	19	16	18	17	16	19	22	14	17	15	62	86	81	98
10-May	71	89	30	55	95	80	60	85	75	44	48	37	25	66	74	27	45	93	90	34	99	50	24	35	99
11-May	96	44	60	88	21	27	83	19	21	29	9	23	76	27	27	74	58	20	28	22	42	47	55	19	96
12-May	58	61	64	59	35	19	27	24	19	18	18	19	19	21	19	20	22	19	15	13	19	17	16	13	64
13-May	25	16	81	84	71	33	31	28	30	30	35	55	55	46	61	70	12	18	52	76	64	33	21	25	84
14-May	26	15	26	24	27	19	26	42	18	39	24	21	21	20	17	17	16	20	19	20	20	17	17	18	42
15-May	18	18	18	18	18	20	18	21	20	23	24	24	30	25	25	22	25	22	19	15	12	12	23	39	39
16-May	42	41	55	88	45	35	33	67	76	84	61	60	90	73	92	98	47	40	33	42	97	63	13	14	98
17-May	16	14	10	11	9	10	9	9	10	16	23	22	12	14	16	14	14	15	9	9	9	10	10	12	23
18-May	12	9	10	11	9	9	9	9	11	13	14	13	31	28	35	32	26	15	15	11	11	12	10	12	35
19-May	15	16	47	44	27	13	22	33	23	19	21	23	22	16	20	24	31	24	22	23	25	14	17	15	47
20-May	12	14	13	14	15	16	14	16	18	18	10	10	22	19	13	10	20	17	15	14	27	31	38	31	38
21-May	27	30	45	30	37	14	11	12	22	20	13	14	14	25	33	39	36	31	37	31	29	28	31	28	45
22-May	30	29	28	27	17	27	29	30	32	36	37	41	21	36	35	25	16	26	32	25	22	24	22	29	41
23-May	17	22	18	39	25	18	24	31	11	11	19	21	27	21	17	15	17	20	13	30	34	26	19	22	39
24-May	18	13	39	59	43	33	35	20	57	14	9	12	23	30	35	16	26	43	33	27	23	19	18	17	59
25-May	17	12	12	13	12	14	14	19	28	32	35	28	24	37	40	35	33	34	33	33	30	26	25	22	40
26-May	18	18	21	23	17	15	15	11	12	30	21	41	38	33	32	36	37	32	36	16	28	47	81	52	81
27-May	29	65	40	59	49	87	44	41	20	24	19	25	18	23	21	16	15	16	20	14	14	21	27	80	87
28-May	82	72	89	28	28	20	11	10	10	9	12	84	54	46	38	33	38	35	26	17	15	16	14	12	89
29-May	16	15	12	14	18	20	12	14	16	24	30	36	27	28	23	14	13	21	28	26	24	46	12	15	46
30-May	14	17	21	22	28	14	13	14	22	17	34	54	46	46	29	21	31	39	26	30	20	22	22	19	54
31-May	21	62	34	43	24	20	17	12	14	12	40	19	17	20	21	17	20	21	25	24	23	18	31	18	62
<div>96 89 89 98 95 87 83 97 88 84 61 84 90 101 92 98 58 93 90 76 99 63 89 93</div> <div>Diurnal Maximum</div>																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Lower Camp - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS13 FORT MCKAY SOUTH MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	710	34	34	100	-	-	50.9	0	6	0
TRS(ppb) Average	708	36	36	100	8.5	1	4.9	0	1.4	0
THC(ppm) Average	710	34	34	100	-	-	2.8	-	2.3	-
NMHC(ppm) Average	710	34	34	100	-	-	0.378	-	0.113	-
CH4(ppm) Average	710	34	34	100	-	-	2.6	-	2.2	-
O3(ppb) Average	703	35	41	99.19	-	-	69.2	0	38.6	-
NO2(ppb) Average	708	36	36	100	-	-	25.3	0	7.1	-
NO(ppb) Average	708	36	36	100	-	-	26	-	4	-
NOX(ppb) Average	708	36	36	100	-	-	43	-	10.4	-
PM2.5(ug/m3) Average	744	0	0	100	-	-	545.1	46	258.9	4
ET(C) Average	744	0	0	100	-	-	34.1	-	24.3	-
RH(%) Average	743	0	1	99.87	-	-	100	-	78.8	-
WS(km/h) Average	740	0	4	99.46	-	-	28	-	16	-
WD(deg) Average	740	0	4	99.46	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT MCKAY SOUTH (AMS13)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	710	1.71	4	-	0	0.2	0.3	0.5	0.9	4.2	50.9
TRS(ppb) Average	708	0.59	0.3	-	0.3	0.4	0.4	0.5	0.6	0.8	4.9
THC(ppm) Average	710	2.12	0.1	-	1.9	2	2	2.1	2.1	2.3	2.8
NMHC(ppm) Average	710	0.014	0.049	-	0	0	0	0	0	0	0.378
CH4(ppm) Average	710	2.11	0.1	-	1.9	2	2	2.1	2.1	2.2	2.6
O3(ppb) Average	703	27.45	13.2	-	1.3	8.2	18.2	28.2	37.9	44.3	69.2
NO2(ppb) Average	708	4.31	4	-	0.2	0.9	1.6	3	5.4	9.5	25.3
NO(ppb) Average	708	1.03	2.5	-	0	0.1	0.2	0.3	0.8	2.2	26
NOX(ppb) Average	708	5.34	5.5	-	0.2	1.1	1.8	3.5	6.5	11.8	43
PM2.5(ug/m3) Average	744	23.58	68.5	-	0.8	2.8	3.9	6.1	9.6	30.5	545.1
Temperature 2 m (C) Average	744	13.73	7.3	-	-3.6	4.4	8.7	13.4	18.5	23.9	34.1
Relative Humidity (%) Average	743	54.16	22.7	-	15.9	25.3	33.3	52.4	73.3	85	100
Wind Speed 10 m (km/h) Average	740	9.7	6	-	0	2	5	9	14	18	28
Wind Direction 10 m (deg) Average	740	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT MCKAY SOUTH (AMS13)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
O3	13 May 2025 10:00	13 May 2025 10:00	1	Maintenance - troubleshooting station calibrator
O3	14 May 2025 10:00	14 May 2025 11:00	2	Maintenance - troubleshooting station calibrator
O3	22 May 2025 09:00	22 May 2025 09:00	1	Maintenance - verify daily QA response
O3	22 May 2025 11:00	22 May 2025 12:00	2	Maintenance - troubleshooting station calibrator
Relative Humidity	27 May 2025 00:00	27 May 2025 00:00	1	Sensor operated out of range
Wind Speed, Wind Direction	09 May 2025 01:00	09 May 2025 01:00	1	Unstable Operation - flatline in analyzer output signal
Wind Speed, Wind Direction	16 May 2025 06:00	16 May 2025 06:00	1	Unstable Operation - flatline in analyzer output signal
Wind Speed, Wind Direction	21 May 2025 07:00	21 May 2025 07:00	1	Unstable Operation - flatline in analyzer output signal
Wind Speed, Wind Direction	23 May 2025 05:00	23 May 2025 05:00	1	Unstable Operation - flatline in analyzer output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

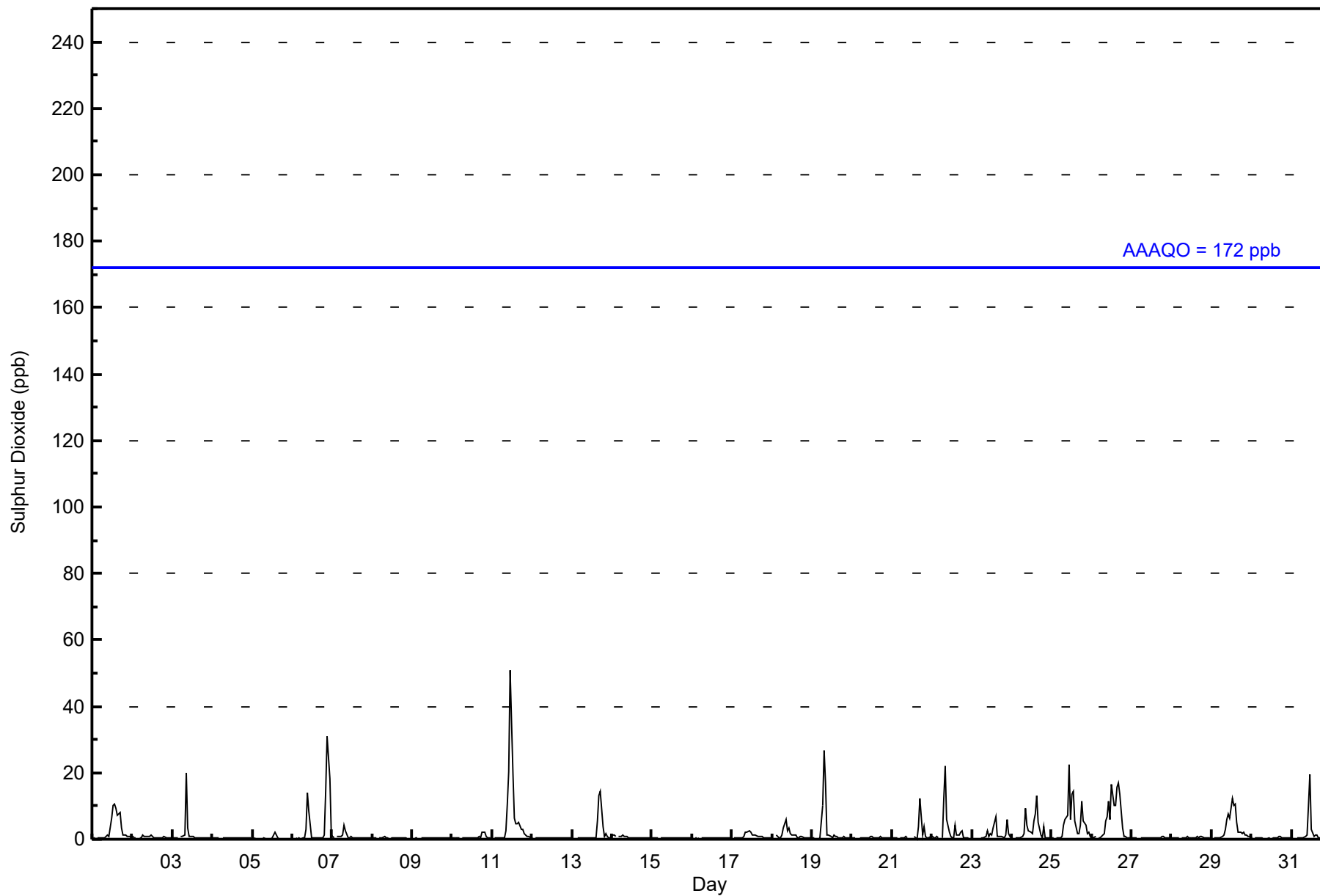
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 50.9 ppb on May 11 12:00 Maximum Daily Average: 6.0 ppb on May 11																			Hours in Service: 744								
Minimum Value: 0.0 ppb on May 5 09:00 Minimum Daily Average: 0.3 ppb on May 5 Maximum Diurnal Average: 3.8 ppb at hour 12 Minimum Diurnal Average: 0.4 ppb at hour 5 Monthly Average: 1.71 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.5 Q ₃ = 0.9 P ₉₀ = 4.2 P ₉₉ = 19.7																			Hours of Data: 710								
																			Hours of Missing Data: 34								
																			Hours of Calibration: 34								
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	0.2	0.3	Z	0.3	0.2	0.2	0.2	0.5	1.0	1.1	1.0	6.2	10.4	10.8	9.2	7.0	8.1	3.5	1.5	1.5	1.1	0.9	0.8	0.6	2.9	10.8	
2-May	0.6	0.6	0.5	Z	0.3	0.5	1.2	1.0	1.0	0.9	1.0	1.5	0.8	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.7	1.5	
3-May	0.4	0.4	0.4	0.5	Z	0.7	0.9	1.3	19.7	3.3	1.0	0.9	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	1.5	19.7	
4-May	0.4	0.3	0.3	0.3	0.4	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.5	0.4	0.4	0.5	0.5	0.3	0.3	0.4	0.5	
5-May	Z	0.3	0.2	0.2	0.2	0.0	0.1	0.3	0.0	0.0	0.1	0.0	0.6	1.9	1.2	0.3	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.3	1.9	
6-May	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.6	3.0	14.1	8.4	0.6	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	1.2	14.6	30.8	18.3	1.2	4.2	30.8
7-May	0.8	0.4	Z	0.7	0.9	1.0	1.2	4.3	2.3	0.6	0.6	0.7	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.8	4.3	
8-May	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.7	0.3	0.2	0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.7	
9-May	0.2	0.2	0.3	0.4	Z	0.5	0.6	0.6	0.4	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6	
10-May	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.5	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	1.0	0.4	2.2	2.3	0.9	0.5	0.4	0.4	0.6	2.3	
11-May	Z	0.4	0.4	0.3	0.4	0.4	0.4	0.5	2.5	10.5	20.3	50.9	20.1	6.5	4.8	4.7	4.9	3.0	2.9	1.9	1.2	1.0	0.7	0.5	6.0	50.9	
12-May	0.5	Z	0.3	0.3	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	
13-May	0.5	0.4	Z	0.4	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.4	0.4	0.4	0.6	5.5	12.9	14.5	3.6	1.1	1.5	0.6	0.5	0.4	2.0	14.5	
14-May	1.1	1.2	1.0	Z	0.8	0.6	1.1	0.9	0.7	1.0	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.6	1.2	
15-May	0.2	0.3	0.3	0.2	Z	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.5	
16-May	0.2	0.1	0.2	0.2	0.2	Z	0.5	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.5	
17-May	Z	0.3	0.3	0.3	0.4	0.3	0.5	0.8	2.2	2.1	2.4	2.2	1.3	1.3	1.2	0.9	0.9	0.8	0.7	0.5	0.4	0.3	0.3	0.4	0.9	2.4	
18-May	0.4	Z	1.4	1.0	0.3	0.2	1.3	3.3	6.0	2.7	3.3	1.7	1.1	1.2	1.3	0.5	0.5	0.8	0.6	0.5	0.3	0.3	0.3	0.3	1.3	6.0	
19-May	0.5	0.6	Z	0.2	0.2	0.5	10.2	26.7	16.7	1.3	1.4	1.0	0.6	1.2	0.7	0.9	0.6	0.4	0.6	1.0	0.3	0.3	0.5	0.6	2.9	26.7	
20-May	0.4	0.3	0.5	Z	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.6	0.8	0.5	0.6	0.3	0.6	0.8	0.6	0.6	0.5	0.4	0.4	0.3	0.5	0.8	
21-May	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.6	0.8	0.6	C	C	C	0.7	0.2	0.1	3.8	12.2	1.4	4.0	0.9	0.5	0.5	0.8	1.5	12.2	
22-May	0.9	0.5	0.6	0.7	0.6	Z	0.6	12.3	22.1	6.0	2.0	0.9	0.5	0.3	4.4	1.1	1.1	2.1	2.5	0.5	0.4	0.3	0.1	0.2	2.6	22.1	
23-May	Z	0.2	0.1	0.1	0.0	0.1	0.4	0.6	1.0	2.5	1.0	1.5	1.4	3.4	6.8	0.9	0.6	0.8	1.0	0.5	1.2	5.8	1.9	0.7	1.4	6.8	
24-May	0.7	Z	0.5	0.4	0.5	0.5	1.0	1.6	9.4	4.4	2.6	2.1	1.8	5.7	7.8	13.3	5.0	1.5	0.5	3.6	0.6	0.6	0.5	0.5	2.8	13.3	
25-May	0.4	0.4	Z	0.4	0.3	0.5	0.9	4.2	6.1	7.3	22.7	6.1	13.5	14.3	5.4	1.5	1.8	4.4	11.5	5.6	4.4	1.6	2.0	0.8	5.1	22.7	
26-May	0.6	0.6	0.9	Z	0.5	0.5	0.8	1.9	5.7	6.7	11.6	5.9	16.5	10.4	10.4	15.7	16.9	13.7	3.6	1.0	0.9	0.6	0.6	0.5	5.5	16.9	
27-May	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.6	0.5	0.5	0.6	0.5	0.8	
28-May	0.5	0.4	0.4	0.3	0.4	Z	0.5	0.6	0.5	0.7	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.4	0.3	0.3	0.4	0.5	0.7	
29-May	Z	0.4	0.4	0.3	0.4	0.4	0.7	1.1	3.1	6.0	7.8	6.4	12.4	10.0	10.5	5.0	2.0	2.1	1.8	2.1	1.3	1.3	0.6	0.6	3.3	12.4	
30-May	0.5	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.2	0.1	0.1	0.3	0.4	0.5	0.7	0.7	0.6	0.5	0.4	0.3	0.4	0.3	0.3	0.7	
31-May	0.3	0.3	Z	0.2	0.3	0.3	0.4	0.6	0.8	1.4	10.1	19.6	2.9	0.9	1.4	1.1	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	1.9	19.6	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	95.77	95.77
11 - 20	25	3.52	99.30
21 - 60	5	0.70	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	56	60	15	2	6	8	36	119	94	62	57	45	28	16	27	46	677
11 - 20	0	0	1	0	0	0	2	4	16	1	0	0	1	0	0	0	25
21 - 60	0	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	5
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	60	16	2	6	8	38	124	113	64	57	45	29	16	27	46	707

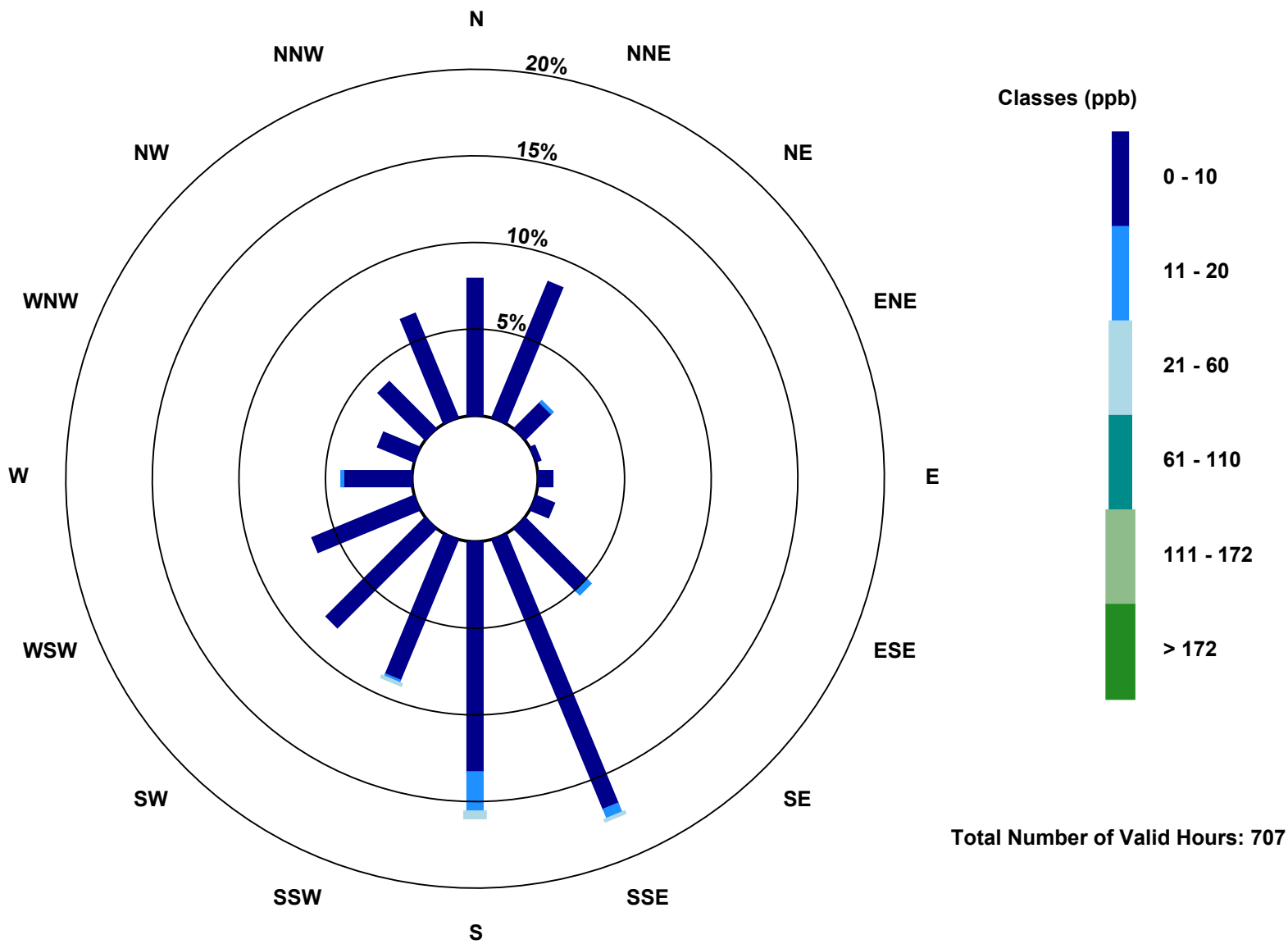
Total Number of Valid Hours: 707

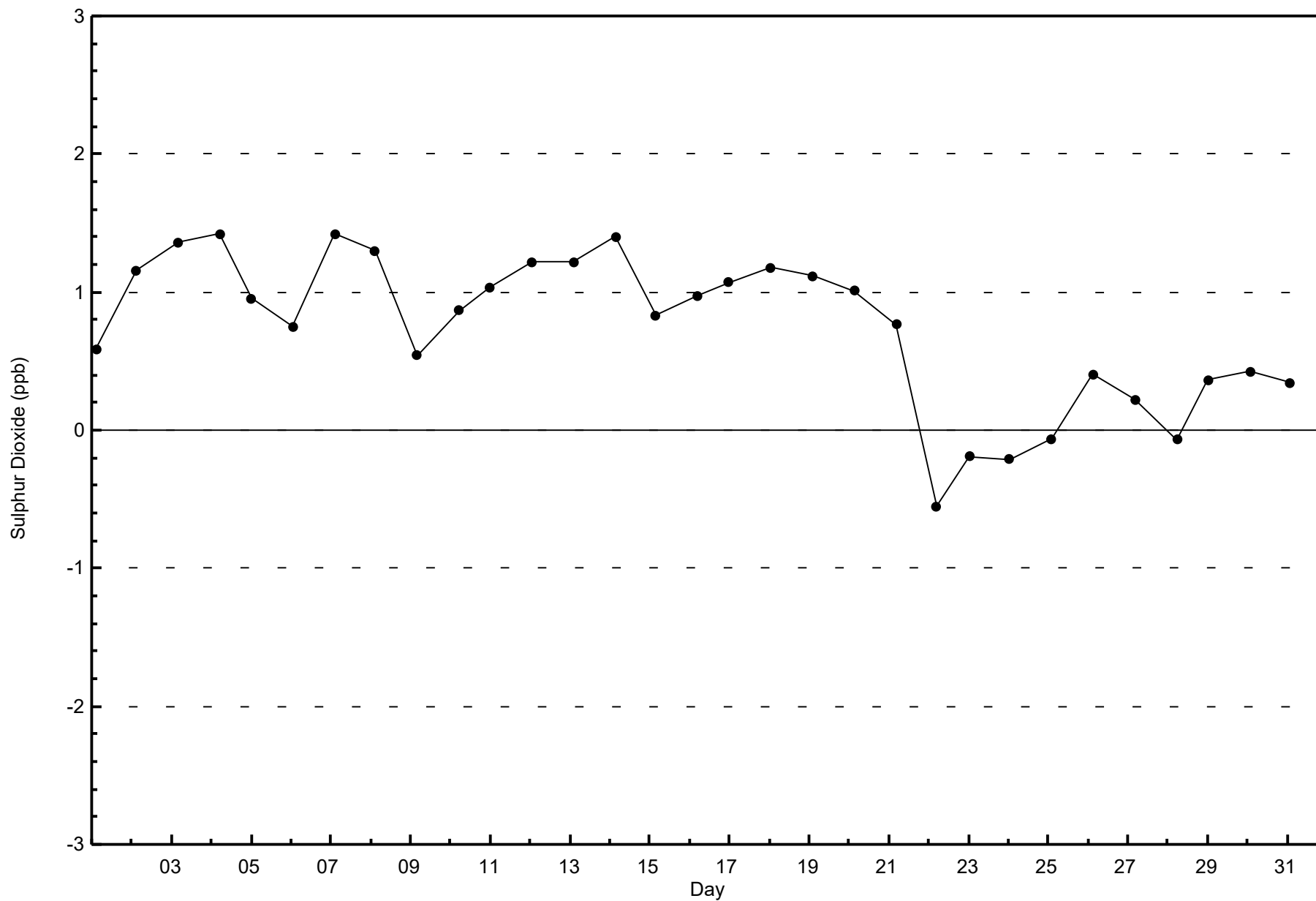
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Fort McKay South

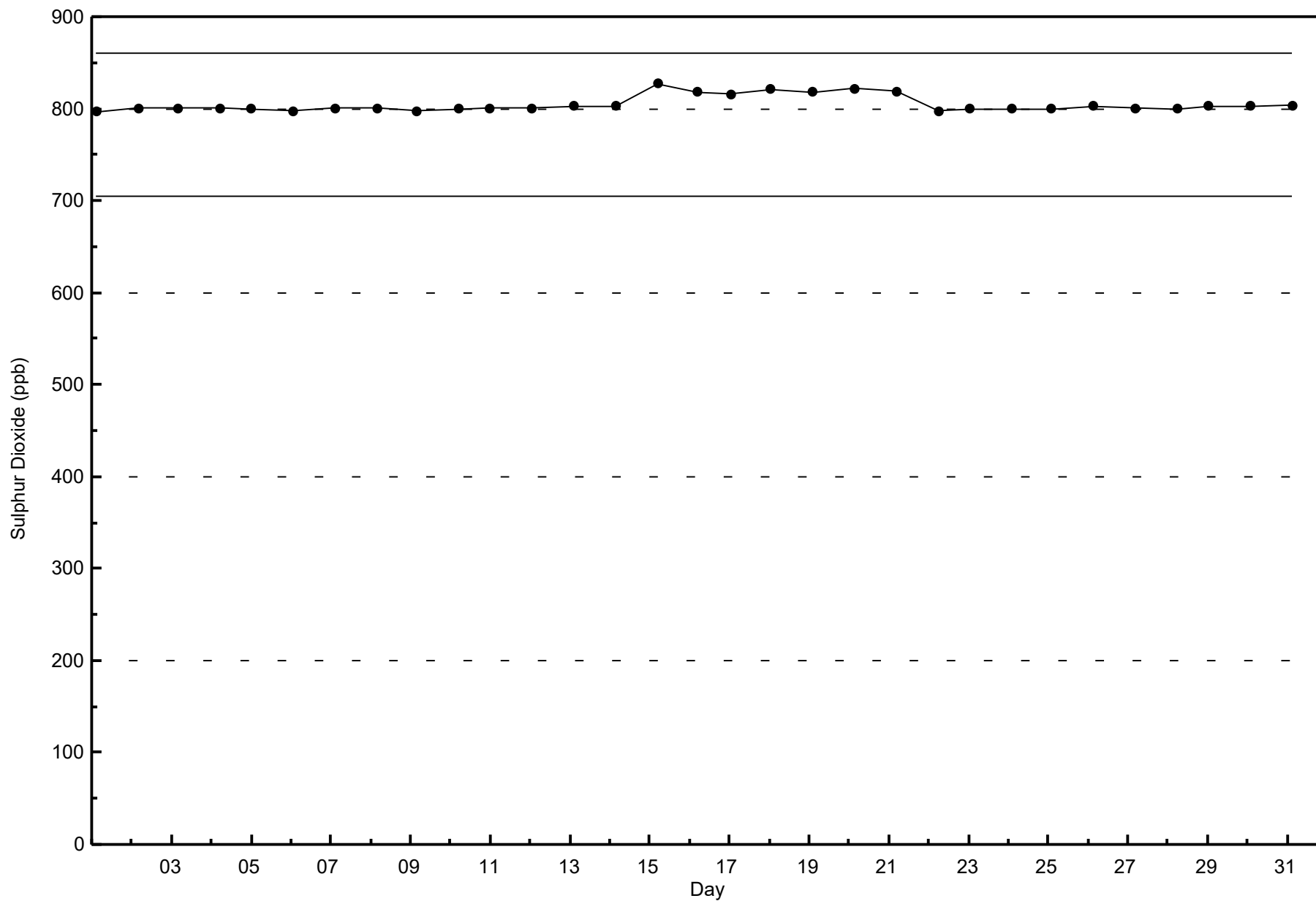






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - May 2025

Number of Exceedences (AAAQG): 30-Min: 1 Maximum Value: 8.5 ppb on May 14 07:00 Maximum Daily Average: 1.4 ppb on May 31																				Periods in Service: 1488 Periods of Valid Data: 1417 Periods of Invalid Data: 71 Periods of Calibration: 71 Percent Operational Time: 100.0						
Minimum Value: 0.3 ppb on May 18 00:00 Maximum Diurnal Average: 0.8 ppb at hour 7 Monthly Average: 0.59 ppb										Minimum Daily Average: 0.4 ppb on May 15 Minimum Diurnal Average: 0.5 ppb at hour 14 Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 2.0																
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.4 0.5	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.6 0.6	0.6 0.6	0.5 0.6	0.5 0.5	0.5 0.6	0.6 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5	0.6
2-May	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	Z SP	0.5 0.5	0.5 0.6	0.5 0.4	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.6 0.6	0.6 0.6	0.5	0.6	
3-May	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	Z SP	0.6 0.7	0.8 0.9	0.9 1.0	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.5	1.0
4-May	Z SP	1.2 0.9	0.7 0.6	0.6 0.6	0.6 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	1.2
5-May	0.4 0.4	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4	0.5	
6-May	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.3 0.4	0.4 0.4	0.4 0.5	0.7 0.7	0.6 0.5	0.7 1.4	0.7 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.9 1.1	0.9 1.3	1.0 0.5	0.5 0.5	0.6	1.4	
7-May	0.5 0.5	0.5 0.5	0.5 0.8	Z SP	0.6 0.6	0.7 1.0	0.9 0.7	0.7 0.7	0.7 0.6	0.5 0.5	0.5 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.6	1.0
8-May	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	Z SP	0.5 0.5	0.6 0.6	0.6 0.8	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.5	0.8	
9-May	0.4 0.4	0.4 0.5	0.5 0.6	0.7 0.7	0.7 0.7	Z SP	0.7 0.7	0.9 0.7	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.9	
10-May	Z SP	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5	0.6	
11-May	0.5 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.7 0.7	0.5 0.7	0.7 0.8	0.8 0.5	0.6 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.6 0.6	0.5	0.8	
12-May	0.6 0.6	0.6 0.5	Z SP	0.6 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
13-May	0.5 0.5	0.4 0.4	0.4 0.4	Z SP	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.6	C C	C C	C C	C C	C 0.6	0.5 0.5	0.6 0.7	1.1 1.0	1.2 0.8	0.6 0.6	0.5 0.5	1.2 1.4	1.1 1.0	0.8 0.8	0.7	1.4	
14-May	0.7 0.7	0.8 1.0	1.0 0.7	0.6 0.5	Z SP	0.5 0.5	1.4 8.5	0.7 0.5	0.4 0.5	0.9 0.9	0.7 0.7	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	8.5	
15-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.4	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	<div><div>Z</div><div>SP</div></div>	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	0.6	
17-May	<div><div>0.4</div><div>0.4</div></div>	<div><div>Z</div><div>SP</div></div>	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.7 0.7	0.7 0.7	0.8 0.8	0.7 0.6	0.5 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.5	0.8	
18-May	<div><div>0.3</div><div>0.3</div></div>	<div><div>0.4</div><div>0.6</div></div>	<div><div>Z</div><div>SP</div></div>	0.6 0.7	0.5 0.6	0.6 0.5	0.4 0.7	1.3 1.0	0.8 0.6	0.6 0.6	0.6 0.9	0.6 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	1.3	
19-May	<div><div>0.6</div><div>0.9</div></div>	<div><div>1.2</div><div>1.2</div></div>	<div><div>0.9</div><div>0.6</div></div>	<div><div>Z</div><div>SP</div></div>	0.6 0.7	0.9 1.0	1.0 0.7	0.6 0.7	0.6 0.6	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.6 0.5	0.6	1.2
20-May	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>Z</div><div>SP</div></div>	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.6	0.7 0.5	0.5 0.5	0.7 0.6	0.5 0.6	0.7 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5	0.7
21-May	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>Z</div><div>SP</div></div>	0.5 0.5	0.7 0.8	0.6 0.6	0.5 0.4	0.5 0.5	0.5 0.6	0.7 0.4	0.6 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.6	0.4 0.4	0.5 0.5	0.5 0.5	0.5	0.8	
22-May	<div><div>Z</div><div>SP</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.8</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	0.5	0.9	
23-May	<div><div>0.7</div><div>0.6</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.8</div><div>0.9</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.9</div><div>0.6</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.8</div></div>	<div><div>0.7</div><div>0.5</div></div>	0.6	1.2	
24-May	<div><div>1.1</div><div>0.9</div></div>	<div><div>0.8</div><div>0.7</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.9</div><div>0.7</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.8</div><div>0.8</div></div>	<div><div>0.8</div><div>0.8</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.6</div><div>0.9</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.9</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	0.7	1.1		
25-May	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.4</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.4</div><div>0.6</div></div>	<div><div>0.5</div><div>0.9</div></div>	<div><div>0.7</div><div>1.9</div></div>	<div><div>0.9</div><div>1.8</div></div>	<div><div>2.2</div><div>1.0</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.7</div><div>0.6</div></div>	0.7	2.2	
26-May	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.7</div><div>0.9</div></div>	<div><div>1.1</div><div>0.9</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.8</div><div>0.9</div></div>	<div><div>1.0</div><div>1.0</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.7</div><div>0.9</div></div>	<div><div>1.1</div><div>0.6</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.8</div><div>0.7</div></div>	<div><div>0.8</div><div>0.8</div></div>	<div><div>0.8</div><div>0.8</div></div>	0.7	1.1	
27-May	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.7</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.6</div><div>0.7</div></div>	0.5	0.7	
28-May	<div><div>Z</div><div>SP</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.4</div></div>	<div><div>0.4</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.4</div><div>0.4</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.6</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.6</div><div>0.9</div></div>	<div><div>0.8</div><div>0.9</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.8</div><div>1.6</div></div>	<div><div>0.9</div><div>1.1</div></div>	0.7	1.6	
29-May	<div><div>1.0</div><div>1.0</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.9</div><div>0.8</div></div>	<div><div>0.8</div><div>0.7</div></div>	<div><div>0.7</div><div>1.0</div></div>	<div><div>1.3</div><div>1.0</div></div>	<div><div>0.8</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.6</div><div>0.5</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.6</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.8</div><div>0.8</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>0.8</div><div>0.5</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.6</div><div>0.7</div></div>	0.7	1.3	
30-May	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>2.3</div><div>1.8</div></div>	<div><div>1.6</div><div>1.9</div></div>	<div><div>2.3</div><div>2.3</div></div>	<div><div>1.9</div><div>1.3</div></div>	<div><div>0.8</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.6</div><div>0.6</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.5</div></div>	<div><div>0.5</div><div>0.7</div></div>	<div><div>0.6</div><div>1.0</div></div>	<div><div>1.4</div><div>1.3</div></div>	<div><div>1.3</div><div>1.2</div></div>	<div><div>1.0</div><div>0.9</div></div>	<div><div>0.8</div><div>0.9</div></div>	<div><div>0.9</div><div>0.9</div></div>	<div><div>0.8</div><div>1.0</div></div>	<div><div>1.1</div><div>1.1</div></div>	<div><div>1.1</div><div>1.0</div></div>	1.0	2.3	
31-May	<div><div>1.0</div><div>0.8</div></div>	<div><div>0.8</div><div>0.7</div></div>	<div><div>0.7</div><div>0.7</div></div>	<div><div>Z</div><div>SP</div></div>	<div><div>1.9</div><div>2.3</div></div>	<div><div>2.1</div><div>1.9</div></div>	<div><div>2.1</div><div>2.3</div></div>	<div><div>2.2</div><div>2.2</div></div>	<div><div>2.4</div><div>2.2</div></div>	<div><div>1.8</div><div>2.5</div></div>	<div><div>1.6</div><div>1.7</div></div>	<div><div>2.0</div><div>1.7</div></div>	<div><div>1.3</div><div>1.1</div></div>	<div><div>1.0</div><div>1.0</div></div>	<div><div>1.1</div><div>1.4</div></div>	<div><div>1.0</div><div>1.0</div></div>	<div><div>0.9</div><div>1.3</div></div>	<div><div>1.5</div><div>1.4</div></div>	<div><div>1.4</div><div>1.3</div></div>	<div><div>1.0</div><div>0.8</div></div>	<div><div>0.8</div><div>0.9</div></div>	<div><div>0.7</div><div>0.8</div></div>	<div><div>0.8</div><div>0.8</div></div>	<div><div>0.7</div><div>0.6</div></div>	1.4	2.5
0.6 0.6 0.6 0.6 0.6 0.7 0.8 0.7 0.6 0.6 0.6 0.6 0.5 0.5 0.5 0.5 0.5 0.6 0.6 0.6 0.6 0.6 0.6 0.6																								Diurnal Average		
1.1 1.2 1.1 2.3 2.3 2.3 8.5 2.2 2.4 2.5 1.7 2.0 1.3 1.0 1.4 1.3 1.4 1.5 1.4 1.9 2.2 1.3 1.6 1.5																								Diurnal Maximum		

Z - zerospan C - Calibration SP - Span
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

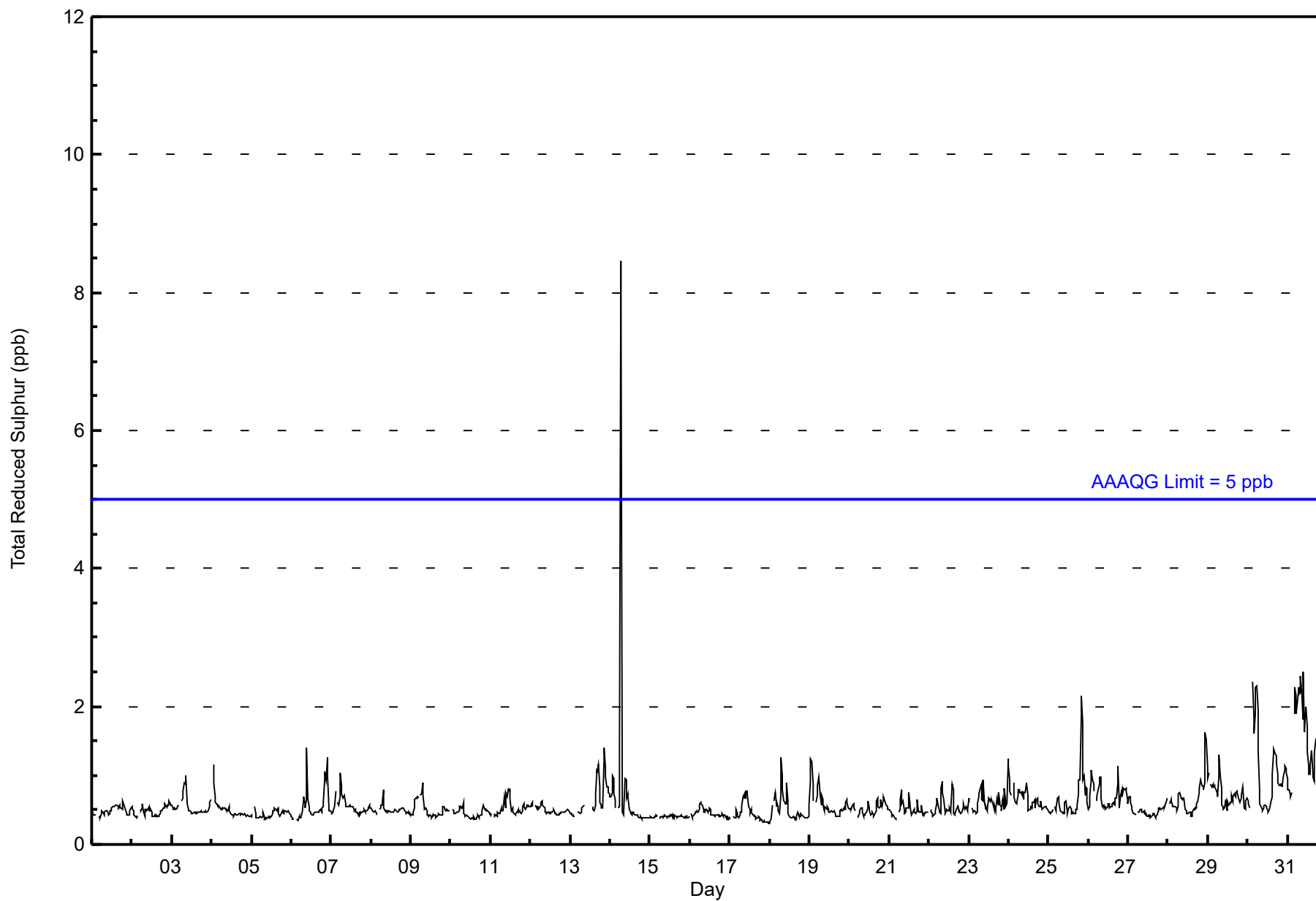
Fort McKay South - May 2025

Maximum Value: 4.9 ppb on May 14 07:00																			Maximum Daily Average: 1.4 ppb on May 31							Hours in Service: 744	
Minimum Value: 0.3 ppb on May 18 00:00																			Minimum Daily Average: 0.4 ppb on May 15							Hours of Data: 708	
Maximum Diurnal Average: 0.8 ppb at hour 7																			Minimum Diurnal Average: 0.5 ppb at hour 14							Hours of Missing Data: 36	
Monthly Average: 0.59 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 2.1							Hours of Calibration: 36	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.4	0.4	0.4	Z	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.6	
2-May	0.5	0.5	0.4	0.4	Z	0.5	0.6	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.6	
3-May	0.6	0.5	0.5	0.5	0.6	Z	0.6	0.8	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.9	
4-May	Z	1.0	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.0	
5-May	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	
6-May	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.7	0.6	1.0	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	1.0	1.1	0.8	0.5	0.6	1.1	
7-May	0.5	0.5	0.7	Z	0.6	0.9	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9	
8-May	0.5	0.5	0.5	0.4	Z	0.5	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	
9-May	0.4	0.4	0.6	0.7	0.7	Z	0.7	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.8	
10-May	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	
11-May	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.6	0.8	0.8	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.8	
12-May	0.6	0.6	Z	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	
13-May	0.5	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.6	C	C	C	C	C	0.5	0.6	1.1	1.0	0.6	0.5	1.3	1.0	0.8	0.7	0.7	1.3	
14-May	0.7	0.9	0.9	0.6	Z	0.5	4.9	0.6	0.5	0.9	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	4.9	
15-May	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
16-May	Z	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	
17-May	0.4	Z	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.7	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.8	
18-May	0.3	0.5	Z	0.7	0.6	0.5	0.6	1.1	0.7	0.6	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.1	
19-May	0.7	1.2	0.8	Z	0.7	0.9	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	1.2	
20-May	0.5	0.5	0.6	0.5	Z	0.4	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.6	0.6	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.7	
21-May	0.5	0.5	0.4	0.4	0.4	Z	0.5	0.7	0.6	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.7	
22-May	Z	0.5	0.4	0.4	0.5	0.6	0.5	0.6	0.8	0.6	0.5	0.5	0.5	0.5	0.8	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	
23-May	0.6	Z	0.5	0.5	0.5	0.5	0.7	0.8	0.6	0.8	0.5	0.5	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.6	0.7	0.6	0.9	0.6	0.9	
24-May	1.0	0.7	Z	0.8	0.6	0.7	0.8	0.8	0.7	0.7	0.8	0.8	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.7	1.0	
25-May	0.5	0.5	0.5	Z	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.8	1.4	2.0	1.0	0.8	0.7	0.7	2.0	
26-May	0.5	0.8	1.0	0.8	Z	0.7	0.8	1.0	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.8	0.9	0.6	0.7	0.8	0.8	0.7	0.7	1.0	
27-May	0.6	0.7	0.5	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.5	0.7	
28-May	Z	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.9	0.9	0.8	1.3	1.3	0.7	1.3	
29-May	1.0	Z	0.9	0.9	0.8	0.8	0.8	1.2	0.7	0.5	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.6	0.7	0.7	0.5	0.6	0.7	1.2	
30-May	0.6	0.5	Z	2.1	1.7	2.3	1.6	0.7	0.5	0.5	0.6	0.5	0.5	0.5	0.7	1.2	1.4	1.2	1.0	0.9	0.9	0.9	1.1	1.1	1.0	2.3	
31-May	0.9	0.8	0.7	Z	2.1	2.0	2.2	2.2	2.3	2.2	1.7	1.9	1.2	1.0	1.3	1.0	1.1	1.5	1.3	0.9	0.8	0.8	0.8	0.7	1.4	2.3	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																											



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	707	99.86	99.86
3 - 4	0	0.00	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	57	57	14	2	6	7	40	126	111	63	55	46	29	17	25	48	703
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	57	14	2	6	7	40	126	112	63	55	46	29	17	25	48	704

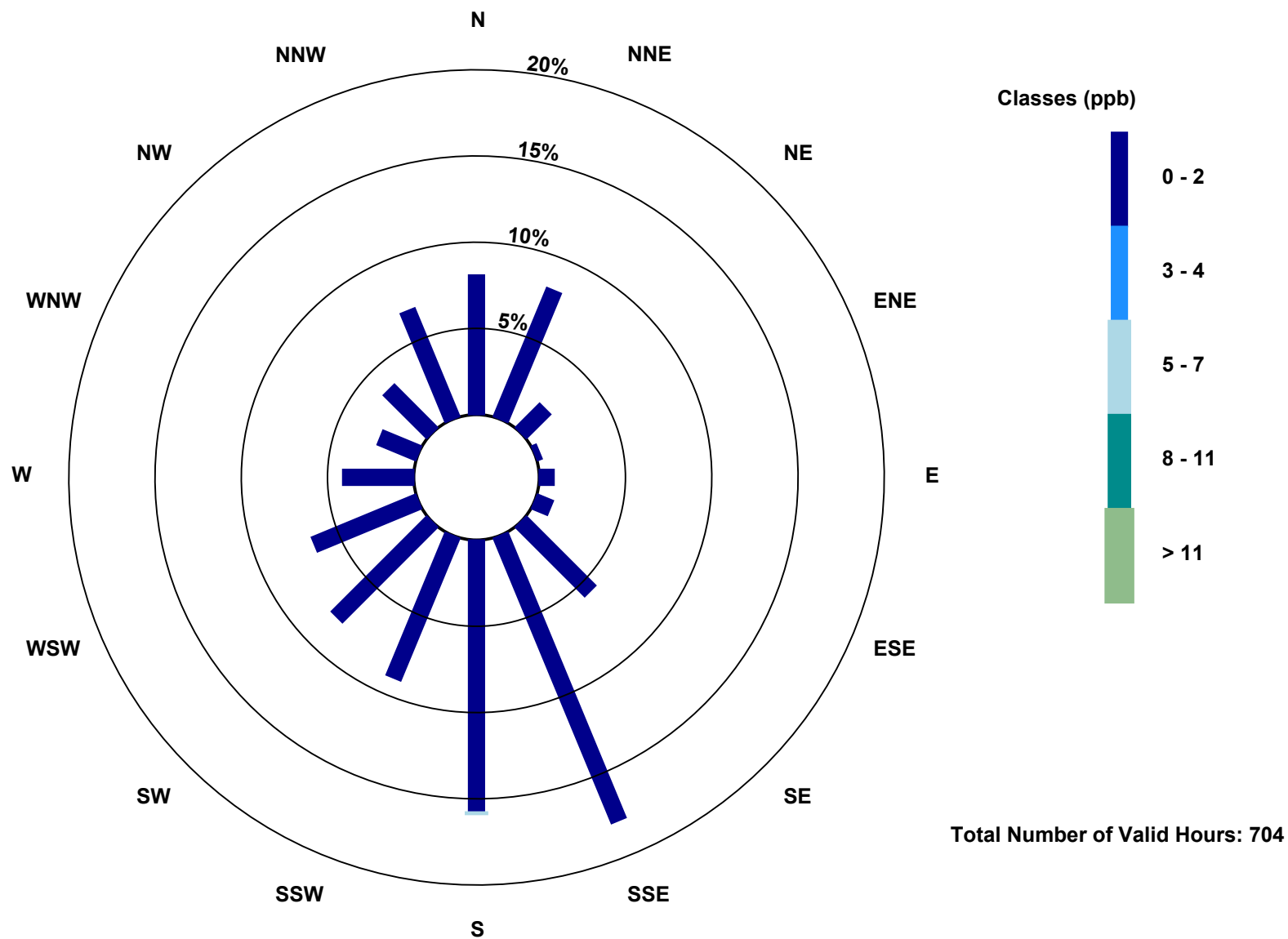
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Fort McKay South



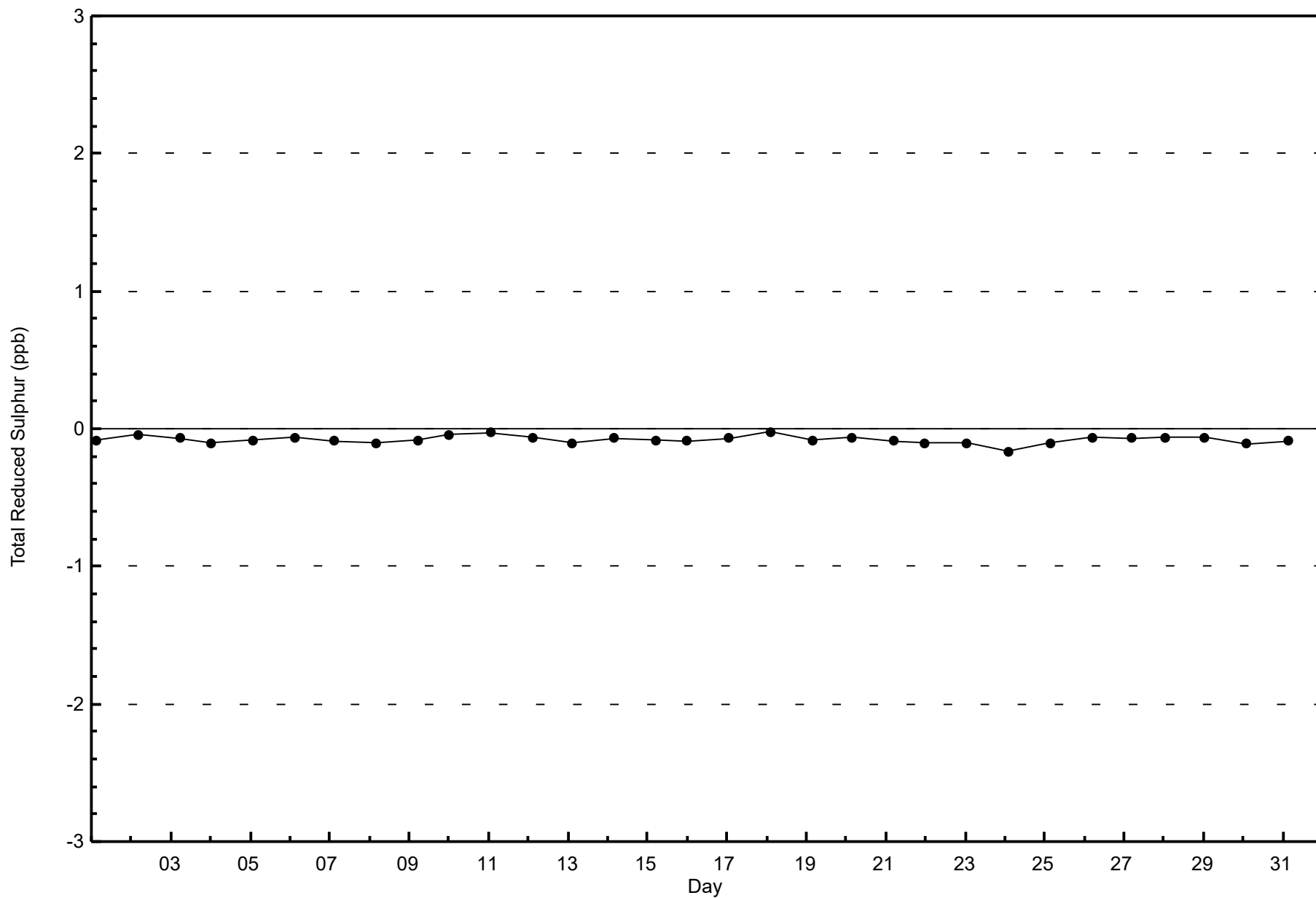


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

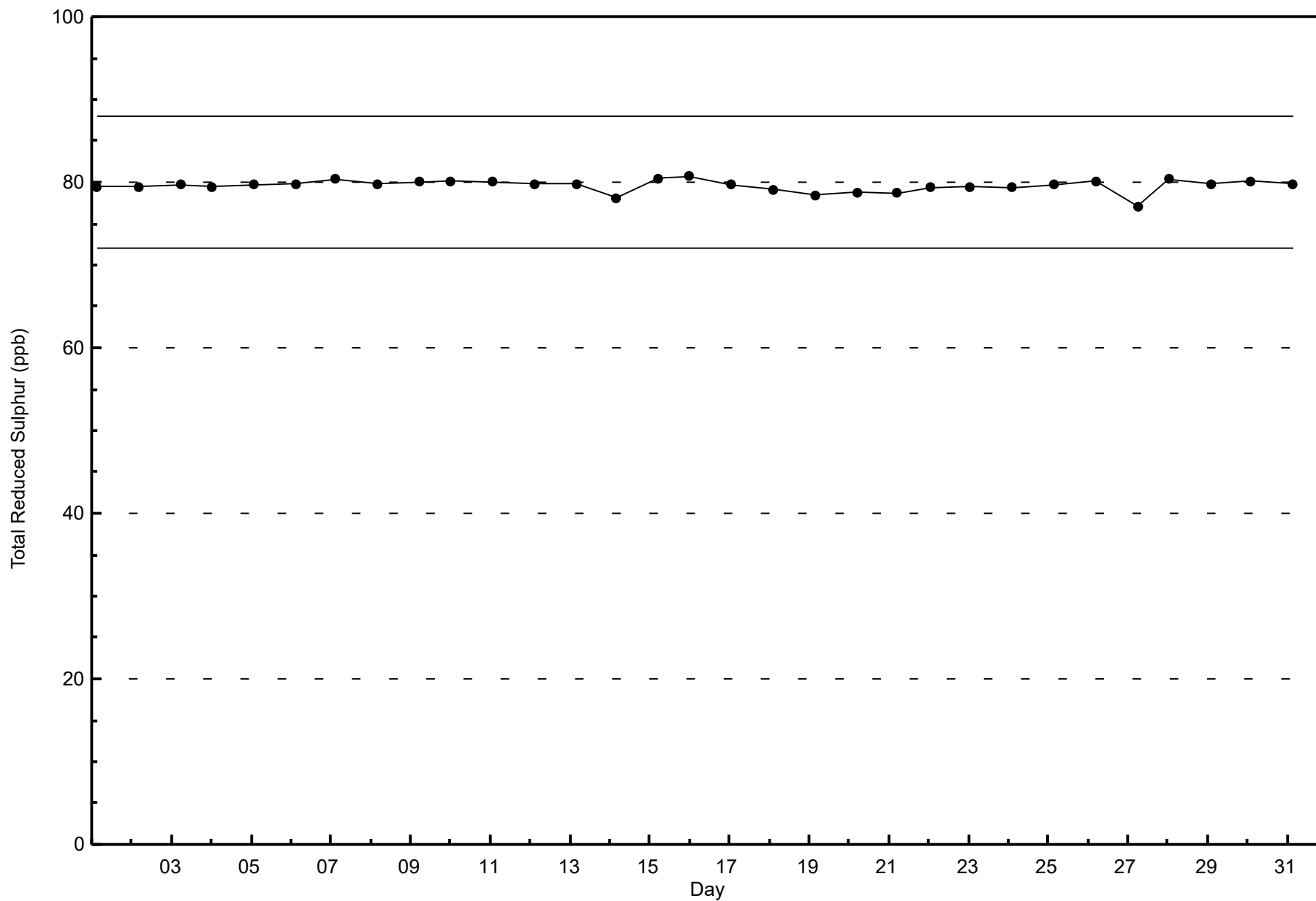
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

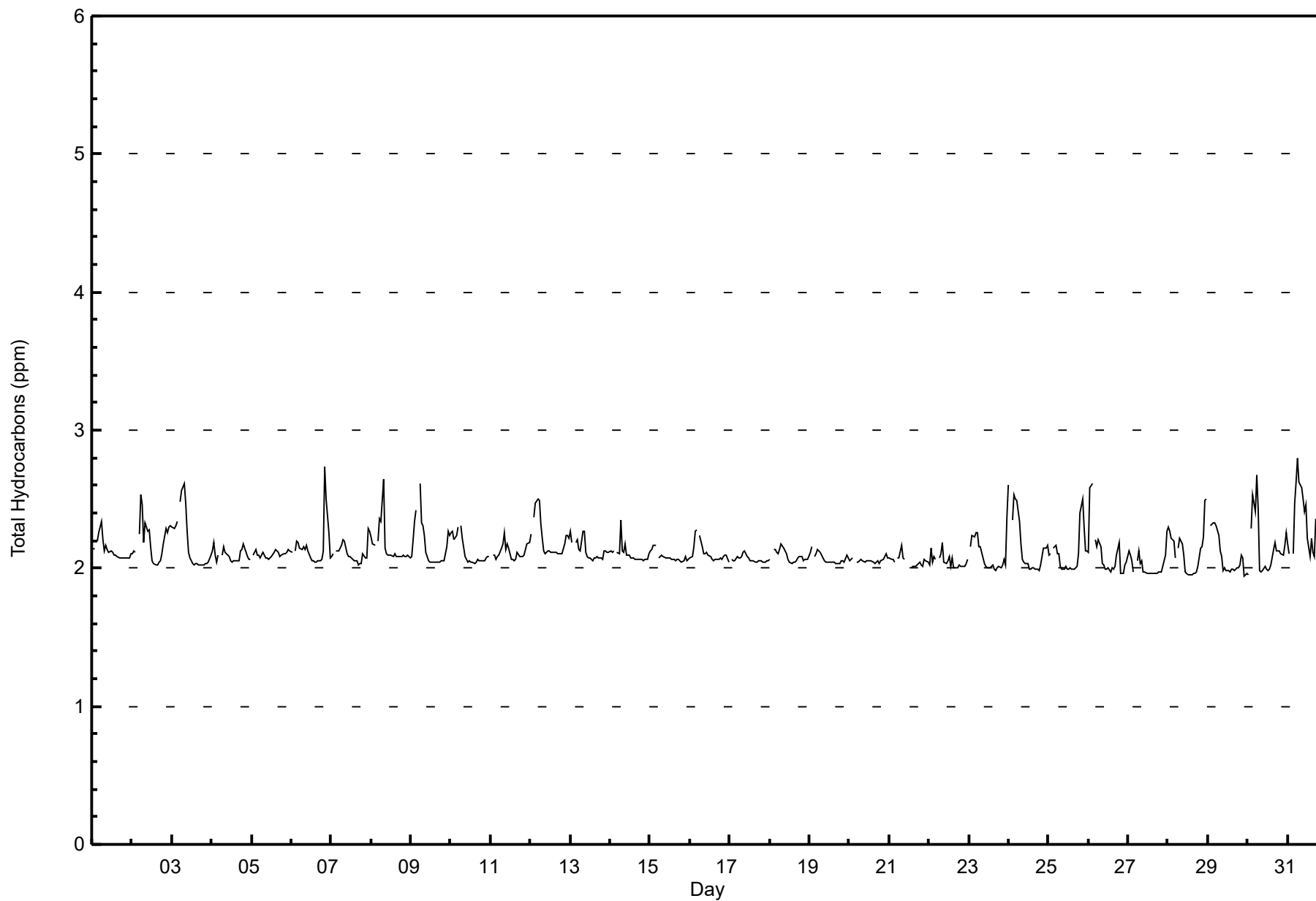
Fort McKay South - May 2025

Maximum Value: 2.8 ppm on May 31 07:00																		Maximum Daily Average: 2.3 ppm on May 31										Hours in Service: 744	
Minimum Value: 1.9 ppm on May 29 23:00																		Minimum Daily Average: 2.0 ppm on May 27										Hours of Data: 710	
Maximum Diurnal Average: 2.3 ppm at hour 6																		Minimum Diurnal Average: 2.0 ppm at hour 14										Hours of Missing Data: 34	
Monthly Average: 2.12 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.1 P ₉₀ = 2.3 P ₉₉ = 2.6										Hours of Calibration: 34	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	2.1	2.1	Z	2.2	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
2-May	2.1	2.1	2.1	Z	2.2	2.5	2.5	2.2	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.2			
3-May	2.3	2.3	2.3	2.3	Z	2.5	2.6	2.6	2.5	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2			
4-May	2.1	2.2	2.1	2.0	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1			
5-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
6-May	2.1	Z	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.7	2.5	2.3	2.1	2.2			
7-May	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.3	2.1	2.1			
8-May	2.2	2.2	2.2	Z	2.2	2.4	2.3	2.6	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2			
9-May	2.1	2.2	2.3	2.4	Z	2.6	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2			
10-May	2.3	2.3	2.2	2.2	2.3	Z	2.3	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
11-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1			
12-May	2.2	Z	2.4	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2			
13-May	2.3	2.2	Z	2.2	2.2	2.1	2.1	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
14-May	2.1	2.1	2.1	Z	2.1	2.1	2.3	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
15-May	2.1	2.1	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1			
16-May	2.1	2.1	2.2	2.3	2.3	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1			
17-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1			
18-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
19-May	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1			
20-May	2.1	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
21-May	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.2	2.1	2.1	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0			
22-May	2.0	2.1	2.0	2.1	2.1	Z	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1			
23-May	Z	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.4	2.1	2.1			
24-May	2.6	Z	2.3	2.5	2.5	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2			
25-May	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.5	2.3	2.1	2.1	2.1	2.1			
26-May	2.1	2.6	2.6	Z	2.2	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1			
27-May	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.0	2.0			
28-May	2.3	2.3	2.2	2.2	2.1	Z	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.5	2.5	2.1	2.1			
29-May	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	1.9	2.0	2.1	2.1			
30-May	2.0	Z	2.3	2.5	2.4	2.7	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2			
31-May	2.2	2.1	Z	2.1	2.5	2.6	2.8	2.6	2.6	2.5	2.4	2.5	2.2	2.1	2.2	2.1	2.1	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.3	2.3			
2.2 2.2 2.2 2.2 2.2 2.3 2.2 2.2 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1																										Diurnal Average			
2.6 2.6 2.6 2.5 2.5 2.7 2.8 2.6 2.6 2.5 2.4 2.5 2.2 2.1 2.2 2.1 2.2 2.3 2.3 2.4 2.7 2.5 2.5 2.5 2.5																										Diurnal Maximum			
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	188	26.48	26.48
2.1 - 3.0	522	73.52	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	1	3	0	1	0	9	54	38	16	16	13	9	7	9	12	188
2.1 - 3.0	56	59	13	2	5	8	29	70	75	48	41	32	20	9	18	34	519
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	60	16	2	6	8	38	124	113	64	57	45	29	16	27	46	707

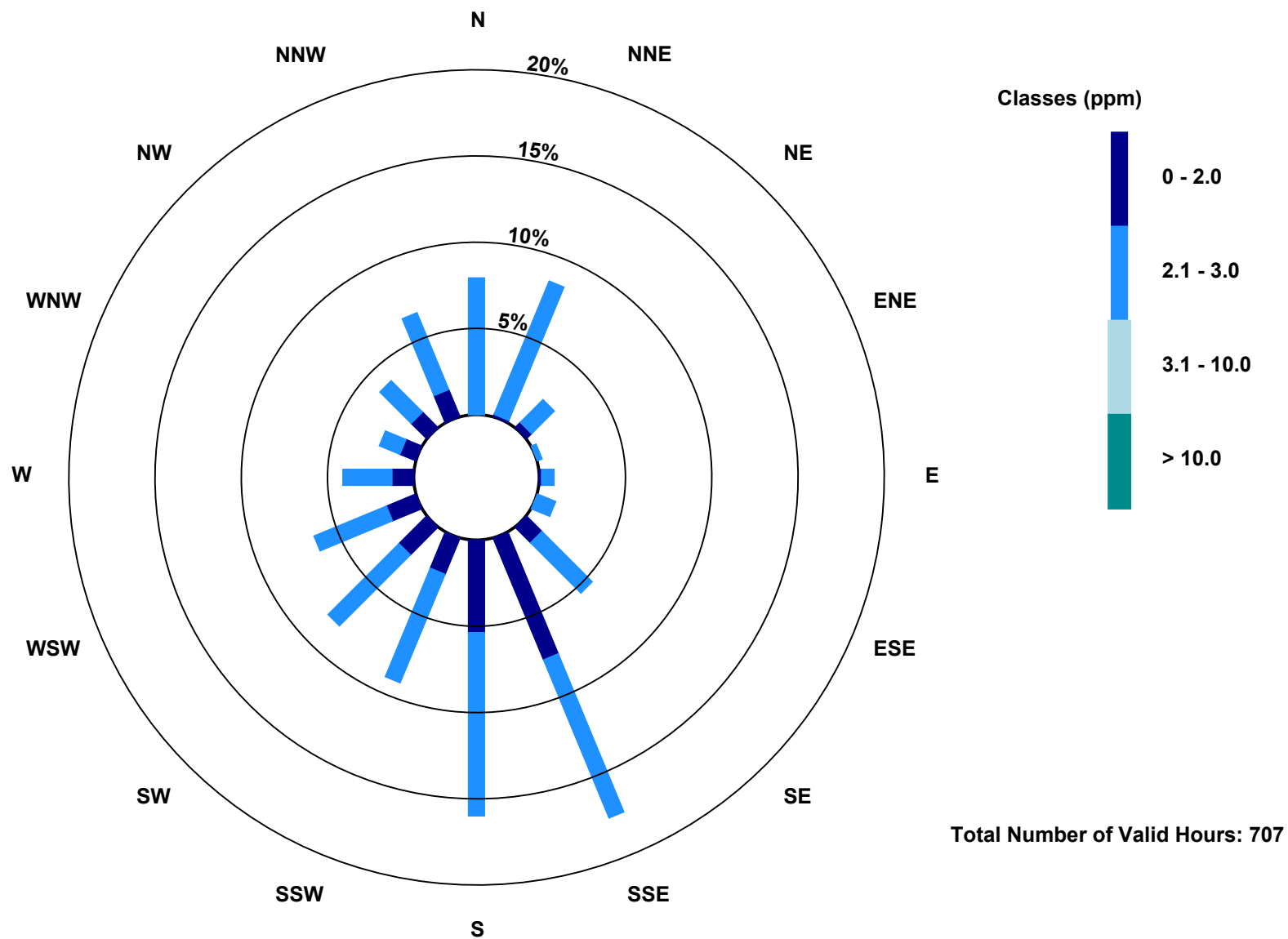
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Fort McKay South



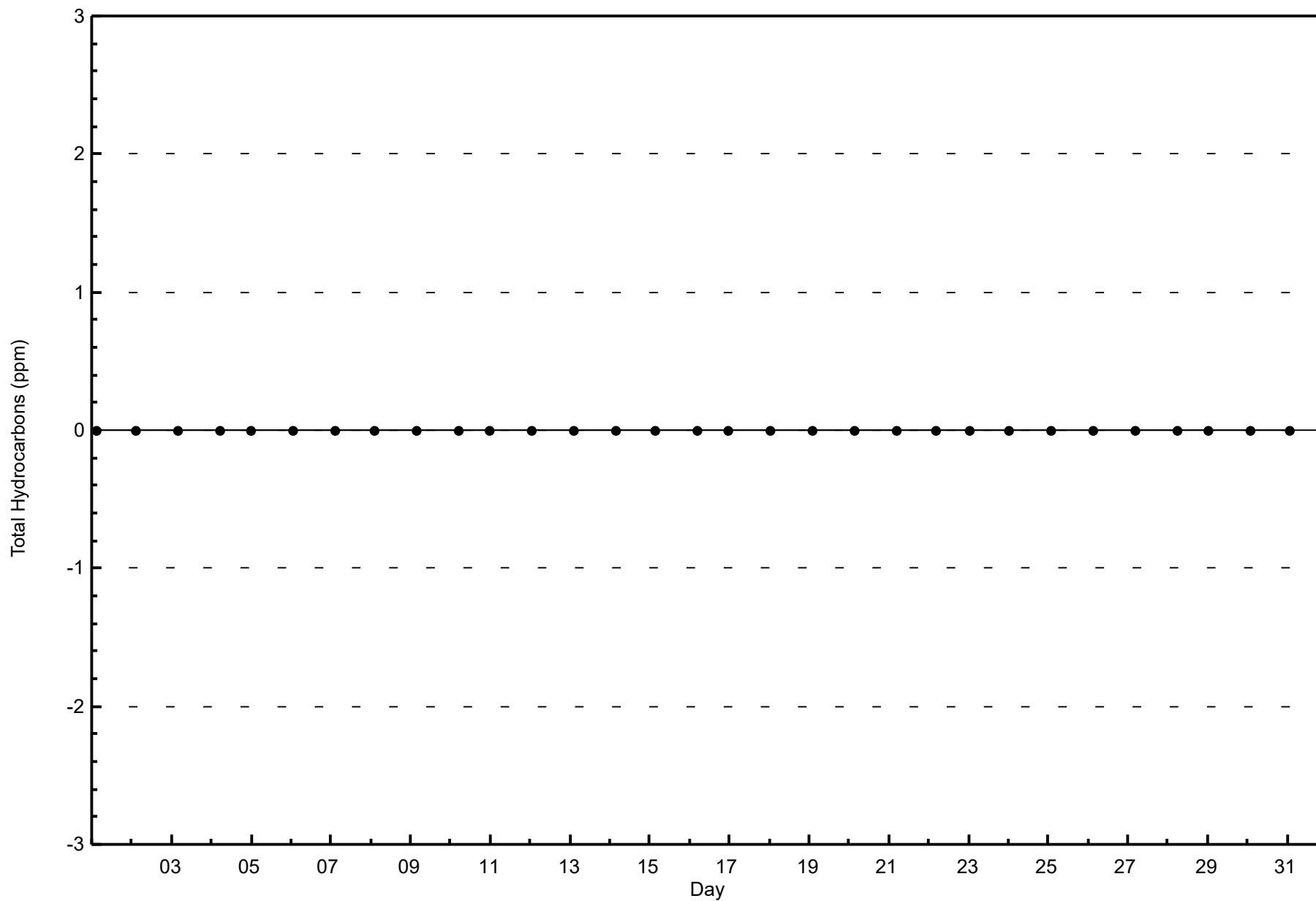


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

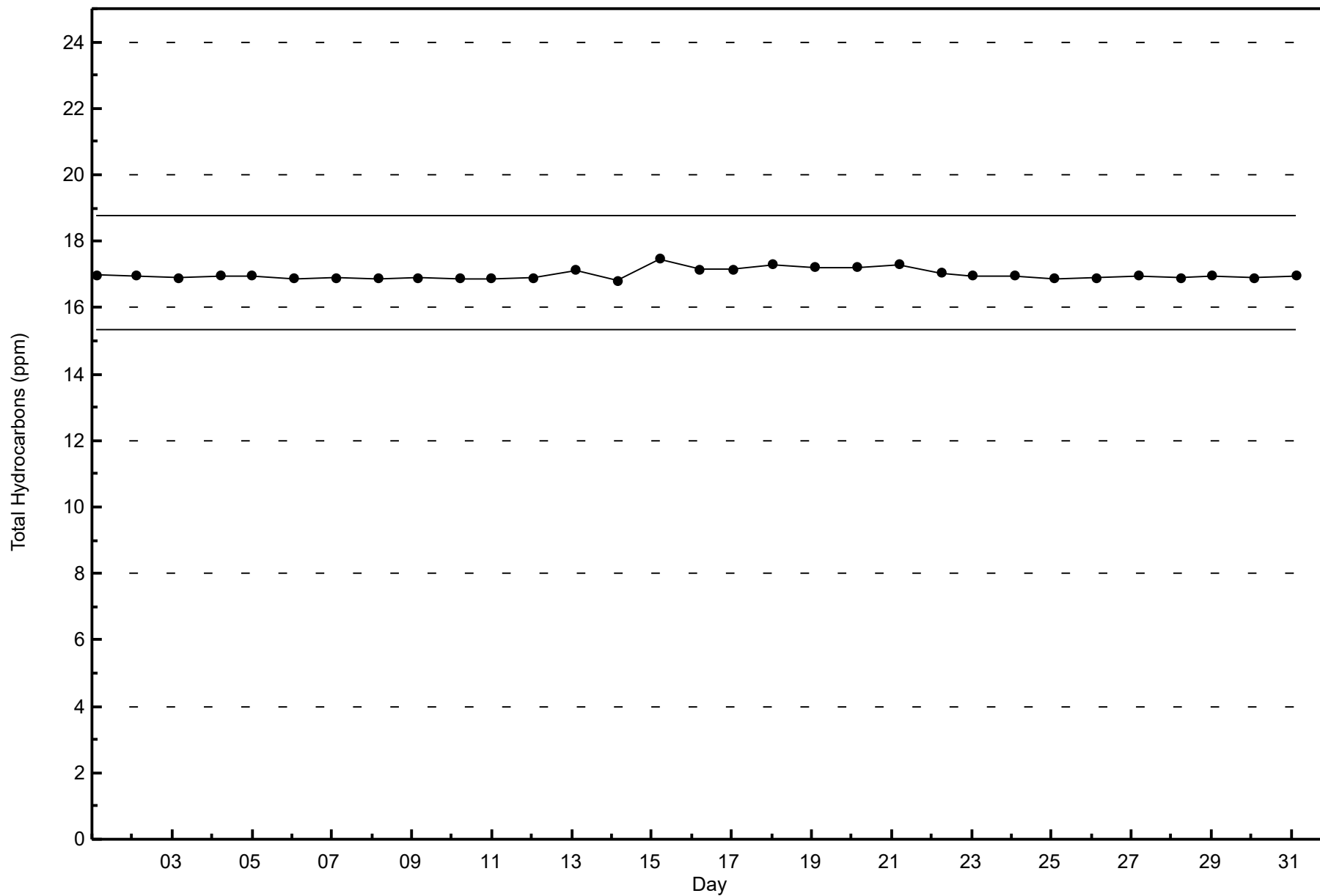
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

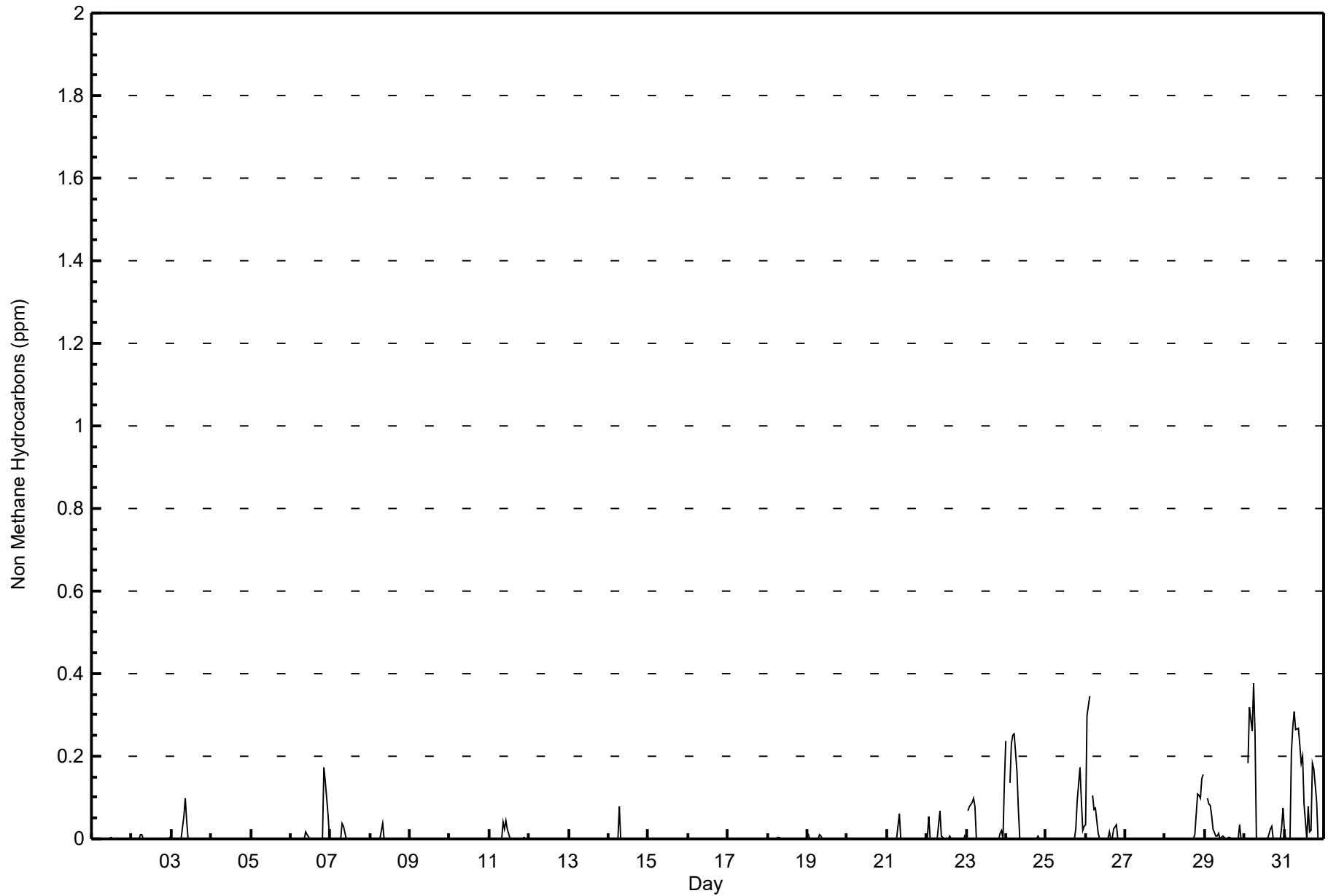
Fort McKay South - May 2025

Maximum Value: 0.378 ppm on May 30 06:00																		Maximum Daily Average: 0.113 ppm on May 31										Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 01:00																		Minimum Daily Average: 0.000 ppm on May 4										Hours of Data: 710	
Maximum Diurnal Average: 0.042 ppm at hour 6																		Minimum Diurnal Average: 0.000 ppm at hour 14										Hours of Missing Data: 34	
Monthly Average: 0.014 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.3										Hours of Calibration: 34	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
2-May	0.000	0.000	0.000	Z	0.000	0.012	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.001	0.012			
3-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.056	0.098	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.098			
4-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
5-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
6-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.172	0.137	0.059	0.017	0.172			
7-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.036	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.036			
8-May	0.000	0.000	0.000	Z	0.000	0.001	0.001	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.038			
9-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
10-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
11-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.024	0.046	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.006	0.046		
12-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
13-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
14-May	0.000	0.000	0.000	Z	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.079			
15-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
16-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
17-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
18-May	0.000	Z	0.000	0.000	0.000	0.000	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004			
19-May	0.011	0.000	Z	0.000	0.000	0.000	0.000	0.011	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011			
20-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
21-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.060	0.000	0.000	C	C	C	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.060			
22-May	0.003	0.055	0.000	0.000	0.000	Z	0.000	0.032	0.067	0.006	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.008	0.067			
23-May	Z	0.067	0.078	0.087	0.098	0.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.022	0.000	0.135	0.025	0.135			
24-May	0.238	Z	0.134	0.230	0.252	0.255	0.162	0.073	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.059	0.255			
25-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.090	0.173	0.092	0.022	0.032	0.019	0.173			
26-May	0.035	0.297	0.347	Z	0.107	0.072	0.074	0.014	0.000	0.000	0.000	0.000	0.001	0.000	0.018	0.001	0.001	0.024	0.033	0.000	0.000	0.000	0.000	0.000	0.044	0.347			
27-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
28-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.108	0.104	0.097	0.146	0.155	0.027	0.155			
29-May	Z	0.099	0.086	0.081	0.057	0.024	0.008	0.006	0.014	0.000	0.002	0.006	0.000	0.000	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.018	0.099			
30-May	0.000	Z	0.183	0.319	0.260	0.378	0.258	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.074	0.068	0.378		
31-May	0.019	0.000	Z	0.000	0.209	0.271	0.310	0.263	0.268	0.226	0.184	0.200	0.084	0.000	0.078	0.016	0.020	0.185	0.170	0.092	0.000	0.000	0.000	0.000	0.113	0.310			
		0.012	0.020	0.033	0.028	0.038	0.042	0.029	0.019	0.017	0.010	0.008	0.008	0.003	0.000	0.003	0.001	0.002	0.007	0.008	0.010	0.015	0.012	0.008	0.013	Diurnal Average			
		0.238	0.297	0.347	0.319	0.260	0.378	0.310	0.263	0.268	0.226	0.184	0.200	0.084	0.000	0.078	0.024	0.031	0.185	0.170	0.108	0.173	0.137	0.146	0.155	Diurnal Maximum			
Z - zerospan		C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	609	85.77	85.77
0.006 - 0.05	43	6.06	91.83
0.06 - 0.1	33	4.65	96.48
> 0.1	25	3.52	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	46	60	15	1	6	8	35	112	75	51	47	41	25	15	26	44	607
0.006 - 0.05	3	0	0	0	0	0	0	8	20	5	4	2	1	0	0	0	43
0.06 - 0.1	4	0	0	0	0	0	2	1	12	6	4	1	0	0	0	2	32
> 0.1	3	0	1	1	0	0	1	3	6	2	2	1	3	1	1	0	25
Totals	56	60	16	2	6	8	38	124	113	64	57	45	29	16	27	46	707

Total Number of Valid Hours: 707

Total Number of Hours: 744



Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South



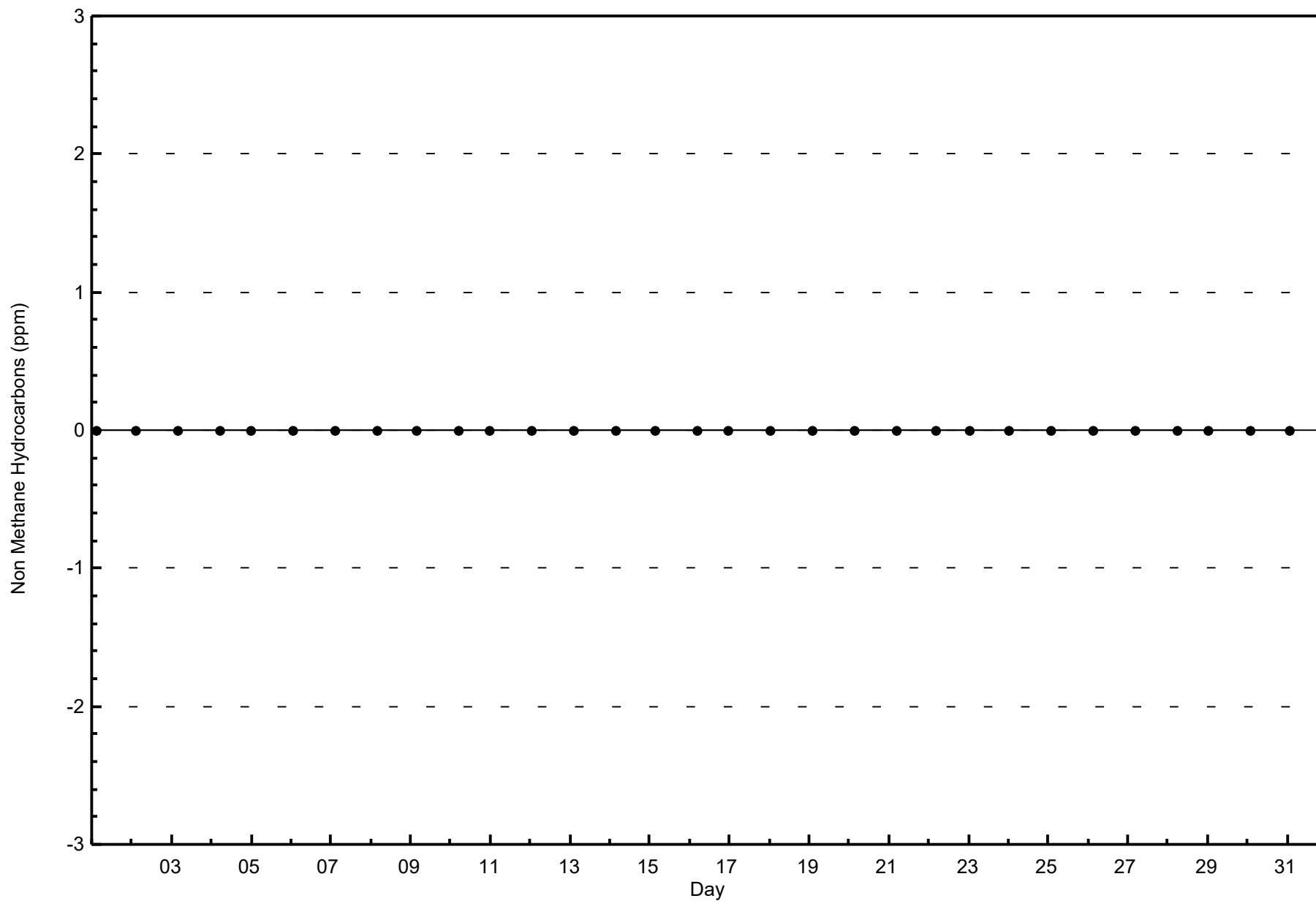


Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

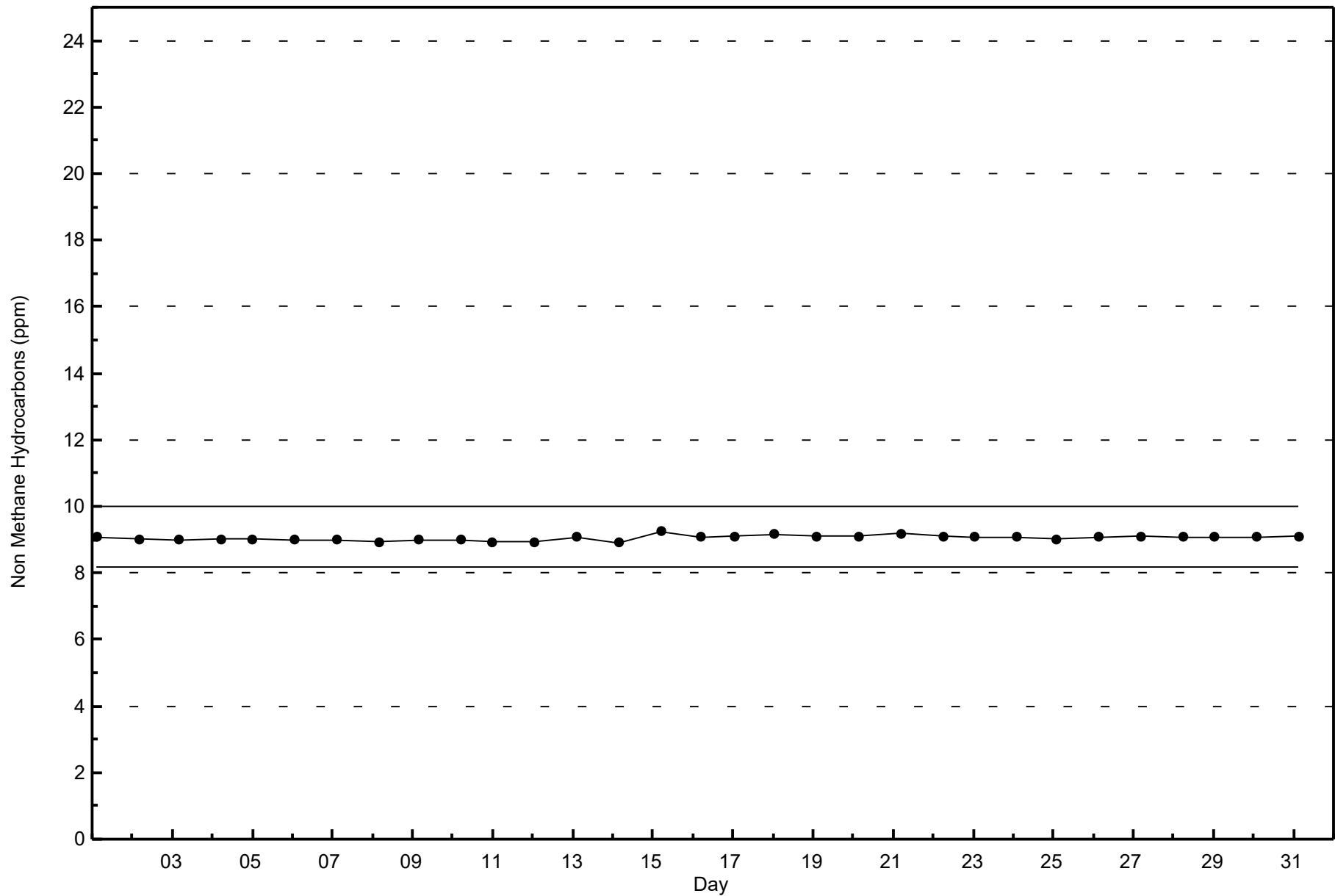
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - May 2025

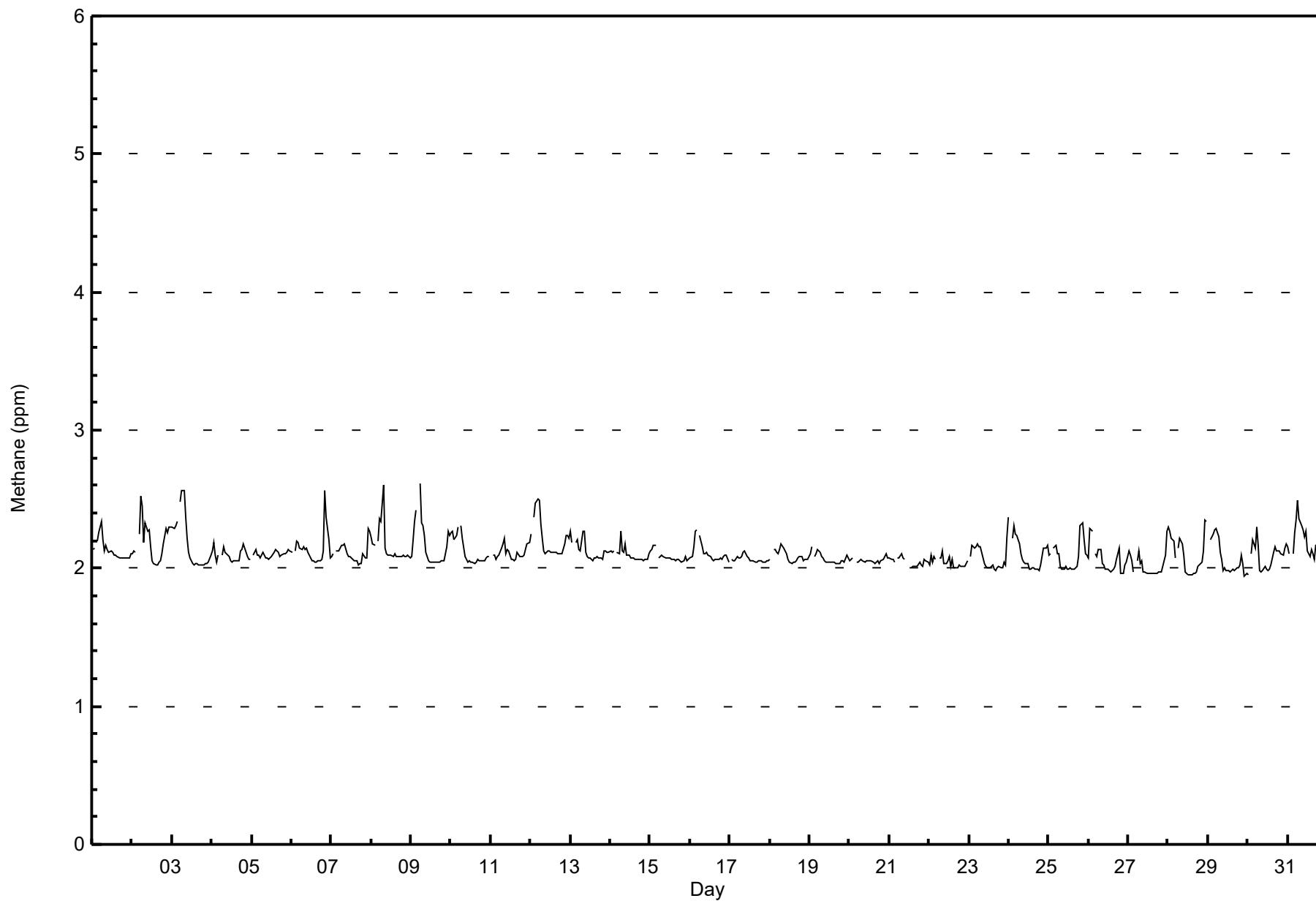


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Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	192	27.04	27.04
2.1 - 3.0	518	72.96	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Fort McKay South - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	1	3	0	1	0	9	55	38	16	17	14	10	7	9	12	192
2.1 - 3.0	56	59	13	2	5	8	29	69	75	48	40	31	19	9	18	34	515
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	60	16	2	6	8	38	124	113	64	57	45	29	16	27	46	707

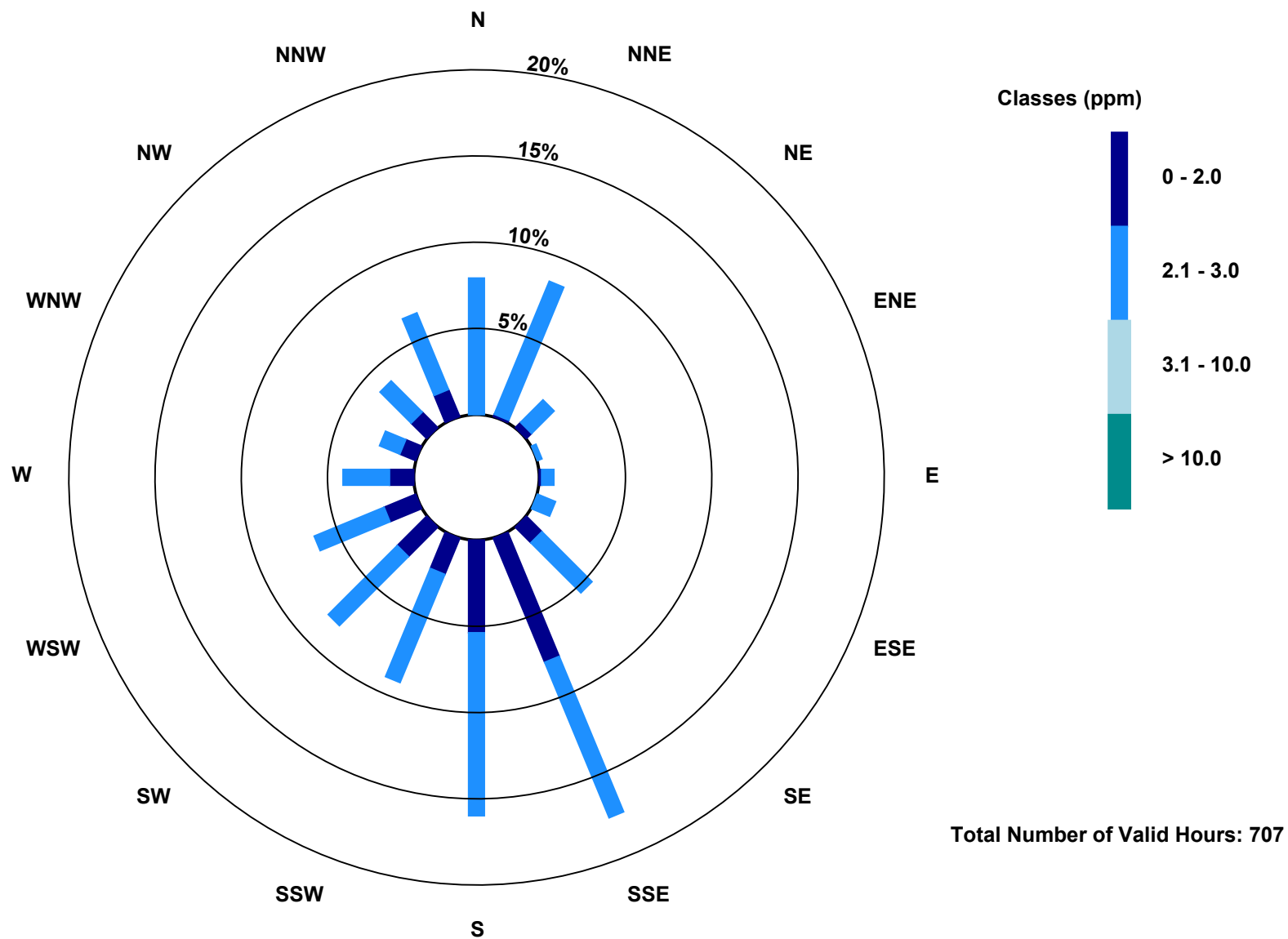
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

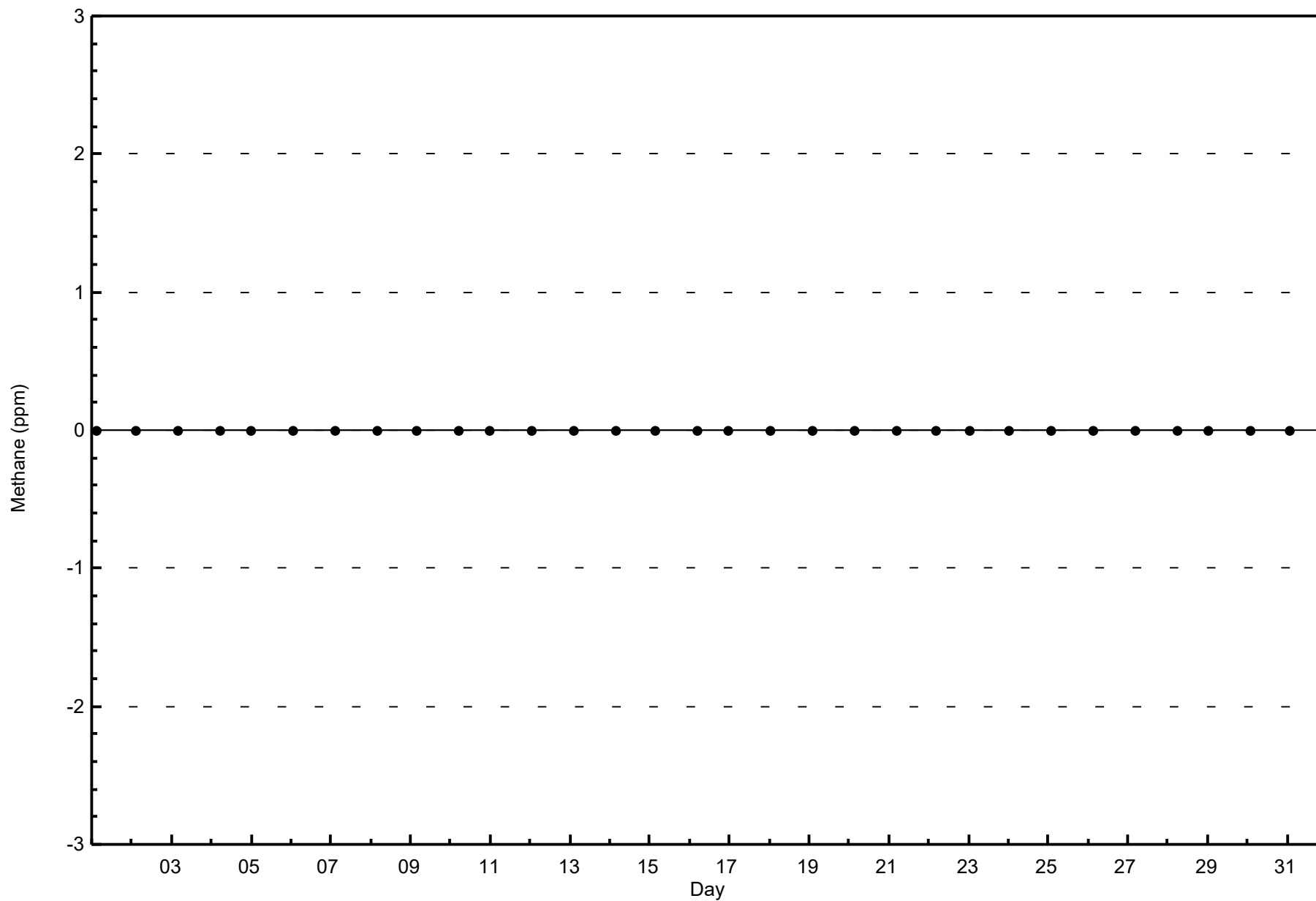
Methane (CH₄) - ppm
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

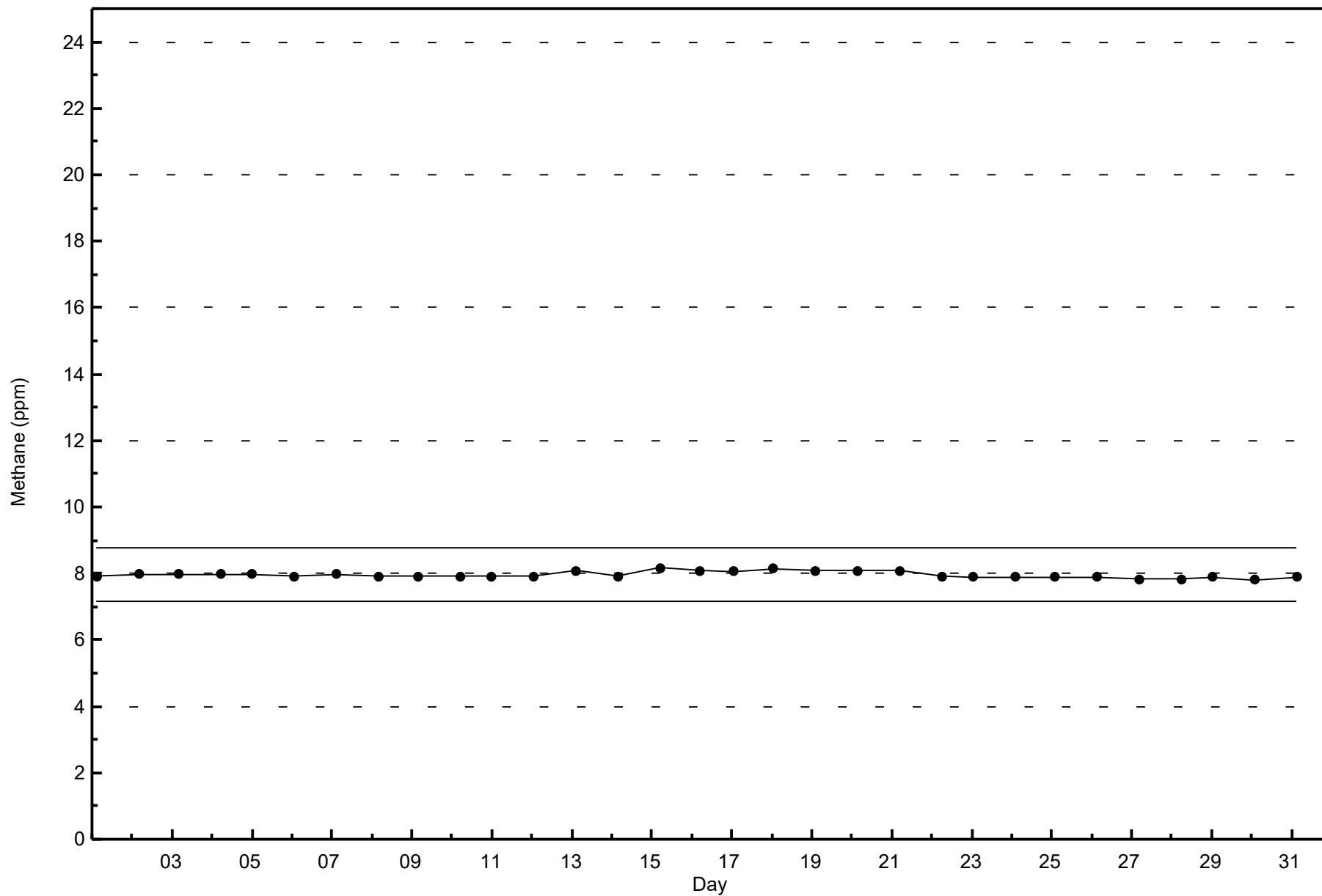
Methane (CH₄) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

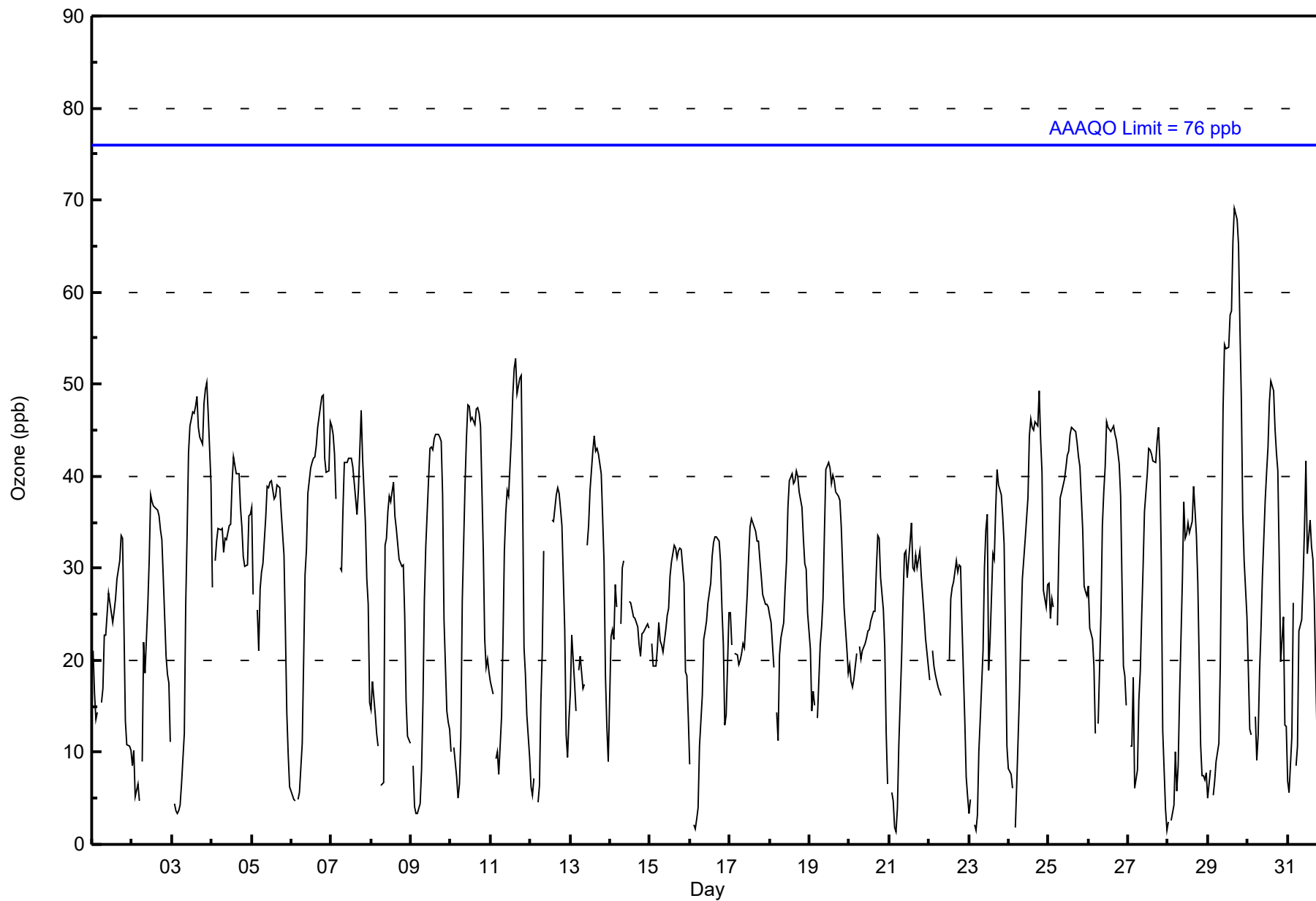
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 69.2 ppb on May 29 17:00 Maximum Daily Average: 38.6 ppb on May 29																								Hours in Service: 744 Hours of Data: 703 Hours of Missing Data: 41 Hours of Calibration: 35 Percent Operational Time: 99.2		
Minimum Value: 1.3 ppb on May 21 05:00 Minimum Daily Average: 20.2 ppb on May 16 Maximum Diurnal Average: 39.1 ppb at hour 17 Minimum Diurnal Average: 11.2 ppb at hour 5 Monthly Average: 27.45 ppb Percentiles: P ₁ = 2.1 P ₁₀ = 8.2 Q ₁ = 18.2 Median = 28.2 Q ₃ = 37.9 P ₉₀ = 44.3 P ₉₉ = 54.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	21.1	16.5	13.6	14.3	Z	15.4	16.9	22.7	22.7	25.1	27.2	25.2	24.1	25.3	26.6	28.8	30.8	33.5	33.2	23.6	13.4	10.8	10.7	10.2	21.4	33.5
2-May	8.6	10.2	5.2	6.6	4.8	Z	8.9	22.0	18.6	26.1	31.0	37.9	37.3	36.7	36.4	36.2	35.7	34.1	33.1	28.9	20.5	18.5	17.6	11.2	22.9	37.9
3-May	Z	4.4	3.7	3.4	3.6	4.2	6.5	12.1	26.1	33.9	42.5	45.5	47.0	46.8	47.5	48.6	45.3	44.3	43.5	48.0	49.4	50.1	46.9	39.2	32.3	50.1
4-May	27.9	Z	30.9	33.0	34.4	34.1	34.4	31.7	33.2	33.2	34.7	34.8	39.2	42.1	41.2	40.3	40.2	36.6	34.4	31.3	30.2	30.3	35.8	35.9	34.8	42.1
5-May	36.6	27.2	Z	25.5	21.0	27.8	29.7	30.5	35.5	38.9	38.7	39.4	39.5	37.5	37.8	39.0	38.8	38.8	36.2	31.4	23.3	14.3	9.7	6.2	30.6	39.5
6-May	5.3	4.9	4.7	Z	4.9	5.7	11.0	20.0	29.3	32.1	38.2	40.9	41.4	41.9	42.0	43.4	45.3	47.5	48.7	48.8	41.9	40.4	40.6	45.9	31.5	48.8
7-May	45.4	44.6	42.5	37.5	Z	30.0	29.8	36.3	41.5	41.5	41.9	42.0	42.0	41.0	39.3	35.8	38.5	42.8	47.2	42.0	34.9	28.8	26.1	15.5	37.7	47.2
8-May	14.6	17.6	14.1	12.0	10.6	Z	6.4	6.7	32.5	33.3	36.1	37.9	37.3	39.3	35.7	34.3	32.6	30.9	30.2	30.4	24.9	15.5	11.7	11.0	24.2	39.3
9-May	Z	8.6	4.2	3.4	3.4	4.4	8.0	15.4	26.5	32.4	39.7	43.0	43.2	42.8	44.0	44.6	44.6	44.3	43.8	38.0	24.5	14.5	13.2	12.5	26.0	44.6
10-May	10.0	Z	10.5	7.4	5.0	6.6	11.7	26.4	39.3	44.2	47.8	47.5	46.0	46.4	45.6	47.2	47.4	46.8	45.5	31.7	22.2	19.3	20.1	18.8	30.1	47.8
11-May	17.7	16.4	Z	9.3	10.0	7.7	13.9	22.1	31.8	36.0	38.4	37.8	44.3	48.7	51.8	52.8	48.9	50.7	51.0	37.7	21.3	18.4	14.1	9.5	30.0	52.8
12-May	6.3	5.3	7.1	Z	4.6	6.4	15.5	21.1	31.9	C	C	C	C	35.3	35.0	38.0	38.8	38.1	36.5	34.6	23.4	11.9	9.4	13.6	21.7	38.8
13-May	16.4	22.7	17.6	14.5	Z	18.9	20.5	16.9	17.4	M	32.5	34.7	38.4	42.8	44.3	42.7	43.0	42.4	40.3	35.5	30.7	18.3	12.8	8.9	27.8	44.3
14-May	22.5	23.3	22.3	28.2	25.7	Z	23.9	30.0	30.8	M	M	26.3	26.2	25.6	24.7	24.5	23.7	21.7	20.5	22.8	23.1	23.4	24.0	23.6	24.6	30.8
15-May	Z	21.8	19.4	19.4	21.4	24.1	22.1	21.6	20.8	23.3	24.9	25.6	29.2	30.7	32.6	32.2	31.2	31.9	32.3	32.0	28.3	18.8	18.3	13.9	25.0	32.6
16-May	8.7	Z	2.1	1.7	2.8	4.0	10.6	16.2	22.2	23.2	24.2	26.2	28.4	31.3	32.8	33.4	33.4	33.0	30.7	25.6	21.7	12.9	14.1	25.1	20.2	33.4
17-May	25.1	21.6	Z	20.7	20.5	19.5	19.9	20.8	21.8	21.4	27.1	31.1	34.5	35.4	34.9	34.0	32.9	32.9	31.0	29.2	27.1	26.0	26.1	25.7	26.9	35.4
18-May	24.8	24.0	19.2	Z	14.3	11.3	20.7	22.4	24.1	27.8	30.8	36.6	39.5	40.2	39.3	39.5	40.5	40.0	38.2	36.6	33.2	30.6	29.8	25.2	29.9	40.5
19-May	21.2	14.4	16.7	15.1	Z	13.7	21.7	23.7	26.6	33.9	40.7	41.5	40.9	39.3	40.1	39.5	38.2	37.9	37.4	34.5	30.0	25.8	21.1	18.6	29.2	41.5
20-May	19.5	17.7	17.1	18.0	20.8	Z	21.5	20.1	21.1	21.8	22.5	23.2	23.3	24.2	25.3	25.4	29.9	33.5	33.2	29.0	25.4	21.4	12.0	6.6	22.3	33.5
21-May	Z	5.6	4.7	1.9	1.3	4.0	10.8	20.5	26.5	31.6	31.9	29.0	32.8	34.9	30.0	29.7	31.5	30.0	31.9	29.2	27.0	24.9	22.4	19.4	22.2	34.9
22-May	17.8	Z	21.1	19.3	18.5	17.0	16.6	16.2	M	24.0	M	M	19.9	26.6	28.0	28.5	30.8	29.7	30.4	30.3	23.9	13.4	7.3	5.1	21.2	30.8
23-May	3.4	4.8	Z	2.1	1.5	3.3	10.1	13.5	21.0	30.0	34.1	35.9	18.9	22.2	31.6	31.0	36.5	40.7	39.0	37.9	35.6	32.7	22.0	10.7	22.5	40.7
24-May	8.2	7.6	6.1	Z	1.8	6.5	16.7	23.2	28.8	31.0	33.1	37.6	44.3	46.3	45.3	45.0	45.9	45.4	49.3	44.1	40.5	27.5	25.7	28.2	29.9	49.3
25-May	28.3	24.5	26.8	25.8	Z	23.8	32.0	37.7	38.3	39.6	40.9	42.3	42.7	44.5	45.3	45.0	44.9	43.7	42.2	41.1	34.2	28.1	27.5	27.0	35.9	45.3
26-May	28.1	23.6	22.3	19.4	12.1	Z	13.1	25.0	34.7	38.2	41.1	45.9	45.3	44.8	45.1	45.4	44.6	44.0	41.4	37.9	28.4	19.4	18.4	15.1	31.9	45.9
27-May	Z	10.6	10.7	18.2	6.1	8.0	15.8	18.8	24.7	30.0	36.2	40.2	43.1	42.9	42.5	41.7	41.5	43.8	45.3	41.5	30.5	12.4	3.8	1.5	26.5	45.3
28-May	2.4	Z	2.6	4.3	10.0	5.7	8.5	16.2	28.7	37.1	33.3	33.7	35.0	33.9	35.1	38.9	36.4	33.5	28.4	10.9	7.5	7.5	6.9	7.8	20.2	38.9
29-May	5.1	8.0	Z	5.4	6.9	9.1	10.9	19.4	33.7	47.4	54.3	53.9	54.0	57.5	58.0	65.5	69.2	68.0	65.2	56.2	48.4	36.1	30.8	24.7	38.6	69.2
30-May	18.9	12.5	11.9	Z	13.9	9.1	11.9	18.7	23.3	28.9	37.4	40.5	43.1	48.1	50.3	49.2	45.2	42.5	40.6	31.0	19.8	24.8	13.0	12.9	28.2	50.3
31-May	6.9	5.7	11.7	26.3	Z	8.5	10.6	23.2	24.4	28.9	34.5	41.6	31.5	35.3	32.4	30.9	26.3	18.3	11.4	19.1	17.8	25.2	23.7	24.3	22.6	41.6
17.3 15.5 14.2 15.1 11.2 12.6 16.5 21.7 27.9 32.0 35.6 37.2 37.1 38.4 38.7 39.1 39.1 38.8 37.8 33.9 27.8 22.6 19.9 17.9 Diurnal Average																										
45.4 44.6 42.5 37.5 34.4 34.1 34.4 37.7 41.5 47.4 54.3 53.9 54.0 57.5 58.0 65.5 69.2 68.0 65.2 56.2 49.4 50.1 46.9 45.9 Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	212	30.16	30.16
21 - 50	477	67.85	98.01
51 - 82	14	1.99	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	6	2	1	3	2	6	18	24	23	24	20	16	7	16	24	209
21 - 50	38	48	11	0	3	6	34	101	82	43	32	24	10	11	12	22	477
51 - 82	0	0	2	1	0	0	1	6	4	0	0	0	0	0	0	0	14
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	55	54	15	2	6	8	41	125	110	66	56	44	26	18	28	46	700

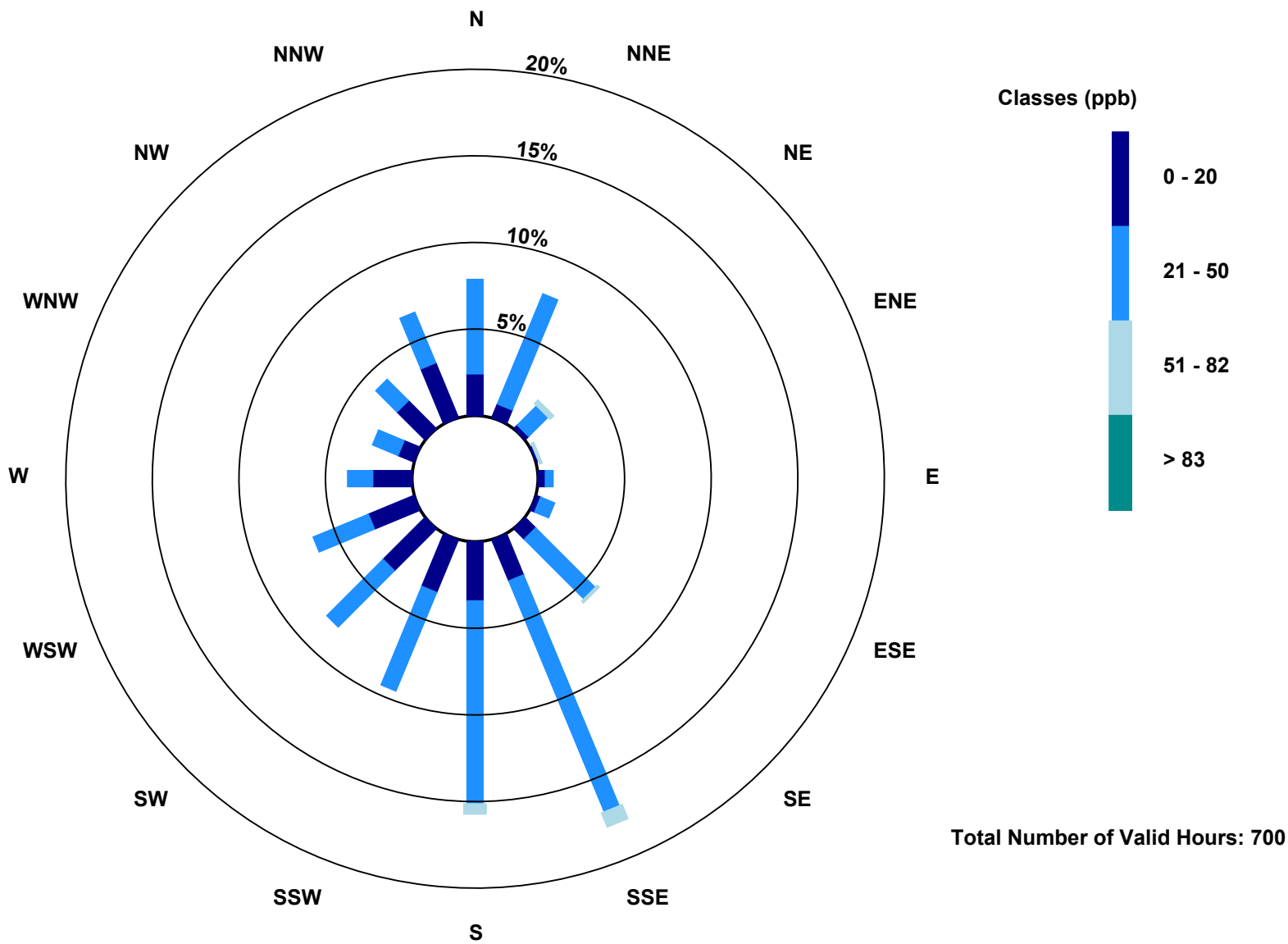
Total Number of Valid Hours: 700

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

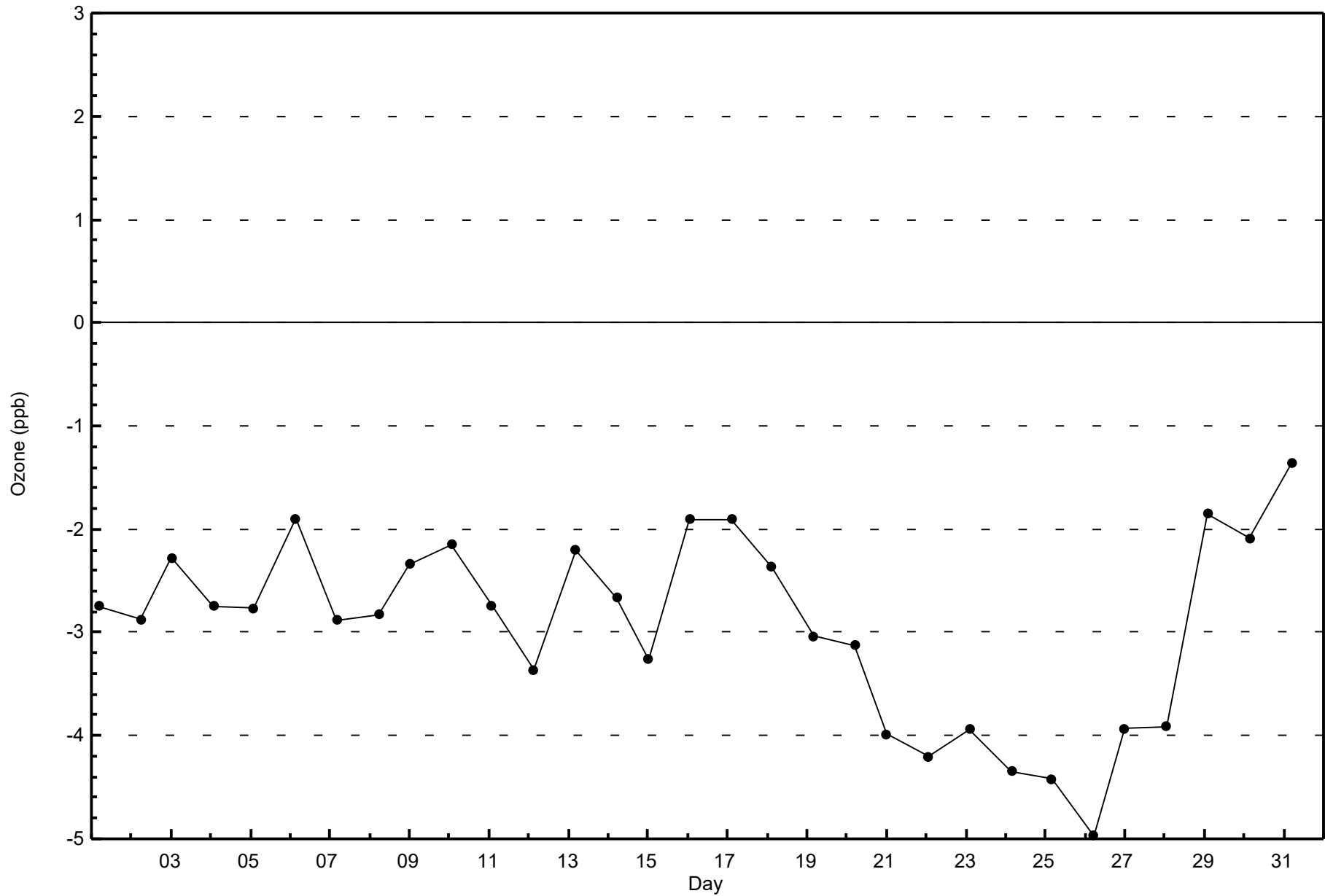
Ozone (O₃) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

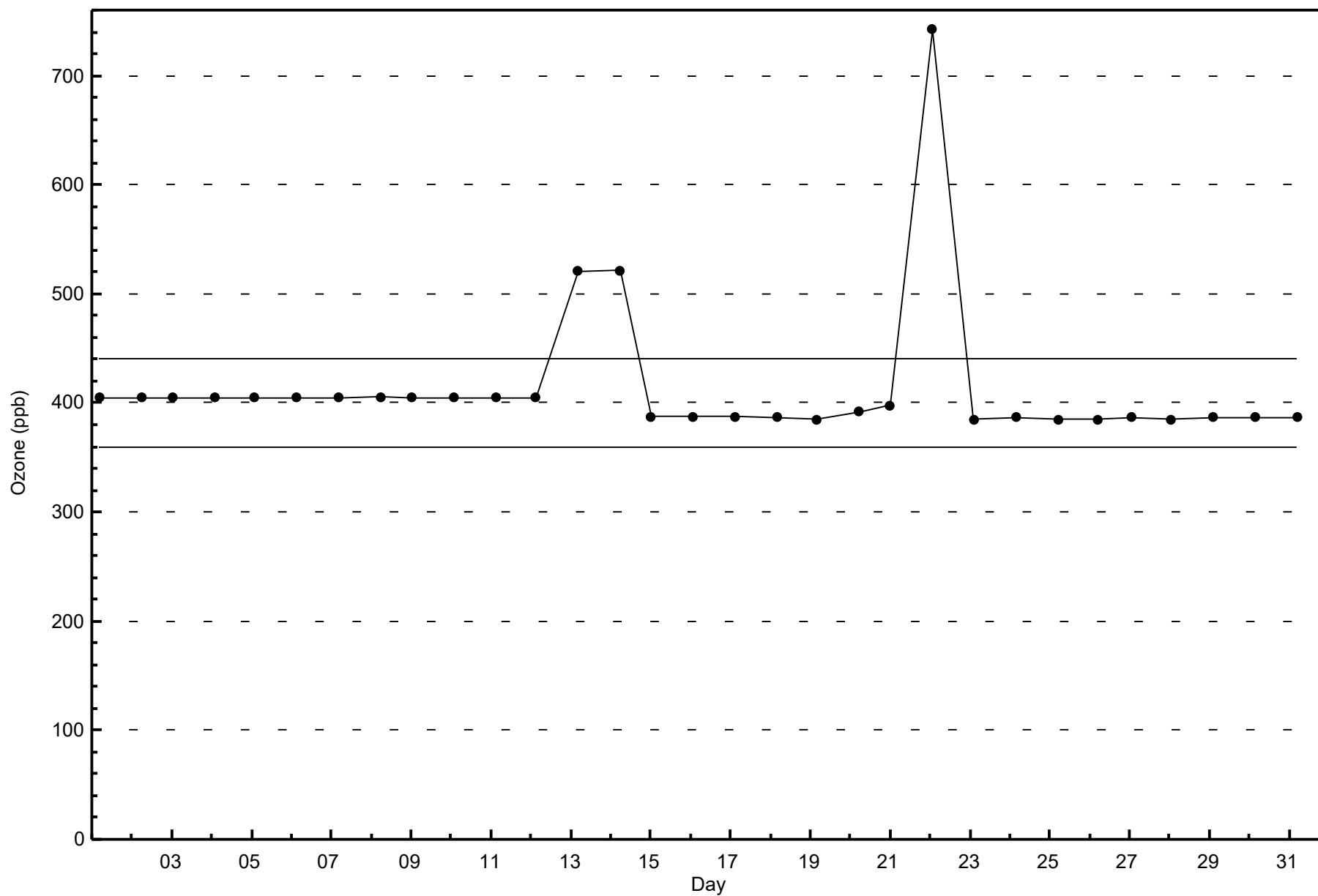
Ozone (O₃) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

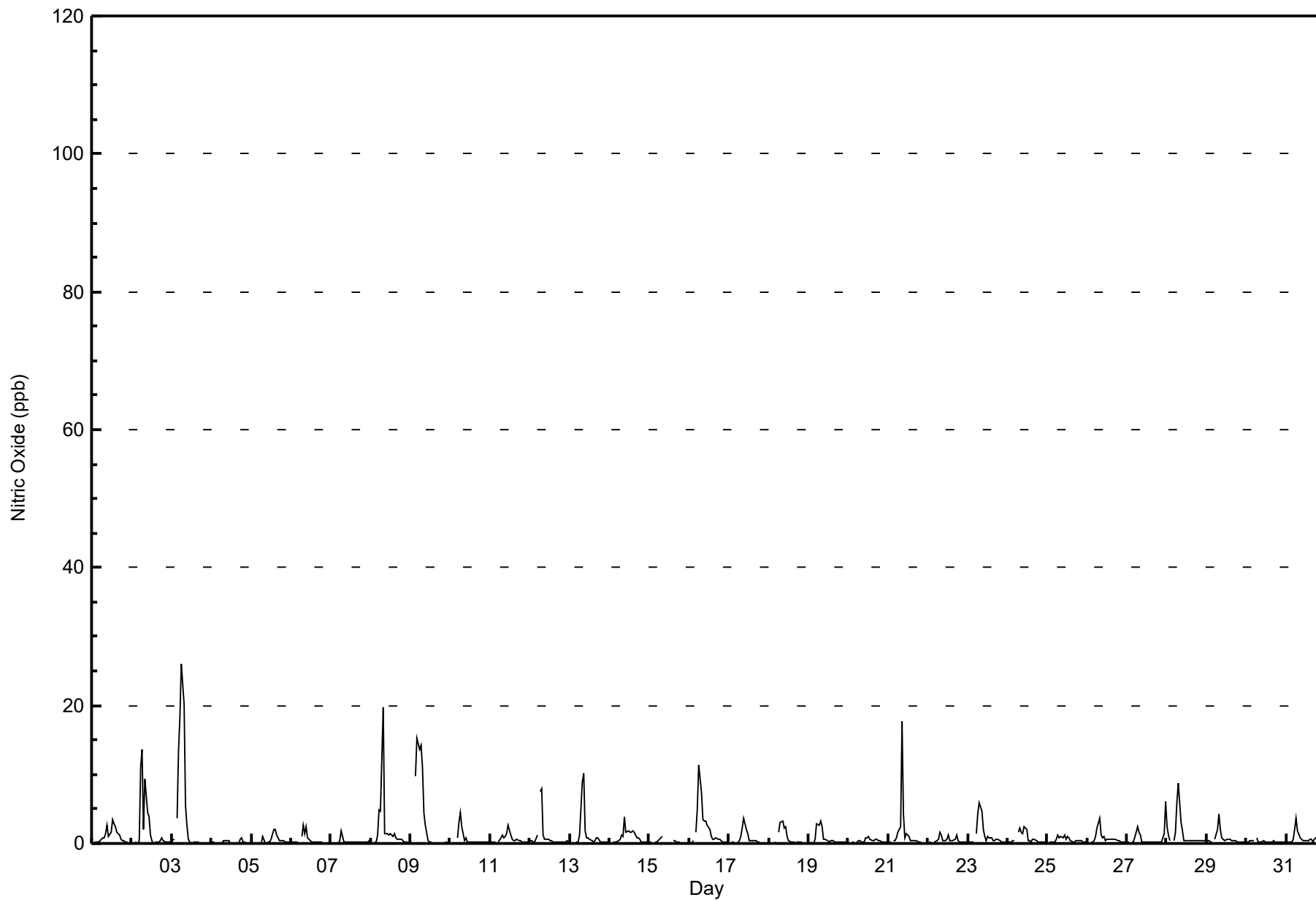
Fort McKay South - May 2025

Maximum Value: 26.0 ppb on May 3 07:00																		Maximum Daily Average: 4.0 ppb on May 3										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 5 00:00																		Minimum Daily Average: 0.2 ppb on May 4										Hours of Data: 708	
Maximum Diurnal Average: 4.2 ppb at hour 8																		Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 36	
Monthly Average: 1.03 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.8 P ₉₀ = 2.2 P ₉₉ = 13.7										Hours of Calibration: 36	
																		Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	Z	0.2	0.2	0.2	0.2	0.6	0.9	0.8	1.3	2.6	1.1	1.6	3.5	2.9	2.4	1.6	1.3	0.6	0.4	0.3	0.2	0.1	0.1	0.1	1.0	3.5			
2-May	0.1	Z	0.1	0.1	0.4	11.1	13.7	2.1	9.4	4.4	3.9	1.3	0.4	0.1	0.1	0.1	0.3	0.4	0.8	0.5	0.2	0.2	0.1	0.2	2.2	13.7			
3-May	0.4	0.7	Z	3.8	13.4	18.3	26.0	20.0	5.5	2.6	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	4.0	26.0			
4-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.4	0.4	0.5	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.5	0.7	0.3	0.1	0.1	0.0	0.0	0.2	0.7			
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	1.0	0.1	0.1	0.1	0.2	0.7	2.0	2.1	1.3	0.9	0.4	0.4	0.4	0.1	0.1	0.1	0.2	0.4	2.1			
6-May	0.3	0.3	0.3	0.2	0.2	Z	1.0	2.7	1.4	2.4	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.5	2.7			
7-May	Z	0.0	0.0	0.0	0.0	0.5	1.8	1.0	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.5	0.3	1.8			
8-May	0.2	Z	0.1	0.1	1.3	4.8	4.7	19.7	1.5	1.4	1.4	1.1	1.5	1.1	1.5	0.9	0.7	0.6	0.6	0.4	0.2	0.1	0.1	0.1	1.9	19.7			
9-May	0.1	0.1	Z	9.8	15.4	13.6	14.3	11.0	4.4	2.7	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	3.2	15.4			
10-May	0.1	0.1	0.1	Z	0.9	3.1	4.4	2.4	0.5	0.9	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	4.4			
11-May	0.2	0.2	0.2	0.2	Z	0.3	0.7	1.2	0.9	1.0	1.4	2.6	1.2	0.7	0.4	0.3	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.6	2.6			
12-May	0.3	0.4	0.2	0.3	1.3	Z	7.5	8.0	1.2	0.7	0.6	0.7	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.3	0.1	1.0	8.0			
13-May	Z	0.1	0.1	0.1	0.2	0.2	1.3	9.0	10.1	1.9	0.8	0.9	0.6	0.3	0.3	0.4	0.7	0.7	0.2	0.2	0.2	0.2	0.2	0.2	1.3	10.1			
14-May	0.2	Z	0.2	0.1	0.1	0.4	0.7	1.3	1.1	3.8	1.7	1.8	1.6	1.6	1.7	1.6	0.9	0.9	0.6	0.2	0.1	0.1	0.1	0.1	0.9	3.8			
15-May	0.1	0.1	Z	0.1	0.2	0.4	0.5	0.8	1.1	C	C	C	C	C	0.5	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	1.1			
16-May	0.1	0.0	0.4	Z	1.7	5.1	11.3	7.3	3.4	3.2	3.4	2.7	2.1	0.9	0.6	0.7	0.7	0.7	0.6	0.4	0.3	0.2	0.1	0.1	2.0	11.3			
17-May	0.0	0.1	0.1	0.1	Z	0.2	0.4	1.0	2.3	3.7	2.1	1.4	0.5	0.4	0.3	0.3	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.6	3.7			
18-May	0.0	0.0	0.0	0.1	0.1	Z	1.7	3.1	3.2	2.2	2.4	0.9	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.7	3.2			
19-May	Z	0.2	0.1	0.1	0.5	2.9	2.7	3.3	2.4	0.6	0.6	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.7	3.3			
20-May	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.3	0.8	0.9	0.9	0.6	0.4	0.4	0.6	0.7	0.4	0.4	0.2	0.2	0.2	0.2	0.4	0.9			
21-May	0.3	0.2	Z	0.3	0.5	0.8	1.5	2.4	17.8	4.3	0.8	1.4	0.9	0.5	0.3	0.3	0.5	0.5	0.2	0.2	0.1	0.1	0.1	0.1	1.5	17.8			
22-May	0.1	0.1	0.1	Z	0.1	0.4	0.6	1.6	1.2	0.4	0.3	0.7	1.2	0.4	0.5	0.4	0.5	1.3	0.4	0.3	0.2	0.2	0.2	0.3	0.5	1.6			
23-May	0.3	0.2	0.2	0.3	Z	1.5	4.2	5.8	4.6	2.0	1.0	0.4	1.0	0.8	0.9	0.3	0.4	0.6	0.7	0.3	0.2	0.1	0.1	0.2	1.1	5.8			
24-May	0.3	0.2	0.2	0.3	0.4	Z	1.7	2.3	1.6	1.5	2.4	2.1	0.4	0.4	0.3	0.6	0.6	0.5	0.2	0.3	0.2	0.3	0.2	0.2	0.7	2.4			
25-May	Z	0.2	0.2	0.2	0.2	0.6	1.2	0.8	0.9	0.8	1.2	0.7	1.1	0.9	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.5	1.2			
26-May	0.2	Z	0.2	0.2	0.5	1.1	2.1	3.7	1.2	0.9	1.0	0.4	0.7	0.6	0.6	0.6	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.7	3.7			
27-May	0.2	0.3	Z	0.1	0.2	1.7	2.4	1.7	1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.3	6.1	0.8	6.1			
28-May	2.3	1.2	0.5	Z	0.5	1.6	5.8	8.8	3.1	1.9	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	1.3	8.8			
29-May	0.4	0.3	0.3	0.3	Z	0.7	2.1	4.2	2.1	0.8	0.5	0.4	0.7	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.7	4.2			
30-May	0.3	0.2	0.5	0.5	0.4	Z	0.9	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.9			
31-May	Z	0.2	0.2	0.2	0.6	2.0	3.7	1.7	0.8	0.7	0.5	0.5	0.4	0.3	0.5	0.6	0.3	0.6	0.9	0.4	0.2	0.1	0.1	0.1	0.7	3.7			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	50	59	16	2	6	8	40	125	110	68	58	46	30	16	26	44	704
21 - 40	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	59	16	2	6	8	41	125	110	68	58	46	30	16	26	44	705

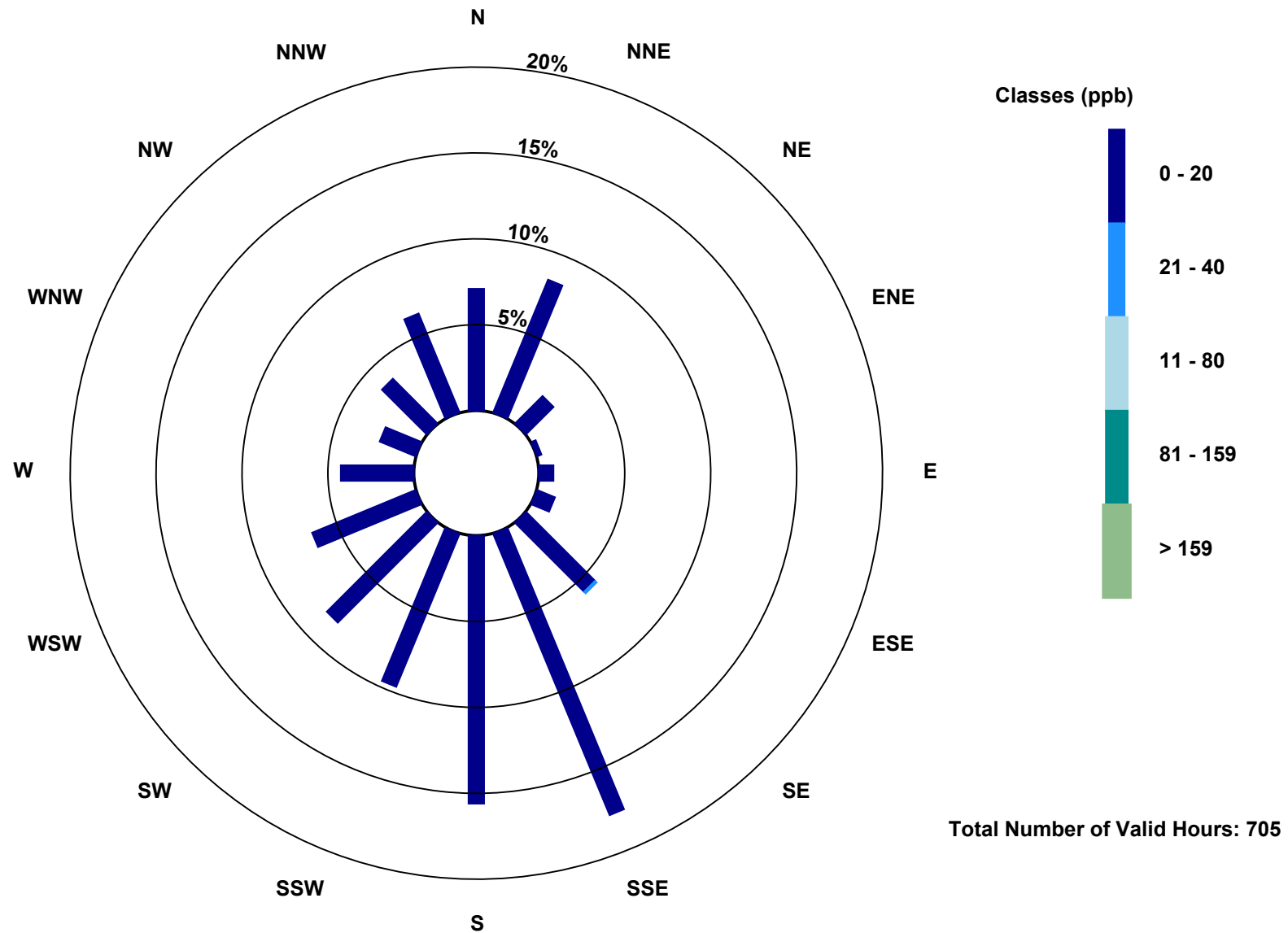
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

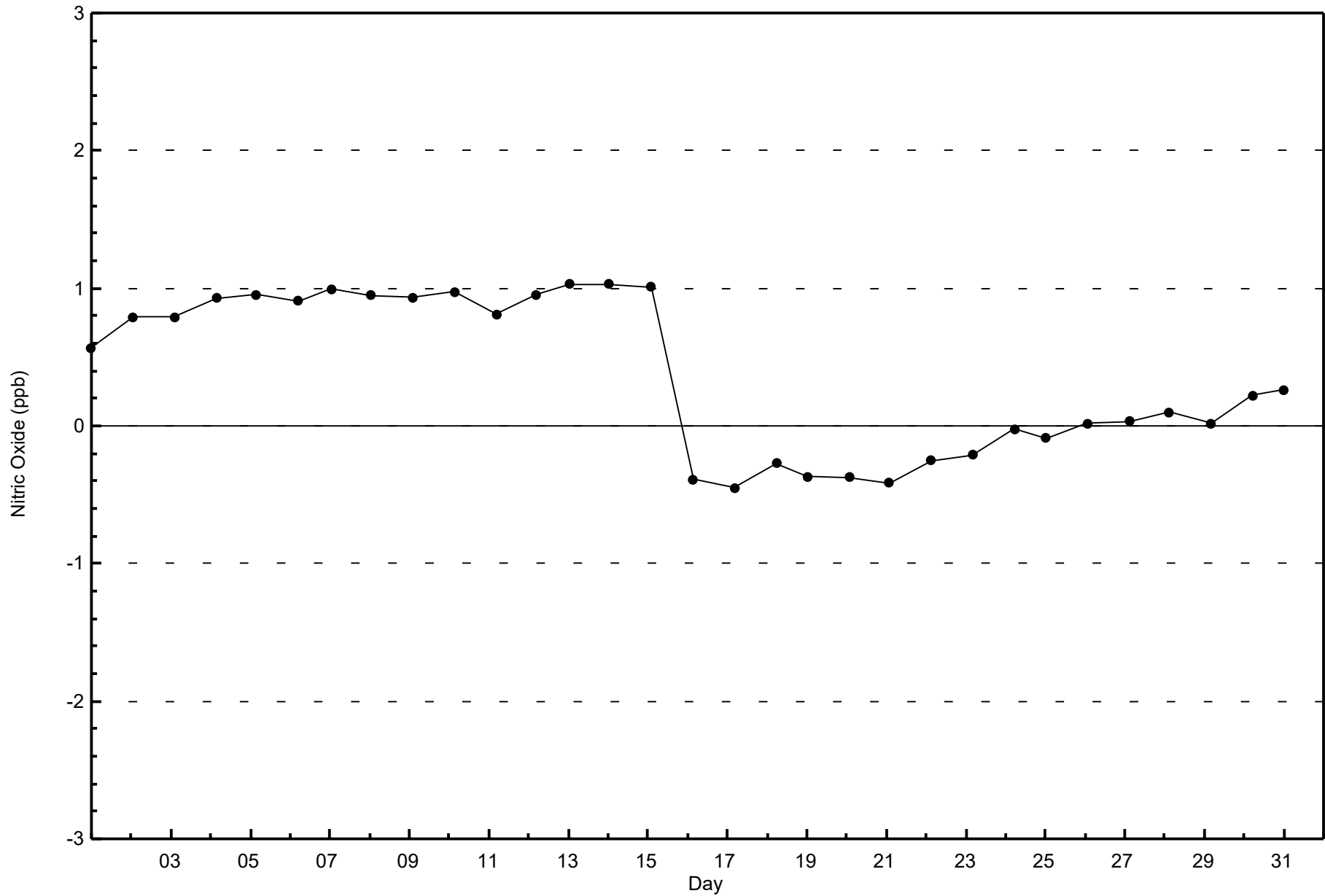
Nitric Oxide (NO) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

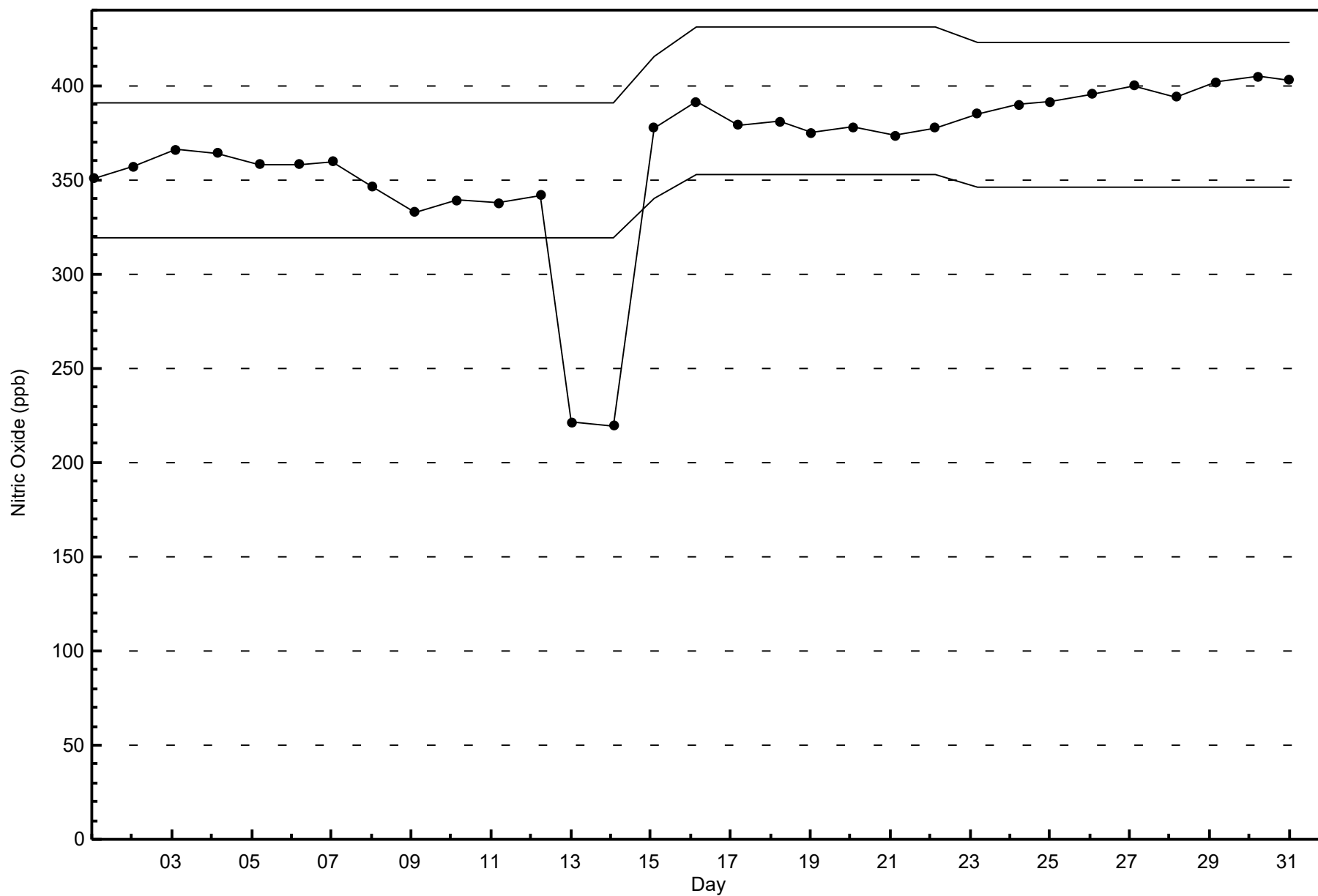
Nitric Oxide (NO) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

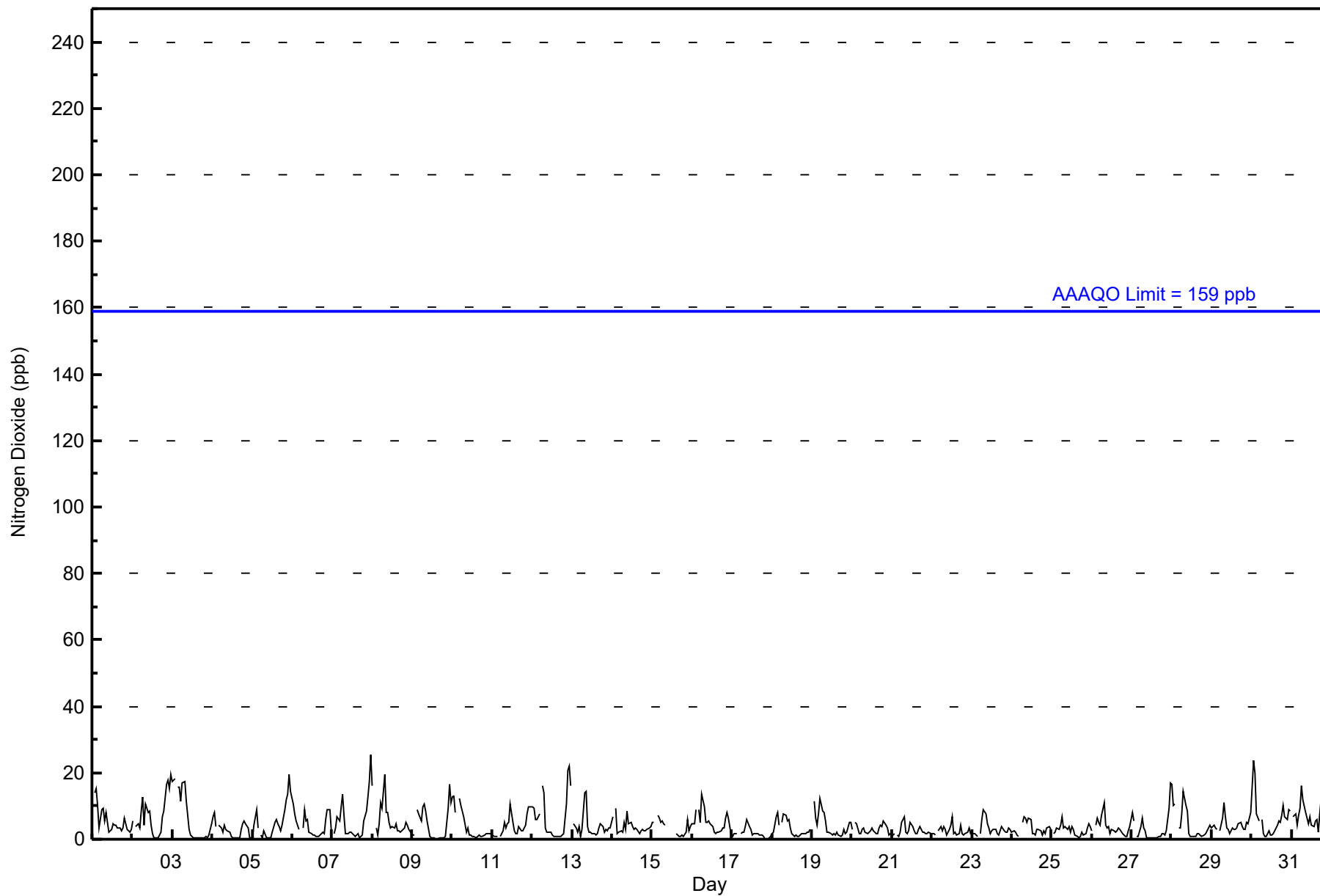
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 25.3 ppb on May 8 00:00 Maximum Daily Average: 7.1 ppb on May 2																				Hours in Service: 744						
Minimum Value: 0.2 ppb on May 9 15:00 Minimum Daily Average: 1.8 ppb on May 17 Maximum Diurnal Average: 7.9 ppb at hour 8 Minimum Diurnal Average: 1.9 ppb at hour 16 Monthly Average: 4.31 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.9 Q ₁ = 1.6 Median = 3.0 Q ₃ = 5.4 P ₉₀ = 9.5 P ₉₉ = 19.2																				Hours of Data: 708						
																				Hours of Missing Data: 36						
																				Hours of Calibration: 36						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	13.8	15.2	10.2	3.6	9.1	9.3	5.3	7.9	5.1	2.0	2.9	4.7	4.3	4.1	3.6	3.5	2.6	3.6	6.2	4.5	3.1	2.2	2.9	5.6	15.2
2-May	5.6	Z	3.9	4.5	3.2	8.3	12.7	4.2	10.6	8.2	8.3	4.4	1.5	0.3	0.3	0.4	1.2	2.3	6.6	8.6	16.6	17.7	15.4	19.6	7.1	19.6
3-May	17.4	18.2	Z	15.7	15.7	11.6	17.0	17.5	11.5	7.1	2.9	1.3	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.6	0.9	0.6	1.3	4.8	6.4	18.2
4-May	6.8	8.2	3.7	Z	4.1	3.3	2.1	4.3	2.9	2.4	2.0	0.7	0.3	0.4	0.3	0.3	0.4	3.0	4.7	5.6	4.6	3.4	0.4	0.3	2.8	8.2
5-May	0.3	4.1	9.1	3.2	Z	1.3	0.6	2.6	0.4	0.4	0.6	0.6	2.1	5.0	5.8	4.5	3.9	2.6	4.2	8.8	11.9	13.5	19.3	14.5	5.2	19.3
6-May	10.8	7.7	5.4	4.1	2.9	Z	3.6	8.8	5.6	6.1	2.3	1.6	1.2	1.1	0.8	0.8	1.0	1.5	2.1	1.7	5.9	9.0	8.9	2.4	4.1	10.8
7-May	Z	1.5	3.4	6.8	5.5	9.8	13.4	7.4	1.7	1.7	2.0	2.3	1.5	1.2	0.8	1.5	0.5	0.8	1.2	5.6	8.3	12.9	17.3	25.3	5.8	25.3
8-May	16.0	Z	3.3	1.4	4.8	11.2	9.5	19.5	8.2	7.9	5.2	3.6	3.7	3.2	4.8	2.4	2.5	2.0	3.1	3.5	5.1	4.1	2.9	1.9	5.6	19.5
9-May	1.2	1.4	Z	8.9	7.6	5.3	9.6	10.5	8.6	5.5	0.9	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.6	0.5	0.7	9.5	16.6	11.0	4.4	16.6
10-May	12.7	13.1	7.9	Z	12.2	10.2	8.5	6.6	2.1	3.2	1.1	1.2	0.7	0.8	0.6	0.8	1.1	0.7	1.0	1.4	1.6	1.6	1.9	1.9	4.0	13.1
11-May	1.3	1.0	0.9	0.9	Z	1.0	2.6	5.0	3.4	4.8	5.0	10.7	5.0	2.5	1.7	1.8	3.9	2.4	2.6	3.4	4.3	7.6	9.8	9.9	4.0	10.7
12-May	9.7	9.3	5.8	5.9	7.7	Z	15.9	14.1	3.5	2.2	2.1	2.1	1.3	0.9	0.9	0.9	1.0	1.0	1.2	1.5	10.7	20.9	22.2	15.9	6.8	22.2
13-May	Z	4.8	3.3	2.3	3.7	0.9	3.0	14.0	14.6	3.9	2.0	2.2	1.7	1.5	1.2	1.8	3.5	4.5	3.7	2.3	2.8	2.4	3.2	3.6	3.8	14.6
14-May	6.8	Z	9.3	1.8	2.1	2.5	2.2	5.0	3.1	8.4	4.7	4.9	3.7	2.9	3.3	2.9	1.6	2.7	3.1	2.5	2.4	3.1	3.3	3.9	3.7	9.3
15-May	4.9	5.0	Z	7.3	6.4	5.2	5.3	4.8	4.4	C	C	C	C	C	1.6	1.2	1.0	1.0	1.1	0.8	2.1	6.0	2.6	4.0	3.6	7.3
16-May	4.6	4.6	8.9	Z	8.7	4.9	13.6	9.6	5.1	4.9	5.3	4.6	4.0	2.2	1.8	2.1	2.1	2.4	3.2	3.4	6.3	8.0	6.2	1.2	5.1	13.6
17-May	0.8	1.7	1.6	1.5	Z	1.8	2.2	2.3	3.8	6.0	3.9	3.0	1.4	1.5	1.5	1.5	1.4	1.1	1.4	0.8	0.2	0.2	0.4	1.0	1.8	6.0
18-May	1.5	2.1	6.8	8.2	4.1	Z	5.1	7.6	7.4	5.7	6.0	3.4	1.6	1.0	1.1	1.0	1.0	1.4	1.9	1.9	1.8	2.3	2.3	3.0	3.4	8.2
19-May	Z	11.5	6.3	4.4	7.8	12.2	8.4	8.0	5.3	2.0	2.0	1.5	1.3	1.8	1.4	2.1	1.3	0.8	1.4	2.9	1.5	2.0	4.9	4.9	4.2	12.2
20-May	2.9	Z	4.9	4.5	1.8	1.7	3.0	3.5	2.2	1.9	2.3	2.6	3.4	2.7	1.9	1.7	3.5	4.4	4.0	5.4	4.1	3.2	1.4	1.9	3.0	5.4
21-May	1.0	1.6	Z	1.2	0.7	2.1	4.9	6.7	2.2	1.7	2.7	5.0	3.7	2.4	1.9	1.5	3.0	4.0	2.2	2.2	1.6	1.6	2.1	1.9	2.5	6.7
22-May	1.9	1.9	1.4	Z	2.7	4.0	2.6	3.8	2.9	1.2	2.9	4.4	6.7	1.8	2.2	1.3	1.8	4.1	1.7	1.3	1.5	2.1	3.2	1.9	2.6	6.7
23-May	1.5	1.7	1.8	0.8	Z	1.6	5.9	8.9	7.8	4.6	3.4	1.9	2.6	2.9	3.0	1.7	1.4	2.4	3.7	2.6	2.2	2.2	3.4	2.9	3.1	8.9
24-May	2.2	2.7	2.3	1.2	0.7	Z	4.9	6.9	6.2	5.2	6.3	6.1	1.8	1.8	1.2	3.1	3.1	2.6	1.2	2.5	1.9	3.3	3.8	3.1	3.2	6.9
25-May	Z	1.9	2.2	3.3	3.0	4.2	6.6	3.6	3.7	3.1	4.0	2.3	3.8	3.1	1.3	0.7	0.6	1.0	2.1	1.4	1.5	3.2	4.8	3.7	2.8	6.6
26-May	2.4	Z	4.2	6.3	5.1	4.4	7.1	11.2	4.4	3.3	4.0	1.9	2.8	2.5	2.3	2.6	3.3	3.0	1.5	1.1	0.7	0.9	2.7	3.8	3.5	11.2
27-May	8.2	5.3	Z	0.7	0.7	3.7	6.2	3.4	2.5	0.6	0.5	0.4	0.3	0.4	0.4	0.5	0.7	0.9	1.6	1.9	1.3	2.7	9.2	17.0	3.0	17.0
28-May	16.6	10.1	10.5	Z	3.2	3.2	7.8	14.4	10.2	8.4	1.6	0.9	0.9	0.8	0.8	1.6	1.5	1.2	0.9	1.3	1.6	2.6	3.6	4.1	4.7	16.6
29-May	3.6	4.2	3.4	2.9	Z	2.6	6.4	10.9	6.6	3.5	2.8	1.9	3.3	2.8	2.9	3.4	4.5	4.9	3.7	2.8	3.0	5.2	4.6	8.2	4.3	10.9
30-May	15.7	23.9	20.0	7.5	5.4	Z	6.0	1.8	1.0	0.9	2.4	1.4	1.1	1.7	2.7	4.2	5.4	4.9	7.0	10.1	6.8	6.1	8.9	8.6	6.7	23.9
31-May	Z	6.6	7.8	4.3	7.1	9.5	15.9	11.8	8.1	6.3	4.8	6.7	4.1	3.8	5.3	5.9	2.3	7.7	12.3	7.1	6.2	0.9	1.2	1.5	6.4	15.9
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	99.44	99.44
21 - 40	4	0.56	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	59	16	2	6	8	41	125	110	68	58	45	29	16	26	44	701
21 - 40	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	59	16	2	6	8	41	125	110	68	58	46	30	16	26	44	705

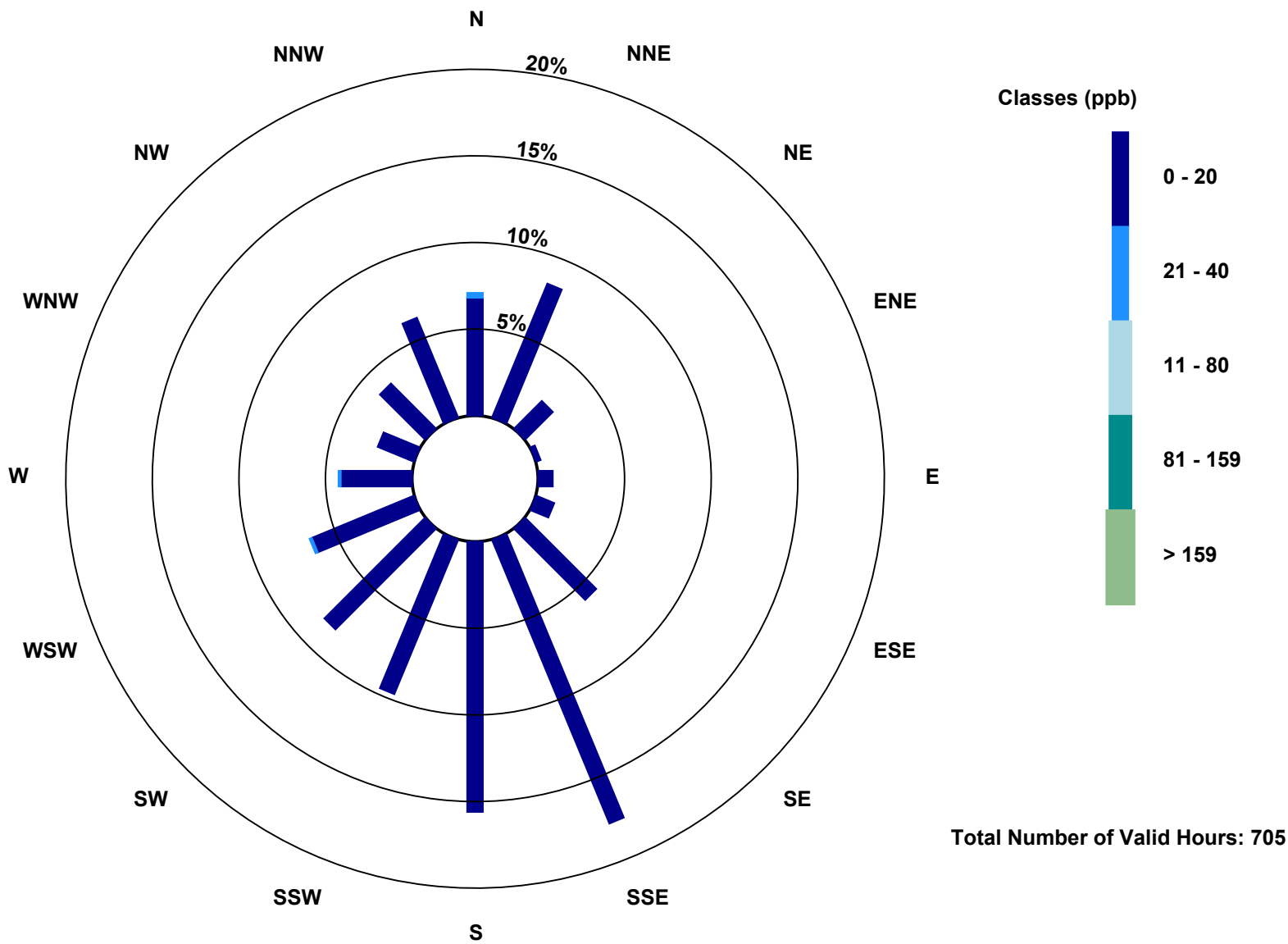
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

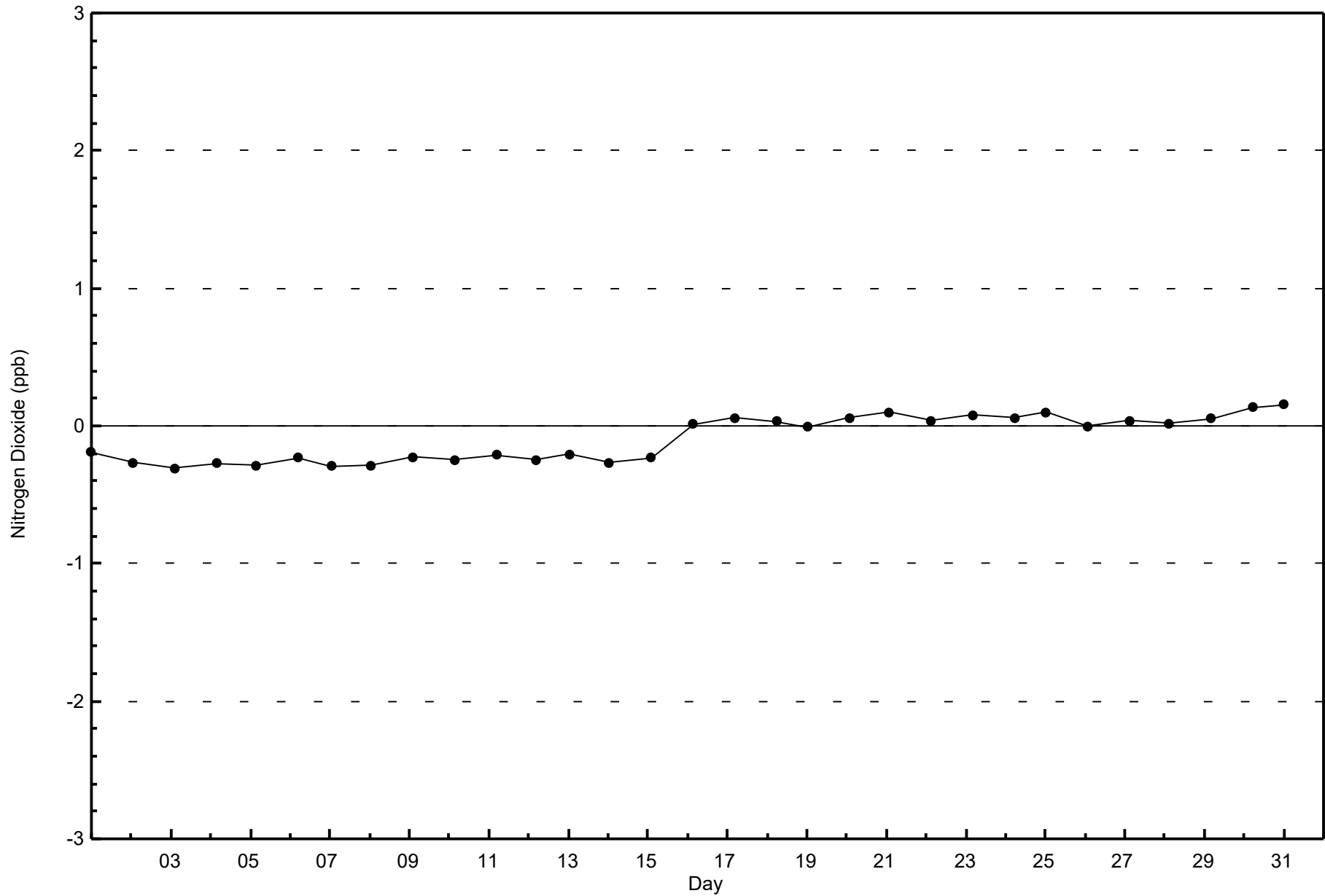
Nitrogen Dioxide (NO₂) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

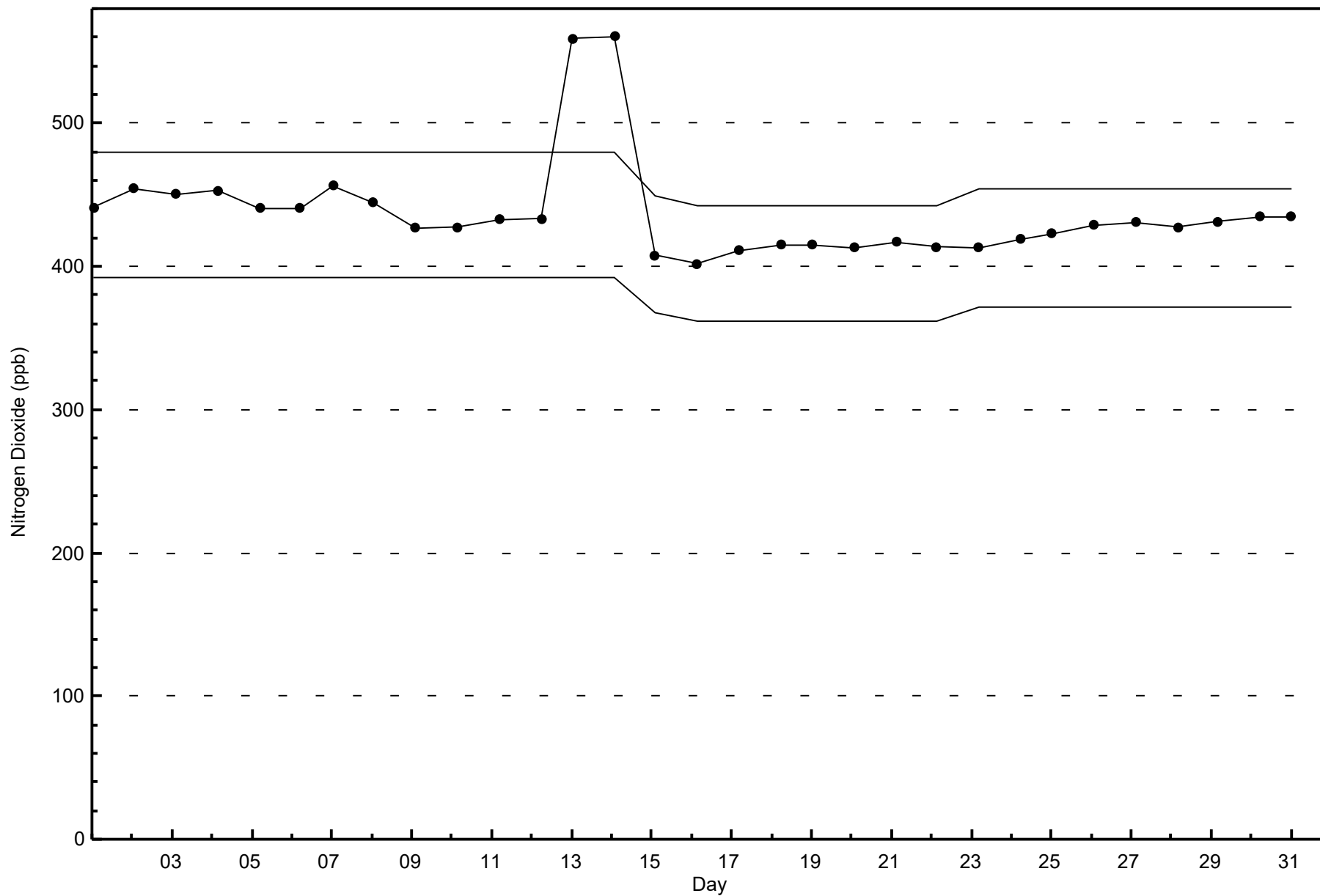
Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

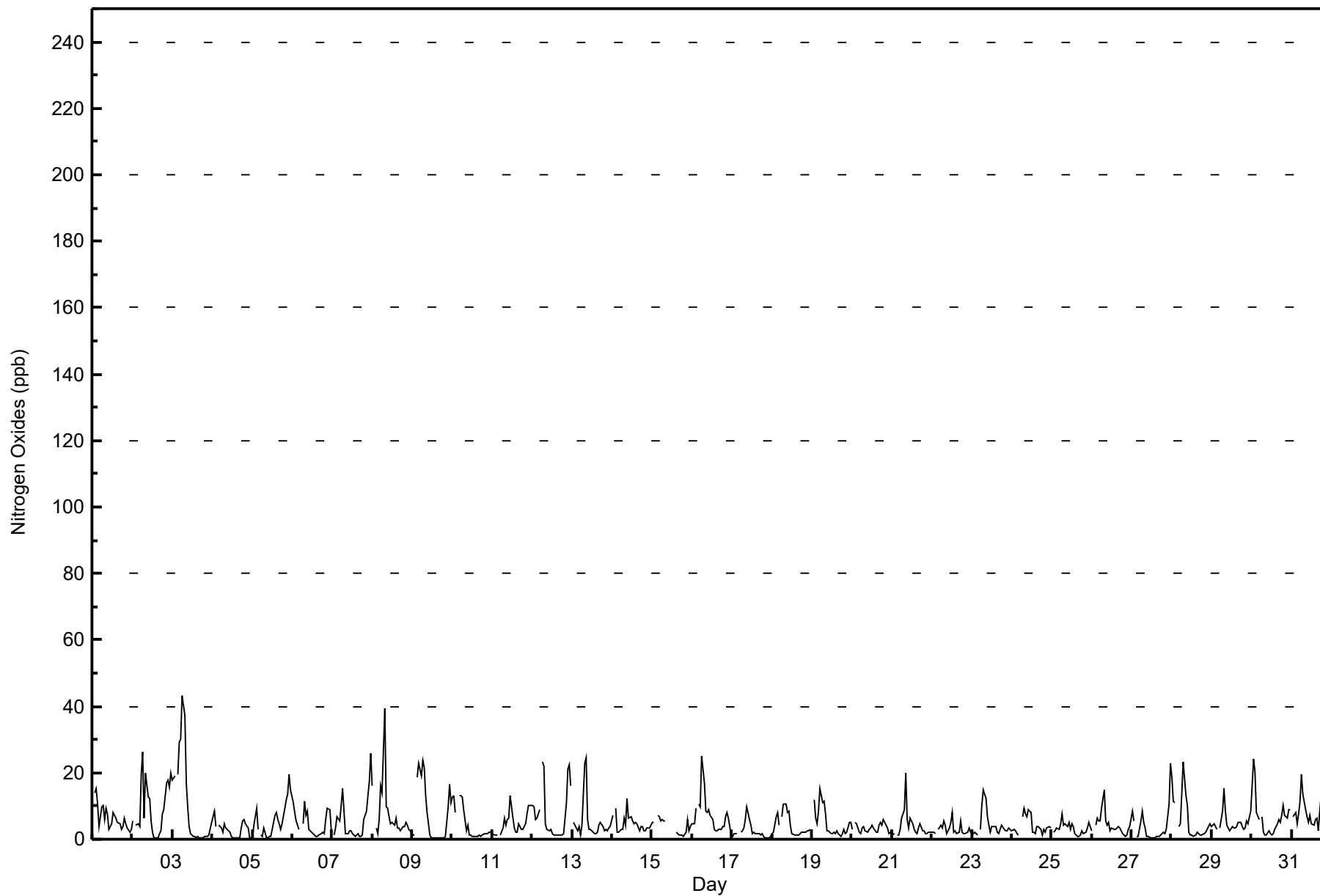
Fort McKay South - May 2025

Maximum Value: 43.0 ppb on May 3 07:00																			Maximum Daily Average: 10.4 ppb on May 3							Hours in Service: 744	
Minimum Value: 0.2 ppb on May 17 22:00																			Minimum Daily Average: 2.4 ppb on May 17							Hours of Data: 708	
Maximum Diurnal Average: 12.1 ppb at hour 8																			Minimum Diurnal Average: 2.3 ppb at hour 16							Hours of Missing Data: 36	
Monthly Average: 5.34 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 1.1 Q ₁ = 1.8 Median = 3.5 Q ₃ = 6.5 P ₉₀ = 11.8 P ₉₉ = 24.9							Hours of Calibration: 36	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	Z	14.0	15.4	10.4	3.8	9.7	10.2	6.1	9.2	7.7	3.1	4.5	8.2	7.2	6.5	5.2	4.8	3.2	4.0	6.5	4.7	3.2	2.3	3.0	6.7	15.4	
2-May	5.7	Z	4.0	4.6	3.6	19.4	26.4	6.3	20.0	12.6	12.2	5.7	1.9	0.4	0.4	0.5	1.5	2.7	7.4	9.1	16.8	17.9	15.5	19.8	9.3	26.4	
3-May	17.8	18.9	Z	19.5	29.1	29.9	43.0	37.5	17.0	9.7	3.6	1.5	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.7	0.9	0.7	1.4	4.9	10.4	43.0	
4-May	6.9	8.3	3.8	Z	4.2	3.4	2.2	4.7	3.3	2.9	2.3	0.8	0.4	0.4	0.3	0.4	0.5	3.5	5.4	5.9	4.7	3.5	0.4	0.3	3.0	8.3	
5-May	0.3	4.1	9.1	3.2	Z	1.3	0.7	3.6	0.5	0.5	0.7	0.8	2.8	7.0	7.9	5.8	4.8	3.0	4.6	9.2	12.0	13.6	19.4	14.7	5.6	19.4	
6-May	11.1	8.0	5.7	4.3	3.1	Z	4.6	11.5	7.0	8.5	3.0	2.0	1.5	1.3	1.0	1.0	1.2	1.7	2.3	1.8	6.0	9.1	8.9	2.4	4.7	11.5	
7-May	Z	1.5	3.4	6.8	5.5	10.3	15.2	8.4	1.9	1.9	2.3	2.6	1.7	1.4	0.9	1.7	0.7	1.0	1.3	5.9	8.5	13.1	17.5	25.8	6.1	25.8	
8-May	16.2	Z	3.4	1.5	6.1	16.0	14.2	39.2	9.7	9.3	6.6	4.7	5.2	4.3	6.3	3.3	3.2	2.6	3.7	3.9	5.3	4.2	3.0	2.0	7.6	39.2	
9-May	1.3	1.5	Z	18.7	23.0	18.9	23.9	21.5	13.0	8.2	1.3	0.4	0.4	0.4	0.3	0.3	0.5	0.6	0.6	0.5	0.8	9.7	16.7	11.1	7.6	23.9	
10-May	12.8	13.2	8.0	Z	13.1	13.3	12.9	9.0	2.6	4.1	1.4	1.4	0.8	0.9	0.8	1.0	1.3	0.9	1.2	1.6	1.8	1.8	2.1	2.1	4.7	13.3	
11-May	1.5	1.2	1.1	1.1	Z	1.3	3.3	6.2	4.3	5.8	6.4	13.3	6.2	3.2	2.1	2.1	4.6	2.8	2.9	3.7	4.5	7.8	10.0	10.1	4.6	13.3	
12-May	10.0	9.7	6.0	6.2	9.0	Z	23.4	22.1	4.7	2.9	2.7	2.8	1.7	1.2	1.2	1.1	1.3	1.3	1.4	1.6	10.9	21.1	22.5	16.0	7.9	23.4	
13-May	Z	4.9	3.4	2.4	3.9	1.1	4.3	23.0	24.7	5.8	2.8	3.1	2.3	1.8	1.5	2.2	4.2	5.2	3.9	2.5	3.0	2.6	3.4	3.8	5.0	24.7	
14-May	7.0	Z	9.5	1.9	2.2	2.9	2.9	6.3	4.2	12.2	6.4	6.7	5.3	4.5	5.0	4.5	2.5	3.6	3.7	2.7	2.5	3.2	3.4	4.0	4.7	12.2	
15-May	5.0	5.1	Z	7.4	6.6	5.6	5.8	5.6	5.5	C	C	C	C	C	2.1	1.5	1.3	1.2	1.2	0.9	2.1	6.0	2.6	4.0	3.9	7.4	
16-May	4.7	4.6	9.3	Z	10.4	10.0	24.9	16.9	8.5	8.1	8.7	7.3	6.1	3.1	2.4	2.8	2.8	3.1	3.8	3.8	6.6	8.2	6.3	1.3	7.1	24.9	
17-May	0.8	1.8	1.7	1.6	Z	2.0	2.6	3.3	6.1	9.7	6.0	4.4	1.9	1.9	1.8	1.8	1.8	1.3	1.6	0.9	0.3	0.2	0.4	1.0	2.4	9.7	
18-May	1.5	2.1	6.8	8.3	4.2	Z	6.8	10.7	10.6	7.9	8.4	4.3	1.9	1.1	1.3	1.1	1.1	1.6	2.1	2.1	1.9	2.4	2.4	3.0	4.1	10.7	
19-May	Z	11.7	6.4	4.5	8.3	15.1	11.1	11.3	7.7	2.6	2.6	1.9	1.6	2.2	1.7	2.5	1.6	1.0	1.6	3.1	1.7	2.1	5.0	5.0	4.9	15.1	
20-May	3.0	Z	5.0	4.6	1.9	1.8	3.3	3.9	2.5	2.2	3.1	3.5	4.3	3.3	2.3	2.1	4.1	5.1	4.4	5.8	4.3	3.4	1.6	2.1	3.4	5.8	
21-May	1.3	1.8	Z	1.5	1.2	2.9	6.4	9.1	20.0	6.0	3.5	6.4	4.6	2.9	2.2	1.8	3.5	4.5	2.4	2.4	1.7	1.7	2.2	2.0	4.0	20.0	
22-May	2.0	2.0	1.5	Z	2.8	4.4	3.2	5.4	4.1	1.6	3.2	5.1	7.9	2.2	2.7	1.7	2.3	5.4	2.1	1.6	1.7	2.3	3.4	2.2	3.1	7.9	
23-May	1.8	1.9	2.0	1.1	Z	3.1	10.1	14.7	12.4	6.6	4.4	2.3	3.6	3.7	3.9	2.0	1.8	3.0	4.4	2.9	2.4	2.3	3.5	3.1	4.2	14.7	
24-May	2.5	2.9	2.5	1.5	1.1	Z	6.6	9.2	7.8	6.7	8.7	8.2	2.2	2.2	1.5	3.7	3.7	3.1	1.4	2.8	2.1	3.6	4.0	3.3	4.0	9.2	
25-May	Z	2.1	2.4	3.5	3.2	4.8	7.8	4.4	4.6	3.9	5.2	3.0	4.9	4.0	1.7	1.0	0.9	1.3	2.5	1.8	1.9	3.5	5.0	3.9	3.4	7.8	
26-May	2.6	Z	4.4	6.5	5.6	5.5	9.2	14.9	5.6	4.2	5.0	2.3	3.5	3.1	2.9	3.2	4.0	3.5	1.8	1.4	1.0	1.2	3.0	4.0	4.3	14.9	
27-May	8.4	5.6	Z	0.8	0.9	5.4	8.6	5.1	3.6	0.8	0.7	0.6	0.5	0.6	0.6	0.7	0.9	1.1	1.8	2.1	1.5	2.9	10.5	23.1	3.8	23.1	
28-May	18.9	11.3	11.0	Z	3.7	4.8	13.6	23.2	13.3	10.3	2.1	1.3	1.3	1.1	1.1	1.9	1.8	1.5	1.2	1.7	2.0	3.0	4.0	4.5	6.0	23.2	
29-May	4.0	4.5	3.7	3.2	Z	3.3	8.5	15.1	8.7	4.3	3.3	2.3	4.0	3.3	3.5	3.8	4.9	5.3	4.0	3.1	3.2	5.5	4.8	8.4	5.0	15.1	
30-May	16.0	24.1	20.5	8.0	5.8	Z	6.9	2.1	1.2	1.1	2.7	1.6	1.2	1.8	2.9	4.5	5.8	5.2	7.3	10.3	7.0	6.3	9.1	8.8	7.0	24.1	
31-May	Z	6.8	8.0	4.5	7.7	11.5	19.6	13.5	8.9	7.0	5.3	7.2	4.5	4.1	5.8	6.5	2.6	8.3	13.2	7.5	6.4	1.0	1.3	1.6	7.1	19.6	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	688	97.18	97.18
21 - 40	19	2.68	99.86
41 - 80	1	0.14	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	46	55	16	2	6	8	38	123	110	68	54	44	29	16	26	44	685
21 - 40	4	4	0	0	0	0	2	2	0	0	4	2	1	0	0	0	19
11 - 80	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	59	16	2	6	8	41	125	110	68	58	46	30	16	26	44	705

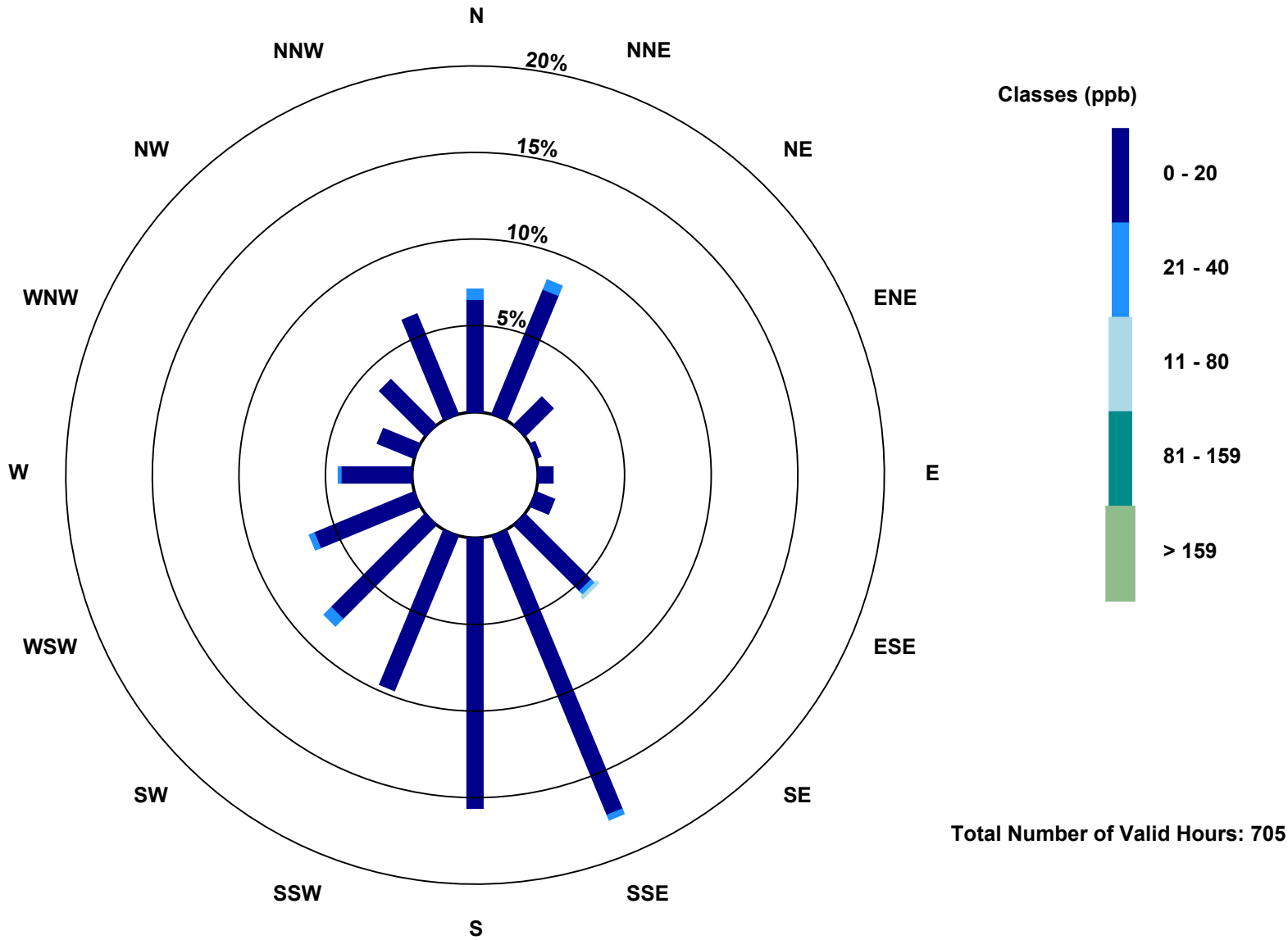
Total Number of Valid Hours: 705

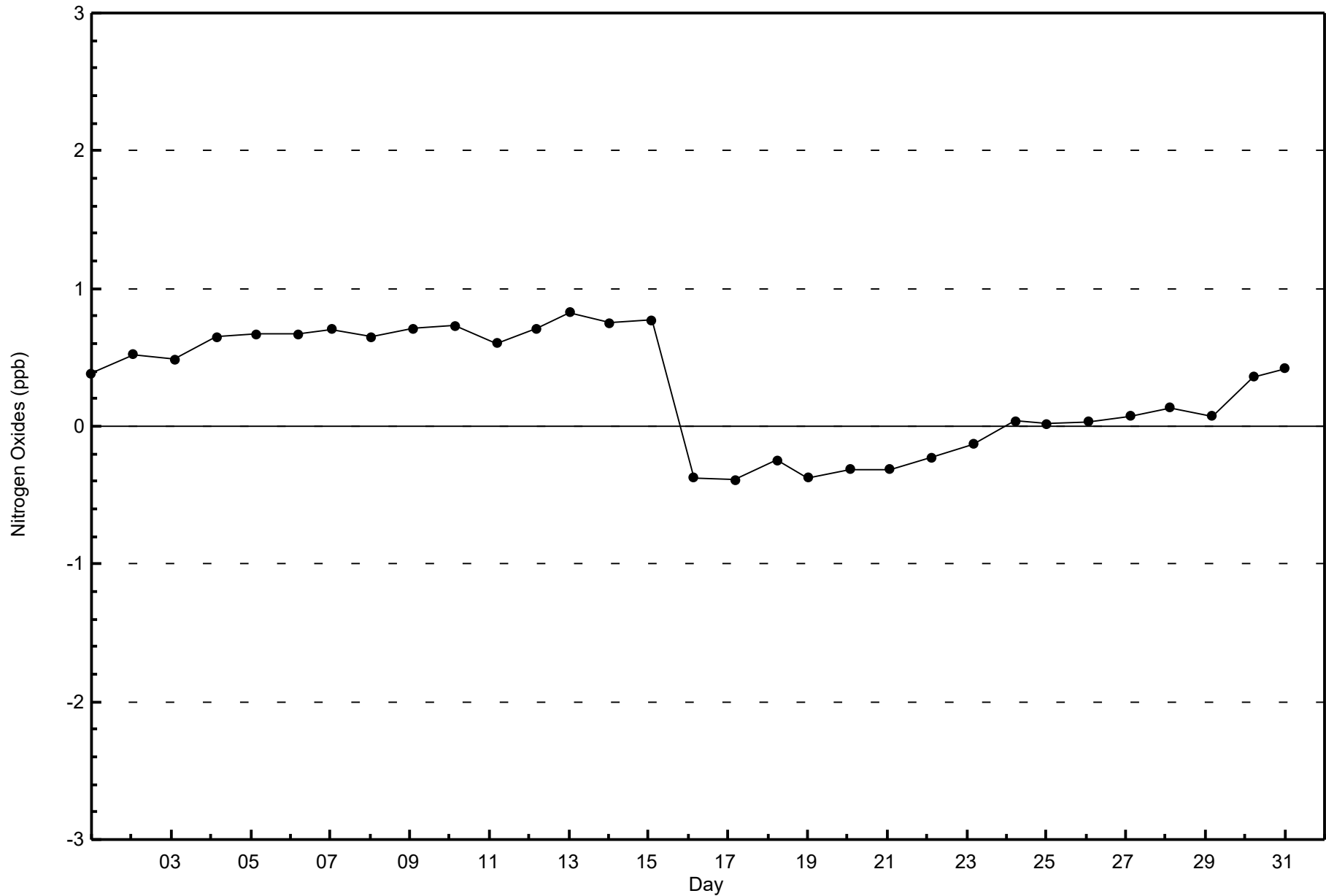
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Fort McKay South

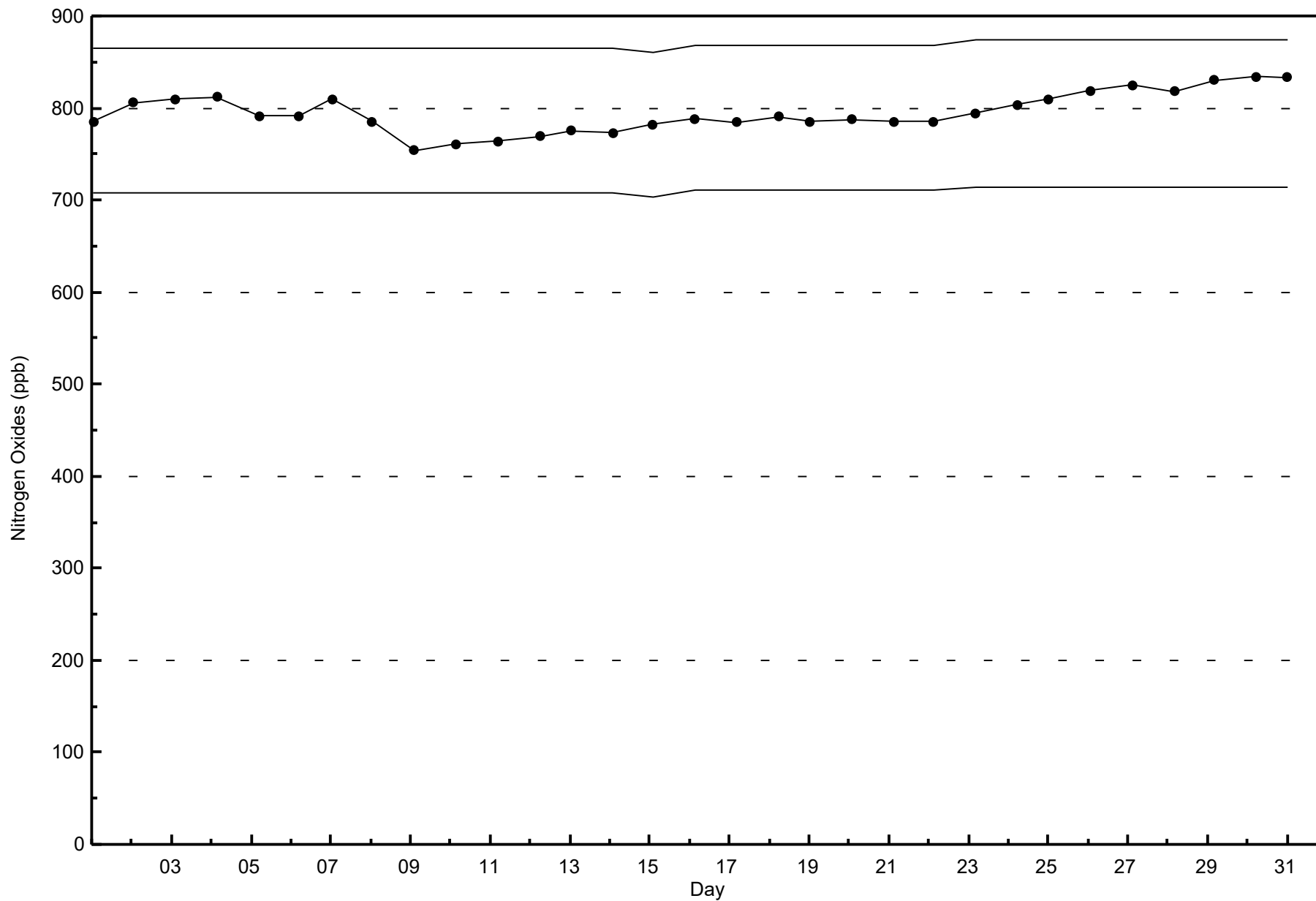






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

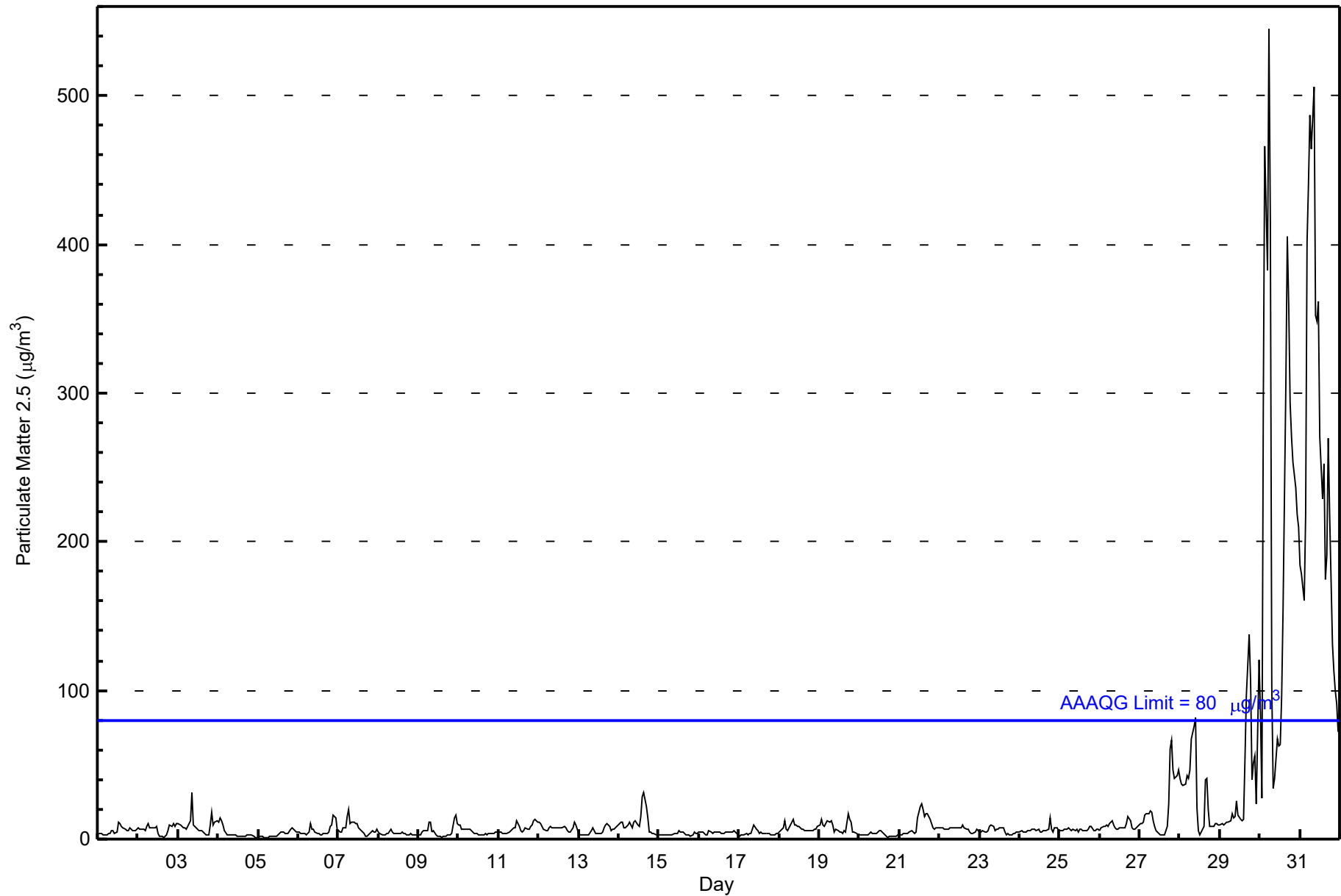
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 46 24-hr: 4 Maximum Value: 545.1 µg/m ³ on May 30 06:00 Minimum Value: 0.8 µg/m ³ on May 5 07:00 Maximum Diurnal Average: 38.8 µg/m ³ at hour 6 Monthly Average: 23.58 µg/m ³																								Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0		
Maximum Daily Average: 258.9 µg/m ³ on May 31 Minimum Daily Average: 3.2 µg/m ³ on May 20 Minimum Diurnal Average: 13.5 µg/m ³ at hour 2 Percentiles: P ₁ = 1.2 P ₁₀ = 2.8 Q ₁ = 3.9 Median = 6.1 Q ₃ = 9.6 P ₉₀ = 30.5 P ₉₉ = 403.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3.4	3.6	3.5	3.2	2.7	3.2	4.2	3.9	6.1	5.3	4.0	5.2	11.2	10.4	8.7	7.5	6.8	5.6	5.6	7.1	6.4	6.0	5.7	6.2	5.6	11.2
2-May	7.6	6.5	7.0	6.5	5.9	8.4	10.6	7.2	7.6	7.2	7.4	8.8	4.1	1.7	1.5	1.2	2.0	3.0	6.1	9.2	8.9	10.3	8.9	10.7	6.6	10.7
3-May	10.1	9.6	8.5	7.9	7.7	7.1	8.3	12.5	31.4	9.0	8.5	7.9	5.9	6.0	5.5	4.5	3.5	2.9	2.8	9.6	18.1	9.3	11.3	12.6	9.2	31.4
4-May	11.9	14.4	12.8	9.7	5.3	3.0	2.7	2.9	2.7	2.7	2.6	2.4	2.3	2.2	2.1	1.9	1.8	2.5	3.0	2.7	2.7	2.3	1.2	1.0	4.1	14.4
5-May	1.0	1.9	1.9	1.0	1.0	0.8	0.8	1.8	1.7	1.8	2.0	2.3	3.0	4.4	5.1	4.4	4.0	3.6	4.1	6.4	7.4	6.5	5.7	5.0	3.2	7.4
6-May	4.4	4.0	3.6	3.4	3.4	3.3	4.4	10.1	6.8	6.9	4.5	3.4	3.4	3.2	3.2	3.5	3.4	3.8	4.7	8.3	9.3	16.5	13.9	5.7	5.7	16.5
7-May	5.4	4.3	4.7	7.8	7.6	15.2	20.3	10.6	11.0	11.1	10.2	10.7	7.7	6.8	5.2	3.7	1.8	1.8	2.7	3.8	6.0	4.5	4.8	6.2	7.3	20.3
8-May	5.2	3.8	3.0	2.7	2.9	3.7	3.8	6.6	5.0	4.1	4.2	3.8	4.2	4.1	4.8	3.9	3.4	3.1	3.1	3.8	3.0	2.8	2.6	2.5	3.8	6.6
9-May	2.4	2.9	4.4	5.6	5.7	5.6	11.5	11.0	4.8	5.5	3.3	2.2	2.0	1.8	1.3	1.6	2.0	2.7	2.8	3.3	3.7	14.2	15.9	10.5	5.3	15.9
10-May	9.6	9.5	6.5	7.0	7.1	7.0	6.4	6.5	4.8	3.8	3.5	3.7	3.1	2.8	2.7	3.2	4.0	3.0	3.5	3.9	3.8	4.2	4.7	5.1	5.0	9.6
11-May	4.6	4.3	4.1	4.0	4.1	4.2	4.4	5.3	6.4	7.6	7.7	12.2	8.5	5.6	4.8	6.0	7.1	6.6	6.8	8.3	9.1	12.5	13.4	11.8	7.1	13.4
12-May	11.4	10.3	8.2	6.5	6.1	5.8	8.0	8.8	7.5	7.5	7.8	8.1	7.6	8.1	8.0	8.1	7.3	5.4	4.9	4.7	7.8	11.1	9.8	6.7	7.7	11.4
13-May	4.1	3.0	3.0	2.8	3.0	2.6	2.8	5.4	7.2	5.4	3.9	4.2	4.3	4.2	4.8	7.4	9.2	10.3	8.6	5.6	6.3	6.5	7.2	8.1	5.4	10.3
14-May	10.2	11.0	11.8	7.1	7.1	9.4	11.5	9.1	7.5	11.7	12.6	10.0	8.7	15.2	28.7	31.3	22.2	14.3	5.1	4.8	3.7	3.3	2.9	2.9	10.9	31.3
15-May	2.5	2.5	2.6	2.8	2.8	2.8	3.1	2.8	3.1	3.4	3.8	4.1	5.6	5.0	4.8	3.6	3.1	2.8	2.6	2.3	2.7	5.1	3.9	3.9	3.4	5.6
16-May	4.4	4.7	5.0	4.0	3.3	3.1	5.8	4.8	3.8	4.3	4.9	4.4	4.9	4.0	3.9	4.2	4.4	4.5	4.3	4.3	4.9	5.7	5.0	3.2	4.4	5.8
17-May	1.9	2.9	3.1	2.9	3.6	2.8	3.5	3.9	7.1	9.6	6.7	5.8	4.1	4.3	4.2	4.2	4.3	4.0	4.0	3.3	2.7	3.1	3.4	3.7	4.1	9.6
18-May	4.6	5.5	8.0	12.2	6.5	5.7	7.3	9.9	12.9	9.2	9.5	9.0	8.3	6.5	6.3	5.5	5.8	5.7	5.6	5.4	5.2	6.3	6.7	8.2	7.3	12.9
19-May	9.3	13.5	9.3	8.4	10.2	12.0	11.0	12.1	9.9	4.6	6.5	5.3	5.0	4.4	3.9	5.9	4.5	17.0	13.2	11.1	4.6	4.6	3.4	3.0	8.0	17.0
20-May	2.6	2.7	3.0	3.0	2.8	3.2	3.9	4.4	4.1	3.9	4.2	4.5	5.9	5.6	3.9	2.9	2.0	1.3	2.1	2.3	2.3	1.6	1.8	2.5	3.2	5.9
21-May	2.9	3.3	3.5	3.6	3.7	4.1	4.8	6.0	5.2	4.2	5.2	14.3	21.6	23.7	19.9	15.4	17.2	16.6	13.0	10.1	7.5	6.9	7.9	7.8	9.5	23.7
22-May	7.5	7.6	7.3	7.1	6.8	6.8	7.4	8.1	7.4	7.4	7.8	7.4	7.9	7.8	9.6	7.5	6.8	6.2	4.5	3.6	4.0	4.8	6.3	5.5	6.8	9.6
23-May	4.7	4.8	5.6	5.1	5.1	5.7	8.2	9.4	8.8	5.3	6.4	6.3	7.3	7.2	7.6	5.2	3.2	3.9	3.1	3.3	3.8	4.2	4.4	4.5	5.5	9.4
24-May	4.8	5.5	5.0	5.2	5.0	5.4	6.0	6.3	6.8	6.2	5.5	6.3	5.0	4.7	5.7	5.8	6.0	6.8	14.5	7.0	5.2	8.0	8.0	6.1	6.3	14.5
25-May	5.4	5.4	5.7	6.3	6.8	7.2	6.6	5.8	6.4	6.0	6.7	5.0	6.2	7.0	6.1	5.3	6.1	6.4	8.7	8.3	5.6	5.4	6.5	7.0	6.3	8.7
26-May	5.3	7.1	8.1	8.6	9.2	8.4	10.2	12.7	9.3	7.5	7.1	6.5	7.1	7.8	7.8	7.8	10.4	15.4	12.4	7.5	6.2	6.6	7.8	8.9	8.6	15.4
27-May	10.6	10.1	11.8	16.0	17.3	17.2	19.3	17.9	12.6	8.1	6.0	4.2	2.7	2.5	2.7	2.9	8.7	23.9	60.7	66.7	46.6	40.6	43.0	46.9	20.8	66.7
28-May	41.3	37.5	35.6	37.2	42.4	40.5	46.3	67.6	76.1	81.2	20.5	5.3	3.1	4.4	8.3	40.0	40.8	20.1	8.6	9.0	8.4	10.6	10.5	9.7	29.4	81.2
29-May	9.4	10.5	9.9	10.2	11.4	11.8	12.1	17.0	14.0	15.1	25.7	15.9	13.7	12.7	13.3	52.9	96.8	138.1	106.2	39.8	51.6	55.9	23.6	120.1	37.0	138.1
30-May	84.1	27.6	290.3	466.4	382.6	545.1	413.9	103.6	33.8	41.3	67.4	62.3	63.4	96.2	154.3	307.4	404.8	359.7	293.7	270.8	253.5	236.4	217.9	209.6	224.4	545.1
31-May	184.6	178.7	160.6	218.3	401.2	440.8	487.1	463.7	505.7	351.7	348.6	361.3	270.1	228.7	252.7	175.1	190.9	269.8	218.4	130.9	112.6	99.8	91.0	72.0	258.9	505.7
15.4 13.5 21.2 28.8 31.9 38.8 37.3 27.7 27.0 21.2 20.2 19.8 16.7 16.4 19.4 23.9 28.8 31.3 27.1 21.5 20.1 19.9 18.0 19.9																								Diurnal Average		
184.6 178.7 290.3 466.4 401.2 545.1 487.1 463.7 505.7 351.7 348.6 361.3 270.1 228.7 252.7 307.4 404.8 359.7 293.7 270.8 253.5 236.4 217.9 209.6																								Diurnal Maximum		
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay South - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	330	44.35	44.35
6 - 15	314	42.20	86.56
16 - 25	22	2.96	89.52
26 - 80	32	4.30	93.82
> 81.0	46	6.18	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Fort McKay South - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	32	35	12	0	2	2	18	57	26	25	32	20	15	10	15	25	326
6 - 15	17	22	3	2	4	6	22	54	75	31	20	18	7	7	9	17	314
16 - 25	0	1	0	0	0	0	1	4	6	5	0	1	2	1	1	0	22
26 - 80	0	2	0	0	0	0	0	6	2	4	5	5	2	0	2	4	32
> 81.0	8	0	1	0	0	0	1	6	7	5	3	4	5	1	2	3	46
Totals	57	60	16	2	6	8	42	127	116	70	60	48	31	19	29	49	740

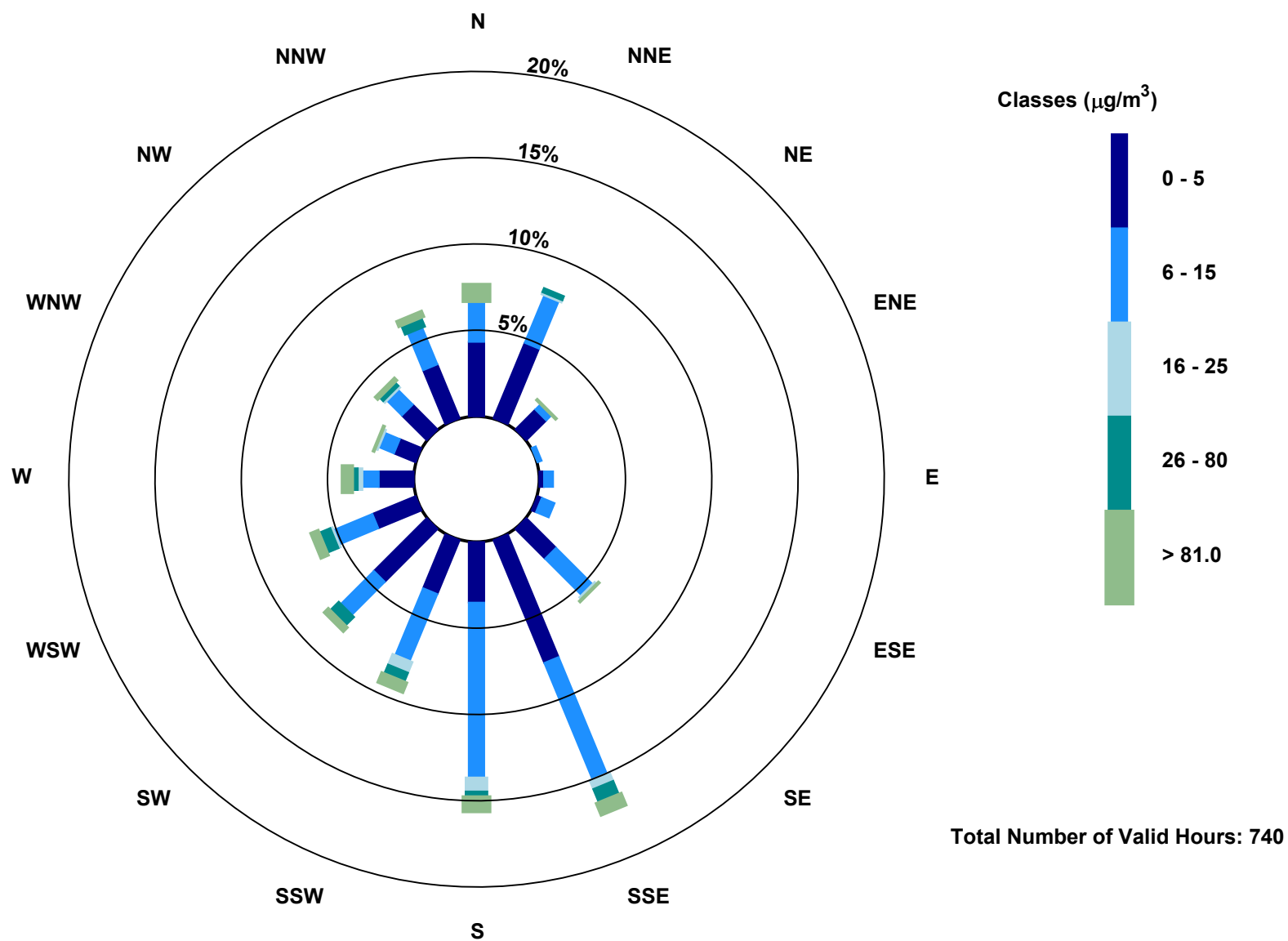
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay South





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

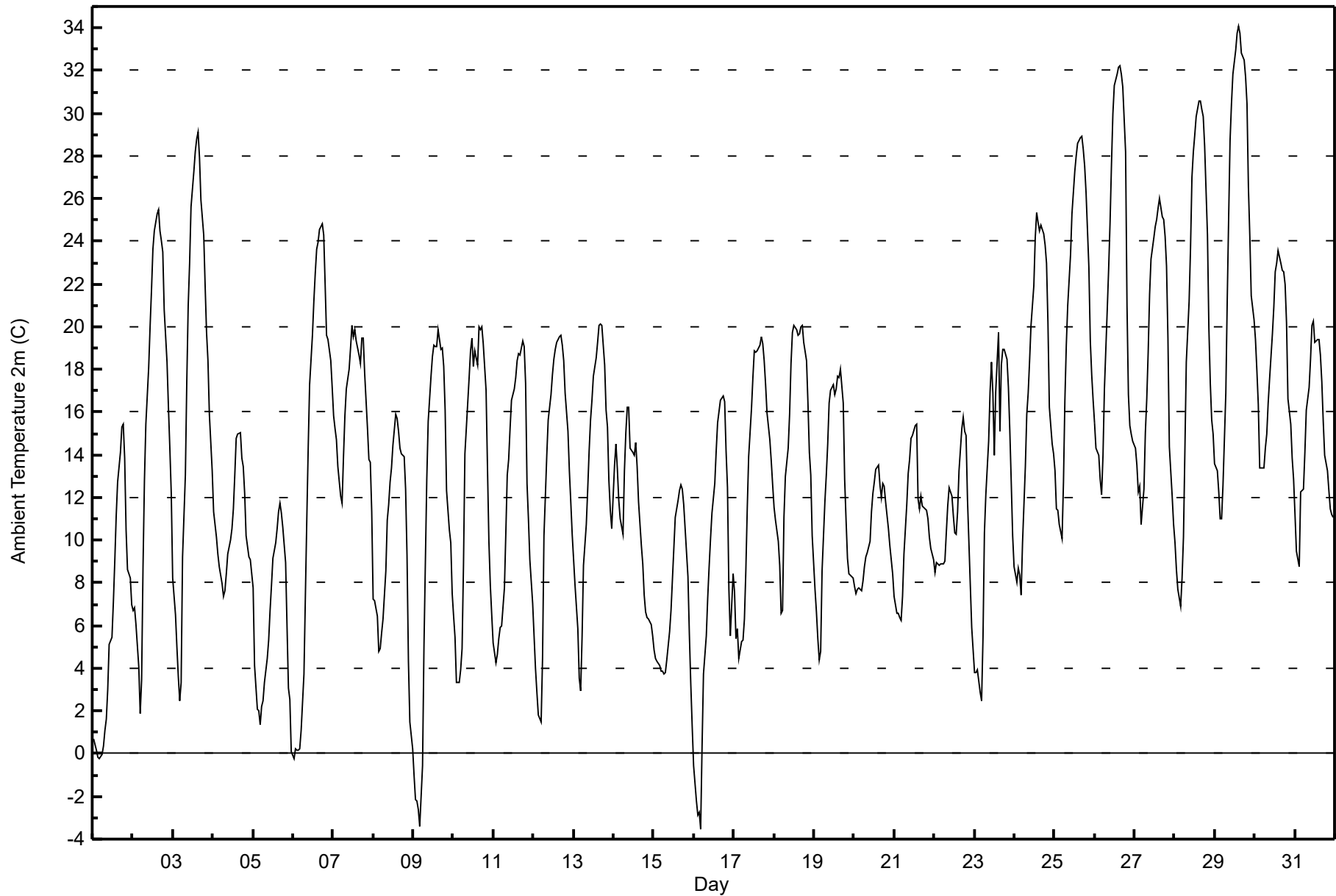
Fort McKay South - May 2025

Maximum Value: 34.1 C on May 29 15:00																				Maximum Daily Average: 24.3 C on May 29					Hours in Service: 744	
Minimum Value: -3.6 C on May 16 05:00																				Minimum Daily Average: 6.0 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 19.9 C at hour 16																				Minimum Diurnal Average: 5.8 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 13.73 C																				Percentiles: P ₁ = -1.7 P ₁₀ = 4.4 Q ₁ = 8.7 Median = 13.4 Q ₃ = 18.5 P ₉₀ = 23.9 P ₉₉ = 32.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.7	0.4	0.2	-0.2	-0.3	0.0	0.4	1.1	1.6	3.0	5.1	5.5	7.1	9.0	11.1	12.7	14.1	15.3	15.4	13.9	10.4	8.6	8.2	7.0	6.3	15.4
2-May	6.7	6.8	6.1	4.1	1.9	3.5	8.8	12.8	15.5	18.1	20.0	21.7	23.7	24.5	25.3	25.5	24.5	24.0	23.5	20.8	18.4	16.2	14.3	12.2	15.8	25.5
3-May	8.2	6.5	5.0	3.6	2.5	3.4	9.2	13.0	17.4	21.0	23.0	25.6	27.3	28.2	28.8	29.1	27.9	26.0	24.3	21.9	19.7	18.4	15.9	13.3	17.5	29.1
4-May	11.3	10.7	10.1	9.4	8.8	8.0	7.4	7.7	8.5	9.4	10.0	10.6	11.5	13.1	14.7	15.0	15.1	13.8	13.4	12.2	10.2	9.2	9.1	8.4	10.7	15.1
5-May	7.8	4.2	2.1	2.0	1.3	2.2	2.5	3.3	4.5	5.3	6.7	7.9	9.2	9.9	10.5	11.3	11.7	11.3	10.6	8.9	6.0	3.1	2.5	0.1	6.0	11.7
6-May	-0.2	0.2	0.2	0.2	0.3	1.1	3.7	7.4	11.0	14.3	17.3	19.6	21.2	22.5	23.6	24.0	24.6	24.8	24.3	22.0	19.6	19.4	18.4	17.1	14.0	24.8
7-May	15.8	15.2	14.7	13.4	12.1	11.7	13.9	15.9	17.1	18.0	19.0	20.1	19.5	19.8	19.3	18.7	18.2	19.5	19.4	17.8	15.3	13.8	13.7	11.4	16.4	20.1
8-May	7.2	7.2	6.5	4.8	4.9	5.6	6.3	8.5	11.0	11.7	12.7	13.4	14.5	15.9	15.7	15.1	14.3	14.0	13.9	12.4	9.3	4.3	1.5	0.2	9.6	15.9
9-May	-1.0	-2.1	-2.2	-2.6	-3.4	-0.6	5.0	9.0	12.8	15.6	17.7	18.6	19.2	19.1	19.1	19.9	18.9	19.0	18.1	16.1	12.3	10.5	9.9	7.5	10.7	19.9
10-May	6.4	5.4	3.3	3.3	3.9	4.9	8.8	14.0	16.4	17.6	18.9	19.5	18.2	18.9	18.2	20.0	19.8	20.0	19.2	17.0	13.4	9.9	7.9	6.5	13.0	20.0
11-May	5.2	4.3	4.7	5.4	5.9	6.0	7.8	10.3	13.0	13.8	15.2	16.6	17.1	17.6	18.4	18.7	18.7	19.3	19.1	17.4	12.7	11.0	9.1	7.1	12.3	19.3
12-May	5.5	4.0	2.9	1.8	1.5	4.5	10.2	12.1	14.0	15.6	16.8	17.7	18.5	19.0	19.3	19.6	19.6	19.2	18.4	16.9	15.1	13.2	11.8	10.3	12.8	19.6
13-May	9.1	7.9	5.9	3.6	3.0	5.4	8.8	10.8	12.4	14.2	15.6	16.6	17.7	18.6	19.3	20.1	20.1	20.1	18.2	16.1	15.3	12.8	11.4	10.6	13.0	20.1
14-May	13.5	14.5	13.3	11.9	11.0	10.3	13.2	15.0	16.2	16.2	14.3	14.1	14.0	14.6	13.5	11.8	9.7	8.9	7.5	6.6	6.4	6.3	6.1	5.5	11.4	16.2
15-May	4.8	4.5	4.3	4.1	3.9	3.9	3.7	3.8	4.4	5.7	6.7	8.2	9.6	11.1	11.9	12.3	12.6	12.4	11.7	10.5	8.3	5.6	3.2	1.3	7.0	12.6
16-May	-0.5	-2.2	-2.9	-2.7	-3.6	0.4	3.7	5.5	7.3	8.8	10.1	11.2	12.7	14.2	15.5	16.0	16.6	16.7	16.5	14.2	12.4	7.7	5.5	8.4	8.0	16.7
17-May	7.6	5.4	5.8	4.4	5.2	5.3	6.3	8.5	11.5	13.9	16.2	17.6	18.8	18.8	18.9	19.1	19.5	19.2	18.4	17.3	16.0	14.7	13.7	12.6	13.1	19.5
18-May	11.5	11.0	10.0	8.9	6.5	6.7	11.1	13.0	14.3	15.9	18.3	19.7	20.1	19.8	19.6	19.7	20.0	20.0	19.3	18.4	16.4	14.1	13.0	10.2	14.9	20.1
19-May	7.7	6.6	5.4	4.4	4.8	8.5	11.8	13.1	14.5	16.4	17.0	17.3	16.8	17.1	17.7	17.6	18.0	16.4	12.9	10.9	9.2	8.4	8.3	8.2	12.0	18.0
20-May	7.9	7.5	7.7	7.7	7.7	8.1	8.8	9.2	9.4	9.9	11.3	12.2	12.7	13.3	13.5	12.6	12.0	12.6	12.6	11.8	10.6	9.7	9.1	8.5	10.3	13.5
21-May	7.4	6.6	6.6	6.3	6.2	7.3	9.3	11.6	13.1	13.8	14.8	14.9	15.4	15.4	11.9	11.5	12.1	11.6	11.5	11.4	11.0	10.2	9.6	9.1	10.8	15.4
22-May	8.5	9.0	8.9	8.8	8.9	8.9	9.0	10.4	11.6	12.5	12.1	11.1	10.3	10.3	11.3	13.3	15.2	15.7	15.1	14.9	11.9	7.9	5.9	4.8	10.7	15.7
23-May	3.8	3.8	3.9	2.9	2.5	5.4	10.3	12.1	14.6	16.9	18.3	16.9	14.0	17.0	19.8	15.1	18.2	18.9	18.9	18.5	17.2	15.1	12.7	10.2	12.8	19.8
24-May	8.7	8.1	8.7	8.4	7.4	9.9	13.5	15.9	16.9	18.4	20.1	21.9	24.2	25.3	24.9	24.5	24.7	24.3	23.8	23.0	20.2	16.2	14.5	14.1	17.4	25.3
25-May	13.2	11.5	11.4	10.7	10.1	12.7	16.6	19.2	21.0	23.4	25.3	26.2	27.3	28.0	28.6	28.9	28.9	28.3	27.5	26.2	22.8	19.3	17.7	16.6	20.9	28.9
26-May	15.5	14.3	14.0	12.9	12.1	14.0	17.1	20.8	22.7	24.9	27.6	30.0	31.3	31.8	32.2	32.2	31.8	31.2	28.2	21.0	16.8	15.4	15.0	14.6	22.0	32.2
27-May	14.3	13.5	12.3	12.5	10.8	12.4	15.0	16.6	18.8	21.5	23.1	24.2	24.7	25.0	25.6	26.0	25.1	25.1	24.2	22.9	19.5	14.3	12.1	10.8	18.8	26.0
28-May	9.9	8.6	7.7	6.9	8.2	10.1	14.2	18.3	21.2	23.7	27.0	28.2	29.0	29.8	30.6	30.6	30.2	29.9	28.5	24.3	19.9	17.4	15.7	15.0	20.2	30.6
29-May	13.6	13.2	12.2	11.0	11.0	12.6	16.9	21.2	25.1	28.7	30.4	31.8	33.0	33.7	34.1	33.7	32.8	32.5	31.7	30.4	26.5	24.2	21.4	20.3	24.3	34.1
30-May	19.4	17.9	16.4	13.4	13.4	13.4	14.3	15.0	16.4	17.6	19.7	20.9	22.6	23.0	23.6	22.9	22.6	22.6	22.0	20.2	16.6	15.4	13.8	12.9	18.2	23.6
31-May	11.2	9.5	8.8	12.2	12.3	12.4	14.1	16.1	17.1	18.5	20.1	20.2	19.3	19.4	19.4	18.7	17.4	15.6	13.9	13.3	12.3	11.5	11.2	11.0	14.8	20.2
8.4 7.5 6.9 6.2 5.8 7.0 9.7 12.0 13.9 15.6 17.1 18.1 18.7 19.5 19.9 19.9 19.8 19.6 18.8 17.1 14.6 12.4 11.0 9.9																										Diurnal Average
19.4 17.9 16.4 13.4 13.4 14.0 17.1 21.2 25.1 28.7 30.4 31.8 33.0 33.7 34.1 33.7 32.8 32.5 31.7 30.4 26.5 24.2 21.4 20.3																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort McKay South - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	15	2.02	2.02
0 - 10	219	29.44	31.45
10 - 20	388	52.15	83.60
> 20	122	16.40	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

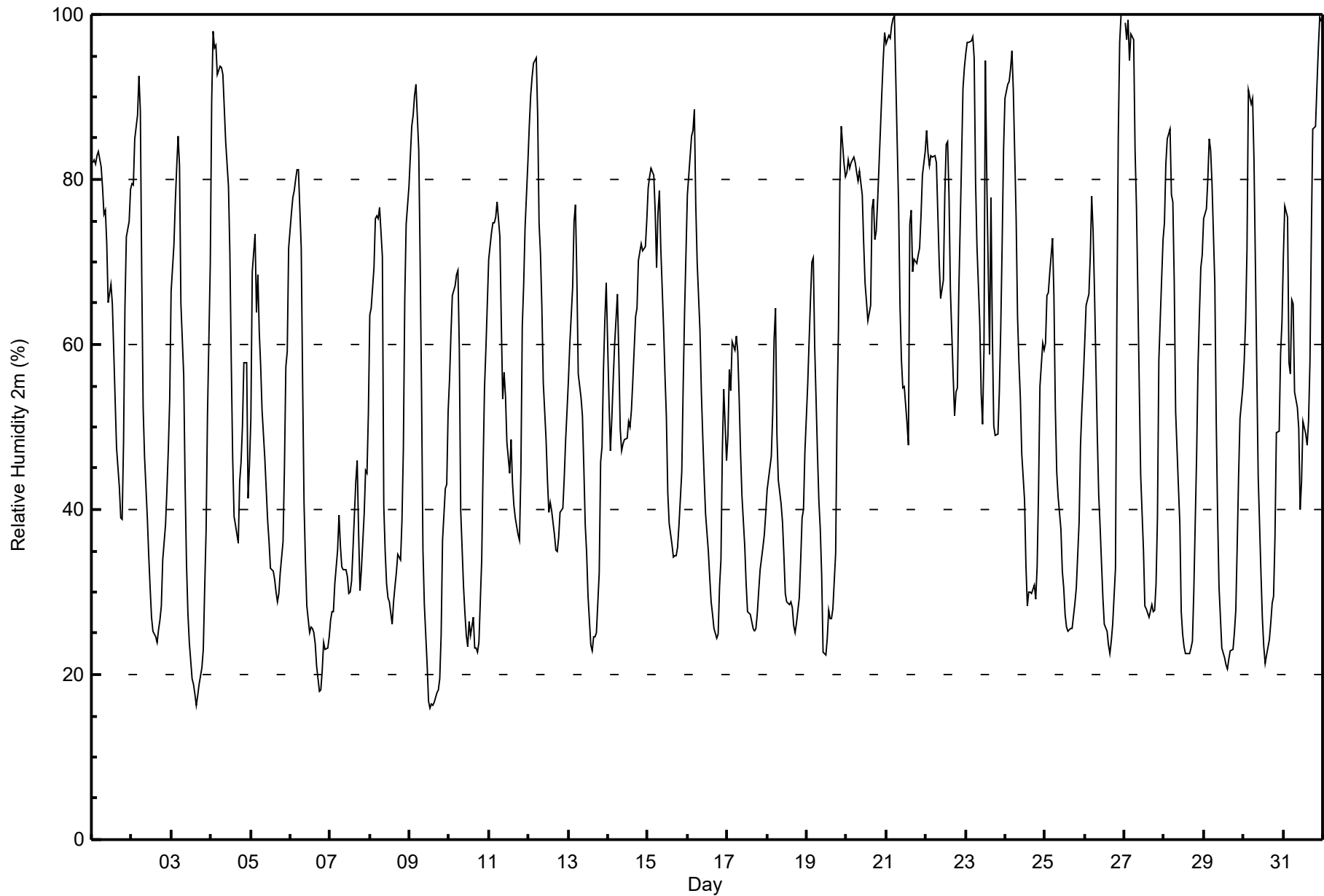
Fort McKay South - May 2025

Maximum Value: 100.0 % on May 26 23:00																				Maximum Daily Average: 78.8 % on May 20				Hours in Service: 744		
Minimum Value: 15.9 % on May 9 13:00																				Minimum Daily Average: 35.4 % on May 7				Hours of Data: 743		
Maximum Diurnal Average: 79.0 % at hour 5																				Minimum Diurnal Average: 35.3 % at hour 17				Hours of Missing Data: 1		
Monthly Average: 54.16 %																				Percentiles: P ₁ = 17.7 P ₁₀ = 25.3 Q ₁ = 33.3 Median = 52.4 Q ₃ = 73.3 P ₉₀ = 85.0 P ₉₉ = 98.4				Hours of Calibration: 0		
																								Percent Operational Time: 99.9		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	82.0	82.4	81.8	82.9	83.3	81.5	79.0	75.8	76.3	72.2	65.1	67.3	64.9	59.2	53.2	47.5	42.7	39.1	38.8	48.1	64.7	73.1	75.0	78.8	67.3	83.3
2-May	79.5	79.4	84.9	87.8	92.6	88.3	68.5	52.4	46.5	38.9	34.5	30.6	27.0	25.3	24.6	23.9	25.4	26.6	28.2	34.0	38.1	42.4	47.3	53.3	49.2	92.6
3-May	66.5	72.1	77.2	81.5	85.2	81.6	64.9	56.2	43.1	33.4	27.4	23.9	19.5	18.8	17.7	16.3	17.4	18.9	20.9	23.1	30.5	37.4	51.4	69.8	43.9	85.2
4-May	89.4	98.0	96.0	96.3	92.8	93.8	93.6	92.7	88.6	84.5	79.1	71.1	57.9	46.3	39.2	38.1	35.9	43.4	45.7	50.2	57.9	57.8	41.3	45.5	68.1	98.0
5-May	51.0	68.8	73.4	63.9	68.5	61.4	57.5	52.1	46.2	42.3	38.7	36.1	32.9	32.5	31.6	29.9	28.8	29.8	32.3	36.1	45.1	57.2	59.1	71.7	47.8	73.4
6-May	76.0	77.8	78.7	80.1	81.2	81.3	71.8	55.3	40.9	33.8	28.2	25.1	25.8	25.6	25.1	23.7	21.0	17.9	18.1	20.5	23.9	23.0	23.2	24.5	41.8	81.3
7-May	26.7	27.6	27.7	31.0	35.0	39.3	35.6	33.0	32.7	32.6	31.9	29.8	30.0	31.4	35.2	43.4	46.0	37.2	30.1	32.7	39.4	44.8	44.3	51.6	35.4	51.6
8-May	63.5	64.4	69.4	75.3	75.7	75.3	76.5	70.6	40.5	35.0	31.0	29.3	28.8	26.1	28.8	30.7	32.3	34.5	33.9	38.6	47.3	65.4	74.6	79.2	51.1	79.2
9-May	82.9	86.5	87.8	90.2	91.6	83.6	70.3	54.0	35.1	28.5	21.1	16.8	15.9	16.5	16.3	16.7	17.8	18.2	19.5	24.7	36.3	42.6	43.0	51.8	44.5	91.6
10-May	55.8	61.1	65.9	67.1	68.5	69.1	59.3	39.8	30.6	27.4	24.8	23.4	26.5	24.7	26.9	23.2	23.2	22.7	23.9	33.8	45.2	54.7	59.4	64.9	42.6	69.1
11-May	70.3	73.6	74.8	74.8	75.4	77.3	73.1	62.7	53.3	56.6	53.8	48.2	44.3	48.5	43.1	40.5	38.9	36.9	36.3	44.5	62.3	67.4	74.2	82.0	58.9	82.0
12-May	86.4	90.2	92.4	94.0	94.8	87.7	74.7	71.0	64.6	55.4	48.5	43.6	39.7	40.8	39.9	36.9	35.2	34.8	36.6	39.7	40.1	43.8	48.4	52.0	58.0	94.8
13-May	55.7	60.2	66.9	74.9	76.9	68.3	56.5	53.6	51.3	45.1	38.2	34.8	29.4	23.5	23.0	24.6	24.5	25.0	32.4	45.8	47.7	56.8	62.8	67.5	47.7	76.9
14-May	53.1	47.1	51.0	55.8	60.0	66.0	58.5	49.8	47.1	47.9	48.5	48.6	50.6	50.0	52.0	55.7	63.4	64.5	70.2	71.2	72.2	71.3	71.8	75.1	58.4	75.1
15-May	79.1	80.3	81.3	80.6	76.1	69.4	75.9	78.7	71.7	62.1	56.2	51.2	42.0	38.3	35.8	34.3	34.3	34.5	35.4	38.1	44.5	54.9	63.9	71.1	57.9	81.3
16-May	78.1	82.9	85.3	86.0	88.5	77.0	70.1	61.6	54.2	48.8	43.8	39.5	34.9	31.6	28.8	27.4	25.5	24.4	24.9	30.6	33.9	47.0	54.5	45.9	51.1	88.5
17-May	49.1	56.9	54.3	60.4	59.3	61.1	59.2	53.5	47.0	41.7	35.5	31.0	27.6	27.5	27.2	25.7	25.2	25.7	27.4	30.1	32.7	35.3	37.0	39.5	40.4	61.1
18-May	42.4	43.7	46.4	51.6	60.7	64.5	49.2	43.6	40.7	38.5	34.3	29.9	28.9	28.4	28.9	28.2	26.0	25.0	26.3	29.3	34.0	39.0	39.9	47.0	38.6	64.5
19-May	55.0	60.4	65.3	70.0	70.5	59.9	46.8	41.0	37.6	32.0	22.7	22.3	24.5	27.8	26.9	26.9	28.0	34.8	52.2	61.8	79.6	86.4	81.8	80.4	49.8	86.4
20-May	80.9	82.4	81.4	82.0	82.7	82.0	80.8	79.9	81.0	78.1	72.4	67.5	65.3	62.9	64.7	76.5	77.6	72.8	73.7	77.5	86.1	90.5	94.5	97.8	78.8	97.8
21-May	96.4	97.5	97.1	98.7	99.5	99.8	92.1	76.6	64.5	58.1	54.8	55.0	50.6	47.8	74.6	76.3	68.9	70.4	69.8	70.8	71.7	75.5	80.5	83.4	76.3	99.8
22-May	86.0	83.2	81.7	82.8	82.7	82.9	82.0	75.9	70.0	65.6	67.8	78.1	84.3	84.6	78.1	66.7	56.2	51.4	54.2	54.7	66.3	82.5	91.0	93.6	75.1	93.6
23-May	95.3	96.7	96.6	96.9	97.4	94.8	79.6	71.9	62.5	54.0	50.3	59.4	94.3	80.3	58.9	77.7	61.1	50.2	48.9	49.1	54.4	62.1	72.2	83.6	72.8	97.4
24-May	89.9	91.5	91.9	93.4	95.7	90.6	75.3	63.3	57.7	53.5	46.8	41.1	33.1	28.2	30.0	30.0	29.8	30.9	29.2	33.0	42.2	54.8	60.2	59.4	56.3	95.7
25-May	60.2	66.0	66.2	68.7	72.9	65.9	52.4	44.6	41.5	37.6	32.6	30.5	27.3	25.8	25.3	25.7	25.7	27.2	28.6	30.5	38.4	47.8	52.2	56.0	43.7	72.9
26-May	60.2	64.8	66.1	70.9	77.9	73.7	66.4	49.0	41.9	38.0	33.6	29.3	26.2	25.2	23.6	22.6	24.1	26.1	32.8	63.6	85.3	96.6	100.0	OR	52.1	100.0
27-May	99.0	96.9	99.3	94.4	97.6	96.9	83.6	76.6	66.4	54.8	44.2	35.1	28.2	28.0	27.5	26.9	28.4	27.6	27.8	30.9	38.9	58.2	68.0	72.6	58.7	99.3
28-May	74.7	81.9	85.0	86.2	78.1	77.4	67.7	51.8	42.7	38.4	27.6	24.9	23.4	22.5	22.5	22.5	23.2	24.1	30.2	46.7	57.5	63.7	69.4	70.8	50.5	86.2
29-May	75.3	76.4	79.9	85.0	83.6	79.5	67.4	50.9	39.3	30.7	27.0	23.3	22.0	21.2	20.6	21.8	22.9	23.0	25.0	27.9	35.6	44.0	50.9	54.8	45.3	85.0
30-May	57.9	62.8	71.5	90.8	89.1	89.9	82.4	69.8	57.0	44.1	32.2	26.7	23.4	21.4	22.4	24.2	26.3	28.6	29.5	36.5	49.4	49.6	58.8	62.8	50.3	90.8
31-May	70.6	76.8	75.5	57.9	56.4	65.4	64.9	54.3	52.4	49.9	40.1	43.4	50.6	49.2	47.8	50.8	57.8	73.3	86.2	86.4	91.3	96.0	99.7	99.1	66.5	99.7
70.6 73.9 75.9 77.8 79.0 76.9 68.9 60.1 52.4 47.1 41.7 39.2 38.1 36.1 35.5 36.0 35.3 35.5 37.7 43.2 51.4 58.8 62.9 66.2																									Diurnal Average	
99.0 98.0 99.3 98.7 99.5 99.8 93.6 92.7 88.6 84.5 79.1 78.1 94.3 84.6 78.1 77.7 77.6 73.3 86.2 86.4 91.3 96.6 100.0 99.1																									Diurnal Maximum	
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort McKay South - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - May 2025

Maximum Speed: 28 km/h on May 19 19:00										Maximum Daily Speed Average: 14.4 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 1 22:00										Minimum Daily Speed Average: 1.1 km/h on May 11										Hours of Data: 740						
Maximum Diurnal Speed Average: 5.5 km/h at hour 18										Minimum Diurnal Speed Average: 1.0 km/h at hour 6										Hours of Missing Data: 4						
Monthly Average Velocity: 3.0 km/h 175.7 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 5 Median = 9 Q ₃ = 14 P ₉₀ = 18 P ₉₉ = 25										Percent Operational Time: 99.5						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N9	NNW6	NNW5	NW3	W4	W4	W3	WSW4	SW7	S9	S12	SSE14	SSE16	SSE14	SE12	ESE12	SE12	SE11	SE7	SE4	SE3	NNE0	WSW1	NNW3	SSE3.8	SSE16
2-May	NW0	NW1	N4	WNW1	W5	WSW2	SW2	WSW4	E6	ESE6	ESE9	E10	N3	NW13	WNW11	NNW12	NNE11	N9	NNE11	N12	N9	N9	N8	N7	N4.0	NW13
3-May	NNW5	NNW4	NW2	WSW2	SW2	SW1	SE1	SE4	S12	SSW10	WSW14	WSW13	NNW15	W12	WSW11	SW13	W13	NW14	NW13	NW18	NW11	NNW14	NNW10	N10	WNW6.3	NW18
4-May	WNW4	SSW6	SW5	WNW8	NNW13	NW9	NW7	N5	SSW1	WSW5	WSW7	WSW10	W12	W13	WSW11	SW14	SW10	SSW13	SSW15	SW9	SW9	WSW8	WNW7	WNW7	WSW6.6	SSW15
5-May	WNW9	NNE14	NNE10	N9	NW4	NNW9	NNW13	NNW11	NW9	NNW9	N9	NNE8	NE8	NE10	NNE10	NNE11	NNE11	NE10	NE10	NNE10	N7	NNW6	NNE6	N5	N8.2	NNE14
6-May	NW3	NW3	W3	WSW3	WNW2	WNW2	NNW2	E2	S12	S12	S14	S14	SSW15	SSW16	SSW18	SSW19	SSW17	SSW16	S13	S13	S12	S17	S17	S19	S9.6	SSW19
7-May	S17	S15	S17	S11	S11	S8	SSE13	SSE17	S21	S19	SSW16	SW13	SW12	WSW10	WSW9	SW12	WSW14	SW14	SSW12	SSW10	SSW9	SSW9	SSW8	WSW5	SSW11.3	S21
8-May	SW4	SW1	SSW1	W2	NW3	W1	WSW1	N6	NNE15	NNE14	NNE15	NNE12	NE10	SSE6	NNE15	NNE13	NNE13	NNE12	N9	NNE10	NNE4	W2	WSW3	WSW2	NNE5.6	NNE15
9-May	UO	WSW3	NNW4	W2	WSW2	SW1	SE3	SE5	S9	S13	SW14	SW16	WSW15	WSW13	W13	SW15	WSW13	SW11	WSW8	SW4	SW4	SW5	SW6	WSW6	SW7.1	SW16
10-May	SW2	SW2	SW2	WSW1	W1	WNW1	S1	ESE4	SW9	SW7	SW8	SSW10	NNW8	NE9	NE6	NNW1	SW6	SW4	S5	SSE1	SSW2	SW2	S2	SW1	SW1.8	SSW10
11-May	SW3	SW1	NW1	NW2	WNW1	W1	NNW2	NNW1	S8	SSE14	S8	SSW4	W1	SSE15	SE9	ENE6	NNE6	NE7	NE3	NNE3	NW2	NNW5	NNW3	NW1	SE1.1	SSE15
12-May	NW2	WSW2	NW2	W2	NNW2	NNW5	NNE7	N13	NNE14	NNE16	N18	NNE19	NNE21	NNE20	NNE20	N21	NNE19	NNE16	NNE17	NNE15	N14	N9	N11	NNW10	N11.8	N21
13-May	NNW11	NNW9	NNW7	WNW4	W2	W4	N4	NNE10	NNE11	NE5	NNE7	NE8	ESE9	SE8	SE7	SSE5	SE8	SE7	SSW8	SSE5	SSE7	S3	WSW1	NW2	NE1.3	NNW11
14-May	S9	S11	S9	S9	S7	SSW5	S7	SSW8	NNW8	NNE18	NNE20	NNE19	NNE20	NNE22	NNE25	NNE24	NNE23	NNE22	N21	N21	N19	N18	N17	N18	NNE10.4	NNE25
15-May	N16	N14	N15	N14	N16	NNE18	N16	N15	N17	N18	N16	N15	N18	NNE16	NNE16	NNE16	NNE14	NNE13	NE12	NE10	NNE6	N7	NNW5	NNW4	N13.3	NNE18
16-May	NW3	WNW2	NNW4	NNW4	W2	UO	NNE6	NE6	NNE5	NNE8	NNE10	N8	N12	N10	NNE7	N7	N9	NNW5	NNW6	NNW9	N9	SSW2	SSE5	SE11	N4.8	N12
17-May	SE8	SSE6	SSE10	SE4	SE6	ESE3	E3	E2	SE8	SE11	SE13	SE14	SSE16	SSE15	SSE15	SSE18	SSE16	SSE16	SE15	SSE12	SE14	SSE16	SSE17	SSE13	SE11.0	SSE18
18-May	SSE11	SSE13	S13	SSE9	NE1	NNW3	SSE7	SE9	SSE11	ESE11	SSE12	SE16	SSE18	SSE18	SSE19	SSE16	SSE15	SSE15	SSE11	SE9	SSE10	SSE9	SSE9	SSE5	SSE10.7	SSE19
19-May	SSW4	S4	S4	SSW4	SSW5	SSW5	S12	SSE15	SSE15	SSE18	SSE24	SSE21	SSE20	SSE17	SSE15	SSE20	SSE20	SSE24	SSE28	SSE22	SSE13	SE9	SSE14	SSE13	SSE14.1	SSE28
20-May	SSE11	SSE8	SSE9	SE6	SE5	SE6	SE9	SSE11	SE9	SE9	SSE14	SSE17	SE15	SE13	SSE16	SSE15	SSE17	SSE14	SSE13	SSE12	SSE11	S8	S2	SSE2	SSE10.2	SSE17
21-May	SW1	SE2	S3	NW1	NNW2	SSW1	UO	SSE10	S13	SSE14	SSE12	SE12	SE12	SSE15	S18	S16	S15	SSW11	SSW10	S8	S11	S10	S9	S8	S8.8	S18
22-May	S8	S11	S11	S9	S11	SSE13	SSE14	S12	S16	S16	S8	WSW7	SW9	SSW10	S12	S15	SSE16	SSE18	S10	SSE13	S7	S3	SSW3	SW4	S10.1	SSE18
23-May	SSW3	SSW2	S4	SW2	UO	N2	ESE3	SSE8	SSE14	SSE14	SSE14	SSW12	NNW3	NNW5	E3	SSE10	SE12	SSE21	SSE17	SSE15	S12	SSE8	S7	SSW2	SSE7.0	SSE21
24-May	S3	SSW2	SSW3	SW1	WNW2	N3	ENE1	SE4	SE7	SE10	SSE16	SSE16	SSE20	S20	S21	S19	SSE19	SSE19	SSW14	S15	SSE10	SSE4	S6	S8	SSE9.4	S21
25-May	S6	SSW5	SSW8	SSW7	SSW4	S8	SSE14	SSE17	SSE18	SSE21	S23	SSE24	S23	S23	S22	S21	S22	S20	S18	S15	S8	S7	S8	S8	S14.4	SSE24
26-May	S8	SSW8	S6	SSW4	NNW2	NNW2	S2	SSE14	SSE19	SSE18	SSE19	SSE22	S25	S26	S25	S26	S26	S22	SW12	NNW10	WNW5	SSE5	WSW1	SW3	S11.4	S26
27-May	S5	S3	SW2	W5	SSW4	SSW5	S6	SSW5	WSW7	WSW8	W8	WSW11	WSW15	SW15	SW16	SW15	SW14	W9	WSW9	SW6	SW5	WSW5	WSW5	SW5	SW7.2	SW16
28-May	WSW3	NNW2	SW2	SSE3	SSW5	SW2	SSE3	SSE4	SSW6	S7	SSW13	SSW13	SSW12	SW10	SSW13	SSW12	SSW11	S12	S5	WSW2	SW2	SSW3	SW3	SSW4	SSW5.9	SSW13
29-May	SSW5	SSW4	SW4	SSW5	S5	SSW3	S2	SSE7	SSE13	SSE20	SSE23	S23	S23	S24	S26	SSE24	SSE25	SSE24	SSE19	SSE13	S8	W14	WNW13	WNW7	S11.5	S26
30-May	W11	W7	SW8	W8	W7	W8	NW7	NW6	NW7	NW8	NNW9	NNW6	WSW5	W9	SW9	SW9	SSW8	SSW8	SSW8	S6	S6	SSW7	S5	S6	WSW4.9	W11
31-May	WSW1	SSW3	WSW4	WSW7	WSW8	S2	SSE3	S7	SSE7	SSE8	SE5	NE4	N7	N10	N12	N12	N14	N12	N11	N14	NNW12	NNW10	NNW10	NNW8	NNW3.9	N14
SSW1.9SSW1.8SSW2.2 SW1.9WSW1.6WSW1.0 SSE1.2 SSE2.9 SSE4.7 SSE5.5 SSE5.0 SSE5.1 S4.0 S4.9 S4.9 S5.4 SSE5.2 SSE5.5 S4.1 SSE2.2 S1.9SSW1.8SSW1.6 SW1.4																								Diurnal Average		
S17 S15 S17 N14 N16 NNE18 N16 SSE17 S21 SSE21 SSE24 SSE24 S25 S26 S26 S26 S26 SSE24 SSE28 SSE22 N19 N18 S17 S19																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

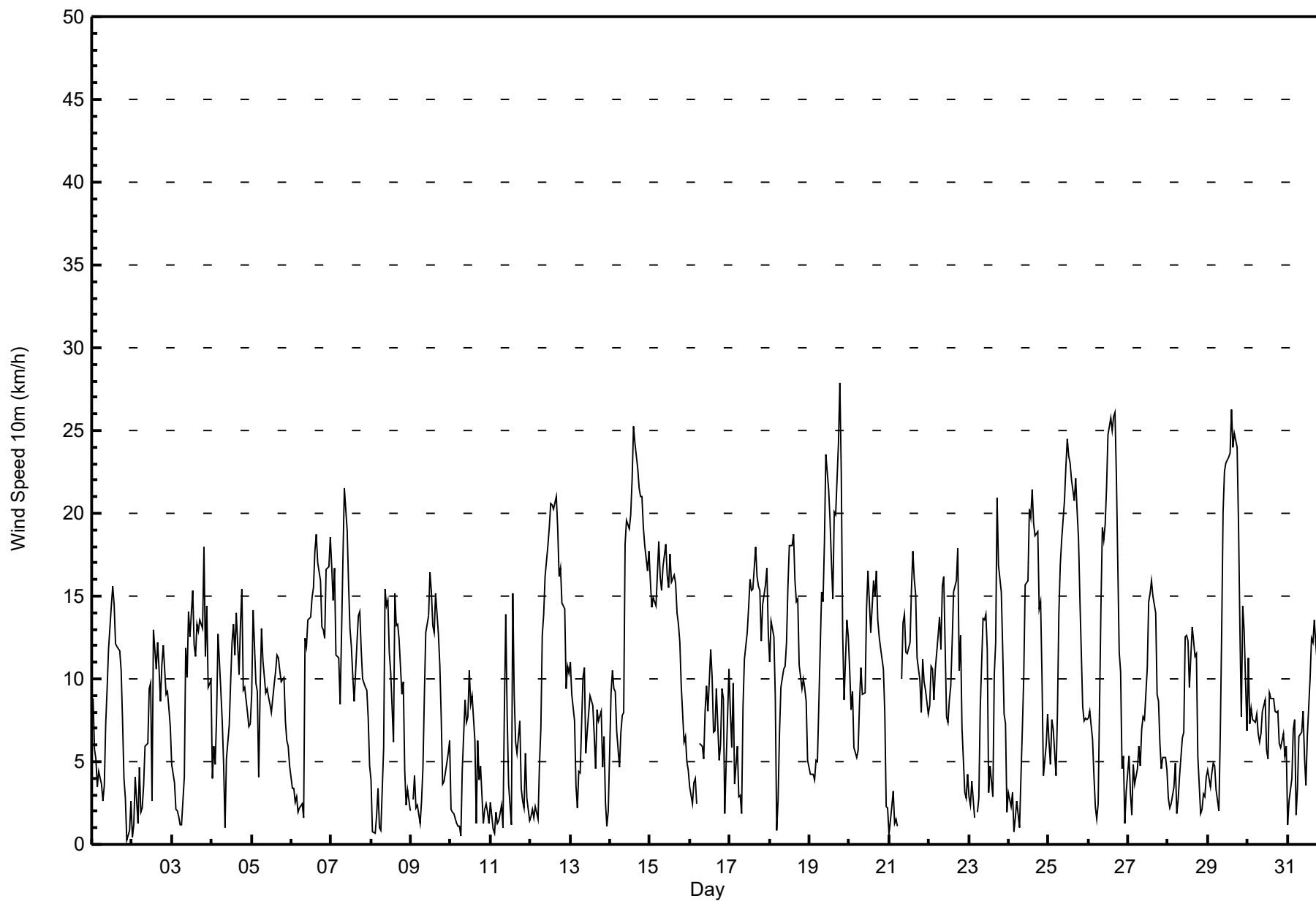
Wind Speed 10m (WS10) - km/h
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 19 18:00																	Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.5								
Minimum Value: 1 km/h on May 6 06:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	1	2	1	1	1	2	2	4	4	4	4	4	3	3	3	3	2	1	1	1	1	1	4
2-May	2	2	2	2	1	1	2	2	2	3	2	3	4	5	4	4	3	2	3	2	2	2	1	2	5
3-May	2	1	1	2	1	1	1	3	3	3	5	4	5	5	5	5	4	5	4	6	4	5	3	3	6
4-May	1	2	1	3	4	3	2	2	2	2	3	4	5	5	4	5	4	5	4	2	3	2	3	3	5
5-May	4	6	3	4	1	3	4	4	3	5	5	5	4	4	3	4	3	3	2	3	1	1	2	1	6
6-May	1	1	1	1	1	1	1	3	2	3	4	4	5	5	5	6	5	4	3	3	2	4	3	3	6
7-May	3	3	3	2	2	2	3	4	4	5	4	5	4	4	3	5	5	5	4	3	1	2	2	2	5
8-May	1	1	1	1	1	2	2	3	4	4	4	3	3	4	4	4	3	4	2	3	2	1	1	2	4
9-May	UO	1	2	2	1	1	2	2	3	4	4	6	6	5	5	6	5	4	3	1	1	1	1	1	6
10-May	2	2	2	2	2	1	1	2	3	3	5	5	5	3	4	3	3	2	3	1	1	2	1	1	5
11-May	1	1	1	2	2	2	2	1	5	3	3	3	3	4	4	3	4	3	2	1	1	2	2	2	5
12-May	2	2	2	1	2	1	3	3	4	4	5	5	5	6	6	6	5	4	5	4	4	2	3	2	6
13-May	2	2	1	2	2	3	1	3	3	3	3	3	3	3	4	4	3	3	3	3	2	1	1	2	4
14-May	4	3	2	2	3	2	3	3	3	5	5	5	5	6	7	7	6	6	6	6	5	5	5	4	7
15-May	4	4	4	3	4	5	5	4	4	4	5	5	5	5	5	4	4	5	3	4	2	2	1	1	5
16-May	2	2	1	1	1	UO	2	2	3	3	4	3	4	4	3	4	4	3	2	3	2	2	2	3	4
17-May	2	2	5	2	2	2	1	2	3	3	4	4	5	4	4	5	5	4	4	3	3	4	4	3	5
18-May	3	3	3	3	2	2	3	2	3	3	4	4	5	4	4	5	4	3	3	3	3	2	2	1	5
19-May	1	1	1	1	1	1	4	3	3	4	5	5	5	5	5	5	4	9	6	7	4	2	4	3	9
20-May	3	2	3	2	1	2	2	2	2	3	4	4	4	4	4	4	4	3	3	3	3	2	2	1	4
21-May	1	2	1	1	1	1	UO	3	3	3	3	3	3	5	4	3	3	3	2	2	2	2	2	1	5
22-May	1	2	2	2	3	3	3	3	3	4	3	3	3	2	3	3	4	4	4	3	2	1	1	1	4
23-May	1	1	1	1	UO	1	2	5	3	3	3	8	2	2	5	6	6	5	4	3	3	2	2	2	8
24-May	2	2	1	1	1	1	2	2	2	4	4	4	6	5	5	5	5	6	5	4	3	1	2	1	6
25-May	1	1	1	1	1	3	3	4	5	5	5	5	6	6	6	5	5	5	4	4	2	1	1	1	6
26-May	1	2	3	1	2	1	2	4	4	4	5	6	6	6	7	6	6	5	6	4	4	4	2	2	7
27-May	2	2	2	2	1	2	2	2	4	3	4	5	5	5	6	5	5	4	3	2	1	1	1	1	6
28-May	3	2	1	1	2	1	1	2	2	3	4	5	5	4	5	4	3	3	3	1	1	1	1	1	5
29-May	1	1	1	1	1	1	1	4	3	4	5	6	6	6	7	6	6	6	5	3	3	8	5	4	8
30-May	5	3	3	3	2	3	2	2	3	3	4	3	3	4	4	4	3	3	3	1	1	2	1	2	5
31-May	1	1	2	2	2	1	1	2	2	2	2	1	2	3	3	3	4	3	3	4	5	4	3	2	5
5 6 5 4 4 5 5 5 5 5 5 8 6 6 7 7 6 9 6 7 5 8 5 4																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort McKay South - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay South - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	220	29.73	29.73
6 - 11	248	33.51	63.24
12 - 19	221	29.86	93.11
20 - 28	51	6.89	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay South - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	4	4	1	4	3	10	13	19	31	31	24	17	10	17	25	220
6 - 11	22	21	11	1	2	4	22	26	44	21	15	17	8	7	8	19	248
12 - 19	26	24	1	0	0	1	10	70	33	18	14	7	6	2	4	5	221
20 - 28	2	11	0	0	0	0	0	18	20	0	0	0	0	0	0	0	51
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	60	16	2	6	8	42	127	116	70	60	48	31	19	29	49	740

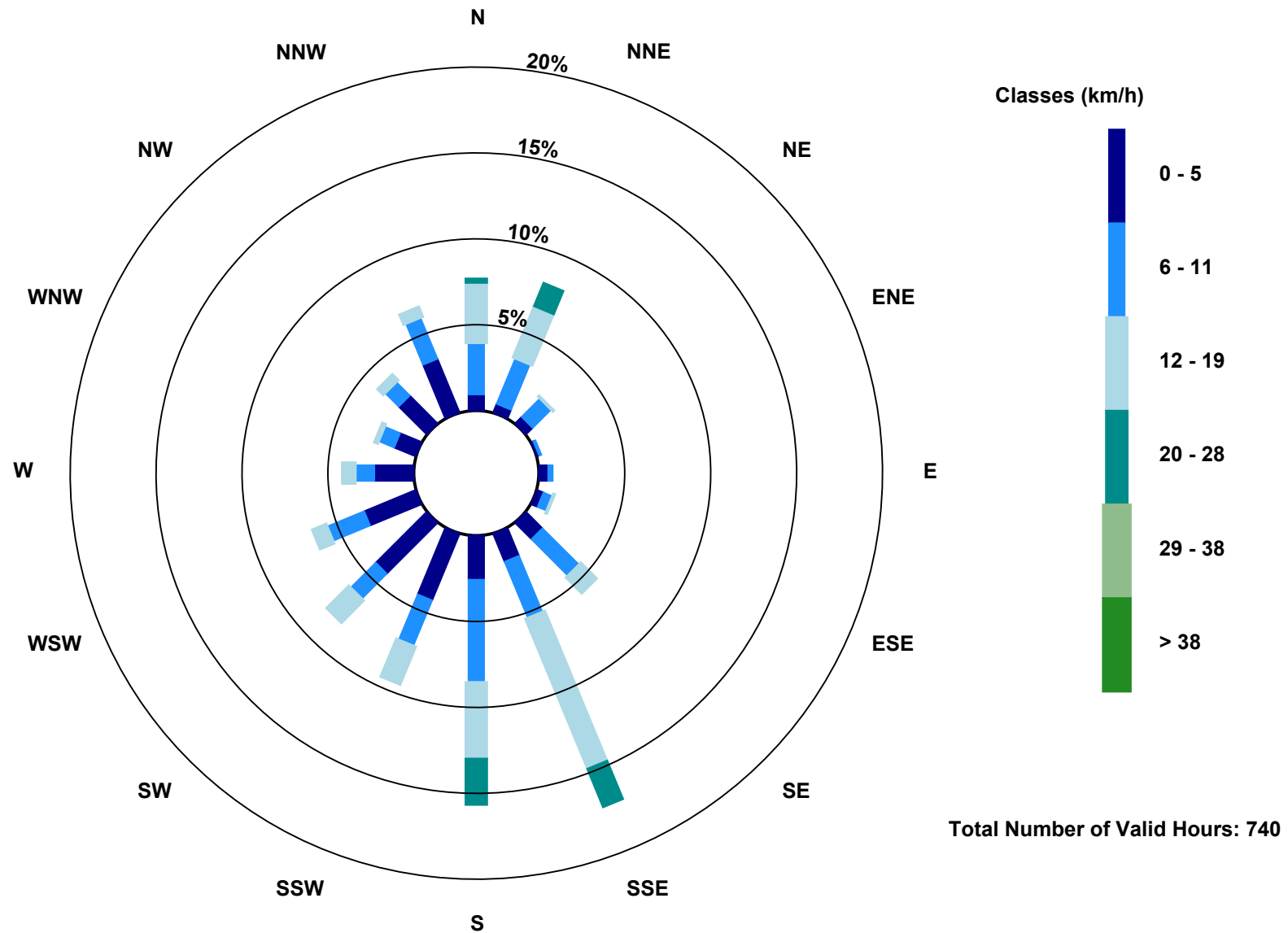
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Fort McKay South





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - May 2025

Direction of Maximum Speed: 162 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 176.2 deg on May 25																				Hours in Service: 744					
Direction of Minimum Speed: 32 deg on May 1 22:00 Direction of Minimum Daily Speed Average: 1.1 deg on May 11																				Hours of Data: 740					
Direction of Minimum Speed: 32 deg on May 1 22:00 Direction of Minimum Daily Speed Average: 1.1 deg on May 11																				Hours of Missing Data: 4					
Monthly Average Direction: 175.7 deg																				Percent Operational Time: 99.5					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1	331	329	320	281	278	281	241	223	180	177	158	154	152	146	121	127	139	136	127	124	32	241	333	157.2
2-May	315	313	350	289	260	245	214	255	89	120	112	99	357	317	297	332	17	0	18	8	8	0	351	350	359.1
3-May	339	332	305	255	235	234	124	129	173	208	252	249	303	262	253	236	275	309	317	320	313	327	346	349	286.1
4-May	291	201	217	294	336	317	326	350	210	245	244	252	266	260	249	234	229	207	203	216	224	249	297	289	253.8
5-May	302	20	19	355	319	337	341	345	322	345	2	30	38	53	22	20	25	46	34	33	354	346	16	2	7.5
6-May	318	309	278	255	294	287	337	88	171	170	187	190	199	203	197	193	195	198	191	184	178	177	170	170	189.6
7-May	172	175	173	176	176	179	162	168	177	182	194	227	231	241	239	235	240	222	213	202	193	200	208	242	196.7
8-May	218	228	210	272	309	275	247	359	16	17	17	32	43	151	22	23	22	19	11	23	23	271	239	240	17.2
9-May	UO	245	346	274	250	236	146	146	190	191	228	229	237	241	262	226	238	227	247	234	221	216	236	247	229.9
10-May	217	230	230	243	263	303	190	116	221	222	225	203	341	41	47	334	223	217	173	150	201	223	190	234	217.3
11-May	229	229	314	310	291	276	344	332	169	158	174	207	261	153	140	62	13	34	51	29	319	342	327	309	137.7
12-May	306	246	308	278	337	346	19	10	13	15	8	15	12	12	12	11	13	16	18	16	7	5	1	340	9.0
13-May	335	333	327	294	267	277	9	13	17	38	32	44	112	125	126	159	133	137	199	166	167	186	242	315	54.6
14-May	169	170	181	183	182	207	183	209	342	17	15	18	16	12	17	24	26	19	11	6	4	11	11	7	16.5
15-May	358	354	355	356	3	18	7	2	359	7	4	10	10	27	27	24	29	24	37	39	19	356	343	336	10.5
16-May	325	299	328	340	272	UO	22	37	17	21	13	11	1	6	14	9	11	341	336	348	357	210	162	144	5.4
17-May	142	159	150	136	135	102	93	86	132	128	125	129	153	148	151	160	149	157	146	147	146	153	151	149	145.0
18-May	152	163	175	161	44	340	147	146	155	118	149	137	153	164	163	155	158	147	152	143	149	161	156	165	153.2
19-May	199	187	187	195	192	199	174	168	156	159	158	161	162	159	160	150	159	162	162	162	159	140	160	155	162.2
20-May	147	149	153	141	130	128	143	148	140	135	148	151	144	144	149	150	159	156	151	156	158	174	178	167	149.6
21-May	232	143	186	320	340	196	UO	158	171	162	161	139	141	151	178	172	178	193	193	183	169	176	174	177	169.0
22-May	173	173	172	173	171	167	164	173	181	170	190	243	221	193	176	169	150	157	178	166	170	188	213	216	175.2
23-May	205	204	171	224	UO	2	120	156	153	152	148	194	328	347	98	153	134	155	154	161	181	166	189	192	160.2
24-May	178	200	196	222	303	5	76	126	143	145	147	155	162	176	177	171	155	165	192	175	168	166	176	184	166.7
25-May	189	197	192	192	195	171	163	166	164	161	180	167	172	176	182	185	180	180	180	179	177	185	181	175	176.2
26-May	185	192	179	204	331	333	184	156	161	159	168	166	175	172	169	174	174	180	221	283	300	167	241	220	177.0
27-May	188	183	236	265	194	200	189	193	242	247	261	248	245	225	230	225	235	259	255	228	234	240	239	226	232.9
28-May	238	339	232	163	196	224	157	157	193	171	198	200	199	227	192	205	192	185	186	255	233	200	219	206	198.1
29-May	202	199	214	204	190	204	182	158	149	163	163	172	176	178	175	159	155	158	165	164	182	275	297	294	174.8
30-May	277	271	234	281	267	267	317	312	316	305	345	336	248	268	235	226	197	199	207	186	184	206	175	169	252.3
31-May	242	202	239	247	247	169	168	179	167	153	142	40	358	1	358	355	5	358	352	359	338	342	330	330	344.0
213.2 200.9 200.7 233.4 242.2 255.8 148.9 150.3 162.1 153.7 165.0 166.8 177.6 177.7 175.6 171.8 161.8 165.4 173.8 160.6 177.8 213.1 211.4 214.2																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

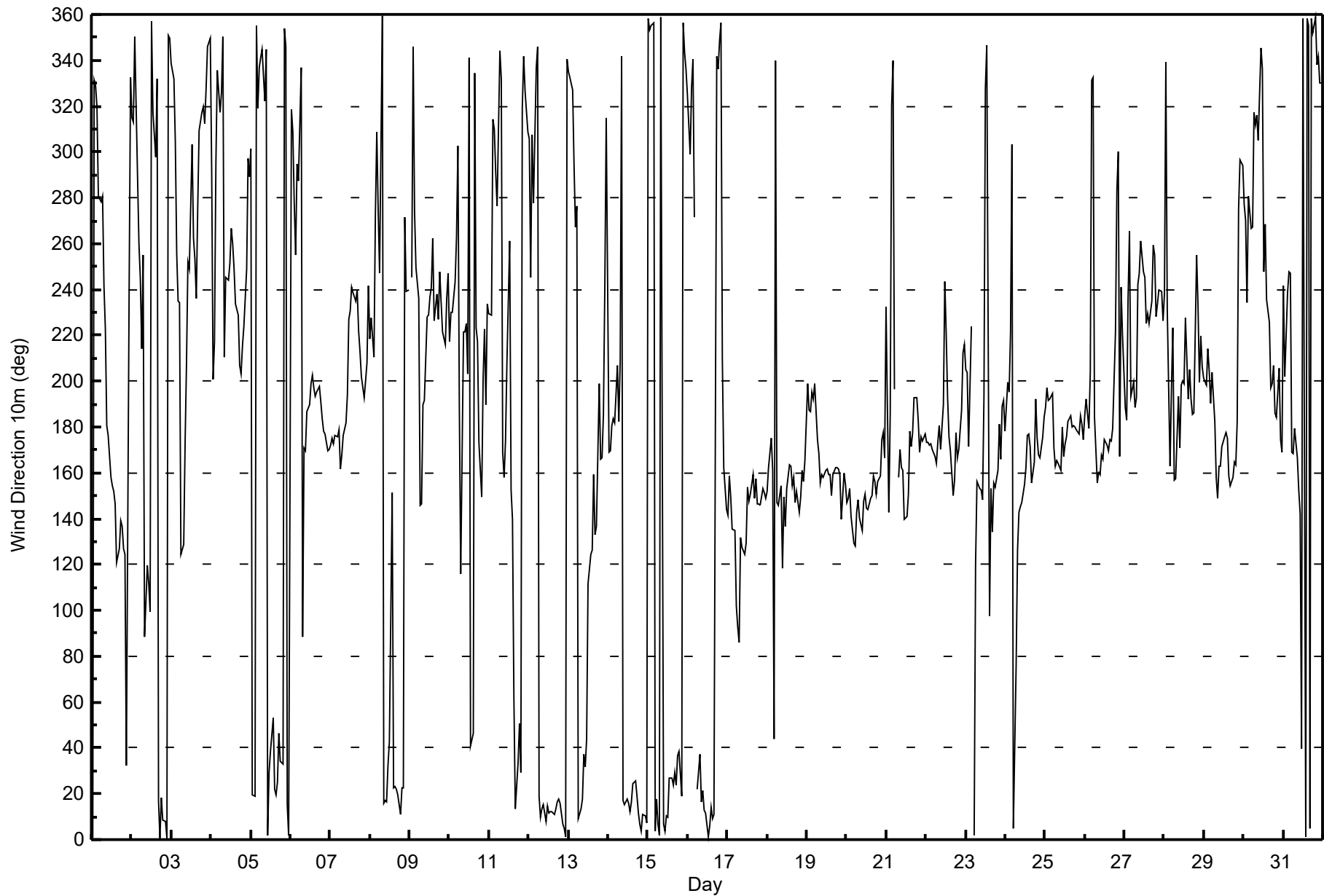
Wind Direction 10m (WD10) - deg
Fort McKay South - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on May 10 16:00																			Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.5						
Minimum Value: 7 deg on May 25 21:00																									
Percentiles: P ₁ = 9 P ₁₀ = 13 Q ₁ = 17 Median = 22 Q ₃ = 35 P ₉₀ = 58 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	16	20	16	37	18	23	33	28	26	39	34	21	18	23	27	25	20	22	21	24	35	96	78	40	96
2-May	86	71	35	65	13	67	87	63	32	50	29	31	95	38	37	36	20	19	24	15	14	15	12	10	95
3-May	18	14	19	48	54	80	60	50	17	33	30	33	32	40	43	29	32	27	23	22	24	22	23	23	80
4-May	39	15	29	27	17	18	18	30	82	27	27	27	29	30	37	27	30	26	16	21	23	31	30	25	82
5-May	22	34	20	22	23	17	23	35	46	49	56	62	60	38	34	26	25	25	22	20	16	14	13	17	62
6-May	30	29	24	19	24	22	27	76	14	21	29	30	26	28	26	21	21	17	15	10	9	11	11	10	76
7-May	10	10	9	11	11	11	12	14	12	15	21	30	27	30	29	26	31	27	23	19	10	13	16	44	44
8-May	50	83	75	36	23	68	68	20	17	17	22	25	29	65	22	26	22	24	22	19	39	43	18	55	83
9-May	UO	34	17	33	13	62	49	35	28	24	29	29	34	37	31	30	26	29	25	17	9	9	17	15	62
10-May	71	73	71	61	74	74	102	54	40	44	57	47	61	36	64	103	47	60	35	71	48	35	57	46	103
11-May	20	72	20	22	41	43	69	66	38	14	38	69	99	20	45	42	62	39	33	23	37	14	35	78	99
12-May	52	44	38	25	22	13	17	19	22	21	21	21	20	21	22	22	20	21	20	17	17	17	17	13	52
13-May	12	12	17	61	73	51	32	24	25	64	54	41	42	37	69	74	42	36	44	63	13	15	60	58	74
14-May	56	15	12	13	21	28	13	41	49	19	18	20	22	20	20	20	19	21	19	19	19	20	20	22	56
15-May	18	17	18	18	19	20	19	20	20	21	23	28	22	25	23	23	27	25	25	23	24	19	21	19	28
16-May	34	23	12	23	23	UO	25	43	62	45	32	45	29	42	54	59	40	69	41	14	17	83	27	17	83
17-May	17	19	20	41	28	31	37	74	35	29	27	26	27	25	24	20	20	18	15	15	15	14	13	13	74
18-May	14	13	12	26	86	39	17	26	27	27	31	23	25	18	17	18	19	17	15	14	13	12	12	18	86
19-May	19	13	15	25	13	19	17	16	17	22	19	18	20	23	25	18	17	14	15	13	15	16	13	15	25
20-May	13	16	17	21	22	22	18	15	18	20	17	16	18	20	16	16	12	14	16	12	13	14	63	34	63
21-May	64	65	18	31	45	75	UO	15	18	20	25	20	22	18	15	13	16	17	16	15	12	12	12	10	75
22-May	11	12	12	13	14	12	13	18	15	16	30	24	24	17	14	15	17	14	15	13	11	13	17	26	30
23-May	19	22	29	53	UO	56	61	35	17	18	19	47	64	35	75	33	25	16	14	13	18	14	9	45	75
24-May	59	68	24	78	23	37	63	32	24	21	18	19	18	20	17	20	23	23	16	17	10	11	14	11	78
25-May	10	15	10	11	13	12	12	15	17	16	16	17	17	18	18	19	18	15	14	13	7	8	9	11	19
26-May	10	12	19	30	55	54	69	13	15	17	17	20	16	17	17	17	16	15	44	39	77	76	85	64	85
27-May	41	42	62	44	43	28	22	46	43	33	49	46	36	31	32	30	29	34	31	26	18	8	10	24	62
28-May	72	51	51	25	41	48	34	47	34	46	32	34	37	49	35	27	24	16	16	43	24	17	20	18	72
29-May	14	15	14	14	16	18	33	26	18	16	17	21	18	19	18	19	14	14	15	11	16	51	31	42	51
30-May	37	39	34	34	29	32	29	30	33	29	39	68	72	47	47	33	24	28	18	11	10	15	21	11	72
31-May	57	44	26	15	20	76	16	20	23	26	44	39	20	18	22	21	20	20	22	20	26	22	22	22	76
86 83 75 78 86 80 102 76 82 64 57 69 99 65 75 103 62 69 44 71 77 96 85 78																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort McKay South - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS14
ANZAC
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	709	35	35	100	-	-	5	0	1	0
TRS(ppb) Average	685	38	59	97.18	2.6	0	1.4	-	0.4	-
THC(ppm) Average	707	35	37	99.73	-	-	2.9	-	2	-
NMHC(ppm) Average	707	35	37	99.73	-	-	0.39	-	0.029	-
CH4(ppm) Average	707	35	37	99.73	-	-	2.5	-	2	-
NO2(ppb) Average	707	37	37	100	-	-	31.9	0	4.7	-
NO(ppb) Average	707	37	37	100	-	-	5.3	-	0.4	-
NOX(ppb) Average	707	37	37	100	-	-	32.7	-	4.8	-
O3(ppb) Average	709	34	35	99.87	-	-	72.3	0	52.1	-
PM2.5(ug/m3) Average	742	2	2	100	-	-	1396.6	0	247.1	3
AT 2m(C) Average	744	0	0	100	-	-	30.4	-	23	-
RH(%) Average	744	0	0	100	-	-	99.6	-	89.5	-
WS(km/h) Average	740	0	4	99.46	-	-	29	-	20	-
WD(deg) Average	740	0	4	99.46	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	67.4	-	9.3	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	709	0.42	0.5	-	0	0	0.1	0.3	0.6	1	5
TRS(ppb) Average	685	0.19	0.1	-	0	0.1	0.1	0.2	0.2	0.3	1.4
THC(ppm) Average	707	1.94	0.1	-	1.9	1.9	1.9	1.9	1.9	2	2.9
NMHC (ppm) Average	707	0.002	0.023	-	0	0	0	0	0	0	0.39
CH4(ppm) Average	707	1.94	0	-	1.9	1.9	1.9	1.9	1.9	2	2.5
NO2(ppb) Average	707	1.37	2.4	-	0	0.4	0.6	0.9	1.5	2.4	31.9
NO(ppb) Average	707	0.19	0.5	-	0	0	0	0	0.1	0.4	5.3
NOX(ppb) Average	707	1.56	2.6	-	0	0.4	0.6	1	1.7	2.8	32.7
O3(ppb) Average	709	37.6	10.2	-	13.3	23.7	29.7	38.3	44.8	49.6	72.3
PM2.5(ug/m3) Average	742	19.01	92.1	-	0.7	1.6	2.5	3.2	4.9	10.5	1396.6
Temperature 2 m (C) Average	744	13.18	6.7	-	-4.2	5.3	8.6	12.7	17.2	22.5	30.4
Relative Humidity (%) Average	744	51.63	22.7	-	14.9	24.6	31.5	48.7	68.6	86.5	99.6
Wind Speed 20 m (km/h) Average	740	13.5	5	-	1	7	9	13	17	21	29
Wind Direction 20 m (deg) Average	740	204.2	-	-	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	1.9	7.7	-	0	0	0	0	0	2.7	67.4

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MAY 2025

OPERATIONAL NOTES				
Parameter	Period Start	Period End	Duration (Hours)	Notes
O3,TRS	22 May 2025 20:00	22 May 2025 20:00	1	Station power failure
TRS	28 May 2025 16:00	29 May 2025 11:00	20	Maintenance - stabilization post maintenance
THC/NMHC/CH4	22 May 2025 13:00	22 May 2025 14:00	2	Maintenance - replaced support gas cylinder
Wind Speed, Wind Direction	01 May 2025 04:00	01 May 2025 07:00	4	Unstable Operation - flatline in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

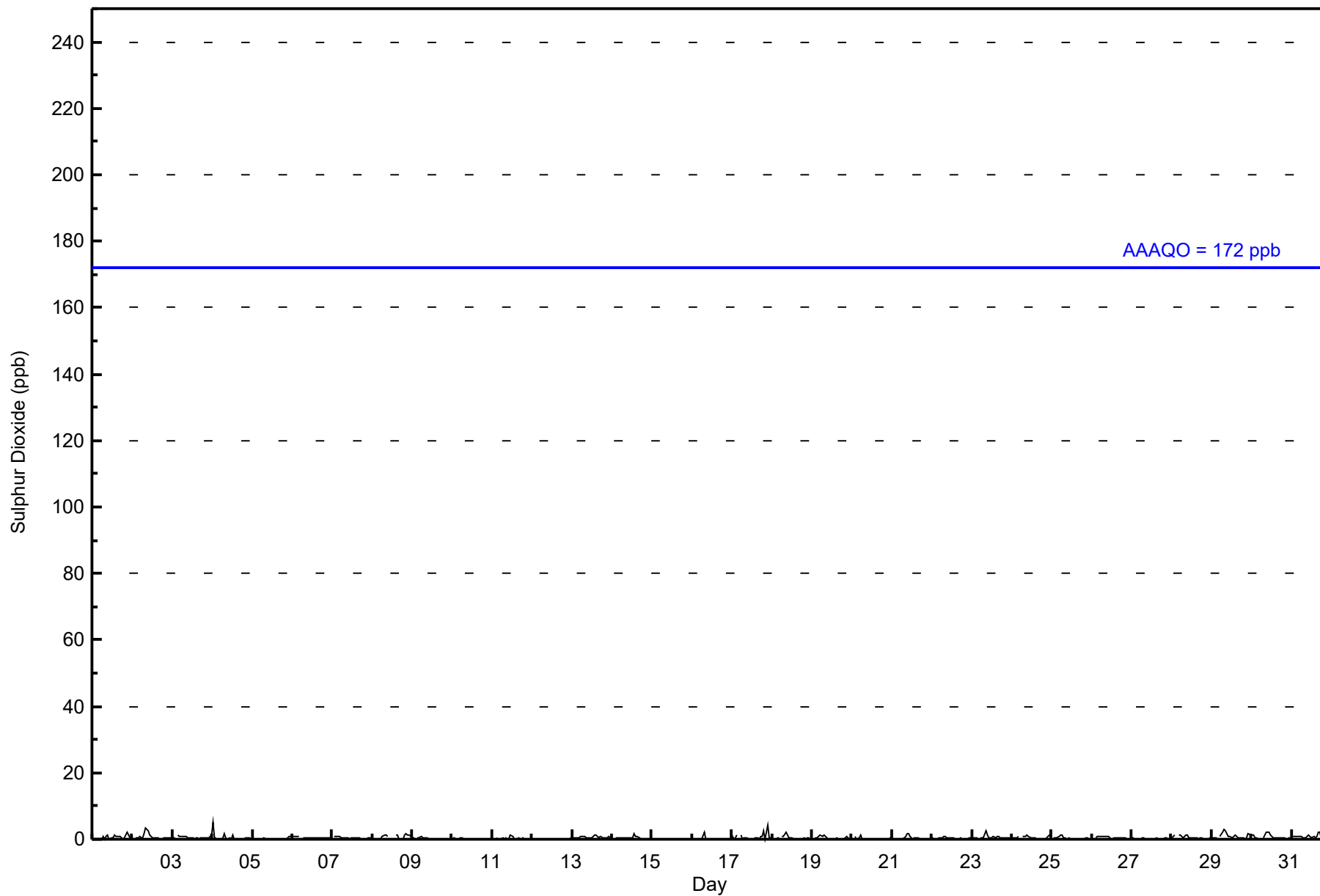
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.0 ppb on May 4 01:00 Maximum Daily Average: 1.0 ppb on May 29																			Hours in Service: 744 Hours of Data: 709							
Minimum Value: 0.0 ppb on May 1 03:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.8 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 19 Monthly Average: 0.42 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 1.0 P ₉₉ = 2.4																			Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.7	1.1	0.2	0.3	0.6	1.3	1.0	0.8	0.7	0.5	0.2	0.3	1.3	2.3	0.2	0.5	0.6	2.3
2-May	0.8	Z	0.4	0.5	0.7	0.5	0.3	1.6	3.3	2.7	1.2	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.4	0.7	3.3
3-May	0.6	0.6	Z	1.4	0.8	1.0	1.0	1.0	0.8	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	1.1	0.5	1.4
4-May	5.0	0.3	0.3	Z	0.2	0.2	0.4	1.5	0.6	0.2	0.2	0.2	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.4	0.1	0.5	5.0
5-May	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.4	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.6	0.9	0.6	0.2	0.9
6-May	0.8	0.9	0.8	0.9	0.9	Z	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.5	0.5	0.9
7-May	Z	0.7	0.9	1.0	0.7	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.3	0.5	0.6	0.4	1.0
8-May	0.1	Z	0.2	0.1	0.2	0.1	0.8	1.2	1.2	1.0	C	C	C	C	1.5	1.2	0.0	0.0	0.0	1.4	1.7	1.1	1.3	0.8	0.7	1.7
9-May	0.5	0.6	Z	0.4	0.5	0.7	0.4	0.6	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.7
10-May	0.0	0.2	0.4	Z	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.4
11-May	0.1	0.1	0.1	0.3	Z	0.2	0.3	0.1	0.3	0.1	0.0	1.4	0.7	0.2	0.1	0.1	0.4	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.2	1.4
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.3	0.1	0.3
13-May	Z	0.3	0.3	0.3	0.4	1.0	1.0	0.8	0.6	0.4	0.3	0.2	0.6	1.2	1.2	0.7	0.5	0.9	0.6	0.4	0.5	0.4	0.7	0.6	0.6	1.2
14-May	0.3	Z	0.5	0.5	0.3	0.5	0.4	0.3	0.6	0.4	0.5	0.2	0.4	1.6	0.7	0.9	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.6
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
16-May	0.1	0.0	0.2	Z	0.0	0.1	0.2	2.0	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0
17-May	0.9	0.0	0.4	1.1	Z	1.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.3	0.5	0.2	1.0	0.9	2.5	0.1	4.4	0.3	0.2	0.7	4.4
18-May	0.2	0.1	0.1	0.3	0.4	Z	0.7	0.8	2.0	1.3	0.3	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.1	0.4	2.0
19-May	Z	0.1	0.2	0.4	0.7	1.3	0.9	1.1	0.8	0.3	0.1	0.1	0.1	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.3	1.0	0.1	0.3	0.3	1.3
20-May	0.5	Z	1.0	0.1	0.3	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	1.4
21-May	0.2	0.1	Z	0.1	0.1	0.0	0.1	0.6	0.8	1.6	1.9	0.7	0.1	0.5	0.3	0.3	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.9
22-May	0.2	0.2	0.2	Z	0.2	0.3	0.6	1.0	0.7	0.6	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.3	1.0
23-May	0.6	0.4	0.5	0.6	Z	0.5	0.2	0.5	2.6	1.3	0.3	0.3	0.4	0.7	0.4	1.0	0.8	0.6	0.4	0.5	0.6	0.4	0.3	0.4	0.6	2.6
24-May	0.3	0.5	0.5	0.5	0.7	Z	0.9	0.8	0.7	1.3	1.0	0.6	0.4	0.4	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.5	1.4	0.7	0.5	1.4
25-May	Z	0.5	0.3	0.4	0.8	1.2	1.2	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.2	0.3	1.2
26-May	0.1	Z	0.6	0.8	0.9	1.0	1.0	0.6	1.0	1.0	0.7	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.5	1.0
27-May	0.3	0.3	Z	0.1	0.1	0.2	0.4	0.4	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.4	0.2	0.4
28-May	0.5	0.8	1.1	Z	1.3	1.1	0.9	0.6	1.3	1.2	0.6	0.5	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.0	0.1	0.4	0.6	1.3
29-May	0.3	0.4	0.5	0.4	Z	0.9	2.0	2.8	2.4	1.8	1.1	0.9	0.6	1.0	1.2	0.9	0.6	0.4	0.5	0.3	0.2	0.6	1.8	1.2	1.0	2.8
30-May	1.2	1.1	0.6	0.3	0.2	0.0	Z	0.3	1.5	2.1	2.2	1.3	0.7	0.2	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.7	2.2
31-May	Z	0.7	0.9	1.0	0.8	0.9	0.8	0.6	0.5	0.8	1.5	0.7	0.6	0.6	0.6	0.7	2.1	2.3	0.4	0.3	0.3	0.2	0.2	0.2	0.8	2.3
0.5 0.3 0.4 0.4 0.5 0.6 0.6 0.7 0.8 0.7 0.5 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.3 0.3 0.5 0.4 0.4																									Diurnal Average	
5.0 1.1 1.1 1.4 1.3 1.4 2.0 2.8 3.3 2.7 2.2 1.4 1.1 1.6 1.5 1.2 2.1 2.3 0.9 2.5 1.7 4.4 1.8 1.2																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	709	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	33	8	25	10	6	32	83	161	79	25	30	30	42	84	34	23	705
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	8	25	10	6	32	83	161	79	25	30	30	42	84	34	23	705

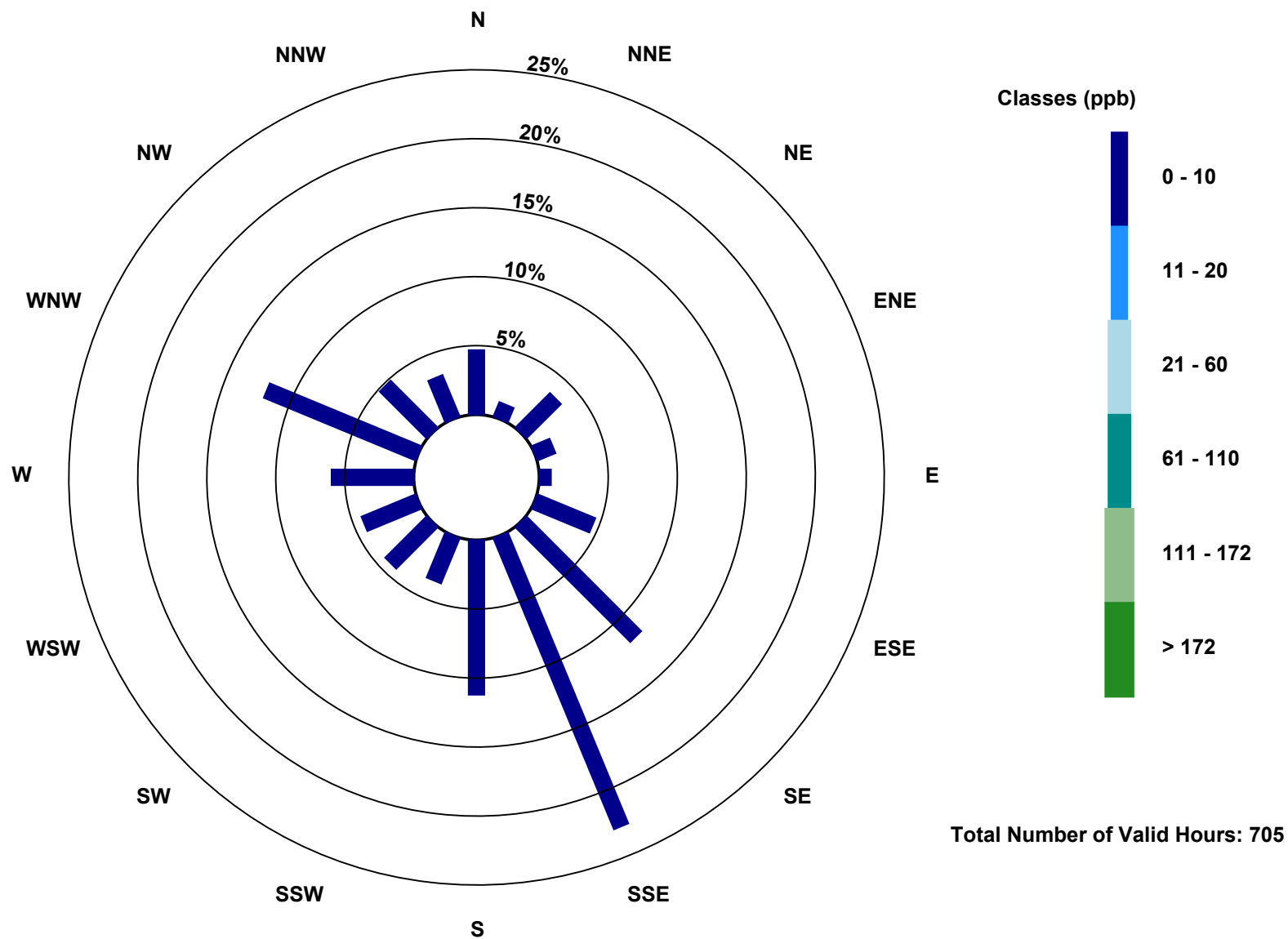
Total Number of Valid Hours: 705

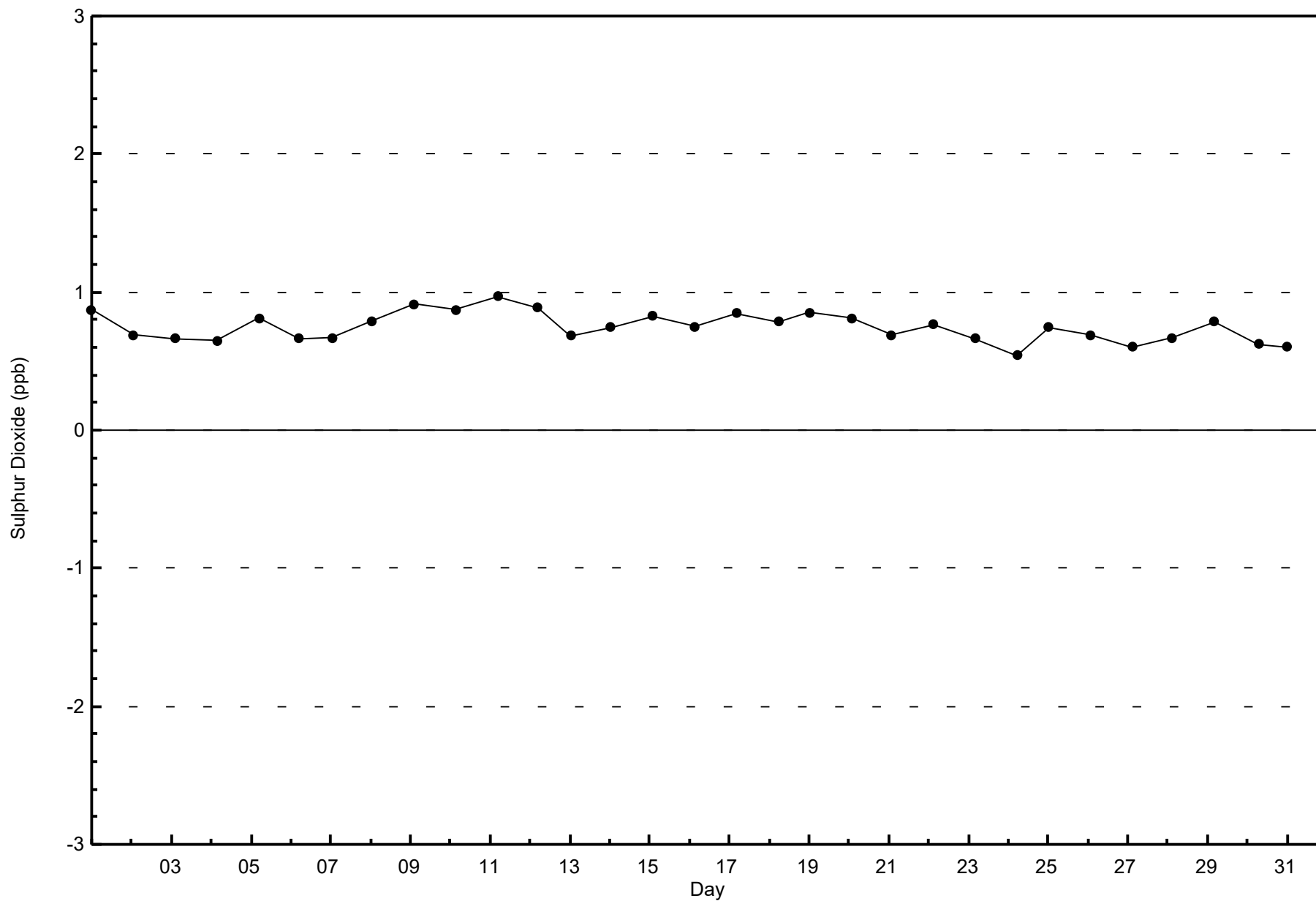
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Anzac

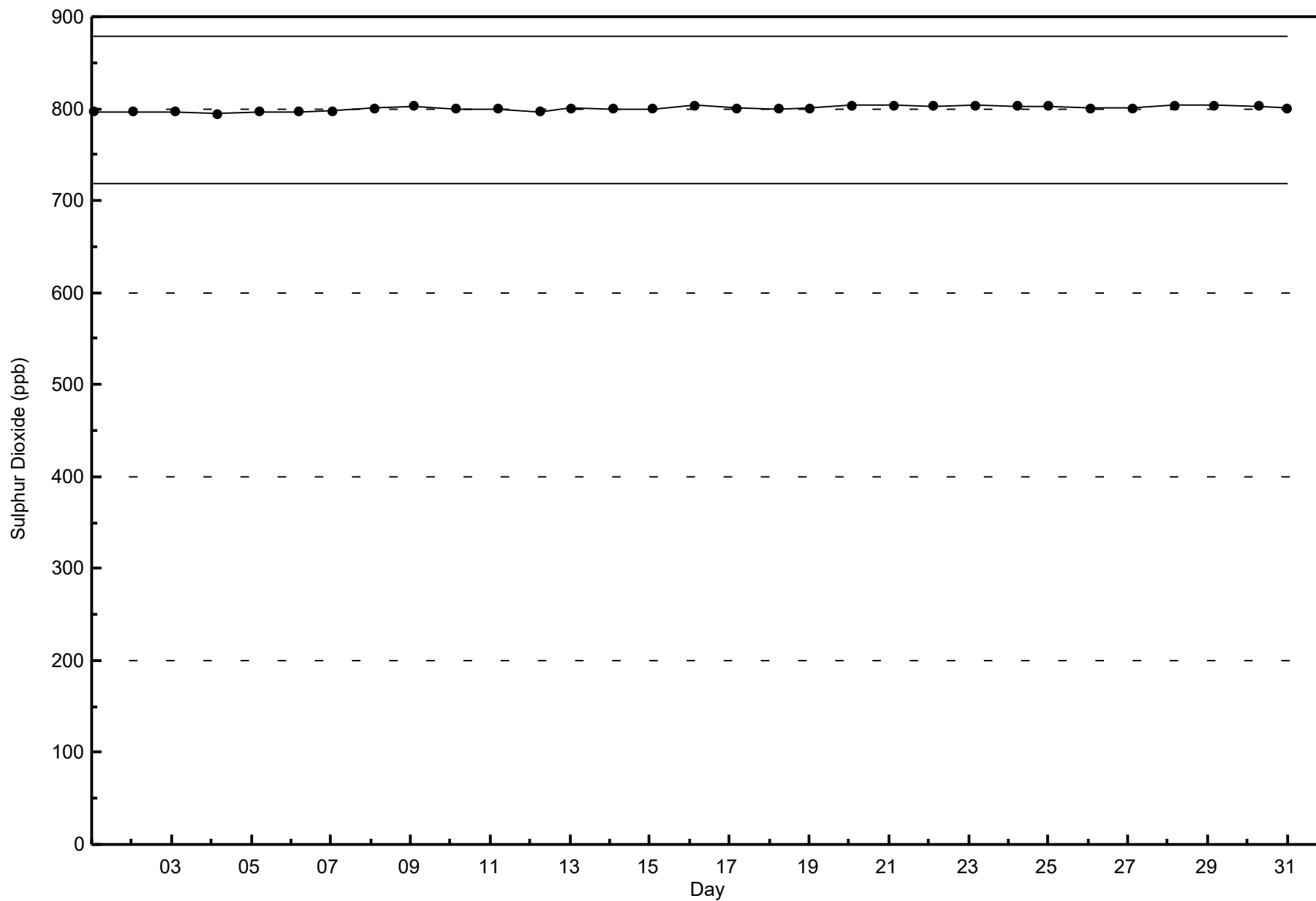






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - May 2025

Number of Exceedences (AAAQG): 30-Min: 0																				Periods in Service: 1488						
Maximum Value: 2.6 ppb on May 28 10:00 Maximum Daily Average: 0.4 ppb on May 30																				Periods of Valid Data: 1370						
Minimum Value: 0.0 ppb on May 29 20:30 Minimum Daily Average: 0.1 ppb on May 16																				Periods of Invalid Data: 118						
Maximum Diurnal Average: 0.3 ppb at hour 5 Minimum Diurnal Average: 0.1 ppb at hour 19																				Periods of Calibration: 77						
Monthly Average: 0.19 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.7																				Percent Operational Time: 97.2						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.3	0.5 0.4	0.2 0.2	0.3 0.2	0.1	0.5
2-May	0.2 0.2	0.2 0.1	Z SP	0.2 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2	0.2
3-May	0.3 0.3	0.4 0.3	0.4 0.5	Z SP	0.5 0.4	0.4 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.5
4-May	0.2 0.2	0.1 0.1	0.1 0.2	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.3
5-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1	0.2
6-May	Z SP	0.2 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
7-May	0.2 0.1	Z SP	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.4	0.3 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.2	0.4
8-May	0.1 0.2	0.1 0.2	Z SP	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.3 0.3	0.1	0.3
9-May	0.2 0.2	0.2 0.2	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1	0.2
10-May	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.1	Z SP	0.3 1.2	0.4 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.1	0.2 0.1	0.2	1.2
11-May	0.2 0.2	0.1 0.2	0.2 0.2	0.4 0.2	0.2 0.1	Z SP	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2	0.4
12-May	Z SP	0.2 0.2	0.2 0.2	0.3 0.2	0.4 0.5	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.4 0.5	0.2 0.3	0.1 0.1	0.2 0.3	0.2	0.5
13-May	0.2 0.2	Z SP	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2	0.4
14-May	0.2 0.1	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.5 0.2	0.2 0.1	0.1 0.2	0.6 0.4	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.4	0.2	0.6
15-May	0.3 0.2	0.2 0.1	0.3 0.1	Z SP	0.4 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.4	0.3 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.4



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
17-May	0.1 0.3	0.1 0.1	0.4 0.4	0.3 0.5	0.3 0.4	Z SP	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.3 0.2	0.1 0.1	0.3 0.4	0.1 0.2	0.4 0.4	0.2	0.5
18-May	Z SP	0.2 0.1	0.3 0.6	0.5 0.5	0.6 0.7	0.7 0.6	0.6 0.4	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.4 0.2	0.3	0.7
19-May	0.2 0.2	Z SP	0.3 0.3	0.3 0.2	0.3 0.3	0.4 0.4	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.3 0.3	0.2	0.4
20-May	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.3 0.4	0.4 0.4	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.2	0.3 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.4	0.3 0.2	0.2	0.4
21-May	0.3 0.2	0.1 0.1	0.1 0.1	Z SP	0.4 0.2	0.4 0.4	0.6 0.7	0.4 0.2	0.2 0.3	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.2	0.7
22-May	0.1 0.1	0.1 0.1	0.3 0.3	0.1 0.1	Z SP	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	PF PF	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2	0.3
23-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	Z SP	0.2 0.1	0.3 0.2	0.2 0.5	0.4 0.2	0.2 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.2	0.5
24-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
25-May	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
26-May	0.3 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.3 0.2	0.2 0.1	0.1	0.3
27-May	0.1 0.1	0.1 0.1	0.1 0.2	Z SP	0.1 0.1	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1	0.2
28-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 2.6	C C	C C	C C	C C	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	--	2.6
29-May	M M	M M	M M	M M	M M	M M	M M	M M	M M	M M	C C	C C	C C	C C	0.3 0.3	0.2 0.2	0.1 0.1	0.1 0.1	0.0 0.0	0.0 0.0	0.0 0.2	0.6 1.6	1.7 1.2	--	1.7	
30-May	1.3 1.6	Z SP	1.7 0.9	0.7 0.7	0.6 0.6	0.6 0.5	0.6 0.7	0.8 0.8	0.6 0.5	0.3 0.3	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.4	1.7
31-May	0.2 0.2	Z SP	0.3 0.2	0.3 0.3	0.4 0.4	0.4 0.4	0.6 0.5	0.4 0.4	0.3 0.3	0.4 0.4	0.3 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.3 0.2	0.3 0.2	0.4 0.3	0.4 0.7	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.3	0.7
0.2 0.2 0.3 0.2 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.2 0.1 0.2 0.2 0.1 0.1 0.2 0.2 0.2 0.2 0.2 0.2																								Diurnal Average		
1.6 0.4 1.7 0.7 0.7 1.2 0.7 0.8 0.6 2.6 0.5 0.2 0.3 0.6 0.3 0.3 0.4 0.3 0.4 0.7 0.5 0.5 1.6 1.7																								Diurnal Maximum		

Z - zerospan C - Calibration M - Maintenance PF - Power Failure SP - Span
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

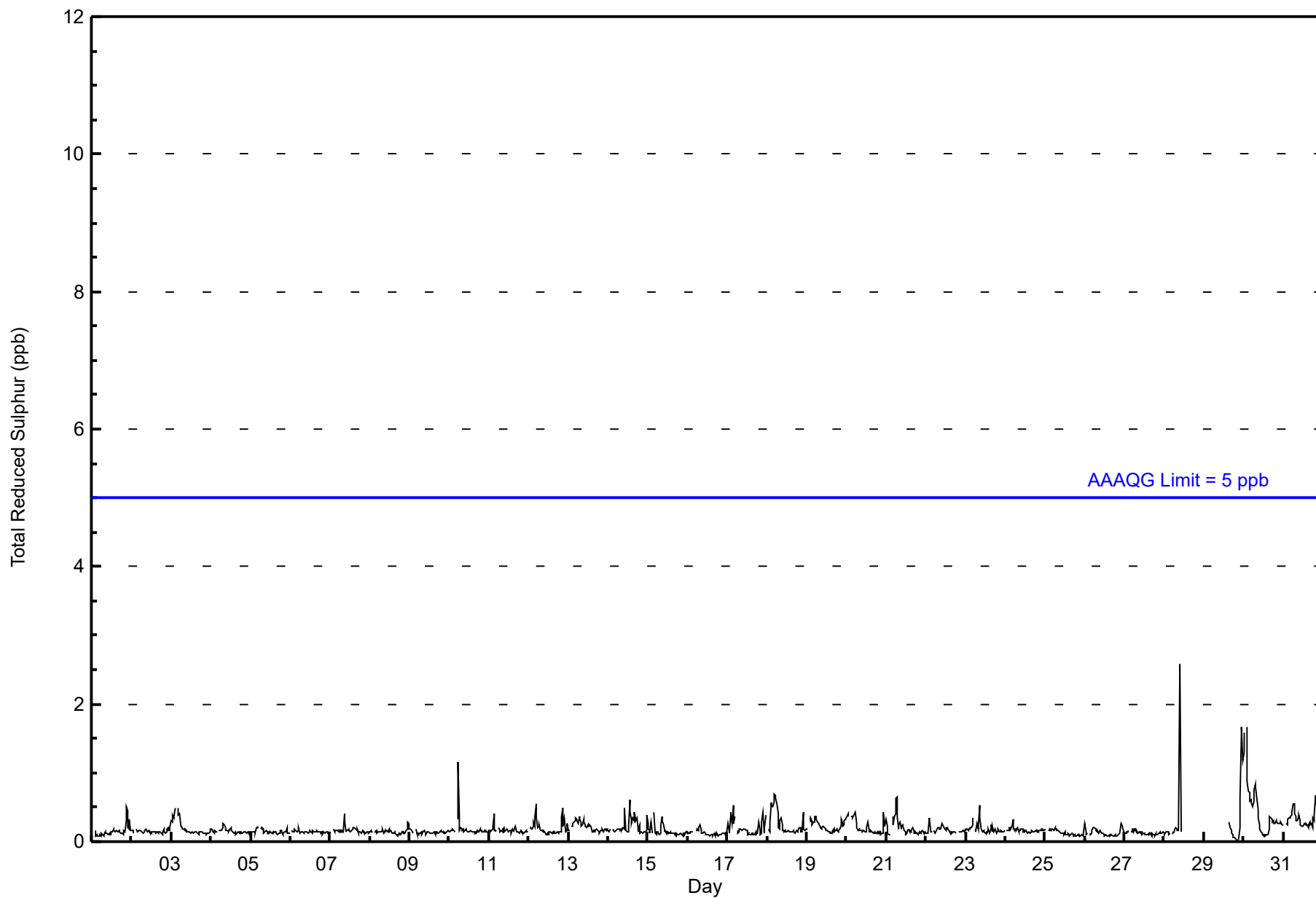
Anzac - May 2025

Maximum Value: 1.4 ppb on May 30 01:00																	Maximum Daily Average: 0.4 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 29 21:00																	Minimum Daily Average: 0.1 ppb on May 16										Hours of Data: 685	
Maximum Diurnal Average: 0.3 ppb at hour 5																	Minimum Diurnal Average: 0.1 ppb at hour 19										Hours of Missing Data: 59	
Monthly Average: 0.19 ppb																	Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.7										Hours of Calibration: 38	
																											Percent Operational Time: 97.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.2	0.2	0.1	0.5	
2-May	0.2	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	
3-May	0.3	0.4	0.4	Z	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	
4-May	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
5-May	0.1	0.1	0.1	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2		
6-May	Z	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
7-May	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	
8-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3	
9-May	0.2	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	
10-May	0.1	0.2	0.2	0.2	Z	0.7	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.7	0.1	
11-May	0.2	0.2	0.2	0.3	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	
12-May	Z	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.1	0.2	0.2	0.5	
13-May	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	
14-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.5	0.1	
15-May	0.2	0.1	0.2	Z	0.3	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
16-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
17-May	0.2	0.1	0.4	0.4	0.3	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.2	0.4	0.2	0.4	
18-May	Z	0.2	0.4	0.5	0.6	0.6	0.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.6	
19-May	0.2	Z	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.4	
20-May	0.4	0.4	Z	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.4	
21-May	0.3	0.1	0.1	Z	0.3	0.4	0.6	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	
22-May	0.1	0.1	0.3	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	
23-May	0.2	0.2	0.2	0.2	0.3	Z	0.2	0.2	0.4	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.4	
24-May	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
25-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
26-May	0.2	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	
27-May	0.1	0.1	0.2	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
28-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	1.4	0.1	C	C	C	C	M	M	M	M	M	M	M	M	M	M	M	1.4	
29-May	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	0.3	0.2	0.1	0.1	0.0	0.0	0.1	1.1	1.4	1.4	1.4		
30-May	1.4	Z	1.3	0.7	0.6	0.5	0.7	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4	1.4	
31-May	0.2	Z	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.5	0.5	0.4	0.4	0.4	0.3	0.5	0.5	
																								Diurnal Average				
																								Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	685	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	34	8	26	9	6	32	79	154	69	26	30	28	39	83	32	26	681
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	8	26	9	6	32	79	154	69	26	30	28	39	83	32	26	681

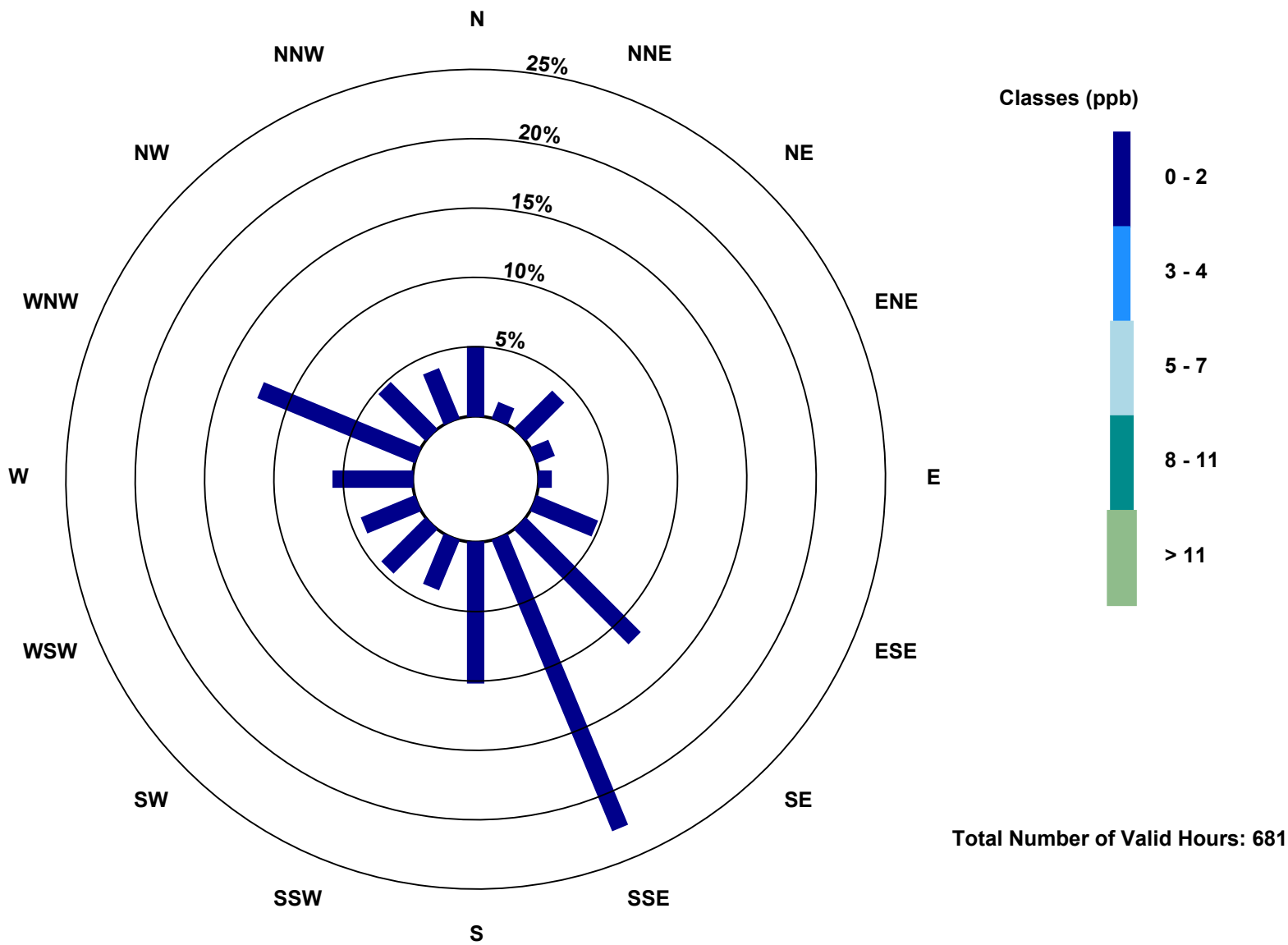
Total Number of Valid Hours: 681

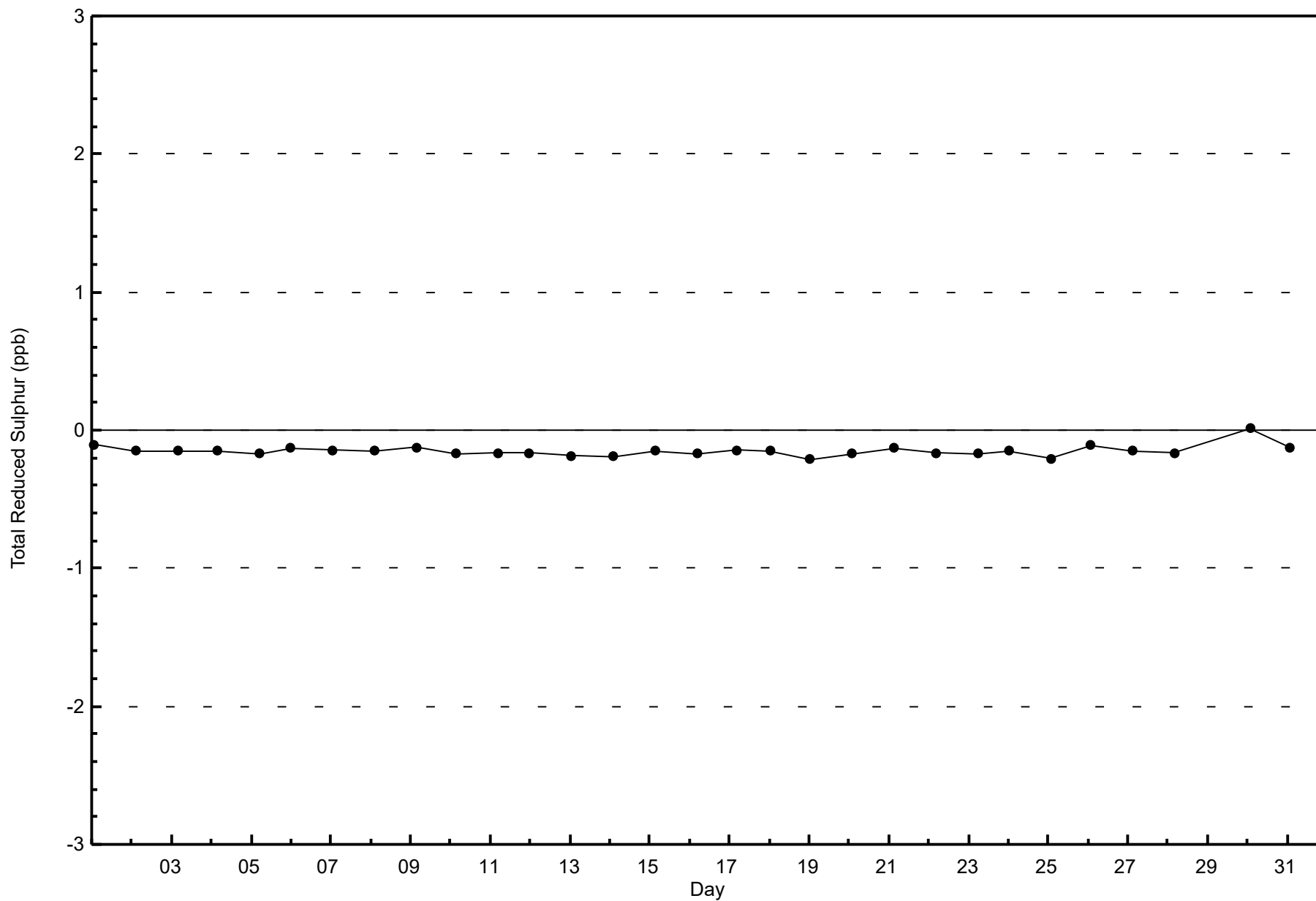
Total Number of Hours: 744

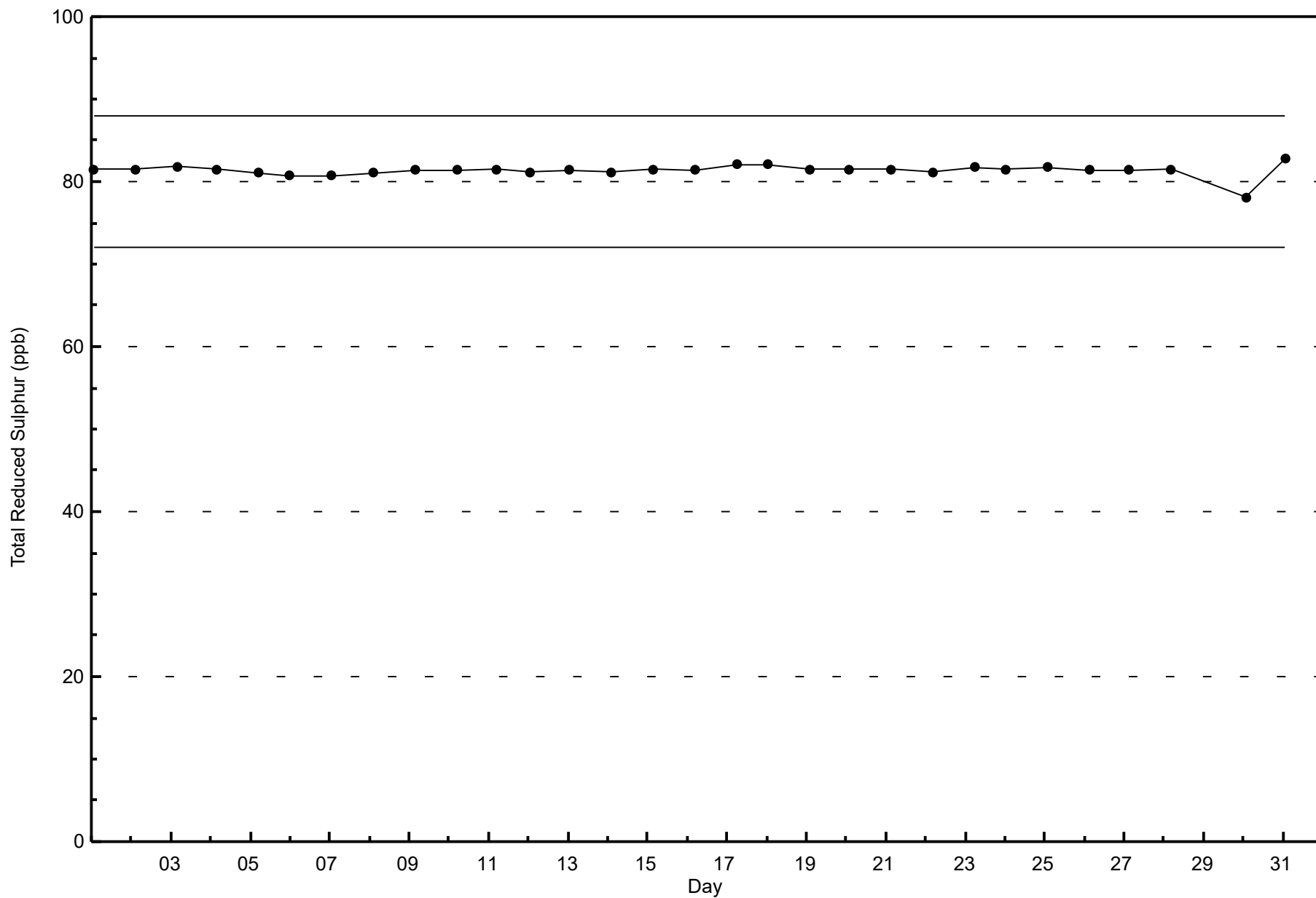


Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Anzac









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

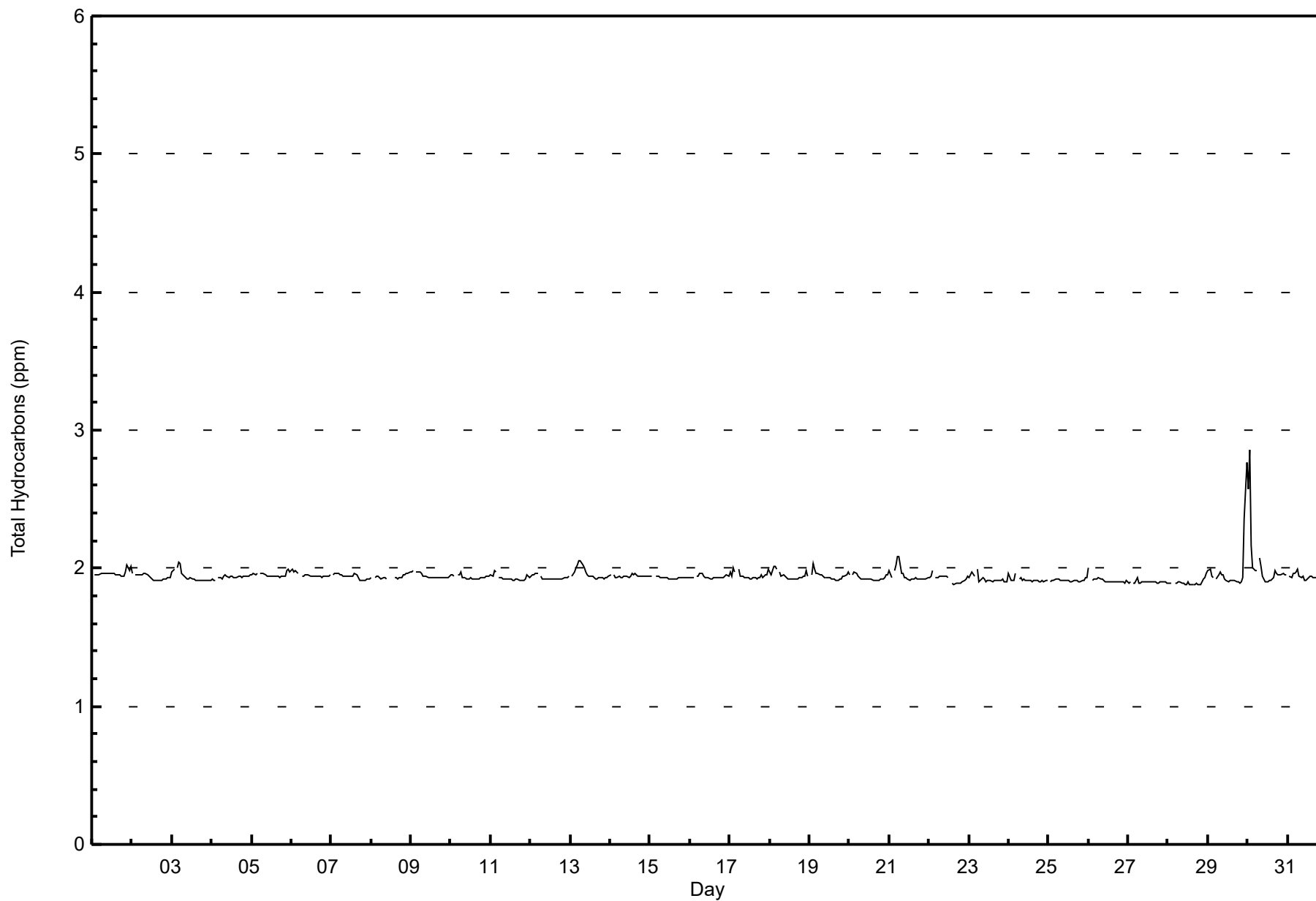
Anzac - May 2025

Maximum Value: 2.9 ppm on May 30 02:00																	Maximum Daily Average: 2.0 ppm on May 30										Hours in Service: 744	
Minimum Value: 1.9 ppm on May 28 11:00																	Minimum Daily Average: 1.9 ppm on May 28										Hours of Data: 707	
Maximum Diurnal Average: 2.0 ppm at hour 2																	Minimum Diurnal Average: 1.9 ppm at hour 19										Hours of Missing Data: 37	
Monthly Average: 1.94 ppm																	Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 1.9 Q ₃ = 1.9 P ₉₀ = 2.0 P ₉₉ = 2.1										Hours of Calibration: 35	
																											Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	
2-May	2.0	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
3-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
4-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0		
5-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0		
6-May	2.0	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0		
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
8-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0		
9-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
10-May	1.9	1.9	1.9	Z	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
11-May	1.9	1.9	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0		
12-May	1.9	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
13-May	Z	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1		
14-May	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
15-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9		
16-May	1.9	1.9	1.9	Z	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
17-May	2.0	1.9	2.0	2.0	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	2.0		
18-May	2.0	1.9	2.0	2.0	2.0	Z	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0		
19-May	Z	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0		
20-May	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0		
21-May	2.0	1.9	Z	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1		
22-May	1.9	1.9	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	M	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
23-May	1.9	2.0	2.0	1.9	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
24-May	2.0	1.9	1.9	1.9	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
25-May	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9		
26-May	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0		
27-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9		
28-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0		
29-May	2.0	2.0	1.9	1.9	Z	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.8	2.0	2.8		
30-May	2.6	2.9	2.2	2.0	2.0	2.0	Z	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.9		
31-May	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0		
2.0 2.0 2.0 2.0 2.0 2.0 2.0 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 2.0 2.0																										Diurnal Average		
2.6 2.9 2.2 2.0 2.0 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.4 2.8																										Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																												



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	698	98.73	98.73
2.1 - 3.0	9	1.27	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	33	8	25	10	6	32	81	160	78	25	30	30	42	79	32	23	694
2.1 - 3.0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	2	0	9
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	8	25	10	6	32	83	160	78	25	30	30	42	84	34	23	703

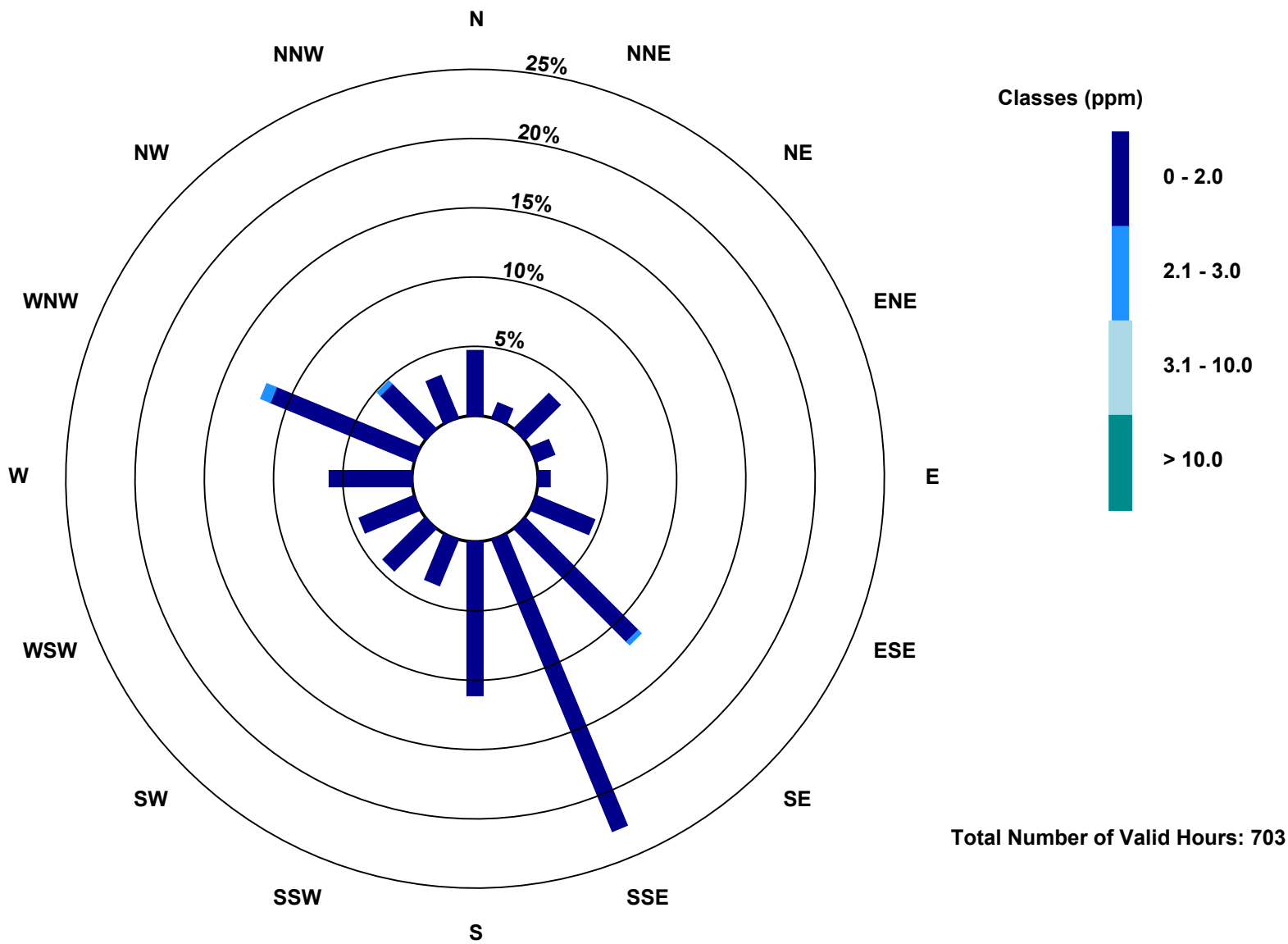
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Anzac



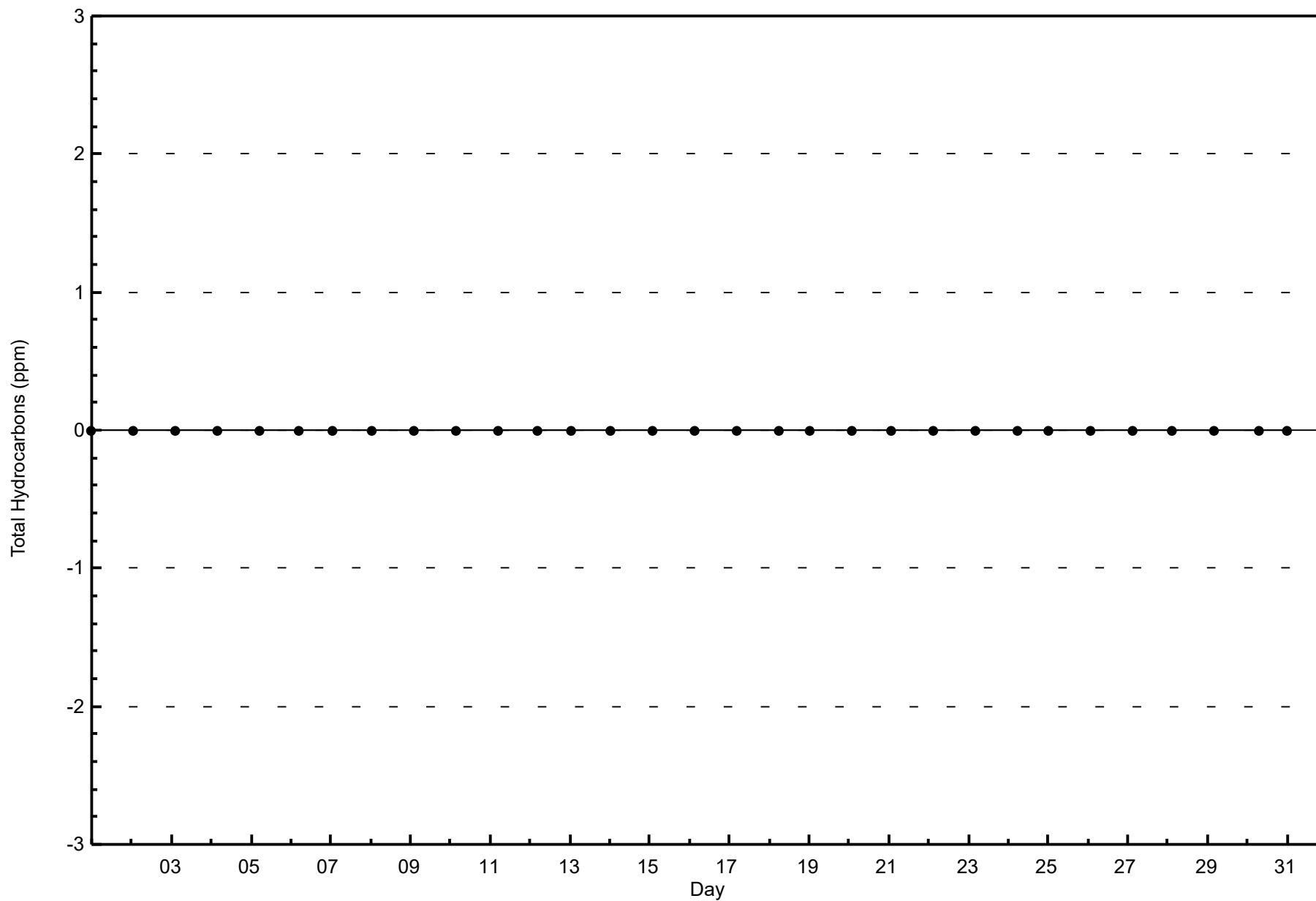


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

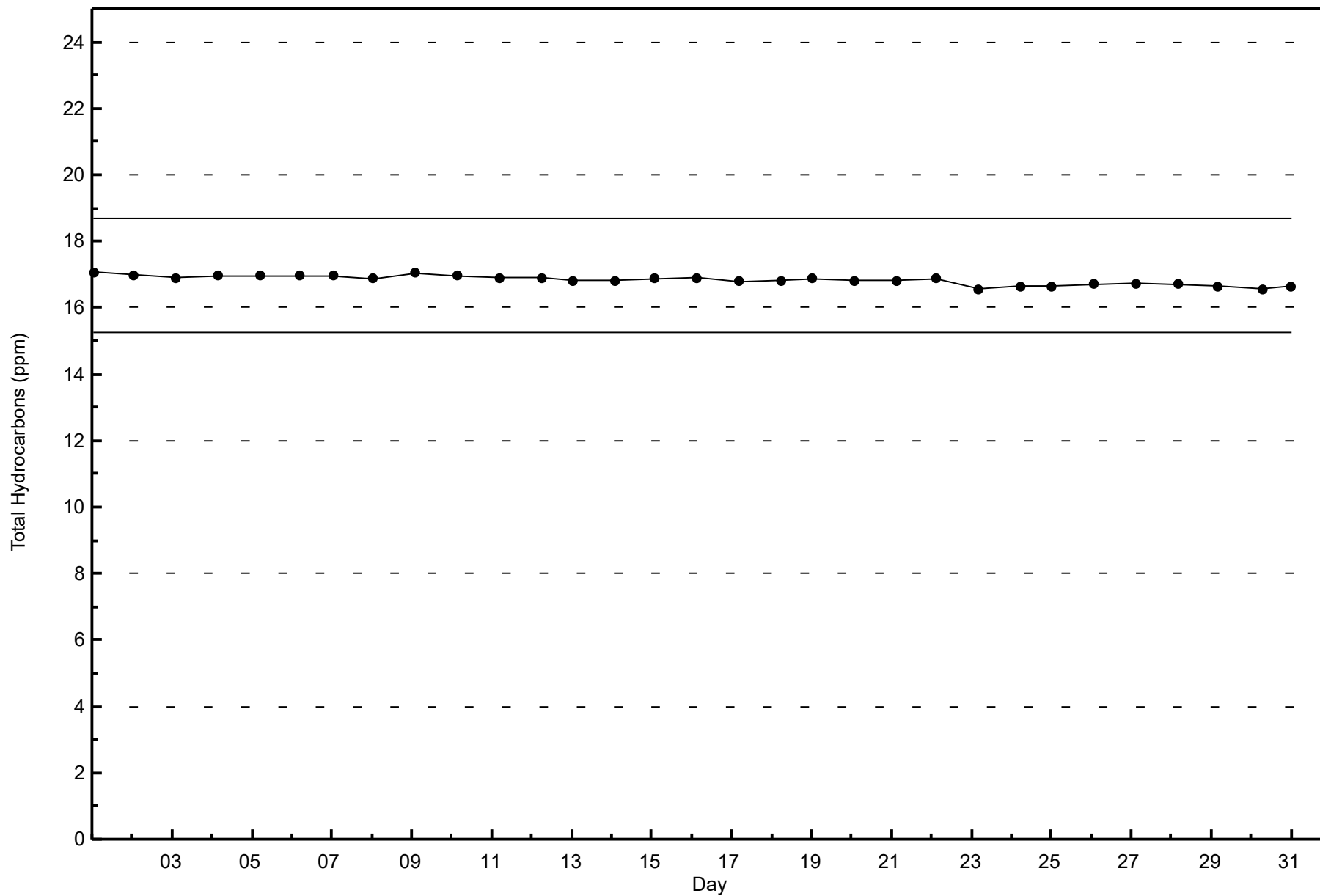
Anzac - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Anzac - May 2025

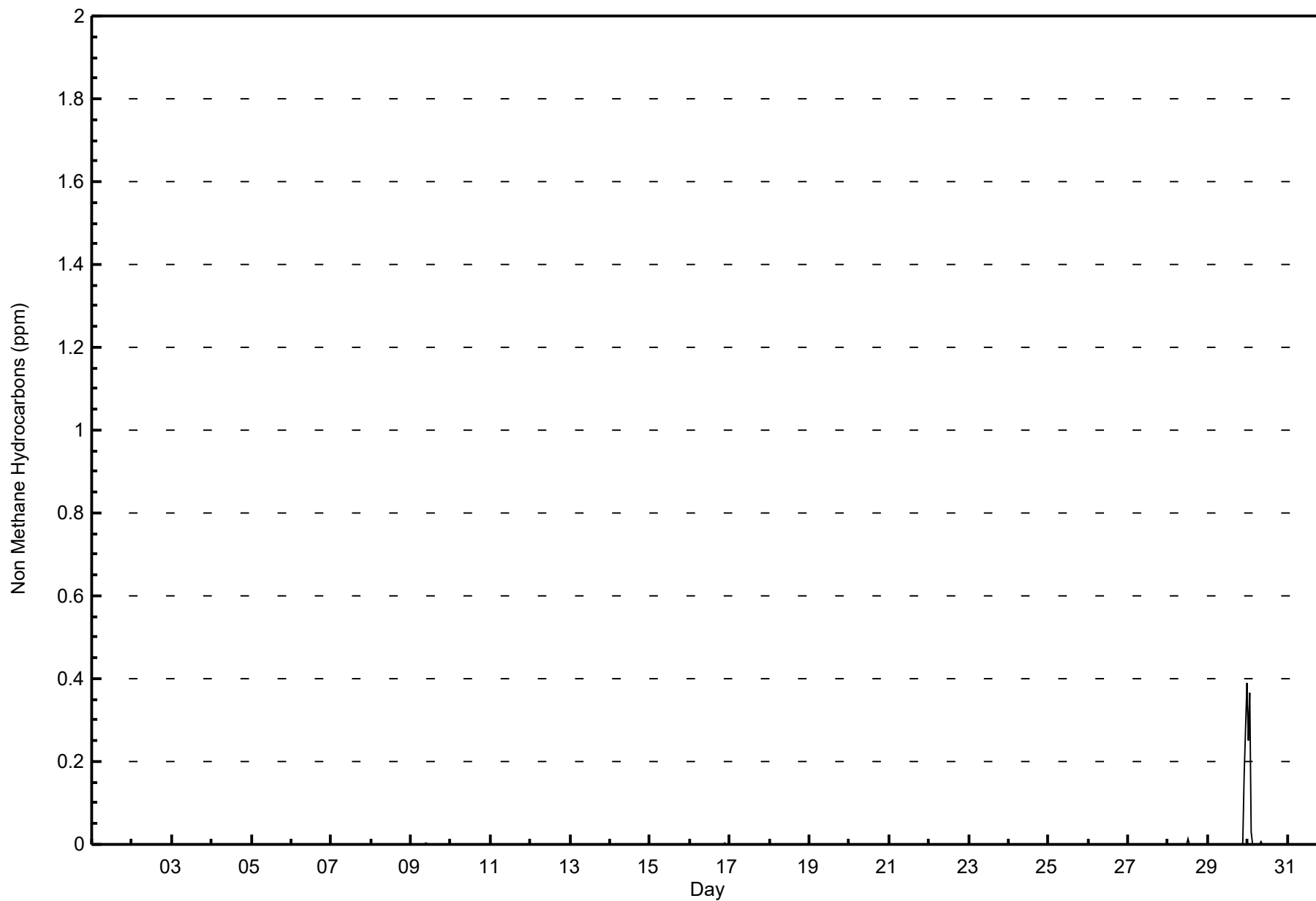


Maximum Value: 0.390 ppm on May 30 00:00																		Maximum Daily Average: 0.029 ppm on May 30								Hours in Service:		744
Minimum Value: 0.000 ppm on May 1 02:00																		Minimum Daily Average: 0.000 ppm on May 1								Hours of Data:		707
Maximum Diurnal Average: 0.014 ppm at hour 2																		Minimum Diurnal Average: 0.000 ppm at hour 4								Hours of Missing Data:		37
Monthly Average: 0.002 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0								Hours of Calibration:		35
																										Percent Operational Time:		99.7
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
2-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
3-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
5-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
6-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
7-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
8-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
9-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.003	
10-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
11-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	
12-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
13-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
14-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
15-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
16-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.002	
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
18-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
19-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
20-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
21-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
22-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
23-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
24-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
25-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
26-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
27-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	
29-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.390	0.024	0.390	
30-May	0.251	0.367	0.032	0.000	0.000	0.000	Z	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.367	
31-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		0.010	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.013	Diurnal Average			
		0.251	0.367	0.032	0.000	0.000	0.000	0.000	0.006	0.003	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.168	0.390	Diurnal Maximum			
Z - zerospan		C - Calibration				M - Maintenance																						



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	700	99.01	99.01
0.006 - 0.05	3	0.42	99.43
0.06 - 0.1	0	0.00	99.43
> 0.1	4	0.57	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	33	8	25	10	6	32	83	160	78	25	30	30	42	80	31	23	696
0.006 - 0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
0.06 - 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
Totals	33	8	25	10	6	32	83	160	78	25	30	30	42	84	34	23	703

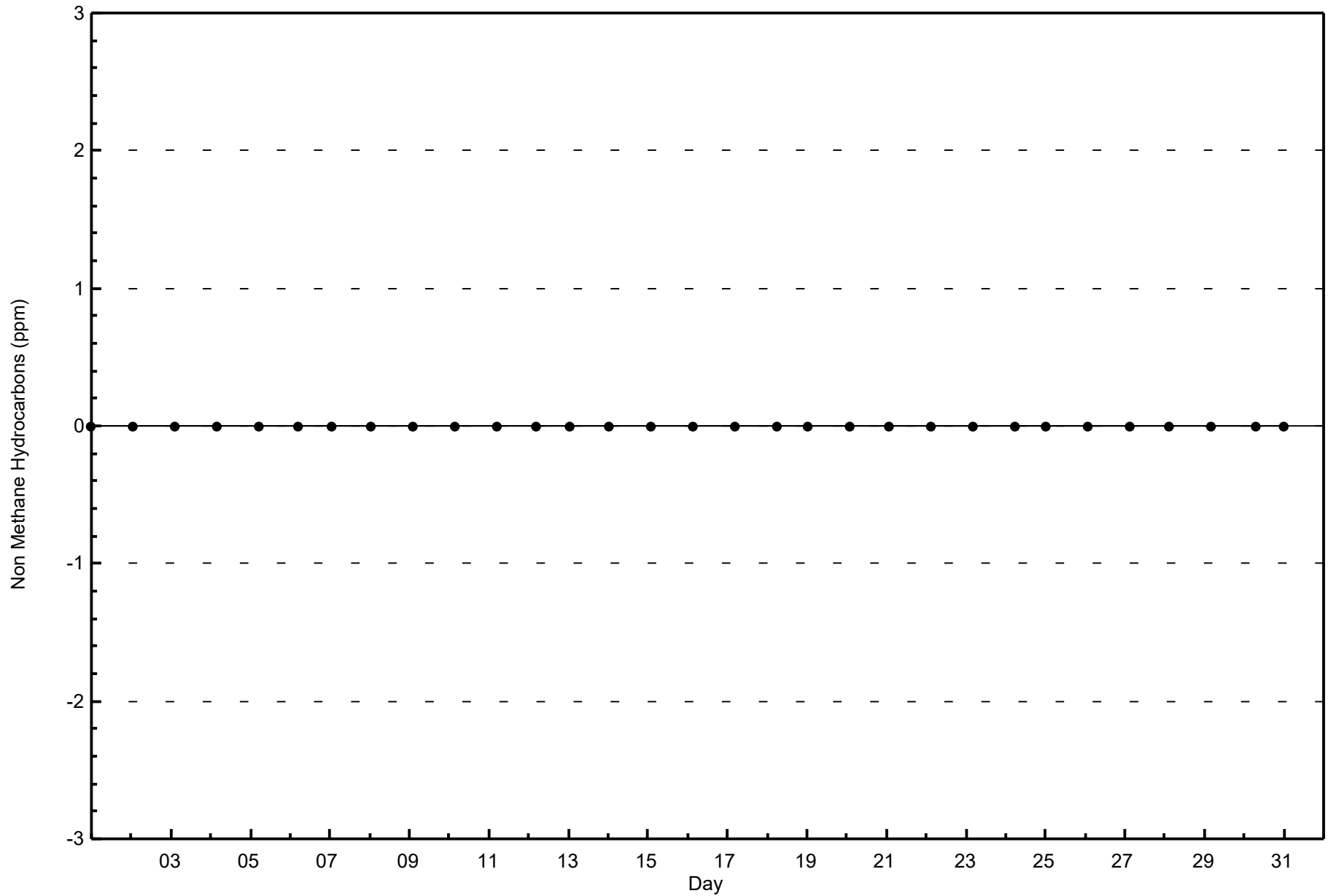
Total Number of Valid Hours: 703

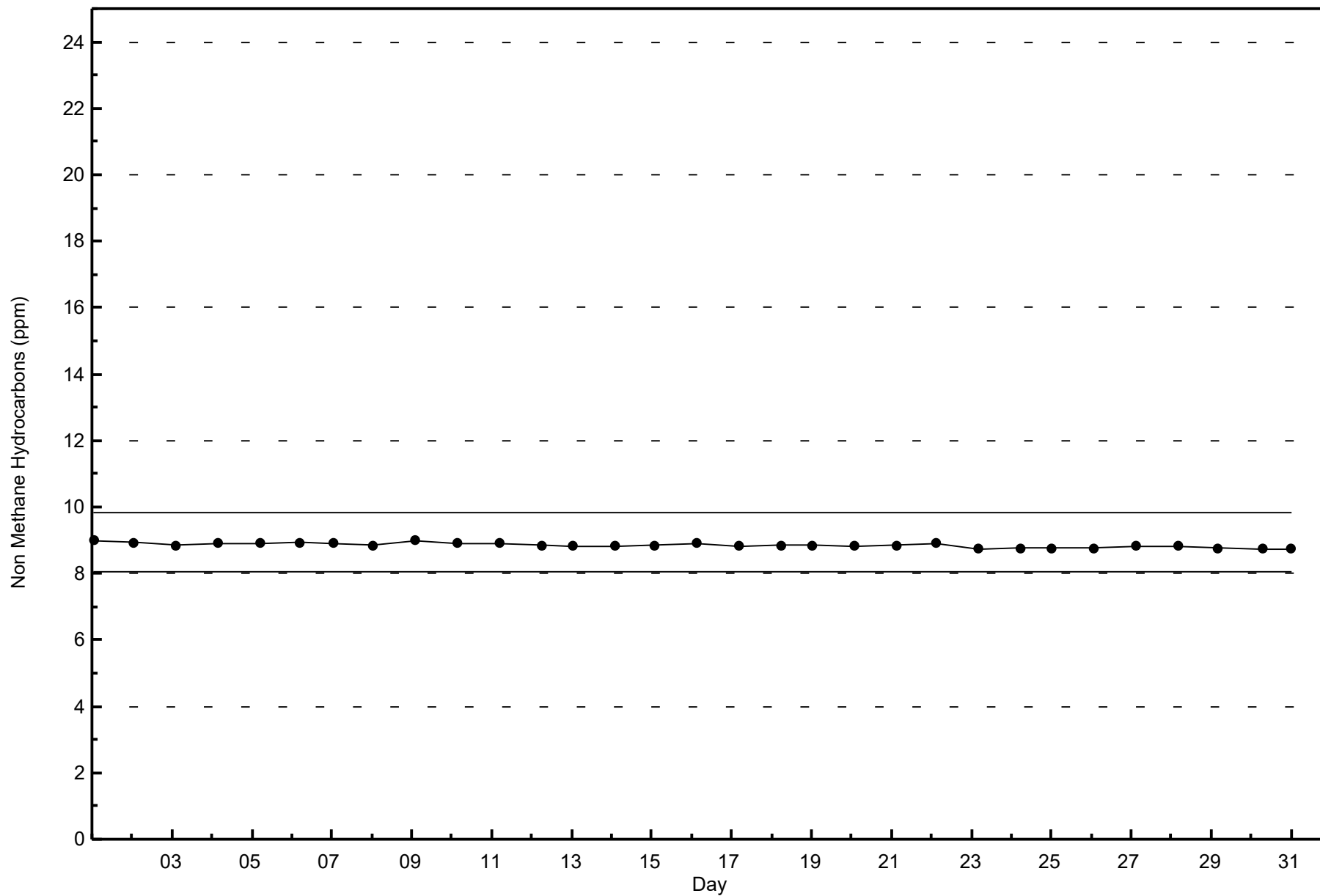
Total Number of Hours: 744



Non Methane Hydrocarbons (NMHC) - ppm









Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

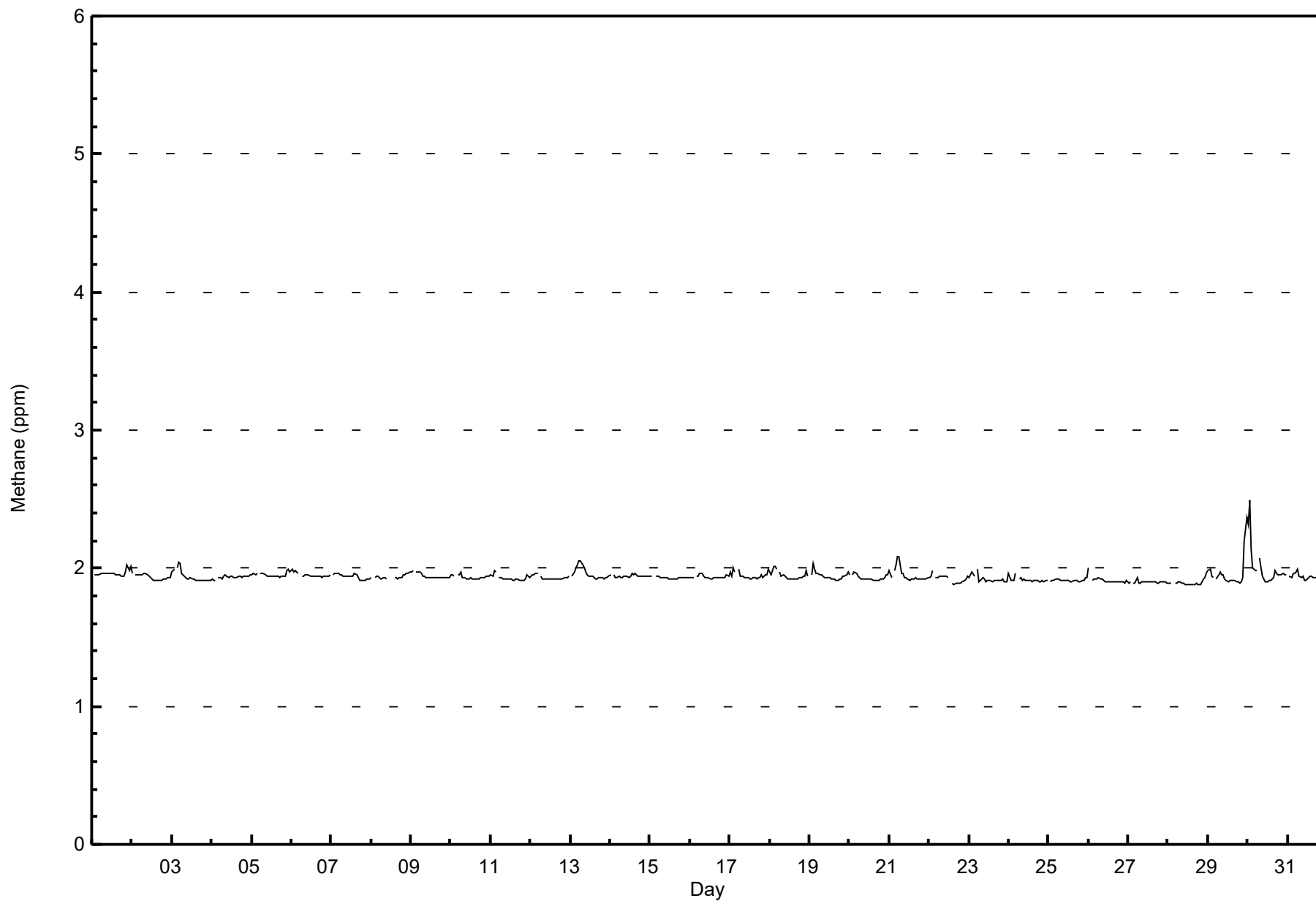
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.5 ppm on May 30 02:00 Maximum Daily Average: 2.0 ppm on May 30																	Hours in Service: 744									
Minimum Value: 1.9 ppm on May 28 11:00 Minimum Daily Average: 1.9 ppm on May 28 Maximum Diurnal Average: 2.0 ppm at hour 1 Minimum Diurnal Average: 1.9 ppm at hour 19 Monthly Average: 1.94 ppm Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 1.9 Median = 1.9 Q ₃ = 1.9 P ₉₀ = 2.0 P ₉₉ = 2.1																	Hours of Data: 707									
																	Hours of Missing Data: 37									
																	Hours of Calibration: 35									
																	Percent Operational Time: 99.7									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
2-May	2.0	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
3-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
4-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	
5-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	
6-May	2.0	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
8-May	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	
9-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
10-May	1.9	1.9	1.9	Z	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
11-May	1.9	1.9	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
12-May	1.9	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
13-May	Z	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
14-May	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
15-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
16-May	1.9	1.9	1.9	Z	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
17-May	2.0	1.9	2.0	2.0	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	
18-May	2.0	1.9	2.0	2.0	2.0	Z	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	
19-May	Z	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	
20-May	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	
21-May	2.0	1.9	Z	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
22-May	1.9	1.9	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	M	M	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
23-May	1.9	2.0	2.0	1.9	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
24-May	2.0	1.9	1.9	1.9	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
25-May	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
26-May	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
27-May	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
28-May	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	
29-May	2.0	2.0	1.9	1.9	Z	1.9	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.4	2.0	
30-May	2.3	2.5	2.1	2.0	2.0	2.0	Z	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	
31-May	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.9	
2.0 2.0 2.0 2.0 2.0 2.0 2.0 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 2.0																								Diurnal Average		
2.3 2.5 2.1 2.0 2.0 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.2 2.4																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	698	98.73	98.73
2.1 - 3.0	9	1.27	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Anzac - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	33	8	25	10	6	32	81	160	78	25	30	30	42	79	32	23	694
2.1 - 3.0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	2	0	9
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	8	25	10	6	32	83	160	78	25	30	30	42	84	34	23	703

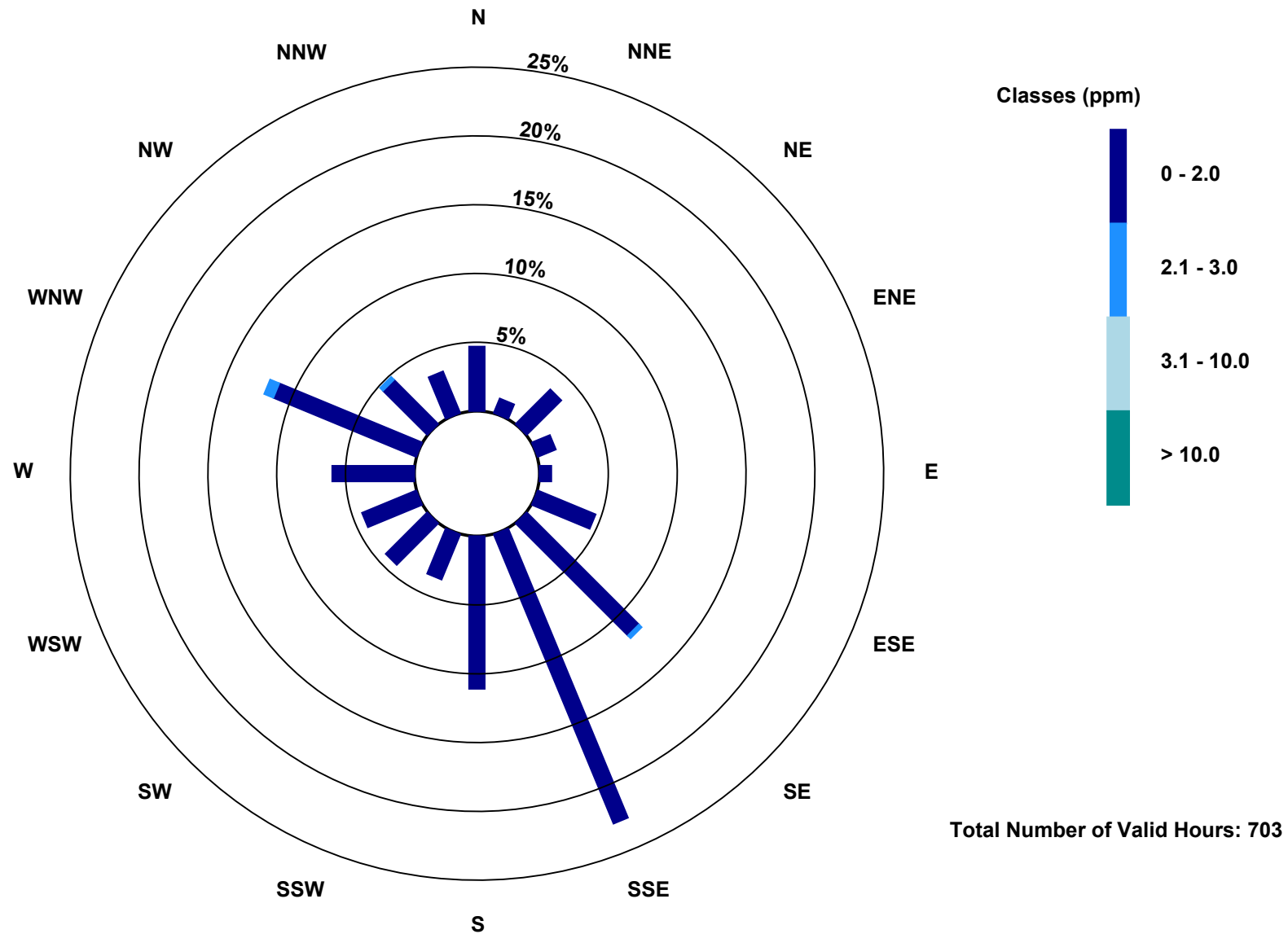
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

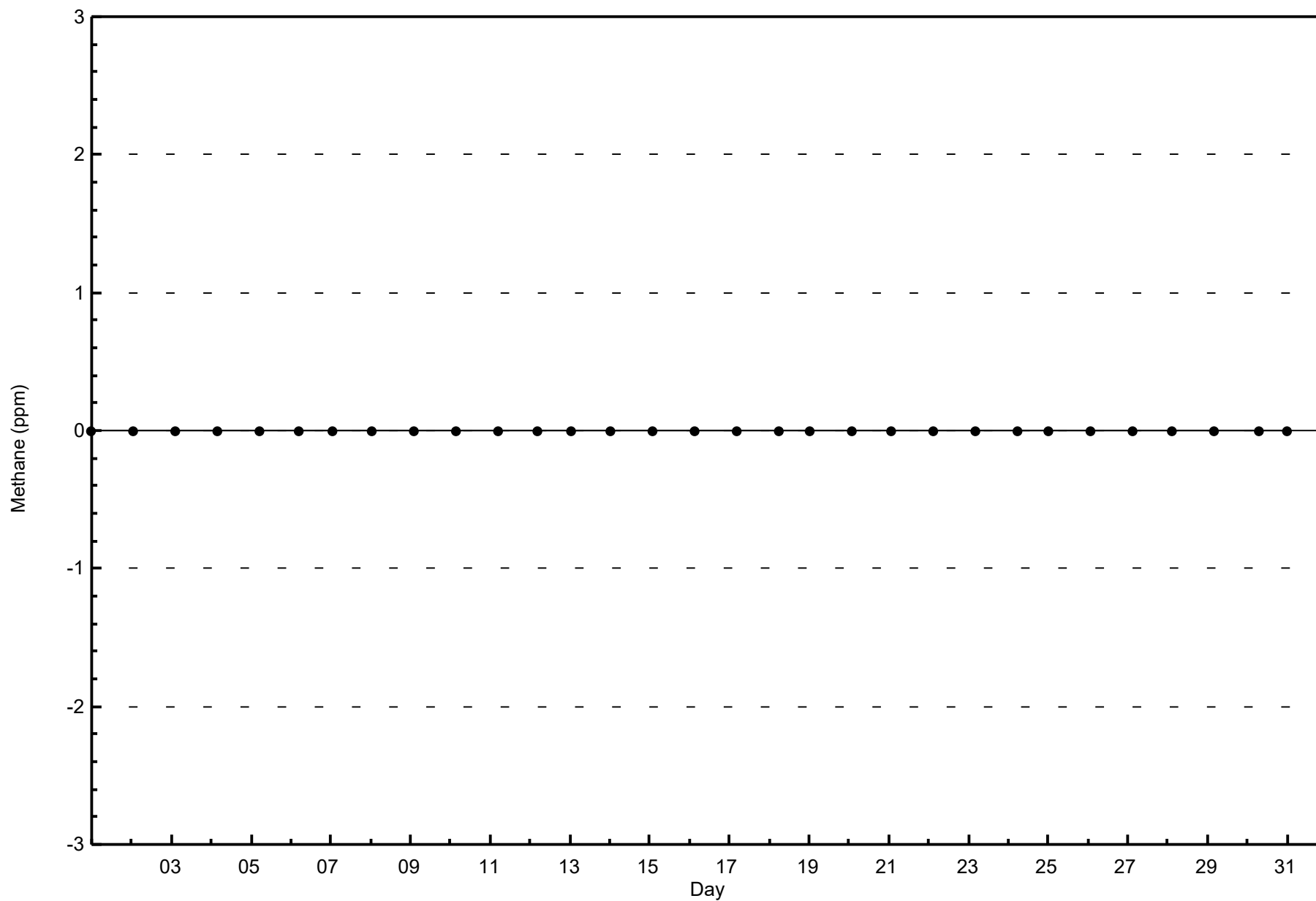
Methane (CH₄) - ppm
Anzac





Wood Buffalo Environmental Association
Zero Responses

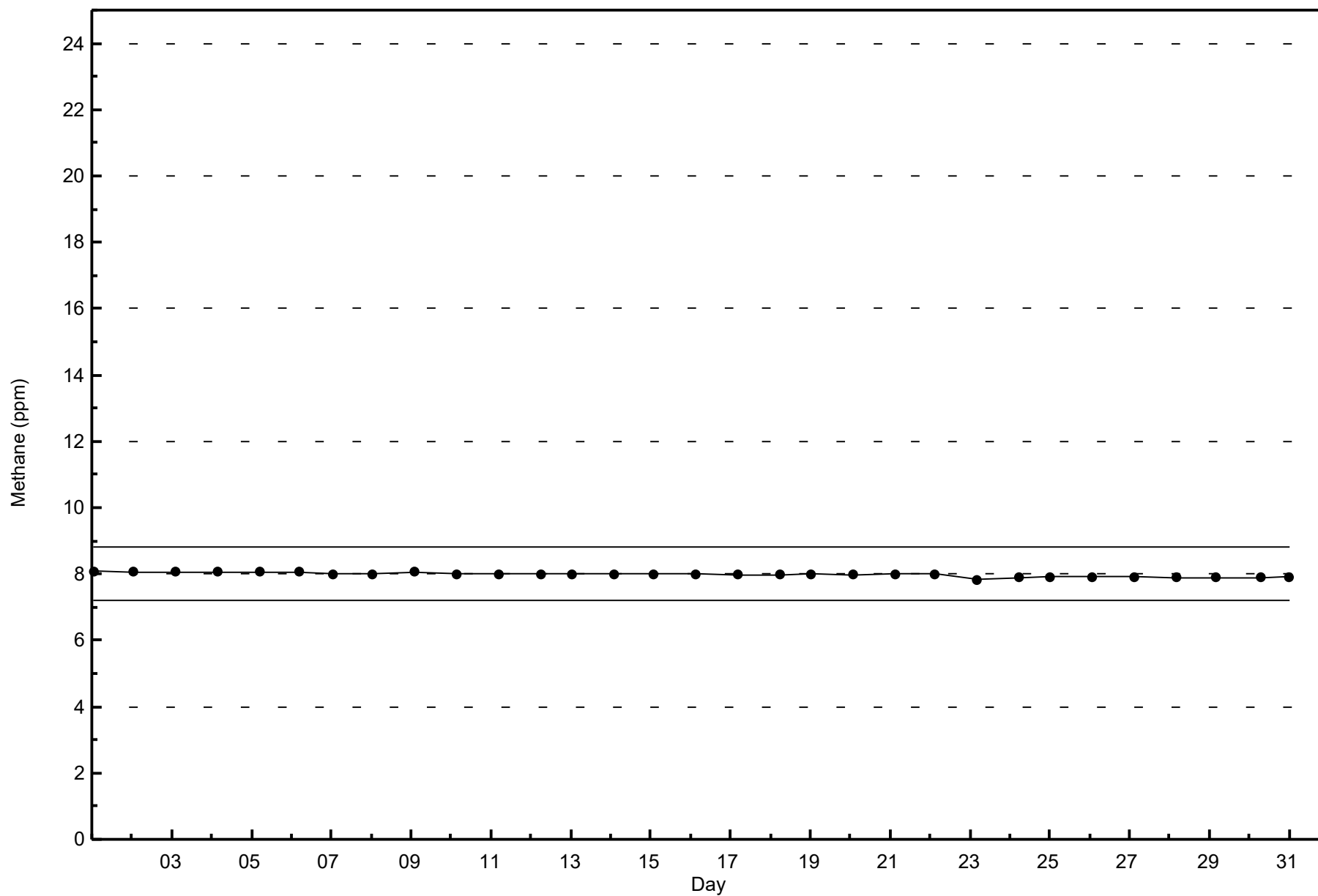
Methane (CH₄) - ppm
Anzac - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH_4) - ppm
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

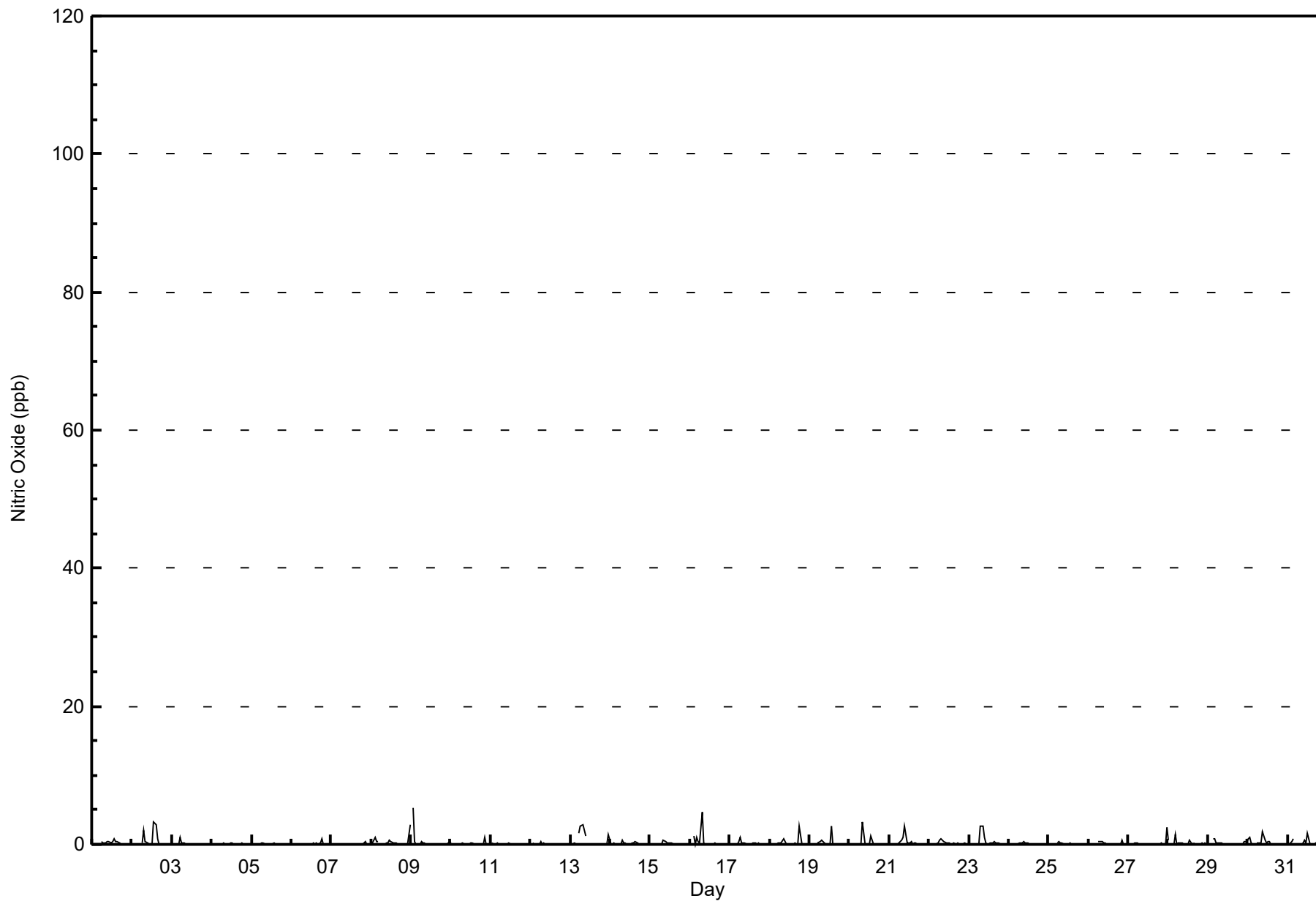
Anzac - May 2025

Maximum Value: 5.3 ppb on May 9 02:00																		Maximum Daily Average: 0.4 ppb on May 2																		Hours in Service: 744					
Minimum Value: 0.0 ppb on May 1 01:00																		Minimum Daily Average: 0.0 ppb on May 12																		Hours of Data: 707					
Maximum Diurnal Average: 0.6 ppb at hour 8																		Minimum Diurnal Average: 0.0 ppb at hour 22																		Hours of Missing Data: 37					
Monthly Average: 0.19 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.4 P ₉₉ = 2.7																		Hours of Calibration: 37					
																																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
1-May	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.1	0.1	0.4	0.3	0.3	0.3	0.8	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8															
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	2.1	0.5	0.3	0.1	0.0	0.0	3.2	2.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.2															
3-May	Z	0.0	0.0	0.0	0.0	1.0	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0															
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.2															
5-May	0.1	0.0	Z	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3															
6-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.8															
7-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.1	0.5															
8-May	0.0	0.2	1.1	0.5	0.5	Z	0.0	0.0	0.1	0.1	0.2	0.7	0.4	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.3	2.7															
9-May	Z	5.3	0.4	0.0	0.1	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.4	0.3	5.3																
10-May	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.1	1.0	0.1	0.0	0.0	0.1	1.0															
11-May	0.0	0.3	Z	0.0	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3															
12-May	0.0	0.0	0.3	Z	0.0	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4															
13-May	0.1	0.0	0.1	0.0	Z	1.7	2.7	2.8	2.1	1.2	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	-	2.8															
14-May	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.6	0.2	0.1	0.1	0.0	0.1	0.3	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6															
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5															
16-May	0.0	Z	1.1	0.0	1.1	0.3	0.3	4.6	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.6															
17-May	0.0	0.0	Z	0.0	0.1	0.3	1.0	0.2	0.3	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	1.0															
18-May	0.4	0.0	0.0	Z	0.1	0.1	0.3	0.2	0.8	0.5	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	2.7	0.1	0.0	0.0	0.0	0.0	0.3	2.7															
19-May	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.5	0.5	0.2	0.1	0.0	0.0	2.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.7															
20-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	3.2	0.0	0.1	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.2															
21-May	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.7	1.0	2.6	1.5	0.2	0.2	0.5	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.6															
22-May	0.0	Z	0.0	0.0	0.0	0.1	0.5	0.9	0.7	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.9															
23-May	0.2	0.0	Z	0.0	0.0	0.0	0.0	2.5	2.7	0.9	0.2	0.1	0.1	0.2	0.1	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.7															
24-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4															
25-May	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4															
26-May	0.0	0.0	0.0	0.0	0.1	Z	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.1	0.5															
27-May	Z	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	2.4	0.2	2.4															
28-May	0.6	Z	0.0	0.0	1.4	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.6	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.0	0.2	0.0	0.2	1.4															
29-May	0.0	0.0	Z	0.9	0.9	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.2	0.9															
30-May	0.8	1.1	0.2	0.1	Z	0.1	0.1	0.3	0.3	1.8	0.6	0.1	0.5	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.8															
31-May	0.0	0.0	0.3	0.8	Z	0.1	0.1	0.1	0.0	0.1	0.5	0.2	1.6	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.6															
0.1 0.3 0.1 0.1 0.2 0.2 0.3 0.6 0.5 0.3 0.2 0.1 0.2 0.4 0.2 0.1 0.1 0.1 0.1 0.0 0.1 0.0 0.0 0.2																									Diurnal Average																
0.8 5.3 1.1 0.9 1.4 1.7 2.7 4.6 3.2 2.6 1.5 0.7 1.6 3.2 2.9 0.8 0.3 0.3 2.7 0.1 1.0 0.1 0.3 2.7																									Diurnal Maximum																
Z - zerospan C - Calibration																																									



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	35	8	26	9	6	32	84	159	78	28	30	29	39	81	34	26	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	8	26	9	6	32	84	159	78	28	30	29	39	81	34	26	704

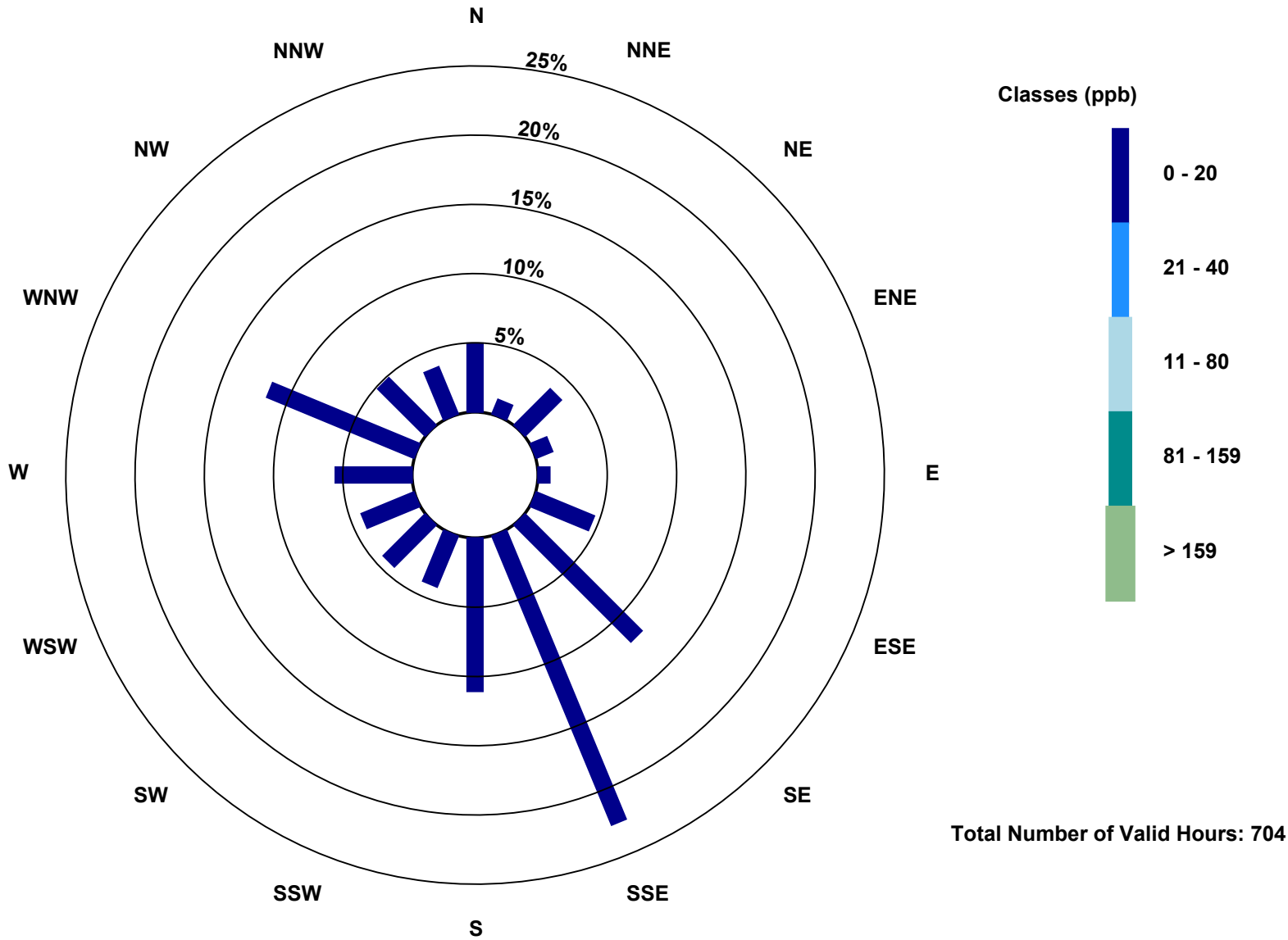
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

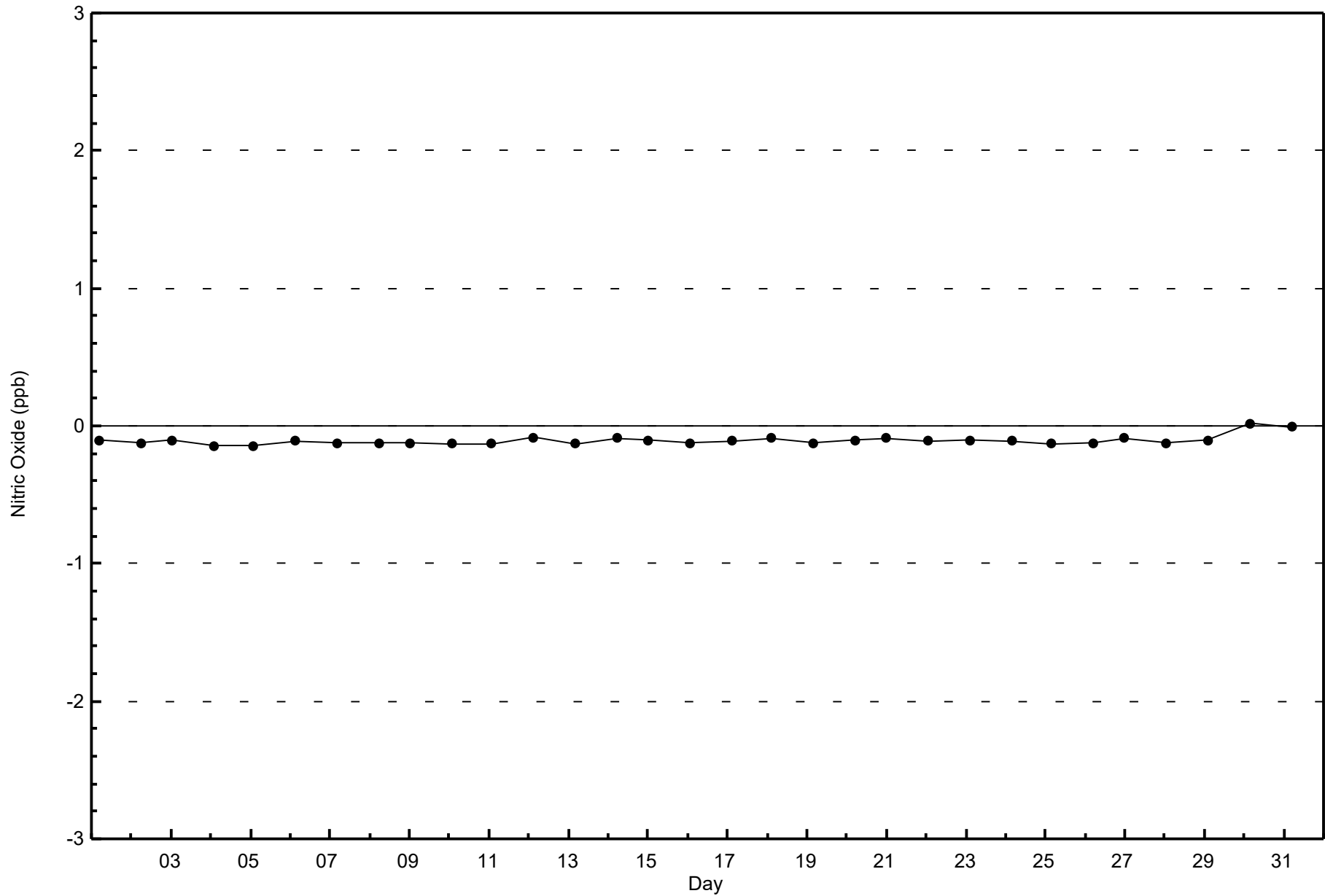
Nitric Oxide (NO) - ppb
Anzac





Wood Buffalo Environmental Association
Zero Responses

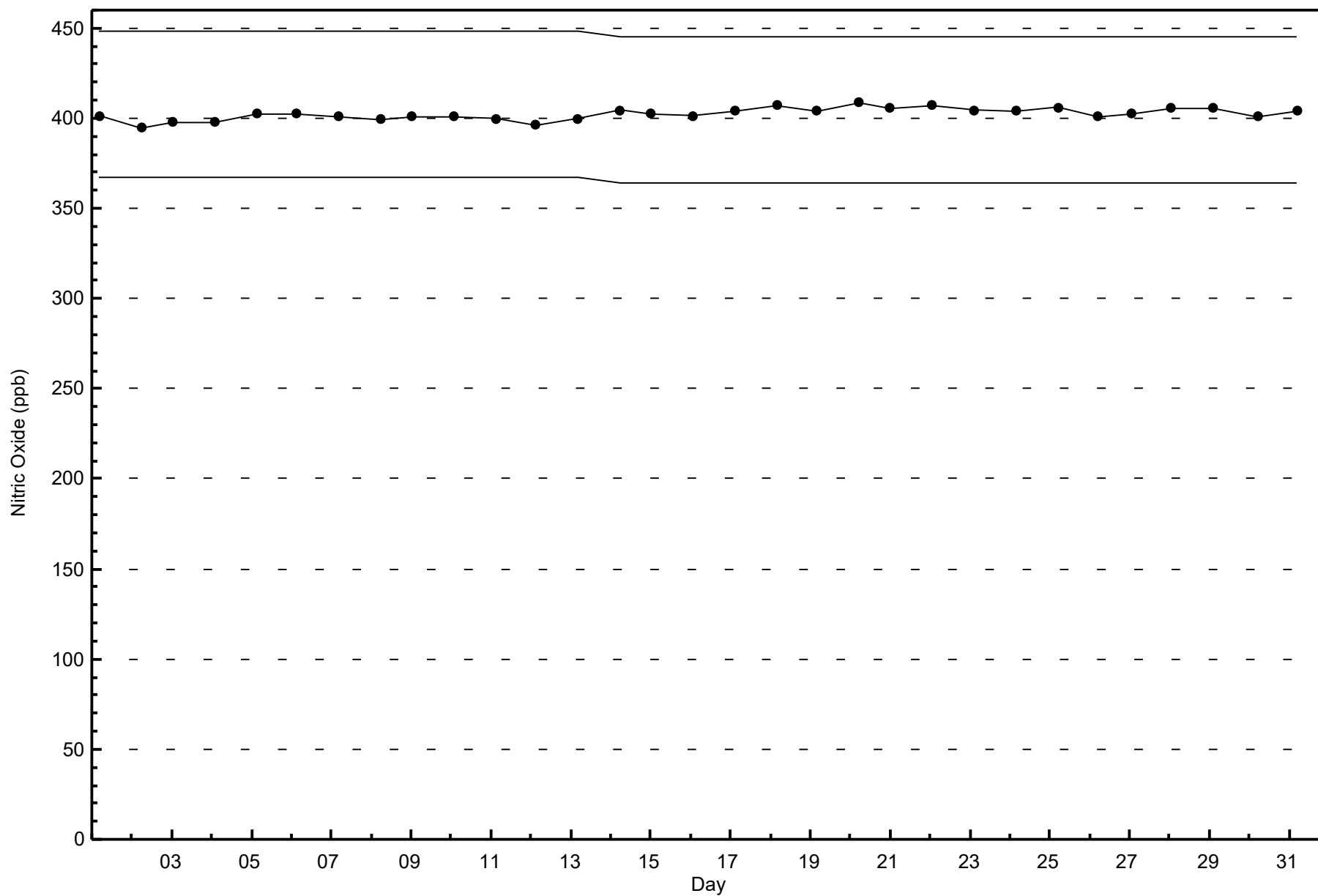
Nitric Oxide (NO) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

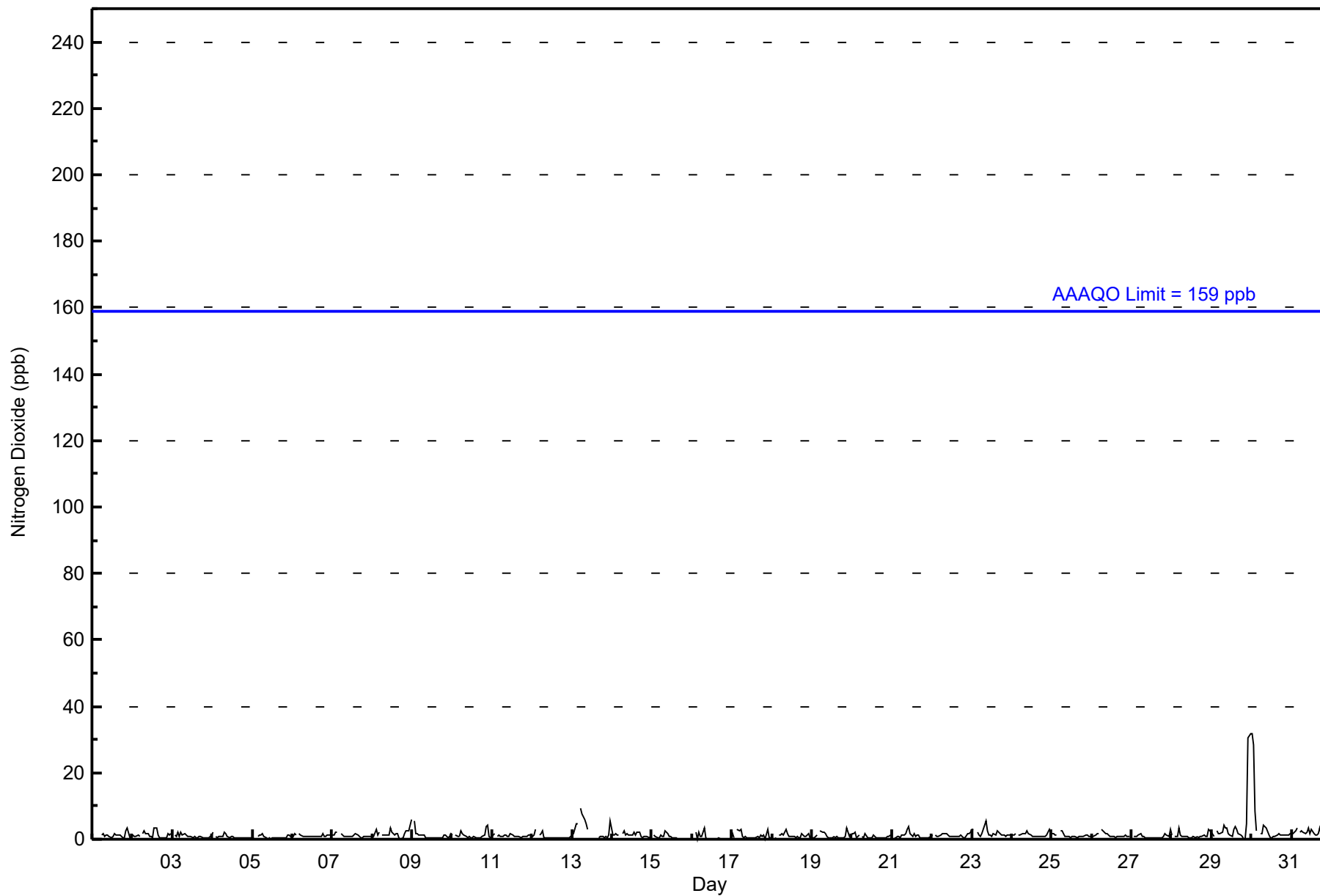
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 31.9 ppb on May 30 01:00 Maximum Daily Average: 4.7 ppb on May 29																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0.0 ppb on May 29 21:00 Maximum Diurnal Average: 2.5 ppb at hour 24 Monthly Average: 1.37 ppb										Minimum Daily Average: 0.5 ppb on May 16 Minimum Diurnal Average: 0.7 ppb at hour 19 Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.4 P ₉₉ = 6.1																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.2	0.2	0.2	0.2	Z	1.2	1.5	0.9	1.1	1.1	0.7	0.6	0.8	1.7	1.3	1.3	1.2	0.8	0.5	0.5	2.5	3.3	0.3	0.6	1.0	3.3
2-May	1.1	1.0	0.9	1.1	1.0	Z	1.7	2.4	1.9	1.5	0.9	0.7	0.5	3.3	3.4	1.3	0.3	0.3	0.4	0.3	0.6	1.8	1.3	1.9	1.3	3.4
3-May	Z	1.2	1.0	2.3	1.0	2.2	1.4	1.7	1.2	0.9	0.7	0.7	0.6	0.7	0.5	0.6	0.7	0.7	0.6	0.6	0.4	0.6	0.5	1.1	1.0	2.3
4-May	2.2	Z	0.7	0.6	0.7	0.8	0.9	2.3	1.8	0.9	0.4	0.8	1.0	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.5	0.4	0.4	0.8	2.3
5-May	0.4	0.3	Z	0.8	1.3	1.1	1.8	1.0	0.4	0.2	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.6	0.4	0.4	1.1	1.2	0.9	0.6	1.8
6-May	0.7	1.6	1.4	Z	1.7	1.2	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.8	0.7	1.0	1.6	0.8	0.7	1.3	1.1	1.2	1.0	1.7
7-May	1.2	1.4	2.1	2.1	Z	1.6	1.2	1.0	1.0	1.0	0.9	1.0	0.9	1.2	1.5	1.4	0.8	0.5	0.4	1.0	0.9	0.8	0.9	0.7	1.1	2.1
8-May	0.7	0.9	3.0	1.3	2.0	Z	1.2	1.3	1.2	1.3	1.2	3.5	2.0	1.1	1.7	1.5	0.4	0.2	0.3	1.8	2.4	2.5	2.7	5.8	1.7	5.8
9-May	Z	5.6	1.8	1.6	1.4	1.3	1.4	1.2	0.6	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.6	1.4	1.3	0.5	0.9	1.8	1.1	5.6
10-May	1.1	Z	1.1	0.9	0.7	2.4	1.5	1.2	0.9	0.6	0.7	0.5	0.6	0.7	0.6	0.5	0.5	0.6	0.7	1.2	4.0	4.2	0.9	0.5	1.2	4.2
11-May	1.0	1.6	Z	1.0	1.3	0.9	1.0	1.1	1.4	0.9	0.9	1.8	1.4	0.9	0.7	0.8	0.9	0.6	0.7	0.8	0.7	0.8	1.3	1.1	1.0	1.8
12-May	0.8	1.3	2.8	Z	1.2	1.6	2.4	0.5	0.5	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.7	2.8
13-May	1.1	1.6	4.7	4.8	Z	9.3	7.5	6.1	4.8	3.1	C	C	C	C	C	C	0.4	1.0	0.8	0.6	1.0	0.6	1.2	5.5	-	9.3
14-May	1.4	1.3	1.7	1.3	1.3	Z	1.6	2.5	1.4	1.5	1.2	1.1	1.1	2.3	1.4	2.2	2.2	0.9	0.5	1.0	1.0	1.0	0.5	0.7	1.4	2.5
15-May	Z	1.1	0.8	0.6	0.4	1.1	0.7	0.7	2.4	1.8	1.0	0.7	0.6	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	2.4
16-May	0.1	Z	2.2	0.2	2.0	0.7	0.9	3.6	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.5	3.6
17-May	1.9	0.3	Z	2.9	2.4	3.0	0.7	0.6	0.7	0.5	0.4	0.3	0.4	0.3	0.5	0.8	0.4	1.1	0.8	1.4	0.2	3.0	0.6	0.5	1.0	3.0
18-May	0.6	0.1	0.3	Z	1.3	1.4	1.5	1.2	2.8	1.8	0.8	0.7	0.8	0.7	0.5	0.7	0.5	0.5	1.8	0.8	0.8	1.1	1.7	0.4	1.0	2.8
19-May	0.5	0.5	0.8	1.2	Z	2.5	2.2	2.1	1.7	0.9	0.6	0.6	0.6	0.8	0.4	0.9	0.5	0.4	0.4	0.3	1.0	3.3	0.8	0.8	1.0	3.3
20-May	1.5	1.9	2.0	0.5	1.1	Z	0.7	0.6	1.9	0.5	0.4	0.4	0.5	1.4	0.4	0.4	0.3	0.3	0.3	0.5	0.5	0.7	0.7	1.2	0.8	2.0
21-May	Z	0.5	0.4	0.9	0.8	0.6	1.3	1.4	1.9	3.0	3.8	1.6	0.9	1.8	0.7	1.3	1.4	0.5	0.5	0.4	0.4	0.5	0.6	0.9	1.1	3.8
22-May	1.3	Z	1.3	0.8	0.8	1.1	1.5	1.8	1.6	1.5	1.0	1.0	0.9	1.0	0.8	0.9	0.8	1.1	0.7	0.5	0.6	1.7	1.6	2.0	1.1	2.0
23-May	3.0	2.8	Z	2.2	1.4	1.0	1.6	3.0	5.3	2.6	1.1	1.1	0.9	1.9	1.2	2.7	2.2	1.6	1.1	1.1	1.0	1.1	1.1	1.4	1.8	5.3
24-May	1.2	1.1	1.7	Z	1.4	1.1	1.7	1.6	1.7	2.5	1.8	1.1	0.9	0.9	0.7	0.8	0.9	0.8	0.7	0.8	0.7	1.2	3.0	1.9	1.3	3.0
25-May	1.9	1.6	1.3	1.3	Z	2.7	2.5	1.5	1.0	0.9	0.8	0.6	0.7	0.8	0.7	0.6	0.7	0.7	0.7	0.7	1.2	1.1	0.8	0.8	1.1	2.7
26-May	0.8	0.8	1.3	1.5	1.9	Z	2.8	2.0	1.9	1.8	1.4	0.8	0.8	0.7	0.6	0.7	0.8	0.8	1.0	0.9	1.3	0.9	0.9	0.9	1.2	2.8
27-May	Z	1.0	0.9	0.7	1.4	1.5	0.9	0.8	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7	1.9	1.1	0.7	2.9	0.9	2.9
28-May	1.4	Z	1.0	0.8	3.6	1.1	1.0	1.0	0.9	0.7	0.6	0.6	0.5	0.9	0.5	0.8	0.5	0.9	1.0	1.1	0.8	0.7	3.1	2.5	1.1	3.6
29-May	2.2	1.0	Z	2.4	1.6	1.8	2.3	4.2	3.4	3.3	1.8	1.4	0.8	3.0	4.0	2.9	1.8	1.1	1.0	0.2	0.0	4.6	30.6	31.6	4.7	31.6
30-May	31.9	28.2	8.6	2.6	Z	1.6	1.7	4.4	4.0	3.3	1.3	0.3	0.6	0.7	0.7	1.2	1.7	1.4	1.2	1.3	1.1	1.2	1.3	1.8	4.4	31.9
31-May	1.7	1.8	2.5	3.6	Z	2.0	2.4	2.3	1.6	2.0	3.3	1.7	2.8	1.6	1.2	1.2	1.6	3.2	1.9	1.7	1.6	1.6	2.6	3.1	2.1	3.6
2.4 2.3 1.8 1.5 1.4 1.8 1.7 1.8 1.7 1.4 1.0 0.9 0.8 1.1 0.9 1.0 0.8 0.8 0.7 0.8 1.0 1.4 2.1 2.5																									Diurnal Average	
31.9 28.2 8.6 4.8 3.6 9.3 7.5 6.1 5.3 3.3 3.8 3.5 2.8 3.3 4.0 2.9 2.2 3.2 1.9 1.8 4.0 4.6 30.6 31.6																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	703	99.43	99.43
21 - 40	4	0.57	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	35	8	26	9	6	32	84	159	78	28	30	29	39	79	32	26	700
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	8	26	9	6	32	84	159	78	28	30	29	39	81	34	26	704

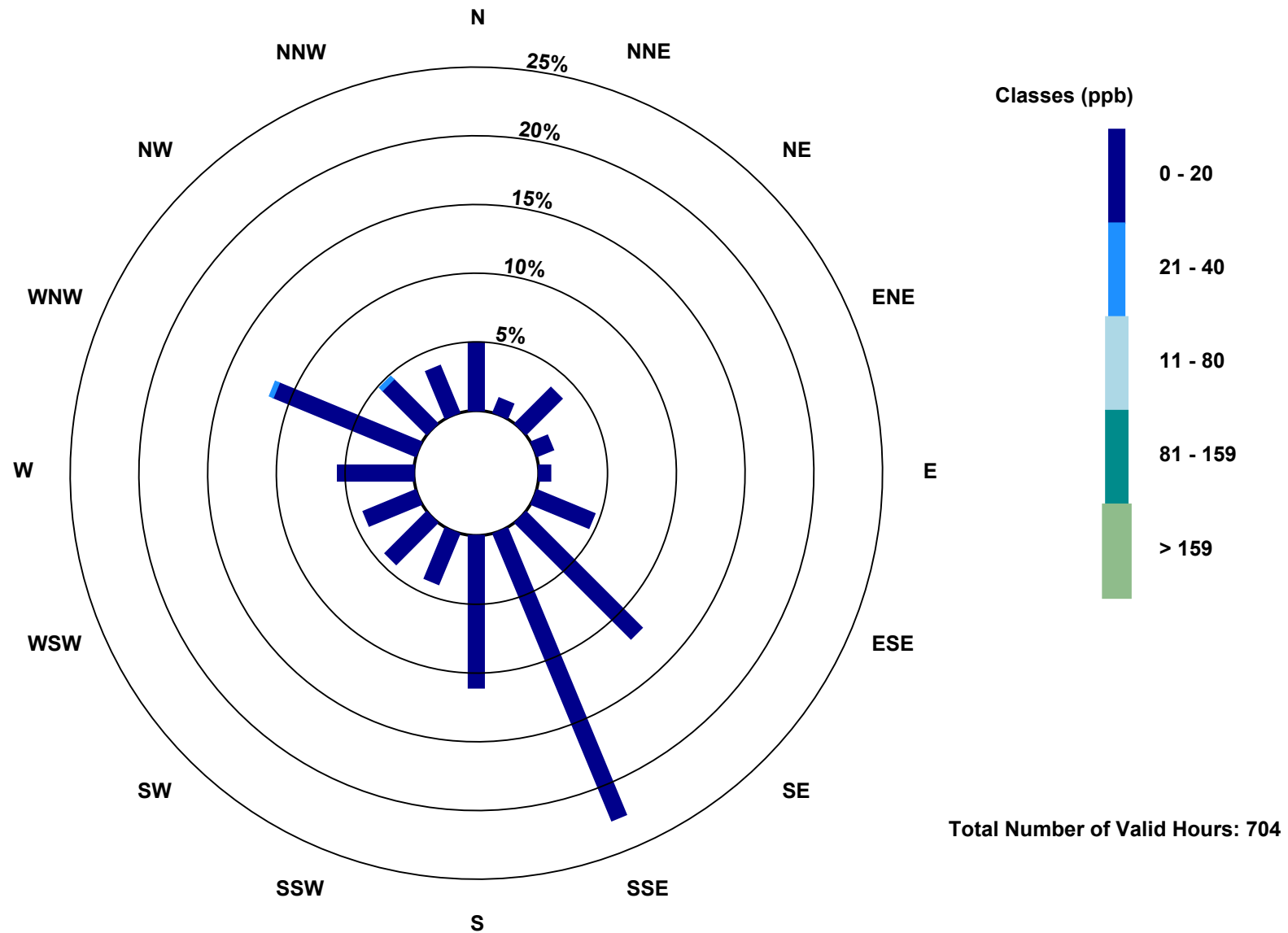
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Anzac



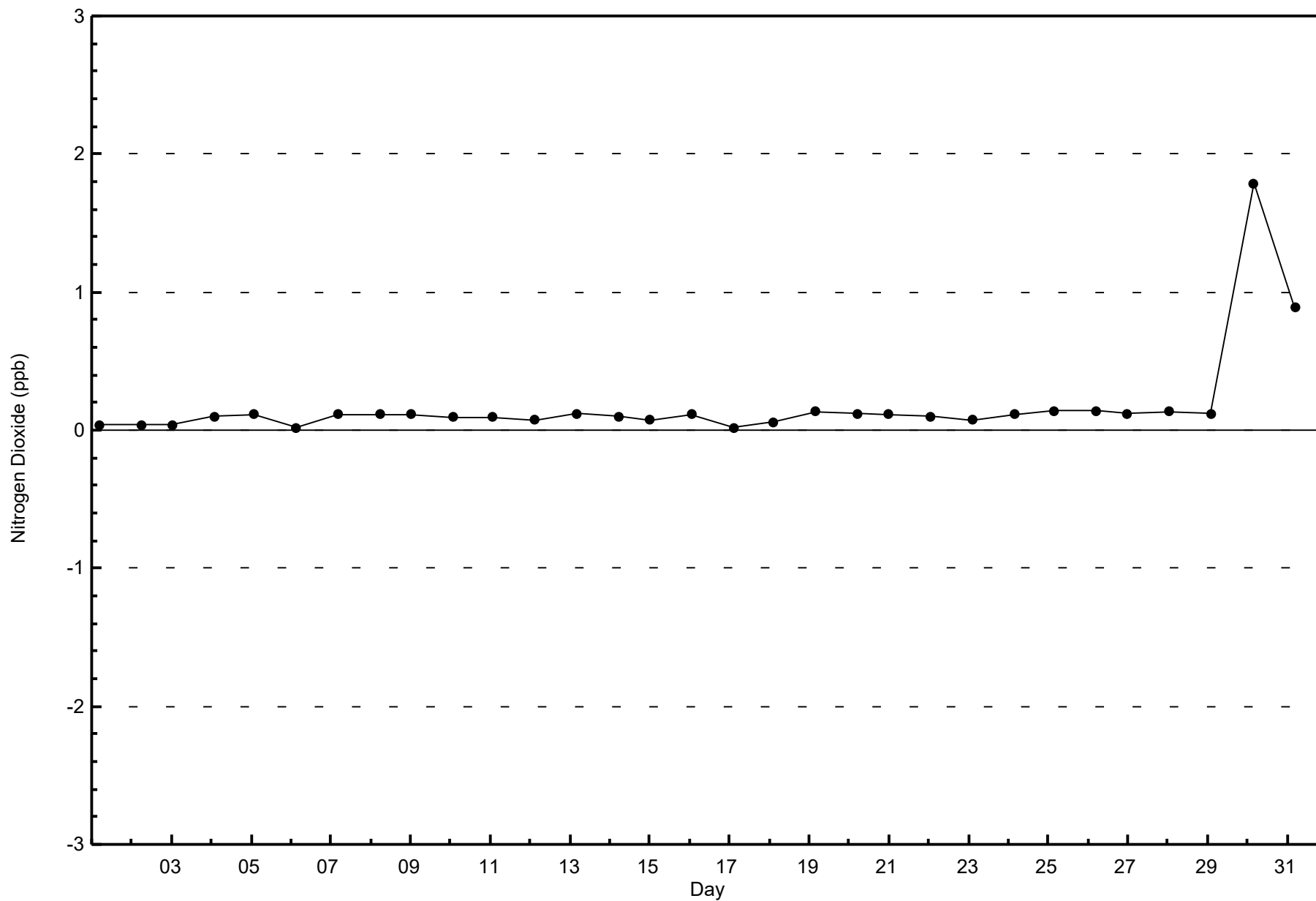


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO₂) - ppb

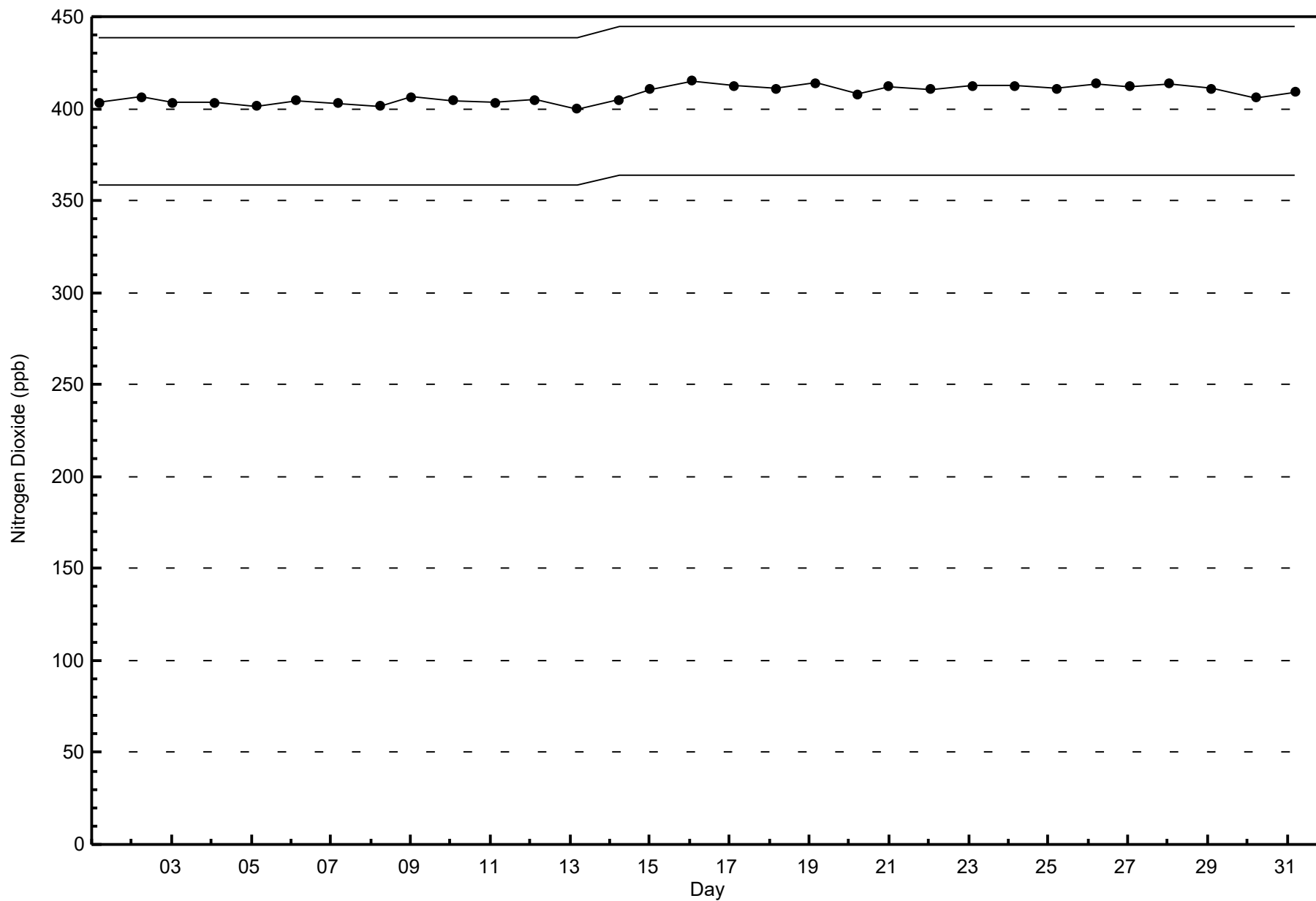
Anzac - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

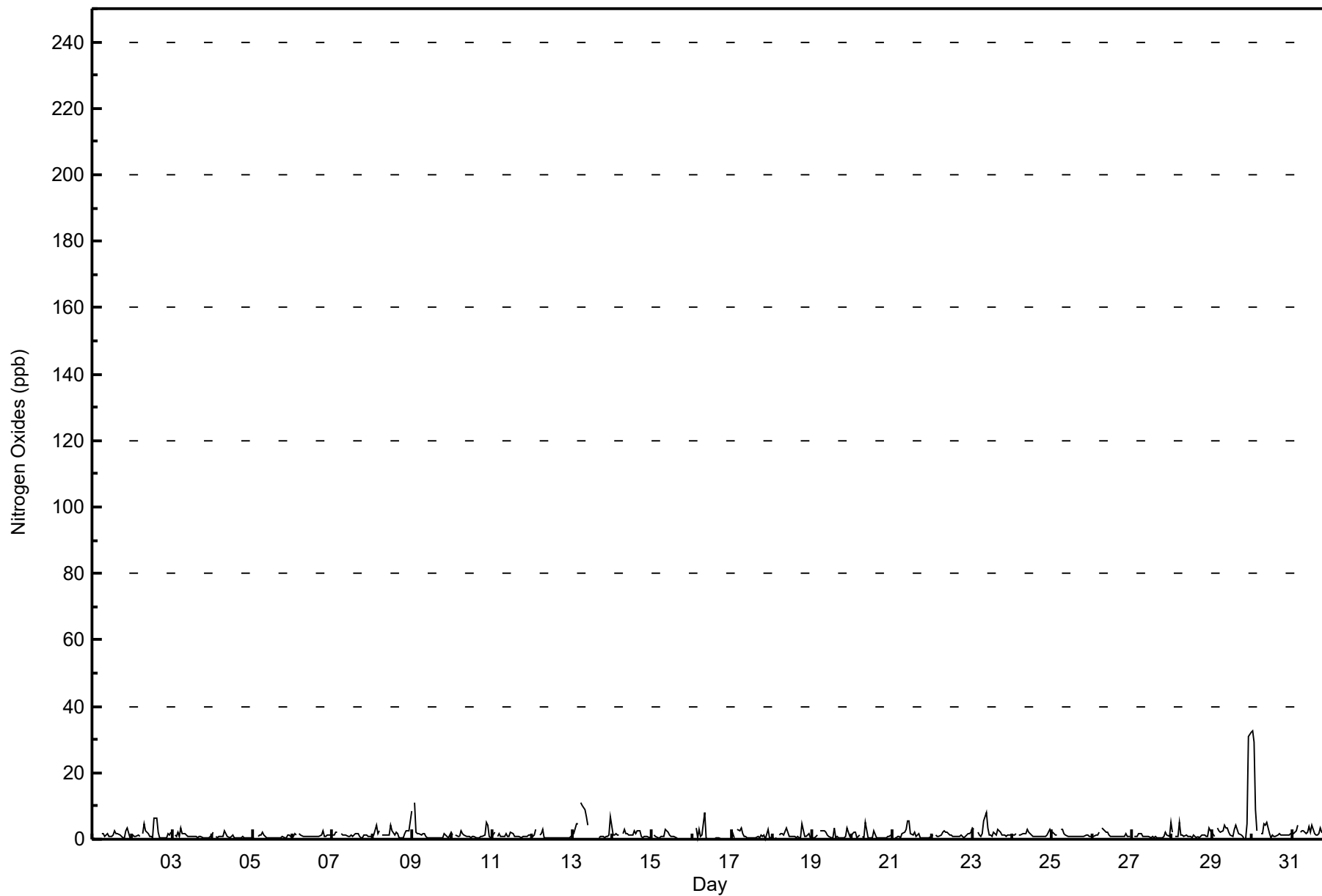
Anzac - May 2025

Maximum Value: 32.7 ppb on May 30 01:00										Maximum Daily Average: 4.8 ppb on May 29										Hours in Service: 744						
Minimum Value: 0.0 ppb on May 29 21:00										Minimum Daily Average: 0.7 ppb on May 15										Hours of Data: 707						
Maximum Diurnal Average: 2.7 ppb at hour 24										Minimum Diurnal Average: 0.8 ppb at hour 20										Hours of Missing Data: 37						
Monthly Average: 1.56 ppb										Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 2.8 P ₉₉ = 8.9										Hours of Calibration: 37						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.2	0.2	0.2	0.2	Z	1.5	1.7	1.0	1.2	1.5	1.0	0.9	1.1	2.5	1.8	1.7	1.4	0.9	0.5	0.5	2.5	3.3	0.3	0.6	1.2	3.3
2-May	1.1	1.0	0.9	1.1	1.0	Z	1.9	4.5	2.4	1.8	1.0	0.7	0.5	6.5	6.3	2.1	0.3	0.3	0.4	0.3	0.6	1.8	1.3	1.9	1.7	6.5
3-May	Z	1.2	1.0	2.3	1.0	3.2	1.6	1.9	1.3	0.9	0.7	0.7	0.7	0.7	0.6	0.6	0.8	0.7	0.6	0.6	0.4	0.6	0.5	1.1	1.0	3.2
4-May	2.2	Z	0.7	0.6	0.7	0.8	0.9	2.4	1.9	1.0	0.4	0.9	1.2	0.4	0.5	0.4	0.4	0.5	0.7	0.3	0.4	0.5	0.4	0.5	0.8	2.4
5-May	0.5	0.3	Z	0.8	1.3	1.2	2.1	1.2	0.5	0.3	0.4	0.3	0.3	0.5	0.4	0.3	0.4	0.3	0.7	0.4	0.4	1.1	1.2	0.9	0.7	2.1
6-May	0.7	1.6	1.4	Z	1.7	1.2	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.8	0.9	0.7	1.2	2.4	0.8	0.7	1.3	1.1	1.2	1.1	2.4
7-May	1.2	1.4	2.1	2.1	Z	1.6	1.3	1.1	1.1	1.1	1.0	1.1	0.9	1.2	1.6	1.5	0.9	0.5	0.4	1.1	1.4	0.8	0.9	0.7	1.2	2.1
8-May	0.7	1.1	4.1	1.8	2.5	Z	1.2	1.3	1.3	1.4	1.4	4.2	2.4	1.3	2.0	1.7	0.4	0.2	0.3	1.8	2.4	2.5	2.7	8.5	2.1	8.5
9-May	Z	10.9	2.2	1.6	1.5	1.4	1.7	1.5	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	1.5	1.3	0.5	1.1	2.2	1.4	10.9	
10-May	1.2	Z	1.1	0.9	0.7	2.5	1.6	1.3	1.0	0.7	0.8	0.6	0.8	0.9	0.6	0.5	0.5	0.7	0.7	1.3	5.0	4.3	0.9	0.5	1.3	5.0
11-May	1.0	1.9	Z	1.0	1.6	1.0	1.0	1.1	1.5	1.0	1.0	2.1	1.5	0.9	0.7	0.8	1.0	0.6	0.7	0.8	0.7	0.8	1.3	1.1	1.1	2.1
12-May	0.8	1.3	3.1	Z	1.2	1.7	2.8	0.5	0.6	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.8	3.1
13-May	1.2	1.6	4.8	4.8	Z	11.0	10.2	8.9	6.9	4.3	C	C	C	C	C	C	0.4	1.0	0.8	0.6	1.0	0.6	1.2	6.9	-	11.0
14-May	1.4	1.3	1.8	1.3	1.3	Z	1.6	3.1	1.6	1.6	1.3	1.1	1.2	2.6	1.6	2.5	2.5	1.0	0.5	1.0	1.0	1.0	0.5	0.7	1.5	3.1
15-May	Z	1.1	0.8	0.6	0.4	1.1	0.7	0.8	2.9	2.2	1.3	0.9	0.8	0.8	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	2.9
16-May	0.1	Z	3.3	0.2	3.1	1.0	1.2	8.2	0.4	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.9	8.2
17-May	1.9	0.3	Z	2.9	2.5	3.3	1.7	0.8	1.0	0.6	0.4	0.3	0.5	0.3	0.6	1.0	0.4	1.2	0.9	1.5	0.2	3.0	0.6	0.5	1.1	3.3
18-May	1.0	0.1	0.3	Z	1.4	1.5	1.8	1.4	3.6	2.3	0.9	0.8	0.9	0.8	0.5	0.8	0.5	0.5	4.5	0.9	0.8	1.1	1.7	0.4	1.2	4.5
19-May	0.5	0.5	0.8	1.2	Z	2.7	2.6	2.6	2.2	1.1	0.7	0.6	0.6	3.5	0.4	1.0	0.5	0.4	0.4	0.3	1.0	3.3	0.8	0.8	1.2	3.5
20-May	1.5	1.9	2.0	0.5	1.1	Z	0.7	0.6	5.1	0.5	0.5	0.4	0.5	2.6	0.4	0.4	0.3	0.3	0.3	0.5	0.5	0.7	0.7	1.2	1.0	5.1
21-May	Z	0.5	0.4	0.9	0.8	0.6	1.5	2.1	2.9	5.6	5.3	1.8	1.1	2.3	0.7	1.5	1.5	0.5	0.5	0.4	0.4	0.5	0.6	0.9	1.4	5.6
22-May	1.3	Z	1.3	0.8	0.8	1.2	2.0	2.7	2.3	2.0	1.3	1.1	1.0	1.1	0.9	1.0	0.9	1.4	0.8	0.5	0.6	1.8	1.6	2.0	1.3	2.7
23-May	3.2	2.8	Z	2.2	1.4	1.0	1.6	5.5	8.0	3.5	1.3	1.2	1.0	2.1	1.3	3.1	2.5	1.9	1.2	1.1	1.0	1.1	1.1	1.4	2.2	8.0
24-May	1.2	1.1	1.7	Z	1.4	1.2	1.8	1.7	1.9	2.9	2.0	1.2	1.0	0.9	0.7	0.8	0.9	0.9	0.7	0.8	0.7	1.2	3.0	1.9	1.4	3.0
25-May	1.9	1.6	1.3	1.3	Z	2.9	2.9	1.7	1.1	1.0	0.9	0.7	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.7	1.3	1.1	0.8	0.8	1.2	2.9
26-May	0.8	0.8	1.3	1.5	2.0	Z	3.2	2.4	2.3	2.1	1.5	0.9	0.8	0.7	0.7	0.8	0.9	0.8	1.0	0.9	1.8	1.0	0.9	0.9	1.3	3.2
27-May	Z	1.0	0.9	0.7	1.6	1.6	1.0	0.9	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.7	2.2	1.2	0.7	5.3	1.1	5.3
28-May	2.0	Z	1.0	0.8	5.0	1.2	1.2	1.1	1.1	0.8	0.7	0.7	0.6	1.5	0.6	1.0	0.6	1.0	1.1	1.2	1.0	0.7	3.3	2.5	1.3	5.0
29-May	2.2	1.0	Z	3.3	2.5	2.0	2.6	4.4	3.5	3.4	1.9	1.4	0.8	3.1	4.1	2.9	1.8	1.1	1.0	0.2	0.0	4.6	30.9	32.1	4.8	32.1
30-May	32.7	29.3	8.8	2.7	Z	1.7	1.8	4.7	4.3	5.1	1.9	0.4	1.1	1.0	0.8	1.3	1.7	1.4	1.3	1.3	1.1	1.2	1.3	1.8	4.7	32.7
31-May	1.7	1.8	2.8	4.4	Z	2.1	2.5	2.4	1.6	2.1	3.8	1.9	4.4	1.7	1.3	1.2	1.6	3.3	2.0	1.7	1.6	1.6	2.6	3.1	2.3	4.4
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	703	99.43	99.43
21 - 40	4	0.57	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	35	8	26	9	6	32	84	159	78	28	30	29	39	79	32	26	700
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	8	26	9	6	32	84	159	78	28	30	29	39	81	34	26	704

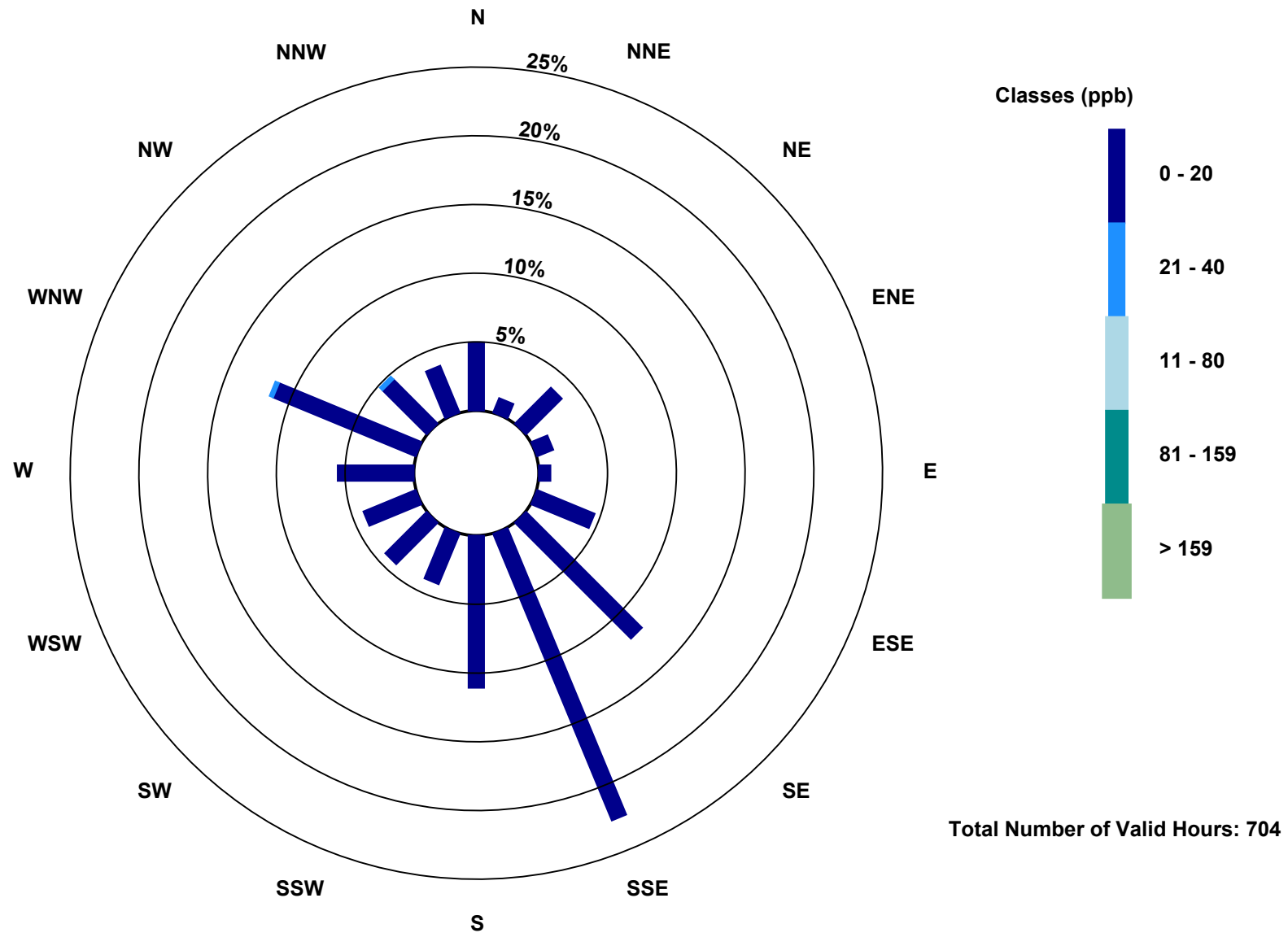
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Anzac



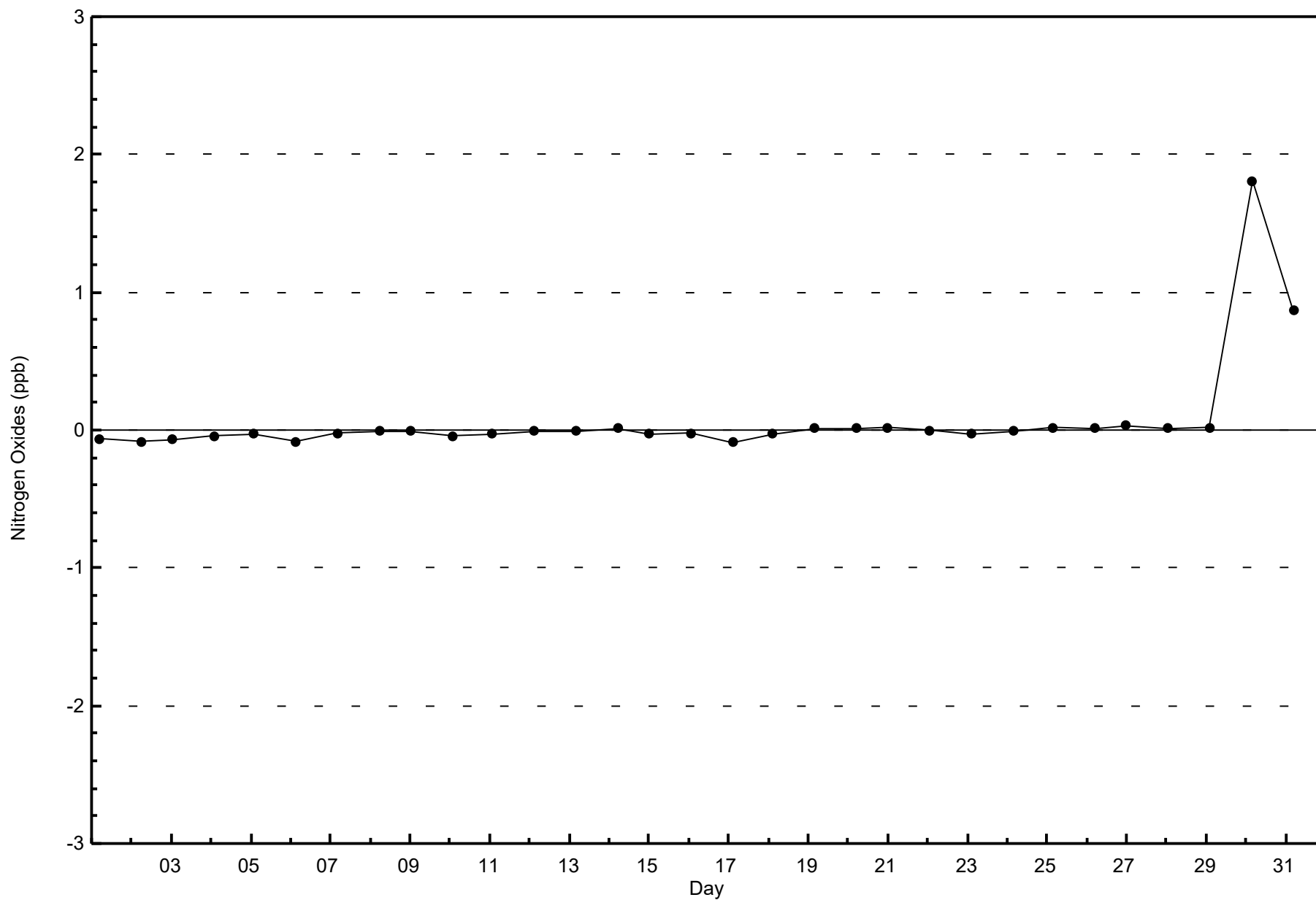


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_x) - ppb

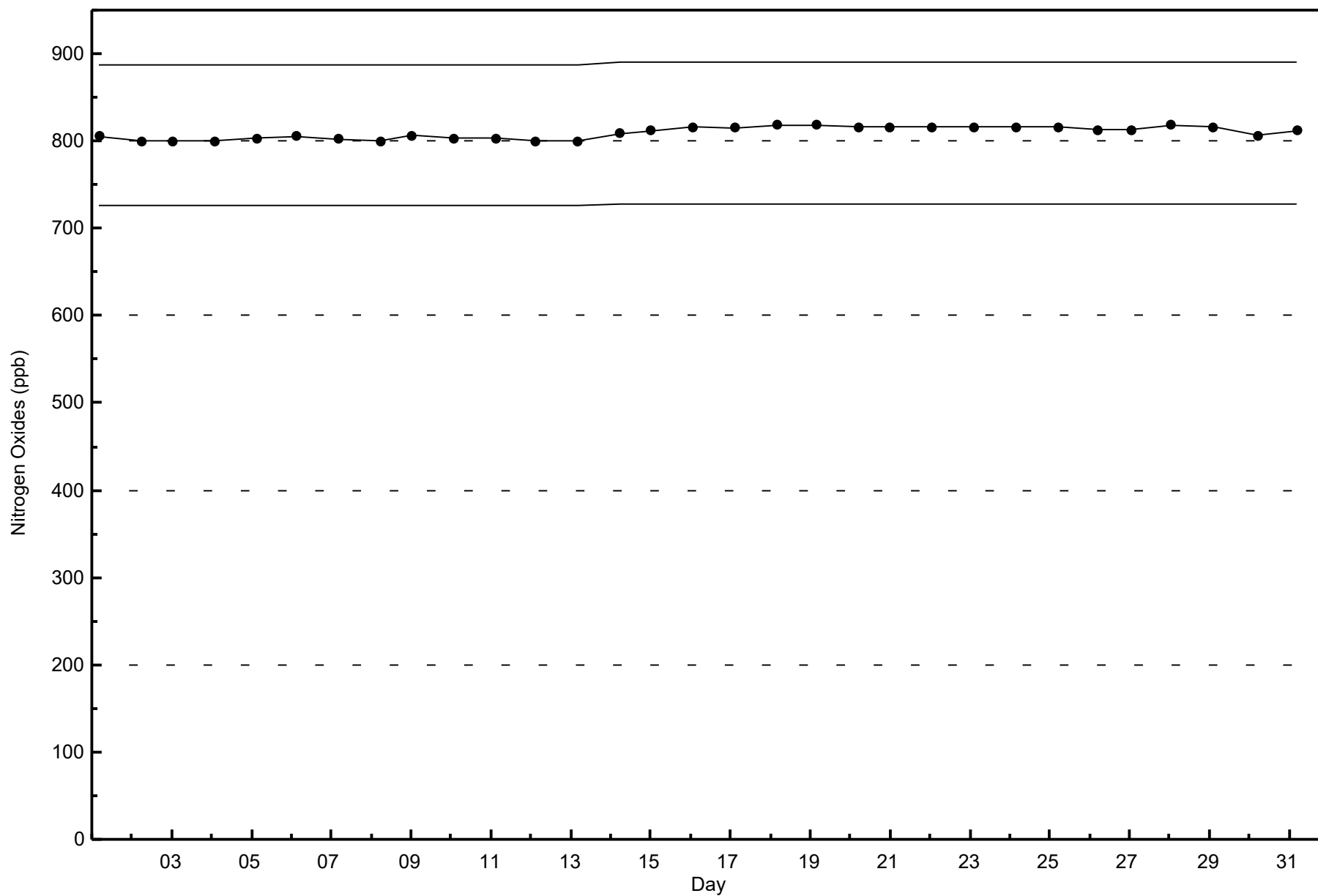
Anzac - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

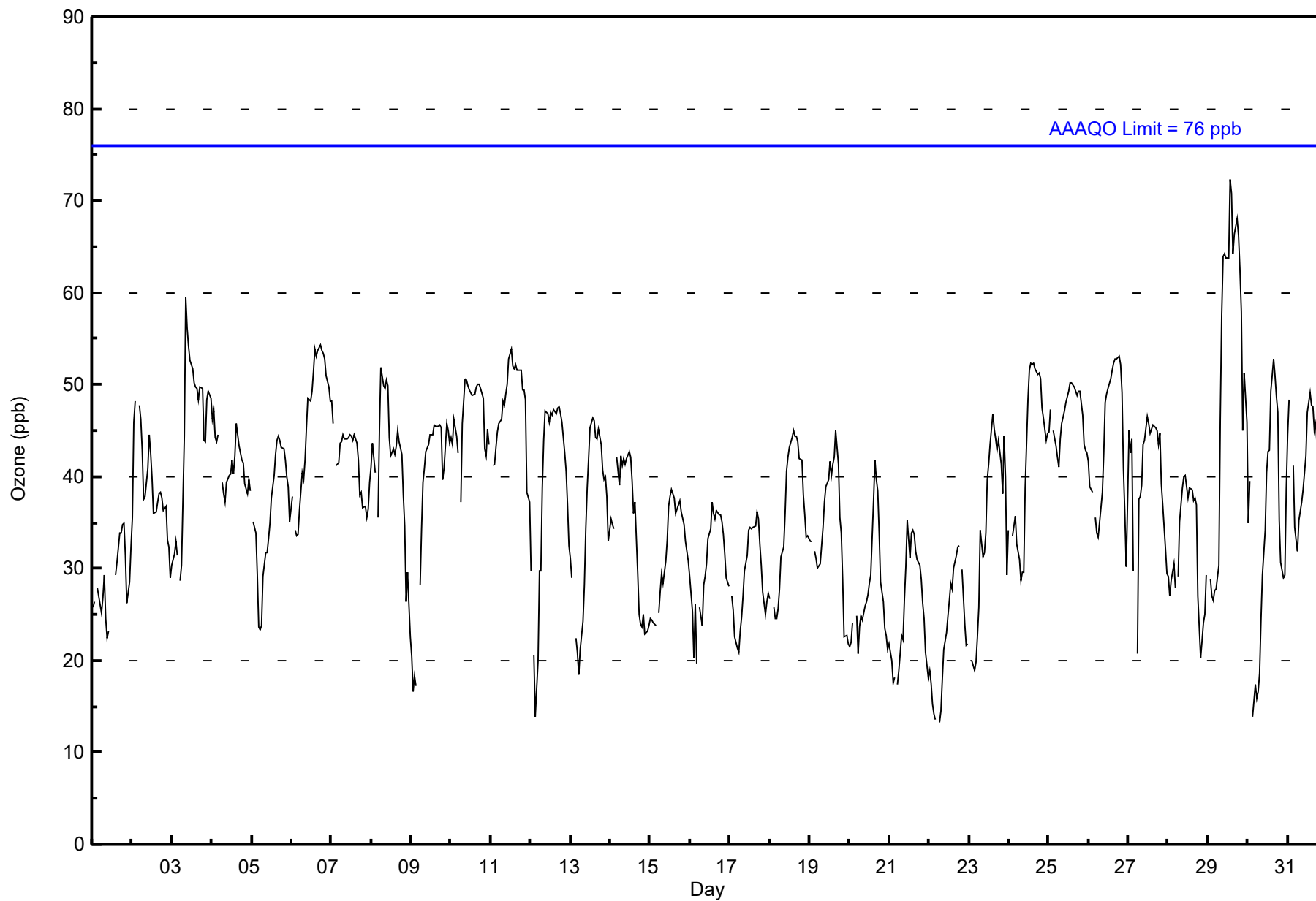
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 72.3 ppb on May 29 14:00 Maximum Daily Average: 52.1 ppb on May 29																				Hours in Service: 744						
Minimum Value: 13.3 ppb on May 22 07:00 Minimum Daily Average: 22.8 ppb on May 22 Maximum Diurnal Average: 44.1 ppb at hour 16 Minimum Diurnal Average: 28.8 ppb at hour 4 Monthly Average: 37.60 ppb Percentiles: P ₁ = 16.0 P ₁₀ = 23.7 Q ₁ = 29.7 Median = 38.3 Q ₃ = 44.8 P ₉₀ = 49.6 P ₉₉ = 63.8																				Hours of Data: 709						
																				Hours of Missing Data: 35						
																				Hours of Calibration: 34						
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	25.7	26.4	Z	27.9	27.1	25.2	26.9	29.2	24.6	22.5	23.2	C	C	C	29.3	30.7	33.9	33.9	34.8	34.9	31.4	26.2	28.5	32.3	28.7	34.9
2-May	35.6	45.9	48.2	Z	47.7	46.2	42.8	37.5	37.8	40.8	44.6	42.5	39.9	35.9	36.2	37.2	38.2	38.3	37.7	36.3	36.8	33.2	32.3	29.1	39.2	48.2
3-May	30.4	31.6	33.0	31.4	Z	28.7	30.3	44.4	59.6	56.2	54.1	52.6	51.6	50.2	49.8	49.6	48.4	49.8	49.5	43.9	43.8	48.4	49.2	48.6	45.0	59.6
4-May	46.2	47.1	44.2	43.8	44.5	Z	39.4	38.1	37.3	39.3	40.1	40.3	41.7	40.2	42.3	45.8	43.3	42.6	41.8	41.5	39.1	38.1	39.6	38.4	41.5	47.1
5-May	Z	35.1	33.8	29.3	23.7	23.3	23.8	29.2	31.7	31.8	33.3	34.9	37.7	40.1	42.4	44.0	44.5	43.9	43.1	43.0	41.8	39.9	38.9	35.0	35.8	44.5
6-May	37.8	Z	34.1	33.6	33.8	36.3	40.4	39.7	41.9	45.3	48.5	48.2	49.3	51.4	53.9	53.1	53.7	54.4	53.8	53.3	52.7	50.9	49.7	48.2	46.3	54.4
7-May	48.3	45.8	Z	41.2	41.5	43.7	43.7	44.5	44.1	44.1	44.3	44.5	44.4	44.0	44.6	43.6	41.8	38.0	38.2	36.6	36.8	35.6	36.5	39.4	42.0	48.3
8-May	41.0	43.6	40.5	Z	35.5	44.9	51.9	49.9	49.5	50.5	49.9	44.2	42.2	43.0	42.4	43.3	45.0	43.7	42.3	37.9	34.6	26.3	29.5	22.6	41.5	51.9
9-May	20.4	16.6	18.4	17.3	Z	28.2	34.3	39.3	40.9	42.7	43.5	44.5	44.5	44.5	45.6	45.5	45.4	45.5	45.2	39.7	40.9	45.8	45.0	43.6	38.1	45.8
10-May	44.2	43.5	46.3	44.4	42.6	Z	37.3	45.7	50.6	50.5	49.9	49.4	49.1	48.8	49.0	49.7	50.0	50.0	49.6	48.4	43.0	42.2	45.1	43.4	46.6	50.6
11-May	Z	41.3	41.3	43.2	44.8	45.8	46.2	48.2	47.7	49.0	50.1	52.7	53.8	52.0	51.7	52.2	51.5	51.5	51.6	49.4	49.4	48.3	38.3	37.2	47.7	53.8
12-May	29.7	Z	20.6	13.8	20.0	29.8	29.8	38.7	44.0	47.1	46.9	46.0	47.0	46.7	47.3	46.8	47.4	47.5	46.8	45.8	42.5	40.6	37.0	32.5	38.9	47.5
13-May	31.1	29.0	Z	22.5	20.9	18.4	21.2	24.2	28.3	34.3	38.7	41.9	45.3	46.3	46.1	44.2	44.0	45.2	43.5	40.7	39.6	40.0	37.9	33.0	35.5	46.3
14-May	35.3	34.7	34.3	Z	42.2	39.0	42.3	41.2	41.9	41.3	41.9	42.8	42.1	39.5	36.0	37.2	29.4	25.0	24.0	23.7	25.1	22.9	23.1	23.9	34.3	42.8
15-May	24.6	24.5	24.1	23.7	Z	25.1	27.5	29.4	28.4	30.9	33.1	36.8	37.8	38.6	37.7	36.0	36.4	36.9	37.3	36.1	34.8	33.0	31.9	30.8	32.0	38.6
16-May	29.1	25.4	20.4	26.0	19.7	Z	25.7	23.8	28.2	29.1	30.6	33.3	34.3	37.2	36.0	35.4	36.3	35.8	35.9	35.0	33.7	31.6	29.0	28.1	30.4	37.2
17-May	Z	27.0	25.5	22.6	21.3	20.8	23.2	24.7	27.1	29.8	31.5	34.2	34.4	34.4	34.5	34.6	36.1	35.3	32.6	30.3	27.5	25.0	26.3	27.2	29.0	36.1
18-May	26.7	Z	25.8	24.6	24.6	25.6	27.8	31.3	32.3	36.0	40.6	42.1	43.1	44.2	44.9	44.4	44.4	43.8	42.0	41.8	38.0	35.9	33.3	33.6	36.0	44.9
19-May	33.0	33.0	Z	31.9	31.2	30.0	30.5	32.4	34.5	37.2	38.8	39.7	41.7	40.1	41.3	42.1	45.1	41.3	35.6	33.8	28.8	22.5	22.7	21.8	34.3	45.1
20-May	21.5	21.9	24.1	Z	24.8	20.8	23.6	24.9	24.4	25.9	26.3	27.2	28.4	29.3	37.4	41.7	39.6	38.4	33.9	28.5	26.4	23.4	22.7	21.1	27.7	41.7
21-May	21.8	19.9	17.5	18.1	Z	17.4	18.9	22.8	22.3	26.7	30.2	35.2	31.2	33.9	34.1	33.7	31.8	30.9	30.3	28.9	26.2	24.5	20.9	18.2	25.9	35.2
22-May	19.0	17.5	15.2	14.2	13.5	Z	13.3	14.6	18.0	21.2	23.0	24.9	26.5	28.3	27.8	30.0	31.4	32.4	32.5	PF	29.9	24.0	21.7	21.9	22.8	32.5
23-May	Z	19.9	20.0	18.9	19.8	22.6	25.8	34.1	31.2	31.7	33.9	39.6	41.3	43.4	46.8	45.1	44.1	42.9	44.0	41.3	38.1	44.4	40.0	29.3	34.7	46.8
24-May	34.1	Z	33.5	34.6	35.7	32.6	31.0	28.7	29.5	29.6	38.7	48.3	51.6	52.3	52.2	52.4	51.8	51.1	51.2	50.7	47.4	46.3	43.9	44.7	42.3	52.4
25-May	44.9	47.2	Z	45.0	43.3	42.1	41.0	44.1	45.8	47.2	48.0	48.6	49.3	50.1	50.2	49.7	49.2	48.8	49.3	49.3	46.6	43.5	42.8	42.6	46.5	50.2
26-May	41.6	38.9	38.3	Z	35.5	33.9	33.5	36.6	38.3	42.5	48.1	49.0	49.6	50.6	51.5	52.3	52.8	52.8	53.1	52.2	49.2	40.9	36.0	30.2	43.8	53.1
27-May	45.0	42.5	44.2	29.7	Z	20.7	37.5	37.8	39.0	43.4	44.0	46.5	45.8	44.7	45.1	45.6	45.3	45.0	43.5	44.7	39.1	36.9	32.0	29.4	40.3	46.5
28-May	29.2	27.1	28.7	30.5	27.9	Z	29.2	35.0	38.8	40.0	40.1	38.9	37.6	38.8	38.6	37.4	37.7	37.0	27.1	20.3	22.1	24.1	25.1	29.3	32.2	40.1
29-May	Z	28.9	27.0	26.5	27.6	27.7	30.4	46.3	57.6	63.8	64.2	63.7	63.7	72.3	70.7	64.2	66.3	68.0	66.2	62.5	58.0	45.0	51.2	45.8	52.1	72.3
30-May	35.0	39.5	Z	13.9	17.4	15.9	16.7	18.6	24.4	29.3	34.2	40.4	42.7	42.8	49.2	52.8	50.9	48.6	47.0	35.2	30.7	28.9	29.2	38.7	34.0	52.8
31-May	44.5	48.3	Z	41.1	34.5	33.1	31.9	35.3	37.3	38.6	40.5	42.2	47.0	49.2	47.7	47.6	45.1	45.8	43.1	38.3	31.9	25.2	21.8	22.3	38.8	49.2
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	33	4.65	4.65
21 - 50	619	87.31	91.96
51 - 82	57	8.04	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Anzac - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	1	0	0	2	0	0	6	13	2	2	0	0	1	5	0	1	33
21 - 50	34	6	26	7	6	30	76	131	54	20	28	25	41	70	35	26	615
51 - 82	0	0	0	1	0	0	1	14	22	7	2	1	1	8	0	0	57
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	6	26	10	6	30	83	158	78	29	30	26	43	83	35	27	705

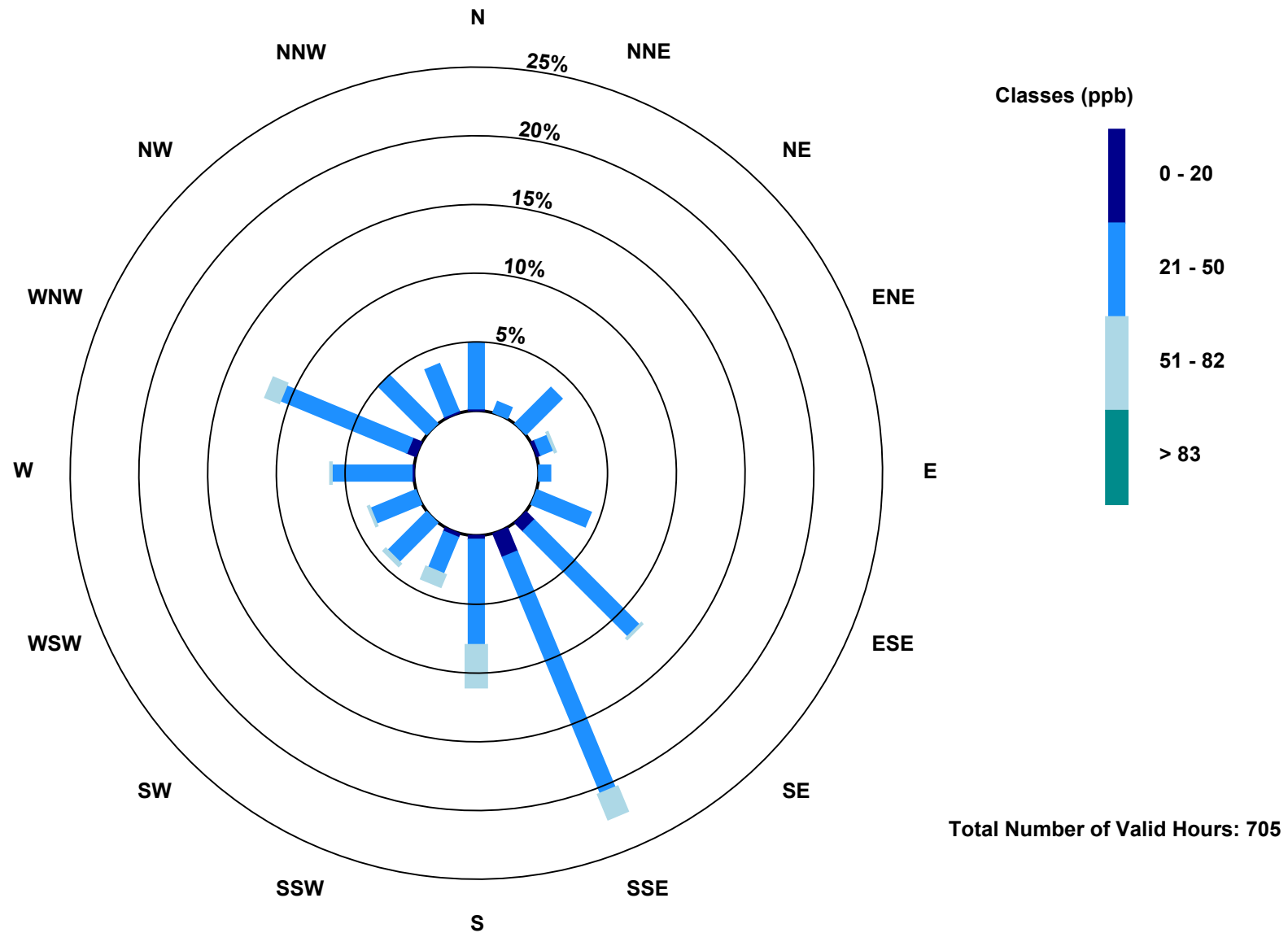
Total Number of Valid Hours: 705

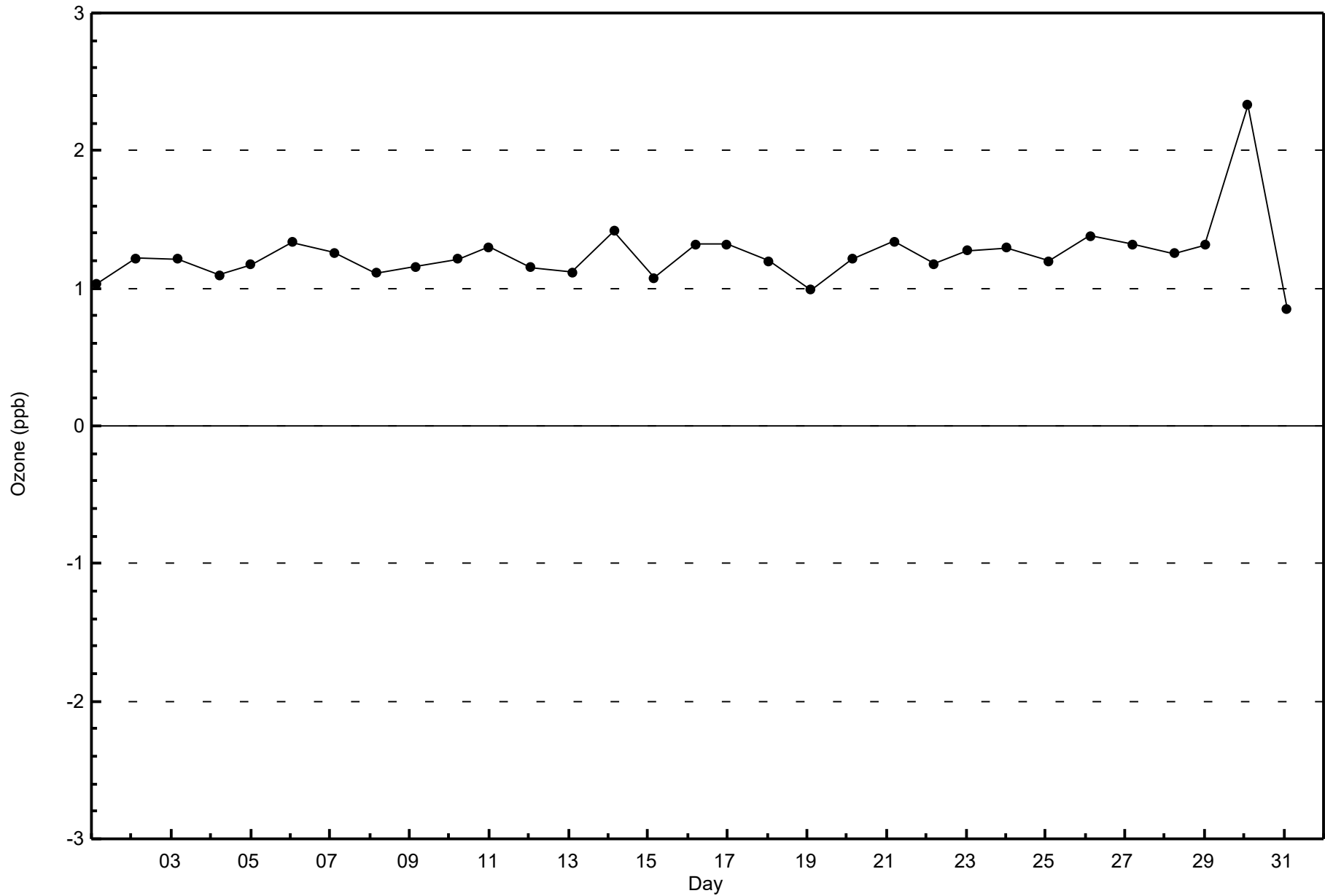
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Ozone (O_3) - ppb
Anzac

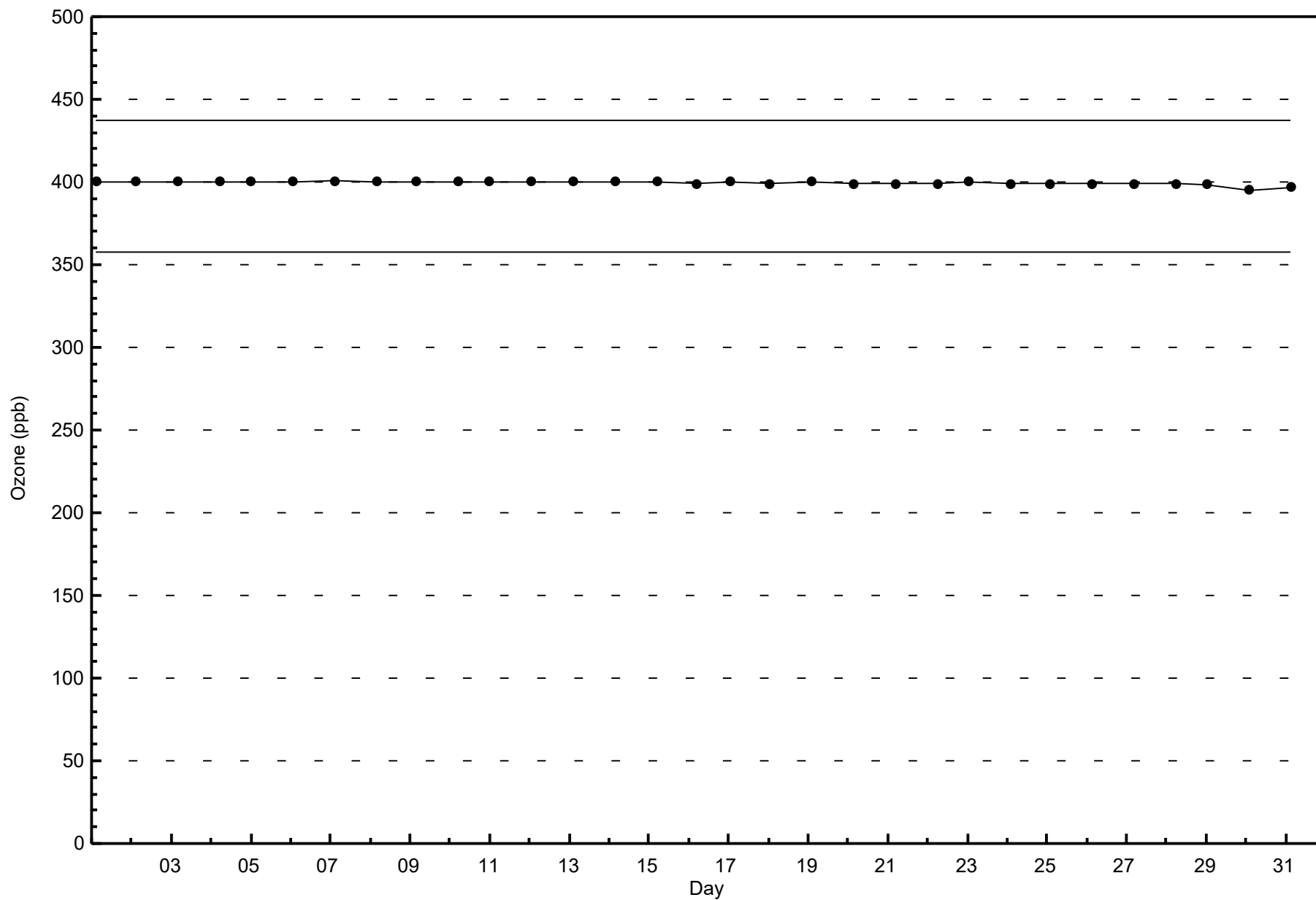






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Anzac - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

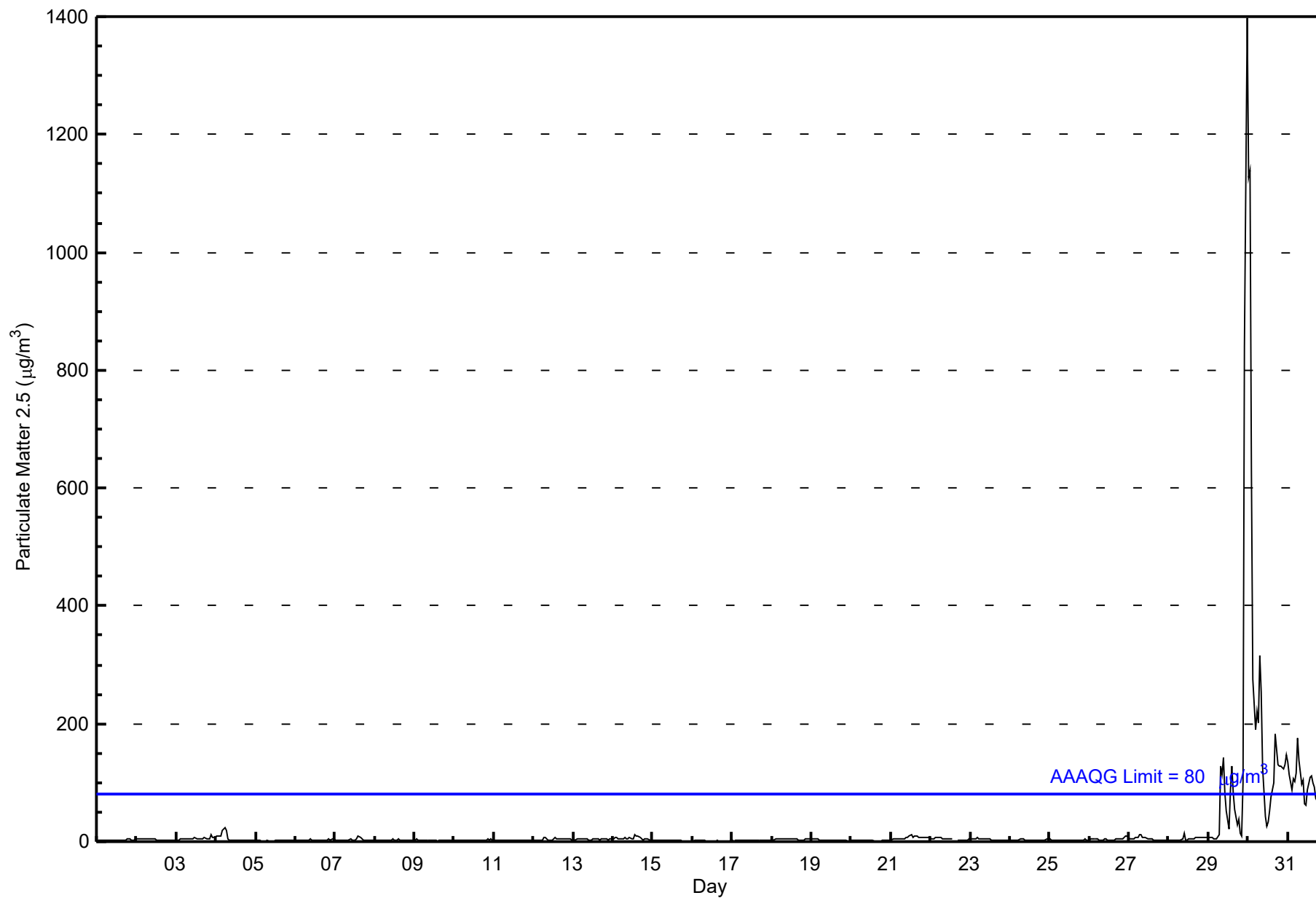
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 47 24-hr: 3 Maximum Value: 1396.6 µg/m ³ on May 30 00:00 Minimum Value: 0.7 µg/m ³ on May 20 16:00 Maximum Diurnal Average: 55.0 µg/m ³ at hour 24 Monthly Average: 19.01 µg/m ³																					Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0					
Maximum Daily Average: 247.1 µg/m ³ on May 30 Minimum Daily Average: 1.1 µg/m ³ on May 16 Minimum Diurnal Average: 7.5 µg/m ³ at hour 12 Percentiles: P ₁ = 0.9 P ₁₀ = 1.6 Q ₁ = 2.5 Median = 3.2 Q ₃ = 4.9 P ₉₀ = 10.5 P ₉₉ = 240.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	2.4	2.6	2.4	2.4	2.4	2.5	2.6	2.2	2.3	2.9	2.8	2.9	2.6	2.4	2.5	2.8	3.3	3.5	3.8	4.0	4.1	3.6	3.4	3.9	2.9	4.1
2-May	4.2	4.2	4.1	4.2	4.4	4.6	4.6	4.7	5.0	5.0	4.7	3.9	3.0	2.4	2.4	2.3	2.4	2.2	3.1	2.4	2.7	3.0	2.8	2.8	3.5	5.0
3-May	2.8	3.1	3.7	4.1	4.2	4.9	4.2	4.8	5.5	5.2	5.8	6.1	5.6	5.7	5.7	5.6	5.9	6.3	5.8	4.7	4.6	12.2	6.4	8.2	5.5	12.2
4-May	9.4	10.4	9.5	8.5	19.7	24.4	19.9	4.9	3.0	2.1	2.0	2.2	3.1	1.9	2.2	2.1	1.8	1.7	1.6	1.6	1.6	1.8	2.2	1.9	5.8	24.4
5-May	1.9	1.5	1.3	1.1	0.9	0.8	1.0	1.3	1.1	0.9	1.0	1.0	1.2	1.5	1.7	1.9	2.0	1.7	1.7	1.9	1.9	2.6	2.5	2.5	1.5	2.6
6-May	2.7	2.4	2.2	2.1	2.0	1.9	3.0	2.7	3.2	3.6	3.5	3.0	2.7	2.7	2.8	2.7	2.8	2.9	3.2	3.3	3.9	3.3	3.7	3.6	2.9	3.9
7-May	3.3	3.2	3.2	3.3	3.5	3.5	3.4	3.1	3.3	4.3	2.9	3.0	3.1	4.3	8.5	6.5	4.2	2.9	2.2	2.3	2.4	2.2	2.2	3.1	3.5	8.5
8-May	2.9	2.4	1.9	1.8	1.9	2.3	2.7	2.8	2.8	2.9	2.9	3.9	3.5	2.9	3.7	3.4	1.9	1.6	1.5	3.1	3.4	3.5	3.5	3.2	2.8	3.9
9-May	3.5	3.7	3.0	3.0	3.2	2.5	2.5	2.7	3.0	2.2	1.9	1.6	1.3	1.2	1.1	1.2	1.4	1.5	1.6	1.9	1.9	1.6	1.9	2.4	2.2	3.7
10-May	2.7	3.1	3.2	2.8	2.7	2.9	2.9	2.9	2.9	2.6	2.7	2.5	2.5	2.5	2.7	2.5	2.6	2.6	2.5	3.0	3.8	3.1	4.1	2.8	2.9	4.1
11-May	2.8	3.4	3.2	3.1	3.2	3.1	3.0	2.9	2.9	2.9	2.9	3.1	3.1	2.7	2.5	2.4	2.7	2.7	2.5	2.4	2.6	2.5	2.6	2.9	2.8	3.4
12-May	2.9	3.1	3.4	3.4	3.0	3.4	6.0	6.4	3.8	3.0	3.1	3.4	5.1	6.2	5.5	5.4	5.5	5.0	4.7	4.4	4.8	5.2	4.4	3.2	4.3	6.4
13-May	3.0	3.3	5.1	5.6	4.9	5.6	4.7	4.2	3.6	3.4	3.1	3.4	4.9	5.0	4.4	3.6	3.5	3.9	3.6	3.9	3.7	3.6	3.7	3.7	4.0	5.6
14-May	4.3	6.8	6.5	5.4	5.2	5.1	5.5	6.0	5.6	5.5	5.9	4.7	5.4	11.0	8.5	9.0	7.1	4.8	3.4	3.9	3.9	3.8	3.0	2.7	5.5	11.0
15-May	2.4	1.5	1.3	1.5	1.3	1.8	2.0	2.2	2.5	2.9	2.6	2.4	2.3	2.3	1.8	1.3	1.5	1.2	1.2	1.1	1.0	1.1	1.1	1.1	1.7	2.9
16-May	1.1	1.2	1.8	1.5	1.5	1.3	1.6	1.3	1.0	0.7	0.7	0.8	0.9	0.8	1.0	1.2	1.2	1.0	0.9	0.9	0.9	0.9	1.0	1.4	1.1	1.8
17-May	1.3	1.1	1.4	2.0	1.8	2.0	1.6	1.9	2.5	2.5	2.7	2.7	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.6	3.0	3.0	3.0	3.3	2.3	3.3
18-May	3.3	3.5	3.7	3.9	4.5	4.9	5.3	4.7	4.7	4.4	4.5	4.5	4.6	4.6	4.2	3.9	3.2	3.0	3.0	3.0	4.2	5.2	4.5	4.3	4.1	5.3
19-May	4.7	4.3	3.9	3.9	3.6	3.5	3.4	3.4	3.4	3.3	3.0	2.9	2.7	2.6	2.4	2.6	2.8	2.9	2.9	2.0	2.1	1.9	1.0	1.1	2.9	4.7
20-May	1.5	2.0	2.5	2.9	3.5	3.4	3.1	3.0	2.8	2.6	2.4	1.5	1.5	1.3	0.8	0.7	0.9	0.9	1.1	1.4	1.6	2.2	2.6	3.0	2.0	3.5
21-May	3.3	3.7	4.2	4.2	4.6	4.7	4.7	4.3	4.5	6.1	7.6	9.5	12.1	7.9	9.4	8.9	10.5	6.9	6.3	6.6	6.8	6.1	6.2	6.4	6.5	12.1
22-May	5.7	5.6	5.9	6.4	6.5	6.5	6.0	5.5	5.4	5.6	5.4	4.0	3.6	4.1	C	C	2.9	2.7	2.5	2.3	2.5	3.0	3.4	3.7	4.5	6.5
23-May	4.0	4.5	5.1	5.7	6.1	5.4	5.5	4.0	5.0	5.9	5.7	4.4	3.7	3.1	2.6	2.3	2.4	2.4	2.5	2.6	2.8	2.7	2.9	3.3	3.9	6.1
24-May	3.1	3.1	3.4	3.3	3.1	3.3	3.7	3.9	3.6	3.5	3.3	3.0	2.8	2.7	2.6	2.7	2.8	2.8	2.9	2.9	3.1	3.3	3.6	3.7	3.2	3.9
25-May	3.6	3.5	3.3	3.2	3.5	3.5	3.2	2.7	2.5	2.5	2.4	2.2	2.4	2.5	2.6	2.7	2.8	2.8	2.8	2.8	3.0	3.6	3.5	3.4	3.0	3.6
26-May	3.5	3.7	3.7	3.8	3.8	3.8	3.5	3.1	3.3	3.6	3.6	3.3	3.3	3.2	3.2	3.5	3.6	3.7	3.8	4.0	4.6	8.0	8.4	9.1	4.2	9.1
27-May	5.4	4.0	4.5	5.5	6.1	6.8	11.1	10.9	8.0	6.6	6.8	5.6	4.2	4.0	3.9	3.3	3.0	2.9	2.6	2.1	2.9	3.2	2.7	2.8	4.9	11.1
28-May	2.5	2.3	2.4	2.6	2.6	2.2	2.2	3.0	3.7	15.1	2.3	2.2	3.8	4.8	5.1	5.9	6.6	7.5	6.2	6.6	7.7	6.7	6.9	6.8	4.9	15.1
29-May	6.8	6.2	6.1	5.5	4.8	4.8	11.2	127.8	113.6	143.1	83.0	52.1	22.4	88.3	129.2	84.0	55.2	29.1	37.3	14.6	9.6	100.3	839.7	1396.6	140.5	1396.6
30-May	1126.5	1138.7	628.8	274.4	189.9	220.7	201.4	315.1	254.7	126.1	41.6	26.9	33.6	52.4	74.8	99.8	183.2	156.3	129.5	127.2	128.0	123.0	130.9	146.4	247.1	1138.7
31-May	136.4	114.8	88.5	106.4	102.6	117.1	176.7	138.5	98.1	105.0	64.8	60.6	87.1	110.1	110.7	99.8	93.0	72.5	67.8	99.2	124.5	110.7	79.6	60.3	101.0	176.7
44.0 43.8 26.6 15.7 13.3 14.9 16.5 22.2 18.3 15.7 9.3 7.5 7.8 11.3 13.7 12.5 13.7 11.1 10.2 10.5 11.4 14.1 37.0 55.0																										Diurnal Average
1126.5 1138.7 628.8 274.4 189.9 220.7 201.4 315.1 254.7 143.1 83.0 60.6 87.1 110.1 129.2 99.8 183.2 156.3 129.5 127.2 128.0 123.0 839.7 1396.6																										Diurnal Maximum
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Anzac - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	585	78.84	78.84
6 - 15	91	12.26	91.11
16 - 25	4	0.54	91.64
26 - 80	15	2.02	93.67
> 81.0	44	5.93	99.60

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Anzac - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	31	6	22	9	6	25	78	136	66	24	28	25	35	53	19	18	581
6 - 15	2	1	2	0	0	3	10	21	11	2	1	1	5	20	8	4	91
16 - 25	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	4
26 - 80	1	0	0	0	0	2	0	4	0	0	0	0	1	1	3	3	15
> 81.0	2	1	2	1	0	2	2	5	2	3	3	4	2	10	3	2	44
Totals	36	8	26	10	6	32	90	167	79	29	32	30	43	86	34	27	735

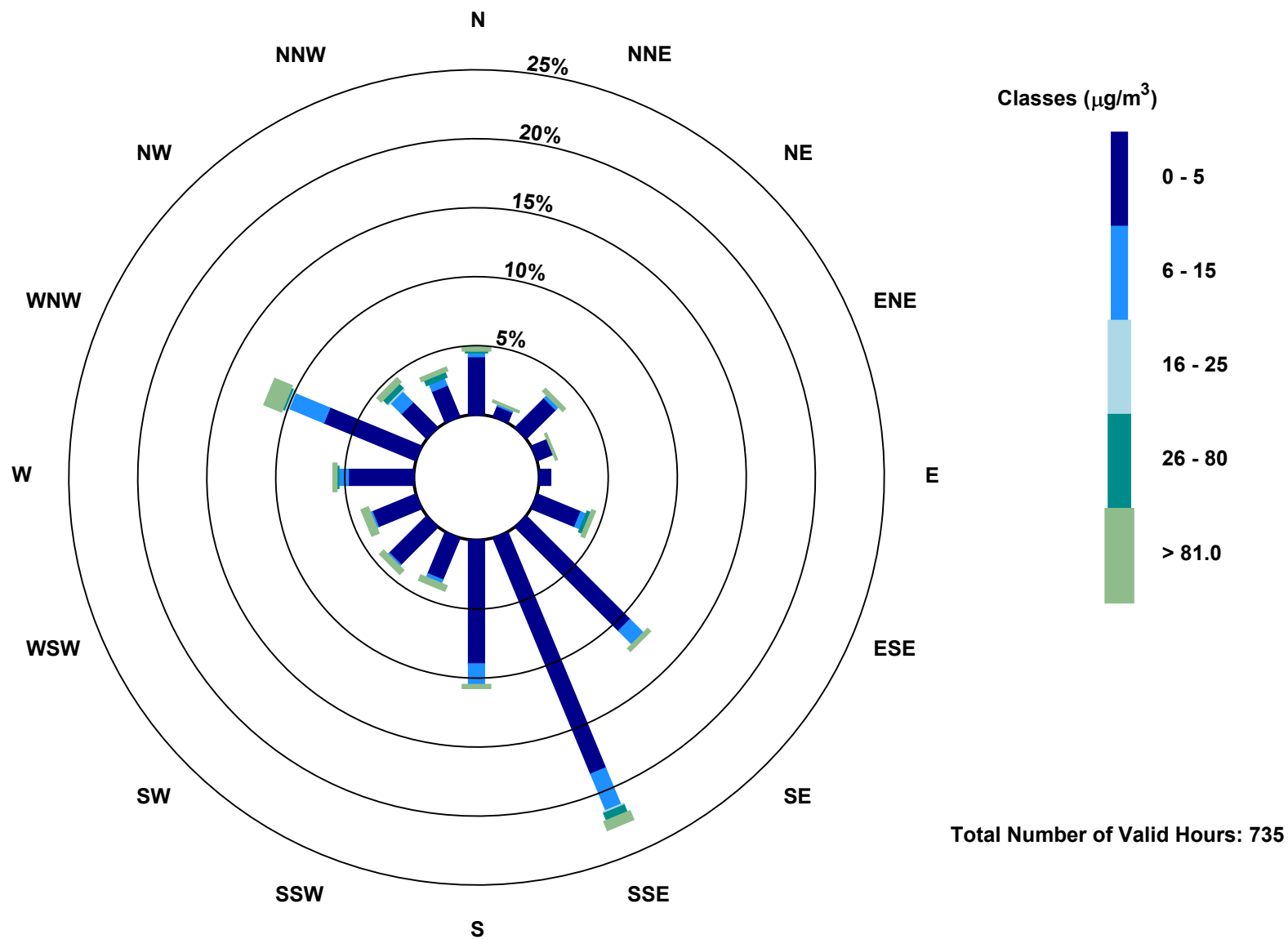
Total Number of Valid Hours: 738

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Anzac





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

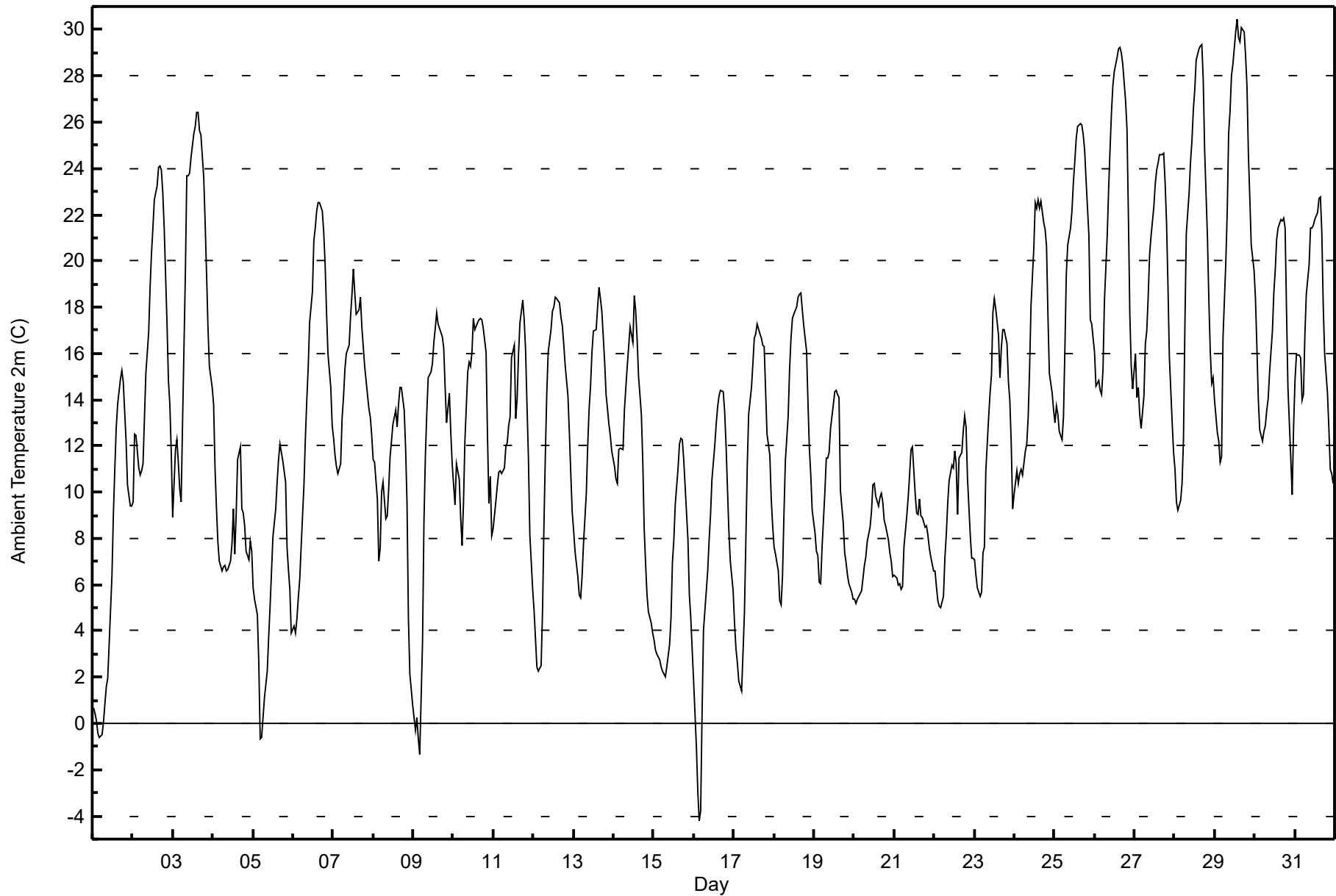
Anzac - May 2025

Maximum Value: 30.4 C on May 29 14:00																				Maximum Daily Average: 23.0 C on May 29					Hours in Service: 744	
Minimum Value: -4.2 C on May 16 04:00																				Minimum Daily Average: 6.0 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 18.4 C at hour 16																				Minimum Diurnal Average: 7.2 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 13.18 C																				Percentiles: P ₁ = -0.6 P ₁₀ = 5.3 Q ₁ = 8.6 Median = 12.7 Q ₃ = 17.2 P ₉₀ = 22.5 P ₉₉ = 29.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.7	0.4	0.1	-0.4	-0.6	-0.5	0.1	0.9	1.6	2.0	3.4	6.4	9.0	11.0	12.8	13.8	14.9	15.3	14.8	13.5	12.2	10.3	9.4	9.4	6.7	15.3
2-May	9.6	12.5	12.4	11.0	10.8	10.9	11.2	13.2	15.2	16.9	18.9	20.3	21.5	22.6	23.3	24.1	24.1	23.9	23.0	21.4	17.3	14.8	13.8	11.7	16.8	24.1
3-May	8.9	11.8	12.3	11.3	10.1	9.6	13.0	19.5	23.7	23.7	23.8	24.5	25.5	25.8	26.4	26.4	25.6	25.4	23.6	21.7	19.5	17.1	15.4	14.5	19.1	26.4
4-May	13.8	11.1	9.4	7.9	7.0	6.6	6.8	6.8	6.6	6.6	7.0	7.8	9.3	7.3	9.1	11.4	12.0	9.3	9.1	8.6	7.4	7.1	7.9	7.4	8.5	13.8
5-May	5.8	5.4	4.7	2.6	-0.6	-0.6	0.3	1.1	2.3	3.7	5.1	6.6	8.1	9.3	10.5	11.4	12.1	11.7	11.3	10.5	7.6	6.6	5.8	3.9	6.0	12.1
6-May	4.2	3.9	4.5	5.4	6.2	7.6	10.3	12.3	14.0	15.4	17.3	18.6	20.8	21.4	22.2	22.5	22.5	22.1	21.2	19.8	17.8	16.0	14.5	12.9	14.7	22.5
7-May	12.3	11.6	11.1	10.8	11.2	13.2	14.1	15.3	16.0	16.4	17.6	18.6	19.6	18.6	17.7	17.9	18.4	17.1	16.3	15.4	14.2	13.6	13.2	12.5	15.1	19.6
8-May	11.4	11.3	9.7	7.0	7.6	10.0	10.5	8.9	8.9	10.1	11.5	12.2	12.9	13.6	12.8	13.8	14.6	14.5	13.6	11.9	9.5	4.5	2.2	0.8	10.2	14.6
9-May	0.3	-0.3	0.2	-0.7	-1.3	3.5	8.7	11.5	13.4	14.9	15.2	15.6	16.5	17.1	17.8	17.3	16.9	16.7	16.3	14.5	13.0	14.3	12.6	11.2	11.0	17.8
10-May	10.3	9.5	11.2	10.5	8.9	7.7	9.5	12.2	15.2	15.6	15.4	16.1	17.5	17.1	17.4	17.5	17.5	17.4	17.1	16.0	12.4	9.5	10.7	8.1	13.4	17.5
11-May	8.4	9.7	10.3	10.9	10.9	10.8	11.1	11.9	12.2	12.9	13.2	15.8	16.3	13.2	14.1	16.0	17.3	18.3	17.5	16.1	13.7	11.5	8.2	5.8	12.7	18.3
12-May	4.9	3.7	2.5	2.3	2.5	4.9	8.6	11.6	14.3	16.1	17.0	17.8	18.0	18.4	18.4	18.2	17.6	17.2	16.4	15.5	14.2	12.6	10.8	9.2	12.2	18.4
13-May	8.4	7.4	6.4	5.6	5.5	6.3	7.7	10.0	12.0	13.6	14.6	16.1	17.0	17.0	18.0	18.8	18.4	17.8	15.6	14.2	13.6	12.9	12.5	11.8	12.6	18.8
14-May	11.1	10.6	10.4	11.8	11.9	11.9	13.5	14.5	15.4	16.3	17.2	16.5	18.5	17.8	16.6	15.0	13.3	11.4	8.4	6.9	5.5	4.8	4.3	3.9	12.0	18.5
15-May	3.6	3.2	3.0	2.7	2.5	2.2	2.1	2.0	2.5	3.4	4.6	7.0	7.9	9.4	11.0	12.1	12.3	12.2	11.4	10.3	7.9	5.6	4.6	3.2	6.1	12.3
16-May	1.8	-1.0	-3.0	-4.2	-3.8	0.4	4.0	5.7	6.6	7.9	9.0	10.6	12.0	13.0	13.6	14.2	14.4	14.3	13.5	12.0	10.1	8.3	7.0	5.8	7.2	14.4
17-May	4.4	3.2	2.7	1.9	1.4	3.0	4.8	7.9	11.1	13.3	14.5	15.6	16.7	16.8	17.3	16.9	16.6	16.4	16.3	14.4	12.5	11.6	9.7	8.6	10.7	17.3
18-May	7.6	7.3	6.6	5.3	5.1	6.4	9.0	11.4	13.3	15.3	16.7	17.5	17.7	18.0	18.4	18.6	18.6	17.9	17.2	16.1	13.9	11.9	10.7	9.2	12.9	18.6
19-May	8.3	7.4	7.2	6.1	6.1	7.6	10.0	11.5	11.5	11.7	12.8	13.8	14.3	14.4	14.2	14.1	10.1	8.6	7.4	7.0	6.4	6.1	5.7	5.4	9.5	14.4
20-May	5.4	5.2	5.4	5.5	5.7	6.3	6.8	7.2	7.9	8.5	9.2	10.3	10.4	9.8	9.4	9.8	9.9	9.6	8.8	8.6	7.9	7.4	7.0	6.4	7.8	10.4
21-May	6.4	6.3	6.0	6.1	5.8	5.9	7.7	9.0	9.7	10.8	11.8	11.9	9.9	9.1	9.0	9.7	9.0	8.9	8.5	8.5	8.1	7.6	7.2	6.6	8.3	11.9
22-May	6.6	5.9	5.3	5.1	5.0	5.5	7.1	8.2	9.5	10.5	11.2	11.0	11.8	11.3	9.1	11.5	11.7	12.6	13.3	12.8	10.6	8.1	7.2	7.1	9.1	13.3
23-May	7.1	6.4	5.8	5.5	5.7	7.4	7.6	10.9	13.2	14.3	15.1	17.8	18.4	17.9	16.8	15.0	16.3	17.1	17.0	16.4	14.8	14.0	12.1	9.3	12.6	18.4
24-May	9.9	11.0	10.4	10.8	11.0	10.8	11.8	12.1	13.3	15.3	18.0	20.6	22.5	22.3	22.6	22.3	22.6	21.7	21.3	20.6	17.6	15.1	14.3	13.5	16.3	22.6
25-May	13.0	13.7	13.4	12.6	12.3	13.2	16.2	19.4	20.7	21.4	22.2	23.3	24.3	25.3	25.8	26.0	25.9	25.4	24.8	23.5	21.1	17.5	17.3	16.7	19.8	26.0
26-May	16.1	14.6	14.8	14.4	14.2	15.3	18.3	21.1	23.1	24.8	26.4	27.6	28.2	28.8	29.2	29.2	29.0	28.5	26.9	25.7	21.9	17.7	15.5	14.5	21.9	29.2
27-May	16.0	14.1	14.5	13.4	12.7	14.1	16.4	17.0	18.5	20.2	21.0	22.4	23.3	23.9	24.2	24.6	24.6	24.7	23.4	21.7	19.0	15.9	13.0	11.7	18.8	24.7
28-May	11.0	9.6	9.2	9.7	10.4	12.3	17.2	21.2	23.0	24.3	25.2	26.5	27.4	28.7	29.2	29.3	29.3	27.8	24.8	21.0	18.2	16.0	14.7	14.9	20.0	29.3
29-May	14.0	12.6	12.2	11.3	11.5	16.7	20.0	22.1	25.5	26.5	28.0	28.5	29.9	30.4	29.7	29.5	30.1	29.9	28.9	27.6	24.6	22.7	20.7	19.6	23.0	30.4
30-May	18.3	16.3	14.0	12.7	12.2	12.6	12.9	13.5	14.0	15.2	17.0	18.6	19.6	21.0	21.4	21.8	21.7	21.9	21.4	17.8	14.5	11.5	9.9	12.8	16.4	21.9
31-May	14.8	15.9	16.0	15.8	13.9	14.2	16.8	18.5	19.8	21.4	21.4	21.5	21.8	22.1	22.7	22.8	21.3	18.1	16.0	14.3	12.7	11.0	10.8	10.4	17.2	22.8
8.8 8.4 8.0 7.4 7.2 8.3 10.1 11.9 13.4 14.5 15.5 16.7 17.6 17.8 18.1 18.4 18.3 17.9 16.9 15.6 13.5 11.7 10.6 9.6																										Diurnal Average
18.3 16.3 16.0 15.8 14.2 16.7 20.0 22.1 25.5 26.5 28.0 28.5 29.9 30.4 29.7 29.5 30.1 29.9 28.9 27.6 24.6 22.7 20.7 19.6																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Anzac - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	12	1.61	1.61
0 - 10	231	31.05	32.66
10 - 20	383	51.48	84.14
> 20	118	15.86	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

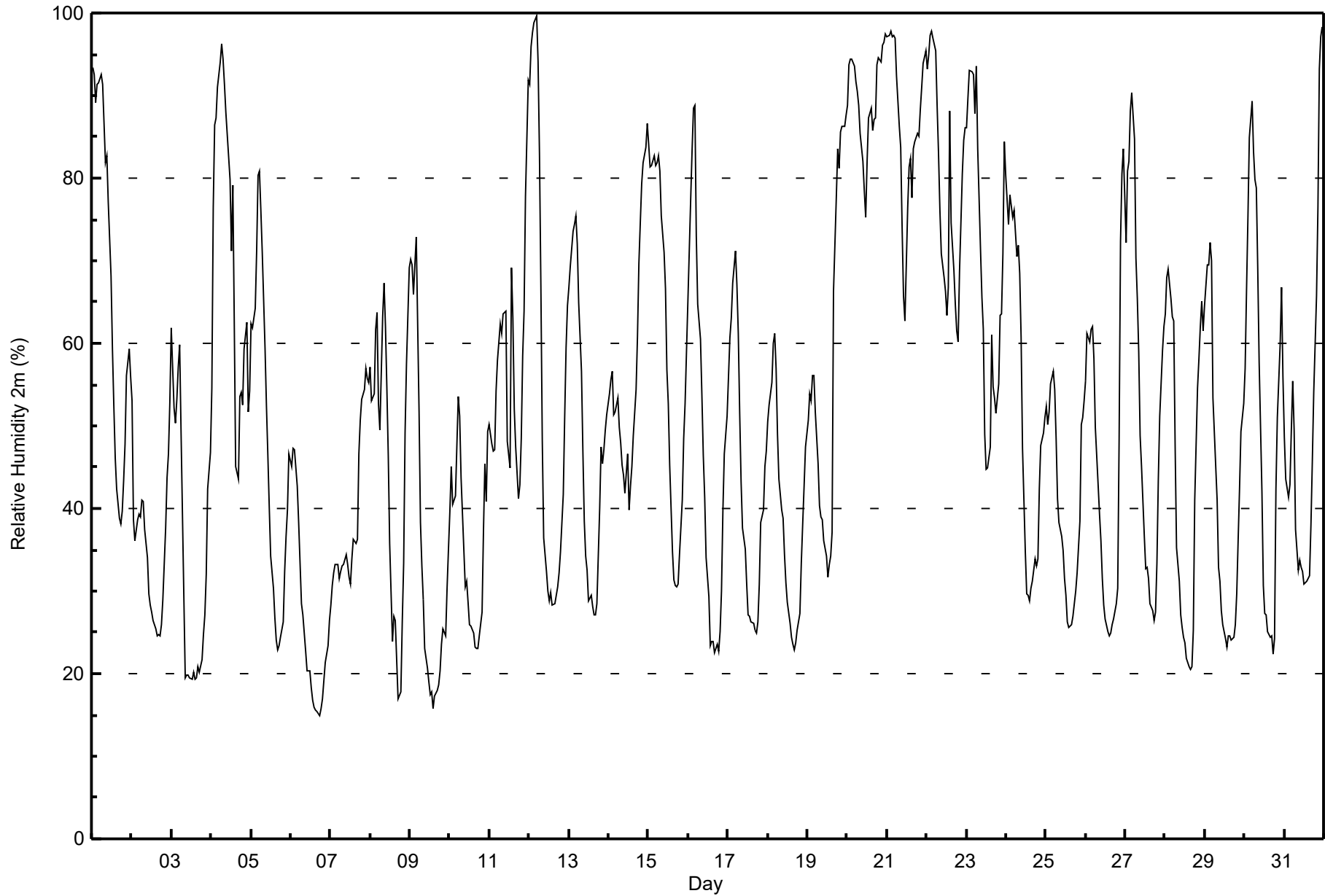
Anzac - May 2025

Maximum Value: 99.6 % on May 12 05:00																				Maximum Daily Average: 89.5 % on May 20				Hours in Service: 744		
Minimum Value: 14.9 % on May 6 18:00																				Minimum Daily Average: 26.2 % on May 6				Hours of Data: 744		
Maximum Diurnal Average: 70.8 % at hour 5																				Minimum Diurnal Average: 34.9 % at hour 16				Hours of Missing Data: 0		
Monthly Average: 51.63 %																				Percentiles: P ₁ = 16.9 P ₁₀ = 24.6 Q ₁ = 31.5 Median = 48.7 Q ₃ = 68.6 P ₉₀ = 86.5 P ₉₉ = 97.3				Hours of Calibration: 0		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	93.5	92.6	89.2	91.3	91.5	92.6	91.3	86.6	81.9	82.7	77.1	68.2	59.3	52.4	46.1	42.3	38.8	38.2	39.6	43.5	47.9	56.1	59.4	55.9	67.4	93.5
2-May	53.1	38.6	36.1	38.7	39.3	39.0	41.1	40.8	37.4	34.1	29.7	28.4	27.4	26.5	25.4	24.6	24.7	24.6	26.0	29.0	37.7	43.8	46.7	52.8	35.2	53.1
3-May	61.8	52.3	50.3	53.2	57.1	59.8	49.3	29.2	19.5	19.8	19.9	19.5	19.4	20.2	19.3	19.4	20.9	20.1	21.8	24.8	27.2	32.0	42.4	46.7	33.6	61.8
4-May	54.6	76.4	86.5	87.3	91.1	94.1	96.3	94.4	91.3	87.9	82.5	79.9	71.1	79.2	62.7	45.1	43.5	53.6	54.1	52.5	59.4	62.6	51.7	54.2	71.3	96.3
5-May	62.4	61.9	64.2	71.2	80.3	80.8	76.1	71.1	59.3	52.3	46.5	40.2	34.2	30.4	26.9	24.1	22.9	23.4	24.4	26.2	32.4	36.6	39.8	46.6	47.3	80.8
6-May	45.2	47.2	47.1	44.8	42.8	38.3	28.5	27.1	24.9	22.7	20.4	20.4	18.3	16.8	16.0	15.5	15.4	14.9	15.7	17.0	19.1	21.4	23.4	26.5	26.2	47.2
7-May	28.3	30.7	32.2	33.2	33.3	31.5	32.4	33.1	33.3	34.4	33.3	31.8	30.9	33.9	36.3	35.7	36.3	46.6	50.7	53.3	54.5	57.0	55.7	55.2	38.9	57.0
8-May	57.2	53.1	53.9	61.7	63.8	52.7	49.5	63.3	67.4	62.0	54.7	46.5	35.7	23.8	26.9	26.4	21.7	16.9	17.7	26.2	33.4	49.2	57.5	69.2	45.4	69.2
9-May	70.1	69.5	65.9	69.5	72.8	51.7	38.4	33.1	28.9	23.0	20.7	19.0	17.4	17.8	15.8	17.2	17.9	18.6	20.3	23.6	25.5	24.5	30.4	35.1	34.5	72.8
10-May	39.7	45.1	40.5	41.5	47.6	53.6	51.2	43.6	35.0	30.5	31.2	28.6	25.9	25.8	24.9	23.2	23.1	23.1	24.5	27.4	37.3	45.4	40.9	49.3	35.8	53.6
11-May	50.1	47.8	46.9	47.2	54.2	58.0	62.3	61.2	63.5	63.8	63.9	48.1	45.0	69.1	63.0	52.0	47.4	41.2	42.9	48.4	58.6	64.0	77.8	91.9	57.0	91.9
12-May	91.4	96.0	97.7	98.9	99.6	94.2	82.9	67.0	48.3	36.4	32.4	30.0	28.8	29.9	28.3	28.5	29.4	30.5	32.3	34.7	41.7	51.0	59.5	64.6	55.6	99.6
13-May	66.8	69.3	73.6	74.5	75.4	72.1	64.9	56.5	46.9	38.5	34.3	32.5	28.9	29.5	28.2	27.0	27.1	28.5	40.1	47.4	45.4	47.1	49.5	51.4	48.1	75.4
14-May	53.9	55.5	56.5	51.4	51.7	53.3	49.8	47.9	45.3	44.1	41.8	46.6	39.9	42.7	45.1	48.9	54.4	60.8	69.7	74.6	79.2	81.8	83.7	86.7	56.9	86.7
15-May	84.1	81.3	81.5	82.7	81.6	81.8	82.8	80.8	75.5	71.1	66.6	56.8	52.6	45.2	34.8	31.3	30.7	30.6	30.8	34.5	41.0	48.5	52.7	59.0	59.1	84.1
16-May	65.0	77.5	83.4	88.5	88.9	73.1	64.8	60.5	53.8	46.4	41.3	34.1	29.3	23.4	24.0	23.9	22.6	23.5	22.7	25.1	30.0	39.7	46.6	51.1	47.5	88.9
17-May	56.0	60.7	63.1	67.2	71.3	67.2	61.1	51.4	43.2	37.7	35.1	30.9	27.1	27.0	26.2	26.2	25.3	24.9	26.2	30.8	38.3	39.9	45.0	46.9	42.9	71.3
18-May	50.6	52.5	55.3	60.0	61.2	57.0	49.0	43.6	39.8	38.7	34.5	31.0	28.7	26.1	24.4	23.5	22.8	23.8	25.3	27.4	33.4	38.1	42.6	47.5	39.0	61.2
19-May	50.7	53.9	53.0	56.1	56.1	51.6	45.4	40.3	39.0	38.6	36.1	34.3	31.7	33.2	34.3	37.1	66.3	77.6	83.6	81.1	85.5	86.3	86.3	87.6	56.1	87.6
20-May	88.9	93.7	94.4	94.5	93.5	91.6	90.5	88.9	85.5	82.0	78.5	75.2	82.0	87.4	88.5	85.8	87.2	87.4	93.8	94.5	94.1	96.1	96.4	97.5	89.5	97.5
21-May	97.1	97.4	97.8	97.0	97.3	97.0	92.3	86.4	83.8	74.0	65.8	62.7	76.4	81.3	82.4	77.7	83.5	84.5	85.5	85.0	88.2	91.0	93.8	95.4	86.4	97.8
22-May	93.2	94.9	97.3	97.8	97.0	95.4	88.7	83.0	76.0	70.8	68.0	66.3	63.4	66.8	88.2	74.6	68.8	64.7	61.6	60.2	68.6	80.6	84.6	86.1	79.0	97.8
23-May	86.1	89.7	93.0	92.9	92.6	87.8	93.6	83.6	71.4	65.6	61.8	48.9	44.7	44.9	47.5	61.0	54.8	53.3	51.6	55.1	63.4	63.6	70.8	84.4	69.3	93.6
24-May	80.4	74.4	78.0	76.6	75.3	76.2	70.5	71.9	68.5	60.7	47.3	34.8	29.6	29.5	28.7	30.3	31.2	33.9	33.0	33.9	42.4	47.7	49.2	51.0	52.3	80.4
25-May	52.4	50.2	51.8	55.1	56.6	54.4	48.5	41.2	38.3	36.6	34.9	31.6	29.5	26.3	25.6	26.0	27.0	28.4	30.0	32.3	38.4	50.2	51.1	53.0	40.4	56.6
26-May	55.4	61.2	60.2	61.7	62.0	58.2	49.9	42.9	39.4	36.1	31.5	28.4	26.5	25.1	24.5	25.0	26.0	26.7	28.5	30.3	48.5	72.4	80.5	83.6	45.2	83.6
27-May	72.1	80.8	82.1	88.1	90.3	84.8	70.4	65.4	58.9	48.8	45.0	36.6	32.6	32.9	31.4	28.5	27.7	26.5	27.4	33.4	43.5	51.2	59.2	62.0	53.3	90.3
28-May	63.5	68.0	69.0	65.4	63.1	62.7	47.7	35.3	31.1	27.1	25.5	24.5	23.7	21.9	20.9	20.5	20.8	25.2	41.1	54.6	58.1	62.0	65.1	61.5	44.1	69.0
29-May	64.6	69.4	69.4	72.2	70.0	53.3	45.1	41.0	32.9	31.2	27.6	26.0	24.3	23.3	24.5	24.6	24.1	24.5	26.0	29.6	36.2	42.4	49.4	52.8	41.0	72.2
30-May	57.0	66.4	75.2	84.9	89.3	83.3	79.8	78.9	69.2	57.8	42.1	30.7	27.3	27.1	25.1	24.4	24.6	22.4	24.3	42.3	51.0	59.9	66.7	56.0	52.7	89.3
31-May	48.6	43.6	41.4	42.9	49.6	55.5	49.4	37.4	32.5	33.7	32.8	32.3	30.8	31.2	31.5	31.9	38.0	45.7	54.1	65.8	76.5	93.3	97.1	98.3	49.7	98.3
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Anzac - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	25	3.36	3.36
20 - 40	257	34.54	37.90
40 - 60	206	27.69	65.59
60 - 80	131	17.61	83.20
80 - 100	125	16.80	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

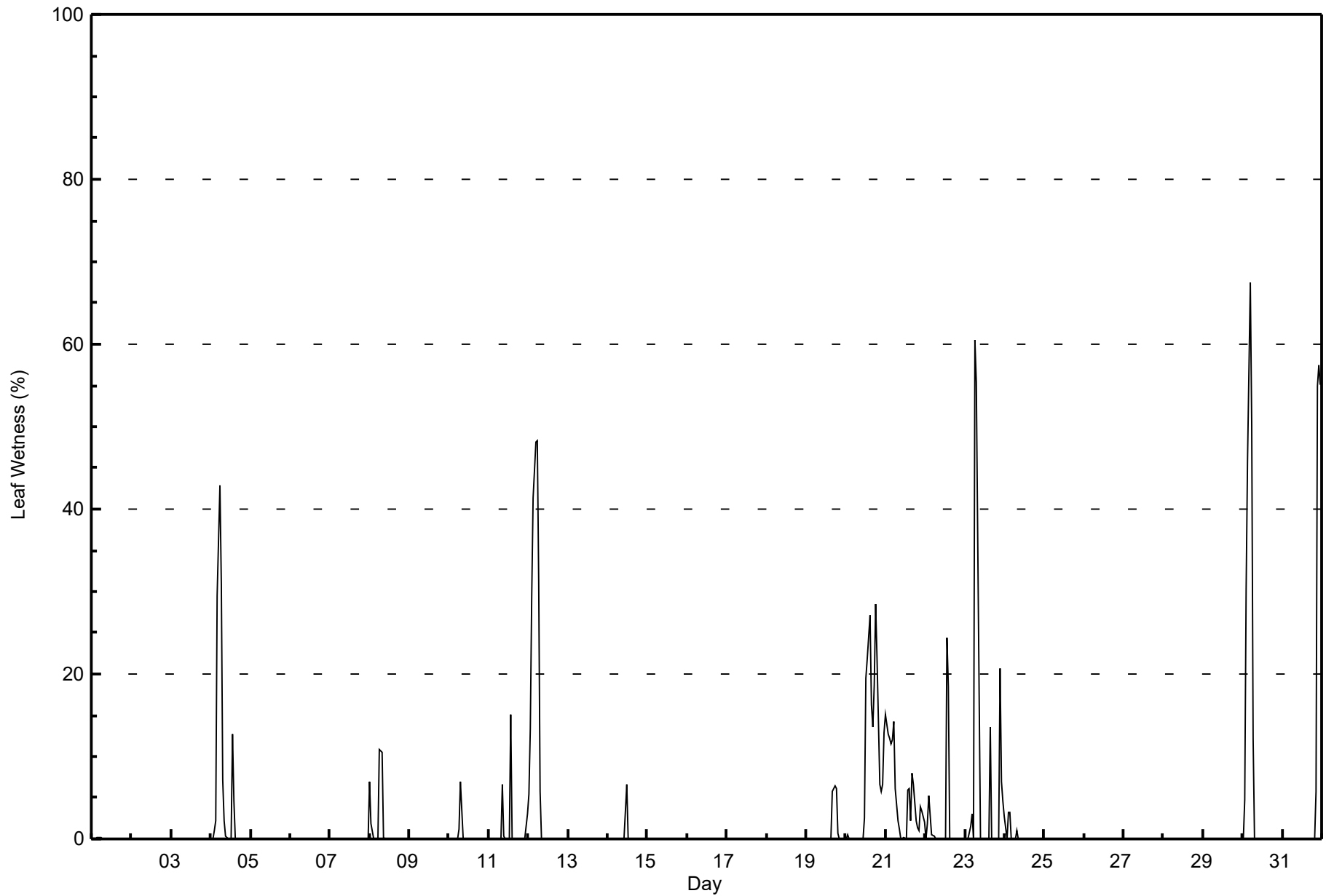
Anzac - May 2025

Maximum Value: 67.4 % on May 30 05:00																				Maximum Daily Average: 9.3 % on May 12					Hours in Service: 744		
Minimum Value: 0.0 % on May 1 02:00																				Minimum Daily Average: 0.0 % on May 2					Hours of Data: 744		
Maximum Diurnal Average: 5.2 % at hour 5																				Minimum Diurnal Average: 0.0 % at hour 11					Hours of Missing Data: 0		
Monthly Average: 1.90 %																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 2.7 P ₉₉ = 48.2					Hours of Calibration: 0		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4-May	0.0	0.0	1.0	2.2	29.5	42.8	30.9	7.1	2.1	0.3	0.0	0.0	0.0	12.7	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	
5-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.8	
6-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8-May	7.0	1.9	0.0	0.0	0.0	0.1	10.9	10.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	
10-May	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.4	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	1.0	15.2	
12-May	5.4	13.4	29.3	41.4	48.1	48.3	31.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	48.3	
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	6.6	
15-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	6.4	6.1	0.6	0.0	0.0	0.0	0.0	0.8	6.4	
20-May	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	19.4	21.8	27.1	16.2	13.5	18.7	28.5	21.8	6.6	5.8	6.7	12.8	8.4	28.5	
21-May	15.1	12.8	12.2	11.6	12.1	14.2	6.0	2.2	1.2	0.0	0.0	0.1	0.0	5.9	6.2	2.1	8.0	6.6	2.1	1.4	1.0	4.0	3.4	2.1	5.4	15.1	
22-May	0.0	1.9	5.2	2.8	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	18.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	24.3	
23-May	0.0	0.0	0.0	1.5	3.0	0.0	60.5	55.4	18.1	0.0	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	20.6	7.0	4.5	7.7	60.5	
24-May	2.8	0.0	3.2	3.2	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.2	
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
30-May	0.0	4.8	30.1	45.9	67.4	50.1	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	67.4	
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	54.9	57.4	55.1	7.2	57.4	
1.0 1.1 2.6 3.5 5.2 5.0 4.9 2.9 0.9 0.0 0.0 0.3 0.6 2.6 1.8 1.0 0.9 1.0 1.2 0.8 0.4 2.8 2.4 2.5																										Diurnal Average	
15.1 13.4 30.1 45.9 67.4 50.1 60.5 55.4 18.1 0.4 0.0 6.6 19.4 24.3 27.1 16.2 13.5 18.7 28.5 21.8 6.6 54.9 57.4 55.1																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Anzac - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	649	87.23	87.23
0.4 - 0.5	2	0.27	87.50
0.6 - 0.7	2	0.27	87.77
0.8 - 1.4	6	0.81	88.58
1.5 - 10	42	5.65	94.22
> 10	43	5.78	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Anzac - May 2025

Maximum Speed: 29 km/h on May 7 06:00										Maximum Daily Speed Average: 17.3 km/h on May 26										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 13 20:00										Minimum Daily Speed Average: 3.5 km/h on May 10										Hours of Data: 740						
Maximum Diurnal Speed Average: 5.5 km/h at hour 12										Minimum Diurnal Speed Average: 3.0 km/h at hour 23										Hours of Missing Data: 4						
Monthly Average Velocity: 4.3 km/h 185.2 deg										Percentiles: P ₁ = 3 P ₁₀ = 7 Q ₁ = 9 Median = 13 Q ₃ = 17 P ₉₀ = 21 P ₉₉ = 26										Percent Operational Time: 99.5						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N6	N6	NNE8	UO	UO	UO	UO	NW4	SW5	S7	S8	SSE9	SE8	ESE8	E8	ENE8	ENE9	E12	ESE14	ESE12	SE13	SSE12	SSE12	SSE14	ESE5.7	SSE14
2-May	S10	SW10	WSW12	WSW12	WNW12	WNW15	WNW15	WNW14	WNW13	WNW13	WSW11	W13	W14	W14	WNW12	WNW12	WNW10	WNW9	WNW6	NE5	ESE8	SSE9	S10	SE10	W7.6	WNW15
3-May	SE9	SE12	SE12	SE12	SSE12	SSE10	SSE11	SSE10	SW6	WNW14	WNW19	WNW17	WNW17	WNW18	WNW13	WNW12	NW11	NW12	NW12	NW20	NW22	NW23	NW19	NNW19	WNW6.9	NW23
4-May	NW18	WNW22	WNW22	WNW21	WNW20	WNW18	NW17	NNW19	NNW15	NNW15	NNW10	WNW14	WNW17	WNW16	W13	W14	W18	W15	WSW13	SW13	SW13	WSW14	W17	WNW18	WNW14.2	WNW22
5-May	WNW14	WNW15	WNW16	NNW17	NNW15	NW7	WNW11	WNW16	NW19	NW19	WNW17	WNW16	WNW16	W15	W15	WNW13	WNW13	N7	N4	E5	ESE9	SE11	SSE12	SSE13	WNW8.5	NW19
6-May	SSE13	SSE14	SSE12	SSE13	SSE13	S16	SSE21	S20	SSW21	SSW21	SSW22	SSW22	SW20	SW23	SSW24	SSW24	SSW22	SSW22	SSW19	SSW16	S16	S15	SSE15	SE11	S16.4	SSW24
7-May	SE15	SE16	SE17	SSE20	SSE23	S29	S22	S23	S18	S17	SSW19	SW20	SW21	WSW18	W17	WNW11	WNW15	WNW17	WNW15	W10	SW8	SW8	W8	WSW5	SSW11.0	S29
8-May	W6	W8	NW7	NW7	WSW6	WNW13	W7	SSE14	S11	S3	N6	NW17	NNW18	NNW21	NNW17	WNW10	WNW20	NW22	NNW23	NNW11	NNW8	NW4	ENE5	SE4	NW7.6	NNW23
9-May	S6	S7	SSW8	SSW5	SW6	SW8	WSW6	WNW9	WNW12	W16	W19	W19	W17	WSW16	WSW17	WSW14	WSW15	WSW12	WSW9	SSW5	SW7	SW10	SW10	SW10	WSW9.8	W19
10-May	SSW9	SSW9	SW12	SSW9	NNW3	NNE5	SSW5	S6	S6	WNW6	WSW7	W7	WNW9	WSW7	SW7	WNW7	WNW5	SW3	SW7	S7	E5	ESE8	ESE8	ESE7	SW3.5	SW12
11-May	SSE9	SSE10	SE11	SSE14	SSW17	S11	S11	SSE9	SSW5	NW6	NNW7	SSE7	S7	SW3	ENE6	SSE8	S7	SSW5	S7	S6	SSW11	S8	W6	WNW2	S6.1	SSW17
12-May	SSW5	WSW4	NW5	NNW6	N9	NW5	NNW5	NE12	NE16	NE17	NE20	NE21	NE21	NE20	NE21	NE22	NE21	NE20	NE17	NE12	N12	N13	N17	N13	NNE11.8	NE22
13-May	NNW14	NW13	WNW13	WNW12	WNW14	WNW16	WNW13	WNW12	WNW11	W14	W15	W14	W11	NW5	NW6	W8	N2	ESE7	WSW9	NNW1	SSE9	SSE10	SSE11	SSE11	W6.5	WNW16
14-May	SSE12	SE14	SSE13	SSE15	SSE14	SSE9	SSW10	SSW9	S11	W5	NW8	WNW9	NW14	NNW26	NNW28	N25	N24	N23	N24	N21	NNW20	N18	N19	N17	NNW6.8	NNW28
15-May	N17	N16	N14	N15	N12	N16	N18	N19	N17	N17	N17	N15	N15	N14	NNE14	NNE13	NNE15	NE15	NE13	NE12	NE10	NE10	NE10	NE9	N13.6	N19
16-May	NE8	ENE6	ENE4	NE6	ENE6	ESE5	ESE8	ESE6	ENE5	NE7	NE7	ENE9	E10	ESE12	E11	SE11	ESE10	ESE13	ESE14	ESE12	ESE12	ESE14	SE15	SE13	ESE8.3	SE15
17-May	SE11	SE12	SE12	SE10	SE11	SE14	SE16	SE16	SE19	SE19	SE19	SSE17	SSE13	SSE16	SE17	SE15	SSE14	SE14	SE15	SE13	ESE16	SE14	ESE11	SE11	SE14.2	SE19
18-May	SE13	SE13	SE13	SE13	SE15	SE13	SE14	SSE15	SE14	SE15	SE21	SE19	SE21	SSE21	SSE21	SSE20	SSE19	SE18	SSE18	SE14	ESE12	ESE12	SSE13	SSE12	SE15.6	SSE21
19-May	SSE13	SSE12	SE11	SSE13	SSE14	SSE15	SSE15	SE16	SSE21	SSE21	SSE21	SSE19	SSE20	SSE17	SSE18	SSE23	SSE27	SSE18	SSE18	SSE19	SE16	SE16	SE15	SE13	SSE16.9	SSE27
20-May	SE14	SE14	SE13	SE13	SE14	SE17	SE16	SE15	SSE17	SSE17	SSE17	SSE18	SE15	SSE16	SSE17	SSE15	SSE13	SSE15	SSE12	SSE12	SSE11	SSE9	SE9	ESE10	SSE13.9	SSE18
21-May	SE8	SSE9	SSE7	SE9	SE7	SE7	SE7	SE8	ESE8	ESE9	SE11	ESE13	ESE21	SE20	SSE16	SSE14	SE13	SE13	SSE13	SSE14	SSE13	SSE12	S10	SSE10	SE10.9	ESE21
22-May	SSE11	SSE9	SE11	SSE13	SSE11	SSE11	SSE12	SSE12	SSE13	SSE14	SE17	SSE18	SSE18	S12	S8	SSE13	SSE17	SSE17	S16	S14	S11	SSE10	SSE11	SSE13	SSE12.7	SSE18
23-May	SSE13	SSE12	SSE12	SSE12	SE10	SSE10	SSE13	SE12	SE16	SE16	SSE15	S17	S17	SE19	SSE25	SSE19	SE19	SE20	SSE16	SSE12	SSE13	S15	SSE9	SE8	SSE14.2	SSE25
24-May	SE9	SSE11	SSE11	SSE12	SSE12	SSE12	SSE13	SE12	SSE12	SE12	SSE16	S20	S21	S18	S20	S20	S23	S19	S17	S14	S11	SSE11	SSE13	SSE14	SSE14.2	S23
25-May	SSE14	S16	SSE14	SSE14	SSE15	SSE16	SSE15	SSE19	S20	S25	S25	S25	S22	S21	S22	S21	S18	S19	S17	S16	SSE12	SSE10	SSE12	SSE13	S17.2	S25
26-May	SSE15	SSE18	SSE18	SSE19	SSE20	SSE19	SSE18	SSE20	SSE20	SSE23	SSE25	S27	S26	S25	S26	S25	S26	S24	S23	S18	W22	WNW19	NNE5	S7	S17.3	S27
27-May	SW8	NW6	WNW7	SSW2	SW3	W5	WNW10	WNW13	WNW11	WNW14	WNW12	WNW14	WNW13	WNW14	W14	W19	W18	W17	W17	WNW12	WSW7	WSW7	WSW7	SW7	W9.9	W19
28-May	SW6	SW7	SW8	SW7	SW7	WSW8	WSW7	W7	WNW10	WNW10	WNW11	WNW13	WNW14	W12	W11	W10	WSW10	W7	NW2	SE4	S9	S8	S9	S10	WSW6.4	WNW14
29-May	S10	S10	S10	S9	SSE11	SSE9	SE10	SE11	SE15	SSE20	SSE21	SSE23	SSE23	SSE27	SSE26	SSE23	SSE24	SSE24	SSE19	SSE14	SSE13	W17	WNW25	NW25	SSE12.7	SSE27
30-May	NW24	WNW24	WNW22	WNW19	WNW18	W16	WNW18	WNW17	NW16	NW17	NW15	NW14	NW10	W8	WNW12	WNW11	WNW10	SW9	SW9	WSW4	S7	S7	SW7	SSW9	WNW11.2	NW24
31-May	SSW10	SW16	WSW12	WSW10	WSW8	WNW7	WNW8	NNW6	NE4	ESE9	ESE11	ESE11	ESE9	ENE7	NE9	NNE14	N22	NNW26	N23	N24	NNW22	NW18	NNW21	NNW19	NNW6.5	NNW26
SSE4.4 S4.8 S4.6 S4.8 S4.8 S4.9 S5.0 S4.5 S4.4 SSW3.9 SSW5.0 SSW5.5 SSW5.1 SSW4.5 SSW4.5 SSW4.6 SSW4.4 S3.6 S4.0 SSE3.4 SSE3.6 S3.9 S3.0 SSE3.3																									Diurnal Average	
NW24 WNW24 WNW22 WNW21 SSE23 S29 S22 S23 SSW21 S25 SSE25 S27 S26 SSE27 NNW28 S25 SSE27 NNW26 N24 N24 NW22 NW23 WNW25 NW25																									Diurnal Maximum	
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

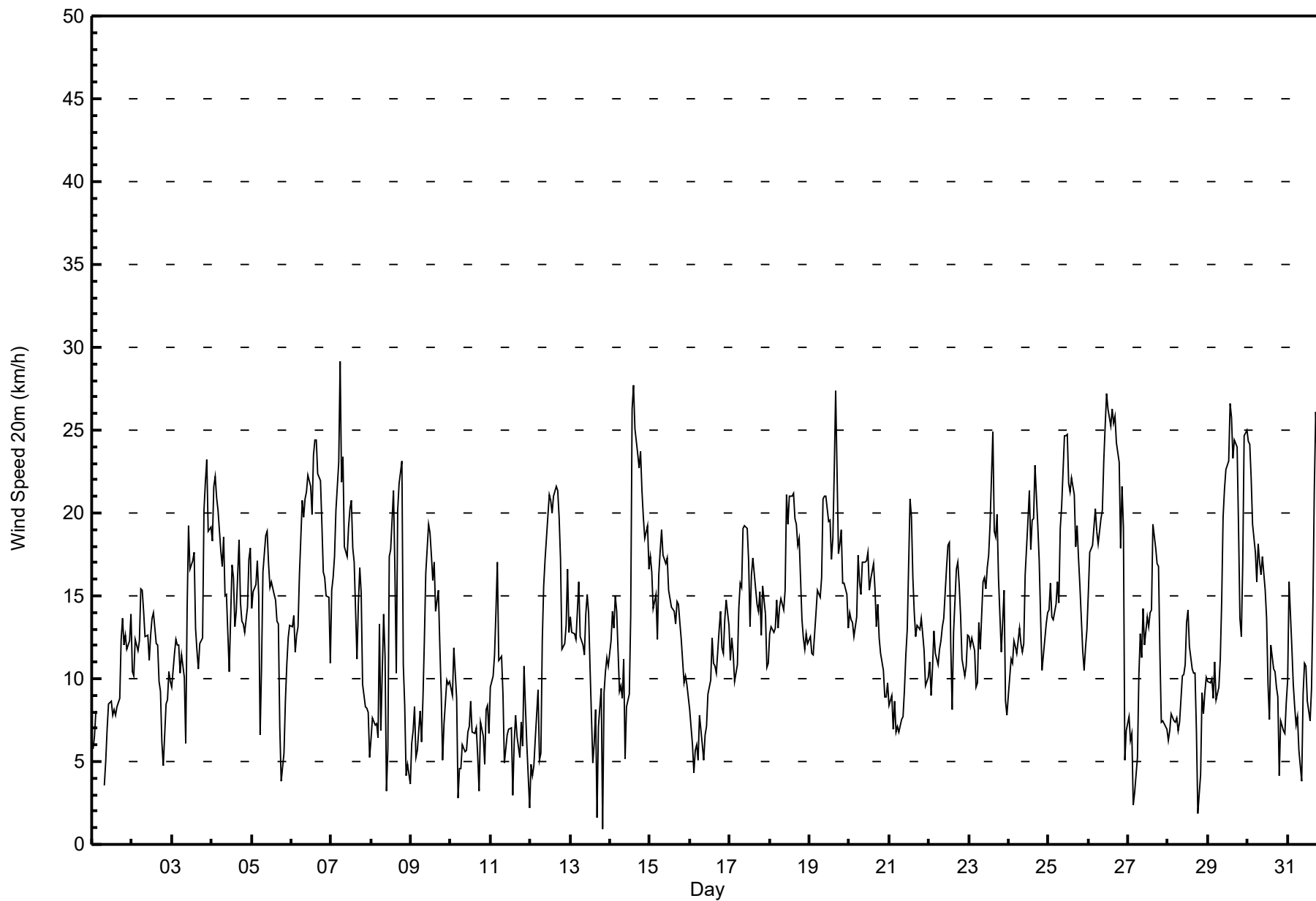
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 29 22:00																	Hours in Service: 744 Hours of Data: 740 Hours of Missing Data: 4 Hours of Calibration: 0 Percent Operational Time: 99.5								
Minimum Value: 1 km/h on May 8 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	1	2	2	UO	UO	UO	UO	1	2	2	3	3	3	3	4	3	3	3	3	3	3	3	2	2	4
2-May	2	3	3	2	3	4	3	3	3	2	3	3	4	4	4	4	3	2	2	2	1	2	1	2	4
3-May	2	2	2	2	2	2	2	2	3	4	4	4	4	4	3	4	3	4	3	6	8	6	4	4	8
4-May	4	5	5	5	5	4	4	5	3	4	3	4	5	7	3	4	6	6	4	4	3	4	5	5	7
5-May	3	4	4	5	3	2	3	4	5	5	5	5	5	4	4	4	4	4	2	1	2	2	2	2	5
6-May	2	2	2	3	2	5	4	5	6	7	7	7	7	7	8	8	7	6	6	5	3	2	3	2	8
7-May	3	3	3	4	5	6	6	7	6	6	6	6	6	5	5	3	4	4	4	3	2	2	2	2	7
8-May	2	2	2	3	2	5	4	3	3	2	4	5	5	6	6	4	6	7	6	2	2	1	2	2	7
9-May	1	1	1	1	1	2	1	3	3	5	5	5	5	5	5	6	4	4	3	1	5	4	2	2	6
10-May	2	2	3	2	2	2	2	2	3	3	2	3	4	3	3	3	3	2	3	2	1	1	2	1	4
11-May	1	2	3	5	5	3	3	2	3	2	2	4	3	5	2	3	3	3	3	2	3	2	1	2	5
12-May	3	1	2	2	1	2	2	4	4	4	5	5	5	5	5	5	5	5	5	3	3	2	3	2	5
13-May	2	3	2	2	3	3	3	3	3	3	3	4	4	4	3	3	2	2	5	1	2	2	2	2	5
14-May	2	2	3	3	3	2	3	3	4	2	3	5	4	6	6	5	6	6	6	5	4	4	4	4	6
15-May	5	3	3	4	4	3	4	4	4	4	4	4	4	5	4	5	4	4	4	3	2	2	2	2	5
16-May	2	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	4	4	4	3	2	3	3	3	4
17-May	2	2	2	2	2	4	3	4	4	5	4	5	5	5	4	4	4	4	4	4	3	3	2	2	5
18-May	2	2	2	2	2	2	3	3	3	4	5	5	5	5	6	5	5	5	4	3	3	2	2	2	6
19-May	2	2	2	2	3	3	3	4	5	5	5	5	6	5	4	8	7	5	4	5	4	4	4	3	8
20-May	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	2	2	2	2	4
21-May	2	2	1	2	1	2	1	2	2	3	3	4	6	5	3	3	3	4	3	3	3	2	2	2	6
22-May	2	2	3	2	2	2	2	3	3	4	5	4	4	6	2	4	4	4	4	3	1	2	2	2	6
23-May	2	2	1	1	2	2	3	3	4	4	3	5	4	6	8	5	5	5	4	3	5	5	2	1	8
24-May	2	2	2	2	2	2	3	3	3	3	5	5	6	5	6	6	6	7	5	3	2	1	2	2	7
25-May	2	2	2	2	2	3	3	5	6	6	6	7	7	6	6	7	6	6	5	4	2	2	2	2	7
26-May	3	3	3	3	3	3	4	4	5	6	6	6	7	8	8	7	7	7	6	4	8	7	2	3	8
27-May	3	2	2	1	1	1	3	3	3	4	3	3	4	4	5	6	5	5	6	4	2	2	1	2	6
28-May	1	1	1	1	1	1	2	2	3	3	3	3	4	4	4	3	4	2	1	2	1	1	1	1	4
29-May	1	1	1	1	2	2	2	3	4	5	5	6	6	7	7	6	6	7	5	4	2	9	6	7	9
30-May	7	7	7	5	5	6	5	4	4	5	5	5	5	3	4	3	3	4	3	2	2	1	2	2	7
31-May	2	4	3	2	2	2	2	2	2	3	3	4	2	2	3	4	6	6	6	7	5	5	7	4	7
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Anzac - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Anzac - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	42	5.68	5.68
6 - 11	233	31.49	37.16
12 - 19	357	48.24	85.41
20 - 28	107	14.46	99.86
29 - 38	1	0.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Anzac - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	2	2	3	2	1	2	0	1	7	4	3	2	2	6	3	42
6 - 11	5	2	8	7	3	18	25	35	33	10	20	16	14	22	9	6	233
12 - 19	21	4	8	0	1	12	59	106	21	4	4	11	26	55	15	10	357
20 - 28	8	0	8	0	0	1	4	27	24	8	4	0	1	8	6	8	107
29 - 38	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	8	26	10	6	32	90	168	80	29	32	30	43	87	36	27	740

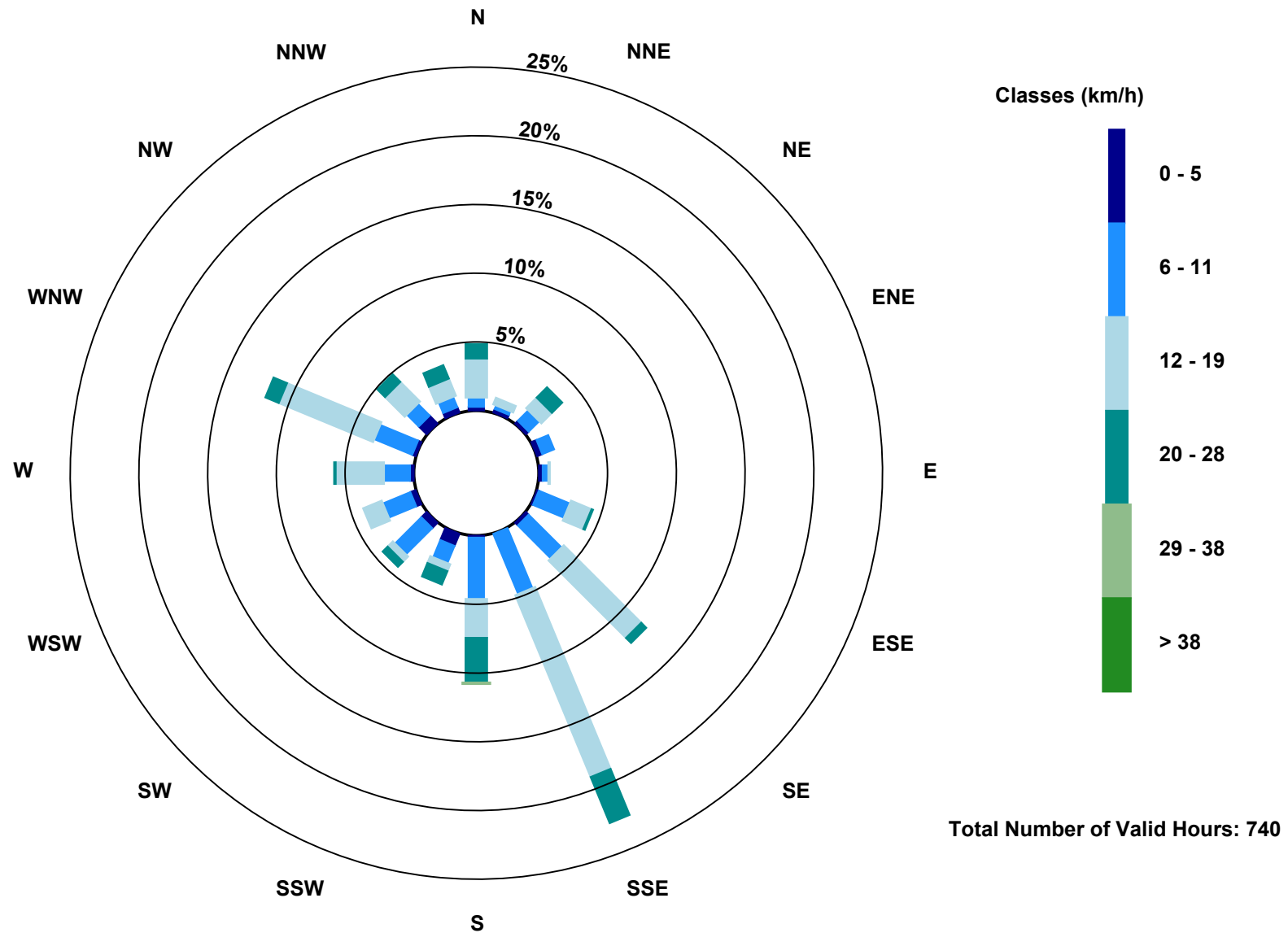
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 20m (WS20) - km/h
Anzac





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Anzac - May 2025

Direction of Maximum Speed: 174 deg on May 7 06:00 Direction of Maximum Daily Speed Average: 173.2 deg on May 26																				Hours in Service: 744					
Direction of Minimum Speed: 339 deg on May 13 20:00 Direction of Minimum Daily Speed Average: 3.5 deg on May 10																				Hours of Data: 740					
Monthly Average Direction: 185.2 deg																				Hours of Missing Data: 4					
																				Percent Operational Time: 99.5					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	359	10	21	UO	UO	UO	UO	307	233	184	178	159	134	119	88	62	75	81	105	113	133	147	149	158	119.2
2-May	181	231	243	249	284	294	287	287	282	287	256	277	275	275	288	301	295	296	288	51	102	158	173	146	267.8
3-May	130	144	140	145	151	157	163	156	236	289	286	287	290	288	283	294	306	313	317	315	316	324	322	328	291.0
4-May	324	302	300	292	288	297	312	342	335	338	338	295	286	299	271	281	281	269	243	235	233	238	259	286	291.2
5-May	285	291	294	331	341	308	301	299	316	316	287	291	287	278	278	290	293	352	5	87	110	133	151	161	298.0
6-May	149	154	148	157	149	169	160	171	200	212	212	213	217	230	209	206	210	201	200	195	184	175	160	145	190.1
7-May	137	138	146	153	167	174	180	184	189	185	202	214	220	254	274	284	285	301	284	265	231	223	262	253	205.3
8-May	276	275	305	326	252	293	277	163	175	186	2	315	347	346	333	291	297	311	330	344	342	306	60	133	314.0
9-May	175	186	194	207	218	232	244	286	291	274	276	274	264	258	252	250	237	255	256	209	216	234	221	219	248.3
10-May	205	213	219	199	346	23	196	175	184	290	253	259	295	249	228	290	283	219	226	181	87	108	117	121	217.0
11-May	163	156	146	155	202	179	181	168	194	318	337	157	170	231	77	161	176	203	172	170	196	185	264	284	177.7
12-May	198	246	315	327	358	322	346	49	50	46	36	42	46	38	49	50	50	52	53	40	7	3	350	350	32.5
13-May	327	322	296	294	297	295	301	299	295	279	260	272	270	304	310	262	7	113	237	339	158	165	162	155	278.7
14-May	147	146	159	157	167	167	201	192	182	260	318	299	306	332	336	350	3	2	353	350	345	351	353	356	342.6
15-May	358	351	353	352	355	355	350	352	1	6	350	10	355	2	16	29	26	42	39	39	34	40	44	43	9.4
16-May	43	77	71	47	68	115	118	119	67	55	47	65	83	107	100	125	115	112	115	114	119	121	127	131	101.6
17-May	144	143	131	131	130	144	142	139	144	138	145	156	154	160	143	142	151	142	137	126	116	137	121	131	140.3
18-May	141	144	140	135	136	136	145	150	136	143	144	143	144	151	161	148	147	145	147	143	118	123	152	156	143.8
19-May	153	147	145	156	155	159	166	146	149	159	157	156	164	160	156	159	165	149	152	151	140	138	140	140	153.4
20-May	142	145	143	143	142	142	141	146	151	154	154	152	145	147	147	162	154	163	153	149	153	151	132	118	147.6
21-May	142	157	156	139	146	140	128	146	113	118	131	122	117	133	151	147	140	144	148	153	153	155	170	158	141.2
22-May	157	157	143	154	154	154	151	153	157	161	146	156	158	182	172	154	168	158	173	183	175	160	157	160	160.1
23-May	159	160	160	159	145	148	155	137	145	145	157	171	176	129	156	150	140	131	147	147	160	178	164	139	152.1
24-May	139	154	157	149	147	150	147	145	159	142	157	170	171	175	185	189	174	179	185	184	172	164	163	160	166.0
25-May	165	173	168	164	150	152	156	167	174	176	177	172	176	179	174	176	183	178	180	178	168	158	152	147	170.2
26-May	150	158	152	152	152	152	154	163	155	160	167	175	177	190	178	178	186	178	177	179	277	286	31	188	173.2
27-May	217	322	282	209	215	275	292	288	286	290	290	297	291	281	266	261	264	263	291	246	247	248	222		274.0
28-May	234	219	225	219	223	238	245	270	289	290	294	293	296	270	275	263	251	261	309	136	173	183	176	179	249.9
29-May	172	175	175	171	161	152	141	138	145	152	158	160	151	155	153	155	157	155	157	154	152	262	290	313	164.2
30-May	318	294	285	293	294	279	287	297	314	310	310	320	316	279	303	294	282	228	226	243	189	181	214	197	288.4
31-May	195	221	248	257	254	289	293	340	55	121	120	114	121	73	38	30	355	347	356	359	333	325	328	337	342.2
168.0 184.4 187.1 178.3 178.5 185.4 186.4 176.9 180.4 192.3 195.5 200.3 200.3 208.3 198.0 195.0 198.6 176.4 180.5 158.8 166.8 180.3 176.2 164.1																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

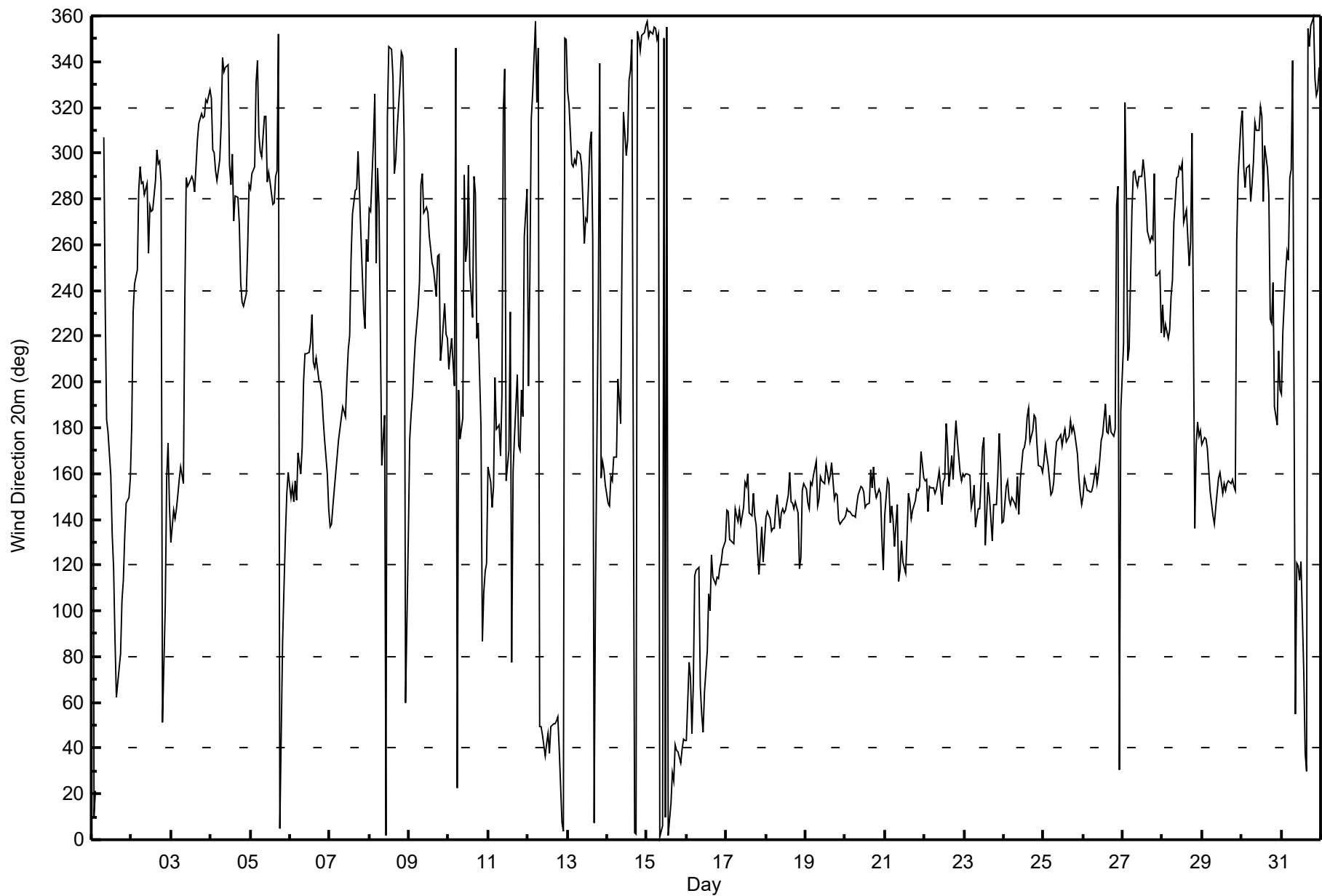
Anzac - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 85 deg on May 11 14:00																		Hours in Service: 744							
Minimum Value: 5 deg on May 28 23:00																		Hours of Data: 740							
Percentiles: P ₁ = 7 P ₁₀ = 11 Q ₁ = 14 Median = 17 Q ₃ = 22 P ₉₀ = 36 P ₉₉ = 70																		Hours of Missing Data: 4							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.5							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	17	13	15	UO	UO	UO	UO	39	41	29	29	38	44	42	50	38	34	19	15	14	13	11	11	10	50
2-May	20	29	18	11	17	14	13	14	17	15	23	22	20	20	30	32	24	23	24	31	15	20	7	18	32
3-May	17	11	11	11	10	9	10	15	54	17	16	16	16	15	21	23	24	19	14	14	15	13	14	13	54
4-May	15	15	15	16	16	16	17	14	15	16	23	16	18	27	19	18	18	28	17	16	18	16	17	16	28
5-May	15	15	15	28	15	19	18	19	19	20	22	26	26	22	26	28	30	58	69	17	15	11	14	10	69
6-May	10	9	12	11	10	11	12	19	19	19	19	20	25	22	22	21	20	19	17	17	12	9	13	12	25
7-May	13	13	12	11	11	11	14	16	22	18	19	20	21	25	17	19	19	16	17	18	26	19	14	21	26
8-May	21	19	29	35	29	37	68	16	24	71	64	20	21	20	18	36	19	17	15	11	10	24	44	43	71
9-May	17	9	7	14	10	13	22	20	17	20	19	20	22	24	26	30	20	26	20	13	17	30	17	14	30
10-May	15	13	17	15	72	31	64	51	64	69	41	36	54	44	36	33	49	68	25	24	35	10	18	20	72
11-May	9	8	15	15	24	27	15	15	50	29	42	52	55	85	38	26	46	58	28	28	19	23	11	83	85
12-May	41	39	41	27	10	26	26	18	19	19	19	20	19	20	18	16	16	15	14	15	14	14	12	15	41
13-May	13	13	11	11	11	13	17	19	30	19	17	20	37	79	59	38	84	30	41	83	9	7	9	10	84
14-May	11	12	14	12	15	11	29	31	26	46	37	71	24	15	16	16	18	16	17	18	13	15	15	16	71
15-May	15	14	14	15	17	14	14	15	17	18	18	25	26	31	30	34	29	18	19	15	10	10	11	11	34
16-May	12	10	11	6	14	16	19	39	65	53	63	47	43	37	39	45	36	28	19	14	14	13	14	14	65
17-May	13	11	14	13	12	13	14	16	17	20	21	24	38	26	22	24	17	19	20	19	14	16	16	11	38
18-May	13	10	10	11	10	13	13	13	17	19	19	20	21	18	20	23	21	17	15	15	14	14	13	8	23
19-May	9	11	12	11	11	11	14	17	15	17	18	20	22	19	17	21	15	16	14	13	16	16	15	14	22
20-May	14	15	15	14	15	15	15	14	14	15	15	15	16	15	14	14	15	15	13	14	11	14	16	11	16
21-May	16	10	11	13	11	13	17	20	26	27	24	23	18	17	15	16	16	16	14	12	12	12	12	14	27
22-May	12	15	14	11	11	13	14	13	15	21	18	16	15	40	33	18	14	16	21	16	8	11	9	8	40
23-May	9	7	6	7	10	13	13	16	16	18	15	19	19	22	19	16	16	17	15	15	19	14	10	11	22
24-May	12	9	14	11	12	11	12	16	15	15	16	18	20	19	22	19	17	19	17	14	10	8	8	9	22
25-May	10	9	9	11	11	11	13	14	18	16	17	19	22	21	20	23	21	21	17	13	11	10	10	10	23
26-May	10	9	10	11	10	10	12	13	13	15	18	17	19	23	19	18	19	16	14	13	31	20	41	31	41
27-May	42	23	16	56	27	14	15	16	19	16	19	19	25	21	26	19	24	20	22	17	16	15	14	22	56
28-May	17	9	9	9	9	8	14	21	20	16	21	19	20	30	39	34	38	31	57	38	8	8	5	5	57
29-May	5	8	8	6	7	9	13	15	16	14	16	15	18	16	14	14	15	15	14	12	9	55	18	15	55
30-May	15	23	19	17	17	18	17	17	16	17	22	28	55	55	25	23	34	26	21	33	13	12	16	12	55
31-May	15	18	17	14	13	14	15	40	56	29	27	22	23	29	23	21	19	16	18	17	17	25	22	17	56
42 39 41 56 72 37 68 51 65 71 64 71 55 85 59 45 84 68 69 83 35 55 44 83																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Anzac - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS17
WAPASU
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	35	37	99.73	28.8	0	4.2	0
H2S (ppb) Average	706	36	38	99.73	1	0	0.3	0
THC (ppm) Average	707	35	37	99.73	3	-	2.5	-
O3 (ppb) Average	707	35	37	99.73	74.8	0	54.9	-
NO2 (ppb) Average	707	37	37	100	24.6	0	5.2	-
NO (ppb) Average	707	37	37	100	15.2	-	0.8	-
NOX (ppb) Average	707	37	37	100	39.8	-	5.3	-
PM2.5 (ug/m3) Average	741	3	3	100	341.7	0	152.6	3
Temperature 2 m (C) Average	744	0	0	100	31.1	-	25.4	-
Relative Humidity (%) Average	743	0	1	99.87	100	-	83.2	-
Wind Speed 10 m (km/h) Average	744	0	0	100	22	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-
Precipitation (mm) Total	743	0	1	99.87	6.7	-	20.7	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	0.56	1.8	-	0	0	0	0	0.3	1.7	28.8
H2S (ppb) Average	706	0.1	0.1	-	0	0	0	0.1	0.2	0.2	1
THC (ppm) Average	707	2.26	0.1	-	2.1	2.2	2.2	2.2	2.3	2.3	3
O3 (ppb) Average	707	37.6	10	-	10.3	25.2	30.3	38.1	44.3	50	74.8
NO2 (ppb) Average	707	1.81	2.3	-	0.2	0.4	0.6	1.1	2.1	4.1	24.6
NO (ppb) Average	707	0.17	0.6	-	0	0	0	0.1	0.1	0.4	15.2
NOX (ppb) Average	707	1.98	2.6	-	0.2	0.4	0.6	1.1	2.3	4.5	39.8
PM2.5 (ug/m3) Average	741	15.3	41.9	-	0.8	2	2.7	3.6	6.2	23.2	341.7
Temperature 2 m (C) Average	744	12.99	6.8	-	-2.9	4.2	8.5	12.6	17.1	22.1	31.1
Relative Humidity (%) Average	743	52.66	21.8	-	16.8	26.9	35.1	48.6	69.3	87.1	100
Wind Speed 10 m (km/h) Average	744	11.3	4	-	0	5	8	12	14	17	22
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	743	-	-	44.37	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MAY 2025

OPERATIONAL NOTES

Parameter	27 May 2025 13:00 Start	27 May 2025 14:00 End	2 (Hours)	Notes
ALL GASEOUS ANALYZERS	27 May 2025 13:00	27 May 2025 14:00	2	Maintenance - sample manifold cleaned
Precipitation Collector	20 May 2025 12:00	20 May 2025 12:00	1	DAS Failure - data not recorded
Relative Humidity	01 Jun 2025 00:00	01 Jun 2025 00:00	1	Sensor operated out of range



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

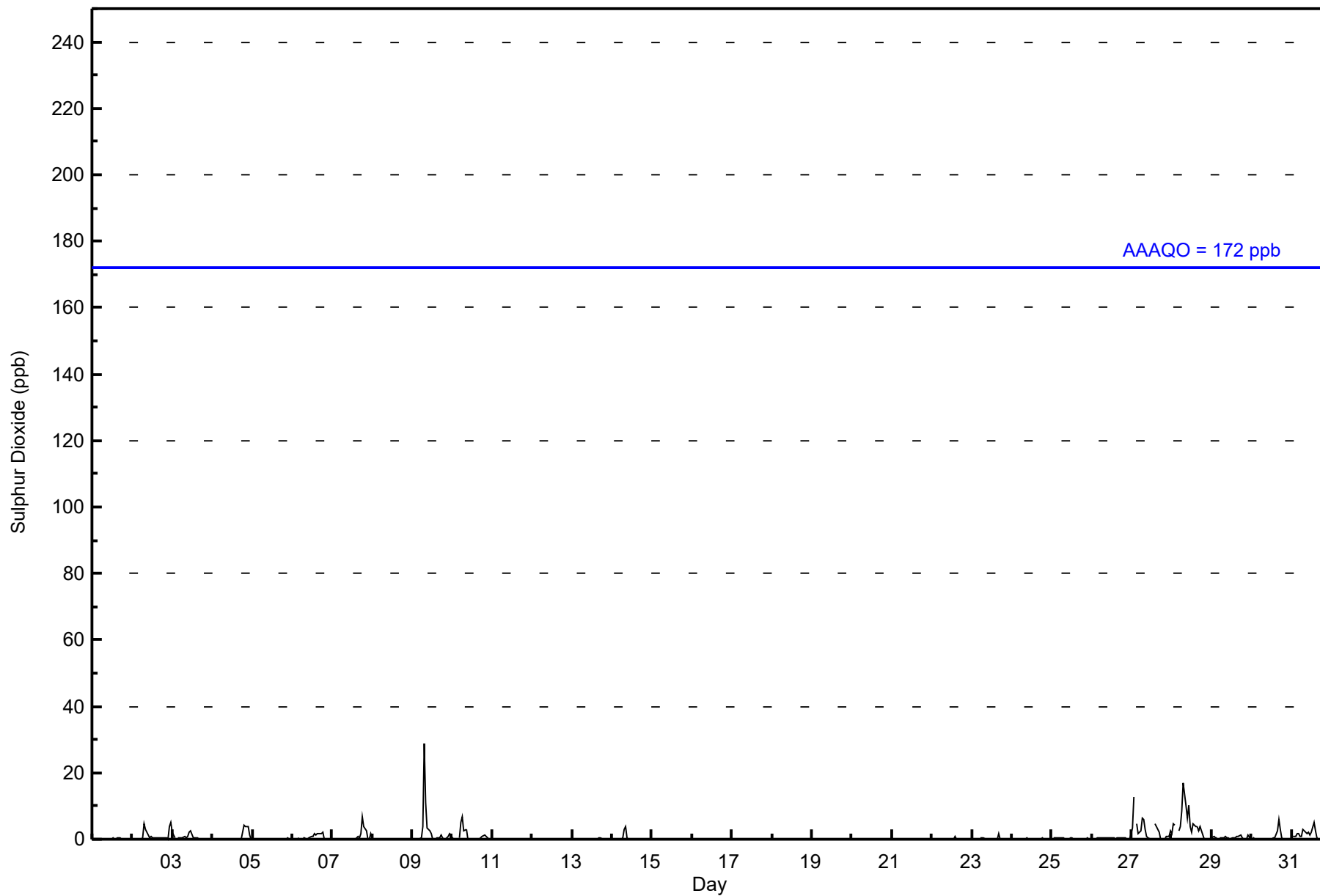
Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 28.8 ppb on May 9 08:00 Maximum Daily Average: 4.2 ppb on May 28																			Hours of Data: 707							
Minimum Value: 0.0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 12																			Hours of Missing Data: 37							
Maximum Diurnal Average: 2.2 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 22																			Hours of Calibration: 35							
Monthly Average: 0.56 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.3 P ₉₀ = 1.7 P ₉₉ = 6.6																			Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
2-May	0.0	Z	0.2	0.0	0.0	0.0	0.6	4.6	3.0	1.4	0.6	0.7	0.3	0.4	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.2	3.7	4.9	1.0	4.9
3-May	2.3	0.3	Z	0.3	0.3	0.4	0.4	0.7	0.6	0.7	2.3	2.4	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.5	2.4
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.4	3.8	3.8	1.3	0.1	0.7	4.4
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
6-May	0.0	0.0	0.0	0.2	0.3	Z	0.3	0.2	0.2	0.2	0.4	1.0	0.8	1.9	1.1	1.7	1.8	1.5	2.1	0.0	0.0	0.0	0.0	0.2	0.6	2.1
7-May	Z	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.1	0.7	0.3	1.7	6.6	3.8	2.7	0.0	0.2	1.8	1.0	6.6
8-May	0.5	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
9-May	0.0	0.1	Z	0.0	0.1	0.2	3.7	28.8	10.9	3.2	2.3	1.9	0.1	0.1	0.1	0.5	0.5	1.4	0.3	0.0	0.1	0.8	1.7	1.4	2.5	28.8
10-May	0.5	0.0	0.0	Z	0.6	5.2	6.6	2.6	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	1.3	0.7	0.5	0.2	0.0	1.0	6.6
11-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.3
14-May	0.0	Z	0.0	0.0	0.0	0.0	0.2	2.8	3.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.7
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-May	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
19-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
23-May	0.0	0.1	0.1	0.1	Z	0.5	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6
24-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.1	0.1	0.5
25-May	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.4
26-May	0.3	Z	0.1	0.3	0.2	0.4	0.3	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.4	0.3	0.3	0.5	0.4	0.1	0.2	0.1	0.3	0.5
27-May	3.3	12.8	Z	4.6	1.5	2.6	6.3	5.8	3.1	1.1	0.2	0.1	M	M	4.5	3.6	2.3	0.1	0.0	0.1	0.2	0.7	0.7	2.7	2.7	12.8
28-May	1.6	4.5	4.2	Z	2.8	4.0	8.6	16.7	10.4	6.2	10.0	3.9	2.1	4.5	3.7	3.6	2.5	3.9	2.7	0.0	0.2	0.0	0.0	0.0	4.2	16.7
29-May	0.6	0.9	0.5	0.4	Z	0.4	0.5	0.6	0.8	0.4	0.5	0.2	0.2	0.4	0.3	0.7	0.8	1.2	0.4	0.1	0.1	0.1	1.3	0.0	0.5	1.3
30-May	0.2	0.3	0.2	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	2.7	5.8	2.8	0.4	0.1	0.0	0.1	0.0	0.0	0.6	5.8
31-May	Z	0.8	0.8	1.7	1.8	0.9	1.0	3.0	1.9	1.9	2.0	1.4	2.1	4.9	2.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	703	99.43	99.43
11 - 20	3	0.42	99.86
21 - 60	1	0.14	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	58	39	9	10	8	24	72	211	88	28	44	32	24	13	16	27	703
11 - 20	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
21 - 60	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	39	9	10	8	24	72	211	88	31	45	32	24	13	16	27	707

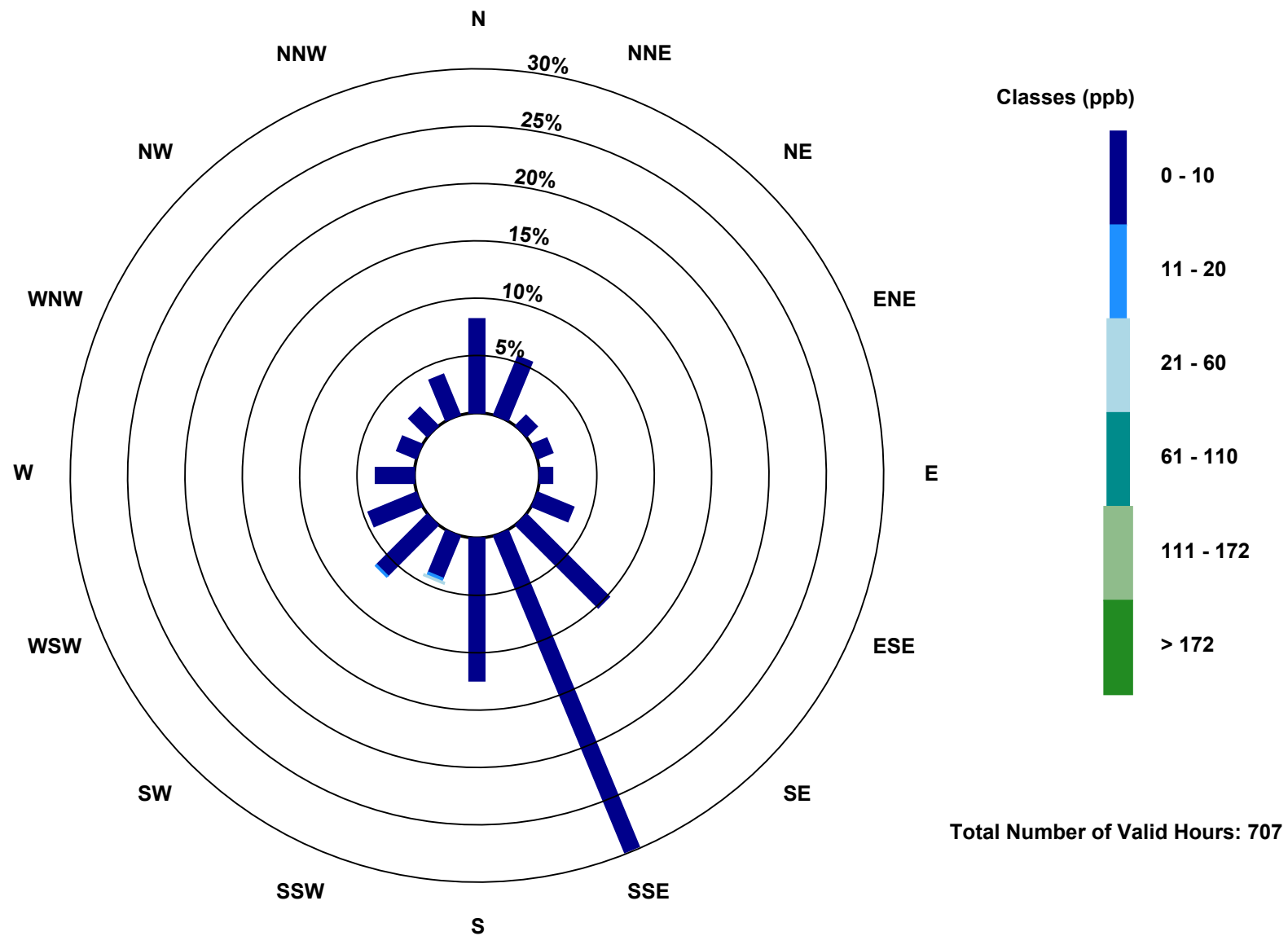
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

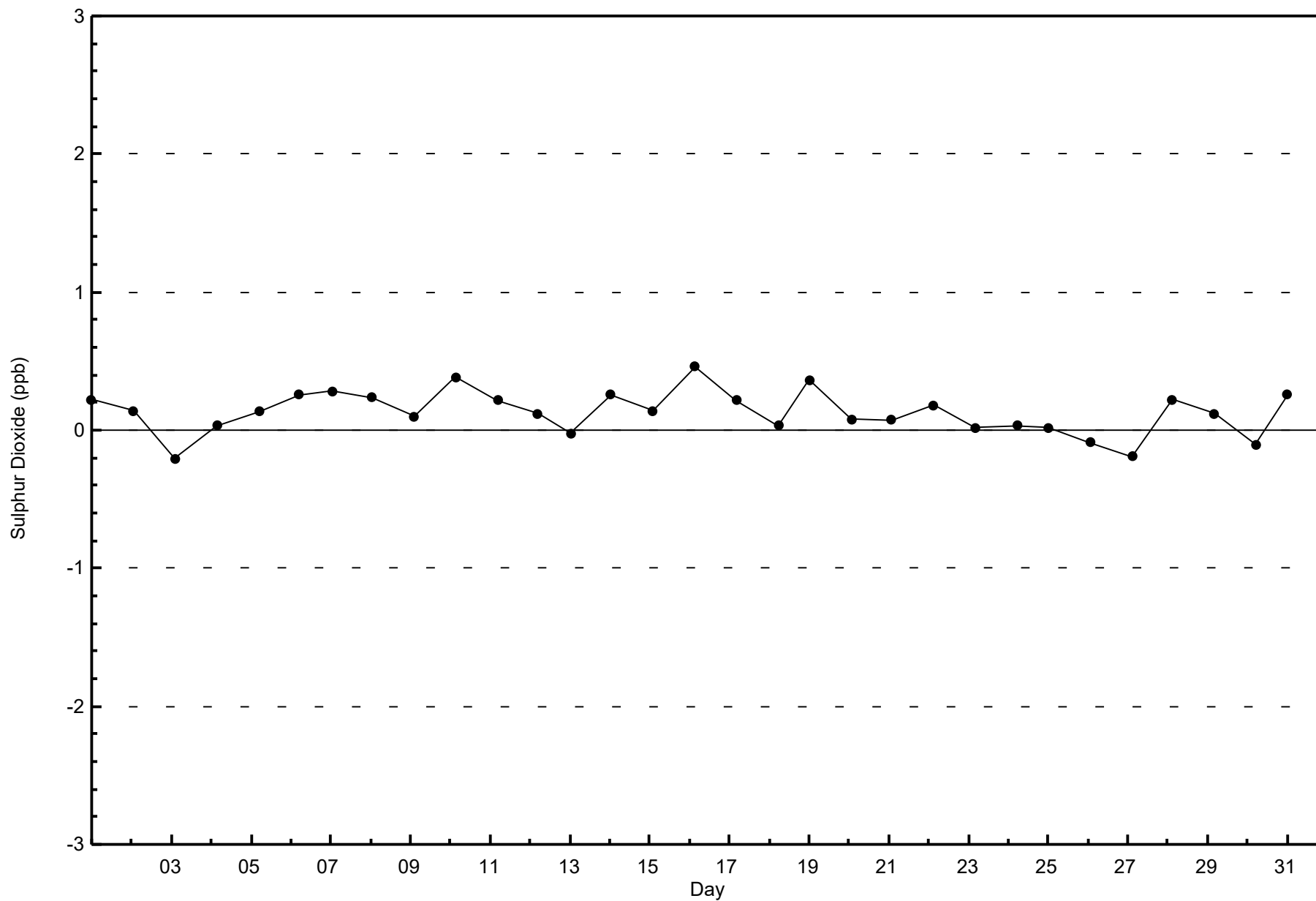
Sulphur Dioxide (SO₂) - ppb
Wapasu

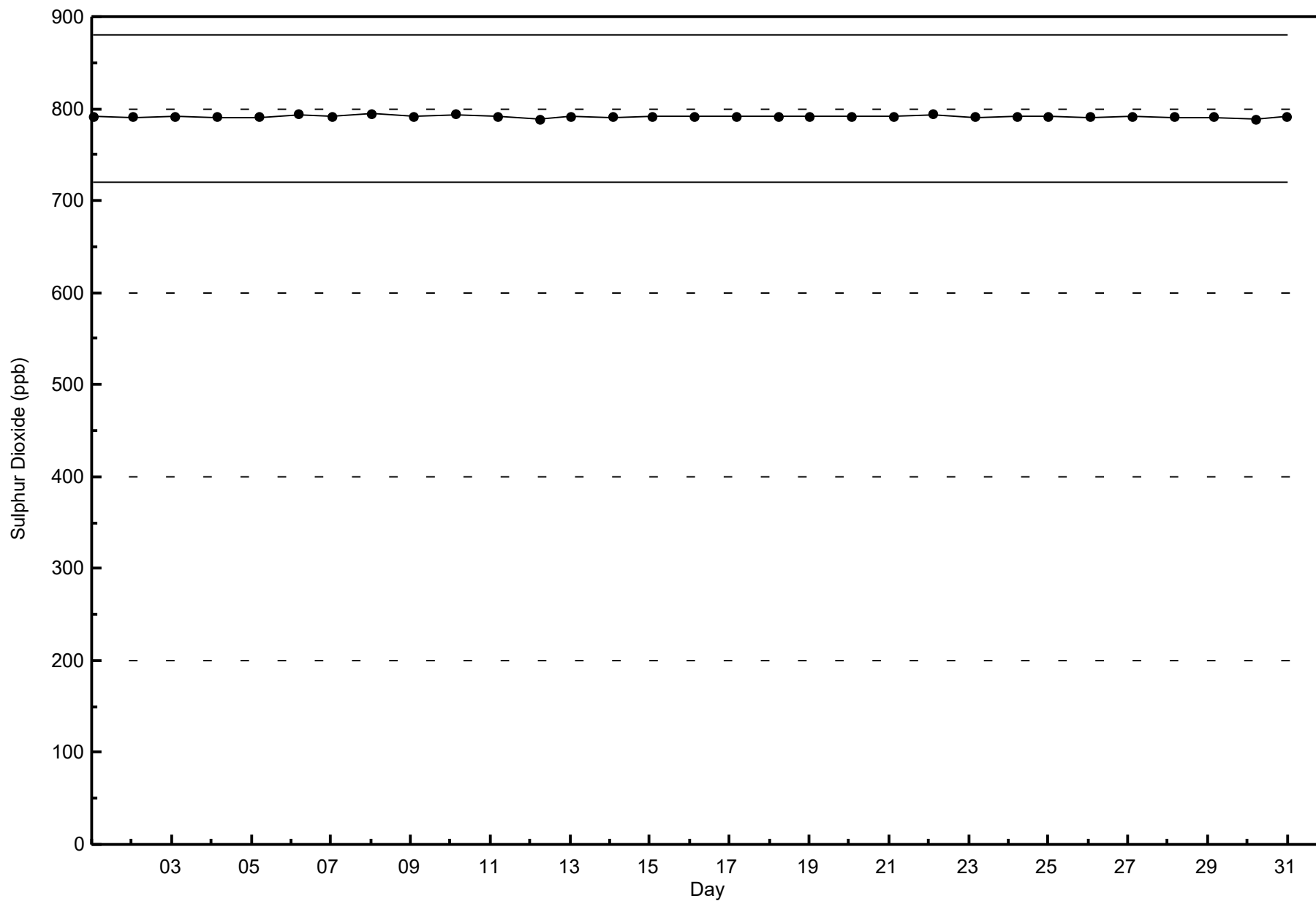




Wood Buffalo Environmental Association
Zero Responses

Sulphur Dioxide (SO₂) - ppb
Wapasu - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

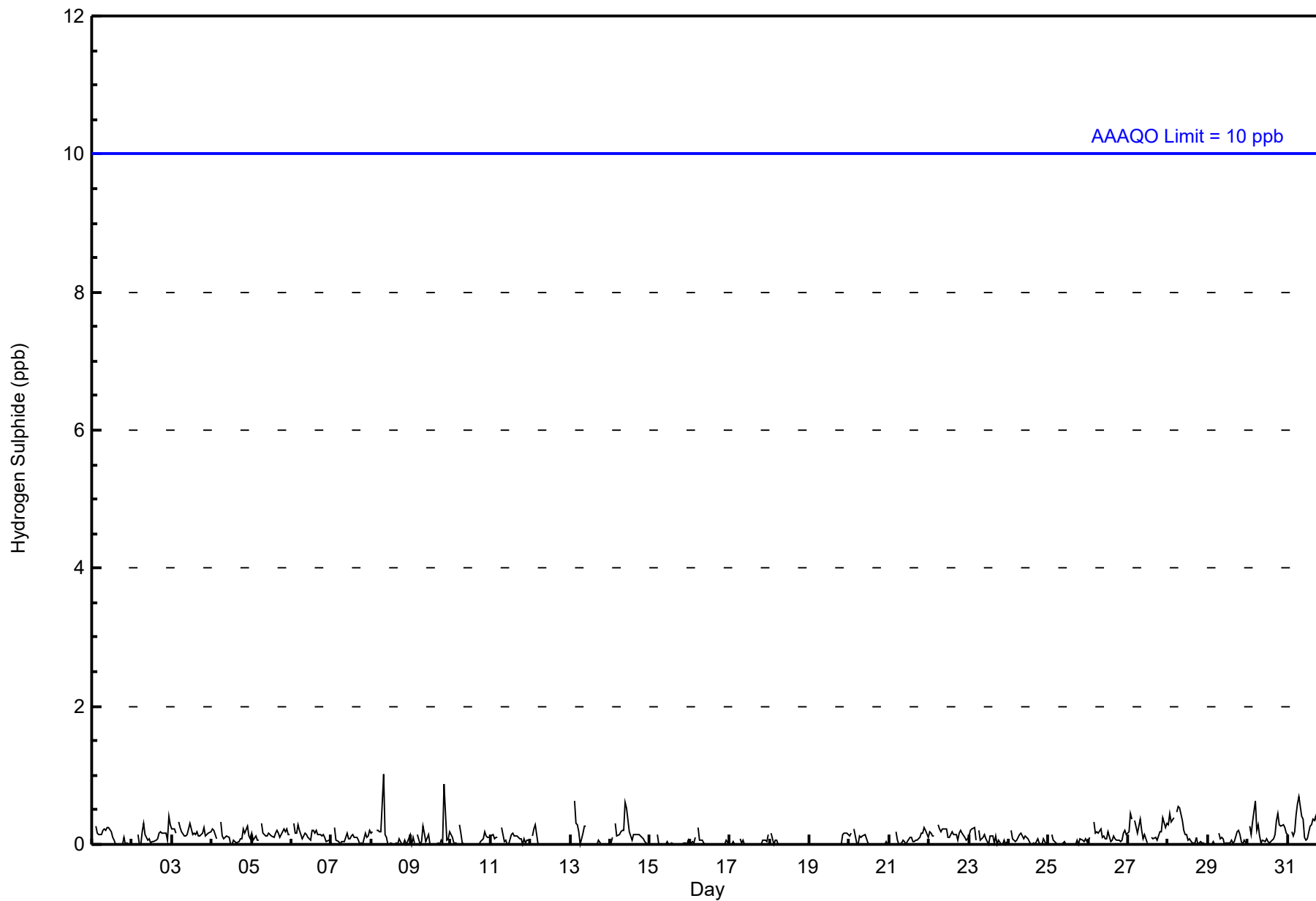
Wapasu - May 2025

Number of Exceedences (AAAQO): Maximum Value: 1.0 ppb on May 8 08:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.3 ppb on May 31																			Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 16:00 Maximum Diurnal Average: 0.2 ppb at hour 8 Monthly Average: 0.10 ppb																			Minimum Daily Average: 0.0 ppb on May 18 Minimum Diurnal Average: 0.1 ppb at hour 12 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.5																			Hours of Data: 706	
																																						Hours of Missing Data: 38	
																																						Hours of Calibration: 36	
																																						Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-May	0.0	Z	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3													
2-May	0.0	0.0	Z	0.1	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.3	0.1	0.4													
3-May	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.3													
4-May	0.2	0.2	0.1	0.1	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.3													
5-May	0.2	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.3													
6-May	Z	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.3													
7-May	0.0	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.2													
8-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	1.0													
9-May	0.0	0.1	0.0	Z	0.1	0.0	0.0	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.1	0.1	0.2	0.1	0.9													
10-May	0.1	0.1	0.0	0.0	Z	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.3													
11-May	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.3													
12-May	Z	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3													
13-May	0.0	Z	0.6	0.3	0.3	0.2	0.0	0.2	0.3	0.3	C	C	C	C	C	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6													
14-May	0.0	0.1	Z	0.3	0.1	0.1	0.2	0.2	0.2	0.6	0.5	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.6													
15-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1													
16-May	0.0	0.0	0.0	0.1	Z	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3													
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1													
18-May	Z	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2													
19-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.2													
20-May	0.1	0.2	Z	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2													
21-May	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2													
22-May	0.2	0.2	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3													
23-May	0.1	0.2	0.2	0.2	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2													
24-May	Z	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2													
25-May	0.0	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.2													
26-May	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.3													
27-May	0.2	0.5	0.4	Z	0.4	0.2	0.3	0.4	0.2	0.1	0.1	0.0	M	M	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.2	0.3	0.2	0.5													
28-May	0.3	0.4	0.3	0.4	Z	0.5	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5													
29-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.2													
30-May	Z	0.3	0.2	0.3	0.6	0.2	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.6													
31-May	0.1	Z	0.2	0.1	0.2	0.4	0.6	0.7	0.4	0.4	0.1	0.1	0.1	0.3	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.7													
0.1 0.2 0.1 0.2 0.1 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																										Diurnal Average													
0.3 0.5 0.6 0.4 0.6 0.5 0.6 1.0 0.4 0.6 0.5 0.3 0.2 0.3 0.3 0.4 0.3 0.4 0.4 0.4 0.3 0.9 0.4 0.4 0.3																										Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																							
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																																							



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	57	41	10	10	8	23	70	215	87	31	47	33	24	14	13	23	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	41	10	10	8	23	70	215	87	31	47	33	24	14	13	23	706

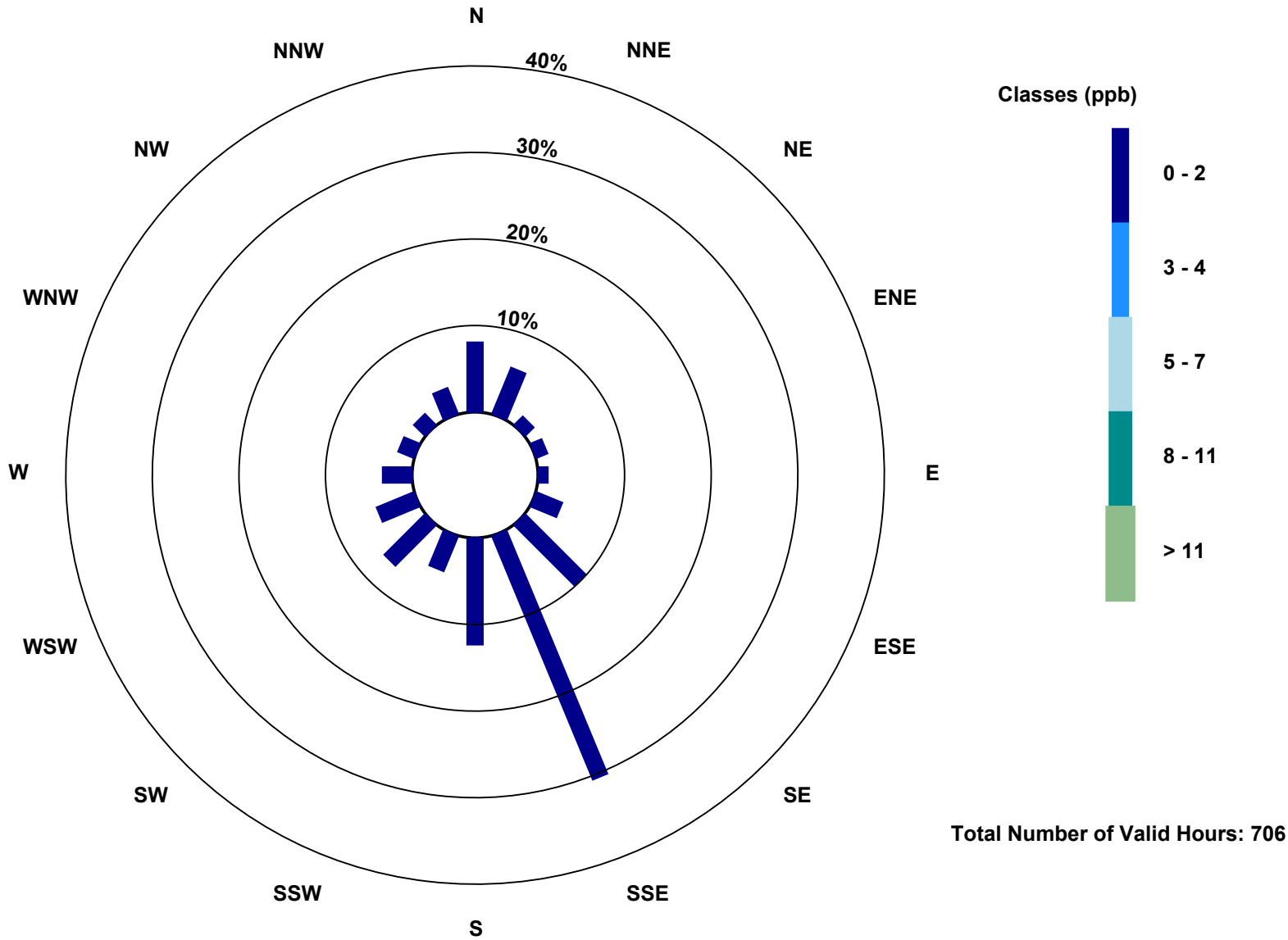
Total Number of Valid Hours: 706

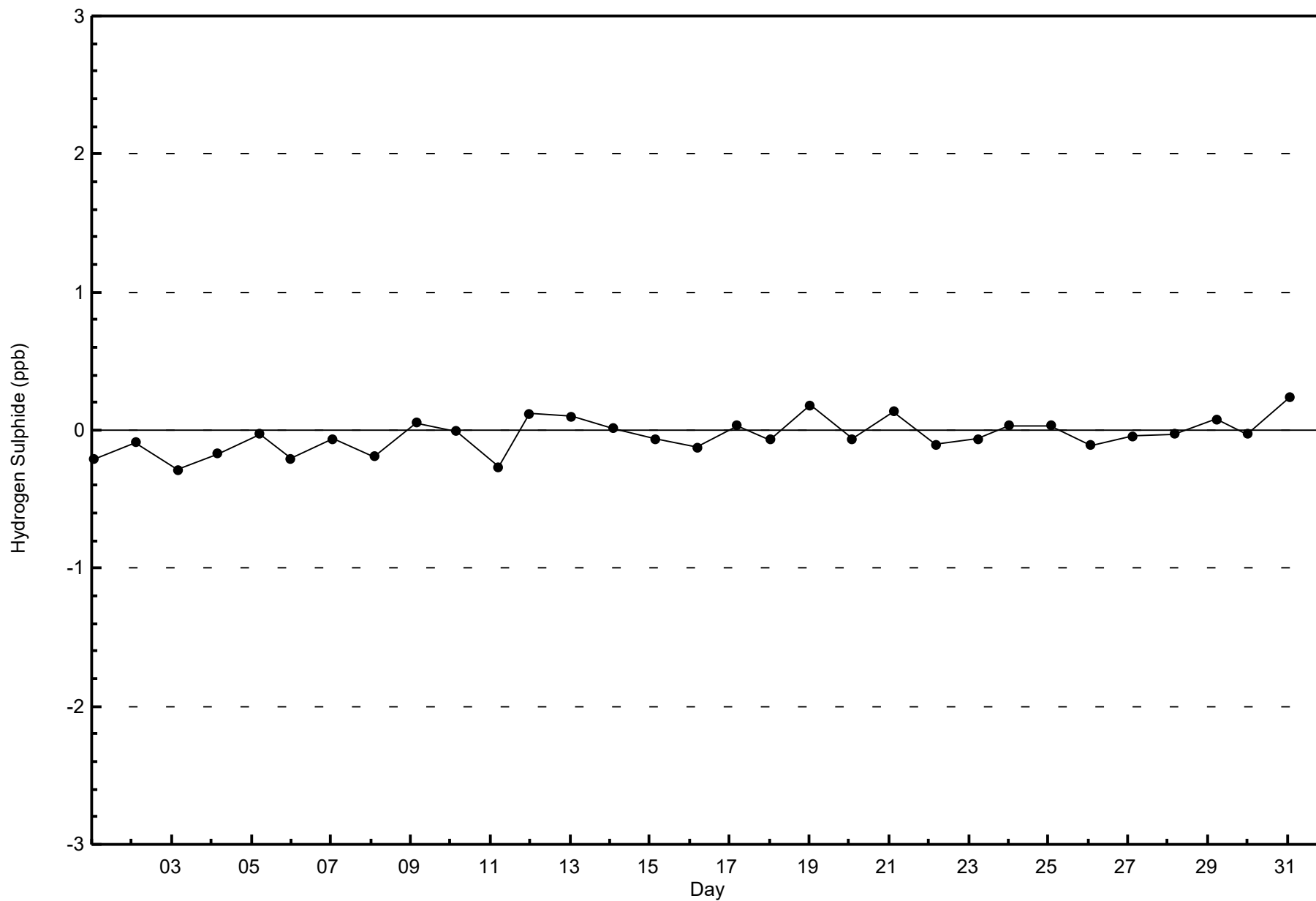
Total Number of Hours: 744

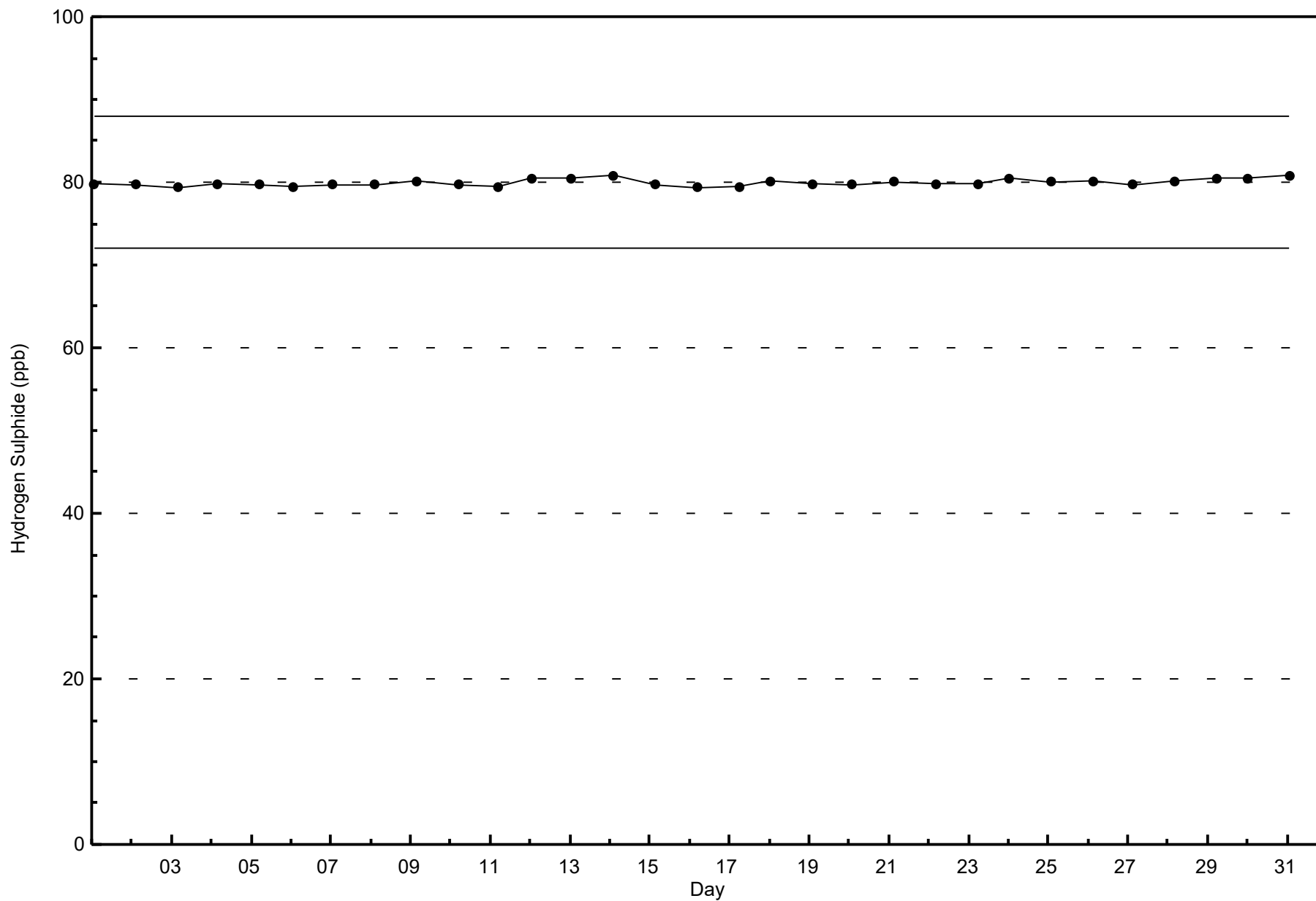


Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Wapasu









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

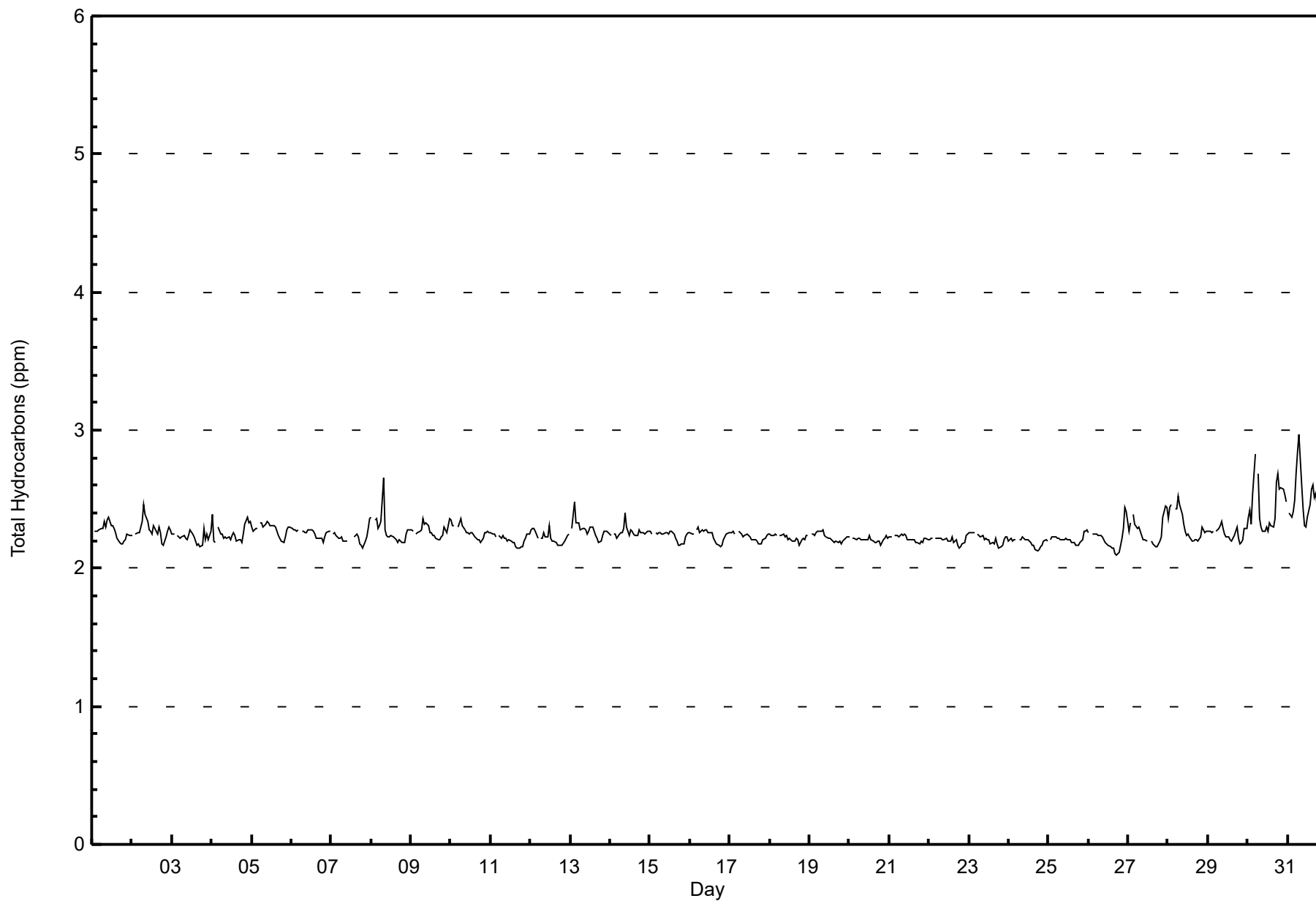
Wapasu - May 2025

Maximum Value: 3.0 ppm on May 31 08:00										Maximum Daily Average: 2.5 ppm on May 31										Hours in Service: 744						
Minimum Value: 2.1 ppm on May 26 18:00										Minimum Daily Average: 2.2 ppm on May 24										Hours of Data: 707						
Maximum Diurnal Average: 2.3 ppm at hour 8										Minimum Diurnal Average: 2.2 ppm at hour 19										Hours of Missing Data: 37						
Monthly Average: 2.26 ppm										Percentiles: P ₁ = 2.1 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.2 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.6										Hours of Calibration: 35						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
2-May	2.2	Z	2.2	2.3	2.3	2.3	2.3	2.5	2.4	2.3	2.3	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	
3-May	2.2	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	
4-May	2.4	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.3	
5-May	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	
6-May	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	
7-May	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	C	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.4	2.2	
8-May	2.4	Z	2.4	2.4	2.3	2.3	2.3	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	
9-May	2.3	2.3	Z	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.3	
10-May	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	
11-May	2.3	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
12-May	2.3	2.3	2.3	2.3	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
13-May	Z	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	
14-May	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	
15-May	2.3	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	
16-May	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	
17-May	2.3	2.3	2.3	2.2	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
18-May	2.2	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
19-May	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
20-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
21-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
22-May	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	
23-May	2.3	2.3	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	
24-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	
25-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	
26-May	2.3	Z	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.2	
27-May	2.3	2.3	Z	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	M	M	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.3	
28-May	2.4	2.4	2.5	Z	2.4	2.4	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	
29-May	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	
30-May	2.4	2.4	2.3	2.5	2.8	Z	2.7	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.7	2.6	2.6	2.6	2.5	2.5	2.4	
31-May	Z	2.4	2.4	2.4	2.5	2.7	2.8	3.0	2.6	2.4	2.3	2.3	2.4	2.5	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.5	
2.3																									Diurnal Average	
2.4																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Wapasu - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	707	100.00	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Wapasu - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	58	39	9	10	8	24	72	211	88	31	45	32	24	13	16	27	707
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	39	9	10	8	24	72	211	88	31	45	32	24	13	16	27	707

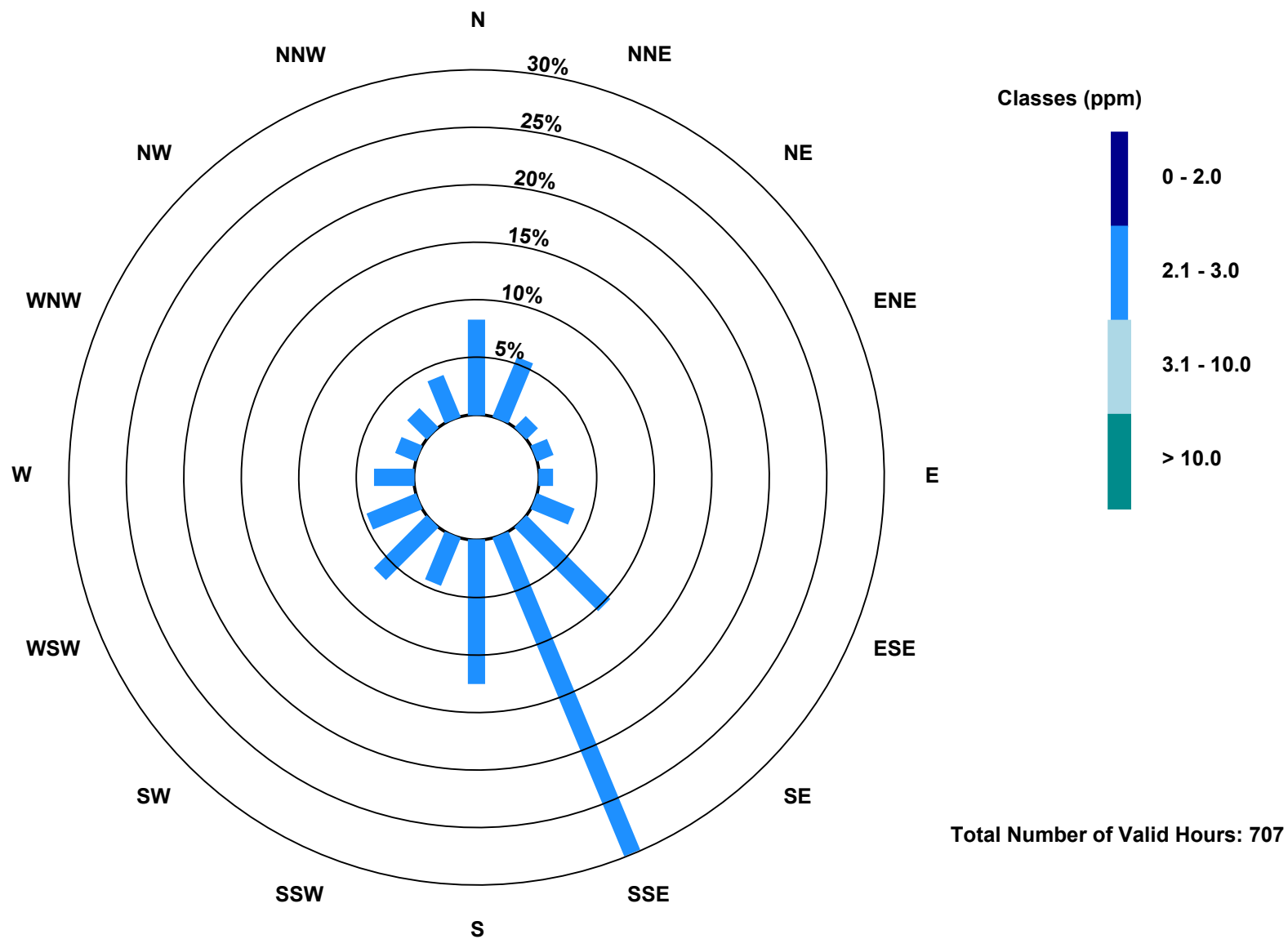
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

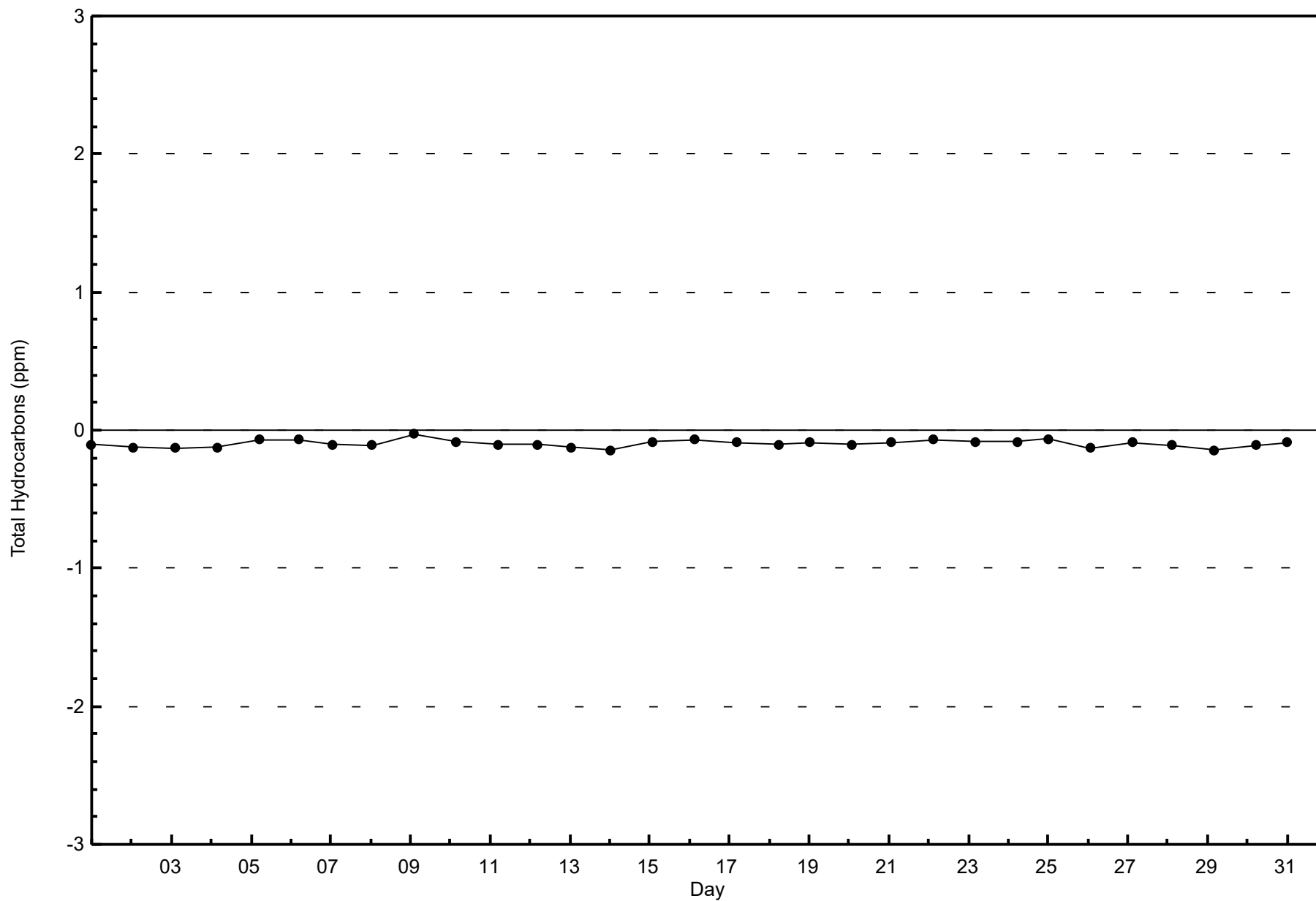
Total Hydrocarbons (THC) - ppm
Wapasu





Wood Buffalo Environmental Association
Zero Responses

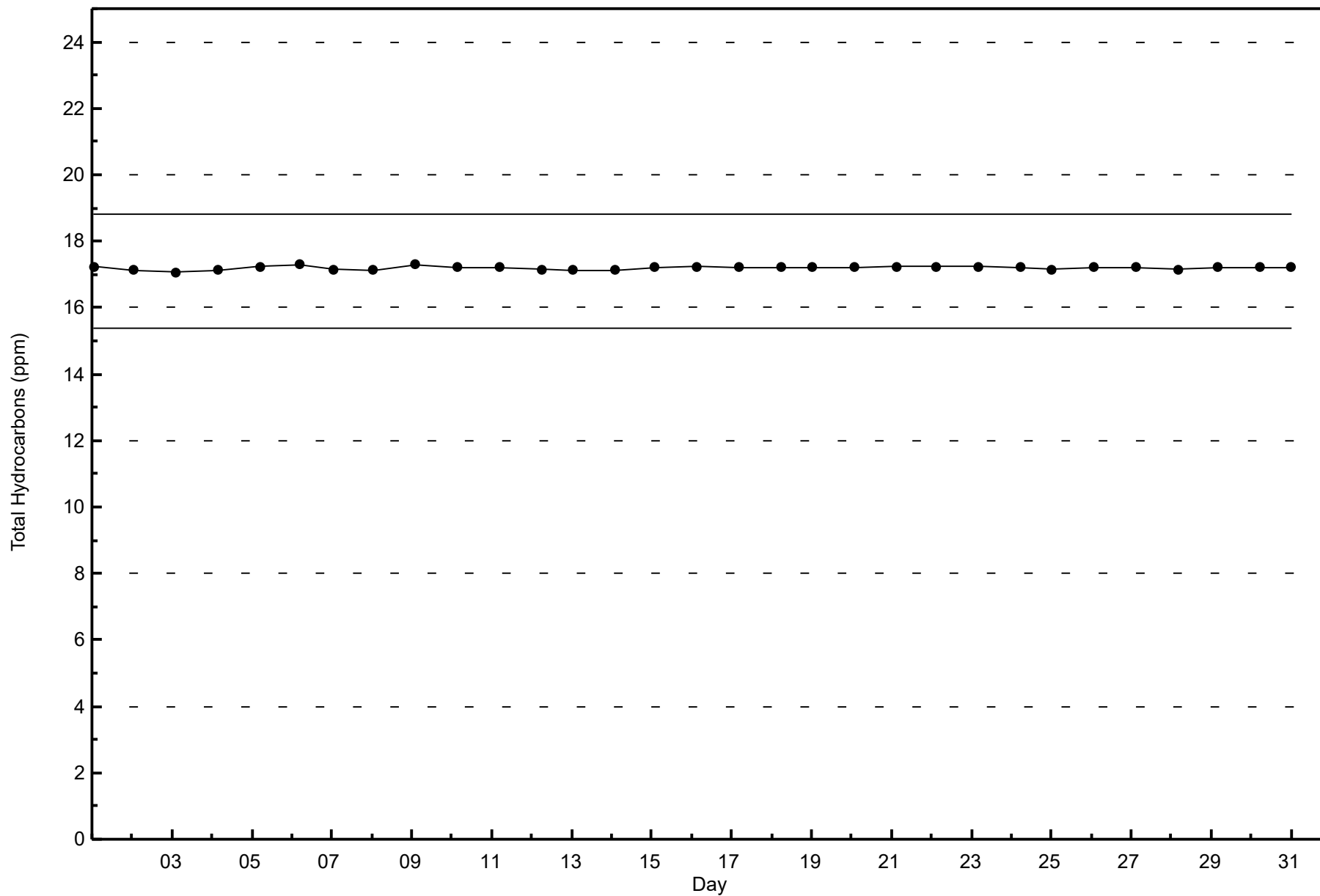
Total Hydrocarbons (THC) - ppm
Wapasu - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

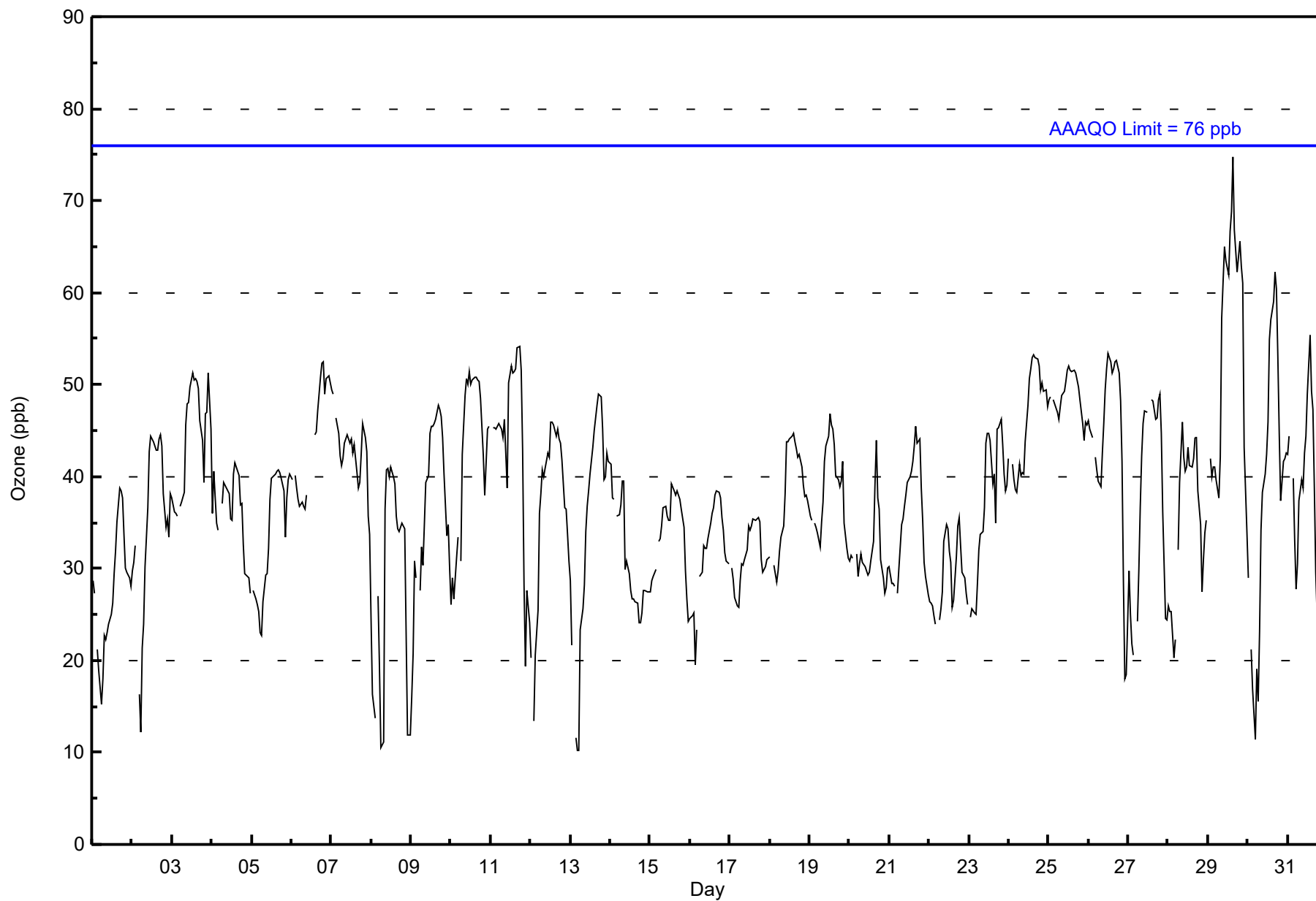
Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 74.8 ppb on May 29 16:00 Maximum Daily Average: 54.9 ppb on May 29																				Hours in Service: 744 Hours of Data: 707						
Minimum Value: 10.3 ppb on May 13 05:00 Maximum Diurnal Average: 44.3 ppb at hour 16 Monthly Average: 37.60 ppb																				Minimum Daily Average: 27.6 ppb on May 1 Minimum Diurnal Average: 30.1 ppb at hour 5 Percentiles: P ₁ = 11.9 P ₁₀ = 25.2 Q ₁ = 30.3 Median = 38.1 Q ₃ = 44.3 P ₉₀ = 50.0 P ₉₉ = 63.5		Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	28.7	27.3	Z	21.3	19.0	15.2	18.1	22.8	22.2	23.0	24.0	25.0	26.2	29.5	31.9	35.1	38.7	38.4	37.6	33.6	30.1	29.6	29.0	28.1	27.6	38.7
2-May	29.8	30.7	32.4	Z	16.3	12.2	21.4	24.0	30.2	36.5	42.7	44.3	44.2	43.7	42.9	42.8	44.1	44.5	43.3	38.2	34.5	35.3	33.5	38.2	35.0	44.5
3-May	37.6	36.1	36.0	35.7	Z	36.8	37.2	38.4	45.6	47.9	48.1	49.8	51.2	50.4	50.6	50.4	49.5	46.1	43.9	39.3	46.8	47.0	51.3	45.2	44.4	51.3
4-May	35.9	40.5	37.7	35.0	34.1	Z	37.1	39.3	39.1	38.7	38.1	35.4	35.3	40.3	41.5	41.0	40.1	37.0	37.1	32.7	29.4	29.1	28.9	27.2	36.1	41.5
5-May	Z	27.6	26.7	26.0	25.3	23.0	22.7	26.4	29.2	29.5	32.1	37.5	39.9	40.1	40.3	40.5	40.7	40.4	39.8	38.5	33.4	37.7	39.7	40.3	33.8	40.7
6-May	39.6	Z	40.2	38.7	37.5	36.8	37.3	36.8	36.5	37.9	C	C	C	C	44.6	44.9	47.2	50.8	52.4	52.5	48.9	50.7	50.9	50.2	43.9	52.5
7-May	49.5	48.9	Z	46.4	44.7	42.2	41.2	41.9	43.6	44.5	44.1	43.6	44.1	42.6	43.5	40.4	38.7	39.3	42.5	45.8	44.2	42.7	35.7	33.8	42.8	49.5
8-May	24.7	16.4	13.8	Z	27.0	19.3	10.5	11.2	36.5	40.7	40.8	40.0	41.1	39.9	39.2	35.7	34.2	34.0	35.0	34.7	34.3	23.0	11.8	11.9	28.5	41.1
9-May	16.0	20.8	30.9	29.0	Z	27.6	32.3	30.4	34.7	39.4	40.1	44.7	45.4	45.5	45.7	46.2	47.8	47.2	46.5	44.2	40.3	33.6	34.8	30.1	37.1	47.8
10-May	26.0	29.0	26.7	31.2	33.5	Z	30.7	42.4	48.7	50.6	50.0	51.4	50.0	50.5	50.8	50.8	50.4	50.3	48.5	42.3	38.1	41.5	45.2	45.4	42.8	51.4
11-May	Z	45.2	45.3	45.2	45.5	45.7	45.2	44.2	46.2	42.5	38.7	50.1	52.0	51.2	51.5	51.8	54.1	54.2	51.6	42.9	28.2	19.4	27.6	24.0	43.6	54.2
12-May	20.2	Z	13.4	20.6	25.4	36.0	38.1	40.7	40.0	40.9	42.6	42.1	46.0	45.9	45.6	44.4	45.1	44.1	43.6	41.8	36.6	36.5	33.7	30.9	37.1	46.0
13-May	28.6	21.6	Z	11.6	10.3	10.3	23.4	25.7	28.3	34.1	36.8	38.5	40.3	43.2	45.0	46.4	47.8	49.0	48.6	45.1	39.7	39.9	42.6	41.6	34.7	49.0
14-May	41.3	37.7	37.5	Z	35.7	35.8	36.9	39.6	39.5	29.8	30.8	29.5	27.6	26.7	26.8	26.3	26.3	24.1	24.1	25.2	27.6	27.6	27.5	27.4	30.9	41.3
15-May	27.5	28.7	29.1	29.8	Z	33.0	33.2	34.7	36.6	36.8	35.8	35.2	35.3	39.3	38.5	37.9	38.4	38.0	37.5	36.4	34.4	29.8	26.6	24.3	33.8	39.3
16-May	24.6	24.9	25.2	19.6	23.3	Z	29.2	29.6	32.5	32.1	32.1	33.2	35.0	36.1	36.7	38.0	38.4	38.2	37.7	35.5	34.1	31.7	30.9	30.5	31.7	38.4
17-May	Z	30.1	28.9	26.8	25.9	25.8	28.7	30.4	30.4	31.0	32.0	34.6	34.2	34.7	35.4	35.2	35.3	35.5	35.0	31.0	29.7	30.3	31.0	31.0	31.4	35.5
18-May	31.2	Z	30.4	29.4	28.6	29.8	31.8	33.4	34.6	38.2	43.7	43.8	44.0	44.4	44.8	43.8	43.0	42.1	42.3	41.1	39.0	37.9	37.9	37.4	37.9	44.8
19-May	35.7	35.2	Z	35.0	34.4	33.9	32.4	35.1	37.3	41.6	43.3	44.4	46.8	45.5	45.1	43.5	40.1	39.6	39.0	39.5	41.6	35.0	32.2	31.1	38.6	46.8
20-May	30.8	31.4	31.2	Z	31.5	29.2	30.6	31.5	30.7	30.2	29.8	29.3	29.5	30.8	33.0	39.1	44.0	37.6	36.5	31.0	29.0	27.3	27.9	30.1	31.8	44.0
21-May	30.2	28.4	28.4	28.0	Z	27.4	30.0	34.8	35.5	36.7	38.0	39.3	39.9	40.6	41.6	43.3	45.5	43.7	44.0	38.7	35.3	30.7	29.1	27.1	35.5	45.5
22-May	26.5	26.3	25.9	24.9	24.0	Z	24.4	25.7	27.5	33.0	34.7	34.3	31.9	30.6	25.8	26.5	31.3	34.6	35.6	32.4	29.6	28.9	27.4	26.0	29.0	35.6
23-May	Z	24.7	25.6	25.1	25.1	28.3	32.0	33.8	34.0	36.6	43.7	44.6	44.6	44.0	39.2	40.3	34.9	45.2	45.4	46.2	43.5	40.3	38.4	39.0	37.2	46.2
24-May	42.0	Z	41.3	39.7	38.6	38.2	41.3	40.1	40.5	40.2	43.8	47.8	50.6	51.8	53.0	53.2	52.9	52.8	52.0	49.5	50.2	49.3	49.4	47.6	46.3	53.2
25-May	48.4	48.6	Z	48.3	47.5	46.9	46.3	47.6	48.8	49.3	50.3	51.5	52.0	51.6	51.4	51.6	51.3	50.6	49.8	48.4	45.8	44.0	45.9	45.7	48.8	52.0
26-May	46.1	45.2	44.3	Z	42.0	40.8	39.5	38.9	42.6	45.7	49.4	51.7	53.4	52.5	51.3	51.7	52.4	52.6	51.2	48.2	41.6	28.5	18.1	18.5	43.8	53.4
27-May	29.7	25.1	21.9	20.5	Z	24.3	29.9	36.7	42.2	45.7	47.1	46.9	M	M	48.4	48.2	46.2	46.4	48.3	48.9	44.6	36.1	24.6	24.4	37.4	48.9
28-May	25.9	25.3	25.3	20.3	22.3	Z	32.1	39.4	46.0	42.1	40.6	41.1	43.1	41.2	41.0	41.9	44.3	44.3	38.5	34.8	27.4	31.0	33.9	35.2	35.5	46.0
29-May	Z	41.9	40.0	41.0	41.0	39.7	37.6	42.1	57.2	61.2	64.9	63.5	61.9	66.6	68.8	74.8	66.8	62.3	63.9	65.6	62.9	61.1	43.2	33.9	54.9	74.8
30-May	28.9	Z	21.2	16.9	11.4	19.0	15.5	23.1	34.2	38.2	40.3	42.4	45.8	55.0	57.0	59.1	62.3	60.3	53.1	44.8	37.4	41.6	42.0	42.6	38.8	62.3
31-May	42.5	44.4	Z	39.8	33.0	27.7	30.5	37.4	39.7	38.7	42.6	44.4	49.0	55.4	49.3	47.2	38.9	29.6	24.7	23.7	22.7	17.3	24.2	28.1	36.1	55.4
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	28	3.96	3.96
21 - 50	616	87.13	91.09
51 - 82	63	8.91	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	3	0	3	0	1	4	5	4	0	2	0	0	3	2	1	0	28
21 - 50	54	41	7	10	6	18	66	198	55	28	39	30	17	11	14	22	616
51 - 82	0	0	0	0	0	1	0	13	30	2	5	3	4	1	1	3	63
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	41	10	10	7	23	71	215	85	32	44	33	24	14	16	25	707

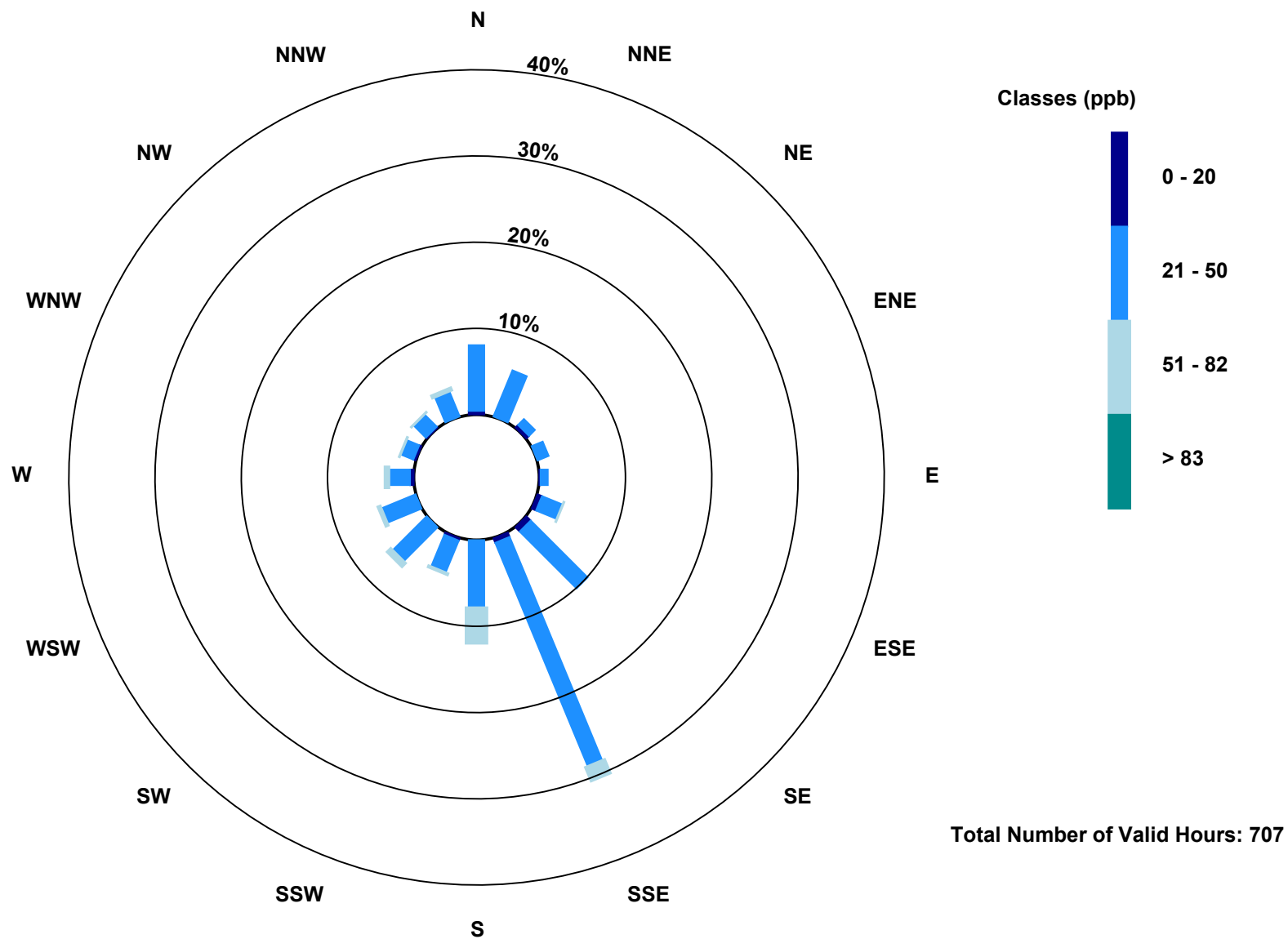
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

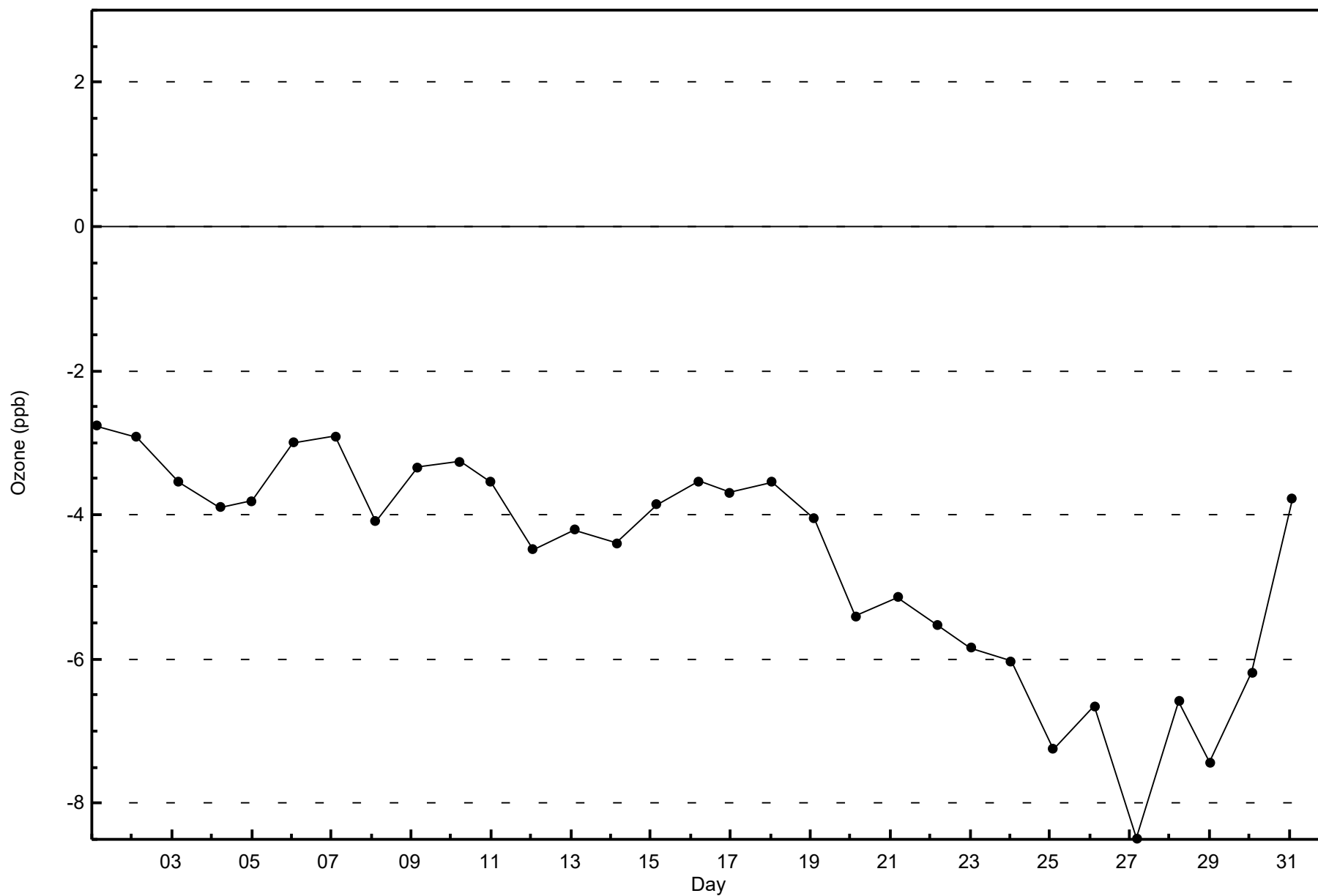
Ozone (O_3) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

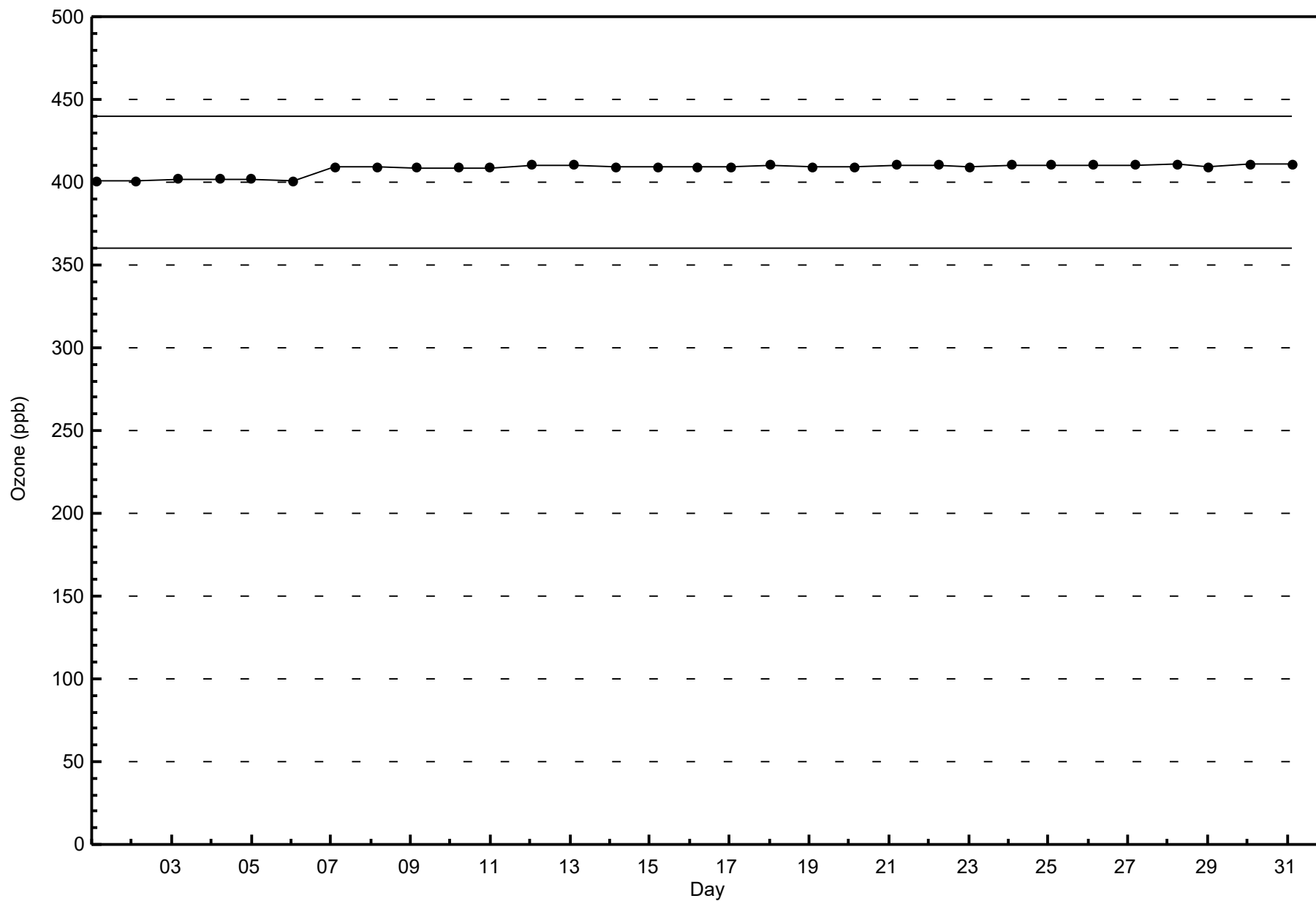
Ozone (O₃) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

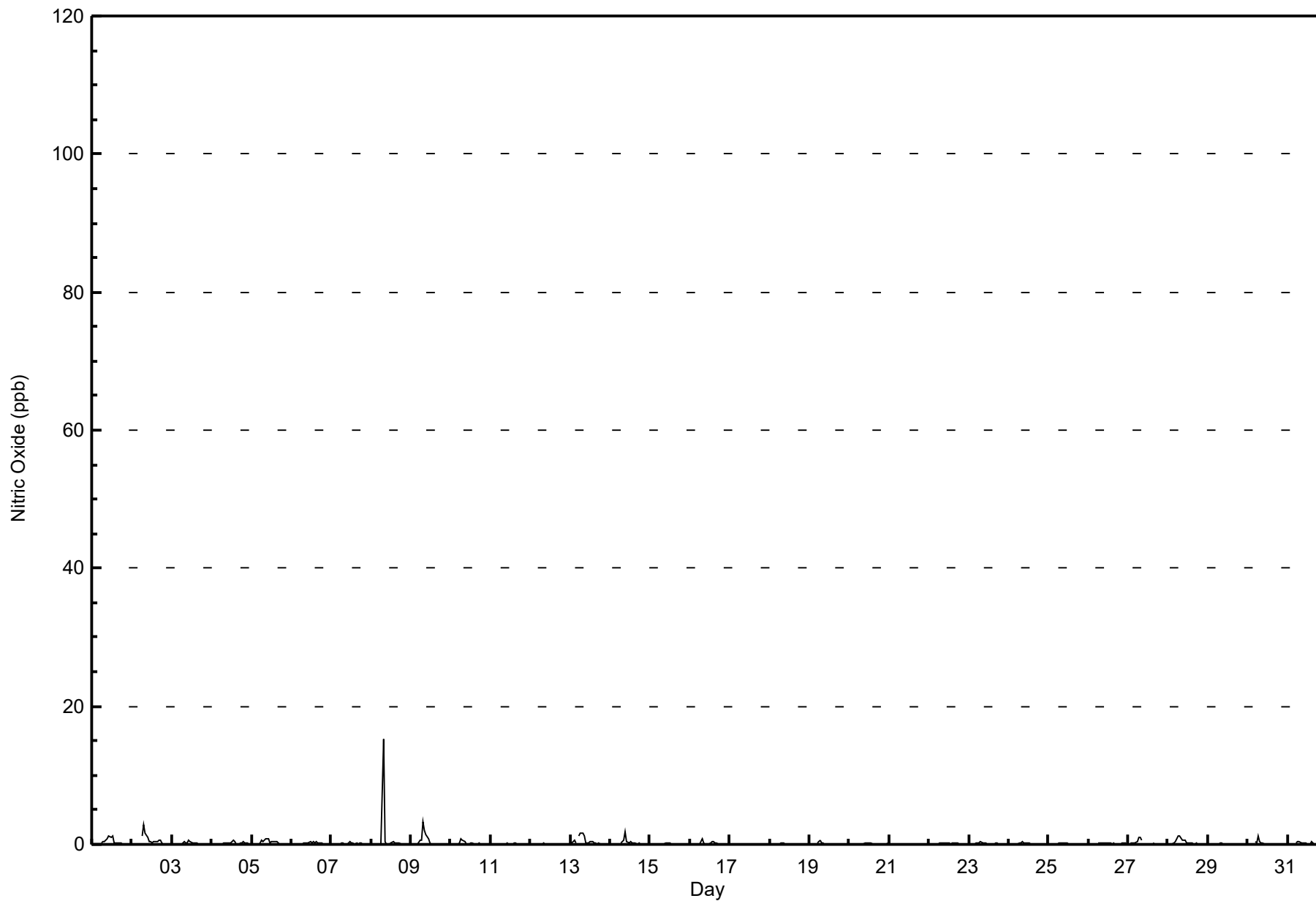
Wapasu - May 2025

Maximum Value: 15.2 ppb on May 8 08:00																			Maximum Daily Average: 0.8 ppb on May 8							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 17							Hours of Data: 707	
Maximum Diurnal Average: 1.0 ppb at hour 8																			Minimum Diurnal Average: 0.0 ppb at hour 21							Hours of Missing Data: 37	
Monthly Average: 0.17 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.4 P ₉₉ = 1.6							Hours of Calibration: 37	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.1	0.5	0.3	0.6	0.7	1.2	1.0	1.1	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	
2-May	0.0	0.0	0.0	0.0	0.0	Z	1.2	2.9	1.6	1.1	0.5	0.4	0.2	0.5	0.3	0.4	0.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.9	
3-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.5	0.4	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5	
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.6	0.3	0.1	0.0	0.1	0.2	0.4	0.1	0.1	0.0	0.0	0.1	0.6	
5-May	0.0	0.0	Z	0.0	0.0	0.2	0.5	0.4	0.8	0.9	0.8	0.3	0.4	0.4	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	
6-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
7-May	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.2	0.1	0.1	0.1	0.4	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4	
8-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	15.2	0.4	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.8	15.2	
9-May	Z	0.0	0.0	0.0	0.1	0.7	0.7	3.2	2.1	1.4	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.2	
10-May	0.0	Z	0.0	0.0	0.0	0.3	0.8	0.6	0.3	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	
11-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3	
12-May	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	
13-May	0.1	0.3	0.6	0.1	Z	1.2	1.7	1.7	1.3	0.3	0.2	0.2	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.7	
14-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.6	1.7	0.5	0.3	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.7	
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
16-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.8	0.2	0.0	0.0	0.0	0.2	0.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	
17-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
18-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
19-May	0.0	0.0	0.0	0.0	Z	0.1	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.6	
20-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
21-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
22-May	0.1	Z	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	
23-May	0.1	0.0	Z	0.1	0.1	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.4	
24-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	
25-May	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	
26-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
27-May	Z	0.1	0.1	0.2	0.2	0.4	1.0	1.0	0.6	C	C	C	C	C	C	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	1.0	
28-May	0.0	Z	0.1	0.1	0.4	0.8	1.2	1.1	0.6	0.7	0.6	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.2	
29-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
30-May	0.0	0.1	0.1	Z	0.5	0.3	1.3	0.4	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3	
31-May	0.0	0.0	0.0	0.1	Z	0.3	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.4	
0.0																									Diurnal Average		
0.1																									Diurnal Maximum		
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	57	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	707
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	707

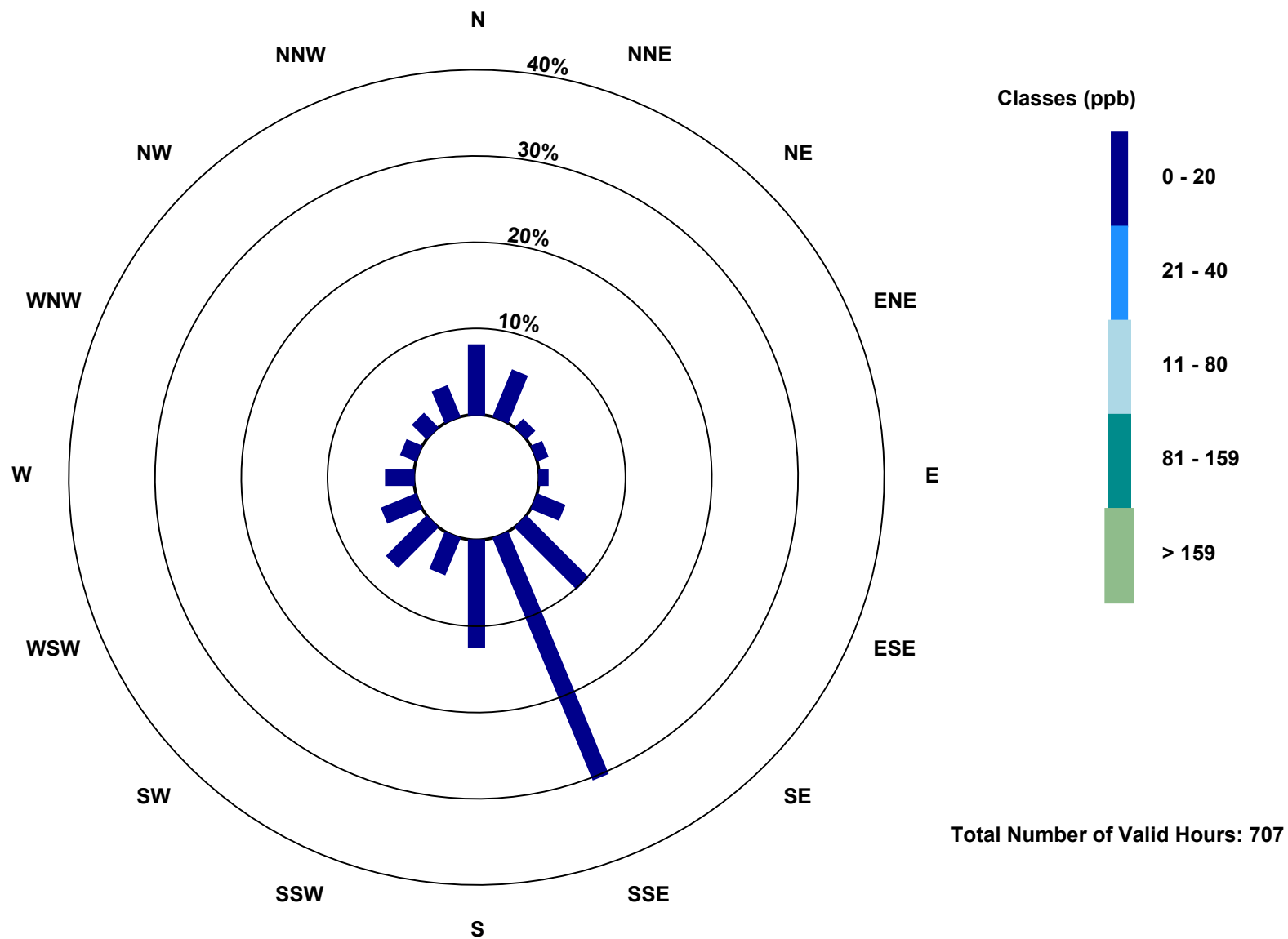
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

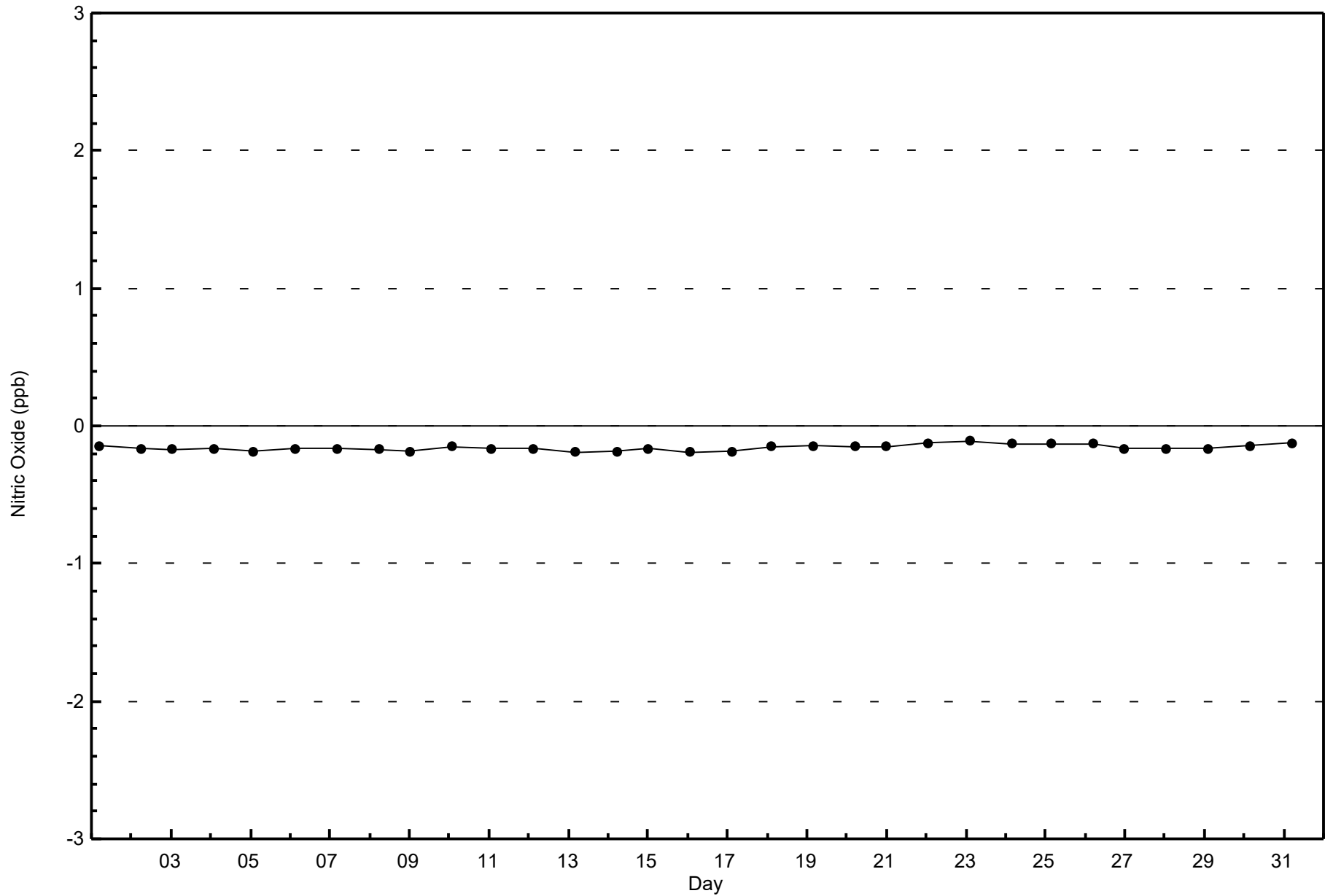
Nitric Oxide (NO) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

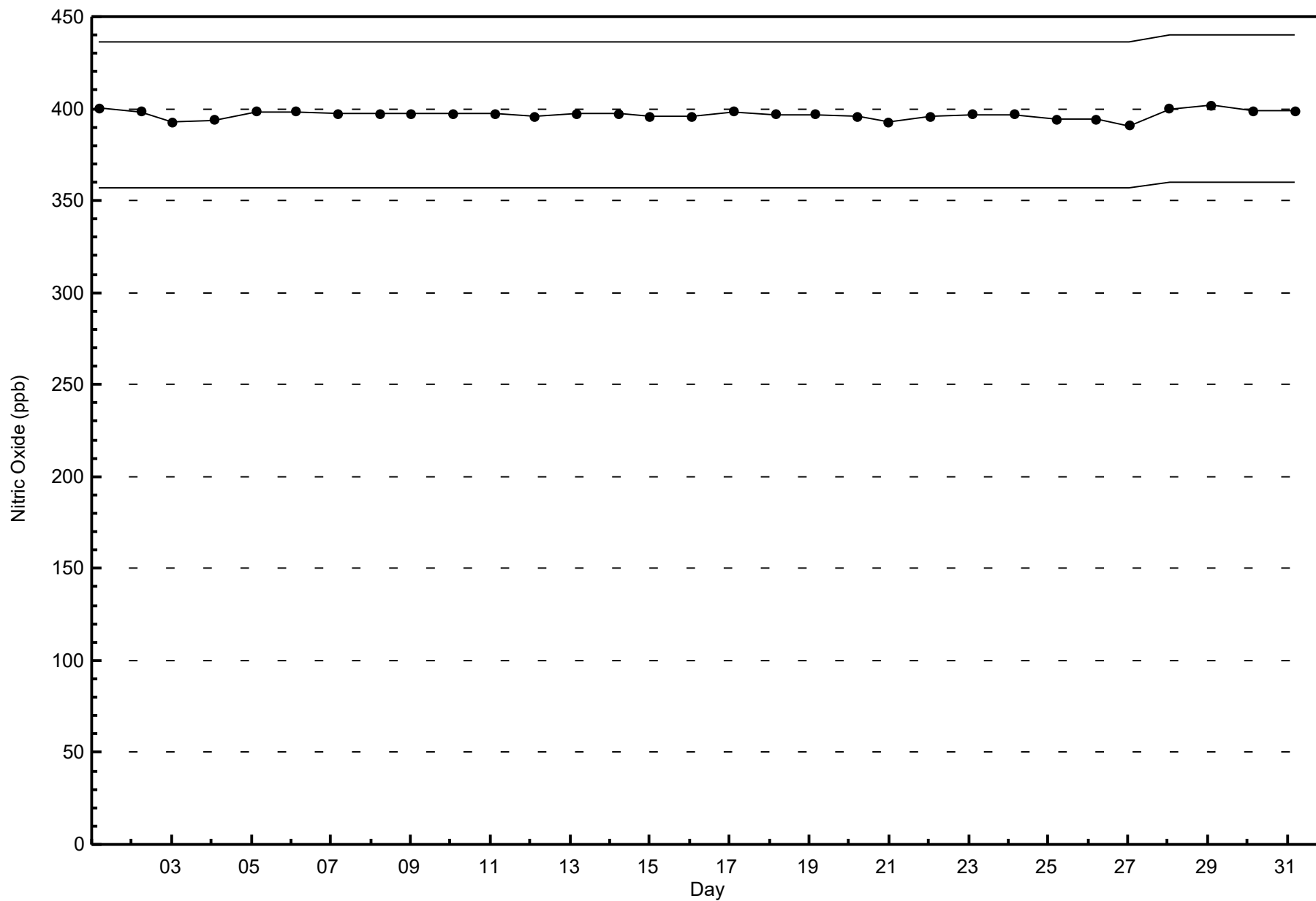
Nitric Oxide (NO) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

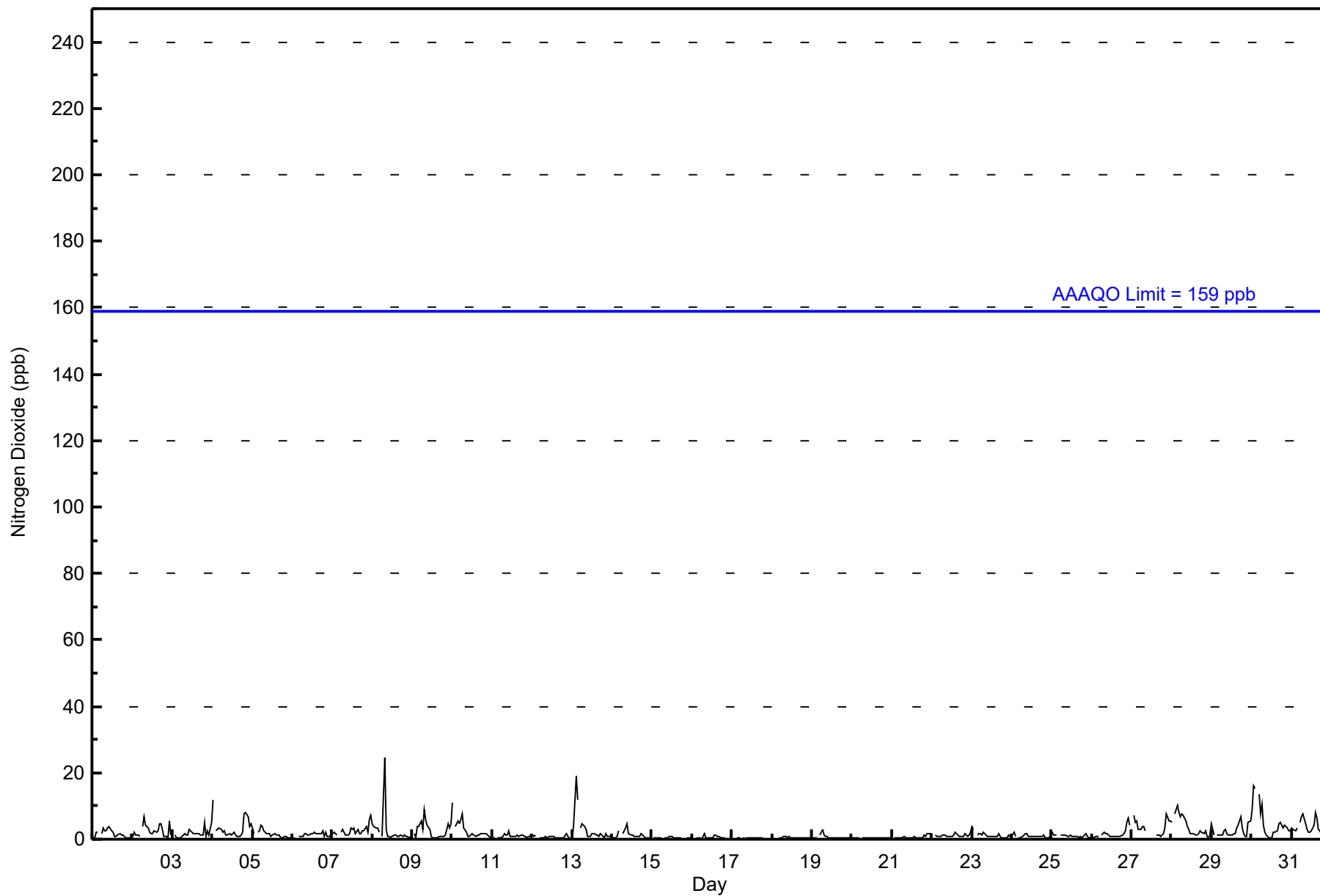
Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.6 ppb on May 8 08:00 Maximum Daily Average: 5.2 ppb on May 30																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0						
Minimum Value: 0.2 ppb on May 13 00:00 Minimum Daily Average: 0.3 ppb on May 17 Maximum Diurnal Average: 3.4 ppb at hour 8 Minimum Diurnal Average: 1.2 ppb at hour 12 Monthly Average: 1.81 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.1 Q ₃ = 2.1 P ₉₀ = 4.1 P ₉₉ = 10.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.3	0.6	2.3	2.3	Z	1.9	3.6	2.4	2.5	3.2	3.9	2.6	2.1	1.0	0.8	1.1	1.5	1.2	1.3	0.8	0.5	0.4	0.4	0.4	1.6	3.9
2-May	0.8	2.3	1.2	1.2	1.0	Z	3.8	6.7	4.4	3.4	2.3	1.9	1.7	2.6	2.3	2.7	4.7	4.8	2.8	0.7	0.7	0.6	5.6	1.1	2.6	6.7
3-May	Z	1.2	0.5	0.4	0.5	0.6	0.7	1.9	1.4	1.4	3.1	2.7	1.9	1.8	1.6	1.7	1.9	1.3	1.1	5.0	0.9	2.6	1.4	5.0	1.8	5.0
4-May	11.7	Z	2.5	2.9	3.2	2.9	2.2	2.4	1.4	1.2	1.7	1.2	1.7	2.0	1.4	0.7	0.8	1.1	2.2	7.7	8.0	6.8	3.8	4.6	3.2	11.7
5-May	3.3	1.9	Z	2.3	2.4	4.1	4.0	2.5	1.9	1.8	1.6	1.0	1.2	1.5	1.3	1.4	1.3	0.6	0.4	0.7	0.7	0.5	0.5	0.3	1.6	4.1
6-May	0.3	0.2	0.4	Z	0.8	0.9	1.0	1.8	1.7	1.1	1.2	1.9	1.8	2.0	1.5	1.9	1.6	1.8	2.5	0.9	2.0	0.8	0.8	1.7	1.3	2.5
7-May	1.9	2.0	1.7	1.4	Z	2.2	2.8	2.3	1.4	1.3	1.6	3.2	3.0	3.6	1.7	3.1	1.6	1.5	2.4	2.6	3.9	2.1	5.8	7.2	2.6	7.2
8-May	4.5	3.8	3.5	3.2	2.1	Z	0.7	24.6	3.1	0.7	0.7	0.5	0.8	1.3	1.1	0.8	0.8	1.2	0.9	1.3	0.9	0.7	0.5	0.7	2.5	24.6
9-May	Z	1.5	0.6	3.8	3.8	5.5	2.9	9.1	5.8	4.2	3.1	1.0	0.5	0.5	0.6	0.6	0.7	0.9	0.7	1.0	1.2	4.7	3.2	4.5	2.6	9.1
10-May	10.9	Z	3.9	5.7	4.7	6.1	7.5	3.4	2.0	0.7	1.0	1.2	1.9	1.4	1.0	1.2	1.4	1.8	1.7	1.7	1.6	1.1	0.9	0.6	2.8	10.9
11-May	0.6	0.5	Z	0.5	0.4	0.5	0.7	1.6	1.1	1.1	2.5	0.9	0.7	1.0	0.9	1.1	1.0	1.2	1.4	0.8	0.8	0.6	0.9	1.0	0.9	2.5
12-May	1.3	0.9	1.1	Z	0.4	0.6	0.5	0.6	0.9	0.6	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	1.9	0.8	0.3	0.2	0.7	1.9
13-May	0.2	3.7	19.1	11.7	Z	3.2	4.6	3.8	2.9	0.8	0.9	0.9	1.7	1.9	1.3	1.2	0.8	1.5	0.9	0.6	1.9	0.7	0.7	0.7	2.9	19.1
14-May	0.6	0.4	0.5	0.8	2.4	Z	1.7	2.7	3.2	4.5	1.9	1.2	1.1	0.9	0.8	0.8	0.9	1.9	1.1	0.8	0.5	0.6	0.4	0.5	1.3	4.5
15-May	Z	0.6	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.5	0.7	0.8	0.8	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.8
16-May	0.2	Z	0.2	0.4	0.4	0.3	0.2	1.9	0.5	0.3	0.3	0.4	0.6	1.4	1.4	0.9	0.8	0.4	0.3	0.6	0.2	0.2	0.2	0.5	0.5	1.9
17-May	0.2	0.2	Z	0.3	0.4	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4
18-May	0.2	0.2	0.2	Z	0.4	0.4	0.6	0.8	0.8	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
19-May	0.4	0.4	0.4	0.5	Z	1.3	2.8	1.1	1.0	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.7	2.8
20-May	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5
21-May	Z	0.4	0.5	0.4	0.5	0.4	0.5	0.7	0.6	0.6	0.6	0.5	0.6	0.7	0.6	0.6	0.4	0.5	0.5	1.1	0.9	1.9	1.7	1.9	0.7	1.9
22-May	1.1	Z	1.1	0.7	0.7	0.9	1.4	1.2	1.1	0.8	0.8	0.7	0.9	1.1	2.2	1.5	0.9	1.0	0.8	0.9	1.6	0.8	1.1	2.1	1.1	2.2
23-May	3.8	3.0	Z	1.2	1.7	1.7	1.3	2.0	1.3	0.8	0.8	0.8	0.8	0.8	0.8	0.7	1.8	0.9	0.5	0.6	0.6	0.6	1.4	1.0	1.3	3.8
24-May	0.7	2.0	0.8	Z	0.5	0.6	0.8	1.1	1.9	1.6	1.0	1.0	0.9	0.9	1.0	0.9	0.9	0.7	1.0	1.1	0.6	0.6	0.6	2.2	1.0	2.2
25-May	2.2	1.2	1.3	1.3	Z	1.4	1.4	1.3	1.1	1.0	1.0	1.1	0.9	0.8	0.8	0.8	0.6	0.7	0.6	0.7	1.5	1.0	0.6	0.6	1.0	2.2
26-May	0.7	0.6	0.8	0.9	1.0	Z	1.4	2.0	1.5	1.5	1.2	1.0	1.0	0.8	0.8	0.9	0.8	0.9	1.1	1.5	2.5	5.0	6.2	4.4	1.7	6.2
27-May	Z	7.0	5.1	5.6	2.9	3.1	3.9	3.9	2.6	C	C	C	C	C	C	1.3	1.1	1.0	1.2	1.7	3.4	7.8	5.5	5.5	--	7.8
28-May	5.1	Z	7.6	10.2	7.9	6.7	7.5	7.0	5.5	3.8	2.9	1.6	1.6	1.5	1.3	1.4	1.7	2.5	2.0	1.7	2.5	0.7	0.5	1.4	3.7	10.2
29-May	4.5	1.3	Z	1.4	1.1	1.3	1.4	2.7	3.1	1.9	1.3	1.1	1.1	1.7	1.6	3.3	4.1	6.9	3.2	1.5	0.8	0.8	5.1	5.7	2.5	6.9
30-May	8.9	15.9	15.4	Z	13.4	7.8	10.5	4.1	2.3	1.2	0.6	0.6	0.6	2.3	2.2	2.6	4.7	5.0	4.4	3.4	4.3	3.2	2.6	2.6	5.2	15.9
31-May	3.3	3.1	2.6	3.2	Z	5.2	6.8	7.7	4.8	2.9	2.3	2.1	2.7	4.4	8.1	6.3	3.1	2.4	1.6	0.8	0.8	5.2	2.2	1.6	3.6	8.1
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	56	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	706
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	707

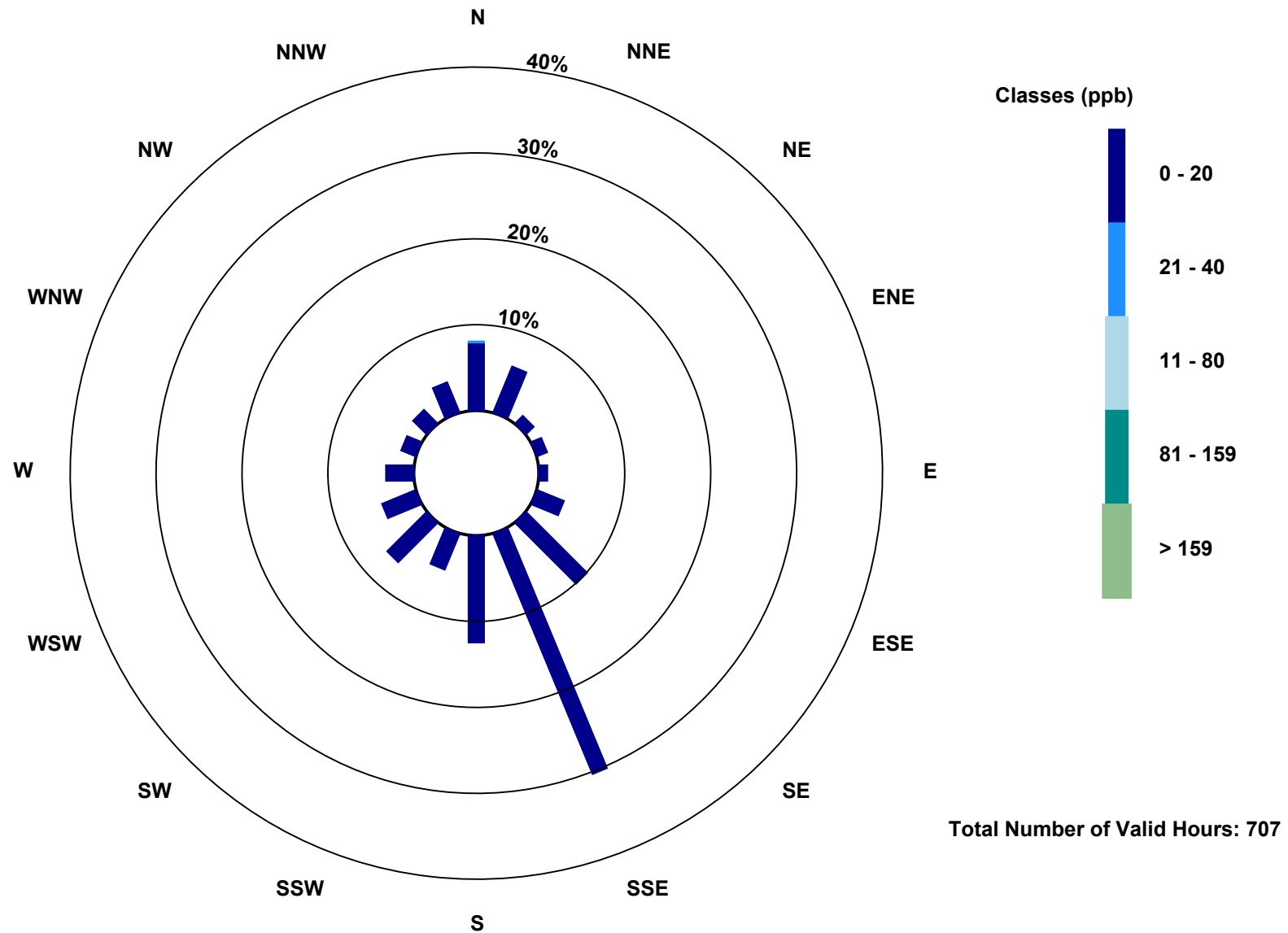
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

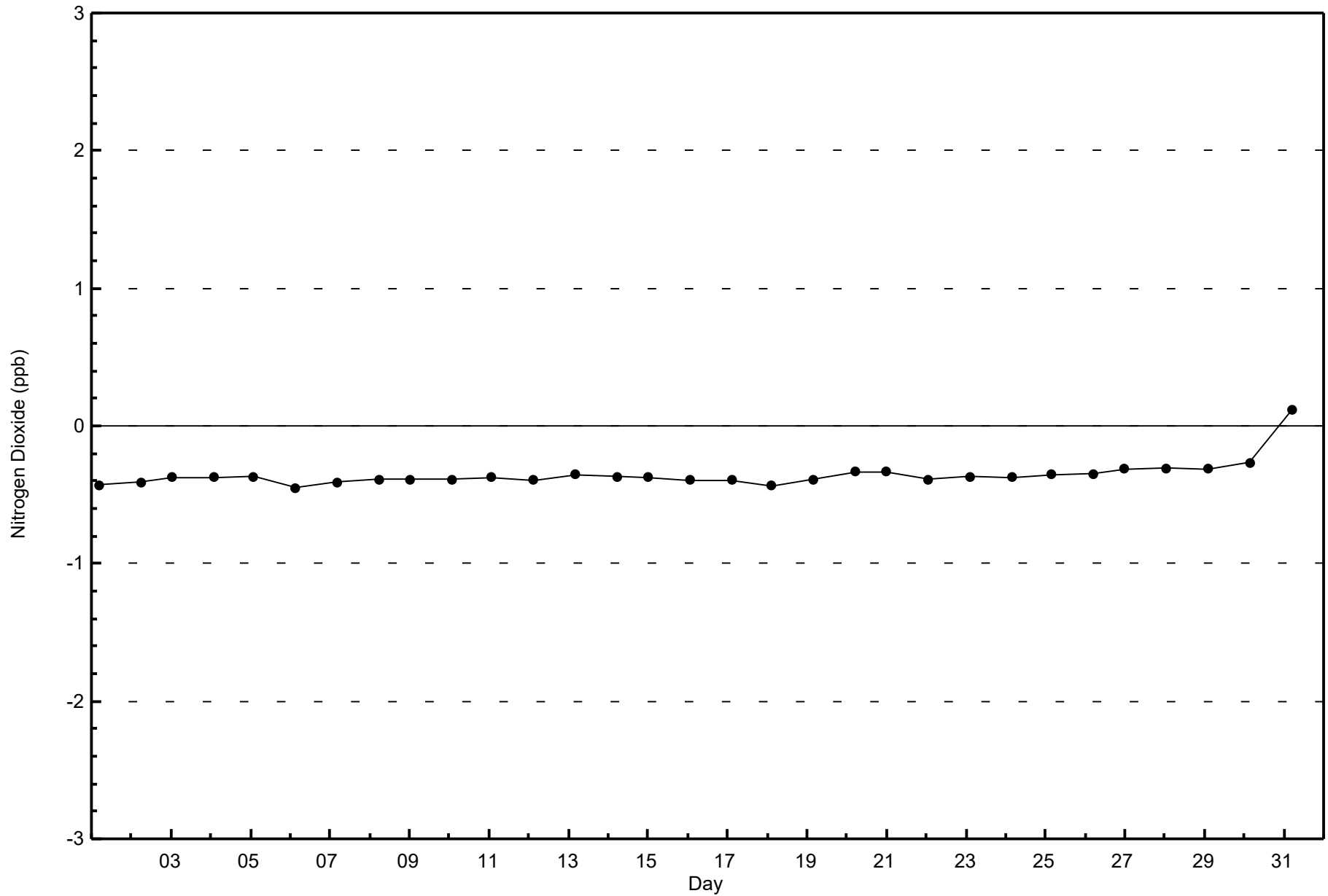
Nitrogen Dioxide (NO₂) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

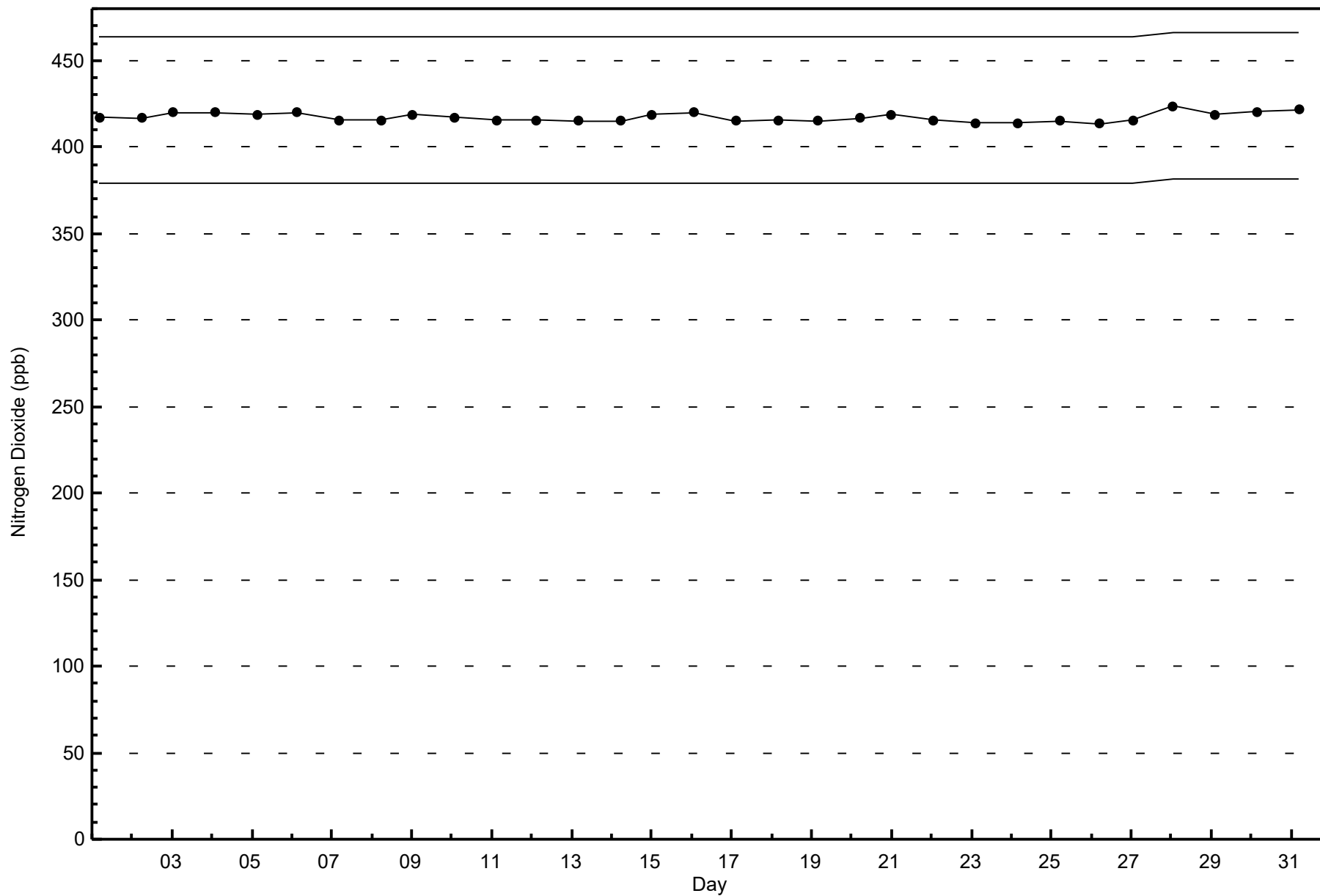
Nitrogen Dioxide (NO₂) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

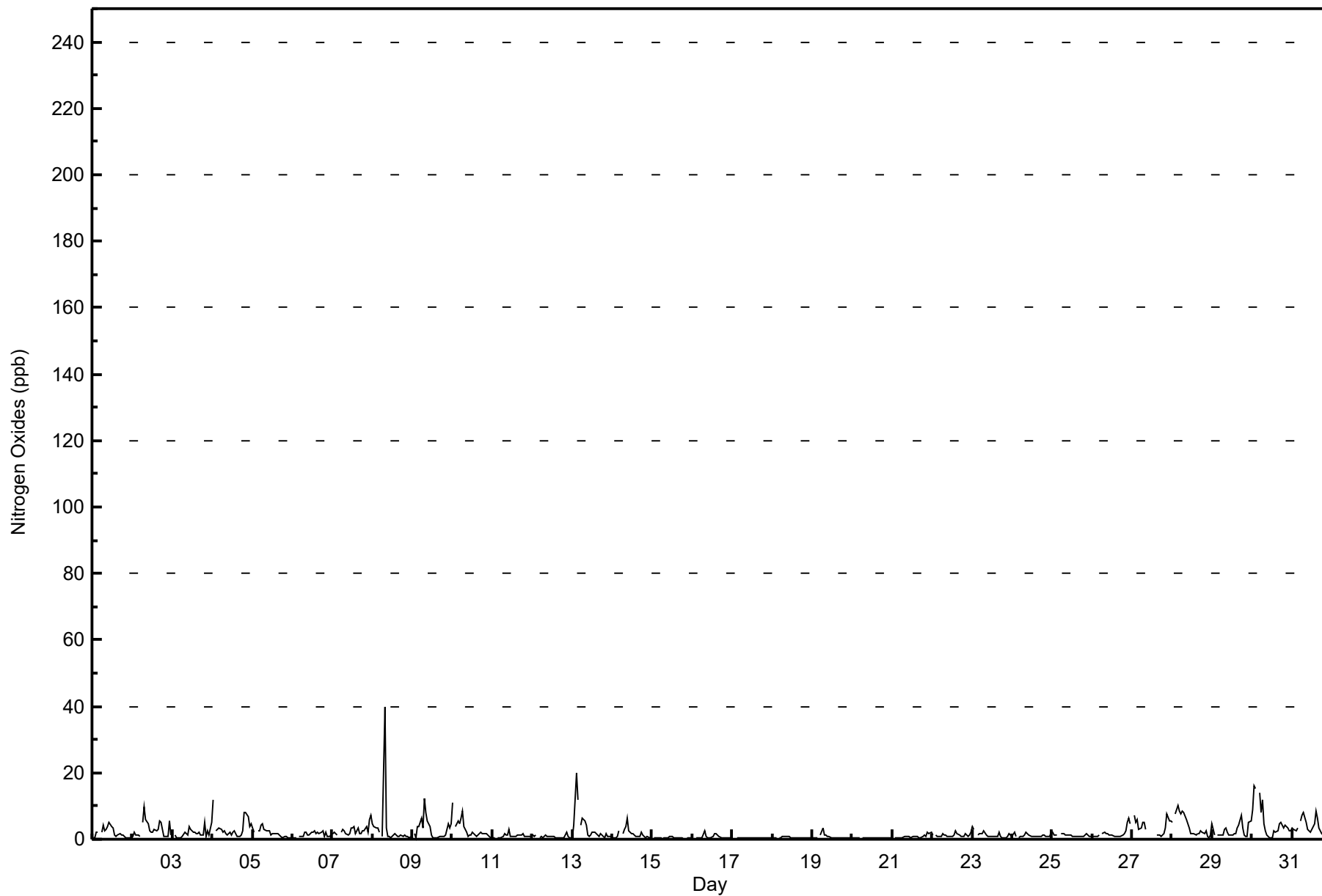
Wapasu - May 2025

Maximum Value: 39.8 ppb on May 8 08:00																			Maximum Daily Average: 5.3 ppb on May 30							Hours in Service: 744	
Minimum Value: 0.2 ppb on May 15 21:00																			Minimum Daily Average: 0.3 ppb on May 17							Hours of Data: 707	
Maximum Diurnal Average: 4.4 ppb at hour 8																			Minimum Diurnal Average: 1.3 ppb at hour 19							Hours of Missing Data: 37	
Monthly Average: 1.98 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.1 Q ₃ = 2.3 P ₉₀ = 4.5 P ₉₉ = 11.8							Hours of Calibration: 37	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.3	0.6	2.3	2.3	Z	2.0	4.1	2.7	3.1	3.9	5.1	3.6	3.2	1.2	1.0	1.3	1.8	1.3	1.3	0.8	0.5	0.4	0.4	0.4	1.9	5.1	
2-May	0.8	2.3	1.2	1.2	1.0	Z	5.0	9.6	6.0	4.5	2.8	2.3	1.9	3.1	2.6	3.1	5.4	5.3	2.9	0.7	0.7	0.6	5.6	1.1	3.0	9.6	
3-May	Z	1.2	0.5	0.4	0.5	0.6	0.7	2.2	1.6	1.5	3.6	3.1	2.0	2.0	1.8	1.8	2.0	1.3	1.1	5.1	0.9	2.6	1.4	5.0	1.9	5.1	
4-May	11.7	Z	2.5	2.9	3.2	2.9	2.3	2.5	1.5	1.4	1.9	1.4	2.1	2.6	1.7	0.8	0.8	1.2	2.4	8.1	8.1	6.9	3.8	4.6	3.4	11.7	
5-May	3.3	1.9	Z	2.3	2.4	4.3	4.5	2.9	2.7	2.7	2.4	1.3	1.6	1.9	1.6	1.8	1.5	0.7	0.4	0.7	0.7	0.5	0.5	0.3	1.9	4.5	
6-May	0.3	0.2	0.4	Z	0.8	0.9	1.0	2.0	1.9	1.2	1.4	2.2	2.1	2.4	1.7	2.2	1.8	1.9	2.6	0.9	2.0	0.8	0.8	1.7	1.4	2.6	
7-May	1.9	2.0	1.7	1.4	Z	2.2	3.0	2.5	1.5	1.4	1.7	3.6	3.3	3.9	1.8	3.3	1.7	1.7	2.6	2.7	3.9	2.1	5.8	7.2	2.7	7.2	
8-May	4.5	3.8	3.5	3.2	2.1	Z	0.8	39.8	3.5	0.8	0.8	0.6	0.9	1.6	1.3	1.0	0.9	1.4	1.0	1.4	0.9	0.7	0.5	0.7	3.3	39.8	
9-May	Z	1.5	0.6	3.8	3.9	6.2	3.6	12.3	7.9	5.6	4.0	1.2	0.5	0.5	0.6	0.6	0.7	0.9	0.7	1.0	1.2	4.7	3.2	4.5	3.0	12.3	
10-May	10.9	Z	3.9	5.7	4.7	6.4	8.3	4.0	2.3	0.7	1.1	1.3	2.0	1.5	1.0	1.3	1.5	1.9	1.7	1.7	1.6	1.1	0.9	0.6	2.9	10.9	
11-May	0.6	0.5	Z	0.5	0.4	0.5	0.7	1.7	1.2	1.2	2.8	1.0	0.8	1.1	1.0	1.2	1.1	1.2	1.5	0.8	0.8	0.7	0.9	1.0	1.0	2.8	
12-May	1.3	0.9	1.1	Z	0.5	0.7	0.6	0.7	1.1	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	1.9	0.8	0.3	0.3	0.8	1.9	
13-May	0.3	4.0	19.7	11.8	Z	4.4	6.3	5.5	4.2	1.1	1.1	1.1	2.1	2.3	1.5	1.3	0.9	1.6	0.9	0.6	1.9	0.7	0.7	0.7	3.2	19.7	
14-May	0.6	0.4	0.5	0.8	2.4	Z	1.9	3.1	3.8	6.2	2.4	1.5	1.5	1.1	1.0	1.0	1.0	2.1	1.2	0.8	0.5	0.6	0.4	0.5	1.5	6.2	
15-May	Z	0.6	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.6	0.9	1.0	1.0	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.4	1.0	
16-May	0.2	Z	0.3	0.5	0.5	0.4	0.3	2.7	0.7	0.3	0.3	0.4	0.8	1.8	1.8	1.1	0.9	0.4	0.3	0.6	0.2	0.2	0.2	0.5	0.7	2.7	
17-May	0.2	0.2	Z	0.3	0.4	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	
18-May	0.2	0.2	0.2	Z	0.4	0.5	0.7	0.9	0.9	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9	
19-May	0.4	0.4	0.4	0.5	Z	1.4	3.4	1.3	1.2	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.5	0.5	0.7	3.4	
20-May	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	
21-May	Z	0.5	0.6	0.5	0.6	0.5	0.6	0.8	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.5	0.5	0.6	1.2	1.0	2.0	1.8	2.0	0.8	2.0	
22-May	1.2	Z	1.1	0.8	0.8	1.0	1.7	1.5	1.4	0.9	0.9	0.8	1.0	1.2	2.5	1.8	1.1	1.1	0.9	1.0	1.6	0.8	1.1	2.1	1.2	2.5	
23-May	3.9	3.0	Z	1.3	1.8	1.9	1.6	2.4	1.5	0.9	0.9	0.9	0.9	0.9	0.9	0.8	2.0	1.0	0.6	0.6	0.6	0.7	1.5	1.1	1.4	3.9	
24-May	0.8	2.1	0.9	Z	0.6	0.7	0.9	1.3	2.3	1.8	1.2	1.1	1.0	1.0	1.1	1.0	1.0	0.8	1.1	1.2	0.7	0.7	0.7	2.3	1.1	2.3	
25-May	2.2	1.2	1.3	1.3	Z	1.5	1.6	1.5	1.3	1.1	1.1	1.2	1.0	0.9	0.9	0.9	0.7	0.7	0.6	0.7	1.5	1.1	0.7	0.7	1.1	2.2	
26-May	0.8	0.7	0.9	1.0	1.1	Z	1.6	2.3	1.7	1.7	1.4	1.1	1.1	0.9	0.9	1.0	0.9	1.0	1.2	1.6	2.6	5.1	6.3	4.5	1.8	6.3	
27-May	Z	7.1	5.2	5.8	3.1	3.5	4.9	4.9	3.2	C	C	C	C	C	C	1.4	1.2	1.0	1.2	1.7	3.4	7.8	5.5	5.5	-	7.8	
28-May	5.1	Z	7.7	10.3	8.3	7.5	8.7	8.1	6.1	4.5	3.5	1.8	1.7	1.7	1.4	1.5	1.8	2.6	2.1	1.7	2.5	0.7	0.5	1.4	4.0	10.3	
29-May	4.5	1.3	Z	1.4	1.1	1.3	1.4	3.0	3.2	2.0	1.4	1.2	1.1	1.8	1.7	3.4	4.2	7.0	3.2	1.5	0.8	0.8	5.1	5.7	2.5	7.0	
30-May	8.9	16.0	15.5	Z	13.9	8.1	11.8	4.5	2.6	1.3	0.6	0.6	0.6	2.4	2.2	2.6	4.7	5.0	4.4	3.4	4.3	3.2	2.6	2.6	5.3	16.0	
31-May	3.3	3.1	2.6	3.3	Z	5.5	7.2	8.1	5.0	3.1	2.5	2.2	2.8	4.5	8.4	6.4	3.2	2.5	1.7	0.9	0.9	5.3	2.2	1.6	3.7	8.4	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Wapasu - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	56	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	706
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	41	9	9	7	24	71	214	88	32	46	30	23	13	16	27	707

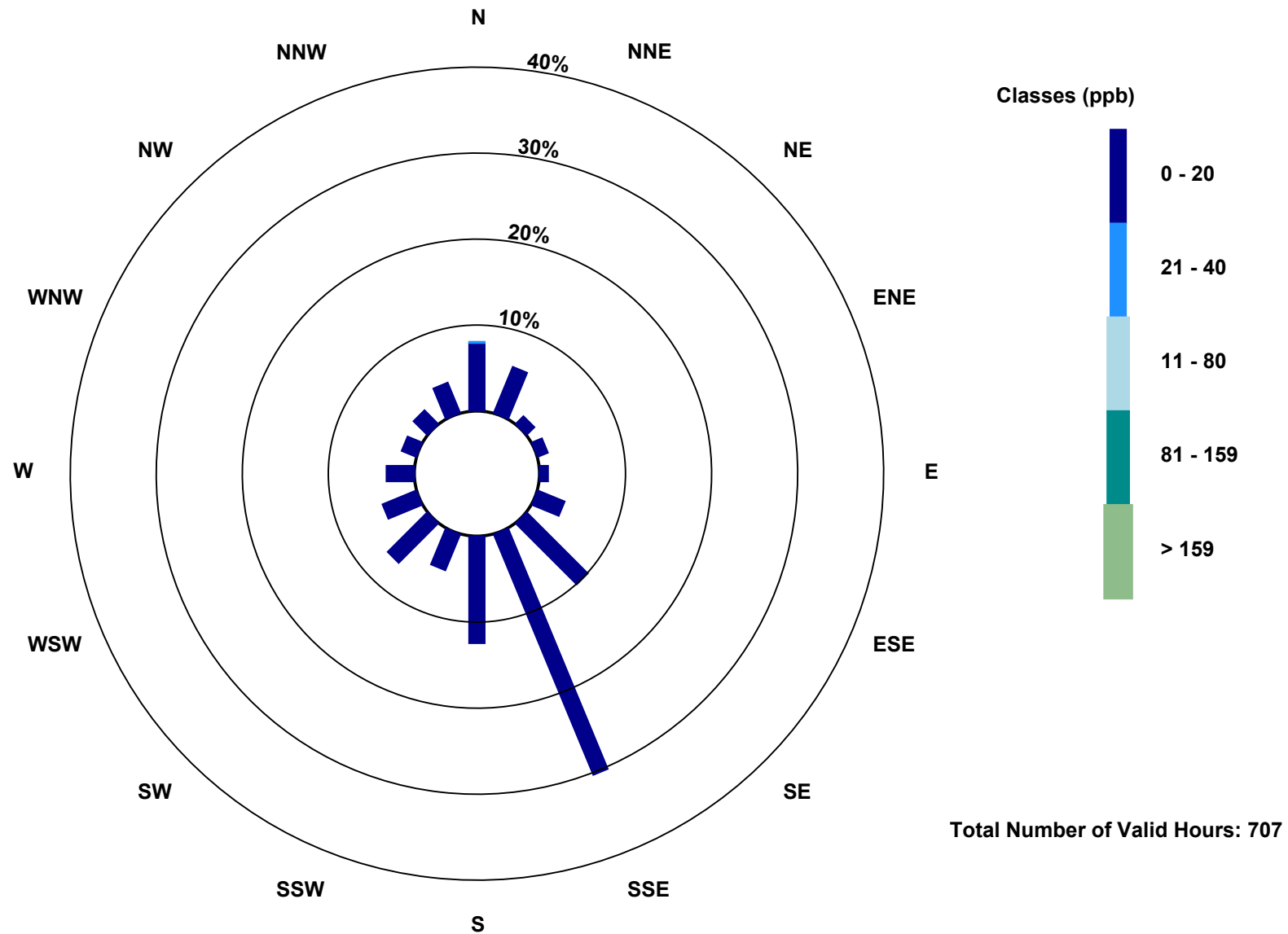
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

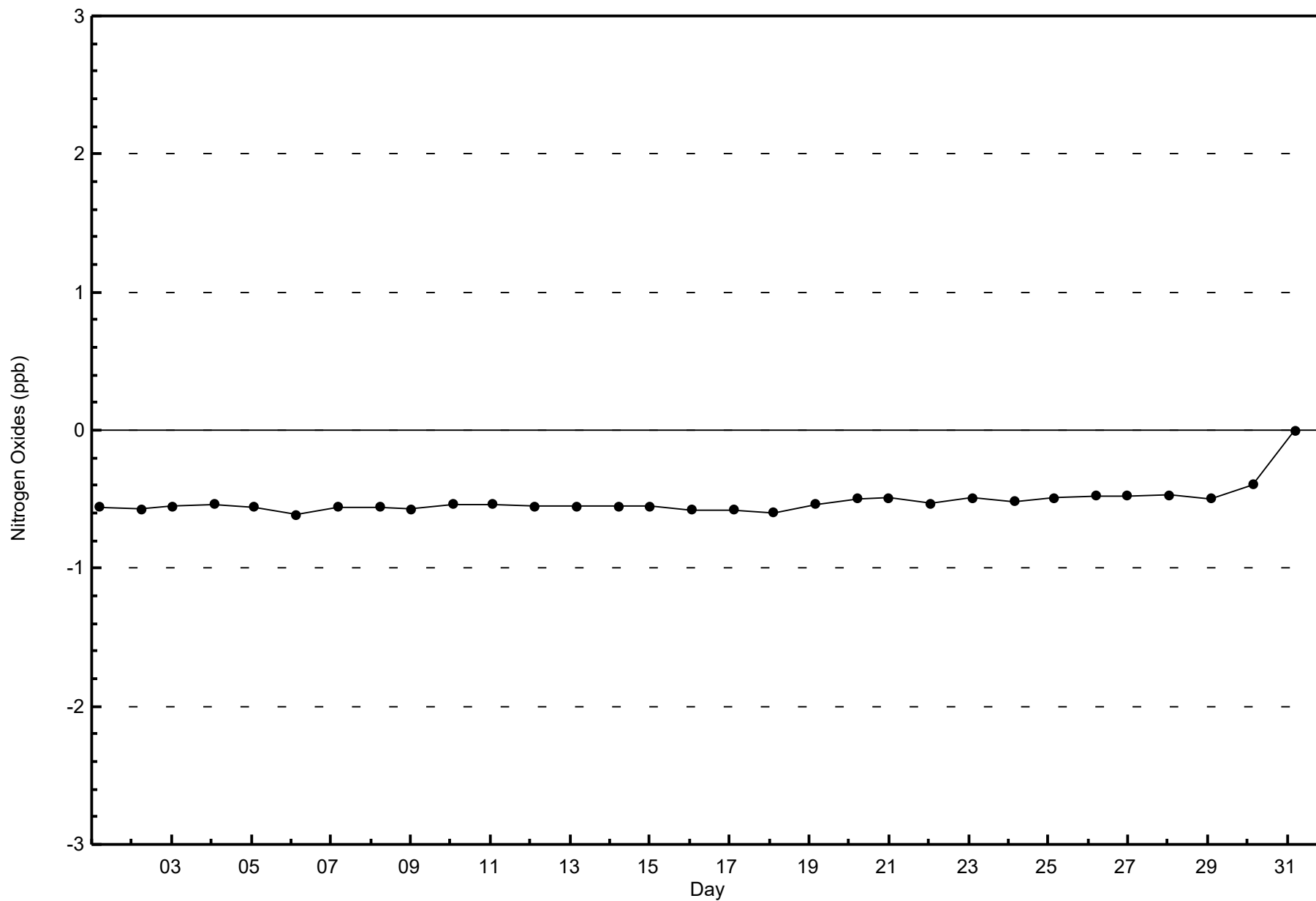
Nitrogen Oxides (NO_x) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

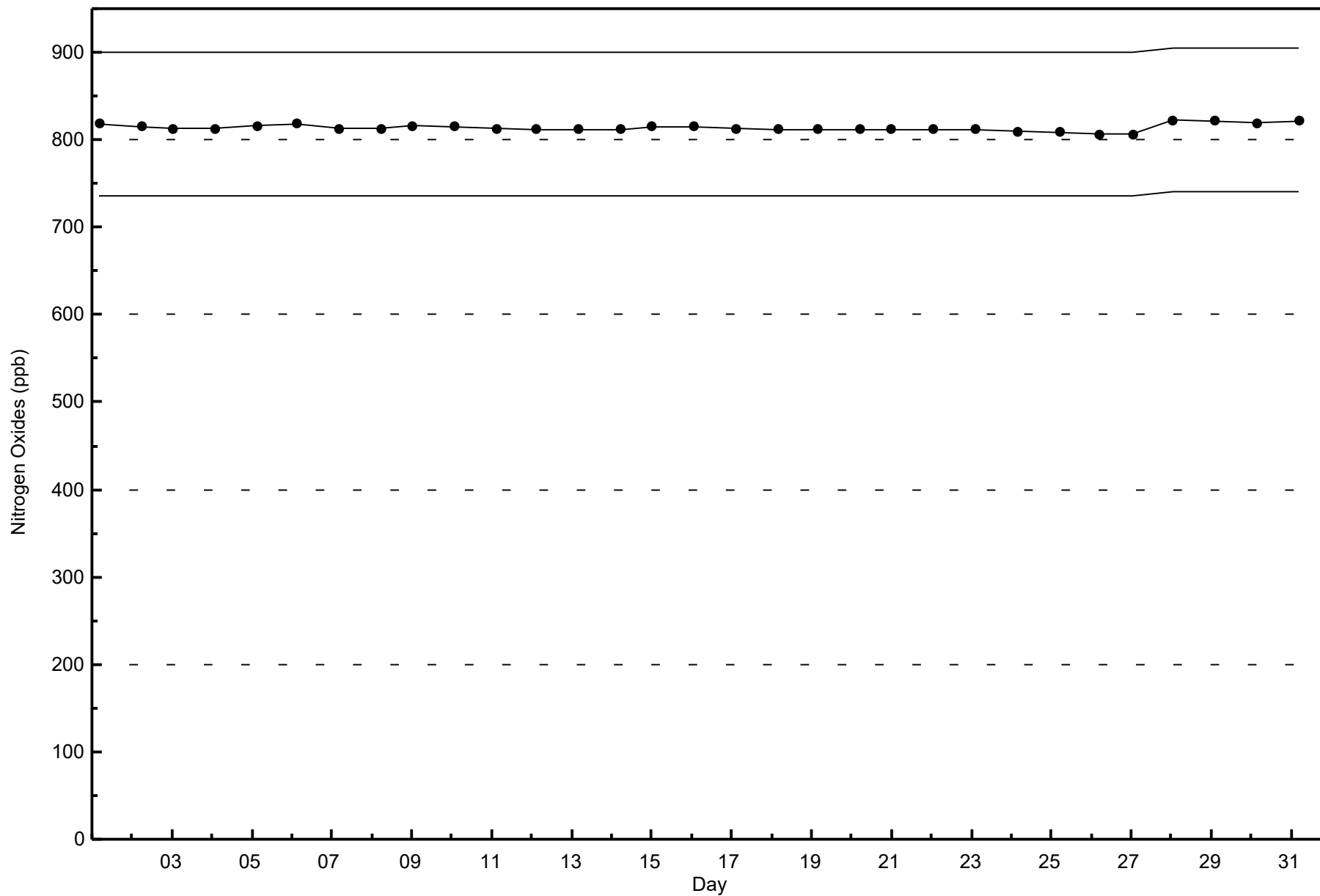
Nitrogen Oxides (NO_x) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

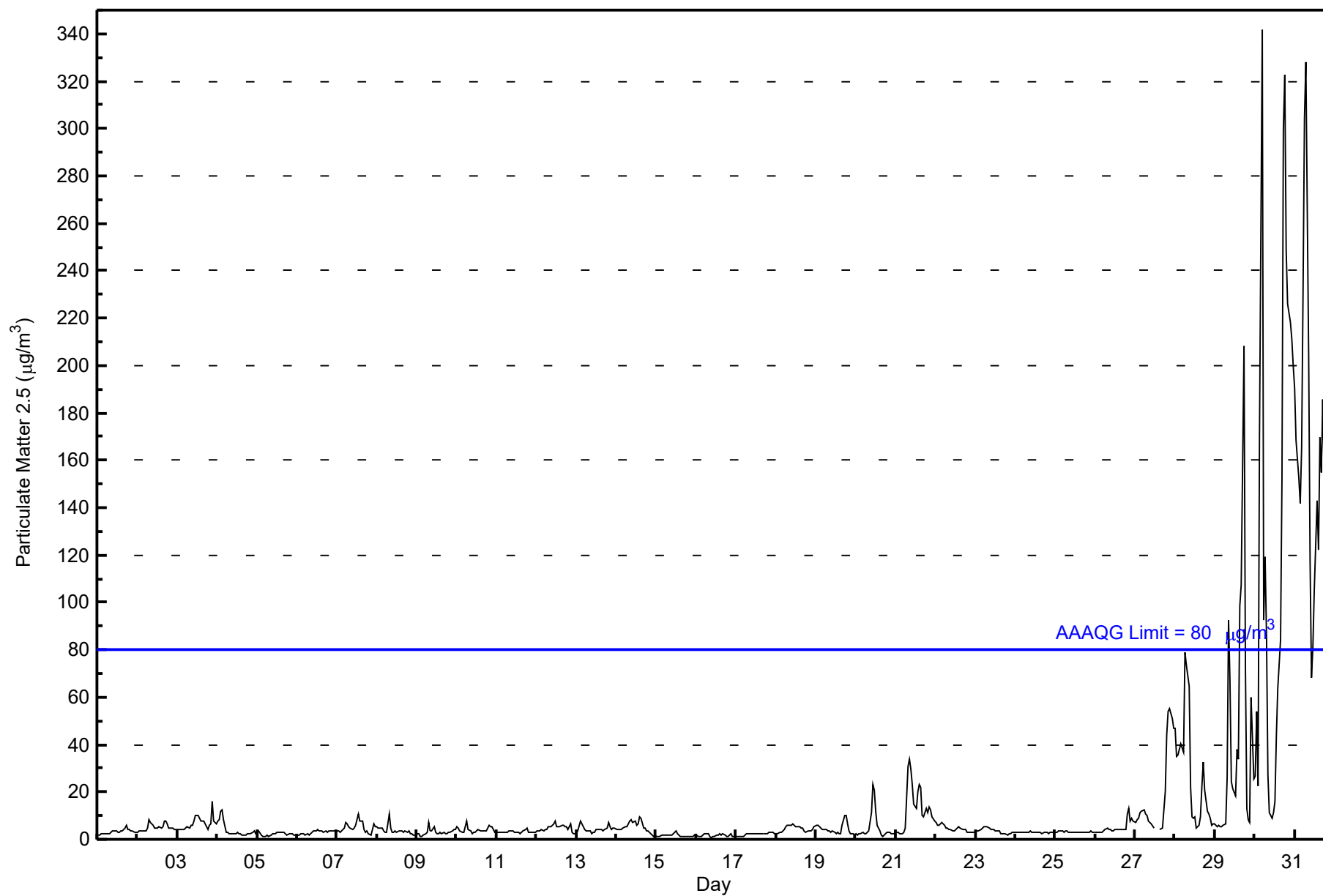
Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 39 24-hr: 3 Maximum Value: 341.7 µg/m³ on May 30 05:00 Minimum Value: 0.8 µg/m³ on May 16 10:00 Maximum Diurnal Average: 27.3 µg/m³ at hour 18 Monthly Average: 15.30 µg/m³																				Maximum Daily Average: 152.6 µg/m³ on May 31 Minimum Daily Average: 1.6 µg/m³ on May 16 Minimum Diurnal Average: 8.3 µg/m³ at hour 11 Percentiles: P ₁ = 1.1 P ₁₀ = 2.0 Q ₁ = 2.7 Median = 3.6 Q ₃ = 6.2 P ₉₀ = 23.2 P ₉₉ = 223.0				Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 3 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	1.9	2.0	2.2	2.3	2.2	2.3	2.7	2.7	2.9	3.6	3.8	3.4	2.7	2.8	3.4	3.7	4.7	5.7	4.4	4.1	3.4	3.3	3.0	2.8	3.2	5.7
2-May	3.1	3.5	3.8	3.8	3.5	3.5	4.5	8.6	7.3	5.9	4.9	4.9	4.7	5.5	4.9	5.2	7.9	7.8	6.2	4.6	4.6	4.6	4.3	4.1	5.1	8.6
3-May	4.0	4.3	4.3	4.4	4.4	4.8	5.3	4.8	5.9	6.1	7.7	9.9	9.9	8.7	7.8	7.9	7.5	6.7	4.0	6.2	6.4	16.0	7.8	6.6	6.7	16.0
4-May	7.5	8.6	12.0	12.4	8.4	3.3	2.9	2.5	2.2	2.2	2.3	2.4	2.7	2.5	2.3	1.9	1.9	1.9	2.3	2.1	2.2	2.8	3.7	2.7	4.0	12.4
5-May	3.7	3.8	1.7	1.2	1.3	1.2	1.7	1.4	1.8	2.3	2.6	2.6	2.9	3.1	3.1	3.2	3.0	2.5	2.0	2.3	2.6	2.4	2.0	1.7	2.3	3.8
6-May	1.7	1.7	2.2	2.3	2.1	2.1	2.2	2.1	2.6	3.3	3.3	3.6	3.9	3.7	3.3	3.4	3.2	3.3	3.2	3.4	3.7	3.4	3.8	3.6	3.0	3.9
7-May	3.6	3.4	3.2	3.4	4.6	7.1	6.6	5.6	4.6	4.2	4.6	5.7	8.5	10.5	7.5	7.6	4.4	2.9	3.8	2.7	2.0	4.1	6.3	5.5	5.1	10.5
8-May	5.2	4.8	4.9	4.9	3.8	3.2	3.1	10.7	4.7	2.7	3.2	3.3	2.8	3.8	3.6	3.3	3.1	3.3	2.8	3.5	2.6	2.6	1.8	1.8	3.7	10.7
9-May	2.4	2.6	1.4	1.2	1.6	2.6	3.1	7.0	3.7	3.5	5.2	3.2	2.7	2.5	2.7	2.5	2.9	2.5	2.3	2.8	2.8	3.8	3.9	4.1	3.0	7.0
10-May	5.6	4.6	3.5	3.1	3.3	5.4	7.8	4.1	3.4	2.6	3.0	3.1	3.6	3.9	3.4	3.3	3.3	3.6	3.7	5.7	5.1	5.3	4.0	3.1	4.1	7.8
11-May	2.8	2.8	2.7	2.8	2.9	3.0	3.1	3.5	3.6	3.5	3.6	3.1	2.8	2.9	2.6	2.7	3.6	4.4	4.7	2.8	2.9	2.9	2.8	2.9	3.2	4.7
12-May	3.4	3.5	3.5	4.2	3.5	3.9	4.0	5.1	5.3	5.6	6.5	7.4	5.3	5.3	5.2	5.7	5.8	5.5	5.1	4.2	6.4	2.9	2.2	2.3	4.7	7.4
13-May	2.5	3.3	7.7	6.8	5.1	4.1	3.8	3.6	3.6	2.5	2.8	3.3	4.0	4.2	4.1	3.9	3.7	4.2	4.8	7.2	5.6	4.4	4.8	4.7	4.4	7.7
14-May	4.2	4.0	4.1	4.4	5.0	5.1	5.4	6.7	7.5	8.2	6.8	7.8	5.8	6.3	9.7	8.8	4.9	4.8	3.8	3.6	2.7	2.3	1.3	1.6	5.2	9.7
15-May	1.2	1.4	1.4	1.7	1.6	1.7	1.5	1.6	1.5	2.0	2.5	3.0	3.3	2.3	1.5	1.5	1.3	1.3	1.1	1.2	1.1	1.1	1.5	1.5	1.7	3.3
16-May	1.5	1.3	1.3	1.5	1.6	2.3	2.3	2.2	1.1	0.8	1.0	1.2	1.5	1.8	2.4	2.0	2.2	1.8	1.5	1.2	1.5	2.4	1.1	1.0	1.6	2.4
17-May	1.0	1.1	1.0	1.2	1.2	1.5	2.1	2.2	2.6	2.3	2.3	2.2	2.4	2.5	2.4	2.3	2.1	2.3	2.2	2.4	2.7	3.0	2.7	2.5	2.1	3.0
18-May	2.3	2.6	2.9	3.1	3.3	4.0	5.5	6.0	5.8	5.9	6.5	5.8	5.5	5.6	5.1	4.7	4.5	3.6	3.3	3.3	3.4	3.5	4.3	5.1	4.4	6.5
19-May	5.9	5.7	5.4	4.9	4.3	4.0	3.9	3.6	3.3	3.1	3.4	2.9	2.6	2.8	2.7	2.5	5.7	10.1	10.3	6.3	3.7	2.6	2.3	1.9	4.3	10.3
20-May	2.1	2.0	2.1	2.7	2.8	2.3	2.4	3.0	3.7	11.3	23.2	21.0	11.9	5.9	3.4	2.0	1.0	1.7	2.4	2.7	2.7	2.6	2.6	2.6	5.0	23.2
21-May	2.7	2.7	2.6	2.5	2.6	3.0	4.9	30.7	34.0	29.6	23.4	14.6	13.0	20.5	22.9	22.2	10.1	9.4	12.9	11.1	13.8	12.7	9.6	7.7	13.3	34.0
22-May	7.0	6.0	5.7	6.7	7.1	6.2	4.8	4.6	4.4	3.9	3.6	3.4	3.9	4.6	5.2	4.7	4.3	4.4	4.1	2.9	2.7	2.7	2.7	2.8	4.5	7.1
23-May	3.1	3.3	3.5	4.0	4.7	5.6	5.5	5.2	4.5	3.9	4.3	4.3	3.5	3.3	3.6	2.6	2.2	2.2	2.2	2.0	2.2	2.5	2.8	2.8	3.5	5.6
24-May	2.8	2.7	2.8	2.8	3.0	3.1	3.0	3.2	3.2	3.3	3.0	2.7	2.7	2.8	2.9	2.7	2.5	2.7	3.0	2.9	2.6	2.7	3.0	3.2	2.9	3.3
25-May	3.2	3.2	3.3	3.4	3.3	3.3	3.3	3.3	3.0	2.7	2.7	3.0	2.9	2.9	2.8	3.2	3.0	3.1	3.1	3.1	3.2	3.5	3.2	3.2	3.1	3.5
26-May	3.2	3.3	3.2	3.2	3.2	3.4	4.2	4.8	3.9	4.2	3.8	3.6	3.9	3.9	4.0	4.2	4.1	4.3	4.2	10.8	13.3	7.6	9.0	8.0	5.1	13.3
27-May	6.9	8.5	8.8	11.1	11.8	12.5	10.6	10.3	7.9	7.2	6.6	4.9	C	C	C	4.1	4.7	12.5	20.3	43.7	53.7	55.0	51.0	47.1	19.0	55.0
28-May	46.9	35.2	35.3	40.3	38.5	36.7	78.6	73.5	64.8	21.8	9.4	9.0	9.4	4.9	6.1	9.6	22.0	32.8	20.7	11.8	10.5	9.0	6.1	6.5	26.6	78.6
29-May	6.6	5.6	6.1	5.6	5.4	5.8	6.7	26.2	92.5	67.0	24.6	21.1	18.7	38.2	33.7	98.3	107.6	208.5	73.1	12.9	8.2	7.2	60.1	25.7	40.2	208.5
30-May	26.7	53.9	22.6	169.6	341.7	92.3	119.3	85.7	27.5	11.5	9.2	11.2	15.8	43.4	63.4	84.1	151.9	299.5	322.9	248.6	226.3	218.0	211.2	199.9	127.3	341.7
31-May	190.5	168.5	152.2	141.6	165.2	231.6	304.6	328.0	203.7	117.6	67.9	81.2	105.8	142.9	122.3	169.9	154.9	185.6	152.5	125.2	148.8	109.8	55.9	36.5	152.6	328.0
11.8 11.6 10.2 14.9 21.1 15.2 20.0 21.4 17.0 11.4 8.3 8.3 9.0 11.8 11.6 15.6 17.6 27.3 22.3 17.6 17.9 16.4 15.5 13.1																								Diurnal Average		
190.5 168.5 152.2 169.6 341.7 231.6 304.6 328.0 203.7 117.6 67.9 81.2 105.8 142.9 122.3 169.9 154.9 299.5 322.9 248.6 226.3 218.0 211.2 199.9																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Wapasu - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	521	70.31	70.31
6 - 15	132	17.81	88.12
16 - 25	16	2.16	90.28
26 - 80	33	4.45	94.74
> 81.0	39	5.26	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Wapasu - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	43	31	9	10	8	25	70	159	64	18	29	17	11	5	5	17	521
6 - 15	9	8	1	0	0	0	5	48	6	9	8	11	7	5	9	6	132
16 - 25	0	0	0	0	0	0	1	5	3	1	1	2	1	0	1	1	16
26 - 80	2	0	0	0	0	0	1	8	7	2	5	2	4	1	0	1	33
> 81.0	5	3	0	0	0	0	0	7	9	3	4	0	2	3	1	2	39
Totals	59	42	10	10	8	25	77	227	89	33	47	32	25	14	16	27	741

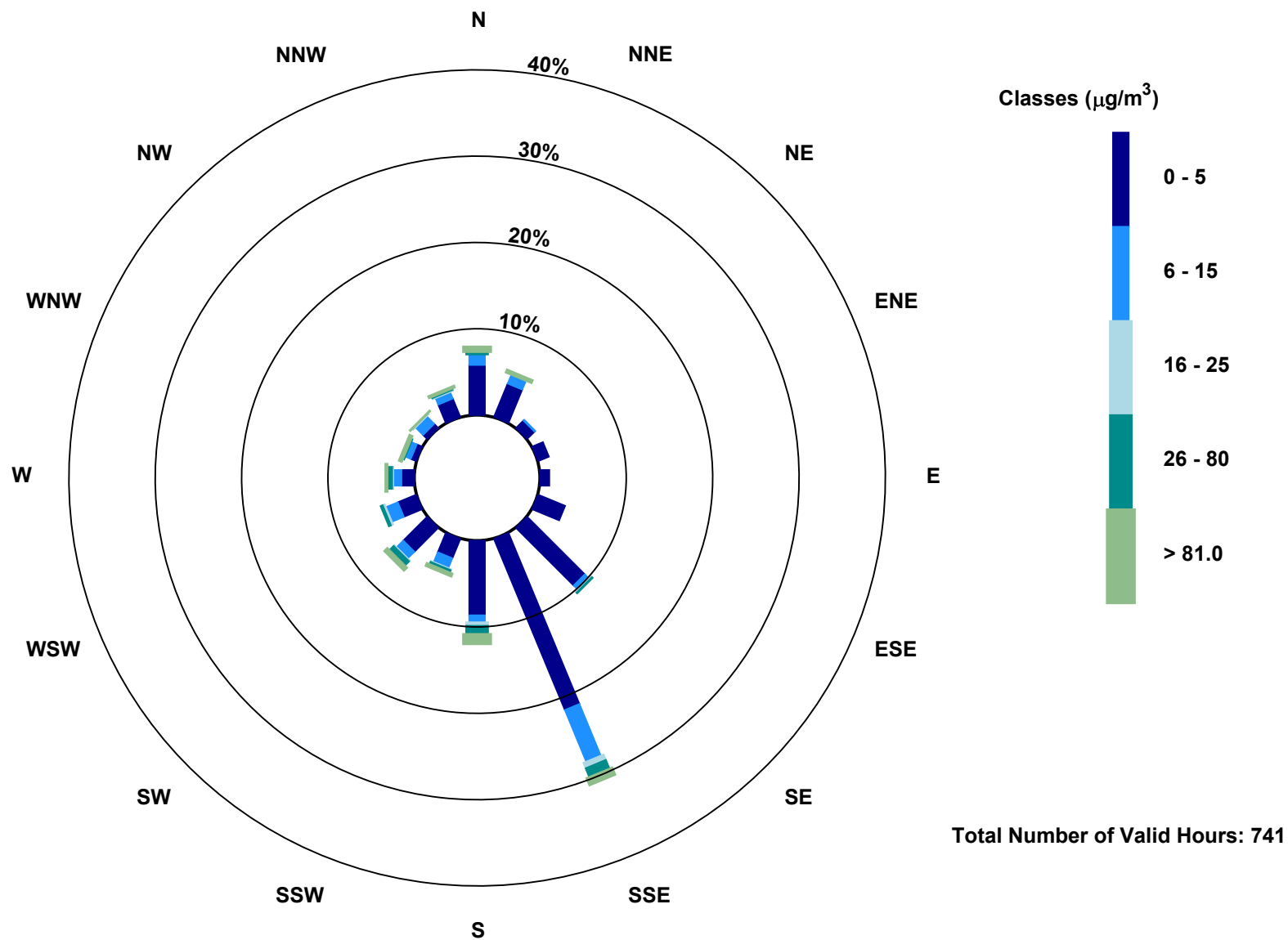
Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Wapasu





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

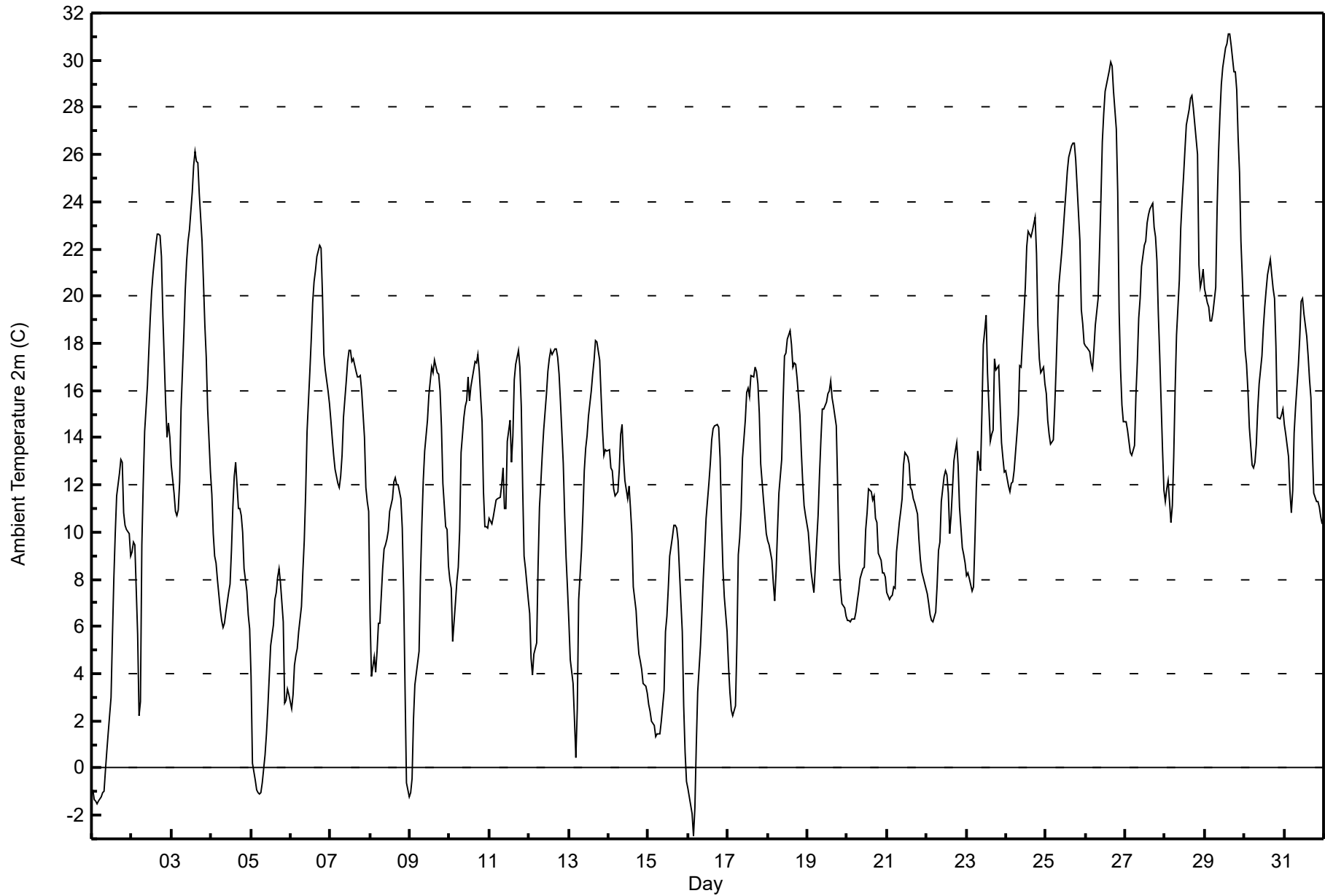
Wapasu - May 2025

Maximum Value: 31.1 C on May 29 16:00																				Maximum Daily Average: 25.4 C on May 29					Hours in Service: 744	
Minimum Value: -2.9 C on May 16 04:00																				Minimum Daily Average: 3.2 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 17.6 C at hour 17																				Minimum Diurnal Average: 7.6 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.99 C																				Percentiles: P ₁ = -1.3 P ₁₀ = 4.2 Q ₁ = 8.5 Median = 12.6 Q ₃ = 17.1 P ₉₀ = 22.1 P ₉₉ = 29.6					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	-0.9	-1.3	-1.4	-1.5	-1.4	-1.2	-1.0	-1.0	-0.1	0.7	1.5	3.0	5.6	8.0	9.9	11.6	12.5	13.1	13.0	10.8	10.3	10.1	9.9	9.0	5.0	13.1
2-May	9.2	9.6	9.5	5.7	2.2	2.8	9.5	12.0	14.3	16.2	17.7	19.1	20.2	21.0	22.2	22.6	22.6	22.6	21.7	19.2	15.5	14.0	14.6	14.0	14.9	22.6
3-May	12.8	11.7	10.9	10.7	10.9	12.1	15.2	18.4	20.3	21.5	22.4	22.8	24.4	25.5	26.1	25.7	25.7	24.3	22.3	20.6	18.8	17.4	15.2	12.6	18.7	26.1
4-May	11.6	9.9	9.0	8.7	8.0	6.7	6.3	6.0	6.2	6.6	7.5	7.8	9.2	11.0	12.4	12.9	11.0	11.0	10.7	10.0	8.4	7.5	6.5	5.9	8.8	12.9
5-May	3.9	0.2	-0.5	-0.9	-1.1	-1.1	-1.0	-0.6	0.5	1.5	2.6	3.9	5.2	6.1	7.1	7.5	8.1	8.4	7.8	6.2	2.8	2.9	3.3	3.1	3.2	8.4
6-May	2.5	3.1	4.4	4.8	5.1	5.8	6.9	8.4	9.6	11.7	14.3	16.8	18.2	19.7	20.6	21.1	21.7	22.2	22.1	20.1	17.5	16.9	16.0	15.5	13.5	22.2
7-May	14.7	13.9	13.2	12.6	12.1	11.9	12.4	13.2	14.8	16.4	17.2	17.7	17.7	17.2	17.3	16.8	16.6	16.6	16.6	16.0	14.0	11.9	11.3	10.9	14.7	17.7
8-May	6.4	3.9	4.7	4.0	5.0	6.2	6.1	8.5	9.3	9.4	9.7	10.1	10.9	11.4	12.1	12.3	12.0	12.0	11.4	10.2	7.4	3.3	-0.6	-1.2	7.7	12.3
9-May	-1.1	-0.5	2.1	3.5	4.0	5.0	8.1	10.4	12.2	13.4	14.7	15.8	16.4	17.0	16.7	17.3	16.8	16.7	16.0	14.4	12.0	10.2	10.1	8.6	10.8	17.3
10-May	8.0	7.6	5.4	7.0	7.9	8.5	10.0	13.4	14.9	15.3	15.5	16.6	15.6	16.2	16.9	17.2	17.2	17.5	16.8	14.7	11.7	10.2	10.3	10.2	12.7	17.5
11-May	10.6	10.4	10.6	11.0	11.4	11.4	11.5	12.0	12.7	11.0	11.0	13.9	14.8	12.9	14.1	16.4	17.1	17.7	17.0	15.3	11.9	9.0	8.5	7.2	12.5	17.7
12-May	6.5	4.7	3.9	4.8	5.3	8.6	11.0	12.1	13.3	14.3	15.9	16.8	17.4	17.7	17.5	17.8	17.8	17.4	16.7	15.5	12.9	10.7	8.9	7.6	12.3	17.8
13-May	6.2	4.6	3.6	2.0	0.4	2.5	7.1	9.2	10.8	12.6	13.5	14.1	14.9	16.0	16.7	17.3	18.1	18.1	17.3	15.8	14.4	13.3	13.5	13.4	11.5	18.1
14-May	13.5	12.7	12.6	11.8	11.5	11.7	12.6	14.2	14.6	13.1	12.2	11.4	12.0	11.0	9.9	7.7	6.6	5.6	4.8	4.6	4.2	3.6	3.4	3.2	9.5	14.6
15-May	2.7	2.4	2.0	1.8	1.3	1.5	1.5	1.4	2.0	3.3	5.8	6.4	7.6	9.0	9.8	10.3	10.3	10.2	9.6	8.3	5.8	2.6	0.7	-0.6	4.8	10.3
16-May	-0.9	-1.6	-2.0	-2.9	-1.7	1.0	3.2	5.2	6.6	8.1	9.3	10.6	12.1	12.9	13.9	14.4	14.5	14.6	14.4	13.1	10.5	8.5	7.3	5.8	7.4	14.6
17-May	4.4	3.2	2.4	2.2	2.6	5.3	9.1	9.8	11.0	13.1	14.7	15.9	16.1	15.8	16.6	16.6	17.0	16.8	16.3	15.0	12.9	11.3	10.7	9.9	11.2	17.0
18-May	9.6	9.4	8.8	7.9	7.1	8.3	10.1	11.7	13.1	15.6	17.5	17.6	18.2	18.5	17.9	17.0	17.2	17.1	16.5	15.0	13.4	12.1	11.1	10.7	13.4	18.5
19-May	10.0	9.2	8.3	7.8	7.4	8.5	10.7	12.4	13.9	15.2	15.2	15.5	15.9	16.0	16.4	15.7	15.3	14.5	11.9	8.7	7.6	7.0	6.8	6.4	11.5	16.4
20-May	6.2	6.2	6.2	6.3	6.3	6.6	7.1	7.5	8.1	8.5	8.5	10.1	10.8	11.8	11.7	11.4	11.5	10.6	10.4	9.1	8.8	8.3	8.2	8.1	8.7	11.8
21-May	7.4	7.1	7.3	7.3	7.7	7.6	9.2	10.4	10.9	11.4	12.9	13.4	13.2	12.9	11.9	11.8	11.4	11.3	10.8	9.7	8.9	8.4	8.1	7.6	9.9	13.4
22-May	7.4	7.0	6.5	6.3	6.2	6.6	7.8	9.2	9.6	11.3	12.4	12.6	12.4	11.6	9.9	10.7	13.0	13.4	13.8	12.9	11.0	9.3	9.0	8.7	9.9	13.8
23-May	8.1	8.3	8.1	7.5	7.7	9.6	11.9	13.4	12.6	15.0	17.9	18.5	19.2	16.8	13.9	14.1	14.3	17.4	16.8	17.0	15.4	13.8	13.2	12.6	13.5	19.2
24-May	12.6	11.9	11.7	12.1	12.1	12.6	14.1	15.0	17.1	17.0	18.1	20.4	22.1	22.8	22.6	22.5	22.7	23.4	21.8	18.8	17.3	16.7	17.0	16.3	17.4	23.4
25-May	15.9	14.8	14.2	13.7	13.9	15.3	17.0	18.9	20.5	21.9	22.7	23.5	24.4	25.3	25.9	26.4	26.5	26.5	25.8	24.6	22.3	19.4	18.8	18.0	20.7	26.5
26-May	17.9	17.8	17.7	17.2	16.9	17.8	18.8	19.9	21.9	24.1	26.5	27.8	28.7	29.3	29.6	29.9	29.7	28.7	27.1	24.4	19.4	16.9	15.4	14.7	22.4	29.9
27-May	14.7	14.3	13.8	13.4	13.3	13.7	15.8	17.3	19.0	19.9	21.2	22.1	22.3	23.1	23.4	23.7	23.9	22.9	22.5	21.5	19.3	17.5	13.5	11.8	18.5	23.9
28-May	11.3	11.9	12.2	10.4	11.1	13.2	16.0	18.3	20.7	22.9	24.1	25.1	26.2	27.2	27.9	28.4	28.5	28.0	27.3	26.0	21.3	20.4	20.7	21.2	20.8	28.5
29-May	20.3	19.7	19.5	18.9	18.9	19.3	20.4	23.8	26.0	27.7	29.0	29.7	30.5	30.7	31.1	31.1	30.6	29.5	29.5	28.7	26.7	25.2	22.4	19.2	25.4	31.1
30-May	17.7	17.1	16.0	14.5	12.8	12.7	12.9	13.7	15.2	16.3	17.5	18.7	19.5	20.3	20.9	21.5	20.9	20.3	19.9	17.9	14.9	14.8	15.0	15.2	16.9	21.5
31-May	14.6	14.1	13.2	11.7	10.8	11.7	14.2	15.3	17.0	18.3	19.8	19.9	19.3	18.3	17.4	16.4	15.7	13.6	11.7	11.3	11.3	11.1	10.7	10.4	14.5	19.9
9.2 8.5 8.2 7.8 7.6 8.5 10.1 11.6 12.9 14.0 15.1 16.0 16.8 17.2 17.4 17.6 17.6 17.5 16.8 15.3 13.2 11.7 10.9 10.2																										Diurnal Average
20.3 19.7 19.5 18.9 18.9 19.3 20.4 23.8 26.0 27.7 29.0 29.7 30.5 30.7 31.1 31.1 30.6 29.5 29.5 28.7 26.7 25.2 22.4 21.2																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Wapasu - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	25	3.36	3.36
0 - 10	214	28.76	32.12
10 - 20	398	53.49	85.62
> 20	107	14.38	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

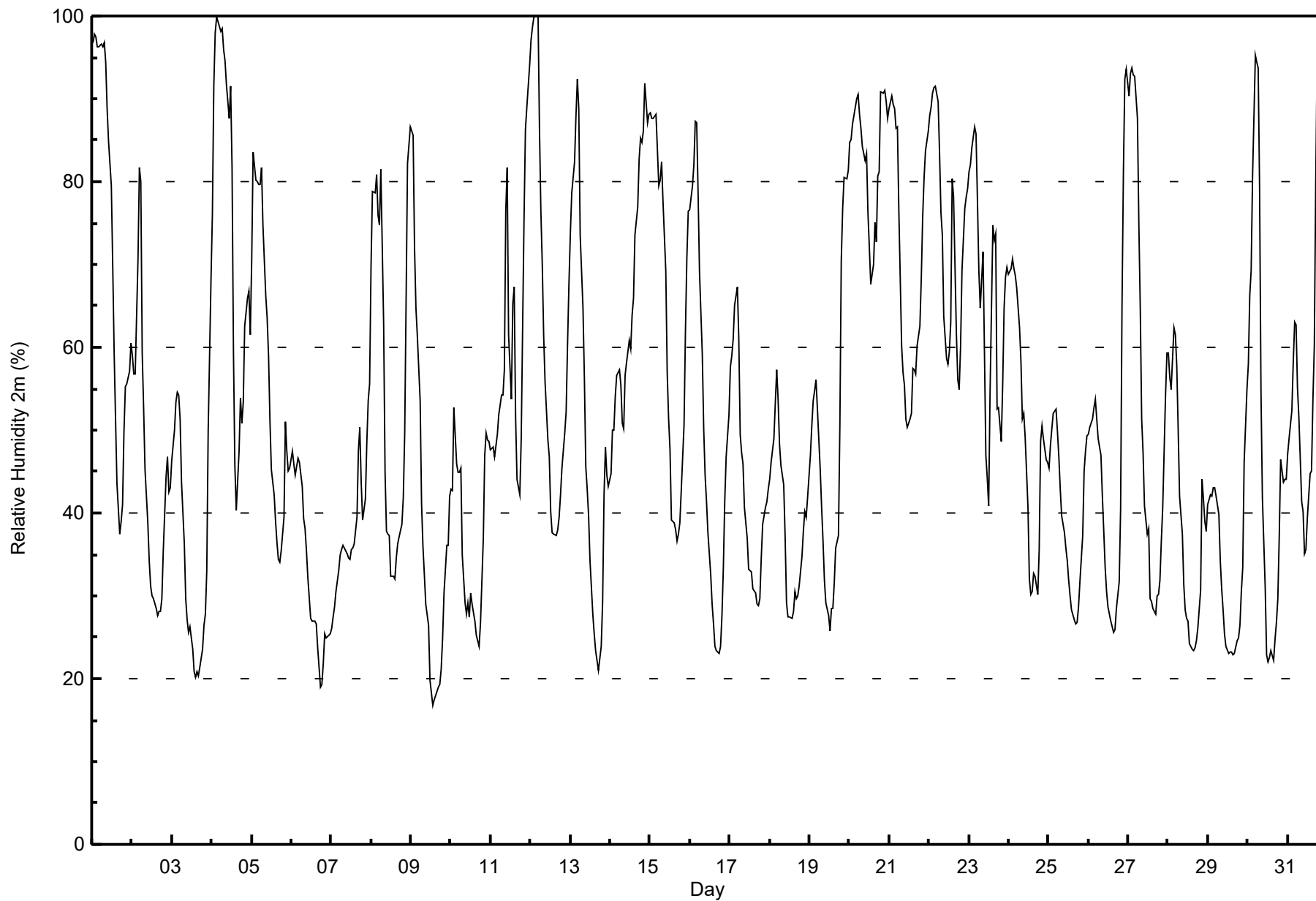
Wapasu - May 2025

Maximum Value: 100.0 % on May 12 04:00																					Maximum Daily Average: 83.2 % on May 20				Hours in Service: 744	
Minimum Value: 16.8 % on May 9 14:00																					Minimum Daily Average: 32.7 % on May 6				Hours of Data: 743	
Maximum Diurnal Average: 71.2 % at hour 5																					Minimum Diurnal Average: 37.5 % at hour 17				Hours of Missing Data: 1	
Monthly Average: 52.66 %																					Percentiles: P ₁ = 19.6 P ₁₀ = 26.9 Q ₁ = 35.1 Median = 48.6 Q ₃ = 69.3 P ₉₀ = 87.1 P ₉₉ = 98.5				Hours of Calibration: 0	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	96.8	97.7	97.4	96.2	96.3	96.6	96.3	96.8	94.5	88.8	85.0	79.5	69.8	59.5	51.3	43.5	37.4	39.1	41.0	49.8	55.3	55.7	57.2	60.5	72.6	97.7
2-May	59.0	56.8	56.8	70.7	81.7	80.0	59.3	52.6	45.2	38.8	34.2	31.3	30.0	29.7	28.5	27.6	28.1	28.1	29.7	35.4	44.3	46.8	42.5	43.1	45.0	81.7
3-May	46.2	50.1	53.3	54.6	54.3	51.4	43.7	36.3	29.6	27.1	25.6	26.3	23.5	20.9	20.1	20.8	20.3	21.4	23.6	26.5	27.8	33.1	50.0	68.1	35.6	68.1
4-May	76.2	91.6	98.0	99.8	99.3	98.1	98.4	96.0	94.7	91.7	87.6	91.5	81.6	59.5	45.8	40.4	47.5	53.9	50.9	53.5	62.6	66.0	66.9	61.6	75.5	99.8
5-May	70.5	83.6	80.2	80.1	79.6	79.6	81.7	74.8	66.2	63.6	58.9	51.1	45.3	42.2	39.0	36.5	34.5	34.0	35.5	39.4	51.0	47.5	45.1	45.4	56.9	83.6
6-May	47.5	45.9	44.6	45.6	46.6	46.1	43.2	39.4	38.1	35.5	32.1	27.2	27.0	26.9	26.9	26.6	23.8	19.0	19.3	21.8	25.4	25.0	25.2	25.4	32.7	47.5
7-May	26.2	27.5	28.7	30.5	33.1	34.9	35.5	36.1	35.7	35.1	34.6	34.4	35.6	35.7	36.3	39.4	47.5	50.4	43.8	39.2	41.8	48.5	53.6	55.6	38.3	55.6
8-May	69.7	78.7	78.6	80.9	75.9	74.8	81.5	62.7	44.9	37.8	37.4	37.3	32.4	32.5	32.0	34.6	36.3	37.0	38.7	41.9	49.6	65.8	82.2	86.6	55.4	86.6
9-May	86.2	85.6	72.1	64.8	61.3	53.5	41.2	35.9	32.6	29.0	26.4	19.8	18.3	16.8	17.4	18.0	19.0	19.4	21.2	24.9	30.3	36.2	36.1	42.0	37.8	86.2
10-May	42.9	42.6	52.8	45.9	45.0	44.8	45.4	34.9	29.2	27.8	29.2	27.4	30.3	29.0	26.9	25.2	24.6	23.9	26.8	37.0	46.9	49.7	48.8	48.7	36.9	52.8
11-May	47.7	48.0	46.7	48.1	49.4	51.8	54.2	54.2	57.2	76.4	81.7	61.4	53.8	65.3	67.3	51.5	44.1	42.2	48.9	62.3	75.4	86.3	89.1	94.0	60.7	94.0
12-May	97.1	98.6	99.9	100.0	100.0	86.4	76.5	70.0	61.3	55.7	48.8	46.8	40.2	37.7	37.4	37.2	37.9	39.5	42.2	45.5	49.7	52.2	60.4	67.7	62.0	100.0
13-May	73.8	78.6	82.3	87.9	92.3	88.8	73.5	64.7	56.3	45.5	42.9	39.7	34.2	27.8	25.4	23.4	22.2	21.0	23.9	29.3	42.1	47.9	44.5	43.3	50.5	92.3
14-May	44.8	50.1	50.0	54.0	56.6	57.3	55.4	50.8	50.1	56.7	58.1	60.9	59.8	64.0	66.0	73.6	76.9	82.7	85.2	84.7	86.1	91.8	87.2	88.1	66.3	91.8
15-May	88.3	87.6	87.6	88.2	84.0	79.5	80.2	82.3	77.6	69.1	56.9	51.4	47.7	39.1	38.9	37.9	36.6	37.5	38.8	42.7	50.6	62.0	70.9	76.4	63.0	88.3
16-May	76.5	79.5	82.1	87.4	87.2	78.6	69.2	59.1	50.2	44.6	41.3	37.6	32.6	29.1	26.7	24.0	23.3	23.1	23.9	27.6	33.4	41.6	46.8	51.8	49.0	87.4
17-May	57.6	59.0	61.0	65.0	67.2	61.0	49.6	47.3	45.9	40.7	37.0	33.2	33.0	32.9	30.8	30.3	28.9	28.9	29.6	34.6	38.7	40.7	41.3	42.9	43.2	67.2
18-May	44.1	46.1	48.9	53.3	57.3	53.7	48.3	45.7	43.4	37.2	29.1	27.5	27.4	27.3	28.2	30.6	29.7	30.0	31.1	34.8	37.8	40.1	39.5	41.9	38.9	57.3
19-May	47.0	50.6	53.6	54.8	56.1	52.6	45.3	40.7	36.7	31.9	29.2	27.6	25.7	28.5	28.5	31.6	35.8	37.2	50.6	70.5	76.7	80.5	80.3	81.3	48.1	81.3
20-May	84.7	85.1	86.9	87.9	90.0	90.6	88.2	86.4	84.2	82.6	83.4	76.3	72.0	67.6	70.0	75.1	72.7	80.7	81.3	90.9	90.6	91.0	89.7	87.6	83.2	91.0
21-May	88.8	90.3	89.4	88.8	86.4	86.6	76.7	60.2	57.0	55.5	51.3	50.3	51.3	52.1	57.4	57.4	56.8	60.2	62.5	68.3	75.7	80.5	83.7	86.2	69.7	90.3
22-May	87.9	89.1	90.6	91.4	91.5	89.6	83.5	76.3	73.5	63.7	58.7	58.0	59.5	63.1	80.3	78.2	61.6	56.1	54.9	60.1	69.4	76.8	78.1	79.1	73.8	91.5
23-May	81.1	82.0	84.0	86.7	85.8	77.8	69.3	64.7	71.5	59.5	46.9	44.3	40.8	54.5	74.7	72.9	73.7	52.5	52.8	48.6	55.7	64.7	68.5	69.7	65.9	86.7
24-May	68.9	69.5	70.7	69.4	68.7	67.1	62.3	58.3	51.4	52.0	49.1	40.6	32.1	30.1	30.6	32.7	32.4	30.2	35.5	48.6	50.5	49.0	46.4	46.1	49.7	70.7
25-May	45.4	48.2	50.1	52.0	52.5	49.8	46.7	42.9	39.6	37.5	35.8	34.3	31.8	30.1	28.3	27.1	26.6	26.9	28.7	31.7	37.3	45.1	47.4	49.3	39.4	52.5
26-May	49.6	50.3	51.3	52.7	53.7	51.4	48.9	46.9	42.1	37.8	33.4	30.5	28.6	26.9	26.2	25.7	26.0	28.4	31.6	40.4	65.1	81.1	92.4	93.6	46.4	93.6
27-May	90.4	93.0	93.7	92.8	92.7	87.6	74.7	64.8	51.4	47.3	40.8	37.5	38.1	29.7	29.3	28.5	27.8	30.1	30.2	31.8	36.7	40.6	54.3	59.3	54.3	93.7
28-May	59.3	56.4	54.9	62.5	61.6	57.7	50.1	42.0	37.5	31.3	28.3	27.4	26.9	24.2	23.5	23.4	23.7	24.6	26.1	30.7	44.0	41.6	39.0	37.8	38.9	62.5
29-May	41.1	42.2	42.1	43.0	43.1	42.0	39.8	34.2	30.8	28.3	25.5	24.0	23.0	23.3	23.3	22.8	23.0	24.7	24.9	26.5	30.5	33.4	46.0	54.9	33.0	54.9
30-May	58.0	66.2	69.3	80.6	95.2	94.3	93.8	79.1	54.6	41.8	31.0	22.9	22.0	22.5	23.4	22.3	24.7	26.8	29.7	37.1	46.4	43.8	44.1	44.1	48.9	95.2
31-May	47.1	49.0	52.4	58.3	63.0	62.7	55.1	51.4	41.4	40.1	35.1	35.6	39.3	44.8	45.1	53.7	60.2	79.8	94.7	97.7	98.1	99.5	100.0	OR	61.0	100.0
Diurnal Average																										
Diurnal Maximum																										
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Wapasu - May 2025





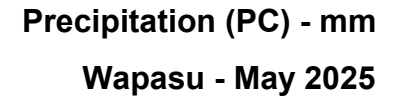
Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Wapasu - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	9	1.21	1.21
20 - 40	245	32.97	34.19
40 - 60	248	33.38	67.56
60 - 80	115	15.48	83.04
80 - 100	124	16.69	99.73

Total Number of Valid Hours: 743

Total Number of Hours: 744

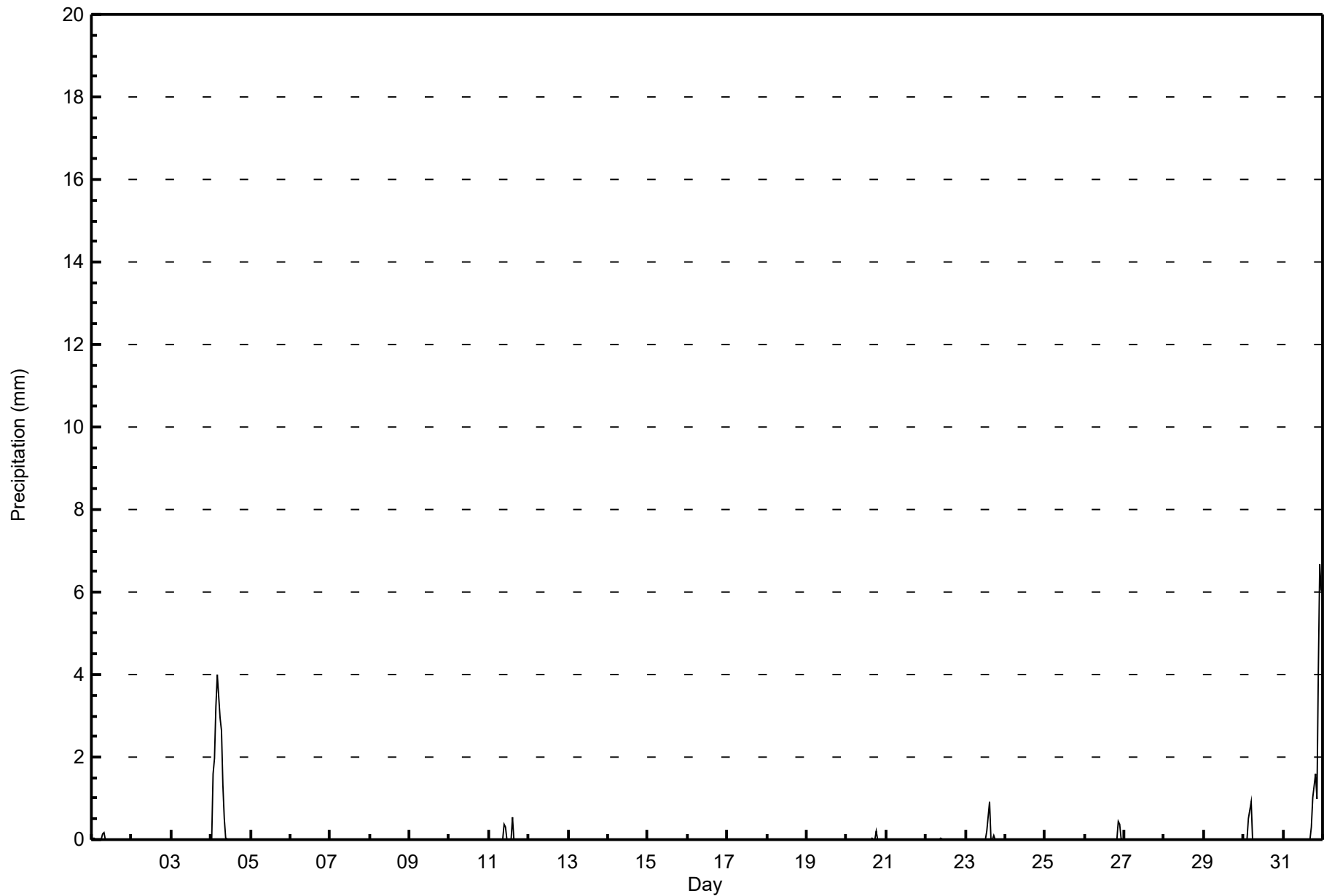


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Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

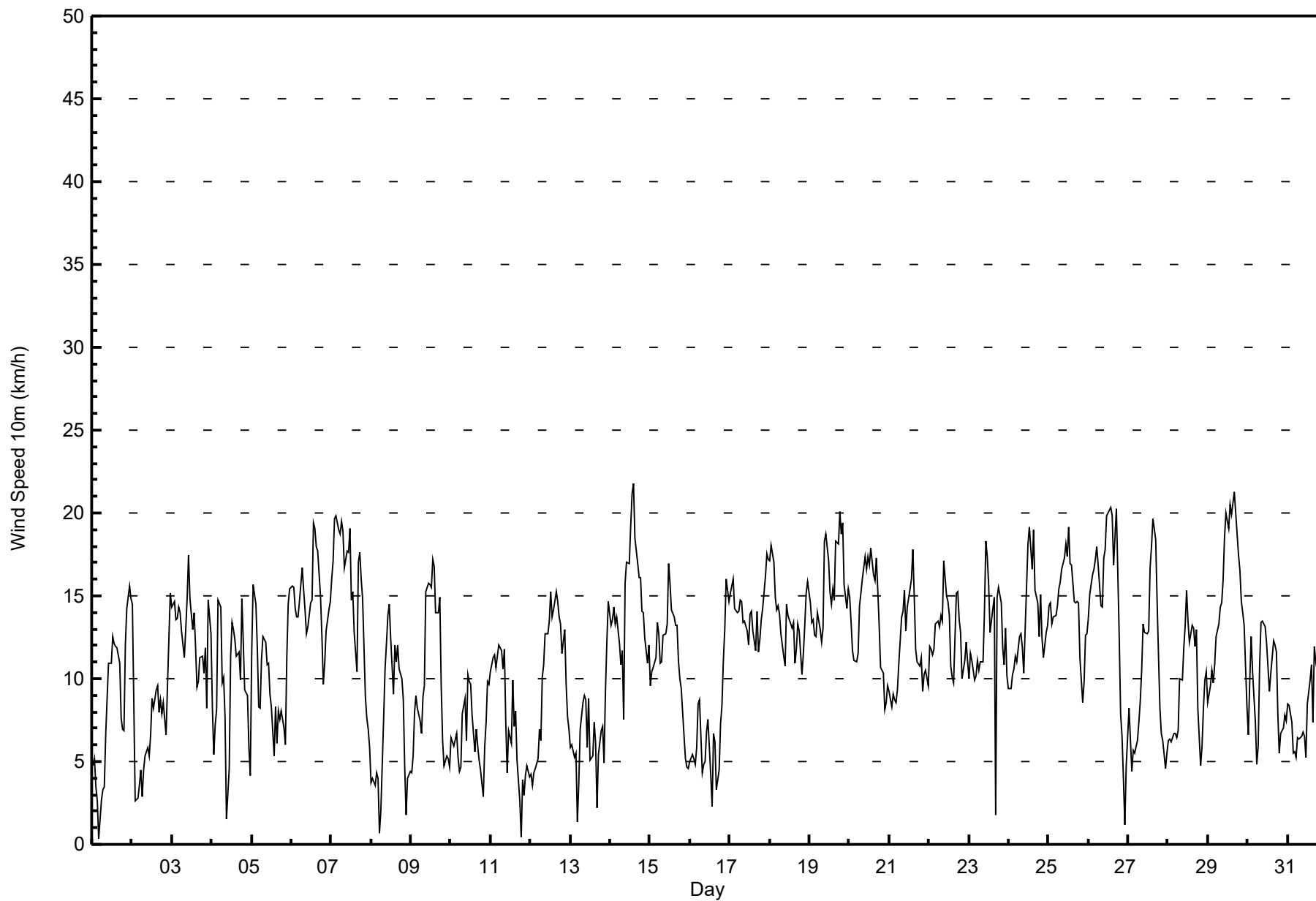
Wapasu - May 2025

Maximum Speed: 22 km/h on May 14 15:00										Maximum Daily Speed Average: 15.4 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 1 05:00										Minimum Daily Speed Average: 0.3 km/h on May 2										Hours of Data: 744						
Maximum Diurnal Speed Average: 7.1 km/h at hour 1										Minimum Diurnal Speed Average: 4.2 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 5.2 km/h 168.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 12 Q ₃ = 14 P ₉₀ = 17 P ₉₉ = 20										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE5	N5	N3	ENE3	S0	NW3	W3	SW3	SSW7	SSW9	SSW11	SSW11	SSW13	SSW12	SSW12	SW12	SW11	SSW8	SSE7	SE7	SE12	SE14	SSE16	SSE15	S5.7	SSE16
2-May	SSE14	S9	SSW3	E3	SE4	SE5	S3	W4	WNW5	NW6	W5	WNW7	WNW9	W8	WNW9	NW10	N8	N9	NNE8	NE9	ENE7	E10	ESE12	ESE15	NE0.3	ESE15
3-May	ESE14	ESE15	SE14	SE14	SE14	SSE14	SSE13	SSE11	SSW13	SSW15	SW17	WSW15	W13	WNW14	WNW12	NW10	WNW10	NW11	NNW11	NNW10	NW12	NW8	NW15	NNW13	WSW3.3	SW17
4-May	NW8	WNW5	W7	W8	NW15	NNW14	NNW10	N10	N8	ENE2	SW5	WSW11	WSW13	W13	W12	W11	WSW12	SW10	SW15	SW12	SSW9	SW9	WSW6	WNW4	W6.7	SW15
5-May	NNW12	N16	N14	N12	N8	NNW8	NNW11	NNW13	NNW12	N11	N11	NNW9	NNW8	NW5	NNW8	N6	N8	NE8	NE8	ENE7	E6	ESE11	SE14	SE15	N6.6	N16
6-May	SE16	SE16	SE14	SSE14	SSE14	SSE15	SSE17	SSE15	S14	S13	SSW13	SW15	SW15	SW19	SW19	SW18	SW18	SW15	SSW13	S10	SSE11	S13	S14	SSE15	S12.6	SW19
7-May	SSE16	SSE17	SSE20	SSE20	SSE19	SSE19	SSE20	SSE19	S17	SSW18	SSW18	SW19	SW15	WSW15	WSW13	SW10	WSW17	SW18	SW16	SW15	SSW9	S8	S7	SSW6	SSW13.2	SSE20
8-May	SSE4	SE4	SE4	ESE4	E4	NE1	ESE2	N8	N11	N12	N14	N14	N12	N9	N12	N11	N12	N11	N9	NNE5	E2	SSE4	SSE4	NNE5.6	N14	
9-May	SE4	SSE5	SSE8	SSE9	SSE8	SSE7	SSW7	SSW9	SSW10	SW15	SW16	W16	WSW15	WSW17	WSW17	WSW14	WSW14	WSW15	WSW10	SW6	S5	SSE5	S5	S5	SW8.2	WSW17
10-May	SSE6	SSE6	SSE6	SSE7	SSE5	S4	S5	SW8	SW9	W6	SW10	WSW10	WNW10	NW8	NNW6	WSW7	WSW6	W5	SW5	SSE3	SE6	SE7	SE10	SE10	SSW3.4	SW10
11-May	SE10	SE11	SE11	SE11	SSE11	SSE12	SSE12	SSE11	S12	S7	S4	S7	S6	S10	SSE7	SW8	W5	ESE3	SSE0	SE4	ESE3	ESE4	SE5	ESE4	SSE6.5	SSE12
12-May	ESE4	ESE4	E4	ENE5	ENE5	NE7	NNE6	NNE10	NE11	NNE13	NNE13	NNE14	NNE15	NNE14	NNE14	NNE15	NNE15	NNE14	NNE13	NNE12	N13	NNE10	NNE8	NE7	NNE9.5	NNE15
13-May	NNE6	N6	NNE5	NE5	N1	NE4	N7	N9	N9	NNE9	NNW6	NNW9	NW5	NNW5	NW7	NNW6	SE2	ESE5	ESE7	SE7	SSE5	SE9	SE12	SE15	NE2.4	SE15
14-May	SSE13	SSE14	SSE14	SSE13	SSE14	SSE12	S11	SW12	W8	NNW16	NNW17	N17	N19	N21	N22	N19	N17	N16	N16	N14	N14	N12	N11	N12	N6.1	N22
15-May	NNE10	NNE10	NNE11	NNE11	N13	NNE13	NNE11	NNE11	N13	N13	N13	N17	N16	NNE14	NNE14	NNE13	NE13	NNE11	NNE10	NNE9	NNE7	NE5	ENE5	E5	NNE10.6	N17
16-May	ESE5	E5	ESE5	ESE5	ESE6	SE8	ESE9	ENE4	NNE5	NE5	NNE7	NNE8	ESE4	ENE2	SE7	SE6	SSE3	ESE4	ESE7	ESE8	ESE11	SE13	SE16	SE15	ESE5.8	SE16
17-May	SE15	SE16	SE16	SE14	SE14	SE14	SSE15	SSE15	SSE13	SSE13	SSE13	S12	SSE14	SSE14	SSE13	SSE12	SSE14	SSE12	SSE12	SE14	SE14	SE16	SE18	SE17	SSE13.9	SE18
18-May	SE17	SSE18	SSE17	SE15	SE14	SE14	SSE14	SSE13	SSE11	SSE11	S14	SSE14	SSE14	SSE13	SSE13	SSE11	SSE12	SE13	SSE13	SE10	SE12	SE13	SE15	SE16	SSE13.5	SSE18
19-May	SSE15	SSE13	SSE14	SSE13	SSE13	SSE14	SSE13	S12	S13	SSE18	SSE19	SSE17	SSE15	SSE14	SSE15	SSE15	SE18	SSE18	SSE20	SSE19	SSE19	SSE16	SSE14	SSE15	SSE15.4	SSE20
20-May	SE15	SE13	SE12	SSE11	SE11	SE12	SSE14	SSE15	SSE16	SSE17	SSE17	SSE17	SSE17	SSE18	SSE16	SSE16	SSE17	SSE15	SSE13	SSE11	SSE10	SE8	SSE9	SSE10	SSE13.8	SSE18
21-May	SSE9	SSE8	SSE9	SE9	SE9	SE9	SE11	SSE14	SSE14	SE15	SSE13	SE14	SE15	SSE16	SSE18	SE15	SE12	SSE11	S11	SSE11	SSE9	SSE10	SSE10	SSE10	SSE11.6	SSE18
22-May	SSE12	SSE12	SSE11	SSE12	SSE13	SSE13	SSE13	SSE14	SSE13	SSE17	S15	S15	S14	S11	SW10	S10	S15	SSE15	SSE14	S13	SSE10	SSE11	SSE12	SSE11	SSE12.4	SSE17
23-May	SSE10	SSE11	SSE11	SSE10	SSE10	SSE11	SSE10	S11	SSE11	SSE14	SSE18	S17	S16	S13	SE14	SE15	SW2	SSE15	SSE15	SSE15	SSE12	SSE11	SSE13	S10	SSE12.1	SSE18
24-May	S9	SSE9	SE10	SE11	SE11	SE11	SSE13	SSE13	SSE12	S10	SSE13	SSE18	S19	S18	S17	SSE19	SSE15	S15	S13	SSE15	SSE12	SSE11	SSE13	SSE13	SSE13.1	S19
25-May	SSE14	SSE15	SSE13	SSE14	SSE14	SSE14	SSE15	S16	S17	S17	S18	S17	S19	S17	S17	S15	S15	S15	S15	S11	SSE9	SSE10	SSE13	SSE13	S14.3	S19
26-May	SSE14	SSE15	SSE16	SSE17	SSE17	SSE18	SSE17	SSE14	S14	SSE17	S18	S20	S20	S20	S20	S17	S19	S20	S13	W8	NNW7	W4	SSE1	SSW5	S13.3	S20
27-May	SW8	SSW6	SSW4	SSW6	S5	S6	SSW7	SW9	WSW10	WSW13	WSW13	W13	W13	WSW17	WSW18	WSW20	WSW18	WSW15	W11	WSW8	SW7	SSW6	S5	S6	WSW9.3	WSW20
28-May	SSE6	S6	S6	SSE7	SSE7	S6	SSW7	SW10	SW10	SW12	SW13	WSW15	WSW13	SW12	WSW13	WSW13	WSW12	SW13	SSW8	SSE5	SSE6	SSE8	SSE10	SSE10	SSW7.9	WSW15
29-May	S9	SSE10	SSE11	SSE10	SSE11	SSE13	SSE13	SSE14	S15	S16	S18	S20	S19	SSE21	S20	SSE21	SSE21	SSE19	SSE17	SSE17	SSE15	SSE14	W13	WNW8	S13.7	SSE21
30-May	W7	W10	WSW13	W10	W7	WNW5	WNW6	NNW11	NNW13	NW13	NW13	NNW12	NNW11	W9	WSW10	SW12	SW12	SW12	SSW8	S6	SSE7	SSE7	S8	S7	W5.7	NW13
31-May	SSE8	S8	S7	S5	SSE6	S5	S6	SSW6	SW7	S7	SW7	WNW5	NW9	NNW10	N11	NNE7	N12	N11	NNE11	N12	NNE9	N10	N12	N11	N2.3	N12
SSE7.1 SSE6.9 SSE7.1 SSE6.9 SSE6.8 SSE6.8 SSE6.9 S5.6 S5.1 S4.9SSW5.6SSW5.3SSW5.1SSW5.3SSW4.7SSW4.7SSW4.4 S4.8 S4.3 SSE4.2 SE4.7 SE6.1 SSE6.4 SE6.7																										Diurnal Average
SE17 SSE18 SSE20 SSE20 SSE19 SSE19 SSE20 SSE19 S17 SSE18 SSE19 S20 S20 N21 N22 SSE21 SSE21 SSE20 SSE20 SSE19 SSE19 SE16 SE18 SE17																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Wapasu - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Wapasu - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	93	12.50	12.50
6 - 11	272	36.56	49.06
12 - 19	362	48.66	97.72
20 - 28	17	2.28	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Wapasu - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3	4	4	8	6	14	8	12	11	4	4	0	6	5	3	1	93
6 - 11	25	23	5	2	2	7	24	65	28	20	17	9	13	7	8	17	272
12 - 19	29	15	1	0	0	4	45	142	44	9	26	24	7	2	5	9	362
20 - 28	2	0	0	0	0	0	0	8	6	0	0	1	0	0	0	0	17
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	42	10	10	8	25	77	227	89	33	47	34	26	14	16	27	744

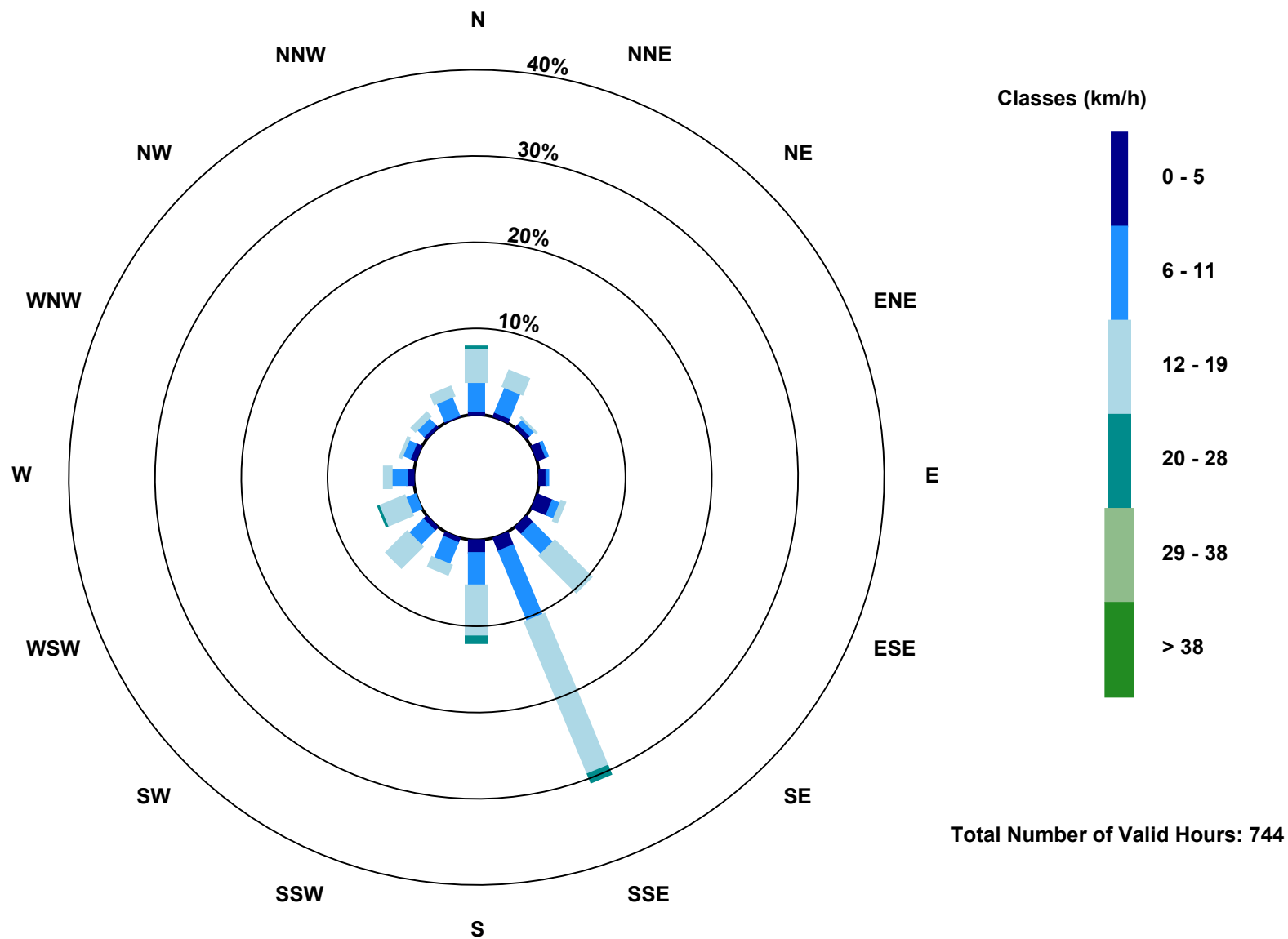
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Wapasu





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on May 29 17:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 10 03:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
1-May	2	1	1	1	1	1	1	1	3	3	3	3	4	4	4	4	3	3	2	2	3	4	4	4	4
2-May	4	3	2	1	1	2	2	1	2	2	3	3	4	4	4	4	3	3	3	3	1	3	3	4	4
3-May	4	4	3	3	3	3	3	4	4	4	5	5	5	5	4	4	4	4	4	3	3	3	5	4	5
4-May	3	2	2	3	5	4	3	4	2	1	2	4	5	4	5	4	6	3	4	4	3	4	2	3	6
5-May	8	5	4	4	3	2	3	3	4	4	4	5	4	4	4	3	3	3	3	1	4	4	4	4	8
6-May	4	4	4	4	4	4	5	5	5	5	5	5	5	6	6	6	6	6	5	3	3	4	5	5	6
7-May	5	5	5	6	6	6	6	7	6	6	6	6	5	4	4	3	5	5	4	4	4	2	2	2	7
8-May	2	2	2	1	1	1	1	3	4	4	5	5	4	4	4	4	3	4	3	2	2	2	2	1	5
9-May	1	1	2	2	2	2	2	3	4	4	5	5	5	6	5	5	5	5	3	2	1	1	1	1	6
10-May	1	1	1	1	2	1	1	3	3	4	4	4	5	4	3	3	3	3	2	1	1	2	2	2	5
11-May	2	2	3	3	4	3	3	3	4	3	2	3	3	6	2	3	3	2	2	1	1	1	1	1	6
12-May	1	1	1	1	1	2	2	4	4	4	5	5	5	5	5	5	5	5	5	4	4	3	2	2	5
13-May	1	2	1	1	2	1	2	3	3	4	4	4	4	4	3	3	2	3	2	2	3	2	3	4	4
14-May	4	4	4	4	4	4	4	3	3	4	5	5	6	6	7	6	5	5	4	5	4	4	4	4	7
15-May	4	4	4	5	5	5	4	4	4	4	5	5	5	5	5	4	5	4	4	3	2	1	1	1	5
16-May	1	1	1	1	1	2	2	2	3	3	3	3	3	3	4	4	3	2	2	3	3	3	4	4	4
17-May	4	4	4	3	4	4	4	4	4	4	4	4	5	5	4	4	5	4	4	4	4	4	5	4	5
18-May	5	5	4	4	3	4	4	4	4	4	5	5	5	4	4	4	4	4	4	3	3	3	4	4	5
19-May	3	3	3	3	3	4	4	4	5	6	6	6	5	5	5	6	6	6	6	6	6	5	5	5	6
20-May	4	4	3	4	3	4	5	5	5	5	5	6	5	5	5	5	6	5	4	3	3	2	2	2	6
21-May	2	2	2	2	2	2	3	4	4	4	4	4	5	5	5	4	4	3	4	4	3	3	3	3	5
22-May	3	3	3	3	4	4	4	4	5	5	5	5	4	4	3	4	5	5	4	5	3	3	3	3	5
23-May	3	3	3	2	2	3	3	4	3	4	6	6	6	6	5	5	2	5	5	4	3	3	4	3	6
24-May	3	2	2	2	3	3	4	4	4	4	6	7	6	7	6	7	6	5	5	5	3	3	3	3	7
25-May	4	4	3	4	4	4	4	5	6	6	6	6	7	6	6	5	5	6	5	4	3	2	3	3	7
26-May	3	4	4	4	4	5	5	5	5	5	6	7	7	7	7	6	7	7	5	6	3	2	1	1	7
27-May	3	2	2	2	2	2	2	2	3	4	4	4	5	5	5	6	6	5	4	2	2	1	1	1	6
28-May	1	1	1	1	1	1	2	3	3	4	4	5	5	5	5	5	4	4	3	1	1	1	2	3	5
29-May	2	2	3	2	3	3	4	4	5	5	7	7	7	7	7	7	8	6	6	5	4	4	7	3	8
30-May	2	3	4	4	2	2	3	3	4	4	4	4	4	4	4	4	4	3	3	1	2	2	2	2	4
31-May	2	2	2	2	1	1	2	2	2	2	3	2	2	3	4	3	4	4	4	4	4	4	3	3	4
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

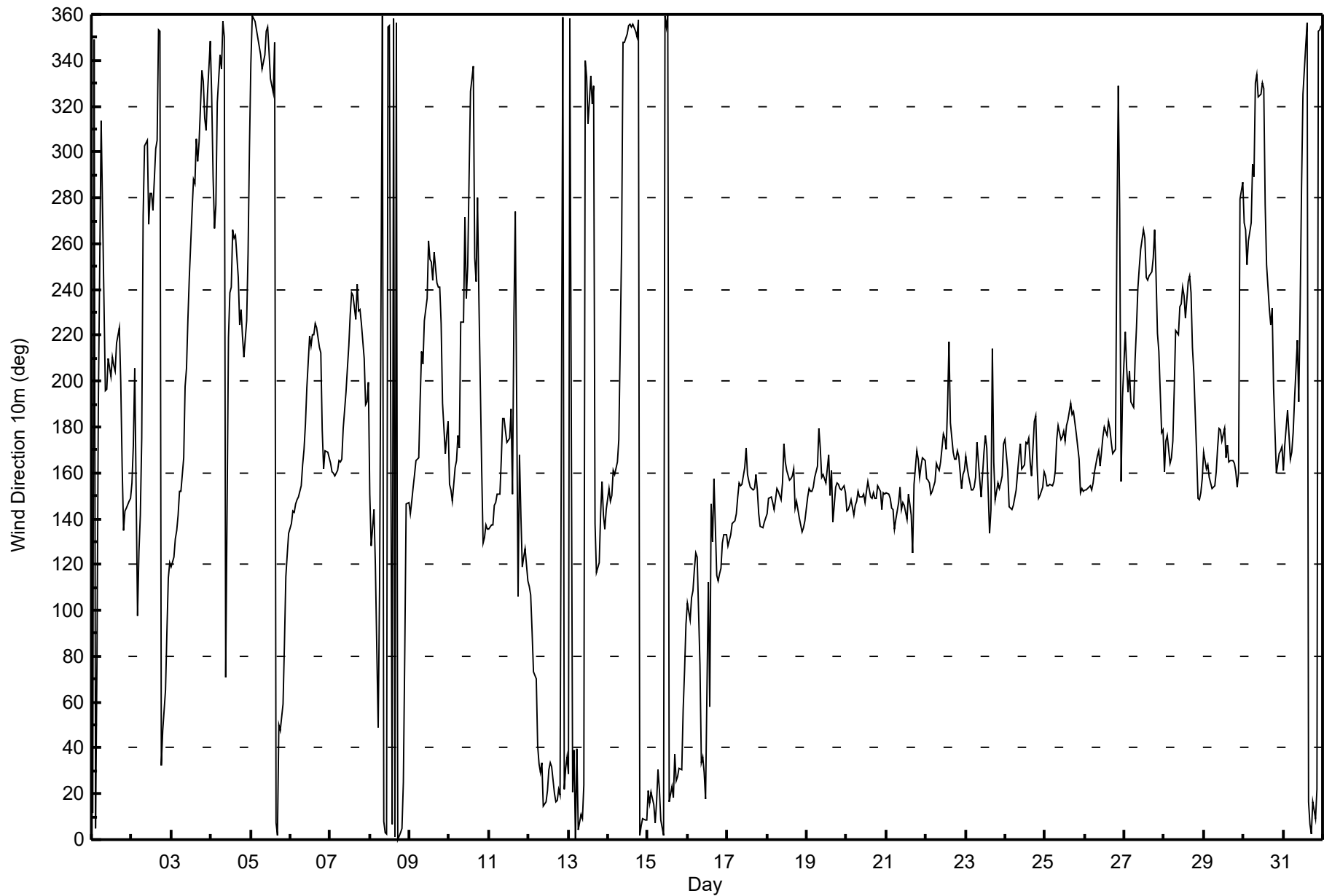
Wapasu - May 2025

Direction of Maximum Speed: 354 deg on May 14 15:00 Direction of Maximum Daily Speed Average: 156.2 deg on May 19																				Hours in Service: 744					
Direction of Minimum Speed: 191 deg on May 1 05:00 Direction of Minimum Daily Speed Average: 0.3 deg on May 2																				Hours of Data: 744					
																				Hours of Missing Data: 0					
Monthly Average Direction: 168.0 deg																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	12	349	5	78	191	314	275	235	196	196	210	202	211	207	205	216	223	200	163	135	143	144	148	149	186.1
2-May	156	172	206	97	126	142	175	272	303	305	269	282	282	275	301	305	353	352	33	47	66	91	114	121	38.9
3-May	119	123	131	135	142	152	152	167	198	206	227	245	275	288	286	305	296	305	336	331	315	309	325	348	238.6
4-May	325	289	266	277	321	342	336	357	350	71	219	239	241	266	262	264	245	225	232	219	210	227	256	302	269.1
5-May	339	360	357	353	349	346	342	336	342	353	354	344	332	326	348	7	2	50	48	59	86	114	124	133	8.0
6-May	138	143	143	147	149	150	154	163	170	181	197	220	216	220	220	225	223	215	213	179	162	170	169	167	182.1
7-May	164	161	160	159	161	166	165	166	179	195	206	215	229	238	237	227	242	230	231	225	210	190	191	200	195.0
8-May	151	128	144	120	84	49	110	359	8	3	2	355	355	7	358	1	356	0	3	5	25	81	147	147	11.6
9-May	142	148	153	159	165	166	192	213	208	226	236	261	253	252	244	256	243	241	241	225	190	168	176	182	222.2
10-May	155	153	148	162	165	176	171	226	226	272	236	250	290	326	337	254	243	280	236	161	129	132	137	136	205.1
11-May	135	137	137	146	147	151	150	166	183	184	178	173	175	188	151	227	274	106	168	142	119	123	127	113	157.5
12-May	110	107	91	73	70	41	33	29	34	15	17	21	31	33	32	20	16	17	22	20	359	22	31	36	28.2
13-May	29	358	21	39	0	39	4	11	9	24	340	332	313	333	321	329	138	117	121	142	156	142	136	144	41.6
14-May	153	148	150	161	159	164	175	216	259	348	348	351	355	356	354	356	353	350	358	2	6	9	9	9	2.0
15-May	21	16	21	15	7	16	31	22	8	2	359	355	360	16	23	18	37	26	27	31	30	56	74	94	18.6
16-May	103	96	105	109	118	125	123	76	33	36	29	18	112	58	146	130	157	115	113	116	119	129	133	133	111.2
17-May	128	130	133	138	139	142	149	156	155	155	162	171	159	156	154	152	153	159	152	142	137	136	139	140	146.7
18-May	142	149	149	147	144	149	153	152	148	156	172	165	161	157	157	159	162	145	147	141	137	134	136	139	149.9
19-May	150	153	152	152	154	158	163	179	171	158	160	155	162	168	150	161	139	154	156	155	153	152	155	151	156.2
20-May	143	144	146	148	142	146	148	152	149	149	151	147	152	156	149	149	151	149	149	155	152	144	152	151	149.0
21-May	151	151	149	145	144	135	140	147	154	144	147	146	140	151	147	142	125	155	170	166	158	163	166	165	149.4
22-May	157	157	156	151	152	156	164	162	161	165	177	175	170	190	217	182	169	166	166	170	167	153	159	161	166.2
23-May	167	162	158	153	152	154	158	173	157	149	159	169	177	171	134	144	214	165	148	155	153	156	158	172	158.7
24-May	174	161	145	145	144	146	152	160	167	173	162	163	173	173	175	165	159	183	185	163	149	150	154	161	162.8
25-May	159	155	154	155	155	156	161	175	181	174	176	178	174	181	183	191	185	187	182	177	166	151	153	152	170.2
26-May	153	152	153	155	153	155	161	167	170	163	169	176	180	176	182	179	174	169	170	263	329	275	156	193	169.5
27-May	221	205	195	204	191	189	209	223	241	249	257	266	262	246	244	246	248	254	266	246	221	213	178	179	237.8
28-May	161	174	176	164	167	174	197	222	220	232	234	241	237	228	244	246	238	215	204	168	149	148	151	158	208.0
29-May	169	162	164	158	155	153	155	161	171	179	179	174	180	166	172	165	165	165	164	160	154	160	280	287	169.3
30-May	269	266	251	261	269	295	289	330	334	324	325	330	328	277	251	231	225	232	197	178	160	168	170	172	266.9
31-May	161	172	187	177	166	169	178	192	218	191	232	285	325	347	356	17	7	3	16	9	22	353	353	355	349.2
147.5 148.2 149.7 148.7 148.5 149.2 156.8 171.6 179.9 182.1 197.0 207.5 208.6 208.4 205.1 204.2 199.8 187.8 171.6 156.6 142.9 143.9 146.4 146.0																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Wapasu - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Wapasu - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 101 deg on May 11 19:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 8 deg on May 10 03:00																									
Percentiles: P ₁ = 11 P ₁₀ = 17 Q ₁ = 20 Median = 26 Q ₃ = 31 P ₉₀ = 39 P ₉₉ = 87																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-May	30	18	32	39	84	34	32	33	31	31	25	29	29	28	29	27	29	36	24	13	18	19	18	18	84
2-May	23	26	75	54	34	22	45	36	44	55	65	61	52	47	48	43	51	37	33	18	22	20	20	19	75
3-May	18	19	18	17	17	19	19	27	30	26	21	28	38	34	41	38	33	29	22	22	25	27	26	23	41
4-May	28	28	28	30	29	19	20	25	26	65	22	21	28	30	32	34	36	17	17	20	24	27	39	33	65
5-May	43	27	25	24	22	23	18	21	25	32	33	48	54	76	54	57	40	36	24	19	17	17	19	18	76
6-May	18	18	18	18	19	20	21	26	28	31	31	25	29	23	25	25	25	27	24	28	21	24	24	25	31
7-May	24	23	21	24	24	24	25	26	30	29	25	24	26	21	18	16	21	20	19	16	26	24	27	28	30
8-May	21	26	51	22	26	78	51	29	29	27	28	26	28	38	29	31	29	32	29	30	23	46	13	10	78
9-May	9	10	15	18	20	20	31	25	29	20	24	29	32	30	25	32	27	24	18	17	26	14	14	24	32
10-May	10	11	8	14	36	45	25	23	30	69	34	47	46	51	61	53	47	56	41	32	12	12	14	15	69
11-May	16	16	17	18	18	20	19	25	30	28	33	38	42	30	36	39	61	85	101	21	22	17	13	18	101
12-May	13	11	12	12	16	23	31	30	33	29	33	37	32	35	34	32	33	32	32	32	27	31	29	26	37
13-May	23	22	29	25	88	27	28	30	38	43	79	48	87	78	49	57	98	67	23	36	40	16	17	20	98
14-May	23	18	19	27	25	25	28	26	40	30	25	25	28	27	27	28	24	23	26	26	30	30	30	30	40
15-May	35	31	31	32	30	32	32	32	30	30	33	27	30	36	36	35	33	34	33	29	24	17	28	17	36
16-May	15	11	11	13	15	19	22	60	73	69	61	53	88	100	67	64	91	70	30	21	19	17	19	19	100
17-May	18	18	18	18	19	19	22	23	23	26	31	36	31	30	32	27	25	28	23	19	19	18	18	19	36
18-May	19	21	19	19	18	19	21	22	23	30	33	30	33	33	29	28	28	23	22	17	16	17	17	19	33
19-May	19	17	18	18	20	20	24	31	31	27	28	26	29	31	28	29	25	24	24	23	23	22	23	23	31
20-May	19	19	20	21	21	21	21	24	24	23	24	23	24	26	24	24	24	23	24	22	19	18	20	17	26
21-May	16	16	16	17	17	17	20	22	24	22	30	30	23	25	23	23	26	28	30	24	21	23	26	25	30
22-May	20	20	19	18	19	23	26	23	26	26	31	31	29	33	29	29	28	27	27	29	23	17	20	21	33
23-May	22	22	21	19	19	19	24	29	24	26	26	33	31	32	21	25	86	28	21	22	18	19	20	26	86
24-May	26	21	17	17	17	18	21	23	28	30	27	26	31	31	32	28	28	31	32	25	17	17	18	22	32
25-May	21	17	19	19	19	21	24	27	31	30	30	32	30	31	33	32	33	31	30	28	22	15	17	16	33
26-May	19	19	19	18	19	19	23	27	29	26	31	30	31	30	30	32	30	28	28	67	33	52	88	28	88
27-May	24	28	27	26	25	26	29	19	28	27	31	38	37	27	26	24	25	26	29	23	16	19	30	16	38
28-May	12	14	16	11	13	20	27	20	24	29	29	30	31	35	31	34	36	24	31	21	9	14	16	21	36
29-May	25	22	23	20	19	19	22	23	29	31	31	30	31	29	30	28	28	26	26	23	20	26	41	30	41
30-May	28	29	24	35	30	36	33	21	21	23	28	35	39	45	44	31	26	20	27	22	14	21	18	23	45
31-May	18	25	26	52	15	15	27	30	24	33	52	51	21	24	28	32	31	28	33	31	40	32	22	26	52
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS18 STONY MOUNTAIN MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	711	30	33	99.6	-	-	2.1	0	0.7	0
TRS(ppb) Average	710	32	34	99.73	2.2	0	1.7	-	0.7	-
THC(ppm) Average	629	31	115	88.71	-	-	2.5	-	2.1	-
NMHC(ppm) Average	629	31	115	88.71	-	-	0.253	-	0.01	-
CH4(ppm) Average	629	31	115	88.71	-	-	2.2	-	2.1	-
O3 (ppb) Average	713	31	31	100	-	-	67.7	0	52.3	-
NO2 (ppb) Average	711	32	33	99.87	-	-	6.6	0	2.1	-
NO (ppb) Average	711	32	33	99.87	-	-	4.9	-	1.5	-
NOX (ppb) Average	711	32	33	99.87	-	-	11.5	-	2.6	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	626.1	0	129.7	3
CO(ppm) Average	636	28	28	100	-	-	0.2	0	0.2	0
CO2(ppm) Average	470	24	24	100	-	-	458	-	443.5	-
Temperature 2 m (C) Average	744	0	0	100	-	-	30.4	-	23.5	-
Relative Humidity (%) Average	729	0	15	97.98	-	-	100	-	91.8	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	20	-	13	-
Wind Speed 20 m (km/h) Average	744	0	0	100	-	-	27	-	20	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	0	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-	0	-
Precipitation (mm) Total	742	0	2	99.73	-	-	3.5	-	6	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	51	-	29.5	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	937.7	-	346	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	711	0.23	0.2	-	0	0	0.1	0.2	0.3	0.5	2.1
TRS (ppb) Average	710	0.5	0.1	-	0.4	0.4	0.5	0.5	0.5	0.6	1.7
THC (ppm) Average	629	2.04	0	-	1.9	2	2	2	2.1	2.1	2.5
NMHC(ppm) Average	629	0.002	0.017	-	0	0	0	0	0	0	0.253
CH4(ppm) Average	629	2.04	0	-	1.9	2	2	2	2.1	2.1	2.2
O3 (ppb) Average	713	39.41	9.8	-	11	25.3	33.7	41.1	45.6	50.1	67.7
NO2 (ppb) Average	711	0.51	0.7	-	0	0	0	0.2	0.8	1.5	6.6
NO (ppb) Average	711	0.36	0.6	-	0	0	0	0	0.6	1.3	4.9
NOX (ppb) Average	711	0.87	1.1	-	0	0	0	0.5	1.4	2.3	11.5
PM2.5 (ug/m3) Average	742	13.58	48.5	-	0.7	1.8	2.6	3.4	4.6	7.8	626.1
CO(ppm) Average	636	0.15	0	-	0.1	0.1	0.1	0.2	0.2	0.2	0.2
CO2(ppm) Average	470	440.52	3.6	-	434.3	436.7	438	439.6	442.4	445.7	458
Temperature 2 m (C) Average	744	12.95	6.6	-	-1.5	5	8	12.4	16.9	22.4	30.4
Relative Humidity (%) Average	729	51.88	23.1	-	14	25.1	32.7	47.1	68.2	89.3	100
Wind Speed 10 m (km/h) Average	744	7.6	3	-	1	4	5	7	10	12	20
Wind Speed 20 m (km/h) Average	744	11.9	5	-	0	7	9	11	15	19	27
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	742	-	-	29.02	-	-	-	-	-	-	-
Surface Wetness (% of range) Average	744	5.07	10	-	0	0.1	0.6	1	1.7	21.2	51
Global Solar Radiation (W/m2) Average	744	238.73	284	-	0	0.2	0.6	95.7	435.3	720.9	937.7

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MAY 2025

MONTHLY SUMMARY

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	22 May 2025 08:00	22 May 2025 10:00	3	Maintenance - verify daily QA response
TRS	07 May 2025 12:00	07 May 2025 13:00	2	Maintenance - WBEA internal audit
THC/NMHC/CH4	07 May 2025 13:00	07 May 2025 14:00	2	Maintenance - WBEA internal audit
NO2	24 May 2025 08:00	24 May 2025 08:00	1	Maintenance - verify daily QA response
CO	28 May 2025 17:00	01 Jun 2025 00:00	80	Analyzer removed from service.
CO2	21 May 2025 15:00	01 Jun 2025 00:00	250	Analyzer removed from service.
THC/NMHC/CH4	16 May 2025 18:00	16 May 2025 20:00	3	Unstable Operations - excessive baseline noise
THC/NMHC/CH5	19 May 2025 23:00	20 May 2025 01:00	3	Unstable Operations - excessive baseline noise
THC/NMHC/CH6	20 May 2025 03:00	20 May 2025 11:00	9	Unstable Operations - excessive baseline noise
THC/NMHC/CH7	21 May 2025 12:00	21 May 2025 13:00	2	Maintenance - zero-air generator replaced
THC/NMHC/CH8	22 May 2025 09:00	22 May 2025 10:00	2	Maintenance - verify daily QA response
THC/NMHC/CH9	22 May 2025 16:00	23 May 2025 11:00	20	Unstable Operations - excessive baseline noise
THC/NMHC/CH10	23 May 2025 12:00	23 May 2025 15:00	4	Maintenance - chromatogram adjusted
THC/NMHC/CH11	25 May 2025 23:00	25 May 2025 23:00	1	Unstable Operations - excessive baseline noise
THC/NMHC/CH12	26 May 2025 11:00	26 May 2025 13:00	3	Maintenance - verify daily QA response
THC/NMHC/CH13	28 May 2025 01:00	28 May 2025 04:00	4	Unstable Operations - excessive baseline noise
THC/NMHC/CH14	28 May 2025 06:00	28 May 2025 12:00	7	Unstable Operations - excessive baseline noise
THC/NMHC/CH15	28 May 2025 13:00	29 May 2025 12:00	24	Maintenance - analyzer replaced and stabilization
Relative Humidity	20 May 2025 02:00	20 May 2025 07:00	6	Sensor operated out of range
Relative Humidity	20 May 2025 22:00	20 May 2025 22:00	1	Sensor operated out of range
Relative Humidity	21 May 2025 04:00	21 May 2025 07:00	4	Sensor operated out of range
Relative Humidity	22 May 2025 04:00	22 May 2025 07:00	4	Sensor operated out of range
Precipitation Collector	12 May 2025 11:00	12 May 2025 12:00	2	Maintenance - field maintenance



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

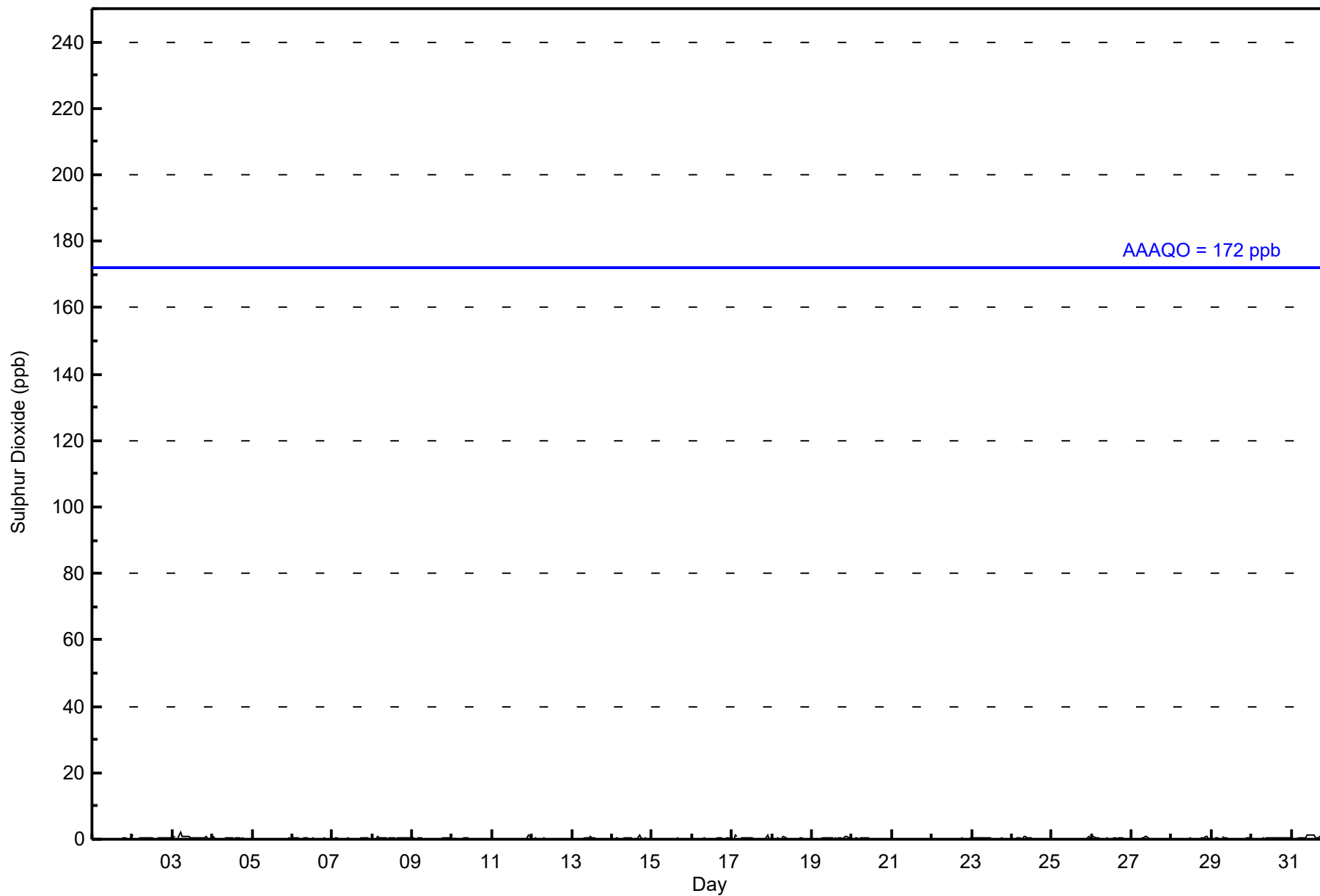
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 744										
Maximum Value: 2.1 ppb on May 3 06:00 Maximum Daily Average: 0.7 ppb on May 31																	Hours of Data: 711										
Minimum Value: 0.0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 15																	Hours of Missing Data: 33										
Maximum Diurnal Average: 0.3 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 15																	Hours of Calibration: 30										
Monthly Average: 0.23 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.3																	Percent Operational Time: 99.6										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.3	0.2	0.1	0.1	0.3	0.1	0.4	
2-May	1.1	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	1.1	
3-May	0.4	0.7	Z	0.5	1.2	2.1	0.9	0.8	0.7	0.8	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.5	0.2	0.6	0.6	2.1	
4-May	0.8	0.2	0.2	Z	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.8	
5-May	0.1	0.1	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.3	
6-May	0.2	0.6	0.4	0.3	0.3	Z	0.3	0.6	0.5	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.5	0.1	0.1	0.2	0.1	0.3	0.6	
7-May	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.4	
8-May	0.0	Z	0.4	0.7	0.4	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.6	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.7	
9-May	0.3	0.3	Z	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.3	0.2	0.3	0.1	0.2	0.4	
10-May	0.1	0.1	0.2	Z	0.1	0.2	0.1	0.4	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
11-May	0.0	0.2	0.0	0.2	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	1.1	0.5	0.1	1.1	
12-May	0.1	0.0	0.2	0.1	0.1	Z	0.1	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.3	0.5	0.7	0.5	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.7	
14-May	0.4	Z	0.5	0.2	0.1	0.0	0.1	0.4	0.4	0.6	0.3	0.2	0.1	0.0	0.1	0.1	1.3	0.4	0.2	0.1	0.4	0.2	0.1	0.0	0.3	1.3	
15-May	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.2	
16-May	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.4	0.2	0.0	0.0	0.3	0.2	0.2	0.1	0.4	
17-May	0.0	0.2	1.1	0.8	Z	0.3	0.4	0.2	0.2	0.3	0.3	0.5	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.4	0.2	0.0	0.3	1.4	
18-May	0.4	0.2	0.2	0.3	0.2	Z	0.4	0.7	0.5	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.7	
19-May	Z	0.2	0.2	0.1	0.1	0.2	0.4	0.6	0.4	0.6	0.4	0.4	0.2	0.2	0.3	0.2	0.4	0.6	0.1	0.3	0.8	0.8	0.3	0.2	0.3	0.8	
20-May	0.3	Z	0.5	0.4	0.2	0.3	0.4	0.3	0.4	0.4	0.5	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	
21-May	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
22-May	0.0	0.1	0.0	0.0	0.0	0.2	0.2	M	M	M	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.3	0.0	0.1	0.2	0.1	0.2	0.1	0.3	
23-May	0.6	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.6	
24-May	0.2	0.1	0.2	0.3	0.2	0.3	0.1	0.7	1.0	0.5	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.2	1.0	
25-May	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.4	0.8	0.6	0.2	0.8	
26-May	0.8	0.7	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.8
27-May	0.1	0.0	0.2	Z	0.1	0.1	0.3	0.4	0.7	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.7
28-May	0.2	0.1	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.6	1.0	0.7	0.2	0.1	0.2	1.0	
29-May	0.1	0.2	0.4	0.6	0.6	Z	0.7	0.4	0.5	0.4	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.5	0.5	0.3	0.3	0.7	
30-May	Z	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	
31-May	0.3	Z	0.3	0.2	0.3	0.3	0.2	0.3	0.5	1.5	1.4	1.4	1.3	1.3	0.6	0.5	0.5	0.7	0.8	2.0	0.5	0.2	0.2	0.2	0.7	2.0	
0.3 0.2 0.3 0.2 0.2 0.2 0.2 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.2																									Diurnal Average		
1.1 0.7 1.1 0.8 1.2 2.1 0.9 0.8 1.0 1.5 1.4 1.4 1.3 1.3 0.6 0.5 1.3 0.7 0.8 2.0 1.0 1.4 1.1 0.6																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	711	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	32	19	19	9	15	11	56	83	145	76	32	34	36	46	67	31	711
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	19	19	9	15	11	56	83	145	76	32	34	36	46	67	31	711

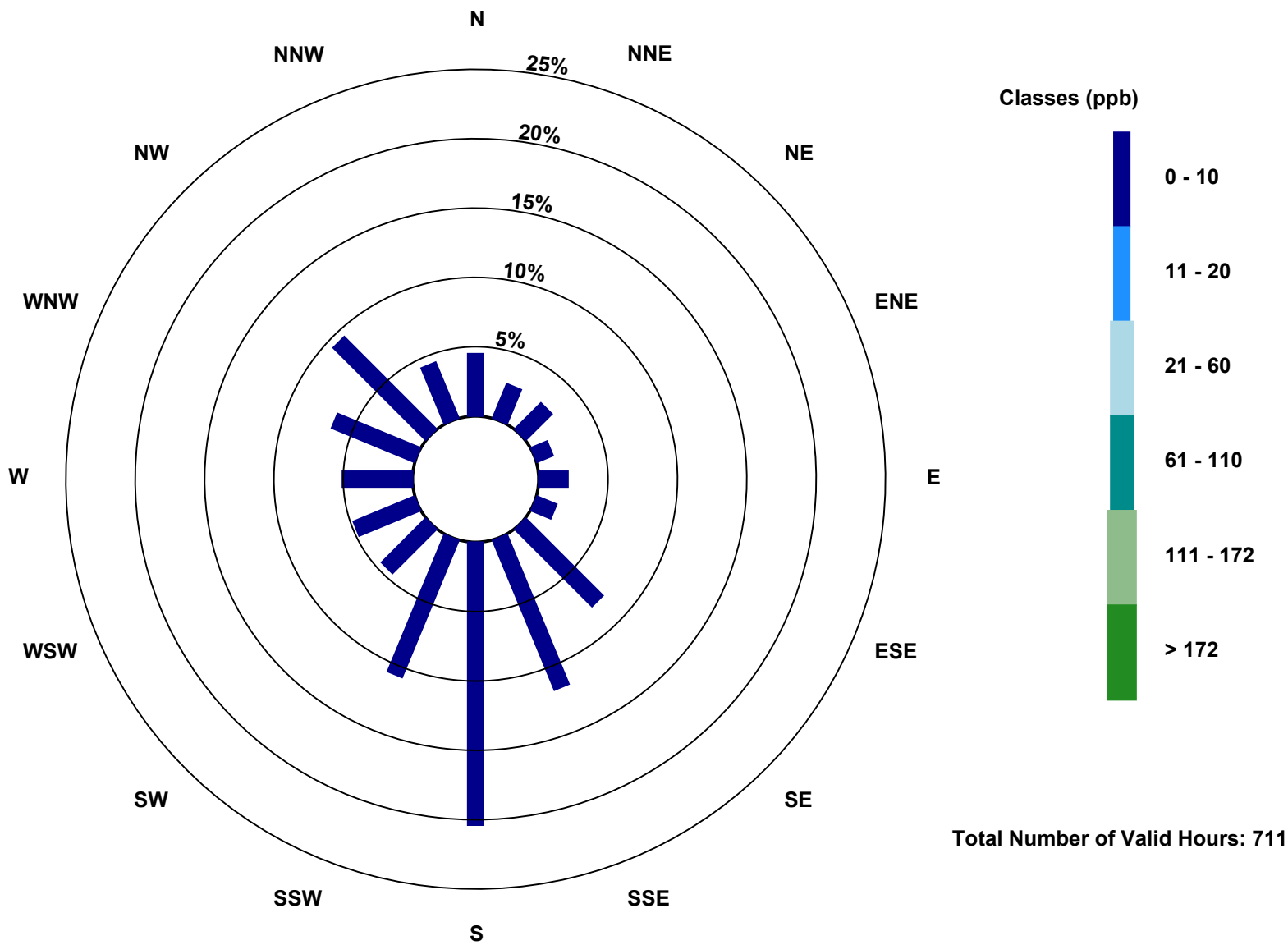
Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

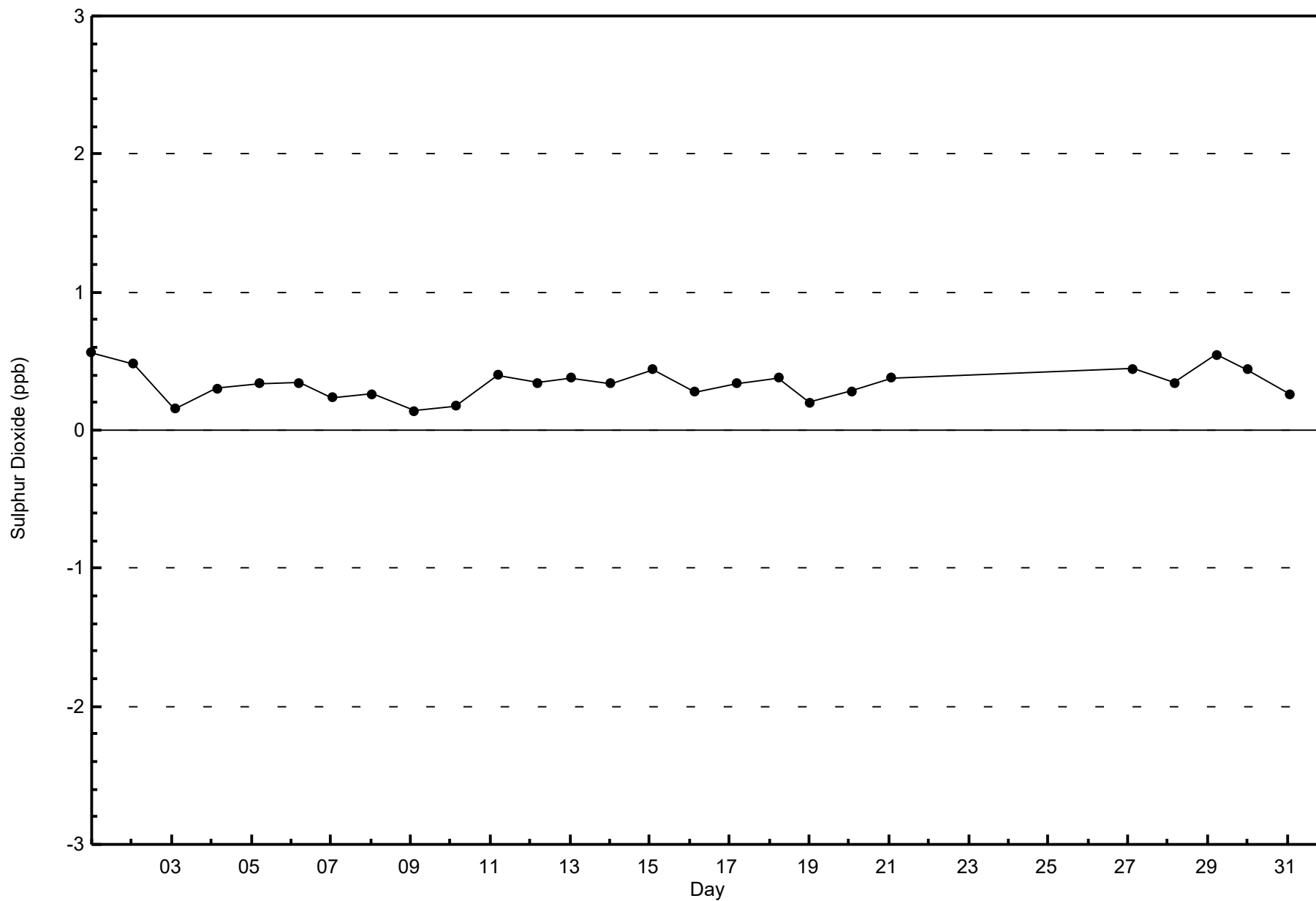
Sulphur Dioxide (SO₂) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

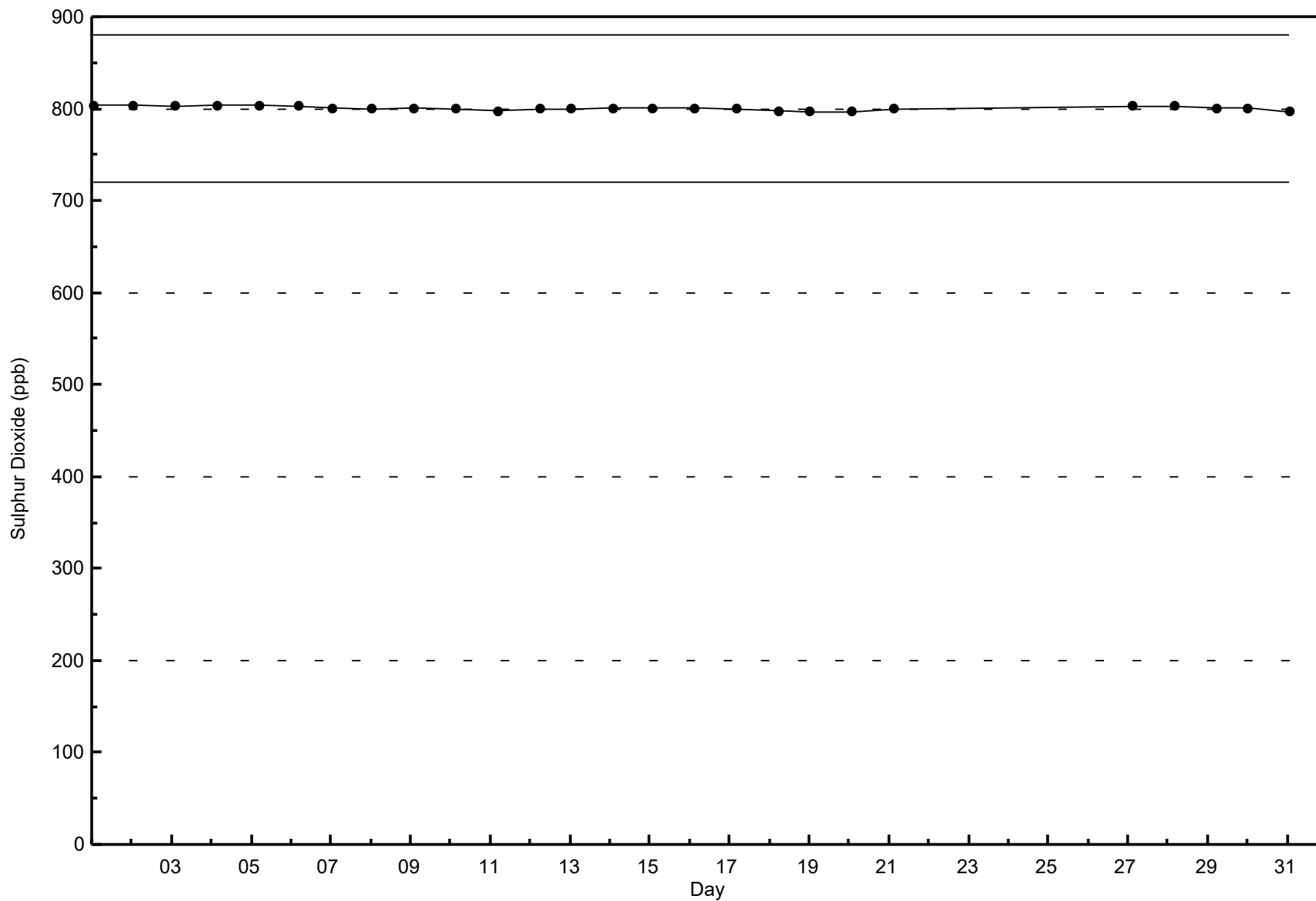
Sulphur Dioxide (SO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 2.2 ppb on May 29 23:00 Maximum Daily Average: 0.7 ppb on May 30																				Periods in Service: 1488							
Minimum Value: 0.4 ppb on May 17 08:00 Minimum Daily Average: 0.4 ppb on May 16 Maximum Diurnal Average: 0.5 ppb at hour 23 Minimum Diurnal Average: 0.5 ppb at hour 15																				Periods of Valid Data: 1414							
Monthly Average: 0.50 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 0.9																				Periods of Invalid Data: 74							
																				Periods of Calibration: 65							
																				Percent Operational Time: 99.4							
Day	Period Ending At (MST)																									Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
1-May	0.6 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
2-May	0.5 0.5	0.5 0.5	Z SP	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.5	0.6	
3-May	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
4-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.5	0.5	
5-May	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	Z SP	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
6-May	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
7-May	0.5 0.6	Z SP	0.6 0.6	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 M	M M	M 0.6	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
8-May	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5	0.6	
9-May	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
10-May	0.5 0.5	0.5 0.4	0.4 0.5	0.4 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.5	0.5	
11-May	0.5 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
12-May	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.4	0.5 0.5	0.5	0.5	
13-May	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
14-May	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.6	0.5 0.5	0.6 0.5	0.6 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.6 0.6	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
15-May	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.5	0.5	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum		
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00				
16-May	0.4 0.5	0.4 0.4	0.4 0.5	0.4 0.5	Z SP	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4	0.5
17-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.4	0.6
18-May	Z SP	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5	0.6	
19-May	0.5 0.5	Z SP	0.7 0.7	0.7 0.7	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.7	
20-May	0.5 0.5	0.5 0.6	Z SP	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
21-May	0.4 0.5	0.4 0.4	0.5 0.5	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.7	0.7 0.7	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 DF	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5	0.7	
22-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.5	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 PF	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
23-May	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 M	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.7	
24-May	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
25-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5	
26-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.6 0.6	M 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 M	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
27-May	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6	
28-May	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.6	0.6 SP	Z 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 C	C C	C C	C C	C C	C C	C C	C 0.7	0.7 0.7	0.6 0.6	0.6 0.5	0.5 0.5	0.4 0.4	0.4 0.4	--	0.7		
29-May	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.7	0.6 0.5	0.5 0.6	0.6 0.7	0.7 0.6	0.6 0.6	0.5 0.5	0.6 0.5	0.8 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.9	0.6 2.2	1.2 2.2	1.9 1.4	0.6	2.2		
30-May	1.4 1.5	Z SP	1.5 1.1	0.8 0.7	0.6 0.5	0.5 0.6	0.5 0.8	0.7 1.1	1.0 0.8	1.0 0.8	0.7 0.7	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.7	1.5	
31-May	0.5 0.5	0.5 0.5	Z SP	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.6	0.6 1.1	2.0 1.2	0.9 0.8	0.8 0.7	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.7 0.7	0.6 0.7	0.8 0.8	0.8 0.8	0.8 0.8	0.6	2.0		
0.5 1.5																								Diurnal Average Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure PF - Power Failure SP - Span																												
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																												



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

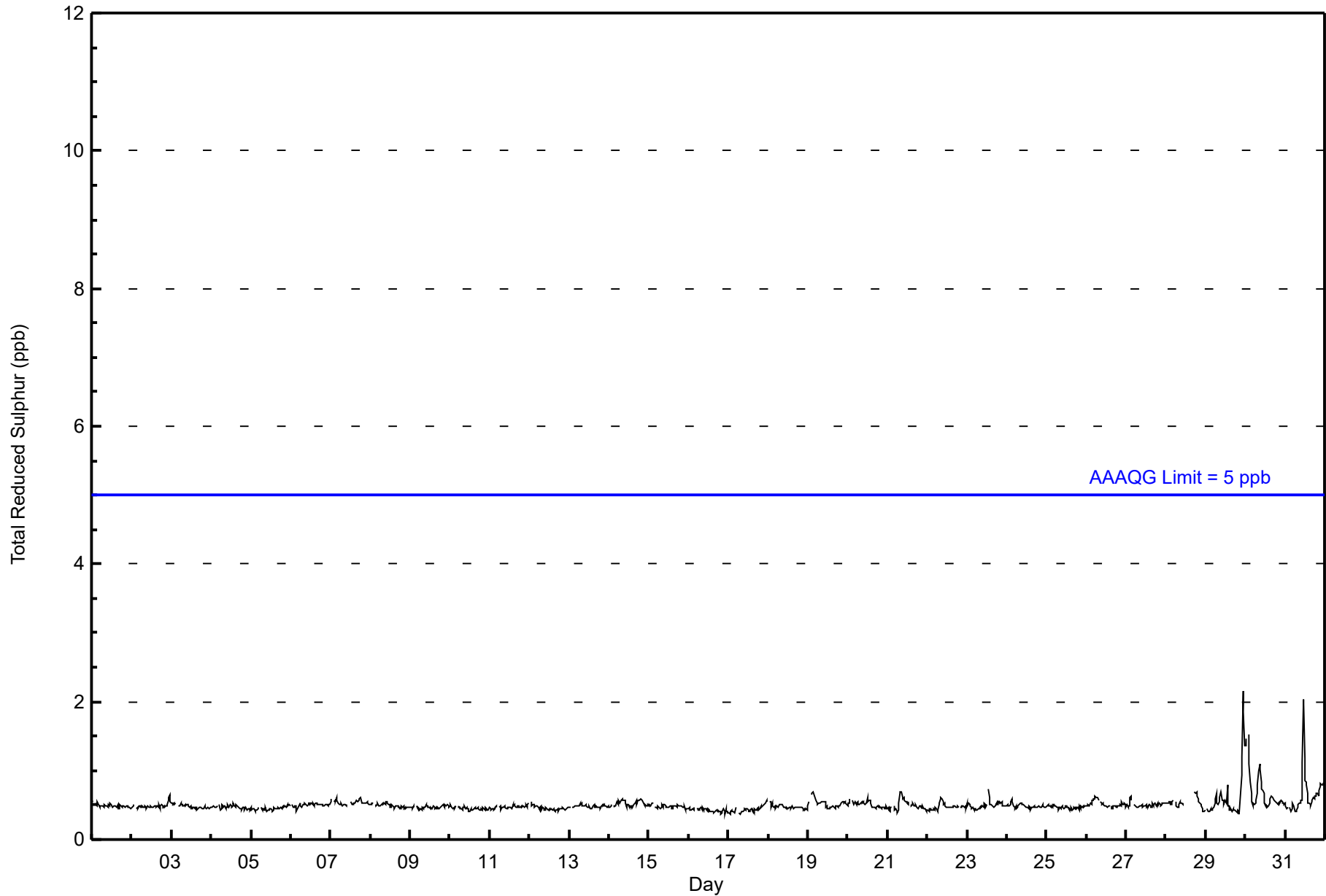
Stony Mountain - May 2025

Maximum Value: 1.7 ppb on May 29 23:00																		Maximum Daily Average: 0.7 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.4 ppb on May 17 08:00																		Minimum Daily Average: 0.4 ppb on May 16										Hours of Data: 710	
Maximum Diurnal Average: 0.5 ppb at hour 23																		Minimum Diurnal Average: 0.5 ppb at hour 15										Hours of Missing Data: 34	
Monthly Average: 0.50 ppb																		Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.5 Q ₃ = 0.5 P ₉₀ = 0.6 P ₉₉ = 0.8										Hours of Calibration: 32	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
2-May	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6			
3-May	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
4-May	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5			
5-May	0.4	0.4	0.4	0.4	0.5	Z	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
6-May	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
7-May	0.6	Z	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	M	M	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
8-May	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
9-May	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
10-May	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5			
11-May	0.5	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
12-May	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5			
13-May	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
14-May	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5			
15-May	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5			
16-May	0.5	0.4	0.4	0.5	Z	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4			
17-May	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.4	0.6			
18-May	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6			
19-May	0.5	Z	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7			
20-May	0.5	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6			
21-May	0.5	0.4	0.5	Z	0.5	0.4	0.4	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.7			
22-May	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6			
23-May	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7			
24-May	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6			
25-May	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5			
26-May	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6			
27-May	0.5	0.5	0.5	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
28-May	0.5	0.5	0.5	0.5	0.6	Z	0.5	0.5	0.5	0.5	0.5	C	C	C	C	C	C	0.7	0.7	0.6	0.5	0.5	0.4	0.4	--	0.7			
29-May	Z	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.8	1.7	1.6	0.6	1.7			
30-May	1.4	Z	1.3	0.8	0.5	0.5	0.6	0.7	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.7	1.4			
31-May	0.5	0.5	Z	0.4	0.5	0.5	0.4	0.4	0.5	0.6	0.8	1.6	0.8	0.7	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.6	1.6			
Diurnal Average																													
Diurnal Maximum																													
Z - zerospan C - Calibration M - Maintenance																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																													



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	710	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	32	19	18	9	15	11	60	82	151	70	28	34	36	47	65	33	710
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	19	18	9	15	11	60	82	151	70	28	34	36	47	65	33	710

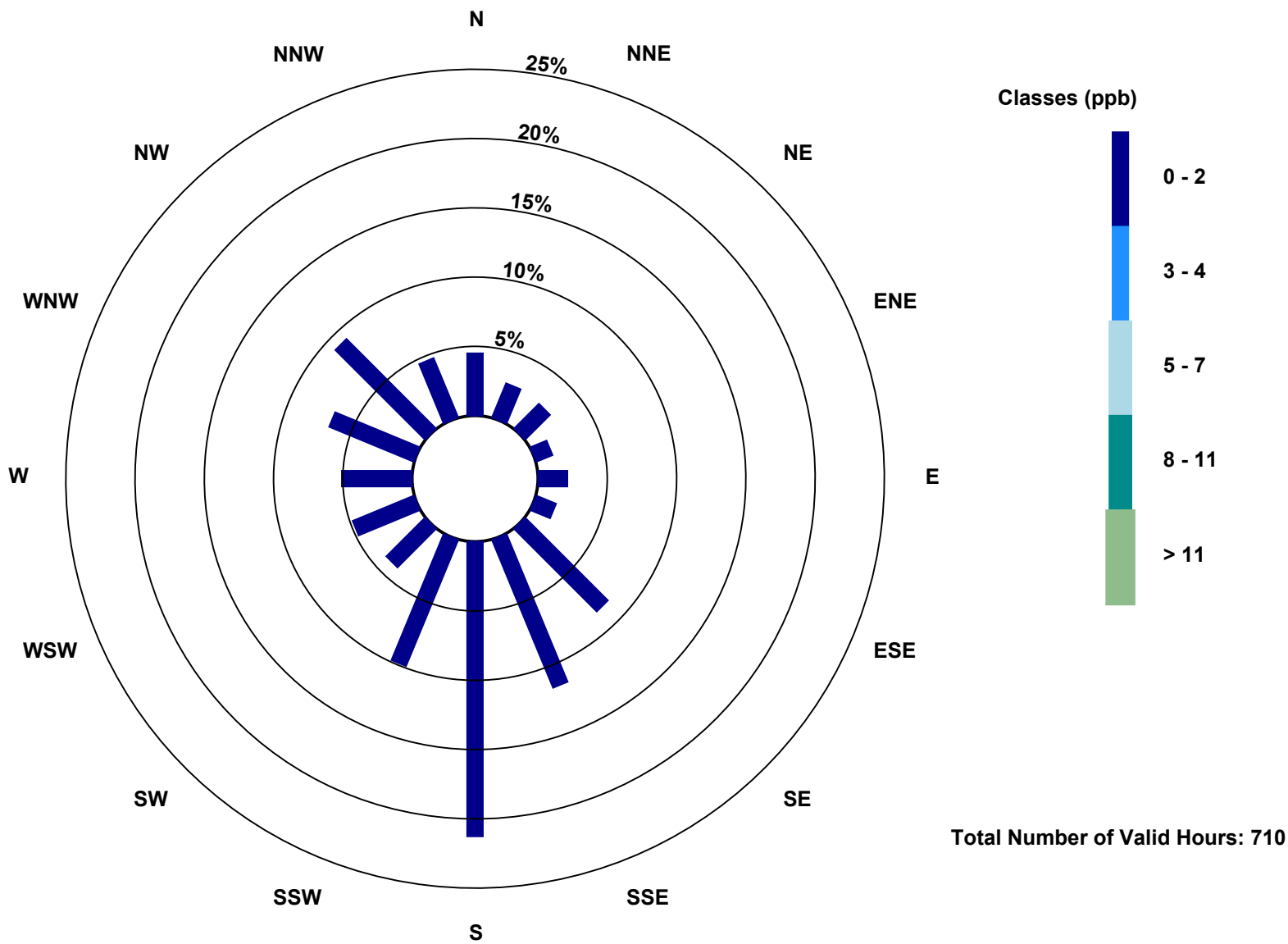
Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

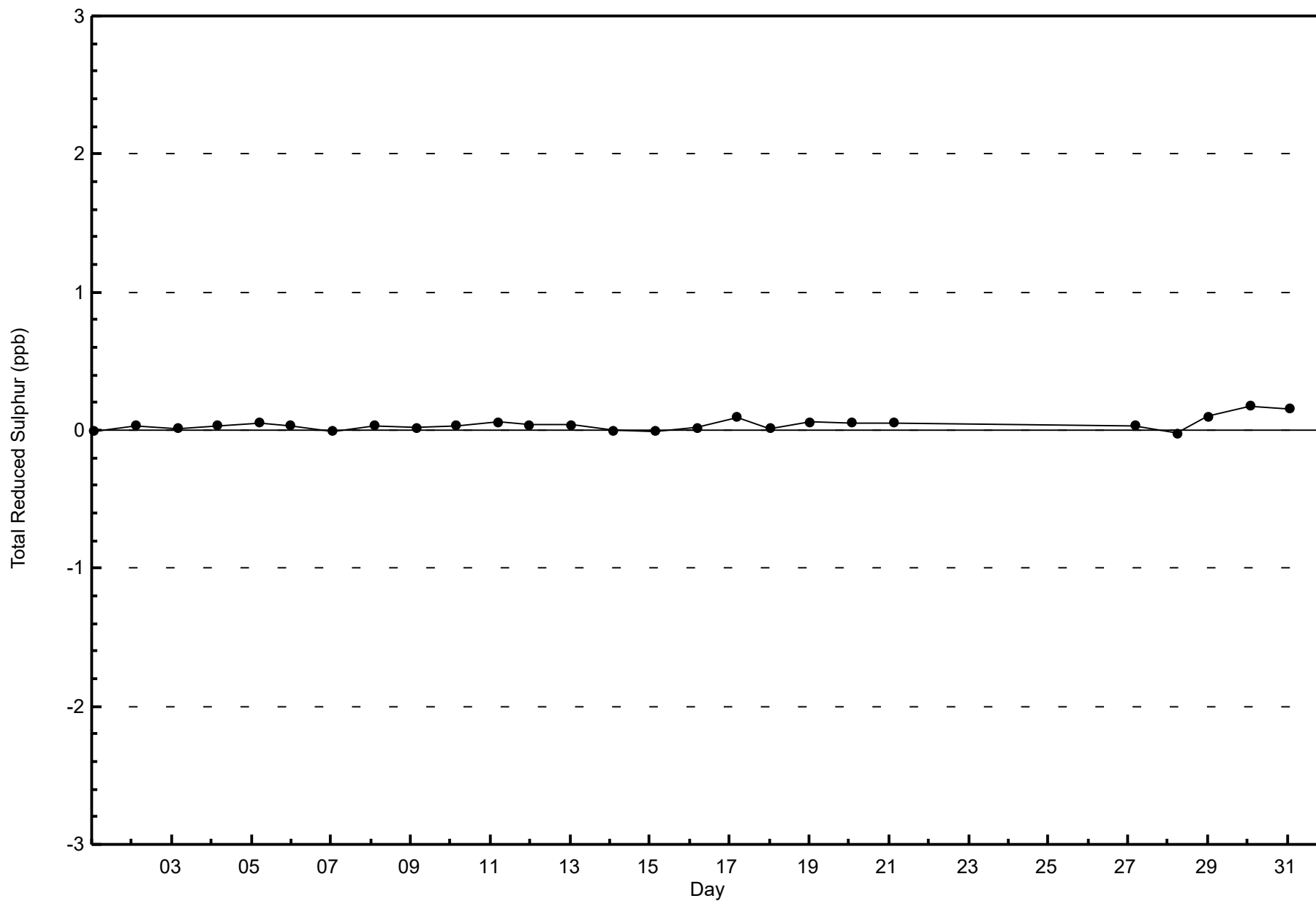
Total Reduced Sulphur (TRS) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

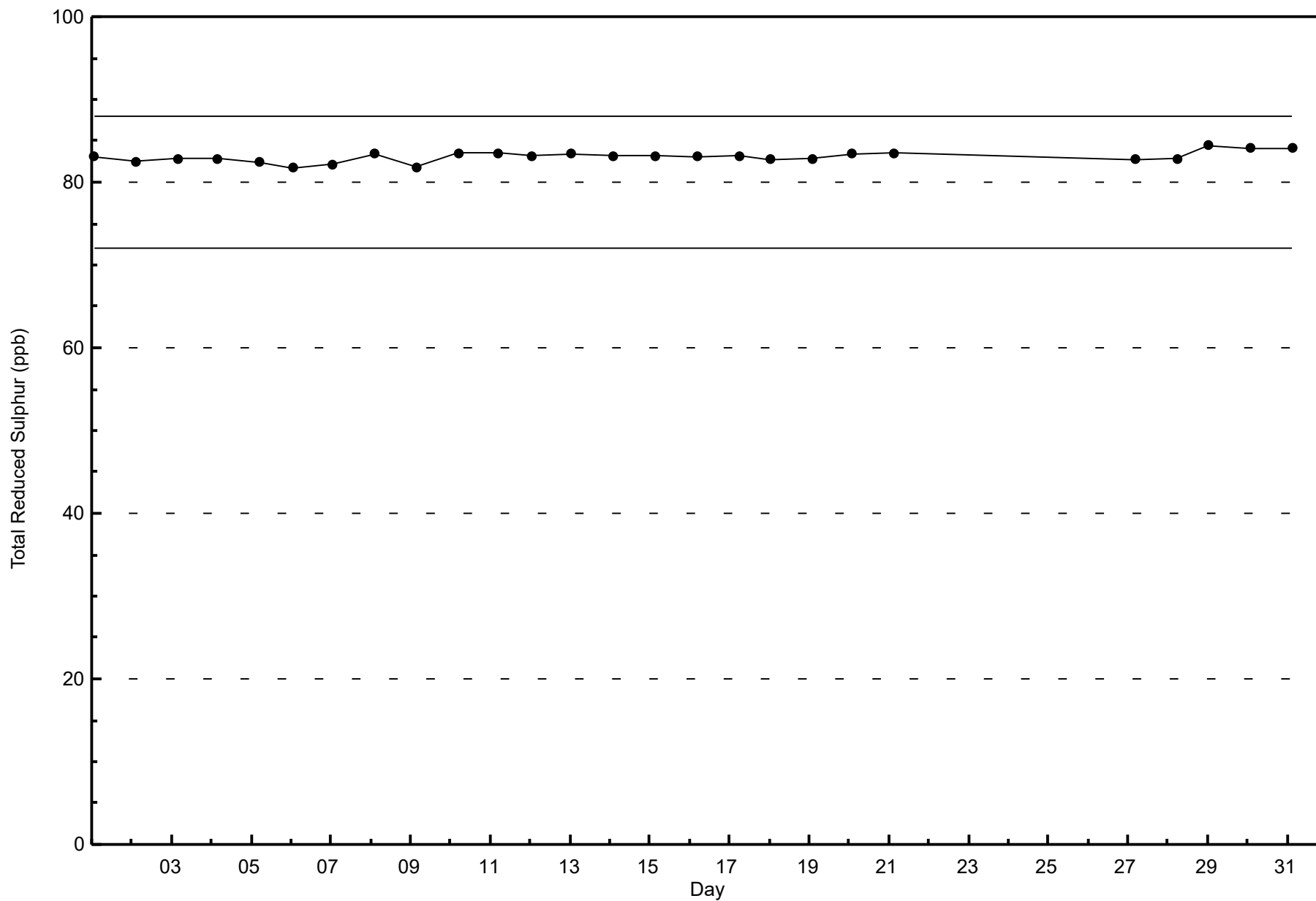
Total Reduced Sulphur (TRS) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

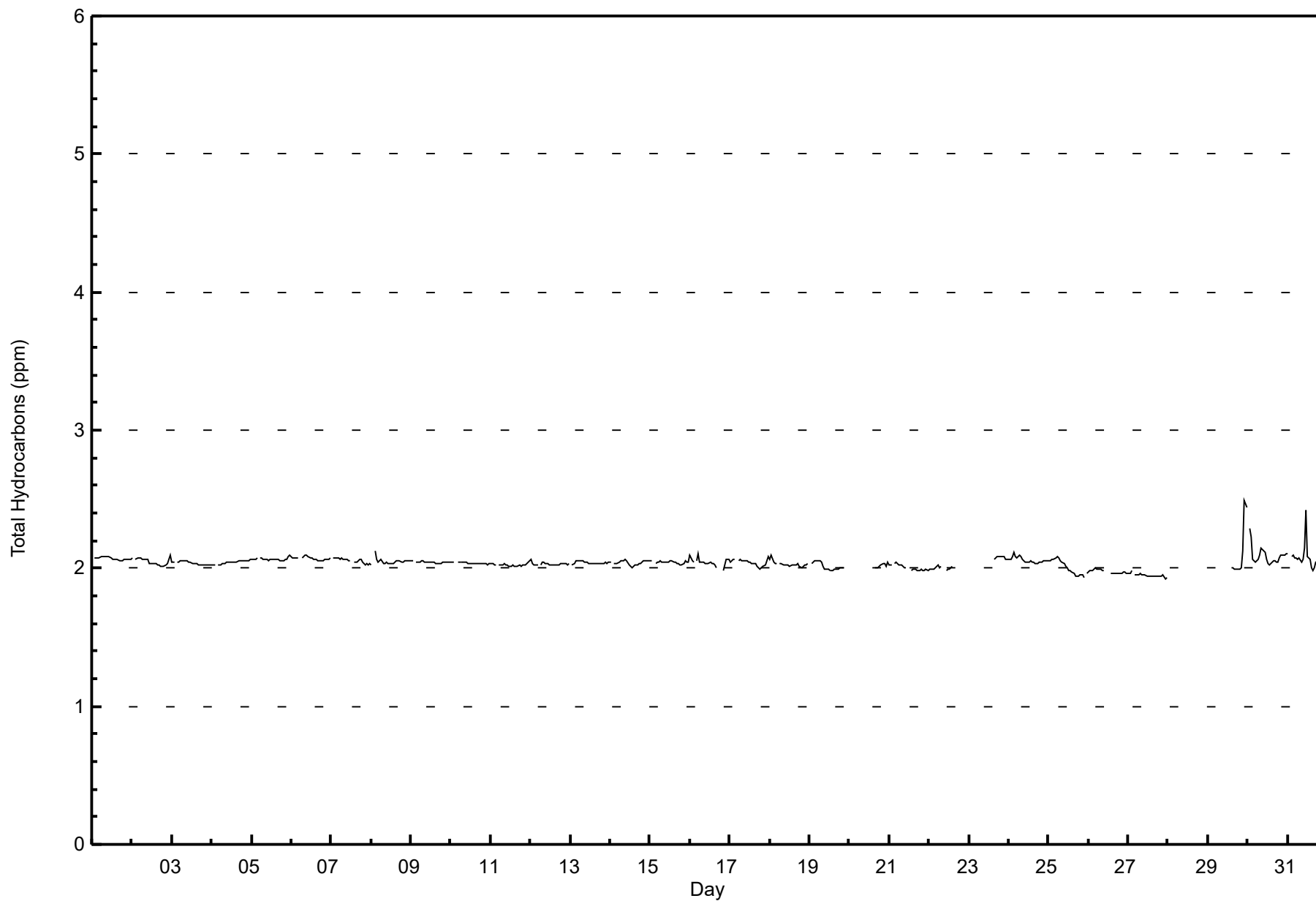
Stony Mountain - May 2025

Maximum Value: 2.5 ppm on May 29 23:00																			Maximum Daily Average: 2.1 ppm on May 30						Hours in Service: 744	
Minimum Value: 1.9 ppm on May 27 23:00																			Minimum Daily Average: 1.9 ppm on May 27						Hours of Data: 629	
Maximum Diurnal Average: 2.1 ppm at hour 24																			Minimum Diurnal Average: 2.0 ppm at hour 17						Hours of Missing Data: 115	
Monthly Average: 2.04 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.1						Hours of Calibration: 31	
																									Percent Operational Time: 88.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
3-May	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
6-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	M	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-May	2.0	Z	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-May	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
11-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
12-May	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
13-May	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1
15-May	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1
16-May	2.1	2.1	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
17-May	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
18-May	2.1	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-May	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
24-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
25-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1
26-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
28-May	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M
29-May	M	M	M	M	M	M	M	M	M	M	M	M	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5	2.4	2.4	2.5
30-May	Z	2.3	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3
31-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.4
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	403	64.07	64.07
2.1 - 3.0	226	35.93	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 629

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	20	12	17	7	7	11	36	50	72	30	10	20	20	29	36	26	403
2.1 - 3.0	12	7	2	2	5	0	7	20	52	28	13	11	14	17	31	5	226
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	19	19	9	12	11	43	70	124	58	23	31	34	46	67	31	629

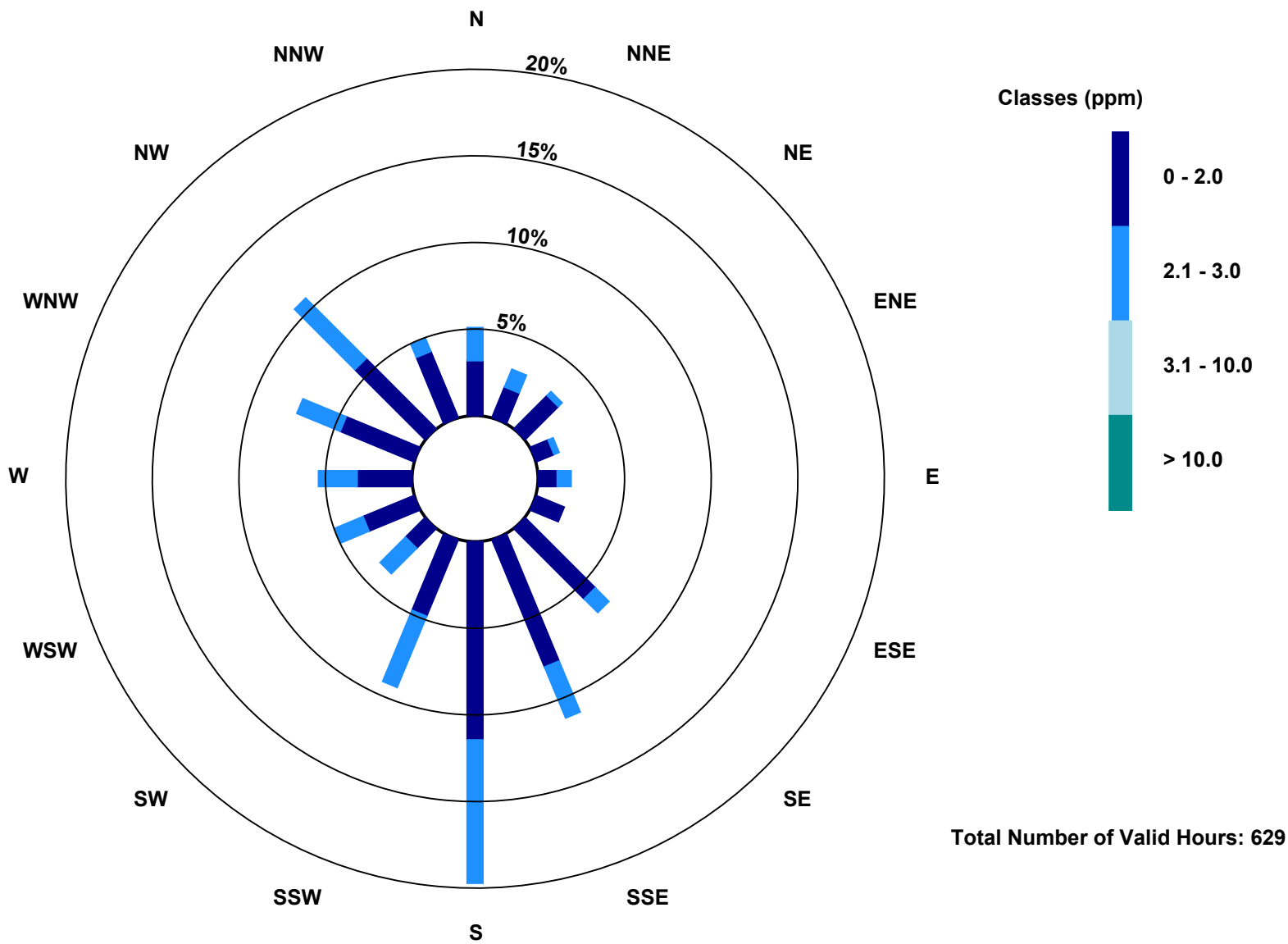
Total Number of Valid Hours: 629

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

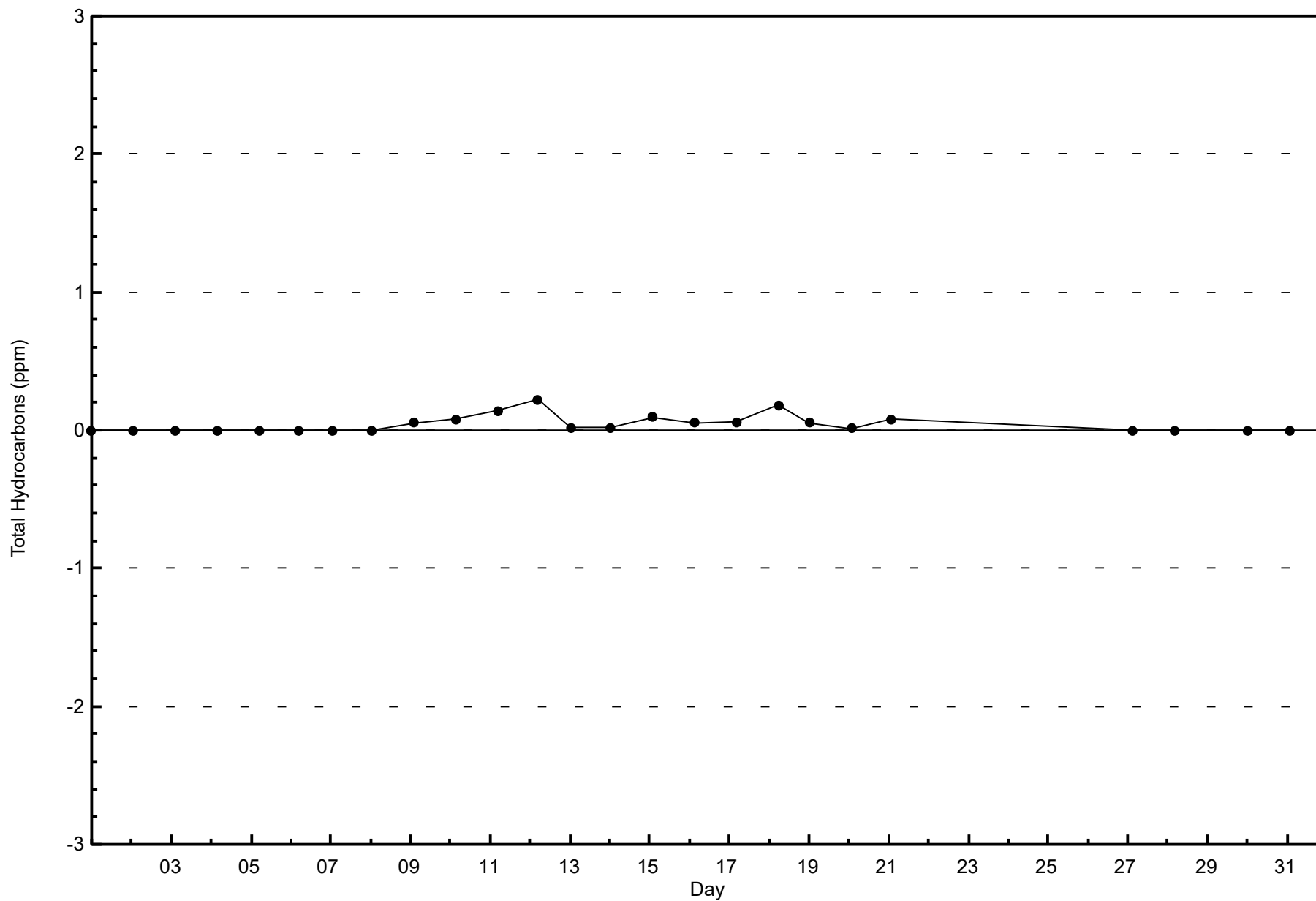
Total Hydrocarbons (THC) - ppm
Stony Mountain

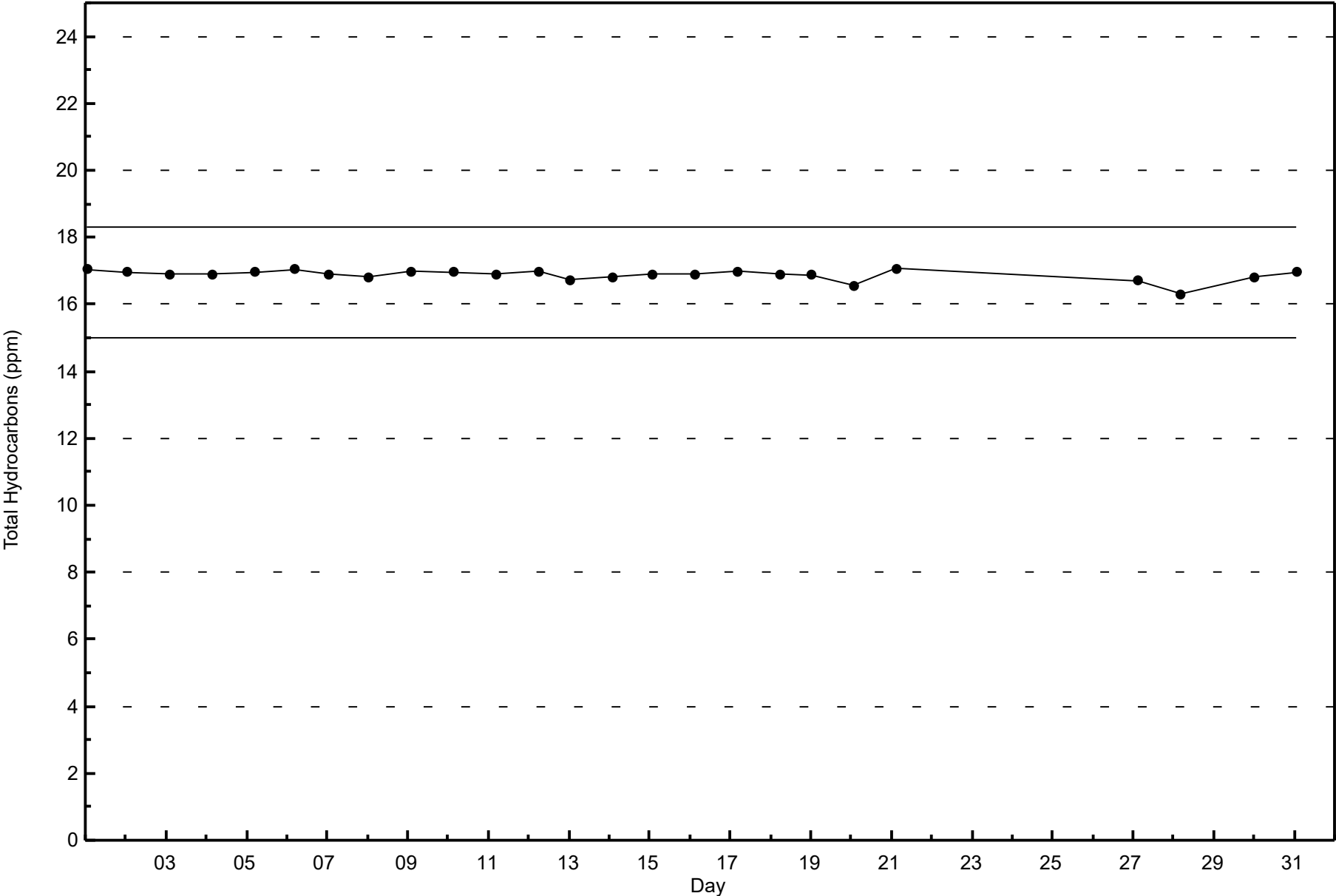




Wood Buffalo Environmental Association
Zero Responses

Total Hydrocarbons (THC) - ppm
Stony Mountain - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

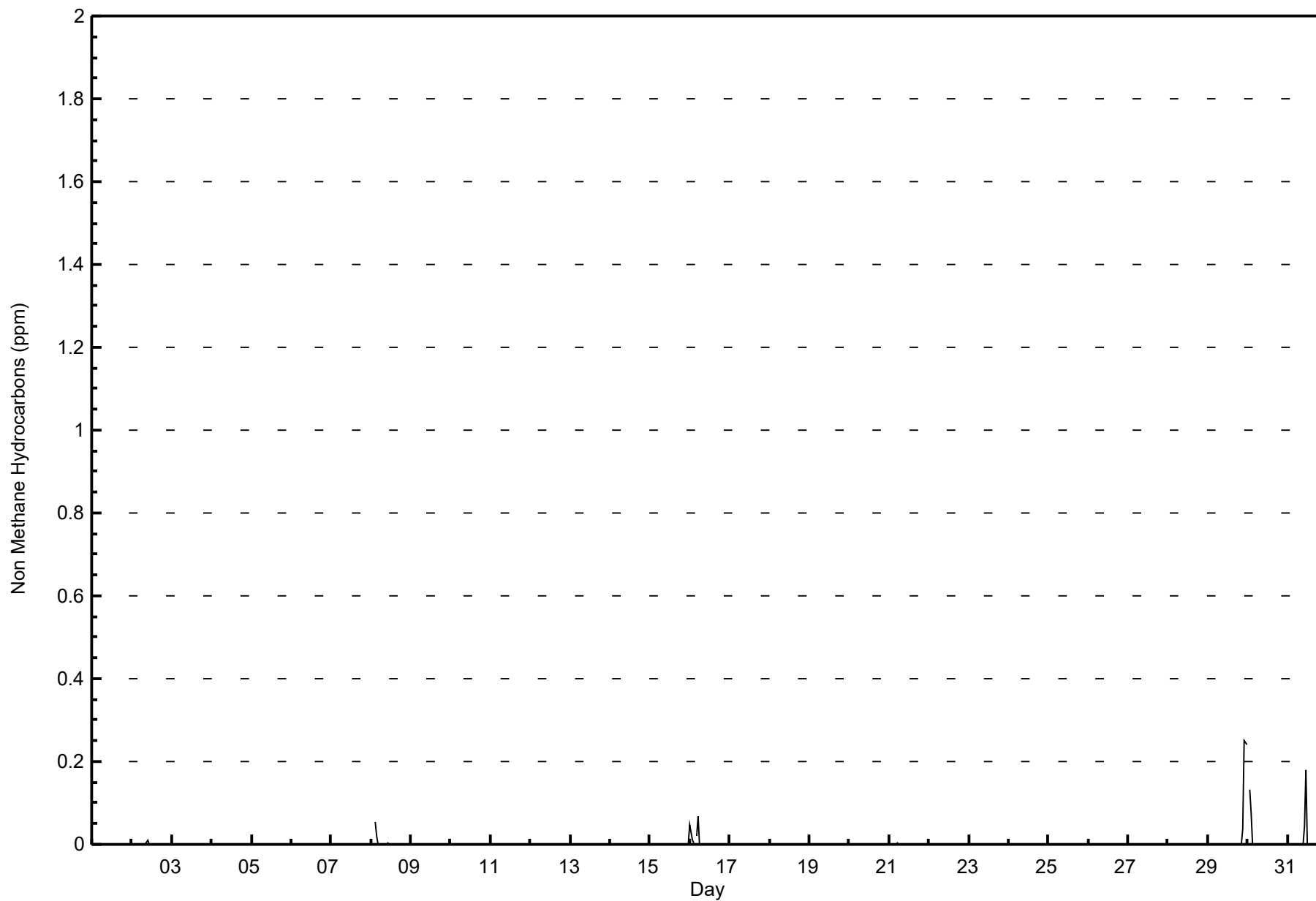
Stony Mountain - May 2025

Maximum Value: 0.253 ppm on May 29 23:00																		Maximum Daily Average: 0.010 ppm on May 31								Hours in Service: 744	
Minimum Value: 0.000 ppm on May 1 02:00																		Minimum Daily Average: 0.000 ppm on May 1								Hours of Data: 629	
Maximum Diurnal Average: 0.009 ppm at hour 23																		Minimum Diurnal Average: 0.000 ppm at hour 7								Hours of Missing Data: 115	
Monthly Average: 0.002 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1								Hours of Calibration: 31	
																										Percent Operational Time: 88.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
3-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8-May	0.000	Z	0.054	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.054	
9-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-May	0.049	0.011	0.003	Z	0.019	0.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	UO	UO	UO	0.000	0.000	0.000	0.000	0.007	0.067	
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	UO	UO	0.000	0.000
20-May	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000	0.000
21-May	0.000	0.000	Z	0.000	0.001	0.004	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000
22-May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
23-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000	0.000
24-May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25-May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	UO	0.000	0.000	0.000
26-May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28-May	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
29-May	M	M	M	M	M	M	M	M	M	M	M	M	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.253	0.242	--	0.253
30-May	Z	0.131	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.131	0.000
31-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.181	0.000
0.002 0.006 0.006 0.001 0.001 0.003 0.000 0.000 0.000 0.000 0.002 0.007 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 0.009 0.009																										Diurnal Average	
0.049 0.131 0.074 0.022 0.019 0.067 0.000 0.000 0.000 0.010 0.044 0.181 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.038 0.253 0.242																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	615	97.77	97.77
0.006 - 0.05	8	1.27	99.05
0.06 - 0.1	3	0.48	99.52
> 0.1	3	0.48	100.00

Total Number of Valid Hours: 629

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	31	17	18	9	10	11	43	70	124	58	23	31	34	43	62	31	615
0.006 - 0.05	0	2	1	0	1	0	0	0	0	0	0	0	0	1	3	0	8
0.06 - 0.1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
> 0.1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	3
Totals	32	19	19	9	12	11	43	70	124	58	23	31	34	46	67	31	629

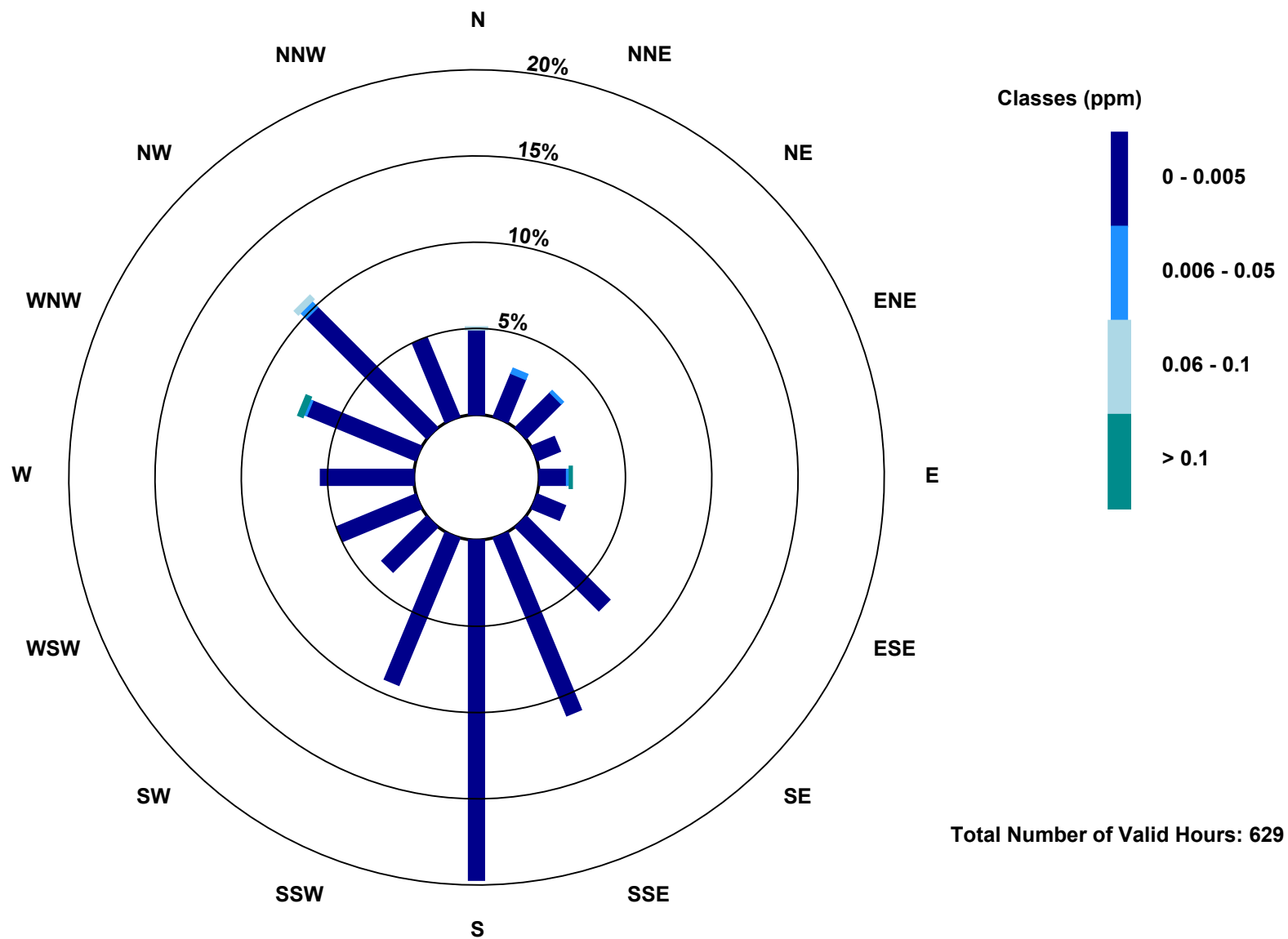
Total Number of Valid Hours: 629

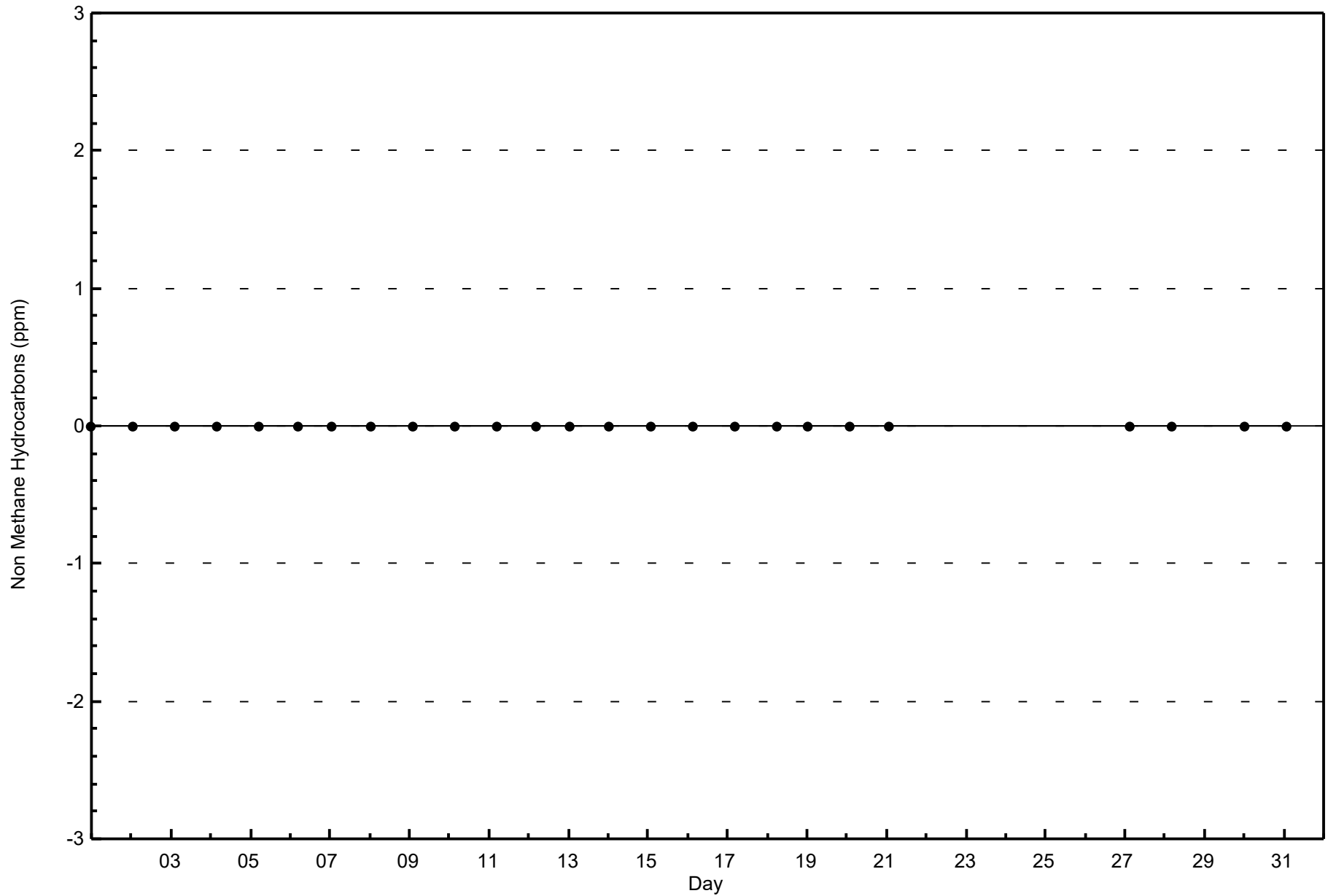
Total Number of Hours: 744

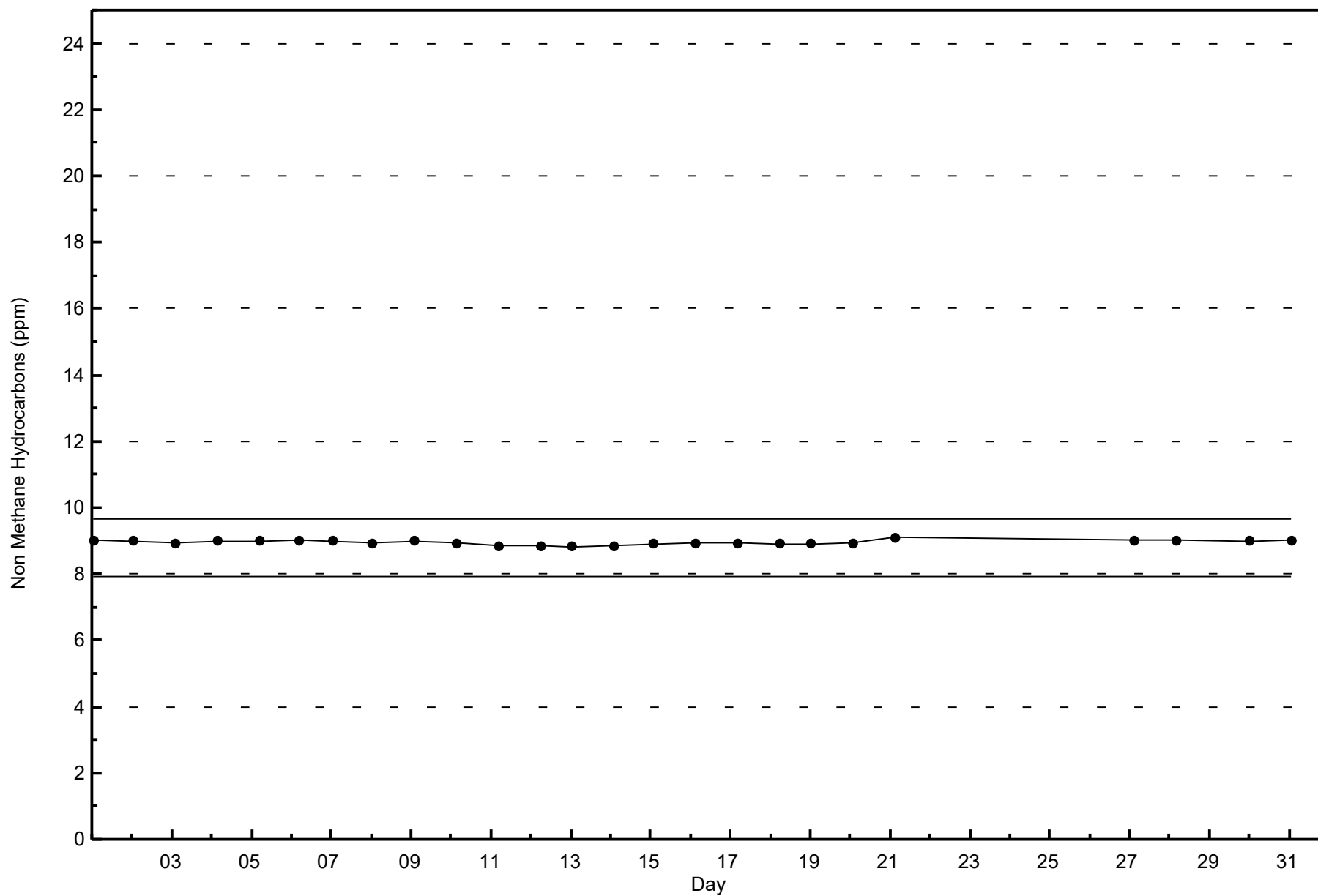


Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain









Wood Buffalo Environmental Association

Summary of Hour Averages

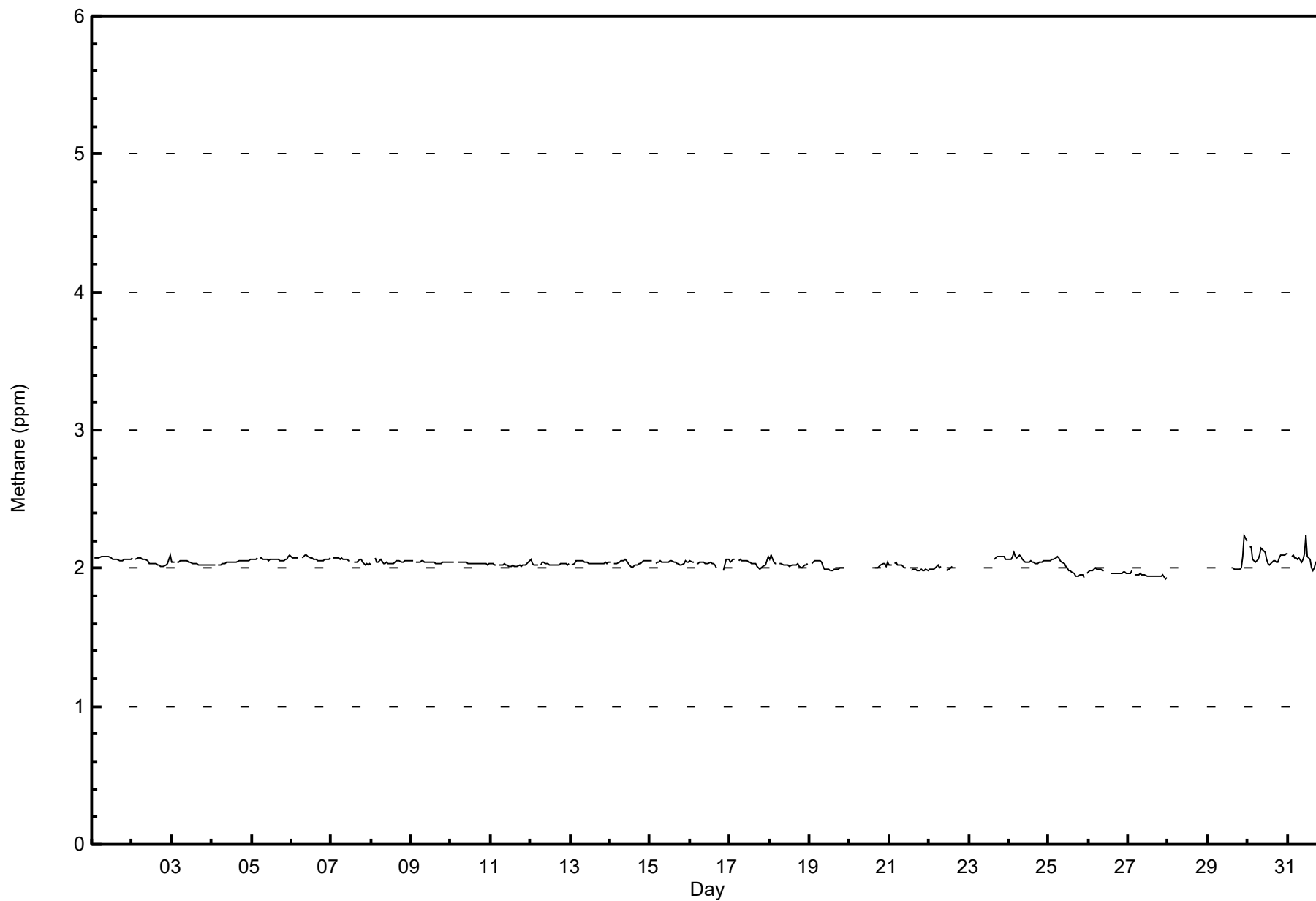
Methane (CH₄) - ppm Stony Mountain - May 2025

Number of Exceedences (AAAQO): Maximum Value: 2.2 ppm on May 31 12:00																		1-hr: 0 Maximum Daily Average: 2.1 ppm on May 30						24-hr: 0 Minimum Daily Average: 1.9 ppm on May 27 Minimum Diurnal Average: 2.0 ppm at hour 17 Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.1						Hours in Service: 744 Hours of Data: 629 Hours of Missing Data: 115 Hours of Calibration: 31 Percent Operational Time: 88.7	
Minimum Value: 1.9 ppm on May 27 23:00 Maximum Diurnal Average: 2.1 ppm at hour 4 Monthly Average: 2.04 ppm																															
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1				
2-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0				
3-May	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1				
5-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1				
6-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1				
7-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	M	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1				
8-May	2.0	Z	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1				
9-May	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
11-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1				
12-May	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
13-May	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1	2.1				
15-May	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1				
16-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	2.0	2.0	2.1	2.1	2.0	2.1	2.1				
17-May	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1				
18-May	2.1	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
19-May	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	2.0	2.1	2.1				
20-May	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
22-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2.0				
23-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1				
24-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1				
25-May	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	UO	2.0	2.0	2.1				
26-May	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
27-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0				
28-May	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	2.0				
29-May	M	M	M	M	M	M	M	M	M	M	M	M	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2				
30-May	Z	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2				
31-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2				
2.0																								Diurnal Average							
2.1																								Diurnal Maximum							
Z - zerospan																								C - Calibration							
M - Maintenance																								UO - Unstable Operation							



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	408	64.86	64.86
2.1 - 3.0	221	35.14	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 629

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	21	14	18	7	7	11	36	50	72	30	10	20	20	29	37	26	408
2.1 - 3.0	11	5	1	2	5	0	7	20	52	28	13	11	14	17	30	5	221
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	19	19	9	12	11	43	70	124	58	23	31	34	46	67	31	629

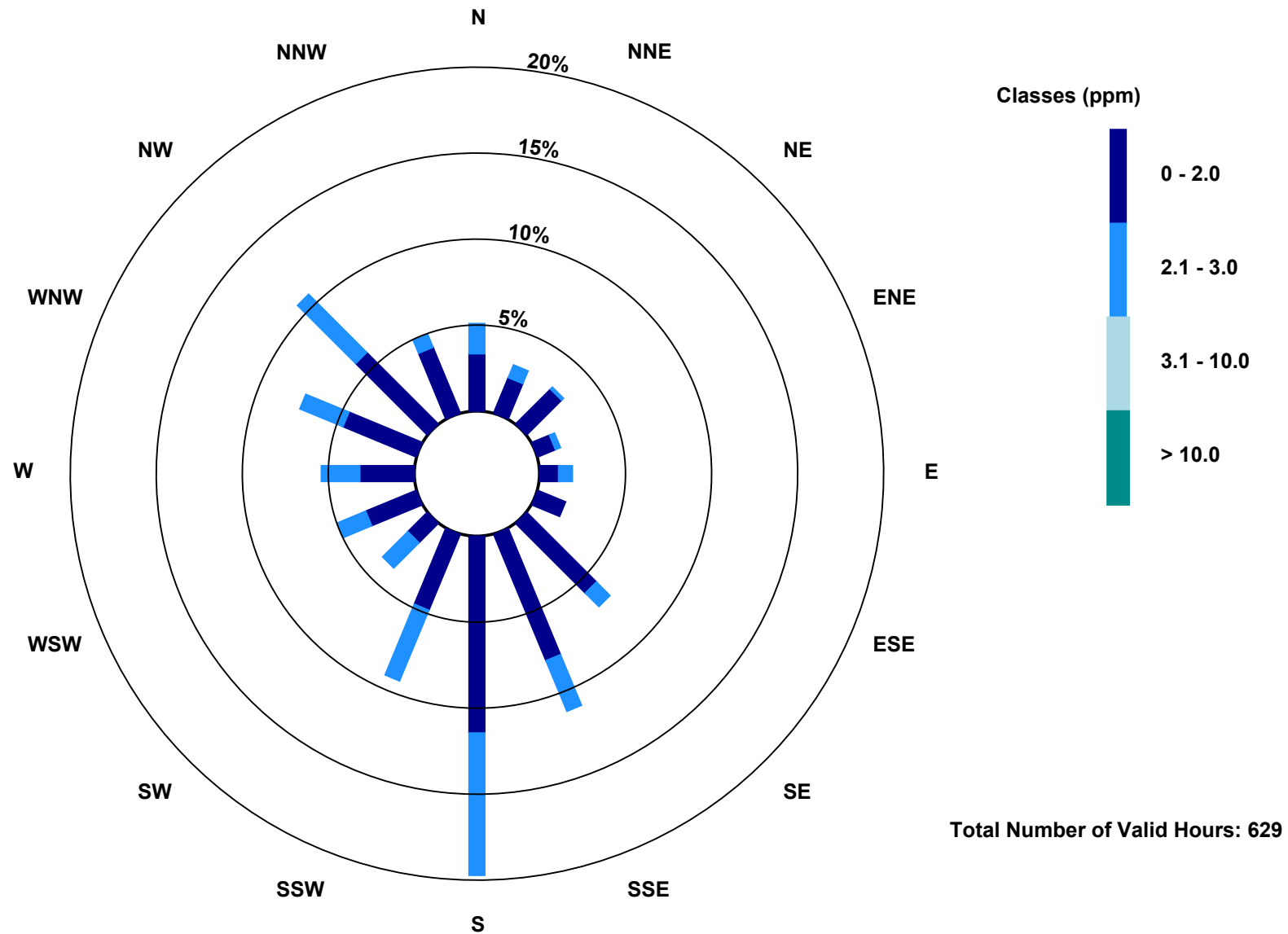
Total Number of Valid Hours: 629

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

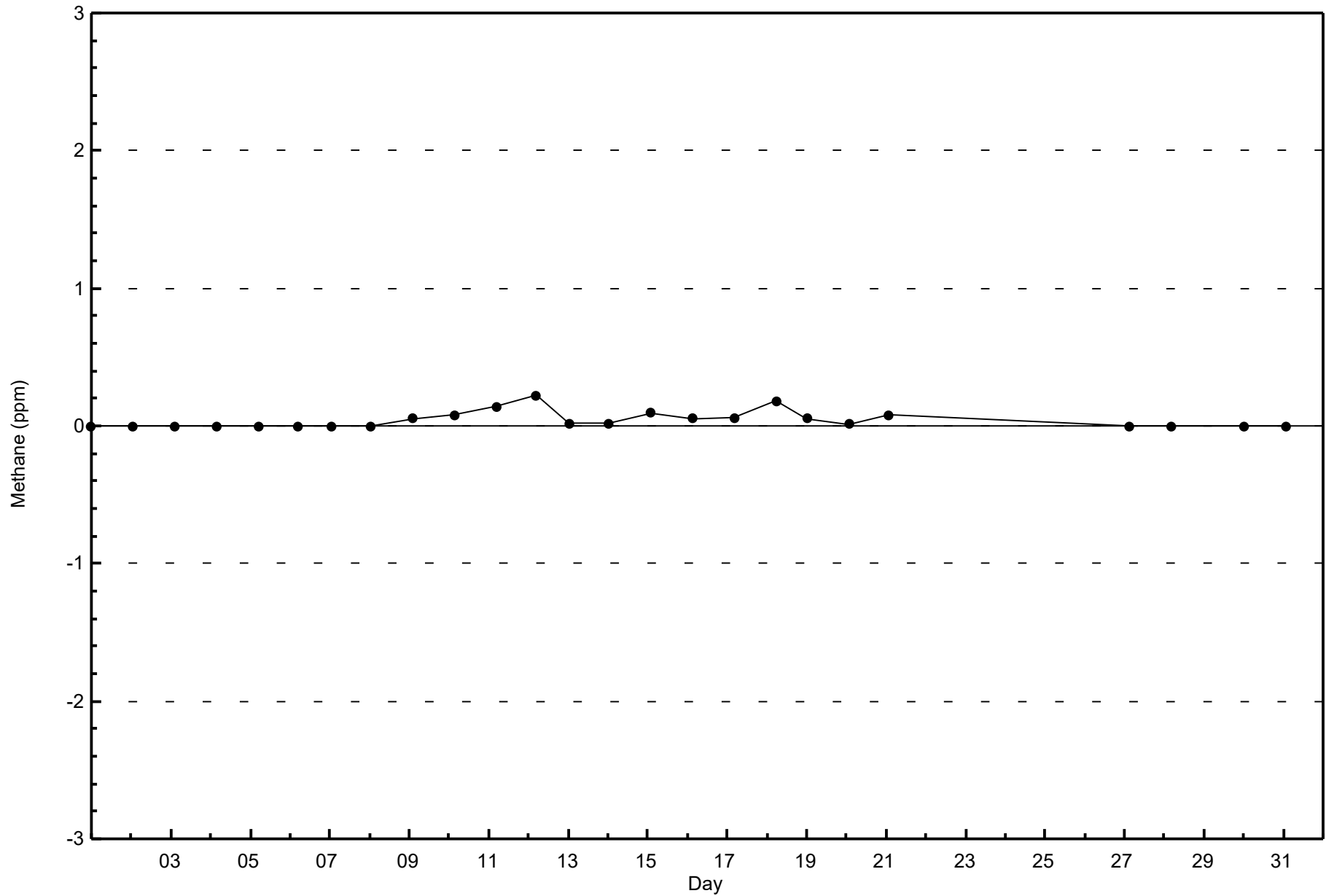
Methane (CH₄) - ppm
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

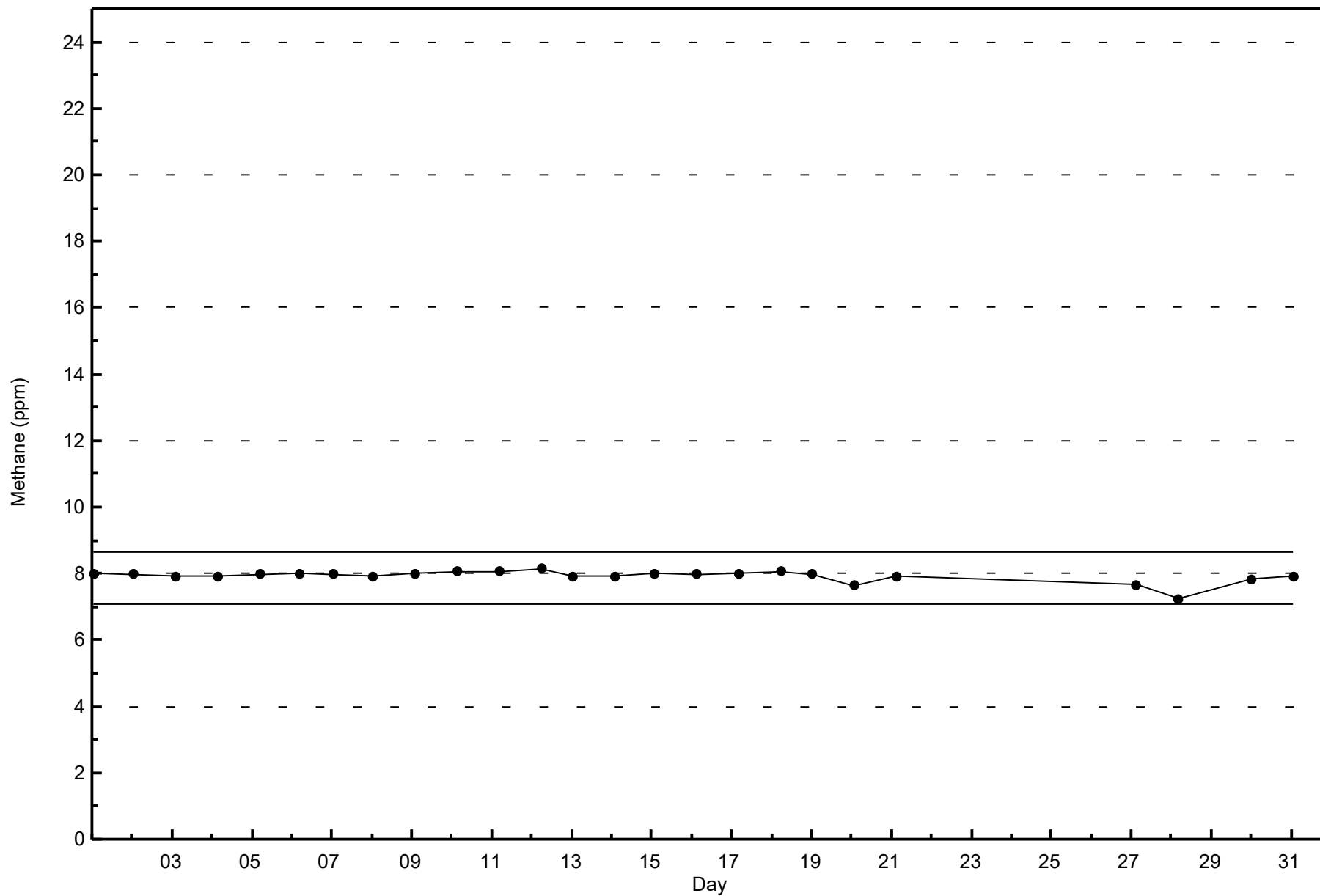
Methane (CH₄) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

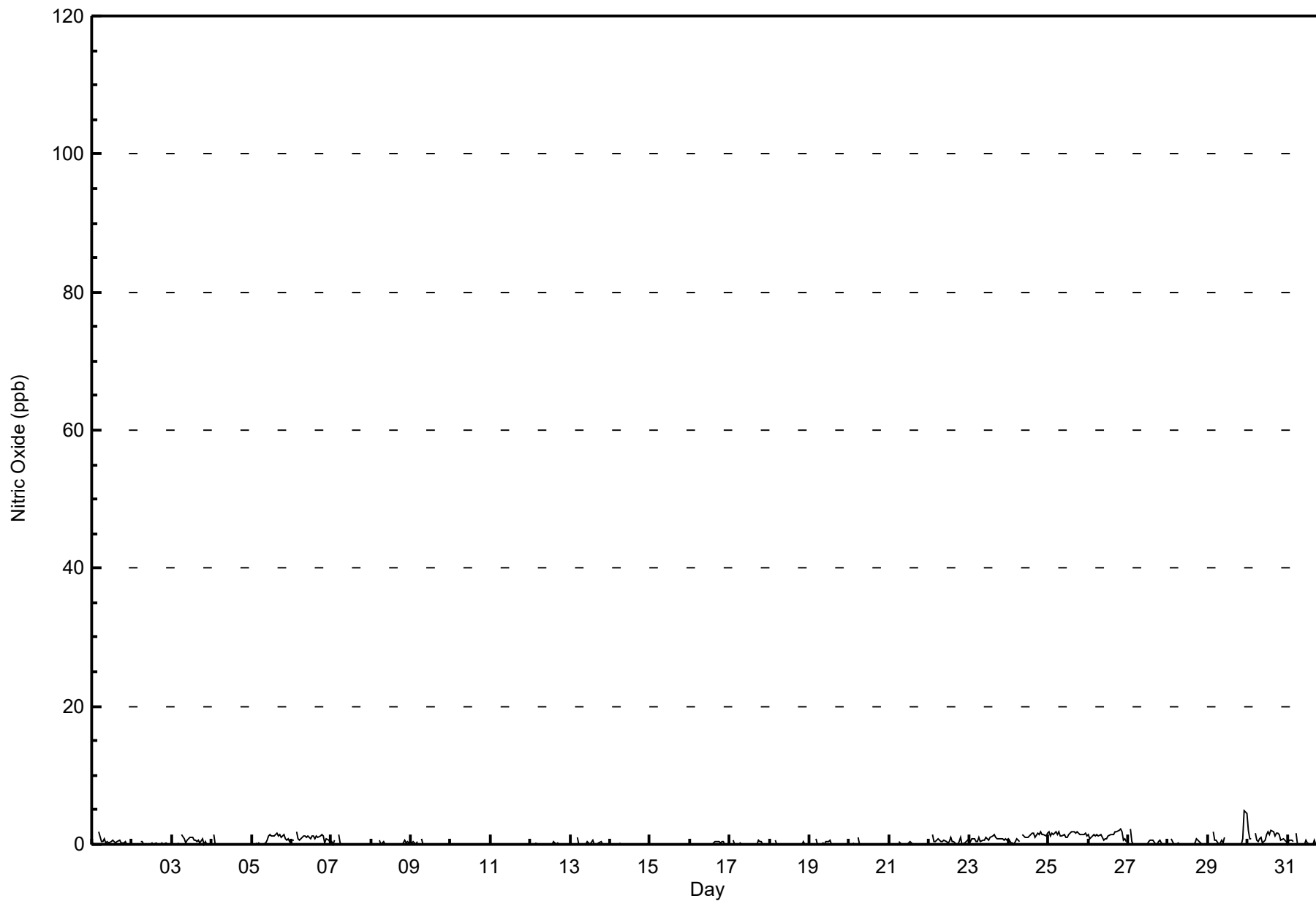
Stony Mountain - May 2025

Maximum Value: 4.9 ppb on May 29 23:00																		Maximum Daily Average: 1.5 ppb on May 25										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 02:00																		Minimum Daily Average: 0.0 ppb on May 10										Hours of Data: 711	
Maximum Diurnal Average: 0.5 ppb at hour 5																		Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 33	
Monthly Average: 0.36 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.6 P ₉₀ = 1.3 P ₉₉ = 1.9										Hours of Calibration: 32	
																		Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.3	0.0	0.0	Z	1.8	0.4	0.4	0.9	0.2	0.5	0.3	0.3	0.7	0.5	0.2	0.3	0.6	0.3	0.2	0.2	0.4	0.0	0.0	0.0	0.4	1.8			
2-May	0.0	0.0	0.0	0.0	Z	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.1	0.4			
3-May	0.0	0.0	0.0	0.0	0.2	Z	1.5	0.9	0.3	0.6	0.7	1.1	1.0	0.7	0.7	0.4	0.6	0.2	0.7	0.0	0.3	0.0	0.1	0.0	0.4	1.5			
4-May	Z	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4			
5-May	0.0	Z	0.3	0.0	0.1	0.0	0.0	0.0	0.3	0.7	1.2	1.5	1.3	1.2	1.4	1.6	1.2	1.5	1.0	1.3	0.8	0.6	0.8	0.4	0.7	1.6			
6-May	0.6	0.6	Z	1.8	0.7	0.7	1.0	1.2	1.1	1.1	1.2	0.9	1.2	1.2	0.8	1.3	1.0	1.2	1.4	1.2	0.3	0.8	0.6	0.2	1.0	1.8			
7-May	0.4	0.0	0.5	Z	1.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4			
8-May	0.0	0.0	0.0	0.0	Z	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.3	0.4	0.0	0.1	0.7			
9-May	0.2	0.4	0.2	0.0	0.5	Z	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8			
10-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
11-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
12-May	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3			
13-May	0.0	0.0	0.0	Z	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.5	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.1	1.0			
14-May	0.0	0.0	0.0	0.0	Z	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3			
15-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.5	0.2	0.3	0.4	0.0	0.1	0.0	0.1	0.5			
17-May	0.0	Z	0.6	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.4	0.0	0.0	0.0	0.0	0.1	0.6			
18-May	0.0	0.0	Z	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5			
19-May	0.0	0.0	0.0	Z	0.8	0.0	0.0	0.0	0.1	0.0	0.5	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8			
20-May	0.0	0.0	0.0	0.2	Z	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1			
21-May	0.0	0.0	0.0	0.0	0.0	Z	0.5	0.0	0.1	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5			
22-May	0.0	Z	1.5	0.4	0.4	0.7	0.6	0.5	0.4	0.6	0.5	0.3	0.5	1.0	0.4	0.3	0.0	0.0	0.5	1.0	0.0	0.2	0.4	0.6	0.5	1.5			
23-May	0.8	0.3	0.7	0.8	0.4	0.5	1.0	0.4	0.7	0.6	1.0	0.9	0.7	1.1	1.2	1.4	1.0	0.9	0.7	0.8	0.7	0.6	0.7	0.7	0.8	1.4			
24-May	0.8	0.2	0.3	0.1	0.3	0.7	0.4	M	1.4	1.2	0.9	1.1	1.2	1.5	1.5	1.7	1.0	1.6	1.5	1.8	1.4	1.5	1.3	1.6	1.1	1.8			
25-May	1.8	1.2	1.7	1.4	1.8	1.3	1.9	1.2	1.2	1.4	1.0	1.0	1.4	1.6	1.9	1.8	1.6	1.9	1.7	1.4	1.4	1.5	1.6	1.3	1.5	1.9			
26-May	1.3	0.9	1.2	1.4	1.2	1.5	1.3	1.5	1.1	0.7	0.8	0.9	1.2	1.4	1.4	1.4	1.7	1.8	2.0	2.2	1.8	0.7	0.9	0.4	1.3	2.2			
27-May	Z	2.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.6	0.5	0.1	0.0	0.4	0.5	0.1	0.0	0.0	0.0	0.3	2.1			
28-May	0.0	Z	0.9	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.6	0.2	0.0	0.0	0.0	0.0	0.1	0.9			
29-May	0.0	0.0	Z	1.9	0.7	0.5	0.0	0.2	0.5	0.3	0.9	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.9	4.9	4.4	0.9	4.9			
30-May	2.0	0.8	0.8	Z	1.7	0.6	0.5	0.7	1.1	0.1	0.7	1.3	1.8	1.5	2.0	1.9	1.3	1.6	1.6	1.3	0.7	0.7	0.6	0.3	1.1	2.0			
31-May	0.0	0.6	0.6	0.4	Z	1.5	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.1	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	1.5			
0.3 0.3 0.4 0.4 0.5 0.4 0.3 0.3 0.3 0.2 0.3 0.3 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.2 0.4 0.3																										Diurnal Average			
2.0 2.1 1.7 1.9 1.8 1.5 1.9 1.5 1.4 1.4 1.2 1.5 1.8 1.6 2.0 1.9 1.7 1.9 2.0 2.2 1.8 1.5 4.9 4.4																										Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	711	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711

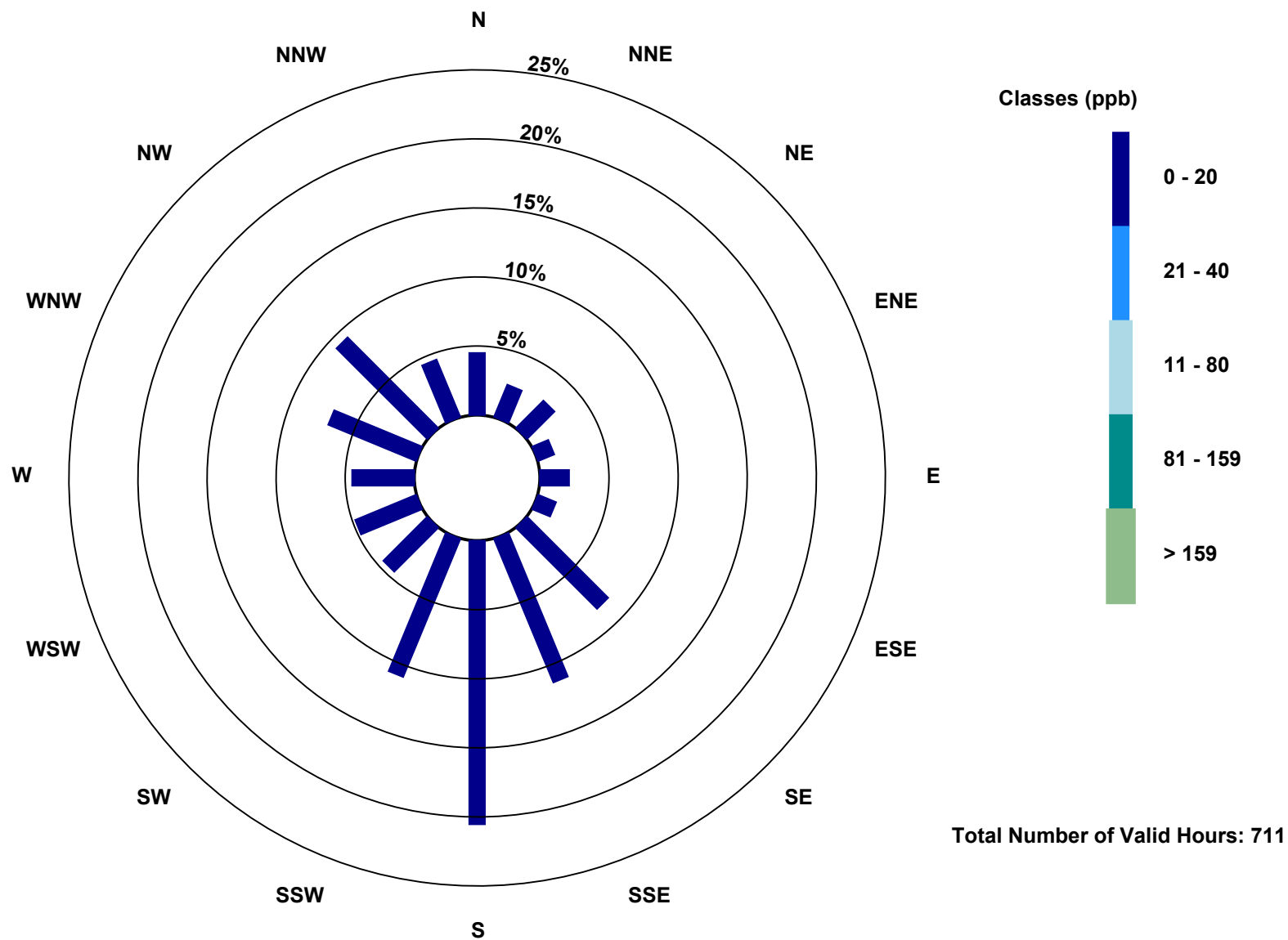
Total Number of Valid Hours: 711

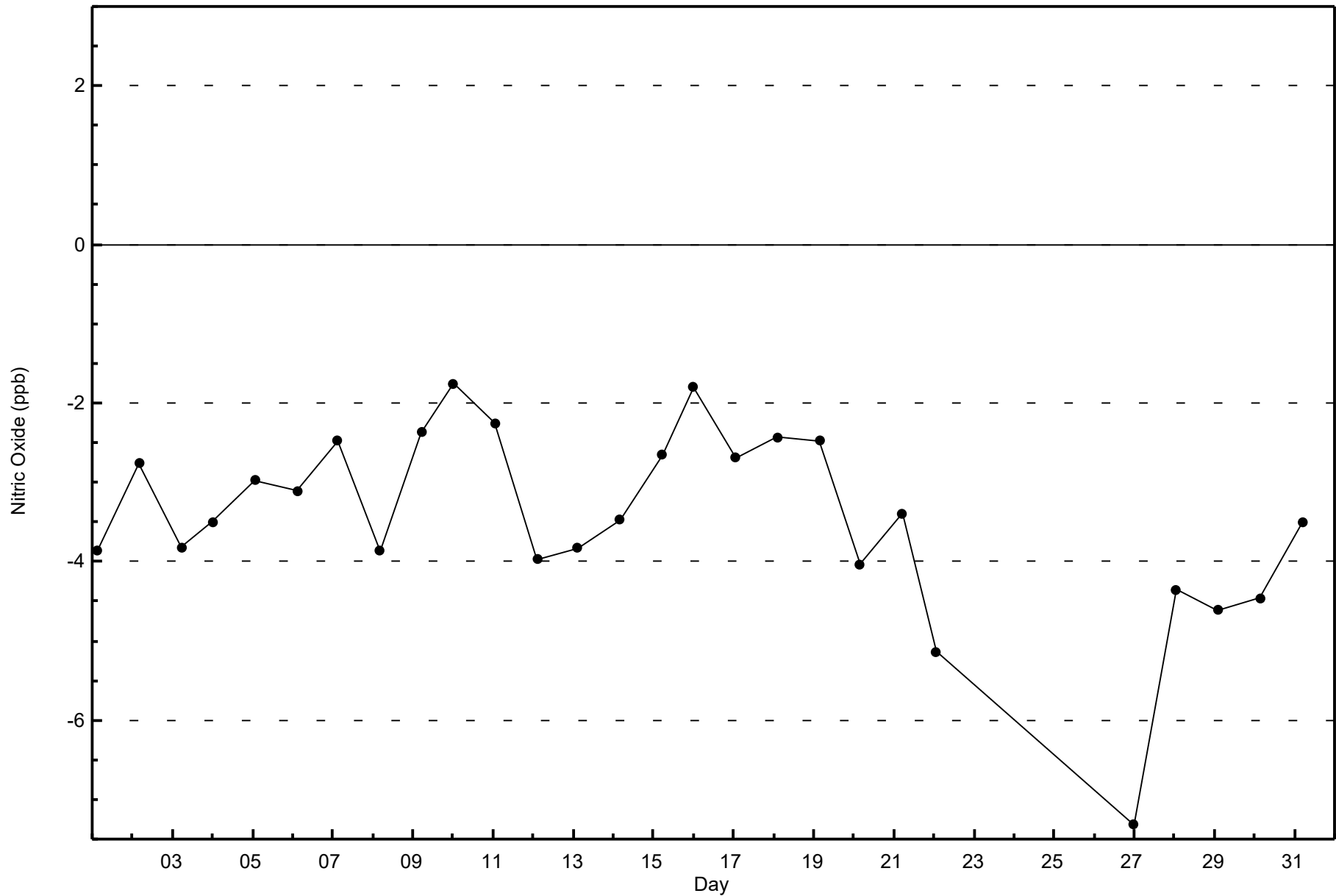
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitric Oxide (NO) - ppb
Stony Mountain

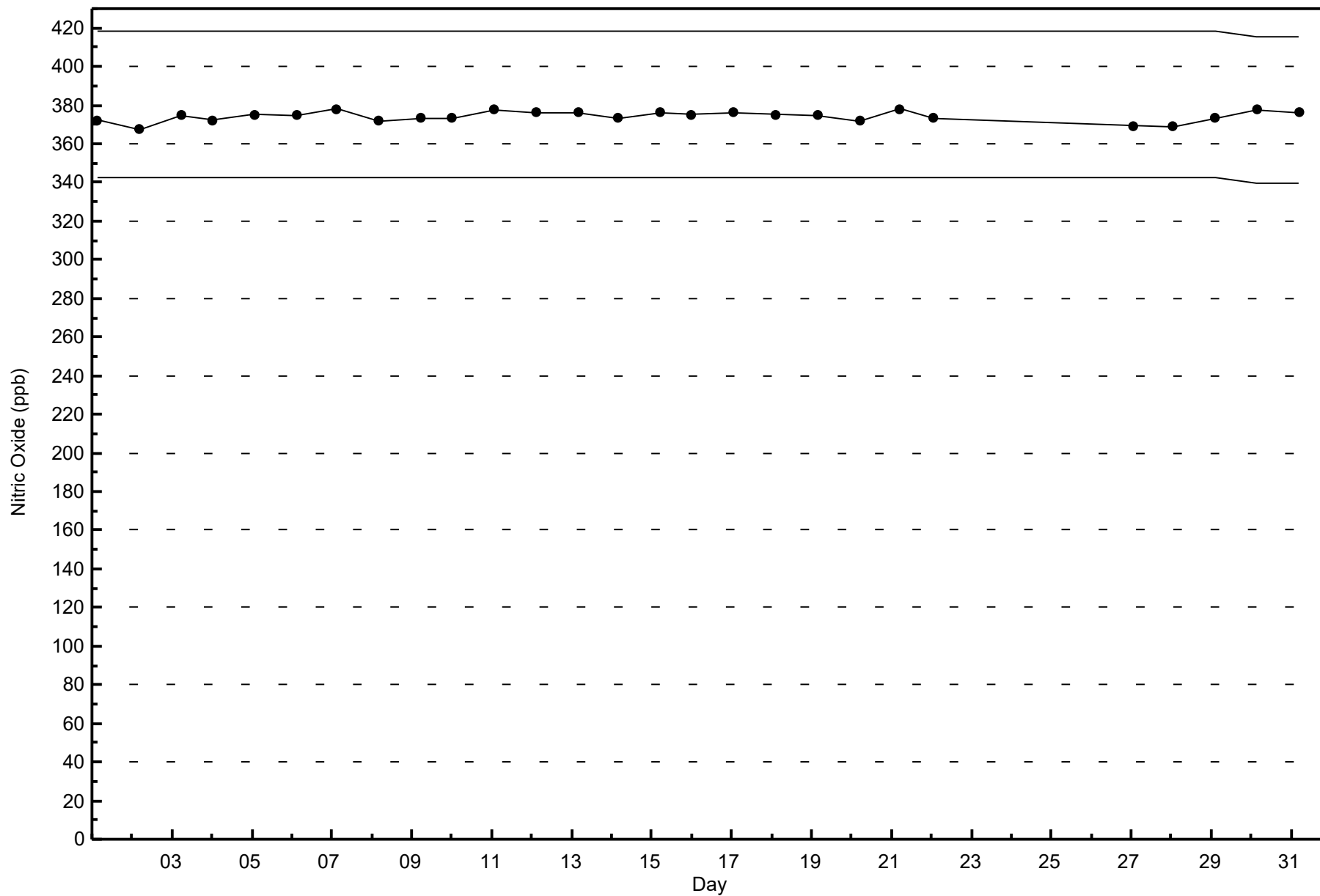






Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

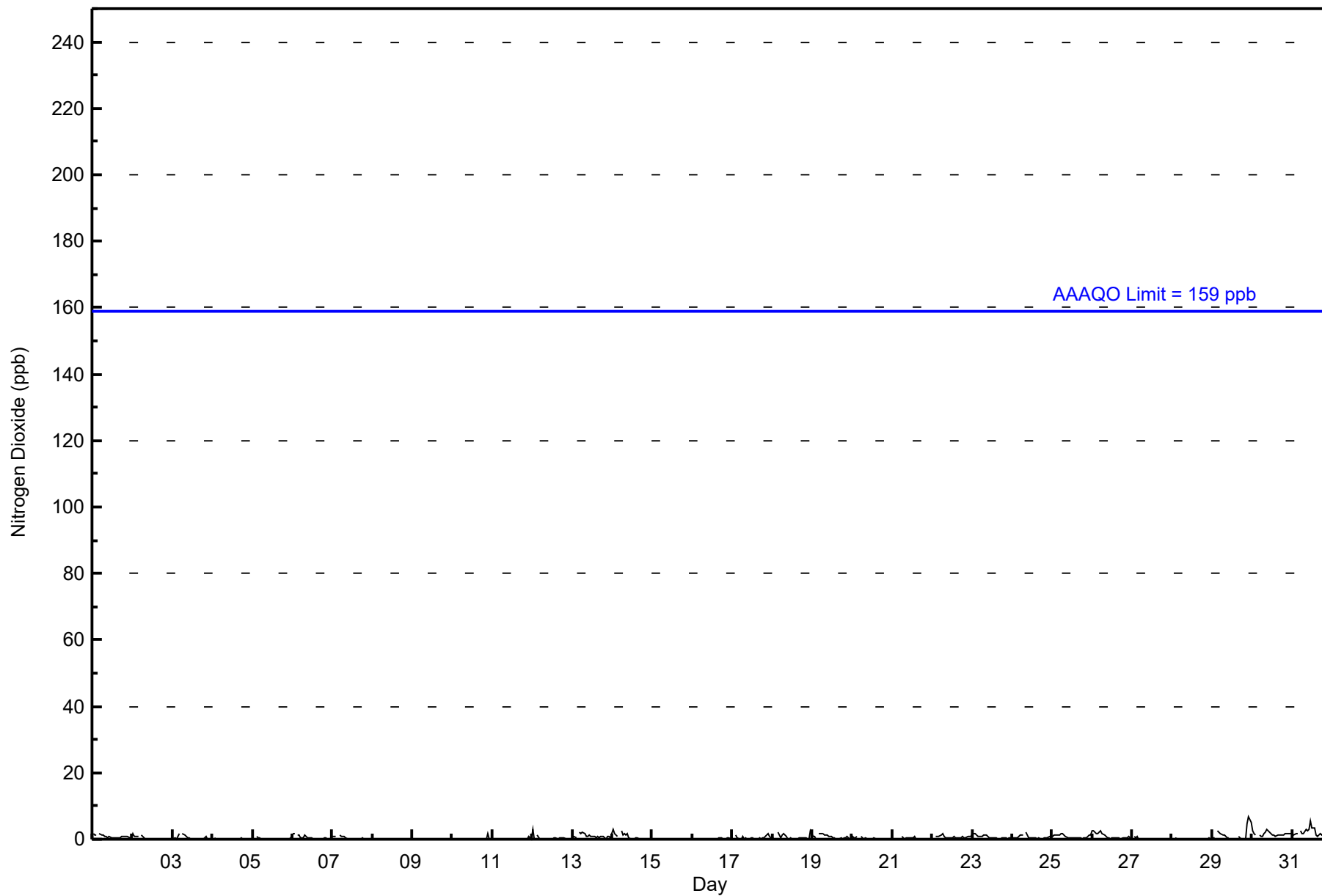
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744								
Maximum Value: 6.6 ppb on May 29 23:00																		Maximum Daily Average: 2.1 ppb on May 31		Hours of Data: 711						
Minimum Value: 0.0 ppb on May 2 12:00																		Minimum Daily Average: 0.0 ppb on May 8		Hours of Missing Data: 33						
Maximum Diurnal Average: 0.9 ppb at hour 6																		Minimum Diurnal Average: 0.2 ppb at hour 16		Hours of Calibration: 32						
Monthly Average: 0.51 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.8 P ₉₀ = 1.5 P ₉₉ = 2.8		Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.9	1.2	1.4	Z	1.5	1.2	1.2	0.9	0.9	0.6	0.7	0.6	0.5	0.6	0.5	0.6	0.5	0.8	0.9	1.0	0.9	0.7	0.3	0.3	0.9	1.9
2-May	1.7	0.7	0.7	1.0	Z	1.4	1.0	0.6	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7
3-May	0.0	0.4	0.1	0.7	1.6	Z	1.9	1.3	0.8	0.6	0.4	0.2	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.3	0.7	0.1	0.1	0.1	0.4	1.9
4-May	Z	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.6
5-May	0.0	Z	0.7	0.5	0.3	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.7
6-May	1.5	1.6	Z	1.2	1.1	0.6	0.5	1.1	0.9	0.5	0.5	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.4	0.1	0.1	0.7	0.5	1.6
7-May	0.8	0.7	1.0	Z	1.1	0.8	1.0	0.8	0.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.3	1.1
8-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
10-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.1	1.7
11-May	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7
12-May	2.8	0.0	Z	1.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.3	0.6	0.1	0.4	0.5	0.5	0.3	0.0	0.0	0.0	0.1	0.3	2.8
13-May	0.0	0.8	0.6	Z	2.1	1.5	2.0	1.7	0.9	0.7	1.2	0.9	0.9	0.7	0.4	0.7	0.5	0.8	0.7	0.6	0.1	0.9	1.0	0.4	0.9	2.1
14-May	2.8	1.7	1.3	0.8	Z	2.4	1.4	1.5	1.1	1.5	0.4	0.1	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.8
15-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
16-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.0	0.4	0.4	0.1	0.1	0.4
17-May	0.0	Z	1.2	0.4	0.1	0.1	0.8	0.2	0.3	0.0	0.1	0.4	0.3	0.2	0.2	0.1	0.3	0.0	0.3	0.4	1.0	1.5	0.8	0.4	0.4	1.5
18-May	0.1	0.3	Z	2.0	1.3	0.6	1.2	1.9	1.0	0.0	0.2	0.5	0.2	0.0	0.2	0.2	0.5	0.4	0.3	0.6	0.6	0.0	0.0	2.4	0.6	2.4
19-May	0.7	0.9	0.0	Z	1.6	1.5	1.5	1.4	1.4	1.1	1.0	1.0	0.4	0.6	0.1	0.2	0.0	0.3	0.0	0.4	0.3	0.7	0.1	0.0	0.7	1.6
20-May	1.0	0.5	0.6	0.9	Z	1.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
21-May	0.0	0.0	0.0	0.0	0.0	Z	0.8	0.0	0.6	0.4	0.6	0.4	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0
22-May	0.0	Z	1.0	0.7	0.9	1.2	1.5	1.0	0.6	0.5	0.5	0.4	0.3	0.7	0.4	0.6	0.4	0.4	0.7	0.3	0.4	1.0	0.8	0.8	0.7	1.5
23-May	1.9	1.8	1.5	0.7	1.0	1.0	1.0	1.3	1.2	1.0	0.6	0.6	0.4	0.3	0.3	0.1	0.2	0.2	0.6	0.4	0.4	0.2	0.4	0.4	0.7	1.9
24-May	0.5	0.3	0.6	0.6	0.9	1.3	1.2	M	2.3	1.1	0.5	0.3	0.3	0.6	0.4	0.2	0.4	0.0	0.1	0.4	0.4	0.5	0.7	0.8	0.6	2.3
25-May	0.8	1.1	1.2	1.2	1.4	1.8	1.7	1.2	0.9	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.2	0.5	0.3	0.8	1.4	1.3	0.8	1.8
26-May	2.5	2.5	1.8	1.6	2.0	2.5	1.5	1.3	0.7	0.5	0.5	0.2	0.3	0.4	0.3	0.3	0.4	0.2	0.3	0.4	0.4	0.6	0.7	0.6	0.9	2.5
27-May	Z	0.8	0.6	0.9	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.9
28-May	0.0	Z	0.5	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.3	0.1	0.1	0.5
29-May	0.4	0.6	Z	2.6	2.2	1.9	1.2	1.1	0.7	0.3	0.3	C	C	C	C	C	0.8	0.0	0.0	0.0	0.0	4.8	6.6	5.0	1.6	6.6
30-May	2.7	1.6	1.4	Z	1.1	0.8	1.0	1.5	2.3	2.8	2.1	1.5	1.2	1.1	1.0	1.2	1.2	1.1	1.1	1.3	1.5	1.9	1.9	1.8	1.5	2.8
31-May	1.6	1.3	1.5	1.5	Z	2.5	1.6	1.8	2.8	2.5	3.1	5.6	3.5	3.2	1.2	0.7	1.4	1.5	1.4	2.1	2.3	1.6	1.3	1.2	2.1	5.6
0.9 0.7 0.7 0.7 0.8 0.9 0.8 0.7 0.7 0.5 0.4 0.5 0.3 0.4 0.2 0.2 0.3 0.2 0.3 0.3 0.3 0.6 0.6 0.6																									Diurnal Average	
2.8 2.5 1.8 2.6 2.2 2.5 2.0 1.9 2.8 2.8 3.1 5.6 3.5 3.2 1.2 1.2 1.4 1.5 1.4 2.1 2.3 4.8 6.6 5.0																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	711	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711

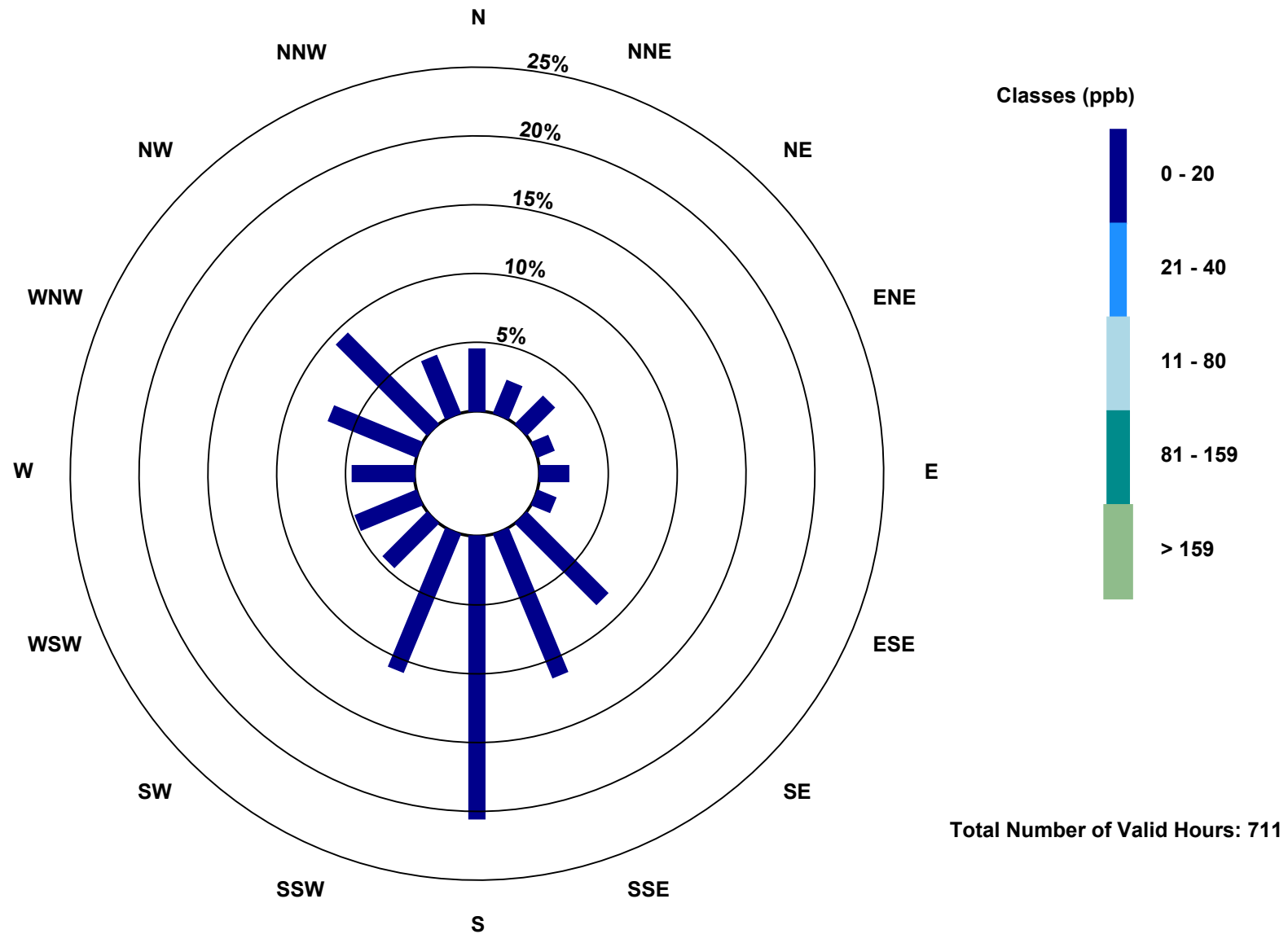
Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

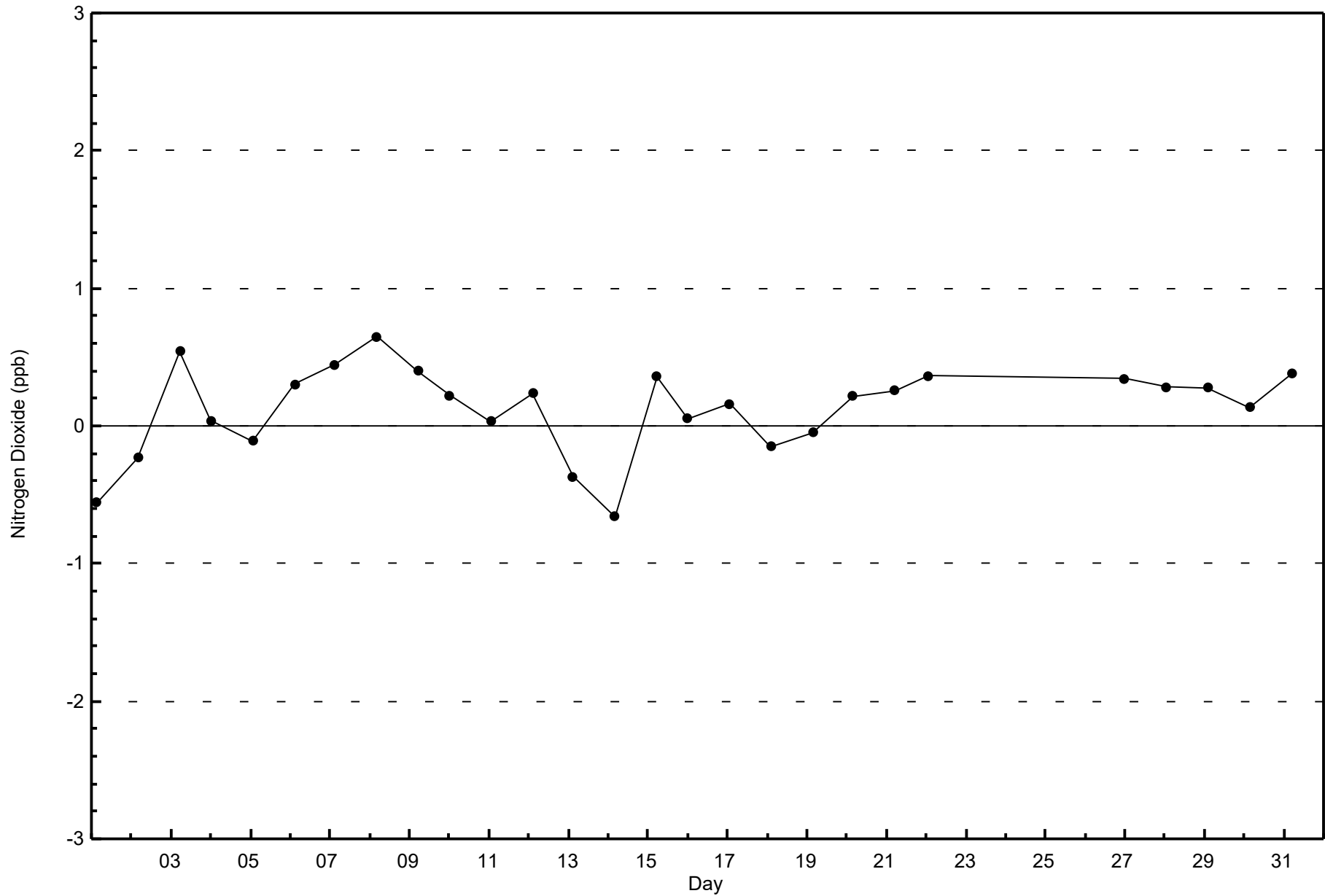
Nitrogen Dioxide (NO₂) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

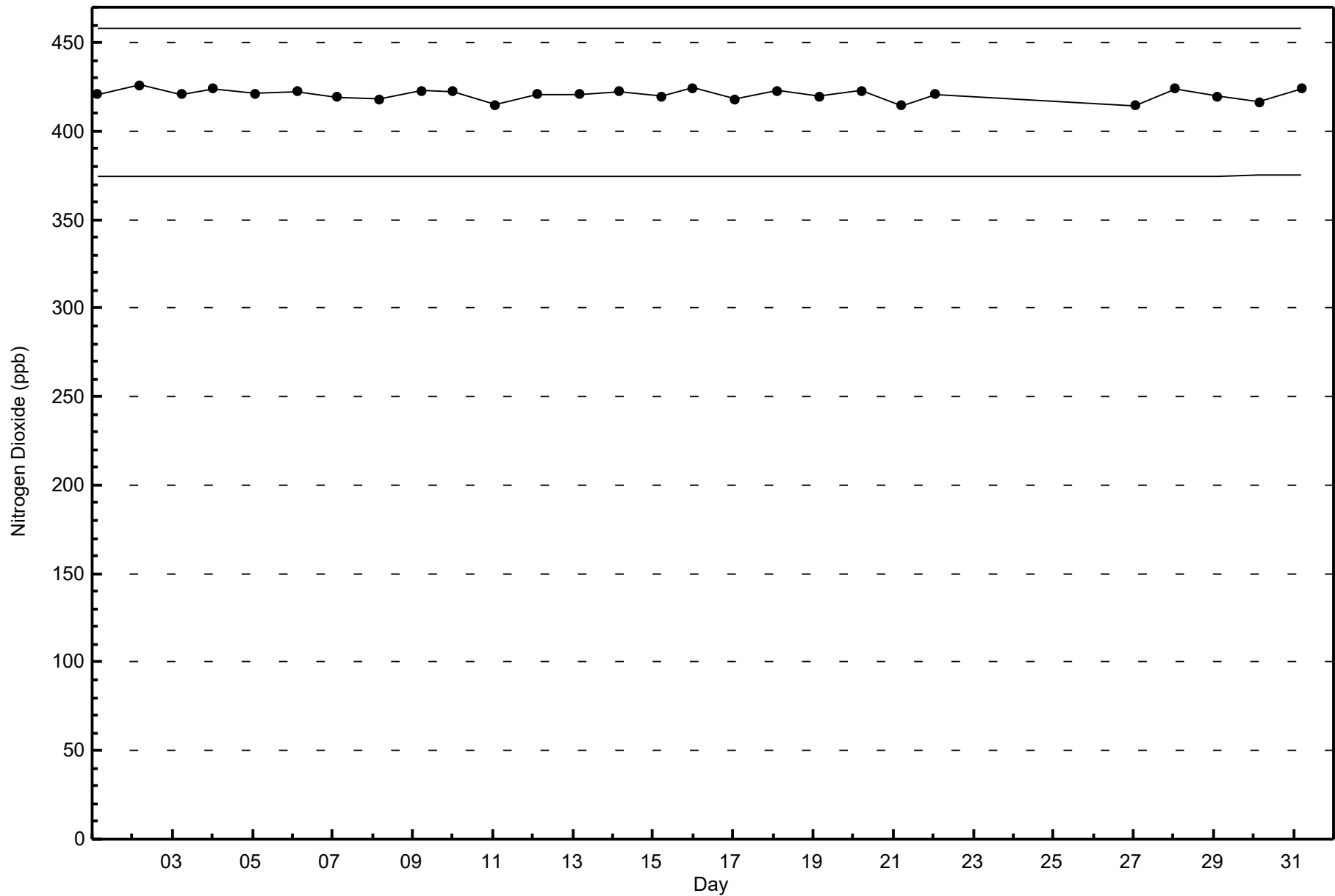
Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

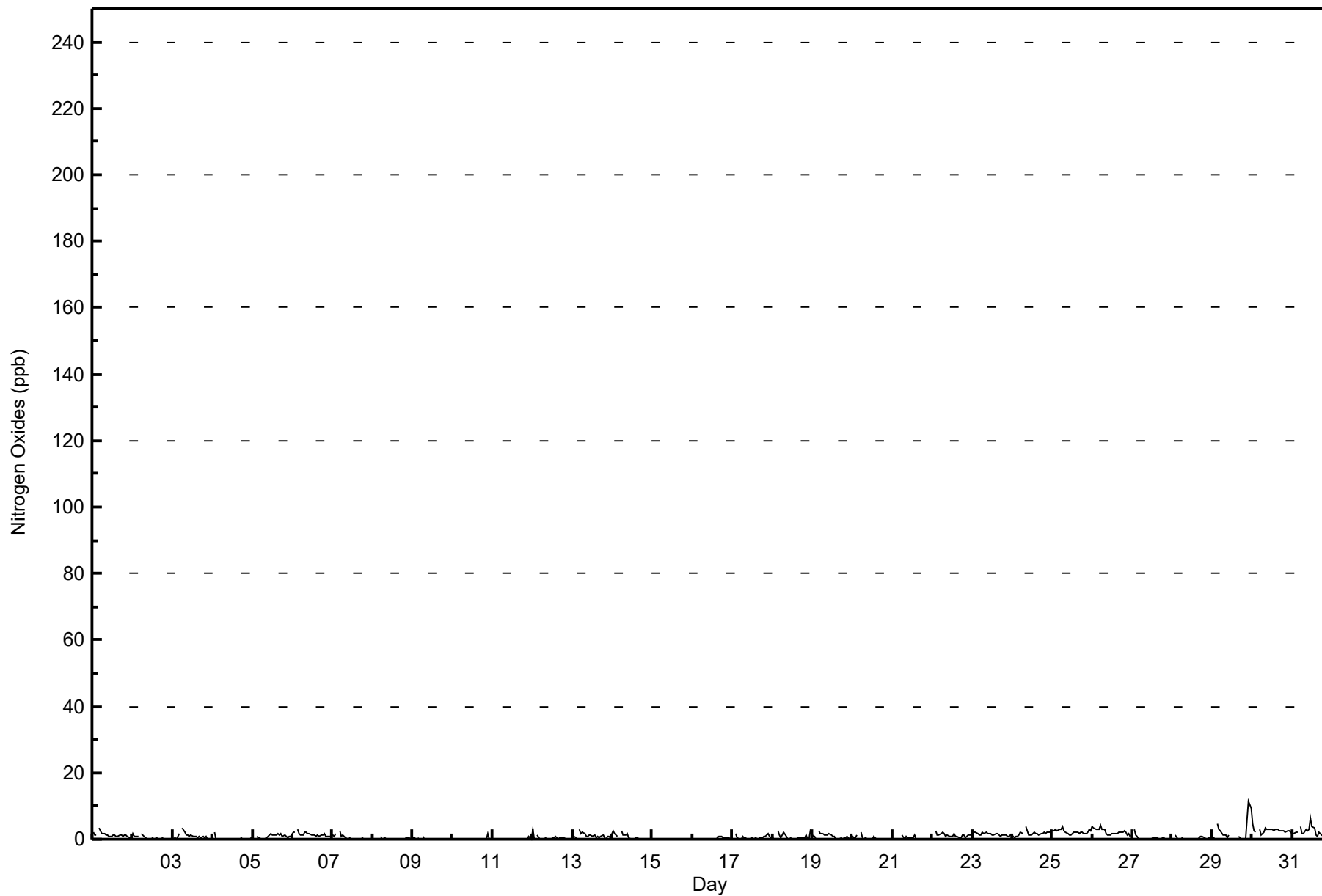
Stony Mountain - May 2025

Maximum Value: 11.5 ppb on May 29 23:00																		Maximum Daily Average: 2.6 ppb on May 30										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 12:00																		Minimum Daily Average: 0.0 ppb on May 15										Hours of Data: 711	
Maximum Diurnal Average: 1.3 ppb at hour 6																		Minimum Diurnal Average: 0.6 ppb at hour 21										Hours of Missing Data: 33	
Monthly Average: 0.87 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.5 Q ₃ = 1.4 P ₉₀ = 2.3 P ₉₉ = 4.0										Hours of Calibration: 32	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	2.2	1.2	1.4	Z	3.3	1.6	1.6	1.8	1.1	1.1	1.0	0.9	1.2	1.1	0.7	0.9	1.1	1.1	1.1	1.2	1.3	0.7	0.3	0.3	1.2	3.3			
2-May	1.7	0.7	0.7	1.0	Z	1.8	1.3	0.6	0.2	0.2	0.1	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.4	1.8			
3-May	0.0	0.4	0.1	0.7	1.8	Z	3.4	2.2	1.1	1.2	1.1	1.3	1.0	0.7	0.9	0.4	0.7	0.3	0.8	0.3	1.0	0.1	0.2	0.1	0.9	3.4			
4-May	Z	2.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.1	2.0			
5-May	0.0	Z	1.0	0.5	0.4	0.0	0.0	0.0	0.5	0.9	1.4	1.7	1.4	1.3	1.4	1.7	1.2	1.5	1.0	1.3	0.8	0.6	0.9	0.9	0.9	1.7			
6-May	2.1	2.2	Z	3.0	1.8	1.3	1.5	2.3	2.0	1.6	1.7	1.3	1.2	1.2	0.8	1.5	1.0	1.2	1.4	1.7	0.7	0.9	0.7	0.9	1.5	3.0			
7-May	1.2	0.7	1.5	Z	2.5	1.0	1.1	0.8	0.5	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.4	2.5			
8-May	0.0	0.0	0.0	0.0	Z	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.3	0.4	0.0	0.1	0.7			
9-May	0.2	0.4	0.2	0.0	0.5	Z	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	1.0			
10-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.1	1.7			
11-May	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.7			
12-May	2.8	0.0	Z	1.4	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.3	0.9	0.1	0.6	0.5	0.5	0.3	0.0	0.0	0.0	0.1	0.3	2.8			
13-May	0.0	0.8	0.6	Z	3.1	1.5	2.0	1.7	0.9	0.7	1.5	1.1	0.9	1.2	0.4	0.7	0.5	0.9	1.2	0.6	0.1	0.9	1.0	0.4	1.0	3.1			
14-May	2.8	1.7	1.3	0.8	Z	2.7	1.4	1.5	1.1	1.5	0.4	0.1	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.8			
15-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1			
16-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.7	0.8	0.3	0.4	0.4	0.4	0.5	0.1	0.2	0.8			
17-May	0.0	Z	1.8	0.4	0.1	0.1	1.0	0.2	0.3	0.0	0.1	0.4	0.3	0.2	0.2	0.1	0.3	0.6	0.6	0.8	1.0	1.5	0.8	0.4	0.5	1.8			
18-May	0.1	0.3	Z	2.5	1.3	0.6	1.2	1.9	1.0	0.0	0.2	0.5	0.2	0.0	0.2	0.2	0.5	0.4	0.3	0.6	1.1	0.0	0.0	2.4	0.7	2.5			
19-May	0.7	0.9	0.0	Z	2.4	1.5	1.5	1.4	1.5	1.1	1.5	1.4	1.0	0.7	0.1	0.2	0.0	0.3	0.0	0.4	0.3	0.7	0.1	0.0	0.8	2.4			
20-May	1.0	0.5	0.6	1.1	Z	2.1	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.1			
21-May	0.0	0.0	0.0	0.0	0.0	Z	1.3	0.0	0.7	0.4	0.6	0.4	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3			
22-May	0.0	Z	2.5	1.1	1.3	1.9	2.1	1.5	1.0	1.1	1.0	0.7	0.8	1.7	0.8	0.9	0.4	0.4	1.2	1.3	0.4	1.2	1.2	1.4	1.1	2.5			
23-May	2.7	2.1	2.2	1.5	1.4	1.5	2.0	1.7	1.9	1.6	1.6	1.5	1.1	1.4	1.5	1.5	1.2	1.1	1.3	1.2	1.1	0.8	1.1	1.1	1.5	2.7			
24-May	1.3	0.5	0.9	0.7	1.2	2.0	1.6	M	3.7	2.3	1.4	1.4	1.5	2.1	1.9	1.9	1.4	1.6	1.6	2.2	1.8	2.0	2.0	2.4	1.7	3.7			
25-May	2.6	2.3	2.9	2.6	3.2	3.1	3.6	2.4	2.1	1.7	1.3	1.3	1.7	2.0	2.3	2.2	1.9	2.3	1.9	1.9	1.7	2.3	3.0	2.6	2.3	3.6			
26-May	3.8	3.4	3.0	3.0	3.2	4.0	2.8	2.8	1.8	1.2	1.3	1.1	1.5	1.8	1.7	1.7	2.1	2.0	2.3	2.6	2.2	1.3	1.6	1.0	2.2	4.0			
27-May	Z	2.9	1.1	1.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.5	0.6	0.6	0.5	0.2	0.0	0.4	0.5	0.2	0.0	0.0	0.0	0.4	2.9			
28-May	0.0	Z	1.4	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.8	0.3	0.1	0.0	0.3	0.1	0.2	1.4			
29-May	0.4	0.6	Z	4.5	2.9	2.4	1.2	1.3	1.2	0.6	1.2	C	C	C	C	C	0.8	0.0	0.0	0.0	0.0	5.7	11.5	9.4	2.4	11.5			
30-May	4.7	2.4	2.2	Z	2.8	1.4	1.5	2.2	3.4	2.9	2.8	2.8	3.0	2.6	3.0	3.1	2.5	2.7	2.7	2.6	2.2	2.6	2.5	2.1	2.6	4.7			
31-May	1.6	1.9	2.1	1.9	Z	4.0	1.6	1.8	2.8	2.5	3.1	6.2	3.8	3.2	1.3	0.7	2.1	1.5	1.4	2.3	2.3	1.6	1.3	1.2	2.3	6.2			
Diurnal Average																										Diurnal Maximum			
4.7 3.4 3.0 4.5 3.3 4.0 3.6 2.8 3.7 2.9 3.1 6.2 3.8 3.2 3.0 3.1 2.5 2.7 2.7 2.6 2.3 5.7 11.5 9.4																													
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	711	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	18	20	9	15	10	59	80	146	77	32	34	32	49	66	32	711

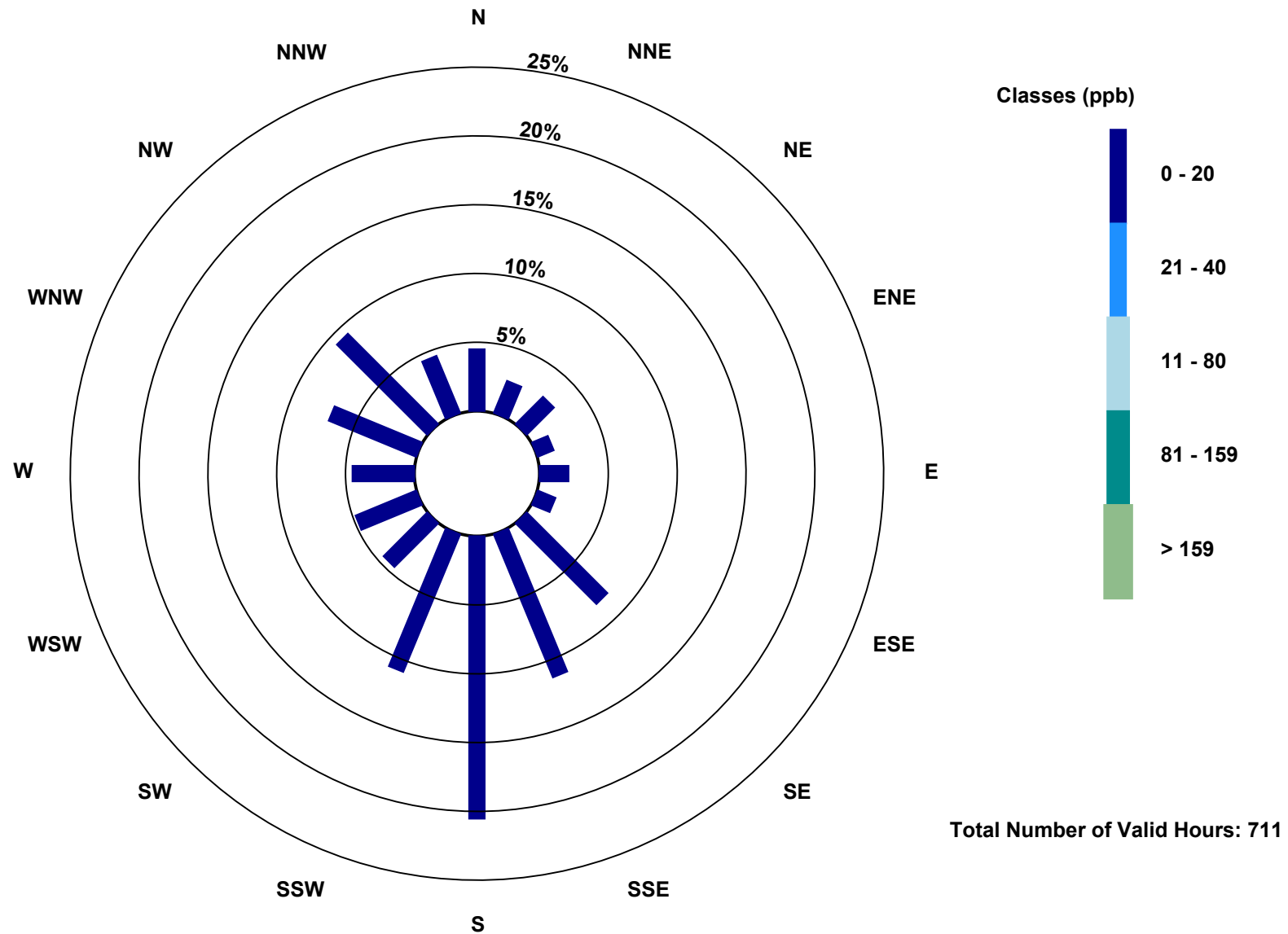
Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

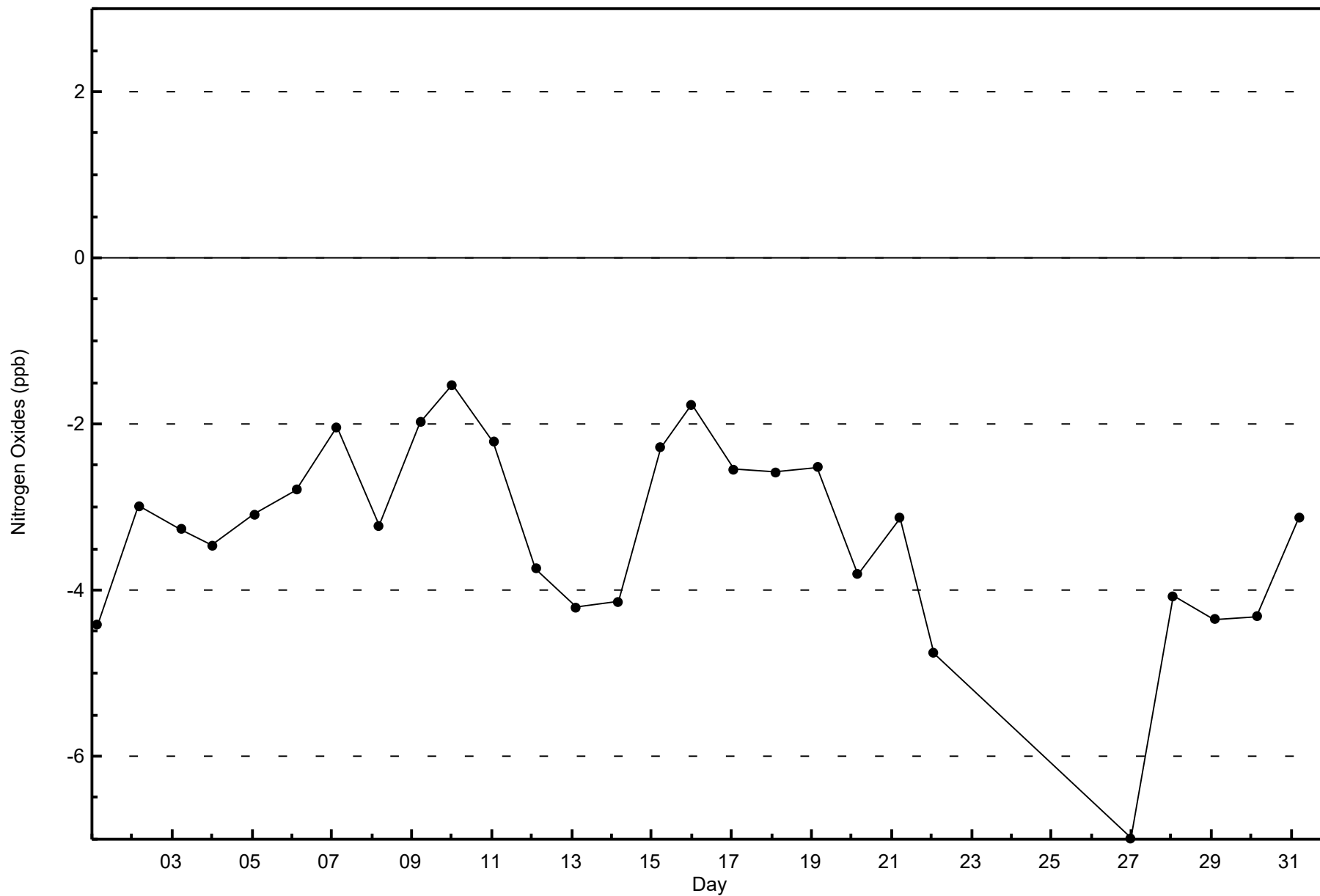
Nitrogen Oxides (NO_x) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

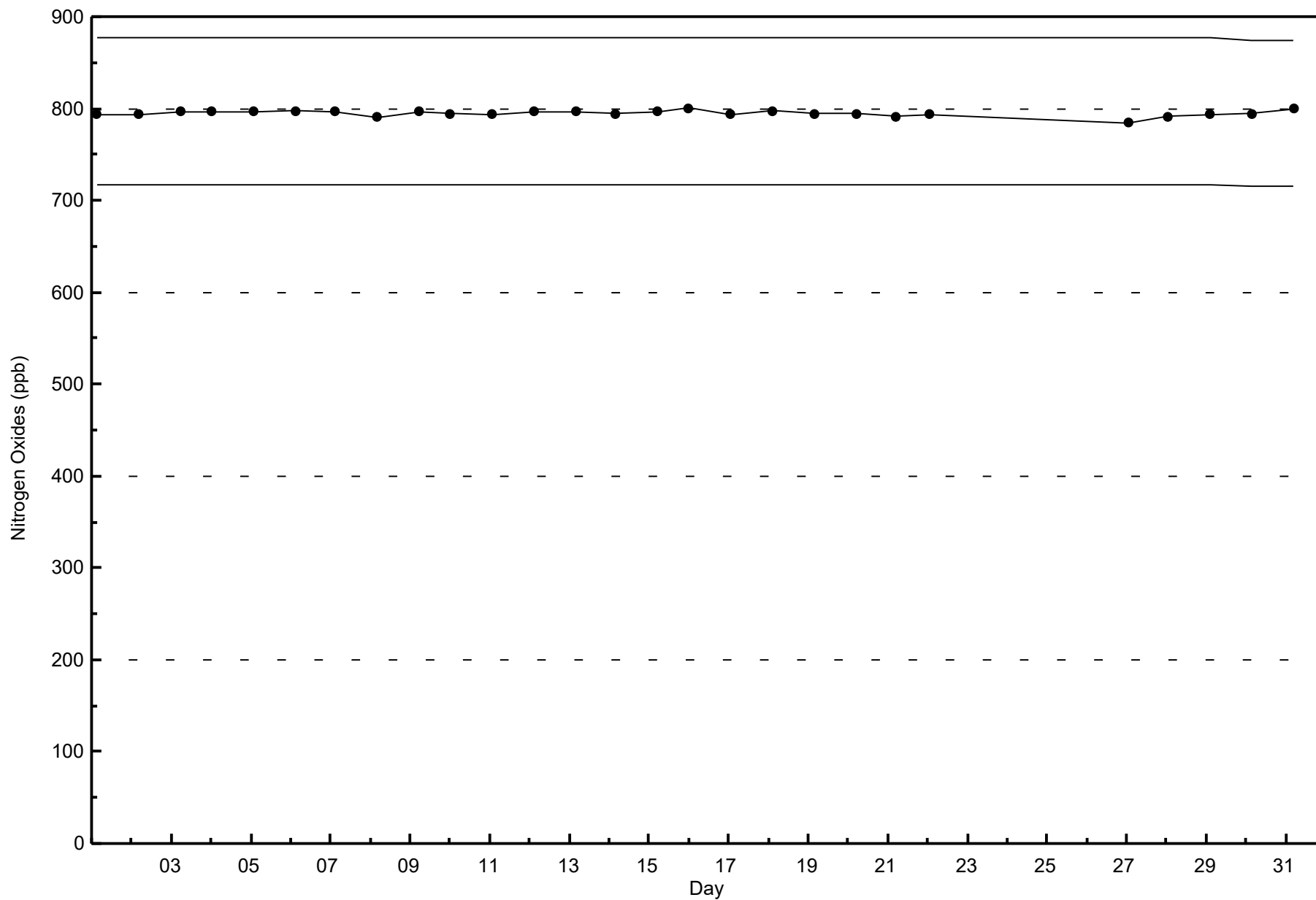
Nitrogen Oxides (NO_x) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - May 2025

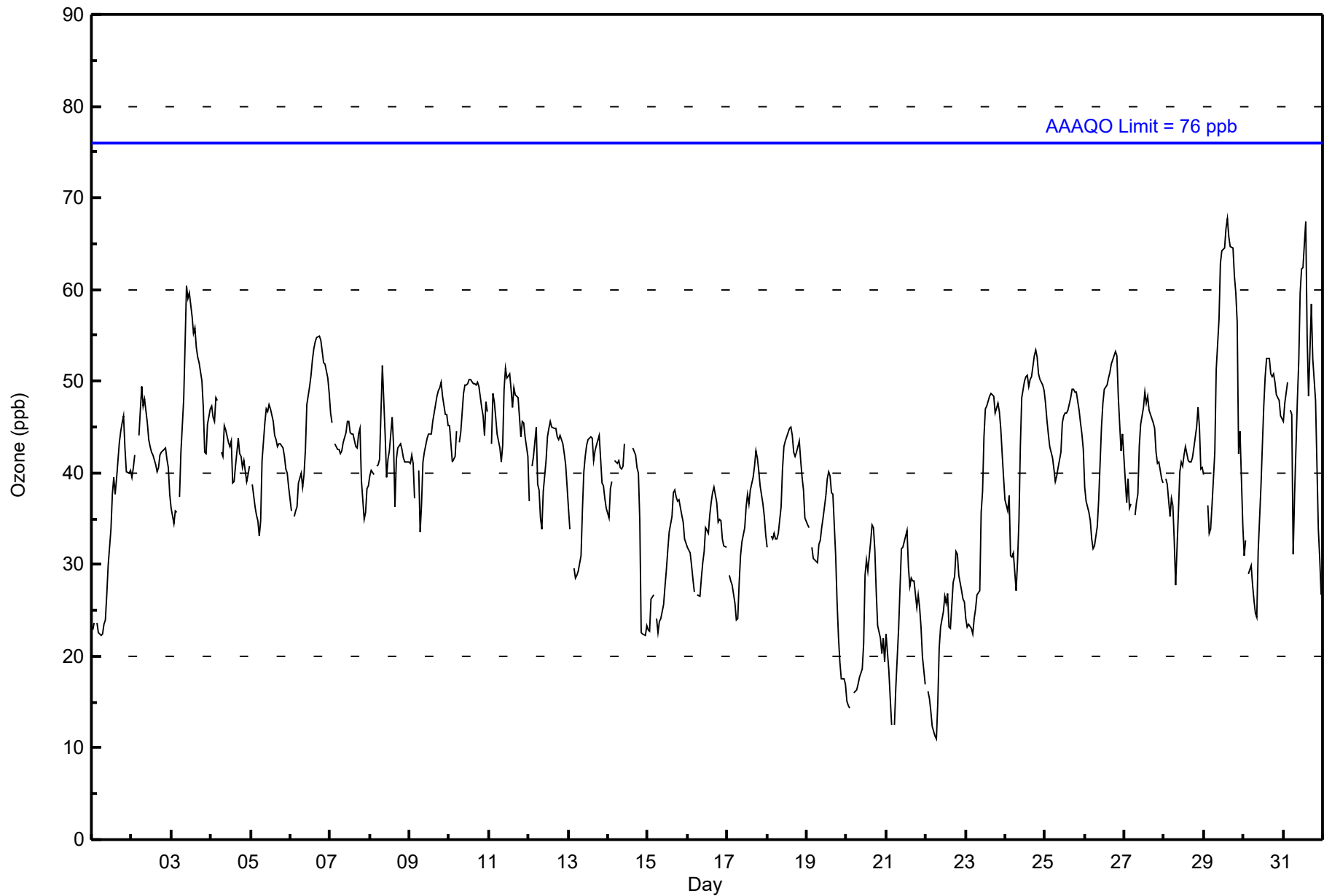


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 67.7 ppb on May 29 15:00 Maximum Daily Average: 52.3 ppb on May 29																					Hours in Service: 744 Hours of Data: 713 Hours of Missing Data: 31 Hours of Calibration: 31 Percent Operational Time: 100.0							
Minimum Value: 11.0 ppb on May 22 07:00 Maximum Diurnal Average: 44.7 ppb at hour 14 Monthly Average: 39.41 ppb										Minimum Daily Average: 22.5 ppb on May 22 Minimum Diurnal Average: 32.6 ppb at hour 6 Percentiles: P ₁ = 14.7 P ₁₀ = 25.3 Q ₁ = 33.7 Median = 41.1 Q ₃ = 45.6 P ₉₀ = 50.1 P ₉₉ = 64.0																		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	22.8	23.6	Z	23.6	22.6	22.3	22.4	23.4	24.0	26.7	29.9	33.8	37.7	39.5	37.7	39.3	43.3	44.5	45.5	46.2	42.7	40.2	40.0	40.3	33.6	46.2		
2-May	39.4	40.6	42.0	Z	44.1	46.9	49.4	47.3	48.0	45.5	43.6	42.9	42.3	42.0	40.9	40.1	40.6	42.0	42.2	42.4	42.8	41.5	40.6	37.7	42.8	49.4		
3-May	36.1	34.5	35.8	35.7	Z	37.4	42.2	48.0	54.2	60.5	59.1	59.7	57.0	55.2	55.8	53.7	52.7	52.0	50.0	47.1	42.3	42.2	45.3	46.9	48.0	60.5		
4-May	47.2	46.1	45.6	48.2	47.9	Z	42.2	41.7	45.2	44.7	43.3	42.9	43.4	38.9	39.0	40.7	43.8	42.2	41.8	40.6	41.3	39.0	39.8	40.8	42.9	48.2		
5-May	Z	38.8	36.3	35.4	34.8	33.1	34.8	41.4	45.5	47.0	46.7	47.4	47.0	45.6	44.1	43.6	42.9	43.1	43.2	42.6	41.8	40.4	39.9	38.5	41.5	47.4		
6-May	35.9	Z	35.2	35.9	36.4	38.9	40.0	38.4	39.8	42.6	47.5	49.5	50.7	52.3	53.5	54.3	54.8	54.9	54.5	53.3	52.0	51.8	50.3	48.7	46.6	54.9		
7-May	46.5	45.4	Z	43.1	42.6	42.6	42.0	42.4	43.3	44.4	45.5	45.6	44.4	44.2	44.2	42.9	42.7	44.2	44.9	39.2	34.9	35.7	38.2	38.5	42.5	46.5		
8-May	39.6	40.3	39.8	Z	40.8	40.9	41.4	51.8	47.9	44.1	39.5	41.5	42.4	46.1	43.0	36.3	41.5	42.7	43.2	42.6	41.6	41.2	41.2	41.2	42.2	51.8		
9-May	41.1	42.0	41.1	37.2	Z	40.3	33.5	36.6	41.2	42.2	43.8	44.2	44.2	44.3	45.6	46.6	48.3	48.9	49.3	49.9	48.3	46.4	46.3	45.1	43.8	49.9		
10-May	45.2	43.2	41.2	41.8	44.5	Z	43.4	44.4	48.7	49.6	49.6	49.7	50.2	50.1	49.8	49.8	49.6	49.8	49.4	47.2	46.2	44.0	47.8	46.6	47.0	50.2		
11-May	Z	43.1	48.7	47.7	46.0	44.2	42.7	41.2	43.0	49.0	51.3	50.3	50.8	49.0	47.2	49.3	48.5	48.1	46.1	43.9	45.5	45.5	43.9	41.9	46.4	51.3		
12-May	37.0	Z	40.7	41.8	45.1	38.8	38.2	35.2	33.8	38.0	41.3	43.9	44.9	45.7	45.0	44.8	44.8	43.9	43.6	44.1	43.2	42.1	41.0	38.6	41.5	45.7		
13-May	36.2	33.9	Z	29.6	28.5	28.8	29.2	31.0	35.9	40.1	41.8	43.0	43.6	44.0	43.7	41.4	42.5	43.0	44.1	41.4	38.9	38.6	37.3	36.2	38.0	44.1		
14-May	35.1	38.3	39.0	Z	41.4	41.0	41.3	40.6	40.5	40.7	43.1	C	C	C	C	42.7	42.0	40.6	40.0	34.9	22.6	22.4	22.3	23.4	36.4	43.1		
15-May	22.8	22.7	26.3	26.6	Z	24.1	22.5	23.9	24.1	25.7	27.6	29.4	31.5	33.5	35.3	37.9	38.1	37.3	36.9	37.1	35.5	34.6	32.9	32.4	30.4	38.1		
16-May	31.9	31.2	29.8	28.4	27.0	Z	26.7	26.6	28.6	30.3	31.4	33.9	33.4	35.4	36.8	37.9	38.4	36.7	34.7	34.9	34.8	32.8	32.0	31.8	32.4	38.4		
17-May	Z	28.9	28.2	27.8	25.7	23.9	24.0	27.9	31.0	32.5	34.1	36.2	37.7	36.6	38.1	39.5	40.7	42.5	41.7	40.2	38.6	36.7	35.3	33.3	34.0	42.5		
18-May	31.9	Z	33.1	32.8	33.4	32.9	32.8	33.4	36.3	40.4	42.9	43.5	43.9	44.8	45.0	44.0	42.3	41.8	42.2	43.5	41.4	39.5	38.1	35.1	38.9	45.0		
19-May	34.4	33.9	Z	31.9	30.7	30.6	30.2	32.2	32.6	34.0	35.2	37.5	39.3	40.1	39.7	37.9	37.7	30.9	26.0	22.1	19.4	17.6	17.6	17.0	30.8	40.1		
20-May	15.0	14.6	14.3	Z	16.0	16.2	16.3	16.9	17.6	18.5	21.3	28.8	30.6	29.3	32.5	34.3	34.0	31.6	27.0	23.4	22.0	20.4	21.9	19.4	22.7	34.3		
21-May	22.5	18.4	15.5	12.5	Z	12.5	16.6	23.0	27.5	31.7	32.0	32.4	33.7	29.7	27.7	28.5	28.3	28.2	25.3	26.6	25.3	23.2	20.0	16.9	24.3	33.7		
22-May	Z	16.1	15.4	14.1	12.4	11.3	11.0	15.0	20.9	23.1	24.9	26.6	25.8	26.9	23.1	23.1	28.1	28.7	31.5	31.1	28.8	27.2	26.2	25.9	22.5	31.5		
23-May	24.1	23.2	23.5	23.0	22.5	24.1	25.1	26.7	27.2	35.7	38.1	43.9	47.1	47.3	48.3	48.7	48.6	48.4	46.6	47.6	46.6	44.8	42.1	39.4	37.2	48.7		
24-May	37.1	35.8	37.6	30.9	30.8	31.2	27.1	30.3	34.8	42.9	48.2	50.1	50.5	50.7	49.4	50.1	50.6	52.8	53.4	52.6	50.8	50.2	49.6	49.0	43.6	53.4		
25-May	47.6	45.8	44.2	42.9	41.7	40.5	39.1	39.6	40.6	42.3	45.5	46.2	46.5	46.5	46.8	48.2	49.1	49.1	48.7	48.7	46.9	45.5	44.2	42.5	44.9	49.1		
26-May	38.4	37.0	35.7	34.8	32.8	31.7	32.0	34.1	37.0	41.0	44.9	47.5	49.2	49.6	50.4	51.0	51.9	52.3	53.3	52.7	48.4	45.3	42.4	44.2	43.2	53.3		
27-May	39.1	36.8	39.3	36.2	36.7	Z	35.4	36.8	37.7	42.8	45.3	47.2	48.8	47.5	48.3	46.8	45.9	45.4	44.9	42.2	41.1	41.1	39.4	38.9	41.9	48.8		
28-May	Z	39.4	38.7	35.2	37.2	36.5	32.6	27.7	35.9	40.1	41.2	40.7	41.9	42.8	41.3	41.1	41.1	41.6	42.7	45.0	47.1	45.0	40.4	40.6	39.8	47.1		
29-May	39.8	Z	36.5	33.5	33.8	36.5	42.2	51.3	54.0	56.7	62.8	64.1	64.6	66.7	67.7	65.8	64.7	64.5	61.5	59.6	56.4	42.1	44.6	34.4	52.3	67.7		
30-May	31.0	32.7	Z	29.0	29.9	27.7	26.0	24.7	24.2	31.4	38.5	43.0	47.3	50.5	52.4	52.5	50.8	50.5	50.7	49.8	48.4	47.9	46.3	45.9	40.5	52.5		
31-May	45.6	47.7	49.9	Z	46.8	46.4	31.2	37.5	47.9	52.2	59.7	62.2	62.4	67.5	54.8	48.4	53.4	58.4	52.5	47.8	40.9	33.8	30.7	26.7	48.0	67.5		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan C - Calibration																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																												



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	29	4.07	4.07
21 - 50	622	87.24	91.30
51 - 82	62	8.70	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 713

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Stony Mountain - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	0	0	0	14	7	6	2	0	0	0	0	0	0	29
21 - 50	29	16	20	9	12	11	45	71	113	72	29	30	29	40	65	31	622
51 - 82	2	2	0	0	3	0	0	7	29	3	3	2	3	6	1	1	62
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	31	18	20	9	15	11	59	85	148	77	32	32	32	46	66	32	713

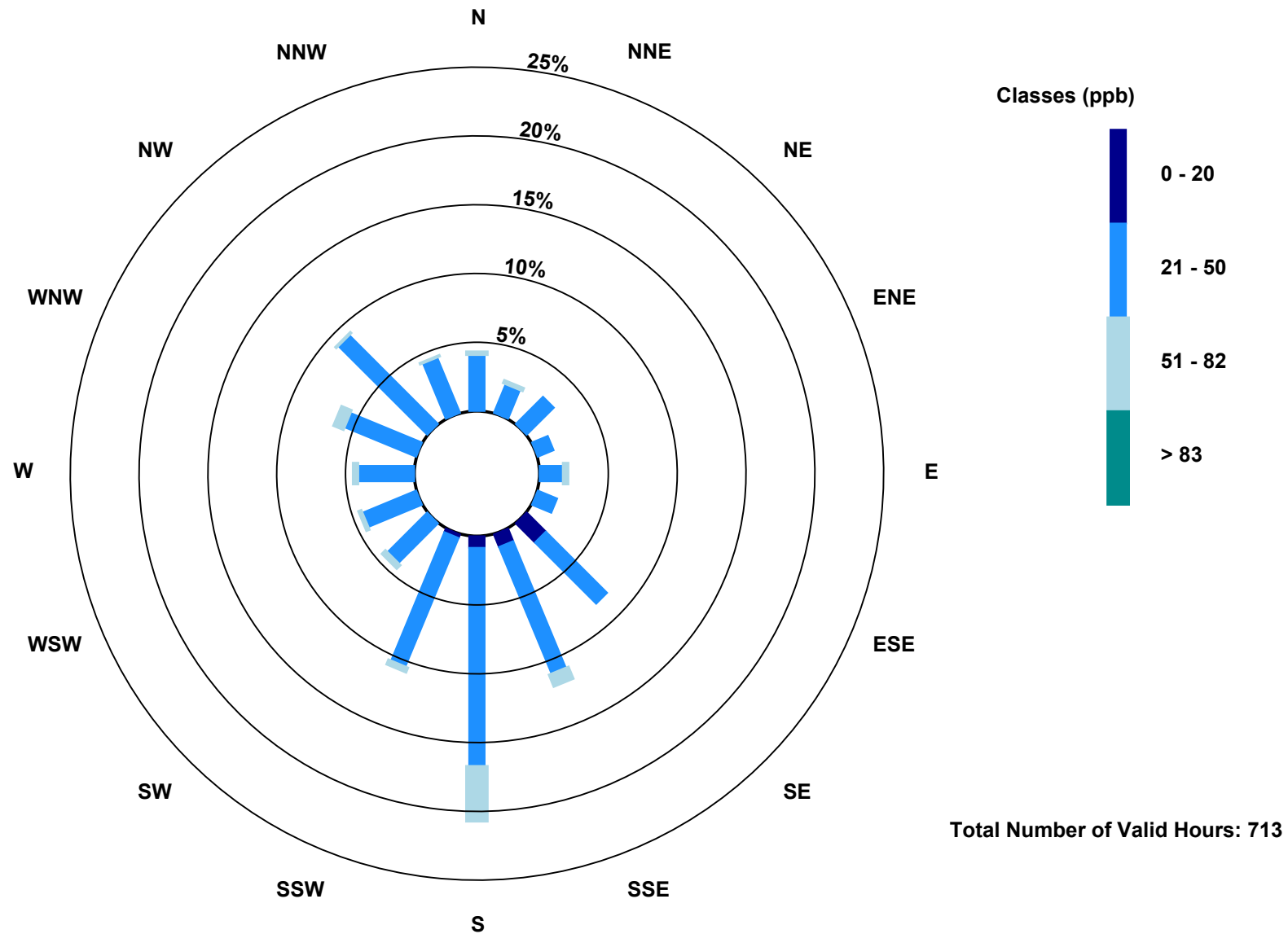
Total Number of Valid Hours: 713

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

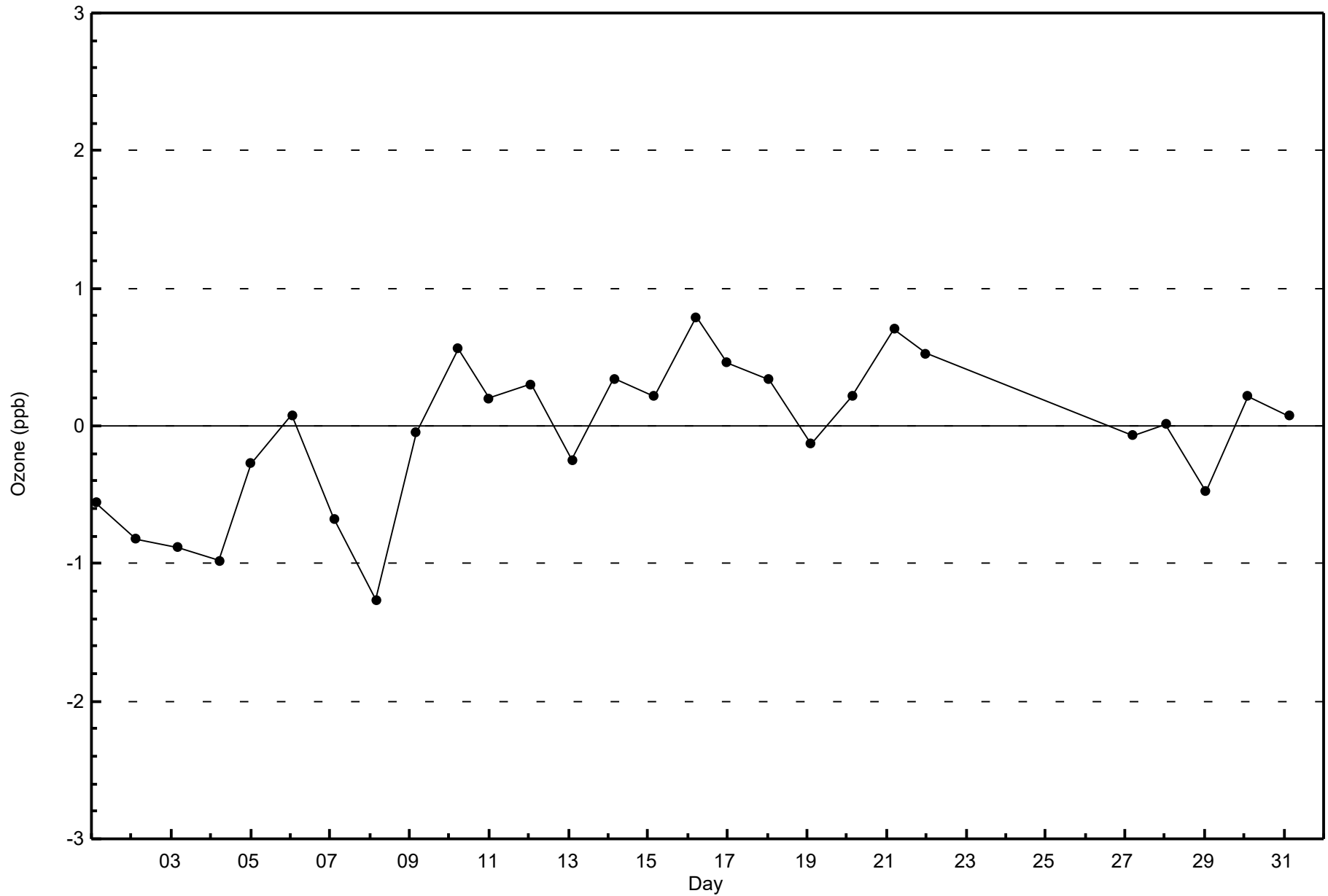
Ozone (O_3) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

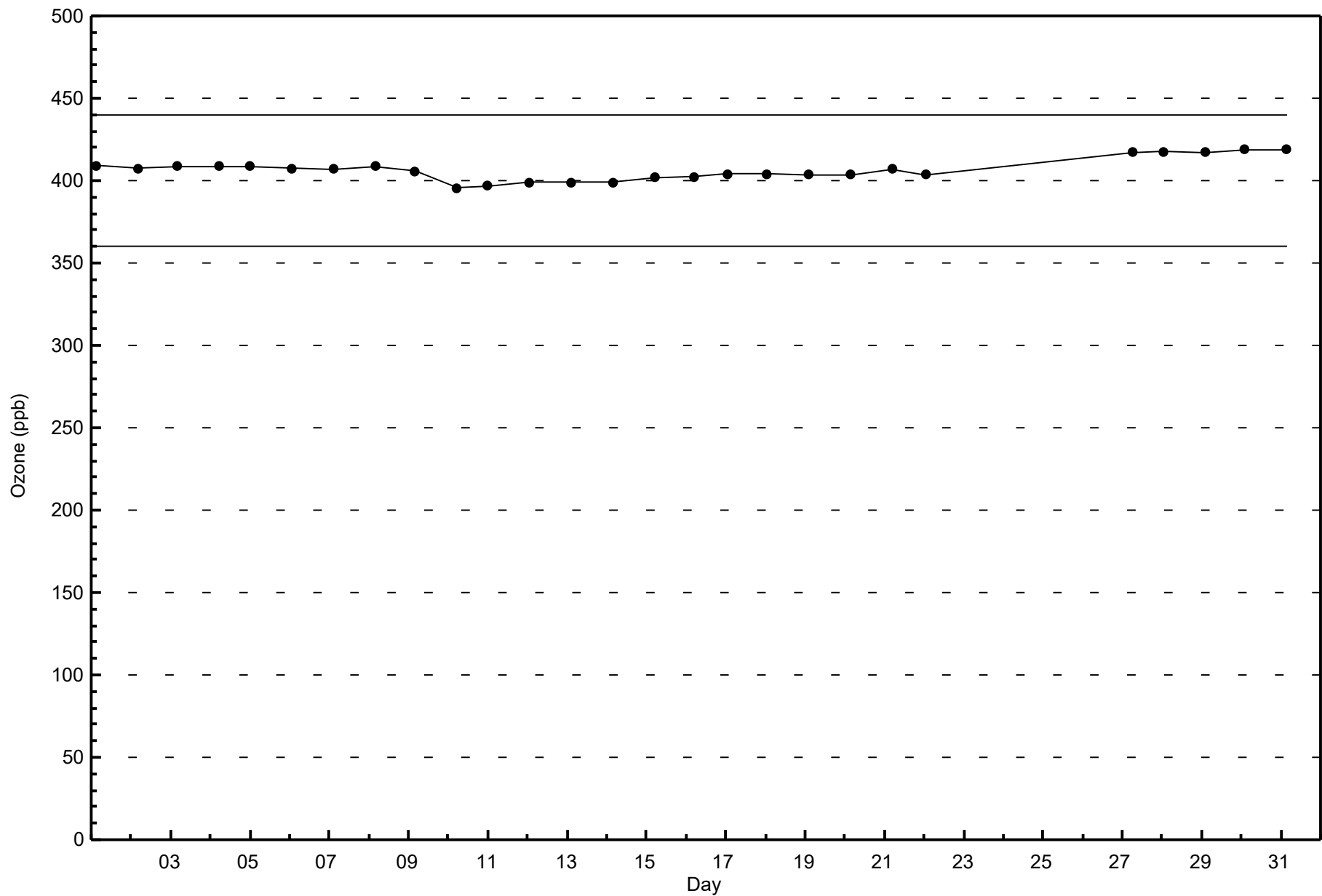
Ozone (O₃) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

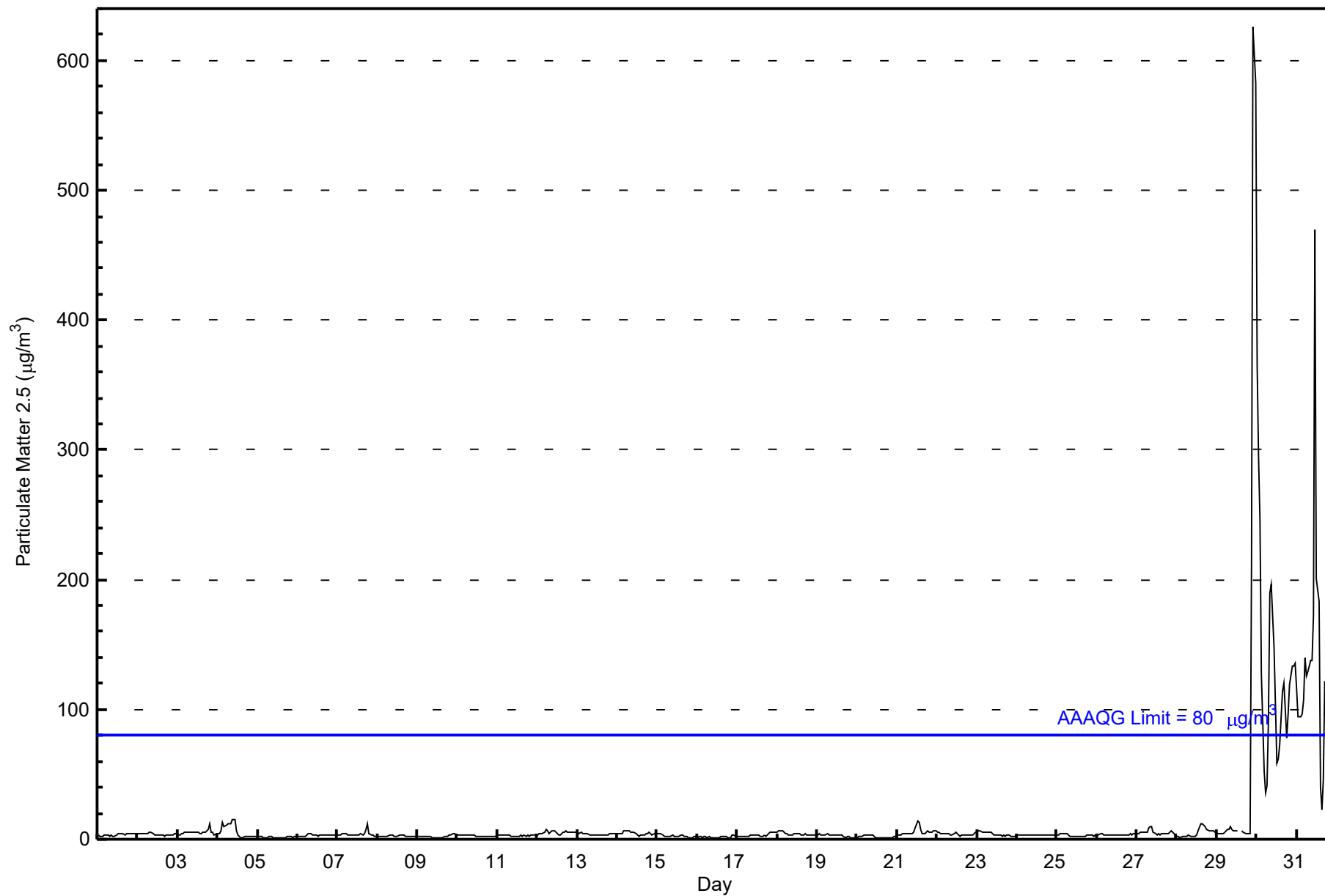
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 40 24-hr: 3 Maximum Value: 626.1 µg/m ³ on May 29 23:00 Minimum Value: 0.7 µg/m ³ on May 4 15:00 Maximum Diurnal Average: 31.2 µg/m ³ at hour 23 Monthly Average: 13.58 µg/m ³																					Maximum Daily Average: 129.7 µg/m ³ on May 30 Minimum Daily Average: 1.7 µg/m ³ on May 16 Minimum Diurnal Average: 6.8 µg/m ³ at hour 15 Percentiles: P ₁ = 1.0 P ₁₀ = 1.8 Q ₁ = 2.6 Median = 3.4 Q ₃ = 4.6 P ₉₀ = 7.8 P ₉₉ = 199.2					Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	3.2	2.6	2.6	2.6	2.7	3.0	3.0	2.7	2.8	2.4	2.5	3.4	4.0	3.9	3.9	3.9	3.8	4.5	4.1	4.0	4.0	4.1	4.2	4.2	3.4	4.5	
2-May	4.5	4.1	4.3	4.4	4.3	4.6	4.9	5.2	5.2	4.1	3.3	3.2	2.9	3.1	2.9	2.7	2.7	3.0	3.0	3.1	3.6	3.7	4.5	4.3	3.8	5.2	
3-May	3.6	3.6	3.9	4.4	5.1	5.8	5.8	5.8	5.9	5.6	5.3	5.2	4.9	4.7	4.6	4.9	5.4	5.6	7.8	12.3	4.9	5.1	3.7	3.8	5.3	12.3	
4-May	4.7	4.5	6.4	12.5	9.3	11.3	12.0	12.2	11.7	15.4	15.4	6.3	3.3	2.1	0.7	1.6	2.1	1.8	1.9	2.0	2.2	2.2	2.1	2.0	6.1	15.4	
5-May	2.0	1.9	1.7	1.5	1.4	1.6	1.5	1.8	1.8	1.6	1.5	1.5	1.6	1.6	1.4	1.3	1.3	1.4	2.0	2.1	2.0	1.5	2.6	2.7	1.7	2.7	
6-May	1.9	1.8	1.9	1.9	1.9	2.6	4.2	4.4	4.0	3.5	3.0	2.8	2.6	2.8	2.9	3.1	3.2	3.5	3.2	3.3	3.3	3.2	3.3	3.3	3.0	4.4	
7-May	3.1	3.2	3.5	4.0	4.0	3.8	3.6	3.5	3.4	3.3	3.0	3.2	3.3	3.5	3.9	3.8	4.4	7.4	12.1	4.6	2.7	3.0	2.5	2.4	4.0	12.1	
8-May	2.3	2.2	2.3	2.3	2.3	2.2	2.7	3.0	2.9	3.0	2.7	2.7	2.7	2.8	2.8	3.2	3.2	2.3	2.0	2.1	2.0	1.8	1.7	1.7	2.5	3.2	
9-May	1.7	1.8	1.9	2.0	2.3	2.6	2.6	2.5	1.9	1.6	1.4	1.3	1.1	1.1	1.1	1.3	1.6	1.9	2.6	3.7	3.6	3.8	3.9	3.6	2.2	3.9	
10-May	3.6	3.4	3.2	3.2	3.2	3.2	3.6	3.6	3.3	3.1	2.7	2.6	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.9	3.6	
11-May	2.8	3.0	3.1	3.0	2.8	2.8	2.8	2.8	2.7	2.5	2.4	2.4	2.3	2.6	2.8	2.2	2.9	2.7	2.7	2.6	2.9	3.0	3.1	3.3	2.8	3.3	
12-May	3.6	3.8	4.3	4.0	5.5	7.4	6.5	3.9	5.6	6.8	6.6	5.2	4.0	3.4	3.8	5.0	5.8	6.1	5.9	5.8	5.5	5.8	5.4	5.1	5.2	7.4	
13-May	5.1	4.8	4.9	4.6	4.6	4.4	3.9	3.4	3.4	3.1	3.4	3.5	3.4	3.3	3.2	3.4	3.3	3.1	3.1	4.0	4.1	4.2	4.5	4.3	3.9	5.1	
14-May	4.6	4.8	4.8	4.9	6.2	6.5	6.3	6.2	6.0	5.9	5.4	4.5	3.1	2.5	3.1	3.6	3.3	4.4	4.3	5.0	4.2	3.7	4.2	4.5	4.7	6.5	
15-May	4.5	4.4	3.8	3.4	2.2	1.8	1.8	2.0	2.2	2.9	2.6	2.5	2.3	2.6	2.7	3.1	2.5	2.2	1.9	1.4	1.5	1.5	1.8	1.6	2.5	4.5	
16-May	1.3	1.8	1.7	1.6	1.7	1.8	1.6	1.8	1.3	1.1	1.2	0.9	1.0	1.2	1.8	2.0	1.8	1.9	1.6	1.5	1.5	2.9	2.8	2.2	1.7	2.9	
17-May	1.9	1.8	1.9	1.8	1.7	1.9	2.1	2.6	3.0	3.1	3.1	3.0	2.8	2.8	2.6	2.7	2.8	2.6	3.5	4.2	5.2	5.8	5.1	5.0	3.0	5.8	
18-May	6.0	6.5	6.9	6.0	5.2	4.3	3.9	3.8	3.7	3.6	4.5	4.6	4.1	3.9	3.5	3.6	3.7	4.0	3.6	3.2	2.9	3.0	3.0	3.5	4.2	6.9	
19-May	3.7	3.8	3.5	3.6	3.5	3.6	4.1	3.7	3.7	3.8	3.5	3.3	3.1	2.9	2.7	2.8	2.0	1.5	1.9	1.7	1.2	1.3	1.2	1.4	2.8	4.1	
20-May	1.4	1.8	1.9	2.5	3.5	3.6	3.6	3.2	2.9	2.9	1.8	1.0	0.8	0.7	0.8	0.7	0.8	0.9	1.1	1.1	1.2	1.5	2.2	2.6	1.9	3.6	
21-May	3.0	3.5	3.8	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.9	9.1	14.4	12.6	7.8	4.7	4.1	4.6	6.5	5.5	5.4	5.3	6.2	6.6	5.8	14.4	
22-May	5.9	4.9	4.3	4.3	4.4	4.4	4.2	4.1	3.7	3.6	4.0	5.2	4.2	2.7	2.5	2.8	3.2	3.2	3.3	2.8	2.7	3.7	4.4	5.0	3.9	5.9	
23-May	5.7	6.6	6.5	5.8	5.5	5.3	5.2	5.4	5.1	4.2	3.4	2.9	2.8	2.7	2.7	2.7	2.9	2.7	2.8	2.7	2.5	2.4	2.5	2.7	3.9	6.6	
24-May	2.8	2.9	3.0	3.1	3.5	3.6	3.5	3.1	2.9	2.7	2.8	2.8	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.1	3.3	3.4	3.5	3.0	3.6	
25-May	3.8	3.7	3.8	4.0	4.0	4.0	3.9	2.9	2.5	2.4	2.0	2.3	2.5	2.6	2.7	2.5	2.5	2.7	2.8	2.9	2.9	3.0	2.7	3.0	3.0	4.0	
26-May	3.5	3.5	3.8	3.8	3.7	3.5	3.5	3.0	3.0	3.1	3.0	3.0	2.9	3.1	3.3	3.4	3.5	3.6	3.4	3.3	4.6	3.6	3.9	4.0	3.4	4.6	
27-May	4.2	4.8	5.2	5.1	5.0	5.1	5.4	8.8	9.8	10.0	5.8	4.0	3.3	3.8	3.7	3.9	4.2	4.4	3.9	4.4	5.2	6.7	4.4	3.0	5.2	10.0	
28-May	2.3	1.8	1.4	1.6	2.0	1.9	2.1	3.6	2.6	1.9	2.0	1.8	3.3	6.3	11.5	12.1	10.6	10.0	7.8	6.3	6.1	6.6	6.1	5.1	4.9	12.1	
29-May	4.7	4.2	3.9	4.0	4.5	5.4	7.6	8.0	9.3	7.6	6.4	6.4	6.4	C	C	6.0	5.1	4.8	4.7	4.4	4.4	211.5	626.1	582.4	69.4	626.1	
30-May	365.9	293.8	246.7	127.1	52.0	35.8	41.2	91.3	190.0	196.6	148.0	102.9	58.4	61.8	72.3	114.3	120.1	99.8	78.6	96.2	119.1	133.2	133.1	135.4	129.7	365.9	
31-May	115.9	94.5	94.0	96.3	107.8	140.2	126.2	129.5	137.4	137.4	172.8	470.2	200.9	182.9	39.7	22.8	45.9	121.2	111.8	97.6	91.3	105.4	108.5	75.2	126.1	470.2	
18.8 15.8 14.4 10.7 8.7 9.4 9.3 11.0 14.5 14.6 13.9 21.7 11.5 11.2 6.8 7.6 8.5 10.4 9.7 9.6 10.0 17.7 31.2 28.7																										Diurnal Average	
365.9 293.8 246.7 127.1 107.8 140.2 126.2 129.5 190.0 196.6 172.8 470.2 200.9 182.9 72.3 114.3 120.1 121.2 111.8 97.6 119.1 211.5 626.1 582.4																										Diurnal Maximum	
C - Calibration																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																											



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Stony Mountain - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	613	82.61	82.61
6 - 15	78	10.51	93.13
16 - 25	1	0.13	93.26
26 - 80	10	1.35	94.61
> 81.0	40	5.39	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Stony Mountain - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	27	14	16	7	11	11	59	75	138	60	23	31	27	38	51	25	613
6 - 15	4	3	4	1	0	0	2	9	12	16	5	1	2	5	8	6	78
16 - 25	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
26 - 80	1	0	0	0	0	0	0	0	1	0	1	0	3	1	3	0	10
> 81.0	2	2	0	1	4	0	0	0	2	5	3	3	4	5	7	2	40
Totals	34	19	20	9	15	11	61	84	153	81	33	35	36	49	69	33	742

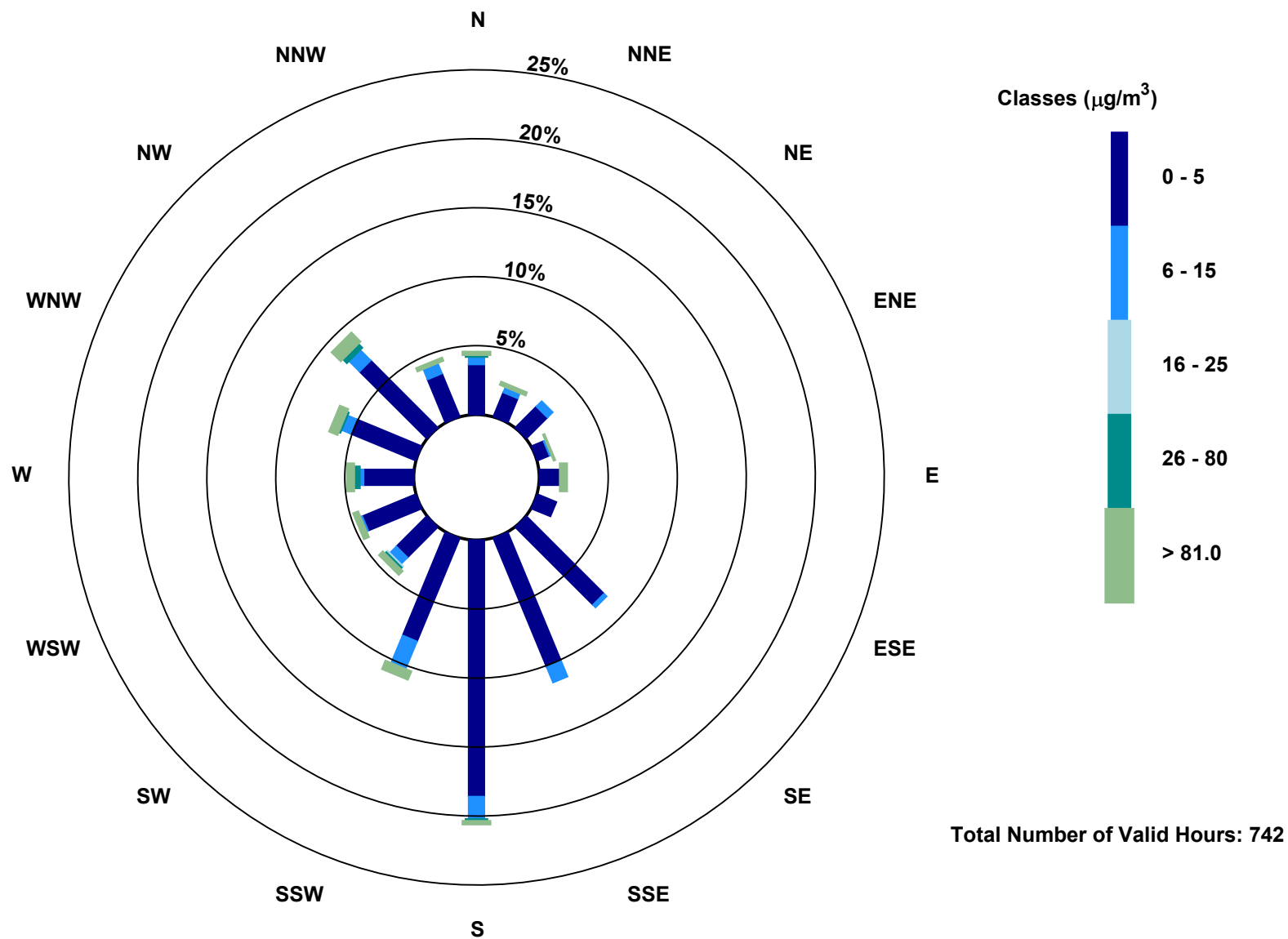
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

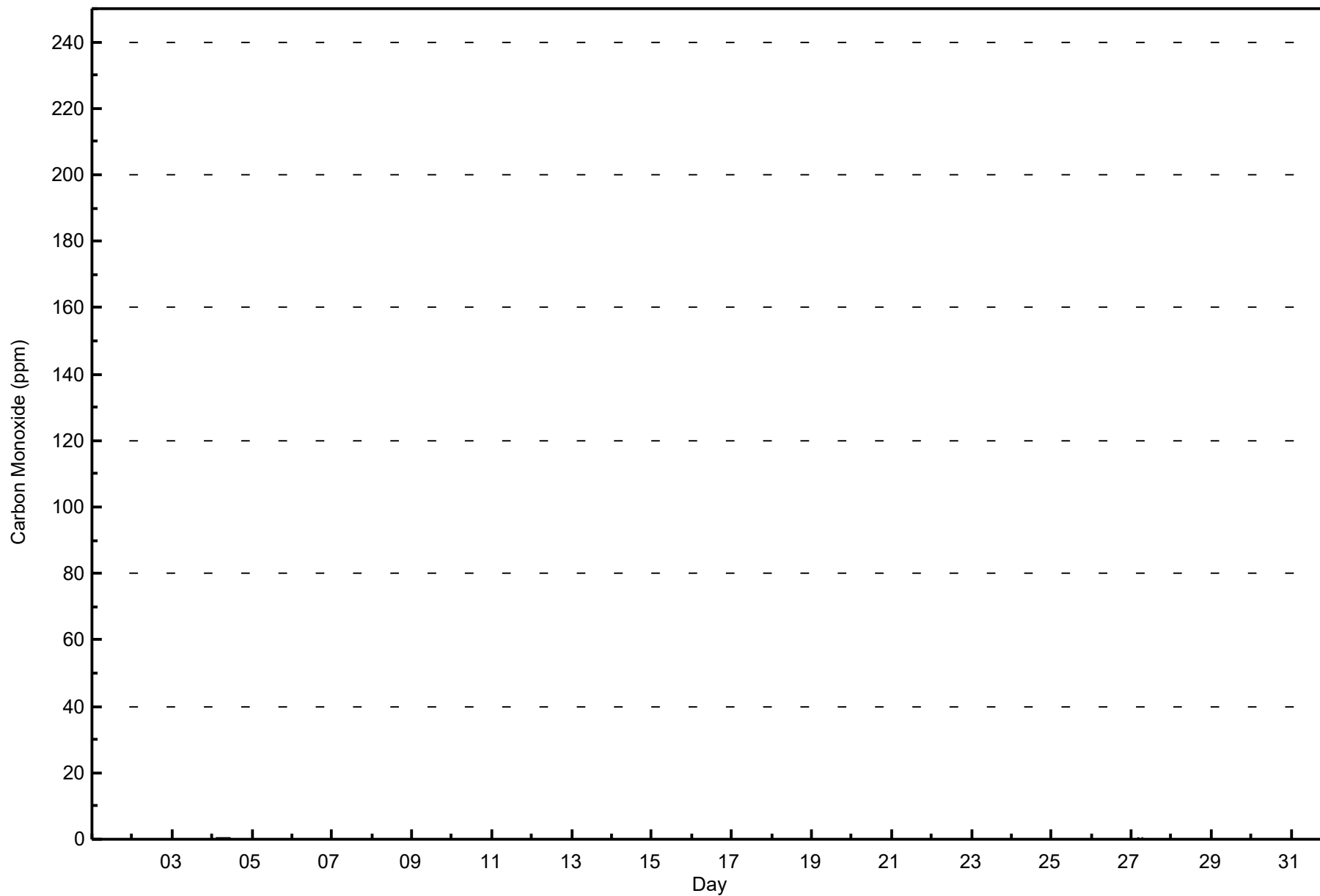
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 664									
Maximum Value: 0.2 ppm on May 4 10:00 Maximum Daily Average: 0.2 ppm on May 4																	Hours of Data: 636									
Minimum Value: 0.1 ppm on May 15 20:00 Minimum Daily Average: 0.1 ppm on May 15																	Hours of Missing Data: 28									
Maximum Diurnal Average: 0.2 ppm at hour 4 Minimum Diurnal Average: 0.1 ppm at hour 17																	Hours of Calibration: 28									
Monthly Average: 0.15 ppm Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.2																	Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
4-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
6-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
7-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
8-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
9-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
11-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
12-May	0.2	0.2	0.1	Z	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
14-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2
15-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
16-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
17-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
18-May	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
19-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
20-May	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
21-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
22-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
23-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
24-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
25-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
26-May	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
27-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
29-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
30-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
31-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.2																									Diurnal Average	
0.2 0.2																									Diurnal Maximum	
Z - zerospan C - Calibration NS - Not in Service																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																										



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	636	100.00	100.00
0.4 - 0.5	0	0.00	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 636

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	29	16	20	8	11	11	59	76	130	65	25	30	29	41	56	30	636
0.4 - 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	16	20	8	11	11	59	76	130	65	25	30	29	41	56	30	636

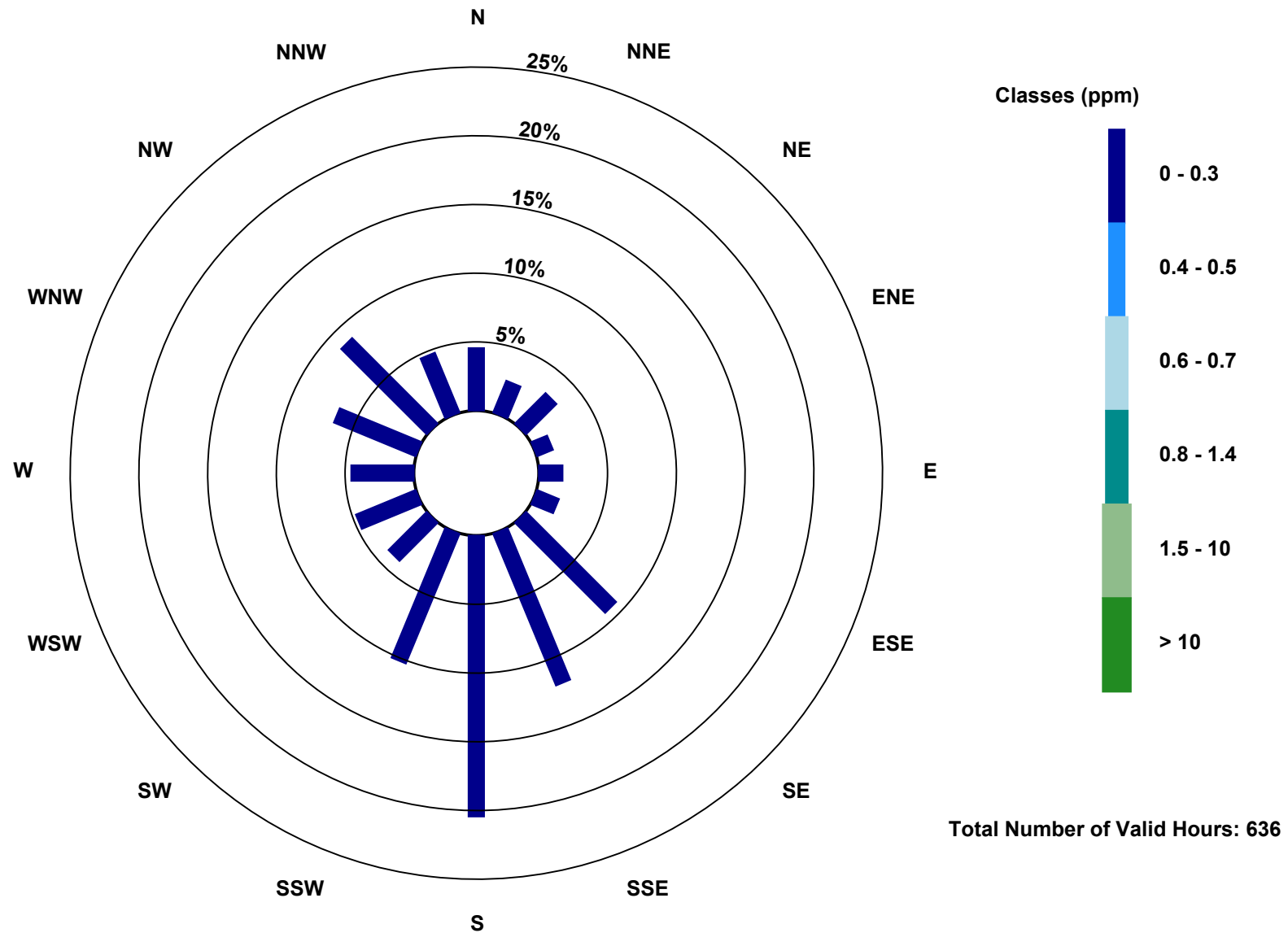
Total Number of Valid Hours: 636

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Monoxide (CO) - ppm
Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

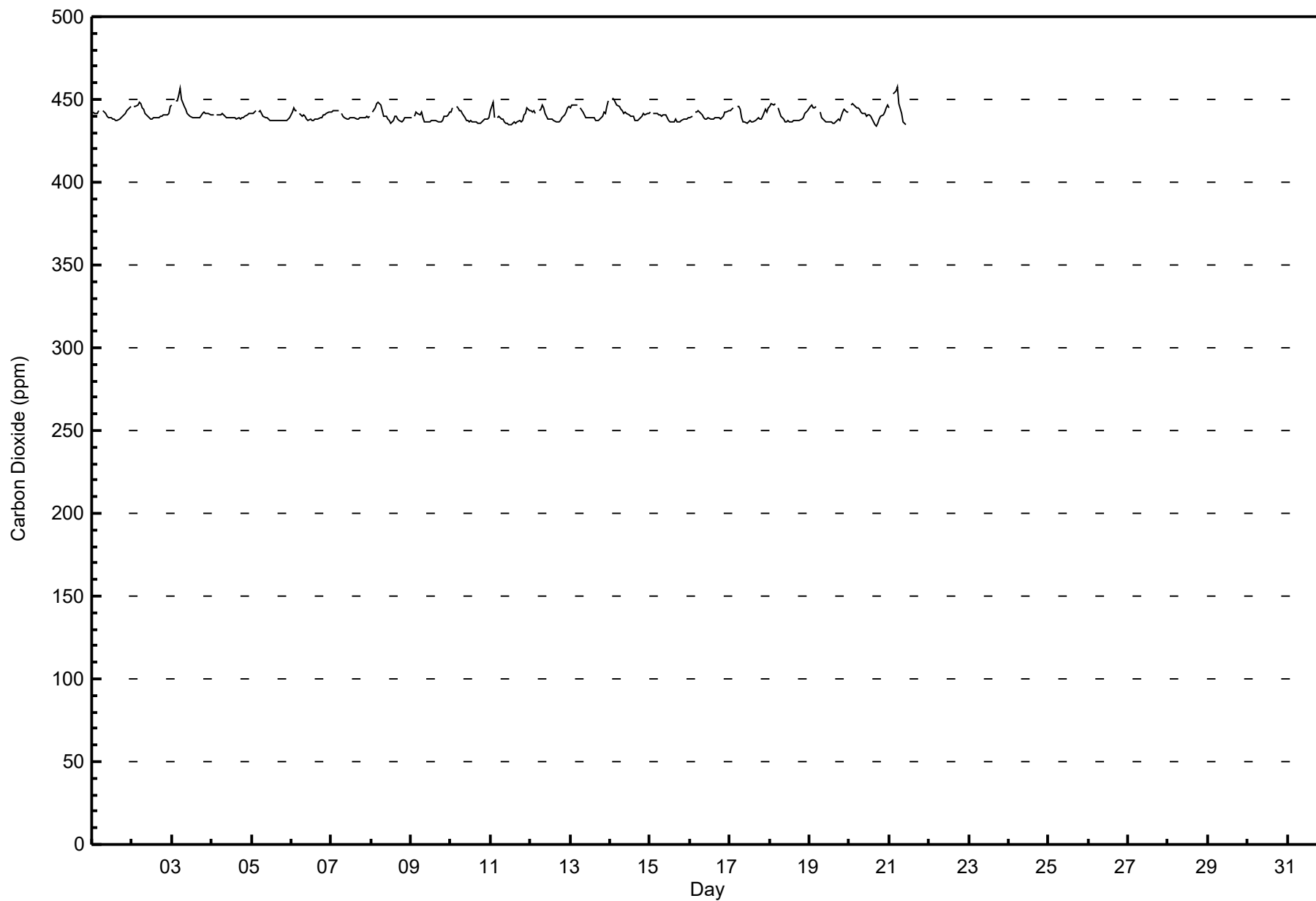
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 458.0 ppm on May 21 06:00 Maximum Daily Average: 443.5 ppm on May 3																								Hours in Service: 494 Hours of Data: 470 Hours of Missing Data: 24 Hours of Calibration: 24 Percent Operational Time: 100.0			
Minimum Value: 434.3 ppm on May 20 17:00 Minimum Daily Average: 438.5 ppm on May 11 Maximum Diurnal Average: 445.3 ppm at hour 4 Minimum Diurnal Average: 437.5 ppm at hour 17 Monthly Average: 440.52 ppm Percentiles: P ₁ = 435.2 P ₁₀ = 436.7 Q ₁ = 438.0 Median = 439.6 Q ₃ = 442.4 P ₉₀ = 445.7 P ₉₉ = 452.6																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	442.1	441.4	441.9	441.7	443.3	Z	443.6	442.2	441.3	440.1	438.9	438.6	438.2	437.7	437.6	437.7	438.1	438.8	439.7	440.5	441.2	443.3	444.7	445.6	440.8	445.6	
2-May	Z	445.7	445.9	446.9	448.3	447.0	444.5	443.9	441.8	440.0	438.8	438.5	438.4	438.7	439.0	439.0	439.2	439.4	439.9	440.5	440.6	440.9	441.9	445.3	441.9	448.3	
3-May	446.9	Z	448.8	449.3	452.3	456.5	450.4	446.1	444.0	441.9	440.8	439.6	438.9	438.7	438.8	439.0	438.8	439.3	441.3	442.6	441.6	441.7	441.2	441.0	443.5	456.5	
4-May	440.8	440.3	Z	440.5	440.7	441.1	441.7	441.0	439.6	439.4	439.4	439.2	438.8	438.9	438.6	438.4	438.9	438.5	438.7	438.9	439.8	440.8	441.5	441.5	439.9	441.7	
5-May	441.6	441.8	442.8	Z	442.7	442.9	441.7	439.8	439.2	438.6	438.1	437.6	437.4	437.4	437.4	437.4	437.4	437.5	437.5	437.4	437.4	437.7	438.5	439.1	439.1	442.9	
6-May	442.2	444.9	443.2	442.9	Z	441.4	440.1	440.9	439.9	438.1	437.6	438.1	437.6	437.6	438.0	438.5	438.5	438.8	439.3	440.5	440.3	441.5	442.3	442.6	440.2	444.9	
7-May	442.5	442.9	443.3	443.4	443.1	Z	441.3	439.8	438.9	438.4	438.3	438.9	438.8	438.9	438.7	438.4	438.5	438.7	438.7	439.1	439.1	440.0	438.9	440.3	439.9	443.4	
8-May	Z	442.6	444.9	447.7	447.9	447.5	446.5	439.8	439.8	440.0	437.9	437.2	435.6	436.9	439.8	439.8	438.0	437.0	436.8	437.5	438.7	439.1	439.2	438.9	440.4	447.9	
9-May	439.0	Z	439.5	442.4	441.8	441.1	442.3	439.1	436.7	436.4	436.4	436.7	437.1	437.3	437.3	437.3	436.7	436.5	436.6	437.7	439.8	440.1	440.9	442.6	438.8	442.6	
10-May	442.2	444.5	Z	446.0	445.0	443.6	443.0	441.2	439.3	437.6	437.1	436.9	436.9	436.8	436.6	436.1	435.7	435.7	435.7	437.1	438.0	438.2	437.9	439.0	439.1	446.0	
11-May	443.2	448.2	438.8	Z	439.1	439.5	438.5	438.1	436.1	435.2	435.5	435.0	434.7	435.4	436.7	435.3	436.6	437.1	436.8	437.2	440.4	441.3	444.5	442.9	438.5	448.2	
12-May	443.4	442.2	442.9	441.7	Z	443.6	444.2	446.3	445.2	441.3	438.5	438.0	438.0	437.8	436.9	436.6	436.8	436.7	437.6	438.7	440.5	442.8	444.9	446.1	440.9	446.3	
13-May	445.0	446.2	446.9	446.9	446.6	Z	444.8	442.7	440.4	439.3	439.2	439.0	438.7	438.6	438.6	437.6	437.6	437.7	438.8	439.5	442.1	441.1	445.7	449.5	441.8	449.5	
14-May	Z	450.6	450.1	448.4	446.6	446.0	443.9	443.2	441.8	442.3	441.3	440.6	439.4	439.5	439.8	437.7	437.3	438.5	439.2	440.1	441.5	440.8	441.2	441.7	442.2	450.6	
15-May	442.1	Z	441.8	441.5	441.2	441.0	440.9	440.2	440.4	440.6	438.6	437.4	436.6	436.1	436.5	437.7	436.5	436.2	436.6	437.4	437.9	438.1	438.5	438.8	438.8	442.1	
16-May	438.9	440.0	Z	442.3	442.8	443.0	442.1	440.9	439.1	438.5	438.2	438.8	438.1	438.2	438.2	438.7	438.9	438.9	438.2	439.0	440.2	442.1	442.3	443.0	440.0	443.0	
17-May	443.0	443.8	444.6	Z	446.0	446.1	444.1	438.7	436.6	436.3	436.0	436.5	437.2	436.4	436.5	437.0	438.0	438.8	438.5	438.5	440.0	444.4	442.6	444.6	440.2	446.1	
18-May	446.0	447.6	446.8	447.5	Z	445.3	442.6	440.2	438.1	436.4	436.8	437.0	436.4	436.3	437.0	437.5	437.2	437.7	437.2	437.9	438.9	441.5	442.4	442.9	440.3	447.6	
19-May	445.6	446.2	445.2	445.2	445.7	Z	442.0	439.1	437.8	437.2	436.7	436.5	436.2	436.2	436.0	435.7	436.8	438.2	437.2	439.6	442.3	443.7	442.7	442.7	440.2	446.2	
20-May	Z	446.3	447.6	446.7	445.3	444.6	444.0	442.4	441.6	441.2	440.0	440.5	440.4	439.9	436.8	434.6	434.3	435.3	438.1	439.5	440.7	442.1	444.7	446.3	441.4	447.6	
21-May	445.1	Z	453.1	454.6	455.1	458.0	447.9	441.2	436.3	435.5	435.1	C	C	C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	458.0	
22-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
23-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
24-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
25-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
26-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
27-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
28-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
29-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
30-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
31-May	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
442.9 444.4 444.9 445.3 445.2 445.2 443.3 441.3 439.7 438.8 438.1 438.0 437.7 437.7 437.7 437.5 437.5 437.8 438.1 439.0 440.1 441.1 441.8 442.7																										Diurnal Average	
446.9 450.6 453.1 454.6 455.1 458.0 450.4 446.3 445.2 442.3 441.3 440.6 440.4 439.9 439.8 439.8 439.2 439.4 441.3 442.6 442.3 444.4 445.7 449.5																										Diurnal Maximum	
Z - zerospan C - Calibration NS - Not in Service																											



Wood Buffalo Environmental Association
Hourly Averages

Carbon Dioxide (CO₂) - ppm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	275	58.51	58.51
440 - 460	195	41.49	100.00
460 - 480	0	0.00	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 470

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Stony Mountain - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	11	10	14	7	9	7	30	23	22	22	10	19	11	27	36	17	275
440 - 460	18	7	5	0	2	3	24	21	34	23	9	7	6	7	16	13	195
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	17	19	7	11	10	54	44	56	45	19	26	17	34	52	30	470

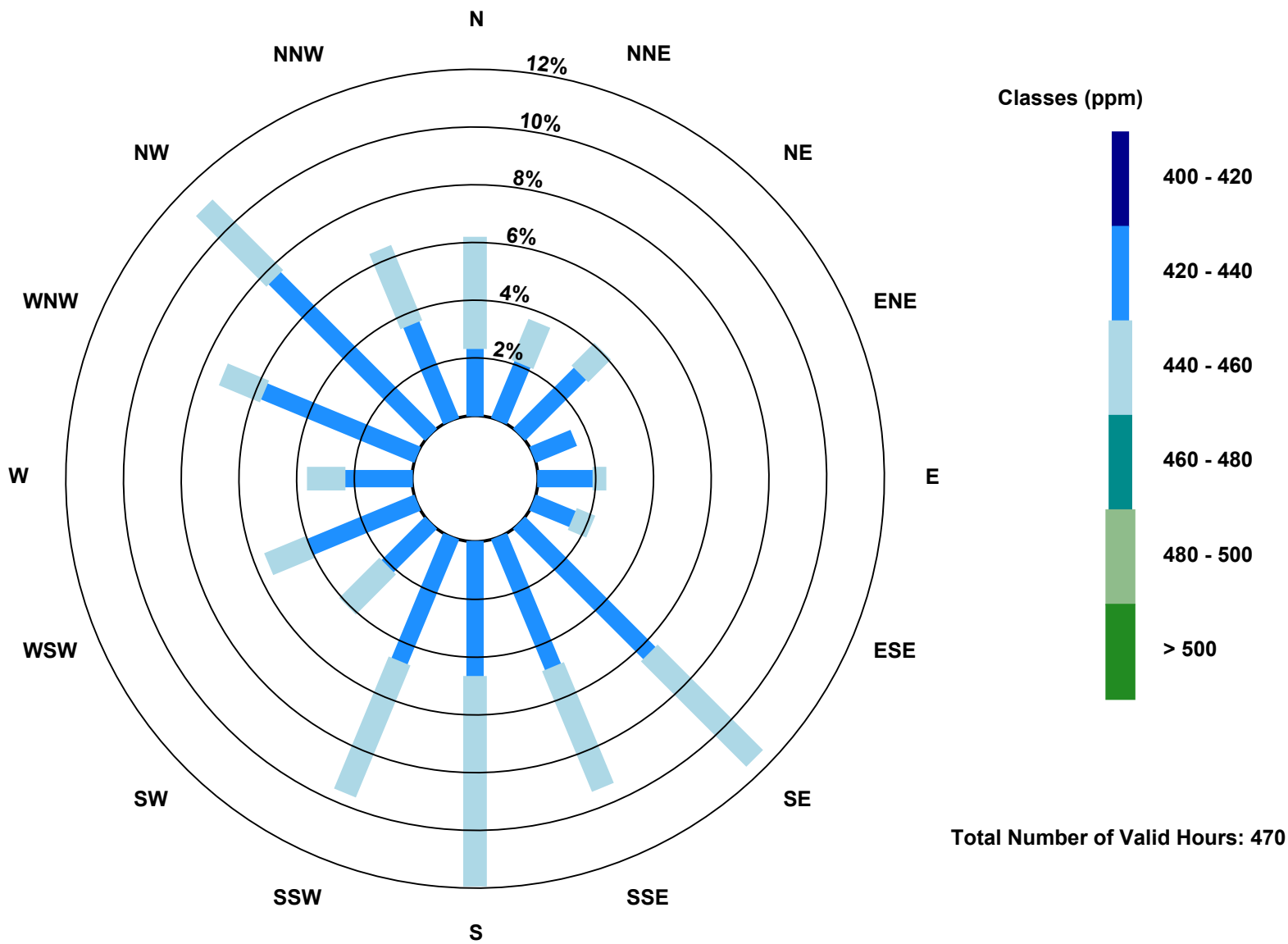
Total Number of Valid Hours: 470

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Carbon Dioxide (CO₂) - ppm
Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

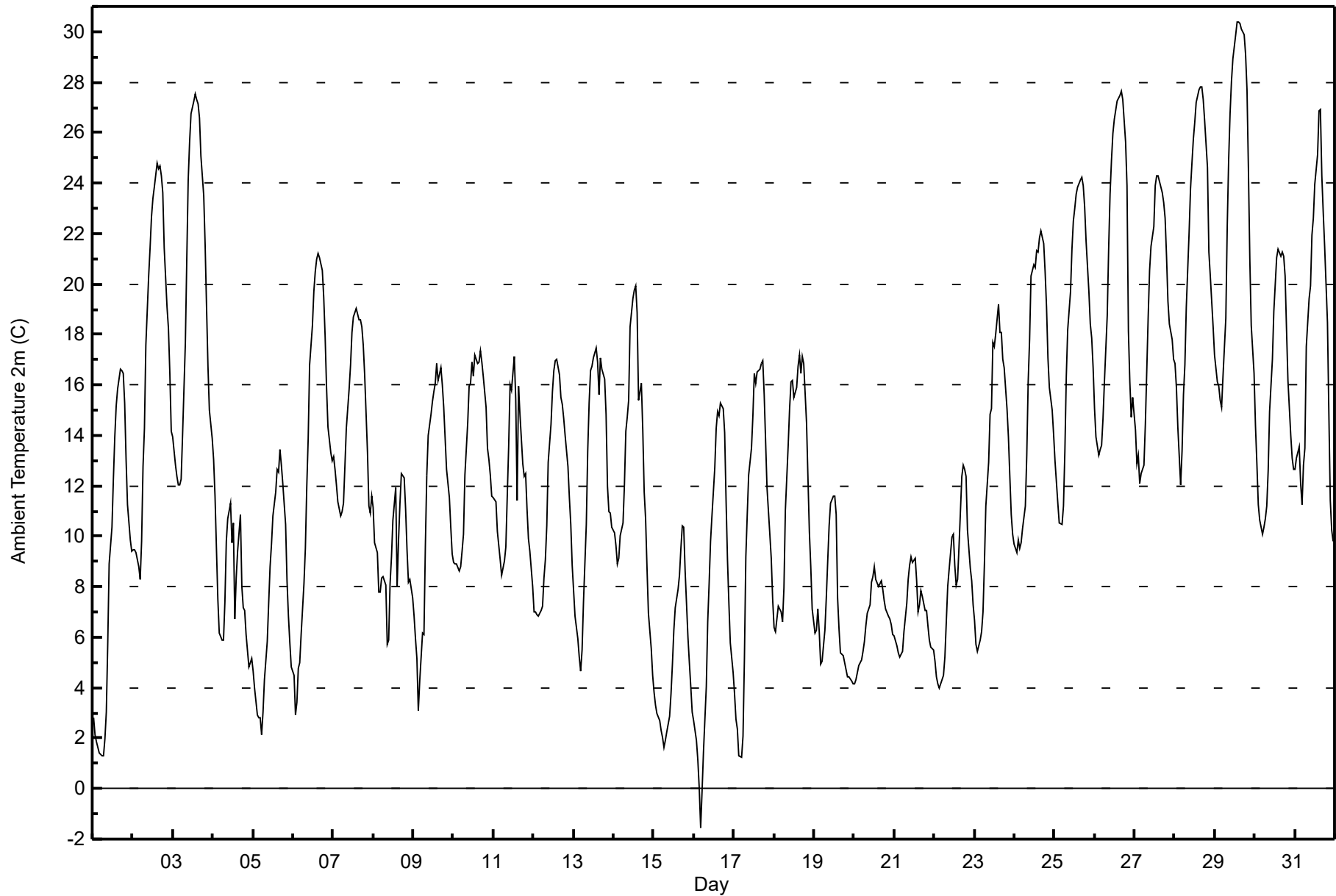
Stony Mountain - May 2025

Maximum Value: 30.4 C on May 29 14:00																				Maximum Daily Average: 23.5 C on May 29										Hours in Service: 744			
Minimum Value: -1.5 C on May 16 05:00																				Minimum Daily Average: 5.1 C on May 15										Hours of Data: 744			
Maximum Diurnal Average: 17.8 C at hour 17																				Minimum Diurnal Average: 7.4 C at hour 5										Hours of Missing Data: 0			
Monthly Average: 12.95 C																				Percentiles: P ₁ = 1.4 P ₁₀ = 5.0 Q ₁ = 8.0 Median = 12.4 Q ₃ = 16.9 P ₉₀ = 22.4 P ₉₉ = 28.5										Hours of Calibration: 0			
																														Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-May	2.8	2.1	1.9	1.6	1.4	1.3	1.3	2.0	3.0	5.7	8.9	10.3	12.2	13.9	15.2	15.9	16.6	16.6	16.5	15.3	13.0	11.2	9.9	9.4	8.7	16.6							
2-May	9.5	9.5	9.4	8.8	8.3	9.8	12.8	14.3	17.6	20.3	21.4	22.7	23.4	23.8	24.8	24.6	24.7	24.3	23.6	21.4	19.1	18.3	16.4	14.2	17.6	24.8							
3-May	14.0	12.8	12.4	12.0	12.1	12.3	14.0	17.7	21.0	24.1	25.6	26.8	27.2	27.5	27.3	27.1	26.6	25.0	23.5	21.5	19.1	16.7	15.0	13.9	19.8	27.5							
4-May	13.0	11.6	9.5	7.5	6.2	5.9	5.9	7.4	9.8	10.7	11.3	9.7	10.5	6.7	8.3	9.4	10.9	8.0	7.1	7.1	6.1	4.8	5.0	5.1	8.2	13.0							
5-May	4.7	4.0	2.9	2.8	2.8	2.2	3.0	4.3	5.9	7.3	8.8	9.7	10.8	11.8	12.7	12.5	13.5	12.8	12.1	10.5	8.3	6.8	5.8	4.8	7.5	13.5							
6-May	4.5	2.9	3.4	4.8	5.0	6.1	8.1	9.5	12.0	13.9	16.8	18.3	19.7	20.5	21.0	21.2	21.0	20.5	19.5	17.9	15.9	14.3	13.3	13.0	13.5	21.2							
7-May	13.2	12.7	12.1	11.4	10.8	11.0	11.3	12.8	14.3	15.8	16.8	18.1	18.7	18.8	19.0	18.6	18.6	18.3	17.6	16.4	13.3	11.2	10.9	11.6	14.7	19.0							
8-May	11.2	9.8	9.3	7.8	7.8	8.4	8.4	8.1	5.7	5.9	8.1	9.2	10.6	12.0	8.0	9.8	11.3	12.5	12.3	11.1	9.5	8.2	8.3	7.6	9.2	12.5							
9-May	6.9	6.0	5.1	3.1	4.3	6.2	6.1	9.6	12.4	14.0	14.9	15.3	15.7	16.1	16.8	16.2	16.7	16.0	15.1	13.9	12.7	11.5	10.4	9.3	11.4	16.8							
10-May	8.9	8.9	8.9	8.6	8.8	9.4	10.1	12.4	14.5	16.0	16.1	16.9	16.4	17.2	16.8	16.9	17.4	16.9	16.3	15.1	13.5	13.1	12.4	11.6	13.5	17.4							
11-May	11.5	11.4	10.2	9.6	9.1	8.4	9.0	9.6	11.6	13.5	16.0	15.8	17.1	15.4	11.4	16.0	14.8	12.9	12.4	12.5	11.1	9.9	9.4	8.0	11.9	17.1							
12-May	7.0	7.0	6.9	6.9	7.0	7.2	8.4	9.1	10.4	12.9	14.5	15.7	16.6	16.9	17.0	16.4	15.5	15.2	14.7	14.0	12.8	11.6	10.4	8.8	11.8	17.0							
13-May	7.8	6.9	5.9	5.2	4.7	5.5	7.4	10.5	13.4	15.3	16.6	16.7	17.1	17.4	16.9	15.6	17.1	16.6	16.2	14.8	12.0	11.0	10.9	10.3	12.2	17.4							
14-May	10.1	9.6	8.9	9.1	10.0	10.5	12.0	14.2	14.7	15.4	18.3	19.4	19.8	19.9	18.9	15.4	16.0	14.2	11.8	10.7	8.7	7.0	5.5	4.5	12.7	19.9							
15-May	3.8	3.3	3.0	2.7	2.3	2.0	1.7	1.9	2.3	2.9	3.7	4.9	6.3	7.2	7.9	8.5	9.5	10.4	10.4	8.6	6.0	5.0	4.0	3.0	5.1	10.4							
16-May	2.7	1.9	1.1	0.0	-1.5	-0.1	1.5	4.1	6.6	8.1	9.8	10.8	12.7	14.3	15.0	14.8	15.3	15.1	14.1	11.4	9.1	7.3	5.8	4.6	7.7	15.3							
17-May	3.8	2.8	2.4	1.3	1.3	2.1	5.1	9.2	10.9	12.4	13.5	14.8	16.4	16.1	16.5	16.6	16.9	16.9	15.6	13.8	11.9	10.1	9.1	7.5	10.3	16.9							
18-May	6.4	6.2	7.2	7.1	7.0	6.6	8.0	11.0	13.6	15.0	16.1	16.2	15.5	15.9	16.7	17.2	16.4	17.1	16.9	14.5	12.3	10.2	8.8	7.1	12.1	17.2							
19-May	6.2	6.3	7.1	6.2	4.9	5.0	6.3	7.6	9.0	10.4	11.3	11.6	11.6	10.9	7.5	6.4	5.4	5.3	5.0	4.7	4.4	4.4	4.3	4.1	6.9	11.6							
20-May	4.1	4.3	4.6	4.9	5.1	5.5	5.9	6.5	6.9	7.3	8.2	8.4	8.8	8.3	8.0	8.1	8.3	7.9	7.5	7.1	6.9	6.7	6.5	6.1	6.7	8.8							
21-May	6.1	5.7	5.4	5.2	5.3	5.4	6.2	7.4	8.3	8.8	9.2	9.0	9.1	8.2	7.0	7.3	7.8	7.6	7.1	7.1	6.4	5.9	5.6	5.5	6.9	9.2							
22-May	5.1	4.5	4.1	4.0	4.1	4.5	5.2	6.6	8.0	8.7	9.9	10.1	8.8	8.1	8.3	9.6	12.4	12.8	12.7	12.4	10.2	8.7	8.2	7.3	8.1	12.8							
23-May	6.7	5.7	5.4	5.9	6.2	7.0	8.9	11.2	12.9	14.8	15.1	17.7	17.5	18.0	19.2	18.1	18.1	17.0	16.7	15.0	13.9	12.4	10.9	10.1	12.7	19.2							
24-May	9.7	9.4	9.8	9.5	9.7	10.3	11.2	13.2	16.1	17.8	20.3	20.8	20.7	21.3	21.2	21.8	22.1	21.6	20.5	19.1	17.1	15.9	15.0	14.0	16.2	22.1							
25-May	13.0	12.2	11.3	10.5	10.5	11.2	13.4	16.3	18.2	19.7	21.4	22.5	23.0	23.5	23.8	24.1	24.2	23.9	23.1	21.7	19.7	18.4	17.9	16.7	18.3	24.2							
26-May	15.0	13.9	13.2	13.4	13.6	14.7	16.1	18.7	21.4	23.5	24.9	26.0	26.6	27.3	27.4	27.5	27.7	27.3	25.6	23.9	18.2	16.1	14.7	15.5	20.5	27.7							
27-May	14.2	12.9	13.2	12.1	12.5	12.8	14.4	16.5	18.7	20.5	21.5	22.3	23.9	24.3	24.3	24.0	23.6	23.2	22.6	21.1	19.3	18.4	17.8	17.0	18.8	24.3							
28-May	16.9	15.9	14.3	12.0	13.4	15.6	16.8	19.1	22.0	23.8	24.8	25.7	26.4	27.2	27.7	27.8	27.8	27.3	26.5	24.6	21.3	20.3	19.3	18.3	21.4	27.8							
29-May	17.2	16.1	15.9	15.4	15.1	16.4	18.6	22.3	24.9	26.7	28.1	28.9	29.9	30.4	30.4	30.3	30.1	29.9	29.1	27.7	24.6	21.0	18.4	16.5	23.5	30.4							
30-May	14.4	12.9	11.2	10.6	10.1	10.4	10.7	11.2	12.6	14.9	17.0	18.9	20.0	21.0	21.4	21.1	21.3	21.1	20.3	18.2	16.2	14.0	13.1	12.7	15.6	21.4							
31-May	12.7	13.1	13.5	12.1	11.2	12.8	13.5	17.5	19.4	19.9	22.0	22.6	23.9	25.1	26.9	26.9	24.3	22.9	21.5	18.4	14.8	11.4	10.2	9.8	17.8	26.9							
9.1 8.5 8.1 7.5 7.4 7.9 9.1 11.0 12.8 14.4 15.8 16.6 17.3 17.6 17.5 17.6 17.8 17.3 16.6 15.2 13.1 11.7 10.8 9.9																									Diurnal Average								
17.2 16.1 15.9 15.4 15.1 16.4 18.6 22.3 24.9 26.7 28.1 28.9 29.9 30.4 30.4 30.3 30.1 29.9 29.1 27.7 24.6 21.0 19.3 18.3																									Diurnal Maximum								



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Stony Mountain - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	2	0.27	0.27
0 - 10	276	37.10	37.37
10 - 20	352	47.31	84.68
> 20	114	15.32	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

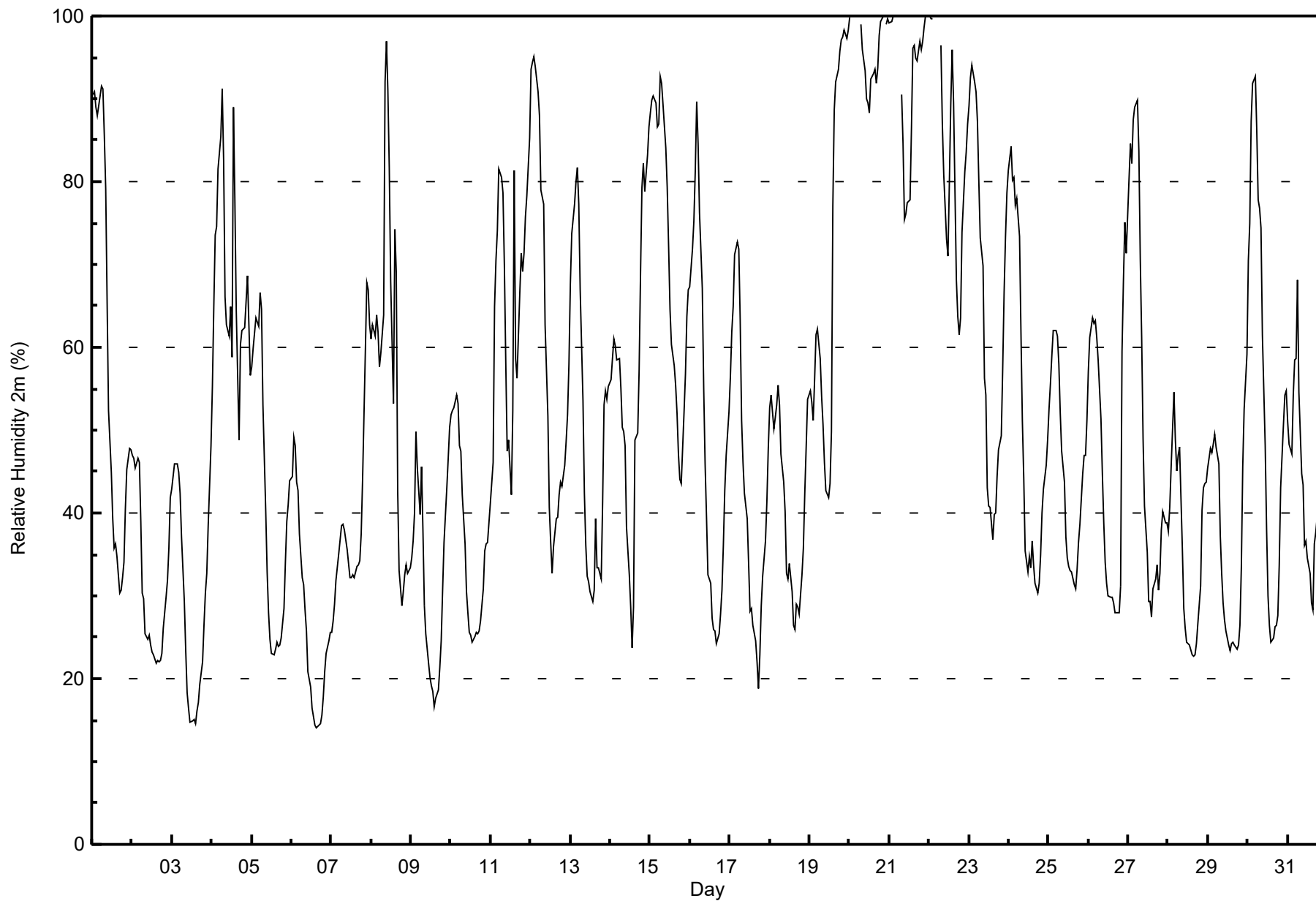
Stony Mountain - May 2025

Maximum Value: 100.0 % on May 20 21:00																					Maximum Daily Average: 91.8 % on May 21					Hours in Service: 744	
Minimum Value: 14.0 % on May 6 16:00																					Minimum Daily Average: 26.7 % on May 6					Hours of Data: 729	
Maximum Diurnal Average: 66.5 % at hour 5																					Minimum Diurnal Average: 38.3 % at hour 13					Hours of Missing Data: 15	
Monthly Average: 51.88 %																					Percentiles: P ₁ = 15.1 P ₁₀ = 25.1 Q ₁ = 32.7 Median = 47.1 Q ₃ = 68.2 P ₉₀ = 89.3 P ₉₉ = 99.6					Hours of Calibration: 0	
																					Percent Operational Time: 98.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	90.5	90.9	89.0	88.0	89.1	91.5	91.1	85.7	79.1	65.4	52.3	45.0	39.3	35.8	36.3	34.7	30.4	30.7	32.3	34.0	40.5	45.3	47.8	47.6	58.9	91.5	
2-May	46.9	46.6	45.5	46.6	46.2	39.0	30.3	29.7	25.4	24.7	25.3	24.1	23.3	22.9	21.8	22.2	22.1	22.2	23.1	26.1	29.9	31.9	35.7	41.8	31.4	46.9	
3-May	42.9	45.9	46.0	45.9	44.9	42.3	37.2	29.3	23.4	18.3	16.4	14.8	14.9	15.0	14.6	16.1	17.1	19.4	22.1	26.4	30.4	32.7	38.5	48.2	29.3	48.2	
4-May	55.2	64.9	73.5	74.5	81.5	85.4	91.2	82.6	66.1	62.6	61.3	64.9	58.8	89.0	77.8	64.4	48.8	60.3	62.0	62.2	62.4	68.6	62.7	56.6	68.2	91.2	
5-May	57.6	59.9	63.6	63.1	62.6	66.6	64.7	53.0	40.1	32.8	27.9	24.7	23.0	22.9	23.6	24.4	23.9	24.0	25.0	28.4	34.0	39.0	41.1	43.9	40.4	66.6	
6-May	44.4	49.2	48.1	43.7	42.7	37.5	32.2	31.3	28.3	25.7	20.8	19.0	16.5	15.4	14.4	14.0	14.2	14.6	15.6	17.8	20.9	23.0	24.6	25.6	26.7	49.2	
7-May	25.7	26.9	29.0	31.8	35.1	36.8	38.5	38.7	37.9	35.6	33.9	32.3	32.3	32.5	32.2	33.6	33.7	34.3	37.5	44.1	59.9	67.8	67.0	62.7	39.2	67.8	
8-May	61.0	62.7	61.4	63.9	61.9	57.7	59.3	63.8	92.1	97.0	91.1	81.7	68.0	53.2	74.2	69.0	42.7	33.1	28.8	30.5	32.5	33.7	32.7	33.4	57.7	97.0	
9-May	34.5	36.6	40.0	49.8	45.4	39.8	45.6	37.8	28.9	25.5	21.9	20.1	19.2	18.5	16.7	17.6	18.7	21.3	24.6	30.7	36.5	43.0	46.6	50.3	32.1	50.3	
10-May	51.9	52.3	52.7	54.2	53.2	48.1	47.4	42.1	36.2	30.5	28.0	25.6	25.3	24.3	25.1	25.6	25.4	25.8	27.0	30.9	35.4	36.2	36.4	38.7	36.6	54.2	
11-May	41.2	46.1	65.0	70.5	74.1	81.5	80.5	78.7	69.8	58.2	47.5	48.8	42.3	52.3	81.3	58.7	56.3	66.7	71.4	69.1	71.3	75.7	78.3	85.3	65.4	85.3	
12-May	93.5	94.5	95.2	93.8	90.8	88.0	79.0	78.1	77.3	62.6	51.7	40.6	36.4	32.7	36.0	39.2	39.6	42.2	43.6	43.2	45.7	48.7	51.8	57.9	60.9	95.2	
13-May	67.6	73.7	77.3	79.9	81.7	77.3	66.9	53.6	42.3	36.0	32.4	31.7	30.5	29.3	30.6	39.3	33.4	33.4	32.1	41.4	53.0	54.8	53.8	55.3	50.3	81.7	
14-May	56.1	58.6	61.1	60.1	58.6	58.7	55.1	50.3	49.8	48.1	38.3	32.5	28.6	23.8	28.6	48.8	49.7	57.3	69.0	79.3	82.2	78.8	83.3	86.7	56.0	86.7	
15-May	88.4	89.9	90.3	89.6	86.6	87.0	92.7	91.9	89.3	84.1	79.3	72.2	64.6	60.3	57.7	55.4	52.0	47.0	44.1	43.6	52.3	56.8	63.7	67.0	71.1	92.7	
16-May	67.3	71.8	75.3	81.3	89.7	84.6	76.3	67.0	55.1	45.9	39.5	32.6	31.6	27.3	26.0	25.7	24.2	25.4	27.9	30.7	36.0	42.8	47.0	52.2	49.3	89.7	
17-May	56.5	61.9	64.9	71.2	72.7	71.8	63.3	51.3	46.0	42.4	39.3	33.9	28.1	28.5	26.4	24.6	22.0	18.8	23.0	28.7	32.4	36.6	41.3	47.8	43.0	72.7	
18-May	52.7	54.3	50.2	51.6	53.0	55.5	53.0	47.1	43.8	40.1	32.7	32.0	33.9	30.6	26.4	25.9	29.0	28.7	27.7	32.5	35.8	42.4	48.0	53.8	40.9	55.5	
19-May	54.8	53.4	51.3	56.2	61.5	62.2	58.7	54.1	50.7	46.1	42.7	41.9	43.5	49.9	77.1	88.6	92.0	93.6	95.7	97.1	97.5	98.4	97.3	98.3	69.3	98.4	
20-May	99.9	OR	OR	OR	OR	OR	OR	98.9	95.9	93.5	90.0	89.5	88.3	92.3	93.0	93.6	91.8	93.7	97.7	99.3	100.0	OR	99.0	99.6	--	100.0	
21-May	99.1	99.3	100.0	OR	OR	OR	OR	90.4	84.5	75.4	76.1	77.4	77.8	86.5	96.1	96.5	94.9	94.5	96.9	96.0	96.9	98.6	99.9	100.0	91.8	100.0	
22-May	100.0	99.6	99.7	OR	OR	OR	OR	96.4	87.0	80.9	73.1	71.0	79.8	89.3	95.9	89.5	68.2	63.7	61.5	63.6	74.0	81.2	83.5	87.0	82.2	100.0	
23-May	89.2	92.5	94.1	92.1	90.8	87.2	79.9	73.2	69.9	56.2	54.2	43.0	40.8	40.7	36.7	39.8	39.9	44.5	47.6	49.2	57.4	66.7	73.4	78.6	64.1	94.1	
24-May	81.3	84.2	80.2	80.6	77.1	77.9	73.5	61.9	51.2	44.2	35.4	32.9	34.7	33.4	36.6	33.8	31.6	30.3	31.4	34.9	40.1	42.9	45.7	48.8	51.0	84.2	
25-May	52.5	55.7	59.0	62.0	62.1	61.3	58.0	52.0	47.5	43.8	37.1	34.6	33.6	33.1	32.9	31.3	30.9	33.2	36.5	38.7	44.8	47.0	47.0	51.1	45.2	62.1	
26-May	57.2	61.2	63.6	62.9	63.2	61.2	58.5	51.3	44.7	38.8	34.0	31.6	30.0	29.8	29.8	29.1	28.0	28.0	28.0	31.2	59.5	68.0	75.2	71.4	47.3	75.2	
27-May	80.3	84.5	82.2	87.5	89.0	89.8	83.7	70.7	61.2	49.0	40.8	35.2	29.4	29.3	27.5	30.9	32.0	33.6	30.7	32.8	38.0	40.2	38.8	38.7	52.3	89.8	
28-May	37.8	40.7	45.5	54.6	48.9	45.0	46.9	48.0	35.7	28.4	26.2	24.5	24.3	24.0	22.9	22.7	22.8	24.2	26.6	31.2	40.3	43.1	43.5	43.6	35.5	54.6	
29-May	45.4	47.7	47.2	48.3	49.5	48.0	46.0	37.3	32.7	29.2	27.1	25.8	24.0	23.3	24.2	24.5	24.0	23.5	24.0	26.4	33.5	45.5	52.6	59.2	36.2	59.2	
30-May	70.6	74.9	87.3	91.9	92.7	86.1	77.8	76.8	74.5	61.4	48.2	37.9	30.0	26.5	24.3	24.9	26.2	26.5	27.5	33.7	43.1	50.7	54.2	54.7	54.3	92.7	
31-May	51.1	48.3	47.1	54.3	58.5	58.7	68.2	54.6	44.8	43.4	36.1	36.5	34.5	32.8	29.1	28.3	36.3	37.6	39.5	46.5	57.6	85.6	94.1	98.6	50.9	98.6	
63.0 64.3 66.2 66.1 66.5 65.2 62.7 60.6 55.2 49.2 43.9 40.6 38.3 38.9 41.2 41.1 38.8 39.8 41.3 44.5 50.8 54.2 58.2 60.8																										Diurnal Average	
100.0 99.6 100.0 93.8 92.7 91.5 92.7 98.9 95.9 97.0 91.1 89.5 88.3 92.3 96.1 96.5 94.9 94.5 97.7 99.3 100.0 98.6 99.9 100.0																										Diurnal Maximum	
OR - Out of Range																											



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

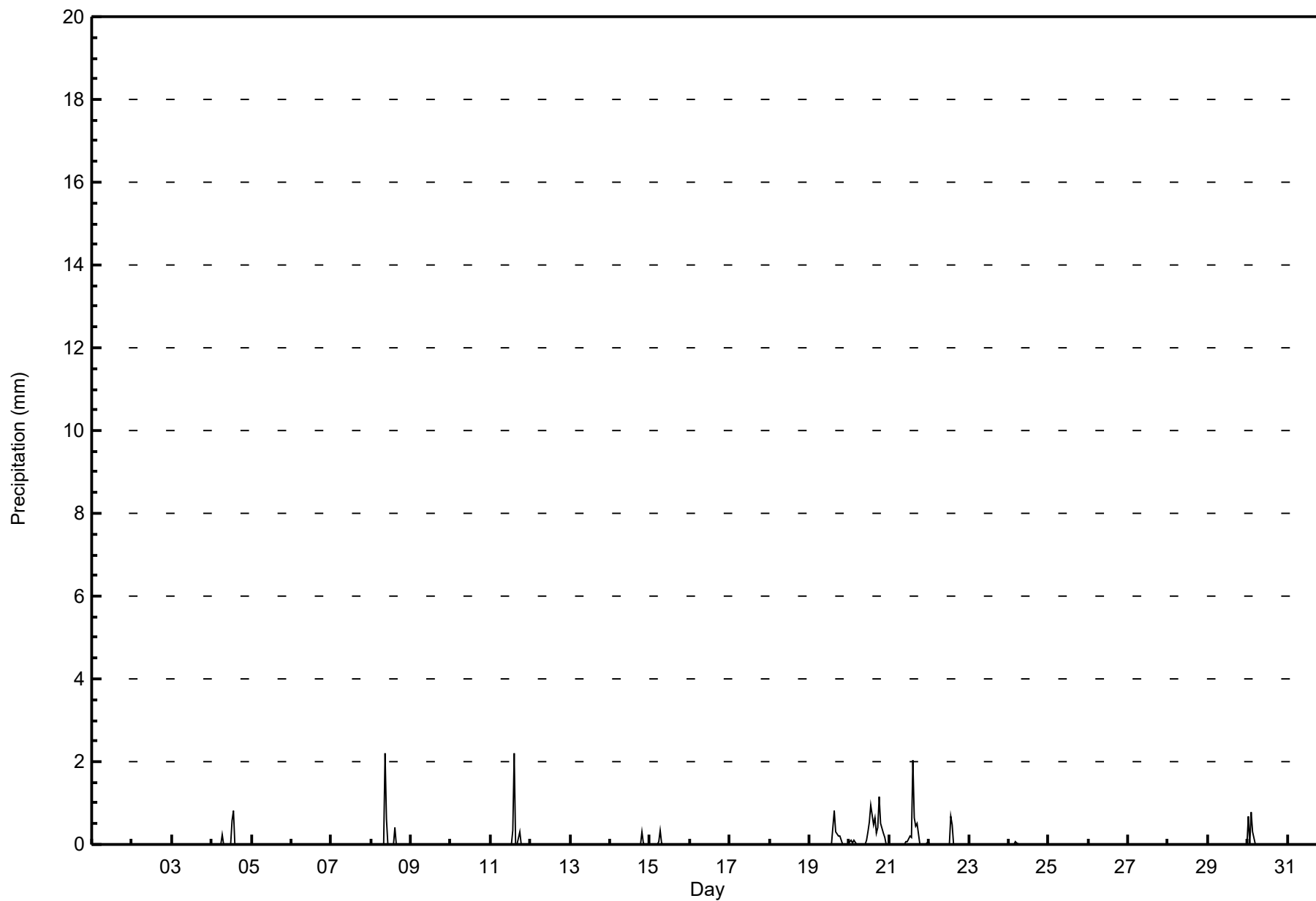
Stony Mountain - May 2025

Maximum Value: 3.5 mm on Jun 1 00:00																		Maximum Daily Total: 6.0 mm on May 20										Hours in Service: 744	
Minimum Value: 0.0 mm on May 1 01:00																		Minimum Daily Total: 0.0 mm on May 1										Hours of Data: 742	
Maximum Diurnal Total: 6.0 mm at hour 15																		Minimum Diurnal Total: 0.1 mm at hour 8										Hours of Missing Data: 2	
Monthly Total: 29.02 mm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.8										Hours of Calibration: 0	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
4-May	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
5-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
6-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
8-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.6	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
10-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
12-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0			
15-May	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0			
20-May	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.9	0.5	0.6	0.3	0.4	1.1	0.5	0.3	0.2	0.0	0.0	0.0	0.0			
21-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	2.0	0.6	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0			
22-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
23-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
24-May	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
30-May	0.7	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	3.5	0.0	0.0			
0.8 0.1 0.8 0.4 0.1 0.1 0.6 0.1 2.2 0.6 0.2 0.4 1.3 3.0 6.0 2.1 1.0 1.4 1.3 0.9 0.3 1.0 0.9 3.6																								Diurnal Average					
0.7 0.1 0.8 0.3 0.1 0.1 0.3 0.1 2.2 0.6 0.1 0.3 0.6 0.9 2.2 0.8 0.4 0.5 1.1 0.5 0.3 0.8 0.9 3.5																								Diurnal Maximum					
M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Stony Mountain - May 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	716	96.50	96.50
0.4 - 0.5	9	1.21	97.71
0.6 - 0.7	6	0.81	98.52
0.8 - 1.4	7	0.94	99.46
1.5 - 10	4	0.54	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

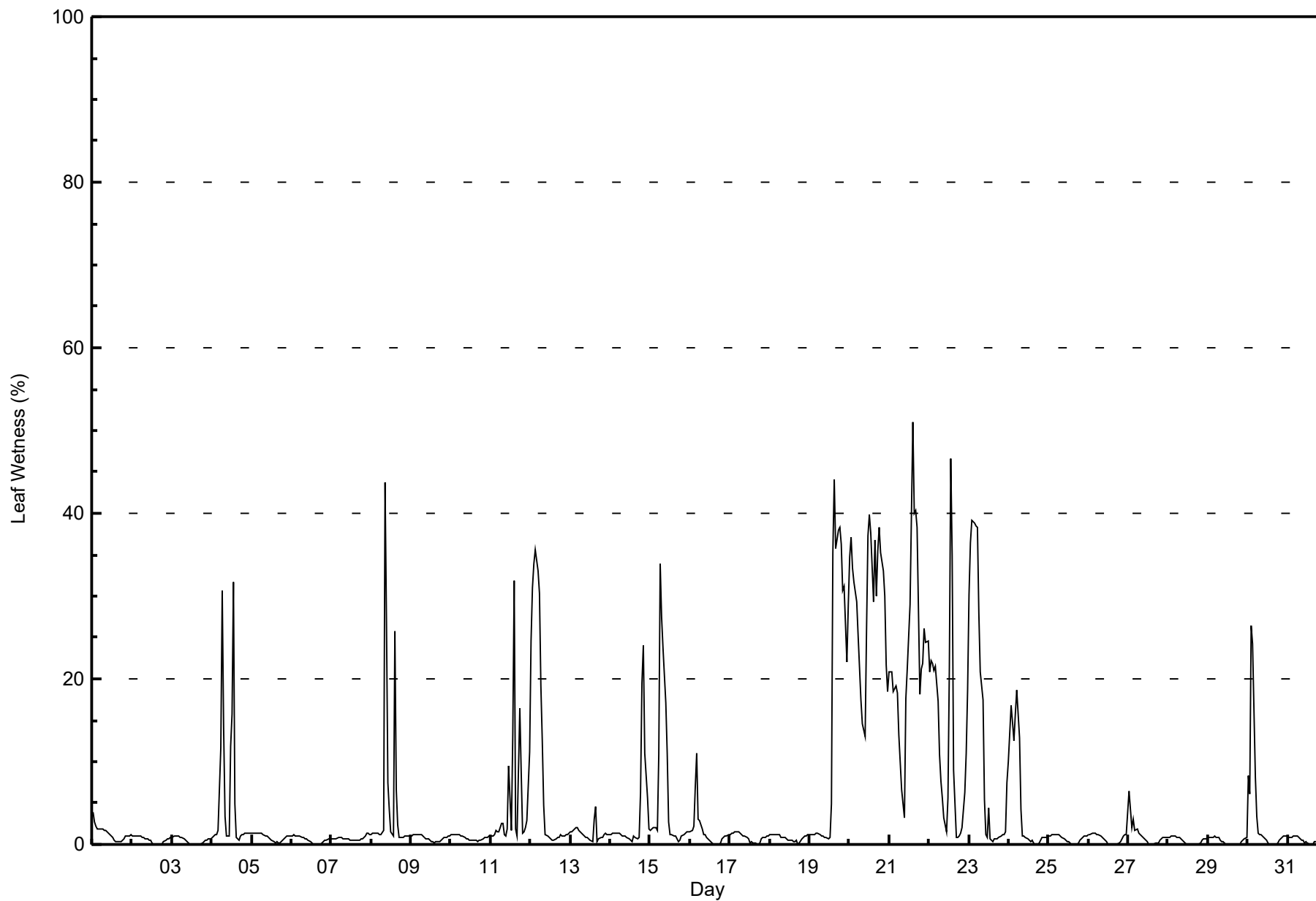
Stony Mountain - May 2025

Maximum Value: 51.0 % on May 21 15:00																			Maximum Daily Average: 29.5 % on May 20							Hours in Service: 744	
Minimum Value: 0.0 % on May 2 14:00																			Minimum Daily Average: 0.4 % on May 29							Hours of Data: 744	
Maximum Diurnal Average: 7.2 % at hour 15																			Minimum Diurnal Average: 2.7 % at hour 11							Hours of Missing Data: 0	
Monthly Average: 5.07 %																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 21.2 P ₉₉ = 39.6							Hours of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	3.8	2.7	2.2	1.9	1.9	1.9	1.9	1.7	1.6	1.5	1.3	1.1	0.8	0.6	0.4	0.3	0.3	0.3	0.5	0.8	1.0	1.1	1.1	1.1	1.3	3.8	
2-May	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.8	0.7	0.6	0.6	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.7	0.7	0.9	0.6	1.1	
3-May	0.9	0.9	1.0	1.0	1.0	0.9	0.8	0.7	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.6	0.7	0.8	0.5	1.0	
4-May	0.9	1.0	1.2	1.2	1.6	11.6	30.8	14.0	3.4	1.0	1.0	11.9	15.7	31.7	4.9	0.9	0.5	1.0	1.1	1.2	1.3	1.4	1.4	1.3	5.9	31.7	
5-May	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.7	0.5	0.3	0.2	0.3	0.2	0.2	0.4	0.7	0.9	1.0	1.1	1.1	0.9	1.3	
6-May	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.6	0.6	0.7	0.6	1.1	
7-May	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.8	1.1	1.3	1.3	1.2	0.7	1.3	
8-May	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.7	43.6	27.2	7.5	4.2	1.6	1.1	25.7	6.5	2.3	0.9	0.8	0.9	1.0	1.1	1.0	1.1	5.7	43.6	
9-May	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.4	0.3	0.4	0.6	0.7	0.8	0.9	1.0	1.1	0.8	1.2	
10-May	1.1	1.1	1.2	1.2	1.2	1.1	1.1	0.9	0.8	0.7	0.7	0.5	0.6	0.4	0.5	0.5	0.3	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.8	1.2	
11-May	1.0	1.0	1.1	1.7	1.6	1.5	2.6	2.5	1.2	1.1	1.9	9.5	1.7	13.5	31.9	1.8	1.0	16.4	8.6	1.4	1.5	2.0	2.9	11.2	5.0	31.9	
12-May	24.6	31.0	33.9	35.6	33.0	30.3	19.2	12.6	4.8	1.2	1.0	0.8	0.6	0.6	0.6	0.7	0.8	0.9	1.2	1.0	1.1	1.1	1.2	1.3	10.0	35.6	
13-May	1.4	1.6	1.8	2.0	2.0	1.7	1.5	1.3	1.0	0.9	0.8	0.7	0.6	0.4	3.1	4.5	0.4	0.7	0.8	0.9	1.2	1.3	1.2	1.2	1.4	4.5	
14-May	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1	1.0	1.0	0.8	0.6	0.5	0.4	1.1	0.8	0.7	0.9	6.2	19.5	24.1	11.0	5.6	1.9	3.6	24.1	
15-May	1.7	1.8	2.0	2.0	1.7	10.8	33.9	27.5	23.7	17.0	11.1	2.7	1.2	1.1	1.0	0.9	0.7	0.4	0.5	1.0	1.2	1.3	1.5	1.6	6.2	33.9	
16-May	1.6	1.6	2.1	6.9	11.0	3.0	2.9	1.8	1.2	1.1	0.9	0.7	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.7	0.9	1.0	1.1	1.2	1.7	11.0	
17-May	1.2	1.3	1.4	1.5	1.6	1.5	1.4	1.2	1.0	0.9	0.8	0.6	0.2	0.3	0.2	0.2	0.0	0.0	0.2	0.7	0.8	0.9	1.0	1.1	0.8	1.6	
18-May	1.2	1.2	1.1	1.1	1.1	1.2	1.1	0.9	0.8	0.8	0.6	0.5	0.6	0.5	0.4	0.3	0.5	0.1	0.2	0.7	0.9	1.0	1.1	1.2	0.8	1.2	
19-May	1.3	1.2	1.1	1.2	1.3	1.3	1.2	1.1	1.0	0.9	0.8	0.8	0.8	4.9	35.3	44.0	35.8	38.0	38.3	36.3	30.6	31.2	22.0	28.9	15.0	44.0	
20-May	34.8	37.1	33.4	31.7	29.3	25.2	21.4	17.5	14.6	13.0	25.9	37.3	39.8	37.6	29.4	36.8	29.9	35.4	38.2	35.3	33.1	30.0	21.7	18.5	29.5	39.8	
21-May	20.9	20.9	18.4	18.8	19.2	18.4	13.2	6.7	4.8	3.1	17.6	21.2	29.0	40.0	51.0	40.1	40.4	38.3	18.2	21.3	21.9	26.1	24.4	24.5	23.3	51.0	
22-May	20.9	22.2	21.9	20.9	21.5	17.3	10.9	7.6	5.5	3.2	1.5	5.6	21.3	46.6	34.9	9.0	0.8	0.9	1.0	1.3	2.0	6.3	11.1	18.7	13.1	46.6	
23-May	30.1	36.5	39.2	38.9	38.5	38.2	27.9	20.9	17.5	5.4	1.2	0.8	4.3	0.6	0.4	0.6	0.7	0.7	0.8	1.0	1.2	1.3	1.5	7.4	13.2	39.2	
24-May	9.9	16.8	14.8	12.5	15.8	18.6	12.9	4.2	1.1	1.0	0.8	0.6	0.6	0.4	0.4	0.1	0.0	0.0	0.2	0.6	0.8	0.9	0.9	0.9	4.8	18.6	
25-May	1.0	1.1	1.2	1.2	1.2	1.2	1.1	0.9	0.8	0.7	0.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.5	0.8	1.0	1.0	1.0	0.7	1.2	
26-May	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.0	0.8	0.7	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.7	1.0	1.2	1.1	0.7	1.3	
27-May	6.5	4.3	2.1	3.0	1.7	1.9	1.4	1.1	1.0	0.8	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.7	0.8	0.8	0.8	1.2	6.5	
28-May	0.8	0.9	1.0	1.1	1.0	0.9	0.9	0.8	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.7	0.7	0.7	0.5	1.1	
29-May	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.6	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.7	0.8	0.4	0.9	
30-May	8.3	6.2	26.4	24.2	8.2	3.4	1.3	1.2	1.2	1.0	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.7	0.9	1.0	1.0	3.6	26.4	
31-May	1.0	0.9	0.9	1.0	1.1	1.0	1.0	0.9	0.5	0.5	0.2	0.3	0.2	0.0	0.0	0.0	0.4	0.4	0.3	0.6	0.9	30.6	25.5	35.4	4.3	35.4	
6.0 6.6 7.1 7.1 6.7 6.5 6.4 4.4 4.5 2.9 2.7 3.4 4.0 5.9 7.2 4.8 3.8 4.4 3.9 4.2 4.3 5.2 4.4 5.5																								Diurnal Average			
34.8 37.1 39.2 38.9 38.5 38.2 33.9 27.5 43.6 27.2 25.9 37.3 39.8 46.6 51.0 44.0 40.4 38.3 38.3 36.3 33.1 31.2 25.5 35.4																								Diurnal Maximum			



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Stony Mountain - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	113	15.19	15.19
0.4 - 0.5	58	7.80	22.98
0.6 - 0.7	77	10.35	33.33
0.8 - 1.4	288	38.71	72.04
1.5 - 10	85	11.42	83.47
> 10	118	15.86	99.33

Total Number of Valid Hours: 744

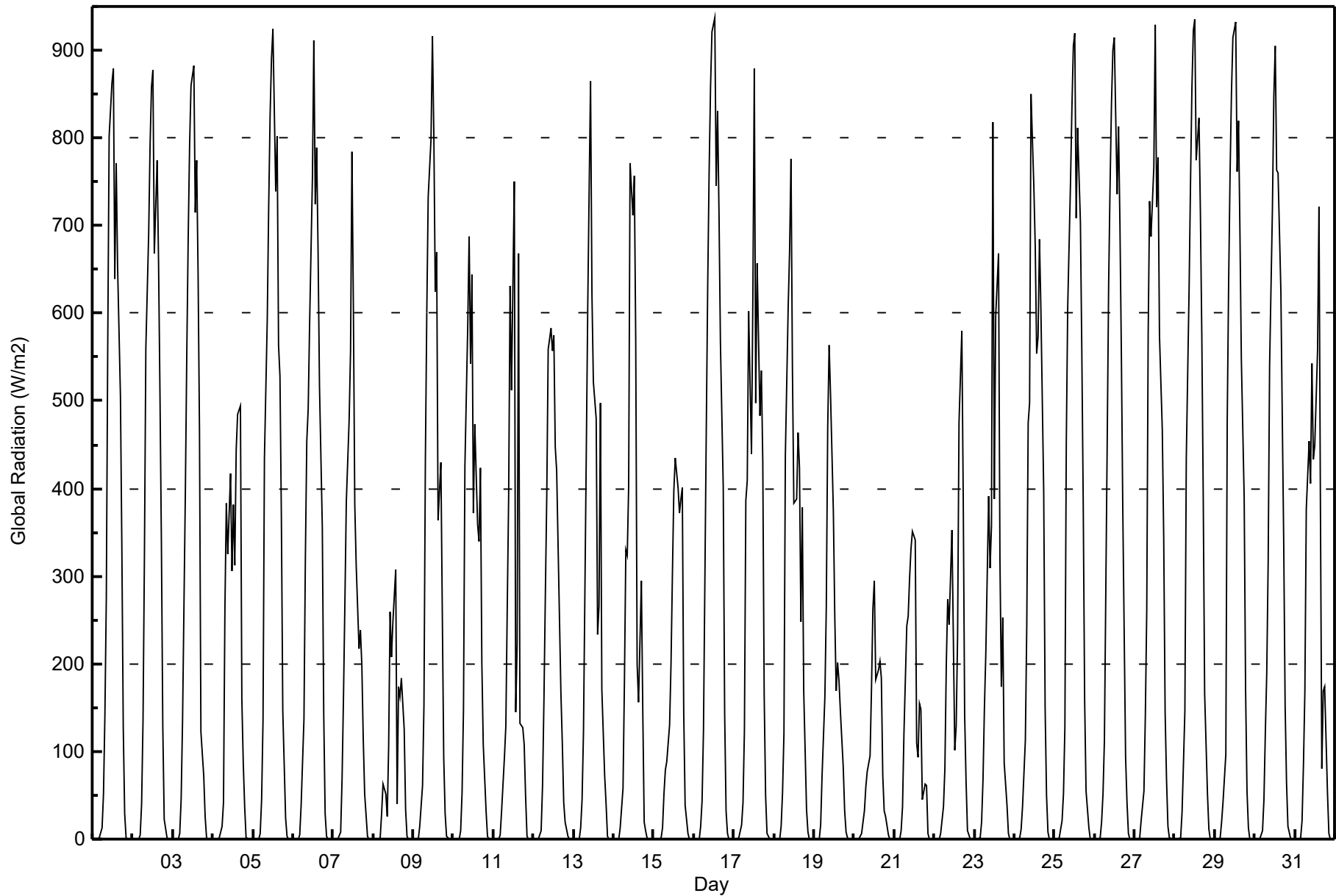
Total Number of Hours: 744

Maximum Value: 937.7 W/m2 on May 16 13:00																				Maximum Daily Average: 346.0 W/m2 on May 28				Hours in Service: 744		
Minimum Value: 0.0 W/m2 on May 3 22:00																				Minimum Daily Average: 79.8 W/m2 on May 20				Hours of Data: 744		
Maximum Diurnal Average: 655.9 W/m2 at hour 12																				Minimum Diurnal Average: 0.3 W/m2 at hour 1				Hours of Missing Data: 0		
Monthly Average: 238.73 W/m2																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 95.7 Q ₃ = 435.3 P ₉₀ = 720.9 P ₉₉ = 917.7				Hours of Calibration: 0		
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																							Daily Average	Daily Maximum	
1-May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	277.1	879.6
2-May	0.1	0.1	0.1	0.1	1.6	13.5	50.7	142.5	274.8	561.6	801.5	862.7	879.6	638.9	771.9	652.8	504.8	332.8	126.5	29.5	1.6	0.8	0.8	0.7	307.9	876.9
3-May	0.5	0.4	0.5	0.6	4.5	40.9	134.6	323.9	560.8	690.0	792.5	857.9	876.9	667.5	774.0	658.5	508.8	341.6	129.1	21.8	2.1	0.7	0.6	0.5	299.3	882.5
4-May	0.6	0.7	0.7	0.7	5.9	45.7	135.3	397.7	553.5	685.6	792.4	859.3	882.5	714.9	774.4	645.3	466.0	121.6	72.9	25.4	1.1	0.0	0.0	0.0	173.1	493.5
5-May	0.0	0.0	0.0	0.0	1.7	14.2	41.7	260.3	384.0	325.8	417.3	305.3	381.5	312.1	443.7	485.4	493.5	160.2	86.7	37.3	2.3	0.7	0.5	0.3	322.8	923.7
6-May	0.2	0.2	0.3	0.4	6.1	45.5	135.7	434.0	592.2	720.4	824.8	890.3	923.7	738.3	801.4	563.1	527.5	366.4	147.1	24.4	2.5	0.6	0.6	0.6	289.1	911.7
7-May	0.5	0.7	0.4	0.4	5.5	38.8	136.2	320.6	453.9	491.8	588.0	755.4	911.7	724.9	789.5	669.6	517.2	356.3	144.0	28.6	2.6	0.6	0.6	0.6	201.8	784.7
8-May	0.4	0.4	0.3	0.4	7.7	68.5	162.3	270.6	385.2	478.8	557.5	784.7	608.9	381.6	312.7	217.3	238.7	197.6	114.0	51.5	3.5	0.1	0.1	0.0	84.4	307.5
9-May	0.0	0.0	0.0	0.1	2.0	29.7	62.4	51.7	26.5	105.8	259.6	207.2	247.6	307.5	41.0	174.2	162.9	184.2	125.0	33.8	3.3	0.4	0.4	0.3	291.1	916.1
10-May	0.3	0.5	0.8	0.8	13.9	61.8	153.7	431.5	600.7	733.0	799.3	916.1	802.8	625.2	670.1	364.6	429.2	257.1	92.7	28.6	2.8	0.6	0.6	0.4	225.4	687.6
11-May	0.3	0.3	0.3	0.5	8.9	53.3	148.1	424.6	584.1	687.6	542.9	643.9	371.6	473.1	359.9	340.5	423.6	201.2	108.0	31.8	3.0	0.5	0.5	0.3	177.7	749.7
12-May	0.2	0.3	0.2	0.2	5.5	31.6	93.4	128.9	264.2	391.3	631.8	512.0	749.7	144.9	221.9	667.9	131.3	127.2	108.2	48.9	3.1	0.6	0.7	0.5	193.2	583.2
13-May	0.3	0.3	0.2	0.2	9.8	60.7	159.6	280.8	393.2	558.1	583.2	556.5	574.5	447.9	419.5	251.8	166.7	109.9	41.1	19.5	3.5	0.0	0.0	0.0	239.1	865.3
14-May	0.1	0.2	0.2	0.5	12.8	45.9	122.4	442.7	605.4	738.6	865.3	621.0	521.9	479.8	232.9	264.9	498.0	170.4	71.7	39.7	3.8	0.6	0.3	0.3	206.1	771.9
15-May	0.5	0.6	0.6	0.7	12.2	58.5	178.1	329.5	324.4	402.3	771.9	711.9	756.7	571.5	199.7	157.0	294.2	146.6	18.7	8.9	1.5	0.0	0.0	0.0	143.9	434.4
16-May	0.0	0.0	0.0	0.2	2.4	12.9	51.0	79.0	89.1	130.9	200.1	302.0	397.7	434.4	400.7	372.3	388.5	401.7	145.7	37.9	6.1	0.3	0.4	0.3	341.8	937.7
17-May	0.4	0.5	0.4	1.0	15.3	42.2	124.6	386.5	408.4	602.8	438.9	620.9	878.5	497.4	657.1	483.6	533.9	431.1	164.1	49.2	6.2	0.4	0.2	0.3	264.3	878.5
18-May	0.3	0.2	0.3	0.5	14.4	53.6	120.1	438.0	607.4	672.2	776.5	537.6	382.5	387.3	463.6	423.0	247.9	378.8	168.4	33.8	8.1	0.6	0.6	0.2	238.2	776.5
19-May	0.4	0.4	0.2	0.8	16.1	72.7	163.2	265.1	470.8	563.5	507.8	373.0	253.8	169.5	201.6	180.7	145.6	81.9	32.1	8.2	1.7	0.3	0.2	0.2	146.2	563.5
20-May	0.1	0.2	0.2	0.3	6.2	19.0	31.6	59.3	76.9	95.6	171.2	262.6	294.9	182.1	193.1	203.2	183.3	72.2	32.1	25.4	5.2	0.3	0.3	0.3	79.8	294.9
21-May	0.2	0.2	0.2	0.4	9.1	37.1	120.0	242.4	254.7	298.3	331.5	351.0	341.0	109.9	93.3	155.1	148.1	45.1	62.8	61.8	6.8	0.4	0.3	0.2	111.2	351.0
22-May	0.3	0.5	0.2	0.7	7.1	36.4	79.8	199.1	274.4	244.0	351.8	228.0	101.6	129.3	231.7	474.6	579.1	387.9	142.4	66.3	9.9	0.8	0.7	0.7	147.8	579.1
23-May	0.6	0.6	0.4	0.9	18.7	67.7	149.3	212.5	391.1	308.4	356.8	817.8	388.1	597.9	668.4	318.9	173.6	253.2	87.4	39.0	6.1	0.5	0.5	0.2	202.4	817.8
24-May	0.2	0.2	0.3	1.3	11.2	37.0	112.9	243.8	475.5	497.5	850.0	745.8	676.1	554.5	572.6	684.9	604.6	395.9	150.1	49.6	8.7	0.6	0.5	0.6	278.1	850.0
25-May	0.5	0.5	0.5	1.4	20.5	51.6	127.1	451.8	606.9	750.1	836.4	905.3	918.8	708.4	811.8	703.2	555.5	381.9	157.7	54.4	12.7	0.5	0.3	0.3	335.8	918.8
26-May	0.3	0.3	0.3	1.6	19.3	51.8	112.5	457.5	632.6	745.3	838.8	900.2	915.3	735.5	813.3	701.1	555.2	378.5	93.9	41.6	6.8	0.2	0.2	0.2	333.4	915.3
27-May	0.3	0.4	0.5	1.2	20.4	55.2	141.6	262.6	577.2	728.1	688.3	766.8	929.3	721.4	778.1	574.6	467.2	344.0	144.8	67.1	15.3	1.0	0.3	0.3	303.6	929.3
28-May	0.2	0.4	0.5	2.1	29.9	87.1	147.0	434.3	630.3	750.1	858.2	923.3	935.9	773.8	822.2	713.9	573.5	391.9	165.8	51.8	11.7	0.7	0.2	0.2	346.0	935.9
29-May	0.4	0.3	0.3	2.0	18.6	41.6	95.8	478.4	635.9	758.0	851.1	914.7	932.0	761.7	819.8	692.9	547.9	389.4	170.1	54.0	12.2	0.3	0.0	0.0	340.7	932.0
30-May	0.0	0.0	0.0	0.7	8.9	45.8	121.8	189.8	317.7	539.7	718.9	847.0	904.8	763.7	760.3	624.3	479.9	340.1	153.7	64.8	15.2	0.7	0.2	0.2	287.4	904.8
31-May	0.3	0.3	0.2	1.7	21.1	84.9	168.6	376.8	453.7	405.9	542.1	432.9	448.8	559.2	721.1	383.1	80.0	168.3	174.4	52.4	6.1	0.0	0.1	0.0	211.7	721.1
																								Diurnal Average		
																								Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Global Radiation (GR) - W/m2
Stony Mountain - May 2025

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	285	38.31	38.31
21 - 100	88	11.83	50.13
101 - 300	114	15.32	65.46
301 - 600	138	18.55	84.01
601 - 900	105	14.11	98.12
> 900	14	1.88	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

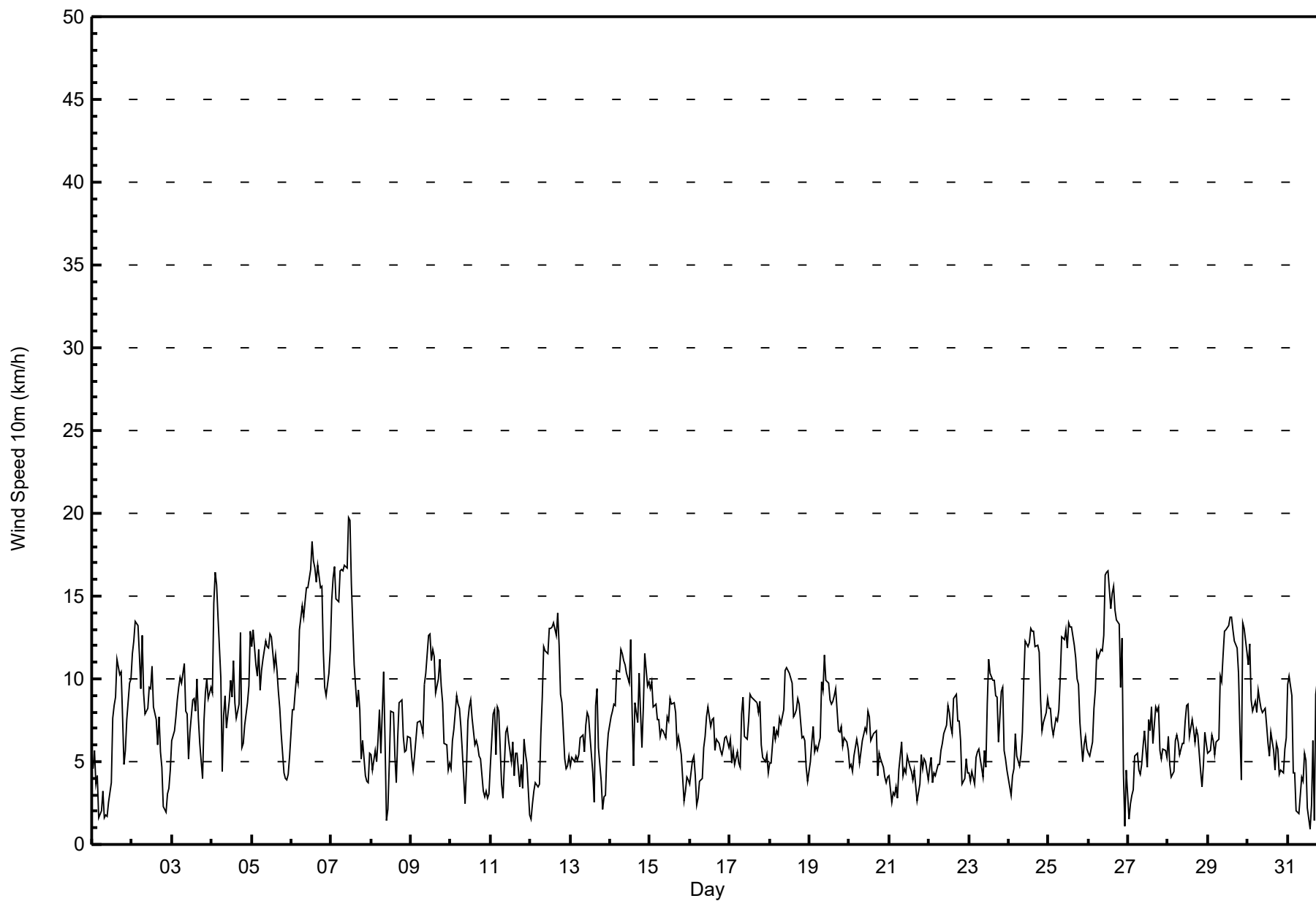
Stony Mountain - May 2025

Maximum Speed: 20 km/h on May 7 11:00																		Maximum Daily Speed Average: 13.0 km/h on May 6																		Hours in Service: 744			
Minimum Speed Value: 1 km/h on May 31 14:00																		Minimum Daily Speed Average: 1.1 km/h on May 31																		Hours of Data: 744			
Maximum Diurnal Speed Average: 4.2 km/h at hour 16																		Minimum Diurnal Speed Average: 1.5 km/h at hour 21																		Hours of Missing Data: 0			
Monthly Average Velocity: 2.9 km/h 194.6 deg																		Percentiles: P ₁ = 2 P ₁₀ = 4 Q ₁ = 5 Median = 7 Q ₃ = 10 P ₉₀ = 12 P ₉₉ = 17																		Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-May	NNW5	N6	N4	N4	N2	NW2	NNE3	N2	SSW2	NW2	NW3	WSW4	WSW8	WSW8	SSW9	SSW11	SW10	SSW10	SSW8	SSE5	SSE6	S8	S10	S10	SW3.1	SSW11													
2-May	SSW11	SSW12	SSW13	SSW13	SW11	WSW9	W13	WNW9	WNW8	NW8	NW10	NW9	NW11	NW8	NW8	WNW6	NW8	WNW6	NW5	NNW2	E2	SE3	SE3	SE5	W4.8	SSW13													
3-May	S6	S7	S8	S9	SSW10	SSW10	SSW10	SSW11	SW8	WSW8	WNW5	WNW7	WNW9	W9	W8	W10	WNW8	NW6	NW4	NW7	NW9	NW10	NNW9	NNW9	WSW4.8	SSW11													
4-May	NW9	NW15	NW16	WNW16	WNW14	WNW10	NW4	W8	WNW9	NW7	NNW9	NW10	NNW9	NW11	NW9	NNW8	NW8	WNW13	WNW6	W6	WSW7	SW9	WSW10	W13	WNW8.6	NW16													
5-May	WSW12	W13	W11	W10	WNW12	WNW9	WNW10	WNW11	WNW12	WNW12	WNW12	NW13	NW13	NW11	WNW11	WNW11	NW9	NW8	NNW7	NNE4	E4	SE4	SSE4	SSE5	WNW7.6	W13													
6-May	SSE8	S8	S9	S10	S10	S13	S14	S14	S15	SSW15	SSW15	S17	S18	S17	S17	S16	S17	S15	S16	S12	SSE9	SSE9	SSE10	S12	S13.0	S18													
7-May	S15	S16	S17	SSE15	SSE15	S17	SSE17	S17	S17	S17	SSW20	SSW20	SSW16	SSW13	SW11	WSW8	W9	W8	WNW5	NW6	NW4	NW4	WNW4	WNW5	SSW9.2	SSW20													
8-May	NW5	NW4	NW6	NW5	WNW6	NW8	NNW5	NW10	NW6	W1	WSW2	W5	NW8	W8	W5	NW4	WNW6	WNW9	WNW9	W7	W6	W6	W7	W6	WNW5.7	NW10													
9-May	WNW5	W5	SW5	SSW6	WSW7	WSW7	SW7	SW7	WSW10	WSW10	WSW13	WSW13	WSW11	WSW12	SW11	SW9	SW10	SSW11	SSW10	SSW9	S6	S6	S4	S5	SW7.6	WSW13													
10-May	SSE5	SSE6	S7	SSW9	SW9	SW8	WSW7	WNW6	NW2	NW5	W7	W8	W9	W8	WSW6	WSW6	W6	SW5	SW5	SSW3	S3	SSW3	S3	SSE3	WSW4.3	SSW9													
11-May	S5	S8	S8	SSE5	S8	S8	SE4	ESE3	ESE5	SE7	S7	SSW6	SW5	WNW6	SSE4	SSE6	NNW5	NNE4	NE5	ENE3	E6	ESE6	SE5	E2	SSE3.1	S8													
12-May	NNW2	NNW2	NW3	NW4	NNW3	NNW4	NNE7	NNE9	NNE12	NE12	NE11	NE13	NE13	NE13	NE13	NE13	NE14	NE12	NNE9	N9	N5	NNW5	NNW5	NW5	NNE7.3	NE14													
13-May	NW5	NW5	NW5	NW5	WNW5	WNW5	WNW6	NW7	NW6	N7	WNW8	NW8	NW6	N4	NW3	SW8	SSW9	SSW6	SW4	NNW2	SE3	SSE3	S6	S7	WNW3.0	SSW9													
14-May	S8	S8	S8	S8	S10	S10	S12	SSW12	SSW11	SSW11	SSW10	W10	W12	W8	NNW5	ESE9	E7	NE10	NE8	N6	NNE8	NNE11	N10	NNE10	SSW2.1	W12													
15-May	N9	NNE10	N8	N8	N8	N8	N7	NNE7	NNE7	N6	N8	N7	N9	NNE8	NNE9	NE8	NE6	NE7	NE6	NE5	NE3	NE3	E4	ENE4	NNE6.5	NNE10													
16-May	NNE4	NNE5	NNE5	NNE4	N2	NNW3	NNE4	NE4	NE6	NNE6	NE8	NNE8	ENE7	ENE8	E8	E6	ENE6	ENE6	ENE6	E5	E6	ESE6	ESE7	ESE6	ENE4.7	NNE8													
17-May	ESE6	SE5	ESE6	SE5	SE6	SE5	SE5	SSE8	SSE9	S7	SSE6	SE7	ESE9	SE9	SE9	SE9	SE9	SE8	SE9	SE6	SE5	SE5	SE5	ESE4	SE6.4	ESE9													
18-May	SE5	SE5	SSE7	SSE6	SSE7	SSE7	SSE8	SE7	SE8	SSE10	SE11	SE11	SE10	SE10	SE8	SE8	ESE8	ESE9	SE8	SSE6	S6	S6	S5	SSE4	SE7.1	SE11													
19-May	SSE5	S6	S7	SSE6	SSE6	SSE6	SE6	SSE10	SSE9	SSE11	SE10	SE10	SE9	SE8	SE9	SE9	ESE9	ESE7	SE7	ESE7	ESE6	ESE6	SE6	ESE6	SE7.2	SSE11													
20-May	ESE5	ESE5	ESE4	ESE5	ESE6	SE6	SE5	SE6	ESE6	SE7	SE7	SE8	SE8	ESE6	ESE7	SE7	SE7	SE4	ESE6	ESE5	SE5	SE4	SSE4	SE4	SE5.6	SE8													
21-May	SSE4	SE3	ESE3	SE3	S4	SSE3	S4	S6	S4	S5	SSE4	S5	SSE5	ENE4	SE4	SE5	SE4	SSE3	SE4	SE5	SE5	SE5	SSE5	SSE4	SSE3.7	S6													
22-May	S5	S5	SSE4	SSE4	SE4	SSE5	SSE5	SSE6	S6	S7	SSE7	S8	S8	SSW7	S7	S9	SSE9	S7	SSW7	S6	SE4	SSE4	S5	SSE4	S5.8	SSE9													
23-May	SSE4	SSE4	SE4	SSE4	SE5	SSE6	SSE6	SE5	ESE4	SSW6	SSW5	S9	SSW11	S10	S10	S10	S9	SSW9	SSE6	S9	SSW10	SSW6	SSW5	S5	S6.2	SSW11													
24-May	S4	S3	SE4	SSE5	S7	S5	SSE5	SSE5	SE7	S10	S12	S12	S12	SSE13	S13	S13	SSE12	SSE12	S12	SSE9	SSE7	SSE7	S8	S9	S8.4	SSE13													
25-May	S8	S8	S7	S7	S8	SSE7	S8	S10	S13	SSE12	SSE13	SSE12	SSE13	SSE13	SSE13	SSE12	S11	SSE10	SSE10	SSE7	SE5	SE6	SE7	SSE6	SSE9.3	SSE13													
26-May	SSE6	SSE5	SSE6	SSE8	S9	S12	SSE11	SSE12	SSE13	SSE16	SSE16	SSE17	SSE14	SSE15	S16	SSE14	SSE14	SSE13	S9	WNW12	NNW4	S1	SW4	S9.6	SSE17														
27-May	ESE2	S2	SSW3	WNW3	WNW5	WNW4	NW4	WNW5	WNW6	WNW7	WNW5	WNW8	W7	W8	W6	WSW8	WSW8	WSW8	WSW6	WSW6	WSW6	WSW6	WSW5	W4.8	WSW8														
28-May	W7	WSW5	SW4	SSW4	SSW6	SW7	SSW6	SSW5	SSW6	SW6	SSW7	SSW8	SSW8	SSW7	SW8	SSW7	SSW6	SSW7	SSW7	SW4	SSW3	SSW5	S7	S6	SSW5.9	SSW8													
29-May	S6	S6	S7	S6	S5	S6	S6	SSE10	SSE10	S11	S13	SSE13	SSE13	SSE14	SSE14	SSE13	SSE12	SSE12	S10	S7	SSE4	W13	WNW13	WNW12	S7.5	SSE14													
30-May	W11	WNW12	WNW9	W8	W9	WSW8	W9	WNW9	WNW8	WNW8	WNW8	NW7	NW6	WNW5	W7	W6	WSW5	SW6	SSW6	SW4	SW4	SSW4	SSW6	S6	W5.9	WNW12													
31-May	SSW10	SSW10	SSW9	SW4	W4	WSW2	S2	ENE2	E4	E4	E5	E5	NNE2	SSE1	SSE2	SW6	N1	NNE9	NNE10	NNE12	NNW11	NW10	NNW8	NW7	NNW1.1	NNE12													
SSW2.8SSW2.9SSW3.1SSW3.2SSW3.7SSW3.9SSW3.2SSW3.2SSW2.9SSW3.2SSW3.2SSW3.2SSW3.0SSW3.0																								Diurnal Average															
S15 S16 S17WNW16 SSE15 S17 SSE17 S17 S17 S17 S17 SSW20 SSW20 S18 S17 S17 S16 S17 S15 S16 NNE12WNW12 W13WNW13 W13																								Diurnal Maximum															
All monthly, daily, and diurnal averages have been calculated using vector methods																																							



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Stony Mountain - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	224	30.11	30.11
6 - 11	413	55.51	85.62
12 - 19	105	14.11	99.73
20 - 28	2	0.27	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Stony Mountain - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	10	5	4	9	12	35	35	22	12	11	6	5	14	23	14	224
6 - 11	15	16	8	5	5	21	38	44	72	44	17	23	32	31	34	8	413
12 - 19	0	2	8	0	0	0	0	31	31	9	0	4	5	11	4	0	105
20 - 28	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	28	21	9	14	33	73	110	125	67	28	33	42	56	61	22	744

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wind Speed 10m (WS10) - km/h

Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 744								
Maximum Value: 7 km/h on May 7 11:00																	Hours of Data: 744								
Minimum Value: 0 km/h on May 12 04:00																	Hours of Missing Data: 0								
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																	Hours of Calibration: 0								
																	Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	2	2	1	1	1	1	2	2	2	3	3	4	4	5	4	4	3	2	2	2	3	3	5
2-May	3	3	4	4	4	4	4	3	3	3	4	4	4	4	4	4	3	3	2	1	1	1	1	2	4
3-May	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	3	1	4	3	4	4	4	4
4-May	3	5	6	6	5	4	3	3	4	3	3	4	4	4	4	3	3	6	2	2	2	3	4	5	6
5-May	4	5	4	4	4	3	4	4	4	5	5	5	5	5	5	5	4	3	3	2	1	1	1	2	5
6-May	3	3	3	3	3	4	5	5	5	6	6	6	6	6	6	6	6	6	6	5	3	3	4	5	6
7-May	6	6	6	6	5	6	6	6	7	7	7	7	6	5	5	3	4	3	2	2	1	1	1	2	7
8-May	1	1	1	1	3	4	2	5	2	1	2	2	3	4	5	2	4	4	4	3	2	2	2	2	5
9-May	2	1	1	1	2	3	2	2	4	5	5	6	5	5	4	4	4	4	4	3	2	2	1	1	6
10-May	1	2	2	3	3	3	3	2	2	3	3	4	4	3	3	3	3	3	2	1	1	1	1	1	4
11-May	2	3	3	2	3	3	2	1	2	3	4	4	4	3	3	2	3	2	2	2	2	2	2	1	4
12-May	1	1	0	0	1	1	2	3	5	5	4	5	4	5	5	5	5	4	4	4	2	2	2	2	5
13-May	1	1	1	1	1	2	2	2	2	3	4	3	3	3	3	4	3	2	2	1	1	1	2	2	4
14-May	2	2	2	2	4	4	4	4	5	4	4	5	5	4	3	4	3	4	3	3	4	4	4	4	5
15-May	4	4	3	3	3	3	2	3	3	3	3	3	4	4	3	4	2	3	2	2	1	2	1	1	4
16-May	1	2	1	1	1	1	1	2	3	3	3	3	3	4	3	3	3	3	3	2	2	2	2	2	4
17-May	2	2	2	1	2	1	2	4	4	3	3	4	4	4	4	4	4	4	4	3	2	2	2	1	4
18-May	2	2	3	3	3	3	3	3	4	5	5	5	5	4	4	4	4	4	4	3	3	2	1	1	5
19-May	2	2	3	2	2	2	3	4	4	5	4	4	4	5	4	5	4	3	3	3	2	3	3	2	5
20-May	2	2	2	2	3	3	2	3	3	3	3	4	3	3	3	3	3	2	2	2	2	2	2	2	4
21-May	2	1	1	1	1	1	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
22-May	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	4	3	3	3	1	2	2	1	4
23-May	1	1	2	1	2	2	2	2	2	2	2	4	5	5	4	4	4	4	3	4	3	3	2	2	5
24-May	1	1	1	2	2	2	2	2	3	5	5	5	5	5	5	6	5	5	5	4	3	3	3	3	6
25-May	3	3	3	2	3	3	3	4	5	6	5	5	6	6	5	5	5	4	4	3	2	3	3	2	6
26-May	2	2	2	3	3	4	4	5	5	6	7	7	7	6	7	6	6	6	6	6	6	3	2	2	7
27-May	1	1	1	1	2	2	2	2	3	3	3	2	4	4	4	3	4	4	4	3	2	2	2	2	4
28-May	3	2	1	1	2	2	2	2	2	2	4	4	3	4	4	4	3	3	3	1	1	1	2	2	4
29-May	2	2	2	2	2	2	3	4	4	5	5	6	6	7	6	6	5	5	5	4	2	7	5	5	7
30-May	5	5	4	3	4	3	4	4	3	3	4	3	3	3	3	3	3	2	2	2	1	1	2	2	5
31-May	3	3	3	3	1	1	2	2	2	2	2	3	2	3	4	3	2	5	4	5	5	4	4	4	5
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

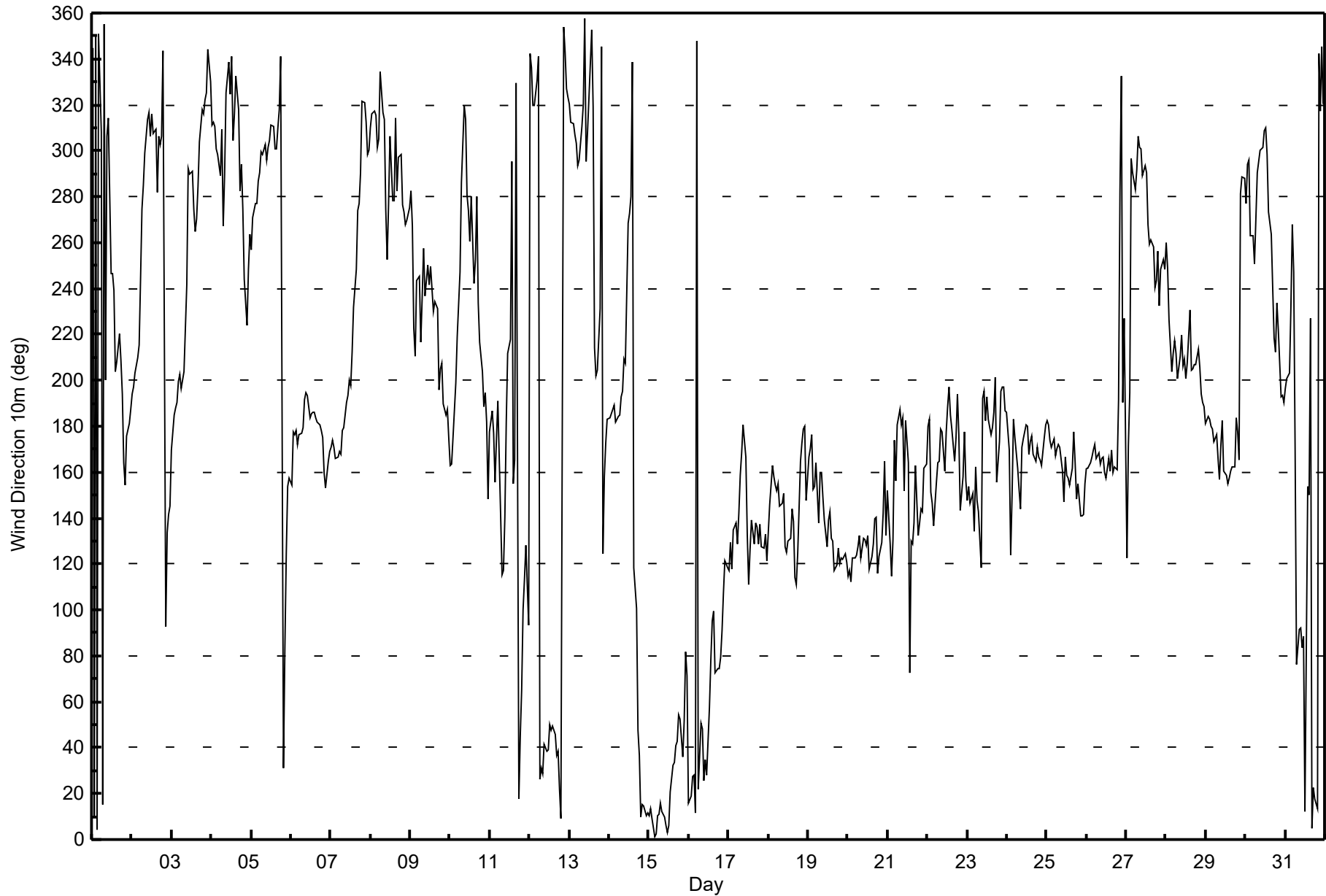
Stony Mountain - May 2025

Direction of Maximum Speed: 193 deg on May 7 11:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 179.5 deg on May 6																					Hours of Data:		744		
Direction of Minimum Speed: 154 deg on May 31 14:00										Direction of Minimum Daily Speed Average: 1.1 deg on May 31											Hours of Missing Data:		0		
Monthly Average Direction: 194.6 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	345	10	350	4	351	308	15	355	200	306	315	246	247	239	204	208	220	209	194	164	154	176	181	187	214.5
2-May	194	197	203	210	216	244	275	285	299	314	317	307	316	307	310	282	306	302	306	344	93	133	141	145	263.9
3-May	170	185	188	191	200	203	197	204	222	242	292	290	291	274	265	270	284	304	318	316	322	325	344	330	258.4
4-May	311	312	311	301	298	289	309	267	290	325	339	324	341	305	316	332	318	282	294	275	244	224	248	263	297.9
5-May	257	271	277	277	287	290	300	299	303	296	301	304	311	310	301	301	310	318	341	31	83	124	154	157	296.2
6-May	154	178	177	178	172	176	177	180	191	194	193	184	185	186	186	184	182	181	178	175	160	153	165	169	179.5
7-May	171	174	171	166	167	169	168	178	179	190	193	200	198	212	232	248	274	277	290	322	321	312	298	300	195.9
8-May	310	316	317	316	301	305	335	316	314	274	253	276	307	278	278	314	283	297	299	276	273	268	270	275	295.7
9-May	282	267	223	211	244	245	217	236	258	237	250	242	249	240	230	234	231	196	205	207	190	185	187	175	229.2
10-May	163	164	175	199	219	233	247	286	320	313	281	274	260	280	242	253	280	234	217	204	189	195	182	148	236.4
11-May	177	187	177	156	174	191	141	115	117	140	182	212	218	295	155	165	329	18	45	65	100	114	128	93	158.5
12-May	343	336	319	320	331	341	26	31	28	41	39	39	50	47	50	46	36	38	22	9	354	343	327	323	26.7
13-May	320	312	312	307	303	294	296	311	320	358	295	308	323	353	319	214	202	204	231	346	124	158	173	183	285.5
14-May	184	186	187	189	182	184	185	193	195	209	208	269	273	280	339	118	101	48	37	10	15	15	11	12	198.7
15-May	11	14	9	1	2	10	11	16	12	10	6	3	6	21	32	34	41	42	54	52	36	52	82	72	21.3
16-May	16	19	27	28	11	348	22	50	48	26	35	28	57	78	95	99	72	75	74	79	91	108	121	118	61.9
17-May	117	129	118	135	138	129	142	159	168	181	166	133	111	126	139	129	138	136	128	137	128	127	133	121	136.4
18-May	134	146	163	158	154	152	155	145	146	150	127	125	130	131	144	139	114	111	124	165	173	179	180	148	142.9
19-May	166	170	176	152	154	164	138	160	160	149	139	127	139	143	131	130	117	120	127	120	123	122	124	121	140.1
20-May	114	117	113	123	122	124	128	132	123	131	130	128	132	118	123	129	140	140	116	123	130	142	164	133	127.7
21-May	152	128	115	131	174	156	181	187	181	184	152	182	164	73	130	129	138	163	133	138	144	143	162	164	152.7
22-May	180	183	151	147	137	155	164	165	179	177	161	178	189	197	185	179	165	175	194	176	143	158	177	156	172.5
23-May	148	154	146	150	134	162	148	143	119	192	195	182	193	183	177	180	186	202	155	173	195	197	197	187	175.5
24-May	186	170	124	150	183	175	162	152	144	171	174	180	180	168	173	176	168	165	171	167	165	163	175	181	169.7
25-May	183	180	174	171	174	167	170	172	171	160	147	167	159	157	155	161	178	164	148	155	141	141	141	155	162.5
26-May	162	161	164	166	169	172	166	168	164	166	167	160	157	166	161	170	160	162	161	191	282	333	191	227	169.3
27-May	123	171	195	296	290	283	292	307	302	301	289	293	290	268	259	261	258	240	243	256	233	249	252	248	266.3
28-May	260	249	226	204	212	217	212	201	211	220	206	209	201	207	230	204	205	207	207	214	206	194	191	189	211.1
29-May	181	184	183	180	179	173	177	166	157	171	183	161	159	155	158	161	163	162	183	178	165	281	288	288	178.9
30-May	277	294	296	263	263	251	270	290	295	300	301	309	310	298	273	264	240	218	212	234	222	193	193	190	268.9
31-May	197	200	203	232	268	247	169	76	92	92	84	88	12	154	150	227	5	22	18	13	343	317	346	320	341.9
195.6 203.1 196.4 199.1 205.0 205.6 195.5 196.8 192.7 194.7 198.1 204.4 206.9 205.1 189.9 186.5 190.4 185.7 171.0 171.1 173.1 183.6 187.5 195.8																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Stony Mountain - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 107 deg on May 31 15:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 9 deg on May 12 03:00																									
Percentiles: P ₁ = 14 P ₁₀ = 23 Q ₁ = 29 Median = 37 Q ₃ = 45 P ₉₀ = 53 P ₉₉ = 87																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	27	29	33	37	44	56	29	78	88	103	96	84	59	54	56	40	42	33	29	31	24	21	21	19	103
2-May	20	21	22	24	22	31	32	25	29	39	39	41	35	53	55	72	40	58	44	29	27	23	19	24	72
3-May	24	18	19	20	20	20	20	25	37	47	67	54	51	59	54	42	51	38	20	21	24	26	29	28	67
4-May	27	24	25	26	23	25	46	29	33	34	39	32	40	29	36	38	34	31	28	26	28	21	31	28	46
5-May	30	26	24	25	24	26	28	30	30	32	33	33	35	39	35	37	40	36	37	26	26	18	22	22	40
6-May	27	22	23	24	24	26	27	29	29	27	32	33	35	36	36	37	32	34	33	33	33	33	35	33	37
7-May	31	29	30	31	30	30	33	32	31	33	30	28	32	34	41	35	32	34	34	28	16	12	17	20	41
8-May	16	12	14	10	17	39	29	27	18	85	72	54	33	38	60	39	40	31	32	27	23	24	22	20	85
9-May	27	20	21	19	30	30	26	37	38	40	43	44	42	46	40	44	44	29	30	27	28	27	20	24	46
10-May	25	26	26	22	30	30	37	44	92	78	48	46	44	46	60	53	51	64	40	25	13	14	17	23	92
11-May	33	31	32	34	28	25	46	45	40	43	54	52	77	42	71	48	48	70	53	57	20	20	25	68	77
12-May	56	37	9	10	12	36	23	27	24	26	28	28	27	26	26	26	23	23	25	31	38	34	22	21	56
13-May	21	15	17	18	19	21	27	33	49	52	55	46	46	62	83	39	33	42	35	62	28	35	32	23	83
14-May	25	25	24	24	28	27	29	32	34	33	41	49	43	51	67	38	33	24	25	33	28	26	30	29	67
15-May	29	30	33	32	35	31	30	29	32	35	37	40	36	37	33	37	41	37	34	22	18	25	19	22	41
16-May	29	23	19	18	28	24	40	58	53	52	40	38	54	48	44	61	42	36	35	24	23	26	23	24	61
17-May	23	25	20	22	28	29	38	43	37	55	59	49	42	42	45	44	49	51	41	36	34	29	37	29	59
18-May	28	44	42	38	37	34	33	44	47	45	46	44	44	44	52	53	45	39	36	47	35	30	30	34	53
19-May	38	34	33	40	35	34	39	44	45	44	46	43	47	52	42	40	40	39	39	40	36	34	34	30	52
20-May	35	31	30	35	29	44	45	39	40	45	42	43	41	39	39	41	42	42	35	37	35	40	47	34	47
21-May	39	30	25	26	30	29	32	38	48	48	43	47	53	48	44	37	53	61	32	37	31	32	37	41	61
22-May	30	27	37	35	30	35	37	40	42	39	50	45	41	32	40	40	43	45	36	47	42	46	33	37	50
23-May	33	33	36	37	29	39	38	40	41	44	48	49	47	41	49	44	41	39	47	41	32	29	26	30	49
24-May	31	30	24	42	31	36	40	38	48	47	46	43	40	42	45	44	43	46	44	46	45	46	42	34	48
25-May	36	31	38	39	37	43	39	42	43	46	47	47	45	46	45	46	46	46	51	50	50	56	53	48	56
26-May	40	42	38	41	35	36	38	39	45	45	45	42	45	46	44	43	47	46	46	57	38	55	89	41	89
27-May	60	32	41	26	29	34	37	53	61	61	51	69	55	60	48	59	49	45	46	42	37	41	38	37	69
28-May	40	36	25	19	25	26	26	26	41	54	53	54	47	63	52	58	58	41	35	27	21	24	27	27	63
29-May	28	30	30	33	32	37	40	45	49	48	48	50	49	50	45	47	49	49	40	46	52	50	35	43	52
30-May	44	38	41	39	47	46	37	41	40	46	50	58	72	70	55	62	60	44	37	32	27	23	23	25	72
31-May	27	27	26	61	34	68	42	55	35	48	44	44	75	101	107	50	93	29	33	35	45	43	55	57	107
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - May 2025

Maximum Speed: 27 km/h on May 4 03:00										Maximum Daily Speed Average: 19.5 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 31 14:00										Minimum Daily Speed Average: 2.9 km/h on May 31										Hours of Data: 744						
Maximum Diurnal Speed Average: 6.5 km/h at hour 6										Minimum Diurnal Speed Average: 2.5 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 4.5 km/h 203.6 deg										Percentiles: P ₁ = 3 P ₁₀ = 7 Q ₁ = 9 Median = 11 Q ₃ = 15 P ₉₀ = 19 P ₉₉ = 25										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N9	N9	N7	N7	N3	NW3	N4	N2	SSW2	WNW3	NW3	WSW5	WSW10	WSW10	SW12	SW14	SW14	SW14	SSW11	S9	SSE11	S14	S16	SSW16	SW4.6	S16
2-May	SSW17	SSW18	SSW19	SW19	SW17	WSW15	W17	WNW13	NW11	NW12	NW15	NW14	NW16	NW12	NW10	WNW9	NW10	NW8	NW7	N5	E5	SE7	SSE8	SSE10	W6.7	SSW19
3-May	S12	SSW12	SSW13	SSW15	SSW15	SSW15	SSW14	SSW14	SW10	WSW10	WNW8	WNW9	WNW12	WNW12	W11	W13	WNW11	NW9	NNW7	NNW13	NNW17	NNW19	NNW17	NNW18	W7.2	NNW19
4-May	NW16	NW24	NW27	NW24	NW21	WNW15	NW8	W11	WNW12	NNW11	NNW13	NNW17	NNW15	NW17	NW14	NNW13	NW13	WNW18	WNW8	W9	WSW11	SW13	WSW15	W19	NW13.5	NW27
5-May	W17	W19	WNW16	WNW16	WNW17	WNW14	NW16	NW17	NW18	NW17	NW17	NW19	NW18	NW16	NW16	NW15	NW14	NNW13	NNW11	NNE6	E7	SE8	SSE9	SSE12	WNW11.0	W19
6-May	SSE15	S15	S16	S17	S16	S21	S21	S19	SSW20	SSW21	SSW21	S23	S25	S24	SSW23	S22	S24	S22	S23	S18	S16	SSE16	S18	S19	S19.5	S25
7-May	S23	S25	S26	S24	S23	S25	S25	S24	S24	SSW23	SSW26	SSW26	SSW21	SW17	WSW15	WSW11	W13	WNW11	WNW8	NNW11	NNW9	NW8	WNW8	NW10	SSW13.1	SSW26
8-May	NW10	NW10	NW11	NW10	NW11	NW13	NNW12	NNW18	NW10	WNW3	W4	WNW8	NW12	WNW11	WNW9	NNW7	WNW10	NW13	NW13	WNW10	WNW9	W10	W10	WNW10	NW9.6	NNW18
9-May	WNW9	W8	WSW9	SW10	WSW12	WSW12	SW11	WSW9	W13	WSW13	WSW16	WSW17	WSW15	WSW15	SW15	WSW12	WSW14	SSW15	SW13	SSW12	SSW9	SSW10	SSW8	S9	WSW10.9	WSW17
10-May	S10	S12	S12	SSW14	SW13	WSW12	WSW10	WNW7	NNW4	NW6	WNW9	WNW11	W12	WNW10	WSW8	W8	WNW8	WSW7	SW7	SW5	SSW5	S6	S6	SSE7	WSW6.3	SSW14
11-May	S9	SSW13	S13	S8	S13	SSW11	SSE5	ESE4	ESE7	SSE9	S10	SW8	SW7	NW10	SSE6	S8	NNW10	NNE5	NE7	ENE6	ESE10	ESE10	SE9	E6	SSE4.6	S13
12-May	NE5	NNE5	NNW7	NNW8	N8	NNW7	NNE9	NE12	NNE15	NE16	NE16	NE17	ENE18	NE19	ENE19	NE18	NE18	NE16	NNE12	N13	N11	N10	NNW10	NNW12	NNE11.2	ENE19
13-May	NNW10	NW10	NW10	NW11	NW10	WNW9	NW10	NW10	NNW8	N11	WNW11	NW11	NW10	N5	NW3	SW11	SSW12	SSW8	WSW5	N4	ESE6	SSE7	S11	SSW12	WNW4.8	SSW12
14-May	SSW13	SSW13	SSW14	SSW14	SSW17	S16	S17	SSW15	SSW15	SW14	SW14	W13	W18	WNW11	NNW8	SE12	ESE11	NE15	NE11	N9	N13	NNE16	N14	N15	SW3.4	W18
15-May	N14	N14	N13	N14	N13	N11	N10	N10	N10	N10	N11	N12	N14	NNE12	NNE12	NNE11	NE9	NE9	ENE10	NE8	NE6	ENE7	E9	E9	NNE9.8	N14
16-May	NNE7	NNE9	NE9	NE7	NE6	N5	NNE5	NE5	ENE8	NNE9	NE10	NNE10	ENE10	E11	ESE11	ESE8	E10	E10	E9	E10	E11	ESE11	SE11	SE10	ENE7.3	ESE11
17-May	SE11	SE9	SE10	SSE10	SSE11	SSE9	SSE7	S12	S13	S9	S9	SE10	SE13	SE12	SSE13	SE13	SE13	SE13	SE13	SSE10	SE9	SE9	SSE10	SE8	SSE10.3	SE13
18-May	SSE9	SSE9	S12	S11	SSE12	SSE11	SSE12	SSE11	SSE12	SSE15	SE16	SE16	SE15	SE13	SSE12	SSE12	SE12	ESE14	SE13	S11	S11	S11	S9	S9	SSE11.5	SE16
19-May	S11	S11	S12	S10	SSE11	S9	SSE10	S15	SSE14	SSE17	SSE15	SE14	SSE14	SSE13	SE14	SE14	SE15	SE11	SE10	SE11	SE10	SE10	SE9	SE9	SSE11.6	SSE17
20-May	SE8	SE8	SE7	SE8	SE9	SE9	SE8	SE9	SE10	SE11	SE10	SSE13	SE12	SE9	SE10	SE10	SSE11	SSE7	SE8	SE8	SE8	SSE7	S7	SSE7	SE8.8	SSE13
21-May	SSE8	SSE6	SE6	SE6	S6	S6	SSW7	SSW9	SSW6	SSW6	SSE6	S7	S7	ENE8	SE6	SE6	SE6	S4	SSE6	SSE8	SSE8	SSE9	S9	S7	SSE6.1	SSE9
22-May	SSW8	SSW9	SSE7	SSE8	SSE8	S8	S8	S9	S9	S9	S10	S12	S12	SSW10	S10	S13	S14	S11	SSW10	S11	SSE8	S9	S10	S9	S9.5	S14
23-May	SSE9	S9	SSE10	SSE9	SSE10	S10	SSE9	SSE8	SE6	SSW8	SSW6	S12	SSW16	S14	S15	S14	S13	SSW13	SSE10	S15	SSW13	SSW9	SSW9	SSW8	S10.1	SSW16
24-May	SSW8	S7	SE8	SSE9	S12	S10	S9	SSE9	SSE10	S15	S17	S17	S18	S20	S19	S19	S18	S19	S17	S15	S13	S13	S14	S14	S13.5	S20
25-May	S14	S14	S13	S13	S13	S13	S12	S15	S19	S19	SSE20	S18	SSE20	SSE20	SSE20	S18	S17	S16	SSE15	SSE13	SSE10	SSE12	SSE12	S11	S15.0	SSE20
26-May	S11	S11	S13	S15	S16	S19	S18	S18	S18	S20	S25	SSE24	SSE24	S22	S23	S24	S22	S21	S22	SSW15	WNW19	NNW9	SE1	WSW7	S15.4	S25
27-May	ESE4	SSE6	S6	WNW7	WNW9	WNW9	WNW7	NW7	NW8	NW10	WNW10	NW7	WNW11	W10	W11	W9	W12	WSW12	W12	W9	WSW9	W10	W10	W9	W7.4	W12
28-May	W11	W9	WSW8	WSW8	SW11	WSW11	SW10	SW7	SW8	SW8	SSW10	SW11	SSW11	SW9	SW10	SSW10	SSW10	SSW10	SW9	SW7	SSW7	SSW9	SSW12	SSW11	SW8.9	SSW12
29-May	SSW10	SSW11	S12	S12	S11	S12	S11	S16	SSE15	S17	S19	S21	SSE20	SSE21	S21	SSE21	S19	S18	S16	S11	S9	WNW20	WNW20	WNW19	S12.4	SSE21
30-May	WNW17	NW20	NW16	W13	W13	W12	W14	WNW14	NW13	NW13	NW13	NW13	NW11	NW9	WNW9	W8	WSW6	SW9	SW9	WSW8	SW9	SSW8	SSW10	SSW12	W9.2	NW20
31-May	SSW15	SSW16	SW14	WSW8	W9	W5	S1	ENE4	E7	E7	E10	E9	NNE3	S0	S4	SW9	N2	NNE13	N14	N19	NNW21	NW20	NNW16	NW13	NNW2.9	NNW21
SSW5.0SSW5.1SSW5.3SSW5.7 SW6.3 SW6.5SSW4.9SSW4.6SSW4.1SSW4.4SSW4.5SSW4.4 SW4.3SSW4.2SSW5.3SSW6.0SSW4.6SSW4.0 S3.7 S2.7 S2.5SSW3.1SSW4.3SSW4.3																								Diurnal Average		
S23 S25 NW27 NW24 S23 S25 S25 S24 S24 SSW23 SSW26 SSW26 S25 SSW24 SSE23 S24 S24 S22 S23 N19 NNW21 WNW20 WNW20 S19																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

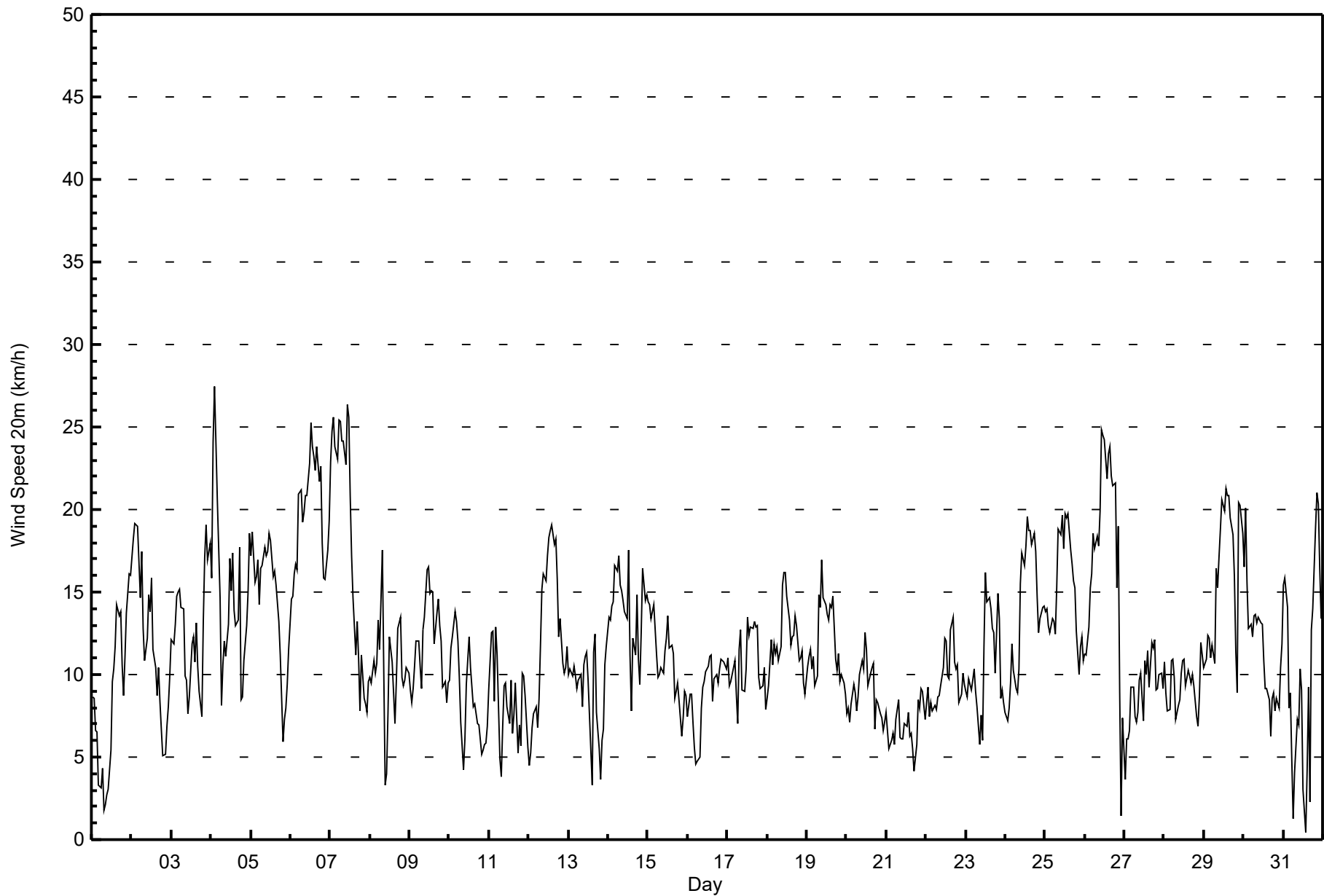
Wind Speed 20m (WS20) - km/h
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 29 14:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 0 km/h on May 10 23:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	2	3	1	1	1	1	2	2	3	3	4	4	5	5	5	4	4	2	2	3	3	3	5
2-May	3	4	4	5	4	4	5	4	3	4	5	5	5	5	5	4	4	4	3	1	1	1	1	2	5
3-May	2	2	2	3	3	3	3	4	3	4	4	3	5	5	5	5	5	3	2	5	5	6	6	6	6
4-May	5	7	8	7	6	5	4	3	4	4	5	6	5	5	5	5	4	8	3	2	3	3	4	6	8
5-May	5	5	4	4	5	4	6	6	5	6	6	6	6	7	6	6	5	5	4	2	1	1	1	2	7
6-May	3	3	3	4	4	4	6	6	6	7	7	7	8	7	8	8	8	7	8	6	4	4	5	6	8
7-May	7	7	7	7	6	7	7	8	8	8	9	7	7	6	5	3	4	3	3	3	2	1	2	2	9
8-May	2	1	2	2	3	5	4	6	3	2	3	3	4	5	6	2	4	6	4	3	2	2	2	2	6
9-May	2	1	2	2	3	3	2	3	4	5	6	7	6	6	5	5	5	5	4	4	3	2	1	1	7
10-May	2	3	2	3	3	3	3	3	2	4	4	4	4	4	4	4	4	3	2	1	1	1	0	1	4
11-May	3	4	4	3	4	3	2	2	2	3	4	4	4	4	4	3	4	3	3	2	2	2	2	2	4
12-May	1	1	1	1	1	2	3	4	5	5	5	6	5	6	5	5	6	5	4	4	3	3	3	3	6
13-May	2	2	2	2	2	2	3	3	3	4	4	5	4	3	4	5	4	3	3	2	1	1	2	2	5
14-May	3	3	3	3	4	4	5	5	5	4	5	6	6	5	4	4	3	4	3	3	4	5	5	5	6
15-May	5	5	5	5	4	4	3	4	4	3	4	4	4	4	4	4	3	3	3	2	1	2	2	2	5
16-May	1	2	2	2	1	1	1	2	3	4	4	3	4	5	4	4	4	3	3	3	2	3	3	2	5
17-May	2	2	2	2	2	2	2	5	4	3	3	5	5	5	5	5	5	4	4	3	2	2	3	2	5
18-May	2	3	4	3	3	3	3	4	4	6	6	6	5	5	4	5	4	4	4	4	3	3	2	2	6
19-May	2	3	3	3	3	3	3	5	5	6	5	5	5	6	5	6	5	3	4	3	3	3	3	2	6
20-May	2	2	2	2	3	3	3	3	3	4	3	4	3	3	3	4	4	3	3	2	2	2	2	2	4
21-May	3	1	1	1	1	1	2	3	2	2	2	2	3	3	2	2	2	3	2	3	2	2	2	2	3
22-May	2	2	2	2	2	2	2	3	3	3	4	4	4	3	4	4	4	4	4	4	2	2	2	2	4
23-May	2	2	2	2	2	3	3	3	2	3	2	5	7	6	5	5	5	5	5	5	4	3	2	2	7
24-May	2	1	2	2	3	2	2	3	4	5	7	6	7	7	6	6	7	6	6	5	3	4	4	4	7
25-May	3	3	3	3	4	4	4	6	7	7	7	6	6	7	7	7	6	6	5	4	3	4	4	3	7
26-May	2	2	3	4	4	5	5	6	6	7	8	8	8	8	8	8	8	7	8	7	8	4	2	3	8
27-May	2	1	1	2	2	2	2	2	3	4	4	3	5	5	4	4	5	4	5	4	3	3	3	3	5
28-May	3	2	1	1	2	2	2	2	3	3	5	5	4	5	5	4	4	4	3	2	1	2	3	2	5
29-May	2	2	3	2	2	3	4	6	5	6	6	8	8	9	7	7	7	6	6	5	2	8	6	7	9
30-May	7	7	5	4	5	4	4	4	4	5	5	5	4	4	4	4	3	3	3	2	2	1	2	3	7
31-May	3	4	3	3	2	2	1	2	2	2	3	4	2	3	5	4	3	5	5	7	7	7	6	5	7
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Stony Mountain - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Stony Mountain - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	37	4.97	4.97
6 - 11	370	49.73	54.70
12 - 19	282	37.90	92.61
20 - 28	55	7.39	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Stony Mountain - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	6	5	2	1	1	2	1	1	4	2	1	2	2	2	3	2	37
6 - 11	15	7	10	6	14	8	42	51	48	36	20	18	18	31	31	15	370
12 - 19	13	7	8	2	0	1	18	22	76	34	12	15	16	14	29	15	282
20 - 28	0	0	0	0	0	0	0	12	25	9	0	0	0	2	6	1	55
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	19	20	9	15	11	61	86	153	81	33	35	36	49	69	33	744

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wind Speed 20m (WS20) - km/h

Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - May 2025

Direction of Maximum Speed: 319 deg on May 4 03:00 Direction of Maximum Daily Speed Average: 186.0 deg on May 6																					Hours in Service: 744				
Direction of Minimum Speed: 189 deg on May 31 14:00 Direction of Minimum Daily Speed Average: 2.9 deg on May 31																					Hours of Data: 744				
Monthly Average Direction: 203.6 deg																					Hours of Missing Data: 0				
																					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	350	8	353	7	353	317	11	5	212	294	305	254	252	244	215	217	227	217	201	176	167	186	190	197	222.4
2-May	203	205	212	220	227	256	279	292	308	324	326	318	323	316	319	292	312	312	315	349	85	134	155	159	270.7
3-May	179	197	199	199	209	211	205	212	231	247	300	299	298	284	272	277	294	310	329	327	331	333	348	338	270.2
4-May	322	322	319	307	306	296	321	274	295	330	341	333	343	315	323	337	325	288	298	278	253	236	258	267	306.3
5-May	261	277	283	284	293	299	309	305	311	306	310	312	316	317	309	312	319	328	343	27	89	125	161	166	303.4
6-May	167	186	187	190	184	186	184	185	195	202	199	190	190	191	192	188	189	185	183	184	171	166	172	175	186.0
7-May	177	179	178	175	176	178	176	183	185	192	199	207	204	220	239	254	280	285	298	330	334	321	301	304	202.8
8-May	312	322	324	325	308	311	339	327	319	289	274	284	316	287	286	331	296	307	308	286	288	280	279	284	305.8
9-May	288	275	242	231	257	257	236	247	263	245	256	245	254	247	236	241	237	200	214	213	200	195	200	186	237.1
10-May	175	175	186	210	228	242	256	293	330	321	286	283	270	283	257	261	284	241	225	214	194	191	172	155	237.6
11-May	182	194	185	169	184	200	156	123	123	147	187	221	228	308	168	177	334	21	47	78	108	122	135	99	165.0
12-May	44	17	335	333	350	347	32	34	32	46	42	44	57	53	57	51	41	42	23	8	356	352	344	337	28.6
13-May	336	325	323	318	311	302	305	321	327	354	303	314	326	349	316	224	211	211	240	357	117	162	186	193	295.6
14-May	193	196	197	195	192	191	190	200	202	219	222	275	278	288	343	133	114	54	43	6	8	13	9	7	215.4
15-May	7	7	2	1	358	6	4	8	6	3	3	360	8	18	30	33	40	46	59	56	52	64	88	79	20.6
16-May	29	29	40	44	44	8	26	55	57	32	40	30	65	86	103	107	83	83	83	86	99	118	134	131	72.2
17-May	126	144	128	149	157	152	154	169	178	184	170	140	125	139	152	142	145	146	143	154	145	144	154	137	148.6
18-May	150	161	171	172	168	166	166	157	154	159	140	133	145	145	151	147	127	122	140	173	178	184	186	169	155.2
19-May	178	180	180	169	167	177	155	170	168	161	152	141	147	153	144	143	133	136	141	137	139	138	144	135	153.6
20-May	131	131	128	137	135	137	146	144	138	142	145	147	146	133	142	144	154	155	133	137	145	160	175	150	142.9
21-May	167	151	126	146	190	178	193	199	195	192	164	191	176	77	138	145	142	174	151	153	160	160	173	174	164.7
22-May	194	194	168	167	159	170	177	174	182	183	172	179	191	203	191	183	171	179	196	182	164	171	185	171	179.9
23-May	168	172	166	168	155	173	161	155	135	199	201	189	195	188	178	184	189	209	168	180	202	203	206	196	182.5
24-May	200	178	138	160	191	186	173	167	157	176	181	186	186	178	179	183	175	171	177	174	172	172	177	184	176.8
25-May	186	187	184	180	180	177	177	180	176	171	161	175	167	168	166	173	181	173	165	166	163	163	163	169	172.7
26-May	173	176	176	178	178	181	176	177	174	175	175	167	167	174	169	177	169	169	169	194	290	335	144	239	177.9
27-May	108	162	186	296	296	289	302	320	317	311	303	307	303	281	270	273	263	250	260	266	252	260	266	267	277.3
28-May	271	269	258	238	234	239	235	218	226	227	212	216	204	214	235	211	208	209	214	225	211	198	196	194	222.5
29-May	193	192	191	189	186	181	177	173	167	176	189	169	168	167	169	168	171	171	187	179	173	287	299	295	186.5
30-May	286	305	309	273	273	261	278	298	305	316	310	317	325	314	282	279	244	226	218	242	234	200	201	199	279.0
31-May	207	208	214	243	276	271	183	75	96	91	85	93	18	189	171	233	352	18	9	6	341	326	341	326	329.7
202.5 210.4 207.2 210.4 215.2 215.9 208.1 206.3 200.9 203.4 207.1 212.3 214.2 213.0 196.8 193.8 195.8 191.6 183.1 186.6 186.5 194.8 196.8 202.2 Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

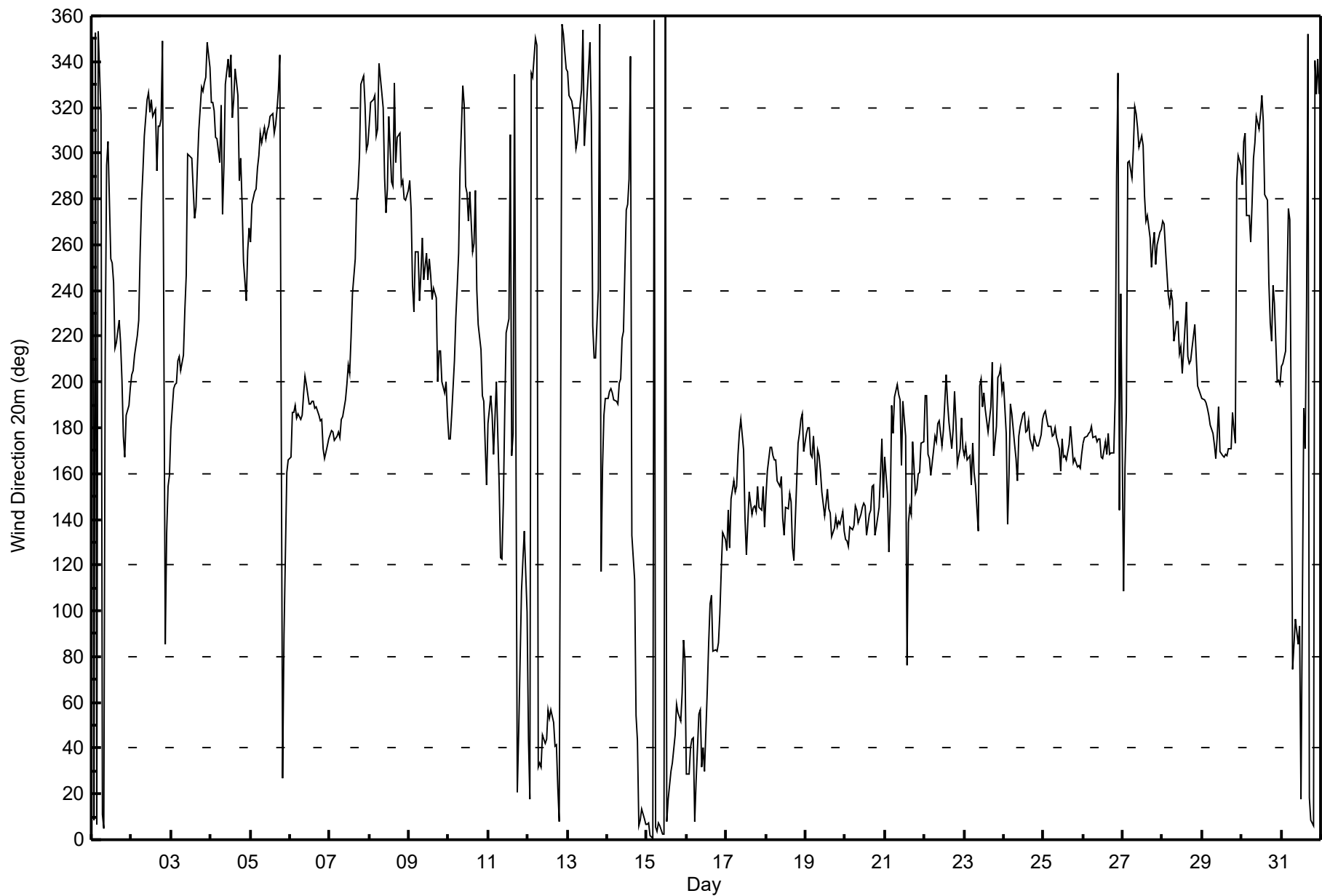
Stony Mountain - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 99 deg on May 31 14:00																			Hours of Data: 744							
Minimum Value: 8 deg on May 12 03:00																			Hours of Missing Data: 0							
Percentiles: P ₁ = 12 P ₁₀ = 16 Q ₁ = 20 Median = 25 Q ₃ = 31 P ₉₀ = 41 P ₉₉ = 78																			Hours of Calibration: 0							
																			Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	21	23	20	27	28	45	26	79	83	87	93	71	50	48	43	34	34	28	24	19	14	13	14	13		93
2-May	15	16	16	18	16	21	24	20	26	28	28	35	27	40	49	59	32	41	35	21	24	17	11	17		59
3-May	16	12	12	14	14	15	15	21	32	39	52	49	44	48	45	38	46	29	17	18	18	20	22	20		52
4-May	21	19	19	20	19	21	32	23	31	22	27	24	28	25	26	24	26	23	22	23	19	16	22	21		32
5-May	23	20	19	19	19	19	22	23	23	27	26	26	28	32	27	28	30	26	26	26	23	14	15	13		32
6-May	15	14	15	16	16	17	19	21	22	22	26	26	27	26	28	27	23	25	24	22	21	19	21	21		28
7-May	22	21	20	20	20	20	22	23	24	26	24	24	26	27	32	27	26	27	24	19	15	13	12	16		32
8-May	15	12	13	11	19	31	20	19	15	78	64	41	23	29	46	22	33	24	24	19	17	16	17	15		78
9-May	18	14	15	14	21	21	19	26	31	37	36	36	36	39	33	39	33	23	25	22	22	18	13	14		39
10-May	14	16	17	16	22	21	27	36	73	72	47	37	31	34	51	44	46	55	32	18	9	9	12	14		73
11-May	21	23	24	24	21	20	41	37	29	28	39	45	66	40	66	34	46	61	54	55	16	11	15	29		66
12-May	24	30	8	11	14	32	22	25	23	23	27	24	24	23	22	22	22	21	24	22	22	21	19	18		32
13-May	17	15	14	15	15	16	21	21	39	40	41	36	31	53	77	30	28	34	24	52	20	29	16	16		77
14-May	16	18	16	16	18	20	21	25	28	26	33	40	30	44	59	27	28	20	22	23	22	23	23	23		59
15-May	23	23	24	23	24	24	22	24	25	24	27	27	26	32	29	33	36	35	26	18	13	19	14	16		36
16-May	23	17	15	14	20	17	30	47	43	42	35	31	46	44	35	51	36	27	28	17	17	19	17	15		51
17-May	15	17	14	14	14	17	28	29	27	44	47	41	32	32	33	34	36	34	30	23	19	17	20	21		47
18-May	16	21	26	24	21	20	22	29	35	32	32	30	32	29	36	36	30	25	26	27	22	18	17	16		36
19-May	17	19	22	21	19	22	26	27	28	30	32	30	30	35	29	27	26	24	24	25	22	23	24	21		35
20-May	20	21	21	21	21	28	26	27	25	27	25	28	27	27	26	28	27	27	25	24	24	25	40	23		40
21-May	24	20	18	18	19	16	20	25	32	37	31	39	40	37	33	26	34	49	27	23	21	19	21	23		49
22-May	17	18	20	18	19	22	22	27	28	29	35	31	26	25	29	29	30	29	29	28	19	21	18	17		35
23-May	17	16	16	17	17	21	25	28	28	39	41	36	31	32	35	31	30	29	28	27	22	22	17	19		41
24-May	16	14	15	24	19	21	20	25	32	30	31	31	27	29	31	30	30	30	28	27	24	24	23	23		32
25-May	20	19	20	20	22	24	27	29	30	33	30	34	30	32	30	33	30	31	30	29	23	24	26	24		34
26-May	18	18	17	20	20	21	24	25	28	29	28	29	31	30	27	30	28	27	44	27	30	78	27		78	
27-May	57	15	31	20	18	21	23	27	34	42	37	53	38	46	34	44	35	32	33	27	24	26	24	24		57
28-May	24	20	18	19	16	18	20	20	31	43	43	44	38	52	43	45	42	32	27	19	15	15	17	17		52
29-May	16	16	18	17	16	20	24	28	29	32	31	32	32	32	30	29	30	30	27	28	22	44	24	28		44
30-May	32	26	23	25	30	30	25	23	23	29	33	33	47	43	44	44	51	33	26	19	15	14	16	15		51
31-May	18	18	18	49	17	39	72	28	23	27	25	28	64	99	98	36	92	24	27	28	27	26	32	35		99
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Stony Mountain - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS19
FIREBAG
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	36	38	99.73	20.5	0	2.4	0
H2S (ppb) Average	705	37	39	99.73	5.3	0	0.4	0
THC (ppm) Average	706	36	38	99.73	2.7	-	2.4	-
NO2 (ppb) Average	706	36	38	99.73	18.7	0	5.1	-
NO (ppb) Average	706	36	38	99.73	14.5	-	1.5	-
NOX (ppb) Average	706	36	38	99.73	32.7	-	5.3	-
Temperature 2 m (C) Average	744	0	0	100	29.8	-	24.1	-
Relative Humidity (%) Average	744	0	0	100	96.7	-	85	-
Wind Speed 10 m (km/h) Average	744	0	0	100	37	-	25	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.55	1.6	-	0	0	0	0.1	0.4	1.3	20.5
H2S (ppb) Average	705	0.11	0.3	-	0	0	0	0.1	0.1	0.2	5.3
THC (ppm) Average	706	2.21	0.1	-	2.1	2.1	2.2	2.2	2.2	2.3	2.7
NO2 (ppb) Average	706	1.5	1.8	-	0	0.3	0.6	0.9	1.6	3.3	18.7
NO (ppb) Average	706	0.21	0.7	-	0	0	0	0.1	0.2	0.4	14.5
NOX (ppb) Average	706	1.71	2.2	-	0	0.4	0.7	1.1	1.9	3.5	32.7
Temperature 2 m (C) Average	744	12.4	6.5	-	-1.9	4.2	8.1	12.2	16.4	21.1	29.8
Relative Humidity (%) Average	744	51.68	21.3	-	16.5	26.5	34	48.3	67	86.1	96.7
Wind Speed 10 m (km/h) Average	744	16.8	7	-	2	9	12	17	21	25	37
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	03 May 2025 13:00	03 May 2025 13:00	1	Station power failure
ALL GASEOUS ANALYZERS (except for NO2 analyzer)	21 May 2025 14:00	21 May 2025 14:00	1	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

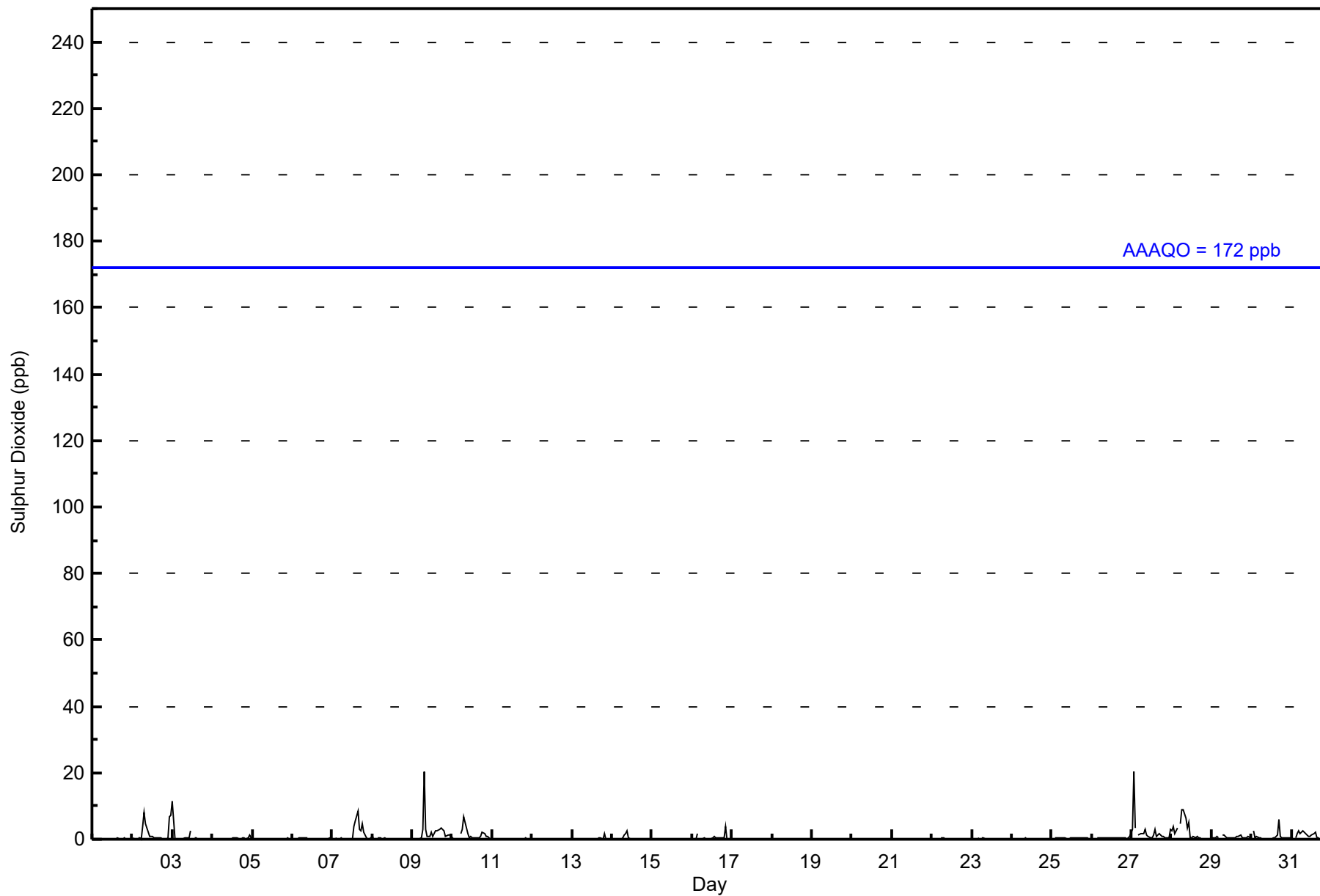
Firebag - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 20.5 ppb on May 27 02:00 Maximum Daily Average: 2.4 ppb on May 9																			Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7							
Minimum Value: 0.0 ppb on May 1 01:00 Minimum Daily Average: 0.0 ppb on May 20 Maximum Diurnal Average: 1.8 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 22 Monthly Average: 0.55 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.3 P ₉₉ = 7.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
2-May	0.1	0.3	Z	0.4	0.2	0.2	3.9	8.1	4.5	2.0	0.8	1.0	0.8	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.6	6.8	7.1	1.7	8.1
3-May	11.5	0.1	0.0	Z	0.0	0.0	0.1	0.4	0.5	0.3	0.3	2.6	PF	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.8	11.5
4-May	0.0	0.0	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.3	0.2	0.1	0.6	0.2	0.2	0.2	1.1	0.4	0.2	1.1
5-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.6
6-May	Z	0.0	0.0	0.2	0.3	0.4	0.4	0.3	0.4	0.4	C	C	C	C	C	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.2	0.4
7-May	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	3.7	5.5	8.5	3.0	2.5	4.8	2.3	0.3	0.1	0.1	0.2	1.4	8.5
8-May	0.9	0.5	Z	0.3	0.2	0.3	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.9
9-May	0.0	0.0	0.0	Z	0.1	0.4	2.9	20.3	2.8	0.8	0.9	2.3	0.8	1.8	2.6	2.4	3.1	3.4	2.9	2.4	0.6	1.1	1.4	1.3	2.4	20.3
10-May	0.3	0.1	0.1	0.0	Z	1.6	2.8	6.9	3.4	1.9	0.3	0.8	0.6	0.5	0.5	0.3	0.5	0.9	2.1	1.6	1.0	0.9	0.5	0.2	1.2	6.9
11-May	0.2	0.2	0.1	0.1	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.4
12-May	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	1.7	0.1	0.2	0.1	0.0	0.1	1.7
14-May	0.0	0.0	Z	0.1	0.2	0.2	0.3	1.1	1.5	2.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.4
15-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
16-May	0.0	0.1	0.2	1.7	Z	0.1	0.1	0.3	0.1	0.0	0.0	0.1	0.4	0.9	0.3	0.6	0.6	0.5	0.5	0.6	3.7	0.1	0.0	0.0	0.5	3.7
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
19-May	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
20-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-May	0.0	0.0	0.0	0.1	Z	0.3	0.5	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.5
23-May	0.2	0.1	0.1	0.1	0.3	Z	0.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
24-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2
25-May	0.2	Z	0.5	0.4	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.3	0.6
26-May	0.2	0.1	Z	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.5	0.4	0.1	0.5	1.1	0.4	1.1
27-May	2.9	20.5	3.6	Z	1.3	1.9	1.7	1.7	2.9	1.2	0.9	0.3	0.3	1.2	2.9	0.7	1.6	1.5	0.8	0.7	0.3	0.4	0.6	3.1	2.3	20.5
28-May	2.6	4.0	1.9	3.3	Z	4.7	8.8	8.8	6.5	3.2	5.0	0.6	0.6	0.8	0.5	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	2.3	8.8
29-May	0.3	0.4	0.5	0.7	0.6	Z	1.2	1.1	0.8	0.4	0.3	0.2	0.2	0.5	0.6	0.6	0.9	1.2	0.4	0.3	0.3	0.2	0.9	0.2	0.6	1.2
30-May	Z	2.4	0.6	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.2	5.7	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.7	5.7
31-May	0.5	Z	0.5	1.8	2.6	1.6	2.3	2.7	1.7	1.3	1.0	0.7	1.3	1.6	2.2	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	703	99.58	99.58
11 - 20	2	0.28	99.86
21 - 60	1	0.14	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	41	60	17	10	6	16	49	103	162	48	52	44	29	18	19	29	703
11 - 20	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
21 - 60	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	60	17	10	6	17	49	103	162	48	52	46	29	18	19	29	706

Total Number of Valid Hours: 706

Total Number of Hours: 744



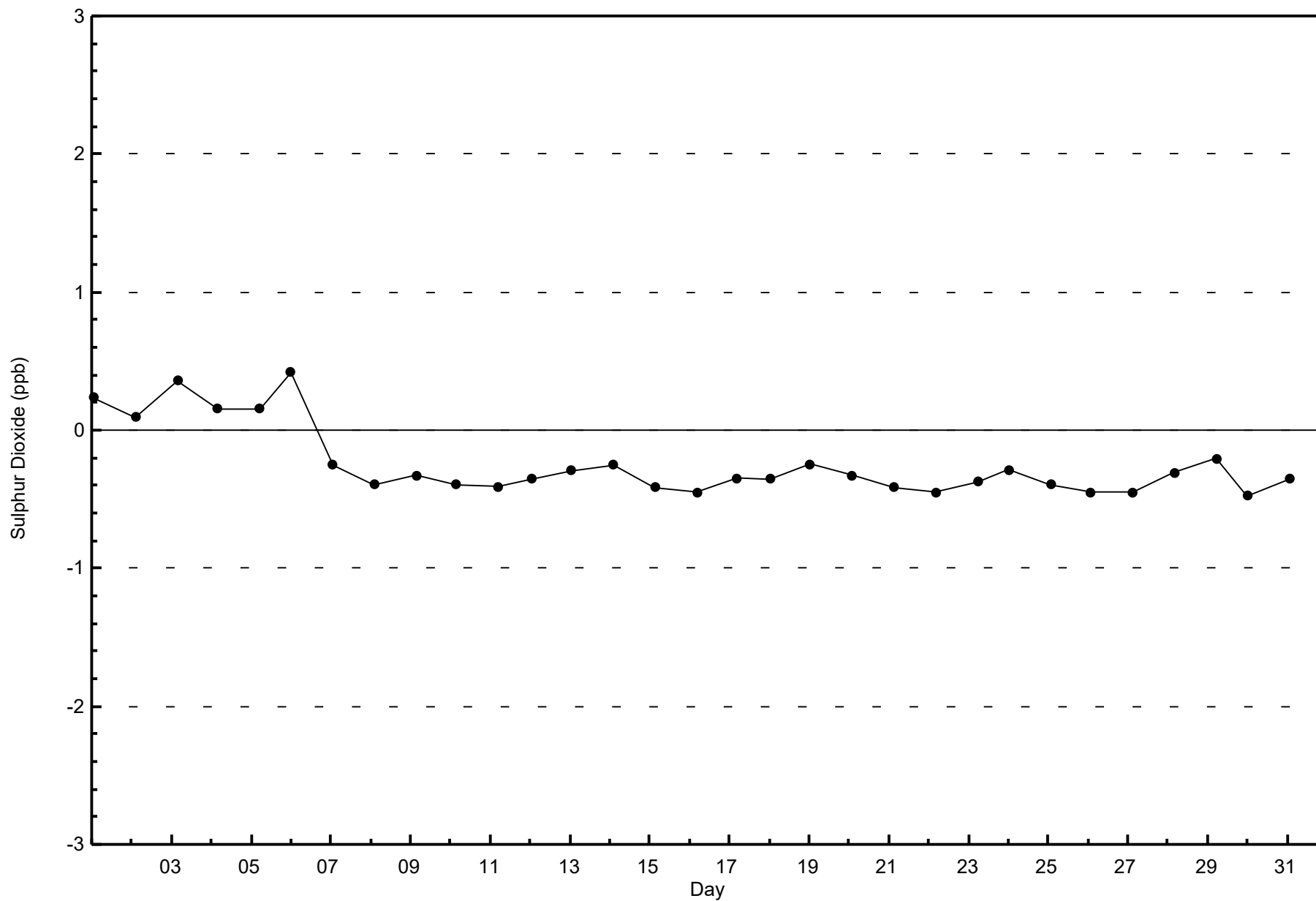
Sulphur Dioxide (SO₂) - ppb
Firebag





Wood Buffalo Environmental Association
Zero Responses

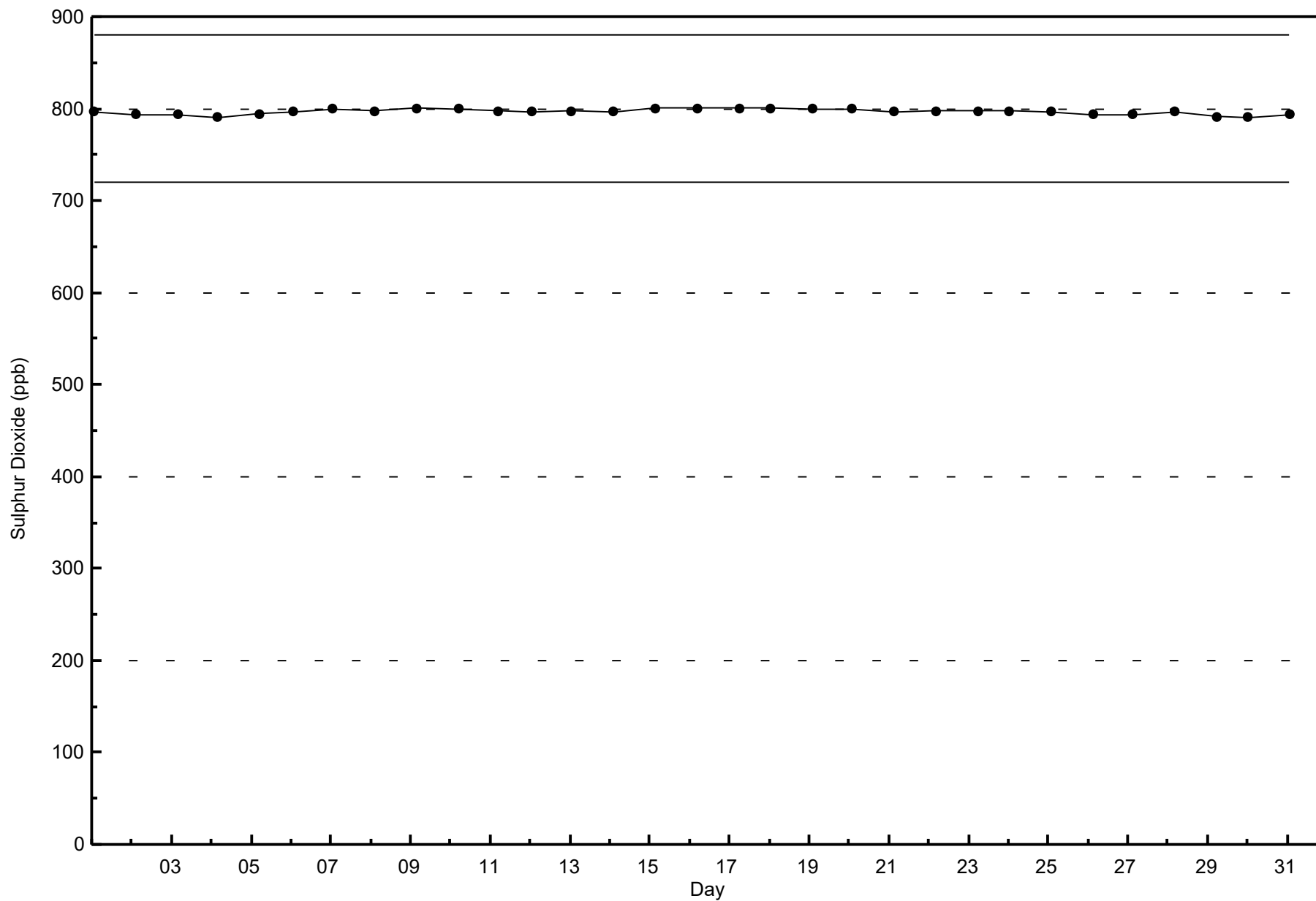
Sulphur Dioxide (SO₂) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

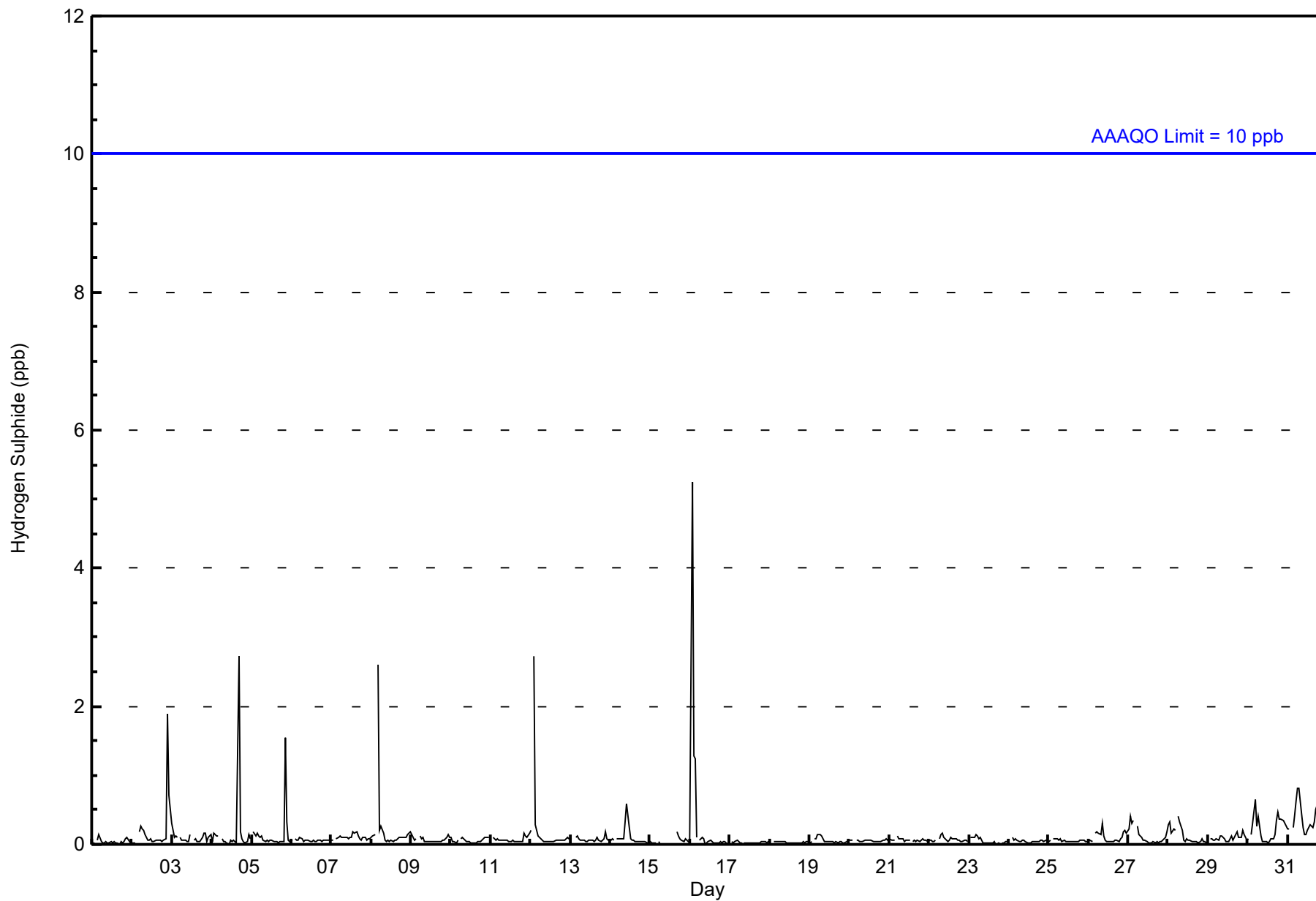
Firebag - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.3 ppb on May 16 02:00 Maximum Daily Average: 0.4 ppb on May 16																			Hours in Service: 744 Hours of Data: 705							
Minimum Value: 0.0 ppb on May 15 07:00 Minimum Daily Average: 0.0 ppb on May 17 Maximum Diurnal Average: 0.3 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 13 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 1.2																			Hours of Missing Data: 39 Hours of Calibration: 37 Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2-May	0.0	0.0	0.0	Z	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	1.9	0.7	0.5	0.2
3-May	0.3	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	PF	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.1
4-May	0.0	0.2	0.2	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	2.7	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2
5-May	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.3	0.1	0.0	0.1	1.6
6-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8-May	0.1	0.1	0.1	Z	2.6	0.2	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	2.6
9-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10-May	0.1	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
11-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.2
12-May	0.2	Z	2.7	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1
14-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	--	
16-May	0.1	5.3	1.3	1.2	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
17-May	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
21-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	M	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1
22-May	0.1	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2
23-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1
25-May	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
26-May	0.1	0.1	0.0	Z	0.2	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.3
27-May	0.2	0.4	0.3	0.3	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.4
28-May	0.3	0.3	0.2	0.2	0.2	Z	0.4	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4
29-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
30-May	0.1	Z	0.1	0.3	0.7	0.3	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.7
31-May	0.2	0.2	Z	0.2	0.4	0.6	0.8	0.8	0.4	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.4	0.8
0.1 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.1																										Diurnal Average
0.3 5.3 2.7 1.2 2.6 0.6 0.8 0.8 0.4 0.3 0.6 0.2 0.2 0.3 0.3 0.2 2.7 0.5 0.6 0.5 1.6 1.9 0.7 0.5 0.5																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	701	99.43	99.43
3 - 4	3	0.43	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	41	55	17	9	3	17	49	107	160	49	55	47	28	18	19	27	701
3 - 4	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	3
5 - 7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	55	17	10	5	17	49	107	160	49	55	47	29	18	19	27	705

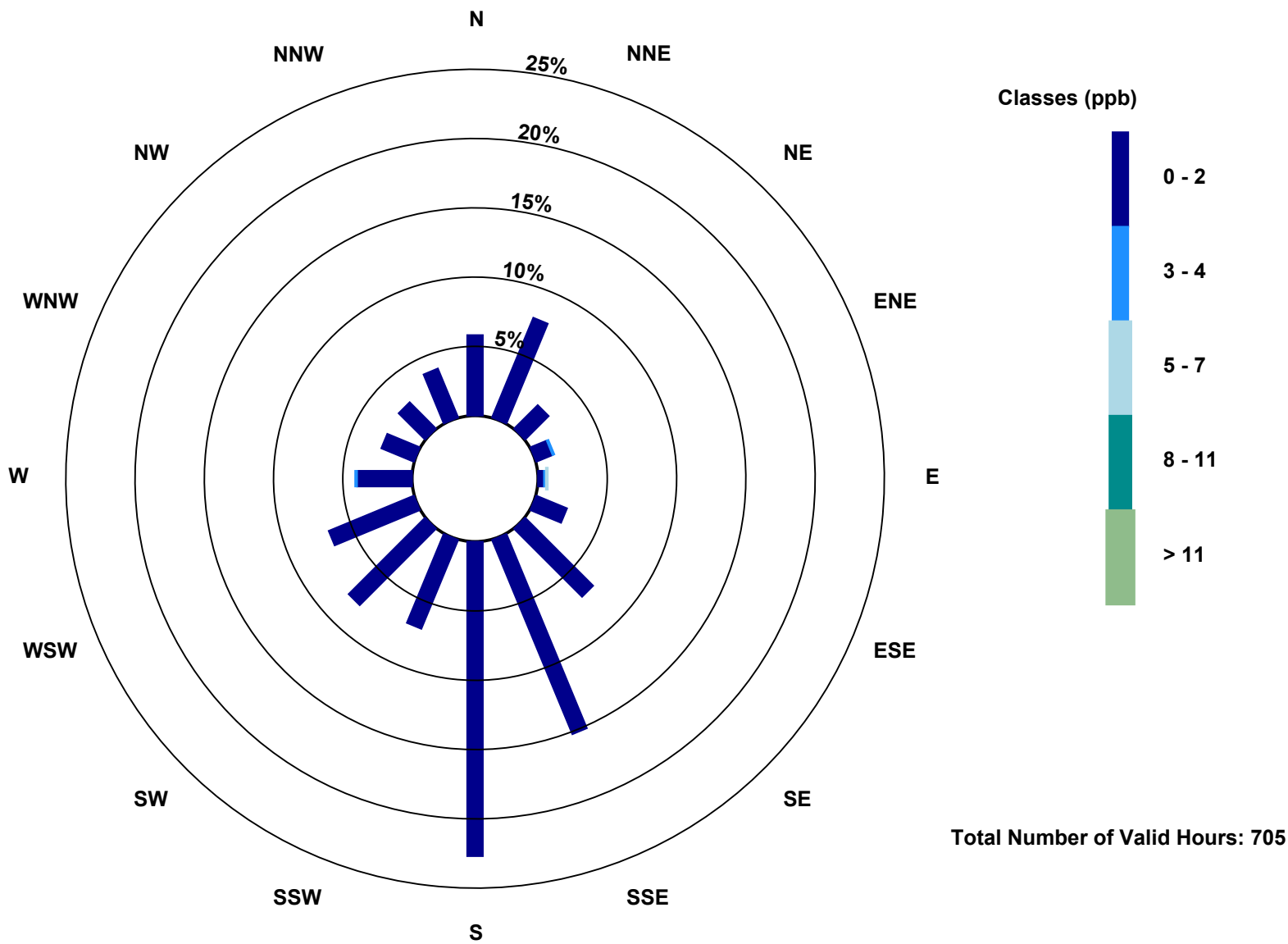
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

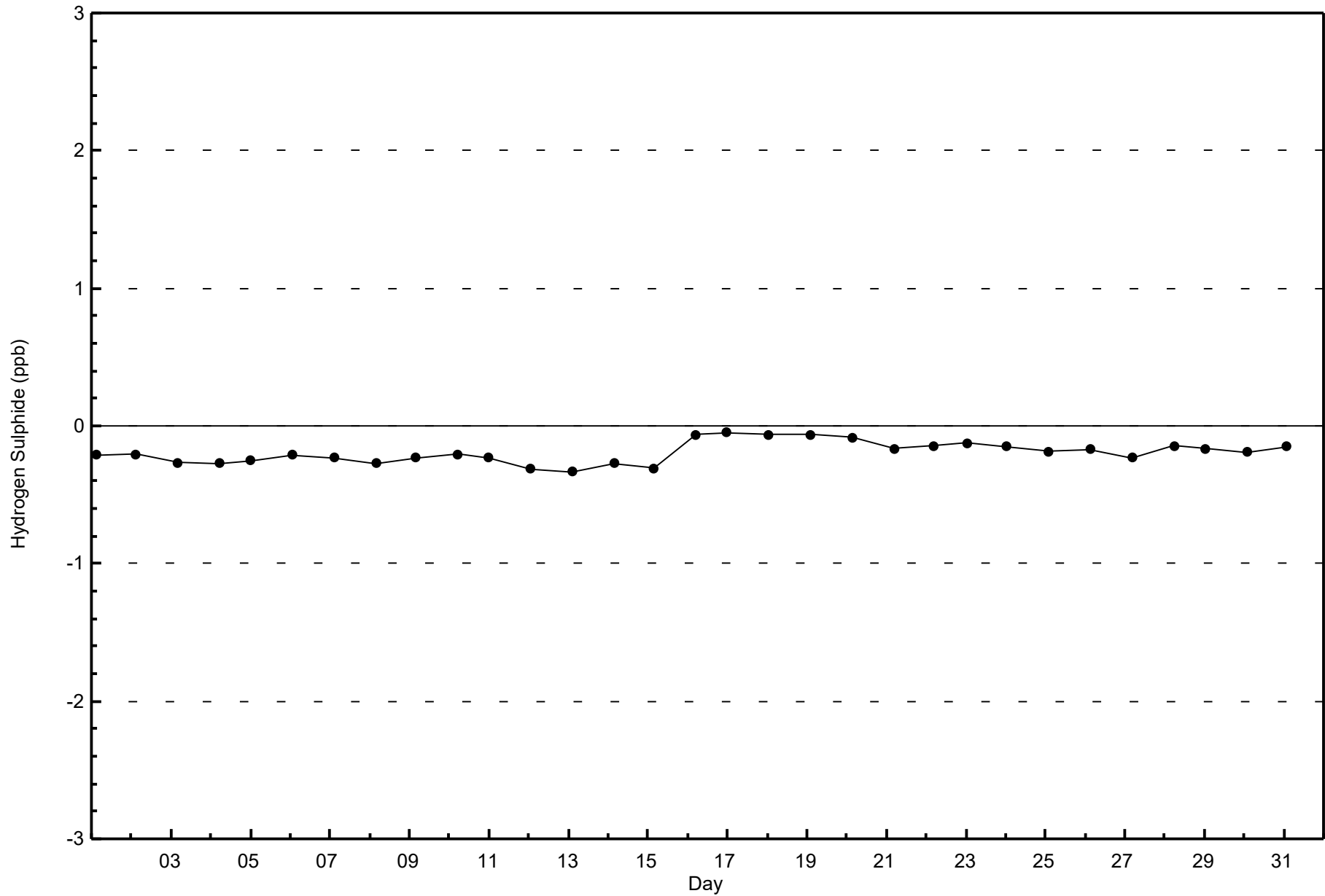
Hydrogen Sulphide (H₂S) - ppb
Firebag





Wood Buffalo Environmental Association
Zero Responses

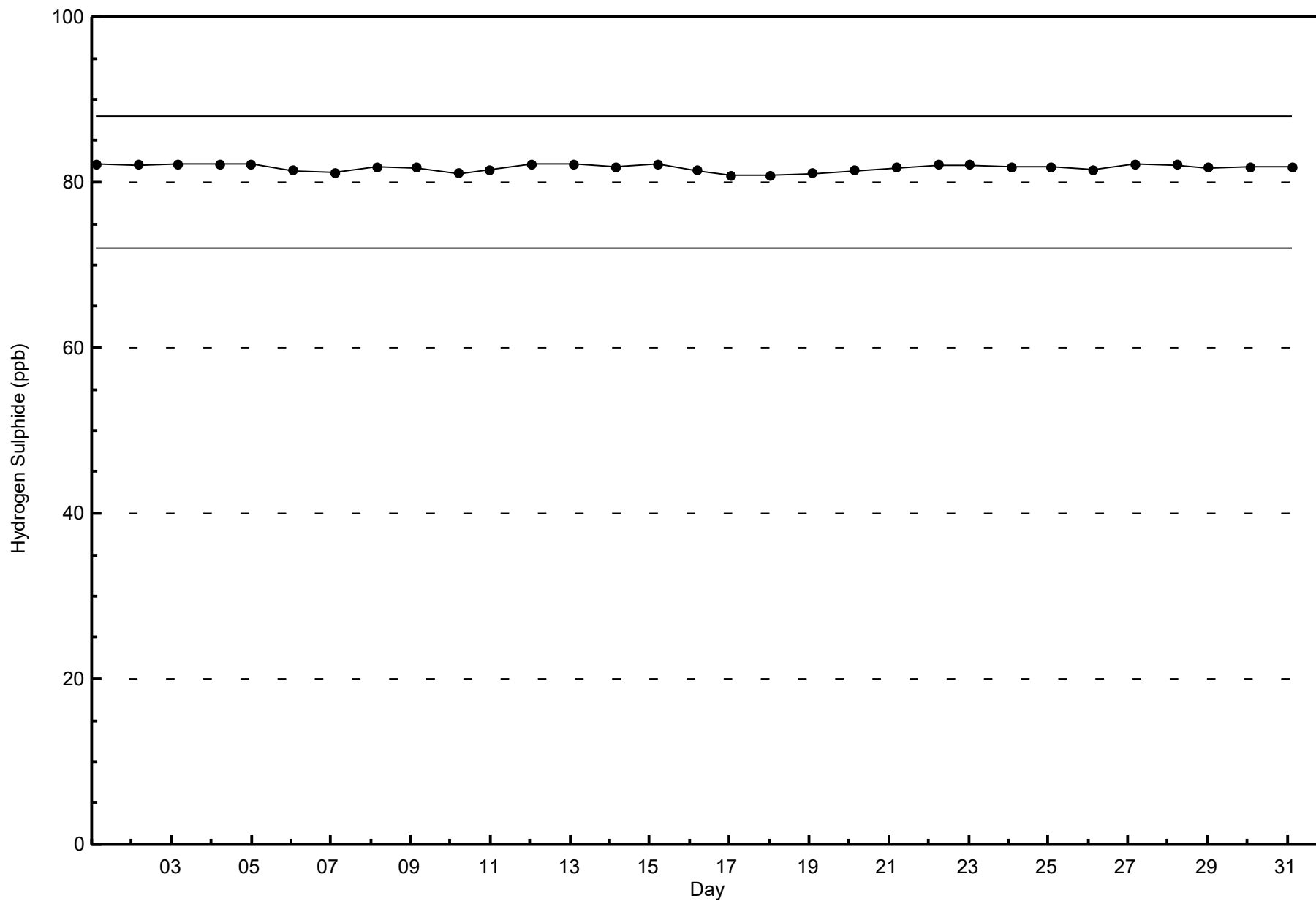
Hydrogen Sulphide (H₂S) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

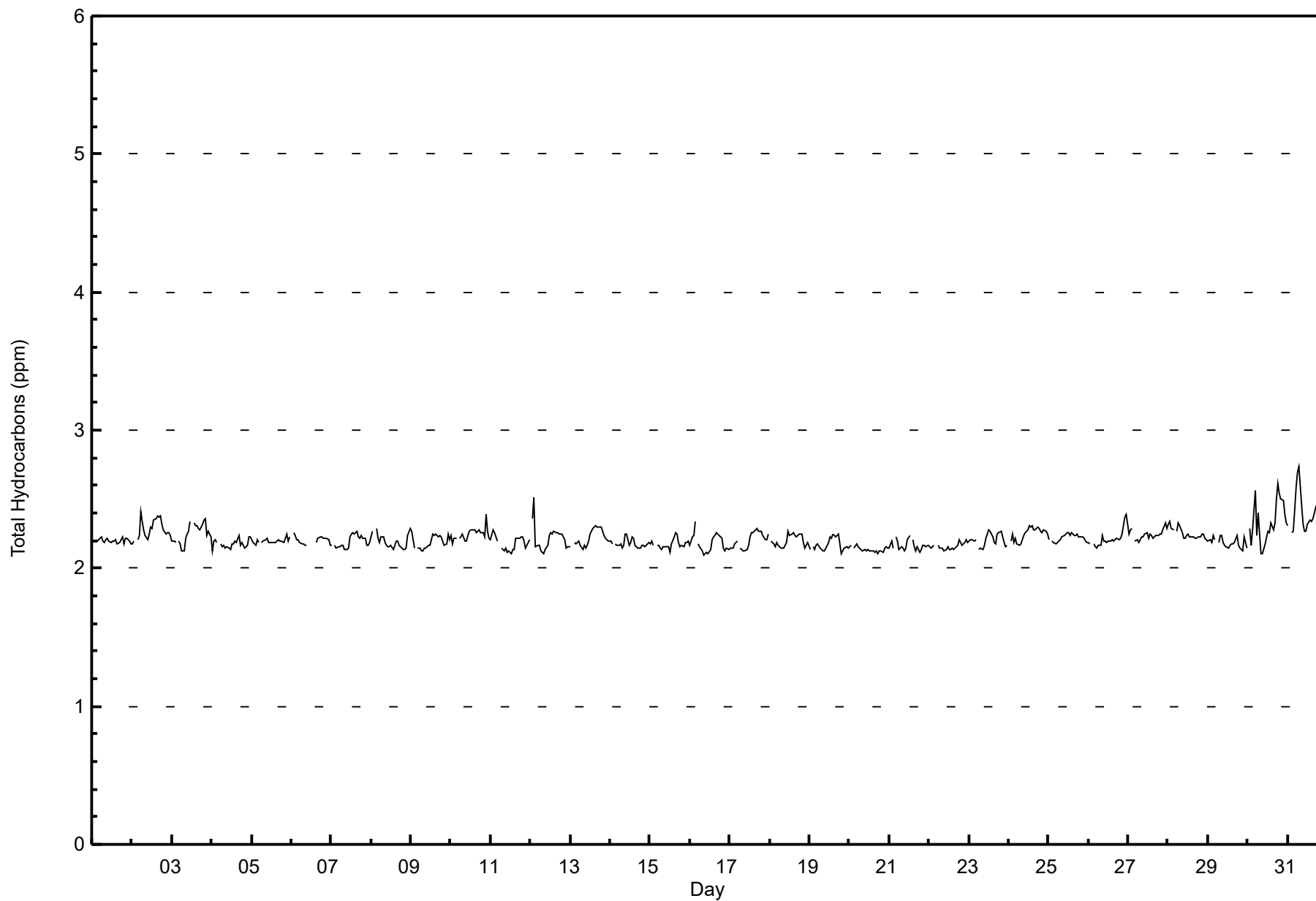
Firebag - May 2025

Maximum Value: 2.7 ppm on May 31 08:00																		Maximum Daily Average: 2.4 ppm on May 31										Hours in Service: 744	
Minimum Value: 2.1 ppm on May 16 09:00																		Minimum Daily Average: 2.1 ppm on May 20										Hours of Data: 706	
Maximum Diurnal Average: 2.2 ppm at hour 18																		Minimum Diurnal Average: 2.2 ppm at hour 10										Hours of Missing Data: 38	
Monthly Average: 2.21 ppm																		Percentiles: P ₁ = 2.1 P ₁₀ = 2.1 Q ₁ = 2.2 Median = 2.2 Q ₃ = 2.2 P ₉₀ = 2.3 P ₉₉ = 2.5										Hours of Calibration: 36	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
2-May	2.2	2.2	Z	2.2	2.2	2.4	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2			
3-May	2.2	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.3	PF	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.3	2.2	2.3	2.4			
4-May	2.1	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2			
5-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3			
6-May	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	C	C	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
7-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
8-May	2.2	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.3			
9-May	2.3	2.2	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
10-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.4	2.3	2.2	2.2	2.4			
11-May	2.2	2.3	2.3	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.3			
12-May	Z	2.4	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.1	2.2	2.2	2.2	2.5			
13-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3			
14-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
15-May	2.2	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
16-May	2.2	2.2	2.2	2.3	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3			
17-May	2.1	2.1	2.1	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3			
18-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.3			
19-May	2.1	Z	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2			
20-May	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2			
21-May	2.1	2.2	2.1	Z	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	M	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2			
22-May	2.2	2.1	2.2	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
23-May	2.2	2.2	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3			
24-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3			
25-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
26-May	2.2	2.2	Z	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.2	2.4			
27-May	2.3	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3			
28-May	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3			
29-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2			
30-May	Z	2.3	2.2	2.3	2.6	2.2	2.4	2.2	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.6			
31-May	2.3	Z	2.3	2.3	2.4	2.6	2.7	2.7	2.5	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.4	2.7			
2.2																								Diurnal Average					
2.3																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Firebag - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	706	100.00	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Firebag - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	41	60	17	10	6	17	49	103	162	48	52	46	29	18	19	29	706
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	60	17	10	6	17	49	103	162	48	52	46	29	18	19	29	706

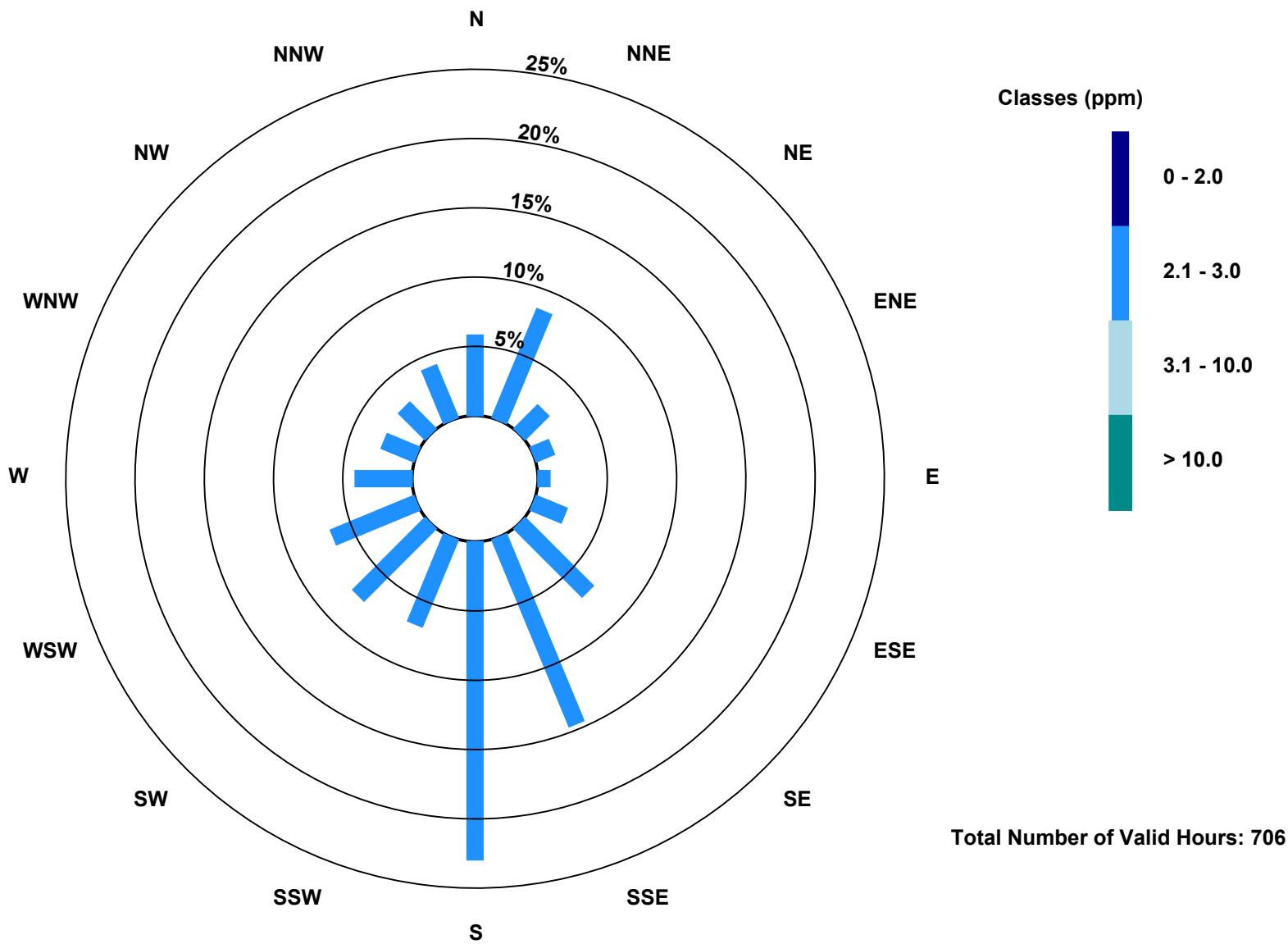
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

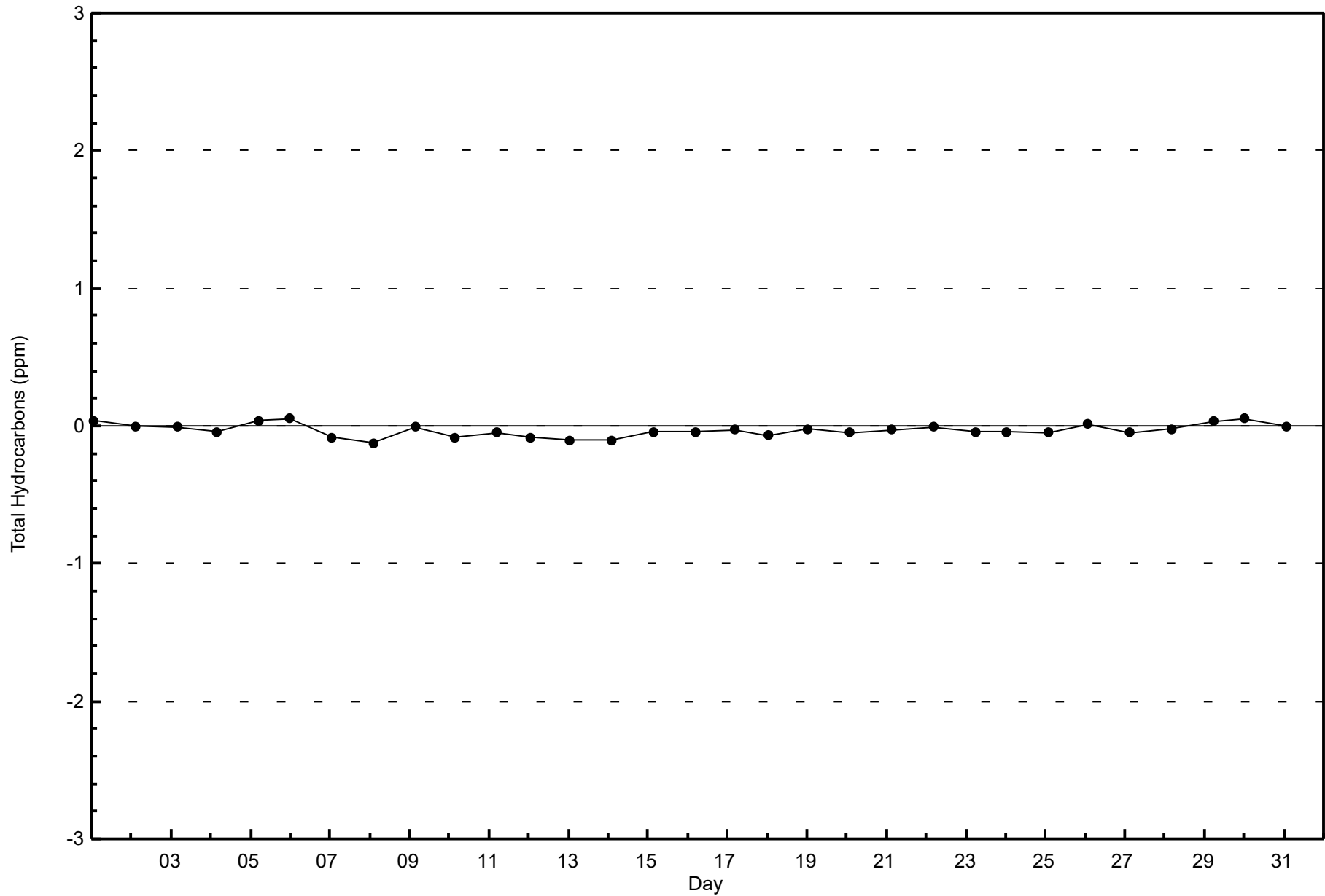
Total Hydrocarbons (THC) - ppm
Firebag





Wood Buffalo Environmental Association
Zero Responses

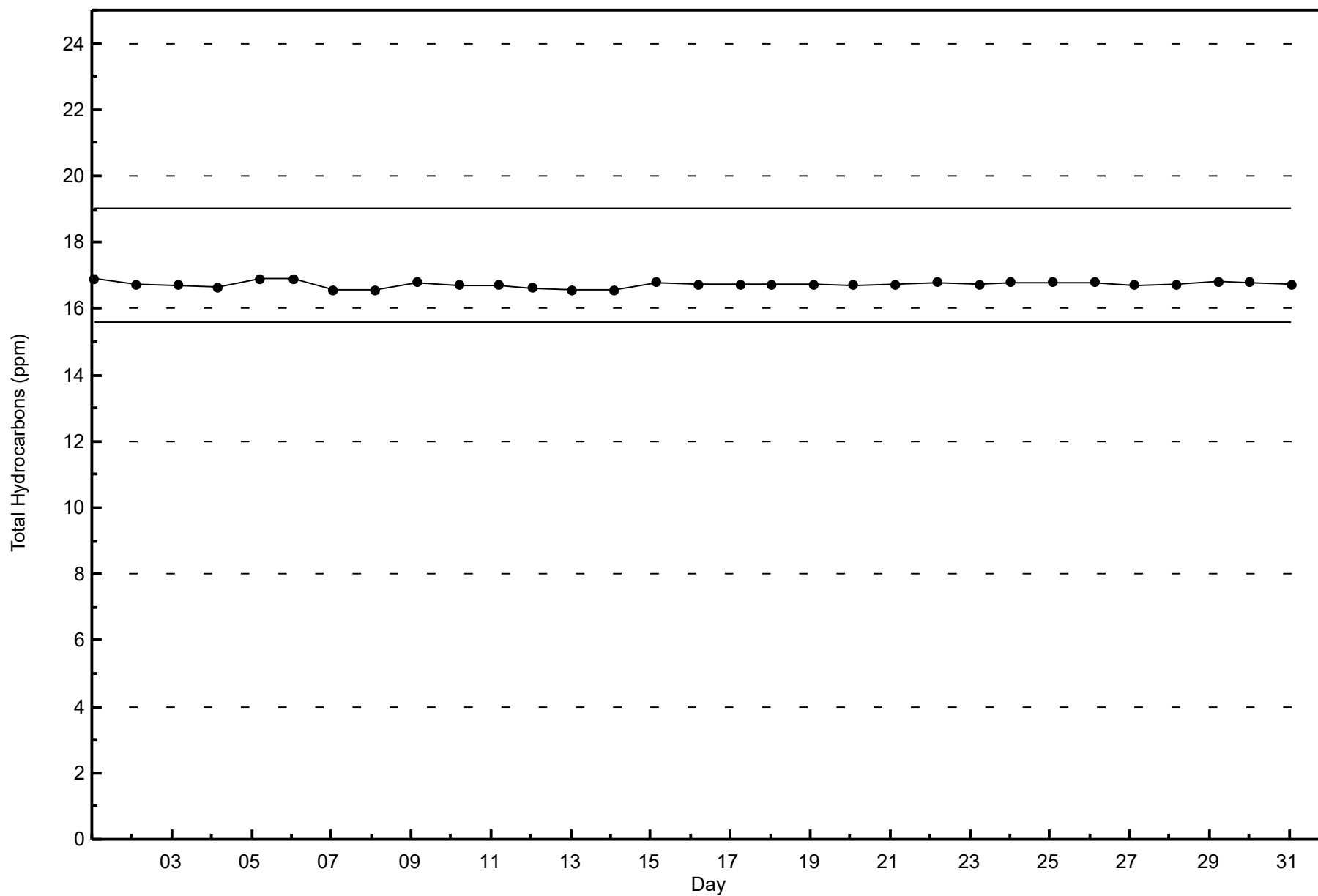
Total Hydrocarbons (THC) - ppm
Firebag - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

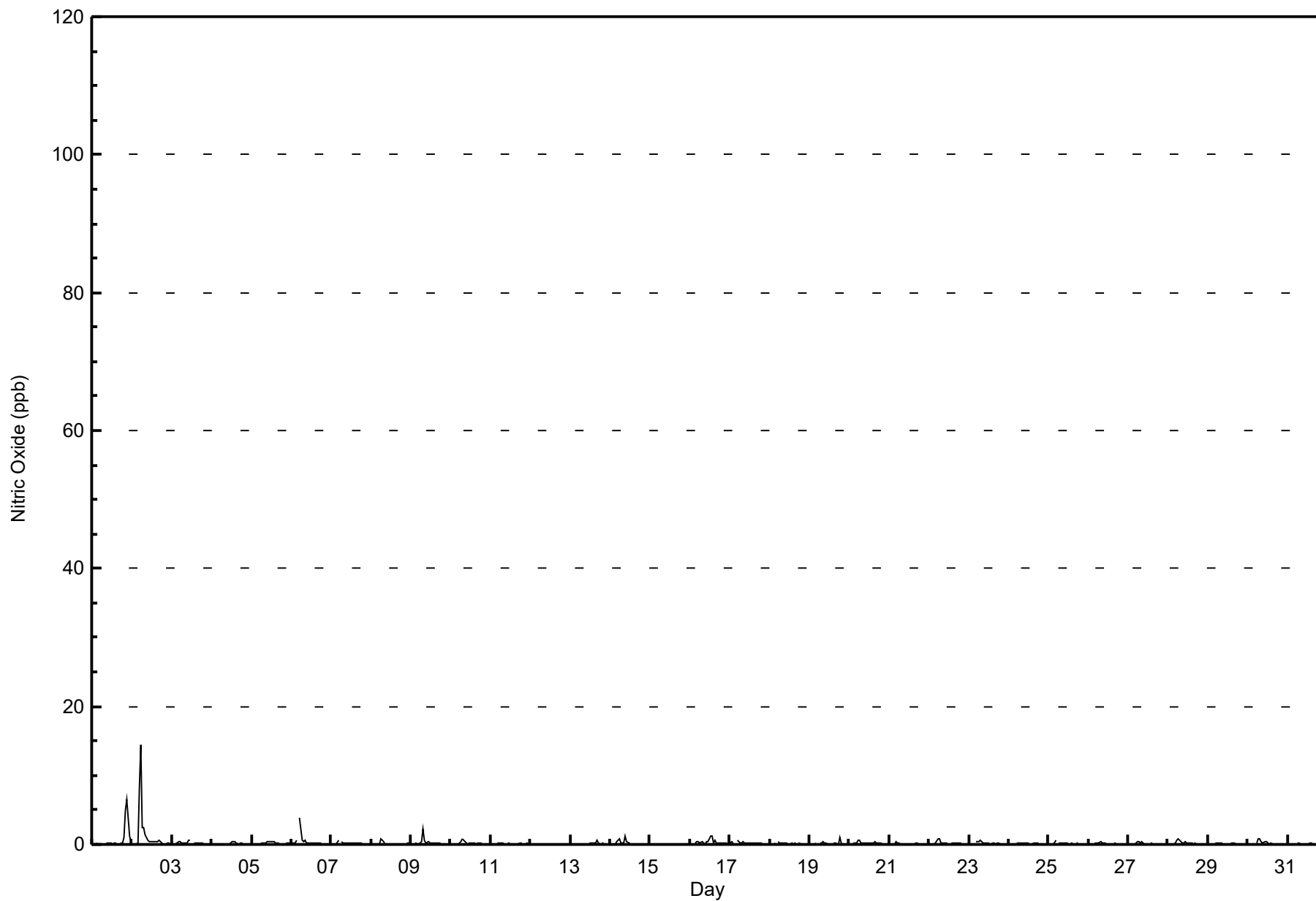
Firebag - May 2025

Maximum Value: 14.5 ppb on May 2 06:00																			Maximum Daily Average: 1.5 ppb on May 2										Hours in Service: 744												
Minimum Value: 0.0 ppb on May 15 05:00																			Minimum Daily Average: 0.0 ppb on May 15										Hours of Data: 706												
Maximum Diurnal Average: 1.0 ppb at hour 6																			Minimum Diurnal Average: 0.1 ppb at hour 3										Hours of Missing Data: 38												
Monthly Average: 0.21 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.2										Hours of Calibration: 36												
																			Percent Operational Time: 99.7																						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-May	0.0	0.0	0.0	0.1	UO	Z	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	1.1	4.8	6.5	1.2	0.4	0.7	6.5															
2-May	Z	0.0	0.0	0.2	8.2	14.5	2.4	2.4	1.4	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.2	0.1	0.1	0.2	0.2	0.1	1.5	14.5															
3-May	0.1	Z	0.2	0.3	0.5	0.4	0.2	0.1	0.2	0.1	0.6	0.7	PF	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.7															
4-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4															
5-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.5															
6-May	0.2	0.1	0.1	0.7	Z	3.8	0.7	0.4	0.7	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	3.8															
7-May	0.0	0.0	0.1	0.1	0.7	Z	0.4	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.7															
8-May	Z	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.7															
9-May	0.1	Z	0.1	0.1	0.1	0.2	0.4	2.3	0.5	0.3	0.5	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	2.3															
10-May	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.8	0.4	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.8															
11-May	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2															
12-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
13-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.6	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.6															
14-May	Z	0.0	0.0	0.1	0.3	0.8	0.1	0.2	0.3	1.2	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2															
15-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
16-May	0.0	0.0	Z	0.2	0.4	0.5	0.2	0.5	0.2	0.0	0.4	0.4	1.3	1.2	0.1	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	1.3															
17-May	0.2	0.4	0.2	Z	0.6	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.6															
18-May	0.0	0.1	0.1	0.3	Z	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4															
19-May	0.0	0.0	0.0	0.1	0.2	Z	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	1.1	0.1	0.1	0.1	0.0	0.1	0.2	1.1															
20-May	Z	0.0	0.0	0.1	0.2	0.5	0.7	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.5	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.7															
21-May	0.1	Z	0.0	0.1	0.3	0.2	0.1	0.0	0.0	C	C	C	C	C	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3															
22-May	0.1	0.1	Z	0.1	0.2	0.8	0.8	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.8															
23-May	0.1	0.1	0.1	Z	0.3	0.4	0.4	0.5	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5															
24-May	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2															
25-May	0.1	0.1	0.1	0.1	0.5	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.5															
26-May	Z	0.0	0.0	0.0	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4															
27-May	0.1	Z	0.1	0.1	0.1	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4															
28-May	0.1	0.0	Z	0.1	0.3	0.7	0.9	0.6	0.3	0.2	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.9															
29-May	0.1	0.1	0.0	Z	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2															
30-May	0.0	0.1	0.1	0.1	Z	0.3	0.9	0.7	0.3	0.2	0.4	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9															
31-May	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3															
																									Diurnal Average																
																									Diurnal Maximum																
Z - zerospan																									C - Calibration		UO - Unstable Operation		PF - Power Failure												



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	41	61	16	10	5	18	51	100	158	50	56	45	29	17	20	29	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	61	16	10	5	18	51	100	158	50	56	45	29	17	20	29	706

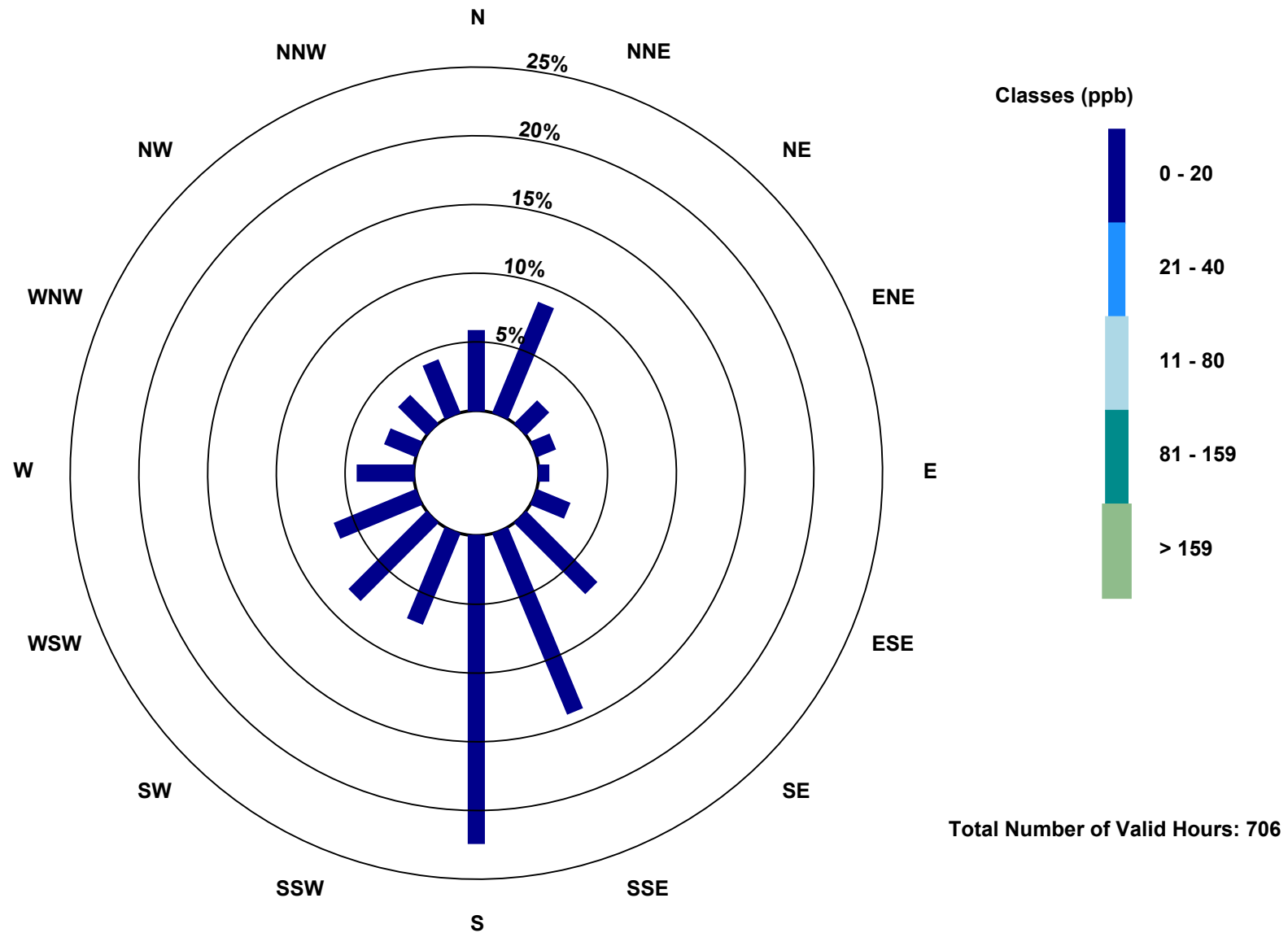
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitric Oxide (NO) - ppb
Firebag



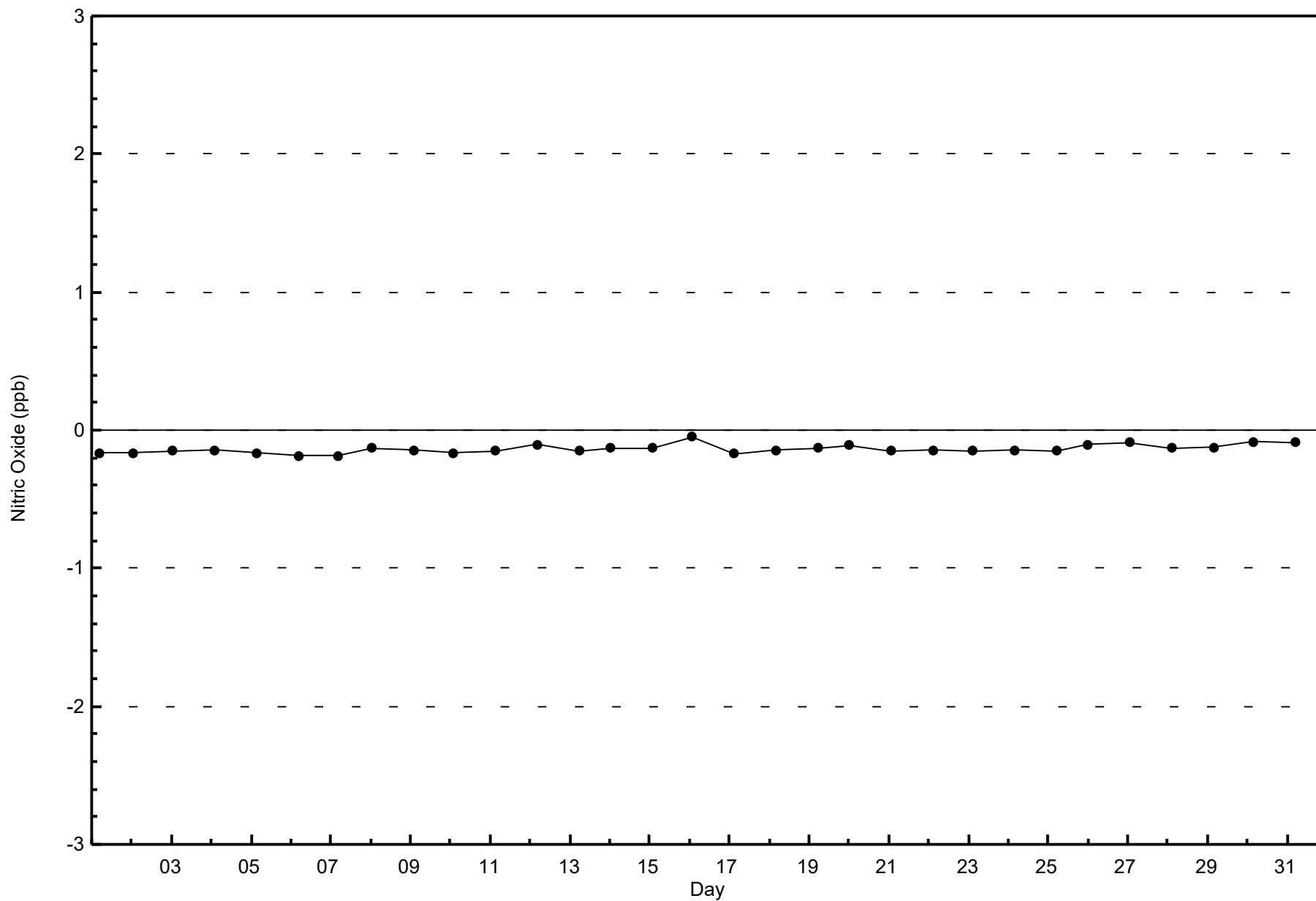


Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

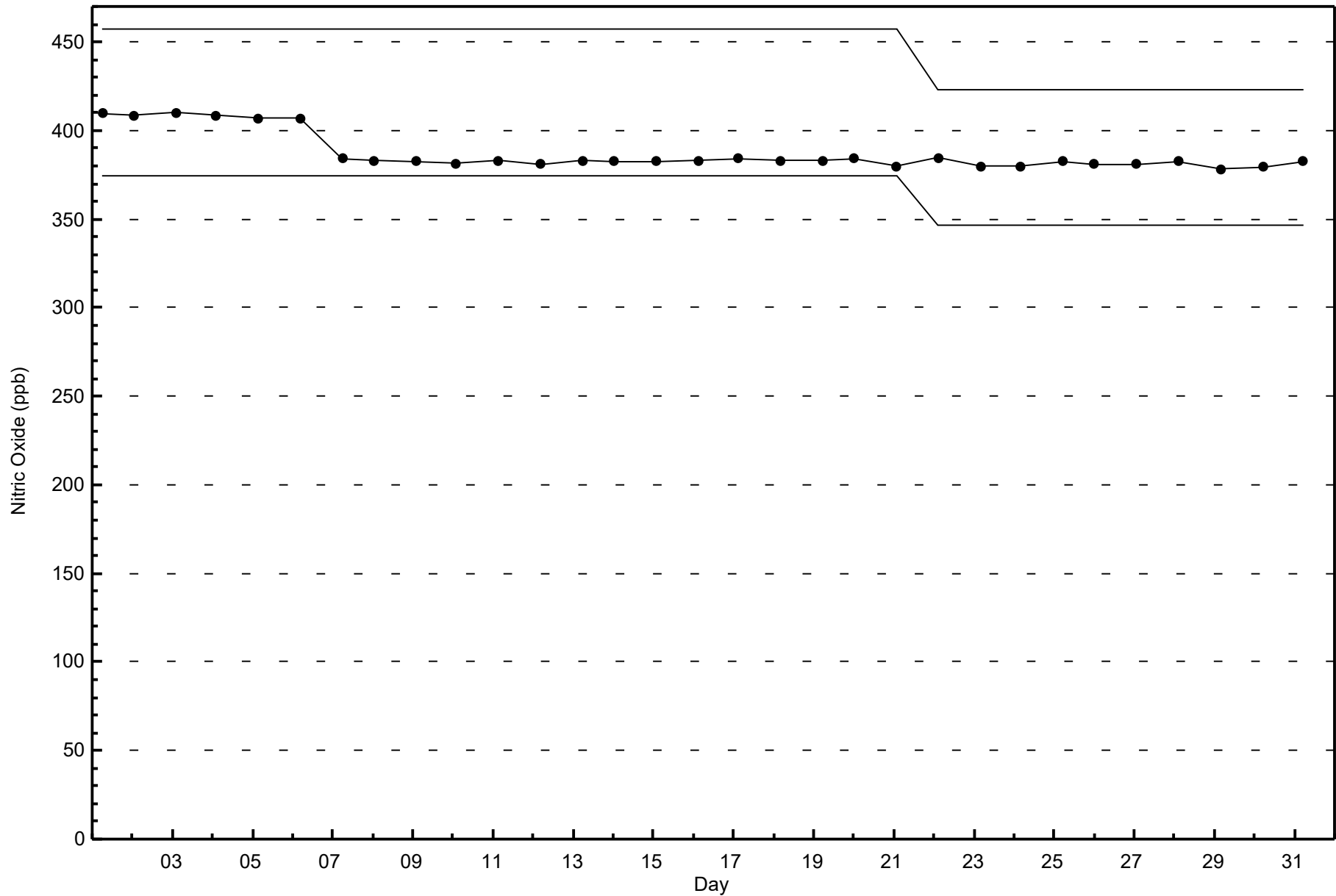
Firebag - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

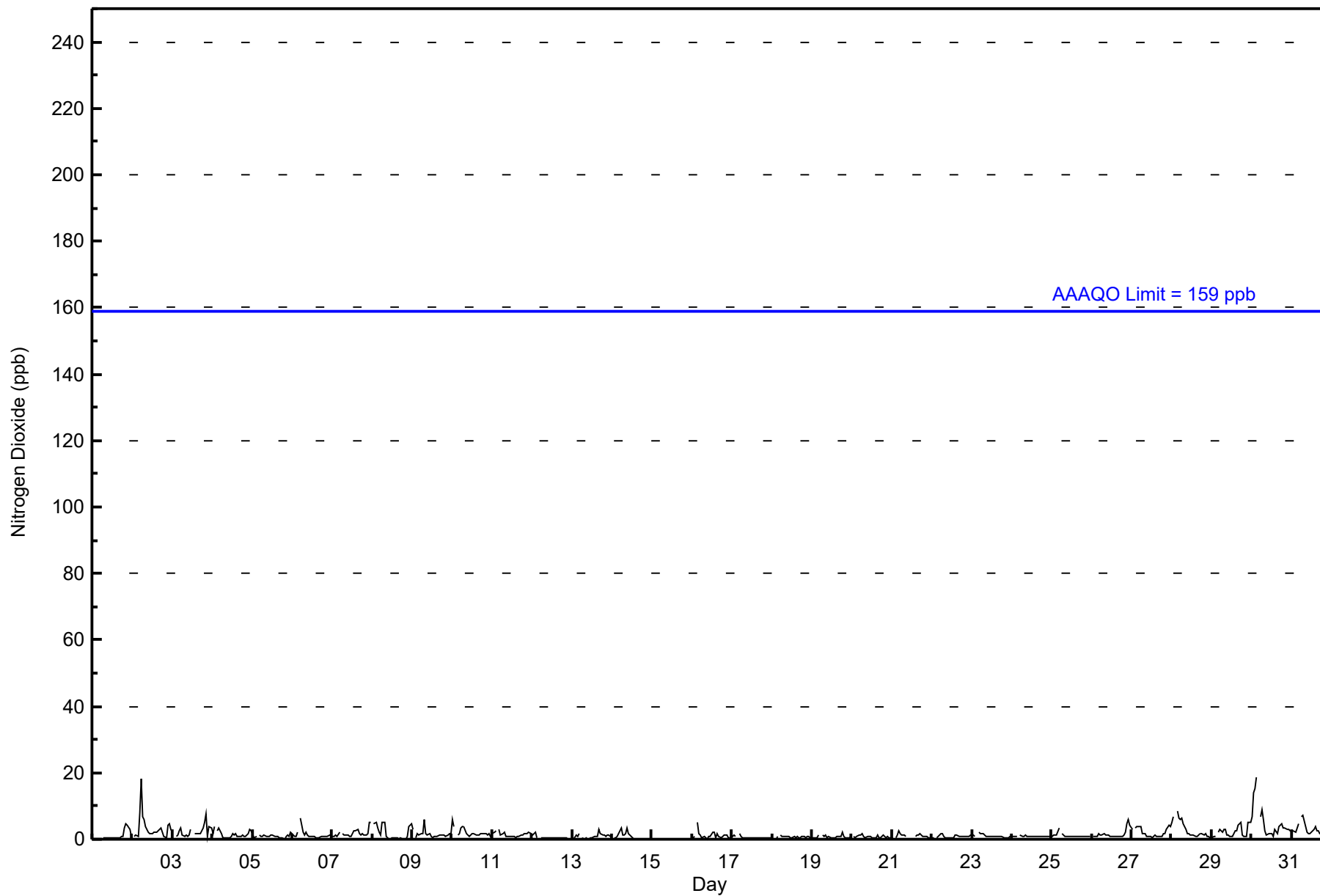
Firebag - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 18.7 ppb on May 30 04:00 Maximum Daily Average: 5.1 ppb on May 30																				Hours in Service: 744							
Minimum Value: 0.0 ppb on May 15 23:00 Minimum Daily Average: 0.1 ppb on May 15 Maximum Diurnal Average: 2.9 ppb at hour 6 Minimum Diurnal Average: 0.9 ppb at hour 12 Monthly Average: 1.50 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.6 P ₉₀ = 3.3 P ₉₉ = 7.6																				Hours of Data: 706							
																				Hours of Missing Data: 38							
																				Hours of Calibration: 36							
																				Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.2	0.2	0.2	0.2	UO	Z	0.5	0.3	0.4	0.5	0.6	0.4	0.3	0.4	0.5	0.3	0.3	0.9	0.8	3.6	4.6	4.1	3.0	0.8	1.1	4.6	
2-May	Z	1.0	1.1	1.0	7.9	18.2	6.8	6.0	3.7	2.1	1.6	1.8	1.9	2.1	2.0	2.4	3.1	3.4	2.0	0.7	0.5	4.3	4.7	3.0	3.5	18.2	
3-May	2.1	Z	1.0	1.3	2.7	3.2	1.2	0.9	1.1	0.9	1.3	3.0	PF	1.7	1.6	1.5	1.5	1.7	3.3	5.2	7.6	0.9	3.8	3.5	2.3	7.6	
4-May	1.5	3.7	Z	2.4	3.2	1.7	0.3	0.4	0.3	0.3	0.4	1.0	1.6	1.4	1.6	1.0	0.9	0.9	1.3	0.9	0.9	1.6	2.8	2.6	1.4	3.7	
5-May	1.6	0.6	0.8	Z	1.1	0.8	0.9	1.1	0.8	0.8	0.9	1.1	1.2	1.0	0.9	0.7	0.6	0.3	0.3	0.2	0.9	1.4	0.9	2.0	0.9	2.0	
6-May	1.1	0.7	0.7	2.2	Z	6.2	2.3	1.4	2.0	1.1	0.8	0.9	0.9	0.9	0.6	0.6	0.6	0.8	0.9	0.8	0.8	0.8	1.2	0.8	1.3	6.2	
7-May	0.9	0.9	1.2	1.0	2.3	Z	1.8	1.3	1.2	1.2	1.0	1.0	1.6	2.4	2.4	3.1	1.6	1.4	1.7	1.4	1.2	1.6	5.1	5.1	1.8	5.1	
8-May	Z	4.7	5.2	3.5	2.3	1.3	5.1	4.9	0.7	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.7	3.7	4.6	1.7	5.2	
9-May	3.1	Z	0.4	1.8	1.1	1.5	1.6	5.9	1.7	1.1	1.6	1.0	0.6	0.7	0.8	0.8	1.1	1.1	1.1	1.2	0.8	1.1	1.7	1.6	1.5	5.9	
10-May	6.0	4.0	Z	1.3	1.9	3.3	3.7	3.8	1.9	1.2	0.8	1.2	1.5	1.7	1.1	1.1	1.3	1.7	1.8	1.5	1.8	1.3	1.5	0.9	2.0	6.0	
11-May	1.5	2.0	2.7	Z	3.1	1.4	1.5	2.1	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.8	0.9	1.1	1.4	1.6	1.8	1.6	2.3	1.9	1.4	3.1	
12-May	1.3	1.7	2.0	0.5	Z	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.6	2.0	
13-May	0.2	0.2	1.1	0.9	1.8	Z	0.4	0.2	0.3	0.2	0.2	0.4	0.6	0.8	0.8	0.8	2.8	1.6	1.4	1.4	0.8	1.1	1.1	0.7	0.9	2.8	
14-May	Z	0.6	0.6	0.8	1.9	3.2	1.3	1.3	1.5	3.5	1.7	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9	3.5	
15-May	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	
16-May	0.1	0.7	Z	5.1	1.8	1.4	0.6	1.0	0.4	0.2	0.9	0.9	2.2	2.3	0.5	1.5	0.8	0.6	0.7	1.1	1.4	1.2	0.6	0.4	1.1	5.1	
17-May	0.9	1.1	0.8	Z	1.6	0.8	0.5	0.4	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.4	0.3	0.4	0.3	0.5	1.6	
18-May	0.3	0.2	0.2	0.9	Z	1.3	0.9	1.0	0.7	0.8	0.7	0.5	0.6	0.7	0.6	0.9	0.5	0.5	0.7	0.7	0.6	0.9	0.8	0.5	0.7	1.3	
19-May	0.4	0.5	0.4	0.4	1.1	Z	1.2	1.0	1.2	0.6	0.7	0.5	0.5	0.5	0.5	0.8	0.8	0.8	2.2	0.7	0.4	0.4	0.5	0.8	0.7	2.2	
20-May	Z	0.7	0.6	0.9	1.2	1.4	1.9	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.5	1.1	0.6	0.6	0.7	1.1	0.4	0.7	0.5	0.5	0.8	1.9	
21-May	0.5	Z	0.6	1.1	2.7	1.8	1.1	1.2	1.0	C	C	C	C	C	1.0	1.1	1.3	1.6	0.7	0.8	0.7	0.7	0.6	0.6	1.1	2.7	
22-May	0.6	0.5	Z	0.6	0.8	1.6	1.6	0.8	0.6	0.6	0.6	0.5	0.6	0.6	1.2	1.2	0.7	0.8	0.7	0.7	0.7	0.8	0.8	1.2	0.8	1.6	
23-May	1.3	1.1	0.9	Z	2.1	1.6	1.7	1.6	0.9	0.8	0.8	0.9	0.7	0.7	0.8	0.9	0.7	0.7	0.8	0.6	0.6	0.6	0.5	0.8	1.0	2.1	
24-May	0.7	0.7	0.8	1.0	Z	1.2	0.9	1.0	1.2	1.0	0.9	0.8	0.7	0.7	0.7	0.8	1.0	0.9	0.8	0.8	0.8	0.9	0.7	0.7	0.9	1.2	
25-May	0.8	1.2	1.2	1.3	3.2	Z	1.5	1.2	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.9	0.8	0.8	0.8	1.0	3.2	
26-May	Z	0.9	0.8	0.9	1.6	1.4	1.4	1.9	1.4	1.3	1.1	0.8	0.8	0.8	0.8	0.7	0.9	0.7	0.8	1.2	2.1	4.6	5.8	4.4	1.6	5.8	
27-May	3.0	Z	3.3	4.0	3.9	3.8	1.8	1.6	1.8	1.0	0.9	0.8	0.6	0.9	1.1	0.7	0.8	1.0	1.0	1.5	1.8	2.8	4.1	3.8	2.0	4.1	
28-May	5.0	6.6	Z	8.4	6.3	5.8	6.4	4.6	3.0	1.6	1.9	1.4	1.2	1.1	1.0	1.0	1.2	1.6	1.5	1.3	1.7	0.9	0.7	0.6	2.8	8.4	
29-May	0.6	0.8	1.0	Z	2.3	3.0	2.3	3.0	2.8	1.4	1.2	0.8	0.8	1.6	2.6	2.7	4.1	5.1	1.3	1.0	0.9	0.8	5.1	4.9	2.2	5.1	
30-May	6.7	13.9	15.1	18.7	Z	6.6	8.7	6.0	2.7	1.2	1.6	1.7	1.5	1.0	2.8	1.9	3.7	4.2	4.5	3.5	3.2	2.8	3.1	2.7	5.1	18.7	
31-May	2.7	2.7	2.3	3.2	4.5	Z	6.6	7.1	3.9	2.1	1.7	1.5	2.0	3.1	3.7	2.6	2.5	1.9	1.6	1.4	1.2	1.0	0.8	0.6	2.6	7.1	
1.7 2.0 1.7 2.4 2.5 2.9 2.2 2.1 1.3 1.0 0.9 0.9 0.9 1.0 1.1 1.1 1.2 1.2 1.2 1.2 1.2 1.3 1.3 1.9 1.7																										Diurnal Average	
6.7 13.9 15.1 18.7 7.9 18.2 8.7 7.1 3.9 3.5 1.9 3.0 2.2 3.1 3.7 3.1 4.1 5.1 4.5 5.2 7.6 4.6 5.8 5.1																										Diurnal Maximum	
Z - zerospan C - Calibration UO - Unstable Operation PF - Power Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	41	61	16	10	5	18	51	100	158	50	56	45	29	17	20	29	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	61	16	10	5	18	51	100	158	50	56	45	29	17	20	29	706

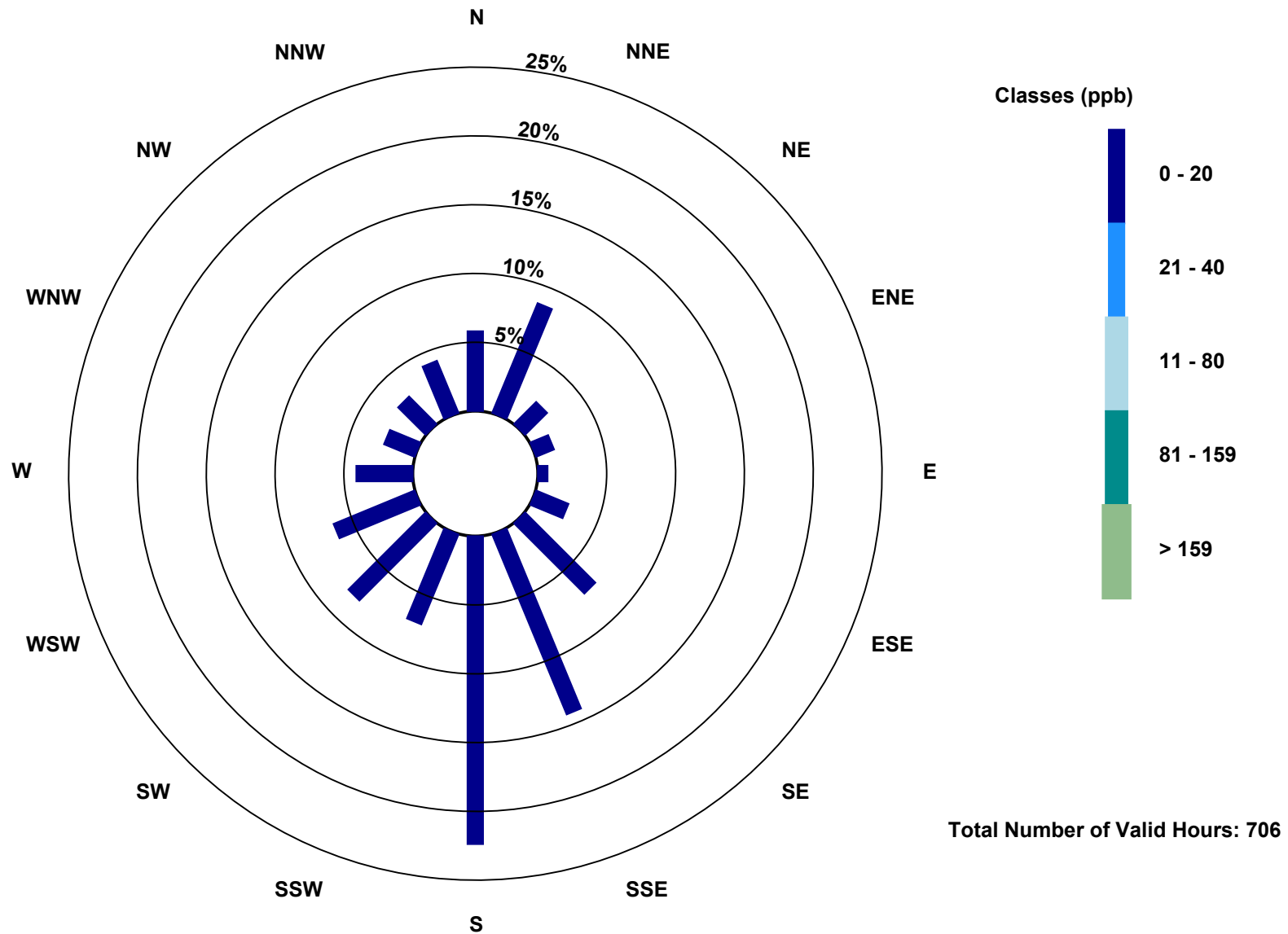
Total Number of Valid Hours: 706

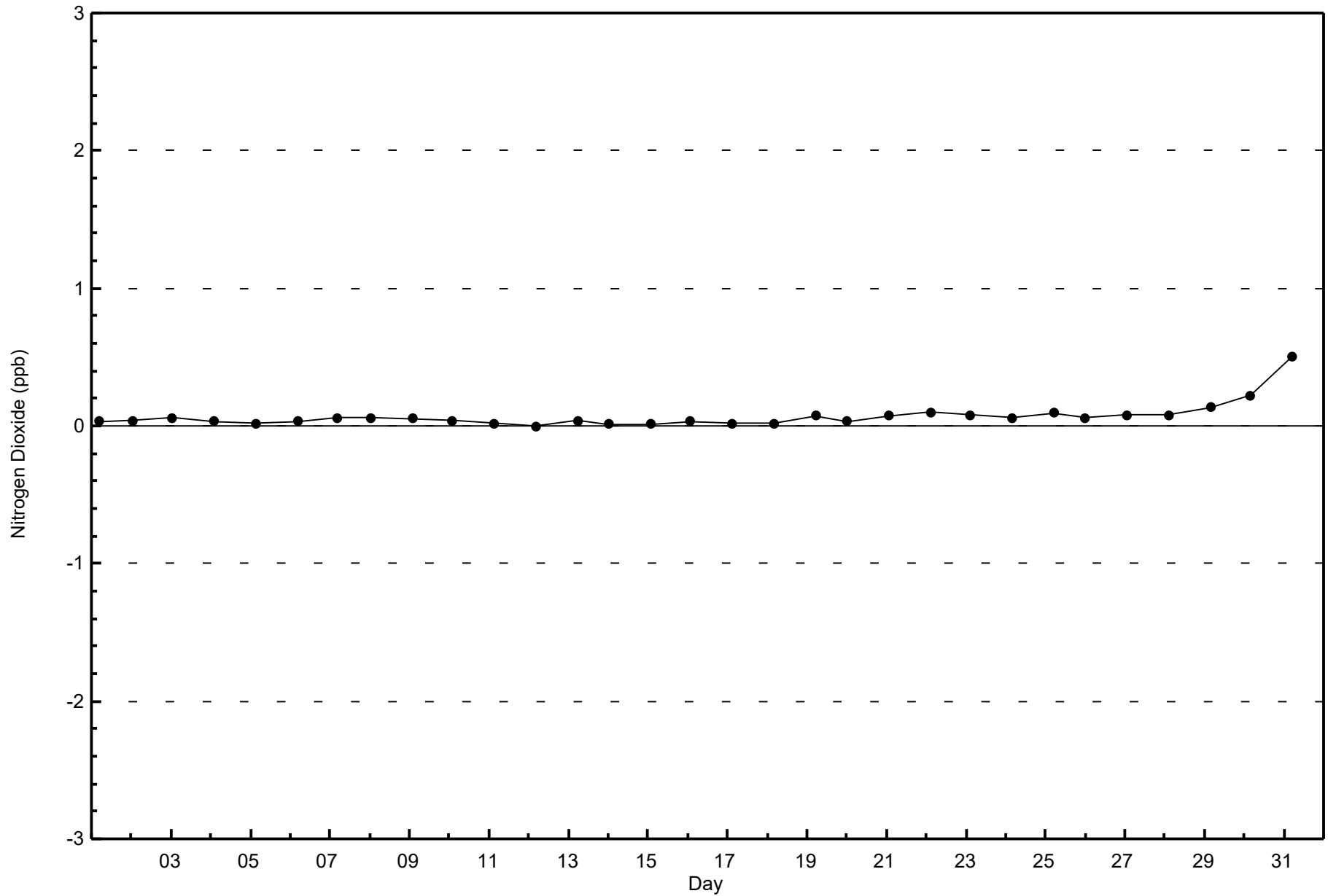
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Firebag

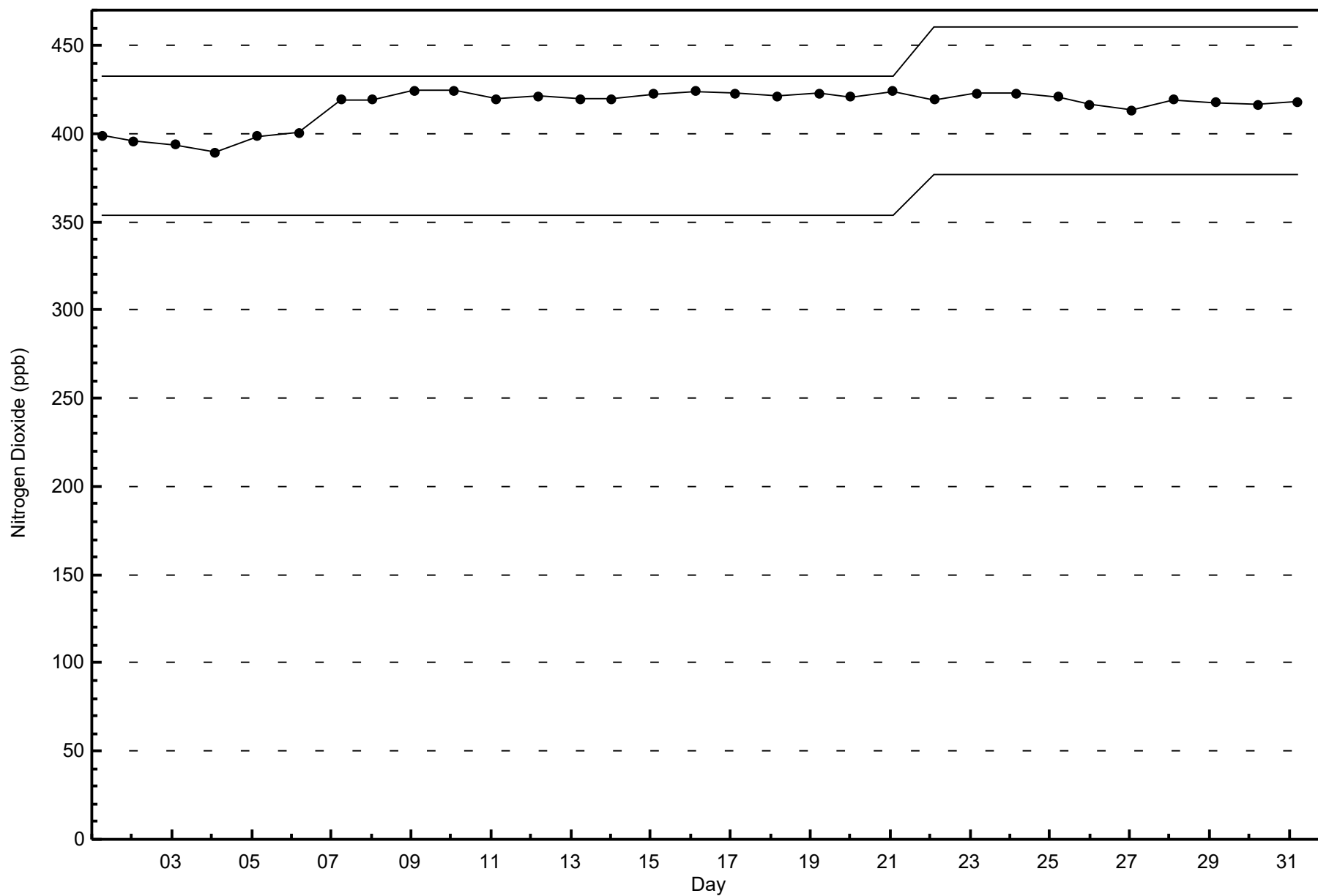






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

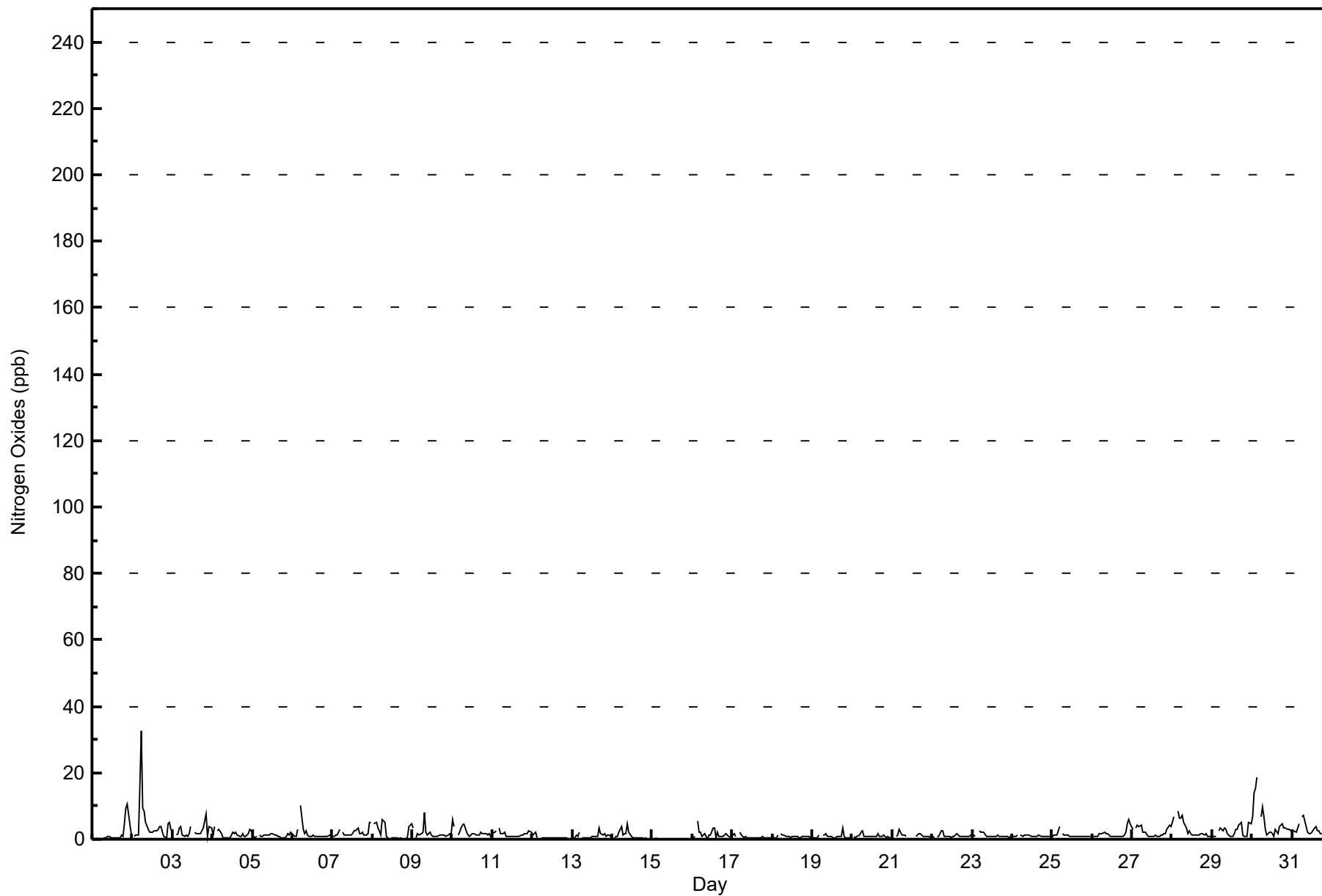
Firebag - May 2025

Maximum Value: 32.7 ppb on May 2 06:00																			Maximum Daily Average: 5.3 ppb on May 30							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 16 00:00																			Minimum Daily Average: 0.1 ppb on May 15							Hours of Data: 706	
Maximum Diurnal Average: 3.9 ppb at hour 6																			Minimum Diurnal Average: 1.1 ppb at hour 12							Hours of Missing Data: 38	
Monthly Average: 1.71 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.1 Q ₃ = 1.9 P ₉₀ = 3.5 P ₉₉ = 9.6							Hours of Calibration: 36	
																										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.2	0.2	0.2	0.3	UO	Z	0.5	0.4	0.5	0.7	0.8	0.6	0.4	0.5	0.6	0.4	0.4	1.1	0.9	4.7	9.4	10.6	4.2	1.2	1.8	10.6	
2-May	Z	1.0	1.1	1.2	16.1	32.7	9.2	8.4	5.1	2.8	2.0	2.2	2.3	2.5	2.4	2.8	3.6	3.9	2.2	0.8	0.6	4.5	4.9	3.1	5.0	32.7	
3-May	2.2	Z	1.2	1.6	3.2	3.6	1.4	1.0	1.3	1.0	1.9	3.7	PF	2.0	1.8	1.6	1.6	1.8	3.4	5.3	7.7	0.9	3.8	3.5	2.5	7.7	
4-May	1.5	3.7	Z	2.4	3.2	1.7	0.3	0.4	0.3	0.3	0.4	1.2	2.0	1.8	2.0	1.2	1.0	1.0	1.5	1.0	0.9	1.6	2.8	2.6	1.5	3.7	
5-May	1.6	0.6	0.8	Z	1.1	0.8	1.0	1.3	1.1	1.2	1.3	1.6	1.7	1.3	1.2	0.9	0.8	0.4	0.4	0.2	0.9	1.5	1.1	2.1	1.1	2.1	
6-May	1.3	0.8	0.8	2.9	Z	10.0	3.0	1.8	2.7	1.3	1.0	1.0	1.1	1.0	0.7	0.7	0.7	0.9	1.0	0.9	0.9	0.9	1.3	0.9	1.6	10.0	
7-May	0.9	0.9	1.3	1.1	3.0	Z	2.2	1.4	1.4	1.3	1.1	1.1	1.8	2.6	2.6	3.3	1.8	1.7	1.9	1.5	1.2	1.6	5.1	5.1	2.0	5.1	
8-May	Z	4.7	5.2	3.5	2.3	1.4	5.8	5.3	0.8	0.3	0.2	0.2	0.3	0.5	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.7	3.8	4.8	1.8	5.8	
9-May	3.2	Z	0.5	1.9	1.2	1.7	2.0	8.2	2.2	1.4	2.1	1.3	0.7	0.9	1.0	1.0	1.2	1.2	1.2	1.3	0.8	1.1	1.7	1.6	1.7	8.2	
10-May	6.0	4.0	Z	1.3	1.9	3.4	4.1	4.6	2.3	1.4	0.9	1.4	1.7	1.9	1.2	1.2	1.4	1.9	1.9	1.6	1.9	1.4	1.6	0.9	2.2	6.0	
11-May	1.5	2.0	2.7	Z	3.3	1.5	1.6	2.3	1.0	1.0	0.9	1.0	0.9	0.7	0.7	0.9	1.0	1.2	1.5	1.7	1.9	1.6	2.4	2.0	1.5	3.3	
12-May	1.3	1.7	2.0	0.5	Z	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.6	2.0	
13-May	0.2	0.2	1.1	0.9	1.9	Z	0.5	0.3	0.3	0.2	0.2	0.5	0.7	1.0	1.0	0.9	3.4	1.8	1.5	1.5	0.8	1.2	1.2	0.7	1.0	3.4	
14-May	Z	0.6	0.6	0.9	2.2	4.0	1.4	1.5	1.8	4.7	2.1	0.8	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	4.7	
15-May	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	
16-May	0.1	0.7	Z	5.3	2.2	1.9	0.8	1.5	0.6	0.2	1.3	1.3	3.5	3.5	0.6	2.2	1.1	0.8	0.9	1.3	1.6	1.4	0.7	0.5	1.5	5.3	
17-May	1.1	1.5	1.0	Z	2.2	1.1	0.7	0.6	0.8	0.6	0.6	0.4	0.5	0.4	0.4	0.5	0.5	0.6	0.8	0.5	0.5	0.4	0.5	0.3	0.7	2.2	
18-May	0.3	0.3	0.3	1.2	Z	1.7	1.1	1.2	0.9	1.0	0.8	0.6	0.7	0.9	0.7	1.0	0.6	0.6	0.8	0.8	0.7	1.0	0.8	0.5	0.8	1.7	
19-May	0.4	0.5	0.4	0.5	1.3	Z	1.4	1.3	1.5	0.7	0.8	0.6	0.6	0.5	0.5	0.9	1.0	0.9	3.3	0.8	0.5	0.5	0.5	0.9	0.9	3.3	
20-May	Z	0.7	0.6	1.0	1.4	1.9	2.6	0.8	0.7	0.8	0.9	0.9	0.8	0.7	0.6	1.6	0.7	0.8	0.9	1.4	0.5	0.8	0.6	0.6	1.0	2.6	
21-May	0.6	Z	0.6	1.2	3.0	2.0	1.2	1.2	1.0	C	C	C	C	C	1.0	1.2	1.5	1.9	0.7	0.8	0.7	0.7	0.7	0.6	1.1	3.0	
22-May	0.7	0.6	Z	0.7	1.0	2.4	2.4	1.0	0.8	0.8	0.7	0.6	0.7	0.7	1.4	1.5	0.9	1.0	0.8	0.8	0.8	0.9	0.9	1.3	1.0	2.4	
23-May	1.4	1.2	1.0	Z	2.4	2.0	2.1	2.1	1.0	1.0	0.9	1.0	0.8	0.8	0.9	1.1	0.8	0.8	0.9	0.7	0.7	0.7	0.6	0.9	1.1	2.4	
24-May	0.8	0.8	0.9	1.1	Z	1.4	1.0	1.2	1.4	1.2	1.1	0.9	0.8	0.8	0.8	0.9	1.1	1.0	0.9	0.9	0.9	1.0	0.8	0.8	1.0	1.4	
25-May	0.9	1.3	1.3	1.4	3.7	Z	1.7	1.4	1.2	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.9	0.9	0.8	0.8	1.1	3.7	
26-May	Z	0.9	0.8	0.9	1.8	1.6	1.6	2.3	1.6	1.5	1.2	0.9	0.9	0.9	0.9	0.8	1.0	0.8	0.9	1.3	2.2	4.7	5.9	4.5	1.7	5.9	
27-May	3.1	Z	3.4	4.1	4.0	4.2	2.2	1.9	2.1	1.1	1.0	0.9	0.7	1.0	1.2	0.8	0.9	1.1	1.1	1.6	1.8	2.9	4.2	3.9	2.2	4.2	
28-May	5.1	6.6	Z	8.5	6.6	6.5	7.3	5.2	3.3	1.8	2.4	1.6	1.3	1.2	1.1	1.1	1.3	1.7	1.6	1.4	1.8	1.0	0.8	0.7	3.0	8.5	
29-May	0.7	0.9	1.0	Z	2.4	3.2	2.5	3.2	3.0	1.5	1.3	0.9	0.9	1.7	2.8	2.9	4.2	5.2	1.4	1.0	0.9	0.8	5.1	4.9	2.3	5.2	
30-May	6.7	14.0	15.2	18.8	Z	6.9	9.6	6.7	3.0	1.4	2.0	2.1	1.8	1.0	2.9	1.9	3.7	4.2	4.5	3.5	3.2	2.8	3.1	2.7	5.3	18.8	
31-May	2.7	2.7	2.3	3.2	4.6	Z	6.8	7.3	4.0	2.2	1.8	1.6	2.1	3.2	4.0	2.7	2.5	1.9	1.6	1.4	1.2	1.0	0.8	0.6	2.7	7.3	
1.7 2.0 1.8 2.6 3.1 3.9 2.5 2.5 1.6 1.2 1.1 1.1 1.1 1.2 1.2 1.2 1.3 1.4 1.3 1.3 1.5 1.6 2.0 1.7																									Diurnal Average		
6.7 14.0 15.2 18.8 16.1 32.7 9.6 8.4 5.1 4.7 2.4 3.7 3.5 3.5 4.0 3.3 4.2 5.2 4.5 5.3 9.4 10.6 5.9 5.1																									Diurnal Maximum		
Z - zerospan C - Calibration UO - Unstable Operation PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Firebag - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	41	61	16	10	5	18	51	100	157	50	56	45	29	17	20	29	705
21 - 40	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	61	16	10	5	18	51	100	158	50	56	45	29	17	20	29	706

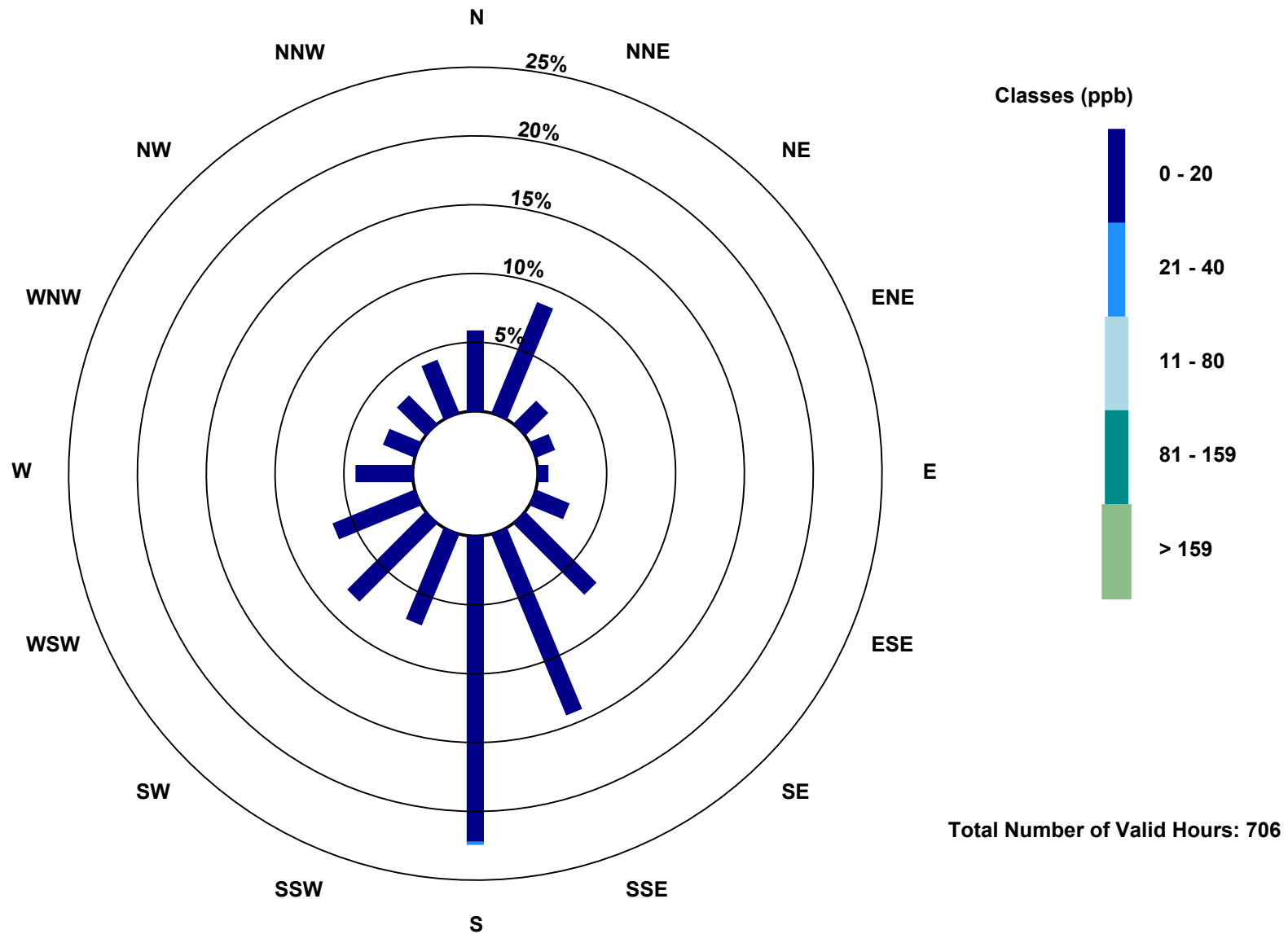
Total Number of Valid Hours: 706

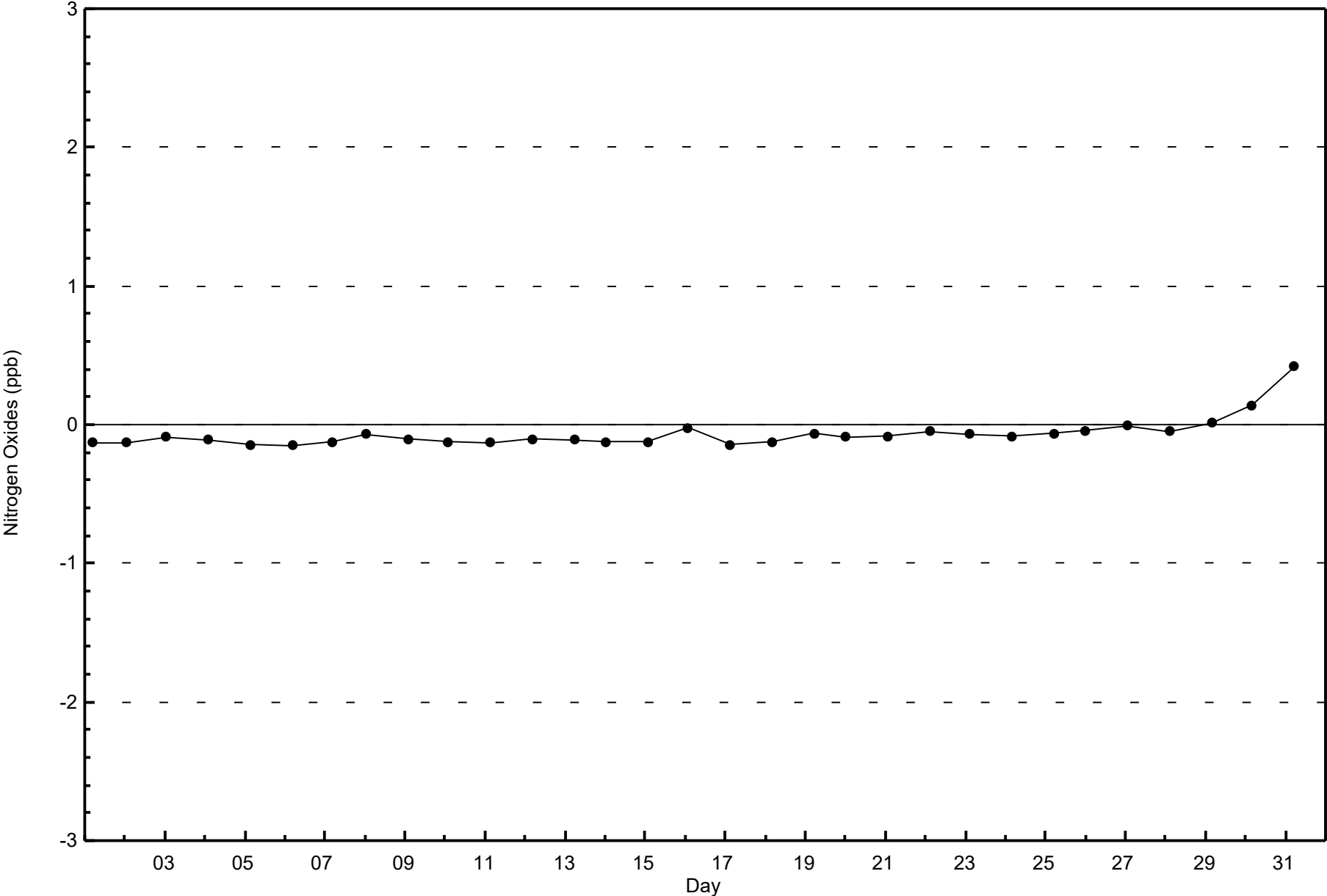
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Firebag

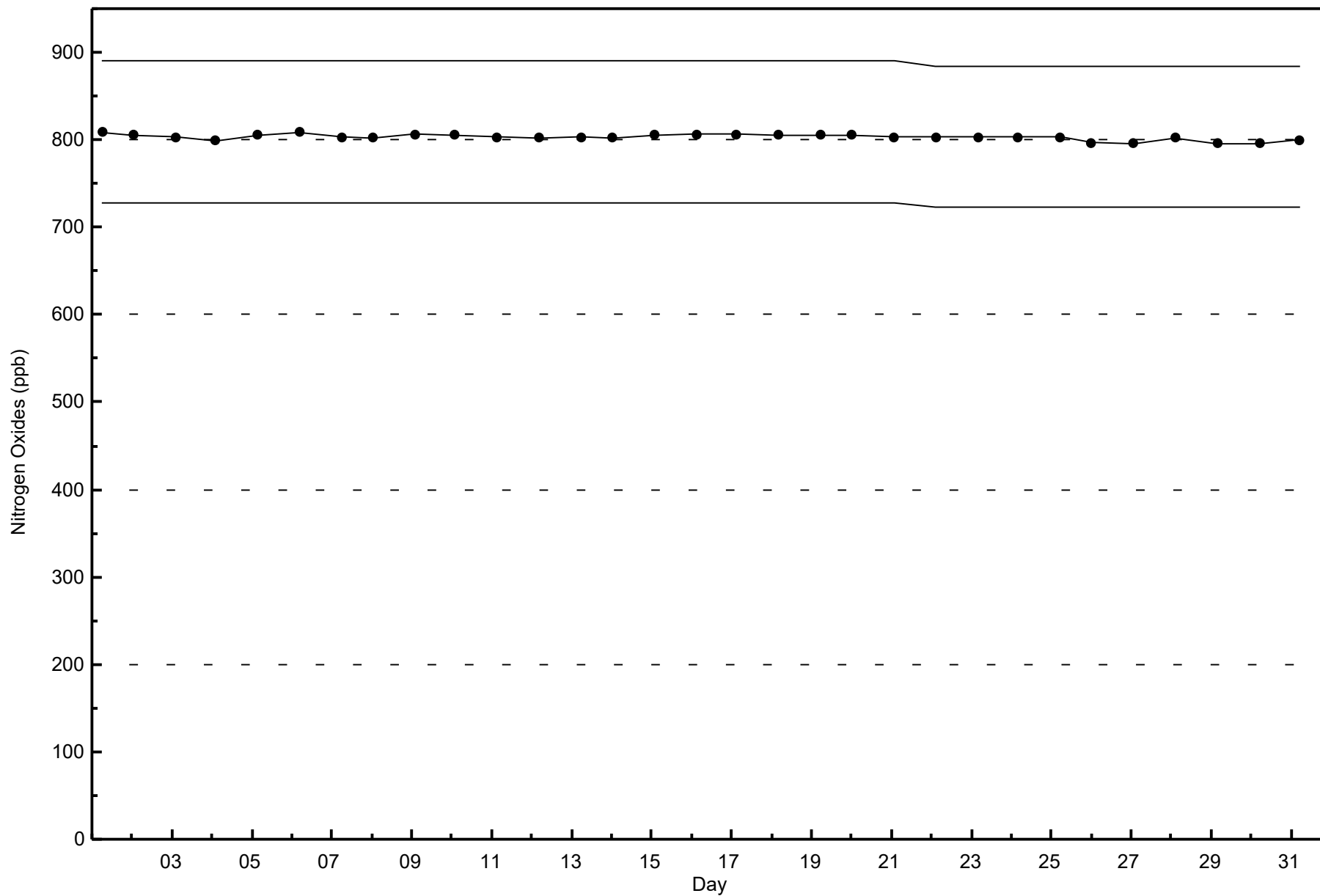






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

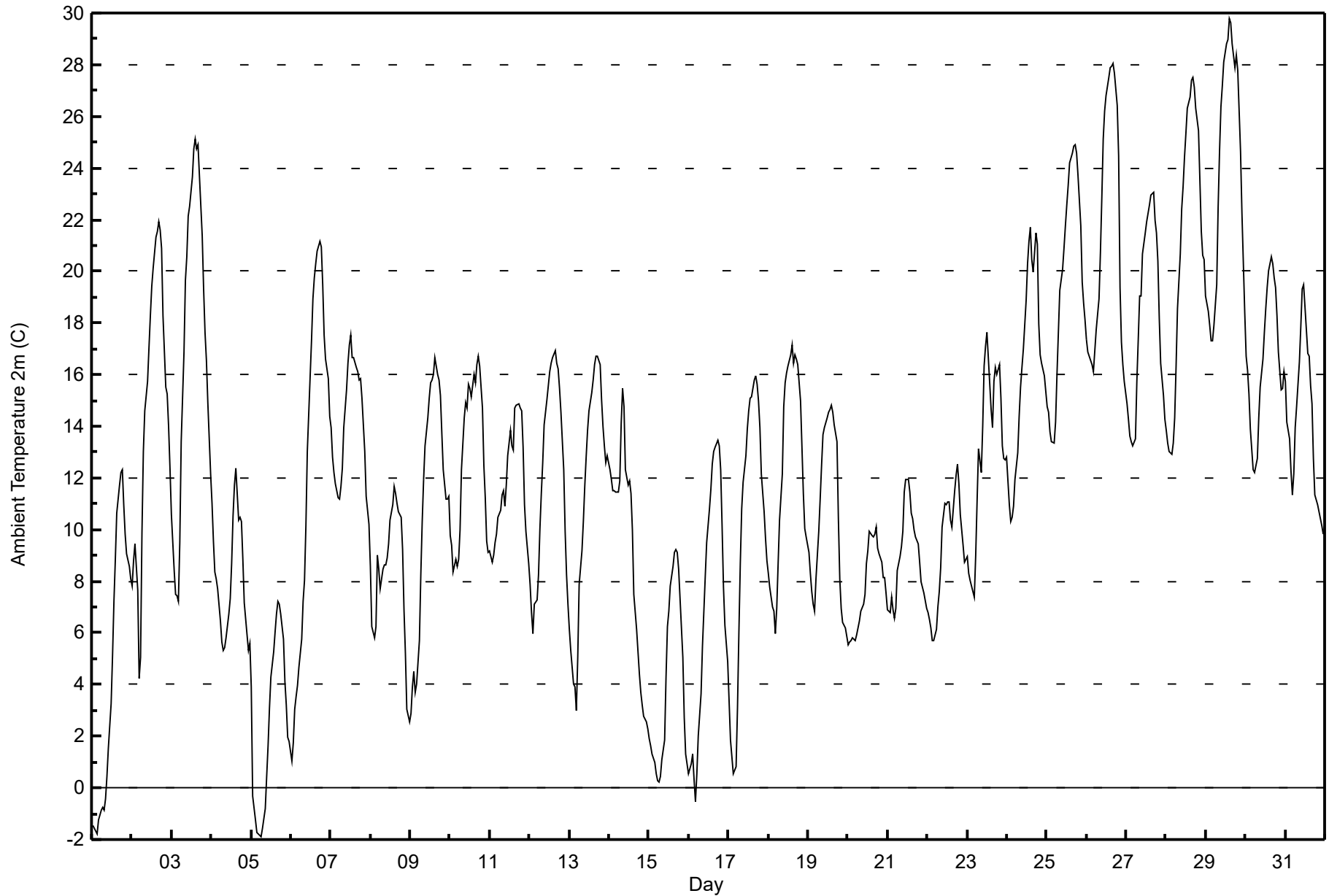
Firebag - May 2025

Maximum Value: 29.8 C on May 29 15:00																				Maximum Daily Average: 24.1 C on May 29					Hours in Service: 744	
Minimum Value: -1.9 C on May 5 07:00																				Minimum Daily Average: 2.4 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 16.6 C at hour 17																				Minimum Diurnal Average: 7.5 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.40 C																				Percentiles: P ₁ = -1.5 P ₁₀ = 4.2 Q ₁ = 8.1 Median = 12.2 Q ₃ = 16.4 P ₉₀ = 21.1 P ₉₉ = 28.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	-1.5	-1.6	-1.7	-1.8	-1.3	-0.9	-0.7	-0.9	-0.4	0.4	1.5	3.2	5.1	7.2	8.8	10.7	11.7	12.2	12.3	11.0	9.8	9.1	8.6	8.1	4.5	12.3
2-May	7.8	8.8	9.5	7.6	4.2	5.1	9.9	13.0	14.6	15.7	17.1	18.3	19.4	20.2	21.3	21.5	21.9	21.6	20.9	18.3	15.5	15.3	14.0	12.4	14.7	21.9
3-May	10.6	8.4	7.5	7.4	7.2	9.5	13.4	16.9	19.6	20.6	22.1	22.5	23.7	24.7	25.1	24.8	24.9	23.7	21.4	19.3	17.7	16.6	14.9	12.2	17.3	25.1
4-May	11.0	9.5	8.4	8.1	7.7	6.4	5.6	5.3	5.4	5.8	6.7	7.3	8.7	10.5	11.7	12.4	10.4	10.5	10.3	8.9	7.2	5.9	5.3	5.6	8.1	12.4
5-May	3.9	-0.3	-1.2	-1.7	-1.8	-1.9	-1.9	-1.6	-0.8	0.5	1.6	3.1	4.3	5.3	6.0	6.7	7.2	7.1	6.7	5.8	4.1	3.2	1.9	1.8	2.4	7.2
6-May	1.1	1.7	3.1	3.5	4.0	4.7	5.8	7.2	8.0	10.2	13.1	15.9	17.3	18.9	19.8	20.3	20.8	21.2	21.0	19.5	17.5	16.6	15.9	14.4	12.6	21.2
7-May	13.9	12.8	12.2	11.8	11.2	11.2	11.6	12.4	14.0	15.4	16.4	17.1	17.6	16.7	16.7	16.3	16.1	15.8	15.9	15.1	13.0	11.3	10.8	10.2	14.0	17.6
8-May	8.6	6.2	5.8	6.2	9.0	8.5	7.7	8.5	8.6	8.6	8.9	9.4	10.4	10.9	11.6	11.4	11.0	10.7	10.5	9.2	6.9	5.2	3.0	2.5	8.3	11.6
9-May	2.9	3.9	4.5	3.7	4.0	5.7	8.2	10.3	11.9	13.2	14.3	15.1	15.7	15.8	16.0	16.7	16.0	15.8	15.2	13.8	12.3	11.2	11.2	11.3	11.2	16.7
10-May	9.8	9.4	8.4	8.8	8.6	8.9	10.0	12.3	14.3	14.9	14.7	15.6	15.4	15.2	16.0	15.7	16.4	16.7	16.3	14.7	12.5	11.3	9.6	9.1	12.7	16.7
11-May	9.2	8.7	9.0	9.5	9.8	10.5	10.7	11.3	11.5	10.9	11.7	12.9	13.8	13.3	13.1	14.7	14.8	14.9	14.7	14.6	13.2	11.0	9.9	8.7	11.8	14.9
12-May	7.9	6.8	6.0	7.1	7.3	8.2	10.0	11.4	12.6	14.1	15.1	15.6	16.1	16.4	16.7	16.9	16.4	16.3	15.5	14.5	12.3	9.9	8.3	7.1	12.0	16.9
13-May	6.2	5.3	4.0	3.9	3.0	5.0	7.9	9.2	10.3	11.7	12.8	13.8	14.6	15.3	15.8	16.4	16.7	16.7	16.4	15.1	14.0	13.2	12.6	12.9	11.4	16.7
14-May	12.3	12.0	11.5	11.5	11.4	11.4	11.9	14.1	15.4	14.8	12.3	11.7	11.9	11.4	10.0	7.5	6.2	5.3	4.4	3.7	3.2	2.8	2.5	2.3	9.2	15.4
15-May	1.9	1.7	1.3	1.0	0.5	0.3	0.2	0.5	1.1	1.8	4.3	6.2	6.9	7.8	8.6	9.1	9.2	9.1	8.5	7.3	5.1	2.7	1.3	0.9	4.1	9.2
16-May	0.6	0.9	1.3	0.3	-0.5	0.5	2.0	3.7	5.5	6.9	8.2	9.5	10.8	11.6	12.5	13.0	13.2	13.4	13.2	12.3	10.2	7.7	6.3	4.9	7.0	13.4
17-May	3.4	1.9	1.2	0.5	0.8	3.1	6.0	8.7	10.8	11.8	12.9	13.9	14.6	15.1	15.2	15.8	16.0	15.6	15.0	14.0	12.2	10.7	9.6	8.8	9.9	16.0
18-May	8.3	7.8	7.0	6.8	6.0	6.9	8.7	10.4	12.2	14.8	15.7	16.1	16.3	16.8	17.1	16.4	16.8	16.6	16.4	15.0	13.2	11.4	10.0	9.7	12.3	17.1
19-May	9.1	8.3	7.6	7.1	6.8	8.1	9.9	11.2	12.5	13.7	14.0	14.4	14.6	14.6	14.8	14.5	14.1	13.4	10.4	8.1	6.9	6.4	6.2	5.9	10.5	14.8
20-May	5.5	5.6	5.7	5.8	5.7	5.9	6.2	6.5	6.8	7.1	7.5	8.7	9.2	9.9	9.8	9.7	9.8	10.1	9.3	9.1	8.7	8.1	8.1	7.6	7.8	10.1
21-May	6.9	6.8	7.4	6.9	6.6	7.0	8.4	8.9	9.3	9.9	11.4	12.0	11.9	11.4	10.7	10.4	10.0	9.7	9.4	8.7	8.0	7.8	7.6	6.9	8.9	12.0
22-May	6.8	6.5	6.2	5.7	5.7	6.2	7.0	7.6	8.5	10.1	11.0	11.0	11.1	11.1	10.4	10.1	11.5	12.1	12.5	11.8	10.6	9.4	8.7	8.8	9.2	12.5
23-May	9.0	8.3	8.1	7.6	7.4	9.0	11.1	13.1	12.2	14.0	16.3	17.1	17.7	16.6	14.7	13.9	15.7	16.3	16.0	16.4	15.1	13.3	12.8	12.7	13.1	17.7
24-May	12.8	11.0	10.3	10.5	10.9	11.9	13.0	14.4	15.5	16.3	17.0	18.9	20.3	21.2	21.7	20.5	20.0	21.5	21.0	18.0	16.8	16.5	16.0	15.4	16.3	21.7
25-May	14.8	14.6	13.8	13.4	13.3	14.2	16.0	17.6	19.2	20.1	20.9	21.8	22.6	23.3	24.2	24.6	24.9	24.9	24.6	23.7	21.8	19.6	18.8	18.1	19.6	24.9
26-May	17.4	16.9	16.5	16.4	16.1	17.0	17.7	19.0	20.7	22.8	25.1	26.2	26.8	27.5	27.9	27.9	28.0	27.7	26.4	24.5	19.4	17.3	16.4	15.7	21.6	28.0
27-May	14.8	14.3	13.6	13.4	13.2	13.5	15.7	17.4	19.0	20.7	21.5	21.9	22.2	22.6	22.9	23.0	22.0	21.5	20.4	18.2	16.4	15.2	14.3		18.2	23.0
28-May	13.9	13.3	13.0	12.9	13.4	14.3	16.3	18.5	20.7	22.4	23.3	24.4	25.3	26.3	26.7	27.4	27.5	27.1	26.3	25.5	23.5	21.6	20.6	20.4	21.0	27.5
29-May	19.1	18.4	17.9	17.3	17.3	17.9	19.5	22.5	24.6	26.4	27.2	28.1	28.8	29.0	29.8	29.6	28.8	27.9	28.3	27.8	26.2	24.6	22.2	18.4	24.1	29.8
30-May	16.7	16.2	15.2	13.9	12.3	12.2	12.5	12.7	14.3	15.5	16.6	17.6	18.6	19.4	20.0	20.5	20.3	19.8	19.4	18.3	16.9	15.4	15.4	16.1	16.5	20.5
31-May	15.8	14.2	13.5	12.3	11.3	12.1	14.0	14.8	16.5	17.9	19.3	19.5	18.6	16.8	16.7	15.6	14.9	12.8	11.3	11.0	10.7	10.4	10.1	9.8	14.2	19.5
9.0 8.3 8.0 7.7 7.5 8.1 9.5 10.9 12.1 13.1 14.2 15.1 15.8 16.2 16.5 16.6 16.6 16.4 15.8 14.7 13.0 11.7 10.8 10.1																										Diurnal Average
19.1 18.4 17.9 17.3 17.3 17.9 19.5 22.5 24.6 26.4 27.2 28.1 28.8 29.0 29.8 29.6 28.8 27.9 28.3 27.8 26.2 24.6 22.2 20.4																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Firebag - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	18	2.42	2.42
0 - 10	259	34.81	37.23
10 - 20	372	50.00	87.23
> 20	95	12.77	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

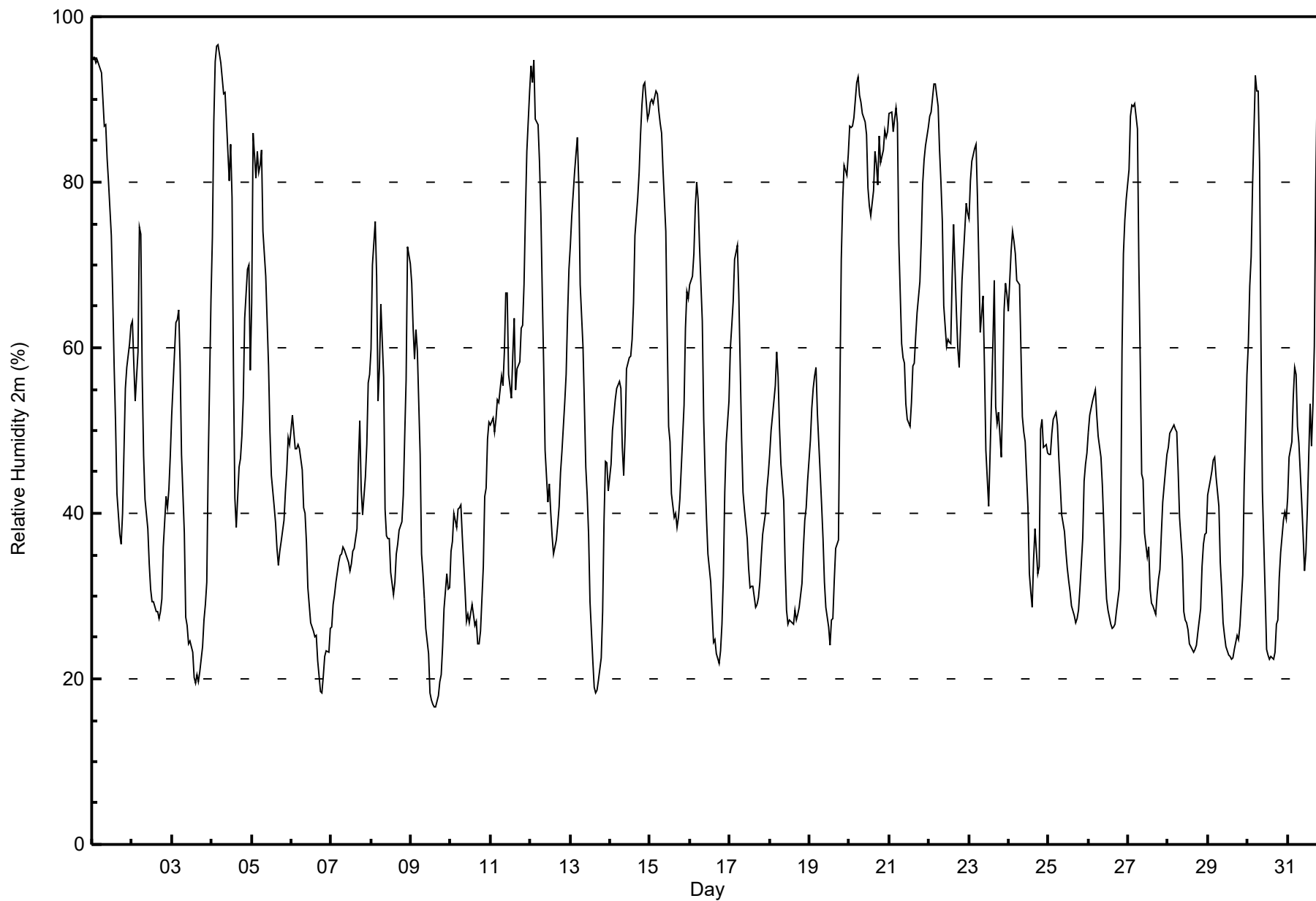
Firebag - May 2025

Maximum Value: 96.7 % on May 31 23:00																				Maximum Daily Average: 85.0 % on May 20					Hours in Service: 744	
Minimum Value: 16.5 % on May 9 16:00																				Minimum Daily Average: 33.0 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 69.7 % at hour 5																				Minimum Diurnal Average: 36.9 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 51.68 %																				Percentiles: P ₁ = 18.4 P ₁₀ = 26.5 Q ₁ = 34.0 Median = 48.3 Q ₃ = 67.0 P ₉₀ = 86.1 P ₉₉ = 95.1					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	95.1	95.1	94.5	94.8	94.3	93.2	90.1	86.8	86.9	82.9	80.0	73.5	66.2	57.8	51.0	42.3	37.5	36.2	40.0	47.4	55.1	57.7	60.5	62.8	70.1	95.1
2-May	63.3	58.1	53.6	59.5	74.6	73.8	56.6	46.9	41.7	38.1	33.8	30.9	29.4	29.4	28.2	28.1	27.3	28.1	29.6	35.9	42.0	40.8	42.9	47.0	43.3	74.6
3-May	51.9	59.3	63.0	63.4	64.6	58.1	47.1	37.7	27.5	26.4	24.3	24.6	23.2	20.2	19.5	20.5	19.6	20.9	23.9	27.2	29.1	31.6	45.7	65.9	37.3	65.9
4-May	73.4	87.2	94.6	96.5	96.7	94.4	92.6	90.7	90.9	87.5	80.2	84.6	78.1	57.4	41.8	38.3	45.6	46.6	49.3	53.9	63.5	69.6	69.9	57.2	72.5	96.7
5-May	65.4	85.9	80.5	83.7	81.2	82.1	84.0	74.1	68.6	63.2	57.9	49.8	44.5	40.8	38.8	35.7	33.6	35.5	36.5	39.2	42.5	45.3	49.1	48.4	56.9	85.9
6-May	51.9	49.8	47.8	47.8	48.4	47.9	45.2	40.7	40.0	36.5	31.1	26.8	26.2	25.8	25.2	25.3	22.3	18.5	18.3	20.4	22.8	23.3	23.2	26.1	33.0	51.9
7-May	26.4	29.0	30.2	31.8	34.0	34.9	35.1	36.0	35.5	34.5	34.0	33.1	34.0	35.3	35.7	38.1	46.1	51.1	42.9	39.9	44.5	48.3	55.8	56.8	38.5	56.8
8-May	59.8	69.9	75.3	68.7	53.5	57.6	65.2	56.5	40.6	37.3	37.0	37.0	32.8	30.1	31.8	35.0	36.2	37.9	38.9	42.2	49.2	56.0	72.1	70.2	49.6	75.3
9-May	67.8	62.3	58.6	62.3	59.7	47.2	35.1	32.7	29.6	26.1	23.1	18.3	17.5	16.9	16.6	16.5	17.9	19.6	20.6	23.9	28.4	32.7	30.8	31.1	33.1	67.8
10-May	35.4	36.6	40.1	38.4	40.5	40.6	41.0	37.3	30.7	27.0	27.8	26.7	27.9	29.0	26.5	26.9	24.2	24.2	25.8	33.6	42.0	43.0	49.0	51.0	34.4	51.0
11-May	50.6	51.6	49.9	51.3	53.6	53.4	56.6	55.3	59.6	66.7	66.6	56.8	53.9	59.1	63.6	54.9	57.5	58.4	62.3	62.8	67.5	76.3	83.7	91.0	61.0	91.0
12-May	94.1	92.0	94.7	87.7	86.9	82.5	76.3	66.6	57.8	47.7	41.4	43.6	40.2	37.2	35.1	36.8	38.6	40.9	44.9	47.5	53.4	56.8	63.7	69.5	59.8	94.7
13-May	72.4	75.9	81.2	83.4	85.4	79.9	67.6	60.2	53.1	45.6	42.1	37.4	29.3	22.2	18.9	18.4	18.7	19.8	22.6	28.1	39.1	46.2	46.1	42.7	47.3	85.4
14-May	46.0	49.9	51.9	53.7	55.1	55.9	55.0	47.9	44.7	49.5	57.5	58.8	59.0	61.1	65.4	73.5	78.1	81.2	85.8	89.4	91.7	92.0	87.6	88.3	65.8	92.0
15-May	89.7	90.0	89.4	91.1	90.7	88.6	87.1	86.0	81.6	74.1	61.6	50.4	48.7	42.4	39.5	40.0	38.3	39.5	41.6	45.4	53.1	62.4	66.8	66.0	65.2	91.1
16-May	67.6	68.7	71.3	76.9	80.0	78.0	72.5	63.3	51.4	44.7	39.3	35.1	31.7	27.9	24.5	24.7	23.0	21.9	23.4	26.6	32.3	42.5	48.4	53.5	47.1	80.0
17-May	60.0	62.7	65.6	70.7	72.3	66.5	57.8	49.0	42.5	40.4	37.0	33.4	31.1	31.2	31.2	28.6	29.1	29.8	31.6	34.8	37.4	39.9	42.9	44.8	44.6	72.3
18-May	47.1	50.1	53.6	55.5	59.4	56.5	50.3	45.9	41.6	33.8	28.4	26.6	27.2	26.7	26.7	28.3	27.0	27.9	28.7	31.6	35.8	39.2	40.7	43.9	38.9	59.4
19-May	48.9	52.7	55.1	56.6	57.6	52.1	44.7	41.1	37.0	31.7	28.7	26.3	24.0	27.2	27.3	31.8	35.8	36.8	54.2	70.7	77.7	82.0	80.8	83.5	48.5	83.5
20-May	86.8	86.6	86.8	87.7	92.0	92.7	90.5	89.7	88.3	87.3	85.7	79.3	77.1	76.0	79.1	83.7	82.1	79.6	85.6	82.4	84.0	86.3	85.5	86.1	85.0	92.7
21-May	88.2	88.5	86.1	87.7	89.0	87.1	72.7	60.4	58.8	58.1	53.2	51.3	50.6	53.4	57.8	58.2	61.4	64.3	67.9	73.0	79.9	82.7	84.5	86.6	70.9	89.0
22-May	88.0	88.6	90.2	91.9	91.9	89.2	83.9	80.0	75.3	65.1	60.2	61.0	60.7	60.6	68.6	74.9	64.5	60.0	57.7	62.5	68.1	74.3	77.5	76.2	73.8	91.9
23-May	75.5	80.1	82.5	84.1	84.6	78.3	70.3	61.9	66.3	57.8	47.6	44.3	40.8	47.1	60.3	68.1	53.0	50.9	52.3	46.8	54.3	64.5	67.8	66.4	62.7	84.6
24-May	64.4	71.6	74.1	73.0	71.3	68.1	67.6	59.7	51.6	49.8	48.6	40.7	32.8	30.4	28.6	34.4	38.2	32.8	33.6	50.2	51.4	48.0	48.2	47.2	50.7	74.1
25-May	47.1	47.1	49.6	51.4	52.2	50.7	46.6	43.3	39.8	37.8	35.5	33.5	31.9	30.5	28.9	27.6	26.9	27.2	28.3	30.9	37.0	43.9	46.0	47.4	39.2	52.2
26-May	49.8	51.8	53.6	54.3	54.9	51.8	49.4	46.8	43.5	38.7	33.2	29.7	28.3	26.6	26.1	26.2	26.7	28.1	30.9	37.1	59.7	71.4	75.4	78.0	44.7	78.0
27-May	81.6	87.9	89.3	89.2	89.6	86.5	69.9	58.1	44.7	44.1	37.6	34.7	36.0	30.9	29.2	28.8	27.8	30.3	32.1	33.3	37.5	41.4	45.2	47.1	51.4	89.6
28-May	47.9	49.6	50.1	50.8	50.2	49.8	45.0	39.5	34.3	28.1	27.1	26.7	26.0	24.2	23.5	23.2	23.6	24.0	25.5	28.5	33.5	36.3	37.5	37.7	35.1	50.8
29-May	42.2	44.0	45.2	46.4	46.7	44.4	40.9	34.1	30.8	26.7	25.3	23.8	22.8	22.8	22.3	22.6	23.6	25.3	24.8	26.5	29.5	32.5	43.4	56.8	33.5	56.8
30-May	60.4	67.5	71.1	79.7	92.9	91.0	91.0	82.4	60.5	42.6	30.2	23.5	22.8	22.5	22.6	22.3	23.2	26.6	27.2	32.1	35.3	39.1	40.1	39.3	47.7	92.9
31-May	41.9	46.9	48.7	54.0	57.6	56.8	50.5	48.5	41.4	37.5	33.0	35.3	40.3	53.1	48.1	53.0	60.2	79.7	91.4	95.5	95.4	96.5	96.7	96.6	60.8	96.7
Diurnal Average																										
95.1 95.1 94.7 96.5 96.7 94.4 92.6 90.7 90.9 87.5 85.7 84.6 78.1 76.0 79.1 83.7 82.1 81.2 91.4 95.5 95.4 96.5 96.7 96.6 Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Firebag - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	15	2.02	2.02
20 - 40	249	33.47	35.48
40 - 60	243	32.66	68.15
60 - 80	124	16.67	84.81
80 - 100	113	15.19	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

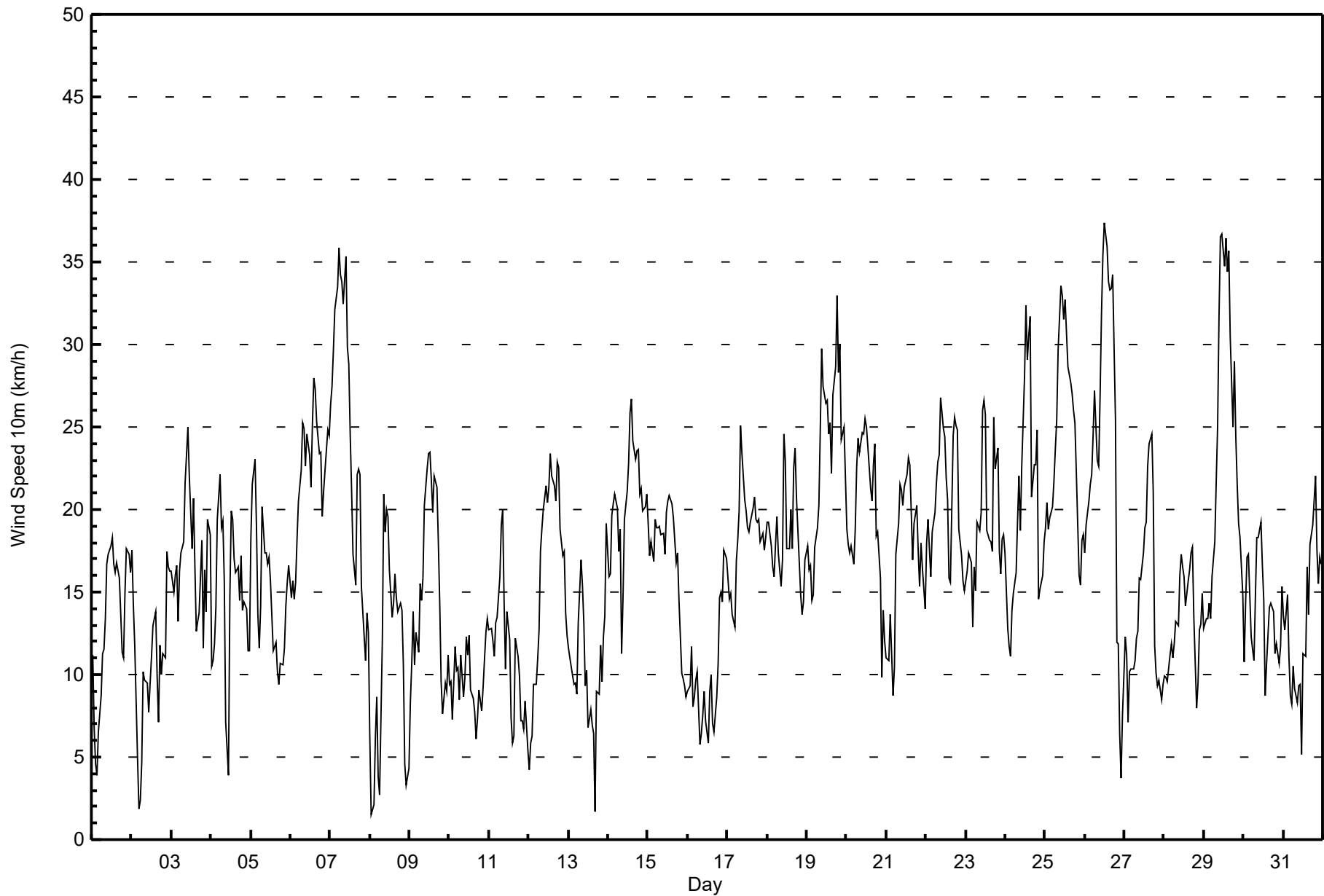
Firebag - May 2025

Maximum Speed: 37 km/h on May 26 13:00										Maximum Daily Speed Average: 24.2 km/h on May 25										Hours in Service: 744							
Minimum Speed Value: 2 km/h on May 8 02:00										Minimum Daily Speed Average: 2.4 km/h on May 2										Hours of Data: 744							
Maximum Diurnal Speed Average: 9.3 km/h at hour 11										Minimum Diurnal Speed Average: 6.2 km/h at hour 21										Hours of Missing Data: 0							
Monthly Average Velocity: 7.3 km/h 184.3 deg										Percentiles: P ₁ = 4 P ₁₀ = 9 Q ₁ = 12 Median = 17 Q ₃ = 21 P ₉₀ = 25 P ₉₉ = 35										Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	NNE11	NNE7	N5	NE4	SSE7	SSW9	SSW11	SSW12	SSW13	SW17	SSW17	SSW18	SSW18	SW17	SW16	SW17	SW16	SW14	S11	SSE11	SSE15	SE18	SSE17	SSE16	SSW9.6	SSW18	
2-May	S18	SSW14	SW12	NW5	ESE2	S2	NW5	NNW10	NW10	NW10	NNW8	NNW9	NNW11	NW13	NW14	N10	NNW7	N12	NNE10	NE11	ENE11	E17	ESE17	ESE16	N2.4	S18	
3-May	ESE16	ESE15	SE16	SE17	SE13	SSE16	SSE17	S18	SSW22	SW23	SW25	W22	WNW18	NW21	NW17	WNW13	WNW13	NW14	NNW18	NNW12	NNW16	NW14	NNW19	N18	W4.3	SW25	
4-May	NNW11	NW11	WNW12	WNW14	NW19	NNW22	N19	N19	N16	N7	WSW4	W15	W20	WNW19	WNW17	W16	W17	WSW15	WSW17	SW14	SW14	WSW14	W11	NW11	WNW10.8	NNW22	
5-May	NNW18	N21	N23	N19	N14	N12	N14	NNW20	NNW17	NNW17	NNW17	NNW17	NNW16	NNW11	N12	N12	N10	NE9	NE11	ENE11	E12	ESE14	SE16	SE17	N10.6	N23	
6-May	SE15	SE16	SE15	SSE16	SSE18	SSE20	S22	S25	S25	SSW23	SSW25	SW23	SW21	WSW25	SW28	SW27	WSW25	SW23	SW23	SSW20	S21	S22	S25	S24	SSW19.0	SW28	
7-May	S26	S27	S30	S32	S34	S36	S34	S34	SSW32	SSW35	SSW30	SW29	SW25	WSW21	WSW17	WSW15	WSW22	WSW22	WSW22	WSW15	SW12	SW11	SW14	SW13	SSW21.3	S36	
8-May	WSW6	WNW2	SSE2	E6	E9	NE4	NE3	N12	NNE21	NNE19	NNE20	N20	N16	NNW13	N14	NNE16	NNE15	N14	N14	NNE14	N11	NE5	SSE3	SSE4	NNE9.1	NNE21	
9-May	SSE8	S11	SSW14	S11	SSW13	SSW11	SW16	WSW14	WSW16	SW20	WSW22	W23	W23	W22	WSW20	W22	W21	WSW18	WSW14	WSW10	SW8	SSW10	SW9	SW11	WSW13.6	W23	
10-May	SSW9	SSW10	SW7	SSW12	SW10	SW10	WSW9	WSW11	WSW9	WSW10	W12	W11	WNW12	NW9	NW9	WNW8	WSW6	W7	SW9	S8	SSE9	SE11	SE13	SSE13	SW6.3	SSE13	
11-May	SE13	SE13	SE12	SE11	SE13	SSE13	S16	S19	SSW20	SSW14	SSW10	S14	S12	WSW7	S6	SE6	SE12	SE11	SE10	SE7	ESE7	ESE7	SE8	SE5	SSE9.7	SSW20	
12-May	ESE4	ESE6	ENE6	ENE9	NE9	NE11	NE13	NE17	NE19	NE20	NE21	NNE20	NNE21	NNE23	NE22	NNE21	NNE21	NNE23	NNE23	NNE19	N17	NNE17	NNE14	NNE12	NE15.6	NNE23	
13-May	NNE12	N11	N10	N9	N9	N9	NNE13	NNE17	NNE15	NE13	N9	NNW10	NNW7	WNW8	NNE7	NNE6	ENE2	ESE9	SE9	SE12	SSW10	SSE12	SE14	SSE19	NE4.7	SSE19	
14-May	SSE16	SSE16	SSE20	S20	S21	S20	SSW17	SW19	W11	NNW15	NNW19	N21	N23	N26	N27	N24	NNE23	N24	N24	N21	NNE21	NNE20	NNE20	NNE21	N7.6	N27	
15-May	NNE19	NNE17	NNE18	NNE17	NNE19	NNE19	NNE19	NNE19	NNE18	NNE19	NNE17	NNE20	NNE20	NNE21	NNE20	NNE19	NNE18	NNE17	NNE17	NNE14	NNE10	NNE10	ENE9	ENE9	NNE16.7	NNE21	
16-May	ENE9	E9	E12	ESE8	ESE9	ESE10	SE10	ESE6	ENE6	NE8	ENE9	NE7	ESE6	SE9	S10	SE7	SE7	SE9	ESE11	ESE15	ESE15	SE14	SE18	SE17	ESE8.8	SE18	
17-May	SE16	SE15	SE15	SE14	SE13	SE17	SSE18	SSE20	S25	S23	S21	SSE20	SSE19	S19	SE19	SE20	SE21	SE19	SSE19	SE19	SE18	SSE19	SE18	SE18	SSE18.0	S25	
18-May	SSE19	SSE19	SSE18	SSE17	SSE16	SSE18	SSE20	SSE17	SSE15	S17	S25	S23	S18	SSE18	SSE20	SSE18	S23	SSE24	SSE21	SSE17	SSE15	SE14	SE14	SE17	SSE18.0	S25	
19-May	SSE18	S16	S17	S14	S15	S18	S19	S20	S25	S30	SSE27	SSE26	S27	S25	S25	SSE22	SSE27	SSE29	SSE33	SSE28	SSE30	SSE24	SSE25	SSE22	SSE23.1	SSE33	
20-May	SSE19	SSE18	SSE17	SSE18	SSE17	SSE19	SSE23	SSE24	SSE23	SSE25	SSE25	SSE26	SSE25	S24	SSE21	SSE21	SSE23	SSE24	SSE18	SSE19	S16	SSE10	S14	SSE12	SSE19.8	SSE26	
21-May	SSE11	S11	S14	SE11	SE9	SE10	SSE17	SSE19	SSE22	SSE21	SSE20	SSE21	SSE22	SSE23	SSE23	SSE20	SE17	SSE19	S20	S17	S15	S18	S16	S14	SSE16.7	SSE23	
22-May	S18	S19	S18	S16	SSE19	S20	S22	S23	S23	S27	S25	S24	SSW22	SSW21	SW16	SSW16	S24	S26	S25	S25	S19	S17	S16	SSW15	S20.2	S27	
23-May	SSW16	S16	S17	S17	S13	S17	S15	S19	S19	SSE20	SSE26	S27	S26	SSW19	SSE18	SSE18	S17	S26	SSE22	S24	SSE17	SSE16	S18	SSW18	S18.7	S27	
24-May	SSW17	S13	SSE12	SSE11	SSE14	SSE15	SSE16	S19	S22	SSW19	S23	S28	S32	S29	S30	S32	SSE21	S23	S23	S25	SSE15	SSE15	S16	S18	S19.9	S32	
25-May	S19	S20	S19	S20	S20	S22	S24	SSW25	SSW30	S34	S33	S31	S33	S31	S29	S28	S27	S26	S25	S22	S16	S15	S18	S18	S24.2	S34	
26-May	S17	S19	S20	S22	S22	S24	S27	S23	S23	S27	S32	S35	S37	SSW36	SSW34	S33	S33	S34	S25	SW12	NW12	WNW6	W4	SW8	S21.8	S37	
27-May	WSW12	WSW11	WSW7	SW10	SW10	SW10	WSW10	WSW11	W12	W13	W16	W16	W17	W19	W19	WSW23	WSW24	W25	W21	WNW12	W10	WSW9	WSW10	SW8	SW9	WSW13.4	W25
28-May	SW10	SW10	SW10	SW11	SW12	SW11	SW12	WSW13	W13	WSW16	WSW17	WSW17	WSW16	WSW14	SW16	WSW16	SW17	SW18	SW14	SSW8	SSE10	S13	S13	S15	SW12.0	SW18	
29-May	S13	S13	S13	S14	S13	SSE16	S18	S22	S25	S32	SSW37	S37	S35	S36	S34	S36	S31	S25	S29	S24	SSE22	SSE19	W18	NW15	S22.1	S37	
30-May	WNW11	WNW14	W17	WNW17	WNW12	NW12	NW11	NNW15	N18	NNW18	NNW19	NNW17	NNW15	NW9	W11	SW14	WSW14	WSW14	SW14	SSW11	SSW12	SSW11	SSW12	SSW15	WNW8.6	NNW19	
31-May	SSW14	SSW13	SW15	SW11	WSW9	SW8	SW11	SW9	WSW8	SW9	SW9	WNW5	N11	N11	N16	NNE14	NNE18	N18	NNE19	NNE22	NNE18	NNE16	N17	NNE17	NNW4.6	NNE22	
SSE7.5 S7.7 S7.8 SSE7.5 SSE7.6 S8.5 S9.0 S8.2 SSW8.1 SSW8.9 SSW9.3 SSW8.6 SW8.5 SW7.6 SSW6.6 SSW6.6 SSW6.9 SSW7.2 S6.9 SSE6.7 SSE6.2 SSE7.2 SSE7.2 SSE7.3																									Diurnal Average		
S26 S27 S30 S32 S34 S36 S34 S34 SSW32 SSW35 SSW37 S37 S37 S36 S34 S36 S33 S34 SSE33 SSE28 SSE30 SSE24 SSE25 S24																									Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																											



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Firebag - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Firebag - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	19	2.55	2.55
6 - 11	157	21.10	23.66
12 - 19	342	45.97	69.62
20 - 28	184	24.73	94.35
29 - 38	42	5.65	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Firebag - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1	0	4	1	0	2	1	3	1	0	0	1	1	2	2	0	19
6 - 11	11	7	7	9	3	10	16	8	6	12	25	15	6	5	8	9	157
12 - 19	20	36	3	0	3	7	34	57	61	24	24	20	13	13	9	18	342
20 - 28	11	19	3	0	0	0	2	40	69	8	9	11	9	0	1	2	184
29 - 38	0	0	0	0	0	0	0	3	31	7	1	0	0	0	0	0	42
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	62	17	10	6	19	53	111	168	51	59	47	29	20	20	29	744

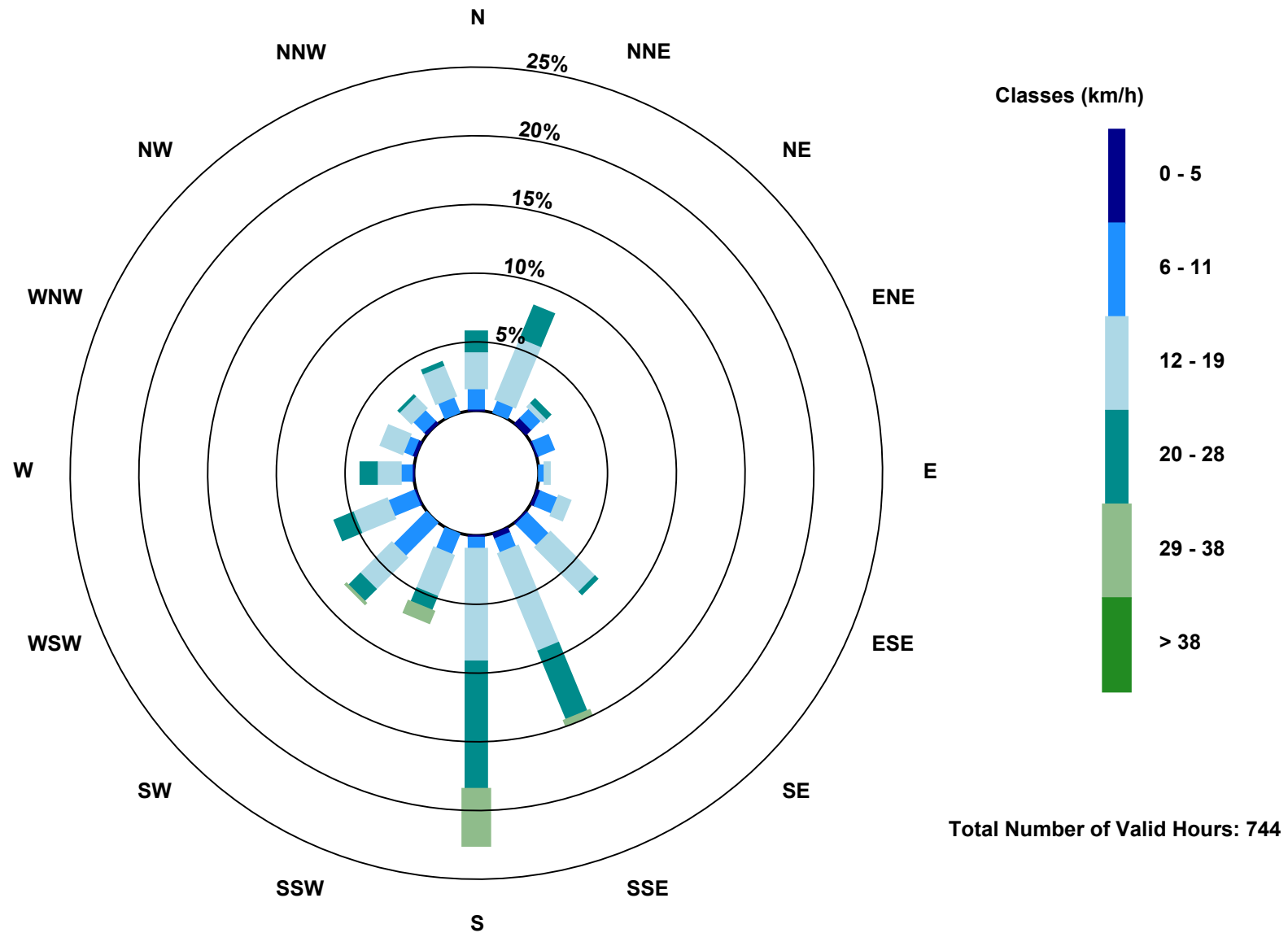
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Firebag





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Firebag - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 4 05:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 1 km/h on May 10 02:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	1	1	2	1	2	2	2	3	3	3	4	4	4	4	4	3	2	2	3	3	3	3	4
2-May	3	3	3	3	1	2	3	2	2	3	3	4	5	4	4	4	5	4	4	2	2	4	3	3	5
3-May	3	3	3	3	2	3	2	3	4	4	5	6	5	6	5	5	5	4	4	2	4	3	7	5	7
4-May	4	2	3	3	7	5	4	4	3	2	2	4	5	5	5	4	6	4	4	3	2	2	2	2	7
5-May	7	5	5	5	3	3	3	4	4	5	4	5	4	5	4	5	4	2	2	2	2	2	3	3	7
6-May	3	3	3	2	3	3	3	4	4	4	5	5	6	6	7	6	5	5	5	3	3	3	4	4	7
7-May	4	4	5	5	5	5	6	5	6	6	6	6	6	5	4	3	5	5	5	3	2	1	2	2	6
8-May	3	1	1	2	1	2	2	4	5	5	4	4	4	4	5	4	4	4	3	3	2	3	1	1	5
9-May	2	2	2	1	1	2	3	3	3	4	5	7	7	6	5	6	6	5	4	2	1	1	1	3	7
10-May	1	1	2	1	2	2	2	3	4	4	6	5	5	5	3	4	3	2	3	2	1	2	2	2	6
11-May	2	2	2	2	3	2	3	4	4	3	5	4	5	3	3	3	3	2	2	2	2	1	2	3	5
12-May	1	1	2	1	1	1	3	4	4	4	5	5	5	6	5	5	6	5	5	5	4	4	2	2	6
13-May	1	1	1	1	1	2	3	3	4	4	4	5	4	4	5	4	3	4	2	3	3	2	3	4	5
14-May	3	3	4	3	4	3	3	5	4	5	4	4	5	6	6	6	5	5	5	5	5	5	5	5	6
15-May	4	4	5	5	5	5	5	4	4	4	5	5	5	5	5	5	4	4	4	3	2	1	1	1	5
16-May	2	2	2	2	2	2	2	3	3	3	4	5	4	4	5	4	4	4	4	3	3	4	3	3	5
17-May	3	3	3	2	2	3	3	3	4	4	4	5	5	5	4	4	5	4	4	4	3	4	3	3	5
18-May	4	3	3	3	3	3	3	3	3	4	5	6	5	6	4	4	4	4	4	4	3	2	2	3	6
19-May	3	2	2	2	2	3	3	3	5	6	5	5	5	5	5	4	6	5	6	6	6	5	5	5	6
20-May	4	3	3	3	3	4	5	4	5	5	5	5	4	4	4	5	4	5	4	3	3	1	2	2	5
21-May	2	2	2	3	2	2	4	4	3	4	4	4	5	5	4	4	3	3	3	3	2	2	2	2	5
22-May	3	3	3	2	3	4	3	3	4	5	4	4	4	4	4	3	5	4	4	4	4	3	2	2	5
23-May	2	3	2	3	2	2	2	3	4	6	5	6	5	6	6	4	6	5	4	5	3	3	3	3	6
24-May	3	2	2	2	2	3	3	4	3	4	4	5	6	5	6	6	4	4	5	6	3	2	2	3	6
25-May	3	3	2	3	3	3	4	4	5	5	5	6	6	6	6	6	6	5	4	4	3	3	2	2	6
26-May	2	3	3	3	3	4	5	4	3	5	6	6	6	6	6	7	6	6	6	5	6	2	3	2	7
27-May	3	2	2	3	2	2	2	3	3	4	4	5	6	6	6	6	6	6	4	3	1	1	1	1	6
28-May	1	1	1	2	1	1	2	3	3	3	5	5	5	5	6	6	5	4	3	1	2	1	2	2	6
29-May	2	2	2	2	1	2	3	3	4	6	7	7	6	6	6	6	5	4	5	4	4	3	7	5	7
30-May	3	4	5	5	3	3	3	3	5	4	5	6	5	4	4	5	4	3	2	2	2	2	4	2	6
31-May	2	1	2	2	1	1	2	2	2	2	3	3	3	3	4	3	5	4	4	6	7	4	4	4	7
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

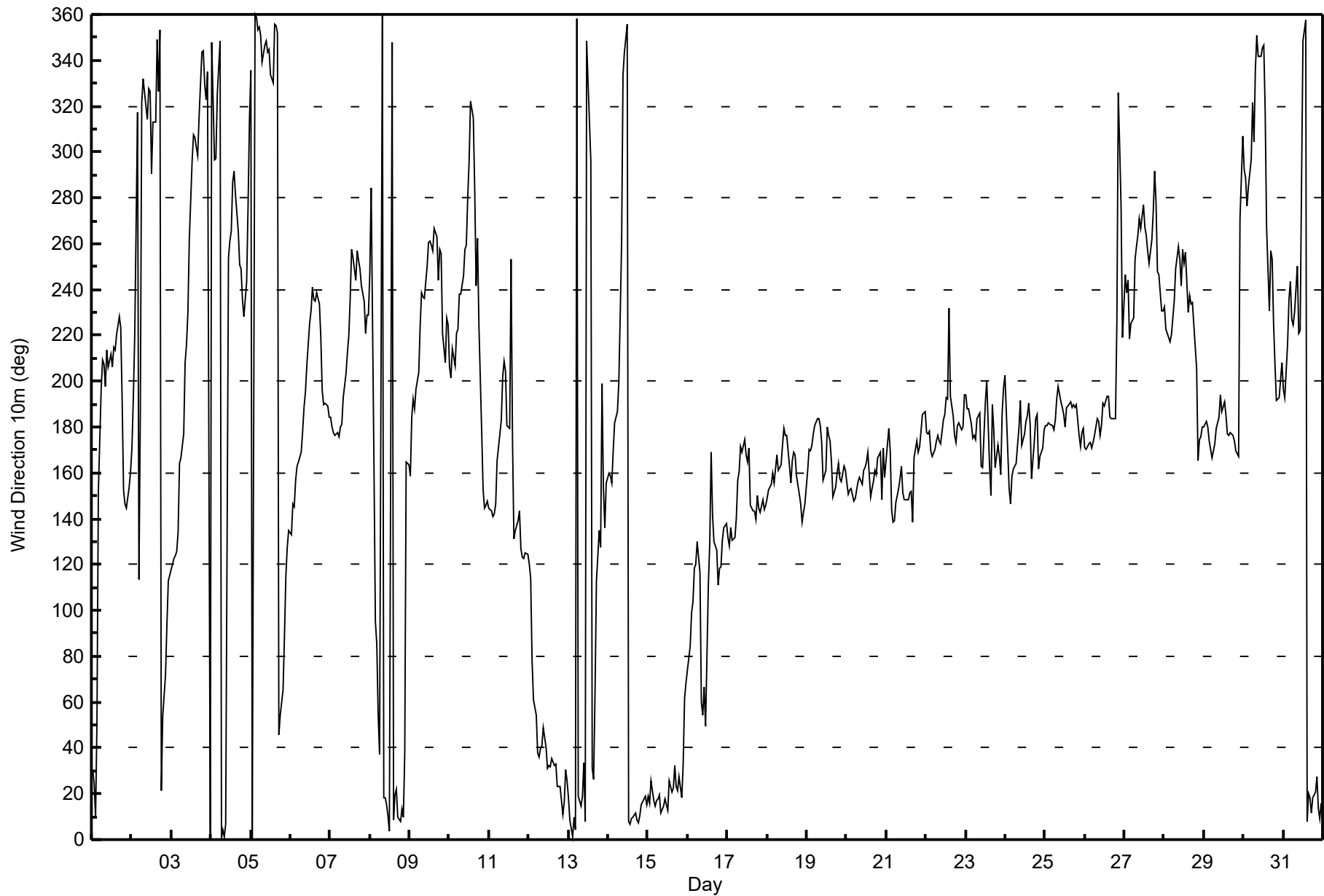
Firebag - May 2025

Direction of Maximum Speed: 189 deg on May 26 13:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 185.7 deg on May 25																				Hours of Data:		744			
Direction of Minimum Speed: 284 deg on May 8 02:00										Direction of Minimum Daily Speed Average: 2.4 deg on May 2										Hours of Missing Data:		0			
Monthly Average Direction: 184.3 deg																				Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	30	24	10	52	152	196	209	207	198	214	206	212	206	215	214	220	228	223	191	152	147	144	154	160	193.2
2-May	171	193	220	317	113	188	321	332	326	314	328	327	290	313	313	349	327	353	21	54	72	94	113	116	354.0
3-May	118	123	124	126	134	164	166	177	208	216	230	262	296	308	306	302	298	315	343	344	329	323	335	0	265.3
4-May	348	323	296	297	325	348	1	4	1	7	254	261	266	287	292	281	265	251	249	236	228	244	276	314	295.7
5-May	335	1	360	359	353	355	351	339	346	348	344	345	334	330	356	355	352	46	54	65	89	115	127	135	4.7
6-May	133	146	145	157	163	165	169	178	189	195	207	225	231	241	236	235	238	234	219	196	190	190	189	184	198.7
7-May	184	180	178	176	178	176	180	181	193	203	212	220	236	257	254	244	257	253	249	242	235	221	229	229	207.6
8-May	246	284	163	95	86	54	37	360	18	18	15	10	4	348	8	19	22	10	8	13	10	38	165	163	15.9
9-May	159	184	192	188	197	204	224	239	237	236	250	261	261	259	257	267	263	244	258	256	221	208	228	224	238.2
10-May	206	201	214	207	221	222	238	238	246	257	259	280	296	322	315	284	242	262	224	177	153	145	146	147	227.6
11-May	145	143	141	142	146	165	177	183	202	208	204	181	179	253	175	131	135	139	143	127	123	123	125	124	162.4
12-May	120	114	78	61	54	38	36	39	41	49	41	31	33	32	35	32	33	23	23	23	11	16	30	26	34.7
13-May	18	9	1	10	4	358	19	15	19	34	8	348	331	296	31	26	64	113	135	127	199	153	136	155	37.2
14-May	160	159	156	169	182	186	200	229	260	334	344	356	8	7	9	10	12	8	7	10	15	16	19	15	9.0
15-May	19	16	26	17	15	17	18	19	12	15	18	15	13	26	21	23	33	23	21	28	18	33	61	68	21.6
16-May	74	84	99	104	118	120	130	116	60	54	67	49	111	130	169	142	130	127	111	118	119	131	136	138	114.4
17-May	132	128	136	131	132	141	157	160	172	169	174	168	165	171	146	144	144	139	150	145	143	148	144	146	150.8
18-May	149	153	155	160	155	162	168	161	163	172	180	177	176	163	156	165	169	168	158	151	147	138	143	146	160.8
19-May	161	170	170	172	177	181	184	184	181	173	157	161	180	176	174	165	150	154	160	164	157	156	163	161	166.9
20-May	156	151	153	153	148	149	152	156	158	155	161	162	165	169	150	153	156	161	159	166	169	148	171	158	157.7
21-May	165	179	170	144	139	139	147	153	157	163	152	149	149	148	151	152	139	167	174	169	172	178	185	187	159.1
22-May	178	177	178	169	167	170	174	176	174	173	183	186	193	192	232	194	185	176	173	181	182	179	180	194	181.0
23-May	194	188	188	181	175	177	174	184	186	163	163	176	191	200	163	150	190	179	162	172	167	159	186	197	177.4
24-May	202	170	153	147	159	162	164	172	179	192	172	177	182	185	190	181	158	174	184	185	162	167	171	179	176.1
25-May	181	181	182	181	181	179	183	192	198	191	188	186	180	189	189	191	188	190	188	190	176	171	177	180	185.7
26-May	171	170	173	173	171	173	176	184	183	176	181	191	189	193	193	184	184	184	184	226	326	302	276	219	185.2
27-May	247	239	244	219	225	227	253	259	264	271	267	277	267	264	257	252	262	274	291	278	248	246	231	231	257.0
28-May	232	223	221	217	221	228	235	249	259	253	241	257	251	256	230	237	234	234	224	206	165	174	176	180	228.5
29-May	180	183	180	174	170	167	173	179	182	184	194	187	191	185	177	176	177	176	174	170	168	167	271	307	182.5
30-May	292	288	277	285	296	322	304	336	351	342	341	346	347	318	267	231	257	253	225	208	192	193	201	208	285.9
31-May	196	193	216	235	243	227	225	230	250	221	222	287	349	358	8	20	18	11	18	21	27	14	9	16	343.5
168.1 168.9 170.8 168.2 168.3 172.0 178.7 188.3 194.3 194.8 198.6 208.3 214.3 221.5 210.3 199.3 198.0 193.1 181.7 166.9 159.2 156.2 166.4 167.1																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Firebag - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Firebag - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 97 deg on May 13 17:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on May 10 02:00																									
Percentiles: P ₁ = 7 P ₁₀ = 9 Q ₁ = 11 Median = 14 Q ₃ = 19 P ₉₀ = 28 P ₉₉ = 66																									
Day	Hourly Period Ending At (MST)																	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		18	19	20	21	22	23	24
1-May	11	17	14	22	22	13	14	15	11	16	16	18	20	19	19	24	20	20	23	10	10	11	11	11	24
2-May	9	11	20	41	65	65	34	16	23	31	43	37	40	31	28	37	63	16	34	10	10	11	10	10	65
3-May	10	11	11	11	12	10	9	10	16	14	17	23	24	22	25	31	24	17	13	13	14	13	22	16	31
4-May	14	15	17	17	22	13	14	14	14	27	82	13	16	20	24	24	21	12	15	12	9	21	19	13	82
5-May	25	15	14	13	13	14	14	14	17	20	21	24	26	33	29	28	34	23	16	13	13	11	12	12	34
6-May	13	11	11	12	10	9	10	10	10	14	12	17	18	17	18	18	16	15	13	9	8	9	9	9	18
7-May	9	9	9	10	9	9	10	9	11	11	14	16	16	15	15	12	14	15	13	11	9	10	10	10	16
8-May	17	73	66	9	12	46	87	20	13	12	15	16	22	22	24	22	18	19	16	11	10	40	21	22	87
9-May	9	9	7	7	7	8	11	13	18	20	17	20	18	22	21	19	18	18	17	11	14	9	7	16	22
10-May	5	4	13	7	19	11	35	19	41	47	32	34	35	39	42	40	52	38	32	37	9	8	9	9	52
11-May	11	9	11	13	12	11	11	11	11	12	33	19	25	46	52	42	20	16	18	14	15	16	11	26	52
12-May	23	11	12	5	6	10	11	13	15	16	17	19	19	18	17	18	16	16	14	12	12	13	13	14	23
13-May	12	12	12	9	13	13	14	13	16	24	45	39	69	46	58	67	97	33	32	14	31	13	12	12	97
14-May	13	13	11	11	10	11	10	19	33	24	14	15	17	17	17	17	16	16	16	15	13	13	13	13	33
15-May	13	14	14	14	13	15	14	16	15	15	19	18	18	20	21	22	21	19	15	13	8	12	6	9	22
16-May	9	9	12	13	13	13	20	51	41	47	37	54	82	46	61	59	60	42	26	14	10	12	11	11	82
17-May	12	12	12	12	12	12	12	12	12	16	17	19	22	30	21	18	16	16	16	12	11	11	11	11	30
18-May	11	11	11	11	10	10	10	11	14	22	17	18	25	26	14	16	16	13	13	12	11	11	11	11	26
19-May	15	9	9	9	10	9	10	13	14	13	15	19	15	16	15	21	14	14	12	11	12	11	12	12	21
20-May	12	12	12	11	12	12	12	12	12	12	14	13	13	14	15	16	13	13	16	12	11	12	11	9	16
21-May	10	9	9	14	14	11	13	13	13	15	17	21	18	17	14	17	19	16	11	11	9	9	11	17	21
22-May	9	9	9	9	10	11	11	10	11	14	13	13	14	13	24	20	13	13	11	11	10	10	8	9	24
23-May	8	9	9	8	9	9	11	13	17	16	18	18	16	25	35	18	17	14	12	10	11	11	10	9	35
24-May	9	14	11	12	12	11	11	12	10	14	13	15	13	17	15	15	15	15	14	19	11	9	9	8	19
25-May	9	9	9	8	8	8	10	10	12	12	13	15	15	15	19	18	17	14	14	12	9	10	9	9	19
26-May	9	9	9	9	10	9	9	10	12	13	15	15	14	16	16	14	13	12	10	56	23	36	64	17	64
27-May	16	23	26	15	12	12	15	17	20	19	26	26	26	26	19	21	17	19	23	20	9	8	9	9	26
28-May	10	15	9	8	8	9	11	15	16	21	25	26	28	26	28	27	28	17	12	14	10	7	9	8	28
29-May	8	8	9	8	8	9	9	10	13	13	12	15	12	12	16	13	11	11	10	11	10	12	42	20	42
30-May	20	20	18	21	21	21	21	16	14	15	19	25	23	56	35	25	19	21	12	12	7	12	8	9	56
31-May	10	8	14	12	10	9	11	12	19	25	38	49	17	14	14	13	13	15	15	15	20	21	15	16	49
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS20 MACKAY RIVER MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)

MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	35	35	100	13.9	0	3.2	0
H2S (ppb) Average	708	36	36	100	3.4	0	0.6	0
THC (ppm) Average	710	34	34	100	4	-	2.4	-
NO2 (ppb) Average	708	36	36	100	35.2	0	5.2	-
NO (ppb) Average	708	36	36	100	16.7	-	2	-
NOX (ppb) Average	708	36	36	100	42.4	-	6	-
Temperature 2 m (C) Average	744	0	0	100	31.8	-	23.5	-
Relative Humidity (%) Average	744	0	0	100	98.6	-	87.7	-
Wind Speed 10 m (km/h) Average	739	2	5	99.6	19	-	12	-
Wind Direction 10 m (deg) Average	739	2	5	99.6	-	-	-	-
Precipitation (mm) Total	744	0	0	100	7	-	17.2	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	0.53	1.4	-	0	0	0	0.2	0.4	1.2	13.9
H2S (ppb) Average	708	0.12	0.2	-	0	0	0.1	0.1	0.1	0.2	3.4
THC (ppm) Average	710	2.17	0.1	-	2	2.1	2.1	2.1	2.2	2.3	4
NO2 (ppb) Average	708	1.31	3.2	-	0	0.2	0.4	0.6	1	2.1	35.2
NO (ppb) Average	708	0.17	1.1	-	0	0	0	0	0	0.2	16.7
NOX (ppb) Average	708	1.47	3.9	-	0	0.2	0.4	0.6	1.2	2.3	42.4
Temperature 2 m (C) Average	744	12.67	6.9	-	-3.2	3.8	7.6	12.5	17	22.3	31.8
Relative Humidity (%) Average	744	53.76	23.4	-	16.3	25.6	33.1	50.7	71.7	90.7	98.6
Wind Speed 10 m (km/h) Average	739	8	4	-	0	3	5	8	11	13	19
Wind Direction 10 m (deg) Average	739	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	744	-	-	52.42	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION -MACKAY RIVER (AMS20)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	03 May 2025 03:00	03 May 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	10 May 2025 20:00	10 May 2025 20:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	11 May 2025 22:00	11 May 2025 22:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

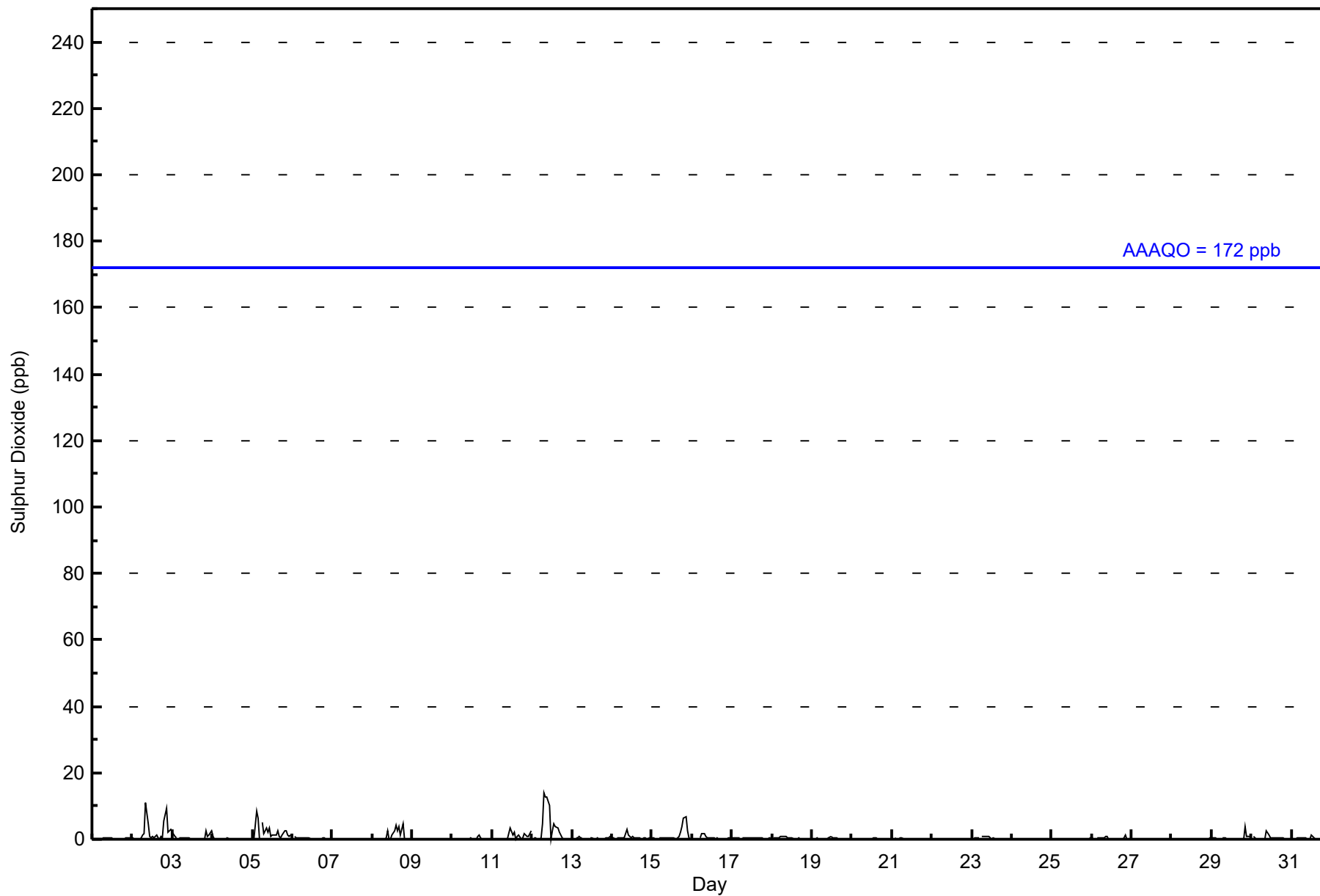
Mackay River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.9 ppb on May 12 08:00 Maximum Daily Average: 3.2 ppb on May 12																				Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0.0 ppb on May 3 16:00 Minimum Daily Average: 0.0 ppb on May 9 Maximum Diurnal Average: 1.2 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 5 Monthly Average: 0.53 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.2 P ₉₉ = 6.9																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.4	Z	0.2	0.2	0.1	0.2	0.6	0.6	0.4	0.4	0.5	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.3	0.2	0.3	0.3	0.3	0.3
2-May	0.2	0.2	Z	0.1	0.1	0.3	1.2	1.6	11.1	4.7	0.9	0.4	0.9	0.4	1.2	0.3	0.1	0.9	0.3	5.6	9.5	1.9	2.4	3.1	2.1	11.1
3-May	1.9	1.0	0.5	Z	0.4	0.6	0.4	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	2.6	0.8	1.4	2.7	0.6	2.7
4-May	0.8	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
5-May	0.0	0.0	8.4	6.5	0.0	Z	5.2	1.7	3.4	2.1	3.4	0.9	1.2	1.1	1.4	2.5	1.0	0.6	1.2	2.7	2.5	1.5	0.7	1.2	2.1	8.4
6-May	Z	0.7	0.5	0.6	0.5	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.3	0.7
7-May	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
8-May	0.0	0.2	Z	0.1	0.0	0.0	0.0	0.1	0.2	2.4	0.2	0.2	1.4	2.4	4.3	2.4	4.0	1.5	4.6	0.0	0.0	0.0	0.1	0.1	1.0	4.6
9-May	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.1	0.7	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5
11-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	1.7	3.2	1.4	2.3	0.1	1.0	1.2	0.0	0.5	1.5	1.1	0.9	1.0	2.4	0.8	3.2
12-May	Z	0.4	0.2	0.2	0.1	0.2	4.7	13.9	12.9	12.9	10.3	0.2	2.7	4.7	3.9	3.3	2.1	1.1	0.2	0.0	0.0	0.0	0.1	0.1	3.2	13.9
13-May	0.2	Z	0.3	0.2	0.7	0.6	0.4	C	C	C	C	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.4	0.8	0.3	0.8
14-May	0.5	0.5	Z	0.2	0.3	0.4	0.3	0.2	1.7	2.8	1.4	0.3	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.2	0.4	0.4	0.6	2.8
15-May	0.5	0.4	0.1	Z	0.4	0.4	0.2	0.4	0.5	0.3	0.4	0.4	0.6	0.3	0.1	0.4	0.8	2.1	3.8	6.3	6.9	2.4	0.3	0.2	1.2	6.9
16-May	0.2	0.2	0.2	0.2	Z	0.2	1.9	1.7	0.7	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.5	0.4	1.9
17-May	0.3	0.3	0.3	0.4	0.4	Z	0.5	0.6	0.6	0.6	0.6	0.4	0.2	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.1	0.2	0.3	0.3	0.4	0.6
18-May	Z	0.2	0.3	0.4	0.5	0.7	0.8	0.8	0.7	0.6	0.6	0.5	0.3	0.2	0.1	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.8
19-May	0.1	Z	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.5	0.7	0.6	0.6	0.6	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
20-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
21-May	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2
22-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
23-May	0.2	0.1	0.3	0.3	0.3	Z	0.8	0.7	0.9	0.7	1.0	0.5	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.3	1.0
24-May	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
25-May	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4	0.1	0.4
26-May	0.4	0.5	Z	0.6	0.4	0.3	0.3	0.5	1.1	0.7	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	1.3	0.0	0.0	0.0	0.3	1.3
27-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1
28-May	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.4
29-May	0.4	0.4	0.3	0.2	0.1	Z	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	3.7	0.9	0.8	0.7	0.4	3.7
30-May	Z	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.2	2.7	1.2	0.5	0.2	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.4	2.7
31-May	0.2	Z	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.1	0.1	1.3	0.2	0.1	0.1	0.1	0.0	0.0	0.5	0.8	0.3	0.2	2.6	0.4	2.6
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	705	99.44	99.44
11 - 20	4	0.56	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	15	40	26	7	6	58	116	92	93	57	28	36	37	40	27	22	700
11 - 20	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	4
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	40	29	7	6	58	116	92	93	57	28	36	37	40	28	22	704

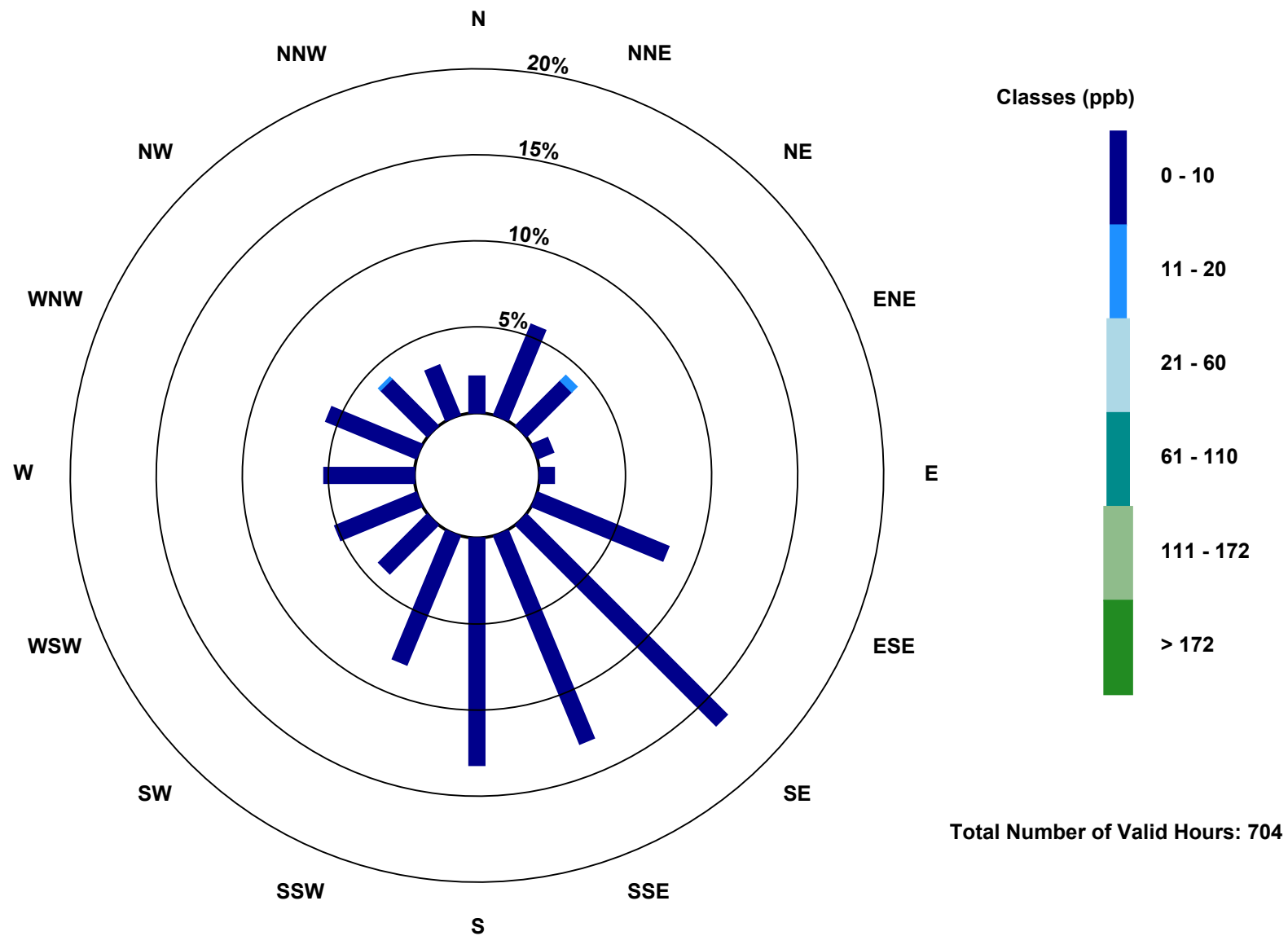
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

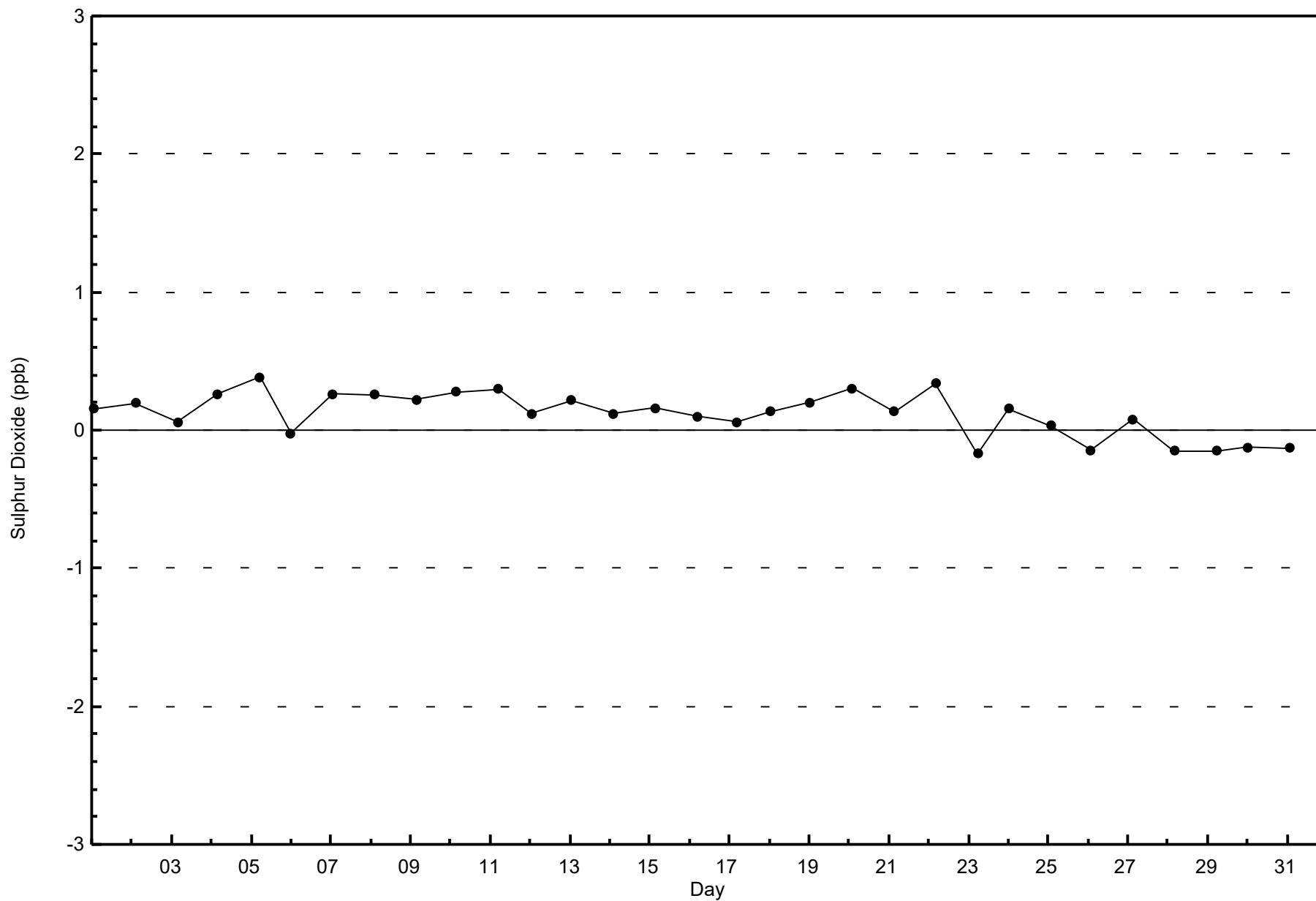
Sulphur Dioxide (SO₂) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

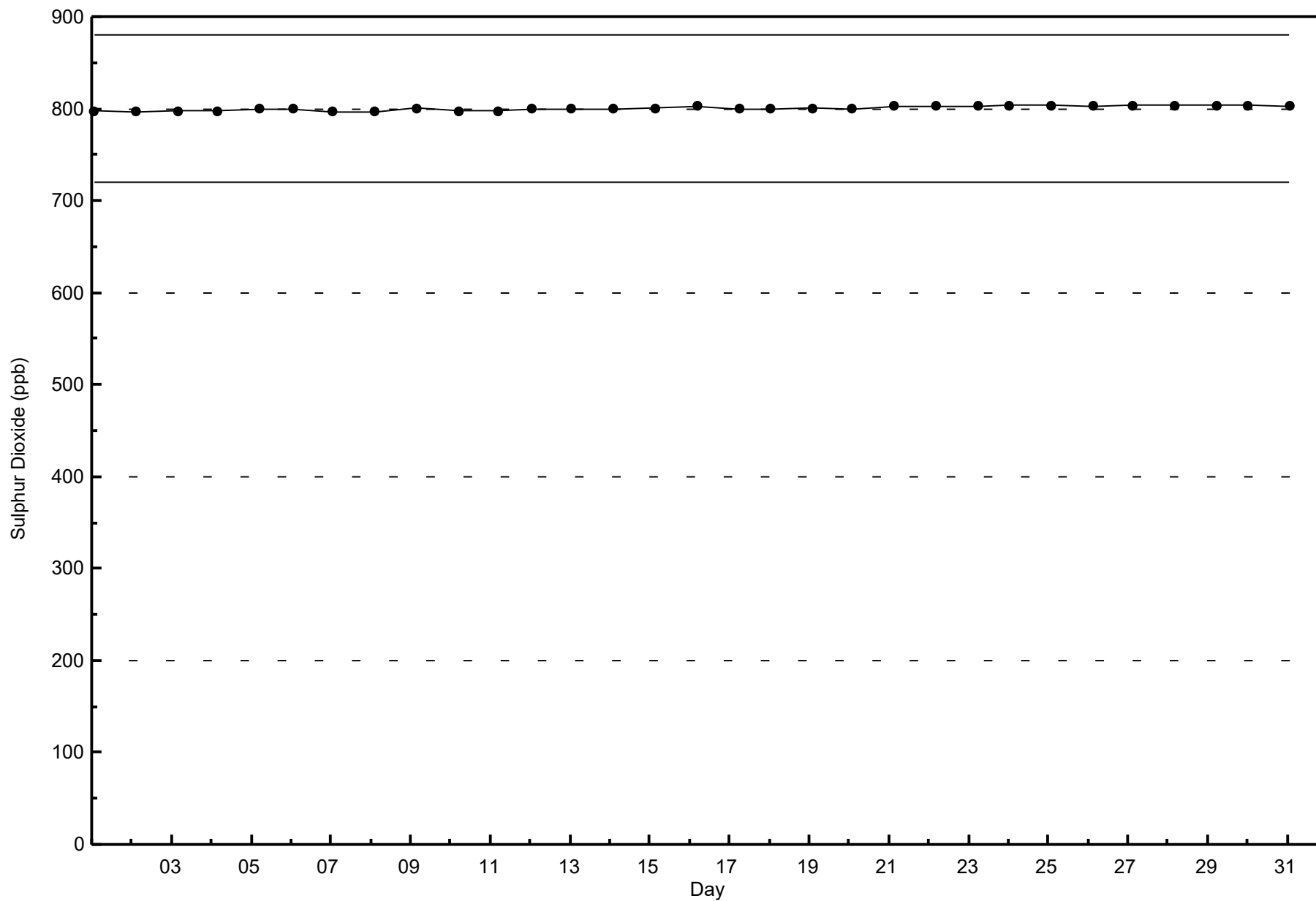
Sulphur Dioxide (SO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

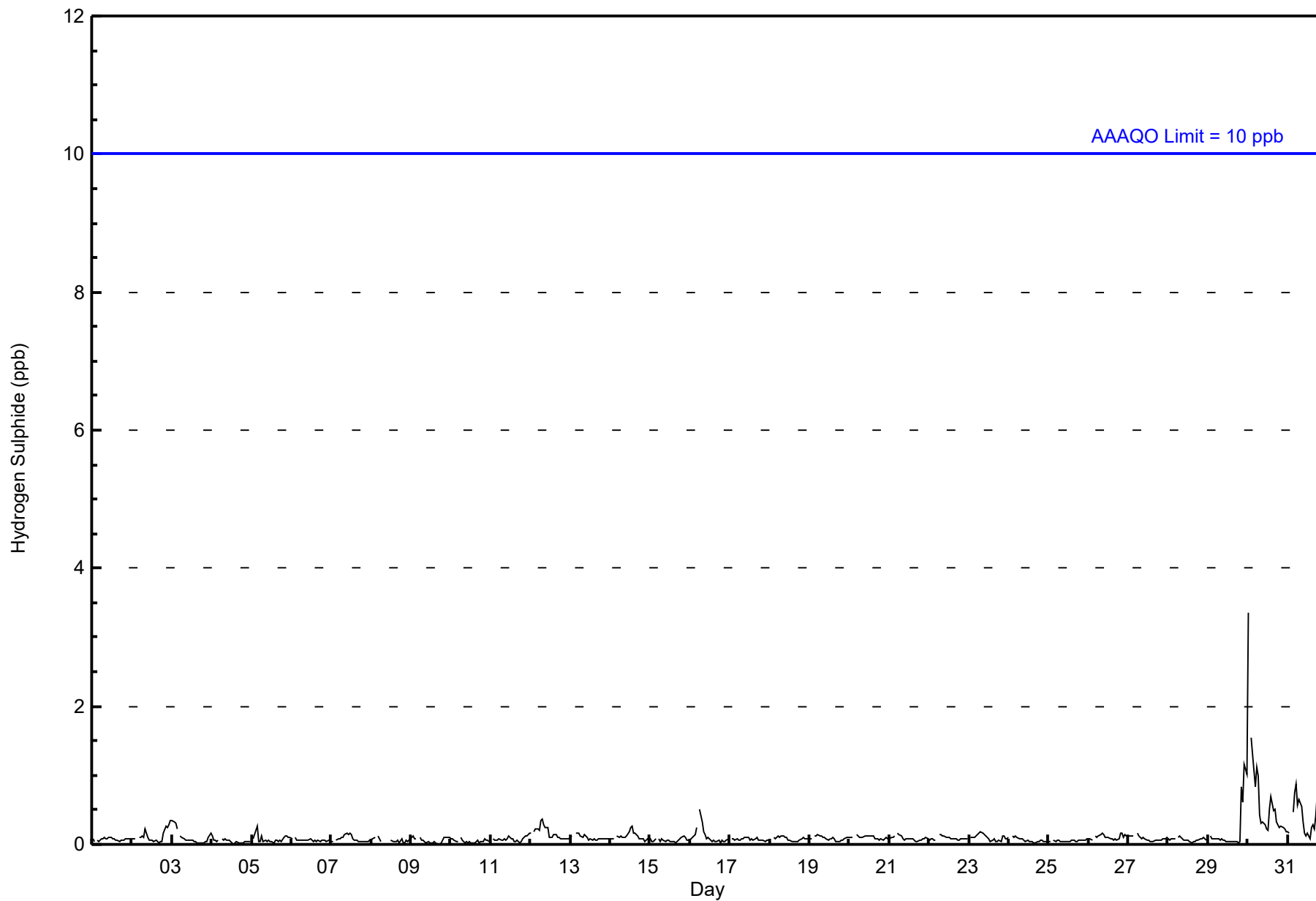
Mackay River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744											
Maximum Value: 3.4 ppb on May 30 01:00																			Maximum Daily Average: 0.6 ppb on May 30						Hours of Data: 708					
Minimum Value: 0.0 ppb on May 4 14:00																			Minimum Daily Average: 0.0 ppb on May 4						Hours of Missing Data: 36					
Maximum Diurnal Average: 0.2 ppb at hour 1																			Minimum Diurnal Average: 0.1 ppb at hour 18						Hours of Calibration: 36					
Monthly Average: 0.12 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.9						Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-May	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
2-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.1	0.3			
3-May	0.3	0.3	0.3	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.3			
4-May	0.1	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			
5-May	Z	0.1	0.2	0.3	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3			
6-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1			
7-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2			
8-May	0.1	0.1	0.1	Z	0.1	0.1	0.0	C	C	C	C	C	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1			
9-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
10-May	0.1	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1			
11-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2			
12-May	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4			
13-May	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2			
14-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.3			
15-May	0.1	0.0	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
16-May	0.1	0.1	0.1	0.1	0.2	Z	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.5			
17-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1			
18-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
19-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
21-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2			
22-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
23-May	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2			
24-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1			
25-May	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
26-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2			
27-May	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2			
28-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
29-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	1.2	1.0	0.2	1.2				
30-May	3.4	Z	1.5	1.3	0.8	1.1	1.0	0.4	0.3	0.3	0.3	0.2	0.2	0.5	0.7	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.6	3.4				
31-May	0.2	0.2	Z	0.5	0.8	0.9	0.6	0.7	0.5	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.4	0.7	0.7	0.7	0.5	0.4	0.6	0.4	0.9				
0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.1																										Diurnal Average				
3.4 0.3 1.5 1.3 0.8 1.1 1.0 0.7 0.5 0.3 0.3 0.2 0.3 0.5 0.7 0.5 0.5 0.4 0.7 0.7 0.8 0.6 1.2 1.0 0.6 0.6																										Diurnal Maximum				
Z - zerospan C - Calibration																														
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																														



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	707	99.86	99.86
3 - 4	1	0.14	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	17	37	29	7	6	60	116	92	92	57	28	36	36	40	28	21	702
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	37	29	7	6	60	116	92	92	57	28	36	37	40	28	21	703

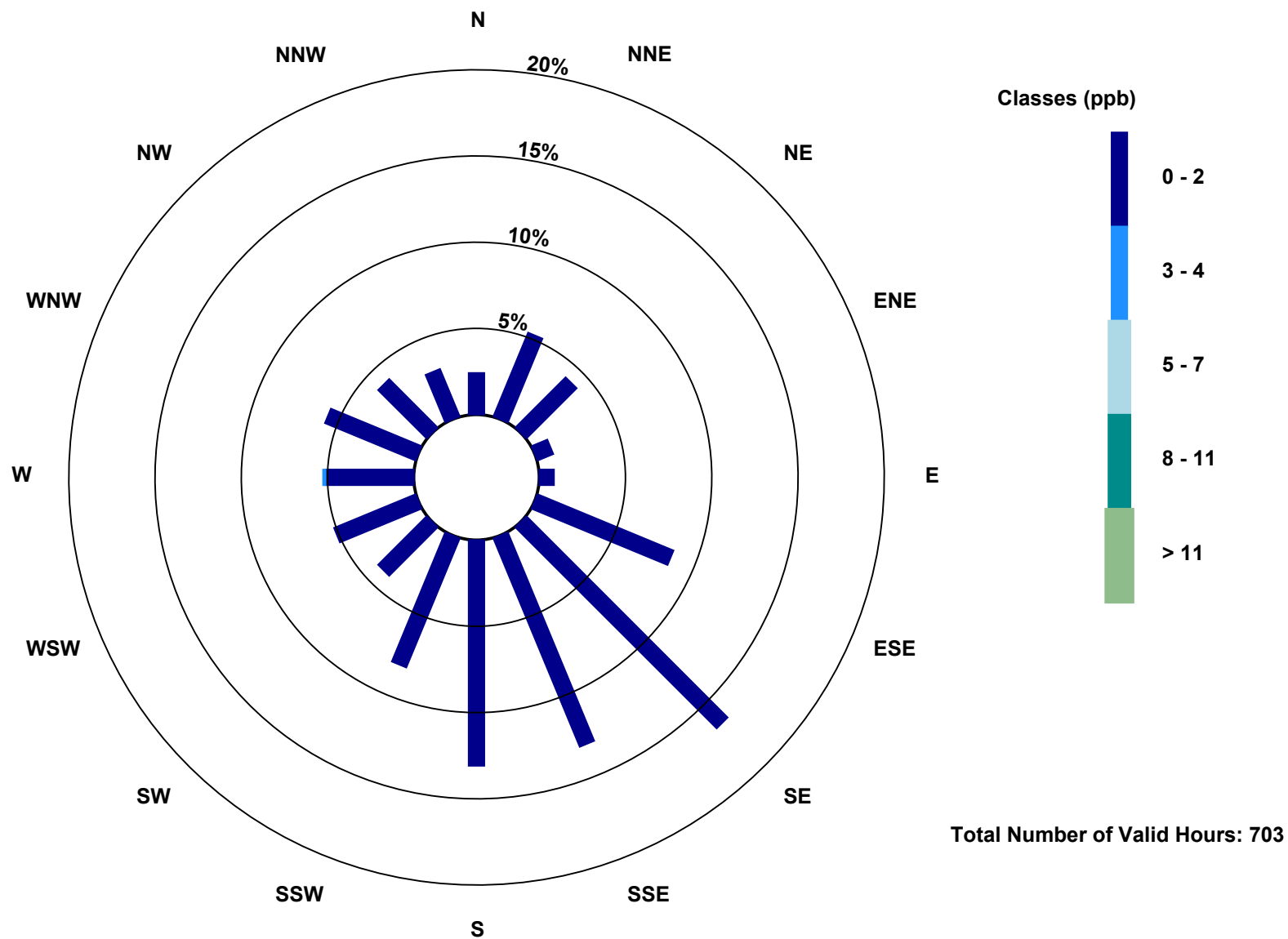
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

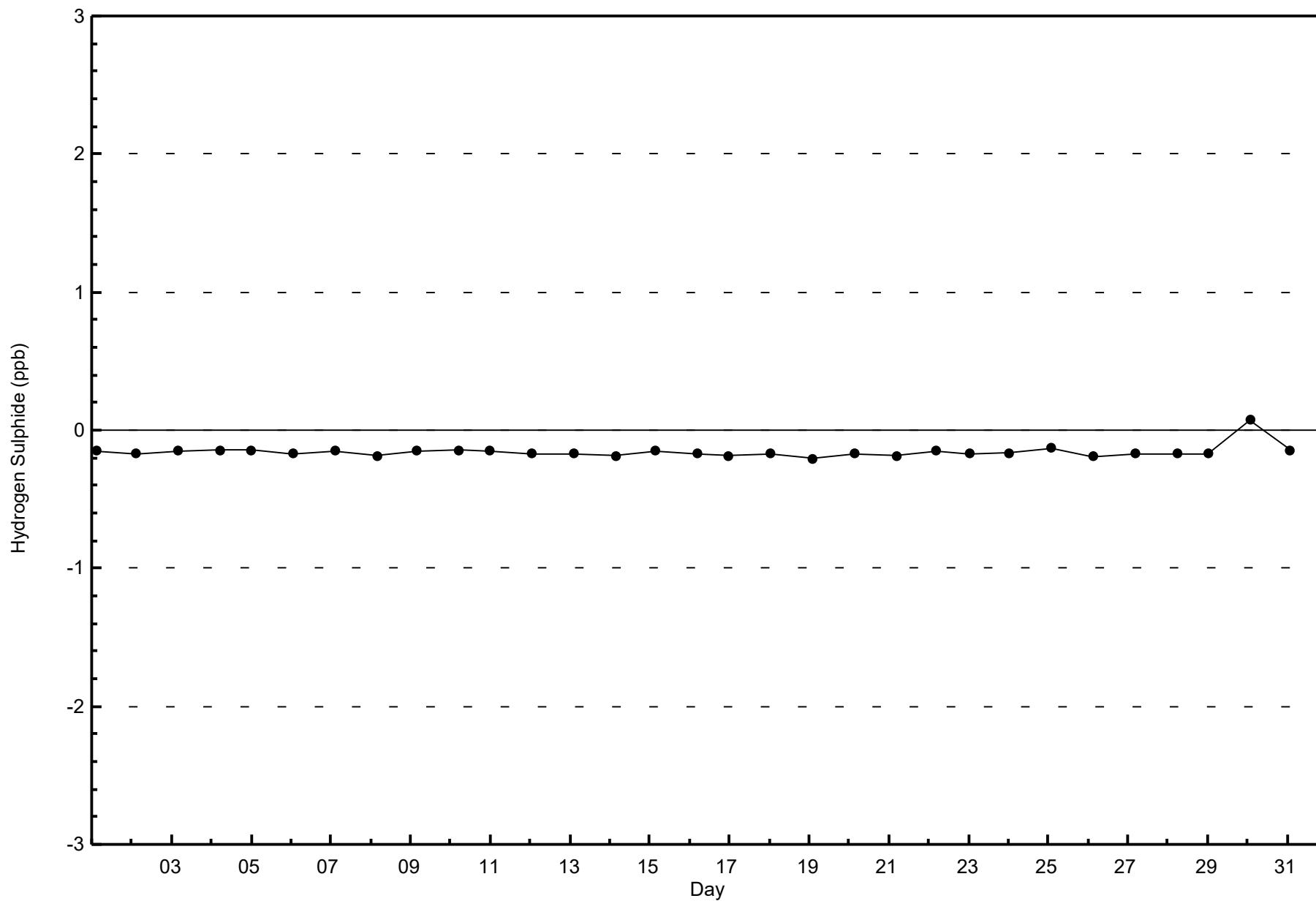
Hydrogen Sulphide (H₂S) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

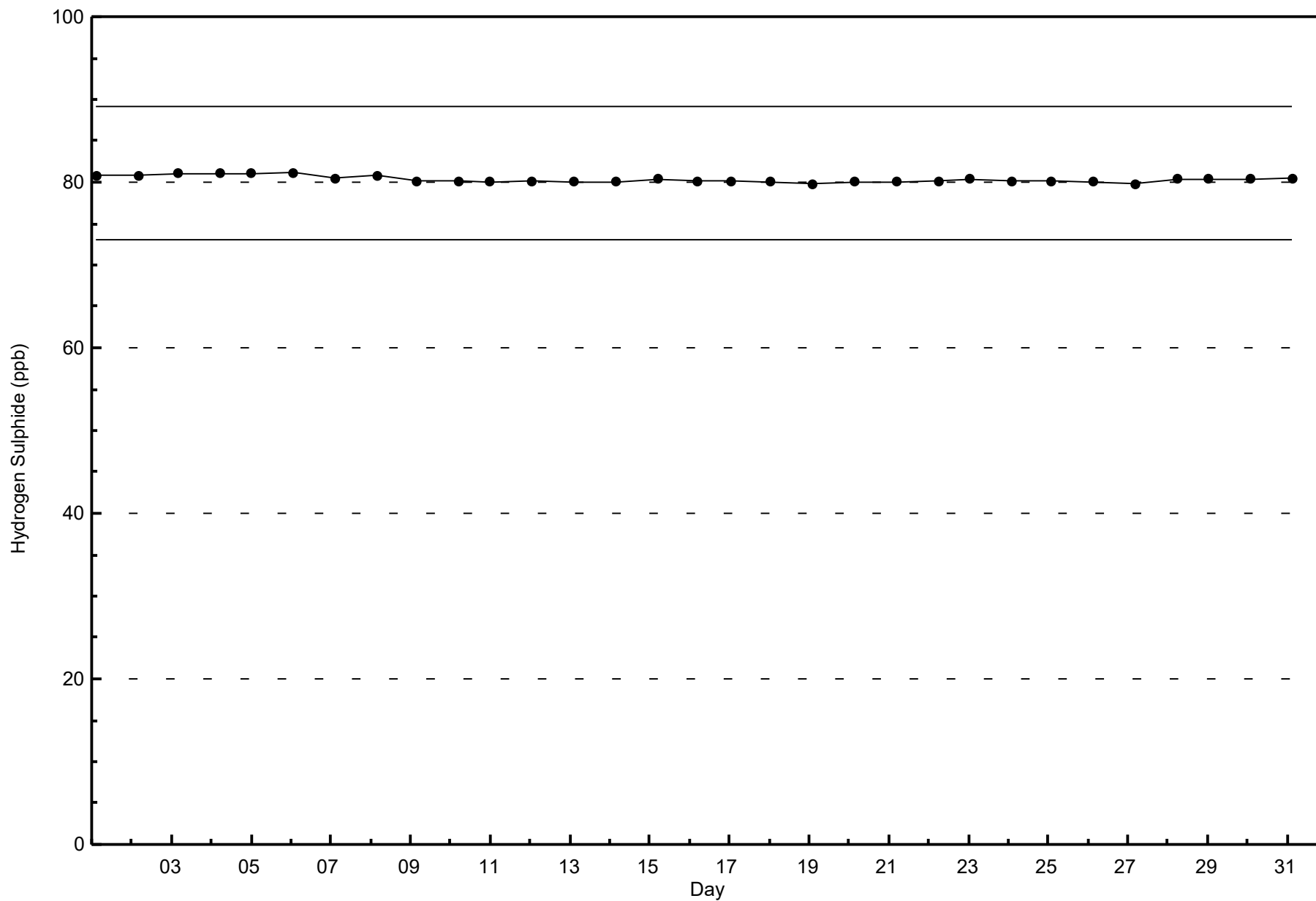
Hydrogen Sulphide (H₂S) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

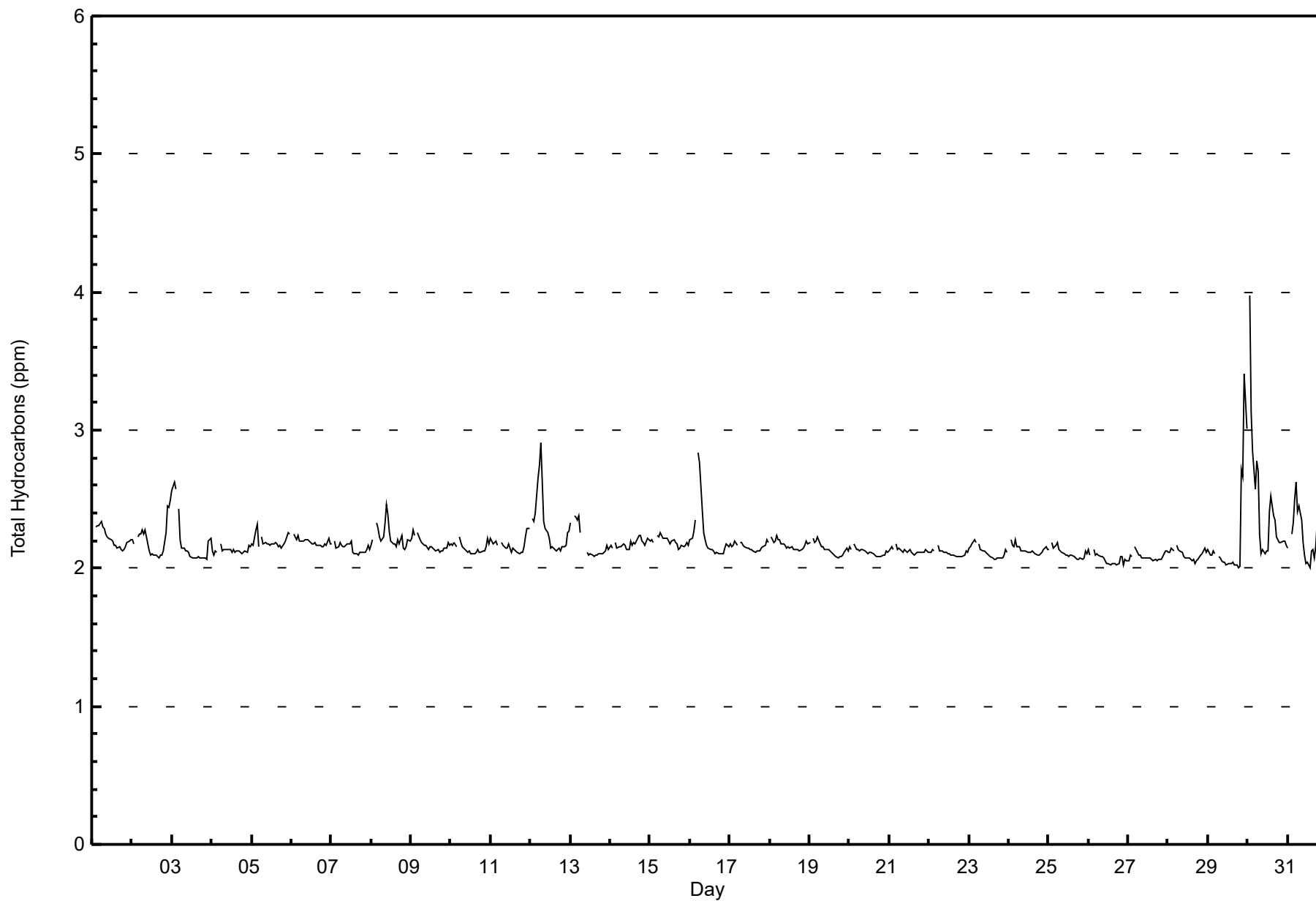
Mackay River - May 2025

Maximum Value: 4.0 ppm on May 30 02:00																			Maximum Daily Average: 2.4 ppm on May 30							Hours in Service: 744	
Minimum Value: 2.0 ppm on May 31 14:00																			Minimum Daily Average: 2.1 ppm on May 26							Hours of Data: 710	
Maximum Diurnal Average: 2.3 ppm at hour 6																			Minimum Diurnal Average: 2.1 ppm at hour 18							Hours of Missing Data: 34	
Monthly Average: 2.17 ppm																			Percentiles: P ₁ = 2.0 P ₁₀ = 2.1 Q ₁ = 2.1 Median = 2.1 Q ₃ = 2.2 P ₉₀ = 2.3 P ₉₉ = 2.8							Hours of Calibration: 34	
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3
2-May	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5	2.4	2.5	2.2	2.5	
3-May	2.6	2.6	2.6	Z	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.6	
4-May	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	
5-May	2.2	2.2	2.3	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.3	
6-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
7-May	2.2	Z	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	
8-May	2.2	2.2	Z	2.3	2.3	2.2	2.2	2.2	2.3	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.5	
9-May	2.2	2.3	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	
10-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	
11-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.3	
12-May	Z	2.4	2.3	2.4	2.7	2.7	2.9	2.6	2.3	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.9	
13-May	2.3	Z	2.4	2.4	2.4	2.4	2.3	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4	
14-May	2.2	2.1	Z	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
15-May	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
16-May	2.2	2.2	2.3	2.4	Z	2.8	2.8	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.8	
17-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	
18-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	
19-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
20-May	2.2	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
21-May	2.1	2.2	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
22-May	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
23-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
24-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	
25-May	2.1	Z	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
26-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1	2.1	
27-May	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
28-May	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	
29-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.7	3.4	3.0	2.2	3.4	
30-May	Z	4.0	3.1	2.8	2.6	2.8	2.7	2.3	2.1	2.1	2.1	2.1	2.1	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	4.0	
31-May	2.1	Z	2.2	2.3	2.5	2.6	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.1	2.2	2.2	2.6	
2.2 2.3 2.3 2.2 2.3 2.3 2.2 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.2 2.2 2.2 2.2																								Diurnal Average			
2.6 4.0 3.1 2.8 2.7 2.8 2.9 2.6 2.4 2.5 2.4 2.3 2.2 2.4 2.5 2.4 2.3 2.2 2.3 2.3 2.7 2.7 3.4 3.0																								Diurnal Maximum			
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mackay River - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	25	3.52	3.52
2.1 - 3.0	682	96.06	99.58
3.1 - 10.0	3	0.42	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mackay River - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	1	0	0	0	0	0	0	8	12	1	0	0	2	0	0	1	25
2.1 - 3.0	14	41	29	7	6	58	116	84	81	56	28	34	35	39	28	21	677
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	41	29	7	6	58	116	92	93	57	28	36	37	40	28	22	705

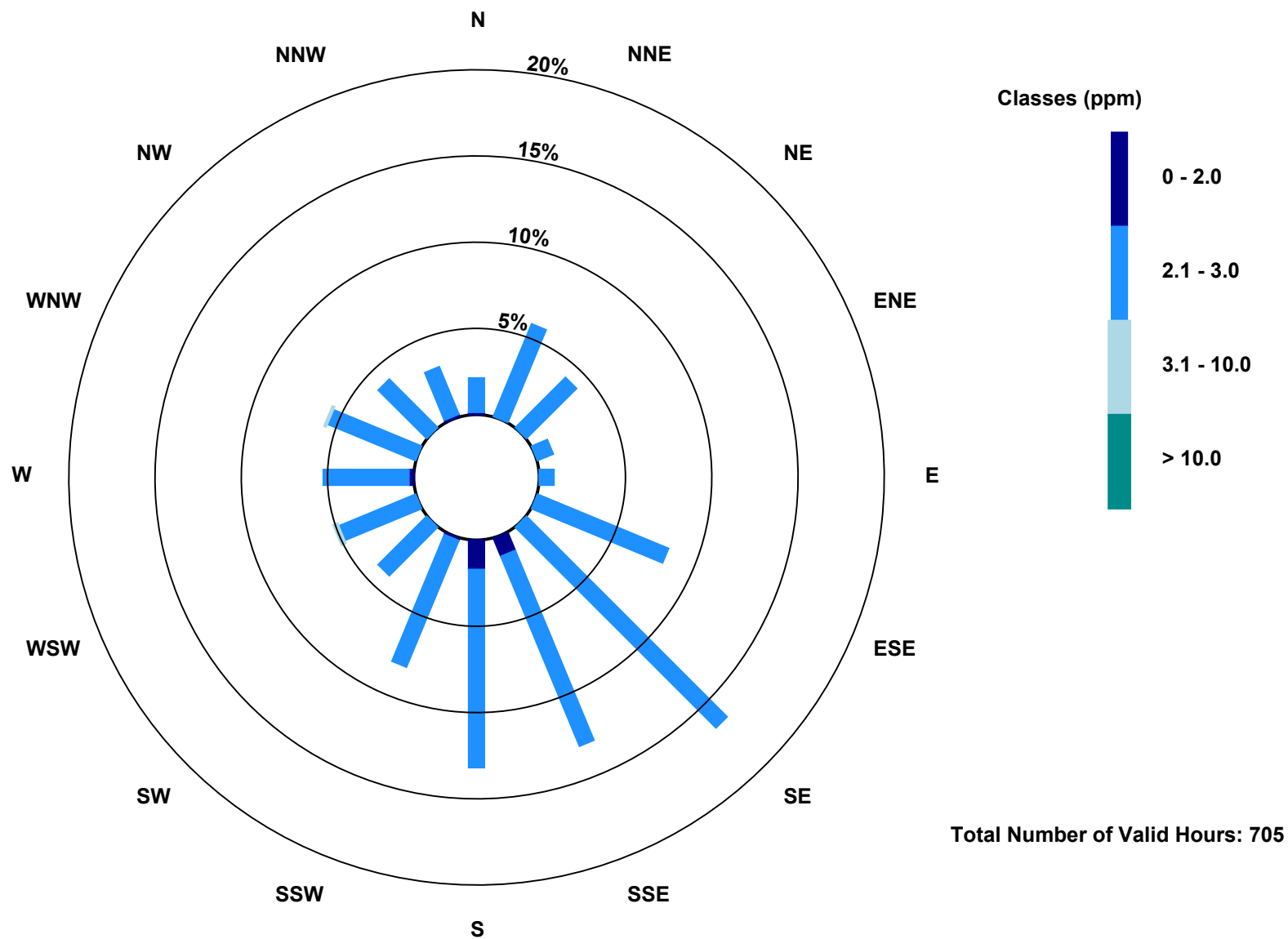
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

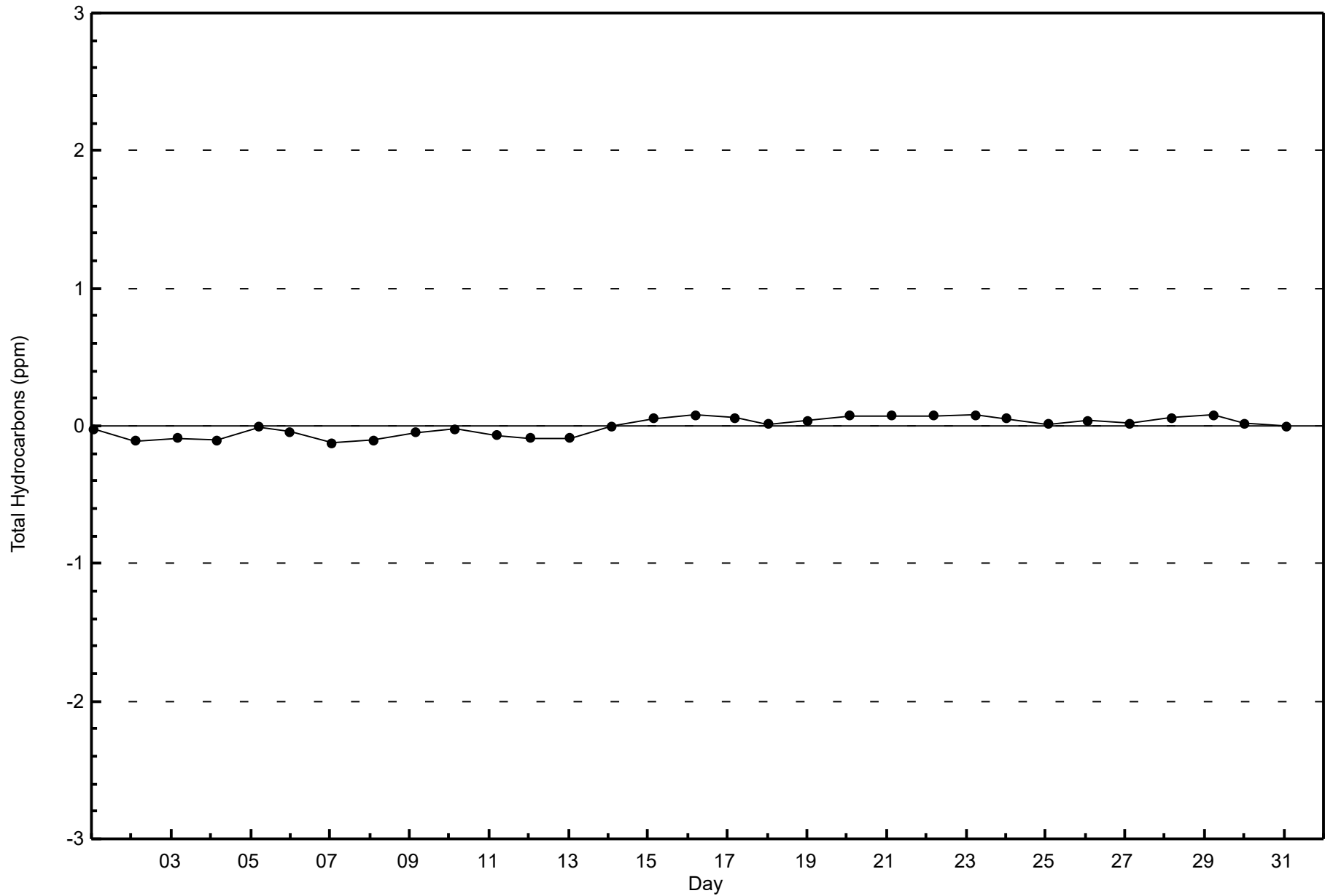
Total Hydrocarbons (THC) - ppm
Mackay River





Wood Buffalo Environmental Association
Zero Responses

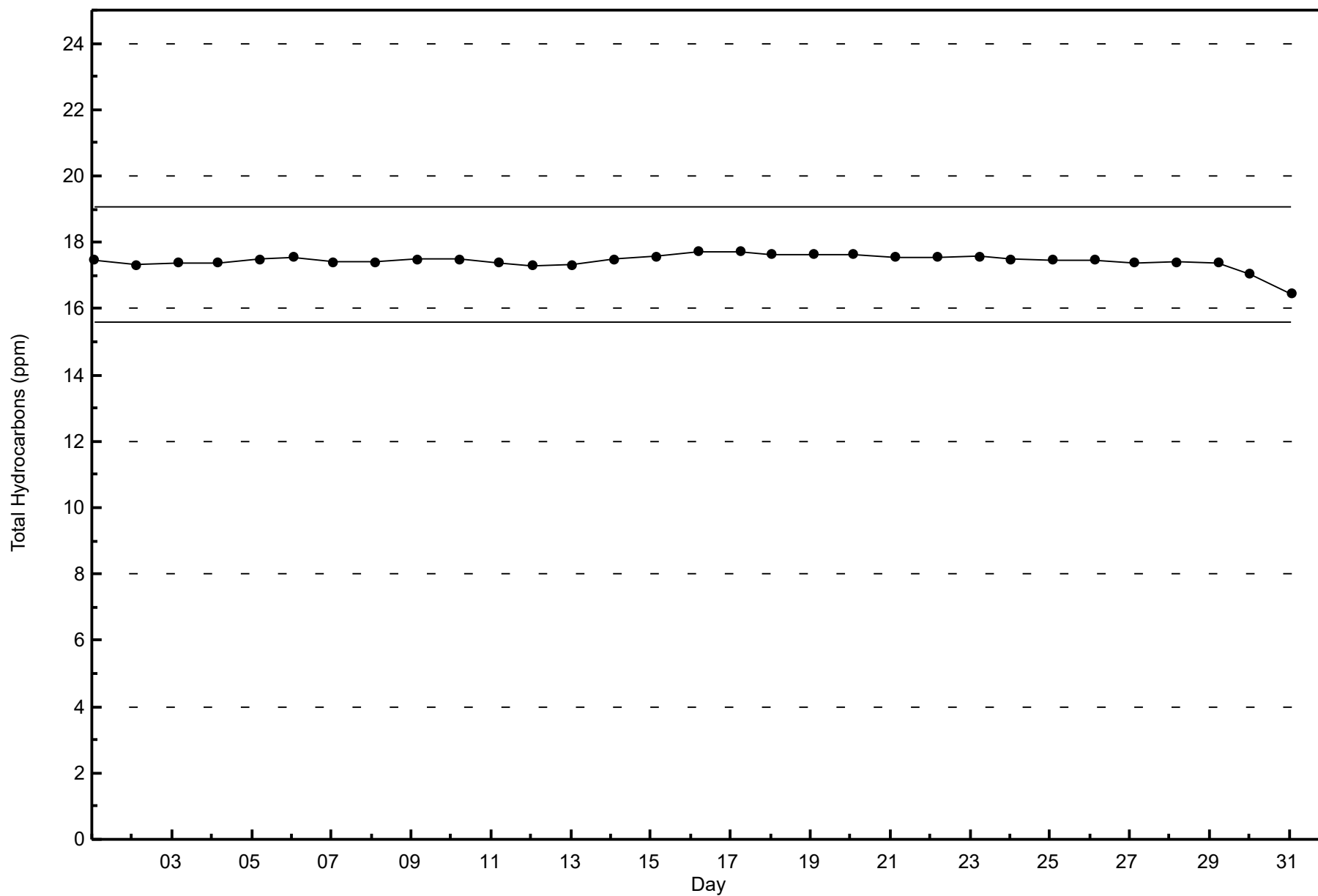
Total Hydrocarbons (THC) - ppm
Mackay River - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

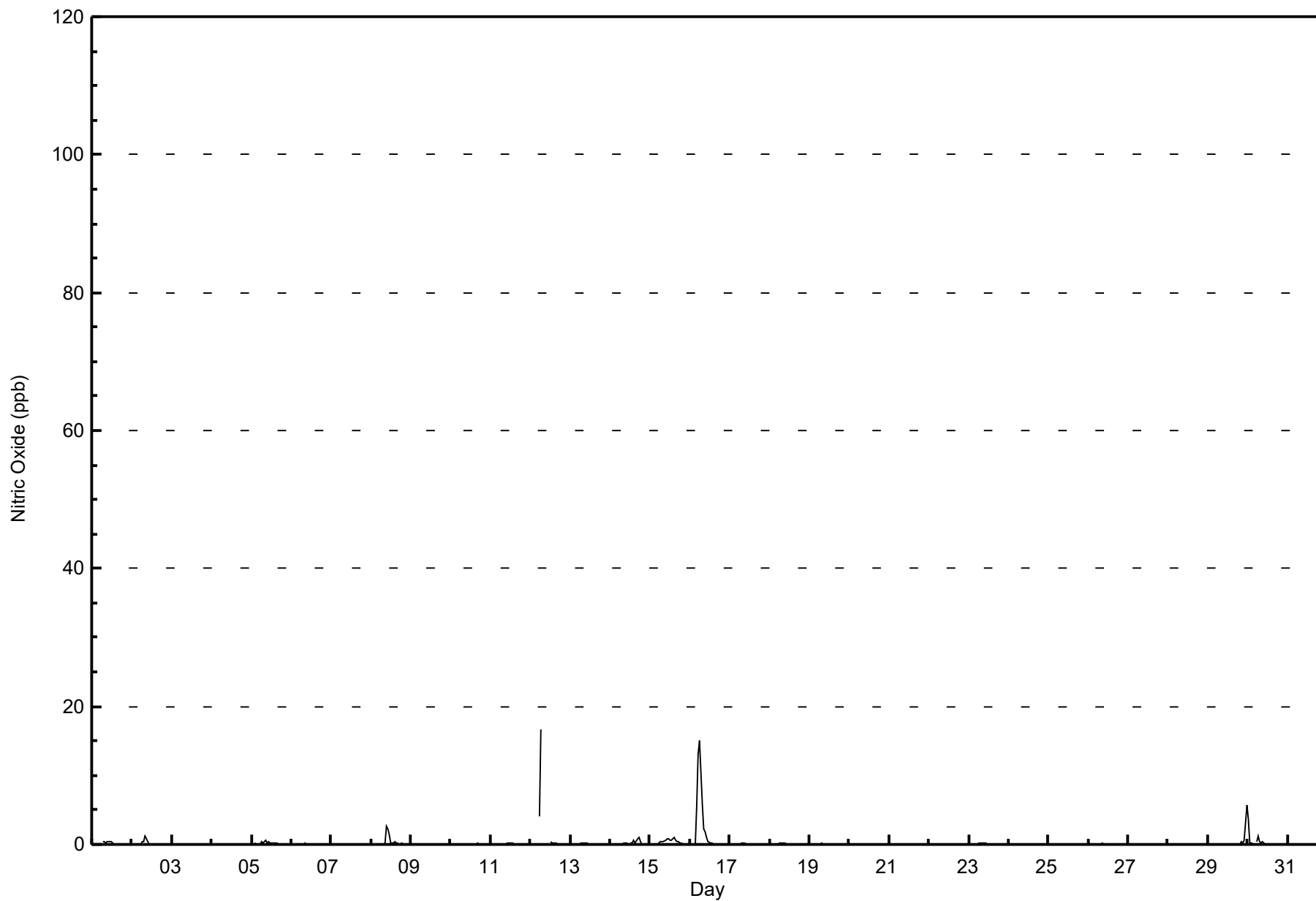
Mackay River - May 2025

Maximum Value: 16.7 ppb on May 12 07:00																			Maximum Daily Average: 2.0 ppb on May 16																			Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 28																			Hours of Data: 708	
Maximum Diurnal Average: 1.2 ppb at hour 7																			Minimum Diurnal Average: 0.0 ppb at hour 4																			Hours of Missing Data: 36	
Monthly Average: 0.17 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.2 P ₉₉ = 3.5																			Hours of Calibration: 36	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-May	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.4	0.3	0.4	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5													
2-May	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.3	0.5	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3													
3-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
4-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
5-May	0.0	0.0	0.1	Z	0.0	0.0	0.5	0.3	0.5	0.3	0.4	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5													
6-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
7-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
8-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.7	2.3	1.4	0.1	0.2	0.4	0.2	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.4	2.7													
9-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
10-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
11-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2													
12-May	0.0	0.0	0.0	0.0	Z	4.0	16.7	C	C	C	C	C	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.2	16.7													
13-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2													
14-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.0	0.2	0.2	0.5	0.2	0.8	1.0	0.4	0.1	0.0	0.0	0.0	0.0	0.2	1.0													
15-May	0.0	Z	0.0	0.0	0.0	0.2	0.5	0.5	0.5	0.6	0.8	0.8	0.7	0.6	1.0	0.7	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.3	1.0													
16-May	0.0	0.0	Z	0.1	5.5	13.0	15.1	6.0	2.3	1.9	1.0	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	15.1													
17-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2													
18-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2													
19-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
20-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
21-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
22-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
23-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3													
24-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
25-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
26-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
27-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
28-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
29-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.6	5.8	0.3	5.8													
30-May	3.6	0.2	0.2	0.1	Z	0.4	1.3	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.6													
31-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1													
0.1 0.0 0.0 0.0 0.2 0.7 1.2 0.3 0.2 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.2																										Diurnal Average													
3.6 0.2 0.2 0.1 5.5 13.0 16.7 6.0 2.3 2.7 2.3 1.4 0.7 0.6 1.0 0.7 0.8 1.0 0.4 0.1 0.5 0.3 0.6 5.8																										Diurnal Maximum													
Z - zerospan C - Calibration																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	708	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	38	26	7	6	57	122	89	92	55	28	36	39	41	27	23	703
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	38	26	7	6	57	122	89	92	55	28	36	39	41	27	23	703

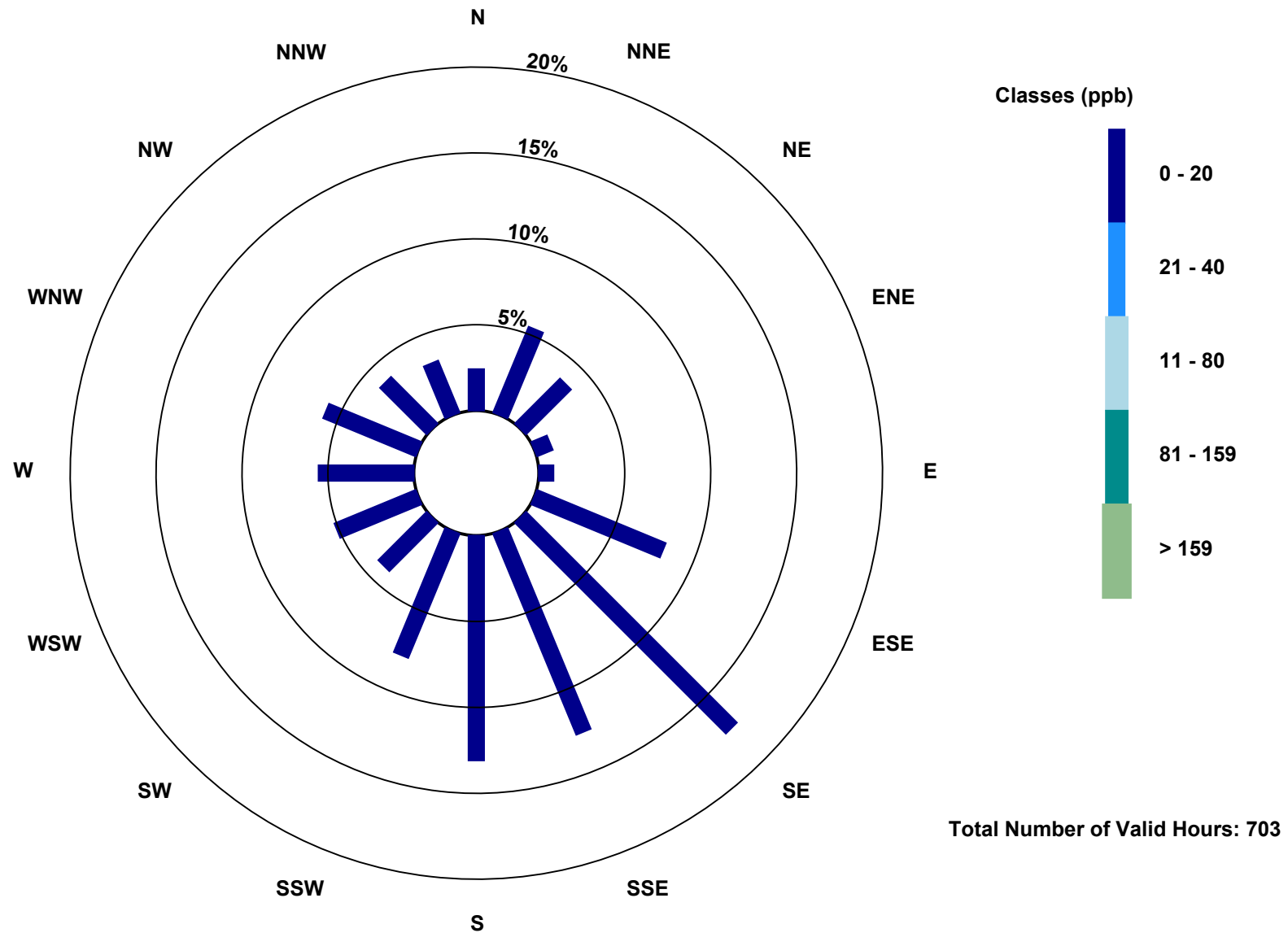
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

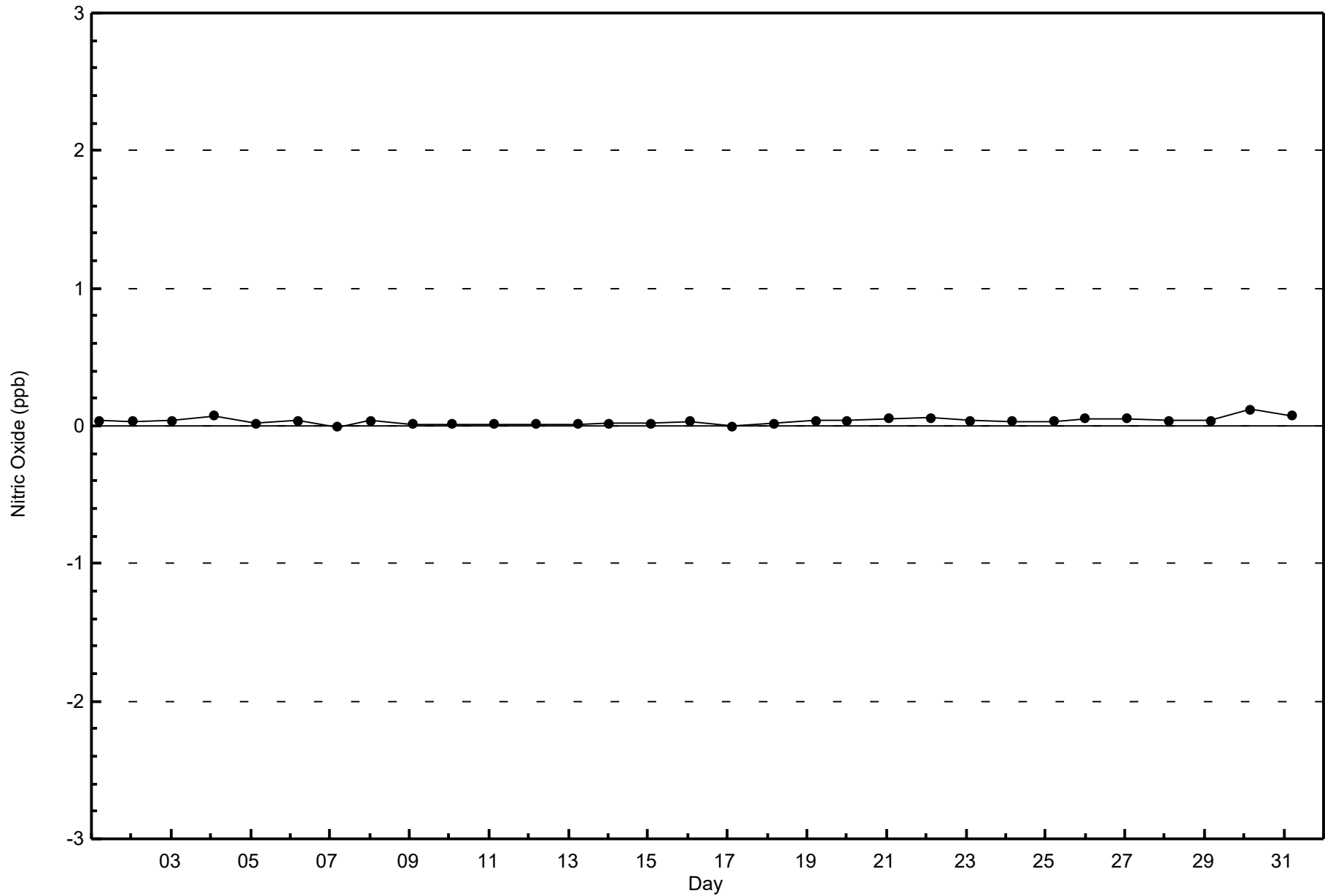
Nitric Oxide (NO) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

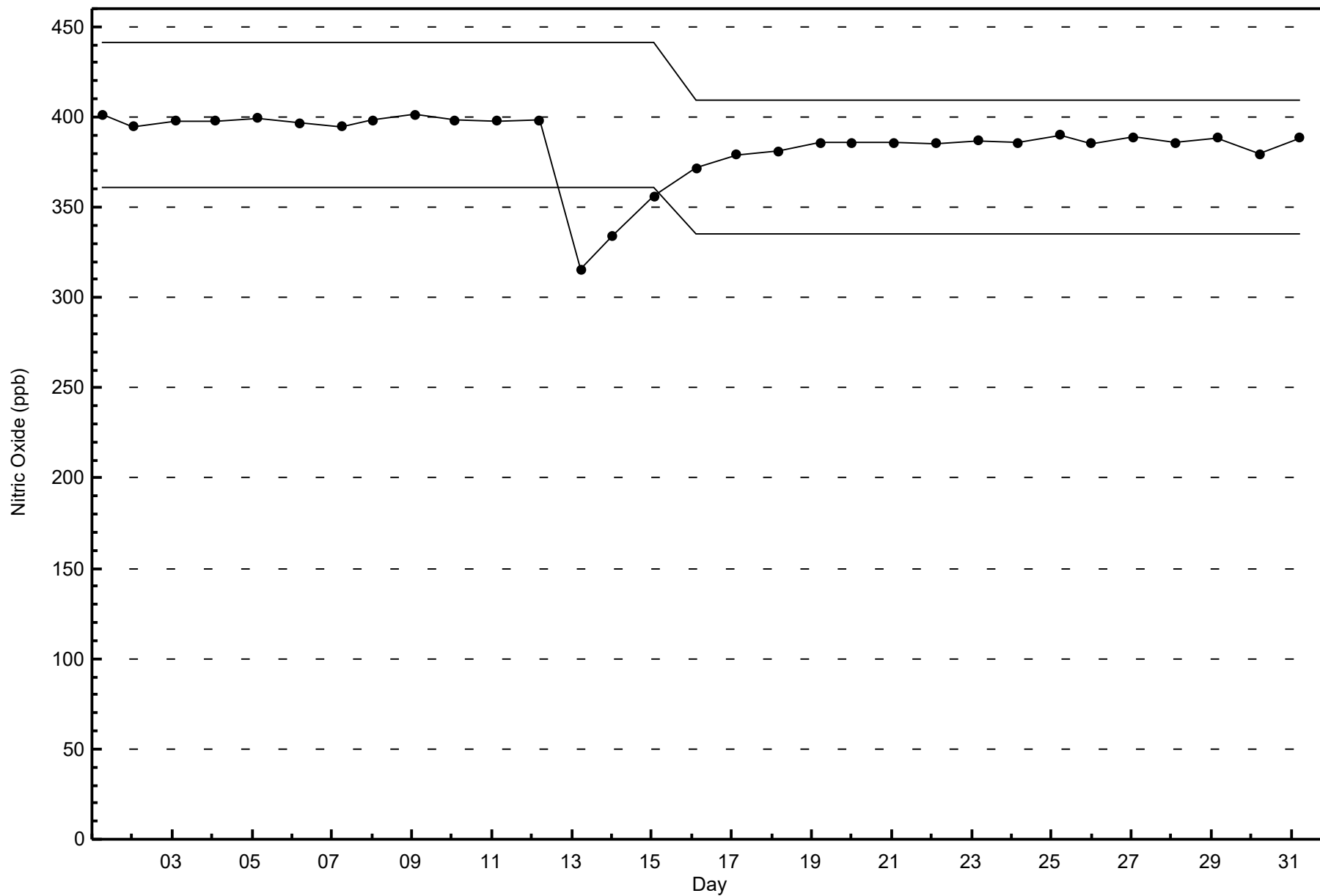
Nitric Oxide (NO) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

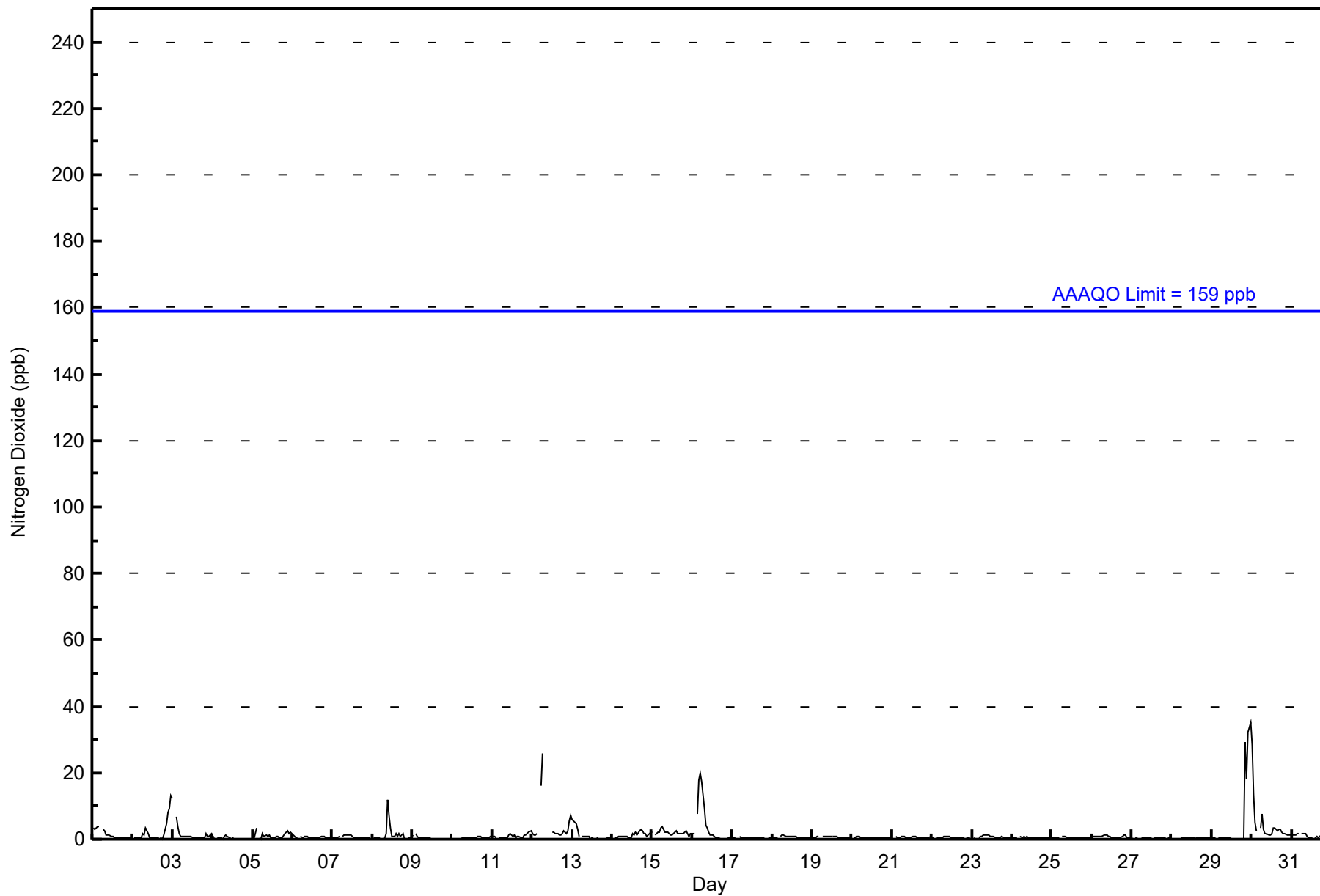
Mackay River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 35.2 ppb on May 30 00:00 Maximum Daily Average: 5.2 ppb on May 29																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0							
Minimum Value: 0.0 ppb on May 29 15:00 Maximum Diurnal Average: 2.6 ppb at hour 1 Monthly Average: 1.31 ppb										Minimum Daily Average: 0.3 ppb on May 28 Minimum Diurnal Average: 0.6 ppb at hour 18 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.6 Q ₃ = 1.0 P ₉₀ = 2.1 P ₉₉ = 17.8																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	3.5	2.9	3.5	3.9	4.0	Z	2.9	2.5	1.4	1.1	1.1	0.9	0.7	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.6	0.6	1.4	4.0		
2-May	Z	0.5	0.3	0.3	0.3	0.5	1.5	1.3	3.4	1.5	0.4	0.3	0.4	0.3	0.5	0.3	0.1	0.4	0.2	1.4	4.6	8.0	9.3	13.3	2.1	13.3	
3-May	12.3	Z	6.8	3.9	1.9	0.7	0.7	0.8	0.7	0.9	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	1.6	0.9	1.0	1.9	1.7	12.3	
4-May	1.0	0.5	Z	0.6	0.6	0.6	0.2	0.7	1.1	0.9	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.4	1.1	
5-May	0.1	0.1	3.4	Z	0.3	0.2	1.9	0.7	1.2	0.8	1.1	0.4	0.6	0.6	0.7	0.9	0.4	0.4	0.6	1.8	2.3	2.4	1.8	2.3	1.1	3.4	
6-May	1.3	0.8	0.5	0.5	Z	0.7	0.5	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.6	1.3	
7-May	0.6	0.6	0.6	0.6	0.8	Z	0.8	1.1	1.2	1.4	1.3	1.2	1.0	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.7	1.4	
8-May	Z	0.4	0.4	0.3	0.3	0.2	0.2	0.4	1.6	11.7	7.1	3.5	0.7	1.0	1.6	1.0	1.7	0.7	1.9	0.2	0.1	0.2	0.4	0.5	1.6	11.7	
9-May	1.2	Z	1.6	0.8	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.4	1.6	
10-May	0.1	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.5	0.5	0.7	0.9	0.7	0.4	0.4	0.4	0.3	0.3	0.8	0.4	0.9	
11-May	1.0	0.7	0.6	Z	0.5	0.5	0.5	0.5	0.6	0.6	1.1	1.5	1.0	1.2	0.5	0.7	0.7	0.4	0.6	1.2	1.2	1.8	2.2	2.5	1.0	2.5	
12-May	1.8	1.4	1.2	1.7	Z	15.9	25.7	C	C	C	C	C	2.0	2.0	1.7	1.6	1.4	1.3	1.6	2.7	1.9	2.7	5.5	7.0	4.4	25.7	
13-May	6.1	5.3	4.6	2.9	0.7	Z	0.8	1.0	1.0	0.9	0.8	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	1.2	6.1	
14-May	Z	0.6	0.6	0.6	0.8	0.9	1.0	0.7	1.0	1.0	0.6	0.6	1.8	1.4	2.1	1.3	2.5	3.0	2.6	1.5	1.8	0.8	1.9	2.2	1.4	3.0	
15-May	2.3	Z	1.4	2.1	2.2	3.3	4.0	2.8	2.1	2.1	1.7	1.4	1.4	1.5	2.6	1.9	1.8	1.5	1.7	1.8	2.7	1.7	1.0	1.5	2.0	4.0	
16-May	1.6	1.7	Z	7.6	17.8	20.1	17.3	9.2	4.1	3.2	2.1	1.2	1.1	1.0	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.0	4.0	20.1	
17-May	0.6	0.5	0.5	Z	0.8	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.5	0.8	
18-May	0.4	0.4	0.4	0.5	Z	1.0	1.1	1.1	1.0	1.0	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.5	0.7	1.1	
19-May	0.4	0.4	0.6	0.7	0.7	Z	0.9	0.9	0.7	0.7	0.7	0.7	0.8	0.9	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.9	
20-May	Z	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.7	
21-May	0.5	Z	0.7	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.6	0.7	0.6	0.8	
22-May	0.6	0.5	Z	0.5	0.4	0.5	0.6	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.8	
23-May	0.1	0.2	0.3	Z	0.6	0.8	1.0	1.1	1.3	1.3	1.2	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.7	0.6	0.5	0.3	0.3	0.3	0.7	1.3	
24-May	0.2	0.3	0.4	0.4	Z	0.7	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7
25-May	0.5	0.5	0.5	0.6	0.6	Z	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.8	
26-May	Z	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.3	1.1	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.7	1.1	1.4	0.4	0.3	0.3	0.8	1.4	
27-May	0.3	Z	0.5	0.3	0.2	0.2	0.3	0.3	0.5	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.6	0.3	0.2	0.4	0.2	0.4	0.6	
28-May	0.2	0.2	Z	0.2	0.1	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.5	
29-May	0.5	0.4	0.5	Z	0.4	0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	29.4	18.1	32.2	35.2	5.2	35.2	
30-May	28.2	13.7	5.2	2.4	Z	3.6	7.5	3.1	1.9	1.8	1.1	1.2	1.7	3.3	3.6	2.7	3.0	2.8	2.2	1.9	1.6	1.2	1.3	1.4	4.2	28.2	
31-May	1.4	1.2	1.3	1.5	1.7	Z	1.7	1.7	1.6	0.8	0.3	0.3	0.5	0.0	0.6	0.9	0.6	0.7	1.2	1.1	1.2	0.5	0.1	1.7	1.0	1.7	
2.6 1.4 1.5 1.4 1.5 2.2 2.5 1.2 1.1 1.3 1.0 0.7 0.7 0.7 0.8 0.7 0.7 0.6 0.7 0.7 1.8 1.5 2.1 2.5																										Diurnal Average	
28.2 13.7 6.8 7.6 17.8 20.1 25.7 9.2 4.1 11.7 7.1 3.5 2.0 3.3 3.6 2.7 3.0 3.0 2.6 2.7 29.4 18.1 32.2 35.2																										Diurnal Maximum	
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	703	99.29	99.29
21 - 40	5	0.71	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	38	25	7	6	57	122	89	92	55	28	35	37	40	27	23	698
21 - 40	0	0	1	0	0	0	0	0	0	0	0	1	2	1	0	0	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	38	26	7	6	57	122	89	92	55	28	36	39	41	27	23	703

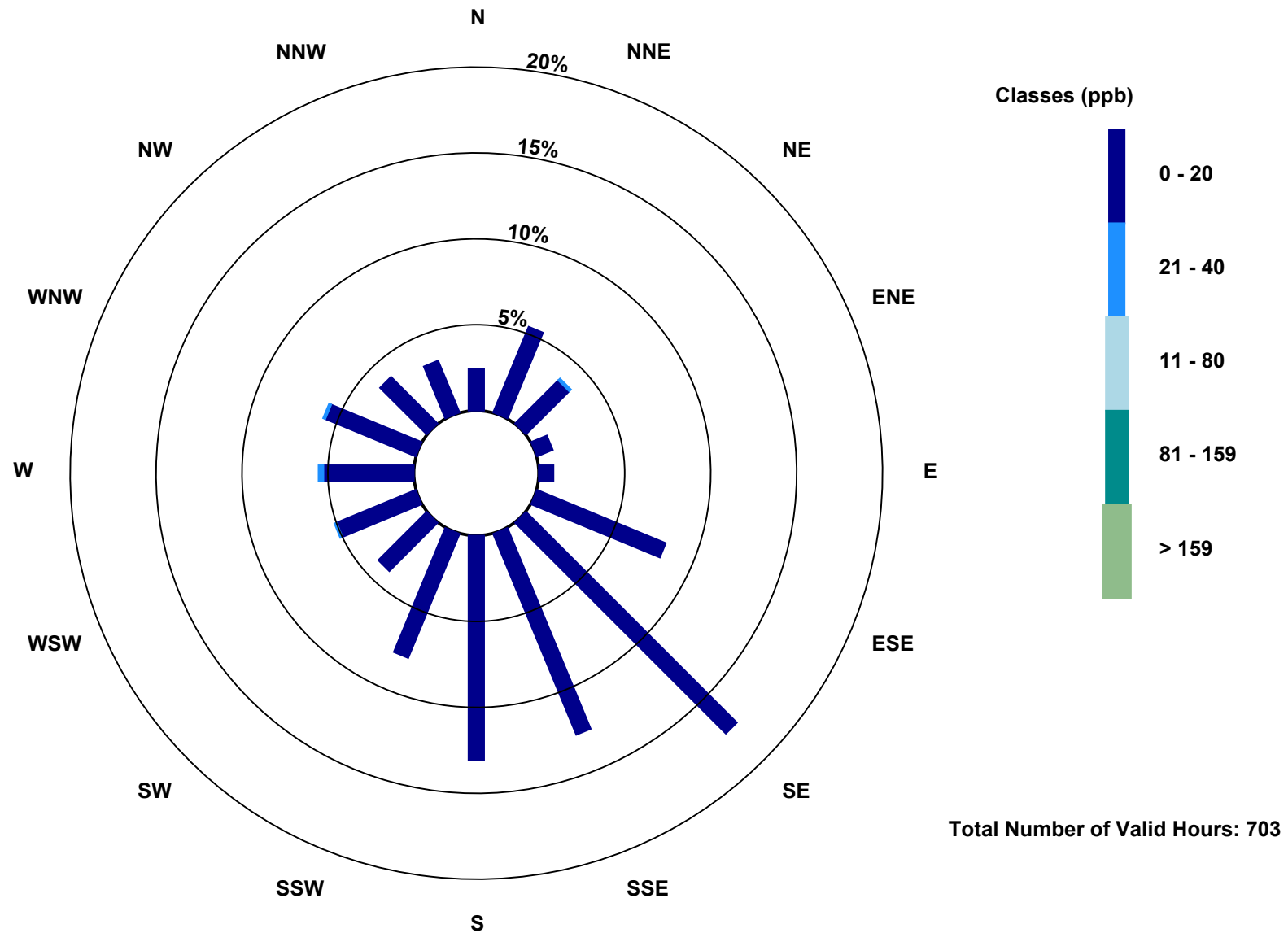
Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

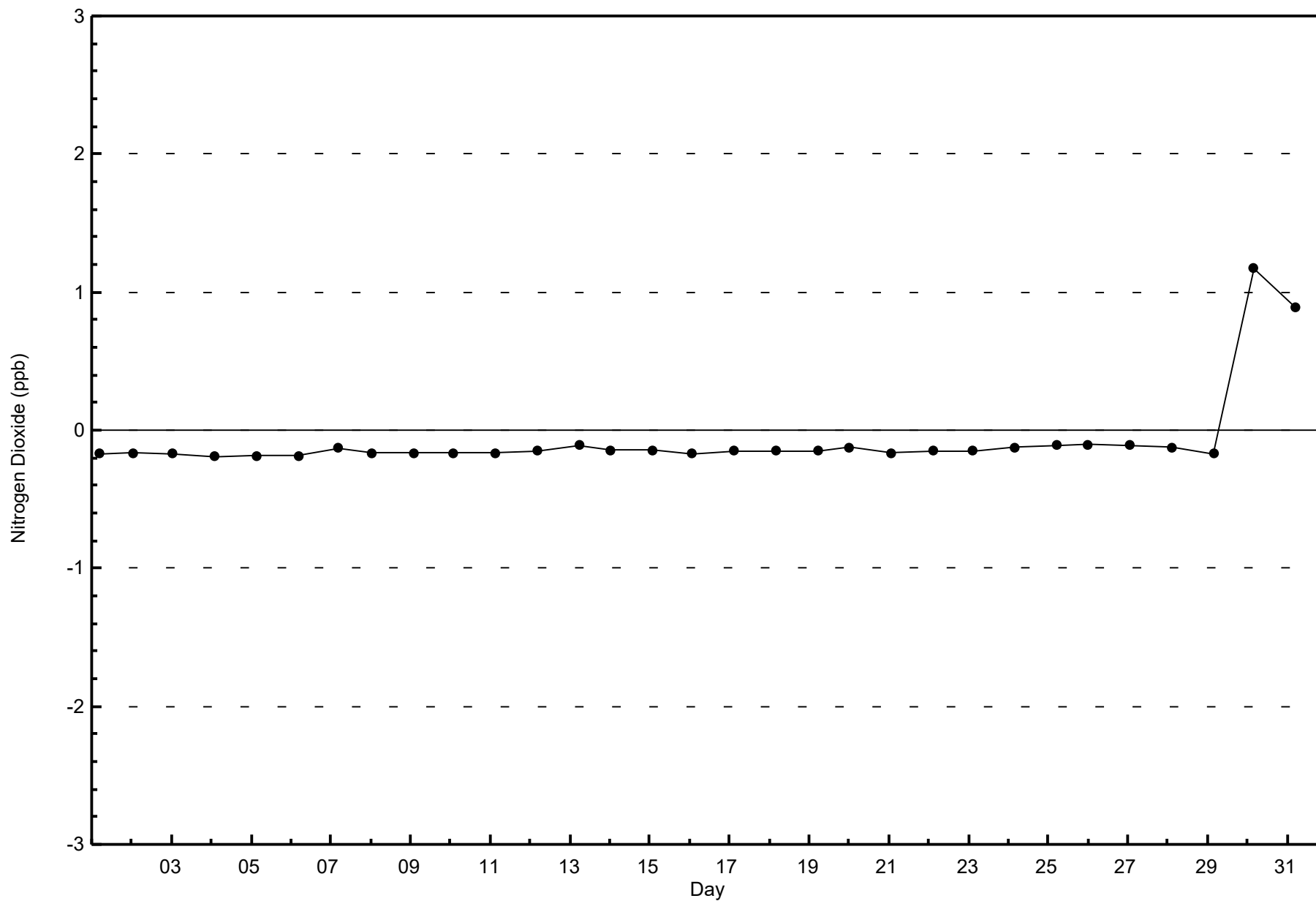
Nitrogen Dioxide (NO₂) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

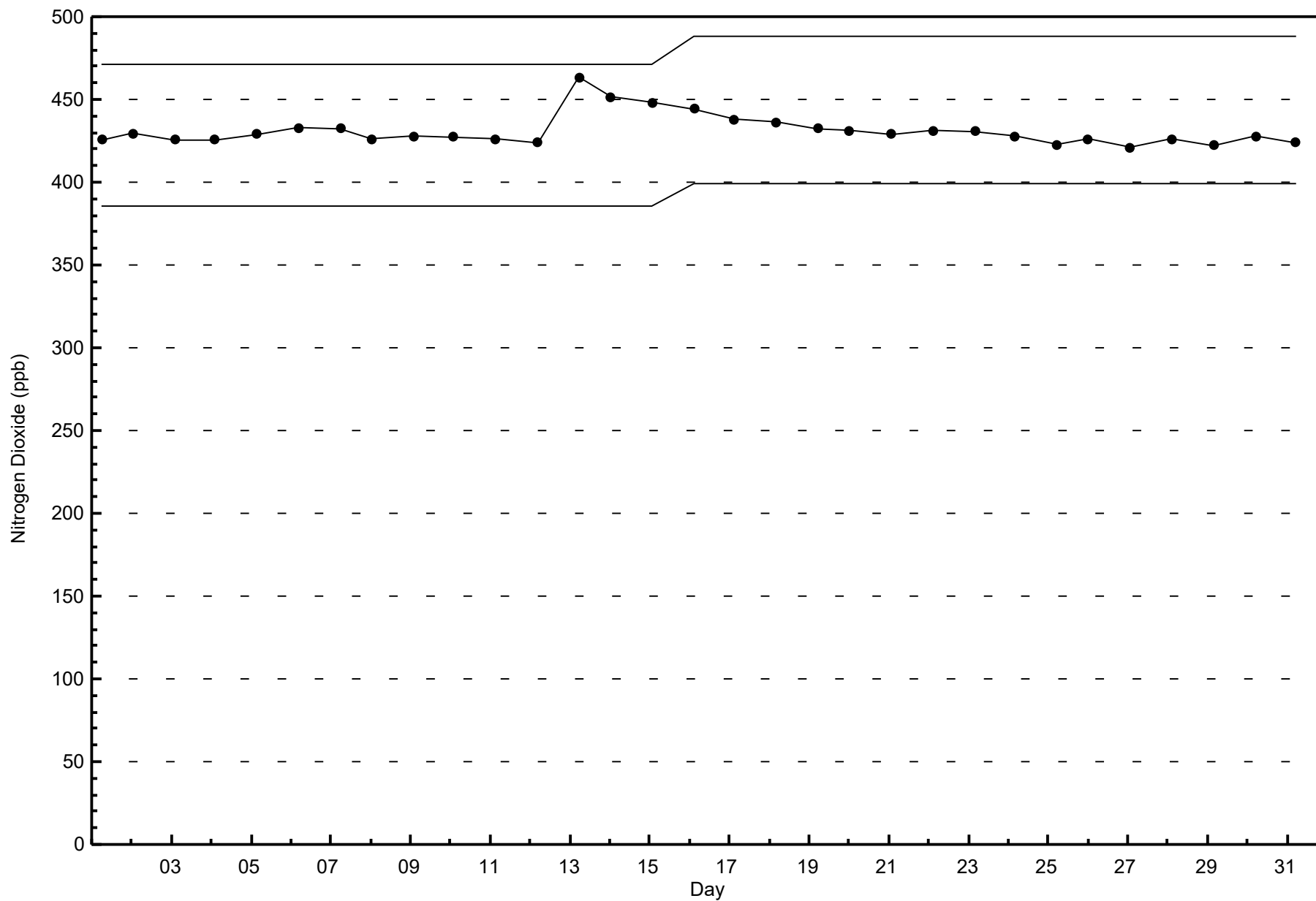
Nitrogen Dioxide (NO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

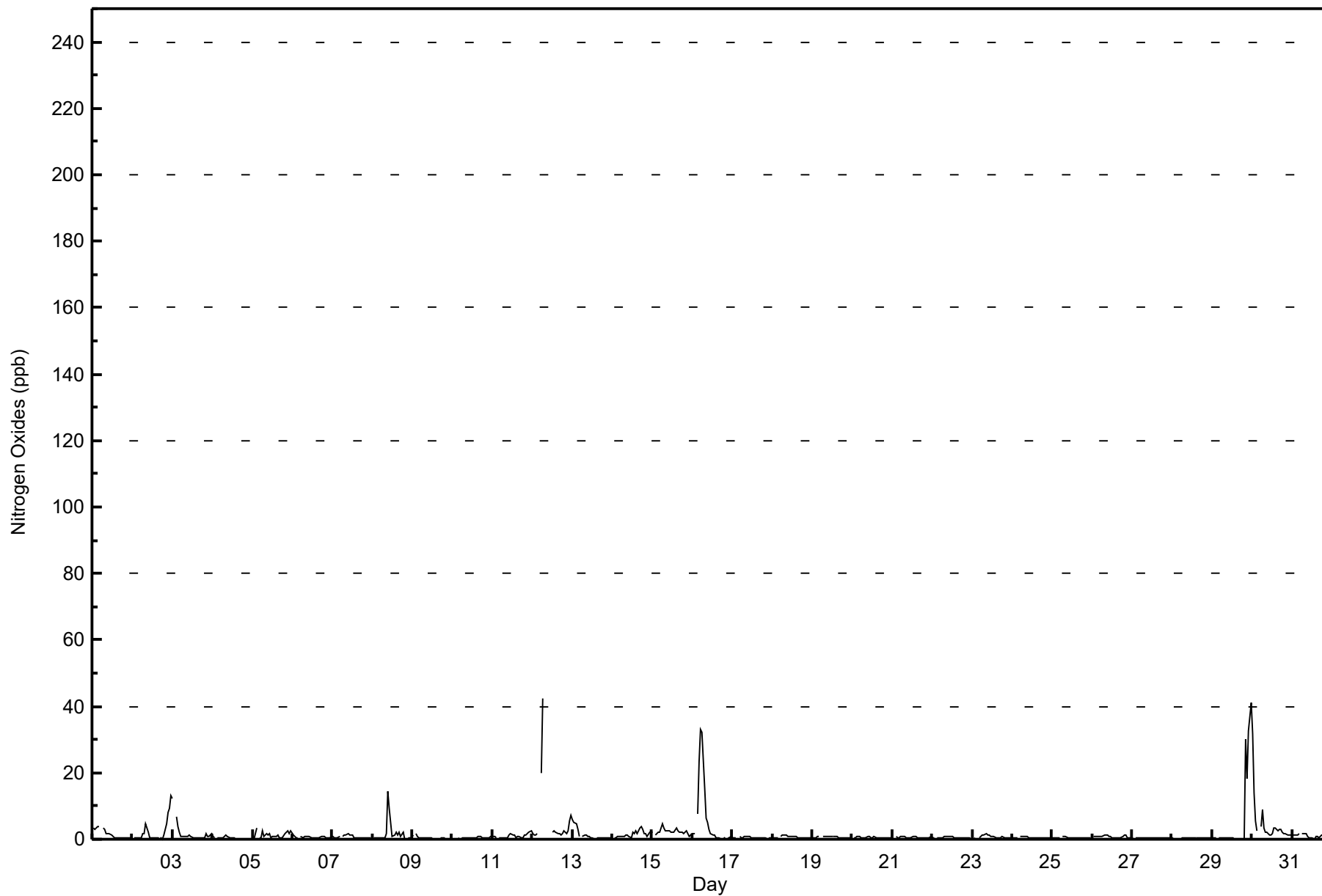
Mackay River - May 2025

Maximum Value: 42.4 ppb on May 12 07:00																			Maximum Daily Average: 6.0 ppb on May 16										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 29 17:00																			Minimum Daily Average: 0.3 ppb on May 28										Hours of Data: 708	
Maximum Diurnal Average: 3.6 ppb at hour 7																			Minimum Diurnal Average: 0.7 ppb at hour 18										Hours of Missing Data: 36	
Monthly Average: 1.47 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.6 Q ₃ = 1.2 P ₉₀ = 2.3 P ₉₉ = 23.1										Hours of Calibration: 36	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	3.5	2.9	3.5	3.9	4.0	Z	3.2	2.9	1.7	1.5	1.6	1.3	0.9	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.6	0.6	1.5	4.0				
2-May	Z	0.5	0.3	0.3	0.3	0.5	1.8	1.7	4.7	2.0	0.5	0.3	0.5	0.3	0.6	0.3	0.1	0.4	0.2	1.4	4.6	8.0	9.3	13.3	2.3	13.3				
3-May	12.3	Z	6.8	3.9	1.9	0.7	0.7	0.8	0.7	0.9	1.1	0.7	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	1.6	0.9	1.0	1.9	1.7	12.3				
4-May	1.0	0.5	Z	0.6	0.6	0.6	0.2	0.7	1.2	1.0	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.4	1.2				
5-May	0.1	0.1	3.5	Z	0.3	0.2	2.4	1.0	1.7	1.1	1.5	0.5	0.7	0.7	0.8	1.2	0.5	0.4	0.6	1.8	2.3	2.4	1.8	2.3	1.2	3.5				
6-May	1.3	0.8	0.5	0.5	Z	0.7	0.5	0.7	0.8	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	1.3				
7-May	0.6	0.6	0.6	0.6	0.8	Z	0.9	1.2	1.3	1.5	1.4	1.3	1.1	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.7	1.5				
8-May	Z	0.4	0.4	0.3	0.3	0.2	0.2	0.4	1.8	14.4	9.4	4.9	0.8	1.2	2.0	1.2	2.0	0.8	2.2	0.2	0.1	0.2	0.4	0.5	1.9	14.4				
9-May	1.2	Z	1.6	0.8	0.4	0.3	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.4	1.6				
10-May	0.1	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.5	0.5	0.8	1.0	0.7	0.4	0.4	0.4	0.3	0.3	0.8	0.4	1.0				
11-May	1.0	0.7	0.6	Z	0.5	0.5	0.5	0.5	0.6	0.6	1.2	1.7	1.1	1.4	0.5	0.8	0.8	0.4	0.6	1.2	1.2	1.8	2.2	2.5	1.0	2.5				
12-May	1.8	1.4	1.2	1.7	Z	19.9	42.4	C	C	C	C	C	2.3	2.3	1.9	1.8	1.5	1.4	1.7	2.7	1.9	2.7	5.5	7.0	5.6	42.4				
13-May	6.1	5.3	4.6	2.9	0.7	Z	1.0	1.2	1.2	1.1	0.9	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	1.2	6.1				
14-May	Z	0.6	0.6	0.6	0.8	0.9	1.0	0.8	1.2	1.3	0.7	0.6	2.0	1.6	2.6	1.5	3.3	4.0	3.0	1.6	1.8	0.8	1.9	2.2	1.5	4.0				
15-May	2.3	Z	1.4	2.1	2.2	3.5	4.5	3.3	2.6	2.7	2.5	2.2	2.1	2.1	3.6	2.6	2.3	1.9	2.0	1.9	2.7	1.7	1.0	1.5	2.4	4.5				
16-May	1.6	1.7	Z	7.7	23.3	33.1	32.4	15.2	6.4	5.1	3.1	1.6	1.3	1.2	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.0	6.0	33.1				
17-May	0.6	0.5	0.5	Z	0.8	0.6	0.6	0.7	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.5	0.8				
18-May	0.4	0.4	0.4	0.5	Z	1.1	1.2	1.3	1.1	1.1	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.5	0.7	1.3				
19-May	0.4	0.4	0.6	0.7	0.7	Z	1.0	1.0	0.8	0.8	0.8	0.8	0.9	0.9	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.6	1.0				
20-May	Z	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.6	0.6	0.7	0.6	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.7				
21-May	0.5	Z	0.7	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.6	0.7	0.6	0.8				
22-May	0.6	0.5	Z	0.5	0.4	0.5	0.6	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.8				
23-May	0.1	0.2	0.3	Z	0.6	0.9	1.2	1.4	1.6	1.5	1.3	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.7	0.6	0.5	0.3	0.3	0.3	0.7	1.6				
24-May	0.2	0.3	0.4	0.4	Z	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8				
25-May	0.5	0.5	0.5	0.6	0.6	Z	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.8				
26-May	Z	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.4	1.2	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.7	1.1	1.4	0.4	0.3	0.3	0.8	1.4				
27-May	0.3	Z	0.5	0.3	0.2	0.2	0.3	0.3	0.5	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.6	0.6	0.6	0.3	0.2	0.4	0.2	0.4	0.6				
28-May	0.2	0.2	Z	0.2	0.1	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.5				
29-May	0.5	0.4	0.5	Z	0.4	0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	29.9	18.4	32.8	41.0	5.5	41.0				
30-May	31.8	13.9	5.4	2.5	Z	4.0	8.8	3.5	2.2	2.1	1.2	1.2	1.7	3.3	3.6	2.7	3.0	2.8	2.2	1.9	1.6	1.2	1.3	1.4	4.5	31.8				
31-May	1.4	1.2	1.3	1.5	1.7	Z	1.7	1.7	1.6	0.8	0.3	0.3	0.6	0.0	0.6	0.9	0.6	0.7	1.2	1.1	1.3	0.5	0.1	1.8	1.0	1.8				
Diurnal Average																										Diurnal Maximum				
Diurnal Maximum																														
Z - zerospan C - Calibration																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	700	98.87	98.87
21 - 40	6	0.85	99.72
41 - 80	2	0.28	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Mackay River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	37	23	7	6	57	122	89	92	55	28	35	37	40	27	23	695
21 - 40	0	1	2	0	0	0	0	0	0	0	0	1	1	1	0	0	6
11 - 80	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	38	26	7	6	57	122	89	92	55	28	36	39	41	27	23	703

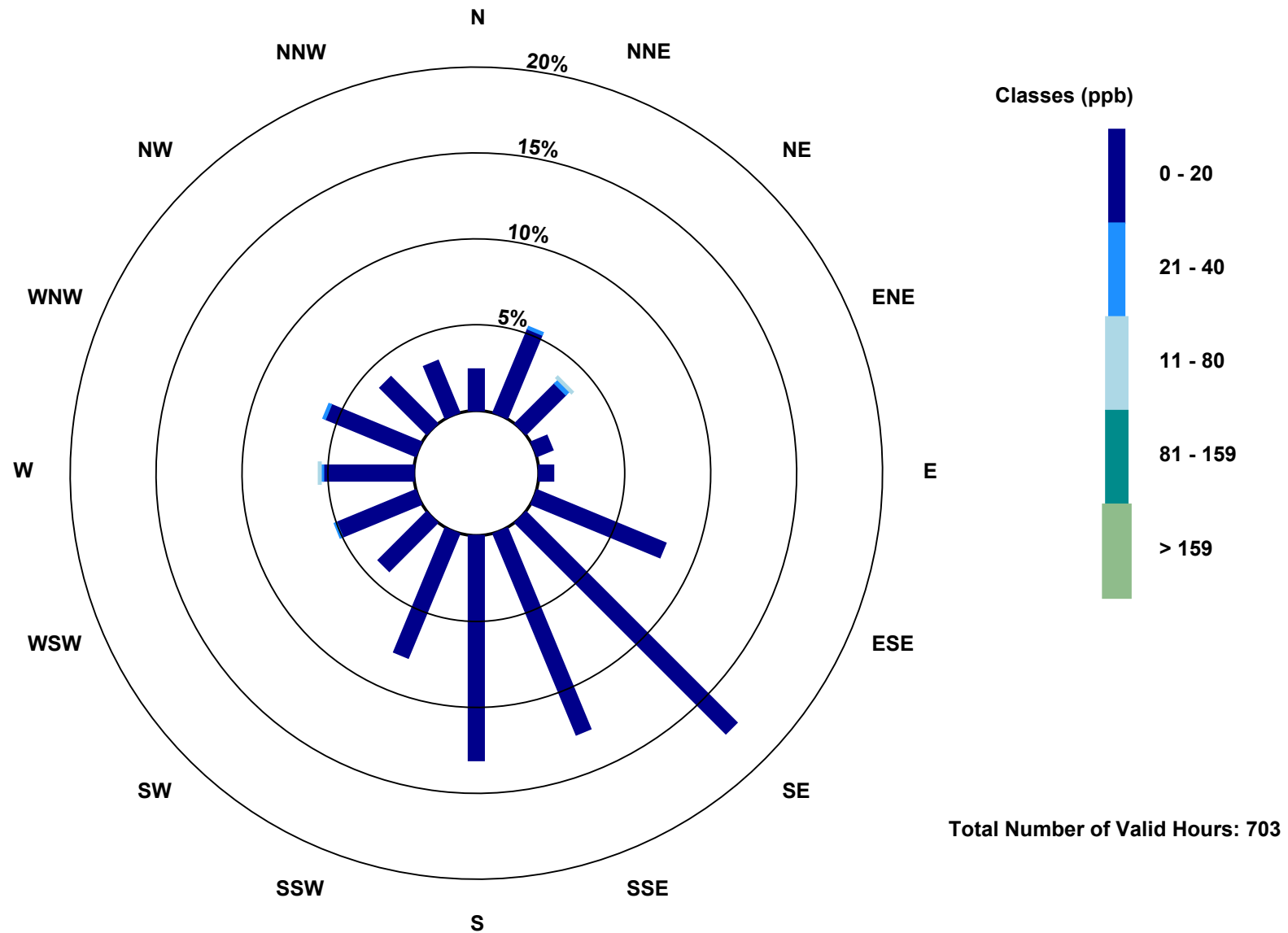
Total Number of Valid Hours: 703

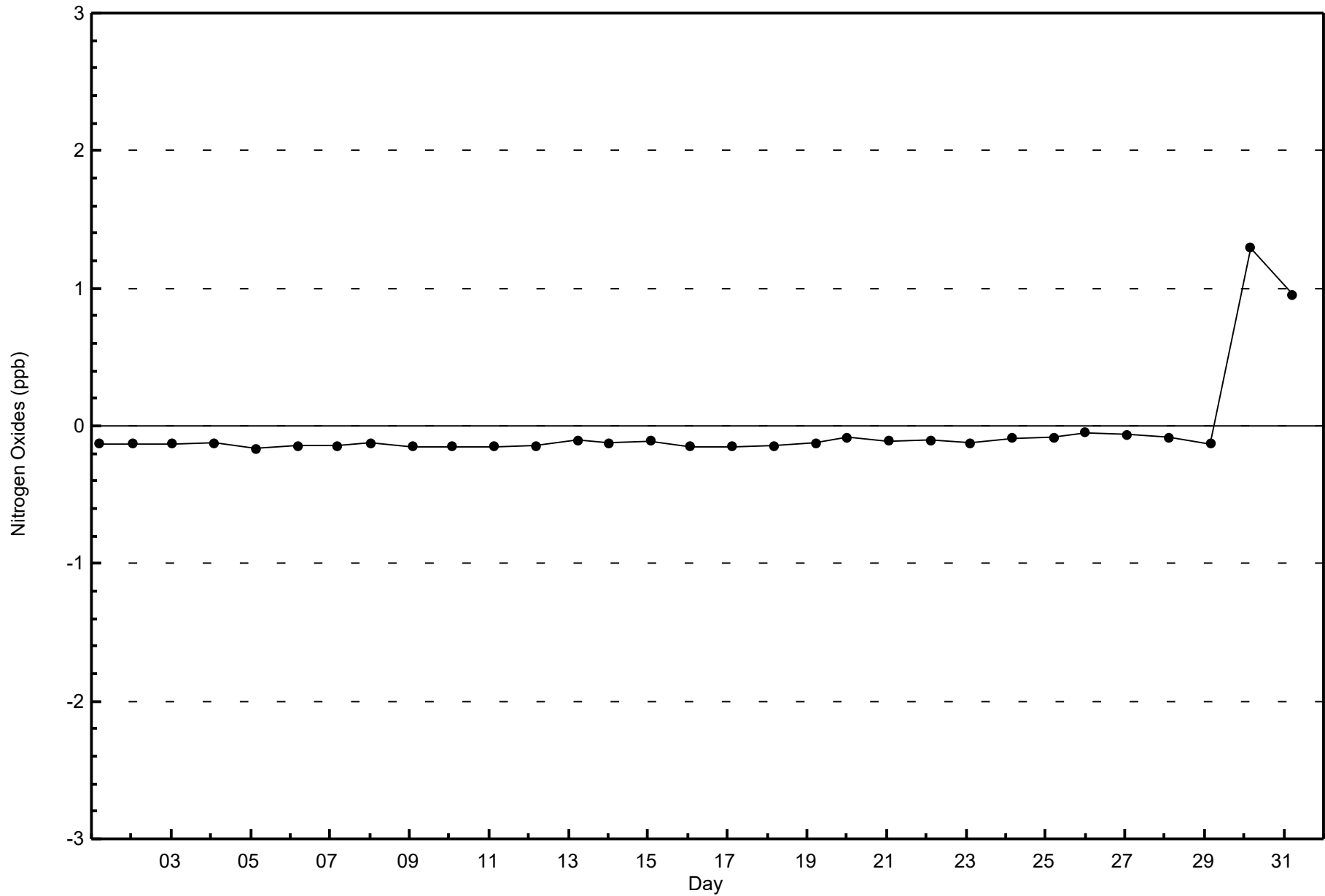
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Mackay River

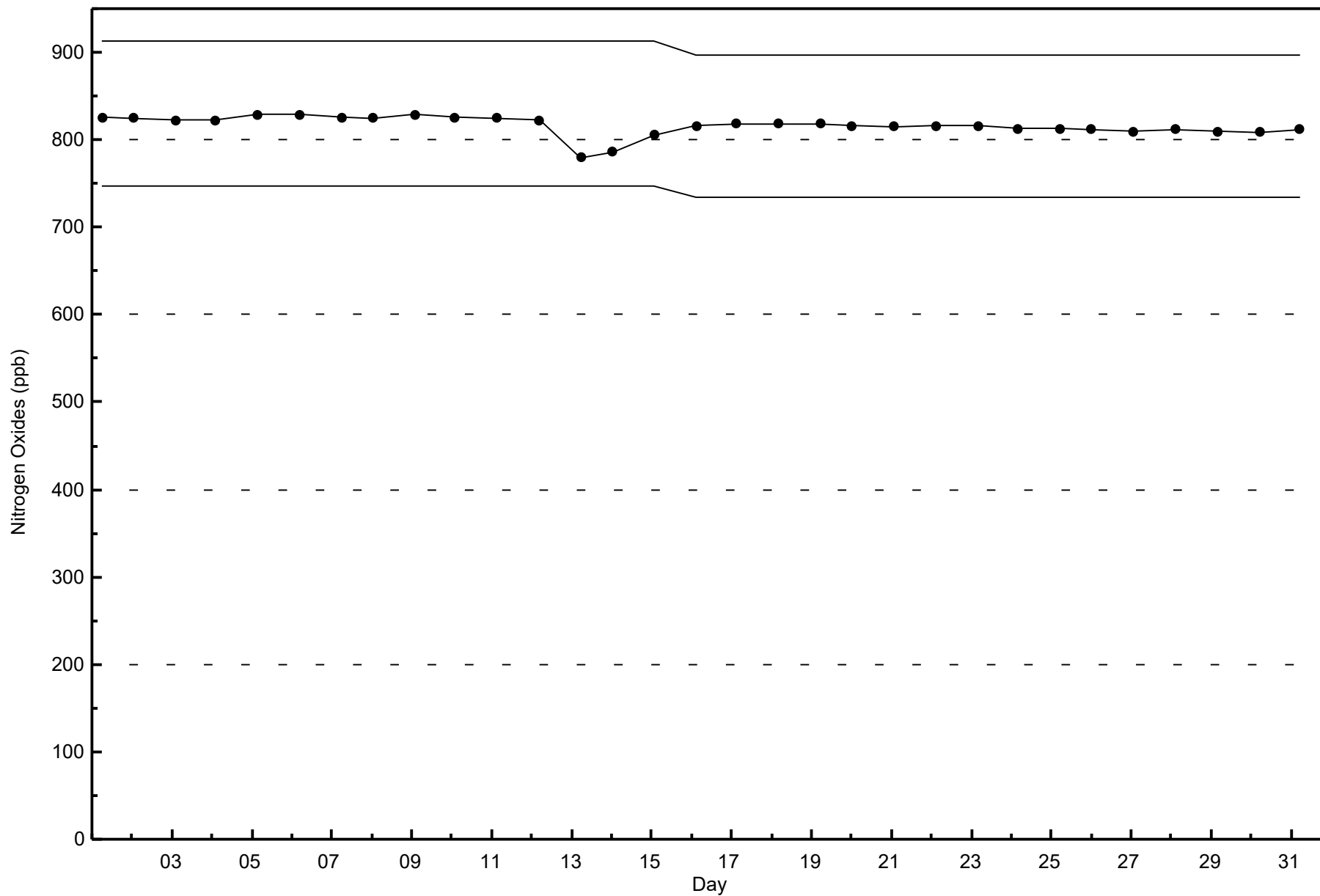






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

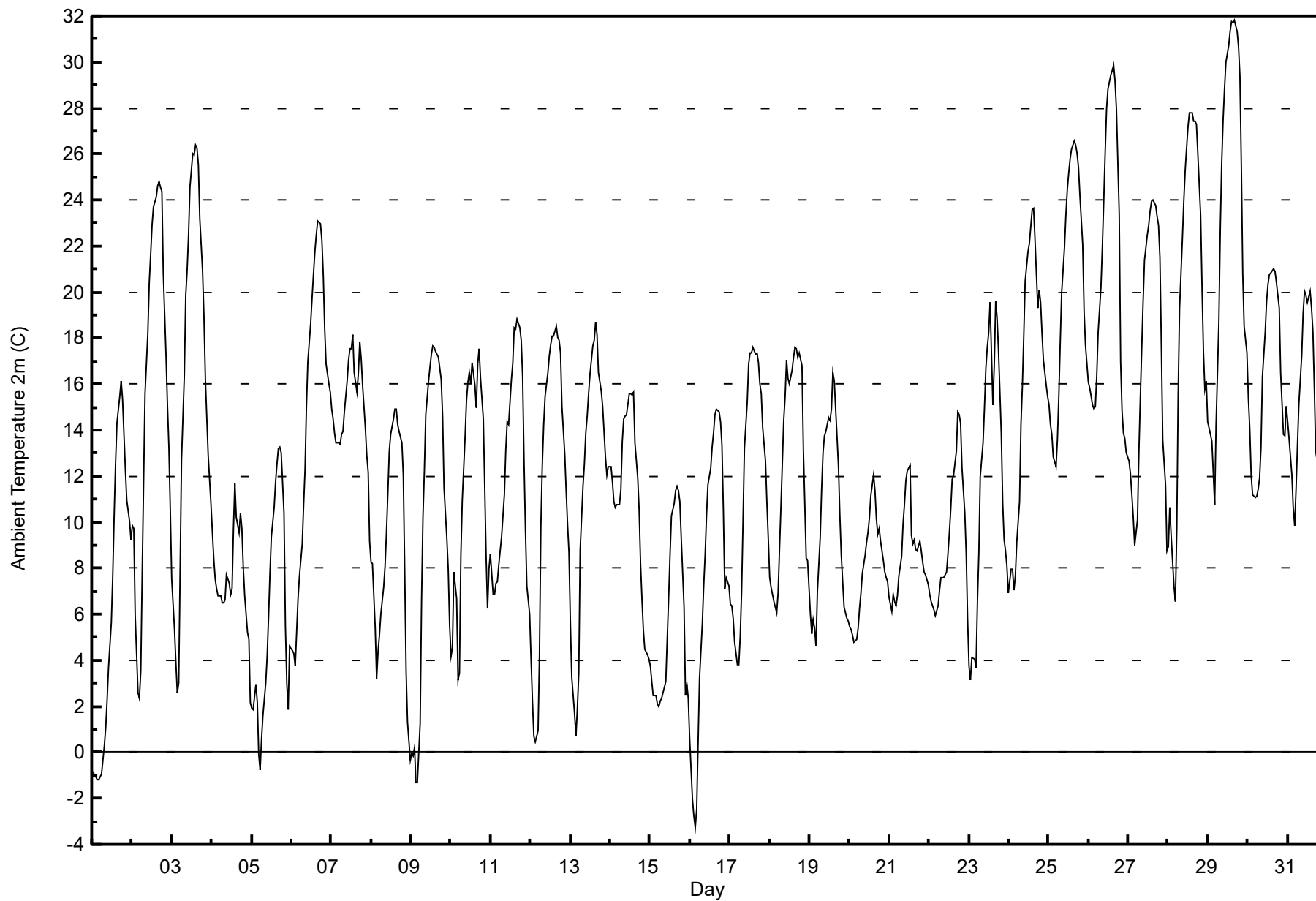
Mackay River - May 2025

Maximum Value: 31.8 C on May 29 17:00																				Maximum Daily Average: 23.5 C on May 29					Hours in Service: 744	
Minimum Value: -3.2 C on May 16 04:00																				Minimum Daily Average: 5.7 C on May 15					Hours of Data: 744	
Maximum Diurnal Average: 18.4 C at hour 16																				Minimum Diurnal Average: 5.7 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.67 C																				Percentiles: P ₁ = -1.1 P ₁₀ = 3.8 Q ₁ = 7.6 Median = 12.5 Q ₃ = 17.0 P ₉₀ = 22.3 P ₉₉ = 29.9					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	-0.8	-1.0	-1.1	-1.2	-1.2	-1.0	-0.3	0.3	1.1	2.3	3.7	5.6	7.6	10.3	12.5	14.3	15.4	16.1	15.4	13.8	12.3	11.0	10.0	9.2	6.4	16.1
2-May	9.9	9.7	5.9	2.6	2.4	3.6	7.8	11.8	15.6	18.2	20.4	21.6	22.9	23.7	24.1	24.6	24.8	24.6	24.4	20.8	17.1	15.1	13.2	10.5	15.6	24.8
3-May	7.5	5.3	3.8	2.6	3.0	7.9	12.7	16.4	19.9	21.0	22.5	24.6	26.0	25.9	26.4	26.2	25.6	23.2	20.9	18.9	16.2	14.5	12.9	10.7	16.4	26.4
4-May	9.5	8.4	7.5	7.1	6.8	6.8	6.5	6.5	6.6	7.7	7.3	6.9	7.1	9.7	11.7	10.2	9.5	10.4	9.7	8.0	6.8	5.2	4.9	2.1	7.6	11.7
5-May	1.9	1.8	3.0	2.1	-0.1	-0.7	0.6	1.6	3.0	4.2	5.9	7.8	9.4	10.7	11.7	12.5	13.2	13.3	13.0	10.4	5.5	3.0	1.9	4.6	5.8	13.3
6-May	4.4	4.3	3.7	5.2	6.7	7.6	9.1	10.8	12.3	15.0	17.0	18.7	19.7	20.8	21.7	22.5	23.1	22.9	22.3	20.7	18.4	16.9	16.0	15.6	14.8	23.1
7-May	14.9	14.5	13.9	13.4	13.4	13.4	13.8	13.9	14.8	16.1	17.1	17.5	17.5	18.1	16.5	15.6	16.5	17.8	17.1	16.0	14.0	12.9	12.2	9.2	15.0	18.1
8-May	8.2	8.2	5.4	3.2	4.4	5.1	6.0	7.2	8.1	9.5	11.3	13.1	13.8	14.5	14.9	14.9	14.2	14.0	13.5	12.0	7.9	3.5	1.3	-0.3	8.9	14.9
9-May	-0.1	-0.1	0.2	-1.3	-1.3	1.3	6.5	10.2	12.2	14.7	16.1	16.8	17.3	17.7	17.6	17.4	17.2	16.7	16.2	14.6	11.5	9.3	7.9	5.5	10.2	17.7
10-May	4.2	4.6	7.9	6.7	3.1	3.5	8.5	11.0	13.7	15.3	16.1	16.5	16.0	16.9	16.0	15.0	16.9	17.5	16.3	14.5	11.5	8.4	6.3	7.9	11.4	17.5
11-May	8.6	6.9	6.9	7.3	7.4	8.1	9.4	10.3	11.2	13.2	14.3	14.2	16.2	16.9	18.5	18.4	18.8	18.5	17.9	16.3	12.6	9.7	7.2	6.0	12.3	18.8
12-May	4.1	2.2	0.7	0.4	1.0	4.3	9.8	12.5	14.3	15.5	16.5	17.3	17.7	18.1	18.1	18.5	18.0	17.9	17.4	15.0	13.0	11.4	9.9	8.7	11.8	18.5
13-May	5.7	3.2	1.7	0.7	1.9	3.4	8.8	11.6	12.5	13.9	14.6	15.6	16.5	17.7	17.9	18.7	18.2	16.5	15.7	15.0	14.0	12.8	12.0	12.4	11.7	18.7
14-May	12.4	11.8	10.9	10.6	10.8	10.7	11.4	13.5	14.5	14.6	14.7	15.6	15.6	15.5	15.6	13.5	11.9	10.5	8.2	6.7	5.3	4.5	4.2	4.0	11.1	15.6
15-May	3.8	3.1	2.4	2.4	2.1	2.0	2.2	2.3	2.6	3.0	4.9	6.6	8.6	10.3	10.8	11.4	11.6	11.4	10.9	9.3	6.3	2.5	2.9	2.3	5.7	11.6
16-May	0.6	-2.1	-2.8	-3.2	-2.5	0.4	3.2	5.6	7.3	8.6	10.3	11.6	12.3	13.3	13.9	14.7	14.9	14.8	14.4	13.3	10.5	7.1	7.6	7.2	7.5	14.9
17-May	6.5	6.4	5.8	4.8	3.8	3.8	5.0	7.0	10.0	13.2	15.2	16.8	17.3	17.4	17.6	17.3	17.3	16.9	16.0	15.6	14.1	12.7	10.9	9.3	11.7	17.6
18-May	7.6	7.2	6.6	6.3	6.1	6.9	8.8	10.6	14.4	15.5	17.1	16.2	16.0	16.7	17.2	17.6	17.5	17.2	17.4	16.8	13.2	10.8	8.4	8.3	12.5	17.6
19-May	6.0	5.2	5.8	5.4	4.6	7.0	9.3	11.5	13.0	13.8	13.9	14.5	14.5	14.9	16.5	16.1	14.9	12.4	10.3	8.6	7.4	6.3	5.8	5.7	10.1	16.5
20-May	5.5	5.3	5.1	4.8	4.9	5.4	6.2	6.9	7.8	8.6	9.1	9.5	10.1	11.2	12.0	11.4	10.2	9.5	9.7	9.2	8.3	7.8	7.6	7.4	8.1	12.0
21-May	6.7	6.1	6.8	6.5	6.4	6.8	7.7	8.5	9.9	10.8	11.8	12.2	12.5	9.4	9.1	9.3	8.8	8.8	9.2	8.8	8.3	7.9	7.7	7.3	8.6	12.5
22-May	6.9	6.6	6.4	6.2	6.0	6.4	7.0	7.6	7.6	7.6	7.9	8.6	9.5	10.6	11.9	12.0	13.1	14.8	14.7	14.3	12.4	10.4	8.6	5.7	9.3	14.8
23-May	3.8	3.2	4.1	4.1	3.7	6.5	8.7	12.0	13.4	15.0	16.7	17.6	18.2	19.6	15.1	16.8	19.6	18.9	17.5	13.8	10.8	9.3	8.7	8.1	11.9	19.6
24-May	6.9	8.0	8.0	7.1	7.6	9.1	10.9	14.3	15.9	18.1	20.4	21.8	22.1	22.9	23.6	23.6	22.3	19.3	20.1	19.5	18.2	17.1	15.9	15.4	16.2	23.6
25-May	15.1	14.3	13.8	12.8	12.4	13.7	15.5	17.9	20.0	21.9	23.4	24.4	25.2	25.8	26.2	26.5	26.4	26.0	25.4	24.2	22.1	19.1	17.7	16.9	20.3	26.5
26-May	16.1	15.8	15.1	14.9	15.1	16.4	18.3	20.2	22.0	24.0	26.1	28.0	28.9	29.4	29.6	29.9	29.2	28.0	23.4	17.0	14.9	13.9	13.6	13.0	20.9	29.9
27-May	12.7	12.1	11.2	10.2	9.0	10.1	13.0	15.4	17.5	19.6	21.4	22.5	22.9	23.5	23.9	24.0	23.8	23.3	22.9	21.5	17.7	13.6	11.6	8.8	17.2	24.0
28-May	8.9	10.6	9.4	7.2	6.5	9.7	15.6	19.3	22.3	23.9	25.3	26.3	27.2	27.8	27.8	27.4	27.4	27.3	26.0	23.3	20.3	17.4	15.8	16.2	19.5	27.8
29-May	14.3	13.8	13.5	12.2	10.8	14.3	18.7	22.7	25.6	27.5	28.8	30.0	30.7	31.3	31.7	31.7	31.8	31.3	30.6	29.4	25.5	20.9	18.5	17.4	23.5	31.8
30-May	15.4	14.0	12.1	11.2	11.1	11.1	11.5	11.9	13.3	16.3	18.3	19.6	20.3	20.8	20.8	21.0	20.9	20.4	19.9	19.3	16.5	13.8	13.8	15.0	16.2	21.0
31-May	14.4	13.6	12.0	10.6	9.9	11.5	13.4	15.1	17.2	19.1	20.1	19.8	19.6	20.1	19.3	18.3	15.8	13.1	12.7	12.0	11.0	10.3	9.6	9.7	14.5	20.1
7.8 7.2 6.6 5.9 5.7 6.9 9.2 11.2 12.9 14.4 15.7 16.7 17.4 18.1 18.4 18.4 18.4 17.8 17.1 15.4 13.0 10.9 9.8 9.0																										Diurnal Average
16.1 15.8 15.1 14.9 15.1 16.4 18.7 22.7 25.6 27.5 28.8 30.0 30.7 31.3 31.7 31.7 31.8 31.3 30.6 29.4 25.5 20.9 18.5 17.4																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Mackay River - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	18	2.42	2.42
0 - 10	262	35.22	37.63
10 - 20	359	48.25	85.89
> 20	105	14.11	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

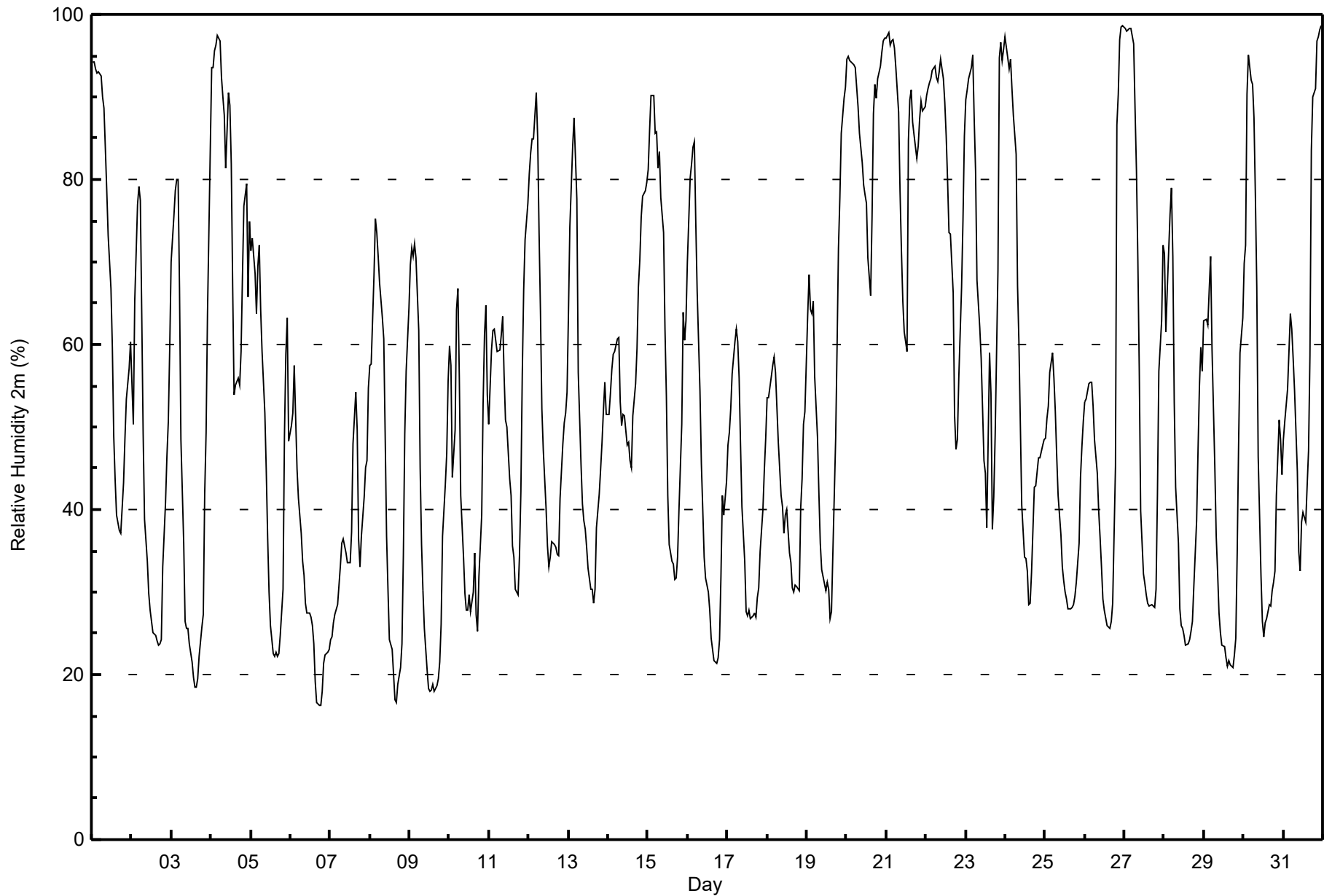
Mackay River - May 2025

Maximum Value: 98.6 % on Jun 1 00:00																				Maximum Daily Average: 87.7 % on May 20										Hours in Service: 744			
Minimum Value: 16.3 % on May 6 19:00																				Minimum Daily Average: 30.6 % on May 6										Hours of Data: 744			
Maximum Diurnal Average: 75.3 % at hour 5																				Minimum Diurnal Average: 35.8 % at hour 15										Hours of Missing Data: 0			
Monthly Average: 53.76 %																				Percentiles: P ₁ = 18.1 P ₁₀ = 25.6 Q ₁ = 33.1 Median = 50.7 Q ₃ = 71.7 P ₉₀ = 90.7 P ₉₉ = 98.0										Hours of Calibration: 0			
																														Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-May	94.3	94.2	93.4	92.8	93.0	92.6	90.1	88.7	83.7	78.7	73.3	66.8	59.6	48.9	43.6	39.4	37.4	37.1	40.2	43.2	48.6	53.4	57.0	60.3	67.1	94.3							
2-May	55.2	50.4	65.3	76.9	79.1	77.4	63.7	49.3	38.8	33.7	29.8	27.9	26.4	25.1	24.7	24.1	23.5	23.8	24.3	33.1	40.8	46.4	50.8	59.4	43.7	79.1							
3-May	69.9	75.6	78.7	80.0	79.9	66.8	48.5	35.9	26.4	25.6	25.6	23.8	21.6	19.7	18.5	18.5	19.4	22.2	25.8	27.3	41.8	49.3	63.7	83.7	43.7	83.7							
4-May	93.6	93.6	95.6	96.3	97.5	96.8	92.5	90.0	87.8	81.3	90.6	88.9	81.9	66.9	53.9	55.1	56.0	55.0	59.2	68.4	76.8	79.5	65.7	74.9	79.1	97.5							
5-May	71.4	72.8	68.7	63.8	69.4	72.0	64.2	59.1	51.7	44.8	36.6	30.0	25.9	22.5	22.1	22.7	22.2	22.6	24.7	30.4	48.7	58.9	63.3	48.4	46.5	72.8							
6-May	50.2	51.6	57.4	51.2	44.9	41.3	37.1	33.8	32.1	28.6	27.4	27.4	26.9	25.9	23.7	19.1	16.7	16.4	16.3	18.0	21.3	22.4	22.7	23.0	30.6	57.4							
7-May	24.3	24.7	26.3	27.4	28.4	30.9	33.2	35.9	36.4	34.8	33.6	33.5	33.6	37.2	47.9	54.2	49.7	36.5	33.0	36.8	41.5	45.1	46.0	54.8	36.9	54.8							
8-May	57.5	57.6	68.3	75.3	73.5	70.7	67.5	63.2	60.6	49.0	36.7	30.3	24.3	23.0	19.9	17.0	16.7	18.8	20.8	23.8	34.4	49.1	56.9	64.4	45.0	75.3							
9-May	69.7	71.8	70.7	72.2	70.5	61.7	45.1	35.8	30.2	25.6	20.5	18.2	17.9	18.1	18.8	18.0	18.6	19.5	21.5	26.1	36.7	43.1	46.8	55.6	38.9	72.2							
10-May	59.8	57.5	43.9	49.6	64.2	66.7	55.9	41.8	34.2	29.8	27.8	27.9	29.6	27.5	30.0	34.8	27.2	25.3	31.9	39.2	52.9	61.3	64.7	53.9	43.2	66.7							
11-May	50.3	59.3	61.7	61.9	60.6	59.1	59.3	61.1	63.4	56.3	50.8	50.0	43.7	41.8	35.6	34.2	30.4	29.6	34.3	42.3	56.4	66.7	72.7	77.2	52.4	77.2							
12-May	80.6	83.3	85.0	84.9	90.4	85.2	73.6	64.0	52.2	47.3	40.2	35.7	33.1	34.3	36.1	35.8	35.5	34.6	34.4	41.3	47.9	50.5	51.7	54.3	54.7	90.4							
13-May	63.7	74.2	83.9	87.4	82.7	77.6	56.7	45.5	40.7	38.6	37.7	35.4	32.9	30.4	30.3	28.6	30.3	37.9	41.8	45.0	48.1	52.0	55.4	51.6	50.3	87.4							
14-May	51.6	54.1	57.0	58.8	59.1	60.7	60.9	53.1	50.2	51.4	51.3	47.8	48.1	45.9	45.0	51.3	55.2	59.4	66.9	70.2	75.5	77.9	78.6	79.7	58.7	79.7							
15-May	81.2	86.0	90.2	90.2	85.6	85.7	81.4	83.4	77.8	73.5	61.8	53.8	41.6	35.8	33.8	33.4	31.6	31.7	34.2	40.1	50.3	64.0	60.5	62.8	61.3	90.2							
16-May	70.1	80.2	81.8	83.9	84.6	74.9	66.4	54.4	45.5	40.0	34.2	31.6	30.0	27.8	24.3	23.1	21.8	21.3	22.0	24.3	31.9	41.7	39.3	43.4	45.8	84.6							
17-May	47.7	49.3	52.3	56.4	60.3	61.8	60.3	56.0	47.8	40.4	33.8	27.6	27.1	27.8	26.8	27.1	27.4	27.0	29.3	30.5	34.9	40.0	44.7	48.7	41.0	61.8							
18-May	53.6	53.6	56.2	57.4	58.5	56.7	52.3	48.2	41.7	40.3	37.2	39.4	39.9	34.8	33.6	30.5	30.0	30.8	30.7	30.1	40.1	43.7	50.4	51.9	43.4	58.5							
19-May	63.5	68.4	64.2	63.7	65.3	56.1	48.8	42.1	35.9	32.7	31.9	30.1	31.2	30.4	26.8	27.6	34.8	48.7	59.7	71.7	77.8	85.7	89.9	91.1	53.3	91.1							
20-May	94.6	95.0	94.4	94.2	93.9	93.6	91.2	88.7	85.5	82.1	79.4	78.1	77.0	70.6	65.9	75.5	87.9	91.5	89.8	92.2	93.8	95.5	96.8	97.1	87.7	97.1							
21-May	97.1	97.7	96.2	96.7	97.0	96.0	93.5	88.1	78.7	71.3	65.2	61.6	59.2	84.8	89.7	90.8	87.0	85.4	82.5	84.1	87.3	89.4	88.3	88.9	85.7	97.7							
22-May	90.1	91.1	91.8	92.3	93.2	93.8	92.4	91.8	93.1	94.6	92.2	89.3	85.2	79.9	73.6	73.4	66.3	51.4	47.3	48.4	56.0	66.9	75.0	85.2	79.8	94.6							
23-May	89.7	90.8	92.2	93.5	95.1	87.4	81.1	67.9	62.1	58.3	52.3	45.9	44.4	37.9	59.0	54.1	37.7	41.5	49.0	68.9	94.7	96.6	94.3	95.7	70.4	96.6							
24-May	97.3	94.7	93.3	94.6	91.0	87.8	83.0	67.0	60.2	50.3	40.4	34.2	34.0	32.5	28.5	28.6	32.4	42.7	42.9	44.6	46.3	46.4	47.8	48.4	57.0	97.3							
25-May	48.7	51.1	52.6	56.5	58.9	55.9	51.9	46.4	41.7	37.0	33.1	31.3	30.0	29.2	27.9	28.0	28.1	28.4	29.5	31.1	35.9	43.9	47.6	50.7	40.6	58.9							
26-May	53.1	53.4	55.3	55.5	55.4	52.6	48.4	44.4	39.8	36.6	33.1	29.1	27.8	26.0	25.7	25.6	26.5	28.6	45.3	86.7	90.3	97.0	98.6	98.6	51.4	98.6							
27-May	98.2	98.0	98.1	98.3	98.4	96.4	88.4	81.0	70.2	56.9	39.7	32.1	31.0	29.7	28.7	28.4	28.5	28.3	28.2	30.4	41.9	56.8	62.9	72.1	59.3	98.4							
28-May	71.1	61.5	66.6	75.7	78.9	70.7	53.1	42.8	35.9	28.0	25.9	25.6	24.8	23.5	23.8	24.2	25.3	26.4	30.7	38.6	47.1	54.9	59.7	56.9	44.6	78.9							
29-May	62.9	63.0	62.4	66.7	70.7	59.4	45.3	36.8	32.4	27.5	25.1	23.6	23.3	22.0	21.0	21.6	21.3	20.9	22.3	24.3	34.8	47.8	58.9	63.3	39.9	70.7							
30-May	69.8	72.0	90.3	95.1	92.0	91.5	87.5	77.9	67.0	46.5	32.0	26.4	24.6	26.3	26.8	28.5	28.2	30.2	31.1	32.5	41.6	50.8	48.6	44.2	52.6	95.1							
31-May	48.5	50.7	54.6	59.2	63.7	61.8	58.3	54.4	44.5	34.9	32.6	38.4	39.7	38.5	42.9	47.0	58.7	83.5	90.0	91.1	96.7	97.4	98.2	98.6	61.8	98.6							
68.7 70.2 72.5 74.5 75.3 72.3 65.5 59.0 53.2 47.6 43.0 40.1 37.9 36.3 35.8 36.1 35.9 37.3 40.0 45.6 54.0 60.4 63.1 65.8																										Diurnal Average							
98.2 98.0 98.1 98.3 98.4 96.8 93.5 91.8 93.1 94.6 92.2 89.3 85.2 84.8 89.7 90.8 87.9 91.5 90.0 92.2 96.7 97.4 98.6 98.6																										Diurnal Maximum							



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Mackay River - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	20	2.69	2.69
20 - 40	243	32.66	35.35
40 - 60	210	28.23	63.58
60 - 80	130	17.47	81.05
80 - 100	141	18.95	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

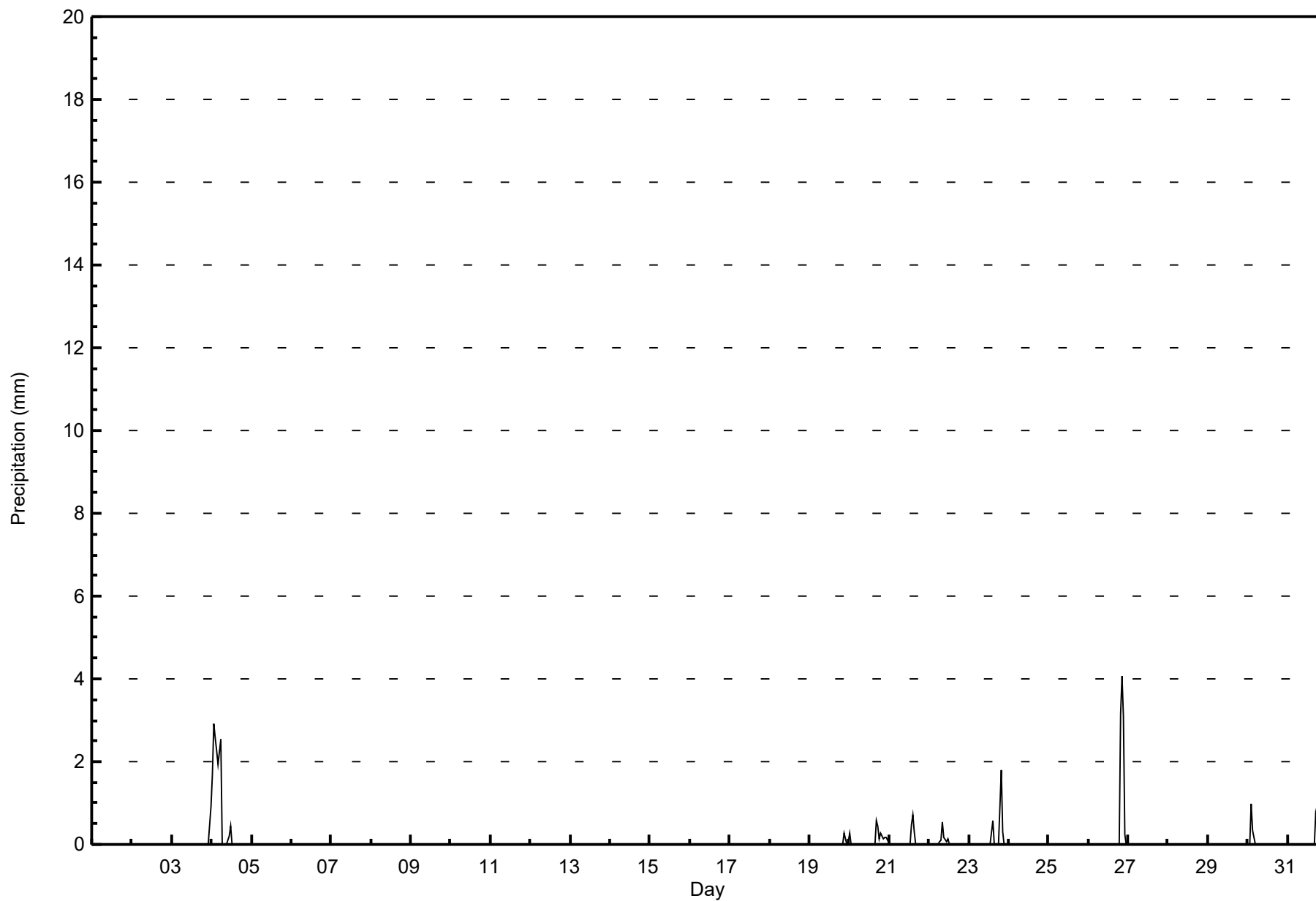
Mackay River - May 2025

Maximum Value: 7.0 mm on May 31 22:00																		Maximum Daily Total: 17.2 mm on May 31										Hours in Service: 744	
Minimum Value: 0.0 mm on May 1 01:00																		Minimum Daily Total: 0.0 mm on May 1										Hours of Data: 744	
Maximum Diurnal Total: 10.5 mm at hour 22																		Minimum Diurnal Total: 0.0 mm at hour 13										Hours of Missing Data: 0	
Monthly Total: 52.42 mm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 2.6										Hours of Calibration: 0	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
3-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9			
4-May	1.7	2.9	2.6	2.3	1.9	2.6	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	2.9			
5-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
6-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
7-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
8-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
9-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
10-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
11-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
12-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
13-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
15-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
17-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
18-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
19-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.3			
20-May	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.1	0.3	0.1	0.2	0.2	0.1	2.3	0.6			
21-May	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.7			
22-May	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5			
23-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.8	0.3	0.0	0.0	0.0	2.7	1.8			
24-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
25-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
26-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.1	3.1	0.2	0.0	10.5	4.1			
27-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
28-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
29-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
30-May	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.0			
31-May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.5	2.3	7.0	3.0	3.2	17.2	7.0			
2.0 2.9 3.6 2.6 1.9 2.6 0.1 0.1 0.5 0.2 0.3 0.6 0.0 0.5 1.3 0.3 0.6 1.2 0.7 5.7 6.8 10.5 3.4 4.2																								Diurnal Average					
1.7 2.9 2.6 2.3 1.9 2.6 0.1 0.1 0.5 0.2 0.2 0.5 0.0 0.5 0.7 0.3 0.6 0.7 0.6 3.1 4.1 7.0 3.0 3.2																								Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Mackay River - May 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	718	96.51	96.51
0.4 - 0.5	5	0.67	97.18
0.6 - 0.7	5	0.67	97.85
0.8 - 1.4	2	0.27	98.12
1.5 - 10	14	1.88	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

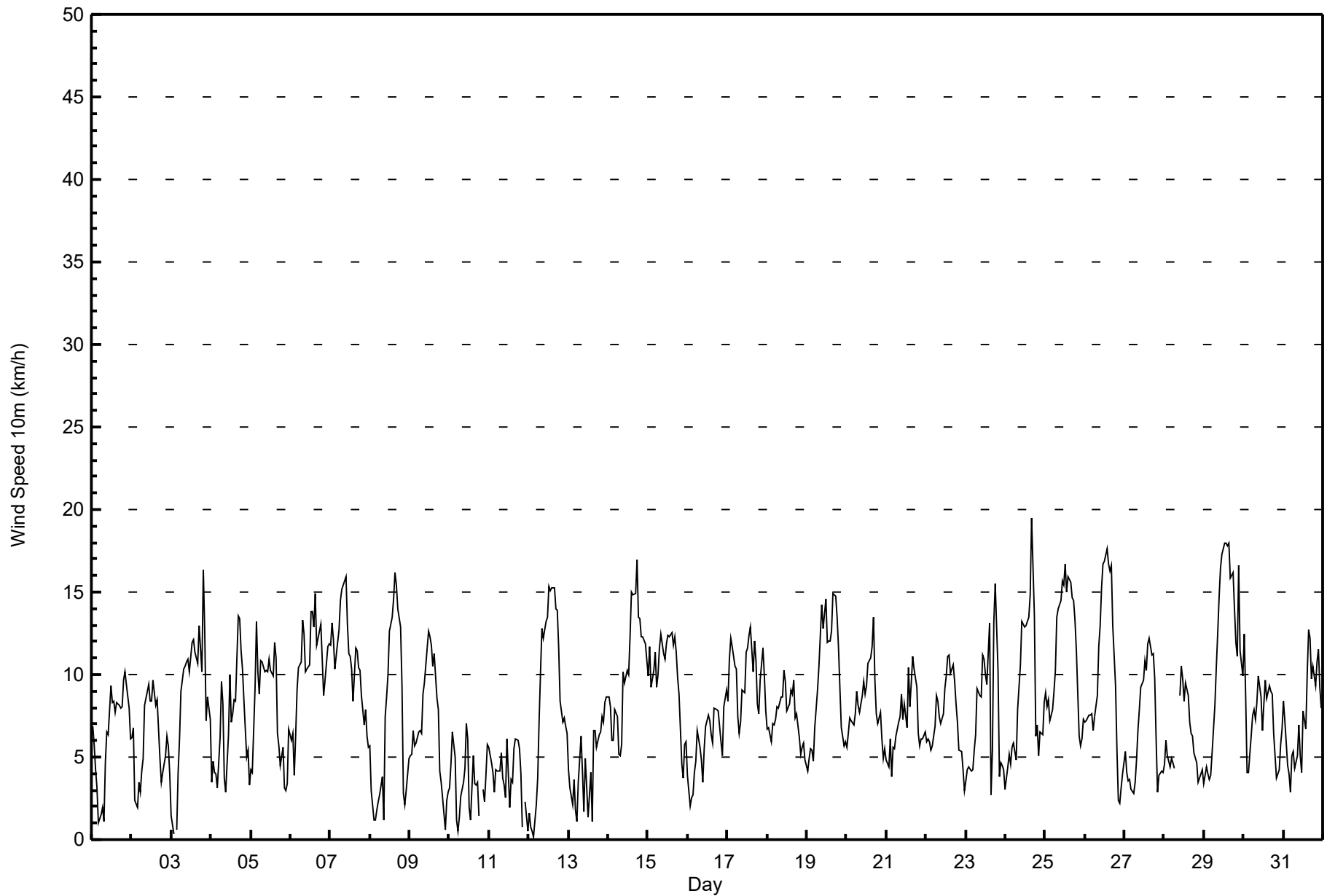
Mackay River - May 2025

Maximum Speed: 19 km/h on May 24 17:00										Maximum Daily Speed Average: 11.1 km/h on May 25										Hours in Service: 744							
Minimum Speed Value: 0 km/h on May 12 04:00										Minimum Daily Speed Average: 0.2 km/h on May 11										Hours of Data: 739							
Maximum Diurnal Speed Average: 3.8 km/h at hour 12										Minimum Diurnal Speed Average: 2.1 km/h at hour 21										Hours of Missing Data: 5							
Monthly Average Velocity: 2.8 km/h 171.0 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 5 Median = 8 Q ₃ = 11 P ₉₀ = 13 P ₉₉ = 17										Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	NNE7	NNE6	NNE4	NNE3	WNW1	SSW2	WSW2	WNW1	SSW5	SSW7	S6	S9	S8	S8	SSW8	S8	SSE8	SE8	ESE8	ESE10	ESE10	SE9	SE8	SSE6	SSE4.0	ESE10	
2-May	S6	SSW7	SW2	W2	WNW3	W3	W4	W5	NW8	NW9	WNW9	WNW8	WNW8	WNW10	WNW8	WNW8	WNW7	WNW5	NNE3	NE4	NE5	NE6	NE6	NE4	WNW3.6	WNW10	
3-May	ENE1	SE0	UO	SE1	SE4	SSE6	S9	SSW10	WSW10	W11	W11	W10	W12	W12	W11	W11	W11	WNW13	WNW10	WNW16	WNW13	WNW7	NNW9	NW7	W6.8	WNW16	
4-May	WNW3	W5	SW4	WSW4	WSW3	NNW6	NNE10	NNE8	N4	NNW3	SW6	W10	WSW7	WSW8	WSW8	WSW8	SSW14	SSW13	SSW11	SSW10	SSW8	SW5	W5	W3	WSW4.4	SSW14	
5-May	W4	W4	WNW9	NW13	WNW10	WNW9	NW11	WNW11	WNW10	NW10	NW10	WNW11	NW10	NW10	NNW12	NW11	NNW6	NW6	NNE4	E6	ENE3	E3	ESE3	SE7	NW6.2	NW13	
6-May	SE6	SE6	SE4	SE6	SSE9	SSE10	S11	SSW13	SSW12	SSW10	SW10	SW11	SSW14	SSW14	SSW13	SSW15	SW12	S13	S13	S11	SSE9	SSE10	SSE12	SSE12	S9.8	SSW15	
7-May	SSE12	SSE13	SSE12	S10	S12	S13	S14	S15	S15	SSW16	SSW13	SW11	WSW11	W10	W8	W12	WSW11	WSW10	SW10	SW9	SSW7	SSW8	SW6	S6	SSW9.2	SSW16	
8-May	SSW6	WNW3	SE1	SW1	WSW2	SSW2	S3	WNW4	NE1	NNE7	NNE9	NNW10	NW13	NW13	WNW15	WNW16	NW15	NW14	NW13	WNW9	NNW3	ESE2	SE3	SE5	NW4.9	WNW16	
9-May	SE5	S5	S7	S6	S6	SSW7	SW7	WSW6	SW9	SW10	WSW12	WSW13	WSW12	WSW10	SW11	SW9	WSW8	WSW4	SSW3	S3	SSW1	SSE2	SSE3	SSE3	SW6.2	WSW13	
10-May	SE3	S5	SSW7	SSW5	ESE1	S1	W1	W3	WSW3	W4	W7	WNW6	E2	ESE1	NNE5	ENE3	NNW3	ENE3	S1	UO	ESE3	SE2	SE4	ESE6	S0.8	W7	
11-May	SE6	ESE5	SE4	SE3	SE4	SSE4	SSW4	S5	SSW4	S3	NW3	NW6	WNW2	WNW4	WSW3	NNW5	NNW6	NNW6	NE5	NE4	ESE1	UO	SE2	NNW1	S0.2	NNW6	
12-May	S2	SE1	SSE0	N0	NNE2	NNE4	NE7	NE10	NE13	NE12	NNE13	NNE13	NNE15	NNE15	NE15	NNE15	NE14	NNE14	NNE12	N8	NNE7	NNE7	NNE7	NNE6	NNE8.7	NNE15	
13-May	NNW4	NW3	NW2	W4	NW2	NW1	N4	N6	NNW4	W2	NNE5	W3	SSW1	W4	WNW1	SE7	SSE7	SW6	SE6	SE7	SE7	SE7	SE8	SSE9	SE1.0	SSE9	
14-May	SE9	SSE8	SSE6	S6	S8	SSW7	SSW5	WSW5	NW6	NW10	NW9	NNW10	N10	NNE12	NNE15	N15	NNE15	NNE17	NNE13	NNE13	NNE12	N12	N12	N11	N5.5	NNE17	
15-May	N10	NNE12	NNE9	N10	NNE11	NNE9	N10	N12	N12	NNE11	NNE11	N12	NNE12	NNE12	NE13	NE12	NE12	NE11	NE10	NE9	NE5	NE4	NE6	NE6	NNE9.7	NE13	
16-May	NE4	NNE2	NE3	ENE3	NE4	NNE5	NE7	NE6	ENE5	E3	ENE6	E7	NE8	E7	ESE6	ESE6	ESE8	ESE8	ESE8	ESE7	ESE6	ESE5	ESE8	ESE9	E4.8	ESE9	
17-May	SE8	ESE11	ESE12	ESE12	SE10	SE10	ESE7	ESE6	SE7	ESE9	SE9	SE11	SSE12	SE12	SE13	SE10	SE12	SE11	SE8	SE8	ESE10	ESE12	ESE10	SE8	SE9.8	SE13	
18-May	SE7	SE7	ESE6	SE7	ESE7	SE7	SE8	SE8	SSE9	SE9	ESE10	SE10	S8	ESE8	SE9	SSE9	SE10	SE10	SE10	S8	SE6	SE5	SE6	SE6	SSE5	SE7.2	ESE10
19-May	SE4	SE5	SE5	SE5	SE5	SSE7	S9	S11	SSE12	SSE14	SE13	SSE15	SE12	SE12	SE12	SE13	SE15	SSE15	SE13	SE12	SE9	SE7	ESE6	ESE6	SE9.6	SE15	
20-May	ESE6	ESE6	ESE7	ESE7	ESE7	ESE8	ESE9	ESE8	ESE8	SE9	ESE10	ESE9	SE9	SSE11	SE11	ESE12	ESE13	ESE10	SE8	SE7	SE8	SE6	SE5	SE5	ESE8.1	ESE13	
21-May	SE5	ESE4	ESE6	SE4	SE6	SE6	SE6	SSE7	S7	S9	S7	S8	SSE7	ESE10	SE8	ESE10	SE11	SE10	SE9	SE6	SE6	SE6	SE6	SSE7	SE6.7	SE11	
22-May	SSE6	SSE6	SSE6	SSE5	SE6	SE7	SSE9	S8	S7	S7	SSE8	S9	S10	S11	SE11	SSE10	SE11	SSE10	SSE8	SSE7	SSE5	SSE5	S4	SSE3	SSE7.3	SE11	
23-May	SSE4	SSE4	SSE4	SSE4	SE4	SE5	SE6	SE9	SE9	SSE9	SSE11	S11	S10	SSE9	S13	SW3	S5	ESE13	ESE16	S10	ESE4	SE5	SE4	S4	SSE6.8	ESE16	
24-May	SE3	SE4	SE5	SE5	SE6	SE6	SSE5	S8	S9	S11	SSE13	SSE13	S13	SSW13	SSW13	S15	SSW19	SE14	SE6	SSE7	SE5	SSE6	SE6	SSE8	SSE8.3	SSW19	
25-May	SSE9	SSE8	SSE8	SSE7	SSE8	SSE9	SSE10	S14	S14	SSE15	S16	SSE15	S17	S15	S16	S16	SSW15	S14	S13	S11	S6	SE6	SE6	SE7	S11.1	S17	
26-May	SE7	SE7	SE8	SE8	SE8	SSE7	SSE7	S9	S12	S13	S15	S17	S17	S18	S17	S16	S17	S13	SSW9	WNW5	WNW2	S2	SW3	W4	S8.8	S18	
27-May	SSW5	SW4	W4	SW4	S3	SSW3	SSW3	WSW5	W7	W8	WSW9	WSW10	WSW11	WSW10	WSW12	SW12	WSW11	WSW11	WSW10	W6	SSW3	SSW4	S4	SSE4	WSW6.1	SW12	
28-May	S5	SSW6	S5	S4	S5	SSW5	SW4	C	C	S9	SSW11	SSW10	SSW8	SSW10	SW9	SSW7	SSE6	SE6	SE5	SE5	SE3	SE4	SSE4	SSE4	S5.4	SSW11	
29-May	SSE3	S4	SSE4	SSE4	SE4	ESE5	SE8	SSE10	SSE12	S15	S16	SSE17	SSE18	SSE18	SSE18	SSE18	SSE16	S16	S14	SSE12	WSW11	WNW17	WNW11	W10	S9.0	SSE18	
30-May	W12	WSW9	WSW4	SW4	WSW6	W8	WNW8	WNW7	WNW8	WNW10	WNW9	WNW7	W8	W10	SW9	SW9	SSW9	SSW9	SSW6	S5	SSE4	S4	S6	S7	WSW5.6	W12	
31-May	S8	SSW7	SW5	SW4	SW3	S5	S5	S4	SSE5	SSE7	SSE5	W4	NNW8	N7	NNW10	NNW13	NNW12	NNW10	NNW11	NW9	NW11	NW11	NNW9	NW8	NW3.4	NNW13	
SSE3.0 SSE3.0 SSE3.0 SSE2.5 SSE2.9 SSE3.1 SSE3.0 S3.1 S3.2 S3.4 SSW3.2SSW3.8SSW3.6SSW3.4SSW3.4SSW3.3 S3.6 SSE3.1 SSE3.0 SSE2.5 SE2.1 SE2.1 SE2.3 SE2.6																								Diurnal Average			
W12 SSE13 ESE12 NW13 S12 S13 S14 S15 S15 SSW16 S16 SSE17 SSE18 SSE18 SSE18 SSE18 SSW19 NNE17 ESE16WNW16WNW13WNW17 N12 SSE12																								Diurnal Maximum			
C - Calibration UO - Unstable Operation																											
All monthly, daily, and diurnal averages have been calculated using vector methods																											



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Mackay River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mackay River - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	214	28.96	28.96
6 - 11	381	51.56	80.51
12 - 19	144	19.49	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 739

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mackay River - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3	10	11	6	3	12	39	24	23	18	12	11	18	12	5	7	214
6 - 11	8	15	12	1	3	42	76	49	41	26	16	21	17	23	18	13	381
12 - 19	6	17	7	0	0	7	12	23	32	14	2	5	4	6	6	3	144
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	42	30	7	6	61	127	96	96	58	30	37	39	41	29	23	739

Total Number of Valid Hours: 739

Total Number of Hours: 744



Wind Speed 10m (WS10) - km/h

Mackay River





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Mackay River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 23 15:00																	Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 2 Percent Operational Time: 99.6								
Minimum Value: 1 km/h on May 12 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	3
2-May	2	2	2	1	1	1	2	1	3	3	4	4	4	4	4	4	3	2	2	2	2	1	1	1	4
3-May	1	1	UO	1	2	2	3	3	4	5	5	4	5	5	4	4	5	5	4	6	5	3	3	3	6
4-May	2	2	1	1	1	3	3	3	2	2	3	4	4	3	3	5	5	5	4	3	2	2	2	1	5
5-May	1	2	4	4	4	3	4	3	4	4	4	4	4	4	4	5	3	3	3	2	1	1	2	2	5
6-May	1	2	2	2	3	3	4	4	4	4	4	4	5	5	6	6	5	5	4	3	3	3	4	4	6
7-May	4	4	4	3	4	4	5	5	5	6	5	4	4	4	4	5	5	4	4	3	2	2	2	1	6
8-May	1	3	1	1	1	2	2	2	2	3	3	4	5	5	5	6	5	5	4	3	2	1	1	1	6
9-May	1	2	1	1	2	2	2	2	3	4	5	5	5	5	4	5	4	3	3	1	1	2	1	1	5
10-May	1	2	1	2	2	1	2	2	2	2	3	6	4	3	4	5	2	2	2	UO	1	1	1	1	6
11-May	1	1	1	1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	2	1	1	UO	1	2	3
12-May	1	1	1	1	1	3	3	4	4	4	4	5	5	5	5	5	5	5	4	3	2	2	2	2	5
13-May	1	2	1	2	2	1	2	2	2	2	2	2	3	3	3	3	2	3	4	2	2	2	2	3	4
14-May	3	3	2	2	2	2	2	2	3	3	3	3	3	4	5	5	5	6	4	4	4	4	4	4	6
15-May	3	4	3	3	4	3	3	4	4	4	3	4	4	5	5	4	4	4	3	3	2	1	2	1	5
16-May	2	1	1	2	1	2	2	2	2	3	3	3	3	4	4	4	3	3	2	2	1	1	3	2	4
17-May	2	3	3	3	3	3	2	2	3	4	4	4	4	5	4	3	4	3	2	3	3	3	3	2	5
18-May	1	2	1	1	1	2	2	2	3	3	4	4	3	3	3	3	4	3	2	2	1	1	1	1	4
19-May	1	1	1	1	1	3	3	4	4	4	4	5	5	4	4	4	5	5	5	4	3	2	1	2	5
20-May	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	3	3	2	2	2	1	1	4
21-May	1	3	2	2	2	2	2	2	2	3	3	3	3	3	2	3	3	3	3	2	2	2	2	2	3
22-May	2	2	2	2	2	2	3	3	2	2	2	3	3	3	4	3	4	3	3	2	2	1	1	1	4
23-May	1	1	1	1	1	1	2	3	3	3	4	4	4	4	7	2	4	4	6	6	1	1	2	1	7
24-May	2	1	1	1	1	2	2	3	3	3	5	5	5	5	5	5	7	6	2	2	1	2	2	3	7
25-May	3	2	3	2	3	3	3	4	4	4	6	5	6	5	5	6	6	5	4	4	2	1	1	2	6
26-May	2	2	2	2	2	2	2	3	4	4	5	6	6	6	6	6	6	5	5	4	3	2	2	1	6
27-May	1	1	1	1	1	1	1	2	3	3	4	4	5	5	5	5	5	5	4	3	1	1	1	1	5
28-May	1	1	1	1	1	1	2	C	C	3	4	4	4	4	3	3	2	2	1	1	1	1	1	1	4
29-May	1	1	1	1	1	1	3	3	4	5	6	6	6	6	6	6	5	6	5	4	7	7	4	4	7
30-May	6	4	3	2	3	3	3	3	3	4	3	3	4	4	4	4	3	3	2	2	1	1	2	2	6
31-May	2	2	1	1	1	1	1	1	2	2	2	2	2	3	3	4	4	3	3	3	4	4	3	3	4
6 4 4 4 4 4 5 5 5 6 6 6 6 6 6 7 6 7 6 6 6 7 7 4 4																									
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

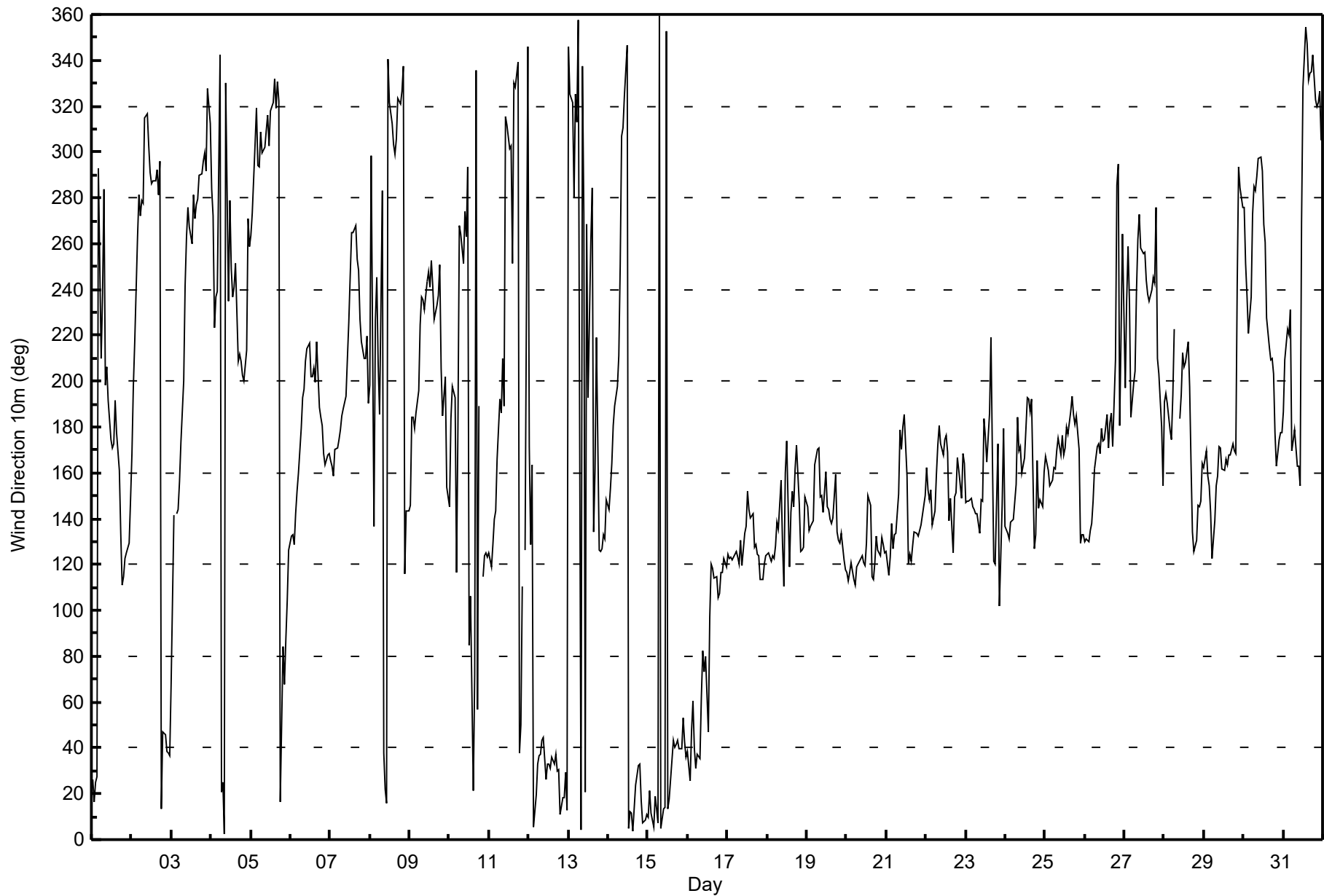
Mackay River - May 2025

Direction of Maximum Speed: 192 deg on May 24 17:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 171.2 deg on May 25																				Hours of Data:		739			
Direction of Minimum Speed: 6 deg on May 12 04:00										Direction of Minimum Daily Speed Average: 0.2 deg on May 11										Hours of Missing Data:		5			
Monthly Average Direction: 171.0 deg																				Percent Operational Time:		99.6			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	26	16	25	28	293	210	238	284	199	206	191	175	171	173	192	178	161	134	111	115	123	125	130	148	148.9
2-May	169	198	217	263	282	272	279	277	315	316	303	291	286	287	287	292	282	296	14	47	46	39	38	37	301.0
3-May	68	142	UO	142	144	156	173	200	242	263	276	267	260	281	271	277	280	290	290	296	300	292	328	313	272.3
4-May	284	272	223	237	239	343	21	25	3	330	235	279	249	237	241	251	208	212	209	202	200	214	271	259	242.8
5-May	264	273	303	319	294	294	309	300	302	309	316	302	318	321	332	319	331	322	17	84	68	87	104	126	315.4
6-May	132	133	129	142	152	160	179	193	197	209	214	217	202	202	206	199	217	189	184	180	168	163	168	168	185.2
7-May	166	163	159	170	171	175	179	185	188	194	210	226	246	265	265	268	253	248	227	217	210	210	220	190	204.6
8-May	199	298	137	227	245	207	186	283	38	22	16	340	322	312	303	299	306	323	321	326	337	116	143	144	315.7
9-May	146	184	184	179	186	196	224	237	235	231	244	248	241	252	242	227	233	237	251	206	185	202	154	150	224.1
10-May	145	184	197	193	117	179	268	264	251	274	263	294	85	106	21	72	336	57	189	UO	115	124	125	123	187.9
11-May	125	119	129	140	144	166	192	186	210	189	315	312	301	303	251	330	328	339	38	50	111	UO	126	346	182.6
12-May	172	129	164	6	20	33	37	37	43	44	26	33	33	31	36	33	37	30	30	11	18	19	29	13	32.0
13-May	346	325	321	280	325	313	358	4	338	273	21	268	193	261	284	134	161	219	126	125	127	133	131	148	136.3
14-May	144	153	164	181	189	198	211	251	307	310	325	347	5	12	12	4	24	28	32	33	17	8	8	11	10.6
15-May	10	22	12	5	19	13	7	359	5	13	14	353	13	18	35	43	40	42	43	40	40	53	43	36	21.2
16-May	39	26	47	60	40	31	37	36	62	82	73	80	47	97	120	119	114	115	106	108	117	117	122	119	87.8
17-May	125	123	123	122	125	125	123	120	131	119	134	136	152	144	141	142	127	129	125	124	113	113	120	124	128.1
18-May	125	125	121	124	123	128	138	135	157	129	111	160	174	119	143	152	145	161	172	146	126	126	128	149	138.8
19-May	145	135	137	138	139	163	170	171	150	150	143	160	145	144	140	138	140	160	134	130	129	134	122	118	144.7
20-May	117	113	117	121	113	111	119	120	122	124	121	120	129	150	146	115	113	121	132	126	124	132	129	125	123.5
21-May	126	116	123	138	127	133	133	151	179	170	180	185	159	120	125	121	128	134	133	132	135	137	142	150	140.7
22-May	162	153	148	153	137	143	160	172	181	173	168	174	176	169	139	149	125	149	151	167	161	149	169	164	157.6
23-May	147	148	147	149	146	144	142	142	134	148	148	184	175	165	186	219	169	121	120	173	102	124	146	179	151.6
24-May	137	134	131	138	139	140	155	184	170	172	160	167	179	193	192	187	192	127	133	165	145	148	145	160	165.4
25-May	167	164	161	154	157	162	162	170	175	168	176	168	171	180	177	187	193	186	181	185	171	129	133	133	171.2
26-May	130	131	130	135	138	147	162	172	173	169	179	174	175	185	171	182	186	172	209	285	295	181	221	264	173.2
27-May	197	235	259	234	184	199	205	239	261	273	258	256	256	244	238	235	240	246	243	276	210	203	180	154	239.4
28-May	191	195	190	179	174	194	223	C	C	184	194	213	206	208	217	197	164	134	126	131	146	145	147	164	184.4
29-May	162	169	159	154	143	123	139	154	159	172	171	162	161	166	164	168	168	173	170	168	241	293	285	276	174.8
30-May	276	251	237	221	237	273	285	283	289	297	298	292	269	260	228	214	209	210	203	177	163	174	178	178	246.1
31-May	187	209	223	220	231	170	174	179	163	163	154	269	328	355	347	331	334	335	342	323	320	322	327	305	305.8
152.3 156.8 152.1 157.0 153.8 158.2 164.7 180.4 186.2 186.6 191.8 209.0 201.5 200.6 193.5 195.7 181.2 164.7 148.0 149.3 135.8 131.9 132.3 145.6																									
Diurnal Average																									
C - Calibration UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Mackay River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Mackay River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 107 deg on May 13 15:00																			Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 2 Percent Operational Time: 99.6						
Minimum Value: 9 deg on May 9 00:00																									
Percentiles: P ₁ = 13 P ₁₀ = 19 Q ₁ = 23 Median = 29 Q ₃ = 38 P ₉₀ = 52 P ₉₉ = 92																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	26	28	28	37	86	47	70	80	43	39	67	42	41	43	47	47	35	32	20	19	19	18	17	22	86
2-May	22	20	43	21	28	47	45	38	31	35	34	47	55	40	57	50	53	53	52	33	21	19	19	18	57
3-May	34	66	UO	76	22	20	25	26	40	46	45	43	43	43	39	36	42	28	28	25	27	38	23	22	76
4-May	39	41	29	30	32	43	26	25	40	64	34	36	49	40	47	44	27	28	28	22	18	36	37	29	64
5-May	35	37	23	22	24	25	28	31	34	36	36	35	41	39	30	37	67	50	55	35	30	31	34	15	67
6-May	17	19	29	24	25	24	25	24	26	38	37	38	29	33	36	32	38	31	27	26	25	26	28	27	38
7-May	27	26	25	27	26	27	27	26	25	25	33	33	39	43	41	41	45	45	35	28	22	24	24	16	45
8-May	20	59	72	70	55	67	71	47	79	29	33	35	29	31	29	28	25	24	24	19	52	35	25	9	79
9-May	13	17	11	12	15	20	32	46	37	45	45	45	45	45	48	35	44	49	55	34	38	94	43	27	94
10-May	19	30	18	24	86	91	45	49	58	58	53	82	88	100	66	69	47	52	66	UO	12	14	13	14	100
11-May	13	12	12	32	22	21	25	31	49	76	95	37	100	85	85	64	44	46	37	28	55	UO	20	89	100
12-May	78	60	74	34	21	22	28	28	26	30	33	32	29	31	29	28	28	28	29	24	22	25	21	21	78
13-May	16	16	20	20	66	37	35	36	82	97	58	80	103	72	107	55	31	51	36	20	20	19	18	25	107
14-May	23	26	27	27	21	21	33	49	51	29	34	34	36	30	32	31	32	28	26	25	28	25	26	28	51
15-May	25	27	26	26	26	28	27	28	28	29	31	35	31	41	38	33	31	29	29	24	17	27	22	18	41
16-May	30	30	30	56	18	21	26	47	77	77	71	54	51	56	71	65	45	43	28	22	16	13	17	17	77
17-May	19	18	19	19	19	20	24	27	37	35	42	33	39	31	30	31	28	25	23	21	17	17	19	19	42
18-May	16	15	13	14	15	20	21	22	30	34	37	43	39	29	31	39	27	32	27	30	14	15	18	23	43
19-May	19	18	20	23	19	27	28	29	29	29	32	30	31	29	34	31	28	29	26	24	23	24	19	20	34
20-May	20	18	18	18	16	18	19	22	26	24	23	23	25	29	31	22	20	20	23	21	20	20	20	20	31
21-May	20	16	20	24	27	21	22	25	33	31	33	36	44	20	20	22	23	22	22	20	19	20	22	24	44
22-May	24	26	23	24	21	24	30	29	25	26	27	29	28	27	27	29	27	33	28	27	27	26	31	22	33
23-May	16	17	20	22	16	19	22	27	31	37	34	35	37	42	46	76	59	25	26	43	57	12	27	24	76
24-May	21	20	17	17	20	20	30	27	28	29	30	36	30	32	33	30	28	25	25	26	24	24	23	27	36
25-May	28	26	26	25	26	27	28	25	26	31	29	31	31	31	29	32	33	30	27	25	27	20	18	17	33
26-May	17	19	20	20	23	25	25	28	29	29	29	31	31	29	31	34	30	30	46	61	82	93	52	33	93
27-May	26	34	33	31	35	28	32	39	45	42	47	51	50	49	47	43	44	45	42	39	38	21	28	24	51
28-May	18	18	18	21	18	24	38	C	C	37	43	42	52	43	40	37	28	24	18	19	20	18	19	23	52
29-May	20	21	24	21	23	17	25	28	29	30	30	31	29	29	31	29	31	29	29	28	54	26	30	39	54
30-May	41	42	70	33	36	37	28	33	33	33	39	55	48	46	41	39	35	29	27	23	21	14	19	21	70
31-May	23	23	28	24	29	19	20	24	37	28	53	47	30	48	27	23	22	23	25	30	28	24	26	26	53
78 66 74 76 86 91 71 80 82 97 95 82 103 100 107 76 67 53 66 61 82 94 52 89																									
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS21
CONKLIN
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	706	35	38	99.6	-	-	4.1	0	0.6	0
TRS(ppb) Average	708	35	36	99.87	2.7	0	2	0	0.5	0
THC(ppm) Average	706	35	38	99.6	-	-	2.5	-	2.1	-
NMHC(ppm) Average	706	35	38	99.6	-	-	0.239	-	0.026	-
CH4(ppm) Average	706	35	38	99.6	-	-	2.3	-	2.1	-
O3 (ppb) Average	707	34	37	99.6	-	-	79	1	48.2	-
NO2 (ppb) Average	638	37	106	90.73	-	-	18.7	0	3.5	-
NO (ppb) Average	638	37	106	90.73	-	-	10.7	-	0.9	-
NOX (ppb) Average	638	37	106	90.73	-	-	25.2	-	3.7	-
PM2.5 (ug/m3) Average	741	2	3	99.87	-	-	750.6	0	127.8	3
Temperature 2 m (C) Average	744	0	0	100	-	-	31.2	-	22.3	-
Relative Humidity (%) Average	695	0	49	93.41	-	-	99.2	-	80.4	-
Wind Speed 10 m (km/h) Average	735	0	9	98.79	-	-	23	-	14	-
Wind Direction 10 m (deg) Average	735	0	9	98.79	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.22	0.3	-	0	0	0	0.1	0.3	0.5	4.1
TRS (ppb) Average	708	0.23	0.2	-	0.1	0.2	0.2	0.2	0.2	0.3	2
THC (ppm) Average	706	2.05	0.1	-	2	2	2	2	2.1	2.1	2.5
NMHC(ppm) Average	706	0.002	0.016	-	0	0	0	0	0	0	0.239
CH4(ppm) Average	706	2.04	0.1	-	2	2	2	2	2.1	2.1	2.3
O3 (ppb) Average	707	36.32	16.4	-	0	12.7	24.2	39.6	48.4	54.7	79
NO2 (ppb) Average	638	1.5	1.8	-	0	0.4	0.7	1.1	1.7	2.7	18.7
NO (ppb) Average	638	0.18	0.8	-	0	0	0	0	0.1	0.3	10.7
NOX (ppb) Average	638	1.68	2.2	-	0	0.4	0.7	1.1	1.8	2.9	25.2
PM2.5 (ug/m3) Average	741	14.77	51.9	-	0.5	2.1	2.9	4	5.8	12.8	750.6
Temperature 2 m (C) Average	744	12.4	7.5	-	-5.9	3.1	7	11.5	17.3	23.2	31.2
Relative Humidity (%) Average	695	54.57	25	-	13.8	24.1	30.8	52.5	77.2	90.3	99.2
Wind Speed 10 m (km/h) Average	735	8.1	5	-	0	2	4	7	11	15	23
Wind Direction 10 m (deg) Average	735	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS 21)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	22 May 2025 22:00	22 May 2025 22:00	1	Station power failure
NO2, O3, SO2, THC	29 May 2025 12:00	29 May 2025 13:00	2	Maintenance - sample manifold cleaned
NO2	01 May 2025 02:00	02 May 2025 12:00	35	Unstable Operation - QA check outside of compliance
NO2	05 May 2025 06:00	06 May 2025 11:00	30	Unstable Operation - QA check outside of compliance
NO2	06 May 2025 12:00	06 May 2025 12:00	1	Maintenance - analyzer replaced
Relative Humidity	08 May 2025 10:00	01 Jun 2025 00:00	49	Sensor operated out of range
Wind Speed, Wind Direction	01 May 2025 06:00	29 May 2025 05:00	9	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

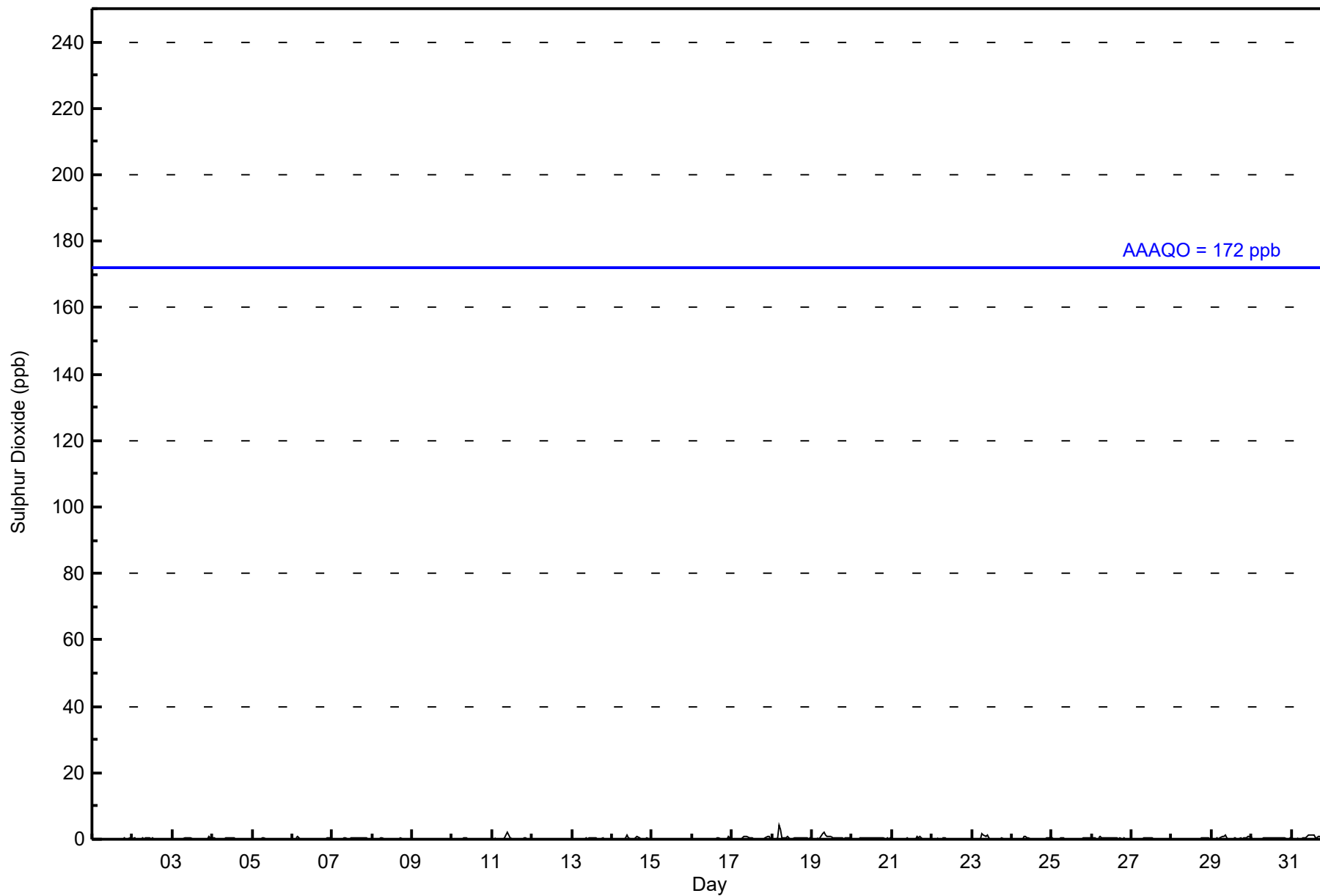
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.1 ppb on May 18 05:00 Maximum Daily Average: 0.6 ppb on May 31																			Hours in Service: 744 Hours of Data: 706							
Minimum Value: 0.0 ppb on May 1 05:00 Minimum Daily Average: 0.0 ppb on May 9 Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 2 Monthly Average: 0.22 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 1.4																			Hours of Missing Data: 38 Hours of Calibration: 35 Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.0	0.2	0.2	0.1	0.3
2-May	0.2	0.2	0.4	Z	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.5
3-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	0.4	0.4	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.7	0.1	0.2	0.7
4-May	0.3	0.2	0.2	0.1	0.1	Z	0.0	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3
5-May	Z	0.2	0.1	0.1	0.1	0.2	0.4	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
6-May	0.0	Z	0.3	0.7	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.7
7-May	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4
8-May	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
9-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
10-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.5
11-May	Z	0.3	0.1	0.1	0.2	0.1	0.2	0.4	1.2	2.1	1.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.5	0.3	0.1	0.2	0.0	0.4	2.1
12-May	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.3	0.6	0.6	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.6
14-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.6	1.2	0.5	0.1	0.0	0.0	0.3	0.9	0.5	0.1	0.0	0.1	0.1	0.3	0.2	0.1	0.2	1.2
15-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-May	0.0	0.0	0.1	0.1	0.0	Z	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.9	0.1	0.1	0.9
17-May	Z	0.1	0.1	0.0	0.1	0.1	0.4	0.8	0.6	0.7	0.6	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.6	0.9	0.7	0.0	0.3	0.9
18-May	0.0	Z	0.1	0.5	4.1	2.8	0.3	0.3	0.6	1.0	0.2	0.1	0.2	0.3	0.3	0.5	0.5	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.6	4.1
19-May	0.1	0.2	Z	0.4	0.2	0.4	1.9	2.1	1.2	0.7	0.9	0.9	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.5	0.3	0.6	0.6	0.6	2.1
20-May	0.2	0.2	0.2	Z	0.4	0.4	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.5	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.3	0.6
21-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.0	0.1	0.0	0.0	0.2	0.6	0.4	0.7	0.1	0.2	0.1	0.1	0.2	0.0	0.2	0.7
22-May	0.0	0.0	0.2	0.1	0.5	Z	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
23-May	Z	0.0	0.0	0.0	0.0	0.0	1.5	1.1	0.7	1.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.3	1.5
24-May	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.9	0.9	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.7	0.2	0.9
25-May	0.5	0.1	Z	0.0	0.0	0.3	0.5	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.6	0.3	0.3	0.2	0.2	0.6
26-May	0.6	0.5	0.4	Z	0.5	0.7	0.6	0.3	0.5	0.5	0.3	0.3	0.3	0.5	0.5	0.3	0.2	0.2	0.2	0.5	0.2	0.2	0.1	0.1	0.4	0.7
27-May	0.1	0.0	0.1	0.0	Z	0.1	0.2	0.2	0.3	0.5	0.3	0.3	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5
28-May	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.5	0.4	0.2	0.2	0.2	0.1	0.5
29-May	Z	0.2	0.1	0.3	0.1	0.3	0.9	1.0	1.1	0.5	0.2	M	M	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.7	0.7	0.4	1.1
30-May	0.3	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.4
31-May	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.4	1.0	1.3	1.3	1.3	1.4	0.4	0.3	0.8	0.7	0.5	2.0	0.5	0.2	0.2	0.2	0.6	2.0
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	706	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	40	19	5	8	6	37	83	99	107	63	36	23	23	33	66	49	697
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	19	5	8	6	37	83	99	107	63	36	23	23	33	66	49	697

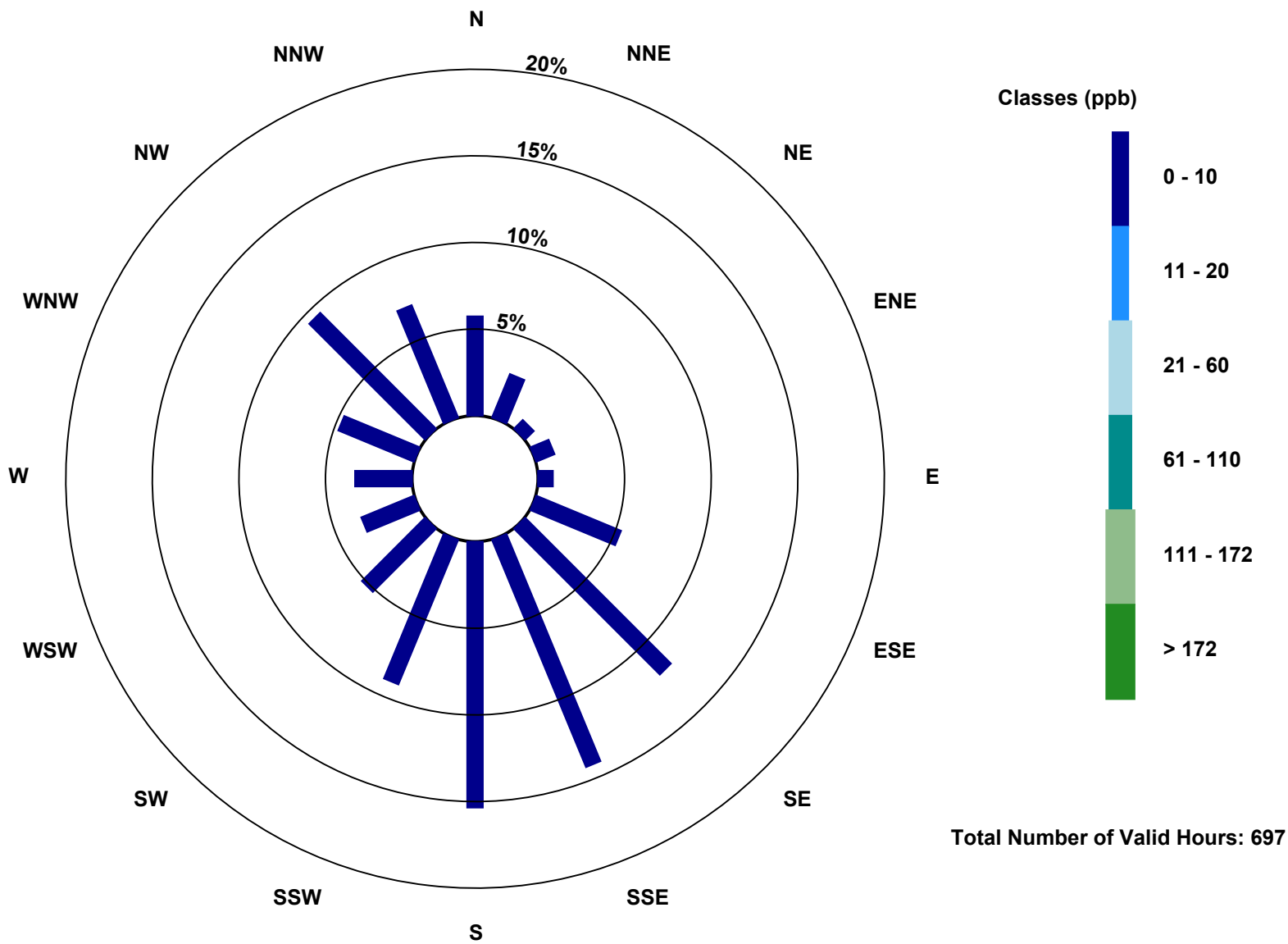
Total Number of Valid Hours: 697

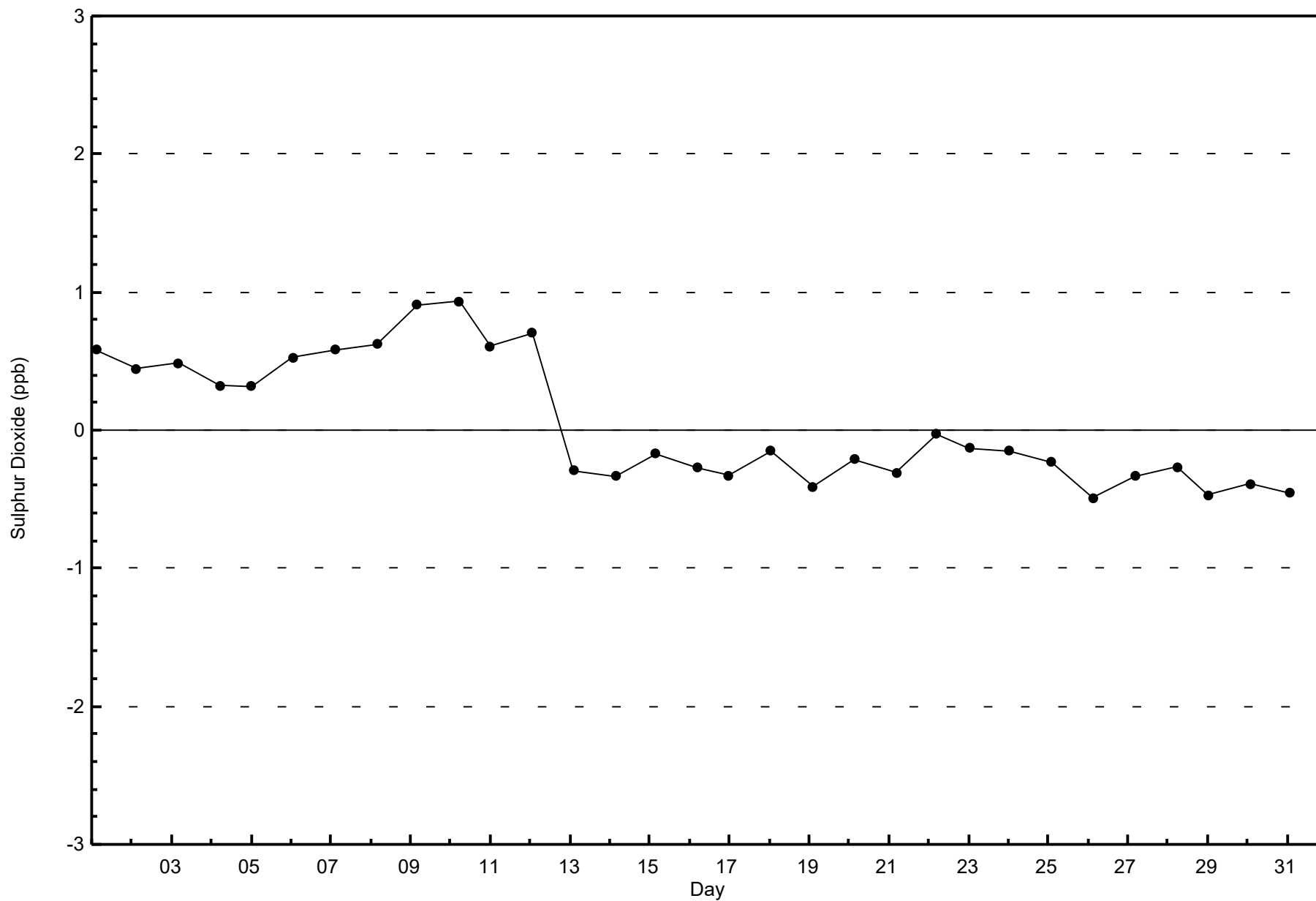
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Conklin

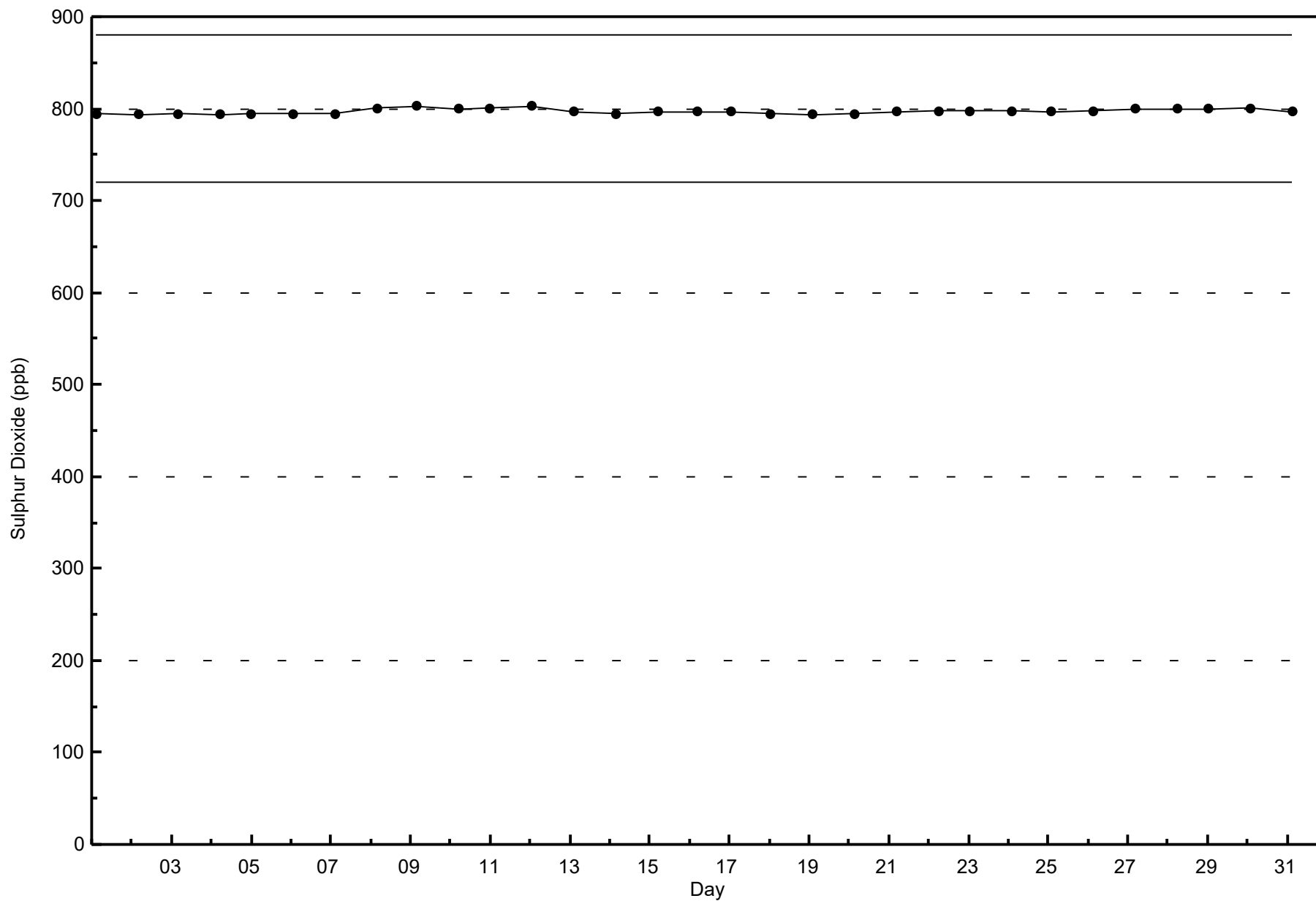






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 2.7 ppb on May 31 11:00 Maximum Daily Average: 0.5 ppb on May 31																				Periods in Service: 1488						
Minimum Value: 0.1 ppb on May 29 18:00 Minimum Daily Average: 0.1 ppb on May 5 Maximum Diurnal Average: 0.3 ppb at hour 24 Minimum Diurnal Average: 0.2 ppb at hour 15																				Periods of Valid Data: 1415						
Monthly Average: 0.23 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.9																				Periods of Invalid Data: 73						
																				Periods of Calibration: 71						
																				Percent Operational Time: 99.9						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.2 0.2	0.2 0.2	0.1 0.1	Z SP	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2	0.2	
2-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.5	0.2	0.5
3-May	0.3 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3	
4-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2	0.2	
5-May	0.1 0.1	Z SP	0.2 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.1	0.2	
6-May	0.1 0.2	0.2 0.2	Z SP	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3	
7-May	0.2 0.2	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.4	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2	0.4	
8-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2	0.3	
9-May	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.3	0.2	0.3	
10-May	Z SP	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.2	0.1 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3	
11-May	0.2 0.3	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2	0.3	
12-May	0.2 0.2	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2	
13-May	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.3	0.2 0.3	0.3 0.2	0.2	
14-May	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.3	0.2 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3	
15-May	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
16-May	<div><div>Z</div><div>SP</div></div>	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2	
17-May	0.2 <div><div>Z</div><div>SP</div></div>	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.3	0.3 0.3	0.2 0.2	0.2	0.3
18-May	0.3 0.2	0.2 <div><div>Z</div><div>SP</div></div>	0.3 0.2	0.3 0.2	0.3 0.3	0.4 0.3	0.2 0.2	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2	0.4
19-May	0.2 0.2	0.2 0.2	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.3	0.4
20-May	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2	0.3
21-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	<div><div>Z</div><div>SP</div></div>	0.2 0.3	0.3 0.4	0.4 0.5	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.3	0.2 0.3	0.2 0.3	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2	0.5
22-May	<div><div>Z</div><div>SP</div></div>	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.3	0.3 0.3	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	<div><div>PF</div><div>PF</div></div>	0.1 0.1	0.1 0.2	0.2	0.3	
23-May	0.1 0.1	<div><div>Z</div><div>SP</div></div>	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2	0.3	
24-May	0.3 0.3	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.3 0.3	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3	0.4	
25-May	0.2 0.2	0.2 0.3	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.2 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2	0.3	
26-May	0.3 0.5	0.3 0.3	0.3 0.2	0.2 0.2	<div><div>Z</div><div>SP</div></div>	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2	0.5	
27-May	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.2	0.2 0.3	<div><div>Z</div><div>SP</div></div>	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3	
28-May	<div><div>Z</div><div>SP</div></div>	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2	0.4	
29-May	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.3	0.3 0.3	0.3 0.3	<div><div>C</div><div>C</div></div>	<div><div>C</div><div>C</div></div>	<div><div>C</div><div>C</div></div>	<div><div>C</div><div>C</div></div>	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.8	1.4 2.2	2.4 1.7	0.4	2.4	
30-May	1.3 1.3	1.3 1.3	<div><div>Z</div><div>SP</div></div>	0.9 0.5	0.4 0.3	0.3 0.3	0.3 0.4	0.4 0.5	0.8 1.0	0.9 0.7	0.6 0.5	0.5 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.5	1.3	
31-May	0.3 0.3	0.3 0.3	0.3 0.3	<div><div>Z</div><div>SP</div></div>	0.3 0.2	0.2 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.9 2.7	1.6 0.9	0.8 0.6	0.6 0.5	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.7 0.6	0.6 0.6	0.5	2.7	
																								Diurnal Average			
																								Diurnal Maximum			

Z - zerospan C - Calibration PF - Power Failure SP - Span
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

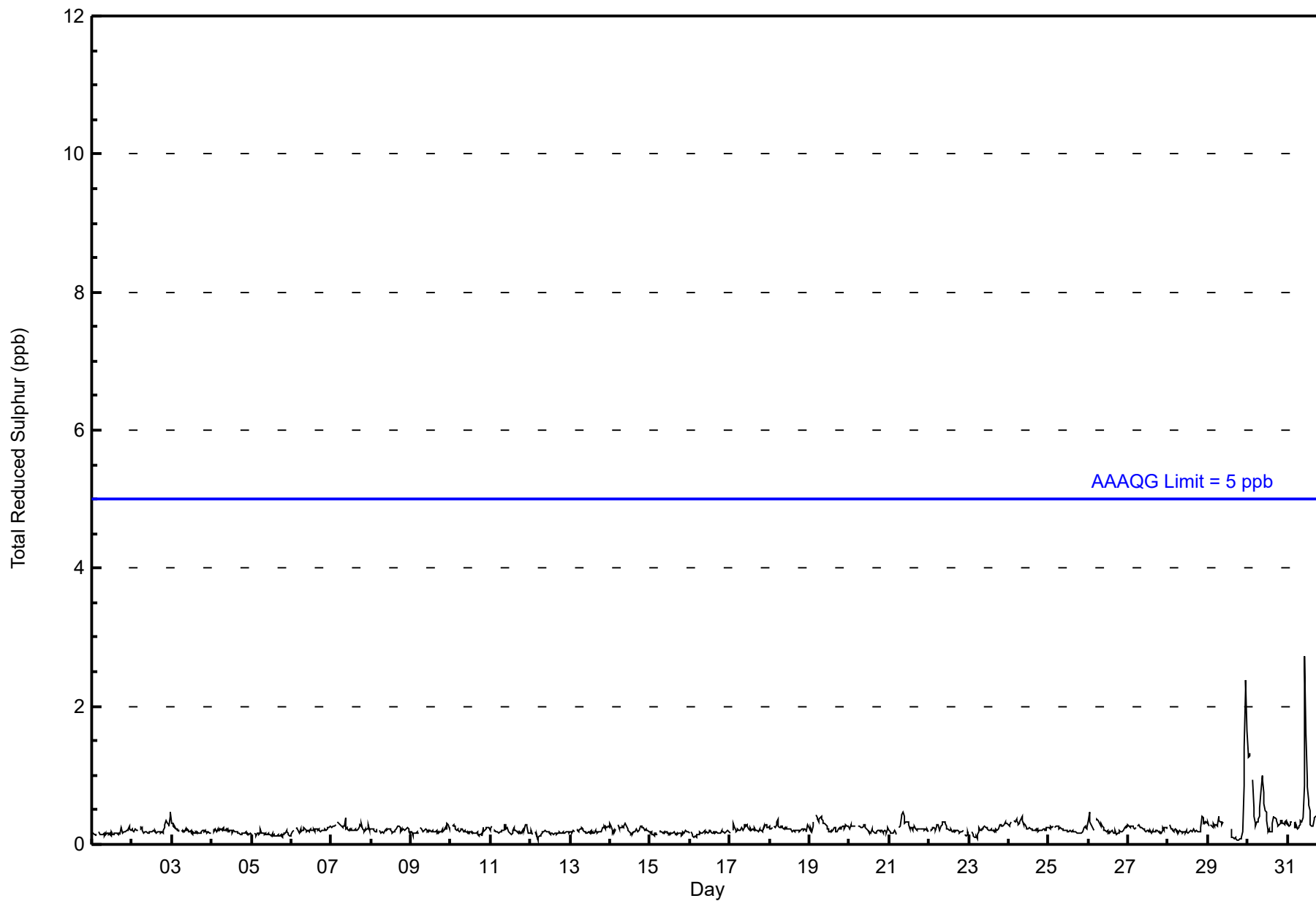
Conklin - May 2025

Maximum Value: 2.0 ppb on May 30 00:00																		Maximum Daily Average: 0.5 ppb on May 31								Hours in Service: 744	
Minimum Value: 0.1 ppb on May 29 19:00																		Minimum Daily Average: 0.1 ppb on May 5								Hours of Data: 708	
Maximum Diurnal Average: 0.3 ppb at hour 24																		Minimum Diurnal Average: 0.2 ppb at hour 15								Hours of Missing Data: 36	
Monthly Average: 0.23 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.8								Hours of Calibration: 35	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	0.2	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	
2-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.2	0.4	
3-May	0.3	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
4-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
5-May	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	
6-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	
7-May	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
8-May	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
9-May	0.2	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	
10-May	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
11-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	
12-May	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
13-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	
14-May	0.3	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	
15-May	0.2	0.2	0.1	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	
16-May	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
17-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	
18-May	0.2	0.2	Z	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	
19-May	0.2	0.2	0.3	Z	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.4	
20-May	0.2	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
21-May	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	
22-May	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	
23-May	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	
24-May	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	
25-May	0.2	0.2	0.3	Z	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
26-May	0.4	0.3	0.3	0.2	Z	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	
27-May	0.3	0.3	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
28-May	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	
29-May	0.3	Z	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.5	1.8	2.0	0.4	2.0	
30-May	1.3	1.3	Z	0.7	0.4	0.3	0.3	0.5	0.9	0.8	0.5	0.4	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	1.3	
31-May	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.3	0.3	0.4	1.8	1.3	0.7	0.5	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.5	1.8	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																											



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	708	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	38	20	7	8	6	37	86	99	105	63	36	25	23	33	65	50	701
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	20	7	8	6	37	86	99	105	63	36	25	23	33	65	50	701

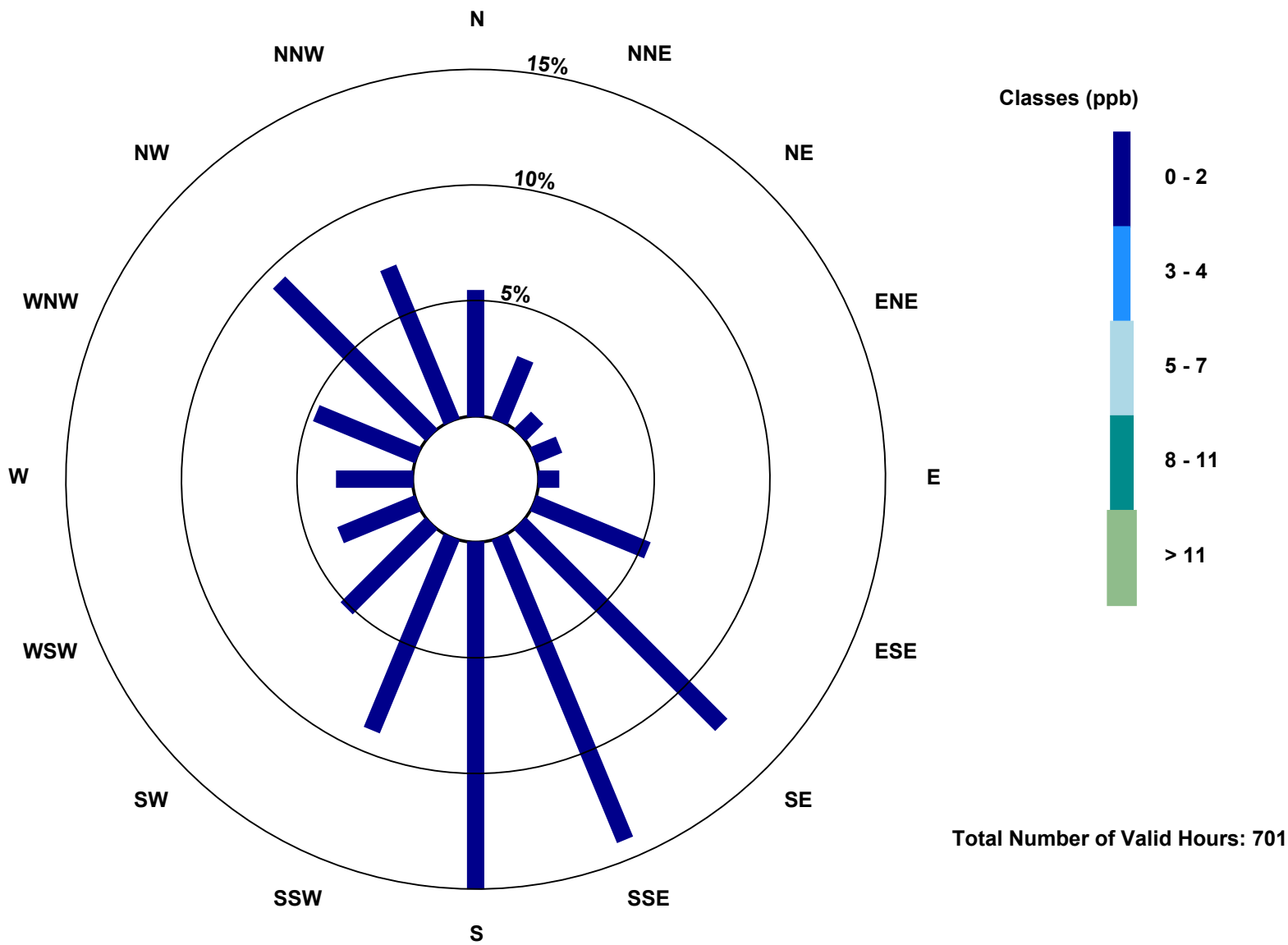
Total Number of Valid Hours: 701

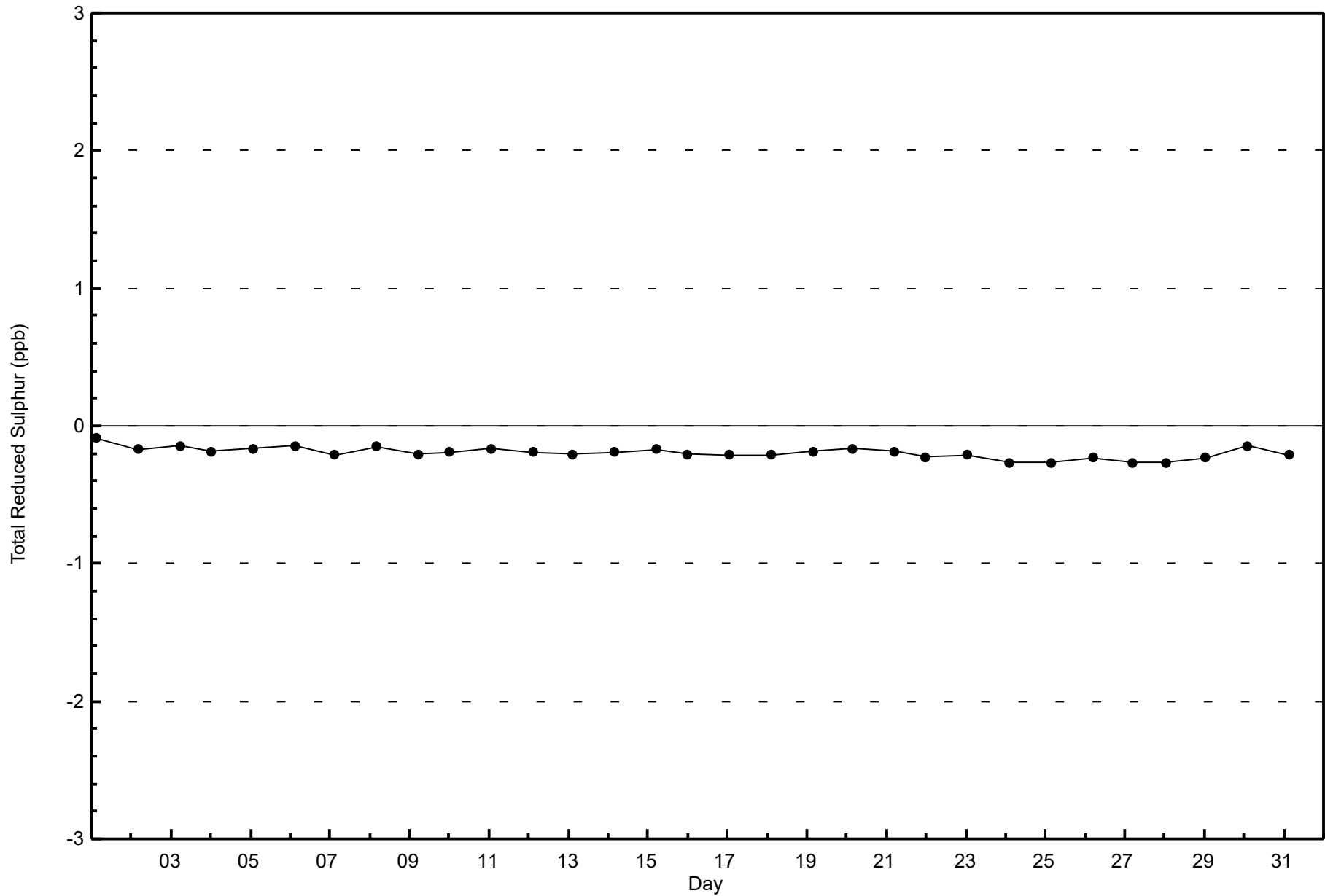
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Conklin

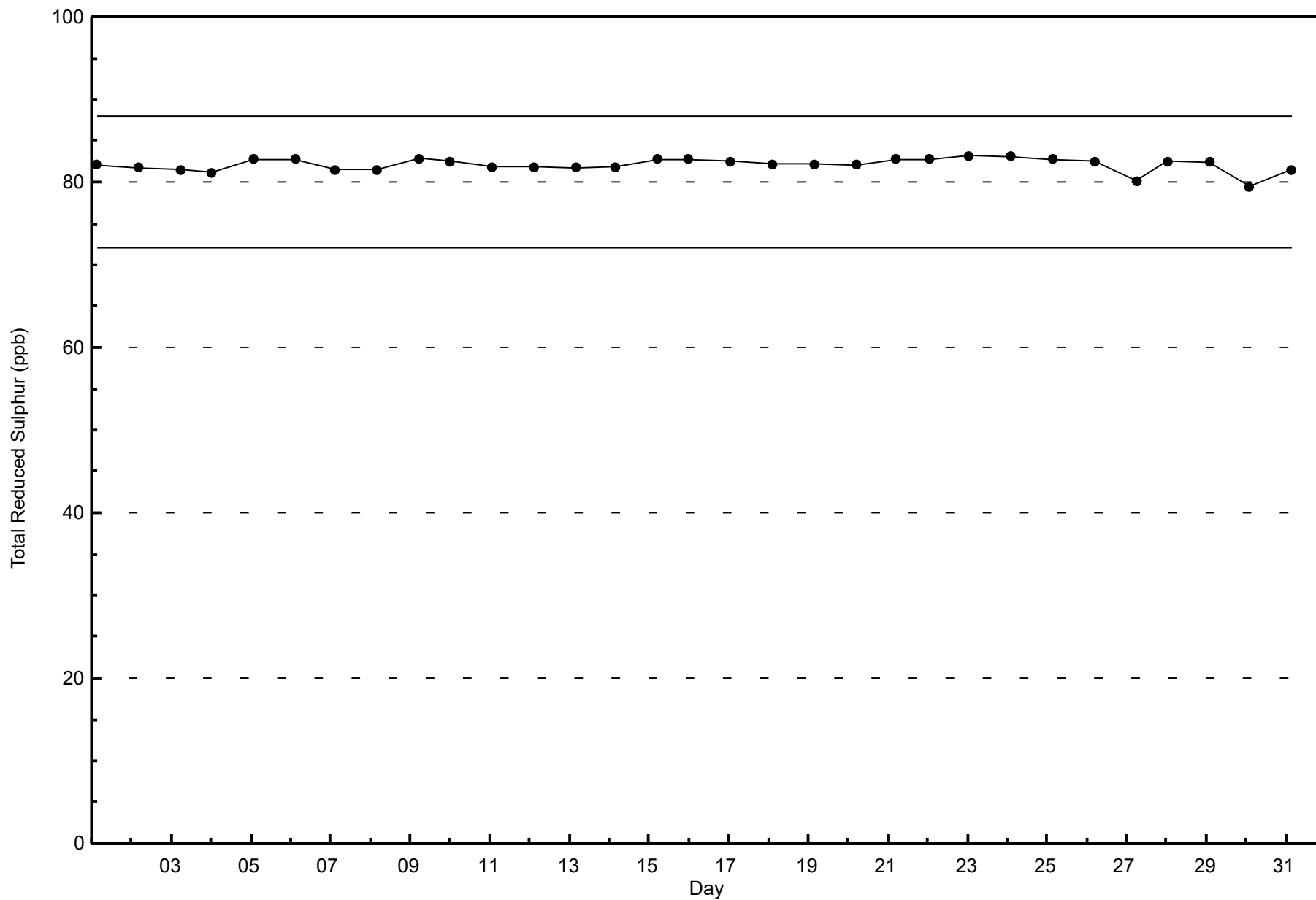






Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

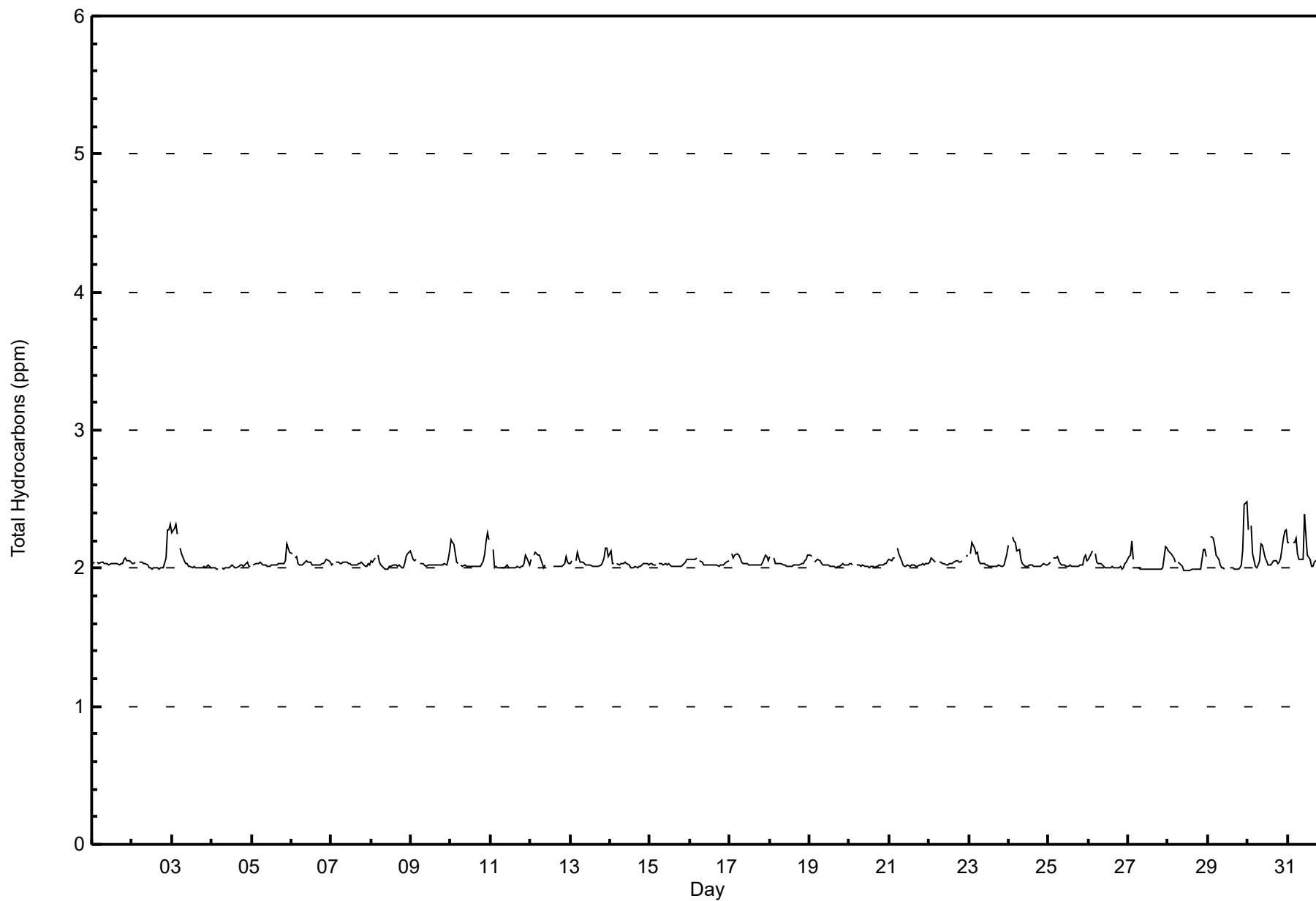
Conklin - May 2025

Maximum Value: 2.5 ppm on May 30 00:00										Maximum Daily Average: 2.1 ppm on May 31										Hours in Service: 744						
Minimum Value: 2.0 ppm on May 28 12:00										Minimum Daily Average: 2.0 ppm on May 4										Hours of Data: 706						
Maximum Diurnal Average: 2.1 ppm at hour 3										Minimum Diurnal Average: 2.0 ppm at hour 15										Hours of Missing Data: 38						
Monthly Average: 2.05 ppm										Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3										Hours of Calibration: 35						
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0
2-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.3	2.1	2.3
3-May	2.3	2.3	2.3	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
4-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.2
6-May	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
7-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-May	2.0	2.0	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
9-May	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
10-May	2.2	2.2	2.2	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.2	2.1	2.3
11-May	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
12-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1
13-May	2.0	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
14-May	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
16-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
17-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
18-May	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
19-May	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
21-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
22-May	2.0	2.1	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	PF	2.1	2.1	2.0	2.1
23-May	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2
24-May	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
25-May	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
26-May	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.1	2.1	2.2	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.2
28-May	2.1	2.1	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
29-May	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5	2.5	2.1	2.5
30-May	2.3	Z	2.3	2.1	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.3	2.3	2.1	2.3
31-May	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4
2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1																									Diurnal Average	
2.3 2.3 2.3 2.2 2.2 2.2 2.1 2.1 2.2 2.2 2.4 2.2 2.1 2.1 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.3 2.5 2.5																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	518	73.37	73.37
2.1 - 3.0	188	26.63	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	31	18	3	4	2	28	60	53	77	53	33	23	20	26	54	32	517
2.1 - 3.0	9	1	2	4	4	9	23	46	30	10	3	0	3	7	12	17	180
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	19	5	8	6	37	83	99	107	63	36	23	23	33	66	49	697

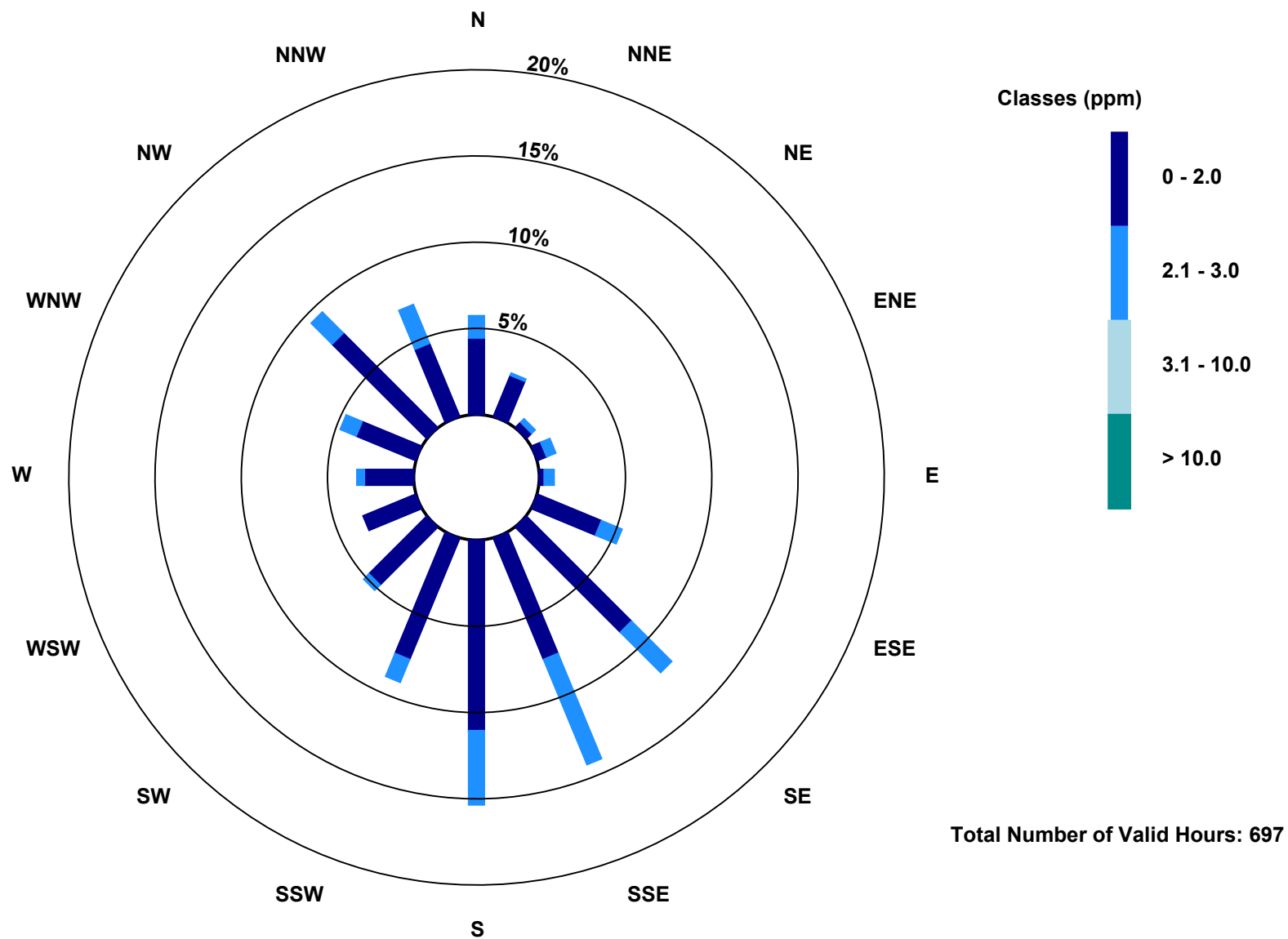
Total Number of Valid Hours: 697

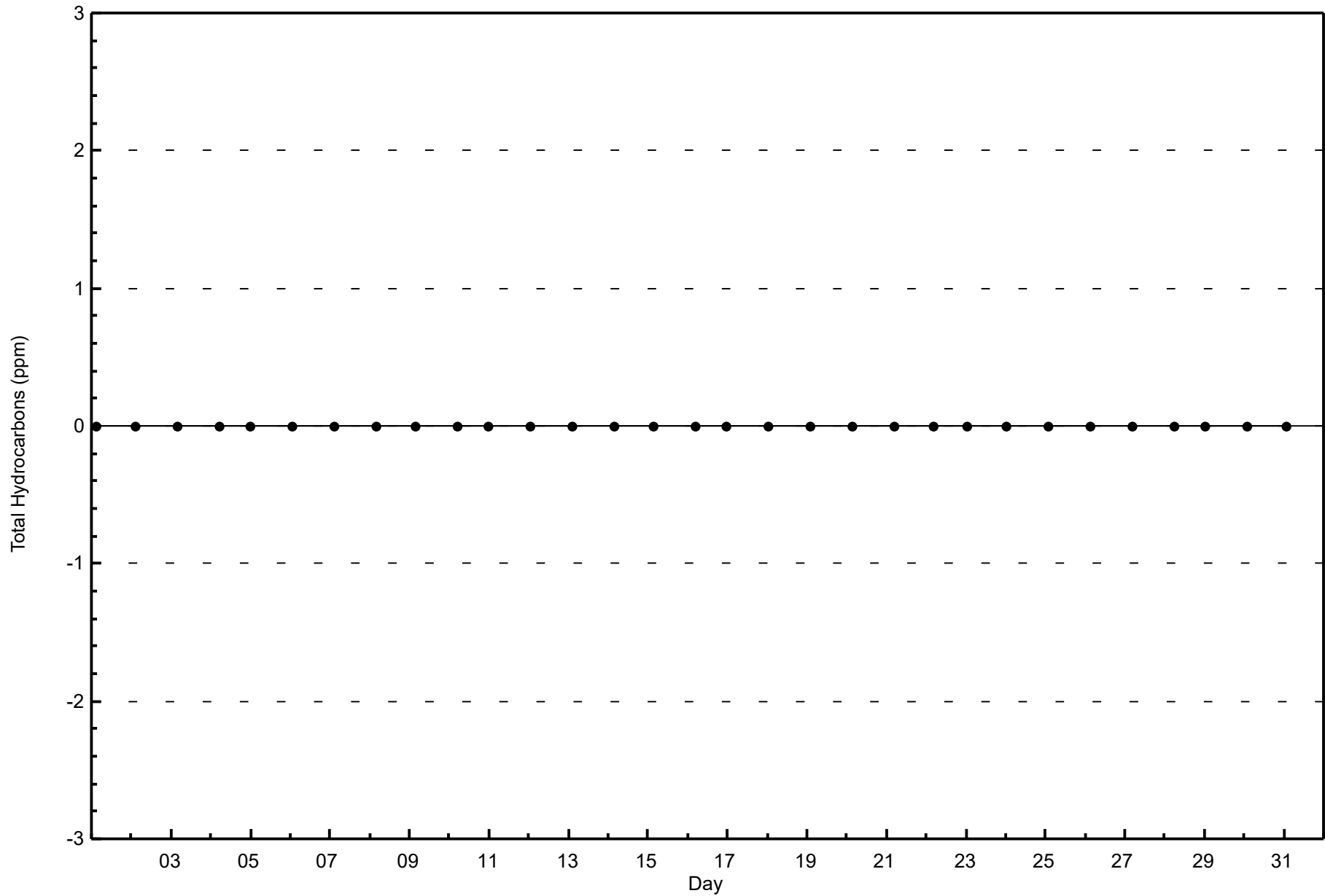
Total Number of Hours: 744

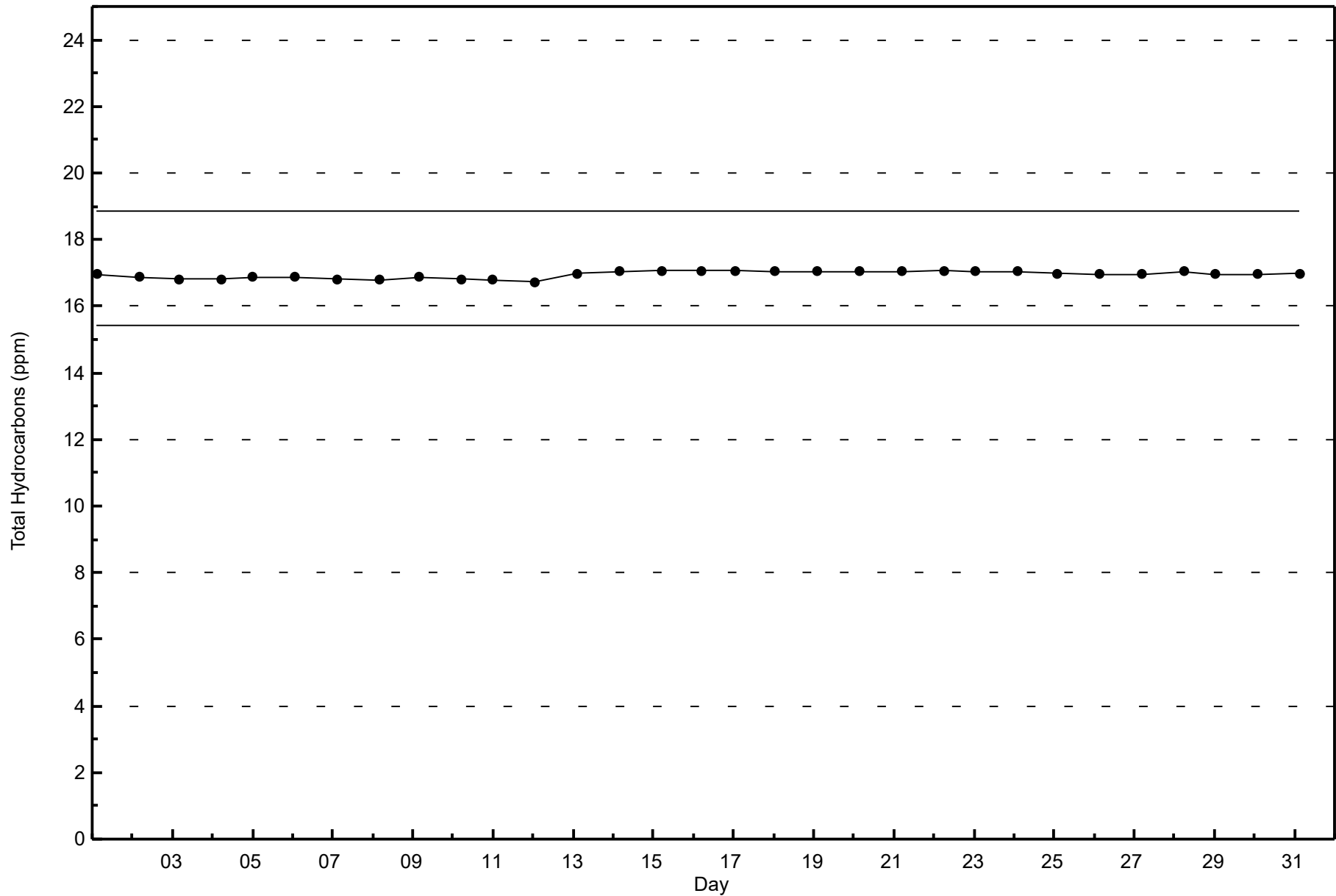


Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Conklin









Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

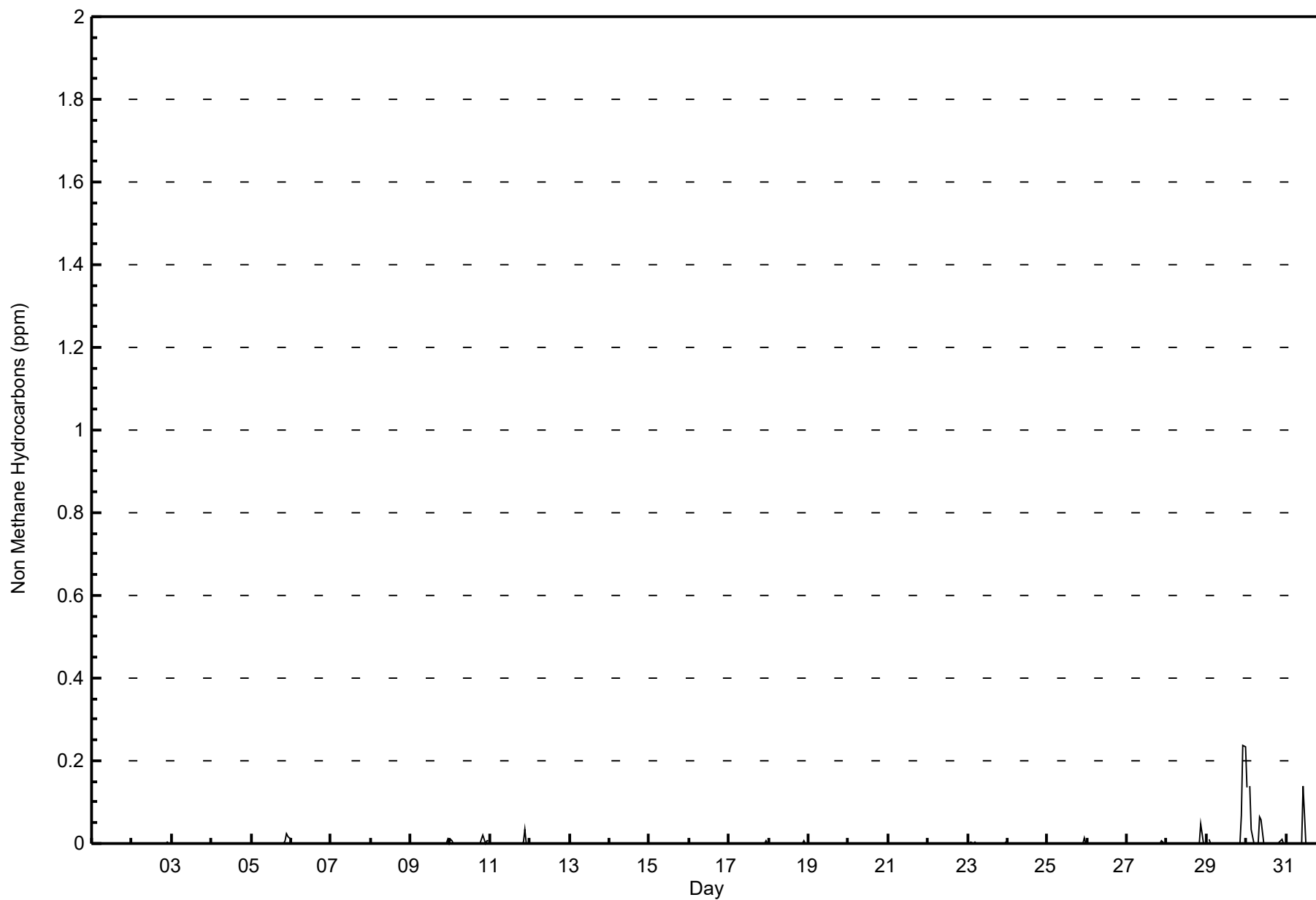
Conklin - May 2025

Maximum Value: 0.239 ppm on May 29 23:00										Maximum Daily Average: 0.026 ppm on May 29										Hours in Service: 744						
Minimum Value: 0.000 ppm on May 1 01:00										Minimum Daily Average: 0.000 ppm on May 1										Hours of Data: 706						
Maximum Diurnal Average: 0.010 ppm at hour 23										Minimum Diurnal Average: 0.000 ppm at hour 15										Hours of Missing Data: 38						
Monthly Average: 0.002 ppm										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1										Hours of Calibration: 35						
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000
3-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.025	0.018	0.014	0.003
6-May	0.009	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.001	0.000	0.010
10-May	0.009	0.007	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.009	0.000	0.007	0.005	0.002
11-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.034	0.000	0.000	0.002	0.034
12-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13-May	0.000	0.003	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.003
14-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-May	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.006
18-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000
19-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
21-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-May	Z	0.000	0.003	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.003
24-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.001
26-May	0.002	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000
28-May	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.025	0.001	0.000	0.003	0.046
29-May	Z	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.068	0.239	0.235	0.026	0.239
30-May	0.134	Z	0.140	0.033	0.000	0.000	0.000	0.000	0.065	0.056	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.011	0.000	0.000	0.019	0.140
31-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.073	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.139
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	676	95.75	95.75
0.006 - 0.05	21	2.97	98.73
0.06 - 0.1	7	0.99	99.72
> 0.1	2	0.28	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	40	19	5	8	5	36	79	91	102	61	36	22	22	30	62	49	667
0.006 - 0.05	0	0	0	0	0	0	4	8	5	2	0	1	1	0	0	0	21
0.06 - 0.1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	3	0	7
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Totals	40	19	5	8	6	37	83	99	107	63	36	23	23	33	66	49	697

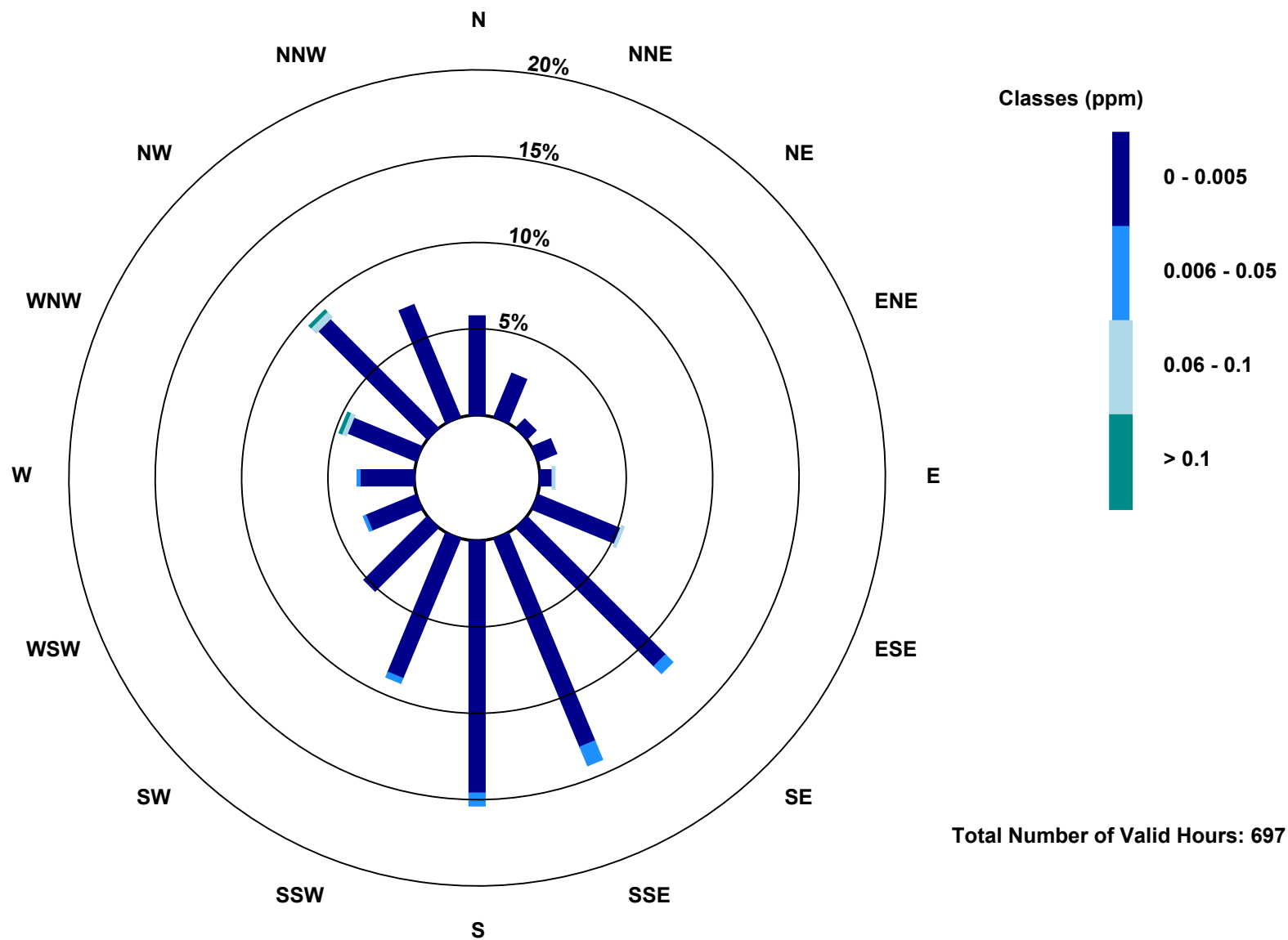
Total Number of Valid Hours: 697

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Conklin



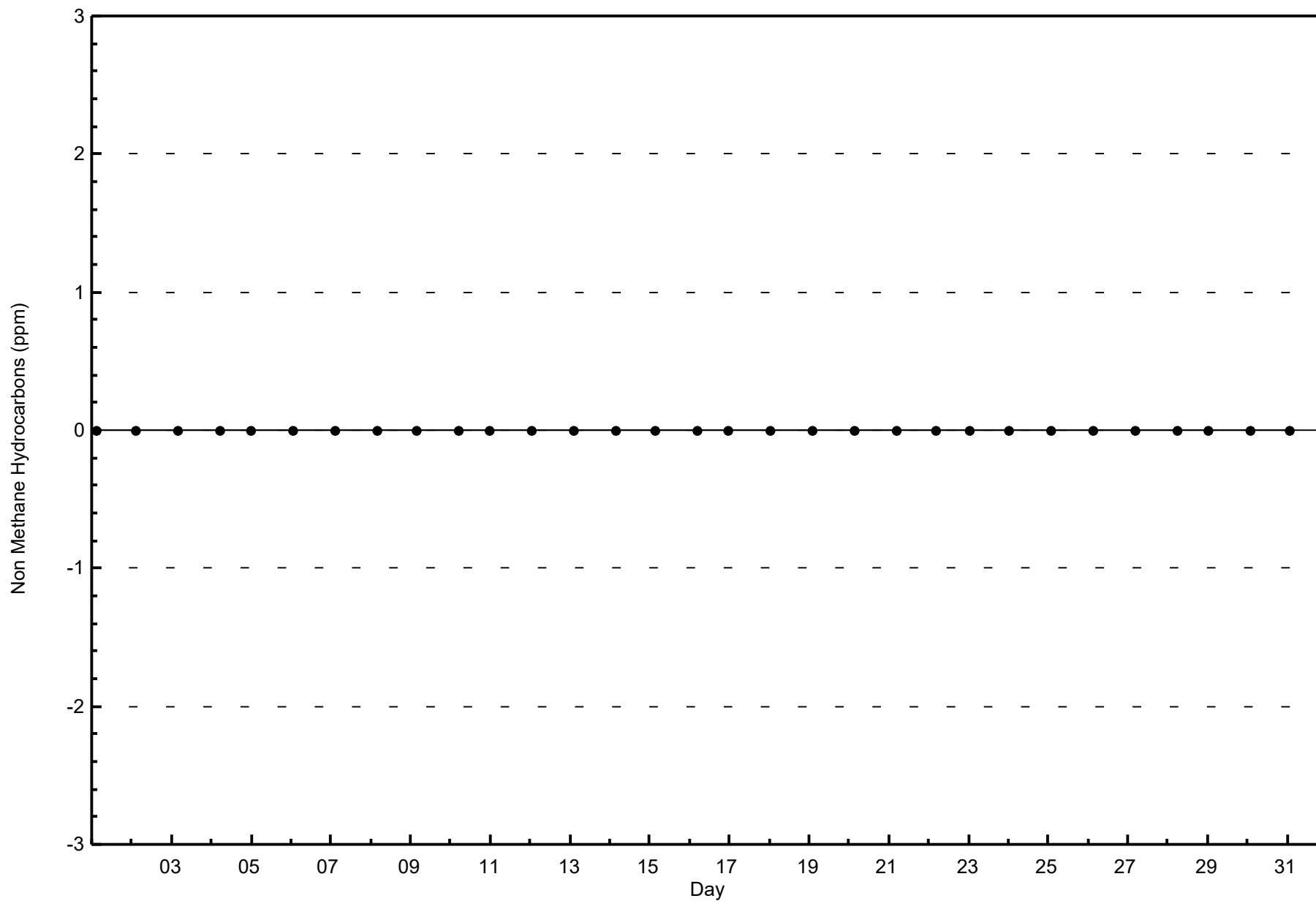


Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

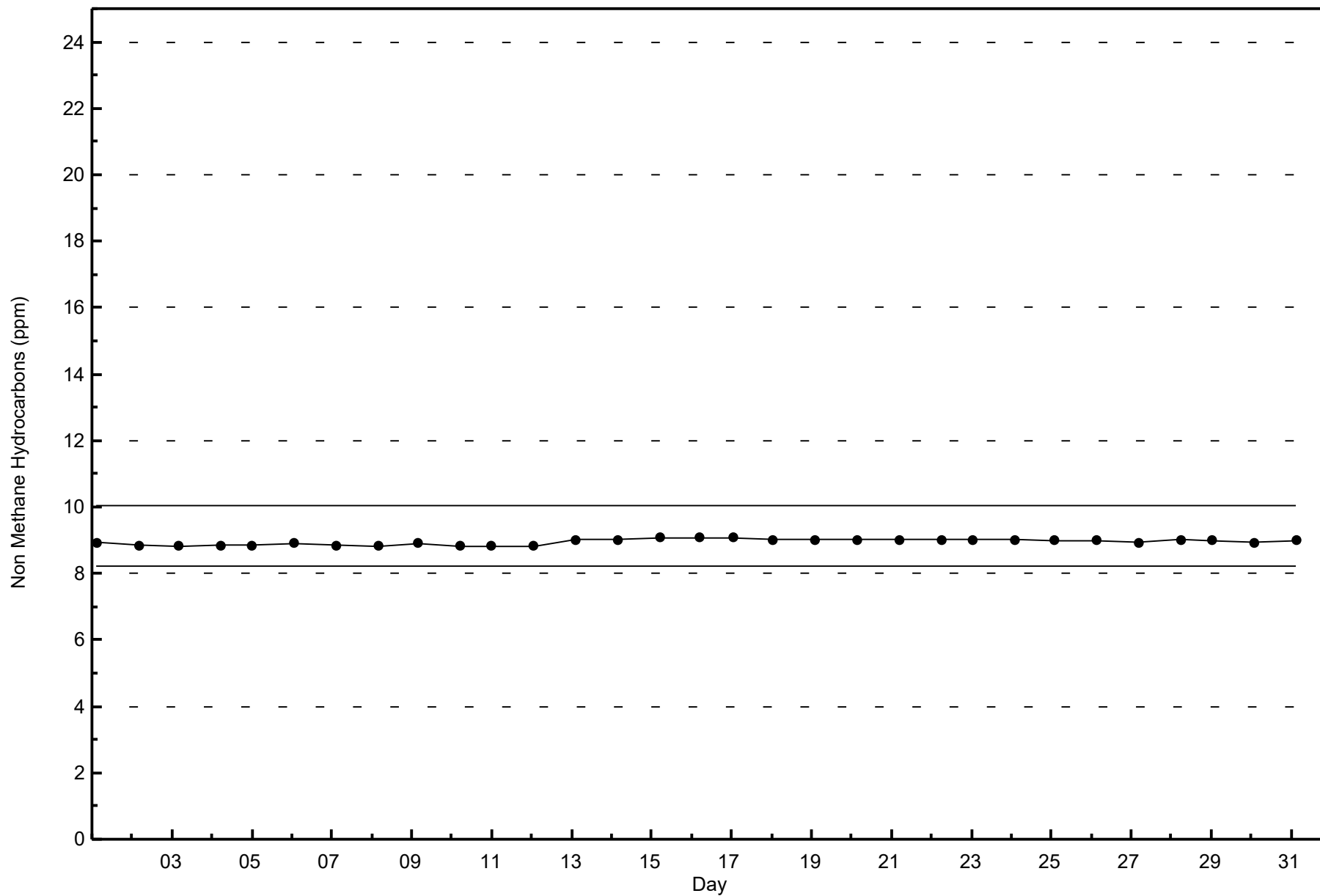
Conklin - May 2025





Wood Buffalo Environmental Association
Span Responses

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

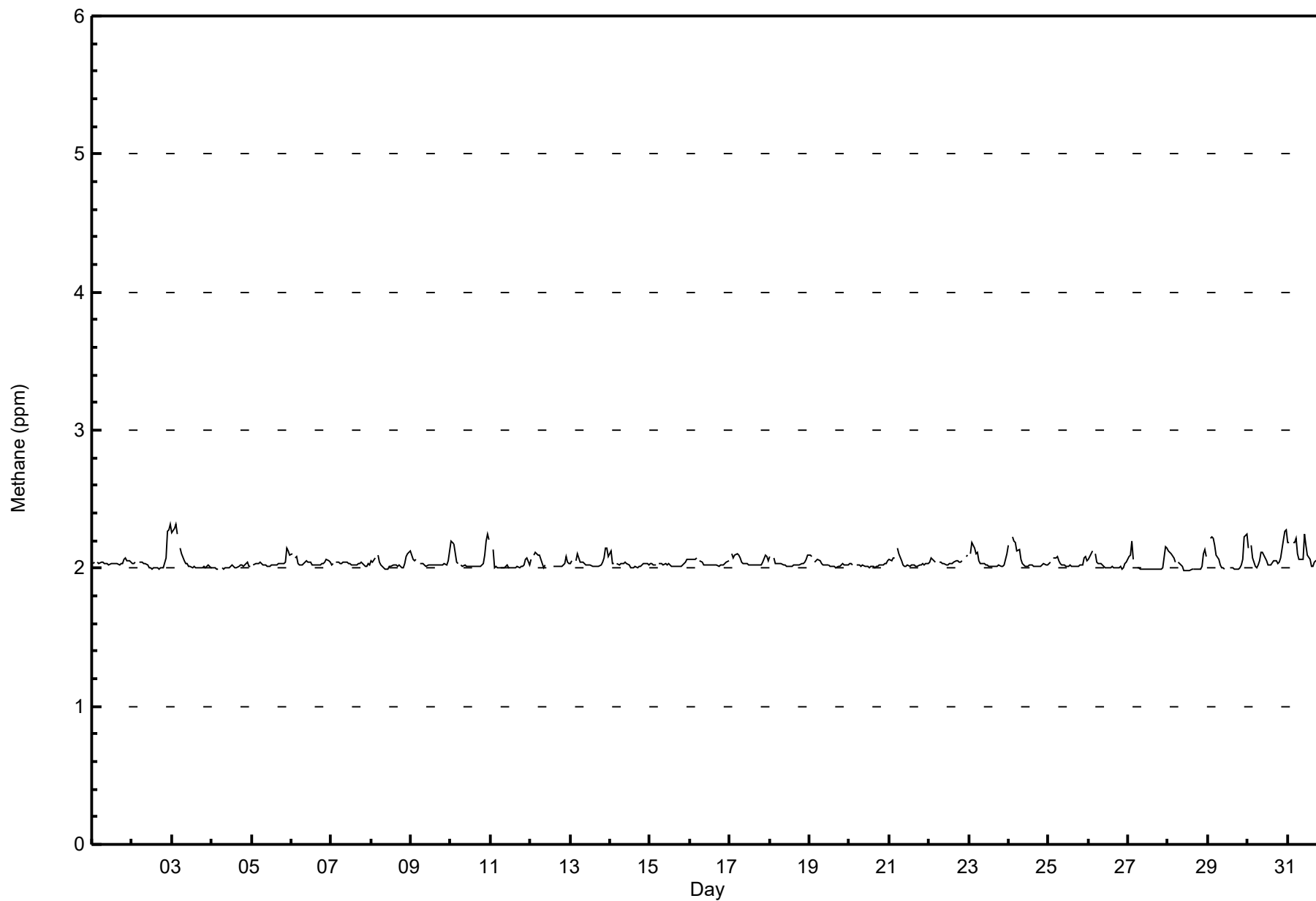
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 2.3 ppm on May 3 03:00 Maximum Daily Average: 2.1 ppm on May 31																			Hours of Data: 706							
Minimum Value: 2.0 ppm on May 28 12:00 Minimum Daily Average: 2.0 ppm on May 4																			Hours of Missing Data: 38							
Maximum Diurnal Average: 2.1 ppm at hour 3 Minimum Diurnal Average: 2.0 ppm at hour 15																			Hours of Calibration: 35							
Monthly Average: 2.04 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3																			Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.1
2-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.3	2.3	2.1
3-May	2.3	2.3	2.3	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
4-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
6-May	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
7-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-May	2.0	2.0	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
9-May	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
10-May	2.2	2.2	2.2	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.2
11-May	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
12-May	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1
13-May	2.0	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
14-May	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
16-May	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
17-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
18-May	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
19-May	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
21-May	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
22-May	2.0	2.1	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	PF	2.1	2.1	2.0	2.1
23-May	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2
24-May	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
25-May	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
26-May	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-May	2.1	2.1	2.2	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.2
28-May	2.1	2.1	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
29-May	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2
30-May	2.1	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.3	2.3	2.1	2.3
31-May	2.2	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1																										Diurnal Average
2.3 2.3 2.3 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.3 2.2 2.1 2.1 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.3 2.3 2.3 2.3																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	522	73.94	73.94
2.1 - 3.0	184	26.06	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Conklin - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	31	18	3	4	2	28	60	54	79	54	33	23	20	26	54	32	521
2.1 - 3.0	9	1	2	4	4	9	23	45	28	9	3	0	3	7	12	17	176
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	19	5	8	6	37	83	99	107	63	36	23	23	33	66	49	697

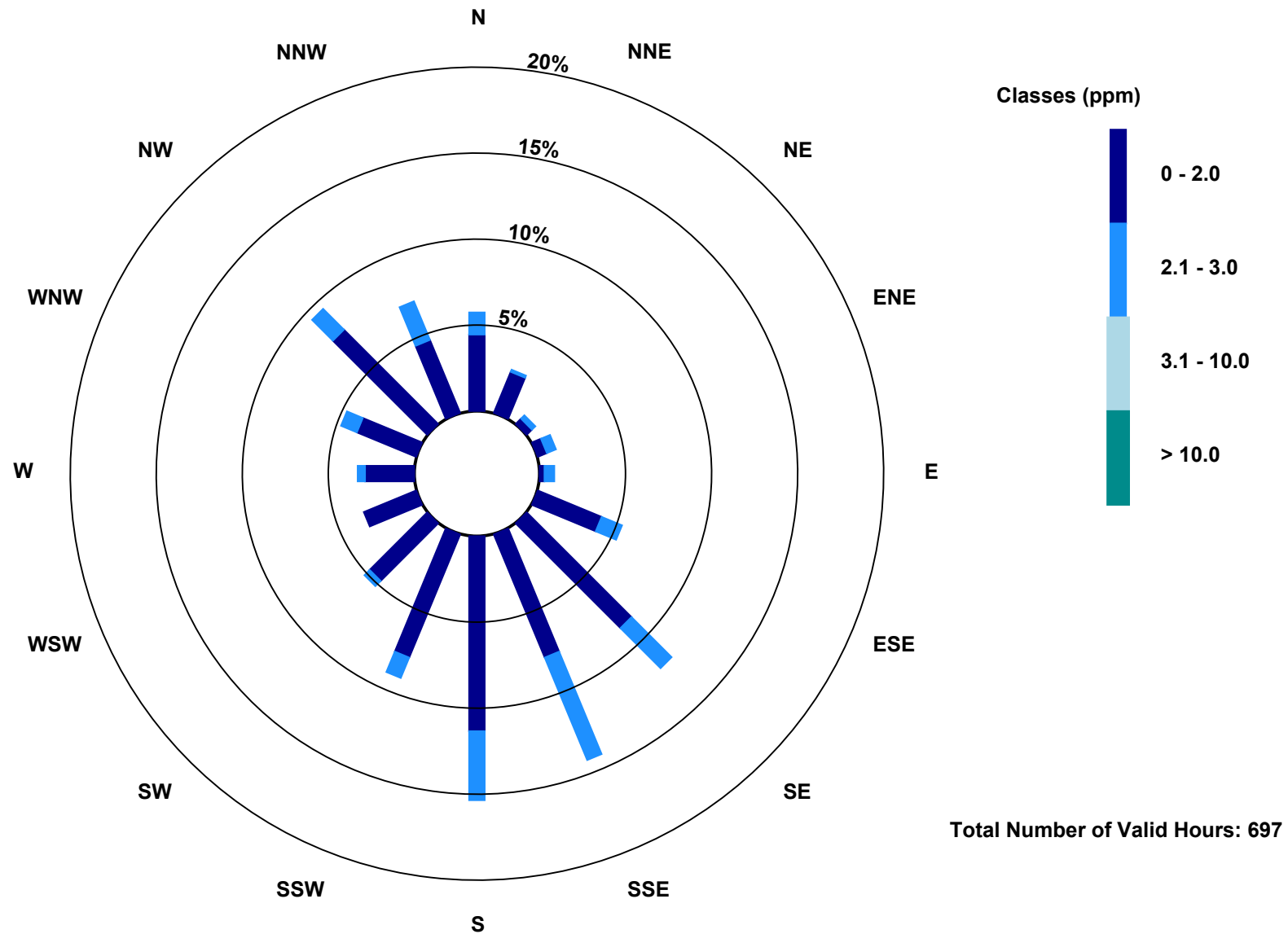
Total Number of Valid Hours: 697

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

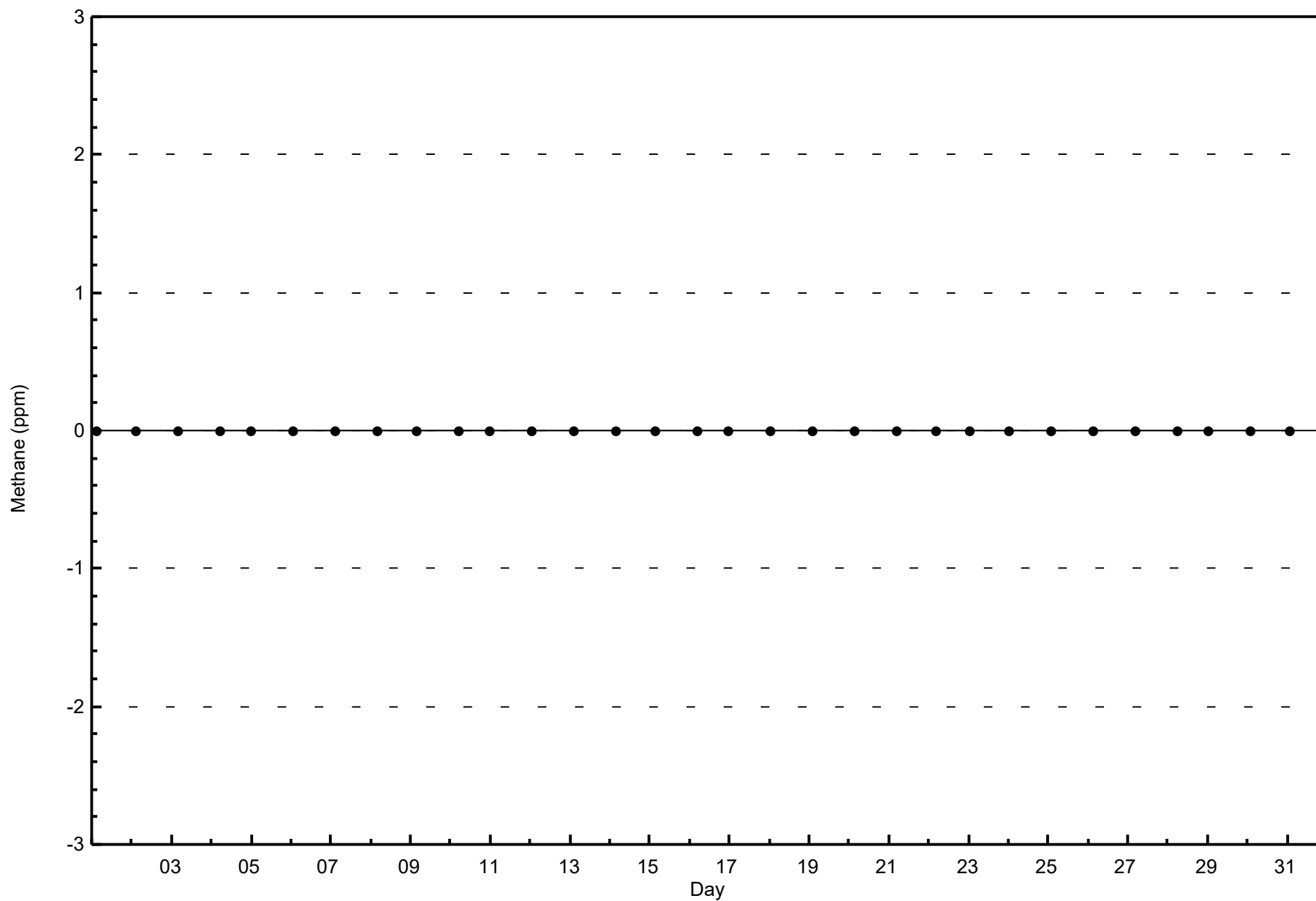
Methane (CH₄) - ppm
Conklin





Wood Buffalo Environmental Association
Zero Responses

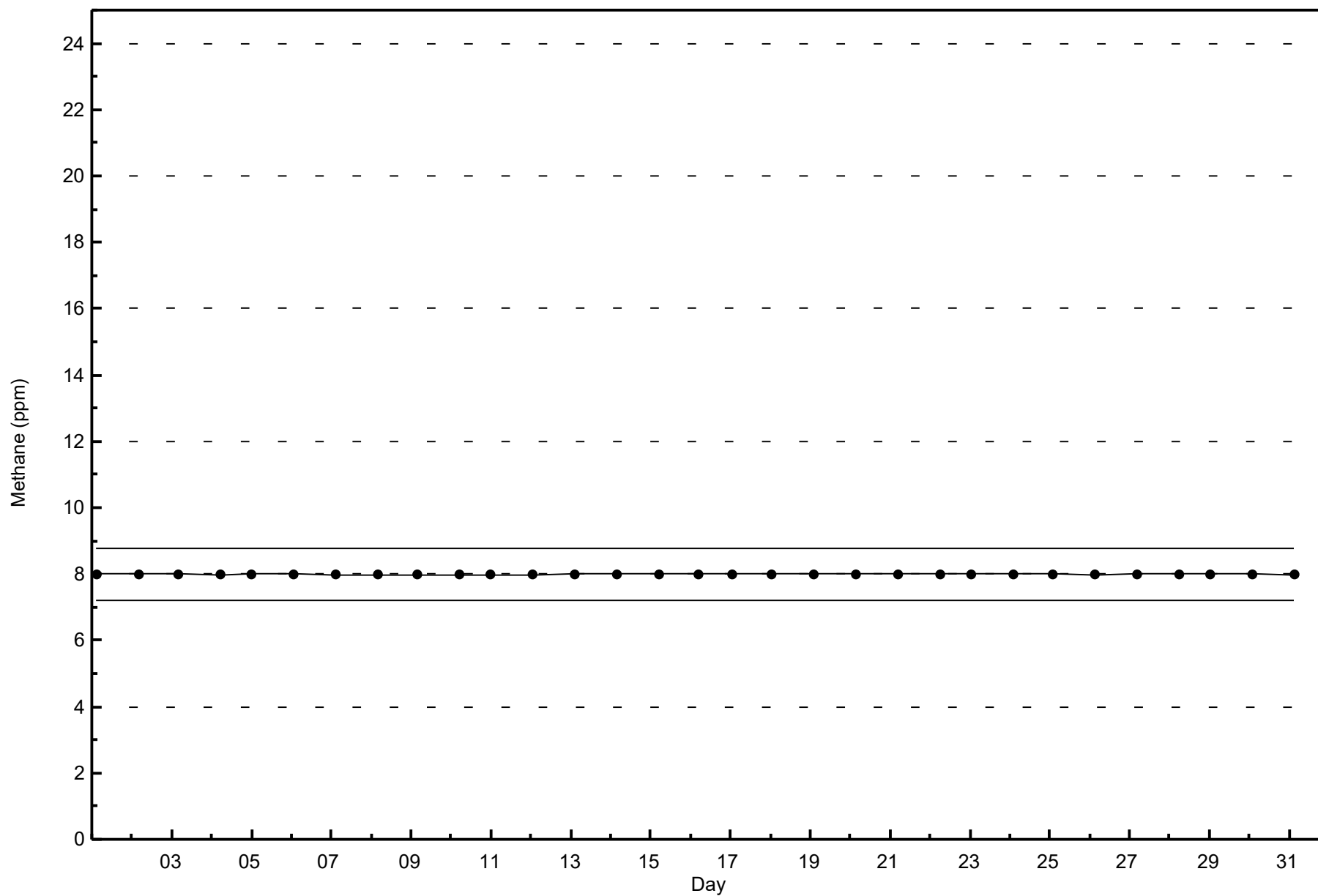
Methane (CH₄) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

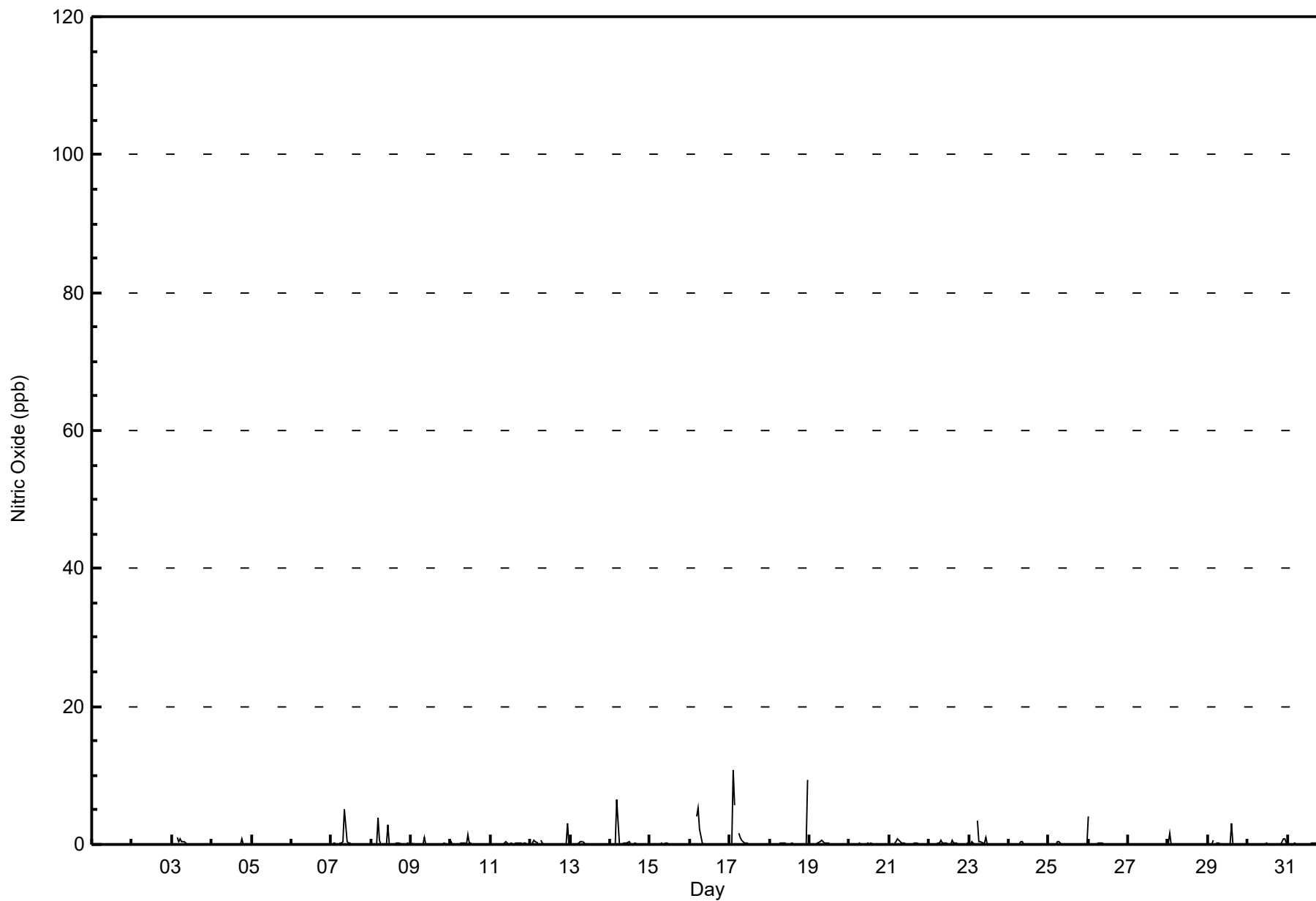
Conklin - May 2025

Maximum Value: 10.7 ppb on May 17 03:00																		Maximum Daily Average: 0.9 ppb on May 17																		Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 17:00																		Minimum Daily Average: 0.0 ppb on May 27																		Hours of Data: 638	
Maximum Diurnal Average: 0.7 ppb at hour 5																		Minimum Diurnal Average: 0.0 ppb at hour 21																		Hours of Missing Data: 106	
Monthly Average: 0.18 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 4.1																		Hours of Calibration: 37	
																																				Percent Operational Time: 90.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--											
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	--	0.1											
3-May	0.0	0.1	Z	1.1	0.5	0.8	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1											
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.8											
5-May	0.0	0.0	0.0	0.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.0											
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0											
7-May	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.3	5.0	0.4	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	5.0											
8-May	0.0	Z	0.0	0.0	3.9	0.5	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.4	3.9											
9-May	0.0	0.2	Z	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	1.0											
10-May	0.3	0.1	0.0	Z	0.0	0.1	0.2	0.2	0.1	0.1	1.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	1.3											
11-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.3											
12-May	0.1	0.1	0.7	0.3	0.3	Z	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.2	3.0											
13-May	Z	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5											
14-May	0.0	Z	0.0	0.0	6.5	0.0	0.1	0.1	0.1	0.3	0.2	0.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.5											
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1											
16-May	0.0	0.0	0.0	Z	4.0	5.4	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4											
17-May	0.0	0.0	10.7	5.6	Z	1.7	1.0	0.6	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	10.7											
18-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.5	9.5											
19-May	Z	0.1	0.0	0.0	0.0	0.1	0.5	0.5	0.4	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5											
20-May	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
21-May	0.0	0.0	Z	0.2	0.4	0.8	0.7	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.8											
22-May	0.0	0.0	0.0	Z	0.0	0.2	0.3	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.6											
23-May	0.0	0.0	0.4	0.1	Z	3.4	0.5	0.3	0.2	0.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.4												
24-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5												
25-May	Z	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4											
26-May	4.1	Z	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.1												
27-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											
28-May	0.2	1.5	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5												
29-May	0.0	0.0	0.0	0.7	Z	0.2	0.2	0.0	0.0	0.0	0.0	M	M	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.0												
30-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.1	0.1	0.8											
31-May	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
Diurnal Average																																					
Diurnal Maximum																																					
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																																					



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	38	17	6	7	5	36	82	92	102	45	29	23	23	31	48	48	632
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	17	6	7	5	36	82	92	102	45	29	23	23	31	48	48	632

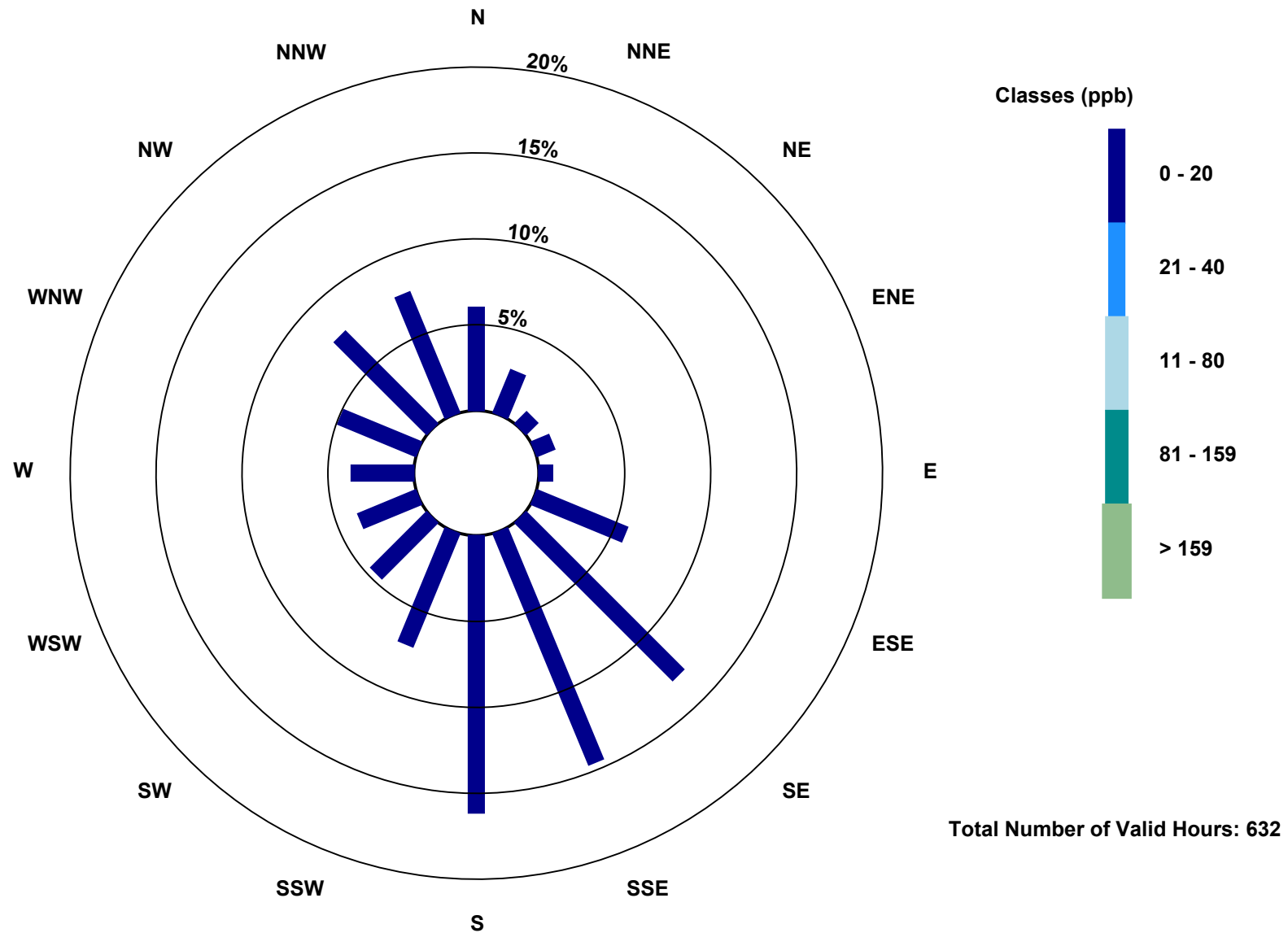
Total Number of Valid Hours: 632

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

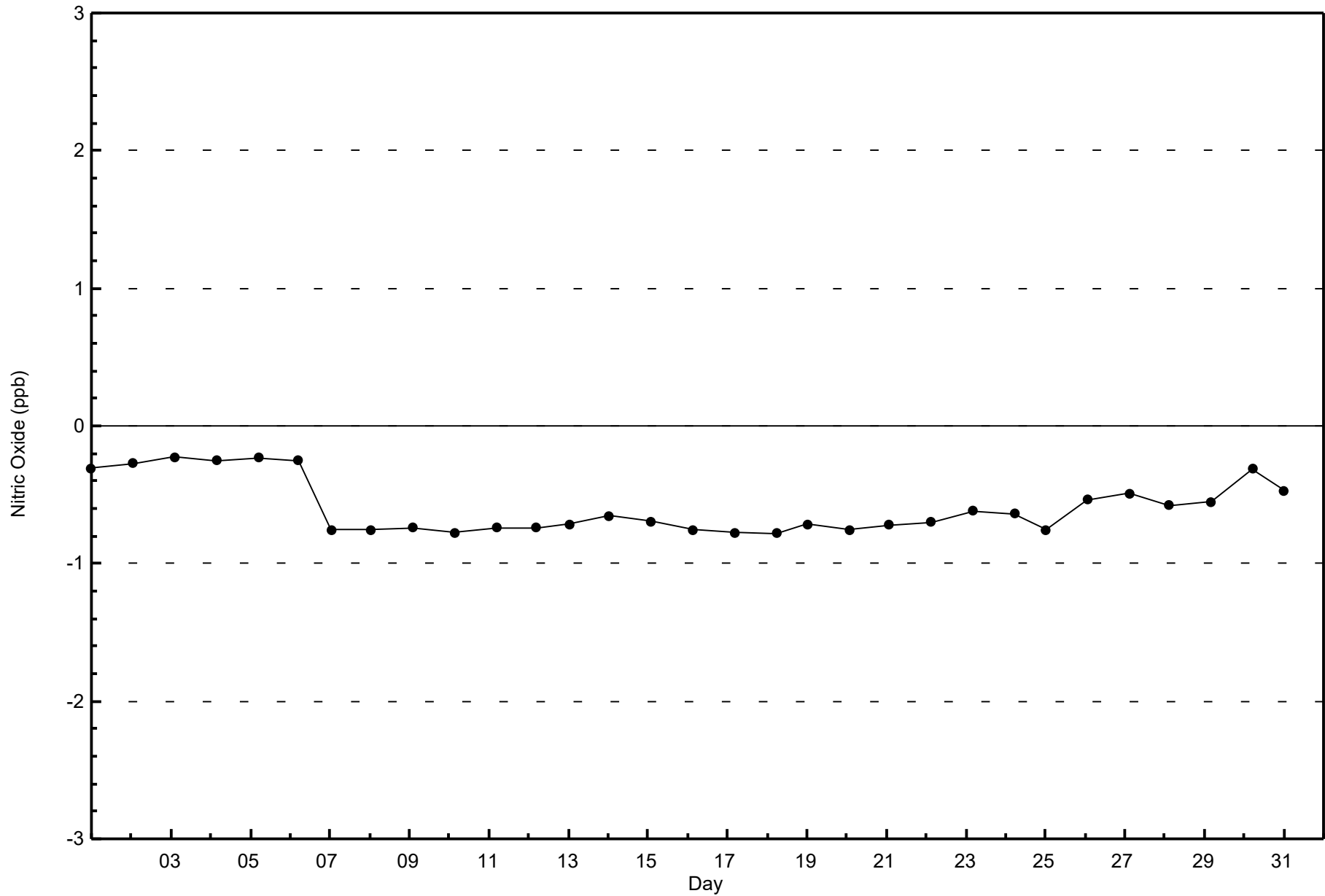
Nitric Oxide (NO) - ppb
Conklin





Wood Buffalo Environmental Association
Zero Responses

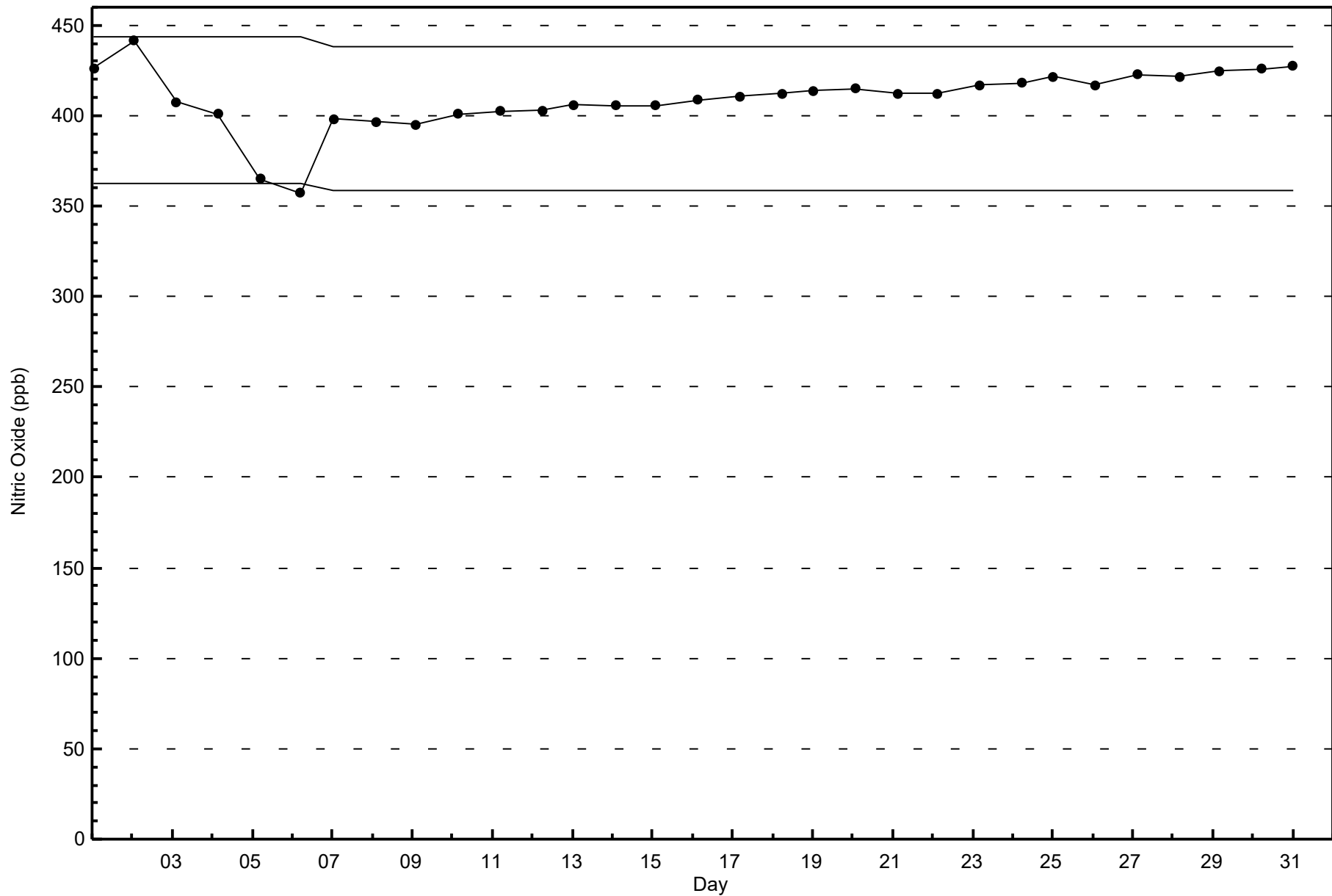
Nitric Oxide (NO) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

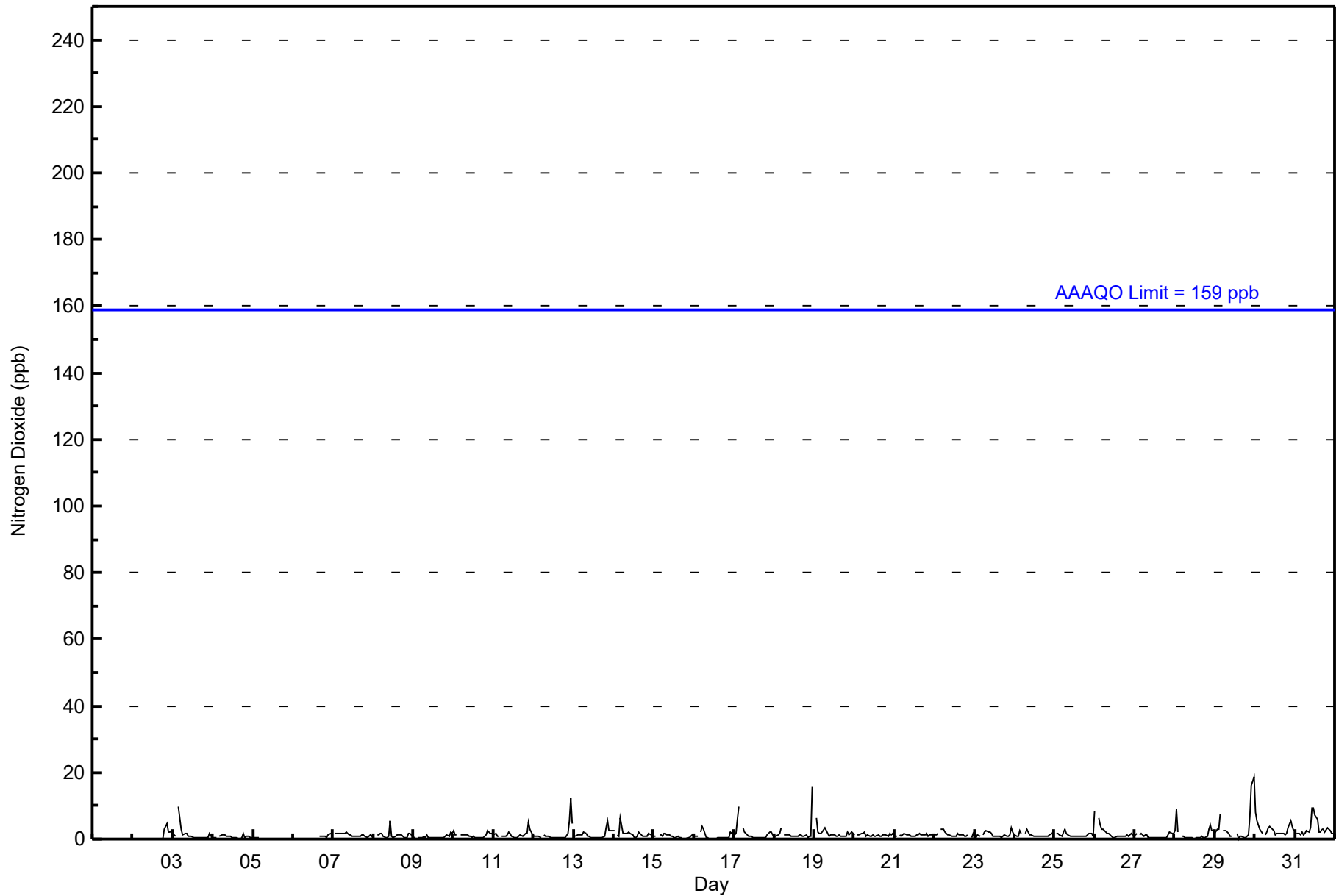
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 18.7 ppb on May 30 00:00 Maximum Daily Average: 3.5 ppb on May 29																				Hours in Service: 744 Hours of Data: 638 Hours of Missing Data: 106 Hours of Calibration: 37 Percent Operational Time: 90.7							
Minimum Value: 0.0 ppb on May 2 17:00 Maximum Diurnal Average: 2.7 ppb at hour 24 Monthly Average: 1.50 ppb										Minimum Daily Average: 0.7 ppb on May 4 Minimum Diurnal Average: 0.8 ppb at hour 15 Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.1 Q ₃ = 1.7 P ₉₀ = 2.7 P ₉₉ = 9.5																	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.0	0.0	0.0	3.0	4.8	2.0	2.0	2.6	--	4.8	
3-May	1.8	0.9	Z	9.7	6.3	2.9	1.4	1.7	1.5	1.0	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.5	1.5	0.5	1.5	9.7	
4-May	0.3	0.4	0.5	Z	0.7	1.1	1.2	1.4	0.7	0.7	0.7	0.4	0.6	0.4	0.3	0.2	0.2	0.3	1.9	0.6	1.0	0.8	0.3	0.3	0.7	1.9	
5-May	0.4	0.4	0.5	0.5	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.5	
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	C	C	C	C	0.7	0.8	0.8	0.9	0.6	1.3	1.7	1.6	--	1.7	
7-May	Z	1.8	1.7	1.5	1.5	1.6	1.7	1.7	2.1	1.4	1.1	1.0	0.9	0.9	0.8	1.0	1.0	1.2	1.4	0.9	0.5	0.8	1.1	0.9	1.2	2.1	
8-May	1.1	Z	1.1	1.2	1.7	1.6	0.8	0.5	0.6	1.0	5.4	0.9	0.6	0.7	1.1	1.3	1.3	1.3	0.3	0.6	0.5	1.5	1.5	0.7	1.2	5.4	
9-May	0.6	0.5	Z	0.5	0.6	0.4	0.7	0.6	1.3	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.6	1.0	1.2	1.0	2.0	1.8	0.7	2.0	
10-May	2.5	1.3	1.3	Z	1.1	1.1	1.3	1.3	1.1	0.8	0.8	0.6	0.8	0.5	0.5	0.4	0.4	0.4	0.4	1.3	2.7	2.0	1.5	1.7	1.1	2.7	
11-May	1.4	1.5	0.7	0.8	Z	0.9	0.8	1.0	1.4	2.1	1.7	0.7	0.6	0.5	0.6	0.8	1.1	0.7	1.1	1.5	1.7	4.9	2.9	1.3	1.3	4.9	
12-May	1.0	1.0	0.9	0.9	0.5	Z	1.4	1.0	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	1.6	5.5	12.4	4.5	1.6	12.4	
13-May	Z	1.0	1.2	1.1	1.3	1.1	2.1	1.6	0.9	0.8	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.7	3.5	5.4	2.6	2.4	2.4	1.4	5.4	
14-May	2.7	Z	1.3	1.0	6.4	1.6	1.7	1.6	1.8	2.1	1.6	1.2	0.5	0.3	0.8	2.1	1.2	0.8	0.8	0.8	0.7	1.6	1.4	1.1	1.5	6.4	
15-May	0.9	0.8	Z	1.1	1.1	0.9	1.6	1.6	1.1	1.4	1.0	0.7	0.6	0.4	0.7	0.5	0.3	0.2	0.2	0.1	0.3	0.4	0.8	1.3	0.8	1.6	
16-May	1.0	1.0	0.7	Z	2.0	3.9	2.9	0.6	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.4	0.5	0.4	2.2	1.2	0.9	3.9	
17-May	1.1	1.6	5.8	9.9	Z	3.6	2.0	1.6	1.1	0.8	0.8	0.6	0.5	0.4	0.4	0.3	0.4	0.5	0.5	0.6	1.4	2.3	2.1	1.3	1.7	9.9	
18-May	1.0	0.9	1.2	1.8	3.6	Z	1.3	1.1	1.2	1.1	0.9	0.7	0.8	0.9	0.8	1.1	1.1	0.8	0.8	1.2	0.6	0.9	1.0	15.7	1.8	15.7	
19-May	Z	6.2	2.0	1.7	1.7	2.0	3.2	2.7	1.5	1.0	1.1	1.2	1.1	0.8	1.0	1.2	0.8	0.9	1.0	0.9	2.2	1.4	2.0	1.9	1.7	6.2	
20-May	1.3	Z	1.2	1.2	1.7	1.7	2.0	0.9	1.2	0.9	0.7	1.1	0.7	1.0	1.1	0.7	0.9	1.1	1.3	1.4	1.0	1.5	1.3	1.5	1.2	2.0	
21-May	0.9	1.0	Z	1.1	1.0	1.2	1.6	1.2	1.4	1.4	1.0	0.8	0.8	1.4	1.3	1.7	1.3	1.4	1.1	1.5	0.9	1.3	1.2	1.4	1.2	1.7	
22-May	1.2	1.1	1.8	Z	2.8	3.0	2.0	1.8	1.2	1.4	1.0	1.0	0.9	1.0	1.8	1.1	1.2	1.1	0.9	0.9	1.1	PF	0.6	1.5	1.4	3.0	
23-May	0.7	0.6	1.3	1.0	Z	1.4	2.1	2.4	2.1	2.0	1.8	0.9	0.7	0.8	0.7	0.7	0.6	0.8	1.4	1.0	0.8	1.4	3.2	2.1	1.3	3.2	
24-May	1.4	0.9	1.0	2.6	1.5	Z	1.9	3.1	2.3	1.3	1.1	0.7	0.9	1.0	0.9	0.8	0.9	0.8	0.9	0.9	1.0	1.3	1.8	2.6	1.4	3.1	
25-May	Z	1.8	1.5	1.2	1.0	2.0	2.9	1.6	1.2	0.9	0.8	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7	1.0	1.6	1.9	1.9	1.0	1.2	2.9	
26-May	8.4	Z	6.2	4.2	2.9	3.1	2.5	1.8	1.7	1.3	0.9	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.7	1.1	1.0	1.2	1.5	1.3	1.9	8.4	
27-May	1.1	1.5	Z	1.2	1.8	0.9	1.3	1.1	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.4	1.4	2.2	1.6	1.8	0.9	2.2	
28-May	2.7	9.1	2.0	Z	1.0	1.0	0.5	0.6	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.7	0.6	0.6	1.0	2.8	4.3	2.7	2.4	1.5	9.1	
29-May	1.9	3.1	2.8	7.5	Z	2.6	2.5	2.3	1.9	0.8	0.8	M	M	1.5	0.0	0.8	0.7	0.6	0.5	0.7	1.3	6.6	16.2	18.7	3.5	18.7	
30-May	8.1	5.4	4.1	3.0	1.6	Z	1.4	2.1	3.4	4.0	2.8	2.5	1.1	1.5	1.5	1.8	1.8	1.8	1.4	1.9	3.5	5.3	3.7	2.5	2.9	8.1	
31-May	Z	1.8	1.6	1.4	2.2	1.2	1.7	2.4	2.3	3.4	9.5	9.4	7.3	6.1	2.2	2.0	3.1	2.8	2.0	3.3	3.1	2.5	1.9	1.9	3.3	9.5	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	38	17	6	7	5	36	82	92	102	45	29	23	23	31	48	48	632
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	17	6	7	5	36	82	92	102	45	29	23	23	31	48	48	632

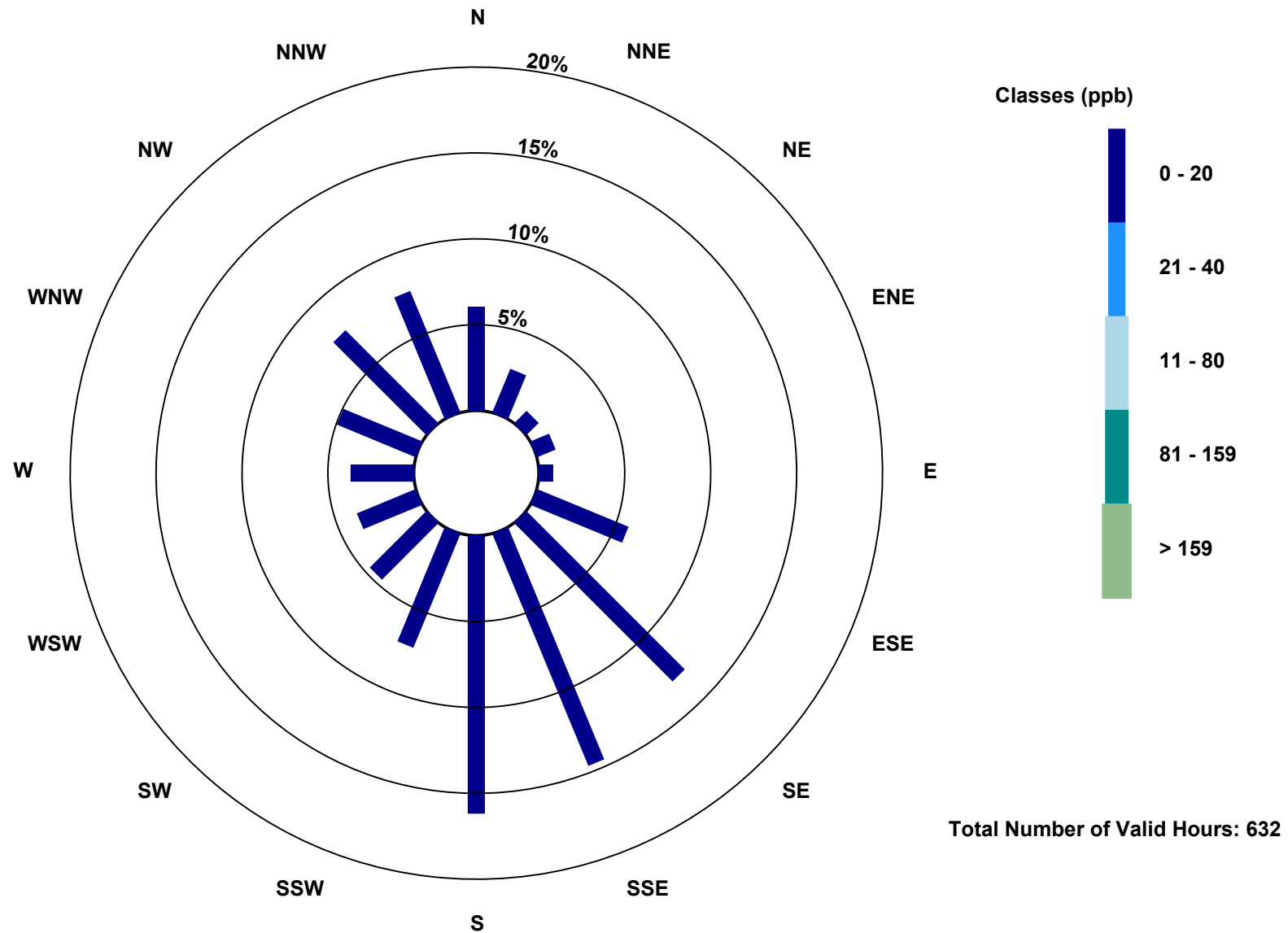
Total Number of Valid Hours: 632

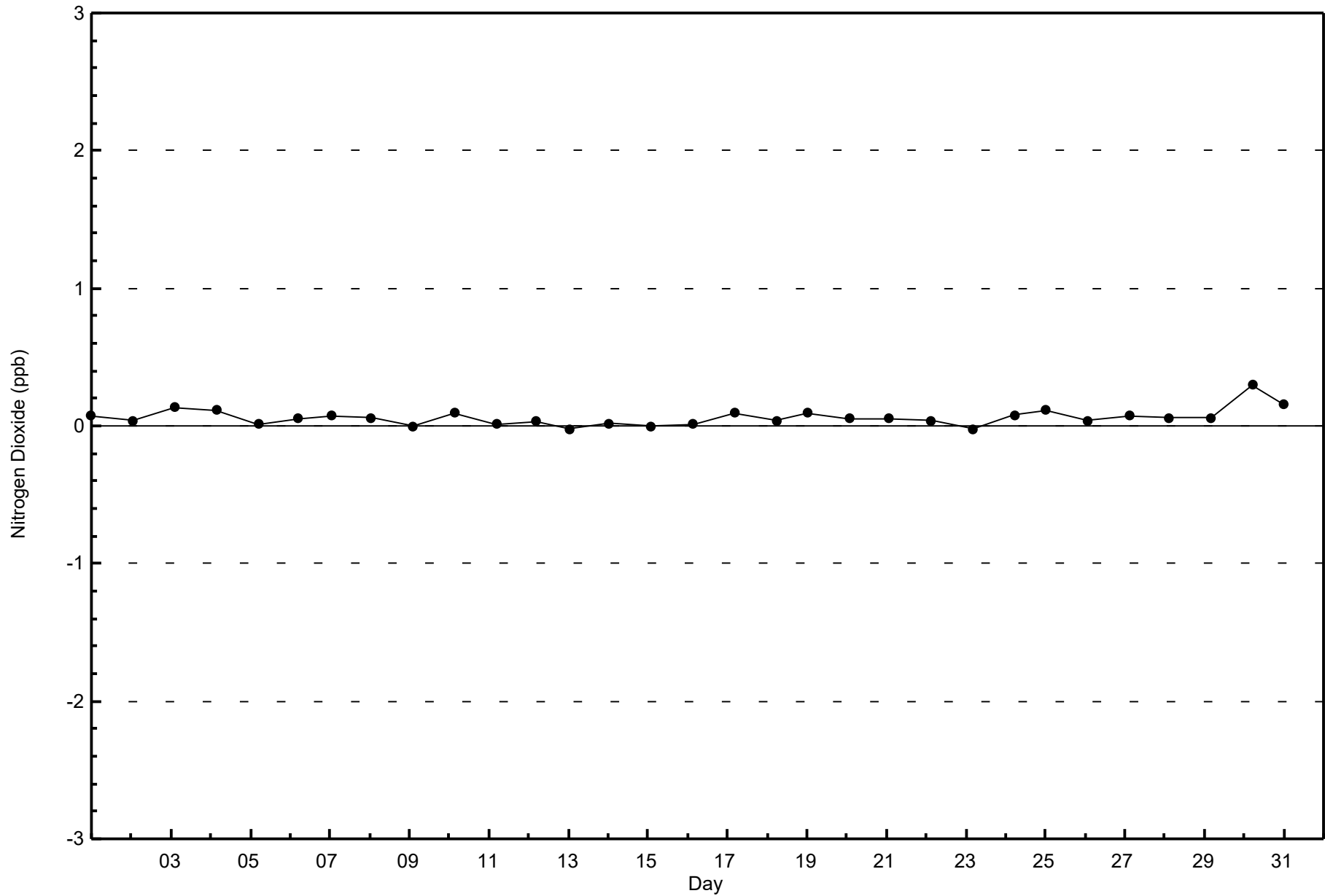
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Conklin

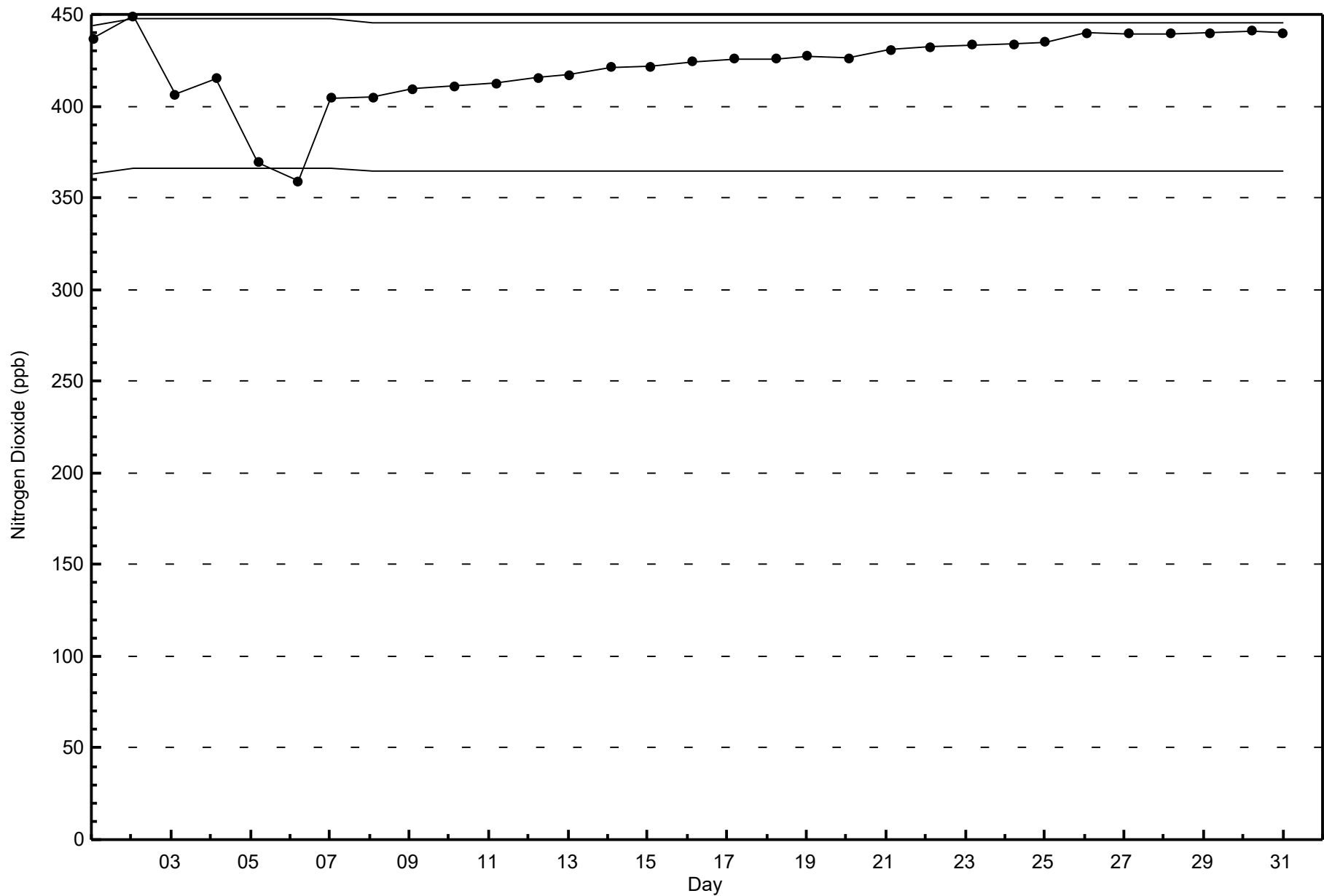






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

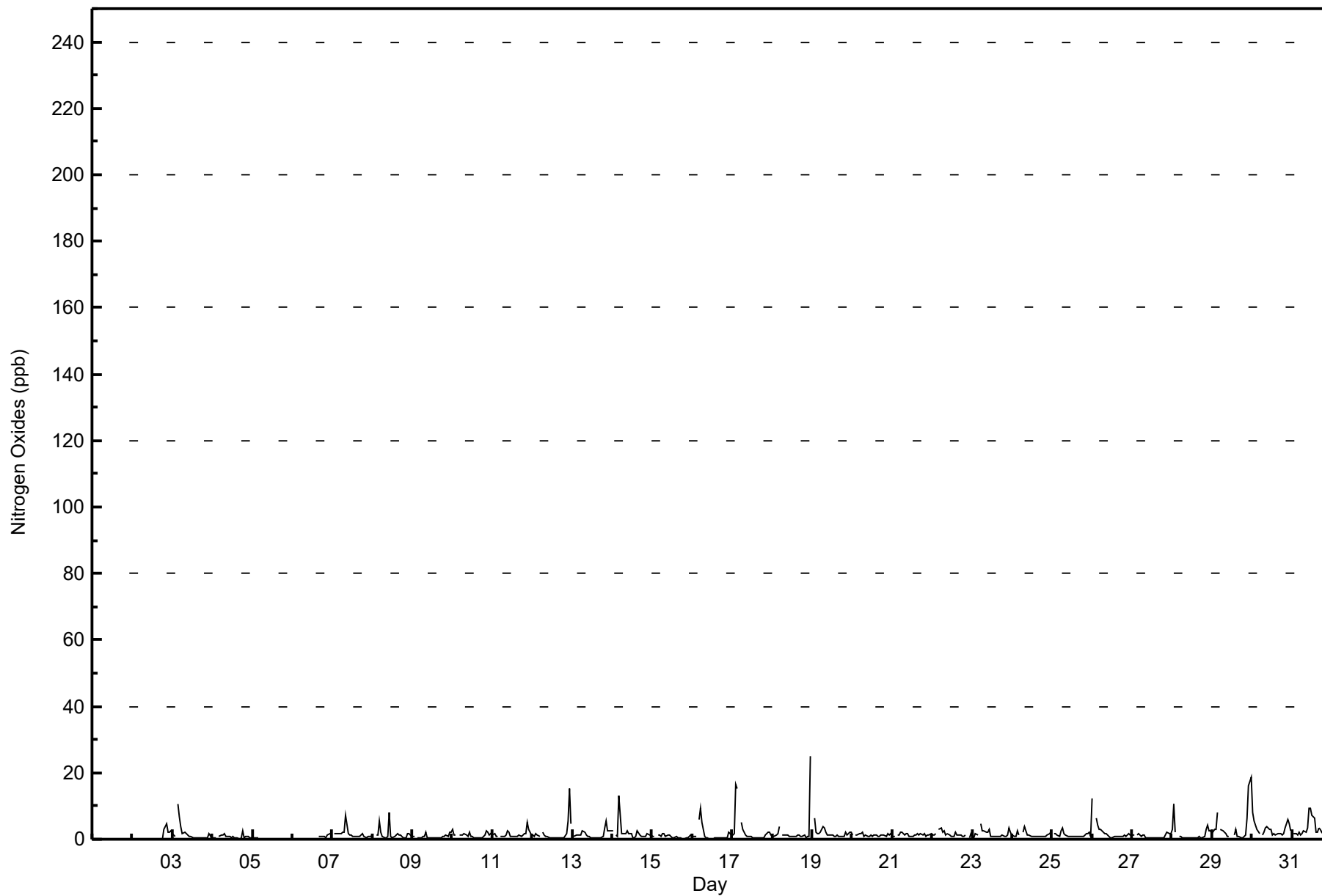
Conklin - May 2025

Maximum Value: 25.2 ppb on May 19 00:00																			Maximum Daily Average: 3.7 ppb on May 29							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 17:00																			Minimum Daily Average: 0.7 ppb on May 4							Hours of Data: 638	
Maximum Diurnal Average: 3.1 ppb at hour 24																			Minimum Diurnal Average: 0.8 ppb at hour 18							Hours of Missing Data: 106	
Monthly Average: 1.68 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.1 Q ₃ = 1.8 P ₉₀ = 2.9 P ₉₉ = 12.8							Hours of Calibration: 37	
																										Percent Operational Time: 90.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--	
2-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.0	0.0	0.0	3.1	4.8	2.0	2.1	2.6	--	4.8	
3-May	1.8	1.0	Z	10.8	6.8	3.7	1.7	2.1	1.7	1.1	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.5	1.5	0.5	1.7	10.8	
4-May	0.3	0.4	0.5	Z	0.7	1.1	1.2	1.5	0.8	0.7	0.8	0.4	0.7	0.4	0.4	0.3	0.2	0.3	2.7	0.6	1.0	0.8	0.3	0.3	0.7	2.7	
5-May	0.4	0.4	0.5	0.5	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.5	
6-May	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	C	C	C	C	0.7	0.8	0.8	0.9	0.6	1.3	1.7	1.6	--	1.7	
7-May	Z	1.9	1.8	1.6	1.6	1.7	1.9	2.0	7.1	1.8	1.4	1.2	1.0	0.9	0.9	1.0	1.0	1.3	1.5	0.9	0.5	0.8	1.1	0.9	1.5	7.1	
8-May	1.1	Z	1.1	1.2	5.6	2.1	0.8	0.5	0.6	1.0	8.2	0.9	0.6	0.7	1.2	1.6	1.4	1.4	0.3	0.6	0.5	1.5	1.7	0.7	1.5	8.2	
9-May	0.6	0.7	Z	0.5	0.6	0.4	0.7	0.7	2.3	0.4	0.3	0.5	0.3	0.4	0.3	0.4	0.4	0.4	0.7	1.0	1.3	1.0	2.0	1.9	0.8	2.3	
10-May	2.8	1.4	1.3	Z	1.1	1.2	1.5	1.5	1.2	0.9	2.1	0.7	0.9	0.6	0.5	0.5	0.5	0.5	0.5	1.4	2.7	2.0	1.5	1.8	1.3	2.8	
11-May	1.4	1.5	0.7	0.8	Z	0.9	0.8	1.0	1.5	2.4	2.0	0.8	0.7	0.6	0.7	0.9	1.2	0.8	1.2	1.6	1.8	5.1	3.0	1.3	1.4	5.1	
12-May	1.1	1.1	1.6	1.2	0.8	Z	2.0	1.2	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	1.6	5.5	15.4	4.5	1.8	15.4	
13-May	Z	1.0	1.2	1.1	1.3	1.3	2.6	2.0	1.1	0.9	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.7	3.5	5.4	2.6	2.4	2.4	1.5	5.4	
14-May	2.7	Z	1.3	1.0	12.9	1.6	1.8	1.7	1.9	2.4	1.8	1.7	0.5	0.3	0.8	2.3	1.2	0.8	0.8	0.8	0.7	1.6	1.4	1.1	1.9	12.9	
15-May	0.9	0.8	Z	1.1	1.1	0.9	1.6	1.7	1.1	1.5	1.1	0.8	0.6	0.4	0.7	0.5	0.3	0.2	0.2	0.1	0.3	0.4	0.8	1.3	0.8	1.7	
16-May	1.0	1.0	0.7	Z	6.0	9.3	5.1	0.7	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.6	0.4	0.3	0.3	0.4	0.5	0.4	2.2	1.2	1.4	9.3	
17-May	1.1	1.6	16.5	15.5	Z	5.3	3.0	2.2	1.5	1.0	0.9	0.7	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.6	1.4	2.3	2.1	1.3	2.6	16.5	
18-May	1.0	0.9	1.2	1.8	3.7	Z	1.4	1.3	1.4	1.3	1.0	0.8	0.8	1.0	0.9	1.1	1.1	0.8	0.8	1.2	0.6	0.9	1.0	25.2	2.2	25.2	
19-May	Z	6.3	2.0	1.7	1.7	2.1	3.7	3.2	1.9	1.2	1.3	1.4	1.1	0.8	1.0	1.3	0.8	0.9	1.0	0.9	2.2	1.4	2.0	1.9	1.8	6.3	
20-May	1.3	Z	1.2	1.2	1.7	1.8	2.1	1.0	1.2	1.0	0.8	1.3	0.8	1.2	1.1	0.7	0.9	1.1	1.3	1.4	1.0	1.5	1.3	1.5	1.2	2.1	
21-May	0.9	1.0	Z	1.3	1.4	2.0	2.3	1.5	1.6	1.6	1.0	0.8	0.8	1.4	1.4	1.8	1.4	1.5	1.1	1.5	0.9	1.3	1.2	1.6	1.4	2.3	
22-May	1.2	1.1	1.8	Z	2.8	3.2	2.3	2.4	1.4	1.6	1.1	1.1	0.9	1.0	2.3	1.2	1.3	1.1	0.9	0.9	1.1	PF	0.6	1.7	1.5	3.2	
23-May	0.7	0.6	1.7	1.1	Z	4.8	2.6	2.7	2.3	2.2	2.8	0.9	0.7	0.8	0.7	0.7	0.6	0.8	1.4	1.0	0.8	1.4	3.2	2.1	1.6	4.8	
24-May	1.4	0.9	1.0	2.6	1.5	Z	2.1	3.6	2.7	1.4	1.1	0.7	0.9	1.0	0.9	0.8	0.9	0.8	0.9	0.9	1.0	1.3	1.8	2.6	1.4	3.6	
25-May	Z	1.8	1.5	1.2	1.0	2.4	3.3	1.8	1.3	0.9	0.8	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7	1.0	1.6	1.9	1.9	1.0	1.3	3.3	
26-May	12.5	Z	6.2	4.2	2.9	3.2	2.7	1.9	1.8	1.3	0.9	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.7	1.1	1.0	1.2	1.5	1.3	2.1	12.5	
27-May	1.1	1.5	Z	1.2	1.8	0.9	1.3	1.1	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.4	1.4	2.2	1.6	1.8	0.9	2.2	
28-May	2.9	10.6	2.0	Z	1.0	1.0	0.5	0.6	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.7	0.6	0.6	1.0	2.8	4.3	2.7	2.4	1.6	10.6	
29-May	1.9	3.1	2.8	8.2	Z	2.8	2.7	2.3	1.9	0.8	0.8	M	M	1.5	3.0	0.8	0.7	0.6	0.5	0.7	1.3	6.6	16.2	18.7	3.7	18.7	
30-May	8.1	5.4	4.1	3.0	1.6	Z	1.4	2.1	3.4	4.0	2.8	2.8	1.1	1.5	1.5	1.8	1.8	1.8	1.4	1.9	3.5	6.1	4.5	2.6	3.0	8.1	
31-May	Z	1.8	1.6	1.4	2.3	1.2	1.7	2.5	2.3	3.4	9.5	9.4	7.3	6.2	2.3	2.2	3.2	2.9	2.1	3.3	3.1	2.5	1.9	1.9	3.3	9.5	
2.1 2.0 2.4 2.8 2.7 2.4 2.0 1.7 1.7 1.4 1.7 1.2 0.9 0.9 0.9 0.9 0.8 0.8 0.9 1.2 1.6 2.2 2.8 3.1																									Diurnal Average		
12.5 10.6 16.5 15.5 12.9 9.3 5.1 3.6 7.1 4.0 9.5 9.4 7.3 6.2 3.0 2.3 3.2 2.9 2.7 3.5 5.4 6.6 16.2 25.2																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	99.84	99.84
21 - 40	1	0.16	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	38	17	6	7	5	36	82	92	101	45	29	23	23	31	48	48	631
21 - 40	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	17	6	7	5	36	82	92	102	45	29	23	23	31	48	48	632

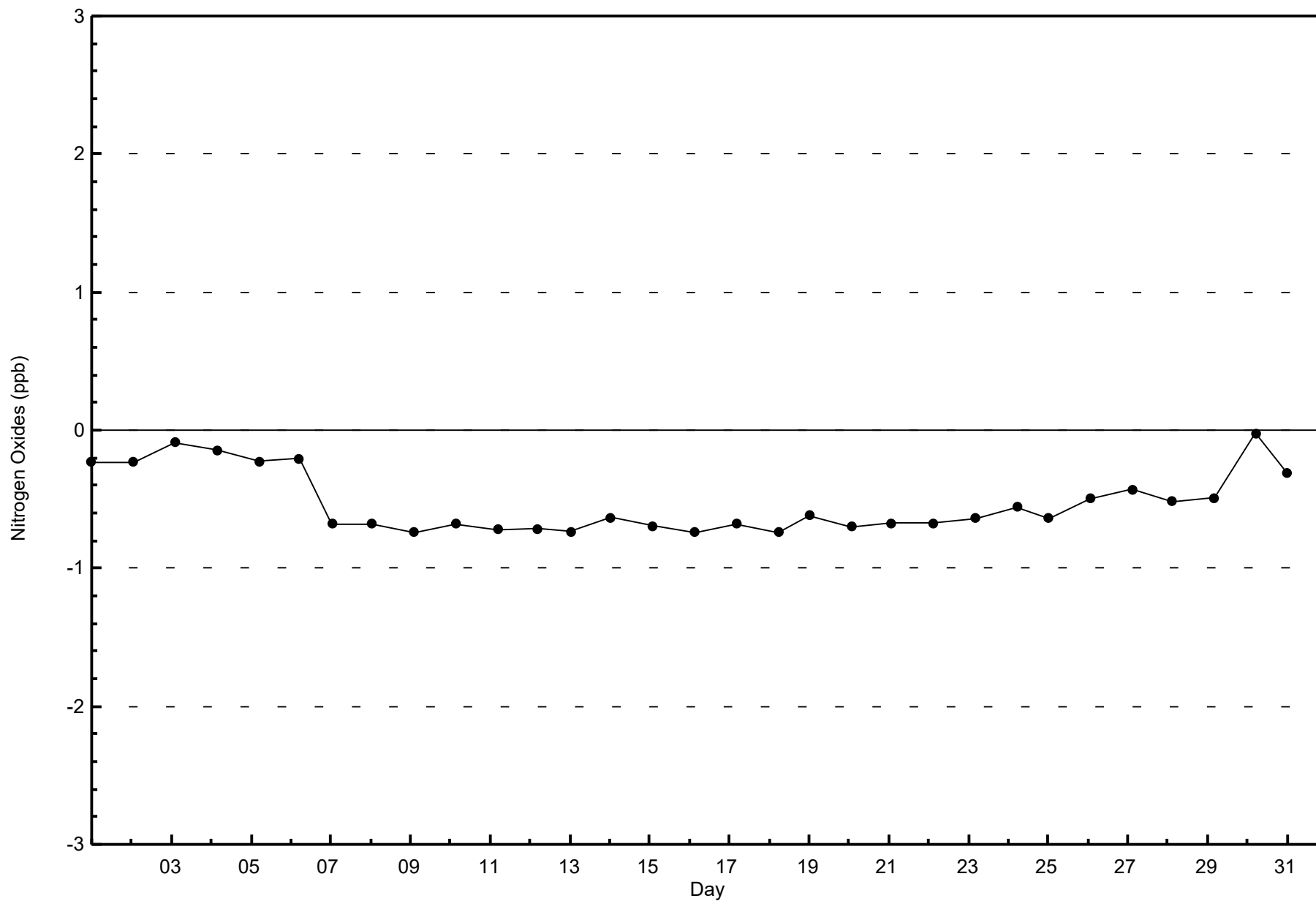
Total Number of Valid Hours: 632

Total Number of Hours: 744



Nitrogen Oxides (NO_x) - ppb
Conklin

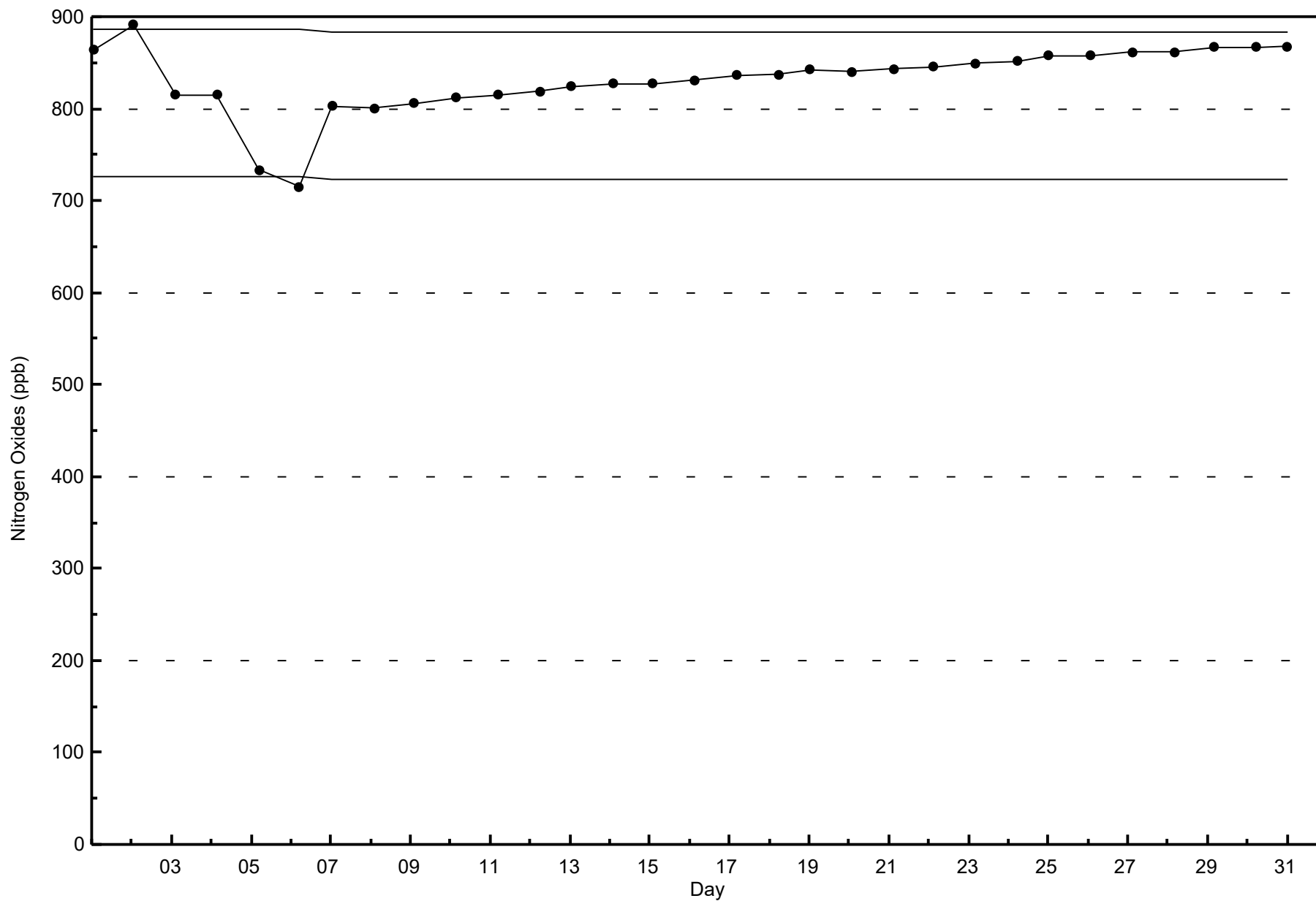






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

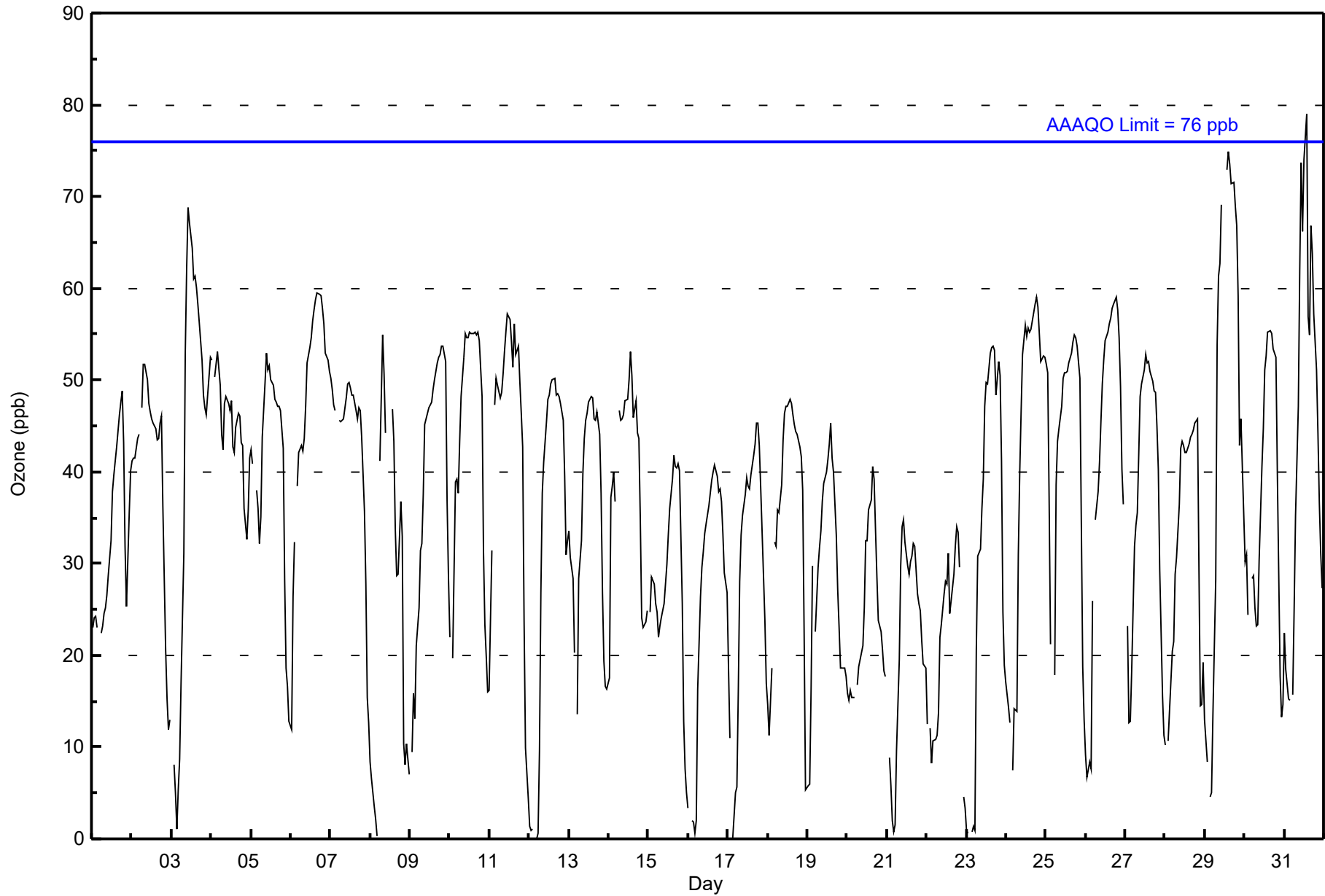
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0 Maximum Value: 79.0 ppb on May 31 14:00 Minimum Value: 0.0 ppb on May 12 05:00 Maximum Diurnal Average: 48.6 ppb at hour 14 Monthly Average: 36.32 ppb																				Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 34 Percent Operational Time: 99.6						
Minimum Daily Average: 20.7 ppb on May 22 Minimum Diurnal Average: 20.3 ppb at hour 3 Percentiles: P ₁ = 0.8 P ₁₀ = 12.7 Q ₁ = 24.2 Median = 39.6 Q ₃ = 48.4 P ₉₀ = 54.7 P ₉₉ = 71.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	23.1	24.2	24.2	23.0	Z	22.5	23.2	24.5	25.1	26.5	28.6	32.5	37.8	39.6	41.2	42.7	46.3	47.7	48.8	43.1	31.9	25.3	35.6	40.1	32.9	48.8
2-May	41.2	41.5	41.5	43.7	44.1	Z	47.0	51.6	51.8	50.0	47.4	46.6	45.8	45.3	44.7	43.5	43.7	45.2	46.0	36.4	20.6	15.2	12.0	12.9	39.9	51.8
3-May	Z	8.2	5.0	1.0	5.3	8.7	16.9	31.0	52.7	62.1	68.9	67.1	64.4	61.0	61.3	60.1	58.2	56.3	52.2	48.4	47.1	46.2	48.4	52.4	42.7	68.9
4-May	52.2	Z	50.3	51.6	53.1	49.5	44.1	42.4	47.4	48.3	47.5	46.7	47.7	42.8	42.1	44.8	46.3	46.1	43.2	42.9	36.0	32.6	35.9	41.6	45.0	53.1
5-May	42.4	40.8	Z	38.0	36.0	32.2	35.1	43.8	49.7	53.0	51.2	51.6	50.0	49.4	47.9	47.6	47.1	47.1	46.7	42.6	28.2	18.5	16.6	12.8	40.4	53.0
6-May	11.9	26.4	32.3	Z	38.5	42.1	42.9	42.2	43.6	47.1	51.9	53.6	54.7	56.5	57.7	58.7	59.5	59.3	59.1	57.7	56.1	52.9	52.2	51.0	48.2	59.5
7-May	50.1	49.0	47.4	46.8	Z	45.7	45.5	45.6	45.8	48.1	49.6	49.7	49.1	48.4	48.4	46.7	45.8	47.0	46.6	43.7	35.7	27.7	15.4	12.7	43.1	50.1
8-May	8.4	6.6	3.5	2.2	0.4	Z	41.2	54.9	50.7	44.2	C	C	C	46.9	43.3	33.9	28.6	28.8	36.7	33.0	10.4	8.0	10.4	7.0	25.0	54.9
9-May	Z	9.4	15.9	13.1	21.0	25.1	31.4	32.2	37.5	45.1	46.4	47.0	47.3	47.6	48.9	50.0	51.9	52.5	52.7	53.7	53.6	52.0	37.0	28.6	39.1	53.7
10-May	22.0	Z	19.7	38.8	39.3	37.6	43.4	48.2	52.5	55.1	54.7	54.6	55.1	55.1	55.0	55.2	54.9	55.2	54.3	48.1	31.4	23.3	19.8	16.1	43.0	55.2
11-May	16.1	31.5	Z	47.3	50.2	49.5	48.0	48.7	50.7	53.0	55.3	57.3	56.6	54.2	51.3	56.2	52.8	53.7	49.7	46.3	42.7	23.7	10.0	4.4	43.9	57.3
12-May	1.4	0.9	1.1	Z	0.0	0.6	9.6	26.8	37.7	41.0	45.4	47.9	48.4	49.5	50.0	50.2	48.4	48.6	48.1	47.4	45.7	39.5	31.0	32.5	32.7	50.2
13-May	33.5	30.6	28.3	20.3	Z	13.6	28.4	32.5	39.9	43.7	45.7	46.3	47.6	48.2	48.0	45.7	45.6	46.5	44.1	37.7	26.9	19.4	16.7	16.4	35.0	48.2
14-May	17.5	37.2	38.5	40.0	36.8	Z	46.6	45.7	45.7	46.3	47.7	47.9	50.1	53.1	50.6	45.9	47.7	44.3	43.6	34.9	24.1	23.0	23.6	24.8	39.8	53.1
15-May	Z	24.7	28.6	27.8	25.7	24.6	22.0	23.2	24.1	25.7	27.8	29.9	33.1	36.0	39.1	41.8	40.6	40.5	40.9	40.1	25.6	12.9	7.6	5.1	28.2	41.8
16-May	3.3	Z	2.0	1.8	0.6	2.0	16.3	26.4	29.6	31.3	33.2	34.4	36.3	37.6	39.1	39.9	40.7	39.5	37.8	38.2	36.8	33.3	28.9	26.9	26.8	40.7
17-May	18.7	11.0	Z	0.0	5.1	5.7	16.0	28.0	33.0	35.3	37.6	39.4	38.4	38.2	39.6	41.8	43.1	45.2	45.2	42.9	38.3	28.7	23.8	16.9	29.2	45.2
18-May	14.7	11.2	18.6	Z	32.4	31.9	35.8	35.6	38.7	43.4	46.4	47.1	47.2	47.9	47.5	46.2	45.2	44.5	44.1	42.7	41.6	38.0	22.7	5.3	36.0	47.9
19-May	5.8	6.0	16.3	29.8	Z	22.6	29.6	31.8	33.6	36.8	38.7	39.9	41.4	43.0	45.3	41.5	40.0	33.2	27.1	23.1	18.6	18.6	18.6	17.6	28.7	45.3
20-May	15.8	15.0	16.1	15.4	15.5	Z	16.8	18.8	19.5	21.0	25.2	32.5	32.5	35.8	36.9	40.6	39.3	33.8	28.6	23.8	22.5	20.6	18.4	17.8	24.4	40.6
21-May	Z	8.8	5.8	2.1	0.8	1.6	9.6	19.6	29.8	34.0	34.8	32.3	29.8	28.8	30.1	30.9	32.1	32.0	26.6	25.6	24.8	21.7	19.1	18.6	21.7	34.8
22-May	12.5	Z	12.1	8.2	10.6	10.9	11.3	13.7	22.0	23.4	26.7	28.1	27.8	31.2	24.6	25.9	28.8	31.9	34.1	33.5	29.6	PF	4.6	3.3	20.7	34.1
23-May	0.9	0.6	Z	0.7	1.4	0.9	20.6	30.9	31.5	35.9	39.2	47.2	49.7	49.5	52.9	53.6	53.8	53.3	48.4	52.0	50.4	41.2	24.7	18.9	33.0	53.8
24-May	17.1	14.4	12.7	Z	7.4	14.2	13.9	31.0	39.8	46.6	52.8	56.0	54.8	55.6	55.3	55.6	56.4	58.3	59.0	58.0	55.0	52.1	52.7	52.5	42.2	59.0
25-May	51.8	50.8	37.1	21.2	Z	17.9	38.6	43.3	44.7	47.2	50.1	50.9	50.8	51.0	51.8	52.9	54.1	54.9	54.5	53.8	50.2	34.5	18.7	12.9	43.2	54.9
26-May	9.2	6.8	8.3	7.6	25.9	Z	34.8	37.9	41.0	45.5	49.6	52.2	54.3	55.3	56.1	56.8	57.8	58.3	59.0	57.7	54.6	49.2	40.3	36.5	41.5	59.0
27-May	Z	23.2	12.7	12.8	18.5	31.9	34.2	35.5	41.7	48.2	49.6	51.2	52.8	51.9	52.0	51.0	49.9	48.8	48.7	45.0	40.2	29.3	15.6	11.3	37.2	52.8
28-May	10.2	Z	10.6	17.3	20.5	21.5	28.8	30.7	36.4	42.6	43.3	42.9	42.2	42.0	43.0	43.7	44.0	44.5	45.2	45.7	29.7	14.5	14.6	19.3	31.9	45.7
29-May	13.0	8.4	Z	4.6	5.0	13.6	28.3	53.8	61.3	62.7	69.1	M	M	72.9	74.8	73.5	71.4	71.6	68.9	66.8	59.2	42.9	45.8	35.4	47.8	74.8
30-May	30.3	30.9	24.5	Z	28.4	28.7	25.2	23.1	23.4	30.3	40.6	44.7	51.0	52.6	55.3	55.3	55.1	53.4	52.9	52.5	40.0	17.7	13.3	14.7	36.7	55.3
31-May	22.4	18.5	15.3	15.2	Z	15.7	25.0	35.3	47.1	62.0	73.7	66.2	74.0	79.0	56.9	55.0	66.8	63.7	57.1	51.1	44.3	36.6	31.1	27.3	45.2	79.0
21.0 20.6 20.3 20.4 20.9 21.9 29.4 35.1 39.6 43.1 46.0 46.3 47.3 48.6 48.1 48.0 48.3 47.9 46.8 44.1 37.2 30.0 24.7 22.4																										Diurnal Average
52.2 50.8 50.3 51.6 53.1 49.5 48.0 54.9 61.3 62.7 73.7 67.1 74.0 79.0 74.8 73.5 71.4 71.6 68.9 66.8 59.2 52.9 52.7 52.5																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	143	20.23	20.23
21 - 50	423	59.83	80.06
51 - 82	141	19.94	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Conklin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	3	1	1	2	2	8	26	32	23	9	1	1	2	3	8	13	135
21 - 50	30	19	6	4	2	24	57	49	40	38	30	19	12	17	40	35	422
51 - 82	5	0	0	1	2	5	2	16	42	18	5	4	8	13	16	4	141
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	20	7	7	6	37	85	97	105	65	36	24	22	33	64	52	698

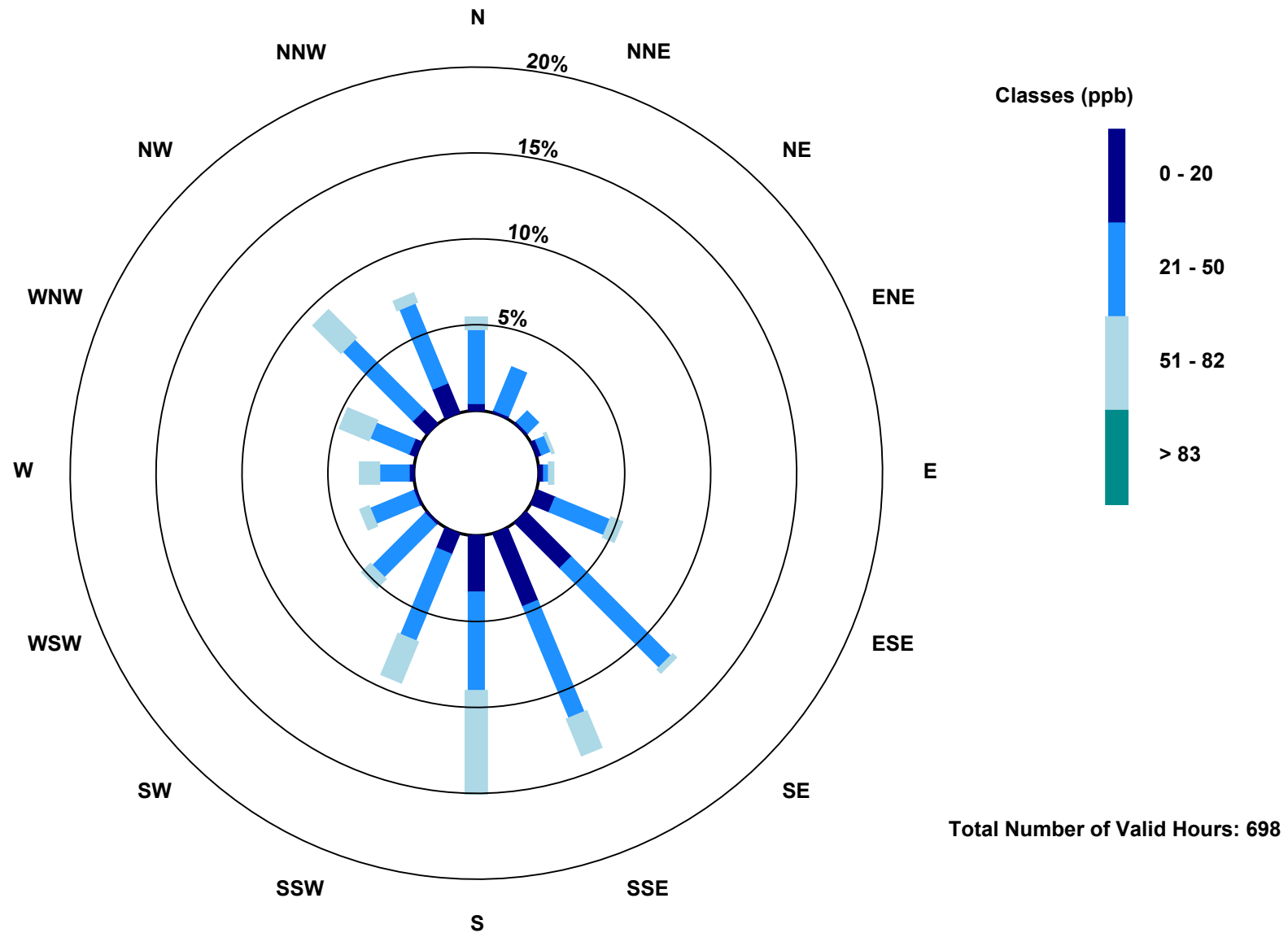
Total Number of Valid Hours: 698

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

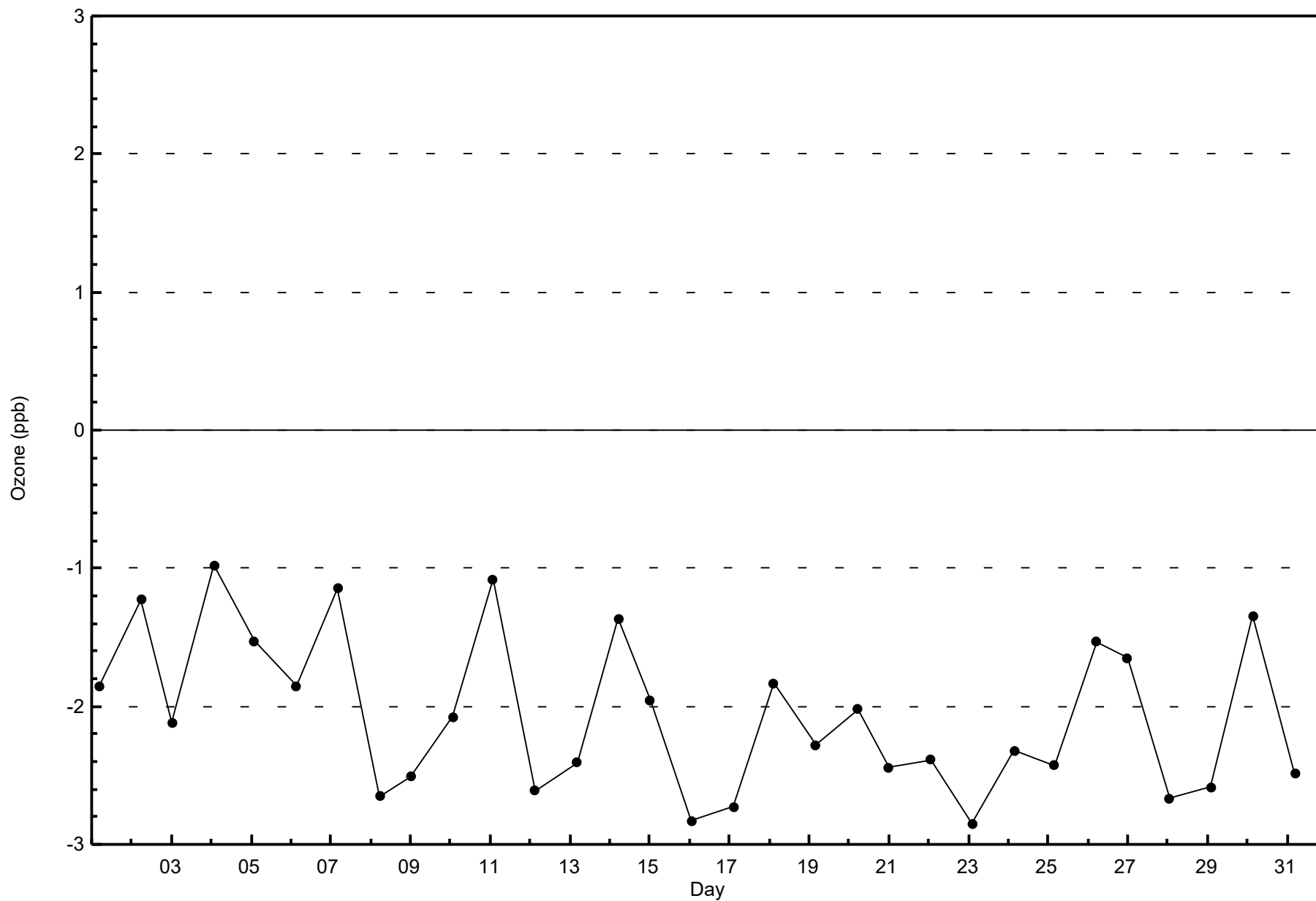
Ozone (O_3) - ppb
Conklin





Wood Buffalo Environmental Association
Zero Responses

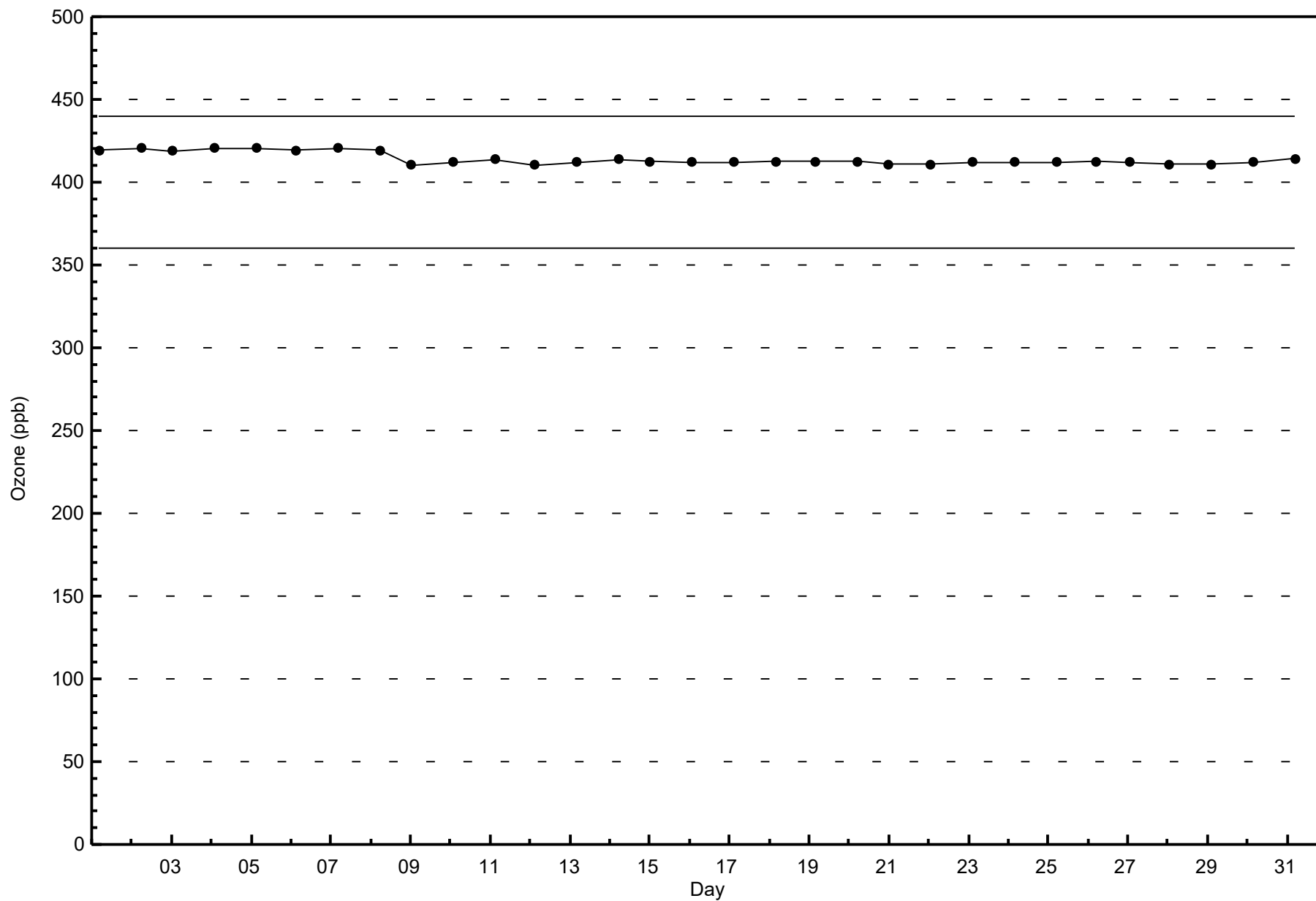
Ozone (O₃) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

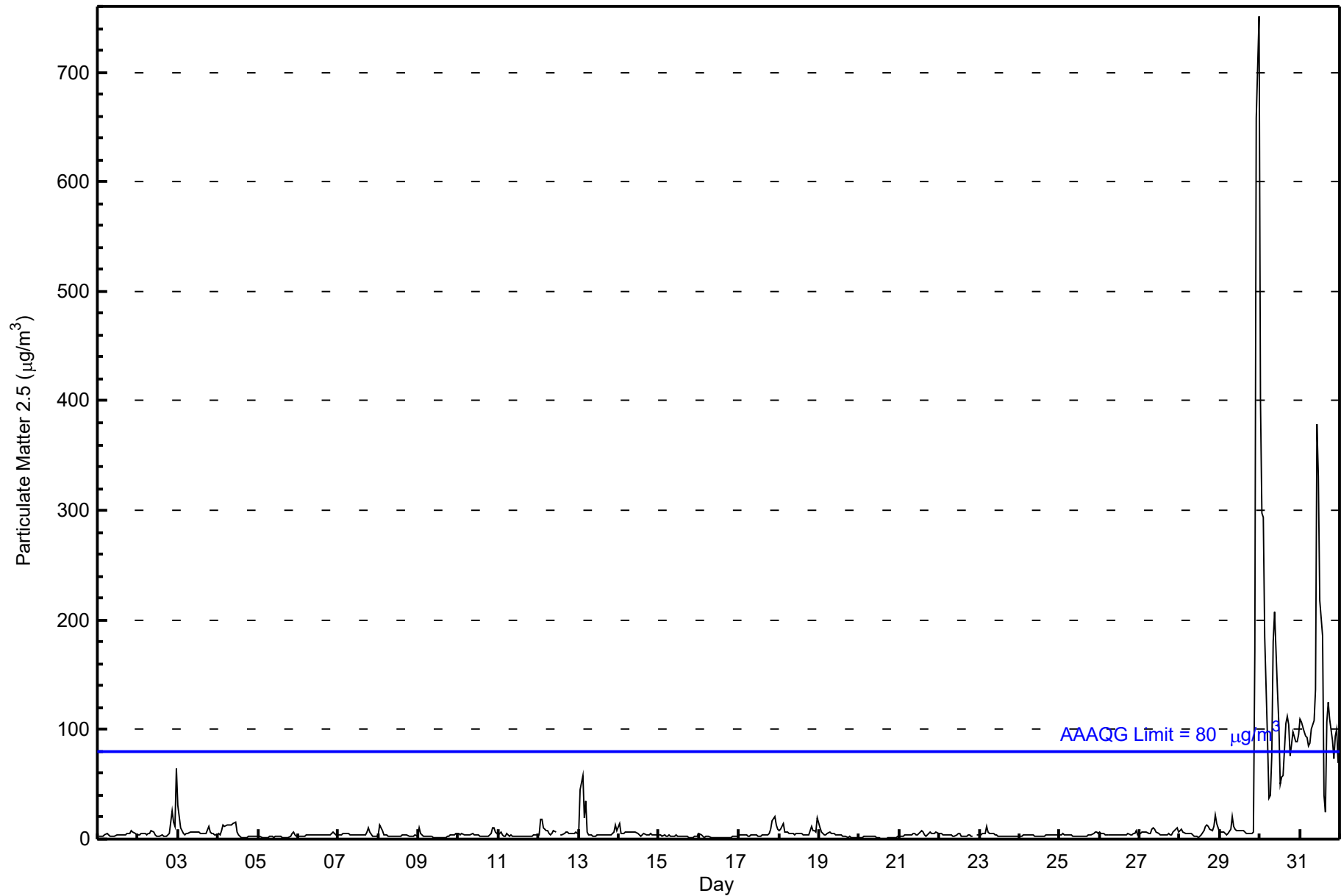
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 40 24-hr: 3 Maximum Value: 750.6 µg/m ³ on May 30 00:00 Minimum Value: 0.5 µg/m ³ on May 20 16:00 Maximum Diurnal Average: 35.9 µg/m ³ at hour 24 Monthly Average: 14.77 µg/m ³																				Maximum Daily Average: 127.8 µg/m ³ on May 30 Minimum Daily Average: 1.6 µg/m ³ on May 20 Minimum Diurnal Average: 6.4 µg/m ³ at hour 15 Percentiles: P ₁ = 0.9 P ₁₀ = 2.1 Q ₁ = 2.9 Median = 4.0 Q ₃ = 5.8 P ₉₀ = 12.8 P ₉₉ = 213.8				Hours in Service: 744 Hours of Data: 741 Hours of Missing Data: 3 Hours of Calibration: 2 Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	3.2	3.0	3.1	3.0	4.0	5.2	3.3	3.1	3.2	3.1	3.0	3.2	3.9	4.0	4.3	4.0	4.0	4.7	4.6	5.7	8.0	6.5	4.8	4.4	4.1	8.0	
2-May	4.4	4.3	4.9	5.0	4.7	4.5	5.5	5.3	7.3	6.5	3.3	3.2	3.2	3.2	3.5	3.2	3.1	3.1	3.4	4.8	26.0	15.4	12.1	63.9	8.5	63.9	
3-May	31.4	9.8	7.2	4.7	4.3	5.3	4.9	6.2	6.1	6.0	5.8	6.3	6.4	5.3	5.0	4.8	5.4	5.7	11.3	6.3	4.9	5.1	3.3	4.0	6.9	31.4	
4-May	4.8	4.4	7.4	12.7	11.2	12.6	13.2	13.2	12.5	14.5	14.9	6.6	3.3	2.4	1.0	1.4	1.7	1.9	2.5	2.2	2.8	2.7	2.3	2.1	6.4	14.9	
5-May	2.0	2.0	1.8	1.5	1.4	1.7	1.9	2.2	2.5	1.8	2.0	2.2	2.5	2.1	1.4	1.3	1.5	1.4	1.3	2.4	5.1	6.0	3.9	2.6	2.3	6.0	
6-May	2.6	2.8	2.1	2.4	2.8	3.8	3.9	4.3	4.2	3.8	3.5	3.5	3.5	3.3	3.6	3.5	3.6	4.0	4.0	3.8	4.7	6.1	4.3	3.8	3.7	6.1	
7-May	3.6	3.7	4.1	4.7	4.9	5.1	4.8	4.1	4.3	3.9	3.8	4.4	4.0	4.0	4.1	3.9	4.1	7.0	10.3	6.9	2.8	2.5	2.8	3.0	4.4	10.3	
8-May	3.8	12.5	7.1	4.3	4.5	3.4	2.7	2.7	2.9	3.2	3.0	3.0	2.8	2.9	3.8	3.9	4.1	4.2	2.1	2.3	2.5	3.1	3.5	2.5	3.8	12.5	
9-May	10.5	5.0	3.5	2.5	2.3	2.8	2.7	2.9	2.6	1.7	1.6	1.4	1.2	1.2	1.2	1.4	1.7	2.1	3.1	3.7	4.3	4.5	5.0	4.9	3.1	10.5	
10-May	4.9	4.0	5.7	4.0	3.3	3.4	3.5	4.2	4.8	3.8	3.3	3.7	3.9	2.6	2.7	2.6	2.7	2.7	2.8	5.1	9.8	10.7	6.3	4.9	4.4	10.7	
11-May	4.5	6.8	4.1	3.2	3.0	5.1	2.9	3.3	2.9	2.8	2.7	2.8	2.5	2.7	3.0	2.5	2.5	2.5	2.7	2.9	3.2	3.7	4.2	3.4	3.3	6.8	
12-May	3.8	17.7	18.2	10.3	7.7	7.8	4.7	4.3	5.1	7.4	6.7	C	C	3.5	4.0	5.1	6.2	5.9	5.7	5.4	5.7	5.5	5.9	5.4	6.9	18.2	
13-May	5.1	44.5	58.5	19.4	34.3	7.0	4.3	3.6	2.9	3.1	3.2	3.8	3.8	3.8	3.4	3.5	3.5	3.4	4.4	4.0	4.9	6.5	13.4	8.3	10.5	58.5	
14-May	13.7	5.4	5.0	4.9	6.8	6.6	6.4	5.9	5.9	5.9	5.8	4.9	3.4	2.7	4.3	4.8	3.8	3.8	4.5	5.0	3.9	3.5	4.1	4.2	5.2	13.7	
15-May	4.3	3.7	3.0	3.5	2.8	2.9	3.3	2.7	2.7	2.8	3.6	3.2	2.6	2.7	2.8	2.6	2.0	2.0	1.7	1.4	1.4	2.1	2.6	2.9	2.7	4.3	
16-May	4.6	3.5	2.1	1.8	2.1	2.6	2.0	1.6	1.3	1.1	1.0	0.9	1.0	1.3	1.6	1.7	1.7	1.8	1.7	1.6	2.5	2.3	2.5	3.1	2.0	4.6	
17-May	3.3	4.5	4.3	4.3	4.4	3.1	2.9	3.2	3.4	3.5	3.5	3.2	3.2	3.0	3.2	3.5	3.9	3.3	4.6	8.4	16.5	20.3	12.8	8.5	5.6	20.3	
18-May	7.2	8.7	14.0	6.6	6.1	6.0	5.3	5.2	4.8	4.3	4.9	5.0	4.5	4.7	4.1	3.8	3.4	3.6	3.9	12.1	7.3	7.5	6.3	18.9	6.6	18.9	
19-May	10.2	6.7	5.7	4.2	3.4	4.6	5.9	5.2	4.7	4.8	4.3	3.9	4.3	3.8	2.8	2.9	2.2	1.7	2.0	1.5	1.3	1.2	0.9	1.2	3.7	10.2	
20-May	1.2	1.7	1.9	2.1	2.7	3.0	3.0	2.9	2.7	2.5	1.1	1.0	0.8	0.6	0.6	0.5	0.6	0.9	0.9	1.0	1.1	1.3	1.8	2.6	1.6	3.0	
21-May	2.6	2.7	2.9	4.0	4.0	3.8	3.7	4.0	4.6	4.7	4.5	4.3	6.0	8.2	6.1	3.8	3.2	3.9	6.1	5.8	4.9	4.8	6.1	5.7	4.6	8.2	
22-May	5.4	4.9	4.1	4.1	3.8	4.1	4.4	3.7	2.9	3.2	4.4	4.8	4.6	3.0	2.8	3.1	2.9	3.3	3.4	2.9	3.0	PF	3.4	4.0	3.7	5.4	
23-May	4.0	4.0	5.1	5.5	12.0	5.8	4.8	5.4	4.9	4.4	3.9	3.1	2.8	2.8	2.7	2.8	3.1	2.9	3.2	2.8	2.6	2.7	2.9	3.1	4.1	12.0	
24-May	3.0	3.2	3.3	3.5	3.7	3.7	3.7	3.5	3.3	2.8	2.9	2.8	3.0	3.0	3.0	3.2	3.3	3.6	3.4	3.6	4.0	4.0	3.6	3.7	3.4	4.0	
25-May	3.6	3.8	5.2	3.6	3.4	3.9	3.7	3.2	2.7	2.5	2.4	2.5	2.6	2.7	2.8	3.1	2.8	3.4	3.4	3.4	5.2	5.9	5.9	4.9	3.6	5.9	
26-May	6.2	5.2	4.5	4.4	3.7	3.8	3.6	3.6	3.9	3.7	3.6	3.7	3.2	3.6	3.7	3.9	4.3	4.9	4.3	4.1	4.8	4.9	8.1	4.3	4.3	8.1	
27-May	4.6	5.9	6.7	6.2	5.9	5.5	5.5	8.7	9.9	9.3	6.0	4.7	4.1	3.8	3.7	3.8	4.2	4.5	4.0	4.2	6.4	7.8	10.7	7.0	6.0	10.7	
28-May	7.4	9.2	6.2	5.2	5.3	5.8	5.3	4.5	3.2	2.0	2.0	1.8	2.4	4.2	8.2	11.6	12.4	11.2	9.3	7.2	11.7	21.6	13.9	9.9	7.6	21.6	
29-May	7.1	6.6	6.1	5.5	4.4	5.0	9.6	20.5	11.6	9.3	7.8	7.3	7.3	7.4	8.0	6.7	5.6	5.2	4.8	5.0	6.1	170.9	657.6	750.6	72.3	750.6	
30-May	399.1	297.2	293.7	184.1	89.6	36.7	40.4	76.5	179.9	207.4	136.4	106.3	49.7	56.9	57.9	105.6	111.4	104.7	75.7	86.5	97.6	89.4	88.5	95.8	127.8	399.1	
31-May	109.2	106.6	97.5	93.8	93.0	84.9	87.2	99.9	108.6	136.4	379.3	331.1	218.1	185.1	40.3	24.6	106.4	125.4	109.5	90.7	74.0	94.1	101.1	69.8	123.6	379.3	
22.0 19.5 19.3 13.7 11.1 8.4 8.3 10.3 13.6 15.2 20.5 17.9 12.2 11.0 6.4 7.5 10.4 10.9 9.8 9.8 10.9 17.4 32.4 35.9																										Diurnal Average	
399.1 297.2 293.7 184.1 93.0 84.9 87.2 99.9 179.9 207.4 379.3 331.1 218.1 185.1 57.9 105.6 111.4 125.4 109.5 90.7 97.6 170.9 657.6 750.6																										Diurnal Maximum	
C - Calibration PF - Power Failure																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																											



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	542	73.14	73.14
6 - 15	134	18.08	91.23
16 - 25	9	1.21	92.44
26 - 80	16	2.16	94.60
> 81.0	40	5.40	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Conklin - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	32	13	5	6	4	33	69	65	93	53	24	17	19	24	39	37	533
6 - 15	3	7	1	1	0	2	18	31	13	10	9	5	1	4	20	9	134
16 - 25	0	0	0	0	0	0	1	2	3	0	1	1	0	0	0	1	9
26 - 80	1	0	0	0	0	0	0	2	1	1	1	1	1	2	3	3	16
> 81.0	5	0	0	1	2	3	2	4	3	2	2	1	2	4	6	3	40
Totals	41	20	6	8	6	38	90	104	113	66	37	25	23	34	68	53	732

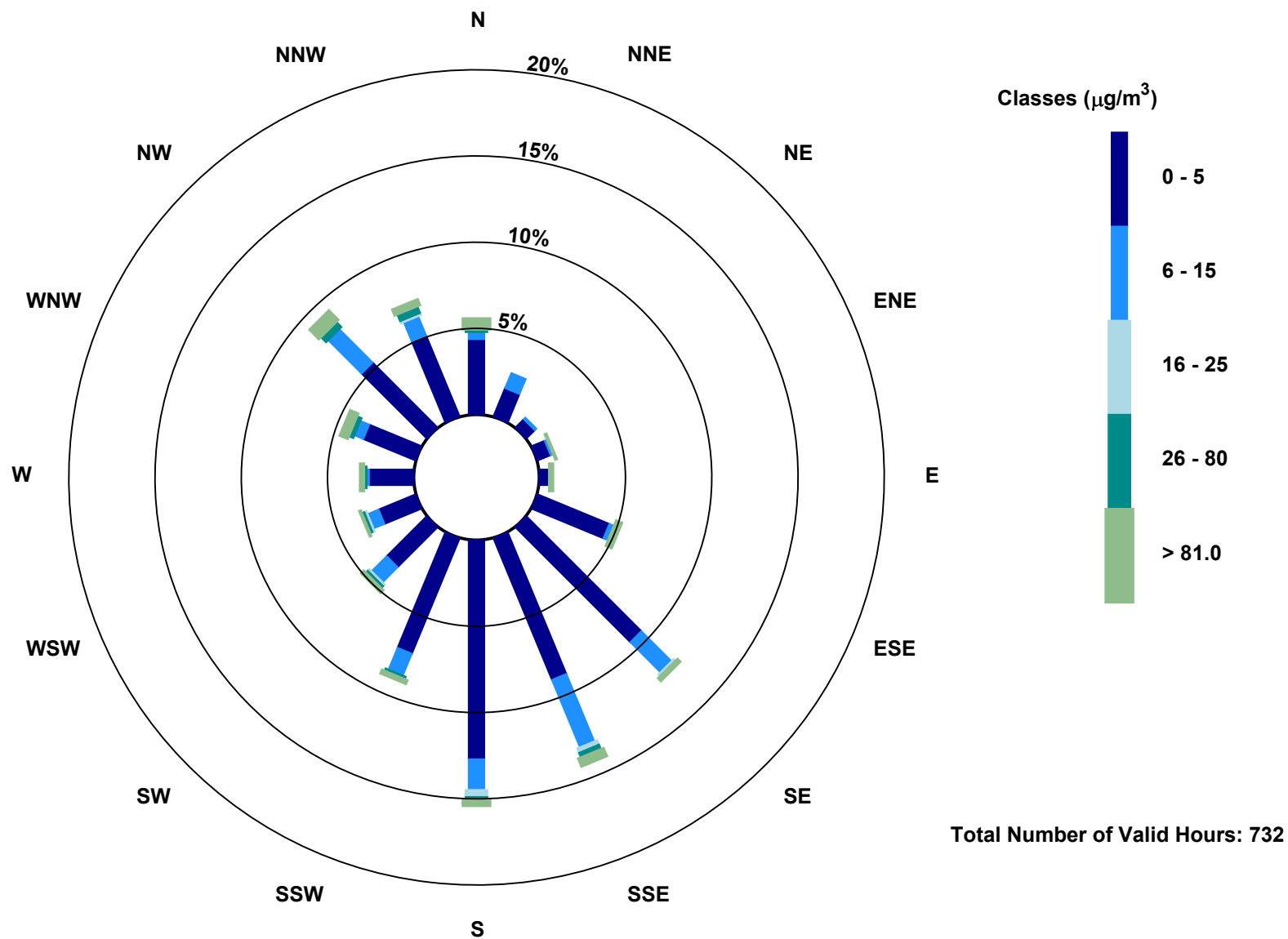
Total Number of Valid Hours: 732

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

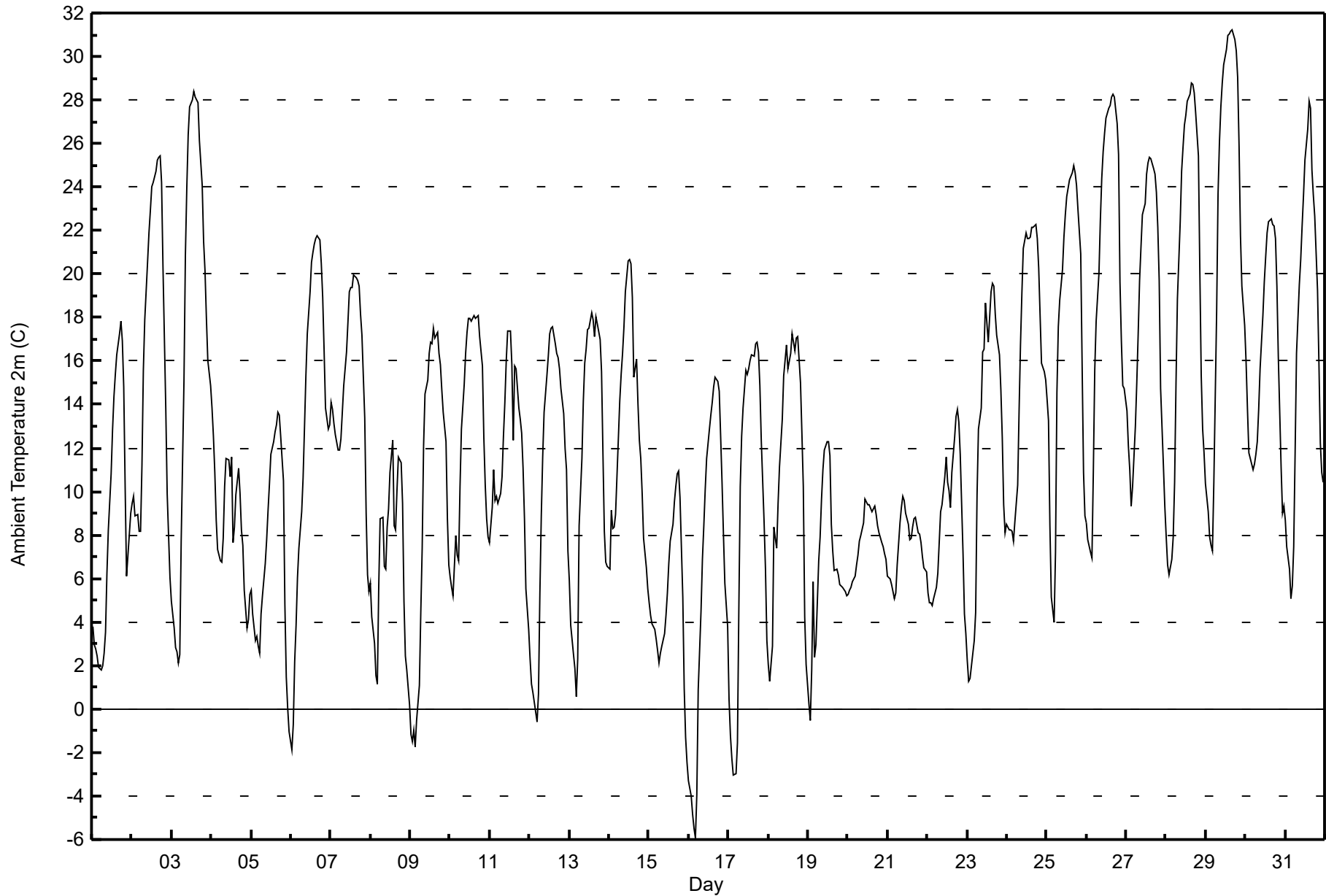
Conklin - May 2025

Maximum Value: 31.2 C on May 29 17:00																				Maximum Daily Average: 22.3 C on May 29					Hours in Service: 744	
Minimum Value: -5.9 C on May 16 05:00																				Minimum Daily Average: 5.0 C on May 15					Hours of Data: 744	
Maximum Diurnal Average: 18.4 C at hour 17																				Minimum Diurnal Average: 5.0 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.40 C																				Percentiles: P ₁ = -2.8 P ₁₀ = 3.1 Q ₁ = 7.0 Median = 11.5 Q ₃ = 17.3 P ₉₀ = 23.2 P ₉₉ = 29.4					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	3.8	3.0	2.7	2.4	1.9	1.8	2.0	2.6	3.5	6.3	8.2	10.8	12.8	14.3	15.4	16.3	17.3	17.8	17.0	14.8	10.3	6.1	8.0	9.0	8.7	17.8
2-May	9.5	9.8	8.9	8.9	8.2	8.2	11.2	15.6	17.9	20.6	21.9	22.9	24.0	24.2	24.8	25.2	25.4	25.5	24.2	20.3	13.8	9.9	8.0	6.1	16.4	25.5
3-May	4.9	3.7	2.9	2.6	2.1	2.5	7.7	15.1	20.9	24.0	26.4	27.7	28.0	28.4	28.1	28.0	27.9	26.2	24.1	21.5	20.1	18.0	16.0	14.8	17.6	28.4
4-May	13.8	12.5	10.9	8.7	7.3	6.8	6.8	7.9	10.2	11.5	11.5	10.7	11.6	7.6	8.4	9.8	11.1	9.9	8.2	7.5	5.4	3.7	4.1	5.3	8.8	13.8
5-May	5.4	4.4	3.2	3.3	2.9	2.6	4.3	5.2	6.7	7.8	9.1	10.4	11.7	12.3	12.8	13.1	13.6	13.5	12.5	10.5	4.8	1.4	0.0	-1.0	7.1	13.6
6-May	-1.9	-0.7	2.2	3.8	6.1	7.4	9.1	10.6	12.9	15.3	17.2	19.2	20.5	21.0	21.4	21.6	21.8	21.5	20.5	18.9	16.5	13.8	12.9	13.0	13.5	21.8
7-May	14.1	13.8	13.2	12.6	11.9	11.9	12.4	13.6	14.9	16.4	17.7	19.2	19.4	19.4	19.9	19.9	19.7	19.4	18.2	17.2	13.4	9.0	6.2	5.4	14.9	19.9
8-May	5.8	4.3	3.0	1.5	1.1	5.6	8.8	8.8	6.6	6.4	8.3	9.2	10.9	12.3	8.5	8.2	10.0	11.6	11.3	9.5	5.0	2.5	1.8	0.2	6.7	12.3
9-May	-1.2	-1.5	-1.0	-1.8	-0.5	1.1	4.5	7.4	12.1	14.5	15.2	16.3	16.9	16.8	17.5	17.0	17.3	16.4	15.8	14.6	13.7	12.3	8.7	6.6	9.9	17.5
10-May	6.1	5.6	5.2	8.0	7.0	6.8	10.2	12.9	14.9	16.4	17.3	17.9	18.0	17.9	18.1	18.0	18.0	18.1	17.1	15.8	12.5	10.3	8.8	7.9	12.9	18.1
11-May	7.7	9.3	11.0	9.6	9.8	9.4	9.9	10.7	12.6	14.1	16.1	17.4	17.4	15.8	12.3	15.8	15.6	13.8	13.4	12.7	11.1	8.7	5.5	3.7	11.8	17.4
12-May	2.3	1.1	0.7	0.3	-0.6	0.7	5.4	8.9	11.6	13.6	15.3	16.2	17.2	17.5	17.6	16.8	16.3	16.2	15.7	14.7	13.6	12.0	11.0	7.2	10.5	17.6
13-May	5.9	3.8	2.5	1.9	0.6	2.3	8.4	11.5	14.2	15.9	16.5	17.5	17.5	18.2	17.9	17.1	18.0	17.7	17.0	15.5	11.7	8.1	6.8	6.6	11.4	18.2
14-May	6.4	9.1	8.3	8.4	9.0	12.4	14.1	15.4	16.3	17.6	19.2	20.6	20.6	20.5	18.9	15.2	16.1	14.0	12.3	11.5	9.9	7.8	6.5	5.5	13.2	20.6
15-May	4.9	4.3	3.9	3.7	3.2	2.7	2.1	2.6	2.9	3.5	4.3	5.4	6.7	7.7	8.5	9.5	10.2	10.8	10.9	9.7	5.1	1.0	-1.3	-2.5	5.0	10.9
16-May	-3.3	-4.0	-4.9	-5.5	-5.9	-4.0	0.9	4.5	6.9	8.5	10.1	11.5	12.9	13.5	14.1	14.8	15.2	15.1	14.6	12.6	10.4	8.1	5.8	3.8	6.5	15.2
17-May	0.4	-1.2	-2.2	-3.0	-3.0	-1.6	4.6	10.2	12.6	13.9	15.6	15.4	15.7	16.0	16.3	16.2	16.8	16.9	16.4	14.9	12.4	8.6	6.4	3.1	9.2	16.9
18-May	2.0	1.3	2.9	8.3	7.9	7.4	9.5	11.1	13.3	15.3	16.0	16.7	15.7	16.3	17.3	16.9	16.5	17.1	17.1	15.0	12.7	10.2	4.2	2.0	11.4	17.3
19-May	0.2	-0.5	1.8	5.9	2.4	2.9	6.8	7.9	9.6	11.0	11.9	12.3	12.3	11.6	8.5	7.3	6.4	6.4	6.2	5.7	5.6	5.6	5.4	5.2	6.6	12.3
20-May	5.3	5.5	5.6	5.9	6.1	6.6	7.1	7.7	8.0	8.5	9.6	9.5	9.4	9.4	9.1	9.2	9.3	8.9	8.4	8.1	7.7	7.5	7.1	6.9	7.8	9.6
21-May	6.1	6.0	5.7	5.4	5.1	5.3	6.6	8.6	9.3	9.8	9.6	9.0	8.5	7.8	7.8	8.3	8.7	8.8	8.1	8.0	7.6	7.0	6.5	6.3	7.5	9.8
22-May	5.4	4.9	4.9	4.7	5.1	5.6	6.2	7.7	9.0	9.4	10.7	11.6	10.4	10.0	9.2	10.9	12.5	13.5	13.8	13.2	11.7	7.1	4.4	3.5	8.5	13.8
23-May	2.2	1.3	1.4	2.6	3.2	4.5	9.8	12.8	13.9	16.4	16.6	18.6	17.7	16.9	19.2	19.6	19.5	18.1	17.2	16.3	14.6	12.5	9.4	8.1	12.2	19.6
24-May	8.5	8.2	8.2	8.2	7.7	8.6	10.3	13.7	16.8	19.1	21.2	21.9	21.6	21.6	21.7	22.2	22.1	22.3	21.7	20.3	18.1	15.9	15.5	15.2	16.3	22.3
25-May	14.2	13.3	8.4	5.1	4.0	7.2	14.5	17.6	18.8	20.2	21.7	22.7	23.6	24.0	24.3	24.6	25.0	24.7	24.1	23.0	20.9	15.8	10.9	8.9	17.4	25.0
26-May	8.5	7.8	7.2	6.9	10.9	15.6	17.8	20.0	22.4	24.4	25.6	26.5	27.2	27.6	27.8	28.1	28.3	28.1	26.9	25.5	19.6	16.9	14.9	14.8	20.0	28.3
27-May	13.7	12.1	11.0	9.4	10.3	13.0	15.0	17.2	19.7	21.2	22.7	23.3	24.6	25.1	25.4	25.3	24.8	24.6	23.7	22.1	19.7	14.8	11.2	9.3	18.3	25.4
28-May	7.9	6.6	6.2	6.9	7.9	10.4	15.0	18.9	22.4	24.7	25.8	26.8	27.3	28.0	28.3	28.8	28.7	28.3	27.4	25.4	20.1	15.3	12.9	11.8	19.2	28.8
29-May	10.4	9.0	7.9	7.5	7.3	10.4	18.3	23.7	26.1	27.7	28.8	29.6	30.3	31.0	31.0	31.2	31.2	30.8	30.3	29.0	25.9	21.8	19.4	17.6	22.3	31.2
30-May	16.0	13.8	11.8	11.5	11.0	11.3	11.7	12.3	13.8	15.6	18.1	19.6	20.8	21.9	22.4	22.5	22.3	22.2	21.6	19.4	16.2	11.1	9.0	9.4	16.1	22.5
31-May	8.7	7.4	6.4	5.1	5.7	7.5	11.8	16.3	19.5	20.7	22.2	23.6	25.3	26.7	27.9	27.6	24.8	23.6	22.6	19.2	15.9	12.3	10.9	10.4	16.8	27.9
6.3 5.6 5.2 5.1 5.0 6.2 9.1 11.6 13.6 15.2 16.5 17.4 18.0 18.1 18.1 18.2 18.4 18.1 17.4 15.9 13.1 10.2 8.3 7.2																									Diurnal Average	
16.0 13.8 13.2 12.6 11.9 15.6 18.3 23.7 26.1 27.7 28.8 29.6 30.3 31.0 31.0 31.2 31.2 30.8 30.3 29.0 25.9 21.8 19.4 17.6																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Conklin - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	23	3.09	3.09
0 - 10	298	40.05	43.15
10 - 20	299	40.19	83.33
> 20	124	16.67	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

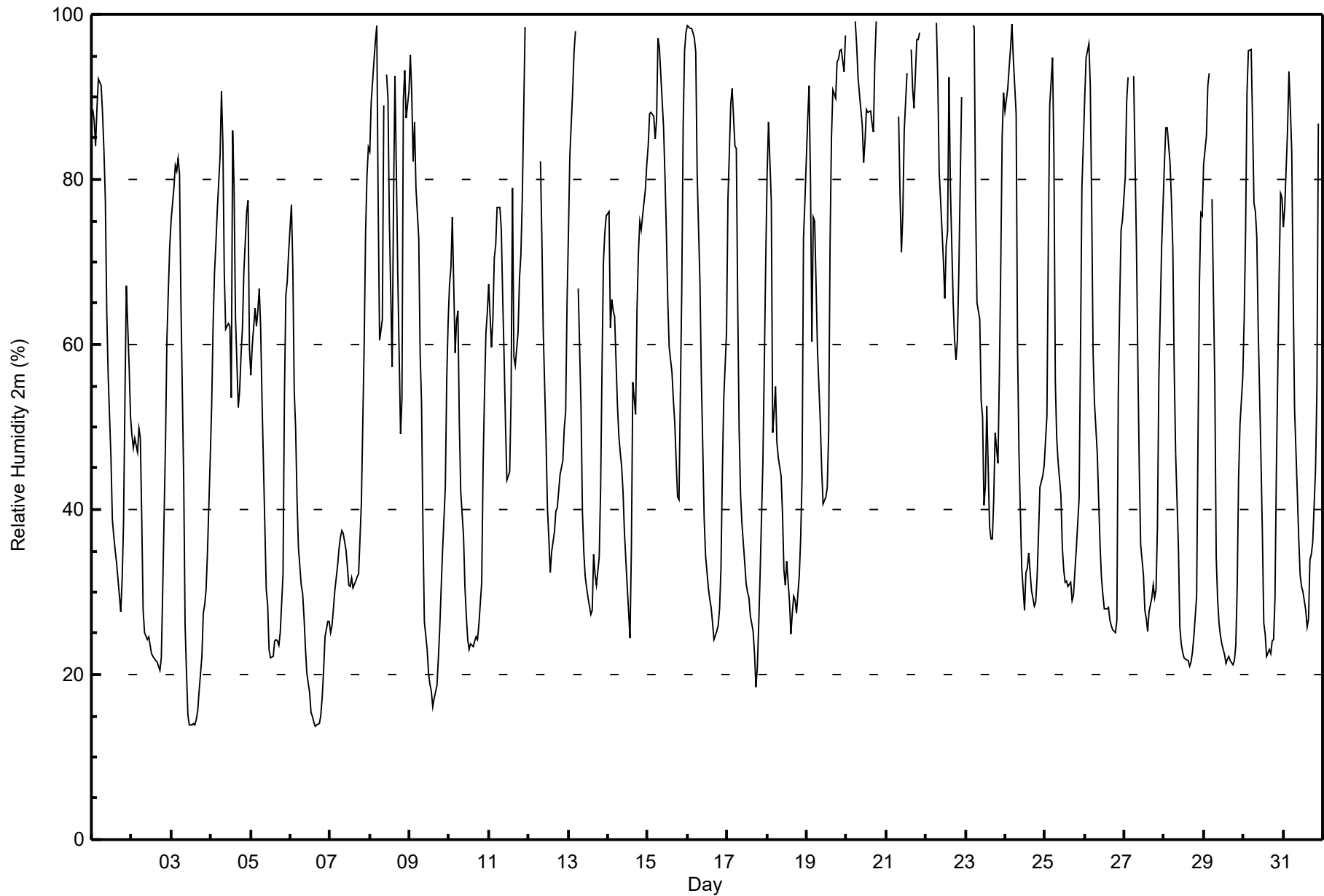
Conklin - May 2025

Maximum Value: 99.2 % on May 20 06:00																				Maximum Daily Average: 80.4 % on May 8					Hours in Service: 744	
Minimum Value: 13.8 % on May 6 16:00																				Minimum Daily Average: 28.9 % on May 6					Hours of Data: 695	
Maximum Diurnal Average: 78.6 % at hour 3																				Minimum Diurnal Average: 36.3 % at hour 14					Hours of Missing Data: 49	
Monthly Average: 54.57 %																				Percentiles: P ₁ = 14.2 P ₁₀ = 24.1 Q ₁ = 30.8 Median = 52.5 Q ₃ = 77.2 P ₉₀ = 90.3 P ₉₉ = 98.5					Hours of Calibration: 0	
																									Percent Operational Time: 93.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	88.4	87.1	84.1	88.7	92.2	91.3	87.9	83.4	77.4	63.9	56.2	46.3	38.8	36.7	35.0	33.6	29.6	27.6	31.6	38.5	53.6	67.2	57.3	51.3	60.3	92.2
2-May	49.0	47.4	48.7	47.0	49.9	48.7	39.1	27.8	25.1	24.2	24.6	23.5	22.5	22.3	21.7	21.5	21.1	20.5	22.0	30.4	48.2	60.7	66.4	71.9	36.8	71.9
3-May	75.1	79.0	81.7	81.0	82.5	80.6	65.3	43.5	26.0	20.1	15.1	13.8	13.9	14.1	14.0	14.6	15.7	18.0	22.2	27.4	28.5	30.4	34.9	46.5	39.3	82.5
4-May	52.7	62.1	68.6	72.3	76.3	82.9	90.6	84.5	68.6	61.8	62.5	62.2	53.5	85.9	79.1	63.4	52.4	54.5	58.8	62.0	68.9	76.1	77.5	59.4	68.2	90.6
5-May	56.2	59.8	64.3	62.3	64.1	66.8	62.1	53.0	38.0	30.3	28.5	23.0	22.0	22.3	24.1	24.2	24.1	23.6	25.0	32.2	53.9	65.9	67.7	71.2	44.4	71.2
6-May	77.0	69.4	54.5	49.8	41.2	35.5	30.9	29.8	27.0	23.3	20.1	17.8	15.5	15.0	14.3	13.8	13.8	14.1	15.0	17.3	20.5	24.6	26.4	26.5	28.9	77.0
7-May	25.0	25.9	28.0	30.2	33.2	35.3	36.6	37.4	37.2	35.1	33.0	30.8	30.6	31.8	30.6	31.4	31.9	32.2	36.5	40.9	60.2	73.5	80.5	83.9	39.6	83.9
8-May	83.4	89.4	94.4	96.8	98.6	77.0	60.5	63.1	89.0	OR	92.7	89.8	75.0	57.2	77.9	92.5	81.0	68.4	49.1	53.4	89.7	93.3	87.4	90.7	80.4	98.6
9-May	95.1	90.4	82.3	87.0	79.0	72.9	58.8	53.0	37.8	26.5	23.0	20.2	18.8	18.0	16.1	17.2	18.6	21.8	25.6	30.4	34.9	42.7	55.7	62.7	45.4	95.1
10-May	67.2	69.3	75.5	59.0	62.9	64.0	50.5	42.1	36.8	30.7	27.2	24.3	23.1	23.6	23.3	24.0	24.6	24.2	26.1	31.1	45.3	54.1	61.3	63.8	43.1	75.5
11-May	67.2	59.6	63.2	70.5	72.0	76.7	76.6	74.0	65.7	58.4	50.3	43.5	44.6	53.7	79.0	58.5	57.4	61.6	68.0	70.9	77.6	88.1	98.5	OR	66.8	98.5
12-May	OR	OR	OR	OR	OR	OR	OR	82.2	72.9	61.6	48.3	40.1	36.5	32.4	34.8	37.3	39.8	40.1	42.2	44.3	46.0	49.8	51.8	65.1	--	82.2
13-May	73.5	82.9	90.7	95.4	98.0	OR	66.7	52.3	39.7	34.8	31.9	30.5	29.3	27.2	27.9	34.5	32.2	30.9	34.2	42.6	57.2	70.0	73.5	75.6	53.5	98.0
14-May	76.2	62.1	65.5	64.0	63.5	52.8	48.9	47.0	45.2	42.3	37.3	30.8	27.6	24.5	35.4	55.4	51.5	64.3	71.1	75.0	74.0	75.5	78.8	81.8	56.3	81.8
15-May	84.1	87.9	88.2	87.6	84.9	87.2	97.1	95.9	92.7	86.3	80.3	73.6	65.3	59.7	56.6	53.2	50.5	45.7	41.4	41.2	66.7	86.4	95.7	97.9	75.2	97.9
16-May	98.7	98.3	98.4	97.8	97.1	95.4	80.7	67.5	55.9	47.6	39.0	34.4	30.5	29.1	28.1	26.2	24.3	25.2	25.9	28.0	32.7	44.4	53.4	61.6	55.0	98.7
17-May	77.6	83.3	89.1	91.1	84.0	83.8	64.8	49.7	41.8	38.3	33.6	31.0	30.1	29.3	27.2	25.3	22.5	18.4	20.9	26.1	32.2	46.0	57.6	70.0	48.9	91.1
18-May	80.6	87.0	77.3	49.4	51.9	54.8	48.2	46.2	44.1	39.5	32.6	30.9	33.7	28.9	24.9	27.4	29.5	28.9	27.5	32.1	36.6	44.1	72.9	77.3	46.1	87.0
19-May	87.2	91.3	79.8	60.3	75.4	74.8	59.3	55.1	50.6	44.9	40.7	41.6	42.7	49.4	72.2	85.1	90.8	89.9	94.2	94.6	95.6	95.7	93.1	97.5	73.4	97.5
20-May	OR	OR	OR	OR	OR	99.2	96.3	92.4	90.3	86.6	82.1	84.8	88.4	88.2	88.4	86.8	85.8	94.4	99.1	OR	OR	OR	OR	OR	--	99.2
21-May	OR	OR	OR	OR	OR	OR	OR	87.6	78.3	71.2	75.8	85.9	92.9	OR	OR	95.7	91.1	88.6	96.9	96.9	97.8	OR	OR	OR	--	97.8
22-May	OR	OR	OR	OR	OR	OR	98.9	91.8	80.9	77.5	70.1	65.6	72.0	73.7	92.4	79.0	65.0	60.4	58.1	60.5	68.4	90.0	OR	OR	--	98.9
23-May	OR	OR	OR	OR	98.7	98.5	77.5	65.2	63.1	53.2	51.2	40.5	43.0	52.5	37.9	36.5	36.4	41.3	49.2	45.6	56.2	69.5	85.1	90.5	59.6	98.7
24-May	88.4	90.9	93.5	96.0	98.8	94.5	88.0	59.7	47.2	39.8	32.9	27.8	32.4	32.8	34.7	32.4	30.2	28.3	28.8	31.8	37.2	42.8	44.0	45.3	53.3	98.8
25-May	48.3	51.3	72.3	89.1	94.7	83.0	55.6	48.6	45.7	41.7	35.5	32.6	31.2	31.4	30.8	31.2	29.0	29.7	32.6	35.2	41.3	59.5	79.0	84.2	50.6	94.7
26-May	89.9	94.8	96.5	91.3	76.8	59.1	52.9	46.8	41.1	35.7	31.6	29.7	28.0	28.0	28.1	26.6	26.0	25.5	25.1	26.5	54.0	64.9	73.9	75.1	51.2	96.5
27-May	80.4	89.5	92.4	OR	OR	92.5	82.2	71.8	57.8	45.1	35.8	32.0	27.8	26.8	25.2	27.6	29.4	30.8	29.3	30.3	38.0	56.0	71.9	77.0	52.3	92.5
28-May	82.0	86.2	86.3	82.1	77.4	71.5	57.0	46.8	35.3	25.8	23.7	22.8	22.0	21.9	21.7	21.1	21.5	22.7	24.6	29.6	48.9	67.3	76.0	75.6	47.9	86.3
29-May	81.8	85.3	91.3	92.9	OR	77.6	55.3	34.2	29.1	26.3	24.8	23.7	22.4	21.4	21.8	22.2	21.7	21.2	21.7	23.5	30.7	43.9	50.3	56.2	42.6	92.9
30-May	63.2	73.8	90.5	95.5	95.7	86.7	77.1	76.1	73.1	62.2	46.2	37.1	26.3	25.0	22.2	23.1	22.5	24.1	24.2	29.1	44.7	68.5	78.3	77.8	56.0	95.7
31-May	74.2	76.6	86.1	93.1	88.7	83.2	66.6	52.2	41.8	36.4	32.1	30.7	30.1	27.9	25.7	26.8	34.0	34.6	36.0	45.0	54.8	86.8	OR	OR	52.9	93.1
73.9 76.2 78.6 77.2 77.5 75.1 66.6 60.0 53.4 45.7 42.5 39.4 37.8 36.3 38.4 40.3 38.8 39.1 40.7 42.4 53.1 63.4 68.5 70.6																										Diurnal Average
98.7 98.3 98.4 97.8 98.8 99.2 98.9 95.9 92.7 86.6 92.7 89.8 92.9 88.2 92.4 95.7 91.1 94.4 99.1 96.9 97.8 95.7 98.5 97.9																										Diurnal Maximum
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

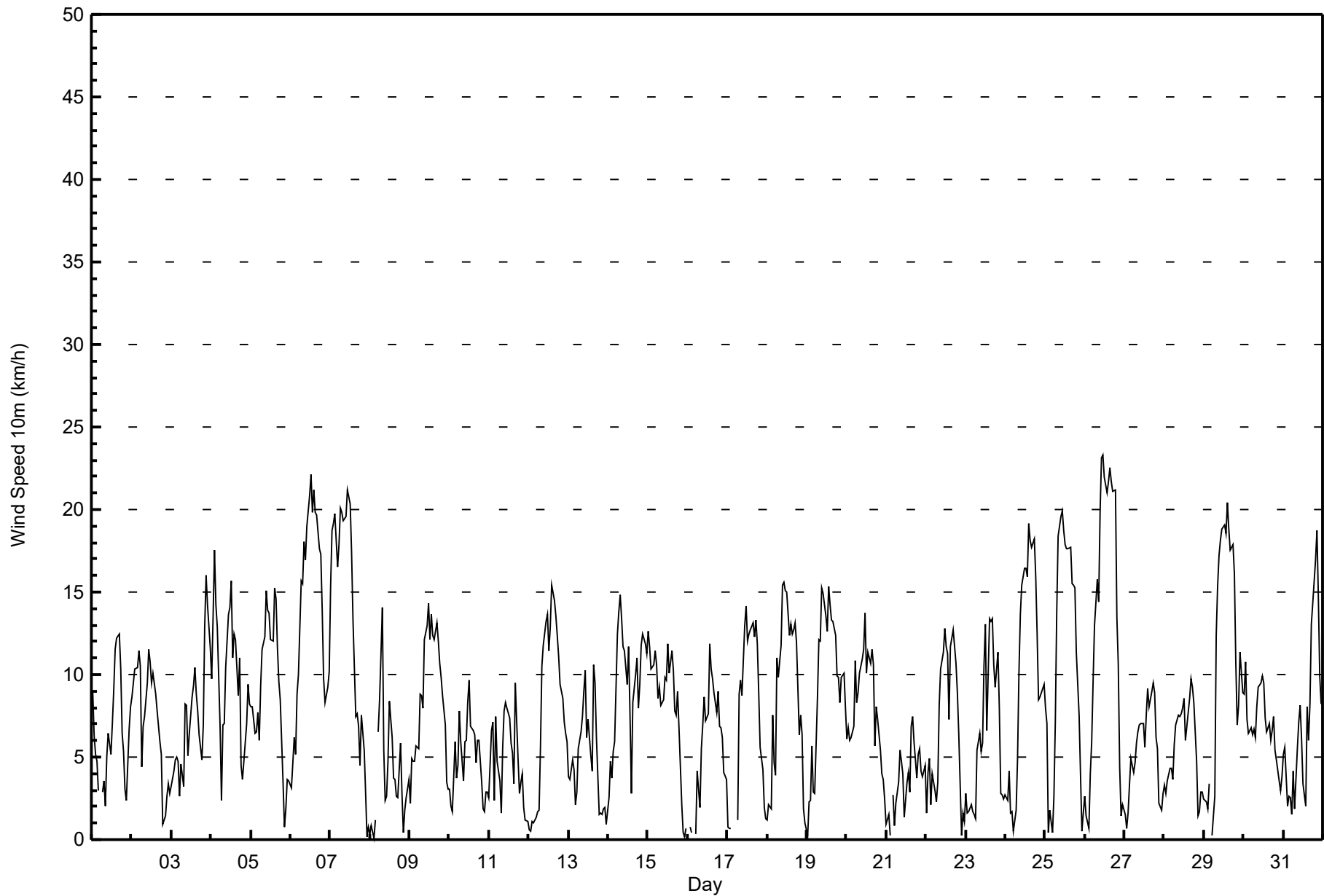
Conklin - May 2025

Maximum Speed: 23 km/h on May 26 12:00										Maximum Daily Speed Average: 13.3 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 8 03:00										Minimum Daily Speed Average: 1.8 km/h on May 14										Hours of Data: 735						
Maximum Diurnal Speed Average: 5.2 km/h at hour 16										Minimum Diurnal Speed Average: 0.7 km/h at hour 22										Hours of Missing Data: 9						
Monthly Average Velocity: 2.7 km/h 188.4 deg										Percentiles: P ₁ = 0 P ₁₀ = 2 Q ₁ = 4 Median = 7 Q ₃ = 11 P ₉₀ = 15 P ₉₉ = 21										Percent Operational Time: 98.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	N9	N6	NNW5	NNE5	NNE3	UO	NNE3	ENE4	ESE2	SE5	SE6	SE5	SW7	SSW9	SSW11	SW12	SW12WSW10	SSW6	SE5	SE3	SW2	SW7	SSW8	SSW2.5	SW12	
2-May	SSW9	SSW9	SSW10	SSW10	SW11	SW10	SW4	WNW7	NW7	NW9	NNW12	NW11	NW9	NW10	NW9	NW8	NW7	WNW6	NW5	NNW1	S1	SE3	SSE3	SSE3	W4.1	NNW12
3-May	SSE3	SE4	SE5	SSE5	SE5	SE3	ESE5	ESE3	WSW8	SSW8	WSW5	NW6	NW9	WNW9	W10	WNW9	W8	NW6	NW5	NW7	NNW13	NNW16	NNW14	NNW12	WNW3.6	NNW16
4-May	NW10	NW13	NW18	NW14	NW13	WNW7	NW2	WSW7	WNW7	NW10	NNW14	NNW14	NNW16	NW11	NNW12	NNW12	NNW9WNW11	WNW4	W4	SW5	SW7	SW9	W8	NW8.5	NW18	
5-May	WSW8	WNW8	WNW6	WNW6	WNW8	WNW6	NW9	NW12	NW12	NW15	NW14	NW14	NW12	NW12	NNW15	NNW15	NW12	NW10	NNW8	NNE3	S1	SSE2	SSE4	SSE4	NW7.7	NNW15
6-May	S3	SSW5	SSW6	S5	SSE9	S10	S16	SSW16	SSW18	SSW17	SSW19	SSW21	SSW22	SSW20	SSW21	SSW20	SSW20	S18	S17	S14	SSE10	SE8	SSE9	SSE10	S13.3	SSW22
7-May	SSE15	S19	S19	S20	SSE17	SSE18	S20	S20	S19	S20	S21	SSW21	SSW20	SSW17WSW13	W7	W8	WNW7	WNW4	NW8	NNW5	N3	SSW0	NNW1	S10.3	S21	
8-May	NNW0	SSE1	NW0	SSE1	UO	NW7	NNW8	NW14	NW5	SSW2	WSW3	NW5	NW8	NW6	W4	S4	SW3	S3	NW6	WNW3	SW0	S2	SSE3	S4	WNW2.4	NW14
9-May	SSE2	S5	S5	S5	SSE6	S6	SW9	SW9	SW8WSW12WSW13WSW14WSW12WSW14WSW12	SW12	SSW13	SSW12	SSW11	SSW10	S9	S7	S3	S3							SW7.9	WSW14
10-May	SE3	SE2	W2	SSW6	SSW4	S4	SW8	WNW6	NNW4	NW6	WNW6	WNW8WSW10	WNW7	W7	SW6	W5	W6	SW6	SSW3	SSE2	SSE2	SE3	S3		WSW3.2	WSW10
11-May	SE3	SSE7	S7	ESE2	SSE7	S5	ESE4	ESE2	ESE6	ESE8	SE8	S8	SSW7	NNW6	W5	SSW3	NNW10	N5	NNE3	ENE3	SE4	SSE2	WNW1	NW1	SE1.8	NNW10
12-May	S1	WSW1	S1	SSE1	NW1	SSE2	NNW2	N6	N11	NNE12	NNE13	NNE14	NE11	NE13	NE15	NNE14	NNE14	NNE12	NNE11	N9	N9	NNW7	NNW6	NW6	NNE7.1	NE15
13-May	NW4	NW4	NNW5	NNW4	N2	NNW3	NW5	NW7	NNW7	NNW9	NNW10	NW6	NNW7	W5	W4	SW11	SSW10	SSW6	SE2	NNW2	SSE2	SSE2	S2	NNE1	WNW2.8	SW11
14-May	SSW3	SSW5	SSW4	SW5	SSW6	S12	SSW14	SSW15	SSW13	SW12	SW11	WSW9WNW12	WNW8	ESE3	SE8	ESE10	NNE11	NNE8	N9	N12	N12	N12	N11		WSW1.8	SSW15
15-May	N13	N12	N10	N11	N11	N11	N9	N9	N8	N8	N10	N10	N12	N10	N11	N10	NNE8	NNE8	NNE9	NNE7	NNW2	SSE0	WNW0	NW1	N8.1	N13
16-May	UO	NNW1	WNW0	UO	UO	S0	N4	SE2	NE6	NNE7	N9	ENE7	ENE8	ESE12	ESE10	ESE10	ESE9	ESE8	E9	E7	ESE7	ESE6	SE4	SE4	E4.7	ESE12
17-May	SSW1	NW1	SSW1	UO	S2	UO	ENE1	SSE9	SSE10	SE9	ESE13	ESE14	SE12	SE12	ESE13	SE13	SE12	SSE13	SE12	SSE9	SE6	SSE4	SSE2	ENE1	SE7.2	ESE14
18-May	NW1	NW2	SSE2	SSE8	SE5	SE4	SSE11	SE10	SSE12	SSE15	SE16	SE15	SE15	SE12	ESE13	ESE12	ESE13	ESE13	SE12	SSE6	SSE8	SSE6	NNW2	S1	SE8.2	SE16
19-May	NE0	NNW2	ESE2	SE6	ESE3	ESE3	SE9	SE12	SSE12	SSE15	SSE15	SSE14	SE13	SE15	SE14	SSE13	SE13	SE12	SE10	SE10	SE8	SE10	SE10	SE8	SE9.2	SE15
20-May	SE6	SE7	ESE6	SE6	ESE7	SE11	SE8	SE9	SE10	SE11	SE12	SE14	SE10	ESE11	SE11	SE12	SSE11	SE6	SE8	SE7	SE5	SSE4	ESE4	SSE2	SE8.1	SE14
21-May	ENE1	E2	NW0	UO	SE3	S1	SSW2	SSE3	SSW5	SSW5	SE4	NE1	N3	NNE4	SSE3	SSE7	SE7	SE6	SE4	SE5	SSE6	SSE4	SSE4	S4	SSE2.7	SE7
22-May	SSW2	SE4	SE5	ESE2	ESE4	SE3	S2	S3	SSE8	SSE10	S11	S13	S12	S11	SSW7	S12	S13	SSE12	SSW11	S9	SSE6	E0	NNW2	S1	S6.2	S13
23-May	NNW3	NNW2	S2	SSE2	S2	NNW2	NE1	SSE5	SE6	SE5	WSW6	SSW11	S13	SSW7	S13	S13	S13	SSW11	SE9	S11	S8	S3	SSE3	SE2	S5.3	S13
24-May	S3	SSE2	SSE4	S2	NNW2	E1	SE2	SSE5	SSE10	SSE14	S15	S16	S16	SSW16	S19	S18	S18	S18	S16	S12	SSE8	SSE9	SSE9	SSE9	S9.8	S19
25-May	SSE8	SSE7	SE0	N2	N0	ESE3	SSE7	S14	S18	S20	SSE20	S19	S18	S18	S18	S18	S16	S15	SSE15	SSE11	SSE8	SE4	SSE1	NNW2	S10.4	SSE20
26-May	SE3	SSE1	S1	SSE4	SSE6	S10	S13	S16	S14	SSE20	S23	S23	S22	S21	S22	S23	S22	SSE21	S21	S13WNW11	NNW4	SSW1	SSW2		S12.1	S23
27-May	SSE1	SSE1	SSE2	N3	NNW5	NW4	NW5	NW6	NW7	NW7	NNW7	NW7	W6	WNW8	W9	WNW8	W9	W9	WSW9	W6	WSW5	WSW2	SSE2	SSE3	WNW4.1	W9
28-May	SSE3	SE3	SE4	SSE4	SSE4	S4	SSW6	SW7	SW8	WSW7	SSW8	WSW8	SW9	WSW6	SW8	SW9	SW10	SW9	SW8	SW5	S1	S2	SSW3	SSW3	SSW5.0	SW10
29-May	SSE2	SE2	SE2	SSW3	UO	W0	SSE3	SSE12	SSE15	S17	S18	S19	S19	S19	S20	SSE19	S18	S18	S16	S11	SSE7	WNW8	NW11	WNW9	S9.5	S20
30-May	WNW9	NW11	NW7	W6	W7	WSW6	W7	NW6	NW8	NW9	NW9	NNW10	NW10	WNW7	WNW7	WNW7	SW6	SSW7	SW7	W5	SW5	SSW4	SSE3	SSE4	WNW5.1	NW11
31-May	S5	S6	SE2	N3	SSE3	SSE2	S4	SE2	ESE5	ESE7	ESE8	E6	ENE3	E2	SSW8	SW6	N8	N13	N14	N17	NNW19	NNW15	NNW10	NNW8	N2.6	NNW19
SSW1.0SSW1.1 S1.1SSW1.8 S1.7 S2.3 S2.7 S3.3 S3.7 S3.9 S3.7SSW3.9SSW3.9SSW3.8SSW4.4 S5.2 S4.7 S3.9 S3.4 SSE2.3 S1.3 S0.7 S0.7SSW1.0																								Diurnal Average		
SSE15 S19 S19 S20 SSE17 SSE18 S20 S20 S19 SSE20 S23 S23 SSW22 S21 S22 S23 S22 SSE21 S21 N17 NNW19 NNW16 NNW14 NNW12																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Conklin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Conklin - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	263	35.78	35.78
6 - 11	289	39.32	75.10
12 - 19	157	21.36	96.46
20 - 28	26	3.54	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 735

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Conklin - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	7	3	6	4	16	39	51	38	21	8	6	8	6	17	24	263
6 - 11	23	8	2	2	3	14	32	33	14	26	25	12	15	27	38	15	289
12 - 19	9	6	2	0	0	8	19	17	46	11	4	7	0	1	13	14	157
20 - 28	0	0	0	0	0	0	0	3	15	8	0	0	0	0	0	0	26
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	21	7	8	7	38	90	104	113	66	37	25	23	34	68	53	735

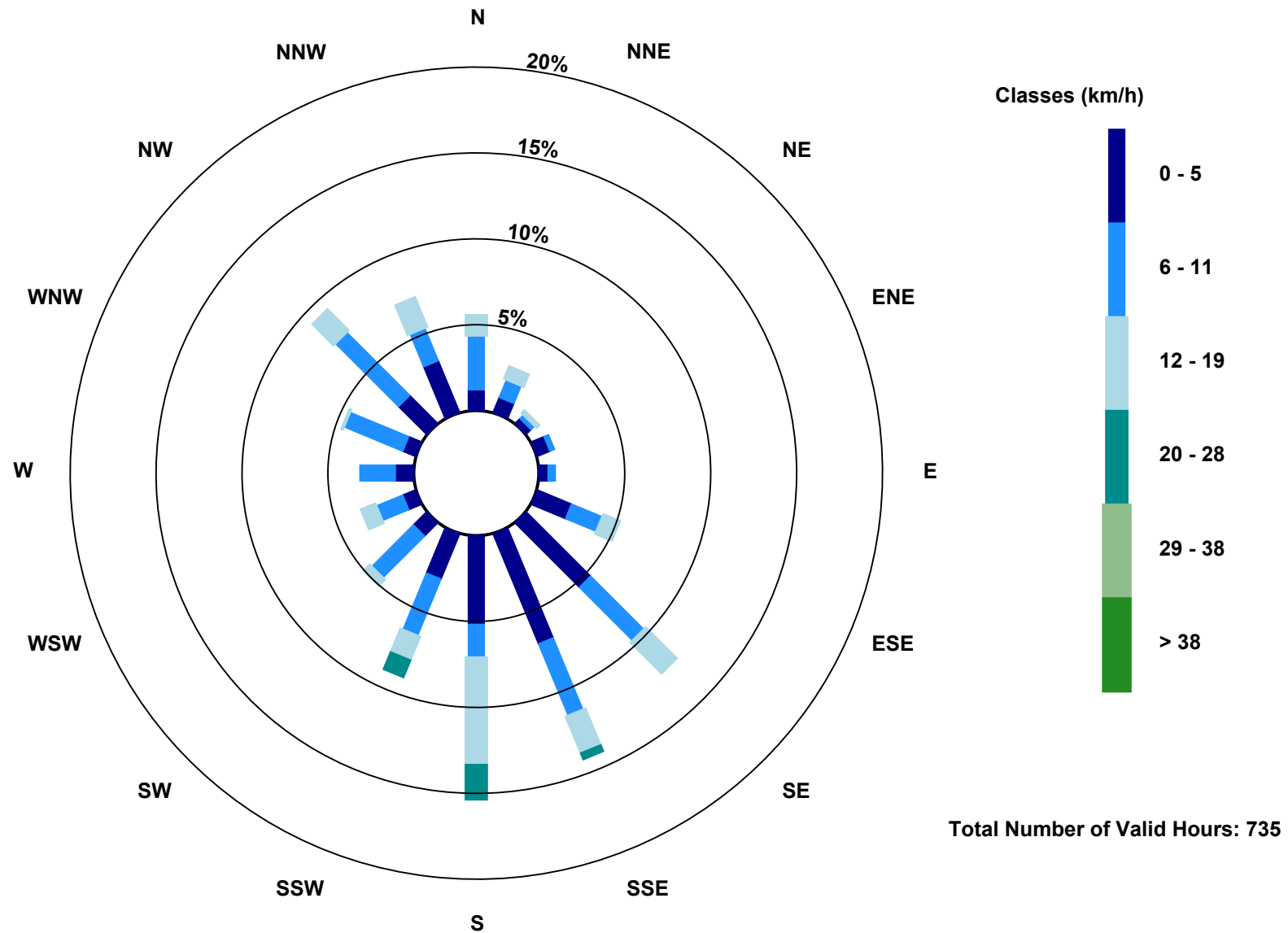
Total Number of Valid Hours: 735

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Conklin





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 26 12:00																		Hours in Service: 744 Hours of Data: 735 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8							
Minimum Value: 1 km/h on May 28 03:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	2	2	1	UO	1	1	2	2	3	3	4	4	4	4	4	4	3	1	2	2	2	2	4
2-May	2	2	2	4	4	4	2	3	3	4	4	5	5	5	4	3	3	3	2	1	1	1	1	1	5
3-May	1	1	1	1	1	2	2	2	3	3	3	3	4	4	5	4	4	3	2	3	4	6	5	5	6
4-May	3	5	7	6	6	3	2	2	3	4	5	5	5	4	4	5	4	6	2	1	2	3	3	3	7
5-May	4	4	2	3	3	2	4	5	5	6	5	6	5	5	6	5	5	4	3	2	1	1	1	1	6
6-May	1	1	2	1	3	3	5	4	5	5	6	6	7	6	6	6	6	6	6	4	2	1	2	3	7
7-May	4	5	5	5	5	5	6	6	6	6	6	7	6	5	5	3	3	3	2	3	2	1	2	2	7
8-May	1	1	1	1	UO	3	3	6	3	3	3	2	3	3	3	1	1	1	2	2	1	1	1	1	6
9-May	2	1	1	1	1	1	2	2	3	5	5	5	5	5	5	5	4	4	3	3	3	4	1	1	5
10-May	1	1	2	1	2	2	2	2	2	3	4	4	4	3	3	4	3	3	2	1	1	1	1	1	4
11-May	2	3	4	2	2	2	1	2	2	2	4	4	3	5	5	2	5	2	3	2	2	1	2	2	5
12-May	1	1	1	1	1	1	2	2	3	4	4	4	4	5	5	6	4	4	4	2	2	2	2	1	6
13-May	2	1	1	1	1	2	2	2	3	4	4	4	3	2	2	5	3	3	2	3	2	1	1	1	5
14-May	2	1	1	2	3	4	4	4	4	4	4	5	5	4	3	4	3	5	3	3	4	4	4	4	5
15-May	4	4	3	3	4	3	2	3	3	3	3	3	4	4	4	4	3	3	3	2	1	1	1	1	4
16-May	UO	1	1	UO	UO	1	1	1	2	3	3	3	4	4	4	3	4	3	4	3	2	2	1	2	4
17-May	1	1	1	UO	1	UO	1	4	3	4	4	4	4	4	4	4	4	4	4	2	2	1	2	1	4
18-May	1	2	3	2	2	4	4	3	3	4	5	5	4	4	4	4	4	4	3	2	2	2	2	1	5
19-May	1	2	2	1	2	1	3	3	3	4	4	4	4	6	4	4	3	4	3	3	2	2	2	2	6
20-May	2	2	2	2	2	3	2	3	3	2	3	4	3	3	3	3	3	2	2	2	1	1	2	1	4
21-May	1	1	1	UO	1	1	1	2	1	1	2	2	2	2	2	2	2	3	2	1	2	1	1	1	3
22-May	1	2	1	1	1	2	2	2	3	3	4	4	4	4	3	4	4	3	4	3	1	1	1	1	4
23-May	1	1	1	1	1	2	1	3	3	3	2	5	4	5	4	4	4	4	3	4	3	1	1	1	5
24-May	1	2	1	1	1	2	1	3	5	4	5	6	5	5	6	6	6	6	5	4	2	2	2	2	6
25-May	2	2	2	1	1	2	3	5	6	6	6	6	6	5	6	5	5	4	5	4	2	1	1	1	6
26-May	1	2	1	1	2	3	4	5	5	6	7	7	6	6	6	7	7	6	7	5	6	2	2	2	7
27-May	1	1	1	1	2	2	2	3	3	3	3	3	3	4	5	4	5	4	4	3	2	2	1	1	5
28-May	1	1	1	1	1	1	1	2	2	3	4	4	4	4	4	4	4	3	3	2	1	2	1	2	4
29-May	1	1	1	1	UO	1	4	5	5	5	6	6	6	6	6	6	6	5	5	3	1	6	5	4	6
30-May	5	5	4	3	3	3	3	3	4	4	4	4	4	3	3	3	3	2	3	2	2	1	1	1	5
31-May	1	1	2	2	2	2	1	1	2	2	3	2	2	2	4	3	2	5	5	6	6	7	4	4	7
5 5 7 6 6 5 6 6 6 6 6 7 7 7 6 6 7 7 6 7 6 6 7 5 5																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

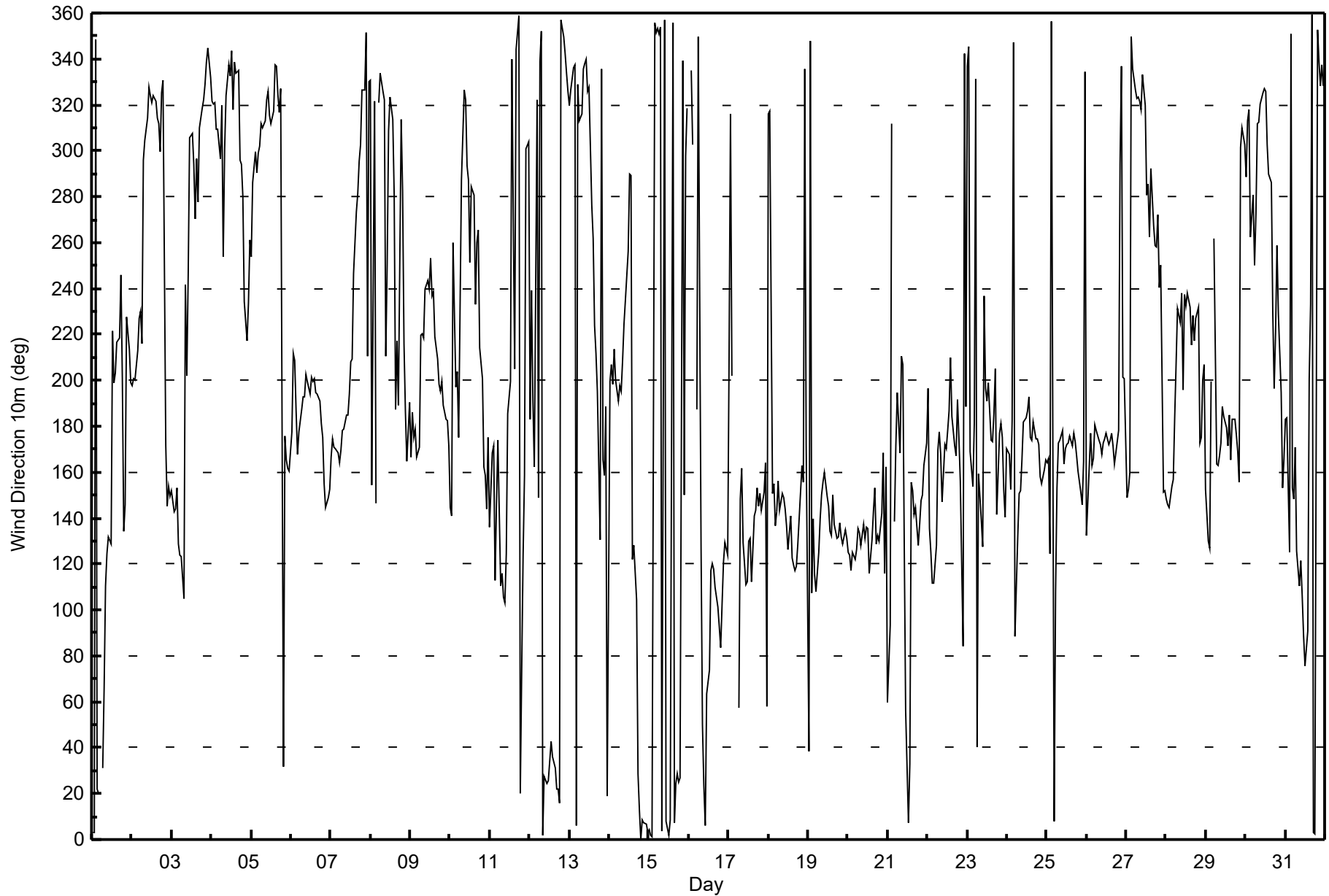
Conklin - May 2025

Direction of Maximum Speed: 174 deg on May 26 12:00 Direction of Maximum Daily Speed Average: 188.5 deg on May 6																				Hours in Service:		744			
Direction of Minimum Speed: 322 deg on May 8 03:00																				Direction of Minimum Daily Speed Average: 1.8 deg on May 14		Hours of Data:		735	
Monthly Average Direction: 188.4 deg																						Hours of Missing Data:		9	
																						Percent Operational Time:		98.8	
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	3	348	22	20	UO	31	66	110	124	132	129	221	199	203	216	218	246	200	134	146	228	214	199	199.2
2-May	198	201	200	213	227	230	216	296	305	314	327	324	321	324	322	314	312	300	325	331	172	145	154	149	275.8
3-May	152	143	144	153	129	124	123	105	242	202	246	306	307	294	271	297	278	310	318	322	329	339	344	332	301.5
4-May	322	320	321	310	309	297	320	254	301	324	337	332	343	318	339	334	335	296	294	280	234	218	233	261	311.6
5-May	254	286	300	290	299	302	312	310	313	322	326	316	312	317	337	337	324	317	327	32	176	165	162	160	314.2
6-May	178	212	209	187	168	178	187	193	193	202	200	194	202	200	201	195	194	191	181	175	155	145	149	153	188.5
7-May	167	174	171	170	168	164	169	178	179	185	185	194	208	210	247	273	281	295	303	326	327	352	210	330	191.1
8-May	330	155	322	147	UO	321	334	326	322	211	251	309	323	313	281	187	217	189	314	283	216	187	165	190	299.2
9-May	167	186	175	179	167	171	220	220	219	239	243	240	253	237	239	219	209	198	195	200	189	183	183	171	214.1
10-May	145	141	260	197	204	175	231	287	327	322	293	288	251	284	281	233	260	266	214	201	162	158	144	175	247.0
11-May	136	168	172	113	147	174	110	116	105	103	124	185	199	340	270	205	344	359	20	74	124	159	301	304	141.9
12-May	183	239	191	162	322	149	338	352	2	28	24	26	34	43	36	31	22	22	16	357	350	342	334	326	16.9
13-May	320	326	336	337	6	329	313	316	336	338	340	326	328	276	262	224	211	195	131	336	165	158	188	19	303.6
14-May	200	207	198	214	200	191	198	195	208	224	235	256	290	290	122	128	104	29	13	0	9	7	7	3	246.3
15-May	4	2	1	355	351	353	351	354	4	357	8	5	2	8	356	7	24	28	25	27	339	150	298	318	3.8
16-May	UO	335	303	UO	UO	187	350	127	50	23	6	64	74	117	120	118	110	102	93	84	103	121	130	124	90.7
17-May	210	316	202	UO	184	UO	57	149	162	129	111	112	130	131	112	141	143	153	145	151	143	151	164	58	136.1
18-May	316	318	150	155	137	143	156	143	151	149	144	137	126	141	123	120	117	119	128	151	163	156	336	172	138.0
19-May	39	348	107	139	115	108	125	140	150	155	160	149	145	134	132	150	137	131	132	138	132	129	135	131	139.1
20-May	125	124	117	125	122	126	135	134	128	137	131	136	136	116	131	143	153	129	132	130	142	168	116	163	132.6
21-May	60	93	312	UO	139	171	195	168	211	207	129	56	7	33	156	152	142	145	128	138	148	150	163	173	149.3
22-May	196	135	125	112	112	128	170	177	168	147	172	170	178	187	210	184	171	167	192	175	156	84	343	189	170.1
23-May	337	345	169	154	181	331	40	159	139	128	237	196	191	199	174	174	186	205	142	177	181	175	153	140	178.2
24-May	170	168	152	183	347	88	132	150	152	165	182	184	187	193	175	174	182	175	174	172	158	155	161	165	173.2
25-May	164	166	124	356	8	108	153	173	174	178	163	170	172	173	176	172	177	173	167	160	151	146	165	334	169.1
26-May	132	147	177	163	166	180	178	174	172	168	173	174	177	172	174	177	171	164	174	178	294	337	202	201	175.0
27-May	149	153	160	350	336	326	323	323	322	318	333	320	281	286	262	292	267	259	258	272	240	250	152	152	288.8
28-May	148	146	145	154	157	184	207	231	225	238	196	238	233	238	232	215	228	217	227	232	173	175	200	207	213.7
29-May	152	130	127	199	UO	262	164	163	167	173	188	184	179	172	185	166	183	183	176	169	156	301	310	302	181.1
30-May	289	313	318	263	281	250	273	312	313	321	325	327	326	303	290	286	230	196	221	259	229	195	153	166	285.8
31-May	183	183	125	351	153	148	171	125	110	121	106	89	76	91	201	233	360	3	3	353	338	328	338	328	3.7
192.0 203.3 190.8 192.3 184.0 186.8 189.3 191.0 185.9 182.1 183.9 192.0 207.7 199.9 197.5 186.9 187.0 185.3 172.6 168.4 170.7 171.8 185.4 199.9																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Conklin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Conklin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on May 26 23:00																			Hours in Service: 744 Hours of Data: 735 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8						
Minimum Value: 9 deg on May 28 02:00																									
Percentiles: P ₁ = 11 P ₁₀ = 17 Q ₁ = 22 Median = 28 Q ₃ = 44 P ₉₀ = 67 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																		Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		19	20	21	22	23	24
1-May	19	23	23	25	33	UO	33	49	75	47	56	72	69	55	40	34	26	29	43	10	23	33	17	15	75
2-May	15	15	16	28	23	24	58	36	34	30	30	35	44	43	46	46	52	41	26	89	64	37	26	37	89
3-May	22	14	20	13	10	37	14	68	41	32	72	74	48	42	42	41	48	27	19	15	18	19	17	23	74
4-May	22	20	22	26	27	31	70	23	36	28	24	22	23	25	23	27	30	35	37	33	28	21	19	28	70
5-May	37	38	30	30	28	29	27	26	27	28	29	30	30	33	27	25	30	31	25	50	78	25	22	21	78
6-May	33	22	18	23	18	21	19	20	21	23	22	22	25	27	23	24	24	24	21	18	16	9	11	14	33
7-May	18	17	17	16	18	18	19	21	21	22	21	28	25	24	28	37	37	33	28	16	14	12	88	68	88
8-May	83	74	84	57	UO	30	17	21	52	69	66	39	20	35	71	38	49	52	24	49	87	61	43	19	87
9-May	30	26	17	20	17	25	24	22	27	32	40	32	39	30	35	33	26	23	19	20	20	20	23	18	40
10-May	21	44	56	17	64	28	26	37	78	54	61	44	42	49	48	55	62	47	20	19	29	47	28	23	78
11-May	34	29	55	63	15	28	25	83	32	24	38	55	48	73	65	55	37	56	81	51	41	54	75	60	83
12-May	94	83	76	74	80	44	73	27	21	31	28	28	34	30	27	27	24	24	23	19	14	13	16	13	94
13-May	16	15	10	17	35	55	33	36	38	38	33	74	41	62	64	32	30	33	80	76	42	41	74	48	80
14-May	37	24	26	24	23	19	20	19	24	29	37	47	35	44	94	43	30	27	25	21	22	22	22	21	94
15-May	21	20	18	19	18	18	17	20	23	24	23	26	27	30	28	32	42	51	32	22	34	95	87	85	95
16-May	UO	90	74	UO	UO	77	20	71	67	65	38	54	54	32	37	33	41	43	31	33	24	18	15	37	90
17-May	65	85	78	UO	18	UO	59	35	34	42	29	26	33	35	27	24	24	23	21	16	13	13	81	69	85
18-May	48	30	85	19	32	52	27	25	26	23	25	27	21	23	24	21	18	18	17	19	17	20	58	81	85
19-May	84	44	60	14	56	51	16	19	26	24	27	24	24	16	17	20	16	19	16	15	14	14	13	15	84
20-May	18	18	19	17	17	16	19	18	15	18	23	19	24	21	17	20	21	24	18	15	14	28	49	29	49
21-May	75	56	95	UO	28	68	34	40	29	39	44	66	34	38	61	26	24	32	26	23	14	17	19	19	95
22-May	59	33	14	45	23	43	40	41	29	20	25	26	20	24	33	24	22	25	24	21	12	73	35	73	73
23-May	24	43	32	45	16	81	59	39	24	62	36	44	25	49	26	29	24	24	32	20	23	26	28	37	81
24-May	42	49	21	31	40	101	49	32	26	23	29	26	27	25	23	24	21	22	19	19	14	11	16	17	101
25-May	16	16	85	40	62	51	31	23	22	23	23	25	28	28	27	25	26	23	22	19	12	10	80	35	85
26-May	48	74	80	17	20	22	21	23	24	22	22	23	24	25	24	24	22	19	20	36	48	49	102	76	102
27-May	74	96	73	27	23	38	30	34	46	46	50	44	72	53	47	52	45	40	39	38	24	55	70	17	96
28-May	13	9	13	20	17	25	19	27	28	43	55	55	54	80	58	42	34	29	26	24	28	68	32	48	80
29-May	46	18	27	27	UO	100	91	21	23	24	26	29	25	26	25	24	25	25	22	20	12	74	41	47	100
30-May	46	41	41	44	46	44	47	45	41	36	38	36	42	52	61	53	56	35	28	22	27	11	19	17	61
31-May	16	12	64	71	63	86	21	60	30	24	31	41	60	93	50	55	23	22	23	21	20	27	33	43	93
94 96 95 74 80 101 91 83 78 69 72 74 72 93 94 55 62 56 81 89 87 95 102 85																			Diurnal Maximum						
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS22
JANVIER
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	709	35	35	100	-	-	2	0	0.5	0
TRS(ppb) Average	707	37	37	100	3.4	0	3.1	-	0.6	-
THC(ppm) Average	707	35	37	99.73	-	-	2.7	-	2.1	-
NMHC(ppm) Average	707	35	37	99.73	-	-	0.757	-	0.113	-
CH4(ppm) Average	707	35	37	99.73	-	-	2.3	-	2	-
O3 (ppb) Average	709	35	35	100	-	-	71.5	0	54	-
NO2 (ppb) Average	708	36	36	100	-	-	36	0	5.4	-
NO (ppb) Average	708	36	36	100	-	-	4.4	-	0.4	-
NOX (ppb) Average	708	36	36	100	-	-	36.4	-	5.5	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	1092.7	0	180.4	3
Temperature 2 m (C) Average	744	0	0	100	-	-	29.4	-	22.2	-
Relative Humidity (%) Average	740	0	4	99.46	-	-	100	-	93.3	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	23	-	13	-
Wind Speed 20 m (km/h) Average	744	0	0	100	-	-	28	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	0.2	0.3	-	0	0	0	0.1	0.2	0.5	2
TRS (ppb) Average	707	0.22	0.2	-	0.1	0.1	0.2	0.2	0.2	0.3	3.1
THC (ppm) Average	707	1.98	0.1	-	1.9	1.9	2	2	2	2	2.7
NMHC(ppm) Average	707	0.004	0.044	-	0	0	0	0	0	0	0.757
CH4(ppm) Average	707	1.98	0	-	1.9	1.9	2	2	2	2	2.3
O3 (ppb) Average	709	41.62	12.4	-	6.4	25.9	32.9	42.8	50.4	56.3	71.5
NO2 (ppb) Average	708	1.11	2.1	-	0.1	0.3	0.5	0.8	1.3	2	36
NO (ppb) Average	708	0.16	0.3	-	0	0	0	0.1	0.2	0.3	4.4
NOX (ppb) Average	708	1.27	2.1	-	0.1	0.3	0.5	0.9	1.5	2.4	36.4
PM2.5 (ug/m3) Average	742	18.42	72.9	-	0.5	1.9	2.7	3.6	5.4	22.2	1092.7
Temperature 2 m (C) Average	744	13.44	6.8	-	-2.5	5	8.6	12.8	17.7	23.1	29.4
Relative Humidity (%) Average	740	54.85	24.1	-	14.1	25.6	33	52.3	74.6	91.3	100
Wind Speed 10 m (km/h) Average	744	7.1	4	-	0	2	4	7	9	12	23
Wind Speed 20 m (km/h) Average	744	9.4	5	-	0	4	6	9	12	16	28
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	16 May 2025 12:00	16 May 2025 13:00	2	Maintenance - replaced support gas cylinder
Relative Humidity	21 May 2025 05:00	21 May 2025 08:00	4	Sensor operated out of range



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

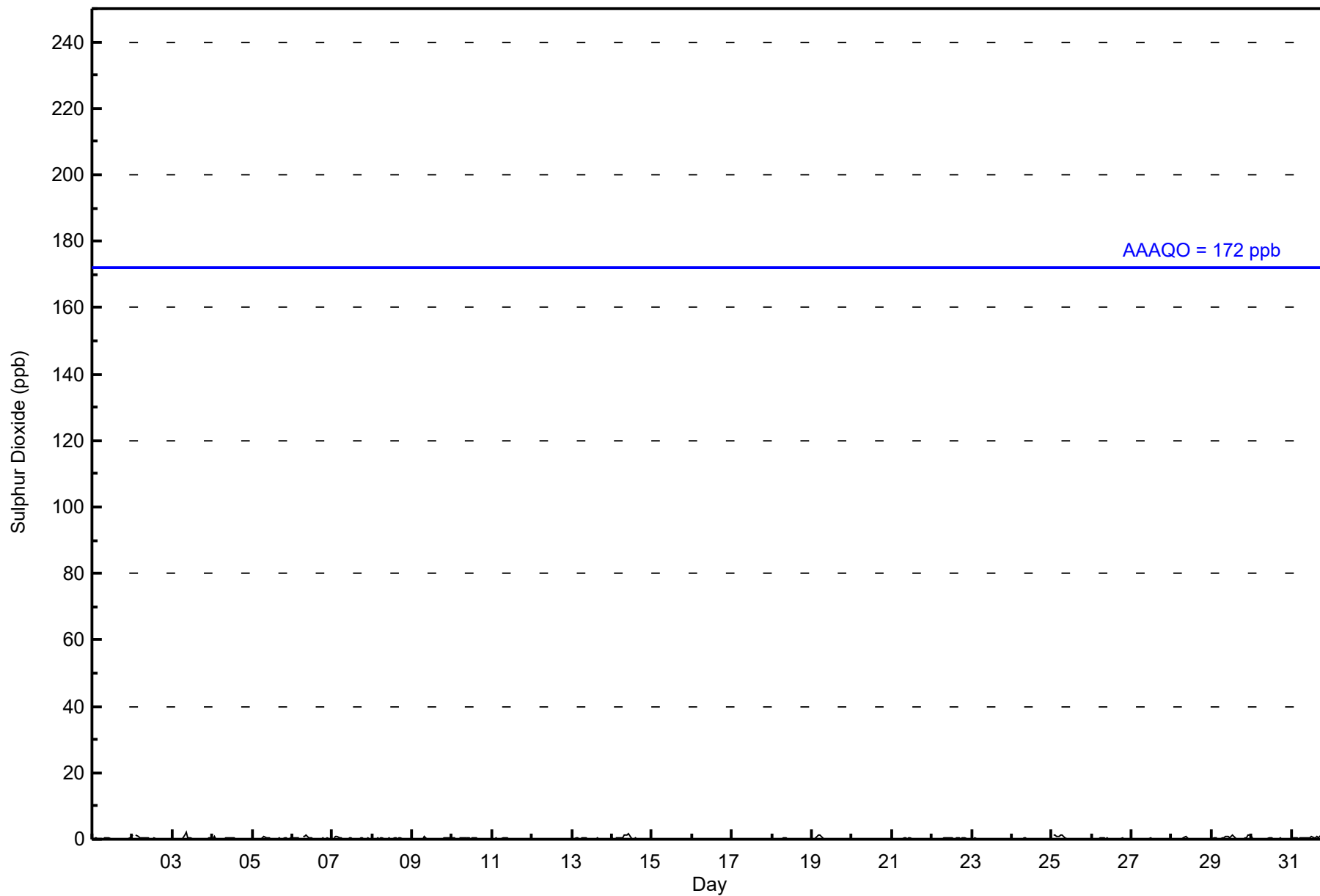
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.0 ppb on May 3 09:00 Maximum Daily Average: 0.5 ppb on May 29																			Hours in Service: 744 Hours of Data: 709							
Minimum Value: 0.0 ppb on May 1 18:00 Minimum Daily Average: 0.0 ppb on May 12 Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 21 Monthly Average: 0.20 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.3																			Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.9	0.2	0.9
2-May	1.3	Z	1.4	0.6	0.3	0.2	0.4	0.4	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	1.4
3-May	0.1	0.2	Z	0.1	0.0	0.0	0.2	1.1	2.0	0.5	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3	0.4	0.3	2.0
4-May	0.2	0.8	0.1	Z	0.2	0.1	0.2	0.1	0.4	0.6	0.6	0.6	0.5	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.8
5-May	0.0	0.0	0.0	0.0	Z	0.1	0.6	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.7
6-May	0.2	0.3	0.5	0.5	0.5	Z	0.8	0.8	1.2	0.7	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.3	0.4	1.2
7-May	Z	0.5	1.0	0.8	0.6	0.3	0.2	0.2	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.5	0.3	0.1	0.2	0.2	0.2	0.1	0.3	1.0
8-May	0.1	Z	0.1	0.3	0.1	0.3	0.4	0.2	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
9-May	0.1	0.0	Z	0.0	0.0	0.0	0.2	0.7	0.4	0.2	0.1	0.1	C	C	C	C	0.1	0.1	0.0	0.3	0.4	0.4	0.3	0.3	0.2	0.7
10-May	0.4	0.4	0.3	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.4
11-May	0.1	0.1	0.4	0.1	Z	0.2	0.3	0.5	0.5	0.5	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-May	Z	0.0	0.3	0.3	0.1	0.1	0.3	0.5	0.3	0.1	0.2	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.5
14-May	0.4	Z	0.5	0.4	0.2	0.6	0.3	1.1	1.3	1.2	1.5	0.5	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.4	1.5
15-May	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
17-May	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1
18-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.3
19-May	Z	0.1	0.5	1.0	1.1	1.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3
20-May	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
21-May	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.4
22-May	0.1	0.0	0.0	Z	0.1	0.1	0.2	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.5	0.2	0.5	0.5	0.3	0.2	0.1	0.1	0.2	0.5
23-May	0.2	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
24-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.5	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.5
25-May	Z	1.1	1.1	0.9	0.9	1.3	1.4	0.9	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4
26-May	0.0	Z	0.0	0.0	0.1	0.5	0.5	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.5
27-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.5	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.8
29-May	0.0	0.3	0.3	0.4	Z	0.2	0.6	0.6	0.9	0.8	0.7	0.6	1.2	0.7	0.2	0.1	0.1	0.1	0.0	0.2	0.3	0.3	1.3	1.3	0.5	1.3
30-May	0.5	0.2	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.5
31-May	Z	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.5	0.4	0.5	0.6	0.7	0.6	0.4	0.7	0.6	0.6	1.3	0.8	0.3	0.4	0.3	0.3	0.5	1.3
0.2 0.2 0.3 0.3 0.2 0.3 0.3 0.4 0.4 0.3 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2																								Diurnal Average		
1.3 1.1 1.4 1.0 1.1 1.3 1.4 1.1 2.0 1.2 1.5 0.6 1.2 0.7 0.4 0.7 0.6 0.6 1.3 0.8 0.4 0.4 1.3 1.3																								Diurnal Maximum		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	709	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	70	33	21	8	14	28	44	81	116	91	43	33	21	37	32	37	709
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	33	21	8	14	28	44	81	116	91	43	33	21	37	32	37	709

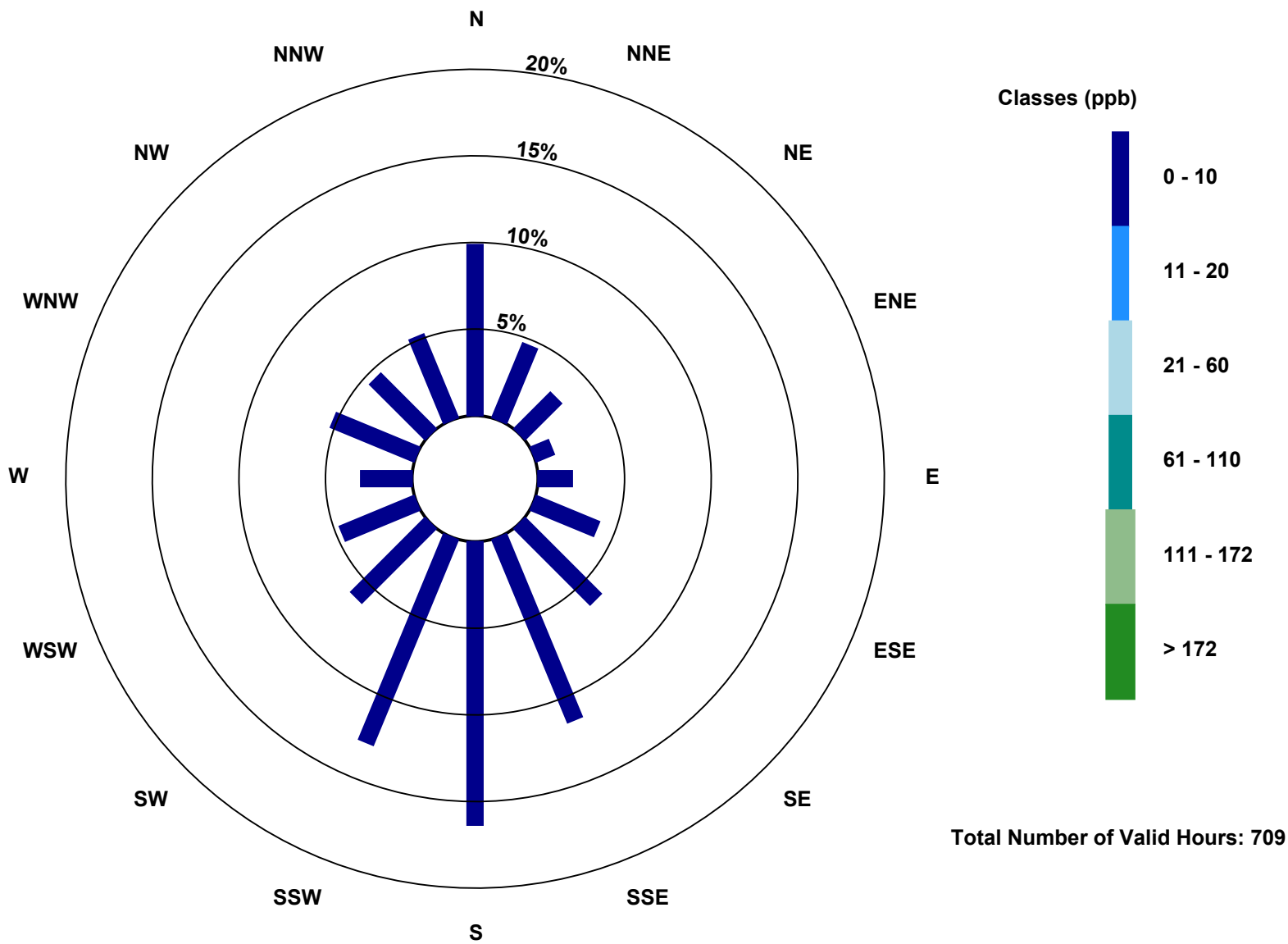
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

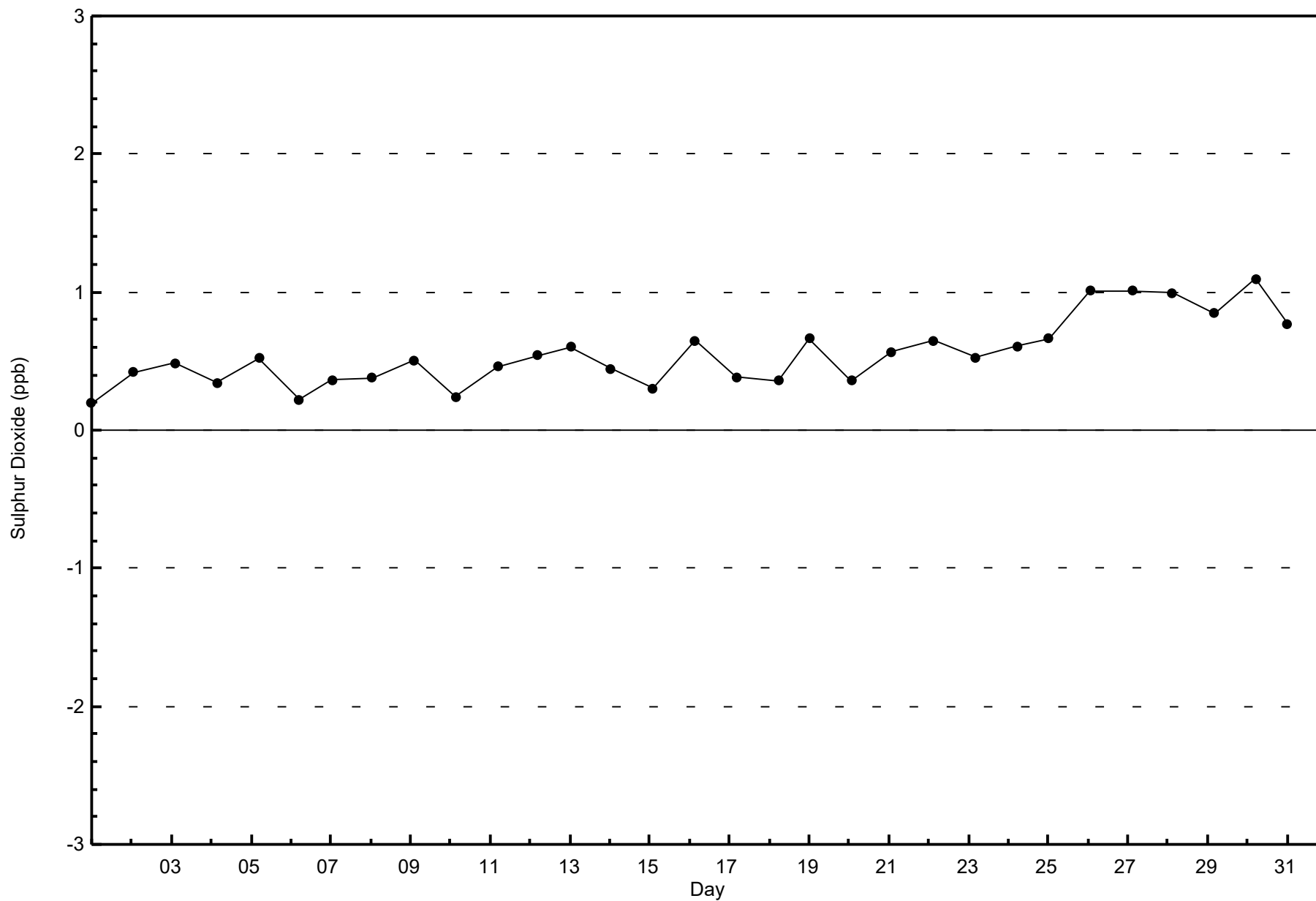
Sulphur Dioxide (SO₂) - ppb
Janvier





Wood Buffalo Environmental Association
Zero Responses

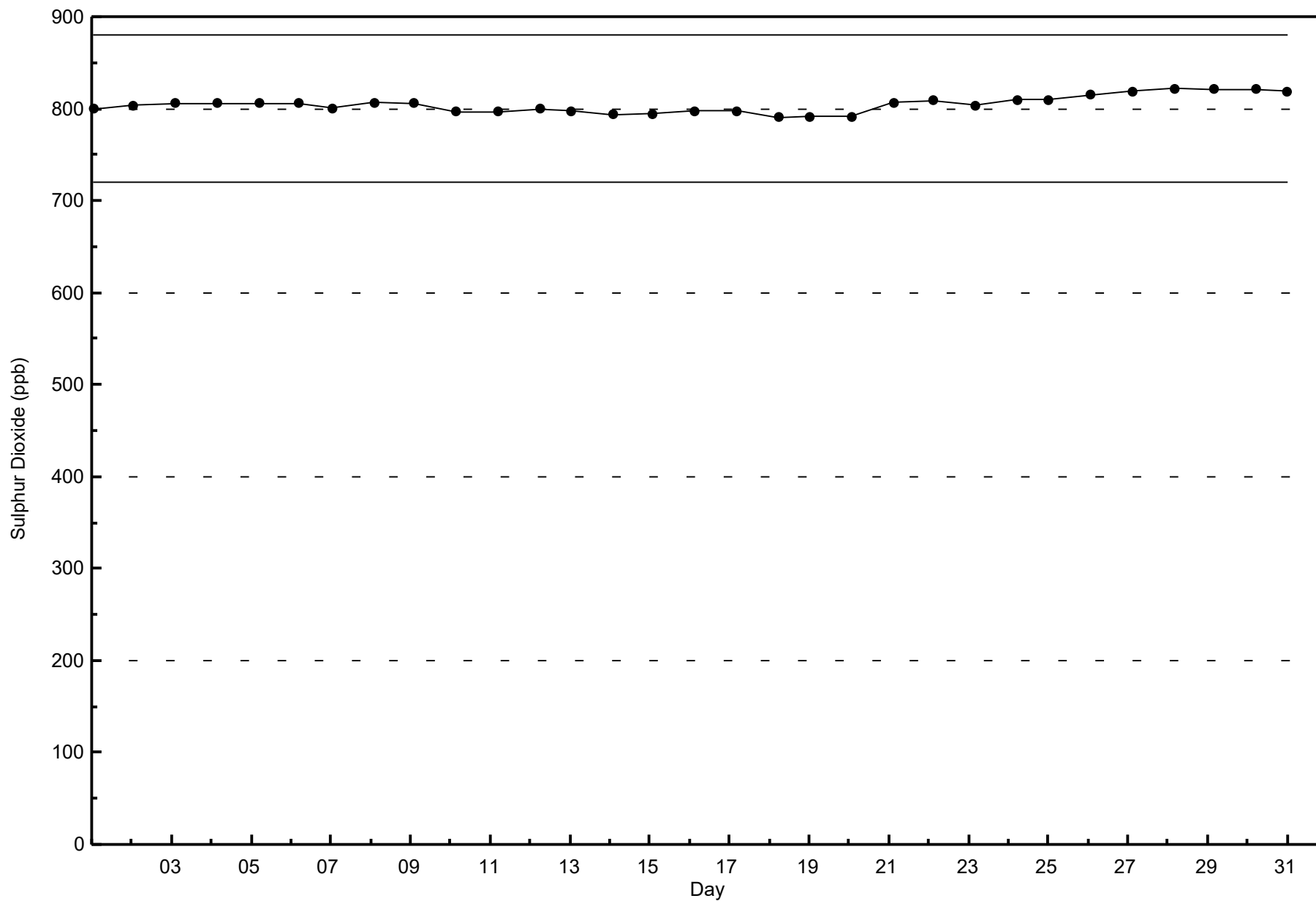
Sulphur Dioxide (SO₂) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 3.4 ppb on May 29 23:00 Maximum Daily Average: 0.6 ppb on May 30																				Periods in Service: 1488 Periods of Valid Data: 1413 Periods of Invalid Data: 75 Periods of Calibration: 74 Percent Operational Time: 99.9						
Minimum Value: 0.1 ppb on May 5 04:30 Maximum Diurnal Average: 0.3 ppb at hour 24 Monthly Average: 0.22 ppb										Minimum Daily Average: 0.1 ppb on May 16 Minimum Diurnal Average: 0.2 ppb at hour 15 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.0																
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.4 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
2-May	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
3-May	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
4-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.3
5-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
6-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
7-May	0.2 0.2	Z SP	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
8-May	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2	0.2
9-May	0.2 0.2	0.2 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	1.7 1.7	0.2	1.7
10-May	0.3 0.2	0.2 0.3	0.3 0.4	0.2 0.3	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.3 0.3	0.3 0.3	0.2	0.4
11-May	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.4 0.5	0.2	0.5
12-May	Z SP	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
13-May	0.2 0.2	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
14-May	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.2	0.1 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2	0.3
15-May	0.1 0.1	0.2 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.2



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
17-May	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
18-May	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
19-May	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.3 0.3	0.3 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
20-May	0.2 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
21-May	0.2 0.1	0.2 0.2	0.2 0.2	Z SP	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
22-May	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2	0.3
23-May	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
24-May	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.4 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.2	0.4
25-May	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
26-May	0.2 0.2	0.3 0.3	Z SP	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.5
27-May	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
28-May	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
29-May	0.2 0.3	0.4 0.5	0.5 0.6	0.8 0.7	0.7 0.6	Z SP	0.4 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.5 0.5	0.4 C	C C	C C	C C	C C	C C	C 0.3	0.3 0.2	0.2 0.3	0.3 0.3	0.3 0.6	2.7 3.4	2.7 3.1	–	3.4
30-May	Z SP	1.6 2.1	1.8 1.3	1.1 1.2	1.3 1.0	0.8 0.6	0.5 0.4	0.5 0.5	0.7 0.9	1.1 0.9	0.7 0.6	0.5 0.4	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6	2.1
31-May	0.4 0.4	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.5 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.3 0.3	0.3 0.4	0.5 0.5	0.4 0.4	0.5 0.5	0.4	0.5
																								Diurnal Average		
																								Diurnal Maximum		

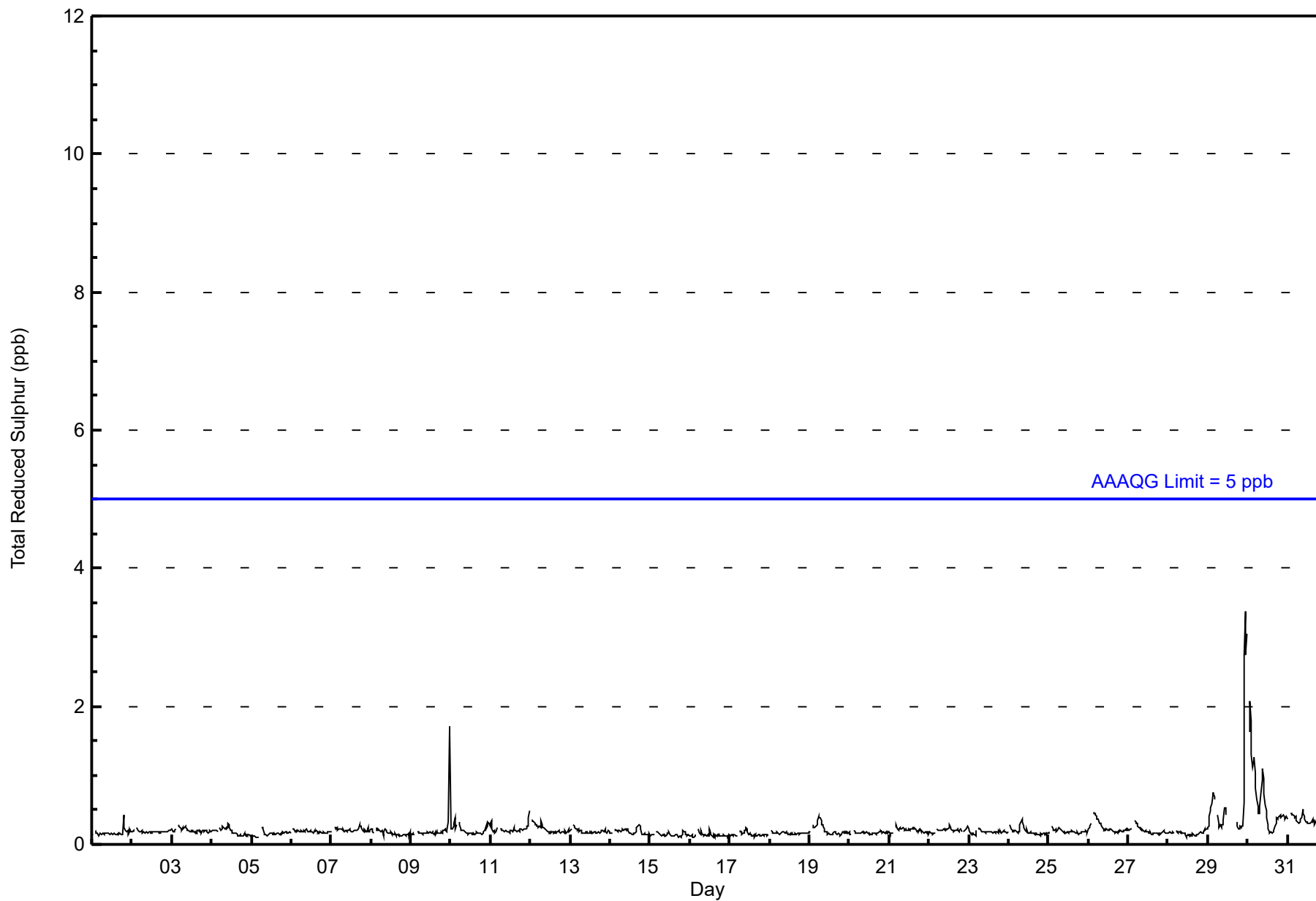
Z - zerospan C - Calibration PF - Power Failure SP - Span
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

[illegible]



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	705	99.72	99.72
3 - 4	2	0.28	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	69	34	22	9	14	28	42	80	114	90	45	33	22	33	33	37	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	69	34	22	9	14	28	42	80	114	90	45	33	22	35	33	37	707

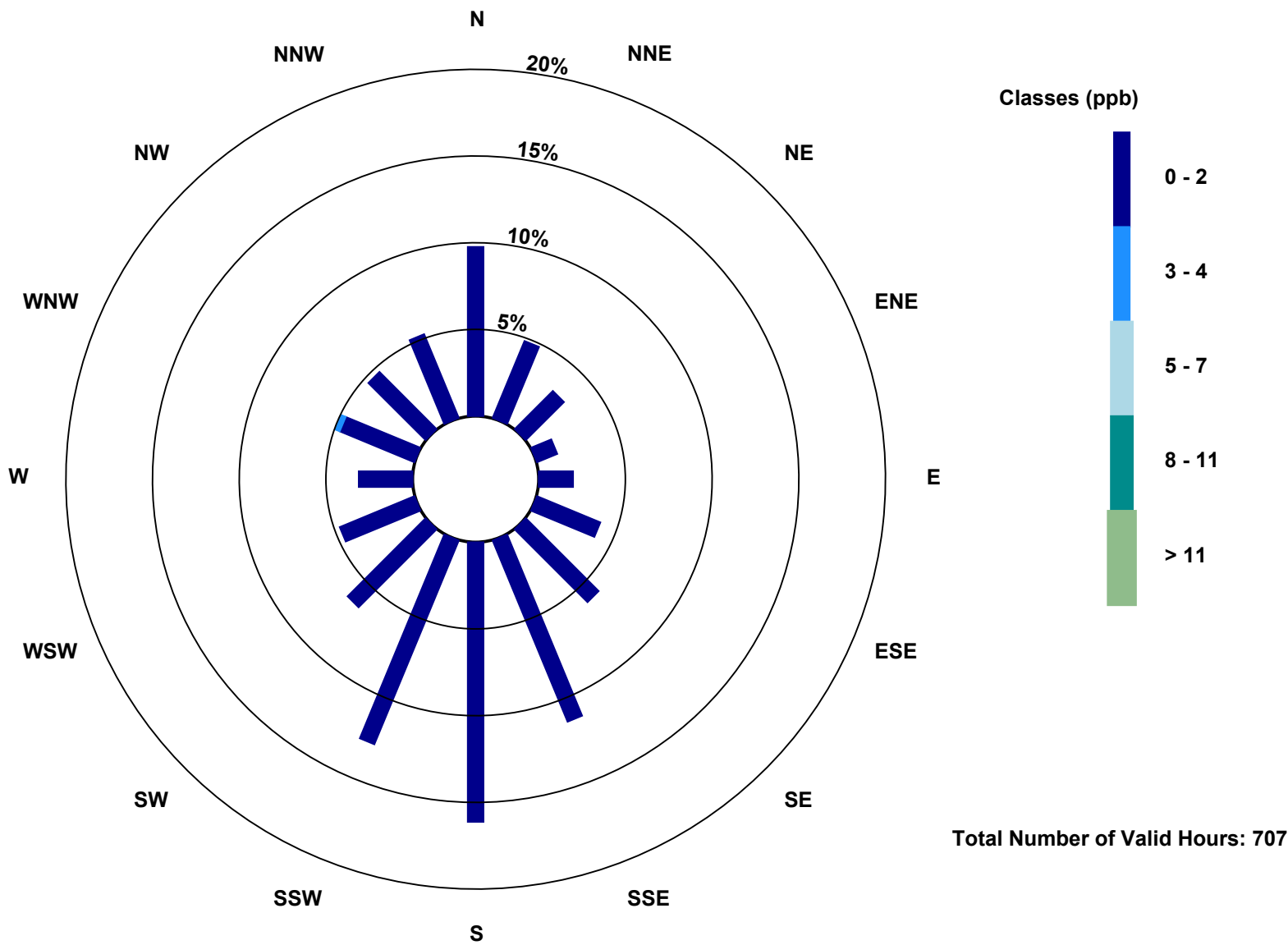
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Janvier



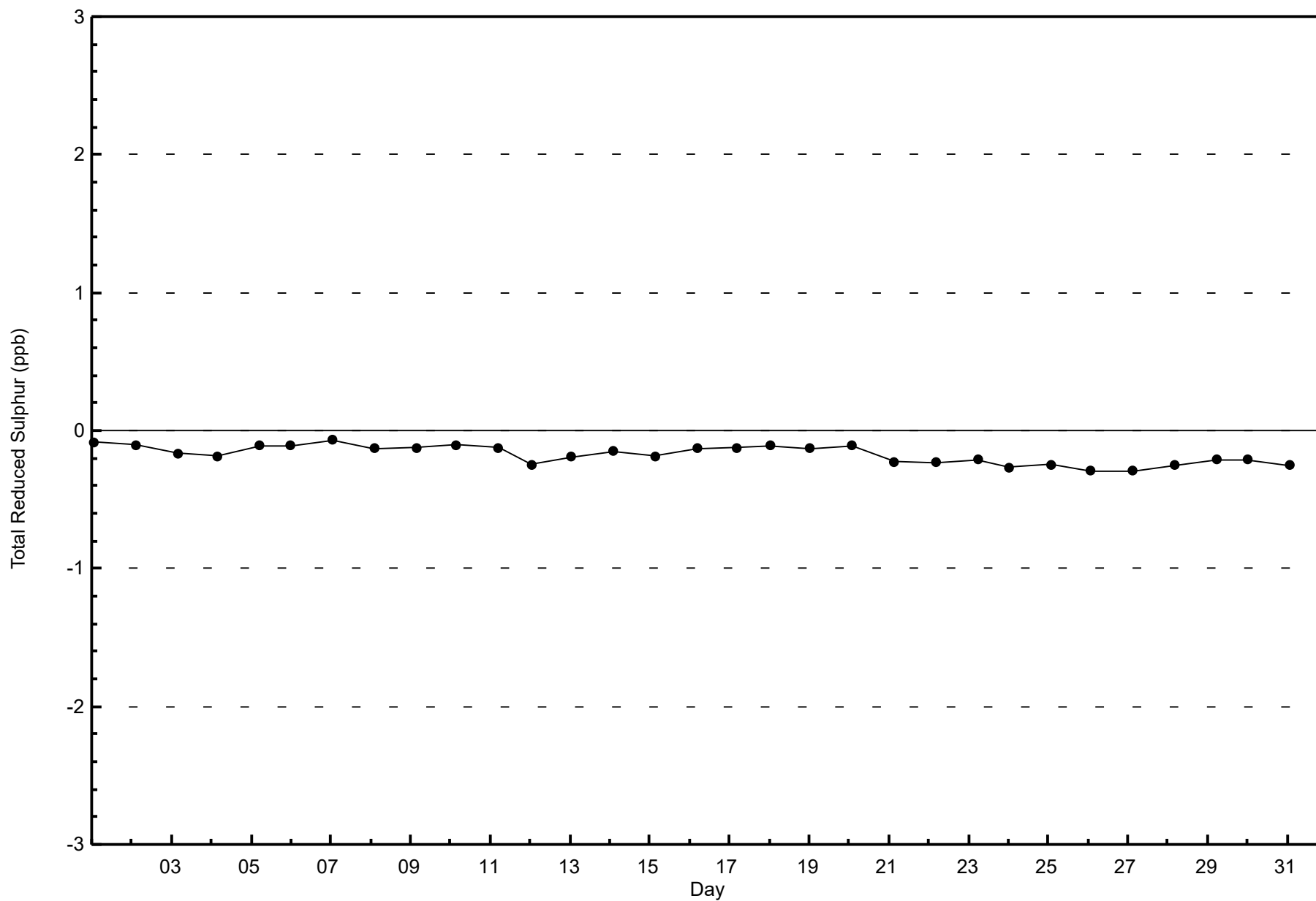


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

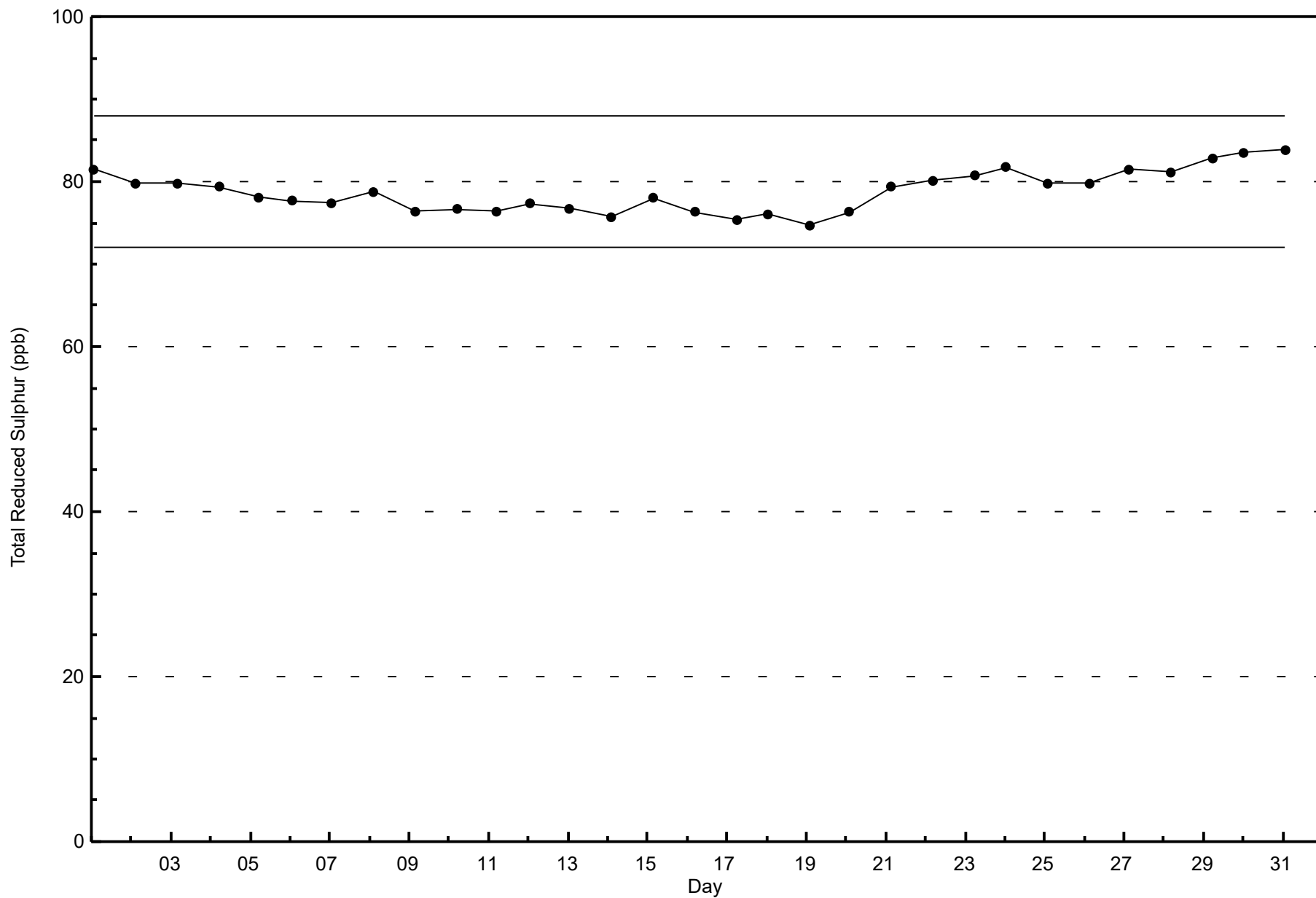
Janvier - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

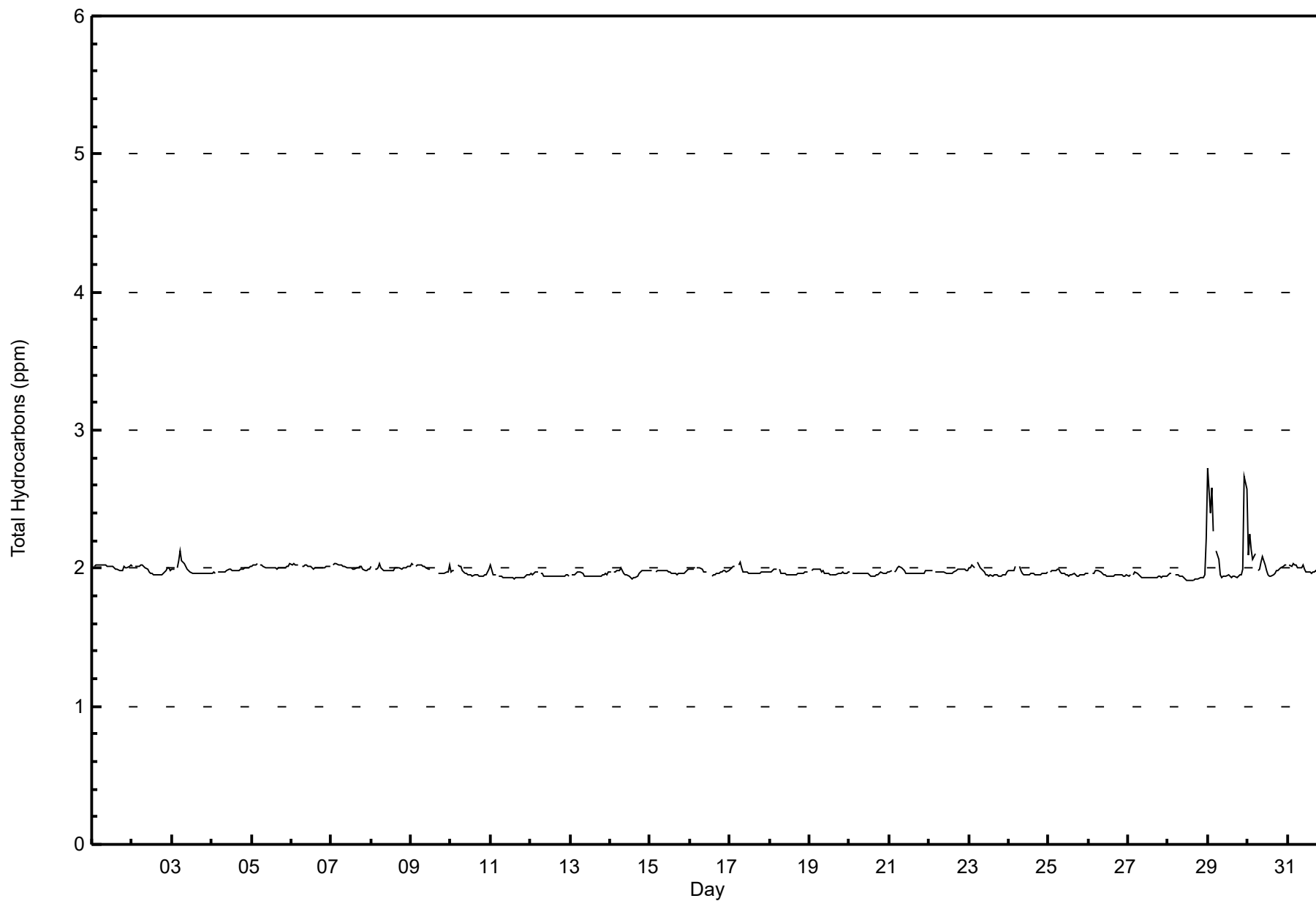
Janvier - May 2025

Maximum Value: 2.7 ppm on May 29 01:00																		Maximum Daily Average: 2.1 ppm on May 29										Hours in Service: 744	
Minimum Value: 1.9 ppm on May 28 15:00																		Minimum Daily Average: 1.9 ppm on May 11										Hours of Data: 707	
Maximum Diurnal Average: 2.0 ppm at hour 1																		Minimum Diurnal Average: 2.0 ppm at hour 14										Hours of Missing Data: 37	
Monthly Average: 1.98 ppm																		Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.2										Hours of Calibration: 35	
																												Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
3-May	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
5-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
8-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
9-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0			
11-May	2.0	2.0	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
12-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0			
13-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
16-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
18-May	2.0	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
19-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
23-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0			
24-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
25-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0			
26-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0			
27-May	1.9	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
28-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	1.9	2.2			
29-May	2.7	2.4	2.6	2.3	Z	2.1	2.1	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.7	2.6	2.1	2.7			
30-May	2.1	2.2	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2			
31-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2.0																										Diurnal Average			
2.7																										Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	689	97.45	97.45
2.1 - 3.0	18	2.55	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	70	33	21	8	12	28	44	81	111	87	42	33	19	32	31	37	689
2.1 - 3.0	0	0	0	0	0	0	0	0	5	4	1	0	2	5	1	0	18
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	33	21	8	12	28	44	81	116	91	43	33	21	37	32	37	707

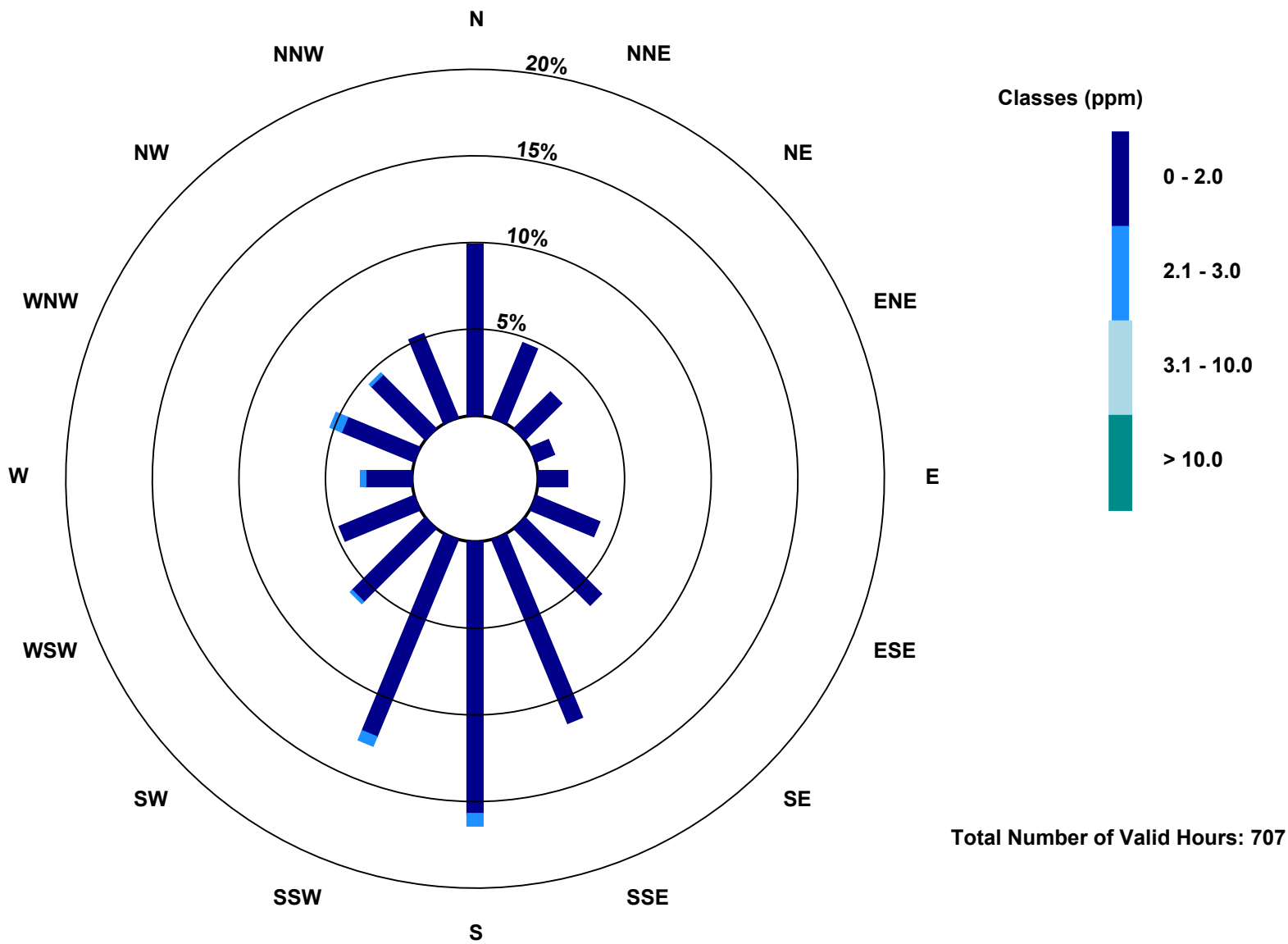
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Janvier



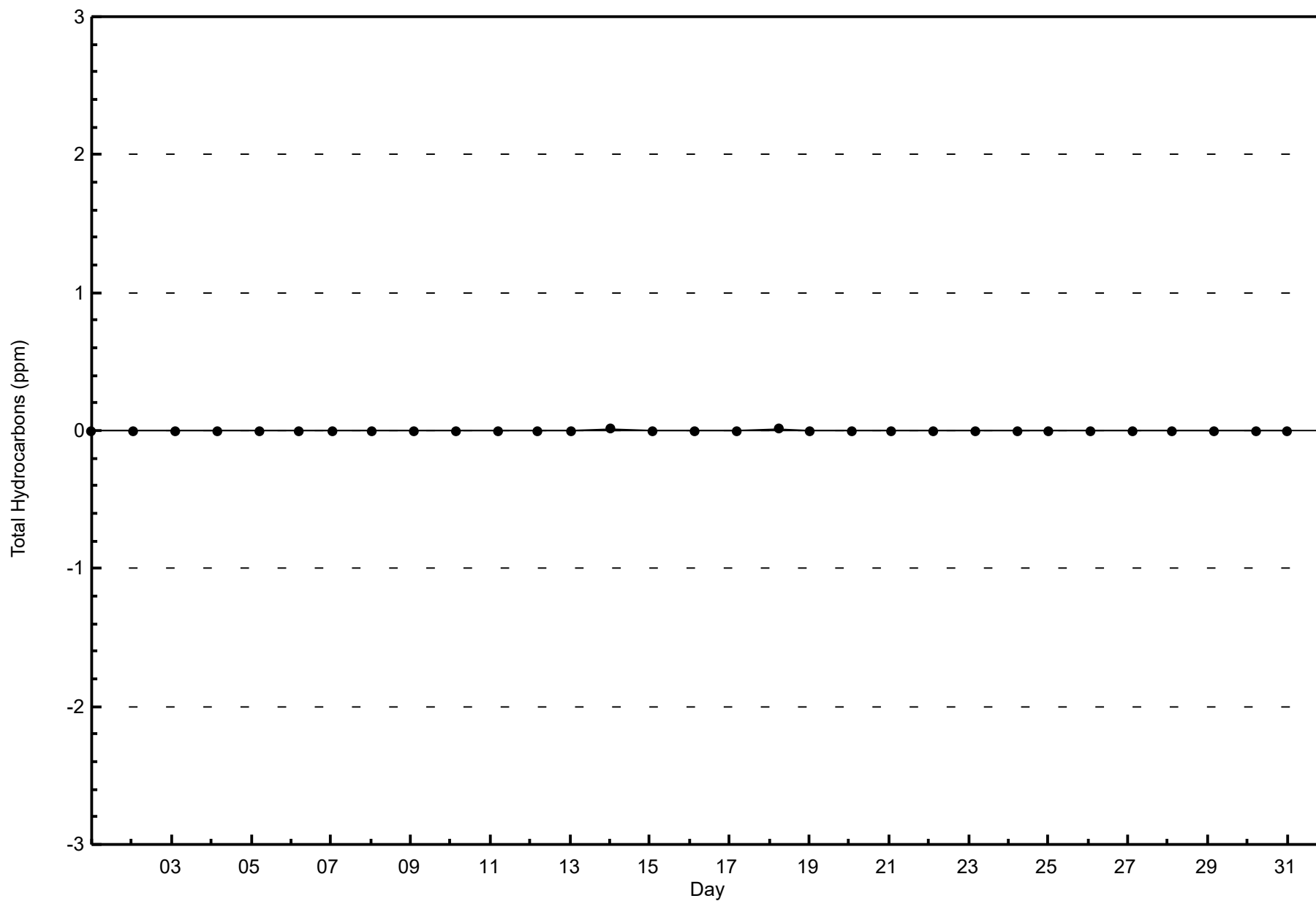


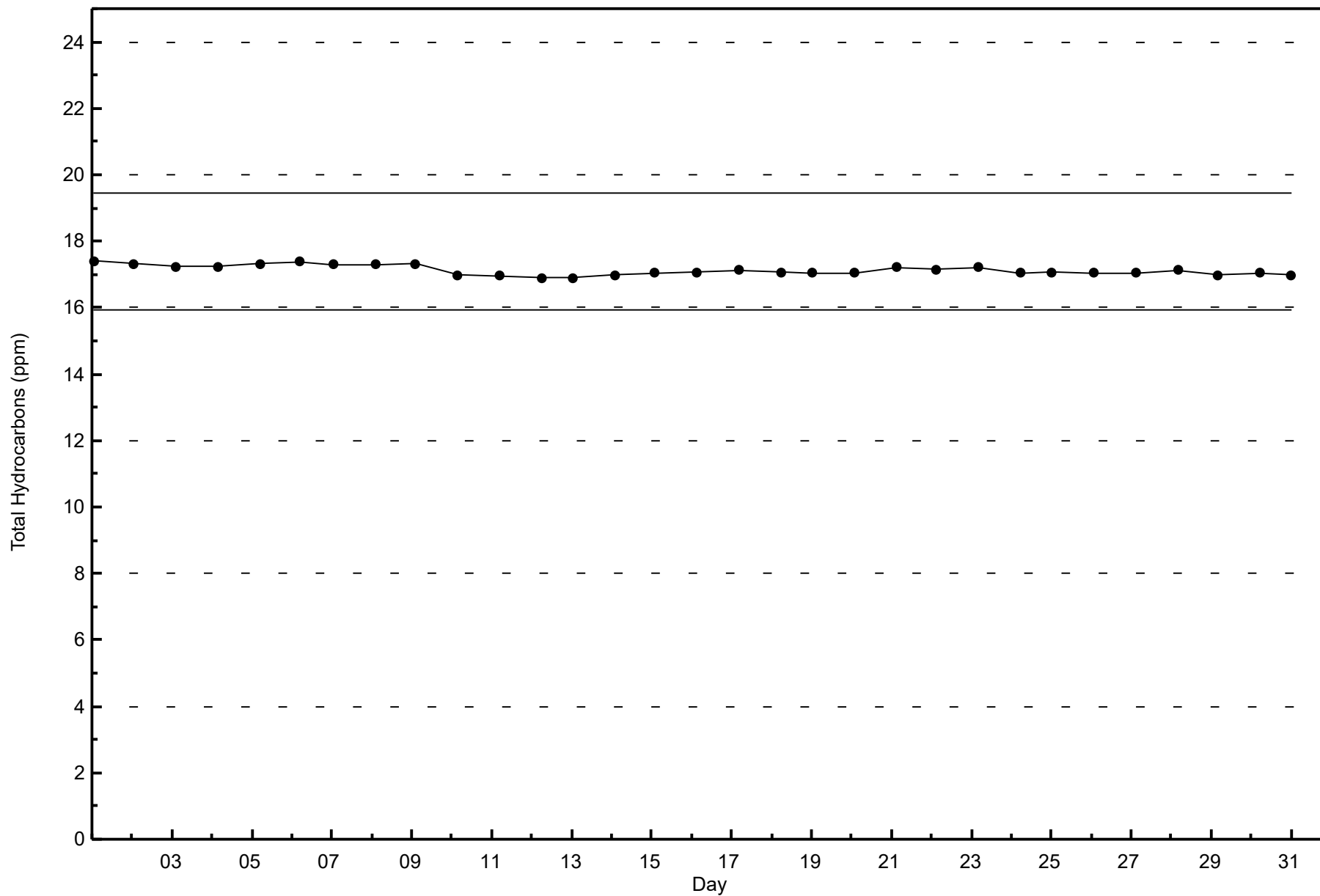
Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Janvier - May 2025

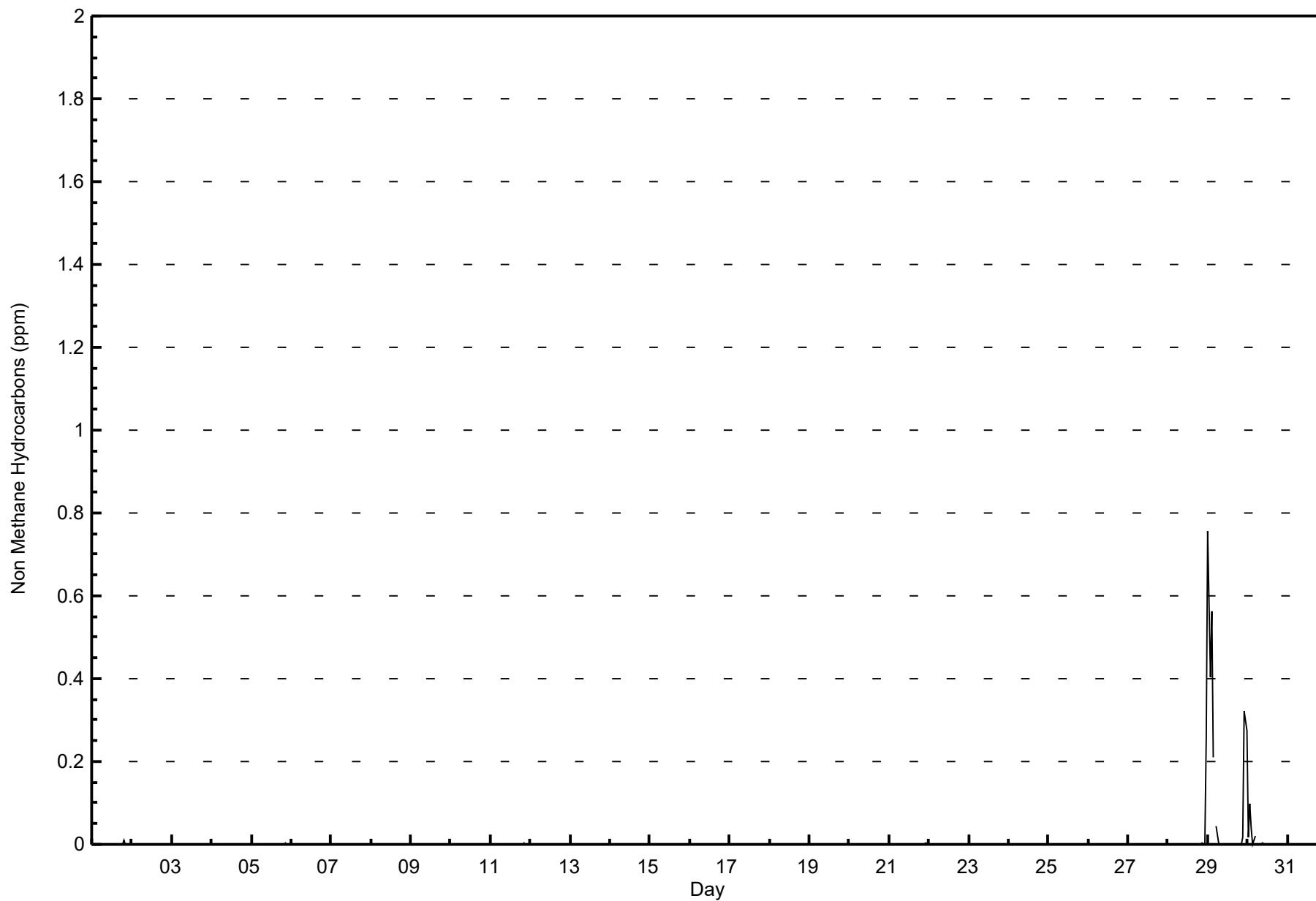






Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	693	98.02	98.02
0.006 - 0.05	6	0.85	98.87
0.06 - 0.1	1	0.14	99.01
> 0.1	7	0.99	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	70	33	21	8	12	28	44	81	112	89	41	33	20	32	32	37	693
0.006 - 0.05	0	0	0	0	0	0	0	0	1	0	2	0	1	2	0	0	6
0.06 - 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 0.1	0	0	0	0	0	0	0	0	3	2	0	0	0	2	0	0	7
Totals	70	33	21	8	12	28	44	81	116	91	43	33	21	37	32	37	707

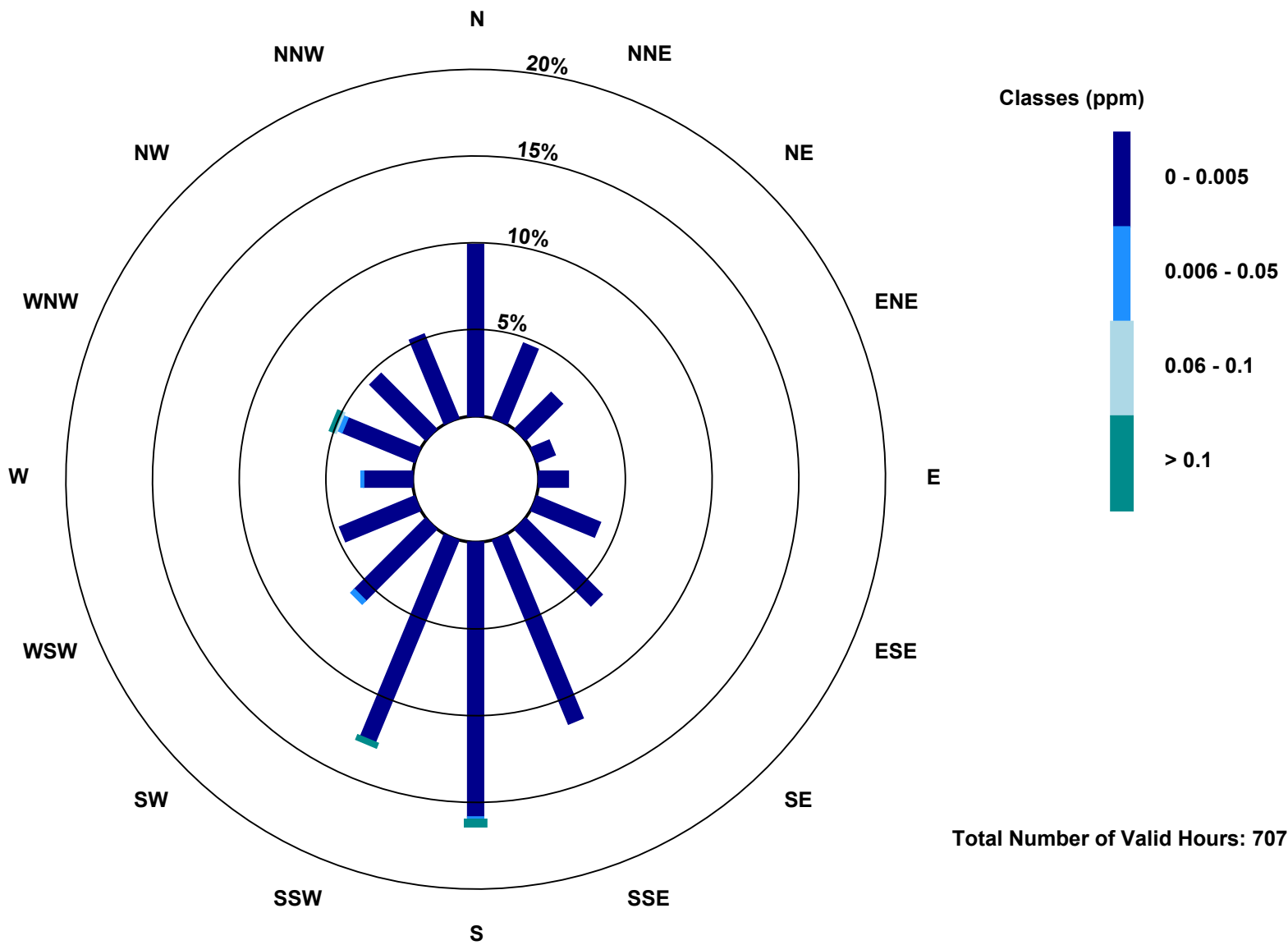
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Janvier



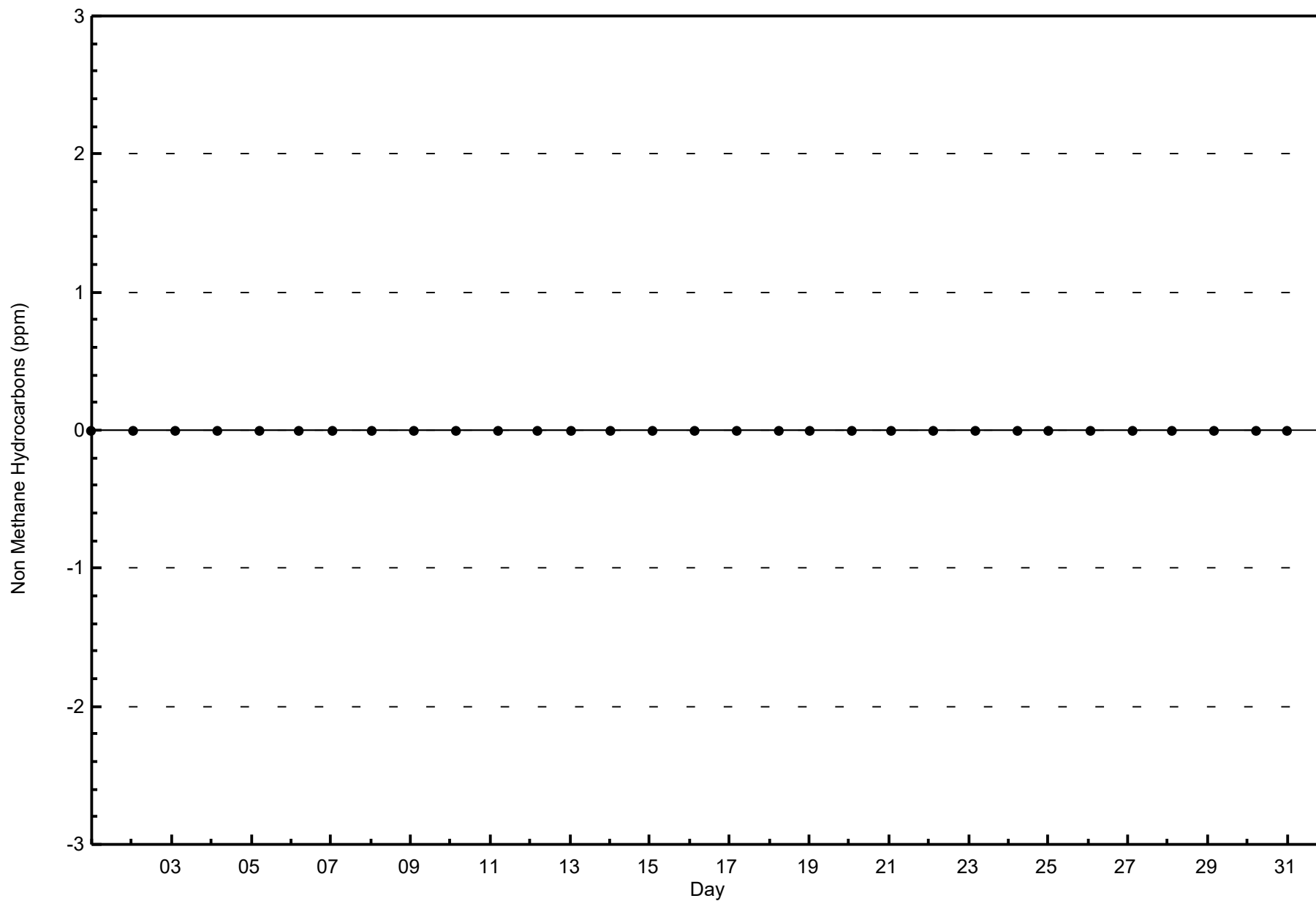


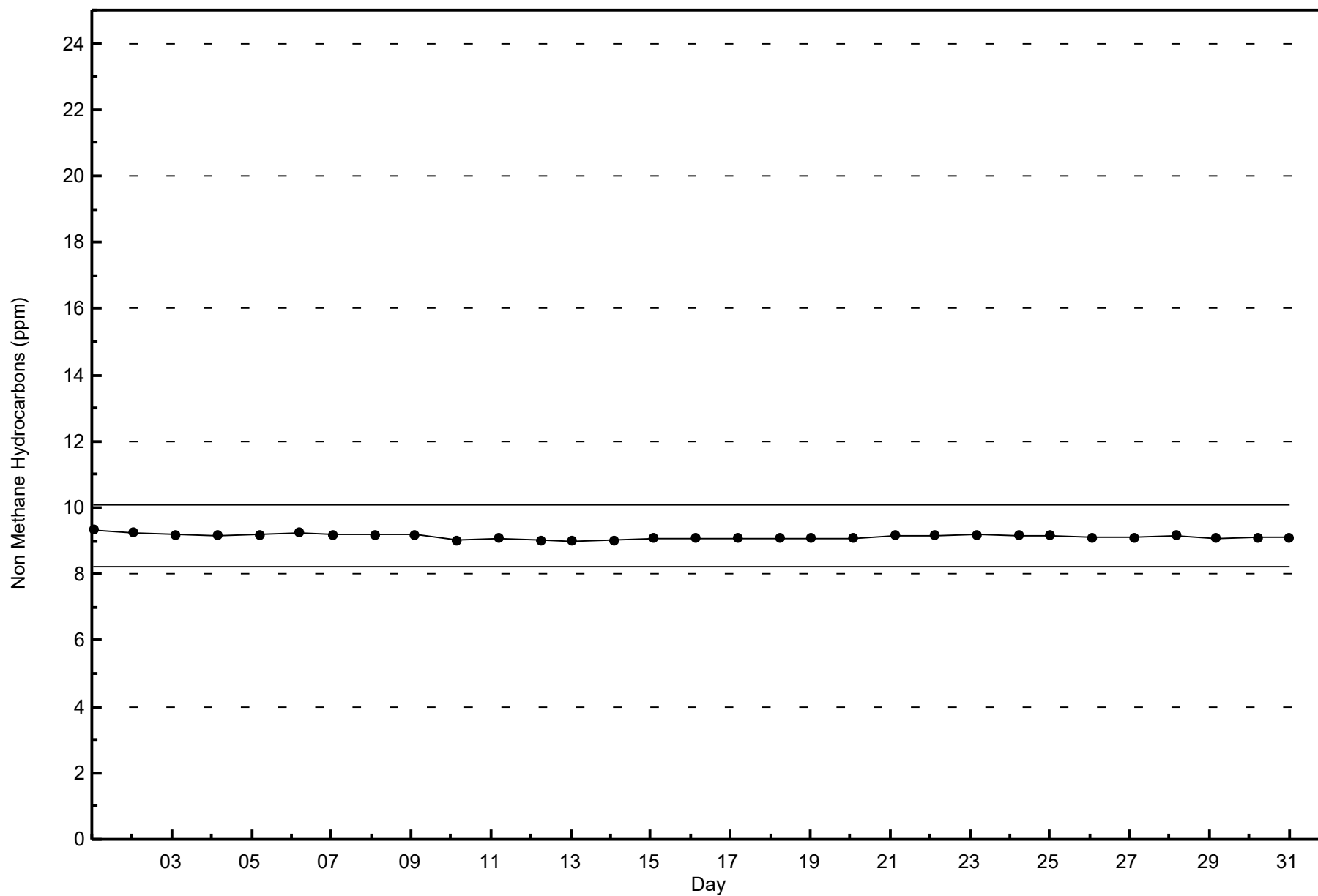
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

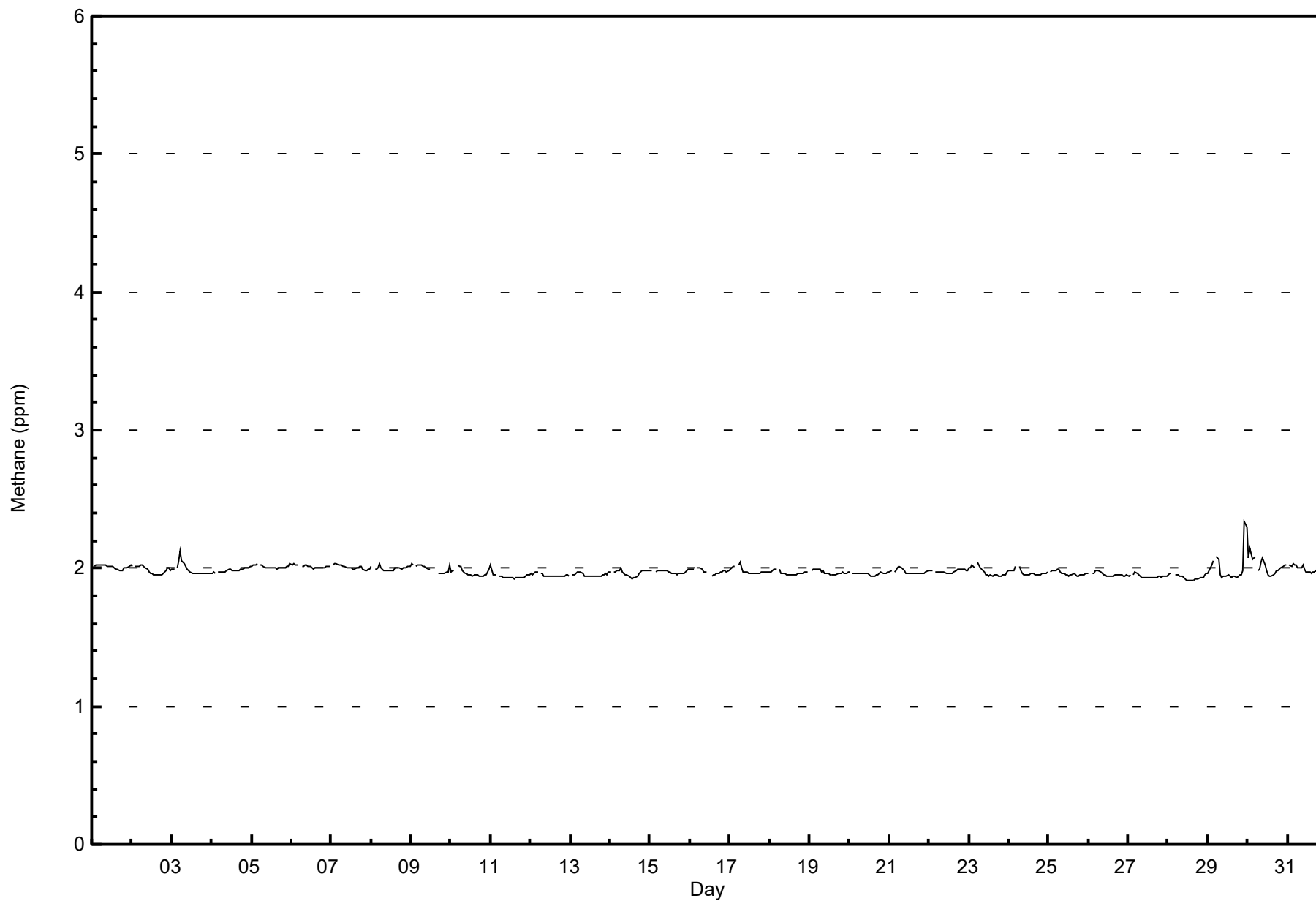
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744											
Maximum Value: 2.3 ppm on May 29 23:00																			Maximum Daily Average: 2.0 ppm on May 30						Hours of Data: 707					
Minimum Value: 1.9 ppm on May 28 15:00																			Minimum Daily Average: 1.9 ppm on May 28						Hours of Missing Data: 37					
Maximum Diurnal Average: 2.0 ppm at hour 6																			Minimum Diurnal Average: 2.0 ppm at hour 14						Hours of Calibration: 35					
Monthly Average: 1.98 ppm																			Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.1						Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
2-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
3-May	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
4-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
5-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
6-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
7-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
8-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
9-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0				
11-May	2.0	2.0	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0				
12-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0				
13-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0				
14-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
15-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
16-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
18-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
19-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
22-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
23-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0				
24-May	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
25-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0				
26-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0				
27-May	1.9	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0				
28-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0				
29-May	2.0	2.0	2.0	2.1	Z	2.1	2.1	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.3	2.3	2.0	2.3				
30-May	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
31-May	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
2.0																										Diurnal Average				
2.1																										Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	693	98.02	98.02
2.1 - 3.0	14	1.98	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Janvier - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	70	33	21	8	12	28	44	81	113	89	42	33	19	32	31	37	693
2.1 - 3.0	0	0	0	0	0	0	0	0	3	2	1	0	2	5	1	0	14
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	33	21	8	12	28	44	81	116	91	43	33	21	37	32	37	707

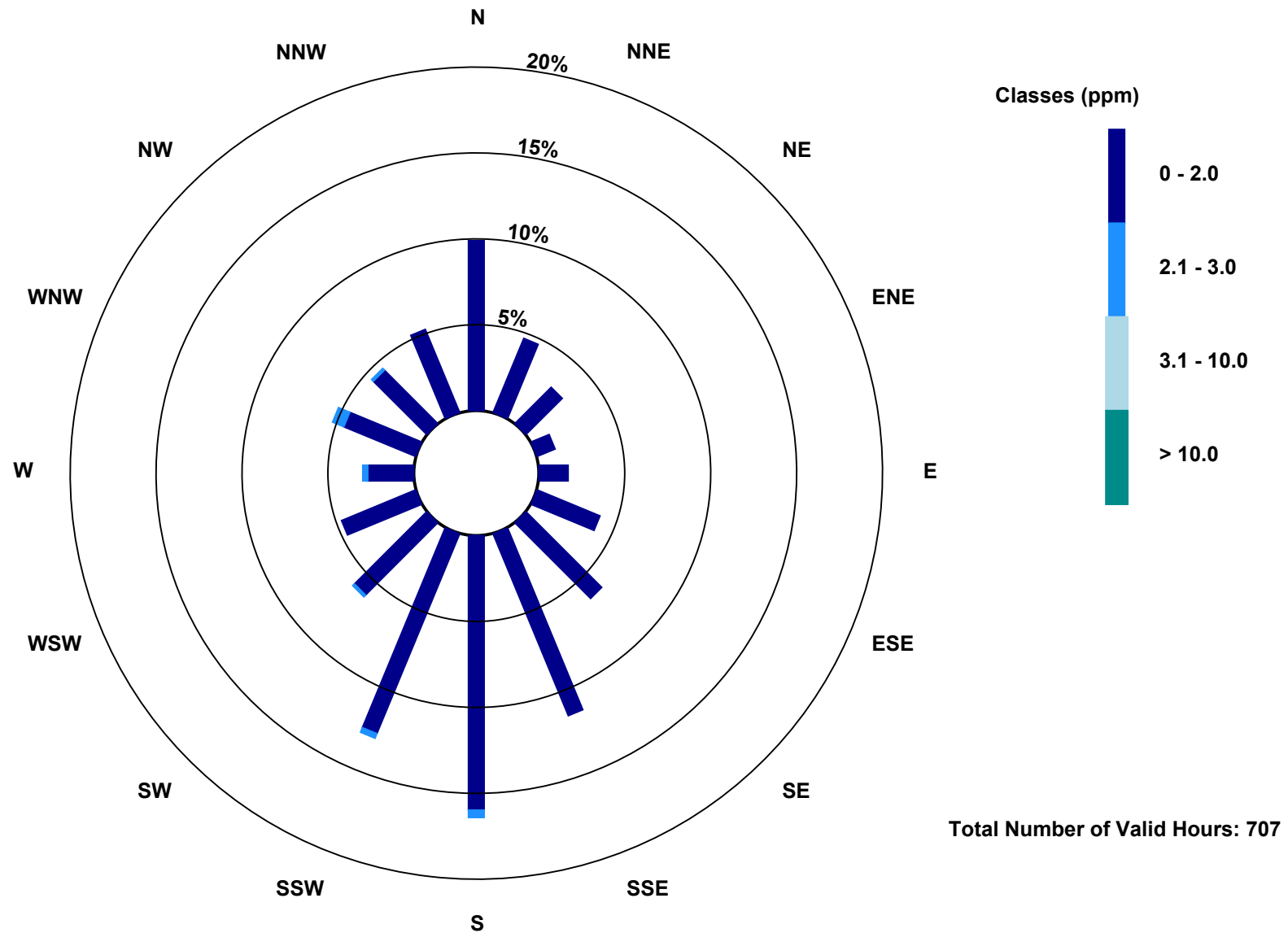
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

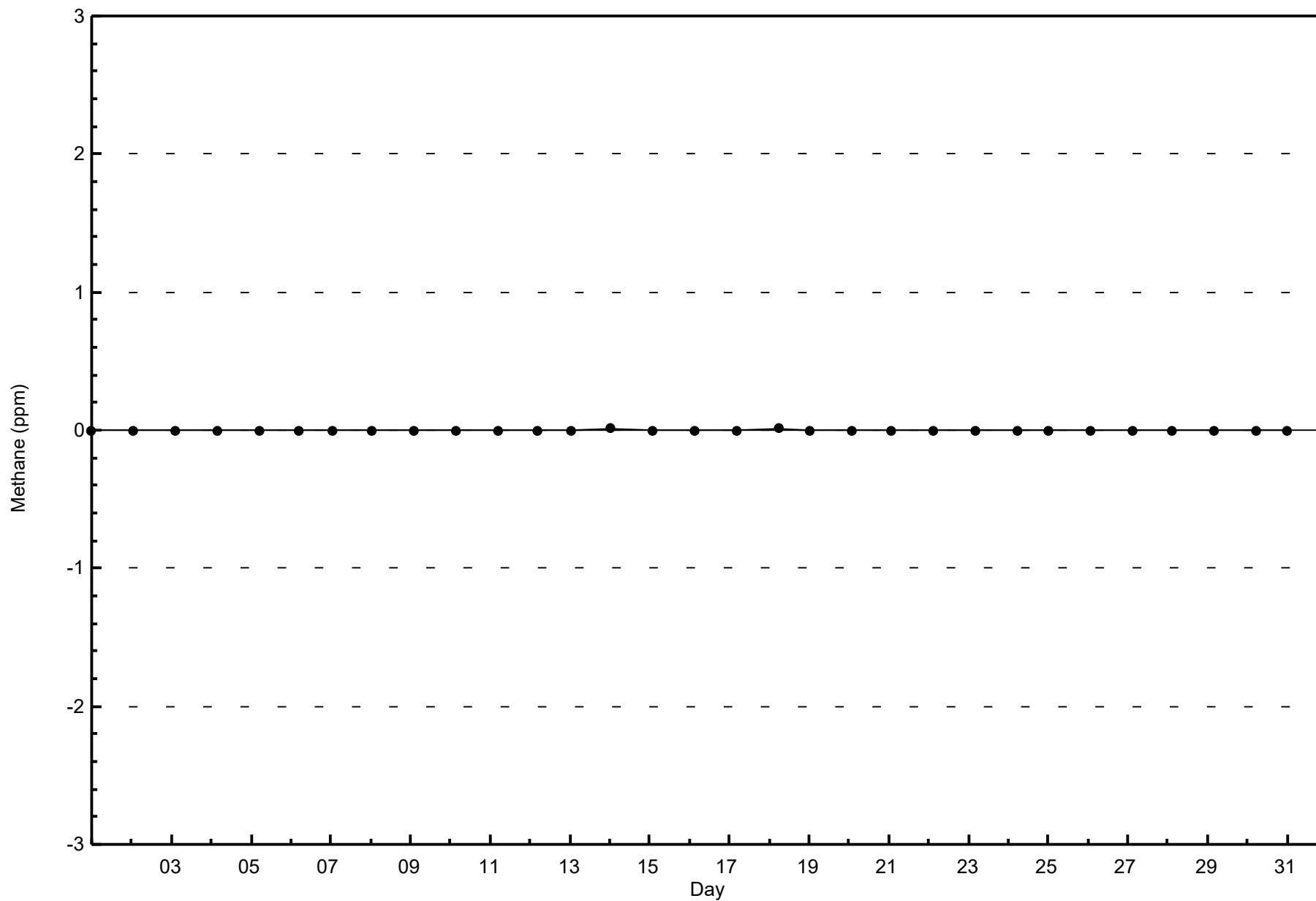
Methane (CH₄) - ppm
Janvier





Wood Buffalo Environmental Association
Zero Responses

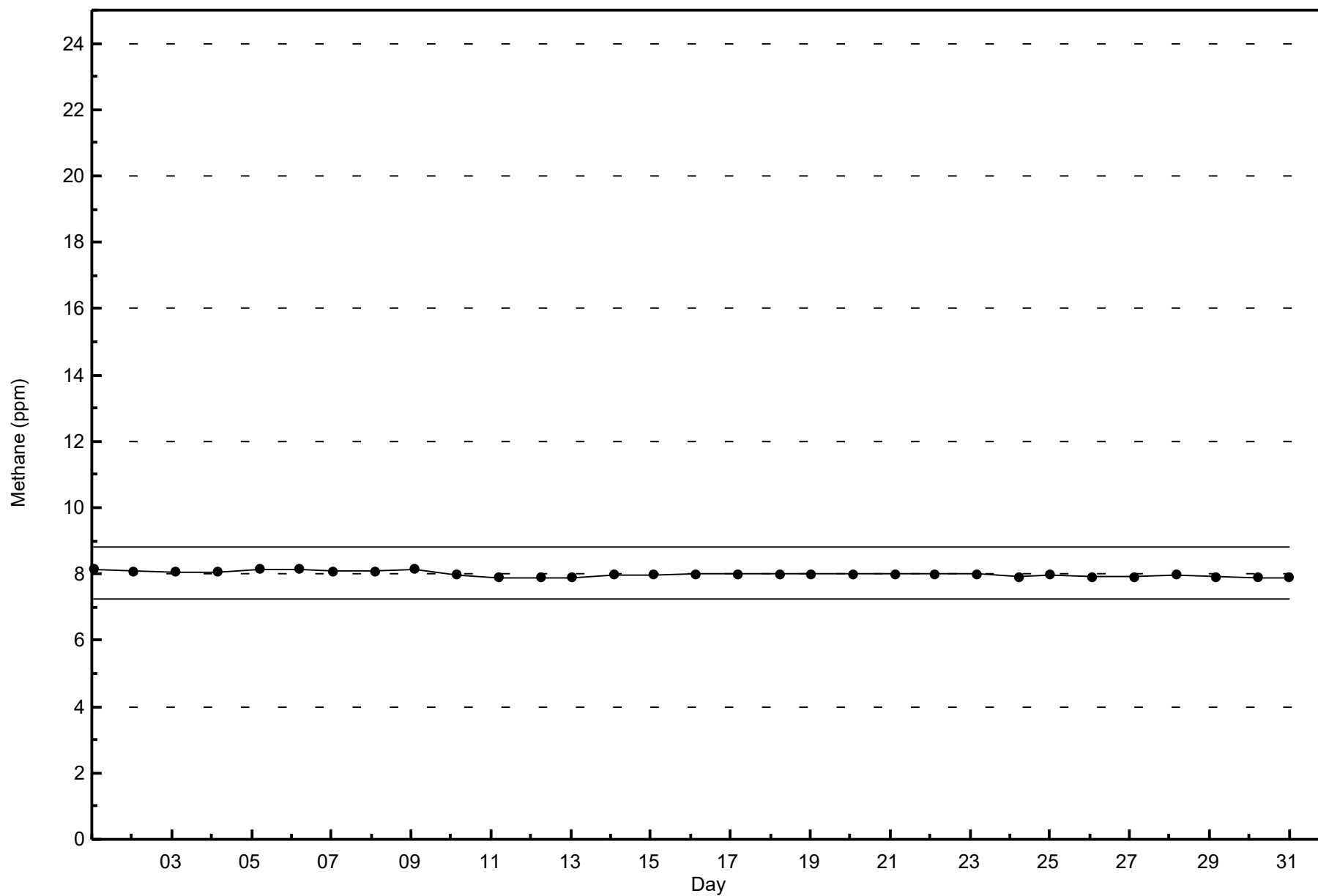
Methane (CH₄) - ppm
Janvier - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

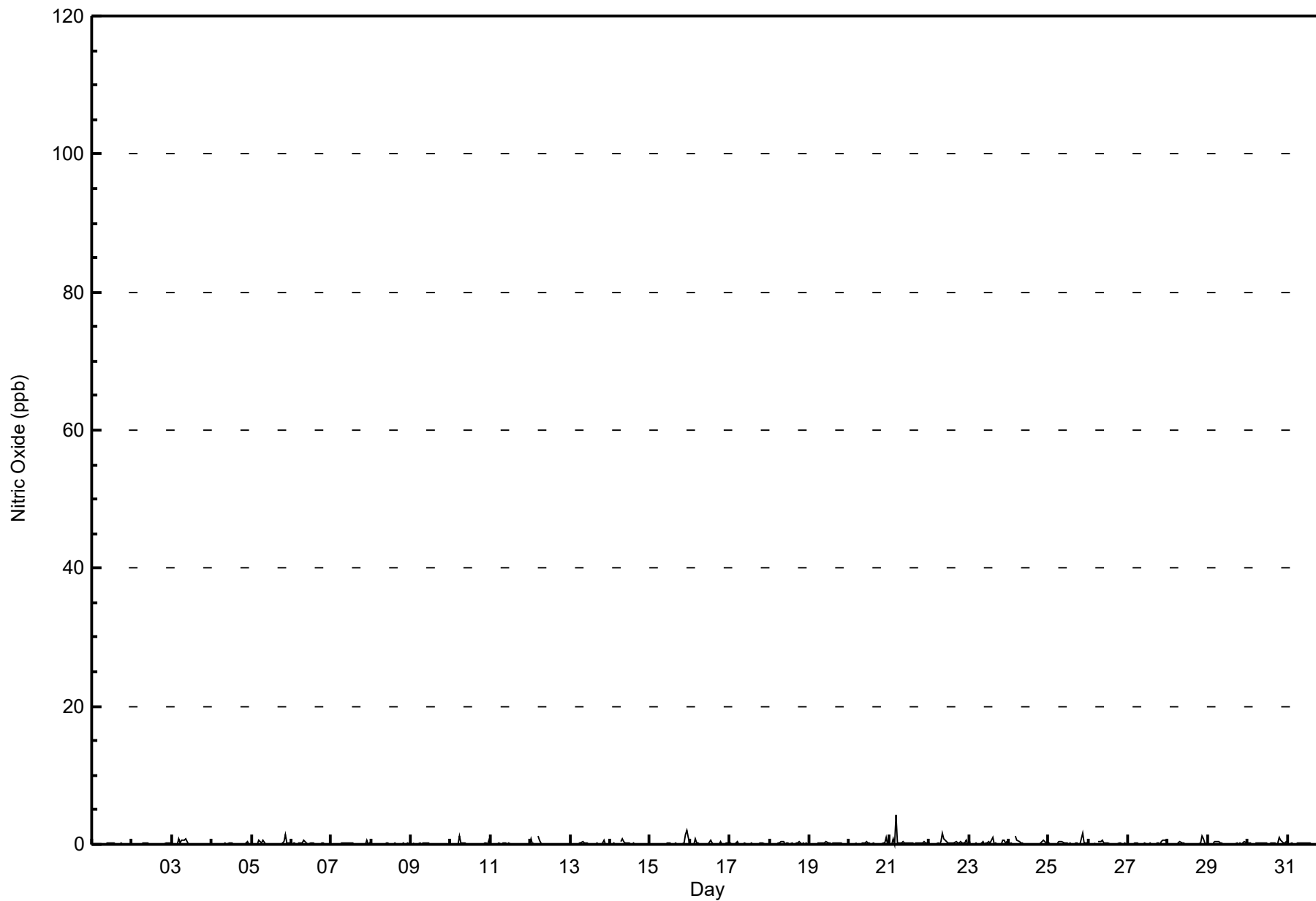
Janvier - May 2025

Maximum Value: 4.4 ppb on May 21 05:00																	Maximum Daily Average: 0.4 ppb on May 21										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																	Minimum Daily Average: 0.1 ppb on May 9										Hours of Data: 708	
Maximum Diurnal Average: 0.4 ppb at hour 5																	Minimum Diurnal Average: 0.1 ppb at hour 16										Hours of Missing Data: 36	
Monthly Average: 0.16 ppb																	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 1.3										Hours of Calibration: 36	
																	Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1			
2-May	0.1	0.1	0.0	0.0	0.1	Z	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.1			
3-May	Z	0.1	0.1	0.1	0.8	0.2	0.6	0.6	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.1	0.0	0.1			
5-May	0.0	0.0	Z	0.0	0.7	0.3	0.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4	0.3	0.1	0.3	0.2			
6-May	0.0	0.1	0.1	Z	0.1	0.1	0.2	0.5	0.5	0.2	0.1	0.2	0.1	0.3	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1			
7-May	0.0	0.0	0.0	0.1	Z	0.0	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.1			
8-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.1			
9-May	Z	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1			
10-May	0.0	Z	0.1	0.1	0.1	1.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.7	0.2			
11-May	0.1	0.0	Z	0.0	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1			
12-May	0.7	0.1	0.1	Z	1.3	0.7	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
13-May	0.0	0.1	0.0	0.0	Z	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.3	0.6	0.1	0.0	0.0	0.1			
14-May	0.0	0.0	0.2	0.0	0.1	Z	0.4	0.8	0.5	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1			
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	1.4	2.1	1.0	0.2			
16-May	0.1	Z	0.1	0.8	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.6	0.2	0.1	0.0	0.0	0.1	0.5	0.0	0.1	0.0	0.1	0.2	0.1			
17-May	0.1	0.0	Z	0.1	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.1			
18-May	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.4	0.1	0.2	0.1	0.2	0.0	0.1			
19-May	0.0	0.0	0.0	0.0	Z	0.2	0.3	0.3	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1			
20-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.2	0.3	0.3	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.3	0.1	0.9	0.0	0.1			
21-May	Z	0.0	0.7	0.1	4.4	0.2	0.1	0.1	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.4	0.3	0.2	0.4			
22-May	0.3	Z	0.1	0.0	0.1	0.1	0.1	0.5	1.5	0.7	0.4	0.3	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.4	0.3	0.2	0.6	0.1	0.3			
23-May	0.1	0.4	Z	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.4	0.1	1.0	0.0	0.1	0.1	0.1	0.1	0.6	0.6	0.1	0.5	0.2			
24-May	0.1	0.1	0.1	Z	1.2	0.7	0.3	0.3	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.7	0.2	0.1	0.2			
25-May	0.1	0.0	0.0	0.0	Z	0.3	0.5	0.5	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.7	0.2	0.1	0.1	0.2			
26-May	0.0	0.0	0.0	0.1	0.1	Z	0.5	0.5	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.2			
27-May	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.4	0.6	0.5	0.0	0.1			
28-May	0.1	Z	0.0	0.0	0.1	0.0	0.2	0.4	0.2	0.1	0.1	C	C	C	C	C	0.0	0.0	0.0	0.2	1.3	0.8	0.2	0.0	0.2			
29-May	0.1	0.0	Z	0.1	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.2	0.1	0.3	0.4	0.3	0.2			
30-May	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.9	0.6	0.2	0.2	0.4	0.2			
31-May	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
0.1 0.1 0.1 0.1 0.4 0.2 0.2 0.3 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.3 0.2 0.2 0.2																										Diurnal Average		
0.7 0.4 0.7 0.8 4.4 1.2 0.6 0.8 1.5 0.7 0.4 0.3 0.6 0.3 1.0 0.2 0.4 0.2 0.5 0.9 1.7 1.4 2.1 1.0																										Diurnal Maximum		
Z - zerospan C - Calibration																												



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	708	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	71	34	22	9	14	27	43	83	116	87	44	30	21	37	33	37	708
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	71	34	22	9	14	27	43	83	116	87	44	30	21	37	33	37	708

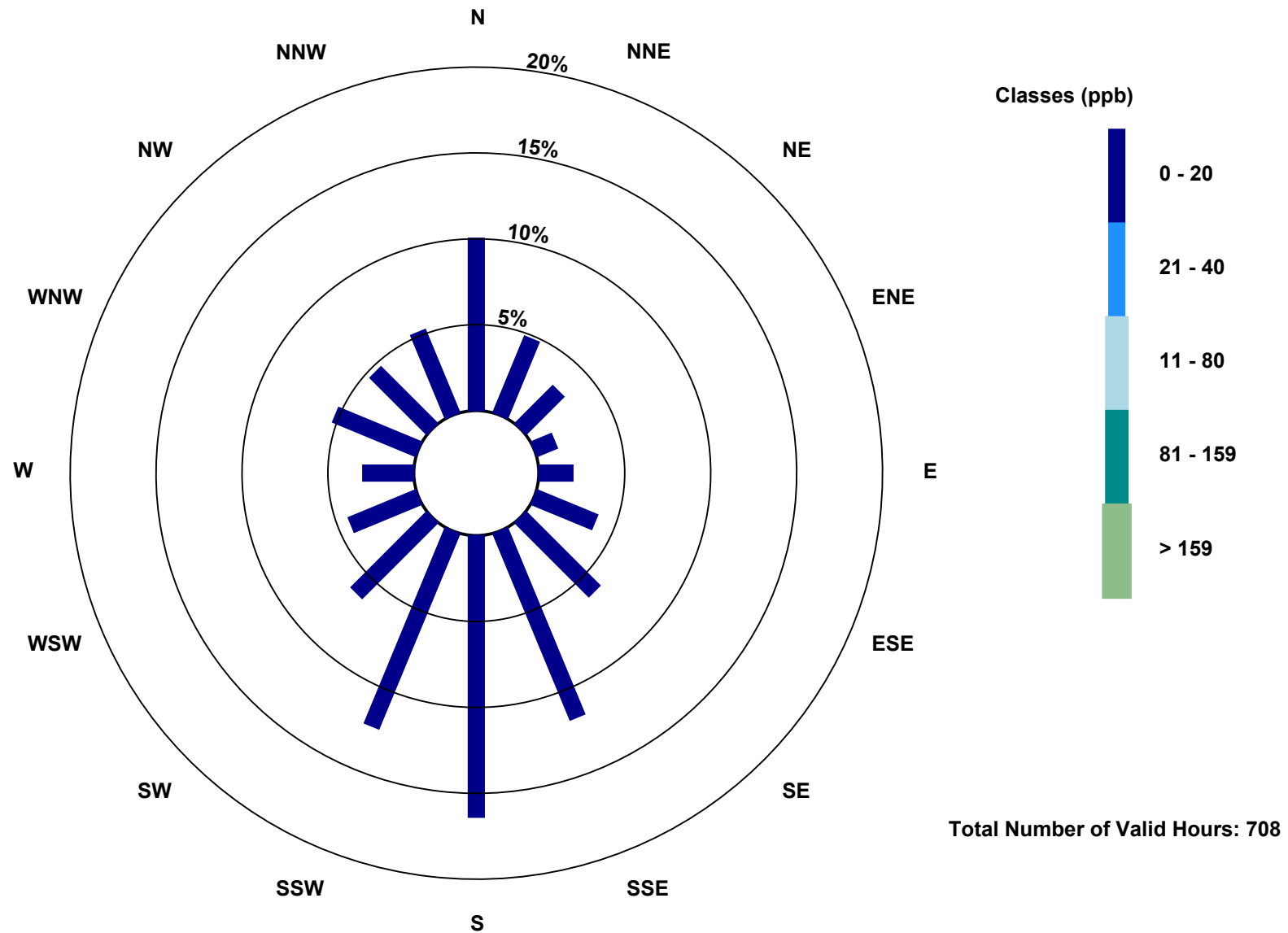
Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

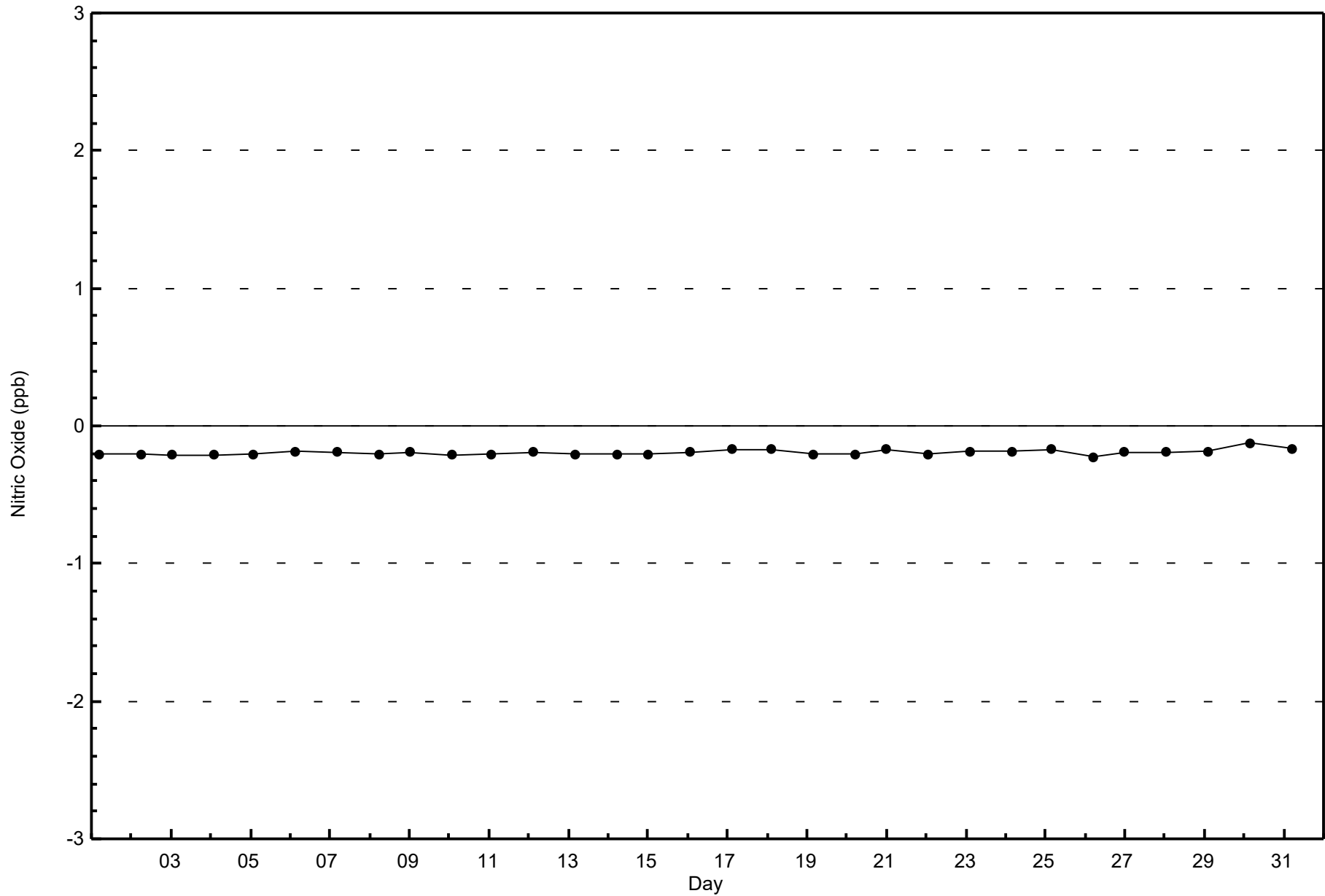
Nitric Oxide (NO) - ppb
Janvier





Wood Buffalo Environmental Association
Zero Responses

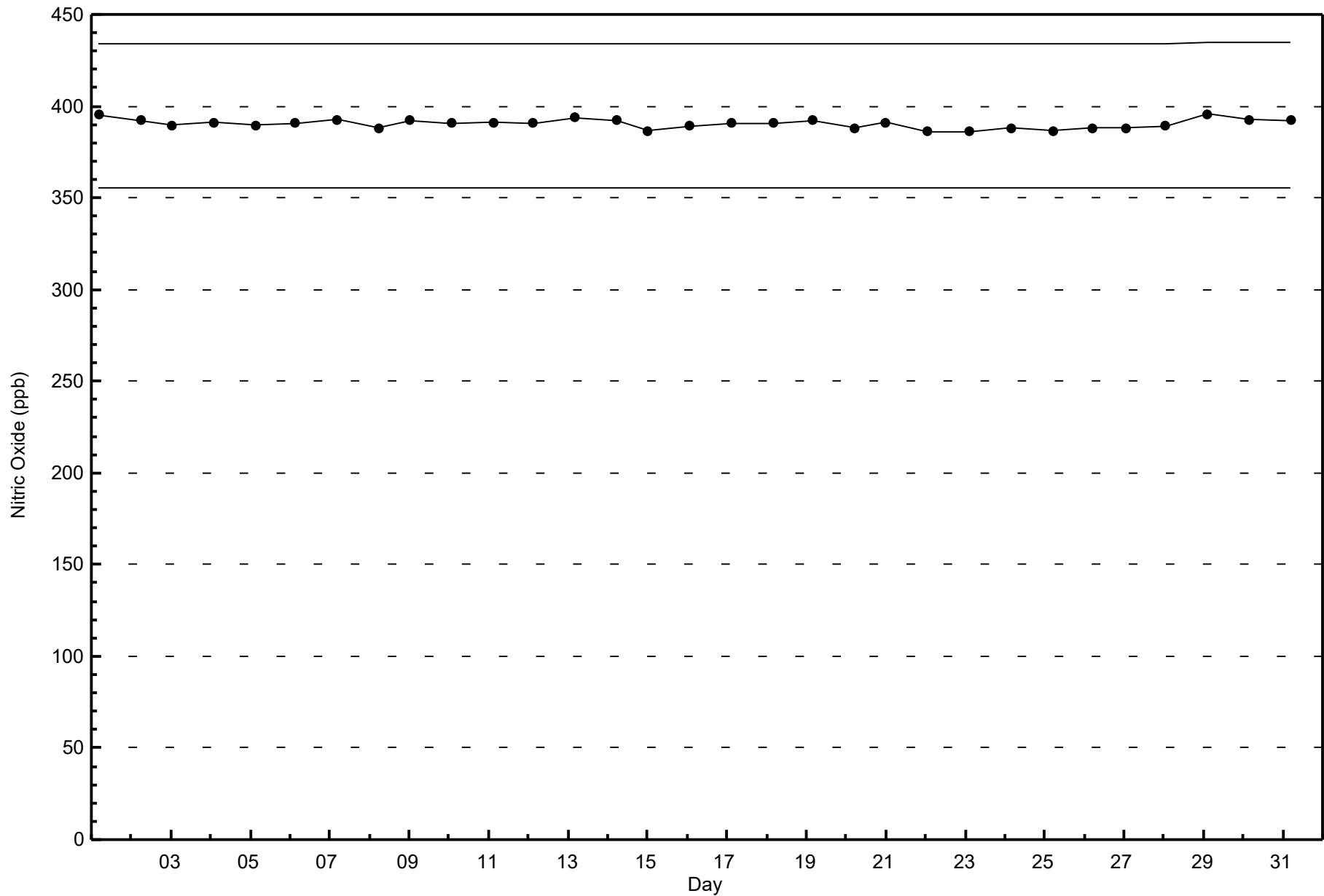
Nitric Oxide (NO) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

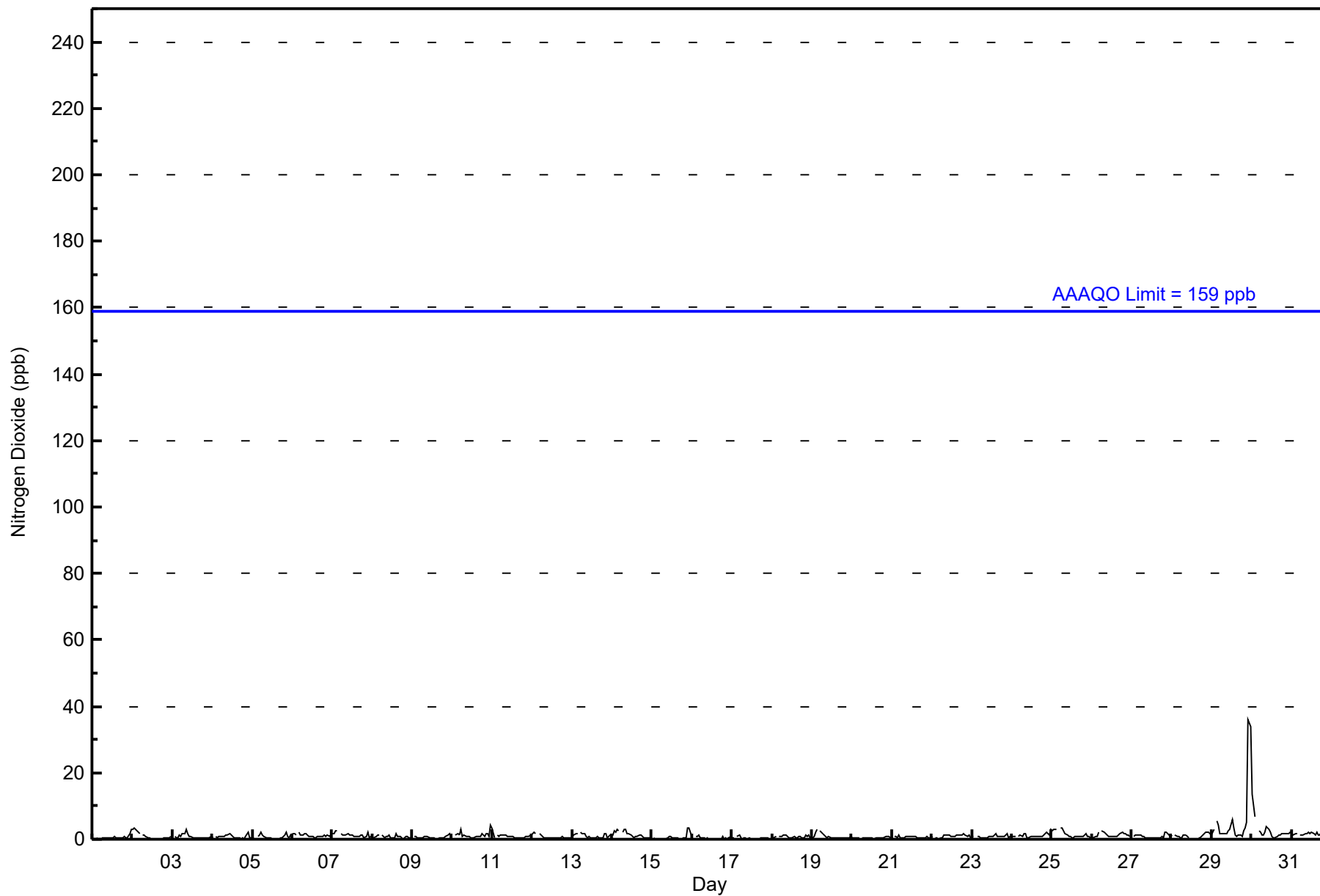
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 36.0 ppb on May 29 23:00 Maximum Daily Average: 5.4 ppb on May 29																				Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0.1 ppb on May 16 13:00 Maximum Diurnal Average: 2.2 ppb at hour 24 Monthly Average: 1.11 ppb										Minimum Daily Average: 0.4 ppb on May 17 Minimum Diurnal Average: 0.6 ppb at hour 16 Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.8 Q ₃ = 1.3 P ₉₀ = 2.0 P ₉₉ = 5.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.2	0.2	0.2	0.3	Z	0.4	0.3	0.5	0.5	0.5	0.4	0.3	0.4	1.0	0.3	0.3	0.3	0.4	0.4	0.9	0.6	0.6	1.6	3.0	0.6	3.0
2-May	2.8	3.4	2.8	2.0	1.6	Z	1.4	1.2	1.0	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.4	0.5	0.5	0.8	0.9	3.4
3-May	Z	0.9	0.4	0.5	1.3	1.0	1.7	1.8	2.9	1.5	1.0	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.6	0.7	0.8	2.9
4-May	0.5	Z	0.8	0.6	0.7	0.7	0.8	0.7	1.1	1.3	1.6	1.2	0.8	0.6	0.3	0.3	0.3	0.2	0.3	0.2	0.7	2.2	0.4	0.4	0.7	2.2
5-May	0.4	0.4	Z	0.7	1.4	2.1	1.1	1.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	1.2	2.3	0.7	0.6	1.3	0.7	2.3
6-May	1.9	1.5	1.2	Z	2.3	1.3	1.4	1.7	1.8	1.2	0.8	0.9	0.7	0.5	0.6	0.7	0.7	0.8	1.0	1.3	1.0	1.2	0.9	1.7	1.2	2.3
7-May	1.9	1.8	2.7	2.4	Z	1.5	1.3	1.2	1.3	1.5	1.4	1.3	1.1	1.0	0.9	0.9	0.9	1.4	1.3	0.6	0.8	2.0	0.6	0.8	1.3	2.7
8-May	0.5	0.5	0.9	1.2	1.3	Z	1.1	0.6	0.7	1.0	1.2	0.6	0.6	0.5	1.5	0.8	0.9	0.8	0.2	0.3	0.8	0.7	0.6	0.3	0.8	1.5
9-May	Z	0.7	0.7	0.4	0.4	0.6	0.6	1.0	0.8	0.7	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.6	0.9	1.3	1.5	0.9	0.6	1.5
10-May	1.0	Z	1.4	1.5	1.3	3.0	1.0	1.1	0.9	0.8	0.7	0.6	0.5	0.5	1.0	0.7	1.0	0.9	1.6	0.8	1.6	1.8	1.0	4.4	1.3	4.4
11-May	3.6	0.5	Z	1.1	0.9	1.4	1.1	1.3	1.1	1.0	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.8	0.7	0.7	1.3	0.9	3.6
12-May	1.8	2.2	1.8	Z	1.6	1.2	0.7	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.8	0.4	0.6	0.5	0.3	0.3	0.8	2.2
13-May	0.4	1.4	1.8	1.8	Z	2.2	1.5	1.5	1.0	0.6	0.7	0.5	0.5	0.5	0.4	0.7	0.6	0.6	0.5	1.6	1.8	0.5	1.0	1.2	1.0	2.2
14-May	1.4	2.5	2.2	2.8	2.7	Z	2.2	2.9	2.9	1.5	1.5	1.2	0.7	0.4	0.7	0.8	1.2	1.2	0.8	0.4	0.3	0.3	0.3	0.2	1.4	2.9
15-May	Z	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.7	0.8	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	3.5	3.3	2.3	0.7	3.5
16-May	1.0	Z	1.0	0.9	1.2	0.6	0.3	0.3	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.9	0.2	0.3	0.2	0.4	0.7	0.4	1.2
17-May	0.5	0.4	Z	0.7	1.2	0.6	0.2	0.3	0.3	0.2	0.4	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.4	1.2
18-May	0.2	0.4	1.0	Z	1.0	0.8	0.8	1.3	1.3	0.7	0.6	0.5	0.6	0.7	0.4	0.5	0.7	0.7	0.6	0.5	1.1	1.0	1.1	0.6	0.7	1.3
19-May	0.4	0.9	2.1	2.8	Z	2.7	1.6	1.2	0.7	0.6	0.7	0.5	0.5	0.4	0.5	0.6	0.4	0.3	0.3	0.3	0.5	0.6	0.6	0.7	0.9	2.8
20-May	0.5	0.4	0.4	0.3	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.2	0.4	0.3	0.3	0.4	0.4	0.5	0.7	0.7	0.7	0.3	0.5	0.7
21-May	Z	0.8	0.9	0.3	1.4	0.6	0.4	0.4	0.8	0.8	0.8	0.9	0.7	0.8	0.7	0.5	0.6	0.4	0.6	0.4	0.4	0.7	0.3	0.6	0.6	1.4
22-May	0.7	Z	0.4	0.4	0.2	0.3	0.3	1.4	1.2	1.2	1.3	0.7	0.8	0.9	1.0	1.2	1.3	1.1	1.4	1.7	1.2	1.0	1.1	0.5	0.9	1.7
23-May	0.7	0.9	Z	0.7	0.8	0.4	0.3	0.4	0.6	0.5	0.8	0.9	1.0	0.7	1.5	0.8	0.9	0.7	0.8	0.8	1.4	1.7	0.6	1.0	0.8	1.7
24-May	0.7	0.8	0.7	Z	1.0	1.2	0.7	1.6	1.6	0.6	0.6	0.9	0.9	0.9	0.9	0.8	0.7	0.8	0.9	1.1	1.6	2.3	1.3	2.8	1.1	2.8
25-May	2.7	2.9	2.9	2.9	Z	3.5	3.3	2.4	1.6	1.1	0.8	0.8	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.9	1.7	0.8	0.8	0.6	1.5	3.5
26-May	0.6	0.6	0.8	1.0	2.1	Z	2.6	2.0	1.8	1.3	1.0	0.9	0.9	0.8	0.8	0.8	1.2	1.6	2.0	1.7	1.6	1.1	1.4	1.0	1.3	2.6
27-May	Z	0.9	1.2	1.2	1.1	1.1	0.8	0.9	0.6	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.9	0.6	2.3	2.2	1.3	0.6	0.9	2.3
28-May	1.1	Z	1.1	0.9	0.8	0.5	0.6	1.1	1.2	0.8	0.3	C	C	C	C	C	0.5	0.5	0.8	1.7	2.0	2.1	2.2	1.5	1.1	2.2
29-May	1.2	3.0	Z	5.4	4.2	1.8	1.8	1.8	1.9	1.8	2.6	3.0	6.0	3.4	1.1	0.9	1.1	1.1	0.9	2.6	3.3	5.0	36.0	33.7	5.4	36.0
30-May	13.7	10.1	6.8	Z	2.4	2.0	1.2	1.1	2.1	3.7	2.9	2.0	1.0	0.6	0.6	0.8	1.2	1.3	1.6	1.8	1.9	1.9	1.8	2.2	2.8	13.7
31-May	1.6	1.3	1.9	1.5	Z	1.4	1.2	1.3	1.8	1.9	2.2	1.8	2.0	1.8	1.3	2.1	1.4	1.1	2.0	1.5	1.0	1.3	0.9	1.2	1.5	2.2
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.72	99.72
21 - 40	2	0.28	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	71	34	22	9	14	27	43	83	116	87	44	30	21	35	33	37	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	71	34	22	9	14	27	43	83	116	87	44	30	21	37	33	37	708

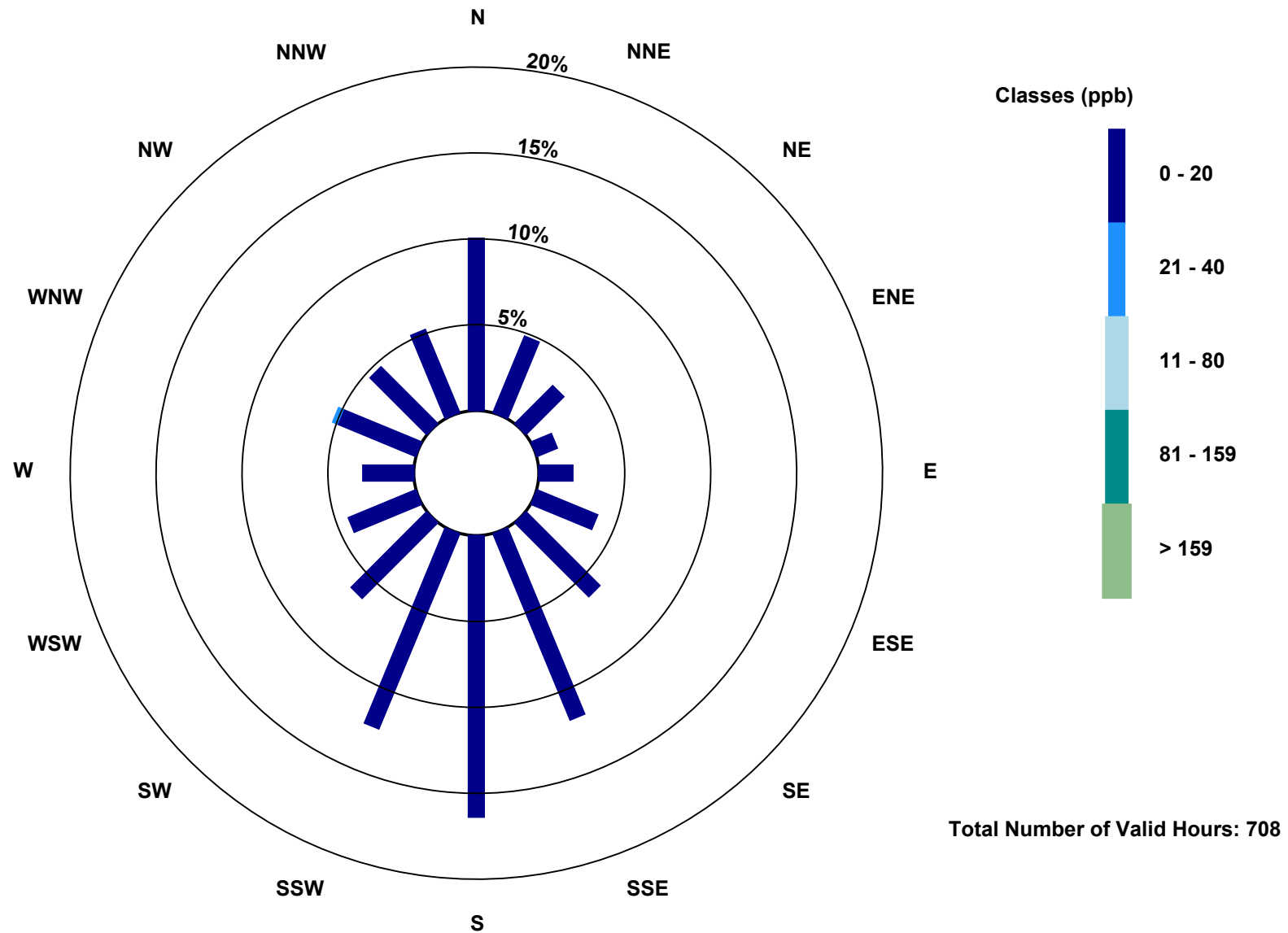
Total Number of Valid Hours: 708

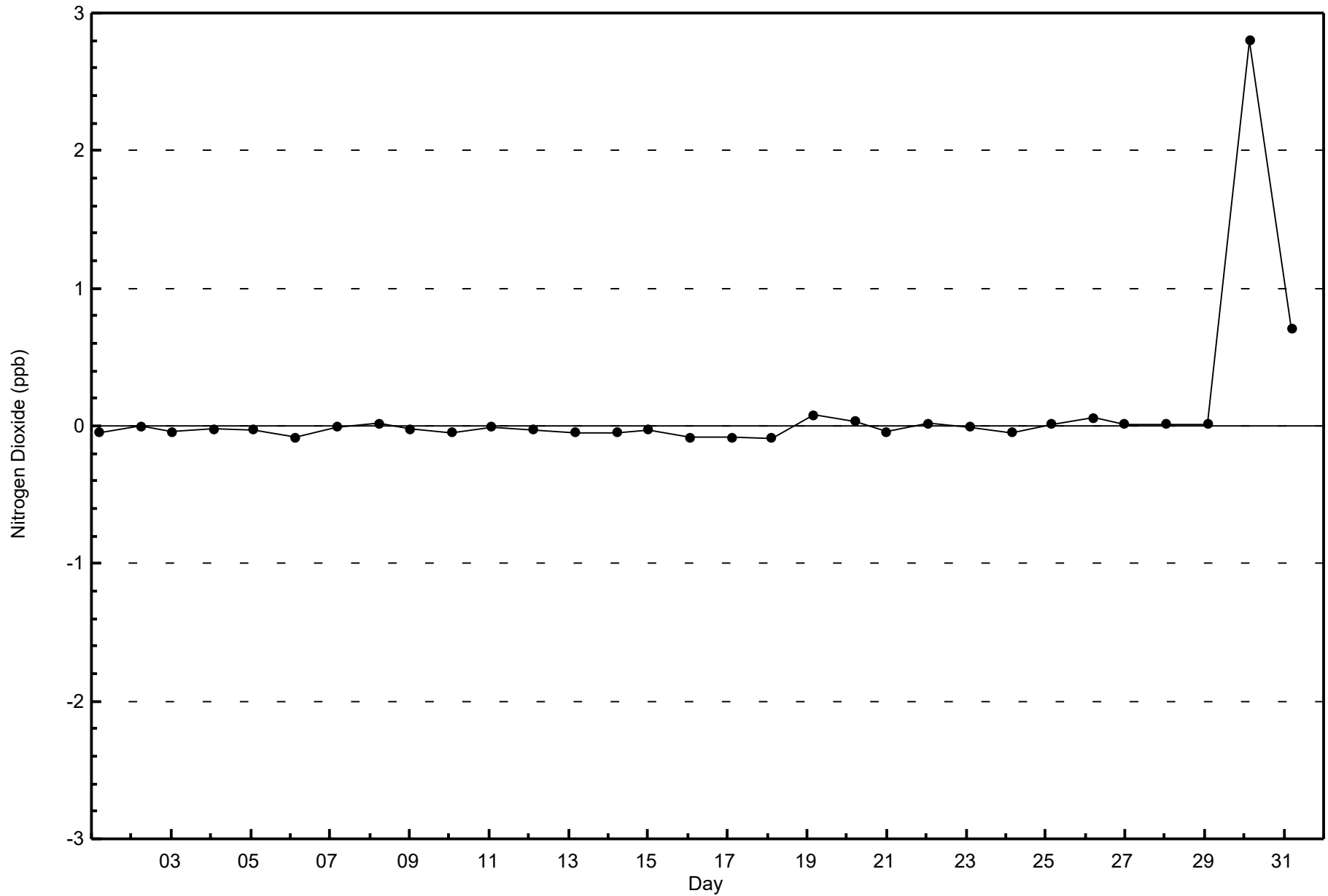
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Janvier

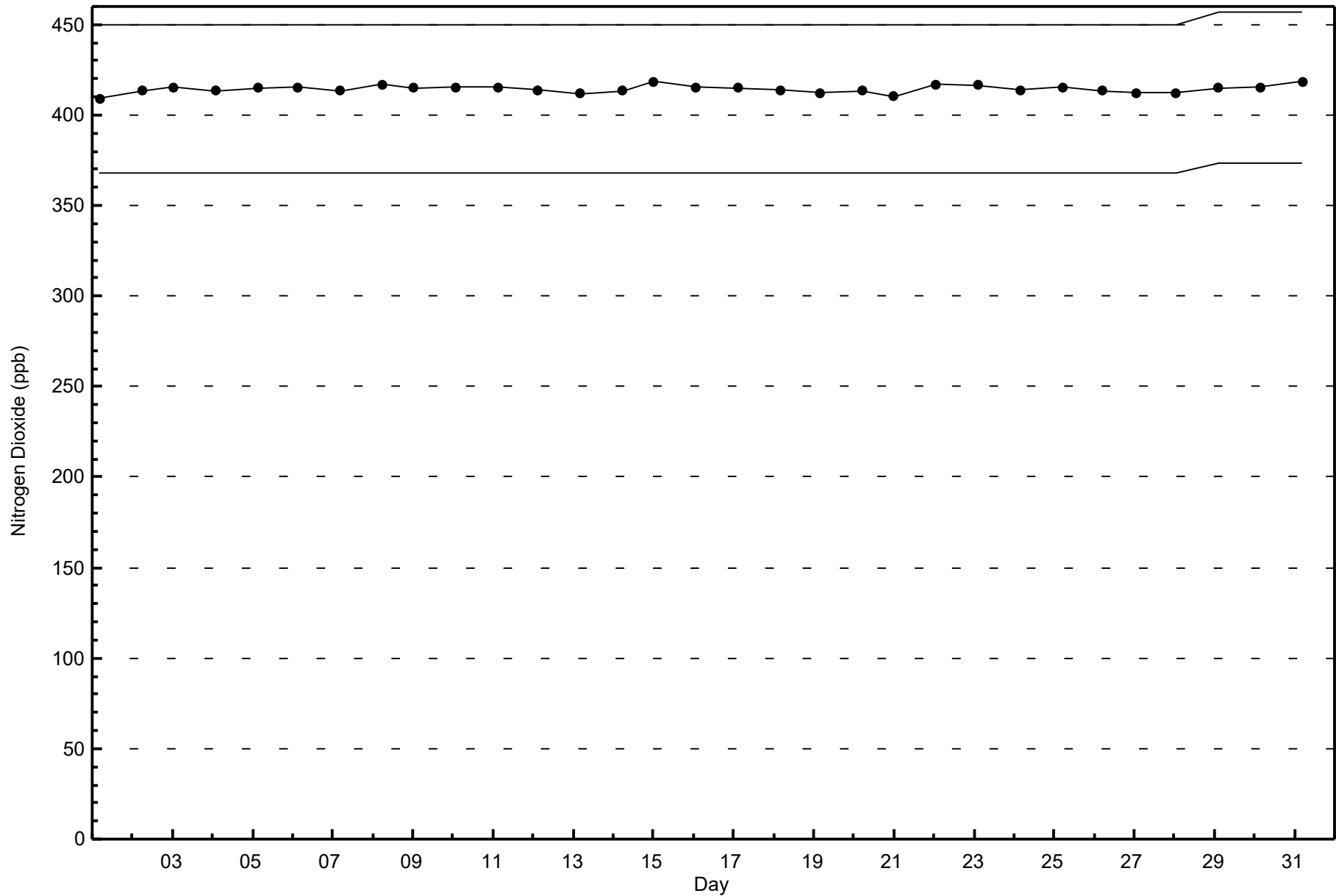






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

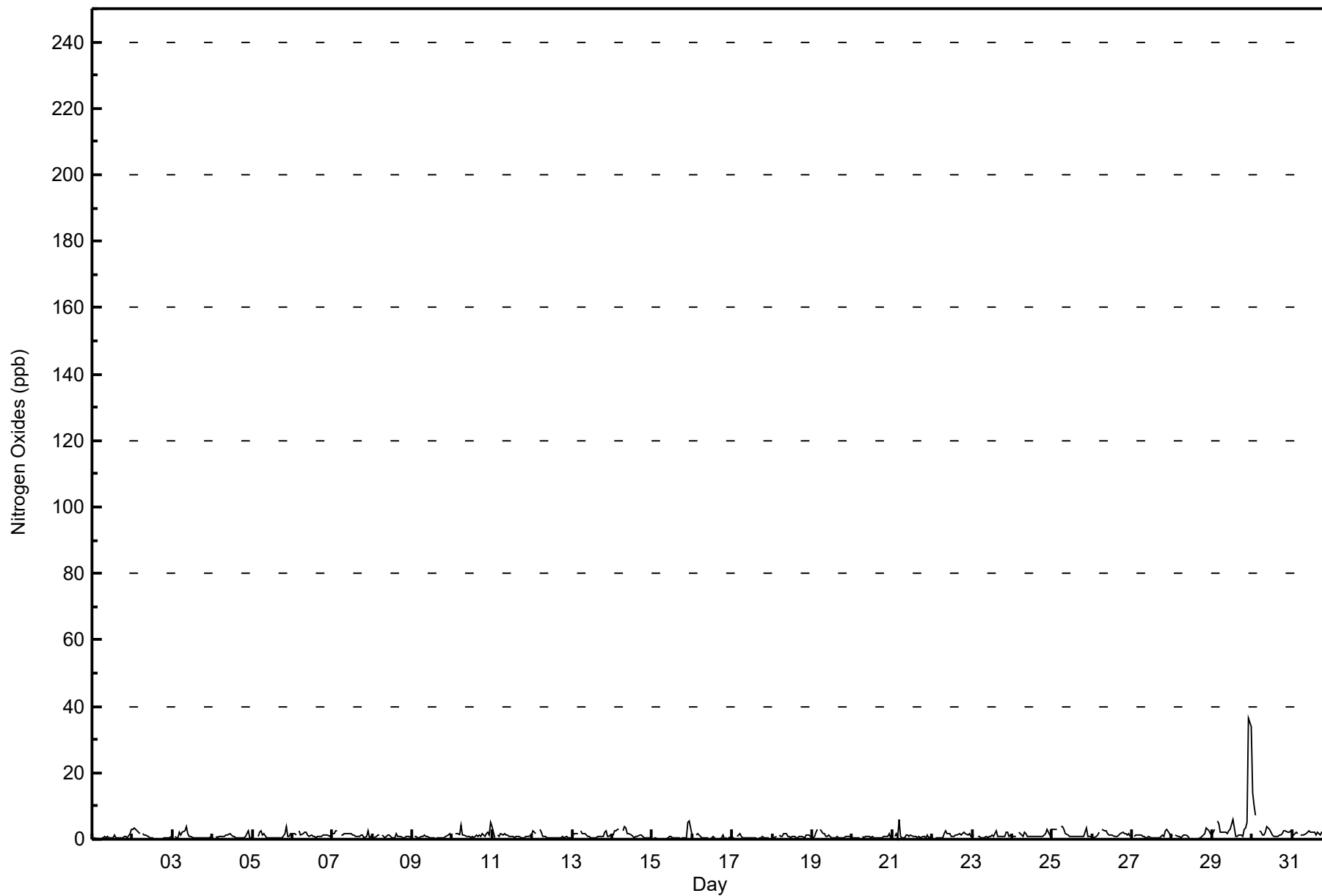
Janvier - May 2025

Maximum Value: 36.4 ppb on May 29 23:00																			Maximum Daily Average: 5.5 ppb on May 29							Hours in Service: 744	
Minimum Value: 0.1 ppb on May 2 17:00																			Minimum Daily Average: 0.4 ppb on May 17							Hours of Data: 708	
Maximum Diurnal Average: 2.3 ppb at hour 24																			Minimum Diurnal Average: 0.7 ppb at hour 16							Hours of Missing Data: 36	
Monthly Average: 1.27 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.4 P ₉₉ = 5.5							Hours of Calibration: 36	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.2	0.2	0.2	0.3	Z	0.4	0.3	0.6	0.6	0.7	0.6	0.4	0.6	1.2	0.4	0.3	0.3	0.5	0.5	1.0	0.7	0.6	1.7	3.0	0.7	3.0	
2-May	2.9	3.5	2.8	2.0	1.7	Z	1.6	1.4	1.2	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.5	0.6	0.6	0.6	1.0	1.0	3.5	
3-May	Z	1.0	0.5	0.6	2.1	1.2	2.3	2.4	3.7	1.8	1.1	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.6	0.7	1.0	3.7	
4-May	0.5	Z	0.8	0.6	0.7	0.7	0.8	0.7	1.3	1.4	1.7	1.4	0.9	0.7	0.3	0.3	0.3	0.2	0.3	0.3	0.7	2.6	0.5	0.4	0.8	2.6	
5-May	0.4	0.4	Z	0.7	2.1	2.4	1.4	1.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	1.5	3.7	1.0	0.7	1.6	0.9	3.7	
6-May	1.9	1.6	1.3	Z	2.4	1.4	1.6	2.2	2.3	1.4	0.9	1.1	0.8	0.8	0.6	0.8	0.7	0.9	1.1	1.4	1.1	1.3	0.9	1.7	1.3	2.4	
7-May	1.9	1.8	2.7	2.5	Z	1.5	1.4	1.5	1.6	1.8	1.6	1.5	1.3	1.1	1.0	0.9	0.9	1.4	1.3	0.6	0.8	2.5	0.6	0.9	1.4	2.7	
8-May	0.5	0.5	0.9	1.2	1.3	Z	1.2	0.6	0.8	1.2	1.4	0.7	0.6	0.5	1.7	0.9	1.0	0.8	0.2	0.5	0.9	0.8	0.7	0.3	0.8	1.7	
9-May	Z	0.9	0.7	0.4	0.4	0.7	0.7	1.3	1.0	0.8	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.6	1.0	1.3	1.6	0.9	0.7	1.6	
10-May	1.0	Z	1.5	1.6	1.4	4.2	1.1	1.3	1.0	0.9	0.7	0.6	0.6	0.5	1.1	0.8	1.1	1.0	1.7	0.9	1.8	2.0	1.1	5.1	1.4	5.1	
11-May	3.7	0.5	Z	1.1	1.0	1.6	1.2	1.5	1.2	1.2	0.8	1.0	0.7	0.6	0.7	0.7	0.7	0.5	0.6	0.6	0.8	0.7	0.7	1.4	1.0	3.7	
12-May	2.5	2.3	1.9	Z	2.9	1.9	0.9	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.8	0.4	0.6	0.5	0.3	0.3	0.9	2.9	
13-May	0.4	1.5	1.8	1.8	Z	2.4	1.8	1.8	1.2	0.7	0.8	0.6	0.5	0.5	0.5	0.7	0.8	0.7	0.6	1.9	2.4	0.6	1.0	1.2	1.1	2.4	
14-May	1.4	2.5	2.4	2.8	2.8	Z	2.6	3.7	3.4	1.7	1.7	1.4	0.7	0.5	0.8	0.9	1.2	1.3	0.9	0.4	0.3	0.3	0.3	0.2	1.5	3.7	
15-May	Z	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.9	1.0	0.6	0.4	0.3	0.4	0.2	0.2	0.2	0.3	0.5	4.9	5.4	3.3	0.9	5.4	
16-May	1.1	Z	1.1	1.7	1.4	0.8	0.4	0.4	0.2	0.3	0.2	0.2	0.7	0.3	0.2	0.2	0.2	0.3	1.4	0.2	0.4	0.2	0.5	0.9	0.6	1.7	
17-May	0.6	0.4	Z	0.8	1.6	0.7	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.6	0.5	0.6	0.3	0.2	0.2	0.4	1.6	
18-May	0.2	0.4	1.0	Z	1.1	1.0	0.9	1.6	1.6	0.8	0.7	0.6	0.7	0.9	0.4	0.5	0.8	0.8	1.0	0.6	1.3	1.1	1.3	0.6	0.9	1.6	
19-May	0.4	0.9	2.1	2.8	Z	2.9	1.9	1.5	0.8	0.7	1.1	0.6	0.6	0.5	0.6	0.7	0.5	0.4	0.4	0.4	0.6	0.7	0.7	0.7	1.0	2.9	
20-May	0.5	0.4	0.4	0.3	0.6	Z	0.6	0.5	0.7	0.8	0.9	0.6	0.6	0.3	0.5	0.3	0.4	0.4	0.4	0.6	1.0	0.8	1.6	0.3	0.6	1.6	
21-May	Z	0.8	1.6	0.4	5.8	0.8	0.5	0.5	1.2	1.1	1.0	1.2	0.9	1.0	0.9	0.6	0.7	0.6	0.7	0.7	0.5	1.1	0.6	0.8	1.0	5.8	
22-May	1.0	Z	0.5	0.4	0.3	0.4	0.4	1.9	2.7	1.9	1.7	1.0	1.0	1.0	1.2	1.4	1.7	1.3	1.6	2.1	1.5	1.2	1.7	0.6	1.2	2.7	
23-May	0.8	1.3	Z	0.8	0.9	0.5	0.4	0.5	1.0	0.6	1.0	1.0	1.4	0.8	2.5	0.8	1.0	0.8	0.9	0.9	2.0	2.3	0.7	1.5	1.1	2.5	
24-May	0.8	0.9	0.8	Z	2.2	1.9	1.0	1.9	1.9	0.7	0.7	0.9	1.0	0.9	1.0	0.8	0.8	0.9	0.9	1.2	1.9	3.0	1.5	2.9	1.3	3.0	
25-May	2.8	2.9	2.9	2.9	Z	3.8	3.8	2.9	1.9	1.2	1.0	0.9	0.7	0.8	0.8	0.8	0.9	0.8	0.8	1.0	3.4	1.0	0.9	0.7	1.7	3.8	
26-May	0.6	0.6	0.8	1.1	2.2	Z	3.1	2.5	2.4	1.5	1.2	1.1	1.1	0.9	0.9	0.9	1.3	1.7	2.1	1.9	1.7	1.1	1.5	1.0	1.4	3.1	
27-May	Z	1.0	1.3	1.3	1.2	1.3	0.9	1.0	0.6	0.5	0.8	0.4	0.5	0.5	0.5	0.4	0.5	0.7	1.1	0.7	2.7	2.8	1.8	0.6	1.0	2.8	
28-May	1.2	Z	1.1	0.9	0.9	0.5	0.8	1.5	1.4	0.9	0.4	C	C	C	C	C	0.5	0.5	0.8	1.9	3.3	2.9	2.4	1.5	1.3	3.3	
29-May	1.3	3.0	Z	5.5	4.5	2.2	2.2	2.1	2.1	1.9	2.7	3.1	6.1	3.4	1.1	1.0	1.1	1.3	0.9	2.8	3.4	5.3	36.4	34.0	5.5	36.4	
30-May	13.9	10.3	7.0	Z	2.6	2.2	1.4	1.3	2.3	3.9	3.1	2.2	1.1	0.7	0.8	0.9	1.4	1.4	1.7	2.7	2.5	2.1	2.0	2.6	3.1	13.9	
31-May	1.8	1.4	2.0	1.6	Z	1.5	1.3	1.4	1.9	2.1	2.5	1.9	2.1	1.9	1.4	2.2	1.5	1.2	2.1	1.6	1.1	1.4	1.0	1.3	1.7	2.5	
1.7 1.6 1.6 1.4 1.8 1.5 1.3 1.4 1.4 1.1 1.1 0.9 0.9 0.8 0.7 0.7 0.7 0.7 0.9 1.0 1.4 1.5 2.3 2.3																									Diurnal Average		
13.9 10.3 7.0 5.5 5.8 4.2 3.8 3.7 3.7 3.9 3.1 3.1 6.1 3.4 2.5 2.2 1.7 1.7 2.1 2.8 3.7 5.3 36.4 34.0																									Diurnal Maximum		
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.72	99.72
21 - 40	2	0.28	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	71	34	22	9	14	27	43	83	116	87	44	30	21	35	33	37	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	71	34	22	9	14	27	43	83	116	87	44	30	21	37	33	37	708

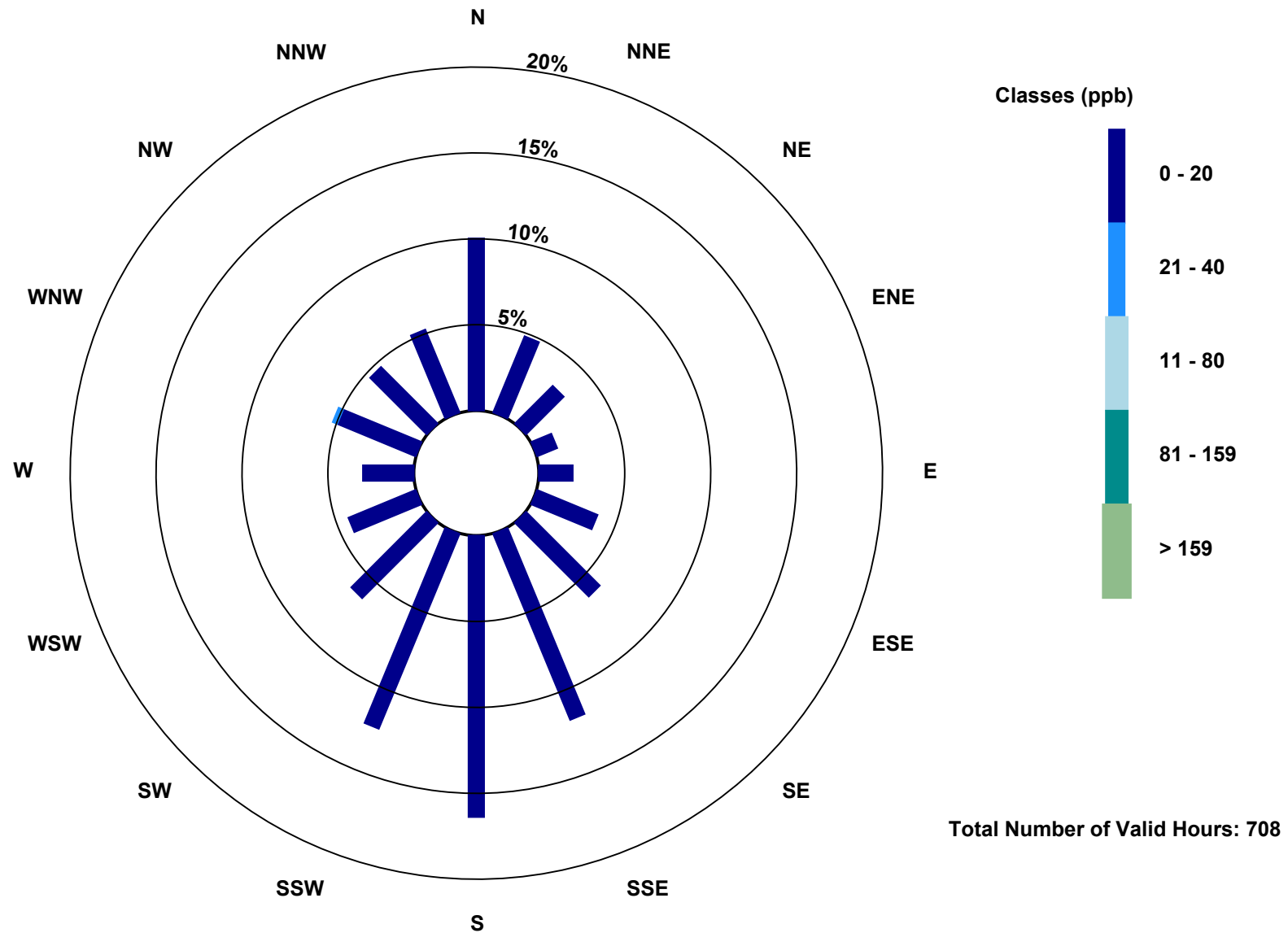
Total Number of Valid Hours: 708

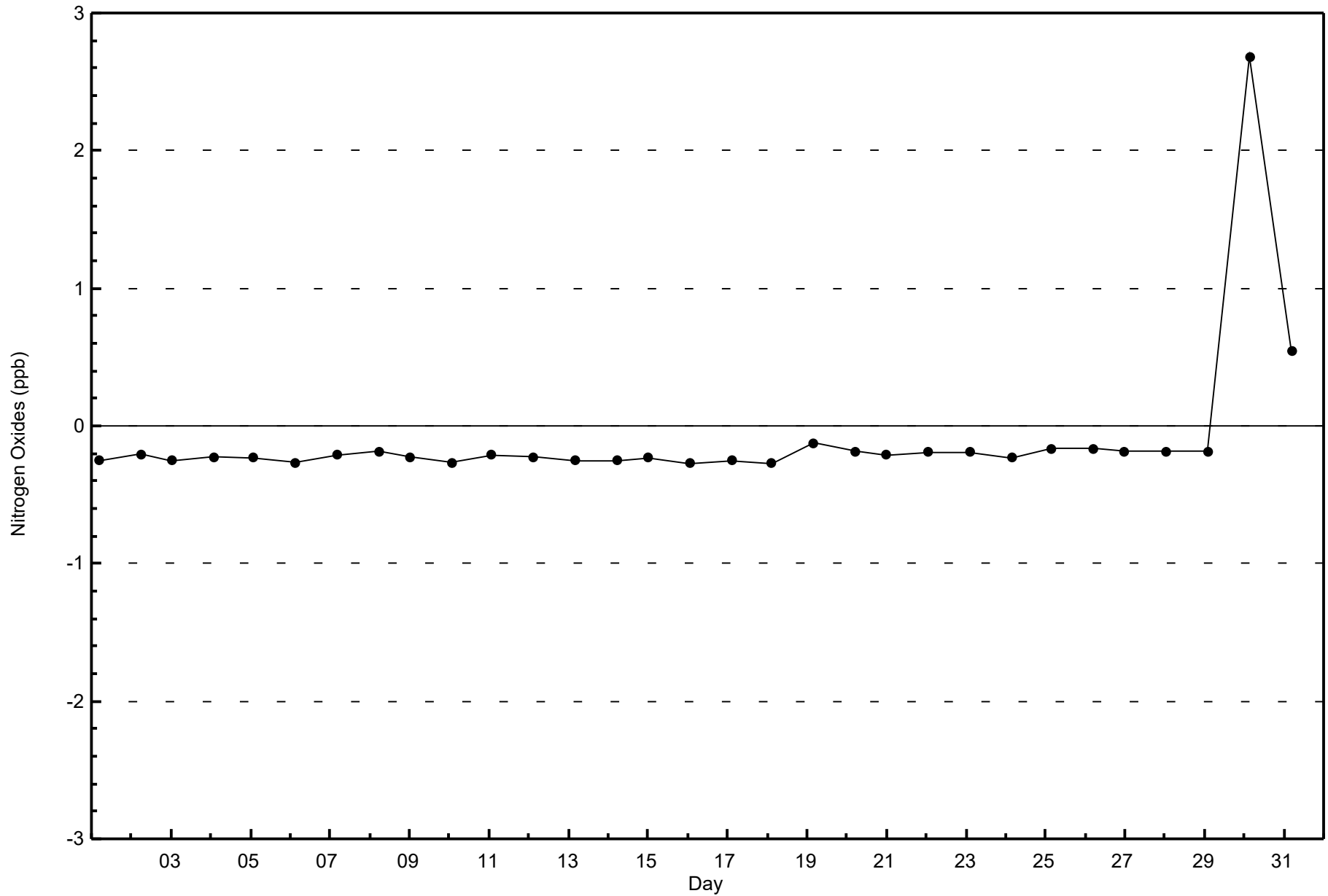
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Janvier

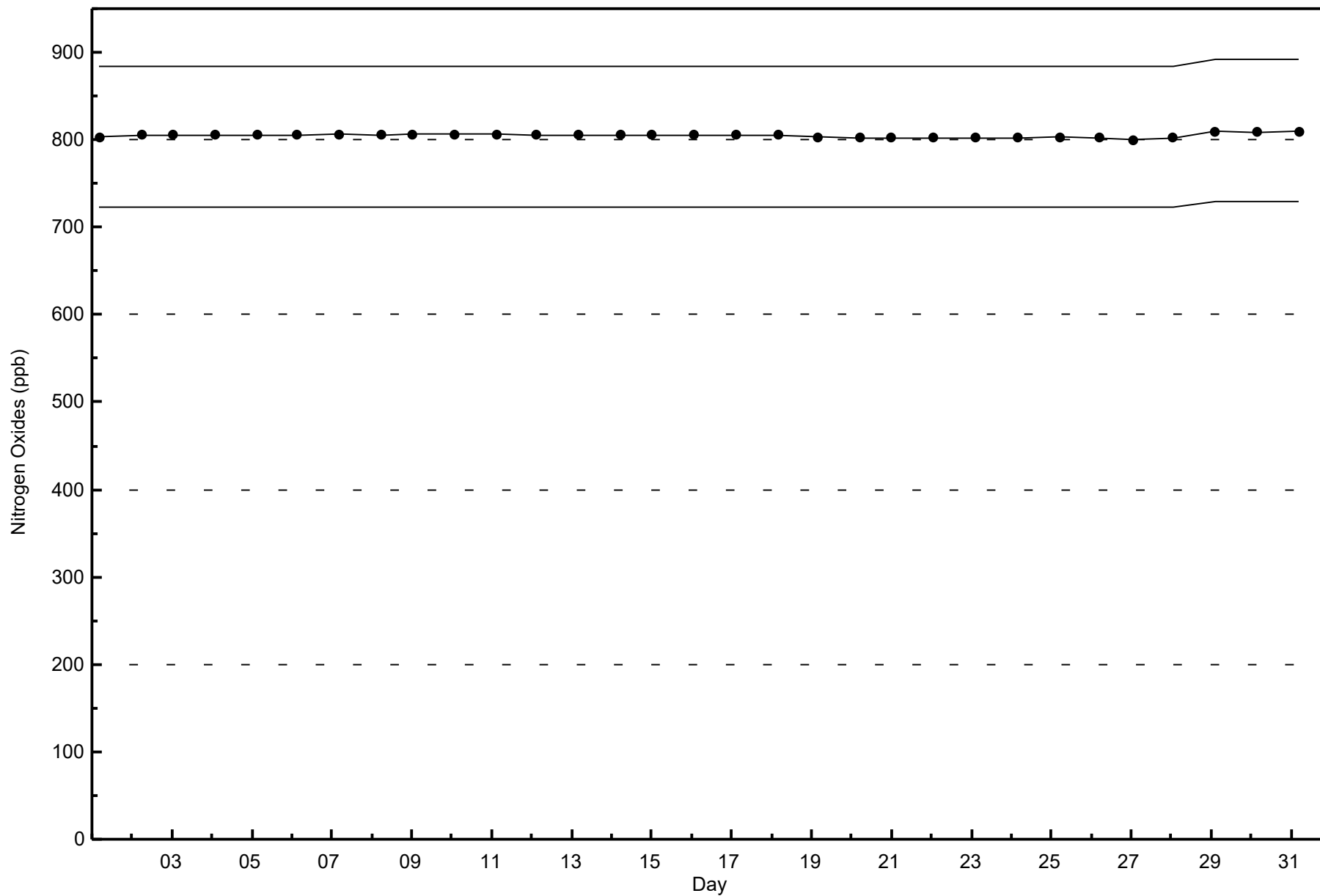






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

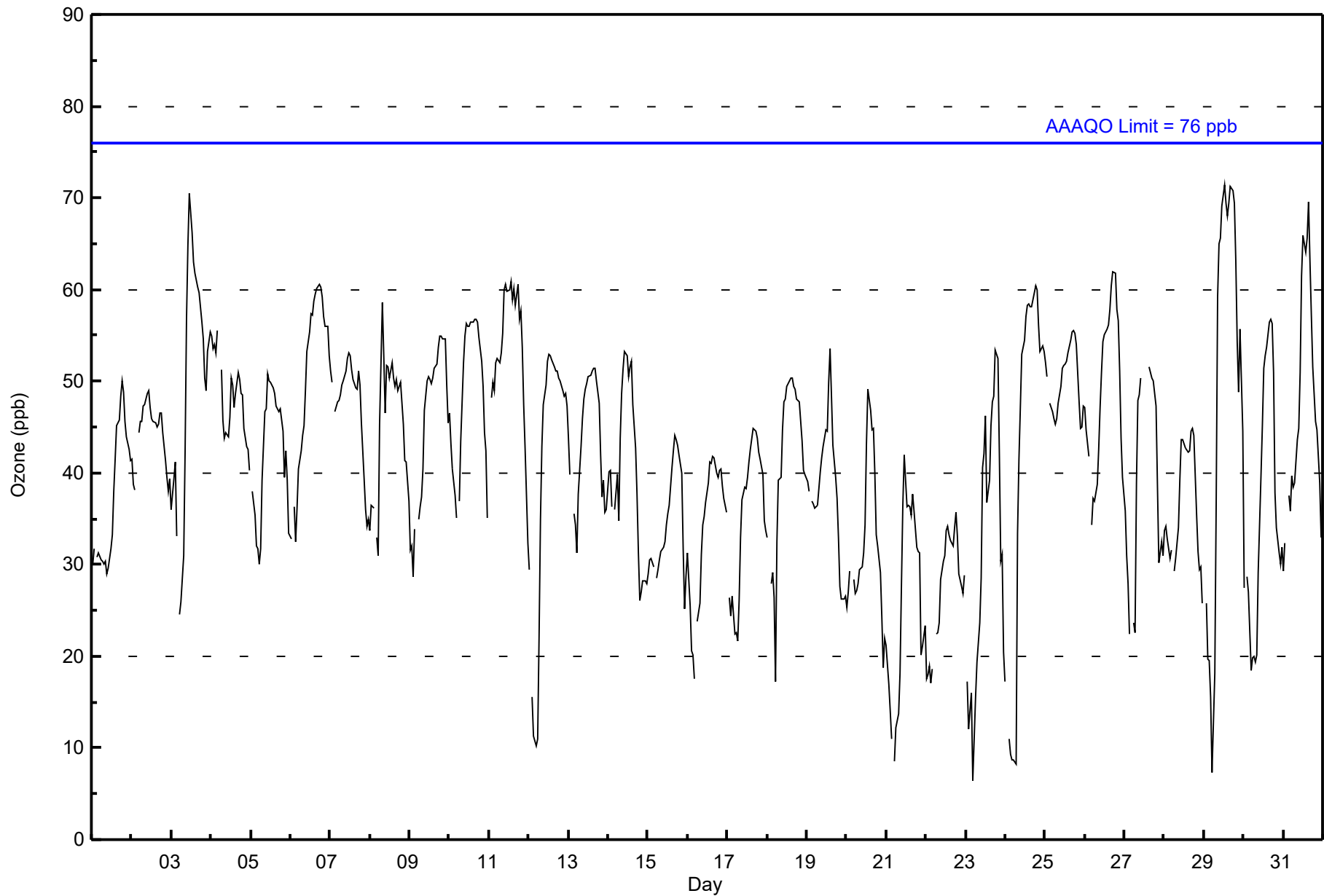
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 71.5 ppb on May 29 13:00 Maximum Daily Average: 54.0 ppb on May 11																				Hours in Service: 744 Hours of Data: 709						
Minimum Value: 6.4 ppb on May 23 05:00 Minimum Daily Average: 26.0 ppb on May 21 Maximum Diurnal Average: 50.6 ppb at hour 16 Minimum Diurnal Average: 29.0 ppb at hour 6 Monthly Average: 41.62 ppb Percentiles: P ₁ = 10.3 P ₁₀ = 25.9 Q ₁ = 32.9 Median = 42.8 Q ₃ = 50.4 P ₉₀ = 56.3 P ₉₉ = 69.3																				Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	30.1	31.7	Z	30.8	31.2	30.5	30.4	30.0	30.3	29.0	29.7	31.8	33.3	38.0	41.4	45.2	45.8	48.3	50.1	48.8	45.6	44.0	42.5	41.4	37.4	50.1
2-May	41.5	38.7	38.1	Z	44.4	45.6	45.7	47.4	47.5	48.7	49.0	47.1	45.9	45.6	45.5	45.0	45.3	46.5	46.5	44.4	41.3	39.5	38.0	39.4	44.2	49.0
3-May	35.9	39.4	41.1	33.2	Z	24.6	26.0	31.0	42.4	56.8	64.9	70.4	66.2	62.9	61.8	61.0	60.2	59.6	56.5	54.6	50.3	48.9	53.3	55.4	50.3	70.4
4-May	55.0	53.5	54.0	53.0	55.6	Z	51.3	45.8	43.8	44.3	43.9	46.0	50.4	49.6	47.2	48.7	50.9	50.2	48.6	48.6	44.8	42.9	42.6	40.3	48.3	55.6
5-May	Z	38.0	35.4	32.1	31.7	30.1	31.7	39.2	46.7	46.9	50.8	50.0	49.9	49.3	48.6	47.3	46.9	46.7	47.0	44.6	39.6	42.4	39.2	33.4	42.1	50.8
6-May	32.9	Z	36.3	32.5	36.2	40.5	42.4	44.2	45.1	48.9	53.2	55.4	57.3	57.3	58.7	59.5	60.1	60.5	60.3	59.1	57.1	56.0	56.1	52.9	50.5	60.5
7-May	51.1	49.9	Z	46.6	47.8	47.9	48.4	49.6	50.0	51.1	52.5	53.1	52.9	51.2	50.2	49.2	49.2	51.2	49.6	45.4	39.2	36.0	34.2	34.9	47.4	53.1
8-May	33.7	36.5	36.1	Z	32.9	31.0	45.3	58.5	52.9	46.5	51.7	51.6	50.3	52.0	50.3	49.4	50.2	49.0	49.9	47.6	45.3	41.3	41.1	37.0	45.2	58.5
9-May	31.7	32.0	28.7	33.9	Z	34.9	36.3	37.3	40.4	46.9	50.0	50.5	50.2	49.8	50.4	51.4	51.9	53.7	55.0	54.9	54.7	54.6	49.6	45.4	45.4	55.0
10-May	46.5	43.2	40.4	37.6	35.1	Z	36.8	43.5	52.0	54.9	56.3	56.0	55.9	56.5	56.4	56.8	56.7	56.4	54.8	52.2	49.5	44.3	42.4	35.0	48.7	56.8
11-May	Z	48.2	49.9	49.0	52.0	52.4	52.0	53.1	55.2	60.0	60.6	59.7	59.9	60.9	58.9	60.2	58.2	60.6	56.8	57.6	53.7	47.5	42.7	32.4	54.0	60.9
12-May	29.5	Z	15.6	11.2	10.2	10.9	22.1	35.0	42.9	47.5	49.6	52.2	52.9	52.7	52.4	51.5	51.1	51.1	50.3	50.0	48.9	48.3	48.6	47.2	40.5	52.9
13-May	43.7	39.9	Z	35.5	34.3	31.2	37.7	42.8	46.0	48.0	49.1	49.7	50.5	50.6	51.0	51.3	51.4	50.1	47.6	41.9	37.4	39.3	35.7	36.0	43.5	51.4
14-May	40.2	40.3	36.3	Z	36.0	39.9	34.8	43.8	48.7	51.2	53.3	52.8	50.5	51.6	52.1	47.4	42.7	37.7	31.2	26.1	27.0	28.2	28.2	28.0	40.3	53.3
15-May	29.0	30.5	30.7	29.7	Z	28.6	29.5	30.4	31.4	31.9	32.5	34.3	35.6	36.5	40.6	42.4	44.0	43.6	42.9	42.0	39.9	31.8	25.1	28.6	34.4	44.0
16-May	31.2	25.4	20.6	20.1	17.6	Z	23.8	25.7	31.2	34.3	35.2	36.8	38.9	41.2	41.1	41.7	41.6	39.9	39.5	40.3	40.4	38.6	37.3	35.7	33.8	41.7
17-May	Z	26.3	24.4	26.5	22.5	22.6	21.6	26.1	33.0	37.1	38.4	38.3	39.4	41.2	42.6	44.8	44.6	44.5	43.8	42.2	41.4	39.8	34.8	33.8	35.2	44.8
18-May	32.9	Z	27.9	29.2	26.3	17.2	32.5	39.2	39.5	44.7	47.7	48.1	49.4	50.0	50.3	50.4	49.4	49.0	48.0	47.7	45.5	43.5	40.3	39.8	41.2	50.4
19-May	39.1	37.9	Z	36.9	36.7	36.2	36.5	38.3	40.0	41.6	42.8	44.7	44.5	49.9	53.6	48.3	43.1	39.5	37.3	32.9	27.7	26.3	26.3	26.5	38.5	53.6
20-May	25.3	27.0	29.2	Z	28.3	26.8	27.1	27.9	29.4	29.7	31.3	34.3	43.2	49.2	46.8	44.7	44.8	40.0	33.3	32.0	29.2	24.2	18.8	21.9	32.4	49.2
21-May	21.2	16.9	14.0	11.0	Z	8.6	12.3	13.7	18.1	27.6	36.4	41.9	36.3	36.5	36.3	35.3	37.6	35.9	31.9	31.4	31.2	20.1	21.0	23.4	26.0	41.9
22-May	17.6	17.9	19.0	17.0	18.6	Z	22.4	22.6	23.7	28.4	30.4	31.0	33.6	34.1	33.3	32.7	32.0	34.0	35.7	33.0	29.0	27.5	26.9	28.8	27.4	35.7
23-May	Z	17.2	12.1	16.0	6.4	11.0	15.6	19.3	23.7	28.5	40.6	42.1	46.3	36.8	39.2	45.2	47.7	48.3	53.4	52.5	42.0	30.3	31.2	20.5	31.6	53.4
24-May	17.2	Z	11.0	9.4	8.6	8.7	8.3	33.4	41.5	47.2	52.9	54.5	57.0	58.2	58.4	58.1	58.1	59.6	60.4	60.0	56.1	53.3	53.8	53.2	42.6	60.4
25-May	52.1	50.5	Z	47.7	46.7	46.0	45.3	46.0	47.5	49.4	51.3	51.8	51.9	52.2	53.1	54.5	55.4	55.5	55.2	54.0	47.7	44.8	45.0	47.3	50.0	55.5
26-May	47.1	44.8	41.8	Z	34.3	37.2	36.8	38.7	42.6	47.2	51.0	54.4	55.1	55.7	56.1	57.9	60.4	62.0	61.8	57.8	56.5	51.1	43.8	39.5	49.3	62.0
27-May	35.8	30.9	27.9	22.4	Z	23.7	22.6	38.8	47.9	48.5	50.4	C	C	C	C	51.5	50.4	50.0	48.6	47.3	38.6	30.2	32.5	31.0	38.4	51.5
28-May	33.7	34.1	32.7	30.7	31.5	Z	29.3	30.7	34.1	39.2	43.6	43.6	43.2	42.7	42.2	42.4	44.5	44.8	44.1	35.4	31.4	29.5	29.7	25.8	36.5	44.8
29-May	Z	25.8	19.7	19.6	15.5	7.4	18.1	37.1	59.2	65.0	65.6	69.0	71.5	69.4	68.0	69.3	71.2	70.8	69.4	63.1	54.3	48.8	55.7	44.6	50.4	71.5
30-May	27.5	Z	28.7	27.0	18.4	19.8	20.0	19.4	20.2	29.1	39.7	45.2	51.5	52.8	53.7	56.4	56.7	56.2	50.9	37.8	34.0	31.3	30.1	31.9	36.4	56.7
31-May	29.2	32.3	Z	37.5	35.9	39.7	38.4	38.9	43.6	44.8	51.0	61.4	65.8	64.0	65.6	69.6	63.2	57.2	51.6	45.7	44.7	41.8	39.0	33.0	47.6	69.6
35.0 35.0 30.1 29.8 30.6 29.0 31.6 36.4 40.3 43.7 47.0 48.6 49.6 50.0 50.2 50.6 50.5 50.1 48.8 46.2 42.7 39.6 38.2 36.3																									Diurnal Average	
55.0 53.5 54.0 53.0 55.6 52.4 52.0 58.5 59.2 65.0 65.6 70.4 71.5 69.4 68.0 69.6 71.2 70.8 69.4 63.1 57.1 56.0 56.1 55.4																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	44	6.21	6.21
21 - 50	493	69.53	75.74
51 - 82	172	24.26	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Janvier - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	5	2	2	1	0	5	5	3	7	2	4	2	2	1	2	1	44
21 - 50	51	29	11	7	11	24	34	64	65	67	30	23	14	15	22	26	493
51 - 82	12	1	9	1	2	0	3	16	44	20	11	10	6	17	10	10	172
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	68	32	22	9	13	29	42	83	116	89	45	35	22	33	34	37	709

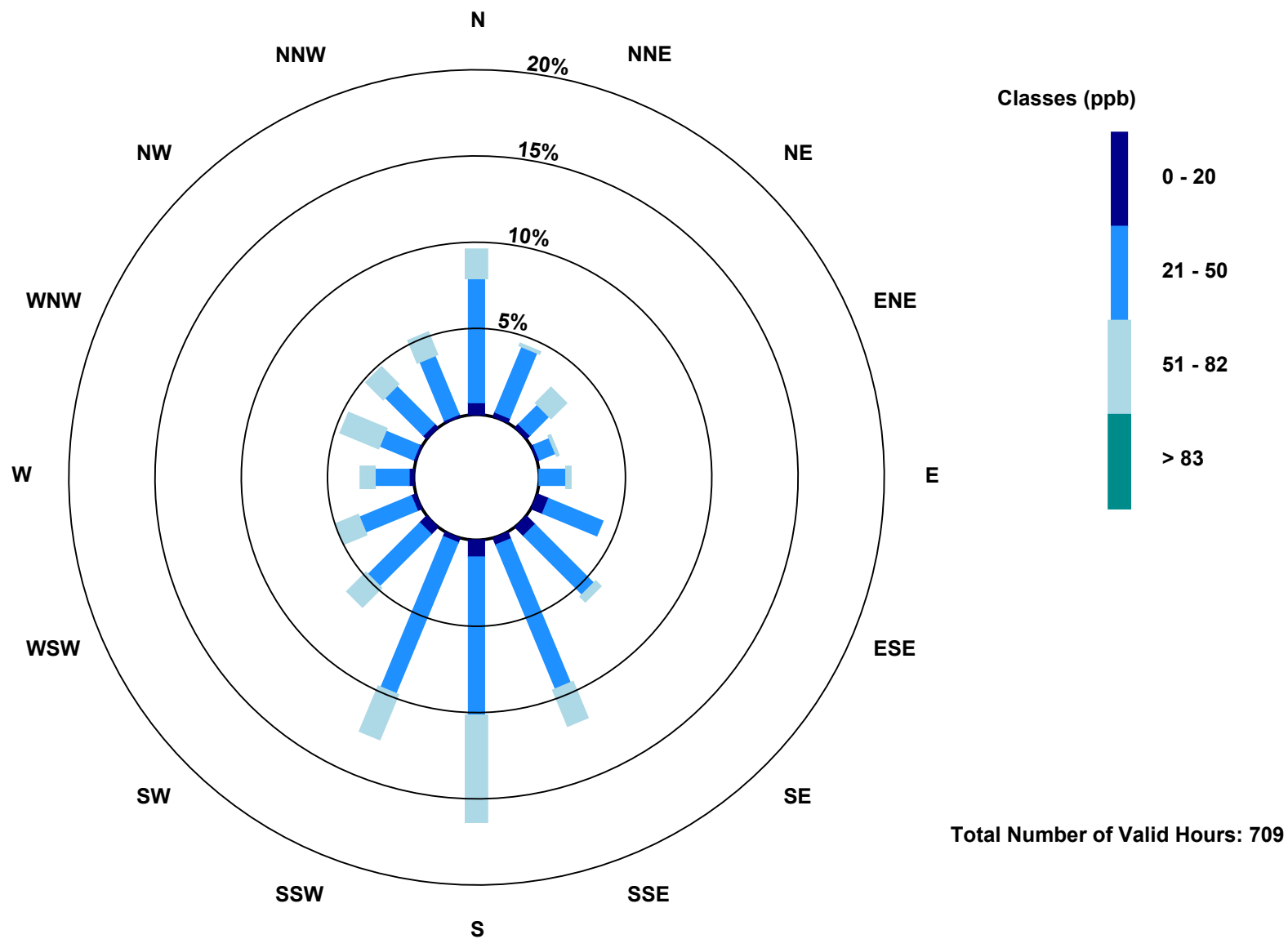
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

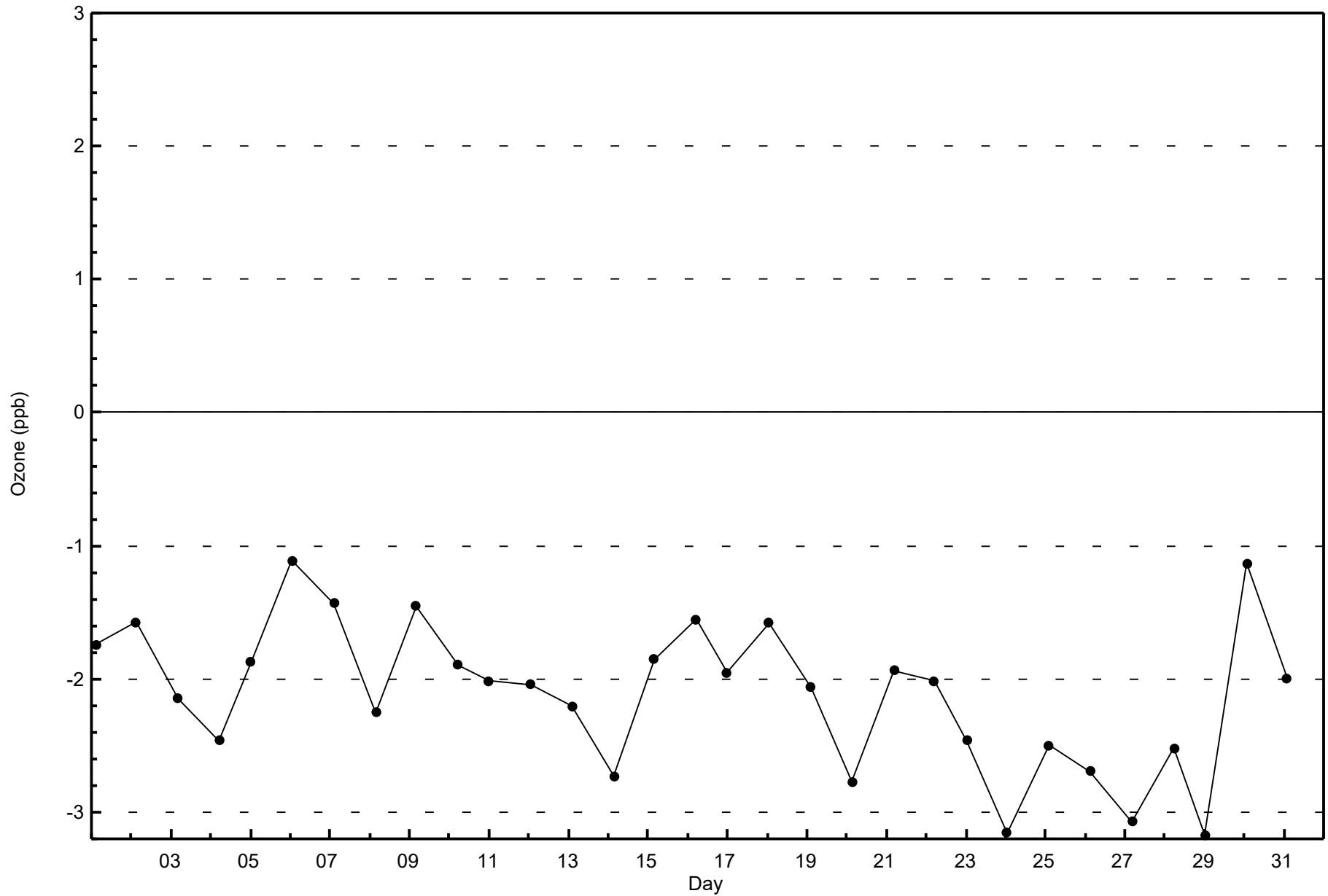
Ozone (O_3) - ppb
Janvier





Wood Buffalo Environmental Association
Zero Responses

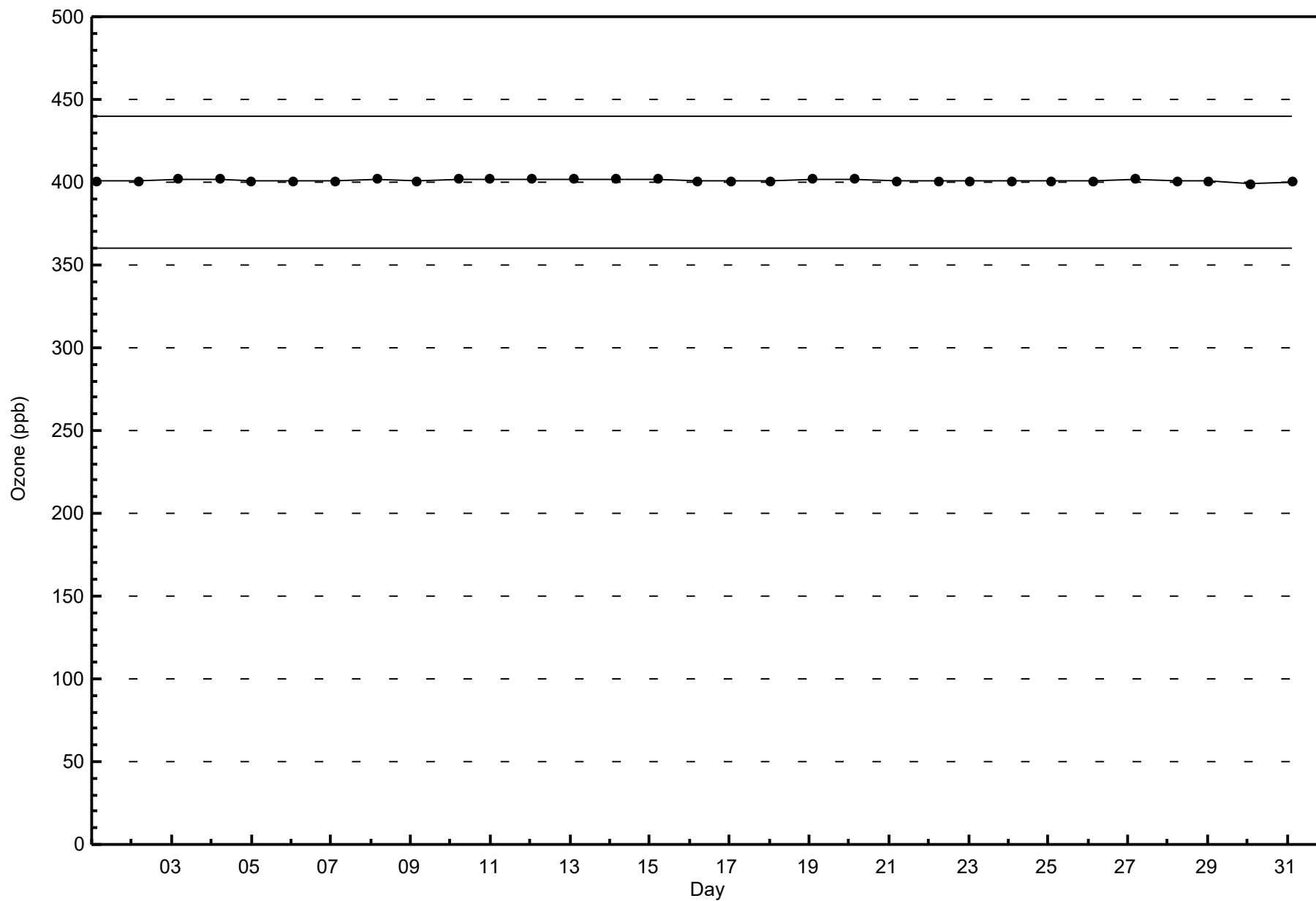
Ozone (O₃) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

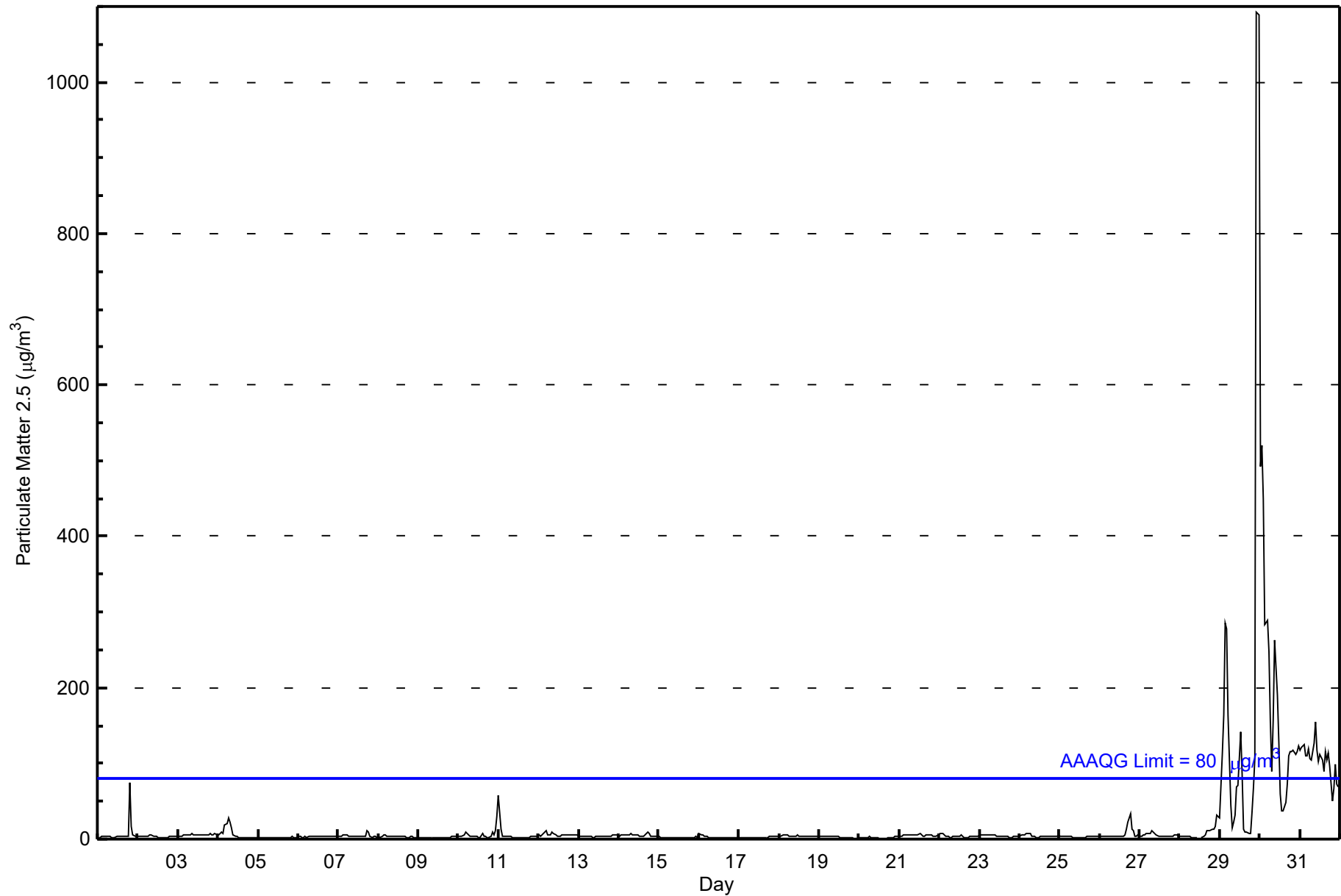
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 49 24-hr: 3 Maximum Value: 1092.7 µg/m ³ on May 29 23:00 Minimum Value: 0.5 µg/m ³ on May 20 14:00 Maximum Diurnal Average: 46.2 µg/m ³ at hour 24 Monthly Average: 18.42 µg/m ³																				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0						
Maximum Daily Average: 180.4 µg/m ³ on May 30 Minimum Daily Average: 1.8 µg/m ³ on May 5 Minimum Diurnal Average: 7.3 µg/m ³ at hour 15 Percentiles: P ₁ = 0.9 P ₁₀ = 1.9 Q ₁ = 2.7 Median = 3.6 Q ₃ = 5.4 P ₉₀ = 22.2 P ₉₉ = 280.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	2.4	2.8	3.0	3.1	3.1	3.1	3.3	3.2	2.7	2.5	2.5	2.8	2.9	3.5	4.3	4.1	4.2	4.2	4.2	74.2	15.9	5.9	4.4	4.5	6.9	74.2
2-May	4.6	4.6	4.4	4.5	4.5	4.3	4.5	4.7	4.9	4.6	3.4	2.8	2.6	2.5	2.6	2.5	2.4	2.5	2.6	3.2	2.9	2.8	3.0	3.6	3.5	4.9
3-May	4.4	4.6	4.5	5.0	6.3	4.8	5.4	4.9	6.8	6.3	5.6	5.9	5.4	5.4	5.4	5.3	5.2	5.2	6.0	6.6	5.5	4.8	7.1	5.5	5.5	7.1
4-May	6.4	8.1	9.6	7.8	18.7	20.2	27.1	22.4	14.9	6.0	4.0	3.3	2.6	2.5	2.0	1.7	1.8	1.7	1.5	1.7	2.0	2.4	2.0	2.1	7.2	27.1
5-May	2.3	2.1	2.0	1.9	2.0	2.2	1.2	1.5	1.4	1.4	1.6	1.5	1.5	1.5	1.6	1.4	1.5	1.6	1.5	2.1	3.8	2.4	2.2	2.3	1.8	3.8
6-May	3.6	3.9	2.3	2.2	3.0	2.8	2.9	3.2	3.9	4.6	3.6	3.6	2.9	3.0	3.3	3.1	3.3	3.5	3.6	4.1	3.6	3.5	3.2	3.2	3.3	4.6
7-May	3.2	3.3	4.1	5.1	5.1	4.7	4.4	4.2	3.7	3.6	3.8	3.9	4.0	3.5	3.7	4.0	4.5	11.0	9.0	3.8	2.8	3.8	2.8	2.7	4.4	11.0
8-May	2.8	2.6	3.5	4.9	6.3	4.5	3.6	3.5	3.1	3.2	3.1	3.0	3.0	2.9	3.4	3.0	2.9	2.6	2.1	2.9	4.4	2.7	2.2	2.1	3.3	6.3
9-May	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.4	2.0	1.6	1.5	1.2	1.2	1.0	1.2	1.3	1.8	1.9	2.8	3.7	4.4	4.1	4.1	2.2	4.4
10-May	3.8	4.2	3.8	6.4	8.6	8.2	5.1	3.8	3.6	3.4	2.9	2.9	2.8	2.7	6.7	4.0	4.0	2.5	2.6	2.9	9.4	5.3	11.8	29.6	5.9	29.6
11-May	57.2	12.2	3.1	3.1	3.0	3.2	3.0	2.9	2.8	2.5	2.4	2.7	2.3	2.1	2.2	2.5	2.8	2.5	2.6	2.9	3.0	3.1	3.1	4.4	5.5	57.2
12-May	5.2	4.0	5.9	6.6	12.0	6.0	5.6	5.5	9.4	7.4	5.9	4.0	3.5	4.2	5.2	6.1	6.3	5.7	5.7	5.8	5.9	5.5	5.1	4.9	5.9	12.0
13-May	4.6	4.6	3.9	3.7	3.8	3.8	3.7	2.9	2.7	2.7	2.8	3.0	3.3	3.5	3.5	4.1	4.4	4.0	3.7	4.3	5.4	5.0	5.3	5.4	3.9	5.4
14-May	4.5	4.9	5.1	5.3	5.4	6.2	6.5	6.6	6.3	6.0	6.5	5.3	4.2	3.5	3.5	3.8	6.7	8.9	8.1	3.5	3.2	3.1	3.0	3.2	5.1	8.9
15-May	3.0	2.7	2.4	1.5	1.3	1.1	1.4	1.4	1.6	1.7	2.7	2.7	2.1	1.2	1.6	1.9	1.7	1.4	1.5	1.5	1.6	2.0	2.9	2.5	1.9	3.0
16-May	7.2	6.2	5.0	2.9	3.0	2.9	2.5	1.9	1.2	1.3	1.2	1.6	1.3	1.4	1.3	1.3	1.2	1.3	1.4	1.1	1.0	1.0	1.2	1.5	2.2	7.2
17-May	1.5	2.2	2.2	2.3	2.6	2.1	2.0	2.0	2.2	2.7	2.6	2.3	2.3	2.4	2.4	2.5	2.3	2.4	2.9	2.8	3.2	3.5	3.4	3.7	2.5	3.7
18-May	4.0	4.6	5.3	6.2	5.9	6.2	4.5	3.8	3.7	3.6	4.5	4.7	4.3	3.7	3.2	3.2	3.0	3.1	3.0	3.0	3.2	3.3	3.1	3.1	4.0	6.2
19-May	3.2	3.7	3.6	3.4	3.7	4.1	3.5	3.6	3.7	3.6	3.2	2.8	2.6	2.8	2.7	2.6	2.6	2.1	1.4	2.0	1.0	0.7	0.7	0.9	2.7	4.1
20-May	1.4	1.8	2.2	2.5	2.7	2.8	2.8	2.8	2.5	1.9	1.4	1.2	0.7	0.5	0.6	0.7	0.7	1.0	1.2	1.9	2.6	2.9	3.3	3.0	1.9	3.3
21-May	3.4	4.0	4.8	4.9	6.3	5.9	5.4	6.1	6.5	5.4	5.2	5.2	8.1	5.5	3.7	2.8	5.1	5.8	6.3	4.9	3.3	3.5	3.9	5.6	5.1	8.1
22-May	6.8	6.9	6.6	5.7	3.9	2.9	2.7	2.6	3.4	4.1	3.8	3.4	4.0	4.9	3.3	2.4	2.7	2.6	3.1	3.3	3.4	3.2	4.1	4.6	3.9	6.9
23-May	5.2	5.6	6.2	5.5	4.9	5.7	5.8	5.7	6.1	5.9	4.6	4.1	3.1	3.2	3.1	2.9	2.9	2.9	2.7	2.6	2.8	3.6	3.4	3.9	4.3	6.2
24-May	4.5	5.0	5.1	5.9	7.8	7.0	7.8	4.2	3.3	2.9	2.7	2.7	2.9	3.0	2.9	3.0	3.0	3.2	3.0	3.1	3.2	3.5	3.4	5.2	4.1	7.8
25-May	4.0	4.2	4.2	4.2	4.3	4.0	3.7	3.2	2.8	2.5	2.4	2.4	2.4	2.5	2.7	2.8	3.2	3.3	2.9	2.8	3.4	3.2	3.3	3.2	3.2	4.3
26-May	3.2	3.2	3.4	3.7	3.6	3.1	3.0	3.0	3.1	3.0	3.3	3.4	3.3	3.5	3.6	4.7	13.0	23.1	34.5	13.7	11.5	3.4	4.0	4.7	6.7	34.5
27-May	4.5	4.5	5.1	5.8	7.4	7.4	7.6	10.3	9.7	6.8	5.1	3.9	3.7	3.7	3.9	3.6	3.8	3.6	3.6	3.4	4.2	4.8	5.4	4.0	5.2	10.3
28-May	3.4	3.9	4.3	4.1	3.7	3.3	3.0	2.7	2.5	2.4	1.9	C	C	2.1	2.9	5.6	10.8	12.1	11.3	12.5	13.8	17.2	30.8	29.0	8.3	30.8
29-May	28.3	113.3	163.2	284.4	277.3	164.7	45.5	14.0	22.8	32.6	69.4	71.5	142.4	85.8	12.4	9.2	10.1	8.0	6.7	35.1	67.3	107.0	1092.7	1089.3	164.7	1092.7
30-May	492.8	520.7	448.5	283.0	289.7	247.2	154.0	90.1	156.5	262.0	190.7	129.1	58.8	38.2	36.4	48.5	72.6	109.9	115.9	116.5	117.1	111.9	116.5	122.7	180.4	520.7
31-May	117.3	122.0	124.8	109.5	109.4	119.3	106.4	103.6	126.3	155.5	117.1	103.4	111.3	104.2	90.3	115.6	105.0	113.2	96.6	50.8	66.2	98.7	72.1	68.1	104.4	155.5
25.8 28.3 27.6 25.7 26.5 21.5 14.2 10.7 13.8 17.9 15.2 13.0 13.2 10.0 7.3 8.4 9.5 11.5 11.4 12.3 12.3 13.8 45.6 46.2																										Diurnal Average
492.8 520.7 448.5 284.4 289.7 247.2 154.0 103.6 156.5 262.0 190.7 129.1 142.4 104.2 90.3 115.6 105.0 113.2 115.9 116.5 117.1 111.9 1092.7 1089.3																										Diurnal Maximum
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Janvier - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	562	75.74	75.74
6 - 15	101	13.61	89.35
16 - 25	7	0.94	90.30
26 - 80	23	3.10	93.40
> 81.0	47	6.33	99.73

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Janvier - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	56	23	11	8	12	26	35	70	99	76	35	21	17	25	20	28	562
6 - 15	8	14	7	1	1	3	7	12	7	7	8	7	2	2	11	4	101
16 - 25	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	1	7
26 - 80	3	0	1	0	0	0	2	1	7	2	1	1	0	2	2	1	23
> 81.0	6	0	3	0	1	1	0	0	7	11	3	4	3	4	1	3	47
Totals	73	37	22	9	14	30	44	85	122	96	47	33	22	35	34	37	740

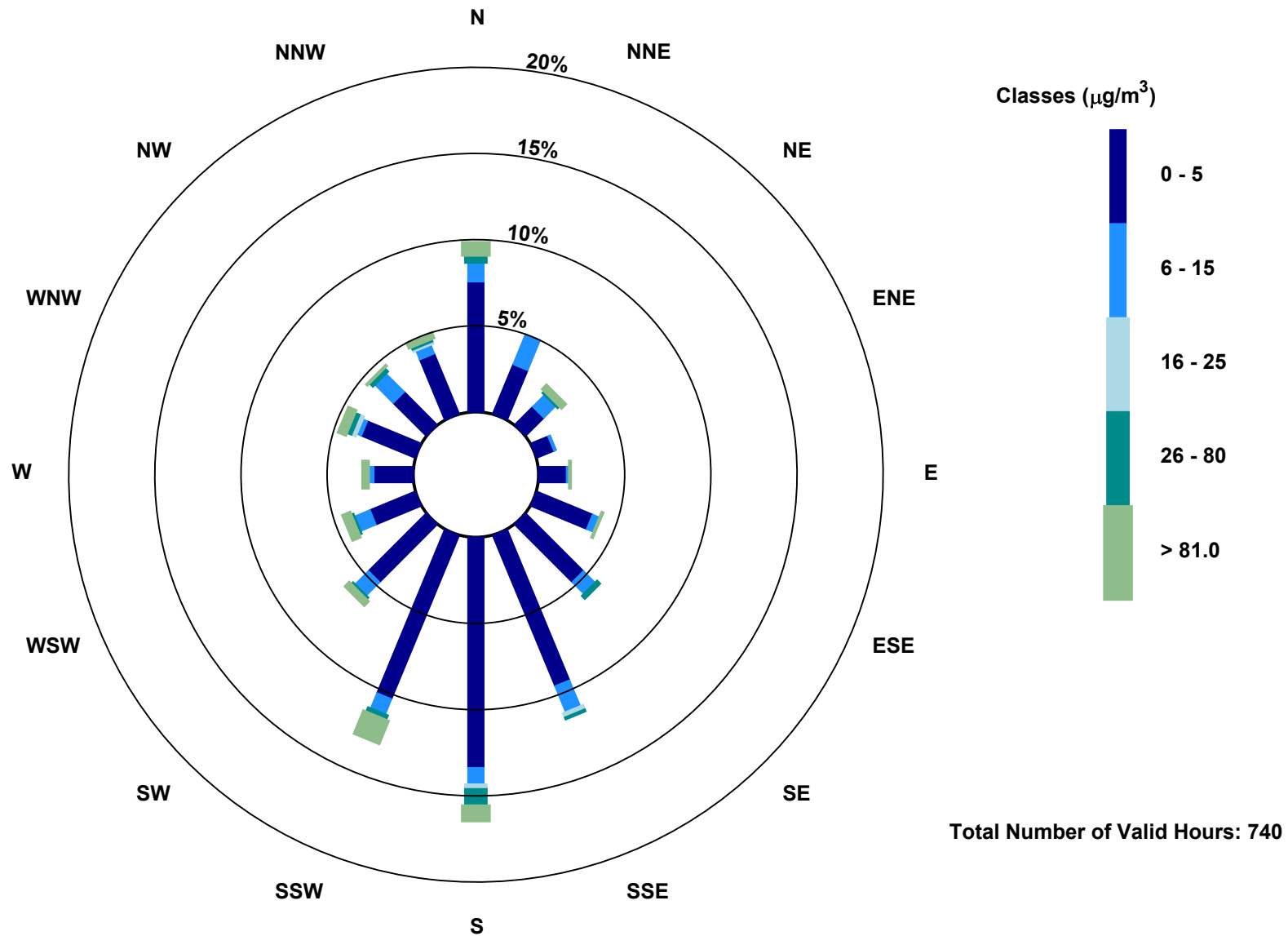
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Janvier





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

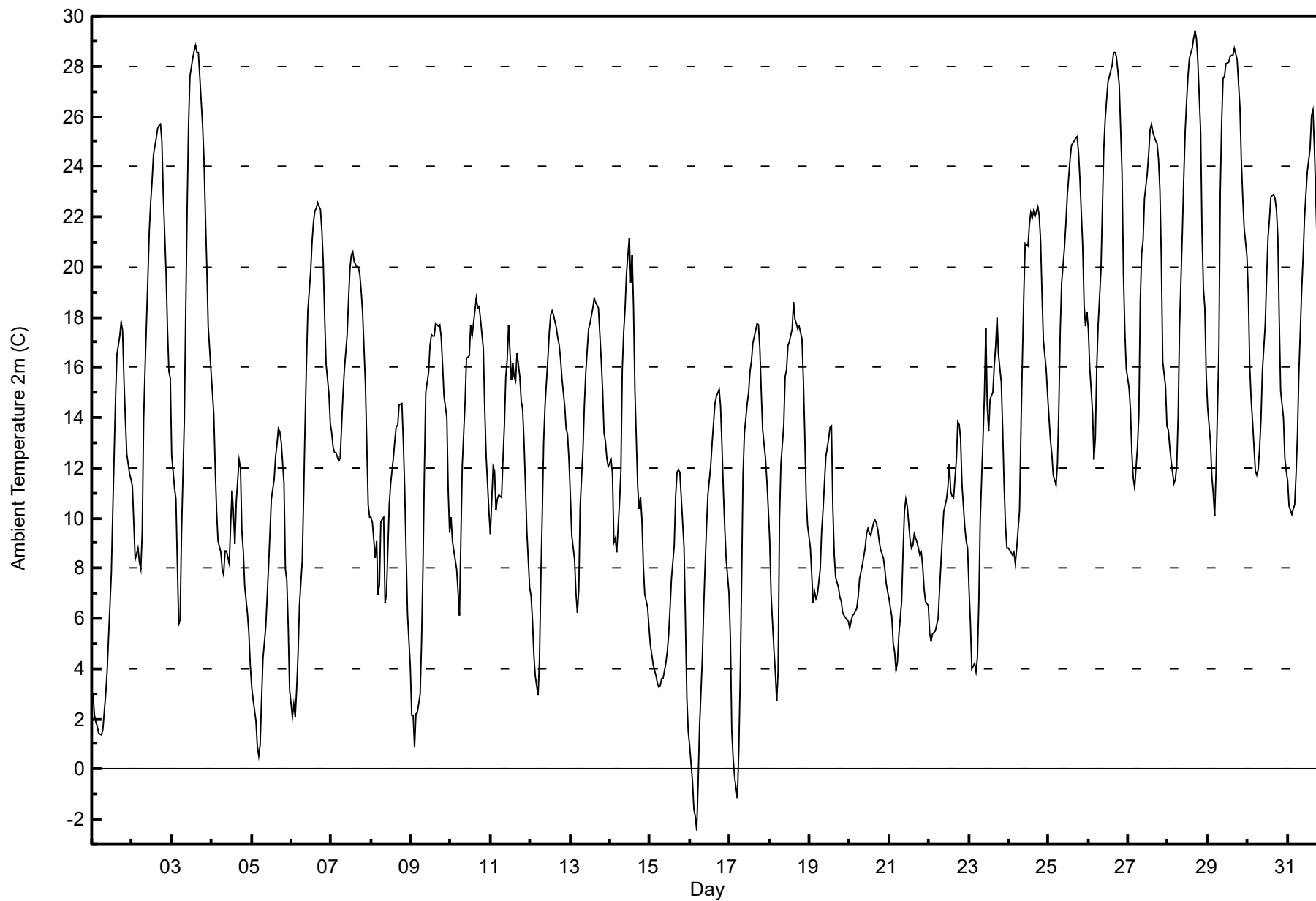
Janvier - May 2025

Maximum Value: 29.4 C on May 28 17:00																			Maximum Daily Average: 22.2 C on May 29										Hours in Service: 744	
Minimum Value: -2.5 C on May 16 05:00																			Minimum Daily Average: 6.2 C on May 15										Hours of Data: 744	
Maximum Diurnal Average: 18.6 C at hour 17																			Minimum Diurnal Average: 6.6 C at hour 5										Hours of Missing Data: 0	
Monthly Average: 13.44 C																			Percentiles: P ₁ = 0.5 P ₁₀ = 5.0 Q ₁ = 8.6 Median = 12.8 Q ₃ = 17.7 P ₉₀ = 23.1 P ₉₉ = 28.6										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	2.9	2.2	1.9	1.7	1.4	1.3	1.6	2.3	3.0	3.9	5.2	7.8	10.2	12.5	14.8	16.5	17.3	17.8	17.5	15.5	13.9	12.6	11.8	11.6	8.6	17.8				
2-May	11.2	9.8	8.4	8.8	8.3	8.0	9.4	13.9	15.9	19.5	21.4	22.6	23.4	24.4	25.1	25.5	25.6	25.7	25.0	22.9	19.8	17.5	15.9	15.5	17.6	25.7				
3-May	12.5	11.2	10.8	8.2	5.8	5.9	9.4	13.9	18.2	22.3	25.6	27.6	28.3	28.6	28.8	28.6	28.5	27.6	25.7	24.3	22.1	20.0	17.6	15.8	19.5	28.8				
4-May	15.0	14.1	12.0	10.3	9.1	8.6	8.0	7.7	8.7	8.7	8.2	9.7	11.1	10.2	9.0	10.7	12.3	12.0	9.5	8.7	7.3	6.2	5.4	4.1	9.4	15.0				
5-May	3.3	2.7	1.9	0.9	0.5	1.0	2.8	4.4	5.7	6.8	8.1	9.4	10.8	11.6	12.5	12.9	13.5	13.5	13.0	11.3	7.9	7.5	5.7	3.1	7.1	13.5				
6-May	2.1	2.6	2.1	3.1	4.5	6.5	8.3	10.9	13.7	16.1	18.2	19.8	21.0	21.8	22.3	22.4	22.6	22.3	21.5	20.1	17.9	16.1	14.9	13.8	14.4	22.6				
7-May	13.4	12.8	12.6	12.6	12.3	12.4	13.6	14.9	15.9	17.3	18.7	19.9	20.5	20.6	20.2	20.0	20.0	19.7	19.0	18.2	15.4	12.9	10.5	10.0	16.0	20.6				
8-May	10.0	9.8	8.4	9.1	6.9	7.3	9.9	10.0	6.6	6.9	8.7	10.5	11.4	12.4	13.1	13.7	13.7	14.5	14.6	13.0	11.2	8.6	6.2	4.1	10.0	14.6				
9-May	2.2	2.2	0.9	2.2	2.3	3.0	5.1	8.0	11.8	15.0	15.8	16.9	17.3	17.3	17.2	17.8	17.6	17.7	17.2	16.1	14.8	14.0	11.1	9.4	11.4	17.8				
10-May	10.0	9.1	8.7	8.0	7.1	6.1	9.1	12.1	14.6	16.3	16.4	16.5	17.7	17.2	18.3	18.7	18.4	18.4	17.9	16.7	14.3	12.5	11.4	10.3	13.6	18.7				
11-May	9.4	12.0	11.9	10.3	10.8	10.9	10.8	12.3	13.6	15.6	16.3	17.7	15.5	16.2	15.6	15.5	16.6	15.6	14.7	14.4	13.1	11.3	9.5	7.2	13.2	17.7				
12-May	6.9	5.9	4.6	3.7	2.9	4.3	7.6	10.2	13.0	14.5	16.3	17.4	18.1	18.3	18.1	17.6	17.2	16.9	16.4	15.6	14.5	13.6	13.3	12.3	12.5	18.3				
13-May	10.9	9.3	8.3	7.0	6.2	7.1	10.5	12.7	14.5	15.8	16.7	17.5	17.8	18.4	18.8	18.6	18.5	18.4	16.3	15.1	13.4	13.1	12.4	12.0	13.7	18.8				
14-May	12.3	11.8	9.0	9.2	8.6	10.6	11.9	15.9	17.4	18.4	19.8	21.1	19.4	20.5	18.4	15.1	11.2	10.3	10.8	9.9	8.1	7.0	6.4	5.7	12.9	21.1				
15-May	5.0	4.6	4.2	3.7	3.4	3.3	3.3	3.6	3.6	4.2	4.6	5.3	6.4	7.5	8.9	10.9	11.8	11.9	11.8	10.8	8.8	5.8	2.8	1.5	6.2	11.9				
16-May	0.9	-0.5	-1.6	-1.9	-2.5	-0.6	1.7	4.4	6.5	8.1	9.6	11.0	12.1	13.0	13.8	14.5	14.8	15.1	14.4	12.9	11.1	9.6	8.3	7.0	7.6	15.1				
17-May	5.2	1.5	0.4	-0.3	-1.1	0.7	3.6	7.5	11.7	13.4	14.6	15.0	15.9	16.2	16.9	17.5	17.8	17.7	16.8	15.0	13.5	12.4	11.5	10.4	10.6	17.8				
18-May	9.1	7.0	4.8	3.9	2.7	3.9	10.0	12.1	13.7	15.6	15.9	16.9	17.0	17.5	18.6	17.9	17.8	17.5	17.6	17.1	15.5	13.3	10.8	9.7	12.8	18.6				
19-May	8.8	7.7	6.6	7.1	6.8	7.0	8.0	9.5	10.3	11.4	12.4	13.2	13.6	13.7	10.4	8.5	7.6	7.2	6.9	6.7	6.2	6.1	5.9	5.9	8.6	13.7				
20-May	5.6	5.9	6.1	6.2	6.4	6.8	7.6	7.9	8.1	8.8	9.4	9.6	9.4	9.3	9.8	9.9	9.8	9.5	9.1	8.8	8.4	8.0	7.4	7.0	8.1	9.9				
21-May	6.8	6.1	5.0	4.7	4.0	4.3	5.3	6.7	8.6	10.3	10.8	10.5	9.1	8.8	8.9	9.4	9.2	9.0	8.5	8.7	8.1	7.2	6.7	6.5	7.6	10.8				
22-May	5.4	5.1	5.4	5.4	5.5	6.0	7.2	8.2	9.3	10.3	10.7	11.2	12.2	11.1	10.9	10.8	12.3	13.8	13.7	13.2	11.3	9.7	9.1	8.8	9.4	13.8				
23-May	7.2	5.8	4.0	4.2	3.9	4.5	6.7	9.9	13.2	15.0	17.6	14.5	13.4	14.7	15.0	16.1	16.8	18.0	16.5	15.4	13.5	11.3	9.7	8.8	11.5	18.0				
24-May	8.8	8.7	8.5	8.6	8.2	8.8	10.3	13.5	16.3	18.8	20.9	20.8	21.7	22.2	21.9	22.2	22.0	22.4	22.1	21.0	18.9	17.1	15.9	14.9	16.4	22.4				
25-May	14.0	13.1	12.5	11.7	11.3	12.2	14.4	17.5	19.4	20.8	21.7	22.8	23.6	24.3	24.9	25.0	25.2	25.2	24.6	23.5	20.8	18.5	17.6	18.2	19.3	25.2				
26-May	17.5	16.0	14.2	12.3	13.2	16.0	17.7	19.9	22.3	24.7	25.9	26.7	27.4	27.8	28.0	28.5	28.6	28.4	27.3	25.6	23.8	19.8	17.5	16.0	21.9	28.6				
27-May	15.2	14.3	12.6	11.6	11.2	12.8	14.1	18.7	20.6	21.0	22.7	23.7	24.5	25.5	25.7	25.3	25.0	24.9	24.3	23.1	20.3	16.2	15.3	13.7	19.3	25.7				
28-May	13.5	12.8	12.3	11.4	11.6	12.1	14.1	17.6	21.4	23.6	25.4	26.6	27.6	28.3	28.7	29.1	29.4	29.1	28.2	25.4	21.4	19.2	18.4	15.7	21.0	29.4				
29-May	14.4	13.1	11.7	11.0	10.1	11.9	16.7	23.0	25.8	27.5	27.6	28.1	28.1	28.4	28.5	28.4	28.7	28.3	27.3	26.3	24.2	22.8	21.5	20.5	22.2	28.7				
30-May	19.0	16.0	14.7	13.8	11.9	11.7	11.9	12.8	13.9	15.8	17.7	19.5	21.2	21.9	22.8	22.9	22.8	22.3	21.2	17.9	15.1	14.0	12.4	11.9	16.9	22.9				
31-May	11.5	10.5	10.1	10.4	10.5	11.8	13.3	15.8	19.1	20.4	22.0	22.9	23.8	24.8	26.0	26.3	24.8	22.9	20.8	17.6	15.3	13.8	11.8	11.3	17.4	26.3				
Diurnal Average																														
Diurnal Maximum																														



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Janvier - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	7	0.94	0.94
0 - 10	242	32.53	33.47
10 - 20	363	48.79	82.26
> 20	132	17.74	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

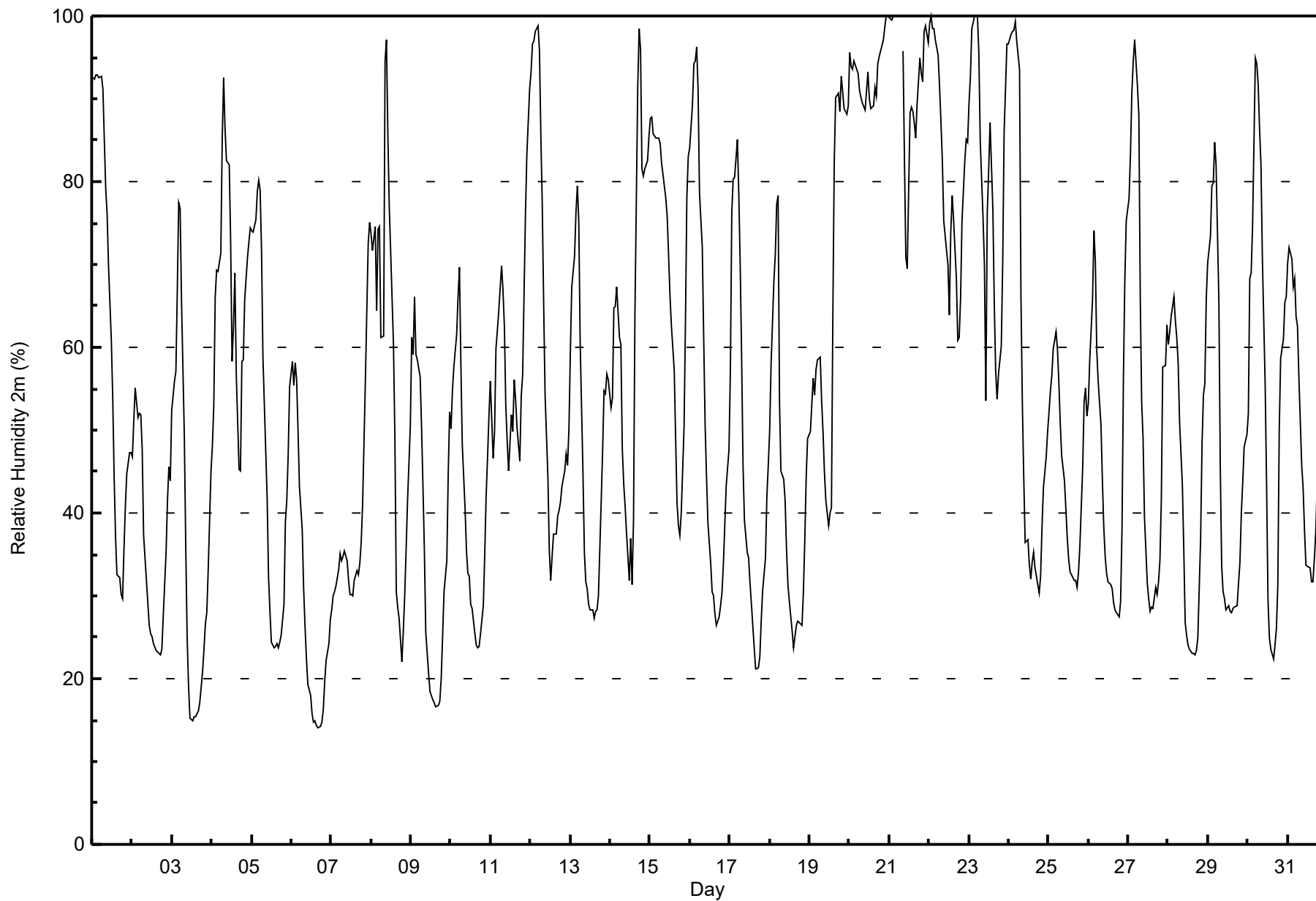
Janvier - May 2025

Maximum Value: 100.0 % on May 20 23:00																				Maximum Daily Average: 93.3 % on May 20					Hours in Service: 744			
Minimum Value: 14.1 % on May 6 17:00																				Minimum Daily Average: 28.7 % on May 6					Hours of Data: 740			
Maximum Diurnal Average: 76.4 % at hour 5																				Minimum Diurnal Average: 38.9 % at hour 17					Hours of Missing Data: 4			
Monthly Average: 54.85 %																				Percentiles: P ₁ = 15.3 P ₁₀ = 25.6 Q ₁ = 33.0 Median = 52.3 Q ₃ = 74.6 P ₉₀ = 91.3 P ₉₉ = 99.9					Hours of Calibration: 0			
																									Percent Operational Time: 99.5			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	92.6	92.3	92.9	92.8	92.6	92.7	91.2	85.1	79.2	76.1	69.8	60.9	54.0	44.4	37.1	32.5	32.2	30.2	29.7	35.6	40.8	44.8	47.2	47.2	62.2	92.9		
2-May	46.9	51.2	55.0	51.6	52.1	51.9	47.7	37.3	34.6	29.1	26.5	25.5	25.1	24.2	23.5	23.2	23.0	22.9	23.6	27.6	35.3	41.6	45.6	44.0	36.2	55.0		
3-May	52.4	55.9	57.1	66.9	77.4	76.8	65.7	49.3	36.0	25.1	19.2	15.2	15.0	15.4	15.4	15.8	16.1	17.0	20.8	23.6	26.6	27.9	33.1	45.1	36.2	77.4		
4-May	48.2	53.0	66.2	69.3	69.2	71.3	85.2	92.6	86.4	82.6	82.0	72.7	58.3	62.3	69.0	56.8	45.3	45.1	58.3	58.4	65.7	70.9	72.7	74.4	67.3	92.6		
5-May	74.1	73.9	75.4	78.7	80.2	79.0	71.8	58.8	47.4	41.8	32.2	28.2	24.3	23.8	23.9	24.3	23.8	24.5	25.3	29.0	39.0	41.6	47.0	55.3	46.8	80.2		
6-May	58.4	55.5	58.1	56.2	50.0	43.3	37.9	30.9	26.2	22.3	19.3	18.0	15.7	14.8	14.9	14.3	14.1	14.3	14.7	16.3	19.7	22.1	24.3	27.1	28.7	58.4		
7-May	28.4	30.1	30.5	31.1	33.1	35.1	34.2	34.8	35.4	34.3	31.9	30.2	30.1	30.1	31.9	33.0	32.6	34.0	36.4	41.0	56.1	64.4	72.6	75.1	38.6	75.1		
8-May	73.7	71.7	74.5	64.4	74.2	74.6	61.1	61.3	94.6	97.2	85.7	76.9	71.6	60.3	49.1	30.4	28.6	27.3	22.1	25.7	30.0	35.6	41.3	50.6	57.6	97.2		
9-May	61.3	59.2	66.0	59.1	58.5	56.5	50.3	43.2	35.6	25.7	20.7	18.4	17.9	17.4	17.2	16.6	16.9	17.2	20.1	25.1	30.5	34.3	44.8	52.2	36.0	66.0		
10-May	50.2	54.7	57.6	61.5	66.2	69.6	58.2	48.3	40.5	35.5	32.8	32.4	29.0	28.4	25.4	24.0	23.7	23.9	25.5	28.9	35.0	42.0	46.6	51.7	41.3	69.6		
11-May	56.0	46.6	49.8	59.9	62.0	64.3	69.8	67.0	62.5	53.0	48.7	45.0	51.8	49.9	56.1	53.8	50.4	46.3	54.1	56.6	66.3	75.9	83.2	91.2	59.2	91.2		
12-May	93.3	96.7	96.9	98.2	98.9	95.8	85.5	77.2	65.1	54.3	44.5	35.6	31.9	34.8	37.4	37.4	39.6	40.4	41.3	43.2	45.1	47.2	45.7	50.2	59.8	98.9		
13-May	59.4	67.2	71.1	76.3	79.5	75.2	60.6	44.8	35.2	31.6	30.8	29.0	28.3	28.2	27.2	28.2	28.3	30.0	41.5	47.6	54.7	54.5	56.7	56.2	47.6	79.5		
14-May	52.6	53.9	64.8	64.8	67.3	61.2	60.3	47.7	43.6	40.8	37.7	31.9	37.0	31.4	39.1	63.8	91.3	98.4	95.9	81.5	80.6	81.5	82.6	85.4	62.3	98.4		
15-May	87.6	87.9	85.8	85.3	85.2	85.2	84.7	82.2	80.9	77.9	75.8	71.0	66.2	62.5	57.3	49.0	41.2	38.4	37.4	40.1	50.3	63.1	78.1	83.0	69.0	87.9		
16-May	84.1	89.4	94.3	94.6	96.3	91.0	78.6	72.0	61.1	50.8	44.4	38.8	33.8	30.5	30.1	27.8	26.4	27.4	28.7	30.3	33.7	38.5	43.3	47.6	53.9	96.3		
17-May	57.1	76.2	80.4	80.5	85.1	78.5	70.0	59.0	45.9	39.2	35.3	34.5	31.6	29.0	26.3	21.1	21.2	21.3	22.6	27.2	30.6	34.6	42.0	45.8	45.6	85.1		
18-May	50.0	57.9	68.1	71.1	77.3	78.4	53.4	45.1	44.1	41.6	35.5	31.3	29.2	25.8	23.7	25.1	26.5	26.9	26.8	26.5	30.3	36.7	44.3	49.0	42.7	78.4		
19-May	49.7	53.1	56.3	54.3	57.2	58.4	58.8	53.5	49.8	44.9	41.5	38.5	40.1	40.7	63.9	82.3	90.1	90.8	88.5	92.7	90.8	88.8	88.2	89.1	65.1	92.7		
20-May	95.6	93.9	93.6	94.5	93.6	93.0	91.0	90.2	89.4	88.6	91.0	93.1	89.9	88.9	89.2	91.3	90.3	94.3	95.1	95.8	97.1	98.6	100.0	100.0	93.3	100.0		
21-May	99.8	99.5	100.0	100.0	OR	OR	OR	OR	95.8	82.7	70.9	69.5	88.3	89.0	88.4	87.1	85.3	89.3	95.0	93.0	92.1	98.2	98.9	96.7	91.0	100.0		
22-May	99.2	100.0	98.4	98.5	97.1	95.3	91.6	87.3	82.6	75.2	71.7	70.0	63.9	73.9	78.4	75.5	68.3	60.8	61.3	66.0	75.3	82.6	85.0	84.8	80.9	100.0		
23-May	89.4	92.7	98.5	100.0	100.0	100.0	95.6	84.9	75.6	69.9	53.5	76.2	81.4	87.1	76.5	65.3	57.1	53.7	56.8	60.2	70.1	85.9	91.1	96.6	79.9	100.0		
24-May	96.6	97.8	98.2	98.3	99.4	96.9	93.5	66.2	53.2	44.3	36.4	36.8	33.7	32.0	34.1	35.2	33.4	31.3	30.3	32.3	38.3	43.1	46.7	49.9	56.6	99.4		
25-May	52.3	54.7	56.7	59.9	61.8	59.9	55.8	50.8	46.9	43.9	40.6	37.0	34.4	33.0	32.6	31.9	31.8	31.1	33.0	36.2	45.6	53.4	55.1	51.7	45.4	61.8		
26-May	53.2	58.5	65.8	74.1	70.4	59.6	56.0	50.7	44.0	38.3	34.7	32.6	31.8	31.4	30.9	29.2	28.3	28.0	27.4	29.2	38.1	56.3	68.2	75.3	46.3	75.3		
27-May	77.9	83.2	90.7	94.6	97.1	91.5	87.9	66.0	53.3	49.0	39.4	31.5	29.7	28.1	28.7	28.5	31.0	30.1	31.7	34.2	41.5	57.6	57.7	62.6	55.1	97.1		
28-May	60.4	61.9	63.7	66.1	63.2	61.2	58.1	51.0	43.4	35.7	26.8	25.3	24.1	23.6	23.0	23.0	22.8	23.4	24.9	36.9	48.2	54.3	55.5	65.7	43.4	66.1		
29-May	70.1	73.4	79.4	79.9	84.7	82.0	65.7	45.6	33.5	30.5	29.6	28.3	28.8	28.1	28.0	28.5	28.6	28.7	31.5	34.1	40.1	43.8	48.0	49.6	46.7	84.7		
30-May	52.1	68.4	69.0	74.6	94.9	94.2	91.6	86.3	82.0	70.6	55.3	43.1	29.4	25.0	23.5	22.3	24.0	26.2	31.3	50.1	58.7	60.9	65.3	66.0	56.9	94.9		
31-May	70.1	72.0	70.7	67.3	68.3	63.8	62.5	56.4	45.8	43.0	38.0	33.7	33.5	33.4	31.7	31.7	34.4	37.5	43.4	51.3	61.2	74.0	90.0	94.7	54.5	94.7		
Diurnal Average																												
Diurnal Maximum																												
OR - Out of Range																												



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

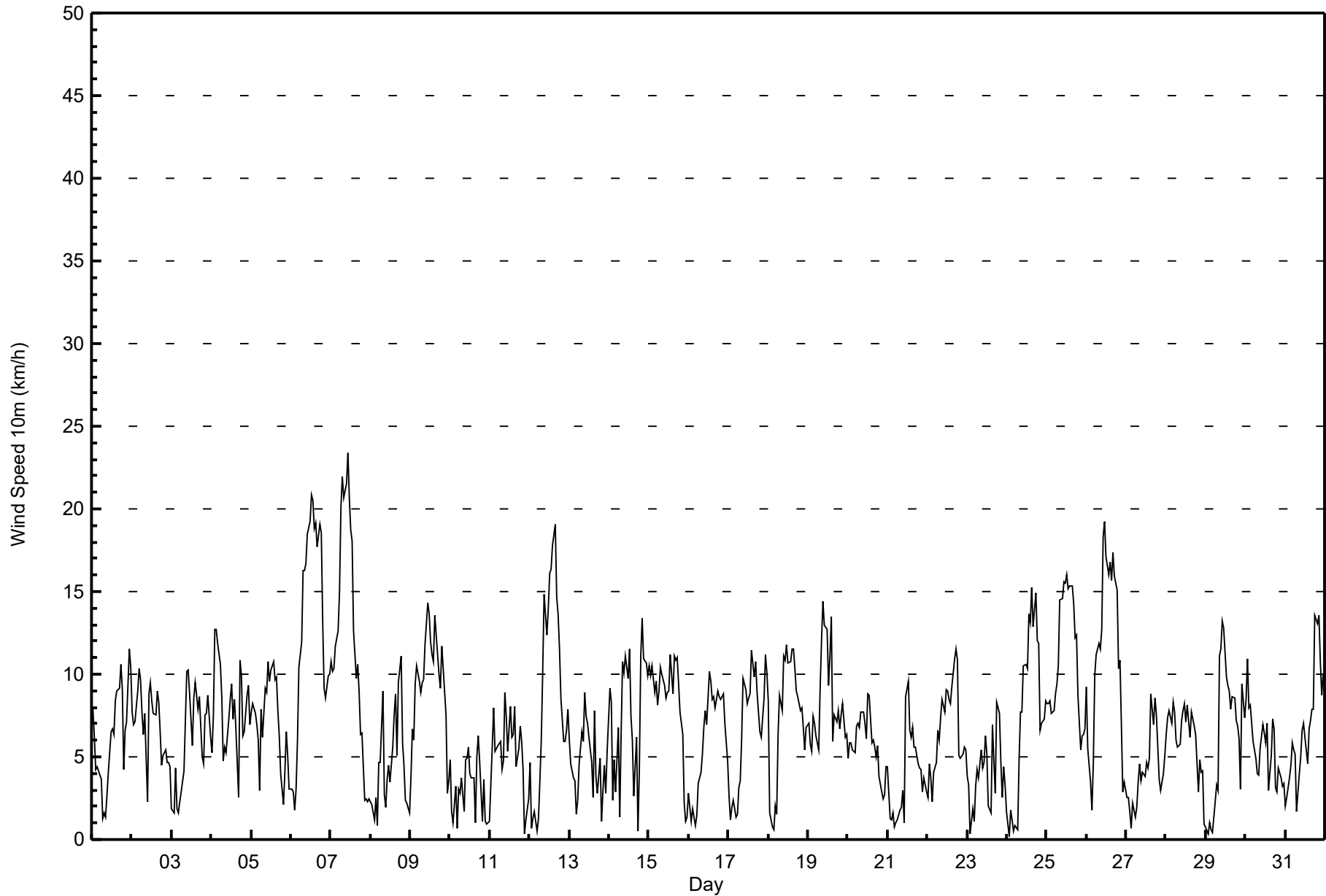
Janvier - May 2025

Maximum Speed: 23 km/h on May 7 11:00																	Maximum Daily Speed Average: 12.5 km/h on May 6										Hours in Service: 744	
Minimum Speed Value: 0 km/h on May 24 02:00																	Minimum Daily Speed Average: 1.2 km/h on May 10										Hours of Data: 744	
Maximum Diurnal Speed Average: 3.4 km/h at hour 17																	Minimum Diurnal Speed Average: 1.8 km/h at hour 3										Hours of Missing Data: 0	
Monthly Average Velocity: 2.5 km/h 187.1 deg																	Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 7 Q ₃ = 9 P ₉₀ = 12 P ₉₉ = 20										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	NNE8	NNE6	N4	NNE4	NNE4	N4	NNE1	SW2	WNW1	SSE3	S4	ESE7	ESE7	S6	SSW8	SW9	SW9	SW11	SSW9	SSE4	SE7	SSE7	S12	SSW10	S2.5	S12		
2-May	SSW8	SSW7	SSW7	SSW9	SSW10	SSW10	SSW8	SSW6	SSW8	WNW2	NNW9	WNW10	NNW8	WNW8	WNW8	W9	W8	NW6	NNW5	NE5	E5	E5	SE5	SSE4	WSW3.1	SSW10		
3-May	SSW2	ESE2	SE4	SE2	SSW2	S2	SW3	WSW4	SSW7	SSW10	SSW10	WSW9	WNW6	W9	W10	W9	WNW8	W9	WNW5	NW5	NNW8	NNW8	N9	NNW6	W3.6	SSW10		
4-May	NW5	NW8	WNW13	WNW13	WNW12	WNW11	WNW9	NNW5	NNW6	N5	N7	N8	N9	N7	NW8	WSW7	WNW3	W11	WNW10	WSW6	SW6	SSW9	SSW9	SSW7	WNW5.6	WNW13		
5-May	SSW8	S8	S8	SSW7	SSW6	WNW3	N8	NNW6	NW9	NW9	N11	NNW10	NW10	NNW11	NNW10	NNW10	NNW8	NNW6	NNW4	NNE2	ESE4	ESE6	SE5	S3	NW2.9	NNW11		
6-May	SW3	SW3	S2	SW3	SSW6	S10	S12	S16	SSW16	SSW17	SSW18	SSW19	SSW21	SSW21	SSW19	SSW19	SSW18	S19	S19	S13	S9	SSE9	SSE10	SSE10	SSW12.5	SSW21		
7-May	SSE11	S10	S10	S12	S13	S15	S20	S22	S21	S22	SSW23	SSW21	SSW19	SSW18	SW13	W10	W11	W9	W6	WNW6	WNW2	SW2	S2	S2	SSW10.7	SSW23		
8-May	SSW2	SE2	NE1	NE3	SW1	SW5	N5	NNW9	NNW3	SSW2	SSW4	W4	W3	NW6	N8	N9	NNW5	W10	WNW11	WNW6	W4	WSW2	E2	S2	WNW2.6	WNW11		
9-May	S4	SSW7	SSW6	SSW9	SSW11	SSW10	SSW9	SW10	SW10	WSW12	W14	WSW14	WSW12	WSW11	WSW11	SW14	SW11	WSW10	SSW9	SSW12	SSW10	SSW8	SSE3	S4	SW8.6	W14		
10-May	SSW5	S2	S1	NNE3	NNE1	S3	WSW3	W4	NW2	NNE5	N5	N6	N4	NW4	NW4	SW1	WNW5	WSW6	W5	SSW1	ESE4	E1	SE1	NE1	WNW1.2	WSW6		
11-May	SSE1	SSE6	S8	S5	S5	SSE6	SSE6	SSE4	SSE5	SSE9	SSE7	SW5	WNW8	NNW6	NE6	SE8	WSW4	W5	SSE7	SW6	S4	SE0	E1	SSW2	S3.1	SSE9		
12-May	S5	NNE1	S1	SW2	SSW0	NE1	N4	NNE6	NNE10	NNE15	NNE12	NNE14	NE16	NE16	NE18	NNE19	NNE15	NNE14	NNE12	N9	NNE6	NNE6	N7	N8	NNE8.2	NNE19		
13-May	NNE6	NNE5	N4	N4	N2	WNW2	NNW5	NNW7	NNW6	N9	N7	NNW7	WNW6	NNW5	NW3	ENE8	ENE4	WNW3	N5	NNE1	SSE3	SE5	SSE3	S5	N2.6	N9		
14-May	S9	S8	S2	S5	S3	SSW7	W1	SW6	SSW11	SW10	SW11	WSW10	W12	W7	S6	SSE3	SW6	SE1	N4	N11	N13	N11	N11	N10	WSW2.2	N13		
15-May	N11	N10	N10	N9	N10	N8	N9	N10	N10	NNE9	N9	N9	N9	NNE11	NNE9	NNE11	NNE11	NNE11	NE9	NE8	NE6	ENE2	ESE1	ENE1	NNE8.2	NNE11		
16-May	NE3	NNE1	SE2	E1	S1	NE1	NNW3	NNW4	NNW5	NE7	NNE8	E7	E10	ESE10	ENE9	ENE9	ENE8	NE9	ENE9	E8	E9	ESE9	ESE7	E5	ENE4.8	E10		
17-May	ENE3	NNW1	NE2	NNE2	ENE1	NNW2	NNW3	NNW4	SE6	SE10	SSE9	SE8	SE9	SE9	S11	S10	S11	SSE9	SSE8	SE7	SE6	ESE9	ESE11	SE10	SE5.1	S11		
18-May	SE8	SSE2	WNW1	E1	NE2	NNW2	S6	SSW9	SSW8	S11	SSE11	SSE12	SSE11	SE11	SSE12	S12	ESE10	SE9	SSE9	SSE8	S8	S7	SE5	SE7	SSE6.5	SSE12		
19-May	SSE7	S6	SSE5	S7	SSE7	SSE6	SSE5	S9	SSE12	SSE14	SSE13	S13	SSE9	SSE11	S14	SSE6	S8	SE7	SE8	ESE7	ESE8	ESE8	SE6	ESE6	SSE8.0	SSE14		
20-May	ESE5	ESE6	ESE6	ESE5	ESE5	ESE7	ESE7	ESE7	ESE8	ESE8	ESE7	SSE6	SE9	SE9	SSE6	SSE6	SSE6	SE5	SE6	SSE4	SE3	SE2	SE3	ESE4	SE5.5	SE9		
21-May	ESE4	SE1	ENE1	SE2	NE1	N1	NW1	NW2	WNW2	NNE3	WNW1	E9	E10	SE7	SSE6	S7	SE6	SE6	SE5	SSE4	SE4	SSE3	SSE4	SSE3	SE2.7	E10		
22-May	ESE3	SE5	SE4	SSE2	SSE4	SSE5	S7	S6	SE7	SSE8	SSE8	SSE9	SSE9	S9	S8	SSW9	SSW11	SSW12	S11	S5	SE5	SE5	SE6	SSE5	SSE6.2	SSW12		
23-May	S4	S3	ENE0	NNE2	NNW1	NNE3	N4	N4	NNE5	N4	SSE5	SSE6	SSE5	WNW2	NNE2	NE7	E5	SSW3	S8	SSE8	SE5	SSE3	ESE4	SE3	ESE1.6	S8		
24-May	S2	ENE0	ESE2	E1	NE1	SSW1	NNE1	S5	S8	S8	S10	S11	S10	S14	S13	S15	S13	S15	S12	S12	SSE7	SSE7	SSE7	S8	S7.3	S15		
25-May	S8	S8	S8	S8	S8	S9	S9	S10	S14	S15	S16	S16	S16	S15	S15	S15	S14	S12	S12	S9	SSE5	SE6	SE6	SSE7	S10.8	S16		
26-May	S9	S6	SSW3	SW2	S5	SSW10	S11	S12	S12	SSE13	S18	S19	S17	S16	S17	S16	S17	S16	S15	S10	WSW11	WNW7	E3	SSW3	S10.4	S19		
27-May	SE3	SSE3	SSE2	SE1	NE2	E1	SW2	WNW3	NW5	NW4	NNW4	NNE4	N5	W4	W5	WSW9	WSW7	WSW9	WSW8	WSW6	WSW4	S3	SW4	SSW5	WSW2.3	WSW9		
28-May	S6	SSW7	SSW8	SSW7	SSW8	SSW8	S6	S6	SSW6	S7	SW8	SW8	WSW7	SW8	SW6	SW8	WSW7	WSW7	WSW6	S3	SE5	SE4	SSE4	SSW1	SSW5.6	SSW8		
29-May	S1	WSW0	SE1	E1	ENE0	NW1	SSW3	S3	S11	S11	S13	S13	S10	S9	SSE9	SSE8	SSE9	SSE9	SE7	SE7	SE6	SSW3	W9	W7	S5.0	S13		
30-May	WNW8	W11	WNW8	WSW8	W6	SW5	WSW5	W4	W4	NW6	NNW7	NNW6	NW6	WNW7	W3	WSW5	SW7	WSW7	SW3	SE3	SE4	SSE4	S3	SSW3	W3.8	W11		
31-May	SE2	SSE3	S4	S5	S6	SSW5	S5	SW2	E4	ENE5	NE7	NNE7	NNE6	N5	N7	NNE7	N8	N8	N14	N13	N14	N11	NNW9	N10	NNE3.9	N14		
S2.3 S2.0 S1.8SSW1.9SSW2.3SSW2.8SSW2.4SSW2.8SSW3.3 S3.3SSW3.3SSW3.2SSW2.2SSW2.9SSW3.1SSW3.3SSW3.4SSW3.2SSW2.6 SSE2.0 SE2.3 SE2.3 SE2.4 SSE2.3																								Diurnal Average				
SSE11 W11WNW13WNW13 S13 S15 S20 S22 S21 S22 SSW23 SSW21 SSW21 SSW21 SSW19 SSW19 SSW18 S19 S19 S13 N14 N11 S12 SSW10																								Diurnal Maximum				
All monthly, daily, and diurnal averages have been calculated using vector methods																												



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Janvier - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	283	38.04	38.04
6 - 11	369	49.60	87.63
12 - 19	84	11.29	98.92
20 - 28	8	1.08	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Janvier - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	18	19	12	10	14	12	33	32	35	19	17	8	12	14	11	17	283
6 - 11	36	17	8	5	6	21	30	44	54	46	18	20	17	17	9	21	369
12 - 19	4	7	3	0	0	0	0	6	43	11	2	3	2	3	0	0	84
20 - 28	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	8
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	58	43	23	15	20	33	63	82	136	80	37	31	31	34	20	38	744

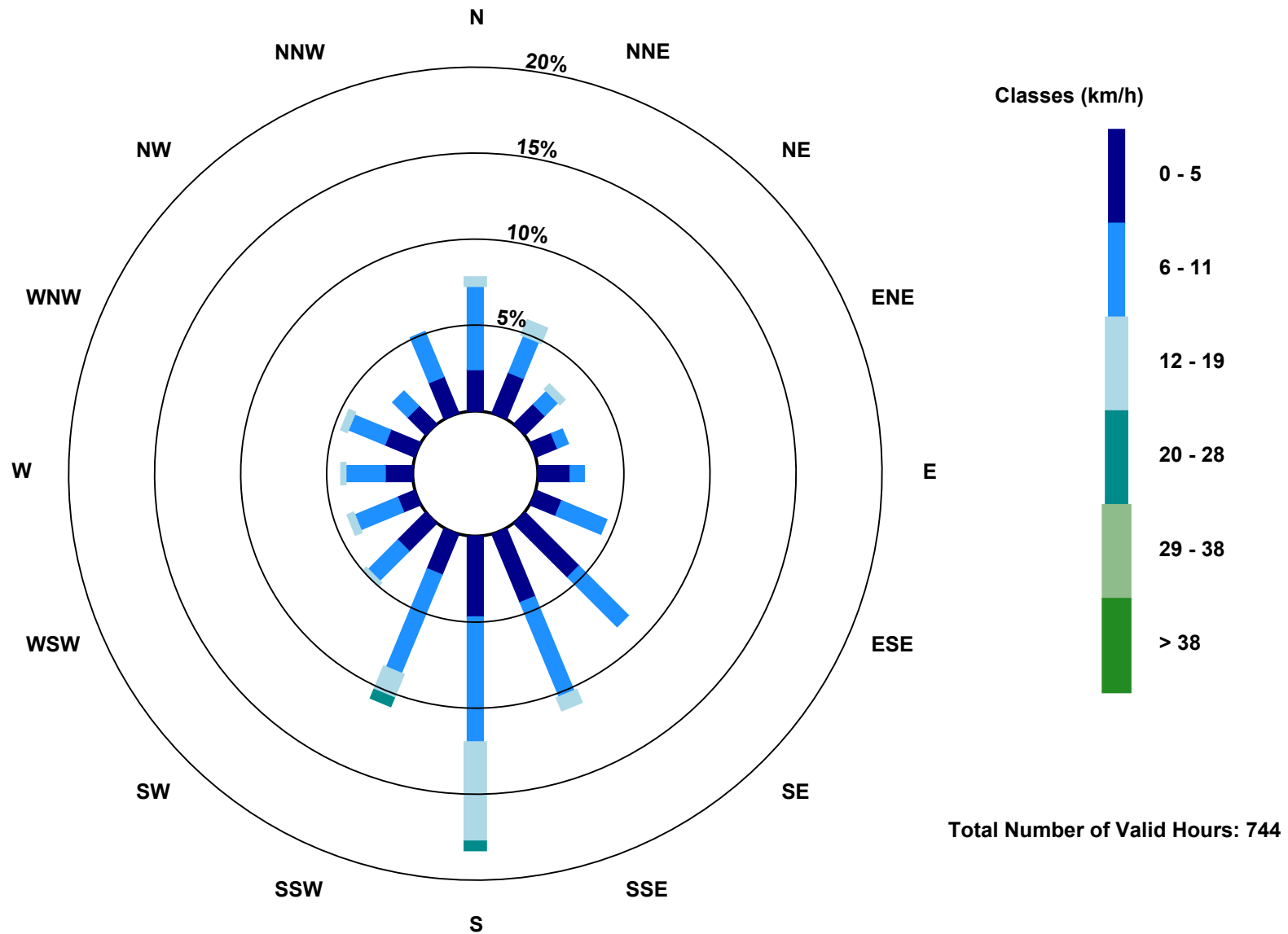
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Janvier





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on May 7 11:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 1 km/h on May 16 05:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	2	1	1	1	2	1	1	2	2	4	3	3	4	4	4	4	3	1	2	2	3	3	4
2-May	2	2	2	2	2	3	2	2	2	4	4	5	4	4	4	4	4	3	2	2	1	1	2	2	5
3-May	1	1	1	1	1	1	1	2	2	3	3	4	4	4	4	4	4	3	2	3	4	4	5	3	5
4-May	3	5	6	6	5	3	3	2	3	3	3	4	4	4	4	3	2	6	5	3	2	2	2	2	6
5-May	2	2	1	1	1	2	3	3	4	3	4	4	4	5	5	4	4	3	2	1	2	2	2	1	5
6-May	3	2	1	2	3	3	4	5	5	5	6	6	7	7	7	6	6	6	6	4	3	3	3	3	7
7-May	3	3	3	3	4	5	6	6	6	7	8	7	6	6	5	4	4	3	2	3	1	1	1	1	8
8-May	1	1	1	1	1	2	2	5	2	2	2	2	1	3	3	4	2	5	5	3	2	1	1	1	5
9-May	2	1	2	2	2	2	2	3	3	5	6	6	5	5	4	5	4	4	4	4	3	3	1	1	6
10-May	2	1	1	2	1	1	1	1	2	3	3	2	3	2	3	2	3	3	2	1	1	1	1	1	3
11-May	1	3	3	1	1	2	2	2	3	4	3	3	3	3	2	3	2	3	2	3	2	2	1	1	4
12-May	2	1	1	1	1	1	2	2	3	4	4	5	5	5	5	6	5	4	4	3	2	2	2	3	6
13-May	2	1	1	1	1	1	2	3	3	4	4	3	3	3	2	3	2	2	2	1	1	1	2	3	4
14-May	3	5	1	2	2	3	2	4	4	4	5	5	6	4	5	3	4	2	3	4	5	4	4	4	6
15-May	4	4	4	4	3	3	3	4	4	3	4	3	4	4	3	4	4	4	3	2	2	1	1	1	4
16-May	1	1	1	1	1	1	1	1	2	3	3	4	4	3	5	4	3	3	3	3	3	3	2	2	5
17-May	2	1	1	1	1	1	1	1	4	4	4	4	4	4	4	5	4	4	3	3	2	4	3	3	5
18-May	3	1	1	1	1	1	4	4	3	5	5	5	4	5	4	4	5	3	3	3	3	2	1	2	5
19-May	3	3	2	3	2	2	2	4	4	5	5	5	4	5	5	3	3	3	3	2	3	3	2	2	5
20-May	2	2	2	2	2	2	3	3	3	3	3	2	4	3	2	3	2	2	2	1	1	1	1	1	4
21-May	1	2	1	1	1	1	1	1	1	1	2	4	4	2	2	2	2	2	2	1	1	1	1	1	4
22-May	2	1	2	1	1	2	3	2	3	3	3	3	3	5	4	4	4	4	4	3	1	1	1	2	5
23-May	2	2	1	1	1	2	1	1	2	2	4	5	3	2	2	3	2	3	4	3	1	1	1	1	5
24-May	2	1	2	1	1	1	1	2	3	3	4	4	4	5	6	6	5	6	4	4	2	2	2	3	6
25-May	3	2	3	3	3	3	3	4	5	5	5	5	6	6	6	5	5	5	5	3	2	1	2	2	6
26-May	3	3	2	1	2	3	3	4	4	5	7	7	6	6	6	6	6	5	5	4	5	5	1	1	7
27-May	1	1	1	1	1	1	1	2	2	2	3	3	3	4	3	4	4	4	4	2	1	1	1	1	4
28-May	1	1	1	1	2	2	2	1	2	2	4	4	4	4	4	4	3	3	3	1	1	1	1	1	4
29-May	1	1	1	1	1	1	2	2	4	4	4	5	4	4	4	3	4	3	3	2	1	5	5	4	5
30-May	4	5	4	4	3	2	2	2	2	3	3	3	4	4	2	3	3	3	2	1	1	1	1	1	5
31-May	1	1	1	1	2	1	2	1	2	2	2	2	2	2	3	2	3	4	5	5	6	5	4	5	6
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

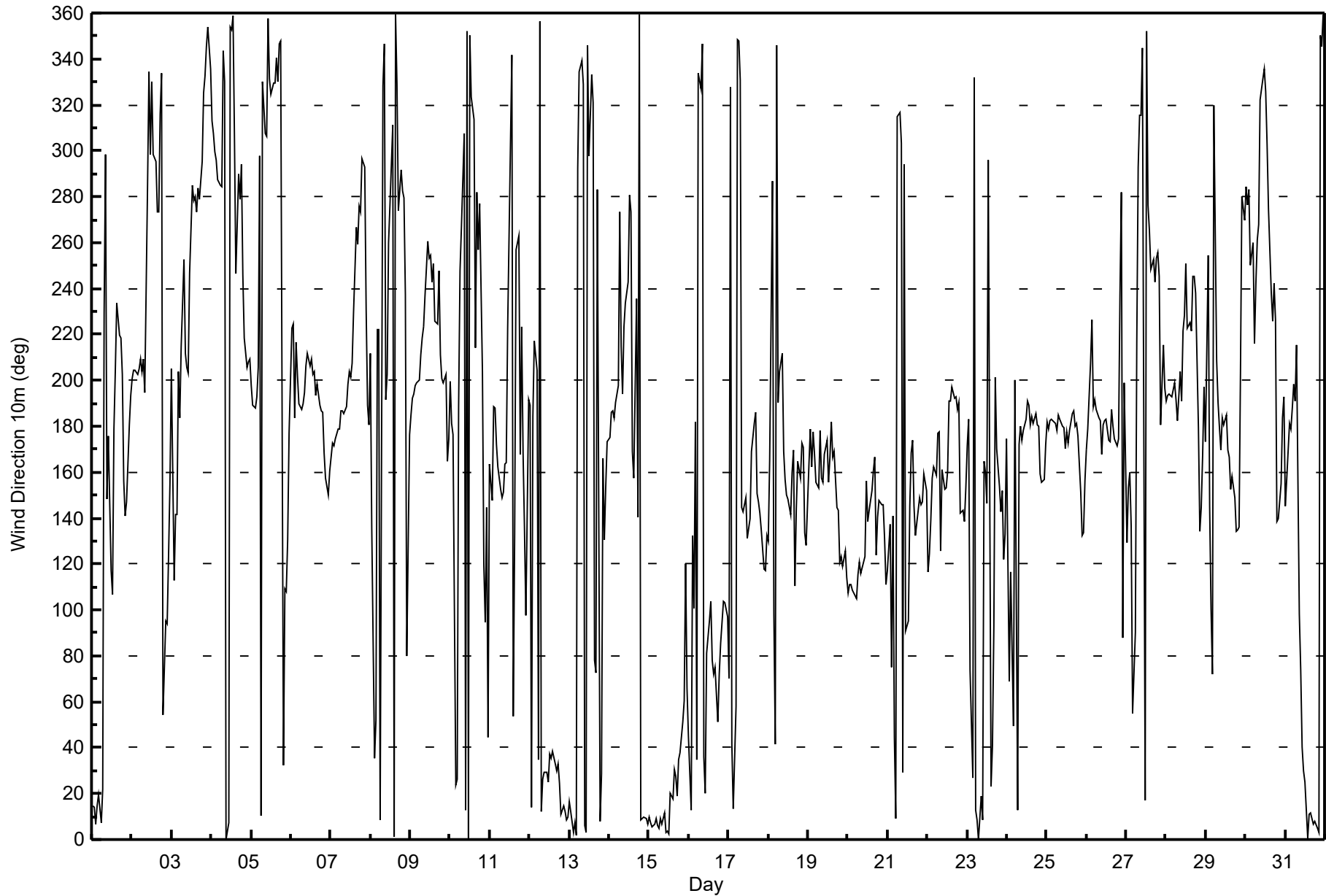
Wind Direction 10m (WD10) - deg
Janvier - May 2025

Direction of Maximum Speed: 198 deg on May 7 11:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 194.1 deg on May 6																					Hours of Data:		744		
Direction of Minimum Speed: 69 deg on May 24 02:00										Direction of Minimum Daily Speed Average: 1.2 deg on May 10											Hours of Missing Data:		0		
Monthly Average Direction: 187.1 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	15	14	7	15	19	7	22	230	299	148	176	117	107	179	204	233	219	218	203	156	141	147	181	193	180.3
2-May	201	205	204	203	205	209	204	209	195	285	335	298	330	298	296	274	273	316	334	55	95	94	124	156	242.9
3-May	205	113	141	142	204	183	215	253	212	206	203	246	285	278	280	273	284	279	295	325	333	345	354	336	269.6
4-May	313	308	300	296	287	285	284	343	330	0	7	354	353	359	307	247	290	279	294	246	218	206	208	210	293.7
5-May	198	189	188	193	206	298	10	330	308	306	358	332	324	329	329	341	330	346	348	32	109	108	131	177	320.9
6-May	223	224	184	217	202	190	188	190	195	206	212	206	210	203	204	193	198	189	187	186	169	158	150	160	194.1
7-May	167	173	172	175	179	179	187	187	185	189	198	204	201	208	230	267	260	276	273	297	293	231	189	181	200.4
8-May	211	136	35	52	222	222	8	328	346	192	203	260	276	311	1	359	329	274	291	283	279	238	80	176	302.4
9-May	185	192	194	198	199	200	211	218	223	237	261	253	254	243	251	226	225	248	211	201	199	202	165	175	222.2
10-May	200	181	176	24	26	188	248	267	308	13	352	1	350	324	314	214	282	257	277	204	119	94	145	44	300.3
11-May	164	148	188	188	172	163	153	149	151	163	164	223	302	341	53	133	257	263	168	223	169	135	98	192	177.3
12-May	189	14	184	217	205	35	356	12	26	29	29	25	37	36	38	33	30	33	24	11	15	12	9	10	27.5
13-May	16	12	3	8	2	292	335	339	329	6	3	346	298	333	321	78	72	283	8	29	166	131	154	173	359.9
14-May	175	186	187	184	190	198	273	215	194	223	233	243	280	273	169	157	235	140	359	8	9	9	9	7	249.7
15-May	10	8	5	6	9	6	5	9	7	12	3	4	3	20	18	30	27	19	35	38	51	61	120	66	16.0
16-May	45	13	132	101	182	35	334	327	346	36	20	81	95	104	78	72	75	51	72	85	95	103	103	97	72.6
17-May	70	327	42	14	58	348	348	331	144	143	149	131	136	140	169	181	186	151	147	142	135	118	117	132	141.3
18-May	130	165	287	98	41	346	190	204	212	169	157	150	148	142	160	170	111	144	165	157	173	171	134	128	157.1
19-May	163	179	162	178	168	156	153	178	158	156	168	174	155	167	182	167	169	145	144	121	123	119	126	114	157.6
20-May	107	111	111	109	106	105	116	121	116	121	123	156	139	143	152	161	167	124	140	148	146	146	131	111	128.6
21-May	117	137	75	141	45	9	315	317	303	29	294	91	95	145	168	174	145	132	143	149	146	147	159	152	132.3
22-May	117	124	139	157	162	159	177	177	126	161	153	153	160	191	191	197	192	193	187	191	142	143	138	153	167.8
23-May	172	183	74	27	332	13	9	0	19	9	165	160	147	296	23	41	93	202	170	154	143	152	122	133	120.6
24-May	175	69	116	83	50	200	13	172	180	174	178	183	191	189	181	184	181	186	180	180	159	156	157	172	177.9
25-May	182	179	182	183	182	181	178	185	183	180	179	170	178	173	178	186	187	180	181	176	152	133	134	156	176.7
26-May	169	178	208	227	188	192	187	183	183	168	181	183	183	174	173	187	180	175	171	175	238	282	88	199	183.1
27-May	129	153	160	137	55	90	217	293	316	315	345	17	352	277	265	248	252	243	253	256	245	181	215	196	257.3
28-May	191	193	194	193	196	199	191	182	204	191	222	228	251	223	225	221	245	245	238	179	134	144	167	197	206.9
29-May	173	255	145	100	72	319	209	190	179	169	184	180	185	170	166	153	158	149	134	135	136	203	280	270	175.1
30-May	284	276	283	250	260	216	242	261	268	322	331	336	326	303	274	238	226	242	226	138	140	155	184	193	264.1
31-May	145	157	181	179	188	198	191	216	99	74	40	30	25	1	11	12	9	7	8	5	3	350	345	360	13.2
169.6 183.3 187.5 192.8 195.2 196.0 200.7 211.7 191.4 176.6 192.5 193.8 197.9 202.4 199.9 196.9 205.1 213.0 191.7 163.5 140.7 136.3 137.3 156.7																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Janvier - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 104 deg on May 10 16:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 8 deg on May 9 03:00																									
Percentiles: P ₁ = 10 P ₁₀ = 19 Q ₁ = 25 Median = 32 Q ₃ = 48 P ₉₀ = 67 P ₉₉ = 95																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	21	25	30	18	29	32	78	71	83	80	70	53	66	67	54	44	40	32	23	32	18	21	18	17	83
2-May	14	13	12	14	16	19	17	24	22	99	48	49	59	53	57	37	44	44	48	32	15	19	26	31	99
3-May	79	72	18	52	41	26	36	34	33	28	31	39	81	47	35	42	47	27	35	57	54	54	55	50	81
4-May	58	52	43	36	27	22	27	49	51	56	33	43	43	58	45	47	83	48	34	29	18	15	16	19	83
5-May	15	10	8	8	15	59	30	52	42	39	43	51	49	47	48	47	54	48	60	56	24	19	27	35	60
6-May	56	33	43	43	31	17	16	17	21	26	25	27	26	24	29	24	25	20	22	18	22	23	23	23	56
7-May	23	20	21	22	18	20	18	19	20	21	21	26	25	25	34	29	26	22	22	41	60	37	43	39	60
8-May	35	59	76	53	81	37	62	55	77	85	44	41	38	47	45	43	50	24	32	21	21	43	35	40	85
9-May	49	9	8	11	12	15	19	23	27	34	30	35	33	37	33	33	31	31	33	19	17	19	22	21	49
10-May	31	63	78	40	83	20	49	44	88	69	61	54	81	74	76	104	56	32	27	60	10	72	72	89	104
11-May	81	42	19	16	21	25	29	55	51	44	54	60	39	57	44	37	45	45	26	34	42	97	77	45	97
12-May	12	78	39	42	94	65	35	30	23	19	28	26	21	22	19	18	19	19	18	22	18	20	23	28	94
13-May	28	26	37	23	40	31	46	48	59	46	60	55	58	75	85	42	53	59	41	58	41	13	65	39	85
14-May	21	29	48	35	41	28	94	50	29	33	38	49	25	45	85	84	50	98	60	25	24	26	25	30	98
15-May	27	28	27	30	24	29	30	28	29	27	41	39	40	23	32	28	27	23	24	20	18	69	75	40	75
16-May	21	62	19	45	63	58	37	52	59	51	45	54	38	39	60	43	40	33	30	30	25	21	21	24	63
17-May	68	60	73	30	59	52	38	47	75	38	56	54	56	46	37	46	35	41	39	26	25	26	22	24	75
18-May	25	84	93	84	29	54	51	34	32	43	36	36	36	42	39	32	36	37	30	28	22	22	23	17	93
19-May	22	38	26	25	25	27	37	29	31	33	32	32	42	33	22	27	27	34	30	29	25	26	31	26	42
20-May	29	25	22	25	27	24	30	32	26	25	31	37	33	33	37	33	34	38	29	29	29	32	27	17	38
21-May	16	85	53	68	61	29	63	56	58	62	80	32	28	31	29	32	33	25	29	24	22	19	30	28	85
22-May	17	21	50	47	30	31	25	27	30	36	30	32	33	34	31	27	25	26	25	27	17	15	17	22	50
23-May	23	44	99	50	76	43	36	46	27	35	74	69	42	85	97	20	41	83	35	28	23	50	10	35	99
24-May	65	92	74	87	62	82	85	32	24	30	37	23	26	30	27	26	26	24	25	21	23	22	23	22	92
25-May	19	20	21	23	23	22	22	25	25	27	27	28	29	33	32	31	25	30	25	23	25	14	17	25	33
26-May	24	48	42	68	25	23	21	22	25	29	26	29	27	30	28	28	26	28	24	24	44	49	51	28	68
27-May	49	36	59	96	45	66	53	56	57	62	68	84	70	79	71	38	46	33	32	26	33	24	21	15	96
28-May	12	10	10	12	15	18	18	19	28	30	45	44	61	55	62	47	43	41	30	39	11	15	23	40	62
29-May	41	89	42	77	95	42	57	67	26	29	27	25	25	27	28	31	31	28	27	22	16	70	36	35	95
30-May	46	35	45	36	37	42	30	40	34	57	54	55	64	60	98	68	42	31	31	24	22	21	21	24	98
31-May	49	21	16	26	18	18	23	68	49	35	29	24	22	44	32	23	23	33	26	30	35	50	47	43	68
81 92 99 96 95 82 94 71 88 99 80 84 81 85 98 104 83 98 60 60 60 97 77 89																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Janvier - May 2025

Maximum Speed: 28 km/h on May 7 11:00										Maximum Daily Speed Average: 15.7 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 24 07:00										Minimum Daily Speed Average: 1.7 km/h on May 10										Hours of Data: 744						
Maximum Diurnal Speed Average: 4.1 km/h at hour 17										Minimum Diurnal Speed Average: 2.1 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 3.0 km/h 199.6 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 6 Median = 9 Q ₃ = 12 P ₉₀ = 16 P ₉₉ = 24										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	NNE10	NNE8	N5	NNE5	NNE5	N4	N1	WSW1	WNW1	SSE3	S5	SE7	ESE7	S7	SW10	WSW11	SW11	SW13	SSW11	S6	SSE9	SSE10	S15	SSW13	S3.1	S15
2-May	SSW11	SSW10	SSW11	SW12	SW14	SW13	SW9	SW7	SSW8	NW4	NNW13	NW13	NNW11	NW11	NW11	WNW11	WNW10	NW9	NNW7	ENE7	ESE8	ESE7	SE8	SSE7	WSW4.0	SW14
3-May	S5	SSE4	SSE6	SE4	S2	S4	SSW5	WSW5	SW8	SW12	SSW12	WSW10	WNW8	WNW11	WNW13	WNW12	WNW11	WNW11	NW8	NNW8	NNW12	NNW12	N14	NNW11	WNW4.9	N14
4-May	NNW9	NW12	NW19	NW20	WNW18	WNW15	WNW13	NNW8	NNW8	N8	N10	N11	N13	N10	NW12	W8	WNW3	WNW16	NW15	WSW8	SW9	SW12	SW12	SW9	NW8.9	NW20
5-May	SW10	SSW11	SSW10	SSW9	SW8	NW6	N10	NNW9	NW13	NW12	N14	NNW14	NNW15	NNW15	NNW14	NNW14	NNW11	NNW8	NNW5	NNE3	E6	ESE9	SE8	SSE5	NW4.6	NNW15
6-May	SSW6	SSW5	SSW4	SSW7	SSW9	SSW13	SSW15	SSW19	SSW19	SSW21	SW22	SW23	SW25	SSW25	SSW23	SSW23	SSW21	SSW22	SSW23	SSW16	S12	SSE11	SSE13	SSE13	SSW15.7	SW25
7-May	SSE14	S13	S13	S15	S16	S19	S24	S26	S25	SSW26	SSW28	SSW25	SSW22	SW22	SW16	W13	W14	WNW12	WNW9	NW10	NW5	WNW5	SW5	WSW3	SSW12.7	SSW28
8-May	WSW4	NW1	NNE4	NNE4	N1	WSW7	N7	NNW14	NNW5	S2	SSW4	W6	WNW5	NW8	N10	N12	NNW8	WNW13	NW17	WNW10	WNW9	WNW5	NNE4	WSW2	NW5.0	NW17
9-May	SSW6	SSW9	SSW9	SSW12	SSW14	SSW12	SW11	SW12	SW12	WSW15	W18	W17	W15	WSW14	WSW13	SW17	SW14	WSW13	SW12	SSW14	SSW13	SSW10	SSW5	S7	SW11.4	W18
10-May	SSW8	S5	SSE4	NNE5	NNE3	SSW4	WSW4	W4	NNW2	N6	N6	N7	N6	NNW5	NW6	W1	WNW7	W8	WNW7	WSW2	SE5	SE2	NW1	NE3	NW1.7	W8
11-May	SE4	SSE8	SSW10	SSW9	S8	SSE8	SSE7	SSE5	SSE5	S10	S8	WSW6	NW12	NNW8	ENE7	SE9	W6	W8	S9	SW8	S6	SSE1	ENE3	SW5	S3.8	NW12
12-May	SW7	N1	SE1	SW3	SW3	NE1	NNE5	NNE7	NE12	NE18	NE15	NNE17	NE19	NE20	NE21	NE23	NE18	NE17	NE14	NNE12	NNE8	NNE8	N9	N11	NNE9.9	NE23
13-May	N8	N7	N6	N7	N4	NW5	NNW7	NNW9	NNW8	N11	N10	N9	NW9	NNW7	NNW4	E9	E5	WNW4	N7	NNE3	S3	SE7	SSE5	S9	N3.9	N11
14-May	S13	S11	SSW5	S8	SSW6	SSW10	W3	SW8	SSW13	SW13	WSW14	WSW13	WNW17	WNW10	S8	SSE4	WSW9	S1	N7	N16	NNE18	N15	N14	N13	W3.2	NNE18
15-May	N14	N13	N14	N12	N12	N10	N12	N13	N13	N11	N11	N12	N11	NNE13	NNE10	NE13	NE13	NNE13	NE11	NE10	ENE9	ENE4	N3	NNE4	NNE10.4	N14
16-May	NNE5	NNE4	N2	N2	WSW2	NNE3	N5	NNW5	N7	NE8	NNE9	E9	E12	ESE11	E10	E10	E10	ENE11	E10	E11	ESE11	ESE12	ESE10	ESE7	ENE6.1	E12
17-May	E5	N3	NNE4	NNE5	NNE4	N2	N3	NNW4	SSE7	SSE11	SSE11	SE10	SE11	SE11	S13	S12	S13	SSE10	SSE10	SE9	SE9	SE12	SE14	SE12	SE6.2	SE14
18-May	SE11	SSE4	S4	SSE3	ESE3	ESE3	SSW8	SSW10	SW10	S13	SSE13	SSE14	SE12	SSE14	S14	ESE13	SSE10	S11	SSE10	S10	S9	SSE8	SE9	SSE8.7	SSE14	
19-May	SSE10	S9	S8	S11	S10	SSE8	SSE7	S11	SSE14	SSE17	S16	S15	SSE12	S13	S16	SSE7	S10	SSE9	SSE10	SE9	SE9	SE11	SE8	ESE8	SSE10.1	SSE17
20-May	ESE7	ESE8	ESE8	ESE7	ESE7	ESE9	ESE9	SE8	SE10	SE9	SE8	SSE8	SE11	SE11	SSE7	S7	S7	SE6	SE7	SSE5	SE4	SSE4	SE5	ESE7	SE7.0	SE11
21-May	ESE7	ESE2	ENE2	ESE1	NNE2	NNE2	NNW1	NW2	NW2	NE3	NW1	E10	E12	SSE8	SSE7	S8	SSE7	SE7	SSE6	SSE6	SSE6	S5	SSE6	SSE5	SE3.4	E12
22-May	SE4	SE7	SE6	SSE4	SSE5	SSE6	S8	S7	SE9	SSE10	SSE9	SSE11	SSE11	SSW11	SSW11	SSW11	SSW14	SSW14	SSW13	SSW7	SSE7	SSE8	SSE8	SSE8	S8.0	SSW14
23-May	S6	S6	SSW2	NE3	NNE2	N5	N5	N5	NNE6	NNE5	S6	S8	SSE7	NW3	N2	NE9	ESE7	SSW4	S11	SSE10	SSE7	SSW4	SE6	SE6	SE2.3	S11
24-May	S3	SE1	ESE3	ESE4	N1	S4	S0	S6	S9	S9	S13	S13	SSW12	SSW17	S16	S19	S16	S18	S15	S15	S10	SSE10	SSE10	S11	S9.4	S19
25-May	S11	S12	S12	S11	S11	S11	S12	S13	S18	S18	S20	S18	S19	S19	S18	SSW18	S17	S15	S15	S11	SSE8	SE9	SE9	SSE9	S13.7	S20
26-May	S12	S8	S6	SSW4	SSW8	SSW13	SSW14	S15	S15	S16	S23	S24	S21	S20	S20	S20	S21	S20	S19	S13	WSW14	WNW11	ENE4	SSW5	S13.1	S24
27-May	SSE4	SSE3	SW3	WSW2	NNE3	ENE2	SW3	NW5	NW7	NW6	N6	NNE5	N7	WNW7	WNW7	W12	W10	W12	W11	W8	W7	SW6	WSW7	SW8	W4.2	W12
28-May	SSW9	SSW11	SSW11	SSW10	SSW11	SSW10	SSW7	SSW6	SW7	SSW9	SW10	WSW11	WSW10	SW10	WSW8	SW10	WSW10	W10	WSW9	SSW5	SSE7	SSE7	S8	S3	SW7.8	SSW11
29-May	SSW3	SSW3	S1	S3	S5	SW3	SSW7	SSW4	S14	S14	S17	S16	S13	S12	SSE11	SSE10	SSE11	SSE11	SE10	SE10	SSE9	SW4	WNW15	WNW11	S7.1	S17
30-May	WNW14	WNW17	WNW14	W11	W9	SW7	WSW7	W6	WNW5	NW9	NNW10	NNW10	NW10	NW10	WNW5	WSW7	SW10	WSW9	WSW5	SSW2	S6	S7	SSW7	SSW7	W6.3	WNW17
31-May	SSW4	SSW5	SSW7	SSW8	SSW9	SSW8	SSW6	WSW2	ESE5	E6	NE8	NE9	NE8	N6	N8	N9	N10	N11	N18	N17	N19	NNW16	NNW13	N14	N4.7	N19
S3.4SSW3.0SSW2.5SSW2.7SSW3.1SSW3.8SSW3.1 SW3.2SSW3.7 S3.7SSW3.9SSW3.7 SW2.5 SW3.3SSW3.5SSW3.8 SW4.1 SW3.9SSW2.9 S2.1 SSE2.6 SSE2.7 SSE2.7 S2.9																										Diurnal Average
WNW14WNW17 NW19 NW20WNW18 S19 S24 S26 S25 SSW26 SSW28 SSW25 SW25 SSW25 SSW23 NE23 S21 SSW22 SSW23 N17 N19 NNW16WNW15 N14																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

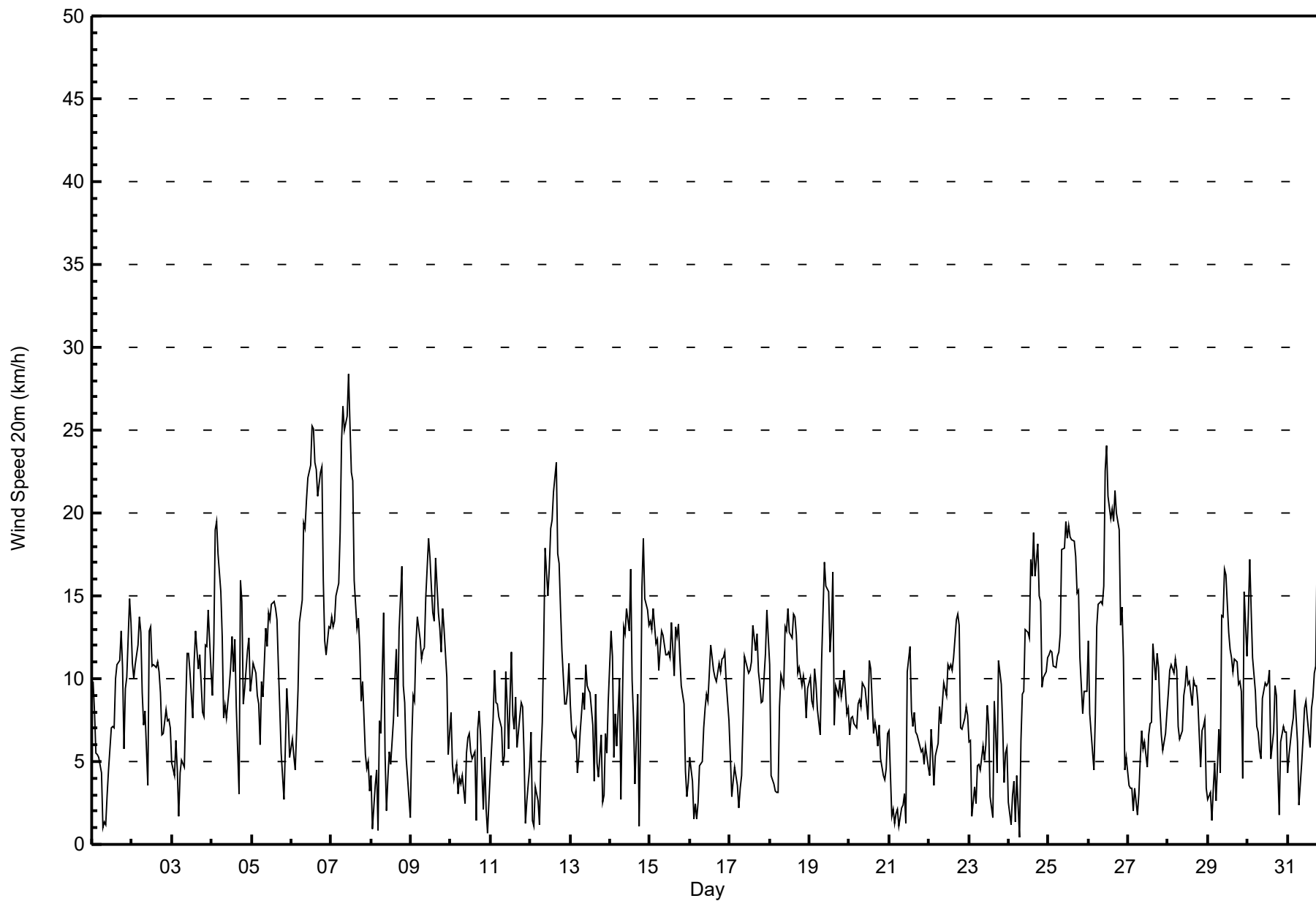
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 4 18:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 1 km/h on May 29 02:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	2	1	1	1	2	2	2	2	3	4	3	4	5	4	4	4	3	2	2	3	4	3	5
2-May	2	2	2	3	3	3	2	2	2	6	5	5	5	5	5	4	4	4	3	2	2	2	2	2	6
3-May	2	1	2	1	1	1	1	2	3	3	3	3	5	5	4	5	5	4	3	3	5	6	6	4	6
4-May	4	6	7	7	6	4	4	3	3	3	3	5	4	5	4	3	3	9	6	3	2	3	3	2	9
5-May	2	1	1	1	1	2	3	4	5	4	5	5	5	6	6	5	4	3	3	1	3	2	2	2	6
6-May	4	2	2	2	4	3	3	6	5	6	6	7	8	8	7	7	7	7	7	5	3	3	4	4	8
7-May	4	3	4	4	4	5	7	7	7	8	8	8	7	7	5	5	5	4	2	3	2	1	1	2	8
8-May	1	1	1	2	2	3	3	7	3	3	2	2	1	3	4	4	3	6	5	3	2	2	1	1	7
9-May	2	1	2	2	3	2	2	3	3	6	6	6	5	5	5	6	5	4	4	4	3	3	1	2	6
10-May	3	2	1	2	2	2	1	2	2	3	3	3	3	3	3	3	4	3	2	1	1	2	1	2	4
11-May	2	4	3	1	2	2	2	2	3	4	3	3	4	4	2	3	3	4	3	3	2	3	2	2	4
12-May	1	2	2	1	1	2	2	2	4	4	5	6	5	5	6	6	5	5	4	3	2	2	3	3	6
13-May	3	2	2	2	1	1	3	3	3	4	5	4	4	4	2	3	2	3	3	1	3	1	2	3	5
14-May	3	5	2	2	2	3	3	5	4	4	6	5	7	4	6	3	4	3	4	5	6	5	5	5	7
15-May	4	5	4	4	4	4	4	5	5	4	4	4	4	4	3	4	4	4	3	2	2	2	1	1	5
16-May	1	2	1	1	1	2	1	2	3	3	4	4	4	3	4	4	4	3	3	4	4	3	3	2	4
17-May	2	1	2	1	1	1	1	1	4	4	4	4	4	4	4	6	5	4	4	3	3	4	4	3	6
18-May	4	2	2	1	1	1	5	4	3	6	5	5	5	5	5	5	5	4	4	3	3	2	2	2	6
19-May	3	3	3	3	3	2	2	5	4	5	5	5	4	5	6	3	4	4	4	3	3	3	2	3	6
20-May	2	2	2	2	2	3	3	3	3	3	3	3	5	4	2	3	3	3	3	2	2	1	1	2	5
21-May	1	3	1	1	1	1	1	1	1	2	2	4	4	2	2	2	3	3	2	1	1	1	1	1	4
22-May	2	1	3	2	2	2	3	3	3	3	3	4	4	6	4	4	4	4	5	3	2	1	2	2	6
23-May	2	2	2	1	2	2	1	1	2	2	4	6	4	3	2	3	2	3	5	3	2	1	1	1	6
24-May	3	2	2	2	1	2	2	3	4	4	5	5	5	6	6	7	5	6	5	4	3	3	3	3	7
25-May	3	3	3	3	3	3	3	4	6	5	6	6	6	6	7	6	6	5	5	4	2	2	2	3	7
26-May	4	4	2	2	3	4	4	4	5	6	7	8	7	7	7	6	7	6	6	4	6	7	2	1	8
27-May	2	2	1	2	2	1	1	2	3	3	3	4	4	4	4	4	4	5	4	2	2	1	1	1	5
28-May	1	1	1	2	2	2	2	1	2	3	4	5	4	5	5	4	4	3	3	1	1	1	2	1	5
29-May	1	1	1	2	1	2	3	3	5	5	5	5	4	4	4	3	4	4	3	3	2	7	7	4	7
30-May	5	5	5	4	4	3	2	2	2	4	4	4	5	5	3	4	3	3	2	1	1	2	1	2	5
31-May	1	1	1	1	2	2	2	1	3	2	2	2	2	2	3	3	3	4	5	6	7	7	5	6	7
5 6 7 7 6 5 7 7 7 8 8 8 8 8 8 7 7 7 9 7 6 7 7 7 6																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Janvier - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Janvier - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	170	22.85	22.85
6 - 11	358	48.12	70.97
12 - 19	185	24.87	95.83
20 - 28	31	4.17	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Janvier - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	18	23	4	5	2	7	8	20	16	19	8	11	3	8	10	8	170
6 - 11	34	8	7	4	10	21	32	55	45	44	21	16	13	16	14	18	358
12 - 19	21	6	8	0	2	2	4	10	50	21	14	8	6	13	9	11	185
20 - 28	0	0	3	0	0	0	0	0	11	12	4	0	0	0	1	0	31
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	73	37	22	9	14	30	44	85	122	96	47	35	22	37	34	37	744

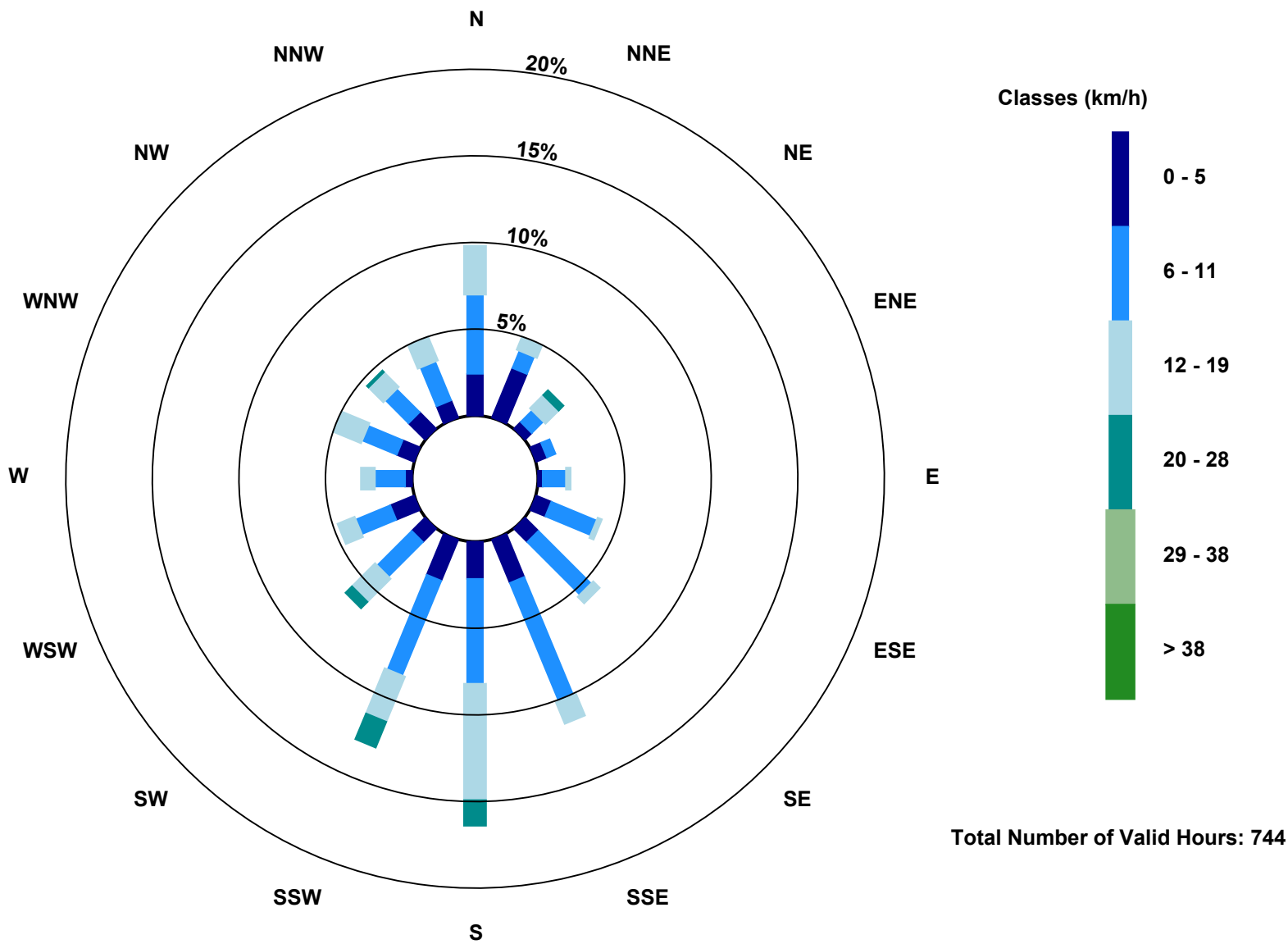
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 20m (WS20) - km/h
Janvier



Total Number of Valid Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg
Janvier - May 2025

Direction of Maximum Speed: 204 deg on May 7 11:00 Direction of Maximum Daily Speed Average: 199.2 deg on May 6																					Hours in Service:		744		
Direction of Minimum Speed: 188 deg on May 24 07:00 Direction of Minimum Daily Speed Average: 1.7 deg on May 10																					Hours of Data:		744		
																					Hours of Missing Data:		0		
Monthly Average Direction: 199.6 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	19	23	8	19	27	6	11	244	288	159	186	124	117	188	215	245	230	226	212	170	151	155	183	196	189.4
2-May	206	213	211	217	220	221	221	220	208	311	339	308	333	307	310	288	288	320	336	62	104	110	130	159	255.3
3-May	183	167	157	137	180	185	212	251	222	216	213	257	297	291	291	287	296	289	312	332	336	342	351	336	282.0
4-May	328	320	316	312	300	297	298	339	336	351	4	354	352	349	319	262	290	295	306	254	234	222	221	230	304.9
5-May	217	210	206	211	225	305	9	334	314	314	353	333	330	335	333	342	331	346	348	30	98	112	132	163	321.2
6-May	195	209	198	209	204	196	192	194	202	211	220	214	215	211	211	200	204	195	192	192	173	161	155	162	199.2
7-May	165	173	173	175	182	182	191	191	189	192	204	211	207	216	235	272	266	284	284	311	318	302	235	252	207.6
8-May	257	318	12	32	349	246	2	334	348	188	207	272	286	317	359	352	330	285	304	296	301	302	31	248	315.5
9-May	204	207	210	211	211	213	221	226	230	246	266	261	262	252	256	232	232	255	219	210	206	206	197	186	230.3
10-May	193	185	163	30	15	206	247	280	327	11	349	357	355	328	311	275	293	271	285	257	125	126	304	42	304.0
11-May	141	149	192	197	181	167	156	156	162	170	172	238	312	344	58	140	268	274	174	233	175	151	59	219	186.0
12-May	215	6	136	224	230	42	16	15	34	35	36	30	43	44	48	42	38	42	34	16	20	14	11	2	32.8
13-May	8	3	356	0	353	319	342	343	329	9	8	349	310	332	327	82	80	288	6	20	188	146	160	179	356.3
14-May	180	191	192	186	199	201	262	221	204	232	243	258	292	287	177	160	246	179	359	11	12	11	11	7	260.5
15-May	10	8	9	5	11	6	3	10	7	10	359	3	2	25	23	34	34	27	42	48	65	67	359	20	17.7
16-May	33	32	9	2	253	27	350	336	354	43	22	86	101	106	85	80	80	63	81	93	103	110	109	108	75.1
17-May	94	358	20	22	18	356	353	343	148	147	157	138	141	142	174	188	191	158	154	144	139	127	125	137	143.9
18-May	137	153	176	163	104	114	192	211	216	177	165	160	152	145	166	173	116	147	169	160	175	177	147	136	161.9
19-May	168	183	171	183	174	161	157	182	165	160	173	179	162	169	184	167	170	148	147	124	129	125	133	121	162.1
20-May	115	119	117	116	115	110	119	127	124	125	132	158	143	146	155	169	172	133	143	149	146	153	144	113	134.0
21-May	122	122	67	118	31	30	337	318	318	34	311	93	98	148	166	178	150	140	149	155	155	169	166	167	135.6
22-May	133	132	142	159	163	159	180	181	133	167	161	159	165	200	200	204	197	198	194	197	161	158	150	160	173.7
23-May	169	176	206	40	14	11	10	4	18	13	171	172	150	304	359	54	106	197	177	158	152	200	134	139	136.6
24-May	176	144	120	109	7	175	188	174	185	181	182	191	200	197	186	190	186	190	185	183	170	163	160	171	181.8
25-May	182	181	180	182	179	180	181	190	189	185	183	177	181	177	184	192	191	190	186	179	162	144	144	161	180.6
26-May	170	174	191	198	195	193	193	187	185	171	185	187	190	178	176	191	185	177	173	178	247	293	76	210	187.1
27-May	150	155	215	245	21	72	230	309	321	321	350	12	349	287	283	260	268	259	260	269	275	230	241	215	273.6
28-May	205	205	206	203	209	210	212	206	217	204	234	238	257	236	238	233	255	260	250	208	161	156	175	188	218.3
29-May	195	208	190	181	176	218	192	194	178	171	189	185	189	173	165	155	158	150	139	143	147	219	294	283	180.6
30-May	297	286	300	260	271	232	252	271	284	325	332	335	324	309	295	254	235	252	246	194	175	188	202	208	274.9
31-May	192	204	209	204	200	210	205	239	103	82	52	44	35	7	9	10	8	1	10	5	1	346	344	357	4.2
178.4 193.5 201.9 204.4 208.1 204.5 210.6 223.5 202.2 187.0 206.0 207.8 217.1 218.7 213.3 209.3 214.8 226.9 204.8 175.7 153.1 153.2 150.3 170.3																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

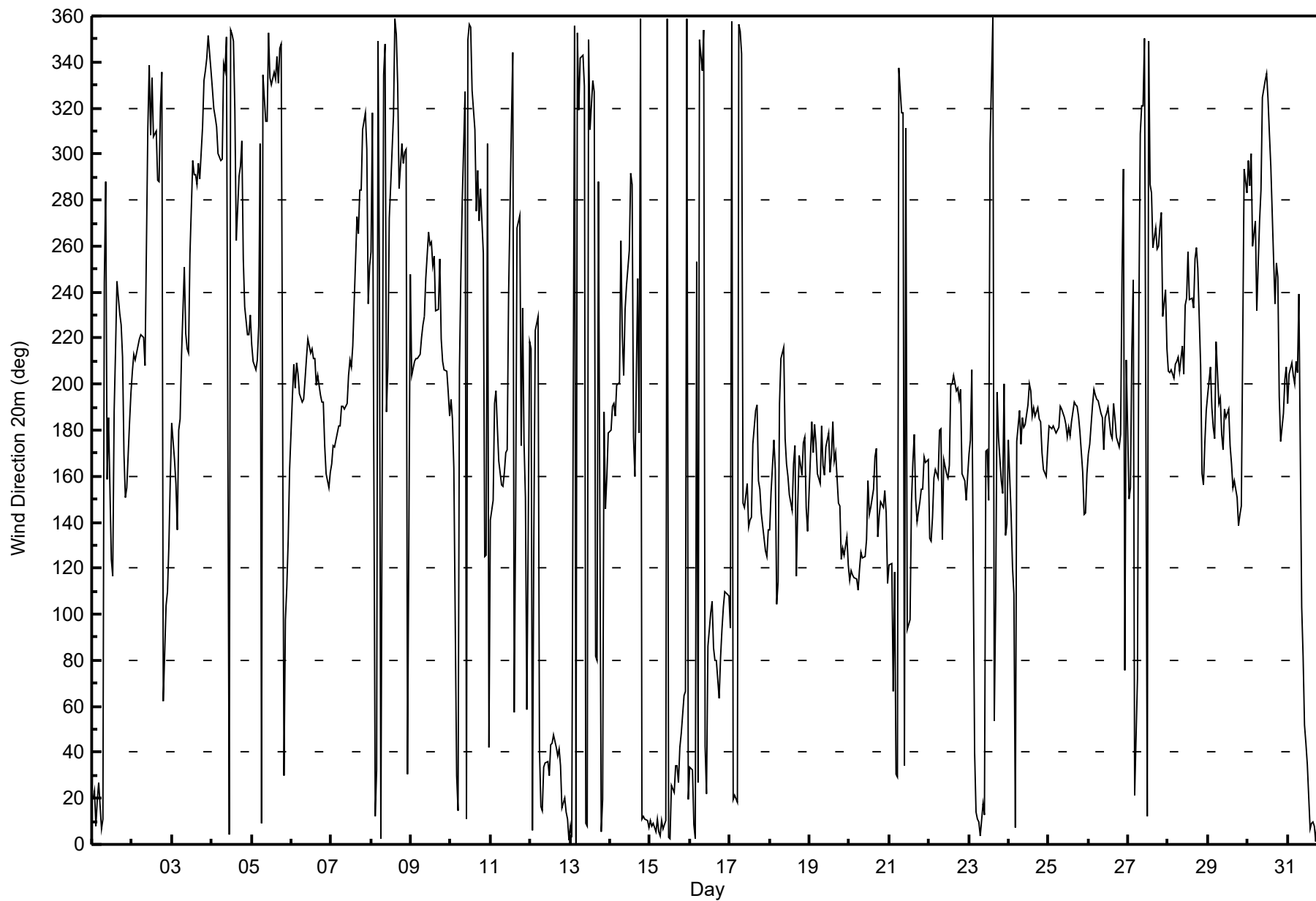
Janvier - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on May 2 10:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 7 deg on May 9 03:00																									
Percentiles: P ₁ = 9 P ₁₀ = 16 Q ₁ = 20 Median = 26 Q ₃ = 36 P ₉₀ = 51 P ₉₉ = 86																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	18	20	26	17	22	22	70	62	68	78	69	49	67	63	48	37	39	27	21	29	16	18	18	15	78
2-May	12	11	10	14	15	17	17	22	22	99	34	36	51	43	44	31	35	34	38	32	13	14	21	23	99
3-May	30	28	18	13	59	17	25	35	30	26	28	38	67	43	30	38	35	21	25	32	37	40	32	37	67
4-May	36	31	29	26	20	17	20	34	38	36	25	34	34	43	33	36	81	42	23	26	15	14	15	19	81
5-May	15	10	8	8	12	49	24	40	32	32	35	36	36	37	36	38	42	40	49	51	19	14	18	17	51
6-May	26	18	23	20	19	15	15	16	19	23	22	25	23	22	28	24	22	20	20	17	20	19	20	21	28
7-May	21	18	19	19	17	17	17	17	19	19	20	23	23	23	31	24	22	20	19	24	24	26	24	54	54
8-May	24	80	33	21	87	25	59	35	53	85	45	32	30	44	40	34	38	18	22	14	17	19	18	67	87
9-May	14	8	7	11	11	13	17	19	23	31	27	30	30	32	30	30	27	27	30	18	15	15	10	12	32
10-May	20	26	25	31	57	23	44	41	77	71	54	50	76	67	59	98	45	29	22	46	9	72	49	61	98
11-May	40	36	18	11	16	22	25	54	49	41	51	64	32	51	46	36	38	36	29	30	41	85	57	36	85
12-May	12	70	84	27	37	73	29	27	21	18	24	24	20	18	17	14	16	15	16	18	16	16	20	24	84
13-May	23	20	22	19	20	15	32	33	43	38	48	44	48	52	73	40	45	56	37	36	86	12	38	22	86
14-May	17	21	24	24	21	20	90	47	25	29	33	46	20	39	77	81	43	88	51	22	20	21	22	25	90
15-May	22	24	21	25	22	24	24	24	27	28	33	31	33	21	26	26	23	23	20	18	16	28	14	16	33
16-May	8	21	15	15	49	30	28	39	46	46	40	47	34	33	43	36	35	28	25	24	20	18	16	18	49
17-May	48	38	30	13	17	38	32	39	62	33	50	45	49	39	33	39	31	38	37	22	20	20	18	20	62
18-May	21	45	44	40	43	34	36	32	27	42	33	31	33	39	35	27	31	36	26	25	20	19	22	14	45
19-May	21	22	19	20	21	23	31	27	29	29	29	27	36	30	21	25	24	31	27	24	21	21	25	20	36
20-May	20	20	21	20	21	20	27	26	23	22	24	34	29	28	33	30	30	31	23	25	21	23	21	14	34
21-May	11	80	22	81	19	14	65	45	49	49	77	28	23	27	33	27	32	24	25	22	19	17	24	23	81
22-May	13	15	34	29	26	26	23	26	27	33	29	28	31	31	28	25	24	24	23	20	17	15	16	18	34
23-May	18	26	82	31	40	31	32	39	27	30	63	63	33	85	89	17	30	75	33	25	18	42	14	23	89
24-May	79	78	65	68	57	29	97	28	24	29	31	22	26	27	25	24	23	23	22	19	19	20	20	21	97
25-May	16	17	19	19	19	20	21	21	22	25	24	26	27	29	28	29	23	27	24	21	20	14	17	22	29
26-May	21	34	28	24	17	20	19	21	22	26	24	26	25	27	25	24	23	25	22	21	46	33	43	29	46
27-May	42	48	35	63	37	66	38	42	40	48	58	77	53	66	58	31	35	30	27	24	18	14	15	18	77
28-May	9	8	9	10	14	16	20	23	24	27	40	38	47	47	55	38	37	32	23	24	19	13	18	17	55
29-May	22	23	54	19	17	32	25	43	24	26	23	21	21	25	27	24	26	24	21	18	16	71	21	25	71
30-May	28	22	23	27	23	36	27	31	22	34	41	40	44	47	78	64	37	26	30	42	25	14	10	11	78
31-May	20	13	11	17	14	15	21	61	36	29	23	21	17	37	30	24	22	29	23	26	28	38	34	36	61
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Janvier - May 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS23 FORT HILLS MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	34	36	99.73	-	-	18.2	0	3	0
TRS(ppb) Average	708	35	36	99.87	2.9	0	2.9	0	1.3	0
THC(ppm) Average	706	34	38	99.46	-	-	5.2	-	3	-
NMHC(ppm) Average	706	34	38	99.46	-	-	1.561	-	0.516	-
CH4(ppm) Average	706	34	38	99.46	-	-	4.1	-	2.5	-
NO2 (ppb) Average	711	31	33	99.73	-	-	43.7	0	19.9	-
NO (ppb) Average	711	31	33	99.73	-	-	184.7	-	37.8	-
NOX (ppb) Average	711	31	33	99.73	-	-	215.5	-	57.6	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	590.6	0	242.3	3
Temperature 2 m (C) Average	744	0	0	100	-	-	32	-	24.5	-
Relative Humidity (%) Average	744	0	0	100	-	-	97.3	-	77	-
Wind Speed 10 m (km/h) Average	742	2	2	100	-	-	38	-	21	-
Wind Direction 10 m (deg) Average	742	2	2	100	-	-	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.87	1.9	-	0	0	0.1	0.2	0.6	2.3	18.2
TRS (ppb) Average	708	0.58	0.3	-	0.3	0.4	0.4	0.5	0.6	0.9	2.9
THC (ppm) Average	706	2.33	0.5	-	2	2	2	2.1	2.4	3	5.2
NMHC(ppm) Average	706	0.15	0.238	-	0	0	0	0	0.2	0.5	1.561
CH4(ppm) Average	706	2.18	0.3	-	2	2	2	2.1	2.2	2.5	4.1
NO2 (ppb) Average	711	10.32	10.6	-	0.1	1.1	2.3	5.8	17	27.6	43.7
NO (ppb) Average	711	7.6	20.1	-	0	0	0.1	0.7	3.4	19.7	184.7
NOX (ppb) Average	711	17.92	27.9	-	0.1	1.2	2.7	6.5	20.8	49.1	215.5
PM2.5 (ug/m3) Average	742	23.23	62.8	-	0.9	3.1	5	7.7	15.4	28.5	590.6
Temperature 2 m (C) Average	744	14.07	6.3	-	-0.2	6.3	9.6	13.5	18	22.8	32
Relative Humidity (%) Average	744	51.14	20.4	-	15.1	25.4	33.4	49.6	67.2	80.5	97.3
Wind Speed 10 m (km/h) Average	742	14.2	7	-	0	5	9	13	19	24	38
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	22 May 2025 08:00	22 May 2025 08:00	1	Maintenance - sample manifold cleaned
NO2	21 May 2025 08:00	21 May 2025 08:00	1	Maintenance - verify daily QA response
THC/NMHC/CH4	21 May 2025 07:00	21 May 2025 07:00	1	Maintenance - verify daily QA response
THC/NMHC/CH4	27 May 2025 09:00	27 May 2025 10:00	2	Maintenance - replaced support gas cylinder
SO2	21 May 2025 07:00	21 May 2025 07:00	1	Maintenance - verify daily QA response



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

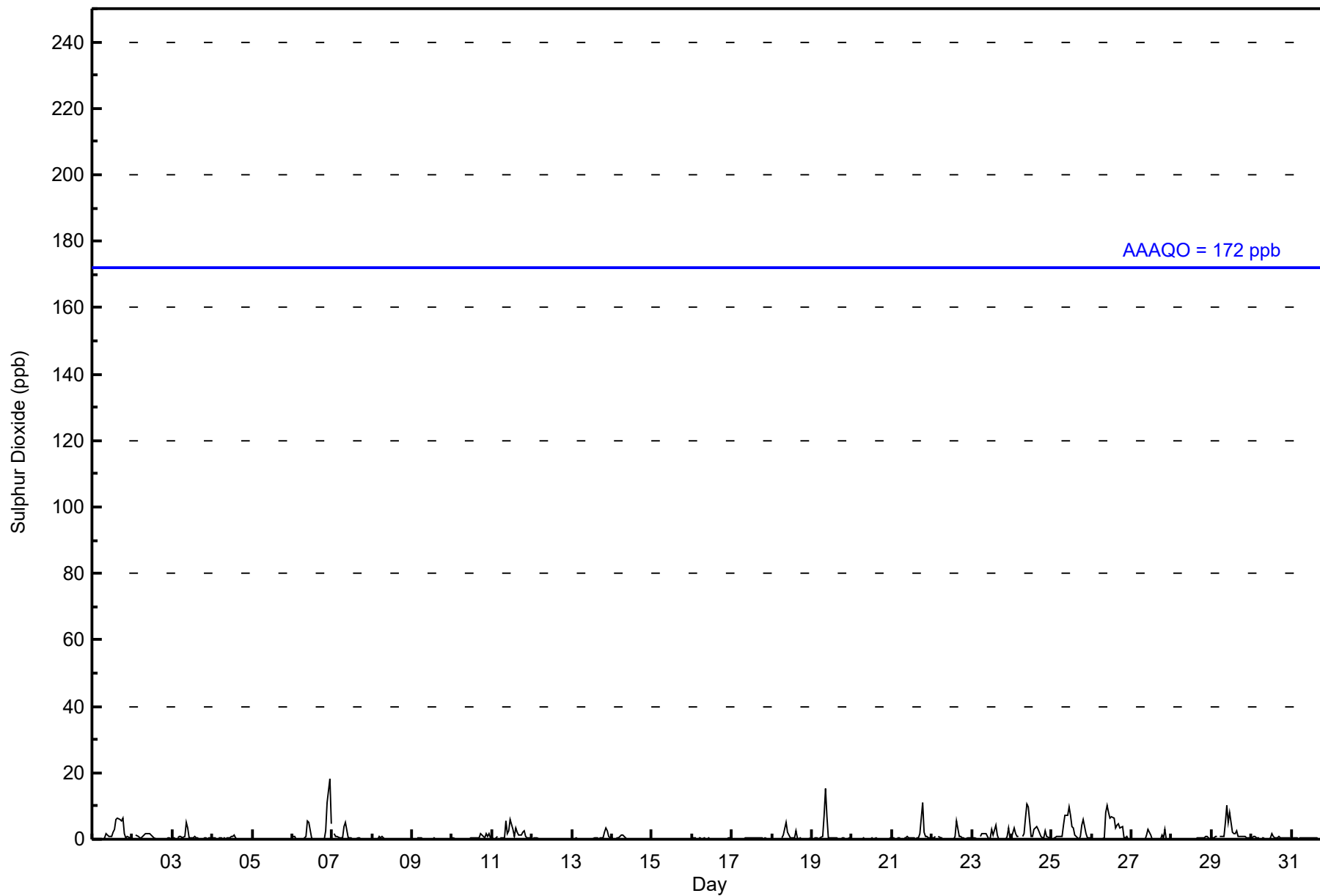
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 18.2 ppb on May 6 23:00 Maximum Daily Average: 3.0 ppb on May 26																			Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7							
Minimum Value: 0.0 ppb on May 4 20:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 2.4 ppb at hour 9 Minimum Diurnal Average: 0.3 ppb at hour 1 Monthly Average: 0.87 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 2.3 P ₉₉ = 9.7																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.0	0.0	0.1	0.2	0.1	0.1	0.2	1.5	1.4	0.9	0.7	2.1	3.1	5.8	6.2	5.8	5.7	6.2	1.9	0.4	0.7	0.5	0.5	1.9	6.2
2-May	0.6	Z	1.3	0.8	0.2	0.3	0.8	1.5	1.5	1.7	1.5	1.2	0.9	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.6	1.7
3-May	0.3	0.5	Z	0.6	0.7	0.8	0.6	0.7	5.1	3.3	0.6	0.6	0.2	0.8	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.7	5.1
4-May	0.3	0.3	0.3	Z	0.2	0.3	0.2	0.2	0.2	0.3	0.2	1.0	0.8	1.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
6-May	0.6	0.7	0.2	0.1	0.1	Z	0.2	0.3	1.0	5.6	4.9	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	2.5	11.0	18.2	4.8	2.2	18.2
7-May	Z	1.8	0.7	0.6	0.5	0.3	0.3	3.9	4.9	0.2	0.3	0.2	0.2	0.1	0.2	0.6	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.7	4.9
8-May	0.1	Z	0.1	0.1	0.7	0.6	0.7	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.2	0.7
9-May	0.1	0.0	Z	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.5
10-May	0.3	0.3	0.1	Z	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.4	0.2	0.3	0.4	0.3	0.4	1.5	1.2	0.5	1.5	0.8	1.5	0.6	0.5	1.5
11-May	0.4	0.1	0.3	0.7	Z	0.4	0.3	0.3	5.4	1.6	2.6	6.1	3.1	0.8	3.3	2.3	1.2	1.4	2.0	2.4	0.9	0.3	0.2	0.3	1.6	6.1
12-May	0.1	0.3	0.4	0.4	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
13-May	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.3	0.2	2.1	3.2	2.7	1.0	0.6	0.5	3.2
14-May	0.3	Z	0.1	0.5	0.6	1.2	1.2	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
16-May	0.3	0.2	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
17-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.5	0.4	0.1	0.3	0.2	0.1	0.1	0.2	0.5
18-May	0.1	0.2	0.1	0.1	0.1	Z	0.3	1.5	5.0	2.0	1.1	0.4	0.3	0.5	2.6	0.4	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.7	5.0
19-May	Z	0.3	0.3	0.2	0.2	0.2	0.7	7.3	15.3	6.8	0.4	0.3	0.3	0.4	0.2	0.2	0.1	0.2	0.4	0.2	0.2	0.2	0.2	0.2	1.5	15.3
20-May	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2
21-May	0.3	0.4	Z	0.3	0.3	0.2	M	0.3	0.5	0.7	0.5	0.3	0.3	0.2	0.2	0.6	0.4	1.8	11.0	2.3	1.0	0.9	0.4	0.4	1.1	11.0
22-May	0.5	0.6	0.6	Z	1.0	0.4	0.5	M	C	C	C	0.1	0.1	0.0	0.7	5.6	0.7	0.7	0.3	0.6	0.1	0.2	0.4	0.4	0.7	5.6
23-May	0.3	0.5	0.5	0.2	Z	0.7	1.7	1.5	1.8	0.8	0.1	0.3	3.0	1.1	4.3	1.2	0.2	0.1	0.1	0.1	0.1	1.0	3.3	0.4	1.0	4.3
24-May	0.5	3.4	1.7	1.0	0.7	Z	1.0	1.7	6.2	10.4	9.7	0.7	1.0	2.9	3.3	3.9	3.2	0.9	0.3	0.5	2.7	1.0	0.5	0.4	2.5	10.4
25-May	Z	0.5	0.6	1.0	0.9	0.9	0.8	4.4	7.0	7.1	9.6	7.2	3.7	3.6	1.4	0.6	0.2	0.8	4.1	5.9	1.8	0.2	0.3	0.4	2.7	9.6
26-May	0.3	Z	0.1	0.0	0.0	0.2	0.2	0.5	8.1	10.1	7.8	6.3	6.7	6.4	3.2	4.4	4.7	3.4	3.9	0.5	0.5	0.8	0.1	0.0	3.0	10.1
27-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	1.4	3.0	1.3	0.0	0.0	0.0	0.0	0.1	0.2	1.1	0.5	2.9	0.1	0.0	0.1	0.5	3.0
28-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.4	0.2	0.3	0.7	0.9	0.3	0.2	0.2	0.9
29-May	0.2	0.5	0.6	1.0	Z	0.8	0.6	0.7	5.0	10.3	5.1	7.9	2.3	1.7	1.7	2.5	0.8	0.9	1.0	0.8	0.6	0.4	0.3	0.3	2.0	10.3
30-May	0.5	0.8	1.0	0.2	0.3	Z	0.3	0.2	0.1	0.2	0.2	0.5	1.5	0.8	0.3	0.5	0.7	0.6	0.4	0.3	0.3	0.2	0.2	0.3	0.5	1.5
31-May	Z	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.6
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	704	99.44	99.44
11 - 20	4	0.56	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	67	59	15	9	11	13	102	165	74	44	33	20	17	17	19	37	702
11 - 20	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	4
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	59	15	9	11	13	102	168	75	44	33	20	17	17	19	37	706

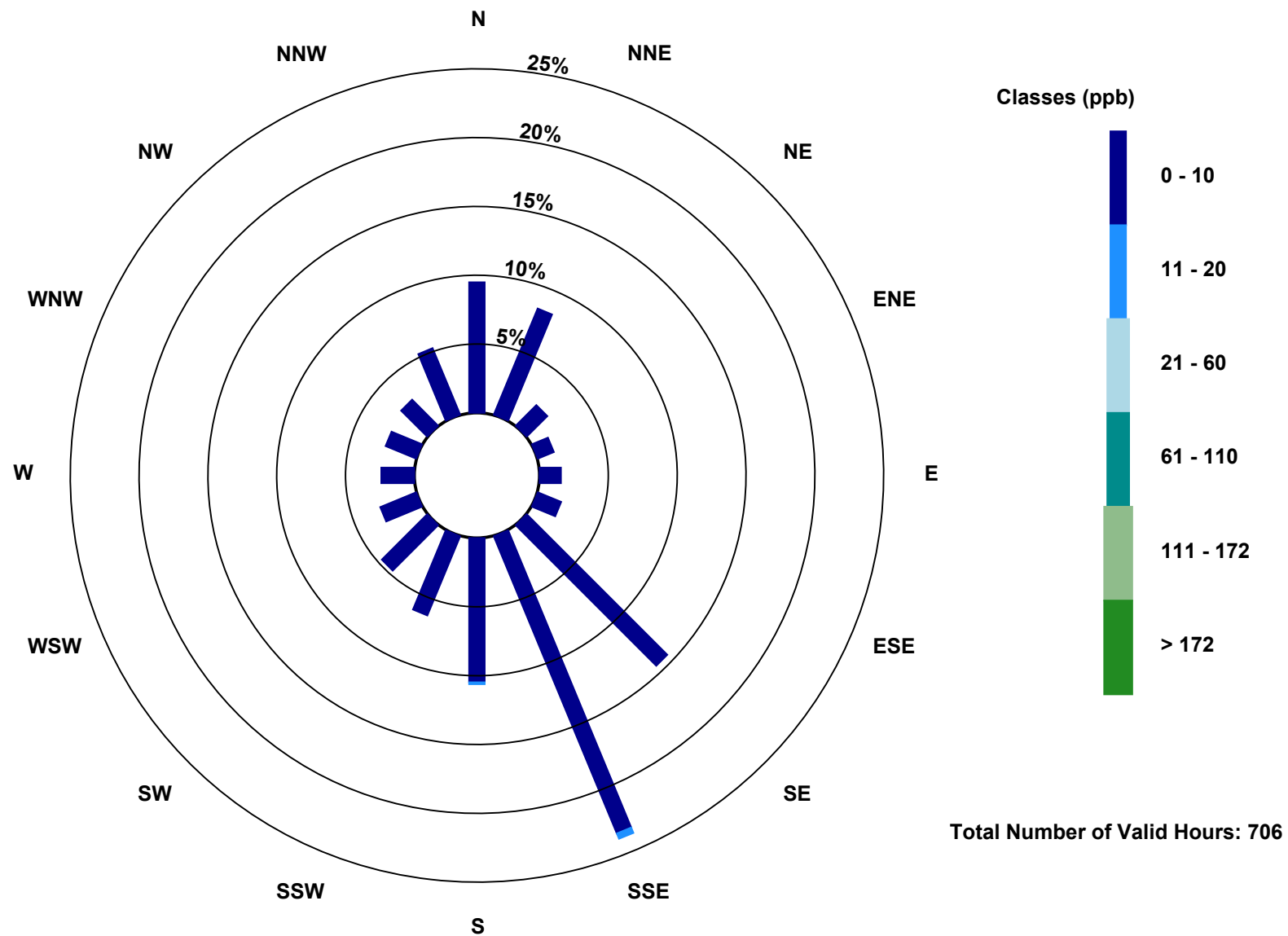
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

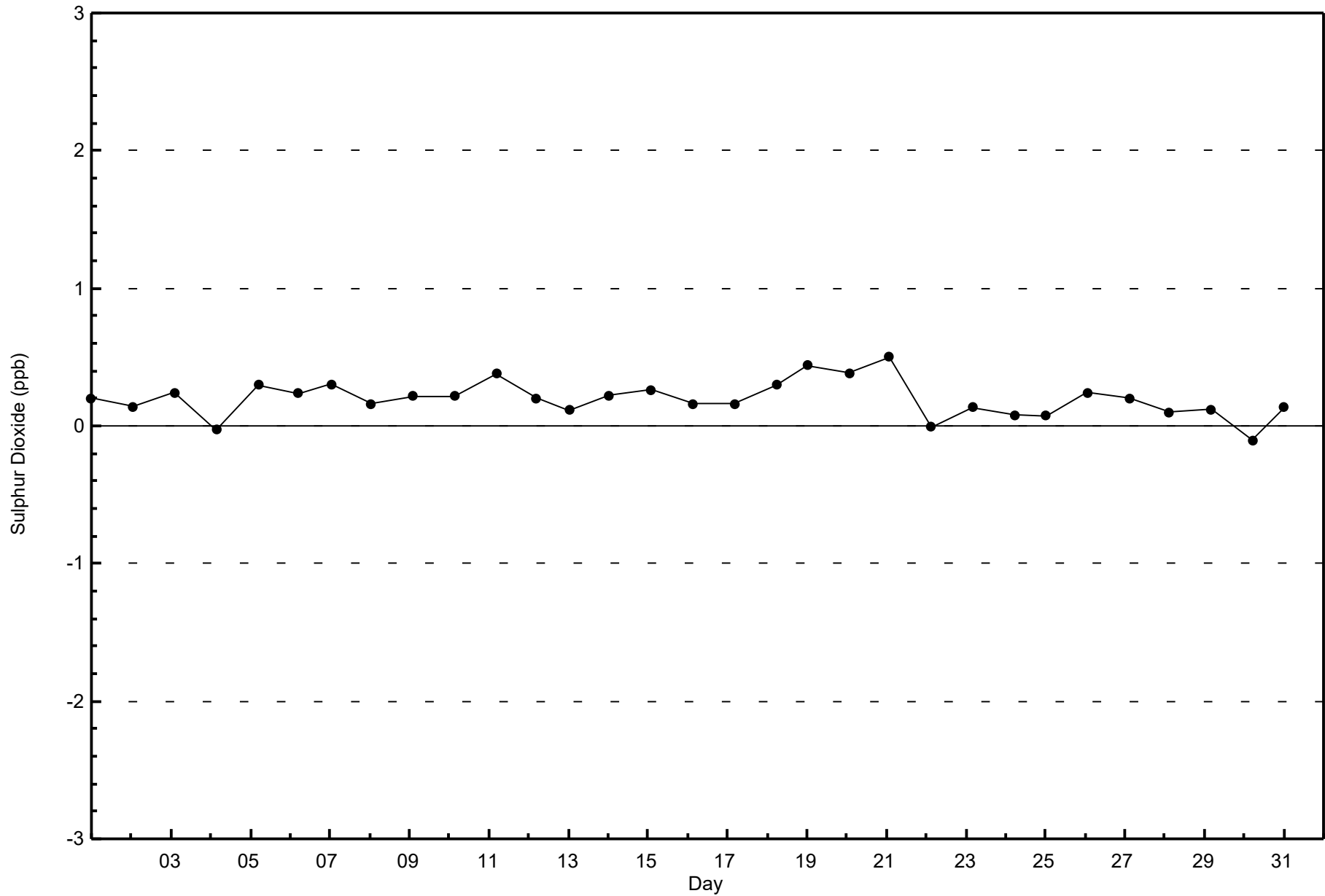
Sulphur Dioxide (SO₂) - ppb
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

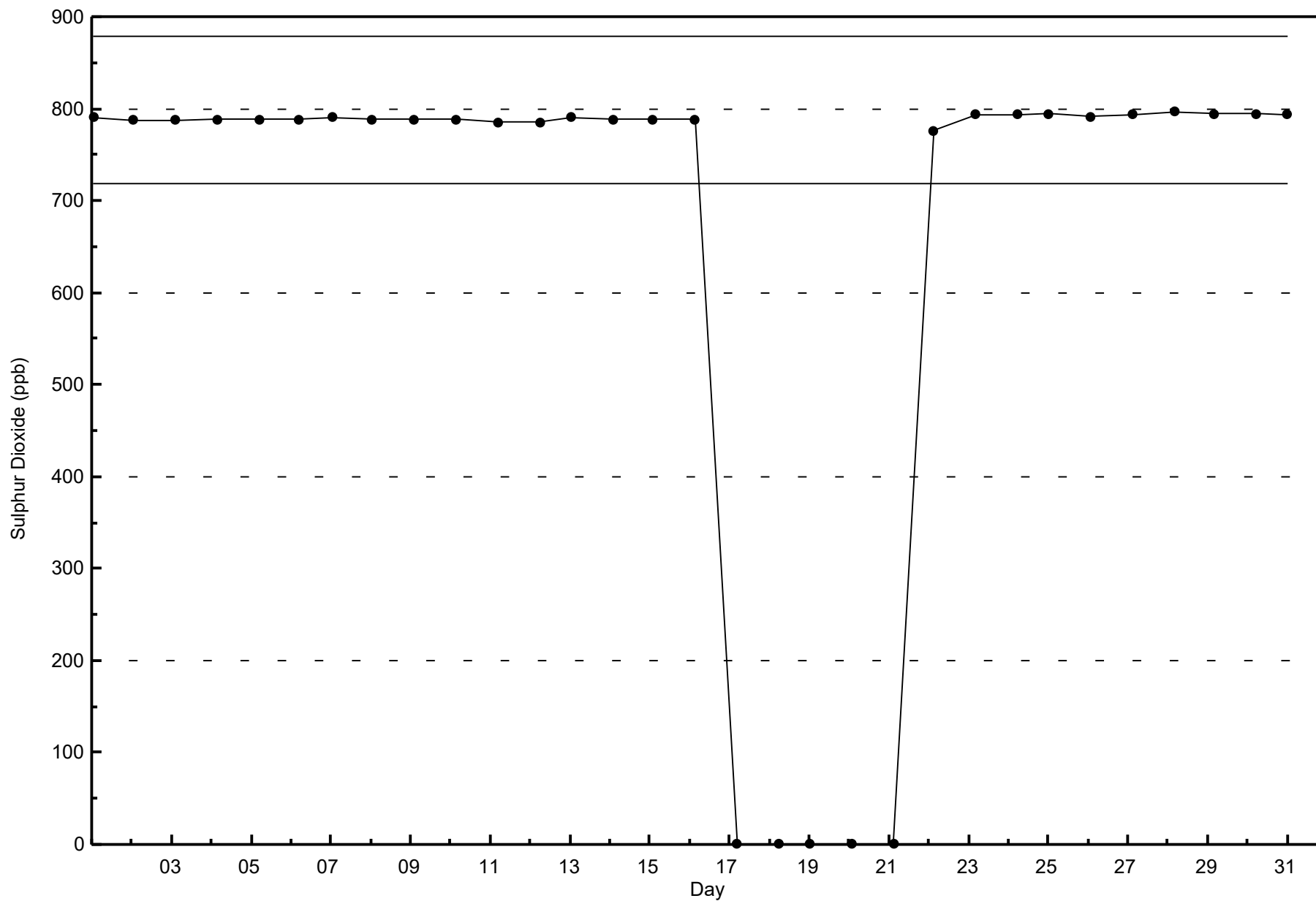
Sulphur Dioxide (SO₂) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - May 2025

Number of Exceedences (AAAQG): 30-Min: 0 Maximum Value: 2.9 ppb on May 31 08:30 Maximum Daily Average: 1.3 ppb on May 31																				Periods in Service: 1488 Periods of Valid Data: 1416 Periods of Invalid Data: 72 Periods of Calibration: 70 Percent Operational Time: 99.9											
Minimum Value: 0.3 ppb on May 3 14:30 Minimum Daily Average: 0.4 ppb on May 15 Maximum Diurnal Average: 0.7 ppb at hour 8 Minimum Diurnal Average: 0.5 ppb at hour 15 Monthly Average: 0.58 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.5																															
Day	Period Ending At (MST)																								Daily Average	Daily Maximum					
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00							
1-May	0.4 0.4	Z SP	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.6	0.6 1.1	0.9 0.7	0.7 0.7	0.7 0.7	0.5	1.1						
2-May	0.9 0.9	0.8 0.8	Z SP	1.0 0.9	0.7 0.7	0.7 0.7	0.8 1.0	0.7 1.2	1.1 1.1	1.3 0.9	0.8 0.7	0.6 0.6	0.6 0.5	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.6	1.3					
3-May	0.5 0.5	0.7 0.6	0.7 0.7	Z SP	0.7 0.9	1.1 0.9	0.9 0.9	1.0 0.9	1.5 1.0	0.6 0.5	0.4 0.4	0.4 0.3	0.4 0.3	0.4 0.3	0.3 0.4	0.3 0.3	0.3 0.4	0.3 0.4	0.3 0.4	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5	1.5					
4-May	0.6 0.7	0.8 0.8	0.7 0.6	0.6 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.6 0.5	0.5 1.6	0.5 0.7	0.7 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.5	0.5	1.6					
5-May	0.5 0.6	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.5	0.6						
6-May	Z SP	0.9 0.9	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.7 0.8	0.8 0.7	0.6 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.7 0.6	0.5 0.5	0.5	0.9					
7-May	0.5 0.5	Z SP	0.7 0.7	0.6 0.6	0.6 0.6	1.0 0.6	0.6 0.5	0.6 0.6	0.6 0.5	0.6 0.5	0.6 0.5	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.6	1.0						
8-May	0.5 0.7	0.6 0.6	Z SP	0.6 0.6	0.9 0.8	0.8 0.8	1.0 0.7	0.6 0.5	0.5 0.5	0.4 0.4	0.5 0.4	0.5 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.6 0.6	0.6 0.7	0.6	1.0						
9-May	0.6 0.5	0.6 0.5	0.7 0.6	Z SP	0.6 0.5	0.6 0.6	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.6	0.5	0.7						
10-May	0.6 0.6	0.6 0.7	0.6 0.5	0.5 0.5	Z SP	0.5 0.5	0.4 0.5	0.5 0.5	0.7 0.7	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.8 1.2	1.1 1.1	1.0 0.9	0.9 0.7	0.6	1.2					
11-May	0.8 0.8	0.7 0.6	0.7 0.9	0.9 1.1	0.8 0.9	Z SP	0.6 0.8	0.9 0.7	0.7 0.7	0.6 0.5	0.6 0.6	0.5 0.5	0.4 0.4	0.4 0.6	0.4 0.5	0.6 0.5	0.4 0.5	0.5 0.5	0.6 0.6	0.6 0.7	0.6 0.6	0.6 0.7	0.6 0.9	0.6	1.1						
12-May	Z SP	0.7 0.6	0.7 0.8	0.8 0.8	0.8 0.6	0.7 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.8						
13-May	0.6 0.6	Z SP	0.5 0.6	0.6 0.5	0.6 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.6	0.8 0.9	1.0 1.2	1.0 0.8	0.8 0.7	0.6	1.2						
14-May	0.7 0.6	0.6 0.7	Z SP	0.6 0.6	0.6 0.7	0.7 0.7	1.0 1.4	1.6 1.8	0.7 0.7	0.7 0.6	0.7 0.6	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6	1.8						
15-May	0.5 0.5	0.5 0.5	0.5 0.4	Z SP	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.4	0.5						



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.7 0.6	0.5 0.6	0.6 0.6	0.5 0.6	Z SP	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.3	0.3 0.3	0.4 0.4	0.3 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5	0.7
17-May	0.5 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4	0.5
18-May	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.7 0.6	0.5	0.7
19-May	0.6 0.5	Z SP	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.7 0.7	0.6 0.6	0.6 0.6	0.5 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5	0.7
20-May	0.5 0.5	0.6 0.6	Z SP	0.5 0.6	0.8 0.7	0.7 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.7 0.7	0.7 0.6	0.5	0.8
21-May	0.6 0.9	1.0 0.9	0.7 0.6	Z SP	0.6 0.7	0.6 0.6	0.6 0.5	C C	C C	C C	C C	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.6 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5	1.0
22-May	0.7 0.6	0.5 0.6	0.6 0.7	0.7 0.7	Z SP	0.5 0.5	0.6 0.6	M 0.6	0.5 0.5	0.6 0.6	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.5 0.5	1.0 0.7	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.6 0.6	0.6	1.0
23-May	0.6 0.7	0.7 0.6	0.6 0.6	0.6 0.6	0.6 0.6	Z SP	0.7 0.8	0.8 1.2	1.0 0.7	0.5 0.4	0.4 0.4	0.4 0.5	DF 0.5	0.4 0.5	0.5 0.6	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.6	0.6	1.2
24-May	Z SP	0.8 1.0	1.0 1.1	1.0 1.2	1.3 1.1	1.1 1.2	1.1 0.8	0.8 0.9	0.8 0.7	0.8 0.7	0.7 0.6	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.7	0.9 1.2	1.2 1.1	0.7 0.6	0.7	1.3
25-May	0.7 0.8	Z SP	0.9 0.8	0.7 0.8	0.9 1.4	0.9 0.8	0.7 0.6	0.5 0.6	0.6 0.5	0.5 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.3	0.5 0.9	1.0 0.8	0.5	1.4
26-May	0.7 1.1	1.0 0.9	Z SP	0.8 1.0	0.8 0.7	0.5 0.4	0.5 0.4	0.4 0.4	0.5 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.3 0.3	0.3 0.4	0.4 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.6	0.6 0.8	1.1 0.8	0.6 0.6	0.6 0.6	0.5	1.1
27-May	0.5 0.6	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.4 0.5	0.4 0.5	0.4 0.5	0.4 0.9	0.5 0.7	0.7 0.8	1.2 0.8	0.6 0.5	0.5 0.6	0.5	1.2
28-May	0.6 0.5	0.6 0.6	0.6 0.6	0.6 0.6	Z SP	0.5 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.7 1.1	1.2 1.2	0.9 0.9	1.0 1.1	0.6	1.2	
29-May	1.1 1.1	1.0 1.0	1.0 1.0	1.0 1.1	1.1 1.2	Z SP	0.8 0.9	0.8 0.8	0.6 0.6	0.6 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.6 0.5	0.6 0.6	0.6 0.5	0.6 0.5	0.4 0.4	0.5 0.5	0.6	1.2
30-May	Z SP	0.7 0.5	0.6 0.5	0.9 0.7	0.6 0.6	0.9 1.0	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.6 0.8	0.7 0.6	0.6 0.6	0.7 1.1	1.4 1.5	1.4 1.4	1.4 1.3	1.4 1.4	1.5 1.2	1.0 1.0	1.1 0.9	0.9 0.9	0.8	1.5
31-May	1.0 1.0	Z SP	0.7 1.1	1.0 1.1	1.0 1.1	1.3 1.6	1.9 2.2	2.4 2.8	2.9 2.8	2.5 2.1	1.8 1.7	1.5 1.2	1.2 1.2	1.2 1.2	1.0 1.0	0.8 1.2	1.4 1.3	1.3 1.2	1.1 1.0	0.8 0.8	0.8 0.7	0.7 0.6	0.6 0.7	0.6 0.6	1.3	2.9
0.7 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.6 0.6 0.6																								Diurnal Average		
1.1 1.0 1.1 1.2 1.4 1.6 2.2 2.8 2.9 2.5 1.8 1.6 1.2 1.2 1.0 1.2 1.5 1.4 1.4 1.4 1.5 1.2 1.2 1.1																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

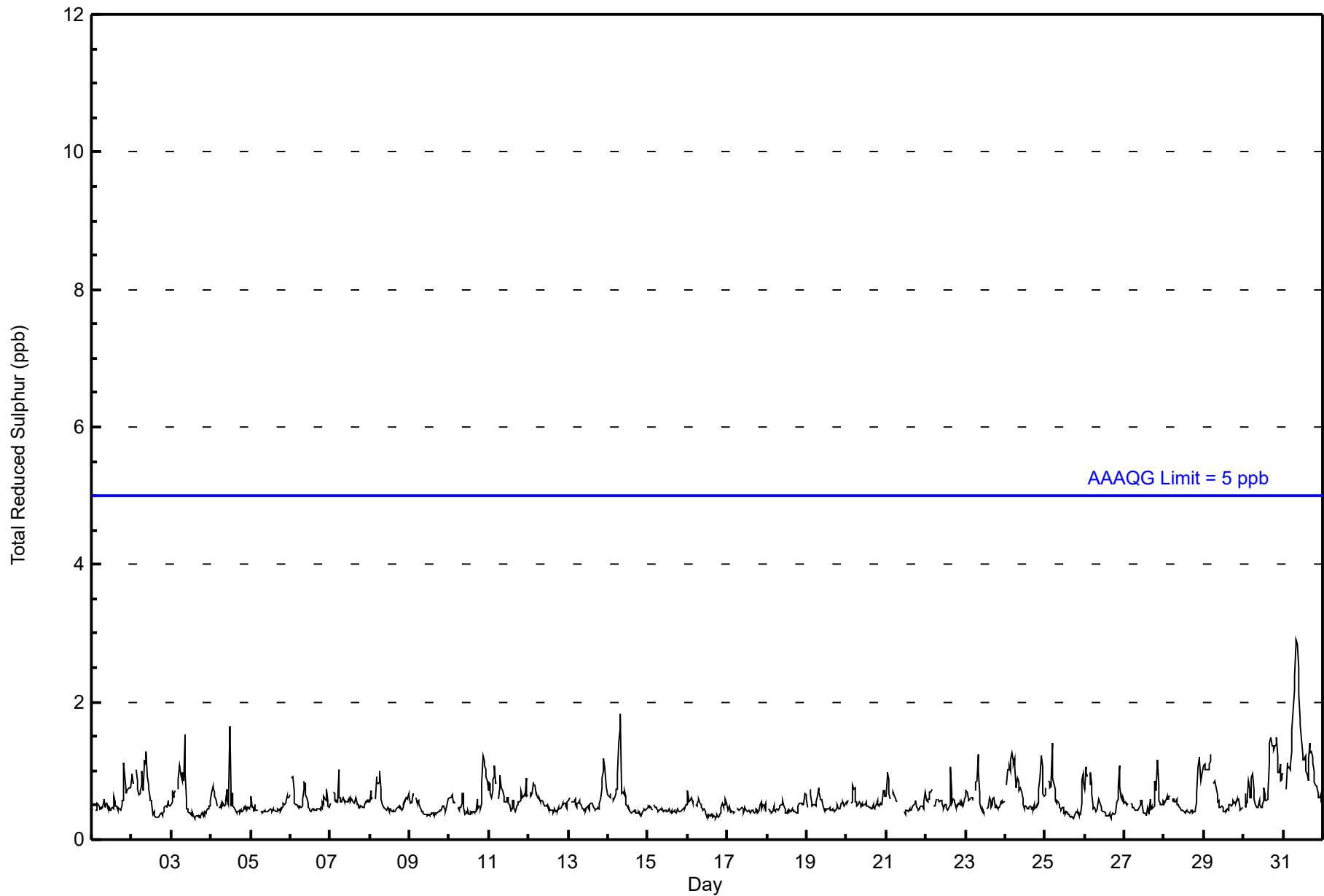
Fort Hills - May 2025

Maximum Value: 2.9 ppb on May 31 09:00																			Maximum Daily Average: 1.3 ppb on May 31							Hours in Service: 744	
Minimum Value: 0.3 ppb on May 25 18:00																			Minimum Daily Average: 0.4 ppb on May 15							Hours of Data: 708	
Maximum Diurnal Average: 0.7 ppb at hour 8																			Minimum Diurnal Average: 0.5 ppb at hour 15							Hours of Missing Data: 36	
Monthly Average: 0.58 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.4							Hours of Calibration: 35	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.4	Z	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.8	0.8	0.7	0.7	0.7	0.5	0.8	
2-May	0.9	0.8	Z	0.9	0.7	0.7	0.9	0.9	1.1	1.1	0.8	0.6	0.6	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	1.1	
3-May	0.5	0.7	0.7	Z	0.8	1.0	0.9	0.9	1.2	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	1.2	
4-May	0.6	0.8	0.7	0.5	Z	0.5	0.5	0.5	0.5	0.7	0.5	1.1	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	1.1	
5-May	0.6	0.5	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.6	
6-May	Z	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.8	0.7	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.9	
7-May	0.5	Z	0.7	0.6	0.6	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.8	
8-May	0.6	0.6	Z	0.6	0.9	0.8	0.9	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.5	0.9	
9-May	0.6	0.5	0.7	Z	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.5	0.7	
10-May	0.6	0.6	0.6	0.5	Z	0.5	0.4	0.5	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	1.0	1.1	1.0	0.8	0.6	1.1	
11-May	0.8	0.6	0.8	1.0	0.8	Z	0.7	0.8	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.7	0.8	0.6	0.6	1.0	
12-May	Z	0.7	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	
13-May	0.6	Z	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.8	1.1	0.9	0.7	0.6	1.1	
14-May	0.6	0.6	Z	0.6	0.6	0.7	1.2	1.7	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	1.7	
15-May	0.5	0.5	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	
16-May	0.7	0.6	0.6	0.5	Z	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.5	0.7	
17-May	0.5	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	
18-May	Z	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.7	0.5	0.7	
19-May	0.5	Z	0.7	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.7	
20-May	0.5	0.6	Z	0.5	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.5	0.8	
21-May	0.8	0.9	0.6	Z	0.7	0.6	0.6	C	C	C	C	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.9	
22-May	0.6	0.6	0.6	0.7	Z	0.5	0.6	M	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.9	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9	
23-May	0.7	0.6	0.6	0.6	0.6	Z	0.8	1.0	0.8	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.0	
24-May	Z	0.9	1.0	1.1	1.2	1.1	0.9	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.1	1.1	0.7	0.7	1.2	
25-May	0.7	Z	0.8	0.8	1.1	0.9	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.7	0.9	0.5	1.1	
26-May	0.9	0.9	Z	0.9	0.7	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.7	0.9	0.6	0.6	0.5	0.9	
27-May	0.5	0.5	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.7	1.0	0.5	0.5	0.5	0.5	1.0	
28-May	0.5	0.6	0.6	0.6	Z	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9	1.2	0.9	1.0	0.6	1.2	
29-May	1.1	1.0	1.0	1.1	1.2	Z	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.4	0.5	0.6	1.2	
30-May	Z	0.6	0.5	0.8	0.6	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.9	1.4	1.4	1.3	1.4	1.3	1.0	1.0	0.9	0.8	1.4	
31-May	1.0	Z	0.9	1.1	1.1	1.4	2.0	2.6	2.9	2.3	1.7	1.3	1.2	1.2	1.0	1.0	1.3	1.2	1.0	0.8	0.8	0.6	0.6	0.6	1.3	2.9	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																											



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	99.72	99.72
3 - 4	2	0.28	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	65	59	15	10	12	13	103	164	77	45	33	19	18	17	18	36	704
3 - 4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	65	59	15	10	12	13	103	164	79	45	33	19	18	17	18	36	706

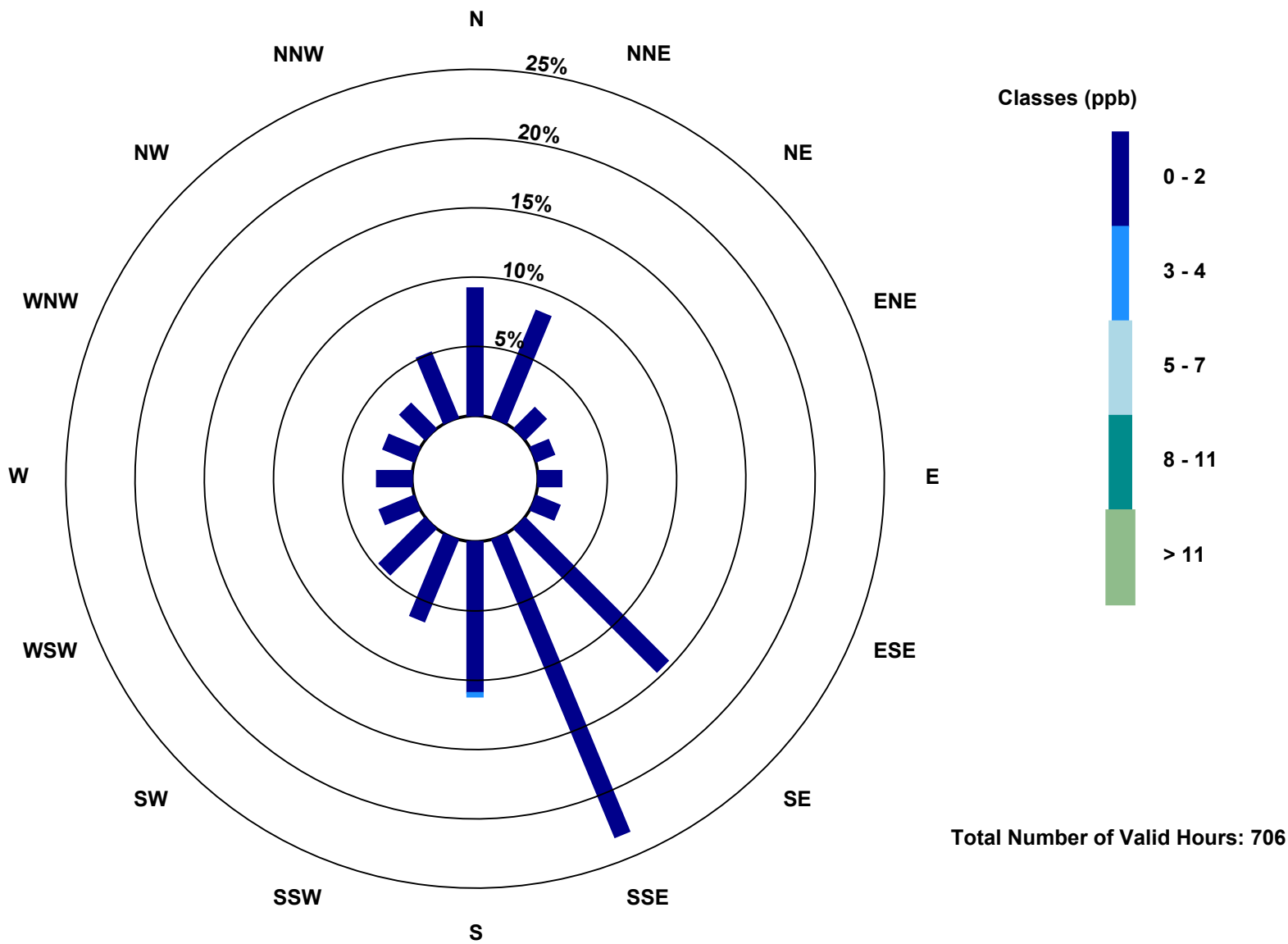
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

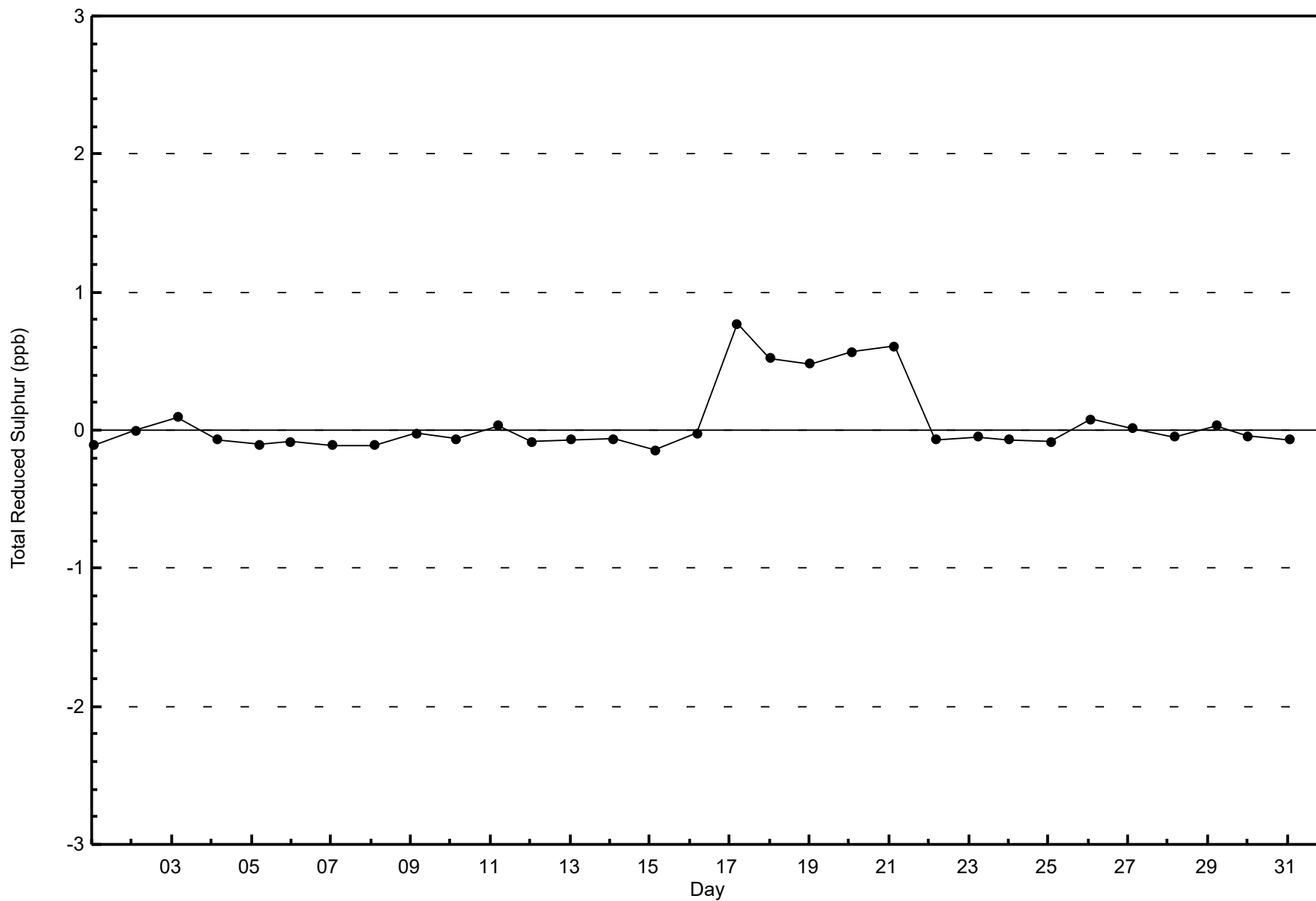
Total Reduced Sulphur (TRS) - ppb
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

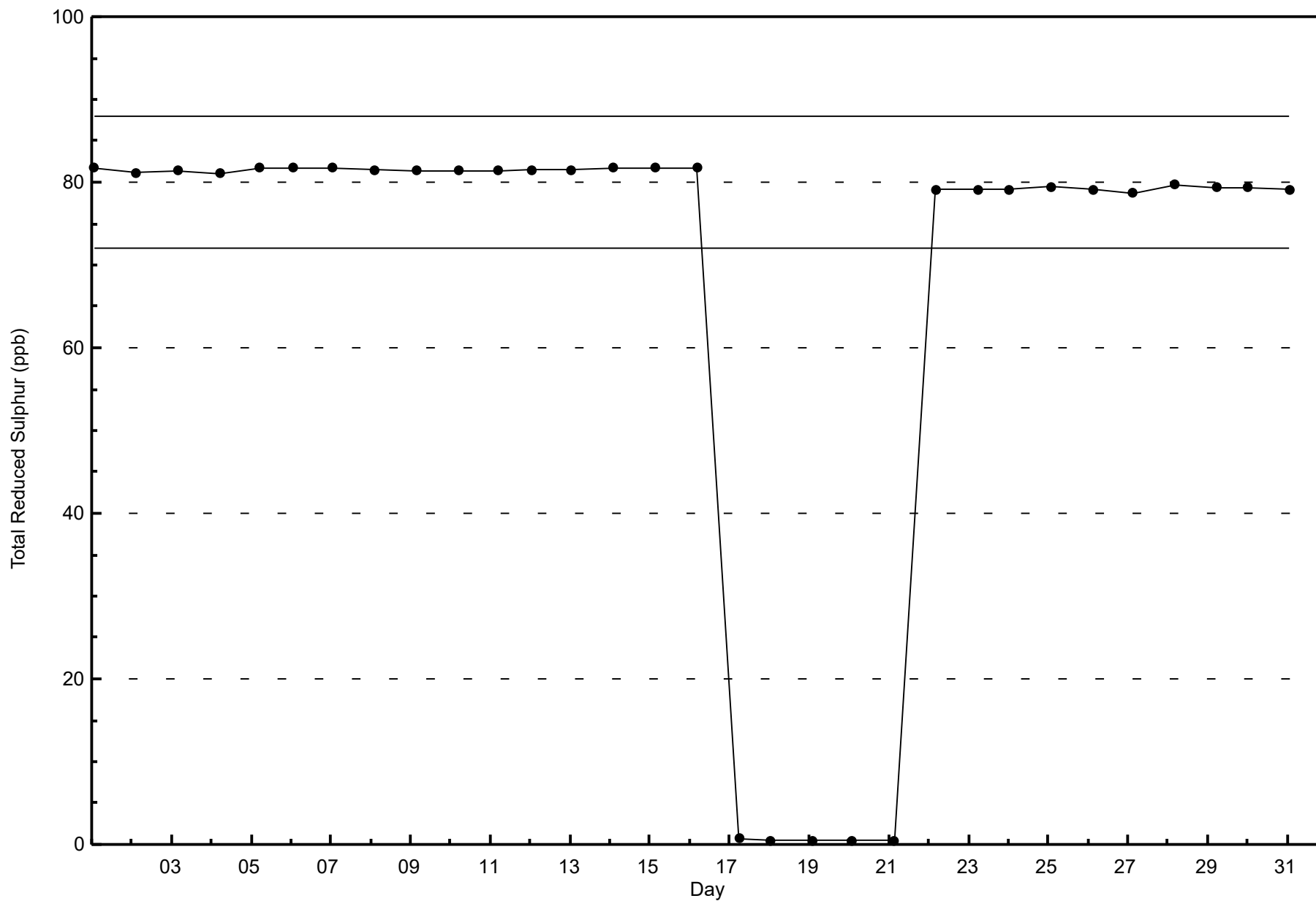
Total Reduced Sulphur (TRS) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Fort Hills - May 2025

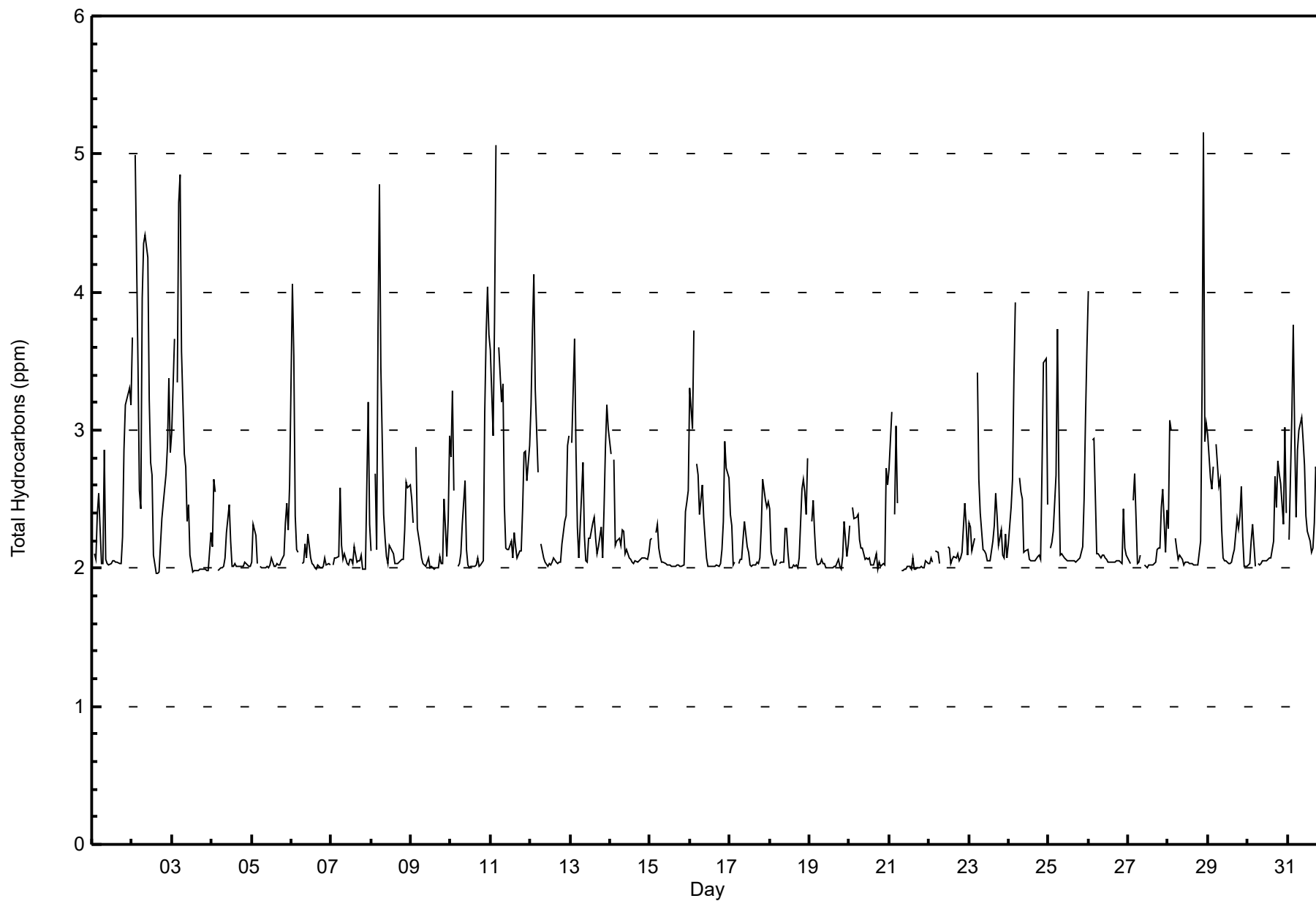


Number of Exceedences (AAAQO): Maximum Value: 5.2 ppm on May 28 22:00																		1-hr: 0 Maximum Daily Average: 3.0 ppm on May 2						Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 34 Percent Operational Time: 99.5					
Minimum Value: 2.0 ppm on May 2 15:00 Maximum Diurnal Average: 2.7 ppm at hour 3 Monthly Average: 2.33 ppm																		Minimum Daily Average: 2.1 ppm on May 19 Minimum Diurnal Average: 2.0 ppm at hour 14 Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.4 P ₉₀ = 3.0 P ₉₉ = 4.3											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	Z	2.1	2.1	2.4	2.5	2.0	2.0	2.9	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.9	3.2	3.2	3.3	3.2	2.4	3.3				
2-May	3.7	Z	5.0	3.5	2.6	2.4	4.0	4.3	4.4	4.2	3.2	2.8	2.7	2.1	2.0	2.0	2.0	2.2	2.4	2.5	2.7	2.9	3.4	2.8	3.0	5.0			
3-May	3.0	3.7	Z	3.3	4.6	4.9	3.6	2.8	2.7	2.3	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.6	4.9				
4-May	2.2	2.6	2.6	Z	2.0	2.0	2.0	2.0	2.1	2.3	2.5	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6				
5-May	2.0	2.3	2.2	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.3	2.6	2.1	2.6			
6-May	4.1	3.5	2.4	2.1	2.1	Z	2.0	2.0	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.2	4.1			
7-May	Z	2.0	2.1	2.1	2.1	2.6	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.2	2.0	2.1	2.1	2.1	2.0	2.0	2.6	3.2	2.3	2.2	3.2			
8-May	2.1	Z	2.7	2.1	3.7	4.8	3.5	2.4	2.2	2.1	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.6	2.6	2.6	2.5	4.8			
9-May	2.5	2.3	Z	2.9	2.3	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.5	2.1	2.4	3.0	2.2	3.0			
10-May	2.8	3.3	2.6	Z	2.0	2.0	2.1	2.3	2.6	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	3.1	3.7	4.0	3.7	2.5	4.0			
11-May	3.6	3.0	3.8	5.1	Z	3.6	3.2	3.3	2.5	2.2	2.1	2.1	2.2	2.1	2.3	2.2	2.1	2.1	2.1	2.4	2.8	2.8	2.6	2.9	2.7	5.1			
12-May	3.2	3.7	4.1	3.3	2.7	Z	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.3	2.4	2.9	3.0	2.5	4.1			
13-May	Z	2.9	3.7	2.9	2.3	2.1	2.3	2.8	2.2	2.1	2.0	2.2	2.2	2.3	2.4	2.2	2.1	2.2	2.3	2.1	2.4	2.9	3.2	3.0	2.5	3.7			
14-May	2.8	Z	2.8	2.2	2.2	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.8			
15-May	2.2	2.2	Z	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.5	2.6	2.1	2.6				
16-May	3.3	3.0	3.7	Z	2.8	2.7	2.4	2.6	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.9	2.7	2.7	2.4	3.7			
17-May	2.4	2.3	2.0	2.0	Z	2.0	2.1	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.6	2.5	2.4	2.5	2.2	2.6			
18-May	2.4	2.1	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6	2.6	2.5	2.4	2.8	2.2	2.8			
19-May	Z	2.3	2.5	2.3	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.3	2.1	2.2	2.1	2.5			
20-May	2.3	Z	2.4	2.4	2.4	2.4	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.7	2.6	2.2	2.7				
21-May	2.7	3.1	Z	2.4	3.0	2.5	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	3.1				
22-May	2.0	2.1	2.0	Z	2.1	2.1	2.0	M	C	C	C	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.3	2.1	2.1	2.5			
23-May	2.3	2.3	2.1	2.2	Z	3.4	2.6	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.3	2.5	2.4	2.2	2.3	2.1	2.1	2.2	2.1	2.3	3.4			
24-May	2.2	2.4	2.6	3.4	3.9	Z	2.7	2.5	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.7	3.5	3.5	2.5	2.5	3.9			
25-May	Z	2.1	2.2	2.3	2.7	3.7	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.5	3.1	3.6	2.3	3.7			
26-May	4.0	Z	2.9	2.9	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.4	2.1	2.1	2.3	4.0			
27-May	2.1	2.0	Z	2.5	2.7	2.0	2.0	2.1	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4	2.6	2.1	2.4	2.2	2.7			
28-May	2.3	3.1	3.0	Z	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	3.3	5.2	2.9	3.0	2.4	5.2			
29-May	3.0	2.7	2.6	2.7	Z	2.9	2.6	2.6	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.4	2.3	2.4	2.6	2.2	2.0	2.0	2.3	3.0			
30-May	2.0	2.0	2.2	2.3	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.7	2.4	2.8	2.7	2.6	2.3	3.0	2.4	2.3	3.0			
31-May	Z	2.2	3.1	3.8	3.0	2.4	2.9	3.0	3.1	2.9	2.8	2.4	2.3	2.2	2.1	2.1	2.3	2.7	2.6	2.5	2.1	2.1	2.1	2.0	2.6	3.8			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	236	33.43	33.43
2.1 - 3.0	411	58.22	91.64
3.1 - 10.0	59	8.36	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	10	30	7	3	1	1	7	57	31	15	18	12	12	11	12	9	236
2.1 - 3.0	45	29	7	5	6	6	81	109	41	26	15	7	5	6	6	16	410
3.1 - 10.0	12	0	1	1	4	6	14	2	3	2	0	1	0	0	1	12	59
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	59	15	9	11	13	102	168	75	43	33	20	17	17	19	37	705

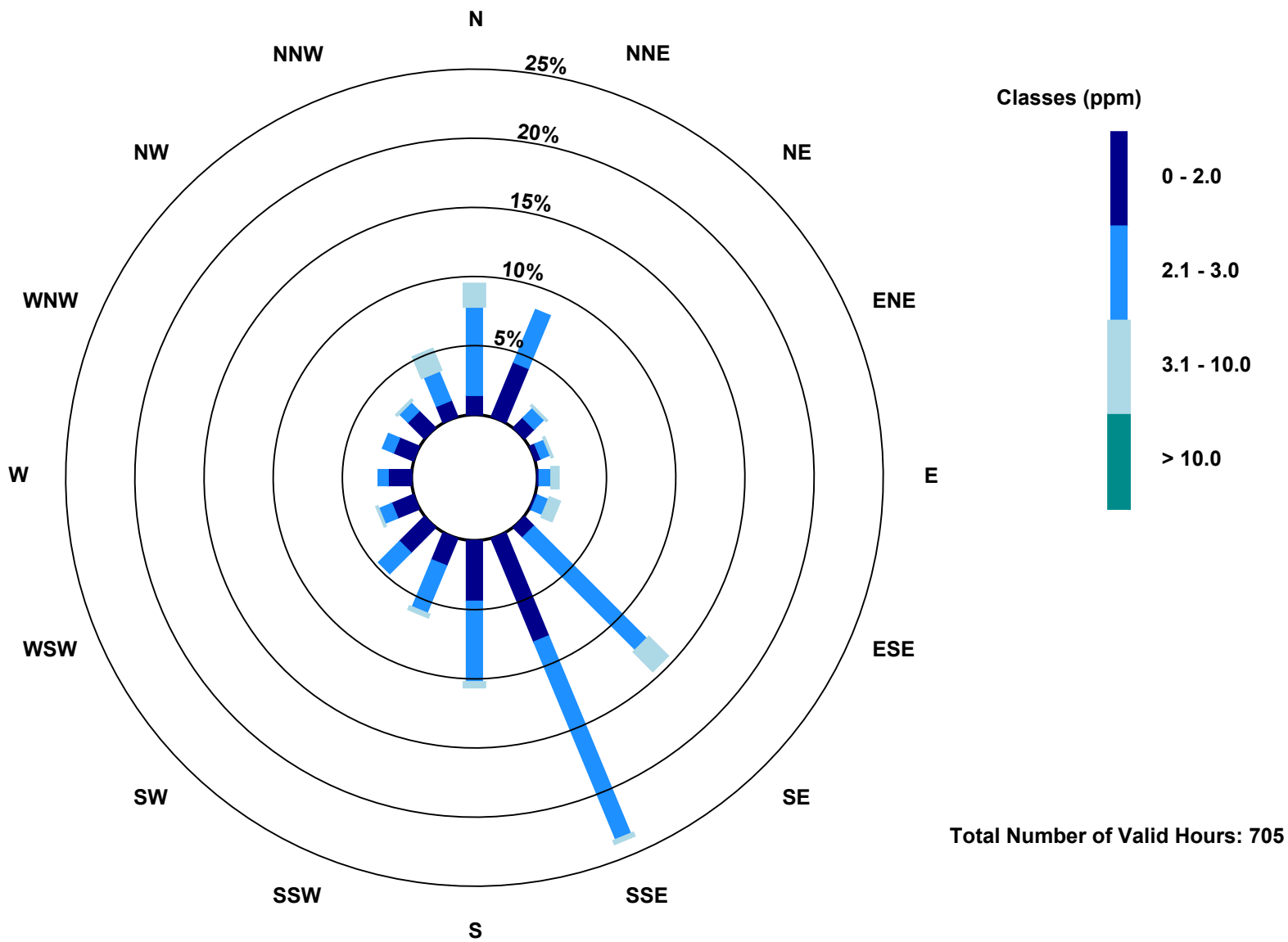
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Total Hydrocarbons (THC) - ppm
Fort Hills



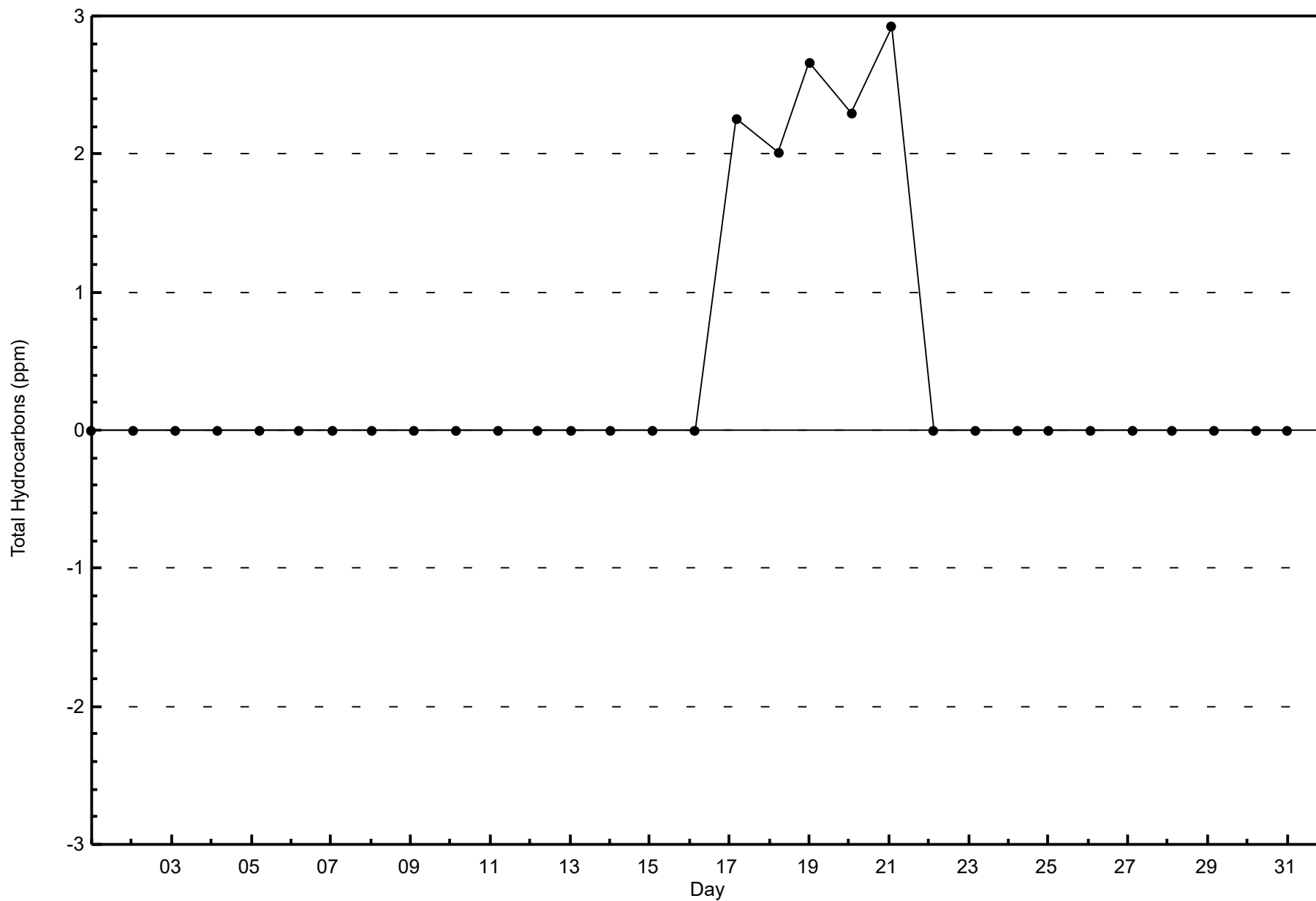


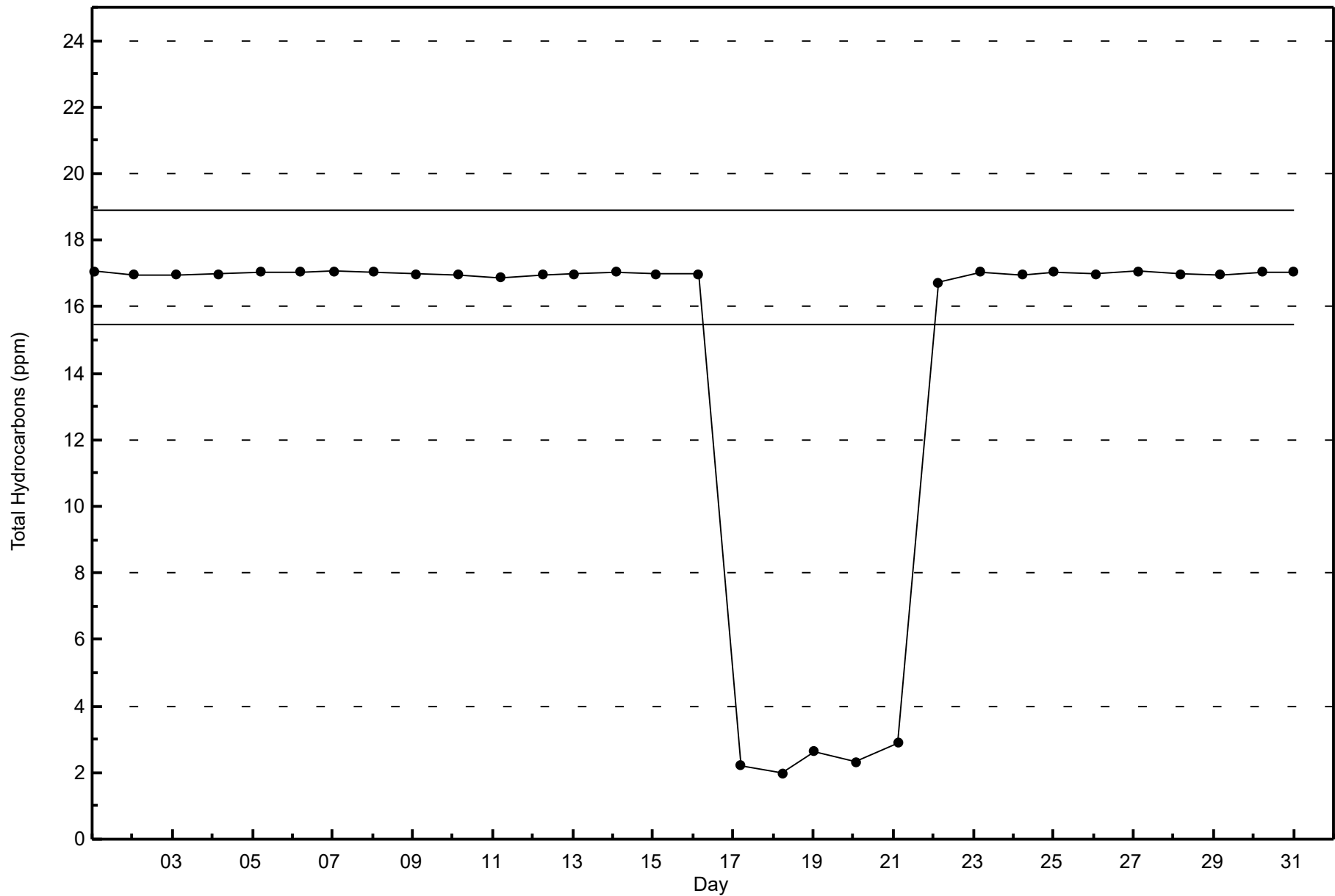
Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

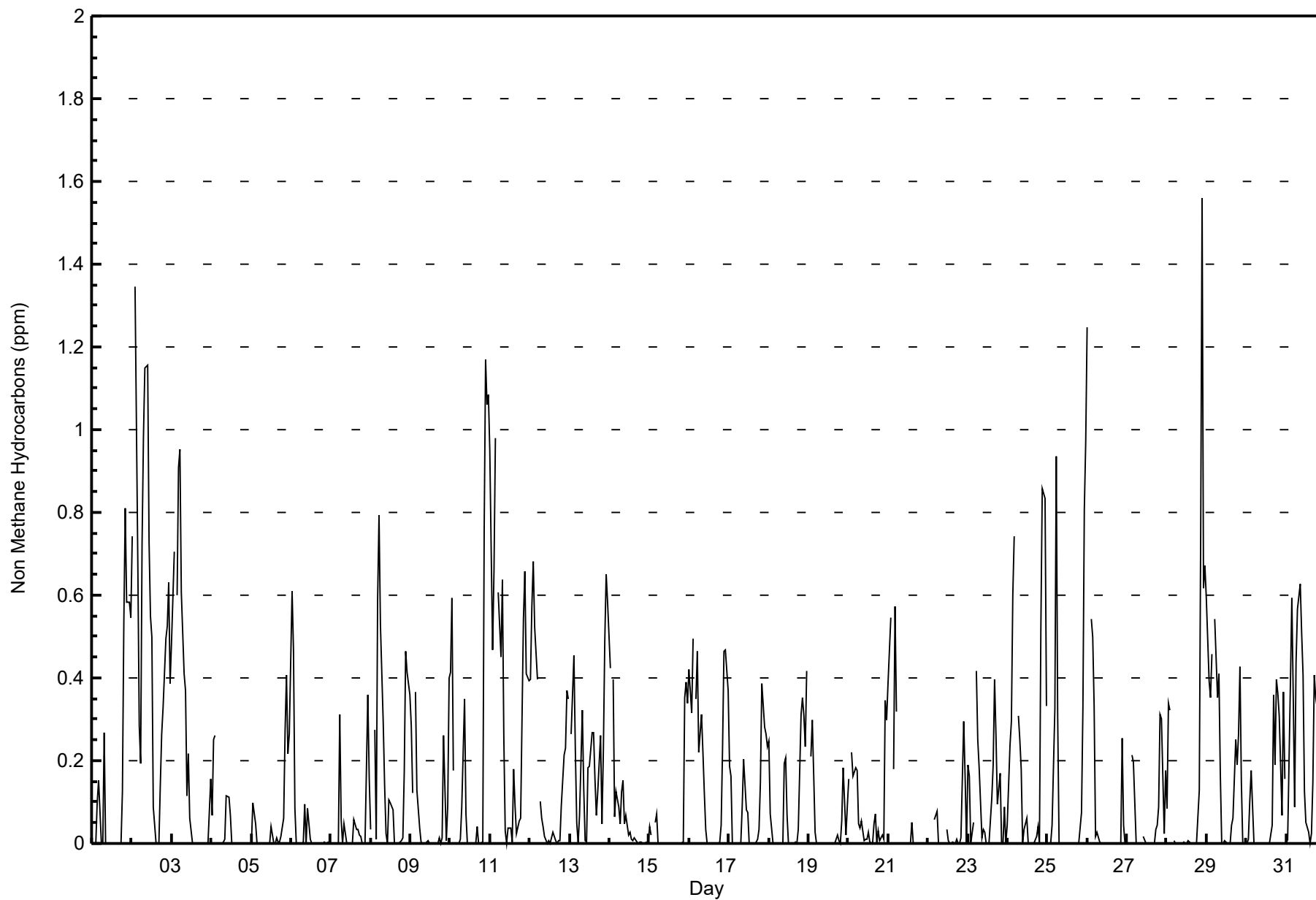
Fort Hills - May 2025

Maximum Value: 1.561 ppm on May 28 22:00																				Maximum Daily Average: 0.516 ppm on May 2					Hours in Service: 744		
Minimum Value: 0.000 ppm on May 1 02:00																				Minimum Daily Average: 0.034 ppm on May 22					Hours of Data: 706		
Maximum Diurnal Average: 0.327 ppm at hour 22																				Minimum Diurnal Average: 0.016 ppm at hour 14					Hours of Missing Data: 38		
Monthly Average: 0.150 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.1					Hours of Calibration: 34		
																									Percent Operational Time: 99.5		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.000	0.000	0.099	0.154	0.000	0.000	0.267	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.124	0.531	0.811	0.583	0.582	0.545	0.161	0.811	
2-May	0.743	Z	1.346	0.670	0.284	0.193	0.722	0.982	1.150	1.156	0.727	0.550	0.499	0.089	0.000	0.000	0.000	0.139	0.263	0.328	0.496	0.525	0.630	0.385	0.516	1.346	
3-May	0.485	0.705	Z	0.601	0.910	0.952	0.608	0.409	0.370	0.115	0.217	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.155	0.243	0.952	
4-May	0.069	0.251	0.261	Z	0.000	0.000	0.000	0.002	0.011	0.116	0.111	0.068	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.261	
5-May	0.000	0.098	0.048	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.013	0.003	0.004	0.016	0.062	0.271	0.408	0.216	0.264	0.063	0.408	
6-May	0.612	0.469	0.084	0.000	0.000	Z	0.000	0.002	0.095	0.000	0.084	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.003	0.000	0.059	0.612	
7-May	Z	0.000	0.000	0.000	0.000	0.311	0.057	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.057	0.035	0.034	0.021	0.016	0.000	0.000	0.176	0.358	0.161	0.055	0.358	
8-May	0.033	Z	0.273	0.011	0.589	0.794	0.528	0.293	0.138	0.023	0.000	0.105	0.097	0.082	0.000	0.000	0.000	0.000	0.006	0.014	0.173	0.463	0.415	0.360	0.191	0.794	
9-May	0.284	0.122	Z	0.365	0.128	0.037	0.003	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.014	0.262	0.006	0.091	0.399	0.075	0.399	
10-May	0.415	0.593	0.176	Z	0.000	0.000	0.011	0.088	0.350	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.003	0.759	1.169	1.061	1.086	0.253	1.169	
11-May	0.948	0.467	0.659	0.978	Z	0.607	0.449	0.638	0.258	0.032	0.000	0.039	0.037	0.004	0.179	0.090	0.023	0.054	0.061	0.306	0.541	0.656	0.410	0.393	0.341	0.978	
12-May	0.396	0.572	0.680	0.522	0.397	Z	0.101	0.060	0.039	0.017	0.000	0.006	0.000	0.012	0.027	0.006	0.000	0.006	0.008	0.091	0.214	0.231	0.368	0.349	0.178	0.680	
13-May	Z	0.263	0.455	0.227	0.051	0.000	0.068	0.321	0.133	0.007	0.003	0.183	0.186	0.266	0.268	0.157	0.068	0.126	0.260	0.048	0.223	0.490	0.650	0.584	0.219	0.650	
14-May	0.425	Z	0.397	0.063	0.125	0.087	0.047	0.127	0.152	0.049	0.069	0.020	0.026	0.009	0.006	0.013	0.003	0.000	0.003	0.003	0.000	0.000	0.003	0.003	0.071	0.425	
15-May	0.042	0.022	Z	0.051	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.354	0.391	0.338	0.055	0.391	
16-May	0.421	0.316	0.496	Z	0.349	0.463	0.220	0.311	0.220	0.123	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.043	0.232	0.465	0.468	0.370	0.197	0.496	
17-May	0.187	0.161	0.000	0.000	Z	0.000	0.000	0.000	0.087	0.204	0.082	0.073	0.000	0.000	0.000	0.000	0.003	0.010	0.034	0.149	0.386	0.283	0.266	0.233	0.094	0.386	
18-May	0.248	0.071	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.195	0.206	0.066	0.000	0.000	0.000	0.000	0.003	0.000	0.034	0.311	0.354	0.307	0.234	0.418	0.106	0.418	
19-May	Z	0.211	0.298	0.166	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.006	0.000	0.055	0.184	0.019	0.090	0.047	0.298	
20-May	0.155	Z	0.221	0.162	0.184	0.176	0.047	0.037	0.055	0.008	0.010	0.011	0.026	0.003	0.000	0.048	0.071	0.000	0.031	0.007	0.019	0.010	0.344	0.299	0.084	0.344	
21-May	0.387	0.547	Z	0.178	0.573	0.320	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.093	0.573	
22-May	0.000	0.000	0.000	Z	0.058	0.078	0.000	M	C	C	C	0.033	0.006	0.000	0.000	0.004	0.000	0.011	0.000	0.000	0.012	0.296	0.158	0.000	0.034	0.296	
23-May	0.190	0.162	0.000	0.051	Z	0.418	0.250	0.183	0.012	0.034	0.028	0.000	0.000	0.000	0.109	0.190	0.397	0.261	0.096	0.171	0.000	0.000	0.089	0.000	0.115	0.418	
24-May	0.042	0.236	0.295	0.600	0.744	Z	0.307	0.250	0.179	0.000	0.034	0.061	0.000	0.000	0.000	0.000	0.000	0.019	0.040	0.000	0.516	0.858	0.834	0.332	0.232	0.858	
25-May	Z	0.000	0.000	0.044	0.326	0.934	0.308	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.330	0.808	0.971	0.165	0.971	
26-May	1.247	Z	0.541	0.499	0.332	0.017	0.029	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.254	0.045	0.000	0.129	1.247	
27-May	0.000	0.000	Z	0.215	0.198	0.000	0.000	0.000	0.000	M	M	0.017	0.000	0.000	0.000	0.000	0.000	0.034	0.044	0.089	0.310	0.303	0.023	0.176	0.067	0.310	
28-May	0.086	0.340	0.324	Z	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.129	0.754	1.561	0.616	0.672	0.196	1.561	
29-May	0.593	0.392	0.352	0.457	Z	0.544	0.352	0.409	0.166	0.000	0.000	0.005	0.000	0.000	0.000	0.043	0.061	0.251	0.191	0.264	0.428	0.151	0.000	0.000	0.203	0.593	
30-May	0.000	0.011	0.103	0.175	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.358	0.190	0.395	0.364	0.310	0.068	0.366	0.157	0.111	0.395	
31-May	Z	0.006	0.389	0.593	0.357	0.087	0.438	0.566	0.628	0.510	0.406	0.127	0.052	0.028	0.000	0.023	0.148	0.406	0.351	0.306	0.049	0.000	0.000	0.000	0.238	0.628	
0.320 0.231 0.285 0.259 0.226 0.231 0.152 0.165 0.141 0.092 0.068 0.046 0.031 0.016 0.022 0.021 0.039 0.051 0.064 0.104 0.234 0.327 0.305 0.282																										Diurnal Average	
1.247 0.705 1.346 0.978 0.910 0.952 0.722 0.982 1.150 1.156 0.727 0.550 0.499 0.266 0.268 0.190 0.397 0.406 0.395 0.531 0.811 1.561 1.061 1.086																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	309	43.77	43.77
0.006 - 0.05	101	14.31	58.07
0.06 - 0.1	66	9.35	67.42
> 0.1	230	32.58	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	20	22	7	3	1	1	9	99	45	20	18	12	13	12	14	12	308
0.006 - 0.05	7	21	1	1	0	0	16	24	8	3	10	2	2	1	1	4	101
0.06 - 0.1	7	4	2	3	2	0	13	13	3	7	2	4	0	1	1	4	66
> 0.1	33	12	5	2	8	12	64	32	19	13	3	2	2	3	3	17	230
Totals	67	59	15	9	11	13	102	168	75	43	33	20	17	17	19	37	705

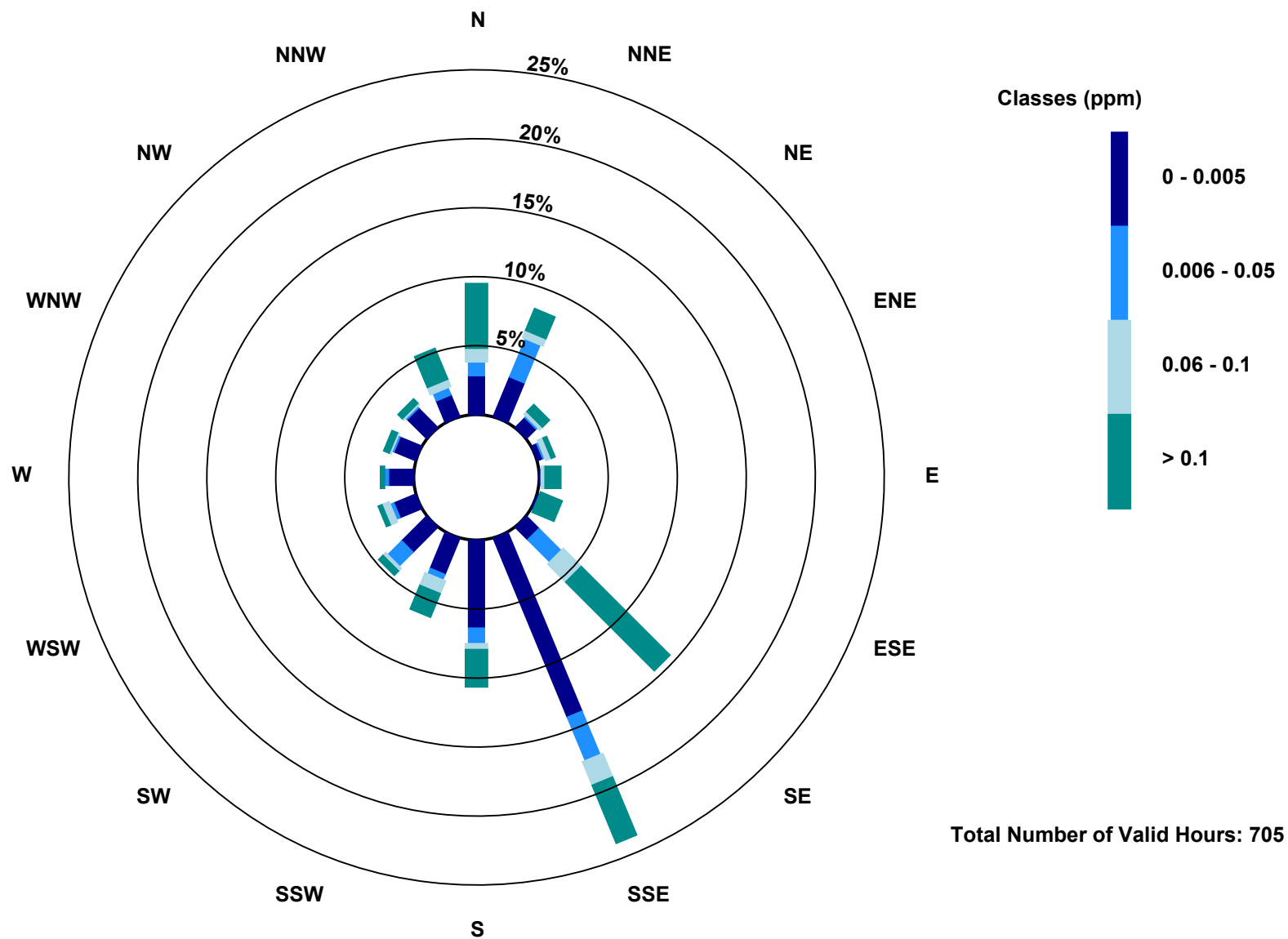
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills



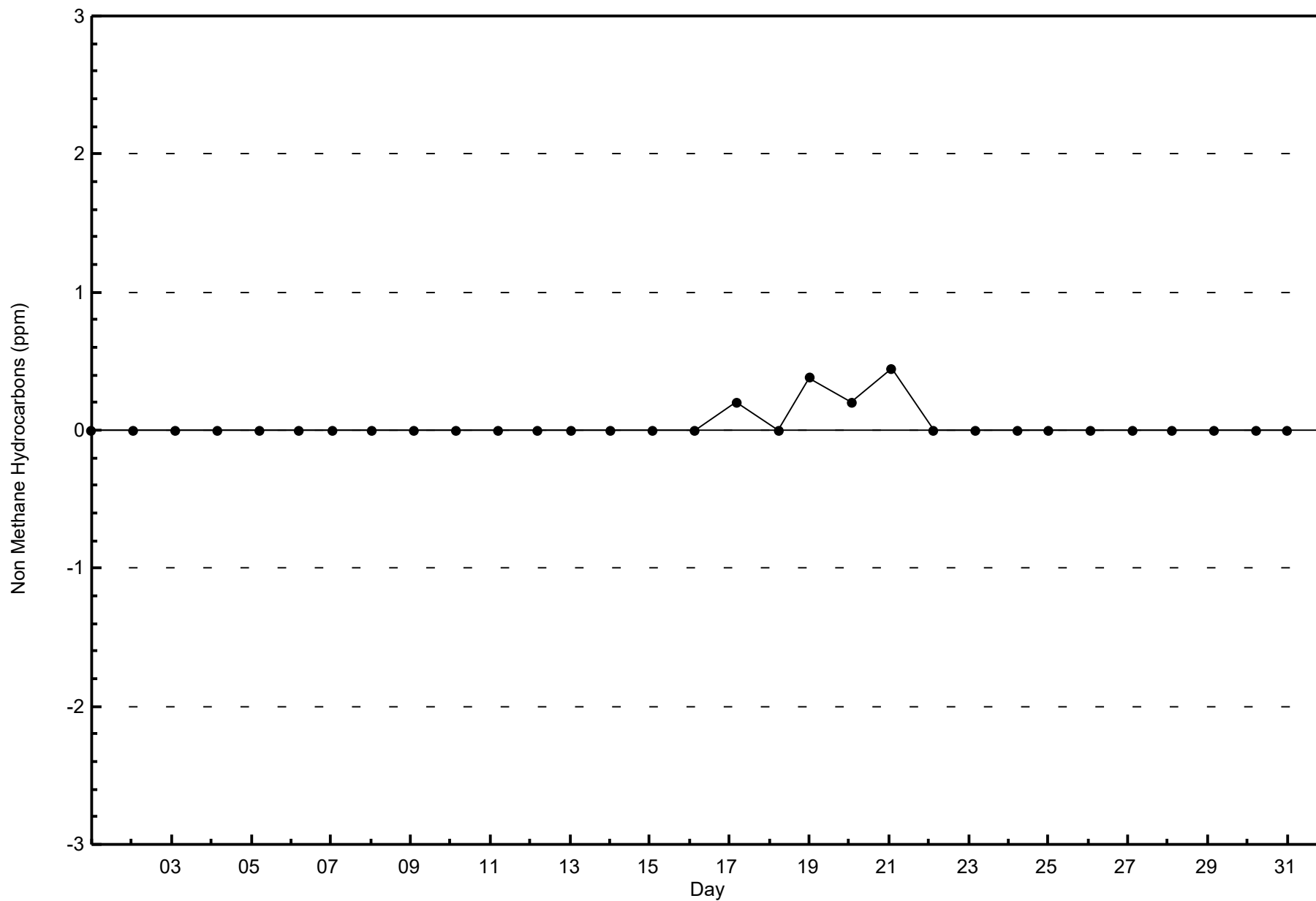


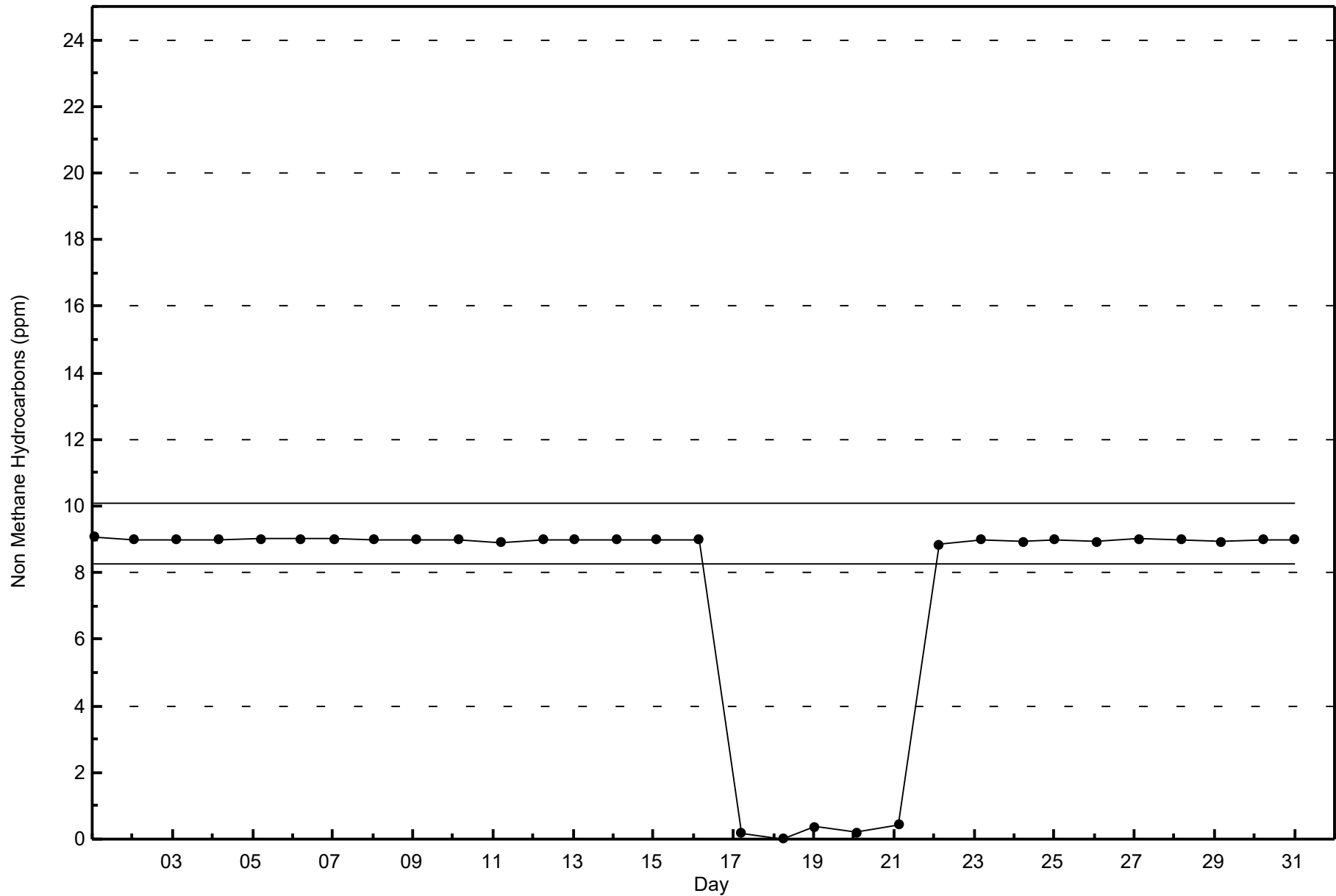
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

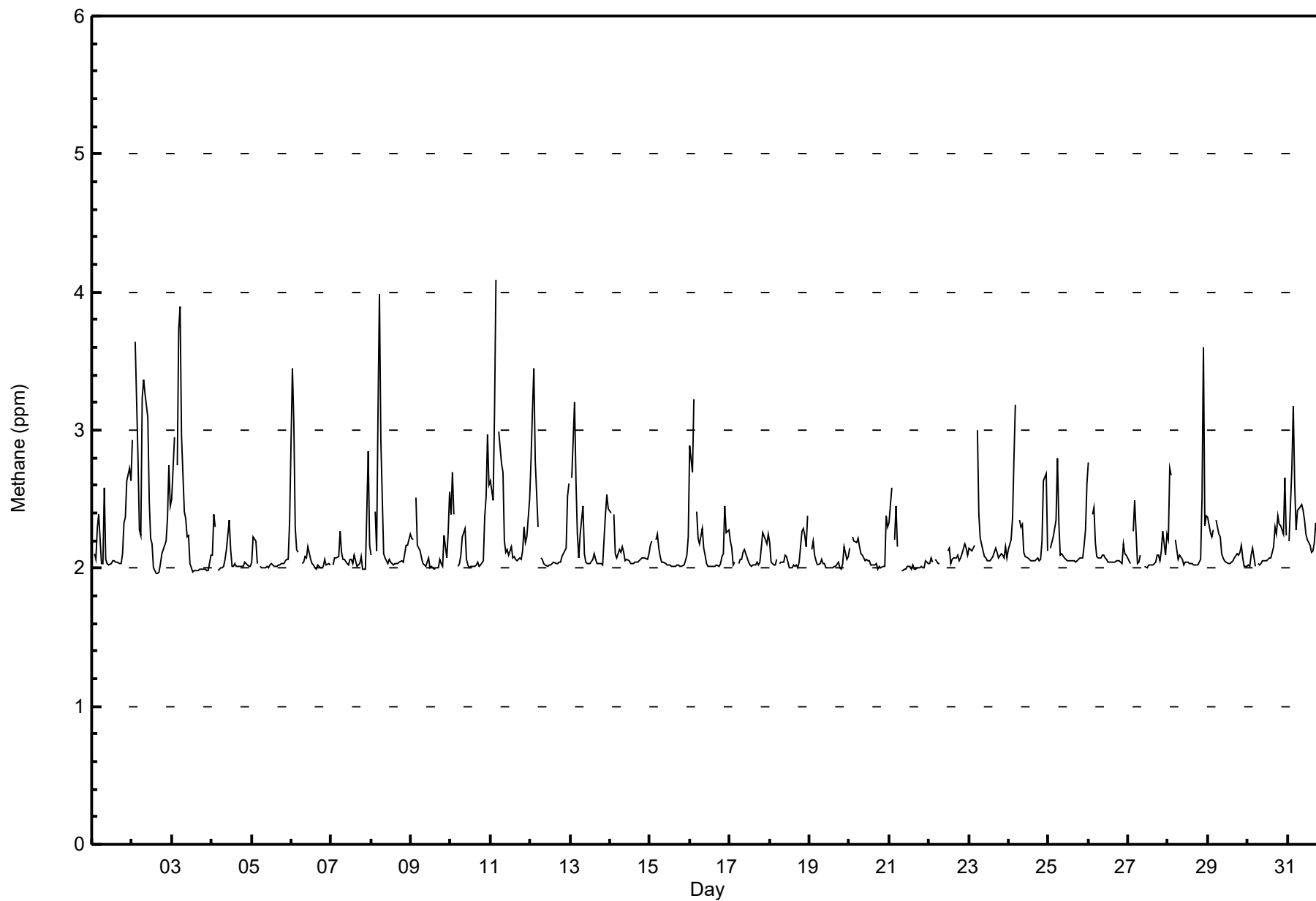
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 4.1 ppm on May 11 04:00 Maximum Daily Average: 2.5 ppm on May 2																			Hours of Data: 706							
Minimum Value: 2.0 ppm on May 2 15:00 Minimum Daily Average: 2.0 ppm on May 19																			Hours of Missing Data: 38							
Maximum Diurnal Average: 2.5 ppm at hour 3 Minimum Diurnal Average: 2.0 ppm at hour 14																			Hours of Calibration: 34							
Monthly Average: 2.18 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.2 P ₉₀ = 2.5 P ₉₉ = 3.4																			Percent Operational Time: 99.5							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.1	2.1	2.3	2.4	2.0	2.0	2.6	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.4	2.6	2.7	2.6	2.2	2.7
2-May	2.9	Z	3.6	2.8	2.3	2.2	3.2	3.4	3.3	3.1	2.5	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.4	2.7	2.4	2.5	3.6
3-May	2.5	3.0	Z	2.7	3.7	3.9	3.0	2.4	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	3.9
4-May	2.1	2.4	2.3	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
5-May	2.0	2.2	2.2	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.1	2.3
6-May	3.4	3.1	2.3	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.2	3.4
7-May	Z	2.0	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.4	2.8	2.2	2.1	2.8
8-May	2.1	Z	2.4	2.1	3.2	4.0	2.9	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.2	2.2	2.3	4.0
9-May	2.2	2.2	Z	2.5	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.3	2.6	2.1	2.6
10-May	2.4	2.7	2.4	Z	2.0	2.0	2.1	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.5	3.0	2.6	2.2	3.0
11-May	2.6	2.5	3.1	4.1	Z	3.0	2.8	2.7	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.5	2.4	4.1
12-May	2.8	3.1	3.5	2.8	2.3	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.5	2.6	2.3	3.5
13-May	Z	2.7	3.2	2.6	2.2	2.1	2.2	2.4	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.4	2.5	2.4	2.2	3.2
14-May	2.4	Z	2.4	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4
15-May	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2
16-May	2.9	2.7	3.2	Z	2.4	2.2	2.2	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.5	2.3	2.3	2.2	3.2
17-May	2.2	2.1	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.2	2.2	2.1	2.3
18-May	2.2	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.2	2.2	2.4	2.1	2.4
19-May	Z	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.0	2.2
20-May	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.3	2.1	2.4
21-May	2.3	2.6	Z	2.2	2.5	2.2	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.6
22-May	2.0	2.1	2.0	Z	2.1	2.0	2.0	M	C	C	C	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
23-May	2.1	2.1	2.1	2.2	Z	3.0	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	3.0
24-May	2.1	2.2	2.4	2.8	3.2	Z	2.4	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6	2.7	2.1	2.3	3.2
25-May	Z	2.1	2.2	2.2	2.3	2.8	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.6	2.2	2.8
26-May	2.8	Z	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2	2.1	2.1	2.1	2.8
27-May	2.1	2.0	Z	2.3	2.5	2.0	2.0	2.1	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.1	2.2	2.1	2.5
28-May	2.2	2.7	2.7	Z	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5	3.6	2.3	2.4	2.2	3.6
29-May	2.4	2.3	2.2	2.3	Z	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.4
30-May	2.0	2.0	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.4	2.3	2.3	2.2	2.7	2.2	2.2	2.7
31-May	Z	2.2	2.7	3.2	2.6	2.3	2.4	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.3	3.2
2.4 2.4 2.5 2.4 2.3 2.4 2.2 2.2 2.2 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.2 2.3 2.3																									Diurnal Average	
3.4 3.1 3.6 4.1 3.7 4.0 3.2 3.4 3.3 3.1 2.5 2.2 2.2 2.2 2.1 2.2 2.3 2.3 2.4 2.3 2.5 3.6 3.0 2.6																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	273	38.67	38.67
2.1 - 3.0	413	58.50	97.17
3.1 - 10.0	20	2.83	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Fort Hills - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	12	37	9	5	4	1	15	65	32	15	20	12	12	12	13	9	273
2.1 - 3.0	50	22	6	4	7	10	84	103	43	27	13	8	5	5	6	19	412
3.1 - 10.0	5	0	0	0	0	2	3	0	0	1	0	0	0	0	0	9	20
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	67	59	15	9	11	13	102	168	75	43	33	20	17	17	19	37	705

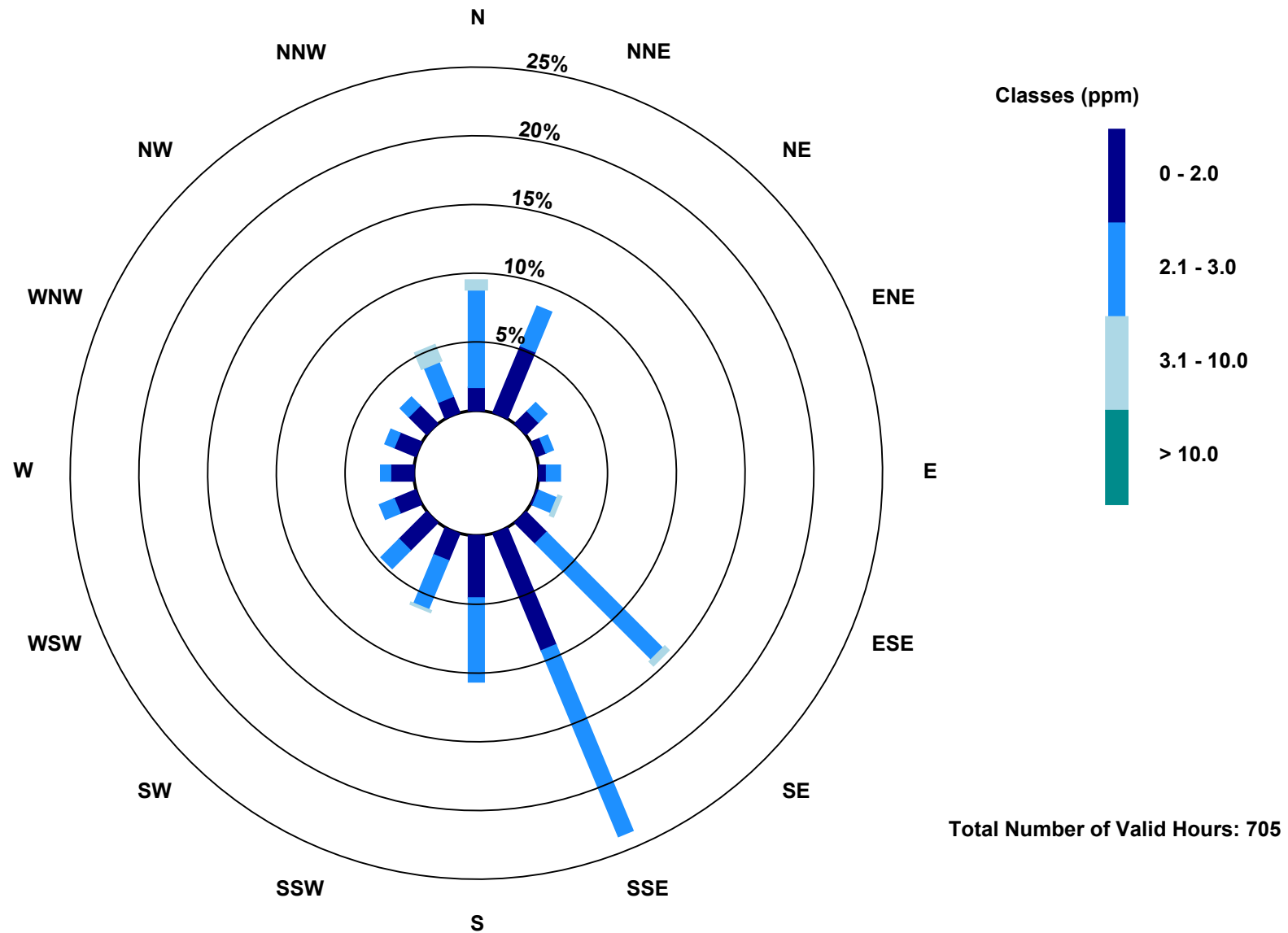
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

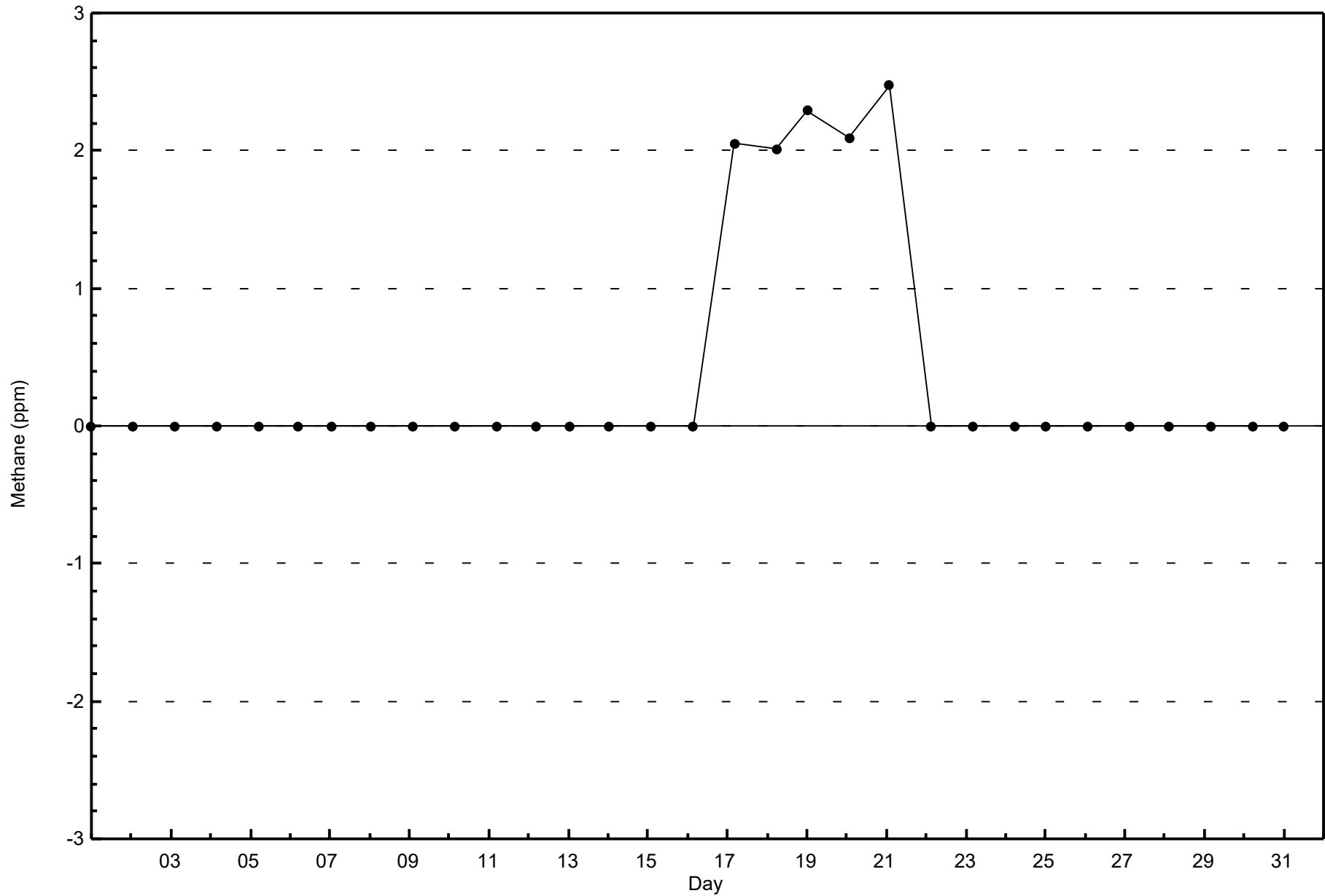
Methane (CH₄) - ppm
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

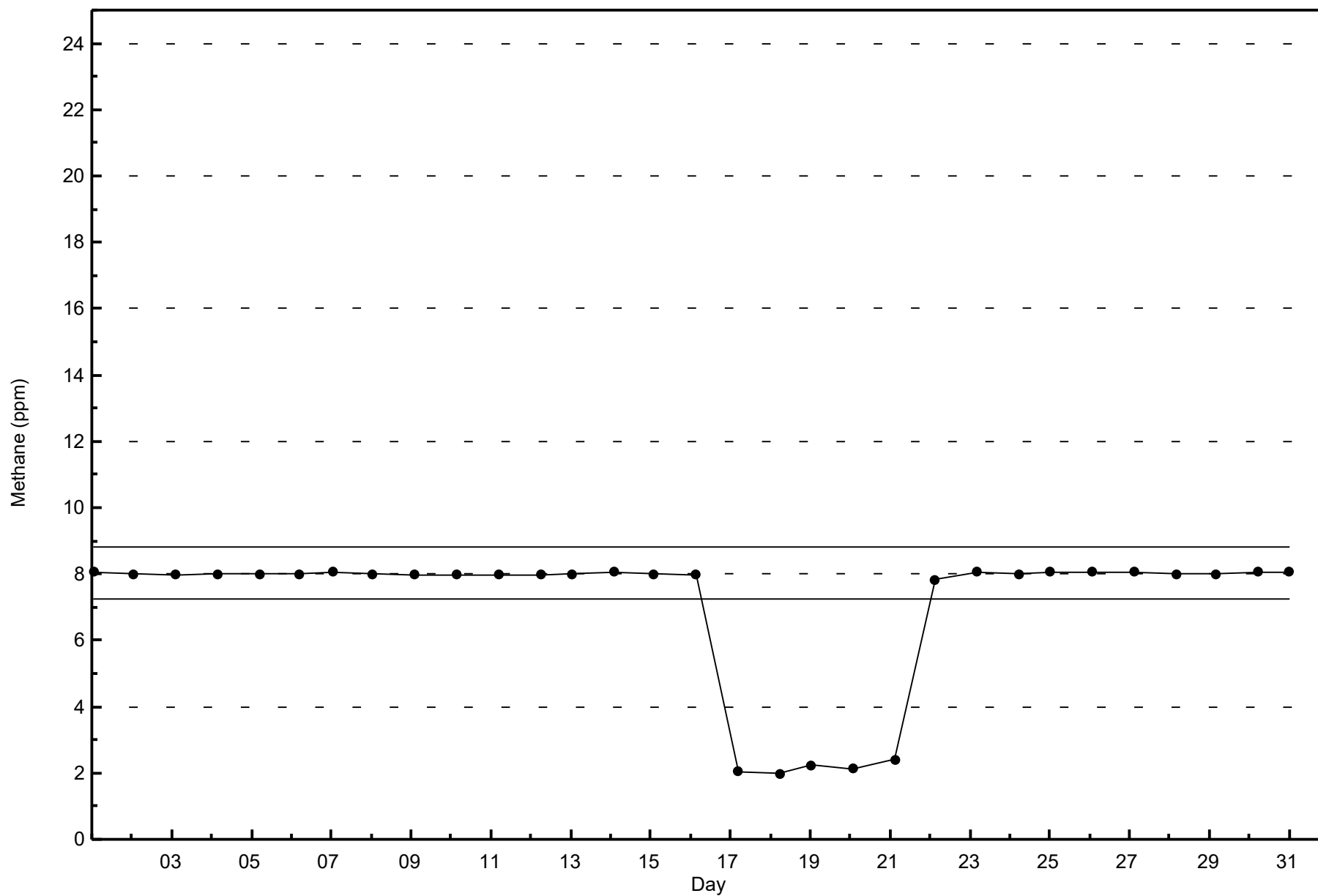
Methane (CH₄) - ppm
Fort Hills - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

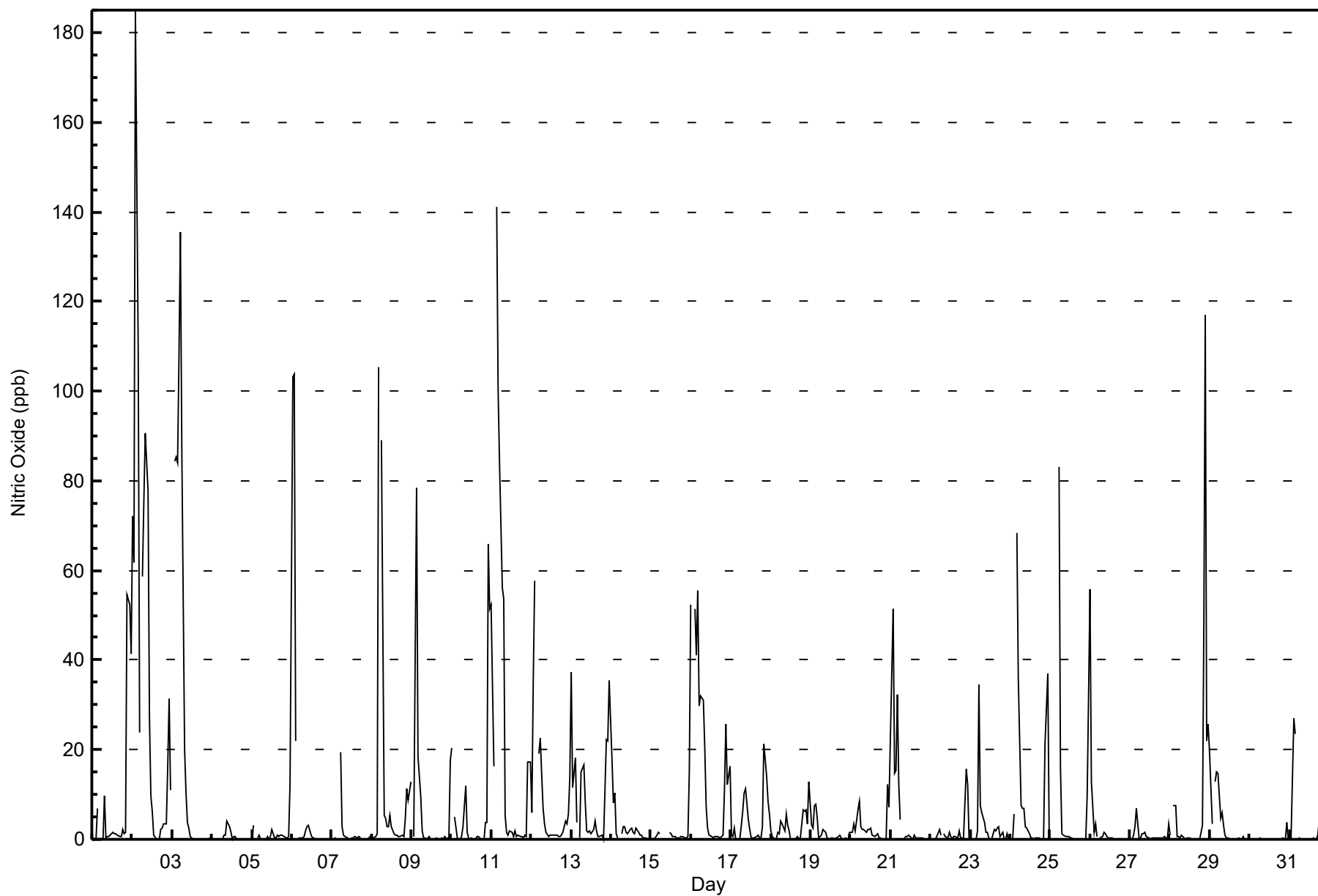
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 184.7 ppb on May 2 03:00 Maximum Daily Average: 37.8 ppb on May 2																				Hours in Service: 744						
Minimum Value: 0.0 ppb on May 2 15:00 Maximum Diurnal Average: 22.0 ppb at hour 5 Monthly Average: 7.60 ppb																				Hours of Data: 711						
Minimum Daily Average: 0.2 ppb on May 30 Minimum Diurnal Average: 0.5 ppb at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.7 Q ₃ = 3.4 P ₉₀ = 19.7 P ₉₉ = 103.8																				Hours of Missing Data: 33						
																				Hours of Calibration: 31						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24
1-May	0.4	0.1	0.1	6.8	Z	0.1	0.3	9.7	0.5	0.8	0.8	1.1	1.6	1.3	1.2	0.9	0.7	0.7	2.1	1.3	1.7	54.5	52.3	41.4	7.8	54.5
2-May	72.1	61.8	184.7	109.3	23.7	Z	58.8	75.2	90.6	77.8	27.2	9.8	6.2	1.0	0.0	0.0	0.0	2.1	2.5	3.6	3.3	16.4	31.3	11.0	37.8	184.7
3-May	Z	84.5	85.4	84.0	107.6	135.3	87.7	20.1	10.3	3.9	2.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	27.1	135.3
4-May	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.9	1.0	4.2	2.7	1.6	0.2	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2
5-May	0.3	3.1	Z	0.3	0.9	0.1	0.0	0.0	0.0	0.5	0.0	0.6	2.2	0.3	0.3	0.9	0.7	0.8	0.9	0.5	0.4	0.4	0.8	12.6	1.2	12.6
6-May	103.3	103.9	22.0	Z	0.3	0.4	0.2	0.5	2.0	2.8	3.1	0.9	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	103.9
7-May	0.0	0.0	0.2	0.1	Z	19.5	2.9	0.9	0.5	0.2	0.0	0.1	0.2	0.4	0.5	0.2	0.7	0.4	0.1	0.0	0.0	0.0	0.3	0.5	1.2	19.5
8-May	0.0	0.4	0.7	1.2	105.4	Z	88.9	5.3	4.8	2.7	2.7	5.2	2.9	1.3	0.8	0.9	0.6	0.6	1.1	0.7	4.6	11.2	8.7	12.8	11.5	105.4
9-May	Z	0.7	40.5	78.4	18.6	9.5	1.9	0.4	0.2	0.1	0.6	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.1	0.6	0.0	0.8	17.6	7.4	78.4
10-May	20.5	Z	4.9	0.4	0.0	0.0	0.7	2.8	12.0	1.7	0.5	0.1	0.2	0.1	0.1	0.6	0.8	0.2	0.0	0.0	3.9	3.6	65.7	51.3	7.4	65.7
11-May	52.5	16.4	Z	141.2	100.3	84.1	56.1	53.7	5.3	1.6	1.0	1.9	1.5	0.5	2.0	0.8	0.8	0.8	0.5	0.4	1.1	0.6	17.4	17.3	24.2	141.2
12-May	5.9	35.4	57.7	Z	19.1	22.5	14.3	7.0	3.4	1.4	0.7	0.9	0.9	0.9	1.1	1.0	0.5	0.7	1.0	1.4	4.1	3.5	5.8	13.7	8.8	57.7
13-May	37.3	11.6	18.2	3.6	Z	0.4	15.1	16.7	8.2	2.0	1.4	1.7	1.3	2.3	4.0	2.0	0.5	0.7	1.0	0.0	10.9	22.3	22.0	35.4	9.5	37.3
14-May	17.9	8.1	10.5	1.3	0.2	Z	1.3	2.8	2.7	1.6	1.2	2.3	2.5	1.6	1.3	2.7	1.5	0.9	0.9	0.2	0.2	0.2	0.1	0.5	2.7	17.9
15-May	Z	0.3	0.1	1.0	1.4	1.3	C	C	C	C	C	1.5	1.2	0.7	0.6	0.5	0.4	0.3	0.6	0.7	0.2	0.3	0.8	15.2	1.5	15.2
16-May	52.3	Z	51.4	41.0	55.4	29.8	32.0	30.9	20.4	7.2	2.4	0.8	0.7	0.4	0.7	0.8	0.7	0.4	0.7	1.0	11.1	25.6	12.2	16.2	17.1	55.4
17-May	0.9	0.5	2.7	0.1	0.0	0.2	3.1	6.2	10.4	11.2	4.4	2.3	0.5	0.3	0.3	0.5	1.0	0.4	0.4	2.8	21.2	14.2	8.4	5.7	4.1	21.2
18-May	1.9	0.5	0.0	0.2	1.6	1.2	4.1	3.4	1.7	5.5	3.2	2.0	0.1	0.0	0.1	0.2	0.7	0.0	0.2	6.6	6.2	6.5	3.4	12.9	2.6	12.9
19-May	3.2	2.5	7.6	7.8	4.8	0.3	0.9	2.1	2.0	1.5	0.3	0.1	0.2	0.2	0.1	0.3	0.2	1.0	0.2	0.0	0.0	0.2	0.1	1.7	1.6	7.8
20-May	1.6	1.6	3.5	2.0	6.6	8.5	2.9	2.1	2.2	1.5	2.1	2.2	2.4	1.0	0.6	1.1	1.4	0.3	0.2	0.1	0.1	0.0	12.3	7.4	2.7	12.3
21-May	22.2	51.3	14.6	15.4	32.3	12.1	4.5	M	0.4	0.6	0.7	0.8	0.4	0.0	1.1	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.0	6.8	51.3
22-May	0.0	Z	0.0	0.0	0.5	2.2	1.1	M	1.3	0.5	0.2	1.5	0.7	0.1	0.6	0.7	0.4	1.8	0.3	0.3	0.1	15.7	12.2	0.0	1.8	15.7
23-May	0.0	0.0	Z	0.1	1.9	34.6	7.7	5.9	3.8	1.7	1.6	0.2	0.1	0.1	2.1	1.8	2.4	2.7	0.7	1.7	0.0	0.0	1.1	0.0	3.1	34.6
24-May	0.0	0.1	5.8	Z	68.5	36.0	7.6	7.0	6.9	2.9	2.5	1.2	0.3	0.2	0.1	0.2	0.3	0.2	0.0	0.0	0.4	21.2	37.0	0.1	8.6	68.5
25-May	0.0	0.0	0.0	0.1	Z	83.1	16.1	1.3	0.9	0.7	0.6	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	31.9	6.3	83.1
26-May	55.8	12.9	1.5	3.4	0.6	Z	0.3	0.7	1.4	1.1	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	55.8
27-May	Z	0.0	0.9	2.7	6.9	0.0	0.2	1.1	1.4	1.6	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.5	0.6	0.0	3.6	1.0	6.9
28-May	0.8	Z	7.4	7.4	0.6	0.6	0.3	0.9	0.4	0.0	0.3	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0	3.0	48.4	117.1	21.9	25.7	10.3	117.1
29-May	19.7	3.4	Z	12.8	15.1	14.7	4.8	5.8	3.2	1.1	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.7	0.1	0.0	0.0	3.6	19.7
30-May	0.0	0.0	0.1	Z	0.0	0.1	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	3.8	0.0	0.2	3.8
31-May	0.0	0.0	26.9	23.4	Z	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.9	3.7	2.2	0.3	0.1	0.4	0.1	2.6	26.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	642	90.30	90.30
21 - 40	28	3.94	94.23
41 - 80	23	3.23	97.47
81 - 159	17	2.39	99.86
> 159	1	0.14	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	45	58	14	9	10	7	86	164	78	43	32	19	16	16	17	26	640
21 - 40	5	2	0	0	0	1	11	2	1	1	1	0	1	0	0	3	28
11 - 80	5	0	1	1	2	4	6	1	0	0	0	0	0	0	0	3	23
81 - 159	5	0	0	0	0	0	3	0	0	0	0	1	0	0	1	7	17
> 159	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	61	60	15	10	12	12	106	167	79	44	33	20	17	16	18	39	709

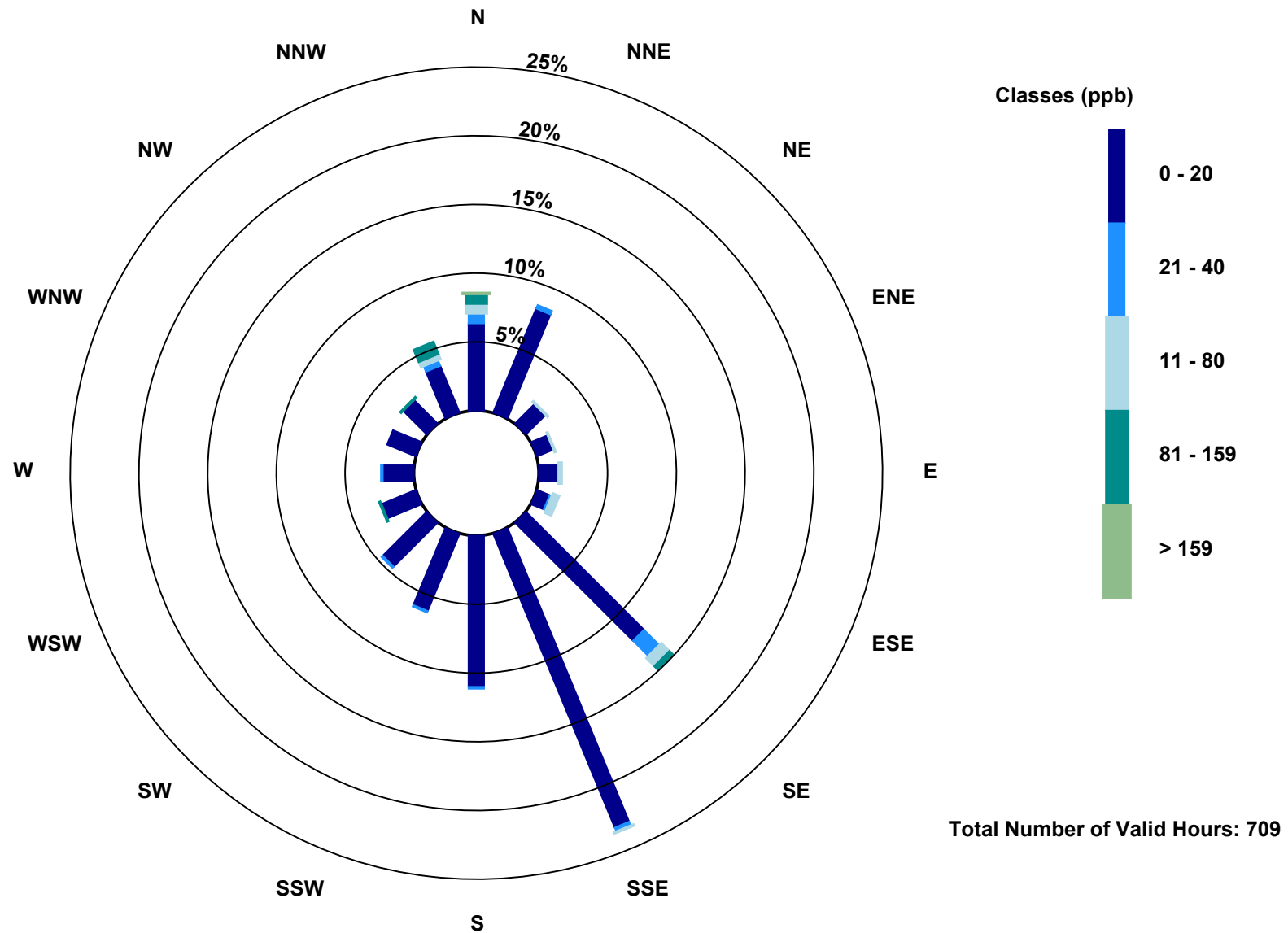
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

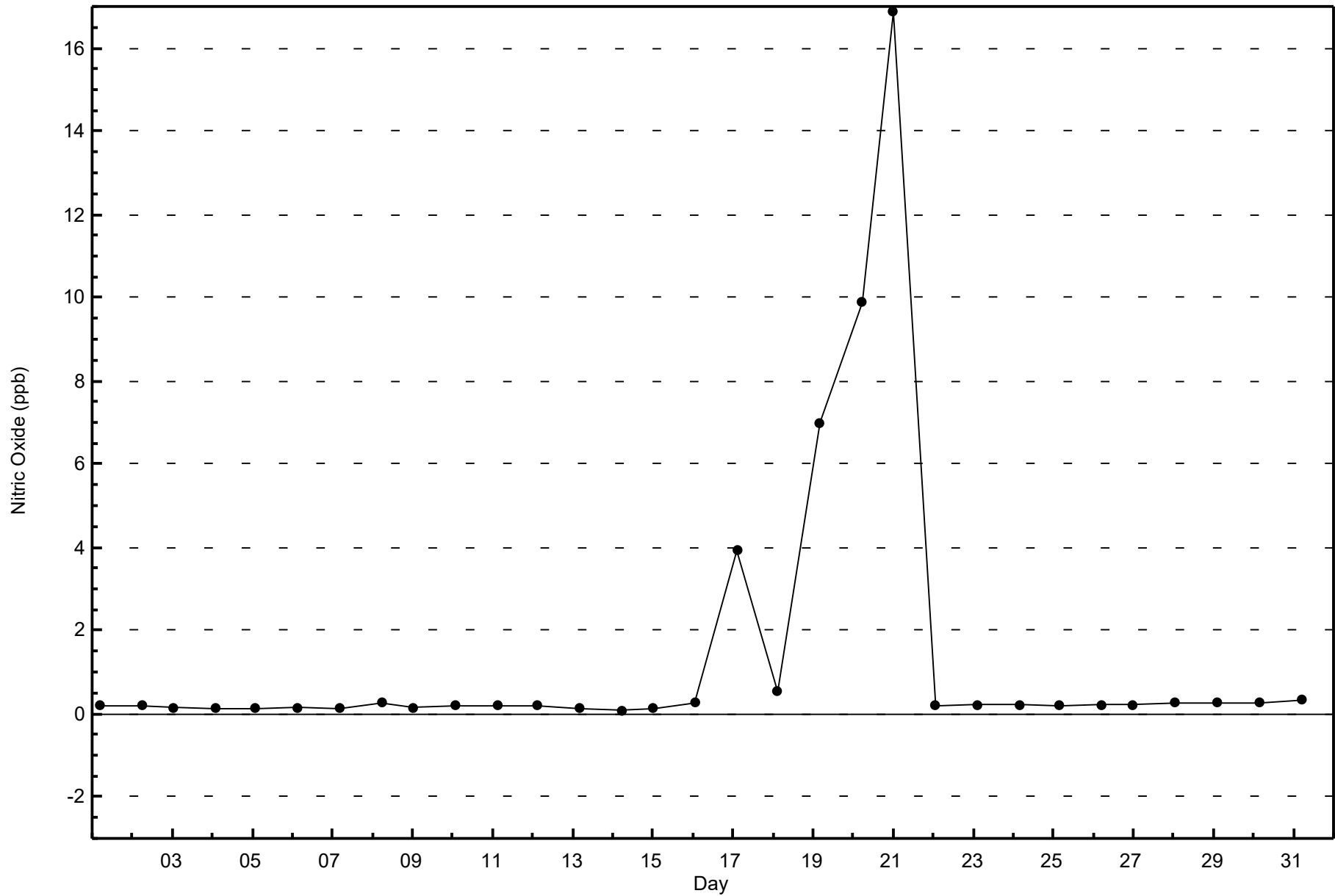
Nitric Oxide (NO) - ppb
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

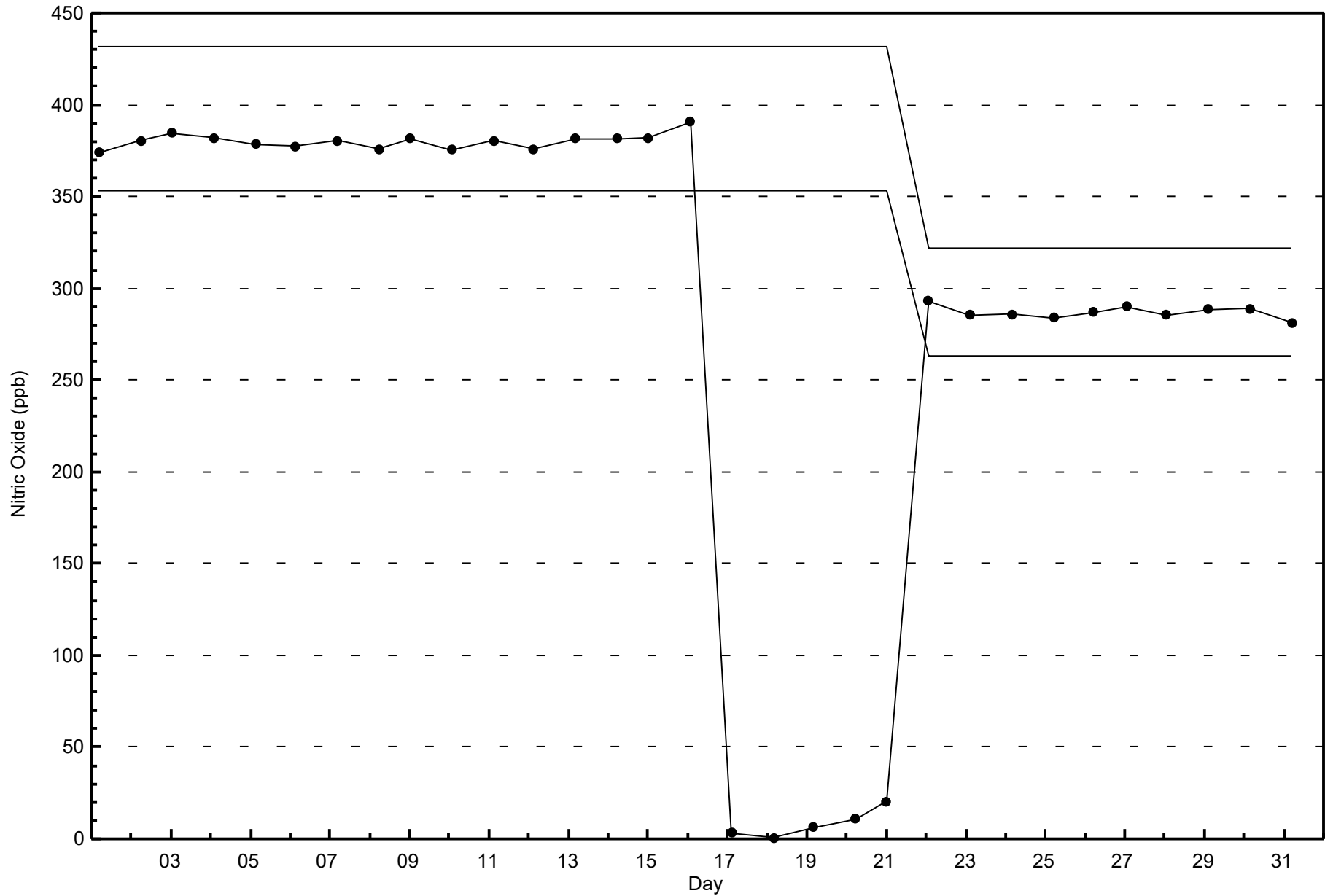
Nitric Oxide (NO) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

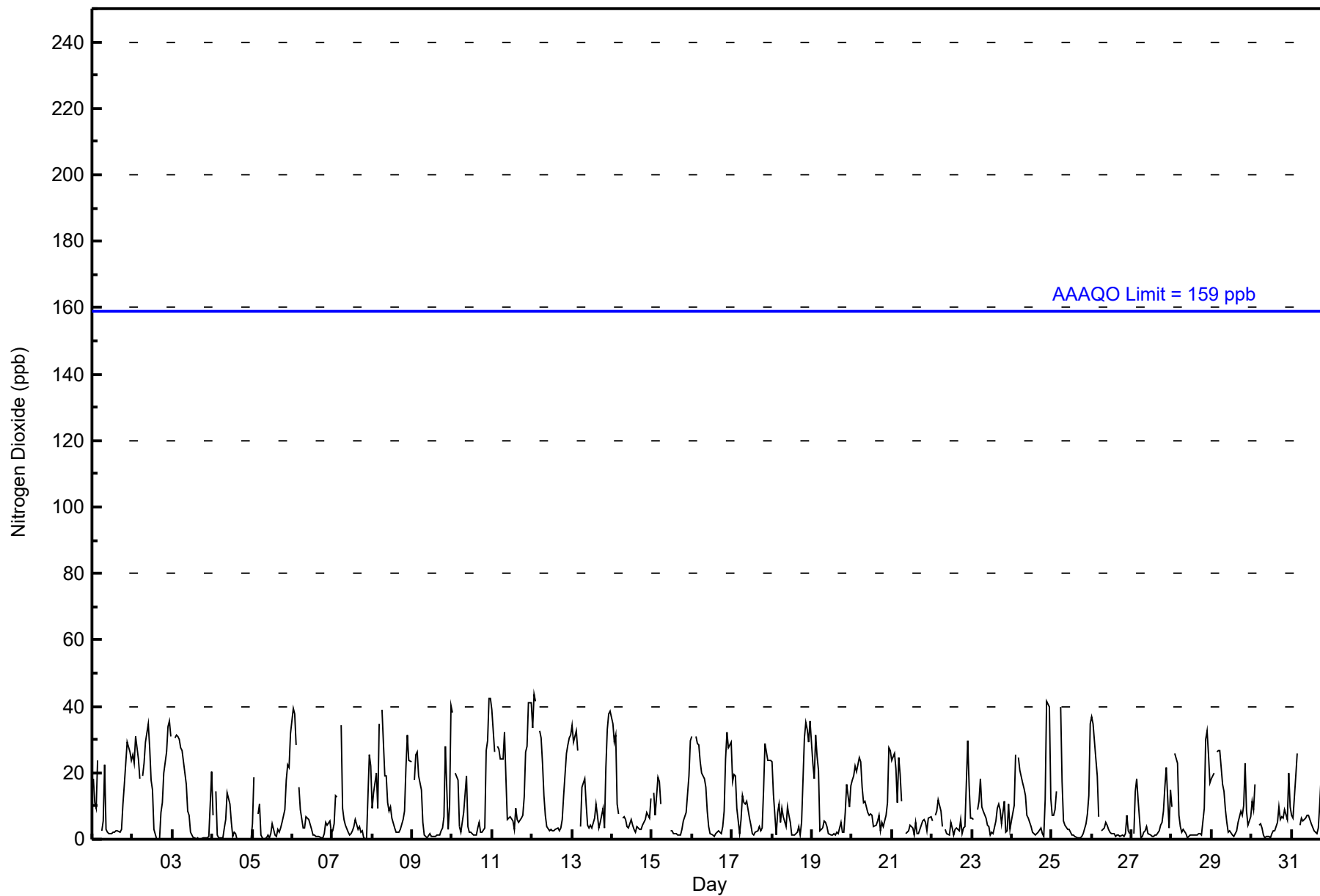
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 43.7 ppb on May 12 02:00 Maximum Daily Average: 19.9 ppb on May 2																				Hours in Service: 744						
Minimum Value: 0.1 ppb on May 2 15:00 Minimum Daily Average: 3.0 ppb on May 4 Maximum Diurnal Average: 21.2 ppb at hour 3 Minimum Diurnal Average: 2.0 ppb at hour 14 Monthly Average: 10.32 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 1.1 Q ₁ = 2.3 Median = 5.8 Q ₃ = 17.0 P ₉₀ = 27.6 P ₉₉ = 40.2																				Hours of Data: 711						
																				Hours of Missing Data: 33						
																				Hours of Calibration: 31						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	18.3	11.0	9.3	23.9	Z	2.7	5.6	22.4	2.9	2.3	1.5	1.7	2.3	2.2	2.5	2.4	2.3	2.9	10.7	16.5	23.0	29.4	26.4	23.8	10.7	29.4
2-May	25.4	23.0	30.8	24.3	18.4	Z	18.9	22.9	29.3	34.7	27.6	17.7	14.7	3.0	0.1	0.2	0.2	8.0	10.9	20.0	26.4	33.8	35.5	31.1	19.9	35.5
3-May	Z	30.7	31.4	30.9	29.9	27.4	26.6	20.1	16.7	8.4	7.0	2.3	0.4	0.6	0.2	0.3	0.1	0.2	0.3	0.3	0.5	0.4	1.0	20.3	11.1	31.4
4-May	7.2	Z	14.2	1.4	0.5	0.3	0.5	3.4	5.9	14.0	10.5	5.0	0.8	2.2	1.9	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	3.0	14.2
5-May	4.8	18.5	Z	7.7	10.8	1.1	0.5	0.2	0.3	1.4	0.3	1.7	4.7	1.1	1.0	2.8	2.2	3.5	5.0	8.8	17.6	22.4	21.5	31.6	7.4	31.6
6-May	39.2	37.7	28.5	Z	15.8	9.0	3.3	3.3	6.6	6.3	6.0	2.8	1.2	1.1	0.7	0.7	1.0	0.4	0.5	1.5	4.9	4.3	5.3	2.2	7.9	39.2
7-May	2.4	4.7	13.2	12.9	Z	34.2	9.4	5.9	4.1	2.0	1.4	1.9	2.5	3.8	5.8	2.8	3.7	2.3	2.4	0.3	0.2	12.9	25.5	22.1	7.7	34.2
8-May	9.2	14.0	20.0	9.5	34.8	Z	39.0	19.0	18.9	11.1	8.5	9.7	6.5	3.2	2.2	2.3	2.2	3.1	6.0	8.4	21.4	31.5	23.8	23.4	14.2	39.0
9-May	Z	18.0	25.5	26.2	19.1	14.7	5.0	1.4	0.9	0.6	1.8	0.8	1.0	1.0	0.9	1.3	1.3	2.7	3.6	6.8	27.8	3.0	10.3	40.2	9.3	40.2
10-May	38.3	Z	19.9	17.9	3.9	2.3	4.9	8.2	19.1	3.7	2.2	2.1	1.7	1.3	1.2	3.2	4.9	2.3	2.3	3.6	26.7	29.7	42.4	42.3	12.4	42.4
11-May	38.9	26.3	Z	28.0	27.2	24.1	24.0	32.3	18.8	5.9	6.4	6.6	5.5	2.8	9.2	6.1	5.1	6.3	7.2	12.9	26.3	28.0	41.3	41.0	18.7	41.3
12-May	33.4	43.7	41.4	Z	32.8	30.5	22.9	13.3	7.2	3.9	2.4	2.9	2.7	2.7	2.9	3.3	2.5	3.2	5.9	13.3	25.9	28.3	30.4	31.4	16.8	43.7
13-May	34.4	29.1	32.6	26.6	Z	3.8	15.5	18.1	10.8	4.3	3.3	4.1	3.6	6.2	10.7	7.1	3.2	5.2	9.4	3.3	21.4	32.9	37.7	38.5	15.7	38.5
14-May	34.6	29.3	31.3	10.7	7.6	Z	6.4	6.8	6.0	3.9	3.5	6.1	4.2	2.9	2.3	3.7	3.0	2.8	4.3	4.9	5.9	8.0	6.5	12.3	9.0	34.6
15-May	Z	13.8	7.2	18.5	17.4	10.8	C	C	C	C	C	2.6	2.4	1.8	1.6	1.3	1.4	1.4	3.0	5.4	8.2	13.7	19.0	29.7	8.8	29.7
16-May	31.1	Z	31.0	28.9	28.4	23.1	19.8	18.2	15.6	8.5	3.9	1.7	1.4	1.0	1.7	2.3	2.4	1.9	3.7	8.3	24.3	32.1	27.5	29.1	15.0	32.1
17-May	17.3	19.4	19.2	9.5	1.7	5.9	13.2	10.9	10.6	11.5	6.3	4.3	1.7	1.4	2.0	2.7	3.9	2.4	3.6	14.8	28.7	23.6	23.9	23.7	10.9	28.7
18-May	23.3	13.4	1.4	8.0	10.8	4.9	9.4	6.7	4.0	9.8	7.3	5.2	1.3	1.3	1.9	2.2	3.8	1.4	5.2	30.6	35.3	32.9	29.3	35.6	11.9	35.6
19-May	22.7	18.2	31.4	24.8	20.6	2.5	3.3	5.5	4.9	3.9	1.6	1.2	1.2	1.8	1.4	2.2	1.9	5.1	2.3	2.0	7.9	16.4	9.8	16.3	8.7	31.4
20-May	17.8	19.1	22.1	20.5	24.6	23.1	15.6	11.0	11.4	7.9	7.1	7.5	7.3	3.9	4.1	5.4	7.1	2.7	5.0	3.8	7.1	11.2	27.4	26.6	12.5	27.4
21-May	23.7	25.9	21.3	11.0	24.7	19.4	11.6	M	1.8	2.3	2.7	4.1	3.3	1.4	5.2	1.6	1.9	2.8	5.6	6.0	5.0	2.6	6.4	6.9	8.6	25.9
22-May	5.7	Z	7.1	8.5	11.7	8.3	4.0	M	2.9	1.8	1.4	4.9	3.6	1.2	3.1	3.2	2.4	5.8	1.7	3.5	3.8	29.5	16.0	6.3	6.2	29.5
23-May	6.5	6.0	Z	9.1	11.5	18.2	9.8	8.6	6.2	4.1	4.0	1.4	2.1	1.5	5.3	9.5	10.7	8.7	4.7	11.4	2.1	2.7	10.6	3.0	6.9	18.2
24-May	5.7	10.2	25.6	Z	24.5	20.7	16.9	15.1	13.3	7.4	6.4	3.9	2.0	1.7	1.1	1.5	2.3	3.4	1.6	1.0	11.8	41.7	39.9	12.1	11.7	41.7
25-May	7.4	7.4	8.7	14.5	Z	40.0	17.5	5.7	4.1	2.9	2.9	2.3	1.4	1.2	0.7	0.5	0.3	0.3	1.0	1.5	4.5	7.6	13.1	34.8	7.8	40.0
26-May	37.0	34.9	24.2	19.2	6.9	Z	2.5	3.3	5.1	4.2	3.1	2.0	1.5	1.6	0.8	1.1	1.1	0.9	1.3	0.8	1.5	7.4	2.6	1.9	7.2	37.0
27-May	Z	1.5	14.5	18.4	12.0	0.4	0.8	2.2	2.5	3.7	1.7	1.1	0.8	0.9	1.2	1.2	2.7	4.4	5.2	8.6	15.6	21.7	3.5	15.0	6.1	21.7
28-May	9.8	Z	25.8	22.9	7.4	3.8	2.0	2.8	1.9	0.3	1.0	1.4	1.1	1.1	1.3	1.2	1.8	1.5	1.1	9.2	30.0	32.8	25.3	17.0	8.8	32.8
29-May	18.2	19.8	Z	26.3	26.7	26.9	16.7	14.2	9.0	5.1	2.3	2.7	1.2	0.9	1.5	2.7	5.1	8.6	7.1	10.0	22.9	8.3	4.2	6.9	10.8	26.9
30-May	11.5	8.9	16.6	Z	4.1	4.7	3.5	1.1	0.5	0.9	0.7	0.5	1.7	2.7	2.4	5.1	9.7	5.8	6.7	6.3	8.8	6.0	20.1	9.6	6.0	20.1
31-May	7.2	6.4	19.2	25.9	Z	4.3	6.2	5.7	6.2	7.3	7.2	5.8	4.5	2.5	2.0	1.7	3.2	10.4	19.0	21.1	4.2	3.4	4.3	0.6	7.8	25.9
19.7 18.9 21.2 18.0 16.7 13.6 11.2 10.3 8.3 6.1 4.7 3.8 2.9 2.0 2.5 2.6 3.0 3.6 4.7 7.9 14.5 18.0 19.1 20.5																								Diurnal Average		
39.2 43.7 41.4 30.9 34.8 40.0 39.0 32.3 29.3 34.7 27.6 17.7 14.7 6.2 10.7 9.5 10.7 10.4 19.0 30.6 35.3 41.7 42.4 42.3																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	574	80.73	80.73
21 - 40	130	18.28	99.02
41 - 80	7	0.98	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	37	51	11	7	7	7	59	159	76	41	31	19	17	15	16	19	572
21 - 40	22	9	4	3	5	4	45	8	3	3	2	1	0	1	2	18	130
11 - 80	2	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	7
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	60	15	10	12	12	106	167	79	44	33	20	17	16	18	39	709

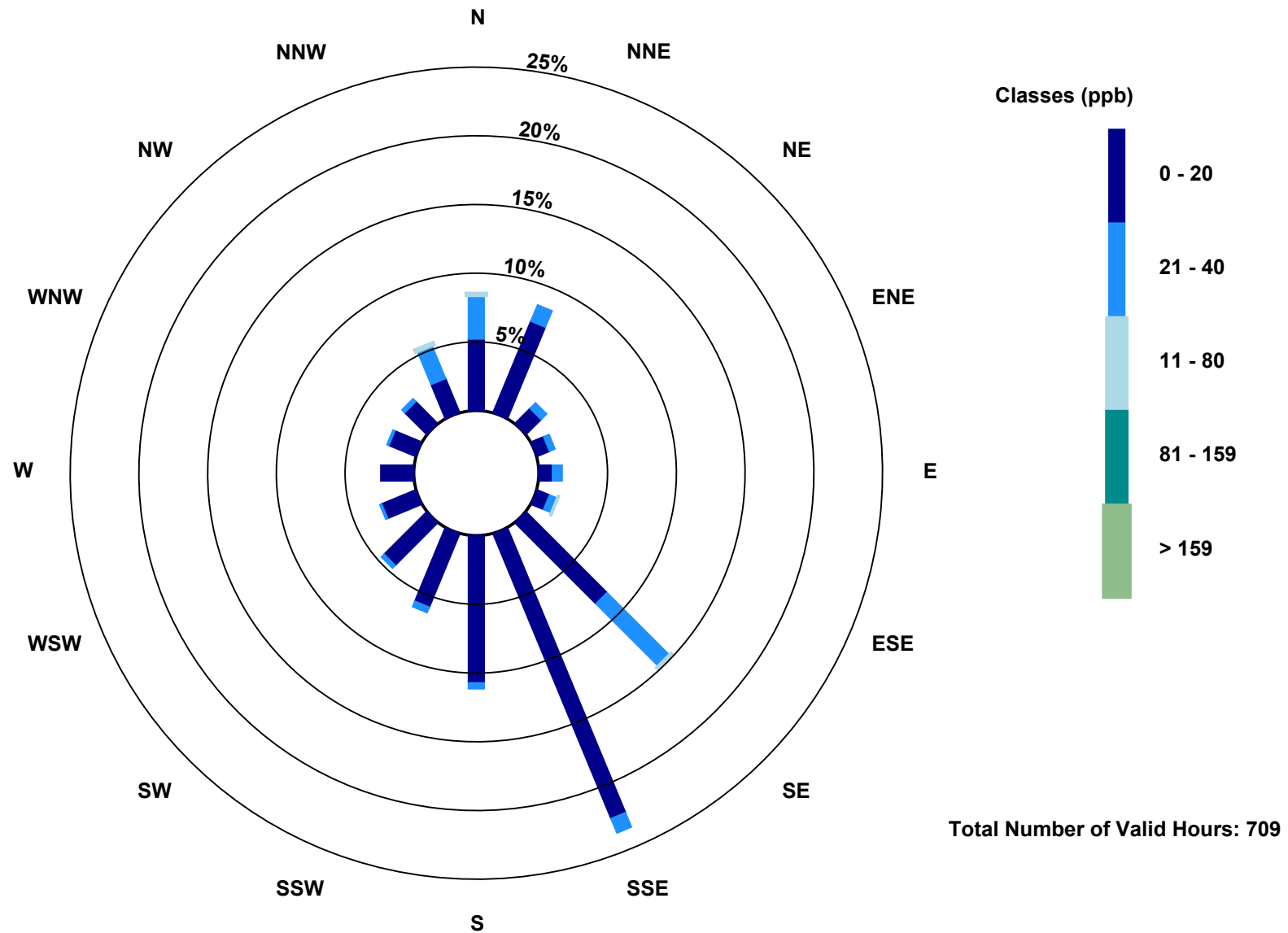
Total Number of Valid Hours: 709

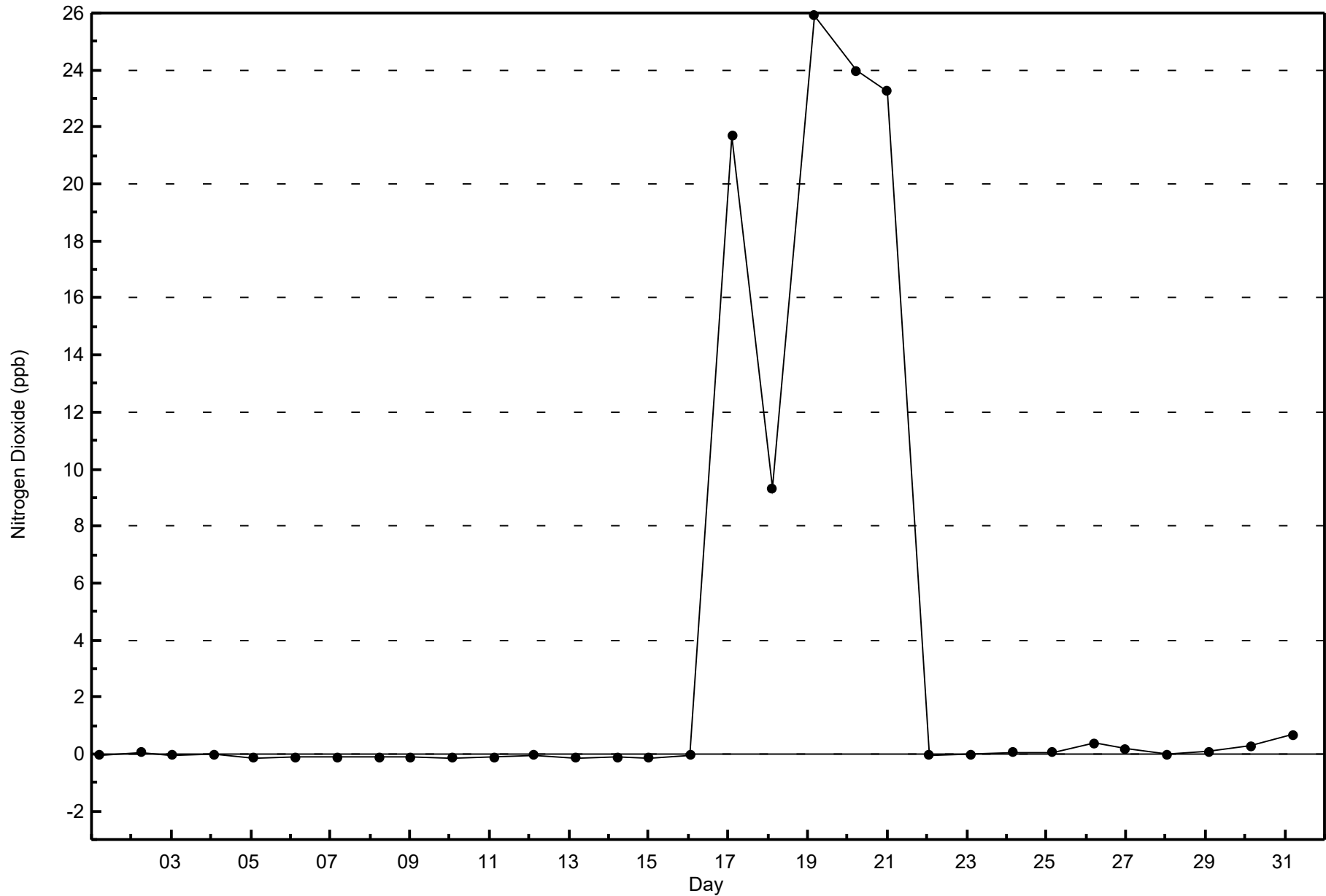
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Fort Hills

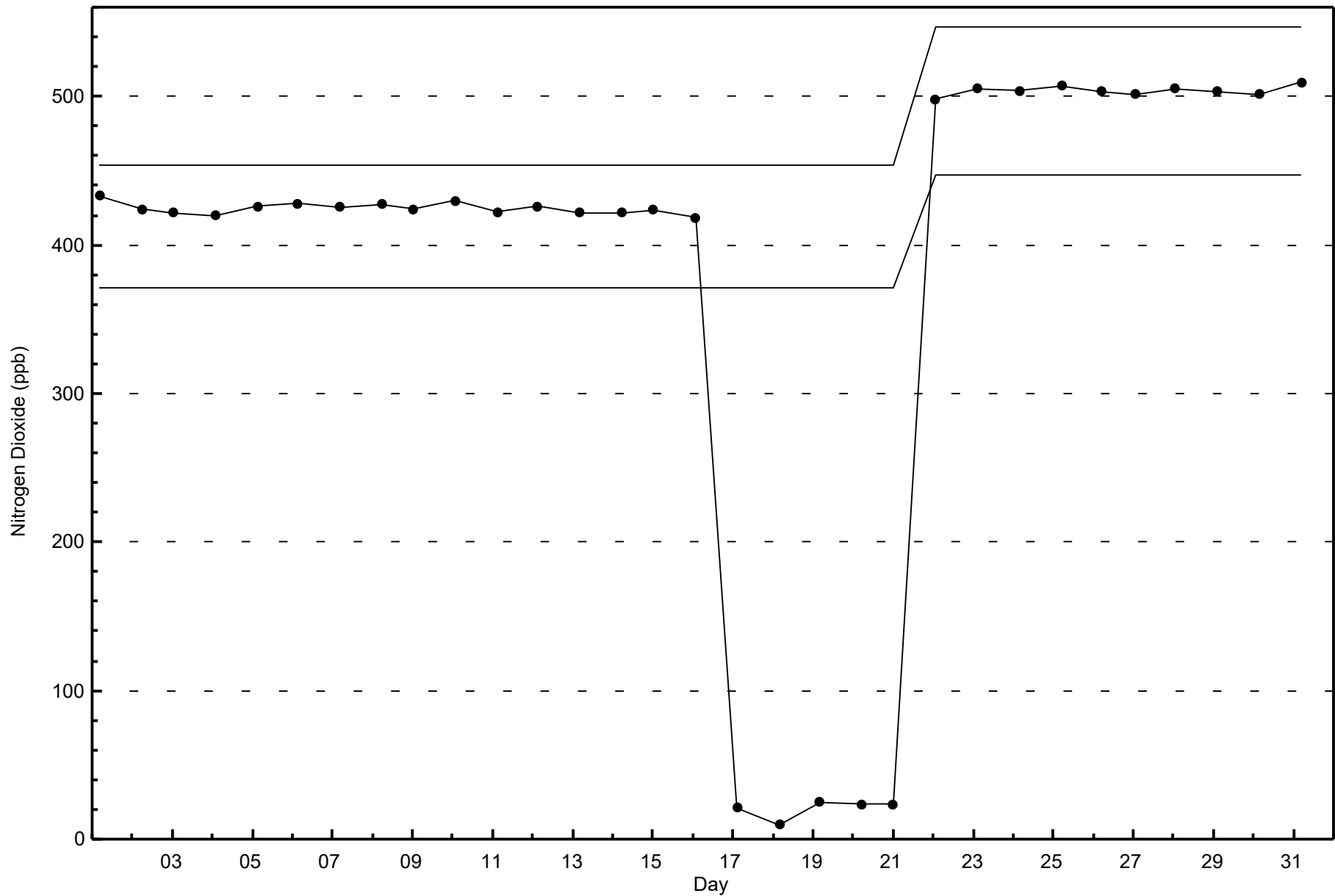






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

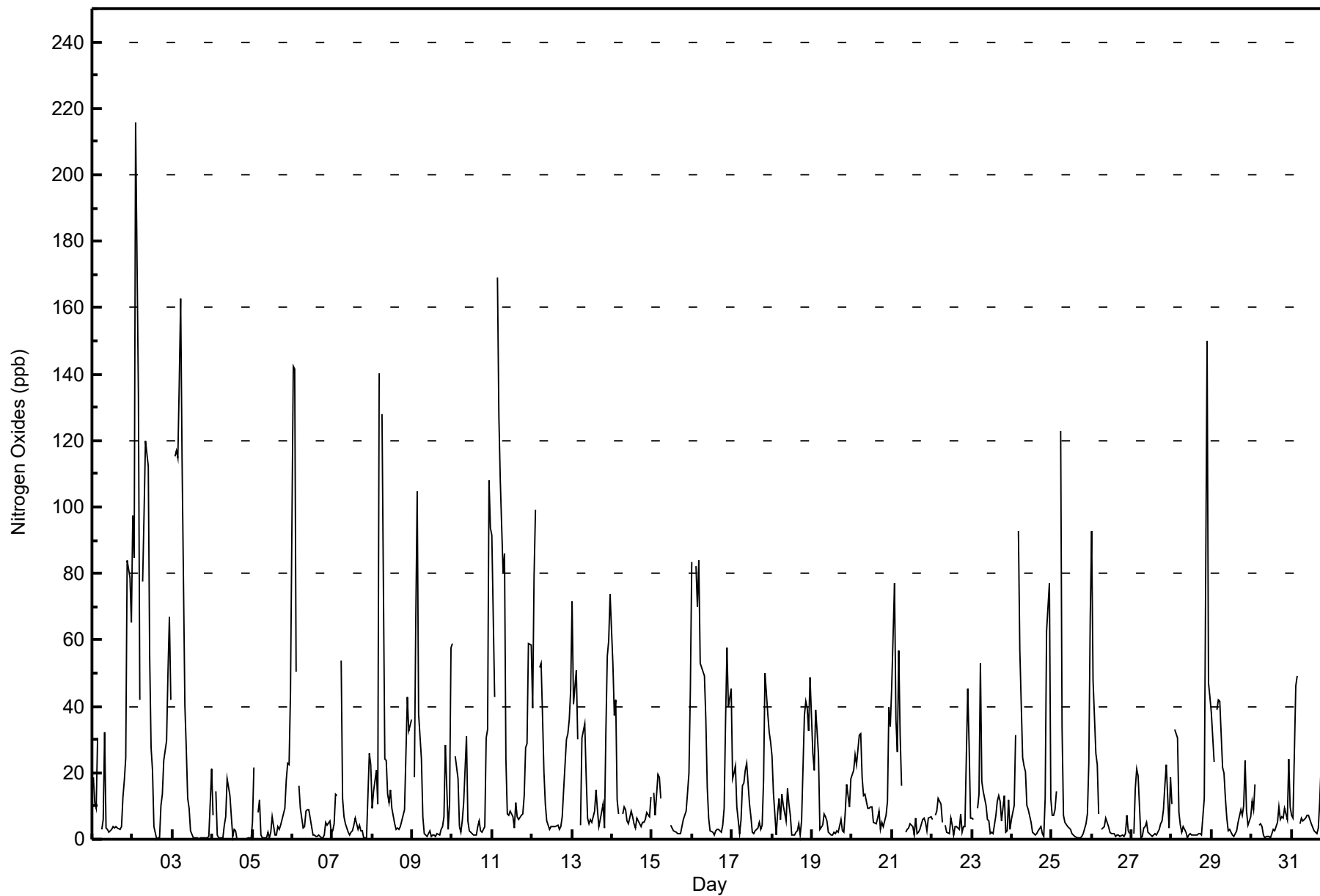
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 215.5 ppb on May 2 03:00 Maximum Daily Average: 57.6 ppb on May 2																				Hours in Service: 744						
Minimum Value: 0.1 ppb on May 4 20:00 Maximum Diurnal Average: 41.5 ppb at hour 3 Monthly Average: 17.92 ppb																				Hours of Data: 711						
Minimum Daily Average: 3.5 ppb on May 4 Minimum Diurnal Average: 2.5 ppb at hour 14 Percentiles: P ₁ = 0.2 P ₁₀ = 1.2 Q ₁ = 2.7 Median = 6.5 Q ₃ = 20.8 P ₉₀ = 49.1 P ₉₉ = 137.1																				Hours of Missing Data: 33						
																				Hours of Calibration: 31						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	18.7	11.1	9.4	30.7	Z	2.8	5.9	32.1	3.4	3.1	2.3	2.8	3.9	3.5	3.7	3.3	3.0	3.6	12.8	17.8	24.7	83.9	78.7	65.2	18.5	83.9
2-May	97.5	84.8	215.5	133.6	42.1	Z	77.7	98.1	119.9	112.5	54.8	27.5	20.9	4.0	0.1	0.2	0.2	10.1	13.4	23.6	29.7	50.2	66.8	42.1	57.6	215.5
3-May	Z	115.2	116.8	114.9	137.5	162.7	114.3	40.2	27.0	12.3	9.5	2.8	0.4	0.6	0.2	0.3	0.1	0.2	0.3	0.3	0.5	0.4	1.0	21.0	38.2	162.7
4-May	7.3	Z	14.2	1.4	0.5	0.3	0.5	4.3	6.9	18.2	13.2	6.6	1.0	2.9	2.4	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	3.5	18.2
5-May	5.1	21.6	Z	8.0	11.7	1.2	0.5	0.2	0.3	1.9	0.3	2.3	6.9	1.4	1.3	3.7	2.9	4.3	5.9	9.3	18.0	22.8	22.3	44.2	8.5	44.2
6-May	142.5	141.6	50.5	Z	16.1	9.4	3.5	3.8	8.6	9.1	9.1	3.7	1.4	1.3	0.8	0.7	1.1	0.4	0.5	1.5	4.9	4.3	5.3	2.2	18.4	142.5
7-May	2.4	4.7	13.4	13.0	Z	53.7	12.3	6.8	4.6	2.2	1.4	2.0	2.7	4.2	6.3	3.0	4.4	2.7	2.5	0.3	0.2	12.9	25.8	22.6	8.9	53.7
8-May	9.2	14.4	20.7	10.7	140.2	Z	127.9	24.3	23.7	13.8	11.2	14.9	9.4	4.5	3.0	3.2	2.8	3.7	7.1	9.1	26.0	42.7	32.5	36.2	25.7	140.2
9-May	Z	18.7	66.0	104.6	37.7	24.2	6.9	1.8	1.1	0.7	2.4	0.9	1.1	1.1	1.0	1.5	1.3	2.8	3.8	6.9	28.4	3.0	11.1	57.8	16.7	104.6
10-May	58.8	Z	24.8	18.3	3.9	2.3	5.6	11.0	31.1	5.4	2.7	2.2	1.9	1.4	1.3	3.8	5.7	2.5	2.3	3.6	30.6	33.3	108.1	93.6	19.7	108.1
11-May	91.4	42.7	Z	169.3	127.5	108.2	80.1	86.0	24.1	7.5	7.4	8.5	7.0	3.3	11.2	6.9	5.9	7.1	7.7	13.3	27.4	28.6	58.7	58.3	43.0	169.3
12-May	39.3	79.1	99.1	Z	51.9	53.0	37.2	20.3	10.6	5.3	3.1	3.8	3.6	3.6	4.0	4.3	3.0	3.9	6.9	14.7	30.0	31.8	36.2	45.1	25.6	99.1
13-May	71.7	40.7	50.8	30.2	Z	4.2	30.6	34.8	19.0	6.3	4.7	5.8	4.9	8.5	14.7	9.1	3.7	5.9	10.4	3.3	32.3	55.2	59.7	73.9	25.2	73.9
14-May	52.5	37.4	41.8	12.0	7.8	Z	7.7	9.6	8.7	5.5	4.7	8.4	6.7	4.5	3.6	6.4	4.5	3.7	5.2	5.1	6.1	8.2	6.6	12.8	11.7	52.5
15-May	Z	14.1	7.3	19.5	18.8	12.1	C	C	C	C	C	4.1	3.6	2.5	2.2	1.8	1.8	1.7	3.6	6.1	8.4	14.0	19.8	44.9	10.4	44.9
16-May	83.4	Z	82.4	69.9	83.8	52.9	51.8	49.1	36.0	15.7	6.3	2.5	2.1	1.4	2.4	3.1	3.1	2.3	4.4	9.3	35.4	57.7	39.7	45.3	32.2	83.8
17-May	18.2	19.9	21.9	9.6	1.7	6.1	16.3	17.1	21.0	22.7	10.7	6.6	2.2	1.7	2.3	3.2	4.9	2.8	4.0	17.6	49.9	37.8	32.3	29.4	15.0	49.9
18-May	25.2	13.9	1.4	8.2	12.4	6.1	13.5	10.1	5.7	15.3	10.5	7.2	1.4	1.3	2.0	2.4	4.5	1.4	5.4	37.2	41.5	39.4	32.7	48.5	14.5	48.5
19-May	25.9	20.7	39.0	32.6	25.4	2.8	4.2	7.6	6.9	5.4	1.9	1.3	1.4	2.0	1.5	2.5	2.1	6.1	2.5	2.0	7.9	16.6	9.9	18.0	10.3	39.0
20-May	19.4	20.7	25.6	22.5	31.2	31.6	18.5	13.1	13.6	9.4	9.2	9.7	9.7	4.9	4.7	6.5	8.5	3.0	5.2	3.9	7.2	11.2	39.7	34.0	15.1	39.7
21-May	45.9	77.2	35.9	26.4	57.0	31.5	16.1	M	2.2	2.9	3.4	4.9	3.7	1.4	6.3	1.8	2.1	3.0	5.9	6.2	5.0	2.6	6.4	6.9	15.4	77.2
22-May	5.7	Z	7.1	8.5	12.2	10.5	5.1	M	4.2	2.3	1.6	6.4	4.3	1.3	3.7	3.9	2.8	7.6	2.0	3.8	3.9	45.2	28.2	6.3	8.0	45.2
23-May	6.5	6.0	Z	9.2	13.4	52.8	17.5	14.5	10.0	5.8	5.6	1.6	2.2	1.6	7.4	11.3	13.1	11.4	5.4	13.1	2.1	2.7	11.7	3.0	9.9	52.8
24-May	5.7	10.3	31.4	Z	93.0	56.7	24.5	22.1	20.2	10.3	8.9	5.1	2.3	1.9	1.2	1.7	2.6	3.6	1.6	1.0	12.2	62.9	76.9	12.2	20.4	93.0
25-May	7.4	7.4	8.7	14.6	Z	123.1	33.6	7.0	5.0	3.6	3.5	2.8	1.6	1.4	0.8	0.5	0.3	0.3	1.0	1.5	4.5	7.6	22.9	66.7	14.2	123.1
26-May	92.8	47.8	25.7	22.6	7.5	Z	2.8	4.0	6.5	5.3	3.8	2.3	1.7	1.8	0.9	1.2	1.2	0.9	1.3	0.8	1.5	7.4	2.6	1.9	10.6	92.8
27-May	Z	1.5	15.4	21.1	18.9	0.4	1.0	3.3	3.9	5.3	2.2	1.3	1.0	1.1	1.5	1.4	2.9	4.6	5.6	9.0	16.1	22.3	3.5	18.6	7.0	22.3
28-May	10.6	Z	33.2	30.3	8.0	4.4	2.3	3.7	2.3	0.3	1.3	1.8	1.4	1.2	1.4	1.3	1.8	1.5	1.1	12.2	78.4	149.9	47.2	42.7	19.1	149.9
29-May	37.9	23.2	Z	39.1	41.8	41.6	21.5	20.0	12.2	6.2	2.5	2.9	1.2	0.9	1.5	2.8	5.2	8.9	7.2	10.1	23.6	8.4	4.2	6.9	14.3	41.8
30-May	11.5	8.9	16.7	Z	4.1	4.8	3.8	1.2	0.5	1.0	0.8	0.5	1.8	2.8	2.4	5.1	9.7	5.8	6.7	6.3	9.1	6.0	23.9	9.6	6.2	23.9
31-May	7.2	6.4	46.1	49.3	Z	4.5	6.5	5.7	6.2	7.3	7.2	5.8	4.5	2.5	2.2	1.7	3.3	11.3	22.7	23.3	4.5	3.5	4.7	0.7	10.3	49.3
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	530	74.54	74.54
21 - 40	89	12.52	87.06
41 - 80	58	8.16	95.22
81 - 159	31	4.36	99.58
> 159	3	0.42	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Hills - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	29	49	11	7	6	6	46	150	71	40	30	19	16	15	15	18	528
21 - 40	11	7	3	1	4	1	33	12	7	3	1	0	0	1	2	3	89
11 - 80	12	4	1	1	1	1	21	4	1	1	2	0	1	0	0	8	58
81 - 159	7	0	0	1	1	4	6	1	0	0	0	1	0	0	1	9	31
> 159	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Totals	61	60	15	10	12	12	106	167	79	44	33	20	17	16	18	39	709

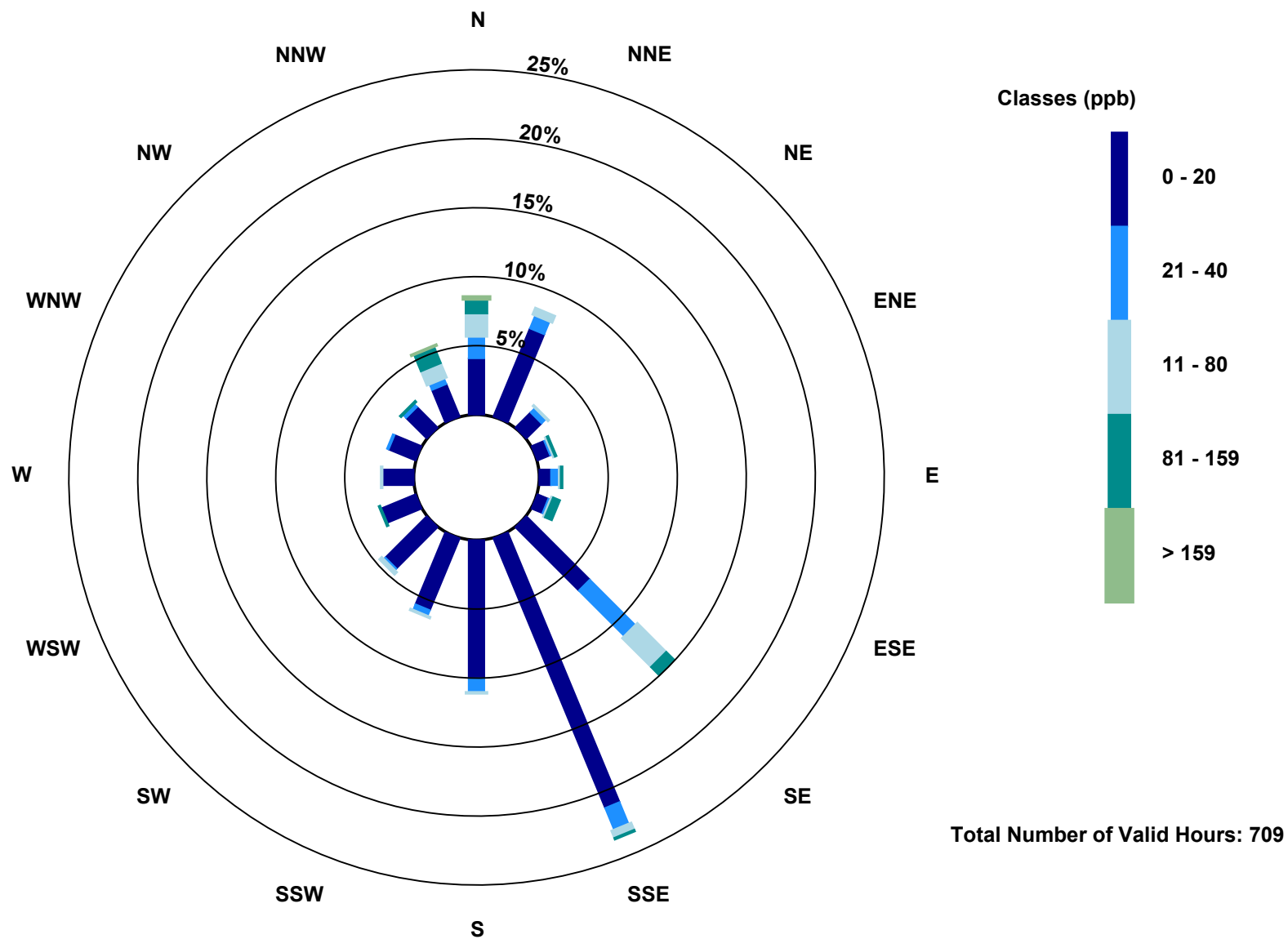
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

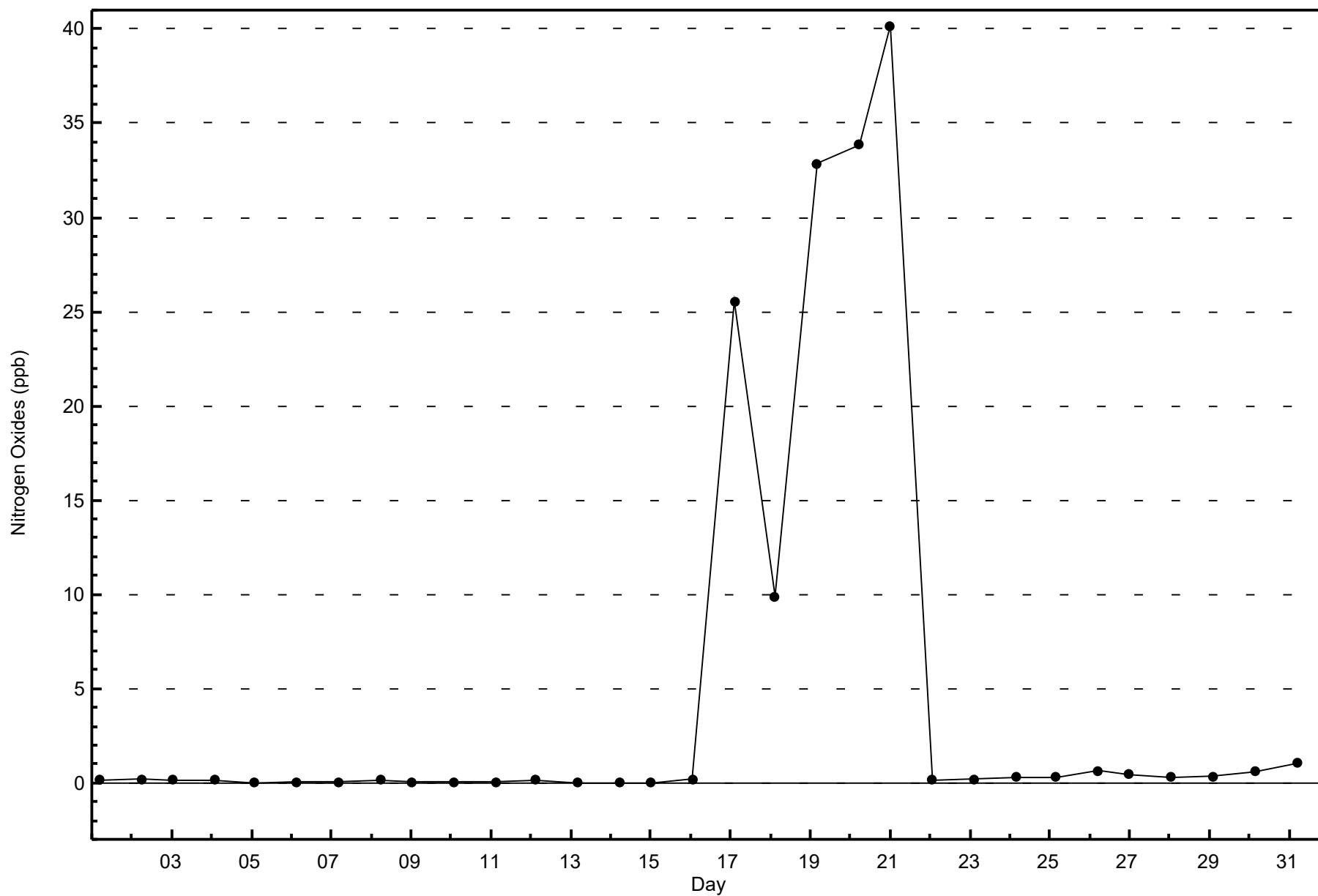
Nitrogen Oxides (NO_x) - ppb
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

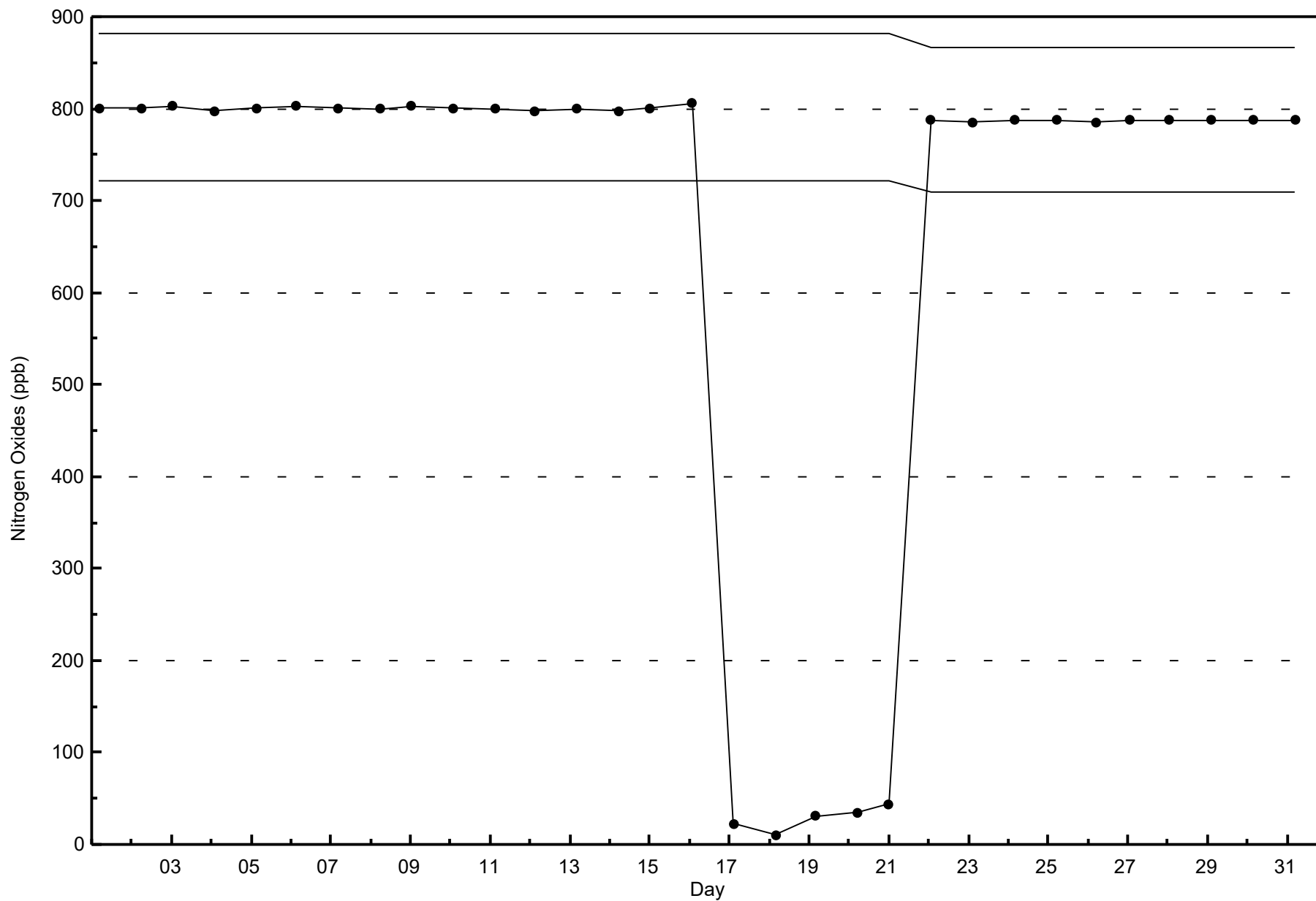
Nitrogen Oxides (NO_x) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

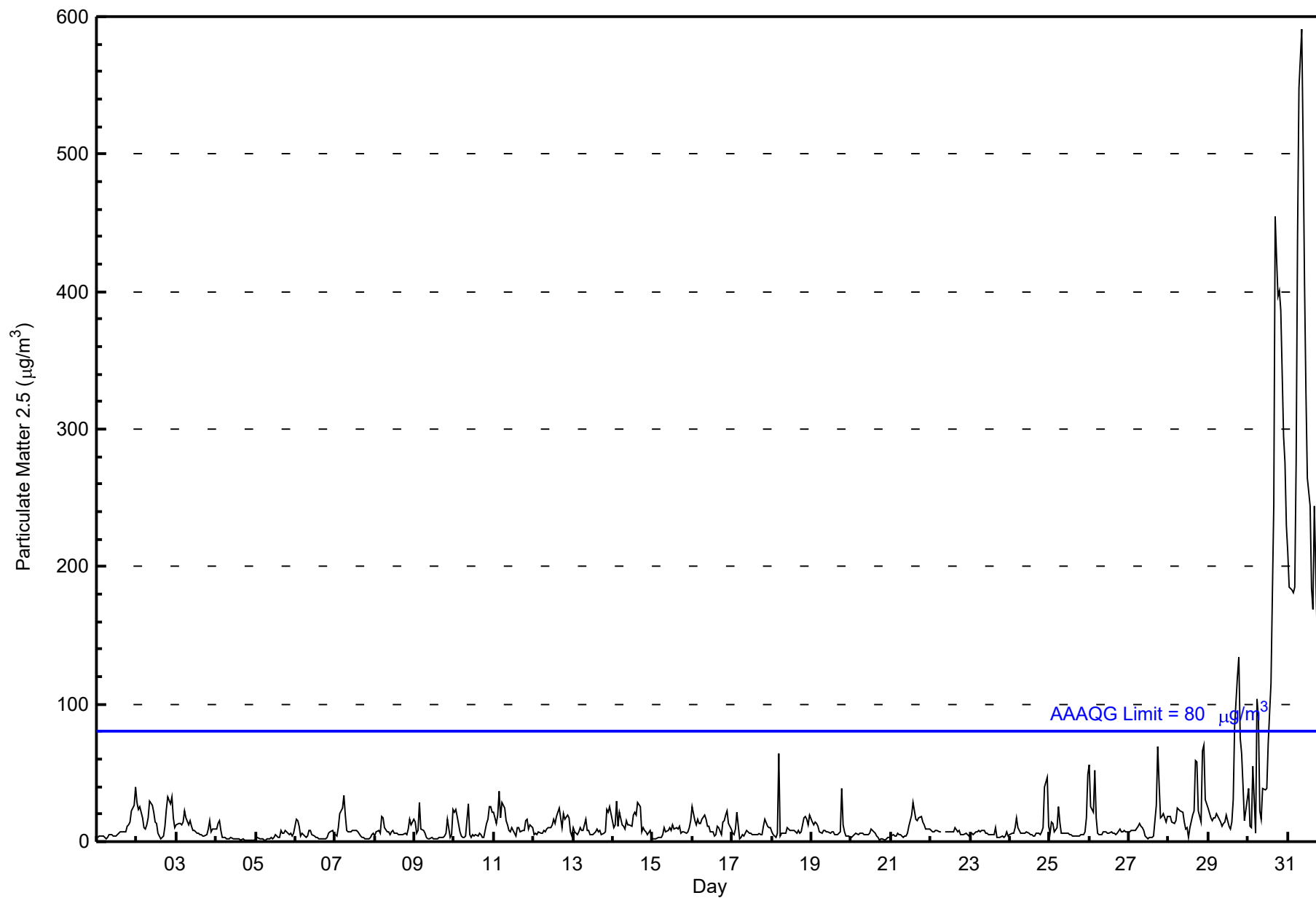
Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 36 24-hr: 3 Maximum Value: 590.6 µg/m³ on May 31 09:00 Minimum Value: 0.9 µg/m³ on May 5 00:00 Maximum Diurnal Average: 33.9 µg/m³ at hour 17 Monthly Average: 23.23 µg/m³																					Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0					
Maximum Daily Average: 242.3 µg/m³ on May 31 Minimum Daily Average: 3.5 µg/m³ on May 4 Minimum Diurnal Average: 16.0 µg/m³ at hour 2 Percentiles: P ₁ = 1.4 P ₁₀ = 3.1 Q ₁ = 5.0 Median = 7.7 Q ₃ = 15.4 P ₉₀ = 28.5 P ₉₉ = 399.4																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3.3	4.0	3.6	3.9	4.6	2.2	2.9	5.0	4.6	4.8	4.3	4.1	4.8	6.2	7.4	7.5	7.0	7.5	11.2	12.3	14.0	22.1	26.9	40.0	8.9	40.0
2-May	28.0	23.6	25.2	16.9	9.8	9.5	11.9	17.4	29.8	26.0	21.1	13.8	13.5	6.3	1.8	2.8	4.5	11.3	23.2	32.7	28.0	32.3	17.0	10.5	17.4	32.7
3-May	12.4	13.6	13.5	11.8	13.8	22.0	17.2	12.7	15.2	10.7	7.9	8.3	6.1	5.7	5.5	5.4	3.9	4.1	5.5	8.8	15.1	7.6	9.5	9.3	10.2	22.0
4-May	8.8	12.9	15.3	8.6	2.9	2.7	2.4	2.3	2.1	2.8	2.5	2.3	2.2	2.3	1.9	1.5	2.2	1.4	1.5	0.9	1.2	0.9	1.0	0.9	3.5	15.3
5-May	1.7	2.7	2.4	2.1	2.3	1.0	1.4	1.8	2.2	3.4	1.9	3.1	5.1	3.4	3.5	8.2	5.8	5.8	8.2	5.8	4.7	5.8	4.4	5.8	3.9	8.2
6-May	16.2	14.9	11.6	4.5	5.8	4.7	3.1	4.5	7.9	8.3	5.3	3.6	3.0	2.7	2.2	2.3	2.4	2.5	2.5	3.2	6.1	6.7	8.3	5.0	5.7	16.2
7-May	4.8	4.4	10.1	20.4	24.2	33.5	19.1	7.8	7.1	7.0	7.7	8.5	8.3	7.8	7.1	4.1	3.5	3.1	2.5	1.7	1.7	2.9	5.0	6.5	8.7	33.5
8-May	4.1	6.7	7.9	5.9	18.0	17.5	10.0	6.9	7.0	5.5	7.3	8.3	6.4	5.9	4.9	5.0	4.8	5.4	6.2	5.6	8.7	16.8	12.3	15.9	8.5	18.0
9-May	14.0	6.0	7.7	28.6	8.8	7.8	6.2	3.1	2.4	2.3	2.6	2.5	2.5	2.2	1.8	2.8	2.7	2.8	3.8	6.2	16.5	2.7	4.7	23.2	6.8	28.6
10-May	20.9	22.9	18.2	7.0	3.6	3.1	3.1	4.1	27.6	5.1	3.2	5.0	4.4	4.8	3.9	5.8	4.6	3.3	3.2	12.9	15.9	25.2	25.8	21.2	10.6	27.6
11-May	20.9	13.1	19.1	36.8	17.5	28.5	24.6	15.3	12.3	7.8	7.4	10.2	6.4	4.5	10.1	9.9	6.8	7.9	8.2	15.0	15.9	9.3	11.9	10.1	13.7	36.8
12-May	5.5	5.8	5.2	7.3	6.4	6.3	8.1	7.2	9.4	9.7	10.3	12.6	16.2	12.9	18.3	24.6	17.3	10.6	20.1	15.9	19.4	17.3	7.2	4.1	11.6	24.6
13-May	10.6	6.7	5.5	6.9	9.9	8.2	7.8	16.8	8.0	8.5	4.9	5.2	5.4	6.9	9.4	7.0	7.8	5.0	5.7	6.6	23.2	21.7	25.1	20.3	10.1	25.1
14-May	10.3	11.9	29.9	11.2	21.0	12.6	10.9	9.3	15.7	12.7	12.5	10.8	19.6	21.6	19.2	28.9	25.2	6.9	9.7	8.6	7.0	4.7	7.7	3.0	13.8	29.9
15-May	2.1	2.3	2.3	3.3	3.3	3.4	5.5	10.2	7.6	8.1	10.4	8.0	11.7	9.5	10.1	9.1	11.6	5.8	7.4	7.3	5.6	6.8	10.2	14.8	7.3	14.8
16-May	25.7	15.5	11.7	16.2	13.3	13.0	16.4	18.8	16.0	11.5	11.1	6.9	6.7	4.4	5.0	10.7	10.1	5.0	14.2	15.4	19.2	22.0	13.2	8.9	13.0	25.7
17-May	5.9	5.1	8.9	21.8	1.8	3.6	5.1	4.3	6.3	8.1	6.3	6.4	4.9	5.0	5.4	4.6	6.0	4.9	5.6	10.9	16.7	11.4	9.9	9.7	7.4	21.8
18-May	6.7	4.7	3.3	5.6	64.2	4.3	6.0	6.1	6.6	10.4	9.4	8.0	8.0	8.2	7.3	6.2	7.9	6.1	6.7	17.7	18.6	16.6	12.6	19.4	11.3	64.2
19-May	13.8	12.3	13.8	12.9	11.1	6.8	6.0	7.9	8.5	6.9	6.8	5.9	6.7	7.0	5.0	5.4	4.8	7.3	38.5	12.2	7.5	4.3	3.6	2.8	9.1	38.5
20-May	3.2	3.6	5.0	5.8	5.4	6.6	5.7	5.8	5.6	5.0	5.3	5.7	9.5	8.1	5.8	3.9	2.6	1.0	2.2	1.9	1.4	2.0	2.9	3.1	4.5	9.5
21-May	3.6	5.0	4.0	3.9	6.2	5.3	5.3	3.5	3.7	4.4	6.3	10.9	19.0	28.1	22.7	16.1	15.5	17.2	17.8	14.2	12.3	8.8	9.4	9.3	10.5	28.1
22-May	8.4	7.5	7.6	7.7	7.9	6.7	7.0	C	C	7.6	7.2	7.1	7.2	7.4	7.3	9.9	7.2	8.1	4.6	4.9	4.9	6.4	4.9	4.4	6.9	9.9
23-May	5.6	6.1	5.3	6.8	7.4	7.9	7.0	8.0	7.8	6.1	6.2	5.5	4.8	4.7	4.8	9.7	3.5	3.1	2.8	3.9	3.5	3.6	6.7	3.8	5.6	9.7
24-May	4.8	6.3	6.2	10.4	17.3	10.2	5.8	5.7	5.8	6.5	7.1	6.5	4.7	5.1	3.9	4.5	5.8	6.0	4.9	7.2	9.9	39.7	47.0	11.4	10.1	47.0
25-May	5.8	14.5	13.0	7.4	10.4	25.7	13.9	6.5	6.3	6.4	6.0	5.6	5.0	4.9	4.5	4.0	4.0	3.8	4.2	4.7	4.6	7.5	17.3	48.7	9.8	48.7
26-May	56.2	25.8	21.5	51.8	17.6	6.4	5.4	5.6	7.2	7.1	6.9	6.1	6.5	7.2	6.4	6.1	5.4	5.9	9.0	7.0	6.7	8.4	7.5	7.5	12.6	56.2
27-May	7.4	7.7	7.8	7.9	7.9	11.5	13.3	11.2	9.8	8.4	4.2	2.4	3.0	3.1	3.2	4.4	26.6	69.5	41.3	17.5	18.0	20.0	14.3	18.7	14.1	69.5
28-May	18.6	18.2	14.0	13.6	15.8	24.6	23.6	22.1	20.9	14.2	9.5	9.8	3.4	9.8	19.8	22.4	58.9	58.2	22.1	14.2	65.9	69.7	30.9	27.0	25.3	69.7
29-May	24.0	17.1	15.5	17.2	17.7	20.2	16.5	14.6	11.2	13.3	14.2	19.5	11.5	9.2	14.7	30.8	84.9	120.4	134.6	75.3	64.3	40.6	15.6	31.0	34.8	134.6
30-May	38.3	11.1	9.8	55.0	6.2	103.3	90.1	22.8	16.3	38.3	37.4	38.6	71.4	93.9	115.1	245.0	454.3	424.4	397.1	401.0	386.9	295.4	275.8	229.6	160.7	454.3
31-May	211.0	184.7	182.8	180.6	184.9	276.4	440.2	547.8	590.6	505.0	404.9	326.4	264.6	243.9	184.5	168.9	243.7	198.4	147.3	84.7	78.6	64.5	55.9	44.1	242.3	590.6
19.4 16.0 16.4 19.3 17.6 22.4 25.9 27.2 29.4 25.2 21.2 18.6 17.8 17.8 16.9 21.8 33.9 33.0 31.4 27.0 29.1 25.9 22.7 21.6																								Diurnal Average		
211.0 184.7 182.8 180.6 184.9 276.4 440.2 547.8 590.6 505.0 404.9 326.4 264.6 243.9 184.5 245.0 454.3 424.4 397.1 401.0 386.9 295.4 275.8 229.6																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Hills - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	216	29.11	29.11
6 - 15	341	45.96	75.07
16 - 25	98	13.21	88.27
26 - 80	51	6.87	95.15
> 81.0	36	4.85	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Fort Hills - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	16	7	5	4	2	1	29	51	26	14	17	10	5	10	10	9	216
6 - 15	34	38	9	4	6	8	52	95	31	21	7	3	8	5	6	12	339
16 - 25	16	11	0	1	3	3	15	16	11	3	4	3	1	0	3	8	98
26 - 80	3	4	1	1	1	1	13	7	1	2	3	3	2	2	1	6	51
> 81.0	3	0	0	0	0	0	0	5	12	6	2	1	2	0	0	5	36
Totals	72	60	15	10	12	13	109	174	81	46	33	20	18	17	20	40	740

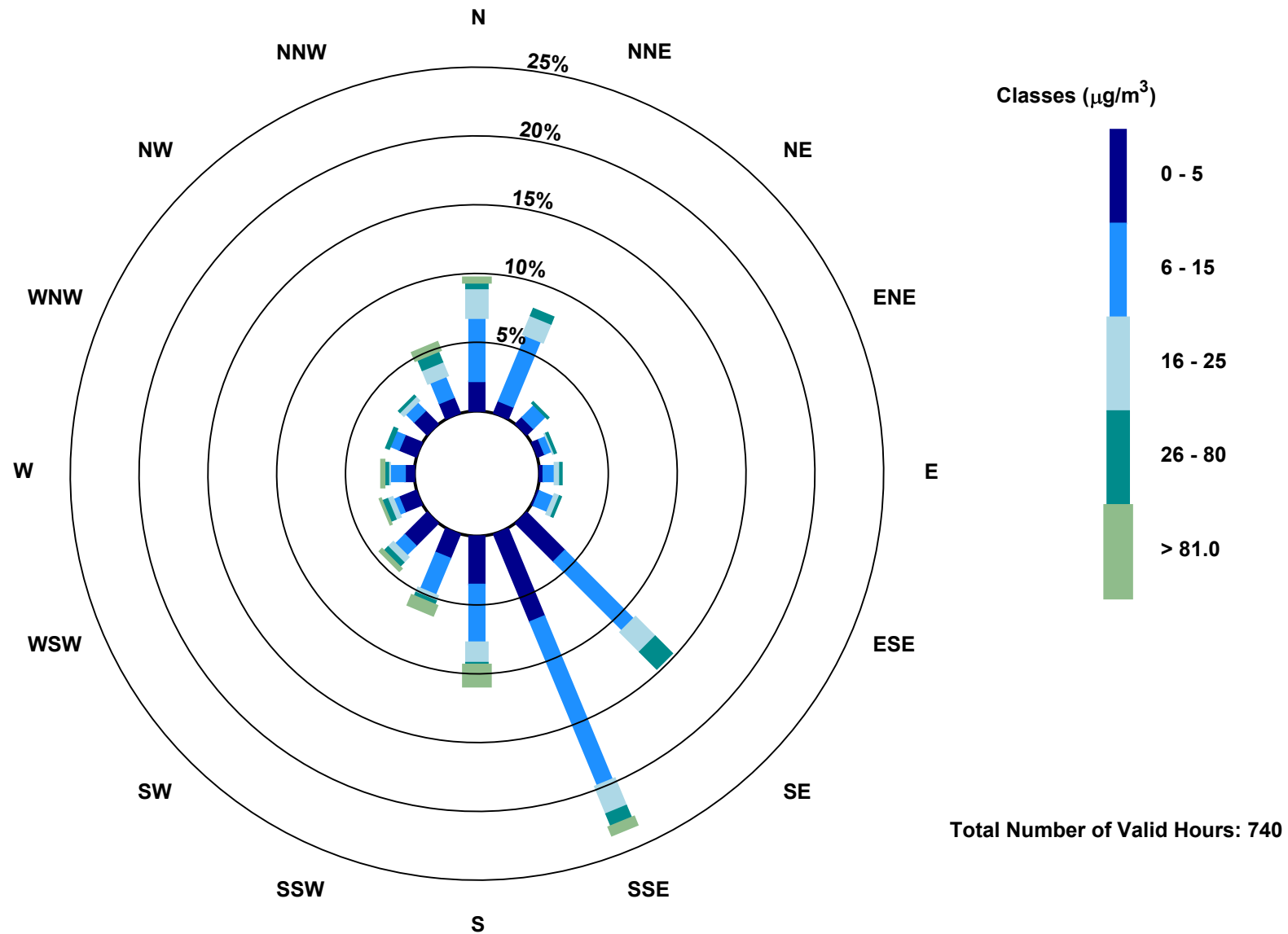
Total Number of Valid Hours: 740

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Hills





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

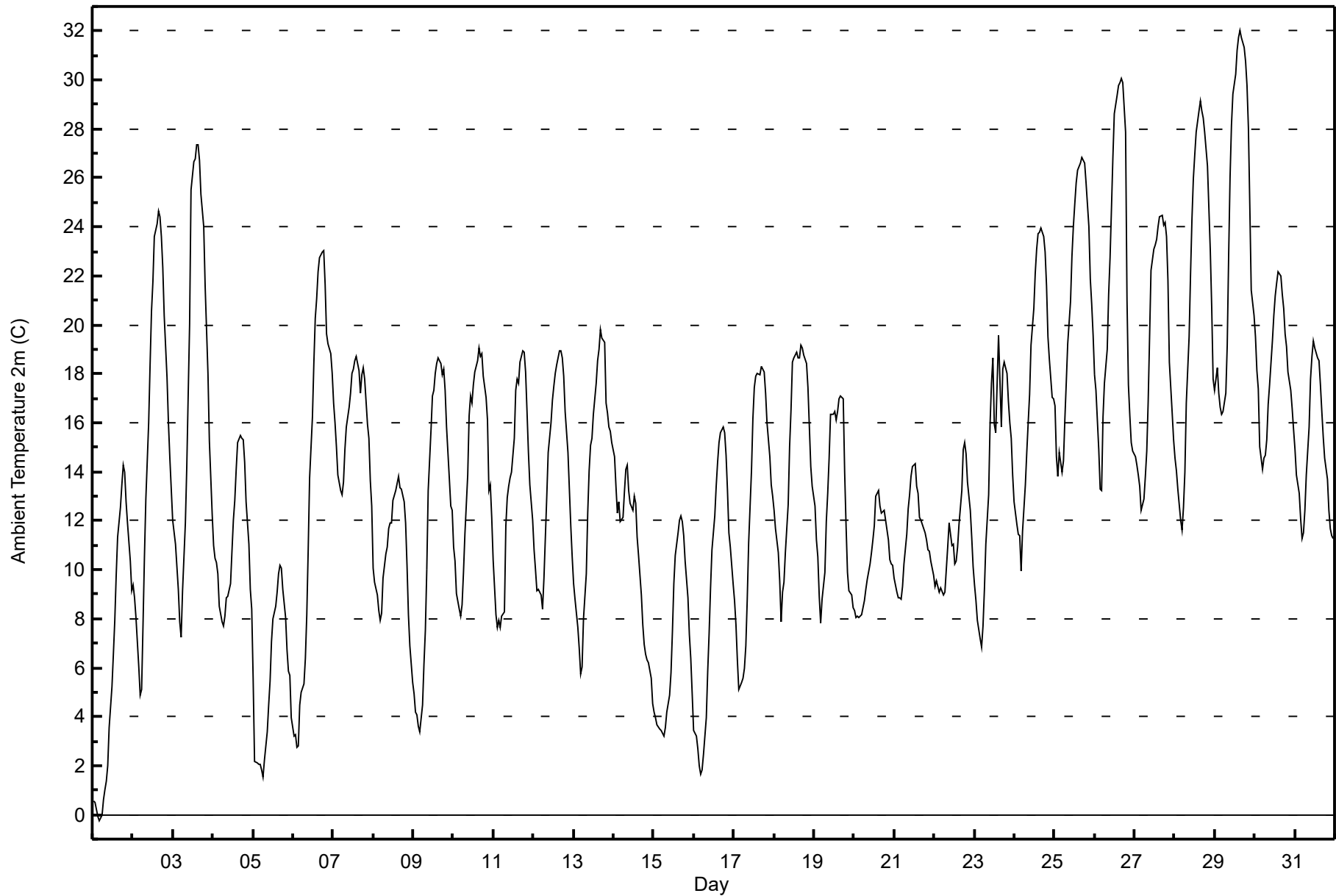
Fort Hills - May 2025

Maximum Value: 32.0 C on May 29 16:00																				Maximum Daily Average: 24.5 C on May 29										Hours in Service: 744			
Minimum Value: -0.2 C on May 1 05:00																				Minimum Daily Average: 5.6 C on May 5										Hours of Data: 744			
Maximum Diurnal Average: 18.9 C at hour 16																				Minimum Diurnal Average: 8.3 C at hour 5										Hours of Missing Data: 0			
Monthly Average: 14.07 C																				Percentiles: P ₁ = 1.2 P ₁₀ = 6.3 Q ₁ = 9.6 Median = 13.5 Q ₃ = 18.0 P ₉₀ = 22.8 P ₉₉ = 30.0										Hours of Calibration: 0			
																														Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
1-May	0.6	0.5	0.2	-0.1	-0.2	0.0	0.6	1.0	1.4	2.0	3.6	5.2	6.5	8.0	9.8	11.3	12.5	13.5	14.3	14.0	12.8	11.9	10.4	9.1	6.2	14.3							
2-May	9.4	8.9	8.1	6.0	4.9	5.1	7.8	10.5	12.9	16.0	18.4	20.5	21.8	23.6	24.2	24.7	24.4	23.6	22.3	20.4	17.9	16.0	14.6	13.3	15.6	24.7							
3-May	12.0	11.0	10.1	9.2	7.9	7.2	9.1	11.9	14.2	17.2	20.1	25.5	26.7	26.8	27.3	27.3	26.7	25.3	24.0	21.6	19.8	18.0	15.2	12.3	17.8	27.3							
4-May	11.0	10.4	10.3	9.9	8.5	7.9	7.7	8.1	8.8	8.9	9.5	10.8	12.1	12.8	14.1	15.2	15.5	15.4	15.3	14.4	12.8	11.1	9.2	8.4	11.2	15.5							
5-May	5.6	2.2	2.1	2.1	2.1	1.8	1.5	2.2	3.4	4.5	5.4	7.0	8.0	8.5	9.1	9.8	10.2	10.1	9.2	8.0	6.7	5.9	5.7	3.9	5.6	10.2							
6-May	3.2	3.3	2.8	2.8	4.5	5.0	5.4	6.4	8.2	10.8	13.8	16.2	18.4	20.3	21.1	22.2	22.7	22.9	23.0	21.6	19.6	19.2	18.8	18.0	13.8	23.0							
7-May	16.8	16.0	15.0	13.8	13.2	13.1	13.6	14.9	15.8	16.6	17.2	18.0	18.2	18.6	18.7	18.1	17.2	18.0	18.2	17.8	15.9	15.4	13.7	12.6	16.1	18.7							
8-May	10.1	9.5	9.0	8.4	7.9	8.2	9.7	10.6	10.9	11.7	11.9	11.9	12.8	13.2	13.5	13.8	13.4	13.3	12.8	11.9	10.2	8.2	6.9	5.4	10.6	13.8							
9-May	4.9	4.2	4.1	3.6	3.4	4.5	6.1	7.5	10.0	13.2	15.7	17.1	17.3	18.0	18.4	18.7	18.4	17.9	18.2	17.3	15.8	13.7	12.6	12.4	12.2	18.7							
10-May	10.9	10.3	9.0	8.4	8.1	8.6	9.9	11.4	13.9	16.3	17.1	16.8	17.6	18.1	18.5	19.1	18.7	18.9	17.9	17.0	16.1	13.2	13.5	12.1	14.2	19.1							
11-May	10.4	8.2	7.6	7.9	7.6	8.1	8.3	11.8	13.0	13.4	13.7	14.0	15.4	17.3	17.8	17.6	18.5	19.0	18.9	18.1	16.5	14.8	13.5	12.0	13.5	19.0							
12-May	10.8	10.0	9.2	9.2	9.0	8.4	9.7	11.3	13.0	14.8	16.0	16.9	17.5	18.0	18.4	18.9	18.9	18.7	17.9	16.5	14.8	13.3	11.8	10.5	13.9	18.9							
13-May	9.4	8.8	7.6	6.8	5.7	6.0	8.0	9.8	12.3	14.0	15.1	15.4	16.4	17.6	18.5	19.0	19.8	19.5	19.3	16.8	16.4	15.9	15.7	15.2	13.7	19.8							
14-May	14.6	13.4	12.3	12.8	12.0	12.2	13.2	14.1	14.3	13.2	12.7	12.4	13.0	12.7	11.3	10.6	9.0	7.8	7.0	6.6	6.3	6.2	5.6	4.5	10.7	14.6							
15-May	4.2	4.0	3.7	3.5	3.4	3.3	3.2	3.6	4.2	4.9	5.8	7.5	9.4	10.6	11.5	12.0	12.2	12.0	11.4	10.3	8.8	7.4	6.4	4.9	7.0	12.2							
16-May	3.5	3.2	2.7	2.0	1.7	1.8	2.4	4.0	5.8	7.4	9.2	10.8	12.2	13.4	14.4	15.2	15.6	15.8	15.6	14.7	13.3	11.5	10.9	9.4	9.0	15.8							
17-May	8.8	7.8	6.3	5.1	5.4	5.5	6.0	6.9	8.8	11.1	14.0	16.2	17.4	17.9	18.0	17.9	18.3	18.2	18.1	17.2	16.0	14.6	13.4	13.0	12.6	18.3							
18-May	12.4	11.7	10.7	9.6	7.9	9.1	9.5	10.7	12.6	15.0	16.5	18.5	18.7	18.9	18.6	18.6	19.1	19.0	18.8	18.4	17.5	15.8	14.2	13.4	14.8	19.1							
19-May	12.6	11.2	10.5	8.9	7.8	8.8	9.9	12.0	13.1	14.6	16.3	16.3	16.5	16.1	16.4	17.0	17.1	17.0	14.0	11.8	9.9	9.1	8.9	8.4	12.7	17.1							
20-May	8.3	8.0	8.1	8.0	8.1	8.4	8.7	9.2	9.6	10.2	10.7	11.2	11.8	13.0	13.2	12.6	12.3	12.4	12.4	12.0	11.2	10.4	10.3	10.2	10.4	13.2							
21-May	9.6	9.1	8.9	8.9	8.8	9.3	10.3	11.4	12.5	13.1	13.8	14.2	14.4	13.4	13.1	12.1	12.0	11.9	11.5	11.2	10.8	10.8	10.4	9.8	11.3	14.4							
22-May	9.3	9.6	9.3	9.1	9.2	9.0	9.1	10.0	10.9	11.9	11.0	11.0	10.2	10.4	10.9	11.9	13.2	14.9	15.2	14.7	13.6	12.4	11.4	10.1	11.2	15.2							
23-May	9.4	8.7	7.9	7.2	6.9	7.7	9.2	11.0	13.1	15.9	17.6	18.6	15.9	15.6	19.6	17.8	15.8	18.2	18.5	18.0	16.9	16.0	15.4	13.9	13.9	19.6							
24-May	12.8	11.9	11.5	11.4	10.0	11.5	13.5	14.8	16.0	17.2	19.2	20.6	22.1	23.1	23.7	23.8	24.0	23.6	23.0	21.6	19.5	18.6	17.0	17.0	17.8	24.0							
25-May	16.7	14.6	13.8	14.8	14.0	14.4	16.2	17.7	19.2	21.0	22.8	24.0	24.9	25.8	26.3	26.6	26.8	26.7	26.6	25.8	24.0	21.9	20.8	19.6	21.0	26.8							
26-May	17.9	17.3	14.9	13.3	13.3	16.2	17.6	19.0	21.2	22.7	24.8	26.8	28.6	29.4	29.8	29.9	30.1	29.9	27.9	21.0	17.6	16.3	15.2	14.9	21.5	30.1							
27-May	14.6	14.3	13.9	13.4	12.4	12.9	13.8	14.9	16.9	19.5	22.2	23.1	23.3	23.5	24.0	24.4	24.5	24.1	24.2	23.6	21.8	18.5	16.4	15.3	19.0	24.5							
28-May	14.6	14.0	13.3	12.0	11.6	12.5	14.0	16.8	19.5	22.0	24.3	26.0	27.0	27.9	28.7	29.2	28.8	28.4	27.9	26.5	24.8	23.0	20.7	17.8	21.3	29.2							
29-May	17.3	18.3	17.2	16.6	16.3	16.5	17.2	19.2	22.8	26.0	28.1	29.4	30.2	31.2	31.7	32.0	31.7	31.4	30.8	29.8	28.1	24.8	21.4	20.4	24.5	32.0							
30-May	19.5	18.1	17.4	15.0	14.1	14.5	14.7	15.3	16.7	17.5	19.3	20.4	21.2	21.7	22.2	22.0	21.3	20.7	19.7	19.1	18.1	17.3	16.6	15.7	18.3	22.2							
31-May	14.9	13.9	13.1	12.1	11.3	11.5	12.5	13.8	15.8	17.8	18.7	19.3	19.1	18.7	18.5	17.5	16.5	15.4	14.6	13.7	12.4	11.7	11.4	11.3	14.8	19.3							
																									Diurnal Average								
																									Diurnal Maximum								



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort Hills - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	2	0.27	0.27
0 - 10	197	26.48	26.75
10 - 20	436	58.60	85.35
> 20	109	14.65	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

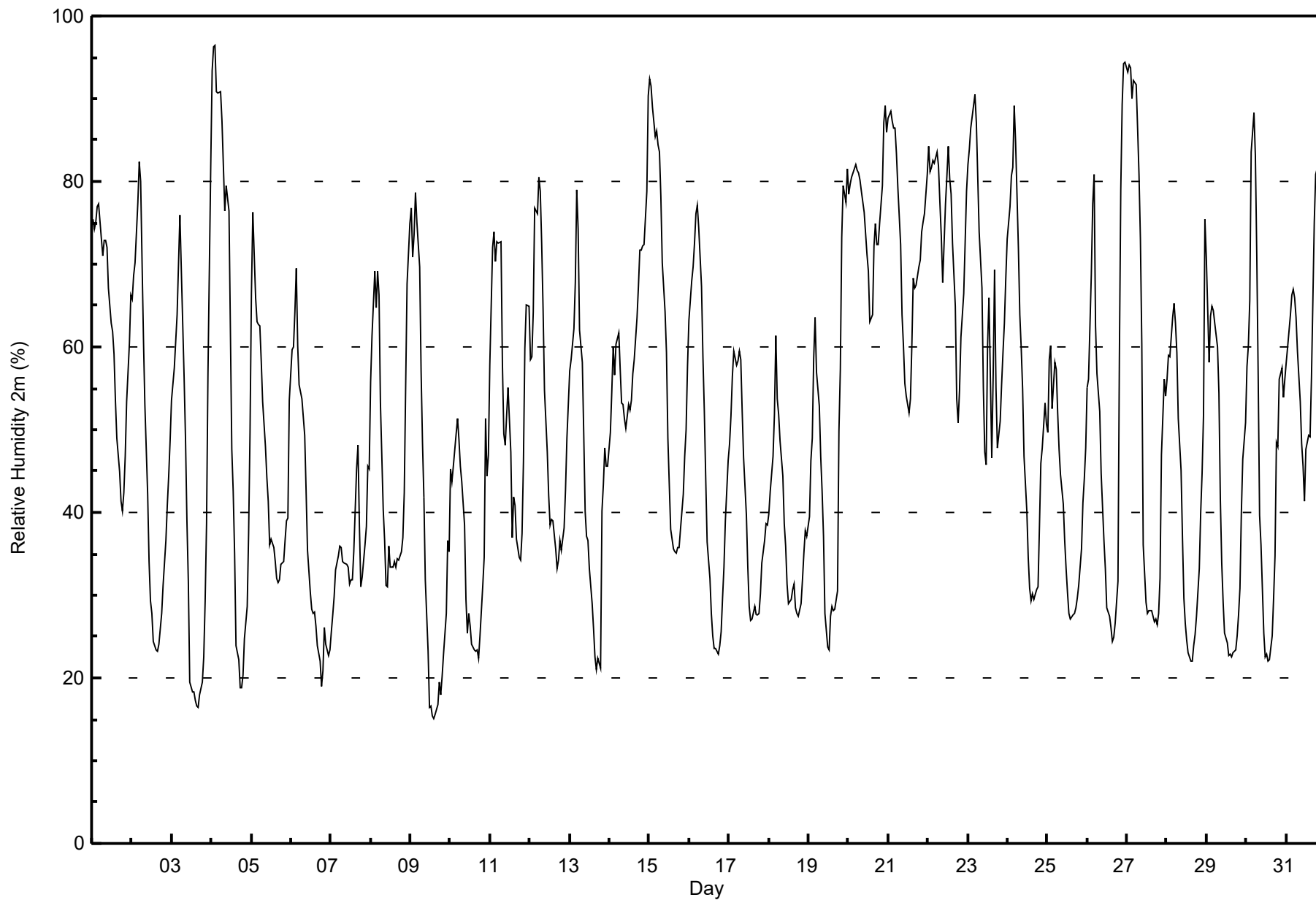
Fort Hills - May 2025

Maximum Value: 97.3 % on Jun 1 00:00																				Maximum Daily Average: 77.0 % on May 20					Hours in Service: 744	
Minimum Value: 15.1 % on May 9 15:00																				Minimum Daily Average: 35.4 % on May 7					Hours of Data: 744	
Maximum Diurnal Average: 72.7 % at hour 5																				Minimum Diurnal Average: 35.0 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 51.14 %																				Percentiles: P ₁ = 17.0 P ₁₀ = 25.4 Q ₁ = 33.4 Median = 49.6 Q ₃ = 67.2 P ₉₀ = 80.5 P ₉₉ = 94.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	75.5	74.3	75.1	76.9	77.2	73.1	70.9	72.9	72.9	72.0	67.2	62.9	61.9	59.1	53.5	48.9	44.9	41.3	40.1	42.4	46.8	53.4	60.5	66.3	62.1	77.2
2-May	65.7	68.6	70.2	77.4	82.5	80.0	70.4	61.0	53.0	42.2	34.1	29.3	27.7	24.4	23.3	23.2	24.0	25.9	27.9	31.3	36.7	40.8	44.4	48.6	46.4	82.5
3-May	53.5	57.5	60.7	63.9	70.0	75.9	69.2	56.2	48.9	39.0	31.7	19.5	18.2	18.3	17.3	16.6	16.5	18.0	19.5	22.5	29.3	38.6	56.8	82.0	41.7	82.0
4-May	93.4	96.3	96.4	90.8	90.6	90.8	87.3	81.8	76.4	79.6	76.5	62.1	47.6	42.5	35.0	23.8	22.3	18.8	18.8	20.4	24.8	28.7	37.4	49.6	58.0	96.4
5-May	66.4	76.3	66.0	63.0	62.7	62.6	58.3	53.4	48.0	44.2	41.3	36.1	36.8	35.7	34.1	32.1	31.6	31.9	33.8	34.1	36.6	39.0	39.3	53.6	46.5	76.3
6-May	59.7	59.9	64.3	69.5	60.2	55.4	53.8	51.6	49.4	42.5	35.3	30.4	28.3	27.8	28.0	26.3	23.9	22.1	19.0	20.9	26.0	24.1	22.8	23.4	38.5	69.5
7-May	25.6	27.6	29.8	33.1	34.8	35.9	35.7	34.1	34.0	33.8	33.3	31.4	31.9	31.9	35.3	45.3	48.1	38.5	31.1	32.2	36.2	38.3	45.5	45.2	35.4	48.1
8-May	55.7	61.4	69.1	64.8	69.2	66.2	53.3	40.4	36.6	31.2	31.1	35.9	33.3	33.4	34.1	33.3	34.4	34.2	35.3	37.0	42.3	55.2	67.6	74.9	47.1	74.9
9-May	76.7	70.8	73.5	78.6	75.1	69.7	57.1	48.4	41.8	31.8	23.1	16.5	16.6	15.4	15.1	15.6	16.7	19.4	18.0	20.1	22.9	27.9	36.6	35.3	38.5	78.6
10-May	45.3	43.7	45.6	49.5	51.4	48.9	45.5	43.8	38.4	29.5	25.5	27.7	26.3	24.1	23.4	23.2	23.4	22.4	25.2	31.2	34.7	51.3	44.4	47.0	36.3	51.4
11-May	57.8	72.1	73.8	70.3	72.6	72.6	72.7	58.0	49.4	48.2	51.6	55.1	47.4	36.9	41.8	40.8	36.8	34.5	34.2	37.5	46.1	59.8	65.1	65.0	54.2	73.8
12-May	58.4	58.9	64.3	76.8	76.1	80.5	78.8	72.5	64.5	54.7	47.2	42.0	38.4	39.2	39.0	35.6	33.3	34.2	36.6	35.4	38.2	42.7	49.0	53.1	52.1	80.5
13-May	57.1	58.5	62.1	67.8	79.0	74.2	62.0	58.2	49.6	40.2	37.2	36.7	33.2	29.1	26.0	22.6	21.0	22.3	21.3	40.2	43.4	47.9	45.5	45.6	45.0	79.0
14-May	49.6	54.6	60.0	56.6	60.3	61.7	57.3	53.3	53.0	51.3	50.2	53.1	52.4	53.5	56.8	58.4	63.6	67.2	71.8	71.6	72.1	72.3	78.9	90.4	61.3	90.4
15-May	92.4	91.6	89.0	85.4	86.1	84.3	83.6	78.1	70.1	64.2	59.2	48.9	43.4	37.9	35.5	35.2	35.2	35.8	35.7	37.9	42.1	46.8	50.0	57.7	59.4	92.4
16-May	63.3	67.9	69.6	72.5	76.0	77.1	74.4	67.3	58.9	52.1	44.0	36.4	32.0	27.8	25.1	23.5	23.6	22.9	23.9	25.6	29.6	33.4	39.0	46.3	46.3	77.1
17-May	48.2	51.8	56.4	59.4	57.9	58.4	59.6	58.4	52.1	46.7	39.6	33.3	28.7	27.0	27.1	28.6	27.6	27.6	27.8	30.2	33.8	36.6	38.7	38.5	41.4	59.6
18-May	39.8	42.6	46.9	51.8	61.3	53.7	51.8	48.7	44.3	38.6	36.0	31.4	28.9	29.6	30.7	31.3	28.4	27.9	27.5	28.9	31.8	35.1	37.9	37.2	38.4	61.3
19-May	39.4	46.3	49.0	58.6	63.6	56.9	52.9	46.8	42.6	37.2	27.8	23.6	23.5	27.4	28.7	28.2	28.4	30.5	49.8	57.2	73.2	79.5	77.5	81.6	47.1	81.6
20-May	78.5	79.7	80.5	81.0	82.0	81.3	81.0	80.1	78.7	76.3	73.8	71.2	69.2	63.1	64.0	72.3	74.8	72.4	72.4	74.8	79.5	87.2	89.1	85.9	77.0	89.1
21-May	87.7	88.4	87.3	86.5	86.5	83.4	79.3	72.5	63.9	60.2	55.7	54.0	52.0	53.7	60.2	68.3	67.0	67.4	69.7	70.5	73.9	75.0	76.2	80.8	71.7	88.4
22-May	84.3	81.2	81.7	82.6	82.3	83.5	81.9	77.5	73.4	67.8	77.3	80.7	84.3	80.4	78.5	72.6	65.0	53.7	50.8	54.8	61.2	66.5	72.5	78.8	73.9	84.3
23-May	82.1	83.9	86.4	89.2	90.5	87.1	80.5	74.0	67.1	55.1	47.3	45.7	60.1	65.9	46.7	56.6	69.4	55.1	47.8	51.1	55.4	59.2	62.8	68.3	66.1	90.5
24-May	73.0	77.0	80.7	81.7	89.1	84.7	71.9	64.0	59.9	54.8	46.8	40.1	34.6	30.9	29.3	30.2	29.5	30.6	31.1	38.3	45.9	47.7	53.2	50.6	53.2	89.1
25-May	49.7	58.4	60.2	52.5	58.2	57.4	52.1	47.7	44.5	40.9	36.5	33.3	30.4	27.7	27.2	27.7	27.8	28.5	29.7	31.2	35.5	41.3	44.0	47.8	41.3	60.2
26-May	55.1	56.1	68.8	77.4	80.8	62.6	56.7	52.2	44.8	40.7	36.6	33.2	28.5	27.5	26.1	24.4	24.9	26.6	31.6	58.5	79.0	89.3	94.2	94.5	52.9	94.5
27-May	93.2	94.1	93.7	90.0	92.2	91.6	86.5	80.9	73.0	60.3	36.1	29.1	27.9	28.2	28.1	28.2	26.8	27.2	26.4	27.7	32.0	47.0	56.0	54.1	55.4	94.1
28-May	56.1	59.0	58.9	63.6	65.3	62.9	59.4	51.4	45.1	36.9	29.7	26.5	24.6	23.0	22.1	22.0	24.0	25.2	27.5	33.2	40.0	44.7	51.6	75.5	42.8	75.5
29-May	70.8	58.2	63.7	64.9	64.3	62.8	60.0	54.4	41.8	33.9	29.2	25.4	24.2	22.6	22.9	22.5	23.1	23.3	25.1	27.6	30.9	40.0	46.4	50.9	41.2	70.8
30-May	57.7	60.1	65.5	83.5	88.3	83.0	71.0	56.4	39.6	36.0	25.4	22.5	22.8	22.0	22.1	25.0	29.7	34.7	48.5	47.9	56.0	57.5	53.9	56.0	48.6	88.3
31-May	58.1	60.1	63.9	66.3	67.0	65.9	63.5	59.5	53.5	48.4	45.6	41.3	47.6	49.4	49.1	56.3	65.5	75.1	80.9	82.2	91.0	94.8	96.6	97.3	65.8	97.3
63.5 65.7 68.2 70.5 72.7 70.5 65.8 59.9 53.9 48.1 43.0 39.2 37.5 36.0 35.0 35.4 35.8 35.3 36.7 40.5 46.0 51.7 55.9 60.7																										Diurnal Average
93.4 96.3 96.4 90.8 92.2 91.6 87.3 81.8 78.7 79.6 77.3 80.7 84.3 80.4 78.5 72.6 74.8 75.1 80.9 82.2 91.0 94.8 96.6 97.3																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Fort Hills - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	19	2.55	2.55
20 - 40	254	34.14	36.69
40 - 60	217	29.17	65.86
60 - 80	175	23.52	89.38
80 - 100	79	10.62	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

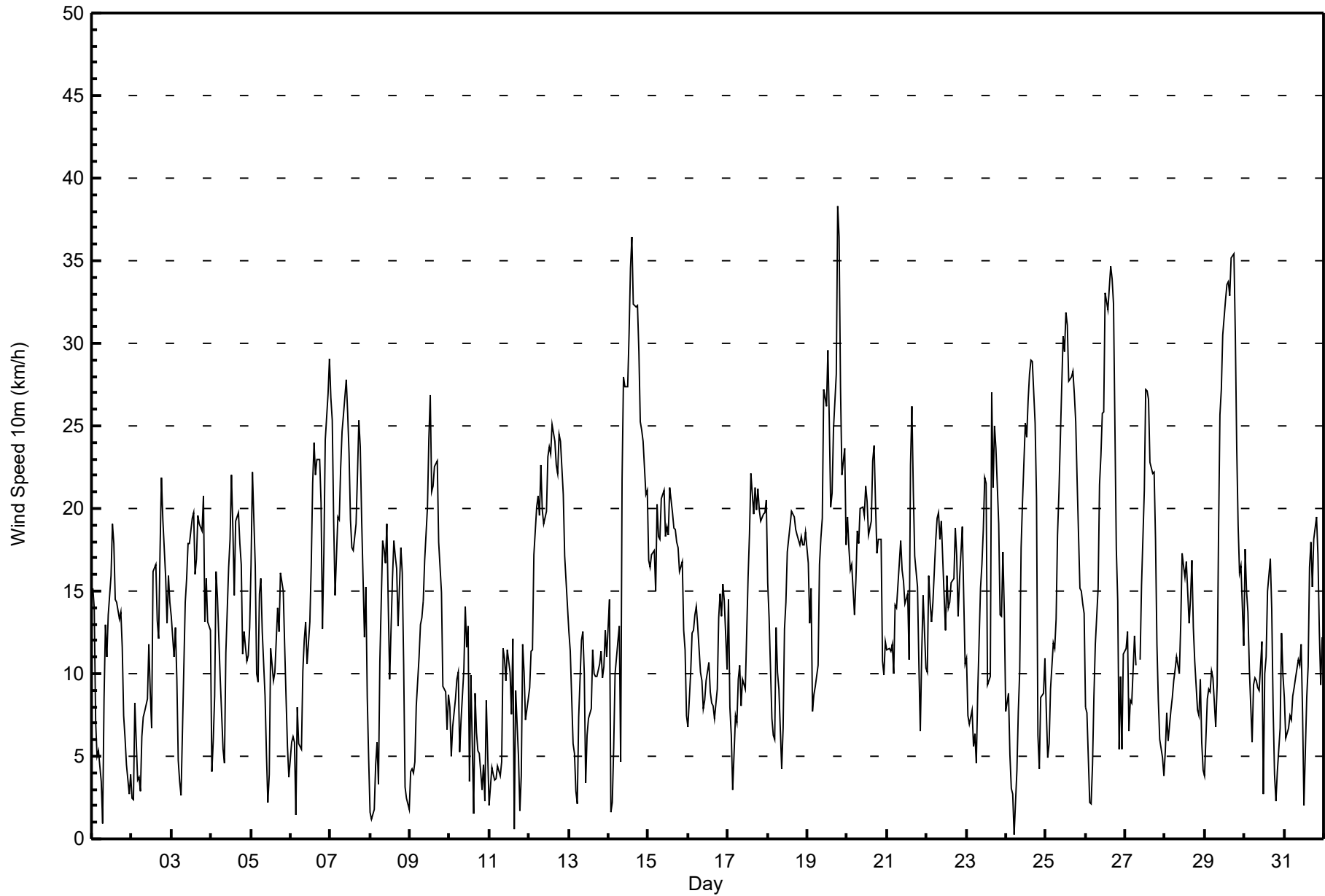
Fort Hills - May 2025

Maximum Speed: 38 km/h on May 19 19:00										Maximum Daily Speed Average: 20.7 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 24 06:00										Minimum Daily Speed Average: 1.5 km/h on May 11										Hours of Data: 742						
Maximum Diurnal Speed Average: 8.5 km/h at hour 13										Minimum Diurnal Speed Average: 1.1 km/h at hour 4										Hours of Missing Data: 2						
Monthly Average Velocity: 4.7 km/h 157.6 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 9 Median = 13 Q ₃ = 19 P ₉₀ = 24 P ₉₉ = 34										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N15	N14	NNW7	NNW5	WNW5	NW3	WSW1	S8	S13	S11	S14	S16	SSE19	S18	S14	S14	SSE13	SSE14	SE12	ESE7	E6	SE5	NE3	E4	SSE5.2	SSE19
2-May	ENE2	E2	N8	NW4	W4	SE3	SE6	ESE7	SE8	ESE8	ESE12	E9	ESE7	NW16	NW17	NW13	NW12	N17	NNE22	NNE19	NNE16	N13	N16	N14	N5.8	NNE22
3-May	N13	N11	N13	N10	NNW5	NNW3	WSW3	S10	S14	SSW16	SSW18	NNW18	NNW19	WSW20	W16	W17	W20	NNW19	NNW19	NNW21	W13	NW16	NNW13	N13	WNW8.9	WNW21
4-May	WSW4	S6	SSW9	NW16	NNW15	NW10	NW8	NNE5	NE5	SW11	SSW16	WSW18	W22	SW19	WSW15	NNW19	NW20	NNW18	NNW17	W11	W13	NNW11	NNW11	NNW13	W10.0	W22
5-May	N17	N22	N17	N10	NNW10	NW15	NNW16	NW13	NNW9	NNW5	WSW2	ENE4	ENE12	ENE10	E10	NNE12	NNE14	NE13	NNE16	NE15	NE12	NE9	NE6	NNW4	NNE9.1	N22
6-May	NNW6	NNW6	NNW6	NW1	SSE8	S6	S5	S10	S12	S13	SSW11	S13	SSW17	SW22	SSW24	SSW22	SSW23	S23	S20	SSE13	SSE17	SSE24	SSE27	SSE29	S12.5	SSE29
7-May	SSE27	SSE25	SSE19	SSE15	SE20	SE19	SSE22	SSE25	S26	S28	SSW26	SSW23	SSW19	SW18	SSW17	WSW19	SW22	SW25	SSW24	SSW19	S12	SSW15	SSW9	WNW5	S17.0	S28
8-May	WNW2	SSW1	NW2	NNW4	NNW6	NNW3	N11	NNE18	N18	NNE17	NNE19	NNE14	ENE10	NE16	NNE18	NNE17	NNE16	NNE13	NNE18	NNE16	NE11	ENE3	SE2	S2	NNE9.8	NNE19
9-May	SSW4	SSE4	SE4	SSE5	SSE8	SSE11	SSE13	S13	SSE14	S17	SW20	SW24	SW27	SW21	SW21	SW23	SW23	SW18	SW16	SW15	SSW9	S9	SSW7	SW9	SSW12.4	SW27
10-May	SW8	SSE5	SE7	SE8	SSE10	S10	SE5	SE7	SE10	S14	S12	NNW13	NNE3	N10	S2	ESE9	SSE6	SW5	S5	SE3	E4	E2	SE8	ESE5	SSE4.1	SSW14
11-May	NNW2	NNW4	N4	N4	NNW4	NNW4	N4	ESE5	SSE12	SSE11	SSE10	SSE11	SSW10	SSW8	SE12	ENE1	NNE9	NNE5	ENE2	E4	NNE12	NNE10	N7	N8	ENE1.5	SE12
12-May	N9	NNW11	N11	N17	N20	N21	NNE20	NNE23	NNE20	NNE19	NNE20	NNE23	NNE24	NNE23	N25	NNE24	NNE23	NNE22	NNE25	N24	NNE21	N17	N16	NNW14	NNE19.4	N25
13-May	NNW13	N11	NNW6	NW5	NW3	W2	NNW7	N12	NNE13	NNE10	NE3	SSE6	SE7	ESE8	ESE11	ESE10	E10	E10	E11	S11	SSE10	SE10	SE13	SE11	E3.8	SE13
14-May	SE14	ENE2	NNE2	S6	SE10	SSE12	S13	WSW5	N22	N28	N27	NNE27	NNE31	NNE35	N36	NNE32	NNE32	N32	N30	N25	N25	N24	N21	N21	NNE16.9	N36
15-May	N17	N16	N17	N17	N15	N20	N18	N18	N21	N21	N18	N19	N18	NNE21	NNE20	NNE19	NNE19	NNE18	NE18	NE16	NE17	NNE13	NNE11	NNE7	NNE16.7	NNE21
16-May	NNW7	N10	N12	N13	N14	N14	N13	N10	N10	N8	NNE8	NNE10	NE11	ENE9	NNE8	NNE8	NNE7	NE9	NNE13	NNE15	N13	NNE15	SE14	SE10	NNE9.1	NNE15
17-May	SE14	SSE8	SE6	SSW3	S7	S7	SSE10	SSE11	SE8	SE10	SE9	SE12	SE16	SE18	SE22	SSE20	SE21	SSE20	SSE21	SE20	SE19	SE20	SE20	SE21	SE13.9	SE22
18-May	SE15	SSE13	SSE7	SSE6	SSE6	SSE13	SSE10	SSE9	SSW4	SSE7	SE13	SE14	SSE17	S19	S20	SSE20	SSE19	SSE19	SE18	SE18	SE18	SE18	SE18	SE19	SSE13.7	S20
19-May	SE17	SE13	SE15	SSE8	SSE9	S9	S10	S17	SSE18	SSE19	SSE27	SSE26	SSE30	SSE25	SSE20	SSE21	SE25	SE28	SSE38	SSE36	SE27	SE22	SE24	SE18	SSE20.7	SSE38
20-May	SE20	SE18	SE16	SE17	SE14	SE16	SE19	SE18	SE20	SE20	SE20	SE21	SE20	SSE18	SSE19	SSE23	SE24	SSE20	SE17	SSE18	SSE18	SSE11	SE10	SE12	SE17.7	SE24
21-May	SE11	SE11	SE11	SE12	SE10	SE14	SSE14	SSE17	SSE18	SSE16	SSE16	SSE14	SSE15	S11	SSE23	S26	S21	S17	S15	S11	SSE7	SSE11	SSE15	SSE10	SSE13.9	S26
22-May	SE10	SSE16	SSE14	SSE13	SE14	SSE18	SSE19	SSE20	S18	S19	SSW15	SW13	SW16	S14	SSE14	S16	SSE16	SE19	SSE17	S14	SSE16	SE19	SE15	SSE11	SSE14.5	SSE20
23-May	SSE11	SSE7	SSE7	SSE8	SSE6	SSE6	SSE5	SSE9	SSE15	SSE17	SSE19	SSE22	SSE22	SSW9	SE10	SE27	ESE21	SE25	SSE24	SE19	SSE14	SSE13	SE17	SSE14	SSE13.8	SE27
24-May	SSE8	SE9	SE5	ESE3	NNW3	NNE0	SSE4	S8	S10	SSE18	SSE20	SSE25	SSE24	SSE27	S28	SSE29	SSE29	SSE25	S21	W6	E4	SE9	SE9	SSE11	SSE12.9	SSE29
25-May	S8	S5	SE6	SE9	SE12	SE12	SE13	SSE18	SSE21	SSE27	SSE30	SSE30	SSE32	SSE31	S28	S28	SSE28	SSE27	SSE25	SSE22	SSE15	SSE15	SE14	SE14	SSE19.2	SSE32
26-May	SE8	SE8	NNW2	SW2	S4	SSE9	SSE12	SSE15	SSE21	SSE23	SSE26	SSE26	SSE33	SSE32	SSE33	SSE35	SSE34	SSE32	SSW18	W14	WNW5	SSE10	SSW5	S11	SSE15.8	SSE35
27-May	SSW12	SSW13	S7	SSW8	SSE8	S12	SSW11	C	C	SSW11	WSW15	WSW21	SW27	SW27	WSW27	WSW23	SW22	SW22	SW18	WSW12	WSW8	S6	S5	SSW4	SW13.5	SW27
28-May	SSE5	S8	SSE6	SE8	SE9	SSE10	SSE10	S11	S10	SSW13	SSW17	SW16	SW16	SW17	SW13	SW15	SSW17	SSW13	S11	SSE8	SE7	SE10	SE6	SSE4	S9.3	SSW17
29-May	SSE4	SSE8	SSE9	SE9	SSE10	SSE10	SSE7	SSE9	SSE18	SSE26	S27	SSE30	SSE33	SSE34	SSE34	SSE33	SSE35	SSE35	SSE30	SSE24	SSE19	NNW16	W17	W12	SSE17.3	SSE35
30-May	WSW18	W15	SW14	W10	W6	W9	NNW10	NW10	NW9	NW9	NNW12	NNW3	WSW10	WSW11	SW15	SW17	SSW14	SSW8	SSW4	SSE2	S4	SSW7	S12	S10	WSW6.7	WSW18
31-May	S9	S6	S7	SSW7	S7	SSE9	S9	S10	S11	S10	S12	S8	W2	NNW9	NNW10	NNW16	NNW18	N15	N18	N19	NNW17	N13	NNW9	NNW12	NW2.4	N19
SE3.1 SE2.5 SE1.8 SE1.1 SE2.4 SSE3.5 SE3.8 SSE5.2 SSE6.0 SSE7.6 S8.1 S7.1 S8.5 S7.2 S7.4 S6.8 SSE6.5 SSE7.0 SSE5.3 SE3.3 ESE3.8 ESE3.7 SE4.3 SE3.4																								Diurnal Average		
SSE27 SSE25 SSE19 N17 N20 N21 SSE22 SSE25 S26 N28 SSE30 SSE30 SSE33 NNE35 N36 SSE35 SSE35 SSE35 SSE38 SSE36 SE27 SSE24 SSE27 SSE29																								Diurnal Maximum		
C - Calibration																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort Hills - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Hills - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	91	12.26	12.26
6 - 11	215	28.98	41.24
12 - 19	273	36.79	78.03
20 - 28	132	17.79	95.82
29 - 38	31	4.18	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Hills - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3	5	3	6	6	3	7	9	7	8	2	5	3	5	6	13	91
6 - 11	14	10	5	3	6	8	35	50	36	14	3	3	5	2	5	16	215
12 - 19	36	25	7	1	0	1	47	53	27	18	16	6	8	9	8	11	273
20 - 28	16	16	0	0	0	1	20	39	12	6	12	6	2	1	1	0	132
29 - 38	3	4	0	0	0	0	0	24	0	0	0	0	0	0	0	0	31
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	60	15	10	12	13	109	175	82	46	33	20	18	17	20	40	742

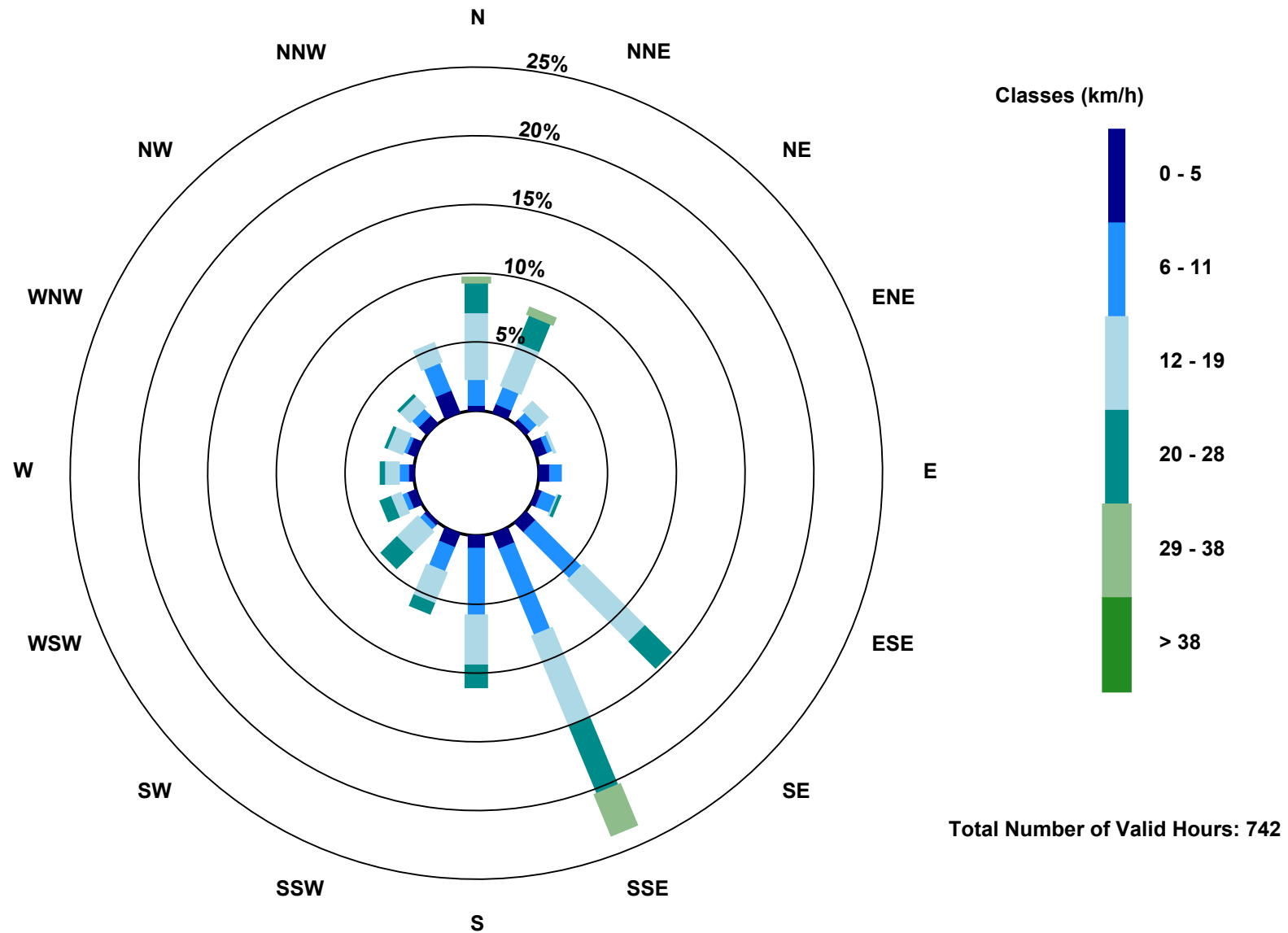
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Fort Hills





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on May 23 16:00																		Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 4 02:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	3	1	2	1	2	2	2	3	3	4	5	5	5	4	5	4	3	2	2	1	2	1	2	5
2-May	1	2	2	2	2	2	2	1	1	2	3	3	5	5	5	4	4	5	4	3	3	3	3	3	5
3-May	2	2	2	2	2	1	2	3	2	3	3	5	5	6	5	5	5	4	5	5	5	6	4	3	6
4-May	2	1	2	5	5	2	2	2	3	2	4	4	5	4	5	5	6	5	4	3	5	3	3	4	6
5-May	9	4	5	3	2	3	4	3	3	3	3	3	3	3	4	3	3	3	3	3	2	2	2	1	9
6-May	1	1	1	2	2	2	1	2	2	3	3	4	7	6	6	5	5	5	5	2	3	4	4	4	7
7-May	3	3	3	2	2	2	3	4	5	5	4	4	4	3	3	5	5	4	4	4	1	2	4	2	5
8-May	3	2	2	3	2	2	5	3	3	3	3	4	5	4	4	4	3	4	4	4	3	2	2	1	5
9-May	2	2	2	1	3	1	3	2	2	4	5	6	5	6	6	6	6	4	4	3	1	1	2	2	6
10-May	1	2	2	1	2	3	2	2	2	5	4	10	4	5	3	4	5	3	2	1	1	2	3	3	10
11-May	1	2	2	1	2	2	2	2	2	3	3	3	3	4	5	4	4	2	1	2	3	2	2	2	5
12-May	2	3	3	3	4	3	4	3	4	4	4	5	5	5	5	5	5	5	4	4	4	3	2	3	5
13-May	2	2	2	1	1	1	3	3	3	4	3	3	3	4	4	4	3	4	3	4	3	2	2	3	4
14-May	5	2	2	3	2	2	2	2	7	6	5	5	5	6	6	6	6	6	7	5	5	5	4	4	7
15-May	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	3	4	3	3	3	2	1	5
16-May	1	2	2	2	2	3	3	2	2	4	3	4	4	4	4	3	4	4	3	3	2	3	3	2	4
17-May	4	2	3	2	2	1	2	2	3	3	3	5	5	5	4	3	4	4	4	4	3	3	3	4	5
18-May	3	3	2	2	6	3	1	2	2	4	3	5	5	5	4	4	4	3	3	3	4	4	3	3	6
19-May	4	4	2	2	2	2	3	3	4	4	4	5	4	5	5	7	4	4	7	6	5	3	4	4	7
20-May	3	3	2	3	3	3	3	3	4	3	3	3	3	3	3	4	3	3	5	3	3	4	2	2	5
21-May	2	2	2	2	3	4	2	3	3	3	3	3	3	5	8	4	3	3	2	3	1	2	2	2	8
22-May	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	3	2	3	2	3	2	2	2	2	3
23-May	3	2	1	1	1	1	1	4	3	4	4	5	10	5	3	10	6	5	4	3	2	3	3	1	10
24-May	4	3	2	2	1	2	3	3	3	3	5	5	5	5	5	5	6	4	5	3	2	1	1	2	6
25-May	3	1	1	1	1	1	2	4	4	5	6	5	6	6	5	6	5	4	5	3	2	1	2	3	6
26-May	2	2	1	1	1	1	3	2	4	4	5	5	5	6	6	6	7	6	7	6	5	5	4	2	7
27-May	2	2	3	2	2	2	2	C	C	3	4	5	6	5	5	5	5	5	4	6	3	2	1	2	6
28-May	2	2	1	1	1	1	1	2	2	3	4	5	5	5	5	4	3	3	2	1	1	1	2	1	5
29-May	2	1	1	1	2	2	2	4	5	4	5	6	6	6	6	6	5	5	4	4	2	7	4	3	7
30-May	5	5	3	3	2	3	3	4	3	4	3	4	5	4	4	3	4	2	1	1	3	2	2	2	5
31-May	1	1	1	1	2	1	2	2	2	2	2	2	3	2	4	4	4	3	4	4	3	3	3	4	4
Diurnal Maximum																									
C - Calibration																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

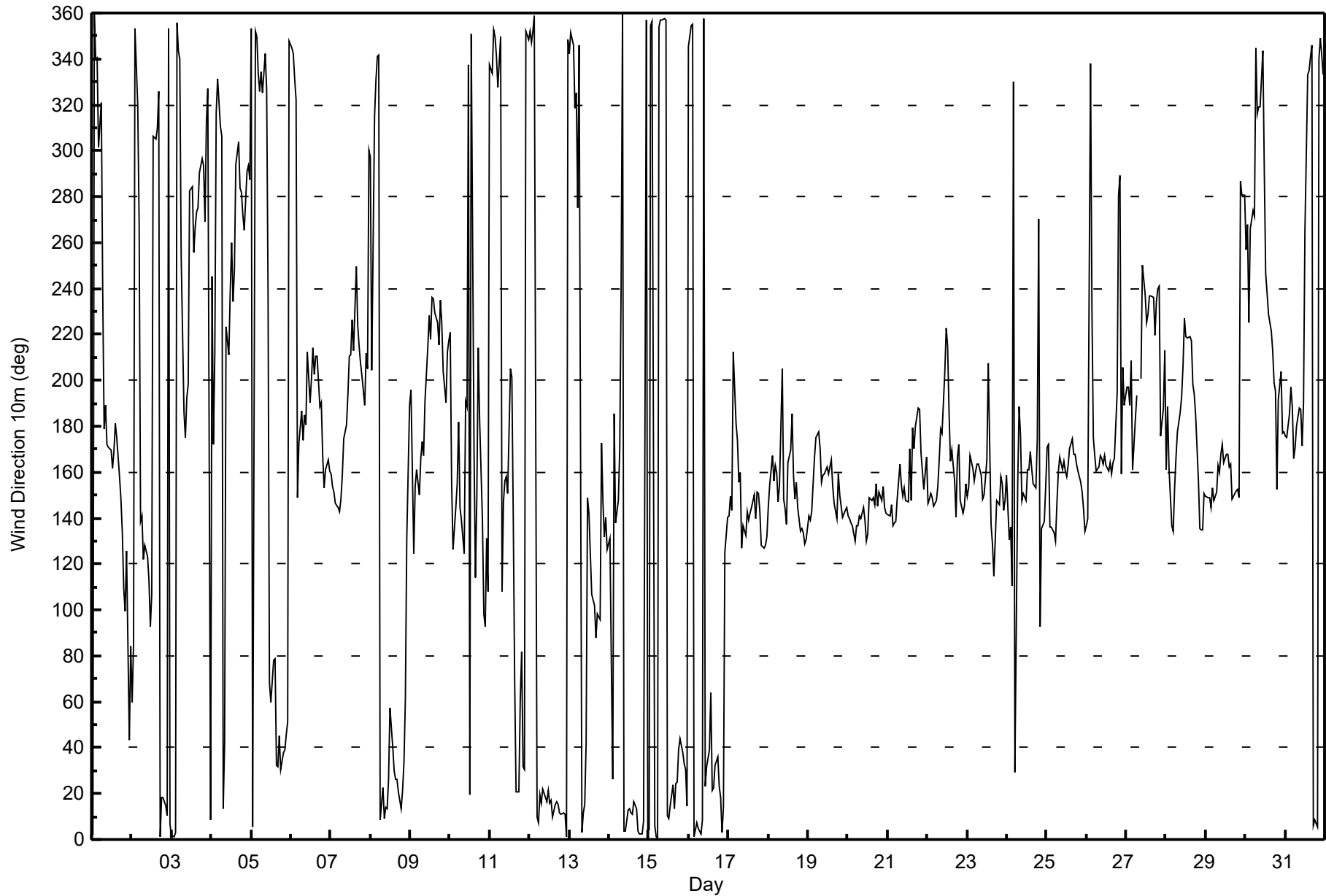
Fort Hills - May 2025

Direction of Maximum Speed: 159 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 153.7 deg on May 19																					Hours in Service: 744				
Direction of Minimum Speed: 29 deg on May 24 06:00 Direction of Minimum Daily Speed Average: 1.5 deg on May 11																					Hours of Data: 742				
																					Hours of Missing Data: 2				
Monthly Average Direction: 157.6 deg																					Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	2	359	340	341	301	321	239	179	189	172	171	169	161	169	181	175	158	148	134	109	100	126	43	84	158.0
2-May	60	85	353	319	268	139	141	122	128	123	113	93	107	307	305	310	326	1	18	19	15	11	354	6	10.3
3-May	2	1	3	356	343	340	254	186	175	192	198	282	284	256	267	274	275	290	297	293	269	313	327	9	286.2
4-May	245	172	212	317	331	311	306	13	42	223	211	239	260	234	248	294	304	284	282	272	265	291	294	288	273.6
5-May	353	5	352	350	334	326	334	325	342	327	238	68	60	78	79	32	31	45	30	38	39	46	51	348	13.9
6-May	345	342	331	322	149	172	187	174	185	181	212	190	201	214	202	211	211	189	190	167	153	161	165	161	186.4
7-May	159	154	151	147	145	143	148	159	175	180	194	211	211	226	213	249	224	215	207	202	189	212	205	300	187.0
8-May	297	204	315	331	341	342	9	23	9	14	14	26	57	40	30	26	26	21	13	21	34	61	131	189	21.1
9-May	196	160	124	153	161	150	166	173	167	191	214	228	218	236	236	229	225	215	235	225	204	190	212	217	209.0
10-May	221	156	127	145	155	182	145	139	125	191	188	338	19	351	169	114	149	214	182	139	98	93	131	108	152.3
11-May	338	334	353	350	341	328	349	108	147	156	158	150	205	201	140	69	21	21	61	82	32	30	352	349	78.4
12-May	352	347	352	359	9	8	20	16	22	20	16	21	16	17	10	15	16	15	12	11	12	11	1	348	11.3
13-May	342	351	346	319	325	275	346	3	12	15	42	149	142	107	105	102	88	98	96	173	147	132	140	126	80.1
14-May	131	77	26	185	138	148	170	243	360	4	4	13	14	12	11	17	13	4	2	3	3	8	357	5	11.5
15-May	4	355	356	6	1	1	354	357	357	358	357	10	9	15	24	14	25	25	39	44	38	33	30	15	11.8
16-May	346	355	355	1	4	7	5	2	9	357	23	32	39	64	22	23	32	36	23	18	3	14	125	140	19.7
17-May	141	150	143	213	181	174	156	160	127	137	133	143	139	142	145	150	140	152	151	143	128	127	128	132	142.7
18-May	145	154	167	156	163	160	147	154	205	149	144	137	164	170	185	159	148	156	145	134	136	134	129	131	150.5
19-May	141	139	142	155	166	175	178	170	156	159	159	163	159	163	165	154	146	140	159	150	145	141	143	145	153.7
20-May	141	140	138	137	130	137	137	141	139	144	139	130	133	149	148	149	146	155	145	151	148	154	144	142	142.4
21-May	141	141	146	137	138	139	149	164	154	150	153	148	147	170	148	179	170	180	188	187	168	161	152	166	158.2
22-May	146	148	151	149	145	148	154	165	179	177	204	223	215	187	165	170	156	140	166	172	148	142	145	155	163.5
23-May	150	153	167	162	156	160	164	164	159	148	150	157	165	208	137	129	115	131	148	146	158	155	144	147	148.8
24-May	159	131	136	111	330	29	154	189	176	148	151	148	161	161	169	161	155	153	174	271	93	135	138	154	157.2
25-May	171	172	136	136	134	130	146	160	166	161	165	161	158	163	170	174	168	168	164	160	156	151	144	134	159.6
26-May	136	140	338	232	175	167	160	162	167	166	164	167	163	161	164	159	164	166	195	280	289	160	206	189	168.3
27-May	197	197	189	208	161	183	194	C	C	201	250	237	225	229	237	237	236	220	234	240	241	176	188	213	221.6
28-May	161	188	162	136	134	153	166	178	186	193	206	227	219	218	219	217	199	194	185	156	135	135	135	151	187.2
29-May	150	149	149	145	153	148	151	163	160	168	172	164	168	168	162	164	148	151	152	153	149	287	281	281	163.6
30-May	257	268	225	266	274	272	345	316	319	319	344	292	247	238	229	222	213	199	196	152	191	204	177	177	247.4
31-May	176	175	185	197	188	166	171	180	188	187	171	191	265	333	335	341	346	6	9	5	340	349	342	333	326.1
145.2 133.3 129.5 130.5 134.8 148.3 145.3 153.3 151.8 163.0 169.8 170.8 175.0 184.3 176.9 175.3 160.9 156.7 156.8 139.0 116.4 123.6 136.8 138.2																									
Diurnal Average																									
C - Calibration																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort Hills - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort Hills - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 101 deg on May 30 12:00																		Hours in Service: 744							
Minimum Value: 5 deg on May 9 22:00																		Hours of Data: 742							
																		Hours of Missing Data: 2							
Percentiles: P ₁ = 6 P ₁₀ = 8 Q ₁ = 12 Median = 15 Q ₃ = 22 P ₉₀ = 40 P ₉₉ = 81																		Hours of Calibration: 2							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-May	14	14	20	27	15	27	82	13	16	24	23	19	25	20	21	23	25	14	13	19	18	28	43	40	82
2-May	56	64	13	34	21	47	12	18	13	17	19	42	67	33	27	29	22	22	10	8	11	13	16	16	67
3-May	12	11	11	11	21	40	41	14	14	15	14	32	23	21	27	25	16	17	15	16	18	23	19	29	41
4-May	51	10	31	23	19	15	23	44	86	14	10	22	13	22	37	16	20	19	18	15	15	13	15	14	86
5-May	41	15	16	15	17	14	16	24	31	69	84	78	28	35	35	21	17	17	11	9	10	15	17	36	84
6-May	13	10	9	77	8	18	13	9	12	16	26	20	27	22	17	21	20	13	11	12	7	8	7	7	77
7-May	7	7	7	6	5	6	6	9	11	12	14	15	15	14	11	14	13	10	10	9	9	8	28	33	33
8-May	74	76	41	21	19	30	14	12	13	13	13	18	32	16	16	17	16	20	16	15	12	40	34	53	76
9-May	12	44	27	17	12	7	11	15	12	13	19	18	18	22	17	20	16	13	19	9	15	5	10	14	44
10-May	20	38	13	14	13	19	30	23	14	26	33	79	81	45	98	43	59	59	15	39	21	56	23	41	98
11-May	64	23	28	17	52	26	38	59	13	30	25	26	25	38	34	90	38	46	86	48	14	26	21	12	90
12-May	13	14	14	15	13	14	10	10	13	15	16	16	15	17	17	16	17	17	14	13	12	12	15	15	17
13-May	12	14	31	16	61	61	16	15	17	30	78	61	50	65	28	29	28	28	24	25	17	9	11	13	78
14-May	22	73	60	48	10	9	12	55	21	16	17	13	14	15	14	12	15	17	17	16	16	13	16	14	73
15-May	14	16	16	13	15	16	17	16	17	17	17	19	23	19	22	21	19	16	15	13	9	8	9	12	23
16-May	18	13	13	13	13	12	15	18	23	45	38	39	32	51	49	41	68	33	18	10	12	20	21	9	68
17-May	9	17	28	53	12	13	13	14	28	22	31	25	24	20	13	16	14	13	14	9	8	8	8	9	53
18-May	12	12	15	11	63	7	11	20	58	54	23	29	17	19	18	16	17	13	12	8	8	8	8	8	63
19-May	13	18	7	6	9	17	14	12	13	15	12	15	12	12	12	14	13	11	10	9	8	8	8	8	18
20-May	8	8	9	9	10	10	10	11	9	10	12	11	13	15	10	8	8	10	14	8	7	20	8	9	20
21-May	7	8	7	12	17	10	11	10	11	13	15	18	16	36	21	9	13	11	10	10	8	7	7	9	36
22-May	9	7	7	6	7	7	9	11	15	15	11	16	13	11	12	14	15	15	15	12	6	6	6	9	16
23-May	12	8	14	11	13	17	36	46	12	17	17	15	16	25	34	18	18	17	9	9	9	16	9	7	46
24-May	28	12	20	39	23	84	22	18	21	12	14	13	16	16	13	11	12	8	19	42	45	8	8	7	84
25-May	15	22	9	6	5	6	10	12	13	13	12	12	12	13	15	14	13	11	10	7	7	5	8	7	22
26-May	8	9	64	54	8	6	9	9	11	12	13	13	11	12	11	11	10	12	51	18	80	49	69	18	80
27-May	13	13	17	12	23	13	15	C	C	20	24	15	13	13	15	15	16	12	17	13	13	12	12	35	35
28-May	28	12	24	9	12	8	16	12	14	14	16	20	21	21	31	21	14	9	9	9	8	6	13	14	31
29-May	30	8	6	7	5	7	20	16	11	11	13	14	12	12	12	14	8	8	7	7	7	63	16	17	63
30-May	13	19	18	30	26	16	25	22	23	24	25	101	53	30	18	13	12	12	16	55	65	12	7	9	101
31-May	9	16	21	14	31	14	14	15	13	16	15	14	71	16	14	15	15	14	14	16	14	18	22	13	71
74 76 64 77 63 84 82 59 86 69 84 101 81 65 98 90 68 59 86 55 80 63 69 53																									
Diurnal Maximum																									
C - Calibration																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS25 WASKŌW OHCI PIMÂTISIWIN MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO ₂ (ppb) Average	709	35	35	100	34.6	0	3.7	0
H ₂ S(ppb) Average	707	37	37	100	1.9	0	0.7	0
Temperature 2 m (C) Average	744	0	0	100	33.1	0	23.9	0
Relative Humidity (%) Average	721	0	23	96.91	99.9	-	81	-
Wind Speed 10 m (km/h) Average	739	0	5	99.33	18	0	10	0
Wind Direction 10 m (deg) Average	739	0	5	99.33	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMĀTISIWIN (AMS25)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	0.99	2.7	-	0	0	0	0.1	0.5	2.6	34.6
H2S (ppb) Average	707	0.19	0.2	-	0	0	0.1	0.1	0.2	0.4	1.9
Temperature 2 m (C) Average	744	13.96	6.9	-	-1.7	5.5	9.2	13.5	18.6	23.6	33.1
Relative Humidity (%) Average	721	52.87	21.5	-	14.3	26.1	33.6	51.8	70.8	82.4	99.9
Wind Speed 10 m (km/h) Average	739	6.3	4	-	0	2	3	6	9	11	18
Wind Direction 10 m (deg) Average	739	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)

MAY 2025

OPERATIONAL NOTES					
Parameter	Period	Period	Duration	Notes	
	Start	End	(Hours)		
Relative Humidity	04 May 2025 02:00	04 May 2025 04:00	3	Sensor operated out of range	
Relative Humidity	21 May 2025 00:00	21 May 2025 00:00	1	Sensor operated out of range	
Relative Humidity	21 May 2025 02:00	21 May 2025 02:00	1	Sensor operated out of range	
Relative Humidity	23 May 2025 02:00	23 May 2025 07:00	6	Sensor operated out of range	
Relative Humidity	26 May 2025 22:00	27 May 2025 06:00	9	Sensor operated out of range	
Relative Humidity	31 May 2025 22:00	01 Jun 2025 00:00	3	Sensor operated out of range	
Wind Speed, Wind Direction	08 May 2025 06:00	08 May 2025 07:00	2	Flat line in sensor output signal	
Wind Speed, Wind Direction	26 May 2025 04:00	26 May 2025 04:00	1	Flat line in sensor output signal	
Wind Speed, Wind Direction	28 May 2025 20:00	28 May 2025 20:00	1	Flat line in sensor output signal	
Wind Speed, Wind Direction	31 May 2025 01:00	31 May 2025 01:00	1	Flat line in sensor output signal	



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

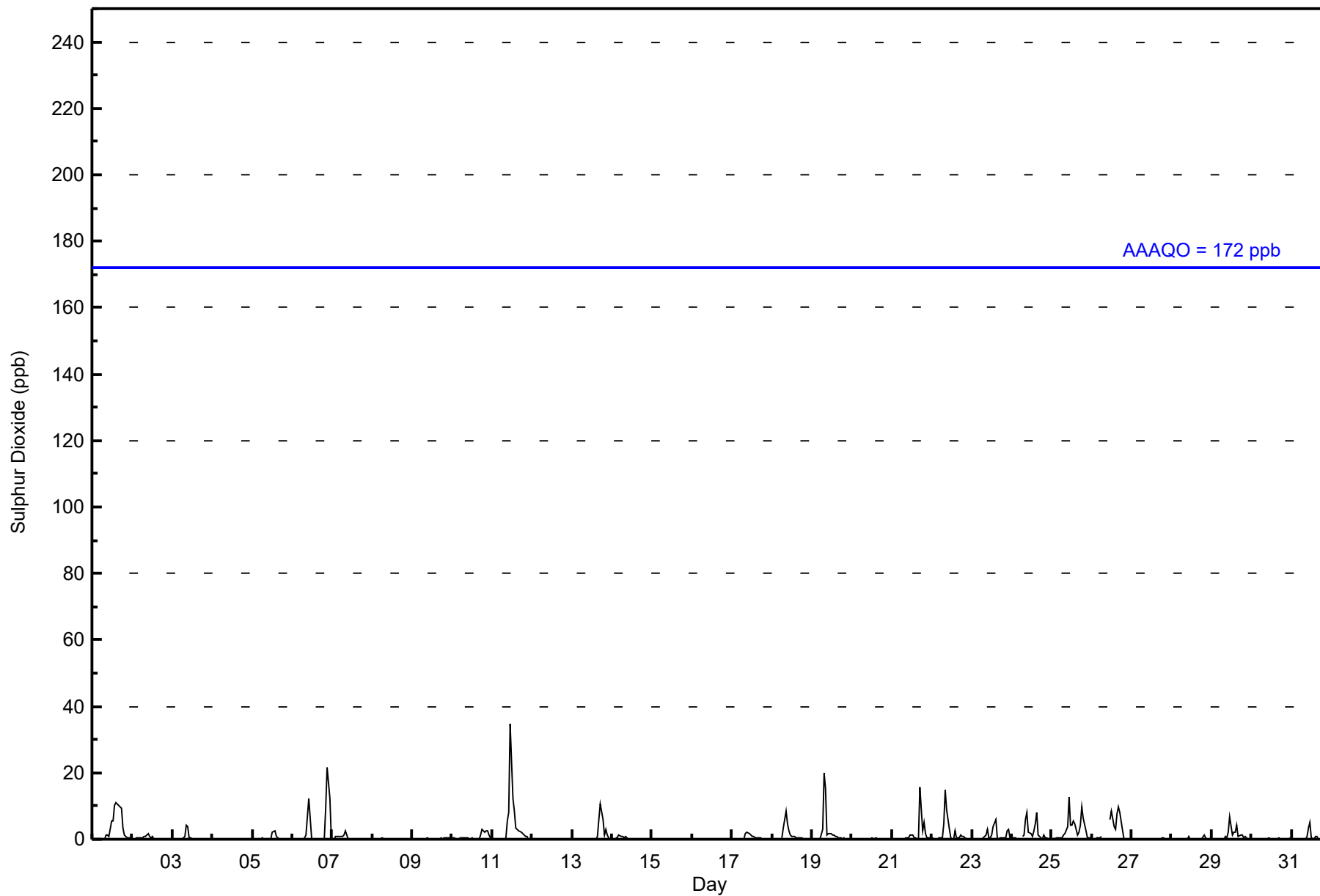
Waskow ohci Pimatisiwin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 34.6 ppb on May 11 12:00 Maximum Daily Average: 3.7 ppb on May 11																			Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0							
Minimum Value: 0.0 ppb on May 1 02:00 Maximum Diurnal Average: 2.3 ppb at hour 12 Monthly Average: 0.99 ppb																			Minimum Daily Average: 0.0 ppb on May 4 Minimum Diurnal Average: 0.1 ppb at hour 2 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 2.6 P ₉₉ = 12.4							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	1.4	1.1	0.8	5.5	5.5	10.3	11.1	10.8	9.9	9.2	3.5	1.5	0.9	0.6	0.5	0.6	3.2	11.1
2-May	0.6	Z	0.4	0.3	0.2	0.4	0.6	0.9	0.8	1.5	0.8	0.4	0.6	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.4	1.5
3-May	0.0	0.0	Z	0.0	0.1	0.0	0.1	1.0	4.4	3.9	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.4
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-May	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.1	0.0	0.2	0.0	0.1	2.2	2.5	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3	2.5
6-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.2	1.2	6.7	12.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	9.3	21.7	12.3	0.3	2.8	21.7
7-May	Z	0.1	0.7	0.6	1.0	0.8	0.7	1.3	2.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.6
8-May	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
9-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.3	0.2	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.1	0.4
10-May	0.4	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	1.4	2.8	2.3	2.6	2.4	1.4	0.3	0.8	2.8
11-May	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.5	5.5	8.0	34.6	12.4	8.4	3.3	3.2	2.4	2.1	1.6	1.2	1.0	0.7	0.1	0.0	3.7	34.6
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.9	6.0	10.6	5.9	1.3	3.1	1.2	0.4	0.2	1.3	10.6
14-May	0.3	Z	0.4	0.5	1.2	1.0	0.7	0.4	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.6	2.1	1.7	1.4	1.0	0.7	0.4	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.1
18-May	0.0	0.0	0.1	0.0	0.0	Z	0.5	3.4	8.6	4.5	2.7	1.3	0.6	1.1	0.3	0.3	0.3	0.3	0.3	0.1	0.0	0.1	0.1	0.1	1.1	8.6
19-May	Z	0.2	0.1	0.1	0.1	0.2	3.1	19.9	15.4	1.1	1.8	1.6	1.1	1.2	0.8	0.8	0.6	0.4	0.2	0.2	0.1	0.1	0.0	0.1	2.1	19.9
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.2	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
21-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.6	1.3	1.1	0.4	0.4	0.0	0.0	15.7	2.5	5.1	1.7	0.5	0.3	0.2	1.3	15.7
22-May	0.5	0.2	0.2	Z	0.3	0.5	0.4	4.7	14.8	8.8	2.8	0.6	0.2	0.1	2.7	0.5	0.5	1.1	1.0	1.0	0.3	0.2	0.0	0.0	1.8	14.8
23-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	1.3	3.1	0.6	0.5	1.2	3.8	5.9	0.4	0.2	0.4	0.5	0.2	0.4	2.5	2.9	0.4	1.1	5.9
24-May	0.4	0.5	0.4	0.1	0.1	Z	0.7	1.2	6.0	8.2	2.0	1.7	1.0	2.7	4.7	8.2	1.1	0.6	0.0	1.1	0.3	0.2	0.2	0.1	1.8	8.2
25-May	Z	0.3	0.1	0.3	0.3	0.3	0.6	1.1	1.5	3.9	12.7	4.2	4.2	5.5	4.8	1.4	2.0	4.3	9.7	6.3	2.5	0.5	0.4	0.5	2.9	12.7
26-May	0.4	Z	0.5	0.3	0.3	0.3	0.7	C	C	C	C	5.9	8.7	3.8	2.8	7.7	9.7	8.1	2.6	0.0	0.0	0.0	0.0	0.0	2.7	9.7
27-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.3
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.2	0.6	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	1.4	0.3	0.2	0.0	0.0	0.2	1.4
29-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.7	0.5	2.0	6.8	1.2	2.2	2.3	4.2	0.8	1.3	1.4	0.3	1.0	0.4	0.0	0.0	1.1	6.8
30-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.4
31-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.9	3.3	5.1	0.4	0.2	1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	696	98.17	98.17
11 - 20	11	1.55	99.72
21 - 60	2	0.28	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	41	45	24	13	12	29	104	166	43	30	42	20	22	34	28	39	692
11 - 20	0	0	0	0	0	0	5	3	2	0	0	0	0	1	0	0	11
21 - 60	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	45	24	13	12	29	109	171	45	30	42	20	22	35	28	39	705

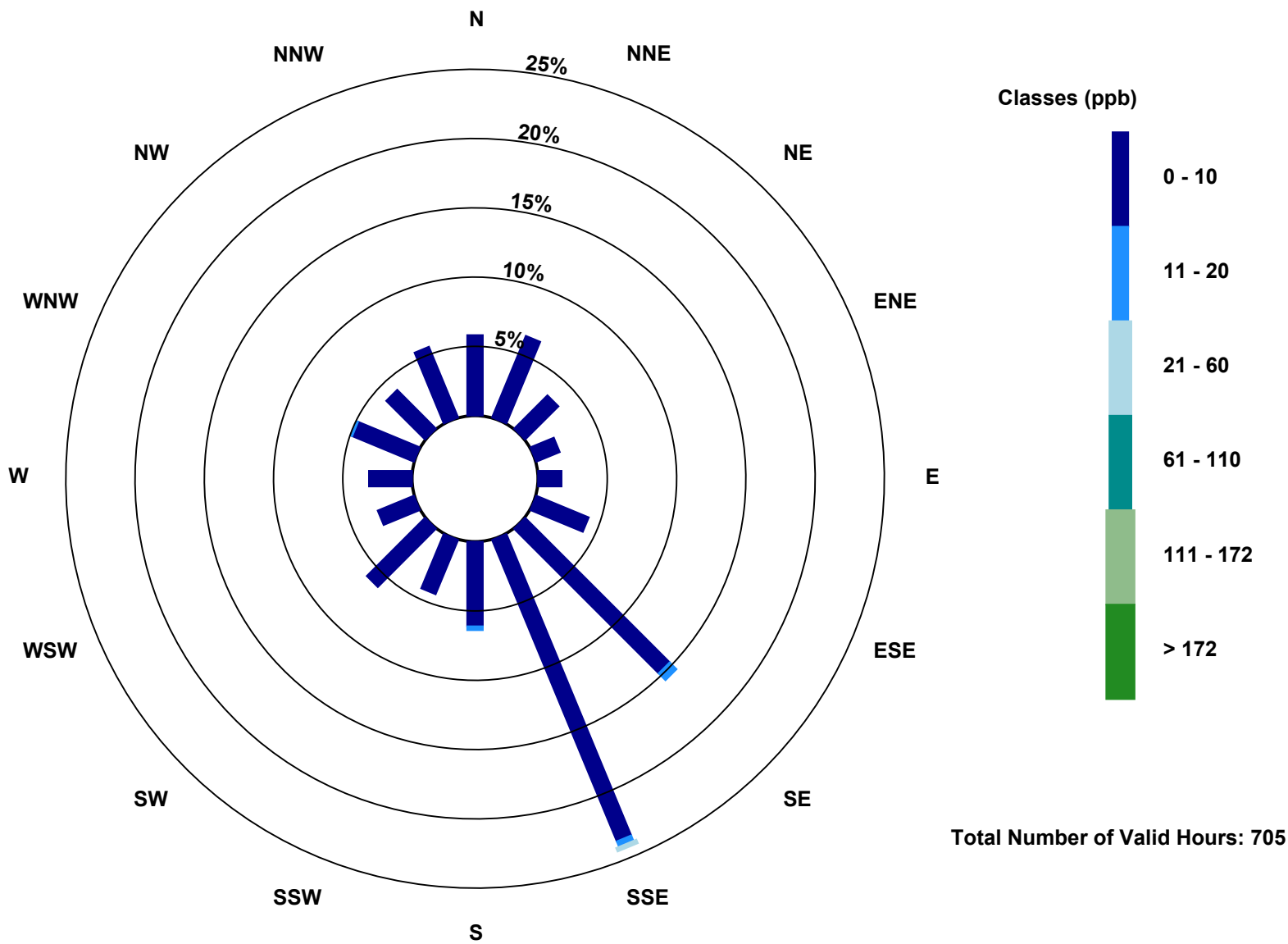
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

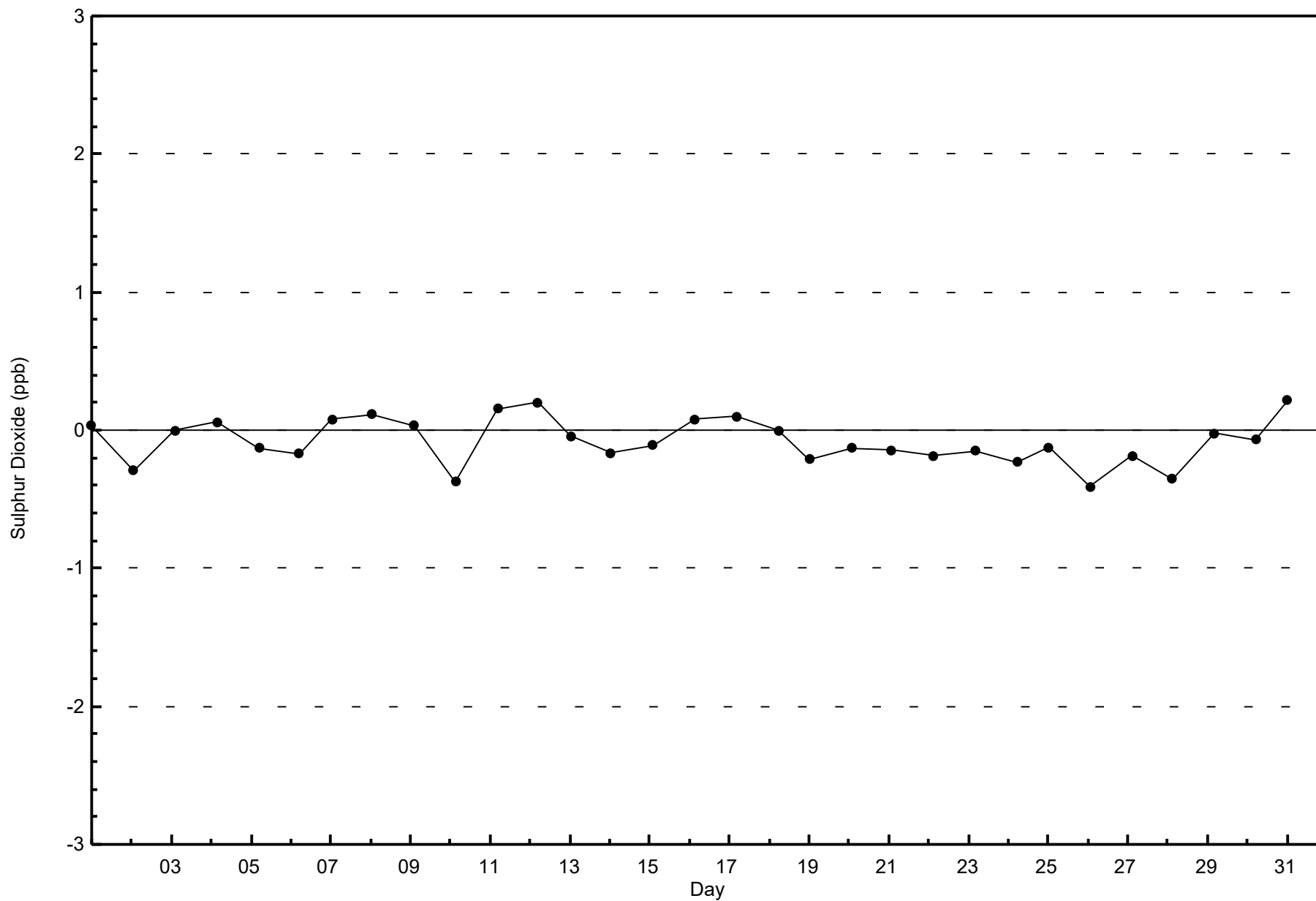
Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin





Wood Buffalo Environmental Association
Zero Responses

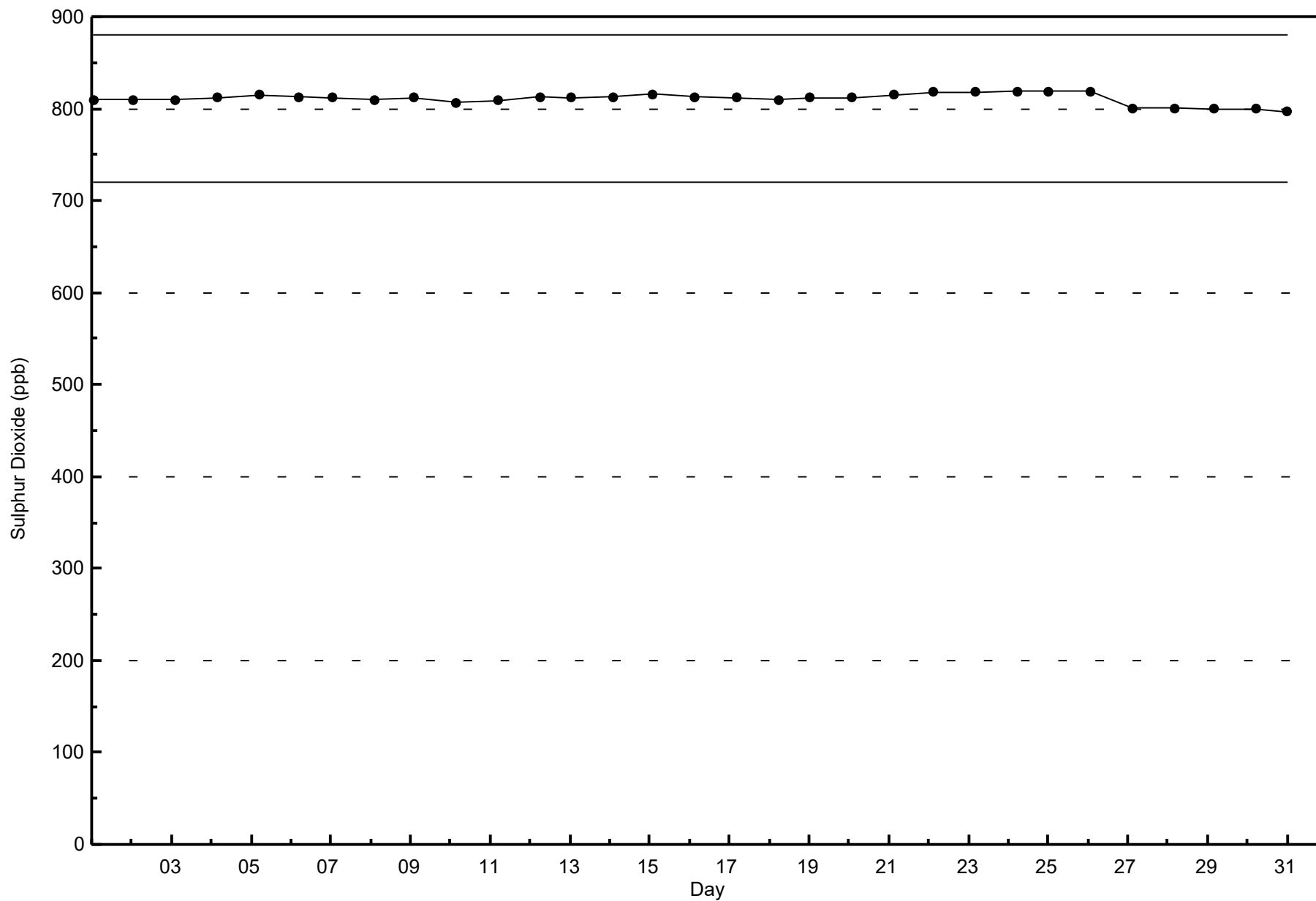
Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

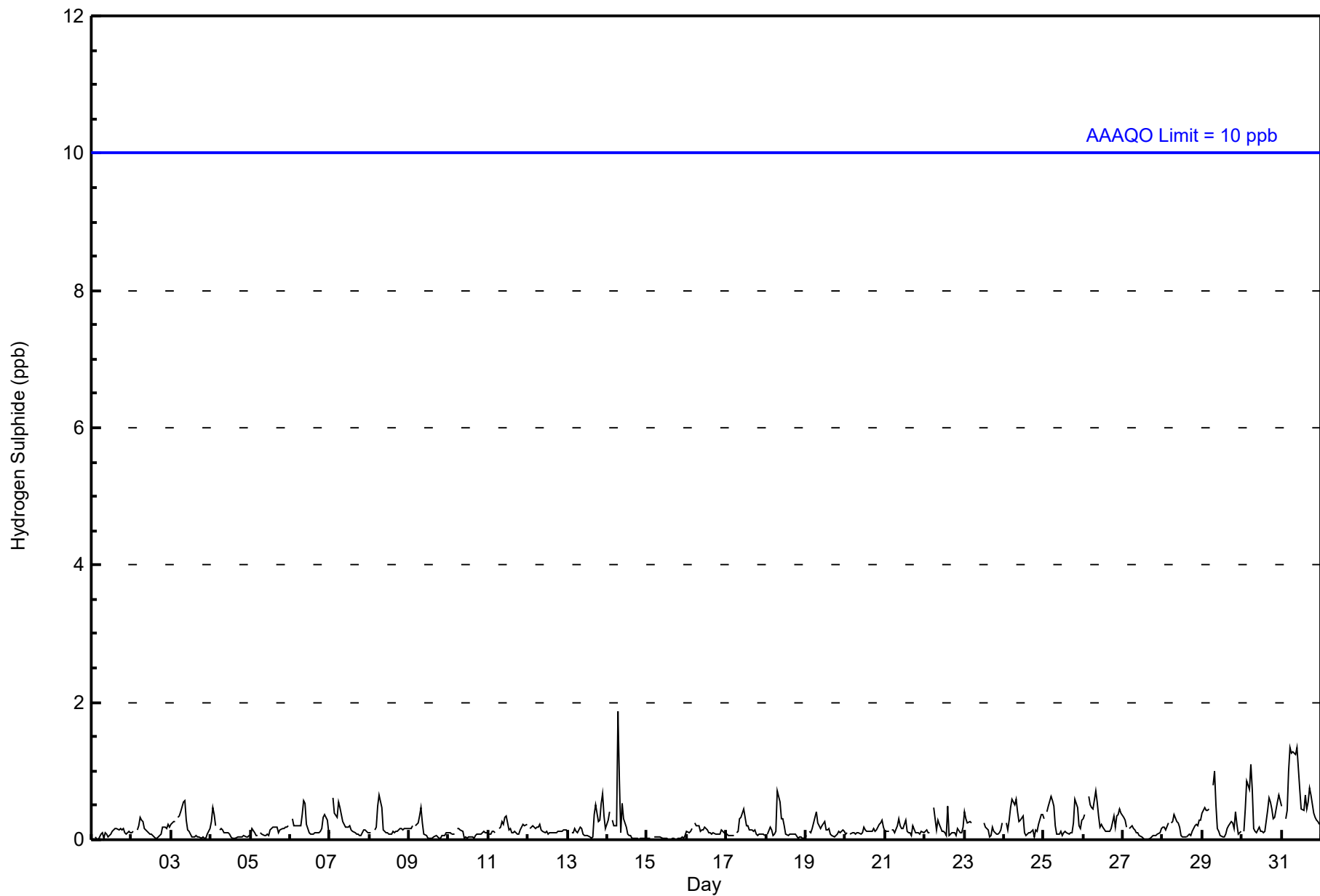
Waskow ohci Pimatisiwin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																Hours in Service: 744										
Maximum Value: 1.9 ppb on May 14 07:00																Maximum Daily Average: 0.7 ppb on May 31		Hours of Data: 707								
Minimum Value: 0.0 ppb on May 27 14:00																Minimum Daily Average: 0.0 ppb on May 15		Hours of Missing Data: 37								
Maximum Diurnal Average: 0.4 ppb at hour 7																Minimum Diurnal Average: 0.1 ppb at hour 14		Hours of Calibration: 37								
Monthly Average: 0.19 ppb																Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.0		Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
2-May	0.1	0.1	Z	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
3-May	0.2	0.3	0.3	Z	0.3	0.3	0.4	0.5	0.6	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
4-May	0.3	0.5	0.4	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
5-May	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	
6-May	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.1	
7-May	0.1	Z	0.6	0.4	0.3	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
8-May	0.1	0.1	Z	0.1	0.2	0.5	0.6	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	
9-May	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
10-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
11-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.3	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	
12-May	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
13-May	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.3	0.3	0.5	0.7	0.3	0.2	0.2	
14-May	0.3	0.4	Z	0.3	0.2	0.2	1.9	0.9	0.1	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
16-May	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
17-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
18-May	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.7	0.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	
19-May	0.1	Z	0.1	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
20-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.2	
21-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
22-May	0.1	0.1	0.1	0.1	Z	0.5	0.3	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	
23-May	0.4	0.3	0.3	0.3	0.2	Z	C	C	C	C	C	C	0.3	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
24-May	Z	0.2	0.1	0.3	0.5	0.6	0.5	0.6	0.4	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.4	0.4	0.3	
25-May	0.3	Z	0.4	0.5	0.6	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.5	0.2	0.2	0.3	0.3	
26-May	0.3	0.4	Z	0.6	0.5	0.5	0.5	0.7	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.4	0.4	0.4	
27-May	0.3	0.3	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	
28-May	0.2	0.2	0.2	0.3	Z	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	
29-May	0.4	0.5	0.4	0.4	0.5	Z	0.8	1.0	0.5	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.4	0.2	0.1	0.1	0.3	
30-May	Z	0.1	0.4	0.8	0.7	1.1	0.7	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	0.6	0.5	0.5	0.3	0.3	0.6	0.6	0.6	0.4	
31-May	0.5	Z	0.3	0.4	1.0	1.3	1.3	1.3	1.2	1.4	1.0	0.7	0.4	0.4	0.7	0.5	0.6	0.8	0.7	0.4	0.3	0.3	0.3	0.2	0.7	
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	707	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	42	45	23	13	12	29	108	169	44	32	42	18	23	37	28	37	702
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	45	23	13	12	29	108	169	44	32	42	18	23	37	28	37	702

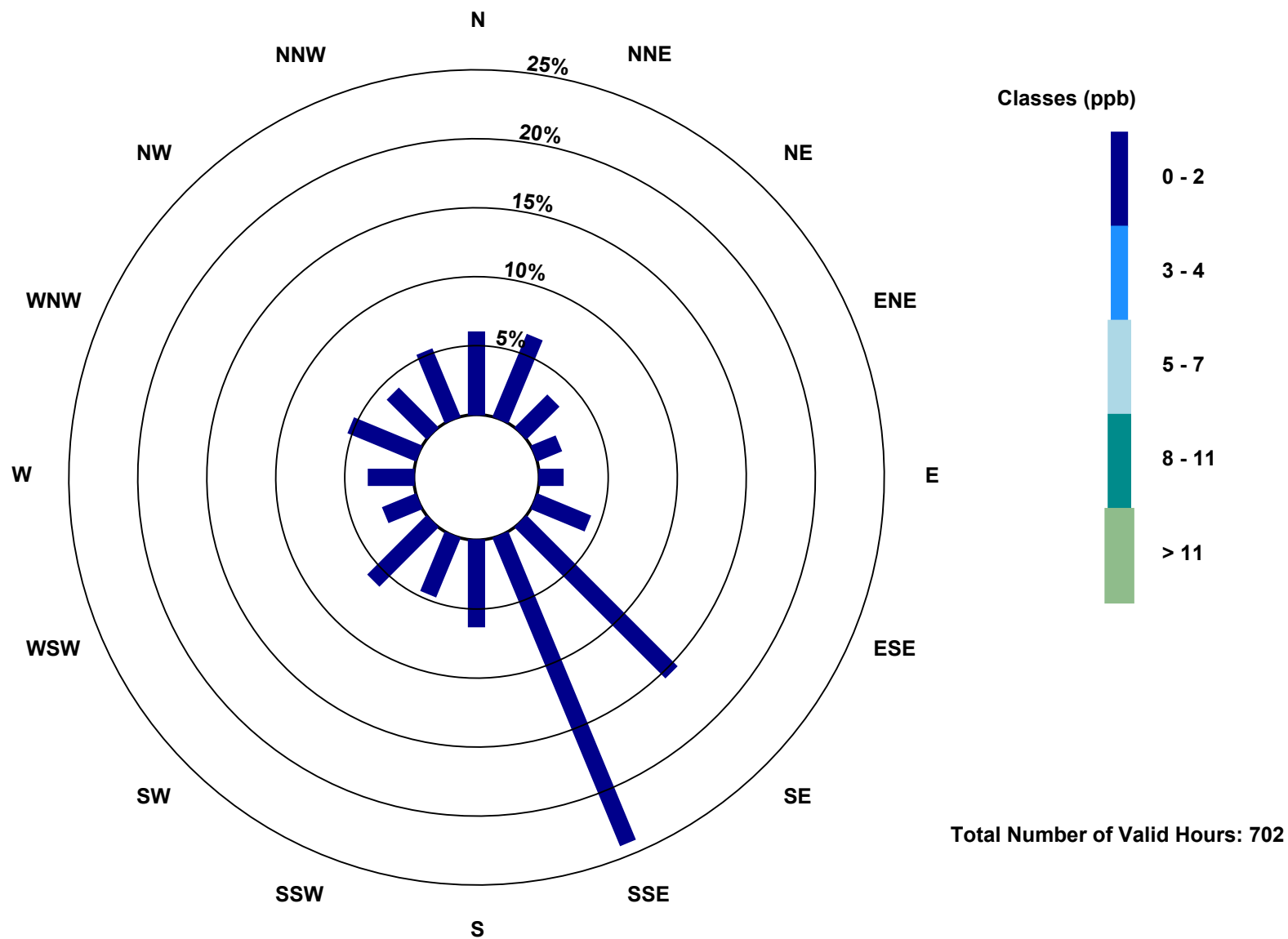
Total Number of Valid Hours: 702

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin



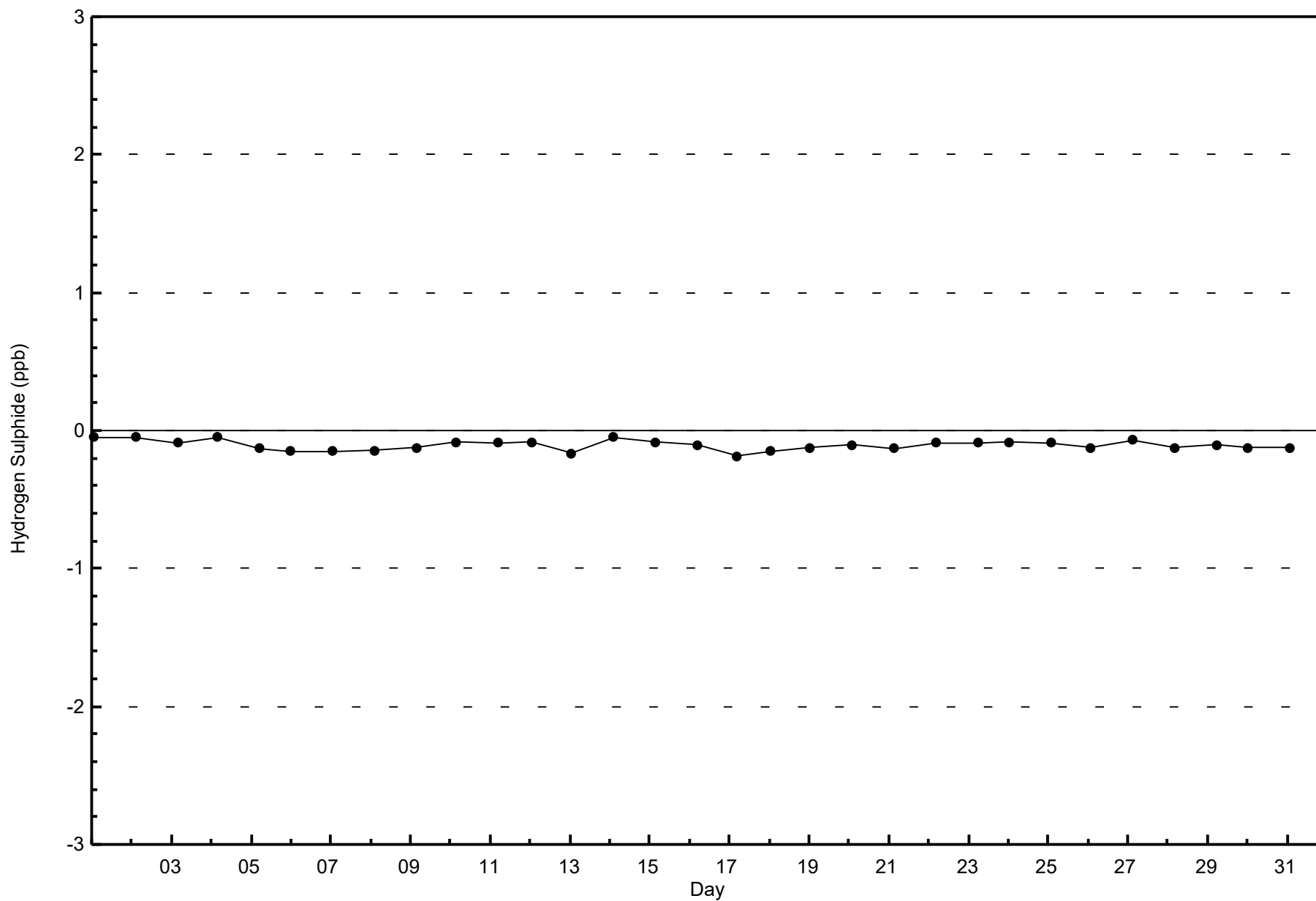


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

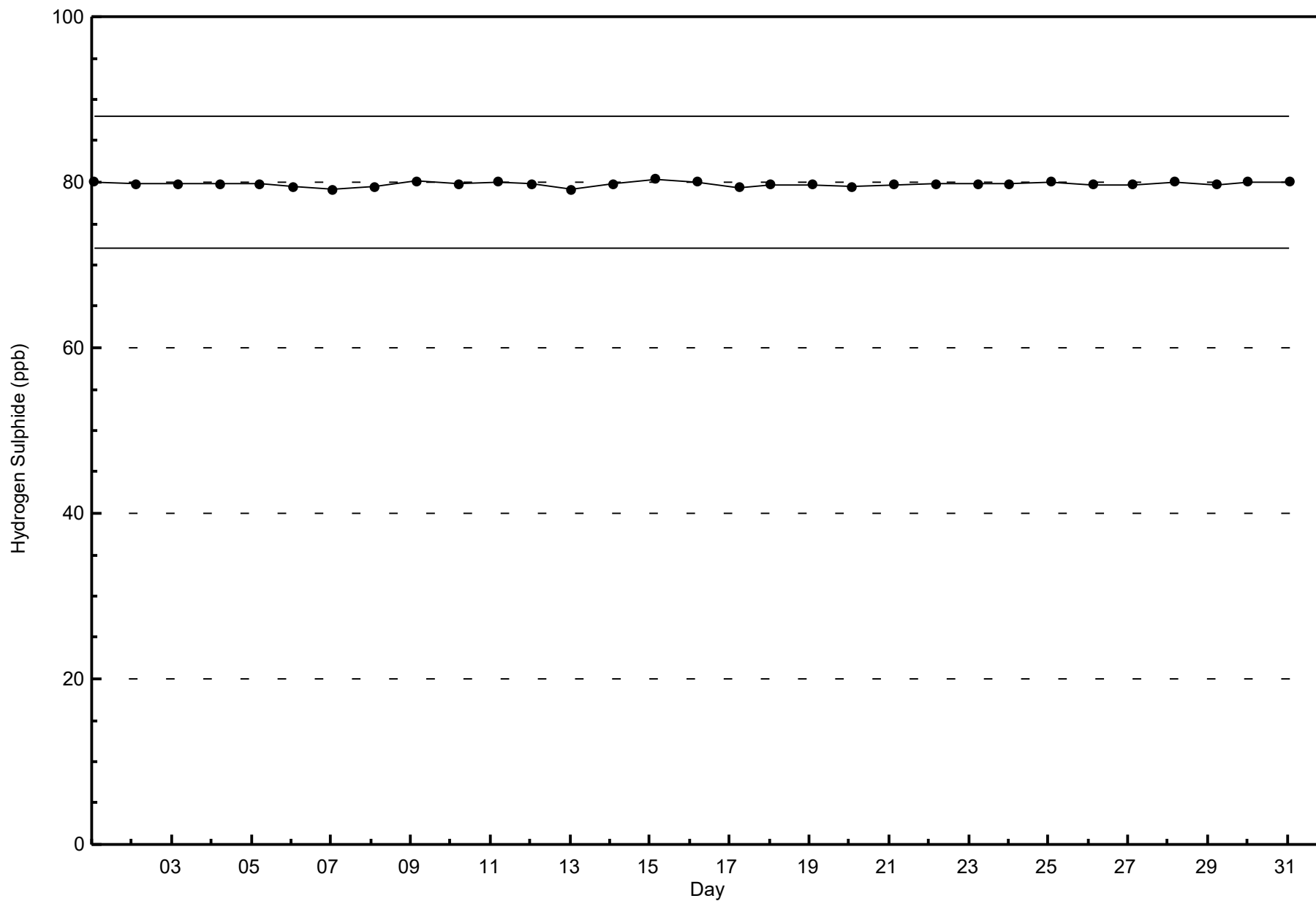
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

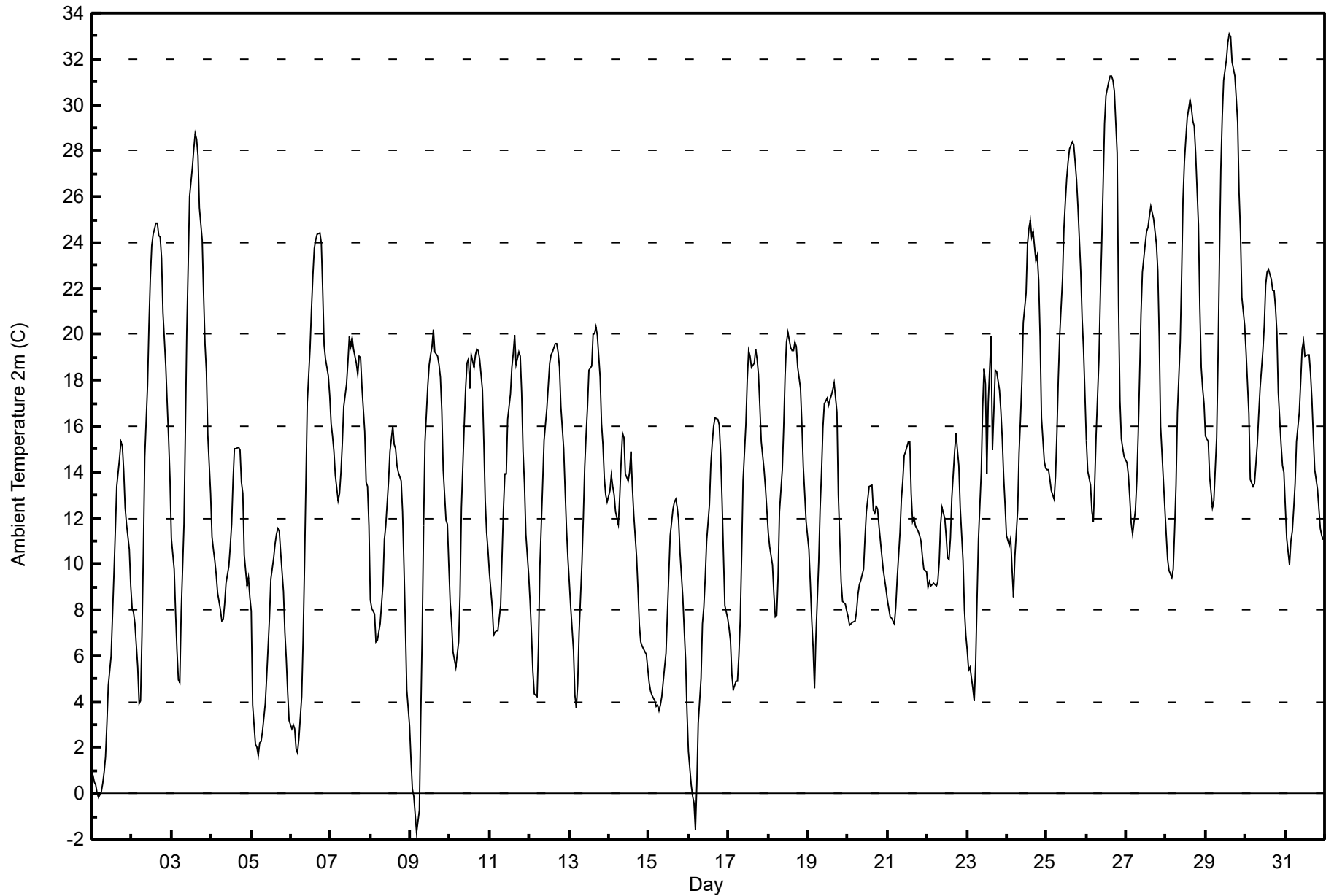
Waskow ohci Pimatisiwin - May 2025

Maximum Value: 33.1 C on May 29 15:00																				Maximum Daily Average: 23.9 C on May 29					Hours in Service: 744	
Minimum Value: -1.7 C on May 9 05:00																				Minimum Daily Average: 6.3 C on May 5					Hours of Data: 744	
Maximum Diurnal Average: 19.8 C at hour 15																				Minimum Diurnal Average: 6.8 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 13.96 C																				Percentiles: P ₁ = -0.1 P ₁₀ = 5.5 Q ₁ = 9.2 Median = 13.5 Q ₃ = 18.6 P ₉₀ = 23.6 P ₉₉ = 31.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.8	0.5	0.4	0.0	-0.2	0.1	0.4	1.0	1.6	3.1	4.7	6.0	7.8	9.5	11.4	13.4	14.6	15.3	15.1	14.1	12.4	11.7	10.6	9.0	6.8	15.3
2-May	8.1	7.9	7.4	5.5	3.9	4.0	6.8	10.4	14.7	17.8	20.4	22.4	23.9	24.4	24.9	24.8	24.3	24.2	23.3	20.9	18.6	17.0	15.5	13.8	16.0	24.9
3-May	11.1	9.8	7.9	6.3	5.0	4.8	7.9	11.7	15.8	20.1	23.0	26.0	27.3	28.1	28.7	28.5	27.8	25.5	24.1	21.7	19.6	18.4	15.6	13.1	17.8	28.7
4-May	11.2	10.6	10.2	9.5	8.7	8.0	7.5	7.6	8.2	9.2	9.9	10.7	11.8	13.6	15.0	15.0	15.1	14.9	13.6	13.1	10.4	9.0	9.4	8.6	10.9	15.1
5-May	8.0	3.8	2.2	2.0	1.7	2.2	2.2	2.7	3.9	5.1	6.3	7.7	9.4	10.3	10.9	11.3	11.6	11.4	10.5	8.8	7.0	5.9	4.4	3.2	6.3	11.6
6-May	2.8	3.0	2.8	1.9	1.8	2.4	4.2	6.7	9.9	13.5	17.0	19.4	21.2	22.6	23.7	24.1	24.3	24.4	24.0	21.9	19.6	18.9	18.2	17.3	14.4	24.4
7-May	16.1	15.5	14.9	13.9	12.7	13.1	14.0	15.3	16.9	17.8	18.8	19.9	19.5	19.9	19.4	18.8	18.3	19.0	19.0	17.7	15.8	13.5	13.4	11.7	16.5	19.9
8-May	8.4	8.1	7.8	6.6	6.7	7.0	7.4	9.1	11.1	11.7	12.7	13.6	14.9	16.0	15.2	15.0	14.3	14.0	13.6	12.3	9.9	7.3	4.6	3.0	10.4	16.0
9-May	1.5	0.2	-0.1	-0.9	-1.7	-0.7	3.3	7.0	11.6	15.3	17.8	18.7	19.1	19.5	20.2	19.3	19.0	18.7	18.1	16.7	14.1	11.9	11.7	10.0	11.3	20.2
10-May	8.3	7.4	6.2	5.5	6.0	6.6	8.6	12.4	16.0	17.6	18.8	18.9	17.6	19.1	18.6	19.1	19.3	19.3	19.0	17.6	15.4	12.8	11.3	10.6	13.8	19.3
11-May	9.6	8.1	6.9	7.0	7.1	7.1	8.2	10.3	12.4	13.9	14.0	16.3	17.4	18.6	19.2	20.0	18.7	19.2	19.0	17.5	14.9	13.5	11.3	9.5	13.3	20.0
12-May	8.4	7.0	5.3	4.3	4.2	6.4	9.9	11.7	13.5	15.4	16.8	17.8	18.7	19.1	19.3	19.6	19.6	19.2	18.6	16.8	15.0	13.2	11.6	10.3	13.4	19.6
13-May	9.2	8.1	6.2	4.3	3.7	4.8	7.0	10.0	12.0	14.2	15.7	16.9	18.4	18.6	20.0	20.0	20.4	20.0	18.1	16.1	15.2	13.8	13.0	12.7	13.3	20.4
14-May	13.2	13.9	13.4	13.0	12.3	11.8	13.0	14.5	15.7	15.5	13.9	13.6	14.0	14.9	13.4	12.2	10.3	8.9	7.3	6.6	6.4	6.3	6.0	5.5	11.5	15.7
15-May	4.8	4.5	4.3	4.0	3.8	3.8	3.6	3.8	4.2	5.5	6.1	7.8	9.5	11.3	12.4	12.7	12.8	12.5	11.9	10.5	8.6	7.1	5.8	3.5	7.3	12.8
16-May	1.8	0.4	-0.1	-0.4	-1.6	0.4	3.1	5.0	7.4	8.1	9.4	11.0	12.6	14.4	15.3	16.0	16.4	16.3	16.1	14.8	12.8	10.5	8.2	7.6	8.6	16.4
17-May	7.2	6.7	5.2	4.5	4.9	4.9	6.0	7.6	10.4	13.6	16.0	18.0	19.3	19.1	18.5	18.7	19.3	18.9	18.2	16.9	15.3	14.1	13.3	12.4	12.9	19.3
18-May	11.4	10.8	10.0	8.7	7.7	7.8	9.5	12.3	14.1	15.9	18.2	19.7	20.1	19.4	19.3	19.3	19.6	19.5	18.6	17.7	16.1	14.2	13.1	11.8	14.8	20.1
19-May	10.6	9.2	7.6	6.4	4.6	6.8	10.1	12.4	14.0	16.0	17.0	17.2	16.9	17.2	17.4	17.6	17.9	16.6	13.0	11.2	9.3	8.3	8.2	8.0	12.2	17.9
20-May	7.7	7.3	7.4	7.4	7.5	7.9	8.7	9.1	9.3	9.8	11.1	12.3	12.8	13.4	13.5	12.4	12.2	12.5	12.4	11.7	10.4	9.8	9.4	8.9	10.2	13.5
21-May	8.4	7.7	7.6	7.5	7.4	8.1	9.4	11.4	12.8	13.6	14.7	14.9	15.3	15.3	13.0	11.8	12.1	11.6	11.4	11.2	11.0	10.3	9.8	9.6	11.1	15.3
22-May	9.0	9.2	9.0	9.1	9.2	9.1	9.2	10.1	11.7	12.4	12.0	11.2	10.2	10.2	11.1	12.9	14.9	15.7	15.0	14.3	12.4	10.1	8.0	6.9	11.0	15.7
23-May	6.2	5.4	5.5	4.6	4.0	5.6	8.4	11.1	14.0	16.8	18.5	17.8	13.9	17.0	19.9	15.0	16.7	18.4	18.4	17.6	16.6	15.5	13.8	12.6	13.1	19.9
24-May	11.2	10.8	11.1	9.8	8.6	10.4	12.3	14.9	16.3	18.0	20.5	21.8	24.0	24.6	24.9	24.3	24.5	23.2	23.5	22.3	19.9	16.4	14.5	14.2	17.6	24.9
25-May	14.1	14.1	13.7	13.2	12.8	13.8	15.7	18.1	20.0	22.4	24.6	25.8	26.8	27.5	28.1	28.4	28.3	27.5	26.7	25.5	22.8	20.7	19.3	17.4	21.1	28.4
26-May	15.4	14.1	13.4	12.3	11.8	13.5	15.6	18.9	21.7	24.0	26.6	29.2	30.4	31.0	31.2	31.3	31.1	30.6	27.9	21.3	17.1	15.4	15.1	14.6	21.4	31.3
27-May	14.4	13.9	12.9	11.8	11.3	12.3	13.6	15.6	18.1	20.9	22.7	24.0	24.5	24.7	25.2	25.6	25.0	24.5	23.9	22.8	19.9	16.0	13.6	12.4	18.7	25.6
28-May	11.3	10.2	9.7	9.4	9.8	11.5	13.4	16.6	19.7	22.6	25.9	27.5	28.5	29.4	30.2	29.9	29.3	29.1	27.9	24.8	21.2	18.6	17.6	17.0	20.5	30.2
29-May	15.6	15.3	13.8	13.1	12.5	12.8	15.5	19.0	23.3	27.2	29.5	31.1	32.0	32.7	33.1	33.0	31.9	31.2	30.3	29.3	26.2	24.4	21.6	20.4	23.9	33.1
30-May	19.3	17.9	16.6	13.7	13.4	13.5	14.4	15.2	16.5	17.7	19.3	20.4	22.1	22.7	22.8	22.4	21.9	21.9	21.2	20.1	17.4	15.2	14.3	14.0	18.1	22.8
31-May	12.5	11.1	10.0	11.0	11.4	12.4	13.5	15.3	16.6	17.9	19.3	19.7	19.0	19.1	19.1	18.3	17.2	15.6	14.1	13.3	12.4	11.5	11.2	11.1	14.7	19.7
9.6 8.8 8.0 7.3 6.8 7.5 9.1 11.2 13.3 15.2 16.8 18.0 18.7 19.5 19.8 19.7 19.6 19.4 18.5 17.0 15.0 13.3 12.0 11.0																										Diurnal Average
19.3 17.9 16.6 13.9 13.4 13.8 15.7 19.0 23.3 27.2 29.5 31.1 32.0 32.7 33.1 33.0 31.9 31.2 30.3 29.3 26.2 24.4 21.6 20.4																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	8	1.08	1.08
0 - 10	212	28.49	29.57
10 - 20	408	54.84	84.41
> 20	116	15.59	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

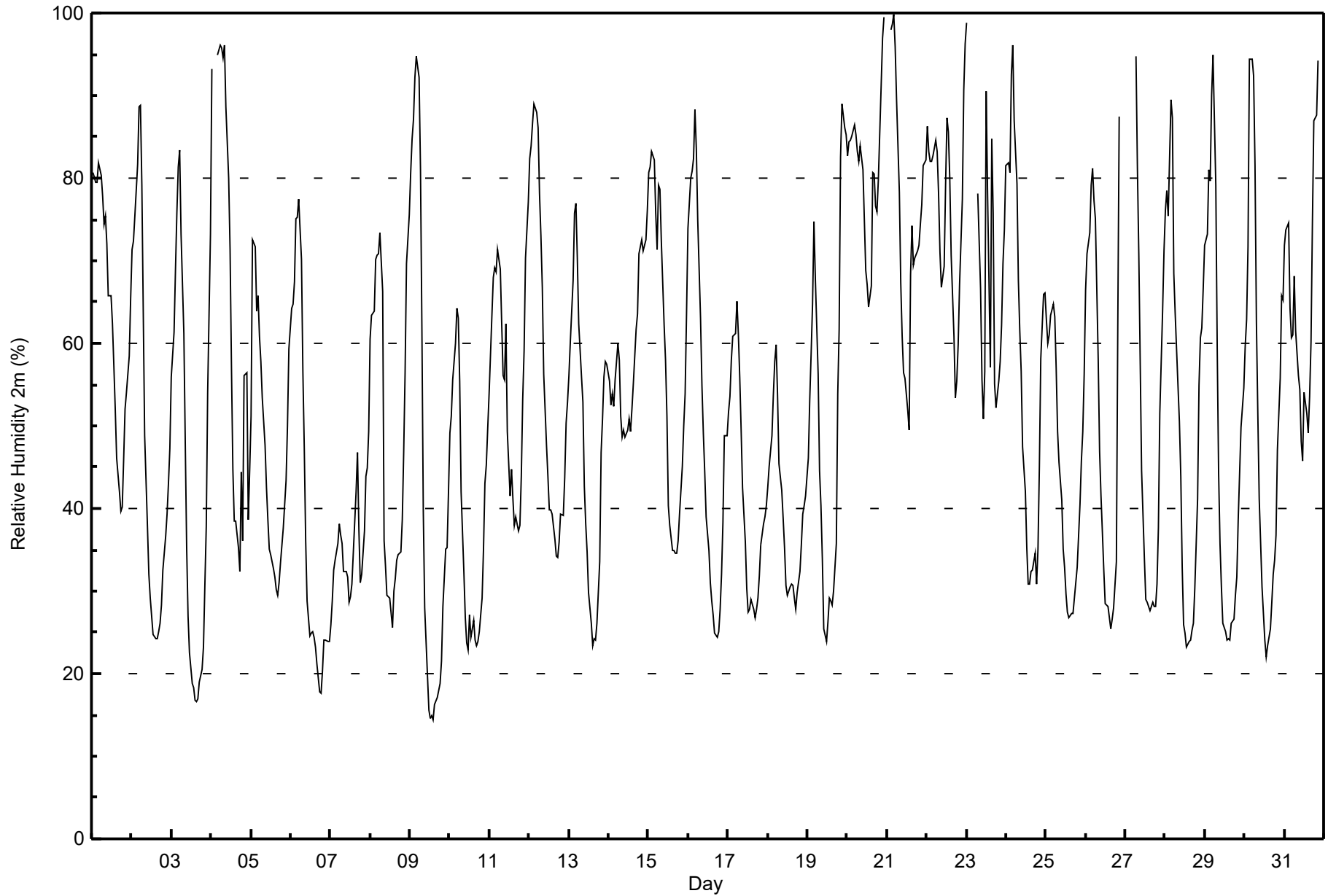
Waskow ohci Pimatisiwin - May 2025

Maximum Value: 99.9 % on May 21 05:00																				Maximum Daily Average: 81.0 % on May 20					Hours in Service: 744			
Minimum Value: 14.3 % on May 9 15:00																				Minimum Daily Average: 35.5 % on May 7					Hours of Data: 721			
Maximum Diurnal Average: 77.4 % at hour 5																				Minimum Diurnal Average: 35.7 % at hour 15					Hours of Missing Data: 23			
Monthly Average: 52.87 %																				Percentiles: P ₁ = 17.0 P ₁₀ = 26.1 Q ₁ = 33.6 Median = 51.8 Q ₃ = 70.8 P ₉₀ = 82.4 P ₉₉ = 96.3					Hours of Calibration: 0			
																				Percent Operational Time: 96.9								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	80.6	80.2	79.4	79.5	81.9	80.3	77.8	74.4	75.4	72.1	65.8	65.8	62.3	57.3	52.0	46.1	42.0	39.7	40.2	45.9	52.0	54.0	58.5	65.4	63.7	81.9		
2-May	71.4	72.3	75.5	81.8	88.6	88.8	79.2	63.9	48.8	37.8	32.0	29.2	26.9	24.8	24.2	24.2	25.0	26.1	28.2	32.5	36.6	39.4	43.1	47.3	47.8	88.8		
3-May	55.9	61.4	68.8	75.8	81.3	83.4	73.3	61.2	48.0	35.2	26.9	22.6	18.8	18.3	16.8	16.6	16.9	19.0	20.5	23.3	30.6	37.8	54.1	73.2	43.3	83.4		
4-May	93.3	OR	OR	OR	95.0	96.1	95.8	94.6	96.1	88.7	80.0	71.4	57.1	44.8	38.4	38.4	35.3	32.4	44.5	36.1	56.1	56.4	38.7	44.6	63.5	96.1		
5-May	51.2	72.6	71.7	63.9	65.8	60.8	57.8	53.4	47.7	42.5	38.6	35.0	34.4	32.6	31.8	30.2	29.6	31.0	33.4	37.7	40.4	43.4	50.0	59.4	46.4	72.6		
6-May	64.2	64.8	67.4	75.0	75.3	77.4	70.2	56.6	47.2	36.2	28.8	24.6	24.9	25.0	24.5	23.3	21.2	17.7	17.6	20.4	24.0	24.1	23.8	23.9	39.9	77.4		
7-May	25.9	28.8	32.6	33.7	35.8	38.2	36.7	35.8	32.3	32.3	31.7	28.7	29.3	30.8	34.5	42.1	46.7	37.4	31.0	32.0	37.4	43.9	44.9	49.2	35.5	49.2		
8-May	60.4	63.4	63.9	70.2	70.7	70.8	73.4	66.3	36.0	33.0	29.6	29.3	29.1	25.6	30.0	31.6	33.7	34.4	34.8	38.6	46.8	56.5	69.6	75.5	48.9	75.5		
9-May	80.6	84.7	87.2	92.2	94.7	92.2	81.0	61.8	39.7	27.9	19.7	15.7	14.5	14.9	14.3	16.3	17.1	17.9	18.9	21.5	28.1	35.1	35.3	42.1	43.9	94.7		
10-May	49.2	51.2	55.6	60.0	64.2	63.0	55.4	42.1	32.1	26.8	23.7	22.9	27.2	24.4	26.4	24.1	23.3	23.8	25.1	29.2	35.0	43.1	45.2	49.6	38.4	64.2		
11-May	54.0	63.4	68.0	69.1	68.7	71.4	68.9	62.4	56.0	55.6	62.4	49.4	41.6	44.8	41.1	37.9	38.9	37.3	37.9	43.9	53.2	59.2	70.3	77.1	55.5	77.1		
12-May	82.4	83.9	86.7	89.0	87.9	86.1	78.2	73.0	66.8	56.3	47.7	44.0	39.9	39.9	39.3	36.3	34.2	34.1	35.9	39.3	39.1	43.7	50.3	52.9	56.9	89.0		
13-May	56.1	60.2	67.7	75.8	76.9	70.3	62.4	55.9	52.8	42.6	38.2	34.7	29.8	26.1	23.4	24.2	24.1	26.1	33.6	46.8	50.9	55.9	57.8	57.4	47.9	76.9		
14-May	55.5	52.6	53.8	52.4	55.6	60.0	58.0	51.2	48.6	49.4	48.7	49.6	50.8	49.3	52.0	55.0	61.8	63.5	70.8	71.7	72.5	71.2	72.5	76.1	58.4	76.1		
15-May	80.7	81.4	83.3	82.2	75.7	71.3	79.1	78.6	72.3	62.3	58.0	51.3	40.4	38.0	34.9	34.9	34.6	34.5	36.1	39.3	45.1	50.0	53.9	63.6	57.6	83.3		
16-May	73.8	80.0	80.8	82.4	88.3	83.6	75.0	63.1	54.9	49.2	44.5	38.9	34.9	31.0	28.9	27.1	25.0	24.5	25.0	27.9	32.0	38.3	48.9	48.8	50.3	88.3		
17-May	51.7	53.5	58.0	60.8	61.2	65.1	61.2	55.9	49.5	42.5	36.0	30.3	27.5	27.8	29.0	27.8	26.7	27.8	29.2	31.8	35.6	38.2	39.0	40.3	41.9	65.1		
18-May	42.5	45.1	48.8	53.7	57.8	59.9	53.7	45.4	42.2	38.8	35.3	30.6	29.5	30.6	30.9	30.7	29.2	27.7	29.8	32.3	35.6	39.4	40.3	41.6	39.6	59.9		
19-May	46.1	53.2	58.9	64.7	74.7	67.7	56.2	44.6	40.4	33.9	25.4	24.0	26.3	29.2	28.9	28.3	29.9	35.8	54.0	61.7	82.5	89.0	86.0	85.2	51.1	89.0		
20-May	82.7	84.4	84.6	85.1	86.5	85.3	83.3	82.1	83.9	81.0	74.9	68.8	67.2	64.5	67.0	80.7	80.5	76.6	76.0	79.9	91.2	97.0	99.4	OR	81.0	99.4		
21-May	99.3	OR	98.0	98.6	99.9	95.9	89.5	78.3	67.2	60.8	56.5	55.7	51.8	49.5	68.4	74.2	69.5	70.3	71.1	71.8	74.5	76.8	81.5	82.3	75.7	99.9		
22-May	86.3	83.3	82.0	82.1	82.8	84.6	83.3	78.1	70.9	66.8	69.4	79.0	87.3	85.6	80.0	70.7	60.9	53.3	55.5	59.9	67.1	77.4	90.7	96.3	76.4	96.3		
23-May	98.9	OR	OR	OR	OR	OR	OR	78.2	66.7	55.6	50.8	56.7	90.5	78.2	57.1	84.7	75.8	55.0	52.2	55.4	57.8	62.3	69.6	73.7	67.7	98.9		
24-May	81.6	81.9	80.6	92.6	96.1	87.0	79.3	67.6	61.6	56.7	47.5	42.0	35.3	30.9	30.8	32.4	32.6	34.7	30.9	35.1	45.2	58.1	65.9	66.1	57.2	96.1		
25-May	63.0	60.1	61.1	63.4	64.8	63.2	57.0	49.3	45.5	41.1	35.1	32.9	29.7	27.5	26.7	27.2	27.3	29.2	31.0	32.9	40.5	45.7	49.4	56.3	44.2	64.8		
26-May	66.5	70.8	73.3	79.2	81.1	77.3	75.1	58.2	46.9	41.5	37.1	32.5	28.4	28.2	26.7	25.4	26.7	27.9	33.6	62.3	87.4	OR	OR	OR	51.7	87.4		
27-May	OR	OR	OR	OR	OR	OR	94.7	81.3	70.8	57.9	44.5	33.9	28.9	28.7	28.1	27.7	28.6	28.2	28.2	30.8	37.7	51.6	64.0	71.1	46.5	94.7		
28-May	76.2	78.4	75.4	89.4	87.3	68.5	63.5	59.2	50.4	44.0	32.8	26.0	25.0	23.2	23.9	24.1	25.2	26.1	30.3	41.3	54.9	60.7	61.8	66.6	50.6	89.4		
29-May	71.9	73.3	81.1	79.6	90.0	94.8	79.1	59.5	44.3	35.8	30.6	26.1	25.1	24.1	24.2	24.1	26.2	26.7	29.4	31.7	38.6	44.2	49.9	54.5	48.5	94.8		
30-May	59.7	62.9	71.7	94.3	94.3	92.4	81.5	62.5	51.5	41.2	30.5	27.3	24.0	22.0	23.4	25.4	28.7	32.0	33.7	36.7	47.2	55.7	65.8	65.3	51.2	94.3		
31-May	71.8	73.8	74.6	64.3	60.7	61.0	68.2	61.5	56.1	54.5	48.2	45.8	54.1	51.5	49.2	53.5	60.1	74.5	86.9	87.6	94.2	OR	OR	OR	64.4	94.2		
Diurnal Average																												
Diurnal Maximum																												
OR - Out of Range																												



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Waskow ohci Pimatisiwin - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	17	2.36	2.36
20 - 40	243	33.70	36.06
40 - 60	182	25.24	61.30
60 - 80	178	24.69	85.99
80 - 100	101	14.01	100.00

Total Number of Valid Hours: 721

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

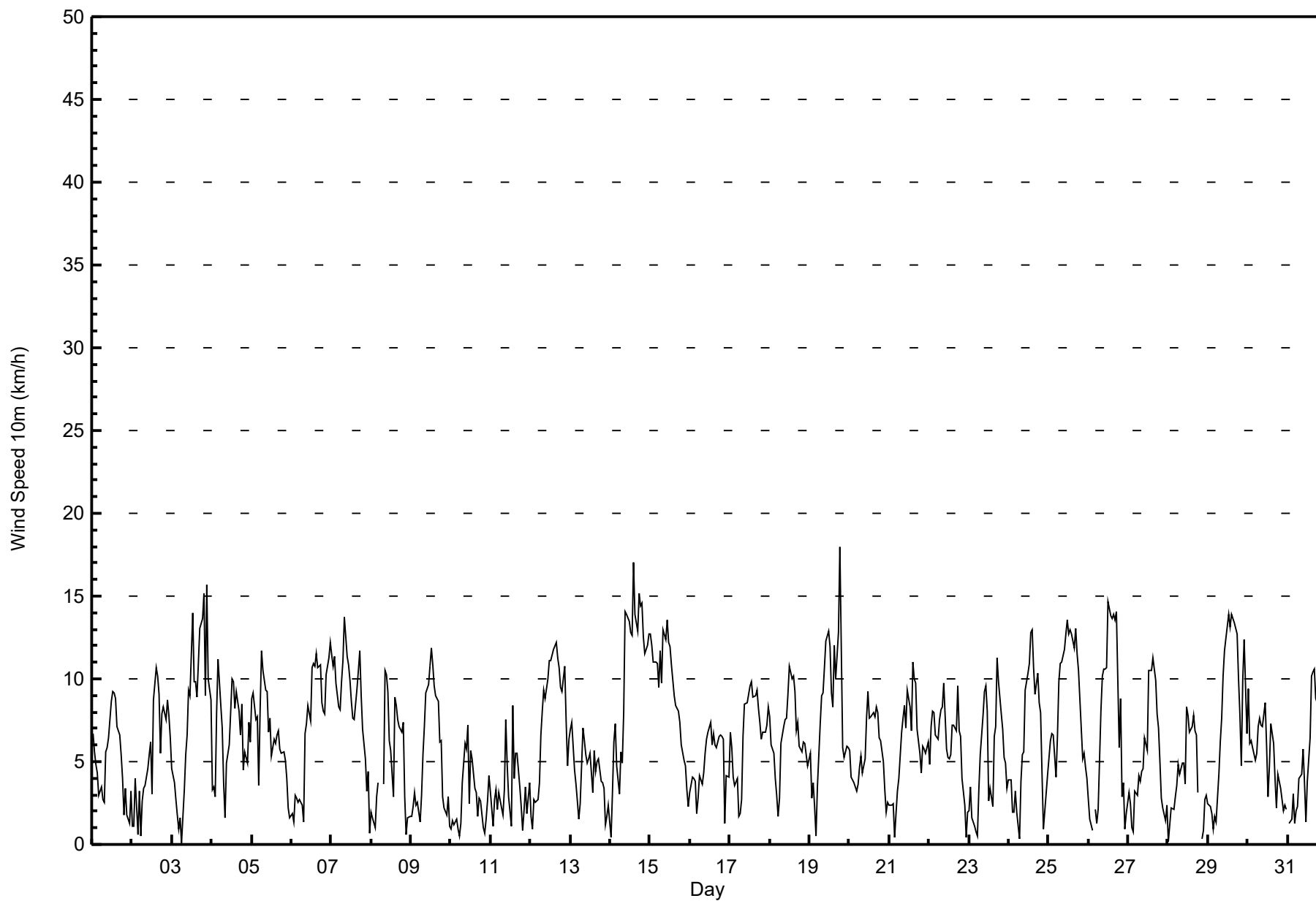
Waskow ohci Pimatisiwin - May 2025

Maximum Speed: 18 km/h on May 19 19:00										Maximum Daily Speed Average: 9.0 km/h on May 25										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 3 07:00										Minimum Daily Speed Average: 0.6 km/h on May 11										Hours of Data: 739						
Maximum Diurnal Speed Average: 3.4 km/h at hour 16										Minimum Diurnal Speed Average: 0.1 km/h at hour 6										Hours of Missing Data: 5						
Monthly Average Velocity: 1.6 km/h 149.5 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 6 Q ₃ = 9 P ₉₀ = 11 P ₉₉ = 14										Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N7	NW6	NW5	NW4	W3	WNW3	W3	SW3	SW6	SSE6	S6	SE9	SE9	SE9	SE9	SE7	SE7	SE5	SE4	E2	ESE3	ENE2	NNW1	NNW3	SSE1.9	SE9
2-May	WNW1	W1	NNW4	WSW1	W3	SSE1	SSE3	SE3	SE4	ESE5	SE5	SE6	E3	NW9	NW11	NNW10	NNW9	N6	NNE8	NNE8	N8	NNE9	N8	NNW6	N2.8	NW11
3-May	NNW5	NNW4	NW3	WNW2	WSW1	SE2	SE0	SE3	SE5	SSW7	SW9	WSW9	NNW14	WNW10	W10	W9	W11	WNW13	NW14	NW15	WNW9	NW16	NNW10	NNW9	WNW5.9	NW16
4-May	W3	S3	SSW3	WNW8	NNW11	NW8	NW7	NNW4	S2	WSW5	SW6	WSW8	W10	W10	SW8	SW9	SW8	SW7	SSW8	SW5	SW6	WSW5	WNW7	WNW6	WSW4.9	NNW11
5-May	WNW9	NNE9	N8	N8	NW4	NNW8	NNW12	NNW11	NW9	NW9	NNW7	NW8	ENE5	NE6	ENE6	NE7	NE7	ENE6	ENE6	NE6	NNE5	NNE4	NE2	NE2	N5.0	NNW12
6-May	NNW2	NNW1	NW3	W3	W3	WNW3	WNW2	S1	SSE7	SE7	SSE8	SSE7	S11	S11	SSW11	S12	S11	S11	S9	SSE8	SSE8	SSE10	SSE11	SSE12	S5.8	SSE12
7-May	SSE11	SSE11	SSE11	SSE10	SSE8	SSE8	SSE10	SSE11	SSE14	S11	S11	SW10	SW9	SW8	SW8	SW9	SW10	SW12	SSW9	SSW7	S5	SSW3	SW4	WNW1	S7.7	SSE14
8-May	SSW2	WNW2	NNW1	WNW3	WNW4	UO	UO	NNE4	NNE10	NNE10	NNE9	NE6	E6	ENE3	NE9	NE8	NE8	NNE7	N7	NNE7	NE3	W1	WSW2	SW2	NNE3.9	NNE10
9-May	WSW2	WSW2	NNW3	WSW2	W3	SSW1	SSE3	SE5	S7	S9	SW10	WSW11	SW12	WSW11	SW10	SW9	SW9	WSW6	SW6	SSW3	SSW2	S2	SW3	SSW1	SW4.6	SW12
10-May	NNE1	SSW1	S1	SSW2	NW1	WSW1	SSE1	SE4	S6	SW6	SSW7	W2	NNW6	E5	NNE3	ENE3	W2	SSE3	E3	ENE1	SSE1	SSE1	SSE3	SSE4	S1.0	SSW7
11-May	SSE3	SE1	NW3	WNW3	WNW2	WNW3	NW2	NW2	SE3	SSE8	SE5	SSE3	WNW1	SE8	ESE4	ESE5	N6	ENE3	E2	ESE1	NNW2	NNW3	W2	WNW4	ESE0.6	SE8
12-May	WNW2	SW1	WNW3	W3	WNW3	N4	NNE7	NNE8	NNE9	NNE9	NE10	NNE11	NE11	NNE11	NNE12	NNE12	NNE11	NNE11	NNE9	NNE9	N11	N7	N5	NNW6	NNE7.0	NNE12
13-May	NNW7	NW7	WNW4	W4	WNW3	NW2	NNW2	N7	NNE6	NE5	ENE5	E5	ESE5	E3	ESE6	SE4	SE5	SE5	S4	SSE4	SE3	ESE1	SE2	N2	ENE1.1	NW7
14-May	ESE0	SSE3	SSE6	SSE7	S5	S3	SSE6	SSW5	NNW8	N14	N14	N13	NNE13	NNE13	NNE17	NNE14	NE13	NNE15	NNE14	N15	N13	N12	N12	N13	NNE7.3	NNE17
15-May	N13	N12	N11	N11	N11	NNE10	N12	N10	N13	N12	N14	N12	N12	NNE11	NE9	NE8	NE8	NE8	NE7	NE6	NE5	NNE5	N3	NNW2	N8.8	NNW14
16-May	WNW3	WNW4	NW4	NW4	WSW2	NNW3	NNE4	NNE4	NE4	NNE6	NNE6	NNE7	NNE7	NNE6	NNE7	NE6	NNE6	NNW7	N7	NNW7	N6	NNW1	SE4	ESE4	N3.8	NNE7
17-May	SE7	SE6	ESE4	E4	ESE4	ENE2	ESE2	S3	SE7	SSE8	SSE9	SSE9	SSE10	SSE10	SE9	SE9	SE9	SE8	SE7	SE6	SE7	SE7	SE7	SE8	SE6.5	SSE10
18-May	SE8	SE6	SE6	ESE4	E3	ENE2	SE3	SSE6	SSE7	SSE8	SSE8	SSE9	SSE11	SSE10	SSE10	SSE9	SE7	SE7	SE6	ESE6	SE6	SE6	SE5	SE5	SE6.3	SSE11
19-May	SE6	ESE3	SE4	SSE2	SSW1	SE3	SSE7	SE9	SE9	SSE11	SSE12	SSE13	SE12	SE9	SSE8	SSE12	SE10	SSE13	SSE18	SE12	SE6	SE5	SE6	SE6	SE8.1	SSE18
20-May	SE6	ESE4	ESE4	ESE4	ESE3	ESE4	SE5	SE5	SE4	ESE5	SE8	SE9	SE8	SE8	SE8	SE8	SE8	SSE8	SE6	SE6	SE5	SE3	ESE2	ESE3	SE5.4	SE9
21-May	ESE2	SE2	SSE2	E0	ESE2	SE3	SE4	SSE7	SSE8	SSE8	SSE7	SSE9	SSE8	SE7	SSE11	SSE10	SSE10	S7	S6	SSE4	SSE6	SSE6	SSE6	SSE6	SSE5.8	SSE11
22-May	SSE5	SSE7	SSE8	SSE8	SSE7	SE6	SSE8	SSE8	S8	SE10	S6	WSW5	SSW5	SSE5	SSE7	SSE7	SE7	SSE10	SSE7	SSE7	SE4	ESE2	ESE0	S2	SSE5.8	SE10
23-May	SSE2	SE3	ESE2	NW1	W1	N1	SSE3	SE5	SSE8	SSE9	SSE10	SSE8	NW3	NNW3	E2	SE7	ESE7	SE11	SE10	SSE8	SSE7	SSE5	SSE5	SSE3	SSE4.4	SE11
24-May	SSE4	S4	SSE2	WNW2	WNW3	NNW2	SE0	SSE4	SE5	SE6	SSE9	SSE10	SE11	SSE13	SSE13	SSE11	SE9	SSE10	S9	SSE8	SE4	E1	SSE3	SSE4	SSE5.5	SSE13
25-May	SSE5	SSE6	SE7	SE7	SE4	SE7	SSE10	SSE11	SSE11	SSE12	SSE13	SSE14	SSE13	SSE13	SSE13	S12	SSE13	SSE11	SSE10	SSE9	SSE5	SSE5	SE5	SE5	SSE9.0	SSE14
26-May	SE3	E1	ESE1	UO	WNW2	N1	SE2	SSE8	SSE10	SSE11	SSE11	SSE11	SSE15	SSE14	SSE14	SSE14	SSE14	SSE14	SW6	WNW9	NNW3	SSE4	WSW1	SSW2	SSE5.9	SSE15
27-May	S3	S2	SSW1	NE1	S3	S4	S4	SSW4	SW5	WSW6	SW6	SW11	SW10	SW10	SW11	SW10	W8	WSW7	SSW5	SW3	S2	S1	SSE2	SW4.6	SW11	
28-May	SSW0	W1	SSW2	SE2	SSE3	SSE4	S5	SSE4	SE5	SE5	SSE4	S8	S8	SW7	S7	SSW8	S7	S7	SSE3	UO	SSW0	S1	S3	SE3	S3.8	S8
29-May	SSE2	SSE2	SSE2	SSE1	ESE2	SE1	SSE4	SSE6	SSE8	SSE10	SSE12	SSE12	SSE14	SSE13	SSE14	SSE14	SE13	SE13	SSE10	SSE8	SSE5	WNW10	WNW12	WNW7	SSE6.0	SSE14
30-May	W9	WNW6	SW6	WNW6	W5	WNW6	NW7	NW8	NW7	NW7	NW9	NNW6	SSW3	SW5	SW7	SW6	SSW4	SSW2	SSW4	SSE4	SSE3	SSE2	SSE2	SSE2	W3.1	W9
31-May	UO	S1	SSE2	W3	SSW1	SSE2	SSE2	SSE4	SSE4	SSE6	SSE4	SSW1	N4	N6	NNW10	NNW10	N11	N9	N9	N10	NNW10	NNW8	NW7	NW6	NNW3.2	N11
S0.6 SSE0.6 S0.6 W0.6 W0.6 SE0.1 SE0.9 SE2.2 SE2.9 SE3.3 SSE3.1 SSE3.1 SSE3.0 SSE2.7 SSE3.0 SSE3.4 SE2.9 SSE2.9 SSE2.2 ESE1.4 ESE1.1 ENE0.3 SE0.2 SE0.2																								Diurnal Average		
N13 N12 SSE11 N11 NNW11 NNE10 NNW12 SSE11 SSE14 N14 N14 SSE14 SSE15 SSE14 NNE17 NNE14 SSE14 NNE15 SSE18 NNW15 N13 NW16 NNW12 N13																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	323	43.71	43.71
6 - 11	348	47.09	90.80
12 - 19	68	9.20	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 739

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	8	6	11	12	29	49	57	23	25	9	12	18	24	13	20	323
6 - 11	22	29	17	3	1	3	58	95	20	7	31	8	6	12	16	20	348
12 - 19	15	8	1	0	0	0	4	28	2	0	2	0	0	4	2	2	68
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	45	24	14	13	32	111	180	45	32	42	20	24	40	31	42	739

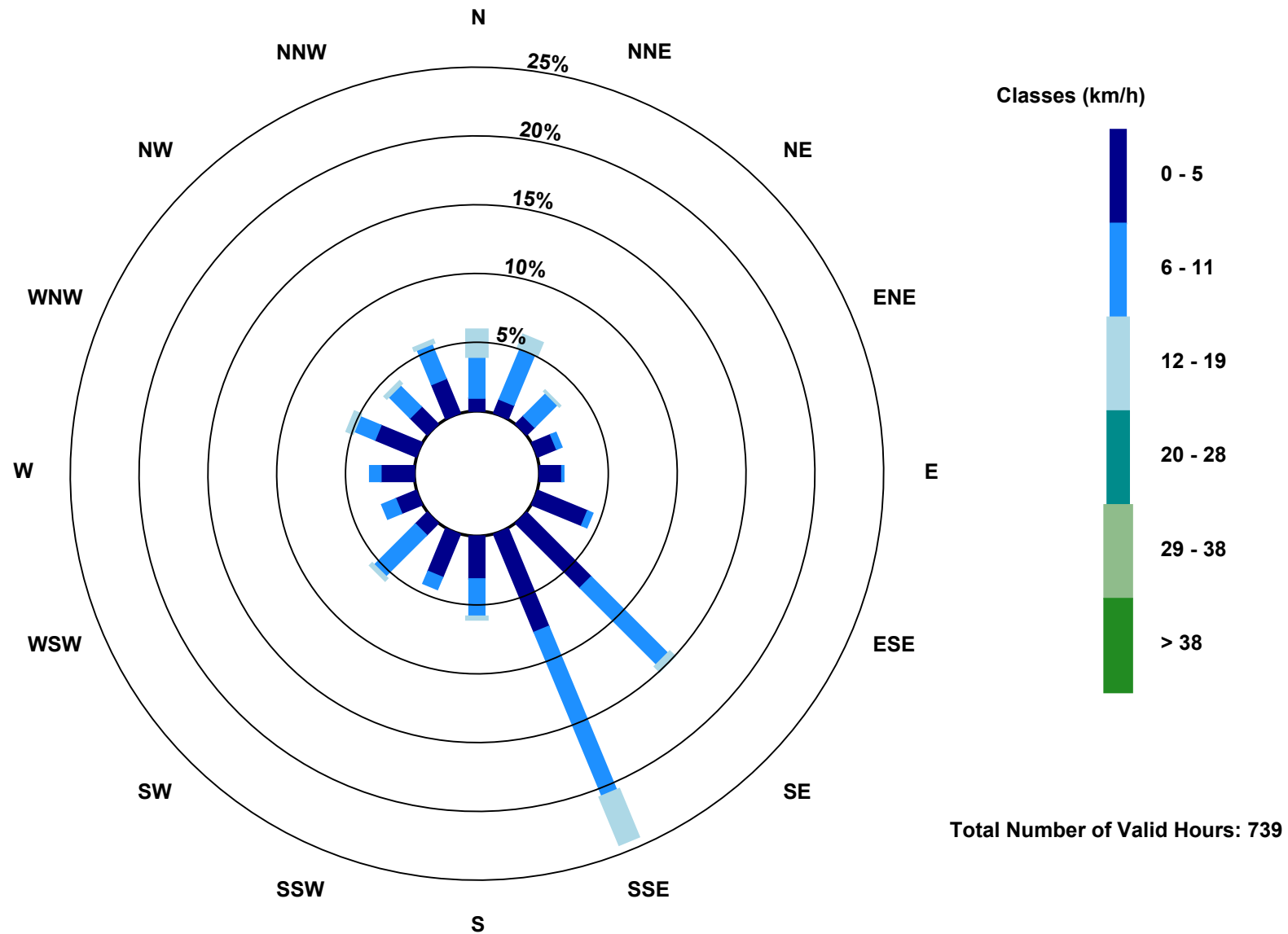
Total Number of Valid Hours: 739

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 19 18:00																		Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3							
Minimum Value: 0 km/h on May 9 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 2 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
1-May	2	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2	2	2	2	1	2	1	2	1	3
2-May	2	1	2	1	1	1	1	1	1	1	2	2	3	4	4	3	3	2	3	3	2	3	2	2	4
3-May	1	1	1	1	1	1	1	1	2	3	3	4	5	5	4	4	5	5	4	5	3	5	4	2	5
4-May	2	1	1	3	3	3	2	1	1	2	2	3	4	3	4	4	3	4	4	2	2	2	3	2	4
5-May	3	4	3	3	2	3	4	3	4	4	4	4	3	3	2	2	2	2	2	2	2	2	1	1	4
6-May	1	1	1	1	0	1	1	1	3	2	3	4	4	5	5	5	4	4	3	3	3	4	4	4	5
7-May	4	3	4	3	3	3	3	4	5	5	4	5	4	4	3	4	5	5	4	3	2	1	2	2	5
8-May	1	2	1	0	1	UO	UO	3	4	4	4	3	2	3	4	3	3	3	4	3	2	1	1	1	4
9-May	1	1	1	1	0	1	1	1	3	4	4	5	6	5	4	5	5	3	3	1	0	1	1	1	6
10-May	2	1	1	1	1	1	1	2	3	3	3	3	5	1	4	2	2	2	1	1	1	1	1	1	5
11-May	1	1	1	1	1	1	1	1	1	3	2	2	2	3	2	2	4	2	1	1	2	1	1	1	4
12-May	1	1	1	1	1	1	2	3	3	4	4	4	4	5	5	5	4	4	4	4	4	2	2	2	5
13-May	2	2	1	1	1	1	2	2	3	2	2	2	2	2	2	2	2	2	3	2	1	1	1	1	3
14-May	1	2	2	3	2	1	2	2	3	5	5	5	5	5	7	6	5	6	5	5	4	4	4	5	7
15-May	4	4	3	4	4	4	4	3	4	5	4	4	5	5	4	3	3	3	3	3	2	2	2	1	5
16-May	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	2	2	3
17-May	2	2	1	1	1	1	1	2	2	3	3	3	4	4	3	4	4	3	3	3	3	3	3	3	4
18-May	3	2	2	2	1	1	2	3	2	3	3	3	4	4	4	4	3	3	3	2	2	2	2	2	4
19-May	2	1	1	1	1	1	3	3	3	4	5	5	4	4	3	4	4	7	7	5	2	2	3	3	7
20-May	2	2	2	1	1	2	2	2	2	2	3	3	4	3	3	3	3	3	3	2	2	2	1	1	4
21-May	1	2	1	1	1	1	2	3	3	3	3	3	3	3	5	4	4	3	2	2	2	2	2	2	5
22-May	2	3	3	3	3	3	3	3	4	4	3	2	2	2	3	3	3	4	3	3	2	1	1	1	4
23-May	1	1	1	1	1	1	2	3	3	3	4	4	2	2	2	5	3	5	4	3	3	2	1	1	5
24-May	2	1	2	1	1	1	1	1	2	2	3	4	4	5	5	5	4	5	5	3	2	1	2	1	5
25-May	1	2	2	2	1	2	4	4	4	4	5	5	5	5	5	5	5	5	5	4	2	2	2	1	5
26-May	1	1	1	UO	1	1	2	4	4	4	4	4	5	6	6	6	6	5	6	5	3	3	2	2	6
27-May	1	1	1	1	1	1	1	1	2	2	4	4	5	5	5	5	4	3	3	2	1	1	2	1	5
28-May	1	1	1	2	1	1	1	2	1	2	3	4	4	3	3	3	3	2	2	UO	1	1	1	1	4
29-May	1	1	1	1	1	1	1	2	3	4	5	5	6	5	6	6	5	5	4	3	2	7	5	4	7
30-May	5	3	3	3	2	3	2	3	3	3	3	3	3	3	4	3	2	1	2	1	1	2	1	1	5
31-May	UO	1	1	1	1	1	1	2	2	2	2	1	3	3	3	3	4	3	3	4	4	3	2	2	4
5 4 4 4 4 4 4 4 4 5 5 5 5 6 6 7 6 6 7 7 5 4 7 5 5 Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

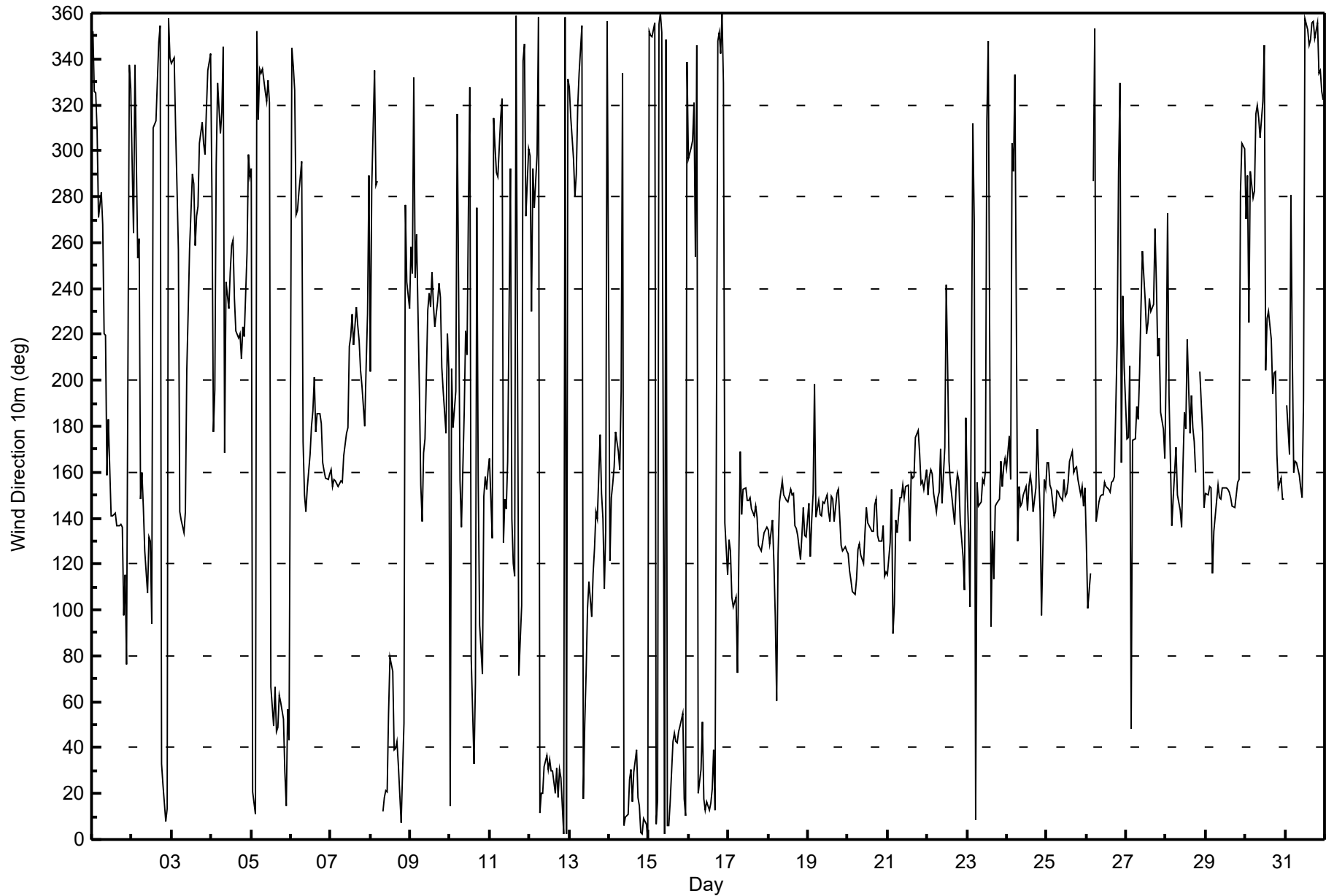
Waskow ohci Pimatisiwin - May 2025

Direction of Maximum Speed: 153 deg on May 19 19:00 Direction of Maximum Daily Speed Average: 155.3 deg on May 25																					Hours in Service: 744				
Direction of Minimum Speed: 139 deg on May 3 07:00 Direction of Minimum Daily Speed Average: 0.6 deg on May 11																					Hours of Data: 739				
Monthly Average Direction: 149.5 deg																					Hours of Missing Data: 5				
																					Percent Operational Time: 99.3				
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	352	326	325	309	271	282	268	220	219	159	183	141	141	142	142	137	137	137	136	98	115	76	337	327	154.6
2-May	294	264	337	253	262	148	160	145	126	107	132	130	94	310	313	330	347	354	33	24	8	14	358	341	0.8
3-May	338	340	311	285	257	143	139	134	143	205	230	257	290	286	259	271	276	303	313	304	298	318	335	342	291.9
4-May	278	177	196	294	330	307	316	345	169	243	231	247	259	261	236	222	218	220	209	224	219	256	298	289	256.9
5-May	292	21	11	352	314	336	334	335	326	321	331	321	67	49	66	47	49	63	60	53	29	15	56	43	3.3
6-May	345	337	326	272	274	282	295	173	150	143	153	168	180	187	201	177	186	185	181	164	160	158	157	159	175.4
7-May	161	154	157	156	153	155	156	155	167	177	179	215	219	229	215	232	224	217	204	198	180	206	229	289	185.6
8-May	204	284	335	285	287	UO	UO	12	18	21	21	55	79	73	39	40	43	33	7	30	51	277	243	231	26.8
9-May	258	247	332	245	264	196	154	138	169	175	231	238	232	247	233	223	234	242	236	206	195	177	221	205	222.7
10-May	15	205	180	195	316	239	156	136	186	222	211	274	328	79	33	68	275	155	94	72	149	158	152	160	170.3
11-May	166	131	314	302	291	289	314	323	129	148	144	165	292	140	120	115	359	71	88	102	339	347	272	301	121.1
12-May	298	230	293	275	299	358	12	20	20	32	36	30	35	30	30	20	31	18	30	27	2	358	3	331	17.9
13-May	327	315	296	280	290	319	334	354	18	50	73	101	112	97	116	127	143	140	176	151	140	109	135	357	66.0
14-May	121	149	155	162	177	169	161	195	334	6	10	11	26	30	16	29	39	18	15	3	2	9	7	0	18.5
15-May	352	350	350	356	7	17	355	360	351	3	349	6	6	16	43	46	43	42	47	49	55	18	10	338	10.0
16-May	296	301	305	321	254	346	20	31	51	18	13	16	13	16	22	39	13	348	351	342	360	329	138	115	6.1
17-May	131	126	105	101	105	73	123	169	142	153	153	148	148	149	144	141	145	141	128	127	126	134	135	136	137.5
18-May	135	129	139	121	97	60	125	147	156	150	149	147	147	152	150	151	137	136	133	122	133	145	132	132	140.2
19-May	146	123	139	150	198	140	147	141	141	147	147	150	143	138	150	148	139	150	153	141	128	126	127	126	143.3
20-May	125	117	113	108	107	113	126	129	124	120	133	145	138	137	135	134	146	148	133	130	130	137	115	117	131.0
21-May	115	130	152	90	102	139	133	149	149	154	149	154	154	130	159	157	158	175	178	168	155	156	153	161	153.0
22-May	150	158	161	160	151	143	149	151	170	146	171	242	206	165	155	150	137	152	159	156	138	123	108	184	157.6
23-May	151	133	102	312	268	9	156	145	147	157	155	160	313	348	93	134	113	145	146	149	165	154	162	166	147.6
24-May	162	176	157	303	291	333	130	154	145	146	150	154	143	154	159	154	143	153	179	160	143	98	157	153	155.1
25-May	164	164	155	152	141	143	152	151	149	148	157	149	151	155	165	169	160	162	163	157	150	154	145	153	155.3
26-May	129	101	116	UO	287	353	138	147	149	150	150	156	154	153	151	156	156	158	216	291	329	164	237	206	158.3
27-May	174	175	206	48	174	174	189	183	203	232	257	235	220	225	235	230	233	266	242	211	219	186	179	166	221.7
28-May	206	273	194	137	149	160	171	150	143	136	163	186	179	218	177	193	179	173	160	UO	204	191	177	144	173.6
29-May	151	150	154	153	116	134	147	154	149	148	153	153	153	153	151	149	145	144	150	156	157	282	303	301	156.8
30-May	270	289	225	291	280	282	316	320	314	306	322	346	205	227	230	218	194	203	204	168	153	158	149	148	267.4
31-May	UO	189	168	281	211	160	165	164	159	153	149	192	358	353	346	348	356	356	349	355	334	335	326	322	343.9
186.4 151.7 169.0 259.2 261.3 137.5 142.9 137.4 141.9 142.5 155.8 159.6 156.3 155.6 153.9 150.4 144.3 148.1 148.8 118.1 103.5 61.1 133.8 143.9																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Waskow ohci Pimatisiwin - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 109 deg on May 14 01:00																			Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3						
Minimum Value: 9 deg on May 6 04:00																									
Percentiles: P ₁ = 16 P ₁₀ = 23 Q ₁ = 28 Median = 33 Q ₃ = 47 P ₉₀ = 65 P ₉₉ = 96																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	19	19	15	18	29	32	44	57	38	49	53	27	27	27	27	29	29	31	39	36	42	42	64	27	64
2-May	76	84	22	78	25	90	50	36	44	31	37	33	74	51	33	26	29	39	27	22	24	21	21	20	90
3-May	16	24	12	48	82	62	96	34	34	52	45	50	36	54	50	48	37	25	20	24	28	21	23	23	96
4-May	46	28	44	25	19	19	21	39	71	41	43	43	37	44	54	45	42	56	38	47	36	46	25	22	71
5-May	27	32	26	23	36	23	21	27	33	44	73	56	50	36	35	35	33	30	26	24	25	36	44	63	73
6-May	36	61	21	9	18	13	26	72	24	29	35	54	41	47	49	36	38	37	32	23	21	22	22	23	72
7-May	22	22	21	22	21	22	22	25	27	33	35	48	43	54	42	42	45	39	39	32	30	40	36	95	95
8-May	62	53	77	19	37	UO	UO	52	24	26	33	41	34	83	31	32	31	32	39	26	46	81	39	46	83
9-May	70	36	15	28	18	59	20	22	37	35	49	51	48	46	55	51	48	54	42	35	18	29	44	73	73
10-May	82	76	86	79	100	100	88	42	52	64	67	97	74	34	72	58	98	51	34	44	74	71	36	24	100
11-May	28	54	25	29	41	24	73	68	37	30	44	73	104	32	66	37	63	46	53	50	26	18	61	42	104
12-May	66	74	28	31	36	26	25	32	28	34	36	35	35	33	34	31	33	30	32	28	23	21	26	20	74
13-May	18	16	18	14	67	71	66	30	47	48	44	44	38	85	45	65	41	34	57	66	25	31	48	38	85
14-May	109	61	26	25	37	35	23	59	36	32	28	29	32	32	29	32	31	28	30	25	27	28	27	28	109
15-May	21	21	23	23	28	32	24	27	23	32	26	34	37	40	40	40	37	36	34	32	30	27	71	36	71
16-May	34	13	16	17	37	35	47	57	50	58	48	50	46	61	55	55	54	37	33	19	22	95	30	36	95
17-May	28	31	29	24	27	43	69	70	33	30	37	36	36	36	29	30	33	34	29	29	27	29	29	28	70
18-May	29	30	29	32	39	53	62	49	32	32	37	34	31	33	28	29	35	33	29	28	29	34	34	33	62
19-May	28	25	25	49	74	26	30	28	28	30	29	29	31	33	33	27	31	31	27	29	29	28	30	31	74
20-May	31	32	34	33	29	36	33	30	31	32	33	33	34	29	30	29	32	30	30	31	29	37	37	34	37
21-May	28	49	47	82	38	30	31	30	32	29	35	27	30	33	33	28	28	34	36	34	28	25	25	25	82
22-May	29	27	25	25	28	29	28	28	40	30	41	44	52	36	31	31	33	30	28	27	32	25	60	47	60
23-May	39	27	37	71	60	64	40	34	32	30	32	50	77	47	67	44	32	32	28	29	31	27	24	34	77
24-May	30	28	60	41	29	28	86	42	30	36	29	31	33	29	30	33	32	32	35	28	38	43	22	22	86
25-May	22	22	22	26	36	28	23	26	29	30	32	29	31	34	36	38	31	31	31	28	31	27	29	22	38
26-May	32	56	35	UO	46	23	88	28	28	29	31	34	30	31	31	31	31	30	64	48	87	65	95	67	95
27-May	58	37	86	74	31	49	38	52	61	69	62	78	54	54	54	52	54	53	55	43	49	38	61	32	86
28-May	97	86	50	33	24	18	23	38	35	33	81	50	48	60	46	52	37	34	30	UO	82	77	22	32	97
29-May	34	33	64	56	28	47	24	26	28	30	32	35	32	31	32	34	32	29	29	27	27	67	38	45	67
30-May	53	49	54	52	46	52	29	25	32	38	37	53	88	73	55	51	48	71	47	28	24	52	26	48	88
31-May	UO	71	67	57	100	29	39	26	33	35	46	71	25	27	22	21	25	26	27	28	27	25	23	25	100
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS27
JACKFISH 2/3
MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	13.2	0	1.3	0
H2S (ppb) Average	703	38	41	99.6	1.4	0	0.4	0
NO2 (ppb) Average	707	36	37	99.87	12.1	0	2.8	-
NO (ppb) Average	707	36	37	99.87	1.8	-	0.2	-
NOX (ppb) Average	707	36	37	99.87	12.6	-	2.9	-
Temperature 2 m (C) Average	744	0	0	100	30.2	-	22.9	-
Relative Humidity (%) Average	744	0	0	100	97.8	-	94	-
Wind Speed 10 m (km/h) Average	742	0	2	99.73	17	-	11	-
Wind Direction 10 m (deg) Average	742	0	2	99.73	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.42	1	-	0	0	0	0.1	0.3	0.9	13.2
H2S (ppb) Average	703	0.11	0.1	-	0	0	0.1	0.1	0.1	0.2	1.4
NO2 (ppb) Average	707	1.09	1.2	-	0.1	0.3	0.5	0.8	1.2	2.1	12.1
NO (ppb) Average	707	0.07	0.2	-	0	0	0	0	0.1	0.2	1.8
NOX (ppb) Average	707	1.16	1.3	-	0.1	0.3	0.5	0.8	1.3	2.3	12.6
Temperature 2 m (C) Average	744	12.51	6.6	-	-2.3	4.6	7.5	11.8	16.4	22.1	30.2
Relative Humidity (%) Average	744	54.05	23.9	-	13.9	24.6	32.9	50.4	73.1	92	97.8
Wind Speed 10 m (km/h) Average	742	7.1	3	-	0	3	5	7	9	11	17
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	23 May 2025 13:00	23 May 2025 13:00	1	Station power failure
H2S	27 May 2025 09:00	27 May 2025 10:00	2	Maintenance - verify daily QA response
Wind Speed, Wind Direction	16 May 2025 04:00	16 May 2025 05:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

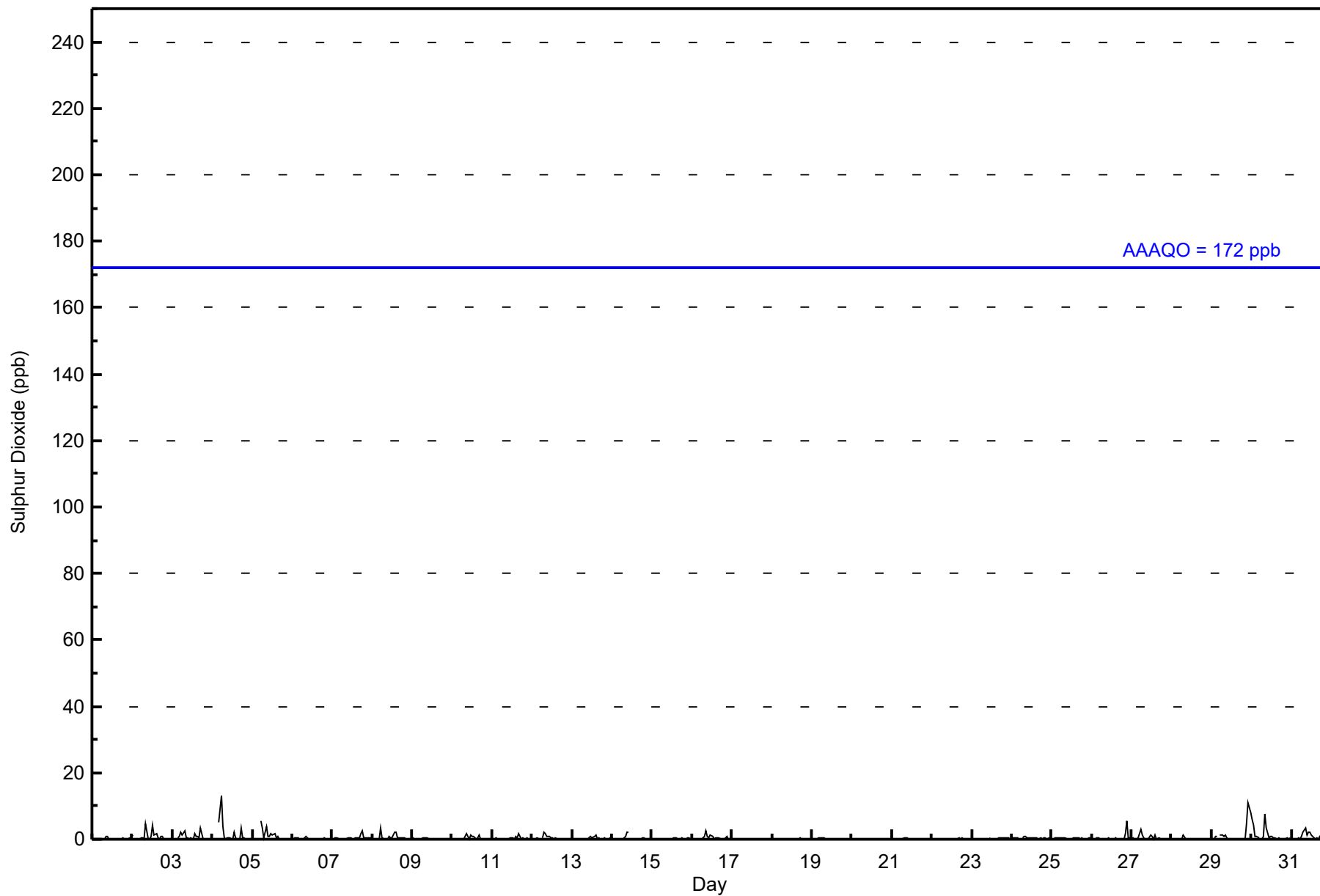
Jackfish 2/3 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13.2 ppb on May 4 06:00 Maximum Daily Average: 1.3 ppb on May 29																		Hours in Service: 744								
Minimum Value: 0.0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 17 Maximum Diurnal Average: 1.2 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 20 Monthly Average: 0.42 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 5.2																		Hours of Data: 708								
																		Hours of Missing Data: 36								
																		Hours of Calibration: 35								
																		Percent Operational Time: 99.9								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.7	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.3	0.0	0.0	0.0	0.3	0.5	0.1	0.9
2-May	1.1	Z	0.0	0.1	0.2	0.3	0.3	0.2	4.5	0.1	0.1	1.0	4.2	1.3	1.6	0.2	0.2	1.0	1.0	0.0	0.0	0.1	0.1	0.1	0.8	4.5
3-May	0.1	0.1	Z	0.4	0.9	2.2	1.2	2.6	0.5	0.6	0.2	0.5	0.1	1.7	0.8	1.0	0.5	3.5	0.0	0.0	0.0	0.0	0.2	0.0	0.7	3.5
4-May	0.0	0.0	0.0	Z	5.3	13.2	3.9	0.5	0.0	0.4	0.3	0.0	0.1	1.9	0.2	0.0	0.0	3.3	0.3	0.6	0.1	0.1	0.1	0.1	1.3	13.2
5-May	0.1	0.2	0.0	0.1	Z	5.4	3.4	0.4	3.7	0.9	0.8	1.6	1.3	1.7	0.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	5.4
6-May	0.0	0.3	0.5	0.5	0.5	Z	0.2	0.5	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.8
7-May	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	1.5	2.7	0.4	0.3	0.3	0.3	0.4	0.4	2.7
8-May	0.3	Z	0.1	0.2	0.1	3.3	0.4	0.2	0.1	0.0	0.7	0.3	0.5	1.9	2.3	0.4	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.5	3.3
9-May	0.2	0.1	Z	0.0	0.0	0.1	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
10-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	1.6	0.8	0.0	1.1	0.8	0.8	0.0	0.2	1.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	1.6
11-May	0.1	0.1	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.6	0.3	1.7	0.2	0.3	0.2	0.2	0.3	0.1	0.0	0.2	1.7
12-May	0.1	0.1	0.1	0.2	0.1	Z	0.4	2.0	1.6	1.0	0.7	0.3	0.2	0.2	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.2	0.4	2.0
13-May	Z	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.6	0.7	0.6	1.0	1.5	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.3	0.3	1.5
14-May	0.4	Z	0.0	0.1	0.1	0.1	0.1	0.6	1.0	1.9	2.0	C	C	C	C	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.4	2.0
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.1	0.1	0.1	0.6	0.2	0.2	0.5	0.6	0.0	0.1	0.6
16-May	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.7	2.6	1.0	0.6	1.1	0.7	0.1	0.4	0.5	0.3	0.1	0.2	0.0	0.6	0.6	0.0	0.0	0.4	2.6
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
18-May	0.1	0.1	0.1	0.1	0.2	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.2
19-May	Z	0.0	0.0	0.2	0.4	0.5	0.5	0.5	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.5
20-May	0.2	Z	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.2
21-May	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
22-May	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.4
23-May	0.1	0.1	0.1	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.2	0.2	PF	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	0.2	0.3
24-May	0.3	0.2	0.3	0.4	0.4	Z	0.4	0.8	0.7	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.8
25-May	Z	0.2	0.2	0.3	0.5	0.6	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.3	0.6	0.3	0.6
26-May	0.6	Z	0.6	0.5	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.2	0.0	0.1	0.1	0.1	1.8	5.7	0.3	0.4	0.5	5.7
27-May	0.4	0.3	Z	0.0	0.3	2.9	1.4	0.4	0.0	0.1	0.2	1.2	0.8	0.1	1.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.9
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1
29-May	0.1	0.2	0.7	0.8	Z	1.2	1.1	0.8	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	11.1	8.2	1.3	11.1
30-May	6.0	4.1	0.8	0.8	0.3	Z	0.1	0.8	7.8	3.4	0.6	0.7	0.9	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.4	1.3	7.8
31-May	Z	0.0	0.0	0.1	0.3	0.1	0.7	2.3	3.2	1.2	2.0	2.1	1.5	0.4	0.2	0.2	0.1	0.7	0.4	0.8	0.7	0.3	0.1	0.1	0.8	3.2
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	706	99.72	99.72
11 - 20	2	0.28	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	13	35	23	16	15	16	46	71	149	80	46	61	44	27	36	27	705
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	13	35	23	16	15	16	46	71	149	80	46	61	44	29	36	27	707

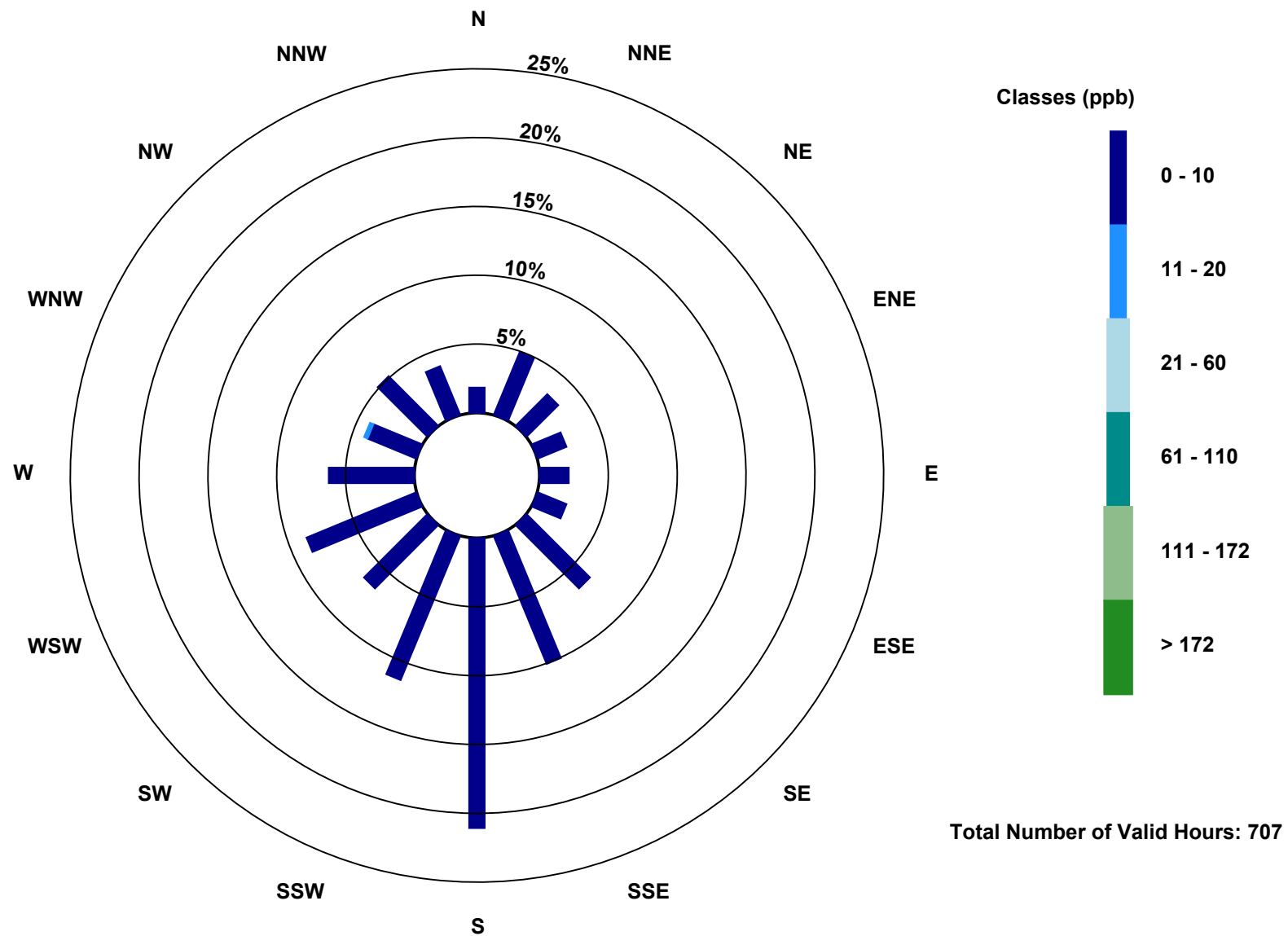
Total Number of Valid Hours: 707

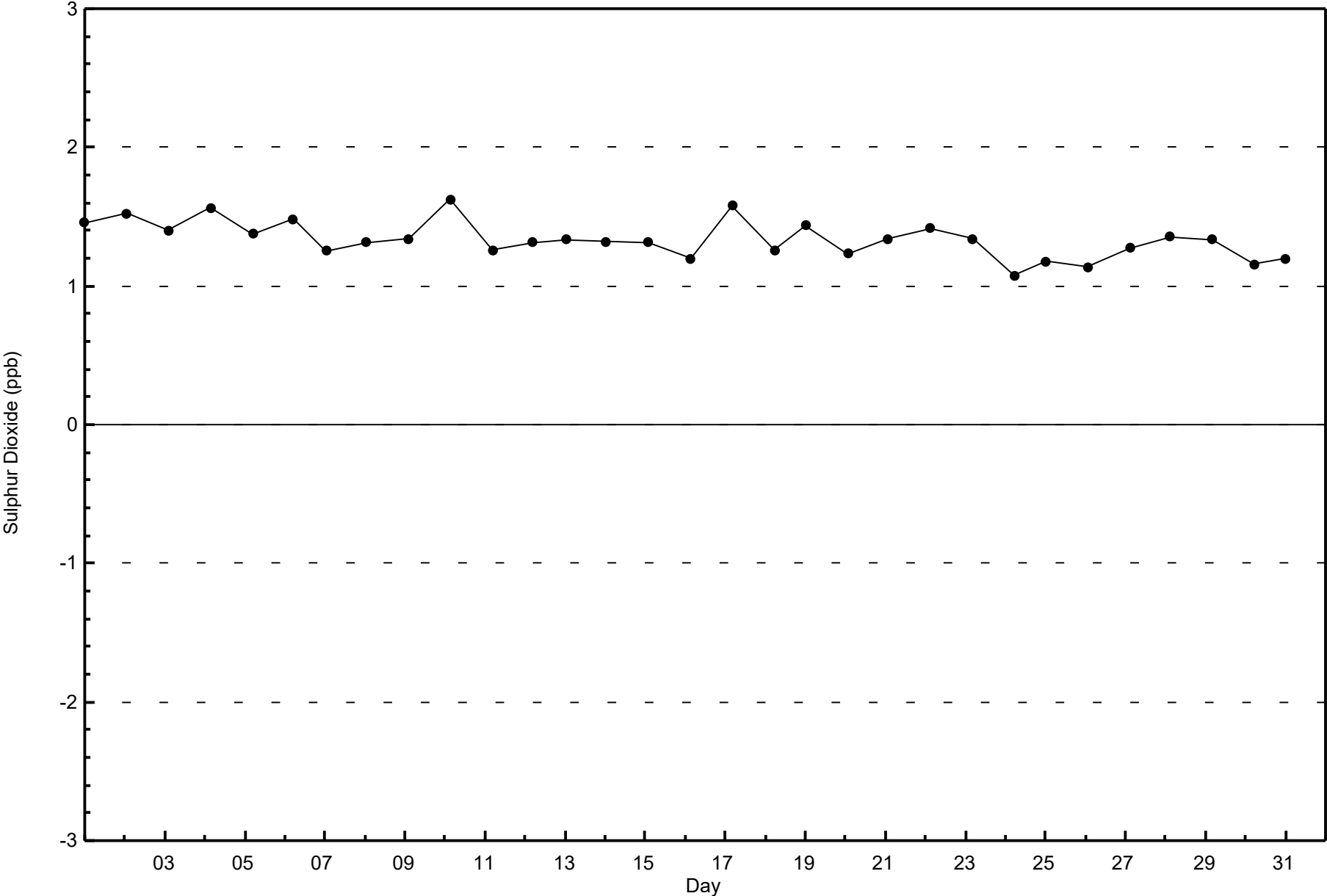
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3

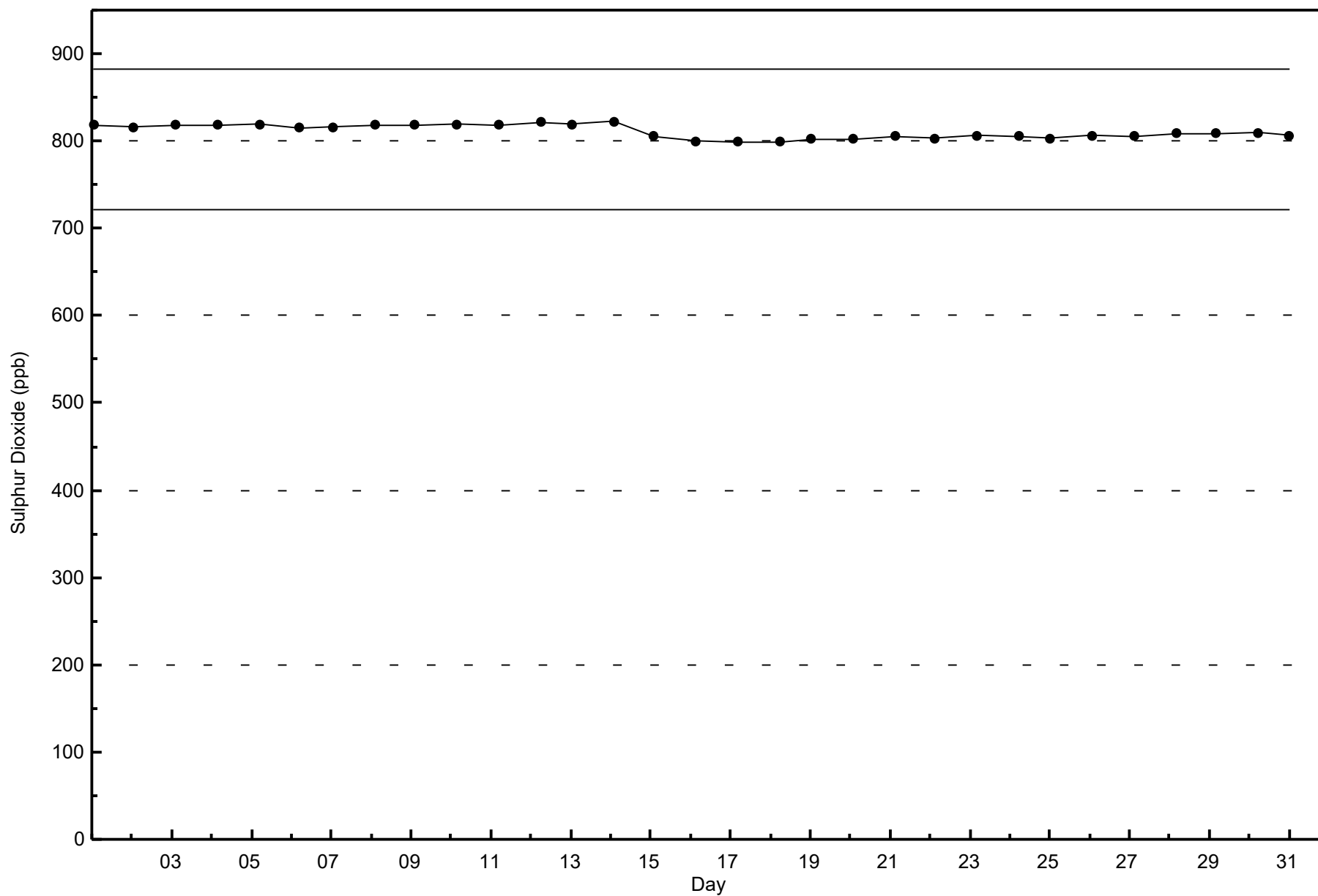






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

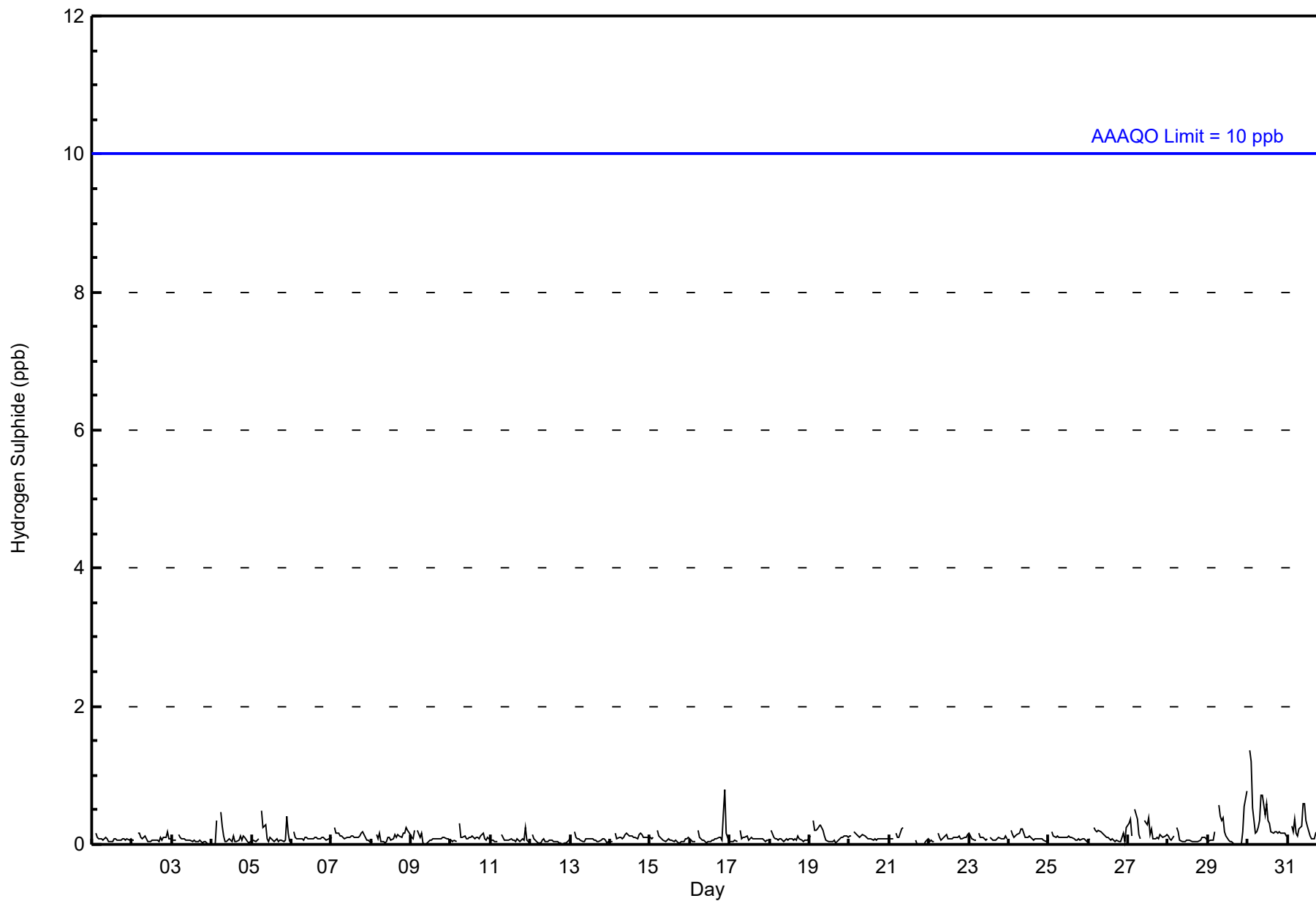
Jackfish 2/3 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744								
Maximum Value: 1.4 ppb on May 30 02:00 Maximum Daily Average: 0.4 ppb on May 30																			Hours of Data: 703								
Minimum Value: 0.0 ppb on May 4 00:00 Minimum Daily Average: 0.0 ppb on May 12																			Hours of Missing Data: 41								
Maximum Diurnal Average: 0.2 ppb at hour 6 Minimum Diurnal Average: 0.1 ppb at hour 17																			Hours of Calibration: 38								
Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6																			Percent Operational Time: 99.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
2-May	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
3-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
4-May	0.0	0.0	0.0	0.4	Z	0.5	0.3	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5
5-May	0.0	0.1	0.0	0.1	0.1	Z	0.5	0.2	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.4	0.2	0.0	0.1	0.5
6-May	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
7-May	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.2
8-May	0.1	0.0	Z	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2
9-May	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
10-May	0.1	0.0	0.1	0.0	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3
11-May	0.1	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.2	
12-May	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
13-May	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2
14-May	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
15-May	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
16-May	0.1	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.2	0.1	0.1	0.8
17-May	0.0	0.0	0.0	0.1	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2
18-May	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
19-May	0.1	Z	0.4	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
20-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
21-May	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.3	C	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	--	0.3
22-May	0.0	0.1	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
23-May	0.2	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	PF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
24-May	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2
25-May	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
26-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.2	0.1	0.2
27-May	0.3	0.4	0.1	Z	0.5	0.4	0.1	0.1	M	M	0.3	0.3	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
28-May	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
29-May	0.0	0.1	0.1	0.1	0.2	Z	0.6	0.4	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.8	0.2	0.8
30-May	Z	1.4	1.2	0.5	0.2	0.2	0.3	0.4	0.7	0.7	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.4	1.4
31-May	0.1	Z	0.3	0.2	0.4	0.2	0.1	0.2	0.3	0.6	0.6	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.4	0.2	0.2	0.2	0.2	0.6
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	703	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	15	33	24	16	15	15	46	72	145	79	46	61	46	29	35	25	702
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	33	24	16	15	15	46	72	145	79	46	61	46	29	35	25	702

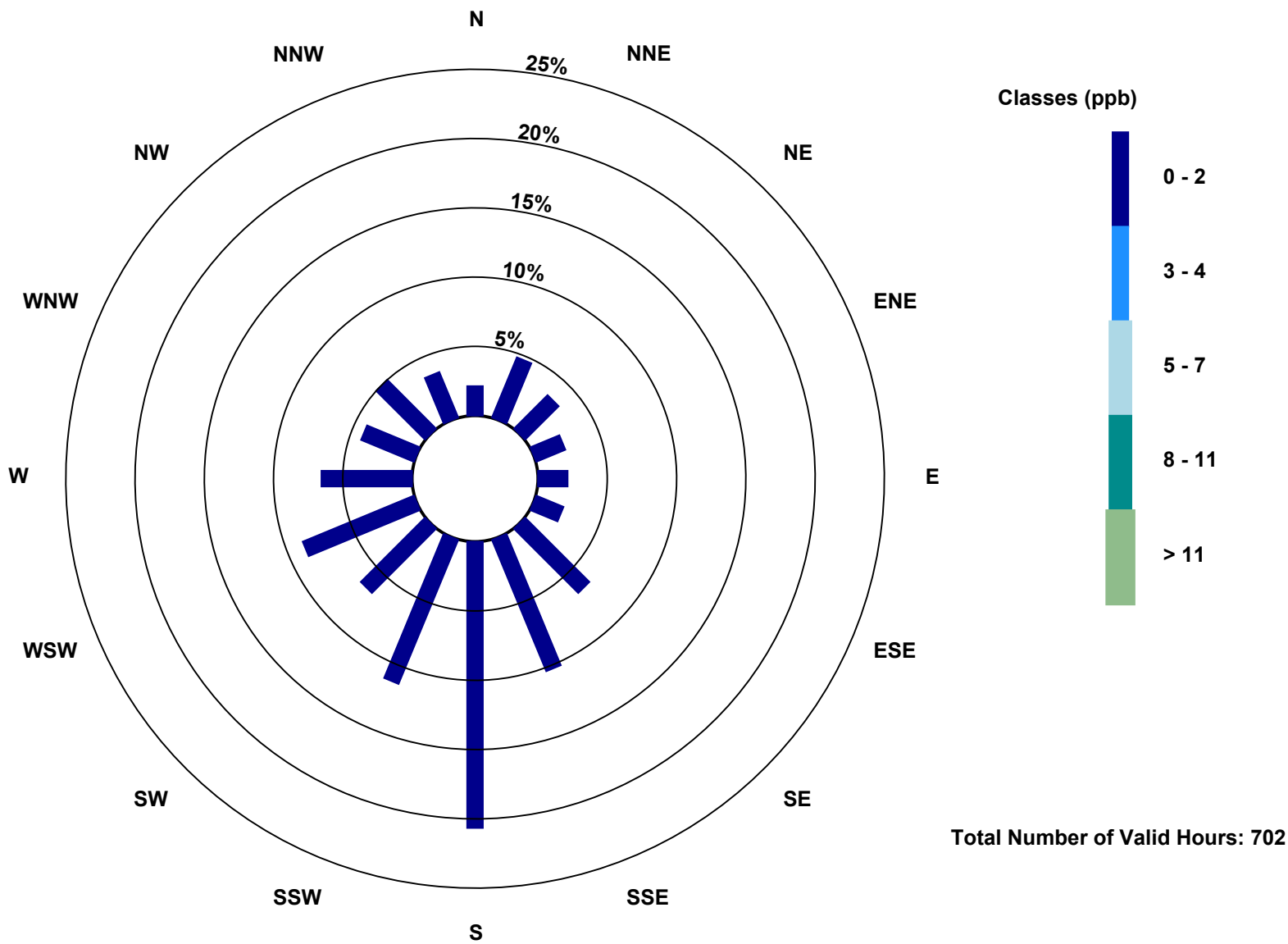
Total Number of Valid Hours: 702

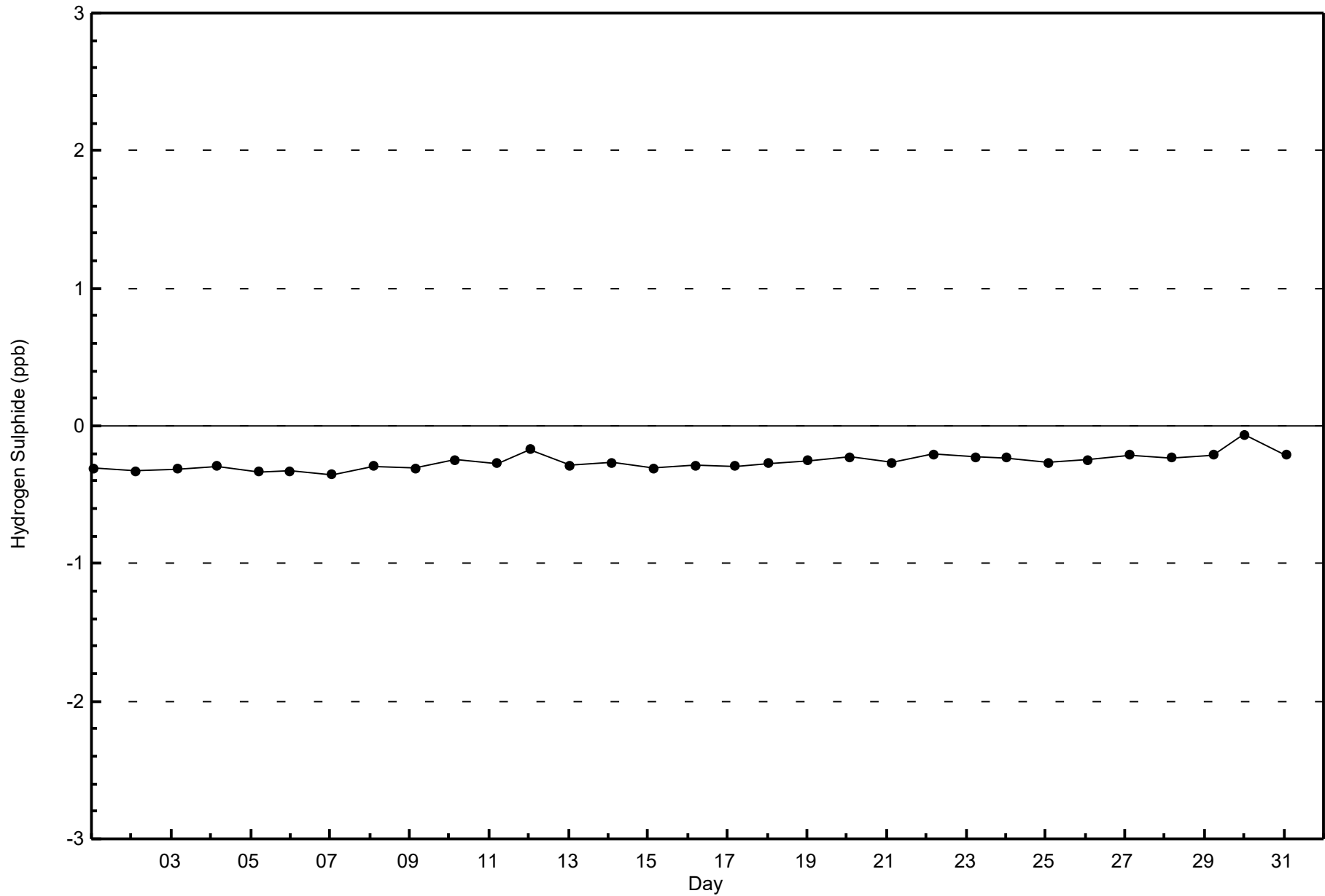
Total Number of Hours: 744

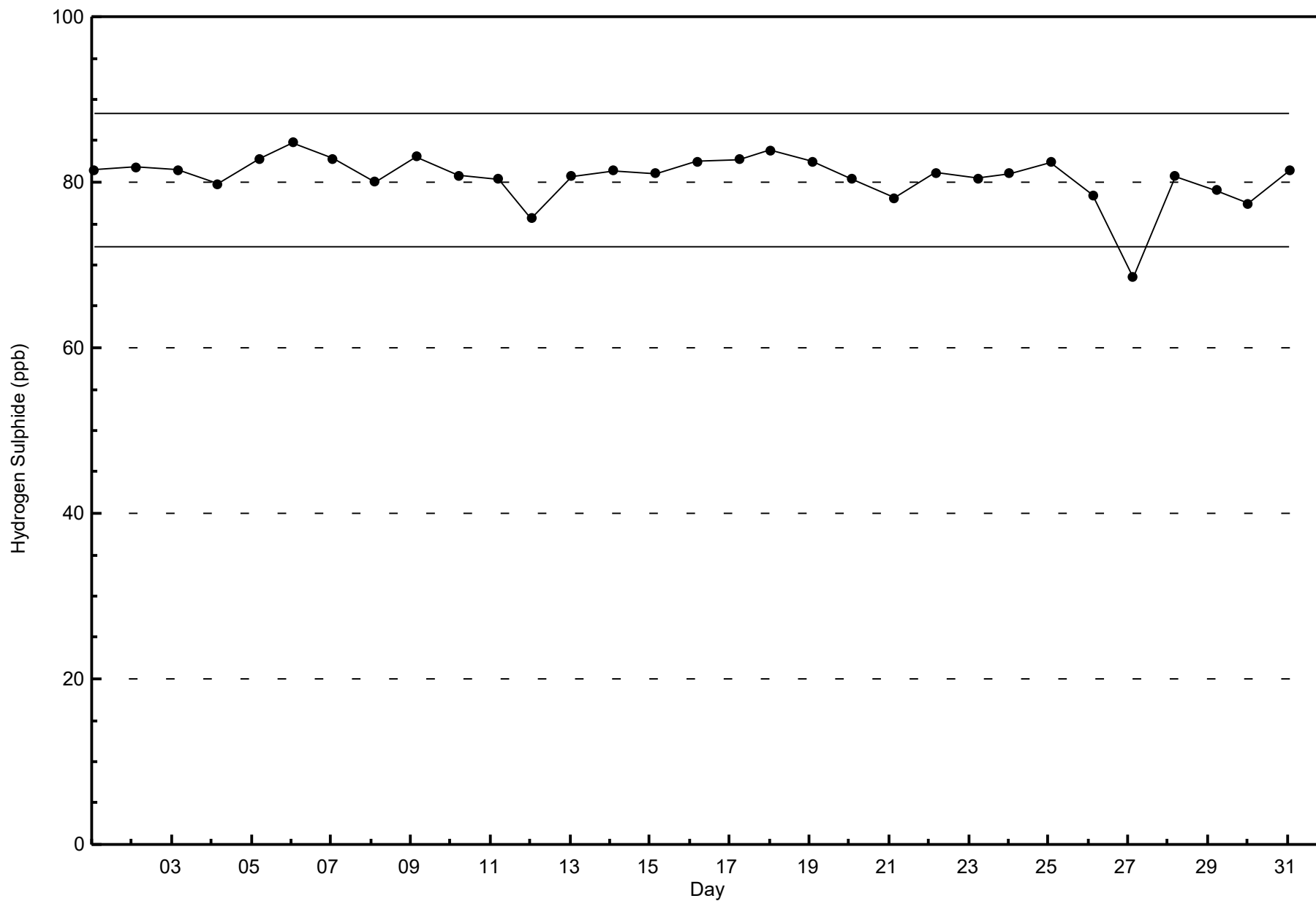


Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3









Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

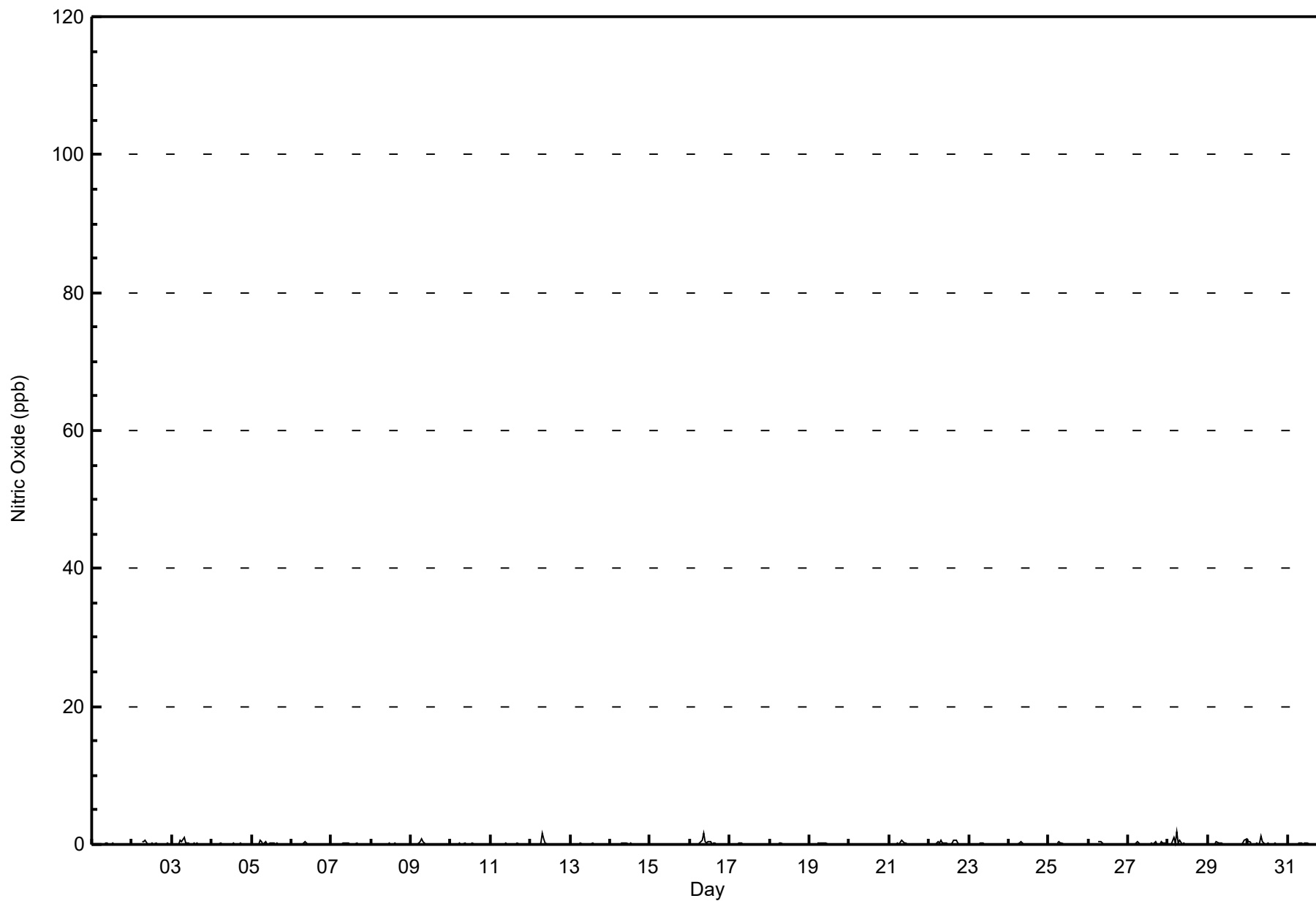
Jackfish 2/3 - May 2025

Maximum Value: 1.8 ppb on May 28 06:00																		Maximum Daily Average: 0.2 ppb on May 16								Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																		Minimum Daily Average: 0.0 ppb on May 15								Hours of Data: 707	
Maximum Diurnal Average: 0.3 ppb at hour 8																		Minimum Diurnal Average: 0.0 ppb at hour 20								Hours of Missing Data: 37	
Monthly Average: 0.07 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.8								Hours of Calibration: 36	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.4	0.6	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.6	
3-May	Z	0.0	0.0	0.0	0.0	0.5	0.3	1.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
4-May	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
5-May	0.0	0.0	Z	0.0	0.0	0.5	0.4	0.1	0.5	0.0	0.0	0.2	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
6-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
7-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
8-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
9-May	Z	0.0	0.0	0.0	0.0	0.4	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	
10-May	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
11-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
12-May	0.0	0.0	0.0	Z	0.0	0.0	0.2	1.6	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	
13-May	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
14-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
16-May	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.6	1.7	0.5	0.2	0.5	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	
17-May	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
18-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
19-May	0.0	0.0	0.0	0.0	Z	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
20-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
21-May	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.6	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	
22-May	0.0	Z	0.0	0.0	0.0	0.5	0.2	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	
23-May	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.0	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
24-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.3	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
25-May	0.0	0.0	0.0	0.0	Z	0.3	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
26-May	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
27-May	Z	0.0	0.0	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.0	0.3	0.2	0.2	0.0	0.1	0.3	
28-May	0.0	Z	0.0	1.1	0.3	1.8	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	
29-May	0.0	0.0	Z	0.0	0.0	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.8	0.1	0.8	
30-May	0.5	0.4	0.1	Z	0.1	0.1	0.0	0.2	1.2	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	
31-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
0.0 0.0 0.0 0.0 0.0 0.2 0.2 0.3 0.3 0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0																										Diurnal Average	
0.5 0.4 0.1 1.1 0.3 1.8 0.9 1.6 1.7 0.5 0.2 0.5 0.3 0.2 0.3 0.6 0.5 0.2 0.1 0.0 0.3 0.3 0.5 0.8																										Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705

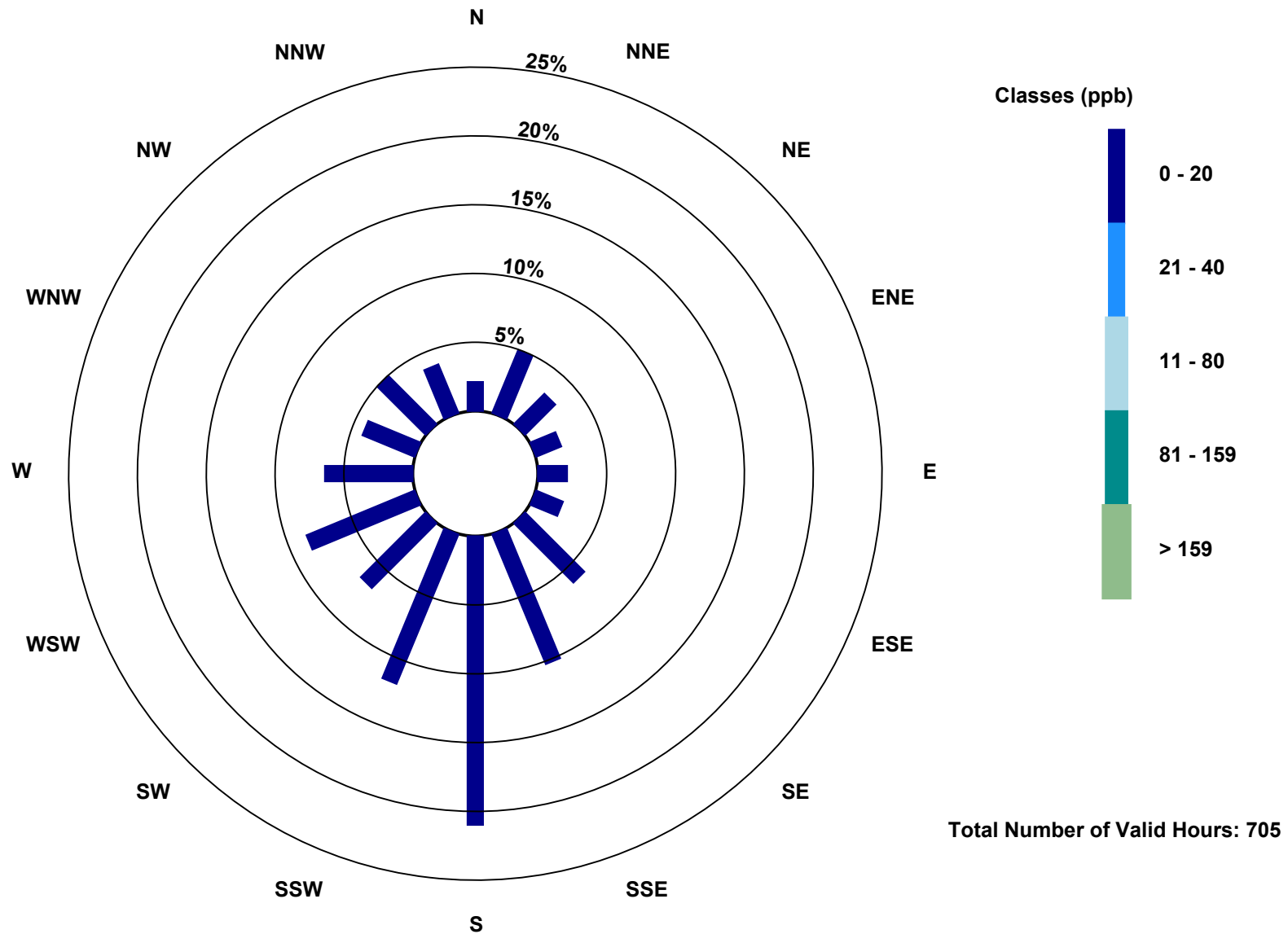
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

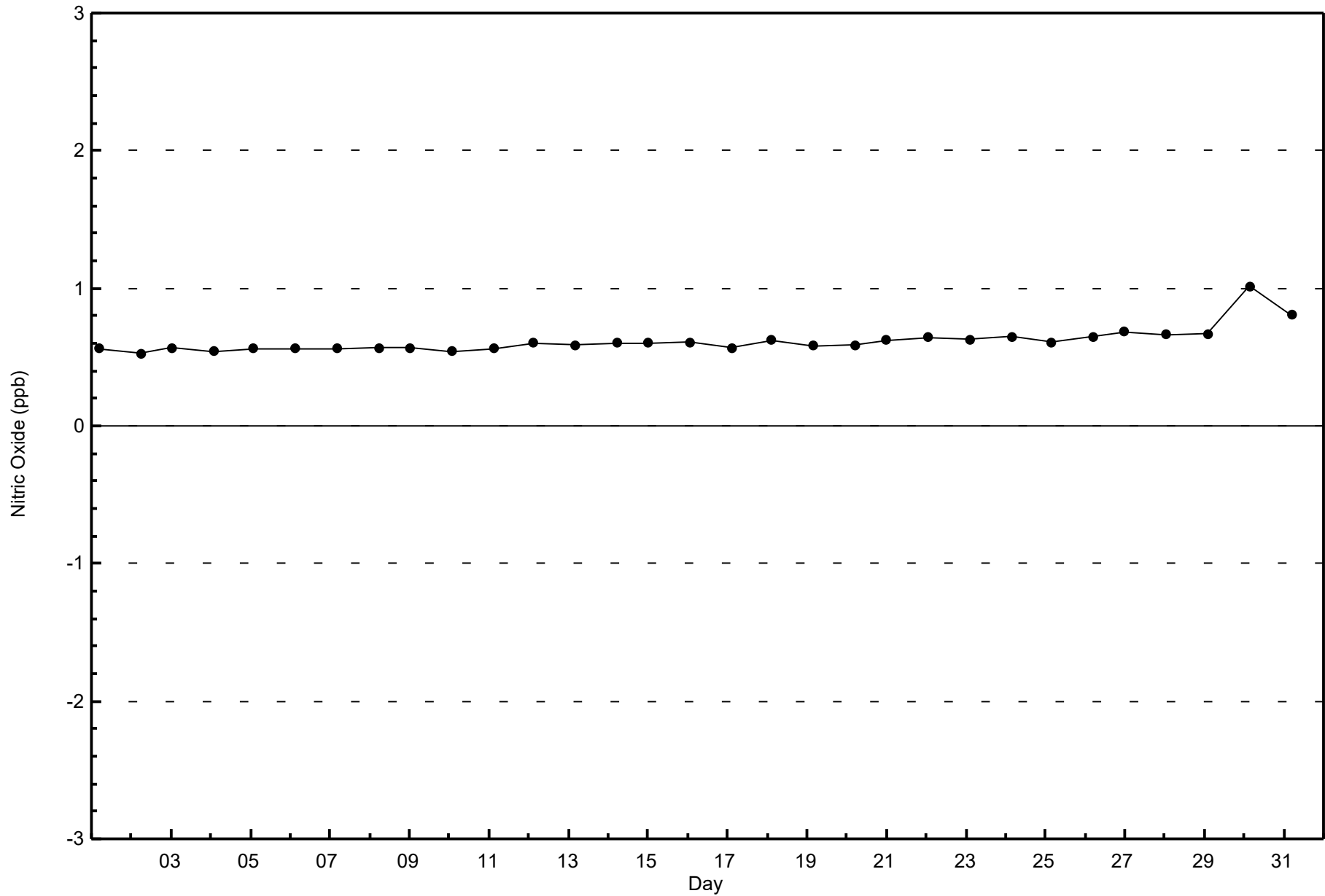
Nitric Oxide (NO) - ppb
Jackfish 2/3





Wood Buffalo Environmental Association
Zero Responses

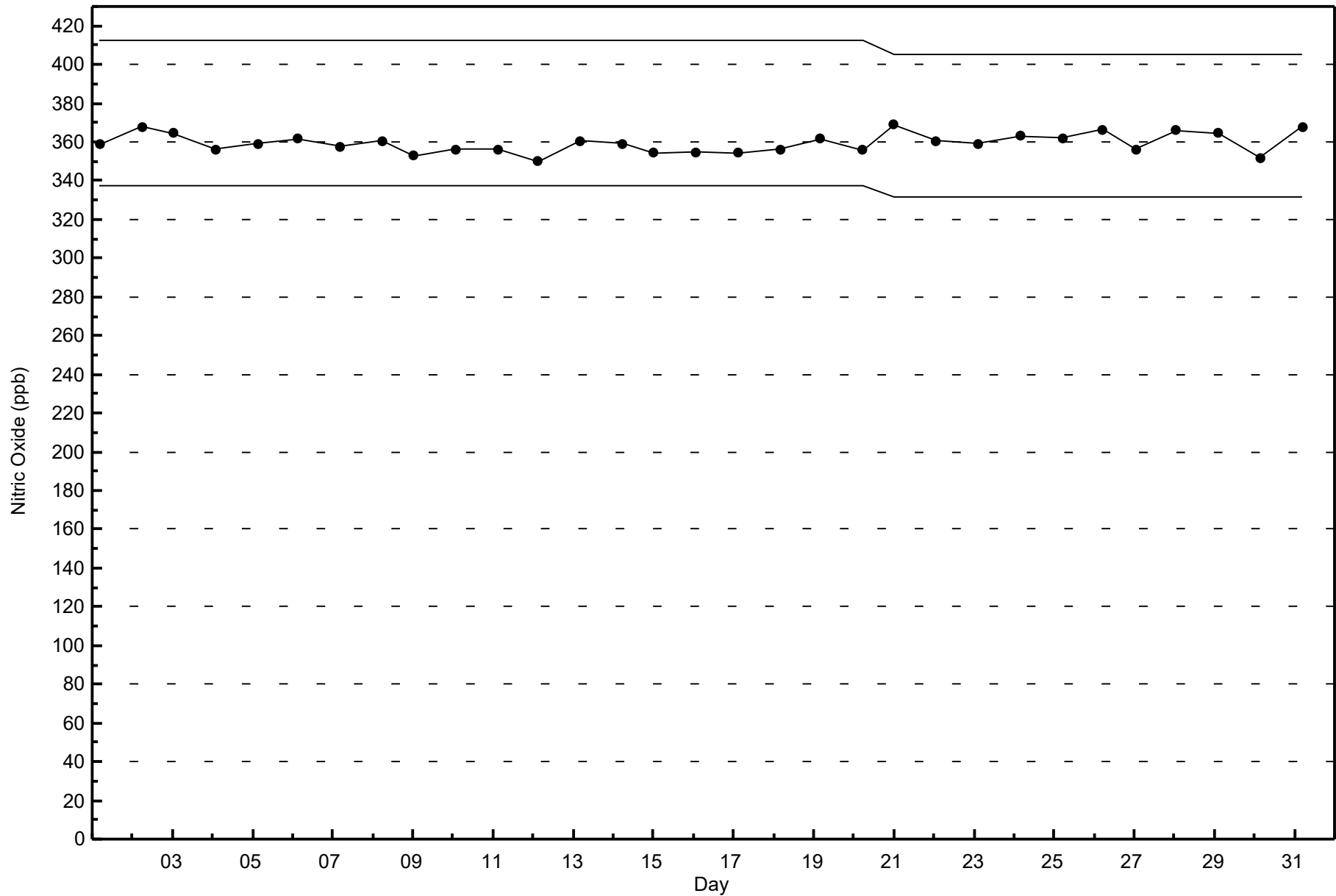
Nitric Oxide (NO) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

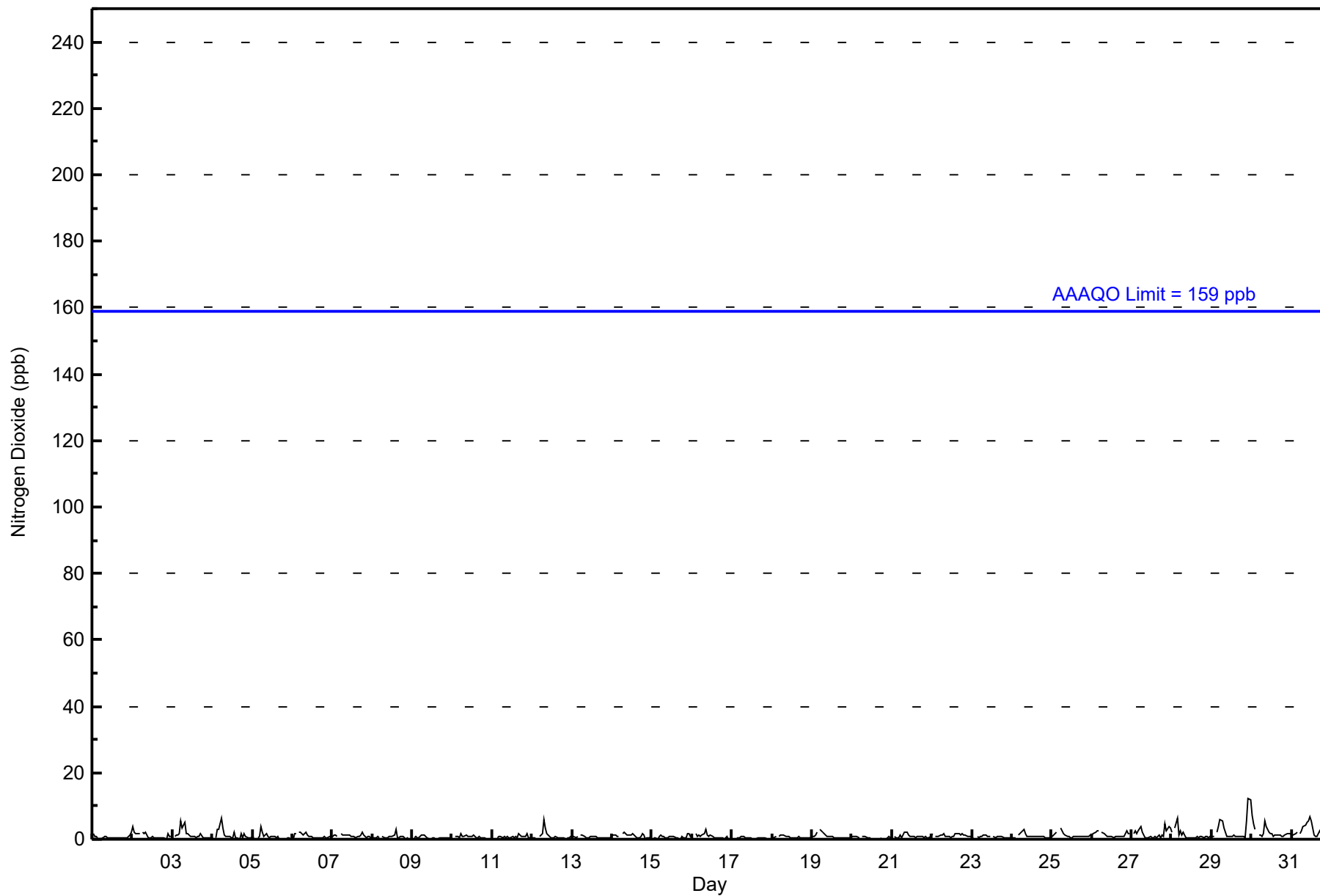
Jackfish 2/3 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12.1 ppb on May 29 23:00 Maximum Daily Average: 2.8 ppb on May 29																			Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 36 Percent Operational Time: 99.9							
Minimum Value: 0.1 ppb on May 6 01:00 Maximum Diurnal Average: 2.2 ppb at hour 6 Monthly Average: 1.09 ppb										Minimum Daily Average: 0.4 ppb on May 17 Minimum Diurnal Average: 0.7 ppb at hour 16 Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.8 Q ₃ = 1.2 P ₉₀ = 2.1 P ₉₉ = 6.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.5	0.7	0.7	0.5	Z	0.5	0.5	0.9	0.9	0.6	0.4	0.3	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	1.3	2.0	0.6	2.0
2-May	3.9	2.3	1.8	1.7	1.6	Z	2.1	1.7	2.3	0.4	0.3	0.5	0.9	0.4	0.5	0.3	0.3	0.5	0.6	0.3	0.2	1.7	0.8	0.8	1.1	3.9
3-May	Z	0.9	1.2	1.3	1.9	5.5	3.2	5.2	1.7	1.6	1.2	1.0	0.8	1.0	0.6	1.0	0.7	1.6	0.4	0.4	0.4	0.5	0.3	0.3	1.4	5.5
4-May	0.3	Z	0.6	2.8	2.9	6.5	3.2	1.1	0.7	0.8	0.7	0.5	0.3	2.3	0.3	0.4	0.2	1.5	0.5	1.6	0.9	0.5	0.5	0.6	1.3	6.5
5-May	0.8	0.6	Z	0.4	0.8	3.7	2.2	0.7	1.8	0.7	0.5	1.0	0.8	0.8	0.5	0.7	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.8	3.7
6-May	0.1	1.6	1.6	Z	2.0	2.0	1.4	1.6	2.1	1.2	1.0	0.8	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.9	0.5	0.5	0.7	0.9	1.0	2.1
7-May	1.0	1.1	1.1	1.0	Z	1.6	1.4	1.3	1.3	1.3	1.2	1.0	0.9	0.7	0.6	0.9	0.8	1.3	2.0	1.3	0.6	0.7	0.7	0.5	1.1	2.0
8-May	0.4	0.3	0.6	0.8	0.5	Z	0.8	0.6	0.5	0.5	1.0	1.0	0.9	1.1	3.1	0.5	0.6	0.7	0.7	0.5	0.2	0.3	0.2	0.1	0.7	3.1
9-May	Z	0.4	0.8	0.3	0.4	1.1	1.4	1.1	0.8	0.6	0.2	0.2	0.3	0.4	0.2	0.2	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	1.4
10-May	0.4	Z	0.7	0.7	0.5	1.5	1.0	0.9	1.3	0.9	0.7	1.0	0.8	1.1	0.4	0.6	0.9	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.7	1.5
11-May	0.2	0.2	Z	0.6	0.8	0.8	0.4	0.7	0.5	0.8	0.4	0.6	0.8	0.5	0.8	0.5	1.5	0.7	0.8	0.8	0.9	1.5	0.4	0.4	0.7	1.5
12-May	0.3	0.6	0.6	Z	1.0	1.1	1.9	6.0	3.5	1.5	1.0	0.6	0.5	0.5	0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.6	0.4	0.7	1.0	6.0
13-May	1.0	0.8	0.5	0.7	Z	1.4	1.2	0.8	0.6	0.5	0.6	0.7	0.7	0.9	0.8	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.5	0.6	1.4
14-May	1.3	1.2	1.1	0.9	1.0	Z	1.8	2.2	1.9	1.3	1.4	1.2	1.6	1.2	0.7	0.6	0.5	0.8	1.8	1.3	0.2	0.3	0.4	0.7	1.1	2.2
15-May	Z	0.4	0.3	0.2	0.8	1.2	0.7	0.8	0.6	0.4	0.8	0.8	0.8	0.8	0.6	0.3	0.2	0.2	1.0	0.3	0.4	1.6	1.8	0.8	0.7	1.8
16-May	0.7	Z	1.5	1.0	1.3	1.0	1.2	1.5	3.1	1.1	0.8	1.2	1.0	0.4	0.5	0.6	0.3	0.3	0.3	0.1	0.6	0.8	0.1	0.2	0.9	3.1
17-May	0.2	0.1	Z	0.3	0.6	0.8	1.0	0.9	0.6	0.6	0.5	0.4	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.4	1.0
18-May	0.5	0.3	0.7	Z	1.0	1.2	1.4	1.2	0.8	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	1.4
19-May	0.7	0.8	1.1	2.0	Z	3.0	2.2	1.6	1.1	0.9	0.9	0.7	0.7	0.5	0.5	0.3	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.9	3.0
20-May	0.8	0.7	0.7	0.7	0.6	Z	0.9	0.7	0.7	0.6	0.4	0.5	C	C	C	C	C	0.3	0.2	0.2	0.1	0.3	0.9	0.5	0.5	0.9
21-May	Z	0.7	0.4	0.3	0.3	1.1	0.6	2.3	2.2	2.0	1.2	0.8	0.8	0.7	0.6	0.7	0.8	0.8	0.9	0.6	1.0	0.6	0.6	0.9	0.9	2.3
22-May	1.5	Z	0.8	0.9	1.0	1.2	1.1	1.5	1.0	1.0	0.9	0.6	0.8	0.9	1.5	1.8	1.9	1.3	1.5	1.4	1.2	0.9	0.9	1.0	1.2	1.9
23-May	0.6	0.6	Z	0.7	0.6	0.7	0.8	1.2	1.4	1.0	1.0	0.9	PF	0.7	0.6	0.7	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.8	1.4
24-May	0.5	0.5	0.6	Z	1.4	1.8	2.4	2.9	1.6	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.7	0.7	0.7	0.9	0.6	0.6	0.6	0.8	1.0	2.9
25-May	1.0	1.2	1.7	2.1	Z	3.2	2.7	1.6	1.2	0.8	0.7	0.6	0.5	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	1.2	1.1	3.2
26-May	1.4	1.7	2.3	2.6	2.7	Z	2.3	1.8	1.4	1.0	0.8	0.7	0.7	0.6	0.8	0.7	0.7	0.7	0.7	0.8	1.6	2.7	1.6	1.9	1.4	2.7
27-May	Z	1.6	2.5	1.7	2.7	4.0	2.2	1.1	0.6	0.6	0.4	0.9	0.6	0.3	0.9	0.5	1.3	0.6	1.1	0.7	4.7	2.7	3.9	3.4	1.7	4.7
28-May	2.1	Z	3.3	6.4	1.4	2.7	1.1	2.0	0.5	0.6	0.6	0.5	0.4	0.3	0.4	0.7	0.6	0.7	0.7	0.5	0.7	0.8	0.6	0.7	1.2	6.4
29-May	0.8	1.0	Z	2.1	3.8	6.1	5.6	3.6	2.1	1.0	1.0	0.9	0.9	1.1	0.9	0.8	0.9	0.9	0.8	0.7	0.6	5.6	12.1	11.7	2.8	12.1
30-May	7.3	4.8	2.8	Z	1.1	1.2	0.7	1.6	5.3	3.8	2.3	1.9	1.5	1.0	1.2	1.3	1.4	1.2	0.8	0.9	1.2	1.6	1.5	1.5	2.1	7.3
31-May	1.2	1.3	1.6	2.2	Z	1.6	2.5	4.0	4.2	5.1	5.6	6.7	5.6	1.3	0.8	1.0	1.5	2.4	1.6	2.8	2.4	2.3	1.3	1.0	2.6	6.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705

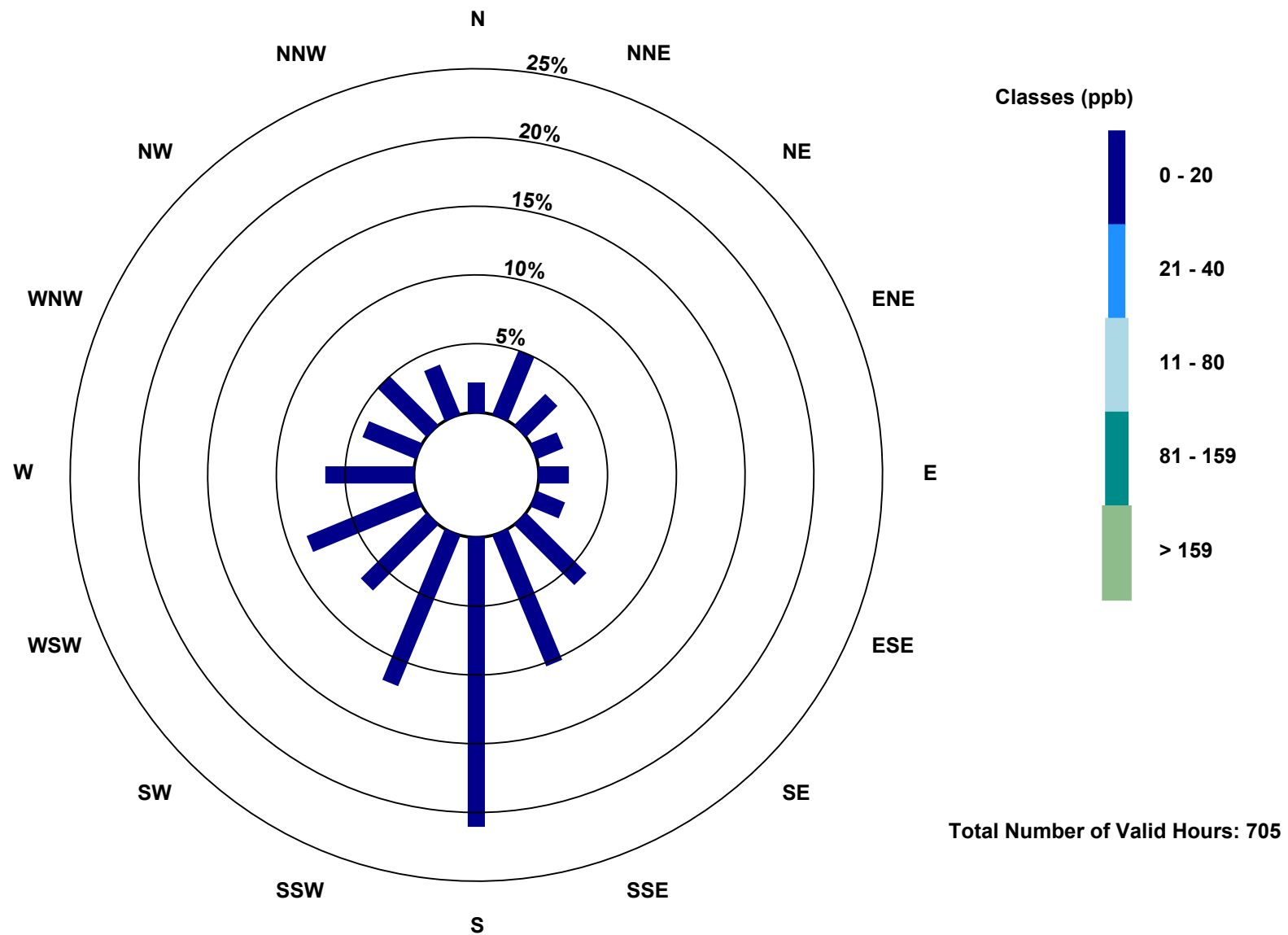
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3



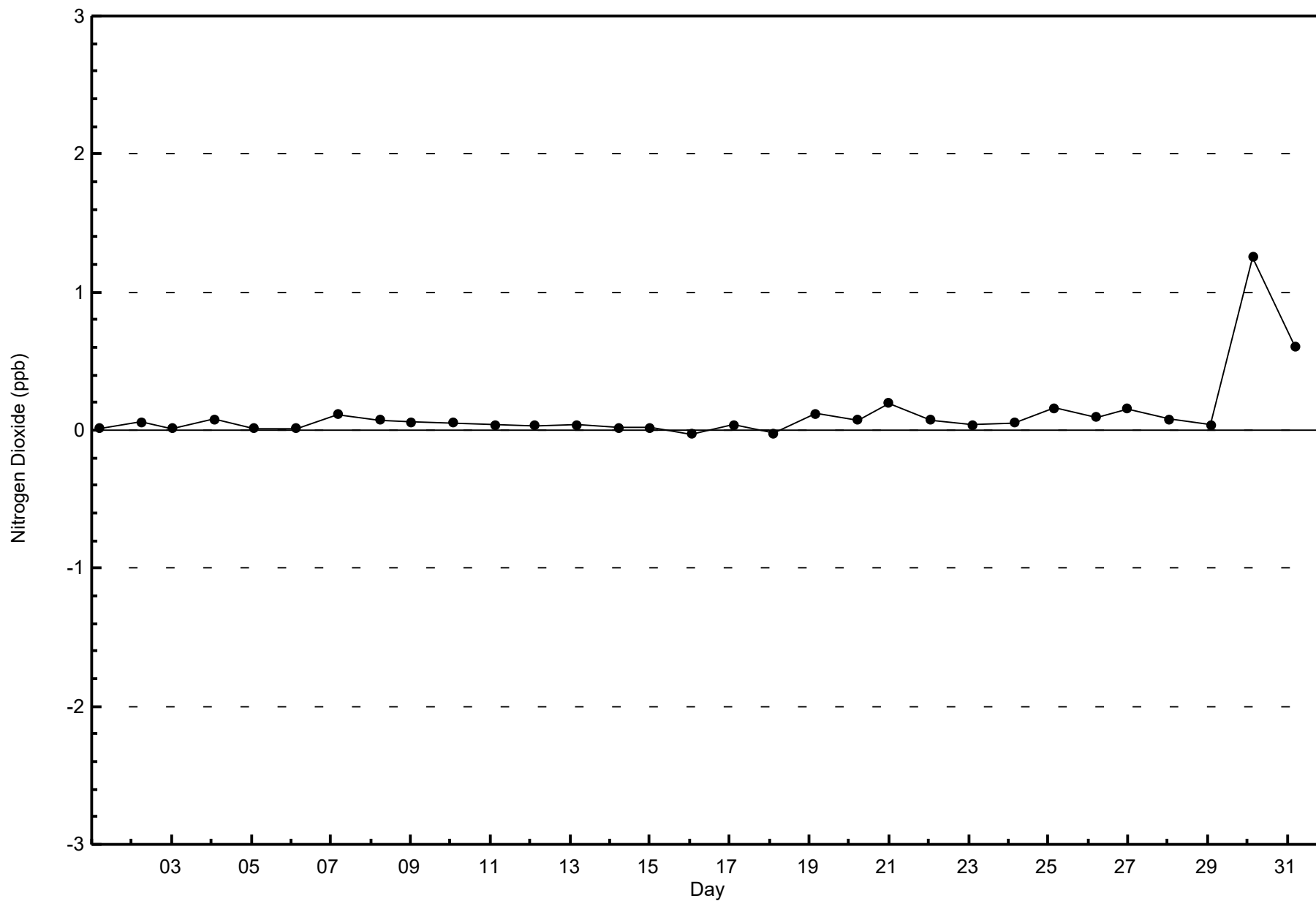


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO₂) - ppb

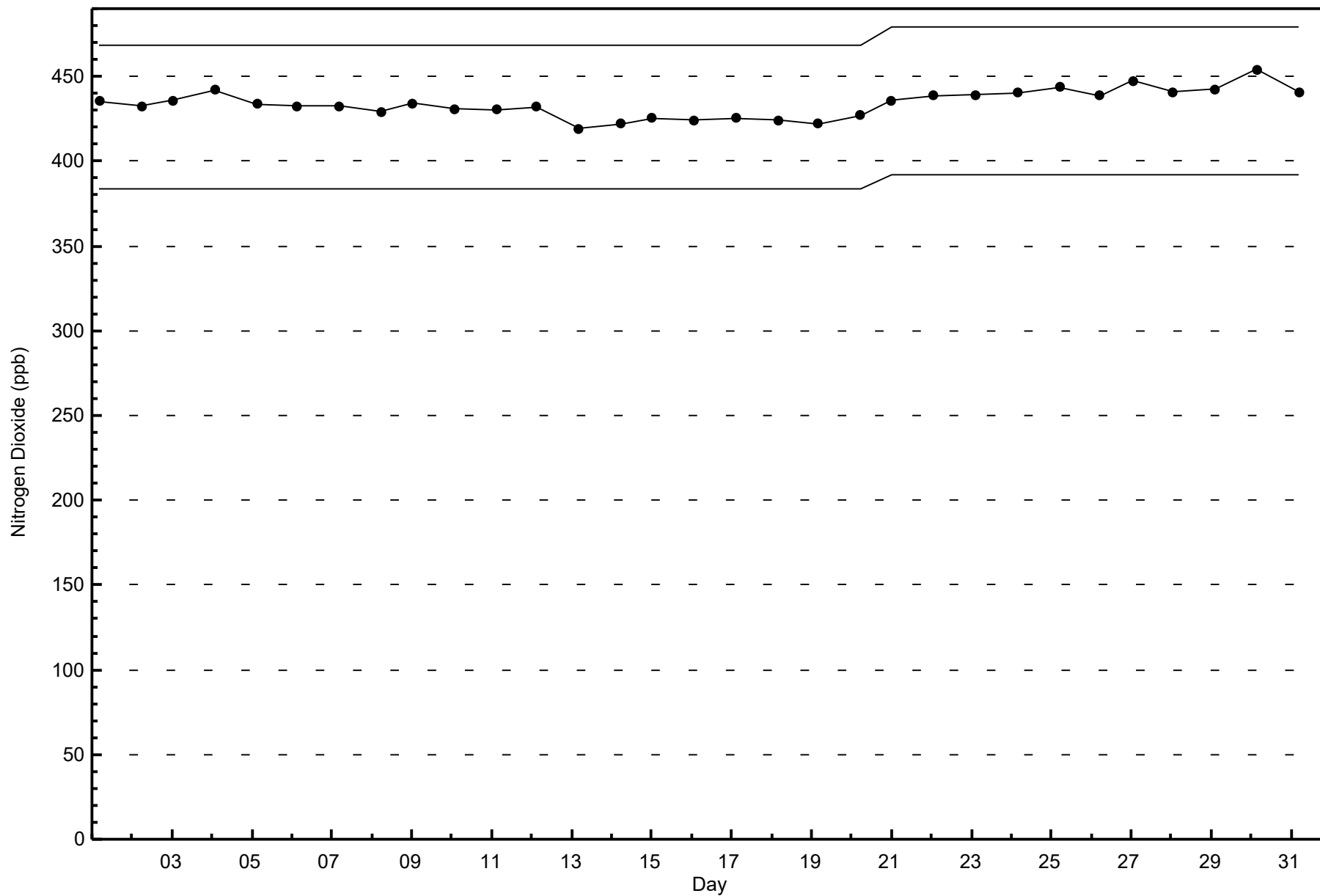
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

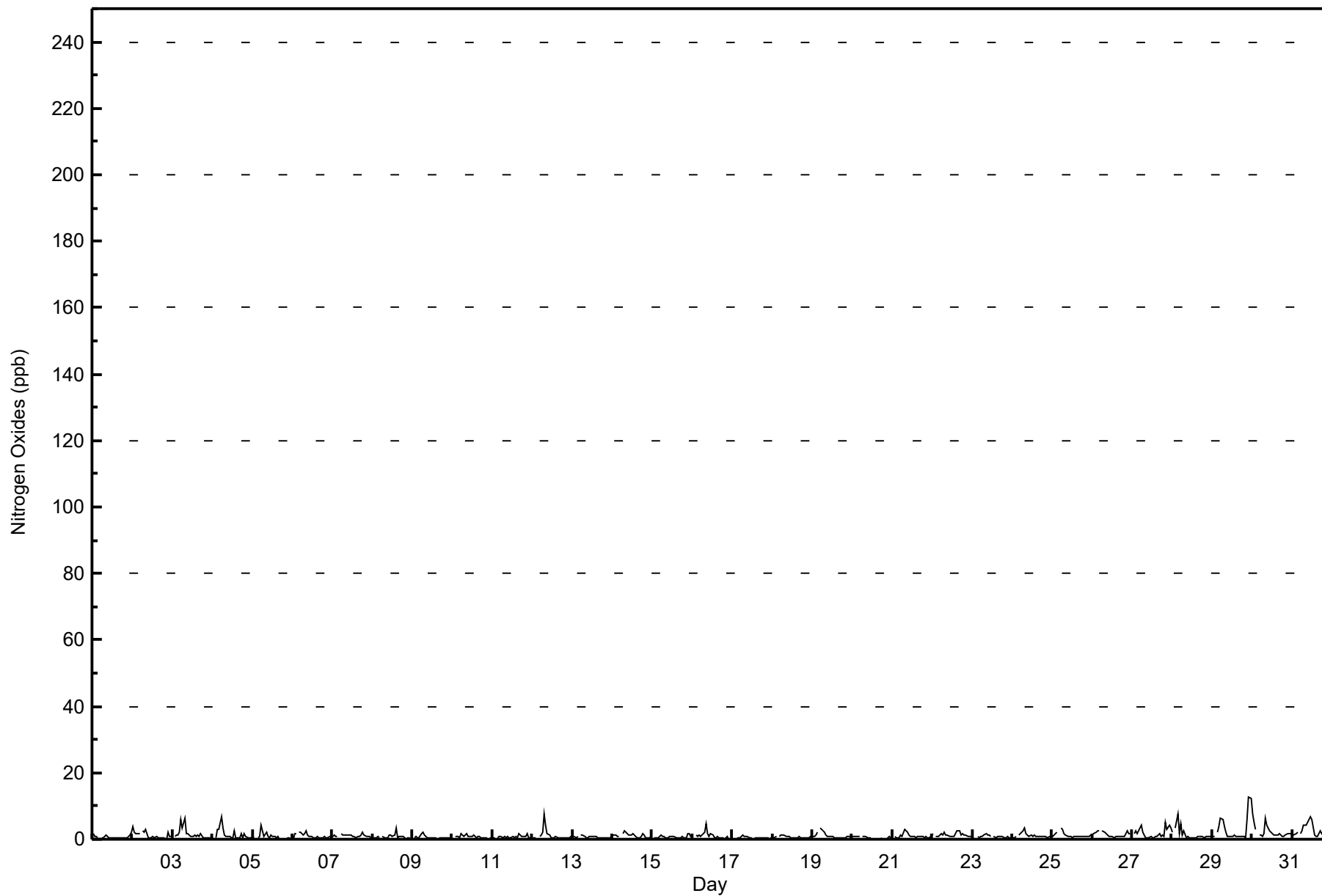
Jackfish 2/3 - May 2025

Maximum Value: 12.6 ppb on May 29 23:00										Maximum Daily Average: 2.9 ppb on May 29										Hours in Service: 744						
Minimum Value: 0.1 ppb on May 16 20:00										Minimum Daily Average: 0.4 ppb on May 17										Hours of Data: 707						
Maximum Diurnal Average: 2.4 ppb at hour 6										Minimum Diurnal Average: 0.7 ppb at hour 20										Hours of Missing Data: 37						
Monthly Average: 1.16 ppb										Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.8 Q ₃ = 1.3 P ₉₀ = 2.3 P ₉₉ = 6.5										Hours of Calibration: 36						
																				Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	1.5	0.7	0.7	0.5	Z	0.5	0.5	1.0	1.2	0.8	0.4	0.3	0.6	0.4	0.4	0.4	0.6	0.4	0.4	0.3	0.3	1.3	2.0	0.7	2.0	
2-May	3.9	2.3	1.8	1.7	1.6	Z	2.5	2.1	2.9	0.4	0.3	0.5	1.1	0.5	0.6	0.3	0.3	0.5	0.6	0.3	0.2	2.0	0.8	0.8	1.2	3.9
3-May	Z	0.9	1.2	1.3	1.9	6.0	3.5	6.2	1.9	1.8	1.3	1.0	0.8	1.1	0.7	1.1	0.8	1.7	0.4	0.4	0.4	0.5	0.3	0.3	1.5	6.2
4-May	0.3	Z	0.6	2.9	3.0	6.6	3.3	1.1	0.8	0.8	0.7	0.5	0.3	2.5	0.3	0.4	0.2	1.7	0.5	1.6	0.9	0.5	0.5	0.6	1.3	6.6
5-May	0.8	0.6	Z	0.4	0.8	4.2	2.6	0.8	2.3	0.7	0.5	1.2	1.0	1.0	0.5	0.8	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.9	4.2
6-May	0.1	1.6	1.6	Z	2.0	2.1	1.5	1.8	2.6	1.4	1.0	0.8	0.5	0.5	0.5	0.7	0.5	0.6	0.6	0.9	0.5	0.5	0.7	0.9	1.0	2.6
7-May	1.0	1.1	1.1	1.0	Z	1.7	1.5	1.4	1.4	1.4	1.3	1.1	0.9	0.7	0.6	1.0	0.8	1.4	2.1	1.3	0.6	0.7	0.7	0.5	1.1	2.1
8-May	0.4	0.3	0.6	0.8	0.5	Z	0.8	0.6	0.5	0.5	1.1	1.2	0.9	1.2	3.4	0.5	0.6	0.7	0.7	0.5	0.2	0.3	0.2	0.1	0.7	3.4
9-May	Z	0.4	0.8	0.3	0.4	1.5	2.3	1.4	0.9	0.6	0.2	0.2	0.3	0.4	0.2	0.2	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.6	2.3
10-May	0.4	Z	0.7	0.7	0.5	1.6	1.1	0.9	1.5	1.0	0.7	1.0	0.9	1.2	0.4	0.7	1.0	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.7	1.6
11-May	0.2	0.2	Z	0.6	0.8	0.8	0.4	0.7	0.5	1.0	0.4	0.6	0.8	0.5	0.8	0.5	1.7	0.7	0.8	0.8	0.9	1.5	0.4	0.4	0.7	1.7
12-May	0.3	0.6	0.6	Z	1.0	1.1	2.1	7.6	4.4	1.7	1.1	0.6	0.5	0.5	0.8	0.4	0.4	0.3	0.3	0.3	0.2	0.6	0.4	0.7	1.2	7.6
13-May	1.0	0.8	0.5	0.7	Z	1.5	1.4	0.9	0.6	0.5	0.7	0.8	0.8	1.0	0.9	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.5	0.7	1.5
14-May	1.3	1.2	1.1	0.9	1.0	Z	1.9	2.5	2.2	1.5	1.5	1.3	1.7	1.3	0.7	0.6	0.5	0.8	1.8	1.3	0.2	0.3	0.4	0.7	1.2	2.5
15-May	Z	0.4	0.3	0.2	0.8	1.2	0.7	0.8	0.6	0.4	0.8	0.9	0.9	0.9	0.6	0.3	0.2	0.2	1.0	0.3	0.4	1.6	1.8	0.8	0.7	1.8
16-May	0.7	Z	1.5	1.0	1.3	1.0	1.4	2.1	4.8	1.6	1.0	1.7	1.3	0.5	0.6	0.8	0.4	0.3	0.3	0.1	0.6	0.8	0.1	0.2	1.0	4.8
17-May	0.2	0.1	Z	0.3	0.6	0.9	1.2	1.1	0.7	0.7	0.5	0.4	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.4	1.2
18-May	0.5	0.3	0.7	Z	1.0	1.2	1.5	1.3	0.9	0.8	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.7	1.5
19-May	0.7	0.8	1.1	2.0	Z	3.3	2.5	1.9	1.3	1.0	1.0	0.7	0.7	0.5	0.5	0.3	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.0	3.3
20-May	0.8	0.7	0.7	0.7	0.6	Z	1.0	0.8	0.7	0.6	0.4	0.5	C	C	C	C	C	0.3	0.2	0.2	0.1	0.3	0.9	0.5	0.6	1.0
21-May	Z	0.7	0.4	0.3	0.3	1.3	0.7	2.9	2.7	2.3	1.4	0.9	0.9	0.7	0.6	0.7	0.9	0.8	0.9	0.6	1.0	0.6	0.6	1.0	1.0	2.9
22-May	1.5	Z	0.8	0.9	1.0	1.7	1.3	2.0	1.3	1.2	1.1	0.7	0.9	1.0	1.7	2.4	2.4	1.5	1.6	1.4	1.2	0.9	0.9	1.0	1.3	2.4
23-May	0.6	0.6	Z	0.7	0.6	0.8	0.9	1.4	1.6	1.1	1.1	0.9	PF	0.7	0.6	0.7	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.8	1.6
24-May	0.5	0.5	0.6	Z	1.4	1.8	2.5	3.3	1.9	1.1	1.0	1.1	1.1	1.1	0.8	0.8	0.7	0.7	0.7	0.9	0.6	0.6	0.6	0.8	1.1	3.3
25-May	1.0	1.2	1.7	2.1	Z	3.5	3.1	1.9	1.4	0.9	0.7	0.6	0.5	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	1.2	1.2	3.5
26-May	1.4	1.7	2.3	2.6	2.7	Z	2.6	2.2	1.6	1.1	0.8	0.7	0.7	0.6	0.8	0.7	0.7	0.7	0.7	0.8	1.6	2.7	1.6	1.9	1.4	2.7
27-May	Z	1.6	2.5	1.8	2.7	4.3	2.3	1.1	0.6	0.6	0.4	0.9	0.6	0.3	1.0	0.6	1.6	0.7	1.2	0.7	5.0	2.9	4.1	3.4	1.8	5.0
28-May	2.1	Z	3.3	7.5	1.7	4.5	1.3	2.5	0.5	0.7	0.6	0.5	0.4	0.3	0.4	0.8	0.6	0.7	0.7	0.5	0.7	0.8	0.6	0.7	1.4	7.5
29-May	0.8	1.0	Z	2.1	3.8	6.5	5.8	3.7	2.2	1.0	1.0	0.9	0.9	1.2	0.9	0.8	0.9	0.9	0.8	0.7	0.6	5.8	12.6	12.5	2.9	12.6
30-May	7.8	5.2	2.9	Z	1.2	1.3	0.7	1.8	6.5	4.1	2.4	2.0	1.6	1.1	1.2	1.3	1.5	1.2	0.8	0.9	1.2	1.6	1.5	1.5	2.2	7.8
31-May	1.2	1.3	1.6	2.2	Z	1.6	2.5	4.1	4.3	5.1	5.8	6.9	5.8	1.4	0.9	1.0	1.6	2.4	1.6	2.8	2.4	2.3	1.3	1.0	2.7	6.9
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	35	22	14	15	15	43	72	148	83	47	60	45	29	35	27	705

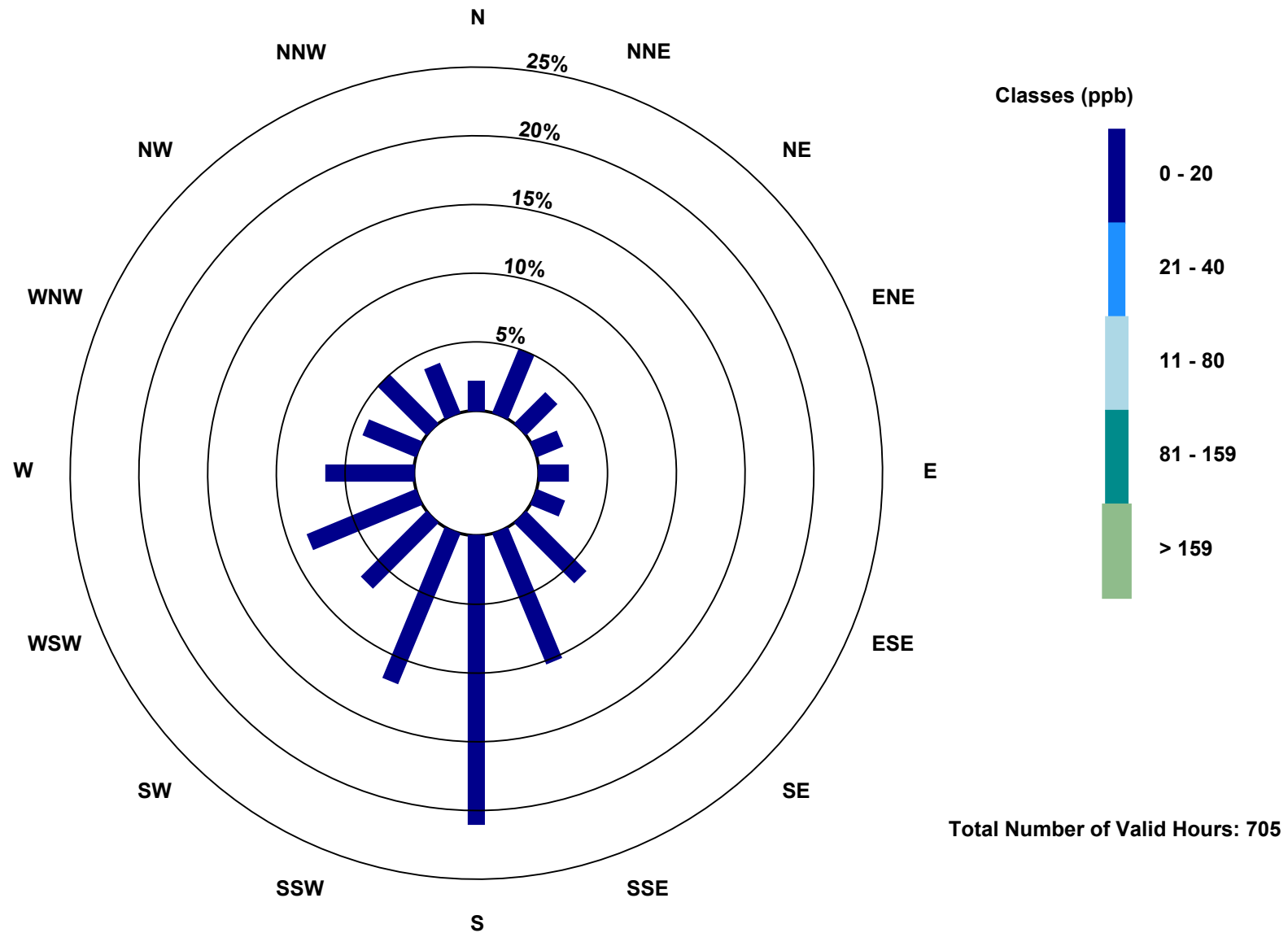
Total Number of Valid Hours: 705

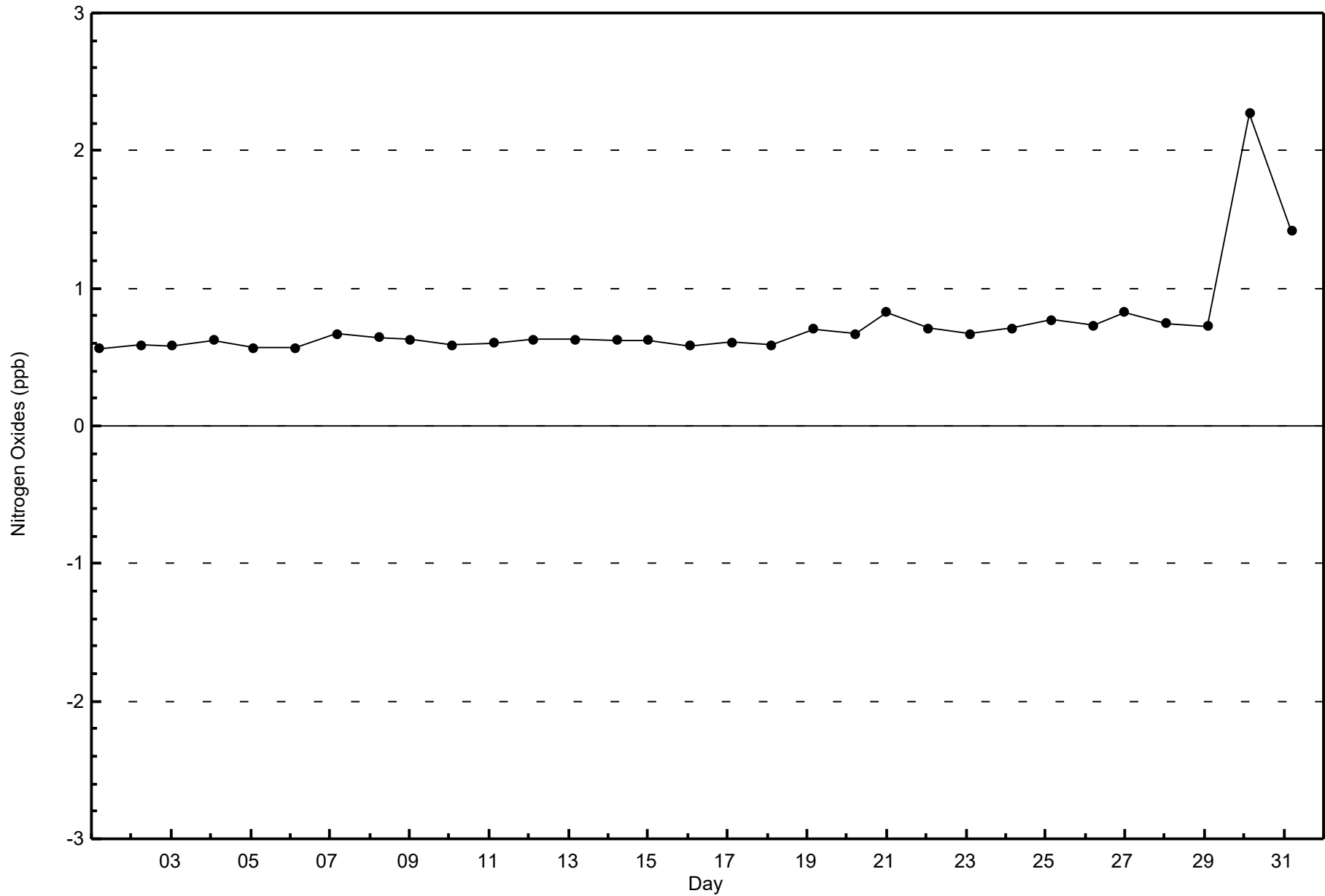
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3

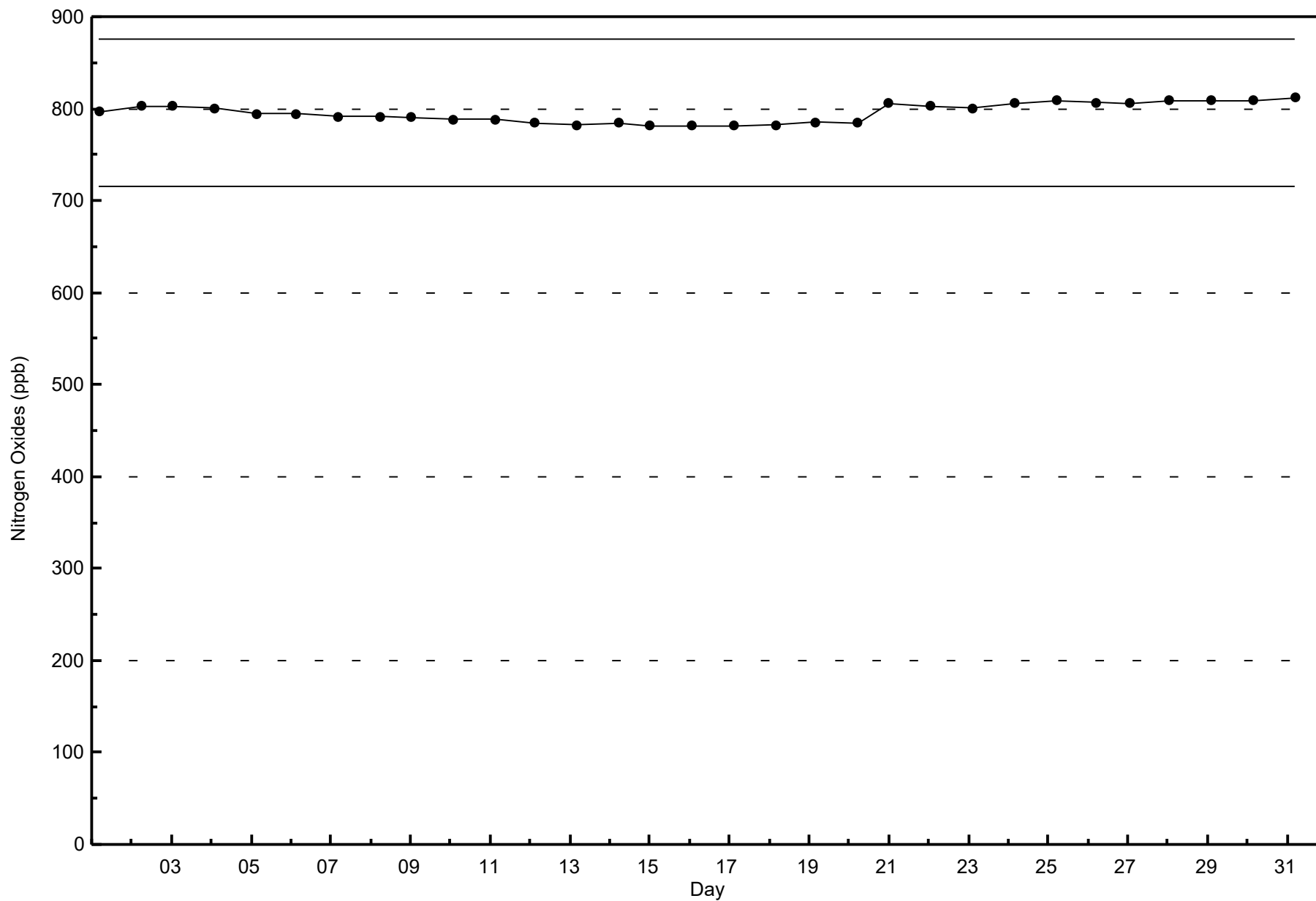






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

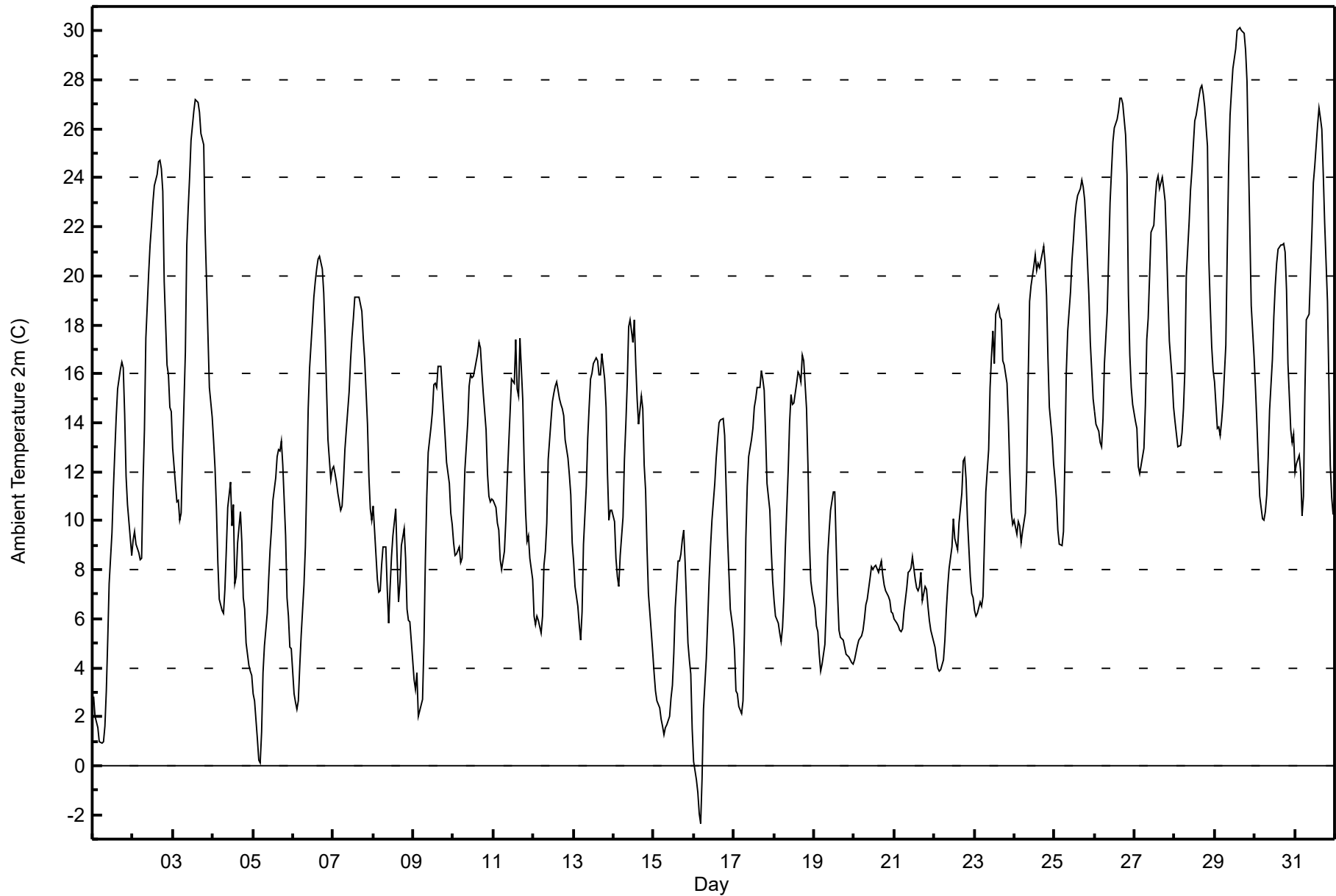
Jackfish 2/3 - May 2025

Maximum Value: 30.2 C on May 29 16:00																				Maximum Daily Average: 22.9 C on May 29					Hours in Service: 744	
Minimum Value: -2.3 C on May 16 05:00																				Minimum Daily Average: 4.4 C on May 15					Hours of Data: 744	
Maximum Diurnal Average: 17.4 C at hour 17																				Minimum Diurnal Average: 6.8 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.51 C																				Percentiles: P ₁ = 0.5 P ₁₀ = 4.6 Q ₁ = 7.5 Median = 11.8 Q ₃ = 16.4 P ₉₀ = 22.1 P ₉₉ = 28.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	2.8	2.0	1.8	1.6	1.0	0.9	1.0	1.6	3.0	5.1	7.4	9.5	11.3	12.8	14.2	15.4	16.2	16.5	16.3	14.4	11.8	10.7	9.3	8.6	8.1	16.5
2-May	9.2	9.6	9.0	8.7	8.4	8.5	11.5	13.7	17.4	20.1	21.3	22.1	23.0	23.7	24.2	24.6	24.7	24.4	23.5	19.8	16.3	15.9	14.6	14.5	17.0	24.7
3-May	13.0	11.4	10.8	10.8	10.0	10.3	12.7	16.9	21.3	22.8	24.0	25.5	26.7	27.2	27.1	27.1	26.7	25.8	25.4	21.9	19.8	17.6	15.4	14.2	19.4	27.2
4-May	13.3	12.1	10.5	8.3	6.8	6.3	6.2	7.2	8.8	10.5	11.6	9.8	10.6	7.4	7.7	9.1	10.4	9.1	6.8	6.4	5.0	4.1	3.9	3.7	8.2	13.3
5-May	2.9	2.6	1.1	0.2	0.1	1.4	3.8	4.9	6.2	7.6	8.8	9.7	10.9	11.8	12.6	12.9	12.9	13.2	12.3	9.4	6.9	6.1	4.8	4.8	7.0	13.2
6-May	2.9	2.6	2.3	2.6	4.0	5.3	7.4	9.0	11.7	14.6	16.2	18.2	19.1	19.7	20.3	20.7	20.8	20.3	19.3	17.6	15.4	13.3	11.7	12.1	12.8	20.8
7-May	12.2	11.9	11.6	11.1	10.4	10.6	11.6	12.9	13.7	15.3	16.5	17.5	18.3	19.1	19.1	19.2	18.8	18.6	17.5	16.6	14.0	11.8	10.5	10.0	14.5	19.2
8-May	10.6	9.6	7.6	7.1	7.2	8.2	8.9	8.9	7.2	5.8	7.3	8.5	9.4	10.5	8.4	6.7	7.5	9.0	9.7	8.4	6.4	5.9	5.9	4.3	7.9	10.6
9-May	3.5	3.1	3.8	2.0	2.2	2.7	5.0	8.4	11.0	12.8	13.8	14.5	15.6	15.6	15.5	16.3	16.3	15.3	14.4	13.4	12.4	11.5	10.3	9.8	10.4	16.3
10-May	9.1	8.6	8.6	8.9	8.3	8.5	10.3	12.1	14.0	15.5	16.0	15.9	15.9	16.2	16.8	17.3	17.1	16.1	15.2	13.7	11.9	11.0	10.8	10.9	12.9	17.3
11-May	10.8	10.6	9.9	9.6	8.4	8.0	8.7	10.0	11.7	13.1	14.4	15.8	15.6	17.4	15.4	15.1	17.5	14.9	12.3	10.3	9.2	9.4	8.5	7.6	11.8	17.5
12-May	6.1	5.8	6.1	5.9	5.4	6.1	8.2	8.7	9.9	12.5	14.1	14.9	15.2	15.5	15.7	15.0	14.8	14.6	14.3	13.3	12.5	11.9	11.0	9.1	11.1	15.7
13-May	8.4	7.3	6.5	5.8	5.1	6.3	9.0	11.4	13.4	14.6	15.8	16.0	16.4	16.6	16.6	16.0	15.9	16.8	15.8	14.7	11.9	10.0	10.4	10.4	12.1	16.8
14-May	10.0	8.5	7.7	7.3	8.6	10.1	12.5	13.9	15.6	17.9	18.2	17.3	18.2	16.4	15.0	14.0	15.1	14.6	12.3	11.2	8.9	7.0	5.5	4.7	12.1	18.2
15-May	3.8	3.0	2.7	2.4	1.9	1.6	1.3	1.5	1.7	2.0	2.8	3.3	4.6	6.5	8.3	8.4	8.6	9.2	9.6	8.3	5.0	4.3	3.8	1.5	4.4	9.6
16-May	0.2	-0.6	-1.1	-1.9	-2.3	-0.5	2.3	4.4	5.9	7.6	8.9	10.0	11.5	12.6	13.3	14.0	14.1	14.2	13.5	11.4	9.4	7.9	6.4	5.5	6.9	14.2
17-May	4.7	3.1	3.0	2.4	2.1	2.6	5.4	9.3	11.4	12.6	13.3	13.7	14.6	15.0	15.4	15.4	16.1	15.8	15.4	13.5	11.5	10.4	8.8	7.5	10.1	16.1
18-May	6.8	6.1	5.8	5.4	5.1	5.6	6.9	8.9	12.0	14.0	15.2	14.7	14.8	15.6	16.1	15.9	15.7	16.8	16.5	14.6	12.3	9.2	7.6	7.1	11.2	16.8
19-May	6.5	5.7	5.5	4.6	3.9	4.1	4.9	6.6	8.6	9.5	10.4	11.2	11.2	9.0	7.0	5.5	5.2	5.1	4.9	4.5	4.5	4.4	4.2	4.1	6.3	11.2
20-May	4.3	4.6	4.9	5.1	5.3	5.5	6.0	6.6	6.8	7.7	8.1	8.0	8.1	8.2	7.9	8.1	8.4	7.8	7.4	7.2	6.9	6.7	6.3	6.2	6.8	8.4
21-May	6.0	5.8	5.7	5.5	5.5	5.6	6.3	7.2	7.9	8.0	8.1	8.5	7.6	7.3	7.1	7.3	7.9	6.8	7.3	7.2	6.5	5.9	5.5	5.1	6.7	8.5
22-May	4.9	4.3	4.0	3.8	3.9	4.3	5.1	6.3	7.3	8.1	8.9	10.1	9.3	9.0	8.8	9.9	11.1	12.5	12.5	11.7	10.1	7.7	7.0	6.9	7.8	12.5
23-May	6.3	6.1	6.2	6.7	6.5	6.9	9.1	11.2	12.9	15.4	16.7	17.7	16.4	18.4	18.8	18.3	18.2	16.5	16.3	15.6	14.1	12.0	10.4	9.8	12.8	18.8
24-May	10.0	9.5	10.0	9.8	9.1	9.6	10.3	12.1	15.8	19.0	19.6	20.4	20.9	20.2	20.5	20.4	20.6	21.2	20.5	19.2	16.7	14.6	13.4	12.3	15.6	21.2
25-May	11.7	10.9	9.6	9.0	9.0	9.6	12.4	16.1	17.7	19.3	20.6	21.4	22.4	22.9	23.3	23.6	23.9	23.6	23.1	22.0	19.2	17.3	16.2	15.0	17.5	23.9
26-May	14.5	13.9	13.7	13.2	13.0	14.2	16.4	18.5	20.8	23.0	24.2	25.5	26.1	26.4	26.7	27.3	27.3	27.0	25.7	24.2	19.3	16.7	15.4	14.8	20.3	27.3
27-May	14.1	13.8	12.2	11.9	12.3	12.9	14.7	17.4	18.2	20.0	21.8	22.1	23.1	23.8	24.1	23.6	24.0	23.6	23.1	21.3	19.2	17.4	15.8	14.6	18.5	24.1
28-May	14.1	13.5	13.0	13.1	13.6	14.5	16.1	20.0	22.2	23.5	24.3	25.4	26.3	26.6	27.3	27.7	27.8	27.4	26.9	25.3	20.6	18.7	17.1	16.1	20.9	27.8
29-May	15.7	13.8	13.8	13.5	14.1	14.8	17.2	21.0	24.4	26.6	27.6	28.5	29.2	30.0	30.1	30.2	30.0	29.9	29.2	28.0	24.9	21.9	18.8	16.7	22.9	30.2
30-May	15.4	14.0	12.4	11.0	10.1	10.0	10.4	11.1	12.6	14.5	16.6	18.3	19.6	20.5	21.1	21.3	21.2	21.3	21.0	19.4	16.4	13.7	13.2	13.6	15.8	21.3
31-May	12.0	12.3	12.7	12.0	10.2	11.0	15.2	18.2	18.5	20.1	21.8	23.8	24.5	26.2	26.8	26.4	26.0	24.2	22.2	19.0	15.7	12.3	10.9	10.2	18.0	26.8
8.6 7.9 7.5 7.0 6.8 7.3 8.9 10.8 12.6 14.2 15.3 16.1 16.7 17.0 17.1 17.2 17.4 17.2 16.5 14.9 12.7 11.2 10.1 9.4																										Diurnal Average
15.7 14.0 13.8 13.5 14.1 14.8 17.2 21.0 24.4 26.6 27.6 28.5 29.2 30.0 30.1 30.2 30.0 29.9 29.2 28.0 24.9 21.9 18.8 16.7																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Jackfish 2/3 - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	5	0.67	0.67
0 - 10	293	39.38	40.05
10 - 20	336	45.16	85.22
> 20	110	14.78	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

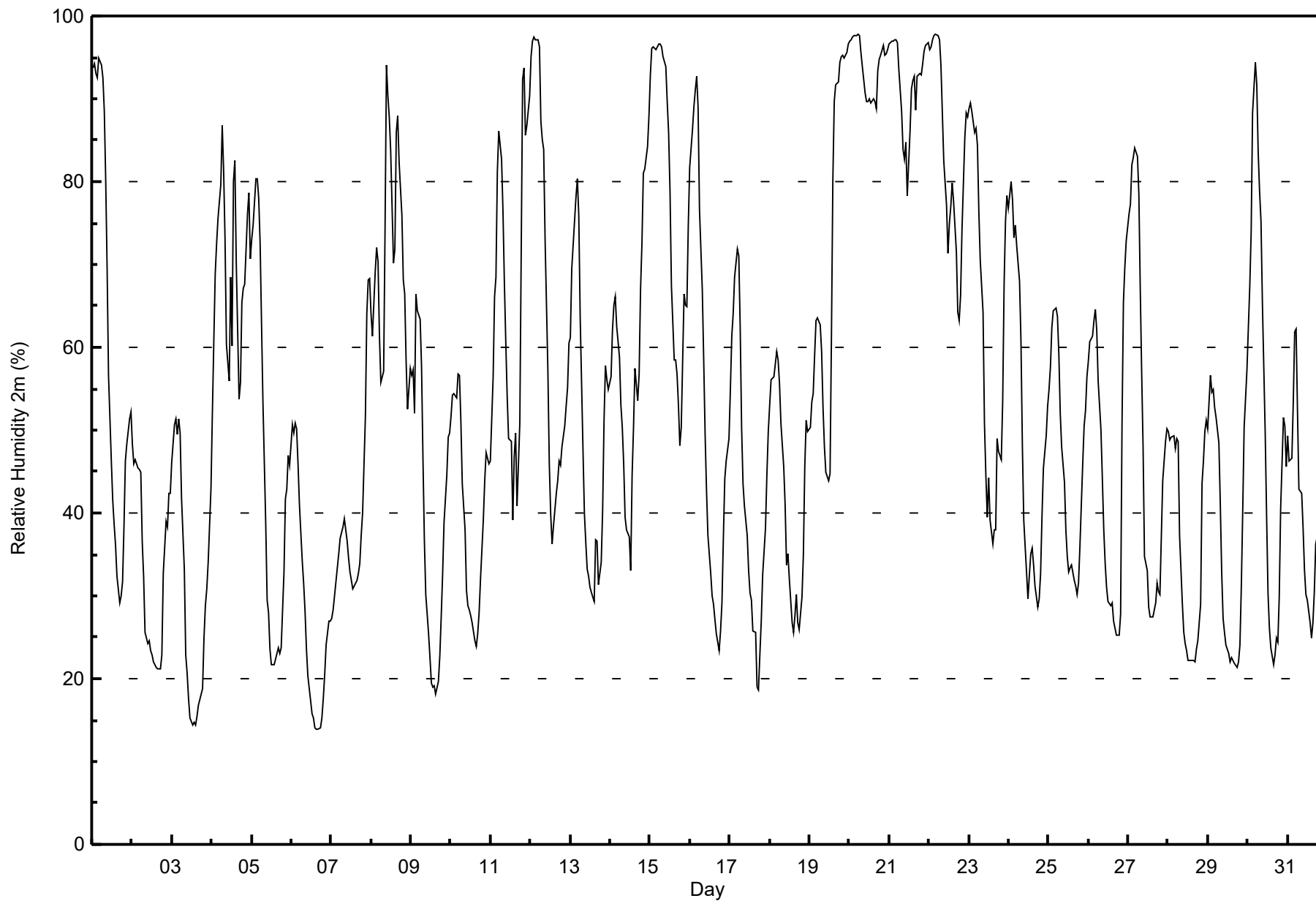
Jackfish 2/3 - May 2025

Maximum Value: 97.8 % on May 22 05:00																				Maximum Daily Average: 94.0 % on May 20										Hours in Service: 744			
Minimum Value: 13.9 % on May 6 16:00																				Minimum Daily Average: 27.6 % on May 6										Hours of Data: 744			
Maximum Diurnal Average: 72.5 % at hour 5																				Minimum Diurnal Average: 39.4 % at hour 14										Hours of Missing Data: 0			
Monthly Average: 54.05 %																				Percentiles: P ₁ = 15.2 P ₁₀ = 24.6 Q ₁ = 32.9 Median = 50.4 Q ₃ = 73.1 P ₉₀ = 92.0 P ₉₉ = 97.5										Hours of Calibration: 0			
																														Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-May	93.8	94.3	93.0	92.6	94.9	94.1	92.6	88.4	80.3	69.5	56.6	46.4	41.6	38.6	36.2	32.4	29.1	29.9	31.6	38.3	46.2	48.3	51.3	52.2	61.3	94.9							
2-May	48.3	45.9	46.5	45.5	45.2	44.9	36.6	32.3	25.6	24.2	24.6	23.4	22.8	22.0	21.3	21.2	21.1	21.2	22.8	32.6	38.9	38.3	42.3	42.4	32.9	48.3							
3-May	46.1	50.6	51.4	49.5	51.4	49.6	41.9	33.3	22.9	20.6	17.6	15.3	14.5	14.8	14.4	15.4	16.7	17.4	18.8	24.9	28.8	30.9	34.1	43.0	30.2	51.4							
4-May	52.3	60.6	68.9	72.5	75.7	79.6	86.8	81.4	73.1	60.3	56.0	68.5	60.1	79.9	82.5	70.2	53.7	55.7	65.5	67.2	67.6	76.0	78.6	70.6	69.3	86.8							
5-May	73.1	74.7	80.4	80.4	78.0	72.6	62.8	53.4	38.7	29.6	27.9	23.6	21.8	21.7	22.4	23.0	23.6	23.0	23.7	32.8	41.6	42.9	46.9	45.8	44.4	80.4							
6-May	50.7	49.7	50.8	50.2	45.9	41.0	34.2	31.6	28.1	23.6	20.3	17.3	15.8	15.2	14.2	13.9	13.9	14.1	15.2	17.7	20.6	24.0	27.0	26.9	27.6	50.8							
7-May	27.3	28.4	30.1	31.8	35.1	37.0	37.6	38.3	39.3	36.7	34.6	32.9	31.9	30.8	31.3	31.9	32.8	33.9	37.3	40.0	51.7	64.0	68.2	68.4	38.8	68.4							
8-May	64.1	61.4	69.2	72.0	70.3	61.4	55.8	57.1	74.4	94.0	90.4	87.8	83.7	70.1	71.9	85.9	88.0	82.4	76.0	68.2	66.5	58.3	52.6	57.4	71.6	94.0							
9-May	56.5	57.3	52.1	66.5	64.4	63.3	57.7	46.7	36.8	30.2	25.5	22.5	19.4	19.0	19.1	18.1	19.7	22.6	27.5	32.5	38.8	44.5	49.1	49.6	39.1	66.5							
10-May	51.7	54.2	54.4	53.9	56.7	56.6	51.2	43.6	38.0	30.6	28.8	28.2	27.6	26.8	24.6	24.0	25.4	28.0	32.0	39.1	44.0	47.3	46.7	45.9	40.0	56.7							
11-May	46.3	56.5	66.0	68.5	81.2	86.0	82.6	76.4	67.7	60.7	54.1	49.0	48.7	39.2	46.7	49.7	40.8	50.8	71.8	92.4	93.7	85.6	86.8	90.3	66.3	93.7							
12-May	95.1	96.9	97.5	97.1	97.2	96.3	87.3	85.1	84.0	73.0	57.1	46.0	39.9	36.2	38.4	42.4	43.9	46.2	45.7	47.9	50.6	52.9	55.0	60.5	65.5	97.5							
13-May	61.1	69.5	75.3	78.1	80.4	76.0	63.7	47.6	40.0	36.4	33.1	32.4	30.9	29.8	29.3	36.7	36.7	31.4	34.0	40.4	51.1	57.8	56.2	54.9	49.3	80.4							
14-May	56.5	62.0	65.1	66.0	62.5	58.9	53.1	50.4	46.0	39.5	37.9	37.1	33.1	44.5	50.3	57.4	53.6	56.7	66.9	72.5	81.0	81.6	84.3	88.0	58.5	88.0							
15-May	92.8	96.0	96.2	96.0	96.3	96.6	96.6	96.3	95.2	93.8	89.7	85.9	78.8	67.5	58.5	58.5	56.9	53.0	48.2	50.4	66.4	65.1	64.9	74.6	78.1	96.6							
16-May	81.6	86.2	89.0	90.9	92.8	88.9	76.6	67.0	58.5	49.5	42.7	37.2	32.8	29.9	29.0	27.2	25.4	23.3	25.7	29.1	37.0	44.1	46.3	49.0	52.5	92.8							
17-May	54.9	61.4	64.1	68.5	71.9	70.9	62.3	50.3	43.6	40.9	37.3	33.0	30.3	29.5	25.8	25.7	19.0	18.6	22.8	26.9	32.6	38.2	44.6	49.9	42.6	71.9							
18-May	53.1	56.1	56.5	58.0	59.5	58.5	55.6	50.9	45.6	41.0	33.8	35.0	32.1	26.8	25.7	27.7	30.1	26.8	25.9	29.9	34.9	45.6	51.2	49.9	42.1	59.5							
19-May	50.4	53.5	54.3	59.0	63.2	63.6	62.7	59.4	52.7	48.0	44.9	43.9	44.8	61.4	80.1	89.7	91.8	92.1	94.4	95.1	95.3	94.9	95.5	96.6	70.3	96.6							
20-May	97.0	97.1	97.4	97.6	97.7	97.8	97.6	95.6	93.8	90.7	89.7	89.7	90.0	89.4	89.9	89.7	88.8	93.4	94.7	95.3	96.4	95.3	95.4	96.0	94.0	97.8							
21-May	96.6	97.0	97.0	97.1	97.0	96.8	93.6	88.4	83.8	82.8	84.7	78.3	86.0	91.2	92.2	92.6	88.6	92.8	93.0	92.8	94.3	95.8	96.5	96.9	91.9	97.1							
22-May	95.9	96.3	97.1	97.6	97.8	97.7	97.1	94.1	88.2	82.5	77.1	71.4	74.9	76.9	79.9	77.7	71.5	64.2	63.2	66.3	74.2	85.3	88.3	87.8	83.5	97.8							
23-May	88.8	89.5	88.6	86.0	86.4	84.5	76.4	70.6	64.2	50.9	44.6	39.6	44.3	39.1	36.3	37.9	38.1	49.0	47.4	46.4	53.5	67.6	75.3	78.3	61.8	89.5							
24-May	76.8	80.0	77.8	73.2	74.8	72.3	68.0	60.9	48.3	39.1	35.9	29.7	32.6	35.1	35.8	33.7	31.1	28.6	29.7	32.7	39.6	45.4	49.3	52.8	49.3	80.0							
25-May	54.9	57.6	62.4	64.3	64.8	63.8	59.2	52.1	48.0	43.7	38.0	34.8	32.8	33.3	33.7	31.8	31.1	30.1	31.6	36.0	45.9	50.5	52.4	56.4	46.2	64.8							
26-May	58.3	60.6	61.4	63.2	64.5	62.0	56.0	50.0	44.1	37.9	33.8	31.0	29.3	28.8	29.2	27.0	26.1	25.2	25.2	27.8	50.7	65.4	69.6	72.9	45.8	72.9							
27-May	76.1	77.2	82.1	82.8	84.1	83.0	78.5	67.0	56.9	48.0	34.8	33.1	28.6	27.5	27.4	27.5	29.1	31.5	30.6	30.2	37.2	43.8	48.6	50.2	50.7	84.1							
28-May	49.8	48.7	49.2	49.4	47.8	49.1	48.7	37.3	29.0	25.5	24.3	23.4	22.2	22.3	22.1	22.1	22.1	23.5	24.6	29.0	43.6	46.4	49.9	51.1	35.9	51.1							
29-May	50.1	56.6	54.5	54.9	52.6	51.4	48.4	41.2	32.8	27.3	25.6	24.1	23.1	22.0	22.6	22.2	21.8	21.3	22.1	24.0	31.1	40.4	50.3	57.3	36.6	57.3							
30-May	62.4	67.3	73.8	88.3	94.4	91.8	83.6	78.8	75.2	65.4	49.6	39.6	30.3	26.1	23.7	21.7	22.9	24.9	24.5	29.8	40.6	51.5	50.5	45.7	52.6	94.4							
31-May	49.3	46.3	46.6	53.3	61.8	62.2	52.5	43.0	42.4	38.2	33.0	30.2	29.5	26.8	25.0	26.7	30.5	36.2	37.2	48.6	54.6	77.1	86.1	91.3	47.0	91.3							
Diurnal Average																																	
Diurnal Maximum																																	



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Jackfish 2/3 - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	25	3.36	3.36
20 - 40	234	31.45	34.81
40 - 60	208	27.96	62.77
60 - 80	130	17.47	80.24
80 - 100	147	19.76	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

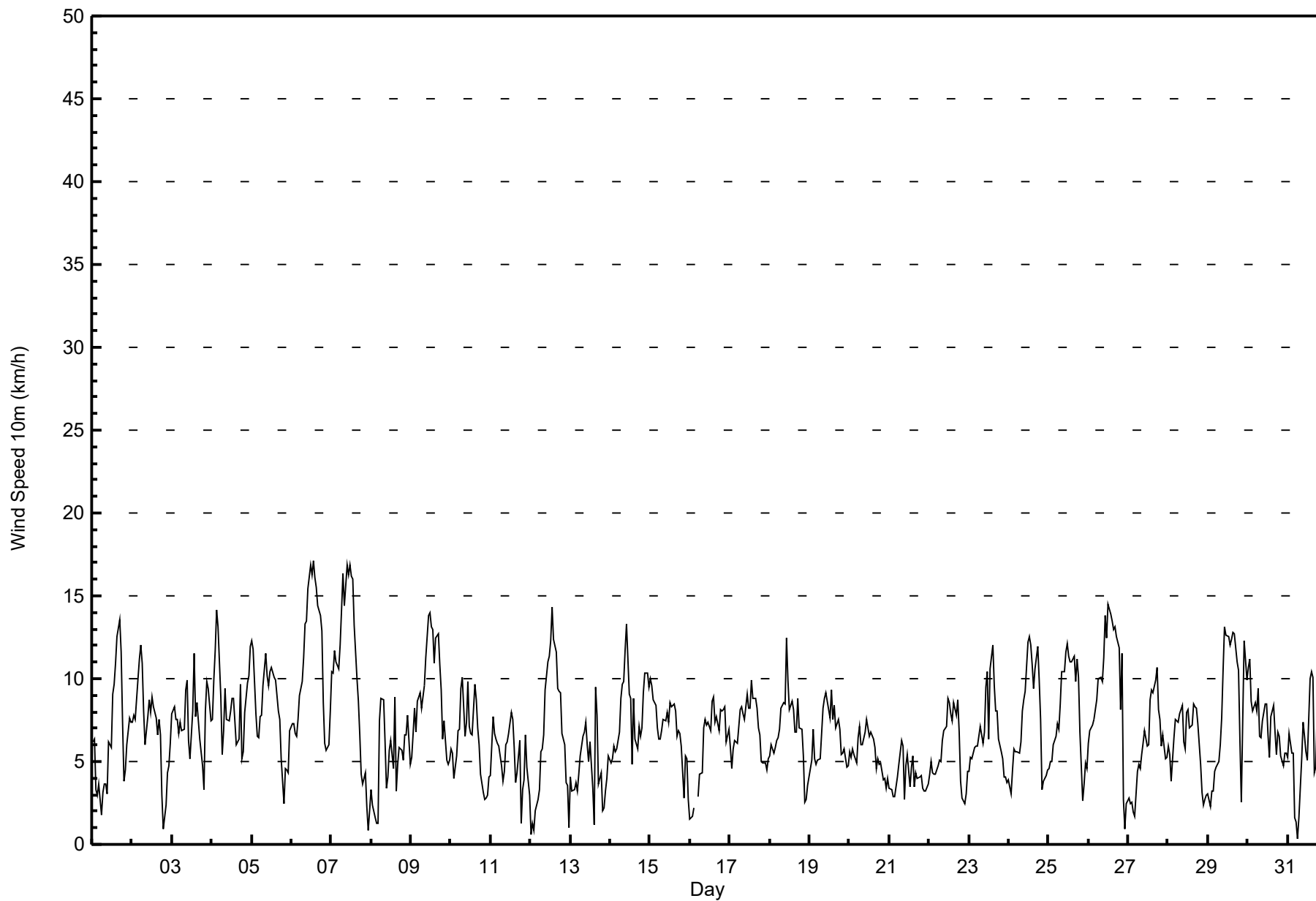
Jackfish 2/3 - May 2025

Maximum Speed: 17 km/h on May 6 14:00														Maximum Daily Speed Average: 10.7 km/h on May 6														Hours in Service: 744	
Minimum Speed Value: 0 km/h on May 31 07:00														Minimum Daily Speed Average: 0.3 km/h on May 31														Hours of Data: 742	
Maximum Diurnal Speed Average: 4.4 km/h at hour 14														Minimum Diurnal Speed Average: 1.0 km/h at hour 21														Hours of Missing Data: 2	
Monthly Average Velocity: 3.1 km/h 207.4 deg														Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 5 Median = 7 Q ₃ = 9 P ₉₀ = 11 P ₉₉ = 16														Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	NNE6	NNE6	NNW3	N3	NE4	NE2	ENE3	ENE4	W4	W3	SW6	WSW6	WSW9	WSW10	WSW11	WSW13	WSW14	WSW12	SW7	S4	SSE4	S6	S8	S7	WSW3.3	WSW14			
2-May	S7	S8	SSW8	SSW10	SW11	SW12	WSW11	W8	WNW6	NW8	NNW9	NW8	NW9	WNW8	WNW8	WNW7	W8	W7	N3	E1	SSE2	S4	S5	S6	WSW4.5	SW12			
3-May	SSE8	S8	S8	S8	S7	S7	SSW7	SSW7	SW9	WSW10	SW6	SW5	W8	W12	W8	WSW9	W7	WNW6	NNW5	NNW3	NNW8	NNW10	N9	NNW7	WSW4.1	W12			
4-May	NW8	NW10	NW12	WNW14	NW13	WNW9	NW5	W7	W9	W8	NW7	NNW8	NNW9	NW9	NW7	NNW6	NW6	WNW10	W5	W6	WSW8	SW10	WSW10	WSW12	WNW7.4	WNW14			
5-May	WSW12	WSW12	W8	W7	W6	WNW8	NW8	NW10	WNW12	NW10	NW10	WNW10	NW11	NW10	NW10	NW9	NNW8	NNW8	NNW5	NNE2	E5	ESE4	SSE4	SSE7	WNW5.7	WSW12			
6-May	S7	S7	S7	S7	S8	S9	S10	S11	SSW13	SSW13	SW15	SW17	SSW16	SSW17	SSW16	SSW16	SSW14	SSW14	SSW13	SSW9	S6	S6	S6	S8	SSW10.7	SSW17			
7-May	S10	S10	S12	S11	S11	S12	S14	S16	S14	SSW17	SSW16	SSW17	SSW16	SW16	SW13	WSW10	W9	WNW7	WNW4	NNW4	NNW4	NNW2	NNE1	W2	SSW8.5	SSW17			
8-May	NW3	N2	NNE2	ENE1	NW1	NW7	NNW9	NW9	NW6	N3	WSW4	WSW6	WNW6	WNW5	WNW9	SW3	SW5	SSW6	SW6	WSW5	WSW7	WSW7	WSW8	WSW5	W3.7	WNW9			
9-May	WSW5	SW7	SW8	SSW7	SW9	SW9	SW8	WSW9	WSW10	WSW11	WSW14	WSW14	WSW13	WSW13	WSW11	WSW12	WSW13	WSW11	SSW9	SSW6	SW7	SW5	S5	SSE5	SW8.7	WSW14			
10-May	SSE6	SSE5	S4	SSW5	WSW7	SW7	WSW9	WSW10	W6	W7	W10	WNW7	W7	W7	WSW10	W9	WNW7	W6	WSW4	SW3	S3	SSE3	SSE3	S4	WSW5.0	WSW10			
11-May	S4	S8	S7	S6	S6	S6	S5	SSE4	SSE4	SE6	S6	SSW7	SSW8	SSW8	WNW6	ENE4	E4	N6	S1	ENE3	NE4	ESE7	ESE5	SE3	SSE3.3	SSW8			
12-May	ESE1	NNE1	NNE1	NE2	NE3	NE3	NNE6	NNE6	NNE7	NE9	NNE11	NE11	NE12	NE14	NE12	NE12	NE9	NNE9	NNE9	NNE7	N6	NE4	N4	W1	NE6.4	NE14			
13-May	NW4	NW3	WNW3	NW4	WNW3	WNW4	NW5	NNW7	NNW7	N7	NNW6	NW5	W6	WNW3	WSW1	W10	WSW8	S4	SW4	S2	S2	S3	S4	S5	WNW2.6	W10			
14-May	S5	S5	S6	S6	S6	S7	S9	SSW10	SSW10	SW12	WSW13	WSW9	W9	SSE5	SSE9	SE6	ESE6	NE7	NE6	NNE7	NNE9	NNE10	NNE10	NNE9	S1.9	WSW13			
15-May	NNE10	NNE10	N9	NNE8	NNE7	NNE6	N6	N7	NNE8	NNE7	NNE8	N7	NNE9	NNE8	NNE8	NNE8	N7	NE7	NE7	NE6	ENE3	E5	E5	ENE3	NNE6.6	NNE10			
16-May	ENE2	ENE2	ENE2	UO	UO	NNE3	NE4	ENE4	NE7	NNE8	NE7	NE7	NE7	ENE9	ENE9	E7	ESE8	ESE7	E8	E8	E8	E8	ESE6	ESE7	ENE5.5	ENE9			
17-May	SSE6	SSE5	SSE6	SSE6	S6	S7	S8	SSE8	SSE8	SE8	SE9	SE8	SE8	SE10	SE9	SE9	SSE8	SSE7	SSE7	SE5	ESE5	ESE5	SSE5	SE5	SSE6.6	SE10			
18-May	SSE5	SSE6	S6	SSE6	SSE6	SSE6	S7	S8	SSE9	SSE8	SE12	SSE10	SE8	SSE9	SE8	SSE7	SE7	ESE9	SSE7	S7	S5	SSW3	S3	SE4	SSE6.5	SE12			
19-May	SSE5	S5	S7	S5	S5	S5	SSE5	S7	S8	SSE9	SSE9	SE8	SSE8	SE9	SE8	SE8	ESE7	SE8	SE7	SE5	SE6	SE6	SE5	SE5	SSE6.2	SE9			
20-May	SE6	SE5	SE6	SE5	SSE5	SE6	SE7	SSE6	SSE6	SE7	SSE8	SSE7	SE6	SE7	SE6	SE6	SSE5	SE5	SE5	SE5	SSE4	SSW4	SE3	SSE4	SE5.4	SSE8			
21-May	S3	SE3	SE3	SSE3	S3	S4	SSW5	SSW6	SW6	S3	S5	SSW5	SSE3	SSE5	SE5	SSE4	SSE4	S4	S4	SSE4	S3	SSE3	S3	SSW4	S3.7	SSW6			
22-May	SSW4	SSE5	SSE4	SSE4	SSE4	S5	S5	S5	S6	S7	S7	S9	SSW9	S8	SSW7	SSW9	SSW8	S9	SSW7	S4	SSE3	S2	SSE3	SSE4	S5.6	S9			
23-May	SSE4	SSE5	SSE5	SSE6	SSE6	SSE6	S7	S7	S6	S7	SW10	SSW10	SW6	SSW11	SSW12	S10	S8	SW8	SSE6	SSW6	SW5	SW4	SSW4	S4	S6.3	SSW12			
24-May	S4	S3	ESE5	SSE6	S6	SSE6	SSE6	S6	S8	S9	S9	SSW12	SSW13	SSW12	S11	S9	S11	SSW12	SSW10	SSW8	S3	S4	SSW4	SSW4	S7.1	SSW13			
25-May	SSW5	S5	SSE5	S6	S7	S7	S7	S8	SSW10	S10	S12	S12	S11	S11	SSW11	S11	S10	SSW11	SSW10	SSW7	SSE3	SE4	SE5	S5	S7.8	S12			
26-May	S6	SSE7	SSE7	S8	S8	S9	S10	S10	S10	S11	S14	S12	SSW15	S14	S13	S13	S13	S12	S8	W12	NNW3	E1	SSW2	S8.8	SSW15				
27-May	ESE3	ESE2	SE3	SW2	W2	W4	WNW5	NNW5	NNW5	NNW6	NNW7	NW6	NW6	W9	W9	W9	W10	W11	W8	W8	WSW6	WSW7	WSW5	WSW5	W4.5	W11			
28-May	WSW6	WSW5	WSW4	SW6	SW8	SW7	SW7	WSW8	WSW8	SW6	SW6	WSW8	W8	SW7	SSW7	SW9	SW8	WSW8	WSW7	SW5	SSW3	SSW2	SSW3	S3	SW6.0	SW9			
29-May	S3	S2	S3	S3	S4	S5	S5	S6	S8	SSW11	SSW13	SSW13	S13	S12	SSW12	SSW13	SSW13	SSW11	SSW10	S6	SSW3	W8	WNW12	WNW10	SSW7.0	SSW13			
30-May	W11	WNW11	NW9	W8	W9	W8	WSW9	W7	WNW6	WNW7	WNW8	NW8	NW7	NW5	WSW8	WSW8	WSW7	SW5	SW7	SW7	SW5	SSW5	SSW5	SSW6	W6.1	WNW11			
31-May	S5	SSW7	SSW5	SSW6	ENE2	ENE1	WSW0	E2	E5	ENE7	E7	E6	SSW5	SW10	SSW10	SW10	WSW4	NNE5	NNE8	NNE11	N10	NW10	NNW10	NNW8	NNW0.3	NNE11			
SSW2.6SSW2.7 S2.7SSW3.5SSW3.5SSW3.7SSW3.4SSW3.5 SW3.5SSW3.0 SW3.8 SW4.2 SW3.9 SW4.4 SW4.4 SW4.4 SW4.1 SW3.4SSW2.8 S1.7SSW1.0 S1.2 S1.6 S2.4																								Diurnal Average					
WSW12WSW12 S12WNW14 NW13 SW12 S14 S16 S14 SSW17 SSW16 SW17 SSW16 SSW17 SSW16 SSW16 SSW14 SSW14 SSW13 NNE11 W12 NNE10 WNW12WSW12																								Diurnal Maximum					
UO - Unstable Operation																													
All monthly, daily, and diurnal averages have been calculated using vector methods																													



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 2/3 - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	237	31.94	31.94
6 - 11	433	58.36	90.30
12 - 19	72	9.70	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 2/3 - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	7	8	13	8	8	18	41	52	20	12	12	7	7	9	10	237
6 - 11	10	29	12	3	7	8	29	39	88	39	31	37	38	20	26	17	433
12 - 19	0	0	4	0	0	0	1	0	17	24	6	13	2	3	2	0	72
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	36	24	16	15	16	48	80	157	83	49	62	47	30	37	27	742

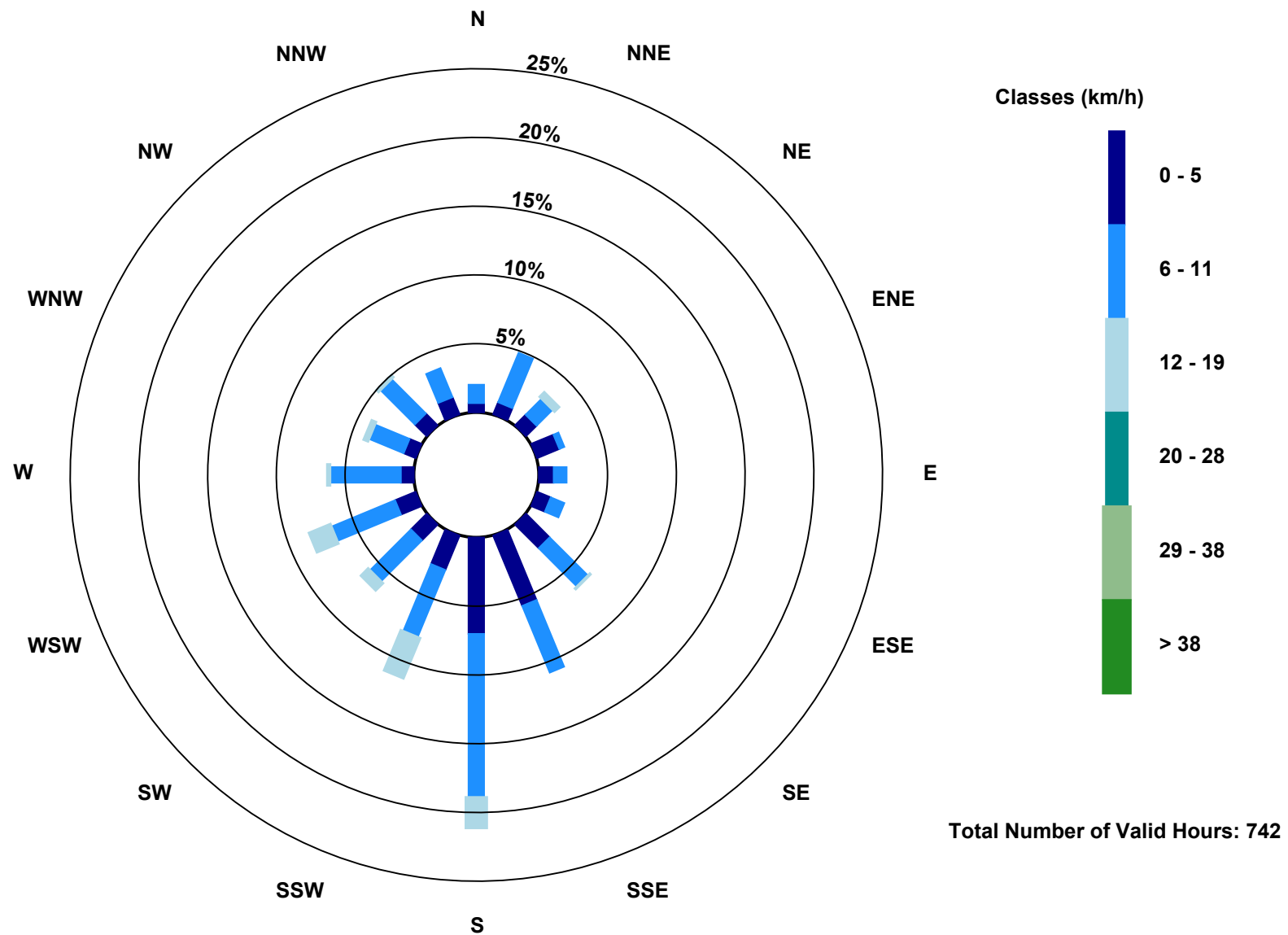
Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Jackfish 2/3





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 7 08:00																	Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7													
Minimum Value: 0 km/h on May 10 21:00																														
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																														
Day	Hourly Period Ending At (MST)																								Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	3	2	1	2	2	1	1	1	2	2	3	3	3	4	4	4	4	4	3	2	2	2	2	2	2	4				
2-May	2	2	2	3	3	3	3	3	3	3	4	3	4	3	3	3	3	3	2	1	1	1	1	2	2	4				
3-May	2	2	2	2	2	2	2	2	3	3	3	3	4	4	4	4	4	3	2	2	3	4	4	3	4					
4-May	3	5	5	6	6	4	3	3	3	3	3	4	4	4	3	3	2	5	2	2	2	2	2	3	6					
5-May	2	3	2	2	2	2	4	4	5	4	4	5	4	4	4	4	3	3	3	1	1	2	1	3	5					
6-May	2	2	2	2	3	3	3	4	4	5	6	6	6	6	6	6	5	5	5	3	2	2	3	3	6					
7-May	4	4	4	4	4	5	6	7	6	6	6	6	6	5	4	3	3	3	2	2	2	1	1	1	7					
8-May	1	1	1	1	1	3	4	4	3	1	2	2	3	2	5	2	2	2	1	2	1	2	2	2	5					
9-May	1	2	2	1	2	2	2	2	3	4	5	5	5	5	4	4	4	4	3	2	3	2	2	1	5					
10-May	2	2	2	2	2	2	3	3	3	3	4	3	2	3	4	3	3	2	1	1	0	1	1	2	4					
11-May	2	3	2	2	2	2	2	2	2	2	2	3	4	3	4	2	3	3	4	2	1	2	2	1	4					
12-May	1	1	1	1	1	2	2	2	2	3	4	5	5	5	4	4	4	4	4	3	2	2	2	1	5					
13-May	2	2	2	2	1	2	2	2	3	3	3	3	3	2	2	4	3	3	2	1	1	1	2	2	4					
14-May	2	2	2	2	2	2	3	4	3	4	4	3	4	4	4	3	2	3	2	3	4	4	4	4	4					
15-May	4	4	4	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	2	1	1	1	1	4					
16-May	1	1	1	UO	UO	2	1	2	3	3	3	3	3	4	4	4	3	3	3	3	2	3	2	2	4					
17-May	3	2	2	2	2	2	3	3	3	3	4	4	4	4	4	4	3	3	3	2	2	2	2	2	4					
18-May	2	2	2	2	2	2	3	3	3	3	5	4	4	4	3	3	3	3	3	3	2	1	1	2	5					
19-May	2	2	3	2	2	2	2	3	3	4	3	3	4	5	3	4	3	3	3	2	2	3	2	2	5					
20-May	2	2	3	2	2	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	1	2	3					
21-May	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2					
22-May	1	2	2	2	2	2	2	2	2	3	3	3	4	3	3	3	3	3	3	2	1	1	1	2	4					
23-May	2	2	2	2	3	2	2	3	2	3	4	4	5	5	5	4	4	4	4	3	2	2	1	1	5					
24-May	1	1	2	2	2	2	2	2	3	4	4	4	5	4	5	4	4	5	4	3	2	2	2	2	5					
25-May	2	2	2	3	3	3	3	4	5	4	5	5	5	5	5	5	4	4	4	3	1	2	2	2	5					
26-May	3	3	3	3	3	4	4	4	4	5	6	6	6	6	5	6	5	5	5	4	6	3	1	2	6					
27-May	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	3	4	4	3	3	1	1	1	1	4					
28-May	1	2	1	1	2	1	2	3	3	3	3	3	4	4	4	4	3	3	2	2	1	1	1	1	4					
29-May	1	1	2	2	2	2	2	3	4	4	5	6	5	5	6	5	5	5	4	3	2	7	6	4	7					
30-May	5	5	4	3	4	3	3	3	3	3	3	3	3	3	4	4	3	2	3	2	1	1	1	2	5					
31-May	1	2	2	2	1	1	1	2	2	3	3	2	3	4	5	4	3	4	3	4	5	5	5	5	5					
5 5 5 6 6 5 6 7 6 6 6 6 6 6 6 6 5 5 5 5 4 6 7 6 5																	Diurnal Maximum													
UO - Unstable Operation																														



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

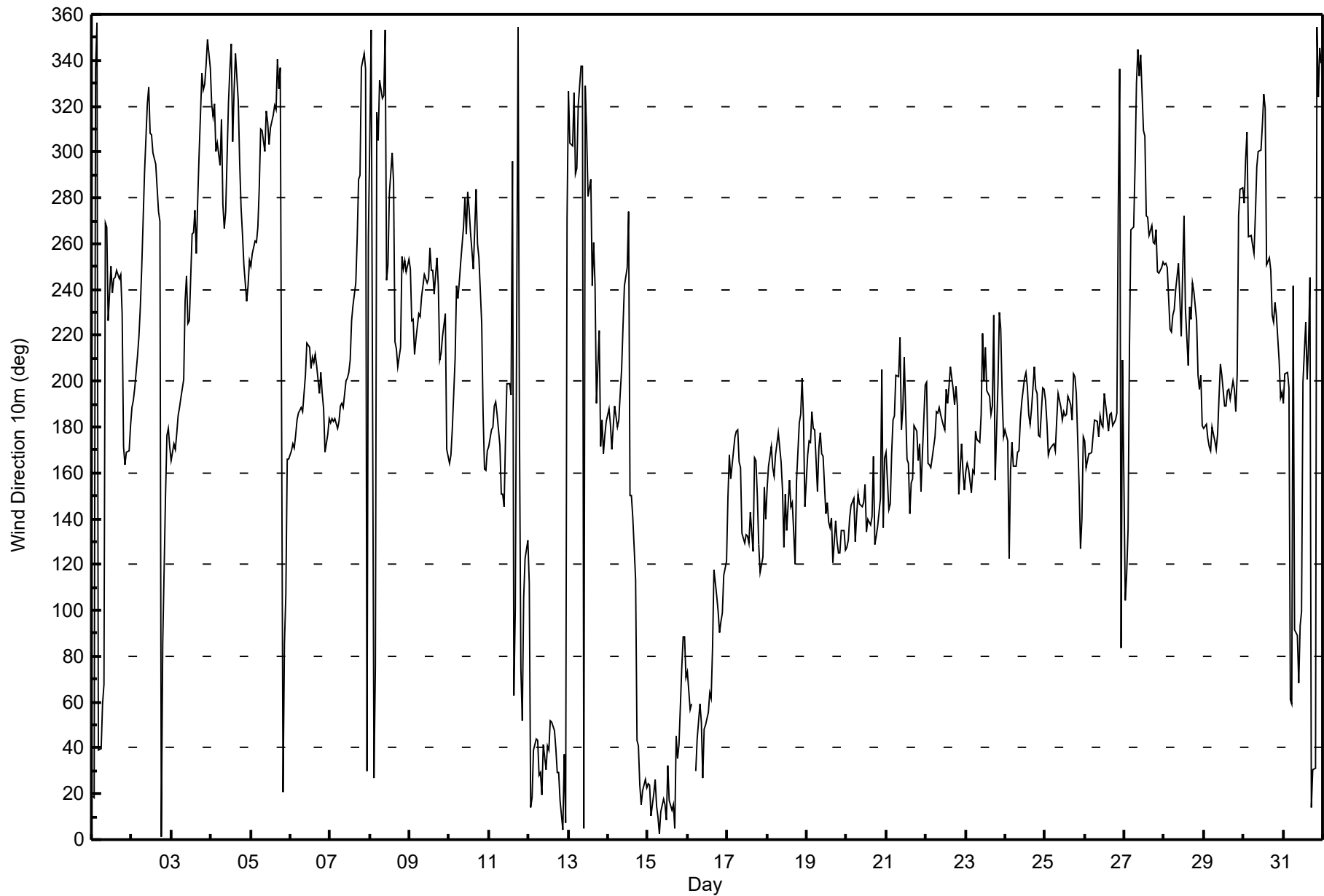
Jackfish 2/3 - May 2025

Direction of Maximum Speed: 211 deg on May 6 14:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 197.3 deg on May 6																				Hours of Data:		742			
Direction of Minimum Speed: 241 deg on May 31 07:00										Direction of Minimum Daily Speed Average: 0.3 deg on May 31										Hours of Missing Data:		2			
Monthly Average Direction: 207.4 deg																				Percent Operational Time:		99.7			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	19	19	337	356	39	40	59	68	269	267	227	250	239	245	245	249	245	246	229	171	164	169	170	180	237.0
2-May	189	191	197	211	220	233	249	270	291	321	328	308	308	300	295	285	274	270	1	85	150	176	179	171	254.5
3-May	165	172	170	177	185	188	193	201	235	246	225	227	264	265	275	256	279	299	334	327	330	338	349	337	248.7
4-May	321	315	321	300	304	294	314	277	267	274	321	336	347	304	326	343	322	295	276	264	251	235	242	253	295.3
5-May	250	256	261	261	267	285	310	309	300	318	313	303	310	316	321	319	341	328	337	21	86	107	166	166	299.0
6-May	170	173	171	177	183	186	188	187	195	203	217	215	205	211	208	212	207	195	204	195	188	169	177	183	197.3
7-May	182	184	183	184	179	182	189	191	188	200	201	204	209	226	233	243	262	288	290	337	343	336	30	263	206.7
8-May	306	353	27	76	317	305	332	324	324	353	244	251	282	300	287	217	214	206	215	254	249	253	248	253	276.7
9-May	249	227	227	212	218	230	228	237	242	247	243	245	258	248	248	238	254	242	209	212	220	229	170	167	234.7
10-May	164	168	179	210	241	236	244	252	268	280	264	283	275	265	249	266	284	260	254	225	185	162	161	169	244.5
11-May	171	179	180	189	191	185	172	151	151	145	175	199	199	194	296	63	101	355	177	75	52	106	123	130	164.6
12-May	112	14	18	39	44	43	28	29	20	41	30	41	39	52	51	48	40	29	29	17	4	37	7	271	35.6
13-May	326	304	303	326	290	293	320	337	337	5	329	308	280	288	242	261	242	190	222	172	183	169	176	182	286.2
14-May	188	181	170	180	189	180	183	194	205	224	242	249	274	150	150	141	114	43	41	24	15	21	26	23	183.0
15-May	24	24	11	20	26	15	10	2	12	18	15	8	33	17	13	15	5	45	36	41	75	88	89	71	24.5
16-May	73	57	59	UO	UO	30	44	59	51	27	48	50	55	64	62	83	118	106	100	90	95	99	115	122	76.4
17-May	150	168	157	164	176	178	179	165	162	133	129	133	133	129	143	126	166	165	150	129	116	123	154	139	148.4
18-May	153	163	171	162	158	168	172	178	165	153	128	151	135	157	145	147	134	120	156	182	185	201	184	145	155.3
19-May	168	174	174	187	179	179	152	171	177	168	167	142	147	139	136	141	121	139	130	125	125	135	135	127	151.2
20-May	128	130	140	146	149	130	142	151	147	145	147	155	134	140	137	141	167	129	133	137	149	205	136	167	143.7
21-May	169	144	146	168	183	185	202	202	219	179	188	210	166	164	142	156	157	181	178	165	172	152	169	198	177.5
22-May	199	164	163	162	166	176	187	186	189	185	181	179	197	190	198	206	197	190	198	189	151	173	160	152	184.5
23-May	161	164	161	151	161	160	178	174	174	186	221	200	215	196	194	186	189	229	157	199	230	223	194	176	188.5
24-May	179	174	123	161	173	163	163	169	170	183	191	201	204	197	186	181	188	206	196	195	176	176	197	196	185.8
25-May	192	182	168	170	172	173	170	183	194	189	183	187	185	186	194	190	183	203	202	195	154	127	140	176	183.7
26-May	174	162	168	169	169	176	183	182	176	185	181	180	195	184	178	185	186	181	183	186	275	336	84	209	184.2
27-May	104	116	136	215	266	267	294	330	345	333	343	309	307	272	272	263	268	260	260	266	248	247	249	252	276.5
28-May	251	251	250	223	221	229	231	240	251	236	219	247	272	231	207	232	227	243	239	226	203	196	202	181	233.6
29-May	179	181	175	171	170	180	174	170	177	193	207	202	189	189	196	196	192	200	196	187	203	272	284	284	201.1
30-May	278	296	309	263	263	259	256	273	294	300	301	312	325	319	251	254	248	229	225	234	229	209	193	195	267.8
31-May	190	203	204	197	61	59	241	91	89	69	93	99	200	226	201	216	245	14	31	31	355	324	345	339	332.1
192.7 192.8 188.3 195.0 200.4 205.6 207.4 208.8 214.4 213.1 214.0 218.4 226.6 215.5 214.4 214.1 215.6 219.5 198.3 184.9 209.5 186.9 184.2 190.6																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Jackfish 2/3 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 112 deg on May 7 23:00																			Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7						
Minimum Value: 7 deg on May 10 21:00																									
Percentiles: P ₁ = 14 P ₁₀ = 25 Q ₁ = 34 Median = 44 Q ₃ = 52 P ₉₀ = 64 P ₉₉ = 89																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	42	41	41	53	35	59	35	41	62	80	65	67	45	46	35	28	27	27	31	44	48	42	32	26	80
2-May	27	25	25	25	20	15	24	34	54	49	52	51	54	53	51	61	46	51	66	72	31	17	15	27	72
3-May	29	20	23	24	17	19	22	24	27	38	61	65	69	41	62	46	52	51	57	72	45	44	47	43	72
4-May	41	43	42	37	39	35	52	41	35	52	55	46	49	44	45	56	61	49	46	27	14	17	16	14	61
5-May	14	17	21	20	25	26	42	44	39	44	52	49	46	52	54	52	55	54	64	67	19	27	27	32	67
6-May	25	29	27	31	32	33	36	31	31	32	32	32	36	31	33	34	33	35	32	38	48	53	52	49	53
7-May	37	41	33	36	38	35	38	35	39	32	34	33	31	27	26	29	31	38	46	56	65	94	112	70	112
8-May	69	85	86	89	74	36	38	47	45	40	55	42	45	54	49	62	47	21	23	23	12	13	12	20	89
9-May	18	17	16	16	16	16	16	21	29	33	34	29	34	35	29	30	28	29	32	29	28	33	29	27	35
10-May	33	47	65	32	19	22	19	29	50	52	39	43	42	44	33	39	43	31	19	21	7	18	18	33	65
11-May	36	39	34	30	29	26	44	45	47	44	50	53	42	59	69	69	73	60	95	35	31	23	33	50	95
12-May	88	76	78	66	31	24	32	37	43	38	38	40	35	34	33	33	31	39	40	49	47	51	69	103	103
13-May	64	79	83	74	72	50	46	43	52	60	73	69	59	84	110	34	32	74	32	36	54	32	49	33	110
14-May	33	28	32	35	34	38	36	36	34	36	29	26	45	77	47	44	36	45	35	43	46	44	44	45	77
15-May	43	43	49	45	41	46	46	45	48	46	42	50	42	48	52	49	52	44	45	29	32	17	18	20	52
16-May	31	31	24	UO	UO	31	39	65	56	52	53	57	65	49	42	58	44	52	33	25	23	29	36	37	65
17-May	49	50	52	44	37	30	34	42	50	51	42	50	53	54	49	45	52	52	49	43	29	47	51	44	54
18-May	55	54	51	48	45	43	35	36	47	49	46	45	50	49	53	55	49	45	52	50	45	46	67	75	75
19-May	58	50	44	46	49	48	59	44	47	49	47	51	51	45	47	45	46	46	46	43	44	44	54	46	59
20-May	38	41	47	45	49	44	46	53	49	49	47	48	43	45	47	57	54	43	48	53	54	40	45	56	57
21-May	55	45	43	45	28	23	28	31	34	47	42	34	47	47	44	50	46	39	48	47	66	64	59	34	66
22-May	26	44	47	50	48	42	34	39	42	46	43	44	44	44	41	38	43	41	40	40	73	70	62	53	73
23-May	58	50	53	51	51	47	37	42	45	48	43	44	58	50	45	44	45	44	58	48	25	35	20	26	58
24-May	23	23	33	49	45	45	56	44	48	52	47	41	43	40	49	50	45	38	42	43	75	76	59	53	76
25-May	65	50	62	61	50	45	45	43	45	51	45	46	50	49	53	51	51	36	39	51	85	78	68	69	85
26-May	61	55	58	53	45	44	37	37	46	52	46	54	41	48	43	47	45	47	49	55	40	82	89	55	89
27-May	48	55	50	61	101	37	53	69	59	69	61	68	63	44	55	39	44	36	39	39	20	16	15	16	101
28-May	14	18	12	18	17	16	18	25	34	50	61	55	51	65	55	40	40	43	34	23	24	59	57	63	65
29-May	61	65	67	77	65	57	56	53	50	49	40	51	45	50	51	44	47	48	41	62	85	72	44	43	85
30-May	43	48	55	35	40	34	31	43	51	55	52	52	63	74	58	43	46	44	28	22	19	22	16	24	74
31-May	25	26	32	23	84	68	92	73	31	35	47	59	61	42	43	35	49	70	38	46	57	55	59	61	92
88 85 86 89 101 68 92 73 62 80 73 69 69 84 110 69 73 74 95 72 85 94 112 103 Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS29 SURMONT 2 MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT2 (AMS29)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	34	35	99.87	5.6	0	0.9	0
H2S (ppb) Average	706	37	38	99.87	1.2	0	0.3	0
THC(ppm) Average	709	34	35	99.87	3.4	-	2.5	-
NO2 (ppb) Average	707	37	37	100	28.3	0	4.2	-
NO (ppb) Average	707	37	37	100	0.9	-	0.2	-
NOX (ppb) Average	707	37	37	100	28.4	-	4.2	-
PM2.5 (ug/m3) Average	743	1	1	100	868.1	0	194.6	3
Temperature 2 m (C) Average	744	0	0	100	29.8	-	22.9	-
Relative Humidity (%) Average	744	0	0	100	100.6	-	96.4	-
Wind Speed 10 m (km/h) Average	744	0	0	100	16	-	10	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	0.33	0.5	-	0	0	0	0.2	0.4	0.8	5.6
H2S (ppb) Average	706	0.08	0.1	-	0	0	0	0.1	0.1	0.2	1.2
THC (ppm) Average	709	2.27	0.1	-	2.1	2.2	2.2	2.3	2.3	2.3	3.4
NO2 (ppb) Average	707	1.11	1.8	-	0.1	0.3	0.5	0.7	1.2	2	28.3
NO (ppb) Average	707	0.05	0.1	-	0	0	0	0	0	0.2	0.9
NOX (ppb) Average	707	1.16	1.8	-	0.1	0.3	0.5	0.7	1.3	2.1	28.4
PM2.5 (ug/m3) Average	743	16.63	61.8	-	0.5	2	2.7	3.5	5.3	12.6	868.1
Temperature 2 m (C) Average	744	12.84	6.9	-	-5	4.6	8.1	12.4	17.2	22.4	29.8
Relative Humidity (%) Average	744	54.45	24.5	-	14.2	24.9	32.4	52	73	92.7	100.6
Wind Speed 10 m (km/h) Average	744	6.8	4	-	0	2	4	7	9	12	16
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2, THC	01 May 2025 15:00	01 May 2025 15:00	1	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

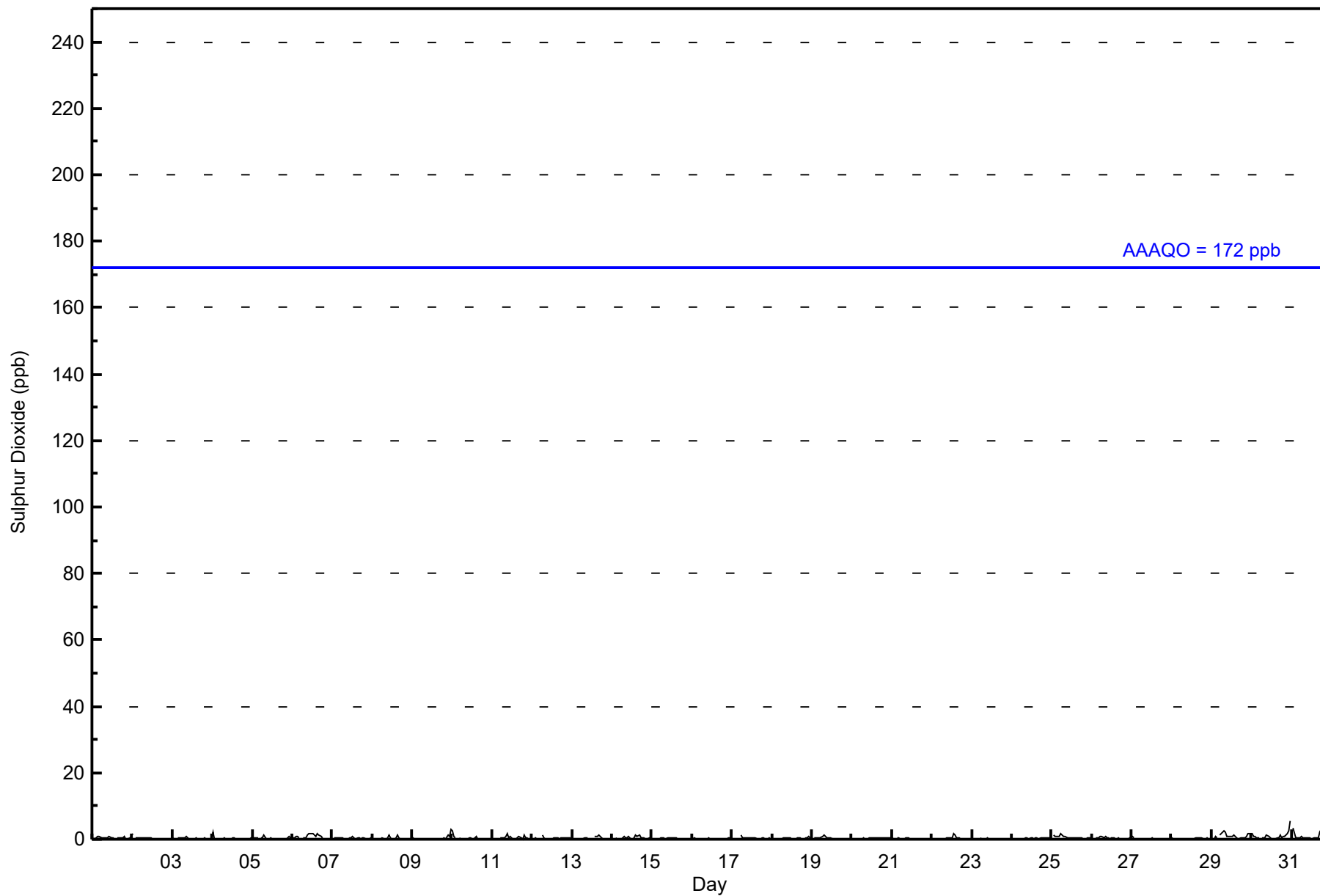
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.6 ppb on May 31 00:00 Maximum Daily Average: 0.9 ppb on May 30																Hours in Service: 744 Hours of Data: 709 Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9											
Minimum Value: 0.0 ppb on May 2 17:00 Minimum Daily Average: 0.1 ppb on May 23 Maximum Diurnal Average: 0.5 ppb at hour 1 Minimum Diurnal Average: 0.2 ppb at hour 21 Monthly Average: 0.33 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 2.1																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	Z	0.1	0.5	0.7	0.7	0.3	0.5	0.5	0.5	0.6	0.8	0.4	0.3	0.2	M	0.3	0.3	0.5	0.6	0.7	0.2	0.2	0.2	0.9	0.4	0.9	
2-May	1.9	Z	0.6	0.3	0.4	0.3	0.6	0.6	0.6	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9	
3-May	0.3	0.1	Z	0.2	0.5	0.4	0.4	0.3	0.7	0.4	0.1	0.1	0.0	0.1	0.3	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.2	0.7	
4-May	2.1	0.2	0.1	Z	0.2	0.1	0.2	0.4	0.2	0.2	0.0	0.2	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	2.1	
5-May	0.0	0.5	0.5	0.4	Z	0.3	0.5	1.3	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.6	0.4	0.3	1.3	
6-May	0.3	0.4	0.6	0.7	0.4	Z	0.5	0.5	0.4	1.1	1.8	1.5	1.5	1.1	1.0	1.7	1.2	0.9	0.1	0.0	0.0	0.0	0.1	0.3	0.7	1.8	
7-May	Z	0.5	0.6	0.5	0.4	0.4	0.3	0.0	0.1	0.1	0.2	0.4	0.7	0.3	0.2	0.5	0.4	0.1	0.3	0.4	0.1	0.1	0.1	0.3	0.3	0.7	
8-May	0.4	Z	0.1	0.1	0.2	0.2	0.3	0.2	0.0	0.6	1.2	0.4	0.2	0.2	0.2	1.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.2	
9-May	0.3	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.0	1.1	0.7	2.8	0.3	2.8	
10-May	2.6	0.7	0.2	Z	0.2	0.2	0.1	0.0	0.0	0.0	0.4	0.6	0.2	0.1	0.8	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3	2.6	
11-May	0.0	0.0	0.0	0.2	Z	0.5	0.3	0.6	0.7	1.7	0.2	0.8	0.1	0.2	0.1	0.4	0.7	0.2	0.1	1.5	0.4	0.3	0.1	0.1	0.4	1.7	
12-May	0.1	0.1	0.2	0.2	0.0	Z	1.1	0.4	0.1	0.0	0.0	0.0	0.1	0.3	0.3	0.3	0.1	0.3	0.2	0.3	0.2	0.2	0.4	0.3	0.2	1.1	
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.3	C	C	C	0.7	0.7	0.9	1.1	0.9	0.1	0.0	0.1	0.0	0.0	0.1	0.3	1.1	
14-May	0.1	Z	0.2	0.0	0.1	0.2	0.6	0.8	0.6	0.4	0.8	0.0	0.1	0.5	1.2	0.9	1.2	0.6	0.6	0.4	0.1	0.2	0.3	0.1	0.4	1.2	
15-May	0.2	0.0	Z	0.1	0.0	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.4	0.5	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.5	
16-May	0.0	0.3	0.2	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.1	0.3	
17-May	0.1	0.1	0.2	0.2	Z	1.5	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.1	0.2	0.2	0.4	0.3	0.2	0.1	0.4	0.1	0.3	1.5	
18-May	0.2	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.6	0.4	0.4	0.4	0.0	0.1	0.1	0.3	0.3	0.3	0.0	0.1	0.3	0.6	0.7	0.4	0.2	0.7	
19-May	Z	0.2	0.3	0.3	0.4	0.4	1.0	1.2	1.0	0.4	0.2	0.3	0.2	0.1	0.2	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.0	0.0	0.3	1.2	
20-May	0.1	Z	0.2	0.0	0.0	0.2	0.2	0.3	0.2	0.2	0.5	0.4	0.3	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.5	
21-May	0.3	0.1	Z	0.4	0.4	0.2	0.0	0.2	0.2	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
22-May	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.3	0.4	0.4	0.4	1.5	1.1	0.2	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.5	
23-May	0.1	0.0	0.0	0.0	Z	0.3	0.2	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.3	
24-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.4	0.5	0.2	0.3	0.3	0.1	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.5	
25-May	Z	1.2	1.0	0.8	1.0	1.7	1.1	1.0	1.0	0.6	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.1	0.1	0.4	0.4	0.3	0.6	1.7	
26-May	0.2	Z	0.4	0.3	0.3	0.7	0.8	0.6	0.7	0.5	0.3	0.1	0.2	0.3	0.2	0.0	0.3	0.0	0.1	0.0	0.2	0.1	0.1	0.3	0.3	0.8	
27-May	1.0	0.4	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	1.0	
28-May	0.3	0.2	0.2	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.3	0.4	0.3	0.0	0.1	0.4	0.1	0.0	0.2	0.6	
29-May	0.0	0.0	0.8	0.6	Z	1.1	2.0	2.3	2.1	0.9	1.0	0.7	0.7	1.3	0.8	0.4	0.2	0.3	0.3	0.3	0.3	0.6	1.6	1.5	0.9	2.3	
30-May	1.6	0.7	0.9	0.5	0.4	Z	0.3	0.3	0.5	1.2	1.0	0.5	0.2	0.0	0.2	0.3	0.4	1.1	0.5	0.8	0.7	1.8	2.5	5.6	0.9	5.6	
31-May	Z	3.3	0.3	0.4	0.3	0.3	0.9	0.6	0.5	0.4	0.4	0.3	0.2	0.4	0.4	0.5	0.6	2.2	1.3	0.4	0.3	0.1	0.2	0.0	0.6	3.3	
0.5 0.3 0.3 0.3 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.3 0.2 0.3 0.3 0.5																										Diurnal Average	
2.6 3.3 1.0 0.8 1.0 1.7 2.0 2.3 2.1 1.7 1.8 1.5 1.5 1.5 1.2 1.7 1.2 2.2 1.3 1.5 0.7 1.8 2.5 5.6																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	709	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	21	8	19	13	7	84	124	79	40	19	45	74	66	34	31	45	709
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	21	8	19	13	7	84	124	79	40	19	45	74	66	34	31	45	709

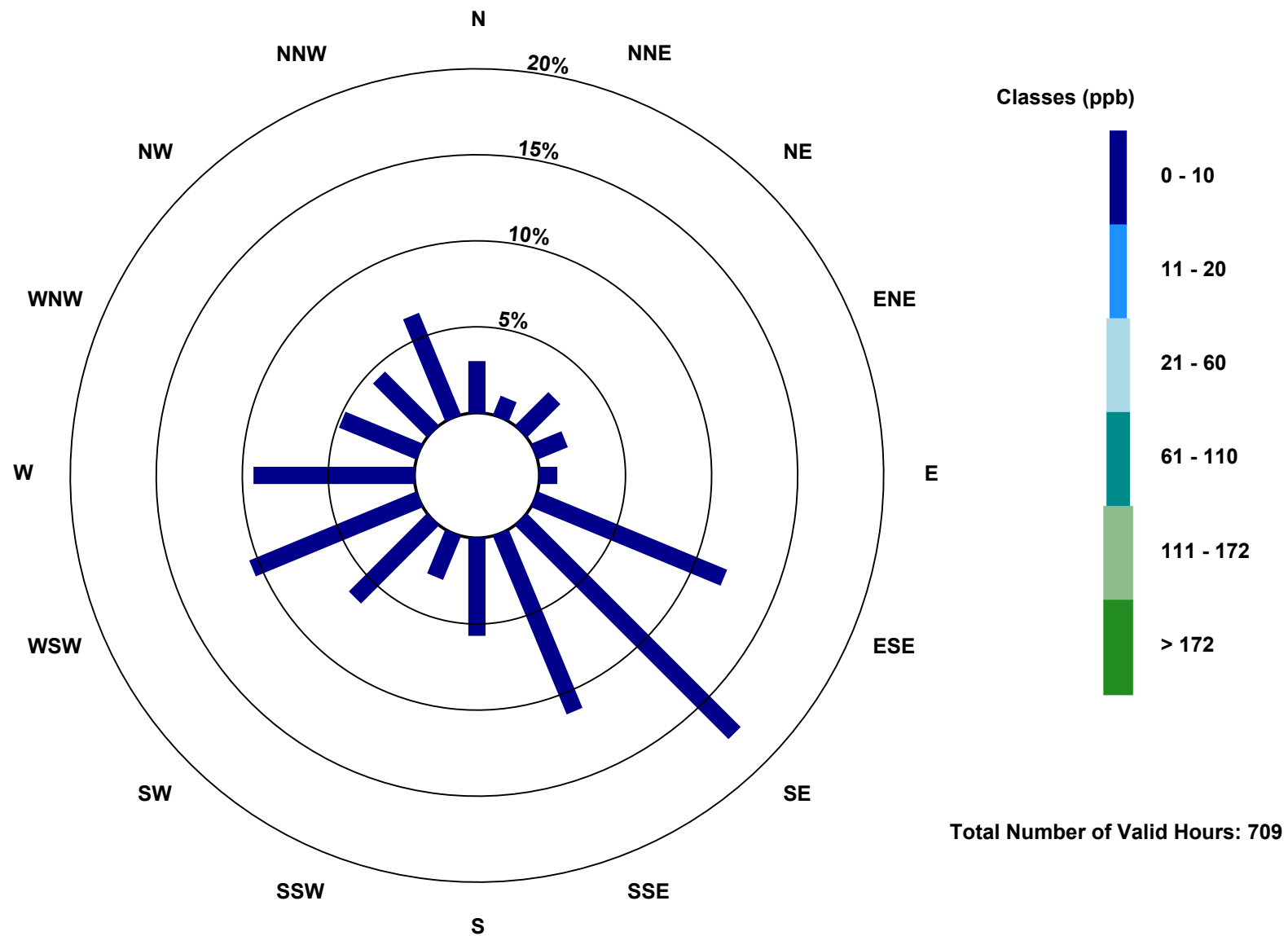
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Surmont 2



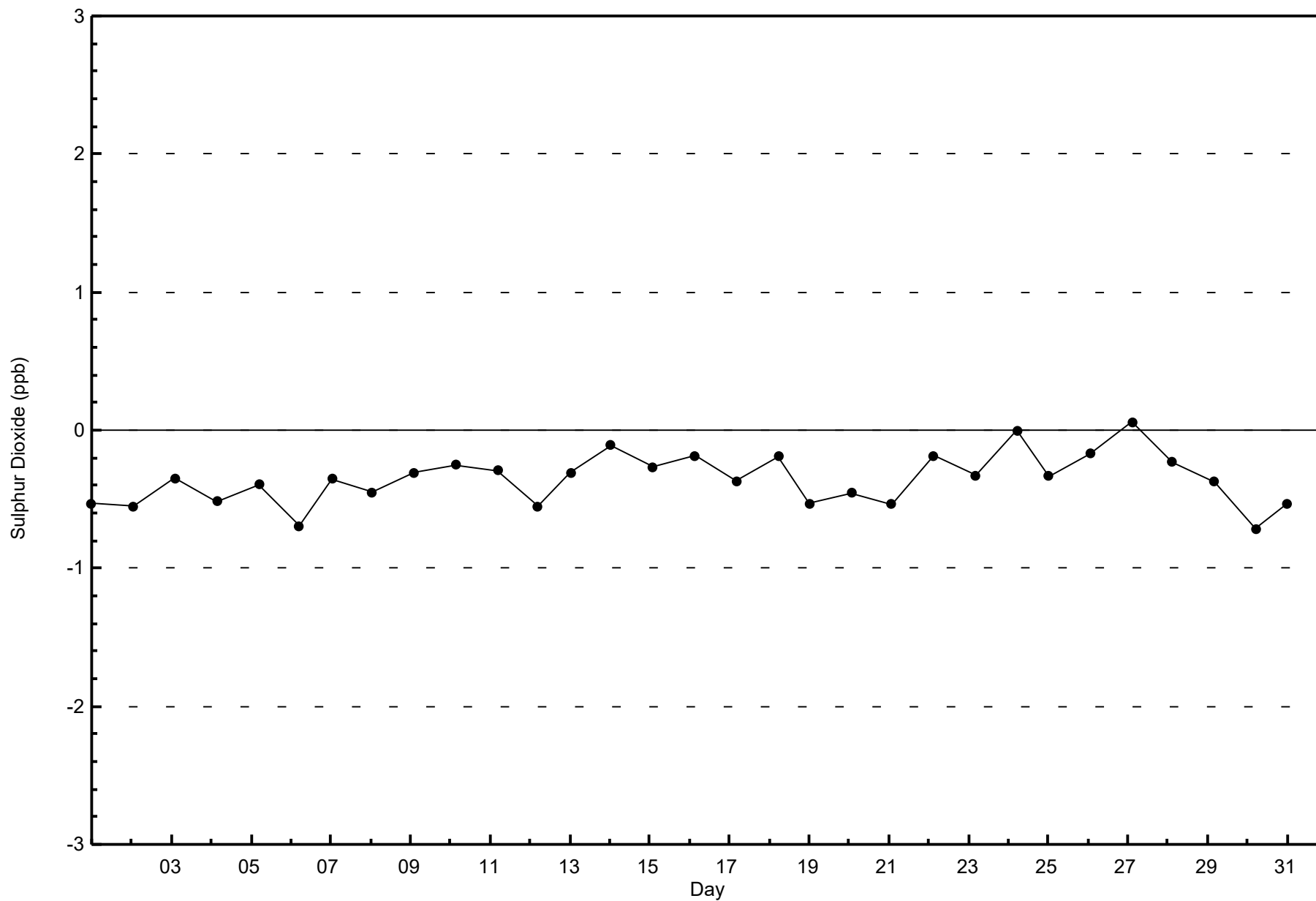


Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

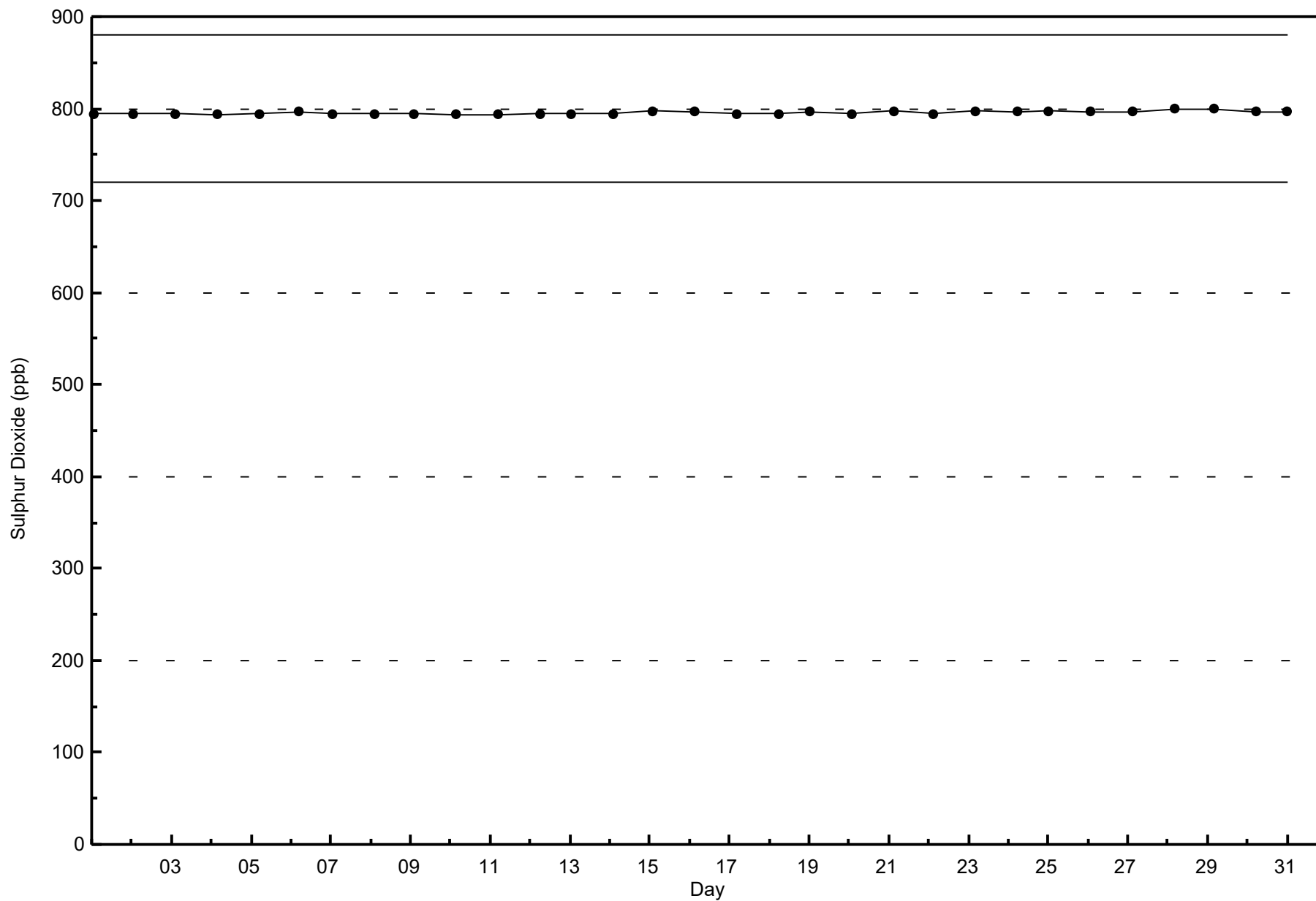
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

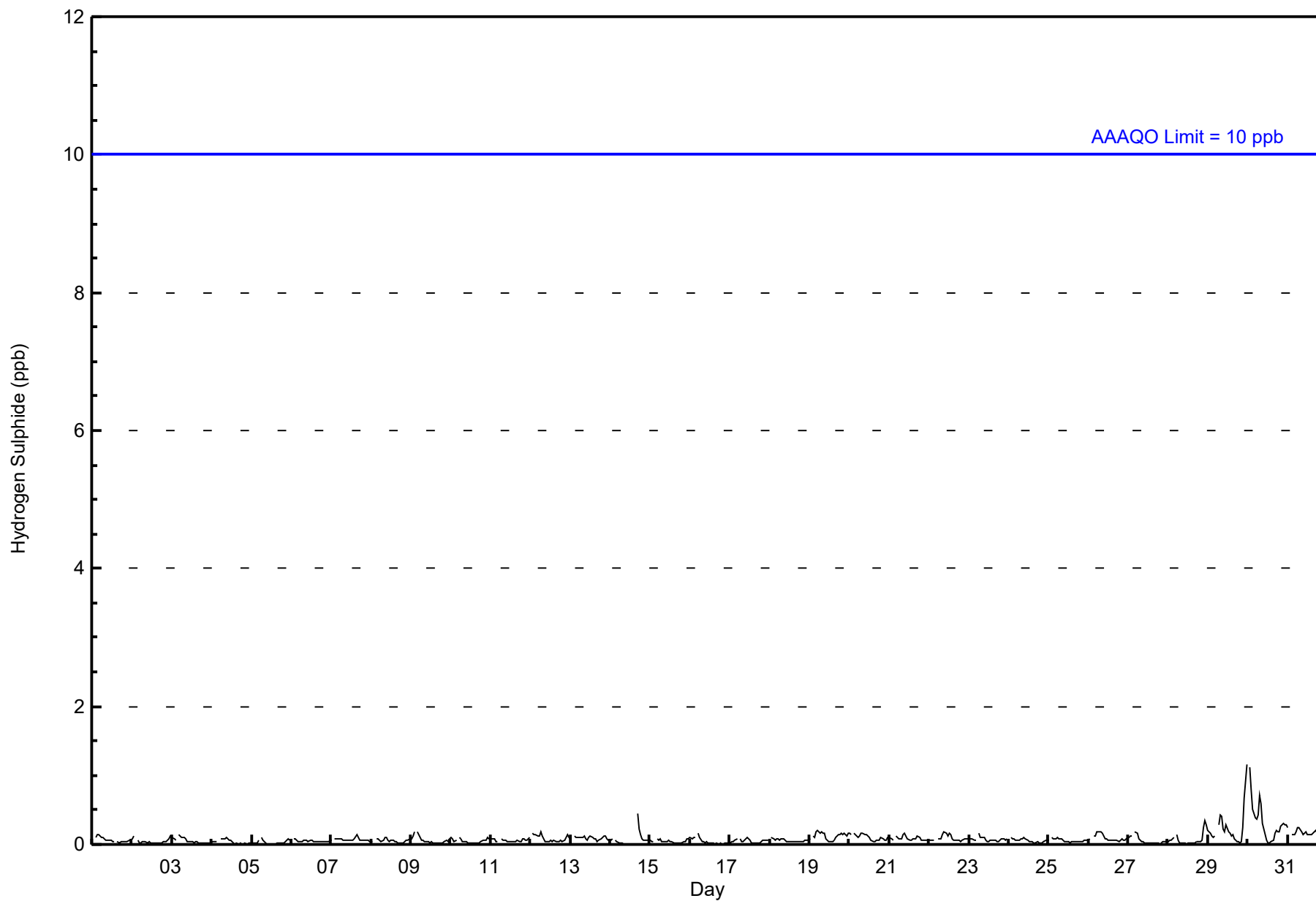
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.2 ppb on May 30 00:00 Maximum Daily Average: 0.3 ppb on May 30																		Hours in Service: 744 Hours of Data: 706									
Minimum Value: 0.0 ppb on May 4 17:00 Minimum Daily Average: 0.0 ppb on May 5 Maximum Diurnal Average: 0.1 ppb at hour 24 Minimum Diurnal Average: 0.0 ppb at hour 15 Monthly Average: 0.08 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.4																		Hours of Missing Data: 38 Hours of Calibration: 37 Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	M	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
2-May	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
3-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
4-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1
6-May	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
7-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
8-May	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
9-May	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.2
10-May	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1
11-May	0.1	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12-May	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
14-May	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
15-May	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
16-May	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
17-May	0.0	0.0	0.0	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1
18-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
19-May	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2
20-May	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
21-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
22-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2
23-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
24-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
25-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
26-May	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
27-May	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
28-May	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.1	0.3
29-May	0.2	0.2	0.1	0.1	0.1	Z	0.3	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7	1.2	0.2	1.2
30-May	Z	1.1	0.8	0.5	0.4	0.4	0.4	0.7	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	1.1
31-May	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																										Diurnal Average	
0.2 1.1 0.8 0.5 0.4 0.4 0.4 0.7 0.6 0.3 0.2 0.3 0.2 0.2 0.1 0.2 0.4 0.2 0.2 0.2 0.2 0.3 0.3 0.7 1.2																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	24	8	19	13	7	82	126	79	42	18	45	70	65	34	32	42	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	8	19	13	7	82	126	79	42	18	45	70	65	34	32	42	706

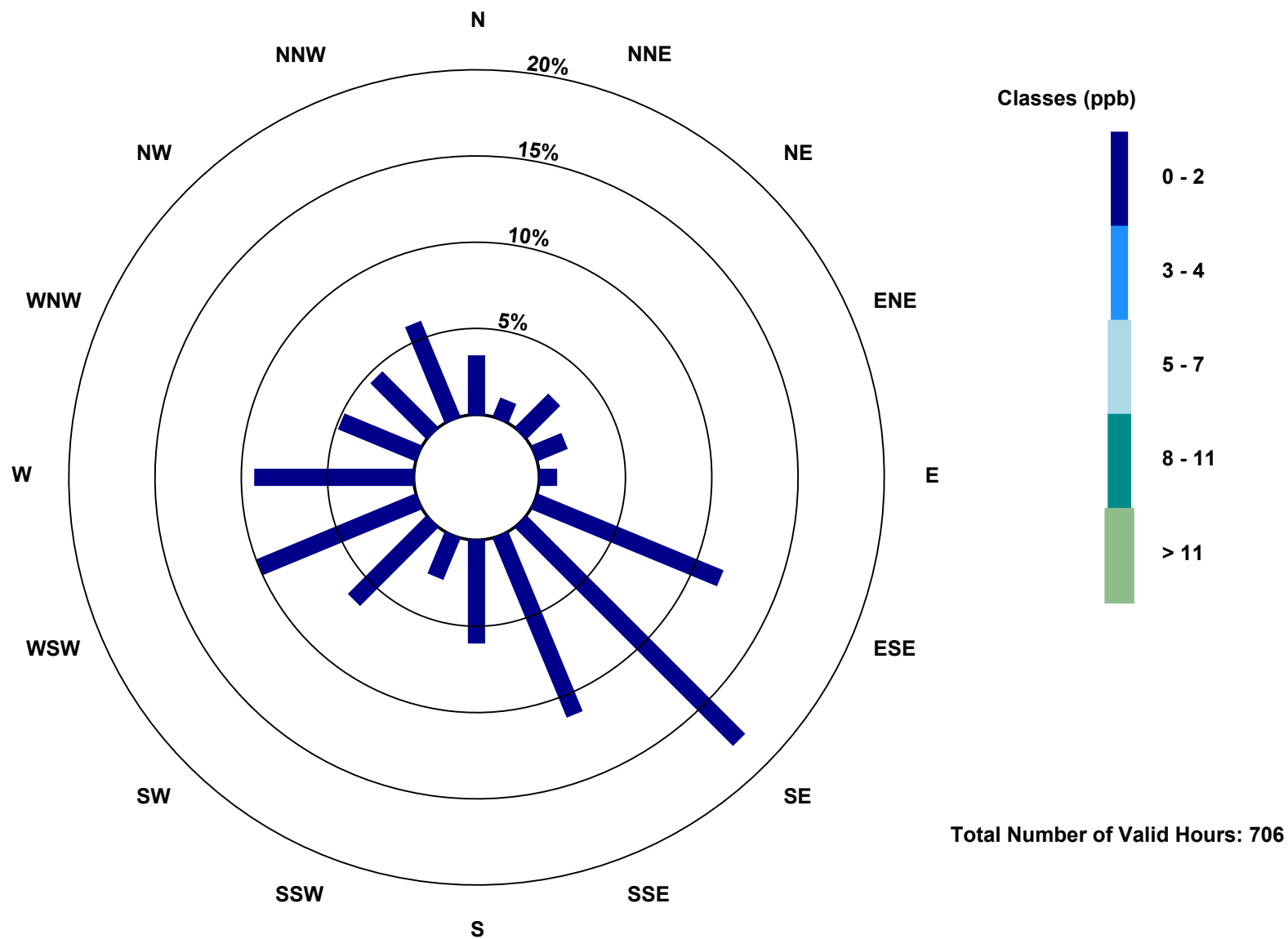
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Surmont 2



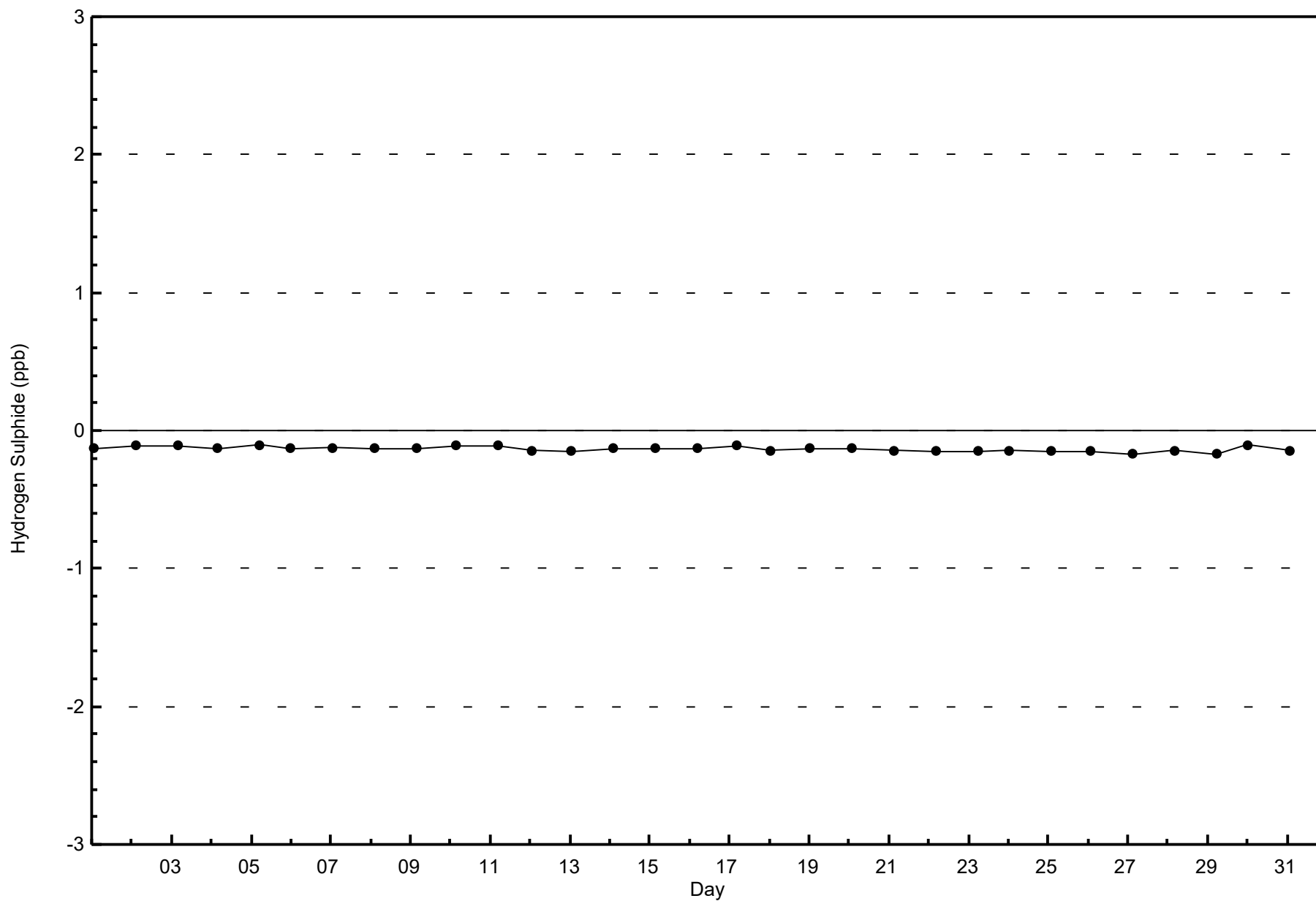


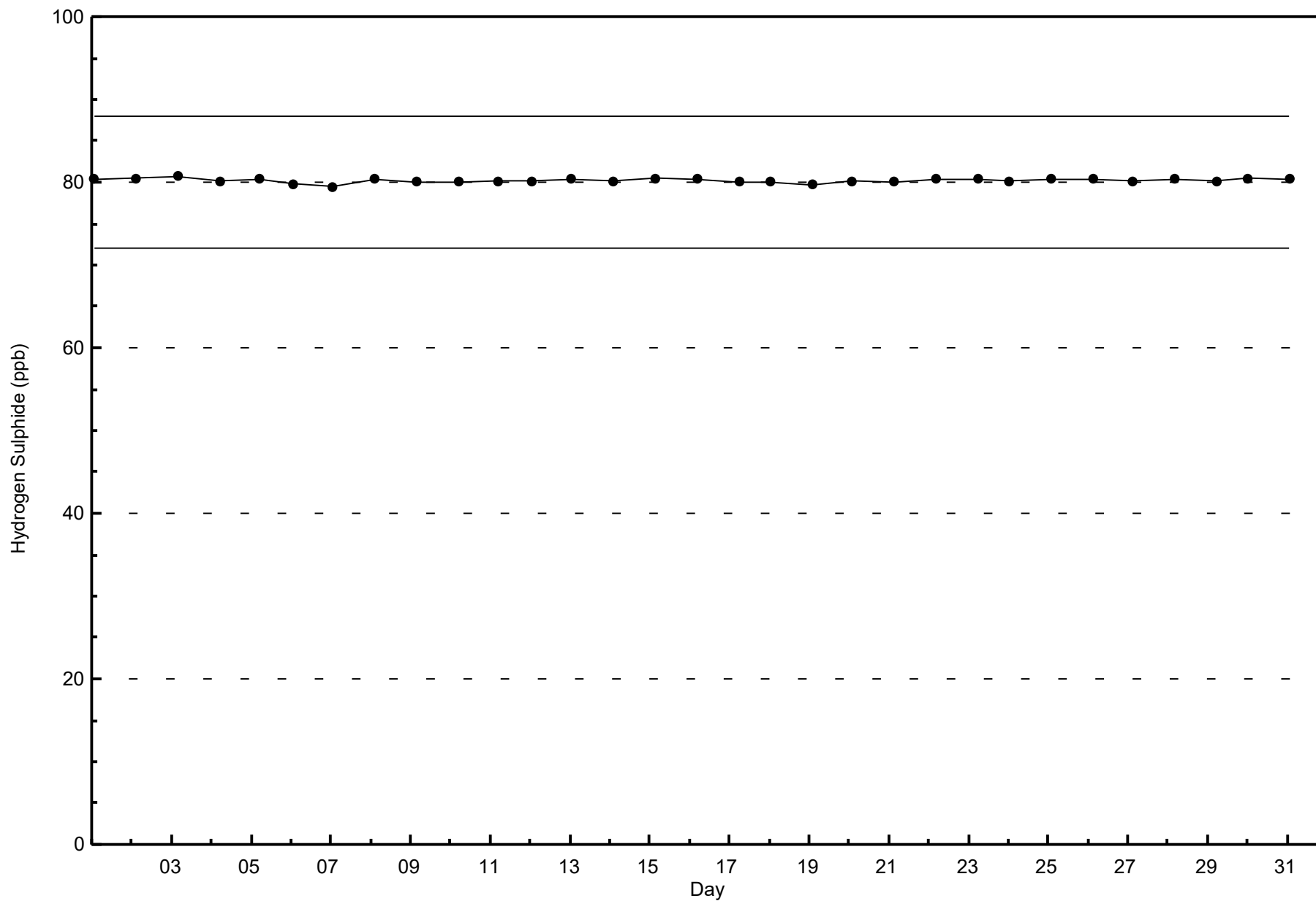
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

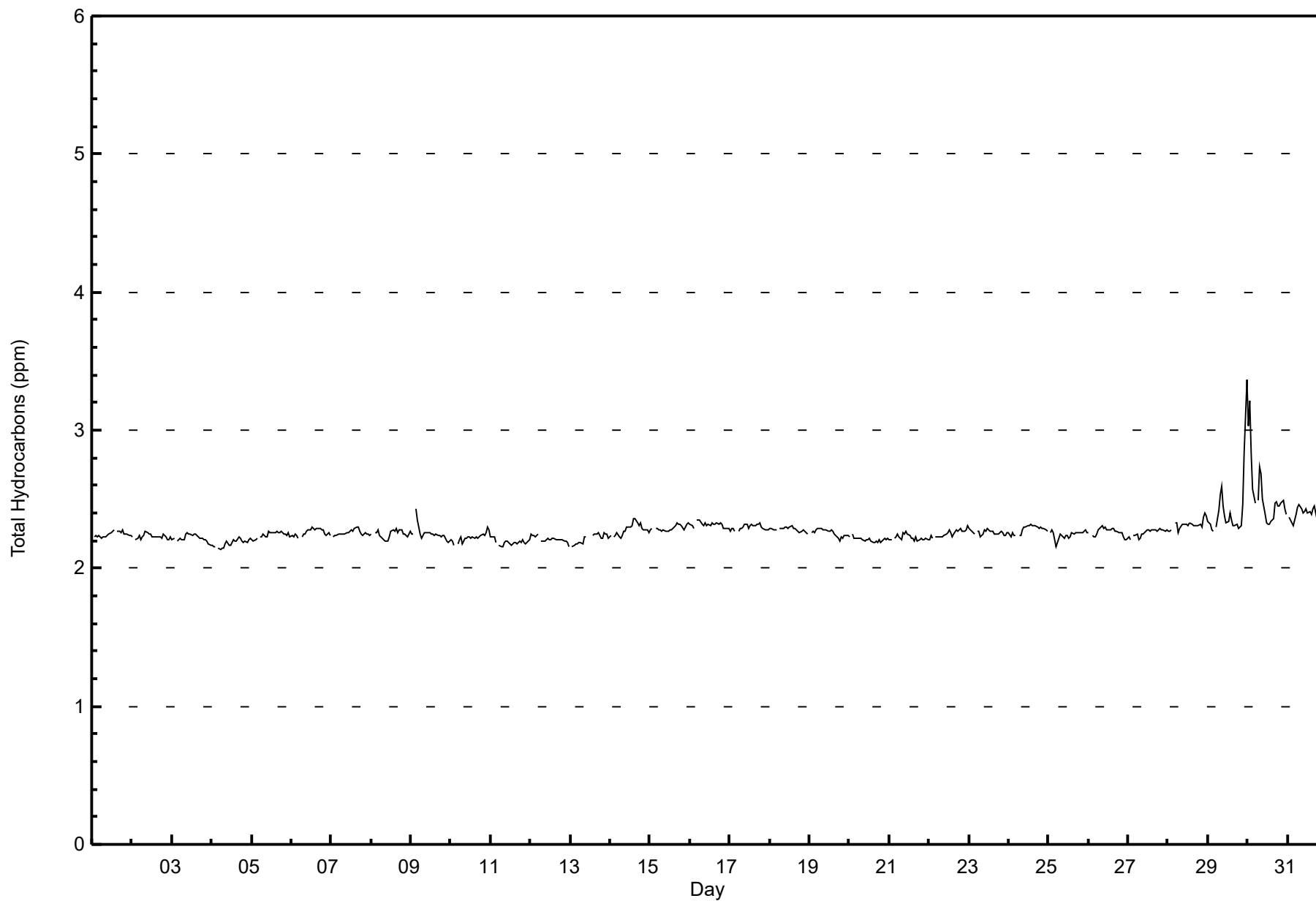
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.4 ppm on May 30 00:00 Maximum Daily Average: 2.5 ppm on May 30																		Hours in Service: 744									
Minimum Value: 2.1 ppm on May 4 06:00 Minimum Daily Average: 2.2 ppm on May 4 Maximum Diurnal Average: 2.3 ppm at hour 24 Minimum Diurnal Average: 2.2 ppm at hour 6 Monthly Average: 2.27 ppm Percentiles: P ₁ = 2.2 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.3 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.6																		Hours of Data: 709									
																		Hours of Missing Data: 35									
																		Hours of Calibration: 34									
																		Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	M	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
3-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
4-May	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
5-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.2	2.3	
6-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	
7-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.3	
8-May	2.2	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	
9-May	2.3	2.2	Z	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
10-May	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	
11-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
12-May	2.2	2.2	2.2	2.2	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
13-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	C	C	C	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	
14-May	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	
15-May	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
16-May	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	
17-May	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
18-May	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	
19-May	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
20-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
21-May	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
22-May	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
23-May	2.3	2.3	2.3	2.2	Z	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.3	2.3	
24-May	2.3	2.2	2.3	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
25-May	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
26-May	2.3	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	
27-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	
28-May	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	
29-May	2.3	2.3	2.3	2.3	Z	2.3	2.4	2.5	2.6	2.5	2.4	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.8	3.4	2.4	3.4	
30-May	3.0	3.2	2.8	2.6	2.5	Z	2.5	2.7	2.7	2.5	2.4	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.5	
31-May	Z	2.4	2.3	2.3	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	
2.3 2.3 2.3 2.3 2.3 2.2 2.3																										Diurnal Average	
3.0 3.2 2.8 2.6 2.5 2.4 2.5 2.7 2.7 2.5 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.8 3.4																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Surmont 2 - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	707	99.72	99.72
3.1 - 10.0	2	0.28	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Surmont 2 - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	21	8	19	13	7	84	124	79	40	19	45	74	65	33	31	45	707
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	21	8	19	13	7	84	124	79	40	19	45	74	66	34	31	45	709

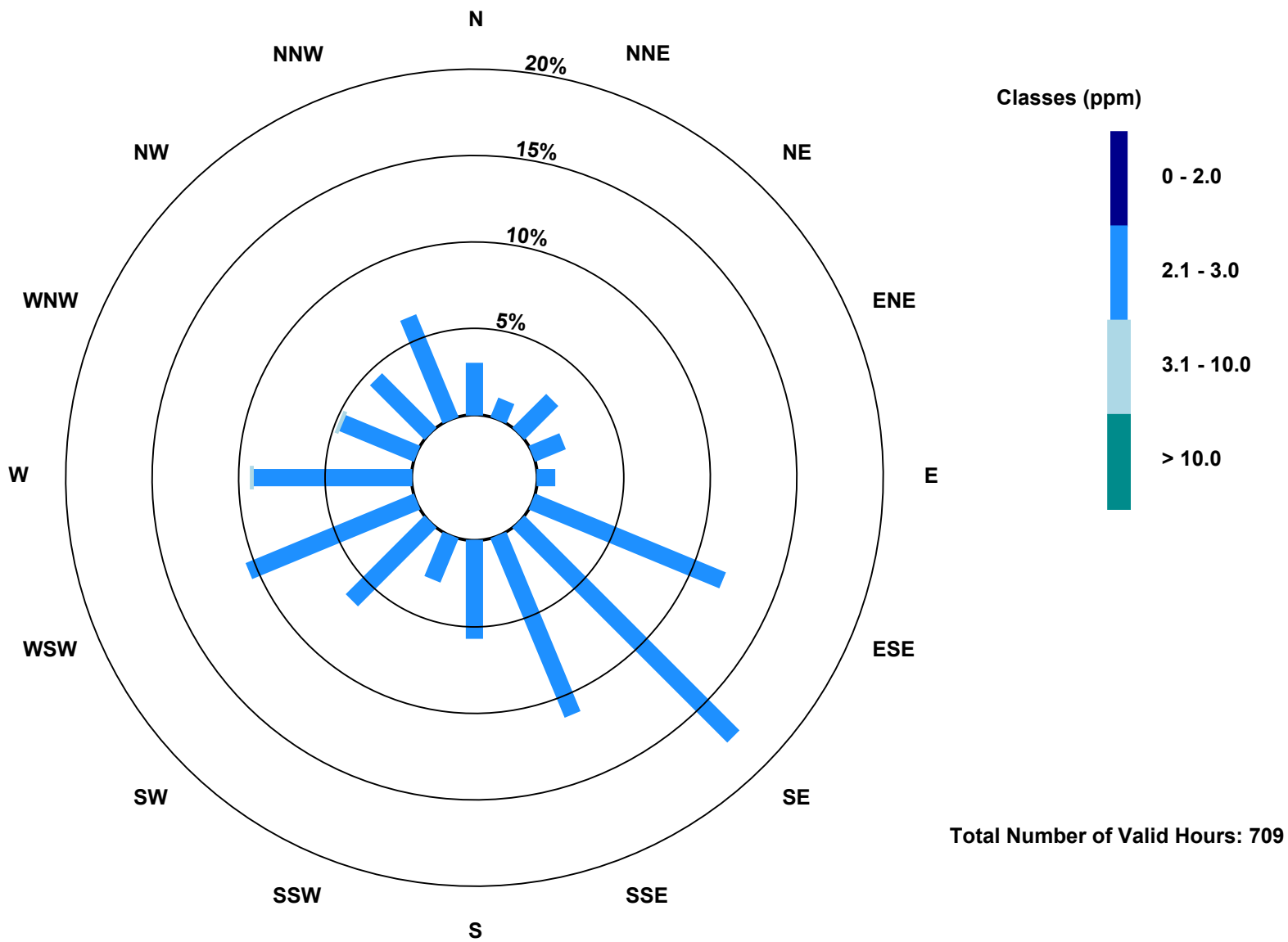
Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

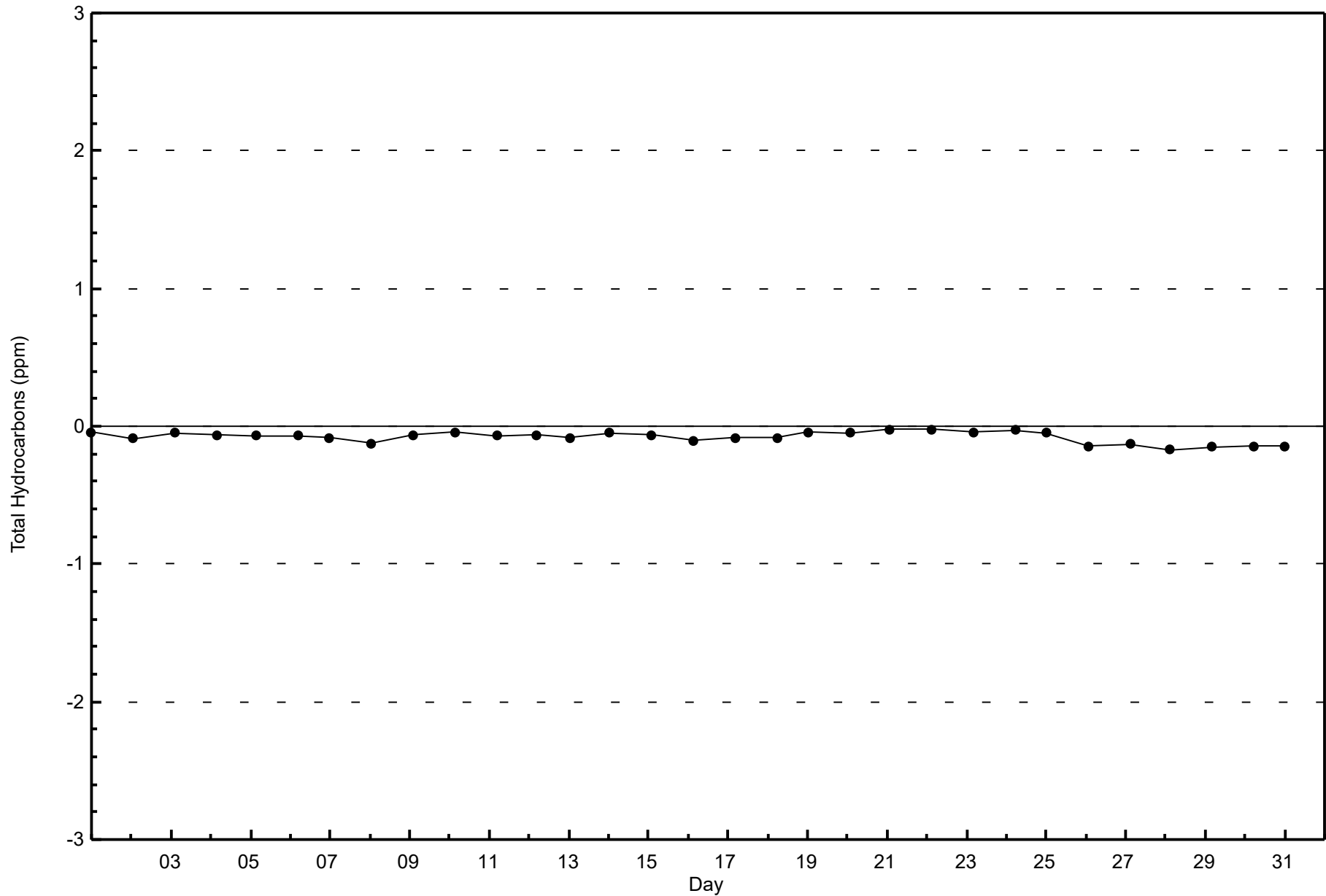
Total Hydrocarbons (THC) - ppm
Surmont 2





Wood Buffalo Environmental Association
Zero Responses

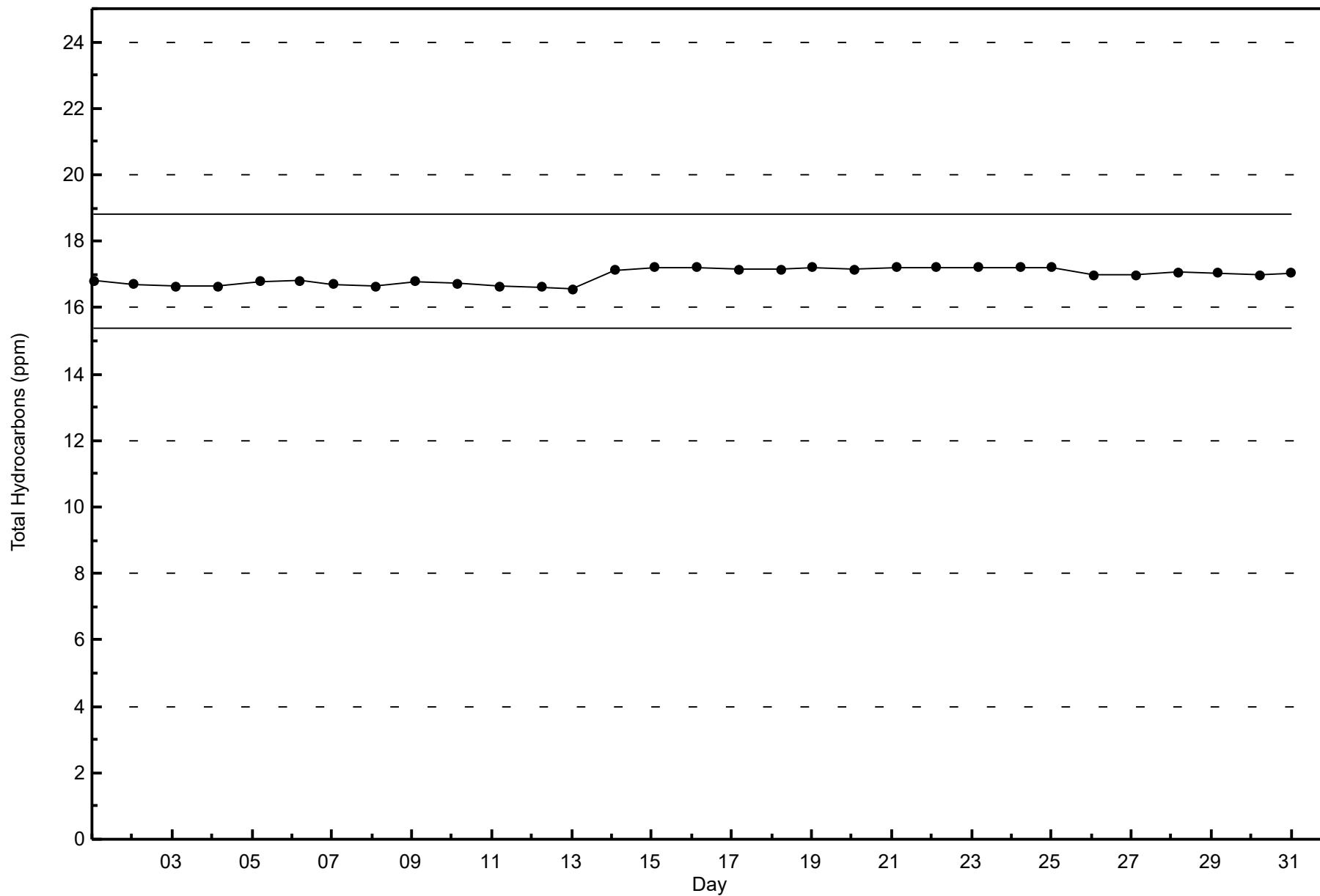
Total Hydrocarbons (THC) - ppm
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Surmont 2 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

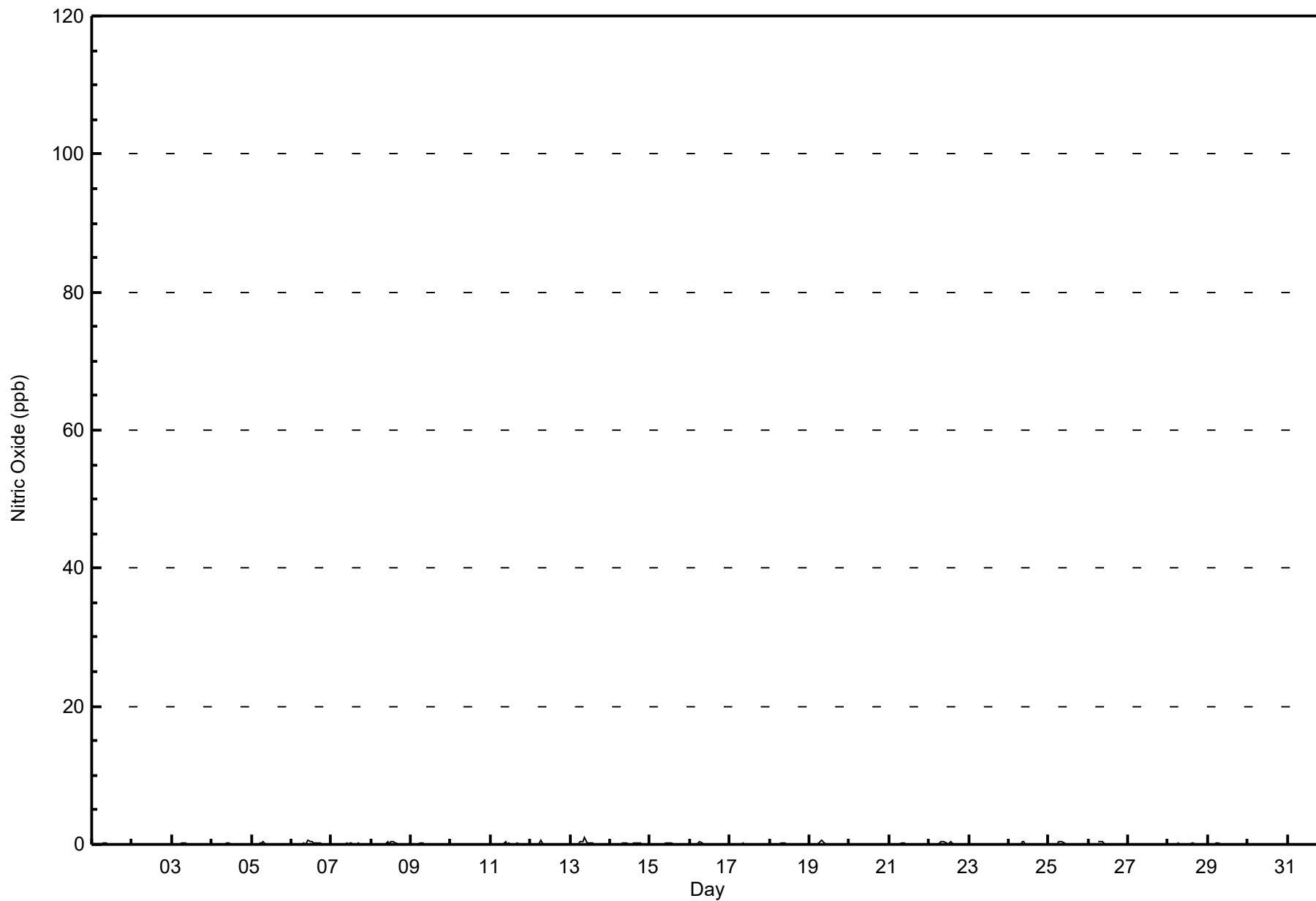
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.9 ppb on May 13 09:00 Maximum Daily Average: 0.2 ppb on May 13																			Hours in Service: 744								
Minimum Value: 0.0 ppb on May 1 01:00 Minimum Daily Average: 0.0 ppb on May 20 Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 23 Monthly Average: 0.05 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.2 P ₉₉ = 0.5																			Hours of Data: 707								
																			Hours of Missing Data: 37								
																			Hours of Calibration: 37								
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.3	0.1	0.3	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.3
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3-May	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-May	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
6-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.3	0.5	0.4	0.4	0.3	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
7-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
8-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.4	0.1	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.4
9-May	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
10-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
12-May	0.0	0.0	0.0	Z	0.0	0.3	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
13-May	0.0	0.1	0.0	0.0	Z	0.2	0.4	0.5	0.9	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
14-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
16-May	0.0	Z	0.0	0.0	0.0	0.2	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
17-May	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
18-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
19-May	0.0	0.0	0.0	0.0	Z	0.1	0.4	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
20-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-May	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
22-May	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.3	0.1	0.1	0.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
23-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
25-May	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.5	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
26-May	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.4	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
27-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-May	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
29-May	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
30-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0																									Diurnal Average		
0.0 0.1 0.0 0.0 0.1 0.3 0.5 0.6 0.9 0.6 0.5 0.4 0.4 0.4 0.3 0.3 0.2 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.3																									Diurnal Maximum		
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	8	19	13	7	85	119	78	45	16	45	74	60	37	31	45	707
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	8	19	13	7	85	119	78	45	16	45	74	60	37	31	45	707

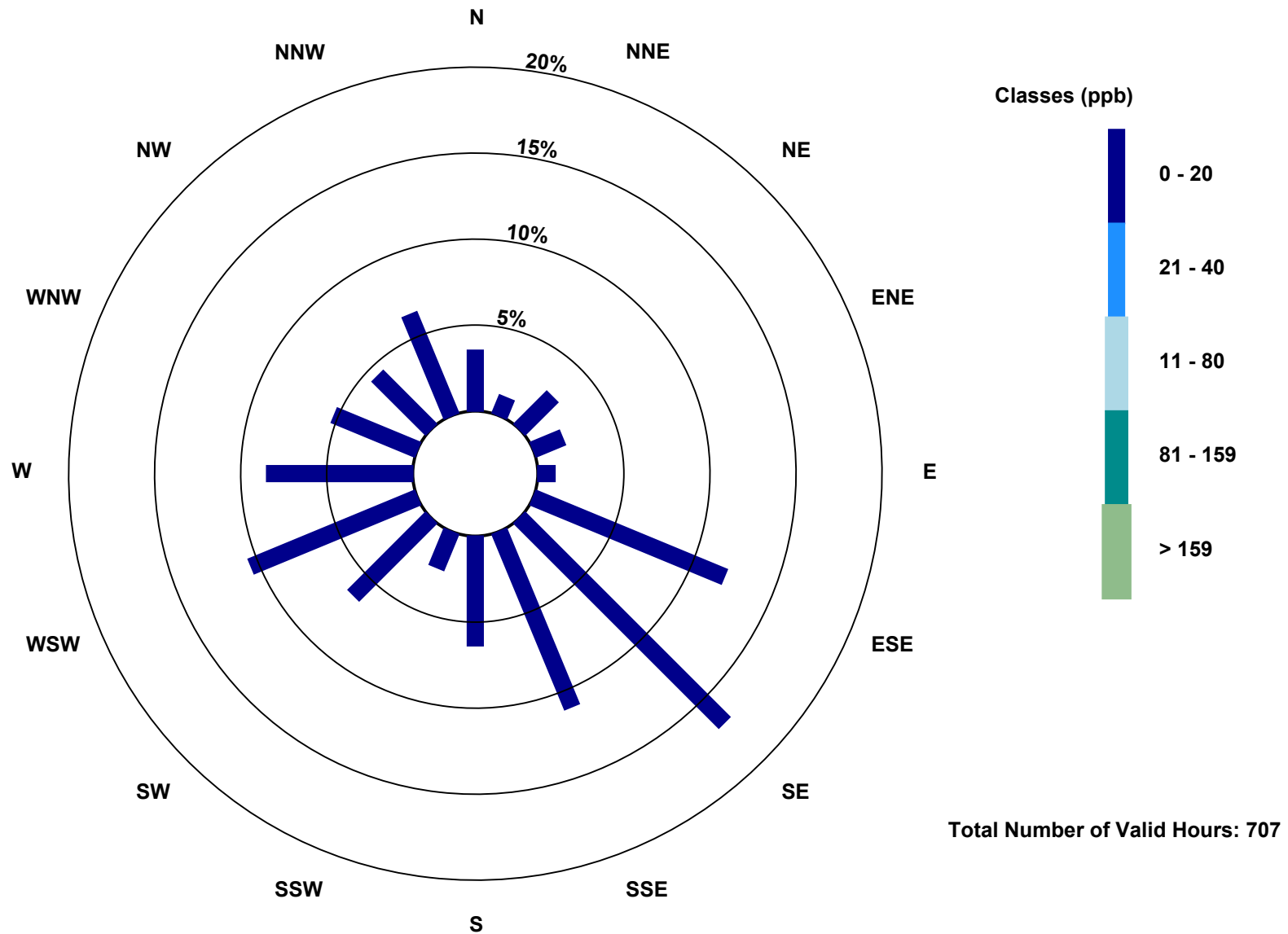
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

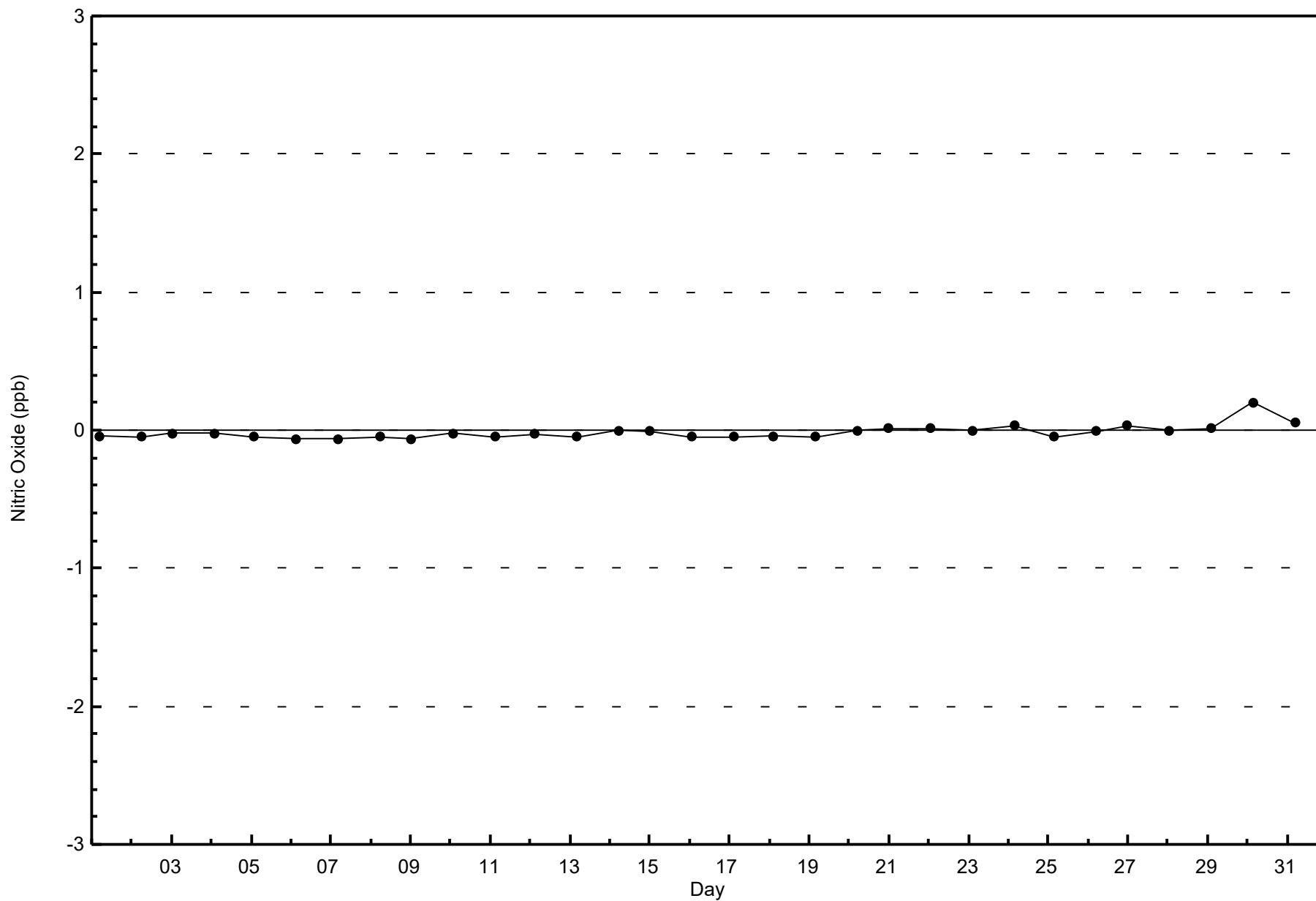
Nitric Oxide (NO) - ppb
Surmont 2





Wood Buffalo Environmental Association
Zero Responses

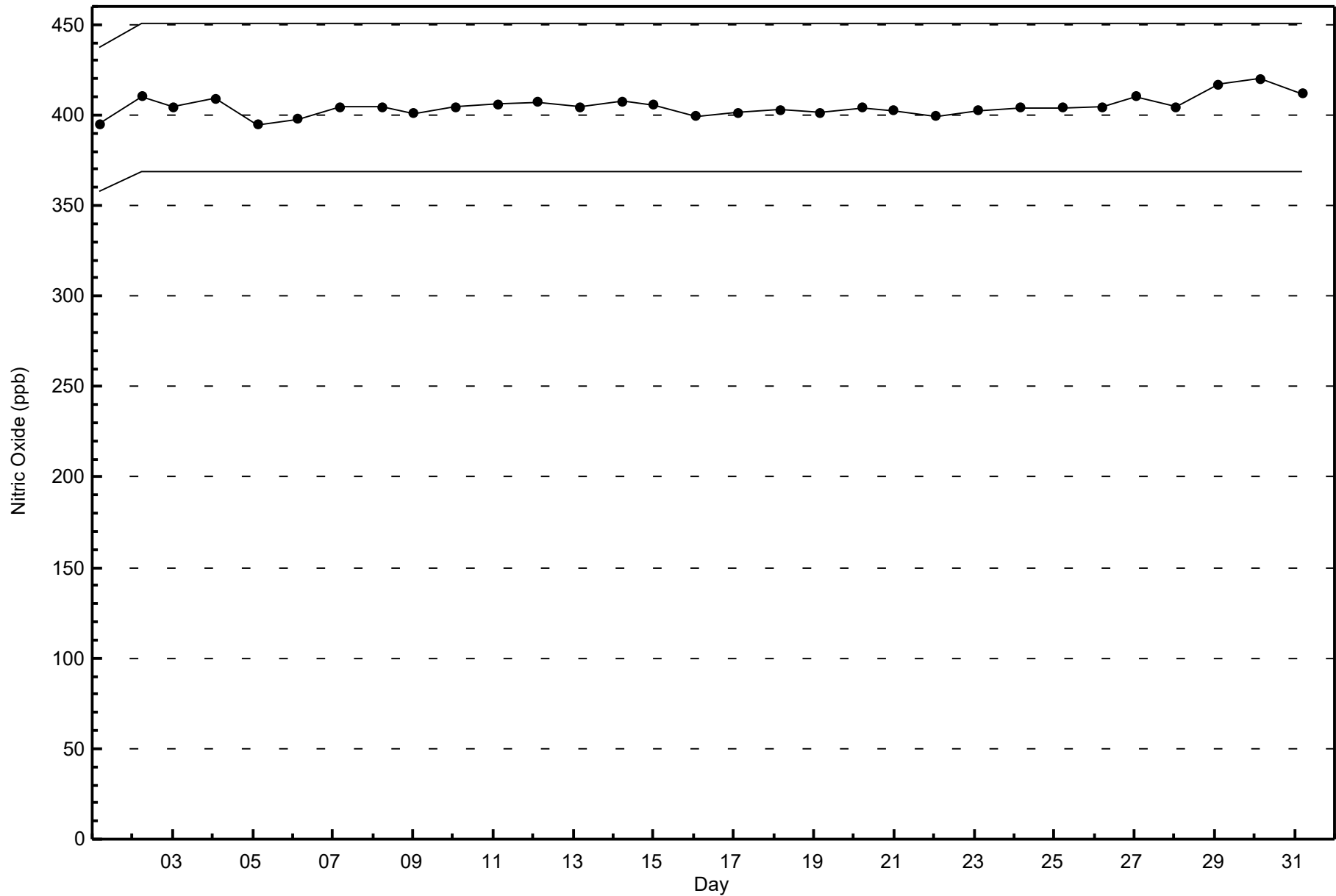
Nitric Oxide (NO) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

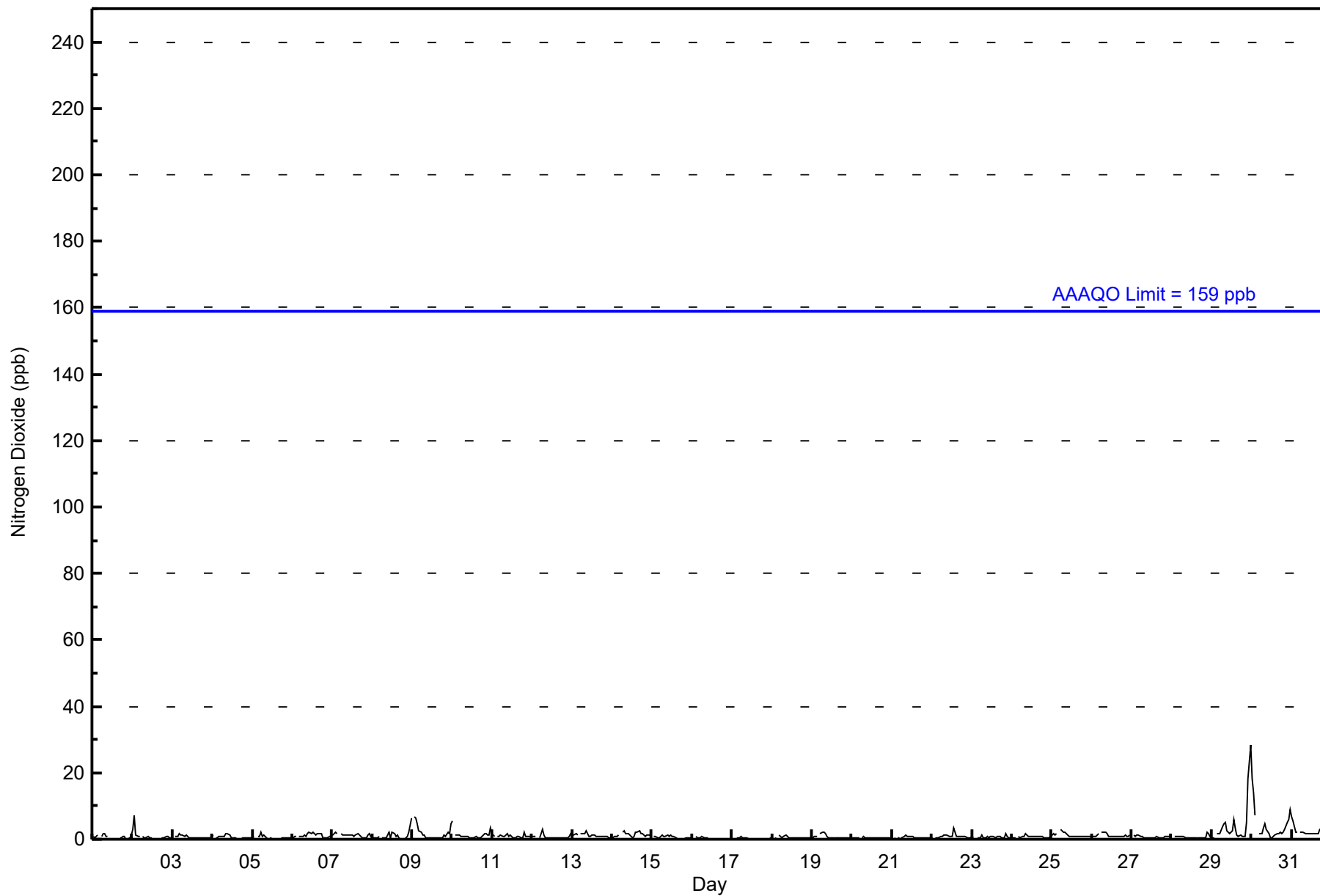
Surmont 2 - May 2025

Number of Exceedences (AAAO): 1-hr: 0 24-hr: 0 Maximum Value: 28.3 ppb on May 30 00:00 Maximum Daily Average: 4.2 ppb on May 29																			Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0							
Minimum Value: 0.1 ppb on May 2 16:00 Maximum Diurnal Average: 2.3 ppb at hour 24 Monthly Average: 1.11 ppb										Minimum Daily Average: 0.2 ppb on May 17 Minimum Diurnal Average: 0.6 ppb at hour 19 Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.7 Q ₃ = 1.2 P ₉₀ = 2.0 P ₉₉ = 6.9																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.8	0.5	0.7	1.4	Z	1.0	1.7	1.6	1.0	1.0	C	C	C	C	C	C	0.3	0.5	0.7	0.9	0.2	0.2	0.3	1.1	--	1.7
2-May	3.0	7.0	1.3	0.9	1.0	Z	0.8	0.5	0.5	0.7	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.9	0.8	0.6	0.3	0.9	7.0
3-May	Z	0.8	0.7	0.9	1.9	1.4	1.1	1.0	1.3	0.7	0.6	0.5	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.3	0.5	0.4	0.5	0.7	1.9
4-May	1.3	Z	0.6	0.5	0.7	0.8	0.7	0.9	1.5	1.5	1.1	0.6	0.6	0.4	0.3	0.2	0.2	0.2	0.5	0.4	0.3	0.3	0.4	0.5	0.6	1.5
5-May	0.3	0.7	Z	1.0	1.0	2.0	1.0	1.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.5	0.5	0.5	0.5	2.0
6-May	0.5	0.8	1.0	Z	0.7	0.8	1.0	1.2	0.8	1.7	2.3	1.9	2.0	1.5	1.4	1.8	1.8	1.5	0.6	0.6	0.6	0.6	0.8	1.2	1.2	2.3
7-May	1.3	1.9	2.2	1.9	Z	1.6	1.4	1.2	1.2	1.2	1.1	1.2	1.3	1.0	1.1	1.6	1.4	0.8	0.5	0.5	0.6	1.3	1.5	0.8	1.2	2.2
8-May	0.6	0.6	0.5	0.5	0.9	Z	0.5	0.5	0.5	1.4	2.0	0.5	2.1	1.7	1.0	1.4	0.6	0.2	0.2	0.2	0.5	1.0	2.1	6.4	1.1	6.4
9-May	Z	6.9	6.2	4.6	2.6	2.0	1.3	1.1	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	1.2	0.9	2.3	1.6	4.6	1.7	6.9
10-May	5.3	Z	1.1	1.4	1.2	0.9	1.0	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.9	0.4	0.6	0.4	0.8	1.6	1.7	1.4	1.1	3.2	1.2	5.3
11-May	1.9	0.7	Z	0.7	0.7	1.3	0.8	0.9	1.1	1.8	0.7	1.3	0.6	0.5	0.5	0.8	0.9	0.5	0.5	2.1	1.0	0.7	1.0	0.9	1.0	2.1
12-May	1.0	0.8	0.8	Z	0.6	1.6	2.9	1.3	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.5	0.4	1.0	1.6	0.8	2.9
13-May	1.1	1.3	1.6	1.3	Z	1.5	1.5	1.5	2.5	1.8	0.8	0.9	1.1	1.2	0.9	0.8	0.8	0.7	0.7	0.7	0.9	0.8	0.4	0.4	1.1	2.5
14-May	0.4	0.7	0.8	0.9	1.3	Z	2.0	2.4	1.9	1.7	1.7	0.9	0.5	0.9	2.1	2.0	2.6	1.6	1.5	1.4	0.9	1.1	1.1	0.9	1.4	2.6
15-May	Z	0.7	0.8	0.6	0.5	1.0	1.1	0.8	0.9	1.2	0.9	1.2	0.9	0.7	0.4	0.2	0.2	0.2	0.1	0.1	0.3	0.4	0.4	0.4	0.6	1.2
16-May	0.4	Z	0.7	0.5	0.4	0.5	0.9	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.9
17-May	0.1	0.2	Z	0.3	0.3	0.7	0.4	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.7
18-May	0.3	0.2	0.3	Z	1.1	0.7	0.5	0.8	1.1	0.9	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	1.1
19-May	0.6	0.7	0.8	0.9	Z	1.5	2.0	2.1	1.7	0.9	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.8	2.1
20-May	0.6	0.5	0.4	0.4	0.4	Z	0.5	0.7	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.7
21-May	Z	0.3	0.2	0.2	0.3	0.2	0.3	0.9	1.1	0.8	0.7	0.8	0.7	0.5	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	1.1
22-May	0.5	Z	0.5	0.4	0.5	0.7	0.9	1.1	1.2	1.2	0.8	0.7	1.0	3.2	2.1	0.7	0.8	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.9	3.2
23-May	0.7	0.6	Z	0.5	0.5	0.5	1.3	0.5	0.6	0.7	0.6	0.9	0.9	0.7	0.6	0.7	1.0	0.7	0.6	0.5	1.7	0.7	0.5	0.5	0.7	1.7
24-May	0.4	0.5	0.5	Z	0.7	0.5	0.7	1.0	1.7	1.4	0.8	0.7	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	1.1	0.8	1.7
25-May	1.4	1.5	1.4	1.6	Z	2.9	2.4	2.2	2.1	1.1	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.2	2.9
26-May	0.7	0.7	0.9	1.3	1.8	Z	2.3	2.0	2.0	1.5	1.0	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.9	1.2	1.0	1.0	1.1	1.1	2.3
27-May	Z	1.4	1.0	1.4	1.1	0.9	0.9	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.7	0.7	0.8	0.7	0.7	1.4
28-May	0.9	Z	0.9	0.8	0.7	0.8	1.0	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.6	0.6	0.5	0.5	0.6	0.4	0.5	2.0	1.6	1.0	0.7	2.0
29-May	0.6	0.6	Z	1.9	1.7	1.8	3.7	4.8	5.1	2.7	2.1	1.5	2.6	5.8	3.3	1.3	1.0	1.3	0.9	0.8	0.9	5.2	18.2	28.3	4.2	28.3
30-May	18.3	13.8	7.1	Z	1.6	1.6	1.6	3.3	4.5	3.1	1.6	0.6	0.4	0.7	1.1	1.6	1.9	2.1	1.6	2.2	3.1	5.1	6.1	8.8	4.0	18.3
31-May	6.7	5.5	2.1	2.0	Z	2.3	2.3	2.2	1.9	1.8	1.8	1.8	1.6	1.8	1.8	1.9	1.9	3.1	2.8	2.1	2.3	2.0	1.7	3.0	2.5	6.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	8	19	13	7	85	119	78	45	16	45	74	60	36	31	45	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	8	19	13	7	85	119	78	45	16	45	74	60	37	31	45	707

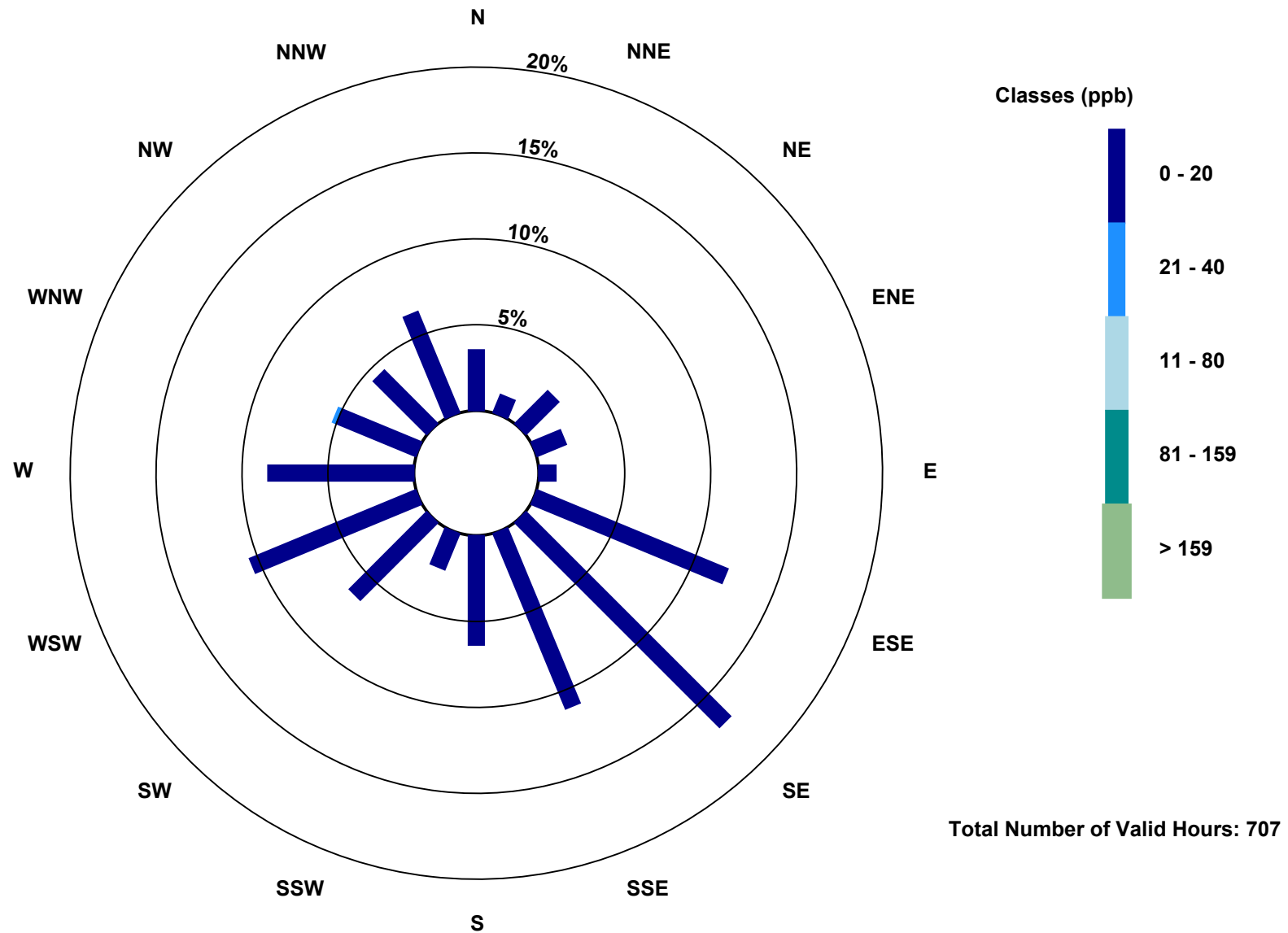
Total Number of Valid Hours: 707

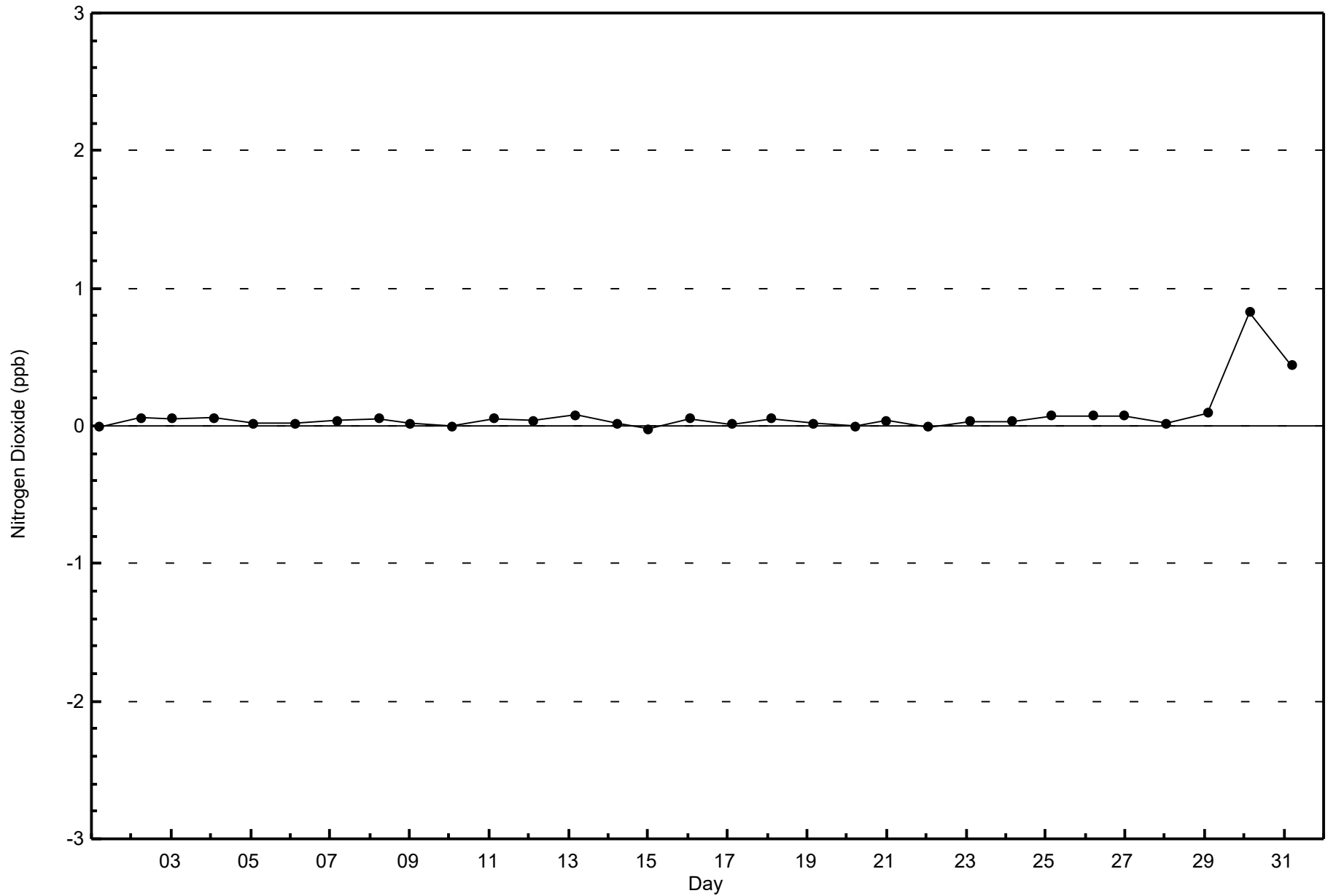
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Surmont 2

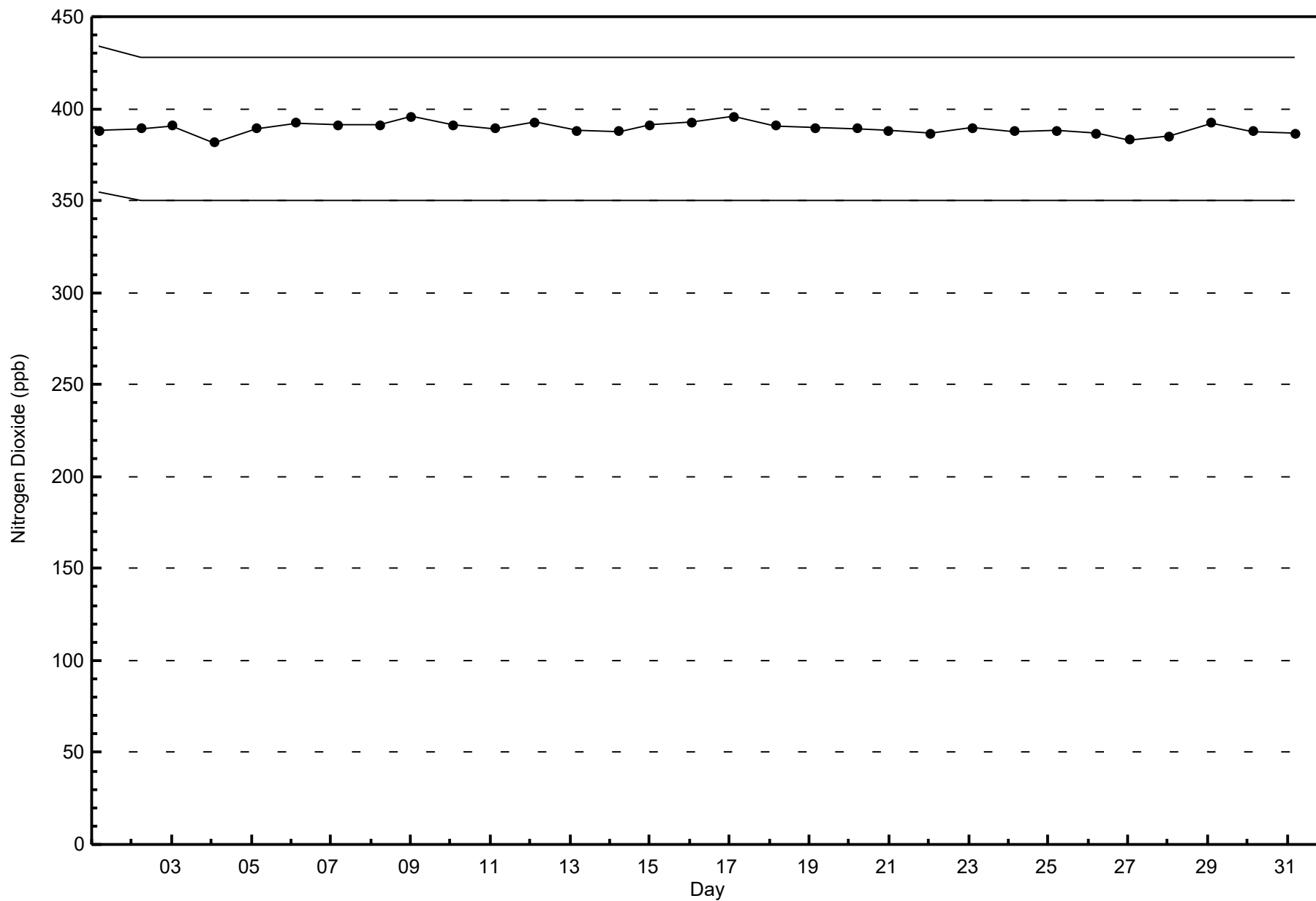






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

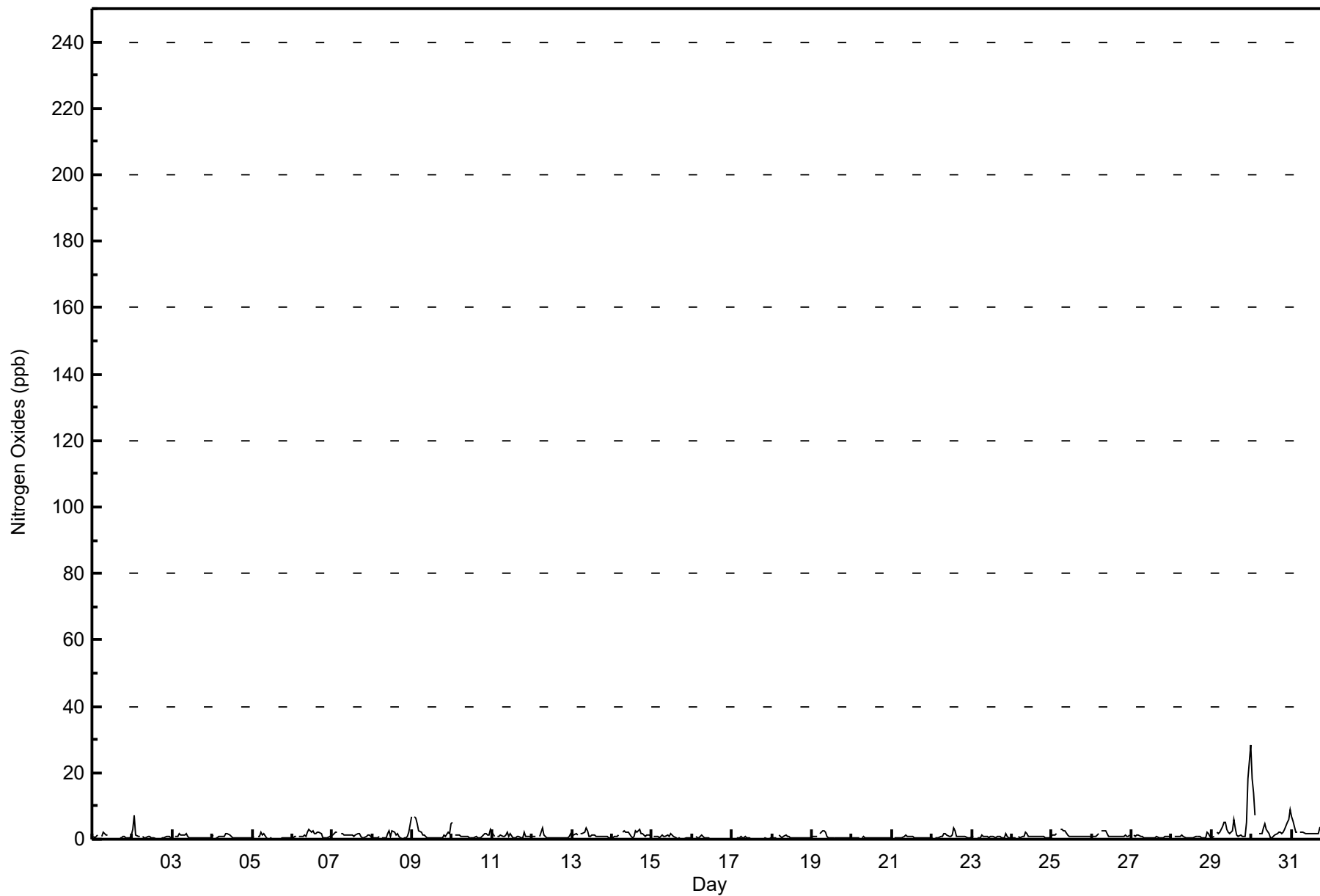
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.4 ppb on May 30 00:00 Maximum Daily Average: 4.2 ppb on May 29																			Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0							
Minimum Value: 0.1 ppb on May 16 17:00 Maximum Diurnal Average: 2.3 ppb at hour 24 Monthly Average: 1.16 ppb										Minimum Daily Average: 0.3 ppb on May 17 Minimum Diurnal Average: 0.6 ppb at hour 19 Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.7 Q ₃ = 1.3 P ₉₀ = 2.1 P ₉₉ = 7.0																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.8	0.5	0.7	1.4	Z	1.0	2.0	1.9	1.1	1.3	C	C	C	C	C	C	0.3	0.5	0.7	0.9	0.2	0.2	0.3	1.1	--	2.0
2-May	3.0	7.0	1.3	0.9	1.0	Z	0.9	0.6	0.6	0.8	0.7	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.9	0.8	0.6	0.3	0.9	7.0
3-May	Z	0.8	0.7	0.9	1.9	1.5	1.2	1.1	1.5	0.8	0.6	0.5	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.3	0.5	0.4	0.5	0.7	1.9
4-May	1.3	Z	0.6	0.5	0.7	0.8	0.7	0.9	1.6	1.6	1.2	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.5	0.4	0.3	0.3	0.4	0.5	0.6	1.6
5-May	0.3	0.7	Z	1.0	1.0	2.2	1.2	1.6	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.5	0.5	0.5	0.6	2.2
6-May	0.5	0.8	1.0	Z	0.7	0.8	1.0	1.3	0.9	2.0	2.8	2.3	2.4	1.8	1.6	2.1	2.0	1.6	0.6	0.6	0.6	0.6	0.8	1.2	1.3	2.8
7-May	1.3	1.9	2.2	1.9	Z	1.6	1.5	1.3	1.3	1.3	1.2	1.3	1.4	1.1	1.2	1.7	1.5	0.8	0.6	0.5	0.6	1.3	1.5	0.8	1.3	2.2
8-May	0.6	0.6	0.5	0.5	0.9	Z	0.5	0.5	0.6	1.6	2.4	0.6	2.5	2.1	1.2	1.6	0.7	0.2	0.2	0.2	0.5	1.0	2.1	6.7	1.2	6.7
9-May	Z	7.0	6.2	4.6	2.7	2.2	1.5	1.3	0.7	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	1.2	0.9	2.3	1.6	4.6	1.7	7.0	
10-May	5.3	Z	1.1	1.4	1.2	0.9	1.0	0.8	0.8	0.7	0.6	0.6	0.5	0.5	1.0	0.4	0.6	0.4	0.8	1.6	1.7	1.4	1.1	3.2	1.2	5.3
11-May	1.9	0.7	Z	0.7	0.7	1.3	0.8	1.0	1.2	2.2	0.7	1.5	0.6	0.5	0.5	0.9	1.0	0.5	0.5	2.1	1.0	0.7	1.0	0.9	1.0	2.2
12-May	1.0	0.8	0.8	Z	0.6	1.9	3.4	1.5	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.5	0.4	1.0	1.6	0.8	3.4
13-May	1.1	1.4	1.6	1.3	Z	1.7	1.9	2.0	3.4	2.4	1.0	1.0	1.2	1.3	1.0	0.8	0.8	0.7	0.7	0.7	0.9	0.8	0.4	0.4	1.2	3.4
14-May	0.4	0.7	0.8	0.9	1.3	Z	2.1	2.6	2.1	1.9	2.0	0.9	0.5	0.9	2.3	2.2	2.8	1.7	1.6	1.5	0.9	1.1	1.1	0.9	1.4	2.8
15-May	Z	0.7	0.8	0.6	0.5	1.0	1.2	0.8	1.0	1.4	1.0	1.5	1.1	0.8	0.4	0.2	0.2	0.2	0.1	0.1	0.3	0.4	0.4	0.4	0.7	1.5
16-May	0.4	Z	0.7	0.5	0.4	0.7	1.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	1.4
17-May	0.1	0.2	Z	0.3	0.3	0.8	0.5	0.4	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.3	0.8
18-May	0.3	0.2	0.3	Z	1.1	0.8	0.6	1.0	1.4	1.0	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.6	1.4
19-May	0.6	0.7	0.8	0.9	Z	1.6	2.4	2.7	2.0	1.0	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.8	2.7
20-May	0.6	0.5	0.4	0.4	0.4	Z	0.5	0.7	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.7
21-May	Z	0.3	0.2	0.2	0.3	0.3	0.3	1.0	1.4	1.0	0.8	0.8	0.7	0.5	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	1.4
22-May	0.5	Z	0.5	0.4	0.5	0.7	1.0	1.5	1.6	1.5	0.9	0.8	1.1	3.6	2.4	0.7	0.8	0.8	0.7	0.8	0.7	0.6	0.5	0.5	1.0	3.6
23-May	0.7	0.6	Z	0.5	0.5	0.5	1.4	0.6	0.7	0.7	0.6	0.9	1.0	0.7	0.6	0.8	1.0	0.8	0.6	0.5	1.7	0.7	0.5	0.5	0.7	1.7
24-May	0.4	0.5	0.5	Z	0.7	0.5	0.7	1.1	2.0	1.7	0.9	0.7	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.6	1.1	0.8	0.8	2.0
25-May	1.4	1.5	1.4	1.6	Z	3.1	2.8	2.7	2.6	1.2	0.9	0.9	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.2	3.1
26-May	0.7	0.7	0.9	1.3	1.8	Z	2.7	2.4	2.4	1.7	1.1	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.9	1.2	1.0	1.0	1.1	1.2	2.7
27-May	Z	1.4	1.0	1.4	1.1	0.9	1.0	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.7	0.4	0.5	0.4	0.5	0.7	0.7	0.8	0.7	0.7	1.4
28-May	0.9	Z	0.9	0.8	0.7	0.8	1.1	0.8	0.6	0.6	0.5	0.5	0.6	0.5	0.7	0.7	0.6	0.6	0.6	0.4	0.5	2.0	1.6	1.0	0.8	2.0
29-May	0.6	0.6	Z	1.9	1.7	1.9	3.9	4.9	5.2	2.8	2.1	1.5	2.6	5.8	3.3	1.3	1.0	1.3	0.9	0.8	0.9	5.2	18.2	28.4	4.2	28.4
30-May	18.3	13.8	7.1	Z	1.6	1.6	1.6	3.3	4.5	3.1	1.6	0.6	0.4	0.7	1.1	1.6	1.9	2.1	1.6	2.2	3.1	5.1	6.1	8.8	4.0	18.3
31-May	6.7	5.5	2.1	2.0	Z	2.3	2.3	2.2	1.9	1.8	1.8	1.8	1.6	1.8	1.8	1.9	1.9	3.2	2.9	2.1	2.3	2.0	1.7	3.0	2.4	6.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	8	19	13	7	85	119	78	45	16	45	74	60	36	31	45	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	8	19	13	7	85	119	78	45	16	45	74	60	37	31	45	707

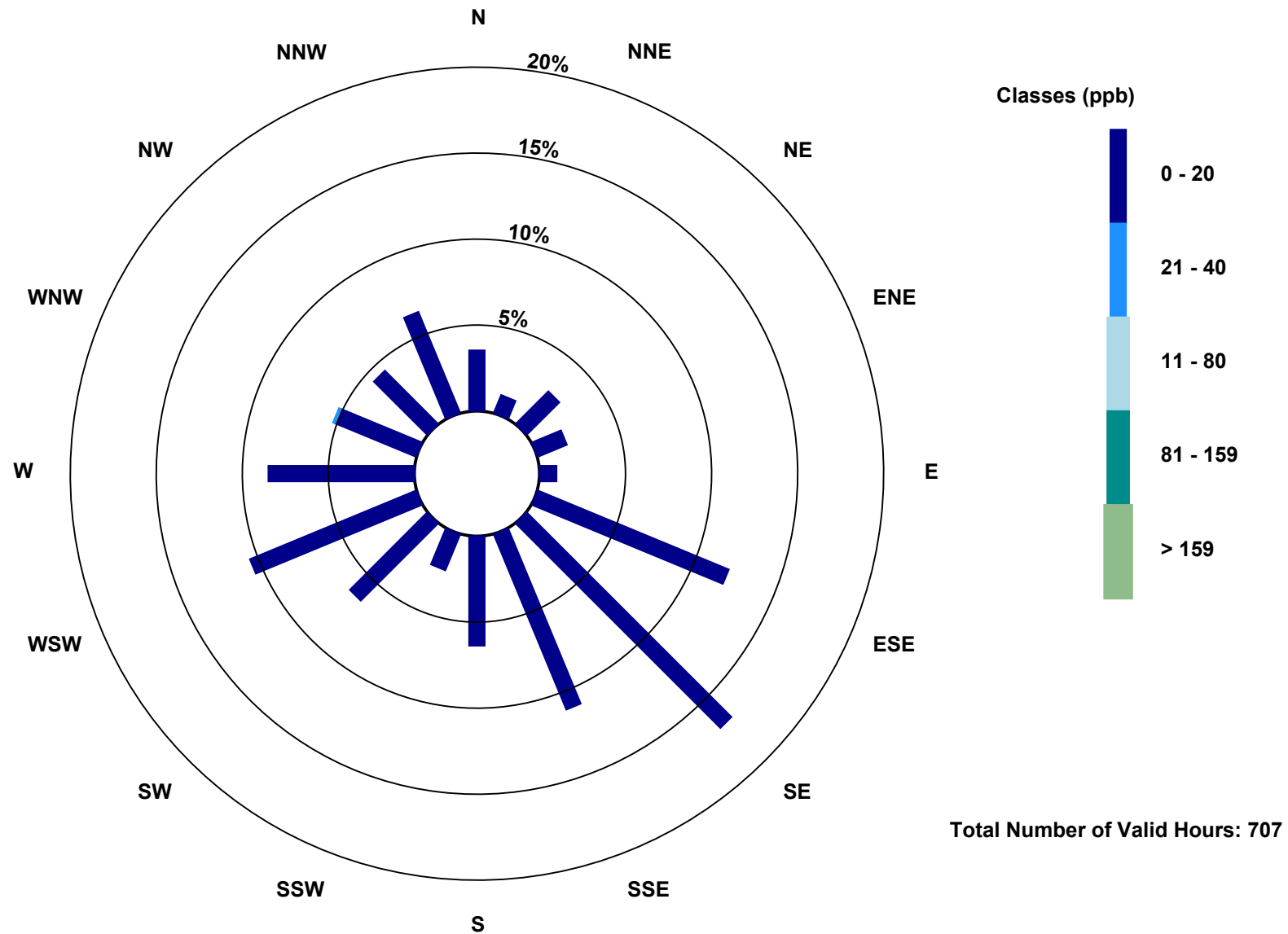
Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Surmont 2



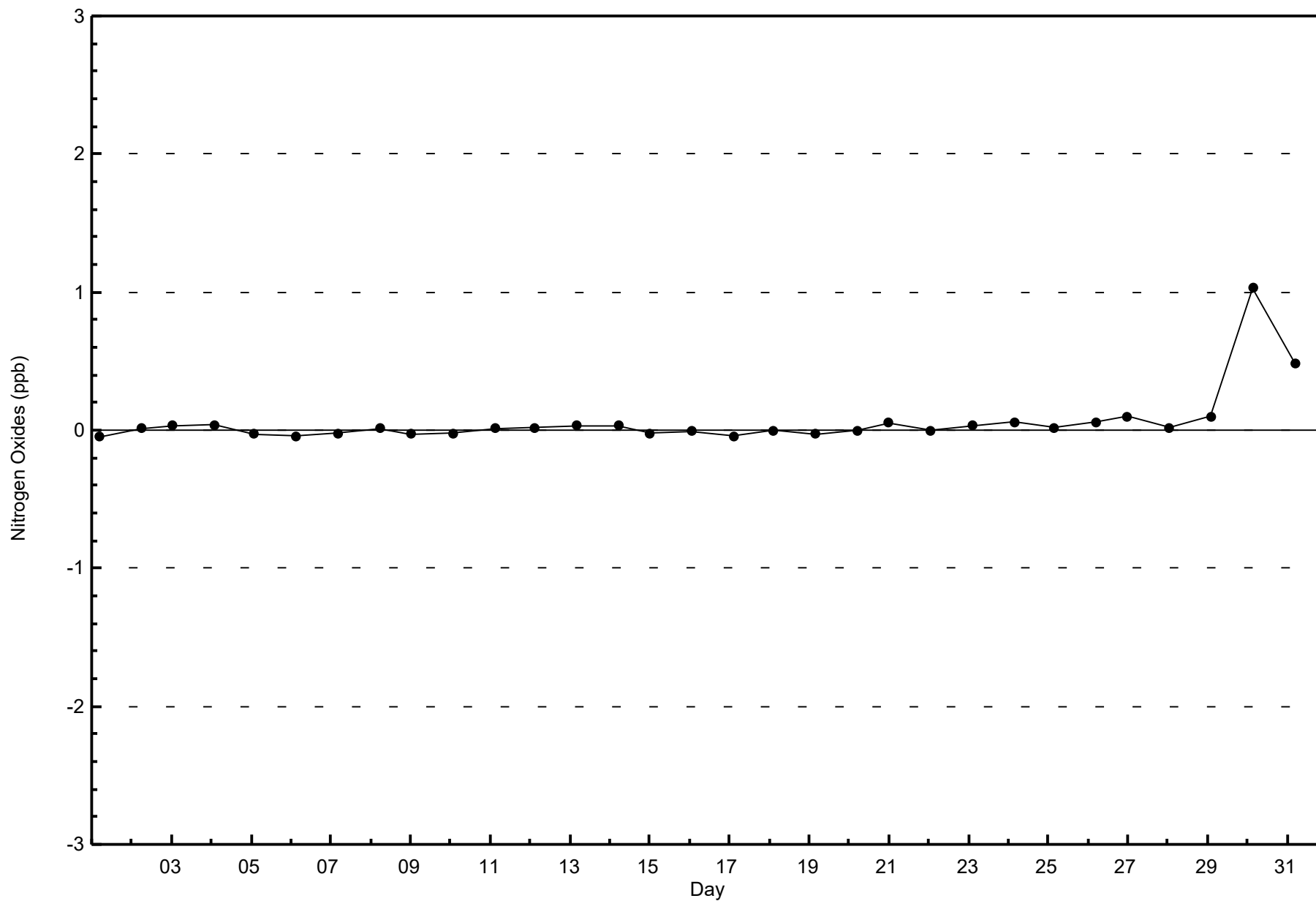


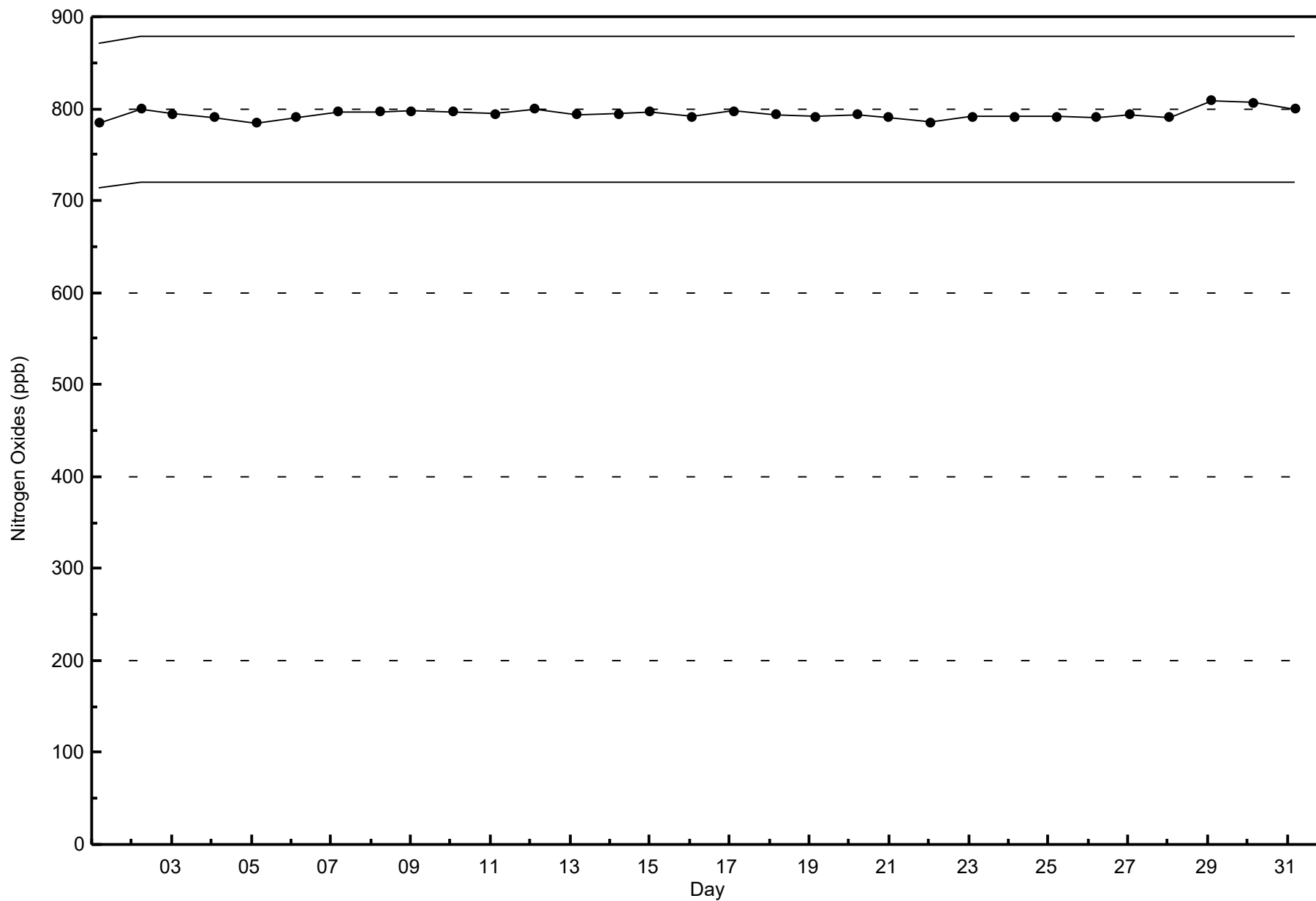
Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_x) - ppb

Surmont 2 - May 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

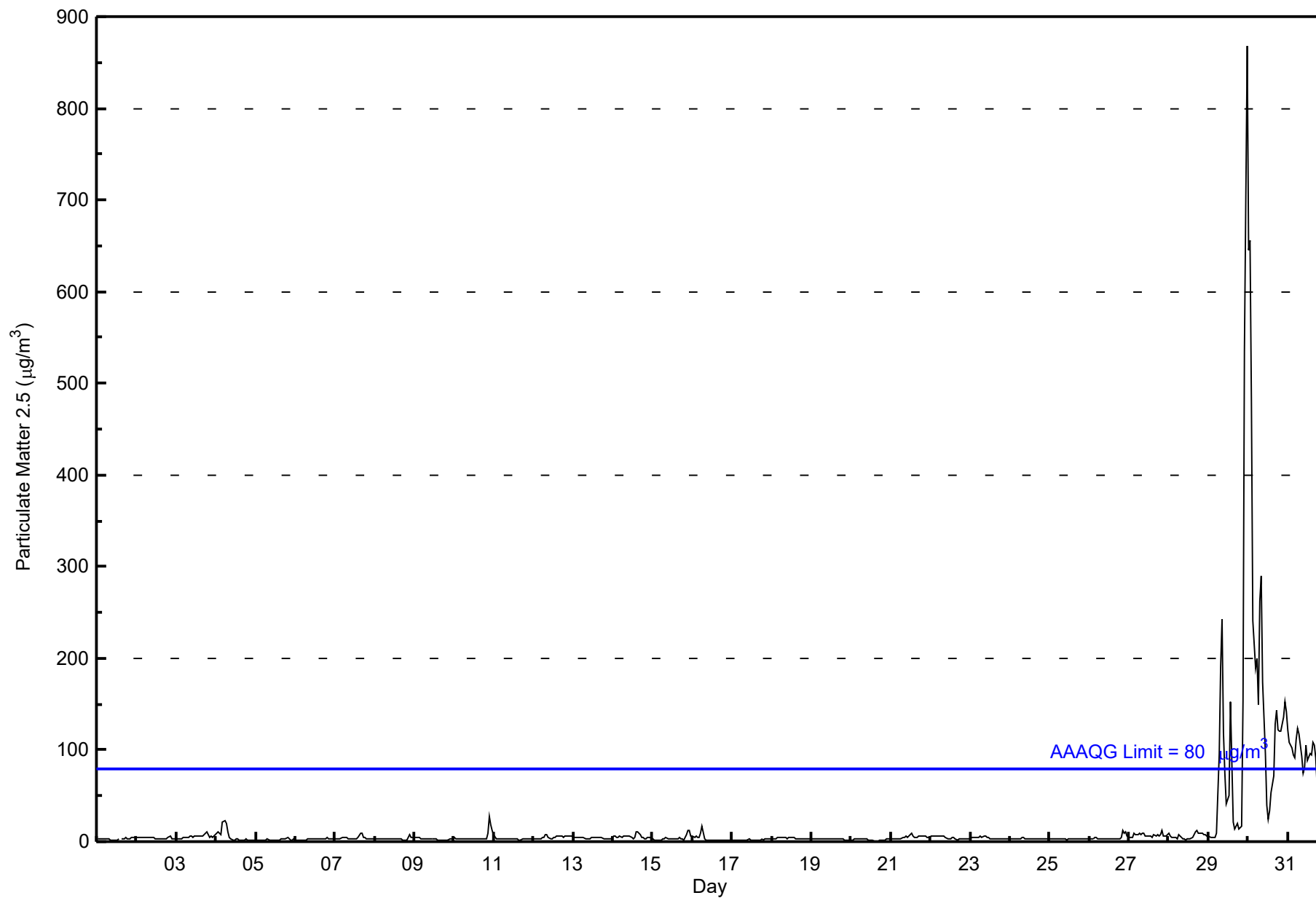
Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 48 24-hr: 3 Maximum Value: 868.1 µg/m ³ on May 30 00:00 Maximum Daily Average: 194.6 µg/m ³ on May 30																								Hours in Service: 744 Hours of Data: 743		
Minimum Value: 0.5 µg/m ³ on May 20 15:00 Minimum Daily Average: 1.9 µg/m ³ on May 17 Maximum Diurnal Average: 38.1 µg/m ³ at hour 24 Minimum Diurnal Average: 8.3 µg/m ³ at hour 13 Monthly Average: 16.63 µg/m ³ Percentiles: P ₁ = 0.9 P ₁₀ = 2.0 Q ₁ = 2.7 Median = 3.5 Q ₃ = 5.3 P ₉₀ = 12.6 P ₉₉ = 241.9																								Hours of Missing Data: 1 Hours of Calibration: 1 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	3.0	2.9	2.8	3.1	2.5	3.0	3.0	2.6	1.7	2.1	1.7	1.5	1.9	2.6	C	3.7	3.8	3.9	3.7	3.8	3.8	3.9	4.2	4.5	3.0	4.5
2-May	4.3	4.2	4.1	4.2	4.4	4.5	4.7	4.8	4.9	4.4	4.0	3.4	2.8	2.5	2.5	2.4	2.5	2.4	2.7	4.2	6.6	3.3	3.1	2.7	3.7	6.6
3-May	2.9	3.2	3.5	3.5	4.1	4.4	4.5	4.6	6.1	5.4	5.0	6.0	6.0	5.6	5.6	5.8	5.8	6.9	10.4	7.4	4.4	6.6	5.0	7.3	5.4	10.4
4-May	8.7	10.3	9.7	7.4	20.7	22.5	20.0	11.2	4.0	2.8	2.1	2.0	2.5	2.5	1.7	2.0	2.0	1.6	2.3	1.8	1.7	1.9	2.1	2.1	6.1	22.5
5-May	2.0	1.9	1.7	1.3	1.2	0.9	1.1	2.7	1.6	1.5	1.3	1.3	1.7	1.8	1.9	2.8	2.7	2.7	2.4	4.5	2.9	2.2	2.2	2.3	2.0	4.5
6-May	2.2	1.8	2.0	2.1	1.8	1.9	2.2	2.7	3.4	3.6	3.6	3.5	3.4	3.0	3.1	3.2	3.1	3.2	3.5	3.8	3.3	3.4	3.4	3.5	2.9	3.8
7-May	3.3	3.2	3.3	3.5	3.9	4.1	4.4	3.9	3.4	3.3	3.3	3.5	3.3	3.6	4.3	9.5	9.0	4.3	4.2	3.6	3.1	3.0	2.8	2.7	4.0	9.5
8-May	2.4	3.2	2.7	3.0	3.4	2.6	2.7	3.3	3.1	3.0	2.9	2.9	3.3	3.4	2.9	3.1	2.6	2.1	1.7	2.2	5.3	6.9	5.1	5.3	3.3	6.9
9-May	5.1	5.0	4.4	3.9	3.4	2.6	2.5	2.8	2.6	2.6	2.8	3.1	2.4	2.8	1.4	1.2	1.8	1.7	2.0	2.1	2.1	2.7	3.2	3.4	2.8	5.1
10-May	3.8	3.8	3.4	3.5	3.2	3.1	3.1	3.0	3.0	3.0	3.2	3.5	3.5	3.1	2.6	2.5	2.6	2.5	2.8	3.0	9.6	26.7	18.3	12.7	5.4	26.7
11-May	7.4	3.5	3.0	3.0	2.8	3.0	2.9	2.8	2.9	2.8	2.7	2.9	2.6	2.3	2.7	2.1	2.3	2.4	2.4	2.5	2.5	2.5	3.2	2.8	2.9	7.4
12-May	2.9	3.0	3.1	3.2	3.4	4.5	4.6	7.5	7.5	4.2	3.1	3.3	4.6	5.2	5.8	6.0	5.5	5.5	5.3	5.5	6.4	5.9	5.8	5.4	4.9	7.5
13-May	4.0	3.9	4.1	4.3	4.6	4.4	5.1	3.4	2.7	2.7	3.7	4.4	4.7	4.3	4.4	4.1	4.1	4.0	3.6	3.4	3.6	3.6	3.3	3.5	3.9	5.1
14-May	5.7	6.9	5.3	4.9	5.5	5.2	5.8	6.4	5.8	5.7	5.7	4.5	3.4	4.8	10.7	10.3	8.3	5.1	3.9	3.1	3.7	4.1	3.9	3.4	5.5	10.7
15-May	2.6	2.1	1.9	1.8	1.6	1.9	2.4	3.3	4.6	3.4	2.4	2.8	2.6	3.3	3.4	2.9	4.5	3.6	2.5	2.0	8.2	12.0	12.9	5.5	3.9	12.9
16-May	5.6	5.0	5.7	5.1	4.4	9.6	17.2	2.9	1.5	1.3	2.1	1.2	2.1	1.8	1.3	1.2	1.1	1.0	0.9	1.1	1.2	1.1	1.0	0.9	3.2	17.2
17-May	0.9	1.0	1.0	1.0	1.1	1.2	1.4	1.6	1.9	2.2	2.3	2.3	2.2	2.1	2.2	2.1	2.2	2.0	2.3	2.2	2.3	2.8	2.9	3.0	1.9	3.0
18-May	3.2	3.5	3.6	3.9	4.4	4.7	4.7	4.5	4.2	3.7	3.9	4.4	4.5	4.2	3.8	3.1	2.8	2.7	2.7	2.7	2.8	3.5	3.5	3.3	3.7	4.7
19-May	3.2	3.0	2.9	3.2	3.3	3.4	3.5	3.5	3.4	3.3	3.0	2.7	2.6	2.5	2.4	2.6	2.5	2.6	2.3	2.4	2.2	1.5	0.9	0.9	2.7	3.5
20-May	1.3	2.0	2.4	2.6	3.3	3.3	3.4	3.1	2.7	2.5	1.9	1.4	1.2	1.0	0.5	0.5	0.7	0.8	1.1	1.3	1.9	2.6	2.7	3.4	2.0	3.4
21-May	3.2	3.4	3.4	3.3	3.6	3.5	3.8	4.0	4.9	5.6	5.3	5.6	8.9	6.1	4.6	4.0	4.6	6.4	6.5	6.7	5.8	5.5	4.8	5.3	5.0	8.9
22-May	5.5	5.8	6.1	6.6	6.5	6.4	6.1	6.1	5.9	4.7	3.5	3.0	3.7	4.1	5.0	3.2	2.3	2.5	2.3	2.4	2.9	3.1	3.5	3.5	4.4	6.6
23-May	3.6	3.9	4.5	4.7	4.8	5.0	5.4	5.2	5.6	5.4	4.8	4.2	3.4	2.5	2.6	2.5	2.6	2.7	2.5	2.7	2.8	3.2	3.5	3.7	3.8	5.6
24-May	3.6	3.2	3.1	3.1	3.4	3.5	3.7	4.0	3.9	3.7	2.9	2.7	2.8	2.7	2.7	2.8	2.8	3.0	3.0	3.2	3.3	3.3	3.5	3.6	3.2	4.0
25-May	3.7	3.6	3.7	3.6	3.7	3.6	3.5	3.5	3.3	2.5	2.3	2.5	2.4	2.4	2.5	2.5	2.8	2.9	3.0	3.0	3.2	3.1	3.3	3.3	3.1	3.7
26-May	3.3	3.7	3.6	3.8	4.0	3.7	3.5	3.5	3.6	3.3	3.1	3.2	3.3	3.4	3.5	3.6	3.6	3.6	3.7	5.2	12.6	8.6	10.9	6.7	4.6	12.6
27-May	4.5	4.1	4.7	9.1	7.9	7.8	9.9	8.2	8.5	9.2	6.6	6.5	6.5	6.6	4.7	8.3	5.8	7.4	5.5	7.2	12.5	6.5	6.4	8.0	7.2	12.5
28-May	9.8	6.3	4.5	3.9	3.9	3.6	7.6	5.7	3.6	2.5	1.8	2.6	3.0	3.3	4.3	7.3	10.0	12.4	9.8	9.5	8.7	8.3	7.4	6.7	6.1	12.4
29-May	6.1	5.3	4.3	4.2	4.6	9.3	95.9	190.9	242.6	119.4	75.1	40.6	49.8	153.0	87.6	21.1	13.3	19.5	13.5	14.7	17.2	154.3	535.2	868.1	114.4	868.1
30-May	645.3	656.5	481.2	240.8	189.1	200.4	149.5	263.1	290.4	174.3	95.6	39.2	24.4	33.6	54.1	71.7	128.0	142.8	121.8	119.8	119.8	135.1	152.9	141.9	194.6	656.5
31-May	122.5	109.0	102.2	94.6	91.2	110.8	122.8	116.9	93.2	74.8	81.2	105.8	88.1	95.7	95.2	107.7	105.7	91.8	58.8	72.3	99.3	109.4	85.2	52.1	95.3	122.8
28.6 28.3 22.3 14.4 13.1 14.5 16.5 22.3 23.8 15.1 11.1 8.9 8.3 12.1 11.0 9.9 11.3 11.5 9.5 10.0 11.8 17.4 29.2 38.1																								Diurnal Average		
645.3 656.5 481.2 240.8 189.1 200.4 149.5 263.1 290.4 174.3 95.6 105.8 88.1 153.0 95.2 107.7 128.0 142.8 121.8 119.8 119.8 154.3 535.2 868.1																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Surmont 2 - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	564	75.91	75.91
6 - 15	110	14.80	90.71
16 - 25	9	1.21	91.92
26 - 80	12	1.62	93.54
> 81.0	48	6.46	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Surmont 2 - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	23	4	14	9	6	66	111	74	44	17	34	56	37	19	19	31	564
6 - 15	2	2	3	2	0	14	11	5	2	2	9	17	18	9	6	8	110
16 - 25	0	0	0	1	0	0	2	1	0	0	1	0	0	3	0	1	9
26 - 80	0	0	0	0	0	1	3	0	0	0	0	1	1	1	2	3	12
> 81.0	1	2	2	1	1	5	4	2	1	0	3	2	11	6	5	2	48
Totals	26	8	19	13	7	86	131	82	47	19	47	76	67	38	32	45	743

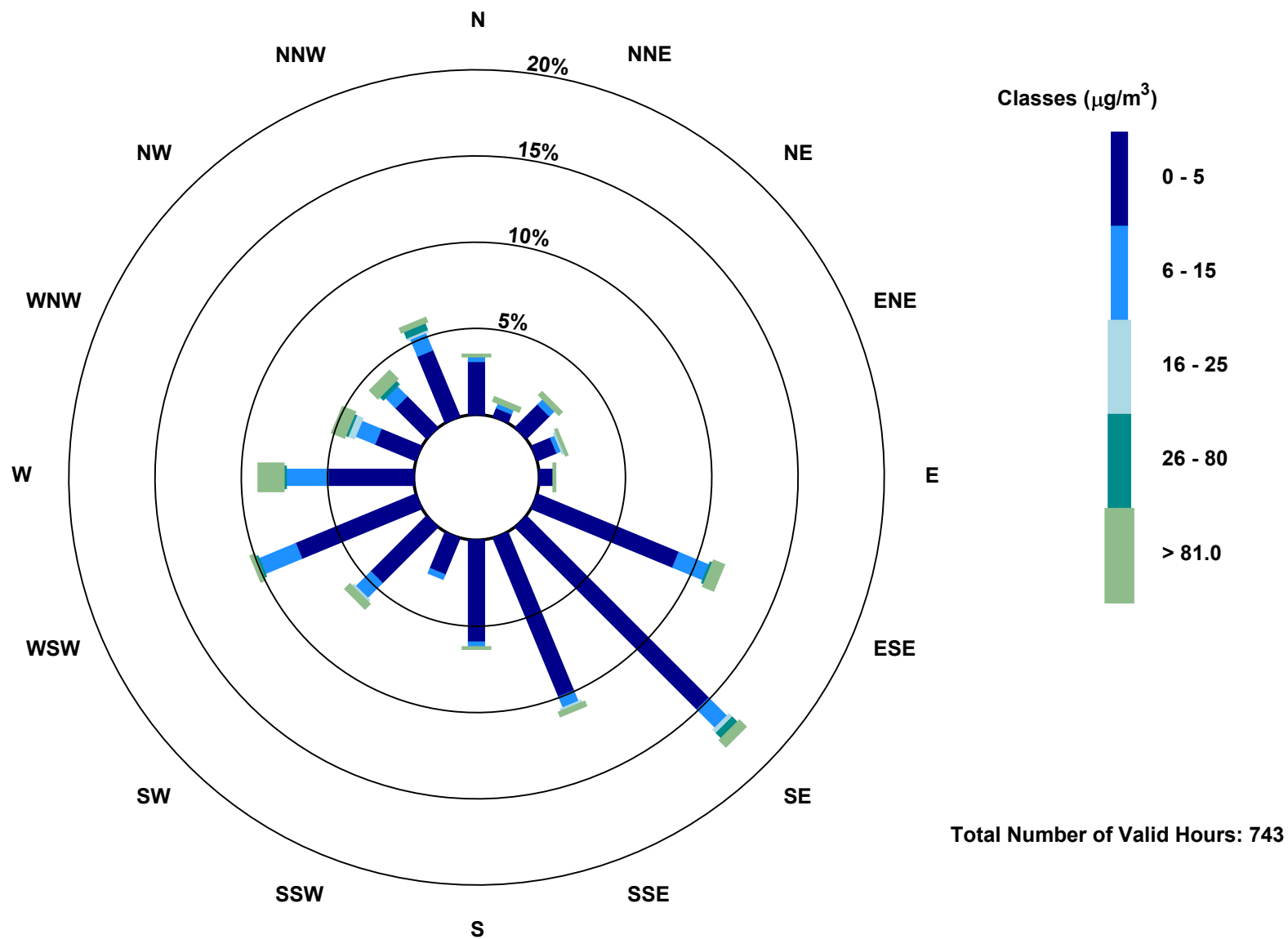
Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Surmont 2





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

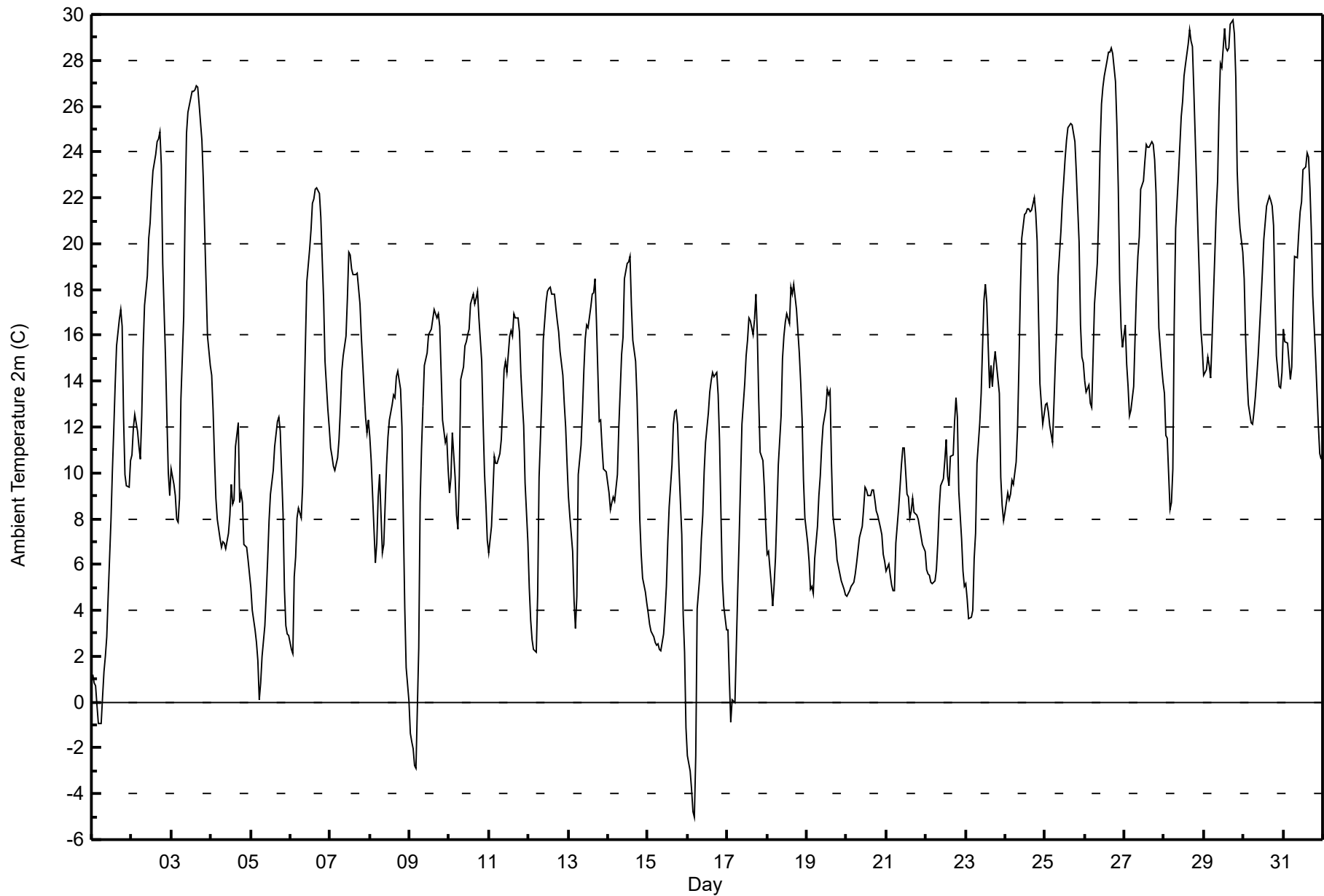
Surmont 2 - May 2025

Maximum Value: 29.8 C on May 29 18:00																				Maximum Daily Average: 22.9 C on May 29					Hours in Service: 744	
Minimum Value: -5.0 C on May 16 05:00																				Minimum Daily Average: 5.6 C on May 15					Hours of Data: 744	
Maximum Diurnal Average: 18.2 C at hour 17																				Minimum Diurnal Average: 6.6 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 12.84 C																				Percentiles: P ₁ = -2.2 P ₁₀ = 4.6 Q ₁ = 8.1 Median = 12.4 Q ₃ = 17.2 P ₉₀ = 22.4 P ₉₉ = 28.6					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	1.2	0.9	0.7	-0.2	-0.9	-0.9	0.2	1.3	2.0	2.9	4.6	7.9	10.1	11.9	13.8	15.5	16.7	17.1	16.4	12.4	9.9	9.4	9.4	10.5	7.2	17.1
2-May	10.8	12.0	12.5	11.8	11.1	10.6	12.5	15.4	17.3	18.6	20.2	20.9	22.2	23.2	23.9	24.5	24.6	24.8	23.4	19.1	15.0	12.4	10.0	9.0	16.9	24.8
3-May	10.2	9.5	9.0	8.0	7.8	8.9	13.2	16.8	21.5	24.8	25.7	26.0	26.7	26.7	26.7	26.9	26.8	26.1	24.5	22.8	20.5	18.2	16.0	14.7	19.1	26.9
4-May	14.3	12.7	10.7	8.9	8.0	7.1	6.8	7.0	7.0	6.7	7.4	8.2	9.5	8.6	8.8	11.2	12.2	8.7	9.1	8.7	6.9	6.7	6.2	5.6	8.6	14.3
5-May	5.0	4.0	3.2	2.6	1.8	0.1	0.8	2.0	3.3	4.7	6.2	7.9	9.1	10.1	11.1	11.7	12.3	12.4	11.8	8.2	4.9	3.3	3.0	2.9	5.9	12.4
6-May	2.3	2.1	5.4	6.3	8.0	8.5	8.1	9.4	12.8	15.7	18.3	19.7	20.6	21.7	22.0	22.4	22.4	22.2	21.2	19.3	17.6	14.9	12.8	12.0	14.4	22.4
7-May	11.1	10.7	10.3	10.1	10.7	11.5	12.8	14.5	15.1	15.9	17.6	19.6	19.5	18.9	18.7	18.7	18.7	18.0	17.4	15.9	13.5	12.4	11.8	12.3	14.8	19.6
8-May	11.6	10.5	7.5	6.1	6.9	9.0	9.9	6.5	6.9	8.6	10.4	11.6	12.3	13.0	13.4	13.3	14.2	14.4	13.7	12.0	7.9	4.1	1.5	0.0	9.4	14.4
9-May	-1.3	-1.7	-2.0	-2.8	-2.9	2.4	8.7	11.1	12.9	14.7	15.3	16.1	16.1	16.2	16.7	17.1	16.7	17.0	16.4	14.4	12.3	11.4	11.6	10.2	10.3	17.1
10-May	9.1	9.8	11.8	9.8	8.2	7.6	9.8	14.1	14.7	15.6	15.7	16.0	16.3	17.3	17.8	17.3	17.6	17.9	16.8	14.9	12.2	10.0	8.6	7.0	13.2	17.9
11-May	6.5	7.6	9.1	10.7	10.4	10.4	10.8	11.4	12.8	14.5	14.9	14.4	16.0	16.2	15.9	16.9	16.8	16.8	16.1	14.3	13.1	12.1	9.5	7.0	12.7	16.9
12-May	5.0	3.6	2.7	2.3	2.2	4.7	9.8	11.5	13.4	15.8	17.4	17.9	18.0	18.1	17.8	17.8	17.2	16.6	16.1	15.3	14.2	13.0	12.0	10.4	12.2	18.1
13-May	9.0	8.1	6.6	4.4	3.2	4.6	9.9	11.2	12.7	14.4	15.8	16.4	16.3	17.3	17.8	17.9	18.5	16.6	12.2	12.3	11.2	10.2	10.1	10.0	12.0	18.5
14-May	9.1	8.4	8.7	8.9	8.8	9.9	12.0	13.6	15.2	15.9	18.5	19.1	19.2	19.4	17.3	15.8	14.9	13.3	10.9	8.0	6.5	5.4	4.8	4.3	12.0	19.4
15-May	3.9	3.4	3.1	2.8	2.6	2.5	2.5	2.3	2.2	3.0	3.9	5.0	7.0	8.5	10.3	12.1	12.7	12.7	12.1	10.2	7.3	3.8	2.2	-1.1	5.6	12.7
16-May	-2.3	-3.0	-3.8	-4.8	-5.0	-2.3	4.1	5.6	7.1	8.2	10.1	11.3	12.6	13.5	14.0	14.4	14.2	14.4	13.4	11.4	8.2	5.3	4.2	3.2	6.4	14.4
17-May	3.1	1.0	-0.9	0.1	0.0	2.4	4.8	7.1	9.6	12.1	13.9	15.1	15.8	16.7	16.6	16.0	16.7	17.8	16.1	13.2	10.9	10.5	9.4	7.7	9.8	17.8
18-May	6.4	6.6	5.1	4.2	5.1	6.4	8.3	10.3	12.5	15.0	15.9	16.6	16.9	16.5	18.1	17.8	18.2	17.7	17.1	15.2	14.0	12.3	9.7	8.0	12.2	18.2
19-May	6.9	6.1	4.9	5.0	4.7	6.3	7.7	9.0	9.8	11.1	12.1	12.8	13.7	13.4	13.6	10.4	8.2	7.1	6.2	5.9	5.6	5.3	4.9	4.7	8.1	13.7
20-May	4.6	4.7	4.9	5.0	5.2	5.6	6.1	6.6	7.2	7.7	8.5	9.4	9.3	9.0	9.0	9.3	9.3	8.8	8.4	8.2	7.6	7.3	6.5	6.1	7.3	9.4
21-May	5.7	6.0	5.5	5.1	4.8	4.9	7.0	8.4	9.4	10.3	11.1	11.1	9.1	8.9	8.1	8.3	8.9	8.3	8.1	8.0	7.6	7.2	6.9	6.6	7.7	11.1
22-May	5.8	5.6	5.5	5.3	5.2	5.3	5.8	6.9	8.4	9.4	9.7	10.5	11.4	9.9	9.5	10.7	10.8	12.2	13.3	12.4	9.2	7.1	5.7	5.1	8.4	13.3
23-May	5.2	4.5	3.7	3.7	4.0	6.2	7.3	10.4	12.2	13.5	15.5	17.6	18.2	17.4	13.7	14.7	13.8	14.7	15.3	14.1	13.5	9.8	8.6	7.9	11.1	18.2
24-May	8.3	9.1	8.8	9.1	9.7	9.5	10.5	12.0	14.7	17.9	20.2	21.2	21.3	21.5	21.5	21.4	21.5	22.0	21.3	20.1	16.8	13.9	12.1	12.6	15.7	22.0
25-May	12.9	13.0	12.7	12.1	11.3	13.0	14.8	16.3	18.6	20.5	21.8	22.8	23.7	24.5	25.1	25.2	25.2	24.8	24.4	23.1	20.0	16.5	15.0	14.8	18.8	25.2
26-May	14.0	13.5	13.8	13.0	12.9	15.0	17.4	19.1	21.2	24.2	26.1	26.9	27.3	28.0	28.4	28.4	28.5	28.3	27.1	25.2	22.4	18.4	16.3	15.5	21.3	28.5
27-May	16.5	14.8	13.8	12.5	12.8	13.8	15.9	18.0	19.4	20.3	22.4	22.7	23.6	24.3	24.2	24.2	24.5	24.3	23.6	22.2	19.2	16.3	14.6	14.0	19.1	24.5
28-May	13.4	11.6	11.5	8.4	8.7	10.1	16.7	20.6	23.0	24.2	25.5	26.2	27.3	27.8	28.7	29.3	28.8	28.6	26.7	22.6	20.4	18.5	16.3	15.5	20.4	29.3
29-May	14.3	14.5	15.1	14.7	14.2	15.8	19.5	21.4	22.8	25.8	27.8	27.7	29.4	28.6	28.4	28.5	29.6	29.8	29.1	27.2	23.1	21.6	20.7	19.7	22.9	29.8
30-May	18.5	15.9	14.2	12.9	12.2	12.1	12.7	13.3	14.2	15.1	17.5	18.8	20.1	20.9	21.6	22.1	21.9	21.6	20.8	17.6	15.1	13.8	13.7	14.4	16.7	22.1
31-May	16.3	15.8	15.6	14.9	14.1	14.7	17.5	19.4	19.4	20.5	21.4	21.8	23.2	23.4	24.0	23.8	22.5	20.5	17.7	15.1	13.6	12.1	10.8	10.6	17.9	24.0
8.3 7.8 7.4 6.8 6.6 7.6 9.8 11.4 12.9 14.4 15.9 16.8 17.5 17.8 18.0 18.2 18.2 17.9 17.0 15.1 12.9 11.1 9.8 9.1																										Diurnal Average
18.5 15.9 15.6 14.9 14.2 15.8 19.5 21.4 23.0 25.8 27.8 27.7 29.4 28.6 28.7 29.3 29.6 29.8 29.1 27.2 23.1 21.6 20.7 19.7																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Surmont 2 - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	17	2.28	2.28
0 - 10	256	34.41	36.69
10 - 20	350	47.04	83.74
> 20	121	16.26	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

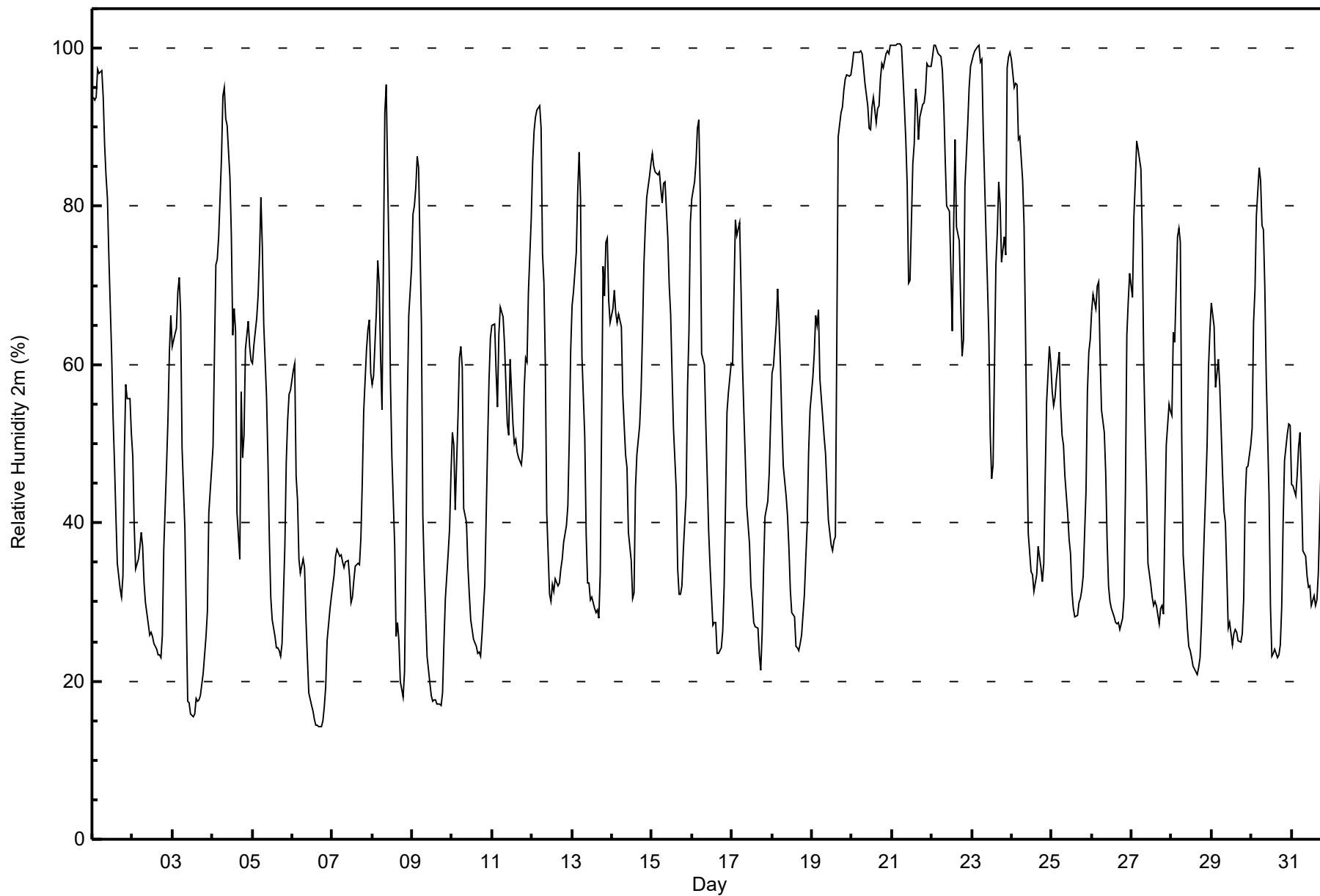
Surmont 2 - May 2025

Maximum Value: 100.6 % on May 21 06:00																					Maximum Daily Average: 96.4 % on May 20				Hours in Service: 744			
Minimum Value: 14.2 % on May 6 18:00																					Minimum Daily Average: 27.4 % on May 6				Hours of Data: 744			
Maximum Diurnal Average: 74.7 % at hour 5																					Minimum Diurnal Average: 37.0 % at hour 16				Hours of Missing Data: 0			
Monthly Average: 54.45 %																					Percentiles: P ₁ = 15.8 P ₁₀ = 24.9 Q ₁ = 32.4 Median = 52.0 Q ₃ = 73.0 P ₉₀ = 92.7 P ₉₉ = 100.4				Hours of Calibration: 0			
																					Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-May	93.8	93.4	93.7	97.3	96.9	97.1	93.8	87.7	83.7	80.9	73.7	61.2	53.4	47.4	40.9	34.9	31.7	30.7	33.3	48.8	57.5	55.7	55.7	51.3	66.4	97.3		
2-May	48.4	39.6	34.1	35.4	36.9	38.8	37.0	32.4	29.8	27.3	25.8	26.1	25.7	24.7	24.1	23.2	23.3	23.0	25.9	36.6	47.4	53.3	61.6	66.2	35.3	66.2		
3-May	62.3	63.9	64.5	69.3	70.9	66.4	49.5	39.3	28.2	17.4	17.3	15.9	15.4	15.8	17.8	17.4	17.6	18.2	21.1	23.4	25.6	28.9	41.2	46.9	35.6	70.9		
4-May	49.6	61.4	72.6	73.4	76.2	86.1	94.0	95.1	91.1	90.3	83.6	76.4	63.7	67.1	64.3	41.3	35.5	56.7	48.2	51.1	62.0	65.5	62.2	60.6	67.8	95.1		
5-May	60.2	62.4	65.9	68.8	73.8	81.2	75.0	65.2	55.8	47.9	37.9	30.7	27.8	25.6	24.2	24.1	23.9	23.1	24.7	37.1	47.8	52.9	56.2	56.8	47.9	81.2		
6-May	59.3	60.1	45.9	42.9	35.5	33.7	35.4	34.4	27.8	22.9	18.5	17.0	16.2	15.1	14.4	14.5	14.3	14.2	15.0	16.7	19.3	25.1	29.1	30.6	27.4	60.1		
7-May	32.1	33.5	35.7	36.7	35.8	35.9	35.1	34.3	35.1	35.2	33.1	29.9	30.6	32.7	34.5	34.9	34.8	38.0	45.3	54.1	62.0	64.4	65.7	58.9	40.3	65.7		
8-May	57.5	58.5	66.7	73.1	70.1	60.9	54.3	91.8	95.5	84.0	73.2	57.8	48.5	37.2	25.6	27.3	25.1	20.0	18.0	21.1	36.1	55.2	66.1	72.2	54.0	95.5		
9-May	79.0	80.1	82.5	86.3	84.9	65.1	40.9	33.7	28.4	23.1	19.7	18.1	17.5	17.7	17.6	17.1	17.1	16.9	18.6	24.9	30.4	36.2	39.4	46.3	39.2	86.3		
10-May	51.5	49.8	41.7	53.6	60.9	62.2	59.7	41.9	40.1	34.4	31.0	27.8	26.6	25.2	24.3	23.6	23.6	23.2	25.7	32.3	41.0	49.9	58.0	63.4	40.5	63.4		
11-May	64.9	65.1	59.2	54.7	63.9	67.2	65.9	62.6	57.6	52.4	51.0	60.6	52.4	50.1	50.5	48.9	48.3	47.4	49.5	56.9	61.0	60.4	69.2	78.5	58.3	78.5		
12-May	85.7	89.5	91.3	92.1	92.8	89.8	74.1	70.3	60.0	41.3	30.9	30.1	32.2	31.4	33.0	32.1	32.4	34.2	35.5	37.6	39.7	42.1	50.6	61.8	54.6	92.8		
13-May	67.5	69.2	74.2	81.9	86.9	81.0	61.0	51.0	38.5	32.4	32.4	30.3	30.6	29.1	28.7	28.9	27.9	33.6	72.4	68.7	75.4	75.9	68.2	65.3	54.6	86.9		
14-May	67.1	69.4	66.5	65.3	66.3	64.8	56.2	52.4	48.6	46.9	38.8	35.3	30.4	31.2	44.3	48.7	52.3	56.6	63.8	72.5	77.3	81.2	83.8	85.4	58.5	85.4		
15-May	86.6	85.1	84.4	84.0	84.3	82.2	80.5	83.0	83.2	76.0	70.0	66.3	58.9	52.0	44.1	34.2	30.9	30.9	31.9	36.5	43.4	57.2	64.1	77.9	63.6	86.6		
16-May	81.1	83.1	85.6	89.9	90.9	81.7	61.5	59.9	52.4	45.7	39.0	34.6	27.1	27.4	27.5	23.5	23.6	24.2	26.4	32.0	42.7	54.0	56.4	60.1	51.3	90.9		
17-May	60.0	69.2	78.3	76.4	78.0	69.5	60.1	53.9	48.3	42.1	37.4	32.0	30.0	27.4	26.9	26.7	23.4	21.3	26.1	34.1	40.7	42.8	46.3	52.8	46.0	78.3		
18-May	59.0	59.9	65.1	69.5	65.4	59.9	52.7	47.1	43.5	40.9	36.8	31.5	28.6	28.1	24.4	24.2	23.8	24.8	25.8	31.0	35.6	39.8	48.9	54.3	42.5	69.5		
19-May	58.4	61.4	66.2	64.9	66.9	58.2	53.3	50.9	48.7	44.7	40.3	37.2	36.5	37.7	38.2	62.7	88.7	91.9	92.6	94.7	96.0	96.6	96.5	96.6	65.8	96.6		
20-May	97.8	99.4	99.5	99.5	99.5	99.6	99.2	97.6	95.5	92.7	89.9	89.8	92.6	93.8	90.6	92.3	92.7	96.1	98.0	97.6	99.3	99.8	99.3	100.5	96.4	100.5		
21-May	100.4	100.4	100.4	100.5	100.5	100.6	100.2	92.7	88.5	82.7	70.3	70.6	85.5	87.9	94.8	93.1	88.4	91.4	92.9	93.1	94.5	98.0	97.6	97.7	92.6	100.6		
22-May	99.0	100.4	100.4	99.9	99.4	99.0	97.2	92.7	85.9	80.1	79.4	72.2	64.3	77.7	88.4	77.4	75.6	67.8	61.1	63.2	82.6	90.4	95.0	97.7	85.3	100.4		
23-May	98.5	99.1	99.7	100.2	100.3	98.2	98.6	89.8	76.3	70.4	63.6	51.1	45.6	47.4	72.7	76.8	83.1	80.3	73.0	76.2	73.8	97.5	98.9	99.4	82.1	100.3		
24-May	98.5	95.0	95.5	95.3	88.5	88.8	83.3	77.6	64.6	50.1	38.7	33.8	33.5	31.3	32.4	33.5	37.0	34.4	32.5	34.9	45.5	55.2	62.3	60.2	58.4	98.5		
25-May	56.5	54.8	55.8	58.2	61.6	54.9	51.1	49.9	45.9	41.2	37.9	36.1	31.3	29.2	28.1	28.2	29.9	30.4	31.6	33.3	43.9	56.7	61.6	63.1	44.6	63.1		
26-May	66.8	68.9	67.0	69.9	70.5	61.1	54.4	51.4	46.2	37.7	32.0	30.1	29.1	28.2	27.3	27.2	27.4	26.5	28.0	30.6	44.0	63.6	67.9	71.6	47.0	71.6		
27-May	68.5	78.7	83.1	88.2	87.1	84.7	75.6	60.3	51.6	44.7	34.9	32.2	30.6	29.6	30.0	29.5	27.2	29.2	29.6	28.5	39.8	49.7	54.9	54.0	50.9	88.2		
28-May	53.6	64.0	62.8	76.1	77.2	75.5	50.6	36.0	30.1	26.7	24.4	23.8	22.9	21.9	21.2	20.8	21.6	22.9	27.2	38.8	44.0	49.9	59.6	64.3	42.3	77.2		
29-May	67.8	64.8	57.2	58.9	60.6	57.3	46.2	41.4	40.0	33.7	26.6	27.4	24.6	25.9	26.4	26.2	25.1	24.9	26.1	30.4	42.6	47.0	47.2	49.9	40.8	67.8		
30-May	51.9	65.3	69.3	78.9	84.9	83.3	77.6	77.0	69.9	58.5	43.4	29.5	23.2	23.5	24.1	23.0	23.4	24.5	29.4	40.0	47.9	51.3	52.6	52.3	50.2	84.9		
31-May	44.9	44.6	43.5	46.2	49.7	51.4	44.7	36.5	35.7	33.2	31.8	32.0	29.6	30.7	29.5	30.3	33.7	40.7	48.1	59.3	71.1	82.9	96.2	98.1	47.7	98.1		
Diurnal Average																												
Diurnal Maximum																												



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Surmont 2 - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	31	4.17	4.17
20 - 40	243	32.66	36.83
40 - 60	167	22.45	59.27
60 - 80	154	20.70	79.97
80 - 100	137	18.41	98.39

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

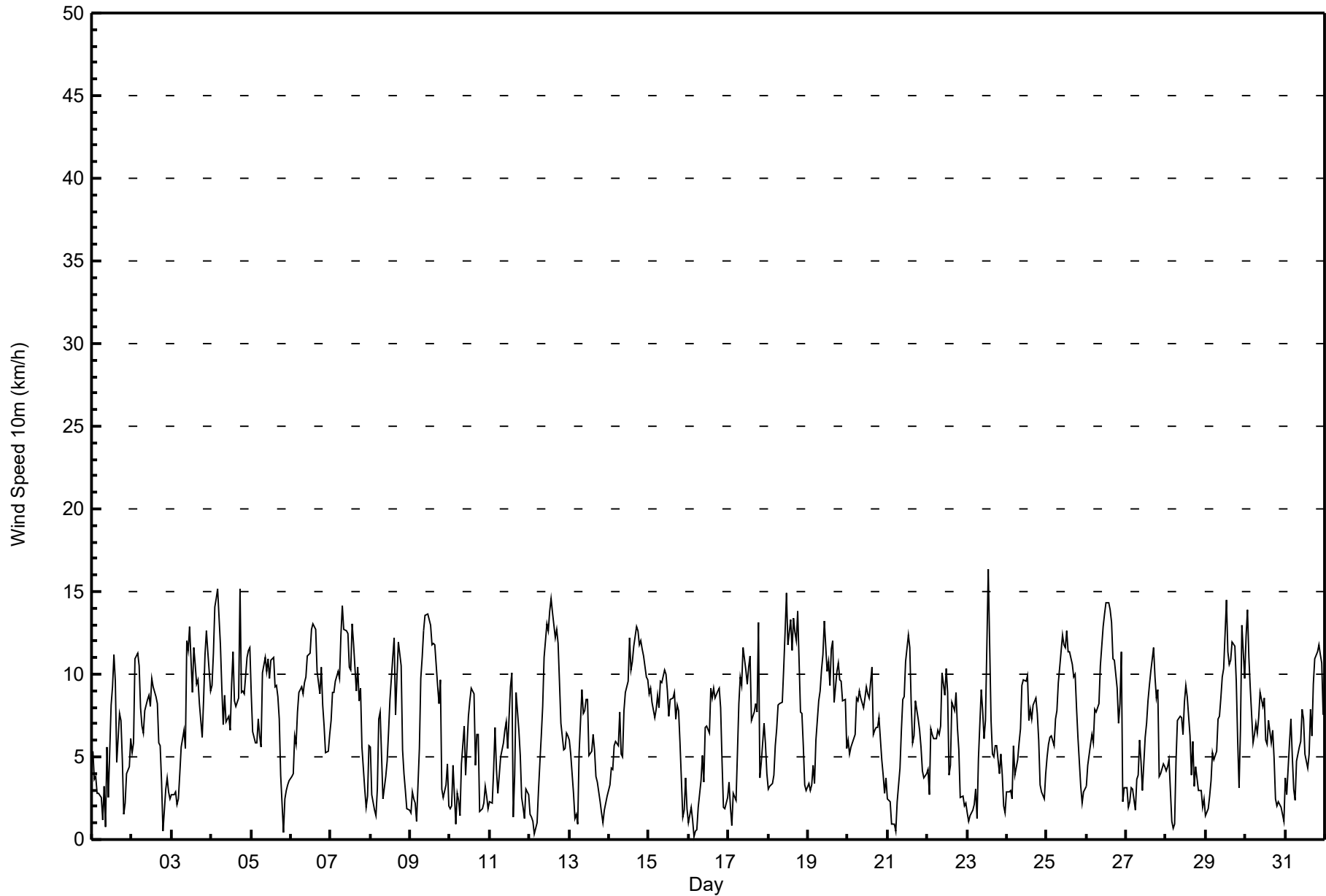
Surmont 2 - May 2025

Maximum Speed: 16 km/h on May 23 14:00										Maximum Daily Speed Average: 9.0 km/h on May 4										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 16 04:00										Minimum Daily Speed Average: 2.0 km/h on May 1										Hours of Data: 744						
Maximum Diurnal Speed Average: 2.5 km/h at hour 9										Minimum Diurnal Speed Average: 0.7 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 1.4 km/h 174.9 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 7 Q ₃ = 9 P ₉₀ = 12 P ₉₉ = 14										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	N5	N4	NNW4	NNW3	WNW3	WNW3	E1	ESE3	W1	ESE6	SSE3	SE8	SE9	SE11	SE10	SSE5	WSW8	W7	SW5	S1	S2	SSE4	SE4	SSE6	SSE2.0	SE11
2-May	SSE5	SW6	WSW11	WSW11	W11	W8	W7	WNW6	NNW8	NNW8	N9	NW8	NW10	NNW9	NW9	NNW8	WNW6	NNW6	WNW3	NE1	SW3	WSW4	SW3	SW2	WNW4.8	WSW11
3-May	SSW3	SSW3	S3	S2	SSE2	SE4	SE6	SE7	SSE6	WSW12	W11	W13	WNW9	W12	WNW11	W9	W10	W8	WNW6	NW8	NW11	NNW13	NNW11	NW9	W4.9	W13
4-May	NNW9	NW11	WNW14	WNW15	WNW15	WNW12	WNW9	NNW7	NNW9	NNW7	NNW7	NNW7	NW9	NW11	W8	WNW8	WNW9	W15	WSW9	WSW9	WSW9	WSW11	WSW11	WSW12	WNW9.0	WNW15
5-May	W9	W7	W6	W6	NW7	NNW6	NNW6	NW10	NW11	NNW10	NW11	NNW10	NW11	NNW11	N9	WNW9	WNW9	NW7	NW4	NE0	SW2	S3	S3	S4	NW5.8	NW11
6-May	S4	SSE4	SE6	SE6	S8	SSE9	SSE9	SSE9	SSE9	S10	SSW11	SSW11	SW13	SW13	SW13	SW13	SSW10	S9	S10	S8	SSE7	SE5	SE5	SE6	S7.5	SW13
7-May	SE7	SE9	SE9	SE10	SE10	SSE10	SSE12	SSE14	S13	S13	S12	SSW10	SSW10	WSW13	WSW12	W9	W10	WSW8	WNW9	W6	WSW3	WSW2	WSW3	W6	SSW5.8	SSE14
8-May	W6	WNW3	SW2	WSW1	W3	W7	WNW8	WSW2	S3	WSW4	NW5	NW7	NNW8	NNW11	NNW12	NNW8	WNW10	NW12	WNW11	NW5	W4	SW3	SW2	SW2	WNW4.6	NNW12
9-May	SW2	WSW3	SW2	SW2	SW1	WSW6	WSW10	WSW11	WSW13	W14	W14	W13	W13	W12	WSW12	W12	WSW9	WSW8	WSW10	WSW3	WSW3	SW3	WSW5	WSW2	WSW7.4	W14
10-May	S2	W2	WSW4	S1	SSE3	WSW2	SW1	ESE5	ESE7	NE4	W6	W7	W8	WSW9	WSW9	SW5	WSW6	W6	NNW2	ENE2	W2	WSW3	SW3	SW2	WSW2.6	WSW9
11-May	WSW2	SW2	SE4	SSE7	S4	S3	SE5	SSE5	SE6	ESE7	SE7	SE6	SSE9	SE10	ESE1	E4	ESE9	SE7	SE5	SSE3	NW2	S1	WSW3	WSW3	SSE3.9	SE10
12-May	WSW2	SW1	W1	SW0	SW1	WNW3	NW5	NNE6	NE8	ENE11	ENE13	NE13	ENE14	NE15	NE14	ENE12	NE13	NE12	NE10	NE7	NNE5	NNW5	NNW6	WNW6	NE6.1	NE15
13-May	WNW6	WNW5	W3	SW1	W2	NNW1	NNW5	NNW9	NNW8	NNW8	N8	N8	N5	N5	NE6	NE5	ESE4	S3	WSW2	SW2	SSW1	SSW2	S2	S3	NNW2.4	NNW9
14-May	SSE3	SE4	SE4	SE6	SE6	SE6	SSE8	SSE5	S5	S8	WSW9	W10	W12	WNW10	NNW11	NNW12	N13	N13	N12	N12	N12	NNW11	N10	N10	NNW3.0	N13
15-May	N9	N9	N8	N7	N8	N9	N8	NNW10	NNW9	NNW10	N10	N9	NNE7	NNE8	NNE9	NE9	NNE7	NE8	NE8	NE6	N1	W2	W4	SW2	N6.6	NNW10
16-May	SW1	WSW2	SW1	WSW0	WSW1	ESE1	ENE2	E4	ENE5	NE4	ENE7	ENE7	ENE6	NE9	E9	E9	ESE9	E9	ESE9	ESE8	ESE5	ESE2	SSE2	SSE3	E3.9	E9
17-May	SE4	SW2	S1	SSE3	S2	SE5	SE8	SE10	SE9	SE12	SE10	SE9	ESE10	ESE11	SE7	SE8	SE8	SE8	ESE13	ESE4	SE5	ESE7	ESE6	SE4	SE6.7	ESE13
18-May	SSE3	S3	SSE3	SE4	SE6	SE7	SE8	SE8	SSE8	SE10	SE13	ESE15	SE12	ESE13	SE11	ESE13	SE13	SE12	ESE14	ESE8	ESE8	SE6	SSE3	SSW3	SE8.2	ESE15
19-May	S3	SSE3	SE3	SE5	SE3	ESE6	SE8	SSE9	SE10	SE11	SE13	SSE10	SE11	SE9	SE12	SSE12	SE8	SE10	ESE11	ESE10	ESE10	ESE8	ESE8	ESE6	SE8.2	SE13
20-May	ESE6	ESE5	ESE6	ESE6	ESE6	ESE9	SE8	ESE9	ESE9	ESE8	ESE9	SE9	SE9	SE9	SE10	SE6	SE7	ESE7	ESE7	ESE7	ESE5	SSE4	ESE3	ESE4	SE6.9	SE10
21-May	SE2	SE2	S1	SE1	SW1	SE1	ESE2	SE4	ESE7	ESE8	ESE9	ESE11	ESE12	ESE12	ESE8	SE6	SE6	ESE8	ESE7	ESE7	ESE6	SE4	SE4	SE4	ESE5.4	ESE12
22-May	ESE4	SE3	SE7	SE6	ESE6	ESE6	SE7	SE6	SE7	SE10	SE9	ESE10	SE9	S4	SE4	SSE8	SE8	SSE9	SSE7	S5	SSE3	SW3	SW2	SSW2	SE5.6	ESE10
23-May	SSW2	WSW1	SSW1	SW2	S2	S3	S1	ESE5	ESE9	SE8	SE6	SSE7	ESE12	ESE16	SE7	ESE5	ESE5	ESE6	ESE6	SE4	SSW5	WSW4	SW2	SW2	SE4.1	ESE16
24-May	SSW3	S3	SW3	SSE2	SE6	SE4	SE5	SE6	SE7	SE9	SSE10	SE10	SE10	S7	S8	SSE7	S8	SSE9	S8	SSE6	SE3	S3	S2	SSE4	SSE5.6	SE10
25-May	SSE5	SE6	SSE6	SSE6	SSE6	SSE7	SE8	ESE9	SE10	SSE12	SSE12	SSE12	SSE13	SSE11	SSE11	SSE11	SSE10	SSE10	SSE8	SSE6	SE3	SW2	SSE3	SSE3	SSE7.8	SSE13
26-May	SSE3	SE4	ESE6	ESE6	ESE6	SE8	SSE8	SE8	SE10	SE12	SSE13	SSE14	SSE14	SSE14	SE14	SSE13	SSE11	SSE9	SE7	WSW8	W11	NW2	SSW3	SSE7.4	SSE14	
27-May	SSW3	SSW2	WSW2	WSW3	WSW3	WNW2	WNW4	NNW4	NW6	WNW5	NW3	WNW6	W7	W8	W9	W10	W12	W10	W9	W9	WSW4	WSW4	WSW5	WSW4	W5.1	W12
28-May	W4	WSW4	WSW5	SE1	WSW1	SSE1	W5	WSW7	WSW7	WSW7	WSW6	W8	WSW9	W9	WSW6	WSW4	WSW6	SW3	SSE4	WSW3	WSW3	WSW3	SW2	SW2	WSW4.4	WSW9
29-May	SSW1	S2	S3	SE4	ESE5	ESE5	ESE5	ESE7	SE7	SSE9	SE10	SE10	SE14	SE11	SE11	SE11	SE12	SE12	SE10	SE6	SSE3	W7	W13	W10	SE5.5	SE14
30-May	WNW12	W14	WNW11	W9	WNW6	W6	W7	WNW6	NW7	NW9	NW8	NW9	NNW6	NW6	WNW7	W6	W7	WSW5	SW2	SW2	SW2	W2	W1	NE1	WNW5.8	W14
31-May	SSE4	S3	W6	WSW7	W5	WNW3	SE2	E5	ESE6	ESE6	ESE8	ESE7	ENE5	NNE4	NE5	NNE8	N6	NNW9	NNW11	NNW11	NNW12	NW11	NW11	NNW8	N2.9	NNW12
SW1.3 SW1.4 SW1.6 S1.5 S1.4 S1.5 SSE1.9 SE2.3 SE2.5 SE2.5 SSE2.1 SSE2.0 SSE2.3 SSE1.3 SSE1.5 S1.4 S1.8 S1.5 SSE1.7 SE1.0 SW0.7 WSW1.7 WSW1.5 SW1.4																								Diurnal Average		
WNW12 W14 WNW14 WNW15 WNW15 WNW12 SSE12 SSE14 S13 W14 W14 ESE15 SE14 ESE16 SE14 ESE13 N13 W15 ESE14 N12 NNW12 NNW13 W13 WSW12																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Surmont 2 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Surmont 2 - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	277	37.23	37.23
6 - 11	385	51.75	88.98
12 - 19	82	11.02	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Surmont 2 - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	2	7	4	4	20	34	32	34	14	42	40	15	10	7	7	277
6 - 11	16	6	9	4	3	57	86	38	10	5	1	30	39	23	24	34	385
12 - 19	5	0	3	5	0	9	12	12	3	0	4	6	13	5	1	4	82
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	8	19	13	7	86	132	82	47	19	47	76	67	38	32	45	744

Total Number of Valid Hours: 744

Total Number of Hours: 744



Surmont 2





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on May 26 21:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 0 km/h on May 16 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	1	2	1	1	1	1	1	1	2	2	3	4	4	3	3	4	3	3	1	1	2	2	3	4
2-May	2	3	4	4	4	3	2	3	3	3	4	4	4	4	4	4	3	2	3	1	1	1	1	1	4
3-May	1	1	1	1	1	2	2	2	4	5	4	4	4	4	4	4	3	3	2	4	5	5	5	4	5
4-May	4	4	5	5	5	5	3	3	3	3	3	3	4	5	3	3	4	7	4	3	3	4	3	3	7
5-May	3	2	2	2	4	2	3	4	4	4	4	4	4	4	4	4	3	3	3	2	1	1	2	2	4
6-May	2	2	2	3	4	4	4	3	4	4	5	6	6	6	6	6	5	4	4	4	3	2	2	2	6
7-May	3	3	3	3	4	4	5	7	6	6	5	5	5	4	5	3	4	3	3	2	1	1	1	1	7
8-May	2	2	1	2	2	2	4	2	1	1	1	3	4	4	5	3	4	5	5	3	1	1	1	1	5
9-May	1	2	1	1	1	2	3	4	4	5	5	5	5	4	5	5	4	3	4	1	1	1	2	2	5
10-May	2	2	3	1	1	1	1	3	3	3	3	3	3	4	4	2	2	3	2	1	1	1	1	1	4
11-May	2	1	3	3	2	2	2	2	2	4	4	2	3	4	4	2	3	2	3	2	2	2	1	1	4
12-May	1	1	1	1	1	1	2	2	4	5	5	5	5	5	5	5	5	5	4	3	2	2	2	2	5
13-May	2	2	1	1	1	1	3	3	3	4	3	4	4	3	3	3	2	5	2	2	1	1	1	1	5
14-May	1	2	2	2	2	2	3	2	2	3	3	4	4	4	4	5	5	5	5	5	5	4	4	4	5
15-May	4	4	3	3	3	3	4	4	4	4	4	3	3	3	3	4	4	4	3	2	1	1	1	1	4
16-May	1	1	1	0	1	1	1	2	2	3	3	3	4	4	4	4	4	3	4	3	2	1	1	2	4
17-May	2	1	1	1	1	2	3	3	3	4	4	4	4	4	4	3	4	3	5	3	3	2	2	1	5
18-May	1	1	1	1	2	2	3	3	3	4	5	6	5	4	5	5	5	5	4	5	3	3	1	1	6
19-May	1	1	1	2	1	1	3	3	4	4	5	4	4	4	4	5	3	4	4	3	3	3	2	2	5
20-May	2	2	1	2	2	2	3	3	3	3	3	3	3	3	4	2	3	2	2	2	2	2	2	1	4
21-May	1	1	1	1	1	1	1	1	3	3	3	4	3	4	3	3	2	3	2	2	2	1	2	2	4
22-May	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	3
23-May	1	1	1	1	1	1	2	3	3	3	3	4	5	5	4	4	3	3	4	2	3	1	1	1	5
24-May	1	1	1	2	2	1	2	2	3	4	4	4	4	4	4	3	4	4	4	3	1	1	1	2	4
25-May	2	2	2	2	3	3	3	3	4	5	5	5	5	5	5	5	5	4	3	3	2	1	2	1	5
26-May	1	2	2	2	2	3	3	3	4	5	6	6	6	6	6	6	5	5	5	4	7	5	3	2	7
27-May	3	1	1	1	1	1	2	2	2	3	3	3	3	3	4	4	4	4	4	4	1	1	1	1	4
28-May	1	2	2	1	1	1	2	3	3	3	4	4	3	3	3	3	3	2	2	1	1	1	1	1	4
29-May	1	1	1	1	1	2	2	3	3	4	4	4	5	4	4	4	4	5	3	3	1	5	5	3	5
30-May	5	6	4	3	3	2	3	3	3	4	4	4	3	3	4	3	3	2	2	1	1	1	1	1	6
31-May	2	2	2	2	1	1	2	3	2	2	3	3	2	2	3	3	3	4	5	5	5	5	5	4	5
5 6 5 5 5 5 5 7 6 6 6 6 6 6 6 6 5 7 5 5 7 5 5 4																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

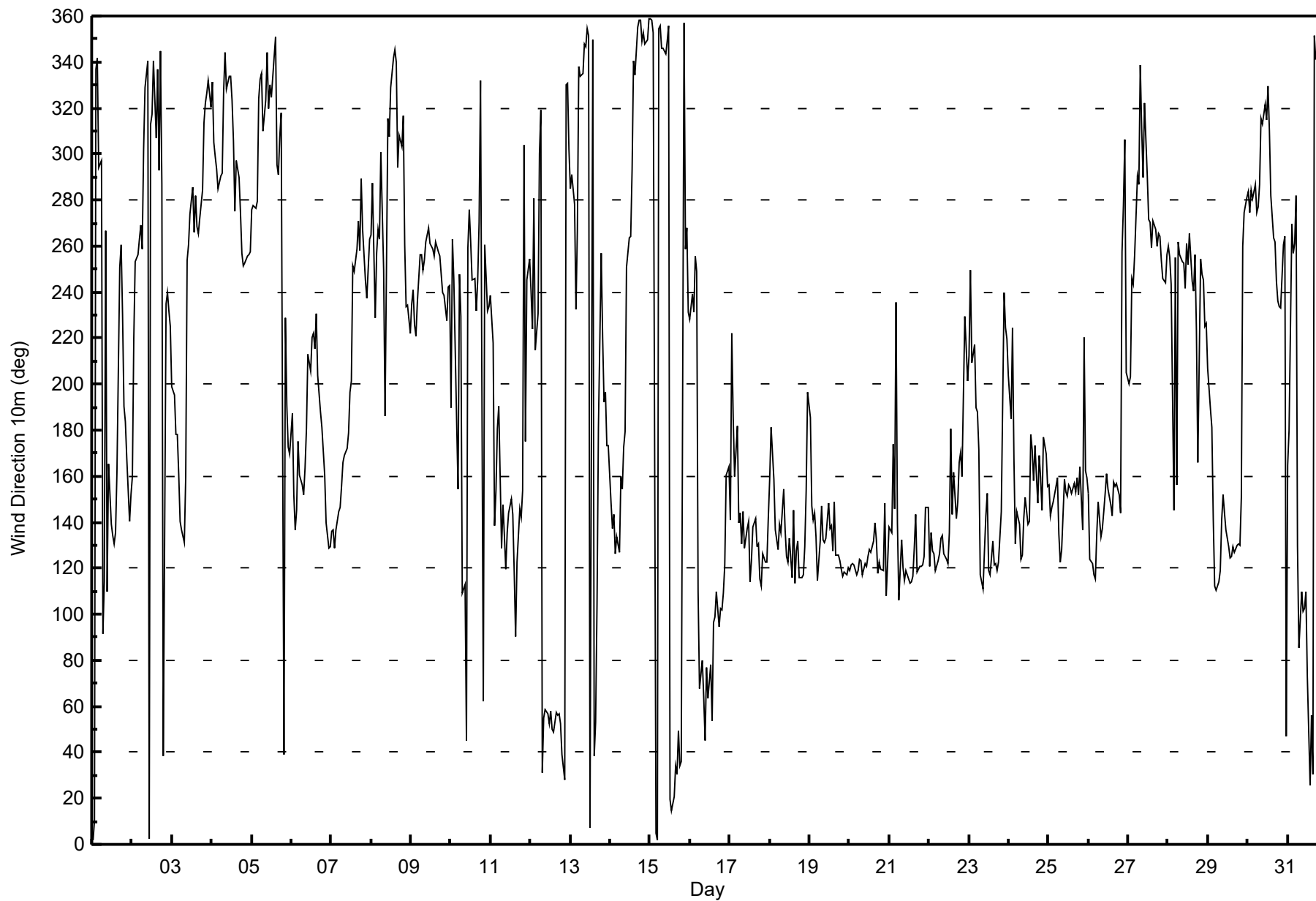
Surmont 2 - May 2025

Direction of Maximum Speed: 117 deg on May 23 14:00 Direction of Maximum Daily Speed Average: 291.3 deg on May 4																					Hours in Service:		744		
Direction of Minimum Speed: 256 deg on May 16 04:00 Direction of Minimum Daily Speed Average: 2.0 deg on May 1																					Hours of Data:		744		
																					Hours of Missing Data:		0		
Monthly Average Direction: 174.9 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	10	337	342	294	297	92	114	267	110	165	139	135	131	135	162	251	261	230	190	184	168	141	152	155.4
2-May	160	220	253	256	263	269	259	302	329	341	3	313	318	340	307	337	293	345	287	39	235	240	232	225	293.0
3-May	199	196	178	178	161	140	136	131	160	254	260	274	285	266	282	269	265	272	284	314	322	327	332	320	276.3
4-May	331	305	299	294	285	290	292	327	344	328	334	334	323	306	275	297	290	275	257	251	253	256	256	257	291.3
5-May	276	278	276	279	324	332	335	310	324	344	320	330	325	342	351	295	291	308	318	39	229	191	173	170	312.4
6-May	187	152	136	145	175	161	156	152	164	181	213	206	220	222	216	231	204	188	181	171	160	140	129	130	183.7
7-May	136	137	129	137	144	147	155	166	169	172	179	196	201	251	249	259	271	258	289	267	246	237	250	263	194.6
8-May	265	287	229	257	267	263	301	250	186	250	315	308	329	342	345	340	294	308	303	317	261	233	234	222	300.6
9-May	235	241	226	221	235	257	256	250	254	262	268	261	260	259	256	262	257	256	248	240	239	228	243	243	254.7
10-May	190	263	245	184	155	248	230	109	113	45	260	276	262	246	246	232	245	270	332	62	260	246	232	234	244.3
11-May	239	218	138	154	181	191	129	148	134	120	136	144	150	144	119	90	123	146	142	154	304	175	245	255	147.3
12-May	240	224	281	215	231	300	319	31	55	58	57	52	58	50	49	57	56	56	53	39	28	330	331	302	41.9
13-May	285	291	278	233	266	338	334	335	348	347	355	352	7	349	39	53	104	181	257	220	192	197	173	173	339.6
14-May	148	137	143	126	134	127	160	155	173	179	251	264	264	294	340	335	355	358	358	349	353	348	350	359	334.0
15-May	359	358	353	5	2	355	356	346	346	344	349	356	19	14	21	34	30	49	34	36	357	259	268	231	4.0
16-May	228	239	231	256	249	110	68	80	64	45	77	63	78	53	96	99	110	94	102	102	109	121	160	164	91.0
17-May	141	222	186	160	182	140	144	130	144	129	137	141	114	123	138	141	129	131	115	112	126	123	123	141	132.6
18-May	159	181	159	137	132	128	139	135	155	137	125	123	133	116	146	113	128	132	116	116	117	129	154	197	131.0
19-May	186	147	141	144	134	115	132	147	133	131	133	148	137	139	128	149	126	126	123	120	117	118	117	120	131.9
20-May	119	121	122	122	117	119	124	123	117	122	121	125	128	127	132	140	132	118	122	120	119	148	108	122	123.8
21-May	138	136	174	146	236	140	106	132	120	115	119	117	113	114	116	128	143	119	121	121	122	125	146	146	123.0
22-May	121	136	128	126	119	123	127	133	134	126	124	122	135	180	143	161	142	149	166	170	160	230	216	201	140.1
23-May	212	250	209	217	190	188	171	117	111	128	143	153	119	117	132	122	122	119	123	144	193	240	225	220	138.6
24-May	204	185	224	168	130	145	139	124	126	142	151	139	140	178	171	158	174	148	169	159	145	177	170	156	154.4
25-May	156	143	147	149	155	160	135	122	128	159	153	151	156	155	153	157	153	159	152	164	137	220	162	159	151.3
26-May	153	124	122	117	115	135	149	134	137	144	153	161	155	147	143	158	155	157	152	144	258	277	307	205	152.1
27-May	200	203	246	244	256	290	287	339	311	290	322	290	272	270	259	271	267	260	265	264	254	246	244	257	268.4
28-May	260	255	244	145	255	156	261	257	253	253	242	261	252	266	244	240	256	223	166	254	248	245	225	226	247.9
29-May	207	189	181	142	112	110	114	119	141	152	144	136	130	125	125	129	127	130	131	130	151	260	275	281	140.3
30-May	284	275	284	280	287	275	277	287	315	313	322	315	329	310	282	264	262	244	236	234	233	261	264	47	286.8
31-May	165	180	270	257	261	282	130	85	110	102	102	110	73	26	56	31	352	341	346	347	334	324	319	344	358.0
216.7 222.4 219.2 189.5 188.5 175.1 163.4 136.2 133.7 142.7 150.9 164.7 154.6 158.2 165.3 168.8 189.4 173.7 150.3 139.3 213.8 248.5 250.4 231.2																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Surmont 2 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Surmont 2 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on May 13 06:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 12 deg on May 27 22:00																									
Percentiles: P ₁ = 17 P ₁₀ = 28 Q ₁ = 36 Median = 45 Q ₃ = 55 P ₉₀ = 65 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	41	39	43	39	35	49	43	42	93	41	92	46	45	42	33	77	49	44	56	54	47	60	47	46	93
2-May	50	73	33	25	35	25	24	47	44	45	53	54	49	51	59	53	65	55	79	92	48	22	27	54	92
3-May	57	64	68	64	50	41	36	31	61	38	35	36	50	37	44	40	34	31	34	39	44	41	40	45	68
4-May	41	37	35	36	26	30	33	42	40	45	43	52	44	42	33	46	54	29	24	23	29	28	23	22	54
5-May	29	29	29	27	45	36	54	41	43	50	44	52	50	47	53	46	48	50	66	81	31	57	61	50	81
6-May	55	46	41	48	62	52	50	51	54	51	59	58	58	52	56	53	60	65	50	56	54	45	45	42	65
7-May	44	42	40	44	47	50	45	54	56	58	53	61	59	34	33	28	30	28	31	27	28	24	39	22	61
8-May	26	70	59	76	72	26	44	62	44	40	44	49	47	45	41	50	39	40	43	41	18	15	55	65	76
9-May	26	21	33	22	46	22	25	27	29	32	36	37	34	37	37	37	38	38	32	36	55	57	57	88	88
10-May	55	86	50	80	43	61	77	67	51	69	60	46	36	44	42	65	51	39	95	75	53	29	49	67	95
11-May	31	47	62	48	68	80	32	44	34	62	48	40	41	40	98	70	28	40	52	78	80	76	49	58	98
12-May	78	64	94	81	50	45	42	40	46	36	37	40	38	38	37	41	38	33	34	41	47	50	41	37	94
13-May	31	40	49	77	78	100	67	41	48	54	59	54	72	63	52	50	64	62	70	61	70	39	61	62	100
14-May	48	40	52	41	42	34	49	57	63	56	38	40	33	47	46	46	41	44	44	43	42	40	40	41	63
15-May	48	48	43	44	44	41	46	39	40	39	39	42	56	52	54	49	58	48	42	39	78	54	15	35	78
16-May	67	24	23	56	49	77	42	66	62	85	55	62	71	44	52	45	48	33	27	20	17	36	45	56	85
17-May	45	53	90	45	66	38	37	34	51	35	39	53	37	45	58	45	40	57	29	35	44	22	30	40	90
18-May	57	60	53	37	34	36	38	45	50	47	34	32	42	24	46	32	40	43	20	26	22	42	47	58	60
19-May	56	45	45	40	33	20	35	48	42	39	43	49	43	41	32	49	35	33	29	23	18	21	21	23	56
20-May	24	27	26	25	22	22	29	23	24	28	26	33	33	29	35	42	47	24	30	28	31	57	49	28	57
21-May	48	57	72	60	83	59	44	45	28	23	29	29	17	21	20	47	45	22	26	29	31	35	50	58	83
22-May	31	68	32	32	31	28	34	42	46	29	32	30	44	77	71	52	49	51	56	52	43	34	35	38	77
23-May	46	34	44	44	46	56	79	30	24	37	50	56	33	22	43	55	34	42	34	49	60	21	56	66	79
24-May	54	55	42	75	45	43	60	35	51	50	47	52	46	64	56	53	59	57	55	58	50	54	56	51	75
25-May	59	50	46	46	50	63	50	29	42	52	58	55	54	60	54	60	60	58	55	55	44	36	64	62	64
26-May	62	38	34	32	37	49	56	53	43	47	57	54	52	52	49	51	54	57	57	50	70	35	87	60	87
27-May	84	56	55	38	21	56	32	63	55	73	90	62	55	45	39	40	38	40	38	32	21	12	14	16	90
28-May	14	23	40	62	46	65	42	37	41	56	65	57	48	48	66	92	48	73	58	38	28	12	22	30	92
29-May	57	50	72	60	25	27	39	37	53	52	57	47	40	38	37	39	38	40	39	41	48	63	31	36	72
30-May	37	34	35	34	48	33	38	47	52	51	57	57	79	66	54	60	49	51	64	45	32	61	98	99	99
31-May	66	94	31	23	25	38	62	45	36	35	29	31	52	69	56	47	55	57	54	59	55	55	57	62	94
84 94 94 81 83 100 79 67 93 85 92 62 79 77 98 92 65 73 95 92 80 76 98 99																									
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS30 ELLS RIVER MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	37	37	100	-	-	29.1	0	5.2	0
TRS (ppb) Average	659	35	85	93.28	27.7	7	27.1	0	3	0
THC (ppm) Average	707	37	37	100	-	-	7.7	-	2.7	-
NMHC (ppm) Average	707	37	37	100	-	-	1.317	-	0.314	-
CH4 (ppm) Average	707	37	37	100	-	-	6.4	-	2.5	-
NO2 (ppb) Average	707	36	37	99.87	-	-	34.4	0	11.3	-
NO (ppb) Average	707	36	37	99.87	-	-	137.6	-	10.2	-
NOX (ppb) Average	707	36	37	99.87	-	-	167.9	-	21.5	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	587	0	247	2
Temperature 2 m (C) Average	744	0	0	100	-	-	33.3	-	24	-
Relative Humidity (%) Average	744	0	0	100	-	-	95	-	79.3	-
Wind Speed 10 m (km/h) Average	734	0	10	98.66	-	-	35	-	21	-
Wind Direction 10 m (deg) Average	734	0	10	98.66	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	950.3	-	351.7	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	1.44	3.6	-	0	0	0.1	0.2	0.8	3.7	29.1
TRS (ppb) Average	659	0.65	1.3	-	0.3	0.4	0.4	0.5	0.6	0.8	27.1
THC (ppm) Average	707	2.17	0.4	-	2	2	2	2	2.2	2.5	7.7
NMHC(ppm) Average	707	0.08	0.159	-	0	0	0	0	0.1	0.3	1.317
CH4(ppm) Average	707	2.09	0.2	-	2	2	2	2	2.1	2.2	6.4
NO2 (ppb) Average	707	4.58	5.6	-	0.1	0.5	1.3	2.7	5.3	10.7	34.4
NO (ppb) Average	707	1.4	6.6	-	0	0	0	0.1	0.7	2.5	137.6
NOX (ppb) Average	707	5.98	10.5	-	0.1	0.5	1.4	3.2	6	13.3	167.9
PM2.5 (ug/m3) Average	742	21.05	66.6	-	0.9	2.2	3.5	5.5	8.3	20.1	587
Temperature 2 m (C) Average	744	13.97	6.7	-	-2.1	5.6	9.2	13.6	18.1	23.4	33.3
Relative Humidity (%) Average	744	51.06	21.2	-	13.7	25.2	32.8	49.5	69.5	82.2	95
Wind Speed 10 m (km/h) Average	734	12.4	7	-	1	4	7	11	17	22	35
Wind Direction 10 m (deg) Average	734	139.4	-	-	-	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	744	262.97	298.2	-	0	0	0.1	130.7	460.4	789.3	950.3

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2	14 May 2025 08:00	14 May 2025 08:00	1	Maintenance - verify daily QA response
TRS	26 May 2025 04:00	27 May 2025 10:00	31	Unstable Operation - AMD non-compliance
TRS	27 May 2025 11:00	27 May 2025 11:00	1	Maintenance - verify daily QA response
TRS	27 May 2025 12:00	28 May 2025 04:00	17	Unstable Operation - AMD non-compliance
TRS	30 May 2025 09:00	30 May 2025 09:00	1	Maintenance - verify daily QA response
Wind Speed, Wind Direction	02 May 2025 02:00	02 May 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	06 May 2025 08:00	06 May 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	19 May 2025 04:00	19 May 2025 06:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	23 May 2025 04:00	23 May 2025 04:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	24 May 2025 07:00	24 May 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	26 May 2025 06:00	26 May 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 May 2025 04:00	29 May 2025 05:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

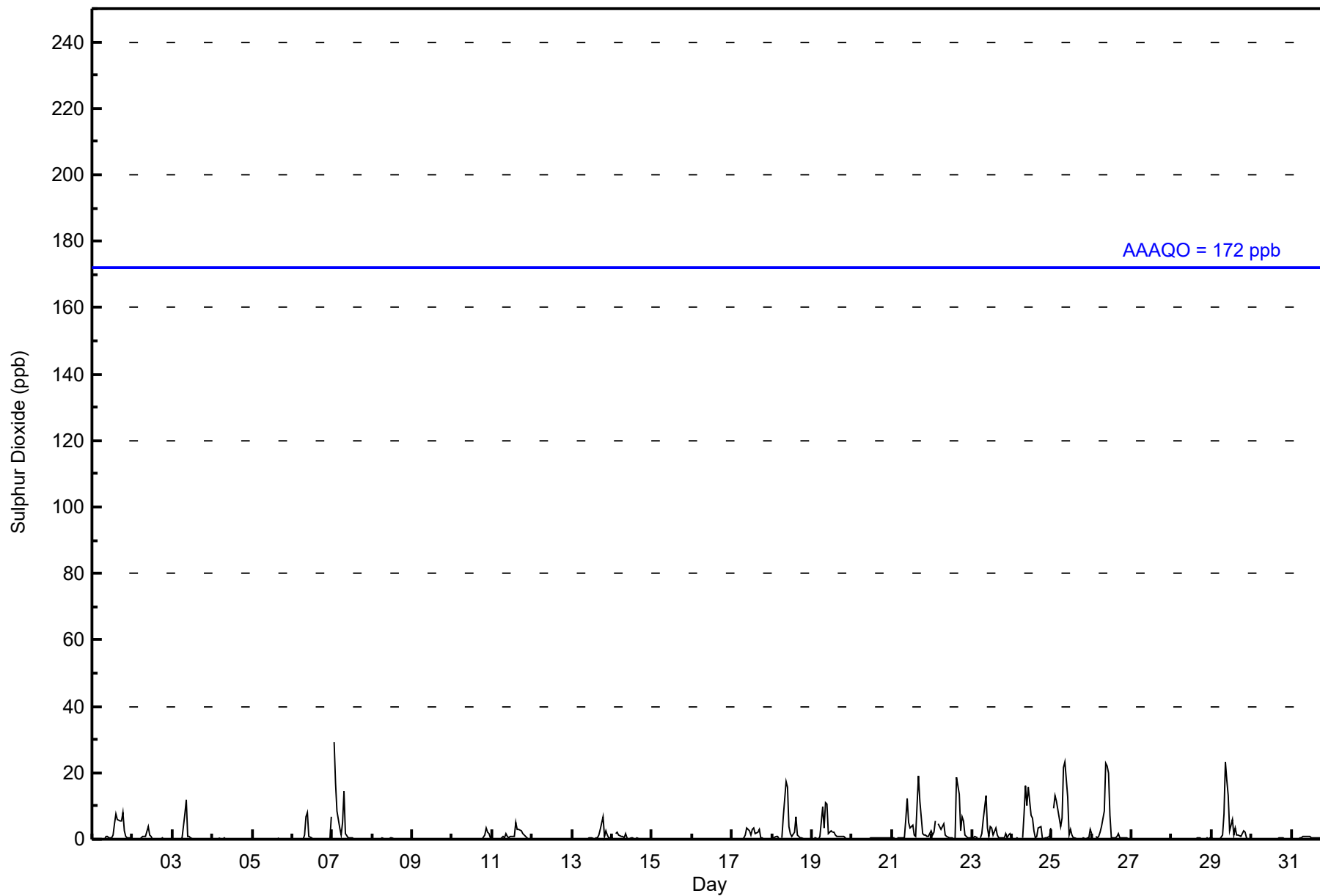
Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.1 ppb on May 7 02:00 Maximum Daily Average: 5.2 ppb on May 25																				Hours in Service: 744						
Minimum Value: 0.0 ppb on May 7 20:00 Minimum Daily Average: 0.0 ppb on May 9 Maximum Diurnal Average: 5.3 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 1 Monthly Average: 1.44 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.8 P ₉₀ = 3.7 P ₉₉ = 19.0																				Hours of Data: 707						
																				Hours of Missing Data: 37						
																				Hours of Calibration: 37						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	Z	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.8	0.7	0.5	0.3	1.3	4.6	7.5	5.8	5.3	5.7	8.2	2.4	1.0	0.4	0.3	0.2	2.0	8.2
2-May	0.2	Z	0.1	0.2	0.2	0.2	0.7	0.7	0.7	4.0	1.2	0.6	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.5	4.0
3-May	0.1	0.1	Z	0.1	0.1	0.1	0.3	7.6	11.9	0.8	0.7	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	1.0	11.9
4-May	0.2	0.1	0.1	Z	0.4	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
5-May	0.1	0.0	0.1	0.1	Z	0.1	0.0	0.1	0.0	C	C	C	C	C	C	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	--	0.2
6-May	0.2	0.1	0.1	0.1	0.1	Z	0.2	1.5	6.6	8.1	0.8	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	6.7	1.1	8.1
7-May	Z	29.1	17.1	8.5	3.5	1.5	5.3	14.4	1.8	0.3	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	29.1
8-May	0.0	Z	0.0	0.1	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
9-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	1.5	3.5	2.0	1.6	0.4	0.4	3.5
11-May	0.2	0.1	0.0	0.0	Z	0.2	0.7	0.4	1.7	0.9	0.4	1.0	1.0	0.8	5.2	2.9	2.8	2.6	1.6	1.2	0.7	0.5	0.1	0.1	1.1	5.2
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1
13-May	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	1.2	2.9	6.9	1.0	2.4	1.4	0.6	0.3	0.8	6.9
14-May	0.3	Z	1.5	2.2	1.4	0.8	1.1	0.6	1.8	0.5	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.6	2.2
15-May	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
16-May	0.0	0.1	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.2
17-May	0.0	0.0	0.1	0.0	Z	0.1	0.0	0.5	1.4	3.3	2.8	1.4	2.9	3.2	1.7	1.9	3.1	0.5	0.5	0.1	0.0	0.0	0.0	0.0	1.0	3.3
18-May	0.0	0.3	0.7	0.7	0.1	Z	0.3	6.8	17.3	15.7	3.9	1.6	1.0	2.0	6.6	1.4	0.7	0.6	0.3	0.2	0.1	0.1	0.2	0.1	2.6	17.3
19-May	Z	0.5	0.3	0.1	0.2	0.7	9.8	3.2	11.0	10.6	1.5	2.6	1.9	2.1	1.2	0.9	0.7	0.8	1.0	0.7	0.2	0.0	0.0	0.0	2.2	11.0
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.5	0.3	0.3	0.5	0.5	0.3	0.3	0.4	0.4	0.3	0.2	0.5
21-May	0.3	0.3	Z	0.4	0.4	0.3	0.4	0.5	5.9	12.2	5.3	3.3	4.1	1.5	1.0	10.4	19.1	11.3	1.7	1.1	1.1	0.9	0.8	2.5	3.7	19.1
22-May	1.2	2.0	5.7	Z	4.5	3.1	4.0	4.8	1.3	0.7	0.5	0.4	0.3	0.2	0.2	18.5	13.5	2.7	6.7	5.5	1.4	0.5	0.4	0.5	3.4	18.5
23-May	0.3	0.4	0.8	0.3	Z	0.3	1.5	5.9	13.0	3.4	1.0	3.8	3.3	1.2	3.6	1.3	0.5	0.6	0.5	0.3	1.5	0.4	1.1	1.8	2.0	13.0
24-May	0.3	0.2	0.2	0.3	0.1	Z	0.5	7.8	16.3	10.1	15.7	7.4	6.2	2.6	0.3	0.9	3.2	3.9	0.3	0.1	0.3	0.5	0.7	3.2	3.5	16.3
25-May	Z	9.3	13.0	11.3	6.3	3.7	6.5	21.6	23.4	12.9	1.2	2.9	1.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	3.1	5.2	23.4
26-May	1.7	Z	0.7	0.6	0.7	2.1	3.7	8.3	23.1	21.9	20.0	7.2	0.6	0.4	0.3	0.8	1.5	0.2	0.2	0.5	0.3	0.3	0.2	0.1	4.2	23.1
27-May	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.3	0.2	0.1	0.0	0.1	0.2	0.1	0.4	0.1	0.4
29-May	0.3	0.0	0.0	0.0	Z	0.2	1.5	7.5	23.5	17.7	13.2	2.6	5.9	1.3	3.6	1.3	1.1	0.9	1.7	2.6	2.2	0.3	0.0	0.0	3.8	23.5
30-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.3
31-May	Z	0.1	0.0	0.0	0.1	0.2	0.5	0.7	0.8	1.0	0.8	0.8	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.0
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	96.18	96.18
11 - 20	21	2.97	99.15
21 - 60	6	0.85	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	51	59	26	13	5	16	109	121	54	47	52	23	21	29	17	29	672
11 - 20	0	0	0	0	0	1	4	12	4	0	0	0	0	0	0	0	21
21 - 60	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	51	59	26	13	5	17	113	139	58	47	52	23	21	29	17	29	699

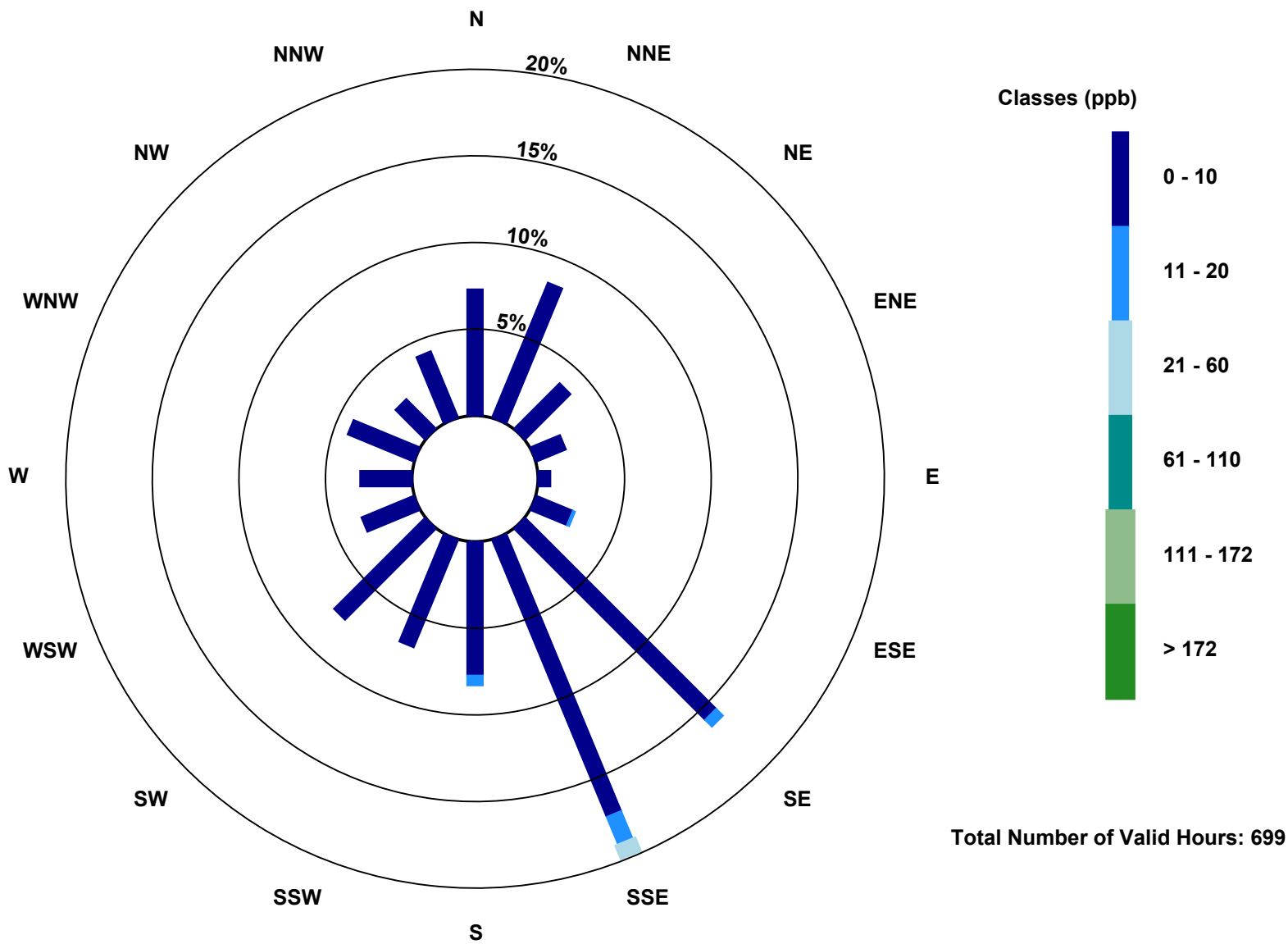
Total Number of Valid Hours: 699

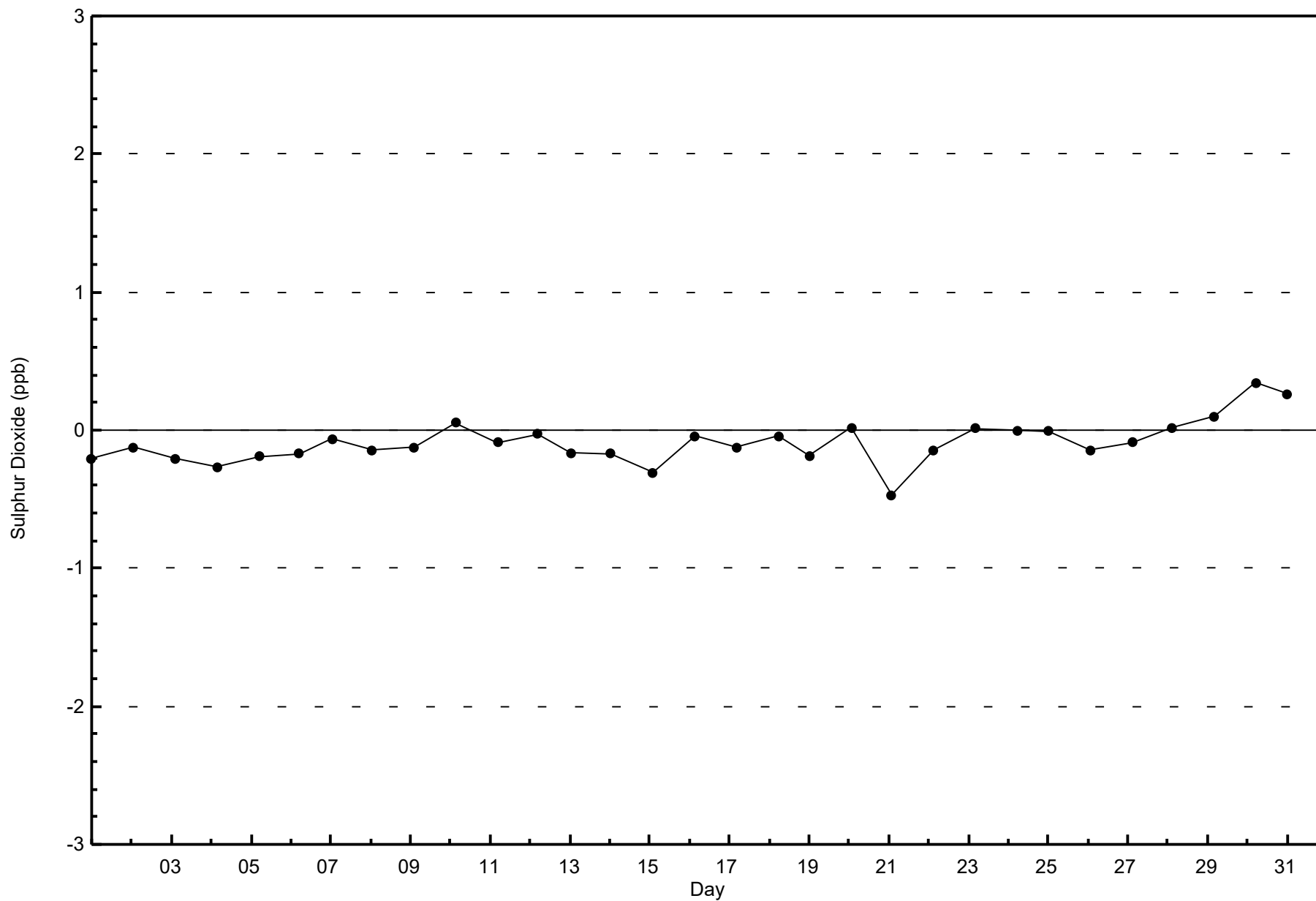
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Ells River

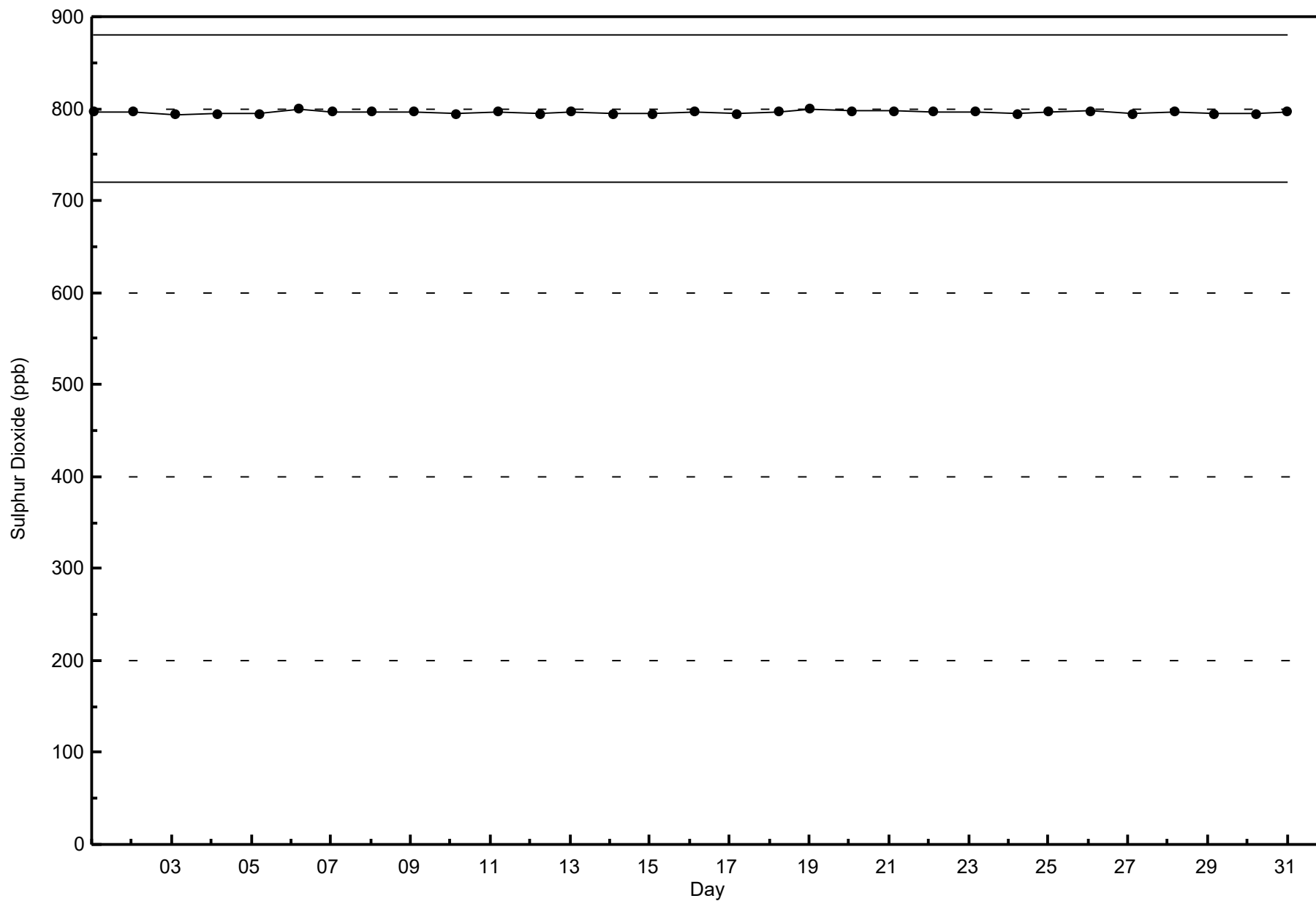






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - May 2025

Number of Exceedences (AAAQG): 30-Min: 7 Maximum Value: 27.7 ppb on May 14 04:30 Maximum Daily Average: 3.0 ppb on May 14																			Periods in Service: 1488							
Minimum Value: 0.3 ppb on May 3 19:30 Minimum Daily Average: 0.4 ppb on May 9 Maximum Diurnal Average: 1.8 ppb at hour 5 Minimum Diurnal Average: 0.5 ppb at hour 15																			Periods of Valid Data: 1318							
Monthly Average: 0.65 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 2.7																			Periods of Invalid Data: 170							
																			Periods of Calibration: 69							
																			Percent Operational Time: 93.2							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-May	0.4 0.4	Z SP	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.9 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.9	
2-May	0.5 0.5	0.5 0.5	Z SP	0.6 0.6	0.6 0.7	0.7 0.7	0.7 0.5	0.6 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.7	
3-May	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.4 0.5	0.5 0.5	0.6 0.7	0.8 0.9	0.9 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.6	0.5	0.9	
4-May	0.7 0.7	0.8 0.7	0.6 0.5	0.5 0.5	Z SP	0.4 0.5	0.5 0.5	0.6 0.5	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.8	
5-May	0.4 0.4	0.6 0.5	0.5 0.4	0.4 0.5	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.5	0.6	
6-May	Z SP	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.7 0.7	0.6 0.7	0.6 0.6	0.6 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.6	0.5 0.5	0.5 0.5	0.5 0.6	0.5	0.7	
7-May	0.7 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.9 1.2	0.9 0.7	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	1.2	
8-May	0.4 0.4	0.4 0.5	Z SP	0.4 0.5	0.5 0.8	0.7 0.8	0.9 0.9	0.9 0.7	0.6 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.9	
9-May	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.5	
10-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.5	
11-May	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	Z SP	1.2 1.4	1.2 0.9	0.9 0.8	0.7 0.6	0.6 0.5	0.5 0.6	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.6 0.6	0.6 0.7	0.6	1.4	
12-May	Z SP	0.7 0.7	0.7 0.6	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.6	0.5	0.7	
13-May	0.6 0.5	Z SP	0.7 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.5	0.8 0.7	0.5 0.6	0.6 0.8	1.1 1.0	0.8 0.6	0.6 0.6	0.5	1.1	
14-May	0.6 0.7	0.7 0.9	Z SP	3.3 19.0	27.7 26.5	9.3 10.4	13.9 6.1	0.7 0.6	0.7 0.8	0.7 0.7	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	3.0	27.7	
15-May	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.6 0.6	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.6	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

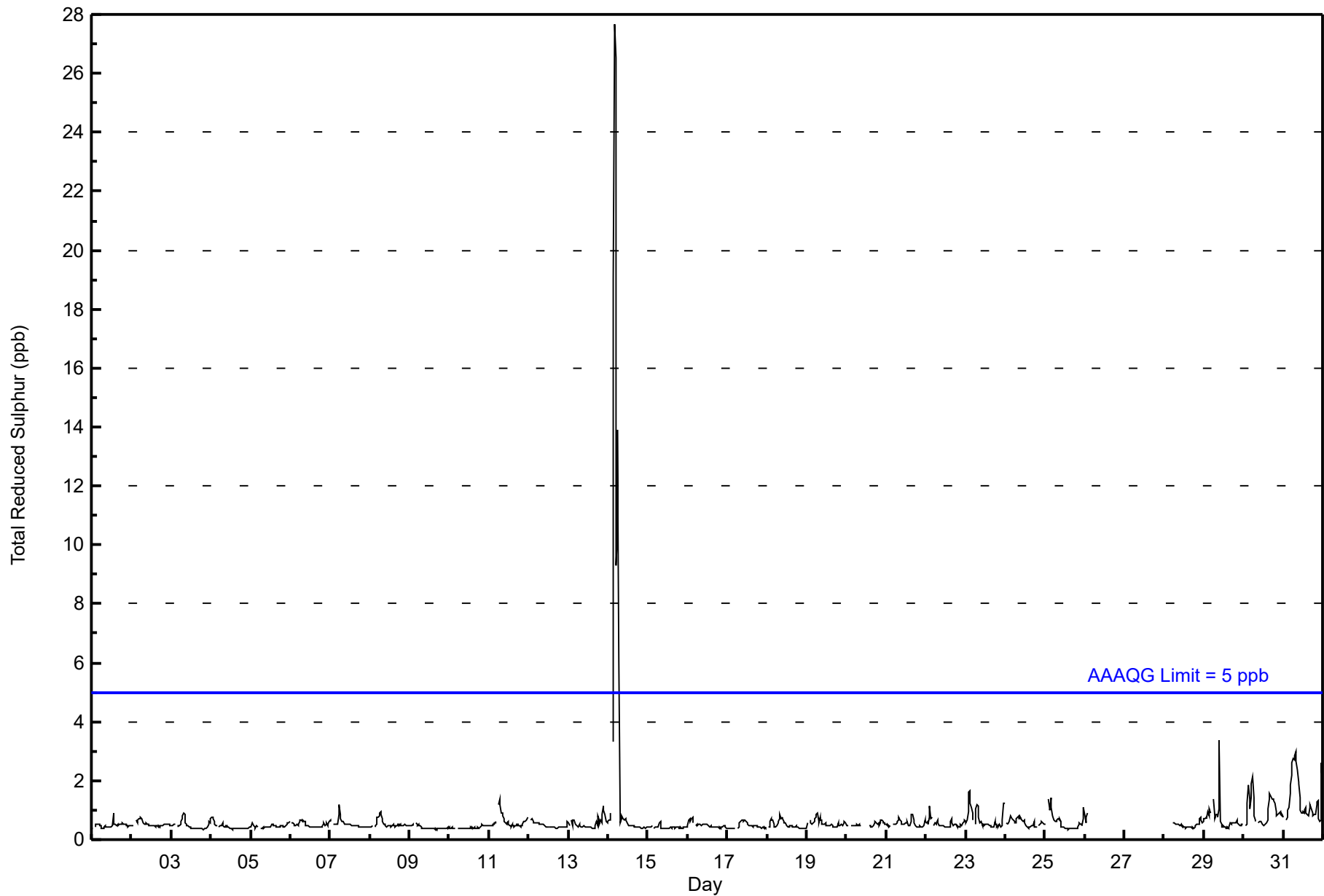
Ells River - May 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-May	0.5 0.7	0.7 0.7	0.6 0.7	0.8 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.4	0.5 0.4	0.5 0.8
17-May	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.6	0.6 0.7	0.7 0.7	0.6 0.7	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.7
18-May	Z SP	0.4 0.4	0.6 0.7	0.7 0.7	0.5 0.4	0.4 0.4	0.5 0.6	0.6 0.7	0.9 0.7	0.8 0.7	0.6 0.6	0.6 0.6	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.9
19-May	0.4 0.6	Z SP	0.7 0.6	0.5 0.5	0.6 0.6	0.7 0.7	0.9 0.9	0.6 0.6	0.7 0.7	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.9
20-May	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	C C	C C	C C	C C	0.5 0.5	0.4 0.4	0.5 0.5	0.6 0.6	0.6 0.5	0.5 0.6	0.5 0.6	0.7 0.6	0.6 0.6	0.6 0.5	0.5 0.7	
21-May	0.5 0.5	0.5 0.5	0.4 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.7	0.8 0.7	0.6 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.6 0.5	0.5 0.5	0.6 0.9	0.6 0.7	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.5	0.5 0.7	0.5 0.9	
22-May	0.6 0.6	0.6 0.5	0.7 1.2	0.7 0.7	Z SP	0.5 0.6	0.5 0.6	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.6 0.7	0.6 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.5	0.5 0.6	0.5 0.6	0.6 0.7	0.5 1.2	
23-May	0.6 0.6	0.7 1.0	1.6 1.7	1.2 1.1	0.9 0.7	Z SP	0.5 1.0	1.2 1.1	0.8 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.6	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.5	0.4 0.4	0.5 0.7	1.3 1.2	0.7 1.7	
24-May	Z SP	0.6 0.5	0.6 0.6	0.8 0.8	0.7 0.7	0.7 0.6	0.6 0.6	0.7 0.8	0.8 0.7	0.7 0.8	0.7 0.6	0.6 0.7	0.6 0.5	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.6	0.4 0.4	0.4 DF	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.5	0.6 0.5	0.6 0.8	
25-May	0.5 0.5	Z SP	1.4 1.0	1.0 1.4	1.1 0.8	0.8 0.6	0.6 0.6	0.6 0.7	0.7 0.7	0.7 0.6	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.6 0.5	0.5 0.5	0.7 1.1	0.6 1.4	
26-May	0.8 0.6	0.7 0.9	Z SP	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	-- --	-- --
27-May	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	M UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	-- --	-- --
28-May	UO UO	UO UO	UO UO	UO UO	Z SP	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.7 0.7	0.6 0.6	0.5 0.7	0.6 0.6	
29-May	0.7 0.7	0.7 0.7	0.7 1.0	0.8 1.0	0.9 0.9	Z SP	1.4 0.8	0.7 0.9	0.9 0.8	1.0 3.4	0.6 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.7 3.4	
30-May	Z SP	0.5 0.5	0.5 1.2	1.8 1.4	1.1 1.4	1.9 2.2	1.4 0.8	0.7 0.6	M M	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	1.1 1.4	1.6 1.5	1.4 1.4	1.4 1.3	1.2 1.0	0.8 0.8	0.9 0.9	1.0 0.8	0.8 0.8	1.0 2.2	
31-May	0.8 0.7	Z SP	0.7 0.8	1.0 1.1	1.6 1.9	2.2 2.6	2.7 2.7	2.9 3.0	2.7 2.4	2.0 1.9	1.4 1.0	0.9 0.9	0.9 0.9	1.0 1.1	0.9 0.8	1.1 1.2	1.0 0.9	0.8 0.9	0.9 0.9	1.2 1.3	1.3 0.7	0.6 0.6	2.6 1.8	1.4 3.0	1.4 3.0	
Diurnal Average																										
0.8																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure UO - Unstable Operation SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	652	98.94	98.94
3 - 4	3	0.46	99.39
5 - 7	0	0.00	99.39
8 - 11	2	0.30	99.70
> 11	2	0.30	100.00

Total Number of Valid Hours: 659

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	53	58	29	12	7	17	107	123	46	38	40	17	21	29	16	30	643
3 - 4	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
> 11	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Totals	53	58	29	12	7	17	107	127	49	38	40	17	21	29	16	30	650

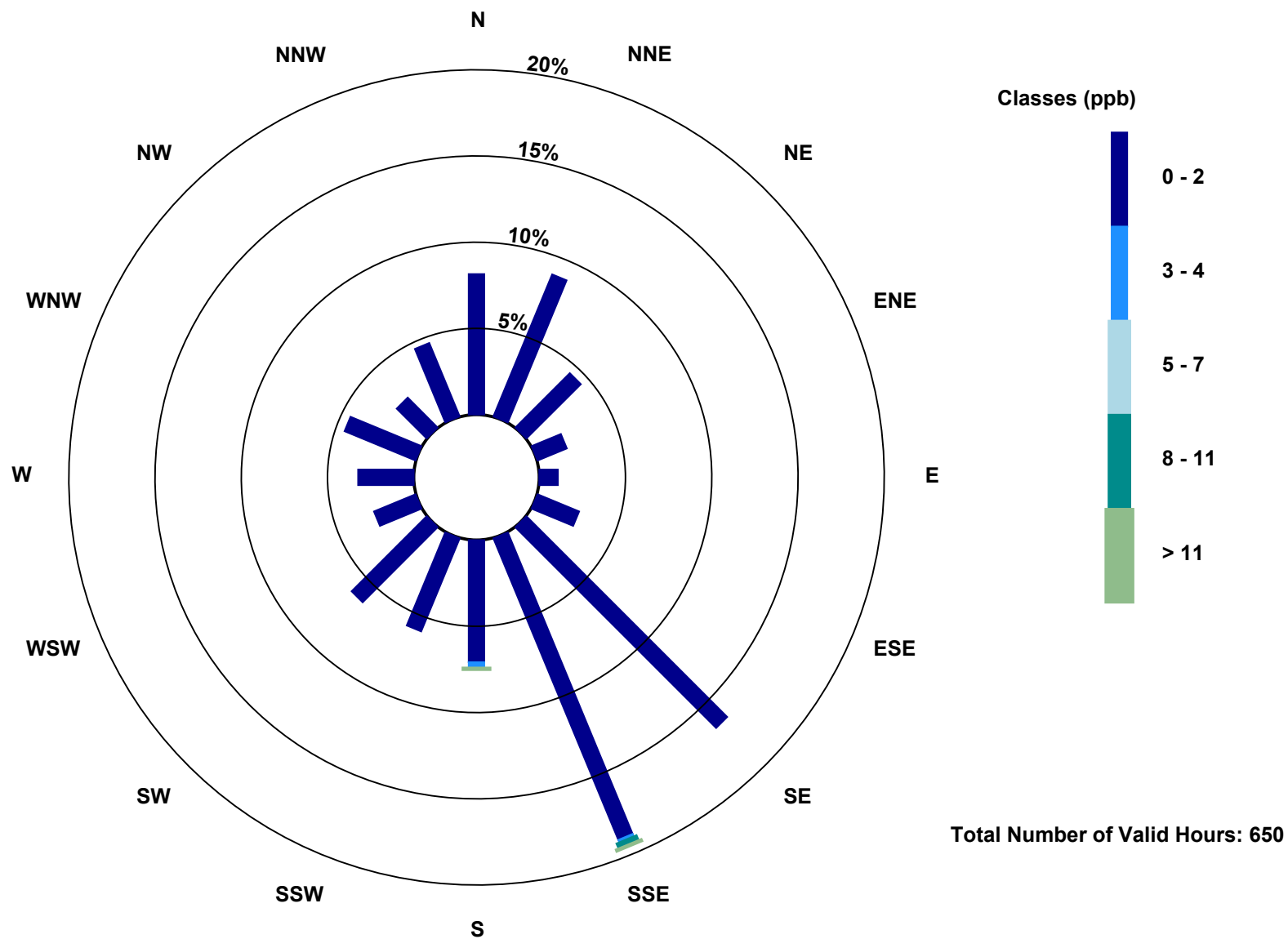
Total Number of Valid Hours: 650

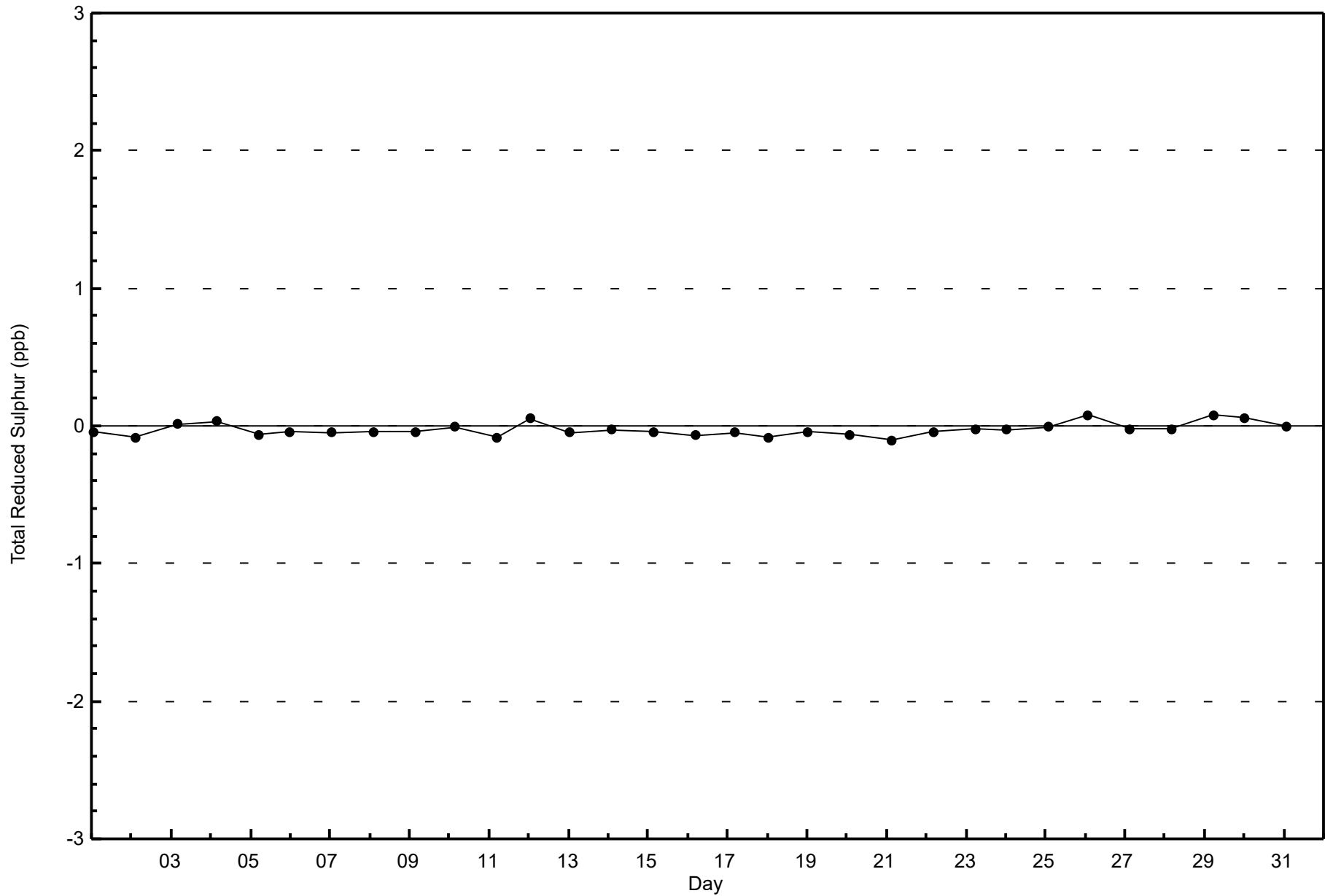
Total Number of Hours: 744

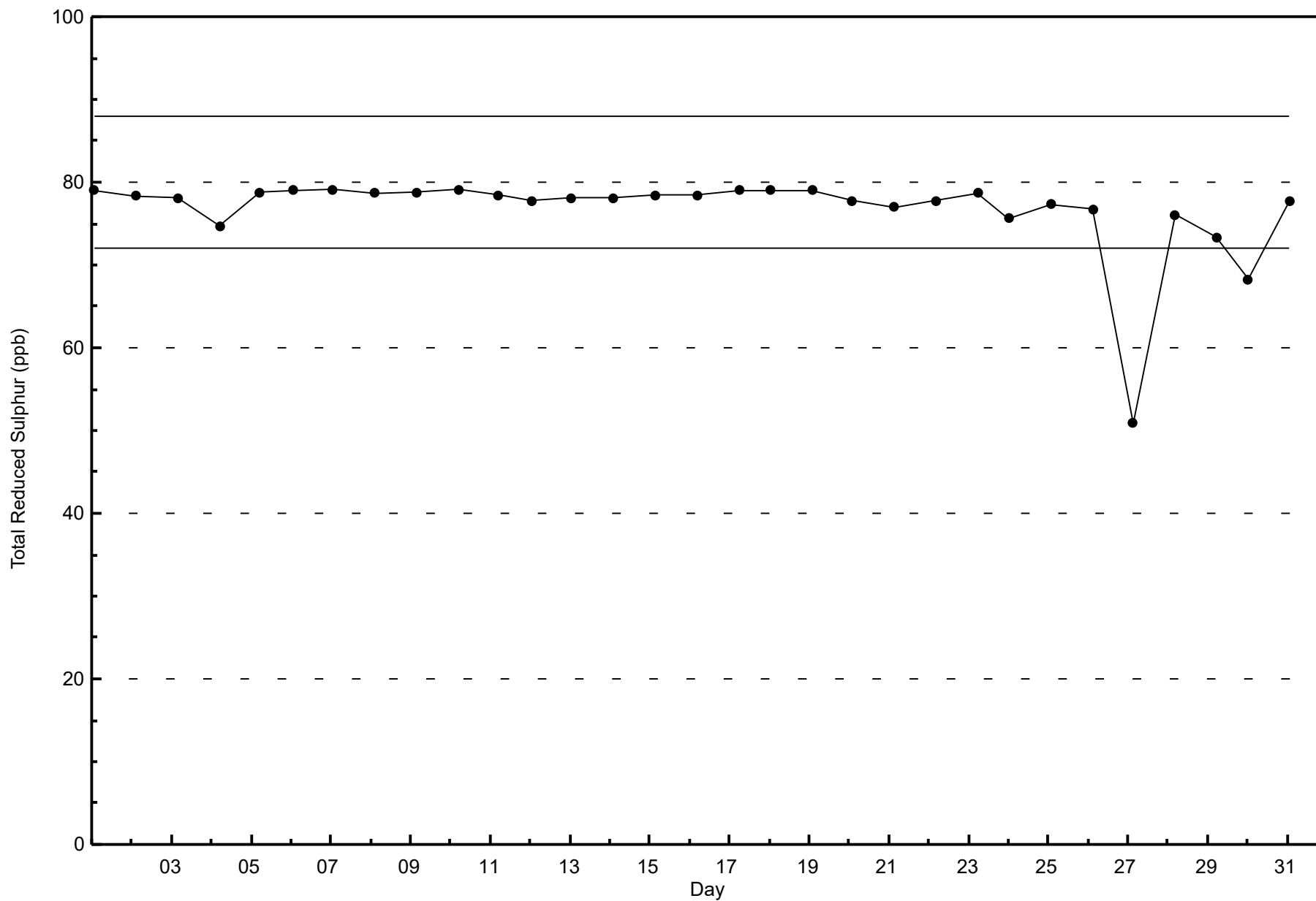


Wood Buffalo Environmental Association
Wind Rose May 2025

Total Reduced Sulphur (TRS) - ppb
Ells River









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

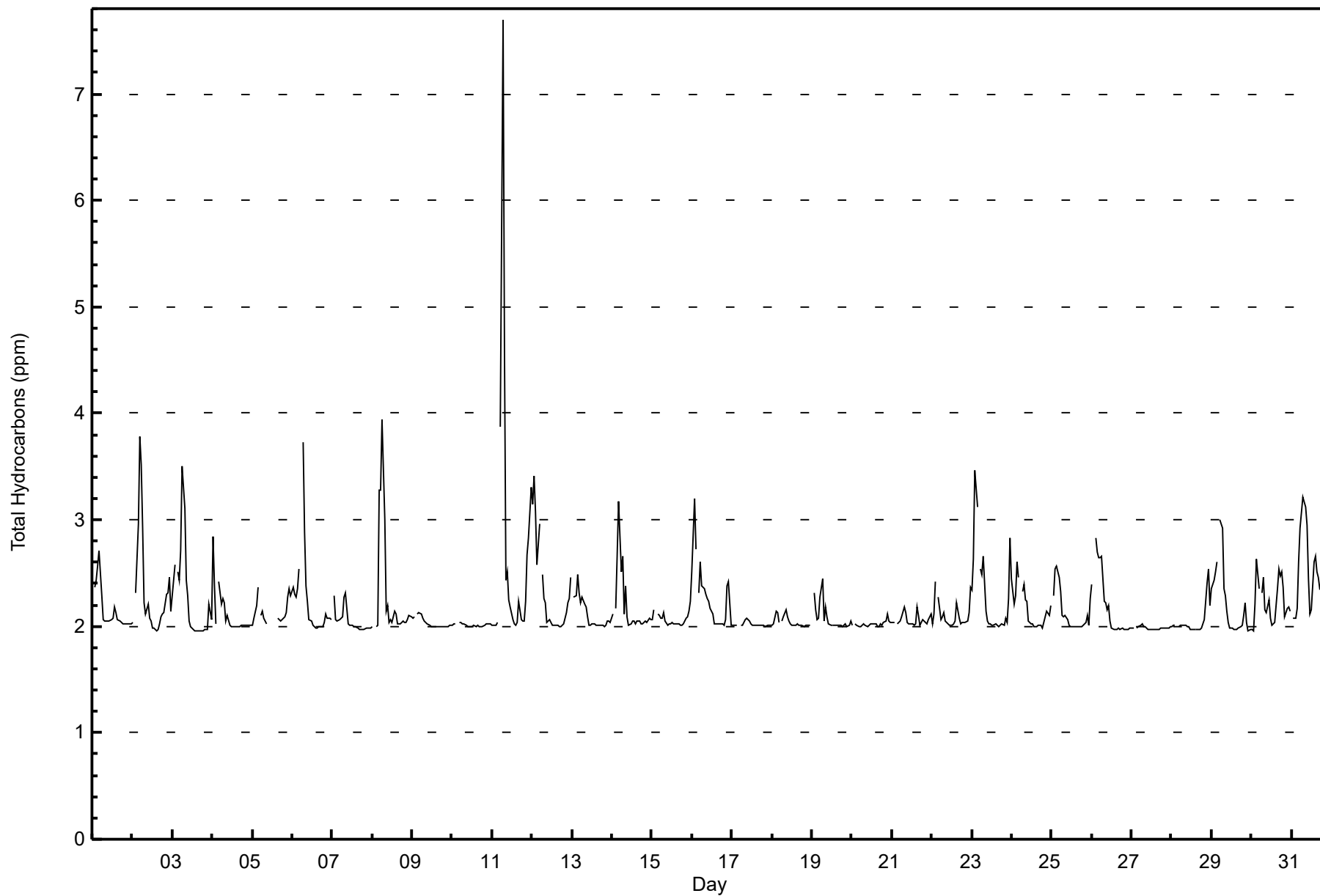
Ells River - May 2025

Maximum Value: 7.7 ppm on May 11 07:00																		Maximum Daily Average: 2.7 ppm on May 11										Hours in Service: 744	
Minimum Value: 2.0 ppm on May 29 23:00																		Minimum Daily Average: 2.0 ppm on May 27										Hours of Data: 707	
Maximum Diurnal Average: 2.6 ppm at hour 7																		Minimum Diurnal Average: 2.0 ppm at hour 13										Hours of Missing Data: 37	
Monthly Average: 2.17 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.2 P ₉₀ = 2.5 P ₉₉ = 3.5										Hours of Calibration: 37	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	Z	2.4	2.4	2.6	2.7	2.3	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.7			
2-May	2.0	Z	2.3	3.0	3.8	3.5	2.9	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.3	2.5	2.1	2.3			
3-May	2.3	2.6	Z	2.5	2.4	2.7	3.5	3.1	2.4	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.3	3.5			
4-May	2.8	2.4	2.0	Z	2.4	2.2	2.3	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.8			
5-May	2.0	2.1	2.2	2.4	Z	2.1	2.1	2.1	2.0	C	C	C	C	C	C	2.1	2.1	2.0	2.1	2.1	2.1	2.3	2.4	2.3	--	2.4			
6-May	2.4	2.3	2.3	2.4	2.5	Z	3.7	2.9	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	3.7			
7-May	Z	2.3	2.1	2.0	2.1	2.1	2.1	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3			
8-May	2.0	Z	2.0	2.0	3.3	3.3	3.9	3.0	2.1	2.2	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3	3.9			
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
11-May	2.0	2.0	2.0	2.0	Z	3.9	7.7	4.5	2.4	2.5	2.2	2.2	2.1	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.2	2.7	2.8	3.3	2.7	7.7			
12-May	3.1	3.4	3.1	2.6	3.0	Z	2.5	2.3	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.5	2.3	3.4			
13-May	Z	2.3	2.3	2.5	2.3	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5			
14-May	2.1	Z	2.2	2.7	3.2	2.5	2.7	2.1	2.4	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	3.2			
15-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.2			
16-May	2.5	3.2	2.7	Z	2.3	2.6	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.4	2.0	2.3	3.2			
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
18-May	2.0	2.0	2.1	2.1	2.0	Z	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2			
19-May	Z	2.3	2.2	2.1	2.1	2.3	2.4	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4			
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1			
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2			
22-May	2.0	2.1	2.4	Z	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.1	2.4			
23-May	2.3	2.6	3.5	3.1	Z	2.5	2.5	2.7	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.3	2.8	2.3	3.5			
24-May	2.4	2.2	2.3	2.6	2.5	Z	2.3	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.6			
25-May	Z	2.3	2.5	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.3	2.1	2.6			
26-May	2.4	Z	2.8	2.7	2.6	2.6	2.7	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.8			
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
28-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.5	2.2	2.1	2.5			
29-May	2.3	2.4	2.5	2.6	Z	3.0	2.9	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.2	3.0			
30-May	2.0	2.0	2.2	2.6	2.4	Z	2.3	2.5	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.3	2.5	2.5	2.5	2.4	2.1	2.2	2.2	2.1	2.2	2.6			
31-May	Z	2.1	2.1	2.2	2.6	2.9	3.1	3.2	3.1	3.0	2.4	2.1	2.2	2.6	2.7	2.5	2.5	2.4	2.4	2.5	2.6	2.3	2.4	2.6	2.5	3.2			
2.2 2.3 2.3 2.4 2.4 2.4 2.6 2.4 2.2 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.2 2.2																										Diurnal Average			
3.1 3.4 3.5 3.1 3.8 3.9 7.7 4.5 3.1 3.0 2.4 2.2 2.2 2.6 2.7 2.5 2.5 2.5 2.5 2.5 2.6 2.7 2.8 3.3																										Diurnal Maximum			
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	392	55.45	55.45
2.1 - 3.0	293	41.44	96.89
3.1 - 10.0	22	3.11	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	11	29	13	11	5	12	94	52	31	37	39	18	12	17	4	7	392
2.1 - 3.0	40	30	13	2	0	4	18	85	23	10	12	5	7	7	11	19	286
3.1 - 10.0	0	0	0	0	0	1	1	2	4	0	1	0	2	5	2	3	21
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	51	59	26	13	5	17	113	139	58	47	52	23	21	29	17	29	699

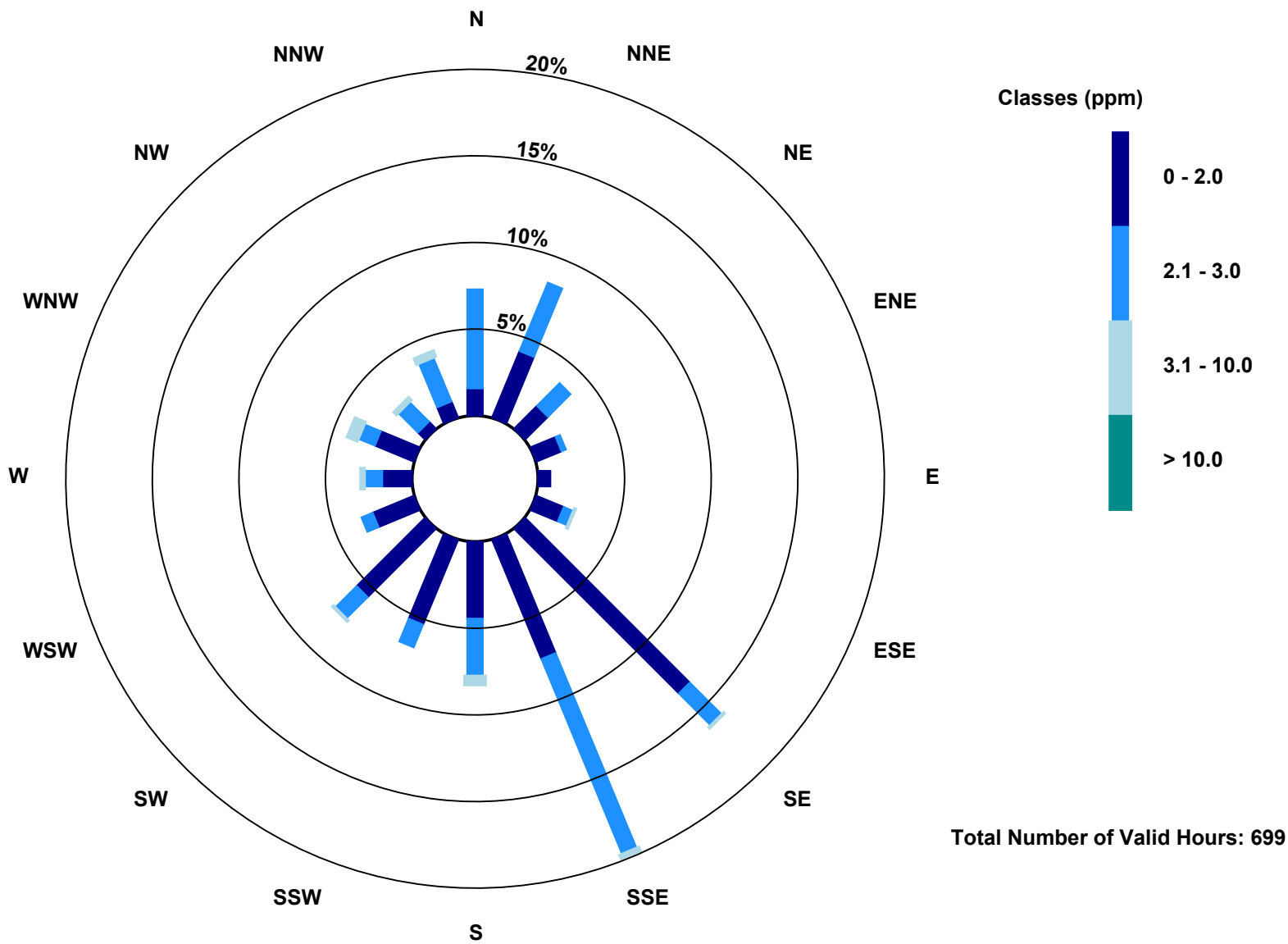
Total Number of Valid Hours: 699

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

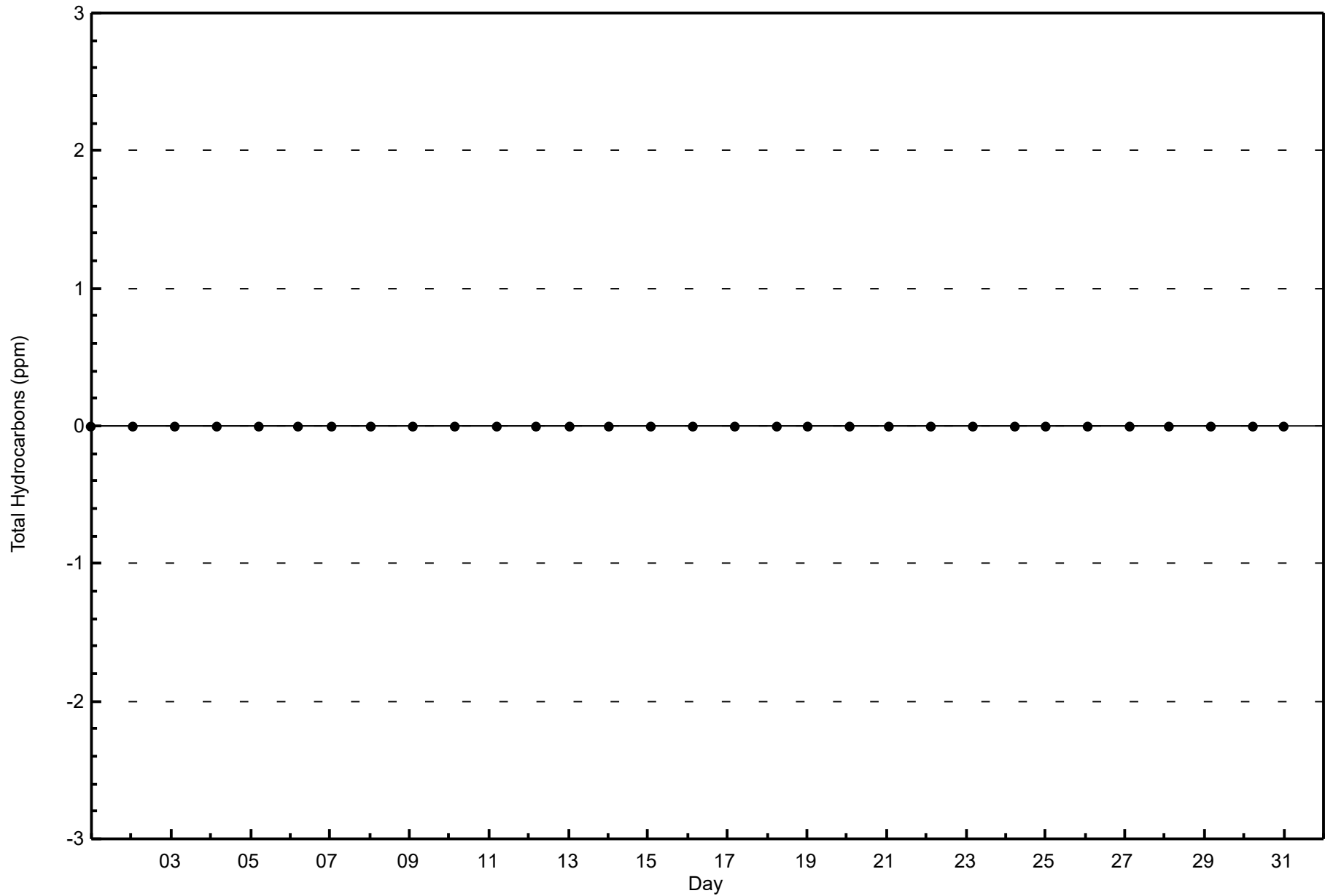
Total Hydrocarbons (THC) - ppm
Ells River





Wood Buffalo Environmental Association
Zero Responses

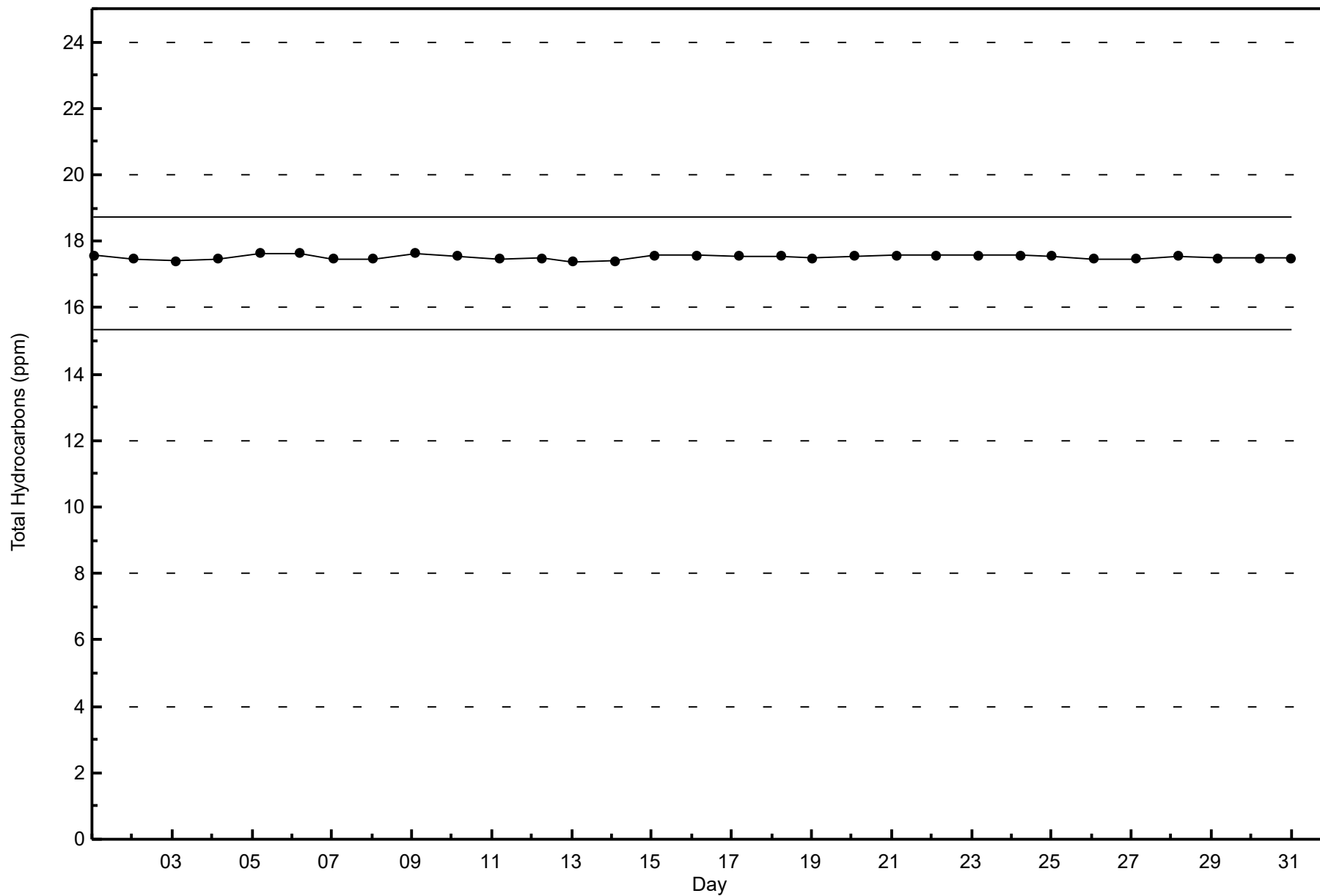
Total Hydrocarbons (THC) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

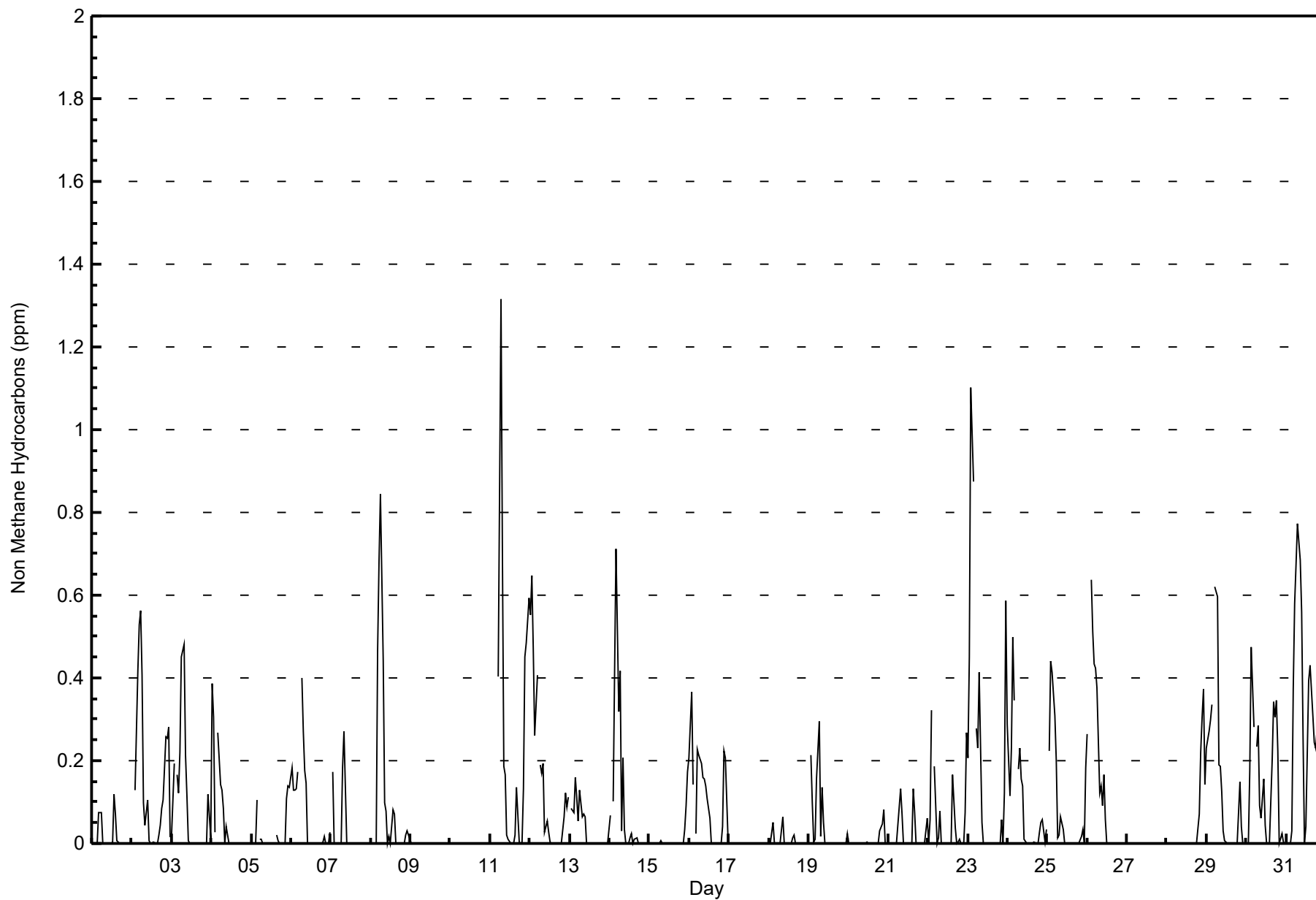
Ells River - May 2025

Maximum Value: 1.317 ppm on May 11 07:00										Maximum Daily Average: 0.314 ppm on May 31										Hours in Service: 744							
Minimum Value: 0.000 ppm on May 1 02:00										Minimum Daily Average: 0.000 ppm on May 9										Hours of Data: 707							
Maximum Diurnal Average: 0.231 ppm at hour 7										Minimum Diurnal Average: 0.004 ppm at hour 13										Hours of Missing Data: 37							
Monthly Average: 0.080 ppm										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 0.7										Hours of Calibration: 37							
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.000	0.000	0.002	0.075	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.119	0.070	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.119	
2-May	0.000	Z	0.129	0.418	0.530	0.562	0.406	0.098	0.043	0.104	0.006	0.000	0.000	0.002	0.000	0.000	0.022	0.046	0.083	0.106	0.256	0.255	0.282	0.018	0.146	0.562	
3-May	0.018	0.194	Z	0.167	0.122	0.219	0.451	0.480	0.214	0.116	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.119	0.012	0.092	0.480	
4-May	0.385	0.303	0.026	Z	0.268	0.142	0.130	0.085	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.385	
5-May	0.000	0.000	0.000	0.104	Z	0.011	0.009	0.000	0.000	C	C	C	C	C	C	0.019	0.005	0.000	0.000	0.000	0.000	0.109	0.139	0.136	--	0.139	
6-May	0.183	0.130	0.127	0.133	0.173	Z	0.399	0.272	0.177	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.016	0.000	0.001	0.028	0.078	0.399	
7-May	Z	0.173	0.000	0.000	0.000	0.000	0.000	0.184	0.272	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.272	
8-May	0.000	Z	0.000	0.000	0.467	0.681	0.846	0.442	0.098	0.077	0.000	0.018	0.000	0.082	0.072	0.000	0.000	0.000	0.000	0.002	0.000	0.022	0.029	0.012	0.124	0.846	
9-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
11-May	0.000	0.000	0.000	0.000	Z	0.404	1.317	0.699	0.188	0.166	0.019	0.012	0.000	0.000	0.000	0.022	0.135	0.005	0.000	0.003	0.132	0.450	0.483	0.592	0.201	1.317	
12-May	0.551	0.647	0.472	0.262	0.407	Z	0.190	0.170	0.193	0.027	0.053	0.029	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.121	0.088	0.112	0.147	0.647	
13-May	Z	0.086	0.075	0.158	0.112	0.054	0.128	0.066	0.072	0.065	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.036	0.158	
14-May	0.067	Z	0.100	0.412	0.711	0.319	0.418	0.030	0.206	0.033	0.000	0.001	0.013	0.023	0.000	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102	0.711	
15-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.091	0.174	0.013	0.174	
16-May	0.208	0.366	0.143	Z	0.023	0.226	0.214	0.192	0.160	0.154	0.139	0.109	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.223	0.205	0.000	0.107	0.366	
17-May	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
18-May	0.000	0.000	0.050	0.000	0.000	Z	0.000	0.001	0.063	0.000	0.000	0.000	0.000	0.000	0.012	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.063	
19-May	Z	0.215	0.098	0.004	0.012	0.157	0.296	0.018	0.136	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.044	0.296	
20-May	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.047	0.080	0.002	0.007	0.080	
21-May	0.000	0.000	Z	0.000	0.000	0.002	0.042	0.134	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.133	0.073	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.022	0.134	
22-May	0.000	0.056	0.323	Z	0.185	0.000	0.013	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165	0.037	0.000	0.004	0.009	0.001	0.000	0.075	0.266	0.053	0.323	
23-May	0.208	0.452	1.101	0.875	Z	0.277	0.229	0.415	0.052	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.058	0.000	0.121	0.587	0.190	1.101	
24-May	0.288	0.115	0.232	0.497	0.344	Z	0.179	0.230	0.156	0.140	0.011	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.027	0.049	0.057	0.005	0.103	0.497	
25-May	Z	0.223	0.439	0.414	0.308	0.200	0.014	0.021	0.065	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.033	0.000	0.183	0.085	0.439	
26-May	0.266	Z	0.639	0.511	0.433	0.422	0.378	0.121	0.140	0.092	0.167	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.639	
27-May	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-May	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.222	0.306	0.372	0.143	0.048	0.372	
29-May	0.231	0.272	0.300	0.336	Z	0.622	0.595	0.189	0.187	0.127	0.031	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.075	0.150	0.042	0.000	0.138	0.622	
30-May	0.000	0.000	0.175	0.476	0.281	Z	0.233	0.285	0.092	0.063	0.154	0.044	0.000	0.000	0.000	0.202	0.341	0.305	0.347	0.225	0.000	0.023	0.003	0.000	0.141	0.476	
31-May	Z	0.000	0.000	0.030	0.372	0.579	0.674	0.774	0.683	0.558	0.256	0.000	0.040	0.393	0.431	0.370	0.309	0.243	0.230	0.325	0.319	0.111	0.144	0.378	0.314	0.774	
		0.096	0.124	0.170	0.185	0.185	0.190	0.231	0.161	0.105	0.066	0.028	0.009	0.004	0.021	0.020	0.030	0.030	0.019	0.021	0.028	0.044	0.060	0.070	0.089	Diurnal Average	
		0.551	0.647	1.101	0.875	0.711	0.681	1.317	0.774	0.683	0.558	0.256	0.109	0.062	0.393	0.431	0.370	0.341	0.305	0.347	0.325	0.319	0.450	0.483	0.592	Diurnal Maximum	
Z - zerospan		C - Calibration																									



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	429	60.68	60.68
0.006 - 0.05	67	9.48	70.16
0.06 - 0.1	78	11.03	81.19
> 0.1	133	18.81	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	23	26	17	11	5	13	97	61	37	39	40	18	14	16	4	7	428
0.006 - 0.05	5	11	3	0	0	2	8	19	2	3	5	1	0	2	1	4	66
0.06 - 0.1	9	14	4	2	0	1	3	26	2	1	1	1	2	3	5	4	78
> 0.1	14	8	2	0	0	1	5	33	17	4	6	3	5	8	7	14	127
Totals	51	59	26	13	5	17	113	139	58	47	52	23	21	29	17	29	699

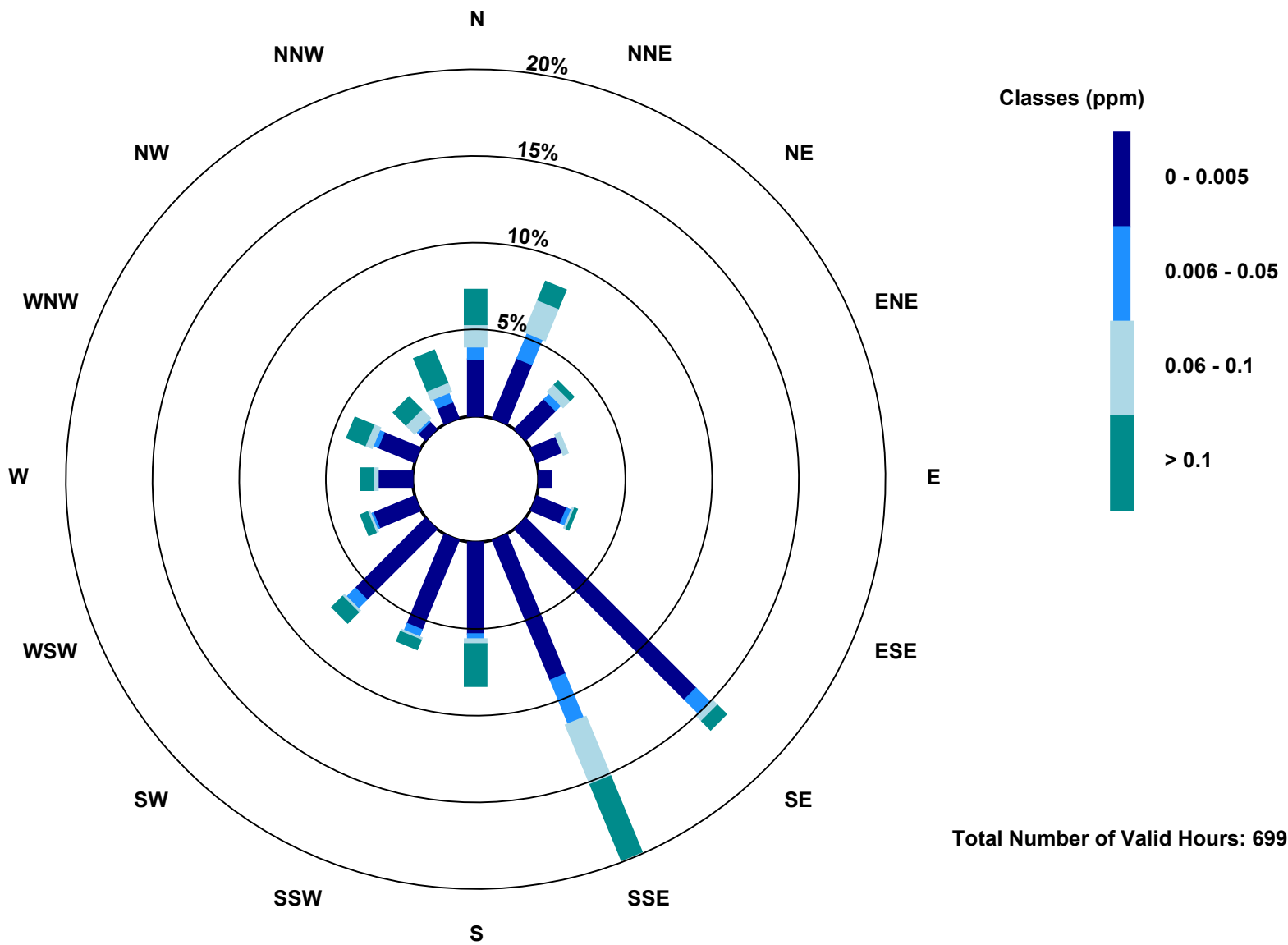
Total Number of Valid Hours: 699

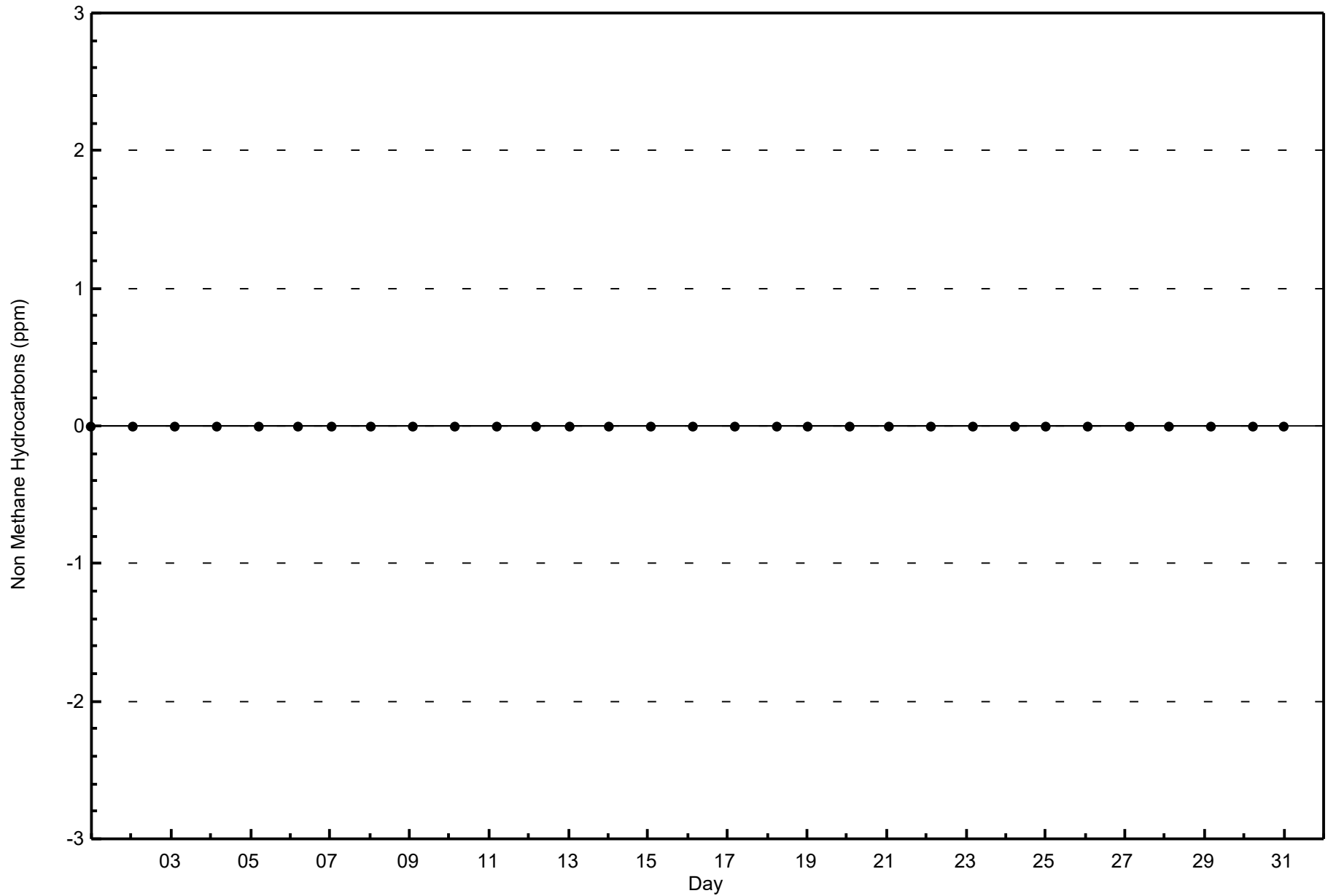
Total Number of Hours: 744

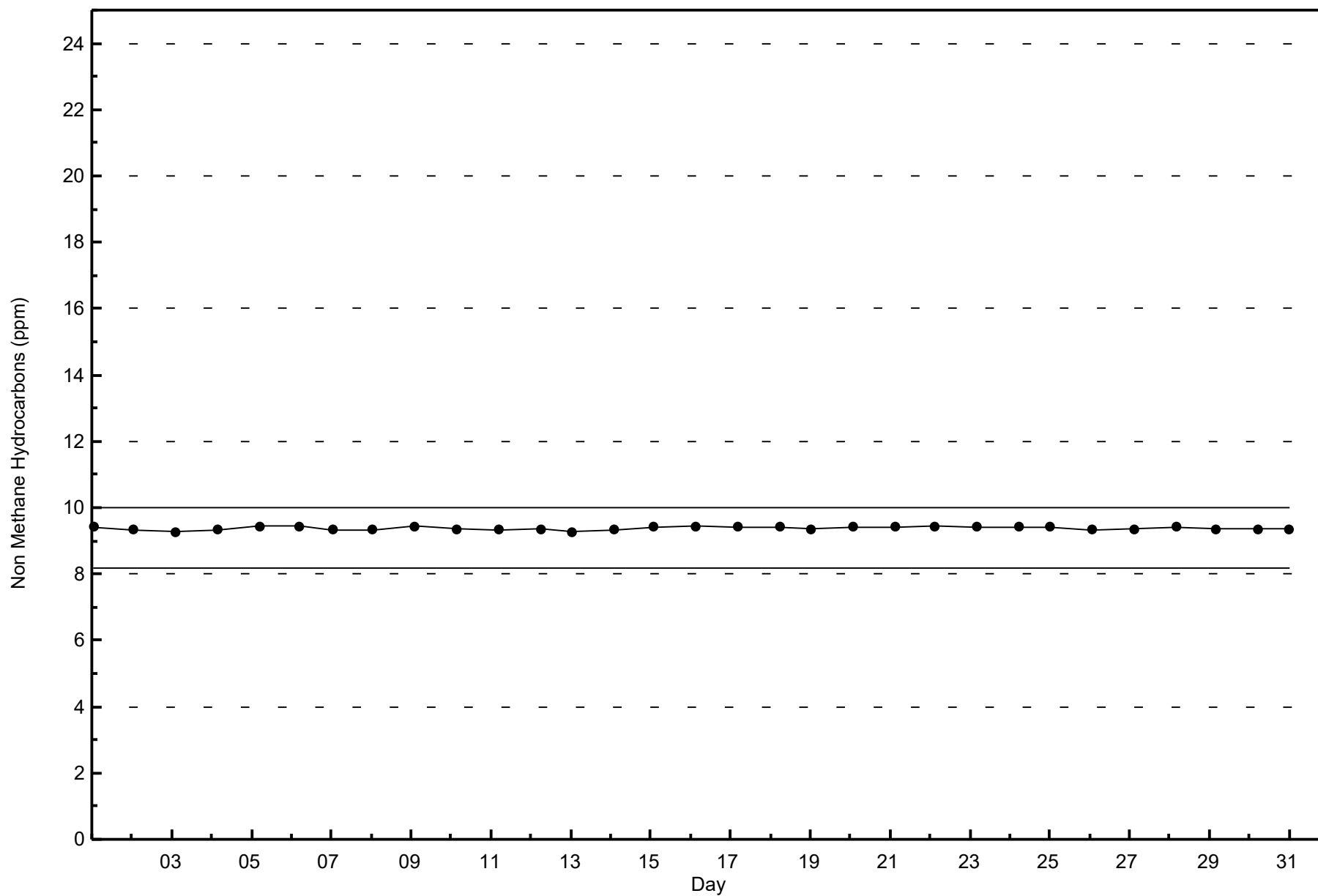


Wood Buffalo Environmental Association
Wind Rose May 2025

Non Methane Hydrocarbons (NMHC) - ppm
Ells River









Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

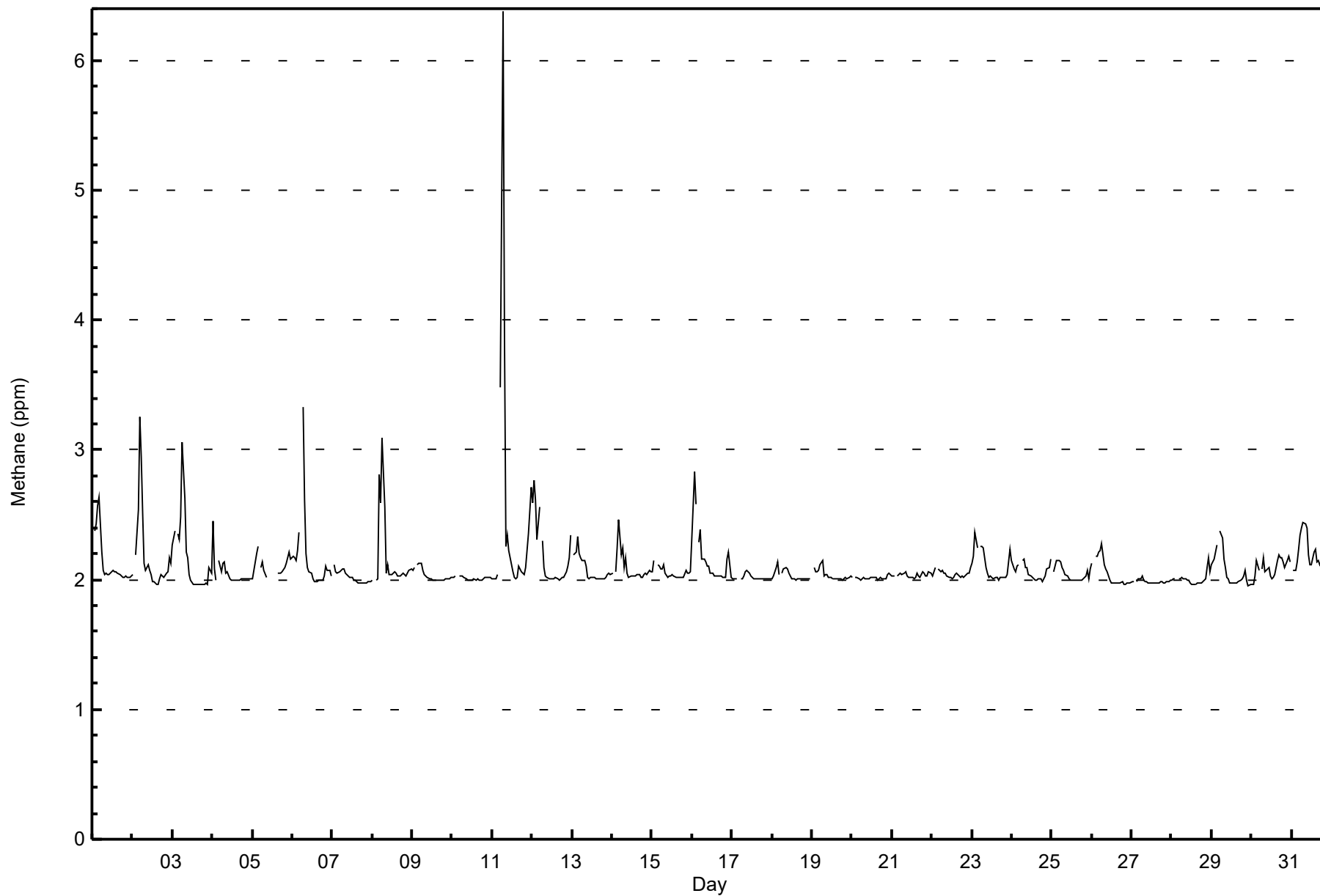
Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744								
Maximum Value: 6.4 ppm on May 11 07:00 Maximum Daily Average: 2.5 ppm on May 11																		Hours of Data: 707								
Minimum Value: 2.0 ppm on May 29 23:00 Minimum Daily Average: 2.0 ppm on May 27																		Hours of Missing Data: 37								
Maximum Diurnal Average: 2.4 ppm at hour 7 Minimum Diurnal Average: 2.0 ppm at hour 14																		Hours of Calibration: 37								
Monthly Average: 2.09 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.9																		Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	2.4	2.4	2.6	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6
2-May	2.0	Z	2.2	2.5	3.2	3.0	2.5	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	3.2
3-May	2.3	2.4	Z	2.3	2.3	2.5	3.1	2.6	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	3.1
4-May	2.5	2.1	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5
5-May	2.0	2.1	2.2	2.3	Z	2.1	2.1	2.1	2.0	C	C	C	C	C	C	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.2	2.2	--	2.3
6-May	2.2	2.2	2.1	2.2	2.4	Z	3.3	2.6	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.2	3.3
7-May	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-May	2.0	Z	2.0	2.0	2.8	2.6	3.1	2.6	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	3.1
9-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
10-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
11-May	2.0	2.0	2.0	2.0	Z	3.5	6.4	3.9	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.3	2.7	2.5	6.4
12-May	2.6	2.8	2.6	2.3	2.6	Z	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.2	2.8
13-May	Z	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
14-May	2.0	Z	2.1	2.2	2.5	2.2	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.5
15-May	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
16-May	2.3	2.8	2.6	Z	2.3	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.2	2.8
17-May	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
18-May	2.0	2.0	2.1	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-May	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-May	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1
21-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.1
22-May	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
23-May	2.1	2.2	2.4	2.2	Z	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.4
24-May	2.2	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2
25-May	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.2
26-May	2.1	Z	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
27-May	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-May	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.2
29-May	2.1	2.2	2.2	2.3	Z	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.4
30-May	2.0	2.0	2.0	2.2	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.2
31-May	Z	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.4	2.4	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.3	2.1	2.3	2.2	2.2	2.4
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	428	60.54	60.54
2.1 - 3.0	272	38.47	99.01
3.1 - 10.0	7	0.99	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Ells River - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	11	38	15	11	5	13	100	66	32	37	40	18	12	17	4	9	428
2.1 - 3.0	40	21	11	2	0	3	12	73	26	10	12	5	8	9	13	19	264
3.1 - 10.0	0	0	0	0	0	1	1	0	0	0	0	0	1	3	0	1	7
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	51	59	26	13	5	17	113	139	58	47	52	23	21	29	17	29	699

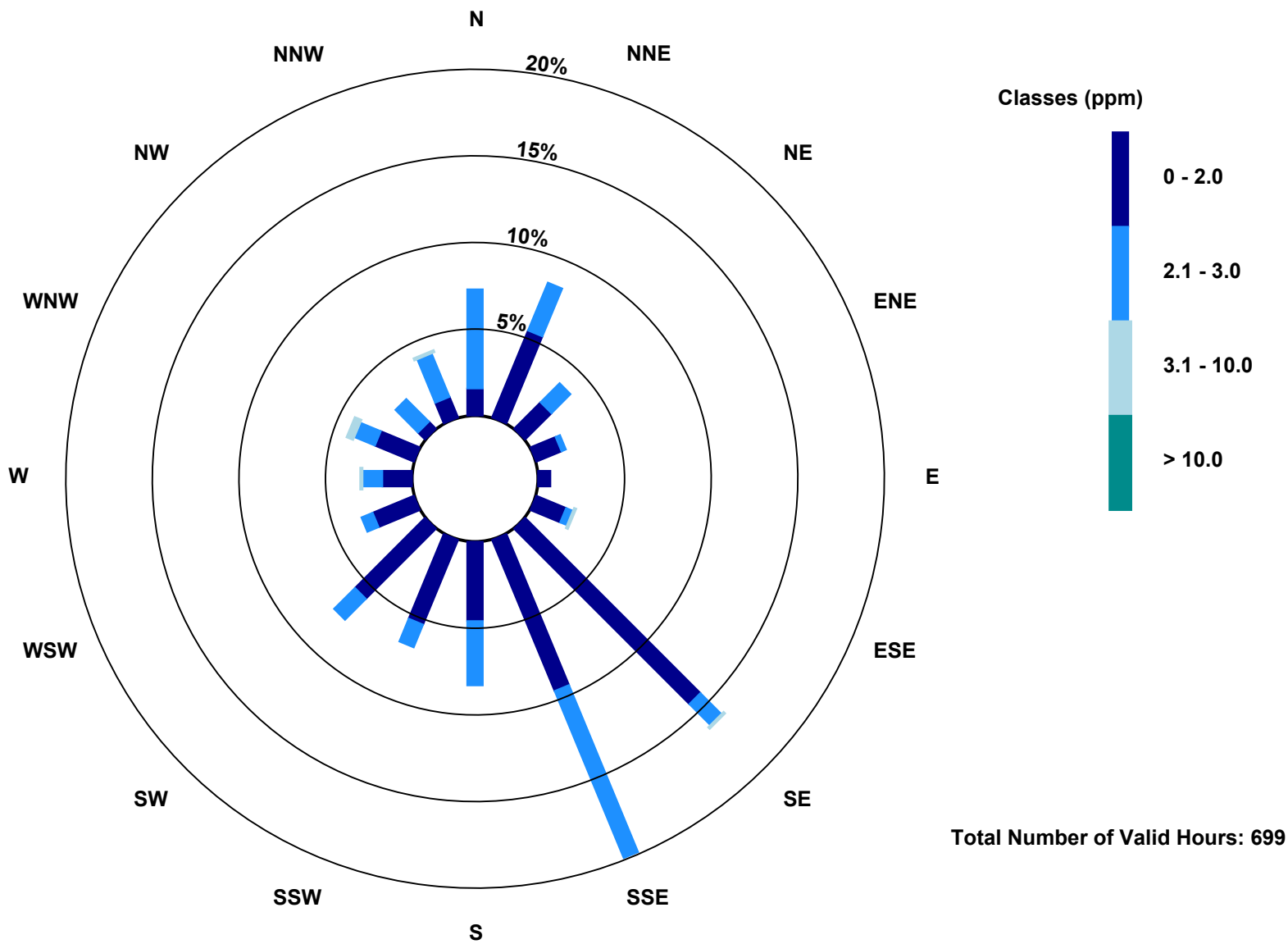
Total Number of Valid Hours: 699

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Methane (CH₄) - ppm
Ells River

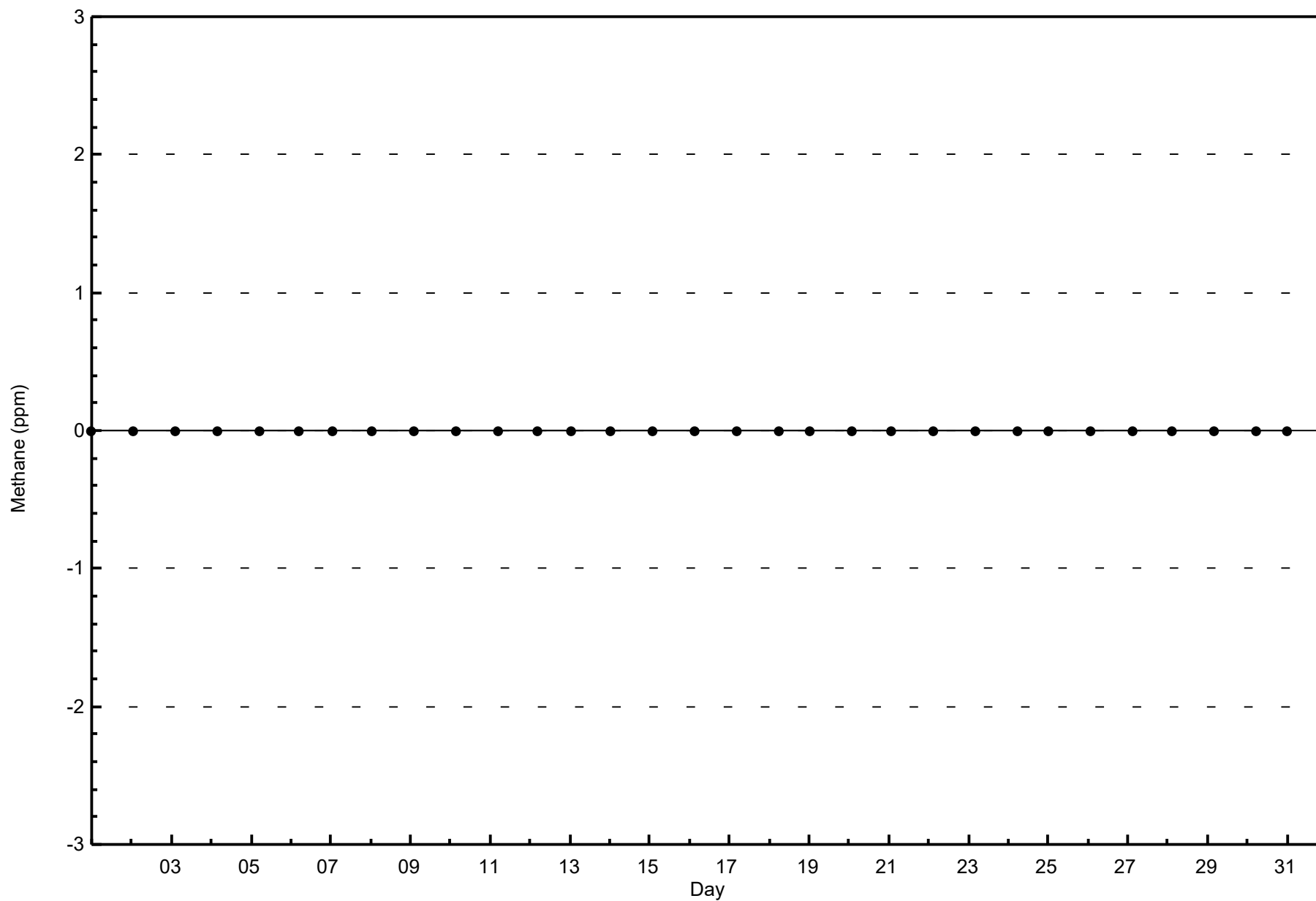


Total Number of Valid Hours: 699



Wood Buffalo Environmental Association
Zero Responses

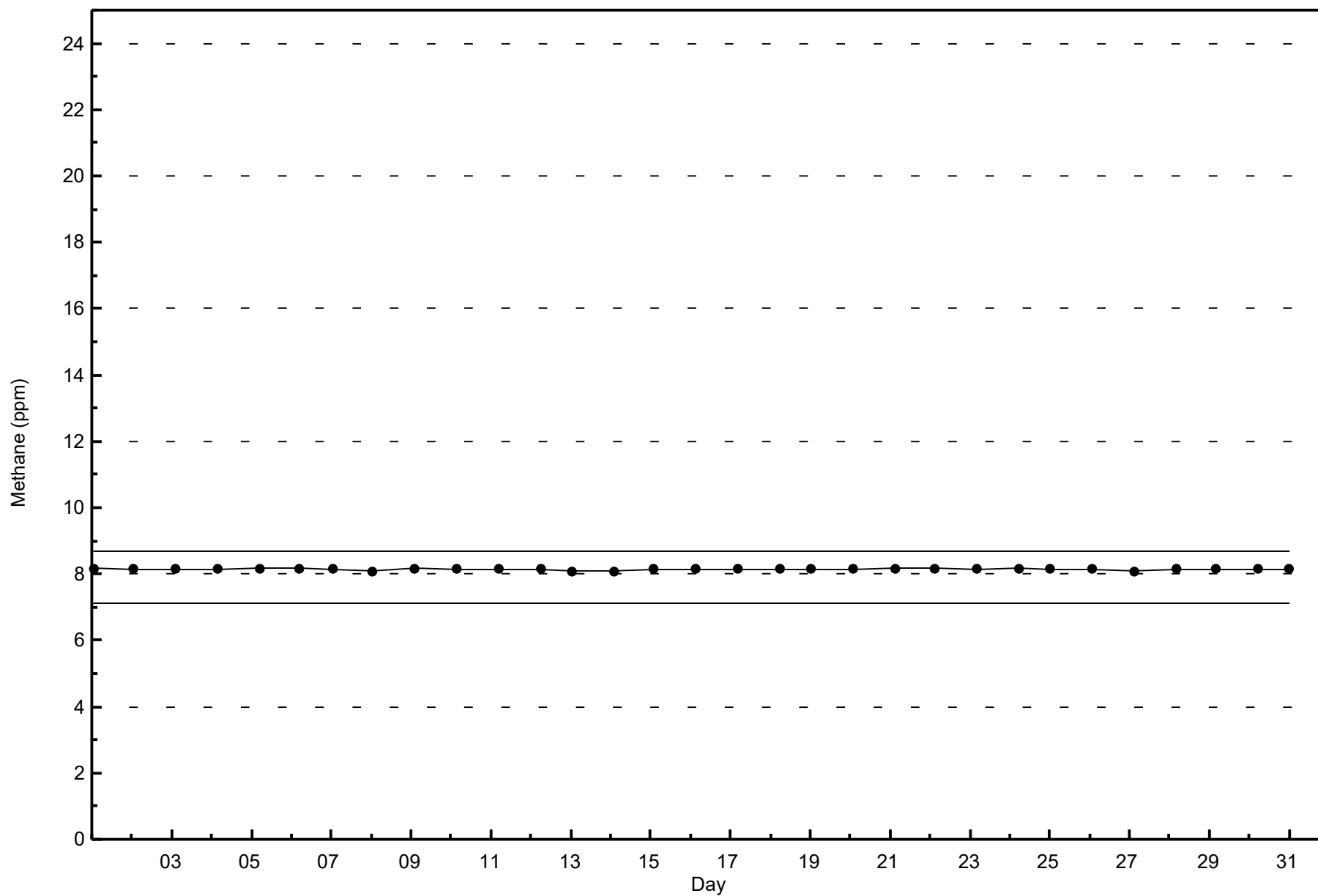
Methane (CH₄) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

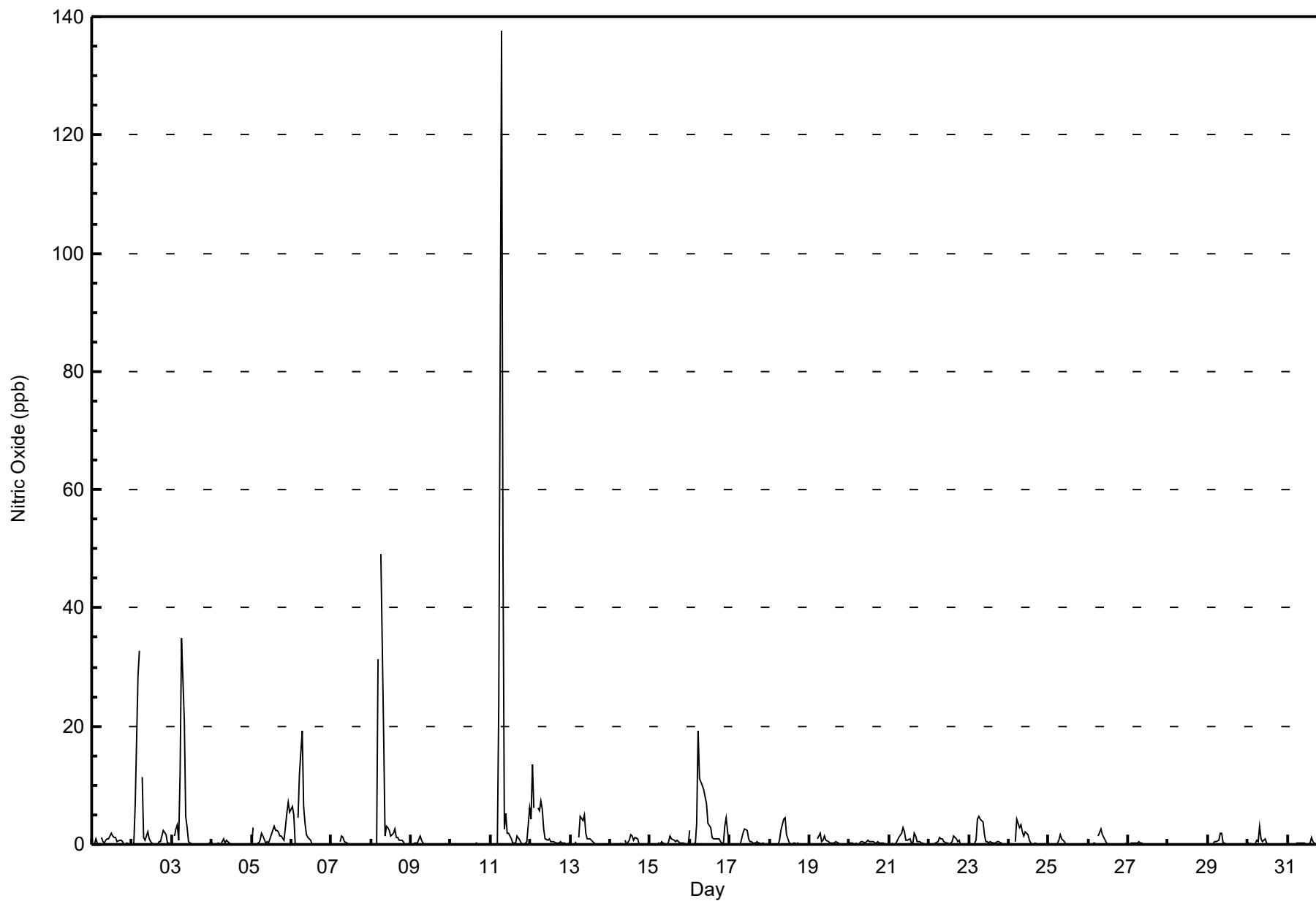
Ells River - May 2025

Maximum Value: 137.6 ppb on May 11 07:00																				Maximum Daily Average: 10.2 ppb on May 11					Hours in Service: 744				
Minimum Value: 0.0 ppb on May 2 00:00																				Minimum Daily Average: 0.0 ppb on May 28					Hours of Data: 707				
Maximum Diurnal Average: 9.6 ppb at hour 7																				Minimum Diurnal Average: 0.2 ppb at hour 20					Hours of Missing Data: 37				
Monthly Average: 1.40 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.7 P ₉₀ = 2.5 P ₉₉ = 23.5					Hours of Calibration: 36				
																									Percent Operational Time: 99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.0	0.0	0.9	0.3	Z	1.1	0.4	0.1	0.8	0.9	0.9	1.9	1.4	1.1	1.1	0.6	0.7	0.6	0.5	0.1	0.1	0.1	0.0	0.0	0.6	1.9			
2-May	0.0	0.0	6.7	28.4	32.8	Z	11.5	1.1	0.6	2.0	1.0	0.5	0.2	0.1	0.0	0.0	0.4	0.4	1.4	2.4	1.8	0.2	0.2	0.1	4.0	32.8			
3-May	Z	1.4	2.6	3.4	0.6	12.2	35.0	20.9	4.8	2.9	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	3.7	35.0			
4-May	0.2	Z	0.1	0.1	0.1	0.1	0.4	1.0	0.3	0.7	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0			
5-May	0.1	2.8	Z	0.4	0.1	0.6	2.0	1.5	0.3	0.5	0.2	1.0	1.7	3.1	2.3	2.3	2.2	1.5	1.4	0.6	2.8	5.1	7.1	5.5	2.0	7.1			
6-May	6.3	5.0	0.1	Z	4.4	11.8	19.2	6.3	3.6	1.6	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.6	19.2			
7-May	0.0	0.0	0.0	0.0	Z	0.4	1.3	1.1	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3			
8-May	0.0	0.0	0.0	0.0	31.2	Z	49.2	18.5	1.4	3.2	2.7	2.3	1.4	1.8	2.6	1.2	1.1	0.7	0.7	0.4	0.1	0.1	0.1	0.1	5.2	49.2			
9-May	Z	0.1	0.2	0.2	0.3	1.5	0.7	0.2	0.1	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5			
10-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1			
11-May	0.0	0.0	Z	0.0	0.2	23.6	137.6	49.7	2.5	5.2	1.9	1.9	1.0	0.3	0.3	0.3	1.5	0.6	0.3	0.1	0.1	0.3	0.5	6.2	10.2	137.6			
12-May	4.3	13.5	6.1	Z	6.2	5.6	7.3	5.9	2.6	0.9	0.8	0.9	0.6	0.5	0.5	0.3	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.1	2.5	13.5			
13-May	0.1	0.1	0.1	0.5	Z	1.1	4.7	4.0	4.9	1.8	1.0	0.9	0.9	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.9			
14-May	0.0	0.0	0.0	0.0	0.0	0.0	0.3	M	Z	0.8	0.0	0.6	1.8	1.4	0.7	1.3	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8			
15-May	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.6	0.3	0.0	0.1	0.6	1.3	1.0	0.7	0.5	0.6	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.3	1.3			
16-May	2.4	Z	0.2	0.1	3.5	19.3	11.1	10.0	9.4	8.1	7.0	3.5	2.8	1.1	0.9	0.9	1.0	0.9	0.5	0.2	0.1	3.0	4.6	0.1	3.9	19.3			
17-May	0.0	0.1	Z	0.0	0.0	0.0	0.1	1.0	1.8	2.5	2.4	1.0	0.5	0.4	0.3	0.2	0.5	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.5	2.5			
18-May	0.0	0.0	0.0	Z	0.1	0.1	0.7	2.3	4.4	4.4	1.7	0.8	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	4.4			
19-May	0.0	0.0	0.0	0.0	Z	1.0	1.8	0.4	0.6	1.3	0.7	0.4	0.3	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.8			
20-May	0.1	0.1	0.1	0.1	0.2	Z	0.3	0.4	0.4	0.3	0.5	0.7	0.6	0.5	0.4	0.2	0.3	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.3	0.7			
21-May	Z	0.2	0.1	0.1	0.3	0.8	1.1	1.8	2.9	2.1	0.8	0.8	0.8	0.3	0.3	2.0	1.4	0.4	0.4	0.1	0.2	0.0	0.0	0.0	0.7	2.9			
22-May	0.0	Z	0.1	0.1	0.1	0.4	1.2	1.0	1.0	0.4	0.1	0.1	0.1	0.3	0.5	1.5	1.1	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.4	1.5			
23-May	0.0	0.1	Z	0.1	0.7	4.2	4.7	4.2	3.8	1.7	0.4	0.4	0.2	0.4	0.3	0.2	0.2	0.4	0.4	0.2	0.1	0.0	0.1	0.1	1.0	4.7			
24-May	0.1	0.1	0.1	Z	0.6	4.2	2.7	3.2	2.1	1.4	2.2	1.6	0.6	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.2			
25-May	0.0	0.0	0.0	0.0	Z	0.2	0.8	1.7	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7			
26-May	0.0	0.0	0.0	0.2	0.2	Z	1.4	2.6	1.8	1.3	0.8	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	2.6			
27-May	Z	0.1	0.1	0.1	0.2	0.3	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4			
28-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			
29-May	0.1	0.1	Z	0.2	0.5	0.5	0.6	2.0	2.0	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0			
30-May	0.1	0.1	0.2	Z	0.2	0.7	0.5	3.1	1.0	0.5	1.0	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4	3.1			
31-May	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.3	1.2	0.5	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	1.2			
0.5 0.9 0.7 1.3 3.3 3.3 9.6 4.8 1.8 1.5 1.0 0.7 0.6 0.5 0.4 0.4 0.4 0.3 0.3 0.2 0.2 0.3 0.4 0.4																										Diurnal Average			
6.3 13.5 6.7 28.4 32.8 23.6 137.6 49.7 9.4 8.1 7.0 3.5 2.8 3.1 2.6 2.3 2.2 1.5 1.4 2.4 2.8 5.1 7.1 6.2																										Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	698	98.73	98.73
21 - 40	6	0.85	99.58
41 - 80	2	0.28	99.86
81 - 159	1	0.14	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	54	58	29	13	7	13	113	141	57	45	48	19	18	28	19	28	690
21 - 40	0	0	0	0	0	0	0	1	0	0	0	0	2	3	0	0	6
11 - 80	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	58	29	13	7	14	114	142	57	45	48	19	20	31	19	29	699

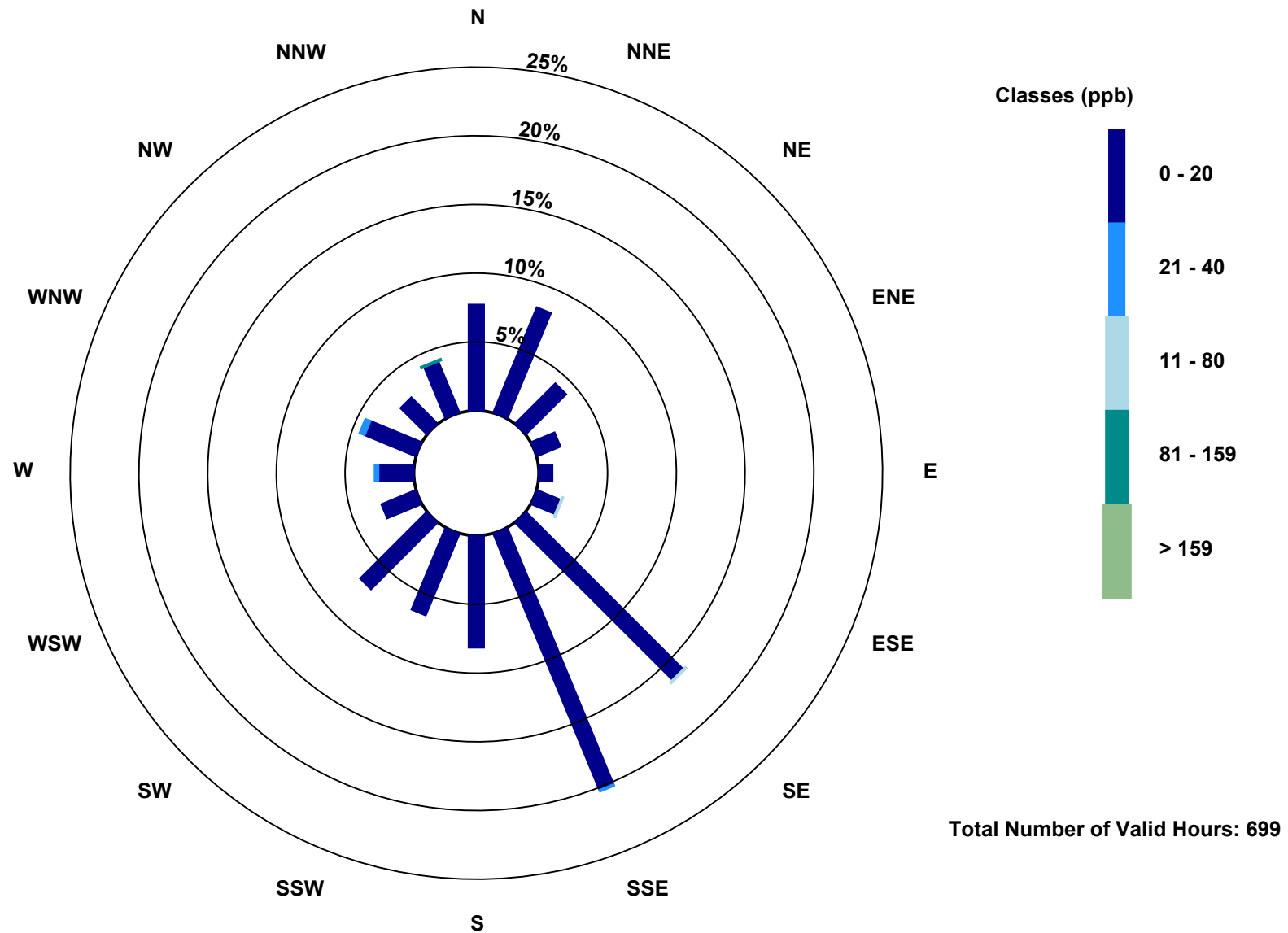
Total Number of Valid Hours: 699

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

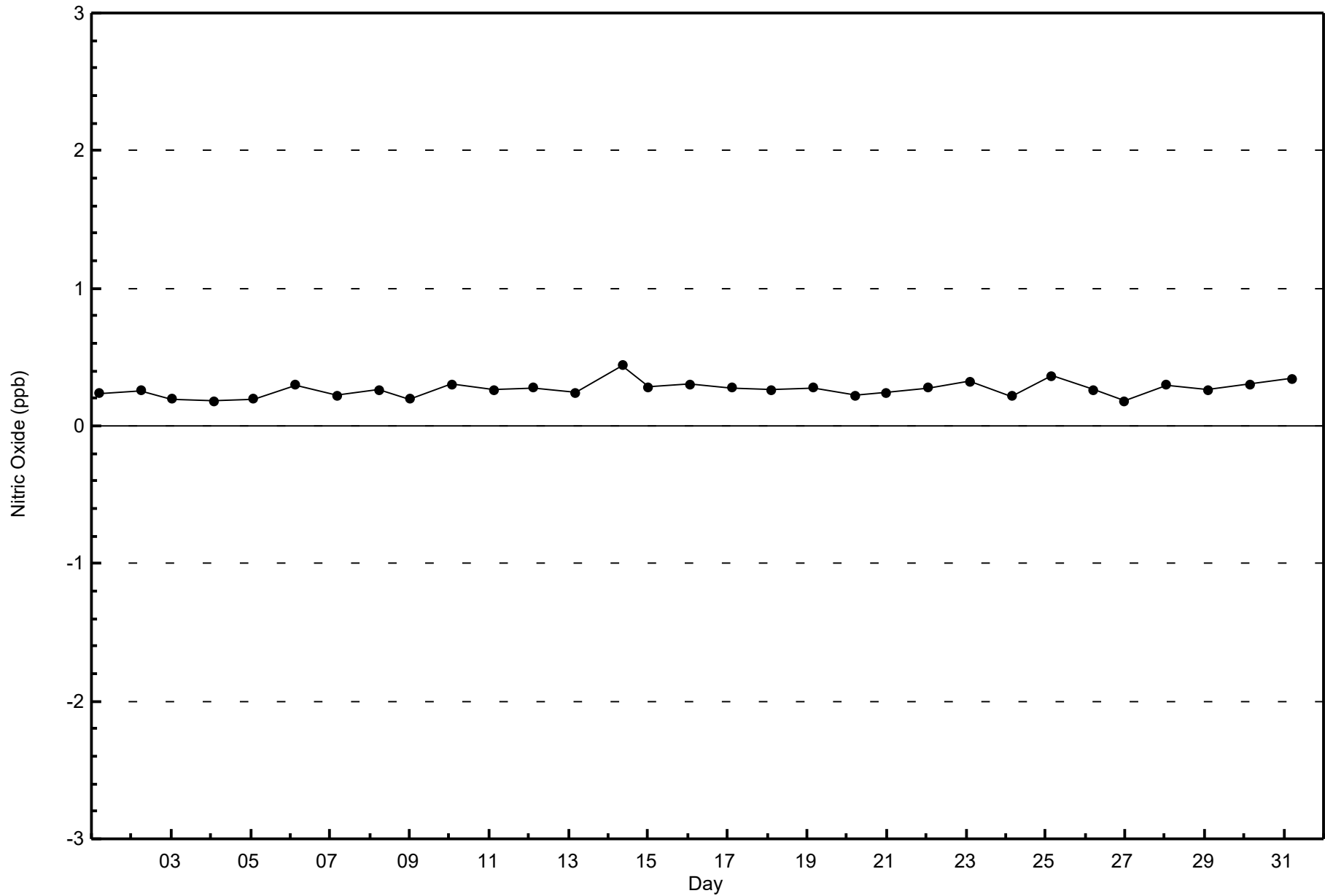
Nitric Oxide (NO) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

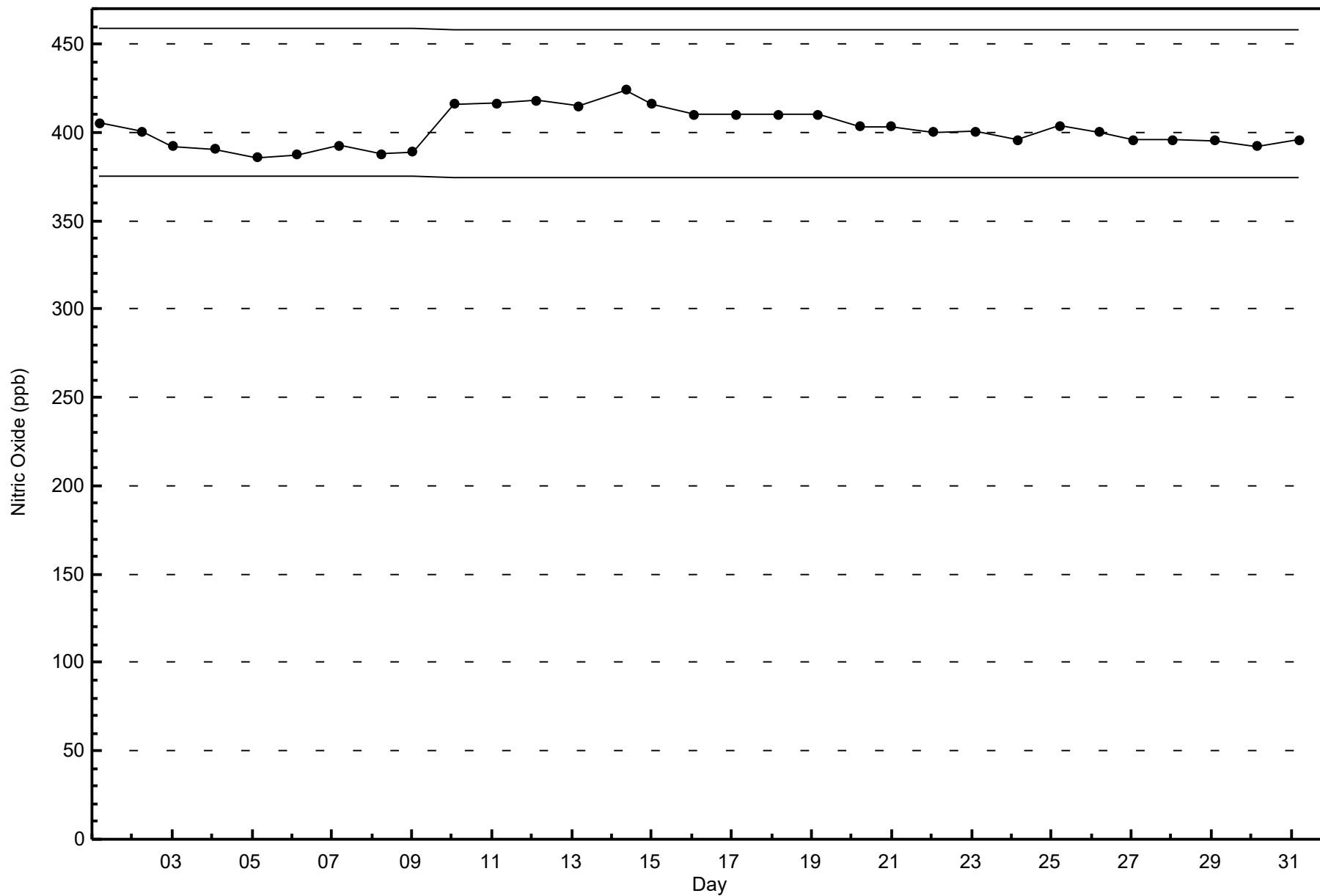
Nitric Oxide (NO) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

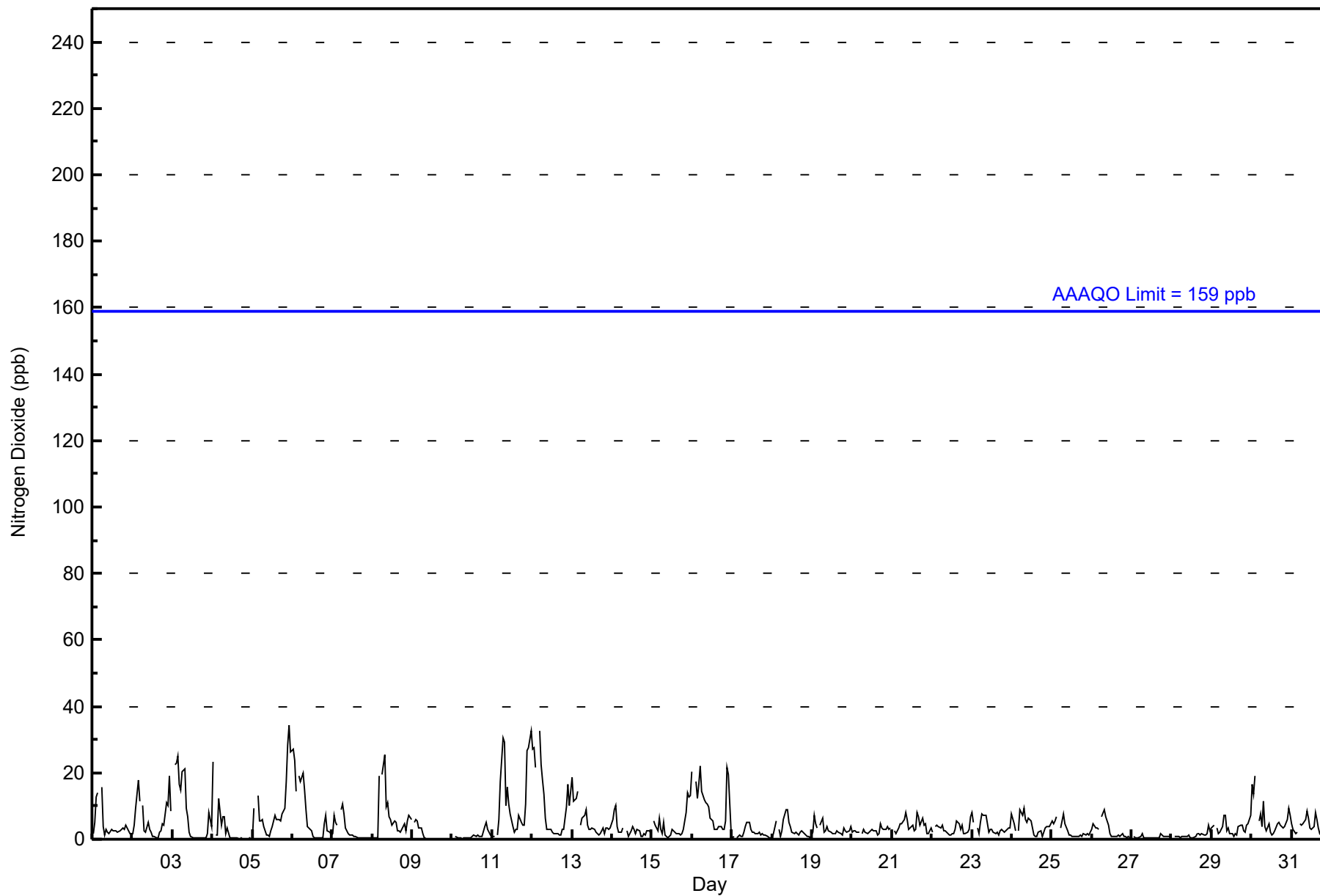
Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 34.4 ppb on May 5 23:00 Maximum Daily Average: 11.3 ppb on May 11																			Hours of Data: 707							
Minimum Value: 0.1 ppb on May 9 15:00 Minimum Daily Average: 0.7 ppb on May 27																			Hours of Missing Data: 37							
Maximum Diurnal Average: 7.7 ppb at hour 8 Minimum Diurnal Average: 2.0 ppb at hour 14																			Hours of Calibration: 36							
Monthly Average: 4.58 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.3 Median = 2.7 Q ₃ = 5.3 P ₉₀ = 10.7 P ₉₉ = 27.5																			Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1.9	5.0	12.7	13.8	Z	15.8	3.9	1.3	2.8	2.2	1.8	2.8	2.4	2.4	2.5	2.0	2.5	2.8	3.6	2.9	4.3	3.2	1.6	1.6	4.2	15.8
2-May	1.9	4.4	9.3	17.8	11.4	Z	10.1	2.7	2.0	5.2	3.1	2.2	1.0	0.8	0.4	0.5	2.3	2.5	4.6	4.3	10.9	10.0	19.0	8.4	5.9	19.0
3-May	Z	22.4	23.0	25.0	16.6	15.0	20.5	21.1	9.2	6.9	2.3	0.9	0.5	0.4	0.3	0.3	0.3	0.5	0.3	0.5	0.6	1.7	8.0	3.9	7.8	25.0
4-May	23.4	Z	1.2	1.4	12.4	4.4	6.7	6.9	1.6	3.2	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.2	2.8	23.4
5-May	0.5	9.4	Z	13.3	5.6	5.3	6.0	3.7	1.1	1.3	0.9	2.4	4.0	7.1	5.9	6.0	6.0	5.3	7.7	9.4	17.5	28.2	34.4	26.2	9.0	34.4
6-May	27.0	23.9	14.5	Z	19.0	17.2	19.9	15.0	9.0	3.9	3.2	2.7	0.8	0.4	0.3	0.4	0.5	0.5	0.6	4.7	7.4	2.4	2.3	1.3	7.7	27.0
7-May	1.8	7.0	5.1	4.1	Z	8.8	10.6	7.5	3.6	1.7	1.4	1.3	1.2	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.6	10.6
8-May	0.6	0.5	0.4	0.4	18.9	Z	19.6	25.5	9.6	11.0	6.6	5.8	4.2	5.4	5.2	2.6	2.5	2.2	3.8	4.6	2.4	5.3	7.4	5.9	6.5	25.5
9-May	Z	4.9	6.1	5.7	3.4	3.2	1.9	0.4	0.3	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	1.5	6.1
10-May	0.2	Z	0.7	0.3	0.4	0.5	0.2	0.4	0.4	0.5	0.4	0.6	0.8	1.1	0.7	1.1	0.7	0.8	0.9	3.8	4.9	3.1	2.3	1.2	1.1	4.9
11-May	0.8	0.7	Z	1.3	5.9	17.5	30.3	29.3	10.2	15.6	10.7	7.8	4.0	2.2	2.9	3.0	7.3	4.9	4.1	4.2	10.5	26.7	27.5	32.6	11.3	32.6
12-May	27.1	27.6	21.7	Z	32.5	22.6	18.0	13.4	6.5	2.9	2.9	3.0	2.2	1.8	1.9	1.6	1.2	1.4	2.8	3.1	9.8	16.7	10.1	14.2	10.7	32.5
13-May	18.7	11.5	12.3	14.6	Z	4.4	6.5	7.1	8.9	4.3	2.9	2.9	3.3	2.8	2.0	1.5	1.4	1.8	3.4	1.9	3.2	3.2	2.9	3.6	5.4	18.7
14-May	6.0	9.1	10.0	3.8	2.1	2.1	3.3	M	Z	2.6	0.7	2.5	3.7	3.1	1.5	2.8	2.7	0.9	0.9	1.6	1.3	2.5	2.4	1.9	3.1	10.0
15-May	Z	5.3	4.1	2.7	6.4	3.0	1.8	4.9	1.3	0.6	0.7	1.4	3.0	2.5	1.9	1.7	1.8	1.4	1.6	2.9	8.0	13.9	12.5	13.2	4.2	13.9
16-May	20.4	Z	17.3	12.1	16.7	21.9	14.4	11.9	11.1	10.7	9.7	6.3	5.6	2.9	2.9	3.0	3.7	3.9	3.1	3.1	5.7	21.8	19.7	1.5	10.0	21.9
17-May	0.5	0.9	Z	0.6	1.3	0.9	1.0	2.2	3.7	5.0	5.1	2.8	2.2	2.0	1.6	1.6	2.3	1.3	1.5	1.3	1.2	0.7	0.3	0.3	1.8	5.1
18-May	0.6	1.8	5.7	Z	3.1	0.9	2.4	5.9	8.9	9.0	5.1	3.7	2.0	1.6	2.1	1.7	1.2	2.0	2.5	1.8	1.4	0.7	0.7	0.5	2.8	9.0
19-May	2.2	7.3	4.5	3.3	Z	4.4	6.5	2.0	2.5	3.9	2.6	2.2	1.8	1.9	1.9	2.5	2.1	1.5	1.3	3.2	2.5	2.0	2.6	4.0	3.0	7.3
20-May	2.1	2.5	2.6	2.2	2.0	Z	1.9	2.9	2.2	1.8	2.0	2.6	2.8	2.7	2.5	1.4	1.8	4.5	3.3	3.0	2.9	3.7	3.0	3.2	2.6	4.5
21-May	Z	2.5	1.6	2.6	3.6	4.6	4.7	5.8	8.0	6.0	3.0	3.6	4.4	2.5	3.0	7.9	6.8	4.1	6.2	4.1	4.7	1.5	1.8	3.3	4.2	8.0
22-May	2.3	Z	3.7	4.1	3.8	3.4	4.1	2.7	2.7	2.0	1.2	1.4	1.5	1.5	3.0	5.3	4.6	2.8	4.3	1.9	1.5	2.2	3.0	6.8	3.0	6.8
23-May	8.1	4.9	Z	3.3	1.9	5.1	7.8	7.0	7.0	4.7	2.1	3.1	2.9	2.1	1.8	2.2	1.2	2.5	3.0	2.3	2.4	3.0	3.4	3.6	3.7	8.1
24-May	7.6	4.5	2.4	Z	2.5	9.1	7.4	9.5	6.0	5.0	6.5	5.6	3.3	1.4	0.9	0.9	2.3	2.6	0.8	2.1	3.5	3.8	3.9	4.8	4.2	9.5
25-May	5.6	4.8	5.4	6.6	Z	3.4	5.4	7.7	4.5	2.7	1.1	1.2	1.0	0.9	0.8	0.9	0.8	1.1	1.0	1.5	1.3	1.5	1.1	2.1	2.7	7.7
26-May	2.9	4.7	3.6	3.2	2.9	Z	6.9	8.8	6.6	5.4	4.1	1.9	1.0	0.9	0.9	0.8	1.1	1.0	1.9	0.9	0.7	0.6	0.7	0.6	2.7	8.8
27-May	Z	0.8	0.4	0.4	0.6	0.9	1.5	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.6	1.6	1.4	1.0	0.8	0.7	0.7	0.9	0.7	1.6
28-May	0.9	Z	0.7	0.7	0.7	0.6	1.0	0.8	0.8	0.7	1.2	0.4	0.5	0.6	0.7	1.7	1.9	1.4	1.9	1.3	1.3	1.8	4.2	2.6	1.2	4.2
29-May	3.3	4.3	Z	3.3	1.8	2.1	4.0	7.3	7.2	2.6	3.6	1.5	1.8	0.9	1.5	1.4	3.9	4.3	4.4	2.4	2.1	4.4	4.7	7.3	3.5	7.3
30-May	16.4	13.5	19.2	Z	5.4	7.7	4.0	11.4	3.9	2.5	4.6	2.3	1.3	1.7	2.7	4.6	5.2	4.4	3.9	3.3	3.9	6.1	9.4	7.1	6.3	19.2
31-May	4.5	2.9	1.6	2.2	Z	4.5	4.4	4.7	6.1	8.3	6.3	3.3	3.1	3.8	8.0	6.0	3.5	1.5	2.3	8.7	9.4	3.7	9.2	11.7	5.2	11.7
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	96.61	96.61
21 - 40	24	3.39	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	49	51	28	13	7	13	114	141	57	45	48	19	19	29	16	26	675
21 - 40	5	7	1	0	0	1	0	1	0	0	0	0	1	2	3	3	24
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	58	29	13	7	14	114	142	57	45	48	19	20	31	19	29	699

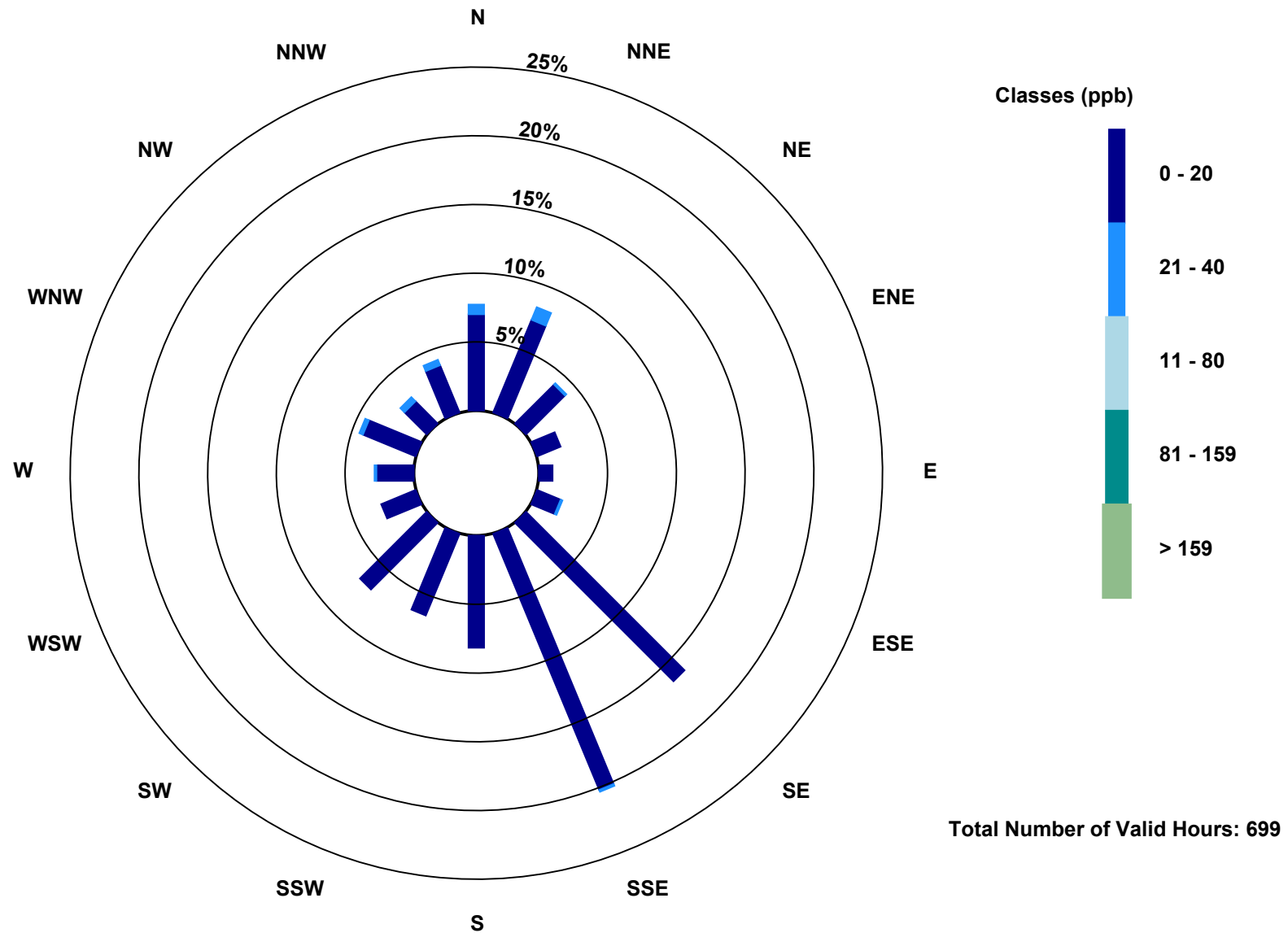
Total Number of Valid Hours: 699

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

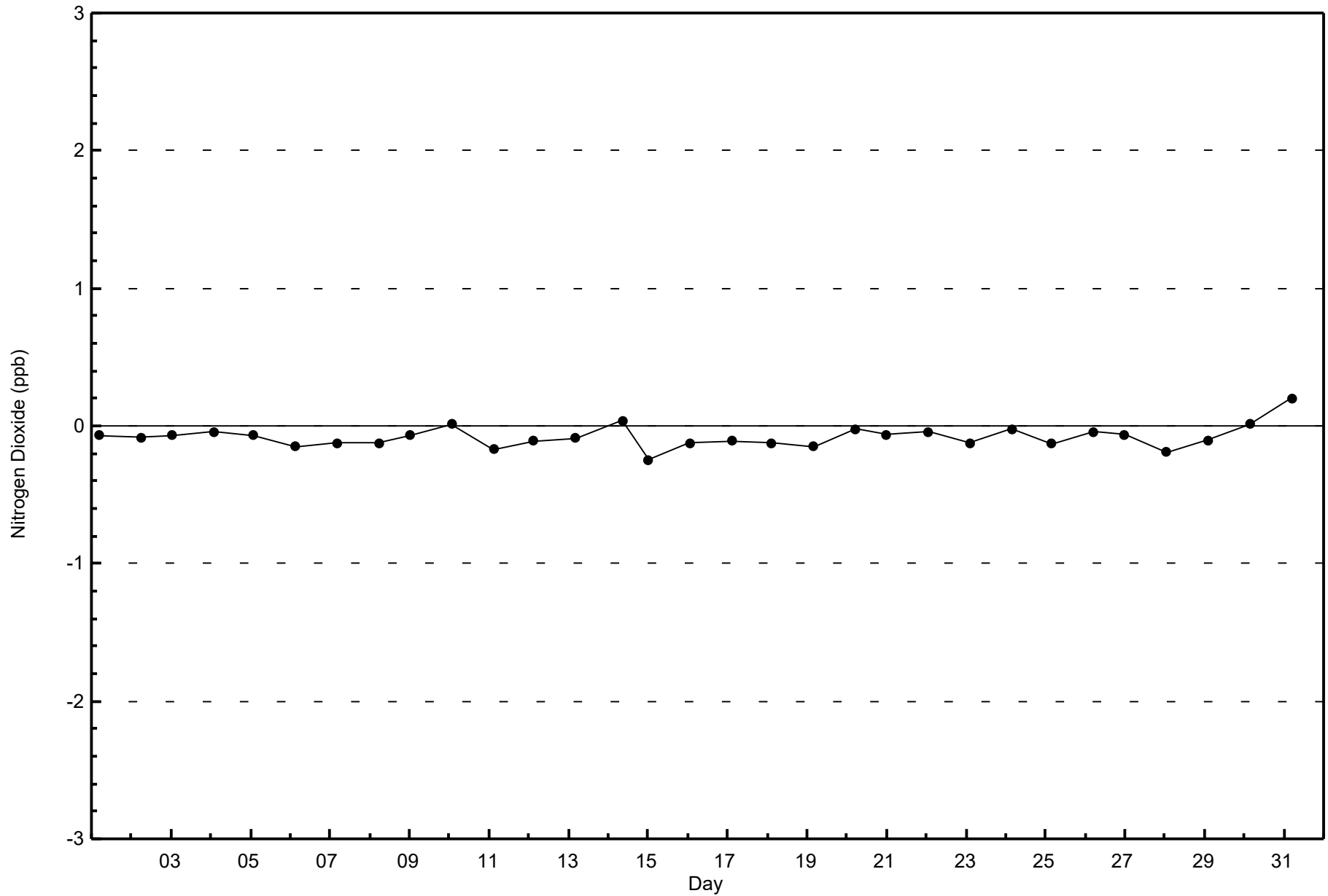
Nitrogen Dioxide (NO₂) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

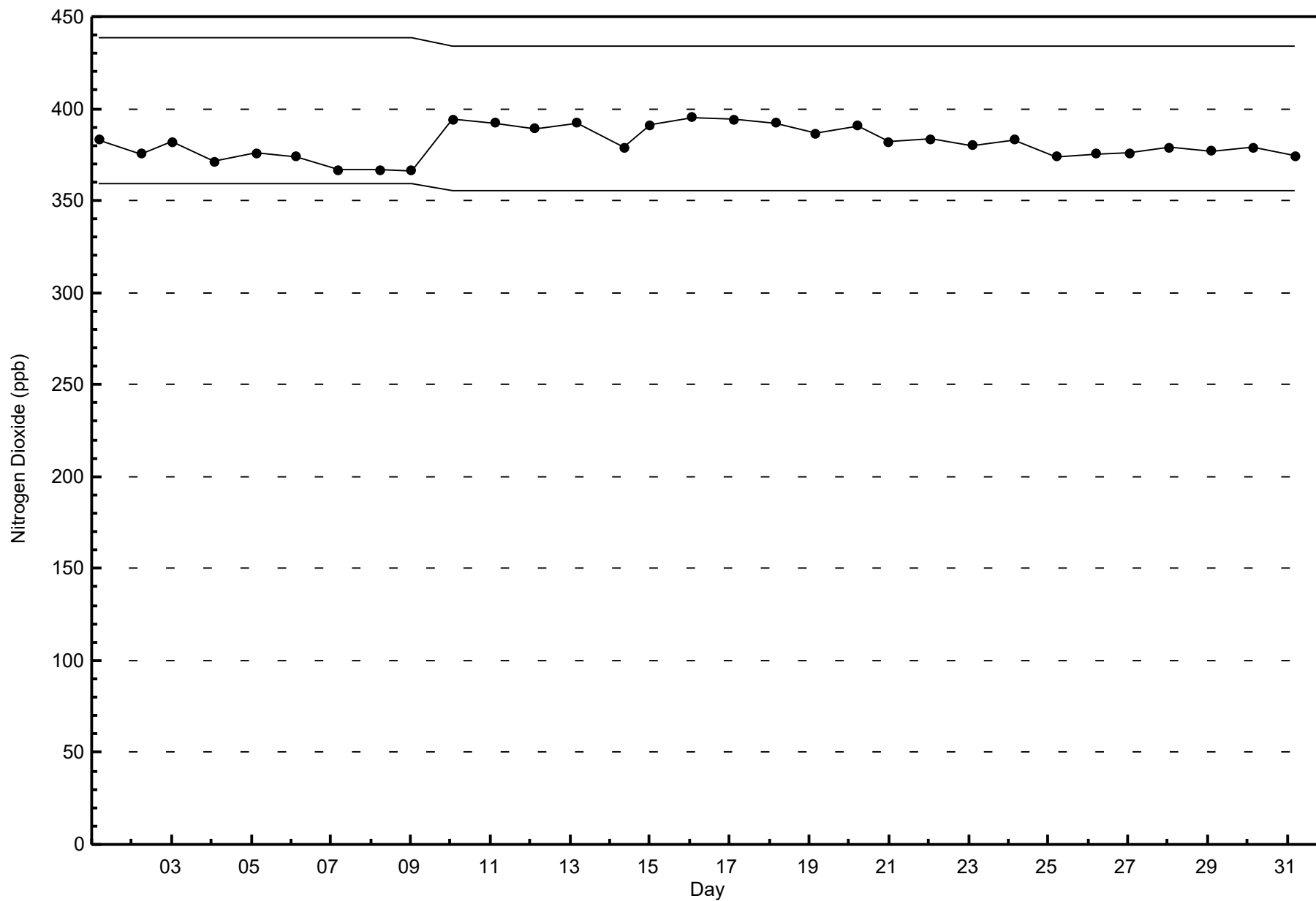
Nitrogen Dioxide (NO₂) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

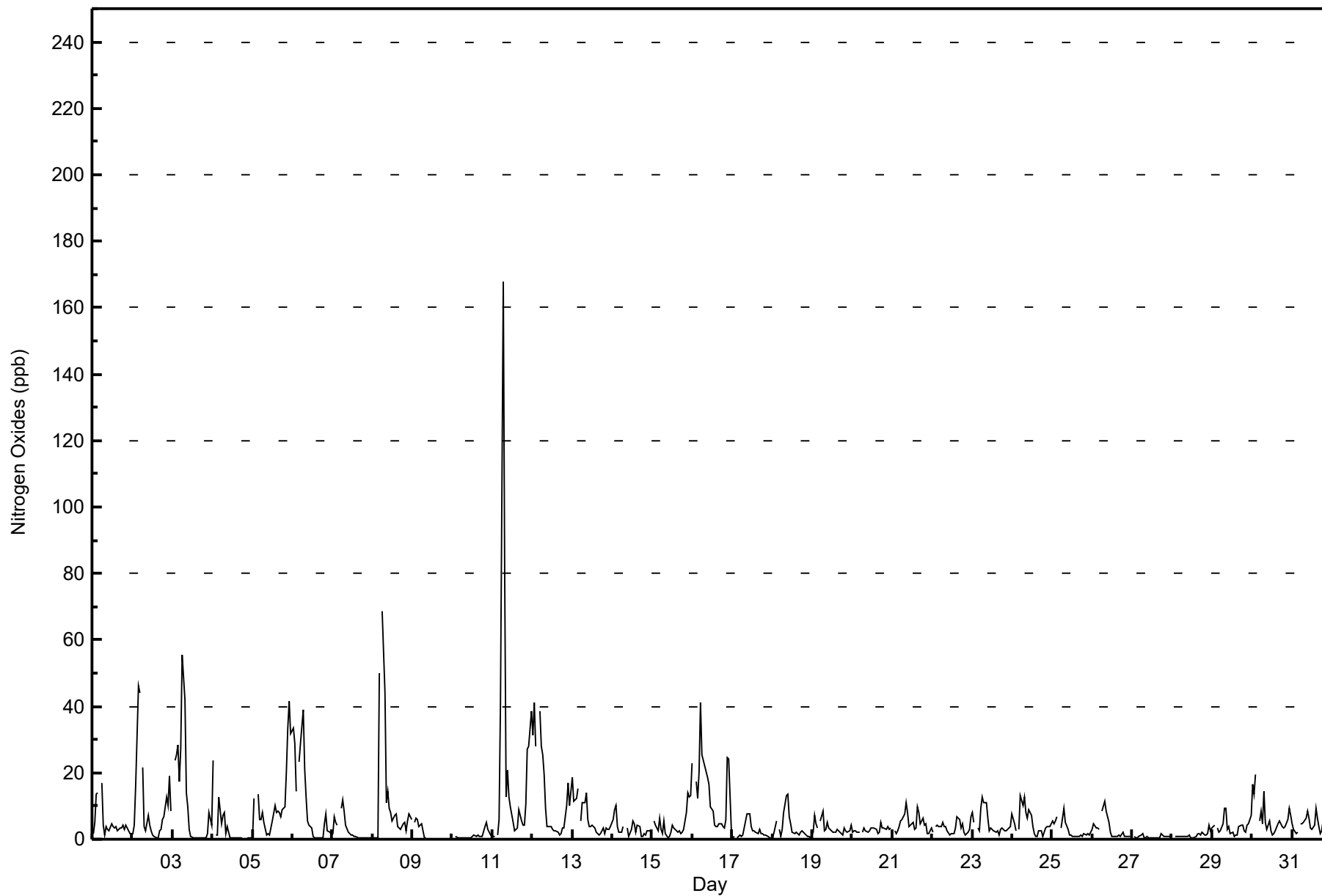
Ells River - May 2025

Maximum Value: 167.9 ppb on May 11 07:00																			Maximum Daily Average: 21.5 ppb on May 11										Hours in Service: 744	
Minimum Value: 0.1 ppb on May 9 20:00																			Minimum Daily Average: 0.8 ppb on May 27										Hours of Data: 707	
Maximum Diurnal Average: 17.2 ppb at hour 7																			Minimum Diurnal Average: 2.4 ppb at hour 15										Hours of Missing Data: 37	
Monthly Average: 5.98 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.4 Median = 3.2 Q ₃ = 6.0 P ₉₀ = 13.3 P ₉₉ = 43.8										Hours of Calibration: 36	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	1.9	5.0	13.6	14.1	Z	16.9	4.3	1.4	3.6	3.1	2.7	4.7	3.8	3.5	3.6	2.6	3.2	3.4	4.1	3.0	4.4	3.3	1.6	1.6	4.8	16.9				
2-May	1.9	4.4	16.0	46.2	44.2	Z	21.6	3.8	2.6	7.2	4.1	2.7	1.2	0.9	0.4	0.5	2.7	2.9	6.0	6.7	12.7	10.2	19.2	8.5	9.9	46.2				
3-May	Z	23.8	25.6	28.4	17.2	27.2	55.5	42.0	14.0	9.8	2.8	1.0	0.5	0.4	0.3	0.3	0.3	0.5	0.3	0.5	0.6	1.7	8.1	4.4	11.5	55.5				
4-May	23.6	Z	1.3	1.5	12.5	4.5	7.1	7.9	1.9	3.9	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.3	3.0	23.6				
5-May	0.6	12.2	Z	13.7	5.7	5.9	8.0	5.2	1.4	1.8	1.1	3.4	5.7	10.2	8.2	8.3	8.2	6.8	9.1	10.0	20.3	33.3	41.5	31.7	11.0	41.5				
6-May	33.3	28.9	14.6	Z	23.4	29.0	39.1	21.3	12.6	5.5	4.3	3.5	0.8	0.4	0.3	0.4	0.5	0.5	0.6	4.8	7.4	2.4	2.3	1.3	10.3	39.1				
7-May	1.8	7.0	5.1	4.1	Z	9.2	11.9	8.6	4.1	1.9	1.5	1.3	1.2	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.7	11.9				
8-May	0.6	0.5	0.4	0.4	50.1	Z	68.8	44.0	11.0	14.2	9.3	8.1	5.6	7.2	7.8	3.8	3.6	2.9	4.5	5.0	2.5	5.4	7.5	6.0	11.7	68.8				
9-May	Z	5.0	6.3	5.9	3.7	4.7	2.6	0.6	0.4	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	1.7	6.3				
10-May	0.2	Z	0.7	0.3	0.4	0.5	0.2	0.4	0.4	0.5	0.4	0.6	0.9	1.2	0.8	1.2	0.7	0.8	0.9	3.8	5.0	3.1	2.3	1.2	1.1	5.0				
11-May	0.8	0.7	Z	1.3	6.1	41.1	167.9	79.0	12.7	20.8	12.6	9.7	5.0	2.5	3.2	3.3	8.8	5.5	4.4	4.3	10.6	27.0	28.0	38.8	21.5	167.9				
12-May	31.4	41.1	27.8	Z	38.7	28.2	25.3	19.3	9.1	3.8	3.7	3.9	2.8	2.3	2.4	1.9	1.4	1.6	3.2	3.3	10.0	16.8	10.2	14.3	13.2	41.1				
13-May	18.8	11.6	12.4	15.1	Z	5.5	11.2	11.1	13.8	6.1	3.9	3.8	4.2	3.3	2.3	1.6	1.5	1.8	3.4	1.9	3.2	3.2	2.9	3.6	6.4	18.8				
14-May	6.0	9.1	10.0	3.8	2.1	2.1	3.6	M	Z	3.4	0.7	3.1	5.5	4.5	2.2	4.1	3.8	1.0	0.9	1.6	1.3	2.5	2.4	1.9	3.4	10.0				
15-May	Z	5.3	4.1	2.7	6.5	3.1	1.9	5.5	1.6	0.6	0.8	2.0	4.3	3.5	2.6	2.2	2.4	1.8	1.9	3.1	8.1	14.0	12.6	13.3	4.5	14.0				
16-May	22.8	Z	17.5	12.2	20.2	41.2	25.5	21.9	20.5	18.8	16.7	9.8	8.4	4.0	3.8	3.9	4.7	4.8	3.6	3.3	5.8	24.8	24.3	1.6	13.9	41.2				
17-May	0.5	1.0	Z	0.6	1.3	0.9	1.1	3.2	5.5	7.5	7.5	3.8	2.7	2.4	1.9	1.8	2.8	1.5	1.7	1.4	1.4	0.8	0.3	0.3	2.3	7.5				
18-May	0.6	1.8	5.7	Z	3.2	1.0	3.1	8.2	13.3	13.4	6.8	4.5	2.3	1.7	2.3	1.8	1.3	2.1	2.6	1.8	1.4	0.7	0.7	0.5	3.5	13.4				
19-May	2.2	7.3	4.5	3.3	Z	5.4	8.3	2.4	3.1	5.2	3.3	2.6	2.1	2.2	2.1	2.8	2.5	1.7	1.4	3.3	2.6	2.1	2.7	4.2	3.4	8.3				
20-May	2.2	2.6	2.7	2.3	2.2	Z	2.2	3.3	2.6	2.1	2.5	3.3	3.4	3.2	2.9	1.6	2.1	5.1	3.6	3.2	3.0	3.8	3.1	3.3	2.9	5.1				
21-May	Z	2.7	1.7	2.7	3.9	5.4	5.8	7.6	10.9	8.1	3.8	4.4	5.2	2.8	3.3	9.9	8.2	4.5	6.6	4.2	4.9	1.5	1.8	3.3	4.9	10.9				
22-May	2.3	Z	3.8	4.2	3.9	3.8	5.3	3.7	3.7	2.4	1.3	1.5	1.6	1.8	3.5	6.8	5.7	3.3	4.9	2.0	1.5	2.2	3.0	6.8	3.4	6.8				
23-May	8.1	5.0	Z	3.4	2.6	9.3	12.5	11.2	10.8	6.4	2.5	3.5	3.1	2.5	2.1	2.4	1.4	2.9	3.4	2.5	2.5	3.0	3.5	3.7	4.7	12.5				
24-May	7.7	4.6	2.5	Z	3.1	13.3	10.1	12.7	8.1	6.4	8.7	7.2	3.9	1.6	0.9	0.9	2.4	2.7	0.8	2.1	3.5	3.8	3.9	4.8	5.0	13.3				
25-May	5.6	4.8	5.4	6.6	Z	3.6	6.2	9.4	5.3	3.1	1.2	1.2	1.0	0.9	0.8	0.9	0.8	1.1	1.0	1.5	1.3	1.5	1.1	2.1	2.9	9.4				
26-May	2.9	4.7	3.6	3.4	3.1	Z	8.3	11.4	8.4	6.7	4.9	2.1	1.0	1.0	0.9	0.8	1.1	1.0	1.9	0.9	0.7	0.7	0.8	0.7	3.1	11.4				
27-May	Z	0.9	0.5	0.5	0.8	1.2	1.9	0.6	0.6	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.6	1.6	1.4	1.0	0.8	0.7	0.7	0.9	0.8	1.9				
28-May	0.9	Z	0.7	0.7	0.7	0.6	1.0	0.8	0.8	0.7	1.3	0.4	0.5	0.6	0.7	1.7	1.9	1.4	1.9	1.3	1.3	1.8	4.2	2.6	1.2	4.2				
29-May	3.4	4.4	Z	3.5	2.3	2.6	4.6	9.3	9.2	2.8	3.9	1.6	1.9	0.9	1.5	1.4	4.0	4.3	4.4	2.4	2.1	4.4	4.7	7.3	3.8	9.3				
30-May	16.5	13.6	19.4	Z	5.6	8.4	4.5	14.5	4.9	3.0	5.6	2.6	1.3	1.7	2.7	4.6	5.3	4.5	4.0	3.4	3.9	6.1	9.4	7.1	6.6	19.4				
31-May	4.5	2.9	1.6	2.2	Z	4.7	4.6	4.9	6.4	8.6	6.5	3.4	3.2	4.1	9.2	6.5	3.7	1.6	2.4	8.9	9.5	3.7	9.3	11.8	5.4	11.8				
7.7 8.1 8.0 7.0 10.5 10.3 17.2 12.5 6.8 5.9 4.2 3.3 2.8 2.4 2.4 2.6 2.8 2.4 2.8 3.0 4.3 6.0 6.9 6.1																								Diurnal Average						
33.3 41.1 27.8 46.2 50.1 41.2 167.9 79.0 20.5 20.8 16.7 9.8 8.4 10.2 9.2 9.9 8.8 6.8 9.1 10.0 20.3 33.3 41.5 38.8																								Diurnal Maximum						
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	665	94.06	94.06
21 - 40	29	4.10	98.16
41 - 80	12	1.70	99.86
81 - 159	0	0.00	99.86
> 159	1	0.14	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Ells River - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	45	50	28	13	7	13	112	140	57	45	47	19	17	25	16	24	658
21 - 40	8	6	1	0	0	0	1	1	0	0	1	0	1	2	3	4	28
11 - 80	1	2	0	0	0	1	1	1	0	0	0	0	2	4	0	0	12
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Totals	54	58	29	13	7	14	114	142	57	45	48	19	20	31	19	29	699

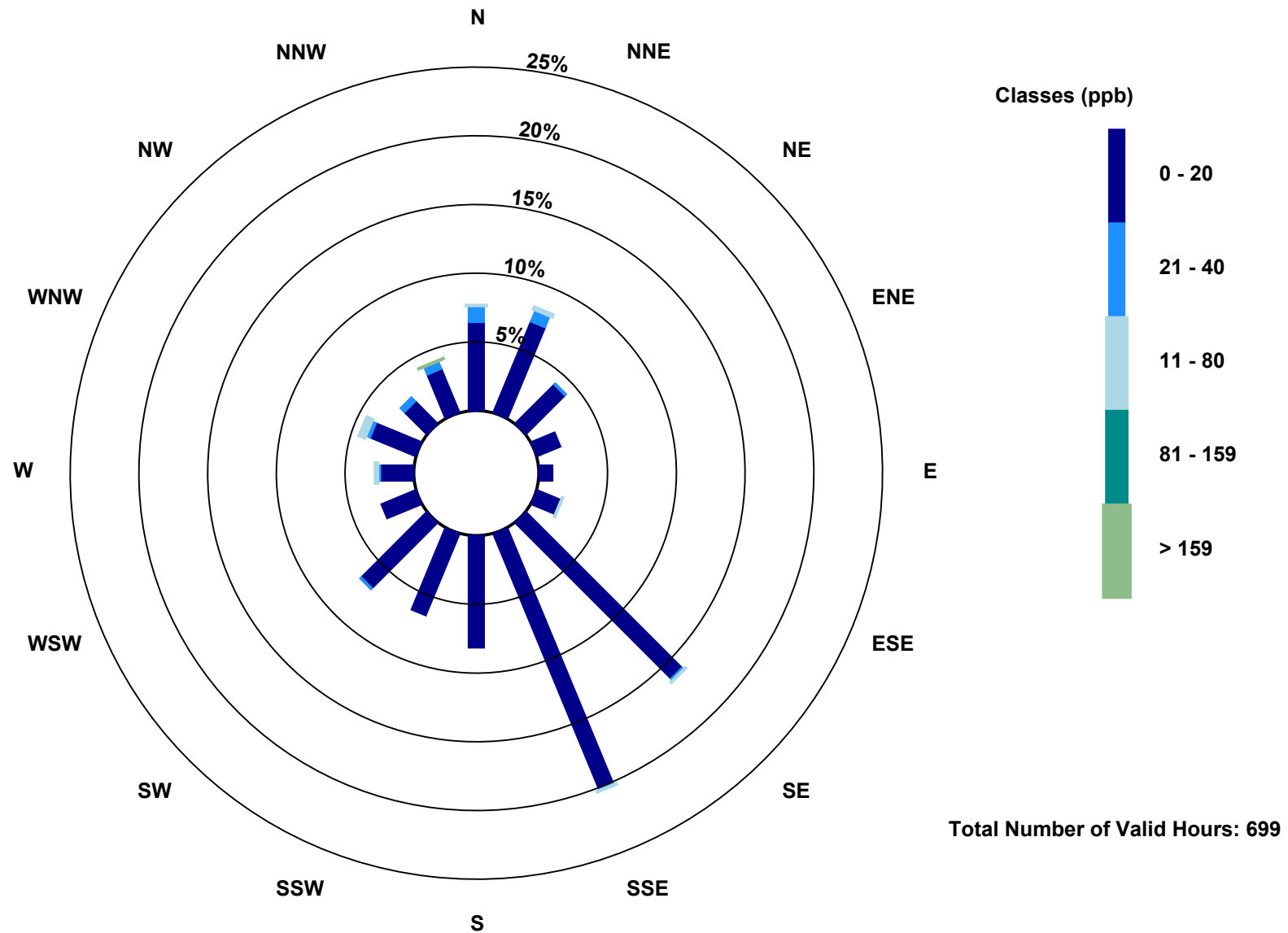
Total Number of Valid Hours: 699

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

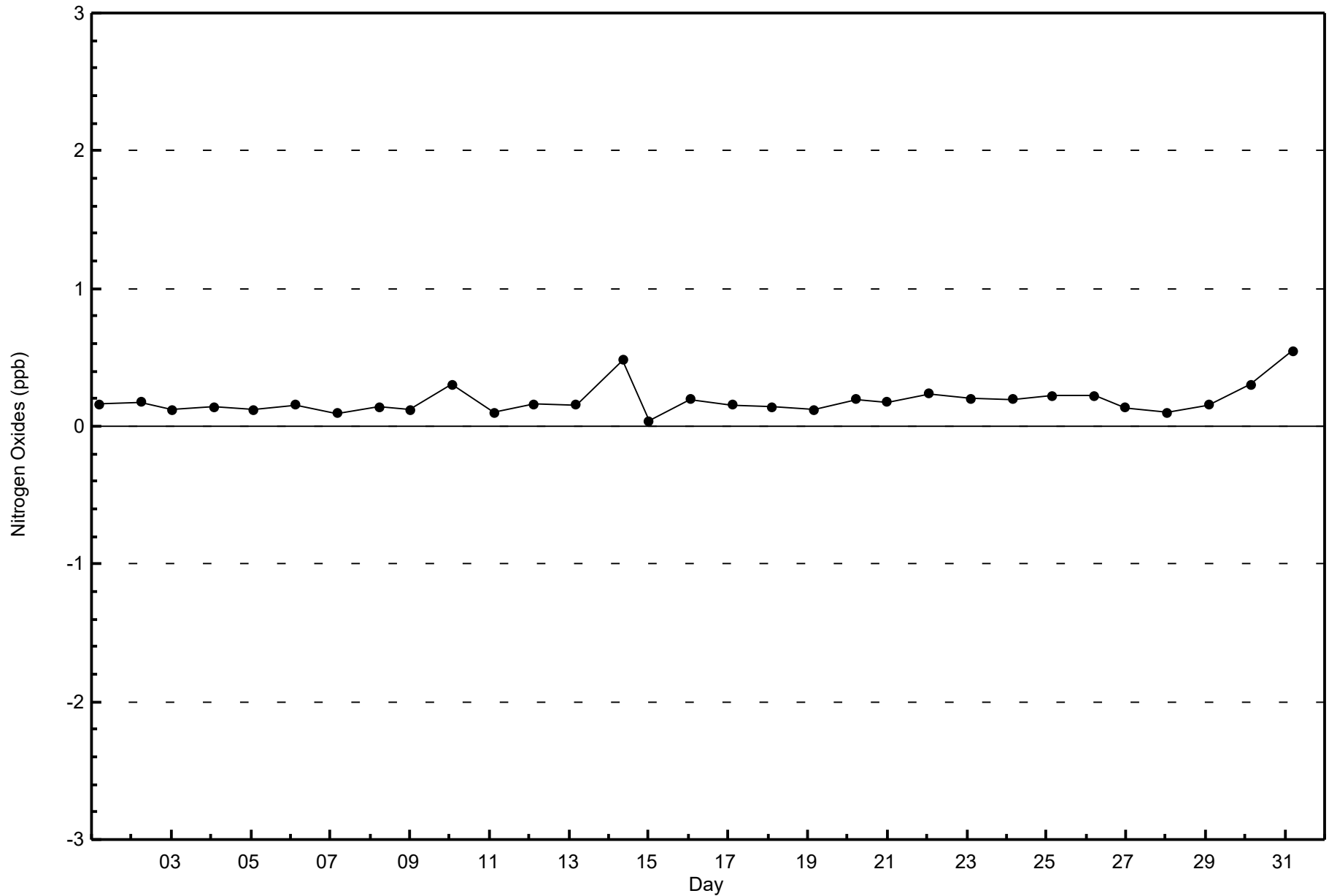
Nitrogen Oxides (NO_x) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

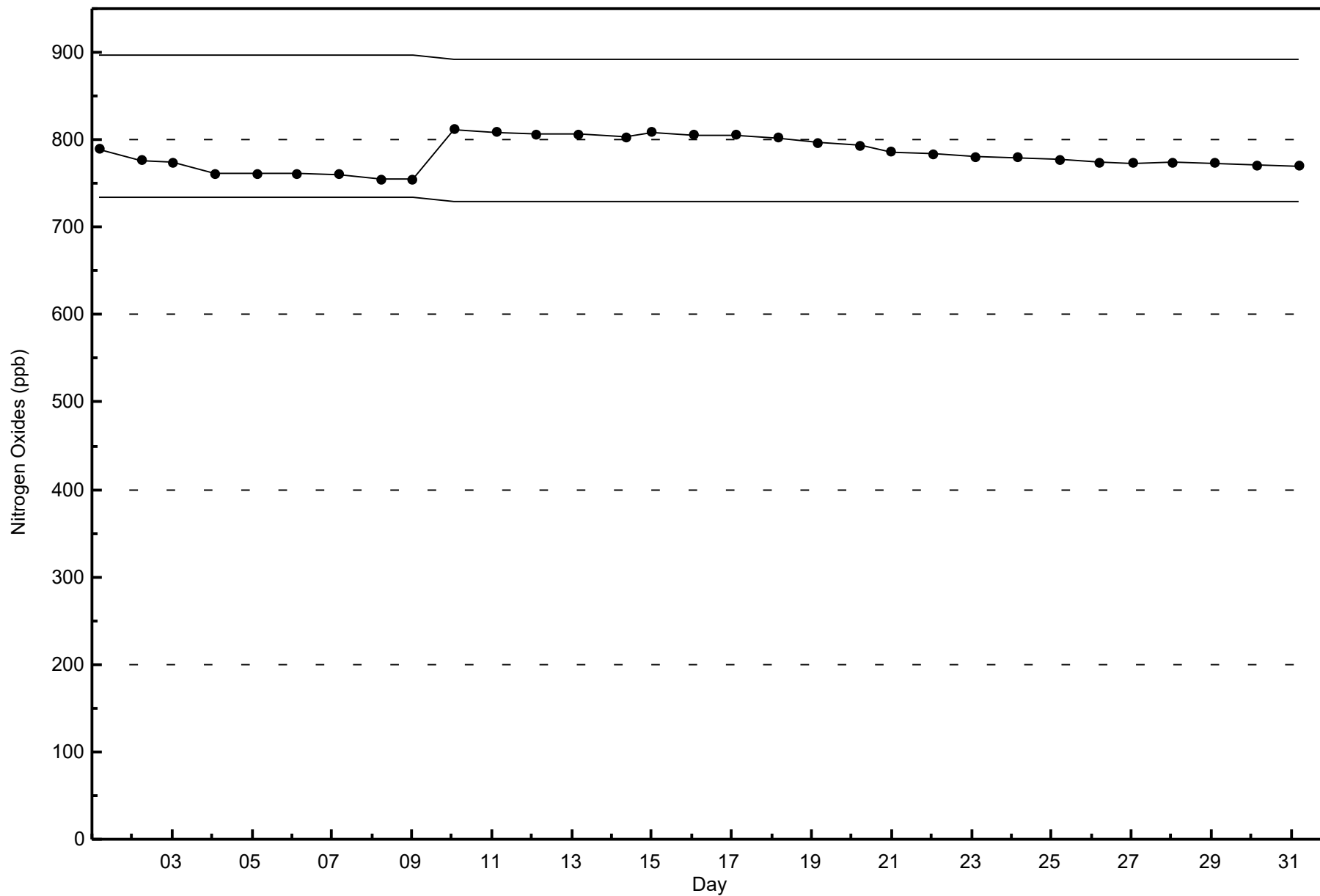
Nitrogen Oxides (NO_x) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Particulate Matter 2.5 (PM_{2.5}) - µg/m³

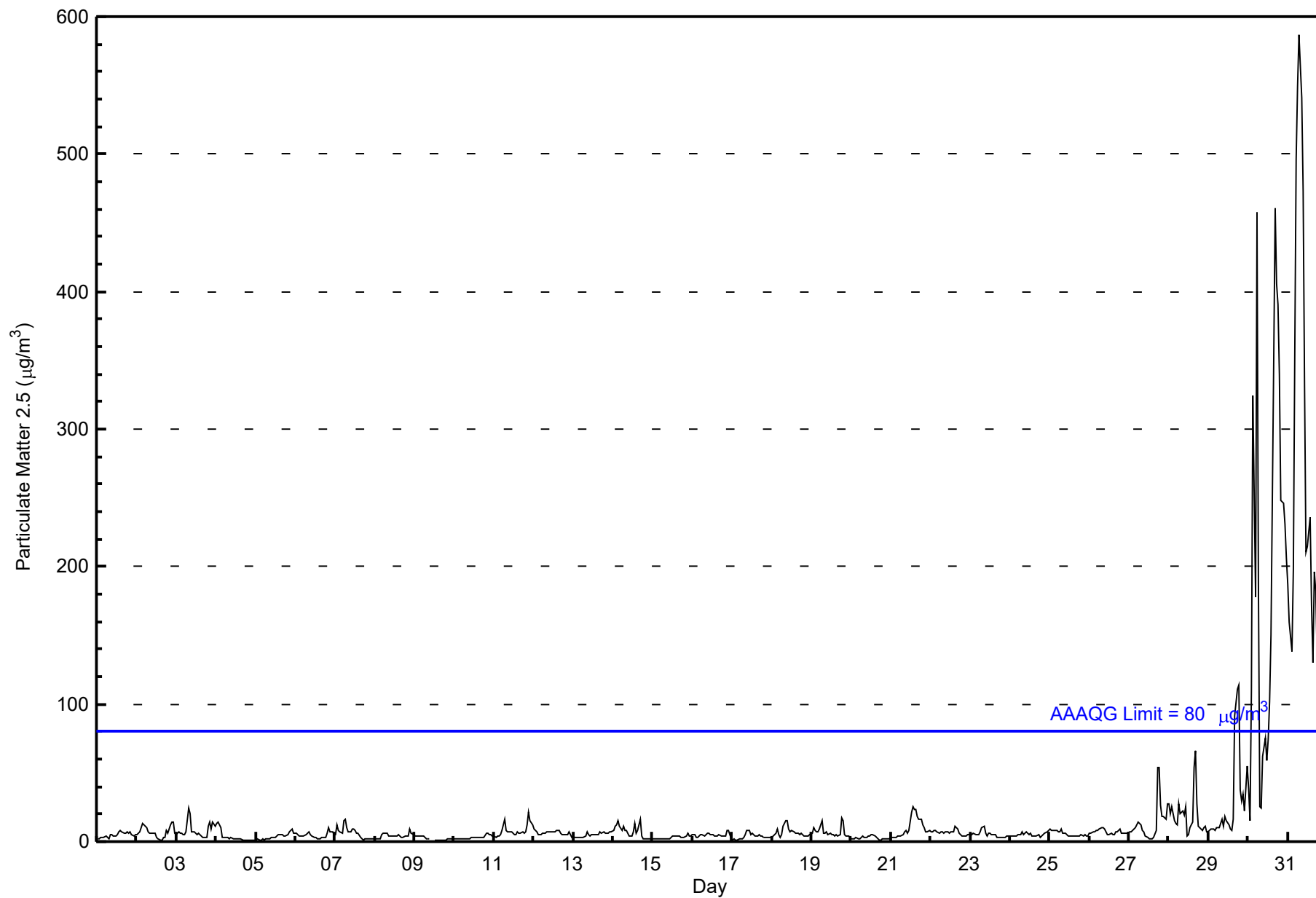
Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 40 24-hr: 2 Maximum Value: 587.0 µg/m³ on May 31 08:00 Minimum Value: 0.9 µg/m³ on May 4 20:00 Maximum Diurnal Average: 36.5 µg/m³ at hour 6 Monthly Average: 21.05 µg/m³																				Maximum Daily Average: 247.0 µg/m³ on May 31 Minimum Daily Average: 2.4 µg/m³ on May 9 Minimum Diurnal Average: 11.5 µg/m³ at hour 2 Percentiles: P ₁ = 1.0 P ₁₀ = 2.2 Q ₁ = 3.5 Median = 5.5 Q ₃ = 8.3 P ₉₀ = 20.1 P ₉₉ = 399.5				Hours in Service: 744 Hours of Data: 742 Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	2.0	2.4	2.8	2.8	2.8	4.1	2.8	2.5	4.9	5.0	4.1	4.0	4.9	6.7	7.9	6.7	6.4	6.5	7.0	5.8	6.6	4.8	4.3	4.7	4.7	7.9
2-May	4.9	5.7	7.5	12.8	11.7	11.4	10.3	6.8	6.0	6.3	6.5	6.2	3.0	2.0	1.5	1.4	3.0	3.0	8.4	6.6	12.7	14.2	13.9	6.2	7.2	14.2
3-May	4.9	6.7	6.4	5.9	5.3	5.5	6.8	24.6	20.1	7.3	7.1	7.0	5.5	6.0	5.1	4.0	3.2	2.9	3.0	11.1	14.5	9.0	14.6	11.2	8.2	24.6
4-May	12.9	14.4	12.4	9.8	3.5	2.9	2.7	2.8	2.5	2.6	2.4	2.2	2.3	2.2	1.9	1.7	1.5	1.1	1.0	0.9	0.9	0.9	1.0	3.6	14.4	
5-May	0.9	2.5	1.0	1.2	1.7	1.2	1.9	2.5	2.4	2.9	2.6	2.9	3.5	5.2	4.7	4.9	4.7	4.4	4.5	5.0	7.0	8.3	8.7	6.2	3.8	8.7
6-May	5.8	5.4	4.4	4.3	4.2	4.2	4.9	6.4	7.5	4.8	3.7	3.5	2.7	2.2	2.1	2.3	2.6	2.6	2.7	5.9	10.4	7.2	6.7	5.3	4.7	10.4
7-May	4.8	11.8	8.2	7.0	6.4	15.6	16.3	10.3	7.1	7.3	8.9	8.8	8.2	6.5	5.6	3.0	1.7	1.5	1.7	1.7	1.8	1.8	1.8	2.0	6.2	16.3
8-May	2.1	2.2	2.3	2.5	5.5	6.4	6.5	6.4	4.4	4.3	4.1	4.5	4.5	4.3	5.1	3.8	3.4	3.6	3.6	4.5	4.4	8.9	5.7	4.6	4.5	8.9
9-May	3.9	4.0	4.1	4.1	3.8	4.0	3.4	2.4	2.3	2.3	C	C	1.2	1.2	1.1	1.4	1.4	1.5	1.5	1.5	1.7	1.6	1.7	2.1	2.4	4.1
10-May	1.9	1.9	1.9	2.1	2.4	2.4	2.5	2.5	2.3	2.5	2.7	2.6	2.6	2.8	2.6	2.9	2.9	3.1	3.0	5.8	5.9	5.3	5.1	4.4	3.1	5.9
11-May	3.7	3.4	3.6	4.1	5.5	7.8	16.4	8.6	7.0	7.3	6.7	6.8	5.2	4.8	6.8	6.5	6.6	6.8	6.3	6.8	11.9	20.9	15.2	12.0	7.9	20.9
12-May	9.1	8.4	7.1	5.2	5.4	5.6	6.0	6.1	7.2	6.8	6.6	7.1	7.2	7.5	8.4	7.8	5.6	5.3	5.4	5.1	5.4	7.1	5.2	3.0	6.4	9.1
13-May	3.6	3.4	2.8	3.4	3.0	2.6	2.8	3.7	6.8	5.3	4.5	4.6	4.7	4.8	4.7	5.5	6.7	6.2	7.6	5.8	6.4	6.2	7.3	7.6	5.0	7.6
14-May	8.2	11.4	11.9	15.2	10.8	8.2	10.9	7.9	7.9	5.9	3.6	4.5	6.8	13.7	6.2	8.4	16.4	4.0	2.4	2.5	2.3	2.4	2.1	1.8	7.3	16.4
15-May	2.0	2.2	2.0	2.0	2.3	2.2	1.9	2.3	2.0	2.0	2.3	2.8	3.7	4.0	4.1	3.7	3.9	3.3	3.0	3.4	3.7	5.9	4.2	4.0	3.0	5.9
16-May	5.2	4.9	2.6	2.9	3.9	5.2	5.0	4.6	5.1	5.8	6.4	5.3	5.5	4.1	4.6	4.3	4.7	4.4	4.2	3.9	4.4	8.2	8.4	2.1	4.8	8.4
17-May	1.4	1.7	1.4	1.2	1.6	2.0	2.2	3.2	5.0	8.4	8.5	5.5	5.7	5.3	4.4	4.4	5.5	4.0	3.8	3.2	2.7	2.9	3.2	3.1	3.8	8.5
18-May	3.2	4.2	6.3	9.3	5.4	3.5	5.0	10.8	14.8	14.9	9.5	7.6	8.2	7.6	6.5	6.1	5.6	5.5	5.6	4.5	3.8	3.7	4.5	4.7	6.7	14.9
19-May	6.3	10.2	8.0	7.1	7.1	8.7	15.2	6.2	6.3	7.1	5.5	6.1	5.6	4.8	4.5	5.5	4.4	5.5	17.6	15.4	5.3	4.3	3.7	3.2	7.2	17.6
20-May	2.5	2.4	2.4	2.6	2.4	2.5	3.1	3.9	3.5	3.4	3.6	4.3	4.9	5.3	4.3	2.7	1.8	1.1	1.5	1.7	1.6	1.9	1.6	2.4	2.8	5.3
21-May	2.9	3.2	3.1	3.5	4.1	4.3	4.2	5.1	6.8	7.7	6.1	8.6	20.9	25.5	23.5	23.3	18.8	16.5	15.8	12.5	10.3	7.0	6.6	7.9	10.3	25.5
22-May	7.0	7.2	7.7	8.2	7.5	6.5	7.1	7.1	6.5	6.9	7.0	6.6	7.4	7.1	7.2	11.2	9.5	6.0	5.4	4.0	3.6	4.4	4.7	5.6	6.7	11.2
23-May	5.8	5.0	6.0	5.3	4.7	5.2	6.8	10.5	11.1	6.0	4.4	5.9	6.0	5.4	4.8	4.7	3.1	3.1	3.3	3.0	3.4	3.0	4.0	4.0	5.2	11.1
24-May	4.3	4.1	3.6	4.2	4.5	5.2	4.7	6.8	5.5	5.7	7.5	5.5	5.8	4.2	3.8	3.6	4.5	4.8	3.2	4.0	4.7	5.7	7.3	7.8	5.0	7.8
25-May	9.3	7.9	8.3	8.5	8.3	6.6	7.1	9.4	6.1	6.3	5.1	4.3	4.1	4.2	3.8	4.1	4.0	4.4	4.3	5.2	4.4	5.2	4.5	4.4	5.8	9.4
26-May	5.6	6.6	6.7	7.1	7.8	8.1	8.8	10.2	10.6	8.9	7.5	5.3	5.4	5.6	5.5	5.6	6.6	6.8	9.6	6.5	5.6	5.8	6.1	6.5	7.0	10.6
27-May	6.8	7.4	7.7	8.8	10.1	13.9	13.6	11.9	8.5	7.1	4.5	2.6	2.4	2.4	2.4	3.6	7.7	54.2	53.8	26.5	18.4	17.8	16.4	27.2	14.0	54.2
28-May	27.4	19.9	25.5	14.8	13.1	11.8	27.0	20.7	22.4	19.7	25.1	4.2	5.3	9.7	14.0	54.2	66.6	27.2	11.1	8.9	8.6	10.1	11.2	7.5	19.4	66.6
29-May	7.5	9.4	9.6	9.0	8.2	10.6	10.3	13.7	16.0	11.5	18.5	15.5	12.4	8.8	8.6	16.7	91.1	110.9	113.6	37.1	29.3	34.9	22.0	55.1	28.3	113.6
30-May	38.6	15.7	110.2	324.3	178.1	457.2	188.3	25.2	24.7	61.6	75.2	59.3	74.6	101.9	150.9	354.5	461.1	405.8	390.3	339.8	248.4	246.1	230.7	206.8	198.7	461.1
31-May	187.2	159.4	138.6	198.7	353.0	496.6	548.7	587.0	540.9	472.5	331.9	211.0	215.1	235.9	172.0	130.1	196.1	181.6	135.7	133.7	122.8	76.9	59.8	42.2	247.0	587.0
12.6 11.5 13.7 22.5 22.4 36.5 30.7 26.8 25.3 23.4 19.7 14.2 14.7 16.5 15.8 22.5 31.0 29.0 27.1 22.0 18.5 17.5 15.9 15.0																								Diurnal Average		
187.2 159.4 138.6 324.3 353.0 496.6 548.7 587.0 540.9 472.5 331.9 211.0 215.1 235.9 172.0 130.1 196.1 181.6 135.7 133.7 122.8 76.9 59.8 42.2																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 ($PM_{2.5}$) - $\mu g/m^3$
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Ells River - May 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	374	50.40	50.40
6 - 15	275	37.06	87.47
16 - 25	31	4.18	91.64
26 - 80	22	2.96	94.61
> 81.0	40	5.39	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Ells River - May 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	39	30	22	11	5	9	68	45	21	23	24	14	12	19	8	22	372
6 - 15	13	28	6	2	2	7	43	84	27	11	15	4	8	8	6	3	267
16 - 25	0	1	1	0	0	0	1	11	3	6	3	0	1	2	1	1	31
26 - 80	1	0	0	0	0	1	0	2	1	3	3	2	1	2	3	3	22
> 81.0	4	0	0	0	0	0	3	3	8	4	8	2	2	1	1	4	40
Totals	57	59	29	13	7	17	115	145	60	47	53	22	24	32	19	33	732

Total Number of Valid Hours: 732

Total Number of Hours: 744



Particulate Matter 2.5 (PM_{2.5}) - µg/m³





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

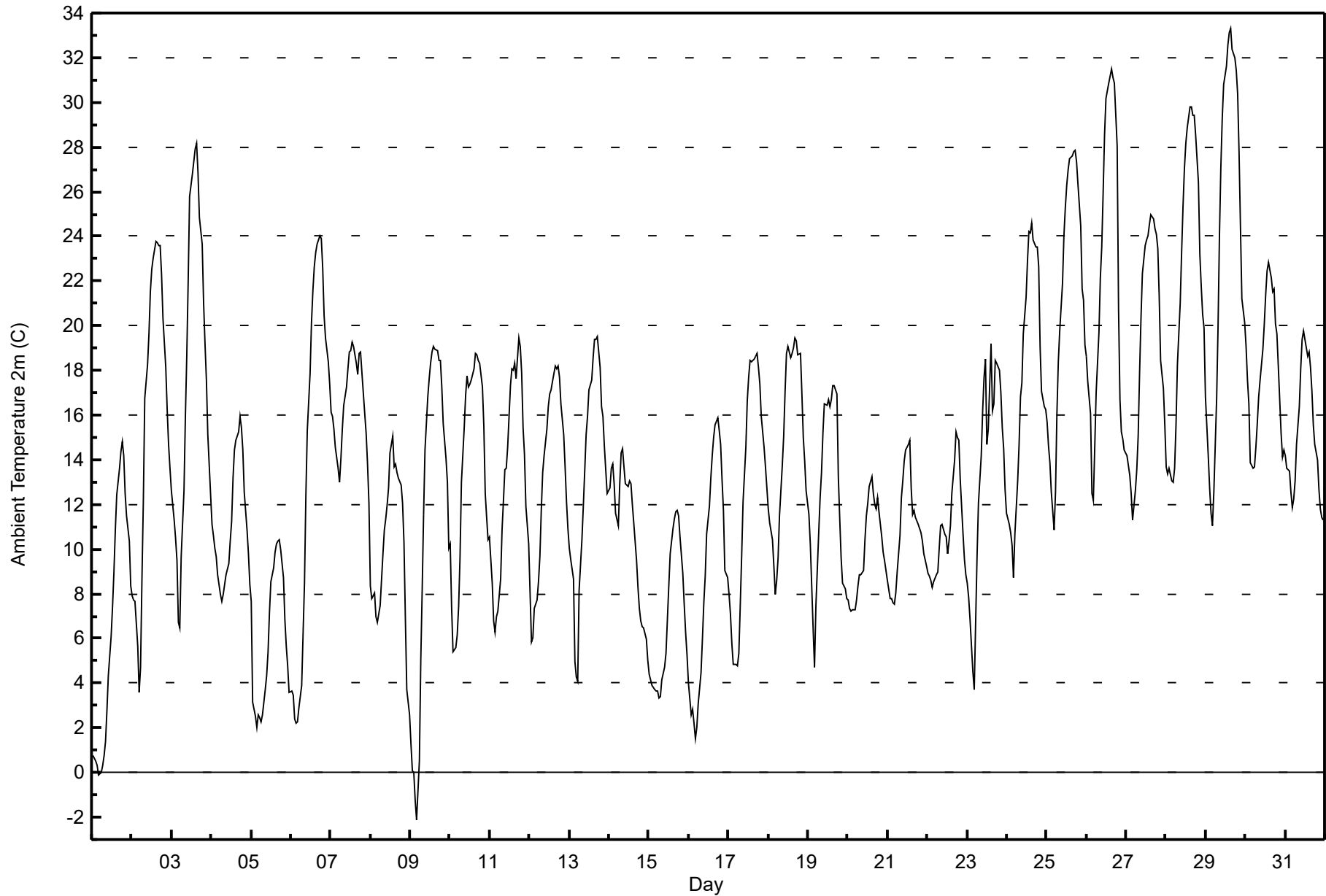
Ells River - May 2025

Maximum Value: 33.3 C on May 29 16:00																				Maximum Daily Average: 24.0 C on May 29				Hours in Service: 744			
Minimum Value: -2.1 C on May 9 05:00																				Minimum Daily Average: 6.0 C on May 5				Hours of Data: 744			
Maximum Diurnal Average: 19.2 C at hour 16																				Minimum Diurnal Average: 7.1 C at hour 5				Hours of Missing Data: 0			
Monthly Average: 13.97 C																				Percentiles: P ₁ = 0.4 P ₁₀ = 5.6 Q ₁ = 9.2 Median = 13.6 Q ₃ = 18.1 P ₉₀ = 23.4 P ₉₉ = 31.3				Hours of Calibration: 0			
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.7	0.6	0.5	0.3	-0.1	0.0	0.3	0.8	1.4	2.8	4.3	6.1	7.4	8.9	10.8	12.4	13.6	14.4	14.8	14.2	12.5	11.5	10.3	8.3	6.5	14.8	
2-May	7.9	7.7	7.6	5.7	3.6	4.7	8.7	12.2	16.8	18.2	19.7	21.6	22.5	23.0	23.8	23.7	23.6	23.6	22.2	20.3	18.2	16.3	14.7	13.6	15.8	23.8	
3-May	12.6	11.3	10.5	9.5	6.7	6.5	9.6	12.6	16.0	18.7	22.0	25.8	26.8	27.4	27.9	28.1	26.9	24.9	23.6	21.0	19.2	17.6	15.1	12.4	18.0	28.1	
4-May	11.1	10.6	10.0	9.6	8.9	8.0	7.7	8.0	8.4	8.9	9.3	10.4	11.3	13.2	14.4	14.9	15.2	16.0	15.4	14.5	12.5	10.9	9.8	8.4	11.1	16.0	
5-May	7.6	3.1	2.5	2.0	2.6	2.4	2.3	2.6	3.7	4.3	5.4	7.1	8.6	9.2	9.8	10.2	10.4	10.4	10.0	8.7	6.8	5.6	4.8	3.6	6.0	10.4	
6-May	3.6	3.4	2.4	2.2	2.3	2.9	3.9	6.2	8.5	12.4	15.3	17.9	20.2	21.6	22.6	23.3	23.7	24.0	23.9	22.6	20.4	19.5	18.4	17.4	14.1	24.0	
7-May	16.1	15.9	15.3	14.6	13.6	13.0	14.0	15.4	16.4	17.2	18.1	18.8	18.9	19.2	19.1	18.3	17.8	18.8	18.8	17.9	16.0	15.2	13.8	12.0	16.4	19.2	
8-May	8.3	7.8	8.0	7.0	6.7	7.1	7.5	9.8	10.9	11.4	12.0	12.7	14.3	15.1	13.7	13.8	13.4	13.2	12.9	12.0	10.3	6.9	3.7	2.6	10.0	15.1	
9-May	1.2	0.1	0.0	-1.2	-2.1	0.5	5.1	8.2	11.5	14.4	16.8	17.6	18.3	18.8	19.1	18.9	18.9	18.4	18.4	17.3	15.6	14.1	13.0	10.1	11.4	19.1	
10-May	10.2	7.4	5.4	5.6	6.1	7.4	9.6	13.0	15.5	16.9	17.7	17.2	17.4	17.6	18.1	18.8	18.7	18.5	18.3	17.2	15.5	12.5	11.4	10.4	13.6	18.8	
11-May	10.5	8.5	6.8	6.3	6.9	7.2	8.7	10.9	12.2	13.5	13.6	14.6	17.3	18.1	18.0	18.3	17.6	19.5	19.1	17.9	15.4	14.2	11.9	10.2	13.2	19.5	
12-May	8.1	5.9	6.0	7.4	7.7	8.5	9.7	11.7	13.4	14.2	15.4	16.4	17.0	17.1	17.5	18.2	18.0	18.2	17.7	16.5	15.1	13.7	12.1	10.9	13.2	18.2	
13-May	10.0	9.6	8.6	4.9	4.2	4.1	8.1	10.4	11.9	13.5	15.1	16.0	17.1	17.6	18.6	19.4	19.4	19.5	18.1	16.4	16.0	14.6	13.5	12.5	13.3	19.5	
14-May	12.7	13.6	13.8	13.0	11.6	11.1	13.0	14.3	14.5	13.7	12.9	12.8	13.1	13.0	12.0	11.2	9.5	8.3	7.3	6.8	6.5	6.4	6.0	5.0	10.9	14.5	
15-May	4.4	4.2	3.9	3.7	3.6	3.6	3.3	3.4	4.2	4.7	5.4	6.9	8.4	9.8	10.9	11.4	11.7	11.8	11.5	10.5	8.9	7.5	6.3	5.3	6.9	11.8	
16-May	4.0	2.6	2.8	2.2	1.5	2.0	3.1	4.5	6.0	7.6	8.8	10.7	11.9	13.2	14.2	15.0	15.5	15.9	15.3	14.7	13.1	11.8	9.1	8.7	8.9	15.9	
17-May	8.0	7.1	5.8	4.8	4.8	4.7	5.4	7.5	9.7	12.1	14.5	16.7	17.7	18.4	18.4	18.5	18.6	18.8	18.1	17.4	16.0	14.6	13.7	12.7	12.7	18.8	
18-May	11.8	11.2	10.4	9.2	8.0	8.6	9.6	11.5	13.7	15.1	17.1	18.7	19.1	18.6	18.8	19.0	19.5	19.4	18.7	18.7	16.9	15.0	13.9	12.6	14.8	19.5	
19-May	11.5	10.3	8.3	6.5	4.7	7.5	10.7	12.3	13.4	15.2	16.5	16.4	16.7	16.4	16.7	17.3	17.3	16.9	13.2	11.4	9.6	8.5	8.2	7.8	12.2	17.3	
20-May	7.7	7.4	7.2	7.3	7.3	7.7	8.3	8.9	8.9	9.1	10.4	11.5	12.1	12.8	13.3	12.5	12.0	11.8	12.3	11.7	10.5	9.9	9.5	9.0	10.0	13.3	
21-May	8.6	7.8	7.8	7.6	7.6	8.0	9.0	10.6	12.3	13.1	13.9	14.5	14.7	14.9	12.7	11.6	11.8	11.4	11.1	10.9	10.8	10.4	9.8	9.2	10.8	14.9	
22-May	8.9	8.8	8.6	8.3	8.5	8.8	9.0	10.0	11.1	11.1	10.7	10.6	9.8	10.4	11.1	12.5	14.0	15.2	15.0	14.9	13.1	10.6	9.5	8.8	10.8	15.2	
23-May	8.5	7.8	6.8	4.5	3.7	6.7	9.7	12.0	14.2	16.2	17.7	18.5	14.7	15.4	19.2	16.2	16.5	18.5	18.3	18.0	17.0	15.4	14.5	12.7	13.4	19.2	
24-May	11.6	11.1	10.7	10.2	8.7	10.7	13.1	14.7	16.8	17.4	19.7	21.3	22.9	24.2	24.1	24.6	23.8	23.5	23.5	22.6	19.1	17.1	16.4	16.3	17.7	24.6	
25-May	15.7	14.6	13.9	12.6	10.9	12.6	16.0	18.4	19.8	21.9	24.0	25.3	26.3	27.0	27.5	27.6	27.8	27.9	27.4	26.4	24.5	21.6	21.1	19.1	21.2	27.9	
26-May	18.6	17.5	16.1	12.5	12.2	14.5	17.0	19.7	22.1	23.5	26.0	28.5	30.2	30.9	31.2	31.5	31.1	30.9	28.1	20.7	16.7	15.2	14.9	14.4	21.8	31.5	
27-May	14.2	13.8	13.3	12.5	11.3	12.6	13.6	15.0	17.9	20.3	22.3	23.6	23.8	24.0	24.6	25.0	24.8	24.3	24.1	23.5	21.3	18.5	17.2	15.6	19.0	25.0	
28-May	13.7	13.4	13.6	13.1	13.0	13.6	15.5	18.3	21.0	23.3	25.4	27.0	28.2	28.9	29.8	29.8	29.4	29.4	28.6	26.4	23.2	21.8	20.5	19.9	21.9	29.8	
29-May	16.8	14.2	12.8	11.6	11.1	12.5	16.8	19.9	24.0	27.1	29.3	30.8	31.6	32.6	33.1	33.3	32.4	32.0	31.4	30.3	27.7	24.4	21.2	20.1	24.0	33.3	
30-May	19.0	17.6	16.5	13.9	13.6	13.7	14.6	15.6	16.8	17.6	19.0	20.1	21.4	22.5	22.8	22.1	21.5	21.6	20.1	19.7	18.2	15.2	14.1	14.4	18.0	22.8	
31-May	14.2	13.6	13.5	12.6	11.9	12.3	13.1	14.7	16.4	18.1	19.4	19.8	19.4	18.6	18.8	18.1	17.0	15.5	14.7	14.0	12.7	11.8	11.4	11.3	15.1	19.8	
10.3 9.3 8.7 7.7 7.1 7.9 9.5 11.4 13.2 14.6 16.1 17.3 18.0 18.7 19.1 19.2 19.1 19.1 18.4 17.3 15.5 13.8 12.6 11.5																										Diurnal Average	
19.0 17.6 16.5 14.6 13.6 14.5 17.0 19.9 24.0 27.1 29.3 30.8 31.6 32.6 33.1 33.3 32.4 32.0 31.4 30.3 27.7 24.4 21.2 20.1																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Ells River - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.40	0.40
0 - 10	207	27.82	28.23
10 - 20	420	56.45	84.68
> 20	114	15.32	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

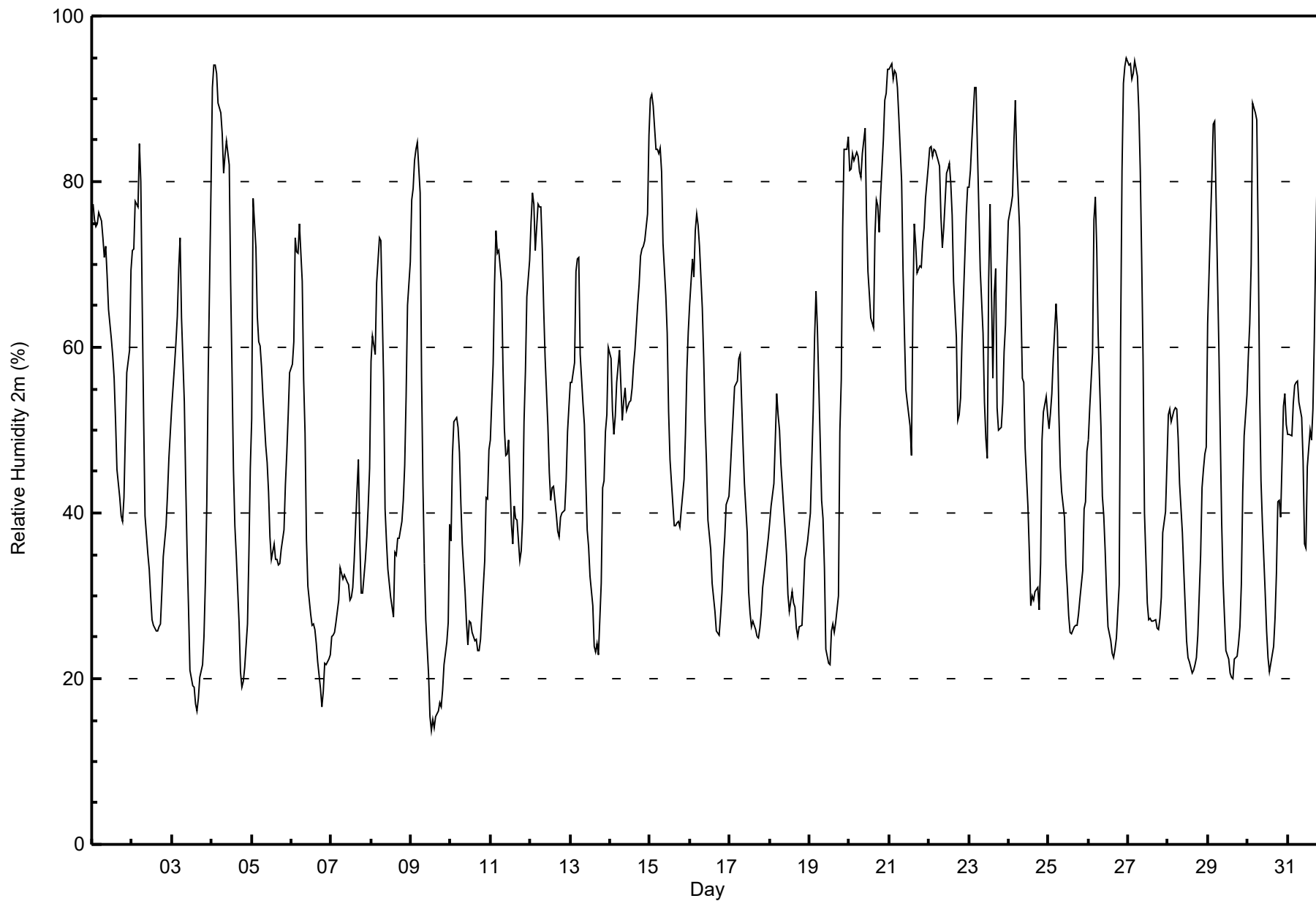
Ells River - May 2025

Maximum Value: 95.0 % on May 31 23:00																				Maximum Daily Average: 79.3 % on May 20					Hours in Service: 744					Hours of Data: 744				
Minimum Value: 13.7 % on May 9 13:00																				Minimum Daily Average: 33.1 % on May 7					Hours of Missing Data: 0					Hours of Calibration: 0				
Maximum Diurnal Average: 73.0 % at hour 5																				Minimum Diurnal Average: 35.1 % at hour 18					Percent Operational Time: 100.0									
Monthly Average: 51.06 %																				Percentiles: P ₁ = 16.6 P ₁₀ = 25.2 Q ₁ = 32.8 Median = 49.5 Q ₃ = 69.5 P ₉₀ = 82.2 P ₉₉ = 94.0														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1-May	77.2	75.4	74.6	74.9	76.3	75.3	73.2	70.9	72.1	68.6	64.6	61.1	59.0	56.3	51.3	45.2	41.9	39.7	38.9	41.9	49.6	56.9	59.6	69.4	61.4	77.2								
2-May	71.6	71.8	77.6	77.0	84.7	79.9	65.2	51.6	39.6	35.1	33.3	30.1	27.0	26.5	25.7	25.7	26.3	26.6	30.6	34.8	38.4	42.3	46.6	49.7	46.6	84.7								
3-May	52.8	57.8	60.6	63.7	69.6	73.1	63.5	53.4	43.5	35.1	28.5	21.1	19.1	19.0	16.9	16.1	17.6	20.1	21.6	25.0	31.7	41.0	56.6	79.2	41.1	79.2								
4-May	91.4	94.1	94.0	93.1	89.6	88.2	85.7	81.1	83.2	85.0	82.1	67.9	56.8	45.3	38.5	34.9	26.8	20.9	18.9	19.7	21.3	26.5	35.1	45.4	59.4	94.1								
5-May	51.4	78.0	72.0	63.7	60.7	60.2	57.6	54.0	48.2	46.1	42.6	37.1	34.4	36.3	34.5	34.4	33.7	33.9	35.5	38.0	43.5	47.3	51.9	57.0	48.0	78.0								
6-May	57.9	60.6	73.2	71.5	71.4	74.9	68.0	56.0	49.7	36.9	31.1	27.7	26.4	26.7	25.9	24.2	22.1	18.8	16.7	18.4	21.9	21.7	22.4	22.9	39.5	74.9								
7-May	25.0	25.2	25.6	26.7	29.5	33.5	32.8	32.1	32.6	31.6	31.4	29.4	29.8	31.1	34.2	42.8	46.5	36.8	30.3	30.4	34.4	37.1	40.9	45.4	33.1	46.5								
8-May	58.3	61.4	59.1	67.8	70.5	73.3	72.9	55.8	40.5	36.7	33.2	31.6	29.9	27.5	35.2	35.0	37.0	36.9	39.1	41.5	45.8	54.0	65.0	70.3	49.1	73.3								
9-May	77.7	79.1	82.5	84.0	84.7	78.6	56.5	43.2	33.9	27.2	20.5	15.4	13.7	15.1	14.1	15.5	16.2	17.1	16.5	18.7	21.6	24.5	26.8	38.6	38.4	84.7								
10-May	36.7	46.9	51.0	51.6	50.4	47.3	41.2	36.4	30.5	26.8	24.1	26.9	26.8	25.6	24.5	24.7	23.4	23.5	24.7	31.2	34.2	41.8	41.8	47.6	35.0	51.6								
11-May	48.7	58.0	67.6	74.1	71.4	71.7	67.8	57.6	50.2	47.0	47.2	48.7	38.7	36.3	40.9	39.4	39.2	34.2	35.4	39.3	51.0	57.1	66.1	70.6	52.4	74.1								
12-May	75.1	78.6	77.3	71.8	77.4	77.0	77.0	71.8	64.8	58.8	50.5	44.9	41.4	43.0	43.2	39.9	37.8	37.0	39.5	39.9	40.3	43.8	49.8	53.0	55.6	78.6								
13-May	55.7	55.7	58.1	69.1	70.6	70.8	59.1	53.3	50.8	44.1	37.9	35.9	32.3	28.8	23.9	23.2	24.3	23.0	31.5	43.1	43.8	49.8	51.9	60.1	45.7	70.8								
14-May	58.6	52.4	49.5	51.6	55.8	59.7	55.4	51.2	53.5	55.1	52.3	53.3	53.6	55.0	57.9	59.6	65.2	67.6	71.0	71.9	72.3	73.0	76.1	85.6	60.7	85.6								
15-May	89.9	90.5	89.1	83.9	83.9	83.5	84.1	81.2	72.6	66.2	61.6	52.2	46.4	43.8	38.5	38.5	38.8	38.9	38.4	40.4	44.0	49.5	57.1	61.8	61.5	90.5								
16-May	65.2	70.6	68.4	74.1	76.0	74.8	72.2	64.8	58.7	51.1	45.9	39.1	35.6	31.6	29.9	28.2	25.8	25.3	27.6	30.3	34.5	37.0	41.0	42.0	47.9	76.0								
17-May	45.3	48.6	51.8	55.2	55.9	58.7	59.1	53.6	48.4	43.5	37.7	30.5	28.0	26.3	26.9	25.9	25.1	24.9	26.1	28.0	30.9	34.0	35.5	36.9	39.0	59.1								
18-May	38.8	40.8	43.6	48.9	54.4	51.9	49.9	46.0	40.5	38.0	34.8	30.2	28.2	30.5	29.2	28.7	26.2	25.1	26.3	26.4	30.2	34.4	35.4	36.7	36.5	54.4								
19-May	40.0	46.3	52.3	61.2	66.8	62.2	48.7	41.6	39.3	33.4	23.6	21.9	21.6	25.8	26.6	25.6	26.8	30.0	49.8	56.2	74.5	83.9	83.9	85.4	47.0	85.4								
20-May	81.3	81.6	83.4	82.5	83.5	83.0	81.2	80.5	83.5	86.4	75.5	69.2	66.4	63.5	62.4	73.6	77.7	77.1	73.8	78.4	85.2	89.8	90.6	93.6	79.3	93.6								
21-May	93.5	94.2	92.3	93.4	93.0	91.4	87.7	80.1	69.3	61.7	54.9	53.5	50.5	47.0	64.7	75.0	72.4	69.0	69.8	69.7	72.7	74.3	78.0	81.9	74.6	94.2								
22-May	84.1	84.2	83.1	83.8	83.7	82.6	81.9	75.8	72.1	74.3	81.0	81.6	82.3	79.8	75.9	68.0	61.1	51.2	51.9	53.8	60.8	70.9	76.0	79.3	74.1	84.2								
23-May	79.3	81.3	84.9	91.4	91.3	83.9	76.6	69.3	61.7	53.4	49.0	46.7	68.1	77.2	56.2	66.5	69.5	52.8	49.9	50.3	53.3	59.5	62.7	69.7	66.8	91.4								
24-May	75.2	77.0	78.4	84.9	89.8	82.8	74.3	65.4	56.3	55.7	47.8	40.6	35.1	28.8	30.0	29.4	30.6	31.1	28.3	34.0	48.8	52.2	54.1	51.8	53.4	89.8								
25-May	50.1	52.1	54.5	58.7	65.2	61.8	52.0	45.6	42.6	39.6	33.9	31.0	27.6	25.5	25.5	26.3	26.5	26.5	27.7	29.7	33.0	40.6	41.4	47.4	40.2	65.2								
26-May	48.8	52.7	59.3	75.4	78.1	71.8	61.4	50.3	42.1	39.7	35.4	30.4	26.3	24.6	23.0	22.5	23.6	24.9	31.3	60.9	81.3	91.9	93.9	94.9	51.9	94.9								
27-May	94.0	94.3	92.3	93.0	94.6	92.7	88.4	81.3	70.8	58.5	40.0	29.2	27.0	27.3	26.9	26.9	27.2	26.1	26.0	27.3	29.9	37.6	40.1	46.0	54.1	94.6								
28-May	51.9	52.6	51.1	52.3	52.7	52.5	49.0	43.5	37.6	33.1	28.7	24.5	22.6	22.0	20.7	21.1	21.7	22.5	25.2	34.8	43.0	45.2	47.0	47.9	37.6	52.7								
29-May	62.9	74.9	80.4	86.9	87.2	78.0	59.9	49.4	38.8	31.7	27.5	23.3	22.3	20.7	20.3	20.0	22.4	22.8	24.2	26.2	31.4	42.6	49.3	54.3	44.1	87.2								
30-May	59.0	62.9	70.0	89.5	88.2	87.4	73.3	54.8	43.8	38.9	30.4	25.8	22.5	20.8	21.9	23.9	27.4	32.8	41.3	41.6	39.4	52.9	54.4	50.7	48.1	89.5								
31-May	49.5	49.5	49.4	53.2	55.4	55.7	55.9	53.4	51.5	46.2	36.3	35.8	45.6	50.0	48.9	52.6	61.2	72.3	80.9	83.7	89.2	92.7	95.0	94.4	60.8	95.0								
62.8 66.1 68.0 71.3 73.0 71.6 65.5 58.2 52.3 47.9 42.7 38.6 36.9 36.1 35.3 35.9 36.2 35.1 37.1 40.8 46.2 51.8 55.7 60.3																										Diurnal Average								
94.0 94.3 94.0 93.4 94.6 92.7 88.4 81.3 83.5 86.4 82.1 81.6 82.3 79.8 75.9 75.0 77.7 77.1 80.9 83.7 89.2 92.7 95.0 94.9																										Diurnal Maximum								



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Ells River - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	20	2.69	2.69
20 - 40	257	34.54	37.23
40 - 60	222	29.84	67.07
60 - 80	153	20.56	87.63
80 - 100	92	12.37	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

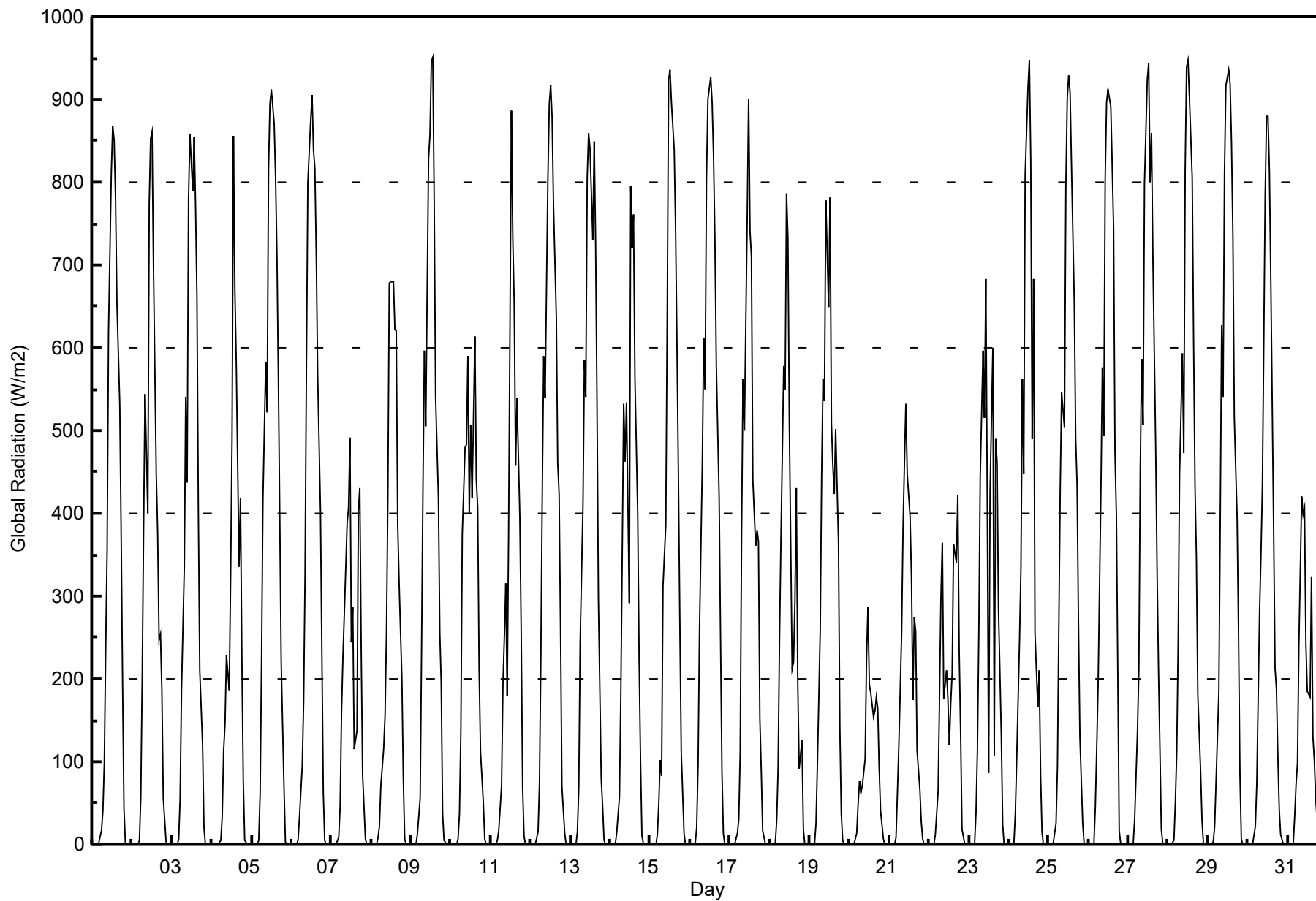
Ells River - May 2025

Maximum Value: 950.3 W/m2 on May 9 14:00																					Maximum Daily Average: 351.7 W/m2 on May 16				Hours in Service: 744	
Minimum Value: 0.0 W/m2 on May 1 01:00																					Minimum Daily Average: 85.9 W/m2 on May 20				Hours of Data: 744	
Maximum Diurnal Average: 710.0 W/m2 at hour 13																					Minimum Diurnal Average: 0.0 W/m2 at hour 3				Hours of Missing Data: 0	
Monthly Average: 262.97 W/m2																					Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 130.7 Q ₃ = 460.4 P ₉₀ = 789.3 P ₉₉ = 932.6				Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																					Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			22	23	24
1-May	0.0	0.0	0.0	0.0	2.4	17.0	40.6	98.5	237.8	355.7	618.4	811.6	867.3	851.1	781.4	653.4	531.4	375.4	197.8	44.2	1.2	0.0	0.0	0.0	270.2	867.3
2-May	0.0	0.0	0.0	0.0	5.2	56.9	200.9	385.6	543.6	399.5	774.8	851.8	860.6	701.1	448.1	376.5	247.7	254.1	186.4	55.4	3.3	0.1	0.0	0.0	264.6	860.6
3-May	0.0	0.0	0.0	0.0	6.7	56.6	186.4	335.4	540.3	437.4	779.9	857.3	790.1	855.1	773.0	659.4	401.1	210.2	120.5	19.5	0.4	0.0	0.0	0.0	292.9	857.3
4-May	0.0	0.0	0.0	0.0	0.7	5.6	33.3	112.8	146.4	228.7	186.2	325.6	490.8	855.2	671.2	580.8	336.3	418.6	226.0	75.9	4.5	0.0	0.0	0.0	195.8	855.2
5-May	0.0	0.0	0.0	0.0	4.5	60.6	219.6	417.6	583.9	521.2	816.2	895.3	911.8	871.3	807.0	710.9	561.2	394.8	221.0	68.7	3.6	0.0	0.0	0.0	336.2	911.8
6-May	0.0	0.0	0.0	0.0	4.6	32.0	94.6	172.6	323.0	579.7	800.1	875.1	905.0	839.2	817.0	711.2	567.6	402.5	229.5	63.1	4.6	0.0	0.0	0.0	309.2	905.0
7-May	0.0	0.0	0.0	0.0	7.7	45.3	161.0	226.5	280.1	388.1	406.1	492.2	244.5	287.0	114.9	136.8	403.9	429.7	238.1	84.9	6.8	0.0	0.0	0.0	164.7	492.2
8-May	0.0	0.0	0.0	0.0	7.9	22.8	70.4	116.0	156.0	254.0	419.4	678.7	679.9	622.6	620.8	388.3	316.6	199.4	79.8	6.7	0.0	0.0	0.0	0.0	221.6	679.9
9-May	0.0	0.0	0.0	0.1	12.1	55.1	234.5	432.1	596.9	504.7	828.0	857.4	945.0	950.3	775.8	541.3	419.4	256.5	194.2	37.5	4.3	0.0	0.0	0.0	318.5	950.3
10-May	0.0	0.0	0.0	0.0	6.5	37.1	134.9	373.9	479.5	482.5	590.1	399.5	507.3	419.3	613.6	439.9	407.4	211.5	111.3	51.0	6.1	0.1	0.0	0.1	219.7	613.6
11-May	0.1	0.0	0.0	0.0	5.4	16.9	71.8	192.4	251.5	315.5	179.3	374.3	886.3	732.3	651.7	458.4	538.3	397.3	253.6	70.1	10.9	0.0	0.0	0.0	225.3	886.3
12-May	0.0	0.0	0.0	0.3	15.4	72.7	229.4	426.5	589.1	539.7	805.2	894.2	916.3	877.3	771.4	637.9	461.2	423.5	262.0	70.2	14.2	0.1	0.1	0.0	333.6	916.3
13-May	0.0	0.0	0.0	0.2	14.4	67.1	245.6	411.0	584.6	540.6	804.9	858.7	841.0	730.5	848.6	724.9	530.0	295.8	79.4	46.5	4.6	0.0	0.0	0.0	317.8	858.7
14-May	0.0	0.0	0.0	0.2	13.5	57.7	186.8	358.3	532.9	462.2	533.5	291.5	794.4	720.6	760.4	563.9	399.0	221.4	99.9	10.5	1.8	0.0	0.0	0.0	250.4	794.4
15-May	0.0	0.0	0.0	0.2	11.1	48.4	100.9	82.2	311.3	387.1	638.5	924.3	935.7	897.2	839.5	740.1	598.0	440.8	269.6	111.9	14.3	0.1	0.0	0.1	306.3	935.7
16-May	0.0	0.0	0.0	0.9	20.6	96.2	258.1	460.1	612.6	549.5	804.3	900.6	927.8	897.1	832.7	730.9	578.6	419.2	249.2	88.2	12.8	0.2	0.0	0.1	351.7	927.8
17-May	0.0	0.0	0.0	0.8	13.0	30.0	112.3	377.4	562.6	499.5	758.1	899.2	740.7	709.9	441.5	361.2	380.5	366.4	152.4	89.4	16.7	0.1	0.0	0.0	271.3	899.2
18-May	0.0	0.0	0.0	0.9	28.6	91.6	246.1	366.3	578.0	549.8	787.3	731.4	507.8	211.2	220.9	295.4	430.7	196.2	90.7	125.8	19.0	0.4	0.1	0.1	228.3	787.3
19-May	0.0	0.1	0.2	1.2	24.8	97.5	257.5	444.4	562.4	534.8	777.9	649.5	781.6	509.1	458.1	423.3	501.6	365.8	140.8	36.8	5.0	0.0	0.0	0.0	273.9	781.6
20-May	0.0	0.0	0.0	0.4	13.3	48.9	76.6	62.1	70.8	103.5	225.4	287.1	193.3	182.9	155.0	161.0	177.9	164.9	91.9	40.2	6.3	0.0	0.0	0.0	85.9	287.1
21-May	0.0	0.0	0.0	0.4	8.9	62.7	118.0	256.6	381.5	461.5	531.5	447.7	396.1	323.9	175.0	275.3	257.6	113.5	66.7	27.9	7.0	0.0	0.0	0.0	163.0	531.5
22-May	0.0	0.0	0.0	0.5	11.1	64.9	177.4	298.0	364.1	175.7	210.9	175.3	120.4	171.8	206.1	362.2	340.3	422.3	234.6	137.3	19.5	0.7	0.0	0.0	145.5	422.3
23-May	0.0	0.0	0.0	2.1	39.4	114.6	258.3	445.2	595.8	515.4	683.0	419.5	87.1	427.2	599.5	106.5	489.2	461.2	284.0	132.4	23.1	0.1	0.0	0.0	236.8	683.0
24-May	0.0	0.0	0.0	2.4	37.7	103.8	247.7	333.7	562.4	447.9	809.2	913.7	947.9	825.5	489.5	682.3	255.9	165.3	210.9	84.9	14.9	0.6	0.1	0.1	297.3	947.9
25-May	0.0	0.0	0.0	2.1	25.9	92.7	264.3	432.8	545.9	503.4	794.9	901.6	928.4	908.8	820.9	654.6	489.7	434.0	264.9	130.9	25.6	0.9	0.0	0.0	342.6	928.4
26-May	0.0	0.0	0.0	2.5	46.0	117.4	194.9	430.8	575.6	493.7	804.0	896.7	911.6	891.9	820.9	743.5	473.3	396.5	17.6	2.0	0.0	0.0	0.0	0.0	325.8	911.6
27-May	0.0	0.0	0.0	2.1	30.9	134.8	212.0	453.0	586.9	507.2	798.7	923.7	943.4	800.4	859.8	710.0	478.3	328.2	212.5	117.6	18.5	2.0	0.0	0.0	338.3	943.4
28-May	0.0	0.0	0.0	4.3	51.5	112.6	242.4	446.7	593.6	473.0	815.8	938.4	947.8	903.8	805.1	607.6	431.8	346.1	180.5	87.4	28.5	0.9	0.0	0.0	334.1	947.8
29-May	0.0	0.0	0.0	2.6	22.7	75.9	184.7	399.0	627.4	540.8	811.5	917.8	935.8	919.2	848.0	736.3	514.6	394.9	256.6	86.5	7.6	0.2	0.0	0.0	345.1	935.8
30-May	0.0	0.0	0.0	0.6	22.4	73.6	177.8	281.4	350.6	431.8	786.1	879.5	880.3	813.8	681.3	385.0	214.0	188.1	108.1	42.0	11.3	0.5	0.0	0.0	263.7	880.3
31-May	0.0	0.0	0.0	2.4	33.4	72.9	97.7	241.0	420.6	397.6	406.8	242.2	184.1	178.3	323.8	130.6	100.9	55.4	29.4	6.7	0.1	0.0	0.0	0.0	121.8	420.6
0.0																									Diurnal Average	
0.1																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

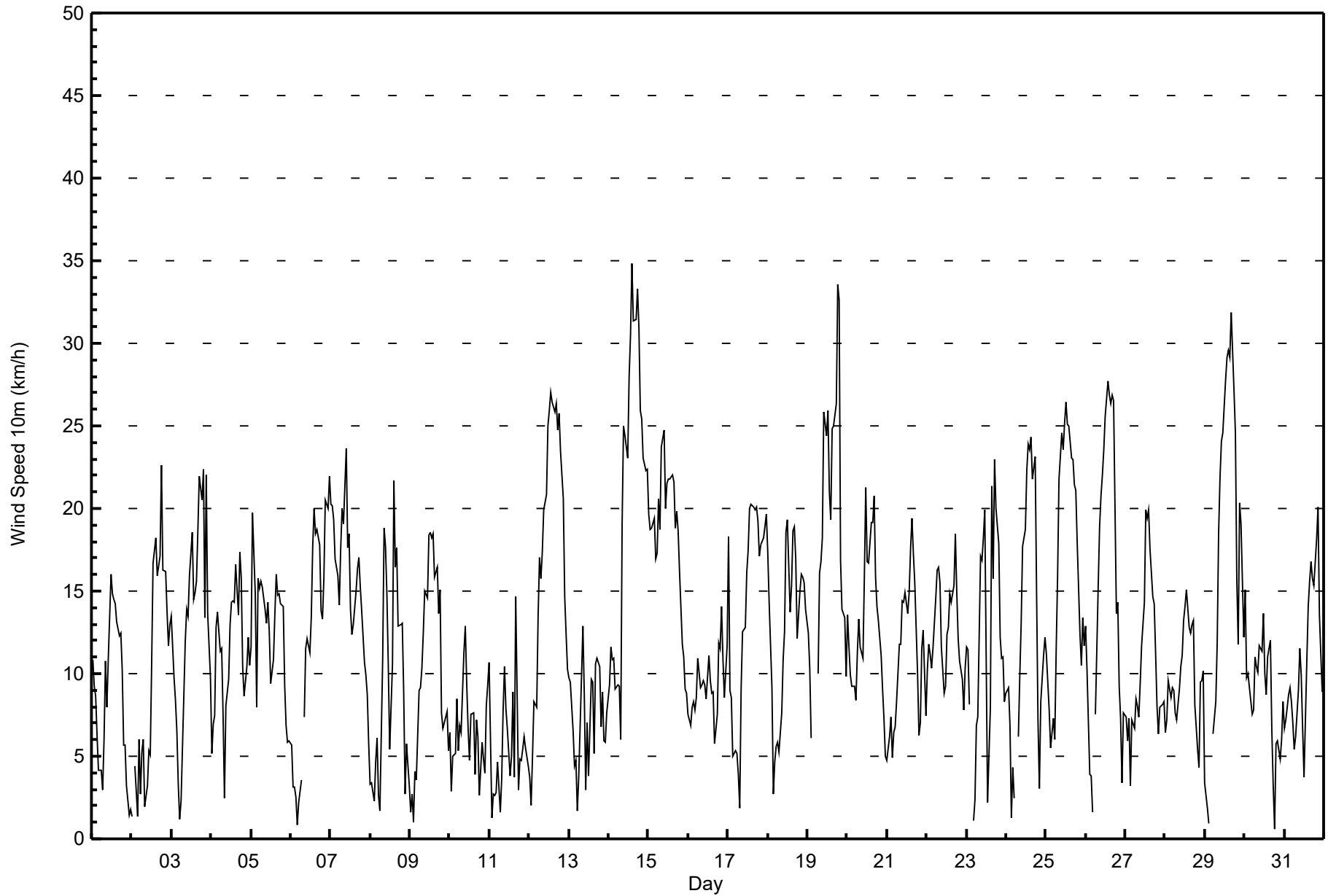
Ells River - May 2025

Maximum Speed: 35 km/h on May 14 15:00										Maximum Daily Speed Average: 19.0 km/h on May 19										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 30 19:00										Minimum Daily Speed Average: 0.8 km/h on May 11										Hours of Data: 734						
Maximum Diurnal Speed Average: 6.0 km/h at hour 15										Minimum Diurnal Speed Average: 1.0 km/h at hour 4										Hours of Missing Data: 10						
Monthly Average Velocity: 3.5 km/h 150.2 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 7 Median = 11 Q ₃ = 17 P ₉₀ = 22 P ₉₉ = 31										Percent Operational Time: 98.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N11	N9	N9	N6	W4	W4	SW3	S6	S11	S8	S11	SSE16	SSE15	SSE15	SSE14	SSE13	SE12	SE12	SE10	E6	ESE6	ENE3	NNE1	NNW2	SSE4.5	SSE16
2-May	WNN1	UO	N4	W1	W6	SW3	SW5	SW6	NE2	N3	ESE5	ENE5	NNW11	NNW17	NW18	NNW16	NNW17	NNW17	NNE23	NNE16	NNE16	NNE14	N12	N13	N7.3	NNE23
3-May	N13	N10	N8	NNW6	NW3	N1	WNN2	SSE9	S12	SSW14	SW13	W16	W19	NNW14	W15	W16	NNW19	NNW22	NNW21	NNW22	NNW13	NW22	NNW14	N10	NNW9.5	NNW22
4-May	W5	S7	SW7	NW13	NNW14	NW11	NW12	NNE8	WSW2	SW8	SSW10	WSW13	WSW14	WSW14	SW14	WSW17	W14	NNW17	NNW16	W10	WSW9	W10	NNW12	NNW10	W8.8	NNW17
5-May	WNN12	NNE20	NNE15	N8	NW16	NW15	NNW16	NNW15	NW14	NNW13	NNW14	NNW13	N9	NE11	NE14	NE16	NE15	NE15	NE14	NE14	NE9	NNE7	NNE6	NNE6	N10.1	NNE20
6-May	NNE6	NNE3	NW3	NNW3	NNE1	NNW2	NNW4	UO	SSE7	S12	SSW12	SSW11	SSW13	SSW18	SSW20	SSW18	S19	S18	S14	SSE13	SSE16	SSE20	SSE20	SSE22	S9.9	SSE22
7-May	SSE20	SSE20	SSE19	SSE17	SSE16	SSE14	SSE18	SSE20	S19	S24	SSW18	SSW18	SW14	WSW12	SSW13	WSW15	SW16	SW17	SSW15	SSW14	SSW11	SSW10	SSW9	W6	S13.3	S24
8-May	SW3	W3	WSW2	NNW5	NNW6	W3	SE2	NNE11	NNE19	NNE18	NNE15	NNE10	ENE5	ENE11	NE22	NE16	NE18	NE13	NNE13	NNE13	NE9	SSE3	S6	SSW3	NNE7.1	NNE22
9-May	W2	SW3	NE1	S4	S4	SSE9	SSE9	S10	S12	SSW15	SW15	WSW18	WSW19	SW18	SW18	SW16	SW16	SW14	SW15	SW8	SSW7	SSW7	SSW8	SW5	SW9.6	WSW19
10-May	WSW6	SW3	S5	S5	S8	SSW5	SW7	S6	SSW11	SSW13	WSW9	ENE7	NNW5	NE8	ESE8	ENE4	S7	S6	ENE3	ENE6	E5	SE4	SE8	SE9	S3.6	SSW13
11-May	SE11	SW1	NNW3	NNW3	NNW3	NNW5	NNW2	ESE4	SE8	SSE10	SSE8	SSE7	W4	SSE5	S9	NE4	N15	N3	N5	ESE5	NE5	NE6	NW5	NW4	ESE0.8	N15
12-May	NW4	NNW2	NNW5	NNW8	N8	N13	N17	NNE16	NE17	NNE20	NNE21	NNE25	NNE26	NNE27	NNE26	NNE26	NNE26	NNE25	NNE26	NNE23	NNE21	NNE15	N12	N10	NNE17.0	NNE27
13-May	NNW10	NNW10	N7	NNW4	WSW5	SSW2	NW4	N10	NNE13	NE9	NE3	N7	ENE4	ESE10	SE10	SE5	SE11	ESE11	S10	SE7	SE9	SE6	SE6	SE8	E2.5	NNE13
14-May	SSE9	SE12	SSE11	SSE11	S9	SSE9	SSE9	WSW6	N19	NNE25	NNE24	NNE23	NNE28	NNE31	NNE35	NNE31	NNE31	NNE33	N31	N26	N25	N23	N22	N22	NNE15.1	NNE35
15-May	N20	N19	N19	N19	N17	N17	N21	N19	N24	N25	N20	NNE22	NNE22	NNE22	NNE22	NNE22	NNE19	NE20	NE19	NE16	NE12	NNE11	NNE9	N9	NNE17.7	N25
16-May	NNW8	NNW7	NNW8	N8	N8	N9	N11	N9	NNW9	NNE10	NE9	ENE8	NE11	NE10	NE9	NE9	ENE6	NNE8	N12	N11	NNE14	NNE11	SE9	SE12	NNE7.3	NNE14
17-May	SE18	SE9	ESE9	E5	E5	ENE5	ENE4	E2	SE9	SE13	SE13	SE16	SE17	SE20	SE20	SE20	SE20	SE19	SE17	SE18	SE18	SE19	SE20	SE20	SE13.7	SE20
18-May	SE17	SSE14	SSE9	ESE3	E5	E6	ESE6	SE5	ESE8	SE11	SE13	SE19	SE19	SSE14	S15	SE19	SE19	SE17	SE12	SE15	SE16	SE16	SE15	SE14	SE12.3	SE19
19-May	SSE12	SSE10	SSE6	UO	UO	UO	SSE10	SSE16	SSE17	SSE18	SE26	SE24	SE26	SE21	SE19	SE25	SE25	SE26	SSE34	SE33	SE17	SE14	SE13	SE10	SE19.0	SSE34
20-May	SE14	SE12	SE10	ESE9	ESE9	ESE8	SE11	SE13	SE12	SE11	SE16	SE21	SE17	SE17	SE19	SE19	SE21	SSE16	SE14	SE13	SE11	SSE9	SSE7	SE5	SE13.0	SE21
21-May	SE5	SE6	SSE7	SE5	SE6	SE7	SE8	SSE12	SSE12	SSE14	SE14	SE15	SE14	ESE15	SSE18	SSE19	SSE17	S15	S10	S6	SSE7	SSE12	SSE13	S7	SSE10.6	SSE19
22-May	SSE10	SSE12	SSE11	SSE10	SSE12	SSE15	SSE16	SSE16	SSE15	S12	SSW9	SSW9	SSW12	S13	SSE15	SSE14	SE15	SE18	SSE15	SSE12	SSE11	SE10	SSE8	SSE10	SSE12.0	SE18
23-May	SSE12	SSE11	S8	UO	W1	SSW2	S7	SE7	SE17	SE17	SE18	SE20	SSE11	S2	SE8	SE21	ESE16	SE23	SSE20	SSE18	SSE12	SE11	SSE11	SSE8	SSE11.8	SE23
24-May	SSE9	SSE9	S7	NNW1	NNW4	W2	UO	SSE6	SSE10	SE13	SE18	SSE19	SSE22	SSE24	SSE24	SSE24	SE22	SE23	S15	SSW7	ESE3	SE8	SSE11	SSE12	SSE11.8	SSE24
25-May	SSE11	S9	S8	S6	SSE7	SSE6	SSE11	SSE16	SSE22	SSE25	SSE24	SSE25	SSE26	SSE25	SSE25	SSE23	SSE23	SSE21	SSE21	SSE18	SSE12	SSE10	SSE13	SSE12	SSE16.6	SSE26
26-May	SSE13	SSE10	S4	NNW4	NW2	UO	SSE8	SSE15	SSE19	SSE21	SSE22	SSE24	SSE26	S28	SSE27	SSE26	SSE27	SSE27	SW14	W14	W9	SSE7	S3	S8	S13.3	S28
27-May	S7	SSW6	SW7	WSW3	SSE7	S7	SSW8	S8	SSW7	SW9	WSW12	WSW14	SW20	SW19	SW20	SW18	SW15	WSW14	SW11	WSW8	SSW6	SSW8	SSW8	SSW8	SW9.9	SW20
28-May	SW6	SW7	SW10	SW9	SW9	SW9	SSW8	SW7	SSW9	SSW10	SSW11	SW13	SW14	S15	SW13	SW12	SSW13	S13	S8	SE5	SE4	S9	SSE10	SSE10	SSW8.8	S15
29-May	SSW3	WSW2	SW1	UO	UO	S6	SSE8	SSE12	SSE18	SSE22	SSE24	SSE25	SSE28	SSE29	SSE30	SSE29	SE32	SE27	SE25	SSE16	SSE12	NNW20	NNW19	NNW12	SSE14.0	SE32
30-May	W15	W10	SW10	W9	WSW8	W8	NW11	NNW10	NNW10	NW12	NNW11	NNW14	NW10	SW9	SW11	SW12	SSW7	WSW3	S1	S6	S6	SW5	S6	S8	W6.0	W15
31-May	S7	SSW7	SW9	SW9	SSW8	SW7	S5	S6	SSE9	SSE11	SSE10	S7	NNW4	NNW11	NNW14	NNW16	N17	N16	N15	N18	NNW20	N14	NNW11	NNW9	NW3.7	NNW20
SSE3.1 SSE2.6 S1.7 W1.0 SW1.1SSW1.2 SSE1.8 SSE3.4 SSE4.8 SSE5.5 SSE5.6 SSE5.5 SSE4.8 SSE5.2 SSE6.0 SSE5.7 SE5.9 SE5.7 SE3.6 ESE3.2 ESE3.0 SE2.1 SSE2.7 SSE2.6																									Diurnal Average	
SSE20 SSE20 SSE19 N19 N17 N17 N21 SSE20 N24 NNE25 SE26 SSE25 NNE28 NNE31 NNE35 NNE31 SE32 NNE33 SSE34 SE33 N25 N23 N22 N22																									Diurnal Maximum	
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Ells River - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Ells River - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	109	14.85	14.85
6 - 11	259	35.29	50.14
12 - 19	252	34.33	84.47
20 - 28	102	13.90	98.37
29 - 38	12	1.63	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 734

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Ells River - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	3	5	8	5	5	9	2	9	5	10	6	9	16	6	6	109
6 - 11	21	13	10	5	2	10	30	51	35	27	21	6	8	3	5	12	259
12 - 19	20	14	13	0	0	2	52	54	14	14	21	11	7	9	7	14	252
20 - 28	10	24	1	0	0	0	22	34	2	1	2	0	0	4	1	1	102
29 - 38	1	5	0	0	0	0	2	4	0	0	0	0	0	0	0	0	12
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	57	59	29	13	7	17	115	145	60	47	54	23	24	32	19	33	734

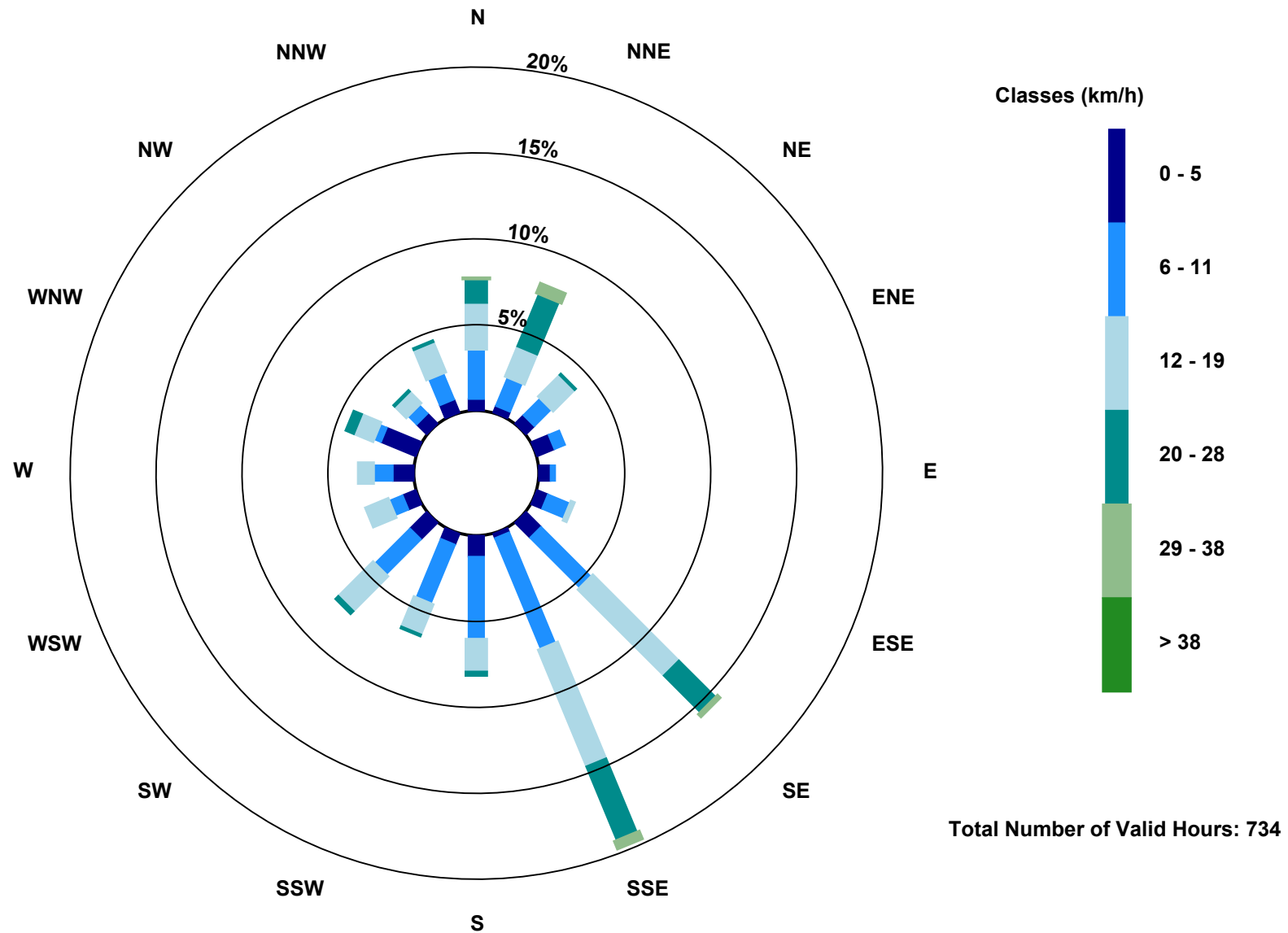
Total Number of Valid Hours: 734

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Ells River





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 744								
Maximum Value: 9 km/h on May 19 18:00																		Hours of Data: 734								
Minimum Value: 1 km/h on May 1 05:00																		Hours of Missing Data: 10								
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																		Hours of Calibration: 0								
																		Percent Operational Time: 98.7								
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	1	1	2	1	1	1	1	2	3	3	4	5	4	4	4	5	4	3	2	2	2	2	2	2	2	5
2-May	3	UO	2	1	3	3	2	2	2	2	4	4	6	5	5	4	5	5	3	3	2	2	1	1	6	
3-May	2	2	1	2	1	2	2	3	3	4	4	6	5	6	6	6	5	5	6	6	5	7	4	3	7	
4-May	2	1	2	7	6	4	3	2	2	2	3	4	5	4	5	5	4	6	5	3	2	3	4	4	7	
5-May	4	7	4	5	6	3	4	3	4	4	4	5	4	5	4	4	4	3	2	2	2	1	2	3	7	
6-May	2	2	1	1	2	2	2	UO	2	3	3	4	6	6	6	6	5	5	4	3	3	4	3	4	6	
7-May	4	4	3	4	3	3	3	4	5	5	5	5	4	4	3	5	5	6	4	3	2	2	2	2	6	
8-May	2	2	2	1	2	2	3	2	4	2	3	4	3	7	4	5	4	4	3	3	2	2	2	3	7	
9-May	1	2	1	2	4	1	2	2	3	4	5	6	6	6	5	5	7	4	5	3	1	1	2	2	7	
10-May	1	2	2	3	1	2	3	3	3	4	4	6	4	5	4	3	3	3	2	1	1	1	1	2	6	
11-May	2	2	1	2	2	1	3	1	2	3	2	3	4	3	4	6	6	2	2	1	3	3	2	2	6	
12-May	2	2	2	2	2	2	2	2	4	4	4	5	6	5	5	6	5	4	4	5	3	3	2	1	6	
13-May	2	2	2	2	2	1	2	4	3	4	3	3	4	5	5	5	5	4	6	4	2	1	1	2	6	
14-May	3	2	2	2	1	1	2	4	5	3	3	4	4	5	5	5	5	5	5	5	4	4	3	3	5	
15-May	3	3	2	2	3	3	3	3	4	4	4	5	5	6	5	5	4	4	3	3	2	1	2	1	6	
16-May	2	2	1	1	2	2	1	2	2	4	4	5	5	5	5	4	4	4	2	2	2	2	6	3	6	
17-May	3	3	2	1	1	1	2	3	3	4	4	4	5	4	4	4	4	5	5	3	3	3	3	3	5	
18-May	3	3	4	1	2	1	1	2	5	3	4	5	5	5	4	4	4	3	4	3	4	2	3	2	5	
19-May	2	2	2	UO	UO	UO	4	3	3	5	5	5	6	5	6	7	5	9	7	6	4	2	3	2	9	
20-May	2	2	1	1	1	1	2	3	2	2	4	4	4	3	4	4	3	3	2	3	2	3	3	2	4	
21-May	1	2	1	1	1	1	2	2	3	3	4	4	3	3	4	4	4	4	2	1	1	2	2	2	4	
22-May	2	2	2	2	2	3	3	3	4	5	2	2	4	3	3	4	3	3	4	2	2	1	1	1	5	
23-May	2	1	2	UO	1	2	2	4	4	4	4	7	6	3	3	7	3	5	5	4	3	2	2	2	7	
24-May	2	2	1	2	1	2	UO	2	3	3	5	4	6	7	6	5	5	4	4	4	2	1	1	2	7	
25-May	2	1	1	1	1	1	4	4	5	5	5	5	6	6	6	5	6	6	5	4	3	1	2	1	6	
26-May	2	2	3	1	2	UO	3	3	4	4	5	6	6	6	6	6	6	6	7	5	4	4	3	1	7	
27-May	3	2	2	2	2	2	2	2	2	3	4	6	6	6	7	6	5	5	4	3	2	1	1	2	7	
28-May	2	2	2	2	3	2	2	3	3	3	4	5	5	6	4	4	5	3	2	1	1	1	1	2	6	
29-May	2	2	1	UO	UO	1	2	3	4	5	6	5	6	6	6	6	6	6	5	4	2	8	5	5	8	
30-May	5	5	3	3	2	2	2	2	3	4	4	4	4	4	4	4	3	2	2	1	1	1	2	1	5	
31-May	2	2	2	2	2	2	2	2	2	3	3	2	2	2	2	3	3	3	3	4	3	5	3	4	5	
5 7 4 7 6 4 4 4 5 5 6 7 6 7 7 7 7 7 9 7 6 5 8 6 5																										
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

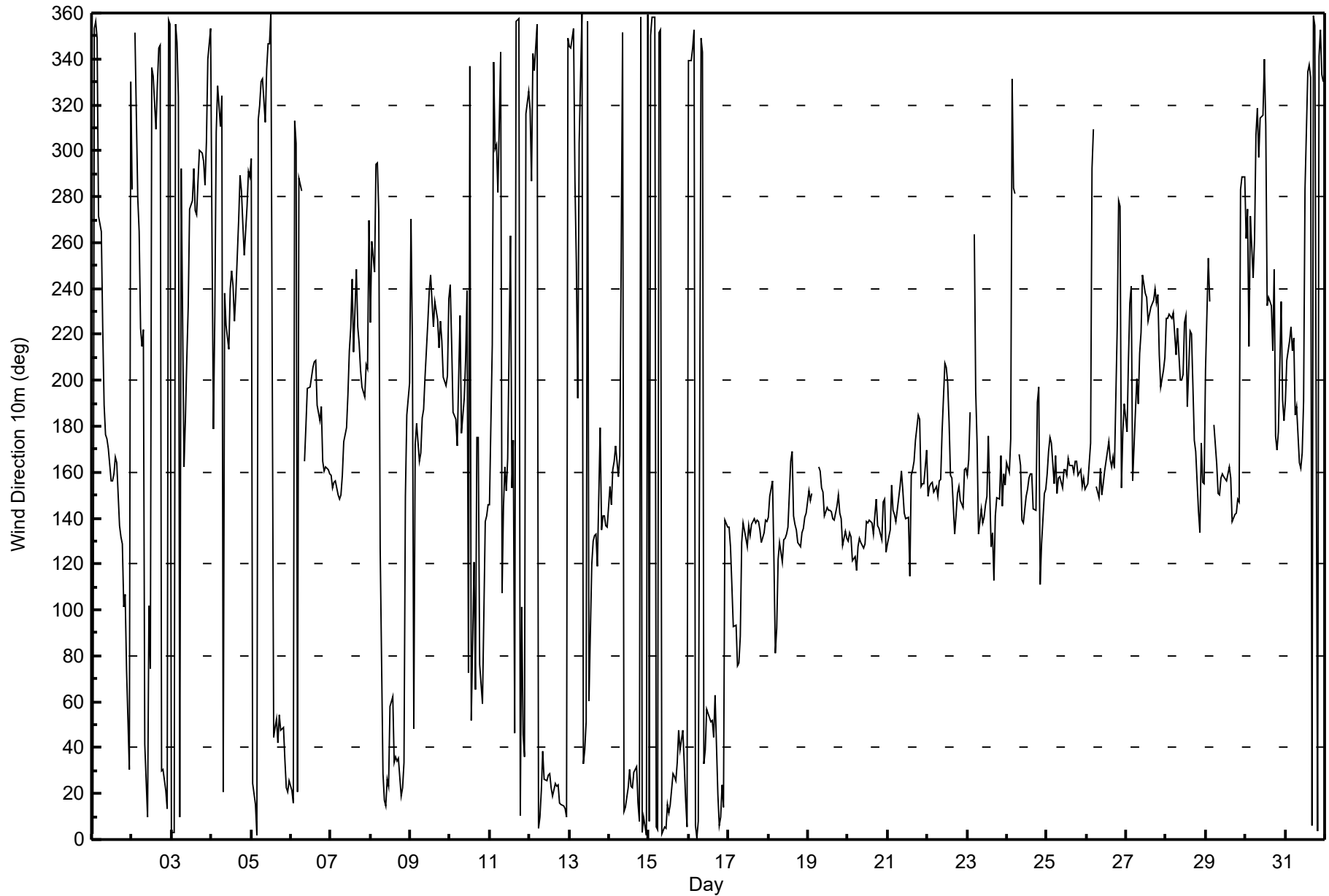
Ells River - May 2025

Direction of Maximum Speed: 23 deg on May 14 15:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 144.5 deg on May 19																				Hours of Data:		734			
Direction of Minimum Speed: 176 deg on May 30 19:00										Direction of Minimum Daily Speed Average: 0.8 deg on May 11										Hours of Missing Data:		10			
Monthly Average Direction: 150.2 deg																				Percent Operational Time:		98.7			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	353	357	349	271	265	223	189	177	174	170	156	156	160	166	164	137	132	129	101	107	74	30	330	150.2
2-May	283	UO	351	279	265	223	215	222	42	10	102	74	336	332	310	329	345	346	30	30	21	13	357	355	352.4
3-May	3	3	355	347	324	10	292	162	183	209	232	275	278	292	274	272	287	300	299	295	285	304	340	353	292.5
4-May	260	179	229	308	328	311	324	21	238	224	213	240	248	241	226	238	270	289	283	268	254	276	291	288	268.1
5-May	297	24	15	2	313	320	330	331	313	335	347	346	360	44	49	52	42	54	48	49	35	23	21	25	7.0
6-May	21	16	313	303	21	288	283	UO	165	180	197	197	201	206	208	209	189	183	189	165	161	162	161	159	184.8
7-May	158	153	156	156	150	148	150	158	173	179	194	213	223	244	212	248	223	216	205	197	193	207	205	269	186.9
8-May	225	261	247	294	295	274	127	28	17	15	27	23	58	62	34	36	34	36	19	23	34	149	185	199	25.9
9-May	271	216	48	172	181	165	168	184	187	201	225	239	246	234	224	234	226	214	226	217	201	198	202	235	216.1
10-May	242	217	186	183	172	201	228	177	192	209	239	73	337	52	121	66	175	175	77	59	98	139	141	146	169.0
11-May	146	215	339	301	303	282	343	108	145	162	152	166	263	153	174	46	356	358	11	102	46	36	316	326	108.3
12-May	318	287	342	335	355	5	10	21	38	26	26	28	29	23	19	25	23	24	16	15	14	13	10	349	17.7
13-May	345	345	353	287	251	192	304	360	33	39	51	356	60	119	130	133	133	119	179	135	141	141	137	136	89.8
14-May	154	146	161	165	172	158	167	253	352	12	14	23	31	23	23	29	32	16	8	358	3	10	2	359	20.1
15-May	8	350	358	358	6	4	352	353	3	6	5	15	12	15	29	27	26	34	48	39	48	33	17	5	13.5
16-May	339	339	345	353	6	1	8	349	343	33	39	57	53	52	52	45	63	19	6	10	24	14	139	136	23.6
17-May	136	128	110	93	93	75	77	88	129	138	131	128	137	133	137	140	138	139	138	135	130	133	139	139	131.9
18-May	141	150	156	122	81	92	122	129	121	131	131	133	136	165	169	141	137	135	129	128	134	136	141	142	137.5
19-May	152	148	151	UO	UO	UO	162	161	153	151	141	144	144	144	143	140	139	145	150	142	139	128	134	131	144.5
20-May	130	133	132	122	123	117	127	131	129	127	128	139	138	139	138	133	141	148	137	136	131	147	148	125	134.3
21-May	129	135	155	143	141	138	143	154	160	152	142	140	140	115	158	161	164	174	185	183	154	155	155	170	152.8
22-May	149	154	155	156	151	153	150	156	157	178	208	205	199	182	159	157	133	141	151	154	148	144	161	162	158.8
23-May	158	165	186	UO	264	196	172	133	144	138	140	146	149	176	127	133	113	141	149	148	167	145	159	154	146.9
24-May	164	160	175	331	284	281	UO	168	163	139	138	149	152	157	159	159	144	144	190	197	111	129	150	153	155.6
25-May	159	169	175	173	155	167	151	157	158	153	161	161	159	166	163	163	160	165	165	159	161	154	157	152	160.5
26-May	154	155	173	292	309	UO	154	149	162	150	155	160	165	173	165	162	167	162	223	278	276	153	178	190	168.8
27-May	178	209	233	241	156	186	201	190	212	221	246	238	236	226	229	232	235	240	234	237	211	197	204	210	222.0
28-May	227	227	229	227	229	220	211	223	200	200	202	225	228	188	222	220	198	174	169	143	134	173	156	155	202.2
29-May	205	253	235	UO	UO	181	164	151	150	157	159	158	156	159	163	157	139	142	142	148	147	283	289	289	161.2
30-May	262	275	215	271	245	262	307	319	297	314	316	340	311	233	236	232	213	248	176	170	178	234	191	183	264.5
31-May	191	208	217	224	213	218	185	188	164	162	168	191	283	335	338	332	6	359	354	4	341	353	333	330	319.4
160.4 154.4 176.0 265.6 226.0 199.2 167.8 150.5 149.7 150.4 153.4 153.4 163.4 156.8 159.6 152.2 134.7 137.5 136.6 113.3 106.4 127.5 154.4 153.9																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Ells River - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Ells River - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 89 deg on May 26 23:00																		Hours in Service: 744							
Minimum Value: 5 deg on May 11 00:00																		Hours of Data: 734							
																		Hours of Missing Data: 10							
Percentiles: P ₁ = 6 P ₁₀ = 9 Q ₁ = 13 Median = 17 Q ₃ = 27 P ₉₀ = 44 P ₉₉ = 76																		Hours of Calibration: 0							
																		Percent Operational Time: 98.7							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	12	13	22	27	21	30	32	16	20	43	32	22	22	26	27	24	20	15	13	18	26	31	68	58	68
2-May	70	UO	17	59	18	65	26	28	56	34	56	50	36	18	17	17	19	19	10	7	6	7	10	13	70
3-May	11	11	11	13	21	52	61	19	23	30	26	35	24	39	31	30	21	14	13	14	18	13	20	29	61
4-May	44	12	27	25	14	13	15	43	80	18	18	25	24	28	27	24	34	26	20	20	19	17	14	17	80
5-May	26	8	13	44	16	13	18	14	22	28	24	30	34	28	28	18	26	19	14	8	9	16	30	14	44
6-May	17	27	28	22	77	44	11	UO	17	25	28	34	39	28	29	28	19	18	18	12	9	11	10	11	77
7-May	10	10	10	10	9	9	9	12	14	16	20	23	24	25	20	24	26	23	20	15	13	16	16	30	30
8-May	60	39	62	16	19	50	78	11	10	13	14	35	50	57	13	17	15	20	13	10	13	55	13	75	78
9-May	60	43	69	51	68	12	15	17	23	25	32	31	29	27	29	27	26	25	22	19	10	9	11	26	69
10-May	16	60	46	32	18	27	26	37	20	25	49	52	69	67	44	74	44	25	73	6	29	13	11	5	74
11-May	6	79	30	29	24	15	88	38	16	26	17	38	86	72	45	79	19	48	26	28	27	34	20	39	88
12-May	24	46	37	11	19	12	9	14	12	14	17	15	16	14	16	18	12	17	13	10	8	8	9	10	46
13-May	14	9	18	39	45	70	30	19	16	50	69	37	73	40	48	74	36	31	37	31	10	14	13	15	74
14-May	32	17	14	12	13	8	13	52	20	11	11	12	14	12	11	13	10	11	16	16	16	14	14	14	52
15-May	12	13	13	14	12	15	11	14	16	15	19	18	20	20	20	14	22	14	12	9	8	8	11	11	22
16-May	13	15	13	16	20	13	12	16	17	32	40	51	36	51	57	45	63	42	19	11	7	9	42	9	63
17-May	8	16	9	17	18	15	29	67	22	19	24	18	17	15	15	14	17	16	13	8	7	8	8	8	67
18-May	8	9	14	51	26	13	30	30	55	21	18	18	17	32	20	14	13	12	9	8	7	8	8	7	55
19-May	11	11	11	UO	UO	UO	18	13	15	21	15	15	16	17	16	14	12	13	12	9	10	8	9	8	21
20-May	8	8	9	8	8	9	10	9	9	10	11	10	14	12	11	10	10	11	13	10	7	15	15	31	31
21-May	8	9	13	20	16	13	11	12	20	21	19	18	20	19	23	14	14	14	15	15	10	9	10	14	23
22-May	8	8	9	9	9	10	10	15	16	29	18	21	19	15	14	14	18	16	14	13	7	10	6	7	29
23-May	6	9	21	UO	45	43	33	34	15	17	19	19	54	73	27	12	11	12	11	10	18	9	10	14	73
24-May	15	12	15	73	17	15	UO	30	30	16	17	19	21	20	15	16	15	15	16	70	71	8	7	7	73
25-May	9	7	7	9	6	11	14	15	14	13	17	17	19	20	18	17	16	17	15	11	9	7	8	7	20
26-May	8	11	64	23	41	UO	18	11	15	14	15	20	19	18	18	17	16	14	54	21	49	65	89	17	89
27-May	26	31	26	28	21	20	17	20	26	25	29	34	27	26	26	31	27	29	25	26	26	14	11	22	34
28-May	27	18	19	20	20	20	22	29	25	28	41	33	34	34	33	29	23	17	17	11	15	12	6	7	41
29-May	56	19	49	UO	UO	11	14	11	14	12	15	17	16	16	16	17	9	10	11	9	7	40	16	23	56
30-May	21	34	25	27	27	26	17	21	19	23	28	19	53	57	37	25	20	33	74	14	23	20	11	8	74
31-May	13	15	17	19	16	20	18	28	19	14	19	27	55	10	16	11	14	12	16	17	15	17	18	27	55
70 79 69 73 77 70 88 67 80 50 69 52 86 73 57 79 63 48 74 70 71 65 89 75																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS31 BLACKROD MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	35	38	99.6	2.7	0	0.6	0
H2S (ppb) Average	708	35	36	99.87	1.1	0	0.3	0
NO2 (ppb) Average	705	36	39	99.6	19.2	0	6	-
NO (ppb) Average	705	36	39	99.6	22.5	-	6.3	-
NOX (ppb) Average	705	36	39	99.6	41.7	-	12.3	-
Temperature 2 m (C) Average	744	0	0	100	30.3	-	23.3	-
Relative Humidity (%) Average	744	0	0	100	99.6	-	86.7	-
Wind Speed 10 m (km/h) Average	744	0	0	100	31	-	24	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.11	0.3	-	0	0	0	0	0.1	0.3	2.7
H2S (ppb) Average	708	0.11	0.1	-	0	0	0.1	0.1	0.1	0.2	1.1
NO2 (ppb) Average	705	2.92	3	-	0.1	0.6	0.8	1.5	4.2	7.5	19.2
NO (ppb) Average	705	2.29	3.7	-	0	0	0.1	0.4	2.9	7.9	22.5
NOX (ppb) Average	705	5.2	6.5	-	0.2	0.7	1	2	7	15	41.7
Temperature 2 m (C) Average	744	13.2	6.2	-	-1.4	5.8	8.8	12.8	17.2	21.7	30.3
Relative Humidity (%) Average	744	52.26	22.8	-	15.2	25.4	34.2	47.3	71.2	87.2	99.6
Wind Speed 10 m (km/h) Average	744	13.4	7	-	0	4	8	14	18	22	31
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD 2/3 (AMS31)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	25 May 2025 09:00	25 May 2025 09:00	1	Station power failure
NO2, SO2	28 May 2025 12:00	28 May 2025 13:00	2	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

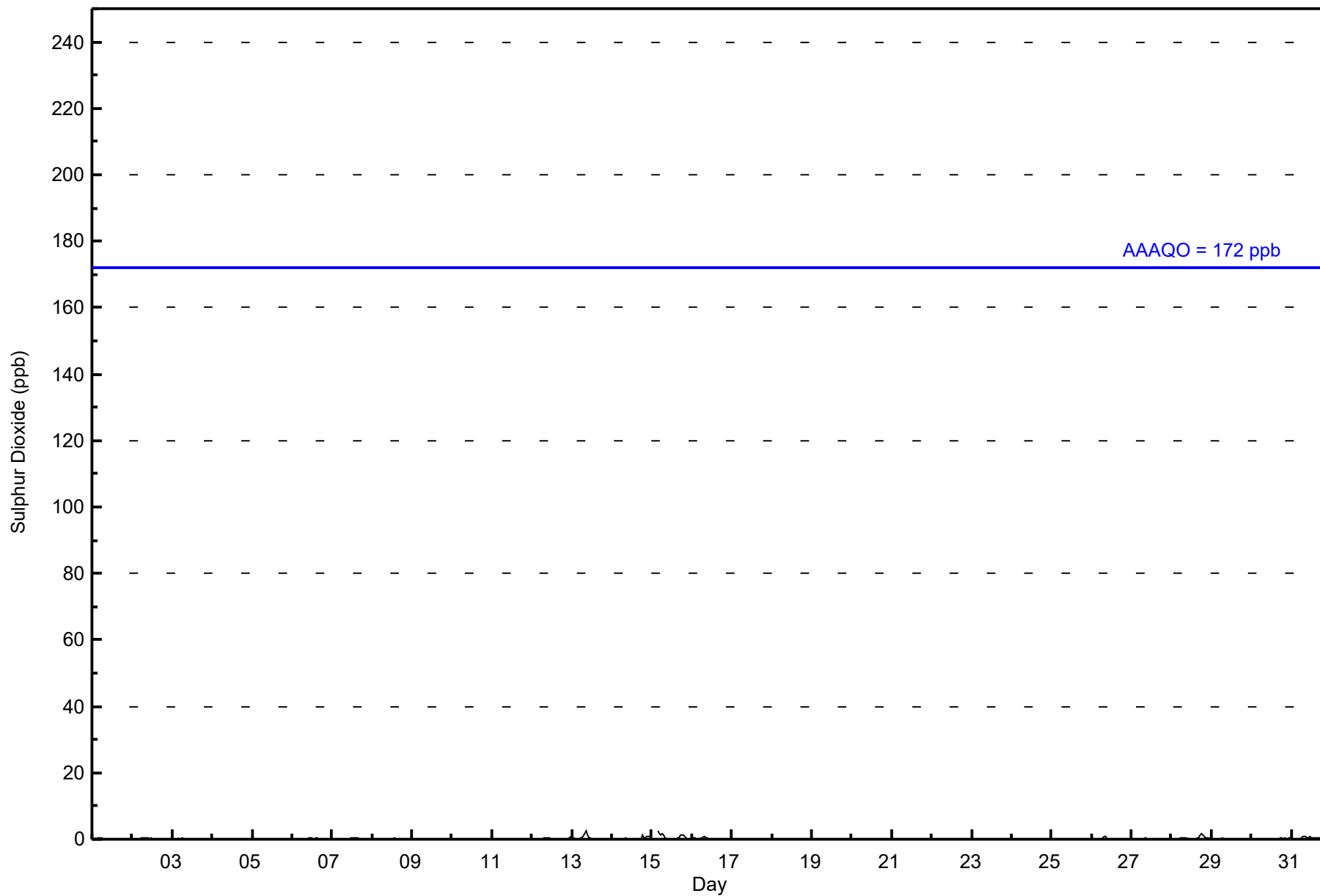
Blackrod - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.7 ppb on May 13 09:00 Maximum Daily Average: 0.6 ppb on May 15																			Hours in Service: 744 Hours of Data: 706								
Minimum Value: 0.0 ppb on May 1 09:00 Minimum Daily Average: 0.0 ppb on May 19 Maximum Diurnal Average: 0.3 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 1 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.4																			Hours of Missing Data: 38 Hours of Calibration: 35 Percent Operational Time: 99.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	Z	0.4	0.2	0.4	0.3	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
2-May	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
3-May	0.0	0.0	Z	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
6-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
7-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
8-May	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
9-May	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
10-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.5	0.5	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.6	0.1	0.6	
13-May	Z	0.2	0.2	0.1	0.1	0.2	0.5	1.7	2.7	1.4	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.7
14-May	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	0.4	0.3	0.7	0.8	0.6	0.2	1.4	
15-May	0.0	0.2	Z	2.7	1.7	1.1	1.6	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.6	1.2	1.3	1.2	0.4	0.2	0.1	0.0	0.6	2.7	
16-May	0.3	0.4	0.3	Z	0.3	0.2	0.4	0.7	0.6	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.7	
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-May	0.0	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
19-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
21-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
23-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
24-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
25-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	
26-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.8	
27-May	0.1	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.3	0.2	C	C	C	C	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.3	
28-May	0.1	0.1	0.0	Z	0.2	0.2	0.3	0.3	0.3	0.2	0.2	M	M	0.1	0.2	0.3	0.5	1.2	1.5	0.7	0.5	0.4	0.3	0.2	0.4	1.5	
29-May	0.2	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2	
30-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.4	0.2	0.3	0.2	0.3	0.2	0.2	0.4	
31-May	Z	0.2	0.1	0.1	0.1	0.2	0.4	0.8	0.7	0.5	0.6	0.6	0.5	0.5	0.6	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.8	
0.0 0.1 0.1 0.2 0.1 0.1 0.2 0.2 0.3 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.1 0.1 0.1																									Diurnal Average		
0.3 0.4 0.3 2.7 1.7 1.1 1.6 1.7 2.7 1.4 0.6 0.6 0.5 0.5 0.6 0.5 0.6 1.2 1.5 1.2 0.5 0.7 0.8 0.6																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	706	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	20	44	15	11	7	12	22	181	202	36	28	17	12	30	38	31	706
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	44	15	11	7	12	22	181	202	36	28	17	12	30	38	31	706

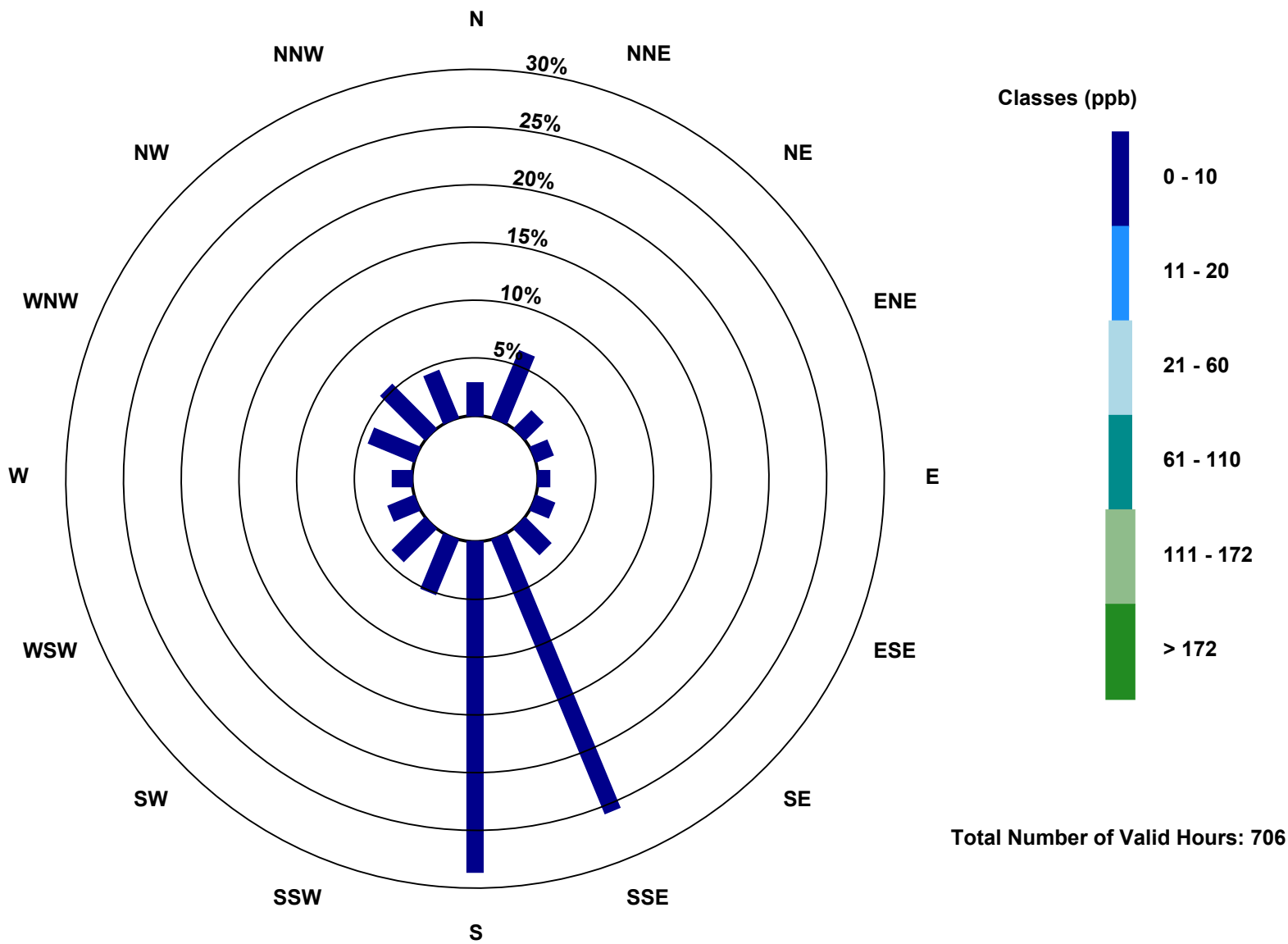
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Blackrod



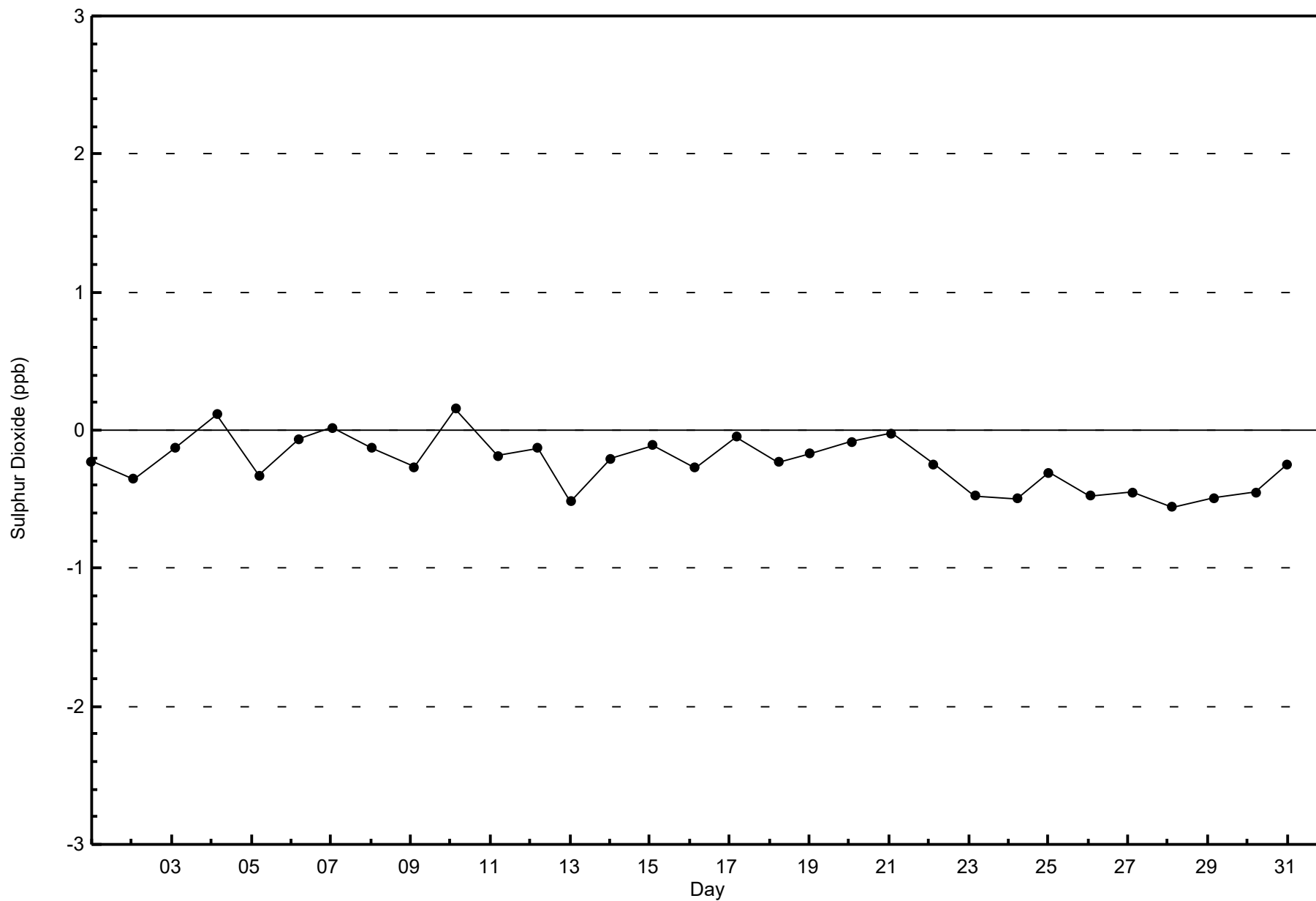


Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

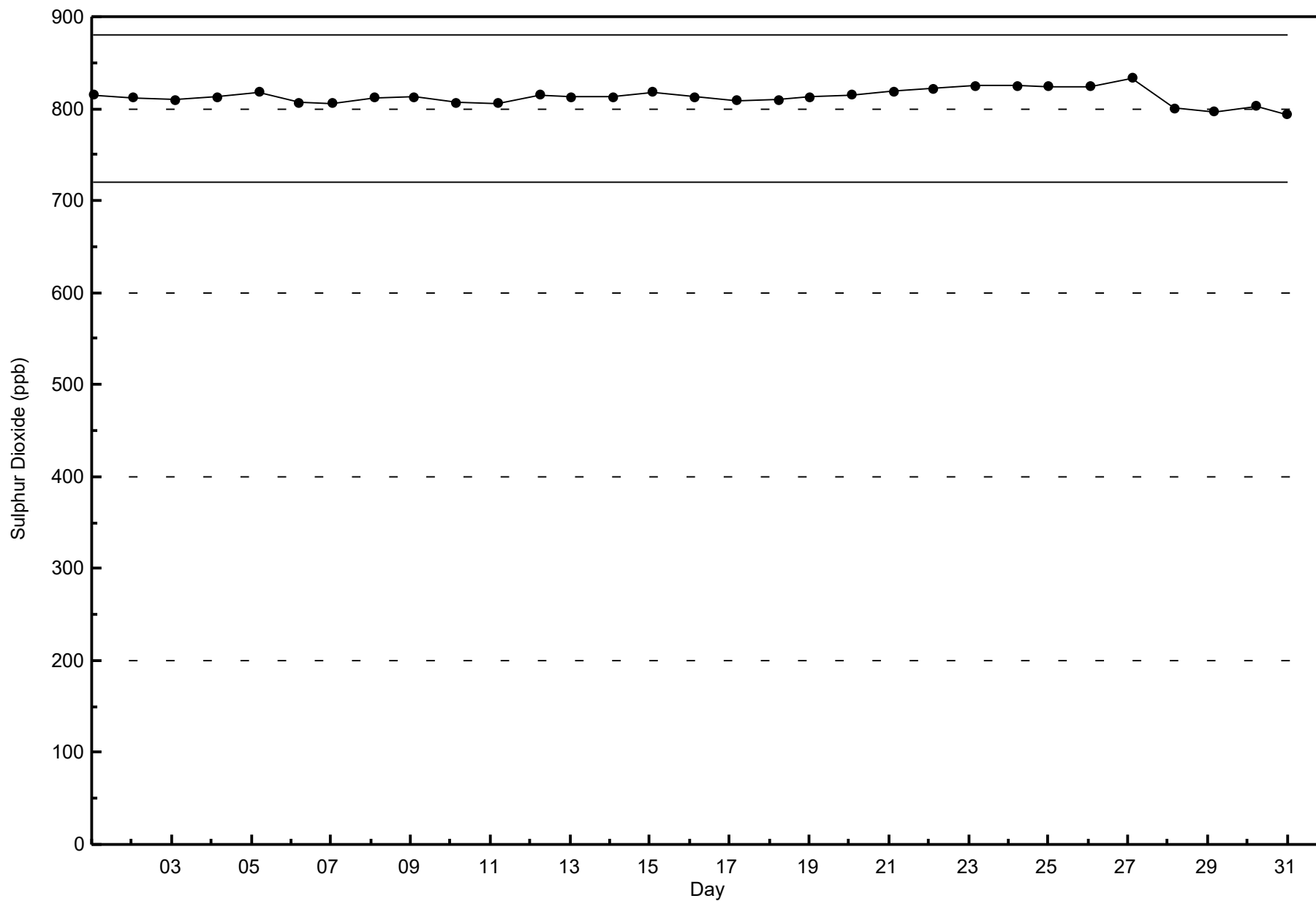
Blackrod - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

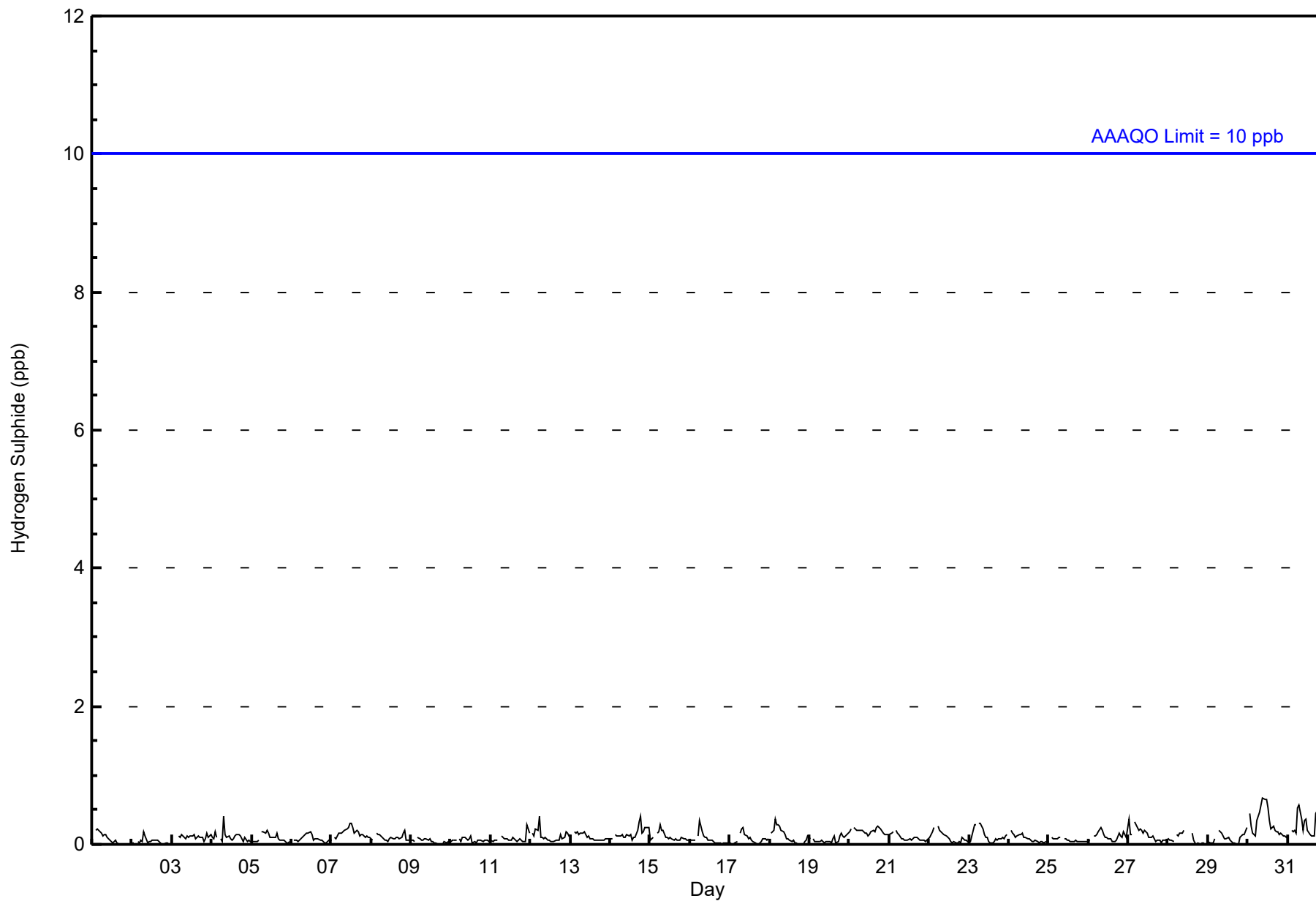
Blackrod - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.1 ppb on May 31 20:00 Maximum Daily Average: 0.3 ppb on May 31																	Hours in Service: 744 Hours of Data: 708										
Minimum Value: 0.0 ppb on May 1 18:00 Minimum Daily Average: 0.0 ppb on May 2 Maximum Diurnal Average: 0.2 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 17 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.5																	Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
2-May	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-May	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
4-May	0.1	0.1	0.2	0.1	Z	0.1	0.0	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.4	
5-May	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	
6-May	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	
7-May	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	
8-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	
9-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
10-May	0.0	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	
11-May	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.1	0.3	
12-May	Z	0.2	0.1	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.4	
13-May	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
14-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.4	
15-May	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
16-May	0.1	0.1	0.1	0.1	Z	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	
18-May	Z	0.2	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	
19-May	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	
20-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	
21-May	0.1	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	
22-May	0.1	0.1	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.3	
23-May	0.0	0.0	0.1	0.3	0.3	Z	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
24-May	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
25-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	PF	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
26-May	0.0	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	
27-May	0.4	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4	
28-May	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.2	0.2	0.2	C	C	C	C	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
29-May	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	
30-May	Z	0.5	0.3	0.2	0.1	0.3	0.4	0.5	0.6	0.7	0.6	0.6	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.7	
31-May	0.1	Z	0.2	0.2	0.2	0.2	0.5	0.6	0.4	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.4	0.5	1.1	0.8	0.4	0.3	0.3	0.3	1.1	
0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																										Diurnal Average	
0.4 0.5 0.3 0.4 0.3 0.4 0.5 0.6 0.6 0.6 0.7 0.6 0.6 0.5 0.3 0.2 0.3 0.2 0.4 0.5 1.1 0.8 0.4 0.3 0.3																										Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	708	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	20	45	15	10	8	11	24	181	202	34	27	18	14	30	38	31	708
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	45	15	10	8	11	24	181	202	34	27	18	14	30	38	31	708

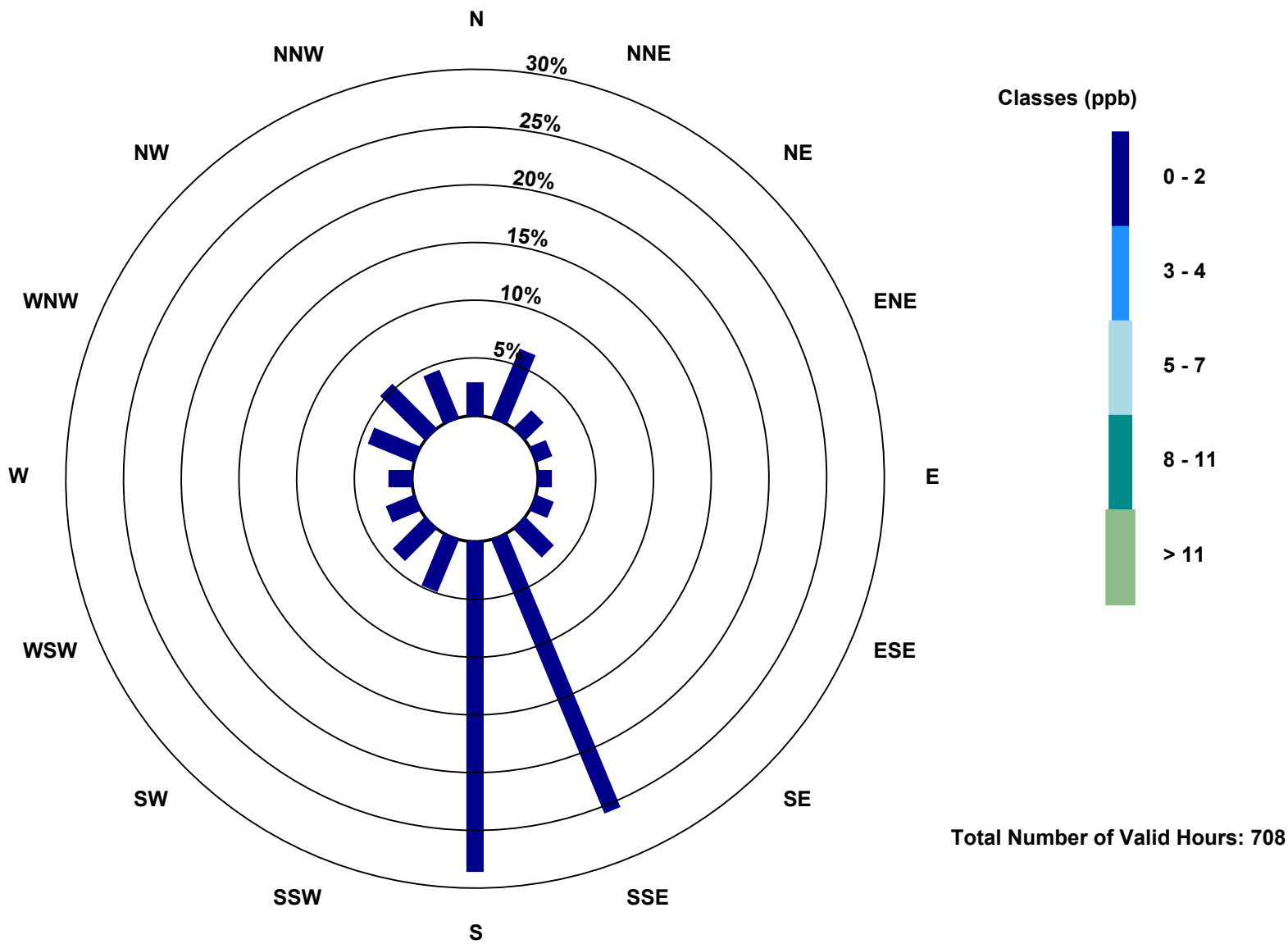
Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Blackrod



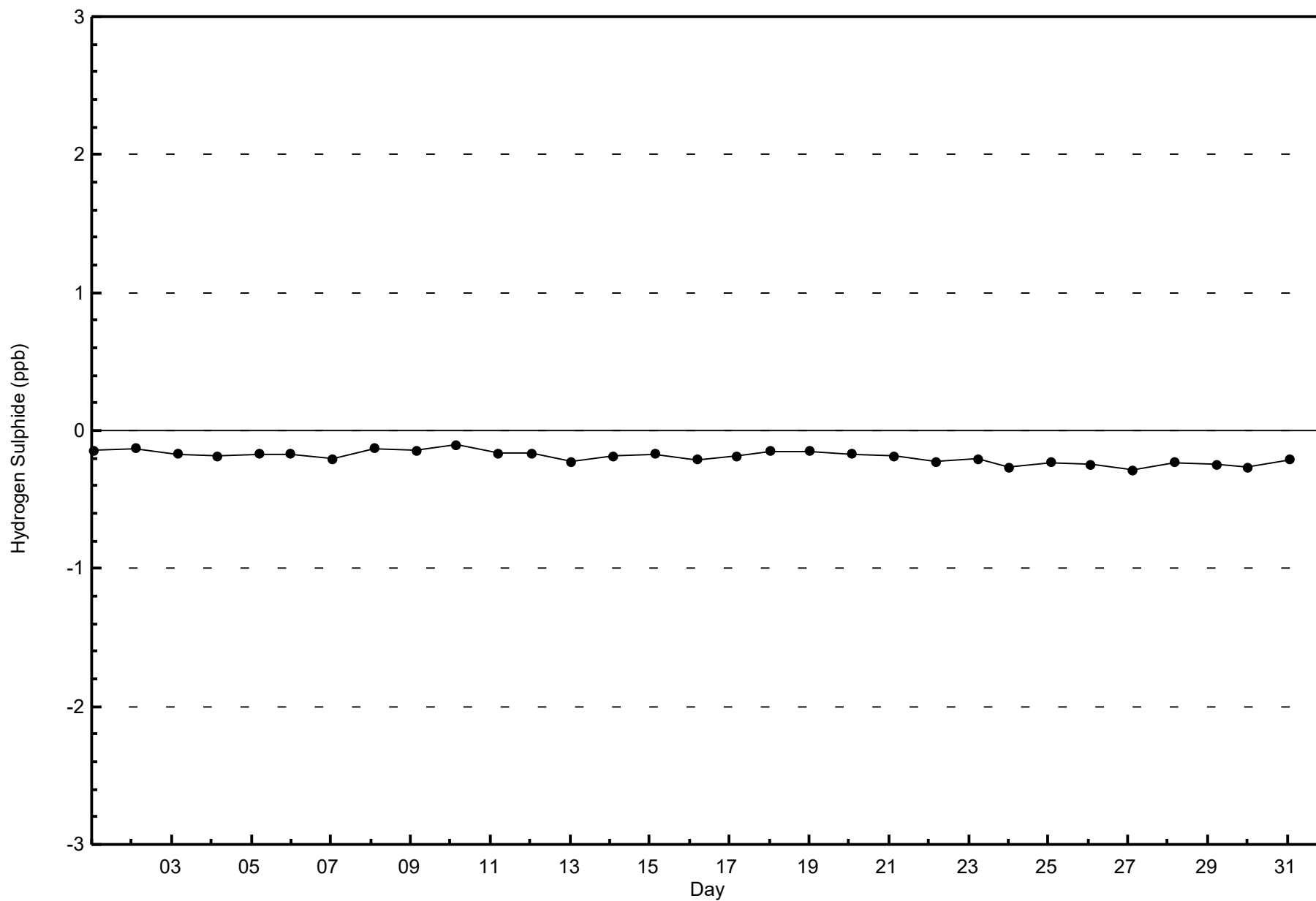


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

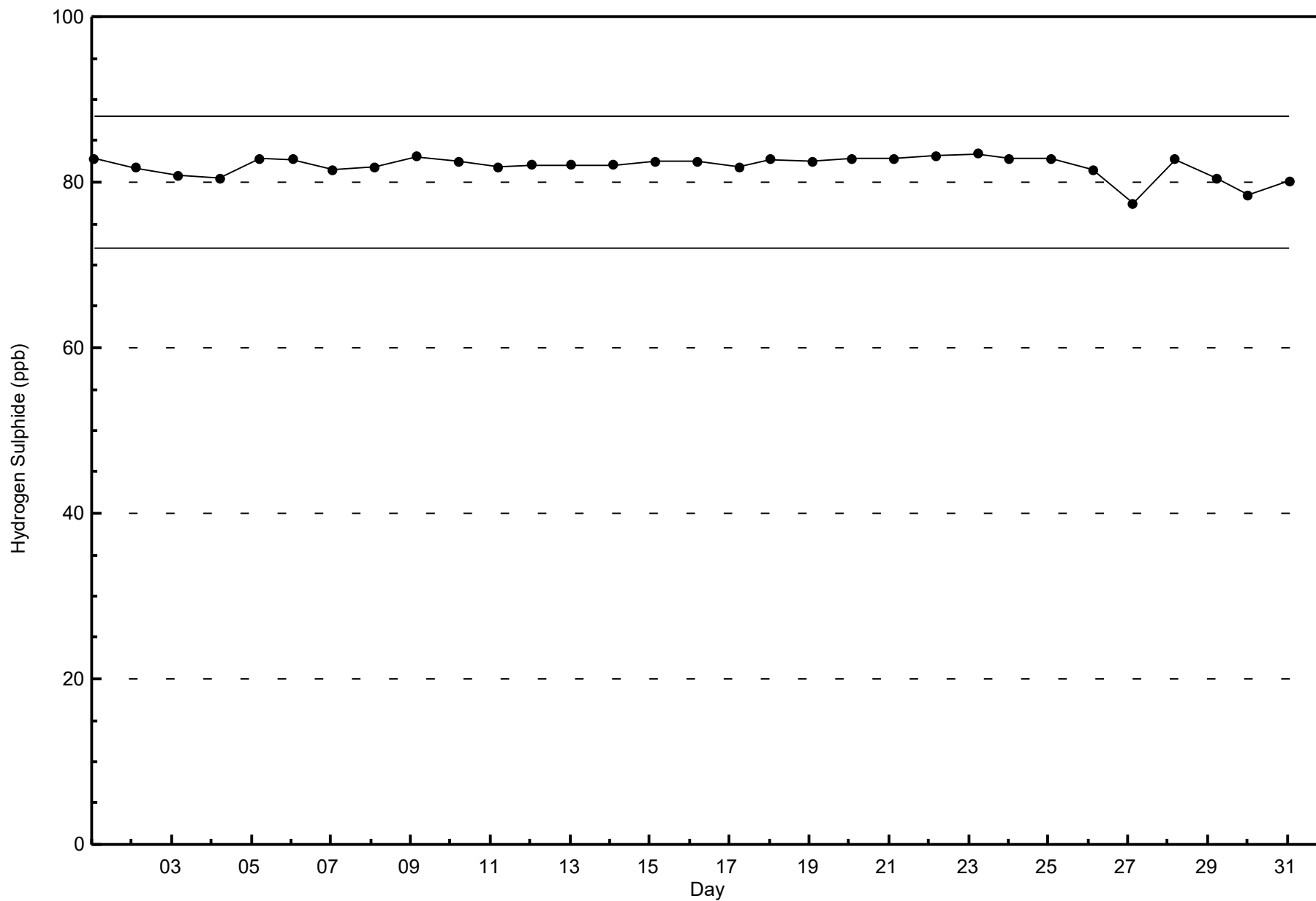
Blackrod - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxide (NO) - ppb

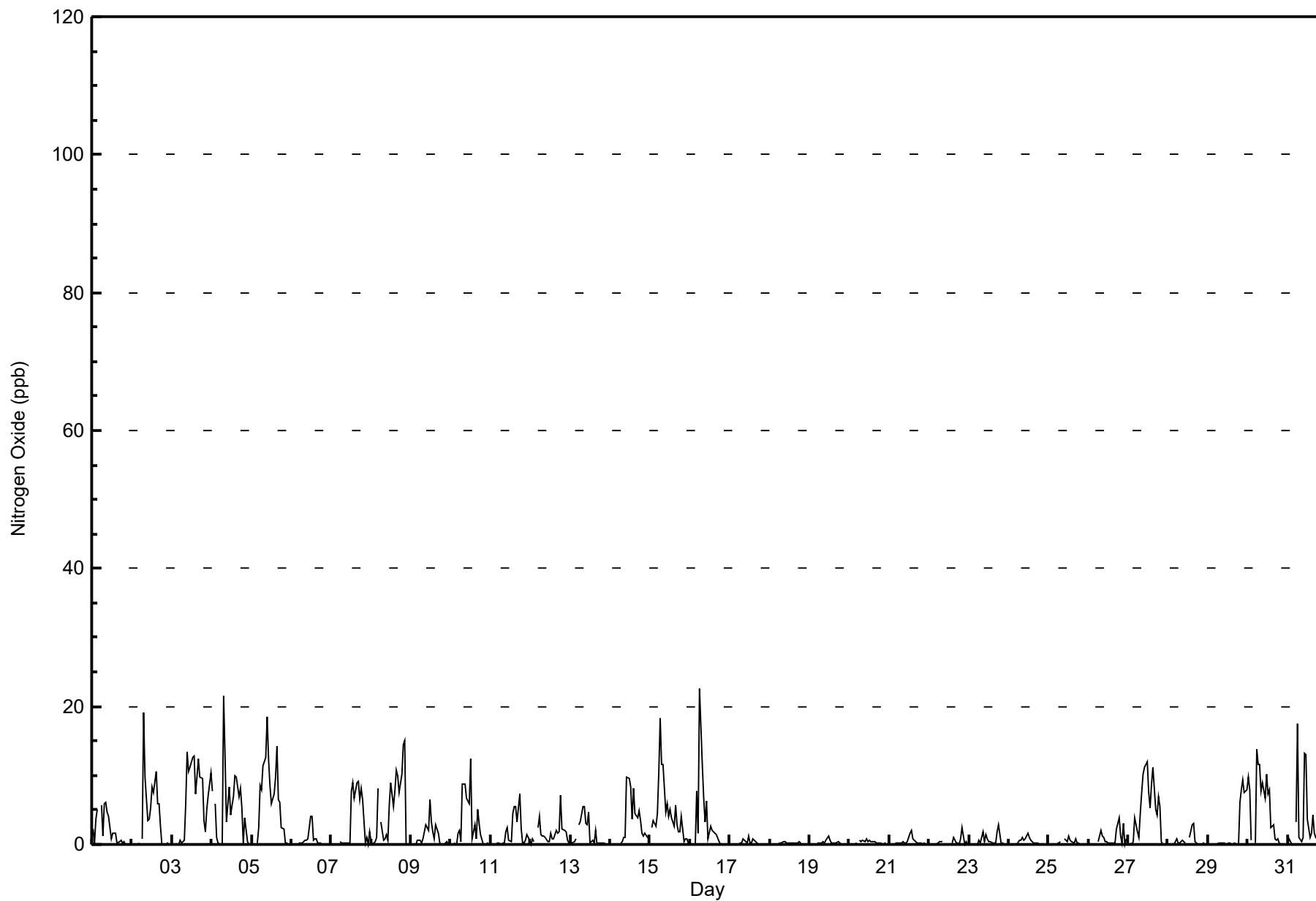
Blackrod - May 2025

Maximum Value: 22.5 ppb on May 16 07:00																		Maximum Daily Average: 6.3 ppb on May 3										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 3 03:00																		Minimum Daily Average: 0.1 ppb on May 18										Hours of Data: 705	
Maximum Diurnal Average: 3.9 ppb at hour 12																		Minimum Diurnal Average: 0.4 ppb at hour 4										Hours of Missing Data: 39	
Monthly Average: 2.29 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 2.9 P ₉₀ = 7.9 P ₉₉ = 14.4										Hours of Calibration: 36	
																												Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	2.2	0.3	3.6	5.0	Z	5.8	1.1	6.0	6.1	4.7	4.1	0.8	1.6	1.7	1.7	0.3	0.5	0.6	0.2	0.3	0.0	0.0	0.0	0.0	2.0	6.1			
2-May	0.0	0.0	0.1	0.1	0.2	Z	0.9	19.0	9.8	3.5	3.6	5.3	8.3	7.6	10.6	5.9	6.0	2.7	0.1	0.1	0.1	0.2	0.0	0.0	3.7	19.0			
3-May	Z	0.0	0.0	0.0	0.0	0.7	0.2	0.5	5.9	13.5	10.6	11.2	12.7	12.8	7.4	9.8	12.5	9.7	9.6	3.5	1.8	5.0	7.0	10.4	6.3	13.5			
4-May	7.8	Z	5.9	1.0	0.2	0.0	0.1	21.6	12.8	3.2	8.3	4.3	5.8	6.9	9.9	9.8	6.9	8.1	5.3	0.2	3.8	0.4	0.0	0.0	5.3	21.6			
5-May	0.0	0.1	Z	0.1	2.5	8.6	8.0	11.3	12.7	18.4	12.3	8.4	5.9	7.3	9.8	14.2	6.5	6.0	2.4	2.2	0.2	0.2	0.0	0.0	6.0	18.4			
6-May	0.0	0.1	0.0	Z	0.1	0.2	0.1	0.3	0.6	0.6	0.8	4.0	4.1	0.6	0.9	0.8	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.6	4.1			
7-May	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.2	0.2	0.1	0.3	0.1	7.7	8.9	6.8	9.0	9.1	6.4	8.1	6.5	0.2	1.1	0.1	1.8	2.9	9.1			
8-May	0.5	0.0	0.3	0.9	8.2	Z	3.3	0.6	0.8	1.5	0.6	5.7	9.0	5.5	7.7	10.8	9.9	7.6	10.2	14.4	15.0	0.0	0.0	0.0	4.9	15.0			
9-May	Z	0.0	0.0	0.0	0.6	0.6	0.2	0.9	1.9	2.8	2.0	6.6	3.3	1.9	0.7	2.9	1.5	0.2	0.1	0.0	0.0	0.4	0.0	0.0	1.1	6.6			
10-May	0.0	Z	0.2	0.0	1.6	2.0	0.5	8.7	8.8	6.8	6.3	5.8	12.3	0.8	2.8	0.9	5.1	3.1	1.5	0.0	0.0	0.1	0.3	0.1	2.9	12.3			
11-May	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.2	0.2	1.9	2.4	0.5	0.3	4.6	5.5	5.5	3.2	7.3	2.2	0.3	0.2	0.5	1.4	0.5	1.6	7.3			
12-May	0.1	0.8	0.4	Z	2.5	4.0	1.4	1.1	1.2	1.1	0.5	0.4	1.6	0.8	0.9	2.0	1.7	1.8	7.0	2.3	2.1	1.9	0.5	0.3	1.6	7.0			
13-May	0.2	0.2	0.3	0.8	Z	2.8	3.3	5.5	5.5	3.0	2.8	4.6	0.2	0.5	0.1	2.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	1.4	5.5			
14-May	0.1	0.0	0.0	0.1	0.1	Z	0.2	0.3	1.1	1.0	9.7	9.5	8.3	3.7	8.1	4.5	3.9	4.8	3.5	1.6	1.3	1.6	0.9	0.9	2.8	9.7			
15-May	Z	2.5	3.5	2.7	4.5	10.4	18.2	11.5	11.5	4.7	5.9	4.0	5.0	3.8	2.6	5.7	2.8	1.9	1.9	4.1	0.5	0.8	0.8	0.2	4.8	18.2			
16-May	0.5	Z	0.1	0.0	7.8	1.5	22.5	11.5	6.8	3.2	6.3	0.7	2.7	2.0	1.8	1.7	1.4	0.4	0.0	0.0	0.1	0.0	0.0	0.0	3.1	22.5			
17-May	0.0	0.0	Z	0.0	0.1	0.1	0.2	0.2	0.7	0.6	0.1	1.3	0.2	0.2	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3			
18-May	0.0	0.0	0.0	Z	0.1	0.1	0.3	0.2	0.4	0.5	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.0	0.1	0.5			
19-May	0.0	0.1	0.0	0.1	Z	0.2	0.3	0.3	0.5	0.2	0.6	1.3	0.6	0.3	0.2	0.2	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.3			
20-May	0.1	0.1	0.0	0.1	0.2	Z	0.7	0.4	0.6	0.3	0.8	0.4	0.6	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.8			
21-May	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.4	0.2	0.2	0.5	1.6	2.1	0.9	0.6	0.5	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.4	2.1			
22-May	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.4	0.4	C	C	C	C	C	0.2	1.0	0.3	0.1	0.0	0.7	2.5	0.0	0.4	0.0	0.4	2.5			
23-May	0.0	0.0	Z	0.0	0.0	0.1	0.6	0.2	1.9	0.4	1.4	0.8	0.4	0.4	0.3	0.1	0.2	1.9	2.8	0.0	0.1	0.0	0.0	0.0	0.5	2.8			
24-May	0.0	0.0	0.0	Z	0.0	0.0	0.7	0.6	1.0	0.7	0.8	1.7	1.0	0.5	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7			
25-May	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	PF	0.8	0.6	0.3	1.2	0.5	0.3	0.3	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.3	1.2			
26-May	0.0	0.0	0.0	0.1	0.1	Z	0.4	1.9	1.1	1.0	0.3	0.3	0.2	0.2	0.1	0.1	0.3	2.3	3.9	1.2	0.2	3.0	0.0	0.9	0.8	3.9			
27-May	Z	0.2	0.1	0.5	3.8	1.9	1.0	4.4	7.5	10.1	11.2	12.0	7.5	5.2	8.7	11.2	5.0	4.3	6.9	5.5	0.3	0.0	0.1	0.0	4.7	12.0			
28-May	0.0	Z	0.0	0.0	0.4	0.7	0.2	0.3	0.5	0.5	0.2	M	M	1.0	2.8	3.1	0.3	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.5	3.1			
29-May	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.0	6.1	7.9	9.3	7.5	8.0	1.8	9.3			
30-May	9.7	7.8	0.6	Z	0.3	13.9	11.6	11.6	7.7	8.9	6.7	10.2	7.3	7.9	2.4	2.9	0.8	0.6	0.9	0.1	0.0	0.0	0.0	0.0	4.9	13.9			
31-May	0.0	0.8	0.0	0.0	Z	3.2	17.6	1.0	0.3	1.0	13.2	13.0	3.6	1.1	1.6	4.2	1.6	0.9	1.2	5.0	8.0	2.9	2.8	4.8	3.8	17.6			
																										Diurnal Average			
																										Diurnal Maximum			
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxide (NO) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxide (NO) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	703	99.72	99.72
21 - 40	2	0.28	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxide (NO) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	18	46	15	9	7	12	23	183	197	36	27	18	13	31	38	30	703
21 - 40	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	46	15	9	7	12	23	183	197	36	28	18	13	31	38	30	705

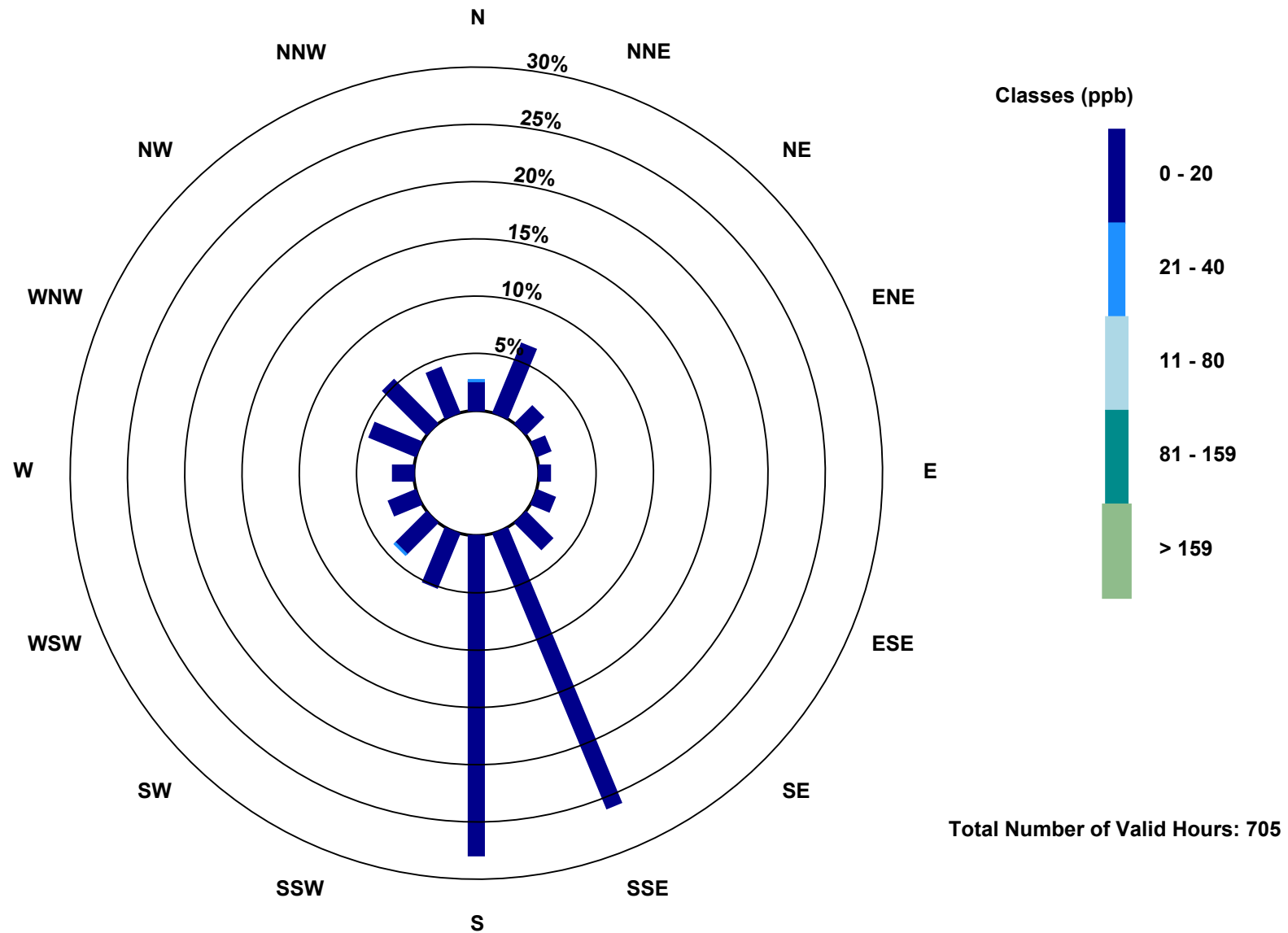
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

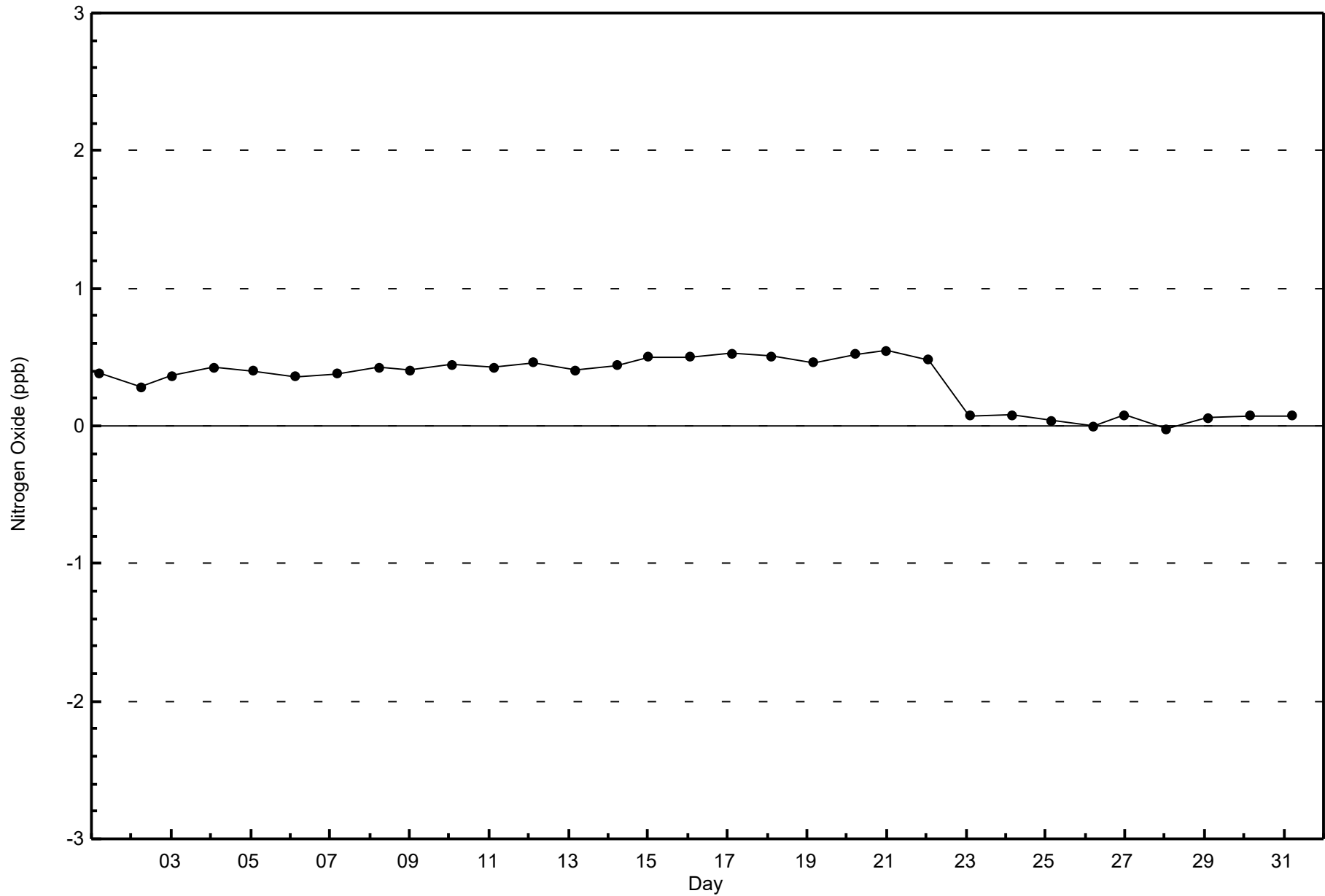
Nitrogen Oxide (NO) - ppb
Blackrod





Wood Buffalo Environmental Association
Zero Responses

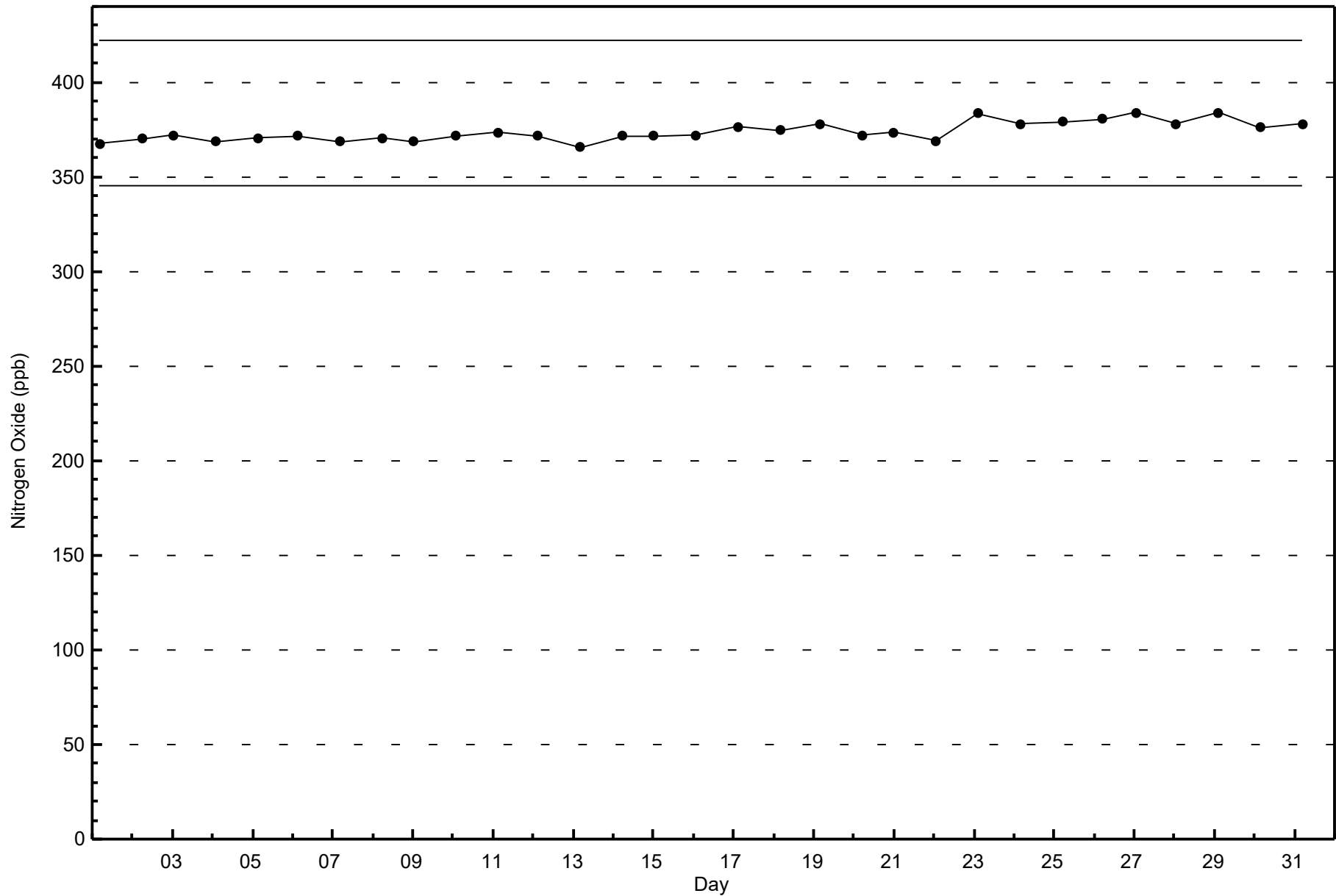
Nitrogen Oxide (NO) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxide (NO) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

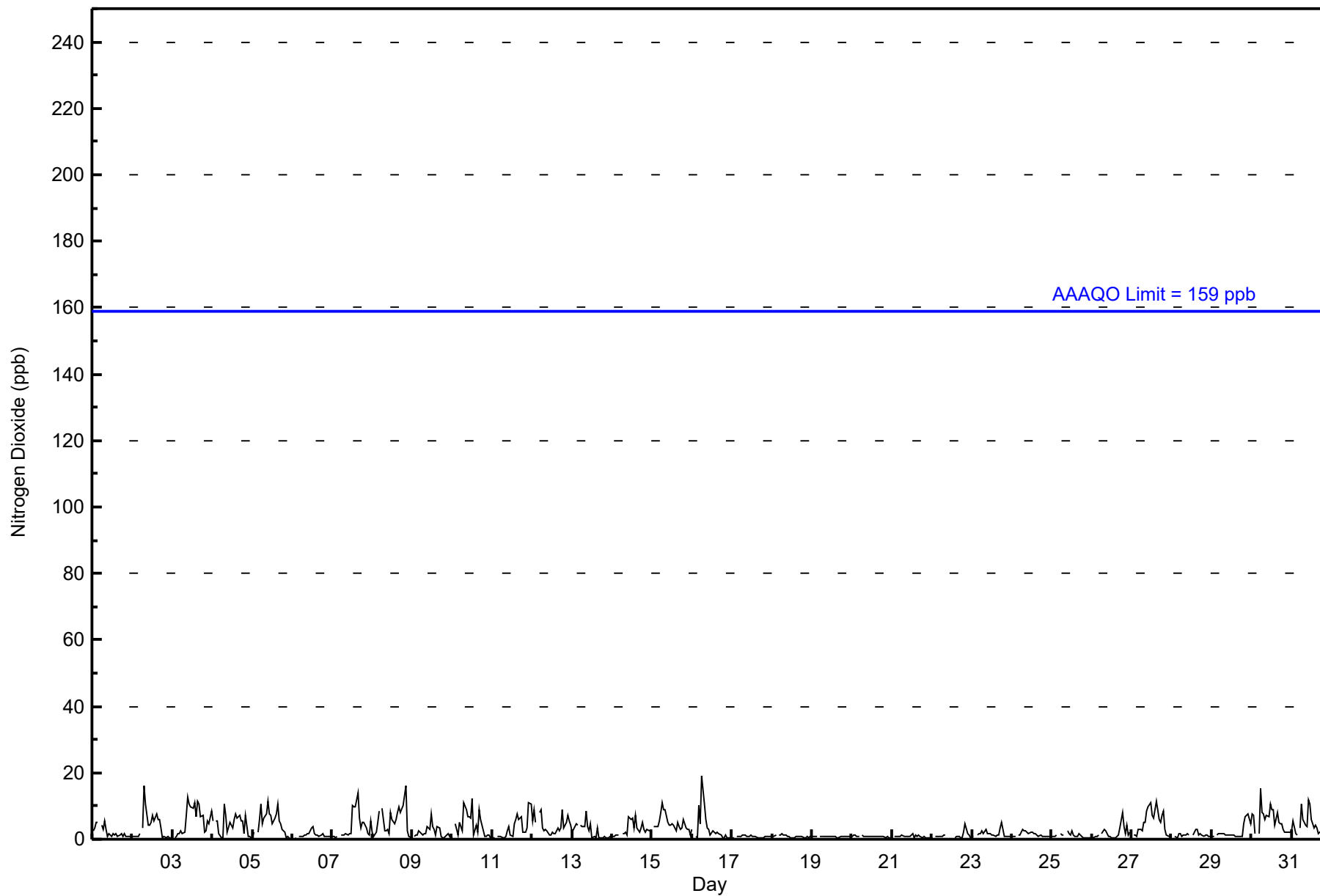
Blackrod - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 19.2 ppb on May 16 07:00 Maximum Daily Average: 6.0 ppb on May 30																				Hours in Service: 744 Hours of Data: 705							
Minimum Value: 0.1 ppb on May 6 02:00 Maximum Diurnal Average: 4.0 ppb at hour 12 Monthly Average: 2.92 ppb																				Minimum Daily Average: 0.8 ppb on May 17 Minimum Diurnal Average: 1.6 ppb at hour 1 Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 0.8 Median = 1.5 Q ₃ = 4.2 P ₉₀ = 7.5 P ₉₉ = 12.2		Hours of Missing Data: 39 Hours of Calibration: 36 Percent Operational Time: 99.6					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	2.5	3.3	5.0	5.1	Z	4.2	2.9	5.3	3.1	0.9	1.7	0.9	1.8	1.4	1.9	0.7	1.3	1.9	0.8	1.5	0.9	0.7	0.8	0.9	2.2	5.3	
2-May	1.0	1.0	0.8	1.0	1.5	Z	3.4	15.9	10.8	4.3	4.2	5.2	7.1	5.6	7.6	5.8	5.9	3.4	0.4	1.0	0.6	0.7	0.4	0.4	3.8	15.9	
3-May	Z	0.5	0.8	1.5	1.6	2.5	1.8	2.1	7.0	12.9	10.8	9.7	9.2	10.9	6.9	11.4	10.4	6.9	7.0	2.3	2.4	5.6	4.6	8.4	6.0	12.9	
4-May	5.3	Z	5.3	5.6	1.8	0.4	0.5	10.6	7.2	2.2	4.9	4.1	3.5	5.8	7.8	6.3	7.0	5.4	5.3	1.7	7.1	0.8	0.8	0.4	4.3	10.6	
5-May	0.5	2.0	Z	2.2	5.9	10.4	4.5	6.5	7.6	11.5	7.5	7.0	4.5	6.4	7.8	10.7	5.4	4.7	2.9	2.2	0.6	0.7	0.3	0.2	4.9	11.5	
6-May	0.2	0.1	0.4	Z	0.9	1.0	0.9	1.2	1.4	1.6	1.6	3.2	3.7	1.8	1.4	1.2	0.9	1.4	1.6	0.8	0.8	0.8	0.7	0.7	1.2	3.7	
7-May	0.7	0.7	0.6	0.7	Z	1.2	1.2	1.3	1.5	1.4	1.6	1.7	10.0	9.9	9.8	13.9	6.4	3.6	5.2	5.2	3.2	1.9	1.4	5.3	3.8	13.9	
8-May	2.1	1.0	2.3	5.2	8.5	Z	9.2	2.6	2.4	3.1	1.5	7.9	6.1	4.5	5.9	8.1	9.8	7.9	10.2	13.0	16.1	2.4	0.7	0.4	5.7	16.1	
9-May	Z	0.7	1.1	1.1	2.5	1.7	1.1	1.6	1.9	3.7	2.8	7.5	3.7	2.9	1.4	3.8	3.6	0.8	0.6	0.6	0.9	1.9	0.9	0.7	2.1	7.5	
10-May	0.6	Z	4.5	1.2	4.9	3.7	2.6	11.1	8.7	6.6	6.6	6.2	12.2	1.3	4.3	2.1	8.8	5.8	4.3	0.9	0.8	1.1	1.1	0.6	4.3	12.2	
11-May	0.5	0.6	Z	0.7	0.8	0.9	0.5	0.6	0.7	2.5	3.8	1.3	1.0	4.8	6.1	7.7	6.1	6.6	2.3	2.1	2.0	3.3	10.9	10.7	3.3	10.9	
12-May	5.7	8.7	5.0	Z	8.1	8.7	3.2	2.5	2.8	2.5	1.4	1.2	2.1	1.5	1.7	3.2	2.5	3.2	9.1	3.6	5.2	7.0	5.5	4.4	4.3	9.1	
13-May	2.0	3.0	4.8	4.1	Z	4.3	3.9	3.9	8.6	3.9	2.6	4.8	0.5	0.8	0.4	3.6	0.3	0.4	0.6	0.7	0.6	0.5	0.5	0.8	2.4	8.6	
14-May	0.8	1.0	1.2	1.1	1.4	Z	1.7	1.5	2.3	1.3	6.8	5.9	6.4	3.5	7.1	3.6	2.1	3.5	5.0	3.1	2.2	2.8	2.4	2.5	3.0	7.1	
15-May	Z	3.8	4.0	3.8	5.5	8.2	11.2	8.9	9.1	5.0	4.3	4.3	4.5	4.1	2.5	5.0	3.9	2.9	3.6	6.1	3.4	3.0	3.0	1.3	4.8	11.2	
16-May	3.0	Z	1.0	0.5	10.1	4.7	19.2	10.4	5.9	3.3	3.0	1.2	2.5	2.0	1.8	2.0	1.8	1.3	0.5	0.5	1.1	0.4	0.3	0.5	3.3	19.2	
17-May	0.4	0.3	Z	0.7	0.8	1.0	1.1	1.1	1.3	0.9	0.8	1.4	0.7	0.8	1.0	0.6	0.6	0.5	0.5	0.4	0.8	0.7	0.8	0.8	0.8	1.4	
18-May	0.8	0.9	1.1	Z	1.4	1.4	1.5	1.2	1.1	0.8	0.7	0.6	0.6	0.6	0.8	0.8	0.7	0.8	1.0	0.6	0.6	0.7	0.6	0.7	0.9	1.5	
19-May	0.8	0.7	0.8	0.8	Z	1.0	1.0	1.0	0.7	0.7	0.8	1.0	1.0	0.8	0.8	0.6	0.5	0.9	0.8	1.0	0.9	0.8	0.9	0.9	0.8	1.0	
20-May	1.0	1.1	1.1	0.9	0.9	Z	1.2	0.9	0.9	0.8	1.0	0.8	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.6	0.8	0.6	0.6	0.8	1.2	
21-May	Z	0.8	0.7	0.7	0.9	1.0	1.1	0.7	0.9	0.7	0.7	0.8	1.8	0.3	1.3	1.0	1.1	0.8	0.6	0.8	0.6	0.5	0.5	0.5	0.8	1.8	
22-May	0.6	Z	0.8	0.7	0.8	0.9	1.0	1.2	1.1	C	C	C	C	C	0.4	0.9	0.7	0.5	0.3	2.1	4.5	1.7	1.1	0.5	1.1	4.5	
23-May	0.7	1.0	Z	1.4	1.7	1.7	2.4	1.7	3.1	1.7	1.7	1.6	1.2	1.2	0.8	1.1	1.1	3.4	5.2	0.7	1.0	0.7	0.7	0.7	1.6	5.2	
24-May	0.7	0.8	0.7	Z	1.1	1.3	2.9	2.5	2.6	2.0	1.9	2.2	2.2	1.7	1.5	1.1	1.0	1.3	0.8	1.0	0.8	0.8	0.7	0.8	1.4	2.9	
25-May	0.8	0.9	1.0	1.1	Z	1.5	1.4	1.4	PF	2.4	1.6	1.3	2.4	1.4	1.0	1.0	1.8	1.1	0.7	0.5	0.5	0.5	0.5	0.6	1.2	2.4	
26-May	0.6	0.6	0.7	0.8	1.1	Z	1.7	2.9	2.4	1.6	0.9	0.9	0.6	0.6	0.6	0.8	1.2	3.6	8.2	3.7	1.8	4.3	1.3	2.2	1.9	8.2	
27-May	Z	1.2	1.1	0.8	3.0	3.1	2.7	5.1	5.0	8.5	9.9	11.0	7.3	6.2	9.0	11.3	5.9	4.9	7.2	8.3	2.8	1.3	0.8	0.7	5.1	11.3	
28-May	0.7	Z	0.7	0.6	1.6	1.9	0.9	1.1	1.4	1.5	1.1	M	M	1.1	3.0	2.8	1.1	1.5	1.2	0.9	1.1	1.3	0.8	0.8	1.3	3.0	
29-May	0.8	0.8	Z	1.3	1.6	1.6	1.6	1.5	1.3	1.3	1.1	1.1	1.2	1.3	0.8	0.8	1.0	0.9	0.8	4.7	6.6	7.2	7.5	4.7	2.2	7.5	
30-May	7.5	7.1	1.9	Z	1.7	15.3	8.2	7.7	6.0	7.4	6.9	10.8	9.1	8.9	4.4	8.2	4.9	4.7	4.8	3.1	2.3	2.3	2.2	2.2	6.0	15.3	
31-May	2.4	5.3	1.6	1.2	Z	3.4	10.4	6.1	4.1	4.0	11.7	10.8	6.0	3.2	4.2	3.4	1.5	2.0	2.4	4.2	6.0	2.4	1.8	2.6	4.4	11.7	
1.6 1.8 1.9 1.7 2.8 3.3 3.4 3.9 3.8 3.4 3.5 4.0 3.9 3.2 3.4 4.0 3.2 2.8 3.1 2.5 2.5 1.9 1.8 1.9																										Diurnal Average	
7.5 8.7 5.3 5.6 10.1 15.3 19.2 15.9 10.8 12.9 11.7 11.0 12.2 10.9 9.8 13.9 10.4 7.9 10.2 13.0 16.1 7.2 10.9 10.7																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	19	46	15	9	7	12	23	183	197	36	28	18	13	31	38	30	705
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	46	15	9	7	12	23	183	197	36	28	18	13	31	38	30	705

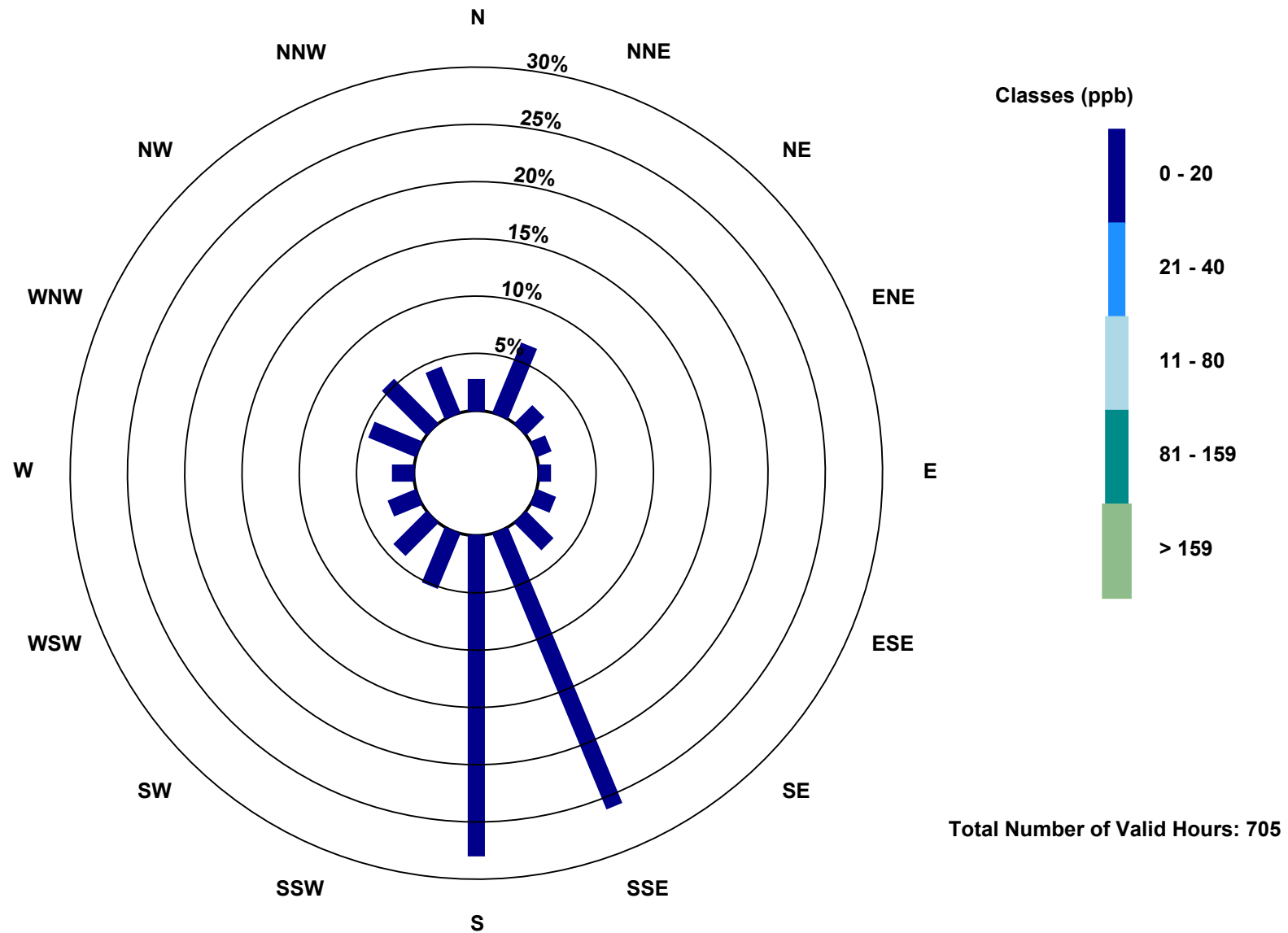
Total Number of Valid Hours: 705

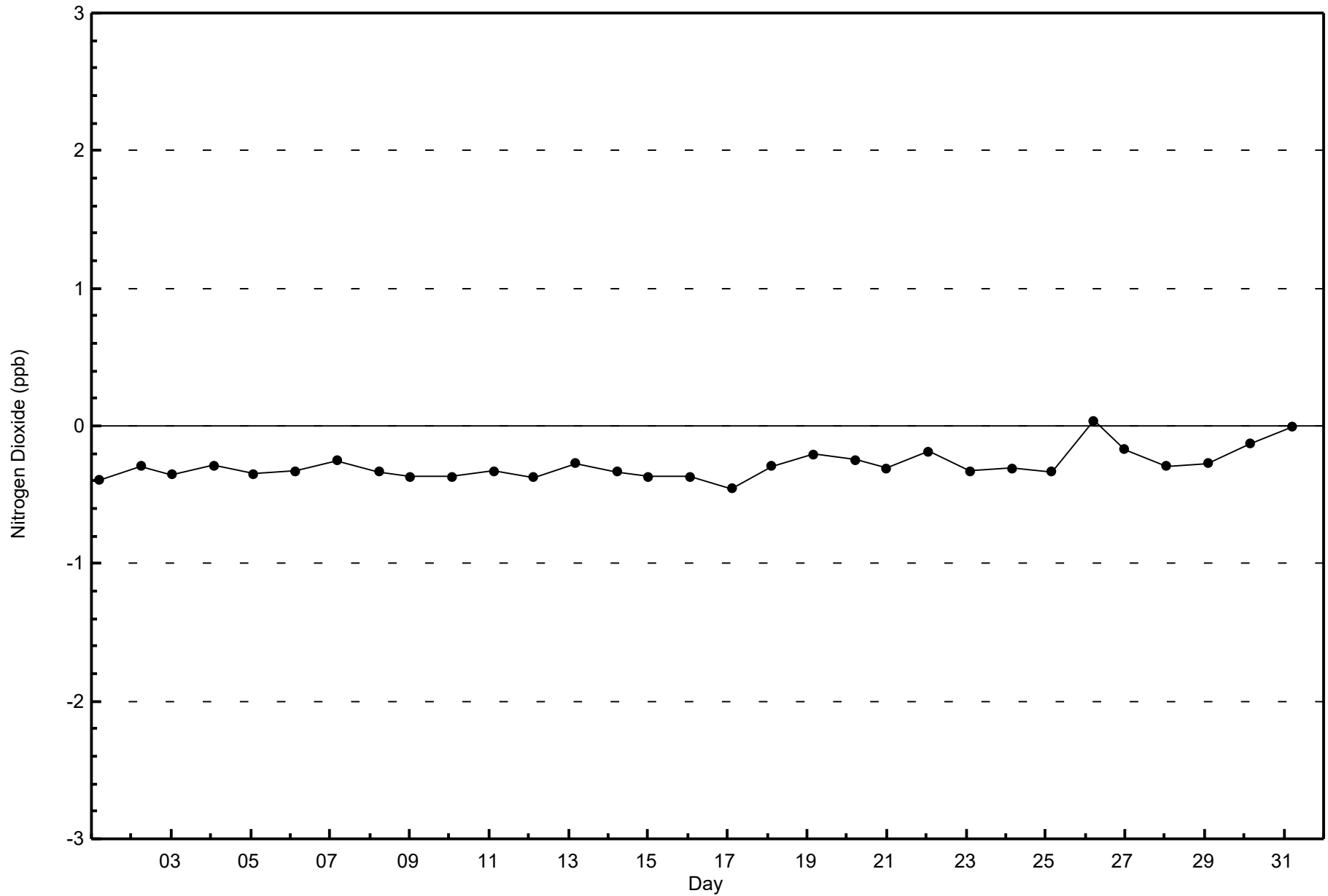
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Blackrod

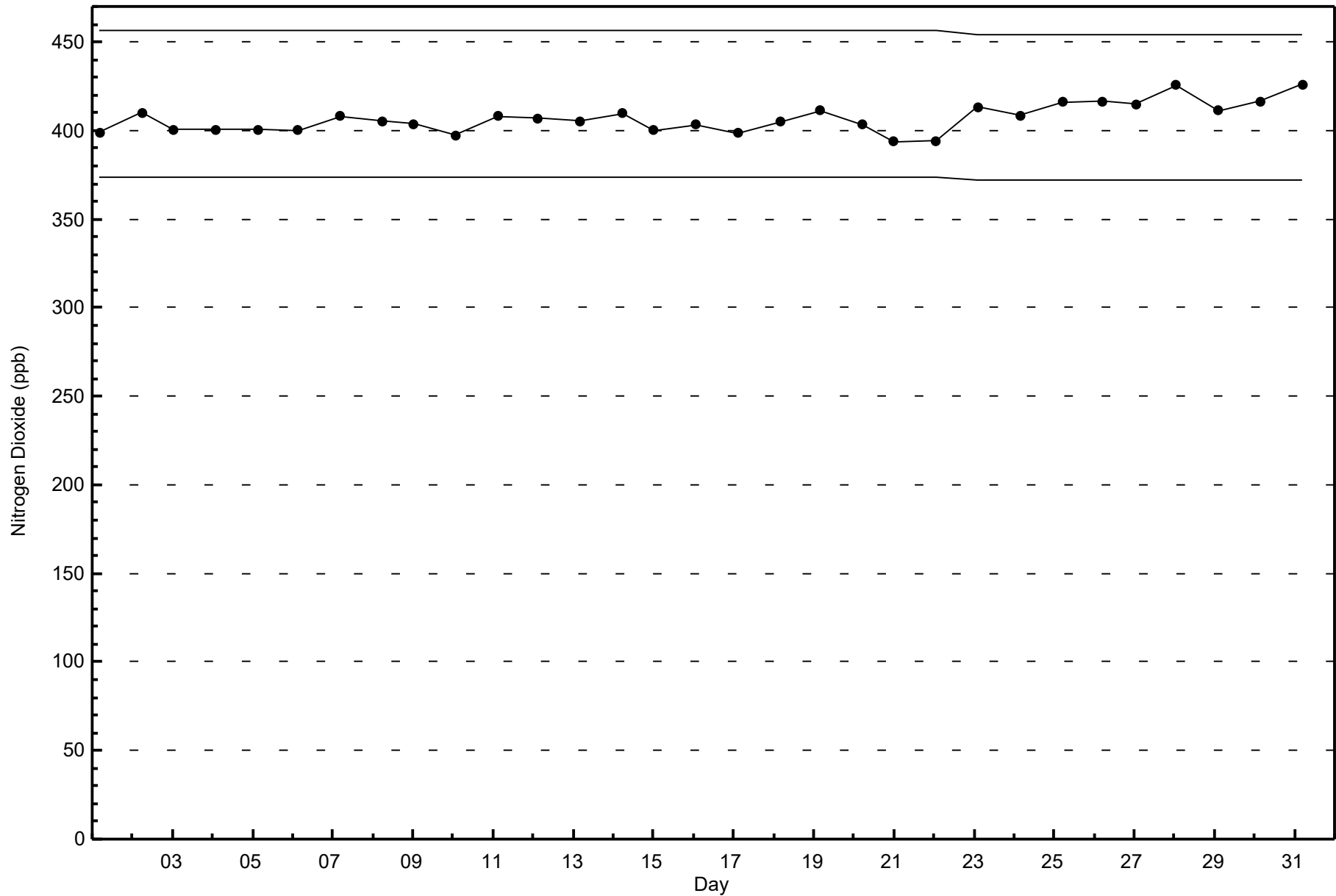






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

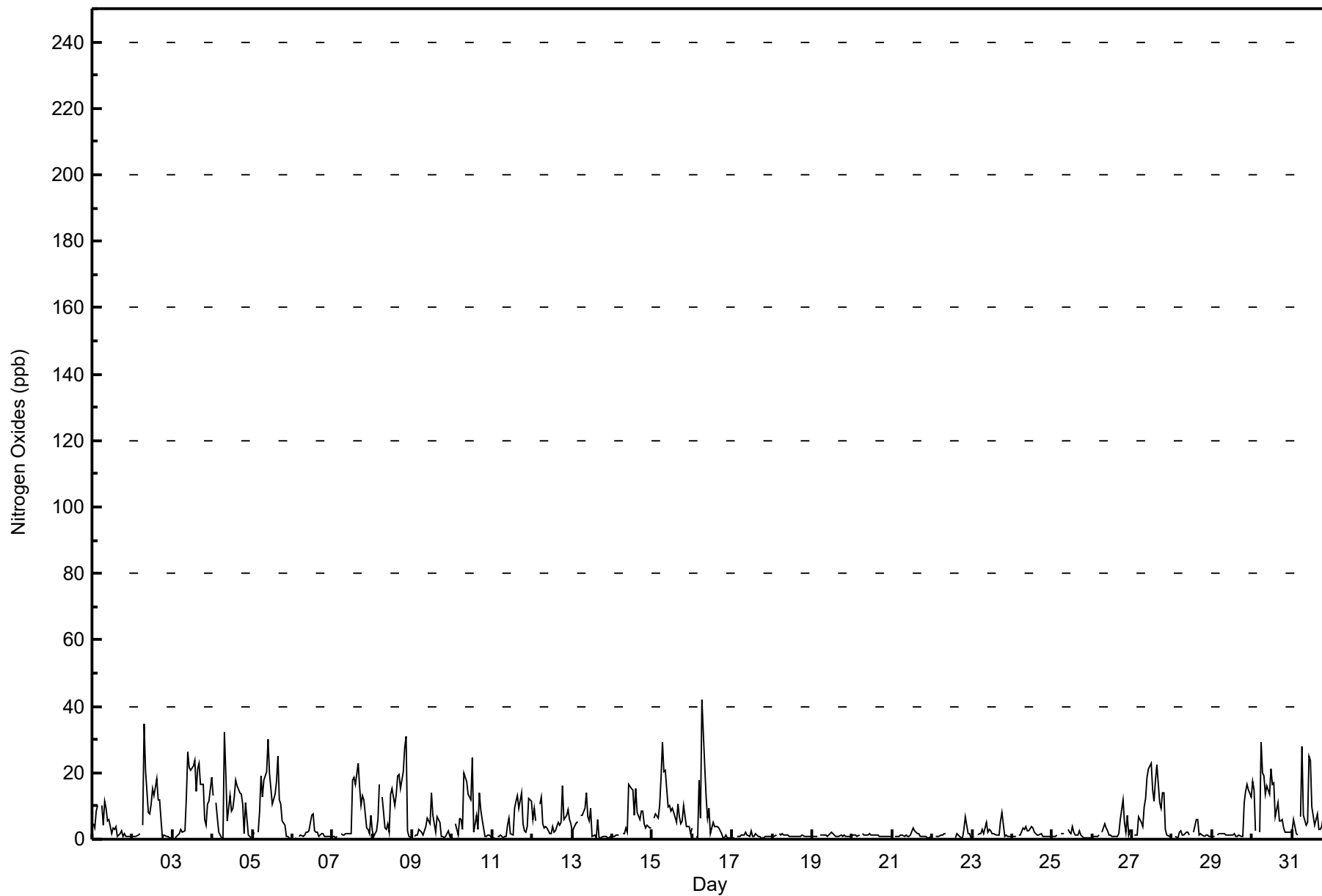
Blackrod - May 2025

Maximum Value: 41.7 ppb on May 16 07:00																				Maximum Daily Average: 12.3 ppb on May 3					Hours in Service: 744	
Minimum Value: 0.2 ppb on May 6 01:00																				Minimum Daily Average: 1.0 ppb on May 17					Hours of Data: 705	
Maximum Diurnal Average: 7.9 ppb at hour 12																				Minimum Diurnal Average: 2.2 ppb at hour 4					Hours of Missing Data: 39	
Monthly Average: 5.20 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.0 Median = 2.0 Q ₃ = 7.0 P ₉₀ = 15.0 P ₉₉ = 27.9					Hours of Calibration: 36	
																									Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	4.7	3.6	8.6	10.1	Z	10.0	4.0	11.3	9.2	5.6	5.8	1.7	3.4	3.1	3.6	1.0	1.8	2.5	1.0	1.8	0.9	0.7	0.8	0.9	4.2	11.3
2-May	1.0	1.0	0.9	1.1	1.7	Z	4.3	34.9	20.6	7.8	7.8	10.5	15.4	13.2	18.2	11.7	11.9	6.1	0.5	1.1	0.7	0.9	0.4	0.4	7.5	34.9
3-May	Z	0.5	0.8	1.5	1.6	3.2	2.0	2.6	12.9	26.4	21.4	20.9	21.9	23.7	14.3	21.2	22.9	16.6	16.6	5.8	4.2	10.6	11.6	18.8	12.3	26.4
4-May	13.1	Z	11.2	6.6	2.0	0.4	0.6	32.2	20.0	5.4	13.2	8.4	9.3	12.7	17.7	16.1	13.9	13.5	10.6	1.9	10.9	1.2	0.8	0.4	9.7	32.2
5-May	0.5	2.1	Z	2.3	8.4	19.0	12.5	17.8	20.3	29.9	19.8	15.4	10.4	13.7	17.6	24.9	11.9	10.7	5.3	4.4	0.8	0.9	0.3	0.2	10.8	29.9
6-May	0.2	0.2	0.4	Z	1.0	1.2	1.0	1.5	2.0	2.2	2.4	7.2	7.8	2.4	2.3	2.0	1.0	1.6	1.7	0.8	0.8	0.8	0.7	0.7	1.8	7.8
7-May	0.7	0.7	0.6	0.7	Z	1.5	1.4	1.5	1.7	1.5	1.9	1.8	17.7	18.8	16.6	22.9	15.5	10.0	13.3	11.7	3.4	3.0	1.5	7.1	6.8	22.9
8-May	2.6	1.0	2.6	6.1	16.7	Z	12.5	3.2	3.2	4.6	2.1	13.6	15.1	10.0	13.6	18.9	19.7	15.5	20.4	27.4	31.1	2.4	0.7	0.4	10.6	31.1
9-May	Z	0.7	1.1	1.1	3.1	2.3	1.3	2.5	3.8	6.5	4.8	14.1	7.0	4.8	2.1	6.7	5.1	1.0	0.7	0.6	0.9	2.3	0.9	0.7	3.2	14.1
10-May	0.6	Z	4.7	1.2	6.5	5.7	3.1	19.8	17.5	13.4	12.9	12.0	24.5	2.1	7.1	3.0	13.9	8.9	5.8	0.9	0.8	1.2	1.4	0.7	7.3	24.5
11-May	0.5	0.6	Z	0.8	0.9	1.1	0.6	0.8	0.9	4.4	6.2	1.8	1.3	9.4	11.6	13.2	9.3	13.9	4.5	2.4	2.2	3.8	12.3	11.2	4.9	13.9
12-May	5.8	9.5	5.4	Z	10.6	12.7	4.6	3.6	4.0	3.6	1.9	1.6	3.7	2.3	2.6	5.2	4.2	5.0	16.1	5.9	7.3	8.9	6.0	4.7	5.9	16.1
13-May	2.2	3.2	5.1	4.9	Z	7.1	7.2	9.4	14.1	6.9	5.4	9.4	0.7	1.3	0.5	5.7	0.4	0.5	0.8	0.8	0.7	0.6	0.6	0.8	3.8	14.1
14-May	0.9	1.0	1.2	1.2	1.5	Z	1.9	1.8	3.4	2.3	16.5	15.4	14.7	7.2	15.2	8.1	6.0	8.3	8.5	4.7	3.5	4.4	3.3	3.4	5.8	16.5
15-May	Z	6.3	7.5	6.5	10.0	18.6	29.4	20.4	20.6	9.7	10.2	8.3	9.5	7.9	5.1	10.7	6.7	4.8	5.5	10.2	3.9	3.8	3.8	1.5	9.6	29.4
16-May	3.5	Z	1.1	0.5	17.9	6.2	41.7	21.9	12.7	6.5	9.3	1.9	5.2	4.0	3.6	3.7	3.2	1.7	0.5	0.5	1.2	0.4	0.3	0.5	6.4	41.7
17-May	0.4	0.3	Z	0.7	0.9	1.1	1.3	1.3	2.0	1.5	0.9	2.7	0.9	1.0	1.9	0.9	0.7	0.5	0.5	0.4	0.8	0.7	0.8	0.8	1.0	2.7
18-May	0.8	0.9	1.1	Z	1.5	1.5	1.8	1.4	1.5	1.3	0.8	0.7	0.8	0.7	0.9	1.0	0.9	1.0	1.4	0.7	0.7	0.8	0.7	0.7	1.0	1.8
19-May	0.8	0.8	0.8	0.9	Z	1.2	1.3	1.3	1.2	0.9	1.4	2.3	1.6	1.1	1.0	0.8	0.6	1.3	0.9	1.1	1.0	0.9	1.0	1.0	1.1	2.3
20-May	1.1	1.2	1.1	1.0	1.1	Z	1.9	1.3	1.5	1.1	1.8	1.2	1.5	1.1	1.3	1.2	1.0	1.0	0.8	0.8	0.7	1.0	0.7	0.7	1.1	1.9
21-May	Z	0.9	0.8	0.8	1.0	1.1	1.4	0.9	1.3	0.9	0.9	1.3	3.4	2.4	2.2	1.6	1.6	1.0	0.7	1.0	0.7	0.6	0.6	0.6	1.2	3.4
22-May	0.7	Z	0.9	0.8	0.9	1.1	1.4	1.6	1.5	C	C	C	C	C	0.6	1.9	1.0	0.6	0.3	2.8	7.0	1.7	1.5	0.5	1.5	7.0
23-May	0.7	1.0	Z	1.4	1.7	1.8	3.0	1.9	5.0	2.1	3.1	2.4	1.6	1.6	1.1	1.2	1.3	5.3	8.0	0.7	1.1	0.7	0.7	0.7	2.1	8.0
24-May	0.7	0.8	0.7	Z	1.1	1.3	3.6	3.1	3.6	2.7	2.7	3.9	3.2	2.2	1.8	1.2	1.1	1.5	0.8	1.0	0.8	0.8	0.7	0.8	1.7	3.9
25-May	0.8	0.9	1.0	1.1	Z	1.6	1.6	1.7	PF	3.2	2.2	1.6	3.6	1.9	1.3	1.3	2.6	1.4	0.8	0.6	0.5	0.5	0.5	0.6	1.4	3.6
26-May	0.6	0.6	0.7	0.9	1.2	Z	2.1	4.8	3.5	2.6	1.2	1.2	0.8	0.8	0.7	0.9	1.5	5.9	12.1	4.9	2.0	7.3	1.3	3.1	2.6	12.1
27-May	Z	1.4	1.2	1.3	6.8	5.0	3.7	9.5	12.5	18.6	21.1	23.0	14.8	11.4	17.7	22.5	10.9	9.2	14.1	13.8	3.1	1.3	0.9	0.7	9.8	23.0
28-May	0.7	Z	0.7	0.6	2.0	2.6	1.1	1.4	1.9	2.0	1.3	M	M	2.1	5.8	5.9	1.4	1.7	1.3	0.9	1.1	1.4	0.8	0.8	1.8	5.9
29-May	0.8	0.8	Z	1.3	1.6	1.7	1.7	1.6	1.4	1.4	1.2	1.2	1.3	1.5	0.9	0.9	1.2	1.0	0.8	10.8	14.5	16.5	15.0	12.7	4.0	16.5
30-May	17.2	14.9	2.5	Z	2.0	29.2	19.8	19.3	13.7	16.3	13.6	21.0	16.4	16.8	6.8	11.1	5.7	5.3	5.7	3.2	2.3	2.3	2.2	2.2	10.9	29.2
31-May	2.4	6.1	1.6	1.2	Z	6.6	28.0	7.1	4.4	5.0	24.9	23.8	9.6	4.3	5.8	7.6	3.1	2.9	3.6	9.2	14.0	5.3	4.6	7.4	8.2	28.0
2.5 2.3 2.5 2.2 4.1 5.6 6.5 7.8 7.4 6.5 7.3 7.9 7.8 6.2 6.5 7.6 5.9 5.2 5.3 4.3 4.0 2.8 2.5 2.8																								Diurnal Average		
17.2 14.9 11.2 10.1 17.9 29.2 41.7 34.9 20.6 29.9 24.9 23.8 24.5 23.7 18.2 24.9 22.9 16.6 20.4 27.4 31.1 16.5 15.0 18.8																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	96.03	96.03
21 - 40	27	3.83	99.86
41 - 80	1	0.14	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Blackrod - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	44	15	9	7	12	23	183	197	36	27	17	9	21	30	30	677
21 - 40	1	2	0	0	0	0	0	0	0	0	1	1	4	10	8	0	27
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	46	15	9	7	12	23	183	197	36	28	18	13	31	38	30	705

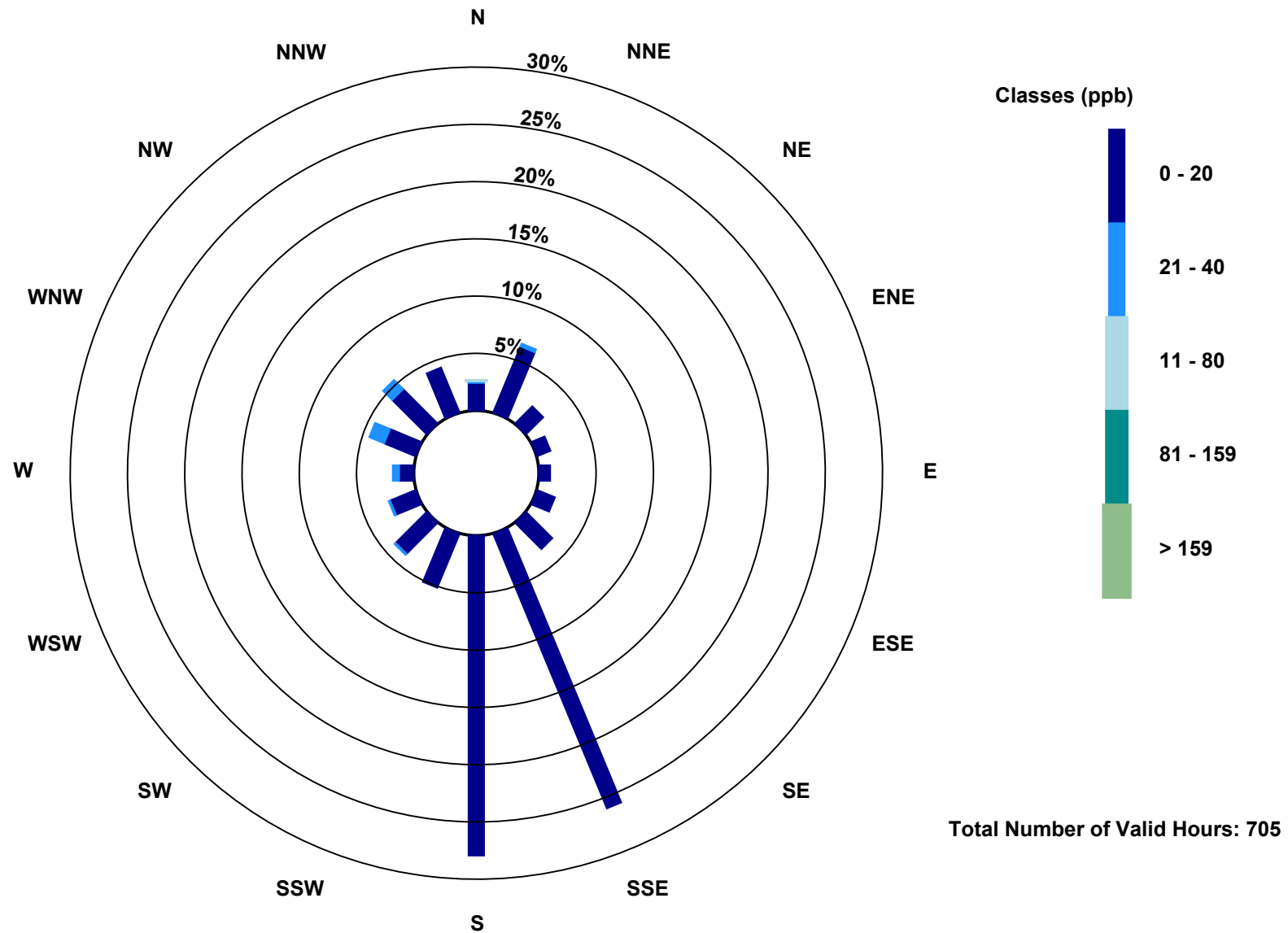
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

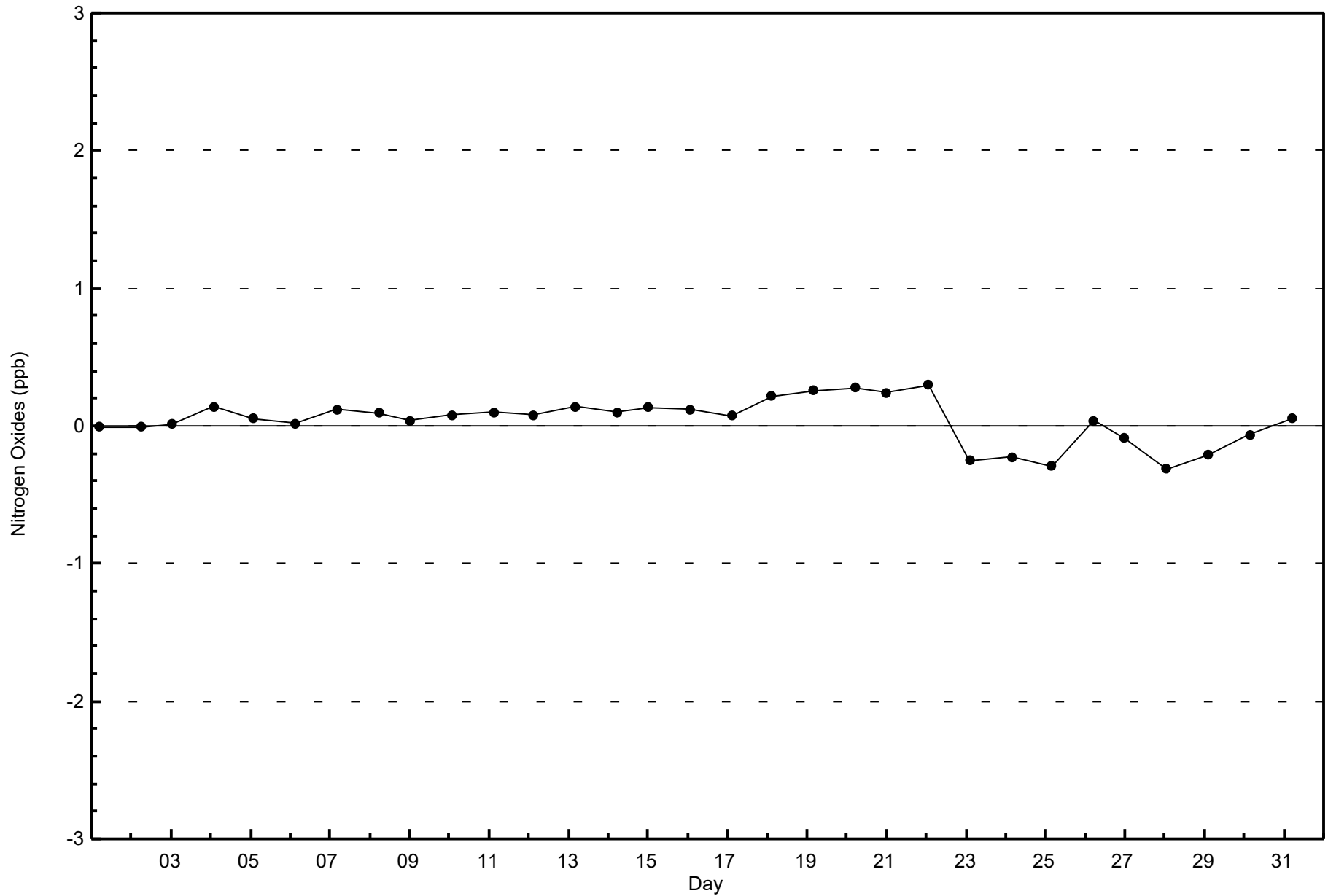
Nitrogen Oxides (NO_x) - ppb
Blackrod





Wood Buffalo Environmental Association
Zero Responses

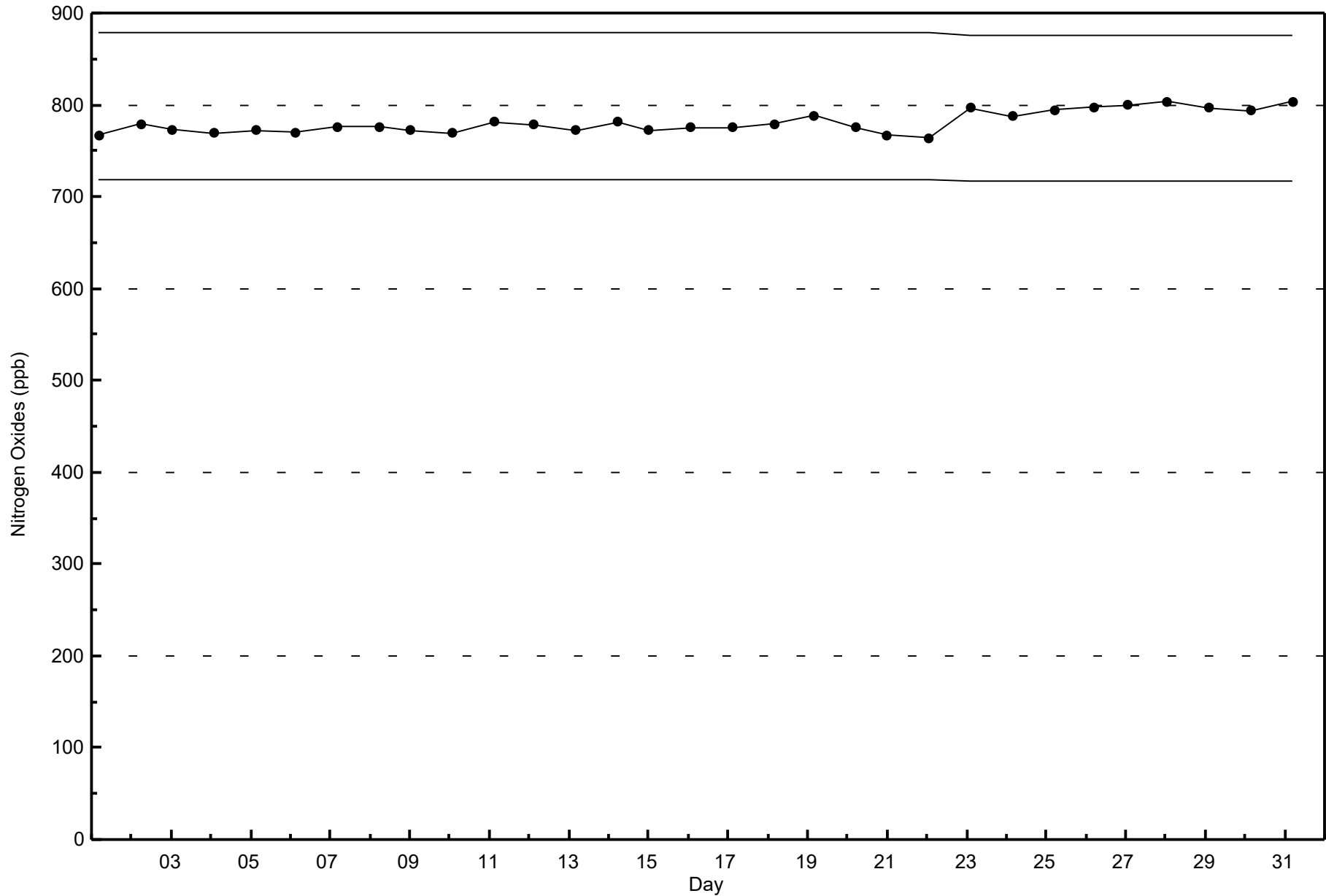
Nitrogen Oxides (NO_x) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

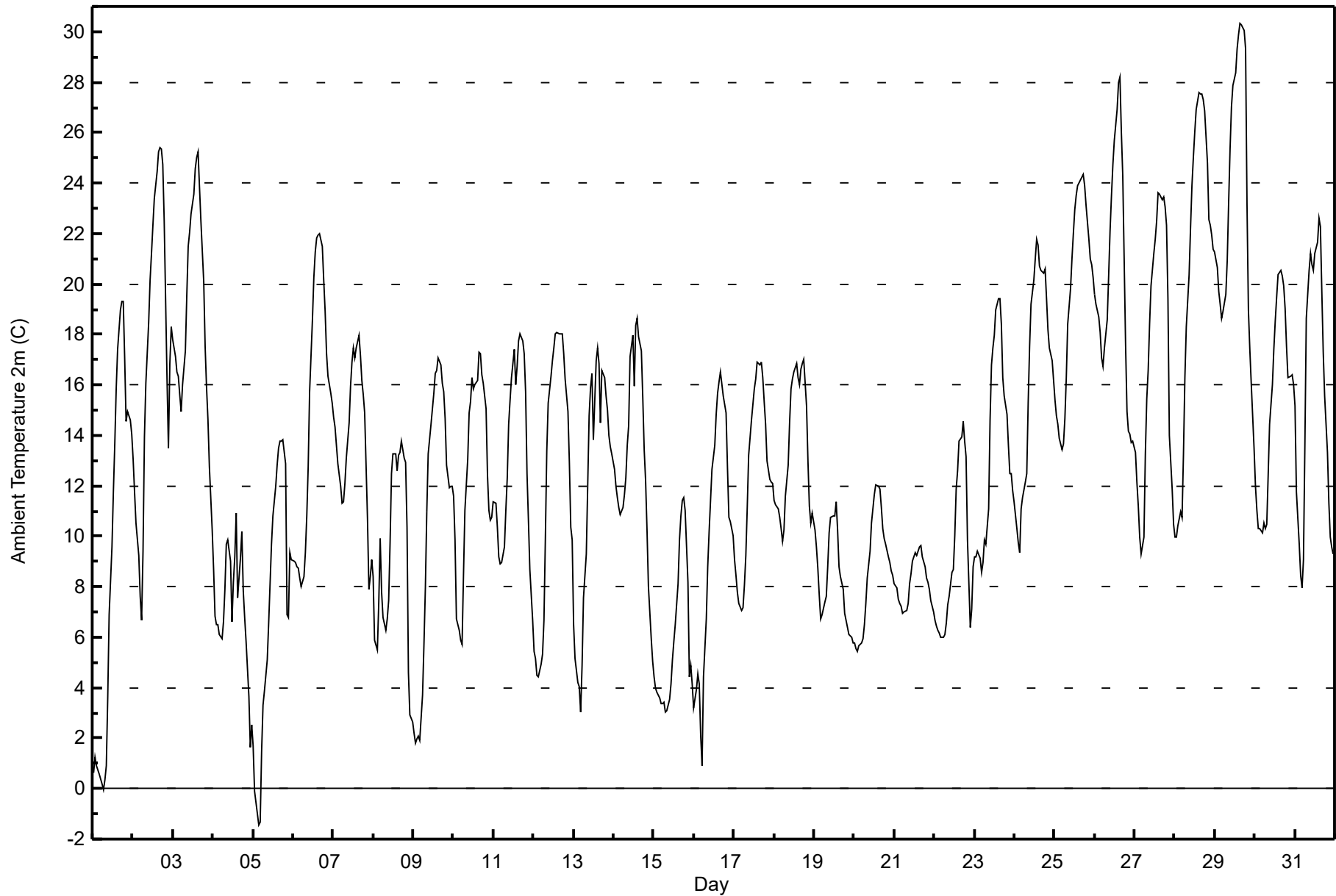
Blackrod - May 2025

Maximum Value: 30.3 C on May 29 16:00																				Maximum Daily Average: 23.3 C on May 29					Hours in Service: 744				
Minimum Value: -1.4 C on May 5 04:00																				Minimum Daily Average: 5.9 C on May 15					Hours of Data: 744				
Maximum Diurnal Average: 18.3 C at hour 16																				Minimum Diurnal Average: 8.1 C at hour 5					Hours of Missing Data: 0				
Monthly Average: 13.20 C																				Percentiles: P ₁ = 0.6 P ₁₀ = 5.8 Q ₁ = 8.8 Median = 12.8 Q ₃ = 17.2 P ₉₀ = 21.7 P ₉₉ = 28.1					Hours of Calibration: 0				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	0.6	1.3	0.9	0.8	0.6	0.2	0.0	0.3	0.9	3.6	6.9	9.6	11.8	13.7	15.9	17.4	18.9	19.3	19.3	17.1	14.6	15.0	14.6	14.0	9.0	19.3			
2-May	13.0	11.8	10.5	9.3	7.6	6.7	9.4	13.9	16.1	18.5	20.2	21.2	22.3	23.4	24.5	25.2	25.4	25.4	24.7	22.5	16.3	13.5	16.9	18.3	17.4	25.4			
3-May	17.8	17.1	16.5	16.3	15.6	15.0	16.0	17.4	19.5	21.5	22.0	22.8	23.6	24.6	25.0	25.2	23.8	22.5	20.1	17.5	15.9	14.6	12.8	10.3	18.9	25.2			
4-May	8.7	6.9	6.5	6.5	6.1	5.9	6.6	7.9	9.7	9.9	9.0	6.6	8.2	9.2	10.9	7.6	9.1	10.2	7.8	6.8	5.8	3.7	1.6	2.5	7.2	10.9			
5-May	1.7	-0.1	-1.0	-1.4	-1.3	1.5	3.3	3.8	5.1	6.6	8.1	9.7	10.8	12.0	12.8	13.5	13.8	13.8	13.8	12.9	6.9	6.8	9.4	9.1	7.1	13.8			
6-May	9.0	9.0	8.8	8.7	8.3	8.0	8.4	9.4	10.8	12.7	15.7	18.6	20.3	21.3	21.9	22.0	22.0	21.5	20.2	18.9	17.2	16.3	15.7	15.3	15.0	22.0			
7-May	14.7	14.3	13.6	12.9	12.0	11.3	11.4	12.1	13.1	14.5	16.0	16.9	17.5	17.1	17.5	18.0	17.2	16.2	15.6	14.9	10.7	7.9	8.4	9.1	13.9	18.0			
8-May	8.4	5.9	5.5	7.4	9.9	7.8	6.8	6.3	6.7	7.5	9.8	12.5	13.3	13.3	12.6	13.2	13.3	13.8	13.1	12.9	10.4	4.6	2.9	2.7	9.2	13.8			
9-May	2.2	1.8	2.0	2.1	1.9	3.7	5.7	8.0	11.0	13.3	14.5	15.1	15.7	16.5	16.6	17.1	16.8	16.0	15.8	14.6	12.8	11.9	12.0	12.0	10.8	17.1			
10-May	11.6	9.8	6.7	6.3	5.9	5.7	8.5	11.0	13.1	14.9	15.3	16.3	15.9	16.0	16.2	17.3	17.2	16.4	16.1	15.1	12.5	11.0	10.6	10.8	12.5	17.3			
11-May	11.4	11.3	10.4	9.2	8.9	9.0	9.6	11.0	12.3	14.5	15.4	16.3	17.4	16.0	16.7	17.7	18.0	17.7	17.2	15.8	12.5	10.6	8.7	6.7	13.1	18.0			
12-May	5.4	5.2	4.5	4.4	4.9	5.3	6.7	9.9	13.4	15.3	16.3	16.9	17.5	18.0	18.1	18.0	18.0	18.0	17.2	16.3	14.9	13.0	10.4	9.9	12.4	18.1			
13-May	6.5	5.2	4.2	4.0	3.0	4.9	7.6	9.3	12.1	14.8	15.9	16.4	13.8	16.9	17.4	16.8	14.5	16.6	16.3	15.6	15.0	14.0	13.6	13.2	12.0	17.4			
14-May	12.7	12.0	11.5	11.1	10.9	11.1	11.7	12.3	13.6	14.4	17.1	18.0	16.0	18.4	18.6	17.9	17.3	15.5	13.4	12.2	10.3	8.0	5.9	5.1	13.1	18.6			
15-May	4.5	4.0	3.8	3.6	3.4	3.3	3.4	3.0	3.1	3.5	4.2	5.1	5.9	6.5	8.1	9.9	10.8	11.4	11.5	11.0	8.2	4.5	4.9	4.2	5.9	11.5			
16-May	3.2	3.9	4.6	4.1	2.1	0.9	4.4	6.7	8.8	10.2	11.4	12.7	13.6	14.8	15.7	16.1	16.5	15.6	15.2	14.9	12.7	10.8	10.6	10.0	10.0	16.5			
17-May	9.1	8.4	7.8	7.3	7.1	7.2	8.0	9.3	11.2	13.2	14.6	15.2	15.8	16.2	16.9	16.8	16.9	16.3	15.3	14.4	13.0	12.3	12.2	12.1	12.4	16.9			
18-May	11.4	11.3	11.1	10.7	10.3	9.8	10.3	11.6	12.8	14.5	15.9	16.2	16.5	16.9	16.3	16.0	16.6	16.8	17.0	15.1	13.0	11.2	10.5	10.9	13.5	17.0			
19-May	10.3	9.6	8.7	7.7	6.7	6.9	7.4	7.6	8.8	10.1	10.7	10.8	10.8	11.4	10.2	8.8	8.4	7.9	6.9	6.7	6.4	6.1	6.0	5.8	8.4	11.4			
20-May	5.8	5.5	5.5	5.7	5.8	5.9	6.5	7.3	8.4	9.4	10.5	11.1	11.6	12.0	12.0	11.9	11.2	10.3	9.9	9.7	9.2	9.0	8.6	8.4	8.8	12.0			
21-May	8.1	7.9	7.5	7.4	7.2	6.9	7.0	7.0	7.4	8.1	8.5	9.0	9.4	9.2	9.4	9.6	9.6	9.2	8.8	8.3	8.2	7.9	7.4	7.0	8.2	9.6			
22-May	6.7	6.4	6.3	6.2	6.0	6.0	6.1	6.6	7.3	7.6	8.6	8.7	10.0	11.9	12.6	13.8	13.9	14.5	13.8	13.2	9.9	6.4	7.1	8.8	9.1	14.5			
23-May	9.2	9.2	9.4	9.1	8.6	8.9	9.9	9.7	11.1	14.6	16.8	17.4	18.0	19.0	19.4	19.4	18.4	16.3	15.6	14.8	13.6	12.5	12.5	11.8	13.6	19.4			
24-May	11.3	10.3	9.8	9.4	11.1	11.5	12.2	12.5	15.3	17.5	19.2	20.1	21.0	21.8	21.5	20.7	20.5	20.4	20.6	19.4	18.2	17.5	16.9	16.2	16.5	21.8			
25-May	15.4	14.8	14.4	13.9	13.4	13.7	14.7	16.3	18.4	19.8	21.0	22.0	22.9	23.5	23.9	24.1	24.3	24.3	23.9	23.1	21.8	21.0	20.8	20.2	19.6	24.3			
26-May	19.6	19.2	18.7	18.1	17.1	16.8	17.5	18.6	20.3	22.1	23.5	24.7	25.7	26.9	28.0	28.2	26.0	24.3	17.6	14.9	14.2	14.1	13.7	13.8	20.1	28.2			
27-May	13.3	12.1	11.2	10.0	9.3	10.0	13.2	15.4	16.5	18.4	19.9	21.2	21.8	22.5	23.6	23.6	23.3	23.4	23.0	22.3	19.4	14.0	11.9	10.5	17.1	23.6			
28-May	10.0	10.0	10.4	11.0	10.8	13.3	16.3	18.3	20.4	22.2	23.9	25.0	26.0	26.9	27.6	27.6	27.5	27.3	26.9	24.8	22.5	22.4	21.9	21.4	20.6	27.6			
29-May	21.3	20.7	19.7	19.2	18.6	18.9	19.6	20.9	23.2	25.4	27.0	27.9	28.4	29.3	29.9	30.3	30.3	30.1	29.3	23.2	19.0	17.4	16.1	13.5	23.3	30.3			
30-May	12.0	11.0	10.3	10.3	10.2	10.5	10.3	10.5	12.4	14.4	16.0	17.4	18.5	19.5	20.4	20.5	20.3	19.9	19.0	17.5	16.3	16.4	16.4	16.0	15.2	20.5			
31-May	15.2	11.8	9.7	8.5	8.0	9.1	13.6	18.6	20.5	21.2	20.8	20.5	21.2	21.6	22.6	22.3	19.7	17.3	15.5	13.3	11.3	10.0	9.6	9.3	15.5	22.6			
10.0 9.3 8.7 8.4 8.1 8.3 9.4 10.7 12.4 14.0 15.3 16.2 16.8 17.6 18.1 18.3 18.1 17.7 16.8 15.5 13.3 11.7 11.3 10.9																									Diurnal Average				
21.3 20.7 19.7 19.2 18.6 18.9 19.6 20.9 23.2 25.4 27.0 27.9 28.4 29.3 29.9 30.3 30.3 30.1 29.3 24.8 22.5 22.4 21.9 21.4																									Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Blackrod - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	5	0.67	0.67
0 - 10	247	33.20	33.87
10 - 20	382	51.34	85.22
> 20	110	14.78	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

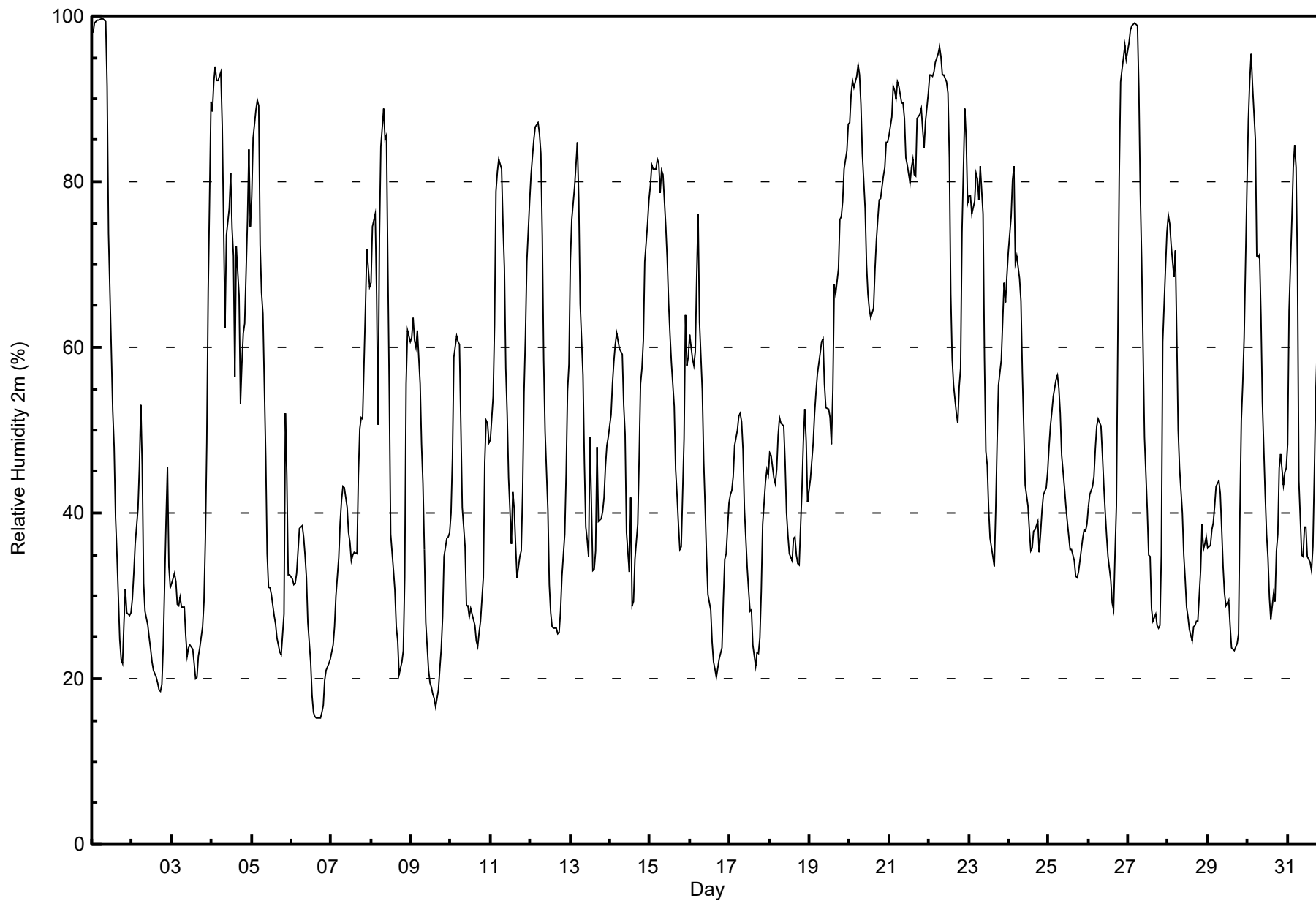
Blackrod - May 2025

Maximum Value: 99.6 % on May 1 06:00																				Maximum Daily Average: 86.7 % on May 21					Hours in Service: 744	
Minimum Value: 15.2 % on May 6 17:00																				Minimum Daily Average: 25.2 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 68.8 % at hour 6																				Minimum Diurnal Average: 35.0 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 52.26 %																				Percentiles: P ₁ = 17.2 P ₁₀ = 25.4 Q ₁ = 34.2 Median = 47.3 Q ₃ = 71.2 P ₉₀ = 87.2 P ₉₉ = 99.1					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	97.9	99.1	99.3	99.5	99.6	99.6	99.6	99.5	99.3	91.5	73.7	59.6	52.3	48.0	39.5	35.1	24.7	22.3	21.8	26.8	30.9	28.0	27.7	27.9	62.6	99.6
2-May	29.7	32.8	36.3	40.5	45.6	53.0	45.8	31.5	28.1	26.4	24.9	23.5	22.1	20.9	20.1	19.5	18.6	18.4	19.2	24.0	39.2	45.6	33.5	31.1	30.4	53.0
3-May	31.6	32.7	31.8	29.0	28.8	29.8	28.6	28.6	25.2	22.7	23.8	24.0	23.5	21.8	20.0	20.1	22.6	23.7	26.3	29.3	36.9	48.4	66.7	89.7	31.9	89.7
4-May	88.5	92.1	94.0	92.3	92.3	93.1	86.8	74.7	62.4	73.5	76.8	81.1	74.5	71.0	56.4	72.2	66.3	53.2	58.0	61.6	62.9	75.4	83.9	74.7	75.7	94.0
5-May	78.1	85.3	88.7	89.9	89.2	72.4	66.6	64.0	46.8	35.1	31.1	31.0	30.2	27.7	26.6	25.0	24.0	23.3	22.9	27.8	52.1	44.5	32.6	32.5	47.8	89.9
6-May	32.0	31.4	31.6	32.6	35.4	38.1	38.5	37.2	34.8	32.1	26.8	22.0	18.0	16.0	15.4	15.2	15.2	15.3	15.9	16.9	19.8	21.0	21.9	22.4	25.2	38.5
7-May	23.2	24.1	26.2	30.0	34.6	38.8	41.5	43.3	43.1	40.7	37.7	36.4	34.3	34.9	35.2	35.0	44.6	50.2	51.5	51.4	64.5	71.9	69.6	67.2	42.9	71.9
8-May	67.8	74.7	76.0	66.2	50.7	73.3	84.3	88.9	85.1	85.5	69.6	54.7	37.5	33.0	30.8	26.3	24.6	20.6	22.1	23.4	32.2	55.5	62.1	60.7	54.4	88.9
9-May	61.2	63.6	60.8	60.0	62.0	55.6	48.3	43.5	35.6	26.7	21.0	19.5	18.9	18.1	17.6	16.6	18.6	21.3	23.5	27.5	34.7	36.9	37.2	37.6	36.1	63.6
10-May	40.0	46.7	58.8	61.4	60.7	60.3	50.5	40.6	35.9	28.8	28.7	27.4	28.5	27.7	26.5	24.6	23.9	25.6	27.0	32.2	46.0	51.2	50.9	48.6	39.7	61.4
11-May	48.9	54.1	62.6	78.8	81.2	82.7	81.4	75.0	69.7	57.4	51.8	44.3	36.2	42.5	40.5	36.1	32.2	34.7	35.5	42.5	54.6	61.4	70.4	77.7	56.3	82.7
12-May	80.9	83.0	85.0	86.6	87.1	85.8	83.5	73.5	58.5	49.9	40.4	31.3	27.9	26.2	26.1	26.1	25.4	25.5	28.1	32.4	37.5	44.7	54.7	58.0	52.4	87.1
13-May	70.3	75.3	79.3	82.1	84.8	77.8	65.2	56.6	46.1	38.3	36.8	34.8	49.1	33.0	33.1	35.4	48.0	38.9	39.3	40.3	41.8	45.6	48.1	49.2	52.1	84.8
14-May	51.8	55.5	58.3	60.3	61.6	59.9	59.6	59.2	53.0	49.5	37.6	32.8	41.9	28.9	29.3	34.4	38.6	46.6	55.6	57.4	60.8	70.3	74.8	77.7	52.3	77.7
15-May	79.5	82.1	81.4	81.6	82.7	82.2	78.6	81.3	80.9	74.6	70.6	65.4	61.5	58.1	52.9	45.2	42.1	38.6	35.6	35.8	48.9	63.8	57.8	58.7	64.2	82.7
16-May	61.5	58.6	57.7	59.5	68.4	76.1	63.0	54.8	46.2	40.8	35.0	30.2	28.2	24.3	22.0	21.2	20.2	22.3	23.1	23.7	29.6	34.5	35.0	41.2	40.7	76.1
17-May	42.3	42.7	44.5	48.1	50.1	51.7	52.0	51.0	47.6	40.5	33.3	30.7	28.2	28.3	24.1	21.5	23.2	23.1	25.0	30.4	38.6	43.7	45.2	44.6	37.9	52.0
18-May	47.2	46.9	44.2	43.5	45.3	49.4	51.4	50.9	50.6	46.2	39.9	37.3	35.1	34.2	36.9	37.2	34.9	33.9	33.7	42.8	48.6	52.5	48.7	41.4	43.0	52.5
19-May	44.1	46.3	48.4	52.1	54.5	56.8	59.4	60.7	61.1	55.6	52.7	52.5	51.5	48.3	54.9	67.6	66.4	69.5	75.4	75.8	77.6	81.5	83.7	86.9	61.8	86.9
20-May	87.1	90.4	92.1	91.4	92.6	94.0	92.9	89.3	83.4	76.9	70.0	66.5	64.6	63.6	64.7	69.2	72.9	75.4	77.8	77.9	80.6	81.7	84.8	84.8	80.2	94.0
21-May	85.6	87.8	91.6	91.0	90.1	92.1	91.4	89.5	89.5	87.7	83.0	82.0	79.9	81.7	82.7	80.9	80.6	87.6	88.1	88.8	86.2	84.1	87.3	90.7	86.7	92.1
22-May	92.9	92.8	92.7	93.2	94.5	95.4	96.3	95.2	92.8	92.9	92.1	90.7	82.9	66.5	58.6	55.3	52.1	50.8	55.3	57.4	73.8	88.8	85.0	77.4	80.2	96.3
23-May	78.3	78.4	76.0	77.6	81.0	80.3	77.8	81.8	76.2	58.8	47.5	45.8	40.5	36.9	34.7	33.5	40.2	48.5	55.5	58.4	63.2	67.8	65.4	68.7	61.4	81.8
24-May	71.5	75.8	80.2	81.8	70.1	71.0	68.2	65.5	56.9	50.3	43.4	40.9	38.0	35.4	35.7	37.8	38.0	39.0	35.2	37.6	40.4	42.2	43.1	45.0	51.8	81.8
25-May	47.9	50.4	52.2	54.1	56.1	56.6	55.1	52.0	47.0	43.0	40.8	39.0	37.3	35.6	35.6	34.2	32.4	32.2	32.9	34.3	37.0	38.0	37.9	38.7	42.5	56.6
26-May	40.6	42.1	43.3	44.5	47.8	50.5	51.3	50.5	47.2	43.4	40.3	37.3	34.8	31.8	29.2	28.3	34.9	40.9	80.5	92.0	93.6	94.9	96.5	94.7	53.8	96.5
27-May	96.7	98.2	98.8	98.9	99.1	98.7	91.1	78.9	70.5	59.9	49.1	40.3	34.9	34.8	28.4	26.9	27.8	26.4	26.1	26.4	34.9	60.8	69.6	73.8	60.5	99.1
28-May	76.0	75.0	72.3	68.5	71.7	61.3	50.0	45.5	40.0	34.9	32.1	28.7	27.5	25.9	24.6	26.3	26.4	26.9	26.9	33.1	38.6	35.7	36.2	37.0	42.6	76.0
29-May	35.8	36.1	38.0	38.8	40.8	43.3	43.9	42.4	38.2	33.5	30.3	28.8	29.4	26.5	23.7	23.6	23.5	24.2	25.4	40.0	51.1	55.7	61.2	79.3	38.1	79.3
30-May	87.4	92.2	95.5	91.4	85.1	71.1	70.8	71.2	63.7	53.4	42.2	37.4	34.6	29.8	27.2	30.3	29.3	35.5	37.4	45.5	47.1	43.3	45.0	45.4	54.7	95.5
31-May	48.3	64.5	75.5	81.6	84.4	81.7	69.6	43.9	34.9	34.7	38.3	38.3	34.7	34.1	33.0	36.0	44.7	54.2	59.8	77.3	88.9	96.7	96.4	94.8	60.3	96.7
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Blackrod - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	20	2.69	2.69
20 - 40	268	36.02	38.71
40 - 60	198	26.61	65.32
60 - 80	127	17.07	82.39
80 - 100	131	17.61	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

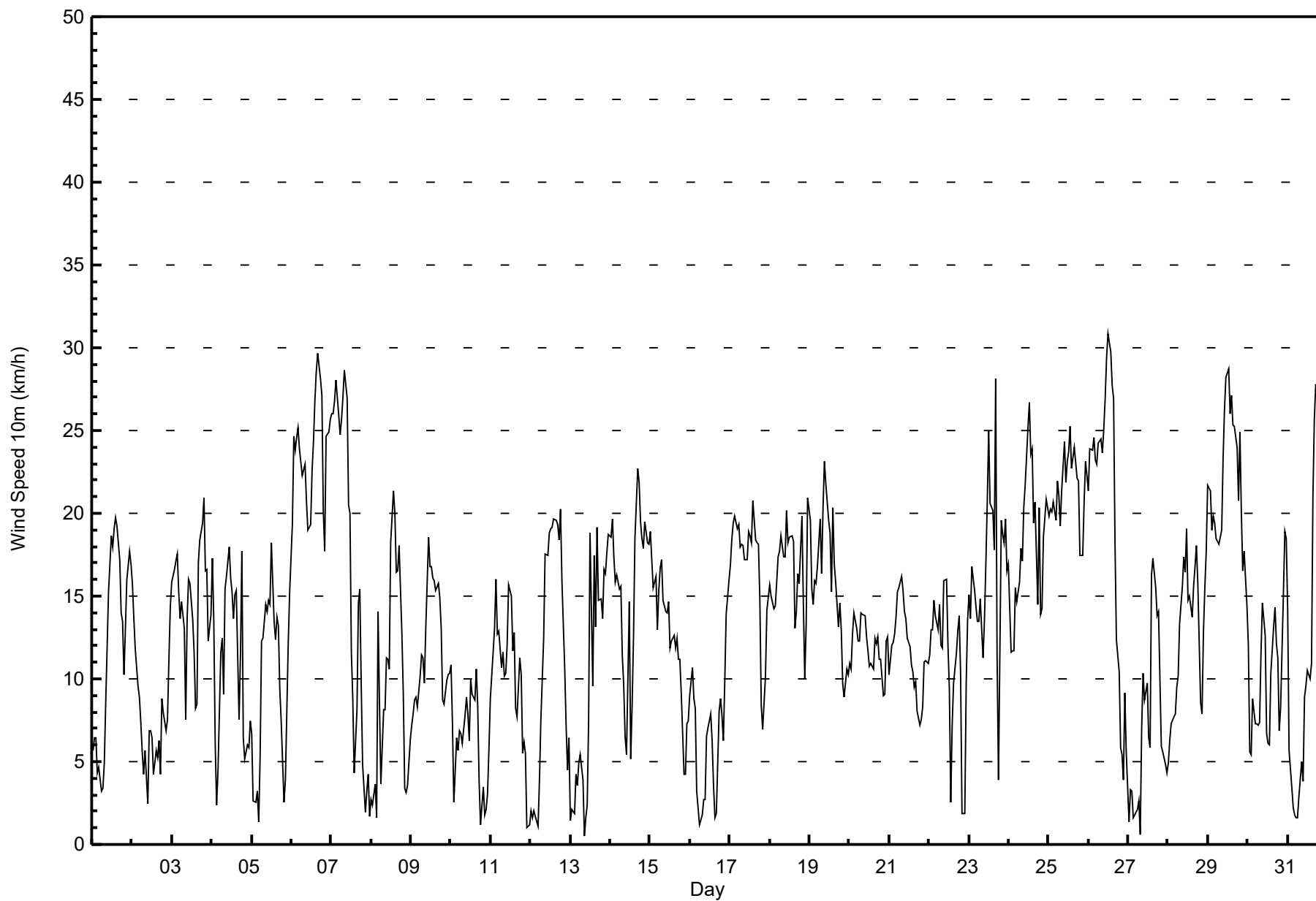
Blackrod - May 2025

Maximum Speed: 31 km/h on May 26 13:00										Maximum Daily Speed Average: 23.2 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 13 09:00										Minimum Daily Speed Average: 2.3 km/h on May 14										Hours of Data: 744						
Maximum Diurnal Speed Average: 10.3 km/h at hour 4										Minimum Diurnal Speed Average: 3.5 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 7.1 km/h 179.1 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 8 Median = 14 Q ₃ = 18 P ₉₀ = 22 P ₉₉ = 28										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	NNE6	NNE6	NNE6	NNE4	N5	NE3	ENE3	SSW5	SSW9	SSW12	SSW15	S19	SSW18	S19	S20	SSW19	SW17	SW14	SSW14	S10	SSE13	SSE16	SSE18	SSE17	S8.8	S20
2-May	S16	S14	S12	S10	S9	S7	S6	W4	NW6	WNW2	N7	NNW7	WNW6	WSW4	W6	WSW5	WSW6	SW4	S9	S8	SE7	SE8	SSE11	SSE14	S4.7	S16
3-May	SSE16	SSE17	SSE17	SSE18	S15	S14	S15	SSW13	SW8	WNW14	WNW16	WNW16	WNW14	WNW11	WNW8	WNW9	WNW17	NW18	NW19	NNW21	NNW17	N17	NW12	WNW14	W6.1	NNW21
4-May	NW17	NNW13	NNW6	E2	S5	S12	S12	SW9	NW15	NNW16	NW18	NW16	NNW15	NNW14	NW15	NW15	N8	NNW11	W18	SSW6	SW5	S6	S6	S7	NW6.1	NW18
5-May	S7	SSE3	SE3	SSE3	S1	NW5	NNW12	NNW12	NW15	NW14	NNW15	NW14	NNW18	NW13	WNW12	NW14	NW13	NNW9	N7	NNE3	SE4	SE8	SSE12	SSE15	NW5.0	NNW18
6-May	SSE19	SSE25	S24	SSE25	SSE25	SSE24	S22	S23	S23	SSW21	S19	SSW19	SSW23	SSW24	S27	S29	S30	S28	S27	S20	S18	S25	S25	S26	S23.2	S30
7-May	SSE26	SSE26	SSE27	S28	S26	S25	S26	S27	S29	S27	SSW21	SSW20	WSW12	NW9	W4	W8	NW15	NW15	NNW10	NNW5	SE2	SSE3	SSE4	SSE2	S11.5	S29
8-May	SE3	SE2	ENE4	NW2	NW14	NW9	NNE4	S8	SSE8	SW11	SW11	WSW11	NW18	NNW21	NW20	WNW16	WNW17	WNW18	WNW13	WNW9	WNW3	SSE3	SSE4	SSE6	WNW5.8	NNW21
9-May	SSE7	SSE8	S9	S9	S8	S10	S11	SSW11	SSW10	SW13	SW19	WSW17	SW17	SW16	SW16	SW15	SW16	SW15	SSW13	S9	SSE8	SSE10	SSE10	SSE10	SSW10.3	SW19
10-May	SSE11	S7	ESE3	S6	SSE6	S7	S7	W6	WNW8	NW9	WNW8	W6	WNW10	SSW9	SW9	SW11	WSW8	N4	N1	SE3	SE2	ESE2	SSE3	SSE6	SW3.1	SSE11
11-May	SSE9	S12	S13	S16	SSE13	S13	S11	S12	SSW10	SW10	SW12	SSW16	SSW15	NNW12	WNW13	W8	SW8	NW11	N10	NE5	ENE6	E6	ESE1	SE1	SSW5.0	S16
12-May	ESE2	ESE2	SE2	ENE2	NE1	NNE4	NNE8	NE10	NE12	NE18	NE17	NE19	NE19	NE19	NNE20	NNE20	NNE19	NNE18	NNE20	NNE16	NNE11	NNE7	NNE5	NE6	NNE11.1	NNE20
13-May	ESE1	SSE2	E2	ENE4	ENE4	NE5	NNE5	NNE4	SE0	SE2	SW2	WSW7	S19	S10	S17	SW13	S19	SSE15	SSE15	SSE14	SSE17	SSE16	SSE18	SSE19	S7.4	S19
14-May	S19	SSE20	S17	S16	S16	S15	S16	S11	SW10	S6	WNW5	NW15	WNW5	NNW8	NW13	NNW18	N23	NNE22	NNE20	NNE19	NNE18	NNE19	NNE18	NNE18	NNE2.3	N23
15-May	NNE19	NNE17	NNE15	NNE16	NNE13	NNE15	NNE17	N17	NNE15	NNE14	NNE14	NNE15	N12	N12	NNE13	NNE12	NNE12	NNE11	NNE11	NNE9	NE4	ENE4	ENE7	ENE7	NNE12.3	NNE19
16-May	ENE9	E11	ESE9	SE8	SW3	E2	N1	NW2	N3	N3	NNE7	NE7	NNE8	ENE6	SE4	ESE2	WSW2	S8	SSE9	SE8	ESE6	SSE10	SE14	SE16	ESE4.0	SE16
17-May	SSE17	SSE18	SSE19	SSE20	SSE19	SSE19	SSE18	S18	S18	S17	S17	S19	S19	S18	S21	S18	S18	S18	S15	SSE8	SSE7	SSE10	SSE14	SSE15	S16.4	S21
18-May	SSE16	SSE15	SSE14	SSE14	SSE16	SSE17	SSE18	S19	S17	SSE17	SSE20	SSE18	SSE19	S19	SSE18	SSE13	SE14	SSE16	SSE16	S20	S14	S10	SSE13	SSE21	SSE16.2	SSE21
19-May	SSE20	SSE15	SSE14	SSE16	SSE16	S17	S20	S16	S20	S23	S22	S20	S19	S15	S20	SSE17	SSE16	SSE13	SSE15	SSE13	SSE10	SE9	SSE11	SSE10	SSE15.9	S23
20-May	SSE11	SSE11	SSE13	SSE14	SSE13	SSE12	SSE12	SSE14	SSE14	SSE14	SSE13	SSE12	SSE11	SSE11	SSE11	SSE12	SE12	SSE13	SSE11	SSE11	SSE9	SSE9	SSE12	SSE13	SSE11.9	SSE14
21-May	SSE10	SSE12	SSE12	SSE13	SSE14	SSE15	S15	S16	S15	S14	SSE14	S12	S12	S11	S10	SSE10	SSE10	SSW8	S7	SSE8	S8	SSE11	SSE11	SSE11	S11.6	S16
22-May	S11	S13	S13	S15	S14	S13	S14	S12	S12	S16	S16	SSE12	S9	S3	SSE7	SSE10	S12	S13	S14	S10	N2	SE2	S10	S14	S10.8	S16
23-May	SSE15	SSE14	SSE17	SSE15	SSE14	SSE13	S13	SSE15	S11	S14	S17	S21	S25	S21	S20	S18	S28	SSW11	W4	S20	SSE19	SSE18	SSE20	S17	S16.3	S28
24-May	S17	S12	S12	S12	SSE16	S15	S16	S18	S17	S20	S22	SSW25	S27	S24	S24	S19	S21	SSE14	S20	S14	SSE14	SSE19	SSE21	SSE20	S17.9	S27
25-May	SSE20	SSE20	SSE20	SSE21	SSE20	SSE22	SSE21	SSE19	S21	S24	S22	SSE23	S24	S25	SSE23	SSE24	SSE23	S22	S22	SSE17	SSE17	SSE21	SSE23	SSE22	SSE21.4	S25
26-May	SSE21	SSE24	SSE24	SSE25	SSE23	S23	S24	S24	S24	S25	S27	S29	S31	S30	S28	S27	SSE18	SSW12	WSW10	SW6	E5	N4	S9	SSE6	S18.8	S31
27-May	W1	S3	SSE3	ESE2	SE2	SSE2	ESE3	WSW1	NW7	WNW10	NW9	W10	WNW6	WSW6	WSW16	WSW17	WSW16	WSW14	W14	WSW10	SW6	SSE6	SSE5	SSE4	WSW5.1	WSW17
28-May	SSE5	SSE6	S7	S8	S8	S9	S10	S13	S16	S17	S16	S19	S15	SSW15	SW14	S16	S17	S18	S16	S9	SSE8	SSE13	SSE16	SSE18	S12.4	S19
29-May	SSE22	SSE21	S19	S20	SSE19	S18	S18	S19	S19	S23	S26	S28	S29	S26	S27	S25	S25	S24	S21	WNW25	WNW20	WNW17	WNW18	NW14	S16.1	S29
30-May	WNW12	NNW6	S5	S9	SSW7	W7	NW7	NW7	NW12	NW15	NNW13	NW7	WSW6	W6	SSW10	SW13	SSW14	SSW12	SSW11	SSE7	SSE8	S15	S19	SSE18	SW4.9	S19
31-May	S14	SSW6	SE3	SE2	ESE2	SSE2	N2	E3	E5	NE4	NW9	NW10	N10	NNE10	N11	NNW21	NNW26	NNW28	N27	NNW26	NNW22	NNW19	NNW18	NW16	NNW9.2	NNW28
SSE9.4 SSE9.3 SSE9.7 SSE10.3 SSE9.5 SSE9.3 S8.9 S8.7 S7.6 SSW7.7 SSW7.2 SSW7.6 SSW7.6 SSW6.1 SSW7.7 SSW7.2 SSW6.5 SSW4.9 SSW4.7 S3.5 SSE3.8 SSE5.7 SSE8.0 SSE8.6																										Diurnal Average
SSE26 SSE26 SSE27 S28 S26 S25 S26 S27 S29 S27 S27 S29 S31 S30 S28 S29 S30 S28 N27 NNW26 NNW22 S25 S25 S26																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Blackrod - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Blackrod - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	101	13.58	13.58
6 - 11	194	26.08	39.65
12 - 19	319	42.88	82.53
20 - 28	123	16.53	99.06
29 - 38	7	0.94	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Blackrod - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	7	6	6	6	11	15	15	4	2	4	4	4	4	3	1	101
6 - 11	6	12	3	5	2	2	5	47	44	12	11	8	8	10	11	8	194
12 - 19	3	23	6	0	0	0	4	96	95	17	13	6	2	15	24	15	319
20 - 28	2	5	0	0	0	0	0	38	62	6	0	0	0	2	1	7	123
29 - 38	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	47	15	11	8	13	24	196	212	37	28	18	14	31	39	31	744

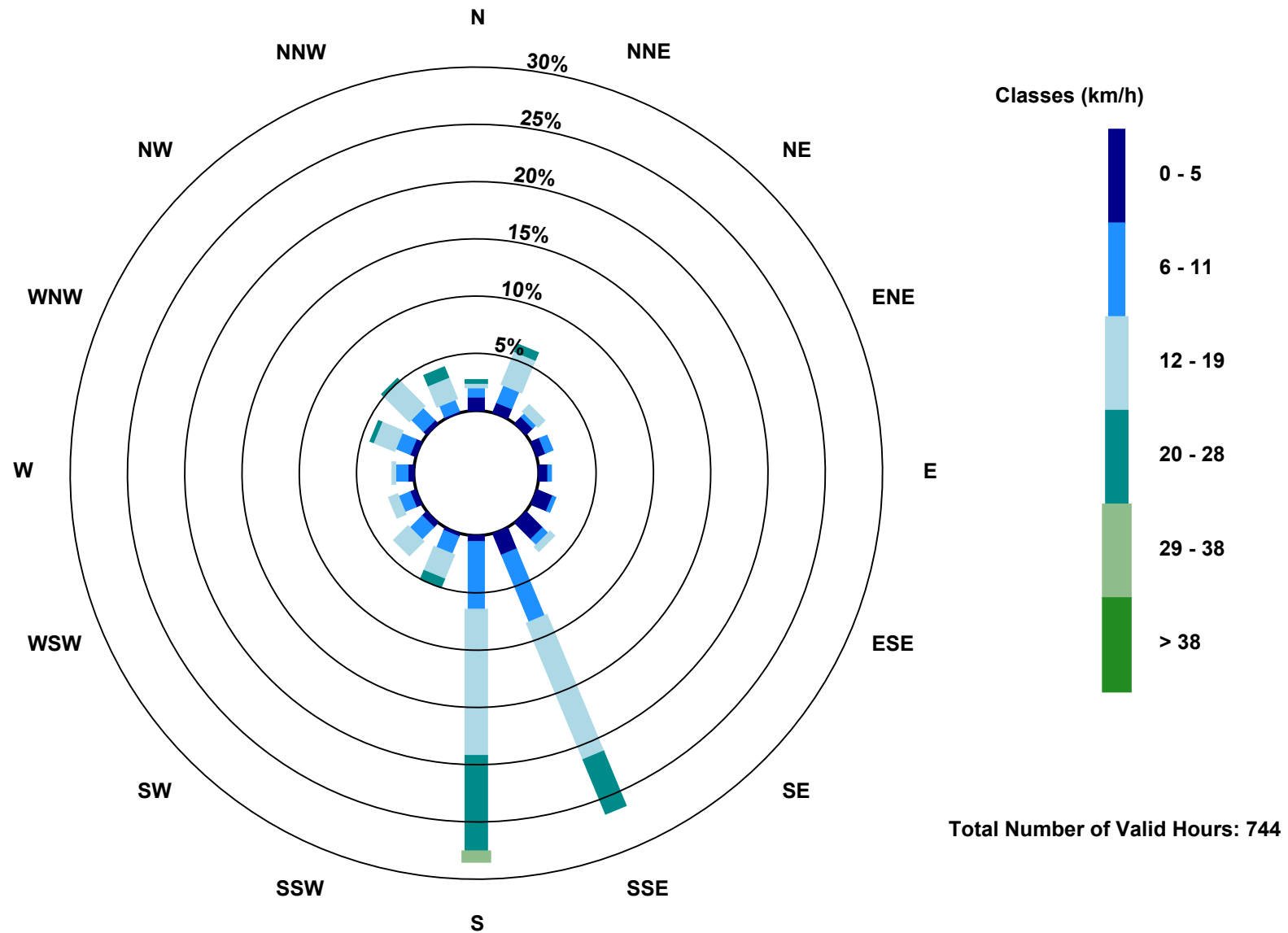
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Blackrod





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Blackrod - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on May 29 20:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 13 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	1	2	1	1	1	1	2	2	3	4	4	4	5	6	5	5	5	4	2	2	2	3	2	6
2-May	3	2	2	1	1	1	2	2	2	2	4	4	4	3	4	4	4	3	3	2	1	1	3	2	4
3-May	3	2	2	3	3	4	2	2	3	5	4	5	5	4	5	4	6	6	6	7	4	4	5	5	7
4-May	5	5	2	2	4	2	2	3	4	4	4	8	4	4	5	9	5	4	10	2	2	2	1	1	10
5-May	1	1	1	1	1	2	3	3	4	5	5	5	6	6	6	5	5	4	3	1	1	2	3	4	6
6-May	4	5	4	5	5	4	4	4	5	4	5	5	6	6	7	7	6	6	6	5	3	5	5	5	7
7-May	5	5	6	6	5	5	5	5	6	5	5	4	4	3	3	3	4	4	4	3	1	1	1	1	6
8-May	1	1	1	2	6	5	3	3	3	3	3	4	6	6	6	5	5	6	4	3	2	1	2	1	6
9-May	1	1	1	1	1	2	1	2	3	5	6	5	6	6	5	5	5	3	4	2	1	2	2	2	6
10-May	3	5	1	2	2	2	2	2	3	4	4	4	4	4	3	6	4	3	1	4	1	1	2	1	6
11-May	3	2	3	3	2	3	3	3	3	4	4	6	6	4	7	4	3	3	3	2	1	1	2	1	7
12-May	1	2	1	2	1	2	2	3	4	5	5	5	6	5	6	6	5	5	5	4	3	2	1	2	6
13-May	1	1	1	1	1	1	1	2	1	2	3	4	5	4	4	5	5	4	4	3	3	3	3	3	5
14-May	4	4	3	3	3	2	3	3	3	3	3	6	7	5	5	6	7	5	5	5	5	5	5	5	7
15-May	5	4	4	4	3	4	4	4	4	3	3	3	4	4	4	4	4	4	3	2	2	1	2	1	5
16-May	2	3	3	3	2	2	1	1	2	3	5	4	4	4	3	4	3	2	3	3	2	2	4	4	5
17-May	4	4	4	4	4	4	4	4	4	4	5	6	5	6	6	6	5	4	4	2	2	3	3	4	6
18-May	3	4	4	4	4	4	4	4	4	5	6	5	5	6	4	4	5	4	5	5	4	2	4	4	6
19-May	4	3	3	4	4	4	4	4	5	6	5	5	4	4	6	4	5	4	4	4	3	3	3	3	6
20-May	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	5	4	3	3	3	2	3	3	3	5
21-May	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	3	2	2	2	2	2	3
22-May	2	2	2	3	2	2	4	2	2	3	3	4	2	3	3	3	4	4	3	5	2	1	3	2	5
23-May	3	3	3	3	3	3	3	3	3	5	5	5	6	5	5	5	7	7	2	6	5	4	4	3	7
24-May	3	2	2	2	3	3	3	4	3	5	5	6	6	6	6	5	5	3	6	3	3	4	5	4	6
25-May	4	4	4	4	4	5	5	4	5	5	5	5	6	6	5	6	6	5	6	5	4	5	5	4	6
26-May	4	5	5	5	5	4	5	5	5	5	6	7	7	7	7	7	6	8	4	8	4	4	4	5	8
27-May	2	1	1	1	1	1	1	2	2	3	3	3	4	4	5	5	5	5	4	3	2	1	1	1	5
28-May	1	2	2	1	2	2	2	2	3	4	4	5	5	5	5	5	4	4	4	3	2	3	3	4	5
29-May	5	4	4	4	4	4	4	4	4	5	7	7	7	7	7	7	6	6	6	11	5	5	6	4	11
30-May	4	2	2	1	2	3	2	2	4	4	3	4	3	4	4	4	4	3	3	2	2	3	3	3	4
31-May	3	2	1	1	1	1	1	2	2	2	4	3	3	3	3	7	5	6	6	6	9	6	5	5	9
5 5 6 6 6 5 5 5 6 6 7 8 7 7 7 9 7 8 10 11 9 6 6 5																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

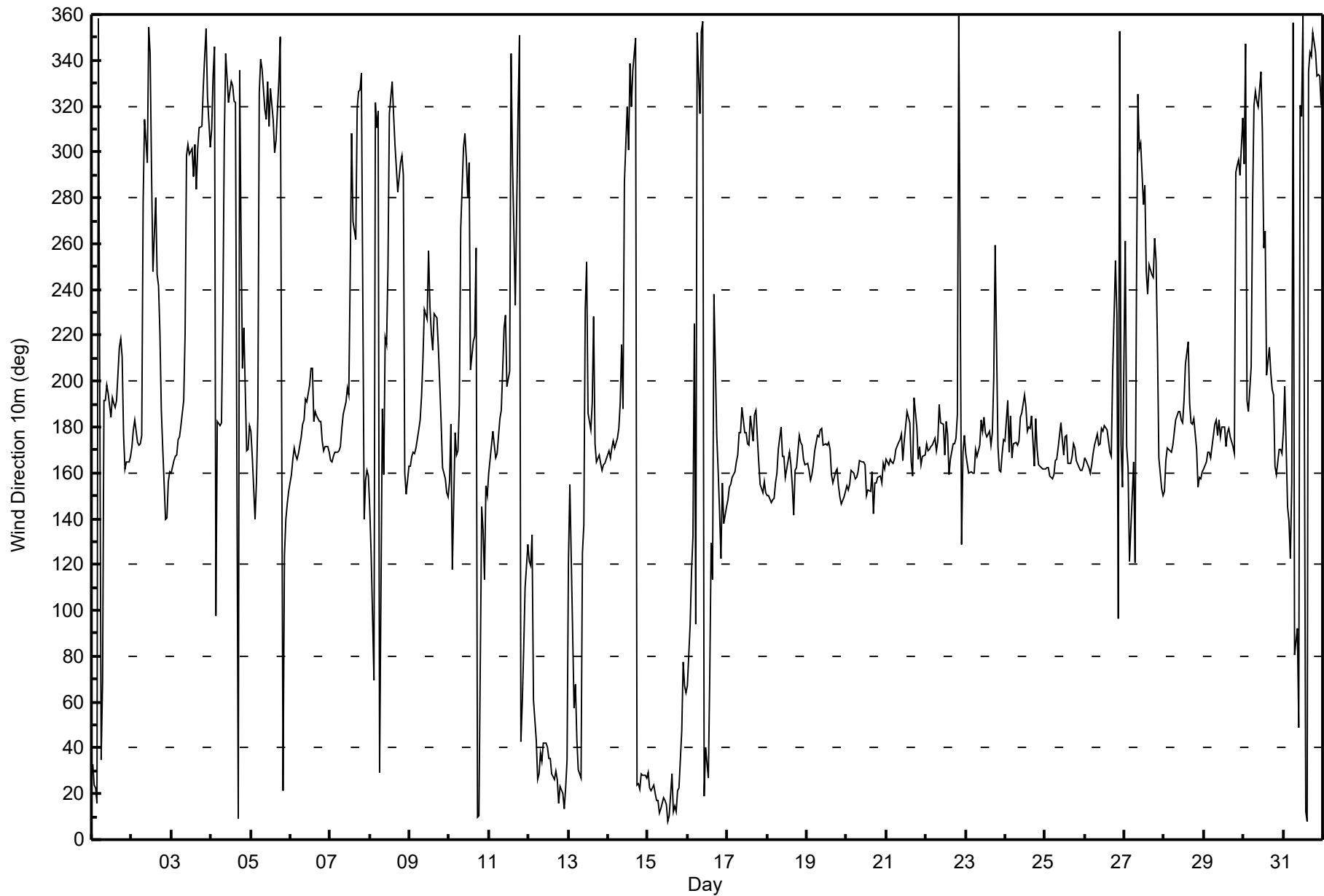
Blackrod - May 2025

Direction of Maximum Speed: 180 deg on May 26 13:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 179.3 deg on May 6																					Hours of Data:		744		
Direction of Minimum Speed: 125 deg on May 13 09:00											Direction of Minimum Daily Speed Average: 2.3 deg on May 14										Hours of Missing Data:		0		
Monthly Average Direction: 179.1 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	33	24	22	16	358	35	69	192	192	198	194	184	193	190	189	192	215	219	210	177	162	165	165	167	185.4
2-May	171	179	183	174	172	173	176	278	314	295	354	343	292	248	280	246	242	221	187	171	140	140	156	160	189.1
3-May	160	165	167	168	174	175	181	192	221	298	303	299	301	289	303	284	301	311	311	328	342	354	324	302	275.7
4-May	310	333	346	98	182	180	182	230	305	343	322	326	331	329	322	322	9	336	262	206	223	170	170	181	303.9
5-May	178	167	140	156	185	326	341	336	318	314	331	311	328	314	300	305	319	331	350	21	124	140	147	152	318.6
6-May	159	166	171	168	166	168	176	181	183	193	191	199	206	205	183	186	185	182	182	174	170	172	172	169	179.3
7-May	166	165	167	169	169	170	171	179	186	191	197	194	247	308	270	262	319	326	327	334	140	157	161	159	186.6
8-May	144	124	70	322	311	318	29	188	159	219	216	250	316	331	317	303	293	283	295	298	290	160	151	163	288.9
9-May	163	167	169	169	171	179	183	193	210	231	227	257	233	221	214	229	228	215	199	182	162	158	151	149	201.7
10-May	156	181	118	177	168	169	190	267	302	308	297	280	295	205	217	220	258	10	10	145	135	114	155	150	219.2
11-May	160	172	178	172	166	169	183	188	205	223	229	198	205	343	295	265	233	318	351	43	60	83	110	129	200.8
12-May	122	120	133	61	43	26	29	38	34	42	42	40	35	36	29	26	30	26	16	23	20	13	22	35	31.9
13-May	122	155	90	57	68	44	31	27	125	137	231	252	186	179	190	228	173	165	168	164	161	164	164	166	170.5
14-May	169	167	171	174	171	175	179	190	216	188	287	320	301	339	319	336	349	24	24	22	29	28	28	27	26.0
15-May	29	22	21	24	20	17	17	11	13	18	17	15	8	11	29	12	14	12	21	23	48	78	67	64	21.3
16-May	67	94	117	132	225	94	352	317	353	357	19	40	27	71	129	113	238	176	161	143	122	156	138	145	116.6
17-May	148	154	155	158	160	165	168	178	178	189	177	178	173	172	185	174	186	187	176	165	155	151	156	151	169.2
18-May	150	150	147	148	149	156	160	170	180	167	167	158	162	169	163	154	142	161	162	176	174	172	166	163	161.6
19-May	164	161	157	159	163	170	176	176	179	179	172	173	172	174	170	159	156	161	161	154	149	146	149	152	165.9
20-May	154	153	155	161	160	157	158	161	165	164	165	164	150	153	152	161	142	156	156	158	158	156	164	162	157.9
21-May	166	164	166	165	164	166	170	173	175	177	166	174	187	184	182	165	158	193	180	166	171	164	167	168	170.9
22-May	173	170	171	172	172	175	169	174	190	182	182	168	182	177	159	166	173	173	175	185	359	129	169	176	174.1
23-May	168	164	160	161	160	160	170	167	172	183	178	184	178	176	178	172	177	202	259	171	161	161	168	175	172.3
24-May	174	191	169	185	167	173	173	172	174	185	186	194	189	178	180	179	185	163	184	170	163	163	162	162	176.6
25-May	162	162	162	159	158	159	165	166	171	182	174	168	176	176	164	164	167	173	171	165	162	161	161	163	166.7
26-May	167	165	162	160	164	169	172	177	172	173	180	178	180	179	174	169	167	205	252	229	96	353	172	154	173.4
27-May	261	172	162	121	136	165	121	241	325	301	304	277	285	248	238	251	246	246	262	253	216	166	153	150	248.6
28-May	152	165	171	169	169	172	178	183	187	187	183	182	191	208	217	191	182	181	183	170	154	158	157	160	179.6
29-May	162	165	169	169	167	172	181	183	176	183	176	180	180	171	178	179	176	171	169	291	294	297	290	315	186.0
30-May	295	347	191	187	206	278	320	326	322	320	335	309	258	265	203	215	204	196	194	163	159	170	170	168	223.7
31-May	178	197	145	139	122	155	356	80	92	49	320	316	359	12	8	335	343	342	352	344	333	334	333	320	342.3
161.9 161.1 160.0 161.6 165.5 167.4 170.2 180.5 189.2 197.4 199.3 201.8 203.3 198.3 197.6 204.5 201.2 205.3 201.8 182.9 155.2 154.4 160.6 161.4																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Blackrod - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Blackrod - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 104 deg on May 16 16:00																			Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 7 deg on May 1 21:00																									
Percentiles: P ₁ = 9 P ₁₀ = 12 Q ₁ = 14 Median = 18 Q ₃ = 27 P ₉₀ = 51 P ₉₉ = 91																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	13	27	23	37	30	51	46	40	18	18	19	18	19	21	20	21	20	20	18	13	7	8	8	9	51
2-May	9	14	8	8	10	9	15	52	41	88	58	58	69	74	65	85	64	76	23	13	10	11	11	11	88
3-May	12	10	9	9	14	29	10	9	41	23	23	24	28	33	66	47	18	19	16	15	17	17	20	15	66
4-May	19	15	35	75	64	10	13	24	23	19	17	27	20	27	28	35	60	27	35	22	38	29	12	12	75
5-May	11	35	28	21	78	18	15	22	21	25	26	27	21	36	58	39	38	36	44	51	20	15	16	15	78
6-May	13	11	11	12	13	12	12	12	13	14	19	21	19	19	16	16	16	15	14	13	12	12	12	12	21
7-May	12	13	12	11	12	12	12	13	10	12	19	15	38	25	73	32	26	17	18	59	71	19	18	76	76
8-May	49	28	19	90	29	29	64	34	31	19	23	30	22	18	23	20	16	19	14	19	65	29	16	9	90
9-May	9	10	9	9	8	8	8	16	27	26	21	27	29	28	25	29	22	17	17	16	9	11	14	16	29
10-May	15	53	34	20	60	9	13	32	31	46	47	69	26	35	37	38	54	80	82	46	32	38	49	12	82
11-May	12	10	11	12	11	13	14	17	19	33	30	29	54	31	29	44	41	23	18	15	16	21	87	85	87
12-May	41	72	47	66	63	23	12	17	18	18	23	19	25	22	20	19	19	19	14	15	13	17	21	11	72
13-May	65	44	52	14	21	15	19	58	100	91	92	60	23	50	18	28	21	19	15	11	12	12	13	12	100
14-May	12	12	12	11	10	10	11	14	19	42	72	29	95	55	30	19	19	22	16	15	16	15	15	14	95
15-May	14	14	15	15	14	14	14	17	16	17	22	23	25	29	28	31	22	26	20	16	22	16	15	12	31
16-May	18	26	36	37	68	53	84	77	82	97	64	59	64	82	85	104	100	30	20	29	29	18	22	20	104
17-May	18	15	15	14	14	13	14	14	16	20	22	25	23	25	24	24	20	16	16	16	16	14	17	17	25
18-May	18	18	19	19	20	17	16	18	18	23	21	20	23	21	17	22	28	19	23	14	12	12	13	13	28
19-May	13	13	15	15	14	15	15	16	17	17	19	22	20	23	18	21	21	18	19	17	21	23	19	20	23
20-May	18	19	17	14	14	16	16	15	18	21	22	24	25	26	26	24	26	18	19	17	18	17	15	14	26
21-May	14	16	13	13	13	13	12	13	13	15	15	17	20	19	24	20	20	15	14	15	13	13	12	12	24
22-May	12	11	11	12	11	12	12	14	15	13	14	20	15	90	41	32	25	24	14	34	71	29	15	10	90
23-May	11	12	12	14	14	13	14	13	14	19	23	18	18	24	20	20	15	47	66	18	14	14	12	12	66
24-May	12	14	12	14	12	12	12	12	15	16	17	17	17	19	18	15	15	16	15	12	13	12	13	14	19
25-May	13	13	14	14	14	17	14	15	17	17	18	17	18	18	19	19	18	17	15	14	13	13	13	13	19
26-May	13	12	12	14	12	12	13	13	14	17	17	16	15	17	19	17	16	43	37	89	47	77	16	55	89
27-May	89	42	20	27	25	33	30	92	28	23	36	33	63	61	27	25	25	25	24	23	29	12	10	13	92
28-May	18	23	12	10	9	9	10	10	12	15	20	19	29	26	31	30	20	15	15	20	15	14	14	13	31
29-May	13	13	13	13	14	14	14	12	15	14	15	16	16	18	18	19	17	16	14	39	16	18	18	21	39
30-May	25	41	29	11	25	32	20	20	18	18	26	51	55	76	24	24	18	16	13	15	14	11	9	10	76
31-May	16	35	22	27	26	48	75	62	40	55	40	27	28	21	26	20	18	15	15	24	36	21	17	20	75
89 72 52 90 78 53 84 92 100 97 92 69 95 90 85 104 100 80 82 89 71 77 87 85																									
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS33 MONDAY CREEK MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	34	36	99.73	4.6	0	1.1	0
H2S (ppb) Average	706	36	38	99.73	4.8	0	0.7	0
NO2 (ppb) Average	707	37	37	100	32.7	0	8	-
NO (ppb) Average	707	37	37	100	21.8	-	3	-
NOX (ppb) Average	707	37	37	100	33.5	-	8.1	-
Temperature 2 m (C) Average	744	0	0	100	30.4	-	23.5	-
Relative Humidity (%) Average	744	0	0	100	100	-	91.3	-
Wind Speed 10 m (km/h) Average	737	1	7	99.19	28	-	16	-
Wind Direction 10 m (deg) Average	737	1	7	99.19	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.25	0.4	-	0	0	0	0.1	0.3	0.6	4.6
H2S (ppb) Average	706	0.11	0.3	-	0	0	0	0.1	0.1	0.2	4.8
NO2 (ppb) Average	707	1.48	2.4	-	0.1	0.4	0.6	0.9	1.5	2.7	32.7
NO (ppb) Average	707	0.22	1.1	-	0	0	0	0	0.1	0.3	21.8
NOX (ppb) Average	707	1.7	2.9	-	0.1	0.4	0.6	1	1.7	3.1	33.5
Temperature 2 m (C) Average	744	13.2	6.9	-	-5.1	5.2	8.4	12.3	17.2	23.2	30.4
Relative Humidity (%) Average	744	53	23.8	-	13.3	24.3	31.8	50	72.6	89.3	100
Wind Speed 10 m (km/h) Average	737	10.9	5	-	0	4	7	10	15	18	28
Wind Direction 10 m (deg) Average	737	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2	13 May 2025 13:00	13 May 2025 14:00	2	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	16 May 2025 01:00	16 May 2025 06:00	6	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

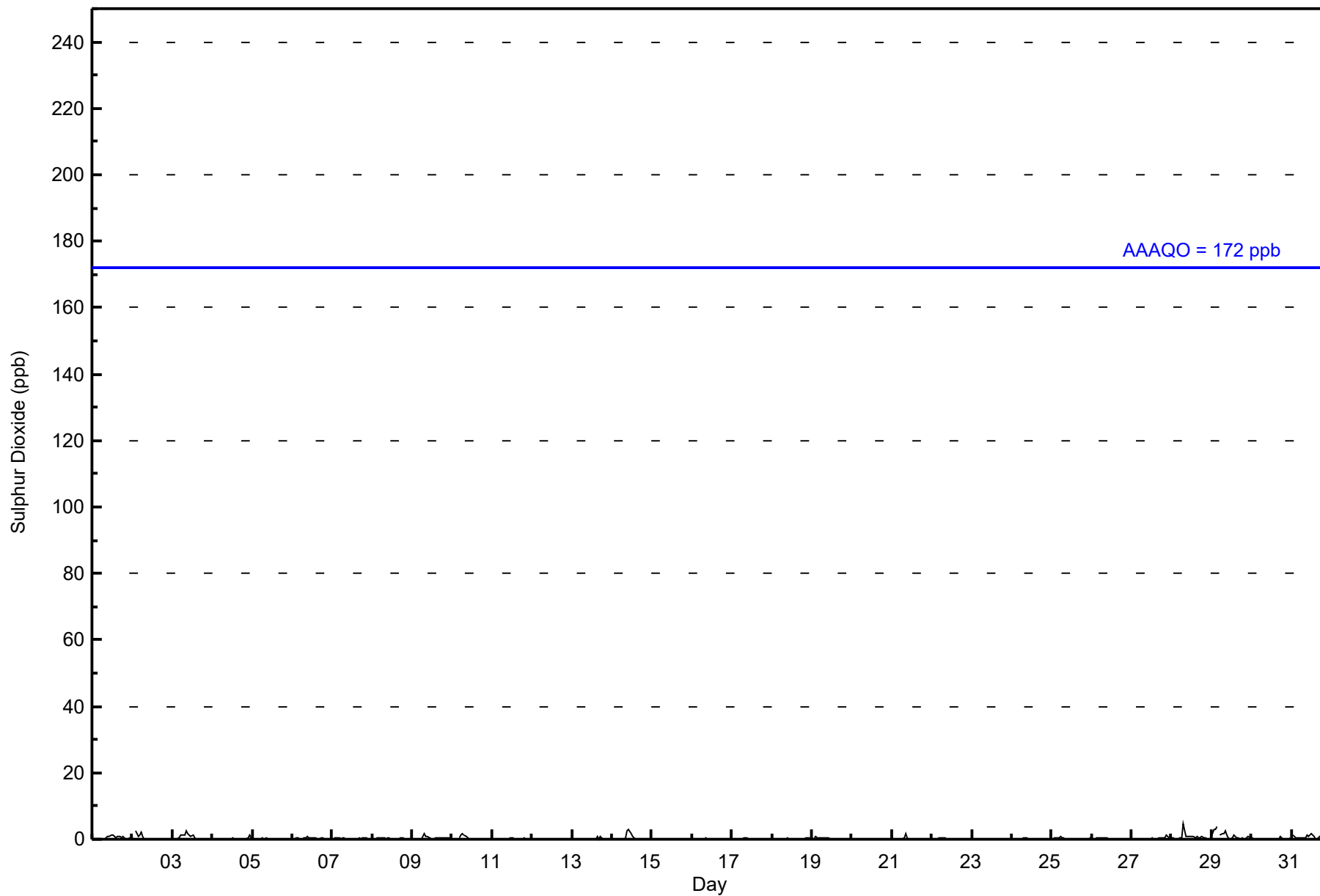
Monday Creek - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.6 ppb on May 28 08:00 Maximum Daily Average: 1.1 ppb on May 29																		Hours in Service: 744								
Minimum Value: 0.0 ppb on May 1 02:00 Minimum Daily Average: 0.0 ppb on May 20 Maximum Diurnal Average: 0.5 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 21 Monthly Average: 0.25 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 2.4																		Hours of Data: 708								
																		Hours of Missing Data: 36								
																		Hours of Calibration: 34								
																		Percent Operational Time: 99.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.7	0.8	1.1	1.2	0.7	0.5	0.6	0.6	0.3	0.7	0.3	0.0	0.0	0.6	0.8	0.4	1.2
2-May	0.4	Z	2.4	1.0	1.2	2.1	0.7	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4
3-May	0.0	0.1	Z	0.3	0.4	1.2	1.3	1.3	2.4	1.7	1.3	1.0	1.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.6	2.4
4-May	0.0	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.3	0.3	0.1	1.3
5-May	0.2	0.1	0.1	0.1	Z	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
6-May	0.0	0.1	0.4	0.4	0.5	Z	0.6	0.4	0.4	1.0	0.6	0.5	0.3	0.5	0.2	0.2	0.1	0.3	0.4	0.1	0.1	0.0	0.1	0.3	0.3	1.0
7-May	Z	0.4	0.4	0.2	0.2	0.2	0.3	0.3	0.2	0.1	C	C	C	0.1	0.1	0.2	0.3	0.0	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.4
8-May	0.3	Z	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.5	0.6	0.2	0.0	0.0	0.1	0.0	0.2	0.6
9-May	0.0	0.0	Z	0.0	0.0	0.1	0.7	1.5	0.8	0.8	0.4	0.1	0.1	0.2	0.3	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.1	0.3	1.5
10-May	0.1	0.1	0.2	Z	0.5	1.1	1.5	1.2	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5
11-May	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.2	0.0	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.4
12-May	0.0	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
13-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.1	0.9	0.1	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.0
14-May	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.4	2.3	2.9	1.5	0.7	0.3	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.4	2.9
15-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
17-May	0.0	0.0	0.1	0.0	Z	0.0	0.1	0.2	0.2	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3
18-May	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.1	0.3
19-May	Z	0.4	0.7	0.5	0.4	0.4	0.6	0.4	0.6	0.4	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-May	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.2	1.7	0.5	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	1.7
22-May	0.2	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.2	0.3
23-May	0.1	0.0	0.0	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2
24-May	0.0	0.0	0.0	0.0	0.1	Z	0.3	0.6	0.5	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.6
25-May	Z	0.4	0.4	0.6	0.6	0.7	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.7
26-May	0.3	Z	0.5	0.5	0.5	0.6	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.6
27-May	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.3	0.1	0.1	0.1	0.6	0.2	0.6	0.3	0.3	1.1	0.4	0.4	0.2	1.1
28-May	0.4	0.3	0.1	Z	0.3	0.3	0.6	4.6	0.9	0.8	0.9	0.9	0.8	0.7	0.5	0.7	0.4	0.6	1.0	0.5	0.3	0.1	0.1	0.1	0.7	4.6
29-May	0.9	2.8	2.8	3.7	Z	1.4	1.9	1.5	2.5	1.3	0.3	0.1	0.6	1.3	1.0	0.6	0.2	0.1	0.4	0.0	0.0	0.4	0.7	0.5	1.1	3.7
30-May	0.3	0.1	0.1	0.1	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.8	0.3	0.1	0.2	0.2	0.2	0.6	0.2	0.8
31-May	Z	1.1	0.5	0.4	0.2	0.2	0.3	0.2	0.6	1.4	1.0	1.3	1.5	0.9	0.2	0.1	0.6	0.7	0.4	1.0	0.4	0.1	0.0	0.0	0.6	1.5
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	708	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	21	23	19	14	14	44	124	83	84	43	23	45	34	47	57	27	702
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	21	23	19	14	14	44	124	83	84	43	23	45	34	47	57	27	702

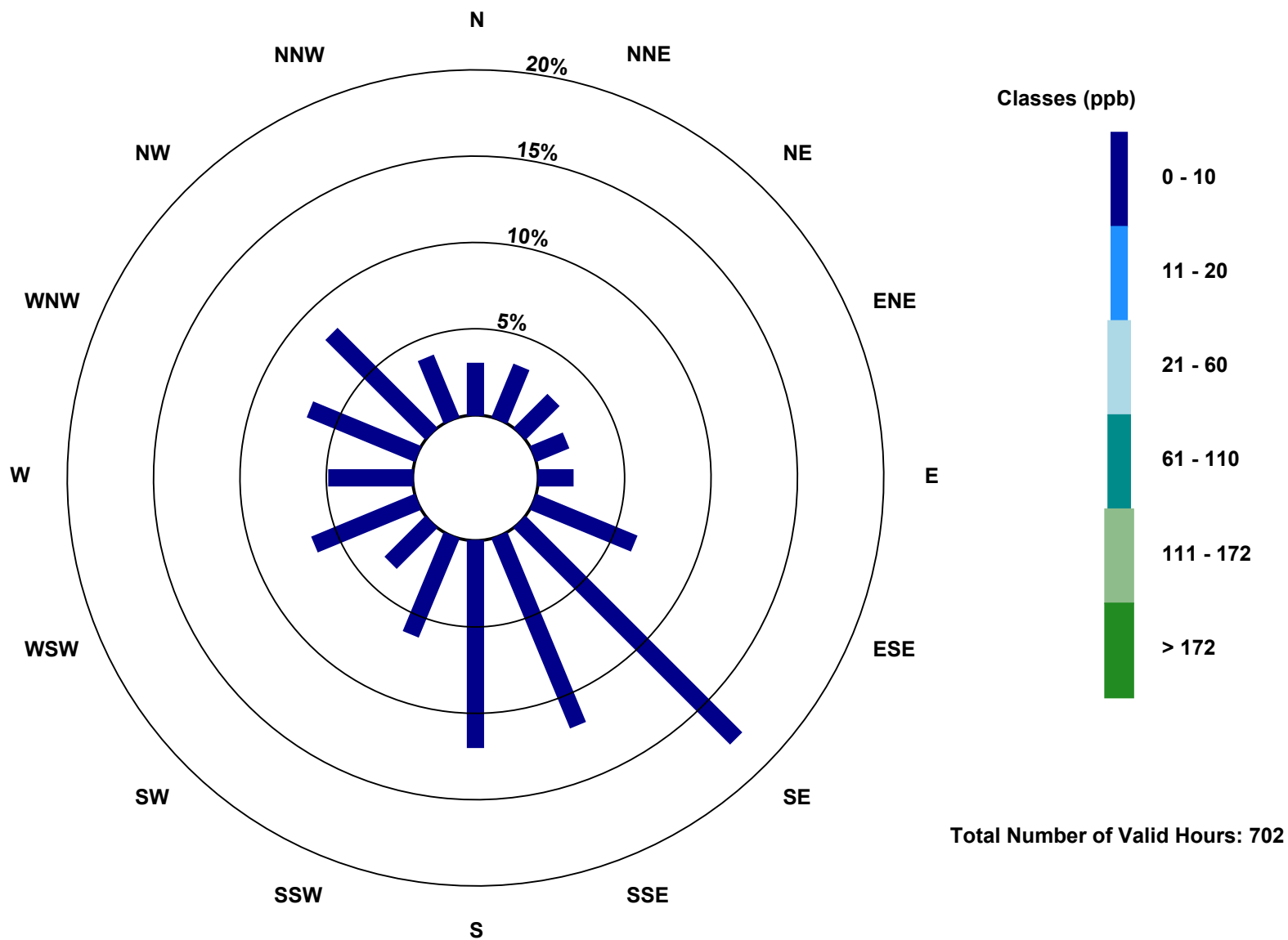
Total Number of Valid Hours: 702

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

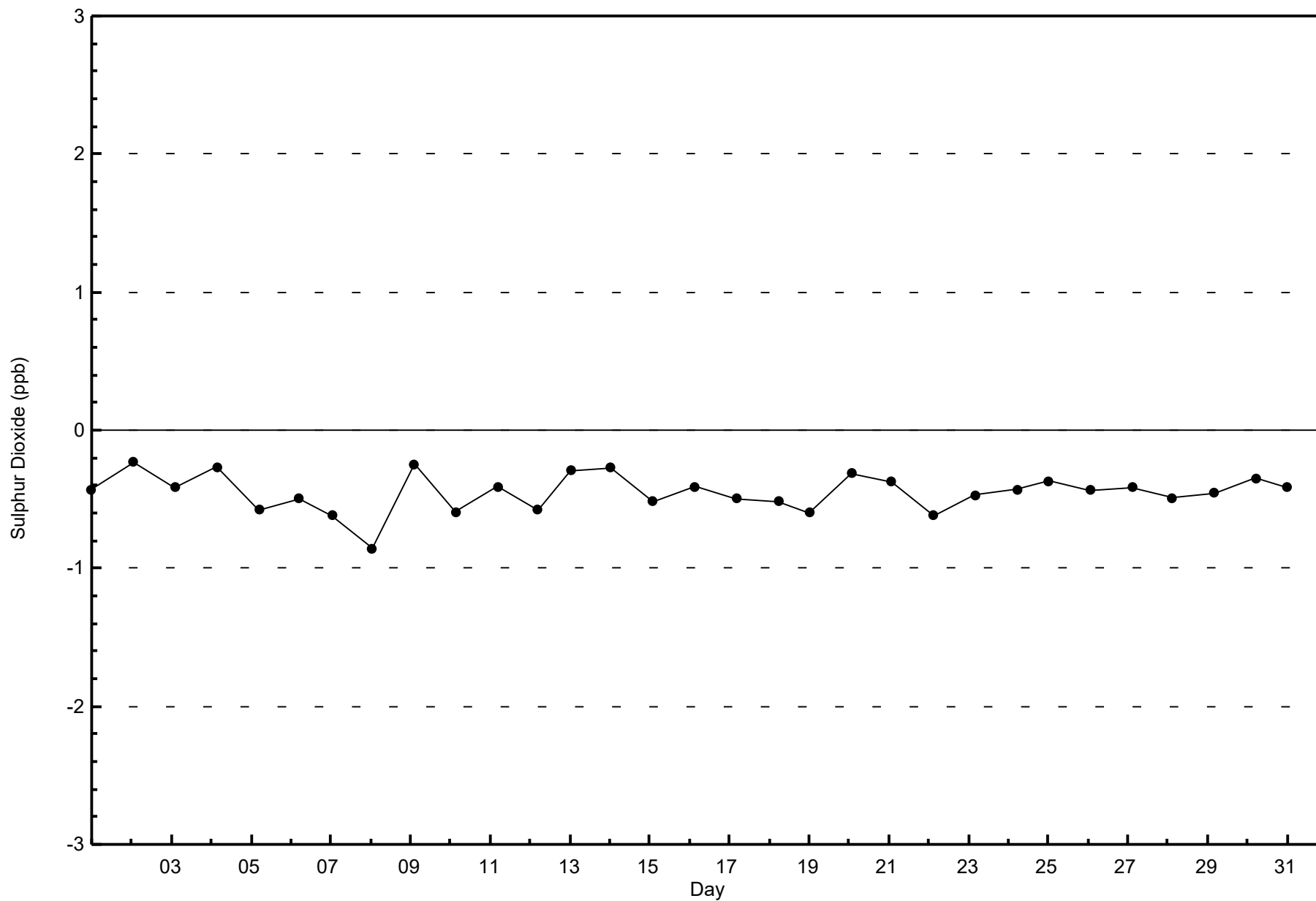
Sulphur Dioxide (SO₂) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

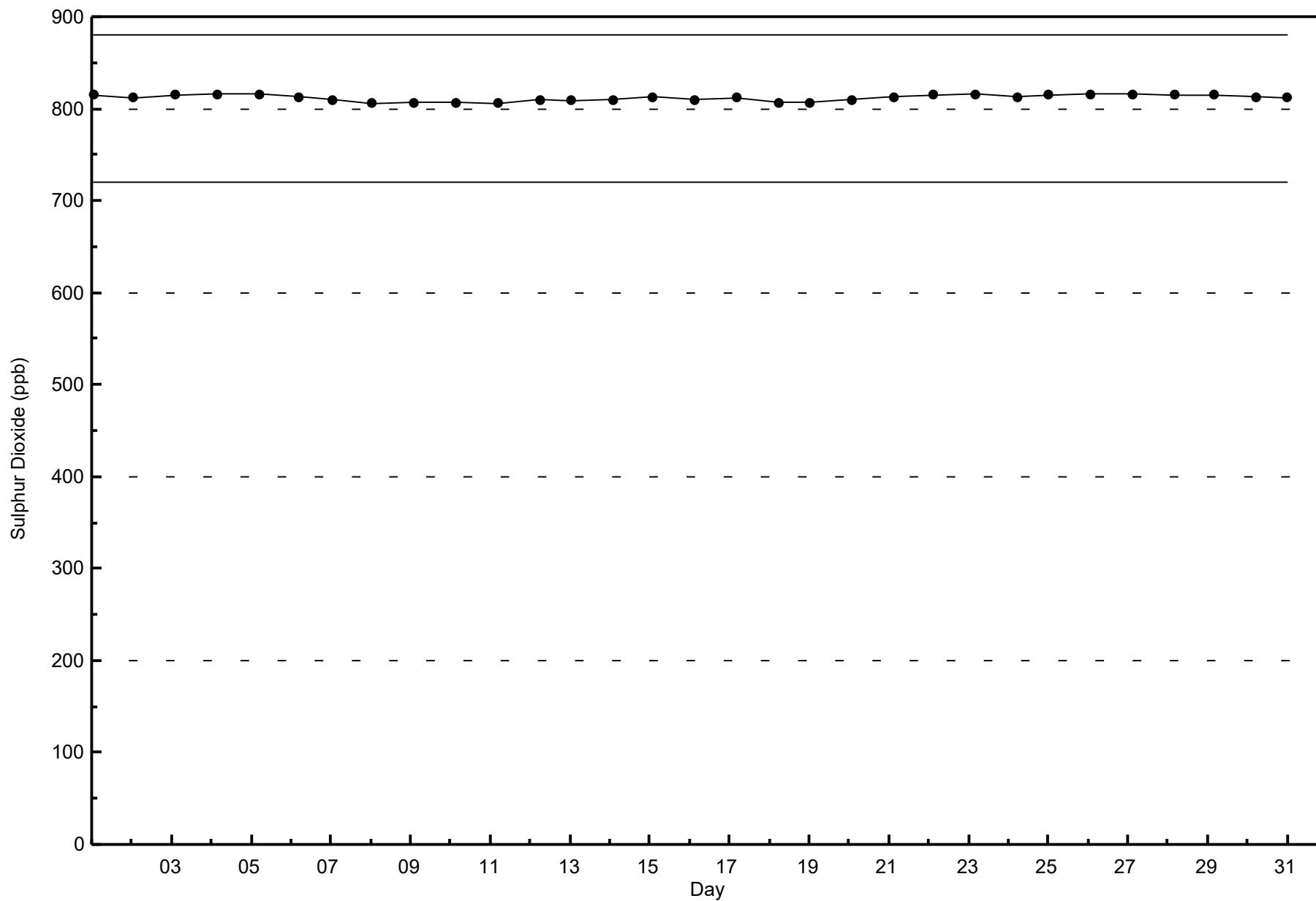
Sulphur Dioxide (SO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

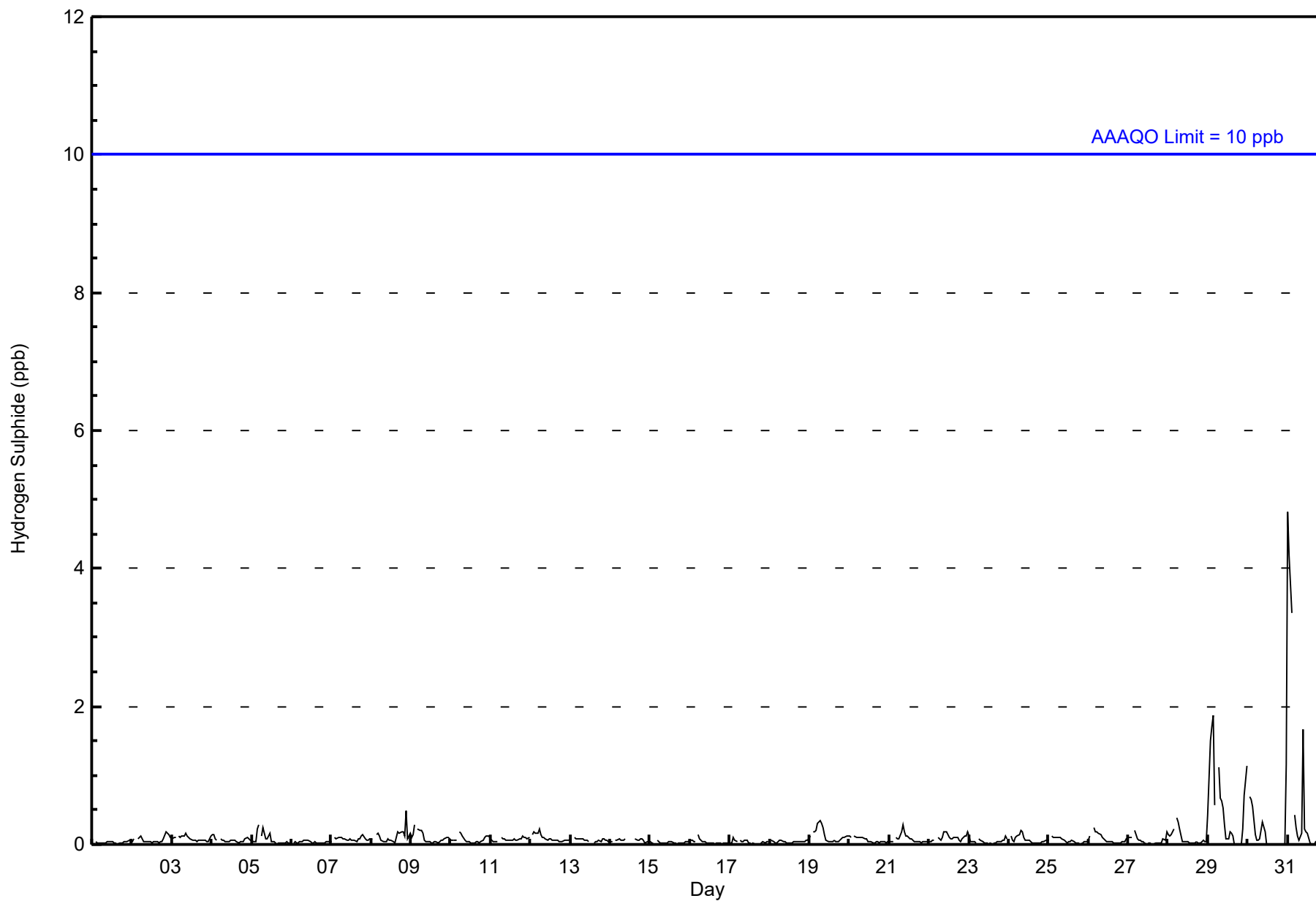
Monday Creek - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 ppb on May 31 01:00 Maximum Daily Average: 0.7 ppb on May 31																			Hours in Service: 744 Hours of Data: 706								
Minimum Value: 0.0 ppb on May 23 15:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.3 ppb at hour 2 Minimum Diurnal Average: 0.0 ppb at hour 17 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 1.2																			Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	
2-May	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	
3-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	
4-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	
5-May	0.1	0.0	0.0	0.2	0.3	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
6-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
8-May	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.5	0.1	0.2	0.1	0.5	
9-May	0.1	0.1	0.3	Z	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
10-May	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
11-May	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
12-May	Z	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	
13-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	M	M	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	
14-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	
15-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16-May	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-May	0.0	0.0	0.1	0.1	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-May	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	
19-May	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
20-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
21-May	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
22-May	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	
23-May	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	
24-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	
25-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
26-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	
27-May	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	
28-May	0.1	0.1	0.1	0.2	Z	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4	
29-May	0.4	1.5	1.7	1.9	0.6	Z	1.1	0.7	0.6	0.5	0.3	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7	1.1	0.5	1.9	
30-May	Z	0.7	0.6	0.5	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.2	1.2	
31-May	4.8	4.2	3.3	Z	0.4	0.2	0.1	0.1	0.2	1.7	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.7	4.8	
0.3 0.3 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1																										Diurnal Average	
4.8 4.2 3.3 1.9 0.6 0.4 1.1 0.7 0.6 1.7 0.3 0.2 0.2 0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.5 0.7 1.2																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	703	99.58	99.58
3 - 4	2	0.28	99.86
5 - 7	1	0.14	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	21	23	19	14	14	45	120	81	86	48	22	42	34	46	57	26	698
3 - 4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
5 - 7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	23	19	14	14	45	121	82	86	48	22	42	34	46	57	26	701

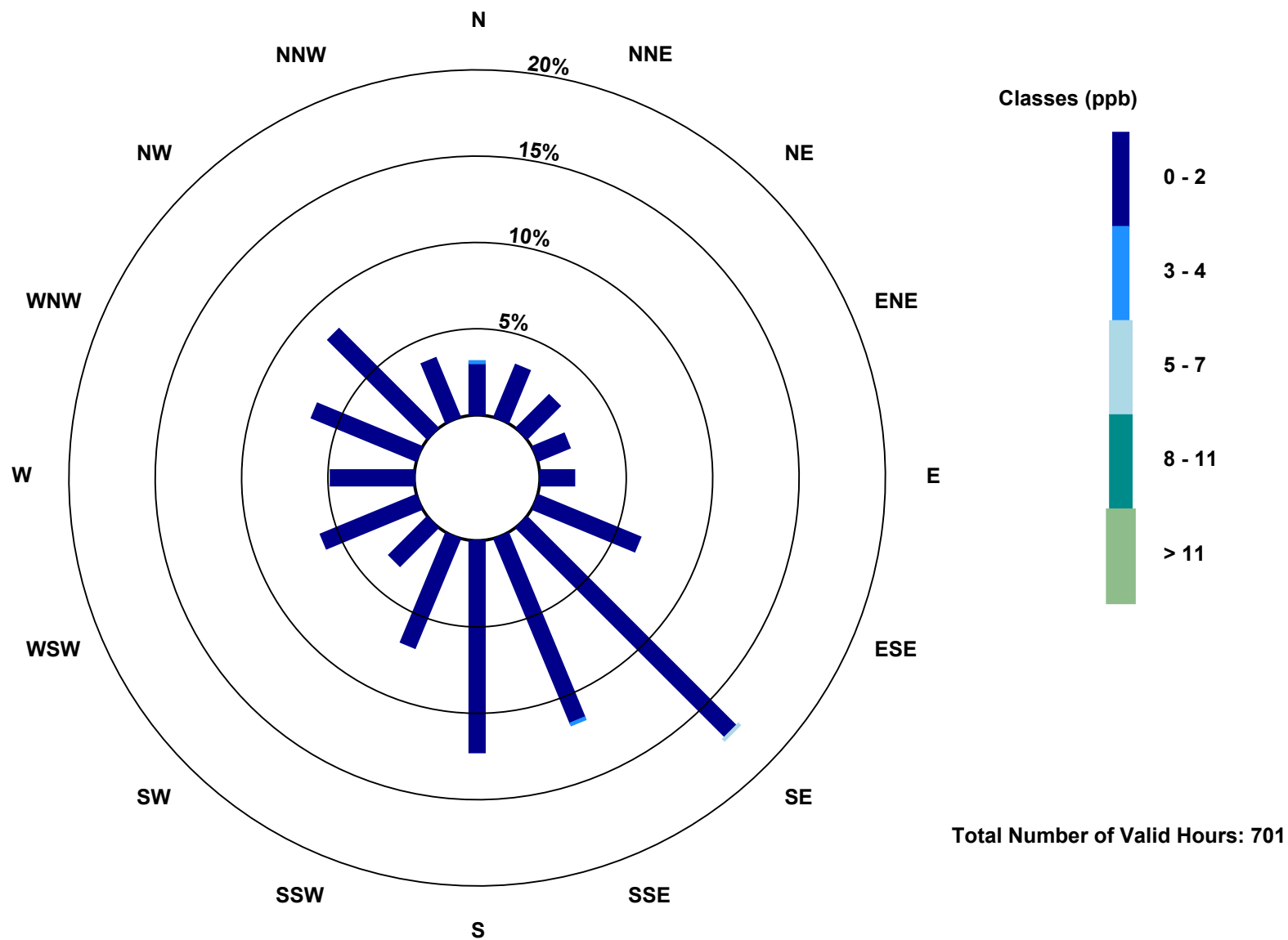
Total Number of Valid Hours: 701

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

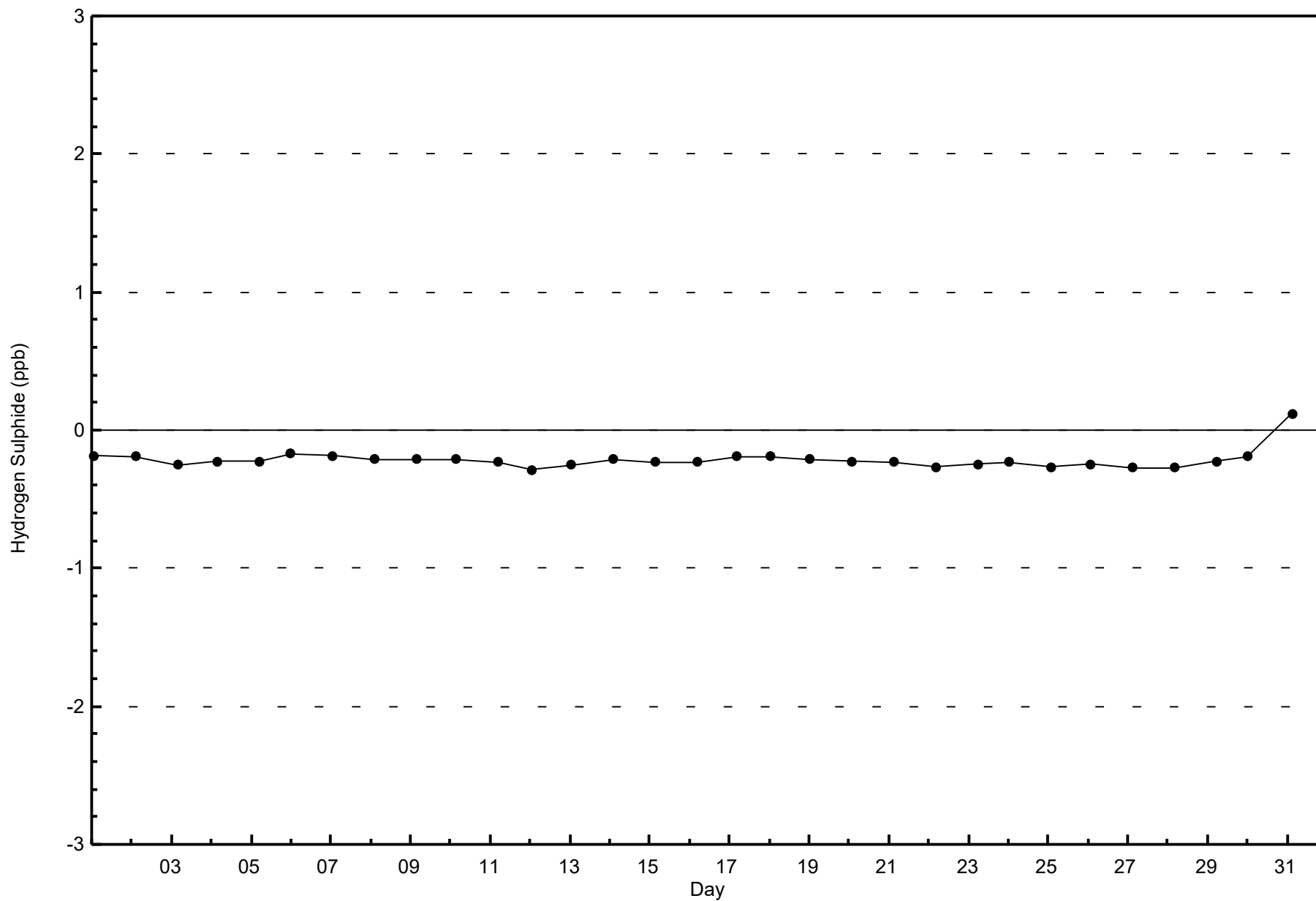
Hydrogen Sulphide (H_2S) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

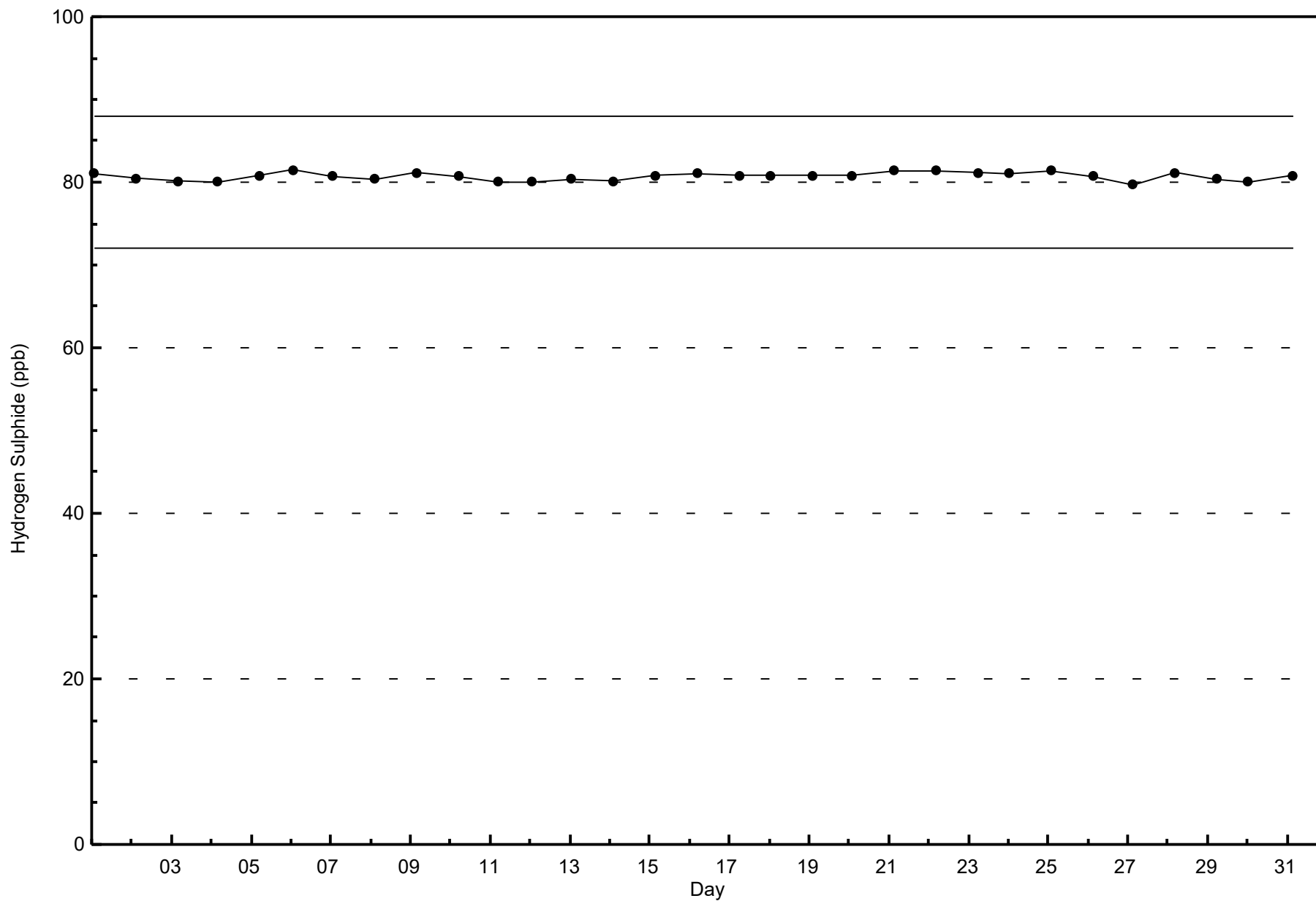
Hydrogen Sulphide (H₂S) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

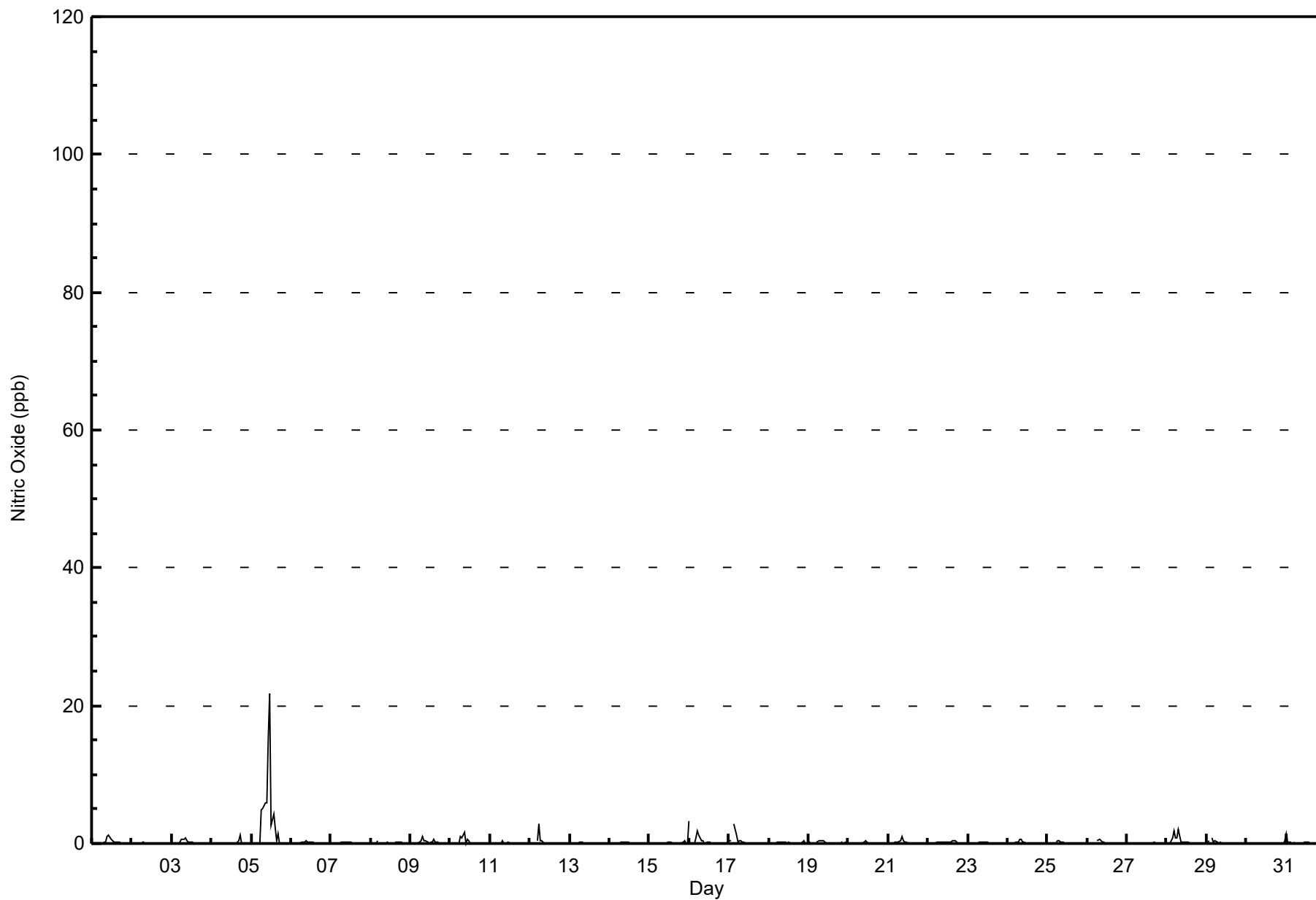
Monday Creek - May 2025

Maximum Value: 21.8 ppb on May 5 12:00																			Maximum Daily Average: 3.0 ppb on May 5							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 11							Hours of Data: 707	
Maximum Diurnal Average: 0.9 ppb at hour 12																			Minimum Diurnal Average: 0.0 ppb at hour 20							Hours of Missing Data: 37	
Monthly Average: 0.22 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 3.3							Hours of Calibration: 37	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	1.0	1.2	0.7	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
3-May	Z	0.0	0.0	0.0	0.0	0.2	0.6	0.6	0.9	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	
4-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1	
5-May	0.0	0.0	Z	0.0	0.0	0.1	4.9	5.1	5.9	5.9	15.3	21.8	2.7	4.2	2.2	0.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	21.8	
6-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
7-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
8-May	0.0	0.0	0.0	0.0	0.3	Z	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
9-May	Z	0.0	0.0	0.0	0.0	0.2	0.5	1.0	0.5	0.4	0.2	0.1	0.1	0.2	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	
10-May	0.0	Z	0.0	0.0	0.0	0.1	1.1	0.7	1.7	0.1	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	
11-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
12-May	0.0	0.0	0.0	Z	0.4	2.9	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.9	
13-May	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.0	0.0	C	C	C	C	C	C	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	0.2	
14-May	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.1	0.4	
16-May	3.3	Z	0.1	0.1	0.8	1.7	1.2	0.5	0.4	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4	3.3	
17-May	0.5	0.5	Z	2.9	1.2	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.3	2.9	
18-May	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.4	0.0	0.0	0.1	0.4	
19-May	0.2	0.0	0.0	0.0	Z	0.3	0.4	0.5	0.4	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.1	0.5	
20-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
21-May	Z	0.0	0.0	0.0	0.2	0.1	0.2	0.5	1.0	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	
22-May	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
23-May	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
24-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
25-May	0.0	0.0	0.0	0.0	Z	0.3	0.5	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
26-May	0.0	0.0	0.0	0.0	0.1	Z	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
27-May	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	
28-May	0.0	Z	0.0	0.8	1.8	0.9	0.8	2.0	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.0	
29-May	0.0	0.4	Z	0.8	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	
30-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.4	
31-May	1.5	0.3	0.3	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	22	22	19	13	13	45	122	85	83	49	24	44	32	48	53	26	700
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	22	19	13	13	45	122	85	83	49	24	44	32	48	54	26	701

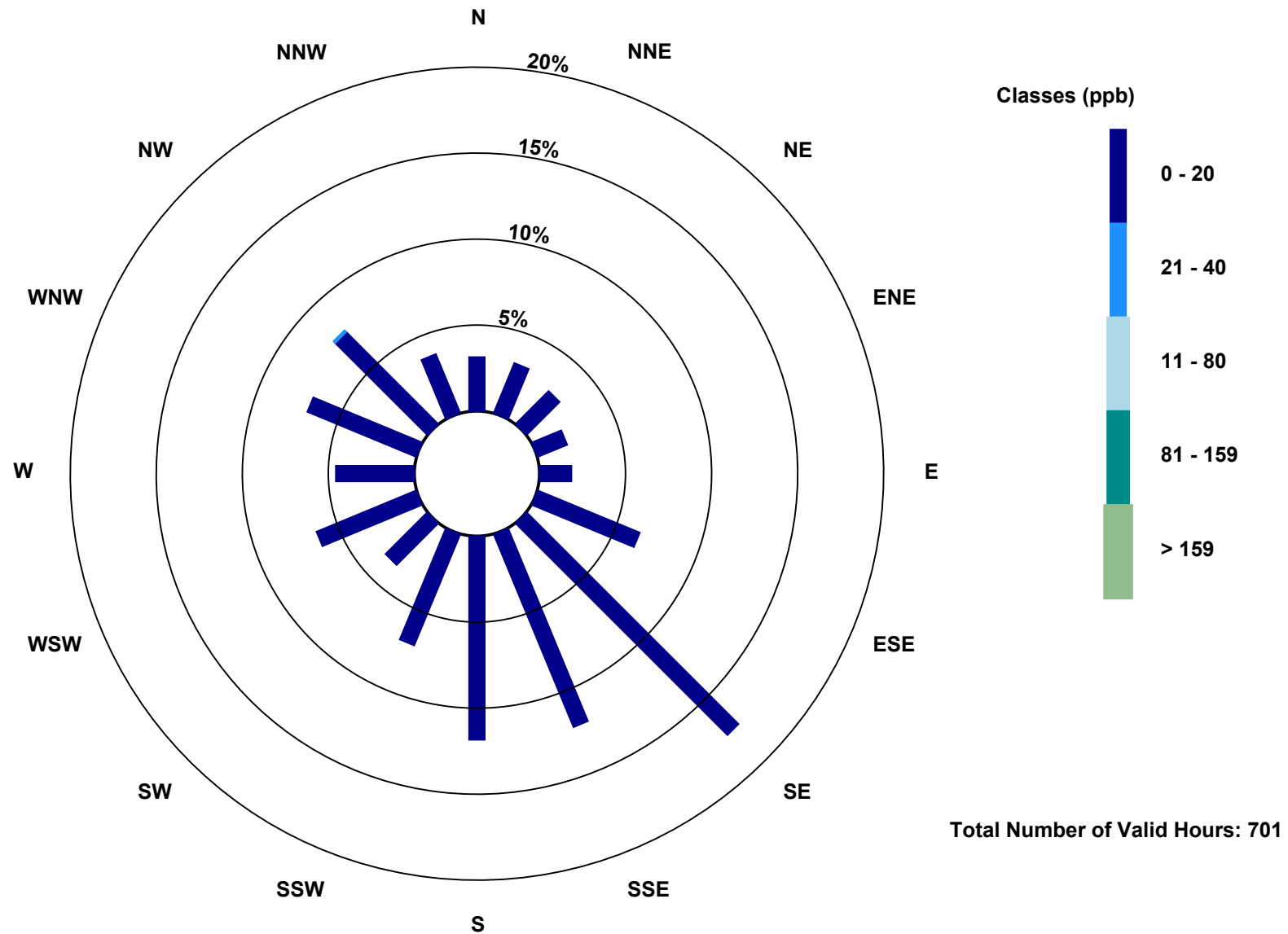
Total Number of Valid Hours: 701

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

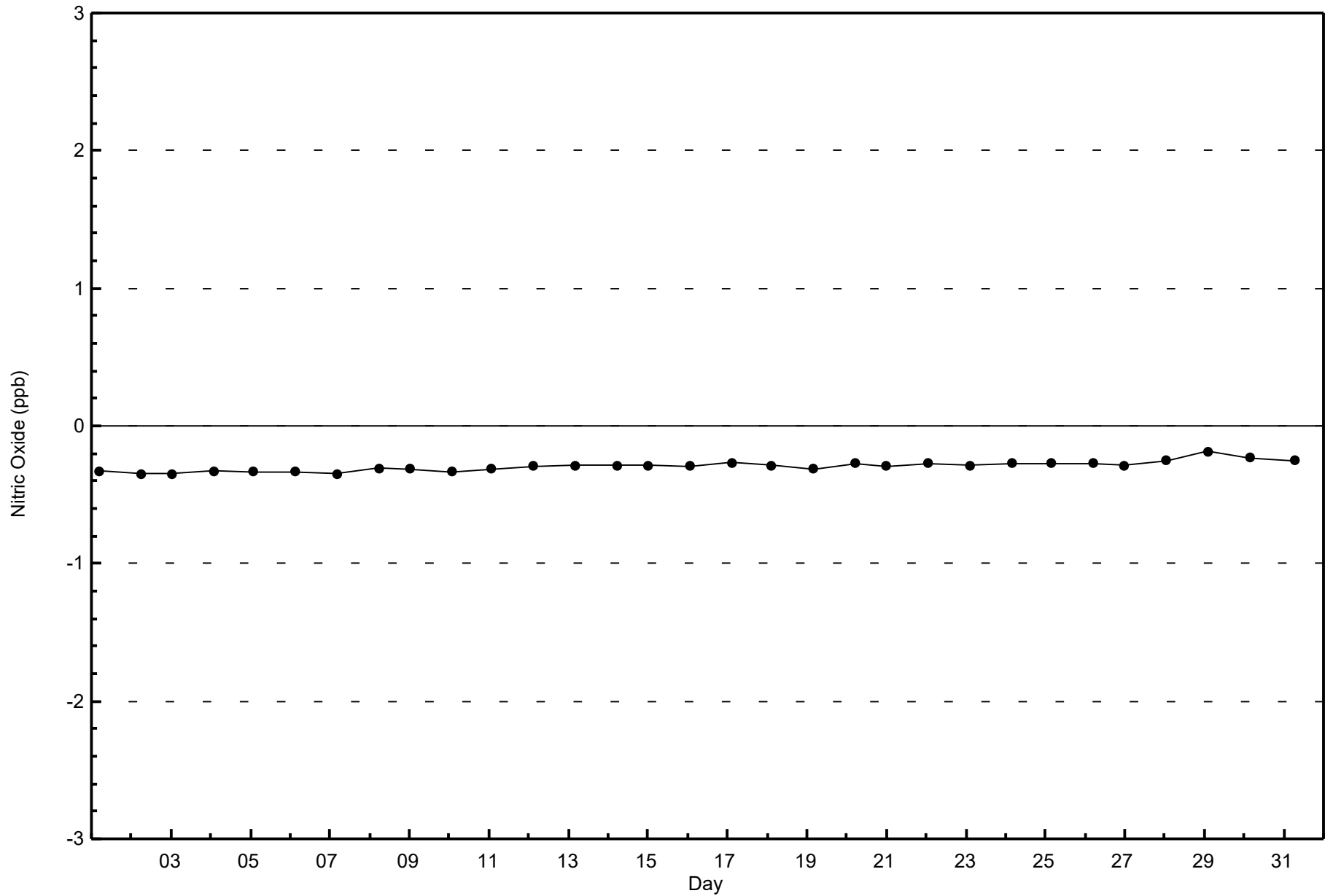
Nitric Oxide (NO) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

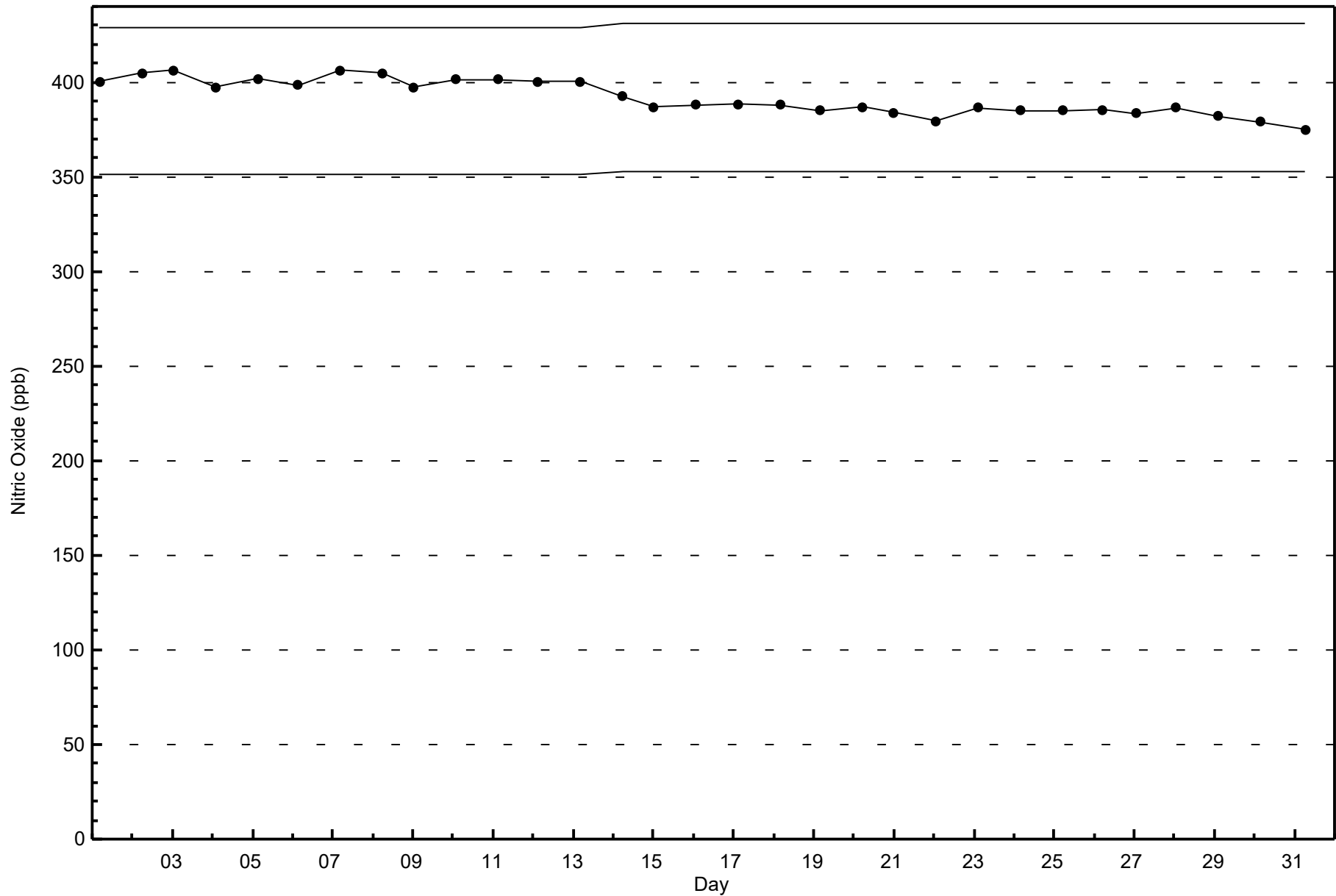
Nitric Oxide (NO) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

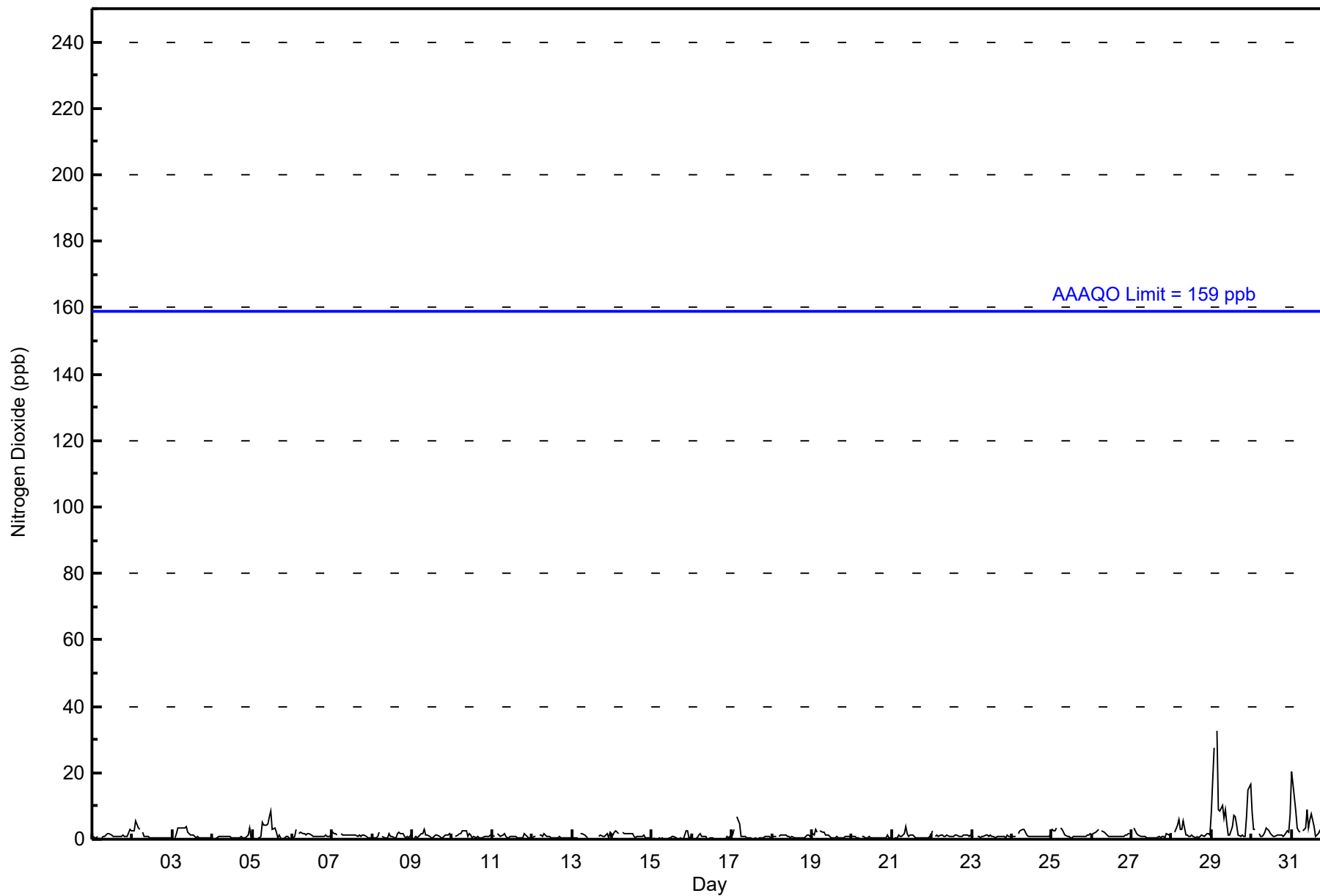
Monday Creek - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.7 ppb on May 29 04:00 Maximum Daily Average: 8.0 ppb on May 29																		Hours in Service: 744								
Minimum Value: 0.1 ppb on May 16 20:00 Minimum Daily Average: 0.5 ppb on May 15 Maximum Diurnal Average: 3.0 ppb at hour 4 Minimum Diurnal Average: 0.7 ppb at hour 19 Monthly Average: 1.48 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.7 P ₉₉ = 9.1																		Hours of Data: 707								
																		Hours of Missing Data: 37								
																		Hours of Calibration: 37								
																		Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.9	0.5	0.3	0.7	Z	0.4	0.7	0.7	1.1	1.8	1.5	1.1	1.0	0.9	0.8	0.9	1.0	0.8	1.1	1.0	0.7	0.8	2.8	2.6	1.0	2.8
2-May	2.5	2.6	5.5	3.5	2.9	Z	2.2	1.0	0.8	0.7	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	1.2	5.5
3-May	Z	0.4	1.7	3.4	3.2	3.3	3.5	3.3	4.0	2.2	1.7	1.3	1.4	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	1.5	4.0
4-May	0.4	Z	0.6	0.6	0.8	0.8	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.5	0.9	0.3	0.4	0.4	1.1	3.4	0.5	0.7	3.4
5-May	0.5	0.4	Z	0.5	0.6	0.7	4.9	4.3	4.1	4.8	6.8	8.3	2.8	3.6	2.3	0.6	1.3	0.3	0.2	0.3	0.8	0.9	0.3	0.2	2.2	8.3
6-May	0.3	1.0	3.0	Z	1.7	2.2	1.7	1.5	1.2	1.8	1.6	1.4	1.0	0.9	0.7	0.8	0.8	0.8	1.0	0.7	1.4	0.8	1.0	1.6	1.3	3.0
7-May	2.0	1.7	1.6	1.3	Z	1.7	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.2	1.0	1.2	1.3	0.8	0.5	0.5	0.6	1.2	2.0
8-May	0.5	0.6	0.5	0.7	2.0	Z	0.8	0.6	0.6	0.5	1.6	1.0	0.7	0.6	0.5	1.6	2.2	1.6	1.6	0.9	0.4	0.8	0.4	1.7	1.0	2.2
9-May	Z	0.6	0.7	0.6	1.0	1.5	1.8	2.9	1.4	1.4	0.9	0.5	0.6	0.7	1.1	1.1	1.0	0.6	0.6	1.0	1.1	1.2	1.6	0.8	1.1	2.9
10-May	0.6	Z	1.0	1.4	1.5	1.8	2.6	2.4	2.5	0.9	1.6	1.2	0.6	0.7	0.6	0.7	0.5	0.4	0.5	0.7	0.9	0.9	1.0	1.1	1.1	2.6
11-May	1.4	0.8	Z	1.9	1.3	0.9	1.4	1.8	0.9	0.6	0.6	0.9	0.9	0.8	0.7	0.5	0.6	0.6	0.5	1.8	1.3	0.7	0.5	0.4	0.9	1.9
12-May	0.6	0.7	0.8	Z	1.1	1.3	0.9	1.5	1.1	0.8	0.7	0.5	0.6	0.6	0.5	0.5	0.7	0.4	0.4	0.4	0.6	0.5	0.4	0.4	0.7	1.5
13-May	0.4	0.4	0.6	0.6	Z	1.5	1.5	1.2	0.8	0.4	C	C	C	C	C	C	0.7	1.3	0.8	1.0	1.1	1.5	0.6	2.3	-	2.3
14-May	1.3	2.1	2.4	2.0	1.9	Z	2.3	1.8	1.5	1.5	1.6	1.8	1.5	1.0	0.6	0.7	0.8	0.8	1.0	1.3	0.4	0.4	0.4	0.3	1.3	2.4
15-May	Z	0.4	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.3	0.6	0.8	0.7	0.4	0.2	0.2	0.3	0.2	0.2	2.4	2.7	0.5	0.6	0.5	2.7
16-May	1.9	Z	0.5	0.5	1.2	1.5	1.0	0.9	0.9	0.2	0.2	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.7	0.5	1.2	0.6	1.9
17-May	1.2	2.9	Z	6.8	4.6	0.8	1.0	0.9	0.7	0.6	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.5	0.9	0.7	0.8	0.5	1.1	6.8
18-May	0.6	0.8	0.8	Z	1.0	1.2	1.1	1.3	1.1	0.8	0.7	0.6	0.7	0.6	0.5	0.6	0.6	0.6	0.4	0.5	1.0	1.3	1.3	0.9	0.8	1.3
19-May	1.5	1.3	3.0	2.3	Z	2.5	2.3	2.0	1.1	1.1	1.1	0.6	0.6	0.5	0.6	0.7	0.4	0.4	0.4	0.5	0.8	0.9	0.9	0.7	1.1	3.0
20-May	1.0	0.8	0.7	0.6	0.6	Z	0.8	0.7	0.6	0.6	0.9	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.4	1.1	0.6	0.4	0.6	1.1
21-May	Z	0.5	0.4	0.4	1.3	0.7	1.0	1.7	3.9	1.7	0.9	1.1	1.1	0.8	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	1.2	0.9	3.9
22-May	2.6	Z	0.7	1.1	1.0	1.1	1.2	1.0	0.9	1.1	0.9	0.8	0.8	1.0	1.1	1.3	1.0	0.9	0.8	1.1	1.4	1.3	0.9	1.1	1.1	2.6
23-May	0.8	0.7	Z	0.9	0.8	0.6	0.7	0.9	1.1	1.1	1.0	1.2	0.9	0.8	0.6	0.8	0.9	0.8	1.0	0.7	0.6	1.1	0.9	0.8	0.9	1.2
24-May	0.7	0.8	0.7	Z	1.8	2.6	3.1	3.0	2.0	1.2	1.0	0.9	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.8	0.9	1.0	0.9	2.2	1.3	3.1
25-May	3.0	2.4	2.7	3.2	Z	3.6	2.8	2.1	1.4	0.9	0.7	0.6	0.6	0.7	0.8	0.8	0.7	0.7	0.8	1.0	1.0	1.4	1.3	1.7	1.5	3.6
26-May	1.4	1.7	2.1	2.6	2.9	Z	2.6	2.1	1.8	1.3	1.0	0.8	0.8	0.8	0.7	0.7	0.7	0.9	0.9	0.9	1.2	1.2	1.5	1.8	1.4	2.9
27-May	Z	3.5	2.6	1.7	1.4	1.0	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.8	0.6	1.0	0.7	0.5	1.9	1.2	1.9	1.1	3.5
28-May	1.7	Z	2.3	4.1	5.8	3.0	2.8	5.7	1.1	1.1	0.9	0.8	1.1	0.8	0.6	0.8	0.6	0.9	1.3	1.0	1.3	1.9	1.6	1.4	1.9	5.8
29-May	8.1	27.4	Z	32.7	8.8	8.4	10.2	6.3	9.1	4.8	1.3	1.3	3.9	7.2	6.6	4.3	1.1	1.0	1.2	0.7	0.7	6.8	15.0	16.6	8.0	32.7
30-May	7.9	3.0	2.9	Z	1.7	0.9	1.0	1.1	2.0	3.3	2.7	1.9	1.3	0.9	1.0	1.2	1.4	1.4	1.3	0.9	1.4	2.5	2.0	7.5	2.2	7.9
31-May	20.2	16.7	8.3	3.4	2.7	2.2	Z	2.5	3.6	8.9	3.5	5.9	7.6	3.7	0.9	1.1	1.6	2.7	1.6	3.1	2.3	1.8	1.4	1.2	4.6	20.2
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	99.72	99.72
21 - 40	2	0.28	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	22	22	19	13	13	45	120	85	83	49	24	44	32	48	54	26	699
21 - 40	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	22	19	13	13	45	122	85	83	49	24	44	32	48	54	26	701

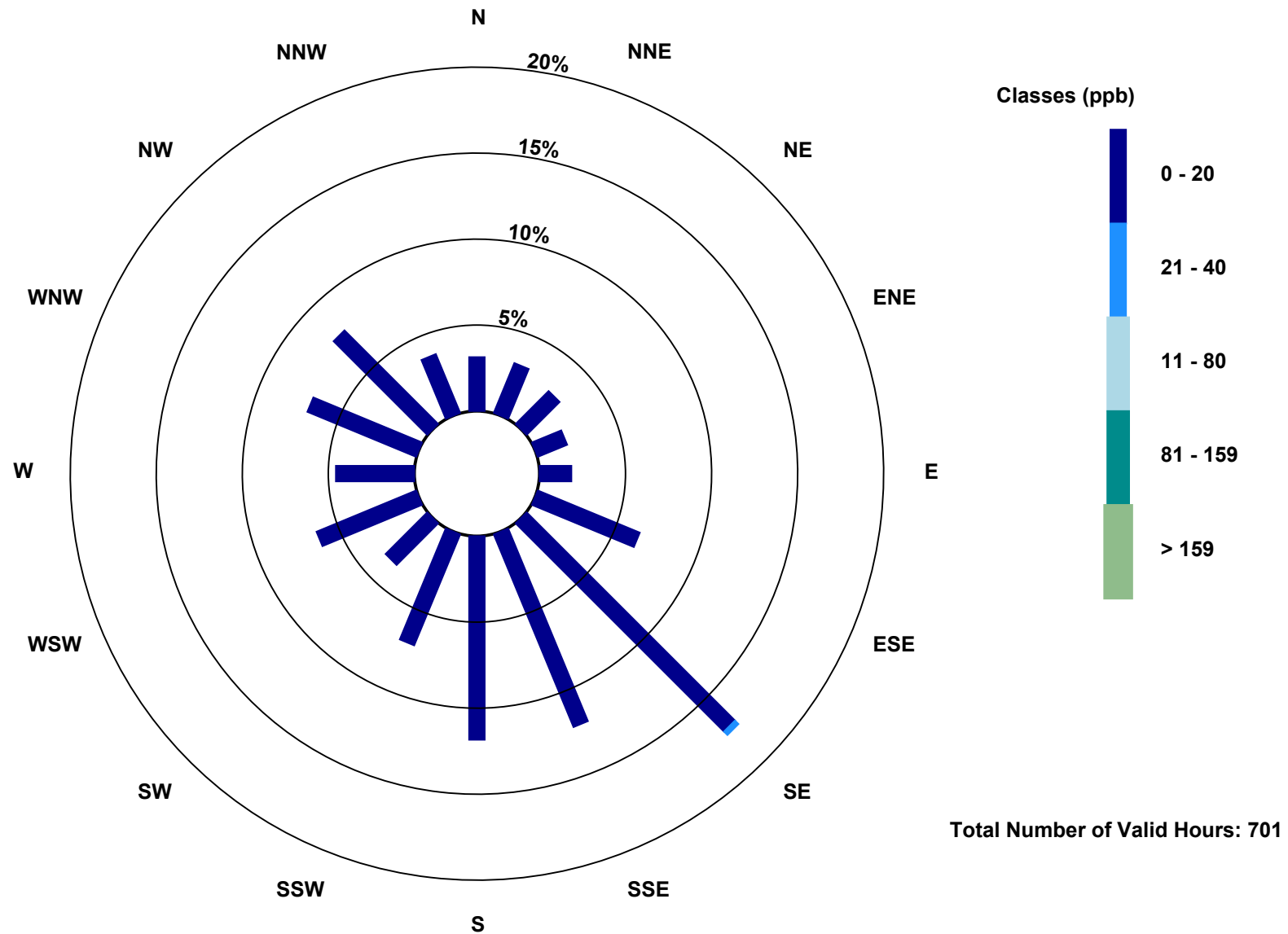
Total Number of Valid Hours: 701

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

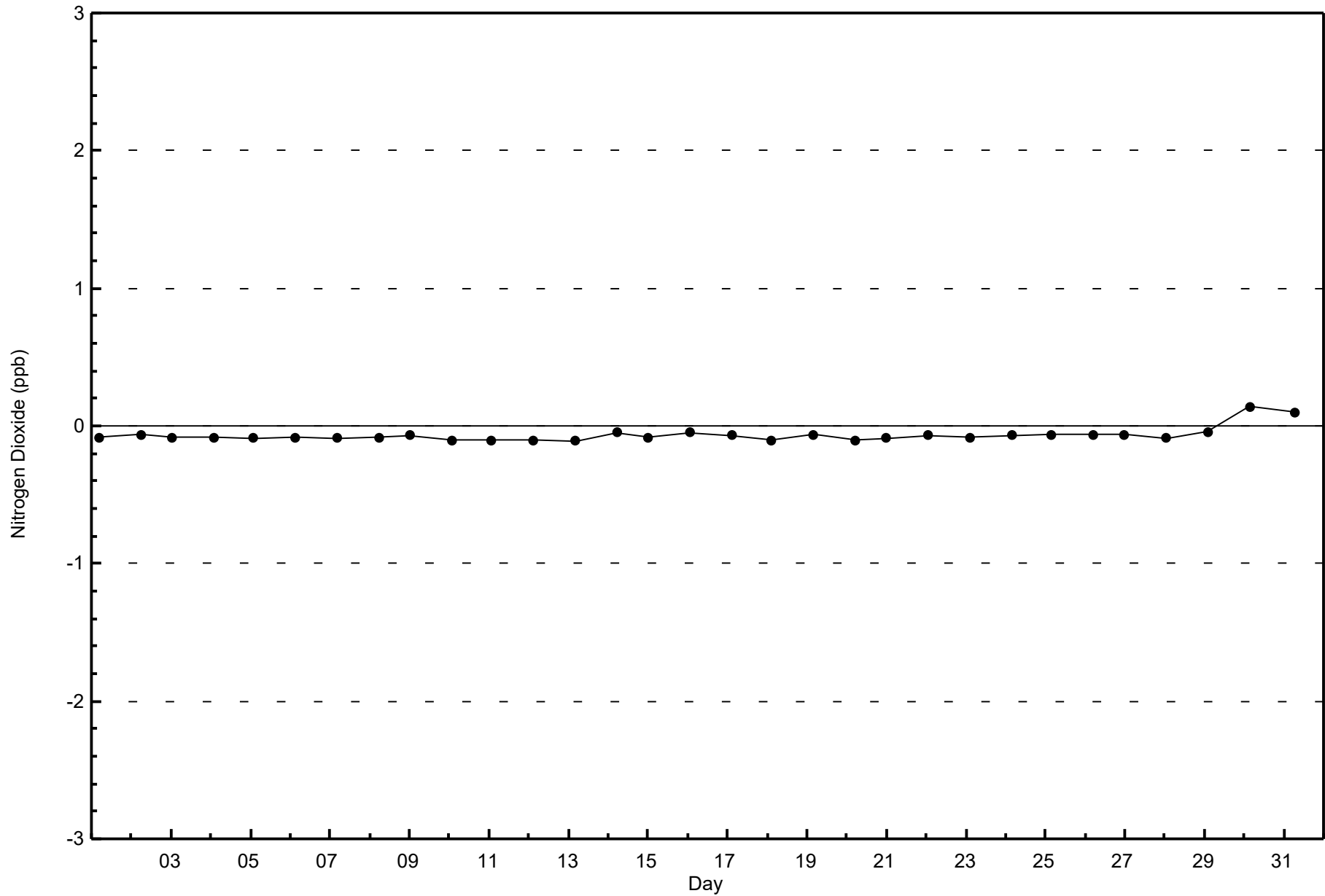
Nitrogen Dioxide (NO₂) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

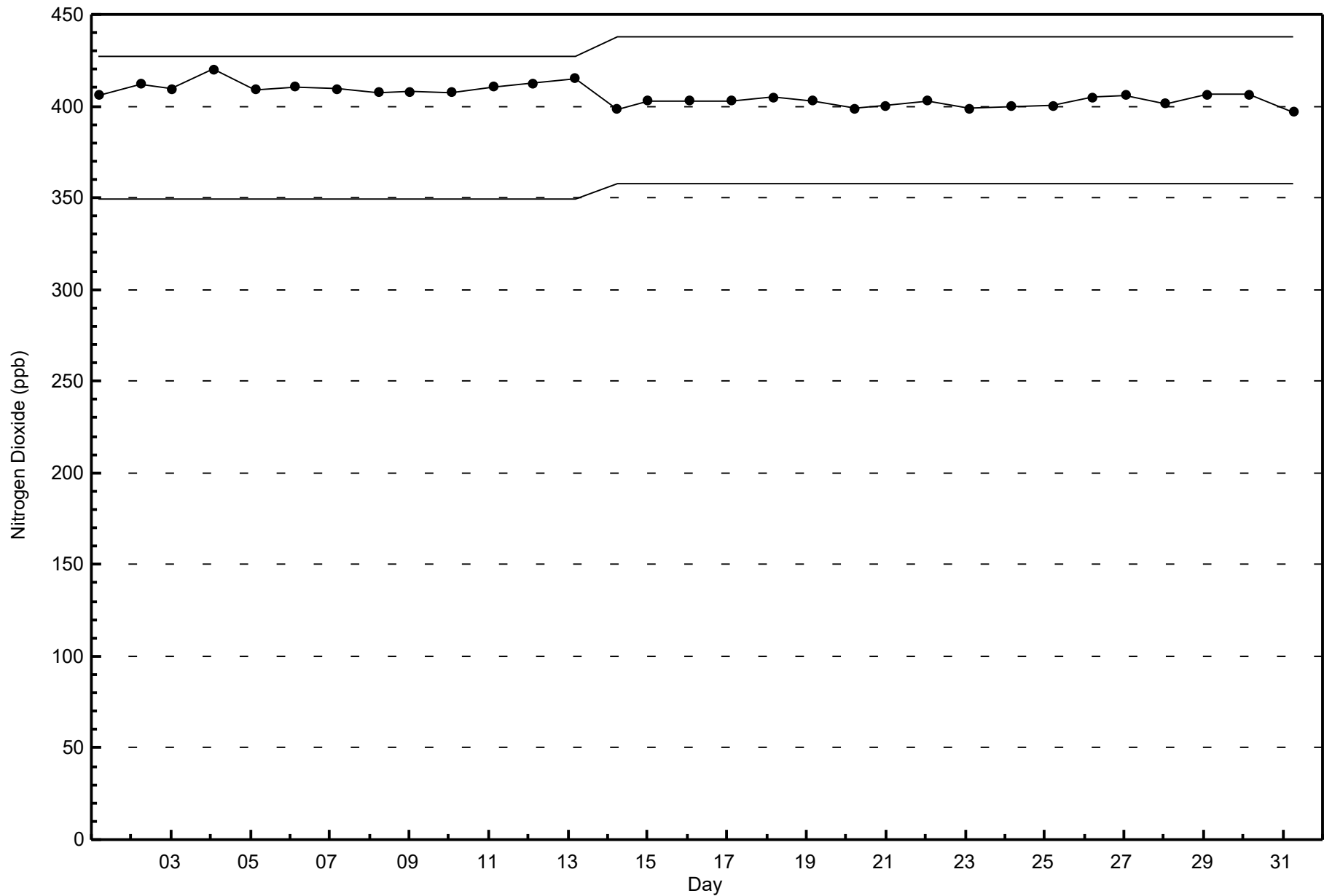
Nitrogen Dioxide (NO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

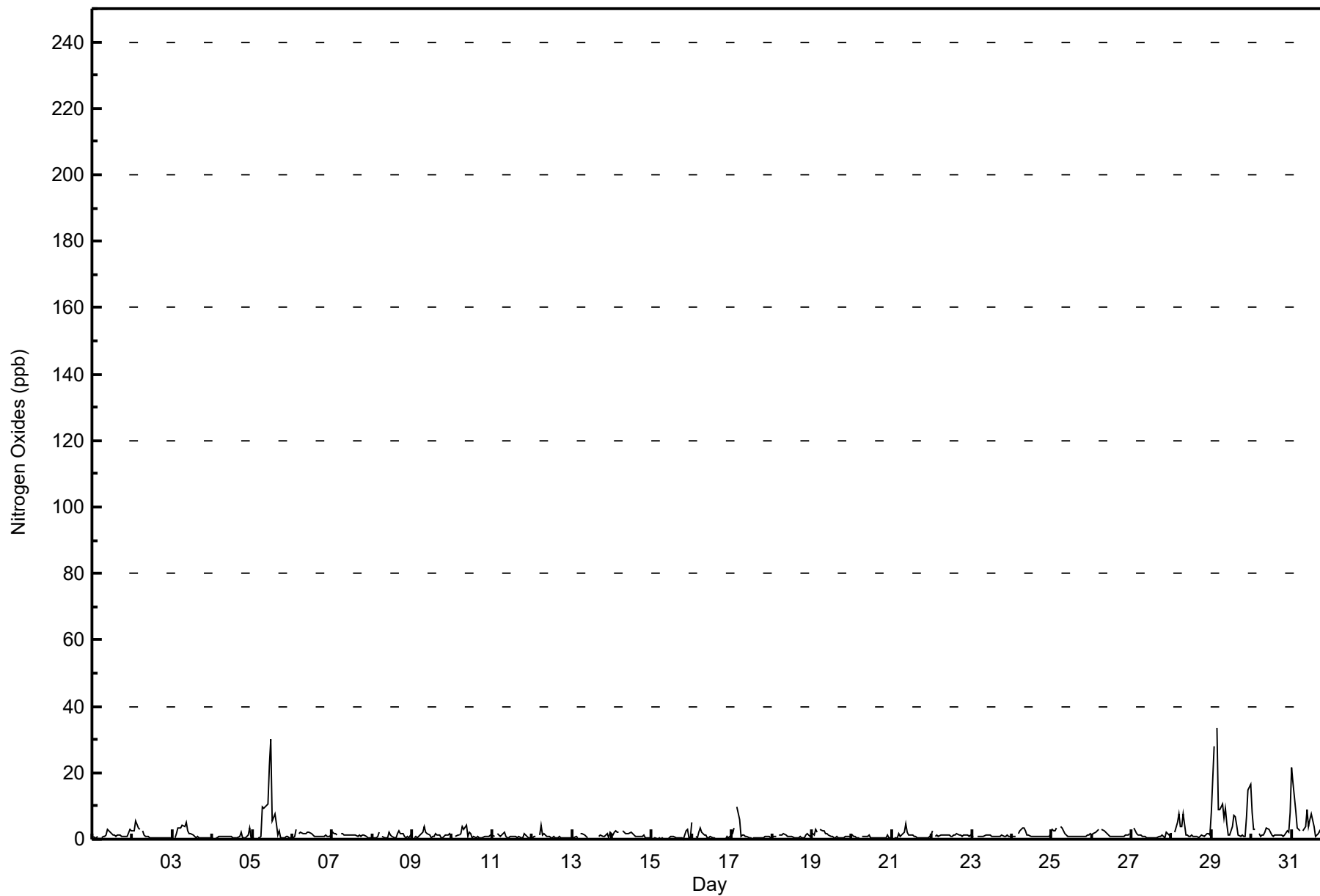
Monday Creek - May 2025

Maximum Value: 33.5 ppb on May 29 04:00																		Maximum Daily Average: 8.1 ppb on May 29										Hours in Service: 744	
Minimum Value: 0.1 ppb on May 16 20:00																		Minimum Daily Average: 0.6 ppb on May 15										Hours of Data: 707	
Maximum Diurnal Average: 3.2 ppb at hour 4																		Minimum Diurnal Average: 0.8 ppb at hour 19										Hours of Missing Data: 37	
Monthly Average: 1.70 ppb																		Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 3.1 P ₉₉ = 14.7										Hours of Calibration: 37	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	0.9	0.5	0.3	0.7	Z	0.4	0.7	0.8	1.4	2.8	2.7	1.8	1.4	1.2	1.0	1.1	1.2	0.9	1.1	1.0	0.7	0.8	2.8	2.6	1.3	2.8			
2-May	2.5	2.6	5.5	3.5	2.9	Z	2.5	1.2	0.9	0.8	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	1.2	5.5			
3-May	Z	0.4	1.7	3.4	3.2	3.5	4.1	3.9	4.9	2.5	1.9	1.5	1.5	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	1.7	4.9			
4-May	0.4	Z	0.6	0.6	0.8	0.8	1.0	0.9	0.8	0.8	0.8	0.7	0.6	0.6	0.4	0.3	0.9	2.0	0.3	0.4	0.4	1.1	3.4	0.5	0.8	3.4			
5-May	0.5	0.4	Z	0.5	0.6	0.8	9.8	9.4	10.0	10.7	22.1	30.1	5.5	7.8	4.5	1.1	2.6	0.3	0.2	0.3	0.8	0.9	0.3	0.2	5.2	30.1			
6-May	0.3	1.0	3.0	Z	1.7	2.3	1.9	1.7	1.5	2.2	1.9	1.6	1.1	1.0	0.8	0.9	0.9	0.9	1.0	0.7	1.4	0.8	1.0	1.6	1.4	3.0			
7-May	2.0	1.7	1.6	1.3	Z	1.8	1.5	1.4	1.3	1.3	1.3	1.4	1.3	1.2	1.1	1.0	1.2	1.0	1.2	1.3	0.8	0.5	0.5	0.6	1.2	2.0			
8-May	0.5	0.6	0.5	0.7	2.3	Z	0.8	0.6	0.6	0.5	1.9	1.1	0.7	0.6	0.5	1.7	2.4	1.8	1.8	0.9	0.4	0.8	0.4	1.7	1.0	2.4			
9-May	Z	0.6	0.7	0.6	1.0	1.7	2.3	3.9	1.9	1.8	1.1	0.6	0.7	0.9	1.8	1.3	1.2	0.6	0.6	1.0	1.1	1.2	1.6	0.8	1.2	3.9			
10-May	0.6	Z	1.0	1.4	1.5	1.9	3.7	3.1	4.2	1.0	2.2	1.6	0.6	0.7	0.6	0.7	0.5	0.4	0.5	0.7	0.9	0.9	1.0	1.1	1.3	4.2			
11-May	1.4	0.8	Z	1.9	1.3	0.9	1.5	2.1	1.0	0.6	0.6	1.0	1.0	0.8	0.7	0.5	0.6	0.6	0.5	1.8	1.3	0.7	0.5	0.4	1.0	2.1			
12-May	0.6	0.7	0.8	Z	1.5	4.2	1.3	1.8	1.3	0.9	0.8	0.5	0.6	0.6	0.5	0.5	0.7	0.4	0.4	0.4	0.6	0.5	0.4	0.4	0.9	4.2			
13-May	0.4	0.4	0.6	0.6	Z	1.6	1.7	1.3	0.8	0.4	C	C	C	C	C	C	0.7	1.4	0.8	1.0	1.1	1.5	0.6	2.3	-	2.3			
14-May	1.3	2.1	2.4	2.0	1.9	Z	2.6	2.1	1.7	1.7	1.8	2.0	1.6	1.1	0.7	0.8	0.9	0.8	1.0	1.3	0.4	0.4	0.4	0.3	1.4	2.6			
15-May	Z	0.4	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.3	0.7	1.0	0.9	0.5	0.2	0.2	0.3	0.2	0.2	2.7	3.1	0.5	0.6	0.6	3.1			
16-May	5.2	Z	0.6	0.6	2.0	3.2	2.2	1.4	1.3	0.3	0.3	0.7	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.8	0.5	1.3	1.0	5.2			
17-May	1.7	3.4	Z	9.7	5.8	0.9	1.3	1.2	1.0	0.7	0.5	0.4	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.9	0.7	0.9	0.5	1.4	9.7			
18-May	0.6	0.8	0.8	Z	1.1	1.3	1.2	1.5	1.4	1.0	0.9	0.7	0.8	0.6	0.6	0.6	0.6	0.7	0.4	0.5	1.2	1.7	1.3	0.9	0.9	1.7			
19-May	1.7	1.3	3.0	2.3	Z	2.8	2.7	2.5	1.5	1.5	1.3	0.7	0.7	0.5	0.6	0.7	0.4	0.4	0.4	0.5	1.0	0.9	1.0	0.7	1.3	3.0			
20-May	1.1	0.9	0.7	0.6	0.6	Z	0.9	0.8	0.7	0.7	1.3	0.6	0.6	0.5	0.4	0.6	0.4	0.5	0.5	0.6	0.4	1.1	0.6	0.4	0.7	1.3			
21-May	Z	0.5	0.4	0.4	1.5	0.8	1.2	2.2	4.9	2.0	1.1	1.3	1.2	0.9	0.7	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	1.2	1.0	4.9			
22-May	2.6	Z	0.7	1.1	1.0	1.3	1.4	1.2	1.1	1.3	1.2	1.0	0.9	1.2	1.2	1.7	1.3	1.1	0.9	1.1	1.4	1.3	0.9	1.1	1.2	2.6			
23-May	0.8	0.7	Z	0.9	0.8	0.7	0.8	1.0	1.2	1.3	1.1	1.4	1.0	0.9	0.7	0.8	0.9	0.8	1.1	0.7	0.6	1.1	0.9	0.8	0.9	1.4			
24-May	0.7	0.8	0.7	Z	1.8	2.7	3.3	3.5	2.5	1.4	1.1	1.0	0.9	1.0	1.0	0.9	0.8	0.8	0.7	0.8	0.9	1.0	0.9	2.2	1.4	3.5			
25-May	3.0	2.4	2.7	3.2	Z	3.9	3.3	2.5	1.7	1.0	0.8	0.7	0.7	0.8	0.9	0.8	0.7	0.7	0.8	1.0	1.0	1.4	1.3	1.7	1.6	3.9			
26-May	1.4	1.7	2.1	2.6	3.0	Z	3.1	2.6	2.2	1.5	1.1	0.9	0.9	0.9	0.8	0.8	0.8	1.0	0.9	0.9	1.2	1.2	1.5	1.8	1.5	3.1			
27-May	Z	3.5	2.6	1.7	1.4	1.1	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.9	0.7	1.1	0.7	0.5	2.0	1.2	1.9	1.1	3.5			
28-May	1.7	Z	2.3	4.9	7.6	3.9	3.6	7.7	1.3	1.2	1.0	0.9	1.3	0.9	0.7	0.9	0.6	0.9	1.4	1.0	1.3	1.9	1.6	1.4	2.2	7.7			
29-May	8.1	27.8	Z	33.5	9.1	8.7	10.4	6.4	9.2	4.8	1.3	1.3	3.9	7.2	6.6	4.3	1.1	1.0	1.2	0.7	0.7	6.8	15.0	16.7	8.1	33.5			
30-May	7.9	3.0	2.9	Z	1.7	0.9	1.1	1.2	2.1	3.4	2.8	2.0	1.4	1.0	1.1	1.3	1.4	1.4	1.3	0.9	1.4	2.5	2.0	7.9	2.3	7.9			
31-May	21.7	17.0	8.6	3.5	2.8	2.3	Z	2.6	3.7	9.0	3.6	6.1	7.8	3.9	1.0	1.1	1.6	2.7	1.6	3.1	2.3	1.8	1.4	1.2	4.8	21.7			
Diurnal Average																													
Diurnal Maximum																													
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	702	99.29	99.29
21 - 40	5	0.71	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Monday Creek - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	22	22	19	13	13	45	119	85	83	49	24	44	32	48	52	26	696
21 - 40	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	22	19	13	13	45	122	85	83	49	24	44	32	48	54	26	701

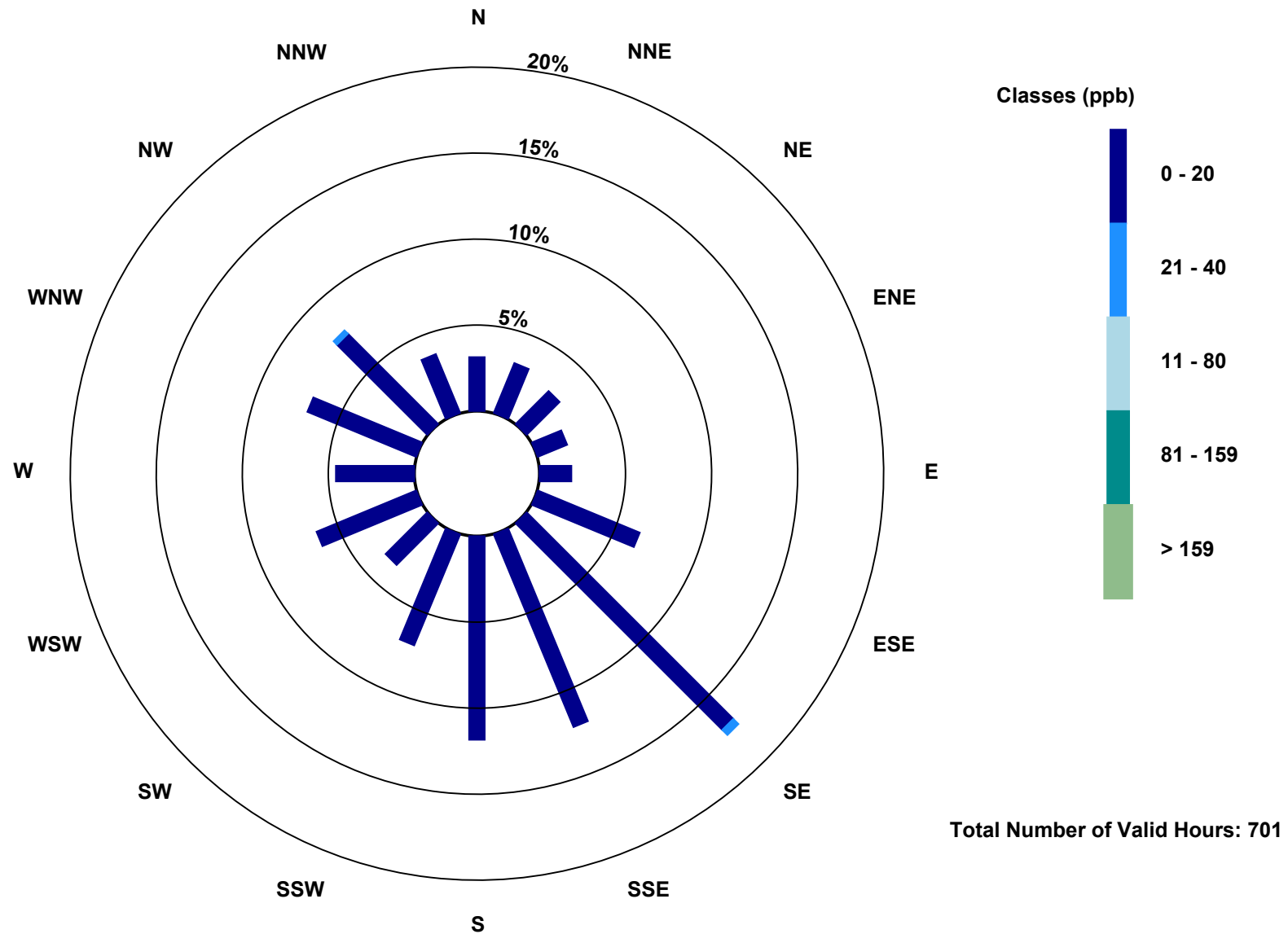
Total Number of Valid Hours: 701

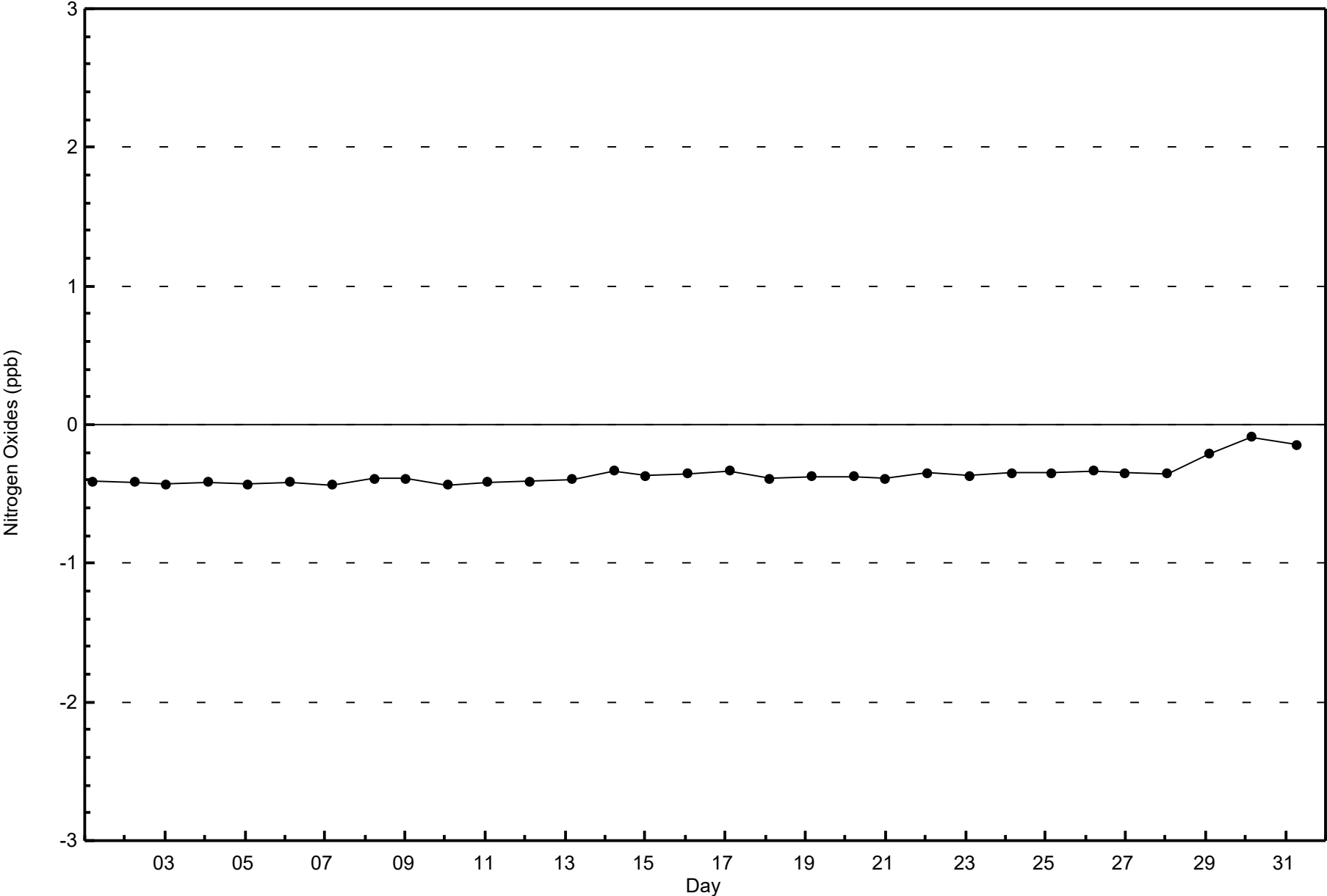
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Monday Creek

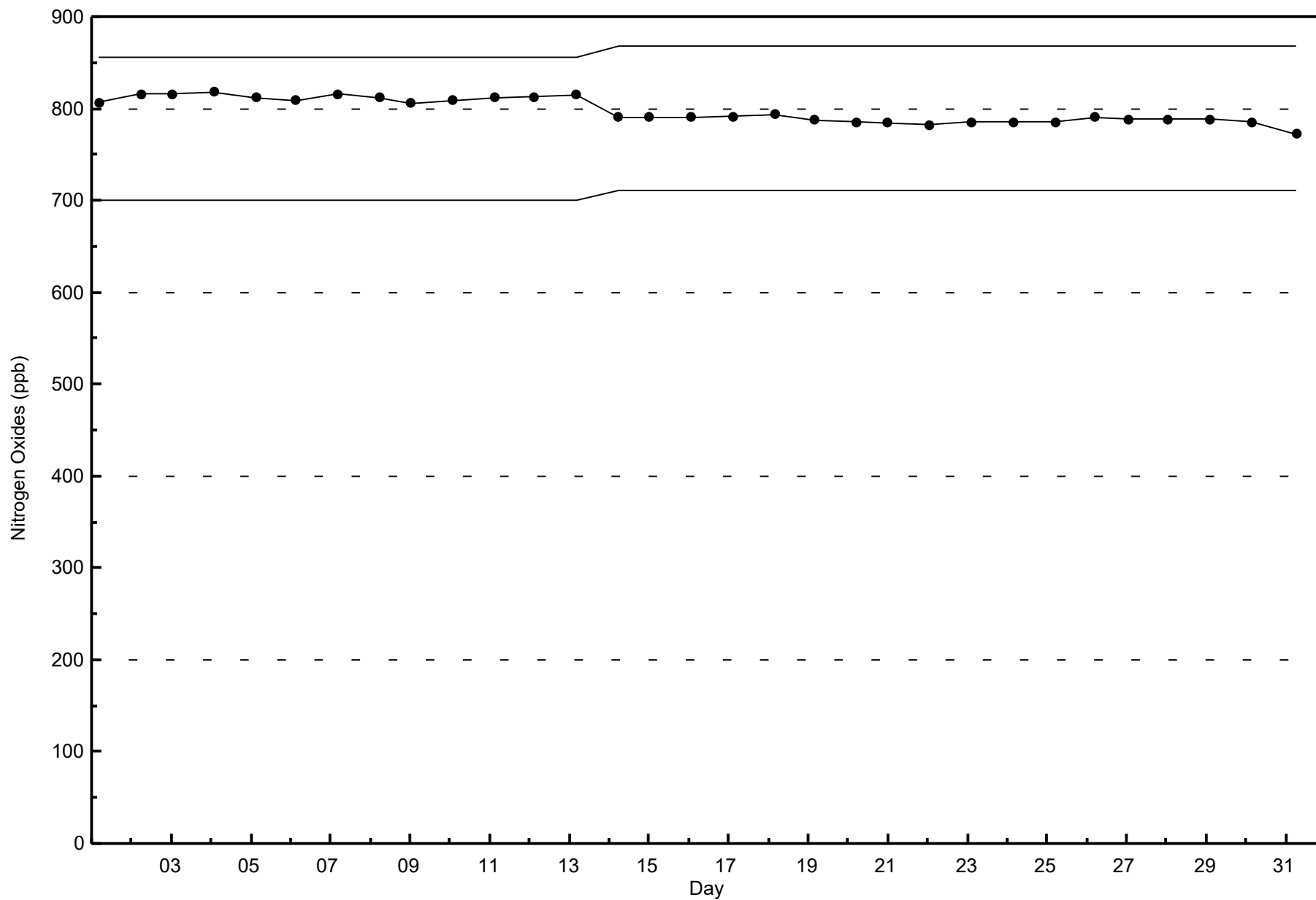






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

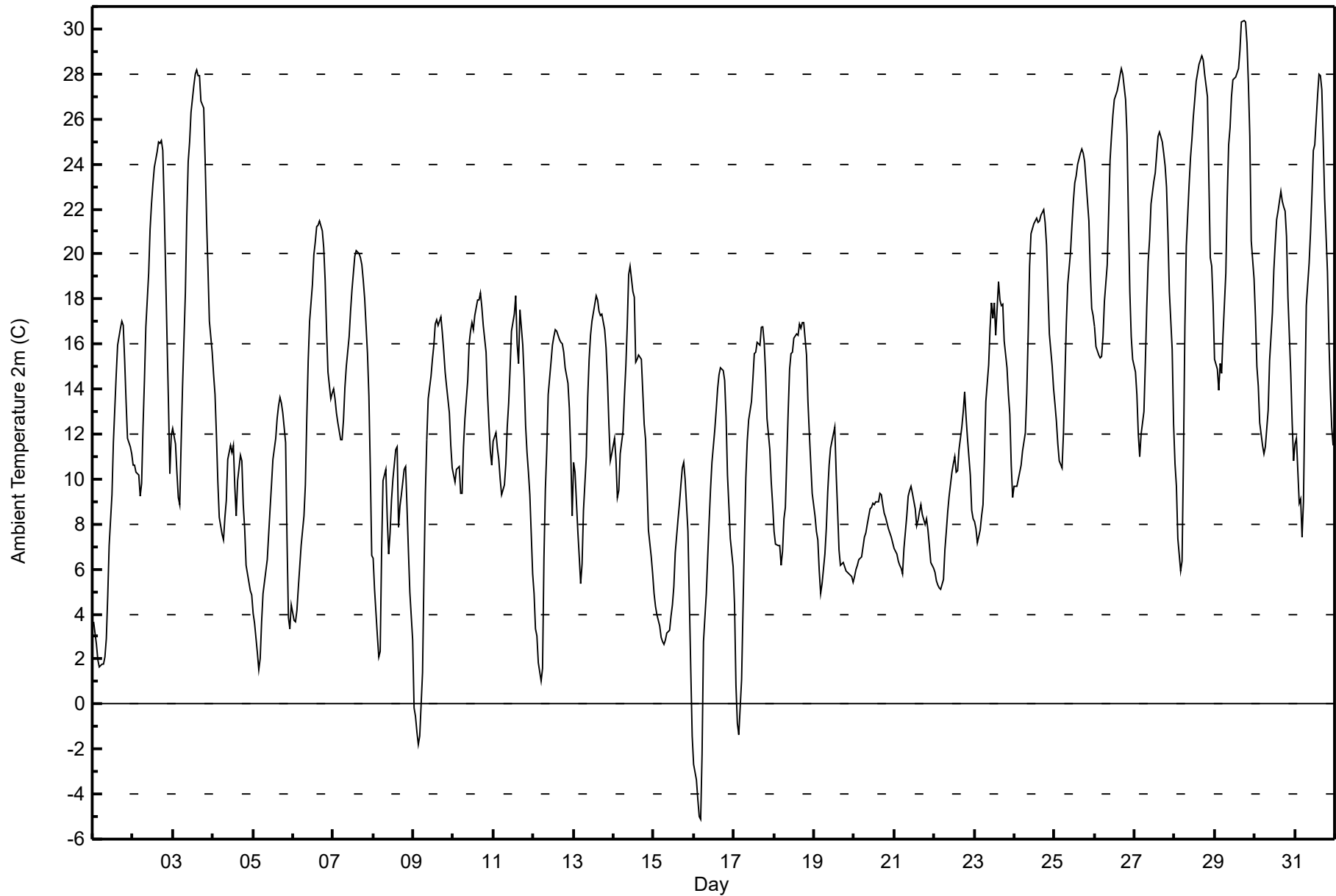
Monday Creek - May 2025

Maximum Value: 30.4 C on May 29 18:00																				Maximum Daily Average: 23.5 C on May 29				Hours in Service: 744		
Minimum Value: -5.1 C on May 16 05:00																				Minimum Daily Average: 5.2 C on May 15				Hours of Data: 744		
Maximum Diurnal Average: 18.3 C at hour 17																				Minimum Diurnal Average: 6.8 C at hour 5				Hours of Missing Data: 0		
Monthly Average: 13.20 C																				Percentiles: P ₁ = -1.4 P ₁₀ = 5.2 Q ₁ = 8.4 Median = 12.3 Q ₃ = 17.2 P ₉₀ = 23.2 P ₉₉ = 28.5				Hours of Calibration: 0		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	3.6	3.2	2.7	2.0	1.7	1.8	1.8	2.1	2.9	4.8	7.1	9.3	11.6	13.1	14.6	16.0	16.7	17.0	16.8	15.2	13.4	11.8	11.4	11.2	8.8	17.0
2-May	10.6	10.6	10.3	10.2	9.3	9.8	12.3	14.4	16.8	19.1	21.1	22.2	23.1	23.9	24.5	25.0	24.9	25.0	24.6	22.2	16.3	13.5	10.2	11.9	17.2	25.0
3-May	12.3	11.6	10.3	9.1	8.9	11.6	14.1	18.3	21.6	24.1	25.0	26.3	27.5	28.0	28.2	27.9	27.9	26.8	26.5	24.2	21.5	19.3	17.0	15.7	20.2	28.2
4-May	14.6	13.8	12.0	9.9	8.3	7.5	7.3	8.3	9.1	10.9	11.5	11.2	11.5	9.7	8.3	9.9	11.1	10.8	8.8	7.8	6.2	5.4	5.0	4.9	9.3	14.6
5-May	4.0	3.6	2.3	1.5	2.0	3.6	4.9	5.4	6.4	7.5	8.7	9.7	10.9	11.8	12.7	13.3	13.6	13.4	13.0	11.6	7.3	3.9	3.3	4.4	7.4	13.6
6-May	3.7	3.7	4.2	5.1	6.1	7.0	8.4	9.8	12.7	15.3	17.0	18.6	19.9	20.6	21.2	21.3	21.5	21.0	20.3	18.9	16.6	14.8	13.6	13.8	14.0	21.5
7-May	14.0	13.6	13.0	12.5	11.7	11.8	12.6	14.1	15.0	16.3	17.4	18.4	19.1	19.9	20.1	20.1	19.9	19.5	18.8	18.0	15.6	13.7	10.4	6.6	15.5	20.1
8-May	6.5	5.1	3.0	2.1	2.3	6.8	9.9	10.4	8.2	6.7	7.6	9.1	10.0	11.3	11.4	7.9	8.8	9.3	10.4	10.6	8.7	6.8	5.0	2.8	7.5	11.4
9-May	-0.2	-0.5	-1.2	-1.8	-1.4	1.4	5.7	9.3	11.7	13.5	14.5	15.3	16.0	16.9	17.1	16.8	17.2	16.5	15.7	14.7	14.1	12.9	11.5	10.5	10.3	17.2
10-May	10.2	9.9	10.4	10.6	9.4	9.4	11.4	12.7	14.4	16.0	16.6	16.9	16.7	17.3	18.0	18.0	18.3	17.7	16.8	15.6	13.8	12.4	11.2	10.6	13.9	18.3
11-May	11.7	12.1	11.3	10.9	10.0	9.3	9.8	10.7	12.3	13.4	14.9	16.6	17.3	18.2	16.0	15.1	17.5	16.0	14.5	12.4	11.2	10.3	9.3	5.8	12.8	18.2
12-May	4.9	3.4	3.0	1.8	1.0	1.6	6.5	9.6	11.3	13.8	15.2	16.0	16.3	16.7	16.6	16.2	16.1	16.0	15.6	14.9	14.2	13.1	11.1	8.3	11.0	16.7
13-May	10.8	10.3	7.7	6.5	5.4	6.3	8.6	11.0	13.6	15.3	16.4	17.0	17.4	18.2	17.9	17.5	17.3	17.3	16.6	15.8	14.4	12.5	10.8	11.1	13.1	18.2
14-May	11.8	10.9	9.1	9.5	11.1	12.1	13.7	15.0	16.8	19.1	19.5	18.3	18.1	15.2	15.3	15.5	15.3	13.9	12.4	11.7	9.8	7.7	6.5	5.8	13.1	19.5
15-May	4.9	4.3	4.0	3.5	3.0	2.8	2.7	2.8	3.1	3.3	3.9	4.4	5.2	6.7	8.2	8.9	9.8	10.5	10.7	10.0	7.7	4.6	1.5	-1.4	5.2	10.7
16-May	-2.7	-3.4	-4.3	-5.0	-5.1	-2.2	2.8	4.9	6.6	8.1	9.5	10.8	12.2	13.0	14.0	14.7	14.9	14.8	14.4	12.8	10.2	8.8	7.4	6.1	6.8	14.9
17-May	4.4	0.9	-0.8	-1.4	1.1	4.2	7.3	10.0	11.7	12.6	13.5	14.4	15.5	15.7	16.1	16.0	16.8	16.8	16.1	14.7	12.7	11.3	9.9	8.9	10.3	16.8
18-May	7.7	7.1	7.0	7.0	6.2	6.8	8.2	8.7	13.0	14.9	15.6	15.7	16.3	16.4	16.4	16.9	16.7	17.0	17.0	15.5	13.5	12.0	10.7	9.3	12.3	17.0
19-May	8.4	7.7	7.3	5.9	4.9	5.4	6.7	7.8	9.4	10.6	11.4	12.0	12.3	10.2	8.6	6.9	6.2	6.3	6.1	5.9	5.9	5.8	5.6	5.4	7.6	12.3
20-May	5.7	6.0	6.2	6.4	6.6	7.0	7.5	7.6	8.0	8.7	8.7	8.9	8.9	9.0	9.0	9.4	9.3	8.8	8.5	8.3	7.8	7.6	7.4	7.2	7.8	9.4
21-May	6.9	6.7	6.3	6.2	6.0	5.8	6.9	8.4	9.2	9.5	9.7	9.4	8.7	7.9	8.2	8.5	8.9	8.4	8.0	8.2	7.8	7.0	6.3	6.1	7.7	9.7
22-May	5.8	5.5	5.3	5.2	5.1	5.5	6.8	7.6	8.6	9.2	10.3	10.7	11.0	10.3	10.4	11.3	12.3	13.0	13.9	12.7	11.8	10.2	8.6	8.3	9.1	13.9
23-May	8.1	7.8	7.2	7.7	8.3	8.9	10.9	13.4	15.1	16.7	17.8	17.2	17.8	16.4	18.8	17.9	17.7	17.8	16.2	14.9	13.8	12.9	10.6	9.2	13.5	18.8
24-May	9.7	9.7	10.0	10.3	10.6	11.3	12.1	13.8	16.4	19.5	20.9	21.4	21.5	21.6	21.4	21.5	21.7	22.0	21.4	20.4	18.4	16.4	15.0	14.0	16.7	22.0
25-May	13.3	12.6	11.5	10.8	10.5	12.1	14.5	16.9	18.6	20.1	21.3	22.3	23.1	23.5	24.0	24.5	24.6	24.5	24.1	23.2	21.5	19.2	17.6	17.2	18.8	24.6
26-May	16.8	15.9	15.5	15.4	15.4	16.3	17.9	19.5	21.8	24.1	25.2	26.2	26.9	27.2	27.6	28.0	28.2	28.0	26.9	25.3	21.7	18.3	16.4	15.3	21.7	28.2
27-May	14.8	13.8	12.0	11.0	12.0	13.0	15.2	17.7	19.7	20.6	22.2	23.2	23.6	24.4	25.2	25.4	25.0	24.5	23.9	23.0	20.9	18.4	15.8	12.4	19.1	25.4
28-May	10.7	9.7	7.4	5.9	6.4	11.0	16.7	20.4	23.1	24.3	25.1	26.1	26.9	27.7	28.4	28.6	28.8	28.6	28.0	27.0	23.3	19.9	19.5	17.8	20.5	28.8
29-May	15.3	14.9	14.0	15.1	14.7	16.4	19.1	22.4	24.9	25.6	27.0	27.7	27.9	28.0	28.3	29.1	30.3	30.4	30.3	29.4	27.6	25.2	20.6	18.9	23.5	30.4
30-May	17.2	15.0	14.2	12.5	11.5	11.1	11.4	12.2	13.1	15.3	17.4	19.3	20.5	21.5	21.9	22.8	22.3	22.1	21.9	20.8	18.1	14.7	12.5	10.8	16.7	22.8
31-May	11.5	11.8	8.9	9.1	7.4	9.0	13.6	17.7	19.6	21.0	22.7	24.6	24.8	27.0	28.0	27.9	27.3	25.0	22.5	19.2	16.2	14.0	12.3	11.5	18.0	28.0
8.9 8.3 7.4 7.0 6.8 7.9 9.9 11.7 13.4 14.8 16.0 16.7 17.4 17.7 17.9 18.0 18.3 18.0 17.4 16.3 14.3 12.4 10.8 9.7																										Diurnal Average
17.2 15.9 15.5 15.4 15.4 16.4 19.1 22.4 24.9 25.6 27.0 27.7 27.9 28.0 28.4 29.1 30.3 30.4 30.3 29.4 27.6 25.2 20.6 18.9																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Monday Creek - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	14	1.88	1.88
0 - 10	245	32.93	34.81
10 - 20	359	48.25	83.06
> 20	126	16.94	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

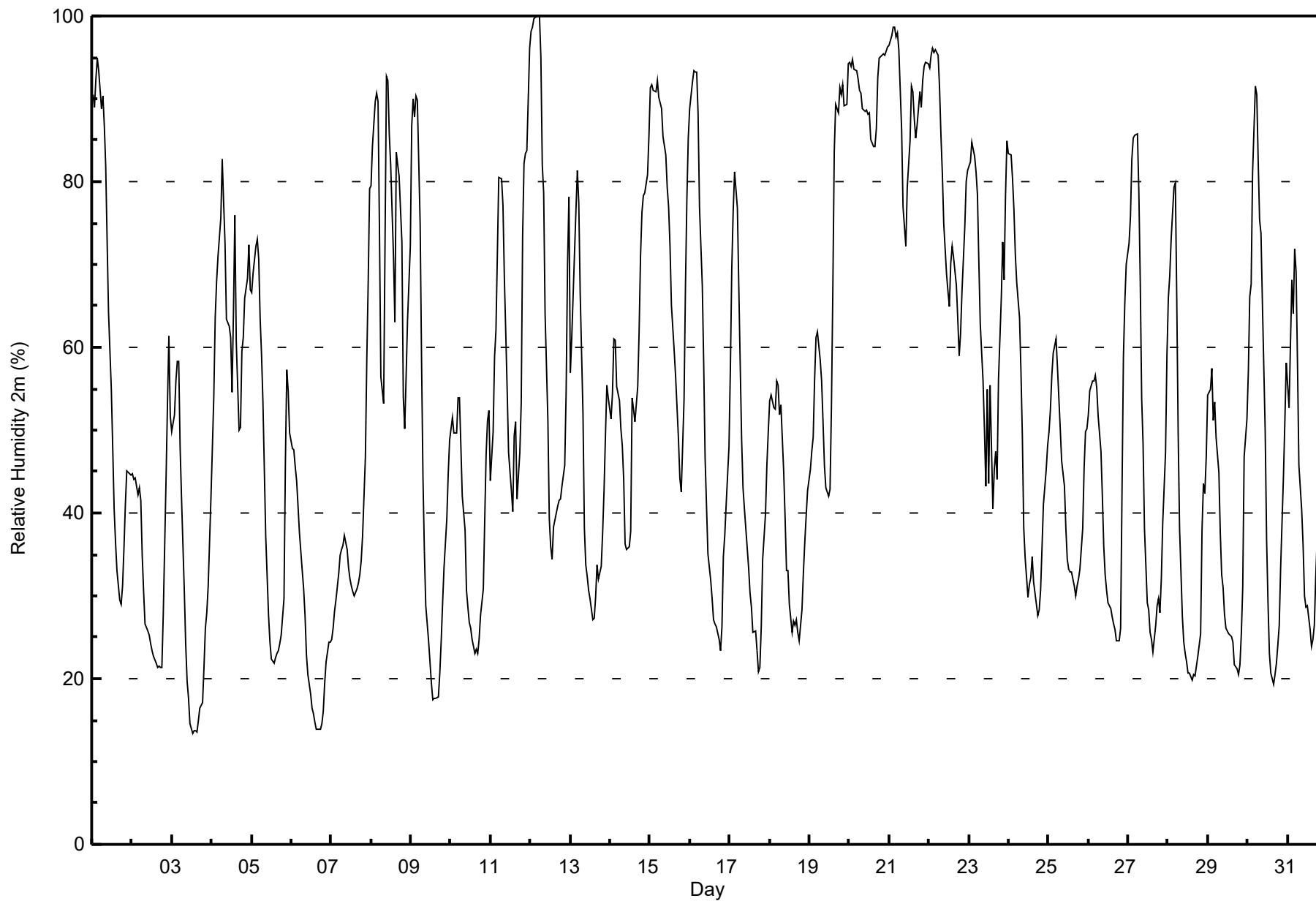
Monday Creek - May 2025

Maximum Value: 100.0 % on May 12 06:00																					Maximum Daily Average: 91.3 % on May 20				Hours in Service: 744				Hours of Data: 744	
Minimum Value: 13.3 % on May 3 13:00																					Minimum Daily Average: 26.1 % on May 6				Hours of Missing Data: 0				Hours of Calibration: 0	
Maximum Diurnal Average: 73.2 % at hour 5																					Minimum Diurnal Average: 38.3 % at hour 17				Percent Operational Time: 100.0					
Monthly Average: 53.00 %																					Percentiles: P ₁ = 14.6 P ₁₀ = 24.3 Q ₁ = 31.8 Median = 50.0 Q ₃ = 72.6 P ₉₀ = 89.3 P ₉₉ = 98.1									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	90.5	88.9	92.4	94.9	93.4	88.9	90.3	86.8	81.9	72.9	64.2	54.8	47.7	40.4	36.4	33.0	29.6	29.0	31.2	35.8	41.0	45.1	44.7	44.6	60.8	94.9				
2-May	44.7	44.1	44.2	42.2	43.1	41.6	34.9	30.6	26.6	25.8	25.3	24.2	23.5	22.7	21.9	21.4	21.5	21.3	21.4	27.8	44.3	53.2	61.4	51.8	34.1	61.4				
3-May	49.9	51.9	55.9	58.4	58.2	48.0	41.8	30.5	24.1	19.6	17.6	14.5	13.3	13.7	13.8	13.6	14.8	16.5	17.2	21.4	26.2	27.9	31.2	42.1	30.1	58.4				
4-May	48.0	54.0	63.5	67.9	71.0	75.6	82.6	77.5	72.5	63.3	62.5	61.1	54.6	64.2	75.9	60.6	50.1	50.3	59.6	61.2	66.0	68.3	72.3	67.0	64.6	82.6				
5-May	66.7	69.0	72.2	73.0	70.7	63.5	59.2	53.4	37.2	32.3	27.6	24.4	22.5	21.8	22.5	23.1	23.4	24.3	25.3	29.7	46.1	57.2	54.8	49.7	43.7	73.0				
6-May	47.7	47.6	45.6	43.9	40.8	37.7	33.1	30.8	27.6	22.9	20.6	18.2	16.4	15.7	14.7	14.0	13.8	13.9	14.7	16.2	19.4	22.1	24.5	24.3	26.1	47.7				
7-May	24.8	26.1	28.2	29.5	32.8	34.9	35.7	36.2	37.3	35.5	33.4	32.1	31.2	30.5	30.1	30.8	31.5	32.5	34.2	37.3	46.8	58.7	68.0	79.1	37.4	79.1				
8-May	79.5	84.3	89.7	90.6	89.7	74.3	56.5	53.2	73.1	92.7	92.1	85.7	82.0	71.1	63.0	83.5	82.0	80.8	72.7	54.1	50.1	56.5	63.2	72.2	74.7	92.7				
9-May	86.8	89.9	87.7	90.3	89.8	75.0	58.5	44.3	35.4	28.9	24.6	22.0	19.5	17.5	17.6	17.7	17.8	20.6	24.7	29.2	33.4	39.4	44.8	48.9	44.3	90.3				
10-May	50.1	51.6	49.7	49.7	53.9	53.9	48.1	42.1	38.0	30.7	28.6	26.8	26.1	24.7	23.1	23.5	23.0	24.8	27.6	30.9	39.2	47.1	51.1	52.4	38.2	53.9				
11-May	43.8	49.8	58.8	62.0	71.2	80.5	80.3	77.1	68.3	61.7	54.7	47.2	42.7	40.1	49.3	51.1	41.8	47.4	53.3	73.4	82.2	83.4	83.8	96.1	62.5	96.1				
12-May	98.2	98.7	99.7	99.9	100.0	100.0	95.0	82.1	78.6	64.0	51.2	39.3	35.9	34.4	38.3	39.9	40.9	41.5	41.6	43.2	45.7	54.5	69.9	78.2	65.4	100.0				
13-May	57.0	61.1	71.6	76.5	81.4	77.5	66.7	52.0	38.2	33.7	32.4	30.6	29.6	27.2	27.3	29.8	33.7	32.1	33.5	37.6	42.7	49.3	55.4	53.9	47.1	81.4				
14-May	51.3	54.4	61.0	60.8	55.2	53.5	50.1	48.1	44.0	36.3	35.5	35.8	37.9	54.0	52.5	51.0	55.2	62.1	70.9	76.3	78.4	78.7	80.9	85.5	57.1	85.5				
15-May	91.4	91.7	91.0	90.9	92.2	90.2	89.5	88.8	85.4	83.3	79.4	77.0	72.2	65.1	59.4	56.4	52.6	49.0	44.3	42.5	53.7	67.3	77.8	85.2	74.0	92.2				
16-May	88.8	92.1	93.4	93.2	93.2	88.1	77.0	67.4	58.0	46.6	40.8	35.1	31.9	29.6	27.0	26.5	26.3	24.7	23.4	26.3	34.8	37.3	41.0	47.9	52.1	93.4				
17-May	57.4	69.5	76.4	81.2	76.8	67.4	58.0	48.9	43.0	40.5	35.7	33.3	30.3	28.7	25.6	25.7	23.3	20.9	21.3	26.3	34.4	39.8	45.7	49.8	44.2	81.2				
18-May	53.5	54.3	52.8	52.6	56.0	55.5	51.8	53.1	44.9	39.3	33.1	33.0	29.0	25.6	27.0	26.5	27.1	25.5	24.6	28.2	32.7	36.5	39.6	42.7	39.4	56.0				
19-May	45.2	47.5	49.2	56.0	61.2	61.9	58.4	55.9	51.0	45.7	43.0	42.1	42.9	52.9	67.1	83.5	89.3	88.3	91.4	90.5	91.7	89.1	89.3	94.2	66.1	94.2				
20-May	94.3	94.0	94.7	93.6	93.3	92.3	91.1	90.6	88.9	88.5	88.6	88.2	88.2	85.0	84.2	84.2	86.5	92.5	94.9	95.1	95.4	95.3	95.8	96.4	91.3	96.4				
21-May	96.5	97.6	98.6	98.6	97.4	98.0	95.9	86.2	76.9	74.6	72.2	79.4	84.9	91.6	90.9	87.6	85.3	86.8	90.8	88.9	92.1	94.0	94.4	94.2	89.7	98.6				
22-May	93.8	95.3	96.1	95.6	95.9	95.3	91.3	85.6	81.0	75.0	68.8	66.8	64.9	70.2	72.2	70.8	67.4	63.4	58.9	61.7	66.7	74.5	80.0	81.3	78.0	96.1				
23-May	81.9	82.4	84.7	83.0	81.3	78.5	70.4	63.0	55.9	50.0	43.3	55.0	43.5	55.5	40.4	45.3	47.4	44.1	56.1	65.9	72.7	68.1	78.3	84.9	63.8	84.9				
24-May	83.4	83.2	80.4	76.5	71.2	67.7	63.6	57.2	49.3	38.1	34.6	29.9	31.3	32.2	34.7	31.7	30.3	27.6	28.4	30.8	35.7	41.0	45.3	48.1	48.0	83.4				
25-May	49.8	52.6	56.6	59.3	61.0	57.7	53.9	50.1	46.3	43.3	38.1	34.5	33.2	32.9	32.9	31.3	30.0	31.2	32.0	33.3	38.1	45.4	49.8	50.1	43.5	61.0				
26-May	51.8	54.8	55.9	56.0	56.6	55.0	51.8	47.5	42.0	36.0	32.5	30.7	29.1	28.4	27.4	26.6	25.9	24.5	24.5	26.1	42.6	58.8	65.4	70.0	42.5	70.0				
27-May	72.6	75.8	82.8	85.2	85.6	85.7	78.7	67.9	54.0	48.4	38.2	29.1	28.3	25.6	24.8	23.3	26.4	28.8	29.7	27.9	32.1	38.8	47.3	59.0	49.8	85.7				
28-May	65.9	68.7	73.1	79.3	79.8	65.8	49.6	38.2	27.4	24.4	23.0	22.1	20.7	20.7	19.9	20.5	20.3	21.5	22.8	25.5	38.0	43.5	42.3	46.8	40.0	79.8				
29-May	54.3	54.8	57.5	51.3	53.3	49.2	44.8	37.7	32.5	31.0	27.8	26.1	25.4	25.2	25.0	24.5	21.6	21.1	20.6	21.6	25.3	31.1	46.7	51.3	35.8	57.5				
30-May	57.1	66.1	67.6	81.1	91.5	90.5	82.5	75.5	73.8	65.4	49.8	36.7	29.2	23.1	20.7	19.4	20.5	21.9	24.1	26.4	33.4	44.4	51.1	58.2	50.4	91.5				
31-May	55.4	52.8	68.1	64.1	71.8	69.2	58.2	45.8	40.4	36.1	29.9	28.7	28.9	25.9	23.9	24.8	26.4	32.2	37.0	47.9	54.6	68.9	80.6	87.7	48.3	87.7				
65.6 67.9 70.9 72.2 73.2 70.1 64.5 58.2 52.7 47.9 43.5 40.8 38.6 38.6 38.4 38.8 38.3 38.7 40.4 43.2 49.5 55.3 60.5 64.3																										Diurnal Average				
98.2 98.7 99.7 99.9 100.0 100.0 95.9 90.6 88.9 92.7 92.1 88.2 88.2 91.6 90.9 87.6 89.3 92.5 94.9 95.1 95.4 95.3 95.8 96.4																										Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Monday Creek - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	27	3.63	3.63
20 - 40	240	32.26	35.89
40 - 60	209	28.09	63.98
60 - 80	124	16.67	80.65
80 - 100	143	19.22	99.87

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

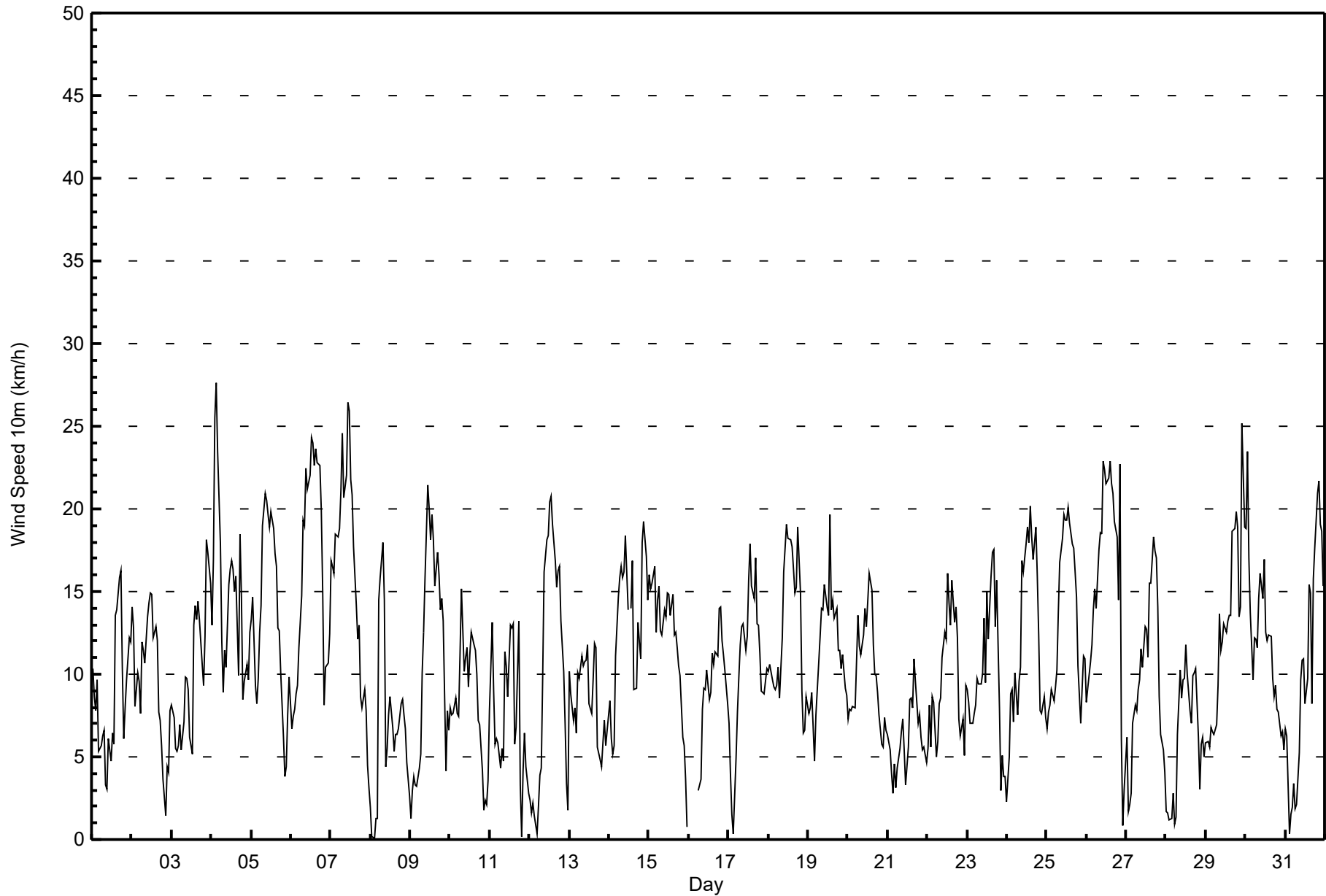
Monday Creek - May 2025

Maximum Speed: 28 km/h on May 4 04:00														Maximum Daily Speed Average: 15.1 km/h on May 6														Hours in Service: 744	
Minimum Speed Value: 0 km/h on May 8 03:00														Minimum Daily Speed Average: 1.6 km/h on May 1														Hours of Data: 737	
Maximum Diurnal Speed Average: 4.5 km/h at hour 16														Minimum Diurnal Speed Average: 0.9 km/h at hour 21														Hours of Missing Data: 7	
Monthly Average Velocity: 3.0 km/h 191.7 deg														Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 7 Median = 10 Q ₃ = 15 P ₉₀ = 18 P ₉₉ = 24														Percent Operational Time: 99.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	N10	N9	N8	NE10	NNE5	NNE6	ENE6	ESE7	ESE3	NE3	E6	SE5	ESE6	WSW6	WSW14	WSW14	WSW16	WSW16	WSW10	SSE6	SE8	SSE10	S12	S12	SSW1.6	WSW16			
2-May	SSW14	SSW13	SSW8	SW10	SW10	WSW8	W12	WNW11	WNW11	WNW13	NW14	NW15	NW15	NW12	NW13	WNW12	WNW8	NNW7	WNW6	NE4	ESE1	ESE4	SE4	SE8	W5.5	NW15			
3-May	SE8	SE7	SSE5	SSE5	S6	S7	S5	S7	SSW10	WSW10	WSW9	SSW6	NNW5	NW13	WNW14	WNW13	NW14	WNW13	NW11	NNW9	NNW12	NNW18	NNW17	NNW15	WNW5.0	NNW18			
4-May	NW13	NW17	NW26	NW28	WNW24	WNW18	WNW12	NW9	W11	NW10	NNW15	NNW16	NNW17	NNW16	NNW15	NW16	NW10	WNW18	WNW15	W8	W10	WSW11	WSW10	W13	NW13.2	NW28			
5-May	W13	W15	W9	W8	WNW10	WNW13	NW14	NW19	NW21	NW20	NW20	NW19	NW20	NW19	NNW17	NW17	NW13	NW13	NNW10	NNE6	E4	ESE4	SE8	SE10	NW10.4	NW21			
6-May	SE7	SSE7	SSE8	S9	S9	S12	S15	SSW19	SSW19	SSW22	SSW21	SSW22	SW24	SSW24	SSW23	SSW24	SSW23	SSW23	SSW20	S15	SSE8	SE10	SE11	SSE12	SSW15.1	SSW24			
7-May	S17	S17	S16	S18	S18	S19	S21	S25	S21	S22	SSW26	SSW26	SSW22	SW21	WSW18	WSW14	W12	WNW13	NW9	NW8	NNW9	NNW8	NW4	NW3	SSW11.7	SSW26			
8-May	WNW2	SSW0	ESE0	SE1	WNW1	NW14	NNW16	NW18	NNW14	WNW4	SSW5	NW8	NW9	NW7	NW5	WSW6	WSW6	SSW7	SW8	W8	W8	W7	W5	SW3	WNW5.1	NW18			
9-May	SSW1	S3	SSW4	S3	SSW3	SSW4	SW5	WSW10	W13	W16	WSW21	WSW20	WSW18	SW20	WSW18	WSW15	WSW17	WSW16	SW14	SW15	SSW13	SSW4	SE8	SE7	WSW9.9	WSW21			
10-May	SE8	SE8	S8	SSW9	SW8	SW7	WSW11	W15	WNW10	NW11	WNW12	W9	WNW11	W13	WNW12	WNW11	WNW10	WNW7	W7	WSW4	SE2	E2	SE2	ESE4	W5.2	W15			
11-May	SE8	S13	S9	S6	S6	SE6	ESE4	ESE5	SSE5	SE11	SSE11	S9	SSW13	S13	NW13	NNE6	NE7	NNW13	NNE3	SSW0	NE4	ESE6	ESE4	NW3	SSE3.1	NNW13			
12-May	WSW2	WNW2	WSW2	S1	WNW0	SW2	N4	NE4	NNE10	NE16	NE18	NE18	ENE20	ENE21	ENE19	NE17	NE15	NE16	NNE17	NNE13	N10	ENE7	SE3	NNW2	NE8.8	ENE21			
13-May	N10	NNW9	NW7	NW8	NW6	WNW10	NW10	NW11	NNW11	N11	NNW11	NW12	NNW8	N8	N10	W12	WSW12	SSW6	S5	SSE4	SSE6	SE7	SSE6	SSE7	NW4.4	W12			
14-May	S8	SE6	SE5	SSE6	S11	S15	SSW16	SSW17	SSW16	SW16	WSW18	WSW14	C	SE14	SE17	SE9	ESE9	NNE13	NE12	NNE11	NNE18	NNE19	NNE17	N14	SSE2.6	NNE19			
15-May	N16	N15	N16	N17	N13	N15	N15	N13	N12	N14	N13	N15	NNE15	NNE14	N15	NNE12	N13	NE12	NNE11	NE10	NE6	E6	ENE4	WSW1	NNE11.5	N17			
16-May	UO	UO	UO	UO	UO	UO	NE3	E4	NE8	NNE9	NNE9	ENE10	NE8	ENE9	E11	ENE11	ENE11	ESE11	ESE14	E14	E12	ESE11	ESE10	ESE8	E8.5	E14			
17-May	ESE7	ESE4	ENE2	NNE0	ESE5	SE8	SE10	SSE12	SSE13	SE13	SSE11	SE12	SE16	ESE18	ESE15	SE15	ESE17	SSE13	SSE13	SE11	ESE9	ESE9	ESE10	ESE10	SE10.1	ESE18			
18-May	SE10	SE11	SE10	SE9	SE9	SE9	SSE10	SSE9	SSE12	SE16	SE18	SE19	SE18	SE18	SE18	ESE16	ESE15	ESE15	SE19	SSE15	S9	S6	SE7	SE9	SE12.4	SE19			
19-May	SSE8	SSE8	SE9	SE7	SE5	ESE8	SE11	SSE12	SSE14	SSE14	SSE15	SSE14	SE14	SE20	SE14	SSE14	SE13	SE14	SE11	SE11	SE10	SE11	SE9	SE9	SE11.2	SE20			
20-May	ESE7	ESE8	ESE8	ESE8	SE8	SE11	SE14	SE12	SE11	SE12	SE14	SSE13	SE14	SE16	SE15	SE12	SSE10	SE10	SE9	SE8	SSE6	ESE6	ESE7	SE7	SE10.1	SE16			
21-May	ESE6	E5	ESE4	SE3	ESE5	SE3	SE4	S6	S7	SE7	SSE5	WNW3	E6	ESE8	SE9	SE8	SE11	SE10	SE7	SSE8	SE6	SE5	SSE6	S5	SE5.4	SE11			
22-May	SSE5	SE8	SE6	SE9	SE8	SE5	SSE6	SSE8	S9	S11	S13	S12	S16	SSW14	S13	SSW16	S13	S14	S12	S7	SSE6	SE7	SSE5	SE9	S9.0	SSW16			
23-May	SE9	SE8	SE7	SE7	SE8	SSE8	SSE10	SSE9	S9	SSE10	S13	SSE9	SE15	S12	S16	SE17	SE18	SSE13	SE16	SE8	SE3	SSW5	SE4	SE4	SSE9.5	SE18			
24-May	SE2	E5	ESE9	SE9	SSE7	SE10	SSE8	SSE10	SSE10	SSE17	SSE16	S18	S19	S18	S20	S18	S17	S19	S16	S12	SSE8	SSE8	SE9	SSE7	SSE11.2	S20			
25-May	S7	SE8	SE8	SE9	SE8	SSE9	SSE10	S14	S17	S18	S20	SSW19	S19	S20	S19	S18	S18	S16	S15	S11	SSE7	SE9	SE11	SE11	S12.7	S20			
26-May	SE8	SSE9	SSE11	SSE12	SSE14	SSE15	S14	S18	S19	SSE18	S23	SSE22	S22	S22	S23	S22	S21	S19	S18	S14	W23	WNW6	SE1	SSW3	S14.0	S23			
27-May	E6	SE2	SE2	NW3	NW7	WNW8	NW8	NW9	NNW10	NW12	NW10	NW13	WNW13	WNW11	WNW15	WNW15	W18	W17	W17	W14	W9	WSW6	WSW5	WSW4	WNW8.2	W18			
28-May	WNW2	ESE2	ENE1	S1	SSW3	SE1	SW1	WSW6	W10	WSW9	SW10	WSW10	W12	SW10	W8	WSW7	SW10	WSW10	WSW10	WSW6	ESE3	SSE6	SSE6	SSE5	SW4.9	W12			
29-May	SE6	SE6	SE6	SE7	SE7	SSE6	SSE7	SSE9	SSE14	SSE11	SSE12	SSE13	SSE13	SE13	SE14	SSE14	SSW19	SSW19	SSW20	SSW19	SSW13	WSW14	WNW25	WNW19	S8.5	WNW25			
30-May	W19	WNW24	NW17	W14	W10	W12	W12	WNW12	WNW15	WNW16	NW15	NW17	NW13	NW12	WNW12	WNW12	WSW10	SW9	SW9	SW8	WSW8	SSW6	S6	SSE5	W10.2	WNW24			
31-May	SE7	SSE6	N0	SW2	NW2	S3	SSE2	E2	ENE5	ENE10	ESE11	E11	ESE8	SW10	SW15	SW15	WSW8	NNE16	NNE18	N21	NNW22	NW19	NNW19	NNW15	N2.7	NNW22			
SSE2.7 SSE2.5 SSE2.0 S2.5 S2.8 S3.2SSW3.2SSW4.1SSW4.0SSW3.3SSW4.5SSW4.0SSW3.5SSW4.4SSW4.0SSW4.5SSW4.5SSW3.8 S3.6 S2.7 S0.9 SE1.7 SE2.0 SSE2.3																									Diurnal Average				
W19WNW24 NW26 NW28WNW24 S19 S21 S25 NW21 SSW22 SSW26 SSW26 SSW24 SSW24 S23 SSW24 SSW23 SSW23 SSW20 NNE21 W23 NNE19WNW25WNW19																									Diurnal Maximum				
C - Calibration UO - Unstable Operation																													
All monthly, daily, and diurnal averages have been calculated using vector methods																													



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Monday Creek - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Monday Creek - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	112	15.20	15.20
6 - 11	309	41.93	57.12
12 - 19	269	36.50	93.62
20 - 28	47	6.38	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 737

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Monday Creek - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	3	5	4	6	15	20	11	8	11	5	6	1	7	6	2	112
6 - 11	8	8	6	7	6	25	81	48	22	7	12	22	14	15	18	10	309
12 - 19	15	11	8	1	2	7	30	27	45	18	5	15	19	23	28	15	269
20 - 28	0	1	0	2	0	0	1	1	13	14	2	2	1	3	6	1	47
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	23	19	14	14	47	132	87	88	50	24	45	35	48	58	28	737

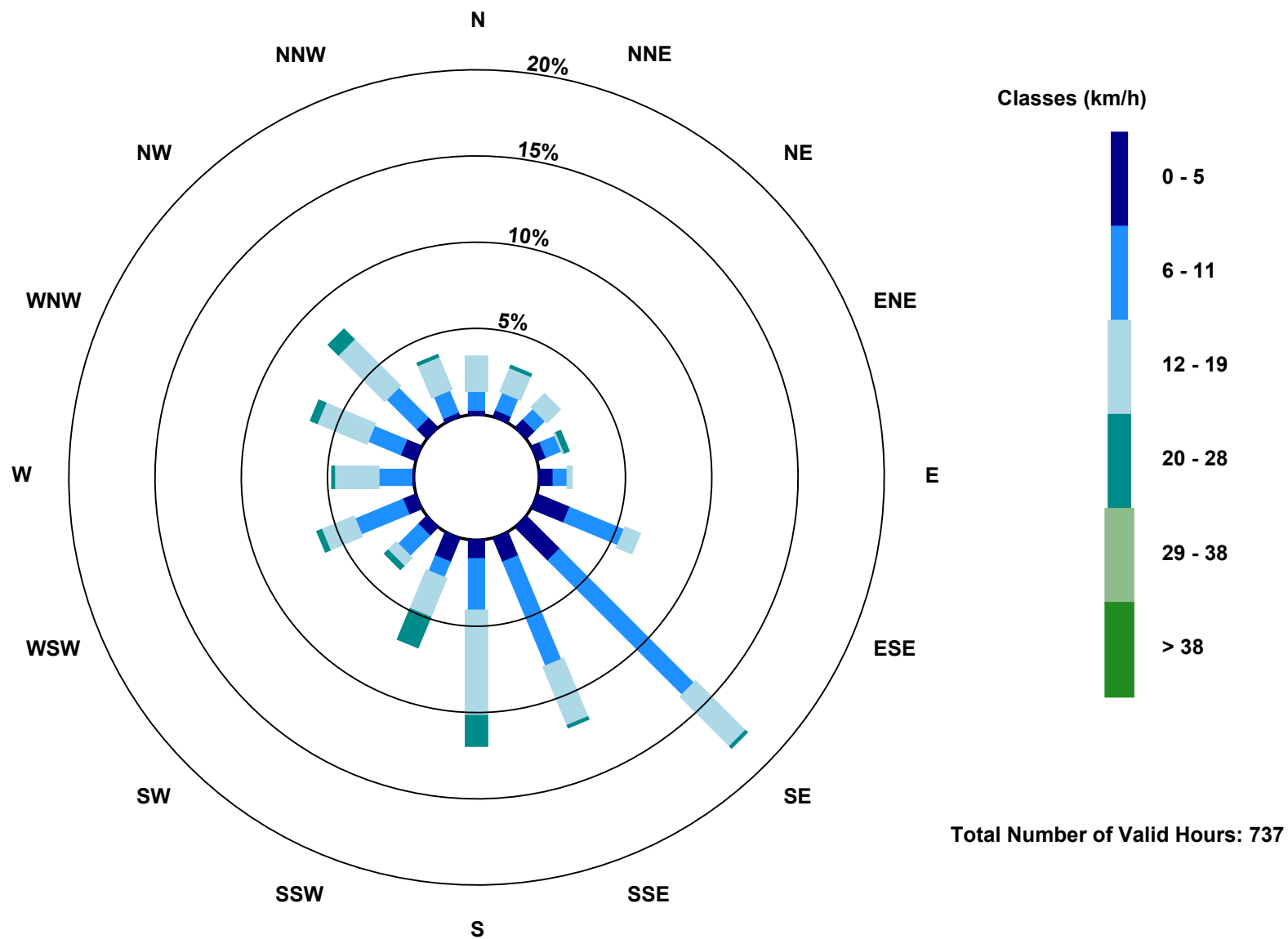
Total Number of Valid Hours: 737

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Monday Creek





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Monday Creek - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on May 29 22:00																	Hours in Service: 744								
Minimum Value: 1 km/h on May 29 05:00																	Hours of Data: 737								
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																	Hours of Missing Data: 7								
																	Hours of Calibration: 1								
																	Percent Operational Time: 99.2								
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	3	2	2	2	2	1	1	1	2	3	3	4	4	4	5	5	4	4	1	1	2	3	3	5
2-May	4	3	2	3	2	3	2	3	2	3	5	5	5	5	5	4	3	3	2	1	2	2	1	2	5
3-May	1	1	1	1	1	2	2	2	3	5	4	3	4	6	5	4	4	4	3	2	4	5	5	3	6
4-May	3	6	7	7	6	4	3	3	3	4	4	5	4	4	4	4	4	7	6	2	2	2	3	2	7
5-May	3	3	2	1	2	3	4	5	5	5	5	5	6	5	5	5	5	4	3	1	1	2	1	2	6
6-May	2	2	2	3	3	3	5	5	5	6	5	6	7	7	7	6	7	6	6	5	1	2	2	4	7
7-May	5	5	5	5	5	6	6	7	6	7	7	7	6	6	4	4	3	3	2	2	2	1	2	2	7
8-May	2	1	1	2	2	5	4	5	5	2	3	2	2	2	4	2	2	2	2	2	2	1	2	1	5
9-May	1	2	2	1	1	1	1	3	3	5	6	6	6	6	5	5	5	5	4	4	6	2	1	2	6
10-May	1	2	3	2	1	1	3	3	3	4	4	5	4	3	4	4	4	3	2	1	1	1	2	1	5
11-May	2	4	3	2	2	1	1	2	3	2	3	4	4	4	4	3	4	5	4	3	2	2	2	1	5
12-May	1	2	1	2	1	1	1	2	4	3	5	5	5	5	5	4	4	4	4	3	3	3	2	3	5
13-May	3	2	2	2	1	2	2	2	3	4	4	6	4	4	4	5	3	3	2	1	2	1	1	2	6
14-May	2	1	2	3	3	4	4	5	4	4	5	4	C	5	4	3	2	6	3	3	5	5	5	4	6
15-May	4	3	4	4	3	4	4	4	3	4	3	3	3	4	4	4	4	3	3	3	1	1	2	1	4
16-May	UO	UO	UO	UO	UO	UO	1	2	3	4	4	4	5	5	4	4	5	4	3	2	2	2	2	1	5
17-May	1	1	2	1	2	2	2	3	3	4	4	5	6	6	4	5	5	4	4	3	1	1	2	2	6
18-May	2	2	2	1	1	2	3	2	3	5	5	5	5	5	5	4	3	4	4	4	3	2	1	2	5
19-May	2	2	2	1	1	2	3	3	4	4	5	4	7	6	4	5	3	3	2	2	2	3	2	2	7
20-May	1	1	1	2	2	3	3	3	2	3	3	3	3	4	4	3	3	3	2	2	2	2	1	1	4
21-May	1	1	1	1	1	2	1	3	2	2	2	2	4	2	2	2	3	3	2	2	1	1	1	1	4
22-May	2	2	2	2	2	1	2	2	3	3	4	4	4	4	4	4	4	4	4	4	1	1	1	2	4
23-May	2	2	1	2	2	2	3	2	3	4	4	6	4	6	5	4	4	4	4	2	2	2	2	2	6
24-May	2	1	4	2	2	3	3	3	3	5	5	5	5	6	6	6	5	5	5	4	2	1	2	2	6
25-May	1	1	1	1	1	2	3	4	5	5	6	6	6	6	6	5	5	5	4	4	1	2	2	2	6
26-May	2	2	3	3	3	4	4	5	5	6	7	7	7	6	6	6	6	6	6	4	9	4	2	2	9
27-May	2	2	2	2	2	2	2	2	2	3	4	4	4	4	5	5	5	5	4	4	1	2	1	1	5
28-May	1	2	1	2	1	1	2	2	3	3	4	5	4	4	4	4	4	3	3	2	1	1	1	1	5
29-May	1	1	1	1	1	1	2	3	4	3	3	4	3	4	3	5	7	6	6	6	3	11	6	4	11
30-May	5	7	5	3	2	2	2	3	3	4	4	4	5	4	5	4	3	3	3	2	2	1	1	1	7
31-May	1	2	2	3	3	1	1	1	2	2	3	4	3	6	5	4	5	6	4	6	5	6	5	5	6
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

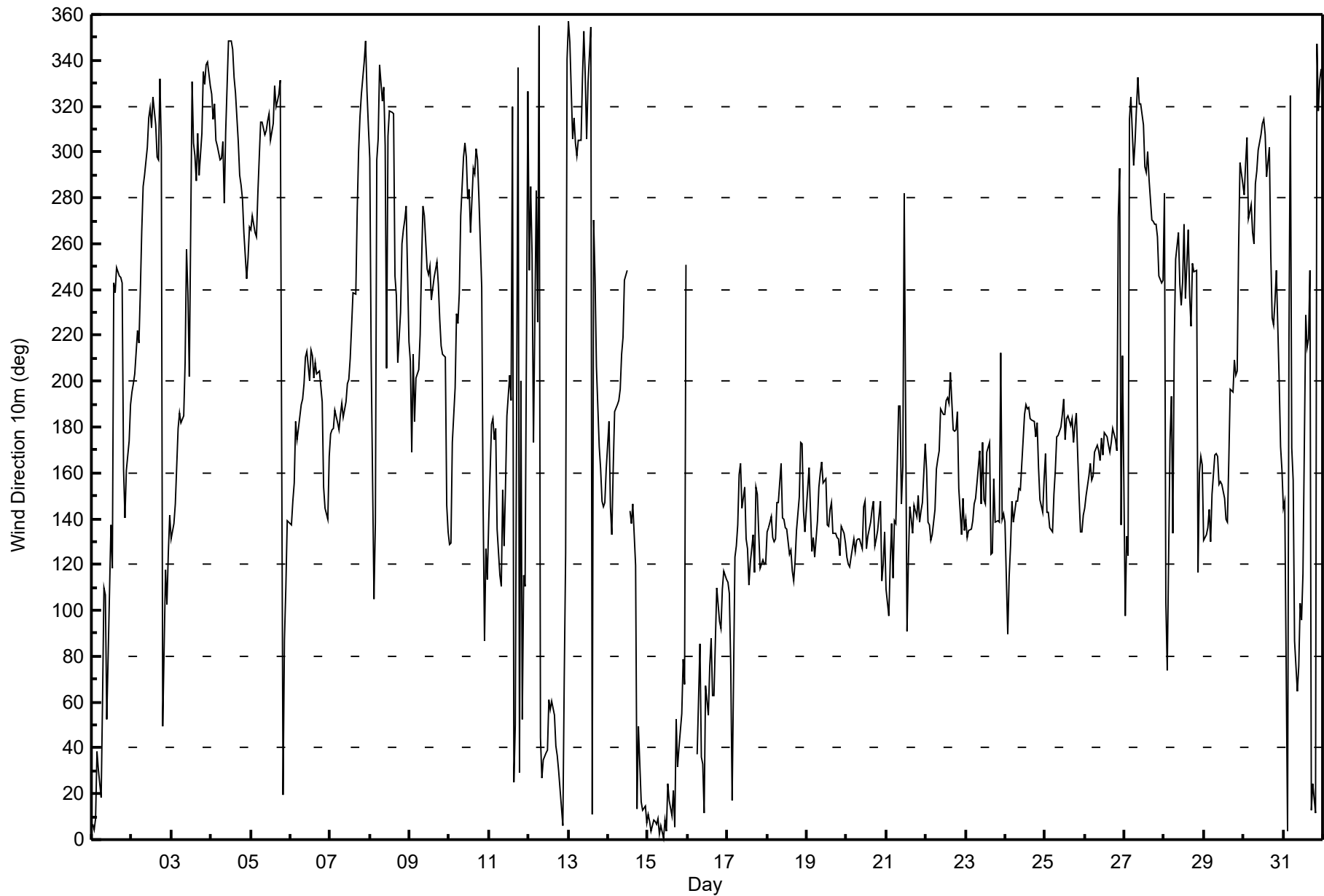
Monday Creek - May 2025

Direction of Maximum Speed: 305 deg on May 4 04:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 193.5 deg on May 6																					Hours of Data:		737		
Direction of Minimum Speed: 105 deg on May 8 03:00										Direction of Minimum Daily Speed Average: 1.6 deg on May 1											Hours of Missing Data:		7		
Monthly Average Direction: 191.7 deg																					Percent Operational Time:		99.2		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	7	4	9	38	31	18	62	110	107	52	80	137	118	243	239	249	246	246	243	162	141	161	174	190	199.1
2-May	195	199	203	222	216	239	265	285	290	302	315	319	311	324	312	298	296	332	302	50	118	102	125	142	278.9
3-May	131	138	147	163	179	186	182	185	208	258	239	202	331	304	298	287	308	290	308	335	329	338	339	329	290.0
4-May	325	314	321	305	302	296	297	305	278	309	348	348	348	344	333	326	305	290	285	279	265	245	254	267	308.0
5-May	266	272	265	263	282	298	313	313	307	309	314	317	305	312	329	320	322	325	331	19	87	110	139	139	307.8
6-May	137	148	156	183	175	180	190	192	199	211	213	200	214	211	201	208	203	204	198	191	154	145	140	167	193.5
7-May	177	179	179	187	182	179	185	191	184	191	199	201	210	224	239	238	274	300	316	326	339	348	326	311	206.8
8-May	297	209	105	139	296	306	338	322	328	303	206	307	318	317	317	246	237	208	230	260	266	270	276	217	292.3
9-May	209	169	212	182	201	205	220	252	276	272	249	247	250	236	240	245	252	242	227	215	212	210	146	134	236.4
10-May	129	130	173	197	229	225	239	272	298	304	298	279	284	265	293	290	301	297	280	241	146	87	127	114	265.5
11-May	139	181	184	174	180	135	115	110	152	128	154	185	202	191	320	25	50	337	30	200	53	115	111	326	153.6
12-May	248	285	255	174	283	226	355	44	27	35	38	39	61	57	61	54	41	37	30	22	6	71	125	341	41.6
13-May	357	348	306	315	304	298	305	305	332	353	333	306	330	354	11	271	246	206	171	162	148	145	147	162	311.1
14-May	183	145	133	162	187	190	192	196	212	219	244	248	C	143	138	146	119	13	49	33	16	13	15	7	165.3
15-May	11	8	4	8	8	7	9	2	6	0	8	4	24	17	10	22	6	53	32	40	55	79	67	251	15.2
16-May	UO	UO	UO	UO	UO	UO	37	85	36	33	12	67	54	76	88	63	63	110	103	95	92	109	117	114	79.9
17-May	112	107	75	17	123	128	137	160	164	145	153	131	127	111	121	133	116	154	151	134	118	122	120	121	131.9
18-May	134	136	141	132	130	131	147	147	164	140	140	136	136	124	127	117	113	121	135	149	173	172	143	134	136.2
19-May	153	162	144	126	132	123	139	154	160	165	155	158	138	137	144	147	134	134	132	131	124	137	134	129	142.3
20-May	123	120	119	123	131	126	131	131	131	127	145	148	127	132	139	144	148	128	131	135	148	113	120	134	132.4
21-May	109	98	121	138	114	139	138	189	189	146	163	282	91	122	145	140	133	146	141	150	139	144	147	173	140.9
22-May	161	139	137	131	133	144	162	166	170	188	186	185	191	193	190	204	179	178	179	187	153	133	149	135	171.8
23-May	140	132	135	136	139	147	149	156	170	147	173	149	146	169	173	125	125	158	138	139	139	213	140	142	148.2
24-May	139	90	115	128	147	138	147	148	153	152	163	186	189	188	188	184	183	182	176	182	163	148	143	158	167.0
25-May	169	143	143	136	135	151	161	176	176	180	185	192	175	184	185	181	183	173	181	186	149	134	134	141	170.5
26-May	145	150	159	164	157	159	169	172	170	165	175	168	178	175	172	169	174	179	174	170	272	293	137	211	174.1
27-May	98	132	124	314	324	294	304	319	333	321	321	312	294	291	300	288	270	270	269	268	263	246	243	244	289.7
28-May	282	104	74	174	193	134	216	253	265	242	233	244	269	236	266	238	224	251	248	248	117	160	167	163	235.8
29-May	131	133	136	144	130	151	168	168	167	155	156	155	149	140	139	165	197	195	209	202	204	257	295	286	183.9
30-May	281	295	306	271	277	265	260	286	292	301	308	313	314	308	289	302	255	228	224	235	248	200	172	161	280.8
31-May	145	147	4	217	325	171	157	87	65	76	103	96	116	229	214	218	248	13	25	11	347	318	332	336	0.7
153.0 158.2 164.3 178.7 183.2 191.2 192.8 205.8 212.4 201.5 204.2 207.3 194.2 193.6 204.7 208.7 204.4 210.6 190.6 173.7 179.6 144.6 140.7 161.1																									
Diurnal Average																									
C - Calibration UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Monday Creek - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Monday Creek - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95 deg on May 11 20:00																		Hours in Service: 744 Hours of Data: 737 Hours of Missing Data: 7 Hours of Calibration: 1 Percent Operational Time: 99.2							
Minimum Value: 8 deg on May 15 22:00																									
Percentiles: P ₁ = 10 P ₁₀ = 13 Q ₁ = 16 Median = 20 Q ₃ = 27 P ₉₀ = 41 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-May	18	21	18	13	34	25	35	22	49	78	51	72	67	83	27	26	21	18	18	16	12	19	20	20	83
2-May	17	18	18	15	10	22	13	18	19	22	25	27	26	35	35	28	49	42	36	30	40	22	19	14	49
3-May	12	11	14	13	14	14	23	27	21	38	40	64	85	38	25	31	24	20	19	14	16	18	16	20	85
4-May	20	17	17	18	17	13	18	36	18	32	23	23	23	29	21	23	41	18	14	14	10	15	19	10	41
5-May	9	10	10	8	15	14	19	20	19	20	23	26	25	29	31	29	30	23	19	29	40	21	16	11	40
6-May	17	18	17	20	22	21	21	18	19	18	19	20	22	21	24	20	21	18	20	18	18	13	14	20	24
7-May	20	20	20	18	20	20	20	20	21	20	19	21	22	24	18	17	29	16	18	17	14	14	16	38	38
8-May	39	94	87	76	83	17	18	21	20	40	37	33	21	29	42	16	19	19	21	15	12	15	38	35	94
9-May	43	40	19	17	20	20	24	18	18	22	20	23	28	24	26	22	20	16	15	17	26	50	11	11	50
10-May	12	13	33	26	19	19	17	14	23	32	29	41	34	28	32	27	30	47	22	18	66	22	41	46	66
11-May	14	20	21	23	20	18	30	25	38	19	28	43	28	39	33	50	36	20	60	95	52	19	57	36	95
12-May	47	66	48	87	86	51	36	38	19	15	19	20	17	15	16	15	15	13	13	13	17	32	35	65	87
13-May	19	24	19	17	20	13	19	23	27	31	37	40	62	63	28	23	16	38	23	22	14	12	15	20	63
14-May	20	23	35	31	19	19	20	20	22	23	20	26	C	18	16	40	29	62	18	21	14	16	16	18	62
15-May	17	17	18	16	17	18	16	19	18	20	19	21	18	26	22	30	26	30	24	12	15	8	14	35	35
16-May	UO	UO	UO	UO	UO	UO	49	55	45	36	44	43	56	53	42	32	35	28	16	10	9	13	11	12	56
17-May	13	23	57	86	14	11	15	23	23	23	32	33	34	23	23	25	19	30	25	14	11	11	12	12	86
18-May	11	11	13	12	12	13	18	20	24	23	25	23	25	21	21	21	17	16	15	23	19	20	14	13	25
19-May	18	20	15	19	24	15	16	19	24	24	24	25	28	18	20	18	14	13	13	13	15	15	13	13	28
20-May	13	14	14	13	13	12	13	14	13	16	16	18	15	14	15	19	17	16	12	14	35	32	14	12	35
21-May	18	16	34	32	16	20	16	32	27	24	46	70	55	19	19	19	16	16	14	15	13	15	18	19	70
22-May	29	13	19	11	13	19	21	20	24	21	24	23	22	21	22	20	25	24	23	29	18	10	14	10	29
23-May	13	12	11	14	14	17	19	20	25	33	27	37	16	24	25	22	14	27	19	15	29	22	37	36	37
24-May	47	15	20	14	17	15	20	18	21	20	27	28	21	25	23	23	23	23	22	19	18	14	13	19	47
25-May	20	12	12	10	11	16	21	23	22	24	23	25	26	29	27	27	24	23	20	20	21	10	11	14	29
26-May	17	17	18	20	19	18	21	20	20	21	22	24	25	24	24	23	23	25	22	21	42	74	81	68	81
27-May	18	62	82	83	27	17	23	20	24	32	42	31	27	34	23	25	18	15	15	11	9	32	22	13	83
28-May	39	45	18	64	20	30	50	21	23	38	42	48	38	52	60	64	36	25	20	16	47	15	19	23	64
29-May	13	13	12	16	9	19	23	22	22	20	24	21	18	15	15	35	23	24	19	19	16	48	16	13	48
30-May	18	17	19	18	22	21	12	14	14	18	20	21	34	32	29	27	33	23	18	12	11	20	11	13	34
31-May	11	18	89	91	77	19	53	49	27	22	27	32	31	62	27	20	35	27	13	20	23	22	20	37	91
Diurnal Maximum																									
C - Calibration UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS505 SAWBONES BAY MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
MAY 2025

MONTHLY SUMMARY for
AMD SECTION III.B.1(c)

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	36	38	99.73	5.1	0	1.4	0
H2S (ppb) Average	708	36	36	100	8.2	0	1.7	0
NO2 (ppb) Average	706	36	38	99.73	31.9	0	8.2	-
NO (ppb) Average	706	36	38	99.73	21.3	-	4.2	-
NOX (ppb) Average	706	36	38	99.73	48.1	-	12.1	-
Temperature 2 m (C) Average	744	0	0	100	29.4	-	23	-
Relative Humidity (%) Average	744	0	0	100	98	-	92.7	-
Wind Speed 10 m (km/h) Average	744	0	0	100	29	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.35	0.6	-	0	0	0	0.1	0.4	0.9	5.1
H2S (ppb) Average	708	0.17	0.5	-	0	0	0.1	0.1	0.1	0.2	8.2
NO2 (ppb) Average	706	2.91	4.1	-	0	0.2	0.4	1.3	3.6	7.3	31.9
NO (ppb) Average	706	1.07	2.4	-	0	0	0	0.2	0.9	2.8	21.3
NOX (ppb) Average	706	3.97	6.3	-	0	0.2	0.5	1.5	4.4	10.7	48.1
Temperature 2 m (C) Average	744	12.83	7	-	-2.8	4.3	7.7	11.7	17.4	23.3	29.4
Relative Humidity (%) Average	744	53.75	23.5	-	13	25	32.3	51.9	72.5	90.2	98
Wind Speed 10 m (km/h) Average	744	11.3	5	-	1	5	8	11	15	19	29
Wind Direction 10 m (deg) Average	744	193.9	0	-	0	-	-	-	-	-	0

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2, SO2	27 May 2025 09:00	27 May 2025 10:00	2	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

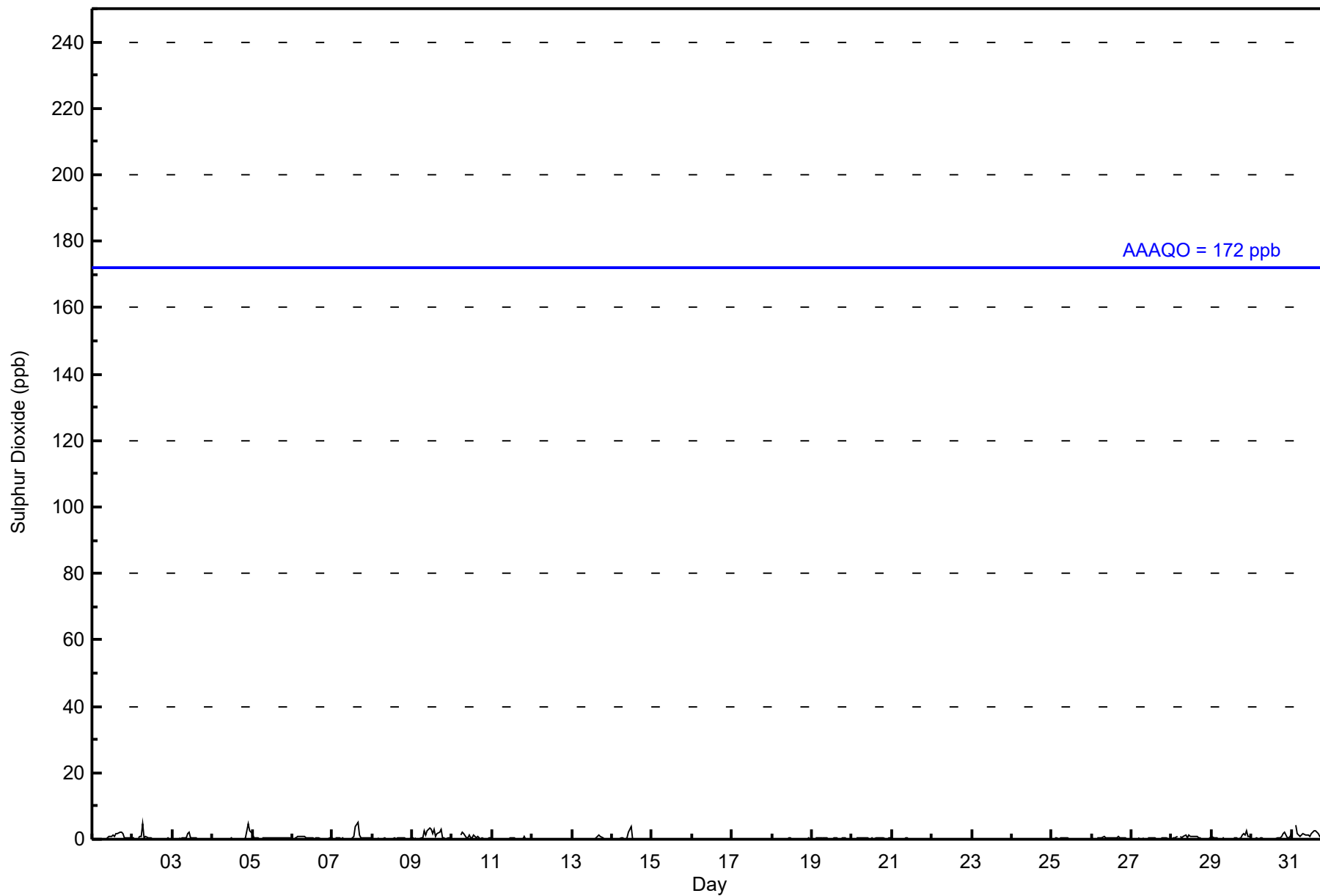
Sawbones Bay - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.1 ppb on May 7 16:00 Maximum Daily Average: 1.4 ppb on May 31																			Hours in Service: 744 Hours of Data: 706							
Minimum Value: 0.0 ppb on May 1 04:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.5 ppb at hour 16 Minimum Diurnal Average: 0.2 ppb at hour 2 Monthly Average: 0.35 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 3.0																			Hours of Missing Data: 38 Hours of Calibration: 36 Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.7	1.0	1.3	0.9	1.6	1.6	2.2	2.0	1.7	0.6	0.3	0.3	0.6	0.5	0.7	2.2
2-May	0.4	0.3	Z	0.3	0.8	0.9	4.6	0.6	0.7	0.5	0.3	0.4	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.5	4.6
3-May	0.2	0.0	0.0	Z	0.2	0.1	0.2	0.4	0.3	1.8	2.2	0.5	0.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.2
4-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.6	4.8	2.4	2.3	0.5	4.8
5-May	1.7	0.5	0.6	0.5	0.0	Z	0.4	0.5	0.6	0.3	0.5	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.5	1.7
6-May	Z	0.5	0.4	0.7	0.7	0.7	0.9	0.8	0.5	0.3	0.5	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.1	0.3	0.5	0.4	0.9
7-May	0.5	Z	0.6	0.5	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.8	4.0	5.1	1.5	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.7	5.1
8-May	0.2	0.1	Z	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.2	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.5	0.3	0.1	0.1	0.2	0.4	0.2	0.5
9-May	0.5	0.2	0.2	Z	0.2	0.5	0.3	2.7	1.1	2.6	3.6	3.0	1.7	2.9	1.0	1.8	2.2	3.0	0.6	0.3	0.2	0.5	0.4	0.1	1.3	3.6
10-May	0.1	0.2	0.0	0.1	Z	1.4	2.1	1.7	0.5	0.3	1.1	0.6	0.3	1.4	0.3	0.9	0.6	0.0	0.3	0.1	0.1	0.2	0.4	0.3	0.6	2.1
11-May	0.2	0.1	0.1	0.2	0.1	Z	0.0	0.2	0.1	0.1	0.2	0.3	0.3	0.5	0.1	0.1	0.1	0.0	0.0	0.9	0.1	0.1	0.1	0.1	0.2	0.9
12-May	Z	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
13-May	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.9	1.1	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.2	1.1
14-May	0.0	0.0	Z	0.0	0.1	0.3	0.3	0.0	0.0	0.4	2.2	3.9	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.9
15-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2
18-May	Z	0.2	0.2	0.1	0.2	0.1	0.0	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.0	0.1	0.3
19-May	0.1	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.4	0.4	0.3	0.0	0.2	0.0	0.2	0.4
20-May	0.0	0.1	Z	0.4	0.2	0.4	0.4	0.4	0.3	0.3	0.0	0.0	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.2	0.3	0.4
21-May	0.1	0.2	0.0	Z	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
22-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
23-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.0	0.2
25-May	0.1	Z	0.4	0.2	0.1	0.5	0.5	0.4	0.4	0.2	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
26-May	0.2	0.3	Z	0.4	0.4	0.5	0.3	0.7	0.6	0.5	0.3	0.4	0.4	0.4	0.2	0.6	0.7	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.4	0.7
27-May	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.2	M	M	0.2	0.4	0.2	0.5	0.3	0.1	0.0	0.0	0.6	0.3	0.2	0.4	0.0	0.0	0.2	0.6
28-May	0.0	0.4	0.3	0.8	Z	0.7	0.6	0.8	1.1	0.5	1.1	0.9	0.9	0.7	1.0	0.6	0.6	0.4	0.0	0.2	0.1	0.0	0.0	0.5	0.5	1.1
29-May	0.8	0.5	0.6	0.4	0.0	Z	0.4	0.4	C	C	C	C	C	0.5	0.3	0.3	0.2	0.3	1.1	1.5	1.4	2.3	0.9	0.7	0.7	2.3
30-May	Z	0.1	0.1	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.3	0.3	0.5	0.9	1.7	2.3	0.6	0.3	1.0	0.4	2.3
31-May	2.2	Z	4.1	1.8	1.2	0.9	1.4	1.8	1.2	1.2	1.3	0.7	1.9	2.6	2.6	2.3	1.7	0.9	0.5	0.8	0.3	0.3	0.3	0.2	1.4	4.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	706	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	40	22	10	15	31	40	116	142	46	27	28	40	41	47	34	27	706
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	22	10	15	31	40	116	142	46	27	28	40	41	47	34	27	706

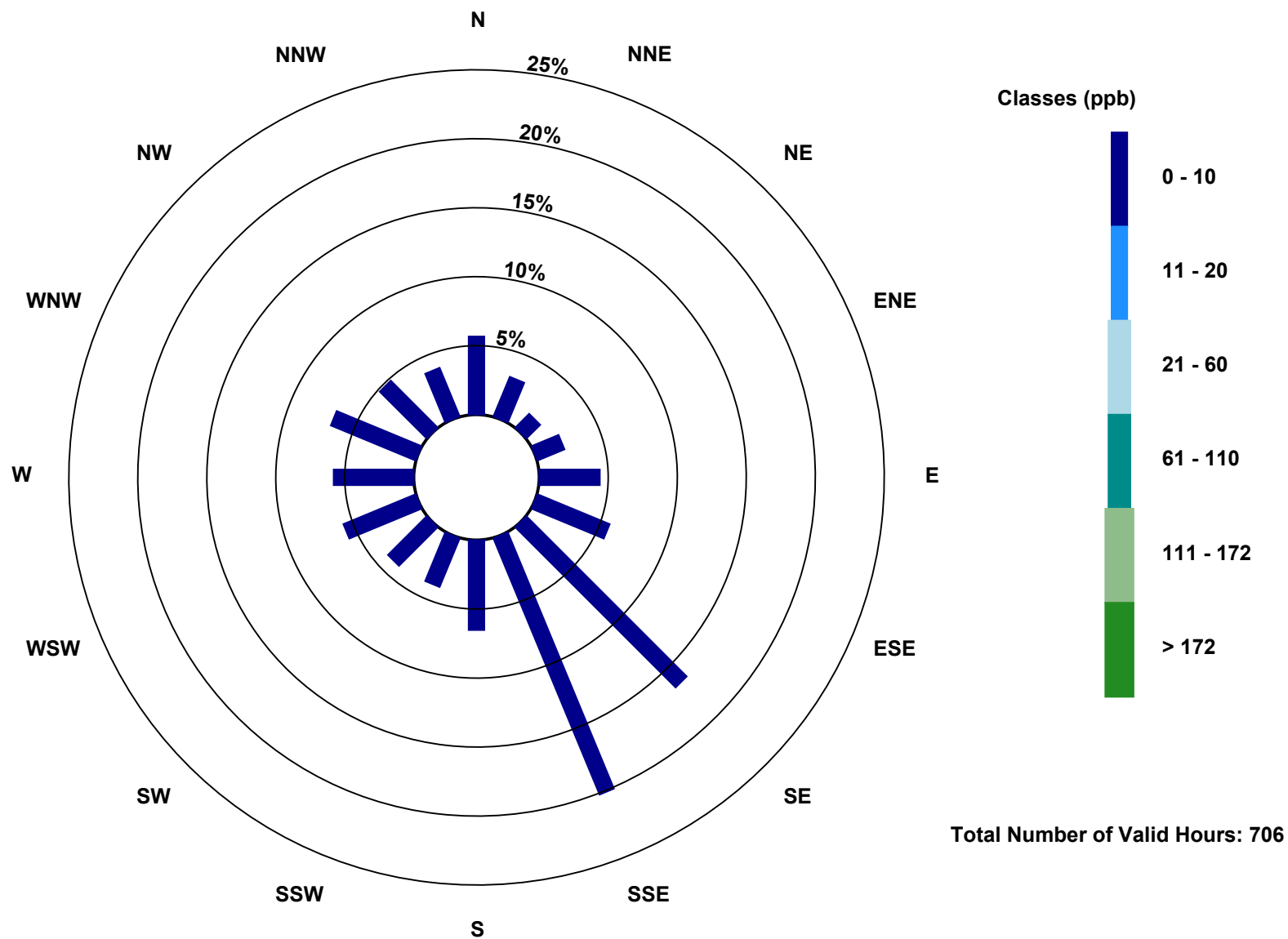
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

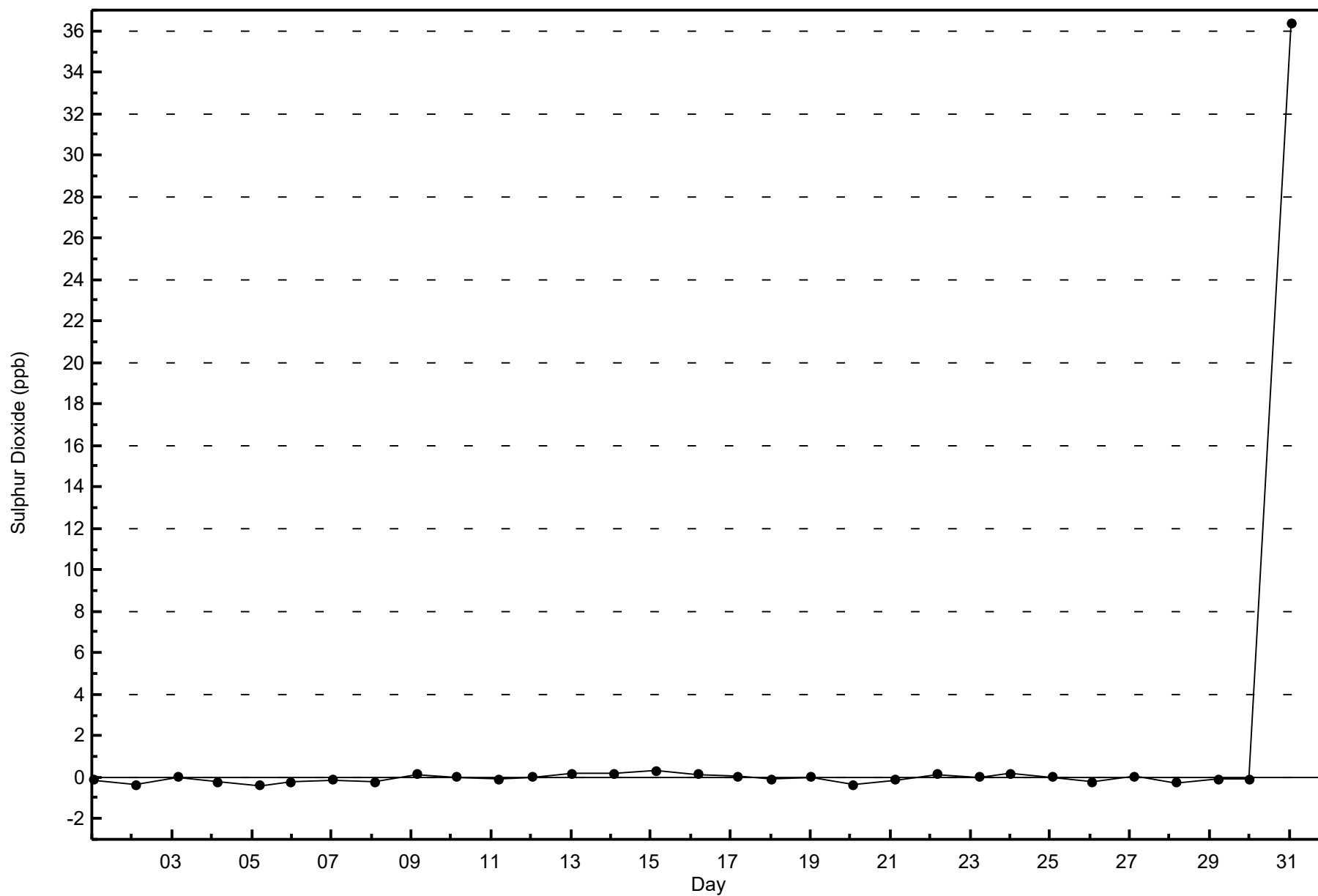
Sulphur Dioxide (SO₂) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

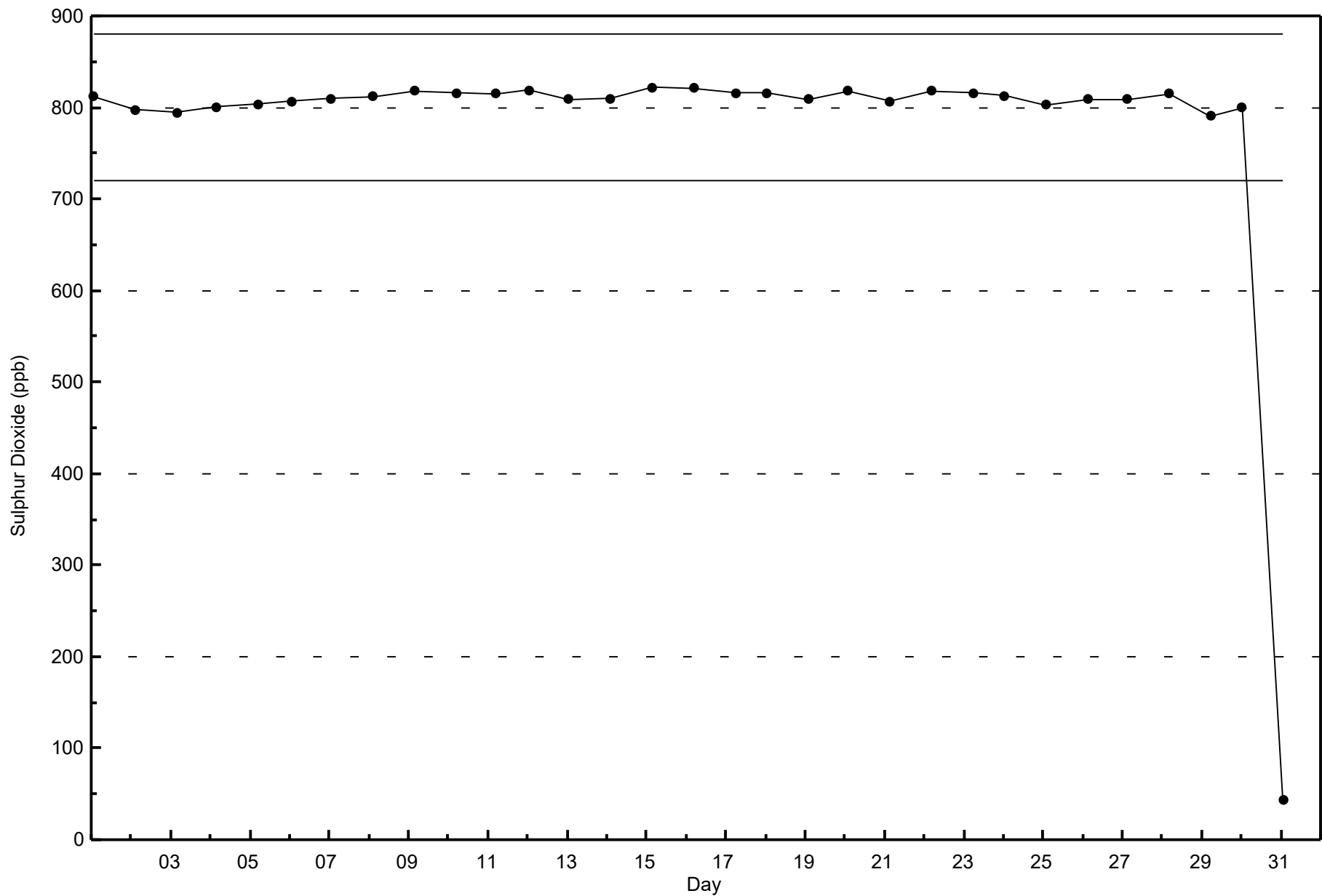
Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

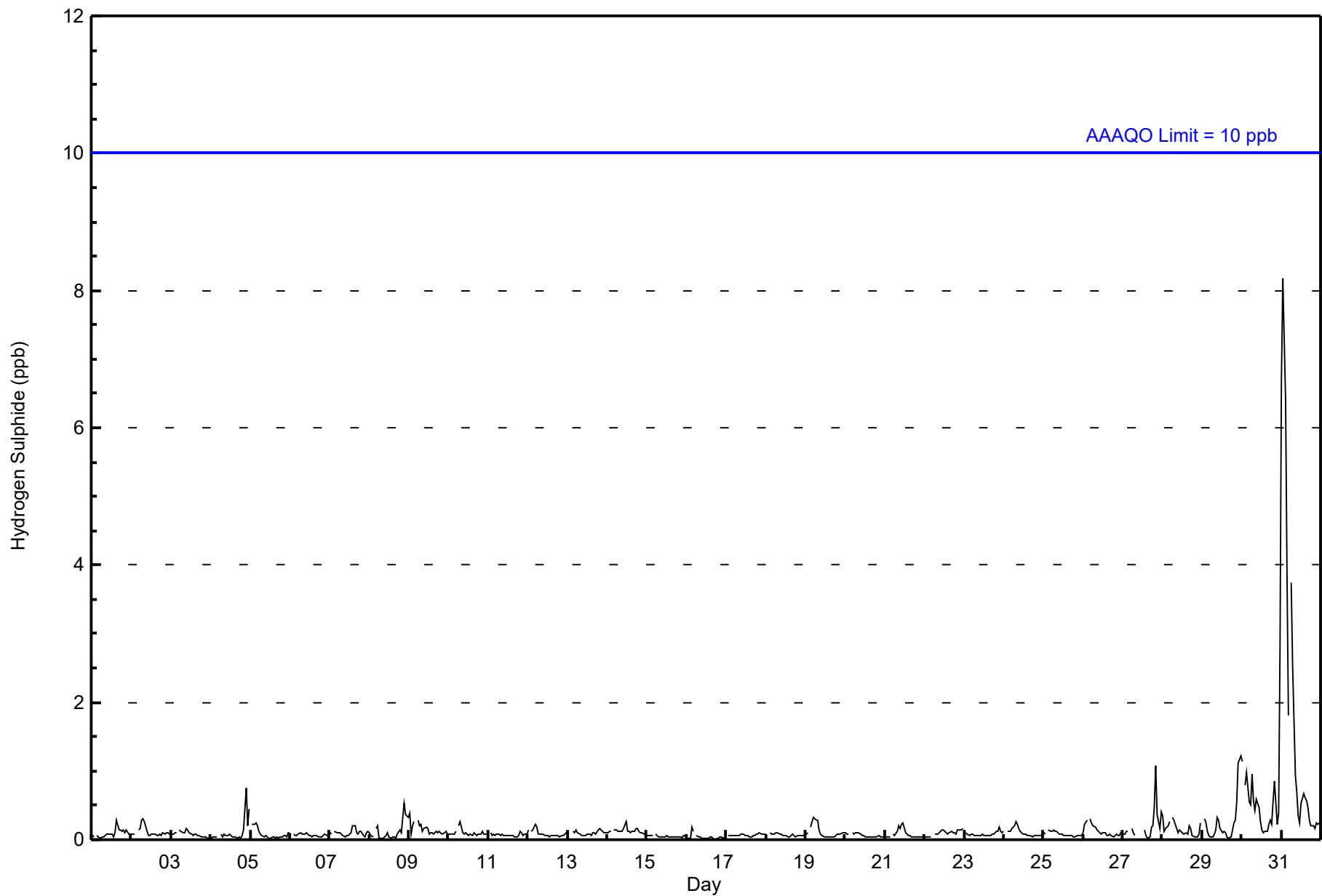
Sawbones Bay - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744									
Maximum Value: 8.2 ppb on May 31 02:00 Maximum Daily Average: 1.7 ppb on May 31																			Hours of Data: 708									
Minimum Value: 0.0 ppb on May 16 18:00 Minimum Daily Average: 0.0 ppb on May 16																			Hours of Missing Data: 36									
Maximum Diurnal Average: 0.4 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 19																			Hours of Calibration: 36									
Monthly Average: 0.17 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 1.8																			Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
2-May	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
3-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
4-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	0.2	0.5	0.1	0.8		
5-May	Z	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.3		
6-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1		
7-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2		
8-May	0.1	0.1	0.0	Z	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.5	0.4	0.3	0.1	0.5		
9-May	0.4	0.1	0.2	0.3	Z	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4		
10-May	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
11-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
12-May	0.1	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2		
13-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2		
14-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3		
15-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1		
16-May	0.0	0.0	0.0	0.2	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		
17-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
18-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
19-May	0.1	0.1	Z	0.2	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
20-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1		
21-May	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2		
22-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2		
23-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2		
24-May	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
25-May	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1		
26-May	0.1	0.2	0.3	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
27-May	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	C	C	C	C	C	0.2	0.1	0.0	0.0	0.2	0.2	0.5	1.1	0.4	0.2	0.4	0.2	1.1		
28-May	0.3	0.1	0.2	0.2	0.3	Z	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.3		
29-May	Z	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.6	1.1	1.2	0.3	1.2		
30-May	1.1	Z	0.8	1.0	0.5	0.5	0.9	0.6	0.4	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.5	0.9	0.2	0.4	2.8	0.6	2.8		
31-May	6.7	8.2	6.4	3.8	1.8	Z	3.7	2.5	0.9	0.7	0.3	0.2	0.5	0.7	0.6	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	1.7	8.2		
0.4 0.4 0.4 0.3 0.2 0.2 0.3 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.1 0.1 0.2																										Diurnal Average		
6.7 8.2 6.4 3.8 1.8 0.5 3.7 2.5 0.9 0.7 0.5 0.3 0.5 0.7 0.6 0.6 0.5 0.3 0.2 0.5 1.1 0.8 1.1 2.8																										Diurnal Maximum		
Z - zerospan C - Calibration																												
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																												



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	701	99.01	99.01
3 - 4	4	0.56	99.58
5 - 7	2	0.28	99.86
8 - 11	1	0.14	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	37	23	10	15	31	41	110	146	47	26	27	39	40	49	34	26	701
3 - 4	0	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	4
5 - 7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
8 - 11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	23	10	15	31	41	112	148	49	27	27	39	40	49	34	26	708

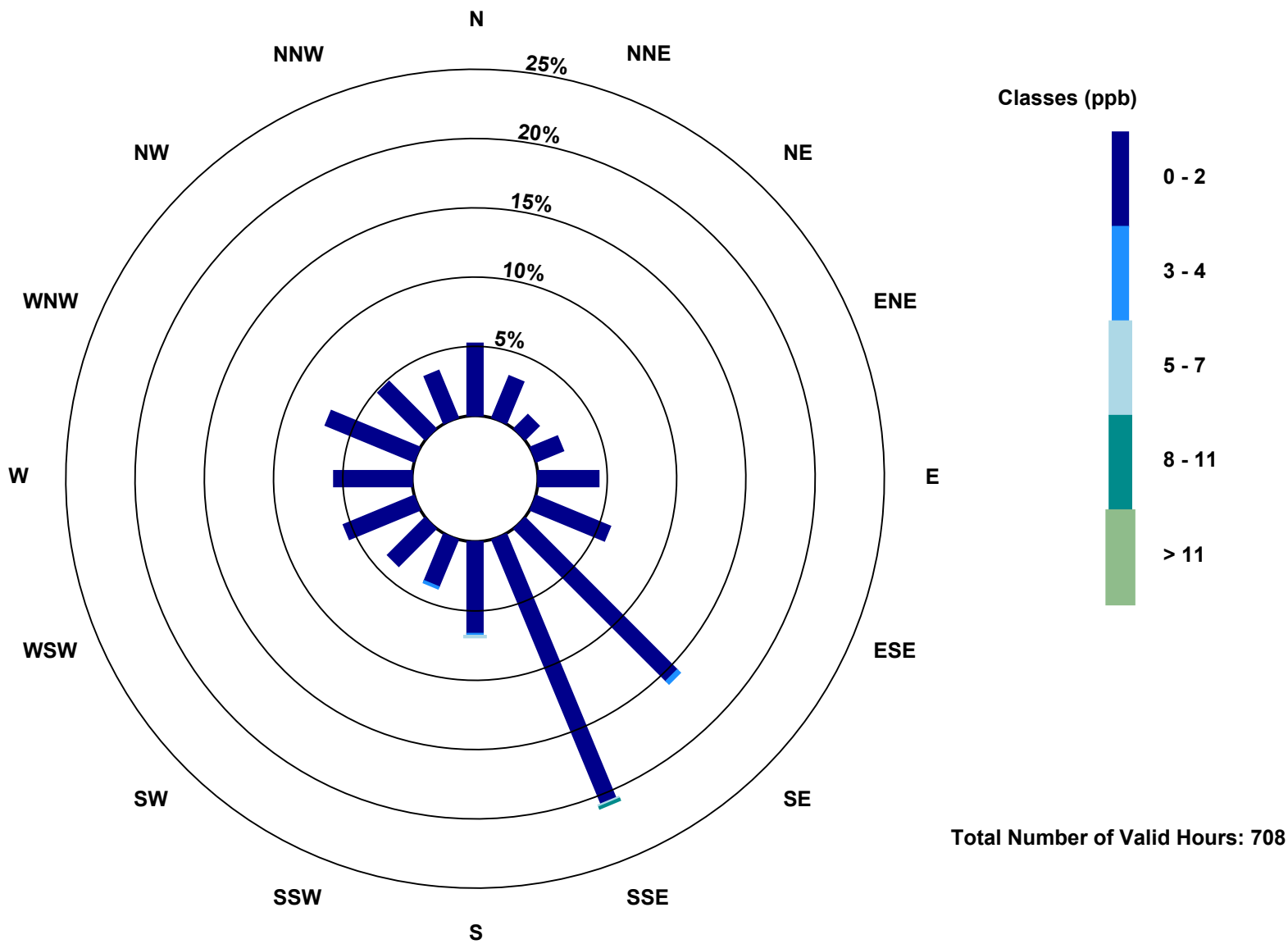
Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

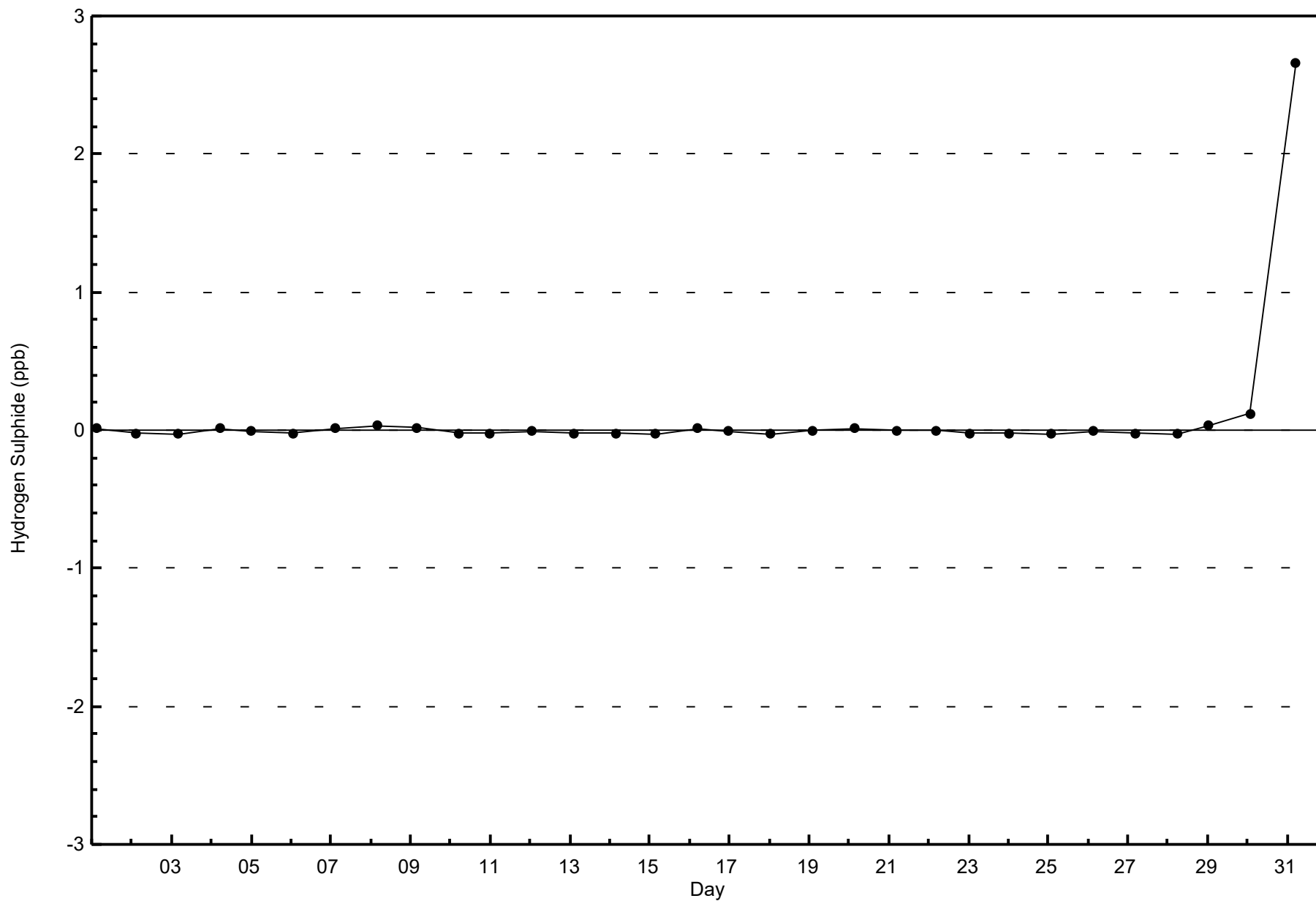
Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

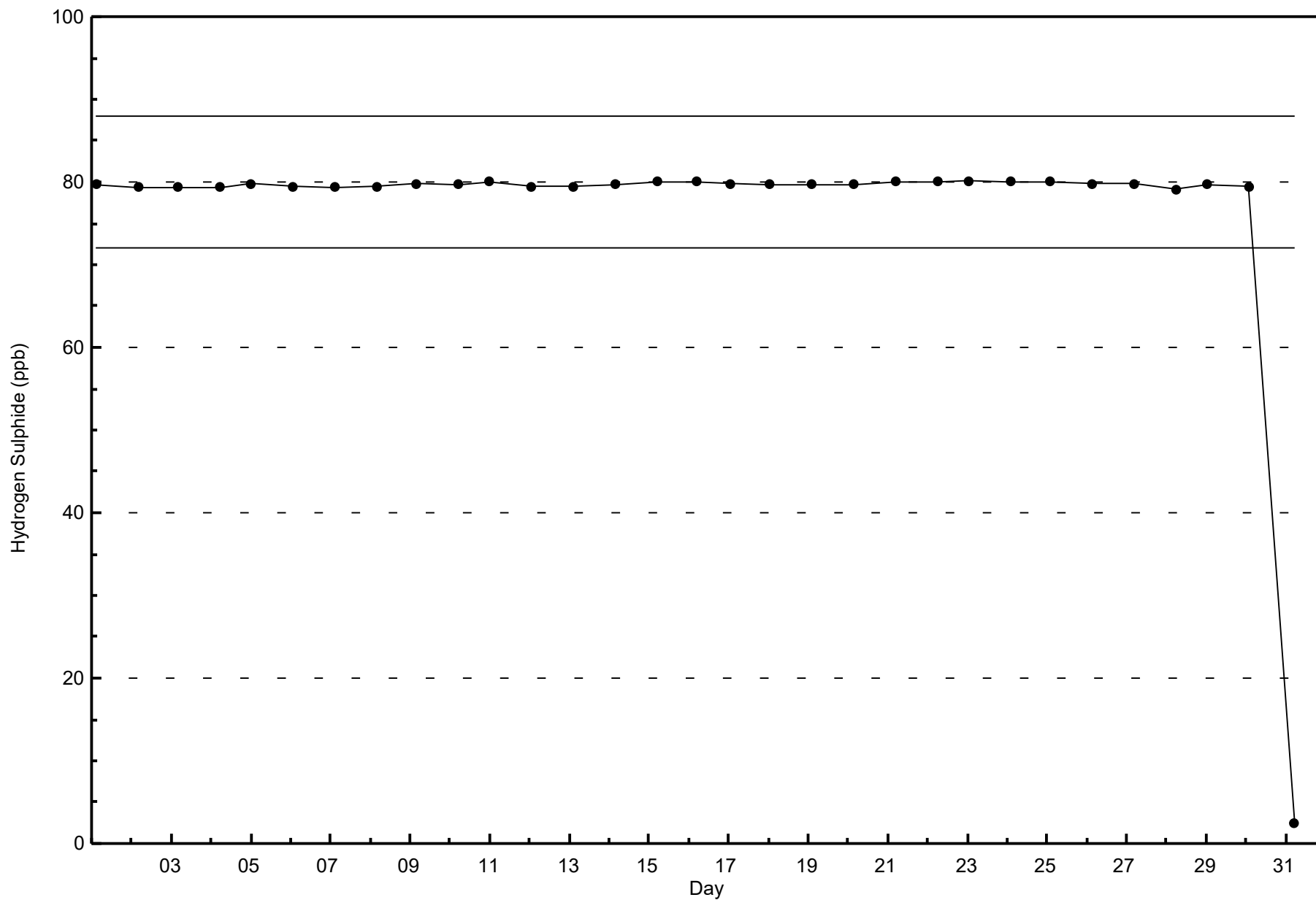
Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

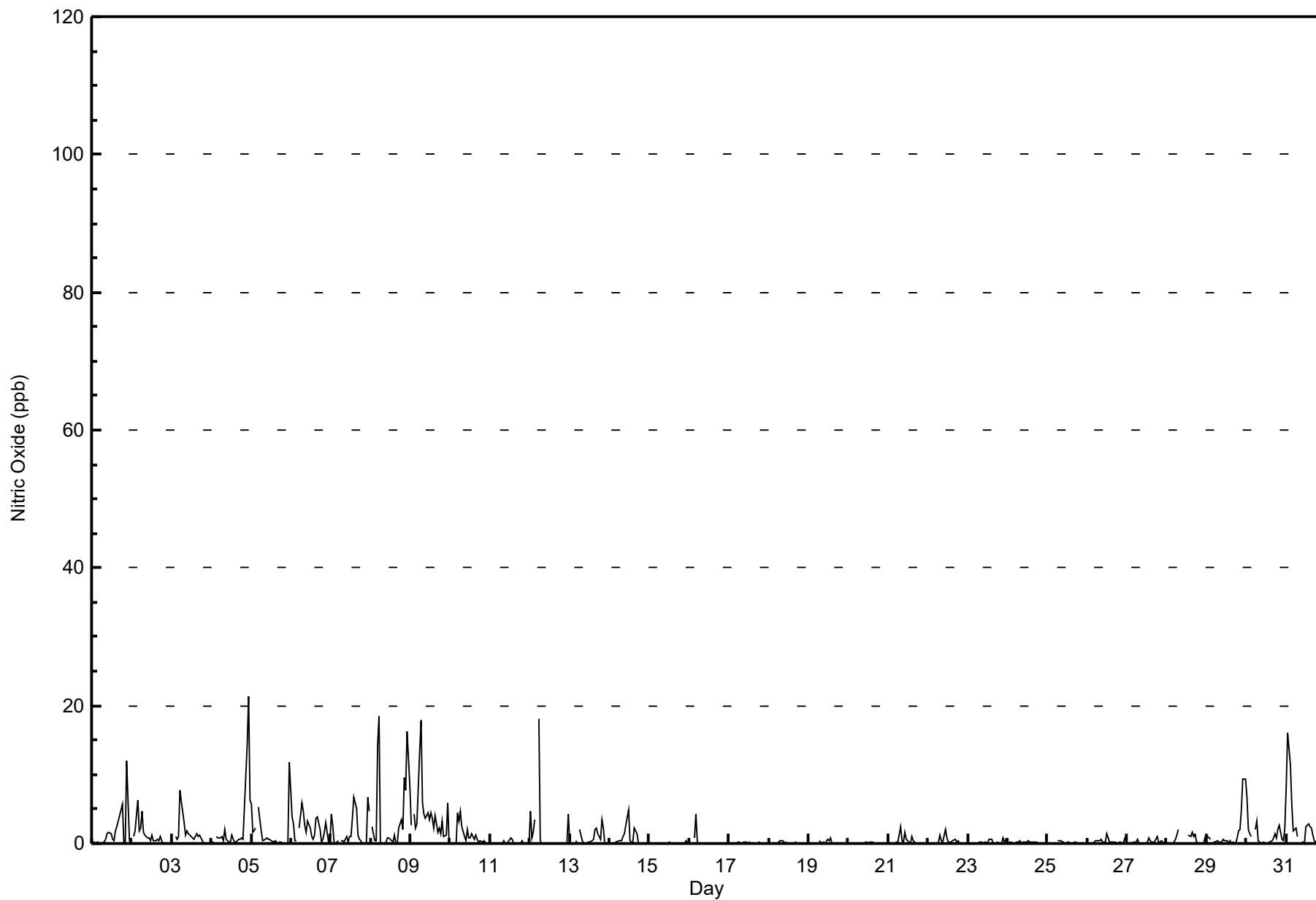
Sawbones Bay - May 2025

Maximum Value: 21.3 ppb on May 4 23:00																			Maximum Daily Average: 4.2 ppb on May 9							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 20:00																			Minimum Daily Average: 0.1 ppb on May 20							Hours of Data: 706	
Maximum Diurnal Average: 2.9 ppb at hour 6																			Minimum Diurnal Average: 0.5 ppb at hour 20							Hours of Missing Data: 38	
Monthly Average: 1.07 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.9 P ₉₀ = 2.8 P ₉₉ = 14.2							Hours of Calibration: 36	
																										Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.2	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.6	1.4	1.7	1.4	0.6	0.3	1.8	2.4	4.0	4.9	5.7	0.2	0.1	12.0	0.5	0.3	1.7	12.0	
2-May	Z	1.0	1.8	6.2	1.9	2.2	4.7	1.7	1.2	0.9	0.8	0.5	1.2	0.5	0.5	0.5	0.3	1.0	0.5	0.0	0.0	0.0	0.0	0.0	1.2	6.2	
3-May	0.0	Z	1.0	0.5	1.1	7.7	6.1	3.1	1.2	1.9	1.5	1.2	0.8	0.5	1.0	1.3	1.0	1.2	0.4	0.0	0.1	0.1	0.0	0.1	1.4	7.7	
4-May	0.2	0.2	Z	0.9	0.8	0.9	1.1	0.3	1.9	0.6	0.1	0.2	1.3	0.7	0.2	0.2	0.5	0.7	0.8	0.6	5.2	14.4	21.3	6.4	2.6	21.3	
5-May	5.8	1.5	2.2	Z	5.2	3.4	1.9	0.5	0.6	0.9	0.6	0.7	0.3	0.2	0.4	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	11.9	1.6	11.9	
6-May	3.9	2.9	0.4	0.3	Z	2.2	5.9	4.7	2.6	1.6	3.2	2.1	1.1	0.5	1.1	3.7	3.9	1.9	0.2	0.7	1.6	3.0	0.1	0.0	2.1	5.9	
7-May	4.4	2.7	0.0	0.1	0.3	Z	0.3	0.4	0.1	1.0	0.3	0.9	1.0	3.6	6.7	5.1	1.2	0.6	0.4	0.0	0.0	0.1	6.6	4.7	1.8	6.7	
8-May	Z	2.4	0.4	0.3	14.3	18.4	0.0	0.0	0.0	0.2	0.7	0.8	0.6	0.2	1.2	0.1	0.1	2.2	3.4	2.0	9.5	7.8	16.2	8.4	3.9	18.4	
9-May	2.6	Z	4.3	2.2	2.8	13.4	18.0	5.8	4.3	3.7	4.5	3.4	4.5	3.7	2.2	4.0	1.7	2.2	1.4	3.3	1.0	1.2	6.0	0.0	4.2	18.0	
10-May	0.0	0.0	Z	0.0	4.4	3.2	4.6	2.3	1.1	0.4	2.0	0.7	0.8	1.4	0.5	1.3	0.5	0.2	0.4	0.3	0.5	0.0	0.0	0.0	1.1	4.6	
11-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.1	0.9	0.6	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.1	0.9	
12-May	4.7	0.8	1.6	3.5	Z	18.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	1.5	18.2	
13-May	0.0	0.0	0.0	0.0	0.4	Z	2.1	0.4	0.1	0.0	0.1	0.1	0.3	0.4	0.6	2.1	2.2	1.4	0.6	3.6	2.2	0.0	0.1	0.1	0.7	3.6	
14-May	Z	0.1	0.1	0.1	0.1	0.4	0.4	0.4	1.0	1.4	2.6	5.0	0.5	0.1	0.1	2.2	1.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	5.0	
15-May	0.3	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.4	
16-May	0.0	0.1	Z	0.9	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	4.3	
17-May	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2	
18-May	0.0	0.1	0.0	0.1	Z	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.5	
19-May	0.0	0.0	0.0	0.0	0.1	Z	0.4	0.1	0.1	0.1	0.0	0.7	0.4	0.8	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	
20-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	
21-May	0.0	Z	0.0	0.1	0.0	0.1	0.2	2.4	0.5	0.2	1.6	0.7	0.1	0.1	1.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.4	
22-May	0.0	0.0	Z	0.0	0.0	0.0	0.1	1.2	0.5	0.3	2.1	0.9	0.2	0.3	0.2	0.5	0.6	0.3	0.5	0.1	0.0	0.0	0.0	0.1	0.3	2.1	
23-May	0.0	0.0	0.1	Z	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.0	0.0	0.7	0.1	0.7	0.2	0.7	
24-May	0.1	0.2	0.2	0.1	Z	0.1	0.2	0.4	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.4	
25-May	0.0	0.0	0.0	0.0	0.1	Z	0.5	0.4	0.3	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5	
26-May	Z	0.0	0.1	0.1	0.1	0.3	0.4	0.4	0.5	0.2	0.1	0.1	1.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.7	0.3	1.4	
27-May	0.1	Z	0.2	0.1	0.2	0.2	0.6	0.1	M	M	0.0	0.0	0.1	0.8	0.5	0.2	0.2	0.5	1.0	0.2	0.2	0.5	0.0	0.0	0.3	1.0	
28-May	0.0	0.0	Z	0.0	0.1	0.7	1.1	2.0	C	C	C	C	C	1.2	0.9	1.7	1.1	1.4	0.1	0.0	0.0	0.0	0.0	0.9	0.6	2.0	
29-May	1.3	0.8	0.5	Z	0.2	0.3	0.4	0.2	0.1	0.2	0.7	0.5	0.3	0.1	0.3	0.1	0.1	0.1	0.9	1.8	2.0	4.8	9.4	9.3	1.5	9.4	
30-May	6.7	2.0	1.4	1.1	Z	2.1	3.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.5	0.8	1.4	0.8	2.1	2.7	0.7	0.4	2.3	1.3	6.7	
31-May	8.4	16.0	11.3	5.5	1.9	2.1	2.3	1.0	Z	0.2	0.2	0.1	2.4	2.8	2.5	2.1	1.3	0.4	0.2	0.2	0.7	0.2	0.2	0.1	2.7	16.0	
1.5 1.2 1.0 0.9 1.5 2.9 1.8 0.9 0.6 0.6 0.8 0.7 0.7 0.6 0.8 0.9 0.7 0.7 0.6 0.5 0.8 1.5 2.0 1.6																										Diurnal Average	
8.4 16.0 11.3 6.2 14.3 18.4 18.0 5.8 4.3 3.7 4.5 5.0 4.5 3.7 6.7 5.1 4.0 4.9 5.7 3.6 9.5 14.4 21.3 11.9																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	99.86	99.86
21 - 40	1	0.14	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	37	23	10	15	30	40	112	149	48	27	25	37	41	47	35	29	705
21 - 40	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	23	10	15	30	40	112	149	48	27	26	37	41	47	35	29	706

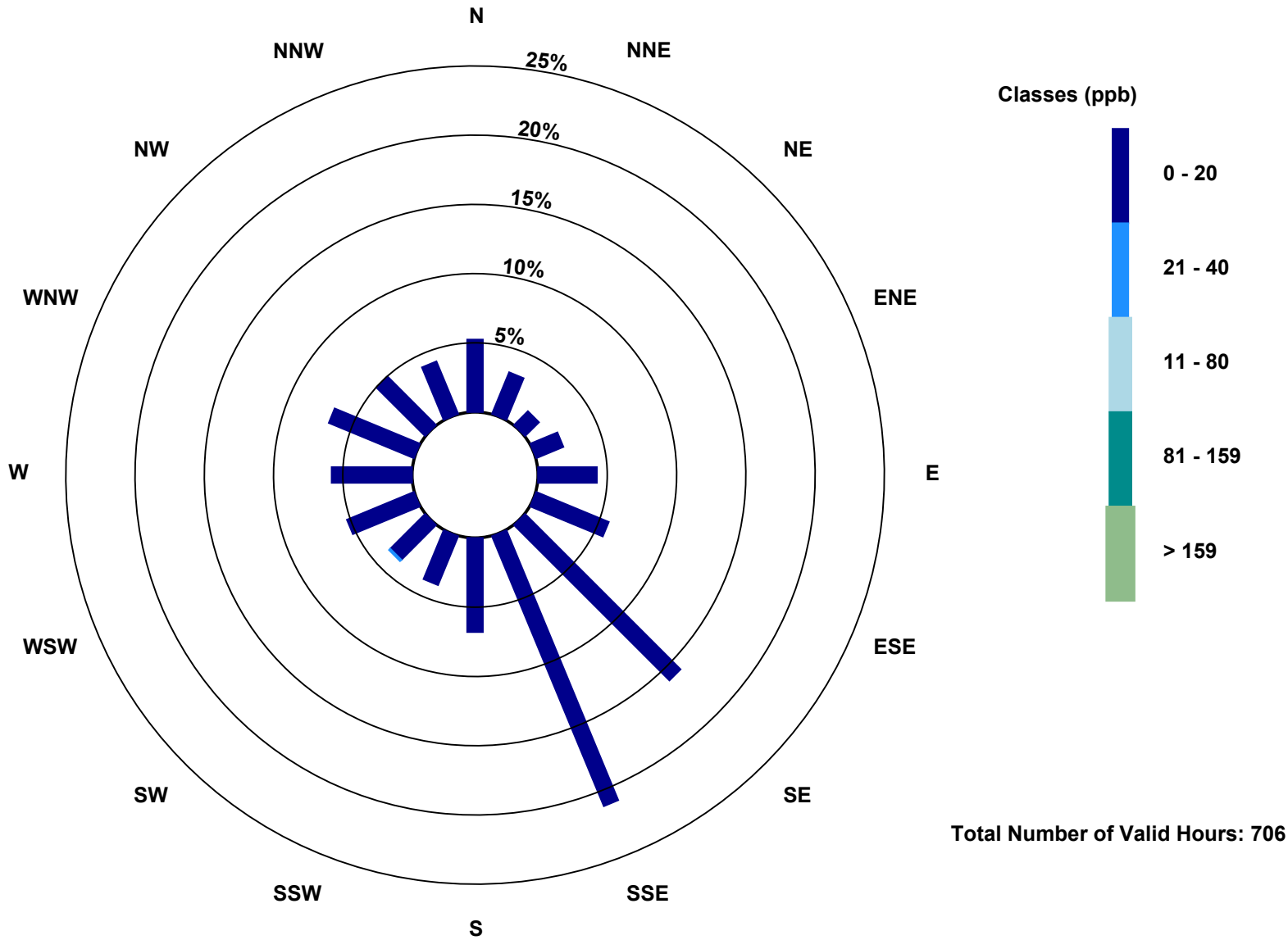
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

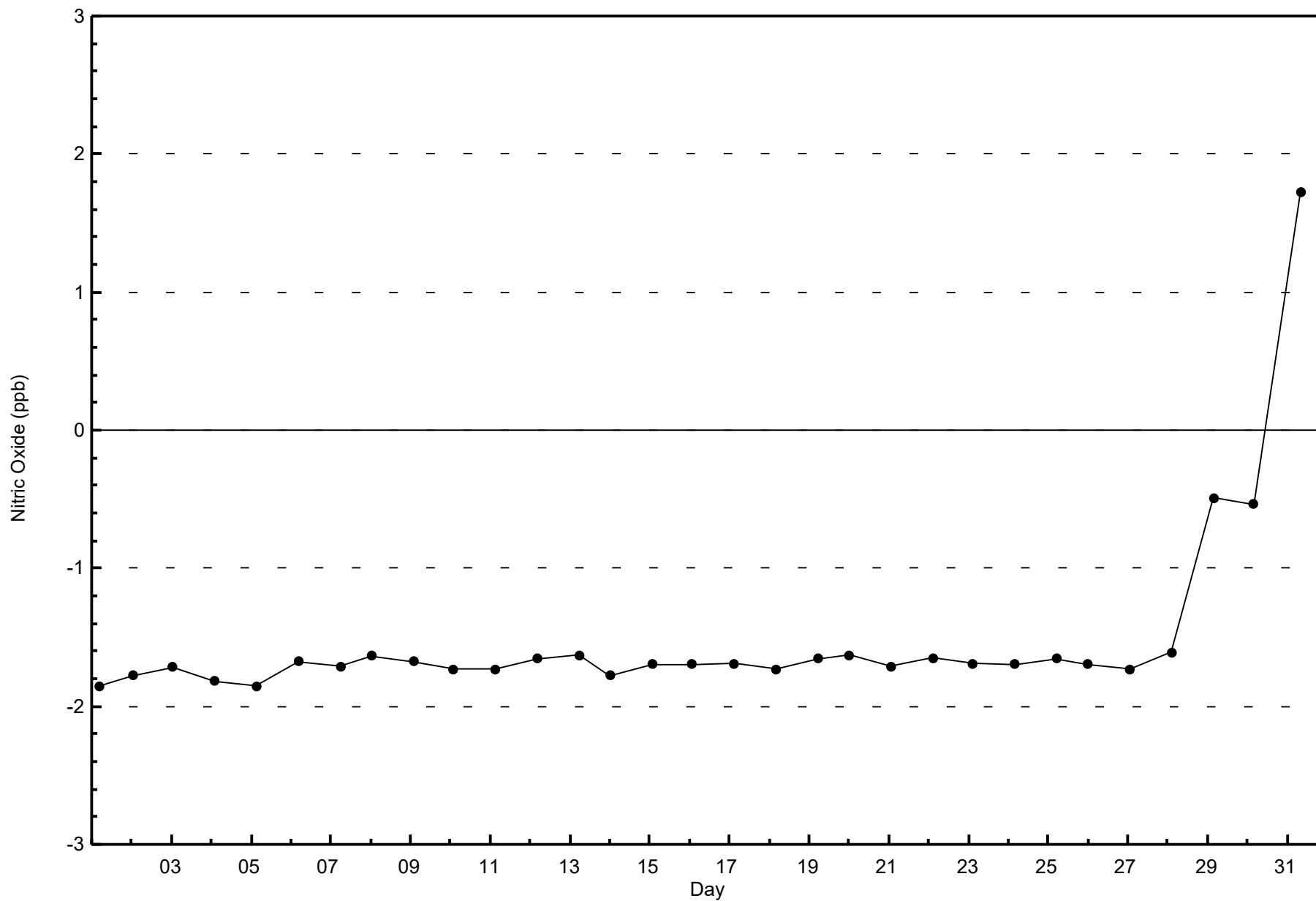
Nitric Oxide (NO) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

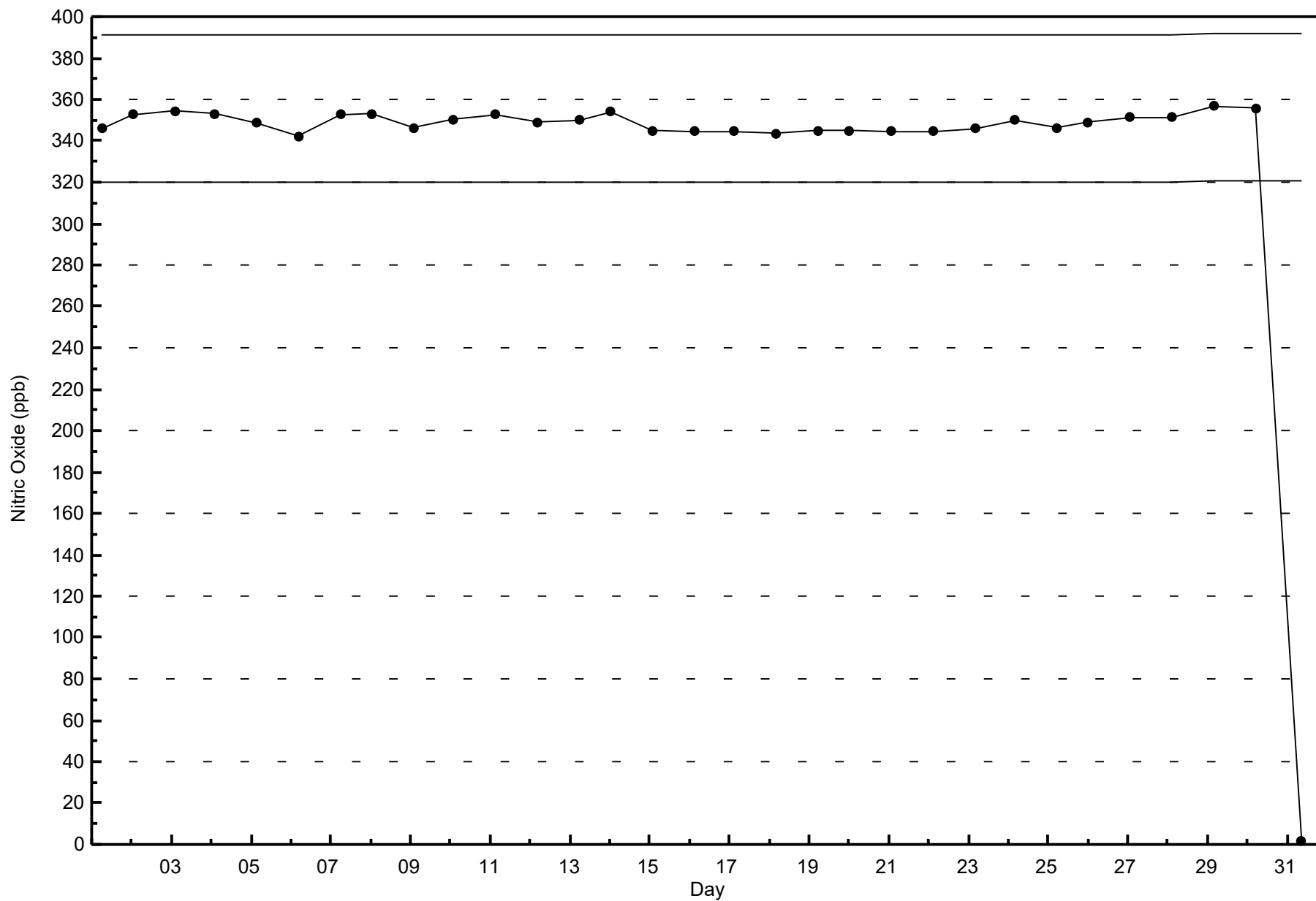
Nitric Oxide (NO) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

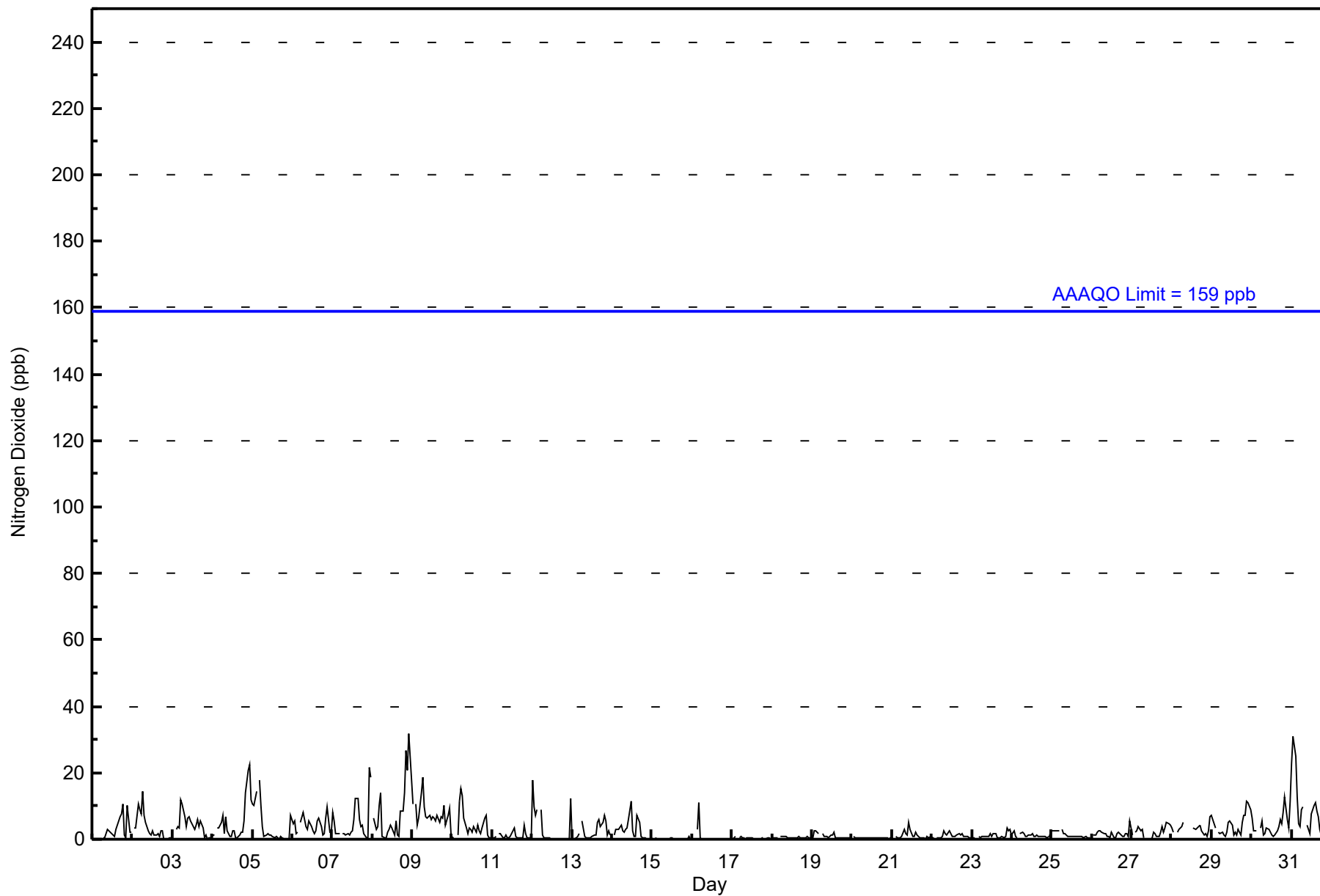
Sawbones Bay - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 31.9 ppb on May 8 23:00 Maximum Daily Average: 8.2 ppb on May 8																				Hours in Service: 744						
Minimum Value: 0.0 ppb on May 13 01:00 Minimum Daily Average: 0.2 ppb on May 15 Maximum Diurnal Average: 4.7 ppb at hour 6 Minimum Diurnal Average: 1.9 ppb at hour 9 Monthly Average: 2.91 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 1.3 Q ₃ = 3.6 P ₉₀ = 7.3 P ₉₉ = 20.7																				Hours of Data: 706						
																				Hours of Missing Data: 38						
																				Hours of Calibration: 36						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	0.2	0.2	0.1	0.1	0.1	Z	0.3	0.3	1.5	2.8	2.4	1.9	1.2	0.8	2.9	4.3	6.9	7.5	10.8	1.4	0.4	10.0	2.0	2.1	2.6	10.8
2-May	Z	3.4	3.6	10.4	8.7	7.5	14.6	7.3	4.9	2.7	1.8	1.1	2.5	1.3	1.2	1.6	0.9	2.6	2.6	0.1	0.1	0.2	0.6	0.3	3.5	14.6
3-May	0.3	Z	2.9	3.7	3.5	11.8	10.6	6.9	3.7	6.5	6.7	5.3	3.8	2.8	4.1	5.8	3.8	5.3	3.4	0.6	1.1	0.2	0.3	0.4	4.1	11.8
4-May	1.2	1.3	Z	3.2	3.6	4.9	7.1	1.7	6.6	2.7	0.7	1.0	2.4	2.6	0.5	0.4	1.2	2.3	2.3	5.5	14.1	20.7	22.5	11.9	5.2	22.5
5-May	10.7	10.3	14.5	Z	17.9	10.2	4.0	1.0	1.2	1.7	1.1	1.2	0.8	0.4	0.9	0.3	0.2	0.8	0.4	0.2	0.2	0.2	0.2	7.3	3.7	17.9
6-May	4.8	5.4	1.7	2.3	Z	4.9	7.9	5.8	3.8	3.1	5.7	3.8	2.5	1.5	2.5	5.6	6.5	4.0	1.1	1.8	6.4	9.7	2.0	2.3	4.1	9.7
7-May	8.2	5.3	1.9	1.7	1.9	Z	1.9	1.5	1.1	1.9	1.3	2.2	2.5	6.1	12.1	12.1	6.0	3.7	4.1	1.9	0.6	0.6	21.6	18.7	5.2	21.6
8-May	Z	6.3	2.8	3.8	10.2	14.1	0.7	0.4	0.6	2.2	3.1	4.1	3.3	1.2	5.7	1.3	0.8	8.5	8.4	14.1	26.8	20.6	31.9	17.8	8.2	31.9
9-May	10.8	Z	10.8	4.4	6.5	14.1	18.5	9.8	6.6	6.3	7.0	5.8	6.6	6.4	5.3	7.1	5.1	6.6	6.2	10.3	4.1	7.3	9.5	1.5	7.7	18.5
10-May	0.5	0.4	Z	1.3	11.3	15.1	13.2	6.5	3.3	1.7	3.6	2.8	2.2	4.0	2.2	4.3	2.6	1.5	3.6	6.3	7.1	1.2	0.6	0.4	4.2	15.1
11-May	0.4	0.5	0.7	Z	1.5	1.6	0.6	0.4	1.2	0.4	0.4	0.8	2.6	3.2	0.7	0.5	0.4	0.3	0.3	4.1	1.5	0.4	0.4	0.3	1.0	4.1
12-May	17.8	9.9	7.0	8.8	Z	8.8	1.1	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	12.2	3.0	17.8
13-May	0.0	0.1	0.4	0.8	1.9	Z	5.3	1.0	0.5	0.4	0.4	0.6	1.0	1.4	1.2	5.0	5.9	3.9	5.1	7.4	5.4	1.4	2.6	1.4	2.3	7.4
14-May	Z	1.4	2.8	2.9	2.9	4.4	2.7	2.2	2.9	3.5	5.8	11.5	2.5	1.0	0.7	7.2	5.1	0.8	0.6	0.6	0.3	0.1	0.1	0.1	2.7	11.5
15-May	0.4	Z	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.8	0.1	0.2	0.8
16-May	0.1	0.1	Z	2.9	10.9	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.8	10.9
17-May	0.1	0.3	0.9	Z	0.4	0.9	0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.2	0.3	0.3	0.2	0.3	0.9
18-May	0.2	0.4	0.4	0.4	Z	0.8	0.9	1.0	1.0	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.3	0.3	0.6	0.7	0.6	0.5	0.5	1.0
19-May	0.6	2.4	2.6	2.0	1.9	Z	1.9	1.0	0.7	0.7	0.5	1.4	1.3	2.2	0.5	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.6	0.6	1.0	2.6
20-May	Z	0.7	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.4	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.7
21-May	0.4	Z	0.7	0.5	0.4	0.4	1.0	3.1	1.7	1.3	5.1	3.0	1.0	0.7	2.2	1.1	0.7	0.4	0.3	0.3	0.2	0.9	0.6	0.8	1.2	5.1
22-May	0.6	0.5	Z	0.6	0.4	0.4	0.8	2.6	1.8	1.1	2.7	1.9	0.9	1.0	0.9	1.3	1.5	1.1	1.5	0.8	1.0	0.8	0.6	0.4	1.1	2.7
23-May	0.4	0.3	0.3	Z	0.7	0.6	0.7	0.8	0.8	0.7	1.0	1.8	0.7	1.7	1.5	0.5	0.5	0.4	1.0	0.6	0.7	3.6	2.5	3.1	1.1	3.6
24-May	1.3	2.6	1.0	0.4	Z	1.9	2.0	1.8	0.7	0.9	1.2	1.3	1.6	1.0	1.0	1.1	1.0	0.8	0.7	0.7	0.7	0.6	1.0	2.5	1.2	2.6
25-May	2.6	2.7	2.4	2.4	2.7	Z	3.0	1.9	1.6	1.0	0.7	0.7	0.8	0.8	0.9	0.7	0.9	0.9	0.9	0.6	0.9	0.6	0.4	0.4	1.3	3.0
26-May	Z	1.1	1.4	2.0	2.5	2.4	2.2	1.8	1.6	1.0	0.8	0.6	2.1	0.6	0.6	1.7	2.1	1.6	0.8	0.8	1.8	1.7	0.9	5.6	1.6	5.6
27-May	1.1	Z	2.1	2.4	3.8	2.7	3.0	0.6	M	M	0.2	0.2	0.4	2.2	1.5	1.0	0.8	2.1	3.8	2.3	3.4	5.0	4.7	4.4	2.3	5.0
28-May	3.3	2.1	Z	2.1	2.9	3.6	3.8	4.9	C	C	C	C	C	C	3.4	2.8	3.6	3.7	4.2	2.4	1.2	1.6	1.0	2.5	3.1	6.8
29-May	7.3	4.5	3.4	Z	2.2	1.7	2.3	1.1	1.0	2.3	5.1	5.7	4.1	1.2	2.0	1.1	3.0	1.2	5.0	7.3	7.3	11.5	11.0	8.9	4.4	11.5
30-May	6.3	2.5	2.4	2.5	Z	3.6	5.3	1.4	1.7	3.2	3.1	2.0	1.3	0.9	1.2	2.5	3.8	6.0	4.7	8.2	12.7	6.0	3.6	11.6	4.2	12.7
31-May	22.7	30.8	25.1	12.5	4.7	3.7	9.1	9.7	Z	4.1	3.0	1.8	7.7	10.2	11.1	8.6	6.7	3.1	1.4	1.8	1.0	1.6	1.0	1.0	7.9	30.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	697	98.73	98.73
21 - 40	9	1.27	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	37	23	10	15	30	40	112	147	47	27	24	36	39	46	35	29	697
21 - 40	0	0	0	0	0	0	0	2	1	0	2	1	2	1	0	0	9
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	23	10	15	30	40	112	149	48	27	26	37	41	47	35	29	706

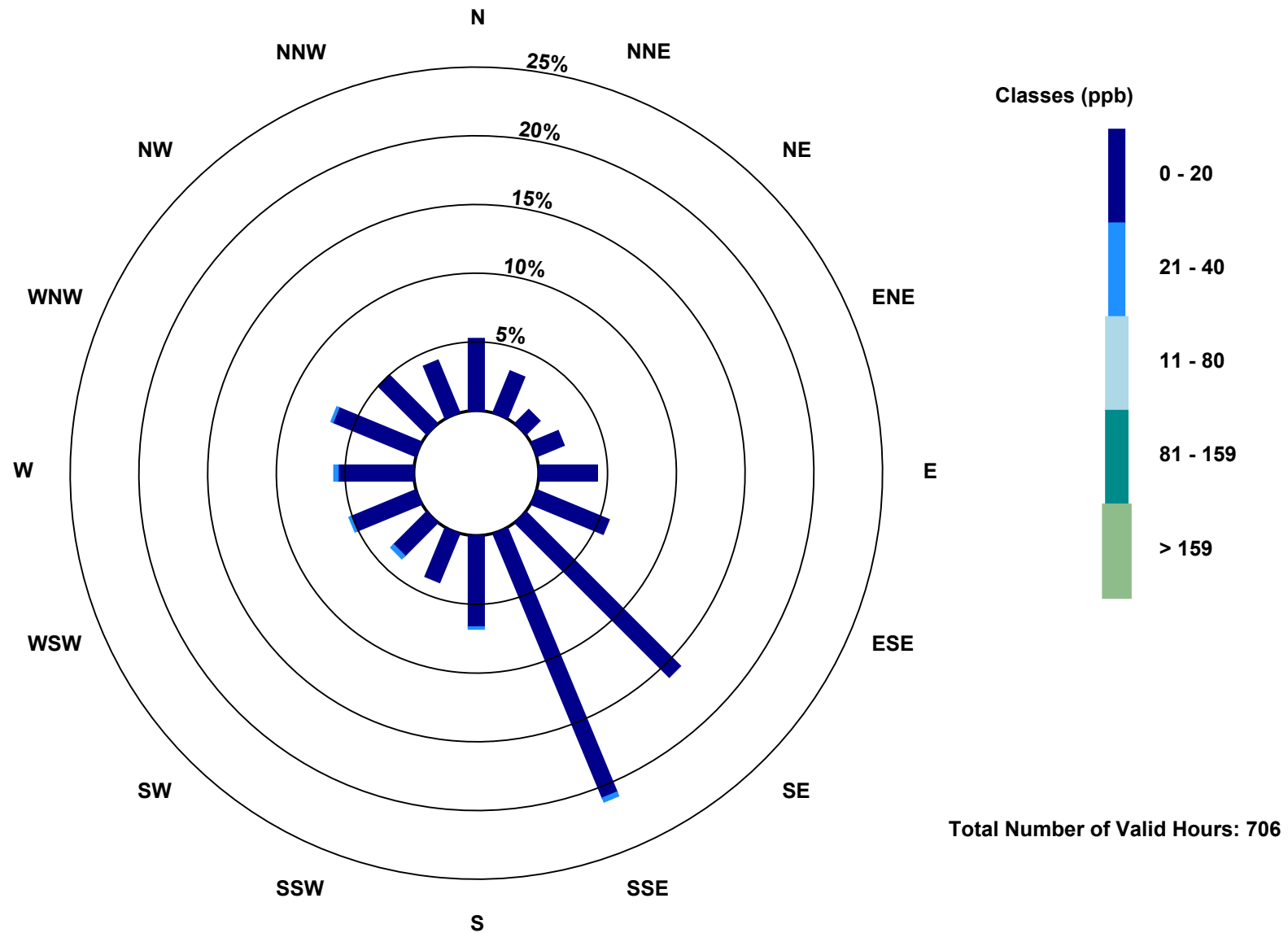
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

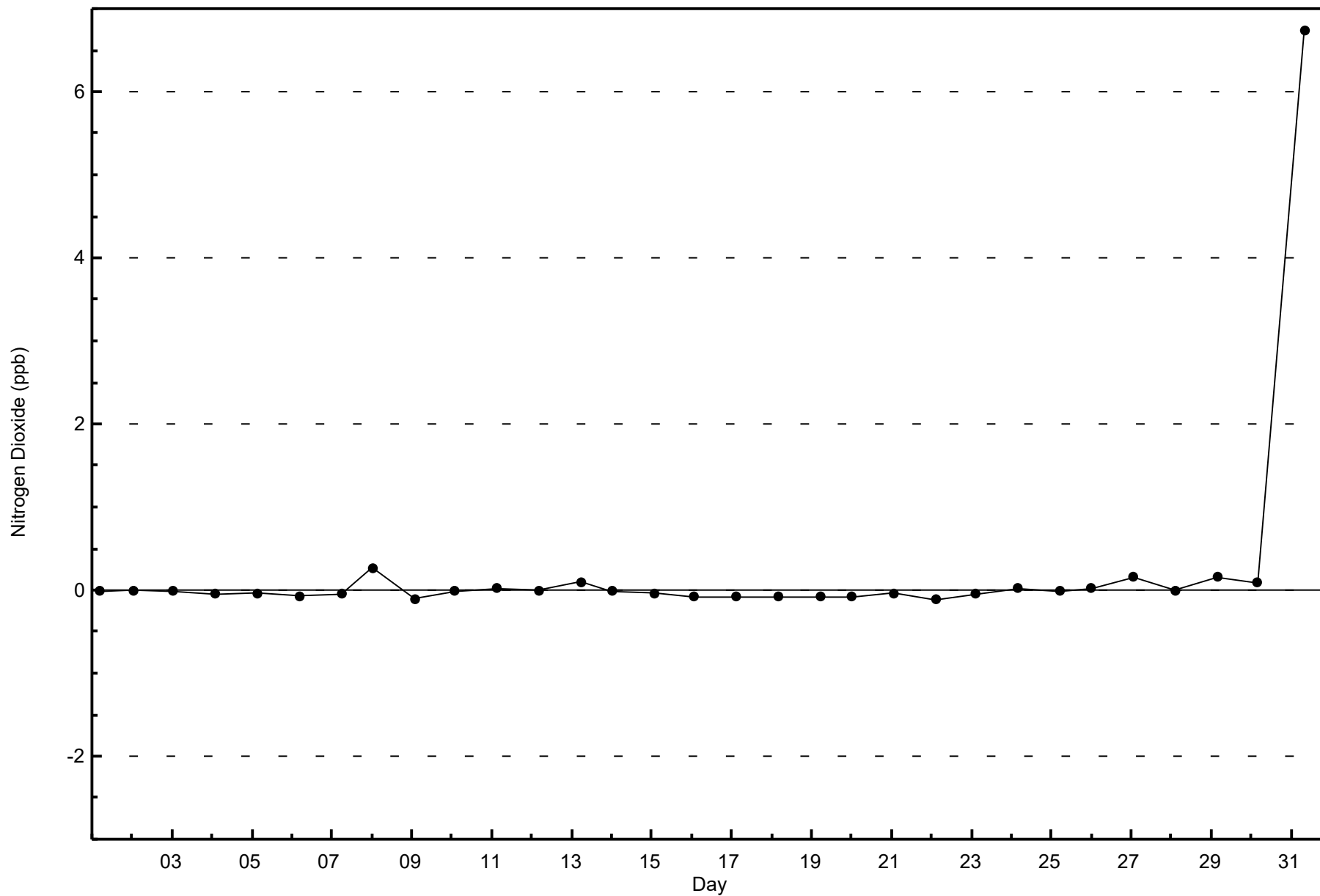
Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

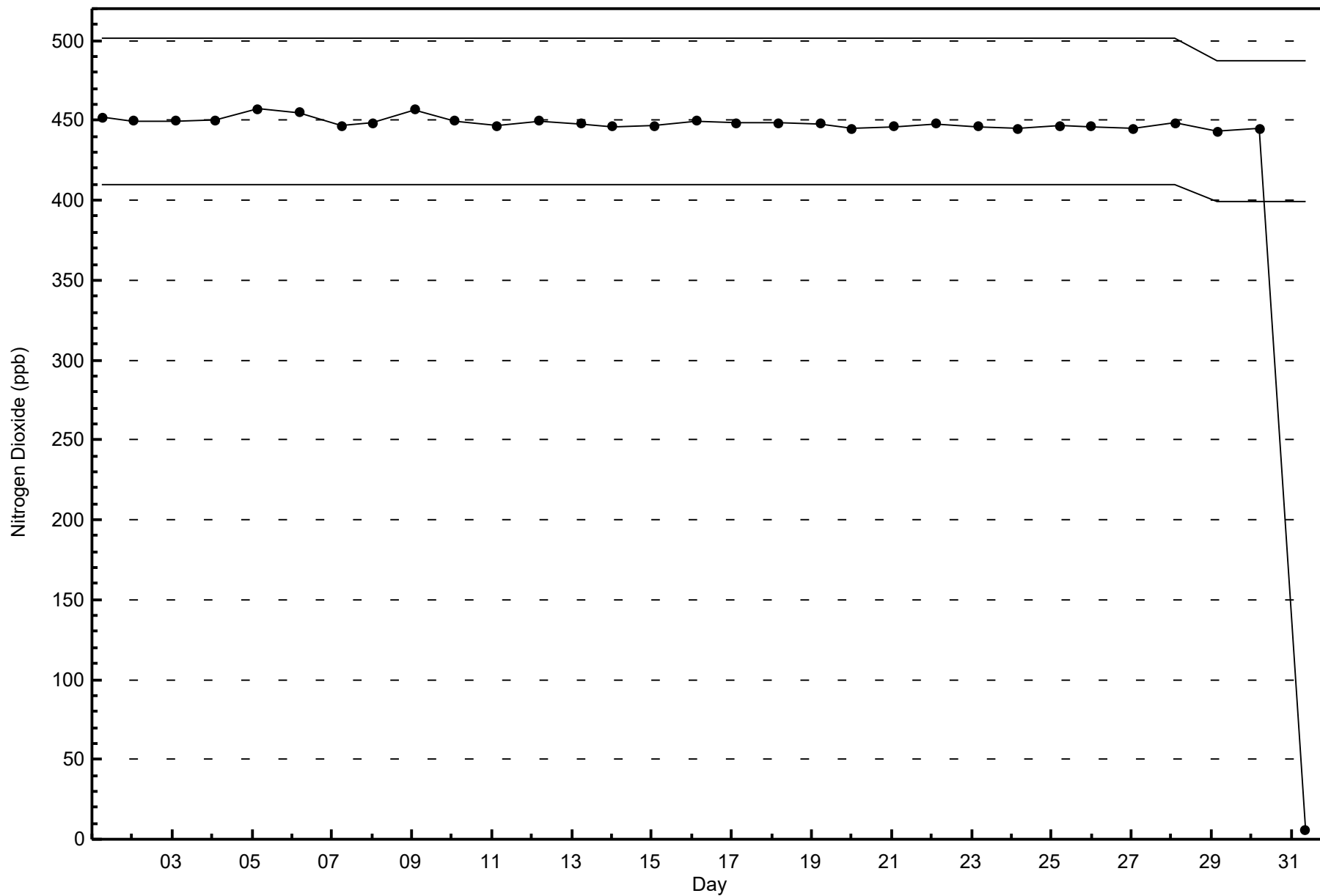
Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

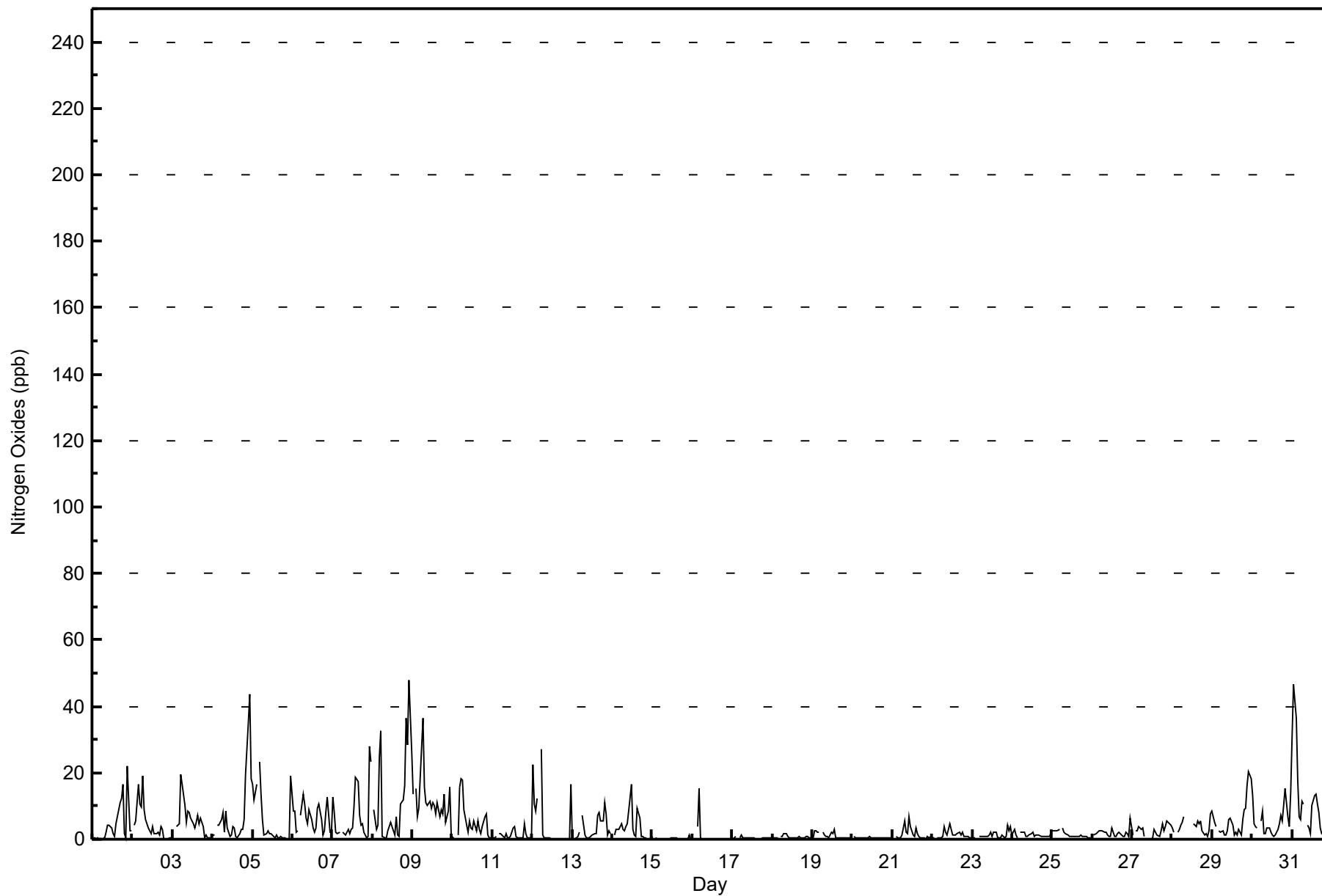
Sawbones Bay - May 2025

Maximum Value: 48.1 ppb on May 8 23:00																			Maximum Daily Average: 12.1 ppb on May 8										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 13 01:00																			Minimum Daily Average: 0.3 ppb on May 15										Hours of Data: 706	
Maximum Diurnal Average: 7.6 ppb at hour 6																			Minimum Diurnal Average: 2.4 ppb at hour 10										Hours of Missing Data: 38	
Monthly Average: 3.97 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.5 Median = 1.5 Q ₃ = 4.4 P ₉₀ = 10.7 P ₉₉ = 32.4										Hours of Calibration: 36	
																													Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	0.4	0.3	0.2	0.2	0.2	Z	0.5	0.5	2.1	4.2	4.1	3.3	1.8	1.1	4.7	6.7	10.9	12.4	16.5	1.6	0.5	22.0	2.5	2.4	4.3	22.0				
2-May	Z	4.4	5.4	16.6	10.6	9.7	19.3	9.0	6.1	3.6	2.6	1.6	3.7	1.8	1.7	2.1	1.2	3.6	3.1	0.1	0.1	0.2	0.6	0.3	4.7	19.3				
3-May	0.3	Z	3.9	4.2	4.6	19.5	16.7	10.0	4.9	8.4	8.2	6.5	4.6	3.3	5.1	7.1	4.8	6.5	3.8	0.6	1.2	0.3	0.3	0.5	5.5	19.5				
4-May	1.4	1.5	Z	4.1	4.4	5.8	8.2	2.0	8.5	3.3	0.8	1.2	3.7	3.3	0.7	0.6	1.7	3.0	3.1	6.1	19.3	35.1	43.8	18.3	7.8	43.8				
5-May	16.5	11.8	16.7	Z	23.1	13.6	5.9	1.5	1.8	2.6	1.7	1.9	1.1	0.6	1.3	0.4	0.3	1.0	0.6	0.3	0.2	0.2	0.2	19.2	5.3	23.1				
6-May	8.7	8.3	2.1	2.6	Z	7.1	13.8	10.5	6.4	4.7	8.9	5.9	3.6	2.0	3.6	9.3	10.4	5.9	1.3	2.5	8.0	12.7	2.1	2.3	6.2	13.8				
7-May	12.6	8.0	1.9	1.8	2.2	Z	2.2	1.9	1.2	2.9	1.6	3.1	3.5	9.7	18.8	17.2	7.2	4.3	4.5	1.9	0.6	0.7	28.2	23.4	6.9	28.2				
8-May	Z	8.7	3.2	4.1	24.5	32.5	0.7	0.4	0.6	2.4	3.8	4.9	3.9	1.4	6.9	1.4	0.9	10.7	11.8	16.1	36.3	28.4	48.1	26.2	12.1	48.1				
9-May	13.4	Z	15.1	6.6	9.3	27.5	36.5	15.6	10.9	10.0	11.5	9.2	11.1	10.1	7.5	11.1	6.8	8.8	7.6	13.6	5.1	8.5	15.5	1.5	11.9	36.5				
10-May	0.5	0.4	Z	1.3	15.7	18.3	17.8	8.8	4.4	2.1	5.6	3.5	3.0	5.4	2.7	5.6	3.1	1.7	4.0	6.6	7.6	1.2	0.6	0.4	5.2	18.3				
11-May	0.4	0.5	0.7	Z	1.5	1.7	0.7	0.5	1.5	0.5	0.4	0.9	3.5	3.8	0.8	0.5	0.4	0.3	0.3	4.5	1.5	0.4	0.5	0.3	1.1	4.5				
12-May	22.5	10.7	8.6	12.3	Z	27.0	1.4	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	16.5	4.4	27.0				
13-May	0.0	0.1	0.4	0.8	2.3	Z	7.4	1.4	0.6	0.4	0.5	0.7	1.3	1.8	1.8	7.1	8.1	5.3	5.7	11.0	7.6	1.4	2.7	1.5	3.0	11.0				
14-May	Z	1.5	2.9	3.0	3.0	4.8	3.1	2.6	3.9	4.9	8.4	16.5	3.0	1.1	0.8	9.4	6.5	0.9	0.7	0.6	0.3	0.1	0.1	0.1	3.4	16.5				
15-May	0.7	Z	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	1.2	0.1	0.3	1.2				
16-May	0.1	0.2	Z	3.8	15.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	1.0	15.2				
17-May	0.1	0.3	0.9	Z	0.5	1.1	0.6	0.4	0.3	0.5	0.5	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.6	0.3	0.3	0.4	0.3	0.3	0.4	1.1				
18-May	0.2	0.5	0.4	0.5	Z	0.9	1.0	1.5	1.5	0.7	0.6	0.5	0.5	0.5	0.4	0.5	1.0	0.4	0.3	0.3	0.7	0.7	0.6	0.5	0.6	1.5				
19-May	0.6	2.4	2.6	2.0	2.0	Z	2.3	1.1	0.8	0.8	0.5	2.1	1.7	3.0	0.6	0.4	0.4	0.3	0.3	0.4	0.6	0.6	0.6	0.6	1.2	3.0				
20-May	Z	0.7	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.8	0.6	0.3	0.5	0.6	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.8				
21-May	0.4	Z	0.7	0.6	0.4	0.5	1.2	5.5	2.2	1.5	6.7	3.7	1.1	0.8	3.3	1.5	0.9	0.4	0.3	0.3	0.2	0.9	0.6	0.8	1.5	6.7				
22-May	0.6	0.5	Z	0.6	0.4	0.4	0.9	3.8	2.3	1.4	4.8	2.8	1.1	1.3	1.1	1.8	2.1	1.4	2.0	0.9	1.0	0.8	0.6	0.5	1.4	4.8				
23-May	0.4	0.3	0.4	Z	0.7	0.7	0.8	0.9	1.0	0.8	1.2	2.0	0.8	2.2	2.0	0.6	0.6	0.5	1.1	0.6	0.7	4.3	2.6	3.8	1.3	4.3				
24-May	1.4	2.8	1.2	0.5	Z	2.0	2.2	2.2	0.8	1.1	1.4	1.5	2.0	1.1	1.1	1.3	1.2	0.9	0.8	0.7	0.7	0.7	1.0	2.5	1.4	2.8				
25-May	2.6	2.7	2.4	2.4	2.8	Z	3.5	2.3	1.9	1.2	0.8	0.8	1.0	0.9	0.9	0.8	1.0	1.1	1.0	0.7	0.9	0.6	0.4	0.4	1.4	3.5				
26-May	Z	1.1	1.5	2.1	2.6	2.7	2.6	2.2	2.1	1.2	0.9	0.7	3.5	0.7	0.7	1.9	2.3	1.7	0.9	0.9	2.0	1.8	1.0	6.3	1.9	6.3				
27-May	1.2	Z	2.3	2.5	4.0	2.9	3.6	0.7	M	M	0.2	0.2	0.5	3.0	2.0	1.2	1.0	2.6	4.8	2.5	3.6	5.5	4.7	4.4	2.6	5.5				
28-May	3.3	2.1	Z	2.1	3.0	4.3	4.9	6.9	C	C	C	C	C	4.6	3.7	5.3	4.8	5.6	2.5	1.2	1.6	1.0	2.5	7.7	3.7	7.7				
29-May	8.6	5.3	3.9	Z	2.4	2.0	2.7	1.3	1.1	2.5	5.8	6.2	4.4	1.3	2.3	1.2	3.1	1.3	5.9	9.1	9.3	16.3	20.4	18.2	5.8	20.4				
30-May	13.0	4.5	3.8	3.6	Z	5.7	8.6	1.8	1.9	3.3	3.3	2.1	1.4	1.0	1.4	3.0	4.6	7.4	5.5	10.3	15.4	6.7	4.0	13.9	5.5	15.4				
31-May	31.1	46.8	36.4	18.0	6.6	5.8	11.4	10.7	Z	4.3	3.2	1.9	10.1	13.0	13.6	10.7	8.0	3.5	1.6	2.0	1.7	1.8	1.2	1.1	10.6	46.8				
5.4 4.9 4.6 3.7 5.5 7.6 5.8 3.5 2.5 2.4 3.0 2.8 2.6 2.6 2.9 3.5 3.0 3.0 2.9 3.1 4.1 5.0 6.0 5.6																									Diurnal Average					
31.1 46.8 36.4 18.0 24.5 32.5 36.5 15.6 10.9 10.0 11.5 16.5 11.1 13.0 18.8 17.2 10.9 12.4 16.5 16.1 36.3 35.1 48.1 26.2																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	687	97.31	97.31
21 - 40	16	2.27	99.58
41 - 80	3	0.42	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	37	23	10	15	30	40	111	146	47	25	23	36	37	44	35	28	687
21 - 40	0	0	0	0	0	0	1	2	1	2	2	1	3	3	0	1	16
11 - 80	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	23	10	15	30	40	112	149	48	27	26	37	41	47	35	29	706

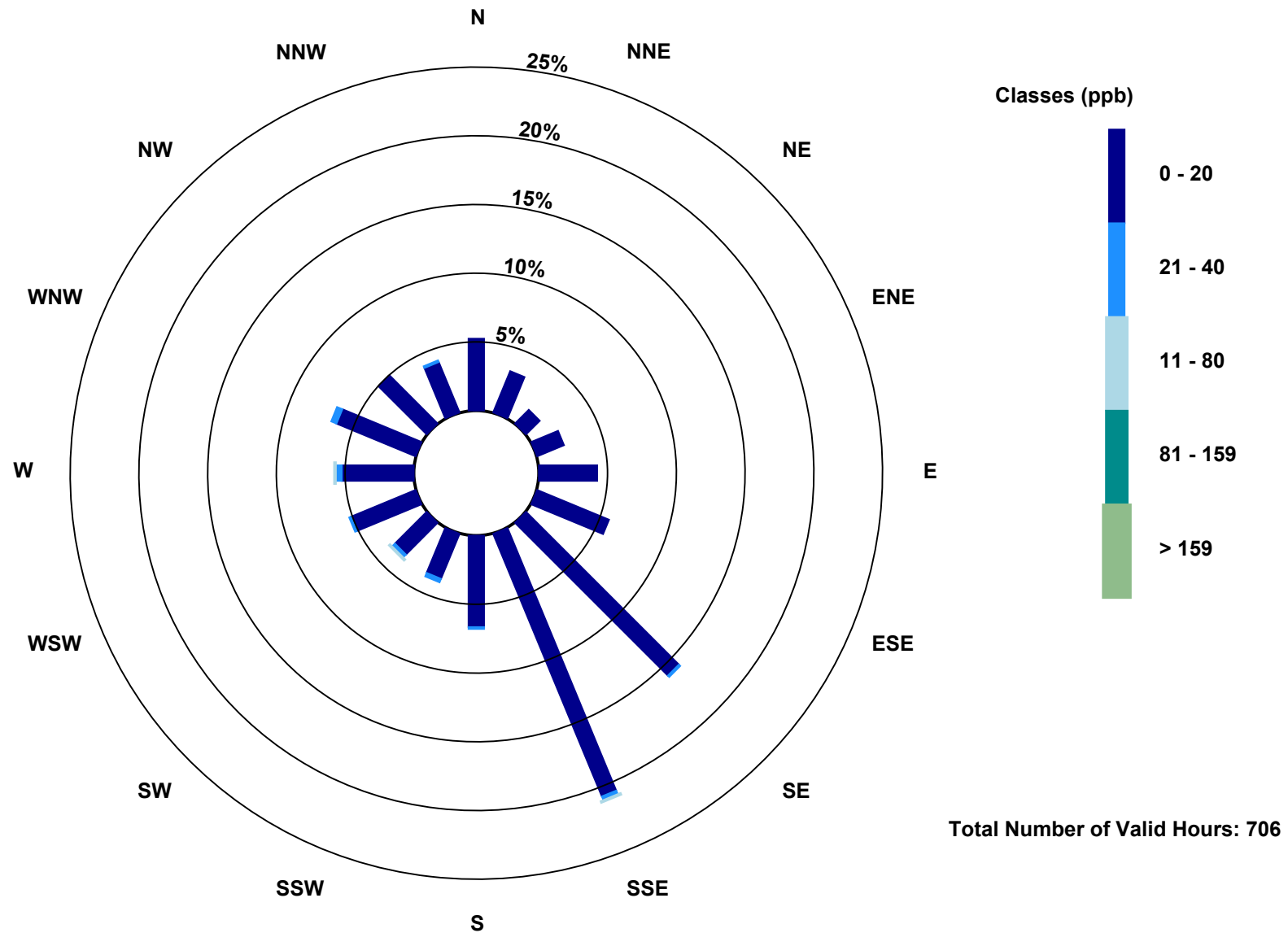
Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

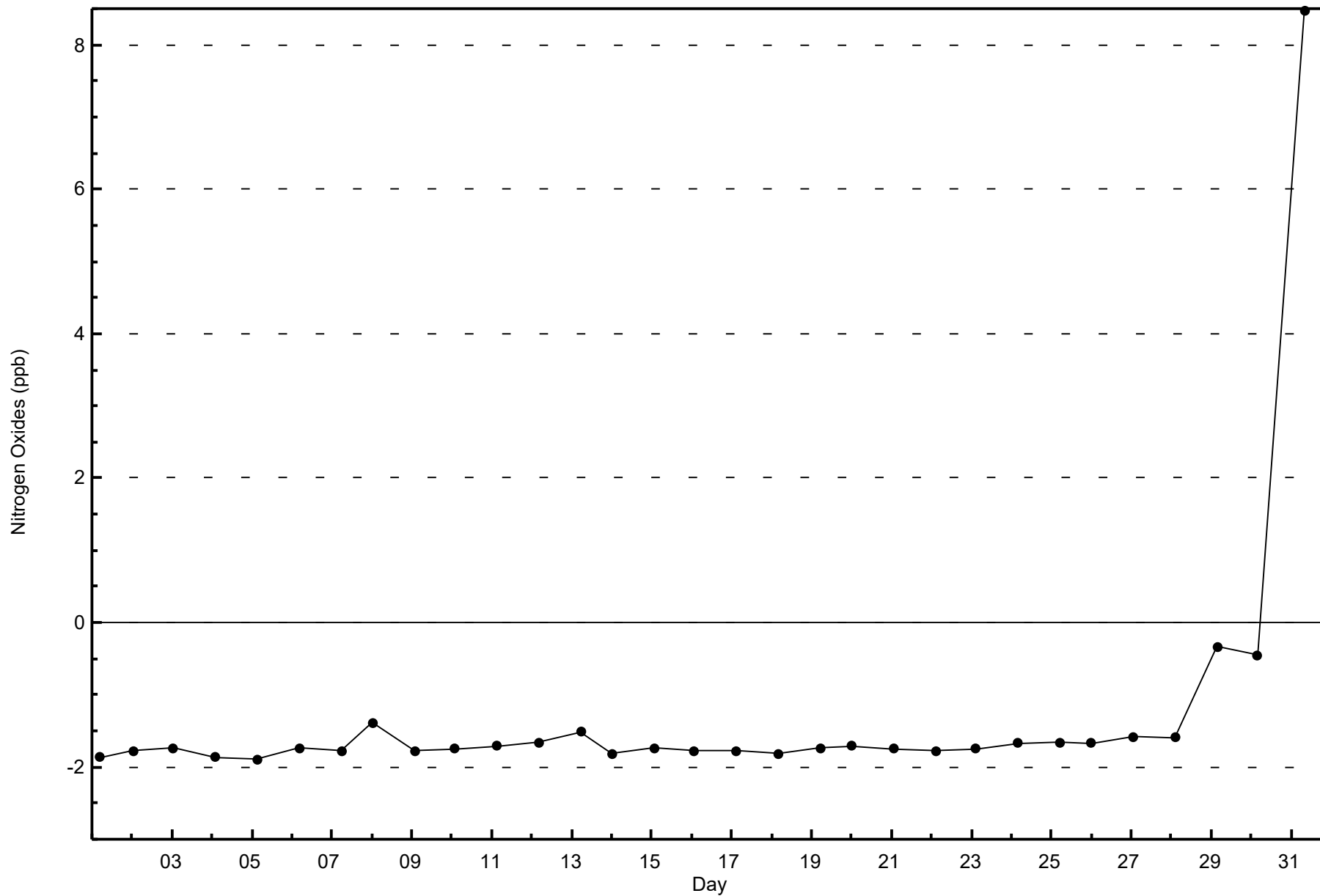
Nitrogen Oxides (NO_x) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

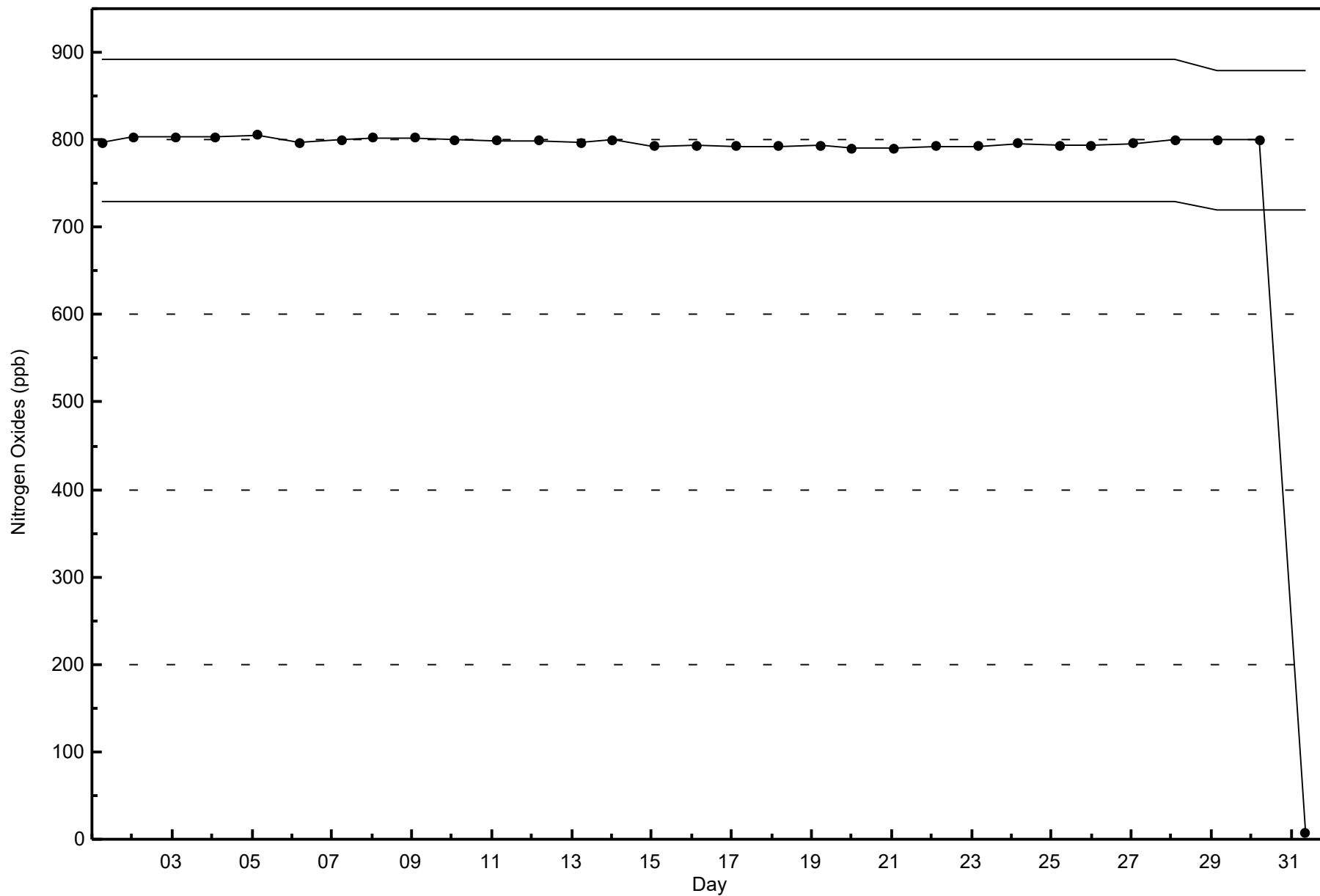
Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

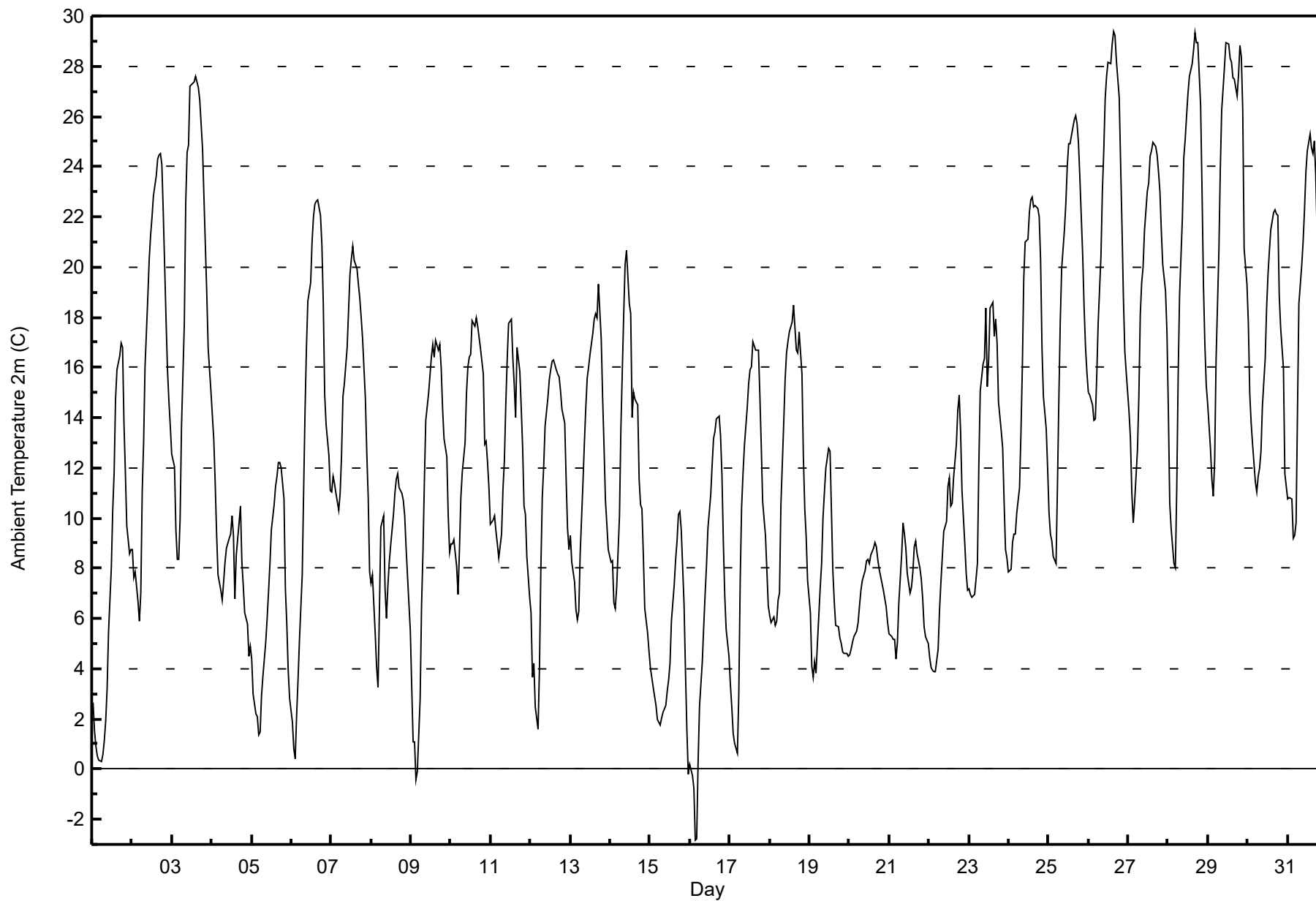
Sawbones Bay - May 2025

Maximum Value: 29.4 C on May 26 16:00																				Maximum Daily Average: 23.0 C on May 29										Hours in Service: 744	
Minimum Value: -2.8 C on May 16 04:00																				Minimum Daily Average: 4.6 C on May 15										Hours of Data: 744	
Maximum Diurnal Average: 18.1 C at hour 17																				Minimum Diurnal Average: 6.0 C at hour 5										Hours of Missing Data: 0	
Monthly Average: 12.83 C																				Percentiles: P ₁ = 0.2 P ₁₀ = 4.3 Q ₁ = 7.7 Median = 11.7 Q ₃ = 17.4 P ₉₀ = 23.3 P ₉₉ = 28.8										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-May	2.7	1.5	0.9	0.5	0.3	0.3	0.6	1.1	1.9	3.2	5.4	8.0	10.3	11.8	14.7	15.9	16.5	17.0	16.8	13.8	11.8	9.7	8.6	8.7	7.6	17.0					
2-May	8.8	7.6	7.8	6.7	5.9	7.0	11.0	13.0	16.0	18.8	20.3	21.3	22.0	22.8	23.6	24.3	24.5	24.5	24.1	22.2	17.8	15.9	14.7	13.6	16.4	24.5					
3-May	12.6	12.0	9.5	8.4	8.4	10.0	13.7	17.8	22.6	24.6	24.9	27.2	27.3	27.4	27.6	27.4	27.1	26.6	24.7	22.7	20.9	18.9	16.7	15.0	19.7	27.6					
4-May	14.1	13.1	11.4	9.3	7.7	7.1	6.7	7.4	8.2	8.8	9.2	9.3	10.1	9.3	6.8	8.5	9.8	10.5	8.3	7.3	6.2	5.8	4.5	4.9	8.5	14.1					
5-May	4.4	3.0	2.2	2.1	1.4	1.5	2.9	3.7	5.1	6.0	7.1	8.2	9.5	10.5	11.2	11.7	12.2	12.2	12.0	10.7	7.2	5.8	4.0	2.8	6.6	12.2					
6-May	1.9	0.8	0.4	2.2	3.6	5.1	7.8	11.1	14.3	16.8	18.7	19.4	21.0	22.0	22.5	22.6	22.6	22.1	20.9	18.5	14.9	13.7	12.5	11.1	13.6	22.6					
7-May	11.1	11.7	11.4	11.0	10.3	11.0	12.5	14.8	15.3	16.8	18.2	19.7	20.3	20.8	20.3	19.9	19.3	18.8	18.0	17.1	14.7	12.6	10.8	7.8	15.2	20.8					
8-May	7.4	7.7	5.4	4.1	3.2	6.4	9.6	10.1	7.2	6.0	7.3	8.3	8.9	10.1	11.0	11.5	11.7	11.2	11.0	10.7	10.1	8.8	7.7	5.5	8.4	11.7					
9-May	3.3	1.1	1.1	-0.4	-0.1	2.8	6.5	8.6	11.4	13.9	14.9	15.7	16.4	16.9	16.4	17.1	16.7	16.9	16.0	14.3	13.2	12.5	10.1	8.6	10.6	17.1					
10-May	9.0	9.0	9.2	8.1	6.9	8.8	10.8	11.8	13.0	15.0	16.0	16.4	16.5	17.9	17.6	18.0	17.6	17.2	16.7	15.7	13.0	13.0	12.2	11.2	13.4	18.0					
11-May	9.8	9.9	10.1	9.5	8.9	8.4	9.3	11.2	12.3	14.5	16.3	17.7	17.9	16.4	15.3	14.0	16.8	15.8	14.4	12.8	10.5	10.1	8.5	6.9	12.4	17.9					
12-May	6.2	3.7	4.2	2.5	1.6	4.1	8.0	10.8	12.1	13.7	14.8	15.5	15.9	16.3	16.3	15.9	15.7	15.6	15.1	14.4	13.8	11.5	9.6	8.7	11.1	16.3					
13-May	9.3	8.2	7.4	6.3	5.9	6.3	8.6	11.4	13.0	14.4	15.6	16.0	16.5	17.4	17.9	18.1	18.0	19.3	17.2	14.8	12.8	10.7	9.8	8.7	12.7	19.3					
14-May	8.3	8.3	6.6	6.4	7.3	10.1	13.5	15.8	18.1	20.1	20.7	18.5	18.1	14.0	15.0	14.7	14.5	11.6	10.5	10.4	8.5	6.4	5.4	4.7	12.0	20.7					
15-May	4.1	3.7	3.2	2.5	2.0	1.8	1.8	2.0	2.3	2.5	3.1	3.6	4.2	5.9	7.3	8.4	9.1	10.1	10.2	9.5	6.6	3.9	1.6	-0.2	4.6	10.2					
16-May	0.2	-0.3	-0.8	-2.8	-2.8	0.2	2.5	4.3	5.7	7.0	8.1	9.6	10.9	12.1	13.2	13.5	14.0	14.1	13.3	11.7	9.0	6.9	5.5	4.5	6.6	14.1					
17-May	3.4	2.5	1.4	1.0	0.6	3.0	7.5	10.4	11.8	12.9	14.4	15.4	15.9	16.0	17.0	16.7	16.7	16.7	14.9	12.9	10.7	9.3	7.9	6.5	10.2	17.0					
18-May	6.1	5.8	6.1	5.7	5.9	6.7	7.0	10.6	13.8	15.5	16.6	17.0	17.4	17.8	18.5	17.6	16.7	16.6	17.4	15.7	12.5	10.4	9.2	7.5	12.3	18.5					
19-May	6.3	4.1	3.6	4.3	3.8	5.0	7.2	8.2	10.1	11.1	12.0	12.8	12.6	10.2	7.9	6.7	5.7	5.7	5.2	5.0	4.7	4.6	4.6	4.5	6.9	12.8					
20-May	4.5	4.8	5.1	5.3	5.5	5.9	6.5	7.1	7.5	7.9	8.3	8.3	8.2	8.5	8.8	9.0	8.8	8.4	7.9	7.7	7.1	6.8	6.5	5.9	7.1	9.0					
21-May	5.4	5.3	5.2	5.2	4.4	5.0	6.6	8.5	9.8	9.3	8.8	7.8	7.0	7.2	7.9	8.9	9.1	8.6	8.0	7.6	6.8	5.7	5.3	5.0	7.0	9.8					
22-May	4.4	4.0	3.9	3.9	3.9	4.8	6.3	7.5	8.4	9.4	9.9	11.3	11.6	10.5	10.6	11.6	12.9	14.3	14.9	13.5	11.1	9.0	7.8	7.1	8.9	14.9					
23-May	7.2	7.0	6.9	7.0	7.6	8.2	12.1	15.0	16.1	16.3	18.4	15.2	16.3	18.3	18.6	17.2	17.9	16.9	14.6	13.4	12.8	10.6	8.7	8.4	13.0	18.6					
24-May	7.9	8.0	9.0	9.4	9.4	10.2	11.2	13.4	16.0	19.6	21.0	21.1	22.2	22.7	22.8	22.4	22.5	22.3	22.0	20.3	16.8	14.9	13.5	12.0	16.3	22.8					
25-May	10.2	9.4	9.1	8.5	8.2	11.3	14.7	17.8	19.9	21.5	22.6	24.0	24.9	24.9	25.2	25.9	26.0	25.7	24.9	23.5	20.4	18.4	16.8	15.8	18.7	26.0					
26-May	15.0	14.9	14.5	13.9	13.9	15.7	17.7	20.4	23.0	24.6	26.7	27.6	28.1	28.1	28.9	29.4	29.2	28.2	26.7	24.1	21.6	18.7	16.6	15.8	21.8	29.4					
27-May	14.2	13.2	11.0	9.8	10.7	12.7	14.9	18.1	19.4	20.0	21.5	23.0	23.4	24.4	24.7	24.9	24.8	24.5	23.8	23.0	21.4	20.1	19.0	17.4	19.2	24.9					
28-May	14.3	10.6	9.6	8.2	8.0	11.2	15.7	18.8	22.0	24.3	25.1	26.0	26.9	27.6	28.1	28.7	29.3	29.0	28.9	26.4	23.1	19.3	16.9	15.3	20.6	29.3					
29-May	14.6	12.8	11.5	10.9	12.3	16.3	20.6	23.8	26.2	27.1	28.0	28.9	28.9	28.3	28.1	27.6	27.5	26.8	27.7	28.8	28.4	26.3	20.7	19.3	23.0	28.9					
30-May	17.8	14.9	13.8	13.0	11.4	11.1	11.7	12.0	12.7	14.4	16.4	18.4	19.7	20.7	21.5	22.2	22.3	22.1	22.1	18.9	17.6	16.0	11.8	11.2	16.4	22.3					
31-May	10.8	10.8	10.8	9.2	9.3	9.8	14.2	18.5	20.0	21.0	22.3	23.8	24.6	25.3	24.8	24.5	25.0	23.7	21.2	18.4	14.2	13.1	11.8	10.9	17.4	25.3					
8.2 7.4 6.8 6.2 6.0 7.3 9.7 11.8 13.4 14.7 15.9 16.6 17.2 17.5 17.7 17.9 18.1 17.8 17.1 15.7 13.5 11.9 10.3 9.2																										Diurnal Average					
17.8 14.9 14.5 13.9 13.9 16.3 20.6 23.8 26.2 27.1 28.0 28.9 28.9 28.3 28.9 29.4 29.3 29.0 28.9 28.8 28.4 26.3 20.7 19.3																										Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Sawbones Bay - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	7	0.94	0.94
0 - 10	288	38.71	39.65
10 - 20	318	42.74	82.39
> 20	131	17.61	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

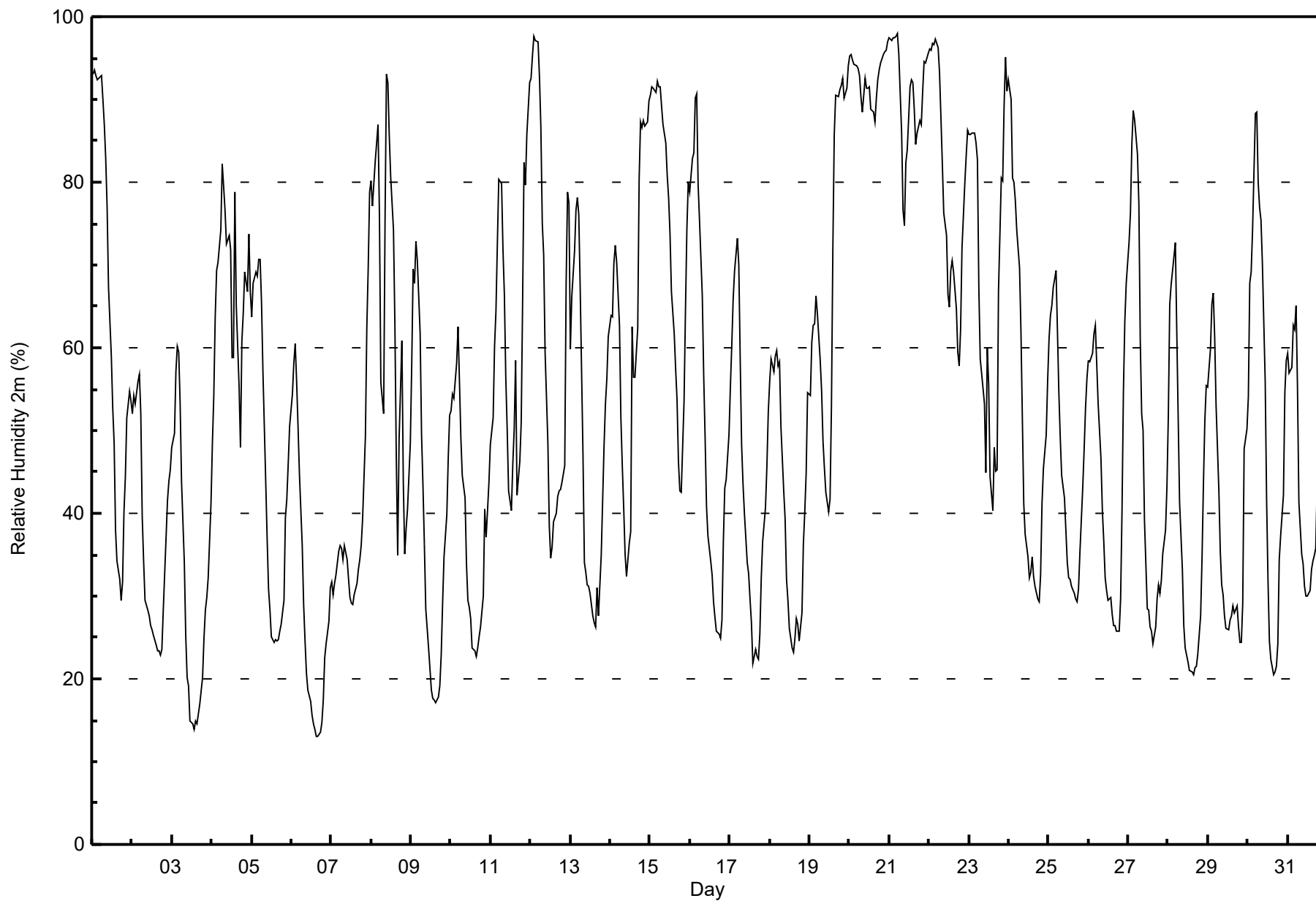
Sawbones Bay - May 2025

Maximum Value: 98.0 % on May 21 06:00																				Maximum Daily Average: 92.7 % on May 20					Hours in Service: 744			
Minimum Value: 13.0 % on May 6 16:00																				Minimum Daily Average: 28.8 % on May 6					Hours of Data: 744			
Maximum Diurnal Average: 74.5 % at hour 5																				Minimum Diurnal Average: 37.9 % at hour 17					Hours of Missing Data: 0			
Monthly Average: 53.75 %																				Percentiles: P ₁ = 14.6 P ₁₀ = 25.0 Q ₁ = 32.3 Median = 51.9 Q ₃ = 72.5 P ₉₀ = 90.2 P ₉₉ = 97.1					Hours of Calibration: 0			
																				Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																				Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			21	22	23	24		
1-May	93.0	93.6	92.9	92.4	92.6	92.8	90.1	87.0	82.8	76.9	67.2	59.1	52.7	48.5	37.9	34.3	32.0	29.5	31.7	40.2	44.4	51.5	54.8	53.6	63.8	93.6		
2-May	52.0	54.3	53.2	55.9	56.7	52.1	39.7	34.3	29.5	28.3	27.6	26.4	25.9	25.2	24.1	23.3	23.4	22.9	23.5	28.3	37.2	41.5	43.8	45.3	36.4	56.7		
3-May	48.0	49.6	57.2	60.2	59.5	53.3	43.8	34.1	25.3	20.1	19.1	15.0	14.5	13.8	14.9	14.5	15.8	16.9	20.1	24.9	28.3	29.8	32.2	41.2	31.3	60.2		
4-May	48.5	54.2	63.7	69.3	70.4	74.3	82.2	79.4	76.6	72.6	73.5	71.8	58.9	58.7	78.8	65.0	55.4	48.0	60.9	64.2	69.1	66.8	73.7	66.8	66.8	82.2		
5-May	63.8	67.7	69.1	68.7	70.7	70.8	65.4	57.1	43.7	37.0	30.9	28.3	25.1	24.4	24.8	24.6	24.8	25.7	26.6	29.4	39.4	41.7	45.9	50.6	44.0	70.8		
6-May	54.4	58.1	60.4	55.9	50.5	44.8	36.1	29.0	24.6	20.7	18.7	17.4	15.6	14.6	13.8	13.0	13.0	13.5	14.7	17.5	22.6	24.2	27.0	31.0	28.8	60.4		
7-May	31.8	30.1	31.5	32.6	35.5	36.2	35.7	34.4	36.0	34.4	32.1	29.8	29.1	28.9	30.2	31.5	33.2	34.3	36.1	39.4	49.3	62.3	69.7	78.7	38.5	78.7		
8-May	80.2	77.2	82.6	84.8	86.9	75.9	55.7	52.1	75.6	93.1	92.0	85.7	80.8	74.2	62.9	46.8	34.9	48.9	60.9	43.8	35.1	38.2	40.5	48.4	64.9	93.1		
9-May	58.0	69.4	67.9	72.8	70.5	61.7	49.5	43.3	36.3	28.5	23.7	21.3	18.7	17.6	17.5	17.0	17.8	19.2	22.9	29.2	34.8	39.9	46.7	51.8	39.0	72.8		
10-May	52.3	54.3	54.0	58.1	62.6	55.9	49.1	44.6	41.9	33.9	29.5	28.6	27.2	23.8	23.4	22.7	23.7	25.0	26.3	30.1	40.5	37.2	40.4	43.7	38.7	62.6		
11-May	48.3	51.5	60.2	64.4	72.5	80.4	79.9	71.9	66.5	56.5	50.2	42.7	40.3	46.0	50.1	58.5	42.2	46.2	51.0	65.7	82.4	79.7	85.8	92.1	61.9	92.1		
12-May	92.5	95.2	97.7	97.1	97.0	92.7	86.5	75.1	71.2	59.5	48.5	38.5	34.6	35.9	39.1	40.0	42.1	42.7	42.9	43.8	45.7	67.8	78.9	77.4	64.3	97.7		
13-May	59.8	66.1	71.7	76.5	78.1	76.2	67.4	47.2	34.0	32.9	31.3	31.3	30.3	27.6	26.7	26.3	31.0	27.6	35.0	41.5	48.1	53.3	56.3	61.4	47.4	78.1		
14-May	63.8	63.7	70.2	72.4	70.4	62.6	51.5	45.8	40.8	35.0	32.3	36.4	37.8	62.5	56.4	56.4	62.3	80.4	87.3	86.6	87.5	86.8	87.3	89.8	63.6	89.8		
15-May	90.5	91.5	91.4	90.9	92.2	91.6	91.6	89.1	86.9	84.8	80.9	78.1	73.8	66.8	61.7	57.4	53.7	46.2	42.7	42.5	53.6	64.4	74.2	80.1	74.0	92.2		
16-May	78.9	82.9	83.5	90.2	90.6	79.9	75.4	66.2	56.6	49.1	40.8	37.3	34.2	32.5	29.3	27.5	25.8	25.5	24.9	27.1	36.7	43.1	44.1	49.5	51.3	90.6		
17-May	55.2	60.4	65.9	69.3	73.1	70.0	58.6	48.3	43.6	40.0	34.0	32.8	29.7	26.8	21.8	23.5	22.7	22.3	25.4	32.3	36.7	40.7	45.7	52.3	43.0	73.1		
18-May	55.9	58.6	57.0	59.0	59.7	57.7	58.4	50.5	42.7	39.4	32.1	29.4	26.1	23.7	23.3	24.9	27.3	26.6	24.5	28.0	36.2	40.2	44.9	54.5	40.9	59.7		
19-May	54.3	60.7	62.7	62.8	66.3	64.1	58.5	54.8	48.6	45.3	42.6	40.3	41.7	52.9	71.8	85.7	90.5	90.4	91.3	91.6	92.5	90.1	91.3	94.1	68.5	94.1		
20-May	95.3	95.5	94.7	94.2	94.0	93.7	92.9	90.4	88.6	92.5	91.3	91.3	91.6	88.9	88.5	87.3	90.2	92.4	93.6	94.4	95.5	95.8	95.9	97.0	92.7	97.0		
21-May	97.5	97.1	97.4	97.5	97.6	98.0	95.4	85.9	76.6	74.8	82.4	84.0	91.5	92.4	92.1	88.8	84.6	85.9	87.5	86.9	91.0	94.6	94.3	95.6	90.4	98.0		
22-May	96.1	96.0	96.9	96.7	97.3	96.2	93.3	87.9	82.2	76.3	73.5	66.5	64.9	69.4	70.5	69.1	64.8	59.5	57.8	62.3	72.0	79.8	83.2	86.3	79.1	97.3		
23-May	85.7	85.8	85.9	86.0	84.8	82.7	67.3	58.6	55.0	53.3	44.9	60.0	55.7	44.3	40.4	47.9	45.0	45.2	66.9	80.5	80.1	89.3	95.1	91.0	68.0	95.1		
24-May	92.4	90.1	80.6	80.0	77.8	74.2	69.7	62.1	51.5	41.2	37.5	34.7	32.2	32.9	34.7	32.4	31.1	29.7	29.4	32.5	41.2	45.5	49.5	56.0	51.6	92.4		
25-May	61.1	63.8	65.0	67.2	69.3	62.0	54.6	49.1	44.5	41.8	38.0	34.1	32.2	32.0	31.1	30.3	29.6	29.3	30.8	35.3	43.1	47.6	52.8	56.3	45.9	69.3		
26-May	58.4	58.3	59.3	61.8	62.7	57.9	53.2	46.6	40.3	36.6	32.3	30.7	29.6	29.9	27.8	26.4	26.4	25.7	25.8	29.7	40.3	54.7	63.2	67.8	43.6	67.8		
27-May	72.8	76.4	84.6	88.6	87.5	83.4	77.4	60.8	52.0	49.9	39.1	28.4	28.3	26.2	25.7	24.2	26.2	29.7	31.4	30.3	31.9	35.0	38.0	43.3	48.8	88.6		
28-May	51.8	65.2	67.6	71.1	72.7	62.1	51.7	41.3	33.2	26.4	23.8	22.9	22.1	21.1	20.9	20.5	21.4	21.6	23.1	27.7	34.6	43.5	51.2	55.4	39.7	72.7		
29-May	55.2	59.9	65.2	66.7	61.3	53.0	42.8	35.4	31.3	30.2	27.6	26.0	25.9	27.1	27.6	28.8	27.9	28.7	26.2	24.4	24.5	29.1	47.8	50.1	38.5	66.7		
30-May	54.0	67.8	69.2	74.2	88.3	88.5	80.0	77.0	75.4	70.2	56.0	41.7	31.8	24.6	22.4	20.6	20.8	21.6	24.2	34.4	37.2	42.1	54.5	58.5	51.5	88.5		
31-May	59.4	57.0	57.6	62.7	62.2	65.2	55.2	41.4	35.1	33.9	31.2	30.1	30.0	30.7	33.2	34.2	34.8	35.8	43.3	49.6	67.7	72.5	80.5	87.2	49.6	87.2		
66.5 69.4 71.5 73.5 74.5 71.3 64.8 57.4 52.5 48.9 44.7 41.9 39.8 39.5 39.5 38.8 37.9 38.6 41.6 45.0 50.9 55.8 60.9 64.7																										Diurnal Average		
97.5 97.1 97.7 97.5 97.6 98.0 95.4 90.4 88.6 93.1 92.0 91.3 91.6 92.4 92.1 88.8 90.5 92.4 93.6 94.4 95.5 95.8 95.9 97.0																										Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Sawbones Bay - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	24	3.23	3.23
20 - 40	235	31.59	34.81
40 - 60	199	26.75	61.56
60 - 80	145	19.49	81.05
80 - 100	141	18.95	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

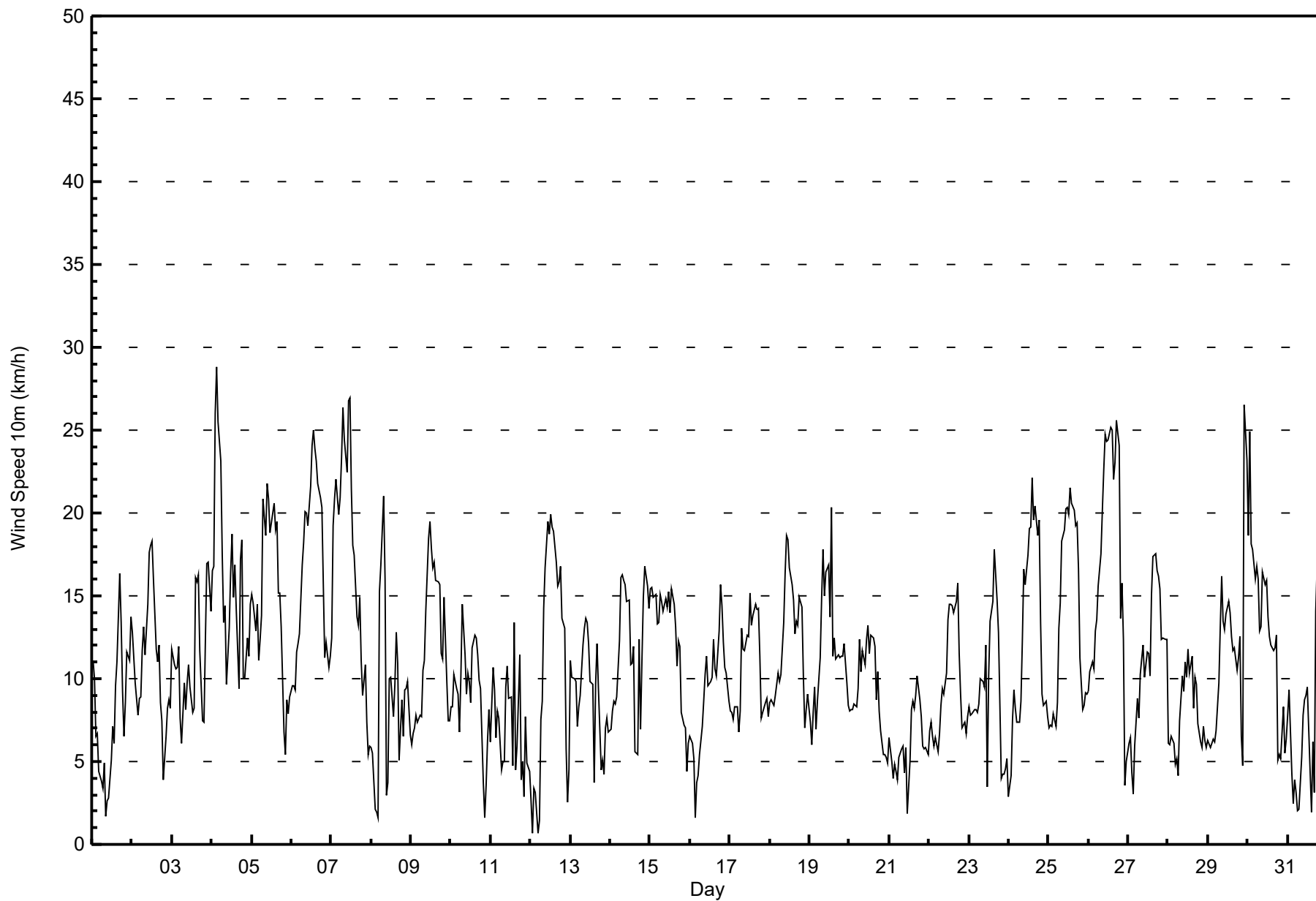
Sawbones Bay - May 2025

Maximum Speed: 29 km/h on May 4 04:00														Maximum Daily Speed Average: 16.2 km/h on May 6														Hours in Service: 744	
Minimum Speed Value: 1 km/h on May 12 05:00														Minimum Daily Speed Average: 2.3 km/h on May 1														Hours of Data: 744	
Maximum Diurnal Speed Average: 4.9 km/h at hour 14														Minimum Diurnal Speed Average: 1.5 km/h at hour 21														Hours of Missing Data: 0	
Monthly Average Velocity: 3.3 km/h 181.1 deg														Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 11 Q ₃ = 15 P ₉₀ = 19 P ₉₉ = 25														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-May	N11	NNE10	N6	N7	NNE4	N4	N3	NE5	N2	SW3	S3	S5	SSE7	SE6	SSW10	SW11	WSW16	SW13	SW9	SE7	SE9	SSE12	SSE11	SSE14	S2.3	WSW16			
2-May	SSE13	SSE11	S10	S8	S9	SSW9	WSW12	W13	W11	WNW14	WNW18	WNW18	WNW18	WNW16	WNW12	WNW11	NW12	WNW9	WNW7	NNE4	ENE7	E8	ESE9	SE8	W5.2	WNW18			
3-May	SSE12	SSE11	SSE11	SSE11	SSE12	SSE8	SSE6	SSE10	S8	SSW10	WSW11	SSW9	WSW8	WNW8	W16	W16	W16	WNW12	NW7	NW7	NW12	NW17	NNW17	NW14	WSW4.7	NNW17			
4-May	NW16	WNW17	WNW26	WNW29	WNW26	W23	W18	NNW13	W14	WNW10	N13	NNW16	NNW19	NW15	NW17	NW14	W9	W17	WNW18	W10	WSW10	SW12	SW11	WSW14	WNW14.0	WNW29			
5-May	WSW15	WSW15	WSW13	WSW15	W11	W12	WNW14	WNW21	WNW19	WNW22	WNW21	NW19	WNW19	NW21	WNW19	NW20	NW15	NW15	NW13	NNW7	ENE5	E9	SE8	SE9	WNW11.2	WNW22			
6-May	SSE10	SSE10	SSE9	SSE12	SSE12	SSE13	SSE17	SSE18	S20	S20	SSW19	S22	S24	S25	S24	SSW23	S22	S21	S20	S16	SSE11	SSE12	SE11	SSE11	S16.2	S25			
7-May	SE12	SSE19	SSE21	SSE22	SSE20	SSE21	SSE23	S26	SSE24	S22	S27	S27	S21	SSW18	SW17	SW14	W13	W15	WNW11	NW9	NNW11	NNW7	WNW5	WNW6	S12.0	S27			
8-May	WNW6	NW5	NNE2	NNE2	SE2	W15	NW17	NW21	NW16	WNW3	SSW4	WNW10	WNW10	WNW8	WNW10	NW13	NW11	SW5	SSW9	W7	WSW9	W9	W10	SW7	WNW7.1	NW21			
9-May	SW6	S7	SSW7	S8	S7	SSW8	SSW8	SW10	SW11	SW14	SW18	SW20	SW18	SW17	WSW17	SW16	WSW16	SW16	SSW11	SSW11	S15	SSW10	SSE7	SE7	SW10.7	SW20			
10-May	SE8	SE8	SE10	SSE9	S9	SW7	SW10	WSW15	W11	W9	W10	W10	WNW9	WSW12	W13	WSW12	W11	WNW10	WSW9	W4	SE2	ENE4	E6	E8	WSW4.8	WSW15			
11-May	ESE6	SSE11	SSE9	S6	SSE8	SSE8	SE5	SE5	SSE5	SE9	SSE11	S9	SSW9	W5	NW13	N5	N6	NW11	N4	SSW5	E3	E8	ENE5	NNW4	SSE2.5	NW13			
12-May	WNW3	WSW1	NNW3	SSE3	N1	NNW1	N8	NE9	NNE14	NNE17	NNE20	NNE19	NE20	NNE19	NE19	NE17	NNE16	NNE16	N17	N14	N13	ENE6	ESE3	NW5	NNE9.8	NE20			
13-May	NNW11	NNW10	NNW10	NW10	NW7	W8	WNW9	NW12	NNW13	NNW14	NW13	NW12	WNW10	WNW10	W4	WSW10	SSW12	SSW9	S4	SSE5	SE4	SSE7	SSE8	SSE7	WNW4.8	NNW14			
14-May	SE7	SE8	SSE9	SSE8	SSE9	SSE12	SSE16	S16	S16	SSW16	SW15	SW15	S11	SE11	SE12	SSW6	SSW5	NNW12	NNE7	N11	N15	N17	N16	N14	SSE3.4	N17			
15-May	N15	N16	N15	NNW15	N13	NNW13	N15	N15	N14	N15	N14	NNW15	NNW14	N15	N15	NNE13	N11	N12	N12	NNE8	NE7	ENE7	NNE4	NNW6	N12.1	N16			
16-May	NNE6	NNE6	NNE5	N2	NW4	N4	NE5	NNE7	NNE9	NNE10	NNE11	N10	NNE10	NE10	E12	ENE11	ENE10	ENE13	ENE16	ENE14	ENE12	E11	E10	E9	NE7.8	ENE16			
17-May	ESE8	E8	E8	ESE8	E8	E7	SE8	SSE13	SE12	SE12	SE13	SE13	SE15	SE13	SE14	ESE14	ESE14	SE14	SE11	ESE8	ESE8	E9	E9	ESE8	ESE10.0	SE15			
18-May	ESE9	ESE9	SE8	SE9	SE10	SE10	SSE10	SSE10	SSE13	SE16	SE19	SE18	SE17	SE16	SE15	ESE13	SE13	SE13	SE15	SE14	SSE10	SE7	ESE8	ESE9	SE11.9	SE19			
19-May	SE7	SSE6	SSE8	SE9	SSE7	SE9	SSE11	SSE15	SSE18	SE15	SE16	SSE17	SE14	SSE20	SE11	SE12	SE11	SE11	ESE11	ESE11	ESE11	ESE12	E10	E8	SE11.3	SSE20			
20-May	E8	E8	E8	E9	E8	E9	ESE12	ESE10	SE12	ESE11	SE12	SE13	ESE12	SE13	SE12	SE12	SE9	SE10	SE8	SE7	SE5	ESE5	ESE5	E5	ESE9.0	SE13			
21-May	E6	E5	SE4	ESE5	E4	SE4	SSE5	S6	SSE6	ESE4	SSW6	NNW2	NE5	ESE8	SE9	SSE8	SSE9	SE10	SE9	SE8	SE6	SSE6	SSE6	SSE5	SE5.2	SE10			
22-May	SE7	SE7	ESE7	SE6	ESE6	SE6	SSE7	SSE8	SSE9	SSE9	SSE10	SSE14	SSE15	SSE14	SSE14	S14	SSE15	SSE16	S12	SSE9	SE7	SE7	SE7	SE8	SSE9.3	SSE16			
23-May	SE8	SE8	SE8	ESE8	ESE8	SE8	SE8	SSE10	SSE10	SE9	SE12	ESE4	SE10	S13	SE15	ESE18	SE16	SE15	SSE13	ESE4	ESE4	SSE4	SE5	SE5	SE9.0	ESE18			
24-May	ESE3	SE4	ESE8	ESE9	SE8	SE7	SE7	SE9	SE12	SSE17	SSE16	S17	S19	SSE19	SSE22	S20	SSE20	S19	SSE20	SSE13	SSE9	SE8	SE9	SSE8	SSE12.0	SSE22			
25-May	SSE7	SSE7	SE7	SE8	SSE7	SSE9	SSE13	SSE15	SSE18	SSE19	SSE20	SSE20	SSE20	SSE22	SSE21	SSE20	SSE19	S19	S17	SSE11	SSE8	SE8	ESE9	ESE9	SSE13.5	SSE22			
26-May	SE9	SE10	SE11	SE11	SSE13	SSE14	SSE16	SSE18	SSE20	SSE23	SSE25	SSE24	SSE24	SSE25	SSE25	SSE22	SSE23	SSE26	SSE24	SSE14	WSW16	W12	NE4	SSW5	SSE15.3	SSE26			
27-May	E6	ESE6	SSE4	WSW3	NNW6	W9	WNW8	NNW10	NNW11	NW12	NNW10	NW12	W12	WSW10	W15	W17	W18	WSW17	WSW16	WSW15	WSW12	WSW12	WSW12	WSW12	W8.6	W18			
28-May	WSW6	S6	S7	S6	SSE5	SSE5	SSE4	WSW7	SW10	SW9	WSW11	WSW10	WSW12	WSW10	WSW11	W8	WSW10	SW10	S7	SE6	SSE6	SSE7	SSE6	SSE6	SW5.9	WSW12			
29-May	SE6	SSE6	SSE6	SSE6	SE6	SSE7	SSE10	SSE13	SSE16	SSE13	S13	S14	SSE15	SSE14	SSE13	SSE12	SSE12	SE11	SE11	SSE13	SSE7	SSW5	WNW27	W23	SSE8.1	WNW27			
30-May	W19	W25	WNW18	W18	W16	WSW17	WSW16	W13	WNW13	WNW16	WNW16	NW16	NW14	WNW13	WNW12	W12	WSW12	WSW13	S5	E5	SW5	SSW8	S5	S6	W10.9	W25			
31-May	SSE8	SSE9	S4	SSW2	NW4	SSE3	SE2	SE2	E5	E8	E9	ENE9	ESE9	SE4	ENE2	ENE6	NNW3	N14	N17	N23	NNW21	NW22	NW19	NNW19	N4.3	N23			
SSE2.3 SSE3.1 SSE2.9 S3.4 SSE3.2 S3.8 S3.9 S3.6 S4.1 S4.3 S4.4 SSW4.3SSW4.6 S4.9 SSW4.7SSW4.3SSW4.7SSW4.2 S3.6 SE2.2 SE1.5 SE2.0 SE1.7 SSE1.7																								Diurnal Average					
W19 W25WNW26WNW29WNW26 W23 SSE23 S26 SSE24 SSE23 S27 S27 SSE24 SSE25 SSE25 SSW23 SSE23 SSE26 SSE24 N23 NNW21 NW22WNW27 W23																								Diurnal Maximum					
All monthly, daily, and diurnal averages have been calculated using vector methods																													



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Sawbones Bay - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Sawbones Bay - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	94	12.63	12.63
6 - 11	328	44.09	56.72
12 - 19	260	34.95	91.67
20 - 28	61	8.20	99.87
29 - 38	1	0.13	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Sawbones Bay - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	8	6	4	4	6	9	14	11	6	6	3	2	3	3	4	5	94
6 - 11	8	10	3	7	26	28	69	67	17	16	12	14	15	19	6	11	328
12 - 19	23	7	2	4	1	7	35	50	13	4	12	25	22	20	22	13	260
20 - 28	1	1	1	0	0	0	0	27	15	1	1	0	3	6	4	1	61
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	24	10	15	33	44	118	155	51	27	28	41	43	49	36	30	744

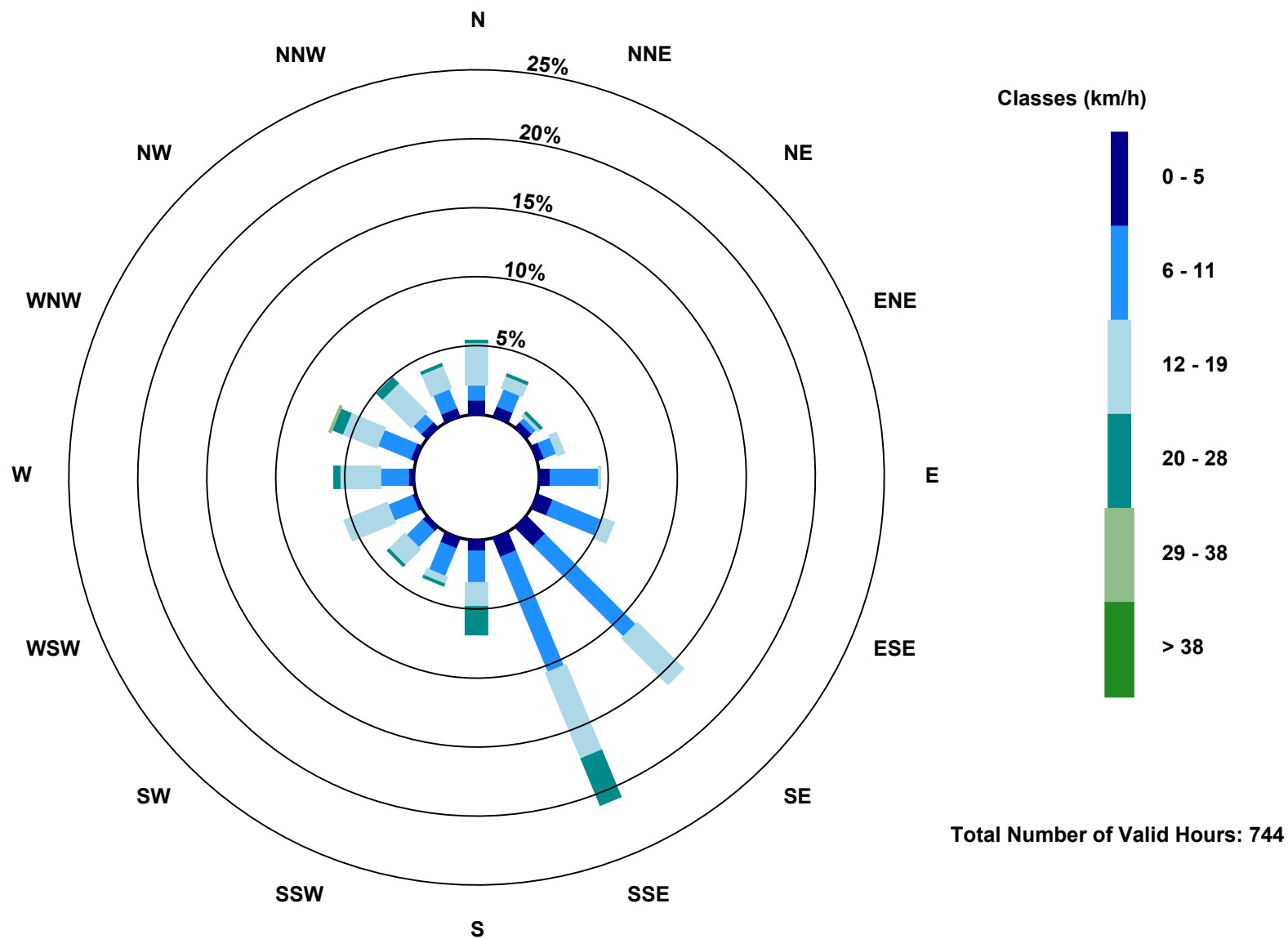
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Sawbones Bay





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Sawbones Bay - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on May 26 21:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on May 29 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	3	2	1	1	1	1	1	1	2	2	3	3	4	4	4	5	5	4	3	2	2	2	2	3	5
2-May	2	2	2	1	1	2	3	2	3	4	5	4	6	5	5	5	5	4	3	1	1	1	2	2	6
3-May	2	2	1	1	2	2	2	2	3	3	3	4	5	5	6	5	5	4	2	1	4	4	4	4	6
4-May	3	4	6	7	6	4	4	4	3	3	4	4	4	4	5	5	3	7	7	2	3	3	3	4	7
5-May	5	3	2	3	3	2	3	5	4	4	5	5	5	5	6	6	5	4	4	3	1	2	1	2	6
6-May	1	1	1	2	2	3	4	5	5	6	6	7	7	8	7	7	7	6	6	5	2	2	2	2	8
7-May	3	5	5	5	4	5	6	8	7	6	7	7	7	6	5	4	4	2	2	2	2	2	1	2	8
8-May	2	1	1	1	2	6	4	5	6	3	3	2	2	2	2	3	5	3	2	2	2	3	2	2	6
9-May	1	1	1	1	1	2	2	3	4	5	5	6	6	5	5	5	4	5	3	3	4	5	2	1	6
10-May	1	2	2	1	2	3	4	4	2	4	4	3	3	5	3	5	3	2	4	3	2	1	1	2	5
11-May	1	3	3	2	1	2	1	1	2	3	3	4	4	3	7	3	4	3	3	4	2	2	2	1	7
12-May	1	2	1	2	2	2	3	2	4	4	4	5	4	5	5	4	4	4	4	3	3	2	1	3	5
13-May	2	2	2	1	2	1	2	3	4	4	5	4	4	4	3	3	3	4	2	1	2	1	1	1	5
14-May	2	1	1	1	2	3	4	4	4	5	5	4	3	3	3	5	4	3	2	3	4	4	4	3	5
15-May	4	4	4	4	3	4	4	4	4	4	3	4	3	3	4	3	3	3	3	2	1	1	1	1	4
16-May	1	1	1	2	1	1	1	3	3	3	4	4	4	4	5	4	5	4	4	3	2	2	2	2	5
17-May	1	1	1	1	1	1	4	4	4	4	4	5	5	5	5	5	5	4	3	2	1	2	2	1	5
18-May	2	1	2	2	2	2	2	3	4	4	6	6	5	5	5	5	4	4	5	4	3	1	1	2	6
19-May	2	1	2	2	2	2	3	5	5	5	5	5	5	6	4	4	3	3	3	3	3	3	2	2	6
20-May	2	2	2	2	2	3	3	3	3	4	4	4	3	3	4	4	2	3	3	2	2	2	1	1	4
21-May	1	1	1	1	3	1	1	2	2	2	2	2	1	2	2	2	2	3	3	2	1	1	1	1	3
22-May	2	1	2	1	1	2	2	2	2	3	3	4	5	5	4	4	4	5	4	4	1	1	1	2	5
23-May	2	1	1	2	2	2	2	3	3	3	4	4	5	6	5	5	5	5	8	2	1	2	2	1	8
24-May	1	1	2	1	2	2	2	3	4	5	5	5	6	6	7	6	6	5	6	4	2	2	2	2	7
25-May	1	1	1	2	1	2	3	4	6	6	7	7	7	6	6	7	6	6	5	3	2	2	2	2	7
26-May	2	2	2	2	3	4	4	5	5	6	7	7	8	7	7	6	7	7	7	4	10	5	1	2	10
27-May	2	3	2	3	1	2	2	4	3	3	4	4	5	4	4	5	4	5	4	4	3	3	2	2	5
28-May	3	1	1	1	1	2	1	2	3	3	4	4	5	6	6	4	5	4	3	2	2	1	1	1	6
29-May	1	1	1	1	1	1	3	4	5	4	4	4	5	4	4	4	5	4	4	5	5	10	6	5	10
30-May	5	6	4	4	4	3	4	3	3	3	4	4	5	4	6	5	4	4	3	2	5	3	1	1	6
31-May	2	1	2	3	3	1	2	1	2	3	3	3	3	2	2	2	3	4	5	5	5	7	6	6	7
5 6 6 7 6 6 6 8 7 6 7 7 8 8 7 7 7 7 8 5 10 10 6 6																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

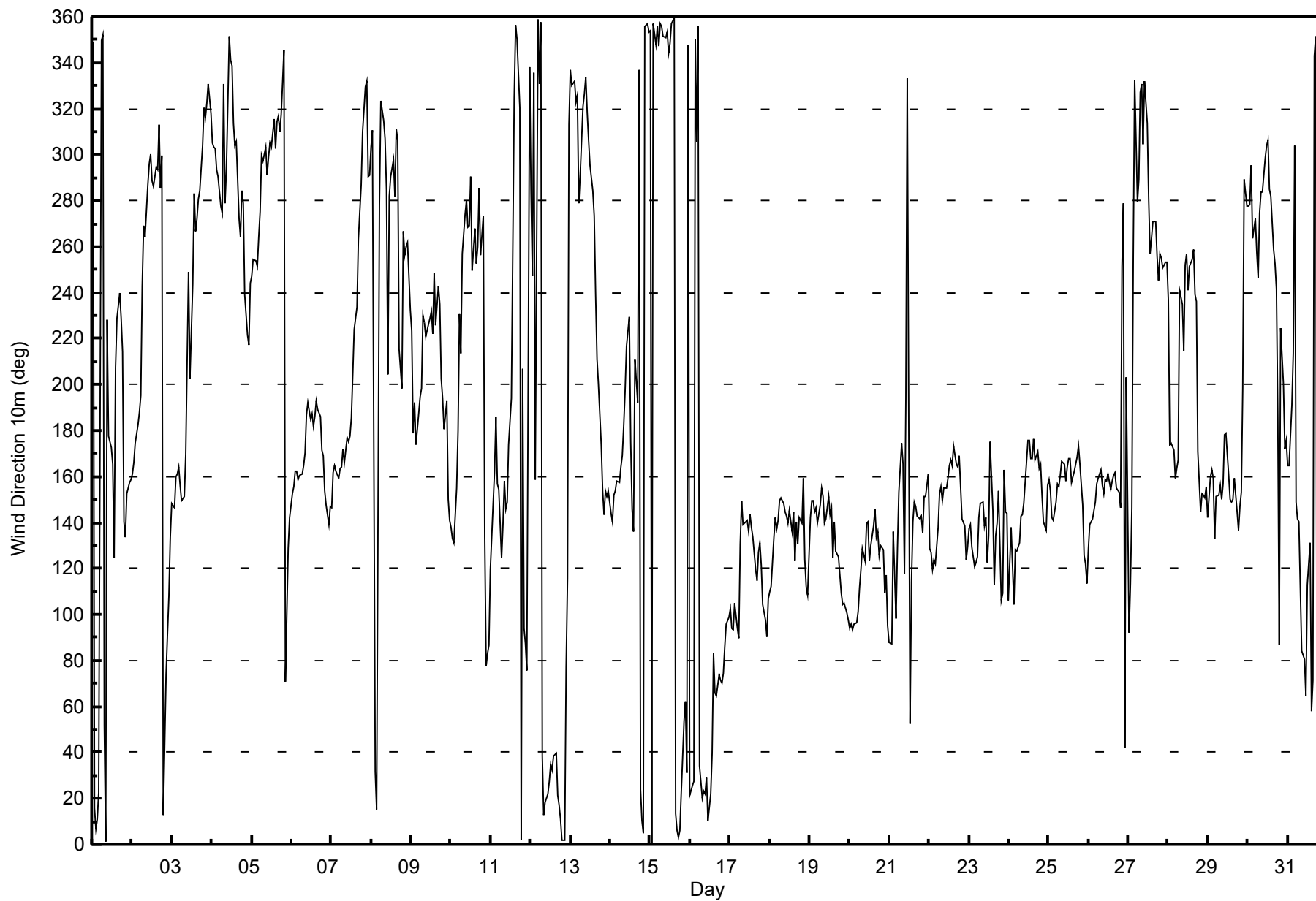
Sawbones Bay - May 2025

Direction of Maximum Speed: 293 deg on May 4 04:00																					Hours in Service:		744			
Direction of Maximum Daily Speed Average: 173.8 deg on May 6																					Hours of Data:		744			
Direction of Minimum Speed: 359 deg on May 12 05:00										Direction of Minimum Daily Speed Average: 2.3 deg on May 1											Hours of Missing Data:		0			
Monthly Average Direction: 181.1 deg																					Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	349	16	7	11	23	349	352	52	1	228	177	173	166	124	207	229	240	229	214	140	134	152	158	159		184.5
2-May	161	166	175	182	188	195	243	269	264	287	296	300	289	286	295	294	313	285	300	13	74	92	108	134		263.9
3-May	148	147	160	161	164	156	150	152	170	211	249	202	244	283	267	272	280	284	304	321	316	322	331	318		249.5
4-May	305	303	303	293	291	278	275	331	279	294	351	341	338	314	304	306	272	264	285	279	239	222	217	244		291.8
5-May	247	255	254	251	264	275	299	297	303	291	299	305	303	316	303	314	317	310	317	346	71	100	129	142		294.4
6-May	153	156	163	162	159	161	161	164	171	187	192	185	187	182	186	193	189	186	172	169	154	148	139	147		173.8
7-May	146	162	165	162	160	164	164	172	166	177	175	177	185	204	224	233	263	275	287	310	330	332	291	291		187.7
8-May	303	310	31	15	144	278	324	315	307	285	204	282	291	298	282	311	307	216	198	267	256	260	262	232		287.3
9-May	223	179	192	174	181	194	198	230	227	221	226	229	232	222	248	226	243	235	203	194	180	193	150	141		213.8
10-May	138	133	131	155	180	231	214	257	274	280	268	269	290	250	268	253	260	286	256	274	134	78	83	87		240.8
11-May	120	148	162	186	157	155	124	139	158	146	149	174	194	259	325	356	351	320	2	207	94	87	75	338		151.7
12-May	284	247	335	159	359	331	357	38	13	19	22	28	35	33	38	40	21	17	11	2	2	77	116	313		22.1
13-May	337	330	332	323	326	279	291	321	327	333	318	306	296	284	274	239	211	200	174	154	143	154	151	154		294.1
14-May	144	140	152	154	158	158	164	169	182	197	216	229	175	146	136	211	192	337	24	10	5	356	357	353		168.4
15-May	354	1	357	348	356	347	357	356	352	351	353	344	348	357	359	13	6	3	6	23	53	62	31	348		359.4
16-May	21	25	27	350	306	356	34	20	23	22	30	11	22	39	83	66	65	74	71	70	75	86	96	99		52.2
17-May	103	94	93	105	94	90	131	149	139	140	141	136	144	138	133	120	115	127	131	122	104	97	90	107		122.3
18-May	110	112	133	142	137	141	149	151	148	145	143	140	145	136	145	123	140	131	142	140	159	124	112	109		137.5
19-May	142	150	149	145	147	139	148	155	151	139	141	152	144	147	125	140	128	125	117	109	104	105	101	98		134.9
20-May	94	96	93	96	96	101	111	120	129	123	140	140	123	130	139	146	134	136	126	130	128	109	117	95		121.4
21-May	88	87	136	117	98	128	153	174	165	118	194	333	52	114	141	149	147	143	141	143	136	151	151	161		137.1
22-May	129	127	119	124	122	138	153	155	149	155	155	159	165	167	165	173	165	164	169	156	141	138	124	130		152.8
23-May	137	139	129	121	122	125	142	148	149	138	142	123	134	175	145	113	134	140	154	106	109	163	145	144		138.0
24-May	106	138	121	105	128	128	131	143	144	148	157	176	176	168	168	176	167	171	163	166	152	140	137	156		156.6
25-May	158	154	142	141	149	157	156	160	167	166	158	164	168	168	157	162	165	169	173	166	148	126	122	114		158.7
26-May	128	139	142	146	149	157	159	163	157	153	159	158	161	154	158	161	162	155	153	147	251	279	42	203		159.1
27-May	92	114	147	255	332	280	289	327	331	304	332	313	281	257	264	271	271	255	245	257	255	251	253	253		273.8
28-May	237	174	174	171	159	163	167	241	235	215	252	257	241	252	255	259	239	236	171	144	152	152	151	155		214.0
29-May	142	160	163	159	133	151	152	156	150	157	178	179	160	150	149	150	159	145	137	147	153	198	289	278		167.0
30-May	278	278	295	264	272	258	247	275	283	284	298	304	306	285	282	259	253	242	186	87	224	200	172	176		270.1
31-May	165	165	191	213	304	149	142	140	84	82	81	65	113	131	58	72	343	352	7	356	341	319	326	335		5.6
146.4 151.4 157.6 169.5 165.9 187.0 180.7 189.8 186.3 186.4 189.9 202.5 194.2 188.5 198.7 200.6 205.5 204.4 172.0 136.4 135.1 136.7 127.4 162.9																										
Diurnal Average																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Sawbones Bay - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Sawbones Bay - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 87 deg on May 10 20:00																		Hours in Service: 744							
Minimum Value: 6 deg on May 16 03:00																		Hours of Data: 744							
Percentiles: P ₁ = 7 P ₁₀ = 12 Q ₁ = 15 Median = 19 Q ₃ = 25 P ₉₀ = 38 P ₉₉ = 78																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	15	16	15	12	15	24	26	18	83	82	81	72	51	66	41	36	24	25	25	22	13	12	10	10	83
2-May	10	10	12	12	11	16	23	13	18	21	19	22	27	29	32	38	25	39	29	28	11	14	14	14	39
3-May	11	10	7	6	9	14	15	15	22	36	31	36	52	75	25	22	21	23	12	12	12	13	15	16	75
4-May	15	13	13	15	12	12	12	24	15	27	20	19	21	28	15	23	22	19	17	20	22	18	17	16	28
5-May	14	11	11	11	14	9	15	16	19	21	23	25	22	24	26	22	24	21	19	33	23	15	16	13	33
6-May	8	7	7	10	11	13	13	15	17	19	20	19	20	18	21	20	19	18	15	15	12	12	14	12	21
7-May	14	14	14	12	13	14	14	15	15	17	18	18	20	23	22	20	23	13	12	13	9	13	12	10	23
8-May	16	18	59	44	55	16	16	15	14	76	73	17	15	21	20	16	12	48	18	29	14	19	13	31	76
9-May	28	20	21	12	14	21	18	20	26	25	21	25	31	28	30	27	23	25	18	15	19	34	10	12	34
10-May	14	19	16	11	10	35	19	18	18	36	45	42	61	38	27	30	26	19	42	87	78	37	8	10	87
11-May	23	20	14	17	13	12	26	27	22	24	23	36	48	57	54	51	41	17	59	59	66	18	35	13	66
12-May	43	79	32	78	71	65	21	19	17	18	17	19	15	16	16	16	15	15	16	15	22	33	26	62	79
13-May	11	12	9	9	14	10	21	20	24	25	30	34	34	38	79	33	21	29	21	10	19	15	10	15	79
14-May	20	14	7	7	11	13	15	18	20	22	34	25	25	21	21	77	59	23	37	18	16	16	17	17	77
15-May	16	17	17	15	17	15	17	19	20	19	20	18	20	20	21	27	23	28	19	22	8	7	20	12	28
16-May	10	9	6	47	14	12	23	34	34	29	30	44	50	48	30	36	33	22	14	10	8	12	12	16	50
17-May	13	11	10	11	9	11	27	18	26	26	34	43	28	30	36	28	28	25	19	17	12	17	11	13	43
18-May	15	16	14	13	13	15	14	19	23	22	23	26	27	32	29	31	22	23	20	19	14	19	13	17	32
19-May	16	15	12	14	19	17	16	17	20	25	22	20	24	17	21	22	20	22	19	18	17	16	15	15	25
20-May	13	14	14	13	14	14	18	21	22	20	20	18	21	22	21	20	20	19	19	18	16	20	21	24	24
21-May	13	13	19	15	15	21	15	22	27	38	25	69	27	26	21	23	21	19	17	16	13	12	16	12	69
22-May	20	17	14	14	19	17	16	17	19	20	19	19	19	18	19	19	19	19	22	16	13	13	14	14	22
23-May	14	13	15	16	16	16	19	20	23	26	26	65	29	38	32	20	20	18	33	29	13	26	50	33	65
24-May	48	24	22	12	16	16	15	20	19	21	23	21	20	20	19	20	17	18	16	16	14	13	15	15	48
25-May	10	12	13	13	12	13	15	18	20	21	20	19	20	19	21	20	21	19	18	18	13	15	16	14	21
26-May	16	15	14	14	15	16	16	17	17	18	17	20	19	19	18	19	18	17	16	17	56	18	57	46	57
27-May	18	14	17	65	26	10	19	23	25	24	36	36	35	40	26	22	21	23	23	14	14	13	9	9	65
28-May	42	16	18	8	13	14	31	22	24	33	38	45	40	51	48	52	39	35	30	17	17	12	7	7	52
29-May	11	10	8	7	13	15	16	18	19	20	21	21	21	19	20	19	20	21	24	28	69	70	12	12	70
30-May	19	16	14	17	13	23	16	14	13	15	20	22	34	32	45	35	32	27	55	25	70	23	9	10	70
31-May	10	11	20	70	62	50	72	40	33	26	37	28	28	62	82	21	66	15	15	18	21	20	20	26	82
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS506
JACKFISH 1
MAY 2025**

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	654	33	90	92.34	17.9	0	2.3	0
H2S (ppb) Average	653	34	91	92.34	3.5	0	0.6	0
NO2 (ppb) Average	654	34	90	92.47	43.7	0	4.2	-
NO (ppb) Average	654	34	90	92.47	9.1	-	1.2	-
NOX (ppb) Average	654	34	90	92.47	44.7	-	5.4	-
Temperature 2 m (C) Average	688	0	56	92.47	30.8	-	21.2	-
Relative Humidity (%) Average	669	0	75	89.92	99.3	-	94.2	-
Wind Speed 10 m (km/h) Average	687	0	57	92.34	18	-	9	-
Wind Direction 10 m (deg) Average	687	0	57	92.34	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	654	0.48	1.4	-	0	0	0	0.1	0.3	1.1	17.9
H2S (ppb) Average	653	0.23	0.4	-	0	0	0.1	0.1	0.2	0.4	3.5
NO2 (ppb) Average	654	1.61	2.7	-	0.1	0.5	0.7	1	1.8	2.9	43.7
NO (ppb) Average	654	0.29	0.7	-	0	0	0	0.1	0.3	0.7	9.1
NOX (ppb) Average	654	1.9	3.1	-	0.1	0.5	0.7	1.1	2.1	3.3	44.7
Temperature 2 m (C) Average	688	12.64	6.8	-	-1.7	4.7	7.7	11.5	16.9	22.8	30.8
Relative Humidity (%) Average	669	53.99	23.2	-	13.8	25.5	33.1	52	72	89.4	99.3
Wind Speed 10 m (km/h) Average	687	6.2	3	-	0	2	4	6	8	11	18
Wind Direction 10 m (deg) Average	687	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2	22 May 2025 10:00	22 May 2025 10:00	1	Maintenance - sample manifold cleaned
ALL PARAMETERS	29 May 2025 17:00	01 Jun 2025 00:00	56	Station power failure
Relative Humidity	21 May 2025 01:00	21 May 2025 08:00	8	Sensor operated out of range
Relative Humidity	21 May 2025 21:00	22 May 2025 07:00	11	Sensor operated out of range
Wind Speed, Wind Direction	28 May 2025 21:00	28 May 2025 21:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

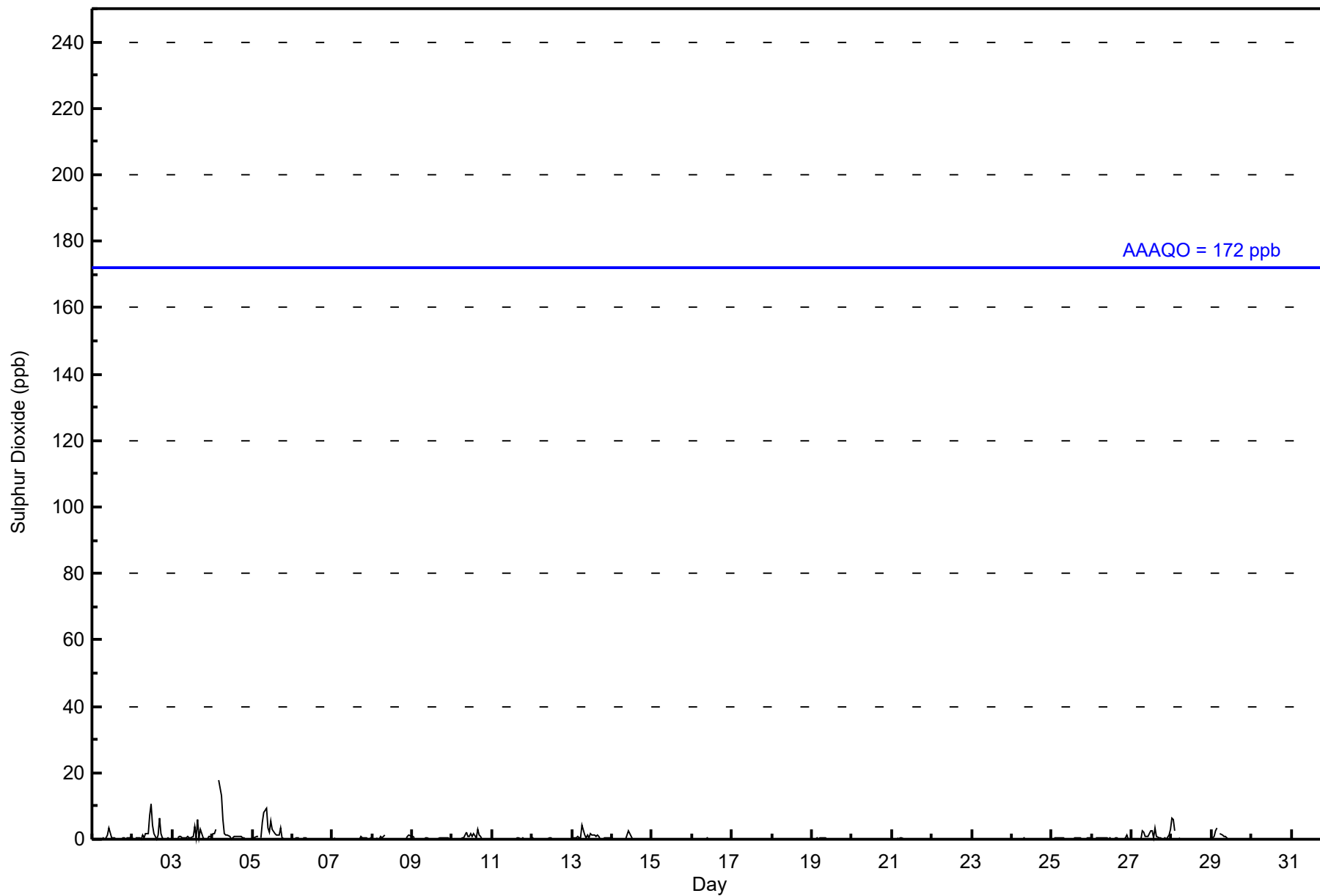
Jackfish 1 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 17.9 ppb on May 4 05:00 Maximum Daily Average: 2.3 ppb on May 4																			Hours in Service: 744 Hours of Data: 654 Hours of Missing Data: 90 Hours of Calibration: 33 Percent Operational Time: 92.3							
Minimum Value: 0.0 ppb on May 1 17:00 Minimum Daily Average: 0.0 ppb on May 17 Maximum Diurnal Average: 0.9 ppb at hour 5 Minimum Diurnal Average: 0.1 ppb at hour 20 Monthly Average: 0.48 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.1 P ₉₉ = 6.3																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.5	1.4	3.2	0.4	0.4	0.5	0.2	0.1	0.0	0.1	0.3	0.3	0.2	0.4	0.6	0.8	0.5	3.2
2-May	0.5	Z	0.3	0.4	0.4	0.1	1.3	0.5	1.8	1.6	7.3	10.4	4.2	1.6	0.1	1.1	6.2	1.7	0.6	0.1	0.1	0.3	0.1	0.1	1.8	10.4
3-May	0.1	0.1	Z	0.6	0.7	0.7	0.6	0.5	0.5	1.0	0.6	0.3	1.0	3.6	0.3	6.0	0.6	3.2	0.2	0.0	0.0	0.0	0.8	1.0	1.0	6.0
4-May	1.5	1.9	2.8	Z	17.9	13.0	6.1	1.6	1.3	1.5	0.7	0.2	0.2	0.9	0.9	0.8	0.7	0.7	0.5	0.5	0.2	0.1	0.0	0.1	2.3	17.9
5-May	0.5	0.5	1.0	0.7	Z	0.6	4.9	8.0	9.4	3.4	2.0	5.7	3.1	1.5	1.2	1.5	1.2	3.2	0.2	0.1	0.2	0.2	0.1	0.1	2.1	9.4
6-May	0.1	0.1	0.3	0.4	0.6	Z	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
7-May	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.7	0.5	0.4	0.2	0.2	0.2	0.3	0.2	0.7
8-May	0.3	Z	0.2	0.2	0.0	0.7	0.4	1.3	C	C	C	C	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.6	1.1	0.6	0.3	1.3
9-May	0.8	0.4	Z	0.2	0.1	0.0	0.2	0.2	0.6	0.6	0.1	0.1	0.0	0.2	0.1	0.1	0.3	0.2	0.5	0.5	0.6	0.3	0.2	0.2	0.3	0.8
10-May	0.2	0.2	0.1	Z	0.0	0.1	0.2	0.6	2.3	0.7	0.7	1.6	0.9	1.8	0.6	2.8	1.3	0.6	0.2	0.1	0.1	0.1	0.1	0.2	0.7	2.8
11-May	0.1	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.5	0.3	0.1	0.4	0.0	0.1	0.1	0.0	0.0	0.1	0.5
12-May	0.2	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3
13-May	Z	0.6	0.4	0.6	0.6	0.5	4.2	1.1	0.4	1.1	0.2	1.8	1.4	1.1	1.0	1.2	0.8	0.1	0.0	0.2	0.3	0.3	0.2	0.3	0.8	4.2
14-May	0.3	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.0	1.2	2.5	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	2.5
15-May	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
17-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.2
19-May	Z	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
20-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
21-May	0.0	0.1	Z	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
22-May	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	M	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
23-May	0.1	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
24-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
25-May	Z	0.0	0.2	0.3	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.5
26-May	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.2	0.0	0.0	0.0	0.5	1.2	0.1	0.0	0.3	1.2
27-May	0.1	0.2	Z	0.1	0.0	0.2	2.7	2.2	1.0	0.9	1.0	2.4	2.4	0.5	3.5	1.0	0.6	0.2	0.2	0.2	0.5	0.1	1.2	2.8	1.0	3.5
28-May	6.4	6.0	2.7	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	6.4
29-May	0.1	0.9	2.5	3.3	Z	1.6	1.1	0.9	0.8	0.3	0.0	0.0	0.0	0.1	0.1	0.0	PF	PF	PF	PF	PF	PF	PF	PF	--	3.3
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
0.5 0.5 0.5 0.3 0.9 0.8 0.8 0.7 0.7 0.6 0.7 0.9 0.5 0.4 0.3 0.6 0.5 0.4 0.1 0.1 0.1 0.2 0.2 0.3 Diurnal Average																										
6.4 6.0 2.8 3.3 17.9 13.0 6.1 8.0 9.4 3.4 7.3 10.4 4.2 3.6 3.5 6.0 6.2 3.2 0.6 0.5 0.6 1.2 1.2 2.8 Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	652	99.69	99.69
11 - 20	2	0.31	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	18	12	6	2	9	12	81	154	124	43	23	13	14	44	66	30	651
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	12	6	2	9	12	81	154	124	43	23	13	14	46	66	30	653

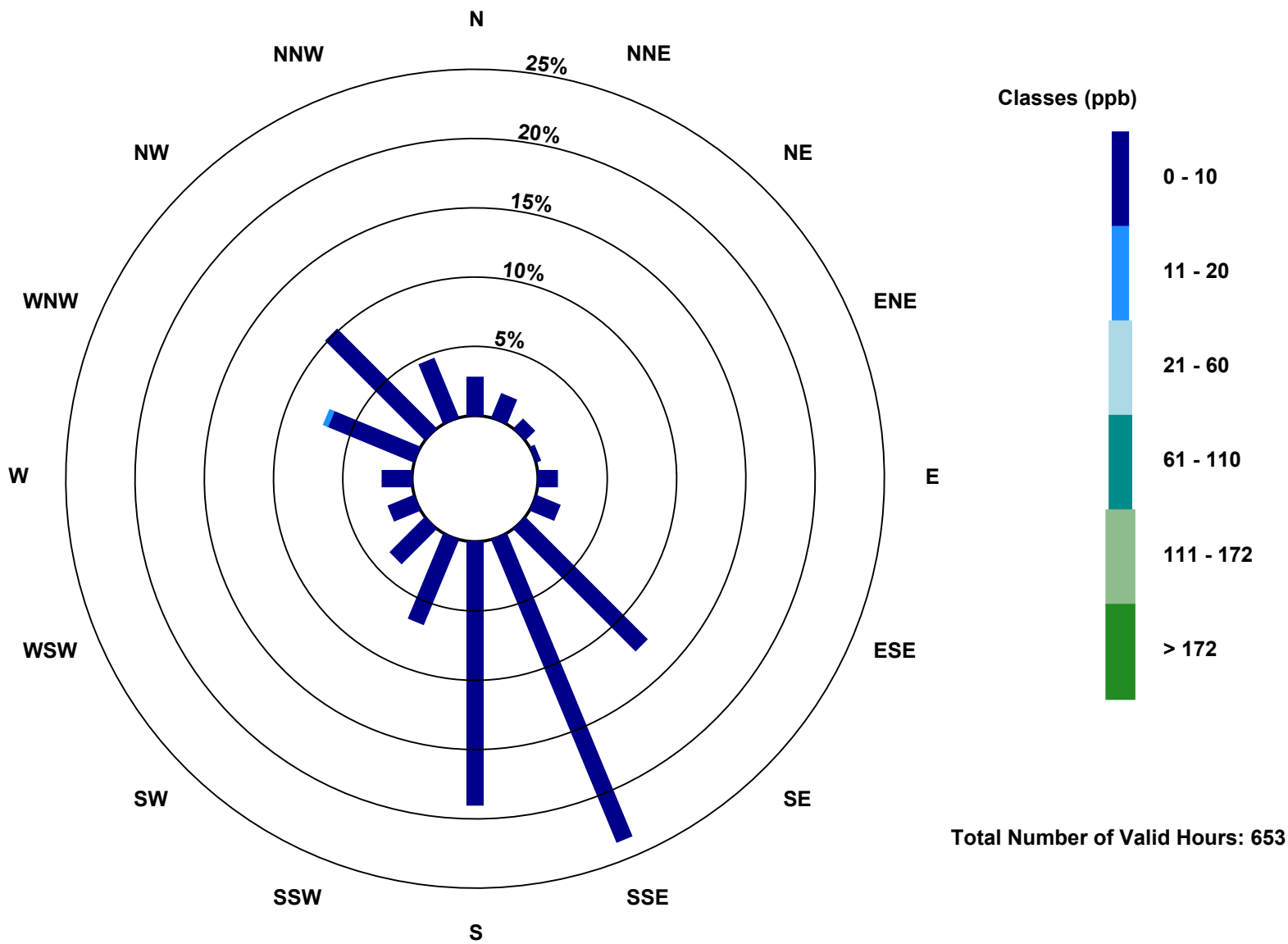
Total Number of Valid Hours: 653

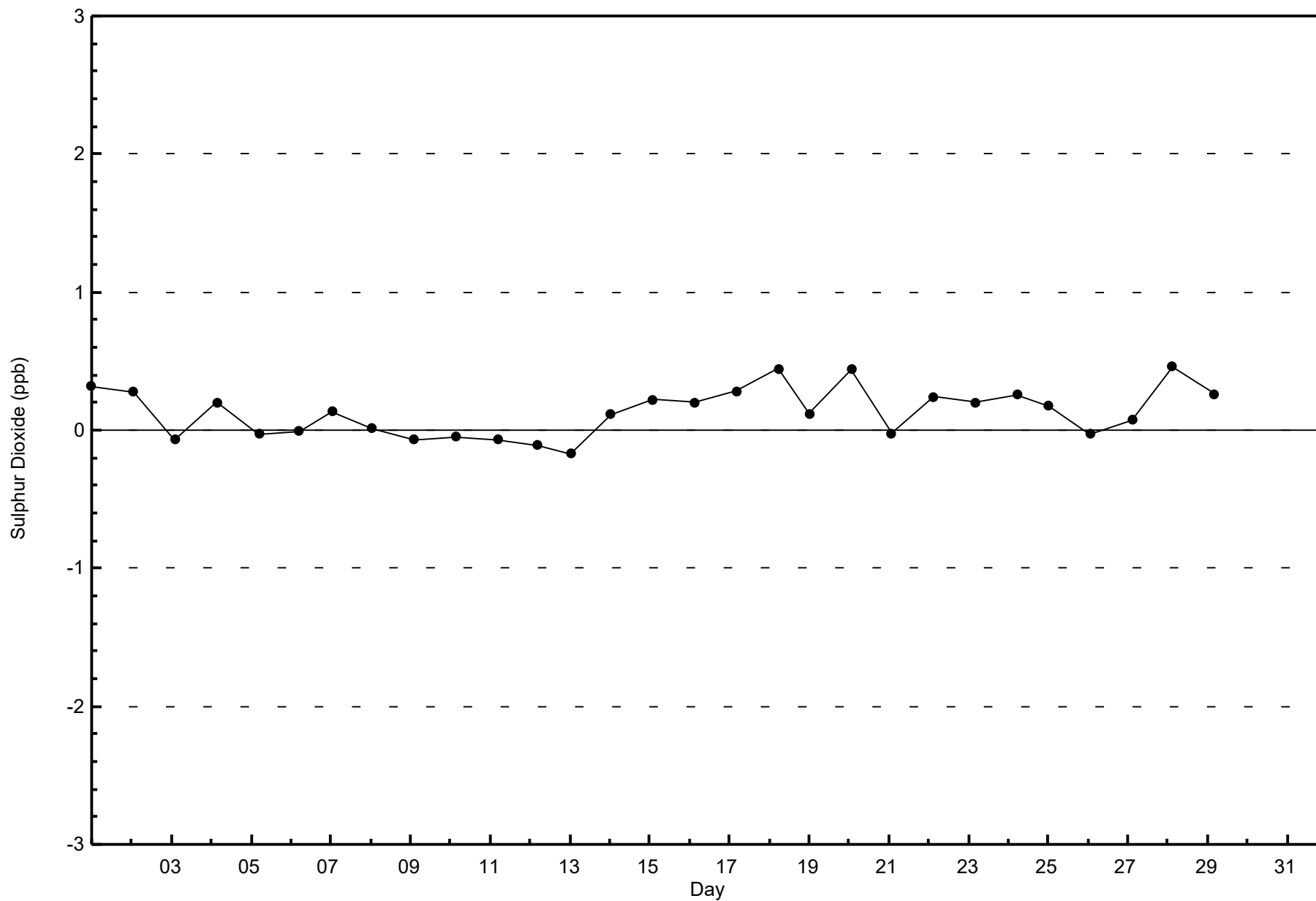
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Sulphur Dioxide (SO₂) - ppb
Jackfish 1

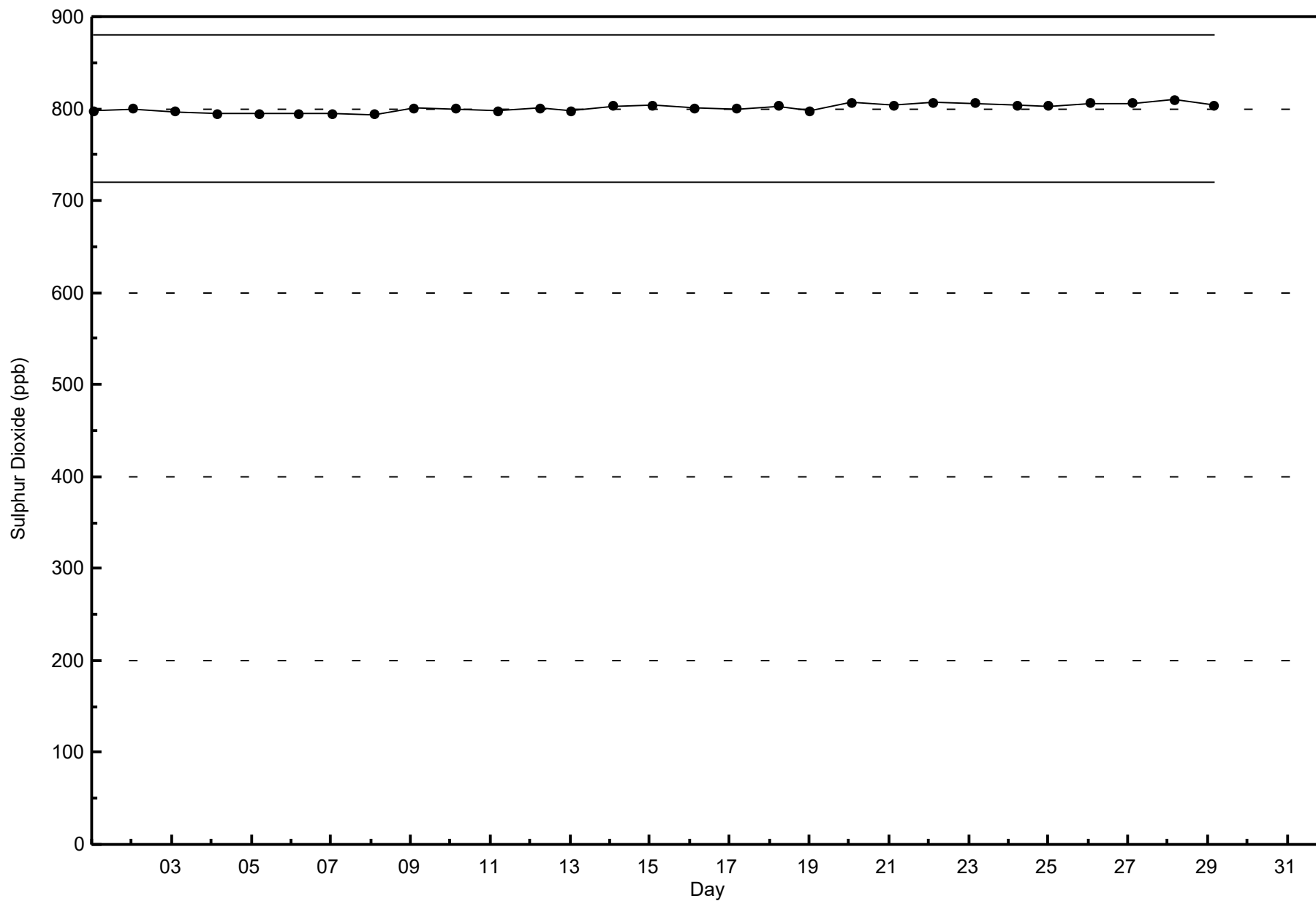






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

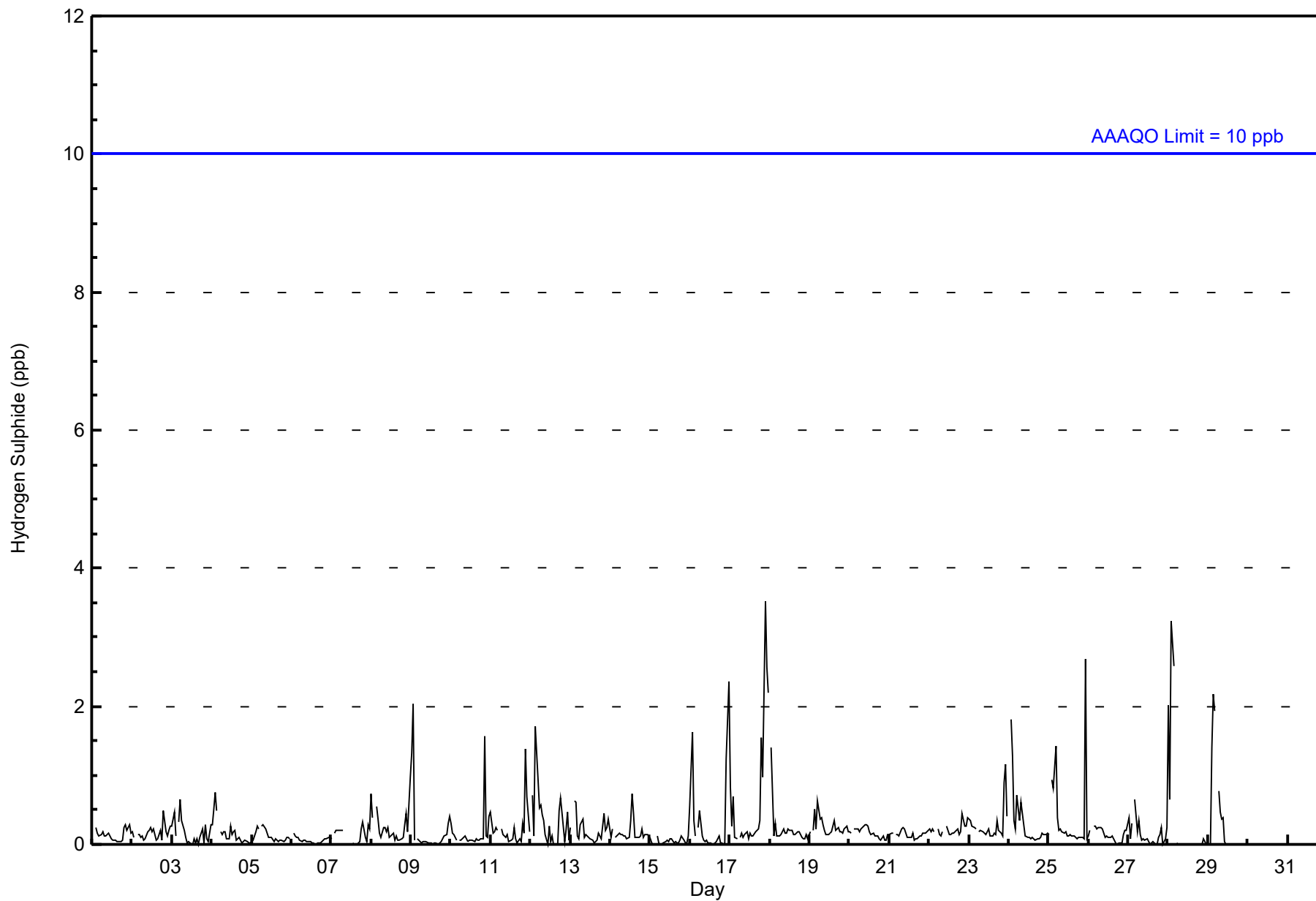
Jackfish 1 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 3.5 ppb on May 17 22:00 Maximum Daily Average: 0.6 ppb on May 17																			Hours in Service: 744 Hours of Data: 653 Hours of Missing Data: 91 Hours of Calibration: 34 Percent Operational Time: 92.3								
Minimum Value: 0.0 ppb on May 7 16:00 Minimum Daily Average: 0.0 ppb on May 15 Maximum Diurnal Average: 0.5 ppb at hour 4 Minimum Diurnal Average: 0.1 ppb at hour 17 Monthly Average: 0.23 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 2.2																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.3	
2-May	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.5	0.2	0.1	0.2	0.3	0.2	0.5	
3-May	0.3	0.5	0.1	Z	0.3	0.7	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.3	0.1	0.0	0.3	0.2	0.7	
4-May	0.3	0.5	0.8	0.5	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.8	
5-May	0.0	0.1	0.2	0.3	0.2	Z	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3	
6-May	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
7-May	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.3	0.2	0.1	0.3	
8-May	0.7	0.4	Z	0.6	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.2	1.0	0.3	1.0	
9-May	1.3	2.0	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.2	2.0	
10-May	0.3	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	1.6	0.1	0.1	0.4	0.2	1.6	
11-May	0.5	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.3	0.2	1.4	0.7	0.2	0.2	1.4	
12-May	Z	0.7	0.1	1.7	0.9	0.5	0.6	0.4	0.3	0.1	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.5	0.7	0.5	0.0	0.2	0.5	0.1	0.4	1.7	
13-May	0.2	Z	0.6	0.6	0.1	0.1	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.3	0.5	0.2	0.2	0.4	0.2	0.6	
14-May	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.7	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.7	
15-May	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	
16-May	0.6	1.6	0.4	0.1	Z	0.2	0.5	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.2	2.4	0.3	2.4	
17-May	0.8	0.3	0.7	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	1.5	1.0	3.5	2.6	2.2	0.6	3.5	
18-May	Z	1.4	0.1	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	1.4	
19-May	0.2	Z	0.2	0.5	0.2	0.6	0.4	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.6	
20-May	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	
21-May	0.1	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	
22-May	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.2	M	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.4	0.2	0.4	
23-May	0.4	0.3	0.3	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.1	0.9	1.2	0.4	0.3	1.2	
24-May	Z	1.8	1.3	0.3	0.2	0.7	0.3	0.6	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3	1.8	
25-May	0.1	Z	0.9	0.8	1.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.7	0.1	0.4	2.7	
26-May	0.1	0.2	Z	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.3	
27-May	0.4	0.1	0.3	Z	0.7	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.2	0.1	0.7	
28-May	2.0	0.7	3.2	2.6	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	3.2	
29-May	0.0	0.0	1.4	2.2	1.9	Z	0.8	0.5	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	PF	PF	PF	PF	PF	PF	PF	--	2.2	
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
0.4 0.5 0.5 0.5 0.4 0.2 0.2 0.2 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.3 0.4 0.4 Diurnal Average																											
2.0 2.0 3.2 2.6 1.9 0.7 0.8 0.6 0.4 0.4 0.3 0.3 0.3 0.7 0.4 0.3 0.2 0.5 0.7 1.5 1.6 3.5 2.7 2.4 Diurnal Maximum																											
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	648	99.23	99.23
3 - 4	5	0.77	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 653

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	18	12	6	2	9	14	77	153	120	42	23	13	14	46	69	29	647
3 - 4	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	5
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	12	6	2	9	14	79	155	121	42	23	13	14	46	69	29	652

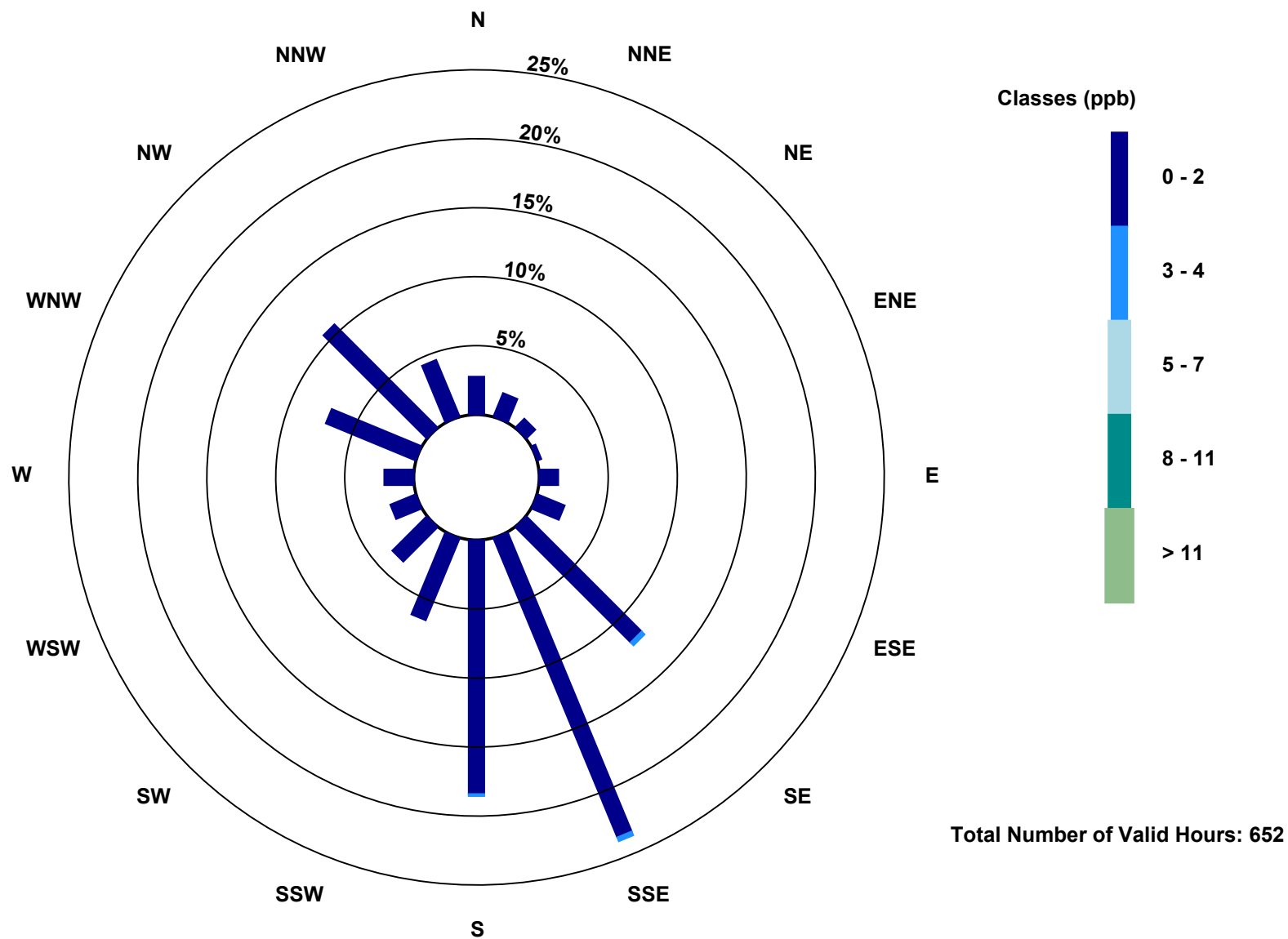
Total Number of Valid Hours: 652

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1



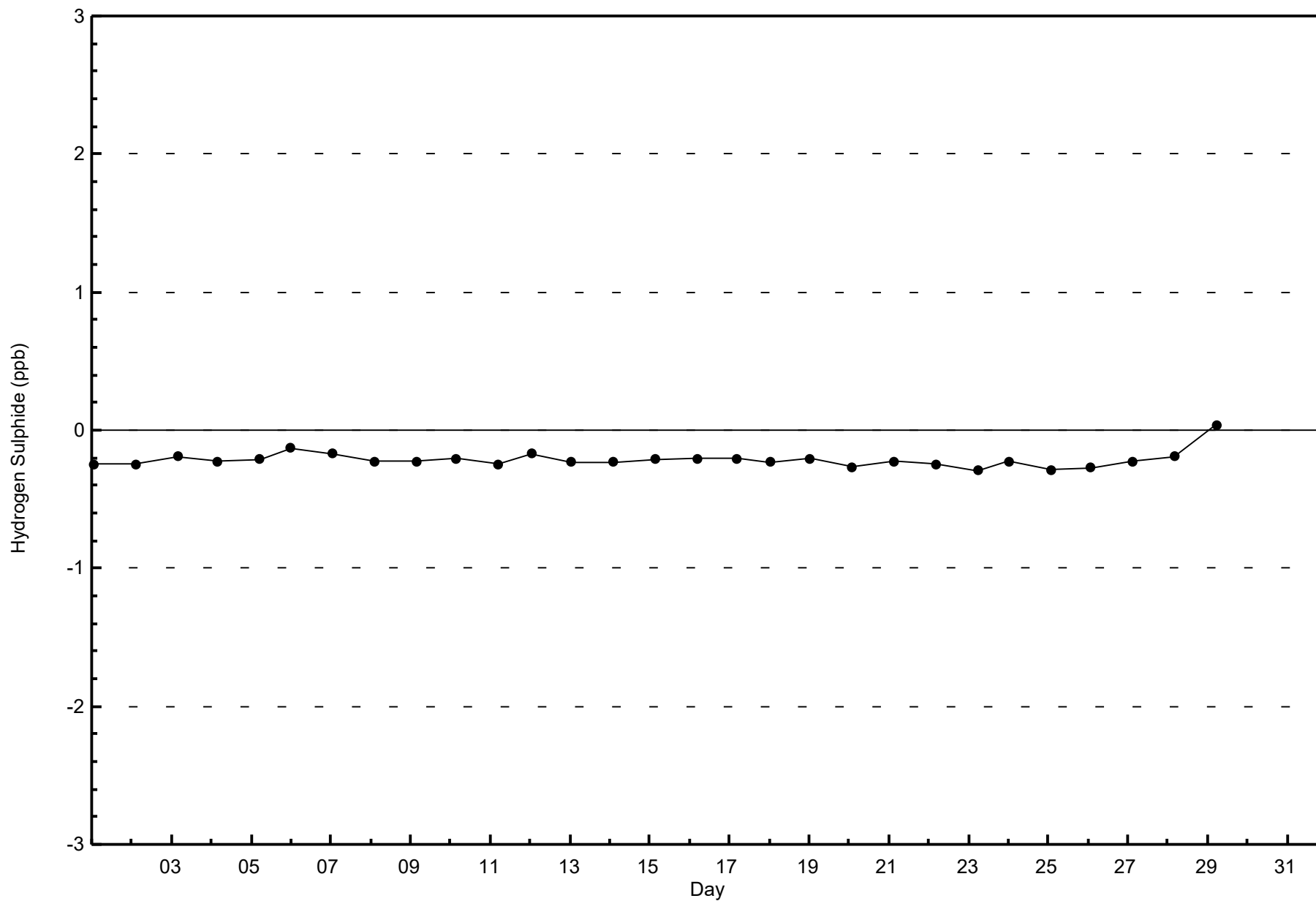


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H₂S) - ppb

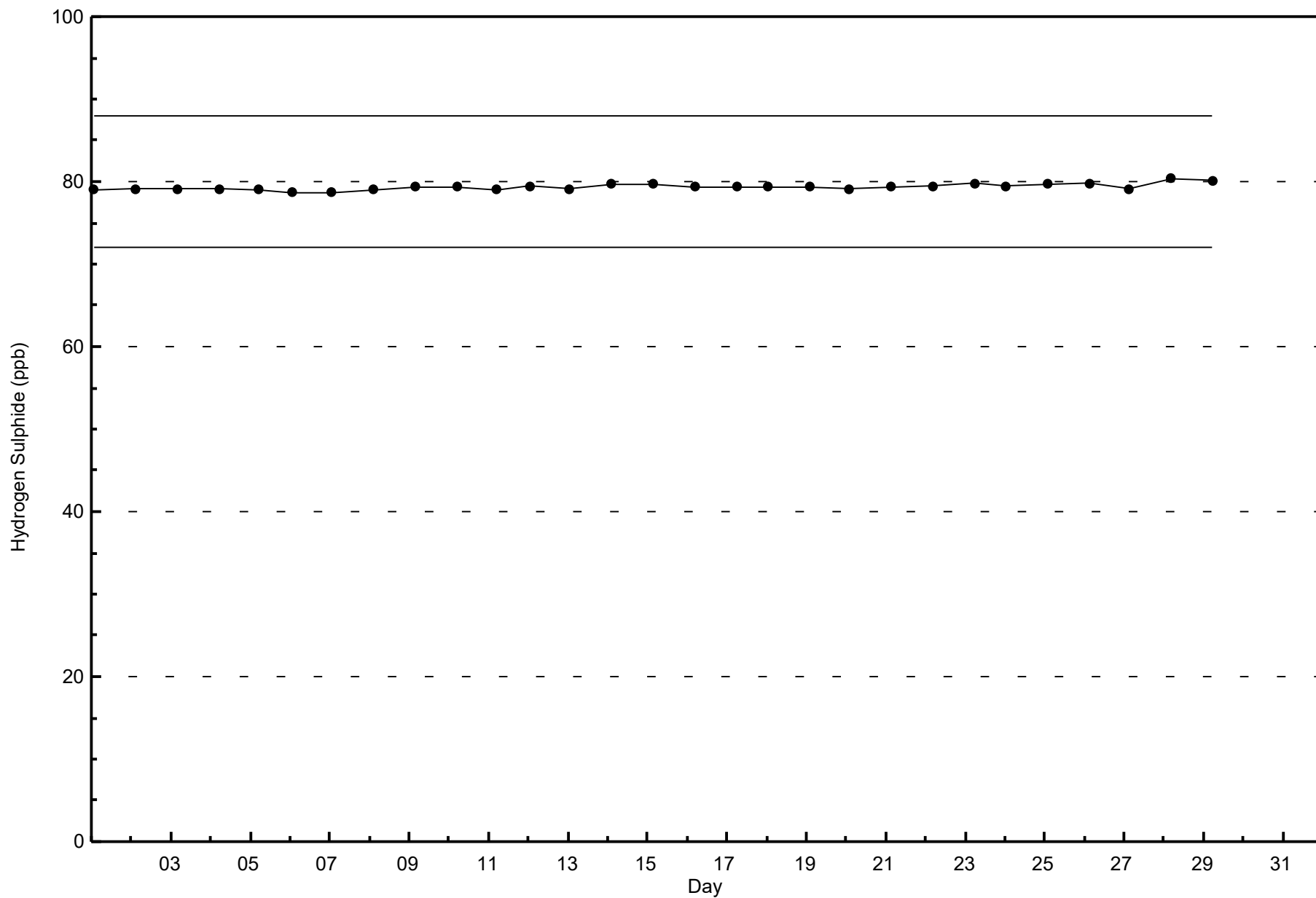
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

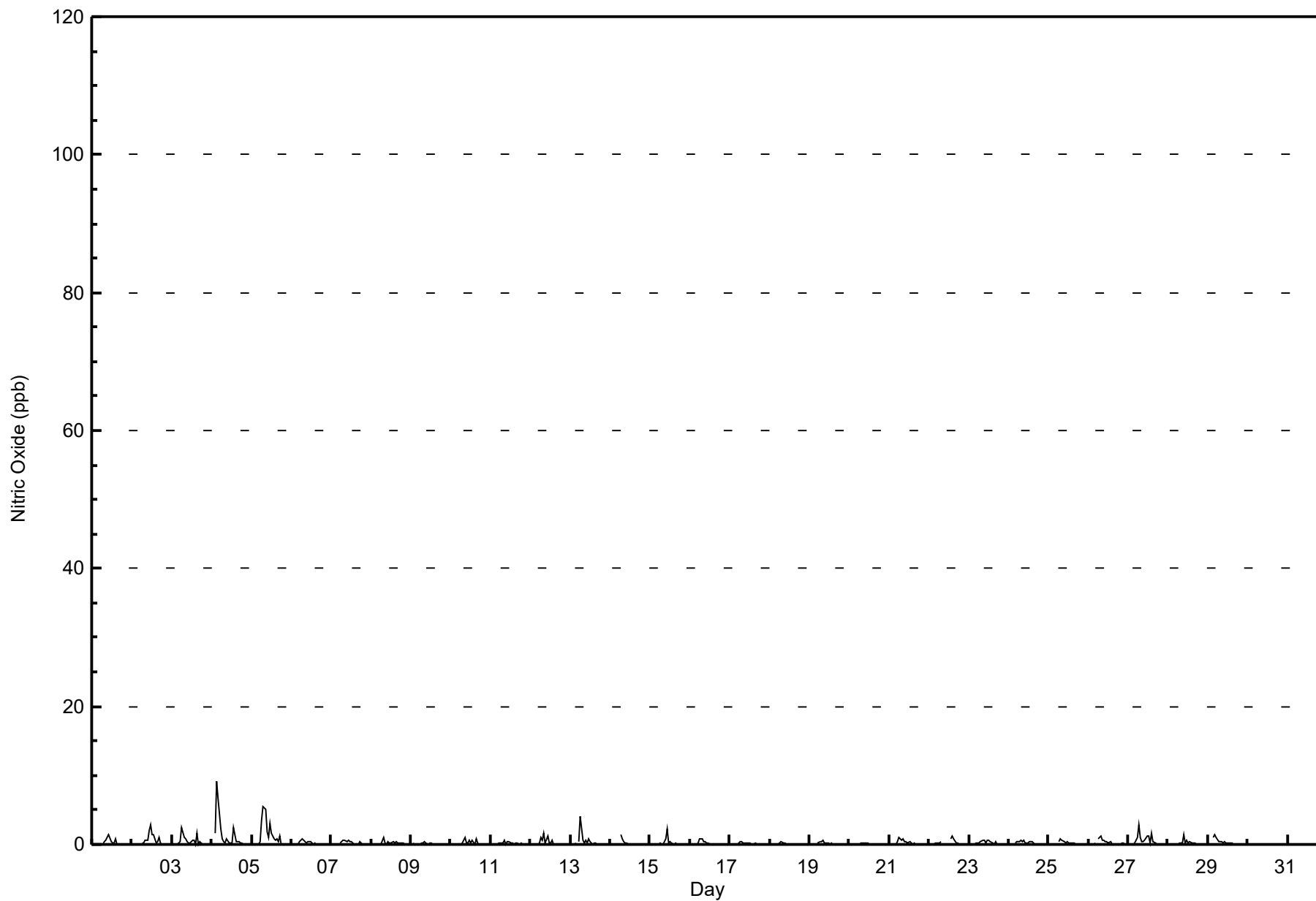
Jackfish 1 - May 2025

Maximum Value: 9.1 ppb on May 4 04:00																			Maximum Daily Average: 1.2 ppb on May 4										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 5 20:00																			Minimum Daily Average: 0.1 ppb on May 20										Hours of Data: 654	
Maximum Diurnal Average: 0.8 ppb at hour 7																			Minimum Diurnal Average: 0.0 ppb at hour 24										Hours of Missing Data: 90	
Monthly Average: 0.29 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 3.0										Hours of Calibration: 34	
																													Percent Operational Time: 92.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.7	1.1	1.4	0.5	0.2	0.1	0.7	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.4				
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.6	0.5	2.0	2.9	1.5	1.3	0.2	0.3	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.9				
3-May	Z	0.0	0.0	0.0	0.3	0.4	2.5	1.0	0.8	0.4	0.2	0.2	0.6	0.7	0.0	1.7	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.5				
4-May	0.3	Z	1.5	9.1	6.8	2.3	0.8	0.3	0.2	0.7	0.2	0.1	0.1	2.3	1.3	0.5	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	1.2	9.1				
5-May	0.0	0.0	Z	0.0	0.0	0.3	3.4	5.4	5.1	1.9	1.0	3.1	1.5	0.8	0.6	0.8	0.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.4				
6-May	0.0	0.0	0.0	Z	0.0	0.4	0.8	0.5	0.5	0.2	0.5	0.5	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8				
7-May	0.0	0.0	0.0	0.0	Z	0.3	0.5	0.7	0.7	0.4	0.6	0.5	0.5	0.1	0.1	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.7				
8-May	0.1	0.0	0.0	0.0	0.0	Z	0.0	1.1	0.1	0.1	0.3	0.3	0.2	0.5	0.1	0.4	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.2	1.1				
9-May	Z	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4				
10-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.2	0.2	0.5	0.1	0.5	0.1	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0				
11-May	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.5	0.0	0.4	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5				
12-May	0.1	0.1	0.1	Z	0.1	0.2	1.1	0.7	1.6	0.2	1.2	0.1	0.1	0.6	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.6				
13-May	0.0	0.0	0.1	0.2	Z	0.4	4.1	0.7	0.3	0.6	0.1	0.8	0.4	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4	4.1				
14-May	0.0	0.0	0.0	0.0	0.1	Z	1.5	0.9	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	1.5				
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.8	2.1	0.2	0.4	0.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1				
16-May	0.0	Z	0.0	0.0	0.0	0.2	0.9	0.8	0.3	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9				
17-May	0.0	0.0	Z	0.0	0.0	0.3	0.4	0.5	0.2	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5				
18-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4				
19-May	0.0	0.0	0.0	0.0	Z	0.2	0.5	0.3	0.5	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5				
20-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
21-May	Z	0.1	0.1	0.1	0.1	0.3	1.0	0.5	0.9	0.5	0.5	0.2	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.2	1.0				
22-May	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.3	C	C	C	C	C	0.9	1.1	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.3	1.1				
23-May	0.0	0.0	Z	0.0	0.2	0.1	0.1	0.5	0.6	0.5	0.2	0.7	0.6	0.3	0.3	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7				
24-May	0.1	0.1	0.1	Z	0.1	0.3	0.3	0.5	0.3	0.6	0.2	0.3	0.4	0.3	0.4	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.6				
25-May	0.0	0.0	0.0	0.0	0.1	Z	0.4	0.7	0.6	0.5	0.1	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.7				
26-May	0.0	0.0	0.0	0.1	0.2	Z	0.8	1.2	0.7	0.5	0.4	0.4	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.2	1.2				
27-May	Z	0.1	0.1	0.1	0.1	1.1	2.8	1.0	0.4	0.4	0.6	1.3	1.2	0.2	1.6	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.8				
28-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.5	0.1	0.6	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5				
29-May	0.0	0.0	Z	1.0	1.5	1.1	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	PF	PF	PF	PF	PF	PF	PF	PF	--	1.5				
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--				
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--				
0.0 0.0 0.1 0.4 0.4 0.4 0.8 0.7 0.7 0.5 0.5 0.5 0.3 0.4 0.3 0.3 0.2 0.1 0.1 0.0 0.0 0.0 0.0 0.0																										Diurnal Average				
0.3 0.1 1.5 9.1 6.8 2.3 4.1 5.4 5.1 1.9 2.1 3.1 1.5 2.3 1.6 1.7 1.1 1.3 0.3 0.1 0.1 0.2 0.1 0.1																										Diurnal Maximum				
Z - zerospan C - Calibration PF - Power Failure																														



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	654	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	11	6	2	9	14	77	153	125	41	24	14	15	44	70	31	653
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	11	6	2	9	14	77	153	125	41	24	14	15	44	70	31	653

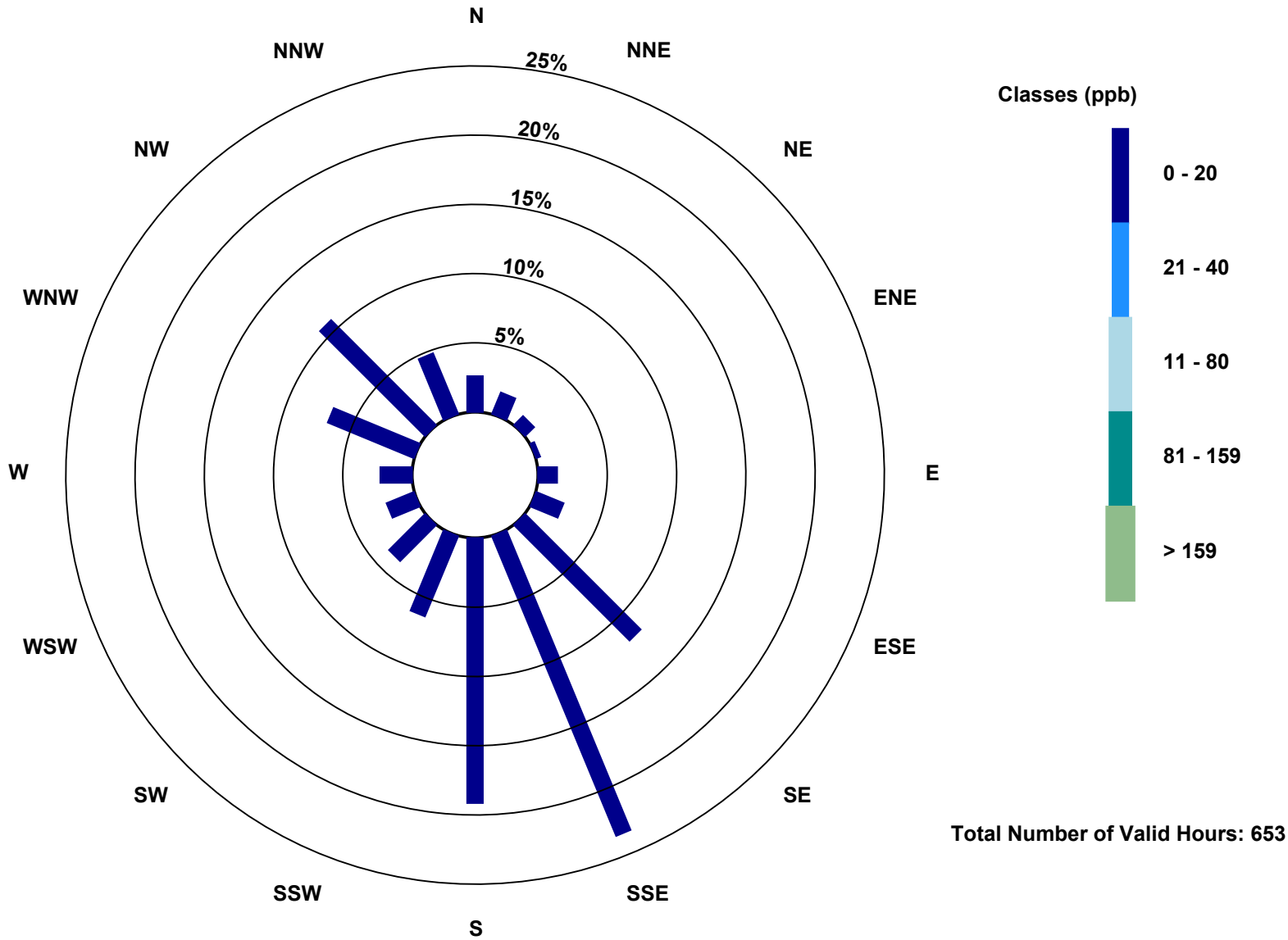
Total Number of Valid Hours: 653

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitric Oxide (NO) - ppb
Jackfish 1



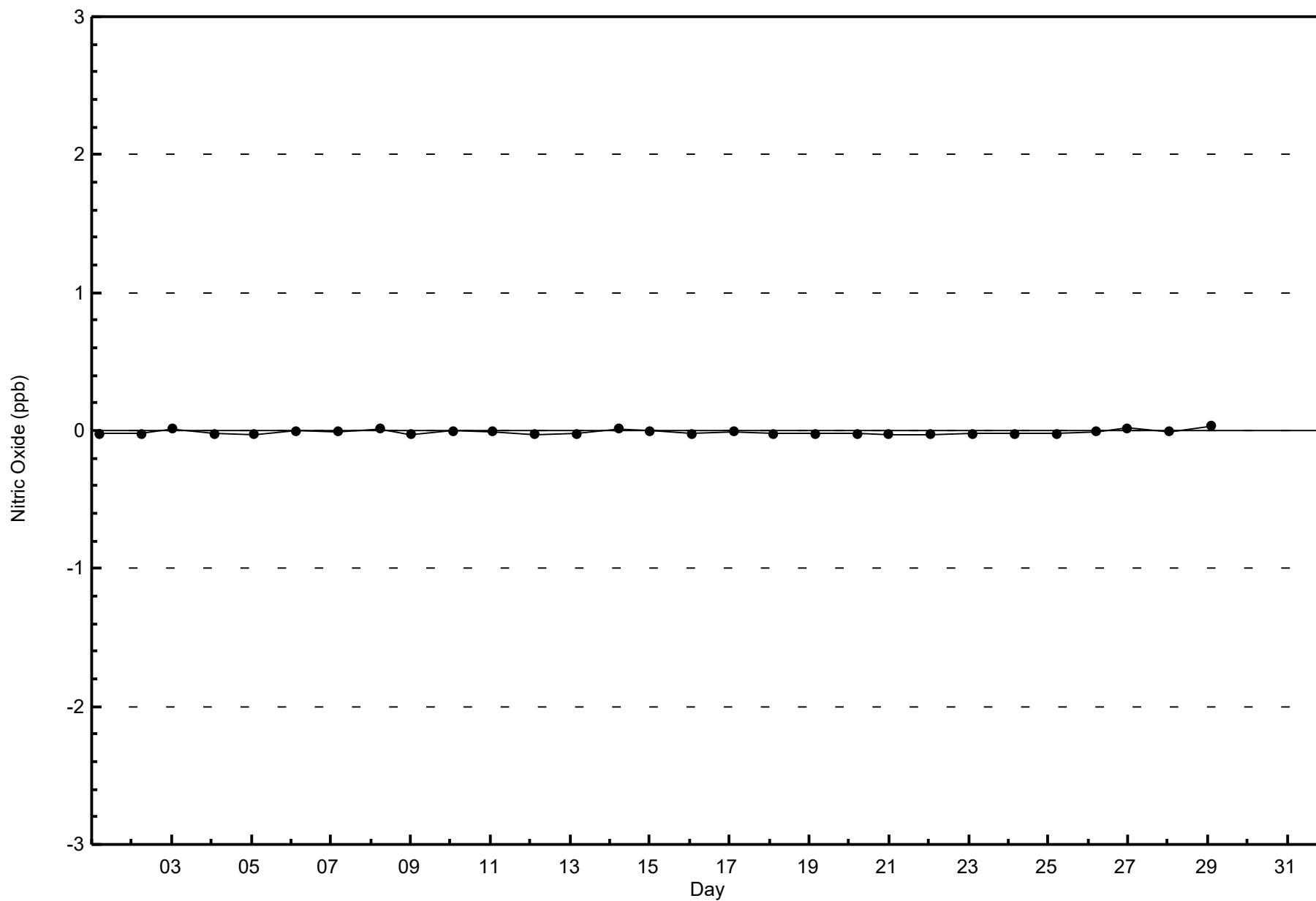


Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

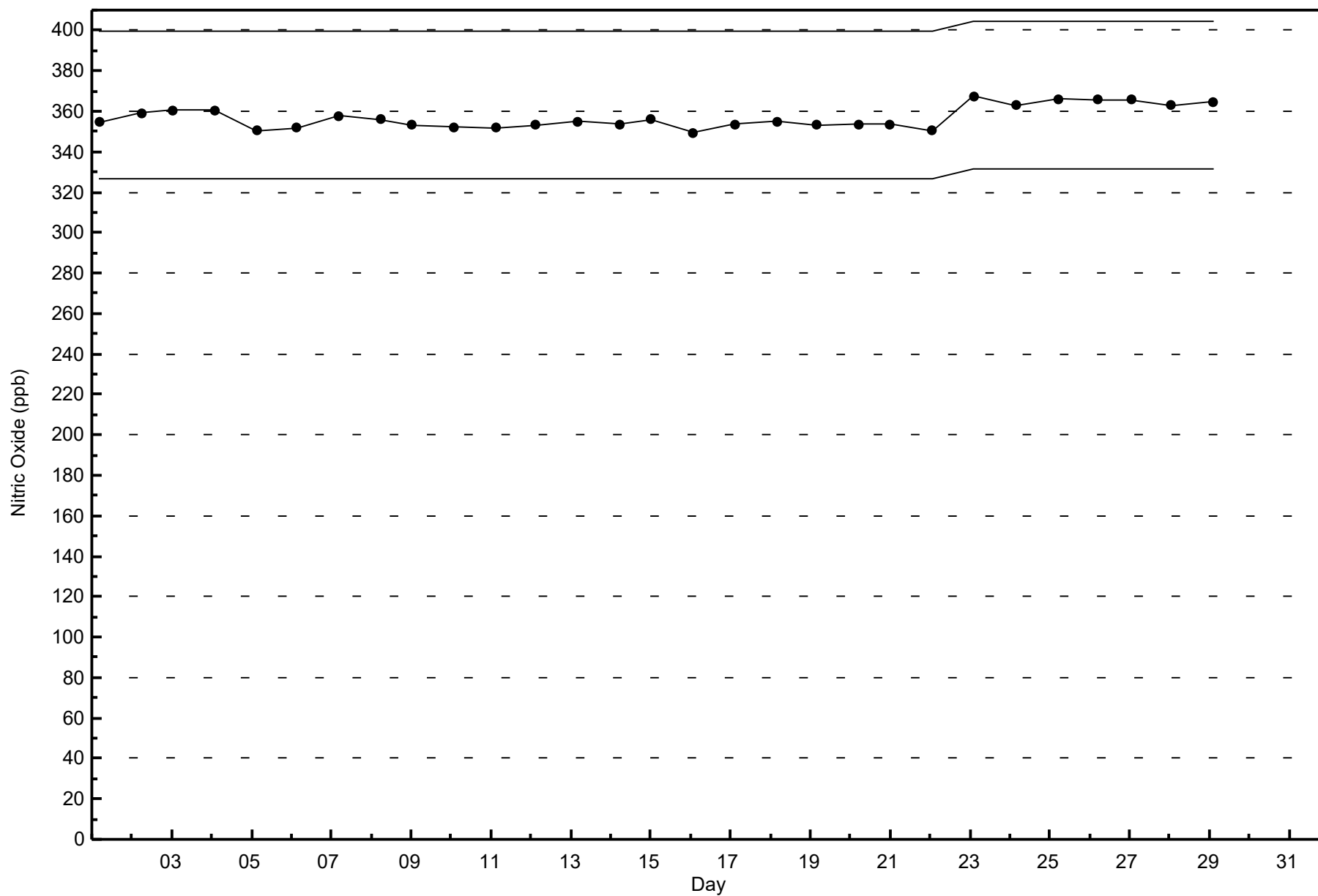
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

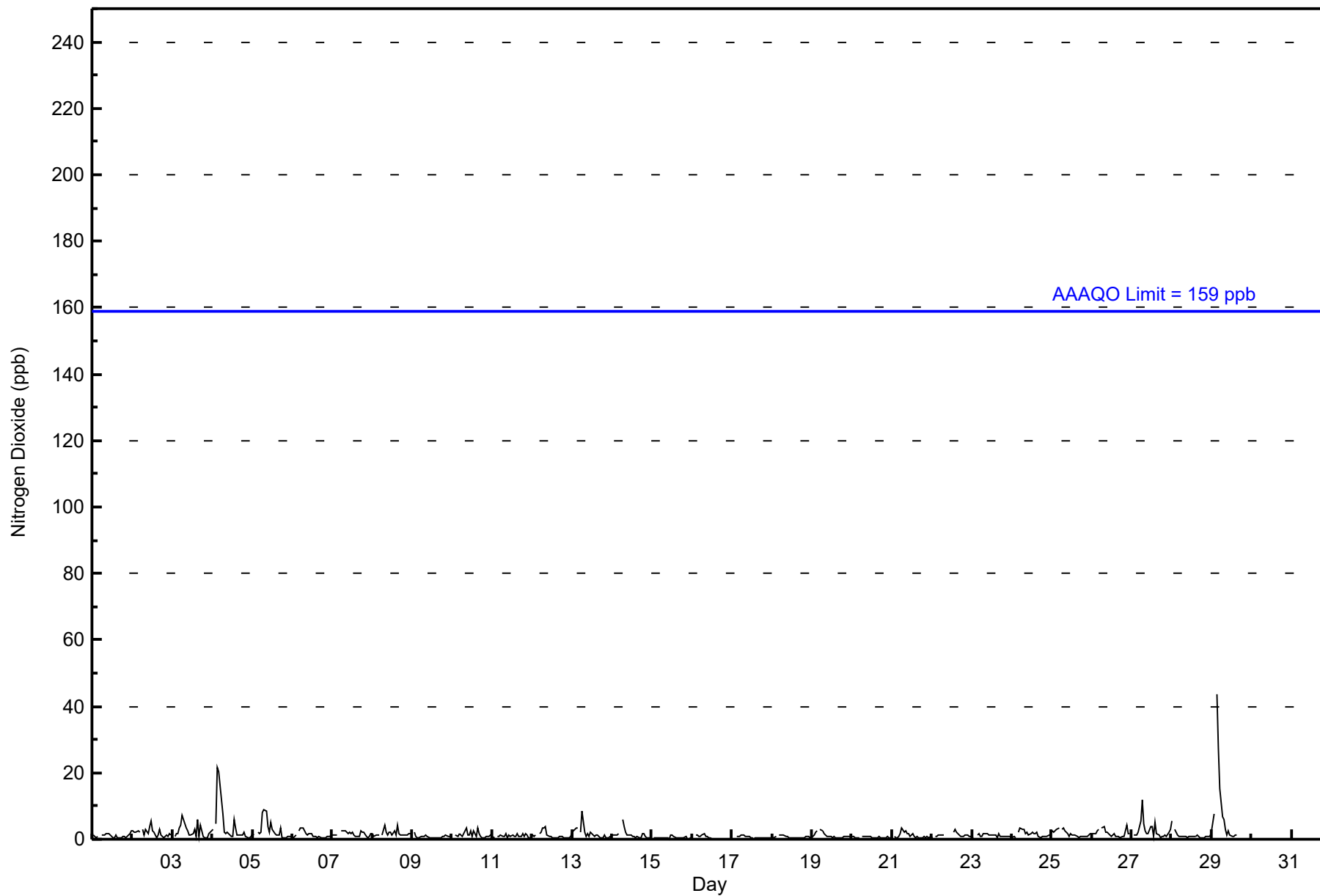
Jackfish 1 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 43.7 ppb on May 29 04:00 Maximum Daily Average: 4.2 ppb on May 4																		Hours in Service: 744									
Minimum Value: 0.1 ppb on May 16 14:00 Minimum Daily Average: 0.5 ppb on May 15 Maximum Diurnal Average: 3.9 ppb at hour 4 Minimum Diurnal Average: 0.8 ppb at hour 19 Monthly Average: 1.61 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 1.0 Q ₃ = 1.8 P ₉₀ = 2.9 P ₉₉ = 10.4																		Hours of Data: 654									
																		Hours of Missing Data: 90									
																		Hours of Calibration: 34									
																		Percent Operational Time: 92.5									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-May	1.3	0.7	0.6	0.7	Z	1.1	1.3	1.1	1.8	1.9	1.9	1.0	0.5	0.6	1.1	0.4	0.4	0.5	0.7	0.7	0.6	1.0	1.8	2.5	1.1	2.5	
2-May	2.4	2.2	2.3	2.6	2.2	Z	3.0	1.4	2.8	1.9	3.9	5.3	2.7	2.0	0.5	1.1	3.0	1.1	0.7	0.4	1.4	1.0	1.7	1.1	2.0	5.3	
3-May	Z	1.0	1.7	1.7	3.5	4.3	7.3	4.7	3.5	2.4	1.4	1.3	1.7	2.8	0.7	5.8	0.8	4.3	0.9	0.4	0.5	0.4	1.9	2.6	2.4	7.3	
4-May	2.9	Z	4.8	21.4	20.2	11.9	7.7	2.2	1.5	2.1	1.3	1.0	0.7	6.1	3.5	1.1	1.3	1.3	1.1	2.3	0.9	0.6	0.5	1.0	4.2	21.4	
5-May	1.5	1.4	Z	2.0	1.6	2.0	7.9	9.0	8.5	3.7	2.1	5.1	3.1	1.7	1.3	1.4	1.3	3.6	0.4	0.4	0.6	0.7	0.7	0.7	2.6	9.0	
6-May	0.3	0.7	1.4	Z	2.4	3.3	3.6	2.4	1.8	1.1	1.9	1.7	0.8	0.7	0.9	0.6	0.7	0.6	0.6	0.6	0.6	0.8	1.0	1.1	1.3	3.6	
7-May	1.2	1.3	1.3	1.2	Z	2.7	2.4	2.5	2.7	1.7	2.2	1.8	2.0	1.1	0.9	0.8	1.0	2.5	2.1	2.2	1.0	0.5	0.9	1.8	1.6	2.7	
8-May	1.6	1.0	1.3	1.1	1.4	Z	1.2	4.1	2.0	1.3	2.2	2.0	1.4	2.4	1.4	4.3	1.6	1.1	1.1	1.2	1.1	1.4	1.7	1.6	1.7	4.3	
9-May	Z	2.0	0.8	0.5	0.5	0.8	0.9	1.0	1.2	1.0	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.8	1.0	1.1	0.8	0.8	0.8	0.8	2.0	
10-May	0.9	Z	1.2	0.8	1.6	1.2	1.0	1.6	3.3	1.1	1.2	2.4	1.0	2.6	0.8	3.6	1.8	0.7	0.6	0.5	0.7	0.7	1.0	1.1	1.4	3.6	
11-May	0.8	0.6	Z	1.0	0.8	1.3	1.0	1.0	1.6	0.6	1.1	0.9	1.1	0.8	0.8	1.6	0.9	0.7	1.7	0.9	1.8	1.3	0.5	0.5	1.0	1.8	
12-May	1.2	1.0	1.1	Z	1.8	2.2	3.6	3.5	3.7	1.2	0.7	0.9	0.6	0.6	0.5	0.5	1.0	0.7	0.9	0.5	0.6	0.5	0.6	1.0	1.3	3.7	
13-May	2.3	2.7	3.3	3.6	Z	2.1	8.6	2.2	1.0	1.6	0.7	2.2	1.7	0.9	1.2	1.4	0.7	0.5	0.5	1.1	0.5	0.5	0.5	0.7	1.8	8.6	
14-May	1.2	1.3	1.3	1.2	1.9	Z	6.1	4.0	2.2	1.3	1.4	1.2	0.9	1.0	0.5	0.7	0.5	0.6	1.6	1.5	0.7	0.4	0.4	0.3	1.4	6.1	
15-May	Z	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.1	1.1	1.2	0.9	0.6	0.4	0.4	0.4	0.5	0.5	0.8	0.2	0.2	0.6	0.5	1.2	
16-May	0.5	Z	1.3	1.1	1.0	1.0	1.3	1.5	0.8	1.0	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.5	1.5	
17-May	0.2	0.2	Z	0.7	0.7	1.4	1.3	1.1	0.7	0.8	0.7	0.6	0.4	0.2	0.3	0.5	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.4	0.6	1.4	
18-May	0.4	0.6	0.9	Z	1.4	1.2	1.4	1.4	1.0	0.9	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.7	0.9	1.0	0.6	0.7	1.4	
19-May	0.9	1.2	2.3	2.5	Z	2.8	2.5	1.8	1.4	1.0	0.8	0.8	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.7	1.1	2.8	
20-May	0.7	0.7	0.6	0.6	0.6	Z	0.8	0.9	0.8	0.8	0.7	0.7	0.5	0.4	0.5	0.5	0.7	0.6	0.6	0.6	0.5	1.0	0.5	0.5	0.6	1.0	
21-May	Z	0.7	0.6	0.5	1.0	1.8	3.2	2.0	2.7	1.5	1.7	1.0	1.6	0.9	0.6	0.7	0.5	0.5	0.5	0.8	0.6	0.8	0.5	0.7	1.1	3.2	
22-May	0.6	Z	0.9	1.0	1.3	1.1	1.1	1.1	C	C	C	C	C	2.0	2.8	2.1	1.1	0.8	0.7	0.9	1.3	1.1	0.8	0.7	1.2	2.8	
23-May	0.5	0.5	Z	1.3	1.5	0.9	0.9	1.5	1.8	1.8	1.2	1.2	1.1	1.4	1.1	0.6	1.7	0.9	0.8	0.7	0.7	0.9	0.9	0.8	1.1	1.8	
24-May	0.6	0.8	0.6	Z	2.3	3.2	2.8	2.8	1.7	2.1	1.3	1.5	2.2	1.8	1.8	2.1	0.8	0.6	0.7	0.8	0.7	0.9	1.1	1.9	1.5	3.2	
25-May	2.6	2.2	2.4	2.9	3.2	Z	3.0	3.2	2.4	1.9	0.8	1.5	1.3	1.1	1.3	1.0	0.6	0.7	0.8	0.8	0.8	0.8	1.2	1.7	1.7	3.2	
26-May	1.9	1.7	1.9	2.4	3.1	Z	3.4	3.7	2.3	2.0	1.8	1.4	0.9	1.5	0.7	0.7	0.7	0.6	0.7	0.8	2.5	4.1	1.8	1.7	1.8	4.1	
27-May	Z	1.4	1.3	1.4	2.0	5.7	12.0	4.6	2.7	1.8	1.8	3.9	3.8	1.0	5.0	1.9	1.1	0.5	0.8	0.7	1.3	0.9	2.1	3.0	2.6	12.0	
28-May	5.4	Z	3.1	1.1	0.8	1.0	0.9	1.0	0.9	0.6	0.7	0.8	0.8	1.0	0.7	1.1	0.7	0.6	0.6	0.6	0.9	0.9	0.7	1.0	1.1	5.4	
29-May	2.1	7.5	Z	43.7	27.6	15.1	6.6	5.8	3.1	1.3	2.6	1.4	1.0	1.0	1.4	1.2	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	43.7
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--
1.4 1.4 1.6 3.9 3.4 3.0 3.4 2.5 2.2 1.5 1.4 1.6 1.2 1.3 1.1 1.3 0.9 0.9 0.8 0.8 0.9 0.9 0.9 1.1																										Diurnal Average	
5.4 7.5 4.8 43.7 27.6 15.1 12.0 9.0 8.5 3.7 3.9 5.3 3.8 6.1 5.0 5.8 3.0 4.3 2.1 2.3 2.5 4.1 2.1 3.0																										Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	651	99.54	99.54
21 - 40	2	0.31	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	11	6	2	9	14	77	151	125	41	24	14	15	43	70	31	650
21 - 40	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
11 - 80	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	11	6	2	9	14	77	153	125	41	24	14	15	44	70	31	653

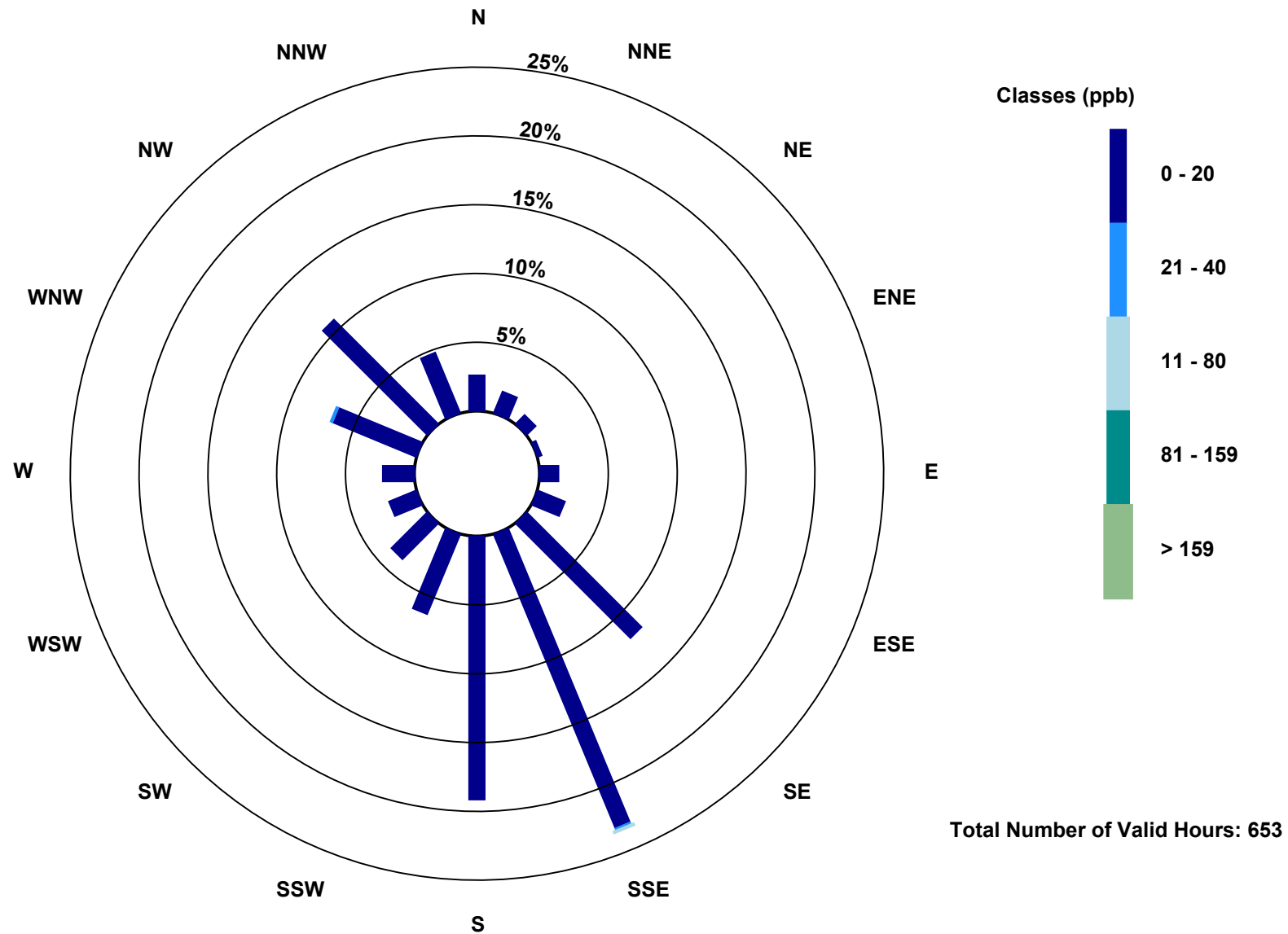
Total Number of Valid Hours: 653

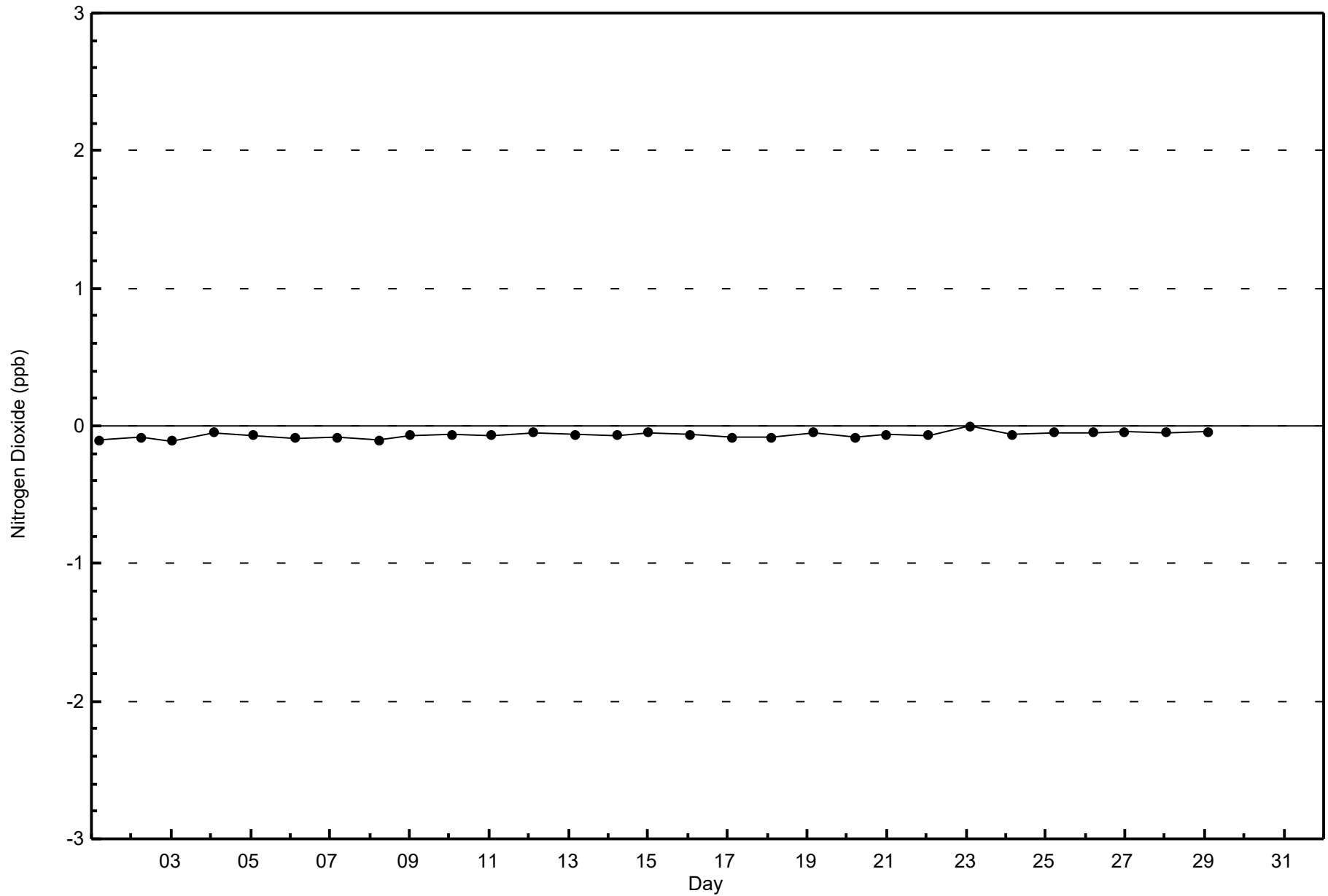
Total Number of Hours: 744

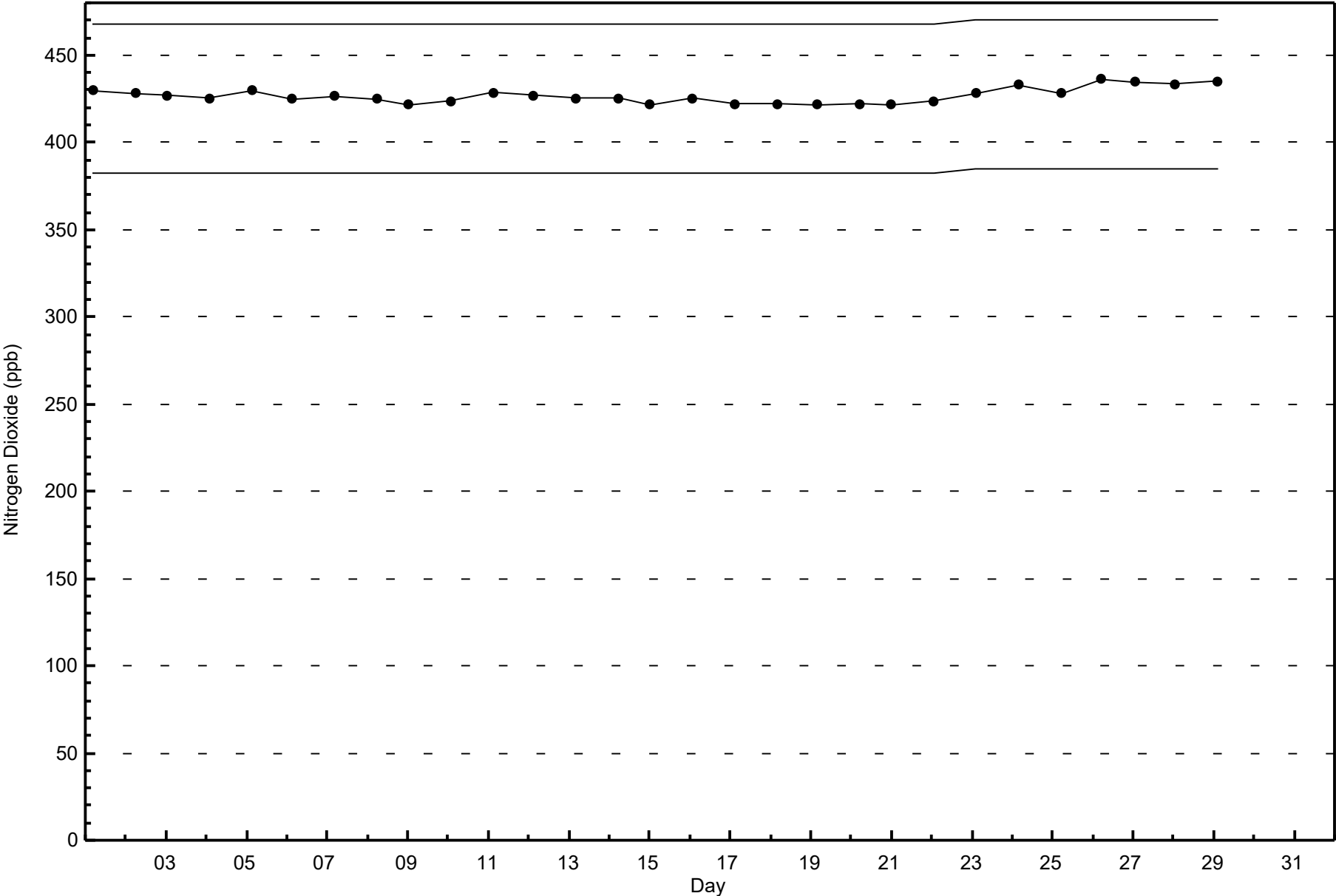


Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1









Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

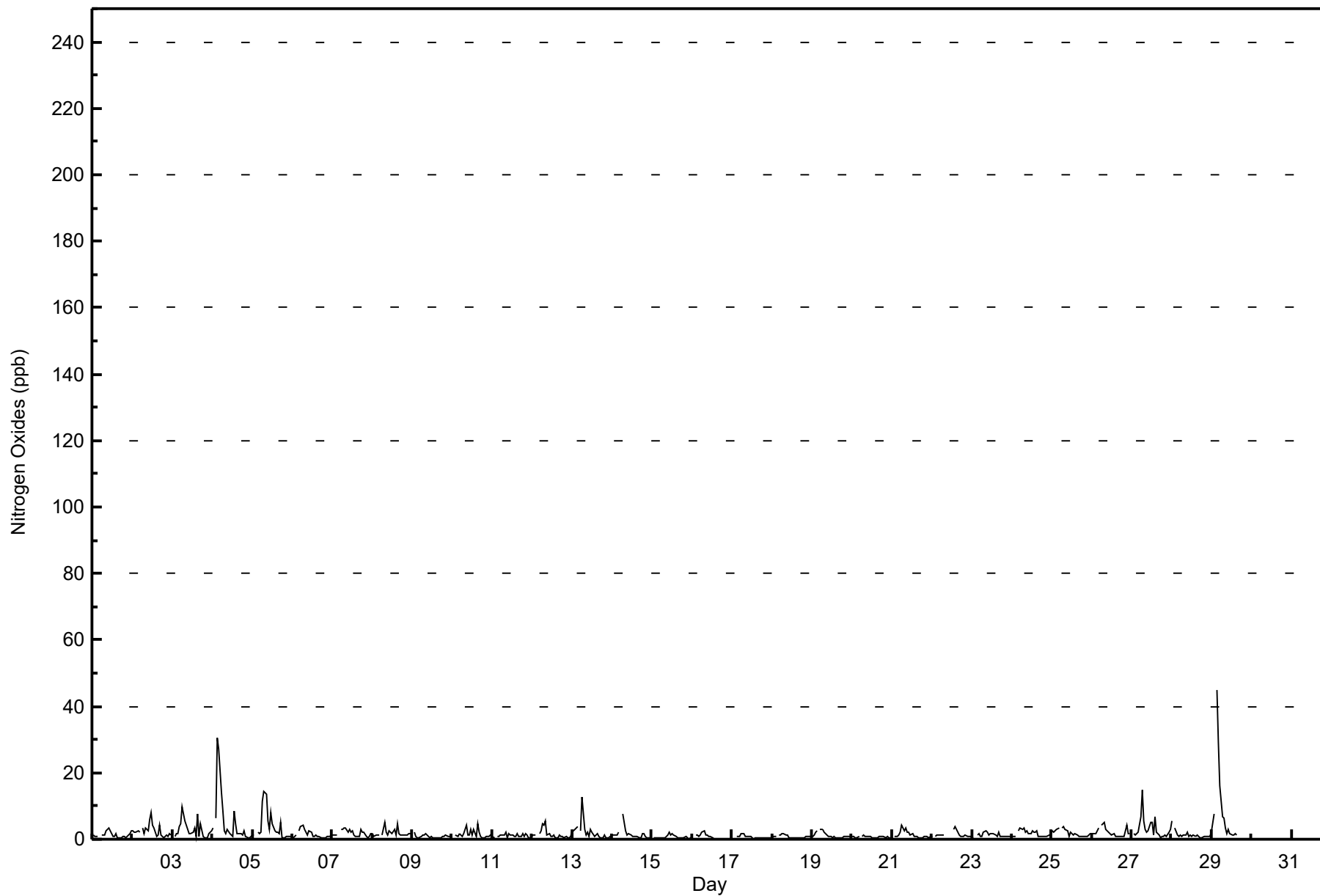
Jackfish 1 - May 2025

Maximum Value: 44.7 ppb on May 29 04:00																				Maximum Daily Average: 5.4 ppb on May 4					Hours in Service: 744				
Minimum Value: 0.1 ppb on May 16 19:00																				Minimum Daily Average: 0.7 ppb on May 17					Hours of Data: 654				
Maximum Diurnal Average: 4.3 ppb at hour 4																				Minimum Diurnal Average: 0.8 ppb at hour 20					Hours of Missing Data: 90				
Monthly Average: 1.90 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 1.1 Q ₃ = 2.1 P ₉₀ = 3.3 P ₉₉ = 14.3					Hours of Calibration: 34				
																									Percent Operational Time: 92.5				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	1.3	0.7	0.6	0.7	Z	1.1	1.4	1.4	2.5	3.0	3.3	1.5	0.7	0.7	1.8	0.5	0.4	0.5	0.7	0.8	0.6	1.0	1.8	2.5	1.3	3.3			
2-May	2.4	2.2	2.3	2.6	2.2	Z	3.2	1.5	3.4	2.4	5.9	8.2	4.2	3.3	0.7	1.4	4.1	1.3	0.7	0.4	1.4	1.0	1.7	1.1	2.5	8.2			
3-May	Z	1.0	1.7	1.7	3.8	4.7	9.8	5.7	4.3	2.8	1.6	1.5	2.3	3.5	0.7	7.5	0.8	4.7	1.0	0.4	0.5	0.4	1.9	2.6	2.8	9.8			
4-May	3.2	Z	6.3	30.5	27.0	14.2	8.5	2.5	1.7	2.8	1.5	1.1	0.8	8.4	4.8	1.6	1.7	1.6	1.4	2.4	0.9	0.6	0.5	1.0	5.4	30.5			
5-May	1.5	1.4	Z	2.0	1.6	2.3	11.3	14.4	13.6	5.6	3.1	8.2	4.6	2.5	1.9	2.2	1.6	4.9	0.4	0.4	0.6	0.7	0.7	0.7	3.8	14.4			
6-May	0.3	0.7	1.4	Z	2.4	3.7	4.4	2.9	2.3	1.3	2.4	2.2	0.9	0.8	1.1	0.7	0.7	0.6	0.6	0.6	0.6	0.8	1.0	1.1	1.5	4.4			
7-May	1.2	1.3	1.3	1.2	Z	3.0	2.9	3.2	3.4	2.1	2.8	2.3	2.5	1.2	1.0	0.8	1.0	2.8	2.2	2.3	1.0	0.5	0.9	1.8	1.8	3.4			
8-May	1.7	1.0	1.3	1.1	1.4	Z	1.2	5.2	2.1	1.4	2.5	2.3	1.6	2.9	1.5	4.7	1.7	1.2	1.3	1.3	1.1	1.4	1.7	1.6	1.9	5.2			
9-May	Z	2.1	0.8	0.5	0.5	0.8	1.1	1.2	1.6	1.2	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.8	1.0	1.1	0.8	0.8	0.8	0.8	2.1			
10-May	0.9	Z	1.2	0.8	1.6	1.2	1.0	1.8	4.3	1.3	1.4	2.9	1.1	3.1	0.9	4.5	2.1	0.7	0.6	0.5	0.7	0.7	1.0	1.1	1.5	4.5			
11-May	0.8	0.6	Z	1.0	0.9	1.4	1.1	1.1	2.1	0.6	1.5	1.3	1.3	0.9	0.9	1.8	1.0	0.8	1.8	1.0	1.9	1.4	0.6	0.6	1.1	2.1			
12-May	1.3	1.1	1.2	Z	1.9	2.4	4.7	4.2	5.3	1.4	1.9	1.0	0.7	1.2	0.6	0.6	1.1	0.7	0.9	0.5	0.6	0.5	0.6	1.0	1.5	5.3			
13-May	2.3	2.7	3.4	3.8	Z	2.5	12.7	2.9	1.3	2.2	0.8	3.0	2.1	1.0	1.4	1.6	0.8	0.6	0.6	1.2	0.5	0.5	0.5	0.7	2.1	12.7			
14-May	1.2	1.3	1.3	1.2	2.0	Z	7.6	4.9	2.6	1.5	1.6	1.3	1.0	1.1	0.6	0.8	0.6	0.6	1.7	1.6	0.7	0.4	0.4	0.3	1.6	7.6			
15-May	Z	0.5	0.4	0.3	0.4	0.3	0.6	0.4	0.4	1.2	2.2	1.3	1.6	1.2	0.7	0.6	0.4	0.4	0.5	0.5	0.8	0.2	0.2	0.6	0.7	2.2			
16-May	0.5	Z	1.3	1.1	1.0	1.2	2.2	2.3	1.1	1.4	0.8	0.6	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.7	2.3			
17-May	0.2	0.2	Z	0.7	0.7	1.7	1.7	1.6	0.9	1.0	1.0	0.8	0.5	0.2	0.4	0.6	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.4	0.7	1.7			
18-May	0.4	0.6	0.9	Z	1.4	1.3	1.6	1.8	1.2	1.2	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.7	0.9	1.0	0.6	0.8	1.8			
19-May	0.9	1.2	2.3	2.5	Z	3.0	3.0	2.1	1.9	1.3	0.9	0.9	0.6	0.8	0.6	0.6	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.7	1.2	3.0			
20-May	0.7	0.7	0.6	0.6	0.7	Z	0.9	1.1	0.9	0.9	0.8	0.8	0.5	0.4	0.5	0.5	0.8	0.7	0.7	0.7	0.6	1.1	0.6	0.6	0.7	1.1			
21-May	Z	0.8	0.7	0.6	1.1	2.1	4.2	2.5	3.6	2.0	2.2	1.2	1.9	1.0	0.7	0.8	0.6	0.5	0.6	0.9	0.7	0.9	0.6	0.7	1.3	4.2			
22-May	0.7	Z	1.0	1.1	1.4	1.3	1.4	1.4	C	C	C	C	C	2.9	3.9	2.9	1.4	1.0	0.8	1.0	1.4	1.1	0.8	0.7	1.5	3.9			
23-May	0.5	0.5	Z	1.3	1.7	1.0	1.0	2.0	2.4	2.3	1.4	1.9	1.7	1.7	1.4	0.7	2.2	0.9	0.8	0.7	0.7	0.9	0.9	0.8	1.3	2.4			
24-May	0.7	0.9	0.7	Z	2.4	3.5	3.1	3.3	2.0	2.7	1.5	1.8	2.6	2.1	2.2	2.4	0.9	0.7	0.7	0.8	0.8	0.9	1.1	1.9	1.7	3.5			
25-May	2.6	2.2	2.4	2.9	3.3	Z	3.4	3.9	3.0	2.4	0.9	1.9	1.6	1.3	1.6	1.1	0.7	0.8	0.9	0.9	0.8	0.8	1.2	1.7	1.8	3.9			
26-May	1.9	1.7	1.9	2.5	3.3	Z	4.2	4.9	3.0	2.5	2.2	1.8	1.1	1.8	0.8	0.8	0.8	0.7	0.8	0.8	2.6	4.3	1.8	1.7	2.1	4.9			
27-May	Z	1.5	1.4	1.5	2.1	6.8	14.8	5.6	3.1	2.2	2.4	5.2	5.0	1.2	6.6	2.3	1.3	0.6	0.9	0.7	1.3	0.9	2.1	3.0	3.2	14.8			
28-May	5.4	Z	3.2	1.2	0.9	1.1	1.0	1.1	1.1	2.1	0.8	1.4	1.0	1.3	0.9	1.3	0.8	0.6	0.6	0.6	0.9	0.9	0.7	1.0	1.3	5.4			
29-May	2.1	7.5	Z	44.7	29.1	16.2	7.0	6.3	3.4	1.6	2.9	1.6	1.2	1.2	1.6	1.4	PF	PF	PF	PF	PF	PF	PF	PF	--	44.7			
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--			
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	650	99.39	99.39
21 - 40	3	0.46	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	17	11	6	2	9	14	77	151	125	41	24	14	15	42	70	31	649
21 - 40	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	3
11 - 80	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	11	6	2	9	14	77	153	125	41	24	14	15	44	70	31	653

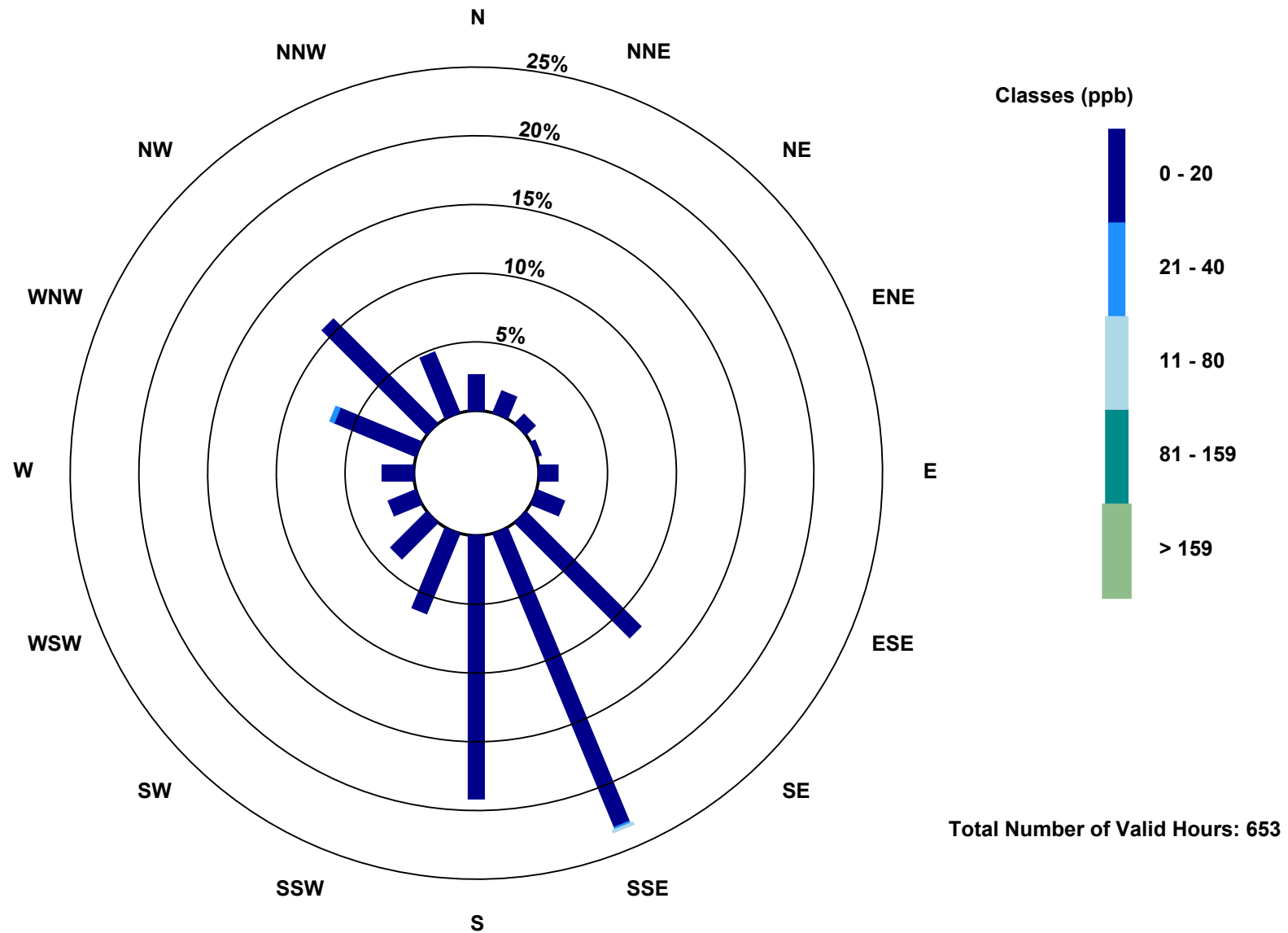
Total Number of Valid Hours: 653

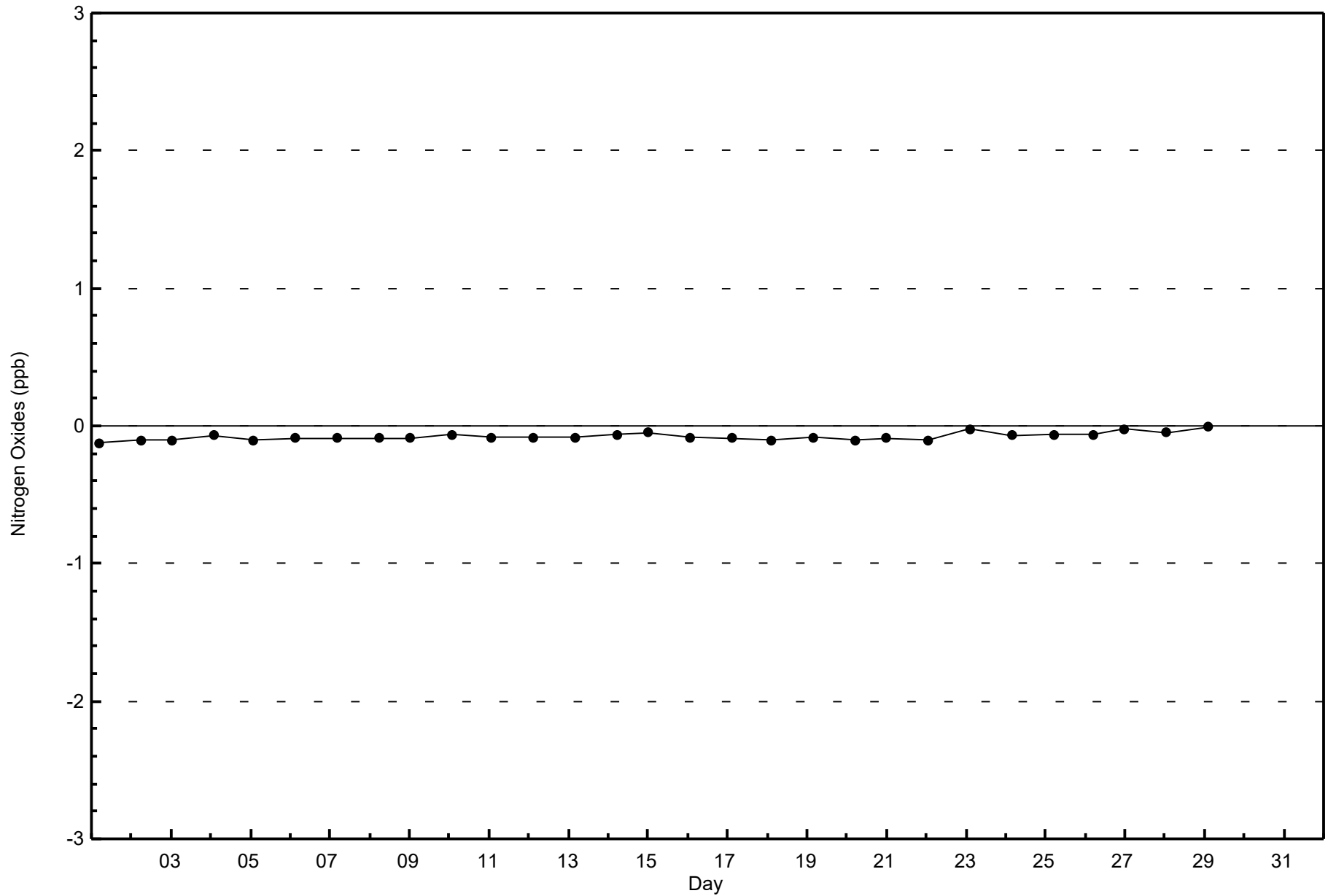
Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Nitrogen Oxides (NO_x) - ppb
Jackfish 1

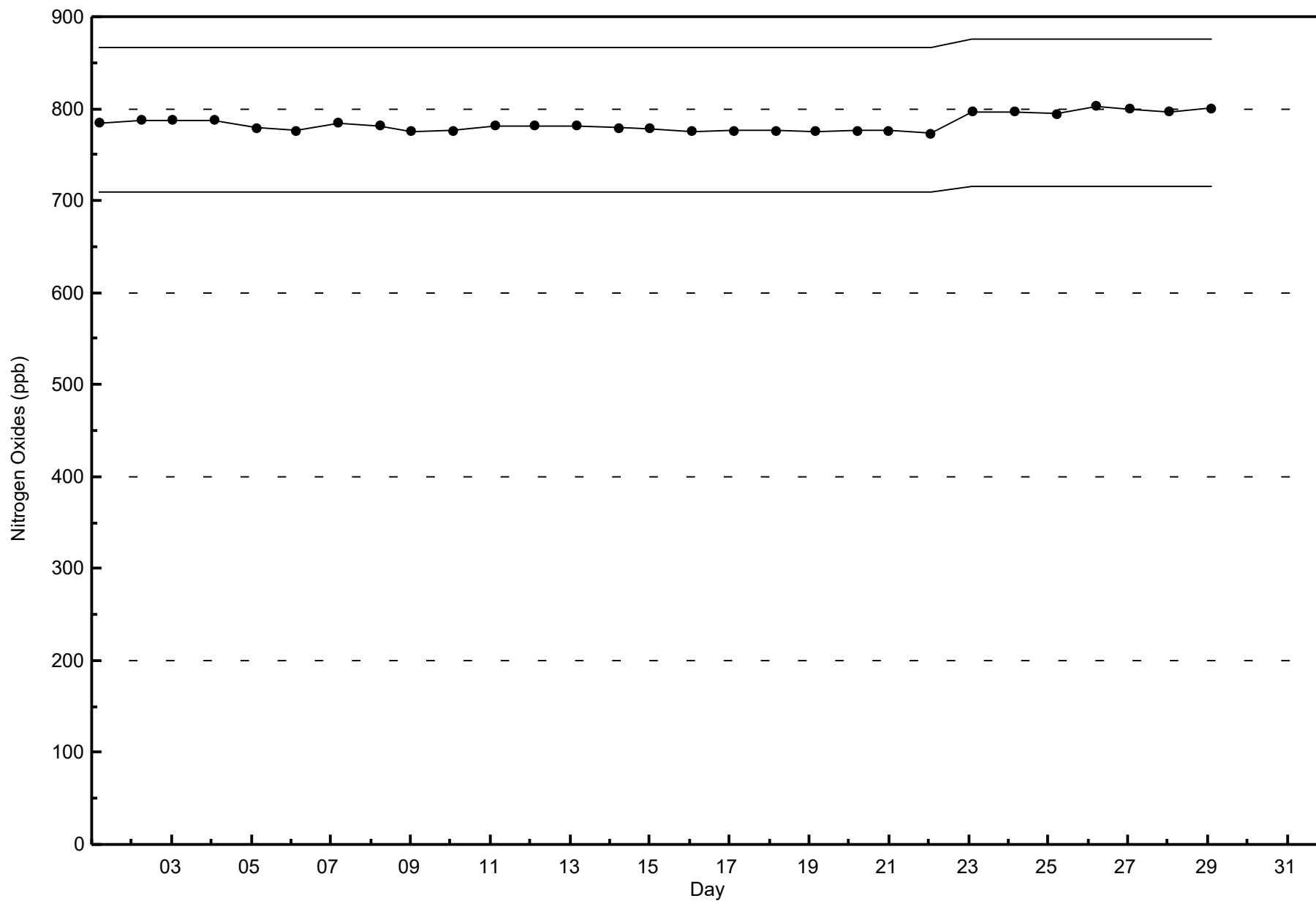






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

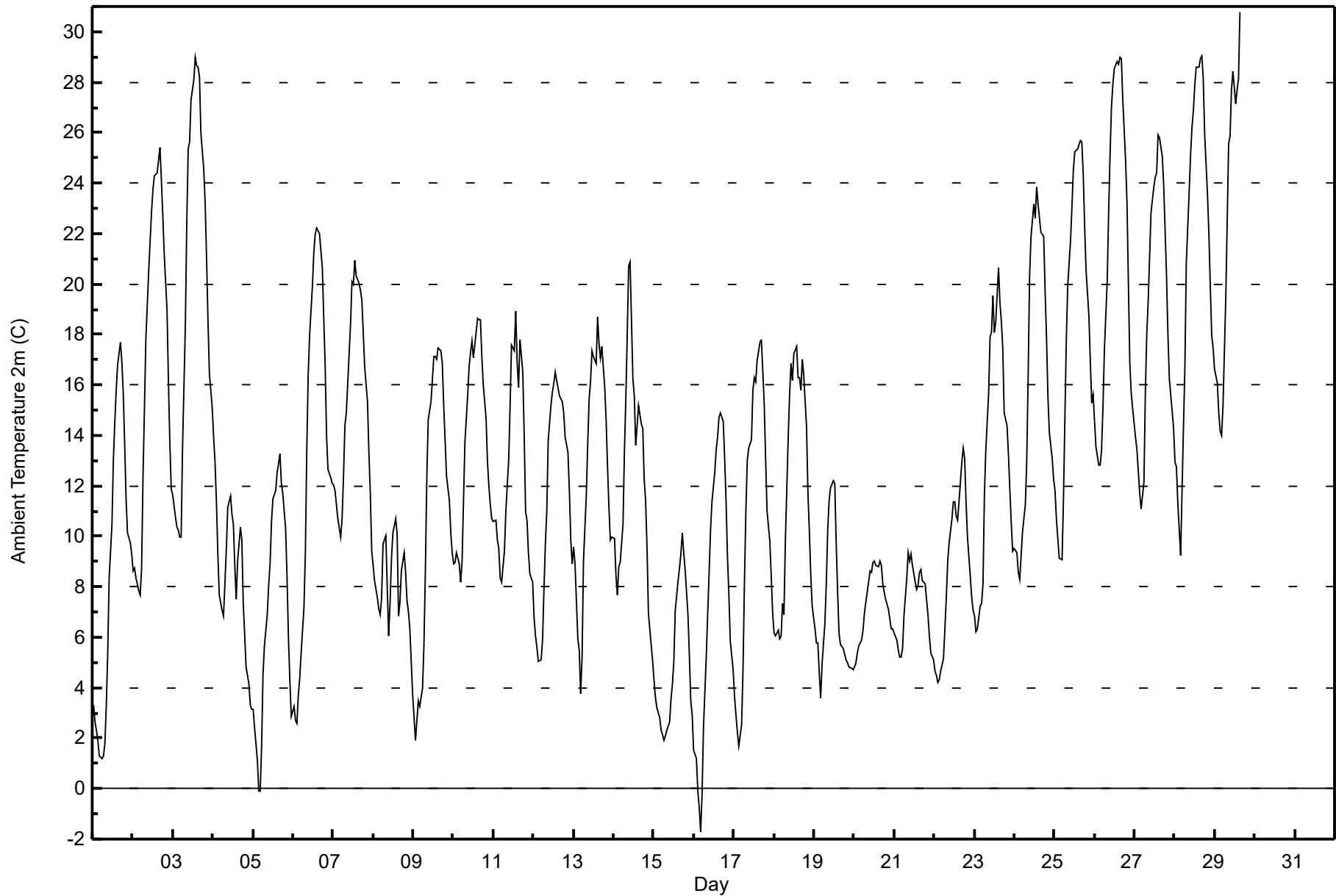
Jackfish 1 - May 2025

Maximum Value: 30.8 C on May 29 16:00																			Maximum Daily Average: 21.2 C on May 28										Hours in Service: 744	
Minimum Value: -1.7 C on May 16 05:00																			Minimum Daily Average: 5.0 C on May 15										Hours of Data: 688	
Maximum Diurnal Average: 17.8 C at hour 16																			Minimum Diurnal Average: 6.5 C at hour 5										Hours of Missing Data: 56	
Monthly Average: 12.64 C																			Percentiles: P ₁ = 1.2 P ₁₀ = 4.7 Q ₁ = 7.7 Median = 11.5 Q ₃ = 16.9 P ₉₀ = 22.8 P ₉₉ = 28.7										Hours of Calibration: 0	
																													Percent Operational Time: 92.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-May	3.3	2.7	2.3	1.9	1.3	1.2	1.3	1.8	3.3	5.4	8.4	10.4	13.0	14.5	15.8	16.8	17.7	16.9	15.7	13.6	11.5	10.1	9.7	9.3	8.7	17.7				
2-May	8.6	8.8	8.4	7.9	7.7	8.7	12.4	15.1	17.8	20.5	21.6	22.8	23.7	24.3	24.4	24.9	25.4	24.1	22.7	21.2	19.0	16.1	13.7	11.9	17.2	25.4				
3-May	11.7	10.7	10.4	10.2	10.0	10.0	13.5	18.4	22.4	25.3	25.6	27.3	28.1	29.0	28.6	28.6	28.2	26.0	24.6	23.2	21.1	18.6	16.5	15.1	20.1	29.0				
4-May	13.9	13.0	11.4	9.3	7.7	7.1	6.8	8.1	9.5	11.1	11.6	10.9	10.5	8.9	7.5	9.0	10.4	9.8	7.3	6.1	4.8	4.2	3.3	3.1	8.6	13.9				
5-May	3.1	2.4	1.1	-0.1	-0.1	1.7	4.6	5.7	6.9	8.1	8.9	10.6	11.5	11.8	12.5	12.9	13.3	12.1	11.7	10.3	8.4	6.0	4.3	2.9	7.1	13.3				
6-May	3.2	2.7	2.6	3.7	4.4	5.4	7.2	9.4	13.4	16.4	17.9	19.9	21.2	22.0	22.2	22.1	22.0	20.7	18.7	16.8	14.0	12.6	12.3	12.1	13.5	22.2				
7-May	12.0	11.8	11.3	10.7	9.9	10.7	12.4	14.4	14.9	17.2	18.4	20.1	20.0	20.9	20.3	20.1	19.8	19.4	18.1	16.7	15.3	13.3	11.7	9.4	15.4	20.9				
8-May	8.9	8.2	7.6	7.1	6.9	7.6	9.7	10.0	8.0	6.0	7.4	9.1	10.1	10.7	10.1	6.8	7.4	8.6	9.3	8.6	7.4	7.0	6.3	3.7	8.0	10.7				
9-May	2.8	1.9	2.7	3.5	3.3	4.0	5.7	8.6	12.3	14.6	15.3	16.2	17.2	17.2	17.0	17.4	17.4	16.8	15.2	13.8	12.4	11.4	10.1	9.3	11.1	17.4				
10-May	8.9	8.9	9.4	8.9	8.2	9.0	11.4	13.7	15.6	16.7	17.3	17.8	17.1	17.6	18.7	18.6	18.6	17.1	16.0	14.6	12.9	12.0	11.3	10.7	13.8	18.7				
11-May	10.6	10.6	9.8	9.5	8.4	8.2	9.4	11.0	12.0	13.0	15.1	17.6	17.4	18.9	16.9	15.9	17.8	16.5	14.0	11.0	10.6	9.4	8.5	8.2	12.5	18.9				
12-May	6.8	6.0	5.6	5.1	5.1	5.9	7.9	9.7	11.0	13.8	15.2	15.7	16.1	16.5	16.2	15.6	15.4	15.4	14.9	13.9	13.3	11.8	9.9	8.9	11.5	16.5				
13-May	9.6	8.9	5.9	5.5	3.7	5.2	9.0	11.6	13.7	15.5	16.1	17.3	17.1	16.9	18.7	17.6	17.1	17.5	16.0	14.7	12.8	11.2	9.9	10.0	12.6	18.7				
14-May	9.9	8.5	7.7	8.8	8.9	10.5	13.4	15.5	18.0	20.7	20.9	16.2	15.6	13.6	14.4	15.2	14.4	14.3	12.3	11.5	9.6	6.9	5.7	5.1	12.4	20.9				
15-May	4.3	3.6	3.2	2.8	2.3	2.1	1.9	2.1	2.3	2.6	3.6	4.1	5.1	7.1	8.2	8.8	9.3	10.1	9.3	8.7	6.9	5.3	3.5	2.9	5.0	10.1				
16-May	1.5	1.2	-0.1	-0.8	-1.7	-0.2	2.4	5.3	6.9	8.6	10.2	11.4	12.6	13.4	13.9	14.7	14.9	14.5	13.1	11.4	9.2	7.7	5.9	4.7	7.5	14.9				
17-May	3.7	2.9	2.2	1.7	2.6	4.7	8.1	10.9	13.0	13.5	13.9	15.8	16.3	16.1	17.0	17.7	17.8	16.6	15.3	13.1	11.0	9.8	8.4	6.9	10.8	17.8				
18-May	6.2	6.1	6.3	5.9	6.1	7.4	6.9	9.8	13.9	15.6	16.9	16.2	17.2	17.5	16.3	16.3	15.8	17.0	16.4	14.3	11.7	10.2	8.5	7.3	11.9	17.5				
19-May	6.3	5.8	5.8	4.6	3.6	4.9	6.5	8.1	10.3	11.4	11.9	12.2	12.1	9.7	7.8	6.2	5.7	5.6	5.3	5.1	5.0	4.8	4.8	4.7	7.0	12.2				
20-May	4.8	5.0	5.4	5.7	5.9	6.3	7.0	7.4	7.8	8.6	8.6	9.0	9.0	8.9	8.8	9.0	8.9	8.2	7.8	7.5	7.1	6.7	6.3	6.3	7.3	9.0				
21-May	6.1	5.9	5.5	5.2	5.2	5.6	6.8	8.4	9.4	9.0	9.3	8.9	8.2	7.9	8.0	8.6	8.7	8.2	8.1	7.5	6.9	6.1	5.4	5.1	7.2	9.4				
22-May	4.7	4.5	4.2	4.3	4.6	5.1	6.3	7.6	9.0	9.7	10.7	11.4	11.4	10.8	10.7	11.4	12.9	13.5	13.1	11.4	9.9	8.4	7.6	7.1	8.8	13.5				
23-May	6.8	6.2	6.3	7.2	7.3	8.1	11.6	13.4	15.7	17.9	18.1	19.5	18.1	18.5	20.7	19.2	18.5	17.5	14.9	14.4	13.3	11.9	10.5	9.4	13.5	20.7				
24-May	9.5	9.3	8.6	8.3	9.2	10.2	11.3	13.0	16.4	20.3	21.9	23.2	22.6	23.8	23.2	22.6	22.0	21.9	19.7	17.9	15.5	14.1	13.1	12.2	16.2	23.8				
25-May	11.8	10.7	9.9	9.1	9.1	11.5	14.7	17.7	19.9	21.7	23.1	24.5	25.3	25.3	25.4	25.7	25.6	24.3	22.3	20.6	18.7	17.0	15.3	15.6	18.5	25.7				
26-May	14.5	13.5	12.8	12.8	13.4	15.1	17.4	20.1	22.9	25.1	27.0	27.9	28.6	28.8	28.7	29.0	28.9	27.3	24.9	23.2	20.0	16.8	15.7	15.0	21.2	29.0				
27-May	13.9	13.4	12.6	11.7	11.1	12.1	15.7	18.0	19.3	21.0	22.8	23.8	24.2	24.4	25.9	25.8	25.1	23.9	22.1	20.3	18.0	16.3	15.0	14.3	18.8	25.9				
28-May	13.0	12.7	11.3	9.2	11.8	14.3	16.7	20.8	23.6	25.1	26.2	26.9	27.9	28.6	28.6	28.9	29.1	28.2	26.0	23.6	22.0	19.9	18.0	17.4	21.2	29.1				
29-May	16.6	16.1	14.9	14.2	14.0	15.2	19.5	22.5	25.6	25.8	27.7	28.4	27.1	27.7	28.1	30.8	PF	PF	PF	PF	PF	PF	PF	PF	--	30.8				
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--				
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--				
8.2 7.7 7.1 6.7 6.5 7.5 9.6 11.7 13.6 15.2 16.3 17.1 17.4 17.6 17.7 17.8 17.4 16.9 15.5 14.1 12.4 10.9 9.7 8.9																										Diurnal Average				
16.6 16.1 14.9 14.2 14.0 15.2 19.5 22.5 25.6 25.8 27.7 28.4 28.6 29.0 28.7 30.8 29.1 28.2 26.0 23.6 22.0 19.9 18.0 17.4																										Diurnal Maximum				
PF - Power Failure																														



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Jackfish 1 - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	6	0.87	0.87
0 - 10	281	40.84	41.72
10 - 20	296	43.02	84.74
> 20	105	15.26	100.00

Total Number of Valid Hours: 688

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

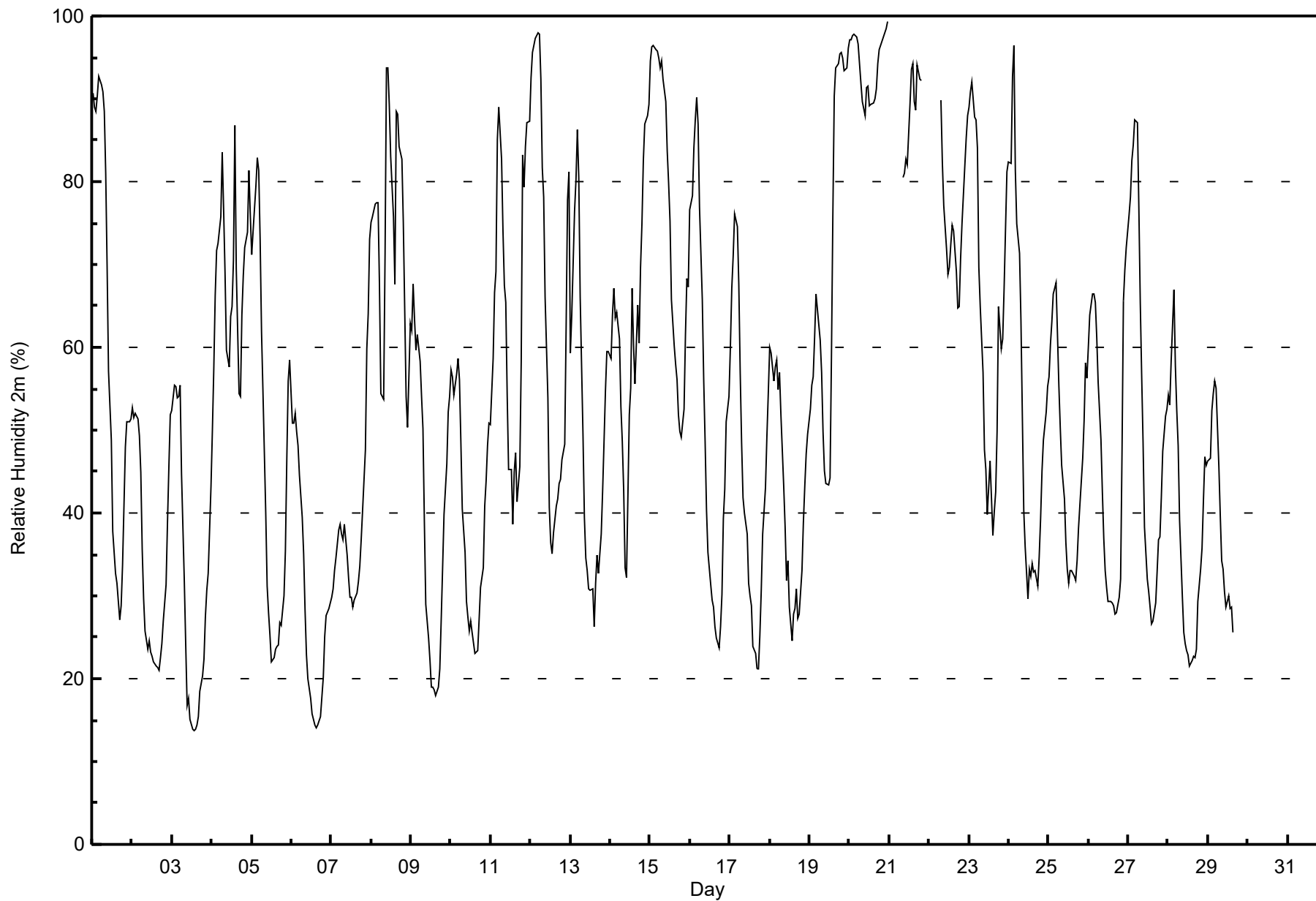
Jackfish 1 - May 2025

Maximum Value: 99.3 % on May 21 00:00																				Maximum Daily Average: 94.2 % on May 20					Hours in Service: 744		
Minimum Value: 13.8 % on May 3 14:00																				Minimum Daily Average: 29.1 % on May 6					Hours of Data: 669		
Maximum Diurnal Average: 72.3 % at hour 5																				Minimum Diurnal Average: 40.8 % at hour 13					Hours of Missing Data: 75		
Monthly Average: 53.99 %																				Percentiles: P ₁ = 14.8 P ₁₀ = 25.5 Q ₁ = 33.1 Median = 52.0 Q ₃ = 72.0 P ₉₀ = 89.4 P ₉₉ = 97.6					Hours of Calibration: 0		
																				Percent Operational Time: 89.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	90.7	89.0	88.6	90.3	92.6	91.7	90.8	88.4	81.0	69.6	57.1	48.9	37.7	35.2	32.8	31.5	27.1	28.9	33.7	40.9	48.0	51.1	51.0	51.3	60.3	92.6	
2-May	52.8	51.6	52.1	51.3	49.3	44.9	35.7	29.6	25.8	23.6	24.5	23.3	22.7	22.0	21.6	21.3	21.0	22.5	24.2	26.9	31.3	38.8	45.6	51.8	33.9	52.8	
3-May	52.4	55.4	55.3	54.0	54.0	55.4	44.8	31.8	24.0	16.8	17.7	15.1	13.9	13.8	14.0	14.4	15.5	18.5	20.4	22.4	27.4	30.7	32.7	43.2	31.0	55.4	
4-May	50.0	57.4	66.3	71.6	72.6	75.8	83.6	76.6	68.9	59.6	57.7	63.7	64.9	70.6	86.8	69.4	54.4	54.0	63.9	68.6	72.1	73.9	81.4	75.9	68.3	86.8	
5-May	71.2	74.0	79.4	83.0	81.3	73.0	61.8	54.8	40.1	31.2	27.9	25.2	22.0	22.6	23.5	23.9	24.1	26.9	26.5	30.0	35.4	46.5	55.9	58.4	45.8	83.0	
6-May	50.9	50.8	52.0	49.8	48.1	44.6	39.5	35.2	28.3	22.9	20.0	17.6	15.8	15.1	14.4	14.1	14.3	15.4	17.8	20.2	25.2	27.6	28.5	29.2	29.1	52.0	
7-May	29.9	30.9	33.0	34.6	38.0	38.6	37.5	36.8	38.7	35.0	32.2	29.9	29.9	28.6	29.5	30.3	31.7	33.5	36.9	40.3	47.6	59.9	64.0	73.0	38.3	73.0	
8-May	75.1	75.7	77.4	77.4	77.5	67.7	54.3	53.7	71.3	93.7	93.7	89.3	83.0	75.7	67.6	88.4	88.2	84.2	82.6	75.1	64.6	54.1	50.3	62.9	74.3	93.7	
9-May	62.1	67.6	63.3	59.7	61.5	58.3	54.0	50.2	38.9	28.9	24.9	22.2	19.0	19.0	18.6	17.9	19.0	21.2	27.1	33.4	39.9	45.9	52.3	54.1	40.0	67.6	
10-May	57.4	56.5	54.3	56.8	58.6	56.1	48.7	40.5	35.2	29.3	27.4	25.8	26.9	25.6	23.0	23.2	23.4	27.1	31.1	33.4	40.8	44.0	48.1	50.9	39.3	58.6	
11-May	50.7	58.6	66.5	69.1	85.0	89.0	82.8	74.1	67.5	65.4	54.2	45.2	45.2	38.6	45.0	47.2	41.4	45.5	58.3	83.3	79.4	84.2	87.1	87.3	64.6	89.0	
12-May	92.6	95.5	96.4	97.3	98.0	97.8	92.4	81.6	78.1	66.1	53.9	40.6	36.4	35.1	37.7	40.9	41.7	43.6	44.1	46.4	48.3	62.5	77.8	81.3	66.1	98.0	
13-May	59.4	63.9	76.4	80.1	86.3	80.5	66.0	49.5	39.5	34.6	33.1	30.9	30.7	30.9	26.3	31.5	34.9	32.8	37.5	42.7	48.7	54.7	59.4	59.5	49.6	86.3	
14-May	58.6	64.0	67.1	63.5	64.2	61.1	52.9	48.6	42.7	33.3	32.2	51.9	55.2	67.2	60.4	55.5	65.1	60.5	69.7	75.0	82.5	86.9	88.0	89.4	62.3	89.4	
15-May	94.6	96.2	96.4	95.9	95.8	94.9	93.7	94.5	92.3	89.7	83.7	79.9	75.3	65.8	60.2	57.9	56.0	51.8	49.8	49.2	52.6	61.6	68.3	67.4	76.0	96.4	
16-May	76.5	78.3	84.1	87.5	90.2	87.0	76.9	65.8	56.2	48.6	40.4	35.2	31.4	29.4	28.6	26.3	24.9	23.8	26.3	30.1	39.4	42.8	50.9	54.0	51.4	90.2	
17-May	60.0	67.1	71.1	76.1	74.6	67.6	57.0	48.4	41.9	40.0	37.4	31.5	30.1	28.8	23.8	23.0	21.1	21.2	25.2	30.7	37.5	43.1	49.2	54.4	44.2	76.1	
18-May	60.0	59.4	55.9	57.6	58.5	55.0	57.0	51.8	43.2	38.3	31.9	34.2	28.7	24.6	27.9	28.5	30.8	27.3	27.8	33.1	38.8	43.2	47.1	49.6	42.1	60.0	
19-May	52.6	55.5	56.5	61.3	66.5	64.5	60.8	56.9	49.9	45.1	43.6	43.5	44.3	58.7	76.0	90.4	93.8	94.2	95.4	95.7	94.9	93.4	93.7	96.1	70.1	96.1	
20-May	97.1	97.1	97.7	97.7	97.4	96.6	94.3	91.9	89.7	88.1	91.3	91.5	89.2	89.4	89.5	90.1	91.2	94.2	96.0	96.5	97.5	98.0	98.5	99.3	94.2	99.3	
21-May	OR	OR	OR	OR	OR	OR	OR	OR	80.5	81.1	82.8	82.1	89.5	93.6	94.2	89.6	88.6	94.1	92.4	92.2	OR	OR	OR	OR	--	94.2	
22-May	OR	OR	OR	OR	OR	OR	OR	89.8	82.3	77.2	71.8	68.9	69.6	72.3	74.7	74.0	69.1	64.8	64.9	70.6	75.0	81.9	85.3	88.0	--	89.8	
23-May	89.0	90.9	92.0	87.8	87.5	84.1	69.7	64.9	56.9	47.6	45.3	39.8	43.0	46.2	37.2	40.2	42.5	49.8	64.9	59.8	61.0	67.1	74.2	81.2	63.4	92.0	
24-May	82.4	82.2	92.7	96.4	81.4	75.0	71.4	63.1	51.7	40.3	36.0	29.7	33.3	32.4	33.9	32.9	33.1	31.3	34.7	39.3	45.1	48.8	52.1	55.3	53.1	96.4	
25-May	56.5	60.3	63.1	66.4	67.8	61.7	55.5	50.4	45.8	41.8	36.5	33.3	31.5	33.0	33.1	32.4	31.8	34.2	38.1	41.0	46.5	51.1	58.1	56.3	46.9	67.8	
26-May	60.0	63.9	66.5	66.5	65.4	61.1	55.8	48.8	42.5	36.9	33.1	31.0	29.2	29.3	29.2	28.8	27.7	27.9	29.8	32.0	47.3	65.6	69.3	72.0	46.7	72.0	
27-May	76.0	78.1	82.5	84.4	87.5	87.1	76.7	65.5	56.6	48.5	38.4	32.1	30.5	28.7	26.6	27.0	29.1	32.9	36.8	37.1	41.8	47.4	51.7	52.5	52.3	87.5	
28-May	54.2	53.1	58.3	67.0	57.9	52.4	48.1	39.1	29.9	25.6	24.3	23.4	22.8	21.6	22.2	22.7	22.5	23.5	29.3	33.3	35.8	41.6	46.8	45.8	37.6	67.0	
29-May	46.3	46.6	52.3	54.4	56.0	55.0	45.6	39.7	34.3	33.2	30.4	28.6	30.0	28.4	28.7	25.6	PF	PF	PF	PF	PF	PF	PF	PF	--	56.0	
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--	
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	--	
65.1 67.4 70.3 71.8 72.3 69.5 63.2 57.9 52.9 48.0 44.3 41.9 40.8 40.8 40.9 41.3 41.6 42.3 45.9 49.3 52.0 57.3 61.8 64.4																										Diurnal Average	
97.1 97.1 97.7 97.7 98.0 97.8 94.3 94.5 92.3 93.7 93.7 91.5 89.5 93.6 94.2 90.4 93.8 94.2 96.0 96.5 97.5 98.0 98.5 99.3																										Diurnal Maximum	
PF - Power Failure OR - Out of Range																											



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Jackfish 1 - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	22	3.29	3.29
20 - 40	206	30.79	34.08
40 - 60	192	28.70	62.78
60 - 80	123	18.39	81.17
80 - 100	126	18.83	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

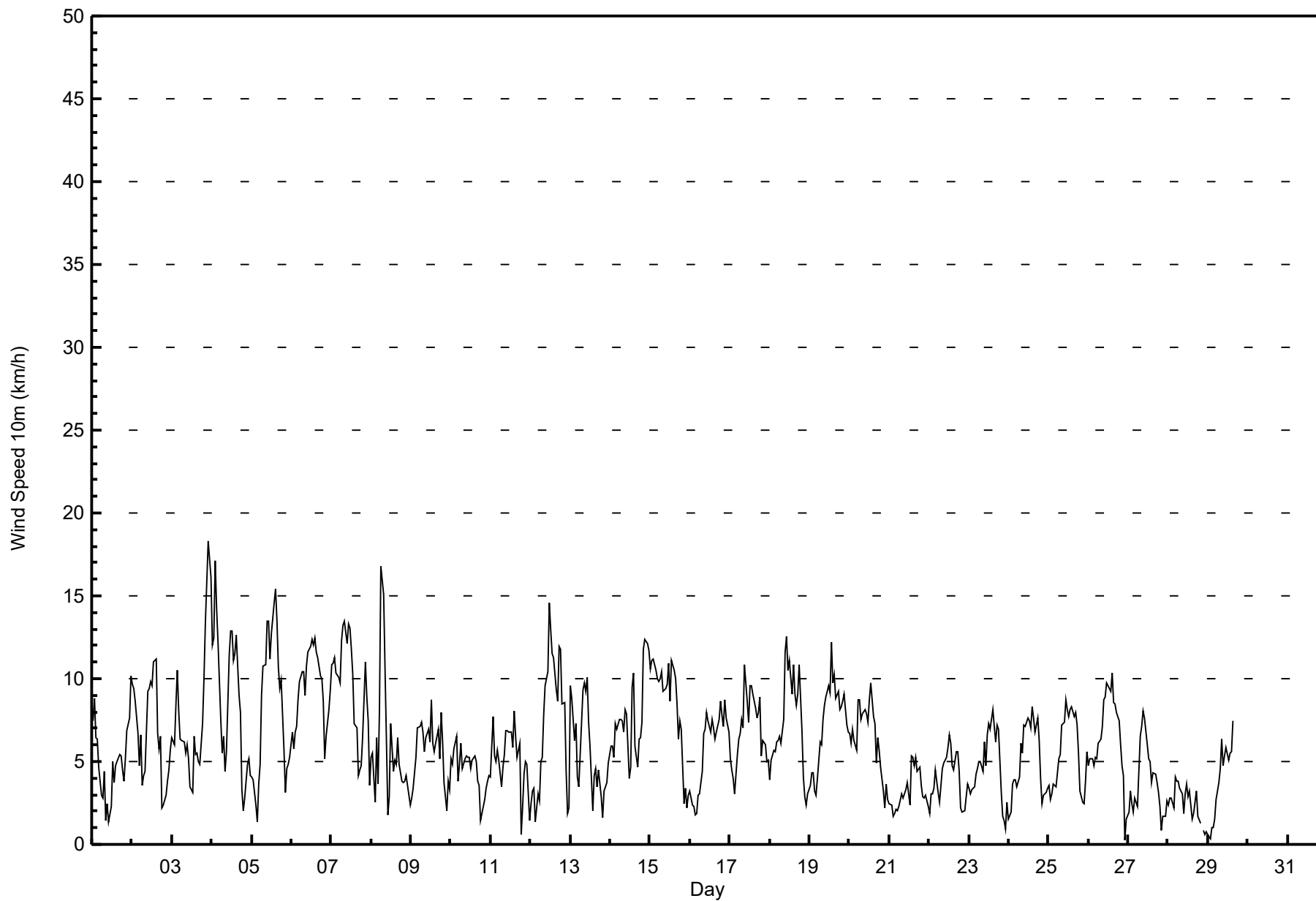
Jackfish 1 - May 2025

Maximum Speed: 18 km/h on May 3 23:00										Maximum Daily Speed Average: 9.3 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 0 km/h on May 26 23:00										Minimum Daily Speed Average: 1.3 km/h on May 1										Hours of Data: 687						
Maximum Diurnal Speed Average: 2.7 km/h at hour 6										Minimum Diurnal Speed Average: 0.4 km/h at hour 21										Hours of Missing Data: 57						
Monthly Average Velocity: 1.8 km/h 183.8 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 6 Q ₃ = 8 P ₉₀ = 11 P ₉₉ = 15										Percent Operational Time: 92.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	NNW7	NNW9	NNW6	N6	NNE5	NNE3	E3	E4	S1	S2	WSW1	SSE2	SW5	WSW4	SSW5	SW5	WSW5	SW5	S4	SSE4	SSE5	SSE7	SSE8	S10	SSW1.3	S10
2-May	S10	S9	S9	S7	SSW5	SSW7	SW4	WNW4	WNW4	NW9	NW9	NW10	NW10	NW11	NW11	NW7	WNW6	NW7	WNW2	N2	SSE3	SSE4	SSE4	SSE6	W2.6	NW11
3-May	SSE6	SSE6	S8	S10	S8	SSE6	SSE6	SSE6	S6	SW6	S5	S4	S3	WNW7	WSW5	WNW6	W5	WNW5	NW7	NW10	NW13	NW16	NW18	NW16	W3.0	NW18
4-May	NW12	WNW12	NW17	WNW14	WNW12	WNW7	WNW6	NW6	WNW4	WNW6	NW11	NW13	NW13	NW11	NW12	NW13	NW9	WNW8	W3	SW2	SW3	SSW5	SSW5	SSW4	WNW7.7	NW17
5-May	SW4	WSW4	WNW2	W1	W4	WNW5	WNW9	WNW11	NW11	NW13	NW13	NW11	NW13	NW15	NW15	NW13	NW11	NW9	NW10	NNW6	E3	SSE5	SSE5	SSE5	NW6.6	NW15
6-May	SSE7	SSE6	S7	SSE7	SSE9	S10	S10	S10	S9	S11	S12	S12	S12	S12	S12	S11	S10	S10	S9	SSE5	SSE7	SSE8	SSE9	S9.3	S12	
7-May	SSE11	SSE11	SSE11	SSE10	SSE10	S10	S12	S13	S13	S12	S13	S13	S12	SSW10	SSW7	SSW7	WSW4	WNW4	WNW5	NW6	NW11	NW9	NW7	WNW4	S6.1	S13
8-May	WNW5	NW6	NNW3	NW6	WNW4	WNW8	NW17	NW15	NW11	NW6	SSW2	WSW3	NW7	WNW4	W5	SW5	SSW6	SSW5	SSW4	SSW4	SW4	SW4	SW4	SSW2	WNW4.1	NW17
9-May	SSW3	SSW3	SW4	SW5	SSW7	SSW7	SSW7	SSW7	SSW6	WSW6	SW7	SW6	SW9	WSW6	SW6	SW6	SW7	SW5	SSW8	S6	S4	S2	SSE4	SSE3	SSW5.3	SW9
10-May	SSE5	SSE5	S6	S7	SSW4	SSW5	SSW6	WSW5	WNW5	WNW5	WNW5	WNW5	W5	WNW5	WNW5	WNW5	WNW4	W4	SW1	SW2	S3	SSE3	SSE4	SSE4	SW2.6	S7
11-May	SSE4	SSE8	SSE5	SSE5	SSE6	SSE5	SE3	SE5	SE5	SE7	SE7	SSE7	S7	S6	WNW8	N7	E5	NNW6	ESE1	ENE2	NNE4	SE5	SE5	SSW1	SSE2.8	WNW8
12-May	WNW2	WNW3	WNW3	WNW1	NW3	WNW3	NNW5	NNE5	N8	NNE10	NNE10	N15	NNE13	NNE12	NE11	NE9	NNE9	N12	N12	NNW8	NNW9	E4	SE2	NW2	N6.1	N15
13-May	NW10	NW9	NW6	NW7	WNW4	W4	NW5	NW9	NW10	NW9	NNW10	NW7	WNW6	W2	WNW4	W5	SW3	SSE5	S3	SSE2	S3	SSE3	SSE4	S5	WNW3.6	NNW10
14-May	S6	SSE6	S5	S7	S7	S8	S8	S7	S7	S8	S8	SSW4	SSE5	SE9	SE10	SSE6	SE5	N6	NNE6	N7	NNW12	NNW12	NNW12	NNW12	SSE1.8	NNW12
15-May	NNW11	NNW11	NNW11	NNW10	NNW10	NNW10	NNW10	NNW10	NNW9	NNW9	NNW10	NNW11	N9	N11	NNW11	N10	NNW8	NE6	N7	N7	NE2	ENE3	NE2	NW3	NNW8.0	NNW11
16-May	NNW3	N2	NW2	WNW2	W2	NW3	NNW3	NNW4	N7	N7	N8	NNE7	NNE7	NE8	E7	E6	E7	ESE8	E9	E8	ESE7	ESE9	SE8	SE7	ENE3.4	ESE9
17-May	SE5	SE5	SE4	SSE3	SSE5	SSE6	SSE7	SSE8	SSE7	SE11	SE9	SE7	SE10	SE10	SE9	SE8	SE8	SE8	SE9	SE5	SE6	SE6	SE5	SE5	SE6.8	SE11
18-May	SE4	SSE5	SSE6	SSE6	SSE6	SSE6	SSE7	SSE6	SE8	SE12	SE13	SE11	SE11	SE9	ESE11	ESE9	ESE8	ESE9	ESE11	SSE7	SSE4	S3	SSE2	SSE3	SE7.0	SE13
19-May	SSE4	SSE4	SSE4	SSE3	SSE3	SSE4	SSE6	SSE6	SSE8	SSE8	SE9	SE10	SE9	SE12	SE10	SE10	SE9	SE9	SE8	SE8	SE9	SE9	SE7	ESE7	SE7.2	SE12
20-May	ESE7	ESE6	SE7	SE6	SE6	SE9	SE9	SE8	SE8	SE8	SE8	SE7	SE9	SE10	SE8	SE7	SE5	SE6	SE6	SE5	SSE3	SSE2	SE4	SSE3	SE6.4	SE10
21-May	SE2	SE2	ESE2	S2	SSE2	S2	SSE2	S3	S3	SSE3	S3	SE4	SSE2	SE5	SSE5	SE5	SE5	SSE4	SSE5	SSE4	SSE3	SSE3	SSE3	S2	SSE3.1	SE5
22-May	SSE2	SSE3	SSE3	SSE3	SSE5	SSE3	S3	SSE4	S5	S5	S5	SSE6	S7	S6	S5	S5	SSE6	SSE6	S4	S2	SSE2	S2	SSE3	SSE4	SSE4.0	S7
23-May	SSE3	SSE3	SSE3	SSE3	SSE4	SSE5	SSE5	SSE5	SSE4	SSE6	S5	SSE7	SE7	SSE7	SSE8	SSE7	SSE6	SSE7	SE7	SSE3	SSW2	S1	S1	SSE3	SSE4.7	SSE8
24-May	S2	SSE2	SE4	SSE4	S4	SSE3	SSE4	SE6	SE6	SSE7	SSE7	S8	S7	S7	SSE8	S8	S7	SSE8	S6	S4	S2	S3	SSE3	S3	SSE5.0	SSE8
25-May	S4	SSE3	SSE3	SSE4	SSE3	SSE4	SSE5	S5	S7	S7	SSE9	S8	S8	S8	S8	SSE8	SSE8	SSE7	S6	S3	SSE3	SSE2	SSE4	SSE6	SSE5.5	SSE9
26-May	SSE5	SSE5	SSE5	SSE5	SSE5	S5	S6	S6	S7	SSE9	S9	SSE10	SSE10	SSE9	SSE10	SSE9	S8	S8	S7	S6	W5	NW4	NW0	S2	S5.8	SSE10
27-May	SE2	S3	S2	WSW2	WNW3	WNW2	NW4	NW7	NW7	NW8	NW8	NW6	NW5	NNW5	W4	WNW4	WNW4	W4	W3	NW2	S1	S2	SSW2	SSW3	WNW2.7	NW8
28-May	SSW2	SSW3	SSE3	S2	SW4	SSW4	SSW4	SSW3	WSW3	SSW2	S3	SSW4	SSW3	WSW3	W2	SSW2	S3	SW3	SSW2	SSW1	UO	SSE1	SSE1	S1	SSW2.3	SW4
29-May	S1	S0	S1	S1	SSE2	SSE3	S4	S5	S6	S5	SSW5	S6	S5	S5	S6	S7	PF	PF	PF	PF	PF	PF	PF	PF	----	S7
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	----	----
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	----	----
S1.7 S1.8 S2.0 S2.2SSW2.5 S2.7SSW2.3SSW2.0SSW1.9 S1.9 S1.9SSW1.9 S2.1 S1.6 S1.9 S1.7 S1.9 S1.5 SSE1.8 SSE0.9 SSE0.4 SSE1.4 SSE1.7 S2.1																								Diurnal Average		
NW12WNW12 NW17WNW14WNW12NNW10 NW17 NW15 S13 NW13 NW13 N15 NNE13 NW15 NW15 NW13 S11 N12 N12 NW10 NW13 NW16 NW18 NW16																								Diurnal Maximum		
UO - Unstable Operation PF - Power Failure																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Jackfish 1 - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 1 - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	326	47.45	47.45
6 - 11	315	45.85	93.30
12 - 19	46	6.70	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 1 - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	4	2	2	5	2	24	99	59	32	17	12	15	34	11	6	326
6 - 11	13	6	4	0	4	12	54	66	60	12	7	2	0	12	41	22	315
12 - 19	3	2	0	0	0	0	3	0	13	0	0	0	0	3	18	4	46
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	12	6	2	9	14	81	165	132	44	24	14	15	49	70	32	687

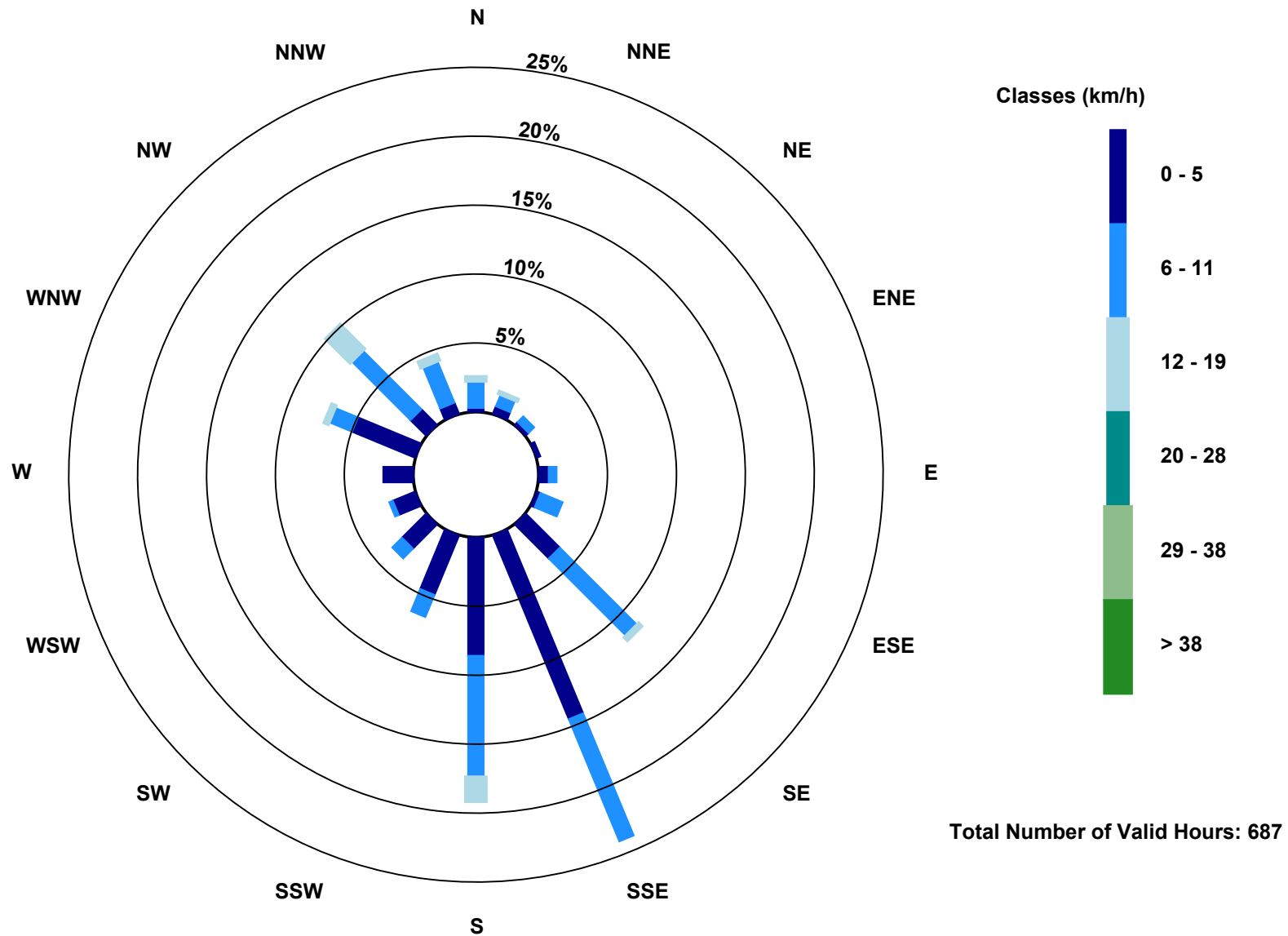
Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Jackfish 1





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 1 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5 km/h on May 19 14:00																	Hours in Service: 744 Hours of Data: 687 Hours of Missing Data: 57 Hours of Calibration: 0 Percent Operational Time: 92.3								
Minimum Value: 0 km/h on May 10 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 2 Q ₃ = 3 P ₉₀ = 4 P ₉₉ = 5																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	2	2	2	1	1	1	1	2	2	3	3	3	2	2	3	3	2	1	1	2	2	3	3
2-May	3	2	2	2	3	2	1	1	2	4	3	4	4	4	4	4	3	3	2	1	1	1	1	1	4
3-May	1	1	2	2	2	1	2	2	2	2	3	2	2	3	3	3	2	2	2	2	4	3	4	4	4
4-May	4	3	5	3	3	2	2	3	2	3	4	4	4	5	4	4	4	3	2	1	1	1	2	2	5
5-May	2	2	1	1	1	1	3	3	3	5	4	5	4	5	5	4	4	4	3	2	1	1	1	1	5
6-May	2	1	1	2	3	3	3	3	3	4	4	5	5	5	5	5	4	4	4	3	1	2	2	3	5
7-May	4	4	4	3	3	3	5	5	5	5	5	5	5	4	3	3	2	1	2	2	2	2	3	2	5
8-May	1	2	2	2	1	4	4	4	4	3	1	1	3	3	4	3	2	2	1	1	1	1	1	1	4
9-May	1	1	1	1	2	2	2	2	2	3	3	3	4	3	3	3	4	3	3	2	1	2	1	0	4
10-May	1	1	1	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	1	1	1	0	1	2	3
11-May	1	3	2	1	2	1	1	2	2	2	2	3	3	3	4	3	2	5	2	2	1	2	1	1	5
12-May	1	1	1	1	2	1	1	2	2	4	4	5	5	5	4	4	3	4	4	3	2	2	1	3	5
13-May	2	2	1	3	1	1	2	3	3	3	4	3	3	2	2	2	2	2	1	1	1	1	1	2	4
14-May	2	2	1	2	2	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	4	4	4	4	4
15-May	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	4
16-May	0	1	1	1	1	1	1	2	3	3	3	3	4	3	3	4	3	3	3	3	2	3	2	2	4
17-May	1	1	1	1	2	2	2	3	3	4	4	4	4	5	4	4	4	4	4	2	2	2	2	2	5
18-May	1	2	2	2	2	2	2	2	3	5	5	5	5	4	4	3	3	4	4	4	2	1	1	1	5
19-May	1	1	1	1	1	2	3	3	3	3	4	4	4	5	4	4	3	3	3	3	3	3	3	2	5
20-May	2	2	2	2	2	3	3	3	3	3	3	3	3	4	3	3	2	3	2	2	1	2	1	1	4
21-May	1	1	1	1	0	1	1	2	1	1	1	2	1	3	3	2	2	2	2	2	1	1	1	1	3
22-May	1	1	1	1	2	1	2	2	2	2	2	2	3	3	2	2	3	2	2	2	1	1	1	1	3
23-May	1	1	1	1	1	2	2	2	2	3	2	3	3	3	4	3	3	3	3	2	2	1	1	1	4
24-May	1	1	1	1	2	2	2	3	3	3	3	3	3	3	4	3	3	3	3	2	1	1	1	1	4
25-May	1	1	1	1	1	2	2	3	3	3	4	3	3	4	4	4	4	4	3	2	1	1	2	2	4
26-May	2	2	2	2	2	2	3	3	3	4	4	4	5	4	5	4	4	4	4	3	3	2	2	5	
27-May	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	2	2	2	2	1	1	1	1	3
28-May	1	1	1	1	1	1	1	2	2	2	2	3	3	2	3	2	2	2	2	1	UO	1	1	1	3
29-May	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	4	PF	PF	PF	PF	PF	PF	PF	PF	4
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
4 4 5 3 3 4 5 5 5 5 5 5 5 5 5 5 5 4 5 4 4 4 4 4																									
Diurnal Maximum																									
UO - Unstable Operation PF - Power Failure																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

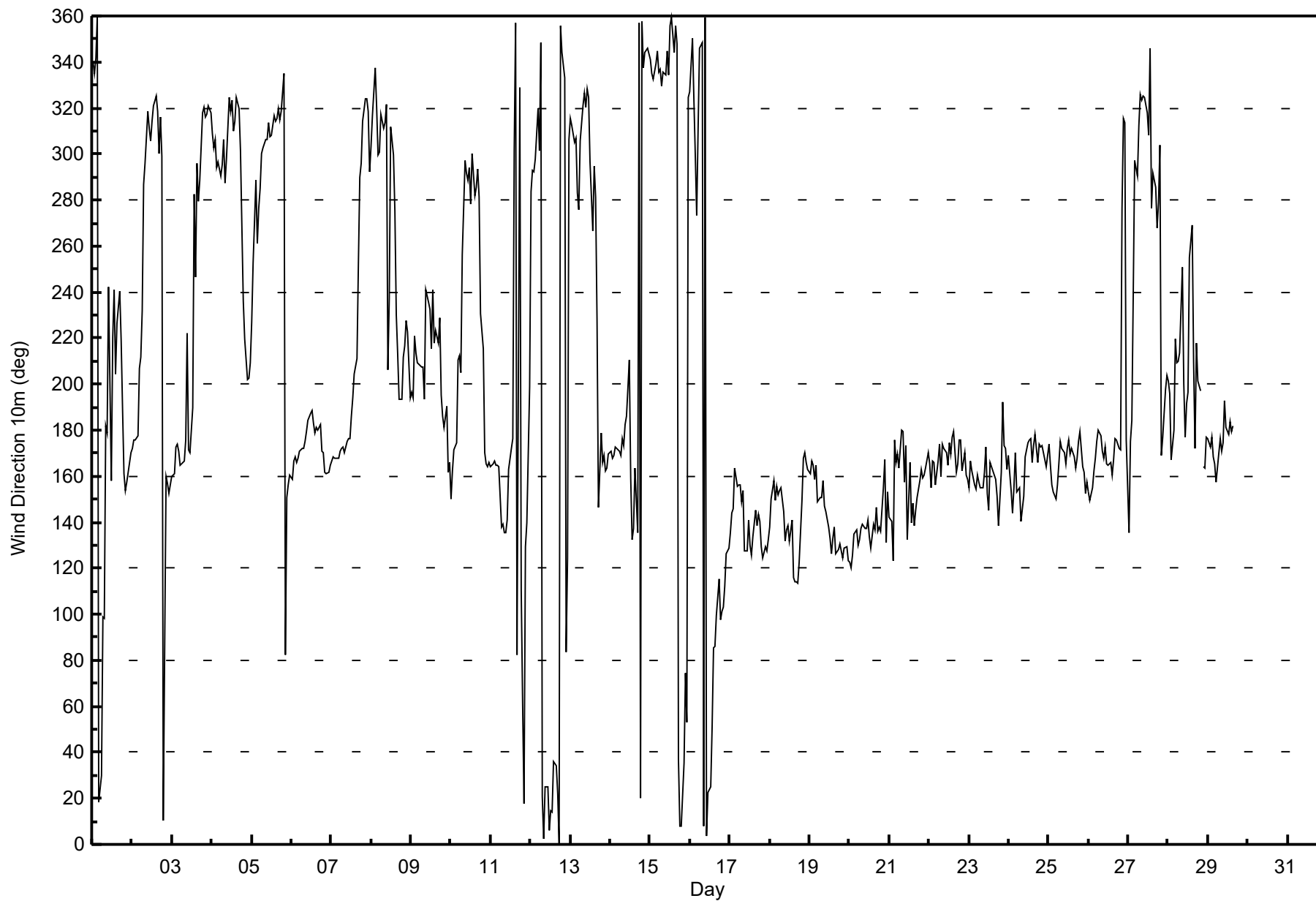
Jackfish 1 - May 2025

Direction of Maximum Speed: 321 deg on May 3 23:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 174.8 deg on May 6																				Hours of Data:		687			
Direction of Minimum Speed: 314 deg on May 26 23:00										Direction of Minimum Daily Speed Average: 1.3 deg on May 1										Hours of Missing Data:		57			
Monthly Average Direction: 183.8 deg																				Percent Operational Time:		92.3			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	340	335	342	360	19	30	99	98	182	179	242	158	221	241	205	226	240	219	189	161	154	157	166	170	197.8
2-May	172	175	176	178	207	212	232	287	296	319	311	306	314	321	325	319	300	316	299	10	160	157	152	156	270.6
3-May	160	161	173	174	171	165	166	167	175	222	172	170	190	283	247	296	280	288	318	320	316	317	321	318	258.9
4-May	309	302	306	294	297	290	295	307	288	298	325	319	323	310	314	324	320	301	268	236	219	202	203	209	302.2
5-May	227	253	289	261	277	285	300	303	306	307	313	307	308	317	314	316	320	315	319	335	82	151	156	160	305.9
6-May	158	166	169	166	168	171	172	172	175	179	184	187	189	183	179	181	180	183	171	170	162	161	162	165	174.8
7-May	167	168	168	168	168	171	172	173	170	175	176	176	186	194	204	211	252	290	296	315	324	324	319	292	190.4
8-May	303	317	337	321	300	301	317	311	314	321	206	237	312	299	275	230	213	194	194	212	216	227	222	194	286.4
9-May	197	194	221	214	209	208	208	208	193	241	235	232	215	241	218	223	218	229	195	186	182	191	162	166	211.1
10-May	150	162	172	175	210	212	205	256	297	291	289	294	278	300	282	286	294	281	230	215	170	165	164	166	234.8
11-May	164	165	166	165	165	164	138	139	135	136	141	163	172	176	301	357	82	329	111	61	17	129	140	199	148.5
12-May	284	293	292	298	320	301	348	20	2	25	25	6	14	14	36	34	22	0	356	344	333	84	124	306	6.0
13-May	315	313	305	307	283	276	306	321	326	320	329	325	297	267	295	281	228	147	179	166	169	162	164	170	299.6
14-May	171	168	169	173	172	171	169	176	174	183	186	210	160	133	137	164	135	357	20	358	338	344	346	344	161.7
15-May	341	335	332	339	345	336	337	330	335	334	345	334	356	359	344	356	348	37	8	8	35	75	53	324	346.8
16-May	327	350	324	300	274	311	346	348	8	360	3	22	25	51	85	86	100	116	98	101	103	112	126	129	62.8
17-May	136	144	146	163	156	156	156	149	154	127	127	141	130	126	134	145	138	144	140	129	124	129	127	133	138.6
18-May	138	150	158	150	156	152	154	155	145	132	137	139	132	141	116	114	114	113	123	149	168	170	166	163	137.8
19-May	161	167	164	159	165	149	151	151	158	147	145	138	133	126	133	138	127	128	131	127	124	129	129	123	138.0
20-May	123	120	126	135	137	130	132	137	139	138	137	141	134	129	139	137	146	136	138	136	155	167	131	153	135.3
21-May	142	140	123	176	166	169	163	180	179	157	173	132	166	140	148	138	145	150	158	163	159	161	163	170	155.1
22-May	165	155	166	166	156	166	174	160	174	172	170	165	175	169	177	179	162	165	176	176	162	170	161	159	167.9
23-May	155	166	162	156	154	161	157	155	155	162	173	153	145	166	162	161	158	151	139	162	192	173	172	163	158.0
24-May	169	154	144	155	170	153	155	140	146	151	168	175	176	176	166	173	178	166	174	172	173	170	164	169	165.1
25-May	174	165	156	153	150	156	166	175	172	170	165	172	176	170	172	168	163	168	175	180	164	162	153	157	167.2
26-May	153	149	155	163	168	175	180	178	171	168	172	165	165	166	161	167	177	176	172	171	277	316	314	176	170.8
27-May	135	175	184	239	297	290	312	326	323	325	324	318	308	346	277	292	286	268	279	304	169	177	198	204	299.4
28-May	201	196	167	180	220	209	210	213	251	200	177	192	196	255	269	210	172	218	201	197	UO	164	163	177	205.0
29-May	176	173	177	169	166	157	170	176	171	175	193	181	178	184	179	182	PF	PF	PF	PF	PF	PF	PF	PF	--
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
181.7 188.1 187.7 189.4 191.3 189.8 193.4 198.1 194.6 188.4 187.8 192.4 190.9 181.7 187.1 190.4 179.6 179.4 159.3 154.5 167.1 152.9 159.1 172.1																									
Diurnal Average																									
UO - Unstable Operation PF - Power Failure																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Jackfish 1 - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 1 - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 105 deg on May 28 10:00																			Hours in Service: 744 Hours of Data: 687 Hours of Missing Data: 57 Hours of Calibration: 0 Percent Operational Time: 92.3						
Minimum Value: 6 deg on May 10 00:00																									
Percentiles: P ₁ = 9 P ₁₀ = 15 Q ₁ = 20 Median = 29 Q ₃ = 42 P ₉₀ = 59 P ₉₉ = 89																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	21	22	22	29	27	52	36	32	89	81	100	98	72	76	75	73	70	59	41	11	7	14	16	16	100
2-May	16	17	17	24	50	35	59	42	46	24	24	28	36	28	29	62	54	39	53	53	28	21	26	12	62
3-May	11	7	11	13	12	10	15	23	35	56	60	88	88	55	70	62	58	49	16	11	11	12	13	16	88
4-May	15	13	14	14	14	20	21	30	50	52	26	20	19	25	19	22	29	31	54	44	22	24	26	46	54
5-May	69	63	64	73	34	23	16	18	19	19	22	28	22	18	17	20	27	30	17	21	34	13	9	10	73
6-May	11	9	12	17	20	21	22	23	30	32	32	31	33	33	32	33	29	30	27	22	14	16	18	20	33
7-May	21	21	22	20	21	26	27	25	24	29	29	31	34	35	49	45	58	24	27	17	12	9	19	34	58
8-May	13	19	42	12	29	20	12	16	18	24	67	54	25	41	55	48	18	22	25	20	17	17	29	41	67
9-May	29	26	24	19	16	20	18	27	39	60	60	65	53	68	66	61	53	65	28	29	45	52	11	6	68
10-May	11	13	19	17	36	30	34	54	49	66	56	47	57	48	62	58	68	50	24	14	26	8	10	22	68
11-May	20	22	18	20	19	17	20	27	26	26	30	43	39	61	64	47	48	74	87	86	30	24	13	63	87
12-May	26	25	20	76	18	14	25	40	29	38	41	30	34	34	35	35	32	27	28	23	19	41	37	75	76
13-May	12	10	9	17	22	18	23	17	23	25	31	47	53	77	66	52	61	38	23	10	14	15	9	15	77
14-May	18	14	13	16	20	24	27	32	34	40	44	52	40	19	23	43	39	50	36	31	26	27	28	26	52
15-May	26	24	21	24	26	23	24	21	25	23	29	25	30	33	34	33	34	48	36	27	26	15	21	29	48
16-May	10	24	13	22	27	17	30	47	44	44	50	53	60	54	48	56	61	33	28	23	20	19	16	16	61
17-May	17	15	14	11	15	18	24	32	33	29	36	40	39	42	41	43	38	34	27	20	14	18	17	17	43
18-May	16	22	22	20	20	25	20	30	37	29	30	32	30	37	30	31	31	32	24	31	26	17	16	15	37
19-May	19	21	22	20	14	25	32	36	35	33	35	30	29	24	27	27	25	23	23	22	20	22	23	19	36
20-May	19	19	20	25	26	22	26	28	29	26	29	29	28	27	30	29	31	27	27	26	24	44	23	17	44
21-May	21	22	28	22	13	15	35	37	51	37	41	41	37	29	30	32	35	33	30	25	19	16	21	20	51
22-May	19	21	18	19	21	26	33	35	37	43	42	39	40	37	39	49	44	42	38	27	13	11	11	15	49
23-May	13	16	15	18	17	20	31	36	44	40	50	43	37	39	43	35	35	34	30	29	55	41	25	17	55
24-May	27	14	23	19	22	22	26	30	34	39	38	43	42	49	40	42	43	37	39	31	21	23	24	27	49
25-May	27	19	15	16	16	27	34	44	45	43	39	47	45	46	41	45	40	41	44	39	18	13	19	27	47
26-May	26	20	21	27	34	44	44	42	41	40	43	44	42	41	37	43	44	41	42	40	60	66	95	65	95
27-May	44	17	24	39	29	41	28	24	22	27	33	48	61	68	72	69	71	70	81	83	74	34	23	24	83
28-May	27	25	43	25	21	29	29	42	67	105	91	86	89	85	98	94	86	60	48	29	UO	51	15	14	105
29-May	66	67	7	10	10	22	43	45	47	45	52	49	51	54	47	48	PF	PF	PF	PF	PF	PF	PF	PF	67
30-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
31-May	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--
69 67 64 76 50 52 59 54 89 105 100 98 89 85 98 94 86 74 87 86 74 66 95 75 Diurnal Maximum																									
UO - Unstable Operation PF - Power Failure																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS508
KIRBY NORTH
MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS 508)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	704	37	40	99.6	6.9	0	1.2	0
H2S (ppb) Average	705	38	39	99.87	0.7	0	0.2	0
THC (ppm) Average	704	37	40	99.6	2.7	-	2.4	-
NO2 (ppb) Average	687	40	57	97.72	5.5	0	2.4	-
NO (ppb) Average	687	40	57	97.72	1.7	-	0.3	-
NOX (ppb) Average	687	40	57	97.72	6.1	-	2.5	-
Temperature 2 m (C) Average	744	0	0	100	30	-	23.9	-
Relative Humidity (%) Average	744	0	0	100	97.6	-	93.3	-
Wind Speed 10 m (km/h) Average	744	0	0	100	26	-	18	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	704	0.33	0.6	-	0	0	0	0.1	0.3	0.8	6.9
H2S (ppb) Average	705	0.07	0.1	-	0	0	0	0.1	0.1	0.1	0.7
THC (ppm) Average	704	2.22	0.1	-	2.1	2.2	2.2	2.2	2.2	2.3	2.7
NO2 (ppb) Average	687	1.11	0.7	-	0.2	0.4	0.6	0.9	1.4	2.1	5.5
NO (ppb) Average	687	0.13	0.2	-	0	0	0	0	0.1	0.4	1.7
NOX (ppb) Average	687	1.23	0.9	-	0.2	0.5	0.7	1	1.6	2.2	6.1
Temperature 2 m (C) Average	744	12.64	6.5	-	-2	5	7.8	11.7	16.5	22.2	30
Relative Humidity (%) Average	744	53.66	23.3	-	14.6	25.3	34.3	49	73.2	89.9	97.6
Wind Speed 10 m (km/h) Average	744	12.1	5	-	1	7	9	12	15	19	26
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2, THC	07 May 2025 15:00	07 May 2025 16:00	2	Maintenance - sample manifold cleaned
NO2	07 May 2025 17:00	08 May 2025 08:00	16	Maintenance - calibration in progress
ALL GASEOUS ANALYZERS	23 May 2025 13:00	23 May 2025 13:00	1	Station power failure



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

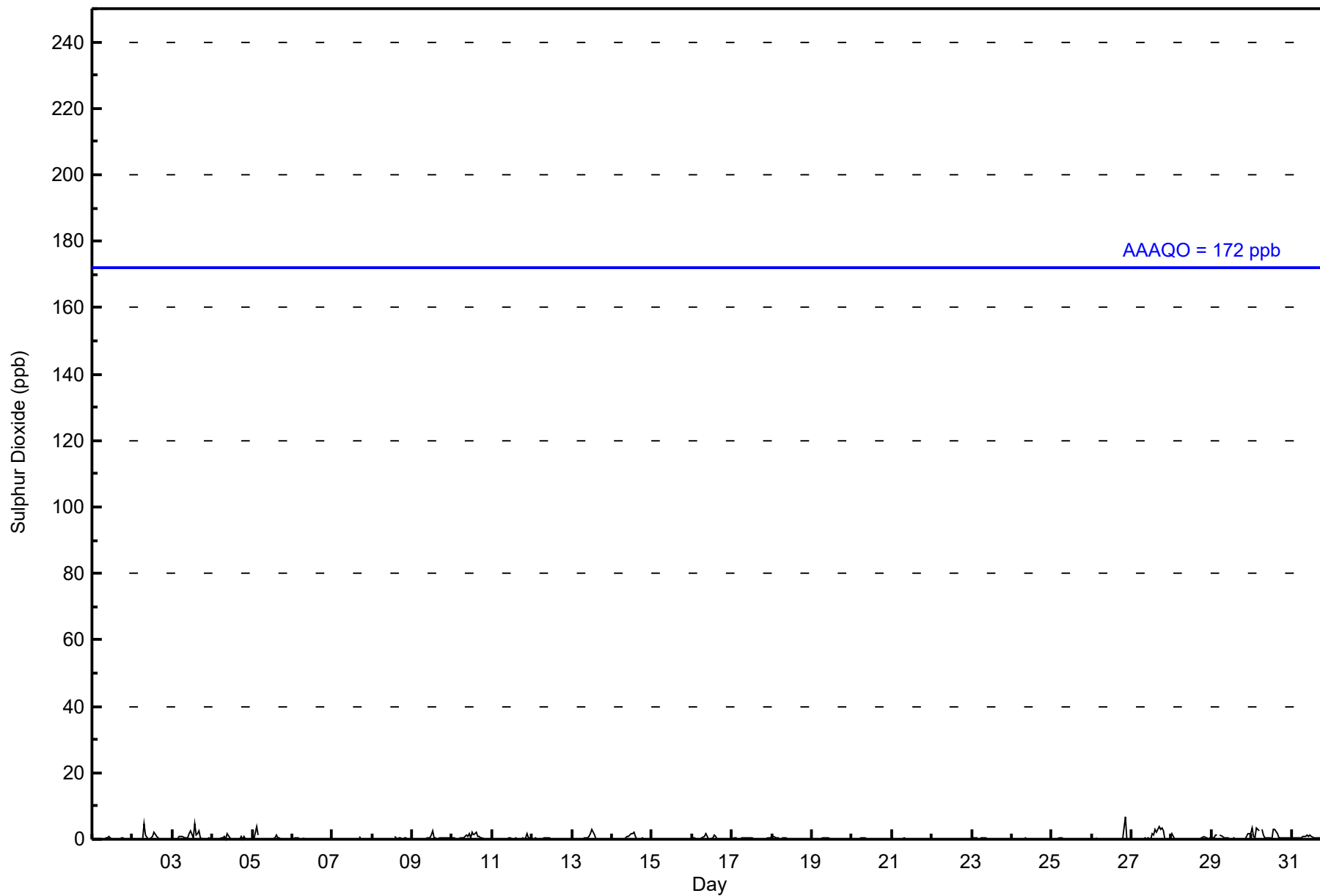
Kirby North - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.9 ppb on May 26 21:00 Maximum Daily Average: 1.2 ppb on May 30																		Hours in Service: 744								
Minimum Value: 0.0 ppb on May 2 11:00 Minimum Daily Average: 0.0 ppb on May 22 Maximum Diurnal Average: 0.6 ppb at hour 14 Minimum Diurnal Average: 0.1 ppb at hour 23 Monthly Average: 0.33 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.8 P ₉₉ = 3.3																		Hours of Data: 704								
																		Hours of Missing Data: 40								
																		Hours of Calibration: 37								
																		Percent Operational Time: 99.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.7	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.2	0.7
2-May	0.0	Z	0.0	0.0	0.1	0.1	0.2	4.6	1.3	0.1	0.0	0.6	0.9	2.1	0.9	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.6
3-May	0.1	0.0	Z	0.4	0.6	0.8	0.7	0.5	0.4	0.6	1.8	2.4	0.5	4.5	1.1	1.6	2.4	0.2	0.0	0.0	0.1	0.1	0.3	0.2	0.8	4.5
4-May	0.1	0.0	0.0	Z	0.1	0.6	0.3	0.8	0.2	1.6	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.8	0.2	0.9	0.1	0.0	0.0	0.0	0.3	1.6
5-May	0.0	0.1	3.8	1.2	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.3	1.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.8
6-May	0.1	0.2	0.4	0.5	0.3	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.5
7-May	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	M	M	0.9	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.9
8-May	0.0	Z	0.0	0.0	0.2	0.1	0.0	C	C	C	C	C	C	0.8	0.3	0.1	0.3	0.2	0.1	0.3	0.4	0.1	0.0	0.0	--	0.8
9-May	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.2	1.3	2.4	0.5	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.4	2.4
10-May	0.3	0.4	0.4	Z	0.3	0.3	0.3	0.3	1.2	1.0	1.6	0.6	2.0	1.1	1.9	0.7	0.8	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.6	2.0
11-May	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.5	1.7	0.2	0.3	0.3	1.7
12-May	0.2	0.2	0.3	0.2	0.2	Z	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
13-May	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.2	0.3	0.9	1.6	3.0	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.0
14-May	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.8	1.7	1.6	1.9	0.7	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.1	0.1	0.4	1.9
15-May	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
16-May	0.5	0.2	0.1	Z	0.0	0.0	0.2	0.8	1.6	0.7	0.2	0.1	0.5	1.4	0.8	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.3	1.6
17-May	0.1	0.2	0.5	0.4	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.6	0.3	0.2	0.3	0.6
18-May	0.7	0.7	0.5	0.5	0.4	Z	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.7
19-May	Z	0.0	0.0	0.0	0.0	0.1	0.6	0.5	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.6
20-May	0.2	Z	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.3
21-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
22-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
23-May	0.2	0.3	0.4	0.4	Z	0.5	0.4	0.3	0.2	0.1	0.0	0.0	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
24-May	0.0	0.0	0.1	0.1	0.0	Z	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.2	0.1	0.2
25-May	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
26-May	0.6	Z	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.5	6.9	0.0	0.0	0.0	0.5	6.9
27-May	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.5	0.0	0.3	0.1	1.7	1.4	2.8	2.0	4.0	2.9	3.4	2.4	0.0	0.0	0.1	0.3	1.0	4.0
28-May	1.5	0.7	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.6	0.3	0.3	0.2	0.3	0.2	1.5
29-May	0.4	0.4	1.1	1.2	Z	1.2	0.9	0.6	0.5	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	1.0	1.5	1.5	0.5	1.5
30-May	3.3	1.0	0.5	3.3	2.3	Z	3.0	1.1	0.4	0.3	0.3	0.3	0.2	2.9	2.9	1.8	0.2	0.3	0.3	0.5	0.5	0.4	0.4	0.4	1.2	3.3
31-May	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.8	0.7	1.2	1.0	1.4	0.7	0.4	0.3	0.3	0.3	0.5	0.5	1.3	0.9	0.3	0.3	0.2	0.6	1.4
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	704	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	19	45	21	13	14	14	63	142	122	46	42	28	28	25	48	34	704
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	45	21	13	14	14	63	142	122	46	42	28	28	25	48	34	704

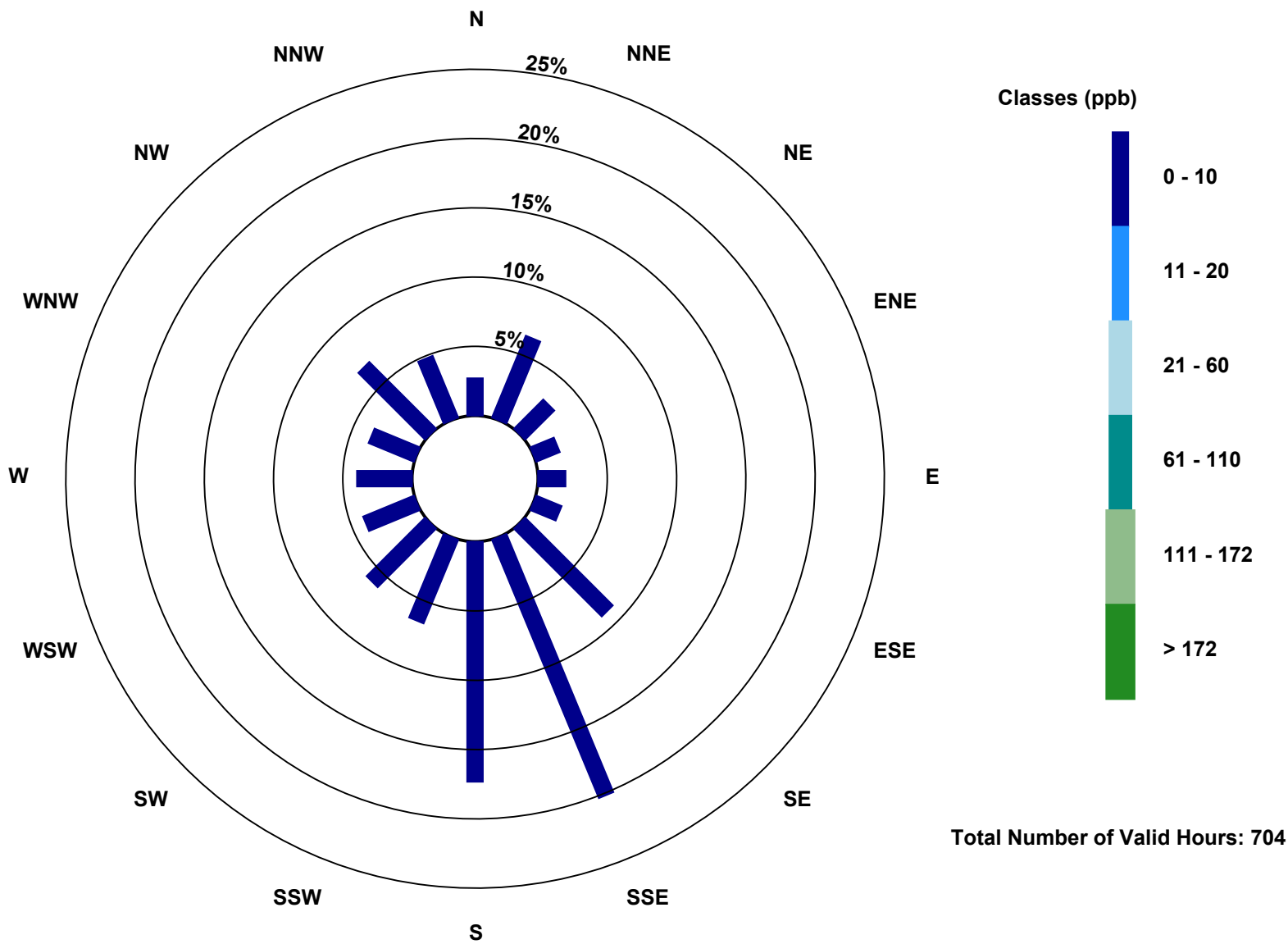
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

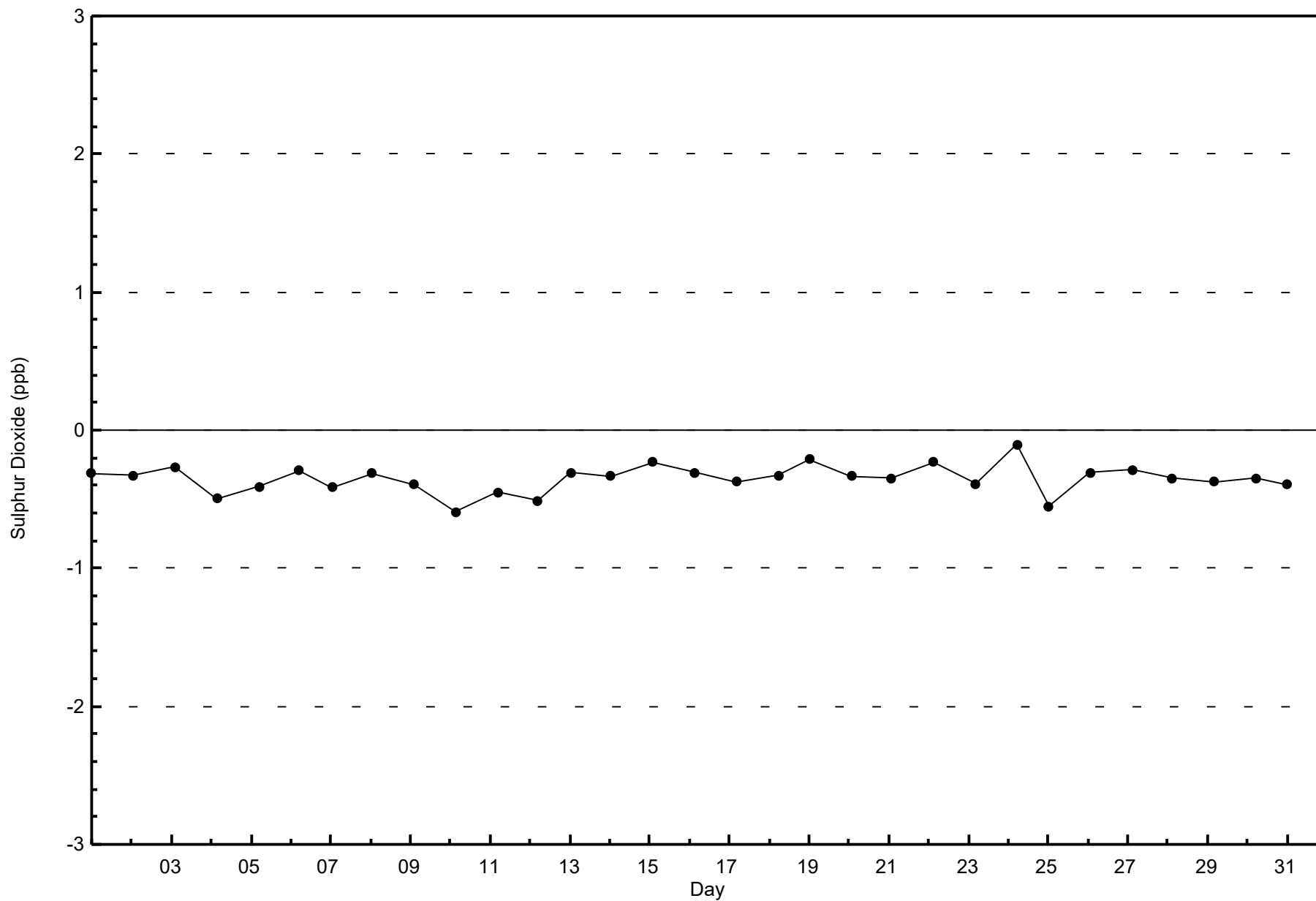
Sulphur Dioxide (SO₂) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

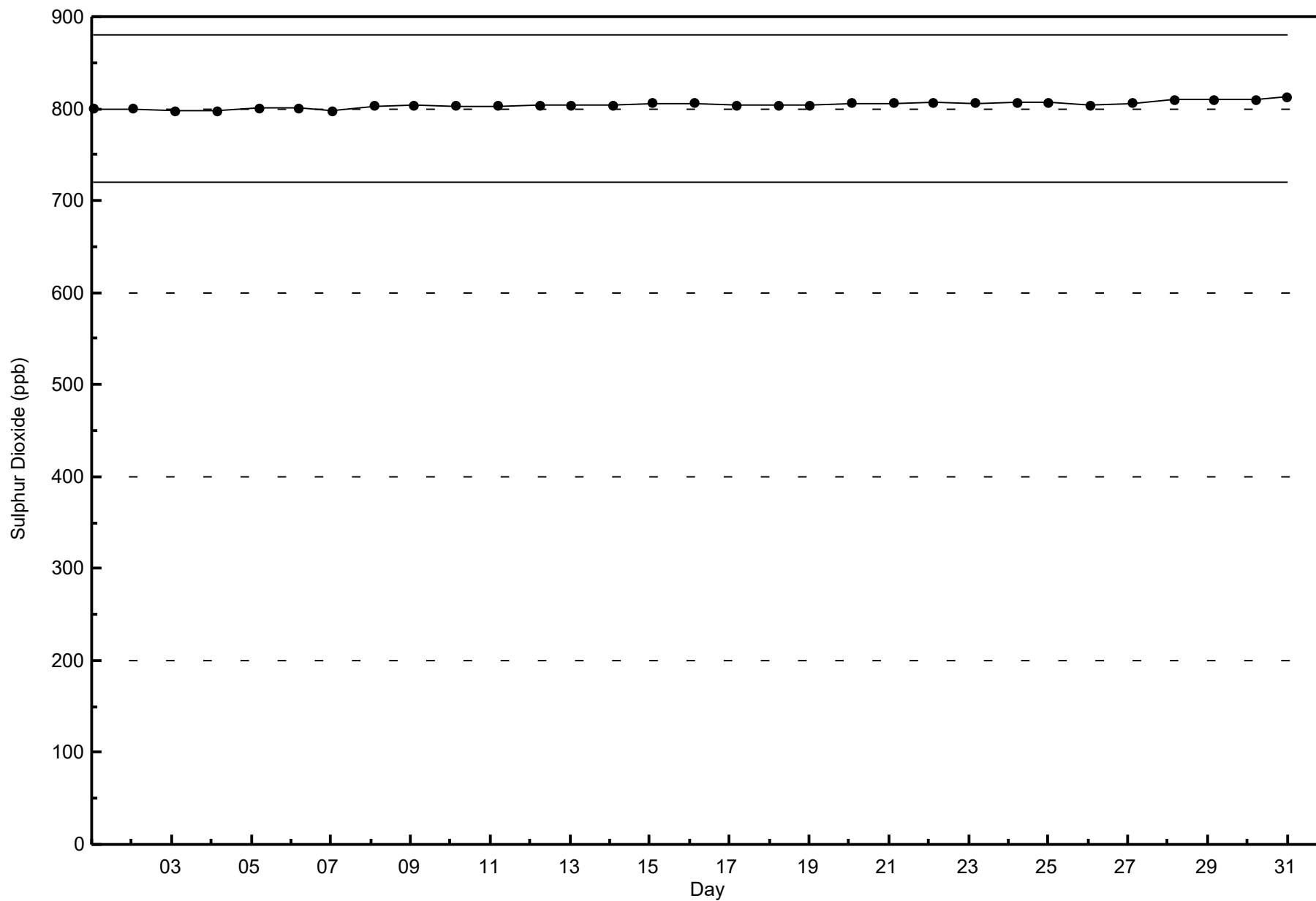
Sulphur Dioxide (SO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

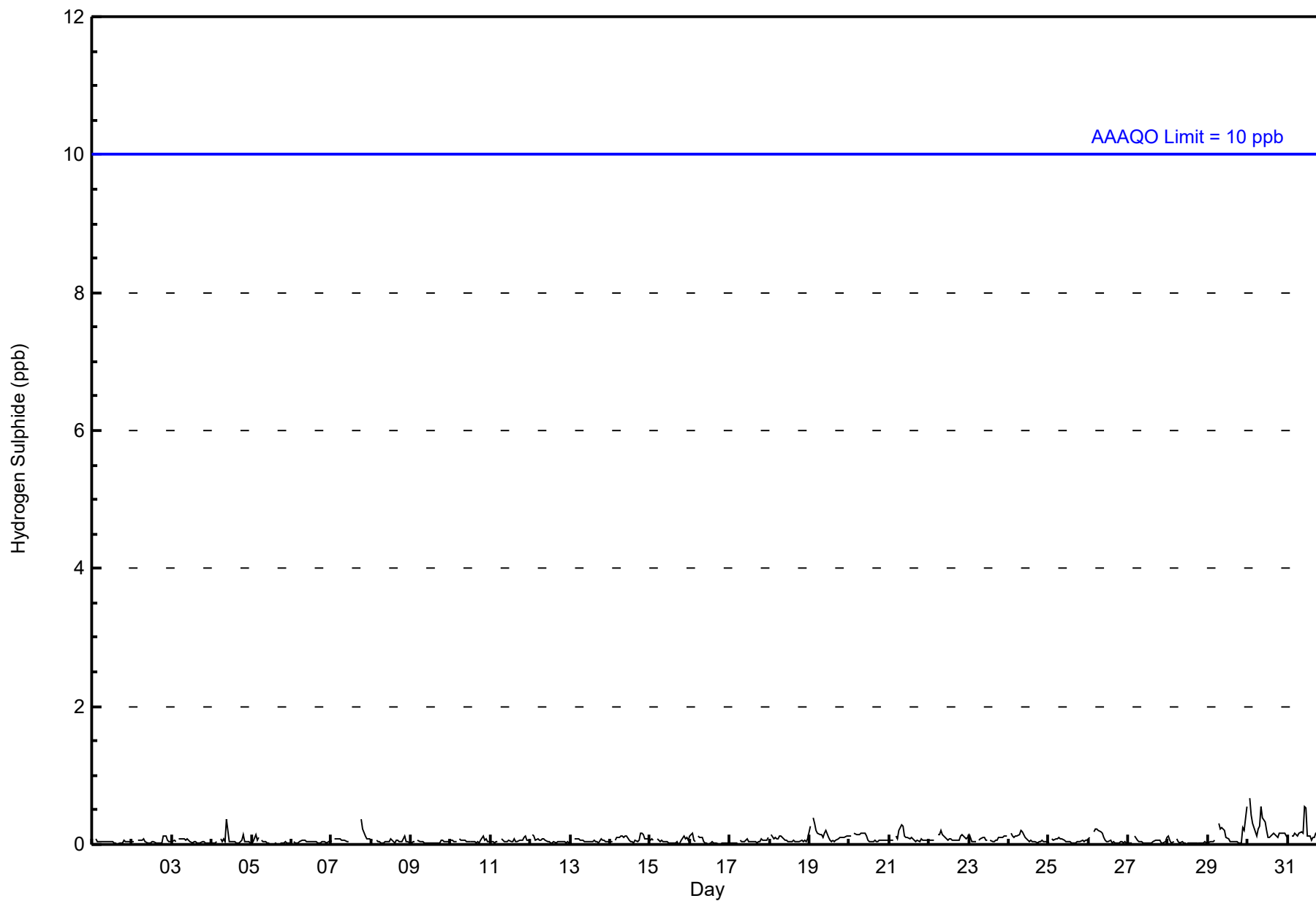
Kirby North - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744								
Maximum Value: 0.7 ppb on May 30 02:00 Maximum Daily Average: 0.2 ppb on May 30																			Hours of Data: 705								
Minimum Value: 0.0 ppb on May 5 13:00 Minimum Daily Average: 0.0 ppb on May 28																			Hours of Missing Data: 39								
Maximum Diurnal Average: 0.1 ppb at hour 8 Minimum Diurnal Average: 0.0 ppb at hour 17																			Hours of Calibration: 38								
Monthly Average: 0.07 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.1 P ₉₉ = 0.4																			Percent Operational Time: 99.9								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	
3-May	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4-May	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
5-May	0.0	0.0	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
7-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	C	C	C	C	C	C	C	0.4	0.2	0.1	0.1	0.1	0.1	0.1	-	
8-May	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	
9-May	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	
10-May	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	
11-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
12-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
13-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	
14-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
15-May	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
16-May	0.1	0.2	0.1	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	
18-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
19-May	0.3	Z	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
20-May	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
21-May	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
22-May	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
23-May	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	PF	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
24-May	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	
25-May	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	
26-May	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
27-May	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	
28-May	0.1	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
29-May	0.0	0.0	0.0	0.0	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.1	0.5	
30-May	Z	0.7	0.4	0.3	0.2	0.1	0.2	0.3	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.7	
31-May	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.5	
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average		
0.3 0.7 0.4 0.3 0.2 0.2 0.3 0.3 0.5 0.4 0.5 0.5 0.1 0.1 0.1 0.2 0.1 0.2 0.4 0.2 0.2 0.3 0.3 0.5																									Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	705	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	23	41	23	13	14	15	61	142	124	44	42	28	27	27	46	35	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	41	23	13	14	15	61	142	124	44	42	28	27	27	46	35	705

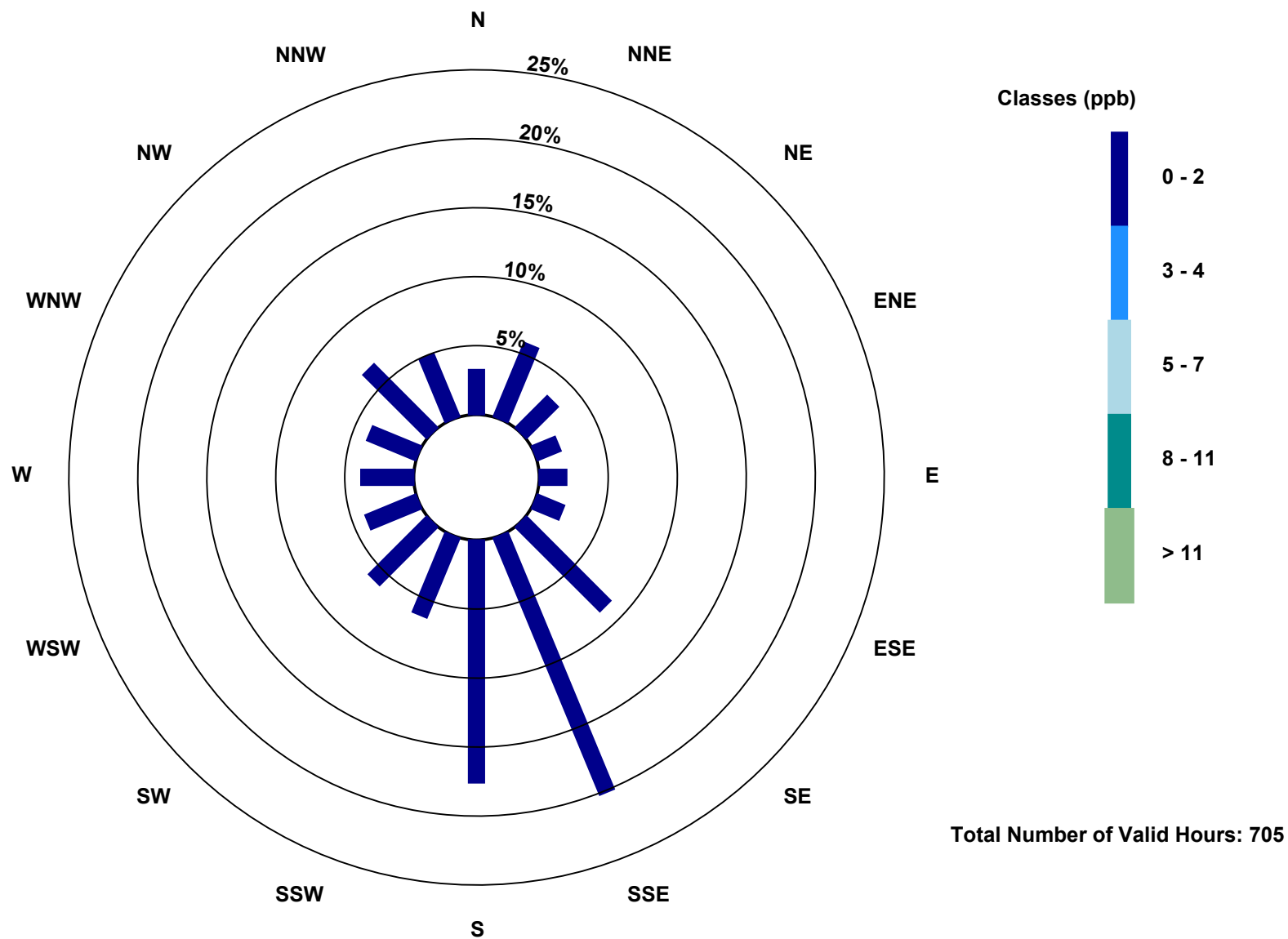
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Hydrogen Sulphide (H_2S) - ppb
Kirby North



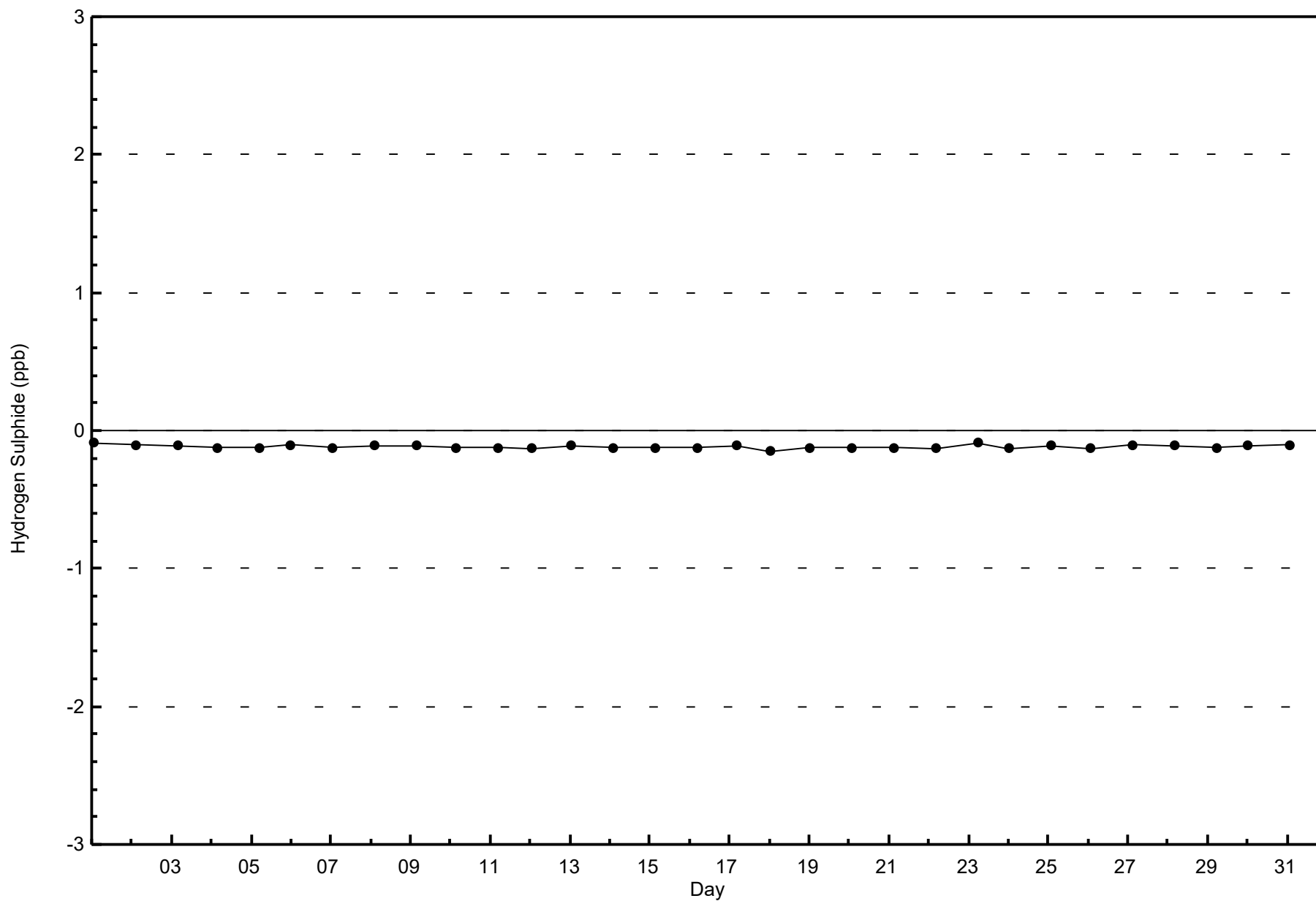


Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

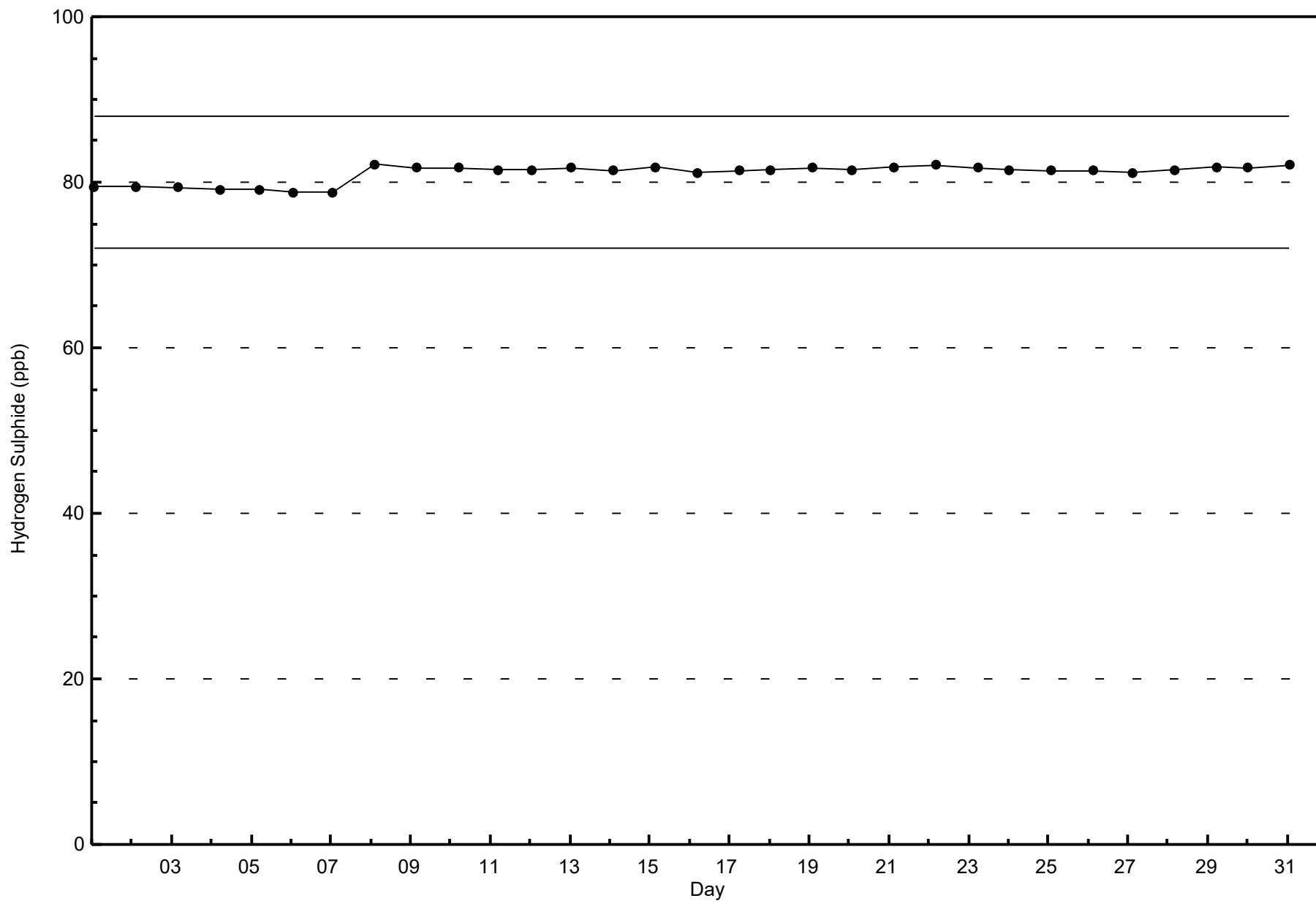
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

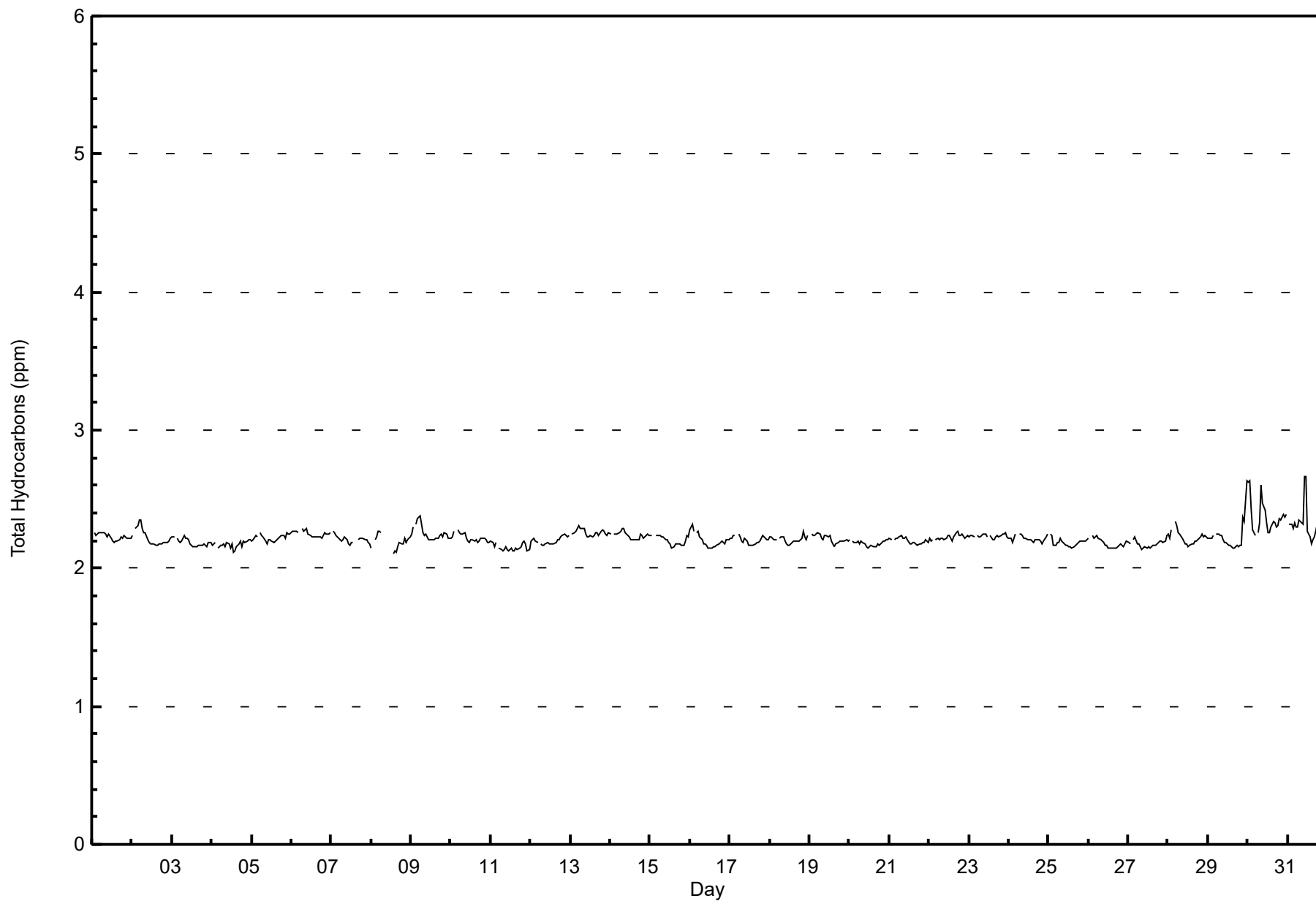
Kirby North - May 2025

Maximum Value: 2.7 ppm on May 31 11:00										Maximum Daily Average: 2.4 ppm on May 30										Hours in Service: 744								
Minimum Value: 2.1 ppm on May 8 14:00										Minimum Daily Average: 2.2 ppm on May 11										Hours of Data: 704								
Maximum Diurnal Average: 2.2 ppm at hour 2										Minimum Diurnal Average: 2.2 ppm at hour 15										Hours of Missing Data: 40								
Monthly Average: 2.22 ppm										Percentiles: P ₁ = 2.1 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.2 Q ₃ = 2.2 P ₉₀ = 2.3 P ₉₉ = 2.4										Hours of Calibration: 37								
																				Percent Operational Time: 99.6								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
1-May	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
2-May	2.2	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4
3-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
4-May	2.2	2.2	2.2	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
5-May	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	
6-May	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.3	
7-May	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	M	M	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
8-May	2.2	Z	2.2	2.2	2.3	2.3	2.3	C	C	C	C	C	C	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
9-May	2.2	2.3	Z	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.4	
10-May	2.2	2.2	2.3	Z	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
11-May	2.2	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	
12-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
13-May	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	
14-May	2.3	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
15-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
16-May	2.3	2.3	2.3	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
17-May	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
18-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	
19-May	Z	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	
20-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
21-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
22-May	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	
23-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.2	2.2	PF	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	
24-May	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
25-May	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
26-May	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
27-May	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
28-May	2.2	2.2	2.3	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	
29-May	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.3	2.6	2.2	2.6		
30-May	2.6	2.6	2.4	2.3	2.2	Z	2.3	2.3	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.6	
31-May	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.7	2.7	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.7		
2.2																								Diurnal Average				
2.6																								Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																												



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Kirby North - May 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	704	100.00	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Kirby North - May 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	19	45	21	13	14	14	63	142	122	46	42	28	28	25	48	34	704
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	45	21	13	14	14	63	142	122	46	42	28	28	25	48	34	704

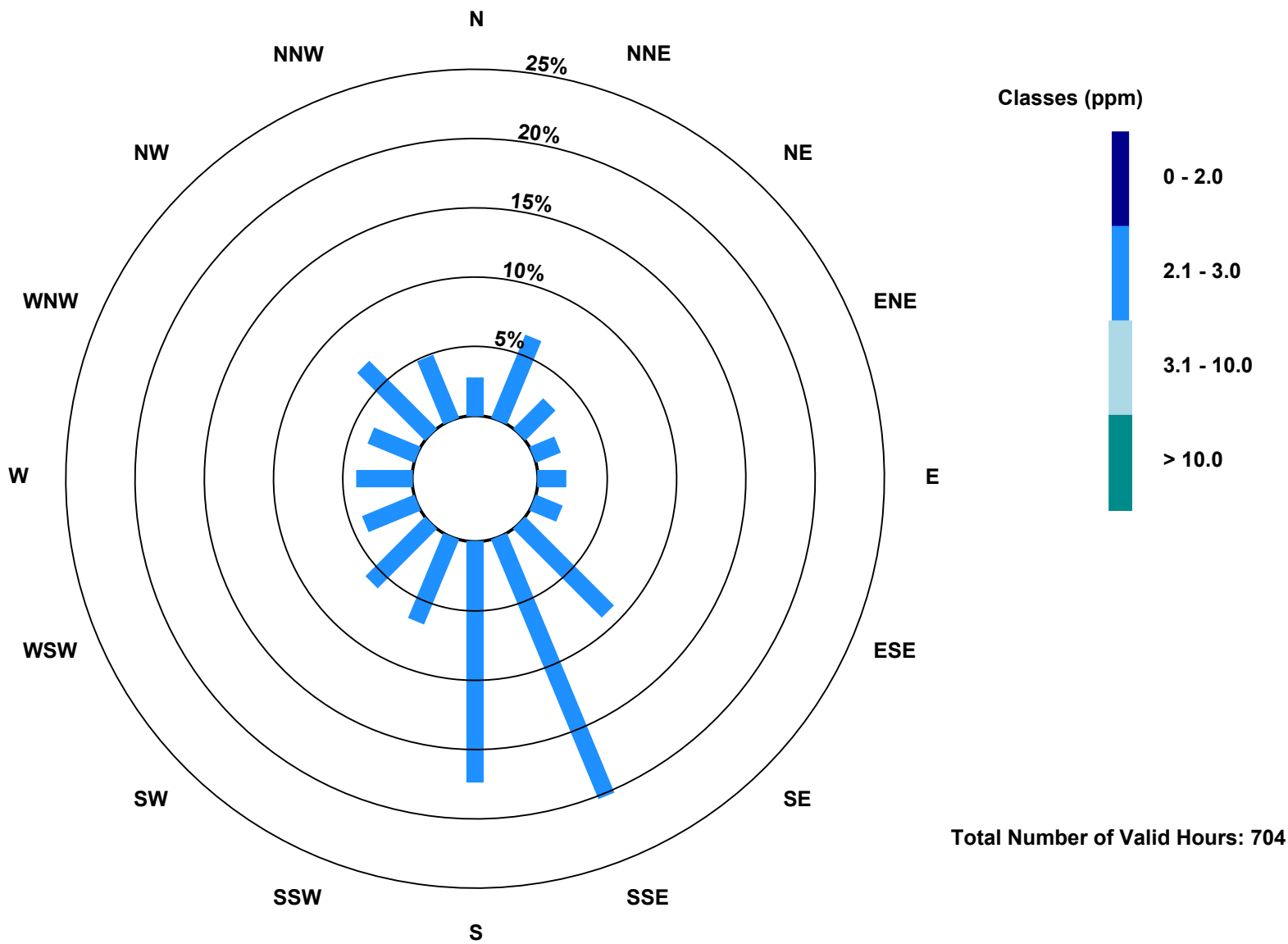
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

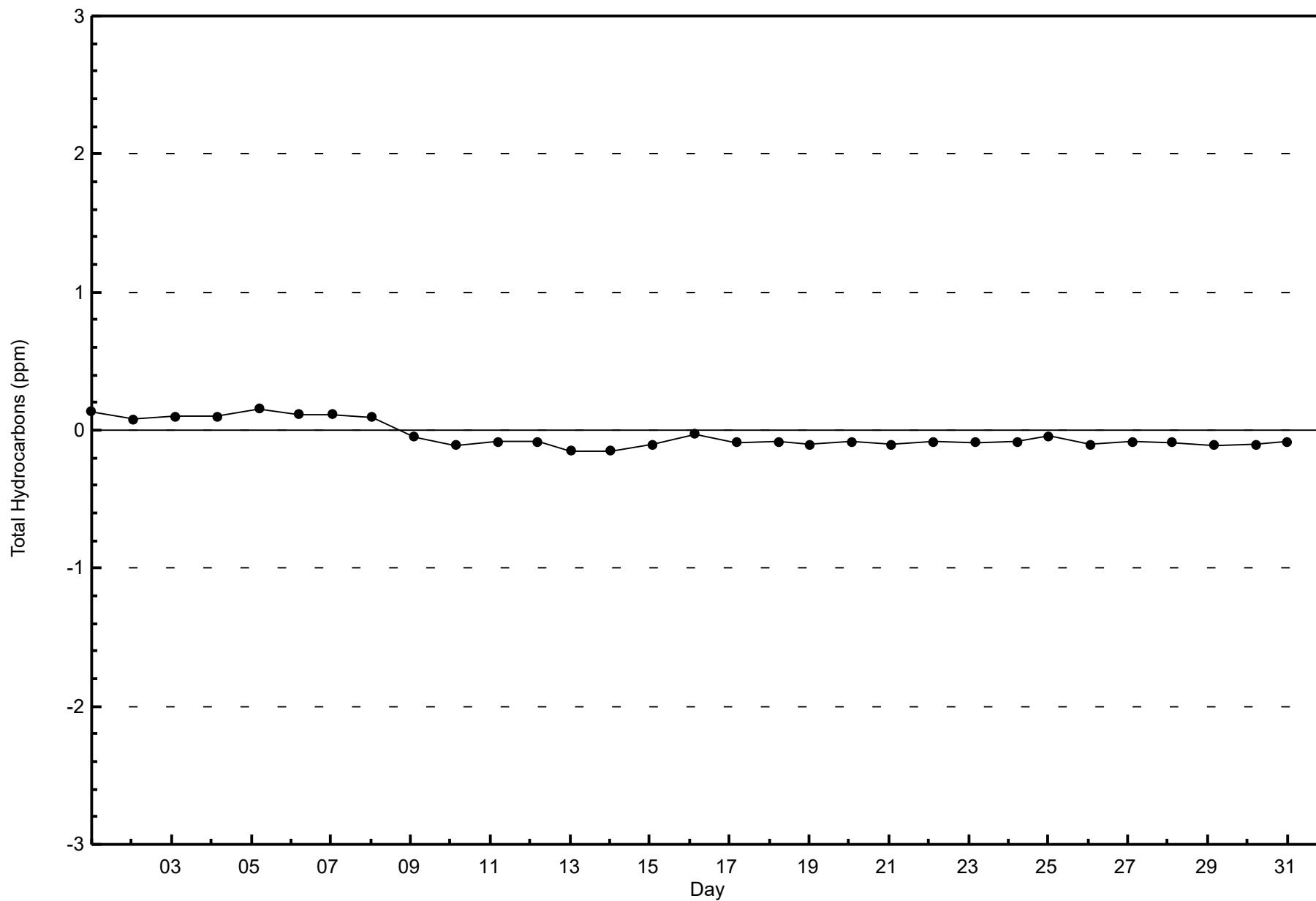
Total Hydrocarbons (THC) - ppm
Kirby North





Wood Buffalo Environmental Association
Zero Responses

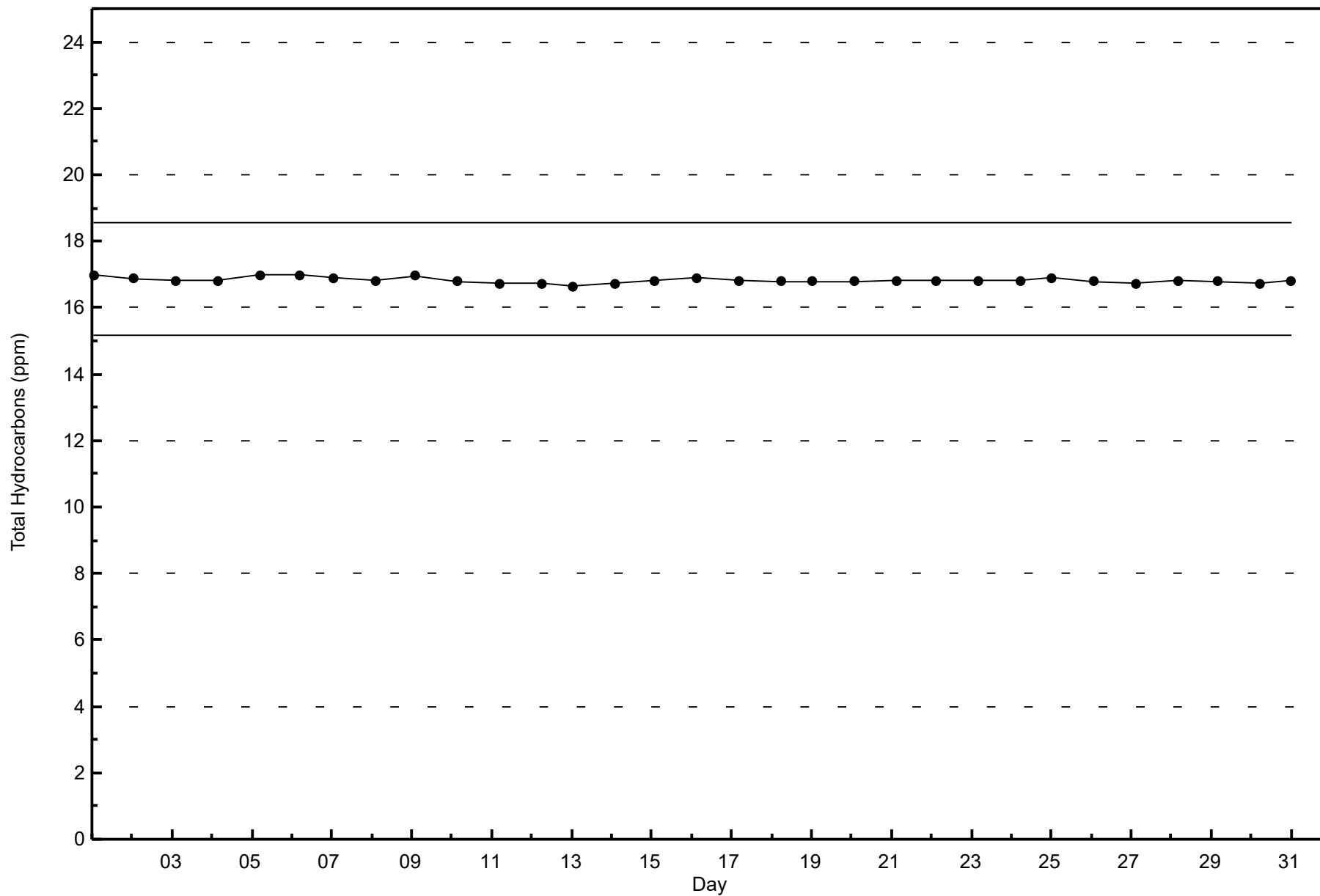
Total Hydrocarbons (THC) - ppm
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

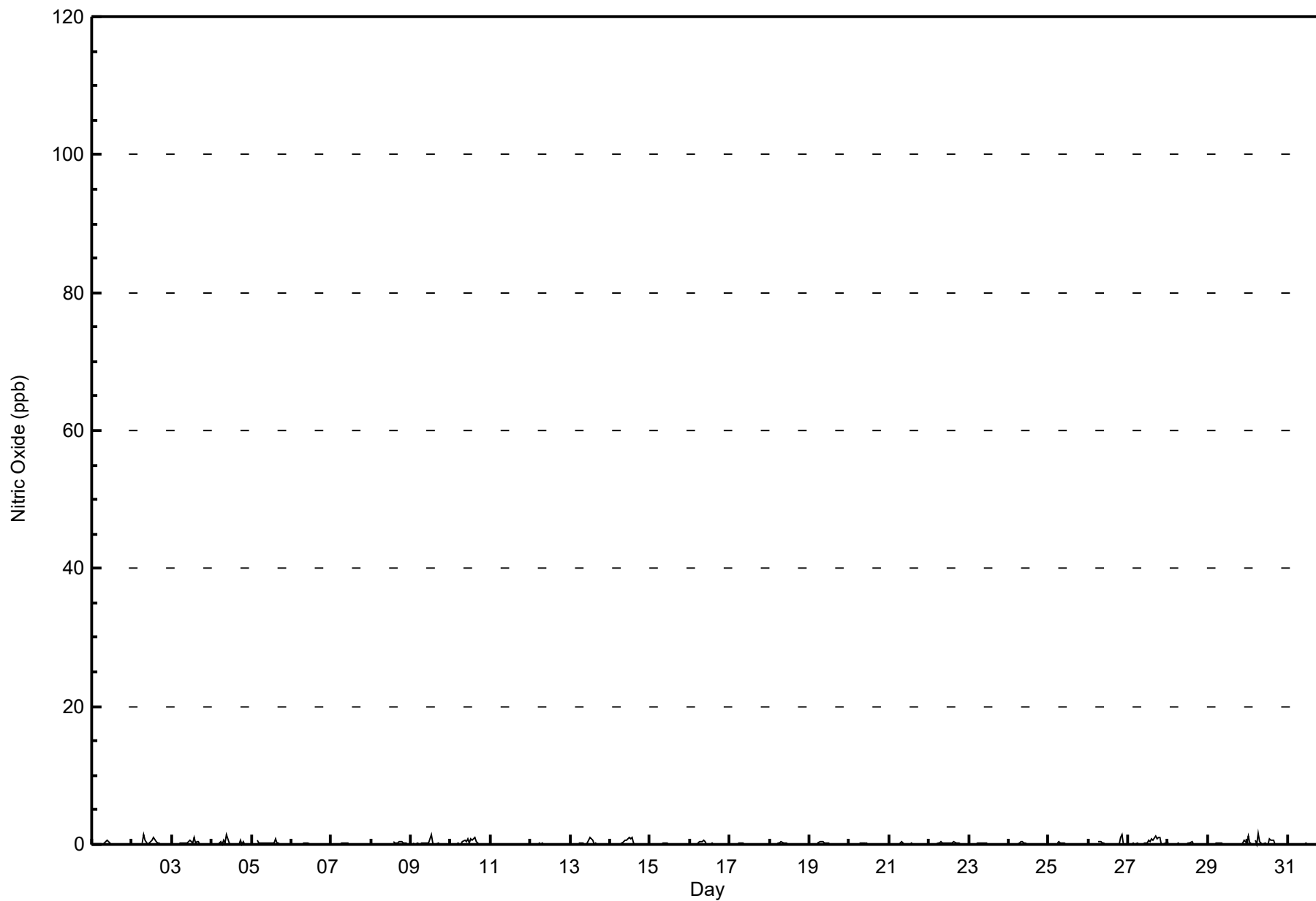
Kirby North - May 2025

Maximum Value: 1.7 ppb on May 30 07:00																			Maximum Daily Average: 0.3 ppb on May 27							Hours in Service: 744	
Minimum Value: 0.0 ppb on May 1 01:00																			Minimum Daily Average: 0.0 ppb on May 11							Hours of Data: 687	
Maximum Diurnal Average: 0.3 ppb at hour 8																			Minimum Diurnal Average: 0.0 ppb at hour 3							Hours of Missing Data: 57	
Monthly Average: 0.13 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.4 P ₉₉ = 1.1							Hours of Calibration: 40	
																										Percent Operational Time: 97.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	
2-May	0.0	0.0	0.0	0.0	0.0	Z	0.3	1.4	0.5	0.1	0.1	0.4	0.5	0.9	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
3-May	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.4	0.6	0.2	1.1	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
4-May	0.0	Z	0.0	0.0	0.0	0.3	0.0	0.6	0.3	1.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.1	0.0	0.0	0.1	0.2	1.3	
5-May	0.1	0.0	Z	0.6	0.3	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.3	0.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	
6-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
7-May	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	C	M	M	M	M	M	M	M	–	0.2	
8-May	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.4	0.2	0.1	0.3	0.5	0.4	0.1	0.3	0.2	0.1	0.0	–	0.5
9-May	Z	0.2	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.9	1.4	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
10-May	0.0	Z	0.0	0.0	0.2	0.0	0.1	0.4	0.5	0.3	0.9	0.2	0.8	0.5	0.9	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
11-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
12-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13-May	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.3	0.1	0.1	0.2	0.7	1.1	0.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
14-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.4	0.7	0.7	0.9	0.8	1.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
15-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
16-May	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.4	0.5	0.4	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
17-May	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
18-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
19-May	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
20-May	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
21-May	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
22-May	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5	
23-May	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.1	PF	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.3	
24-May	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
25-May	0.0	0.1	0.0	0.0	Z	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
26-May	0.0	0.0	0.0	0.0	0.1	Z	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0	0.0	0.2	1.4	
27-May	Z	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.7	0.5	0.8	0.6	1.3	0.8	1.0	0.9	0.1	0.0	0.1	0.1	0.3	1.3	
28-May	0.3	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4	
29-May	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.2	0.1	0.6	
30-May	1.3	0.2	0.1	Z	0.6	0.0	1.7	0.4	0.1	0.1	0.1	0.0	0.0	0.8	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7	
31-May	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	687	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687

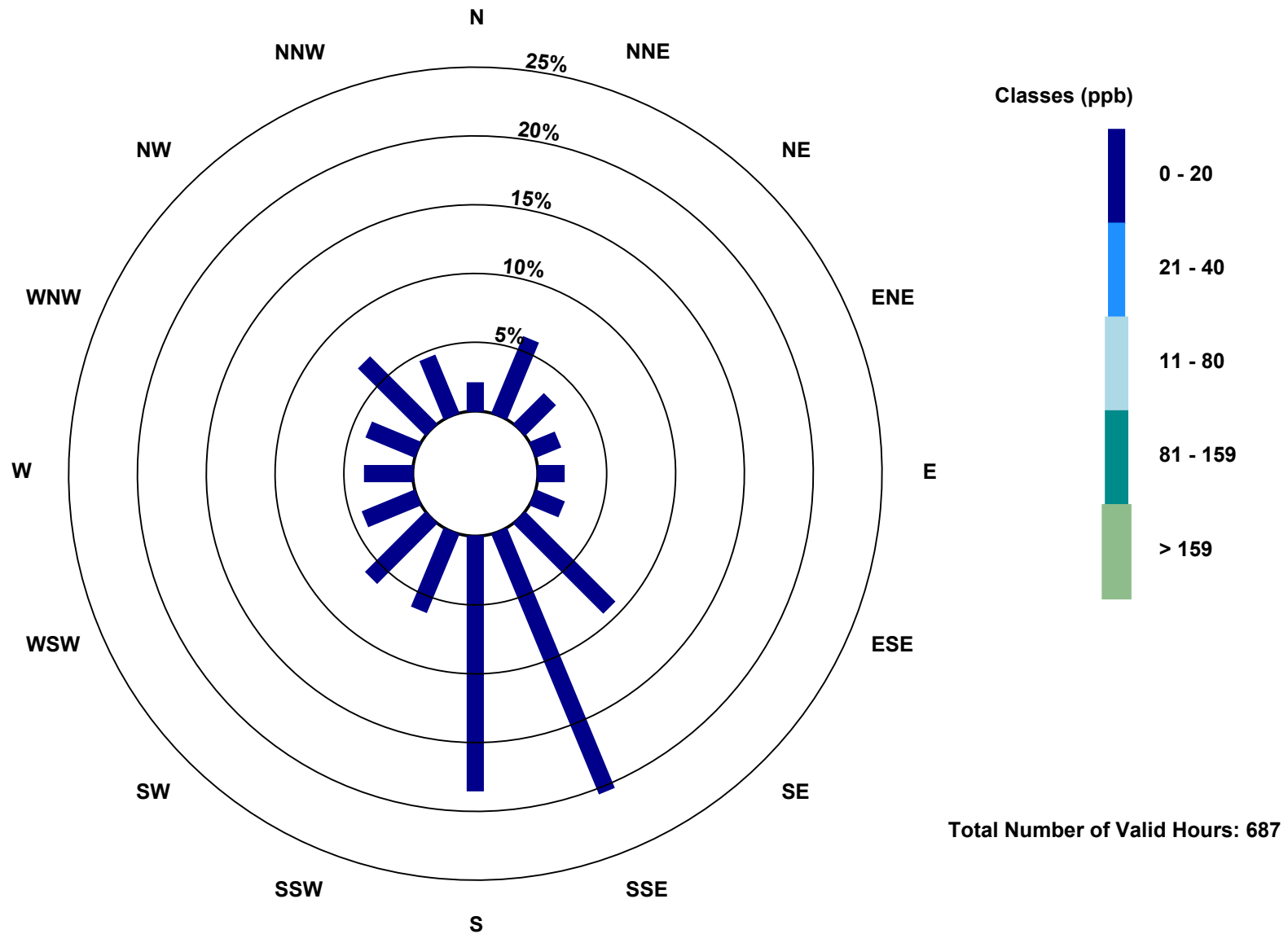
Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

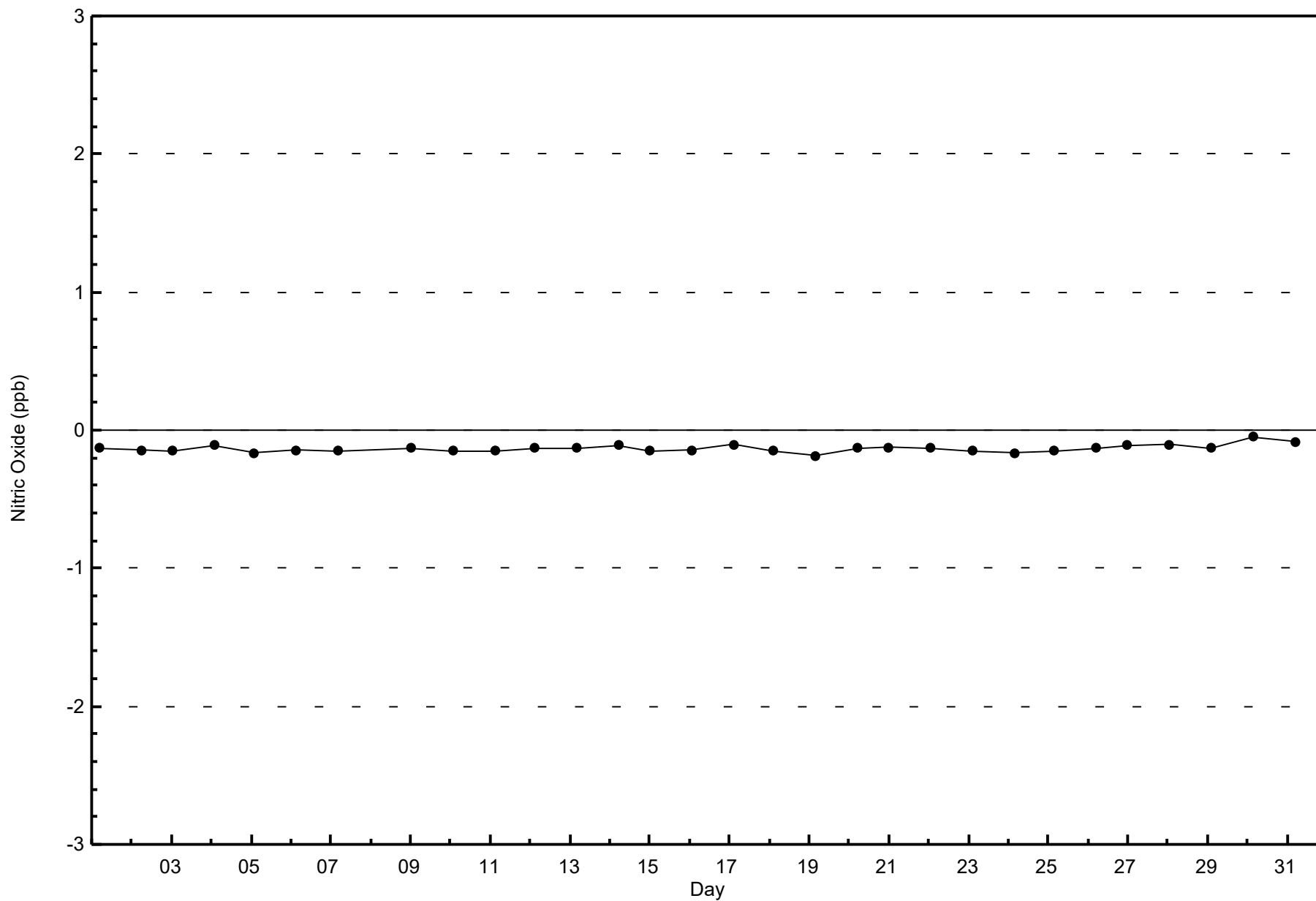
Nitric Oxide (NO) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

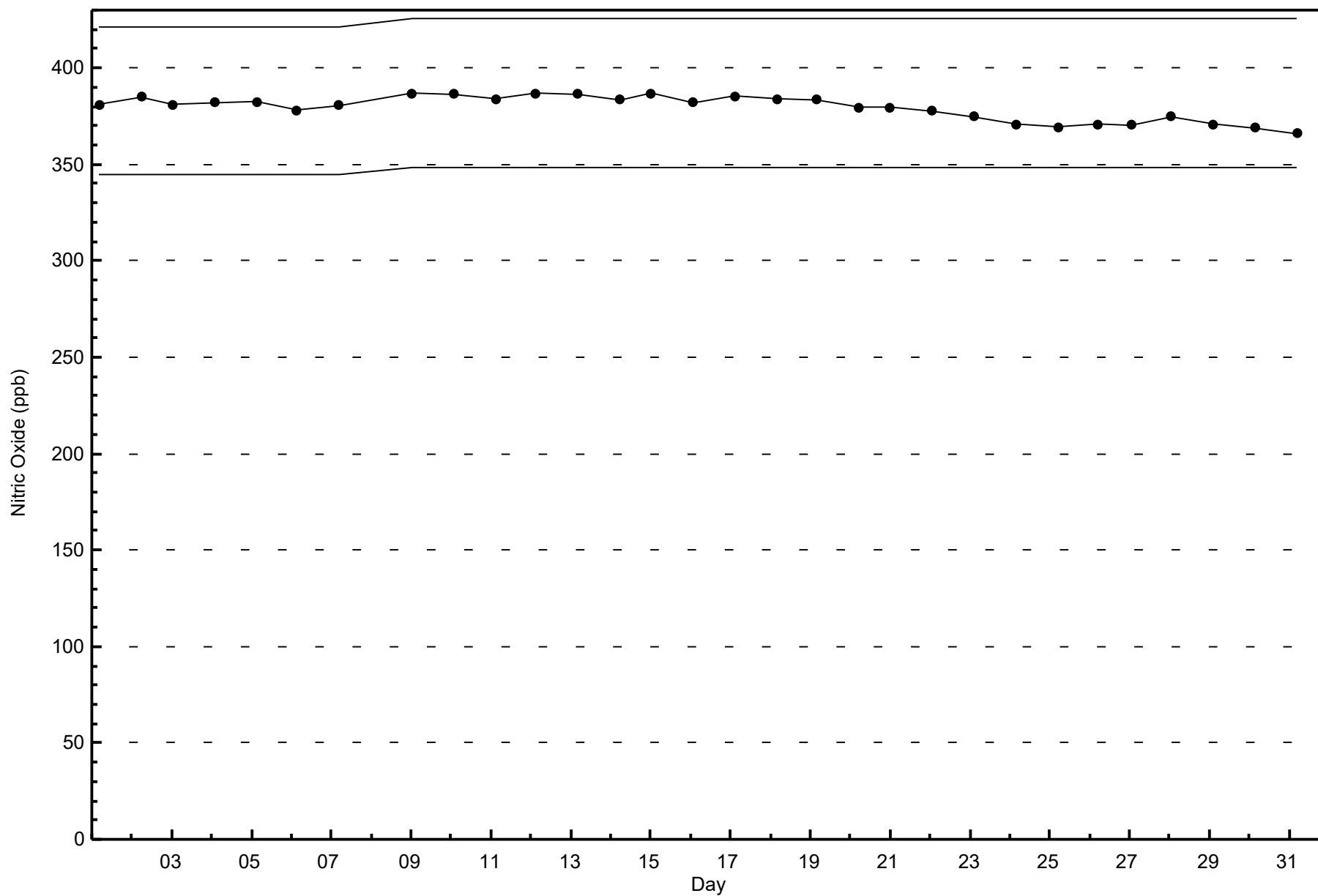
Nitric Oxide (NO) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

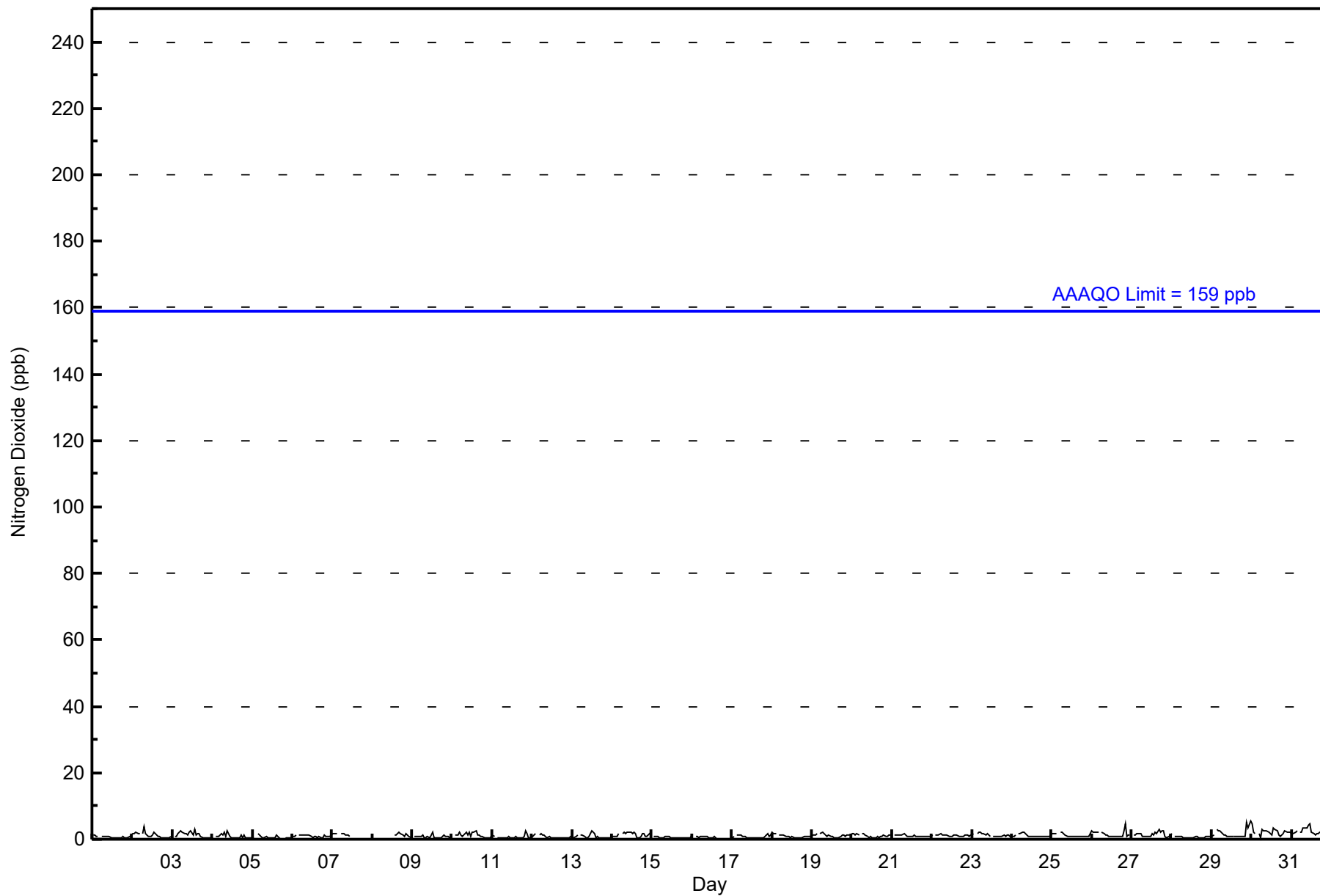
Kirby North - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.5 ppb on May 30 00:00 Maximum Daily Average: 2.4 ppb on May 31																		Hours in Service: 744								
Minimum Value: 0.2 ppb on May 5 18:00 Minimum Daily Average: 0.5 ppb on May 16 Maximum Diurnal Average: 1.5 ppb at hour 8 Minimum Diurnal Average: 0.8 ppb at hour 18 Monthly Average: 1.11 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.4 P ₉₀ = 2.1 P ₉₉ = 3.6																		Hours of Data: 687								
																		Hours of Missing Data: 57								
																		Hours of Calibration: 40								
																		Percent Operational Time: 97.7								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	1.4	1.3	1.0	0.9	Z	0.8	0.7	0.7	0.8	1.0	0.8	0.4	0.3	0.3	0.4	0.3	0.5	0.6	0.9	0.6	0.5	0.6	0.9	1.3	0.7	1.4
2-May	1.5	1.7	2.1	1.9	1.9	Z	1.8	4.0	1.9	0.7	0.7	0.9	1.3	2.0	1.3	0.8	0.7	0.4	0.3	0.4	0.6	0.4	0.6	0.7	1.2	4.0
3-May	Z	0.8	1.0	1.6	2.3	2.7	2.3	1.9	1.6	1.4	2.3	2.6	1.4	3.1	1.2	1.6	1.7	0.7	0.5	0.5	0.4	0.4	0.5	0.4	1.4	3.1
4-May	0.5	Z	0.7	0.8	0.8	1.5	1.1	2.0	0.7	2.7	0.8	0.6	0.5	0.4	0.3	0.3	0.5	1.2	0.5	1.3	0.5	0.4	0.5	0.5	0.8	2.7
5-May	0.3	0.5	Z	1.6	1.1	0.9	0.4	0.6	0.9	0.6	0.5	0.6	0.5	0.6	1.2	0.7	0.5	0.2	0.2	0.2	0.5	0.3	0.4	0.5	0.6	1.6
6-May	0.8	0.9	1.2	Z	1.1	1.2	1.1	1.2	1.2	1.1	1.1	0.8	0.6	0.7	0.7	0.6	0.7	0.6	0.6	1.1	0.7	0.7	0.9	1.3	0.9	1.3
7-May	1.5	1.5	1.6	1.5	Z	1.5	1.5	1.5	1.4	1.2	0.8	C	C	C	C	C	M	M	M	M	M	M	M	M	--	1.6
8-May	M	M	M	M	M	M	M	M	C	C	C	C	C	1.4	1.2	1.5	2.1	1.7	1.3	0.9	1.6	1.4	0.8	0.5	--	2.1
9-May	Z	1.0	0.7	1.0	1.0	0.8	1.2	0.6	0.6	0.7	0.5	1.2	2.1	0.5	0.4	0.5	0.6	0.5	0.8	1.4	0.9	0.9	0.6	0.7	0.8	2.1
10-May	0.8	Z	1.2	1.1	2.0	1.1	0.8	1.3	2.1	1.2	2.0	1.0	2.3	2.0	2.4	1.4	1.4	0.9	0.7	0.5	0.4	0.5	0.4	0.5	1.2	2.4
11-May	1.3	0.9	Z	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.8	0.6	0.6	0.5	0.8	0.6	0.5	0.4	0.6	1.0	2.5	1.9	0.5	0.5	0.8	2.5
12-May	0.8	1.1	1.8	Z	1.4	1.7	1.1	1.1	0.8	0.6	0.8	0.6	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.8	1.8
13-May	0.5	0.4	0.7	1.2	Z	1.4	1.1	1.0	0.5	0.5	0.9	1.5	2.5	1.5	0.6	0.8	0.4	0.4	0.3	0.5	0.5	0.6	0.4	0.6	0.8	2.5
14-May	0.8	0.7	0.7	1.0	1.6	Z	1.7	2.0	1.8	2.2	2.1	2.0	1.7	2.2	1.5	0.6	0.6	0.7	1.6	1.9	1.0	1.0	1.5	1.4	1.4	2.2
15-May	Z	1.0	1.0	0.9	0.6	0.5	0.5	0.6	0.8	0.7	0.7	0.5	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	1.0
16-May	1.2	Z	0.7	0.7	0.5	0.7	0.8	0.8	1.0	0.8	0.3	0.3	0.5	1.0	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.2
17-May	0.3	0.7	Z	1.1	1.2	1.2	1.0	0.8	0.8	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.6	0.7	1.5	1.0	1.1	0.7	1.5
18-May	2.3	1.9	1.5	Z	1.4	1.4	1.4	1.2	0.9	0.7	0.7	0.6	0.7	0.6	0.5	0.6	0.5	0.5	0.6	0.8	0.8	0.8	0.7	0.8	1.0	2.3
19-May	1.2	1.2	1.4	1.5	Z	1.9	2.1	1.8	1.3	1.0	1.1	0.9	0.8	0.6	0.6	0.5	0.5	0.8	1.3	1.4	1.0	1.1	1.1	1.3	1.1	2.1
20-May	1.7	1.5	1.3	1.5	1.2	Z	1.6	1.5	1.2	0.7	0.6	0.7	0.5	0.6	0.6	0.7	0.5	0.7	0.7	1.1	0.9	0.8	1.4	1.1	1.0	1.7
21-May	Z	1.2	1.2	1.3	1.2	1.2	1.3	1.9	1.3	1.0	0.9	0.8	0.9	1.2	0.9	0.8	0.9	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.9
22-May	1.1	Z	1.3	1.2	1.2	1.7	1.4	1.4	1.2	1.1	0.9	0.9	1.0	1.3	1.2	1.2	1.0	0.9	1.0	0.9	1.1	1.1	1.0	1.3	1.1	1.7
23-May	1.4	1.6	Z	1.8	2.2	2.2	1.7	1.6	1.4	1.5	1.1	0.8	PF	0.7	0.7	0.7	0.7	0.8	0.8	1.1	1.0	1.1	1.3	0.8	1.2	2.2
24-May	0.8	0.9	1.2	Z	1.6	1.8	2.0	2.3	1.8	1.2	1.0	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.9	1.0	1.2	1.1	2.3
25-May	1.5	1.6	1.8	1.9	Z	2.3	2.0	1.5	1.3	1.0	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.9	1.0	0.9	0.9	1.0	1.5	1.2	2.3
26-May	2.4	2.2	2.2	2.2	2.3	Z	2.0	1.7	1.4	1.1	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.9	2.7	4.7	1.0	1.1	1.1	1.6	4.7
27-May	Z	1.2	1.1	1.5	1.8	1.6	1.0	0.9	0.8	0.7	0.9	0.8	1.5	1.4	2.3	1.6	2.8	2.1	2.6	2.5	0.8	0.5	0.8	1.1	1.4	2.8
28-May	1.6	Z	0.9	0.9	0.8	0.9	1.0	0.6	0.6	0.5	0.4	0.5	0.6	0.5	1.0	0.7	0.6	0.5	0.6	0.6	0.7	0.8	0.8	0.9	0.7	1.6
29-May	0.9	1.1	Z	3.0	2.6	2.4	1.8	1.4	1.2	0.9	0.8	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	5.1	3.5	5.5	1.7	5.5
30-May	4.5	2.0	1.5	Z	1.5	0.5	2.8	2.4	2.6	2.4	2.3	1.5	1.3	3.3	2.8	2.4	1.2	0.9	1.1	1.8	2.4	2.2	2.2	2.1	2.1	4.5
31-May	1.8	1.8	2.1	2.5	Z	2.1	2.2	3.2	3.2	3.2	4.3	4.7	2.1	1.7	1.3	1.7	1.9	2.1	2.0	2.1	2.9	2.2	1.7	2.2	2.4	4.7
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	687	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687

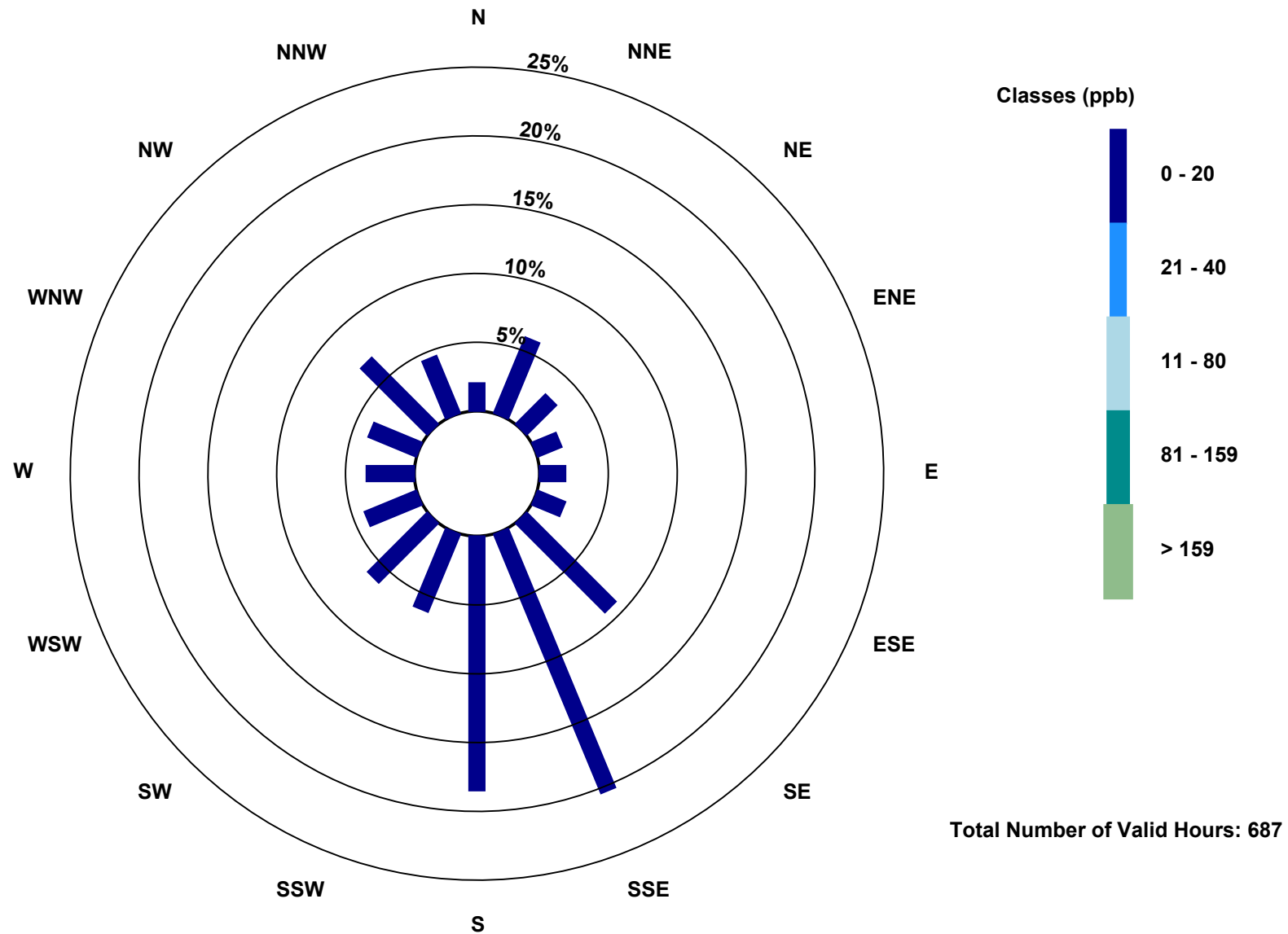
Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

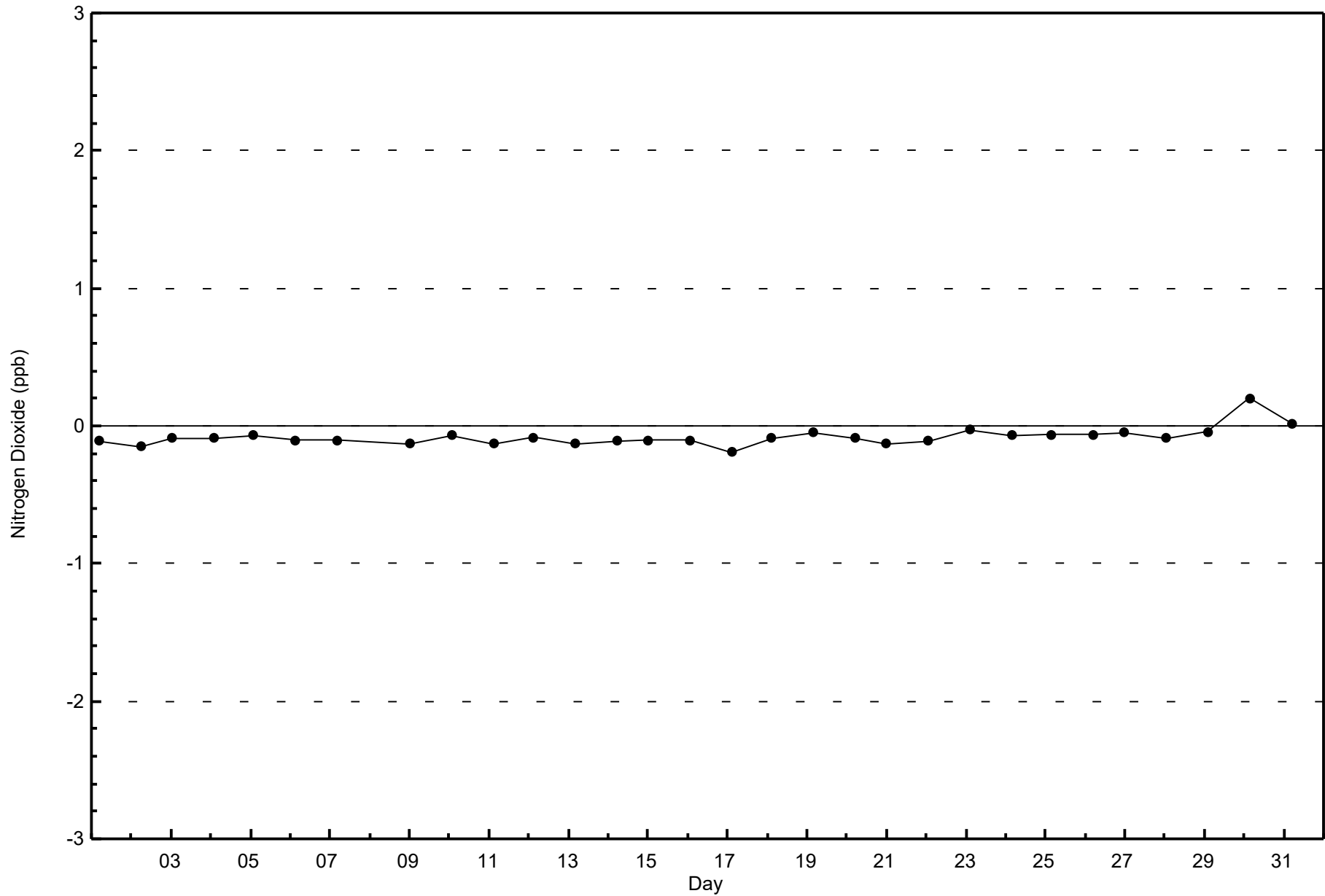
Nitrogen Dioxide (NO₂) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

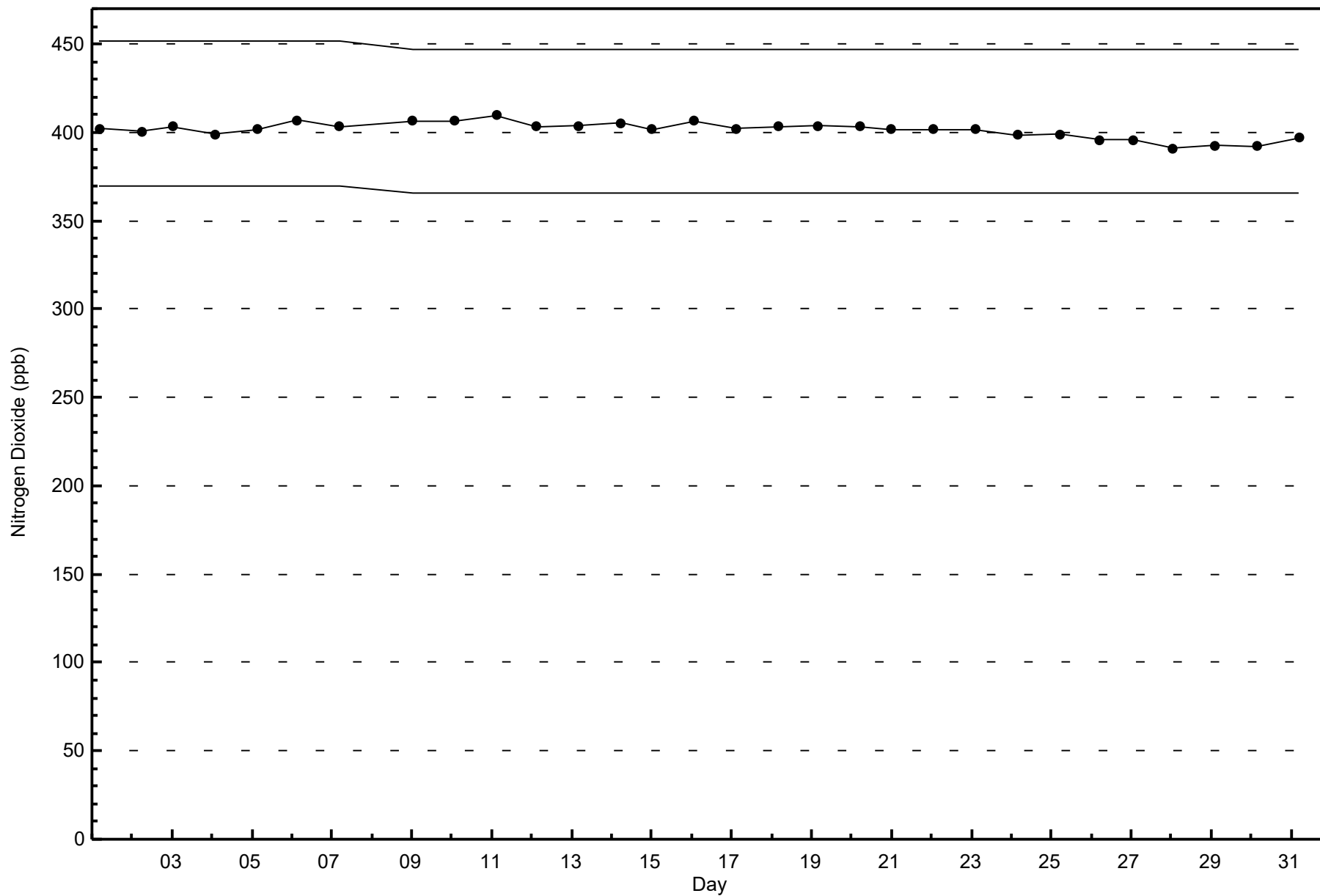
Nitrogen Dioxide (NO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

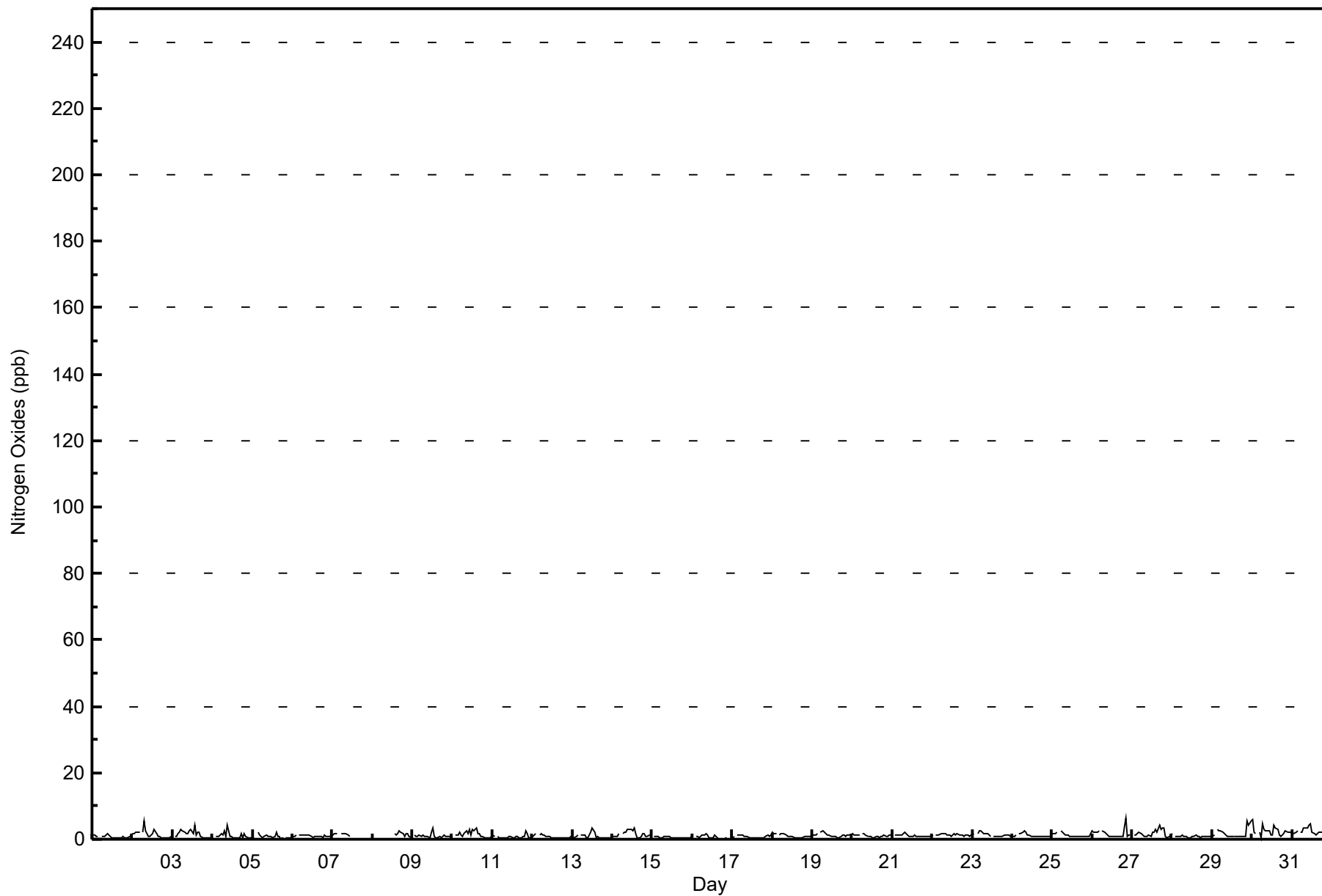
Kirby North - May 2025

Maximum Value: 6.1 ppb on May 26 21:00																			Maximum Daily Average: 2.5 ppb on May 31							Hours in Service: 744	
Minimum Value: 0.2 ppb on May 16 23:00																			Minimum Daily Average: 0.6 ppb on May 15							Hours of Data: 687	
Maximum Diurnal Average: 1.7 ppb at hour 8																			Minimum Diurnal Average: 0.9 ppb at hour 18							Hours of Missing Data: 57	
Monthly Average: 1.23 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 0.7 Median = 1.0 Q ₃ = 1.6 P ₉₀ = 2.2 P ₉₉ = 4.4							Hours of Calibration: 40	
																										Percent Operational Time: 97.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-May	1.4	1.3	1.0	0.9	Z	0.8	0.8	0.9	1.2	1.7	1.2	0.4	0.3	0.3	0.4	0.3	0.5	0.6	1.0	0.6	0.5	0.6	0.9	1.3	0.8	1.7	
2-May	1.5	1.7	2.1	1.9	1.9	Z	2.1	5.4	2.4	0.8	0.8	1.3	1.8	2.9	1.8	1.0	0.8	0.4	0.3	0.4	0.6	0.4	0.6	0.7	1.5	5.4	
3-May	Z	0.8	1.0	1.6	2.3	2.8	2.6	2.2	1.8	1.5	2.7	3.2	1.6	4.2	1.4	2.0	2.0	0.7	0.5	0.5	0.4	0.4	0.5	0.4	1.6	4.2	
4-May	0.5	Z	0.7	0.8	0.8	1.8	1.1	2.6	1.0	4.0	1.0	0.7	0.5	0.4	0.3	0.3	0.5	1.8	0.5	1.7	0.6	0.4	0.5	0.6	1.0	4.0	
5-May	0.4	0.5	Z	2.2	1.4	1.0	0.6	0.9	1.2	0.8	0.7	0.9	0.6	0.9	2.0	0.9	0.7	0.2	0.2	0.2	0.5	0.3	0.4	0.5	0.8	2.2	
6-May	0.8	0.9	1.2	Z	1.1	1.2	1.2	1.3	1.4	1.3	1.3	0.9	0.6	0.7	0.7	0.6	0.8	0.6	0.6	1.1	0.7	0.7	0.9	1.3	1.0	1.4	
7-May	1.5	1.5	1.6	1.5	Z	1.6	1.7	1.7	1.6	1.4	1.0	C	C	C	C	C	M	M	M	M	M	M	M	M	--	1.7	
8-May	M	M	M	M	M	M	M	M	C	C	C	C	C	1.8	1.4	1.6	2.4	2.2	1.7	1.0	1.9	1.6	0.9	0.5	--	2.4	
9-May	Z	1.2	0.7	1.0	1.1	0.9	1.4	0.7	0.7	0.9	0.6	2.1	3.5	0.7	0.4	0.5	0.7	0.5	0.9	1.4	0.9	0.9	0.6	0.7	1.0	3.5	
10-May	0.8	Z	1.2	1.1	2.2	1.1	0.9	1.7	2.6	1.5	2.9	1.2	3.1	2.5	3.3	1.7	1.6	1.0	0.7	0.5	0.4	0.5	0.4	0.5	1.4	3.3	
11-May	1.3	0.9	Z	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.9	0.7	0.6	0.5	0.9	0.7	0.5	0.4	0.6	1.0	2.5	1.9	0.5	0.5	0.8	2.5	
12-May	0.8	1.1	1.8	Z	1.4	1.8	1.2	1.2	0.9	0.7	0.8	0.6	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.8	1.8	
13-May	0.5	0.4	0.7	1.2	Z	1.5	1.4	1.3	0.6	0.6	1.1	2.2	3.6	2.0	0.6	1.0	0.4	0.4	0.3	0.5	0.5	0.6	0.4	0.6	1.0	3.6	
14-May	0.8	0.7	0.7	1.0	1.6	Z	1.9	2.2	2.2	2.9	2.8	2.9	2.5	3.2	1.7	0.6	0.6	0.7	1.7	1.9	1.0	1.0	1.5	1.4	1.6	3.2	
15-May	Z	1.0	1.0	0.9	0.6	0.5	0.6	0.7	1.0	0.8	0.8	0.6	0.5	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.6	1.0	
16-May	1.2	Z	0.7	0.7	0.6	0.8	1.1	1.2	1.5	1.2	0.3	0.3	0.5	1.2	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	1.5	
17-May	0.3	0.7	Z	1.1	1.2	1.4	1.2	1.0	0.9	0.7	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.6	0.7	1.5	1.0	1.1	0.7	1.5	
18-May	2.3	1.9	1.5	Z	1.4	1.5	1.6	1.5	1.1	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.8	0.9	0.8	0.7	0.8	1.0	2.3	
19-May	1.2	1.2	1.4	1.5	Z	2.1	2.5	2.2	1.7	1.3	1.3	1.0	0.9	0.7	0.7	0.5	0.5	0.9	1.4	1.4	1.0	1.1	1.1	1.3	1.3	2.5	
20-May	1.7	1.5	1.3	1.5	1.2	Z	1.8	1.7	1.4	0.8	0.7	0.8	0.6	0.6	0.7	0.8	0.5	0.7	0.7	1.1	0.9	0.8	1.4	1.1	1.1	1.8	
21-May	Z	1.2	1.2	1.3	1.2	1.2	1.4	2.2	1.5	1.1	1.0	0.9	1.0	1.3	1.0	0.9	1.0	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.1	2.2	
22-May	1.1	Z	1.3	1.2	1.2	1.8	1.7	1.9	1.5	1.3	1.1	1.0	1.1	1.5	1.4	1.5	1.3	1.1	1.1	1.0	1.1	1.1	1.0	1.3	1.3	1.9	
23-May	1.4	1.6	Z	1.8	2.3	2.4	1.9	1.8	1.7	1.8	1.2	0.9	PF	0.8	0.7	0.7	0.7	0.9	0.9	1.1	1.1	1.1	1.3	0.8	1.3	2.4	
24-May	0.8	0.9	1.2	Z	1.6	1.9	2.1	2.7	2.3	1.4	1.1	0.9	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.2	1.2	2.7	
25-May	1.5	1.7	1.8	1.9	Z	2.5	2.3	1.8	1.5	1.1	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	1.0	1.0	0.9	0.9	1.0	1.5	1.3	2.5	
26-May	2.4	2.2	2.2	2.2	2.4	Z	2.4	2.1	1.7	1.3	1.0	0.9	0.9	1.0	0.9	0.8	0.8	0.8	0.9	3.7	6.1	1.0	1.1	1.1	1.7	6.1	
27-May	Z	1.2	1.1	1.6	1.9	1.8	1.1	0.9	0.9	0.8	1.1	1.0	2.2	1.9	3.1	2.2	4.1	2.9	3.6	3.4	0.9	0.5	0.9	1.2	1.7	4.1	
28-May	1.9	Z	0.9	0.9	0.8	0.9	1.1	0.6	0.7	0.6	0.5	0.5	0.7	0.6	1.4	0.7	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.8	1.9	
29-May	0.9	1.1	Z	3.0	2.7	2.6	2.0	1.5	1.3	1.0	0.9	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	5.3	4.1	5.7	1.7	5.7	
30-May	5.8	2.2	1.6	Z	2.1	0.5	4.5	2.8	2.7	2.5	2.4	1.5	1.3	4.1	3.4	2.9	1.2	0.9	1.1	1.8	2.4	2.2	2.2	2.1	2.4	5.8	
31-May	1.8	1.8	2.1	2.5	Z	2.1	2.2	3.3	3.3	3.3	4.4	4.8	2.2	1.8	1.4	1.8	2.0	2.2	2.1	2.2	3.0	2.3	1.8	2.3	2.5	4.8	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration M - Maintenance PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	687	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Kirby North - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	41	21	13	13	15	63	140	127	42	42	28	24	26	47	31	687

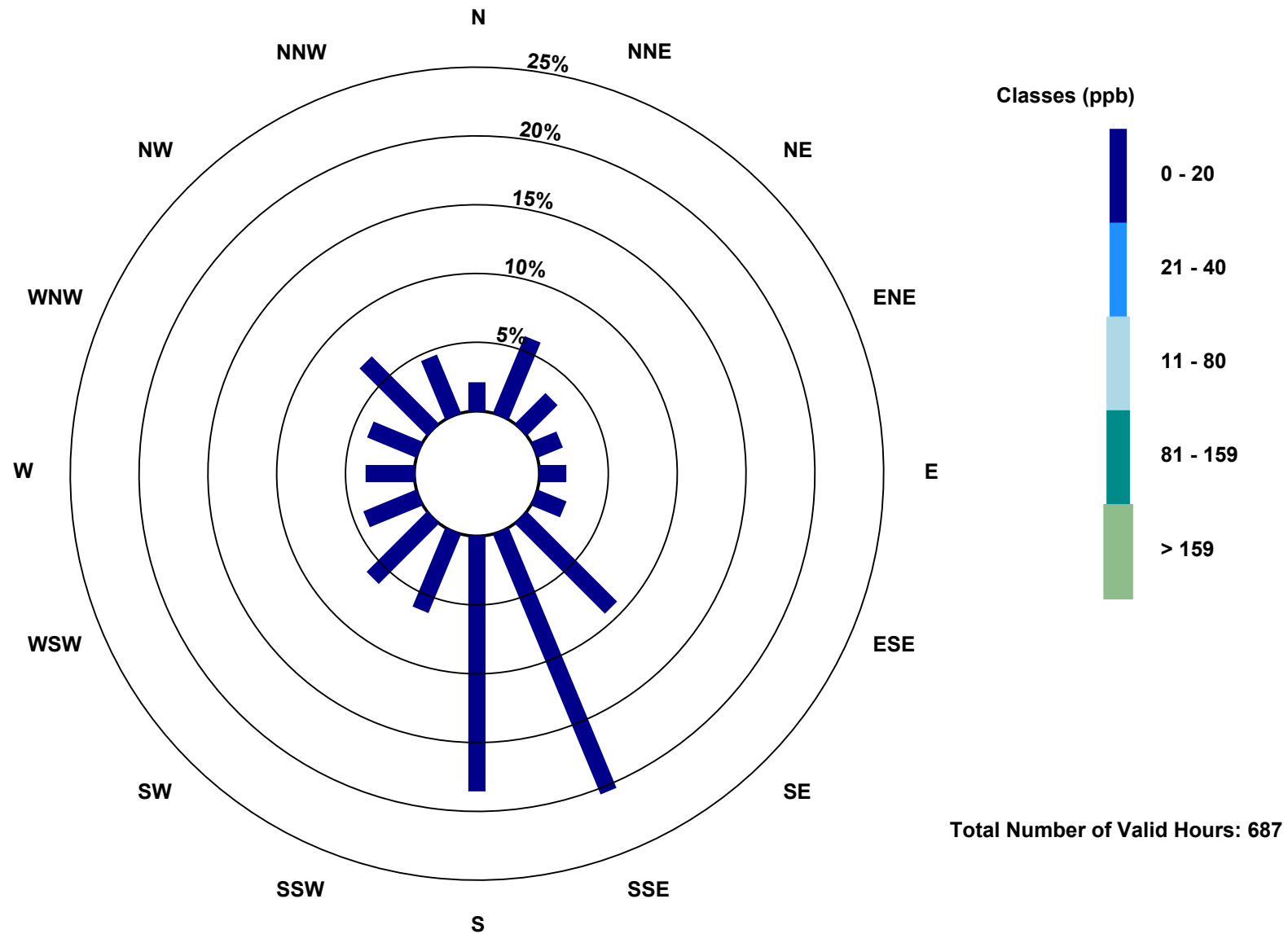
Total Number of Valid Hours: 687

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

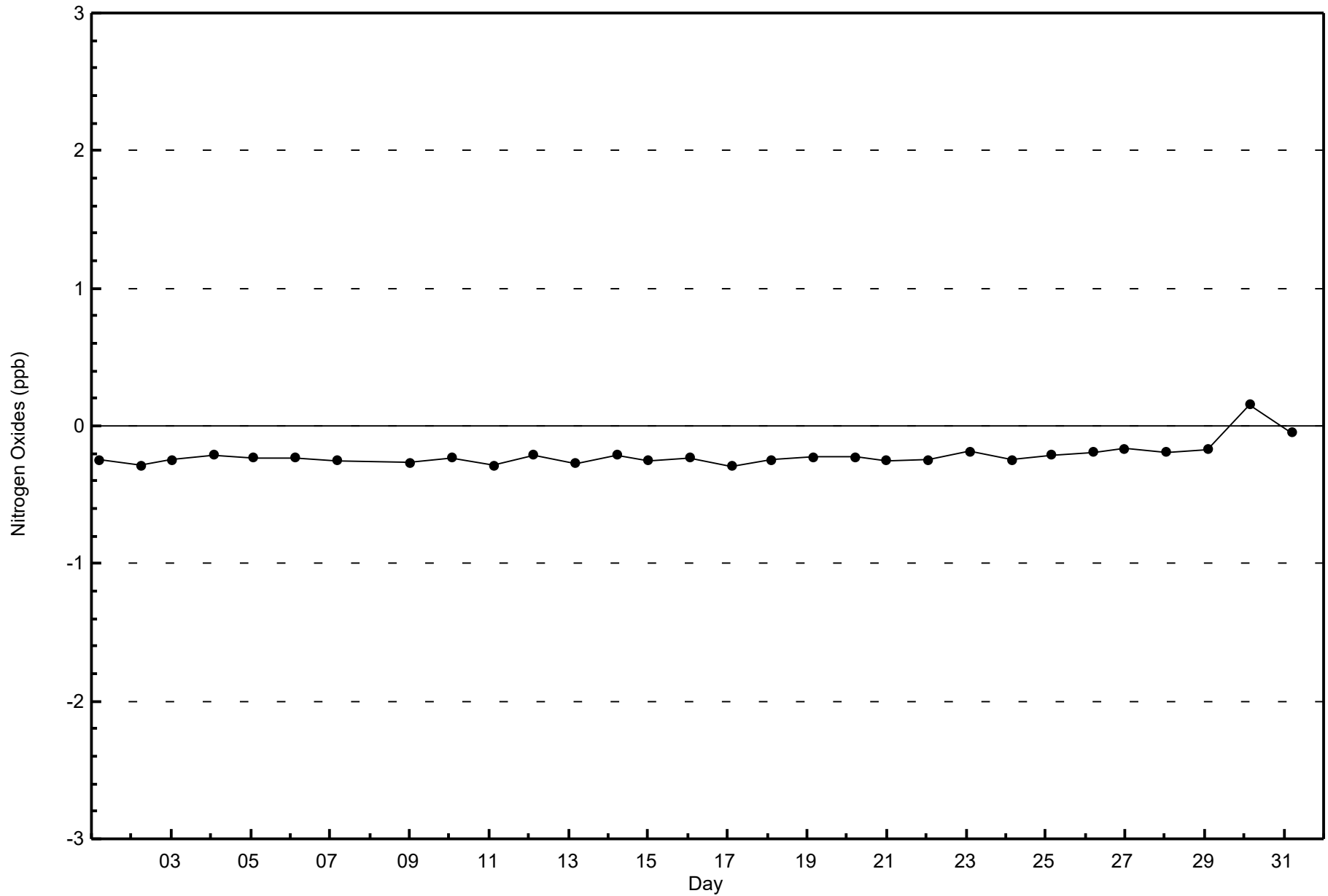
Nitrogen Oxides (NO_x) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

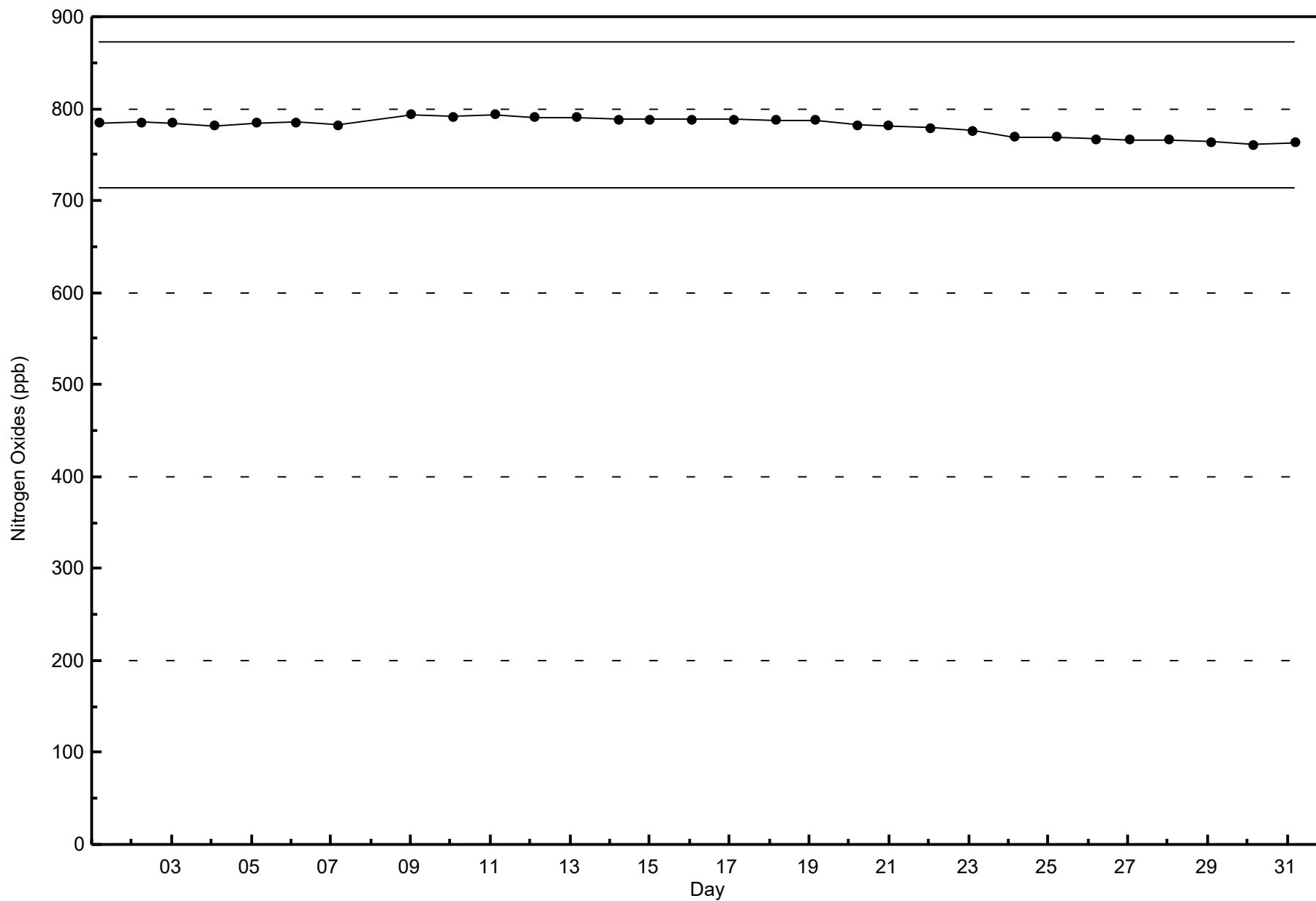
Nitrogen Oxides (NO_x) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

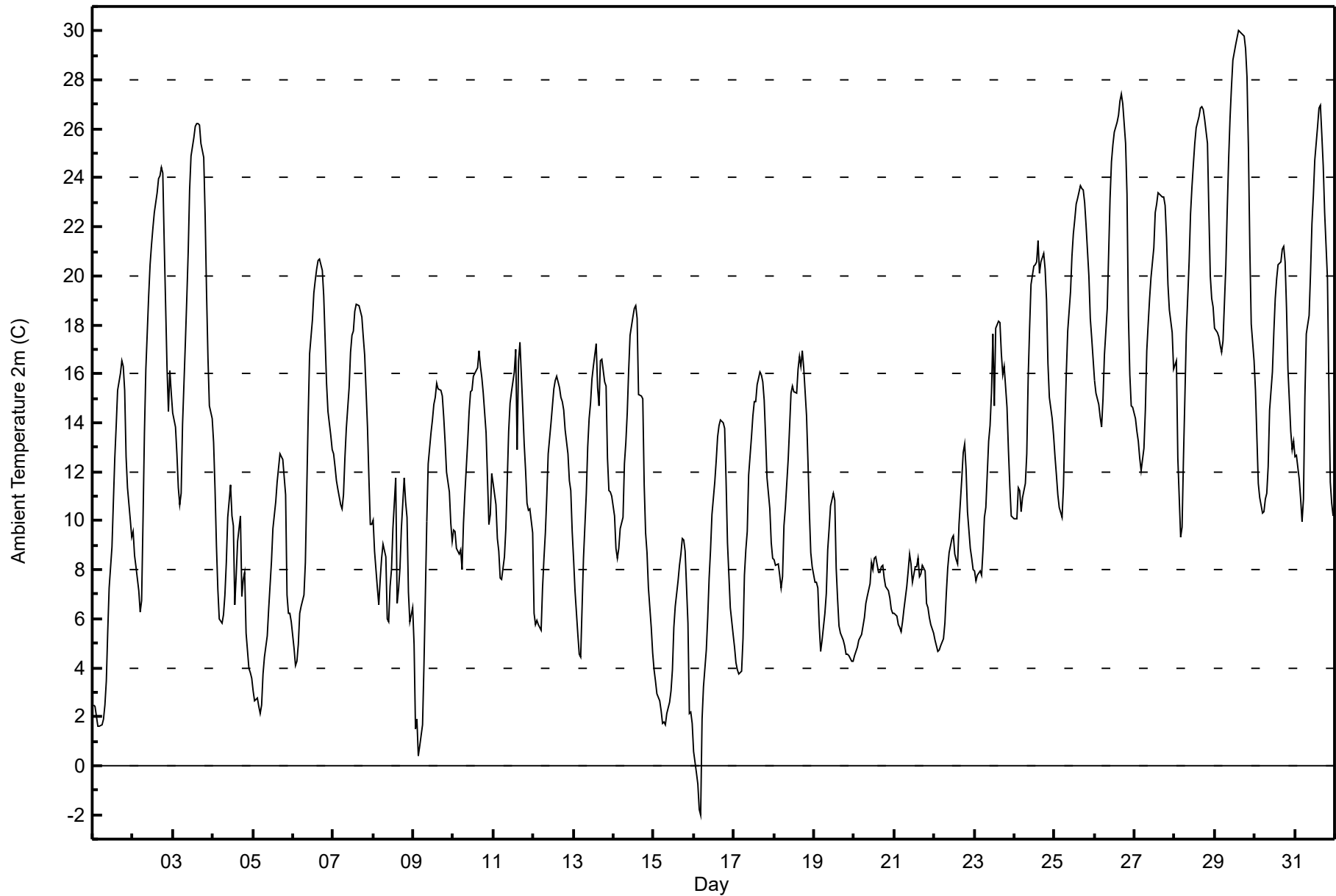
Kirby North - May 2025

Maximum Value: 30.0 C on May 29 15:00																			Maximum Daily Average: 23.9 C on May 29																			Hours in Service: 744			
Minimum Value: -2.0 C on May 16 05:00																			Minimum Daily Average: 4.5 C on May 15																			Hours of Data: 744			
Maximum Diurnal Average: 17.3 C at hour 17																			Minimum Diurnal Average: 7.1 C at hour 5																			Hours of Missing Data: 0			
Monthly Average: 12.64 C																			Percentiles: P ₁ = 1.5 P ₁₀ = 5.0 Q ₁ = 7.8 Median = 11.7 Q ₃ = 16.5 P ₉₀ = 22.2 P ₉₉ = 28.5																			Hours of Calibration: 0			
																																						Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-May	2.5	2.4	2.0	1.6	1.6	1.7	1.9	2.5	3.4	5.5	7.3	8.9	10.8	12.6	13.9	15.3	16.0	16.5	16.3	15.3	12.6	11.3	10.0	9.3	8.4	16.5															
2-May	9.5	8.6	8.1	7.1	6.3	6.7	10.1	13.6	16.2	19.2	20.5	21.2	22.0	22.6	23.4	24.0	24.1	24.4	24.2	21.4	16.3	14.5	16.1	15.2	16.5	24.4															
3-May	14.4	13.8	12.7	11.4	10.7	11.1	14.0	17.3	19.1	21.0	23.5	24.9	25.6	26.1	26.2	26.2	26.2	25.4	24.8	22.5	19.3	16.7	14.7	14.2	19.2	26.2															
4-May	13.2	11.3	9.0	7.2	6.0	5.8	6.1	7.0	8.3	10.1	11.5	10.2	9.8	6.5	7.8	9.2	10.2	6.9	7.6	7.9	5.4	4.0	3.8	3.6	7.8	13.2															
5-May	3.1	2.7	2.8	2.4	2.2	2.5	3.7	4.4	5.3	6.4	7.4	8.3	9.7	10.8	11.6	12.1	12.7	12.6	12.5	11.1	7.0	6.2	6.2	5.9	7.1	12.7															
6-May	4.8	4.1	4.3	4.9	6.2	6.5	7.0	8.3	11.3	14.3	16.8	18.2	19.3	19.8	20.3	20.6	20.7	20.2	19.2	17.4	15.6	14.4	13.5	12.9	13.4	20.7															
7-May	12.7	12.2	11.7	11.3	10.7	10.5	11.1	12.6	13.8	15.4	16.9	17.6	17.8	18.5	18.9	18.8	18.5	18.3	17.5	16.8	13.8	11.7	9.9	9.9	14.4	18.9															
8-May	10.0	8.7	7.3	6.5	7.6	8.5	9.0	8.5	6.0	5.9	7.3	8.0	9.7	11.7	6.6	7.2	8.1	9.7	11.7	10.8	10.1	7.1	5.9	6.5	8.3	11.7															
9-May	5.0	1.5	1.9	0.4	0.8	1.7	4.1	7.0	10.0	12.4	13.6	14.1	14.8	15.0	15.6	15.4	15.3	15.1	14.2	13.2	12.0	11.2	9.9	9.1	9.7	15.6															
10-May	9.6	9.6	8.8	8.6	8.8	8.0	9.9	11.1	13.2	14.4	15.3	15.3	15.9	16.0	16.3	16.9	16.3	15.8	15.2	13.6	11.8	9.8	10.2	11.9	12.6	16.9															
11-May	11.5	10.7	9.3	8.7	7.7	7.6	8.5	9.7	11.6	13.7	14.8	15.3	16.1	17.0	12.9	16.5	17.3	14.6	13.1	12.0	10.7	10.5	10.5	9.5	12.1	17.3															
12-May	6.2	5.7	5.9	5.8	5.5	7.3	8.4	9.5	11.0	12.7	14.0	14.7	15.4	15.7	15.9	15.4	15.0	14.9	14.5	13.7	12.7	11.7	11.2	9.6	11.4	15.9															
13-May	8.4	7.2	5.3	4.6	4.4	6.4	8.5	11.1	13.0	14.2	14.8	15.8	16.3	17.2	15.4	14.7	16.5	16.6	15.7	15.5	12.6	11.2	11.2	11.0	12.0	17.2															
14-May	10.2	8.9	8.5	8.9	9.7	10.1	12.3	13.2	14.4	16.2	17.6	18.3	18.7	18.8	18.3	15.2	15.1	15.0	11.4	9.5	8.7	7.2	5.6	4.6	12.3	18.8															
15-May	3.9	3.4	2.9	2.6	2.2	1.7	1.8	1.7	2.1	2.6	3.0	3.9	5.6	6.5	7.6	8.2	8.6	9.2	9.2	8.8	5.8	2.1	2.2	1.7	4.5	9.2															
16-May	0.5	-0.3	-0.7	-1.8	-2.0	1.9	3.2	4.7	6.0	7.7	8.8	10.3	11.6	12.5	13.4	13.9	14.1	14.0	13.8	11.7	9.1	7.8	6.5	5.4	7.2	14.1															
17-May	4.8	4.2	3.9	3.8	3.9	5.2	7.8	8.8	9.6	11.9	13.4	14.3	14.9	14.9	15.6	16.1	15.9	15.7	14.9	13.4	11.8	10.5	9.1	8.4	10.5	16.1															
18-May	8.4	8.2	8.2	7.8	7.2	7.7	9.8	10.5	12.5	13.8	15.2	15.5	15.3	15.2	16.2	16.7	16.3	17.0	16.3	14.3	12.4	10.4	8.7	8.1	12.2	17.0															
19-May	7.5	7.5	7.2	5.7	4.7	5.1	6.2	7.0	8.8	9.7	10.6	11.1	10.9	8.1	6.8	5.7	5.4	5.2	4.9	4.6	4.5	4.5	4.3	4.3	6.7	11.1															
20-May	4.5	4.7	4.8	5.1	5.4	5.7	6.1	6.6	6.9	7.5	8.3	8.0	8.5	8.5	7.9	7.9	8.1	8.2	7.7	7.3	7.2	6.8	6.4	6.2	6.8	8.5															
21-May	6.2	6.1	5.8	5.7	5.5	5.9	6.4	7.3	8.0	8.6	8.3	7.5	8.1	8.1	8.5	7.7	7.8	8.2	8.0	6.6	6.5	6.0	5.8	5.4	7.0	8.6															
22-May	5.1	4.9	4.7	4.7	4.9	5.2	5.8	7.1	8.1	8.7	9.3	9.4	8.7	8.4	8.2	9.9	11.8	12.8	13.1	12.1	10.4	8.9	8.5	8.0	8.3	13.1															
23-May	7.9	7.6	7.8	7.9	7.8	8.8	10.1	10.5	13.3	13.9	15.2	17.6	14.7	17.9	18.2	18.1	16.8	16.0	16.3	14.6	12.9	11.4	10.2	10.1	12.7	18.2															
24-May	10.1	10.1	11.3	11.2	10.4	10.9	11.5	12.7	15.8	17.9	19.7	20.4	20.5	20.6	21.4	20.1	20.6	20.9	20.3	19.0	16.4	15.1	14.2	13.5	16.0	21.4															
25-May	12.6	11.9	11.1	10.5	10.2	11.4	13.9	16.0	17.8	19.3	20.8	21.7	22.3	23.0	23.1	23.7	23.6	23.5	23.0	22.1	20.0	18.3	17.5	16.6	18.1	23.7															
26-May	15.7	15.2	14.7	14.2	13.8	15.0	16.8	18.7	20.9	23.1	24.7	25.4	25.9	26.3	26.6	27.2	27.5	27.0	25.4	23.3	18.4	15.9	14.7	14.6	20.5	27.5															
27-May	14.2	13.6	13.3	12.6	12.1	13.0	14.5	16.9	18.0	19.1	19.9	21.1	22.6	22.9	23.4	23.4	23.2	23.2	22.9	21.6	19.7	18.6	17.7	16.2	18.5	23.4															
28-May	16.3	16.6	12.6	9.3	9.7	12.6	15.0	17.7	20.6	22.5	23.6	24.5	25.4	26.1	26.5	26.8	26.9	26.8	26.4	25.4	22.6	20.0	19.1	18.7	20.5	26.9															
29-May	17.8	17.7	17.5	17.2	16.9	17.3	20.4	22.7	24.8	26.5	27.7	28.8	29.4	29.7	30.0	30.0	29.9	29.8	29.3	28.1	25.2	21.2	18.0	16.5	23.9	30.0															
30-May	15.3	13.4	11.5	10.9	10.3	10.4	10.9	11.1	12.2	14.5	16.1	17.7	19.1	19.9	20.4	20.5	21.1	21.2	20.6	18.7	16.2	13.7	12.9	13.3	15.5	21.2															
31-May	12.6	12.7	11.7	10.9	10.0	10.9	15.0	17.6	18.4	20.1	22.1	23.3	24.7	26.1	26.9	27.0	25.8	24.5	22.6	19.9	15.5	11.6	10.7	10.2	17.9	27.0															
9.2 8.5 7.9 7.4 7.1 7.8 9.3 10.8 12.3 13.8 15.1 15.9 16.4 16.9 16.9 17.1 17.3 17.1 16.5 15.2 13.0 11.3 10.5 10.0																										Diurnal Average															
17.8 17.7 17.5 17.2 16.9 17.3 20.4 22.7 24.8 26.5 27.7 28.8 29.4 29.7 30.0 30.0 29.9 29.8 29.3 28.1 25.2 21.2 19.1 18.7																										Diurnal Maximum															



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Kirby North - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	4	0.54	0.54
0 - 10	286	38.44	38.98
10 - 20	346	46.51	85.48
> 20	108	14.52	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

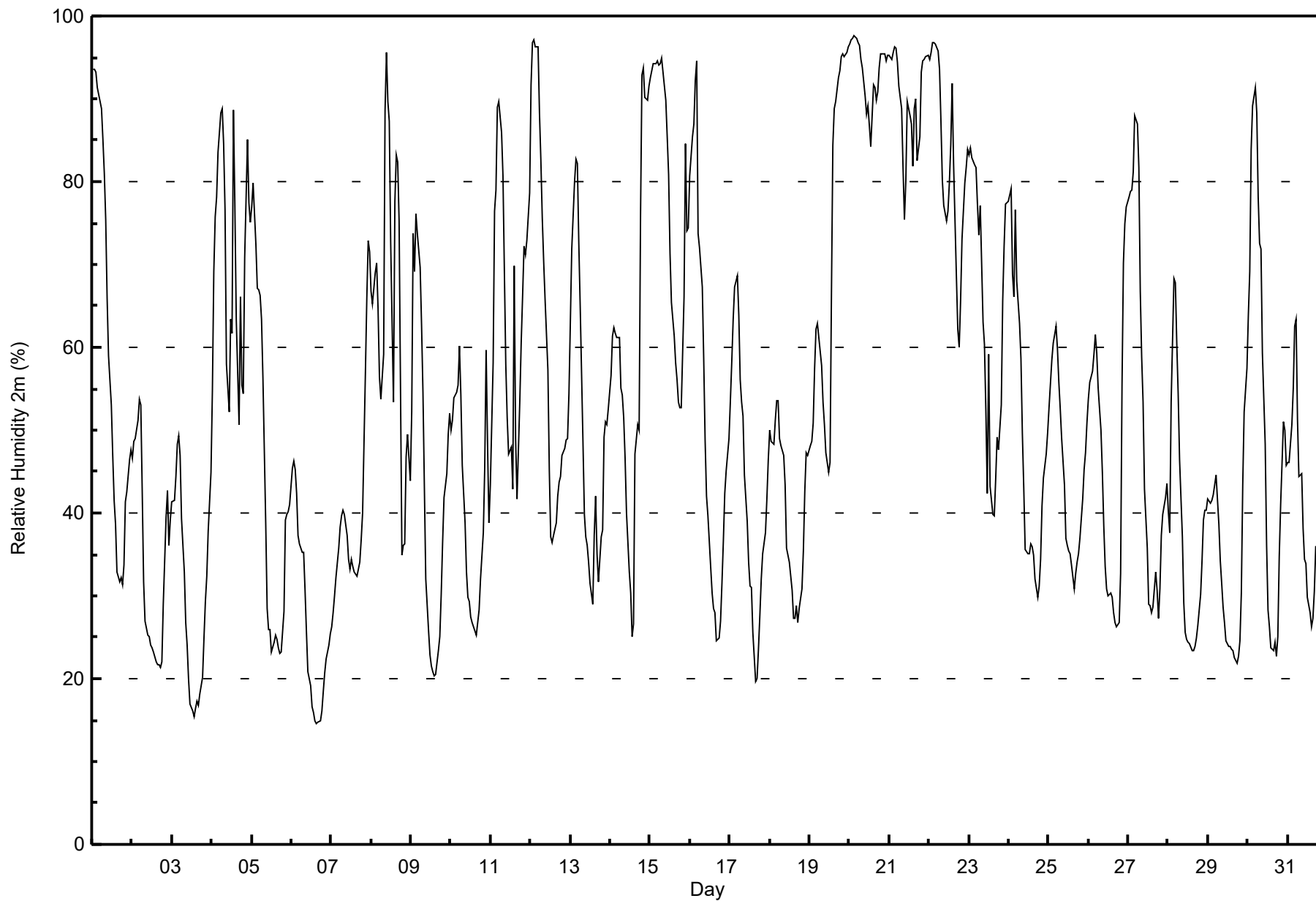
Kirby North - May 2025

Maximum Value: 97.6 % on May 20 04:00																				Maximum Daily Average: 93.3 % on May 20					Hours in Service: 744	
Minimum Value: 14.6 % on May 6 16:00																				Minimum Daily Average: 26.6 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 72.2 % at hour 5																				Minimum Diurnal Average: 39.8 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 53.66 %																				Percentiles: P ₁ = 16.3 P ₁₀ = 25.3 Q ₁ = 34.3 Median = 49.0 Q ₃ = 73.2 P ₉₀ = 89.9 P ₉₉ = 96.8					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	93.6	93.6	93.3	91.3	90.6	88.8	85.1	81.1	75.4	65.9	58.9	53.0	46.9	41.4	38.7	32.9	31.6	32.1	31.4	33.7	41.4	42.6	46.4	47.7	59.9	93.6
2-May	46.6	48.7	49.0	51.2	53.8	53.0	42.7	31.6	27.0	25.2	25.1	24.2	23.8	23.1	22.0	21.8	21.8	21.4	22.1	28.9	39.5	42.8	36.1	39.2	34.2	53.8
3-May	41.3	41.6	44.5	48.2	49.4	47.0	39.4	33.0	26.8	24.0	20.0	17.0	16.1	15.5	16.5	17.3	16.8	18.2	20.1	24.9	29.3	32.4	37.8	44.9	30.1	49.4
4-May	54.8	69.1	75.8	78.2	83.6	88.3	88.8	84.6	76.6	58.0	52.1	63.5	61.7	88.7	77.4	63.5	50.7	66.1	55.4	54.4	70.9	85.0	77.5	75.1	70.8	88.8
5-May	77.0	79.8	72.3	67.1	66.9	66.2	63.4	56.4	38.6	28.5	25.9	25.9	23.2	24.4	25.2	24.7	23.7	23.1	23.2	28.1	39.2	39.8	40.2	41.0	42.7	79.8
6-May	45.5	46.2	45.3	42.4	37.4	36.3	35.2	35.2	30.7	25.5	20.9	19.1	16.7	16.0	14.9	14.6	14.8	15.0	16.0	18.5	20.7	22.4	24.0	25.5	26.6	46.2
7-May	26.3	28.0	30.0	32.2	35.7	38.3	39.7	40.3	39.8	37.2	34.5	33.3	34.4	33.5	32.9	32.3	33.3	34.0	36.9	40.0	57.0	65.9	72.9	71.6	40.0	72.9
8-May	66.9	65.2	69.0	70.1	64.7	56.4	53.7	59.2	88.6	95.6	89.7	87.3	72.7	53.4	77.6	83.2	82.3	75.3	34.9	36.1	36.2	46.7	49.6	43.9	64.9	95.6
9-May	52.3	73.7	69.2	76.0	73.7	69.7	62.7	54.5	43.2	32.0	25.8	22.9	21.6	20.9	20.4	20.5	23.4	25.1	30.2	36.4	41.9	44.8	49.6	52.1	43.4	76.0
10-May	50.0	51.1	53.9	54.6	55.5	60.2	54.2	45.7	38.8	32.9	29.9	29.3	27.4	26.8	25.8	25.3	26.7	28.2	32.1	37.6	45.5	59.6	48.5	38.8	40.8	60.2
11-May	43.4	58.2	76.4	78.9	89.1	89.7	86.0	80.6	69.2	58.0	51.5	47.1	47.9	42.8	69.8	49.0	41.8	53.5	60.6	66.3	72.2	71.3	72.9	78.7	64.8	89.7
12-May	91.7	96.8	97.2	96.3	96.2	88.3	82.6	75.6	70.3	65.7	57.3	45.2	37.1	36.4	37.2	38.9	42.1	43.7	44.4	47.0	47.8	48.9	49.0	54.3	62.1	97.2
13-May	63.0	71.8	80.0	82.7	82.2	72.7	65.1	48.4	39.9	37.1	36.1	34.0	31.6	28.9	37.3	42.0	35.0	31.6	37.0	38.0	49.2	51.1	50.7	52.5	49.9	82.7
14-May	56.5	61.4	62.4	61.7	61.1	61.2	55.1	54.3	51.5	46.6	40.0	32.9	30.3	25.2	26.7	47.1	50.7	50.1	75.9	92.8	93.8	90.2	89.8	91.6	58.7	93.8
15-May	92.6	93.4	94.3	94.2	94.5	94.1	94.3	95.0	93.2	89.8	85.4	80.9	71.4	65.3	61.3	58.2	56.1	53.4	52.8	52.7	66.1	84.6	74.0	74.4	78.0	95.0
16-May	80.7	85.4	87.0	92.2	94.5	73.8	72.1	67.4	58.7	48.8	42.0	39.7	33.4	30.3	28.4	27.9	24.6	25.0	27.0	31.5	36.6	42.3	45.1	49.1	51.8	94.5
17-May	53.6	58.2	63.4	67.3	68.7	63.9	56.1	53.3	51.8	44.5	39.0	34.1	31.2	31.0	25.6	19.6	20.0	23.5	27.6	32.1	35.1	37.6	41.7	46.5	42.7	68.7
18-May	50.0	48.7	48.2	51.2	53.6	53.5	48.9	48.1	47.0	43.4	35.8	34.9	34.1	30.7	27.2	27.3	28.9	26.8	28.5	30.8	35.5	42.6	47.2	46.9	40.4	53.6
19-May	48.1	48.7	50.9	57.5	62.1	62.8	59.5	57.8	53.3	50.7	47.4	44.9	46.1	66.5	84.4	88.9	89.7	92.5	93.4	95.1	95.5	95.2	95.5	96.2	70.1	96.2
20-May	96.6	97.0	97.2	97.6	97.2	96.8	96.5	94.7	93.7	90.3	88.1	89.1	86.8	84.2	91.7	91.3	89.8	90.9	93.7	95.5	95.5	95.5	94.7	95.3	93.3	97.6
21-May	95.2	94.7	95.6	96.3	96.1	94.5	91.5	88.8	81.7	75.5	80.2	89.6	88.0	87.0	81.9	88.9	89.9	82.6	85.5	93.2	94.6	94.8	95.1	95.3	89.9	96.3
22-May	94.7	95.7	96.7	96.8	96.7	95.8	93.6	87.2	80.2	77.1	75.2	76.4	79.8	84.5	91.8	82.1	68.7	62.2	60.1	65.5	73.0	79.9	81.7	83.8	82.5	96.8
23-May	83.3	84.1	82.9	82.1	81.7	77.3	73.5	77.0	63.1	60.3	52.4	42.4	59.2	43.2	39.9	39.6	44.0	49.1	47.6	53.1	65.6	72.2	77.4	77.4	63.7	84.1
24-May	77.6	79.1	68.8	66.1	76.6	68.0	62.9	58.7	49.7	43.1	35.5	35.1	35.0	36.3	35.9	34.8	32.1	29.9	31.1	34.4	40.9	44.2	47.2	49.7	48.9	79.1
25-May	52.6	55.5	58.4	60.4	62.5	59.9	55.8	52.5	48.9	43.3	37.0	36.1	35.4	35.0	33.7	30.9	32.7	34.1	35.0	36.9	41.7	45.2	47.3	50.9	45.1	62.5
26-May	53.8	55.7	57.2	59.2	61.6	59.4	55.0	50.1	45.0	38.4	33.6	30.8	30.1	30.3	29.8	28.0	26.9	26.2	26.8	32.6	55.5	70.1	74.9	76.9	46.2	76.9
27-May	78.1	78.7	78.9	81.3	88.0	86.9	81.7	66.8	58.9	53.4	42.9	35.8	29.0	28.8	27.9	28.6	32.9	30.7	27.3	30.9	37.3	39.8	41.9	43.5	51.2	88.0
28-May	40.2	37.7	53.4	68.2	67.8	60.4	54.4	46.4	37.1	29.1	25.6	24.8	24.4	24.2	23.3	23.4	23.9	24.9	26.5	30.1	34.3	39.2	40.3	40.3	37.5	68.2
29-May	41.7	41.2	41.5	42.2	43.4	44.6	38.6	34.3	31.5	28.7	26.8	24.6	23.9	23.9	23.5	23.4	22.5	21.8	22.6	24.6	30.4	43.4	52.2	57.4	33.7	57.4
30-May	63.8	69.2	83.8	89.2	91.4	88.3	78.1	72.5	71.9	59.3	48.3	36.2	28.4	26.3	23.7	23.4	24.5	22.7	25.1	34.7	41.0	51.0	50.0	45.7	52.0	91.4
31-May	46.1	46.0	50.6	55.1	62.5	63.3	51.4	44.4	44.7	38.2	34.3	33.9	29.8	28.0	26.2	27.3	30.5	36.0	35.9	42.5	55.1	82.7	88.2	93.7	47.8	93.7
63.1 66.3 68.6 70.6 72.2 69.7 65.1 60.5 55.7 49.9 45.1 42.7 40.6 39.8 41.2 40.5 39.8 40.3 40.9 45.1 52.2 58.2 59.3 60.6																										Diurnal Average
96.6 97.0 97.2 97.6 97.2 96.8 96.5 95.0 93.7 95.6 89.7 89.6 88.0 88.7 91.8 91.3 89.9 92.5 93.7 95.5 95.5 95.5 95.5 96.2																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Kirby North - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	19	2.55	2.55
20 - 40	244	32.80	35.35
40 - 60	212	28.49	63.84
60 - 80	126	16.94	80.78
80 - 100	143	19.22	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

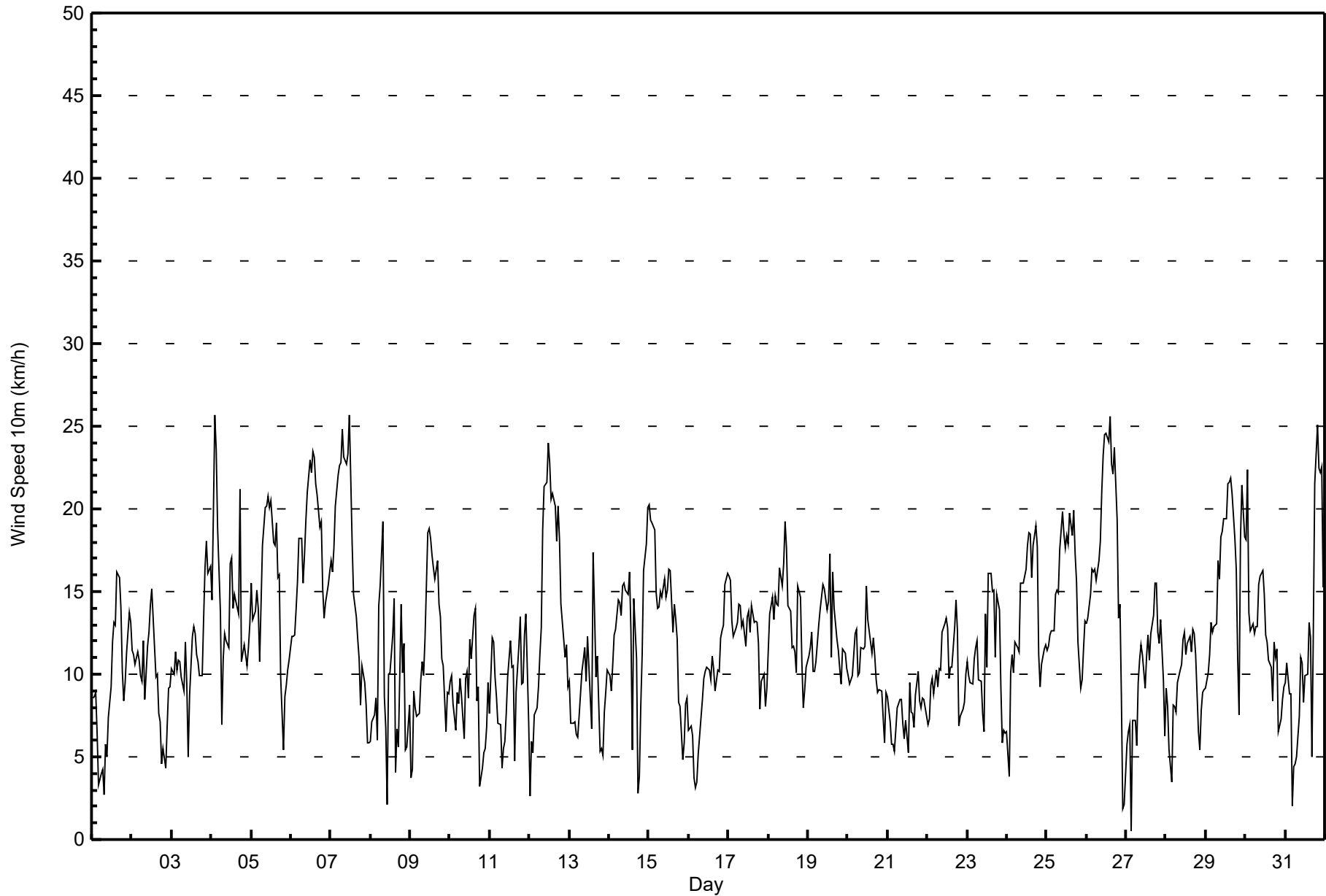
Kirby North - May 2025

Maximum Speed: 26 km/h on May 4 03:00										Maximum Daily Speed Average: 17.1 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 27 04:00										Minimum Daily Speed Average: 2.7 km/h on May 31										Hours of Data: 744						
Maximum Diurnal Speed Average: 6.0 km/h at hour 14										Minimum Diurnal Speed Average: 1.9 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 4.1 km/h 185.3 deg										Percentiles: P ₁ = 3 P ₁₀ = 7 Q ₁ = 9 Median = 12 Q ₃ = 15 P ₉₀ = 19 P ₉₉ = 24										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	N9	NNE9	NNE9	NNE6	NNE3	NNW4	N4	W3	W6	W5	SW7	SW9	SSW12	SSW13	SW13	SW16	SW16	SW14	SSW10	SSE8	SSE9	SSE11	SSE14	SSE13	SSW4.8	SW16
2-May	S11	S11	S11	S11	S11	SSW10	SW10	WNW12	WNW9	NNW12	NNW13	NW14	NW15	NW13	NW10	NW10	NW8	NNW7	NNE5	E6	ESE4	SE7	SE9	SSE9	W2.8	NW15
3-May	SSE10	SSE10	SSE11	S10	SSE11	S11	SSE10	SSW9	SW12	SW9	WSW5	W9	NW12	NNW13	NW12	NW11	NW11	NW10	NNW10	NNW13	NNW16	NNW18	N16	NNW17	WNW3.7	NNW18
4-May	NNW15	NW20	NW26	NW24	NW19	NNW14	NW7	W11	WSW12	NNW12	NNW17	NNW17	NW14	NNW15	NNW14	NW14	NNW21	WSW11	NNW11	SW12	SW11	SW12	WSW13	WNW12.1	NW26	
5-May	WSW16	WSW13	W14	NNW15	NNW14	NW11	NW14	NW18	NW20	NW20	NW21	NW20	NW21	NW18	NW18	NW19	NW16	NNW16	NNW10	NNE5	E9	ESE9	SE10	SE11	NW10.5	NW21
6-May	SSE12	SSE12	SSE12	S14	S16	S18	S18	S16	S17	SSW19	SSW21	SSW23	SSW22	SSW23	SSW23	SSW22	SSW21	S19	SSW19	S15	S13	S14	S15	S16	S17.1	SSW23
7-May	S17	S16	S18	S20	S22	S23	S23	S25	S23	SSW23	SSW23	SSW26	SSW22	SSW18	SW15	WSW13	W12	NW11	NNW8	NNW11	N10	N8	NNE6	N6	SSW11.1	SSW26
8-May	N6	N7	NNE8	NNE9	N6	NNW14	N15	NNW19	NNW9	N7	NNW2	WSW10	NNW10	NW12	NNW15	WSW4	SSW7	SSW6	NNW14	W10	W12	WSW5	SW6	WSW8	NW6.2	NNW19
9-May	SSW4	S4	S9	S8	S7	S8	S10	SSW11	SSW10	SW12	SW19	WSW19	WSW18	WSW17	SW16	SW16	SW17	SW14	SSW14	SSW11	S11	SSE7	SE9	SE9	SSW10.0	WSW19
10-May	SE10	SSE10	S8	SSW7	WSW9	SSW8	SW10	WSW9	WNW6	WSW10	NNW10	W9	NNW12	W11	NNW14	NNW14	WNW8	NW9	NW3	ESE4	SE5	SE5	SE7	ESE10	WSW4.1	WNW14
11-May	S8	S12	S12	S10	S9	S7	SSE7	SSE4	ESE6	SSE6	SSW8	SW10	SW12	SSW10	NW11	WSW5	SSW9	NNE12	E14	ENE9	ENE10	E12	ESE14	ESE7	SSE4.7	ESE14
12-May	NNE3	NNE6	NE5	NE8	NE8	NE9	NNE11	NE13	NE19	NE21	NE22	NNE24	NE23	NE21	NE21	NE20	NE18	NNE20	NNE18	NNE14	N12	N11	N12	N9	NE14.0	NNE24
13-May	N10	NNW7	N7	N7	N6	NNW6	NNW7	N10	N11	NNW12	NW10	NW12	NNW10	W7	WSW17	WSW14	SSW10	SW11	SSW5	S6	SSE5	SSE8	SSE9	SSE10	WNW3.6	WSW17
14-May	S10	S9	SSE11	SSE12	S13	SSE14	S14	S14	SSW15	SW16	SW15	W15	W16	NNW13	NNW5	SSE15	SSE11	E3	WSW4	NNW8	N11	NNE16	NNE18	NNE20	SSW3.7	NNE20
15-May	NNE20	NNE19	NNE19	NNE19	NNE15	NNE14	NNE14	NNE15	NNE15	NNE16	NNE15	NNE15	NNE16	NNE16	NNE13	NNE14	NNE13	NNE12	NE8	ENE8	ENE5	ENE6	E8	ENE9	NNE12.9	NNE20
16-May	NE7	NE7	NE6	NE4	NNE3	NNE3	NNE5	NE7	NE8	NE10	NNE10	NE10	ENE10	ENE10	ENE11	E10	ESE9	E10	ENE10	E12	E13	ESE13	ESE15	ESE16	ENE8.0	ESE16
17-May	SE16	SE16	SE13	SSE12	SSE13	SSE13	SSE14	S14	S13	S13	SSE12	SE13	SSE14	SSE13	SE14	SSE13	SE13	SE13	SSE12	SE8	SE10	SE10	SE8	SE9	SSE12.1	SE16
18-May	SE11	SE14	SSE15	SSE13	SSE15	SSE14	SSE14	SSE16	SSE15	SE17	SE19	SE18	SE14	SE14	SSE12	SSE12	SSE11	SE10	SSE15	S15	S11	S8	SSE9	SSE10	SSE13.2	SSE19
19-May	SSE11	SSE12	SSE13	SSE10	SSE10	SSE11	SSE13	SSE14	SSE15	SSE15	SE15	SE14	SSE14	SSE17	SE11	SE16	SE14	SE12	SE11	SE10	ESE9	SE12	SE11	SE10	SSE12.1	SSE17
20-May	SE10	ESE9	SE10	SE10	SE12	SE13	SE10	SE10	SE12	SSE11	SSE12	SE15	SSE13	SE13	SE11	SE12	SE11	SE10	SE9	SE9	SE9	SSE7	SSE6	SE9	SE10.4	SSE15
21-May	SSE9	S7	SSE6	SE6	SSE5	SSE7	S8	S8	SSW9	SSW7	SSW6	ESE7	SSE5	SSW9	S8	SSE8	S7	S9	SE10	SSE8	SSE8	SSE9	SSE8	SSE7	SSE7.0	SE10
22-May	S7	S7	SSE9	SSE10	SSE9	SSE10	SSE9	S10	S10	S13	SSE13	S13	S13	S10	S10	S10	S13	S14	S13	S7	SSE7	SSE8	SSE8	SSE10	S10.0	S14
23-May	SSE11	SSE10	SSE10	SSE9	SE11	SSE12	SSE12	SSE10	S10	SSW8	SSE7	SSW14	SW10	S16	SSE16	S15	SSW15	SW11	S15	S14	SSW9	S6	SSE7	SSE6	S10.1	S16
24-May	SE7	E4	SE10	SSE11	SSE10	SSE12	SSE12	SSE11	SSE15	S16	S16	S16	S18	S19	S18	S16	S18	S19	S18	S11	SSE9	SSE11	SSE12	S12	S12.8	S19
25-May	S11	S12	SSE12	SSE13	SSE13	SSE15	SSE15	S15	S18	S20	S18	S18	S18	S18	S20	S18	SSE20	SSE17	SSE16	SSE12	SSE9	SSE10	SSE11	SSE13	SSE14.9	SSE20
26-May	SSE13	SSE13	SSE15	SSE16	SSE16	SSE16	S16	S17	SSE18	SSE21	S23	S25	S25	S24	SSE26	S23	S22	SSE24	S19	SW13	NNW14	NNE9	SE2	SW2	S15.3	SSE26
27-May	E6	SE7	SE7	WSW1	NW7	NNW7	NNW6	NNW9	NNW11	NW12	NW11	NW9	NNW11	W12	W11	W12	NNW14	WSW16	W15	W13	WSW12	WSW13	WSW10	W6	WNW7.1	WSW16
28-May	W9	W8	SSW5	S3	S8	S8	SSW8	SSW9	SW10	SW11	WSW12	SW13	SW11	SW12	WSW12	SW11	WSW13	SW12	SW11	SW7	S5	SSE8	SSE9	SSE9	SW8.1	WSW13
29-May	SSE9	SSE10	SSE11	SSE13	SSE13	SSE13	SSE13	SSE17	S16	S18	S19	S19	S19	SSE21	SSE22	SSE22	SSE21	S18	S16	S11	SSE8	NW18	NNW21	NW18	S12.0	SSE22
30-May	WNW18	NW22	NW14	W13	W13	WSW12	W13	NNW13	NW15	NW16	NW16	NNW15	NNW12	NNW12	W11	W10	SW8	SW12	SW11	SW12	SW7	SSE7	S8	S9	W9.0	NW22
31-May	S9	S11	S9	S9	WSW2	NE4	ENE5	E5	E7	ENE11	E11	ESE8	S10	S10	SSW13	SSW12	W5	NNE13	NNE22	NNE25	NNW22	NNW22	N23	NNW15	NNE2.7	NNE25
SSE4.3 SSE3.9 SSE4.7 S4.9 S5.0 S5.5 S5.0 S4.5 SSW4.6 SSW4.1 SSW4.5 SW5.2 SW5.4 SSW6.0 SSW5.0 SSW5.9 SSW5.8 SSW3.8 S4.0 S2.5 SSE1.9 SE2.8 SE3.9 SSE3.9																										Diurnal Average
NNE20 NW22 NW26 NW24 S22 S23 S23 S25 S23 SSW23 SSW23 SSW26 S25 S24 SSE26 S23 S22 SSE24 NNE22 NNE25 NNW22 NNW22 N23 NNE20																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Kirby North - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Kirby North - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	46	6.18	6.18
6 - 11	325	43.68	49.87
12 - 19	314	42.20	92.07
20 - 28	59	7.93	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Kirby North - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1	7	3	2	3	2	3	4	3	3	1	7	3	2	1	1	46
6 - 11	17	10	11	11	7	9	39	71	51	22	20	7	13	8	16	13	325
12 - 19	4	23	3	0	4	4	23	68	63	11	23	17	12	16	23	20	314
20 - 28	1	6	6	0	0	0	0	8	14	11	0	0	0	2	9	2	59
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	46	23	13	14	15	65	151	131	47	44	31	28	28	49	36	744

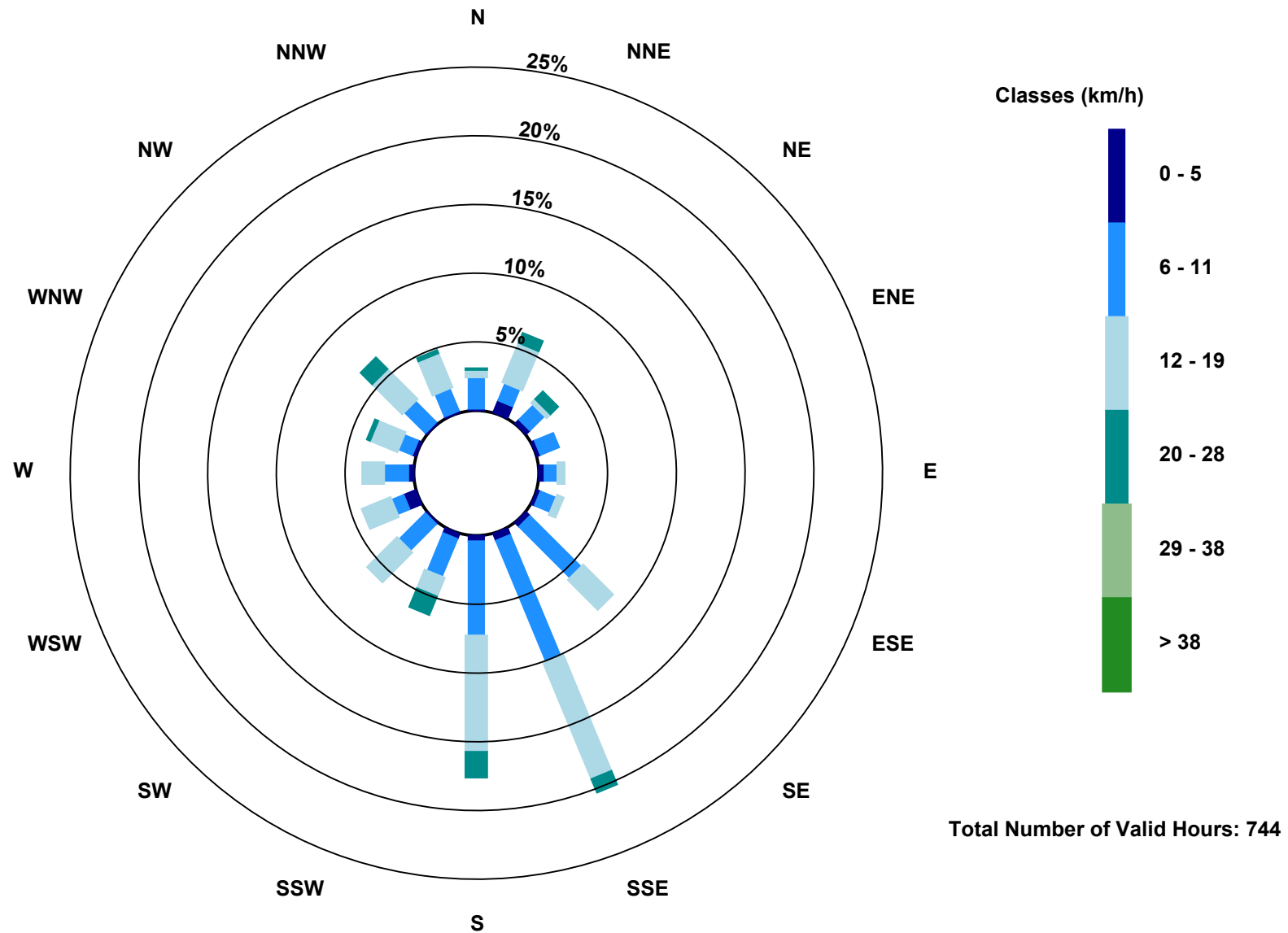
Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Kirby North





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Kirby North - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on May 29 22:00																	Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 0 km/h on May 16 05:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	2	2	2	1	3	2	2	2	3	3	4	4	4	4	5	4	4	3	2	2	2	3	3	5
2-May	2	2	2	2	2	2	3	3	2	3	4	4	5	4	5	4	4	3	2	1	1	1	1	1	5
3-May	1	2	2	2	2	2	2	3	3	3	3	4	4	5	5	5	4	3	3	5	4	5	4	4	5
4-May	4	6	7	6	5	3	2	3	3	4	4	4	5	4	4	4	4	8	3	3	3	2	2	2	8
5-May	3	3	6	3	3	3	4	5	5	5	6	6	5	6	5	6	5	4	3	2	1	1	2	2	6
6-May	3	3	3	3	4	5	5	4	5	6	7	7	7	7	7	7	7	7	6	5	4	4	4	4	7
7-May	5	5	5	6	7	6	7	8	8	7	8	7	7	5	4	3	3	3	2	3	2	2	1	2	8
8-May	2	1	1	1	2	4	4	6	4	2	2	4	3	4	9	2	2	2	4	2	4	3	3	2	9
9-May	2	3	1	1	3	2	2	2	2	3	5	5	5	5	5	5	5	4	4	4	3	2	1	1	5
10-May	2	2	2	1	3	1	2	2	3	4	4	3	4	4	4	4	4	3	2	2	1	1	1	1	4
11-May	2	5	4	2	2	1	1	2	2	2	4	4	4	4	8	3	3	3	5	2	1	2	3	6	8
12-May	2	2	1	2	1	1	2	3	4	4	5	5	5	5	5	5	5	5	4	4	2	2	3	2	5
13-May	2	1	2	1	1	1	2	2	3	4	4	4	3	4	5	4	4	3	2	2	1	1	2	2	5
14-May	2	2	2	3	3	3	4	4	5	4	4	5	5	5	4	5	3	4	3	3	3	4	4	4	5
15-May	4	4	4	4	4	3	3	3	3	4	3	3	4	4	3	4	5	4	2	2	1	2	1	1	5
16-May	1	1	1	1	0	1	1	2	3	3	3	3	4	4	4	5	3	3	2	2	2	3	3	3	5
17-May	3	3	3	3	3	3	4	4	4	4	4	6	5	5	5	5	4	4	4	2	2	1	2	6	
18-May	2	3	4	3	4	4	4	4	4	4	5	5	4	4	5	4	4	5	4	4	3	2	2	2	5
19-May	3	3	3	2	2	3	4	4	4	5	4	4	5	6	4	4	4	3	3	2	2	3	3	2	6
20-May	2	2	2	2	3	3	3	3	3	4	4	5	4	4	3	3	3	3	2	2	2	2	2	2	5
21-May	2	2	1	1	1	2	2	3	2	2	2	2	2	3	2	2	3	2	3	2	2	2	2	2	3
22-May	2	2	2	3	2	3	2	3	3	4	4	4	4	3	3	3	4	4	4	2	1	1	2	2	4
23-May	2	2	2	2	3	3	3	3	3	2	2	5	6	6	5	5	6	4	6	5	2	1	1	1	6
24-May	1	2	3	3	3	3	3	3	5	5	5	5	6	6	6	5	6	6	5	4	2	2	3	3	6
25-May	3	3	3	3	3	4	4	5	6	6	6	6	6	6	6	6	6	5	5	3	2	2	3	3	6
26-May	3	3	4	4	4	4	5	5	5	7	7	8	8	8	7	7	7	7	6	8	7	2	3	2	8
27-May	3	1	1	2	2	2	2	3	3	4	4	5	5	5	5	4	4	5	5	4	2	2	3	3	5
28-May	3	3	2	3	2	1	2	2	2	3	3	4	4	4	4	4	4	4	3	2	1	2	2	2	4
29-May	2	2	3	3	3	3	4	5	5	6	6	6	6	7	7	7	7	6	5	4	2	9	6	5	9
30-May	5	7	4	4	4	2	3	3	4	4	4	4	4	4	4	3	3	3	3	3	1	1	2	2	7
31-May	2	2	2	1	3	2	1	2	3	3	3	3	4	4	5	5	2	6	5	7	6	6	6	4	7
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

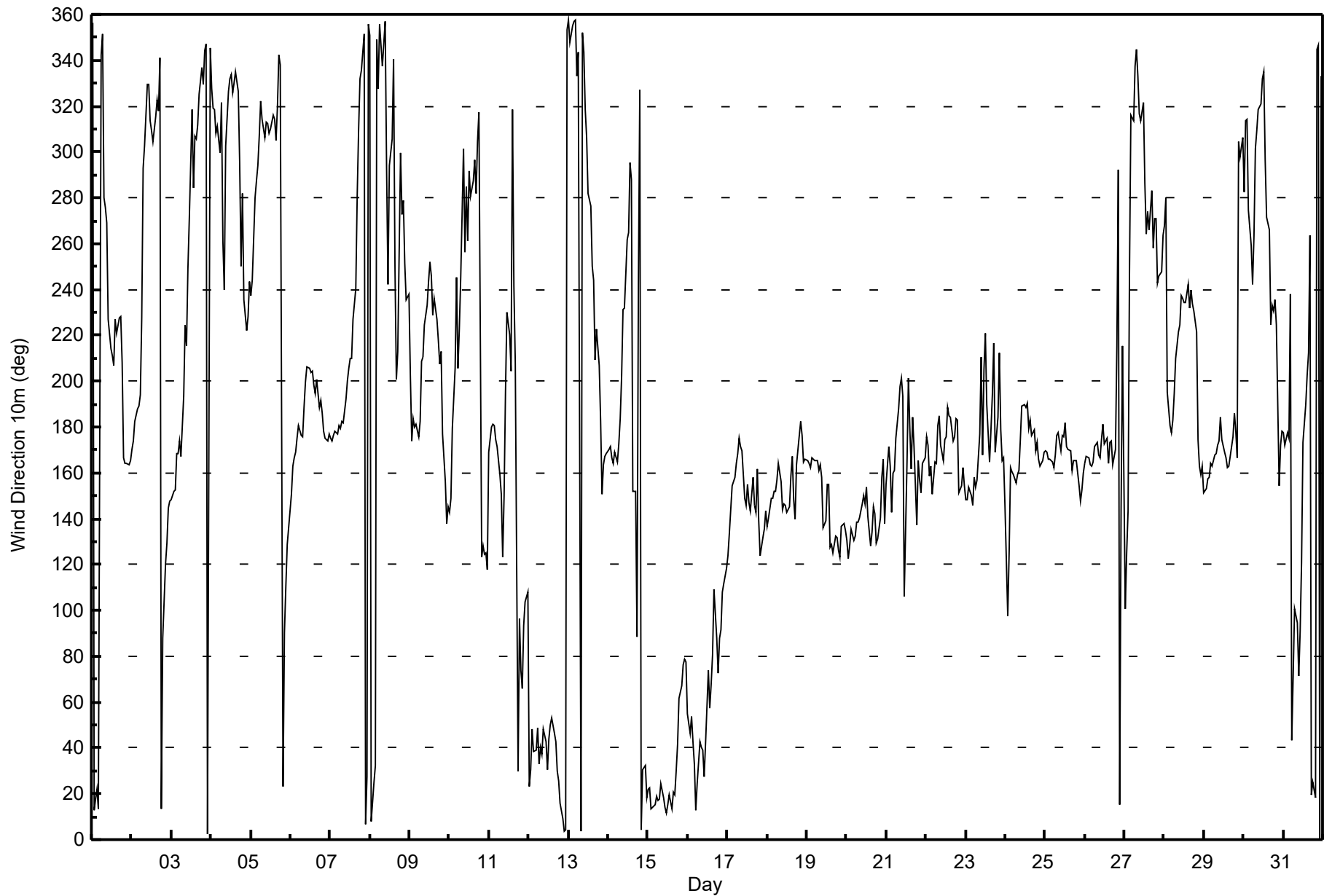
Kirby North - May 2025

Direction of Maximum Speed: 319 deg on May 4 03:00																					Hours in Service:		744		
Direction of Maximum Daily Speed Average: 187.4 deg on May 6																					Hours of Data:		744		
Direction of Minimum Speed: 246 deg on May 27 04:00										Direction of Minimum Daily Speed Average: 2.7 deg on May 31											Hours of Missing Data:		0		
Monthly Average Direction: 185.3 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-May	356	13	18	22	13	342	351	280	276	269	227	214	211	207	227	221	228	228	208	167	164	164	164	166	213.6
2-May	170	174	182	188	189	194	228	293	303	329	330	314	309	305	315	323	318	341	14	88	120	129	145	148	267.0
3-May	149	152	153	169	168	174	167	193	225	216	249	271	319	284	307	306	312	325	337	329	344	347	2	346	291.6
4-May	327	319	319	308	311	300	322	261	240	303	326	332	334	326	330	335	326	295	250	282	236	222	228	243	301.7
5-May	237	244	280	288	294	307	322	314	306	313	313	308	310	316	314	305	320	343	338	23	90	111	129	136	307.8
6-May	150	163	167	169	175	181	176	176	189	199	207	206	204	204	198	195	201	189	192	186	178	175	174	177	187.4
7-May	175	174	176	178	177	181	180	182	182	192	200	205	210	210	227	240	281	309	332	336	351	7	27	356	199.6
8-May	351	8	25	32	349	328	356	337	347	357	293	242	294	305	340	250	201	213	299	273	279	252	236	238	313.7
9-May	203	174	184	180	181	176	183	209	210	225	233	244	252	246	229	236	227	218	207	213	177	156	138	145	212.6
10-May	143	149	180	206	245	206	223	245	301	256	285	261	292	281	287	297	282	304	317	123	128	124	125	118	245.5
11-May	169	180	181	181	174	171	159	151	123	150	195	230	220	205	318	241	208	30	97	74	66	94	104	108	154.9
12-May	23	31	48	38	39	49	33	40	37	48	43	31	44	50	53	46	43	30	25	16	9	4	4	353	35.0
13-May	357	348	355	357	358	333	344	4	352	344	318	306	282	276	250	244	209	222	207	183	151	164	167	168	290.2
14-May	170	172	167	164	169	165	173	183	202	231	232	262	265	295	288	152	152	89	242	327	4	30	33	19	199.3
15-May	22	22	14	15	15	19	17	18	24	18	14	12	15	20	14	20	19	30	42	61	67	76	79	78	24.1
16-May	55	46	54	43	33	13	24	43	40	39	28	42	74	57	68	81	109	88	73	88	92	108	112	118	72.2
17-May	124	133	144	154	158	164	168	175	171	169	149	146	155	147	143	158	146	143	162	139	124	132	136	143	150.0
18-May	137	140	149	149	152	152	157	164	156	144	146	146	143	145	159	167	148	140	163	177	182	177	165	166	154.2
19-May	165	164	162	167	166	165	165	161	164	158	136	139	155	155	128	128	125	132	132	126	123	137	138	135	147.2
20-May	131	123	128	135	131	132	139	138	140	147	150	146	154	141	128	134	145	142	129	131	140	158	166	138	139.1
21-May	155	171	163	143	160	161	175	188	197	201	193	106	165	202	180	162	184	171	137	165	157	151	164	167	168.0
22-May	176	172	159	163	151	165	164	180	185	172	166	175	176	188	185	184	174	176	184	183	151	154	162	155	171.5
23-May	148	148	154	150	146	158	154	157	177	210	168	205	221	190	165	179	194	217	169	184	213	179	165	166	176.1
24-May	146	98	126	162	160	159	155	160	161	174	189	190	189	190	179	183	176	179	170	173	166	163	166	169	171.2
25-May	170	169	166	166	165	162	168	177	178	169	176	175	182	172	170	170	161	165	165	165	154	148	152	160	168.0
26-May	164	167	166	164	163	165	172	173	168	167	175	181	173	175	164	173	174	164	171	215	292	16	144	215	172.7
27-May	101	125	143	246	316	313	337	345	333	317	313	322	286	264	274	266	283	258	271	271	243	246	248	263	281.5
28-May	268	280	195	180	178	183	195	210	221	224	237	236	234	234	242	232	240	234	231	221	175	163	159	163	219.5
29-May	152	153	158	158	164	163	168	168	172	174	184	174	169	167	162	163	167	176	186	178	167	304	297	306	176.9
30-May	282	314	314	274	259	242	264	302	309	319	321	332	335	297	271	266	224	233	231	236	225	154	172	178	279.3
31-May	178	172	177	175	238	43	71	100	95	72	91	121	173	189	203	213	263	19	25	18	344	347	0	333	32.5
159.3 158.6 161.1 170.1 175.3 174.9 173.9 189.8 192.8 198.3 206.3 214.6 220.4 213.5 211.4 202.6 198.0 199.1 181.0 178.9 160.0 133.9 140.3 153.8																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Kirby North - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Kirby North - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 88 deg on May 14 19:00																		Hours in Service: 744 Hours of Data: 744 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 5 deg on May 10 21:00																									
Percentiles: P ₁ = 7 P ₁₀ = 13 Q ₁ = 15 Median = 20 Q ₃ = 26 P ₉₀ = 35 P ₉₉ = 72																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-May	17	16	13	17	21	37	41	73	48	58	53	43	32	30	25	20	20	20	20	20	14	14	14	15	73
2-May	16	14	14	13	11	13	30	20	24	25	34	28	29	28	48	41	58	51	46	12	19	8	9	9	58
3-May	10	11	14	16	13	14	18	22	23	27	70	50	29	37	35	47	27	27	18	14	16	17	15	20	70
4-May	15	16	16	15	16	15	35	24	18	31	26	20	27	17	17	20	20	38	19	21	14	10	13	12	38
5-May	12	14	17	13	15	18	17	19	18	19	20	20	21	24	27	23	25	18	23	36	8	10	11	12	36
6-May	16	15	16	17	18	19	19	19	22	23	22	21	24	24	23	24	24	24	23	21	19	19	19	19	24
7-May	19	19	20	20	20	20	19	21	22	22	24	22	22	22	20	16	26	20	13	15	15	11	15	25	26
8-May	16	15	13	9	40	30	18	17	25	18	71	19	26	29	41	56	44	34	14	27	17	58	46	15	71
9-May	52	50	9	13	38	24	15	18	21	22	19	20	23	19	24	18	18	20	21	18	20	25	7	11	52
10-May	14	17	18	31	35	16	15	22	43	33	45	42	32	33	27	28	38	18	57	27	5	5	6	8	57
11-May	29	19	19	17	18	15	16	34	34	40	46	35	27	44	44	58	29	21	21	17	11	14	14	77	77
12-May	78	15	8	7	10	12	13	13	14	16	16	14	15	17	16	16	15	12	12	13	13	14	13	15	78
13-May	15	12	12	11	12	13	16	21	25	28	45	33	34	68	16	16	32	18	29	24	27	13	16	17	68
14-May	15	15	15	15	17	16	20	21	23	19	22	33	31	34	70	22	23	71	88	17	26	11	12	12	88
15-May	12	12	12	12	13	10	13	14	13	14	15	15	16	21	23	20	25	21	29	11	7	8	10	8	29
16-May	7	7	8	9	12	9	13	28	30	33	33	34	43	49	38	45	41	29	24	13	11	11	12	12	49
17-May	13	13	15	15	15	16	19	21	21	27	34	33	33	31	32	36	26	25	24	19	11	12	12	13	36
18-May	13	15	16	16	17	17	19	18	22	22	23	24	26	23	29	28	27	28	20	22	21	16	15	15	29
19-May	17	17	18	17	17	18	18	19	23	25	25	22	21	18	22	17	16	18	16	16	15	17	15	15	25
20-May	14	14	14	15	14	15	16	17	17	18	22	19	19	18	20	17	19	17	14	15	16	19	21	13	22
21-May	15	17	16	16	19	15	19	24	23	36	31	26	35	21	26	26	27	22	20	16	16	15	17	18	36
22-May	18	16	15	15	15	18	18	21	23	23	23	22	21	25	24	26	25	21	24	23	16	13	15	15	26
23-May	15	16	16	15	16	16	16	18	31	32	37	31	21	27	26	24	29	23	24	24	17	19	12	17	37
24-May	14	47	13	21	22	17	17	17	20	23	30	27	26	26	26	23	26	23	21	21	16	17	16	17	47
25-May	16	16	15	16	15	16	18	23	23	23	28	26	27	28	26	24	23	24	21	19	15	15	16	16	28
26-May	16	17	16	15	16	17	22	22	20	22	24	24	24	25	22	24	24	21	20	51	27	25	74	84	84
27-May	28	11	21	88	21	18	22	19	22	25	26	45	39	42	44	27	25	23	22	24	10	11	21	68	88
28-May	19	27	26	51	10	12	18	17	20	25	29	27	30	32	30	25	22	20	16	21	19	14	13	15	51
29-May	14	15	17	17	18	15	20	21	23	25	27	23	28	24	26	24	23	25	24	23	16	59	17	18	59
30-May	26	20	23	21	25	14	26	17	17	17	17	20	29	34	38	30	38	20	16	14	17	7	14	16	38
31-May	15	14	14	11	73	23	24	34	31	23	30	39	40	42	37	31	43	16	13	14	21	20	22	30	73
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS512 HANGINGSTONE EXPANSION MAY 2025

Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

June 27, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MAY 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	35	35	100	31.6	0	4.7	0
H2S (ppb) Average	707	36	37	99.87	2.8	0	0.4	0
NO2 (ppb) Average	707	36	37	99.87	8.5	0	2.9	-
NO (ppb) Average	707	36	37	99.87	6.7	-	0.8	-
NOX (ppb) Average	707	36	37	99.87	13.8	-	3.1	-
Temperature 2 m (C) Average	744	0	0	100	30.9	-	24.3	-
Relative Humidity (%) Average	744	0	0	100	99.1	-	87.2	-
Wind Speed 10 m (km/h) Average	739	0	5	99.33	29	-	19	-
Wind Direction 10 m (deg) Average	739	0	5	99.33	-	-	-	-

Note : Operational time includes periods of data collection and instrument calibration

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MAY 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	1.29	3.4	-	0	0	0.1	0.2	0.6	3.1	31.6
H2S (ppb) Average	707	0.11	0.2	-	0	0	0	0.1	0.1	0.2	2.8
NO2 (ppb) Average	707	1.15	1.2	-	0	0.3	0.5	0.8	1.3	2.3	8.5
NO (ppb) Average	707	0.16	0.5	-	0	0	0	0.1	0.1	0.3	6.7
NOX (ppb) Average	707	1.31	1.5	-	0	0.4	0.6	0.9	1.4	2.5	13.8
Temperature 2 m (C) Average	744	13.05	6.5	-	-1.2	5.3	8.4	13	16.9	21.9	30.9
Relative Humidity (%) Average	744	50.66	22.3	-	15.9	25.6	32.5	45.8	66.4	87.6	99.1
Wind Speed 10 m (km/h) Average	739	12.5	5	-	1	6	9	12	16	19	29
Wind Direction 10 m (deg) Average	739	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MAY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, NO2	09 May 2025 07:00	09 May 2025 07:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	01 May 2025 03:00	01 May 2025 07:00	5	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

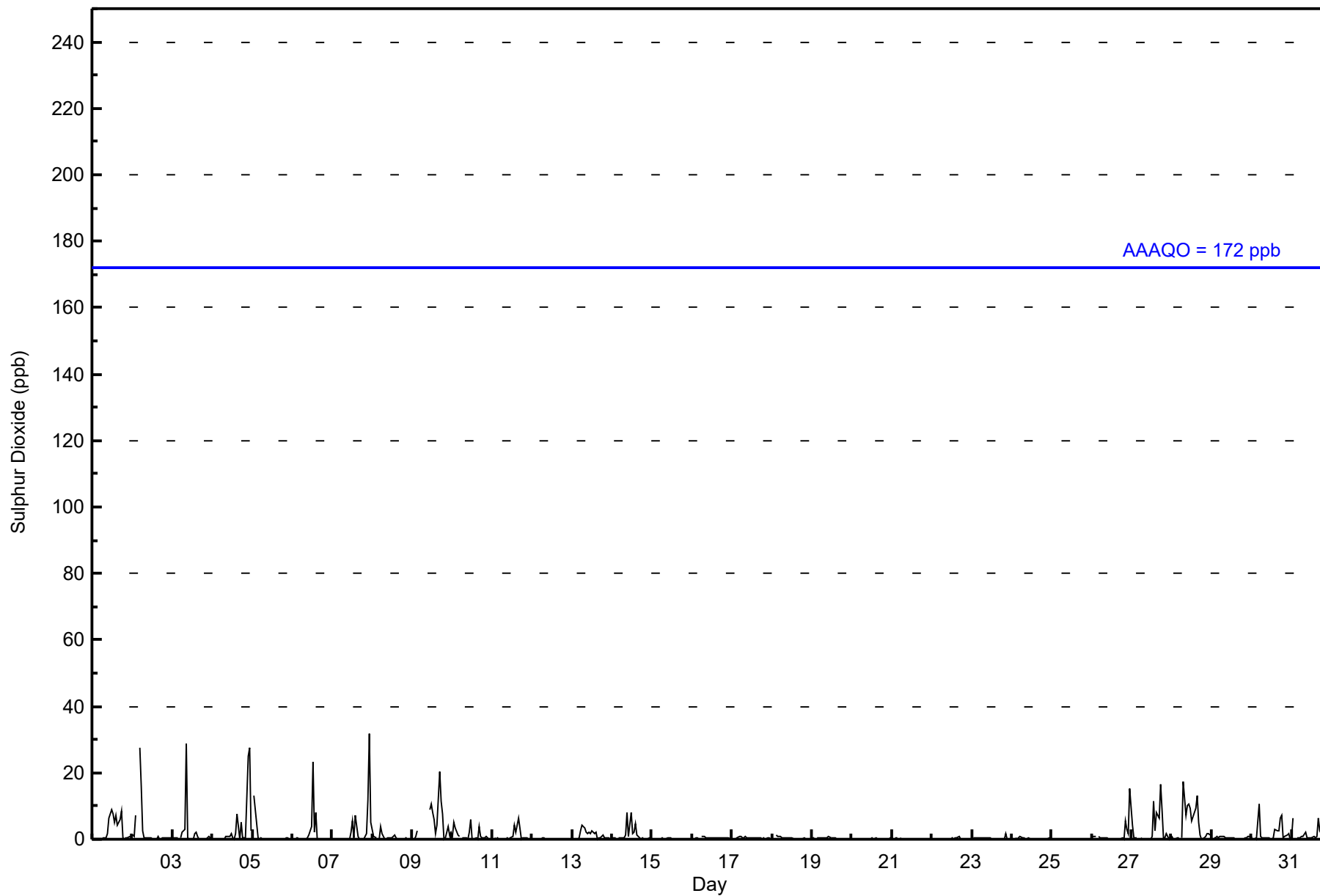
Hangingsstone Expansion - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 744							
Maximum Value: 31.6 ppb on May 7 23:00 Maximum Daily Average: 4.7 ppb on May 9																			Hours of Data: 709							
Minimum Value: 0.0 ppb on May 1 01:00 Minimum Daily Average: 0.1 ppb on May 25																			Hours of Missing Data: 35							
Maximum Diurnal Average: 2.3 ppb at hour 23 Minimum Diurnal Average: 0.2 ppb at hour 20																			Hours of Calibration: 35							
Monthly Average: 1.29 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 3.1 P ₉₉ = 17.4																			Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	0.0	Z	0.0	0.0	0.1	0.6	0.5	0.4	1.8	6.2	9.1	7.5	5.1	7.0	4.4	6.0	8.6	0.2	0.2	0.2	0.5	0.7	0.8	2.6	9.1
2-May	1.4	0.9	7.4	Z	27.5	16.3	2.4	0.4	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.6	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	2.6	27.5
3-May	0.4	0.5	0.6	0.5	Z	0.3	2.1	2.8	28.8	0.2	0.2	0.1	0.2	1.7	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.2	1.8	28.8
4-May	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	1.0	0.9	0.8	1.7	0.3	0.1	1.6	7.8	0.1	5.1	0.2	0.3	0.5	25.2	27.6	2.6	3.3	27.6
5-May	Z	13.3	4.5	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.0	0.9	13.3
6-May	0.1	Z	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.3	1.4	3.7	23.4	2.2	8.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	1.8	23.4
7-May	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.6	0.4	7.3	0.9	0.1	0.1	0.2	0.1	1.5	12.1	31.6	5.2	2.9	31.6	
8-May	2.9	0.7	0.4	Z	0.2	3.6	1.5	0.2	0.2	0.5	0.4	0.3	0.3	1.2	0.2	0.0	0.1	0.0	0.1	0.0	0.2	0.2	0.2	0.1	0.6	3.6
9-May	0.1	0.1	0.7	2.6	Z	0.6	C	C	C	C	8.7	10.4	8.1	5.9	1.7	4.1	20.2	11.6	7.7	0.1	0.3	4.0	1.4	2.0	4.7	20.2
10-May	0.8	5.0	3.5	1.2	0.8	Z	0.5	0.3	0.4	0.2	2.0	6.0	0.0	0.1	0.4	0.0	3.6	0.7	0.3	0.3	0.8	0.3	0.1	0.2	1.2	6.0
11-May	Z	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.9	4.2	2.0	4.3	6.2	0.1	0.4	0.3	0.3	0.2	0.1	0.1	0.9	6.2
12-May	0.2	Z	0.2	0.1	0.1	0.1	0.6	0.6	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.6
13-May	0.0	0.0	Z	0.0	0.3	2.7	4.4	3.5	1.9	1.7	2.0	1.6	2.4	1.8	2.3	0.1	0.3	0.4	1.4	0.6	0.2	0.3	0.3	0.2	1.2	4.4
14-May	0.3	0.2	0.2	Z	0.5	0.3	0.3	0.3	1.1	8.1	1.0	7.9	1.6	2.3	4.8	1.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.4	8.1
15-May	0.2	0.1	0.1	0.1	Z	0.1	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.3
16-May	0.2	0.2	0.5	0.3	0.2	Z	0.7	0.7	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.7
17-May	Z	0.2	0.2	0.4	0.7	0.7	0.6	0.6	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.1	0.4	0.7
18-May	0.1	Z	1.2	1.0	0.7	0.7	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.3	1.2
19-May	0.4	0.3	Z	0.5	0.4	0.4	0.2	0.3	0.3	0.4	0.7	0.5	0.5	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.7
20-May	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
21-May	0.2	0.1	0.2	0.4	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.4
22-May	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.4	0.4	0.7	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.7
23-May	Z	0.2	0.3	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	1.9	0.1	0.1	0.1	0.3	1.9
24-May	0.1	Z	0.2	0.2	0.4	0.9	0.5	0.5	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.2	0.9
25-May	0.1	0.0	Z	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2
26-May	0.5	0.7	0.8	Z	0.7	0.6	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.2	5.4	3.0	1.6	15.4	1.4	15.4
27-May	4.1	0.4	0.3	0.6	Z	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.8	11.6	2.8	8.0	6.6	16.7	8.7	0.3	0.3	1.9	0.2	1.0	2.8	16.7
28-May	1.0	0.2	0.2	0.2	0.3	Z	0.6	17.5	7.1	10.3	10.4	9.2	5.5	6.7	9.4	13.0	5.3	1.2	0.1	0.2	1.0	1.8	1.7	1.1	4.5	17.5
29-May	Z	0.3	0.4	0.7	0.6	1.0	0.9	0.9	0.6	0.6	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.3	0.4	0.8	0.7	0.4	1.0
30-May	0.3	Z	0.3	0.2	10.6	0.8	0.3	0.3	0.3	0.2	0.3	0.2	0.1	0.6	2.9	2.3	2.5	6.3	7.3	0.2	0.7	1.1	1.7	0.2	1.7	10.6
31-May	0.3	6.5	Z	0.4	0.4	0.5	0.6	0.9	2.1	0.5	0.4	0.5	0.4	0.9	0.5	0.7	6.5	2.7	1.6	0.4	0.2	0.5	0.5	0.5	1.2	6.5
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	692	97.60	97.60
11 - 20	11	1.55	99.15
21 - 60	6	0.85	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	34	27	20	5	5	17	48	146	157	48	29	36	32	35	36	13	688
11 - 20	0	0	0	0	0	0	0	0	0	1	5	5	0	0	0	0	11
21 - 60	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	27	20	5	5	17	48	146	157	49	39	42	32	35	36	13	705

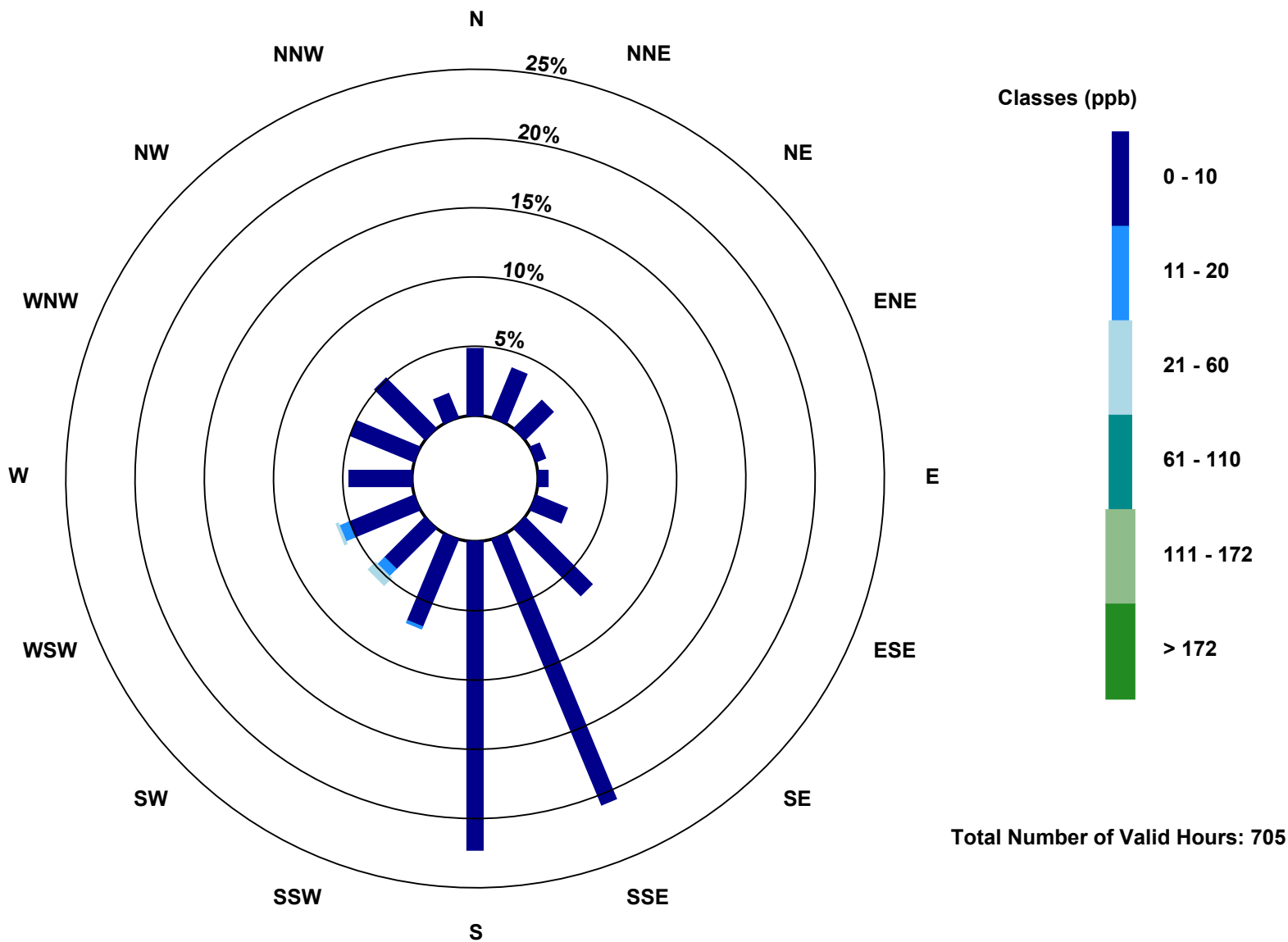
Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

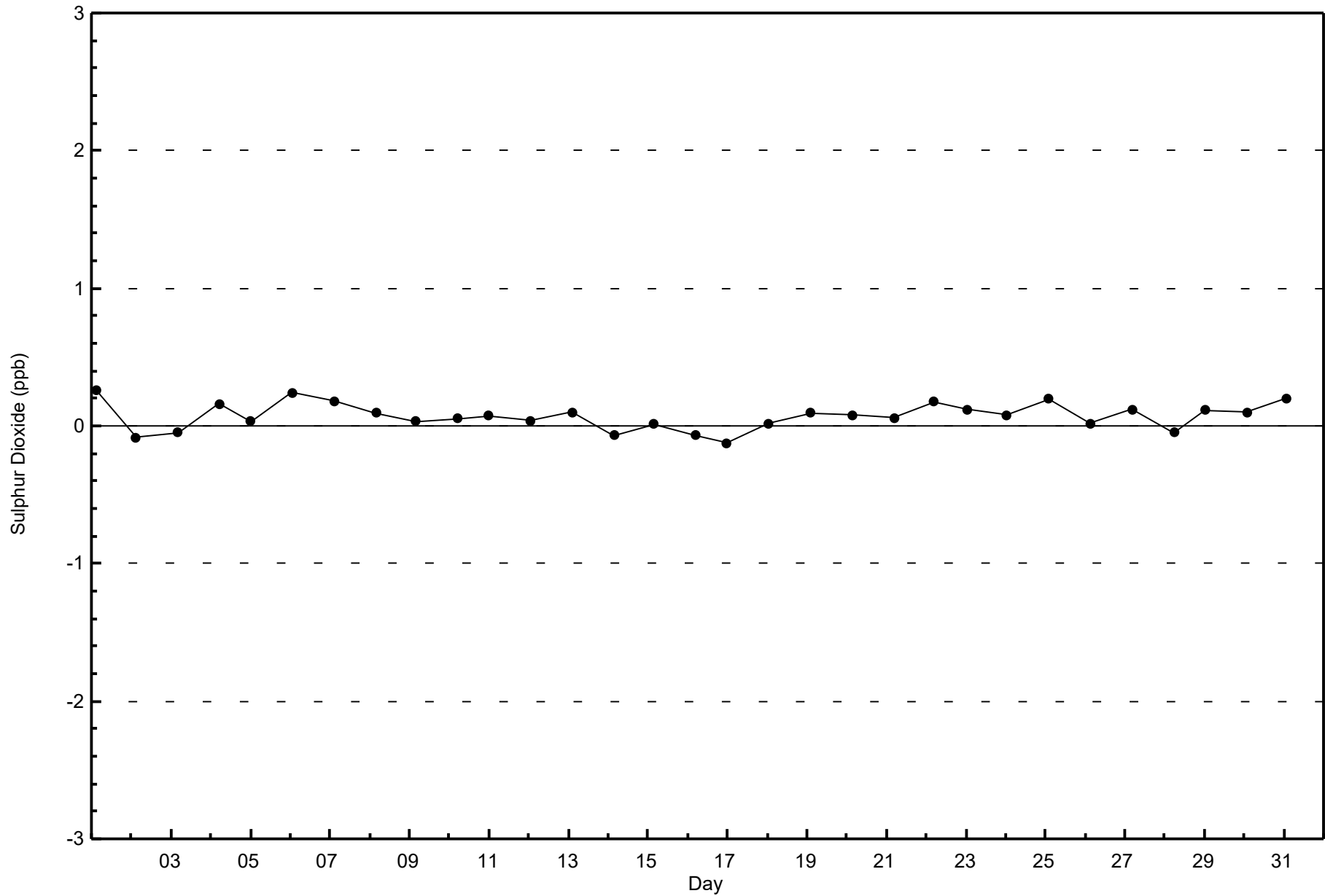
Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

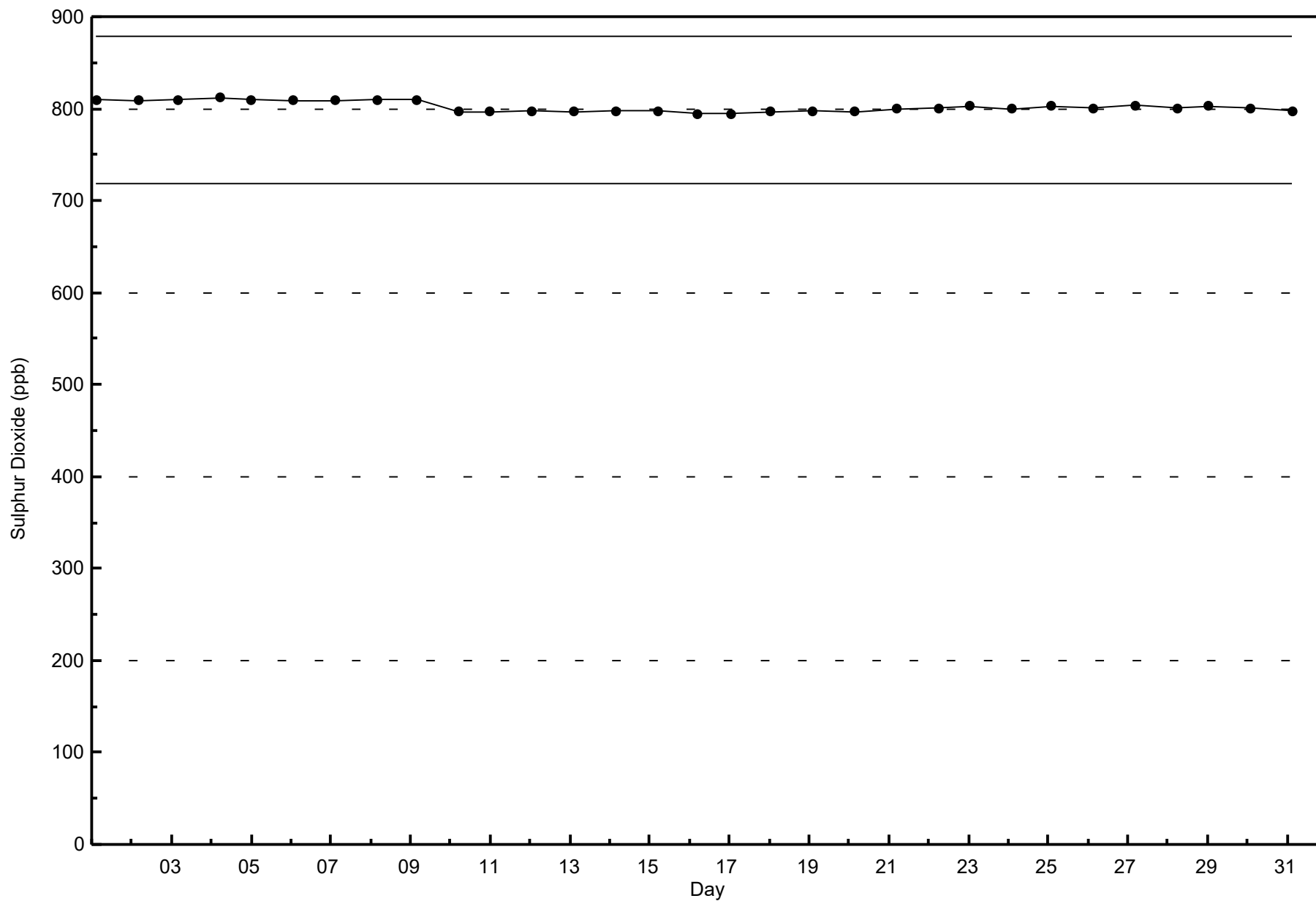
Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

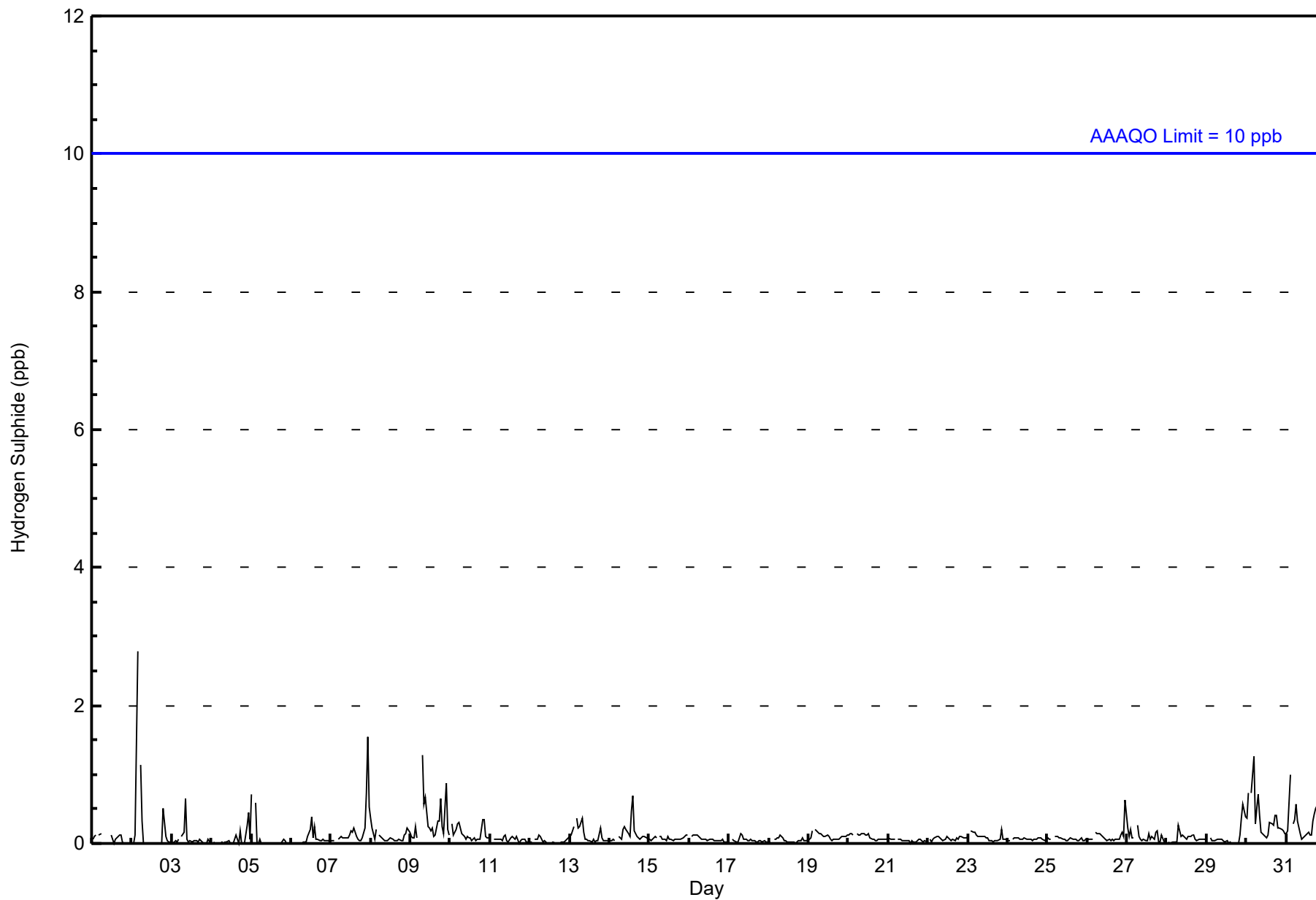
Hangingsstone Expansion - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.8 ppb on May 2 04:00 Maximum Daily Average: 0.4 ppb on May 30																			Hours in Service: 744 Hours of Data: 707							
Minimum Value: 0.0 ppb on May 1 20:00 Minimum Daily Average: 0.0 ppb on May 12 Maximum Diurnal Average: 0.2 ppb at hour 4 Minimum Diurnal Average: 0.1 ppb at hour 16 Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.7																			Hours of Missing Data: 37 Hours of Calibration: 36 Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.1	0.1	0.1	Z	0.1	0.1	C	C	C	C	C	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
2-May	0.0	0.0	0.1	2.8	Z	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.2
3-May	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.6
4-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.3	0.4	0.1	0.1	0.4
5-May	0.7	Z	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.7
6-May	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.4
7-May	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.7	1.5	0.5	0.2	1.5
8-May	0.4	0.2	0.1	0.2	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.4
9-May	0.1	0.1	0.1	0.2	0.1	Z	M	1.3	0.6	0.7	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.3	0.6	0.2	0.1	0.9	0.2	0.1	0.3	1.3
10-May	Z	0.3	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.4
11-May	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1
12-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
13-May	0.1	0.1	0.2	Z	0.4	0.2	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4
14-May	0.0	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.5	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
15-May	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
16-May	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
17-May	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
19-May	0.1	0.1	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
20-May	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
21-May	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
22-May	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
23-May	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
24-May	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
25-May	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1
26-May	0.0	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.6	0.1	0.6
27-May	0.2	0.1	0.2	0.1	0.1	Z	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.3
28-May	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
29-May	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.4	0.1	0.6
30-May	0.4	0.7	Z	0.7	1.3	0.3	0.5	0.7	0.4	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.4	1.3
31-May	0.1	0.2	1.0	Z	0.3	0.3	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.4	0.5	0.6	0.7	0.7	0.5	0.4	0.3	1.0
0.1 0.1 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.1																									Diurnal Average	
0.7 0.7 1.0 2.8 1.3 1.1 0.6 1.3 0.6 0.7 0.2 0.2 0.4 0.5 0.7 0.3 0.3 0.4 0.6 0.6 0.7 0.9 1.5 0.6																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	706	99.86	99.86
3 - 4	1	0.14	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	34	27	20	5	5	16	49	147	156	49	38	42	32	35	35	13	703
3 - 4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	27	20	5	5	16	49	147	156	49	39	42	32	35	35	13	704

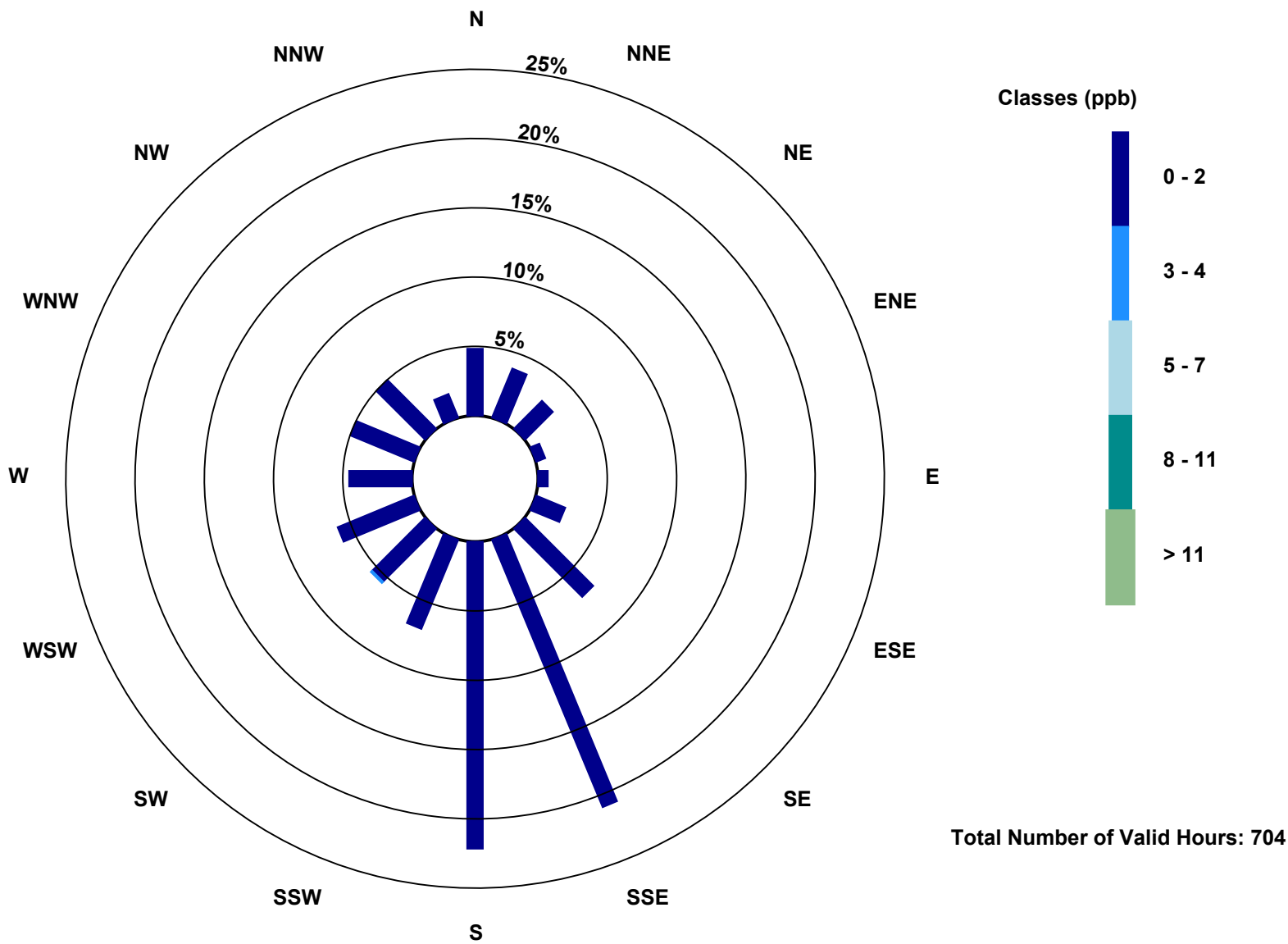
Total Number of Valid Hours: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

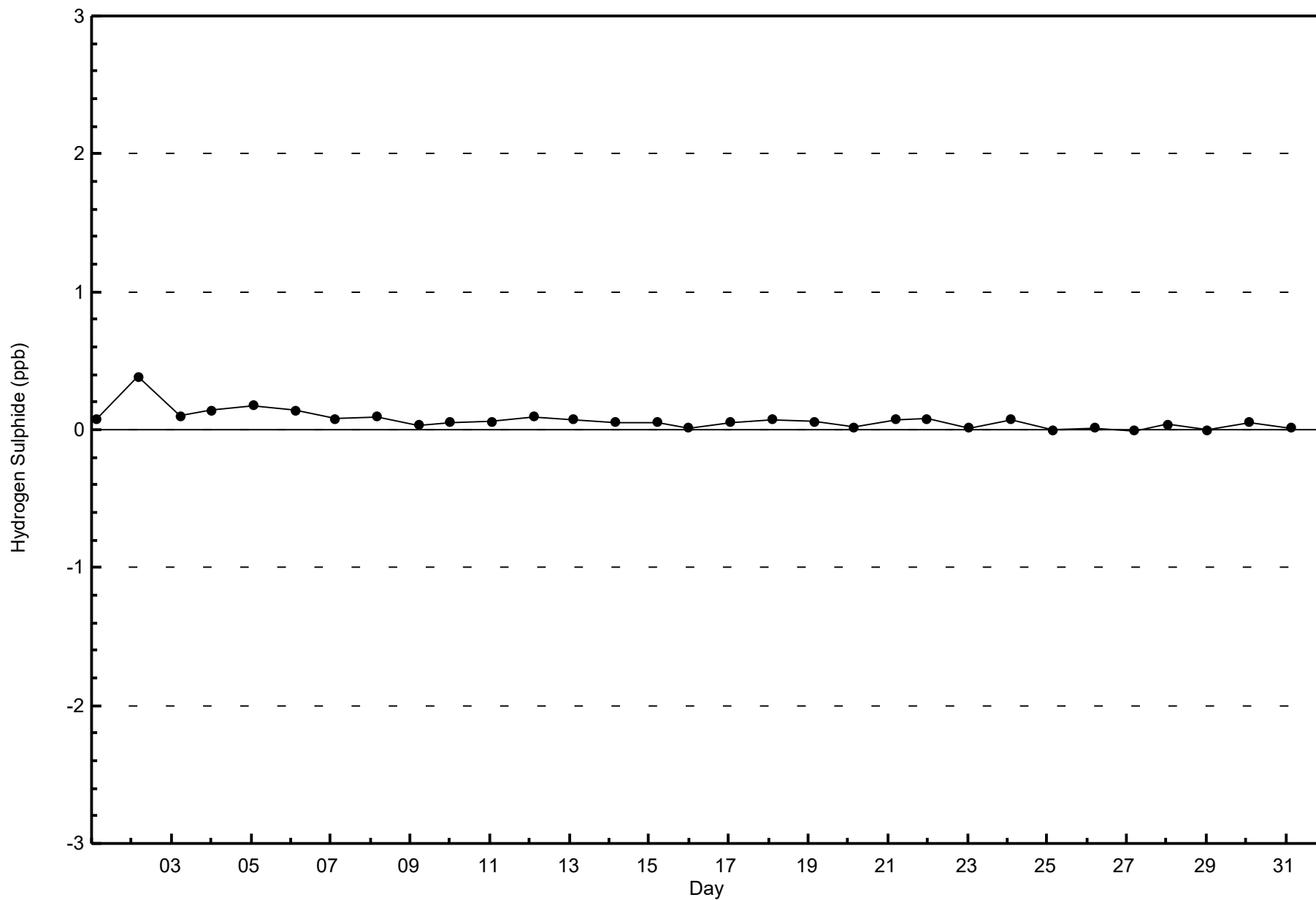
Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

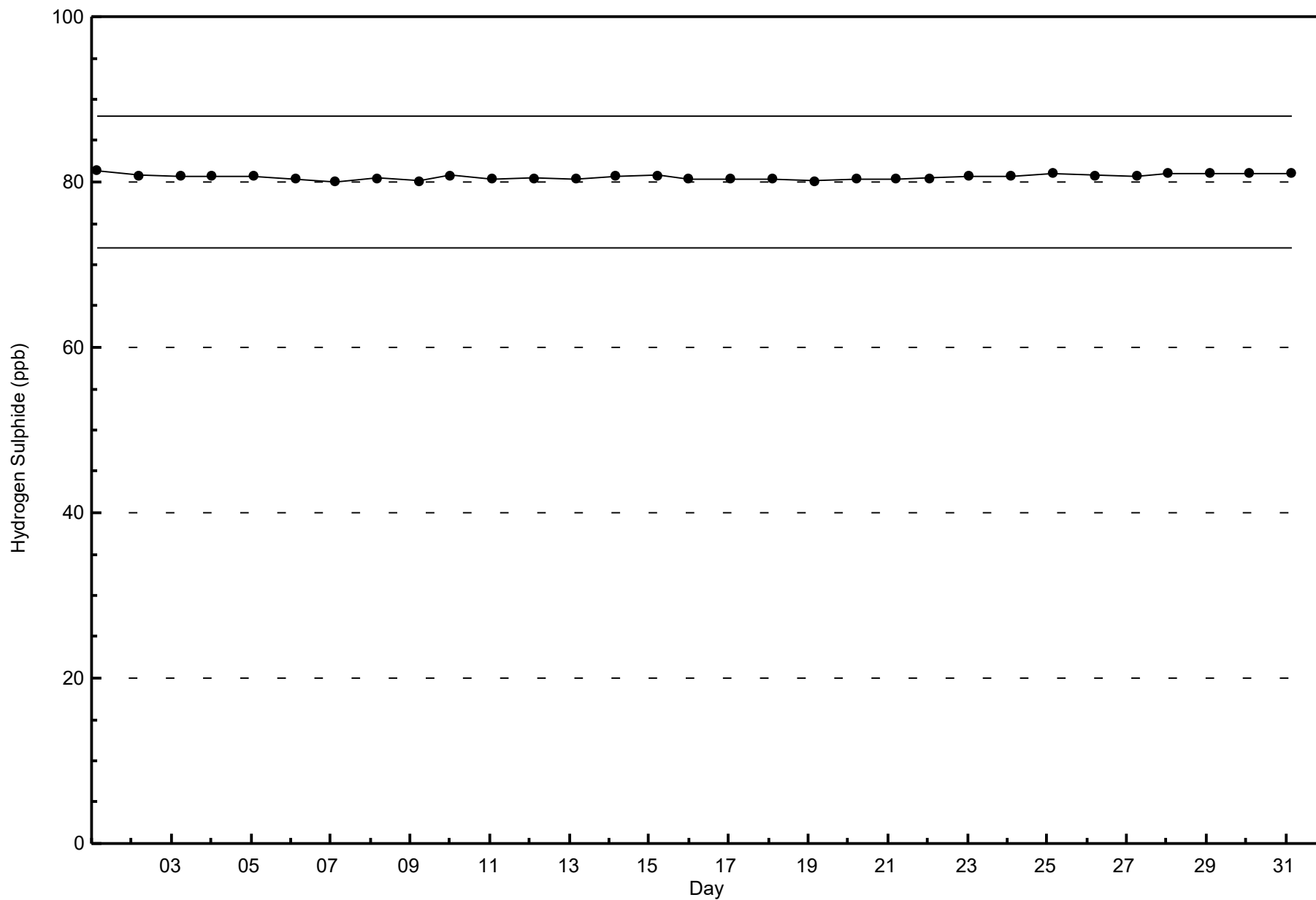
Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

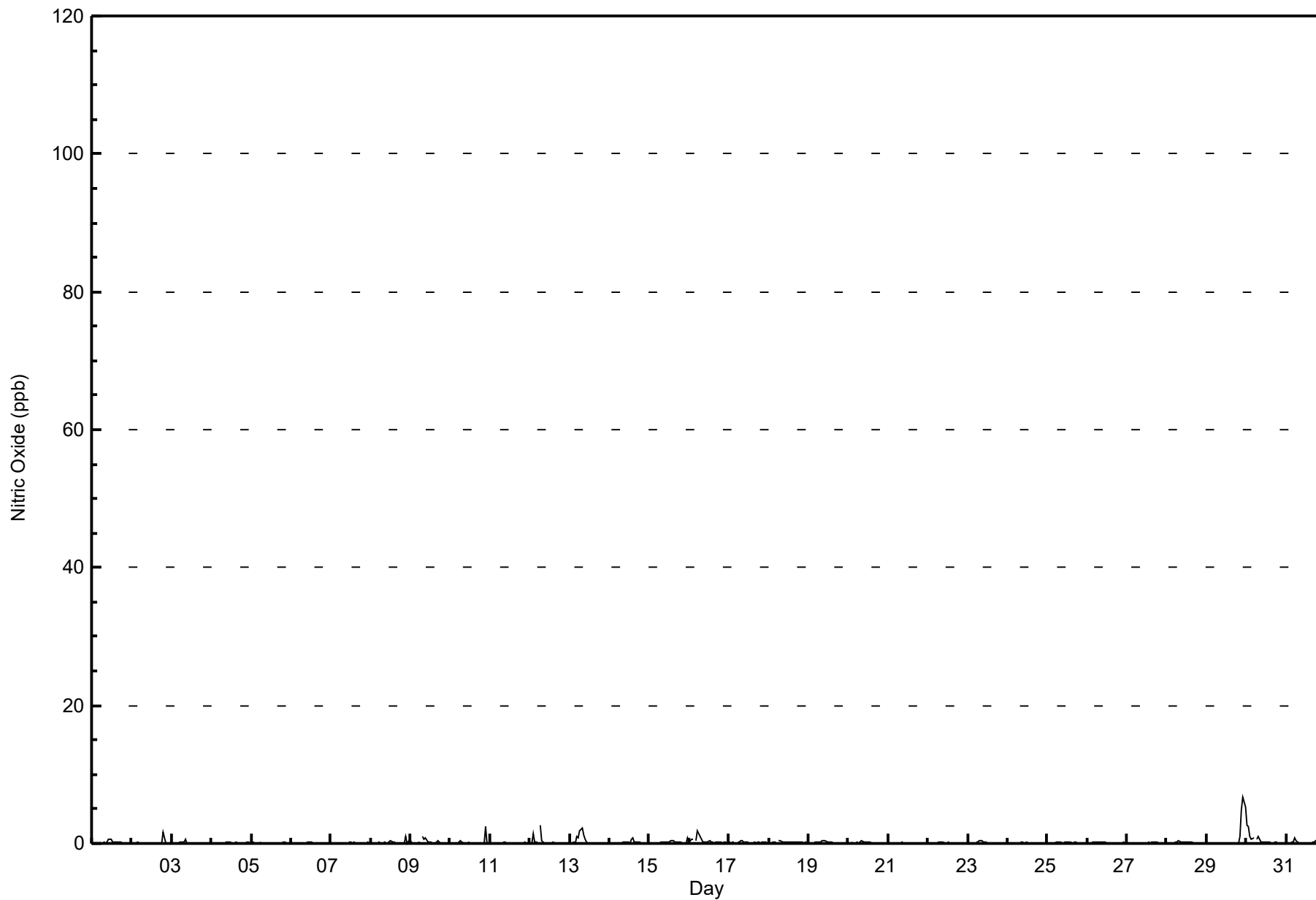
Hangingsstone Expansion - May 2025

Direction of Maximum Speed: 172 deg on May 7 04:00 Direction of Maximum Daily Speed Average: 185.5 deg on May 6																				Hours in Service: 744					
Direction of Minimum Speed: 184 deg on May 11 10:00 Direction of Minimum Daily Speed Average: 1.7 deg on May 13																				Hours of Data: 739					
																				Hours of Missing Data: 5					
Monthly Average Direction: 183.6 deg																				Percent Operational Time: 99.3					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	19	3	UO	UO	UO	UO	UO	264	282	214	233	210	222	237	215	234	243	224	163	147	159	162	172	184	200.0
2-May	192	194	209	229	225	219	245	278	296	320	308	305	317	285	303	297	290	288	17	97	120	132	139	154	254.3
3-May	159	164	168	177	176	175	189	203	242	268	288	279	301	277	247	261	280	290	314	321	322	330	351	306	260.6
4-May	306	298	297	274	258	265	20	349	360	22	335	318	313	317	222	245	284	212	198	209	214	220	227	246	279.8
5-May	239	230	243	259	322	332	318	320	308	301	312	303	321	310	312	296	300	313	305	200	136	131	164	159	293.2
6-May	164	168	173	175	175	176	177	180	189	209	211	213	219	206	209	203	193	186	187	177	175	166	163	161	185.5
7-May	165	170	171	172	178	178	178	183	187	188	190	213	250	256	250	266	287	291	272	256	215	211	226	240	201.3
8-May	222	231	201	192	241	217	141	156	181	201	300	335	353	355	316	301	294	304	320	318	323	251	167	162	288.7
9-May	167	174	174	195	199	207	222	226	228	232	250	252	256	252	269	255	239	236	246	179	200	218	191	171	225.9
10-May	176	218	187	162	95	174	150	282	265	288	263	266	311	291	266	277	236	337	15	105	123	134	118	127	233.2
11-May	128	135	162	170	179	185	181	169	141	184	83	164	296	78	61	11	11	318	225	159	137	137	129	148	157.5
12-May	165	179	149	116	140	126	47	46	57	52	41	53	50	40	47	42	48	37	36	16	24	9	11	8	47.4
13-May	359	333	284	220	255	258	264	330	301	318	333	326	311	277	245	279	164	215	78	139	144	151	155	158	219.8
14-May	167	174	176	182	185	178	182	183	212	225	252	211	312	357	11	21	17	11	14	8	10	8	9	12	9.4
15-May	8	10	5	4	5	360	5	15	18	2	358	8	27	31	23	22	28	20	36	19	8	27	54	111	16.4
16-May	107	124	122	130	93	124	46	19	50	17	52	44	41	58	90	109	122	108	115	118	105	117	128	130	102.5
17-May	130	135	142	147	157	160	161	158	157	178	157	154	160	156	148	153	153	139	146	142	146	149	143	137	150.0
18-May	146	152	155	157	158	159	167	169	161	161	164	162	169	155	158	164	158	153	156	147	144	154	173	175	159.3
19-May	161	156	162	170	171	175	177	167	158	159	156	150	158	165	156	161	149	151	145	150	148	143	135	143	157.2
20-May	144	135	131	136	140	138	143	148	153	147	148	141	157	151	143	134	144	151	150	142	150	159	160	166	146.3
21-May	167	156	153	153	155	164	172	182	187	185	183	167	145	177	126	134	147	157	162	162	162	160	162	171	161.3
22-May	172	175	181	171	168	168	168	173	179	181	179	199	196	200	185	174	182	170	170	176	169	163	171	179	176.6
23-May	175	162	163	162	158	159	149	143	154	162	170	180	184	189	179	157	151	133	150	150	195	186	176	172	164.6
24-May	166	164	158	156	160	165	167	159	159	157	172	174	186	185	181	182	187	184	182	181	166	171	169	171	171.5
25-May	171	173	178	179	182	183	182	179	182	183	183	175	173	175	185	182	176	179	179	173	170	160	160	161	176.5
26-May	162	162	163	164	167	168	171	172	177	178	183	186	178	188	181	186	174	178	180	259	261	193	188	231	180.7
27-May	220	251	202	196	195	201	266	254	286	292	291	290	282	242	261	251	250	247	250	260	249	212	194	205	249.6
28-May	202	200	199	197	201	202	208	236	256	240	216	231	235	235	235	230	216	203	191	183	175	166	172	171	210.3
29-May	172	172	169	166	164	165	168	172	178	179	179	183	189	171	169	183	188	178	181	175	228	265	266	267	185.2
30-May	286	269	262	260	243	251	273	302	323	319	328	318	305	267	261	253	220	215	214	196	182	189	187	178	259.3
31-May	187	208	214	198	201	192	188	119	46	4	169	177	323	358	10	6	0	14	6	359	358	334	6	340	354.4
171.5 174.7 175.0 174.9 176.0 179.2 178.5 180.2 189.7 201.9 207.9 208.1 225.4 217.3 203.5 204.0 199.9 187.9 171.4 167.8 168.8 166.1 160.5 171.5																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702

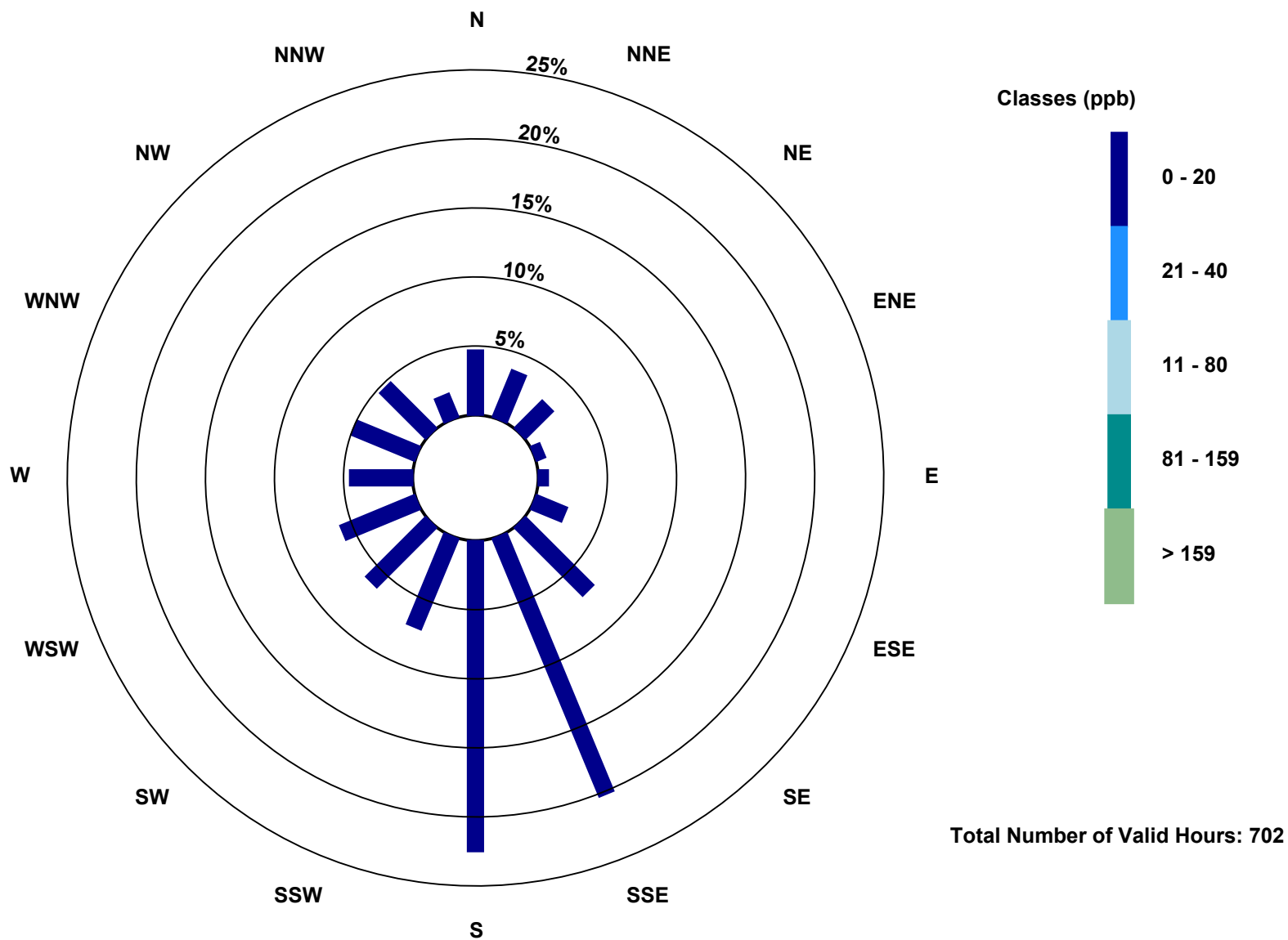
Total Number of Valid Hours: 702

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

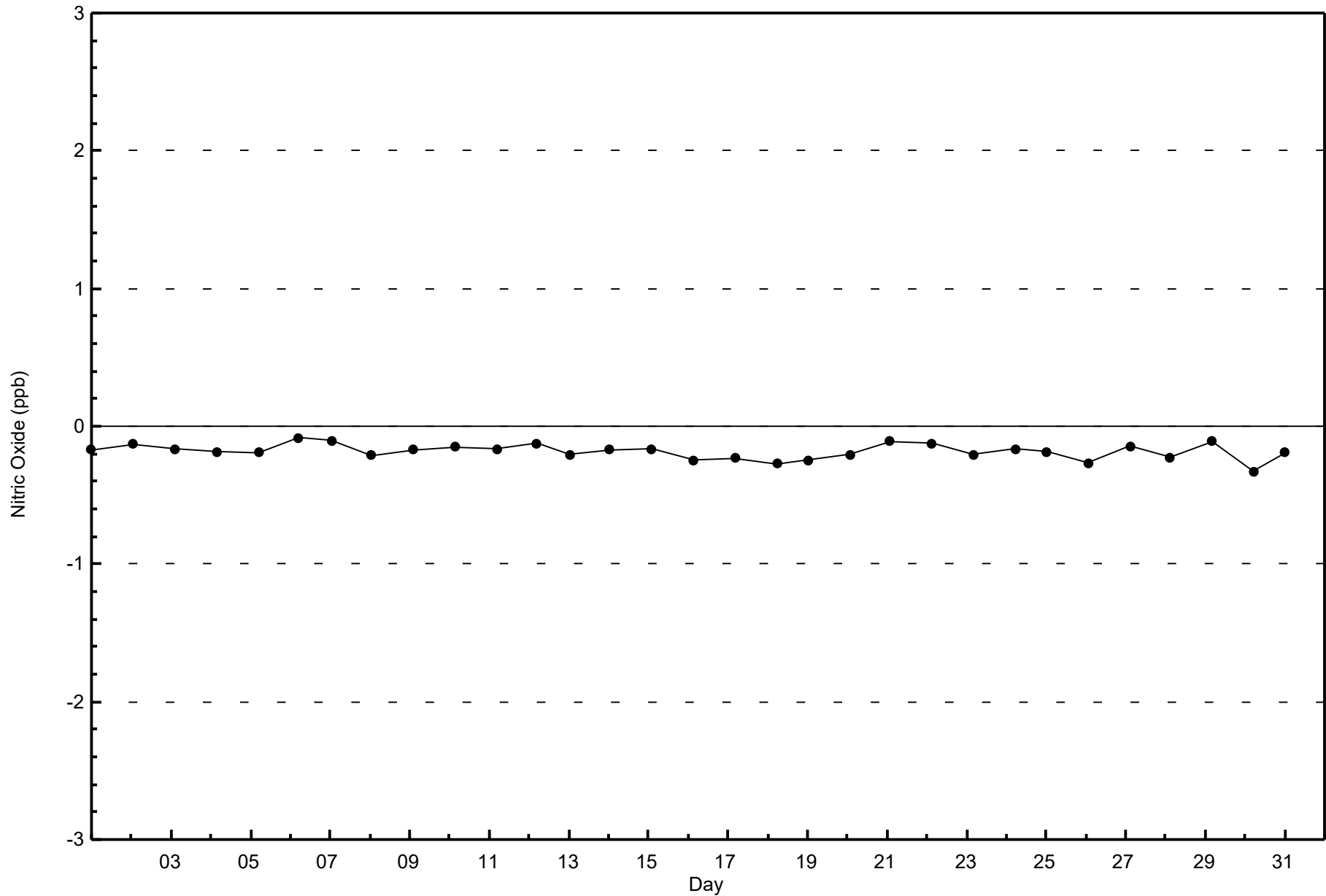
Nitric Oxide (NO) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

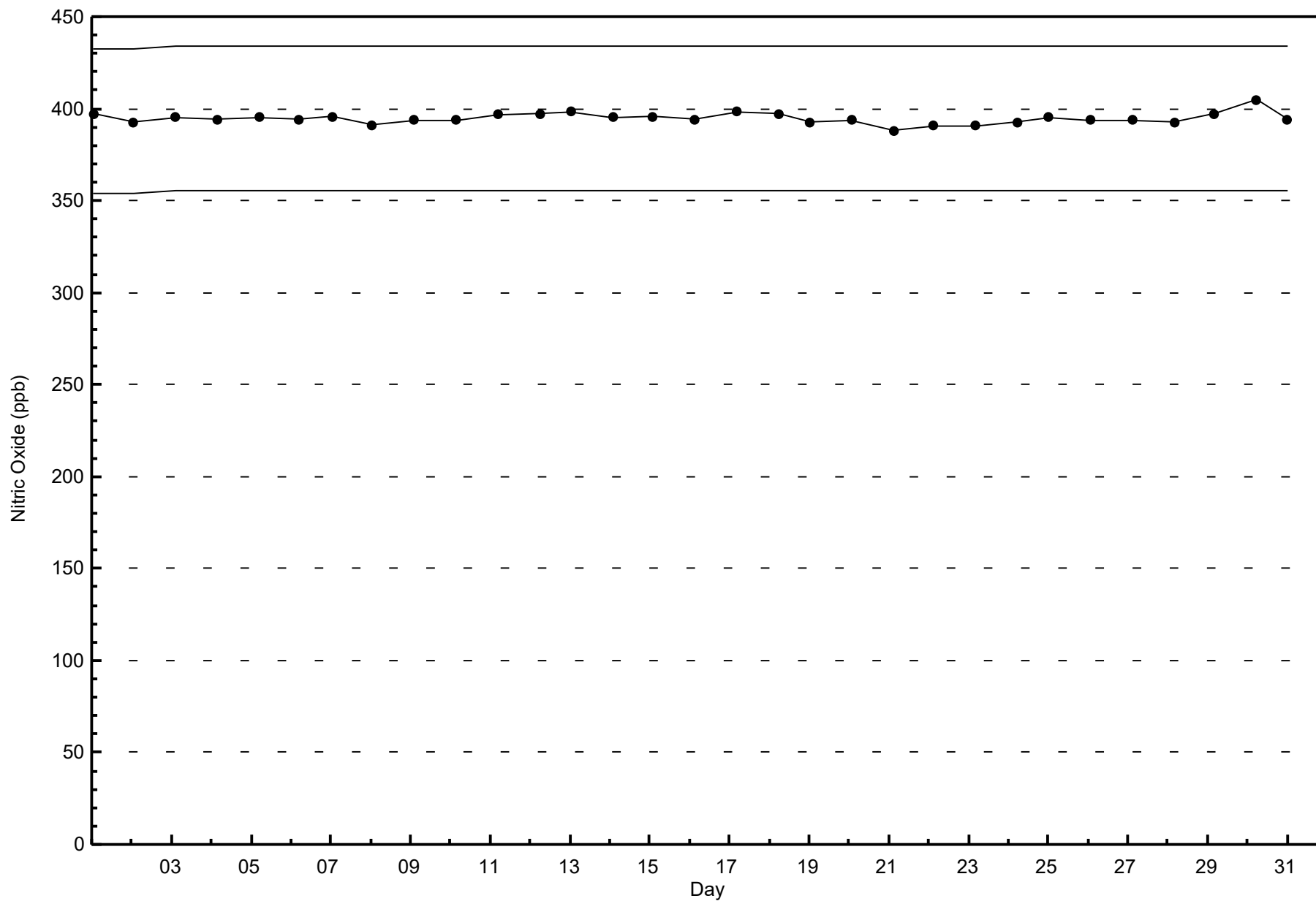
Nitric Oxide (NO) - ppb
Hangingsstone Expansion - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

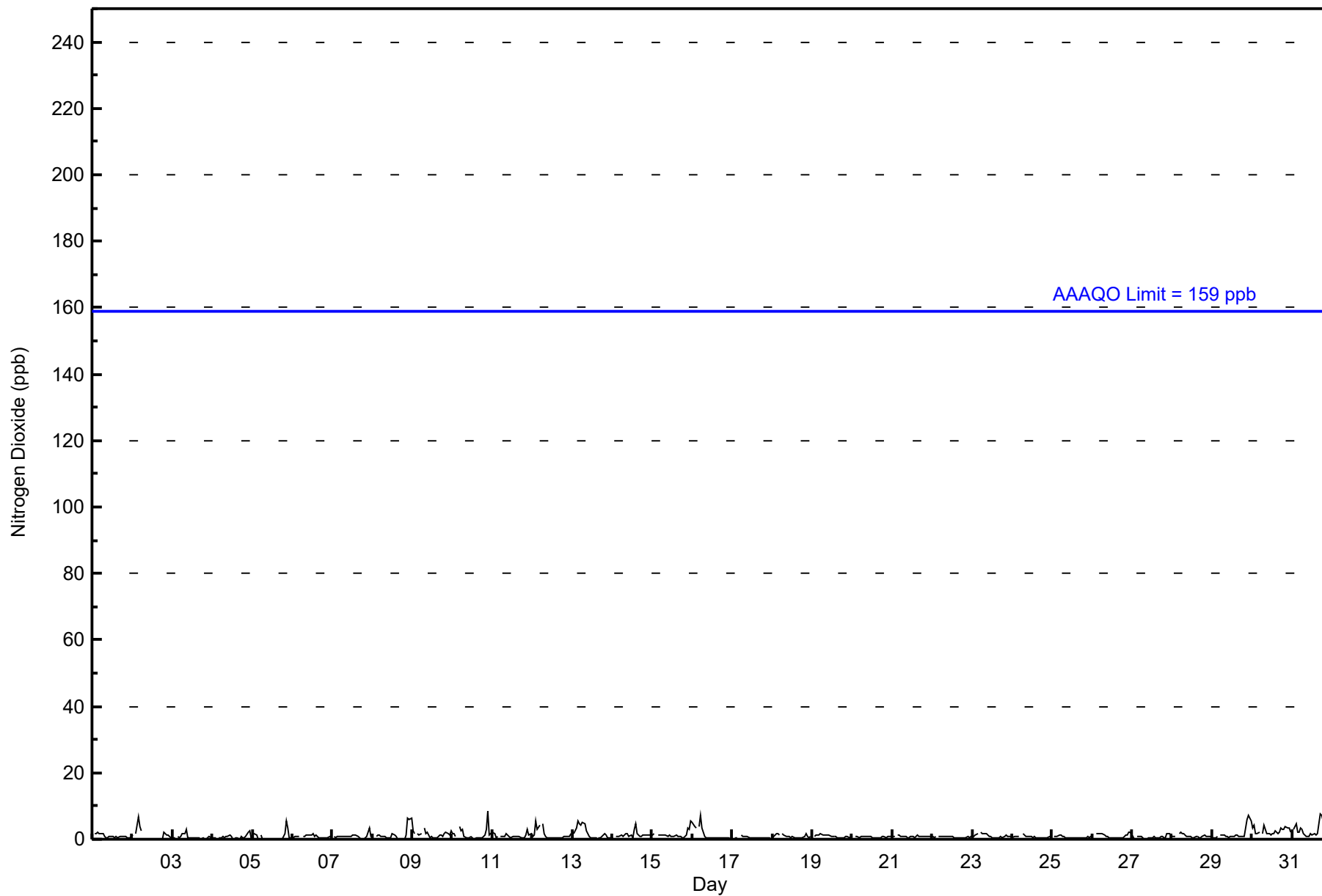
Hangingsstone Expansion - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.5 ppb on May 10 22:00 Maximum Daily Average: 2.9 ppb on May 31																		Hours in Service: 744								
Minimum Value: 0.0 ppb on May 2 13:00 Minimum Daily Average: 0.5 ppb on May 17 Maximum Diurnal Average: 2.0 ppb at hour 22 Minimum Diurnal Average: 0.6 ppb at hour 16 Monthly Average: 1.15 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.8 Q ₃ = 1.3 P ₉₀ = 2.3 P ₉₉ = 6.2																		Hours of Data: 707								
																		Hours of Missing Data: 37								
																		Hours of Calibration: 36								
																		Percent Operational Time: 99.9								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	Z	1.7	1.8	2.0	1.8	1.6	1.5	0.9	0.5	0.6	0.9	1.0	0.7	0.5	0.7	0.6	0.7	0.9	0.8	0.9	0.7	0.5	0.6	0.7	1.0	2.0
2-May	1.1	Z	1.5	6.8	3.7	2.4	C	C	C	C	C	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.2	2.3	1.1	1.2	0.9	0.4	1.2	6.8
3-May	0.3	0.6	Z	0.7	0.5	0.7	1.9	1.7	2.8	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.9	0.4	0.7	2.8
4-May	0.3	0.3	0.3	Z	0.6	0.4	0.7	0.6	0.7	1.0	1.2	0.8	0.2	0.1	0.3	0.6	0.1	0.8	0.3	0.6	0.9	2.0	2.4	0.4	0.7	2.4
5-May	1.4	1.7	1.3	0.1	Z	1.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	1.8	5.3	3.2	0.6	0.4	0.8	5.3
6-May	0.3	1.0	0.7	0.9	0.7	Z	0.8	0.8	1.1	1.3	1.3	1.1	1.7	0.9	1.3	0.8	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.6	0.8	1.7
7-May	Z	0.7	0.6	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.3	1.3	1.4	0.7	0.3	0.2	0.2	0.2	0.7	2.1	3.2	0.9	0.9	3.2
8-May	1.0	Z	0.9	1.3	1.1	0.9	1.0	0.9	0.6	0.5	0.5	0.6	1.8	1.1	0.8	0.2	0.1	0.1	0.1	0.1	1.3	6.5	5.8	6.2	1.5	6.5
9-May	2.6	1.6	Z	1.7	1.2	1.5	M	3.4	1.5	2.2	0.6	0.9	0.6	0.6	0.3	0.5	1.3	1.2	0.8	1.9	2.0	1.5	1.3	2.7	1.5	3.4
10-May	1.5	1.5	1.0	Z	3.9	2.5	3.1	0.8	0.5	0.3	0.4	0.7	0.3	0.2	0.4	0.3	0.5	0.5	0.4	1.2	3.1	8.5	1.3	1.6	1.5	8.5
11-May	2.0	1.6	0.5	0.8	Z	0.9	0.7	0.7	1.7	1.1	0.7	0.6	0.7	0.9	0.9	0.8	0.9	0.4	0.4	0.6	1.3	3.1	1.3	1.9	1.1	3.1
12-May	0.9	1.3	5.6	2.9	4.4	Z	4.8	1.8	0.7	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.3	0.4	0.5	0.8	0.8	0.9	0.8	1.5	1.4	5.6
13-May	Z	1.8	3.3	5.3	4.6	4.4	5.0	4.8	2.5	1.5	0.9	0.5	0.5	0.3	0.3	0.1	0.5	0.4	1.1	1.5	1.2	0.5	0.4	0.3	1.8	5.3
14-May	0.4	Z	0.7	0.7	0.9	1.1	1.0	1.1	1.5	1.5	0.9	1.2	0.6	2.8	4.5	1.6	1.0	1.0	1.2	1.2	1.1	1.2	1.3	1.2	1.3	4.5
15-May	1.3	1.6	Z	1.3	1.3	1.2	1.1	1.4	1.2	0.9	1.1	1.0	0.8	1.0	1.1	1.0	0.8	0.7	0.4	0.6	1.2	3.2	3.1	5.4	1.4	5.4
16-May	5.1	3.9	3.2	Z	3.9	7.2	3.4	1.0	0.5	0.4	0.3	0.4	0.6	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.4	0.6	0.5	0.2	1.5	7.2
17-May	0.1	0.1	0.3	0.5	Z	1.2	0.8	0.8	0.8	0.7	0.6	0.5	0.3	0.5	0.4	0.4	0.3	0.4	0.5	0.4	0.6	0.5	0.6	0.2	0.5	1.2
18-May	0.3	0.7	1.6	1.6	1.3	Z	1.5	1.1	1.0	0.8	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.7	1.7	1.0	0.5	0.7	0.9	1.7
19-May	Z	0.9	1.1	1.4	1.4	1.6	1.4	1.3	1.2	1.2	1.3	1.0	0.8	0.8	0.8	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.6	0.8	0.9	1.6
20-May	0.9	Z	0.9	0.7	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.9	0.6	0.6	0.6	0.4	0.4	0.4	0.8	0.8	0.6	0.9	0.8	1.0	0.7	1.0
21-May	1.0	0.7	Z	1.3	1.3	1.0	0.9	0.8	0.7	0.6	0.6	0.8	0.9	0.6	1.0	1.2	0.9	0.8	0.8	0.9	0.7	0.7	0.9	0.8	0.9	1.3
22-May	0.7	0.6	0.7	Z	0.9	1.0	0.9	1.0	0.8	0.8	0.8	1.0	1.0	0.6	0.6	0.4	0.4	0.3	0.4	0.4	0.5	0.8	0.4	0.7	0.7	1.0
23-May	0.8	1.0	1.3	1.8	Z	2.2	1.8	1.6	1.5	1.1	1.0	0.9	0.5	0.5	0.4	0.6	0.6	0.7	0.6	0.7	1.1	0.8	0.7	0.8	1.0	2.2
24-May	0.5	0.7	0.8	0.7	1.0	Z	1.5	1.2	0.7	1.0	1.0	0.7	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.8	0.7	0.7	1.5
25-May	Z	0.9	0.9	0.9	1.1	1.2	1.0	0.9	0.6	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.6	0.7	0.6	1.2
26-May	0.9	Z	1.5	1.5	1.7	1.9	1.6	1.3	0.9	0.8	0.5	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.8	1.1	1.1	2.1	2.2	1.0	2.2
27-May	0.8	0.2	Z	0.8	0.8	0.8	0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.7	0.4	0.5	0.5	0.8	0.8	0.4	0.4	1.7	1.5	1.1	0.6	1.7
28-May	0.9	0.8	1.0	Z	1.8	2.0	1.6	1.7	0.8	0.8	0.8	0.9	0.6	0.5	0.8	0.9	0.6	0.6	1.0	1.2	0.9	0.8	0.8	0.8	1.0	2.0
29-May	0.5	0.5	0.6	0.8	Z	1.4	1.4	1.2	0.9	0.7	0.6	0.8	0.7	1.0	1.2	1.1	1.0	0.9	1.0	0.9	3.2	6.1	7.1	5.3	1.7	7.1
30-May	3.3	4.2	1.8	1.6	2.3	Z	1.8	4.3	3.1	1.7	1.5	1.4	1.6	1.9	2.4	1.9	2.0	3.2	2.8	2.8	3.7	3.6	3.4	2.3	2.5	4.3
31-May	Z	2.8	4.6	2.1	2.3	3.6	3.0	1.9	1.0	0.7	0.8	1.5	1.2	1.5	1.2	1.5	4.7	7.6	7.2	3.9	2.7	4.9	3.8	2.3	2.9	7.6
1.2 1.3 1.5 1.6 1.8 1.8 1.6 1.4 1.1 0.9 0.8 0.7 0.7 0.7 0.8 0.6 0.7 0.8 0.8 1.0 1.3 2.0 1.6 1.5 Diurnal Average																										
5.1 4.2 5.6 6.8 4.6 7.2 5.0 4.8 3.1 2.2 1.5 1.5 1.8 2.8 4.5 1.9 4.7 7.6 7.2 3.9 5.3 8.5 7.1 6.2 Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Hangingsstone Expansion - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702

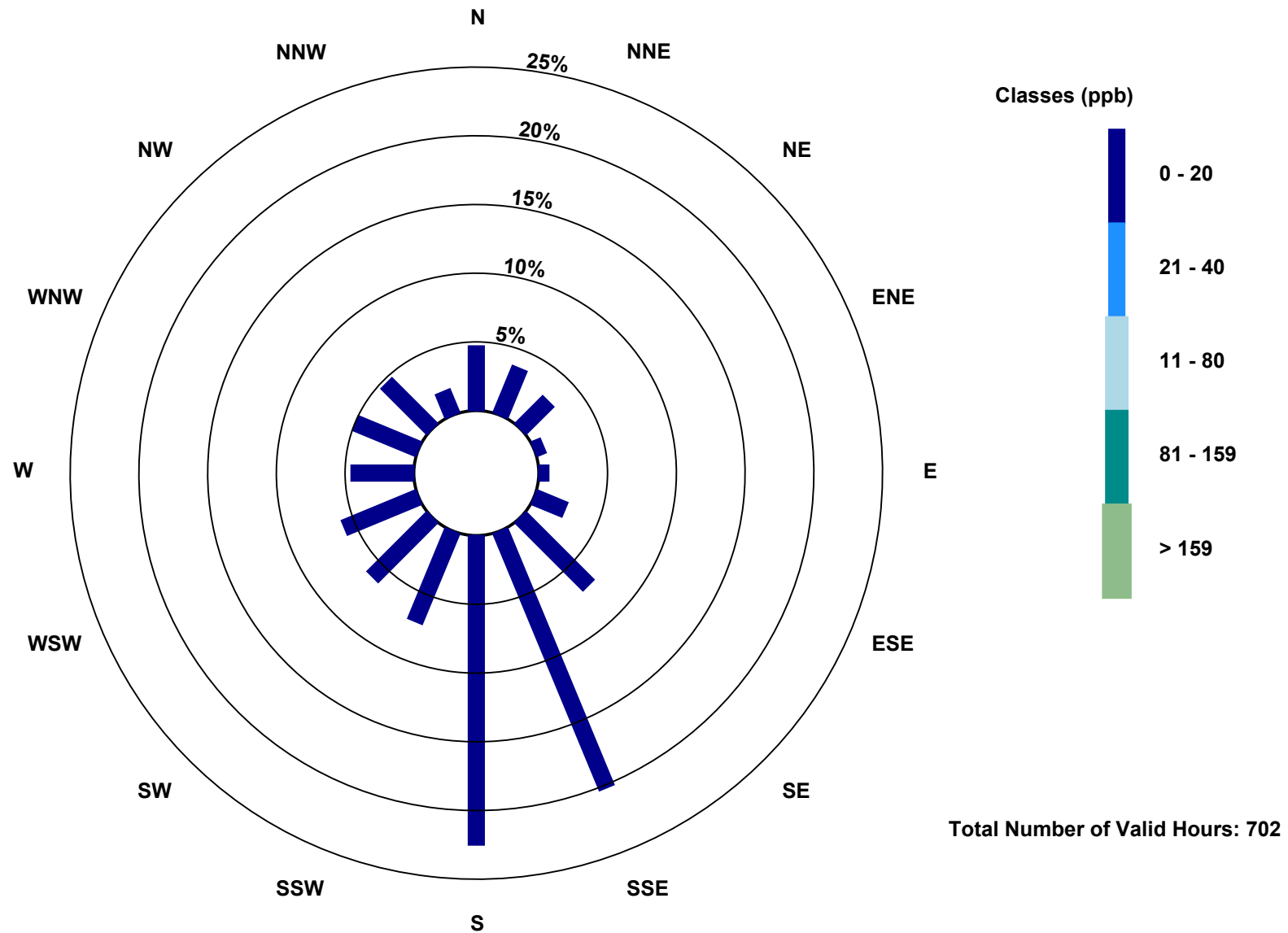
Total Number of Valid Hours: 702

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

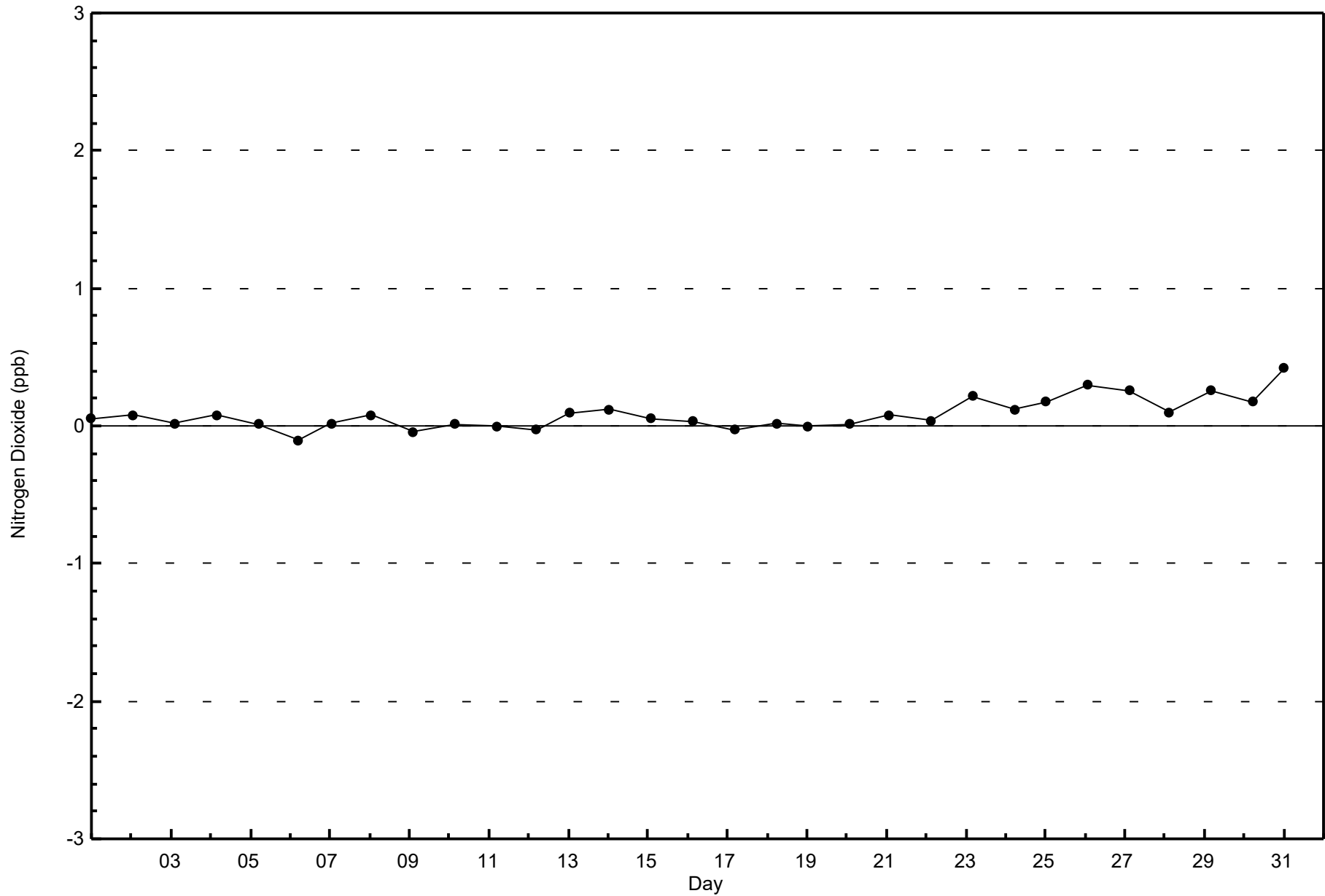
Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

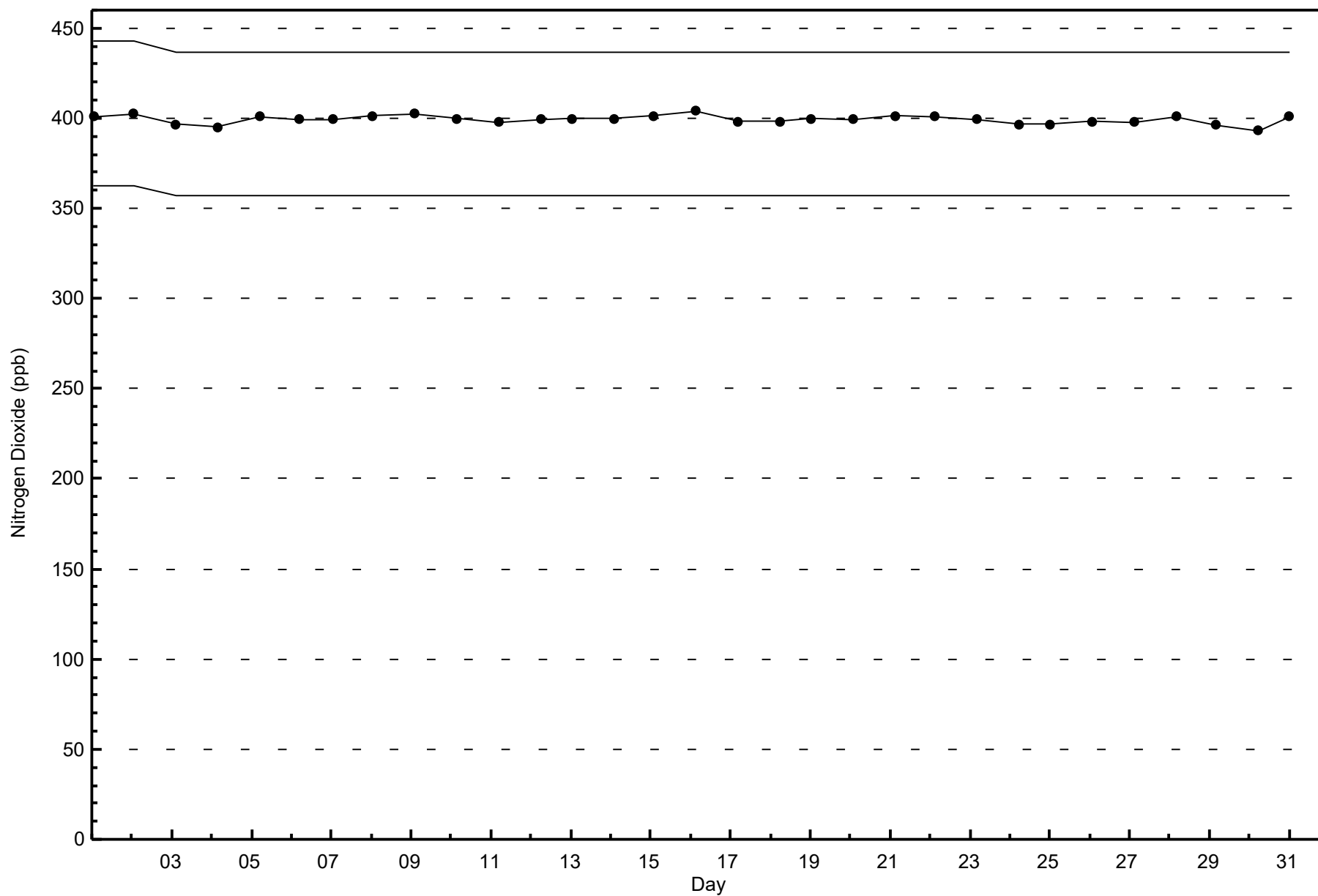
Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

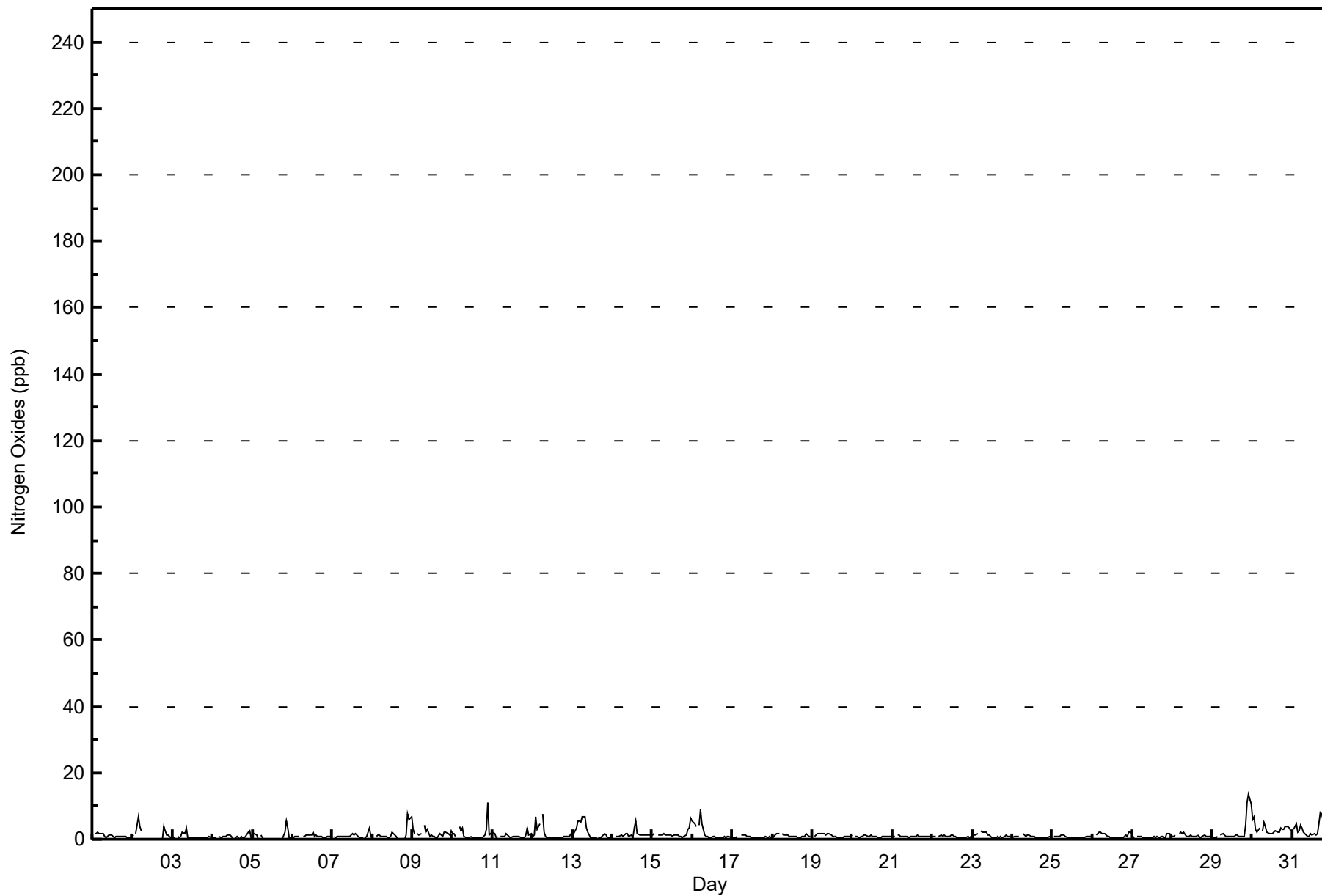
Hangingsstone Expansion - May 2025

Maximum Value: 13.8 ppb on May 29 23:00																		Maximum Daily Average: 3.1 ppb on May 31										Hours in Service: 744	
Minimum Value: 0.0 ppb on May 2 14:00																		Minimum Daily Average: 0.6 ppb on May 17										Hours of Data: 707	
Maximum Diurnal Average: 2.3 ppb at hour 22																		Minimum Diurnal Average: 0.7 ppb at hour 16										Hours of Missing Data: 37	
Monthly Average: 1.31 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 0.9 Q ₃ = 1.4 P ₉₀ = 2.5 P ₉₉ = 7.6										Hours of Calibration: 36	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-May	Z	1.8	1.8	2.0	1.9	1.7	1.6	1.0	0.5	0.8	1.5	1.5	1.0	0.6	0.9	0.7	0.8	1.1	0.8	0.9	0.7	0.5	0.6	0.7	1.1	2.0			
2-May	1.1	Z	1.5	7.0	3.8	2.5	C	C	C	C	C	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.2	3.9	1.1	1.2	0.9	0.4	1.3	7.0			
3-May	0.3	0.6	Z	0.7	0.5	0.9	2.0	1.8	3.3	0.5	0.5	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.9	0.4	0.7	3.3			
4-May	0.3	0.3	0.3	Z	0.6	0.5	0.7	0.7	0.8	1.1	1.3	1.0	0.2	0.1	0.4	0.8	0.1	0.9	0.4	0.6	0.9	2.3	2.6	0.5	0.8	2.6			
5-May	1.5	1.8	1.3	0.1	Z	1.4	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	2.0	5.5	3.2	0.6	0.4	0.9	5.5			
6-May	0.3	1.0	0.7	0.9	0.7	Z	0.8	0.8	1.1	1.4	1.4	1.2	2.0	0.9	1.4	0.8	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.6	0.9	2.0			
7-May	Z	0.7	0.6	0.8	0.7	0.8	1.0	0.9	0.9	0.9	1.0	1.1	1.5	1.3	1.6	0.8	0.3	0.2	0.2	0.2	0.7	2.1	3.3	1.0	1.0	3.3			
8-May	1.1	Z	1.0	1.4	1.1	1.0	1.0	1.0	0.7	0.6	0.6	0.7	2.3	1.3	0.9	0.2	0.2	0.1	0.1	0.1	1.3	7.6	5.8	6.8	1.6	7.6			
9-May	2.9	1.6	Z	1.7	1.2	1.6	M	4.4	2.0	3.1	0.8	1.2	0.8	0.7	0.3	0.5	1.7	1.4	0.9	2.0	2.0	1.5	1.3	2.8	1.7	4.4			
10-May	1.5	1.5	1.0	Z	3.9	2.6	3.5	0.9	0.6	0.3	0.5	0.8	0.3	0.2	0.4	0.3	0.5	0.5	0.4	1.2	3.1	11.0	1.3	1.7	1.6	11.0			
11-May	2.1	1.7	0.5	0.8	Z	0.9	0.7	0.7	1.9	1.3	0.8	0.6	0.7	1.0	1.0	0.9	0.9	0.4	0.4	0.6	1.3	3.3	1.3	1.9	1.1	3.3			
12-May	0.9	1.3	6.9	3.1	4.5	Z	7.4	2.1	0.8	0.5	0.5	0.4	0.4	0.4	0.6	0.4	0.3	0.5	0.5	0.8	0.8	0.9	0.9	1.6	1.6	7.4			
13-May	Z	1.8	3.4	5.4	5.6	5.2	6.9	7.0	3.6	2.0	1.2	0.6	0.6	0.4	0.3	0.2	0.5	0.4	1.1	1.6	1.2	0.5	0.4	0.4	2.2	7.0			
14-May	0.4	Z	0.8	0.7	0.9	1.2	1.0	1.2	1.7	1.8	1.0	1.4	0.6	3.4	5.4	1.8	1.1	1.2	1.4	1.2	1.1	1.2	1.3	1.2	1.4	5.4			
15-May	1.3	1.6	Z	1.3	1.3	1.3	1.2	1.6	1.4	1.1	1.4	1.3	1.0	1.3	1.4	1.3	0.9	0.9	0.5	0.7	1.3	3.2	3.2	6.2	1.6	6.2			
16-May	5.4	4.5	3.9	Z	4.3	9.0	4.9	1.5	0.8	0.7	0.5	0.6	0.9	0.7	0.5	0.4	0.4	0.5	0.6	0.8	0.5	0.8	0.7	0.3	1.9	9.0			
17-May	0.2	0.2	0.4	0.7	Z	1.4	1.1	1.1	1.1	0.9	0.7	0.6	0.4	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.7	0.6	0.8	0.3	0.6	1.4			
18-May	0.4	0.8	1.7	1.8	1.5	Z	1.8	1.5	1.3	1.1	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.7	0.8	1.8	1.1	0.6	0.8	1.0	1.8			
19-May	Z	1.0	1.2	1.5	1.5	1.8	1.6	1.6	1.5	1.6	1.7	1.3	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.7	0.9	1.1	1.8			
20-May	1.1	Z	1.0	0.7	0.6	0.8	0.8	1.1	1.1	1.0	0.9	1.2	0.9	0.7	0.7	0.5	0.4	0.4	0.8	0.8	0.7	0.9	0.8	1.0	0.8	1.2			
21-May	1.0	0.7	Z	1.3	1.3	1.0	0.9	0.9	0.8	0.7	0.6	0.8	1.0	0.7	1.0	1.2	0.9	0.8	0.9	0.9	0.7	0.7	0.9	0.8	0.9	1.3			
22-May	0.7	0.6	0.7	Z	0.9	1.1	1.1	1.2	1.0	0.9	0.9	1.1	1.2	0.7	0.7	0.5	0.5	0.3	0.5	0.5	0.5	0.8	0.5	0.8	0.8	1.2			
23-May	0.9	1.1	1.3	1.8	Z	2.4	2.1	2.0	1.9	1.4	1.2	1.0	0.6	0.6	0.5	0.7	0.6	0.8	0.6	0.8	1.1	0.8	0.7	0.8	1.1	2.4			
24-May	0.5	0.7	0.8	0.7	1.0	Z	1.6	1.3	0.8	1.2	1.1	0.8	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.8	0.7	0.8	1.6			
25-May	Z	0.9	0.9	0.9	1.1	1.3	1.2	1.1	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.8	0.7	1.3			
26-May	1.0	Z	1.5	1.6	1.9	2.1	1.9	1.6	1.2	1.0	0.7	0.5	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.8	1.1	1.1	2.2	2.2	1.1	2.2			
27-May	0.8	0.2	Z	0.8	0.8	0.9	0.5	0.2	0.2	0.3	0.4	0.3	0.3	0.9	0.4	0.7	0.6	1.0	0.9	0.4	0.4	1.8	1.6	1.2	0.7	1.8			
28-May	1.0	0.8	1.1	Z	1.9	2.3	1.8	2.2	1.0	1.0	1.0	1.2	0.8	0.7	1.0	1.1	0.7	0.6	1.0	1.2	0.9	0.8	0.8	0.8	1.1	2.3			
29-May	0.5	0.5	0.6	0.8	Z	1.5	1.5	1.2	1.0	0.7	0.7	0.8	0.8	1.0	1.2	1.2	1.0	1.0	1.0	1.0	4.2	11.0	13.8	10.7	2.5	13.8			
30-May	5.9	6.7	2.8	2.2	3.2	Z	2.5	5.2	3.7	2.0	1.6	1.5	1.7	2.1	2.5	2.0	2.1	3.3	2.9	2.9	3.8	3.7	3.4	2.3	3.0	6.7			
31-May	Z	2.9	4.7	2.3	2.6	4.3	3.4	2.1	1.1	0.8	0.8	1.5	1.3	1.6	1.3	1.6	4.8	7.9	7.6	4.0	2.9	5.0	3.8	2.4	3.1	7.9			
Diurnal Average																										Diurnal Maximum			
Diurnal Maximum																													
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Hangingsstone Expansion - May 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - May 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	33	26	20	5	5	17	49	142	158	50	43	41	32	35	33	13	702

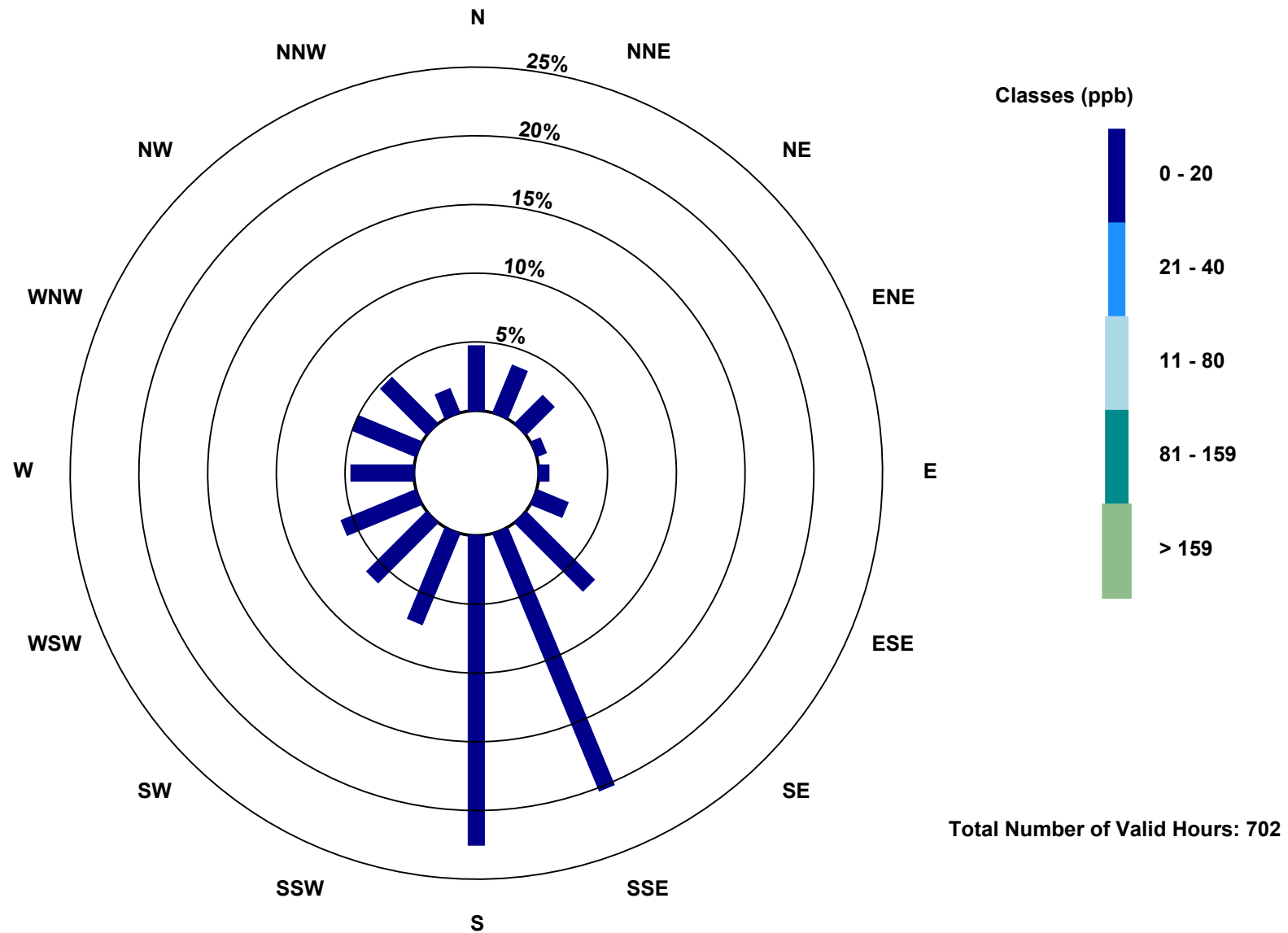
Total Number of Valid Hours: 702

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

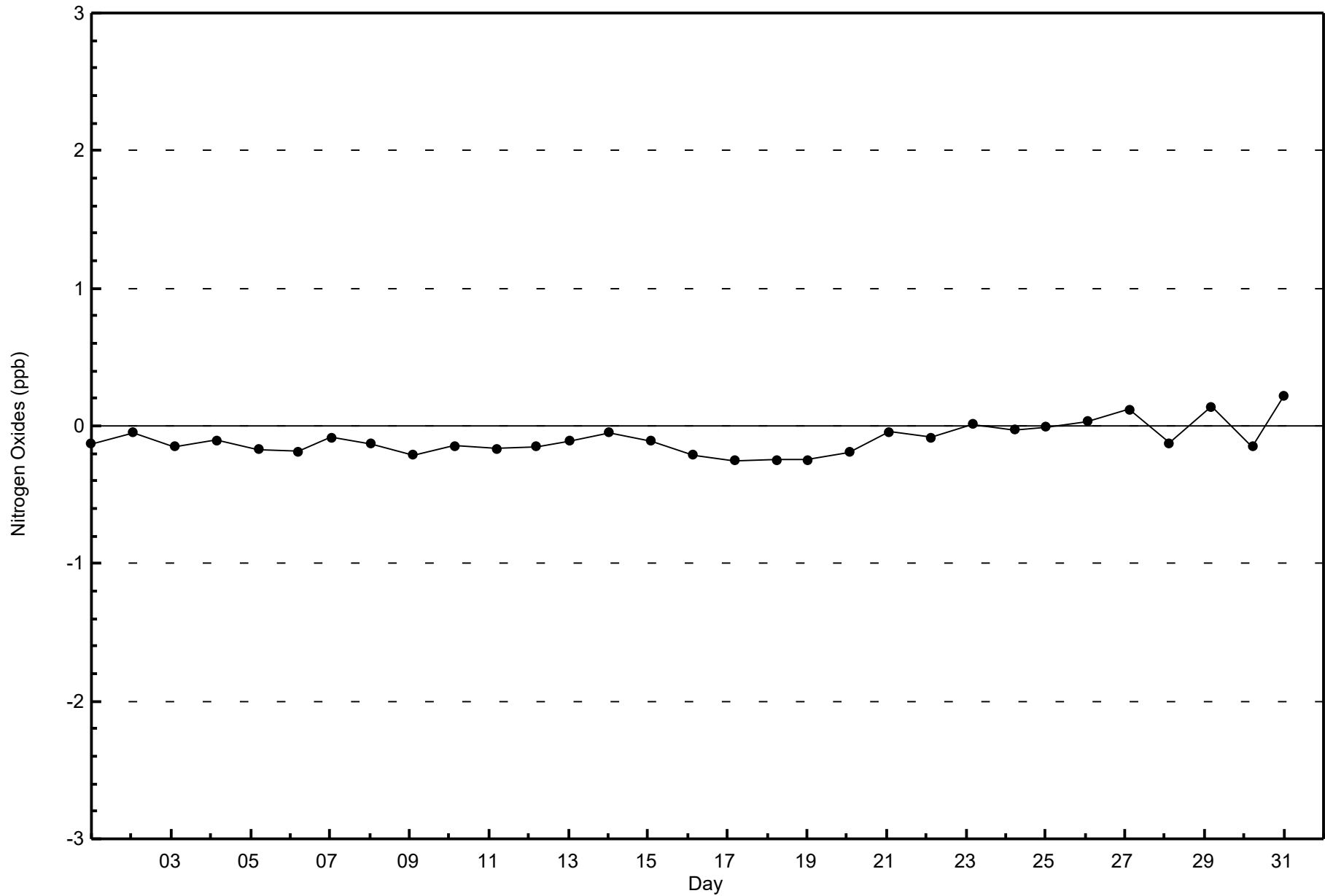
Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

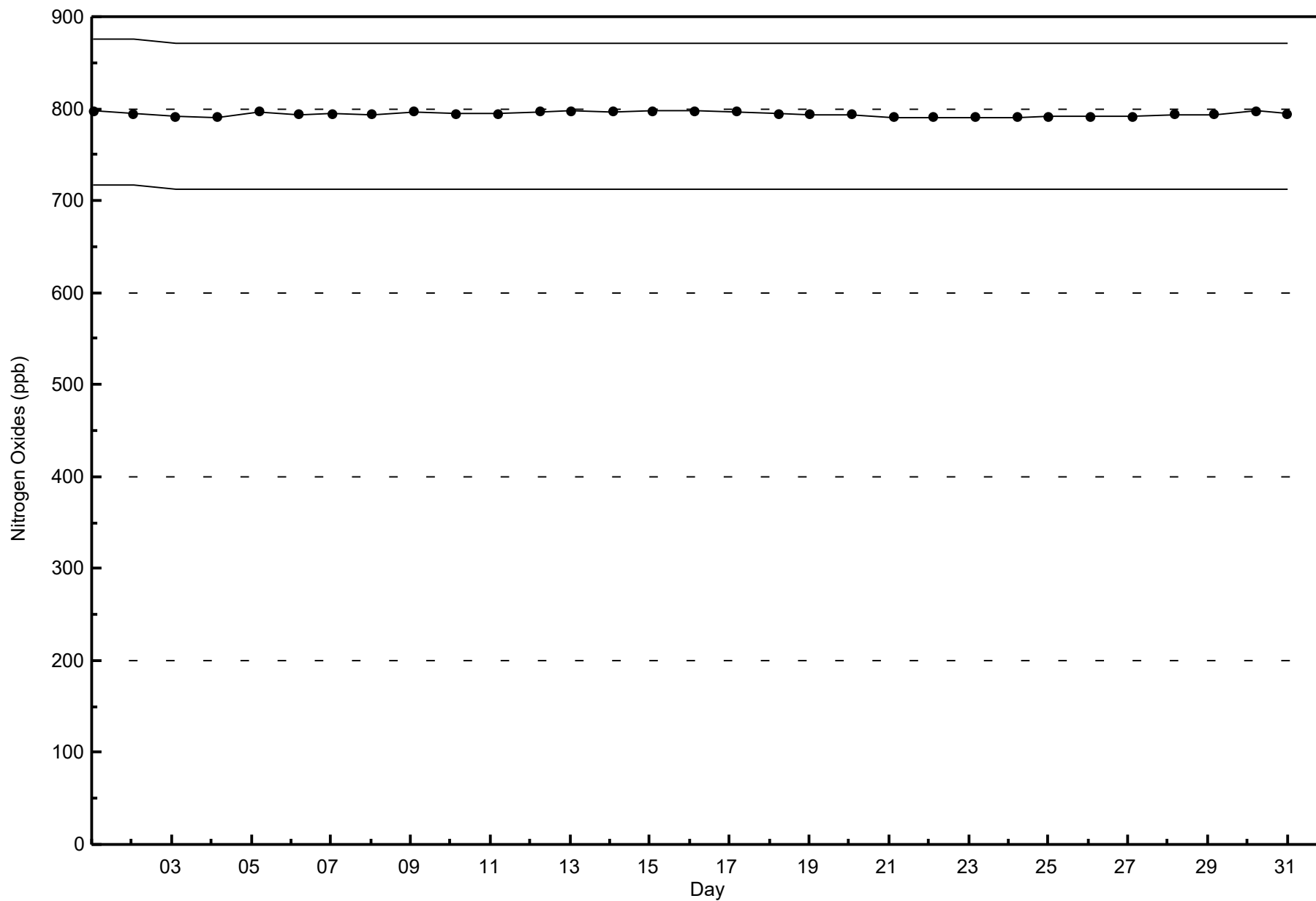
Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

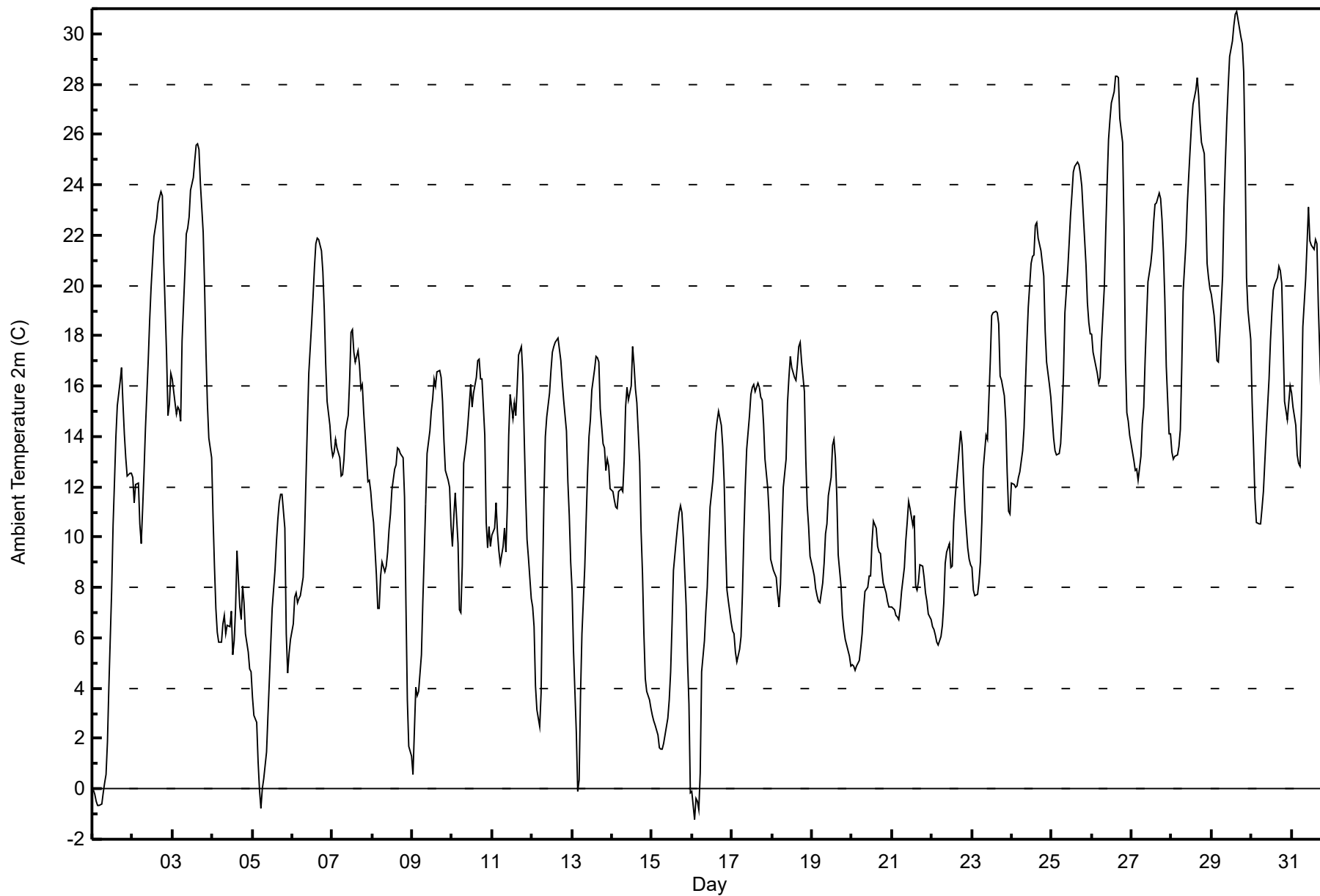
Hangingstone Expansion - May 2025

Maximum Value: 30.9 C on May 29 16:00																				Maximum Daily Average: 24.3 C on May 29					Hours in Service: 744	
Minimum Value: -1.2 C on May 16 02:00																				Minimum Daily Average: 5.2 C on May 15					Hours of Data: 744	
Maximum Diurnal Average: 17.9 C at hour 16																				Minimum Diurnal Average: 8.0 C at hour 5					Hours of Missing Data: 0	
Monthly Average: 13.05 C																				Percentiles: P ₁ = -0.4 P ₁₀ = 5.3 Q ₁ = 8.4 Median = 13.0 Q ₃ = 16.9 P ₉₀ = 21.9 P ₉₉ = 28.8					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	0.0	-0.2	-0.5	-0.7	-0.7	-0.6	-0.2	0.2	0.6	1.9	4.0	7.9	10.5	12.2	14.0	15.2	16.2	16.7	15.4	14.1	13.2	12.4	12.5	12.5	7.4	16.7
2-May	12.4	11.4	12.1	12.2	10.5	9.7	11.1	12.6	14.3	17.0	18.6	19.9	20.9	21.9	22.7	23.3	23.5	23.7	23.5	20.9	17.2	14.9	15.3	16.5	16.9	23.7
3-May	16.3	15.4	14.9	15.2	15.1	14.6	17.8	20.5	22.1	22.3	22.7	23.8	24.3	25.0	25.6	25.6	25.4	24.1	22.1	19.9	17.3	15.3	13.9	13.2	19.7	25.6
4-May	10.8	8.9	7.2	6.2	5.8	5.8	6.5	6.9	6.2	6.5	6.5	7.1	5.4	5.9	7.2	9.5	7.2	6.7	8.1	7.4	6.1	5.4	4.7	4.7	6.8	10.8
5-May	3.6	2.9	2.6	1.1	0.0	-0.8	0.0	0.4	1.5	2.9	4.3	5.8	7.2	8.7	9.8	10.7	11.4	11.7	11.7	10.3	6.2	4.6	5.4	5.9	5.3	11.7
6-May	6.5	7.6	7.8	7.4	7.5	7.7	8.4	10.1	12.3	14.5	16.5	18.5	19.5	20.7	21.6	21.9	21.8	21.4	20.5	19.0	16.9	15.4	14.4	13.6	14.7	21.9
7-May	13.2	13.4	13.9	13.5	13.2	12.5	12.5	13.1	14.2	14.8	16.2	18.1	18.2	17.3	17.0	17.4	16.8	15.9	16.1	14.9	13.1	12.2	12.3	11.8	14.7	18.2
8-May	11.1	10.6	8.5	7.2	7.2	8.5	9.0	8.6	8.8	9.4	10.3	10.9	11.8	12.7	12.9	13.5	13.5	13.3	13.2	11.6	7.4	3.5	1.7	1.3	9.4	13.5
9-May	0.6	2.3	4.1	3.7	3.9	5.3	7.4	9.3	11.3	13.3	14.2	15.0	15.5	16.3	16.0	16.6	16.6	16.4	15.4	13.8	12.6	12.2	12.0	10.5	11.0	16.6
10-May	9.6	10.8	11.8	9.8	7.1	7.0	8.8	12.9	13.8	14.5	15.3	16.1	15.1	15.7	16.3	17.0	17.1	16.3	16.3	14.1	10.6	9.6	10.4	9.6	12.7	17.1
11-May	10.1	10.4	11.4	10.2	9.5	9.0	9.7	10.3	9.4	11.2	14.0	15.7	14.7	15.3	14.8	15.9	17.2	17.6	16.5	14.0	11.7	9.9	9.2	7.6	12.3	17.6
12-May	7.2	6.5	4.1	3.2	2.5	3.8	8.1	11.5	14.0	14.8	15.8	16.6	17.4	17.6	17.8	17.9	17.5	17.0	16.2	15.5	14.2	12.2	10.9	9.0	12.1	17.9
13-May	7.9	5.5	2.3	-0.1	0.4	3.7	6.2	8.8	10.7	12.5	14.0	14.7	15.9	16.7	17.2	17.1	17.0	15.1	13.7	13.5	12.7	13.1	12.8	11.9	11.0	17.2
14-May	11.8	11.5	11.2	11.1	11.8	11.9	11.8	13.0	15.1	16.0	15.4	16.0	17.6	16.9	15.9	15.3	13.0	10.2	8.5	6.2	4.4	3.9	3.5	3.2	11.5	17.6
15-May	2.9	2.7	2.6	2.1	1.6	1.6	1.6	1.8	2.1	2.8	3.5	4.7	6.6	8.7	9.9	10.5	11.0	11.3	11.0	10.0	7.3	5.1	3.4	-0.1	5.2	11.3
16-May	-0.1	-1.2	-0.4	-0.5	-0.8	0.6	4.7	5.9	7.1	8.0	9.7	11.2	12.3	13.1	14.1	14.6	15.0	14.4	13.6	12.2	9.8	7.9	7.4	6.6	7.7	15.0
17-May	6.3	6.2	5.5	5.0	5.6	6.1	7.8	10.1	12.0	13.5	14.9	15.6	15.9	16.1	15.8	16.1	15.9	15.6	15.4	14.5	13.1	11.9	10.9	9.1	11.6	16.1
18-May	8.9	8.7	8.4	7.7	7.2	8.1	10.2	12.0	13.1	15.3	16.3	17.2	16.7	16.4	16.2	16.8	17.6	17.8	17.0	15.8	13.1	11.2	10.4	9.2	13.0	17.8
19-May	8.7	8.4	8.0	7.7	7.4	7.4	8.2	9.0	10.1	10.5	11.6	12.4	13.7	13.9	13.1	11.6	9.3	8.1	6.9	6.3	6.0	5.7	5.3	4.9	8.9	13.9
20-May	4.9	4.9	4.7	4.9	5.1	5.6	6.2	7.1	7.8	8.0	8.5	8.5	9.8	10.7	10.4	9.6	9.4	9.3	8.7	8.2	7.8	7.4	7.2	7.2	7.6	10.7
21-May	7.2	7.1	6.9	6.8	6.7	7.2	7.9	8.8	9.9	10.6	11.4	11.2	10.5	10.9	8.1	7.9	8.2	8.9	8.8	8.4	7.8	7.5	6.9	6.7	8.4	11.4
22-May	6.5	6.3	6.1	5.8	5.7	6.1	6.5	7.4	9.0	9.4	9.7	8.8	8.9	10.6	11.5	12.2	13.5	14.2	13.7	12.3	11.1	9.6	9.2	8.9	9.3	14.2
23-May	8.8	7.9	7.6	7.7	8.2	9.0	10.6	12.7	14.0	13.9	15.5	17.0	18.8	18.9	19.0	18.9	18.5	16.4	16.2	15.6	14.7	12.6	11.1	10.9	13.5	19.0
24-May	12.1	12.1	12.0	12.0	12.4	12.6	13.4	14.4	16.0	17.7	19.1	20.9	21.2	21.2	22.4	22.5	21.9	21.4	20.9	20.4	18.2	17.0	16.1	15.5	17.2	22.5
25-May	14.7	13.9	13.4	13.3	13.3	13.7	14.9	16.5	18.9	20.6	21.7	22.8	23.6	24.5	24.7	24.9	24.8	24.5	23.9	22.9	20.8	19.3	18.5	18.1	19.5	24.9
26-May	18.1	17.4	16.8	16.5	16.1	16.3	17.7	19.9	22.1	24.0	25.8	26.6	27.3	27.7	28.3	28.3	28.3	26.6	25.7	22.3	17.1	14.9	14.6	14.1	21.4	28.3
27-May	13.4	13.1	12.7	12.7	12.3	13.2	14.5	15.2	17.1	18.6	20.1	20.9	21.5	22.5	23.2	23.3	23.7	23.4	22.6	21.3	19.4	16.8	14.1	14.1	17.9	23.7
28-May	13.4	13.1	13.2	13.2	13.6	14.3	16.8	19.8	21.7	23.3	24.4	25.5	26.5	27.2	27.8	28.3	27.5	26.5	25.7	25.3	23.3	20.9	20.3	19.9	21.3	28.3
29-May	19.6	18.8	18.0	17.0	16.9	18.0	20.3	23.1	24.9	26.6	27.9	29.1	29.7	30.3	30.8	30.9	30.6	29.9	29.6	28.5	25.1	20.3	19.0	17.8	24.3	30.9
30-May	15.3	13.5	11.5	10.6	10.5	10.5	11.1	11.8	13.0	14.2	16.3	17.8	18.9	19.8	20.0	20.3	20.8	20.6	20.1	17.8	15.4	14.7	15.3	16.0	15.7	20.8
31-May	15.7	15.2	14.4	13.3	12.9	12.8	15.0	18.4	20.3	21.7	23.1	21.8	21.6	21.4	21.8	21.7	19.2	17.4	15.4	13.2	11.5	10.7	10.2	9.6	16.6	23.1
9.6 9.2 8.8 8.3 8.0 8.4 9.8 11.4 12.7 13.9 15.1 16.1 16.7 17.3 17.6 17.9 17.7 17.2 16.5 15.2 13.1 11.6 10.9 10.3																										Diurnal Average
19.6 18.8 18.0 17.0 16.9 18.0 20.3 23.1 24.9 26.6 27.9 29.1 29.7 30.3 30.8 30.9 30.6 29.9 29.6 28.5 25.1 20.9 20.3 19.9																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Hangingsstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Hangingstone Expansion - May 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	16	2.15	2.15
0 - 10	232	31.18	33.33
10 - 20	383	51.48	84.81
> 20	113	15.19	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

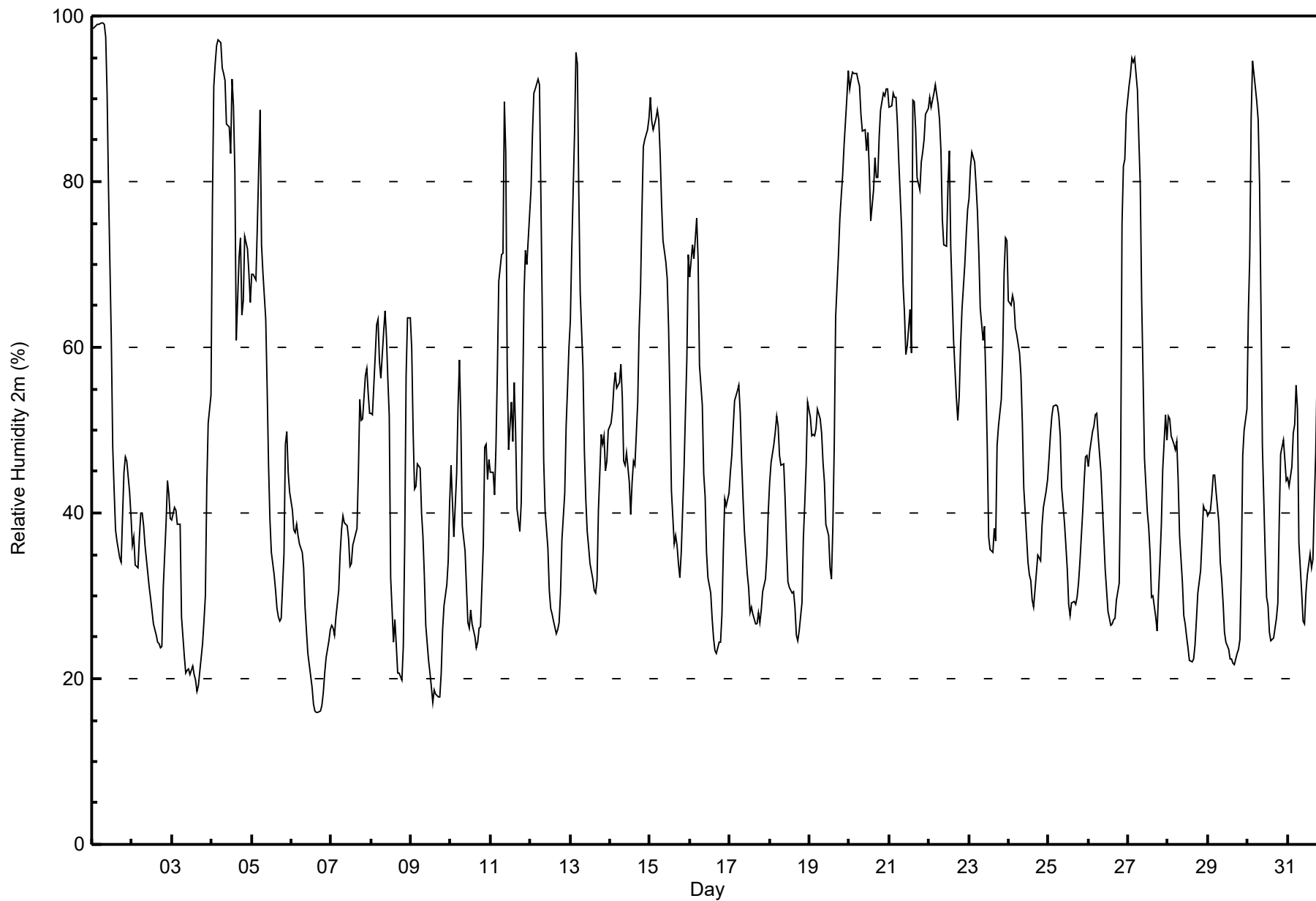
Hangingsstone Expansion - May 2025

Maximum Value: 99.1 % on May 1 06:00																				Maximum Daily Average: 87.2 % on May 20					Hours in Service: 744	
Minimum Value: 15.9 % on May 6 16:00																				Minimum Daily Average: 26.0 % on May 6					Hours of Data: 744	
Maximum Diurnal Average: 66.3 % at hour 5																				Minimum Diurnal Average: 35.3 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 50.66 %																				Percentiles: P ₁ = 17.8 P ₁₀ = 25.6 Q ₁ = 32.5 Median = 45.8 Q ₃ = 66.4 P ₉₀ = 87.6 P ₉₉ = 98.0					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-May	98.4	98.7	98.9	99.0	99.0	99.1	99.1	99.0	97.4	90.5	79.2	60.9	48.0	42.8	37.9	36.7	34.6	34.1	39.6	45.0	46.9	46.3	42.6	39.7	67.2	99.1
2-May	36.1	37.1	33.7	33.4	37.2	40.0	40.0	38.5	36.1	32.7	30.9	29.7	28.2	26.6	25.3	24.4	24.3	23.8	23.9	31.1	38.8	43.8	42.2	39.3	33.2	43.8
3-May	39.1	40.7	40.4	38.7	38.6	38.6	27.4	22.7	20.6	20.9	21.2	20.6	21.5	20.6	19.9	18.5	19.2	20.9	24.2	26.9	30.0	43.2	50.9	54.2	30.0	54.2
4-May	77.1	91.6	94.2	96.5	97.1	96.8	93.7	93.0	92.2	86.9	86.6	83.4	92.4	89.2	81.2	60.9	70.9	73.3	63.8	65.7	73.5	71.9	69.1	65.5	81.9	97.1
5-May	68.9	68.9	68.1	74.6	81.7	88.7	72.4	69.0	63.4	55.1	45.7	39.1	35.2	32.5	30.6	28.5	27.4	27.0	27.4	35.1	48.3	49.9	45.0	42.5	51.0	88.7
6-May	40.4	38.0	37.6	38.7	37.3	36.3	35.2	33.3	28.6	25.8	23.0	20.3	18.9	17.0	16.1	15.9	15.9	16.1	16.8	18.3	20.7	22.6	24.6	26.0	26.0	40.4
7-May	26.4	26.0	25.2	27.5	30.6	35.0	38.0	39.7	38.8	38.6	37.0	33.5	33.8	36.1	36.9	38.2	44.9	53.7	51.1	51.4	56.7	57.5	54.4	52.0	40.1	57.5
8-May	52.1	51.9	58.9	62.7	63.3	58.2	56.4	61.9	64.4	61.1	56.0	51.7	32.2	24.5	27.2	24.0	20.7	20.8	19.9	23.9	36.3	56.7	63.6	63.6	46.3	64.4
9-May	59.8	49.9	42.9	43.3	46.0	45.4	40.1	37.0	32.4	26.4	22.3	20.6	18.9	17.2	18.7	18.2	17.9	17.8	20.6	25.9	28.7	31.4	34.2	41.1	31.5	59.8
10-May	45.8	41.4	37.2	44.7	52.8	58.5	51.0	38.6	35.4	31.1	26.9	26.0	28.3	26.6	25.1	23.7	24.4	26.2	26.3	36.2	47.9	48.2	44.1	46.4	37.2	58.5
11-May	44.9	44.9	42.2	47.9	57.2	67.9	71.1	71.3	89.7	83.3	57.9	47.7	53.4	48.7	55.8	49.9	40.5	37.8	41.2	53.4	66.5	71.6	69.9	76.0	57.9	89.7
12-May	79.1	85.7	90.8	91.3	92.4	91.8	78.4	64.3	46.4	40.4	35.8	30.7	28.6	27.8	26.9	25.5	26.0	26.8	30.4	36.8	42.4	50.6	55.0	60.0	52.7	92.4
13-May	63.2	71.9	86.0	95.7	94.2	78.9	66.7	57.5	47.4	41.8	37.8	36.0	33.9	32.0	30.7	30.4	31.8	40.4	49.4	48.3	49.4	45.1	46.3	50.0	52.7	95.7
14-May	50.8	52.3	55.3	56.9	55.2	55.8	58.0	54.1	46.3	45.7	47.3	43.7	39.8	43.7	46.2	45.7	53.4	62.3	67.2	76.5	84.3	85.1	86.2	87.7	58.3	87.7
15-May	90.3	87.2	86.3	87.6	88.6	87.5	83.2	77.3	72.9	70.4	68.3	62.2	53.4	42.7	36.3	37.3	36.1	33.9	32.2	35.3	45.4	52.3	58.6	71.2	62.4	90.3
16-May	68.5	72.4	70.7	73.1	75.6	70.6	57.9	53.1	44.8	42.0	35.2	32.3	30.3	27.4	24.9	23.4	23.1	24.3	24.4	27.8	35.7	41.7	40.9	42.4	44.3	75.6
17-May	44.9	47.0	50.3	53.6	54.8	55.4	52.2	46.4	41.8	37.8	32.8	31.0	27.9	28.6	27.9	26.6	26.7	27.9	26.7	28.3	30.5	32.0	34.9	40.2	37.8	55.4
18-May	43.8	46.1	48.2	49.8	51.7	50.5	47.0	45.7	46.0	41.7	36.3	31.8	31.0	30.3	30.4	28.7	25.3	24.5	25.8	29.2	37.0	41.1	45.9	53.3	39.2	53.3
19-May	51.5	49.4	49.4	49.3	50.1	52.5	51.4	49.6	46.2	43.7	38.6	37.3	33.3	32.1	38.3	48.1	63.8	71.2	75.7	78.4	80.9	84.4	90.1	93.4	56.6	93.4
20-May	91.2	92.4	93.3	93.0	93.0	92.2	91.6	88.2	86.1	86.2	83.7	86.0	81.2	75.2	78.9	82.9	80.5	80.5	85.5	88.6	90.7	90.4	91.2	91.1	87.2	93.3
21-May	89.0	89.2	90.7	90.2	90.2	86.9	82.3	74.2	67.7	64.3	59.2	60.1	64.5	59.4	89.8	89.7	86.3	80.5	79.1	82.4	83.6	85.1	88.1	88.8	80.0	90.7
22-May	90.2	89.0	89.8	90.8	91.7	89.3	87.4	83.8	75.5	72.4	72.1	79.5	83.7	72.0	66.4	60.9	53.9	51.1	54.1	60.1	64.5	70.1	73.6	76.6	74.9	91.7
23-May	78.0	81.7	83.5	82.5	79.7	76.5	71.4	64.7	60.9	62.6	55.9	48.0	37.0	35.7	35.2	38.2	36.7	48.1	50.5	53.8	59.4	69.0	73.3	72.9	60.6	83.5
24-May	65.6	65.1	66.3	65.4	62.4	61.6	59.3	56.6	50.9	43.0	40.2	34.0	32.6	31.9	29.6	28.7	30.6	34.8	34.6	34.2	38.5	40.8	42.8	44.1	45.6	66.3
25-May	46.5	49.5	51.7	52.8	53.1	52.9	51.7	49.3	43.0	38.8	36.1	33.2	29.0	27.7	29.1	29.3	29.0	29.9	31.6	34.0	40.1	43.7	46.8	47.0	40.7	53.1
26-May	45.6	47.5	49.9	50.4	51.9	52.1	49.3	44.9	41.0	37.2	33.3	30.8	28.1	26.5	26.7	27.1	27.2	29.5	31.6	44.5	75.0	81.9	82.8	88.2	45.9	88.2
27-May	91.5	92.9	95.0	94.3	94.9	91.0	85.0	79.4	65.7	56.4	46.6	40.2	38.3	35.0	29.9	30.0	27.5	25.7	30.3	34.0	38.4	45.3	51.8	48.8	57.0	95.0
28-May	51.7	51.4	49.3	48.3	47.7	48.7	43.9	37.3	31.6	27.6	26.6	25.0	23.6	22.2	22.1	22.5	24.1	27.1	30.3	33.1	36.9	40.8	40.4	40.3	35.5	51.7
29-May	39.6	40.4	42.2	44.6	44.7	42.5	38.8	34.1	32.0	29.2	25.6	24.4	23.5	22.3	22.4	21.9	21.6	23.1	23.6	24.7	33.4	46.9	49.9	52.5	33.5	52.5
30-May	64.2	71.0	87.8	94.6	91.4	89.7	87.4	79.7	64.7	48.1	35.2	29.8	28.7	25.6	24.6	24.9	26.1	27.3	29.2	39.0	47.1	48.8	46.4	43.9	52.3	94.6
31-May	44.2	43.2	45.5	49.7	50.7	55.4	52.5	36.4	30.4	27.0	26.6	30.4	32.5	35.1	33.4	34.4	41.3	47.3	57.1	71.3	87.3	95.3	96.6	97.4	50.9	97.4
60.6 61.7 63.3 65.2 66.3 66.0 61.9 57.4 52.9 48.7 43.9 40.6 38.5 36.0 36.3 35.3 35.9 37.7 39.5 44.3 51.4 55.9 57.5 59.2																										Diurnal Average
98.4 98.7 98.9 99.0 99.0 99.1 99.1 99.0 97.4 90.5 86.6 86.0 92.4 89.2 89.8 89.7 86.3 80.5 85.5 88.6 90.7 95.3 96.6 97.4																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Hangingsstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Hangingsstone Expansion - May 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	18	2.42	2.42
20 - 40	275	36.96	39.38
40 - 60	227	30.51	69.89
60 - 80	104	13.98	83.87
80 - 100	120	16.13	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

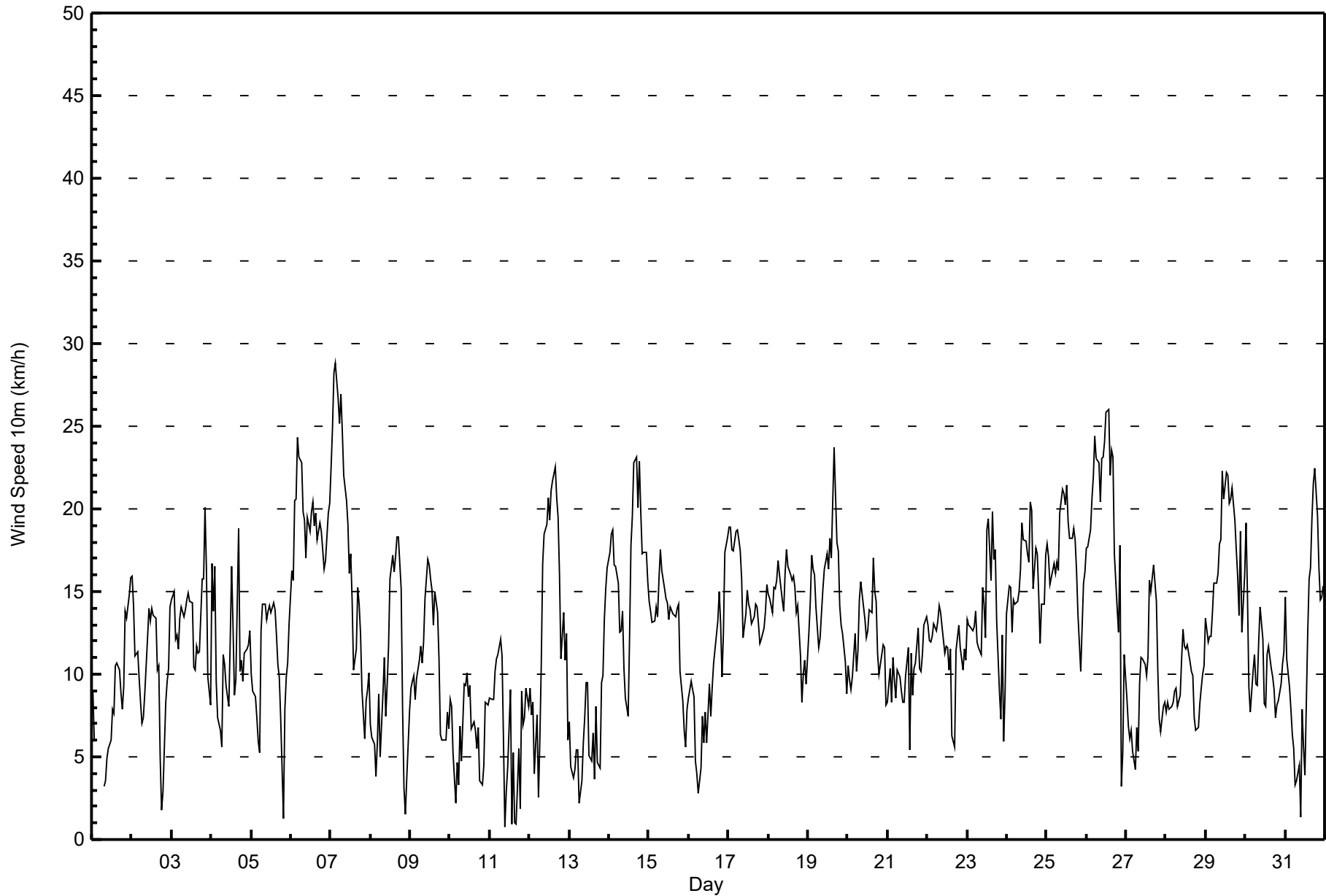
Hangingsstone Expansion - May 2025

Maximum Speed: 29 km/h on May 7 04:00										Maximum Daily Speed Average: 18.4 km/h on May 6										Hours in Service: 744						
Minimum Speed Value: 1 km/h on May 11 10:00										Minimum Daily Speed Average: 1.7 km/h on May 13										Hours of Data: 739						
Maximum Diurnal Speed Average: 9.3 km/h at hour 6										Minimum Diurnal Speed Average: 3.6 km/h at hour 19										Hours of Missing Data: 5						
Monthly Average Velocity: 5.9 km/h 183.6 deg										Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 9 Median = 12 Q ₃ = 16 P ₉₀ = 19 P ₉₉ = 25										Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-May	NNE9	N6	UO	UO	UO	UO	UO	W3	WNW4	SW5	SW5	SSW6	SW8	WSW8	SW10	SW11	WSW10	SW9	SSE8	SSE9	SSE14	SSE13	S15	S16	SSW5.9	S16
2-May	SSW16	SSW14	SSW11	SW11	SW10	SW8	WSW7	W7	WNW9	NW12	NW14	NW13	NW14	WNW14	WNW13	WNW10	WNW10	WNW5	NNE2	E3	ESE8	SE10	SE10	SSE14	WSW4.8	SSW16
3-May	SSE15	SSE15	SSE12	S12	S11	S13	S14	SSW13	WSW14	W14	WNW15	W14	WNW14	W10	WSW10	W12	W11	WNW11	NW16	NW16	NW20	NNW16	N10	NW8	W6.9	NW20
4-May	NW17	WNW14	WNW16	W10	WSW7	W7	NNE6	N11	N11	NNE9	NNW8	NW12	NW16	NW13	SW9	WSW10	WNW19	SSW10	SSW11	SSW10	SW11	SW12	SW12	WSW13	W7.3	WNW19
5-May	WSW10	SW9	WSW9	W7	NW6	NNW5	NW13	NW14	NW14	WNW13	NW14	WNW14	NW14	NW14	NW14	WNW12	WNW11	NW10	NW7	SSW1	SE8	SE10	SSE11	SSE13	WNW6.5	NW14
6-May	SSE16	SSE16	S20	S21	S24	S23	S23	S20	S19	SSW17	SSW19	SSW19	SW20	SSW20	SSW19	SSW20	SSW18	S19	S19	S18	S16	SSE17	SSE20	SSE20	S18.4	S24
7-May	SSE23	S25	S28	S29	S27	S25	S27	S25	S22	S20	S19	SSW16	WSW17	WSW14	WSW10	W12	WNW15	WNW14	W12	WSW9	SW6	SSW8	SW9	WSW10	SSW13.9	S29
8-May	SW7	SW6	SSW6	SSW4	WSW6	SW9	SE5	SSE9	S11	SSW7	WNW9	NNW12	N16	N17	NW16	WNW17	WNW18	NW18	NW15	NW8	NW3	WSW2	SSE4	SSE8	WNW4.8	WNW18
9-May	SSE9	S10	S10	SSW8	SSW10	SSW11	SW12	SW11	SW12	SW15	WSW17	WSW17	WSW16	WSW17	W13	WSW15	WSW14	SW11	WSW6	S6	SSW6	SW6	S8	S7	SW9.5	WSW17
10-May	S8	SW8	S5	SSE2	E5	S3	SSE7	WNW5	W9	WNW9	W10	W9	NW9	WNW7	W7	W7	SW6	NNW7	NNE4	ESE3	ESE4	SE8	ESE8	SE8	SW2.3	W10
11-May	SE9	SE8	SSE8	S10	S11	S11	S12	S11	SE6	S1	E3	SSE4	WNW9	ENE1	ENE5	N1	N1	NW6	SW2	SSE9	SE7	SE7	SE9	SSE8	SSE4.7	S12
12-May	SSE9	S8	SSE8	ESE4	SE8	SE3	NE6	NE11	ENE17	NE19	NE19	NE21	NE19	NE21	NE22	NE23	NE21	NE19	NE16	NNE11	NNE14	N11	N12	N6	NE11.1	NE23
13-May	N7	NNW4	WNW4	SW4	WSW5	WSW5	W2	NNW4	WNW6	NW7	NNW9	NW9	NW5	W5	WSW6	W4	SSE8	SW5	ENE4	SE9	SE10	SSE13	SSE15	SSE16	SW1.7	SSE16
14-May	SSE17	S18	S19	S17	S17	S15	S13	S13	SSW14	SW10	WSW9	SSW7	NW12	N18	N20	NNE23	NNE23	N20	NNE23	N20	N17	N17	N17	NNE16	N2.6	NNE23
15-May	N14	N14	N13	N13	N14	N13	N16	NNE18	NNE16	N15	N15	N14	NNE13	NNE14	NNE14	NNE14	NNE13	NNE14	NE14	NNE10	N8	NNE7	NE6	ESE8	NNE12.3	NNE18
16-May	ESE9	SE10	ESE9	SE9	E5	SE4	NE3	NNE4	NE7	NNE6	NE8	NE6	NE9	ENE7	E9	ESE11	ESE12	ESE13	ESE15	ESE13	ESE10	ESE13	SE17	SE18	ESE8.0	SE18
17-May	SE19	SE19	SE18	SSE17	SSE19	SSE19	SSE18	SSE17	SSE16	S12	SSE14	SSE15	SSE14	SSE14	SSE13	SSE13	SSE14	SE14	SE13	SE12	SE12	SSE13	SE14	SE15	SSE14.9	SE19
18-May	SE15	SSE15	SSE14	SSE15	SSE15	SSE16	SSE17	S16	SSE14	SSE14	SSE16	SSE18	S17	SSE16	SSE16	SSE16	SSE15	SSE14	SSE11	SE8	SSE10	S11	S9	SSE14.1	SSE18	
19-May	SSE13	SSE14	SSE17	S16	S16	S14	S12	SSE12	SSE14	SSE15	SSE16	SSE17	SSE16	SSE18	SSE17	SSE20	SSE24	SSE18	SE17	SSE14	SSE13	SE12	SE11	SE9	SSE15.1	SSE24
20-May	SE10	SE10	SE9	SE10	SE12	SE10	SE11	SSE14	SSE16	SSE14	SSE13	SE12	SSE13	SSE14	SE14	SE17	SE15	SSE14	SSE11	SE10	SSE11	SSE12	SSE12	SSE8	SSE12.1	SE17
21-May	SSE8	SSE10	SSE8	SSE11	SSE10	SSE9	S10	S10	S9	S8	S8	SSE10	SE12	S5	SE11	SE9	SSE10	SSE11	SSE13	SSE10	SSE10	SSE11	SSE13	S13	SSE9.7	S13
22-May	S13	S12	S12	S12	SSE13	SSE13	SSE13	S14	S14	S13	S11	SSW12	SSW12	SSW10	S12	S6	S6	S11	S12	S13	S12	SSE10	S12	S11	S11.4	S14
23-May	S13	SSE13	SSE13	SSE13	SSE13	SSE14	SSE12	SE12	SSE11	SSE15	S14	S12	S19	S19	S16	SSE20	SSE17	SE18	SSE13	SSE9	SSW7	S12	S6	S9	SSE12.8	SSE20
24-May	SSE14	SSE15	SSE15	SSE13	SSE15	SSE14	SSE14	SSE15	SSE16	SSE19	S18	S18	S17	S17	S20	S20	S15	S18	S17	S15	SSE12	S14	S14	S17	S15.7	S20
25-May	S18	S17	S15	S16	S17	S16	S17	S16	S20	S21	S21	S20	S21	S19	S18	S18	S19	S18	S16	S14	S10	SSE13	SSE16	SSE16	S17.1	S21
26-May	SSE18	SSE18	SSE19	SSE21	SSE22	SSE24	S23	S23	S20	S23	S23	S24	S26	S26	S22	S24	S23	S17	S14	W13	W18	SSW3	S5	SW11	S17.7	S26
27-May	SW8	WSW7	SSW6	SSW7	SSW5	SSW4	W7	WSW5	WNW9	WNW11	WNW11	WNW11	WNW10	WSW11	W16	WSW15	WSW17	WSW16	WSW14	W10	WSW7	SSW7	SSW8	SSW8	WSW8.4	WSW17
28-May	SSW8	SSW8	SSW8	SSW8	SSW8	SSW9	SSW9	SW8	WSW9	WSW11	SW13	SW12	SW12	SW12	SW11	SW10	SW10	SSW7	S7	S7	S8	SSE9	S10	S10	SSW8.5	SW13
29-May	S13	S12	S12	SSE12	SSE14	SSE16	SSE16	S16	S18	S18	S22	S21	S22	S22	S20	S21	S21	S19	S18	S16	SW14	W19	W13	W16	S15.0	S22
30-May	WNW19	W15	W9	W8	WSW10	WSW11	W9	WNW9	NW12	NW14	NNW12	NW8	NW8	W11	W12	WSW10	SW10	SW9	SW7	SSW8	S8	S9	S11	S11	W7.4	WNW19
31-May	S15	SSW11	SW9	SSW8	SSW6	SSW6	S3	ESE4	NE5	N1	S8	S6	NW4	N13	N16	N16	N19	NNE22	N22	N20	N16	NNW14	N15	NNW15	N5.2	N22
S8.2 S8.5 S9.2 S9.2 S9.3 S9.3 S8.0 S6.5 S5.7 SSW5.4 SSW5.4 SSW5.4 SW4.7 SW4.5 SSW4.5 SSW4.8 SSW4.8 S3.8 S3.6 SSE4.0 S4.0 SSE5.3 SSE6.4 S7.3																								Diurnal Average		
SSE23 S25 S28 S29 S27 S25 S27 S25 S22 S23 S23 S24 S26 S26 S22 S24 SSE24 NNE22 NNE23 N20 NW20 W19 SSE20 SSE20																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion - May 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	59	7.98	7.98
6 - 11	267	36.13	44.11
12 - 19	346	46.82	90.93
20 - 28	66	8.93	99.86
29 - 38	1	0.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 739

Total Number of Hours: 744



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion - May 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	4	2	3	4	4	3	3	6	5	5	4	4	4	3	3	59
6 - 11	7	7	7	1	1	8	28	34	39	34	29	24	17	16	10	5	267
12 - 19	22	11	6	1	0	5	21	106	81	12	10	15	13	16	22	5	346
20 - 28	4	5	5	0	0	0	0	10	38	2	1	0	0	0	1	0	66
29 - 38	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	27	20	5	5	17	52	153	165	53	45	43	34	36	36	13	739

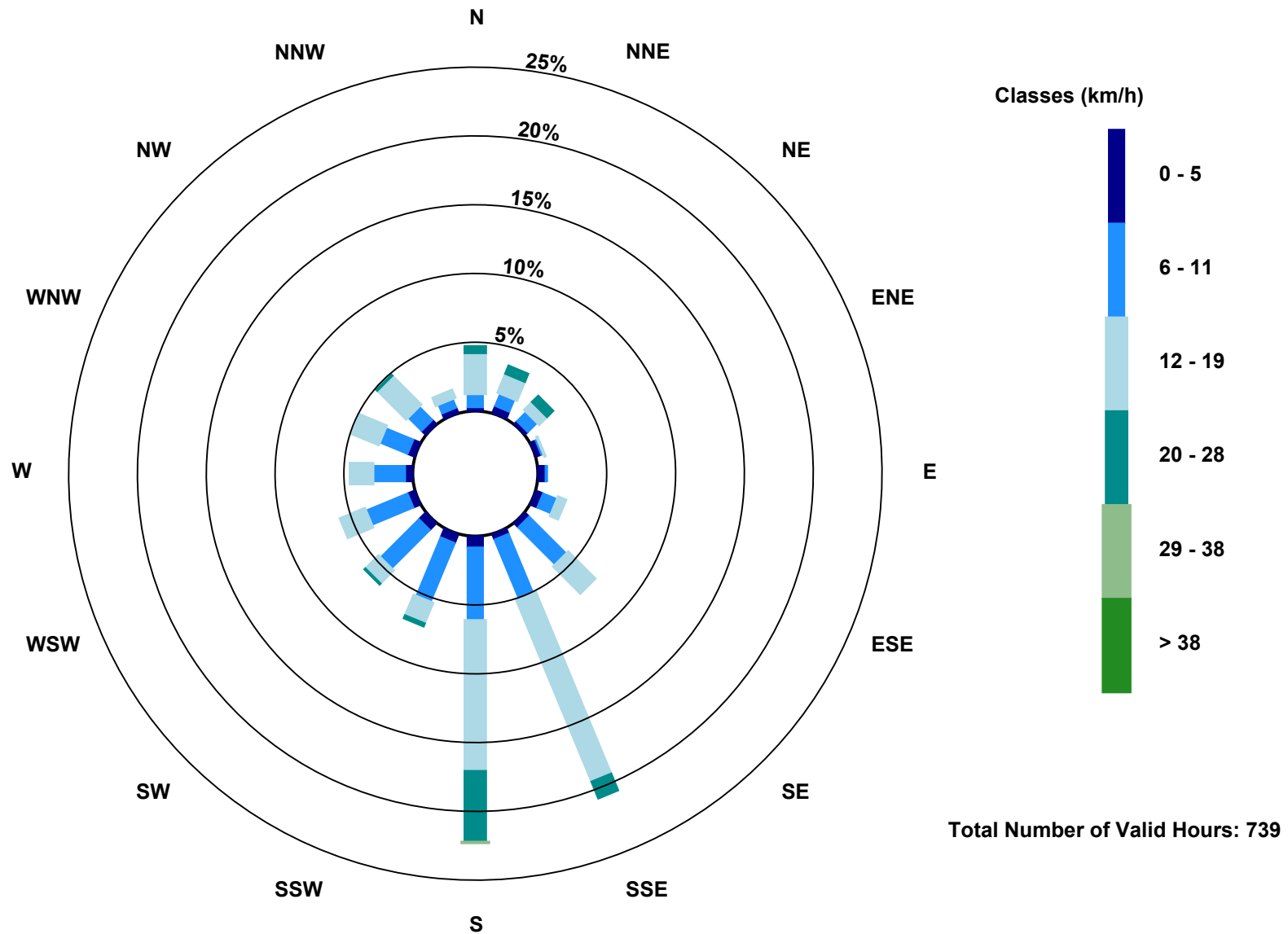
Total Number of Valid Hours: 739

Total Number of Hours: 744



Wood Buffalo Environmental Association
Wind Rose May 2025

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on May 29 21:00																		Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3							
Minimum Value: 0 km/h on May 13 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	2	3	UO	UO	UO	UO	UO	2	2	2	2	3	3	4	4	4	4	3	2	2	3	3	4	4	4
2-May	3	3	3	4	3	3	2	2	3	3	4	4	5	5	5	5	4	3	1	2	1	1	1	3	5
3-May	3	3	2	3	2	3	3	4	5	4	4	4	4	5	5	5	4	3	4	4	6	5	3	2	6
4-May	4	5	4	3	2	2	4	3	3	2	2	3	5	5	3	4	7	3	3	3	3	3	4	4	7
5-May	3	3	3	2	2	2	3	4	4	4	4	4	5	5	5	4	4	3	2	1	1	1	2	3	5
6-May	3	4	5	5	6	6	6	5	6	6	6	6	7	7	6	6	6	6	6	5	4	4	4	4	7
7-May	5	6	7	7	7	7	7	7	6	6	6	5	5	5	4	4	4	3	4	3	3	2	3	3	7
8-May	3	2	2	2	3	5	3	2	3	4	4	3	4	6	4	5	6	5	5	3	2	1	2	2	6
9-May	1	1	1	2	2	3	3	4	4	5	6	5	5	5	5	5	5	4	2	2	2	2	2	1	6
10-May	2	3	3	2	1	2	1	4	3	3	4	4	4	3	3	3	3	3	2	1	1	1	1	1	4
11-May	1	1	2	2	3	3	3	3	1	2	3	3	6	3	3	2	2	3	3	2	1	2	1	1	6
12-May	1	1	1	2	1	2	2	4	5	5	5	5	6	5	6	6	5	5	5	3	4	3	4	1	6
13-May	1	1	1	0	1	1	1	2	2	3	4	5	3	4	3	2	6	5	2	2	2	3	3	4	6
14-May	4	5	5	4	4	4	3	3	4	3	3	3	5	5	6	6	6	5	6	5	4	4	4	4	6
15-May	4	4	3	3	4	3	4	5	4	4	4	4	4	5	5	4	4	4	4	3	2	1	1	1	5
16-May	1	1	1	1	2	1	1	2	3	3	4	4	5	5	5	5	4	4	4	3	2	4	4	5	5
17-May	5	5	5	4	5	4	5	5	4	4	5	4	5	5	4	4	4	4	3	3	3	3	3	4	5
18-May	3	3	3	3	3	4	4	4	4	4	5	5	5	5	4	5	4	4	4	3	1	3	2	2	5
19-May	3	3	4	4	4	4	3	4	4	4	5	5	5	5	5	6	6	5	5	4	4	3	3	3	6
20-May	3	3	3	3	4	5	3	4	4	4	4	3	4	4	4	4	5	4	3	3	3	3	3	3	5
21-May	2	3	2	2	2	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3	4	4
22-May	3	3	3	3	3	3	3	4	4	3	3	4	4	3	3	3	3	4	4	3	3	2	2	2	4
23-May	3	3	3	3	3	3	3	3	4	4	4	5	6	6	5	6	5	6	4	3	3	5	3	5	6
24-May	3	3	3	3	3	4	3	4	4	5	5	6	5	5	6	6	5	5	5	4	3	3	4	4	6
25-May	5	4	4	4	4	5	4	5	5	6	6	6	6	6	5	5	5	5	5	4	2	3	4	4	6
26-May	4	4	4	5	5	6	6	6	6	7	7	6	7	7	7	7	7	6	5	5	7	2	3	4	7
27-May	3	2	2	1	1	1	2	1	3	3	4	4	4	4	6	5	6	5	5	4	2	2	1	2	6
28-May	2	1	1	1	2	2	3	3	3	4	4	4	5	4	5	4	4	3	1	2	1	1	2	2	5
29-May	3	3	3	3	3	4	4	4	5	5	6	6	6	7	6	7	7	6	5	5	8	6	4	5	8
30-May	5	4	4	3	4	3	3	2	3	4	4	4	4	4	4	4	3	3	3	2	1	2	2	3	5
31-May	4	3	2	2	2	1	1	1	2	2	4	2	2	4	4	4	5	5	6	5	5	4	5	4	6
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

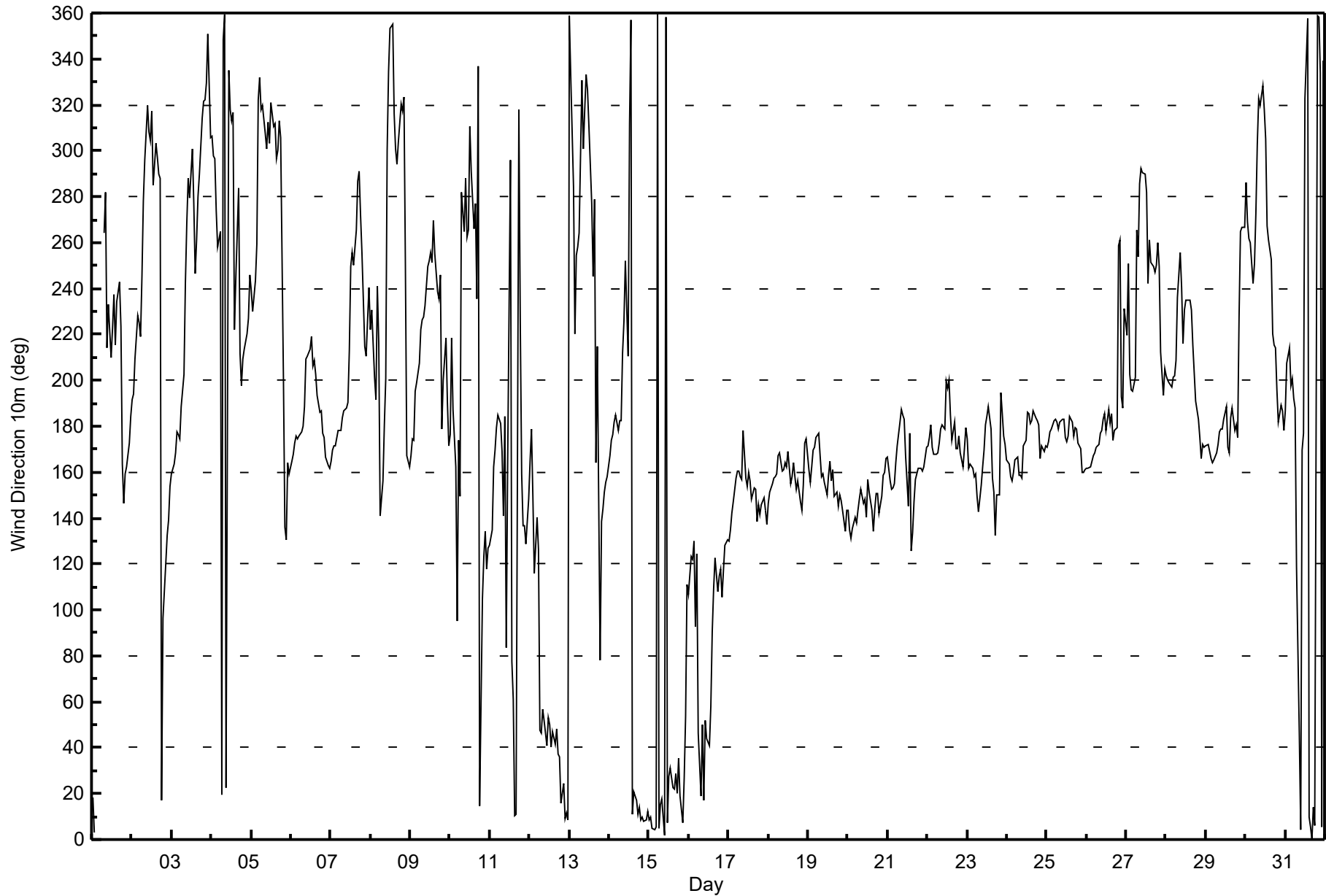
Hangingstone Expansion - May 2025

Direction of Maximum Speed: 172 deg on May 7 04:00																				Hours in Service:		744			
Direction of Maximum Daily Speed Average: 185.5 deg on May 6																				Hours of Data:		739			
Direction of Minimum Speed: 184 deg on May 11 10:00										Direction of Minimum Daily Speed Average: 1.7 deg on May 13										Hours of Missing Data:		5			
Monthly Average Direction: 183.6 deg																				Percent Operational Time:		99.3			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	19	3	UO	UO	UO	UO	UO	264	282	214	233	210	222	237	215	234	243	224	163	147	159	162	172	184	200.0
2-May	192	194	209	229	225	219	245	278	296	320	308	305	317	285	303	297	290	288	17	97	120	132	139	154	254.3
3-May	159	164	168	177	176	175	189	203	242	268	288	279	301	277	247	261	280	290	314	321	322	330	351	306	260.6
4-May	306	298	297	274	258	265	20	349	360	22	335	318	313	317	222	245	284	212	198	209	214	220	227	246	279.8
5-May	239	230	243	259	322	332	318	320	308	301	312	303	321	310	312	296	300	313	305	200	136	131	164	159	293.2
6-May	164	168	173	175	175	176	177	180	189	209	211	213	219	206	209	203	193	186	187	177	175	166	163	161	185.5
7-May	165	170	171	172	178	178	178	183	187	188	190	213	250	256	250	266	287	291	272	256	215	211	226	240	201.3
8-May	222	231	201	192	241	217	141	156	181	201	300	335	353	355	316	301	294	304	320	318	323	251	167	162	288.7
9-May	167	174	174	195	199	207	222	226	228	232	250	252	256	252	269	255	239	236	246	179	200	218	191	171	225.9
10-May	176	218	187	162	95	174	150	282	265	288	263	266	311	291	266	277	236	337	15	105	123	134	118	127	233.2
11-May	128	135	162	170	179	185	181	169	141	184	83	164	296	78	61	11	11	318	225	159	137	137	129	148	157.5
12-May	165	179	149	116	140	126	47	46	57	52	41	53	50	40	47	42	48	37	36	16	24	9	11	8	47.4
13-May	359	333	284	220	255	258	264	330	301	318	333	326	311	277	245	279	164	215	78	139	144	151	155	158	219.8
14-May	167	174	176	182	185	178	182	183	212	225	252	211	312	357	11	21	17	11	14	8	10	8	9	12	9.4
15-May	8	10	5	4	5	360	5	15	18	2	358	8	27	31	23	22	28	20	36	19	8	27	54	111	16.4
16-May	107	124	122	130	93	124	46	19	50	17	52	44	41	58	90	109	122	108	115	118	105	117	128	130	102.5
17-May	130	135	142	147	157	160	161	158	157	178	157	154	160	156	148	153	153	139	146	142	146	149	143	137	150.0
18-May	146	152	155	157	158	159	167	169	161	161	164	162	169	155	158	164	158	153	156	147	144	154	173	175	159.3
19-May	161	156	162	170	171	175	177	167	158	159	156	150	158	165	156	161	149	151	145	150	148	143	135	143	157.2
20-May	144	135	131	136	140	138	143	148	153	147	148	141	157	151	143	134	144	151	150	142	150	159	160	166	146.3
21-May	167	156	153	153	155	164	172	182	187	185	183	167	145	177	126	134	147	157	162	162	162	160	162	171	161.3
22-May	172	175	181	171	168	168	168	173	179	181	179	199	196	200	185	174	182	170	170	176	169	163	171	179	176.6
23-May	175	162	163	162	158	159	149	143	154	162	170	180	184	189	179	157	151	133	150	150	195	186	176	172	164.6
24-May	166	164	158	156	160	165	167	159	159	157	172	174	186	185	181	182	187	184	182	181	166	171	169	171	171.5
25-May	171	173	178	179	182	183	182	179	182	183	183	175	173	175	185	182	176	179	179	173	170	160	160	161	176.5
26-May	162	162	163	164	167	168	171	172	177	178	183	186	178	188	181	186	174	178	180	259	261	193	188	231	180.7
27-May	220	251	202	196	195	201	266	254	286	292	291	290	282	242	261	251	250	247	250	260	249	212	194	205	249.6
28-May	202	200	199	197	201	202	208	236	256	240	216	231	235	235	235	230	216	203	191	183	175	166	172	171	210.3
29-May	172	172	169	166	164	165	168	172	178	179	179	183	189	171	169	183	188	178	181	175	228	265	266	267	185.2
30-May	286	269	262	260	243	251	273	302	323	319	328	318	305	267	261	253	220	215	214	196	182	189	187	178	259.3
31-May	187	208	214	198	201	192	188	119	46	4	169	177	323	358	10	6	0	14	6	359	358	334	6	340	354.4
171.5 174.7 175.0 174.9 176.0 179.2 178.5 180.2 189.7 201.9 207.9 208.1 225.4 217.3 203.5 204.0 199.9 187.9 171.4 167.8 168.8 166.1 160.5 171.5																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Hangingstone Expansion - May 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - May 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on May 11 16:00																			Hours in Service: 744 Hours of Data: 739 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3						
Minimum Value: 6 deg on May 10 22:00																									
Percentiles: P ₁ = 8 P ₁₀ = 14 Q ₁ = 17 Median = 20 Q ₃ = 27 P ₉₀ = 44 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-May	17	20	UO	UO	UO	UO	UO	35	73	51	44	56	45	52	41	38	33	37	23	13	13	13	17	17	73
2-May	17	17	25	24	29	25	30	23	26	22	23	27	26	31	30	40	30	57	81	73	13	7	9	11	81
3-May	13	13	13	14	14	15	18	25	28	25	23	28	31	38	47	31	27	21	19	15	15	18	22	26	47
4-May	13	16	15	21	21	25	54	21	19	20	22	19	15	24	34	37	22	30	21	24	22	25	26	23	54
5-May	27	24	24	19	50	30	17	18	19	26	25	28	30	31	32	30	33	29	26	65	7	12	10	12	65
6-May	14	15	16	16	16	16	16	17	21	25	24	28	27	27	27	24	25	21	20	17	17	15	14	14	28
7-May	15	16	17	16	17	17	17	18	19	20	20	27	25	25	30	27	20	19	23	22	34	27	25	26	34
8-May	28	29	25	57	48	47	55	21	18	34	27	30	27	29	21	22	18	19	14	15	47	75	31	13	75
9-May	8	8	10	25	17	22	26	28	29	27	29	34	32	33	32	31	31	33	29	23	28	26	17	11	34
10-May	18	33	42	95	24	72	13	87	30	38	45	54	29	34	46	50	52	49	46	24	31	6	15	7	95
11-May	10	13	19	17	16	19	18	16	18	94	78	79	63	95	49	102	94	60	80	13	13	12	9	18	102
12-May	8	11	9	61	17	56	23	18	19	20	21	19	22	21	20	19	17	17	14	18	14	15	17	19	61
13-May	17	31	23	19	12	19	57	57	45	53	40	53	71	90	62	61	47	75	53	16	12	13	13	13	90
14-May	17	17	17	18	18	17	18	18	27	32	32	44	43	30	22	20	20	18	19	18	18	17	18	18	44
15-May	18	18	18	18	17	17	18	16	18	21	20	23	26	30	27	32	26	26	22	18	14	13	22	11	32
16-May	8	7	9	9	48	24	54	51	38	63	53	63	58	62	56	36	33	25	17	14	13	14	14	14	63
17-May	15	15	15	15	16	15	16	16	18	25	29	25	30	23	24	23	20	19	16	15	14	13	16	15	30
18-May	14	14	13	13	14	14	17	17	18	23	24	24	20	19	19	23	23	25	21	17	11	14	15	14	25
19-May	13	13	14	16	16	17	19	19	20	19	21	22	22	18	23	18	16	17	17	16	16	15	16	20	23
20-May	16	16	18	18	17	24	17	17	17	17	19	19	21	24	19	19	18	17	18	17	17	16	16	17	24
21-May	17	16	16	15	17	24	20	22	27	32	37	24	23	51	16	21	15	18	15	16	14	15	15	17	51
22-May	17	17	18	18	17	17	17	19	22	20	21	30	23	30	25	44	52	24	21	17	15	13	15	15	52
23-May	16	13	14	14	14	15	18	20	23	18	24	28	25	22	26	23	21	16	19	16	37	19	24	23	37
24-May	16	15	15	14	15	17	17	16	17	17	21	24	24	24	23	23	26	21	20	19	16	16	17	16	26
25-May	17	18	20	19	19	20	18	19	19	21	21	22	23	23	26	23	22	20	19	17	15	15	15	15	26
26-May	15	16	16	17	17	18	17	18	20	19	21	21	20	20	24	22	19	20	28	26	28	59	57	28	59
27-May	27	23	31	18	15	22	22	28	21	24	31	35	41	39	29	28	27	27	26	23	23	26	13	16	41
28-May	18	14	14	14	19	20	23	31	27	34	29	35	40	36	37	39	35	26	17	14	13	11	13	14	40
29-May	15	16	16	16	16	16	18	19	19	20	22	24	23	23	22	23	23	20	20	17	48	23	22	23	48
30-May	21	22	27	23	26	25	28	21	18	18	25	50	47	40	31	38	33	30	29	17	13	16	17	17	50
31-May	18	23	25	16	14	11	31	45	39	96	56	36	68	19	20	19	20	19	20	22	27	34	33	23	96
Diurnal Maximum																									
UO - Unstable Operation																									



<u>Site</u>	<u>Paramter</u>	<u>Date/Time</u>	<u>Reference</u>	<u>Period</u>	<u>Reported</u>	<u>Final</u>	<u>Status</u>
Ells River	TRS	14May25, 04:00		30-min	19	19.0	exc
Ells River	TRS	14May25, 04:30		30-min	28	27.7	exc
Ells River	TRS	14May25, 05:00		30-min	26	26.5	exc
Ells River	TRS	14May25, 05:30		30-min	9	9.3	exc
Ells River	TRS	14May25, 06:00		30-min	10	10.4	exc
Ells River	TRS	14May25, 06:30		30-min	14	13.9	exc
Ft. McKay S	TRS	14May25, 07:00		30-min	8	8.5	exc
Ells River	TRS	14May25, 07:00		30-min	6	6.1	exc
Buffalo Viewpoint	H2S	14May25, 10:00	440674	1-hr	12	12.3	exc
Barge Landing	PM2.5	28May25, 24:00	441502	24-hr	34	33.7	exc
Ft. McKay S	PM2.5	28May25, 24:00	441503	24-hr	29	29.4	exc
Bertha Ganter	PM2.5	29May25, 24:00	441504	24-hr	34	33.6	exc
Buffalo Viewpoint	PM2.5	29May25, 24:00	441505	24-hr	43	43.3	exc
Patricia McInnes	PM2.5	29May25, 24:00	441506	24-hr	62	62.0	exc
Athabasca Valley	PM2.5	29May25, 24:00	441507	24-hr	82	81.9	exc
Barge Landing	PM2.5	29May25, 24:00	441502	24-hr	33	38.1	exc
Ft. McKay S	PM2.5	29May25, 24:00	441503	24-hr	37	37.0	exc
Anzac	PM2.5	29May25, 24:00	441508	24-hr	140	140.5	exc
Wapasu	PM2.5	29May25, 24:00	441509	24-hr	40	40.2	exc
Stony Mtn.	PM2.5	29May25, 24:00	441510	24-hr	67	69.4	exc
Conklin	PM2.5	29May25, 24:00	441511	24-hr	72	72.3	exc
Janvier	PM2.5	29May25, 24:00	441512	24-hr	165	164.7	exc
Fort Hills	PM2.5	29May25, 24:00	441513	24-hr	35	34.8	exc
Surmont 2	PM2.5	29May25, 24:00	441514	24-hr	114	114.4	exc
Barge Landing	TRS	30May25, 05:30		30-min	4.947	4.947	nae
Barge Landing	TRS	30May25, 06:00		30-min	5.803	5.803	nae
Athabasca Valley	O3	29May25, 15:00	441206	1-hr	76	78.3	exc
Patricia McInnes	O3	29May25, 16:00	441207	1-hr	78	80.1	exc
Wapasu	O3	29May25, 16:00	441208	1-hr	75	74.8	nae
Bertha Ganter	PM2.5	30May25, 24:00	441504	24-hr	187	186.9	exc
Fort Hills	PM2.5	30May25, 24:00	441513	24-hr	161	160.7	exc
Buffalo Viewpoint	PM2.5	30May25, 24:00	441505	24-hr	227	227.1	exc
Patricia McInnes	PM2.5	30May25, 24:00	441506	24-hr	226	225.6	exc
Athabasca Valley	PM2.5	30May25, 24:00	441507	24-hr	322	322.9	exc
Fort Chip	PM2.5	30May25, 24:00	441515	24-hr	119	119.4	exc
Barge Landing	PM2.5	30May25, 24:00	441502	24-hr	213	213.0	exc
Ft. McKay S	PM2.5	30May25, 24:00	441503	24-hr	224	224.4	exc
Anzac	PM2.5	30May25, 24:00	441508	24-hr	247	247.1	exc
Wapasu	PM2.5	30May25, 24:00	441509	24-hr	127	127.3	exc



<u>Site</u>	<u>Paramter</u>	<u>Date/Time</u>	<u>Reference</u>	<u>Period</u>	<u>Reported</u>	<u>Final</u>	<u>Status</u>
Stony Mtn.	PM2.5	30May25, 24:00	441510	24-hr	130	129.7	exc
Conklin	PM2.5	30May25, 24:00	441511	24-hr	128	127.8	exc
Janvier	PM2.5	30May25, 24:00	441512	24-hr	180	180.4	exc
Surmont 2	PM2.5	30May25, 24:00	441514	24-hr	195	194.6	exc
Ells River	PM2.5	30May25, 24:00	441516	24-hr	199	198.7	exc
Anzac	PM2.5	31May25, 24:00	441508	24-hr	101	101.0	exc
Wapasu	PM2.5	31May25, 24:00	441509	24-hr	153	152.6	exc
Stony Mtn.	PM2.5	31May25, 24:00	441510	24-hr	126	126.1	exc
Conklin	PM2.5	31May25, 24:00	441511	24-hr	124	123.6	exc
Janvier	PM2.5	31May25, 24:00	441512	24-hr	104	104.4	exc
Fort Hills	PM2.5	31May25, 24:00	441513	24-hr	242	242.3	exc
Surmont 2	PM2.5	31May25, 24:00	441514	24-hr	95	95.3	exc
Ells River	PM2.5	31May25, 24:00	441516	24-hr	247	247.0	exc
Bertha Ganter	PM2.5	31May25, 24:00	441504	24-hr	239	238.5	exc
Buffalo Viewpoint	PM2.5	31May25, 24:00	441505	24-hr	187	187.5	exc
Patricia McInnes	PM2.5	31May25, 24:00	441506	24-hr	118	118.5	exc
Athabasca Valley	PM2.5	31May25, 24:00	441507	24-hr	153	152.9	exc
Fort Chip	PM2.5	31May25, 24:00	441515	24-hr	111	111.2	exc
Barge Landing	PM2.5	31May25, 24:00	441502	24-hr	244	244.2	exc
Ft. McKay S	PM2.5	31May25, 24:00	441503	24-hr	259	258.9	exc
Conklin	O3	31May25, 14:00	441330	1-hr	79	81.0	exc

*status legend:

late	exceedance, raw values were not found to be in exceedance in real time, and/or were not reported, but final values were found to be an exceedance after data processing.
exc	exceedance, raw values reported in real time were confirmed to be in exceedance after data processing.
nae	not an exceedance, raw values reported in real time were found not in exceedance after data processing.
ret	retracted, reported exceedance was found to be not an exceedance after investigation of measurement system status and/or validation of raw data in conjunction with all associated measurement

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

June 27, 2025
10:06:01 AM
Request # 4817450

Submitted by: EN6138
Submission Date: Jun 27, 2025 10:05:43 AM

File Type

Calibration Report

File Name

CAL-WBEA-202505.pdf

Total Number of Files: 1

*** End of Report ***

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

June 27, 2025
10:06:35 AM
Request # 4817451

Submitted by: EN6138
Submission Date: Jun 27, 2025 10:06:29 AM

File Type

Airshed Monitoring Report

File Name

WBEA-202505.pdf

Total Number of Files: 1

*** End of Report ***

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

June 27, 2025
10:07:50 AM
Request # 4817453

Submitted by: EN6138
Submission Date: Jun 27, 2025 10:07:26 AM

File Type

Ambient Data

File Name

AMB-WBEA-202505-V00.xml

Total Number of Files: 1

*** End of Report ***



End of Report