WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION

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Wood Buffalo Environmental Association

SEPTEMBER 2025

MONTHLY REPORT

CONTINUOUS MONITORING

October 31, 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
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October 31, 2025

Director, Environmental Monitoring and Evaluation Branch
Alberta Environment and Protected Areas
11th Floor, Oxbridge Place
9820 106 Street
Edmonton, Alberta T5K 2J6

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

Enclosed is the September 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 19 – Firebag
AMS 02 – Mildred Lake	AMS 20 – MacKay River
AMS 03 – Lower Camp (Meteorology)	AMS 21 – Conklin
AMS 04 – Buffalo Viewpoint	AMS 22 – Janvier
AMS 05 – Mannix	AMS 23 – Fort Hills
AMS 06 – Patricia McInnes	AMS 25 – Waskōw ohci Pimâtisiwin
AMS 07 – Athabasca Valley	AMS 27 – Jackfish 2/3
AMS 08 – Fort Chipewyan	AMS 29 – Surmont 2
AMS 09 – Barge Landing	AMS 30 – Ells River
AMS 11 – Lower Camp (Air Quality)	AMS 31 – Blackrod
AMS 13 – Fort McKay South	AMS 33 – Monday Creek
AMS 14 – Anzac	AMS 505 – Sawbones Bay
AMS 17 - Wapasu	AMS 507 – Kirby South
AMS 18 – Stony Mountain	

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
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 McMurray 468 First Nation
Chard Métis Nation	Lakeland Métis
Chipewyan Prairie Dene First Nation	McMurray Métis
Conklin Resource Development Advisory Committee	Mikisew Cree First Nation
Fort Chipewyan Métis Nation	Smith's Landing First Nation
Fort McKay First Nation	Willow Lake Métis Nation
Fort McKay Métis Nation	

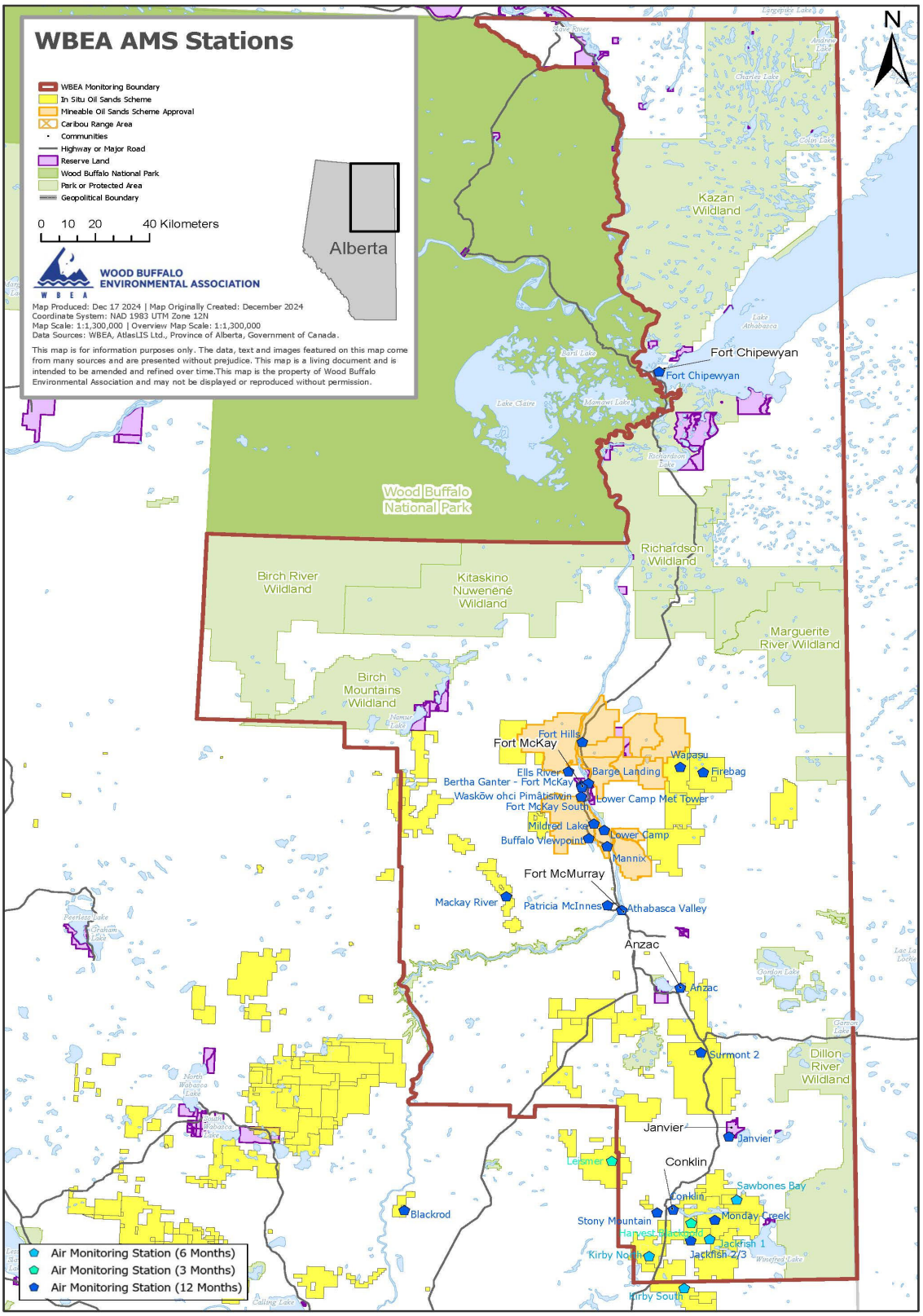


Figure 1. Map of WBEA Continuous Monitoring Network

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, H_2S, NH_3, NO_2, and O_3.

There were three ambient ground-level concentrations in excess of the 1-hour SO_2 objective reported to AEPA; following data validation and processing, the exceedances were confirmed.

There were one hundred twenty 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 thirty-nine ambient ground-level concentrations in excess of the 30-minute TRS guideline reported to AEPA; following data validation and processing, there were thirty-one exceedances 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, NO_2 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 NO_2 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 September 2025, there were no instances of monitoring instruments operating less than 90% of the time.

3.2 Intermittent Monitoring

The results for time-integrated sampling of dustfall, precipitation, PAH, TSP, VOC, $PM_{2.5}$ ECOC, $PM_{2.5,}$ and PM_{10} will be submitted in the 2025 Annual Report.

3.3 General Network Notes

The Ammonia (NH_3) 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 (CH_4) measurements are collected at some air monitoring stations in the WBEA network using the Thermo Environmental model 55i direct THC/CH_4/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 NH_3 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 NH_3 gas, and this is an inherent behavior in the NH_3 analyzer operations due to the properties of the NH_3 gas. Data for 1-2 hours following the daily spans have been reported as invalid for a total of 29 hours this month.

Maintenance to complete calibration of the NH_3 analyzer over two days on September 4 and 5 resulted in 18 hours of downtime.

Cleaning of the manifold on September 11 interrupted the normal operations of all gaseous analyzers, except for NO_x/NO/NO_2, for 2 hours.

A station power failure on September 17 interrupted the normal operations of NO_x/NO/NO_2 and TRS analyzers for 1 hour.

Maintenance to replace the support gas cylinder of the THC/NMHC/CH_4 analyzer on September 23 resulted in 5 hours of downtime.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 4 hours of invalid data.

Station 2, Mildred Lake

Cleaning of the manifold on September 8 interrupted the normal operations of the H_2S analyzer for 1 hour.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer throughout the month resulted in 22 hours of invalid data.

Maintenance to recalibrate and adjust the span of THC/NMHC/CH_4 analyzer on September 8 and 24 resulted in 14 hours of downtime.

Station 3, Lower Camp – Meteorology

The relative humidity sensor at 45-meter elevation operated out of range throughout the month resulting in 56 hours of invalid data.

Station 4, Buffalo Viewpoint

Maintenance to clean the reaction cell of the NO_x/NO/NO_2 analyzer on September 24 to 25 resulted in 21 hours of downtime.

Station 5, Mannix

Cleaning of the manifold on September 15 interrupted the normal operations of the H_2S analyzer for 1 hour.

Maintenance to replace support gas cylinder of the THC/NMHC/CH_4 analyzer on September 23 resulted in 2 hours of downtime.

Maintenance to reboot the H_2S analyzer on September 29 resulted in 6 hours of downtime.

Station 6, Patricia McInnes

The NH_3 analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. NH_3 analyzers require additional time for stabilization after being exposed to high concentrations, this is due to the physical properties of the NH_3

gas. Data for 1-2 hours following each daily span has been reported as invalid for a total of 58 hours this month.

Cleaning of the manifold on September 11 interrupted the normal operations of all gaseous analyzers for 1 hour.

Station 7, Athabasca Valley

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer on September 11 and 12 resulted in 32 hours of invalid data.

Cleaning of the manifold on September 19 interrupted the normal operations of all gaseous analyzers, except for O_3 analyzer, for 1 hour.

The relative humidity sensor operated out of range on September 17 resulting in 2 hours of invalid data.

Station 8, Fort Chipewyan

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

Note: Automated daily zero-response checks of the O_3 analyzer did not meet WBEA's QC acceptance criteria for September. Therefore, the calibrator zeros from the multi-point calibrations conducted in August and September were used to validate the analyzer baseline response.

Station 9, Barge Landing

Failure to record data of the $PM_{2.5}$ analyzer on September 5 resulted in 1 hour of invalid data.

Station 11, Lower Camp

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer on September 1 and 2 resulted in 27 hours of invalid data.

Flatlines in the output signal of the wind sensor throughout the month resulted in 13 hours of invalid data.

Station 13, Fort McKay South

Unstable operation of the NOX/NO/NO_2 analyzer due to inconsistent response on September 21 to 22 resulted in 28 hours of downtime. Subsequent maintenance to replace the sample pump on September 22 to 23 resulted in an additional 27 hours of downtime.

The relative humidity sensor operated out of range on September 5, 14, and 17 resulting in 8 hours of invalid data.

Station 14, Anzac

Cleaning of the manifold on September 15 interrupted the normal operations of the NO_x/NO/NO_2, O_3, and THC/NMHC/CH_4 analyzers for 2 hours.

Maintenance to run converter efficiency response of the TRS analyzers on September 15 and 16 resulted in 18 hours of downtime.

Unstable operation due to excessive baseline drift of the TRS analyzer on September 24 and 25 resulted in 28 hours of invalid data.

Maintenance to replace the converter on September 25 interrupted the normal operation of the TRS analyzer for 7 hours.

Station 17, Wapasu

Maintenance to replace O_3 analyzer on September 3 resulted in 25 hours of downtime.

Maintenance to replace calibration gas cylinder on September 15 interrupted the normal operation of the THC analyzer for 2 hours.

Maintenance to replace calibration gas cylinder on September 16 interrupted the normal operations of the THC and SO_2 analyzers for 2 hours.

Cleaning of the manifold on September 25 interrupted the normal operation of all gaseous analyzers except for the NO_x/NO/NO_2 analyzer for 2 hours.

Station 18, Stony Mountain

Unstable operation due to depleting support gas cylinder of the THC/NMHC/CH_4 on September 18 resulted in 7 hours of invalid data.

Unstable operation due to inconsistent response of the PM2.5 analyzer on September 22 resulted in 20 hours of invalid data. Subsequent maintenance to replace the analyzer on September 23 resulted in an additional 3 hours of downtime.

Station 19, Firebag

A flatline in the output signal of the wind sensor on September 2 resulted in 1 hour of invalid data.

Station 20, MacKay River

Flatlines in the output signal of the wind sensor on September 1 and 8 resulted in 3 hours of invalid data.

Station 21, Conklin

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 74 hours of invalid data.

The relative humidity sensor operated out of range throughout the month resulted in 12 hours of invalid data.

Station 22, Janvier

Cleaning of the manifold on September 15 interrupted the normal operation of the NO_x/NO/NO_2, O_3, and TRS analyzers for 2 hours.

The relative humidity sensor operated out of range throughout the month resulting in 3 hours of invalid data.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 14 hours of invalid data.

Station 23, Fort Hills

Flatline in the output signal of the wind sensor on September 8 resulted in 1 hour of invalid data.

Station 25, Waskōw ohci Pimâtisiwin

Cleaning of the manifold on September 23 interrupted the normal operation of all gaseous analyzers for 1 hour.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 4 hours of invalid data.

Station 27, Jackfish 2/3

Unstable operation due to excessive baseline drift of the H_2S analyzer on September 7 resulted in 1 hour of invalid data.

An internal audit on September 11 interrupted the normal operations of all air quality analyzers for 2 hours.

Cleaning of the manifold on September 18 interrupted the normal operation of the NO_x/NO/NO_2 and SO_2 analyzers for 1 hour.

Flatline in the output signal of the wind sensor on September 11 resulted in 2 hours of invalid data.

Station 29, Surmont 2

Cleaning of the manifold on September 5 interrupted the normal operation of the H_2S and NO_x/NO/NO_2 analyzers for 1 hour.

The relative humidity sensor operated out of range throughout the month resulting in 10 hours of invalid data.

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

Station 30, Ells River

Failure to record data of all the parameters except for the NO_x/NO/NO_2 analyzer on September 3 resulted in 1 hour of invalid data.

Unstable operation due to a failing pump of the SO2 analyzer on September 7 to 8 resulted in 30 hours of invalid data.

Maintenance to verify daily QA response of the TRS analyzer on September 15 resulted in 2 hours of downtime.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 13 hours of invalid data.

Note: Ambient condition impacted span check performance of the TRS analyzer, affecting compliance with AMD criteria on several days for the month of September.

Station 31, Blackrod

Maintenance to replace the internal pump and charcoal beads of the NO_X/NO/NO_2 analyzer on September 9 resulted in 19 hours of downtime.

Station 33, Monday Creek

Flatlines in the output signal of the wind sensor on throughout the month resulted in 52 hours of invalid data. Maintenance to replace the wind sensor on September 9 resulted in 1 hour of downtime.

Station 505, Sawbones Bay

No operational issues to report.

Station 507, Kirby South

Cleaning of the manifold on September 18 interrupted the normal operation of the H_2S and NO_X/NO/NO_2 analyzers for 1 hour.

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.

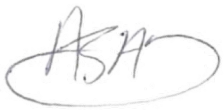
Level one (L1) data review was completed by the Field Technicians responsible for each respective air monitoring station. Level two (L2) data validation, report preparation, and submission were completed by Asad Hidayat, Denny Estador and Karina Fenwick of WBEA. The WBEA has retained the services of 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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R00_2509

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

Created: Oct 30, 2025 11:45:11

APPROVAL NUMBERS	REPORT DATE	
	MONTH	YEAR
289664-00-00	9	2025
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		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
SO2(ppb)	1	100	-	-	199	1	18.7	0
SO2(ppb)	2	100	-	-	52.7	0	6.4	0
SO2(ppb)	4	100	-	-	55.4	0	14.8	0
SO2(ppb)	5	100	-	-	26.6	0	7.4	0
SO2(ppb)	6	100	-	-	16.2	0	2.5	0
SO2(ppb)	7	100	-	-	20.0	0	1.8	0
SO2(ppb)	8	100	-	-	4.6	0	0.8	0
SO2(ppb)	9	100	-	-	260.0	1	18.2	0
SO2(ppb)	11	100	-	-	60.6	0	8.9	0
SO2(ppb)	13	100	-	-	128.8	0	15.2	0
SO2(ppb)	14	100	-	-	7.0	0	1.1	0
SO2(ppb)	17	99	-	-	9.6	0	3.0	0
SO2(ppb)	18	100	-	-	2.6	0	0.9	0
SO2(ppb)	19	100	-	-	10.1	0	2.0	0
SO2(ppb)	20	100	-	-	23.1	0	4.5	0
SO2(ppb)	21	100	-	-	3.4	0	1.0	0
SO2(ppb)	22	100	-	-	2.0	0	0.9	0
SO2(ppb)	23	100	-	-	61.5	0	7.2	0
SO2(ppb)	25	100	-	-	181.7	1	16.7	0
SO2(ppb)	27	99	-	-	19.1	0	2.0	0
SO2(ppb)	29	100	-	-	8.1	0	1.4	0
SO2(ppb)	30	96	-	-	88.3	0	13.3	0
SO2(ppb)	31	100	-	-	4.7	0	1.0	0
SO2(ppb)	33	100	-	-	14.8	0	1.7	0
SO2(ppb)	505	100	-	-	43.4	0	12.0	0
SO2(ppb)	507	100	-	-	11.4	0	2.7	0
H2S(ppb)	1	100	-	-	5.3	0	1.8	0
H2S(ppb)	2	100	-	-	6.7	0	1.5	0
H2S(ppb)	4	100	-	-	6.1	0	1.5	0
H2S(ppb)	5	99	-	-	4.7	0	1.0	0
H2S(ppb)	11	100	-	-	9.7	0	2.8	0
H2S(ppb)	17	100	-	-	1.8	0	0.6	0
H2S(ppb)	19	100	-	-	1.4	0	0.4	0
H2S(ppb)	20	100	-	-	1.5	0	0.4	0
H2S(ppb)	25	100	-	-	6.6	0	1.9	0
H2S(ppb)	27	100	-	-	1.1	0	0.4	0
H2S(ppb)	29	100	-	-	0.7	0	0.3	0
H2S(ppb)	31	100	-	-	1.0	0	0.5	0
H2S(ppb)	33	100	-	-	0.6	0	0.3	0
H2S(ppb)	505	100	-	-	1.3	0	0.6	0
H2S(ppb)	507	100	-	-	0.6	0	0.3	0
TRS(ppb)	1	100	7.9	10	5.6	-	2.0	-
TRS(ppb)	6	100	1.5	0	1.4	-	0.6	-
TRS(ppb)	7	100	2.8	0	2.5	-	0.9	-
TRS(ppb)	8	100	0.8	0	0.8	-	0.4	-
TRS(ppb)	9	100	11.5	9	8.2	-	1.8	-
TRS(ppb)	13	100	7.3	7	5.6	-	1.9	-
TRS(ppb)	14	93	3.4	0	3.3	-	0.7	-
TRS(ppb)	18	100	1.1	0	1.1	-	0.6	-
TRS(ppb)	21	100	0.7	0	0.6	-	0.4	-
TRS(ppb)	22	100	0.6	0	0.6	-	0.4	-
TRS(ppb)	23	100	5.8	1	4.8	-	1.4	-
TRS(ppb)	30	100	6.9	4	5.8	-	1.6	-
THC(ppm)	1	99	-	-	5.4	-	2.8	-
THC(ppm)	2	95	-	-	5.0	-	2.6	-
THC(ppm)	4	100	-	-	5.7	-	2.6	-
THC(ppm)	5	100	-	-	3.3	-	2.4	-
THC(ppm)	6	100	-	-	2.8	-	2.3	-
THC(ppm)	7	95	-	-	2.6	-	2.2	-
THC(ppm)	9	100	-	-	3.3	-	2.4	-
THC(ppm)	11	96	-	-	4.6	-	3.2	-
THC(ppm)	13	100	-	-	4.2	-	2.7	-

APPROVAL NUMBERS	REPORT DATE	
	MONTH	YEAR
289664-00-00	9	2025
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		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
THC(ppm)	14	100	-	-	2.2	-	2.0	-
THC(ppm)	17	99	-	-	3.6	-	2.5	-
THC(ppm)	18	99	-	-	2.2	-	2.1	-
THC(ppm)	19	100	-	-	3.3	-	2.5	-
THC(ppm)	20	100	-	-	3.1	-	2.6	-
THC(ppm)	21	100	-	-	3.3	-	2.4	-
THC(ppm)	22	100	-	-	2.2	-	2.1	-
THC(ppm)	23	100	-	-	7.9	-	3.1	-
THC(ppm)	29	100	-	-	2.8	-	2.5	-
THC(ppm)	30	100	-	-	7.6	-	3.5	-
THC(ppm)	507	100	-	-	3.3	-	2.7	-
O3(ppb)	1	100	-	-	52.9	0	26.8	-
O3(ppb)	4	100	-	-	58.4	0	36.0	-
O3(ppb)	6	100	-	-	55.4	0	33.9	-
O3(ppb)	7	100	-	-	52.4	0	29.7	-
O3(ppb)	8	100	-	-	58.8	0	35.7	-
O3(ppb)	13	100	-	-	60.2	0	29.4	-
O3(ppb)	14	100	-	-	57.1	0	34.8	-
O3(ppb)	17	96	-	-	52.8	0	41.7	-
O3(ppb)	18	100	-	-	52.2	0	40.2	-
O3(ppb)	21	100	-	-	56.5	0	32.8	-
O3(ppb)	22	100	-	-	55.2	0	33.2	-
NO2(ppb)	1	100	-	-	34.7	0	13.8	-
NO2(ppb)	4	97	-	-	48.2	0	10.6	-
NO2(ppb)	6	100	-	-	16.6	0	5.9	-
NO2(ppb)	7	100	-	-	24.0	0	7.0	-
NO2(ppb)	8	100	-	-	14.8	0	6.2	-
NO2(ppb)	9	100	-	-	38.7	0	15.5	-
NO2(ppb)	13	92	-	-	28.3	0	11.0	-
NO2(ppb)	14	100	-	-	22.3	0	3.3	-
NO2(ppb)	17	100	-	-	31.5	0	4.2	-
NO2(ppb)	18	100	-	-	4.1	0	2.0	-
NO2(ppb)	19	100	-	-	17.2	0	5.1	-
NO2(ppb)	20	100	-	-	14.1	0	5.6	-
NO2(ppb)	21	100	-	-	10.4	0	2.0	-
NO2(ppb)	22	100	-	-	6.5	0	2.0	-
NO2(ppb)	23	100	-	-	44.6	0	20.4	-
NO2(ppb)	27	99	-	-	6.7	0	2.0	-
NO2(ppb)	29	100	-	-	8.8	0	2.0	-
NO2(ppb)	30	100	-	-	45.4	0	15.3	-
NO2(ppb)	31	97	-	-	15.7	0	7.5	-
NO2(ppb)	33	100	-	-	16.3	0	2.9	-
NO2(ppb)	505	100	-	-	19.6	0	7.5	-
NO2(ppb)	507	100	-	-	6.9	0	2.1	-
CO(ppm)	7	100	-	-	1.2	0	0.5	-
NH3(ppb)	1	93	-	-	13.9	0	2.9	-
NH3(ppb)	6	92	-	-	17.5	0	3.2	-
PM2.5(ug/m3)	1	100	-	-	170.2	0	68.5	12
PM2.5(ug/m3)	4	100	-	-	171.2	0	63.0	11
PM2.5(ug/m3)	6	100	-	-	265.0	0	75.9	8
PM2.5(ug/m3)	7	100	-	-	249.2	0	70.8	8
PM2.5(ug/m3)	8	100	-	-	144.5	0	60.2	6
PM2.5(ug/m3)	9	100	-	-	185.5	0	84.1	12
PM2.5(ug/m3)	13	100	-	-	168.2	0	78.4	13
PM2.5(ug/m3)	14	100	-	-	161.0	0	54.6	7
PM2.5(ug/m3)	17	100	-	-	609.1	0	172.2	8
PM2.5(ug/m3)	18	97	-	-	225.6	0	68.1	4
PM2.5(ug/m3)	21	100	-	-	112.0	0	54.2	5
PM2.5(ug/m3)	22	100	-	-	179.3	0	64.4	6
PM2.5(ug/m3)	23	100	-	-	167.8	0	63.6	13
PM2.5(ug/m3)	29	100	-	-	132.0	0	44.1	4
PM2.5(ug/m3)	30	100	-	-	134.0	0	47.6	3

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

Created: Oct 30, 2025 11:45:11

APPROVAL NUMBERS	REPORT DATE MONTH	YEAR
289664-00-00 241311-00-00 20809-02-00 149968-01-00 237382-00-00 48522-01-00	9	2025

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE MAXIMUM CONCENTRATION	30-MIN AVERAGE NO. READINGS > REGULATION	ONE-HOUR AVERAGE MAXIMUM CONCENTRATION	ONE-HOUR AVERAGE NO. READINGS > REGULATION	24-HOUR AVERAGE MAXIMUM CONCENTRATION	24-HOUR AVERAGE NO. READINGS > REGULATION
240008-00-00	WS(km/h)	1	99	-	-	-	-	-	-
48263-01-00	WS(km/h)	2	100	-	-	-	-	-	-
224816-00-00	WS(km/h)	4	100	-	-	-	-	-	-
151469-01-00	WS(km/h)	5	100	-	-	-	-	-	-
189942-00-00	WS(km/h)	6	100	-	-	-	-	-	-
206355-00-00	WS(km/h)	7	100	-	-	-	-	-	-
46586-00-00	WS(km/h)	8	99	-	-	-	-	-	-
73203-02-00	WS(km/h)	9	100	-	-	-	-	-	-
216466-01-00	WS(km/h)	11	98	-	-	-	-	-	-
137467-01-00	WS(km/h)	13	100	-	-	-	-	-	-
236394-00-00	WS(km/h)	14	100	-	-	-	-	-	-
254465-00-00	WS(km/h)	17	99	-	-	-	-	-	-
094-03-00	WS(km/h)	18	100	-	-	-	-	-	-
80105-01-00	WS(km/h)	19	100	-	-	-	-	-	-
305529-00-00	WS(km/h)	20	100	-	-	-	-	-	-
318401-00-00	WS(km/h)	21	90	-	-	-	-	-	-
026-03-00	WS(km/h)	22	98	-	-	-	-	-	-
364232-00-00	WS(km/h)	23	100	-	-	-	-	-	-
228044-00-00	WS(km/h)	25	99	-	-	-	-	-	-
247548-00-00	WS(km/h)	27	100	-	-	-	-	-	-
231302-00-00	WS(km/h)	29	99	-	-	-	-	-	-
246984-01-00	WS(km/h)	30	98	-	-	-	-	-	-
153125-01-00	WS(km/h)	31	100	-	-	-	-	-	-
	WS(km/h)	33	93	-	-	-	-	-	-
	WS(km/h)	505	100	-	-	-	-	-	-
	WS(km/h)	507	100	-	-	-	-	-	-

SIGNATURE OF ASSOCIATION REPRESENTATIVE

FOR ALBERTA ENVIRONMENT USE ONLY

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS01
BERTHA GANTER - FORT MCKAY
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY - BERTHA GANTER (AMS01)
SEPTEMBER 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	684	34	36	99.72	-	-	199.2	1	18.7	0
H2S(ppb) Average	682	36	38	99.72	-	-	5.3	0	1.8	0
TRS(ppb) Average	681	36	39	99.58	7.9	10	5.6	-	2	-
THC(ppm) Average	679	34	41	99.03	-	-	5.4	-	2.8	-
NMHC(ppm) Average	679	34	41	99.03	-	-	0.554	-	0.135	-
CH4(ppm) Average	679	34	41	99.03	-	-	5.2	-	2.7	-
O3 (ppb) Average	683	35	37	99.72	-	-	52.9	0	26.8	-
NO2 (ppb) Average	683	36	37	99.86	-	-	34.7	0	13.8	-
NO (ppb) Average	683	36	37	99.86	-	-	92.4	-	19.9	-
NOX (ppb) Average	683	36	37	99.86	-	-	112.9	-	33	-
NH3 (ppb) Average	623	43	97	92.5	-	-	13.9	0	2.9	-
PM2.5 (ug/m3) Average	717	3	3	100	-	-	170.2	0	68.5	12
Temperature 2 m (C) Average	720	0	0	100	-	-	29.9	-	19.2	-
Temperature 10 m (C) Average	720	0	0	100	-	-	29.3	-	19.8	-
Relative Humidity (%) Average	720	0	0	100	-	-	99	-	81.3	-
Wind Speed 10 m (km/h) Average	712	4	8	99.44	-	-	21	-	11	-
Wind Direction 10 m (deg) Average	712	4	8	99.44	-	-	-	-	-	-
Precipitation (mm) Total	720	0	0	100	-	-	1.2	-	1.7	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	59	-	19.7	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	664.2	-	204.5	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	1.3	9.1	-	0	0	0	0.1	0.5	2.2	199.2
H2S (ppb) Average	682	0.57	0.8	-	0	0.1	0.1	0.3	0.6	1.5	5.3
TRS (ppb) Average	681	0.67	0.8	-	0.1	0.2	0.2	0.4	0.7	1.5	5.6
THC (ppm) Average	679	2.26	0.3	-	2	2	2.1	2.2	2.3	2.6	5.4
NMHC(ppm) Average	679	0.045	0.065	-	0	0	0	0	0.1	0.1	0.554
CH4(ppm) Average	679	2.22	0.3	-	2	2	2.1	2.1	2.3	2.5	5.2
O3 (ppb) Average	683	17.44	11.3	-	0	2	8	17.5	25.9	31.8	52.9
NO2 (ppb) Average	683	4.89	5.2	-	0	0	0.8	3.5	7	12	34.7
NO (ppb) Average	683	2.49	7.8	-	0	0	0	0.5	1.5	5.7	92.4
NOX (ppb) Average	683	7.38	11.2	-	0	0.4	1.4	4.1	8.9	17.6	112.9
NH3 (ppb) Average	623	0.21	1.6	-	0	0	0	0	0	0	13.9
PM2.5 (ug/m3) Average	717	29.88	24.1	-	1.7	6.8	14.2	24	37.5	60.7	170.2
Temperature 2 m (C) Average	720	14.39	5.7	-	0.1	7.2	10.5	14.1	18.3	22.3	29.9
Temperature 10 m (C) Average	720	14.7	5.3	-	1.6	8.3	11.1	14.3	18.1	22	29.3
Relative Humidity (%) Average	720	65.99	21	-	22.1	36.3	49.9	64.8	84.6	94.6	99
Wind Speed 10 m (km/h) Average	712	6.5	4	-	0	2	3	5	9	13	21
Wind Direction 10 m (deg) Average	712	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	6.78	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	720	8.25	12.8	-	0.2	0.8	1.1	1.7	8.4	31.7	59
Global Solar Radiation (W/m2) Average	720	149.52	199	-	0	0	0	18.2	293.7	500.9	664.2

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
All Gaseous Analyzers (except Nox)	11 Sep 2025 13:00	11 Sep 2025 14:00	2	Maintenance - sample manifold cleaned
NO2, TRS	17 Sep 2025 09:00	17 Sep 2025 09:00	1	Station power failure
THC/NMHC/CH4	23 Sep 2025 11:00	23 Sep 2025 15:00	5	Maintenance - replaced support gas cylinder
NH3	04 Sep 2025 18:00	05 Sep 2025 11:00	18	Maintenance - calibration in progress
NH3	01 Sep 2025 03:00	30 Sep 2025 02:00	29	Stabilization after daily QA check
Wind Speed, Wind Direction	05 Sep 2025 22:00	05 Sep 2025 22:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Sep 2025 18:00	08 Sep 2025 19:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Sep 2025 23:00	29 Sep 2025 23:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0

Maximum Value: 199.2 ppb on Sep 17 13:00

Maximum Daily Average: 18.7 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 26

Maximum Diurnal Average: 9.5 ppb at hour 13

Minimum Diurnal Average: 0.1 ppb at hour 5

Monthly Average: 1.30 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.5 P_{90} = 2.2 P_{99} = 10.7

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	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	0.1	1.1
2-Sep	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	2.0	8.6	12.4	10.1	5.1	2.4	5.9	4.8	1.9	0.6	0.2	0.0	0.3	0.9	2.4	12.4
3-Sep	Z	0.5	0.5	0.6	0.4	0.4	0.4	1.0	3.9	C	C	C	C	0.4	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.6	3.9
4-Sep	0.3	Z	0.2	0.3	0.0	0.1	0.1	0.1	0.6	0.7	0.3	0.7	0.6	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
5-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8	1.6	2.4	4.3	7.8	4.6	5.3	6.8	2.4	0.9	0.4	0.2	0.1	0.1	1.7	7.8
6-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	1.0	1.7	2.2	19.8	9.2	3.0	6.9	4.3	4.9	2.0	1.3	0.6	0.3	0.2	0.1	0.0	2.5	19.8
7-Sep	0.1	0.0	0.0	0.0	Z	0.1	0.2	0.0	0.0	0.0	0.4	0.5	0.6	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
8-Sep	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	0.1	0.1	0.4	0.5	0.2	0.0	0.0	0.0	0.0	0.1	0.5
9-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.6	7.0	5.2	6.1	1.8	1.0	1.5	2.0	0.5	0.4	0.3	0.2	0.1	0.1	0.1	1.3	7.0
10-Sep	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	0.0	0.1
11-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.8	8.6	M	M	8.6	2.0	0.9	0.9	0.8	0.6	0.4	0.5	0.4	0.4	1.2	8.6
12-Sep	0.4	0.4	0.3	Z	0.3	0.2	0.2	0.3	1.2	4.3	5.2	2.8	1.3	0.7	0.7	0.5	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.9	5.2
13-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	1.2	8.5	8.4	5.4	5.5	4.8	4.6	3.2	2.0	1.8	1.2	0.7	0.4	0.3	2.1	8.5
14-Sep	0.1	0.1	0.1	0.1	0.0	Z	0.0	0.1	0.1	0.9	0.7	8.5	5.5	9.3	2.0	2.5	2.1	0.9	0.6	0.3	1.6	0.6	0.3	0.2	1.6	9.3
15-Sep	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	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	0.0	0.0	0.0	0.2
16-Sep	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	0.5	0.8	1.4	4.6	6.3	3.7	1.0	0.7	0.2	0.0	0.8	6.3
17-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.3	9.7	12.3	10.3	199.2	118.4	29.8	20.9	7.5	2.2	0.6	0.8	4.0	3.9	7.1	3.2	18.7	199.2
18-Sep	2.1	1.0	0.6	0.3	Z	0.3	0.7	0.8	4.5	2.0	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	4.5
19-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2
20-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.9	2.0	2.0	5.3	1.4	0.3	0.5	0.5	0.1	0.6	0.2	0.9	0.5	0.4	0.1	0.7	5.3
21-Sep	Z	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.5	0.7	1.6	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6
22-Sep	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
23-Sep	1.1	0.2	Z	0.4	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	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	1.1
24-Sep	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	0.1
25-Sep	0.0	0.1	0.2	0.1	Z	0.0	0.0	0.0	0.1	0.3	1.2	4.7	6.3	3.7	2.1	1.0	1.1	0.4	0.5	0.7	0.1	0.0	0.0	0.0	1.0	6.3
26-Sep	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
27-Sep	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	0.0	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-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.4	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	2.7
29-Sep	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.5	3.7	2.8	3.4	4.6	2.9	1.7	2.5	1.3	1.5	0.4	0.5	0.2	0.2	0.2	1.2	4.6
30-Sep	0.1	0.1	0.1	Z	0.3	0.6	0.5	0.6	0.9	1.0	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	0.3	1.0
	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.9	1.5	3.0	9.5	5.7	2.5	1.6	1.3	1.0	0.7	0.4	0.4	0.3	0.4	0.3	Diurnal Average	
	2.1	1.0	0.6	0.6	0.4	0.6	0.7	1.0	4.5	9.7	12.3	19.8	199.2	118.4	29.8	20.9	7.5	6.8	6.3	3.7	4.0	3.9	7.1	3.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

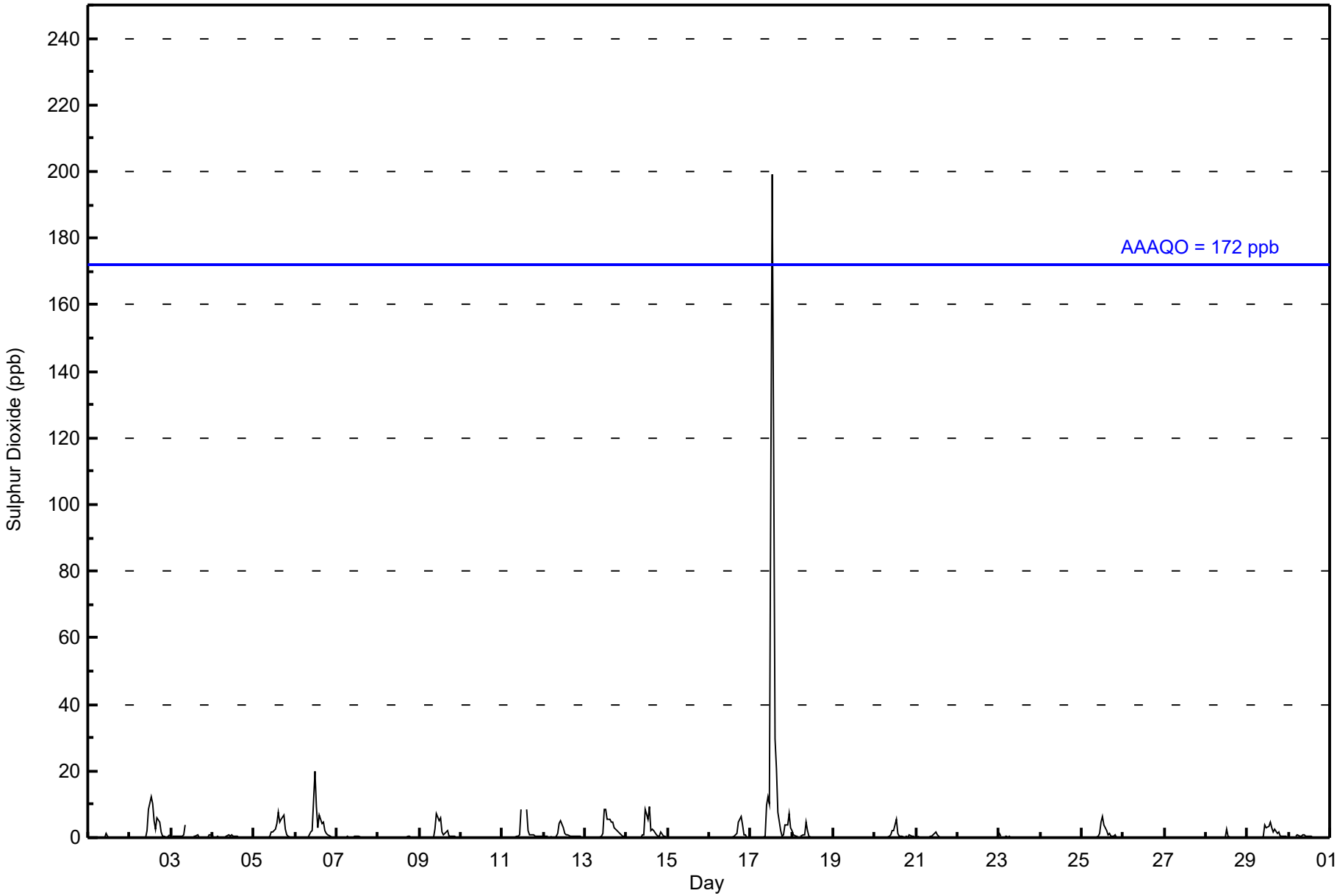
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025



Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	677	98.98	98.98
11 - 20	3	0.44	99.42
21 - 60	2	0.29	99.71
61 - 110	0	0.00	99.71
111 - 172	1	0.15	99.85
> 172	1	0.15	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	42	15	1	2	2	4	36	132	115	68	44	53	46	45	42	22	669
11 - 20	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
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	1	0	0	0	0	0	0	0	0	1
> 172	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	42	15	1	2	2	4	37	138	115	68	44	53	46	45	42	22	676

Total Number of Valid Hours: 676

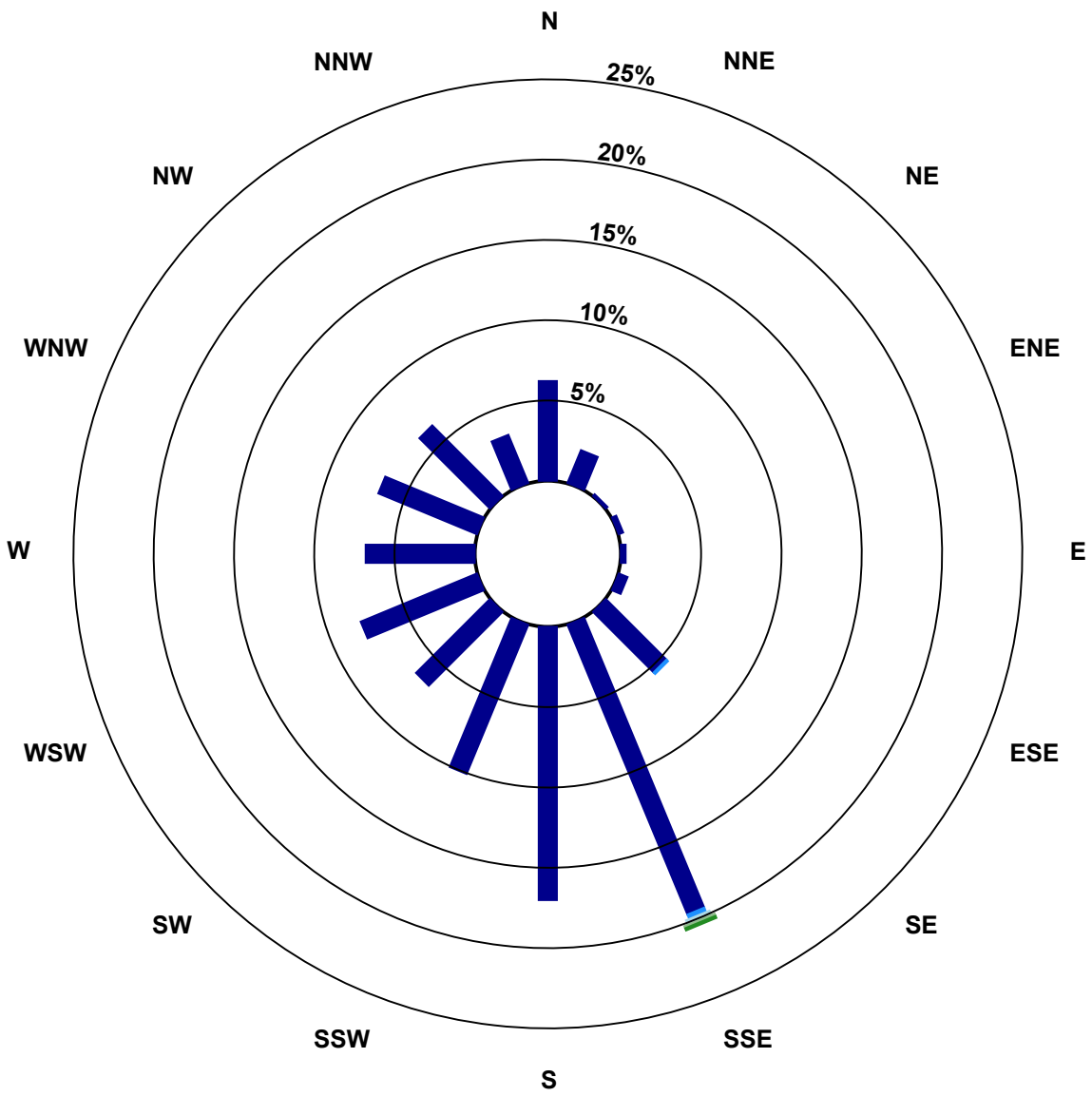
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

- 0 - 10
- 11 - 20
- 21 - 60
- 61 - 110
- 111 - 172
- > 172

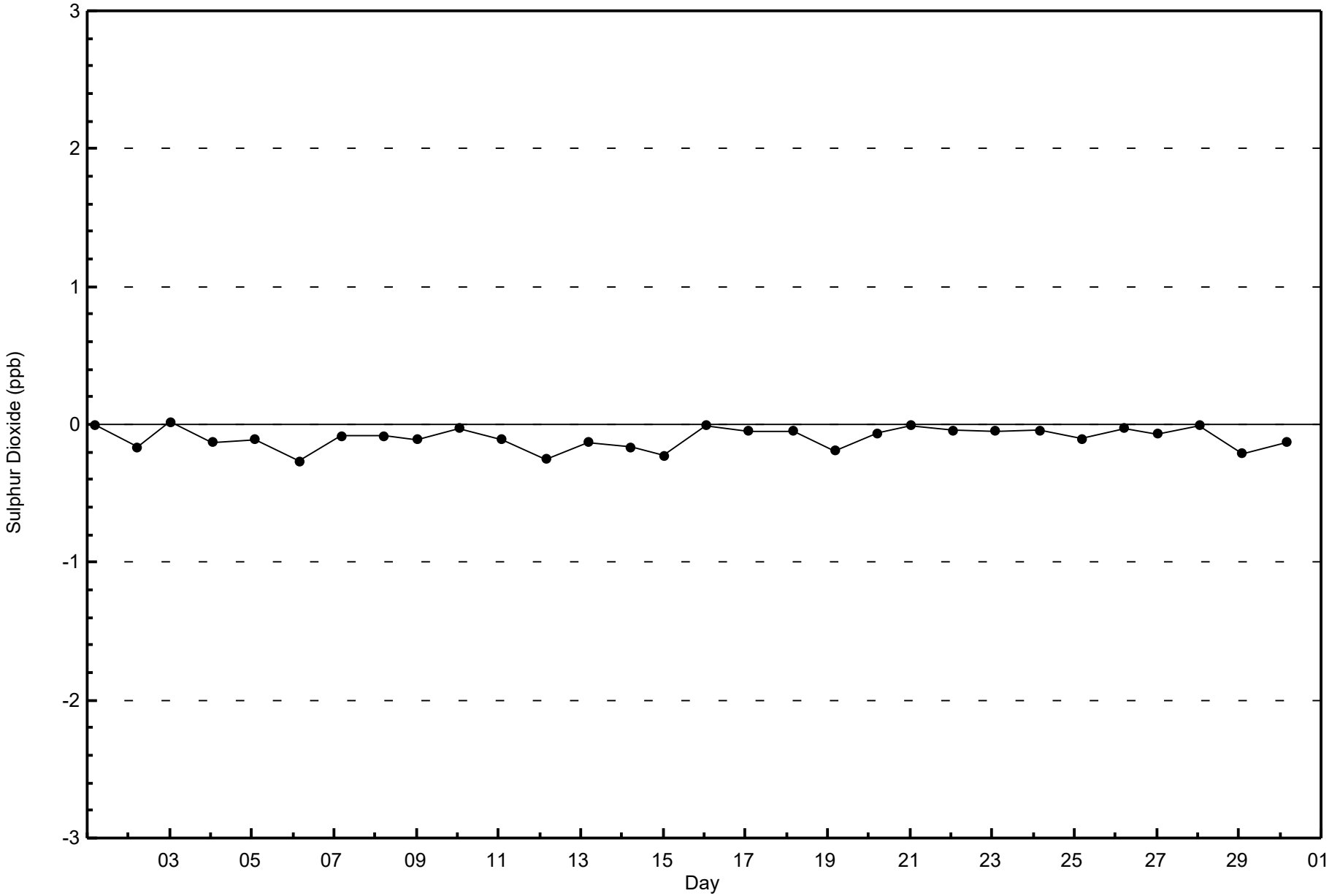
Total Number of Valid Hours: 676

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

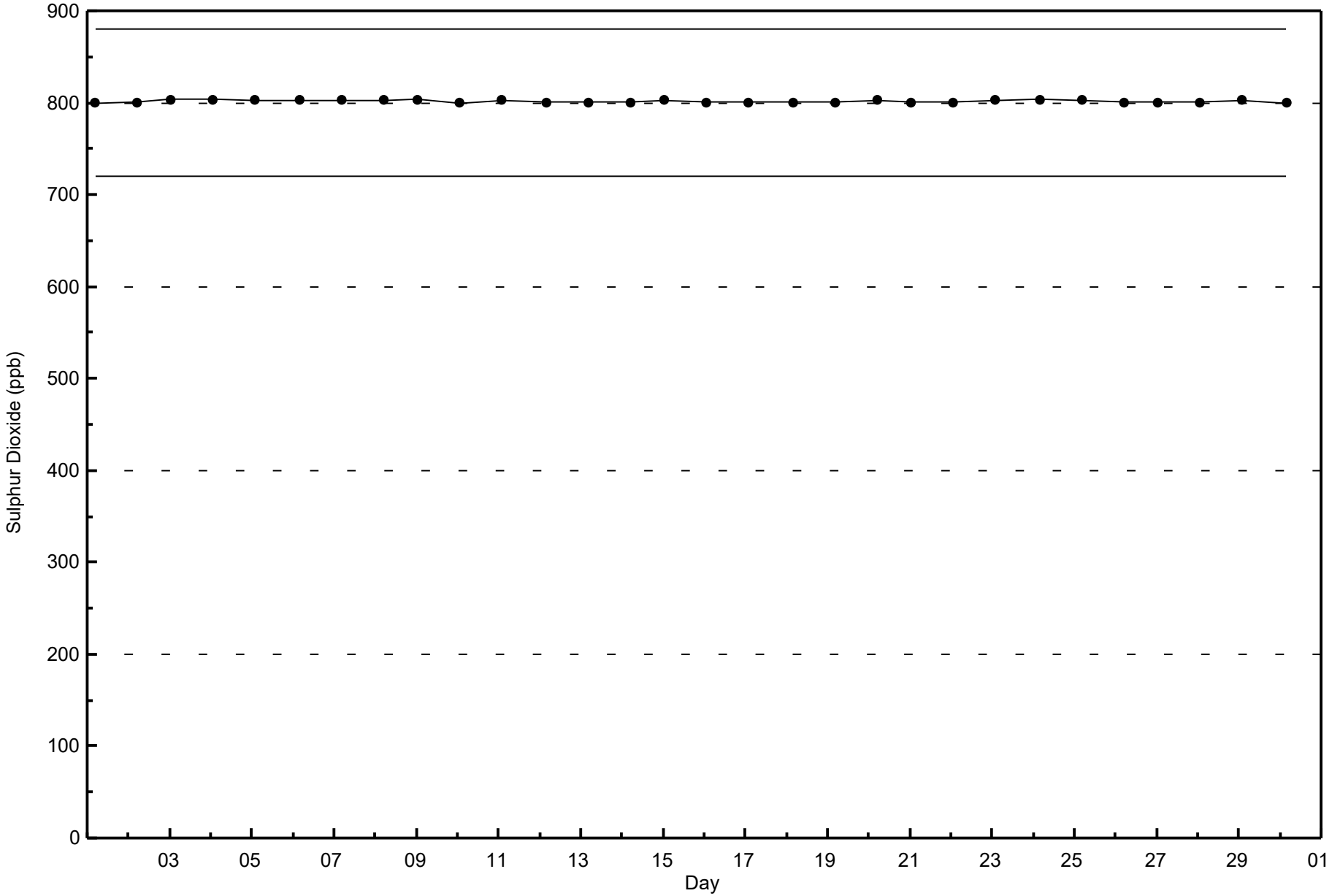


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.3 ppb on Sep 17 22:00 Maximum Daily Average: 1.8 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 10 14:00
Maximum Diurnal Average: 1.0 ppb at hour 10
Monthly Average: 0.57 ppb

Minimum Daily Average: 0.1 ppb on Sep 27
Minimum Diurnal Average: 0.2 ppb at hour 16
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.5 P_{99} = 4.4

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	0.3	0.3	0.2	0.3	Z	0.5	0.4	1.8	2.1	2.2	1.0	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.5	2.2
2-Sep	Z	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.6	1.7	2.5	1.1	0.6	0.3	0.1	0.5	0.7	0.9	0.7	0.3	0.2	0.5	0.4	0.6	2.5
3-Sep	0.4	Z	2.6	3.0	0.7	0.3	0.3	0.3	0.3	0.5	1.1	1.0	0.8	0.3	0.3	0.5	0.3	0.2	0.2	0.3	0.4	0.6	0.7	0.4	0.7	3.0
4-Sep	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3
5-Sep	0.2	0.2	0.2	Z	0.2	0.4	0.4	0.9	1.0	1.1	0.7	0.6	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4	1.1
6-Sep	0.2	0.2	0.2	0.2	Z	0.6	0.7	1.0	1.5	1.4	1.4	1.9	1.2	0.2	0.1	0.1	0.1	0.2	0.5	0.4	0.4	0.3	0.3	0.3	0.6	1.9
7-Sep	0.4	0.2	0.2	0.3	1.3	Z	1.2	1.4	1.2	0.8	0.7	1.1	1.0	0.8	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.6	1.4
8-Sep	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	C	C	C	C	C	C	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.2	--	0.4
9-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.4	0.9	2.5	1.6	0.9	1.0	0.5	0.2	0.3	0.3	0.6	3.9	0.5	0.1	0.1	1.1	2.5	0.8	3.9
10-Sep	2.0	1.1	Z	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	2.0
11-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.9	2.5	4.6	4.3	1.3	M	M	0.1	0.1	0.0	0.1	0.2	0.4	0.4	1.9	0.7	0.3	0.9	4.6
12-Sep	0.5	0.9	0.8	2.2	Z	2.4	2.7	4.4	4.3	1.2	0.8	0.6	0.4	0.5	0.1	0.0	0.0	1.7	1.1	0.7	0.2	0.2	1.0	0.4	1.2	4.4
13-Sep	0.4	0.6	0.5	1.2	0.4	Z	1.3	2.7	2.4	2.7	1.5	2.1	1.6	1.0	1.0	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	1.1	2.7
14-Sep	Z	0.6	0.6	0.5	0.4	0.4	0.3	0.4	1.1	1.4	0.9	0.9	0.7	1.3	0.3	0.7	1.7	2.5	1.9	0.3	1.3	1.8	2.3	1.8	1.1	2.5
15-Sep	1.1	Z	4.4	3.0	1.5	3.5	4.7	2.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	1.1	4.7
16-Sep	0.3	0.3	Z	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.4	1.0	0.9	0.8	0.6	0.8	1.1	0.4	1.1
17-Sep	0.9	0.8	0.6	Z	0.4	0.3	0.4	0.8	1.7	3.4	2.1	1.0	4.6	2.1	0.8	1.0	1.6	1.7	0.5	1.2	4.2	5.3	3.2	3.7	1.8	5.3
18-Sep	3.2	4.7	3.8	3.0	2.0	Z	0.4	0.2	0.2	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.8	4.7
19-Sep	0.1	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.5	0.7	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	1.5	1.5	0.3	1.5
20-Sep	Z	0.8	0.7	0.4	0.4	0.2	0.5	1.3	1.5	0.8	0.5	0.4	0.4	0.3	0.3	0.3	0.5	1.9	0.5	0.1	0.5	0.3	0.3	0.3	0.6	1.9
21-Sep	0.3	Z	1.0	1.3	2.3	2.9	1.8	1.3	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.3	0.1	0.6	2.9
22-Sep	0.1	0.1	Z	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	0.1	0.1	1.4	0.2	0.2	0.1	0.1	0.2	0.2	1.4
23-Sep	0.3	0.1	0.1	Z	0.1	0.1	0.1	0.2	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	0.2	0.2	0.1	0.3
24-Sep	0.3	0.4	0.3	0.3	Z	0.3	0.4	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.4
25-Sep	0.5	0.5	0.4	0.4	0.9	Z	0.6	1.2	0.5	0.5	0.4	0.4	0.5	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.1	0.2	0.1	0.4	1.2
26-Sep	Z	0.1	0.1	0.1	0.1	0.2	0.4	1.0	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	0.1	0.6	0.2	1.0
27-Sep	0.3	Z	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	0.1	0.0	0.1	0.0	0.0	0.2	0.1	0.4
28-Sep	0.3	0.1	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.1	0.2	0.4
29-Sep	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.5	0.9	1.1	0.5	0.1	0.1	0.1	0.2	0.2	0.4	0.2	0.6	0.6	0.4	0.3	0.3	1.1
30-Sep	0.3	0.3	0.3	0.4	Z	1.6	1.4	1.6	1.8	1.8	1.1	0.4	0.4	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.6	1.8
	0.5	0.5	0.7	0.7	0.5	0.6	0.7	0.8	0.9	1.0	0.8	0.7	0.6	0.4	0.2	0.2	0.3	0.4	0.5	0.3	0.4	0.5	0.6	0.6	Diurnal Average	
	3.2	4.7	4.4	3.0	2.3	3.5	4.7	4.4	4.3	4.6	4.3	2.5	4.6	2.1	1.0	1.0	1.7	2.5	3.9	1.2	4.2	5.3	3.2	3.7	Diurnal Maximum	

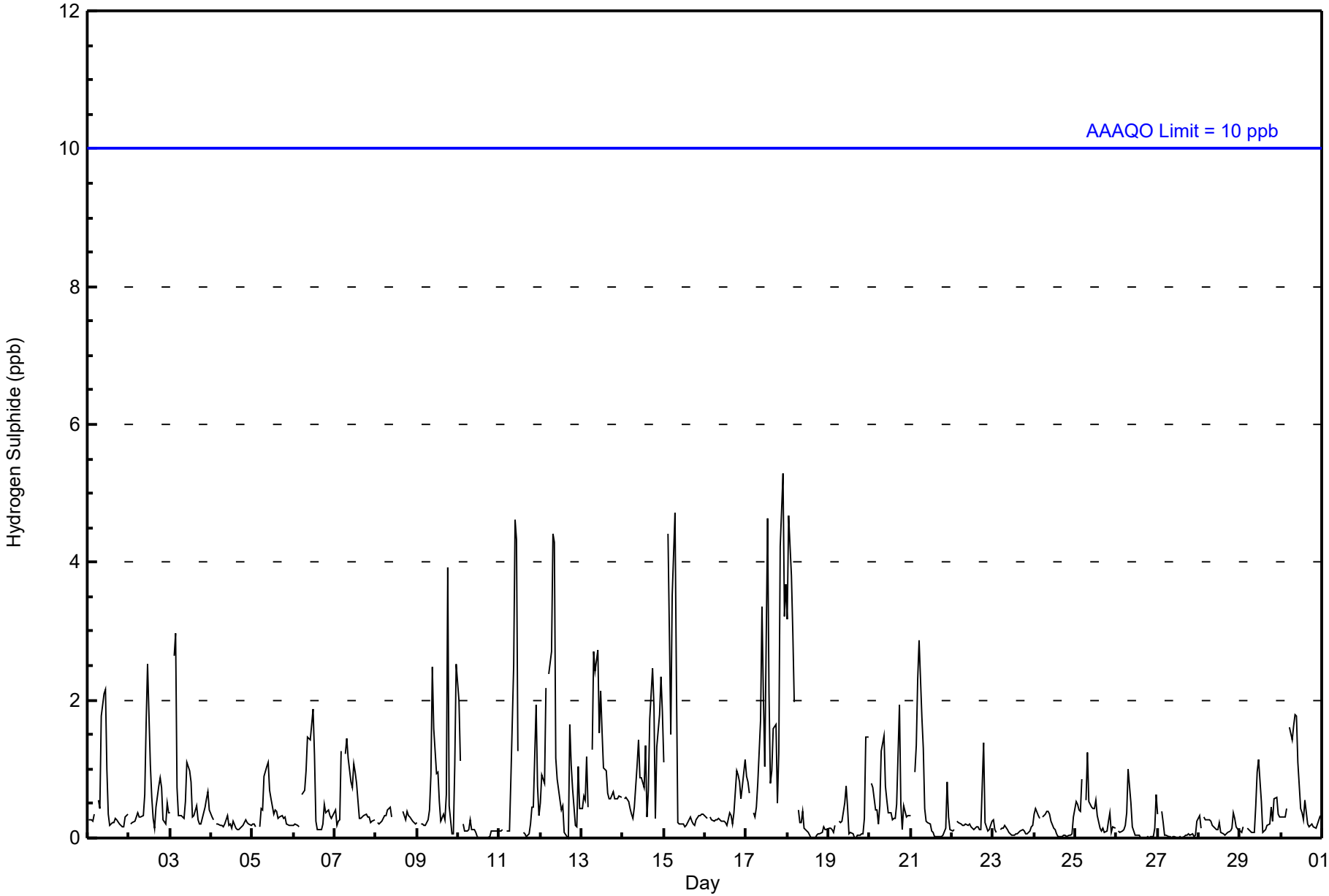
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	654	95.89	95.89
3 - 4	23	3.37	99.27
5 - 7	5	0.73	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	41	13	1	2	2	4	34	123	115	65	44	51	44	48	40	19	646
3 - 4	0	1	0	0	0	0	2	11	3	4	0	1	0	0	0	1	23
5 - 7	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	5
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	14	1	2	2	4	37	137	119	69	44	52	44	48	40	20	674

Total Number of Valid Hours: 674

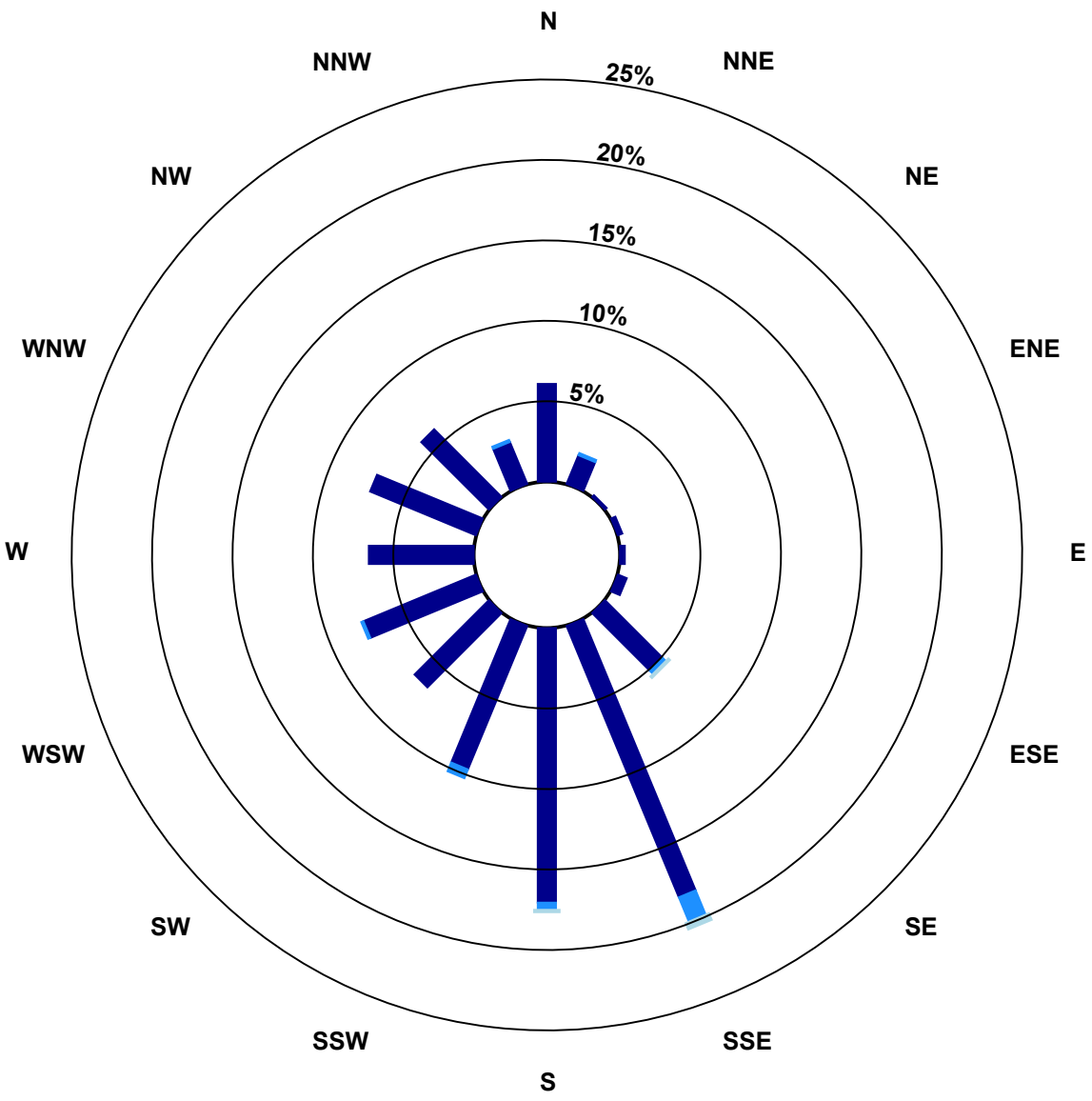
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

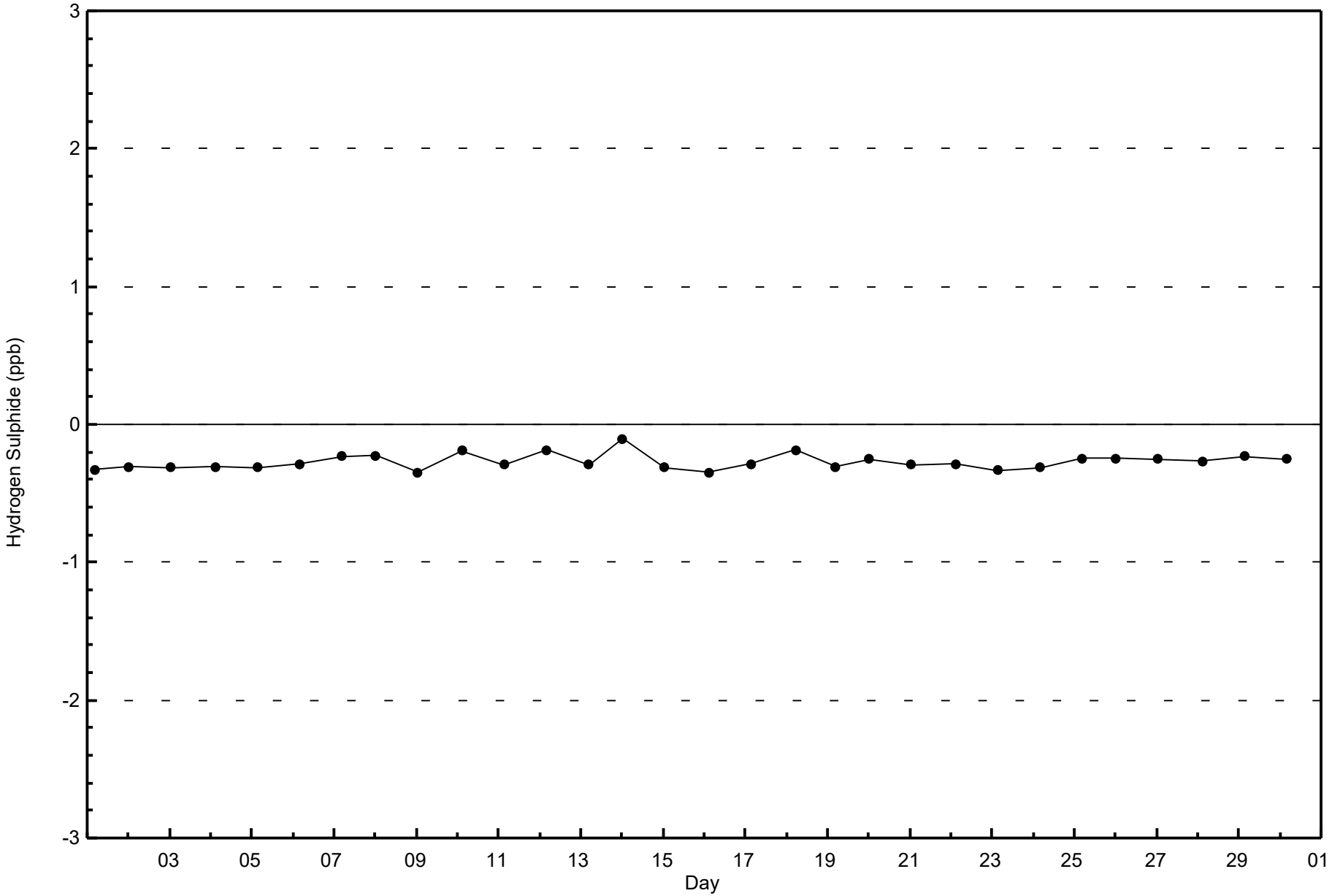
Total Number of Valid Hours: 674

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025

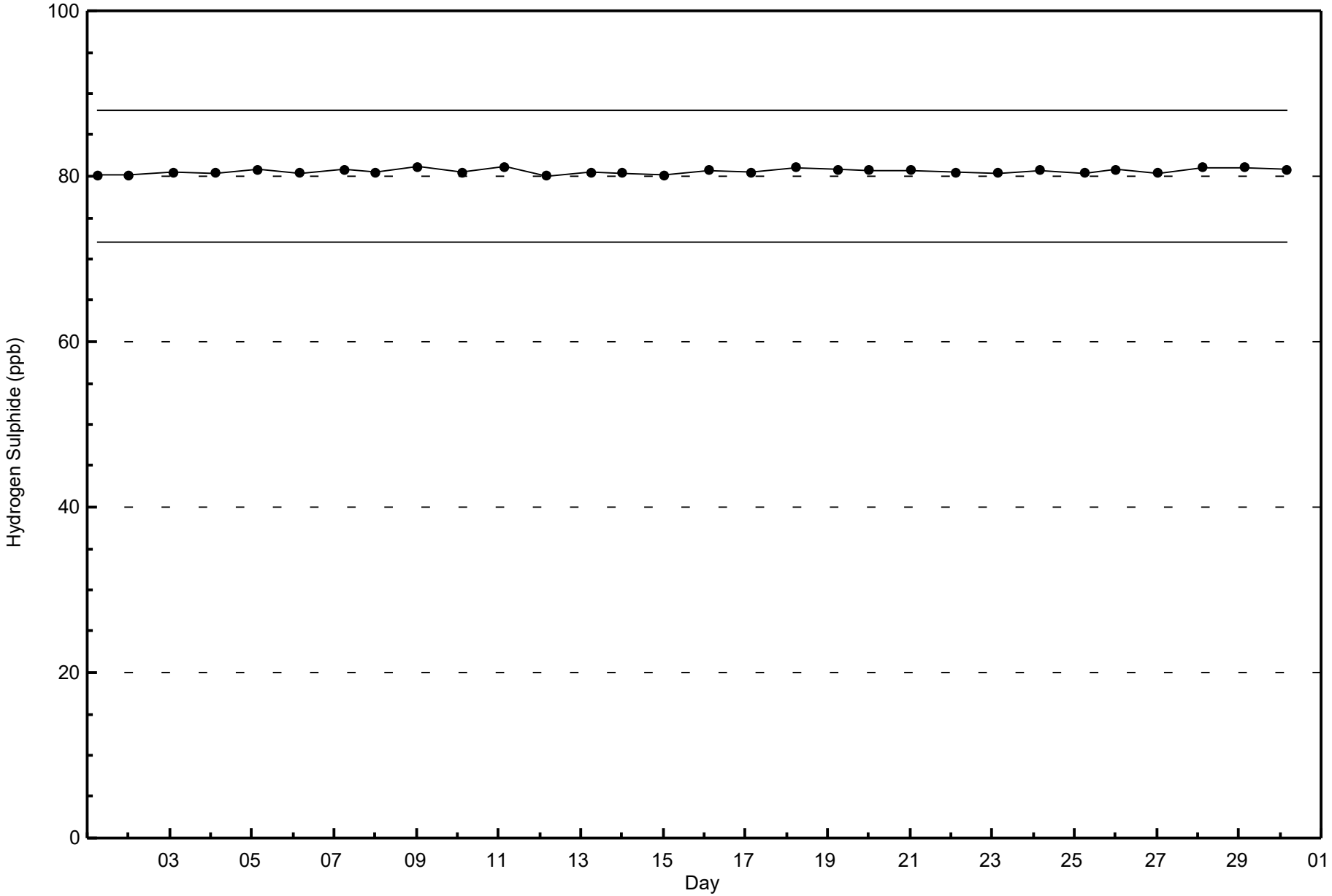


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQG): 30-Min: 10

Maximum Value: 7.9 ppb on Sep 17 13:00 Maximum Daily Average: 2.0 ppb on Sep 17

Minimum Value: 0.1 ppb on Sep 27 14:00 Minimum Daily Average: 0.2 ppb on Sep 27

Maximum Diurnal Average: 1.0 ppb at hour 10 Minimum Diurnal Average: 0.3 ppb at hour 16

Monthly Average: 0.67 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.4 Q_3 = 0.7 P_{90} = 1.5 P_{99} = 4.2

Periods in Service:	1440
Periods of Valid Data:	1364
Periods of Invalid Data:	76
Periods of Calibration:	71
Percent Operational Time:	99.7

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	0.3	0.4	0.4	0.3	0.4	Z	0.7	0.5	1.9	2.3	2.2	1.6	0.5	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.7	2.4
	0.4	0.3	0.3	0.3	0.5	SP	0.6	0.6	1.8	2.2	2.4	0.6	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.4		
2-Sep	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	1.0	2.5	1.2	0.9	0.4	0.2	0.3	0.9	0.9	0.9	0.4	0.3	0.5	0.6	0.7	3.0
	SP	0.3	0.3	0.4	0.4	0.5	0.4	0.5	0.4	0.9	2.6	3.0	1.1	0.5	0.3	0.2	0.8	0.8	1.1	0.7	0.3	0.3	0.7	0.3		
3-Sep	0.4	Z	2.7	3.4	1.3	0.4	0.4	0.4	0.4	0.5	1.2	1.2	1.0	0.4	0.4	0.6	0.4	0.2	0.2	0.3	0.6	0.5	0.8	0.6	0.8	3.4
	0.4	SP	2.9	3.0	0.5	0.4	0.4	0.3	0.4	0.7	1.2	0.9	0.9	0.3	0.4	0.5	0.3	0.2	0.3	0.4	0.4	0.9	0.7	0.4		
4-Sep	0.4	0.3	Z	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4
	0.4	0.3	SP	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3		
5-Sep	0.4	0.3	0.3	Z	0.3	0.3	0.5	0.9	1.1	1.2	0.8	0.7	0.5	0.5	0.6	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5	1.2
	0.4	0.3	0.3	SP	0.3	0.8	0.6	1.1	1.1	1.2	0.8	0.6	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3		
6-Sep	0.3	0.3	0.3	0.2	Z	0.7	0.5	1.4	1.3	1.7	1.4	1.5	1.7	0.4	0.2	0.2	0.2	0.3	0.6	0.5	0.5	0.4	0.4	0.4	0.7	2.4
	0.3	0.3	0.2	0.3	SP	0.7	1.0	0.7	1.8	1.4	1.5	2.4	0.9	0.2	0.2	0.2	0.2	0.3	0.7	0.4	0.5	0.4	0.4	0.4		
7-Sep	0.6	0.3	0.4	0.3	0.8	Z	1.3	1.5	0.9	1.1	0.7	1.1	1.0	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.6	1.9
	0.4	0.3	0.3	0.3	1.9	SP	1.0	1.4	1.4	0.6	0.9	1.2	0.9	0.7	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3		
8-Sep	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	C	C	C	C	C	C	0.4	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.5
	SP	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	C	C	C	C	C	C	0.3	0.3	0.5	0.3	0.3	0.2	0.3	0.3	--	
9-Sep	0.2	Z	0.2	0.3	0.2	0.2	0.3	0.4	0.7	2.7	1.7	1.1	1.1	0.8	0.4	0.4	0.4	0.5	5.3	0.9	0.3	0.2	0.5	2.8	0.9	5.3
	0.3	SP	0.2	0.3	0.2	0.2	0.3	0.5	1.1	2.4	1.6	1.0	1.0	0.5	0.4	0.6	0.4	1.1	3.5	0.4	0.2	0.2	2.1	2.8		
10-Sep	2.7	1.5	Z	0.4	0.3	0.2	0.2	0.4	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	0.2	0.2	0.2	0.2	0.3
	1.8	0.9	SP	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2		
11-Sep	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.5	2.0	3.8	5.5	1.7	0.5	M	0.3	0.2	0.2	0.2	0.3	0.5	0.6	1.6	1.1	0.5	1.0	5.5
	0.2	0.2	0.2	SP	0.2	0.2	0.2	1.2	2.8	5.3	3.3	1.0	M	M	0.2	0.2	0.2	0.3	0.4	0.7	0.6	2.5	0.8	0.5		
12-Sep	0.7	1.0	1.0	2.1	Z	2.6	2.7	3.8	6.1	1.6	1.3	0.6	0.8	0.6	0.4	0.2	0.2	0.7	1.8	0.8	0.3	0.3	1.0	0.6	1.4	6.1
	0.7	1.2	1.0	2.9	SP	2.5	3.1	5.4	3.1	1.3	1.0	0.8	0.3	0.6	0.2	0.2	0.2	3.0	0.7	1.0	0.3	0.3	1.4	0.5		
13-Sep	0.6	0.4	0.7	1.4	0.6	Z	1.1	2.8	2.8	2.2	2.6	2.0	2.0	1.3	1.1	0.9	0.8	0.8	1.0	0.8	0.8	0.7	0.8	0.7	1.3	3.6
	0.5	1.1	0.6	1.1	0.5	SP	1.5	2.8	2.2	3.6	0.9	2.6	1.6	1.2	1.2	0.8	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.7		
14-Sep	Z	0.7	0.8	0.7	0.6	0.5	0.4	0.5	1.2	1.1	1.1	1.0	0.9	1.3	0.6	0.5	1.7	2.8	2.9	0.6	1.5	1.6	1.8	2.3	1.2	3.4
	SP	0.8	0.7	0.6	0.5	0.4	0.4	0.6	1.1	1.9	0.8	1.0	0.8	1.8	0.3	1.4	2.4	3.0	1.6	0.3	1.6	2.6	3.4	2.0		
15-Sep	1.3	Z	4.9	3.1	1.2	3.8	2.0	4.0	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.5	1.2	7.7
	1.2	SP	4.2	3.2	2.0	3.4	7.7	0.9	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.4		

Wood Buffalo Environmental Association

Total Reduced Sulphur (TRS) - ppb

Summary of 30-Minute Averages

Fort McKay - Bertha Ganter - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.4	0.4	Z	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.3	0.3	1.1	1.1	1.0	0.7	0.7	1.3	0.5	1.3
	0.4	0.4	SP	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.6	0.4	0.4	0.7	1.2	1.0	0.9	0.7	1.1	1.2		
17-Sep	1.1	0.9	0.8	Z	0.5	0.4	0.4	0.7	PF	3.2	2.7	1.2	1.8	2.7	1.1	0.9	1.5	1.9	0.8	1.0	3.9	5.7	3.5	4.2	2.0	7.9
	0.9	0.9	0.6	SP	0.4	0.4	0.5	1.1	PF	3.7	1.7	1.1	7.9	1.8	0.8	1.4	2.0	1.8	0.5	1.8	5.0	5.5	3.4	3.6		
18-Sep	3.1	4.3	3.8	3.5	1.9	Z	0.6	0.4	0.4	0.6	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	1.0	5.5
	3.7	5.5	4.2	2.8	2.9	SP	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3		
19-Sep	0.3	0.3	0.3	0.2	0.3	Z	0.3	0.3	0.3	0.4	1.2	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	1.5	1.5	0.4	1.8
	0.3	0.3	0.2	0.2	0.3	SP	0.3	0.3	0.4	0.7	0.6	0.7	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.6	1.8	1.6		
20-Sep	Z	0.9	0.8	0.6	0.4	0.3	0.4	1.3	1.3	1.0	0.6	0.4	0.6	0.3	0.5	0.5	0.4	1.7	0.9	0.2	0.5	0.4	0.4	0.4	0.7	2.4
	SP	0.9	0.9	0.5	0.5	0.3	0.7	1.4	1.8	0.7	0.6	0.4	0.3	0.4	0.3	0.3	0.8	2.4	0.4	0.3	0.7	0.4	0.4	0.4		
21-Sep	0.4	Z	1.0	1.1	2.7	3.1	2.0	1.6	0.6	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.5	0.2	0.7	3.1
	0.5	SP	1.1	1.8	2.2	2.8	1.7	1.1	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.5	0.3	0.2		
22-Sep	0.2	0.2	Z	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	1.1	0.4	0.2	0.2	0.1	0.3	0.3	1.7
	0.2	0.3	SP	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	1.7	0.1	0.3	0.1	0.2	0.3		
23-Sep	0.3	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.3
	0.3	0.1	0.1	SP	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3		
24-Sep	0.4	0.6	0.4	0.4	Z	0.4	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.6
	0.5	0.5	0.4	0.4	SP	0.4	0.5	0.5	0.5	0.5	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	0.6		
25-Sep	0.8	0.5	0.4	0.3	0.7	Z	0.6	1.1	0.8	0.5	0.4	0.5	0.8	0.6	0.3	0.2	0.2	0.2	0.1	0.3	0.7	0.2	0.2	0.2	0.5	1.6
	0.4	0.6	0.3	0.4	1.0	SP	0.7	1.6	0.5	0.5	0.6	0.6	0.7	0.3	0.2	0.2	0.2	0.1	0.3	0.4	0.3	0.2	0.2	0.2		
26-Sep	Z	0.2	0.2	0.2	0.2	0.3	0.4	0.8	0.8	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	0.8	0.3	1.3
	SP	0.2	0.2	0.2	0.3	0.3	0.6	1.3	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	0.3	0.7		
27-Sep	0.4	Z	0.6	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	0.2	0.1	0.1	0.2	0.2	0.6
	0.4	SP	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	0.2	0.1	0.1	0.1	0.1	0.1	0.4		
28-Sep	0.6	0.2	Z	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.3	0.6
	0.3	0.3	SP	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.2	0.2		
29-Sep	0.2	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.2	0.3	1.0	1.1	0.8	0.2	0.2	0.2	0.2	0.3	0.6	0.3	0.6	0.7	0.5	0.4	0.4	1.4
	0.2	0.2	0.3	SP	0.3	0.2	0.2	0.2	0.2	0.8	1.0	1.4	0.4	0.2	0.2	0.2	0.4	0.3	0.5	0.4	0.7	0.6	0.4	0.4		
30-Sep	0.4	0.4	0.4	0.4	Z	1.0	1.1	1.1	1.4	1.4	1.1	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.5	1.4
	0.4	0.4	0.4	0.5	SP	1.3	1.0	1.4	1.3	1.3	0.7	0.3	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4		
	0.6	0.6	0.8	0.9	0.6	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.7	0.5	0.3	0.3	0.4	0.6	0.7	0.4	0.6	0.6	0.7	0.7	Diurnal Average	
	3.7	5.5	4.9	3.5	2.9	3.8	7.7	5.4	6.1	5.3	5.5	3.0	7.9	2.7	1.2	1.4	2.4	3.0	5.3	1.8	5.0	5.7	3.5	4.2	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 - September 2025

Maximum Value: 5.6 ppb on Sep 17 22:00

Maximum Daily Average: 2.0 ppb on Sep 17

Minimum Value: 0.1 ppb on Sep 27 12:00

Minimum Daily Average: 0.2 ppb on Sep 27

Maximum Diurnal Average: 1.0 ppb at hour 10

Minimum Diurnal Average: 0.3 ppb at hour 16

Monthly Average: 0.67 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.4 Q_3 = 0.7 P_{90} = 1.5 P_{99} = 4.5

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	36
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.4	0.4	0.3	0.4	Z	0.7	0.5	1.9	2.2	2.3	1.1	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.7	2.3
2-Sep	Z	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.7	1.8	2.7	1.2	0.7	0.4	0.2	0.5	0.9	1.0	0.8	0.3	0.3	0.6	0.5	0.7	2.7
3-Sep	0.4	Z	2.8	3.2	0.9	0.4	0.4	0.4	0.4	0.6	1.2	1.1	0.9	0.4	0.4	0.5	0.3	0.2	0.2	0.4	0.5	0.7	0.8	0.5	0.8	3.2
4-Sep	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4
5-Sep	0.4	0.3	0.3	Z	0.3	0.5	0.5	1.0	1.1	1.2	0.8	0.7	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.5	1.2
6-Sep	0.3	0.3	0.3	0.2	Z	0.7	0.8	1.1	1.5	1.5	1.5	2.0	1.3	0.3	0.2	0.2	0.2	0.3	0.6	0.5	0.5	0.4	0.4	0.4	0.7	2.0
7-Sep	0.5	0.3	0.4	0.3	1.3	Z	1.1	1.5	1.2	0.8	0.8	1.1	1.0	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.6	1.5
8-Sep	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	C	C	C	C	C	C	0.3	0.3	0.4	0.4	0.4	0.2	0.3	0.3	--	0.4
9-Sep	0.2	Z	0.2	0.3	0.2	0.2	0.3	0.4	0.9	2.5	1.7	1.0	1.1	0.6	0.4	0.5	0.4	0.8	4.4	0.7	0.2	0.2	1.3	2.8	0.9	4.4
10-Sep	2.3	1.2	Z	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3	2.3
11-Sep	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.8	2.4	4.5	4.4	1.4	M	M	0.2	0.2	0.2	0.2	0.3	0.6	0.6	2.1	0.9	0.5	1.0	4.5
12-Sep	0.7	1.1	1.0	2.5	Z	2.6	2.9	4.6	4.6	1.4	1.2	0.7	0.6	0.6	0.3	0.2	0.2	1.8	1.3	0.9	0.3	0.3	1.2	0.5	1.4	4.6
13-Sep	0.6	0.8	0.7	1.3	0.6	Z	1.3	2.8	2.5	2.9	1.7	2.3	1.8	1.2	1.2	0.8	0.8	0.9	1.0	0.8	0.8	0.7	0.7	0.7	1.3	2.9
14-Sep	Z	0.7	0.7	0.7	0.5	0.4	0.4	0.5	1.1	1.5	0.9	1.0	0.9	1.6	0.5	0.9	2.0	2.9	2.2	0.4	1.6	2.1	2.6	2.1	1.2	2.9
15-Sep	1.3	Z	4.5	3.1	1.6	3.6	4.8	2.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.5	1.2	4.8
16-Sep	0.4	0.4	Z	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.5	0.3	0.5	1.1	1.1	1.0	0.7	0.9	1.3	0.5	1.3
17-Sep	1.0	0.9	0.7	Z	0.4	0.4	0.4	0.9	PF	3.5	2.2	1.2	4.8	2.2	0.9	1.1	1.8	1.9	0.7	1.4	4.4	5.6	3.5	3.9	2.0	5.6
18-Sep	3.4	4.9	4.0	3.1	2.4	Z	0.6	0.4	0.4	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	1.0	4.9
19-Sep	0.3	0.3	0.2	0.2	0.3	Z	0.3	0.3	0.3	0.6	0.9	0.6	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	1.6	1.6	0.4	1.6
20-Sep	Z	0.9	0.8	0.5	0.5	0.3	0.6	1.3	1.6	0.8	0.6	0.4	0.4	0.3	0.4	0.4	0.6	2.1	0.6	0.2	0.6	0.4	0.4	0.4	0.7	2.1
21-Sep	0.4	Z	1.1	1.5	2.4	2.9	1.8	1.3	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.9	0.4	0.2	0.7	2.9
22-Sep	0.2	0.3	Z	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	0.2	0.2	1.4	0.3	0.2	0.1	0.2	0.3	0.3	1.4
23-Sep	0.3	0.1	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.3
24-Sep	0.4	0.5	0.4	0.4	Z	0.4	0.5	0.5	0.5	0.5	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	0.4	0.3	0.5
25-Sep	0.6	0.6	0.3	0.3	0.9	Z	0.6	1.3	0.7	0.5	0.5	0.5	0.7	0.4	0.2	0.2	0.2	0.1	0.2	0.4	0.5	0.2	0.2	0.2	0.5	1.3
26-Sep	Z	0.2	0.2	0.2	0.2	0.3	0.5	1.1	0.6	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	0.7	0.3	1.1
27-Sep	0.4	Z	0.5	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	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.5
28-Sep	0.4	0.2	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.3	0.2	0.3	0.5
29-Sep	0.2	0.2	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.6	1.0	1.2	0.6	0.2	0.2	0.2	0.3	0.3	0.5	0.3	0.7	0.7	0.4	0.4	0.4	1.2
30-Sep	0.4	0.4	0.4	0.4	Z	1.1	1.1	1.2	1.4	1.3	0.9	0.3	0.3	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	1.4
	0.6	0.6	0.8	0.9	0.6	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.7	0.5	0.3	0.3	0.4	0.6	0.7	0.4	0.6	0.6	0.7	0.7	Diurnal Average	
	3.4	4.9	4.5	3.2	2.4	3.6	4.8	4.6	4.6	4.5	4.4	2.7	4.8	2.2	1.2	1.1	2.0	2.9	4.4	1.4	4.4	5.6	3.5	3.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance PF - Power Failure

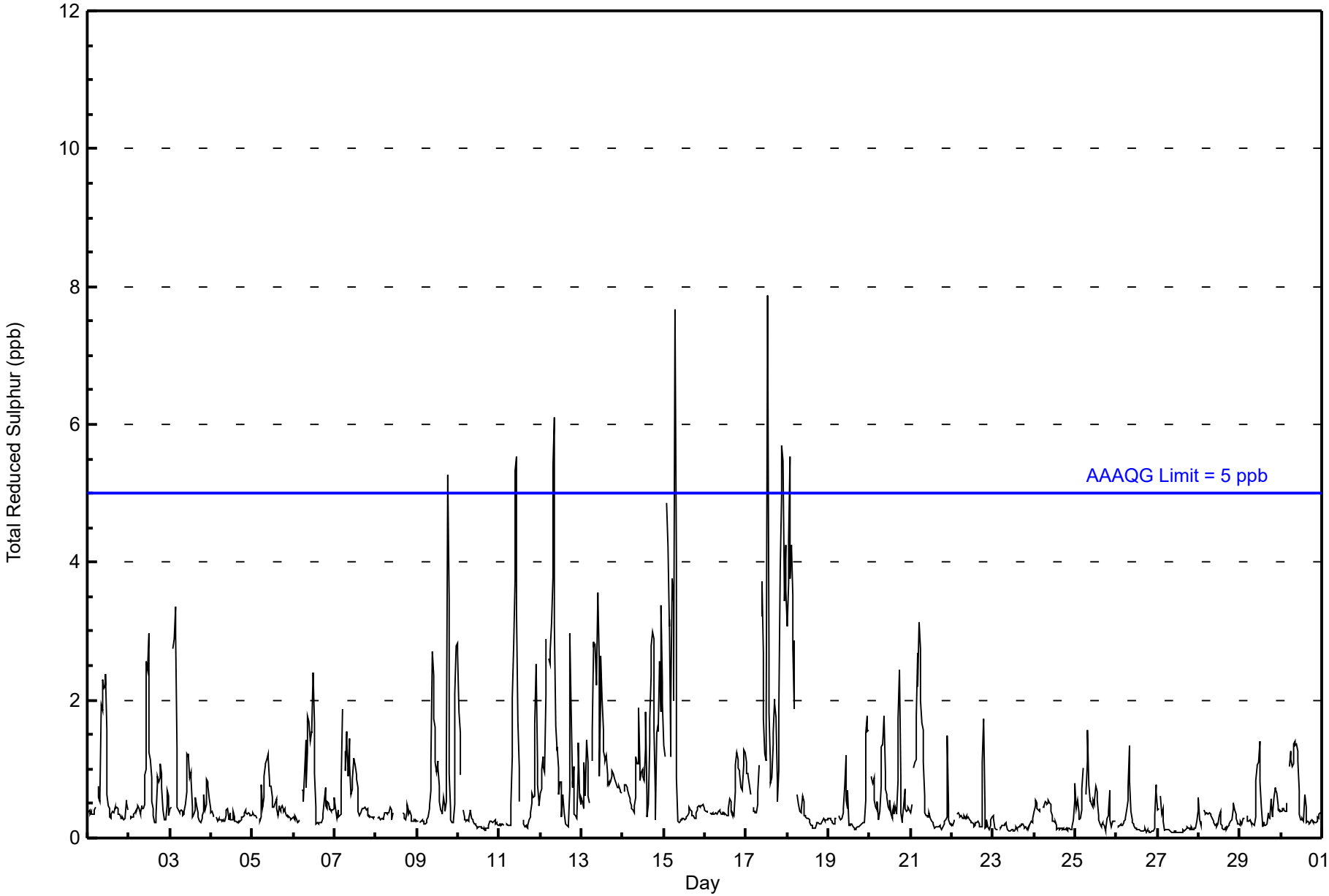
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - September 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	649	95.30	95.30
3 - 4	24	3.52	98.83
5 - 7	8	1.17	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	41	13	1	2	2	4	34	120	114	65	43	51	44	48	40	19	641
3 - 4	0	1	0	0	0	0	2	11	4	3	1	1	0	0	0	1	24
5 - 7	0	0	0	0	0	0	1	5	1	1	0	0	0	0	0	0	8
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	14	1	2	2	4	37	136	119	69	44	52	44	48	40	20	673

Total Number of Valid Hours: 673

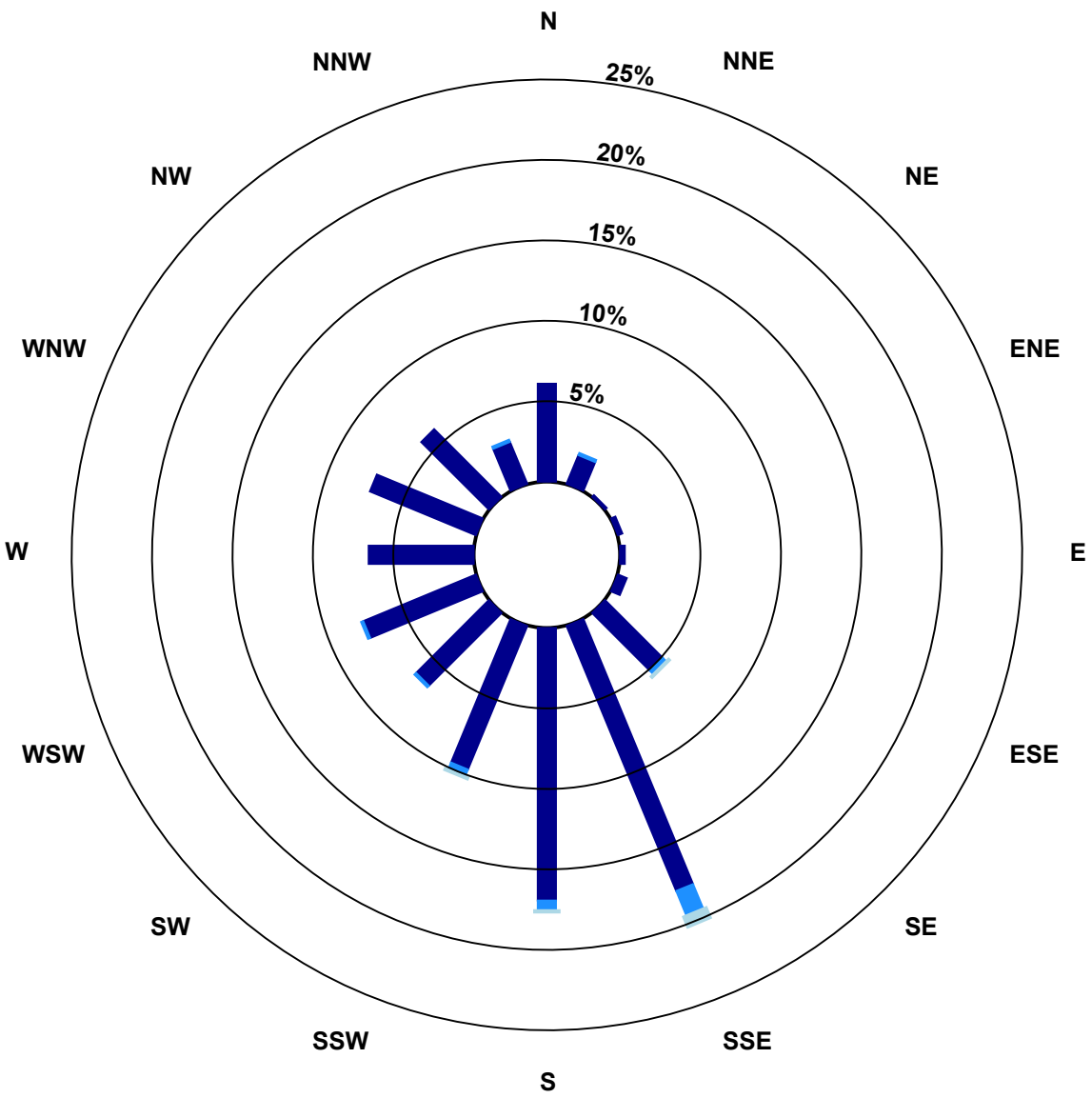
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

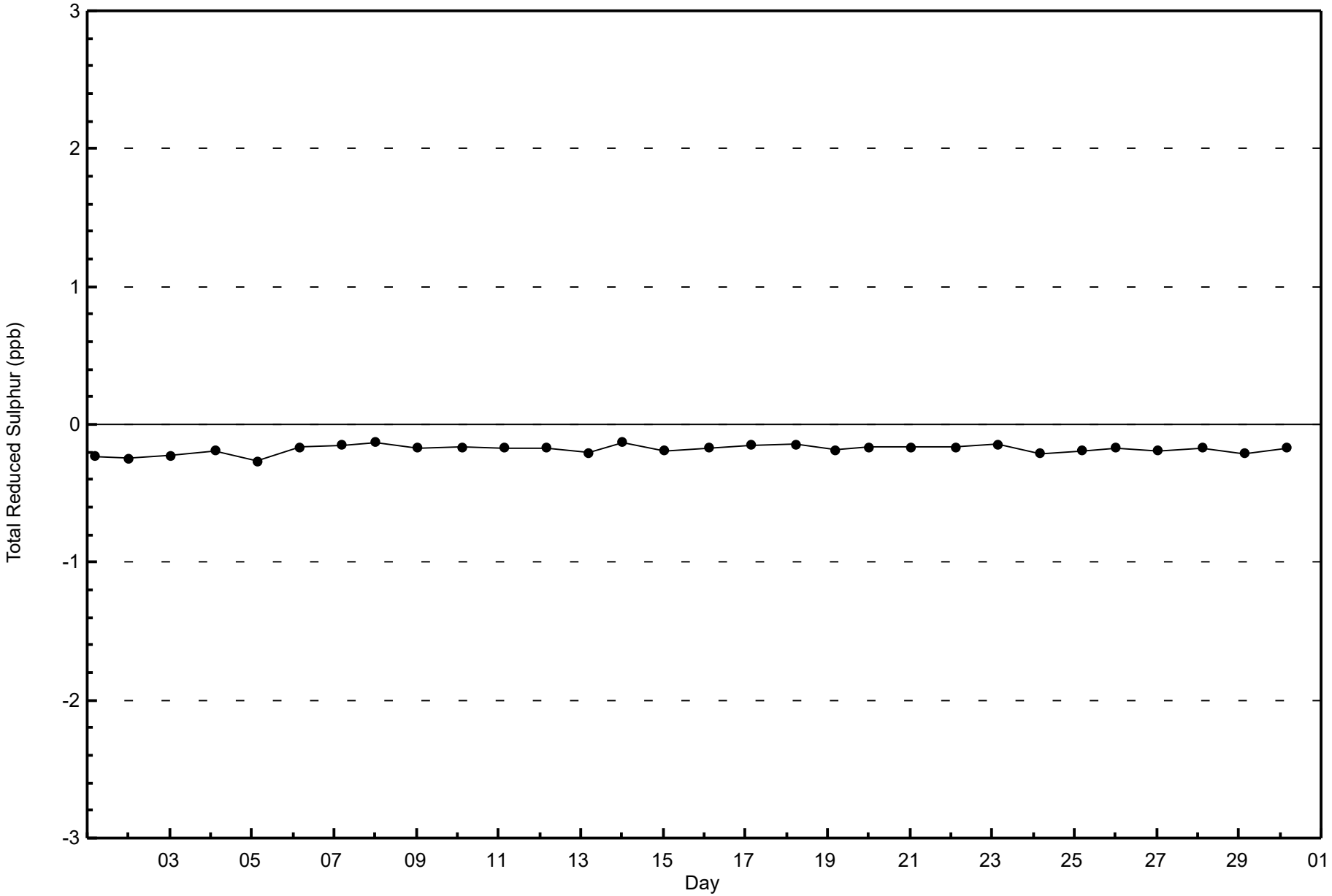
Total Number of Valid Hours: 673

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - September 2025

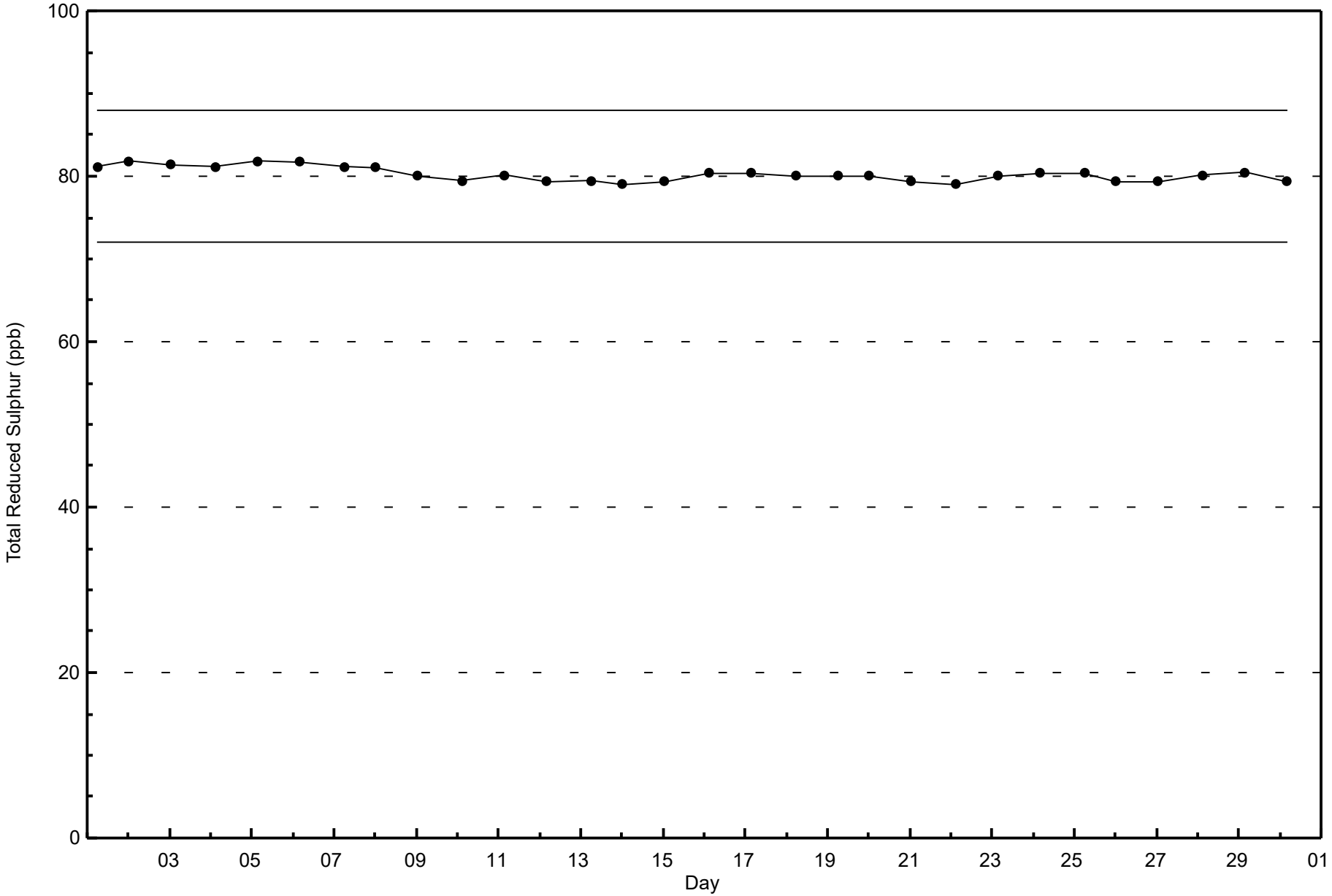


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 5.4 ppm on Sep 30 06:00

Maximum Daily Average: 2.8 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 17:00

Minimum Daily Average: 2.1 ppm on Sep 27

Maximum Diurnal Average: 2.5 ppm at hour 6

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.26 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.4

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.3	2.5	2.4	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.4	2.5	2.2	2.5
2-Sep	2.3	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.4	2.5	2.7	2.4	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.7
3-Sep	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.1	C	C	C	C	2.2	2.2	2.4	2.1	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.2	2.4
4-Sep	2.1	Z	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
5-Sep	2.1	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.3	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	2.2	2.4
6-Sep	2.1	2.2	2.2	Z	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.3	2.4	2.2	2.4
7-Sep	2.6	2.3	2.5	2.7	Z	3.1	3.3	3.0	2.7	2.5	2.4	2.6	2.8	3.1	2.2	2.2	2.3	2.2	2.2	2.1	2.2	2.2	2.3	2.3	2.5	3.3
8-Sep	2.2	2.2	2.2	2.2	2.3	Z	2.4	2.5	2.4	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.5
9-Sep	Z	2.3	2.3	2.3	2.4	2.5	2.5	2.4	2.4	2.5	2.5	2.6	2.4	2.3	2.2	2.1	2.1	2.2	2.4	2.3	2.1	2.1	2.4	2.7	2.3	2.7
10-Sep	2.5	Z	2.5	2.3	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	2.2	2.2	2.2	2.2	2.1	2.1	2.5
11-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.4	2.8	3.0	3.3	2.8	M	M	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.2	2.3	3.3
12-Sep	2.3	2.4	2.4	Z	2.5	2.5	2.6	2.8	2.7	2.6	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.2	2.3	4.1	2.7	2.4	4.1
13-Sep	2.5	2.2	2.3	2.5	Z	2.4	2.6	2.6	2.6	2.6	2.6	2.8	2.6	2.5	2.5	2.5	2.7	2.7	2.6	2.5	2.6	2.8	2.8	2.9	2.6	2.9
14-Sep	3.0	3.2	3.2	3.1	2.9	Z	2.9	2.8	2.8	2.8	2.7	2.5	2.4	2.4	2.2	2.3	2.4	2.3	2.2	2.0	2.1	2.1	2.2	2.2	2.5	3.2
15-Sep	Z	2.4	2.5	2.6	2.6	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.6
16-Sep	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	2.3	2.3	2.3	2.2	2.2	2.3	2.1	2.3
17-Sep	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.3	2.2	2.4
18-Sep	2.3	2.3	2.3	2.3	Z	2.3	2.2	2.2	2.1	2.3	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	2.1	2.3
19-Sep	2.1	2.1	2.1	2.0	Z	2.4	2.3	2.3	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.5	2.5	2.2	2.5
20-Sep	2.5	2.4	2.4	2.4	2.4	Z	2.4	2.9	3.0	2.5	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.4	2.4	2.4	2.6	2.4	3.0
21-Sep	Z	2.9	3.0	3.0	3.1	3.4	3.3	3.1	2.4	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	2.0	2.4	3.4
22-Sep	2.0	Z	2.0	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	2.0	2.1	2.3	2.1	2.1	2.1	2.1	2.4	2.1	2.4
23-Sep	2.3	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	M	M	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3
24-Sep	2.4	2.3	2.3	Z	2.3	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.4
25-Sep	2.2	2.3	2.6	2.6	Z	2.4	2.5	2.7	2.4	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.3	2.7
26-Sep	2.1	2.1	2.1	2.1	2.1	Z	2.3	2.7	2.5	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	2.4	2.1	2.7
27-Sep	Z	2.2	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	2.0	2.0	2.1	2.1	2.3	2.1	2.3
28-Sep	2.3	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	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
29-Sep	2.1	2.1	Z	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	2.3	3.2	2.4	2.3	2.3	2.2	2.2	2.2	3.2
30-Sep	2.3	2.3	2.5	Z	4.3	5.4	4.4	4.5	4.2	3.6	2.5	2.3	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.8	5.4
	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	Diurnal Average	
	3.0	3.2	3.2	3.1	4.3	5.4	4.4	4.5	4.2	3.6	3.3	2.8	2.8	3.1	2.5	2.5	2.7	2.7	3.2	2.5	2.6	2.8	4.1	2.9	Diurnal Maximum	

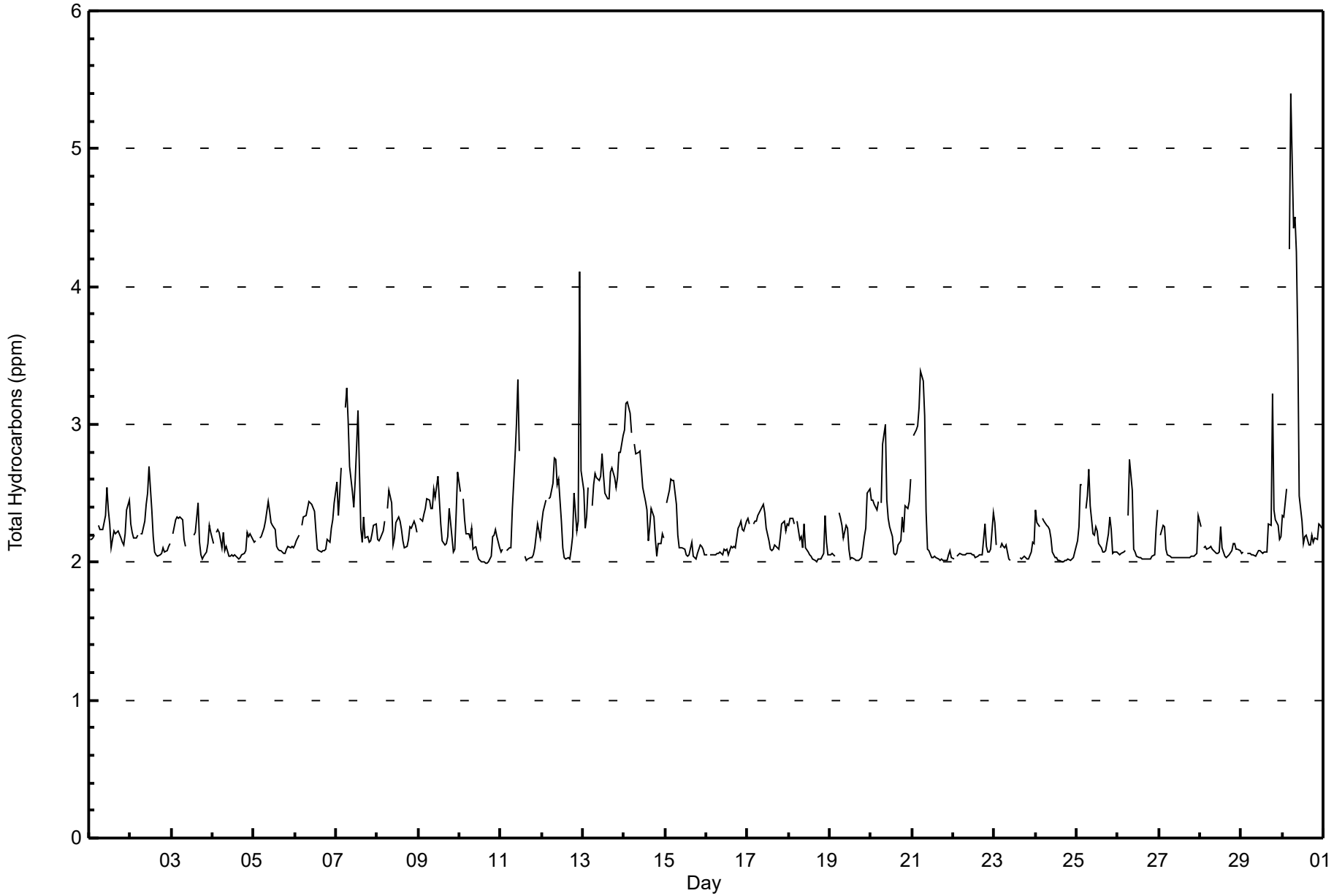
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	114	16.79	16.79
2.1 - 3.0	546	80.41	97.20
3.1 - 10.0	19	2.80	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	5	0	0	0	0	1	1	8	8	24	12	19	9	8	10	5	110
2.1 - 3.0	34	14	1	2	2	3	34	127	105	43	28	30	35	36	32	16	542
3.1 - 10.0	3	1	0	0	0	0	2	3	2	0	2	2	2	1	0	1	19
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	15	1	2	2	4	37	138	115	67	42	51	46	45	42	22	671

Total Number of Valid Hours: 671

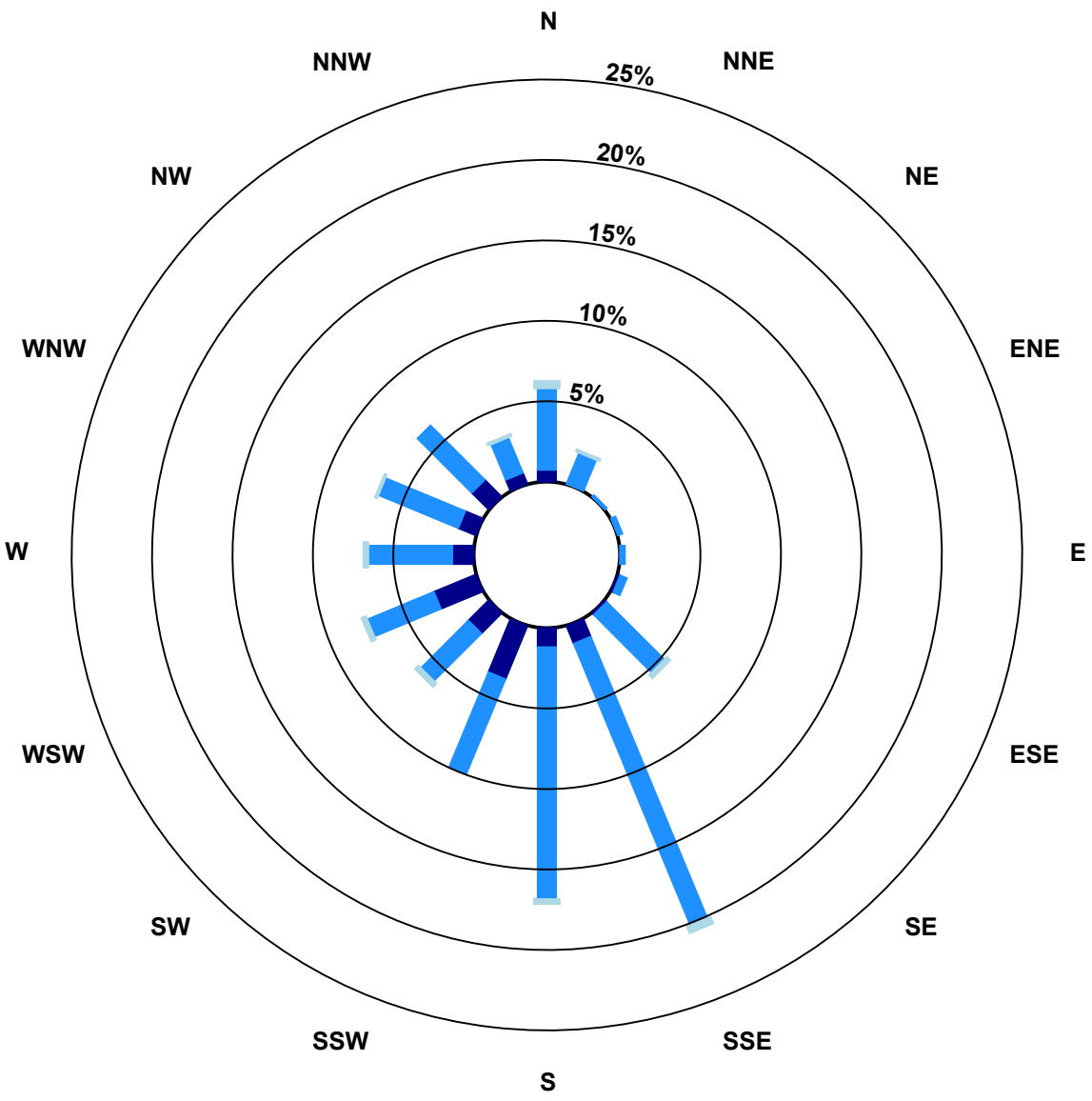
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

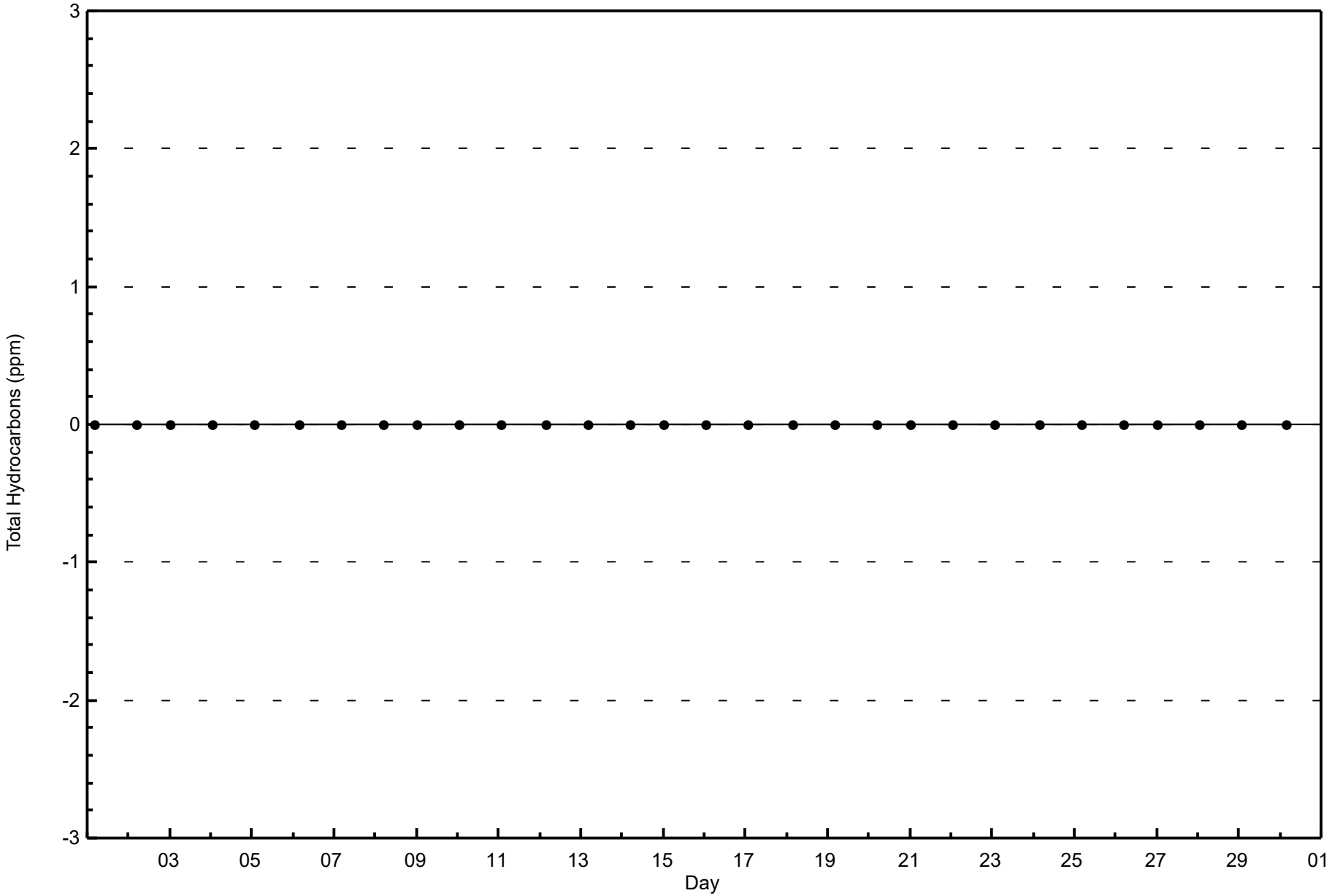
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - September 2025

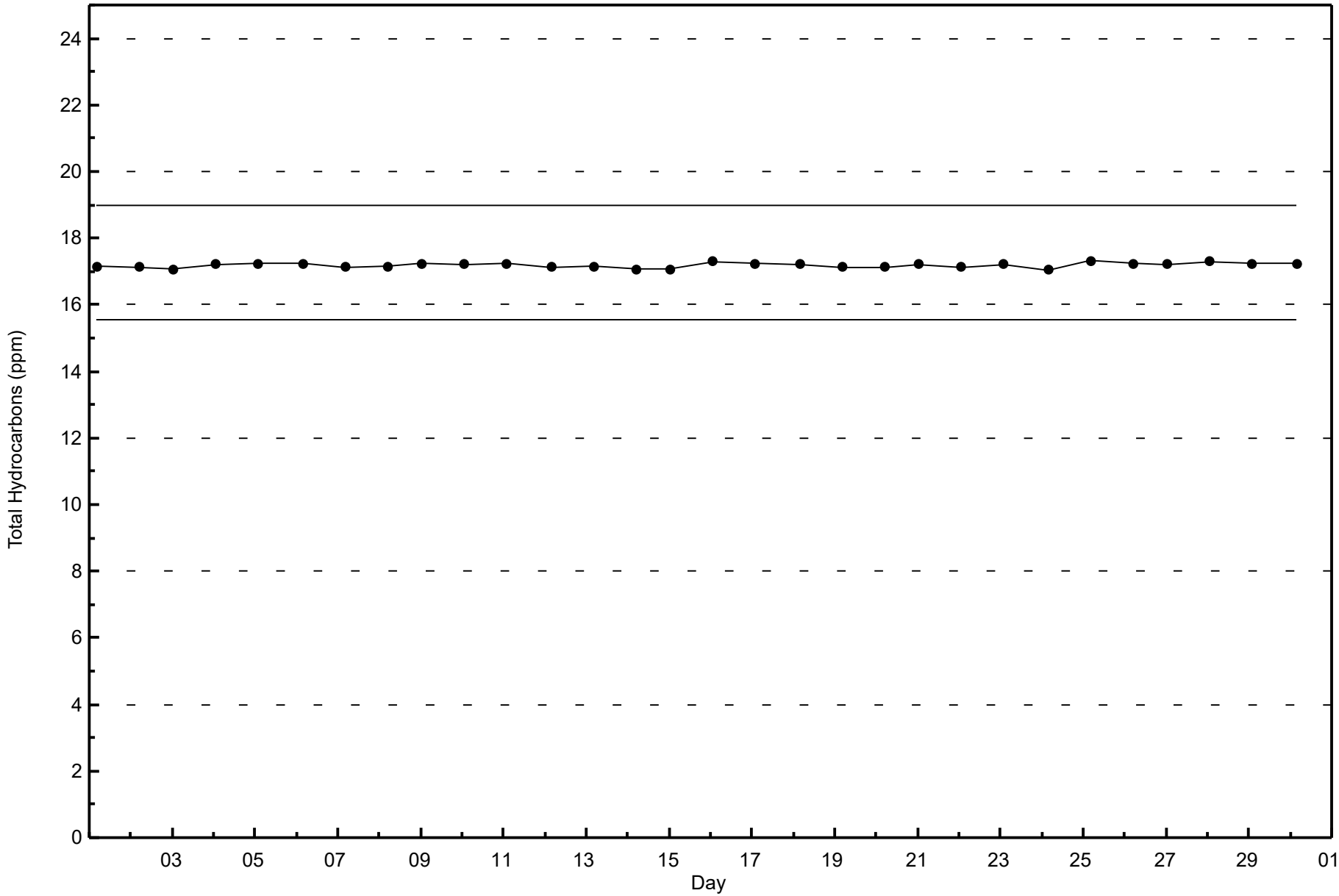


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 0.554 ppm on Sep 12 23:00

Maximum Daily Average: 0.135 ppm on Sep 12

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.001 ppm on Sep 27

Maximum Diurnal Average: 0.074 ppm at hour 12

Minimum Diurnal Average: 0.022 ppm at hour 15

Monthly Average: 0.045 ppm

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.1 P_{99} = 0.2

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.000	0.003	0.007	0.000	Z	0.007	0.000	0.002	0.018	0.061	0.096	0.096	0.158	0.023	0.084	0.106	0.126	0.119	0.078	0.049	0.032	0.014	0.033	0.077	0.052	0.158
2-Sep	0.031	0.013	0.001	0.000	0.000	Z	0.000	0.001	0.007	0.068	0.108	0.163	0.107	0.040	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.003	0.014	0.024	0.163
3-Sep	Z	0.091	0.111	0.098	0.102	0.097	0.083	0.012	0.002	C	C	C	C	0.006	0.004	0.082	0.013	0.000	0.000	0.000	0.001	0.016	0.048	0.025	0.042	0.111
4-Sep	0.016	Z	0.019	0.014	0.015	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	0.001	0.003	0.089	0.072	0.069	0.006	0.013	0.089
5-Sep	0.001	0.003	Z	0.001	0.000	0.000	0.000	0.002	0.045	0.065	0.092	0.071	0.061	0.013	0.000	0.000	0.000	0.000	0.000	0.028	0.031	0.004	0.000	0.000	0.018	0.092
6-Sep	0.000	0.000	0.000	Z	0.024	0.052	0.029	0.063	0.096	0.112	0.111	0.103	0.042	0.000	0.004	0.000	0.000	0.000	0.000	0.029	0.047	0.056	0.058	0.106	0.040	0.112
7-Sep	0.079	0.041	0.061	0.075	Z	0.071	0.064	0.077	0.055	0.026	0.042	0.124	0.299	0.493	0.116	0.030	0.174	0.035	0.054	0.015	0.029	0.007	0.010	0.012	0.086	0.493
8-Sep	0.013	0.011	0.013	0.011	0.013	Z	0.021	0.028	0.030	0.008	0.061	0.147	0.191	0.173	0.113	0.045	0.003	0.005	0.032	0.101	0.104	0.126	0.078	0.021	0.058	0.191
9-Sep	Z	0.060	0.037	0.061	0.066	0.090	0.064	0.035	0.068	0.145	0.136	0.181	0.170	0.119	0.047	0.027	0.044	0.081	0.100	0.116	0.014	0.003	0.084	0.101	0.080	0.181
10-Sep	0.073	Z	0.071	0.047	0.024	0.014	0.002	0.001	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.010	0.068	0.074	0.091	0.045	0.013	0.023	0.091
11-Sep	0.000	0.001	Z	0.002	0.000	0.000	0.000	0.026	0.100	0.124	0.242	0.301	M	M	0.000	0.000	0.000	0.000	0.000	0.001	0.027	0.093	0.057	0.046	0.049	0.301
12-Sep	0.105	0.138	0.168	Z	0.151	0.140	0.154	0.178	0.188	0.169	0.182	0.127	0.032	0.000	0.000	0.000	0.000	0.016	0.085	0.203	0.151	0.130	0.554	0.224	0.135	0.554
13-Sep	0.165	0.073	0.076	0.081	Z	0.075	0.092	0.083	0.098	0.118	0.128	0.191	0.171	0.155	0.159	0.145	0.159	0.169	0.166	0.132	0.127	0.099	0.116	0.174	0.128	0.191
14-Sep	0.140	0.144	0.163	0.174	0.152	Z	0.146	0.130	0.209	0.199	0.208	0.206	0.200	0.176	0.065	0.138	0.196	0.128	0.053	0.000	0.012	0.013	0.028	0.002	0.125	0.209
15-Sep	Z	0.100	0.056	0.064	0.095	0.090	0.067	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.085	0.008	0.000	0.000	0.007	0.051	0.040	0.035	0.005	0.031	0.100
16-Sep	0.000	Z	0.007	0.002	0.003	0.004	0.000	0.000	0.000	0.000	0.020	0.009	0.008	0.000	0.000	0.007	0.003	0.007	0.107	0.121	0.121	0.078	0.078	0.106	0.030	0.121
17-Sep	0.094	0.084	Z	0.077	0.078	0.079	0.081	0.087	0.113	0.126	0.121	0.089	0.037	0.001	0.004	0.002	0.002	0.002	0.023	0.078	0.097	0.099	0.039	0.090	0.065	0.126
18-Sep	0.109	0.120	0.113	0.092	Z	0.063	0.015	0.003	0.010	0.097	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.003	0.033	0.004	0.000	0.029	0.120
19-Sep	0.000	0.000	0.000	0.000	Z	0.022	0.024	0.002	0.001	0.074	0.059	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.026	0.005	0.036	0.033	0.013	0.074
20-Sep	0.020	0.032	0.017	0.007	0.013	Z	0.009	0.109	0.181	0.089	0.067	0.038	0.006	0.000	0.000	0.000	0.000	0.000	0.033	0.005	0.070	0.052	0.082	0.077	0.039	0.181
21-Sep	Z	0.227	0.220	0.214	0.146	0.139	0.147	0.110	0.032	0.000	0.000	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	0.054	0.227
22-Sep	0.000	Z	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	0.003	0.002	0.000	0.000	0.001	0.072	0.003	0.072
23-Sep	0.090	0.002	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	0.090
24-Sep	0.040	0.011	0.021	Z	0.087	0.087	0.092	0.091	0.098	0.087	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.098
25-Sep	0.000	0.000	0.044	0.054	Z	0.041	0.077	0.117	0.068	0.002	0.023	0.067	0.049	0.004	0.000	0.000	0.000	0.000	0.012	0.058	0.005	0.000	0.003	0.000	0.027	0.117
26-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.075	0.104	0.096	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	0.003	0.007	0.012	0.104
27-Sep	Z	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.001	0.017
28-Sep	0.008	Z	0.006	0.024	0.009	0.012	0.005	0.001	0.000	0.000	0.000	0.000	0.068	0.000	0.000	0.000	0.000	0.001	0.000	0.012	0.015	0.000	0.000	0.000	0.007	0.068
29-Sep	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	0.002	0.001	0.000	0.062	0.058	0.403	0.107	0.086	0.071	0.020	0.021	0.036	0.403
30-Sep	0.054	0.064	0.083	Z	0.133	0.183	0.178	0.178	0.158	0.215	0.101	0.143	0.006	0.066	0.008	0.000	0.005	0.088	0.002	0.003	0.000	0.065	0.083	0.005	0.079	0.215
	0.041	0.049	0.052	0.043	0.046	0.051	0.048	0.048	0.056	0.062	0.065	0.074	0.059	0.045	0.022	0.022	0.026	0.024	0.039	0.038	0.040	0.039	0.052	0.042	Diurnal Average	
	0.165	0.227	0.220	0.214	0.152	0.183	0.178	0.178	0.209	0.215	0.242	0.301	0.299	0.493	0.159	0.145	0.196	0.169	0.403	0.203	0.151	0.130	0.554	0.224	Diurnal Maximum	

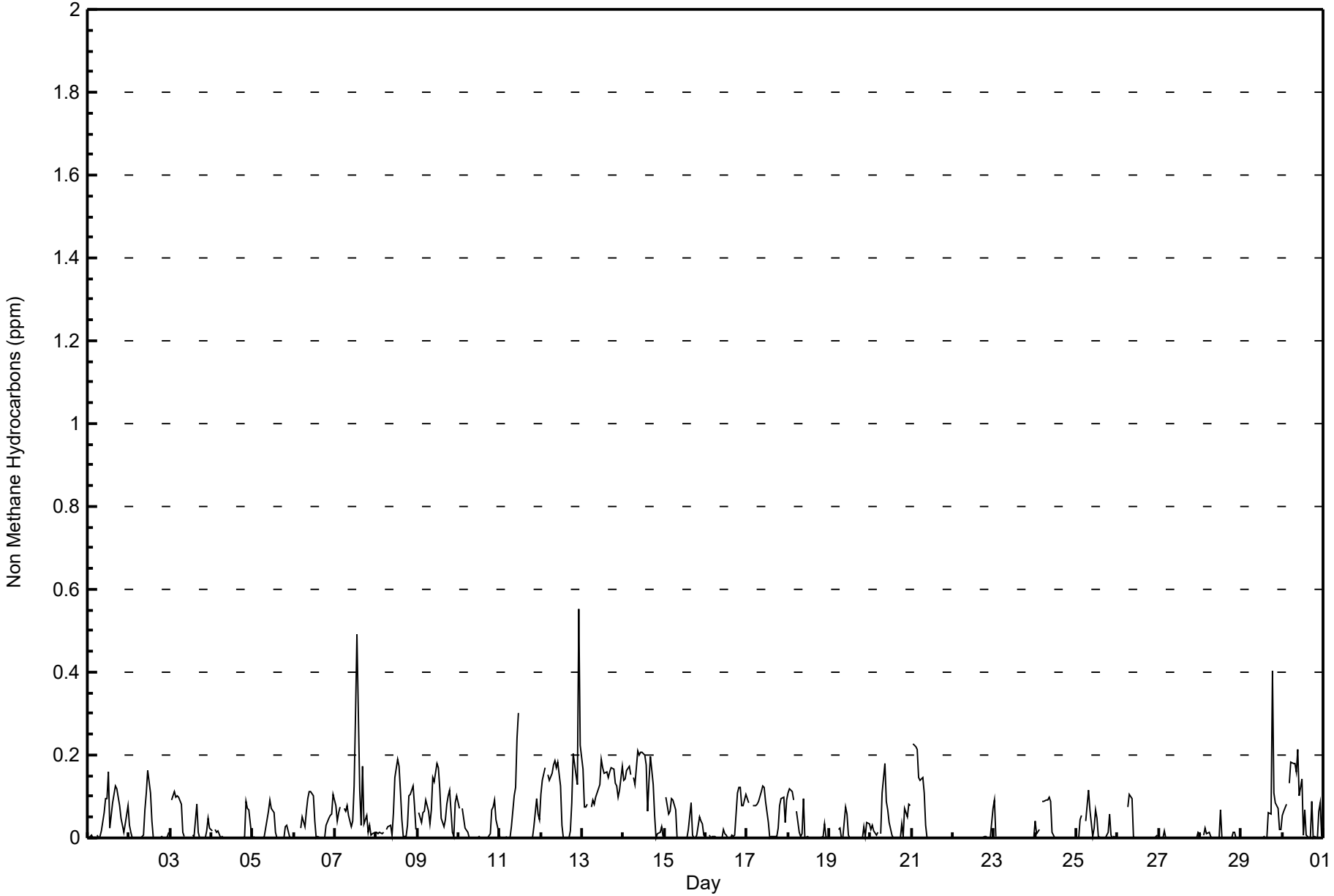
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	313	46.10	46.10
0.006 - 0.05	138	20.32	66.42
0.06 - 0.1	177	26.07	92.49
> 0.1	51	7.51	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	10	3	0	0	1	3	18	48	54	43	24	30	23	23	17	10	307
0.006 - 0.05	12	2	1	0	1	1	3	26	26	5	9	6	11	8	19	6	136
0.06 - 0.1	14	6	0	1	0	0	11	50	32	15	7	11	9	11	5	5	177
> 0.1	6	4	0	1	0	0	5	14	3	4	2	4	3	3	1	1	51
Totals	42	15	1	2	2	4	37	138	115	67	42	51	46	45	42	22	671

Total Number of Valid Hours: 671

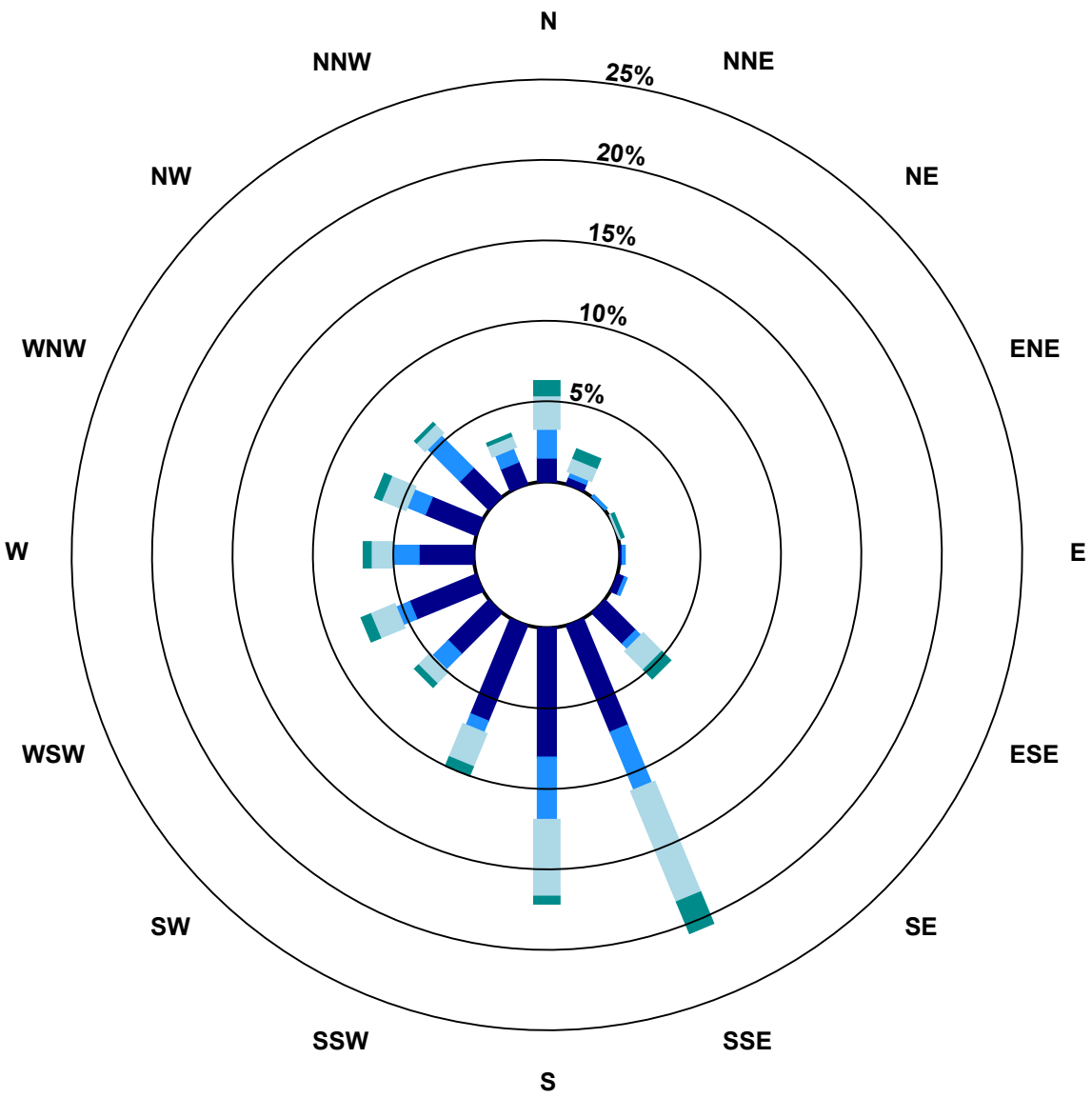
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

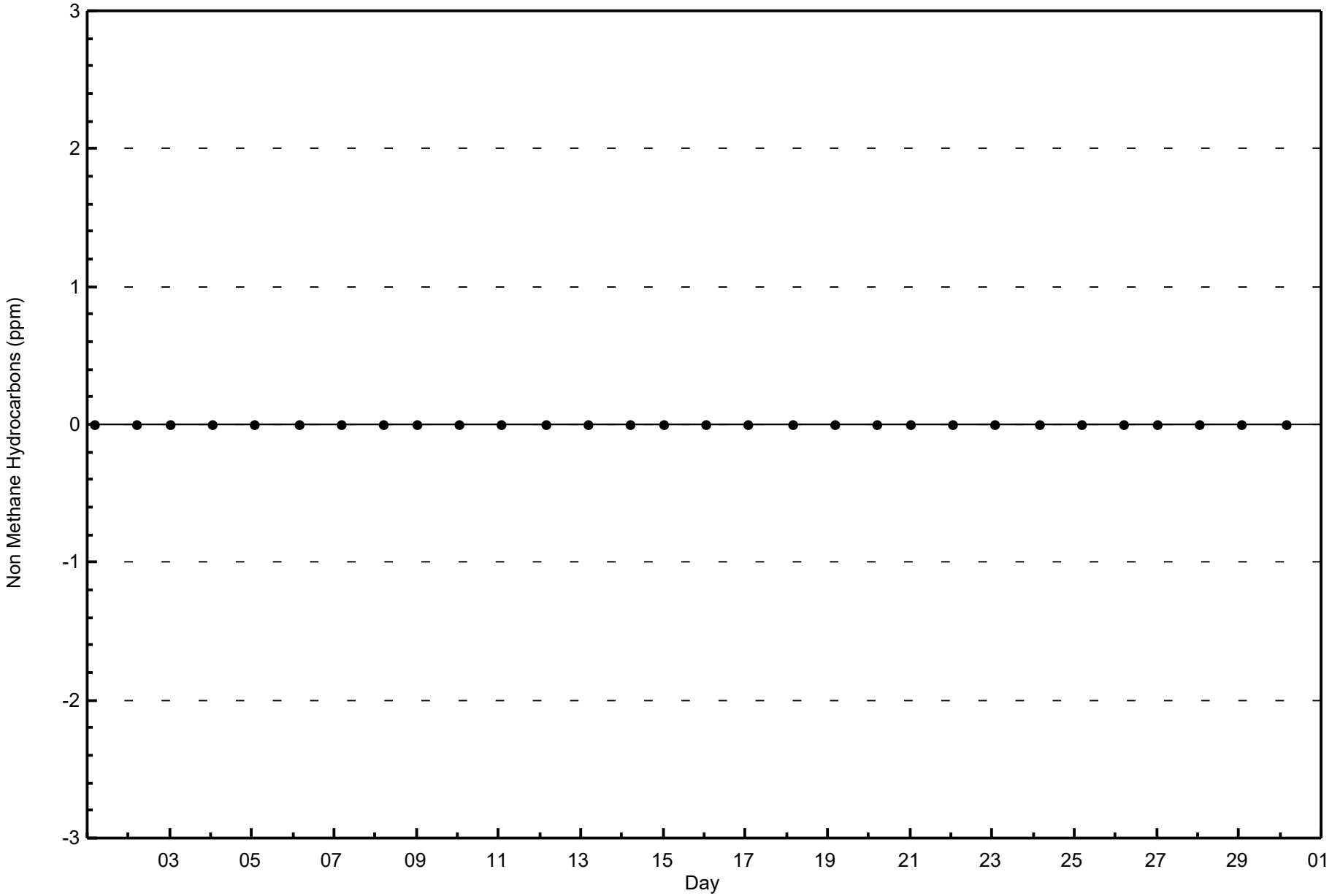
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025

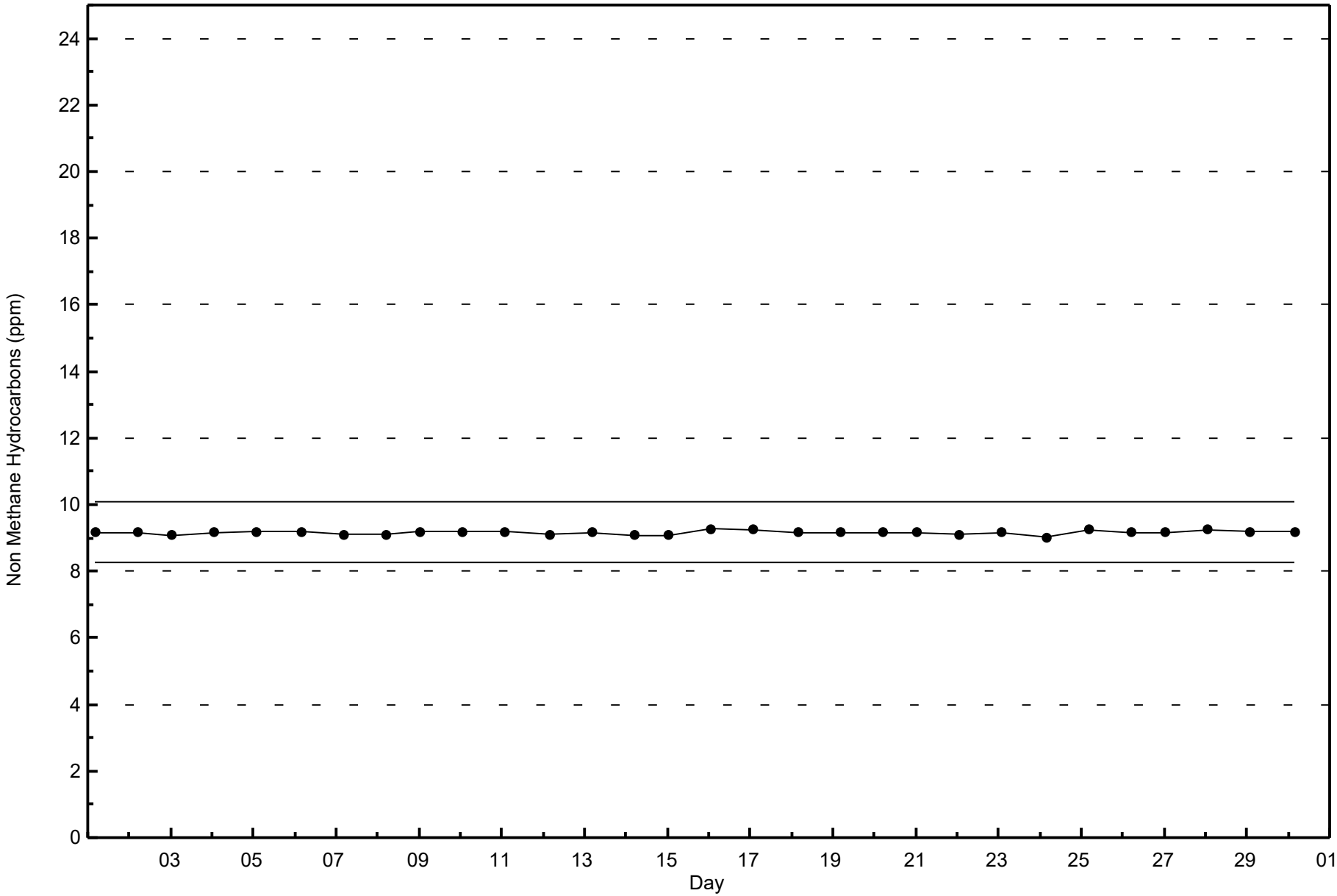


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 5.2 ppm on Sep 30 06:00

Maximum Daily Average: 2.7 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 17:00

Minimum Daily Average: 2.1 ppm on Sep 22

Maximum Diurnal Average: 2.4 ppm at hour 6

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.22 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.3	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.2	2.4
2-Sep	2.3	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.4	2.5	2.3	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
3-Sep	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	C	C	C	C	2.2	2.2	2.3	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3
4-Sep	2.1	Z	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
5-Sep	2.1	2.2	Z	2.2	2.2	2.2	2.3	2.3	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	2.1	2.2	2.4
6-Sep	2.1	2.2	2.2	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.3
7-Sep	2.5	2.3	2.4	2.6	Z	3.1	3.2	2.9	2.6	2.5	2.4	2.5	2.5	2.6	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.4	3.2
8-Sep	2.2	2.1	2.2	2.2	2.3	Z	2.4	2.5	2.4	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	2.2	2.2	2.2	2.5
9-Sep	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.3	2.6	2.3	2.6
10-Sep	2.4	Z	2.4	2.3	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	2.1	2.1	2.1	2.1	2.1	2.1	2.4
11-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.4	2.7	2.9	3.1	2.5	M	M	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2	3.1
12-Sep	2.2	2.2	2.3	Z	2.3	2.3	2.4	2.6	2.6	2.4	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.2	3.6	2.4	2.3	3.6
13-Sep	2.4	2.2	2.3	2.5	Z	2.3	2.5	2.6	2.5	2.5	2.5	2.6	2.5	2.4	2.3	2.3	2.5	2.5	2.4	2.4	2.5	2.7	2.7	2.7	2.5	2.7
14-Sep	2.8	3.0	3.0	2.9	2.8	Z	2.7	2.7	2.6	2.6	2.5	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.0	2.1	2.1	2.2	2.2	2.4	3.0
15-Sep	Z	2.3	2.5	2.5	2.5	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.5
16-Sep	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	2.2	2.2	2.2	2.1	2.2	2.1	2.2
17-Sep	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	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	2.2	2.3
18-Sep	2.2	2.2	2.2	2.2	Z	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.1	2.1	2.3
19-Sep	2.1	2.1	2.1	2.0	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.1	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	2.5
20-Sep	2.4	2.4	2.4	2.4	2.4	Z	2.4	2.8	2.8	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.3	2.3	2.4	2.5	2.3	2.8
21-Sep	Z	2.7	2.7	2.8	3.0	3.2	3.2	3.0	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	2.1	2.1	2.0	2.3	3.2
22-Sep	2.0	Z	2.0	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	2.0	2.1	2.3	2.1	2.1	2.1	2.1	2.3	2.1	2.3
23-Sep	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	M	M	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2
24-Sep	2.3	2.3	2.2	Z	2.2	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	2.1	2.1	2.3
25-Sep	2.2	2.3	2.5	2.5	Z	2.3	2.4	2.6	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.6
26-Sep	2.1	2.1	2.1	2.1	2.1	Z	2.3	2.6	2.4	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	2.4	2.1	2.6
27-Sep	Z	2.2	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	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.3
28-Sep	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
29-Sep	2.1	2.1	Z	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	2.2	2.2	2.8	2.3	2.2	2.2	2.1	2.2	2.1	2.8
30-Sep	2.3	2.3	2.5	Z	4.1	5.2	4.2	4.3	4.1	3.4	2.4	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.7	5.2
	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	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	Diurnal Average	
	2.8	3.0	3.0	2.9	4.1	5.2	4.2	4.3	4.1	3.4	3.1	2.6	2.5	2.6	2.3	2.3	2.5	2.5	2.8	2.4	2.5	2.7	3.6	2.7	Diurnal Maximum	

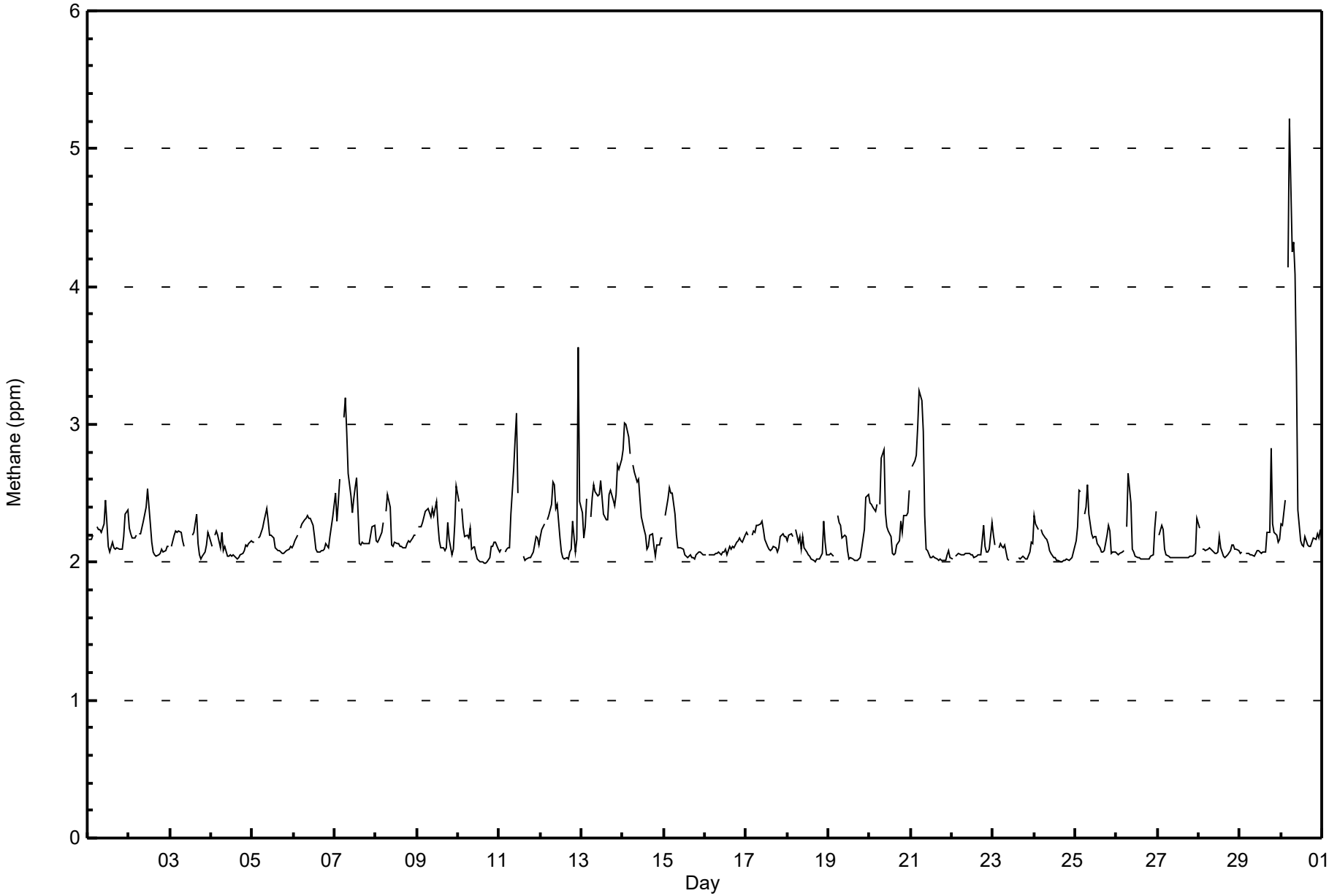
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025



Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	115	16.94	16.94
2.1 - 3.0	552	81.30	98.23
3.1 - 10.0	12	1.77	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	5	0	0	0	0	1	1	8	8	24	12	19	9	8	11	5	111
2.1 - 3.0	34	15	1	2	2	3	35	128	106	43	28	32	36	36	31	16	548
3.1 - 10.0	3	0	0	0	0	0	1	2	1	0	2	0	1	1	0	1	12
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	15	1	2	2	4	37	138	115	67	42	51	46	45	42	22	671

Total Number of Valid Hours: 671

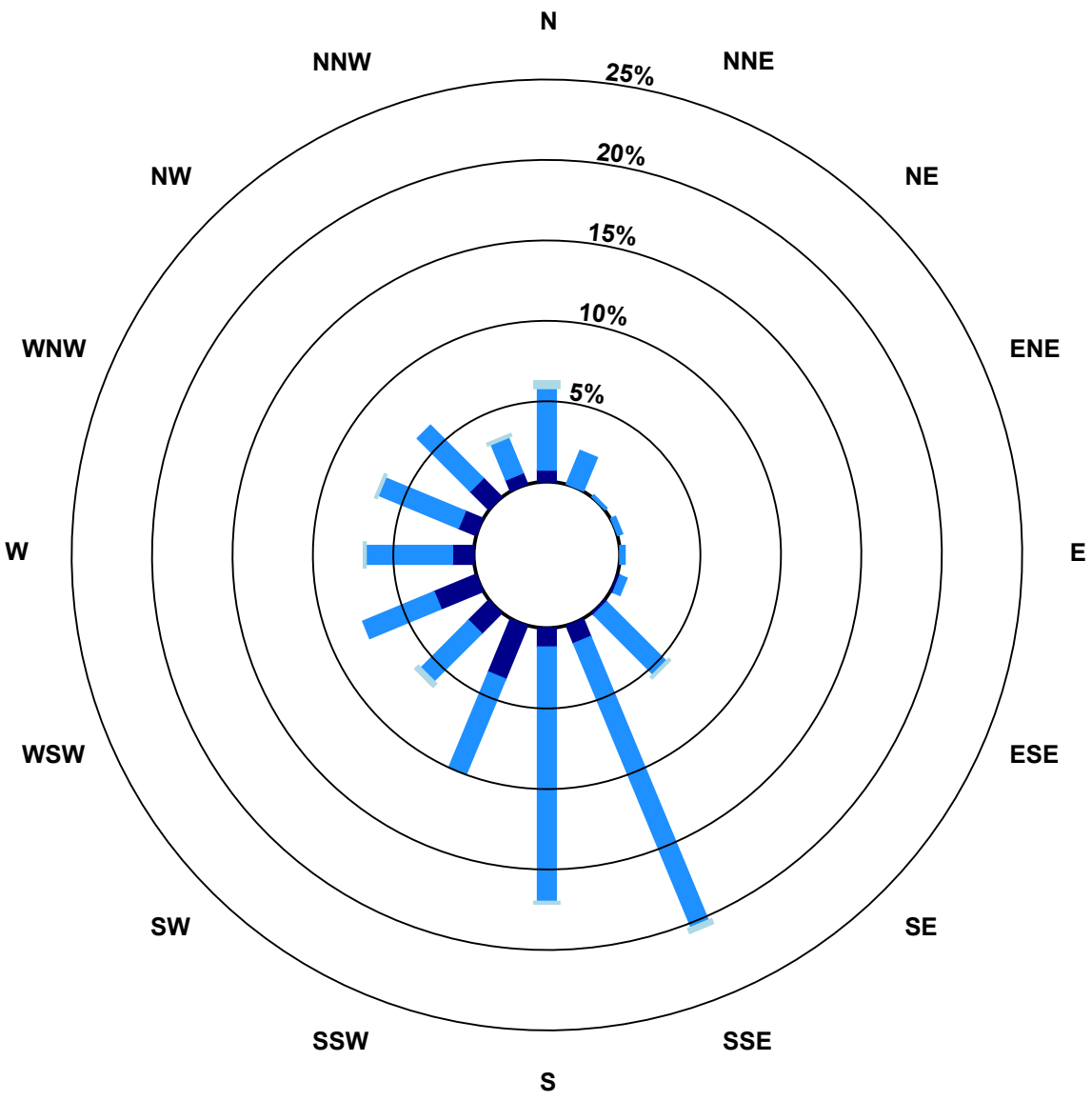
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

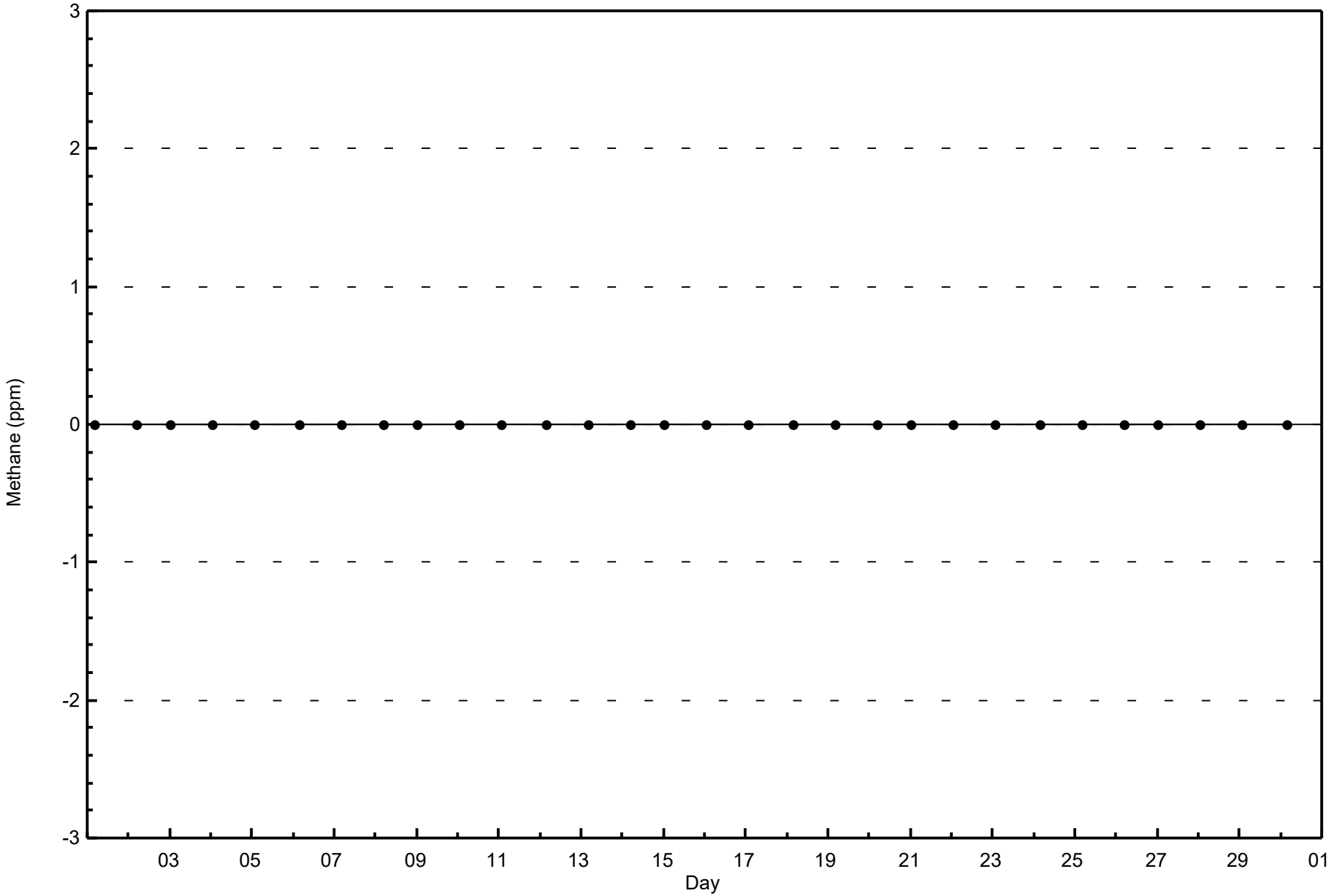
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025

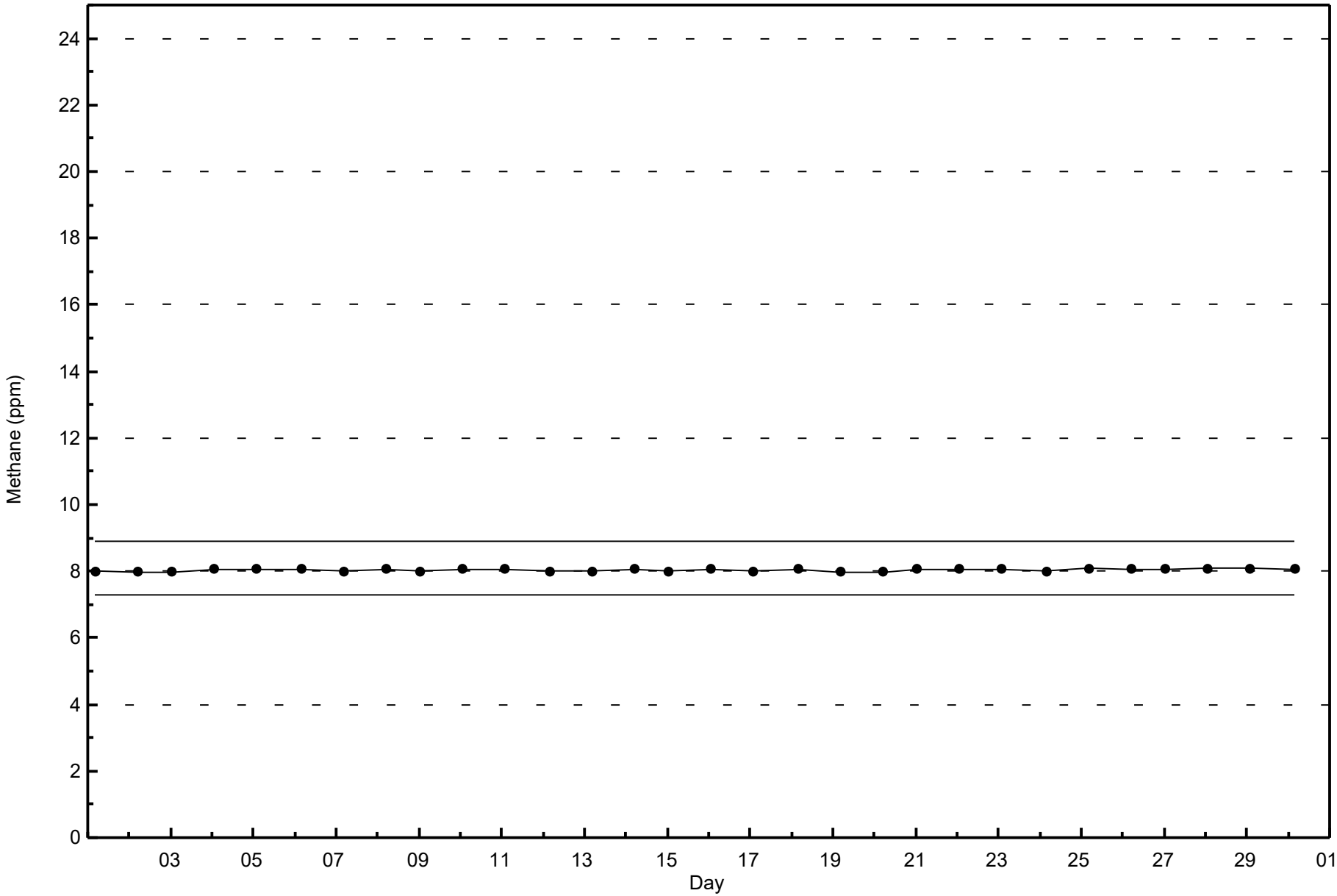


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 92.4 ppb on Sep 30 06:00

Maximum Daily Average: 19.9 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.2 ppb on Sep 18

Maximum Diurnal Average: 7.3 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 20

Monthly Average: 2.49 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.5 Q_3 = 1.5 P_{90} = 5.7 P_{99} = 41.8

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.4	1.5	3.2	9.3	6.8	2.4	1.0	0.7	0.5	0.1	0.3	0.0	0.1	0.0	1.5	1.5	7.5	1.6	9.3
2-Sep	0.2	0.1	0.0	Z	0.0	0.0	0.0	0.1	3.0	5.4	5.8	15.1	4.7	2.9	1.3	0.5	0.9	0.5	0.4	0.1	0.0	0.0	0.0	0.0	1.8	15.1
3-Sep	0.0	0.0	0.1	0.2	Z	0.3	0.5	0.8	1.5	2.6	0.2	0.3	2.3	1.0	0.6	3.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.4
4-Sep	0.0	0.0	0.0	0.0	0.0	Z	1.2	1.6	1.8	0.9	0.0	0.6	1.5	1.4	0.8	1.4	1.6	1.5	0.8	0.3	0.5	0.3	0.2	0.5	0.7	1.8
5-Sep	Z	1.0	0.5	0.6	0.2	0.9	3.1	8.4	10.3	7.8	4.0	2.1	1.8	1.4	1.6	0.7	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.0	10.3
6-Sep	0.0	Z	0.2	0.5	1.1	0.8	3.8	6.1	10.3	11.0	8.7	13.9	7.5	1.4	0.9	0.5	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.6	2.9	13.9
7-Sep	1.9	0.3	Z	8.9	18.0	26.9	43.3	18.3	8.5	5.0	2.5	5.6	10.8	18.5	2.3	0.5	1.0	0.7	0.9	0.8	11.9	1.7	7.6	5.5	8.8	43.3
8-Sep	1.3	0.1	0.1	Z	10.4	5.5	6.2	11.6	19.4	2.8	2.1	2.7	2.4	2.0	1.9	1.4	0.7	0.2	0.0	0.0	0.0	0.0	0.7	0.0	3.1	19.4
9-Sep	0.1	0.1	0.2	0.4	Z	1.1	2.0	3.5	9.0	11.2	12.6	6.4	5.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	12.6
10-Sep	3.7	12.9	8.0	2.0	0.0	Z	0.7	1.4	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.4	0.7	1.1	1.0	0.5	0.4	0.4	0.3	0.0	1.5	12.9
11-Sep	Z	0.4	0.0	0.0	0.0	0.0	0.0	20.7	37.5	41.5	C	C	C	C	C	C	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	41.5
12-Sep	0.0	Z	0.2	0.2	0.1	0.4	1.3	4.0	7.9	4.7	3.4	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.0	7.9
13-Sep	0.0	0.5	Z	10.8	2.4	2.1	8.4	8.2	7.1	4.3	3.3	6.0	4.1	2.6	1.7	0.9	0.9	0.5	0.0	0.0	1.8	6.6	11.1	17.4	4.4	17.4
14-Sep	14.1	15.7	13.9	Z	4.6	2.7	3.5	3.8	4.3	4.4	2.3	1.8	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	15.7
15-Sep	0.0	0.0	1.5	2.7	Z	1.4	2.5	1.7	0.6	0.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.3	0.5	0.6	0.8	0.7	2.7
16-Sep	0.9	0.9	1.0	1.0	1.1	Z	1.6	1.7	1.4	1.4	1.9	1.4	1.3	0.4	1.1	1.2	0.7	0.6	0.4	0.3	0.2	0.0	0.1	0.2	0.9	1.9
17-Sep	Z	0.1	0.2	0.0	0.3	0.9	18.5	6.8	PF	10.7	10.5	4.1	2.1	1.1	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	18.5
18-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.2	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.2	3.6
19-Sep	0.0	0.0	Z	0.6	2.0	3.8	5.2	10.3	3.7	2.7	1.2	0.3	0.0	0.0	0.0	0.3	0.7	0.7	0.5	0.1	0.0	0.2	1.7	3.8	1.6	10.3
20-Sep	3.3	4.3	6.4	Z	5.2	0.9	1.0	6.3	5.3	2.9	3.0	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	6.4
21-Sep	0.0	0.1	0.1	0.5	Z	1.6	3.6	5.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.6	5.4
22-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.4	0.3	0.5	0.6	1.0	0.4	0.6	0.9	0.7	0.8	0.5	0.2	0.1	0.1	0.0	0.0	0.3	1.0
23-Sep	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.8	0.8	1.0	1.1	1.3	0.9	1.1	0.6	0.6	0.8	1.0	0.5	0.3	0.5	1.3
24-Sep	0.1	Z	0.1	0.0	0.0	0.0	0.1	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.8	0.7	0.6	0.4	0.3	0.3	0.2	0.3	0.8
25-Sep	1.2	7.7	Z	26.1	21.2	2.2	5.0	6.7	4.5	2.2	1.8	3.1	2.8	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	26.1
26-Sep	0.0	0.0	0.0	Z	0.6	0.3	1.4	5.7	3.0	0.0	0.0	0.3	0.6	0.8	0.9	1.0	1.1	1.2	1.0	1.1	1.2	1.2	1.1	0.6	1.0	5.7
27-Sep	0.5	0.3	0.2	0.0	Z	0.2	0.5	0.7	0.9	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.7	0.8	0.8	0.8	0.5	0.7	1.1
28-Sep	0.1	0.0	0.1	0.0	0.0	Z	0.3	0.1	0.0	0.2	0.6	0.8	2.4	1.0	0.0	0.1	0.5	0.4	0.6	0.3	0.2	0.0	0.0	0.1	0.3	2.4
29-Sep	Z	0.9	0.8	0.7	0.8	0.7	1.0	0.9	0.9	1.4	1.5	1.2	1.3	0.8	0.3	0.6	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.5
30-Sep	0.0	Z	0.1	12.4	47.2	92.4	71.9	72.2	64.4	70.2	9.2	4.2	2.6	1.5	1.2	0.5	1.2	0.3	0.0	0.2	0.0	0.4	1.5	3.5	19.9	92.4
	1.1	1.8	1.4	2.7	4.6	5.8	6.2	7.0	7.3	6.6	3.0	2.8	2.1	1.5	0.6	0.6	0.5	0.4	0.3	0.2	0.6	0.6	0.9	1.4	Diurnal Average	
	14.1	15.7	13.9	26.1	47.2	92.4	71.9	72.2	64.4	70.2	12.6	15.1	10.8	18.5	2.3	3.4	1.6	1.5	1.0	1.1	11.9	6.6	11.1	17.4	Diurnal Maximum	

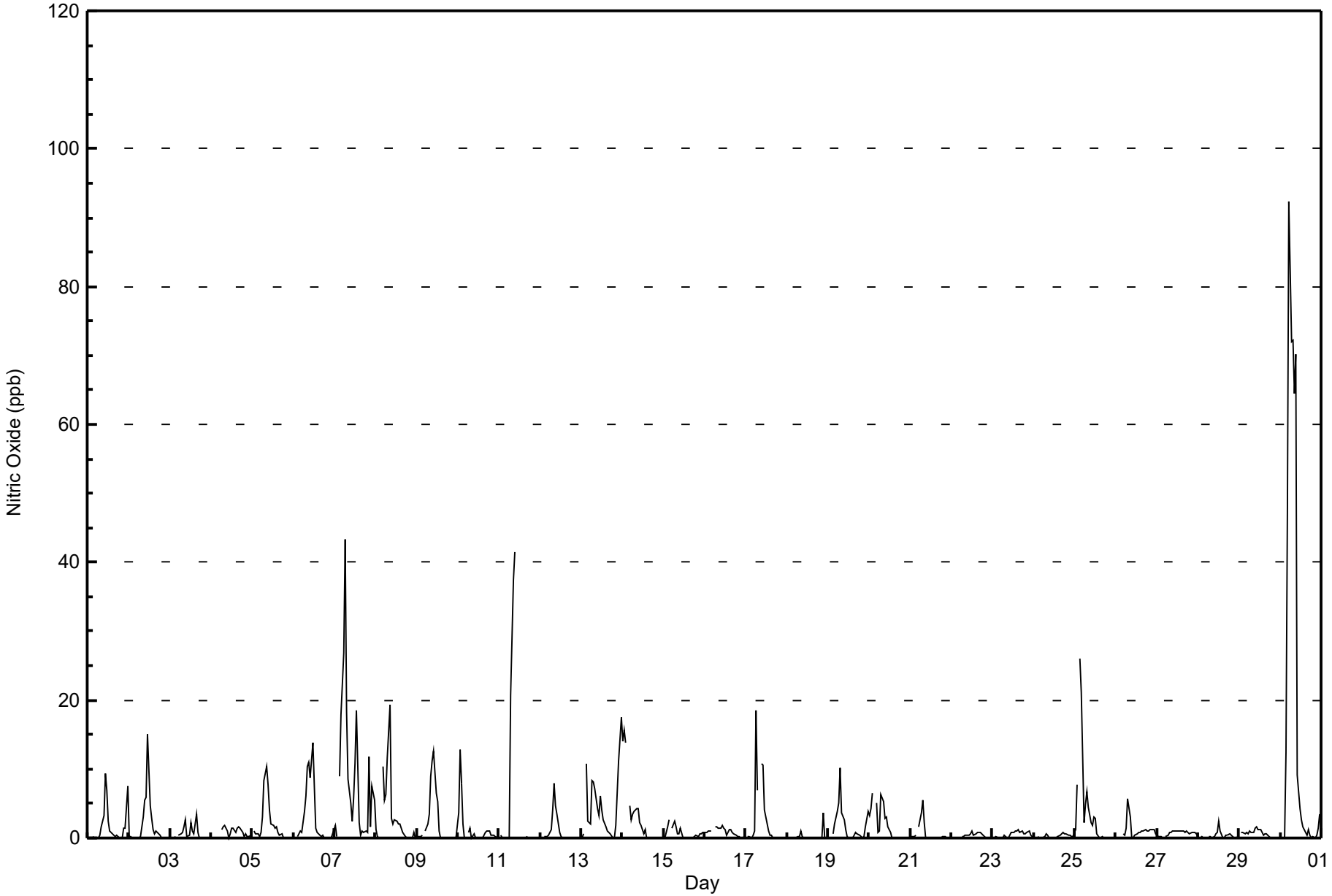
Z - zerospan C - Calibration PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	670	98.10	98.10
21 - 40	5	0.73	98.83
11 - 80	7	1.02	99.85
81 - 159	1	0.15	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	40	15	1	2	2	4	35	130	116	67	43	52	46	47	42	20	662
21 - 40	0	0	0	0	0	0	0	2	2	0	1	0	0	0	0	0	5
11 - 80	3	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	7
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	15	1	2	2	4	36	132	118	67	45	52	47	48	42	21	675

Total Number of Valid Hours: 675

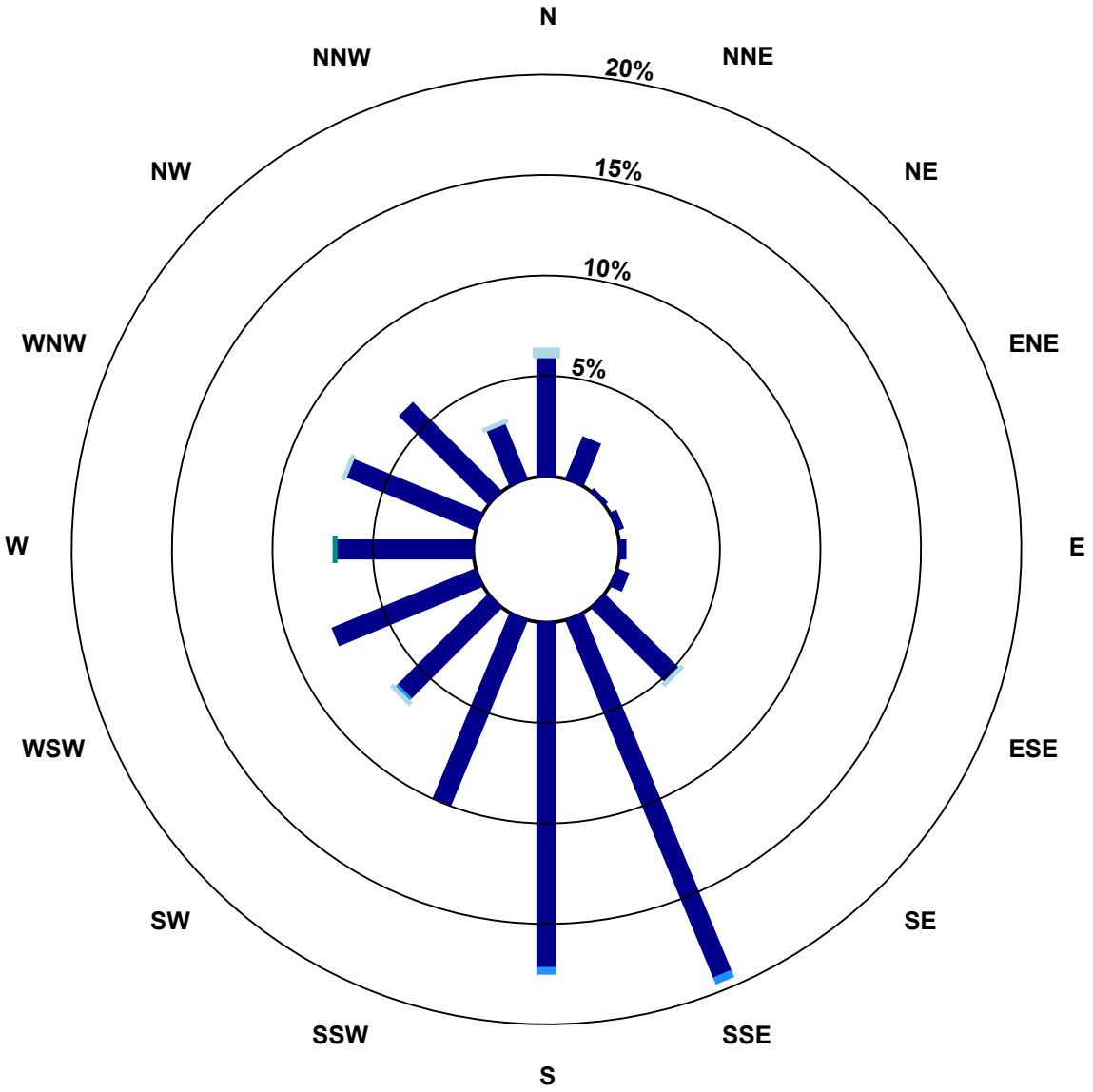
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

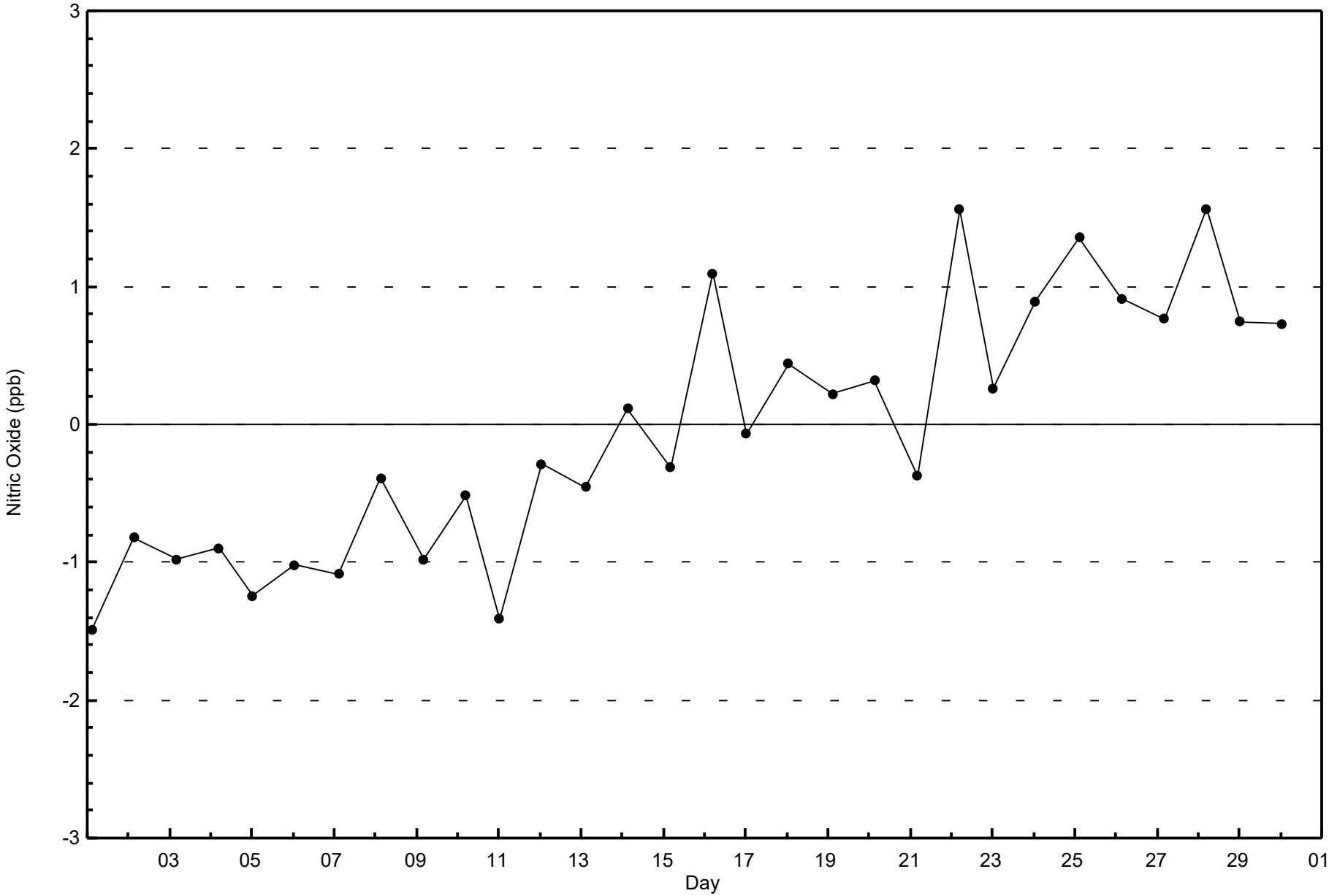
Total Number of Valid Hours: 675

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - September 2025

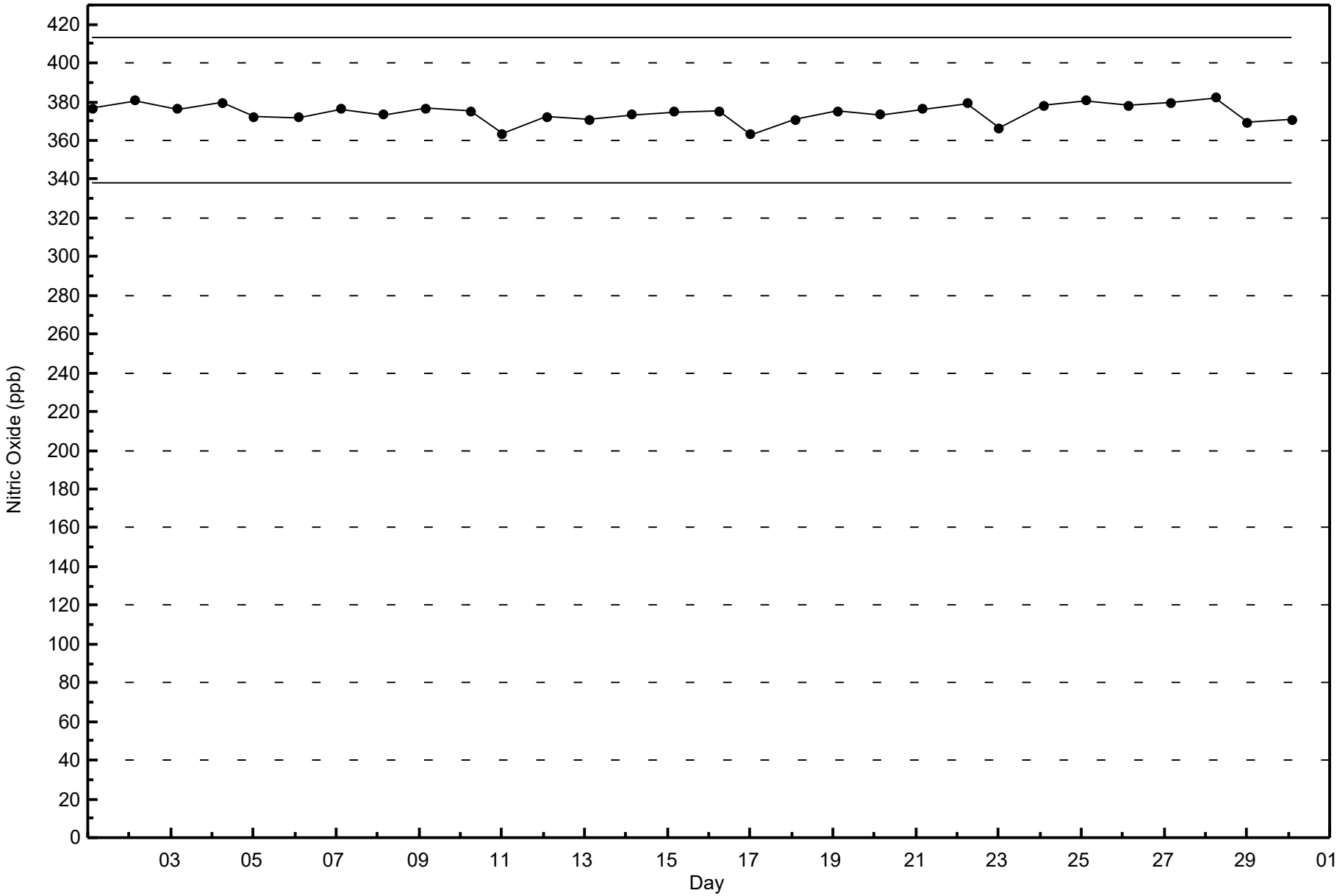


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 34.7 ppb on Sep 7 14:00

Maximum Daily Average: 13.8 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 1 05:00

Minimum Daily Average: 1.2 ppb on Sep 27

Maximum Diurnal Average: 7.2 ppb at hour 22

Minimum Diurnal Average: 2.2 ppb at hour 15

Monthly Average: 4.89 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.8 Median = 3.5 Q_3 = 7.0 P_{90} = 12.0 P_{99} = 21.8

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.7	0.4	Z	0.5	0.0	0.0	1.8	2.2	3.3	3.8	5.4	6.1	3.7	2.5	2.5	2.7	2.9	4.6	4.7	6.2	7.9	17.3	8.2	11.8	4.3	17.3
2-Sep	3.7	1.4	0.4	Z	0.6	0.0	0.3	0.5	3.2	6.3	8.4	13.3	10.1	8.6	4.4	2.7	4.4	5.3	5.9	5.8	2.5	1.7	4.1	6.1	4.3	13.3
3-Sep	5.2	7.9	11.0	12.5	Z	4.5	6.1	5.1	6.5	7.2	2.5	3.0	6.5	3.7	2.3	9.1	3.1	0.5	0.0	0.6	0.3	2.3	4.6	7.2	4.9	12.5
4-Sep	6.9	11.5	8.9	9.8	10.9	Z	7.2	4.6	4.4	1.2	0.8	0.9	1.6	1.5	0.8	0.7	0.8	2.5	3.3	4.4	5.9	3.7	4.2	3.7	4.4	11.5
5-Sep	Z	3.5	1.9	1.1	0.6	1.1	1.9	3.0	4.5	5.6	4.6	3.1	3.8	3.7	4.9	2.8	3.3	5.2	3.1	3.4	3.9	3.1	1.4	0.7	3.1	5.6
6-Sep	1.2	Z	1.4	1.4	2.1	2.4	2.4	5.3	9.5	13.2	13.2	20.5	15.0	3.8	3.3	2.8	3.9	4.6	3.6	2.6	5.2	3.2	2.2	6.3	5.6	20.5
7-Sep	11.8	5.5	Z	12.1	15.5	13.4	12.0	8.7	9.0	7.0	4.5	11.2	21.6	34.7	6.3	4.3	6.7	6.7	5.5	6.2	10.6	15.2	16.4	14.7	11.3	34.7
8-Sep	11.1	9.9	9.4	Z	9.3	5.7	5.2	5.3	8.0	4.6	4.4	4.3	4.2	4.5	4.6	4.1	4.1	4.5	4.4	5.8	3.8	3.6	4.1	2.7	5.5	11.1
9-Sep	3.0	2.3	2.1	2.6	Z	1.4	0.9	1.3	5.0	10.7	15.4	12.6	14.1	5.5	1.3	2.0	2.9	3.9	3.5	6.4	1.0	2.5	10.5	10.3	5.3	15.4
10-Sep	20.5	18.9	15.5	9.4	3.4	Z	2.5	2.0	0.3	1.6	1.1	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.3	5.3	6.4	5.8	1.9	1.2	4.2	20.5
11-Sep	Z	1.2	0.5	0.0	0.0	0.6	1.6	6.6	9.2	12.9	C	C	C	C	C	C	1.5	1.7	2.5	3.3	6.3	9.9	4.8	3.6	--	12.9
12-Sep	4.7	Z	6.2	4.6	4.5	3.9	4.1	4.8	10.3	9.8	8.9	4.3	1.6	1.2	1.3	1.1	0.9	1.9	5.4	4.4	2.5	12.9	9.7	6.1	5.0	12.9
13-Sep	6.2	7.1	Z	14.1	11.9	11.6	10.1	9.3	9.4	10.9	10.1	15.0	13.4	9.6	8.8	8.6	14.1	14.0	12.4	19.5	22.6	29.0	26.7	23.1	13.8	29.0
14-Sep	18.3	14.1	11.0	Z	5.9	4.0	2.5	2.8	5.8	8.6	8.3	8.1	5.3	10.1	2.8	3.0	3.6	5.1	5.5	1.9	3.0	3.0	2.4	2.8	6.0	18.3
15-Sep	3.1	4.8	14.1	15.0	Z	10.6	10.3	4.3	0.6	0.6	1.7	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	2.8	15.0
16-Sep	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.9	1.1	1.3	0.4	1.7	2.7	1.9	3.6	9.2	10.3	8.8	5.9	7.0	8.6	2.8	10.3
17-Sep	Z	6.3	4.5	3.2	2.2	2.1	3.5	3.3	PF	9.6	12.1	8.0	6.7	4.9	3.2	4.3	4.2	3.4	2.9	3.5	6.3	9.2	13.7	10.0	5.8	13.7
18-Sep	6.2	Z	4.9	3.9	4.6	9.9	8.8	3.1	3.9	2.3	1.9	1.0	0.0	0.8	0.5	0.3	0.0	0.0	0.6	0.7	2.7	28.3	11.0	0.2	4.2	28.3
19-Sep	0.0	0.0	Z	0.3	13.2	21.2	17.4	13.1	5.3	6.0	4.3	2.4	0.0	0.0	0.0	0.0	0.2	1.5	2.6	6.6	10.4	16.2	14.8	15.2	6.6	21.2
20-Sep	15.3	13.9	12.9	Z	8.9	6.2	4.8	7.1	6.5	5.2	6.1	4.7	4.8	1.5	0.4	0.6	0.7	2.0	3.2	2.0	4.2	3.1	2.7	2.7	5.2	15.3
21-Sep	2.4	7.4	6.4	8.5	Z	16.5	10.8	9.3	4.8	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.0	1.7	1.4	0.0	3.1	16.5
22-Sep	0.0	0.0	0.1	0.2	0.2	Z	1.2	0.7	0.7	0.5	0.6	0.9	1.7	0.5	0.5	1.2	1.6	4.3	4.5	3.0	3.3	4.1	1.7	2.6	1.5	4.5
23-Sep	Z	8.5	7.0	6.0	7.0	6.9	5.1	7.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	2.0	0.1	3.1	1.6	0.8	0.3	3.7	6.4	7.1	3.2	8.5
24-Sep	8.8	Z	7.8	10.2	8.9	12.4	11.4	10.1	4.8	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.5	0.7	0.7	2.6	3.5	12.4
25-Sep	7.2	10.4	Z	15.0	13.1	9.7	10.6	7.8	7.8	6.3	5.3	7.3	7.7	4.8	3.4	4.7	6.7	1.3	2.8	2.2	4.4	1.2	0.0	0.0	6.1	15.0
26-Sep	0.2	0.5	1.0	Z	0.8	1.7	6.6	6.0	3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.4	0.2	0.5	8.7	8.6	1.7	8.7
27-Sep	5.3	5.7	4.7	4.0	Z	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.7	0.9	0.7	5.4	1.2	5.7
28-Sep	5.5	0.4	0.4	0.3	0.3	Z	0.6	0.3	0.2	0.1	0.1	0.5	4.5	2.7	0.6	0.4	0.9	2.1	3.1	3.6	5.8	2.6	1.7	1.1	1.6	5.8
29-Sep	Z	2.2	1.2	0.7	1.3	1.4	1.6	1.6	0.9	2.2	4.0	3.8	3.3	2.5	1.8	1.7	2.6	3.2	4.5	3.7	7.4	6.0	3.1	2.1	2.7	7.4
30-Sep	2.7	Z	7.0	13.2	17.6	20.5	20.2	19.5	18.6	23.8	13.0	9.5	8.8	7.3	8.0	4.6	5.4	7.5	10.2	15.9	12.1	18.2	19.4	18.7	13.1	23.8
	6.0	5.8	5.6	5.9	5.7	6.7	5.7	5.2	5.0	5.3	4.7	4.9	4.8	4.0	2.2	2.3	2.6	3.1	3.6	4.3	5.0	7.2	6.5	6.2	Diurnal Average	
	20.5	18.9	15.5	15.0	17.6	21.2	20.2	19.5	18.6	23.8	15.4	20.5	21.6	34.7	8.8	9.1	14.1	14.0	12.4	19.5	22.6	29.0	26.7	23.1	Diurnal Maximum	

Z - zerospan C - Calibration PF - Power Failure

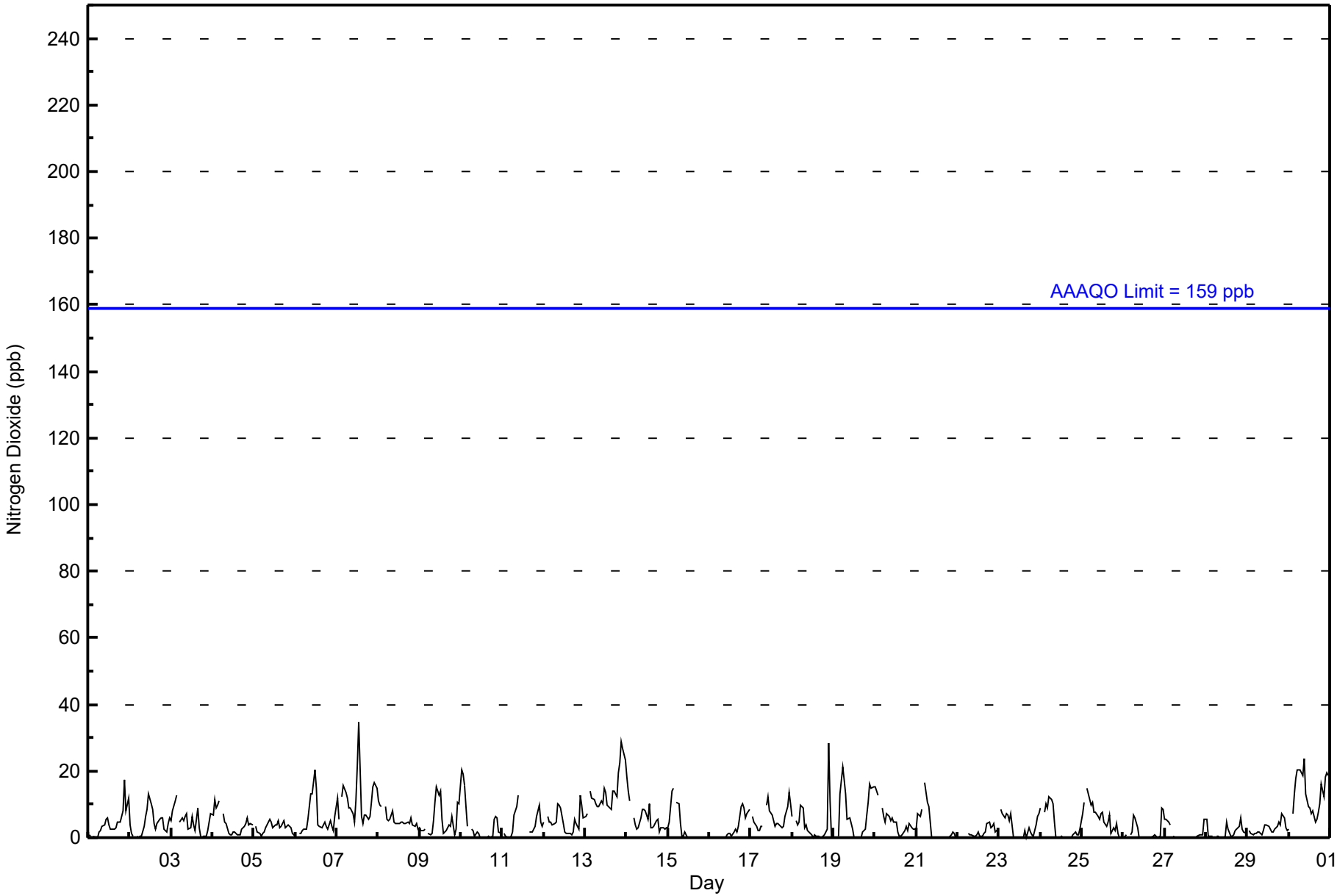
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - September 2025



Nitrogen Dioxide (NO_2) - ppb
Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	671	98.24	98.24
21 - 40	12	1.76	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	42	14	1	1	2	4	36	131	118	66	43	52	46	46	41	20	663
21 - 40	1	1	0	1	0	0	0	1	0	1	2	0	1	2	1	1	12
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	15	1	2	2	4	36	132	118	67	45	52	47	48	42	21	675

Total Number of Valid Hours: 675

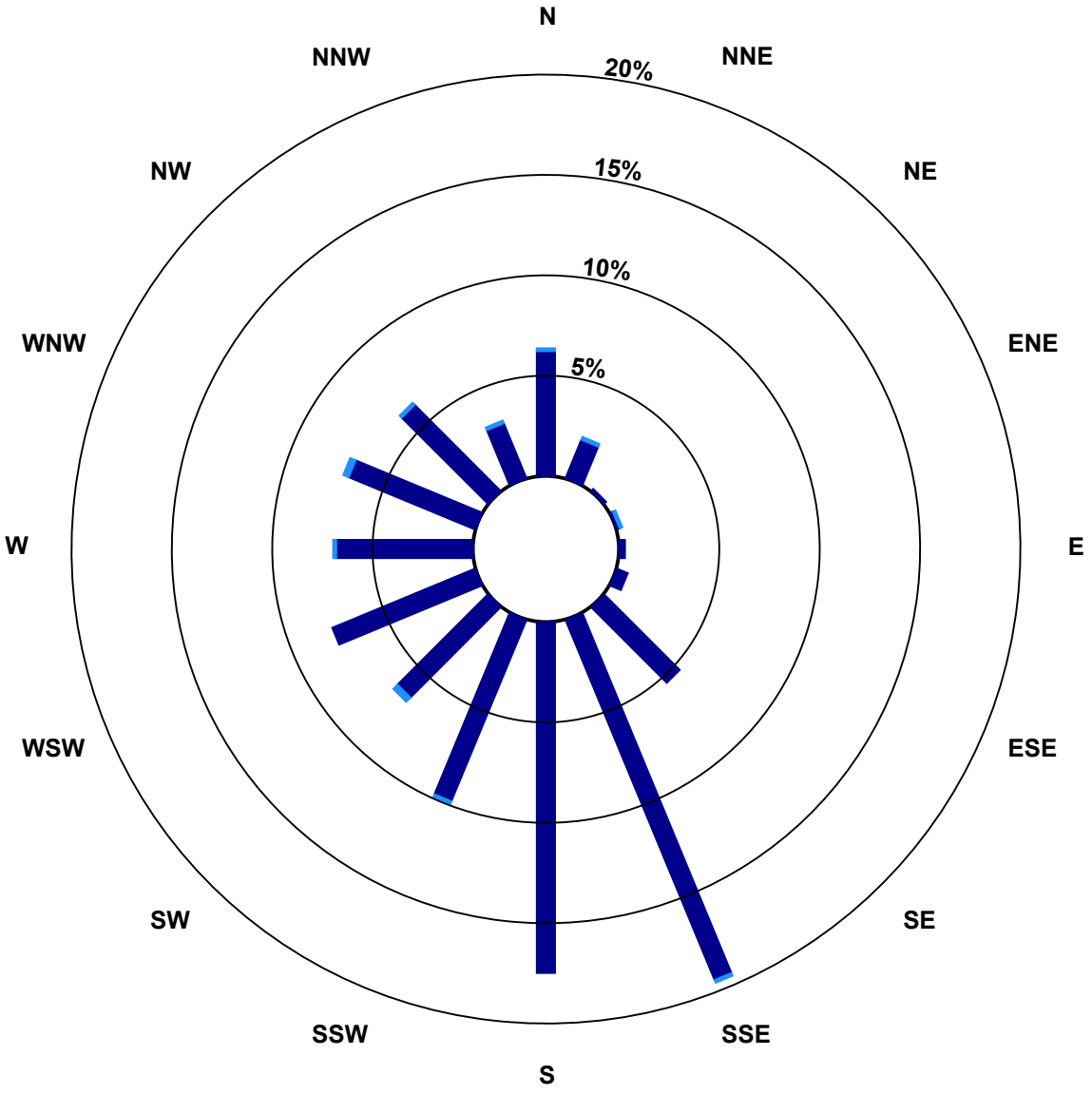
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

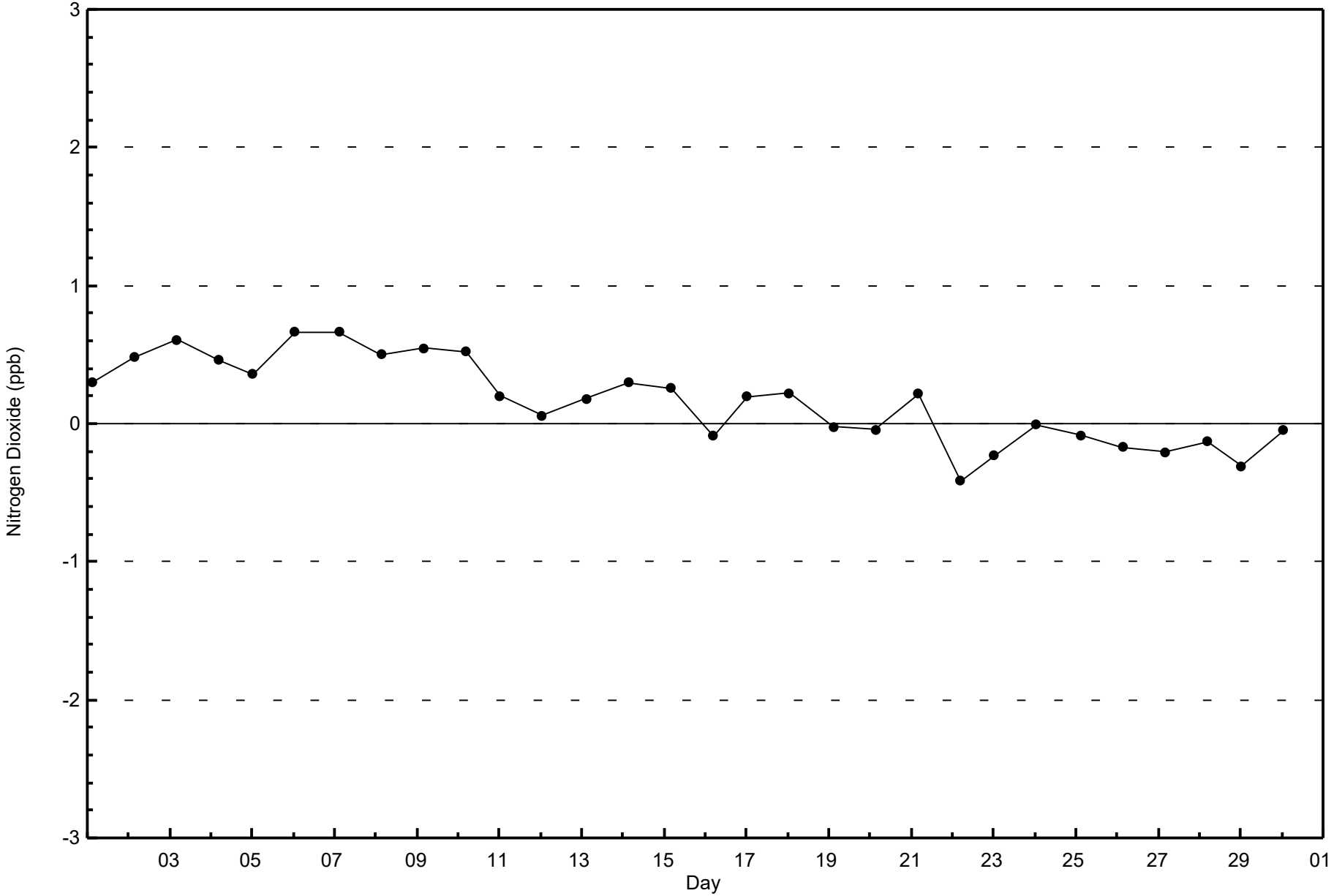
Total Number of Valid Hours: 675

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - September 2025

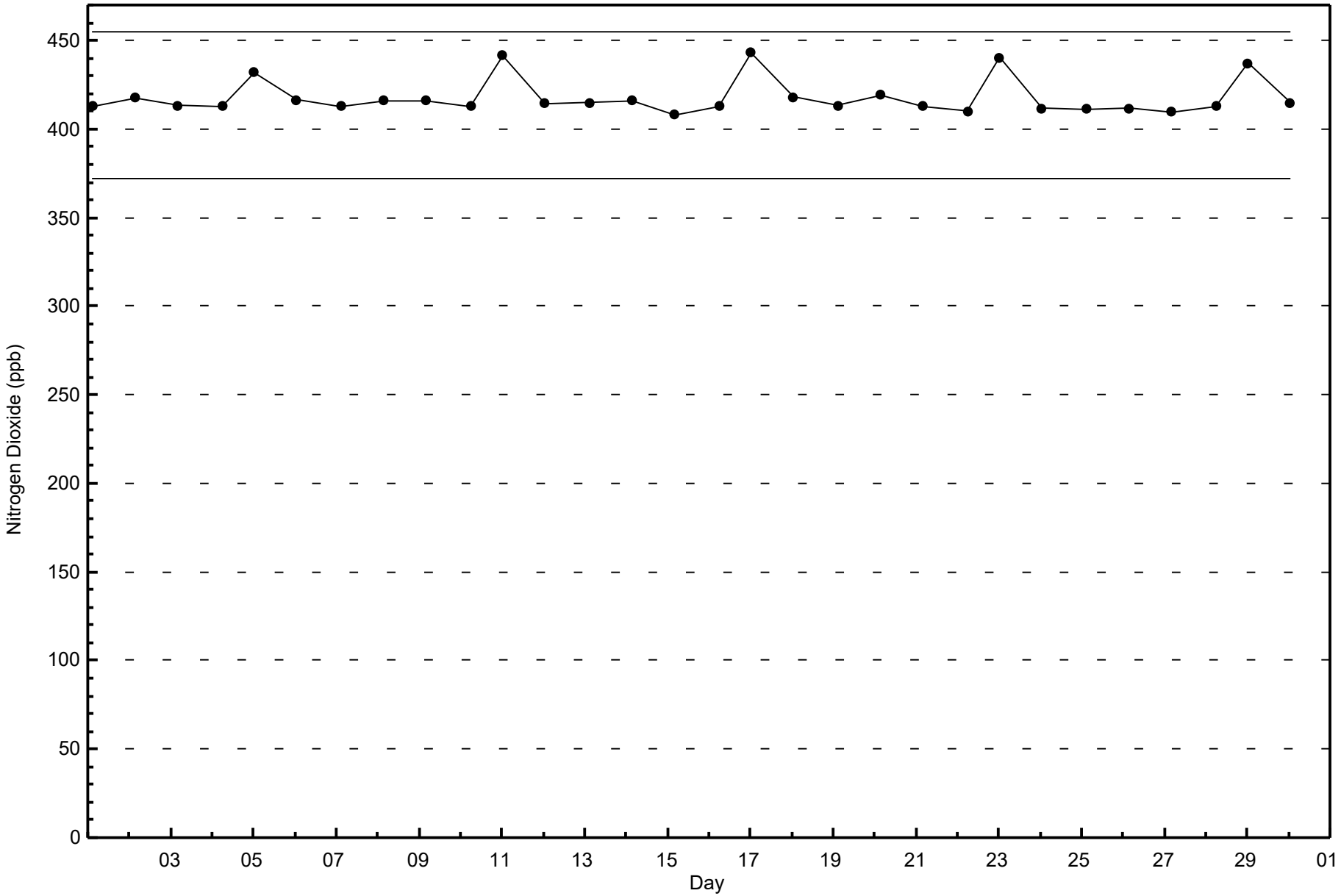


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 112.9 ppb on Sep 30 06:00

Maximum Daily Average: 33.0 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 1 06:00

Minimum Daily Average: 1.8 ppb on Sep 22

Maximum Diurnal Average: 12.5 ppb at hour 6

Minimum Diurnal Average: 2.8 ppb at hour 15

Monthly Average: 7.38 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.4 Q_1 = 1.4 Median = 4.1 Q_3 = 8.9 P_{90} = 17.6 P_{99} = 54.5

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.7	0.4	Z	0.7	0.0	0.0	1.8	2.6	4.8	7.0	14.7	12.9	6.1	3.5	3.2	3.2	3.0	4.9	4.7	6.3	7.9	18.8	9.7	19.3	5.9	19.3
2-Sep	3.9	1.5	0.4	Z	0.6	0.0	0.3	0.6	6.2	11.7	14.2	28.4	14.8	11.5	5.7	3.2	5.3	5.8	6.3	5.9	2.5	1.7	4.1	6.1	6.1	28.4
3-Sep	5.2	7.9	11.1	12.7	Z	4.8	6.6	5.9	8.0	9.8	2.7	3.3	8.8	4.7	2.9	12.5	3.8	0.5	0.0	0.6	0.3	2.3	4.6	7.2	5.5	12.7
4-Sep	6.9	11.5	8.9	9.8	10.9	Z	8.4	6.2	6.2	2.1	0.8	1.5	3.1	2.9	1.6	2.1	2.4	4.0	4.1	4.7	6.4	4.0	4.4	4.2	5.1	11.5
5-Sep	Z	4.5	2.4	1.7	0.8	2.0	5.0	11.4	14.8	13.4	8.6	5.2	5.6	5.1	6.5	3.5	3.7	5.7	3.1	3.4	3.9	3.1	1.4	0.7	5.0	14.8
6-Sep	1.2	Z	1.6	1.9	3.2	3.2	6.2	11.4	19.8	24.2	21.9	34.4	22.5	5.2	4.2	3.3	4.2	4.9	3.6	2.6	5.2	3.2	2.2	6.9	8.6	34.4
7-Sep	13.7	5.8	Z	21.0	33.5	40.3	55.3	27.0	17.5	12.0	7.0	16.8	32.4	53.2	8.6	4.8	7.7	7.4	6.4	7.0	22.5	16.9	24.0	20.2	20.0	55.3
8-Sep	12.4	10.0	9.5	Z	19.7	11.2	11.4	16.9	27.4	7.4	6.5	7.0	6.6	6.5	6.5	5.5	4.8	4.7	4.4	5.8	3.8	3.6	4.8	2.7	8.7	27.4
9-Sep	3.1	2.4	2.3	3.0	Z	2.5	2.9	4.8	14.0	21.9	28.0	19.0	19.5	6.5	1.3	2.0	2.9	3.9	3.5	6.4	1.0	2.5	10.5	10.3	7.6	28.0
10-Sep	24.2	31.8	23.5	11.4	3.4	Z	3.2	3.4	0.3	2.1	1.2	0.1	0.1	0.0	0.0	0.5	1.0	1.2	1.3	5.8	6.8	6.2	2.2	1.2	5.7	31.8
11-Sep	Z	1.6	0.5	0.0	0.0	0.6	1.6	27.3	46.7	54.4	C	C	C	C	C	C	1.7	1.7	2.5	3.3	6.3	9.9	4.8	3.6	--	54.4
12-Sep	4.7	Z	6.4	4.8	4.6	4.3	5.4	8.8	18.2	14.5	12.3	5.0	1.8	1.2	1.3	1.1	0.9	1.9	5.4	4.4	2.5	12.9	9.8	6.2	6.0	18.2
13-Sep	6.2	7.6	Z	24.9	14.3	13.7	18.5	17.5	16.5	15.2	13.4	21.0	17.5	12.2	10.5	9.5	15.0	14.5	12.4	19.5	24.4	35.6	37.8	40.5	18.2	40.5
14-Sep	32.4	29.8	24.9	Z	10.5	6.7	6.0	6.6	10.1	13.0	10.6	9.9	5.9	11.3	2.8	3.0	3.6	5.1	5.5	1.9	3.0	3.0	2.4	2.8	9.2	32.4
15-Sep	3.1	4.8	15.6	17.7	Z	12.0	12.8	6.0	1.2	1.2	3.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.3	0.5	0.6	0.8	3.5	17.7
16-Sep	0.9	0.9	1.1	1.0	1.1	Z	1.6	1.8	1.4	1.4	2.8	2.5	2.6	0.8	2.8	3.9	2.6	4.2	9.6	10.6	9.0	5.9	7.1	8.8	3.7	10.6
17-Sep	Z	6.4	4.7	3.2	2.5	3.0	22.0	10.1	PF	20.3	22.6	12.1	8.8	6.0	3.6	4.6	4.3	3.4	2.9	3.5	6.3	9.2	13.7	10.0	8.3	22.6
18-Sep	6.2	Z	4.9	3.9	4.6	9.9	9.1	3.3	4.9	2.5	1.9	1.0	0.0	0.8	0.5	0.3	0.0	0.0	0.6	0.7	2.7	31.9	11.0	0.2	4.4	31.9
19-Sep	0.0	0.0	Z	0.9	15.2	25.0	22.6	23.4	9.0	8.7	5.5	2.7	0.0	0.0	0.0	0.3	0.9	2.2	3.1	6.7	10.4	16.4	16.5	19.0	8.2	25.0
20-Sep	18.6	18.2	19.3	Z	14.1	7.1	5.8	13.4	11.8	8.1	9.1	6.2	5.7	1.5	0.4	0.6	0.7	2.0	3.2	2.0	4.2	3.1	2.7	2.7	7.0	19.3
21-Sep	2.4	7.5	6.5	9.0	Z	18.1	14.4	14.7	7.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.2	1.7	1.4	0.0	3.7	18.1
22-Sep	0.0	0.0	0.1	0.2	0.2	Z	1.3	0.8	1.1	0.8	1.1	1.5	2.7	0.9	1.1	2.1	2.3	5.1	5.0	3.2	3.4	4.2	1.7	2.6	1.8	5.1
23-Sep	Z	8.6	7.1	6.0	7.0	6.9	5.1	7.5	0.1	0.0	0.4	0.8	0.8	1.2	1.3	3.3	1.0	4.2	2.2	1.4	1.1	4.7	6.9	7.4	3.7	8.6
24-Sep	8.9	Z	7.9	10.2	8.9	12.4	11.5	10.7	5.1	0.0	0.0	0.0	0.4	0.0	0.2	0.5	0.6	0.8	0.8	1.4	1.9	1.0	1.0	2.8	3.8	12.4
25-Sep	8.4	18.1	Z	41.1	34.3	11.9	15.6	14.5	12.3	8.5	7.1	10.4	10.5	5.4	3.4	4.7	6.8	1.3	2.8	2.2	4.4	1.2	0.0	0.0	9.8	41.1
26-Sep	0.2	0.5	1.0	Z	1.4	2.0	8.0	11.7	6.0	0.0	0.0	0.4	0.6	0.8	0.9	1.0	1.2	1.5	1.8	1.5	1.4	1.7	9.8	9.2	2.7	11.7
27-Sep	5.8	6.0	4.9	4.0	Z	0.6	0.6	0.8	0.9	1.0	1.1	1.0	1.0	1.0	1.0	1.0	0.9	1.2	1.1	1.0	1.5	1.7	1.5	5.9	2.0	6.0
28-Sep	5.6	0.4	0.5	0.3	0.3	Z	0.9	0.4	0.2	0.3	0.7	1.3	6.9	3.7	0.6	0.5	1.4	2.5	3.7	3.9	6.0	2.6	1.7	1.2	2.0	6.9
29-Sep	Z	3.1	2.0	1.4	2.1	2.1	2.6	2.5	1.8	3.6	5.5	5.0	4.6	3.3	2.1	2.3	3.2	3.4	4.5	3.7	7.4	6.0	3.1	2.1	3.4	7.4
30-Sep	2.7	Z	7.1	25.6	64.8	112.9	92.1	91.7	83.0	94.0	22.2	13.7	11.4	8.8	9.2	5.1	6.6	7.8	10.2	16.1	12.1	18.6	20.9	22.2	33.0	112.9
	7.1	7.6	7.0	8.6	10.3	12.5	12.0	12.1	12.3	12.0	7.8	7.7	6.9	5.5	2.8	2.9	3.1	3.5	3.8	4.5	5.7	7.8	7.4	7.6	Diurnal Average	
	32.4	31.8	24.9	41.1	64.8	112.9	92.1	91.7	83.0	94.0	28.0	34.4	32.4	53.2	10.5	12.5	15.0	14.5	12.4	19.5	24.4	35.6	37.8	40.5	Diurnal Maximum	

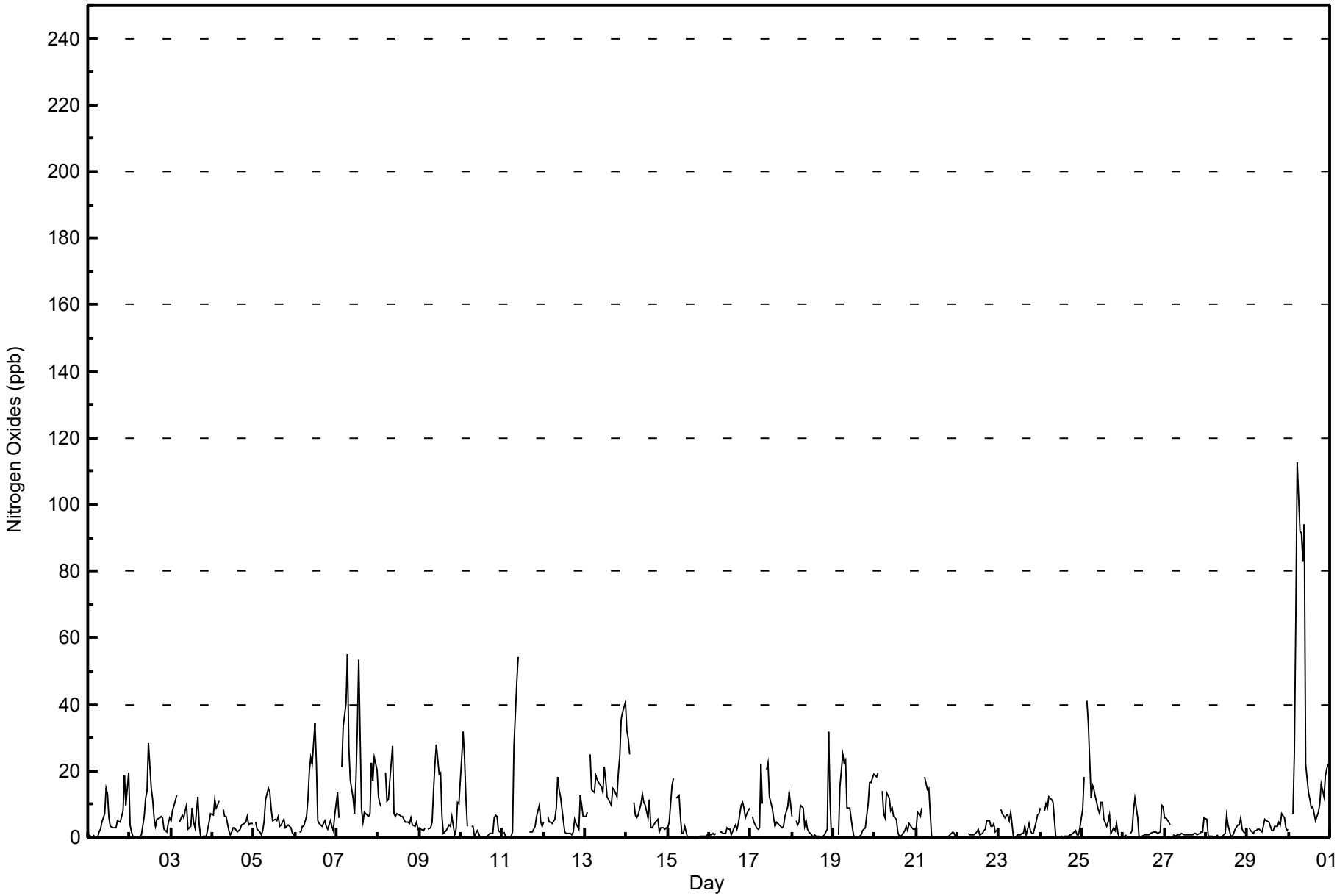
Z - zerospan C - Calibration PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025



Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	633	92.68	92.68
21 - 40	38	5.56	98.24
11 - 80	7	1.02	99.27
81 - 159	5	0.73	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	35	14	1	1	2	4	32	124	113	63	40	51	44	43	40	18	625
21 - 40	5	0	0	1	0	0	3	7	4	4	4	1	2	3	2	2	38
11 - 80	0	1	0	0	0	0	1	1	1	0	1	0	0	1	0	1	7
81 - 159	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	15	1	2	2	4	36	132	118	67	45	52	47	48	42	21	675

Total Number of Valid Hours: 675

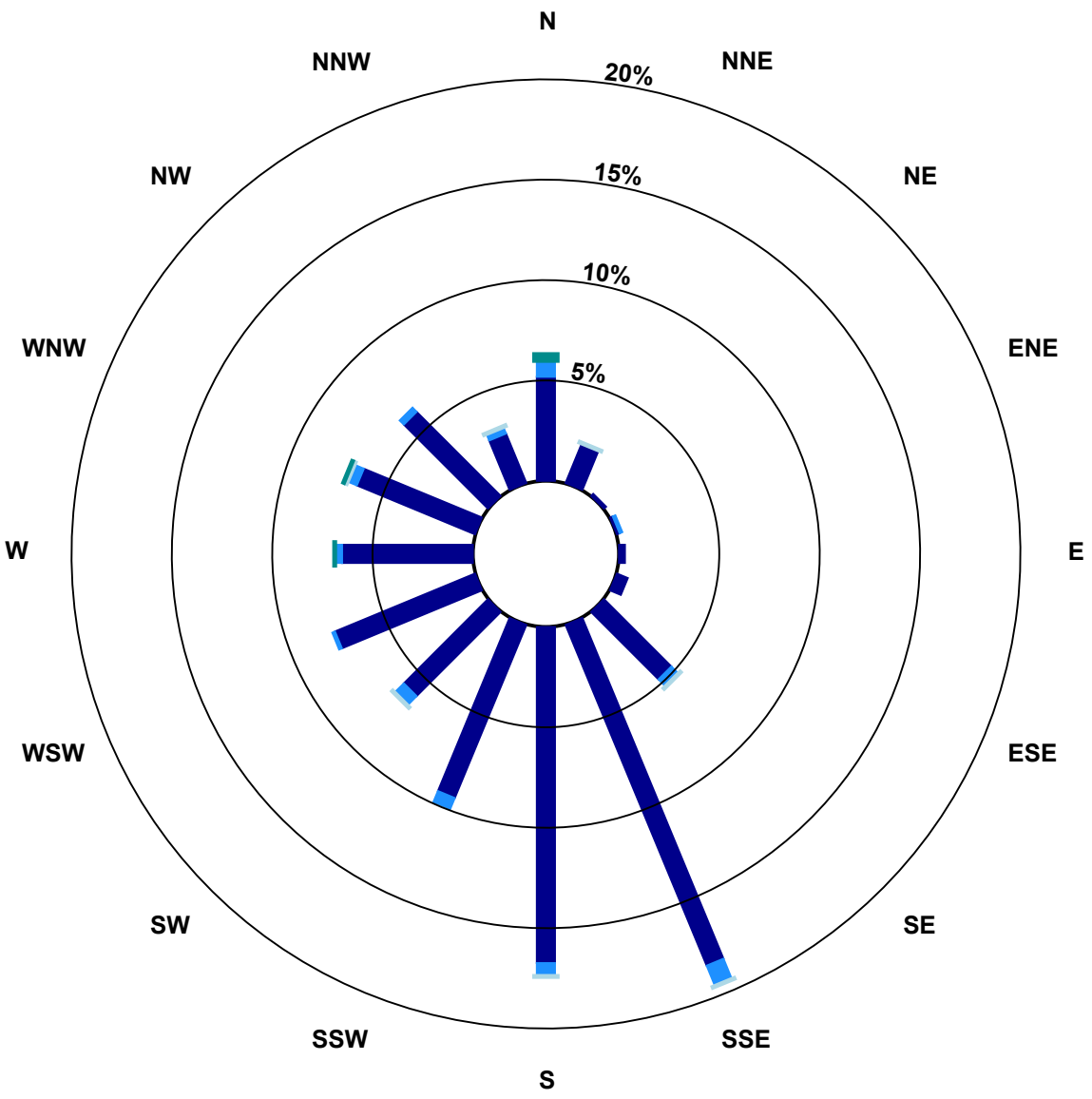
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

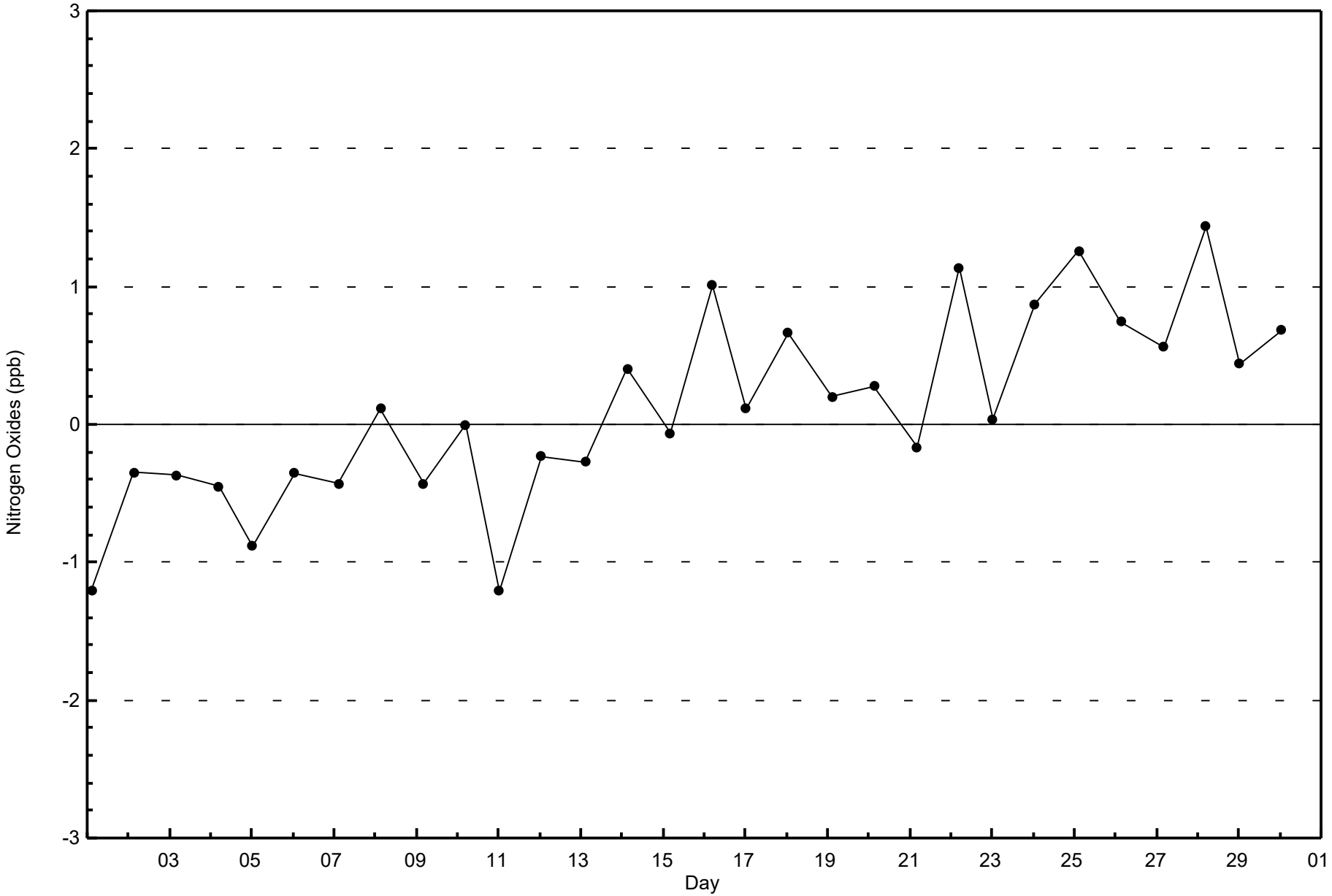
Total Number of Valid Hours: 675

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025

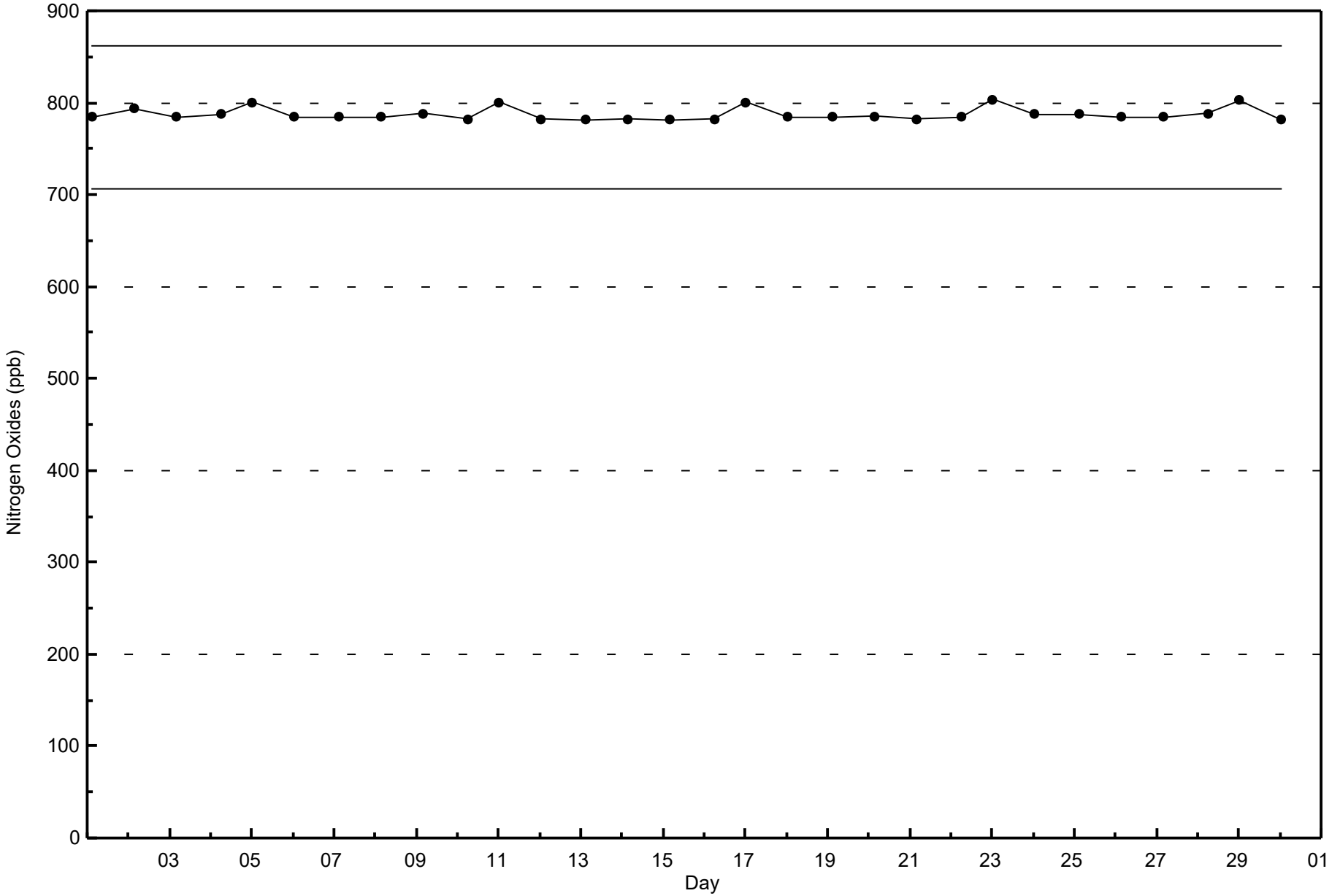


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.9 ppb on Sep 20 16:00 Maximum Daily Average: 26.8 ppb on Sep 23

Minimum Value: 0.0 ppb on Sep 9 04:00 Minimum Daily Average: 9.6 ppb on Sep 8
Maximum Diurnal Average: 30.8 ppb at hour 15 Minimum Diurnal Average: 6.3 ppb at hour 5
Monthly Average: 17.44 ppb Percentiles: P_1 = 0.0 P_{10} = 2.0 Q_1 = 8.0 Median = 17.5 Q_3 = 25.9 P_{90} = 31.8 P_{99} = 46.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	3.0	3.5	2.5	3.1	2.1	2.5	2.4	3.9	3.4	3.4	9.9	16.5	23.1	22.7	25.0	25.3	23.4	21.6	15.7	10.2	2.8	7.3	1.4	10.2	25.3
2-Sep	5.6	Z	6.5	5.8	4.9	4.3	3.2	3.2	3.8	C	C	C	C	C	27.8	31.1	27.0	24.7	18.6	14.1	15.0	14.2	11.9	15.2	13.2	31.1
3-Sep	16.6	11.6	Z	4.9	9.7	14.0	12.7	15.2	13.8	13.3	19.3	18.5	17.0	21.0	19.0	15.3	23.8	27.2	26.6	22.6	20.3	15.5	16.4	13.3	16.8	27.2
4-Sep	12.6	9.2	12.3	Z	11.2	14.9	14.2	16.2	18.6	21.4	22.0	22.2	22.6	24.4	25.3	23.5	22.2	19.6	17.5	13.4	7.1	5.1	2.1	2.1	15.6	25.3
5-Sep	3.0	2.0	1.7	1.6	Z	0.7	0.5	1.2	3.6	8.6	15.4	20.3	24.3	27.1	28.0	31.0	30.3	26.7	26.0	20.7	16.1	11.9	9.7	6.2	13.8	31.0
6-Sep	5.9	4.1	2.4	1.1	1.1	Z	1.8	5.3	8.5	13.8	18.3	17.7	27.7	39.7	39.6	40.1	39.8	37.3	26.7	19.9	11.6	9.6	6.4	2.1	16.6	40.1
7-Sep	Z	4.0	1.6	0.8	1.1	1.1	1.8	3.3	7.8	10.4	17.7	22.6	21.6	19.3	27.6	24.9	16.4	12.7	7.8	8.0	7.0	2.2	1.3	1.9	9.7	27.6
8-Sep	3.5	Z	3.9	1.3	1.3	1.3	1.2	0.8	1.3	9.6	13.4	15.3	17.7	20.1	21.0	23.7	24.4	23.9	17.1	10.0	5.5	2.0	0.7	1.6	9.6	24.4
9-Sep	0.7	0.7	Z	0.0	0.2	0.6	1.0	2.0	4.3	8.2	11.2	19.0	24.3	33.7	34.8	37.5	38.3	35.6	33.1	25.6	25.1	16.6	8.0	8.1	16.0	38.3
10-Sep	1.2	0.3	0.2	Z	5.1	3.5	4.7	3.5	9.2	12.6	21.2	26.2	29.1	29.8	30.8	33.0	34.1	30.9	24.8	17.2	10.8	7.5	12.4	11.0	15.6	34.1
11-Sep	12.0	9.1	7.9	8.1	Z	6.9	6.6	3.5	3.0	4.0	11.2	27.0	M	M	33.4	33.6	35.4	34.3	30.6	26.1	17.5	12.7	15.4	17.9	17.0	35.4
12-Sep	16.2	14.2	15.3	9.5	5.7	Z	3.0	4.2	9.4	18.9	26.2	34.6	41.1	47.1	50.0	46.9	44.8	41.6	32.8	26.6	17.7	9.5	7.2	9.7	23.1	50.0
13-Sep	Z	4.9	0.6	0.5	2.8	2.7	2.0	2.9	4.6	10.3	15.0	14.4	19.7	21.3	27.8	30.4	27.9	23.5	19.7	15.9	8.3	0.0	0.0	0.0	11.1	30.4
14-Sep	0.0	Z	0.0	0.0	0.0	1.0	0.7	1.9	5.1	10.8	24.5	33.6	40.1	32.7	30.5	25.8	23.7	27.3	30.4	32.6	27.9	23.8	16.5	15.9	17.6	40.1
15-Sep	13.3	12.5	Z	0.7	1.4	3.1	4.2	9.7	11.6	11.7	14.1	24.3	26.3	28.8	23.7	16.9	14.8	16.4	20.8	16.3	13.2	12.0	12.6	13.7	14.0	28.8
16-Sep	12.8	11.2	10.1	Z	10.1	9.3	8.5	8.5	11.0	13.3	14.5	18.1	21.2	22.7	28.8	28.7	26.6	23.2	20.1	14.8	10.2	11.7	9.0	4.1	15.2	28.8
17-Sep	2.8	3.9	2.8	2.0	Z	1.1	1.2	1.9	4.8	9.7	14.1	22.9	30.0	33.5	36.0	35.9	32.0	31.6	27.0	21.6	18.0	16.6	13.2	15.5	16.4	36.0
18-Sep	17.6	15.6	9.4	7.6	7.6	5.8	11.3	Z	17.3	22.4	27.3	32.4	35.5	39.5	41.3	41.5	40.5	37.1	33.0	29.7	25.6	2.1	16.7	25.6	23.6	41.5
19-Sep	Z	23.9	22.3	22.2	8.5	0.9	4.0	7.0	14.8	18.2	24.2	25.8	29.3	29.8	30.6	31.8	29.5	24.3	19.8	12.2	8.3	3.0	1.5	1.7	17.1	31.8
20-Sep	1.2	Z	0.9	1.5	1.1	3.9	2.7	4.3	10.1	17.6	21.2	28.0	34.7	47.6	51.0	52.9	52.5	48.2	42.5	39.2	33.1	33.7	33.0	25.7	25.5	52.9
21-Sep	26.3	15.4	Z	12.4	3.7	4.3	2.4	6.4	18.6	26.3	28.1	35.2	37.2	38.2	34.2	32.7	31.1	30.7	31.6	27.2	17.7	16.1	11.7	16.5	21.9	38.2
22-Sep	19.6	20.7	19.4	Z	16.6	15.8	15.8	18.2	20.2	21.0	21.1	23.3	25.9	28.5	29.4	30.0	30.6	28.2	25.5	26.7	25.0	22.7	24.3	22.7	23.1	30.6
23-Sep	20.3	21.1	23.5	23.7	Z	20.1	21.0	17.7	29.5	32.1	33.0	33.8	34.0	33.9	33.8	31.1	33.4	29.9	30.9	28.7	27.9	21.1	19.3	16.2	26.8	34.0
24-Sep	14.3	17.0	13.1	12.7	10.4	Z	8.4	9.7	13.9	18.3	21.5	24.7	24.4	30.0	31.9	32.4	32.0	30.8	27.8	22.5	20.0	19.2	16.5	11.3	20.1	32.4
25-Sep	Z	0.3	0.4	0.3	0.3	3.1	1.0	1.8	7.3	11.7	17.3	18.6	19.9	23.7	26.4	24.4	20.9	28.8	25.9	27.9	27.0	31.8	28.1	24.9	16.2	31.8
26-Sep	20.3	Z	15.0	12.6	10.9	7.5	2.4	2.4	7.6	13.8	16.5	19.0	21.0	23.0	26.2	25.3	25.5	24.2	22.4	21.9	23.8	24.0	10.3	11.2	16.8	26.2
27-Sep	17.4	15.1	Z	17.1	21.2	25.0	25.1	26.0	28.0	28.7	29.3	29.7	30.1	31.0	32.6	31.2	29.8	28.2	27.8	26.3	24.5	23.0	21.3	14.8	25.3	32.6
28-Sep	15.8	21.8	20.8	Z	20.1	18.8	17.6	18.3	19.5	20.3	21.0	23.3	25.7	27.2	28.4	28.2	26.2	23.1	18.4	15.5	11.7	16.7	17.1	18.3	20.6	28.4
29-Sep	20.1	19.8	20.3	21.6	Z	24.3	23.8	24.0	26.0	26.7	26.3	26.7	27.6	30.1	30.9	31.0	29.8	27.9	25.0	22.1	15.5	13.2	17.2	13.4	23.6	31.0
30-Sep	9.9	8.4	5.3	1.3	0.3	Z	1.2	1.4	1.8	2.6	13.5	18.2	19.1	20.8	19.3	22.7	21.8	19.6	15.5	8.7	11.2	5.4	3.3	2.7	10.2	22.7
	11.6	10.8	8.8	6.9	6.3	7.5	6.9	7.7	11.3	15.2	19.4	23.6	26.6	29.5	30.8	30.6	29.7	28.0	24.9	21.0	17.1	13.5	12.3	11.5	Diurnal Average	
	26.3	23.9	23.5	23.7	21.2	25.0	25.1	26.0	29.5	32.1	33.0	35.2	41.1	47.6	51.0	52.9	52.5	48.2	42.5	39.2	33.1	33.7	33.0	25.7	Diurnal Maximum	

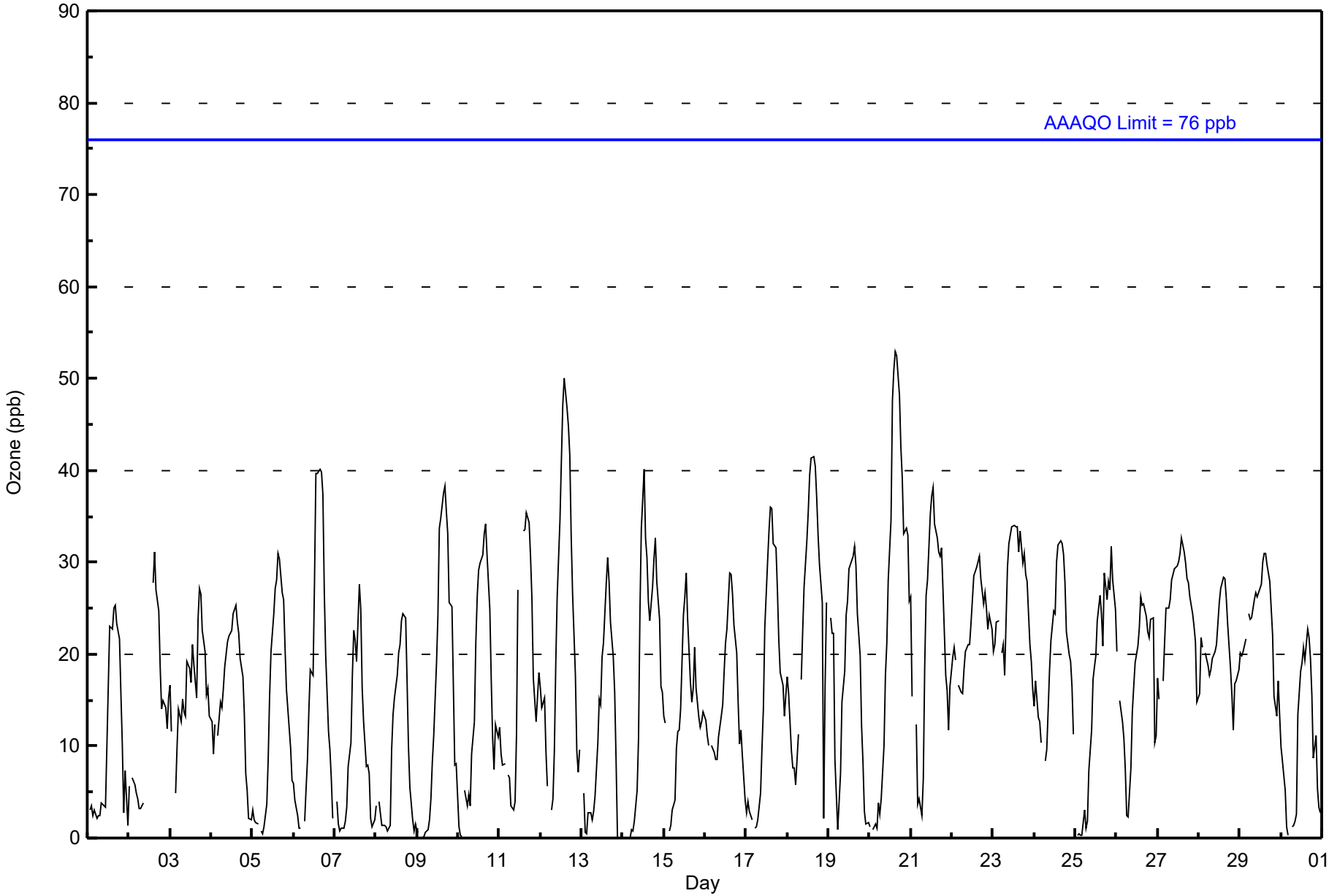
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	402	58.86	58.86
21 - 50	278	40.70	99.56
51 - 82	3	0.44	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	9	1	0	2	0	15	70	76	36	24	30	28	36	31	15	399
21 - 50	16	6	0	2	0	4	18	66	42	31	20	23	16	11	11	7	273
51 - 82	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	15	1	2	2	4	33	136	121	67	44	53	44	47	42	22	675

Total Number of Valid Hours: 675

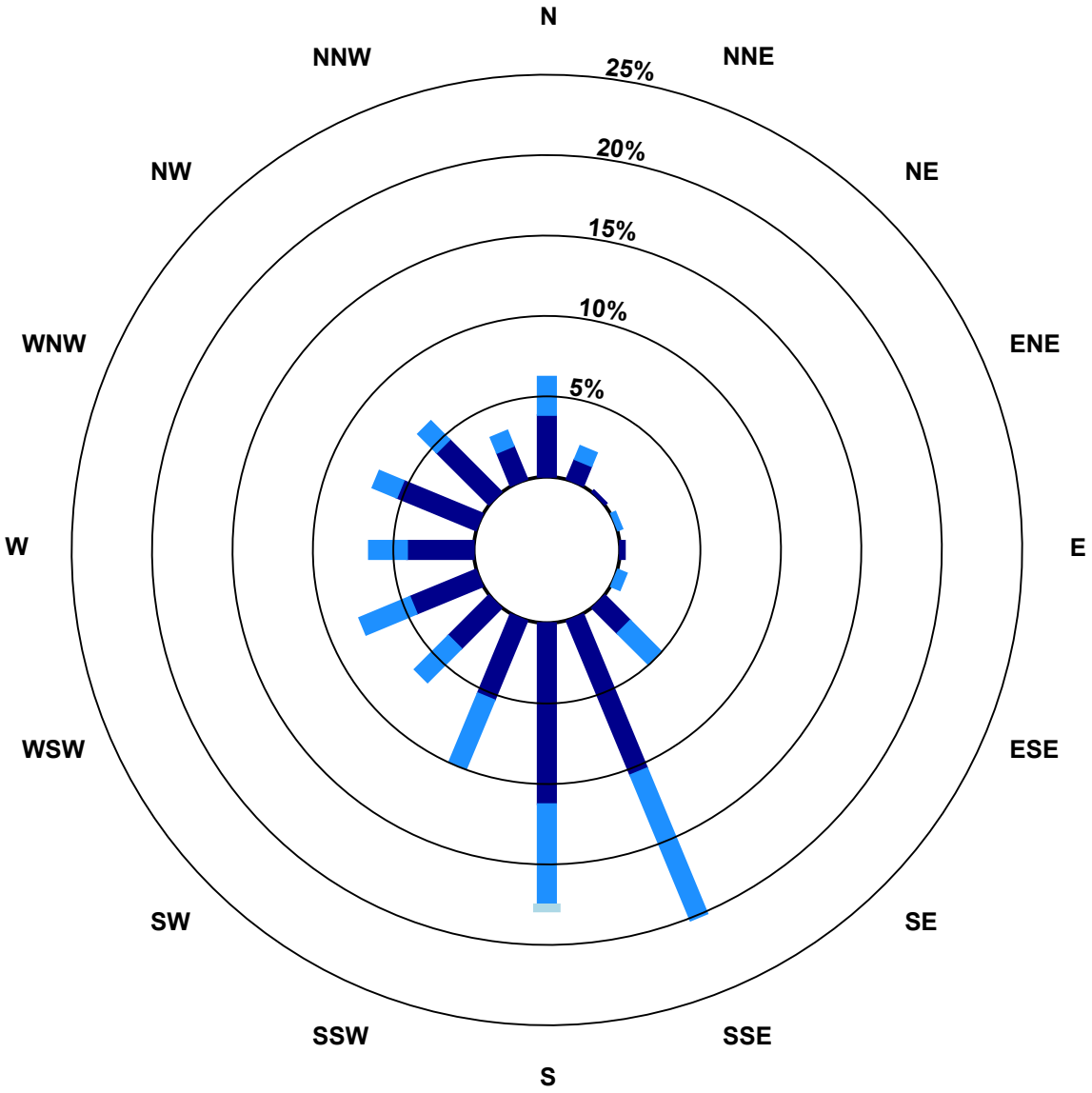
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

- 0 - 20
- 21 - 50
- 51 - 82
- > 83

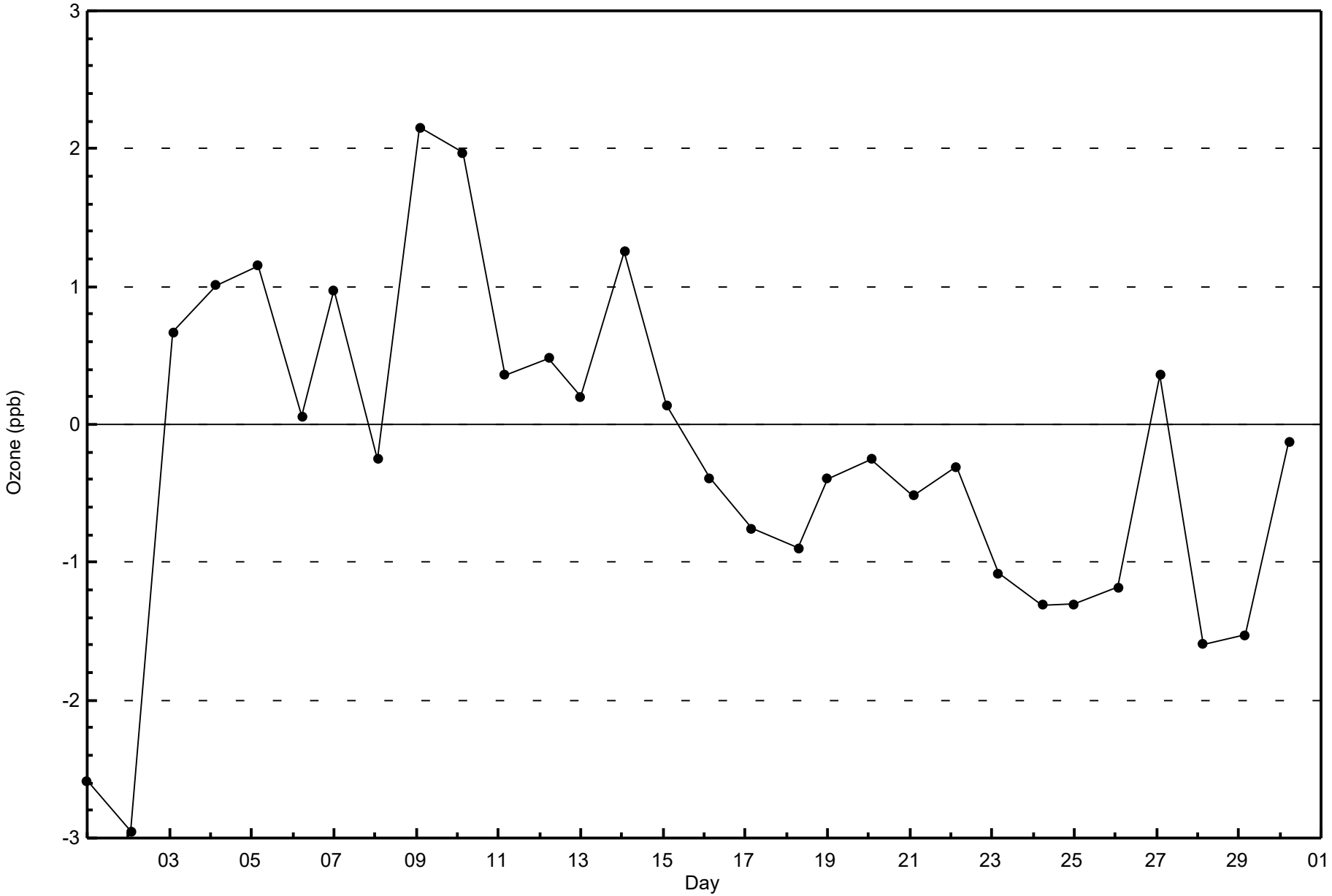
Total Number of Valid Hours: 675

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - September 2025

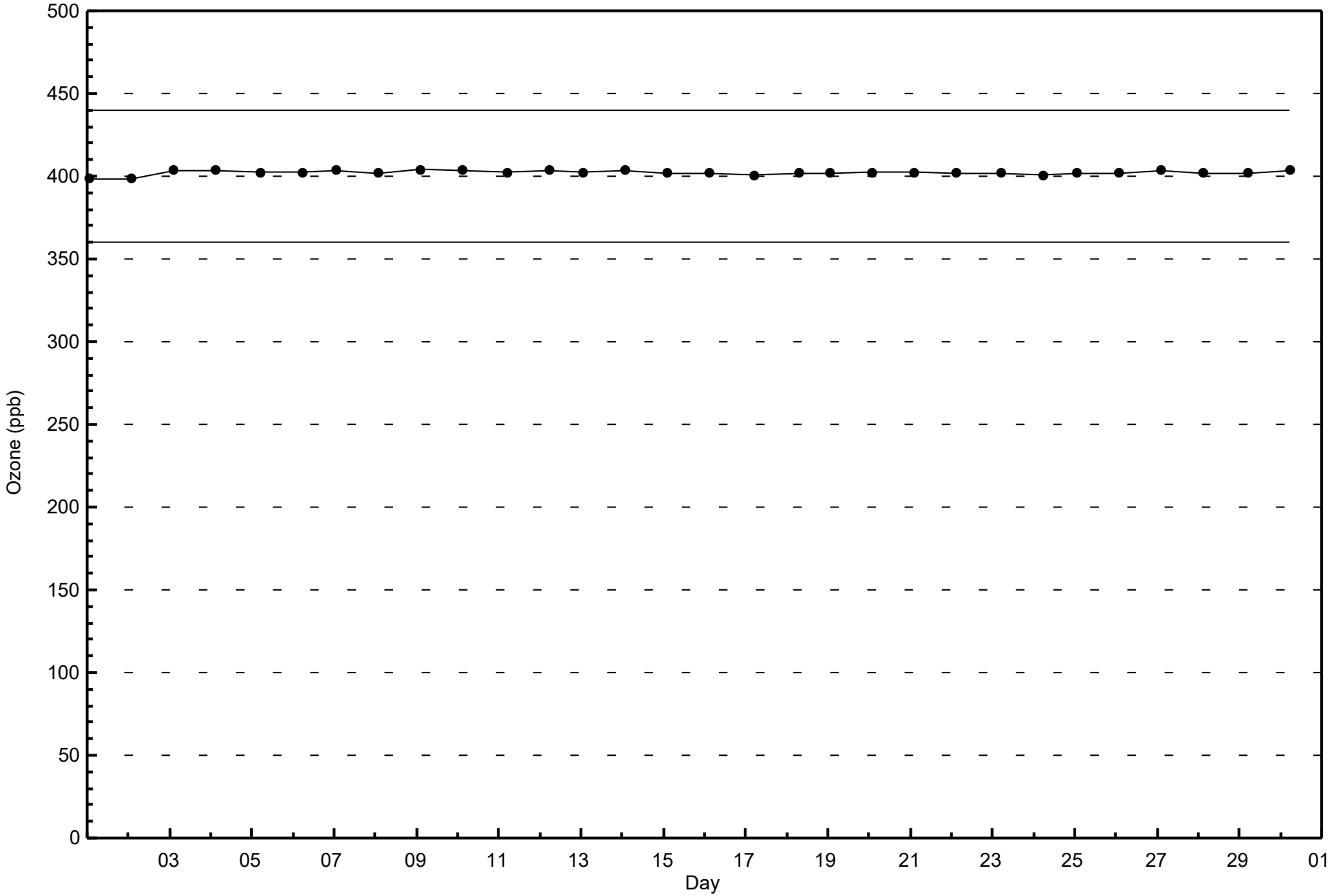


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 12

Maximum Value: 170.2 $\mu g/m^3$ on Sep 14 11:00

Maximum Daily Average: 68.5 $\mu g/m^3$ on Sep 12

Minimum Value: 1.7 $\mu g/m^3$ on Sep 24 15:00

Minimum Daily Average: 8.7 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 39.5 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 22.2 $\mu g/m^3$ at hour 20

Monthly Average: 29.88 $\mu g/m^3$

Percentiles: P_1 = 2.3 P_{10} = 6.8 Q_1 = 14.2 Median = 24.0 Q_3 = 37.5 P_{90} = 60.7 P_{99} = 124.5

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	3
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	30.8	29.9	29.6	28.7	29.6	29.1	30.2	30.0	18.4	18.6	33.1	31.4	20.9	17.0	70.9	111.9	142.5	144.5	113.2	60.8	55.5	56.1	56.2	60.6	52.1	144.5
2-Sep	64.3	65.7	66.8	66.9	68.6	67.0	70.0	69.0	64.8	62.7	72.2	85.5	64.1	45.9	34.3	27.0	20.1	20.1	29.8	24.2	24.5	26.9	31.7	43.9	50.7	85.5
3-Sep	52.9	62.4	78.5	80.8	80.8	75.3	69.0	61.6	61.5	61.8	56.1	55.7	56.2	54.4	56.1	70.6	78.5	42.3	33.1	53.7	69.4	73.2	52.0	35.0	61.3	80.8
4-Sep	27.5	14.2	17.8	12.0	7.4	6.1	5.8	6.1	6.8	6.4	4.3	4.0	5.2	5.0	6.0	6.9	7.3	7.6	9.2	7.4	13.7	8.2	14.5	8.7	9.1	27.5
5-Sep	8.4	7.4	6.7	6.2	6.0	6.3	5.4	5.9	10.9	13.2	15.9	13.9	17.5	20.4	20.9	17.8	18.8	29.4	34.3	16.9	16.3	16.9	14.5	14.6	14.4	34.3
6-Sep	14.8	14.7	15.1	16.0	19.5	21.2	28.2	60.1	86.9	85.3	76.2	63.2	53.2	29.7	22.0	18.7	18.1	17.3	14.5	15.0	15.3	16.1	16.7	19.5	31.6	86.9
7-Sep	22.9	16.2	18.5	21.5	27.5	26.5	28.1	23.4	22.1	20.0	21.9	38.8	41.8	51.5	48.6	31.1	36.8	29.3	26.7	25.5	28.1	26.4	26.3	31.6	28.8	51.5
8-Sep	41.2	42.4	38.4	34.8	32.9	30.0	29.4	29.4	31.3	23.8	20.7	22.8	24.2	27.9	29.0	28.3	28.0	28.5	31.0	28.7	29.5	27.0	28.6	26.4	29.8	42.4
9-Sep	26.8	26.3	26.0	28.3	27.9	26.2	23.9	20.1	33.6	55.4	64.5	64.6	64.1	52.8	39.0	33.9	32.2	36.8	39.6	41.9	28.4	26.5	32.3	31.3	36.8	64.6
10-Sep	32.6	33.2	28.5	23.1	21.7	22.0	25.1	22.8	20.7	18.6	13.3	9.5	C	C	C	3.2	3.4	3.3	4.2	7.7	9.0	14.3	7.3	7.3	15.8	33.2
11-Sep	6.0	5.6	6.1	5.5	5.9	6.2	6.2	10.4	16.5	21.3	31.2	40.0	15.2	19.5	15.8	12.1	10.8	10.2	12.0	12.3	18.3	22.6	19.9	24.0	14.7	40.0
12-Sep	49.9	106.4	154.0	124.1	81.5	80.9	102.9	120.2	132.3	104.3	86.7	59.0	34.9	27.4	27.2	29.7	30.1	31.6	39.9	37.3	37.1	50.5	47.5	48.1	68.5	154.0
13-Sep	50.6	57.9	63.8	66.4	61.6	58.6	54.6	47.6	41.4	35.8	34.7	51.7	50.4	46.8	50.0	48.9	50.2	39.8	39.2	47.3	47.7	47.4	46.9	43.2	49.3	66.4
14-Sep	43.5	38.9	38.3	36.6	36.2	34.9	34.2	37.9	70.8	135.9	170.2	165.9	124.6	87.8	52.8	48.8	61.0	37.5	15.1	9.3	10.7	10.5	11.9	10.7	55.2	170.2
15-Sep	10.4	11.2	15.2	17.1	17.6	18.0	16.2	12.9	12.4	14.2	19.2	32.6	24.8	26.1	36.3	58.5	42.2	37.7	31.1	43.3	43.4	37.5	28.1	22.1	26.2	58.5
16-Sep	17.6	17.3	17.0	18.5	17.9	16.3	17.4	21.9	17.7	19.1	21.6	21.4	23.6	19.2	27.0	27.1	23.3	22.9	28.9	31.1	29.6	28.8	31.6	34.3	23.0	34.3
17-Sep	31.3	30.5	29.6	38.4	28.4	29.1	30.4	27.7	38.1	36.1	31.7	28.7	30.3	25.2	19.0	20.9	25.2	25.8	22.0	20.3	18.7	20.8	23.9	20.0	27.2	38.4
18-Sep	18.0	18.8	17.4	16.5	16.8	18.8	18.7	17.9	22.9	24.2	27.8	31.0	30.9	28.7	21.4	14.3	9.4	22.6	24.4	24.4	28.9	45.6	35.2	43.4	24.1	45.6
19-Sep	46.3	45.7	36.5	23.3	21.5	15.2	14.0	18.8	47.0	77.4	62.2	33.0	19.6	23.5	16.5	6.8	5.4	8.2	9.3	14.3	15.6	19.5	15.7	13.6	25.4	77.4
20-Sep	11.3	11.4	13.7	12.3	10.0	6.9	7.6	13.3	17.5	15.0	15.1	17.4	21.7	20.1	20.6	21.0	22.3	22.9	25.2	23.3	25.5	24.3	22.4	22.4	17.6	25.5
21-Sep	20.8	26.3	24.4	24.4	24.9	24.1	23.5	27.4	20.0	13.9	12.9	8.7	10.4	8.5	7.1	7.3	8.8	11.2	9.8	6.8	8.4	8.3	15.4	12.2	15.2	27.4
22-Sep	10.9	18.4	29.3	37.1	33.3	28.4	24.0	21.6	27.4	27.0	27.9	21.9	19.1	16.4	22.9	26.9	20.6	18.6	11.4	4.9	4.4	4.8	4.4	6.4	19.5	37.1
23-Sep	10.6	6.4	5.5	6.1	8.9	13.6	12.7	15.9	10.5	2.5	2.5	2.0	2.3	8.0	7.7	16.4	19.5	30.0	43.8	24.0	16.2	28.9	34.6	40.9	15.4	43.8
24-Sep	34.4	27.6	37.0	49.9	65.9	81.8	90.4	91.0	96.1	93.7	60.5	27.0	27.3	6.9	1.7	2.1	1.7	2.2	2.3	3.0	3.9	7.5	3.7	7.5	34.4	96.1
25-Sep	14.7	19.3	44.9	49.8	51.6	50.9	48.5	53.6	62.1	37.2	33.6	44.9	36.7	18.5	10.4	15.3	10.3	7.8	10.5	7.2	10.4	35.4	49.3	49.6	32.2	62.1
26-Sep	42.6	29.2	26.1	23.0	31.4	39.9	43.4	52.6	63.6	47.4	24.5	12.9	7.6	6.6	2.9	2.1	2.6	2.2	4.8	6.6	6.6	6.6	12.0	18.8	21.5	63.6
27-Sep	26.1	17.2	15.0	8.3	4.0	7.2	5.5	3.6	4.0	4.9	5.7	5.2	4.3	4.5	4.0	7.7	8.4	8.0	10.0	10.8	10.5	11.0	6.9	15.3	8.7	26.1
28-Sep	21.1	30.1	48.8	63.3	56.6	60.4	59.1	53.5	34.7	19.9	14.7	15.7	19.2	10.0	4.7	5.4	6.2	7.6	12.0	17.7	16.7	11.1	9.8	7.8	25.3	63.3
29-Sep	7.7	16.8	18.1	22.4	26.9	29.0	29.8	32.1	18.3	20.8	40.5	36.0	17.8	11.8	12.9	9.6	12.0	13.4	15.0	13.5	16.7	18.7	45.1	54.6	22.5	54.6
30-Sep	51.6	51.2	45.4	51.6	50.6	54.1	56.9	60.6	70.2	68.9	35.7	21.3	25.1	25.8	29.7	34.5	27.8	26.3	21.7	25.6	23.7	29.8	24.8	22.2	39.0	70.2
	28.3	30.0	33.7	33.8	32.4	32.8	33.7	35.6	39.3	39.5	37.9	35.5	30.8	25.7	24.7	25.5	26.1	24.9	24.1	22.2	22.8	25.4	25.6	26.5	Diurnal Average	
	64.3	106.4	154.0	124.1	81.5	81.8	102.9	120.2	132.3	135.9	170.2	165.9	124.6	87.8	70.9	111.9	142.5	144.5	113.2	60.8	69.4	73.2	56.2	60.6	Diurnal Maximum	

C - Calibration

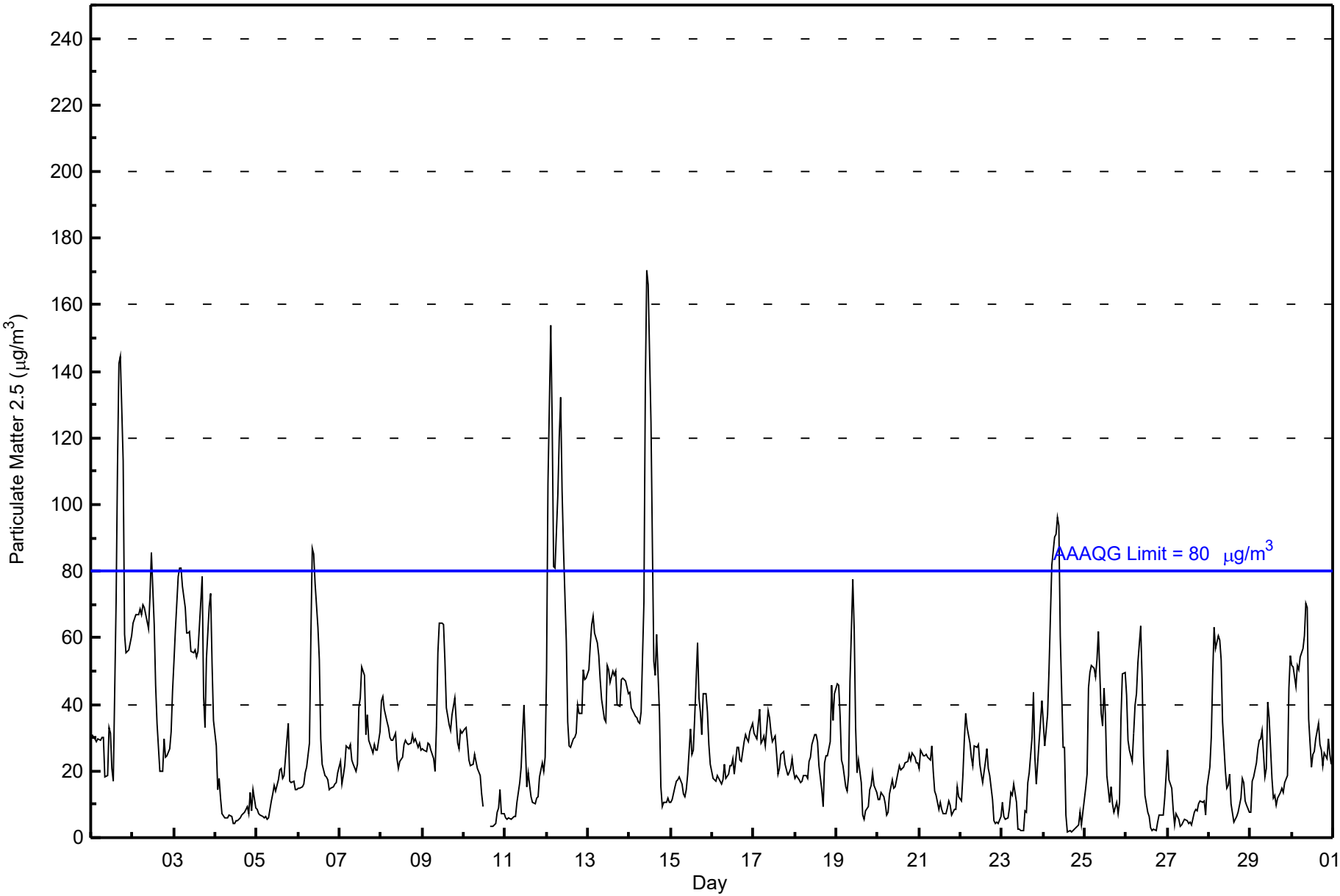
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay - Bertha Ganter - September 2025



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

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	42	5.86	5.86
6 - 15	163	22.73	28.59
16 - 25	173	24.13	52.72
26 - 80	310	43.24	95.96
> 81.0	29	4.04	100.00

Total Number of Valid Hours: 717

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	0	0	0	0	0	0	5	7	5	9	1	3	7	4	41
6 - 15	5	1	0	0	1	2	4	28	36	17	18	16	11	13	9	2	163
16 - 25	7	5	1	0	1	1	15	47	34	19	7	11	6	10	4	4	172
26 - 80	27	9	0	2	0	1	16	56	49	26	14	16	32	24	23	12	307
> 81.0	4	0	0	0	0	0	3	11	2	2	4	2	0	1	0	0	29
Totals	43	15	1	2	2	4	38	142	126	71	48	54	50	51	43	22	712

Total Number of Valid Hours: 712

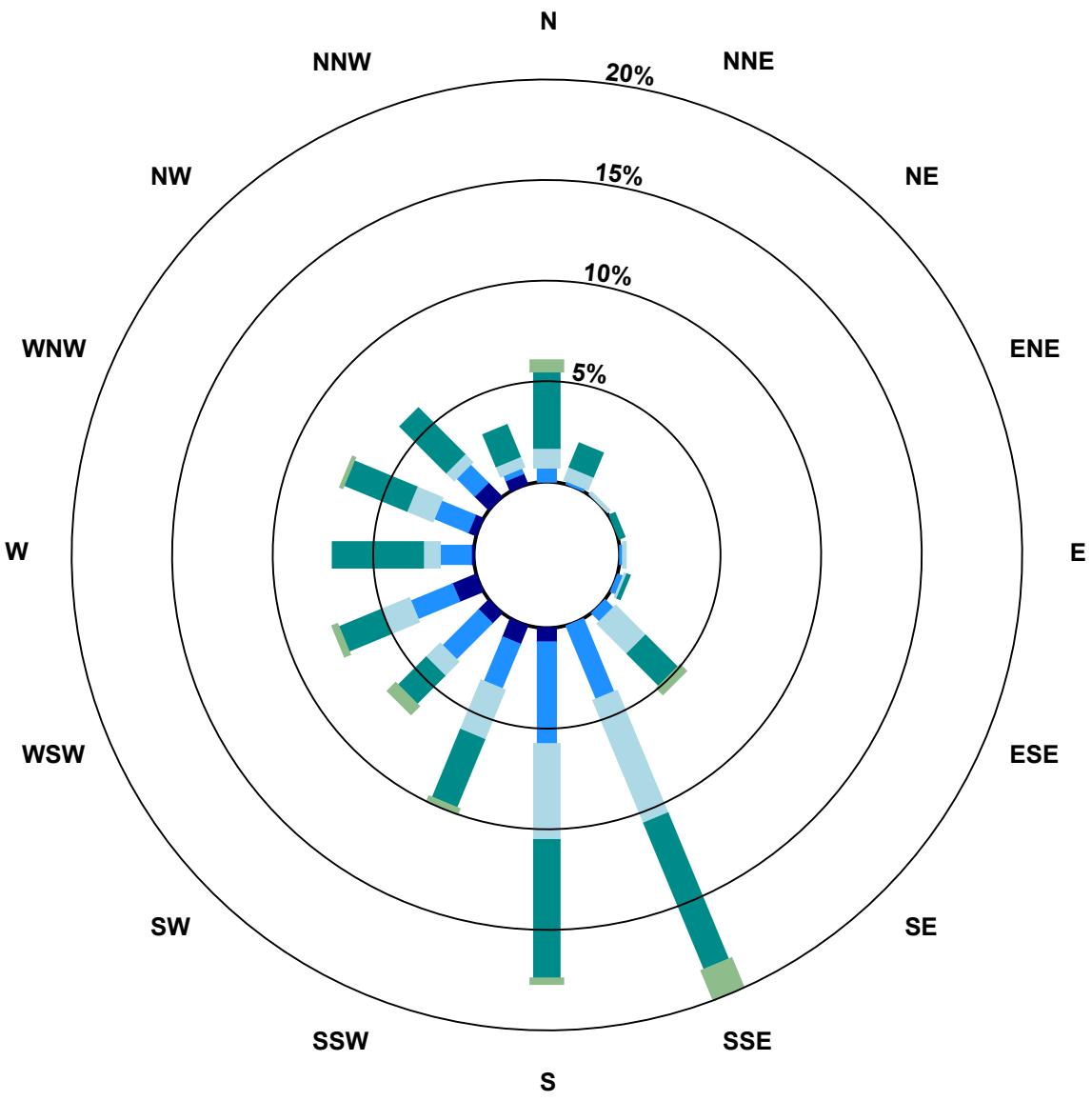
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Fort McKay - Bertha Ganter



Classes ($\mu g/m^3$)

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 81.0

Total Number of Valid Hours: 712

Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0

Maximum Value: 13.9 ppb on Sep 24 09:00

Maximum Daily Average: 2.9 ppb on Sep 24

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 2

Maximum Diurnal Average: 0.7 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 1

Monthly Average: 0.21 ppb

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} = 10.7

Hours in Service:	720
Hours of Data:	623
Hours of Missing Data:	97
Hours of Calibration:	43
Percent Operational Time:	92.5

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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	10.5	12.1	13.0	11.7	0.0	0.0	0.0	0.0	0.0	2.2	13.0
2-Sep	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
3-Sep	0.0	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
4-Sep	0.0	0.0	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	M	M	M	M	M	M	M	--	0.0
5-Sep	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	--	0.0
6-Sep	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
7-Sep	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	0.0
8-Sep	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
9-Sep	0.0	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
10-Sep	0.0	0.0	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
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	RE	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
12-Sep	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
13-Sep	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	0.0
14-Sep	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	10.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.8
15-Sep	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
16-Sep	0.0	0.0	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
17-Sep	0.0	0.0	0.0	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
18-Sep	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
19-Sep	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	0.0
20-Sep	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
21-Sep	0.0	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
22-Sep	0.0	0.0	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
23-Sep	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
24-Sep	Z	RE	RE	0.0	0.0	0.0	10.7	13.1	13.9	13.9	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	13.9
25-Sep	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	0.0
26-Sep	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
27-Sep	0.0	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
28-Sep	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
29-Sep	0.0	0.0	0.0	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
30-Sep	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
	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	0.5	0.7	0.4	0.0	0.0	0.0	0.4	0.4	0.5	0.4	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	10.7	13.1	13.9	13.9	10.8	10.4	0.0	0.0	0.0	10.5	12.1	13.0	11.7	0.0	0.0	0.0	0.0	0.0	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance RE - Recovery

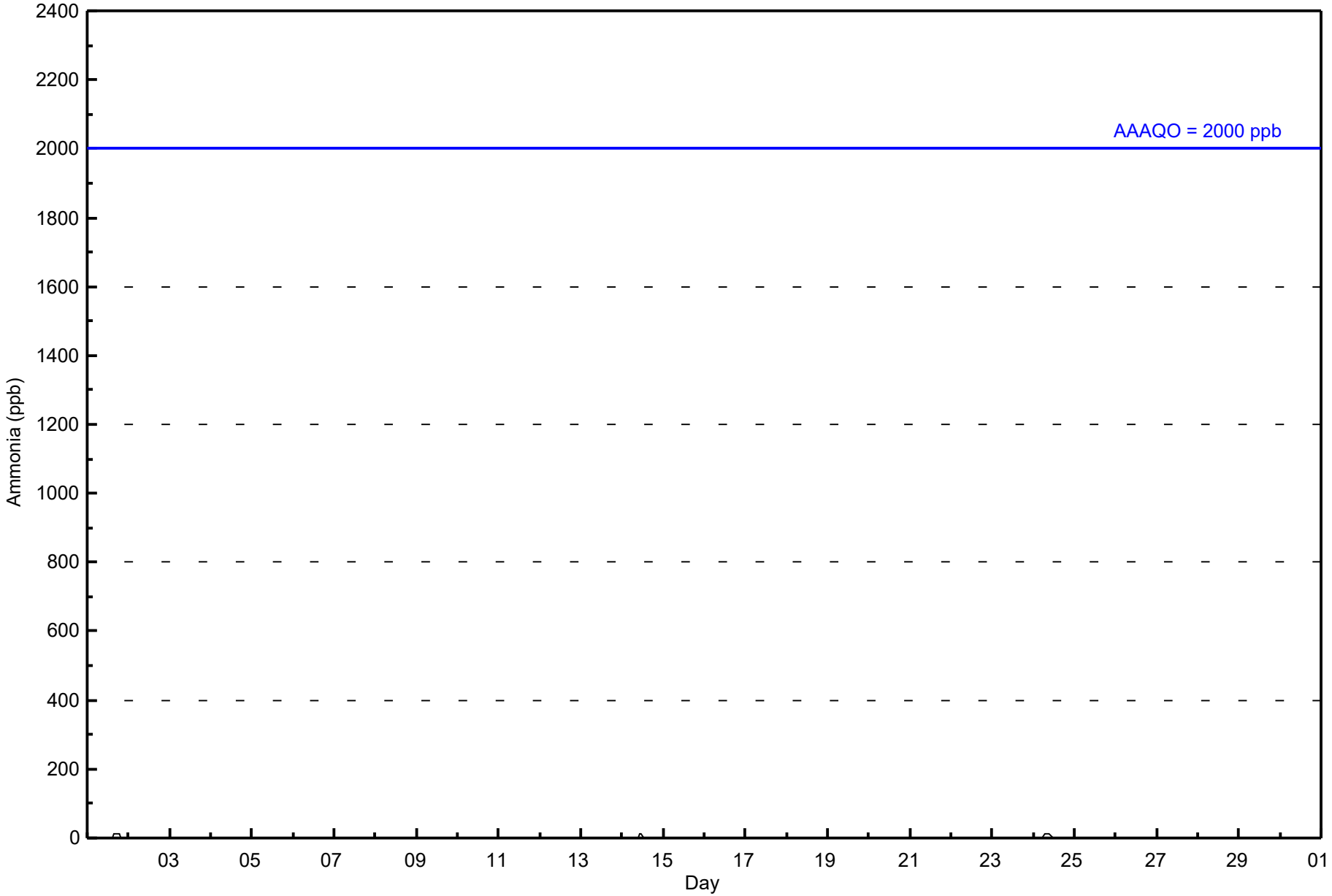
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025



Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	612	98.23	98.23
6 - 10	2	0.32	98.56
11 - 15	9	1.44	100.00
16 - 20	0	0.00	100.00
21 - 25	0	0.00	100.00
> 26	0	0.00	100.00

Total Number of Valid Hours: 623

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	35	14	1	2	2	3	27	133	107	58	40	41	43	43	39	16	604
6 - 10	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
11 - 15	4	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	9
16 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	39	14	1	2	2	3	28	134	108	59	41	42	43	44	39	16	615

Total Number of Valid Hours: 615

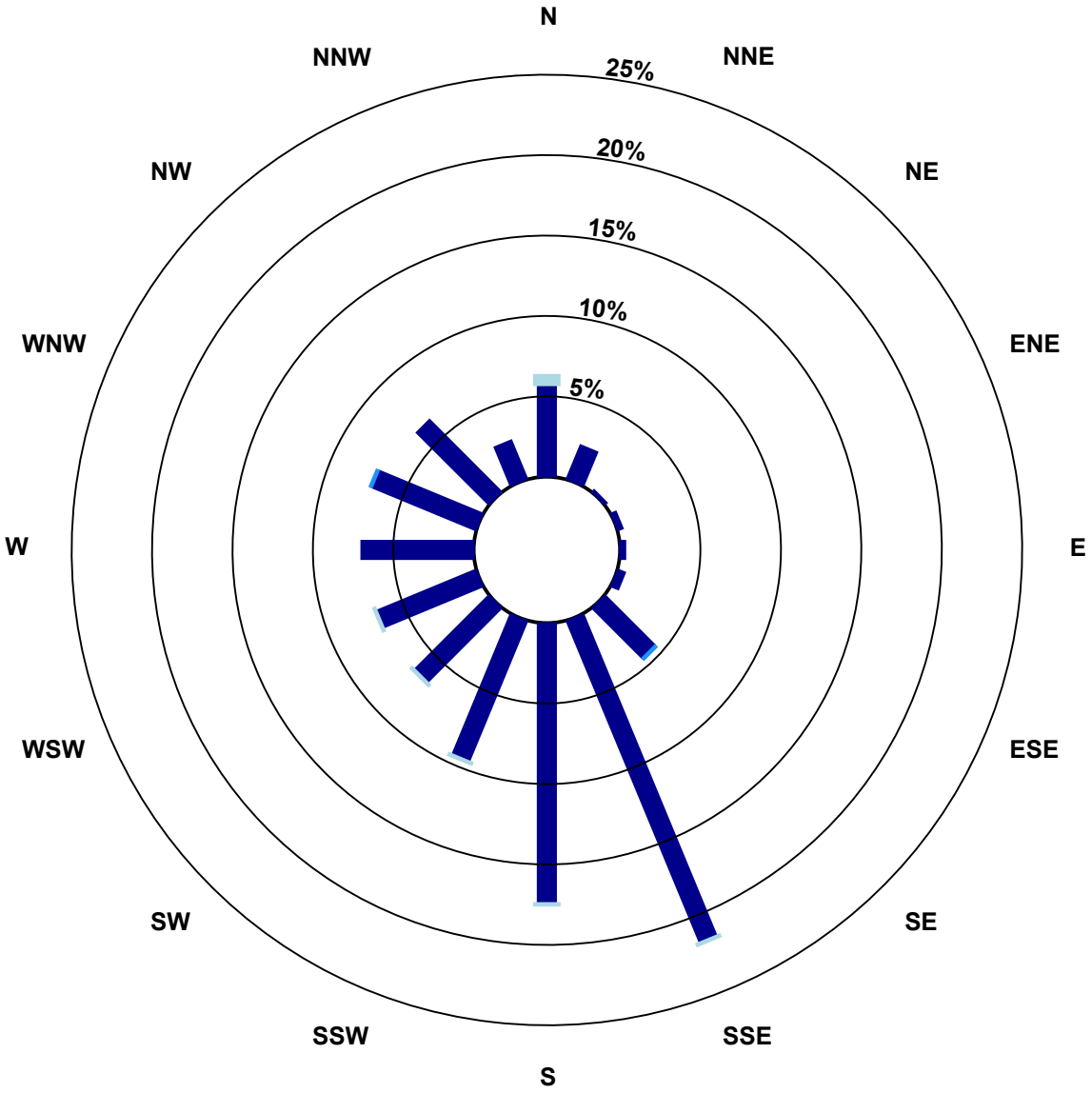
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 5

6 - 10

11 - 15

16 - 20

21 - 25

> 26

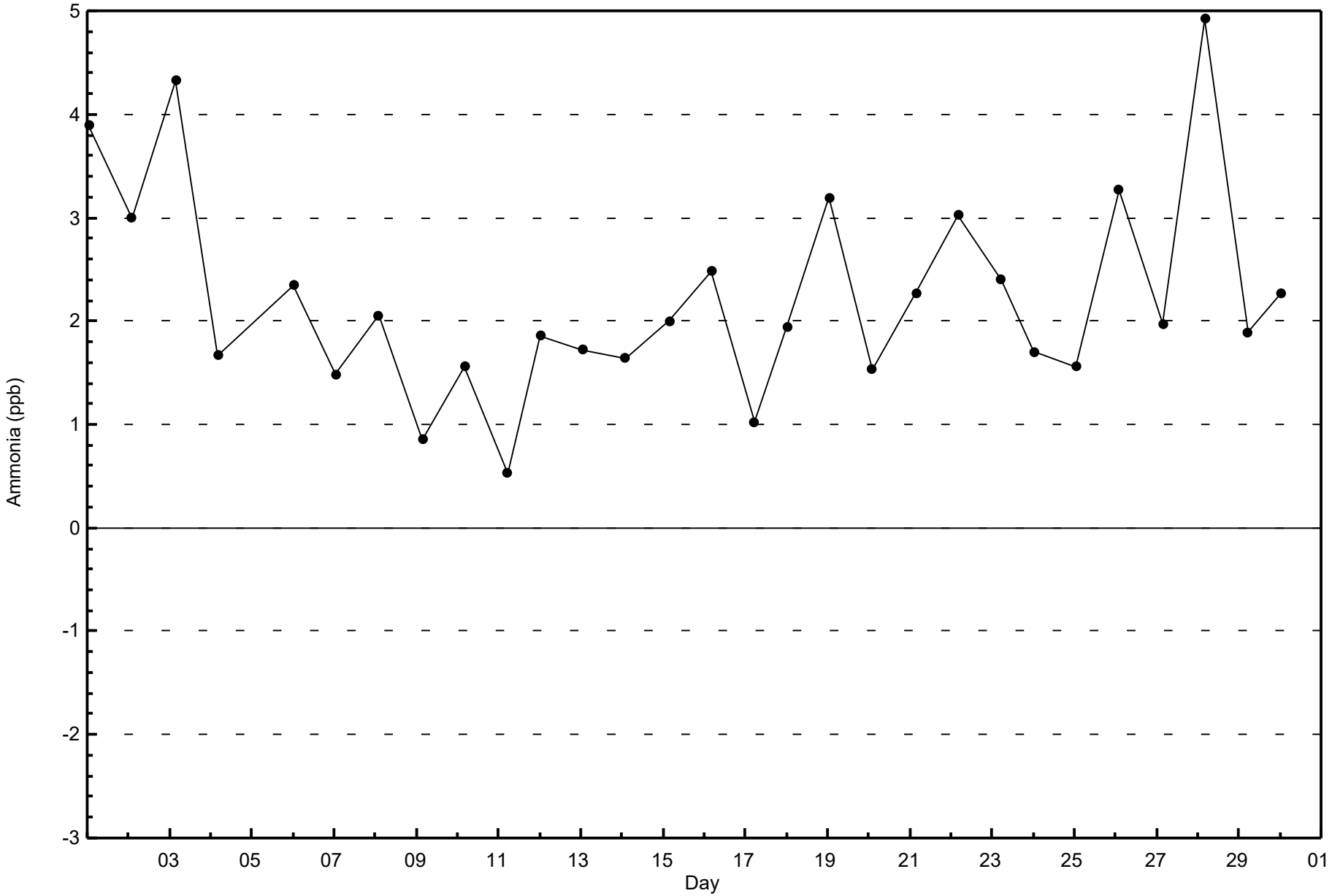
Total Number of Valid Hours: 615

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025

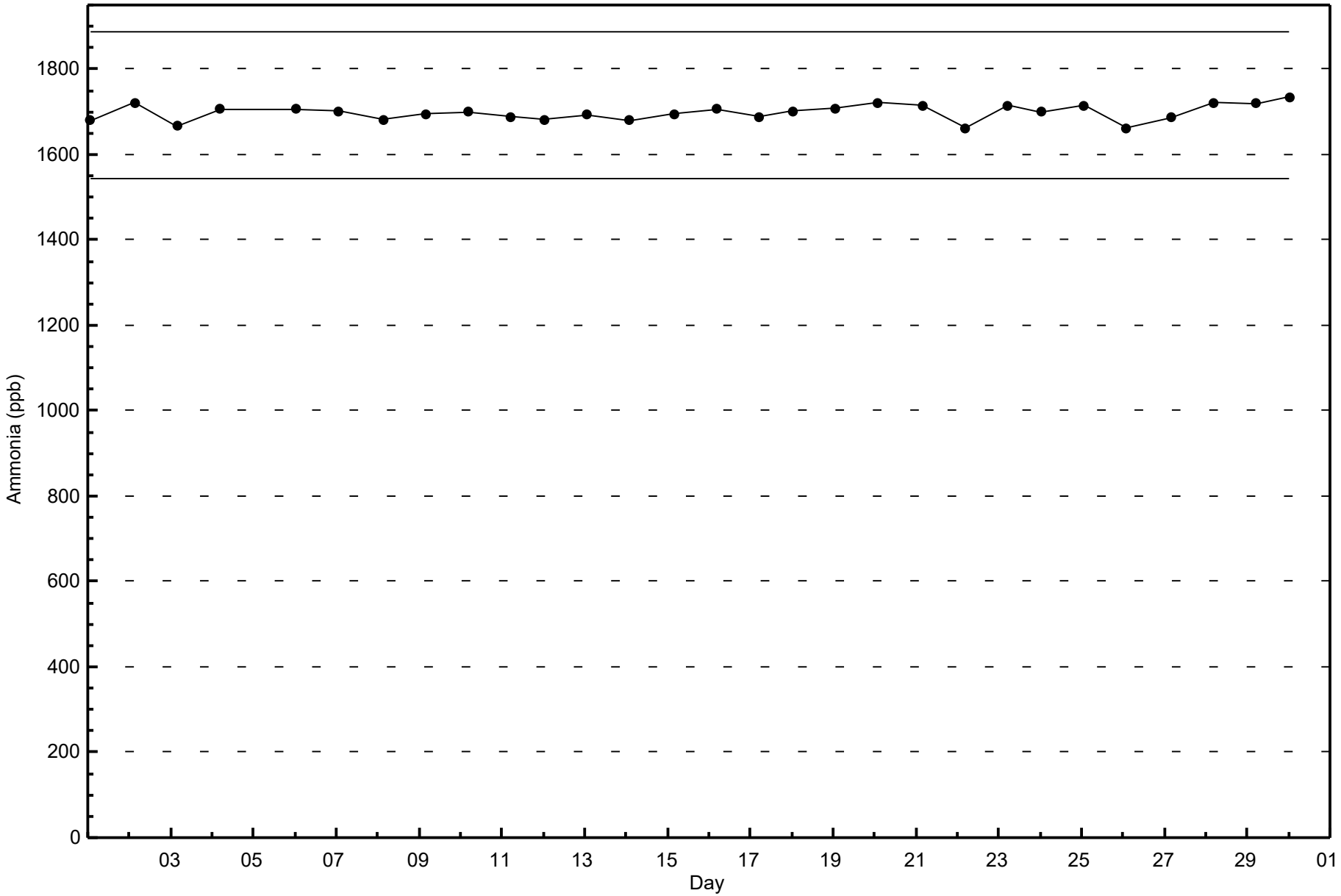


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - September 2025



Maximum Value: 29.3 C on Sep 12 16:00
Maximum Daily Average: 19.8 C on Sep 12

Minimum Value: 1.6 C on Sep 25 06:00
Minimum Daily Average: 9.7 C on Sep 25
Maximum Diurnal Average: 21.1 C at hour 15
Minimum Diurnal Average: 9.0 C at hour 7
Monthly Average: 14.70 C
Percentiles: P_1 = 3.1 P_{10} = 8.3 Q_1 = 11.1 Median = 14.3 Q_3 = 18.1 P_{90} = 22.0 P_{99} = 26.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

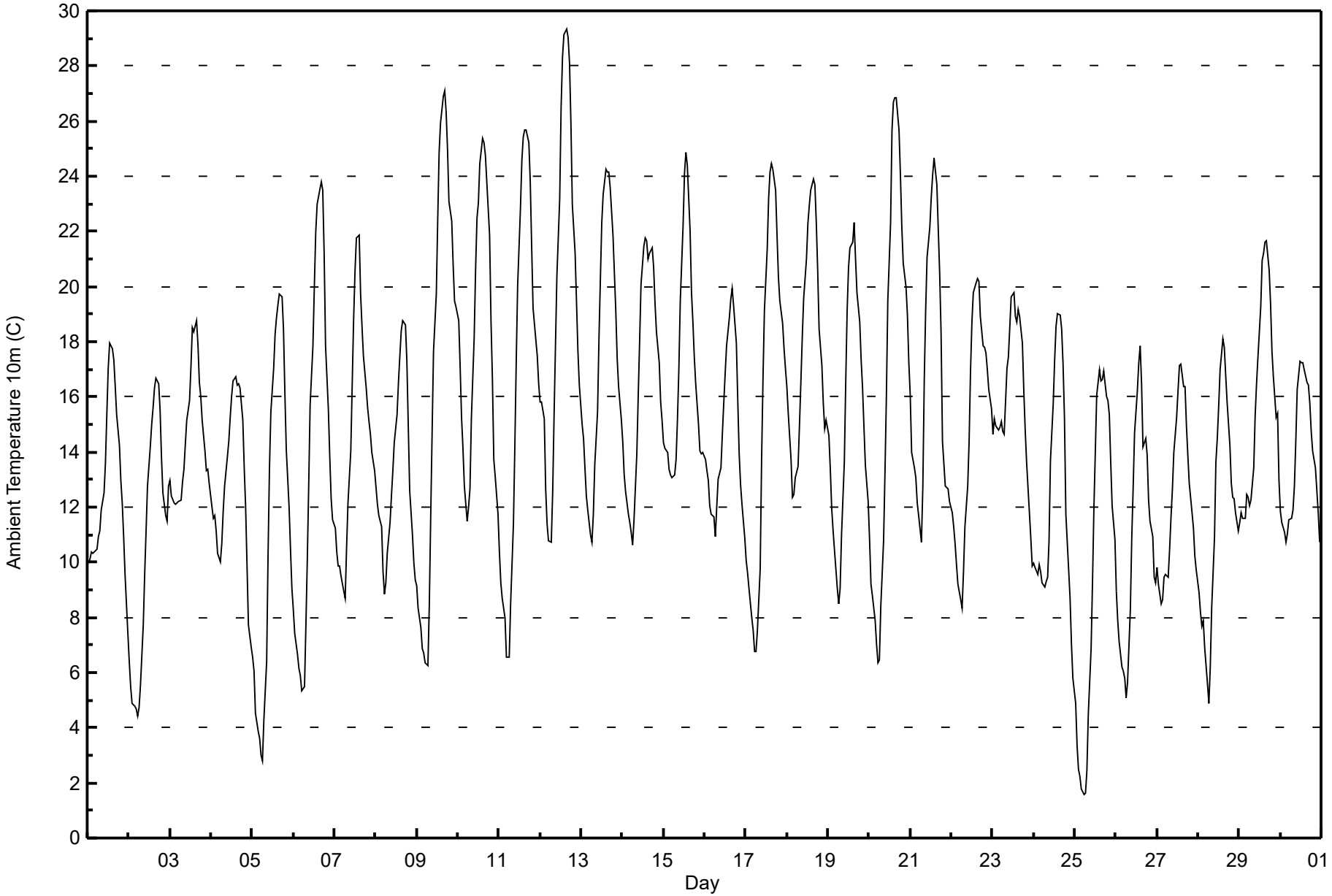
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10.0	10.1	10.4	10.3	10.4	10.5	10.9	11.2	11.9	12.5	13.6	15.4	17.0	17.9	17.8	17.3	16.4	15.4	14.2	13.0	12.1	10.9	9.6	7.4	12.8	17.9
2-Sep	6.4	5.5	4.9	4.8	4.7	4.4	4.8	5.5	7.7	9.6	11.1	12.8	14.2	15.0	15.6	16.3	16.7	16.5	15.5	13.8	12.5	11.7	11.5	12.8	10.6	16.7
3-Sep	13.0	12.4	12.2	12.1	12.1	12.2	12.3	12.9	13.4	14.3	15.1	15.9	17.1	18.5	18.4	18.8	17.9	16.5	16.0	15.2	14.0	13.3	13.4	12.9	14.6	18.8
4-Sep	12.0	11.6	11.7	11.1	10.3	10.0	10.7	11.9	12.8	13.8	14.4	15.2	16.0	16.6	16.7	16.4	16.5	16.3	15.2	13.4	12.0	9.8	7.8	6.9	12.9	16.7
5-Sep	6.5	6.0	4.5	3.8	3.6	3.0	2.8	4.3	6.4	10.2	13.4	15.5	17.1	18.3	18.9	19.3	19.7	19.6	18.5	16.1	14.1	12.0	10.5	9.0	11.4	19.7
6-Sep	8.3	7.4	6.7	6.1	5.9	5.3	5.5	7.7	10.1	12.8	15.7	17.9	20.0	22.0	23.0	23.6	23.8	23.5	21.2	17.9	15.6	13.8	12.3	11.5	14.1	23.8
7-Sep	11.2	10.3	9.9	9.9	9.5	9.0	8.7	10.5	12.2	14.0	16.4	18.8	20.6	21.8	21.9	19.7	18.6	17.5	16.3	15.6	15.1	14.7	14.0	13.3	14.6	21.9
8-Sep	12.7	12.1	11.7	11.3	9.6	8.8	9.2	10.3	11.4	12.4	13.3	14.3	15.3	16.5	17.5	18.4	18.7	18.6	17.3	15.0	12.6	11.0	10.0	9.4	13.2	18.7
9-Sep	9.2	8.3	7.6	6.8	6.7	6.3	6.2	8.4	11.6	14.7	17.6	19.7	22.4	24.8	25.9	26.9	27.1	26.4	25.0	23.1	22.4	20.8	19.5	19.3	17.0	27.1
10-Sep	18.8	17.1	15.2	14.2	12.8	11.5	12.0	12.7	15.2	18.1	20.6	22.5	23.0	24.4	25.4	25.2	24.8	23.8	21.9	18.7	16.7	13.7	13.1	11.8	18.0	25.4
11-Sep	10.4	9.3	8.7	8.0	6.5	6.5	6.6	8.5	11.4	14.2	17.3	20.0	22.8	24.6	25.4	25.7	25.7	25.2	23.8	21.4	19.2	18.1	17.5	16.5	16.4	25.7
12-Sep	15.8	15.8	15.2	12.7	11.4	10.8	10.7	12.5	15.4	17.9	20.4	23.2	26.5	28.3	29.1	29.3	29.1	28.1	25.9	23.0	21.2	19.4	17.6	16.4	19.8	29.3
13-Sep	15.0	14.5	13.4	12.4	11.9	11.0	10.7	11.8	13.5	15.5	18.1	20.2	22.3	23.3	24.3	24.2	24.2	23.6	21.9	20.5	19.1	17.4	16.4	15.1	17.5	24.3
14-Sep	14.3	13.2	12.5	11.8	11.4	11.1	10.6	11.6	13.9	16.0	18.0	20.1	21.5	21.7	21.7	21.0	21.2	21.4	20.7	19.4	18.3	17.3	15.8	15.1	16.7	21.7
15-Sep	14.4	14.2	14.0	13.4	13.2	13.0	13.2	13.7	15.2	17.0	19.5	22.2	24.1	24.9	24.4	22.0	19.8	18.7	17.4	16.5	15.0	14.0	13.9	14.0	17.0	24.9
16-Sep	13.7	13.3	13.0	12.0	11.8	11.6	10.9	12.0	13.0	13.4	14.7	15.8	16.8	17.8	18.9	19.5	19.9	19.3	17.9	15.9	13.9	12.8	12.1	10.9	14.6	19.9
17-Sep	10.1	9.6	9.1	8.0	7.5	6.8	6.8	7.5	9.7	13.7	16.7	19.1	21.4	23.2	24.1	24.5	24.2	23.5	21.9	20.3	19.5	18.7	17.8	17.0	15.9	24.5
18-Sep	16.4	15.4	13.7	12.3	12.5	13.0	13.5	14.9	16.5	18.1	19.6	21.0	22.2	23.0	23.5	23.9	23.7	22.3	20.6	18.5	17.1	15.8	14.8	15.1	17.8	23.9
19-Sep	14.6	13.4	11.9	11.1	10.4	9.1	8.5	9.0	11.0	13.6	16.5	19.1	20.7	21.4	21.6	22.3	21.0	19.8	18.7	17.3	16.3	14.9	13.5	12.2	15.3	22.3
20-Sep	10.8	9.2	8.8	7.9	7.0	6.4	6.5	8.4	10.8	13.3	16.0	19.5	22.3	25.7	26.7	26.8	26.9	25.7	24.0	22.2	20.8	20.0	19.0	17.2	16.7	26.9
21-Sep	16.1	14.0	13.4	13.1	12.1	11.7	10.7	12.7	16.6	19.1	21.0	22.2	23.3	24.0	24.7	23.7	22.1	20.5	18.3	14.4	12.8	12.7	12.7	12.2	16.8	24.7
22-Sep	11.8	11.3	10.7	9.9	9.2	8.6	8.4	9.6	11.3	12.8	14.4	16.9	18.7	19.8	20.2	20.3	20.2	18.9	17.9	17.8	17.6	17.0	16.3	15.6	14.8	20.3
23-Sep	14.6	15.2	15.0	14.8	14.9	15.1	14.7	14.7	17.0	17.4	18.5	19.6	19.8	18.9	18.7	19.2	18.9	18.0	16.2	14.8	13.6	11.8	10.9	9.9	15.9	19.8
24-Sep	10.0	9.8	9.6	9.9	9.7	9.3	9.1	9.3	9.5	10.8	13.7	15.7	17.3	18.6	19.0	19.0	18.5	17.2	15.3	11.8	9.7	8.7	7.0	5.8	12.3	19.0
25-Sep	4.9	3.3	2.5	2.3	1.8	1.6	1.6	2.4	4.5	6.9	9.2	12.0	14.0	16.1	17.0	16.6	16.6	16.9	16.0	15.9	15.3	13.6	12.1	10.8	9.7	17.0
26-Sep	9.0	7.9	7.1	6.2	6.0	5.8	5.1	5.7	8.3	10.9	12.7	14.7	16.2	17.2	17.9	16.5	14.2	14.5	13.9	12.3	11.5	10.9	9.4	9.3	11.0	17.9
27-Sep	9.8	9.2	8.5	8.6	9.4	9.6	9.5	10.5	11.6	12.7	14.0	15.2	16.2	17.1	17.2	16.4	16.4	14.9	13.9	12.9	11.8	11.2	10.2	9.7	12.4	17.2
28-Sep	8.9	8.2	7.7	7.9	6.9	5.6	4.9	6.2	8.3	10.9	13.6	14.5	15.7	17.0	18.1	17.8	16.8	15.8	14.2	12.9	12.3	12.3	11.8	11.1	11.6	18.1
29-Sep	11.5	11.8	11.6	11.6	12.4	12.4	12.0	12.3	13.4	15.3	16.5	17.4	19.3	20.9	21.2	21.6	21.6	20.6	19.4	17.6	16.7	15.3	15.4	12.9	15.9	21.6
30-Sep	11.8	11.5	11.1	10.7	11.1	11.5	11.6	11.9	12.7	14.4	16.3	17.3	17.2	17.2	17.0	16.5	16.4	15.8	14.7	14.0	13.4	12.6	11.8	10.7	13.7	17.3
	11.7	11.0	10.4	9.8	9.4	9.0	9.0	10.0	11.9	13.9	15.9	17.8	19.4	20.6	21.1	21.0	20.6	19.8	18.5	16.7	15.4	14.2	13.2	12.4	Diurnal Average	
	18.8	17.1	15.2	14.8	14.9	15.1	14.7	14.9	17.0	19.1	21.0	23.2	26.5	28.3	29.1	29.3	29.1	28.1	25.9	23.1	22.4	20.8	19.5	19.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 10m (AT10) - C

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	135	18.75	18.75
10 - 20	468	65.00	83.75
> 20	117	16.25	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 29.9 C on Sep 12 16:00

Maximum Daily Average: 19.2 C on Sep 12

Minimum Value: 0.1 C on Sep 25 05:00

Minimum Daily Average: 9.5 C on Sep 25

Maximum Diurnal Average: 21.6 C at hour 15

Minimum Diurnal Average: 8.2 C at hour 6

Monthly Average: 14.39 C

Percentiles: P_1 = 2.4 P_{10} = 7.2 Q_1 = 10.5 Median = 14.1 Q_3 = 18.3 P_{90} = 22.3 P_{99} = 27.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

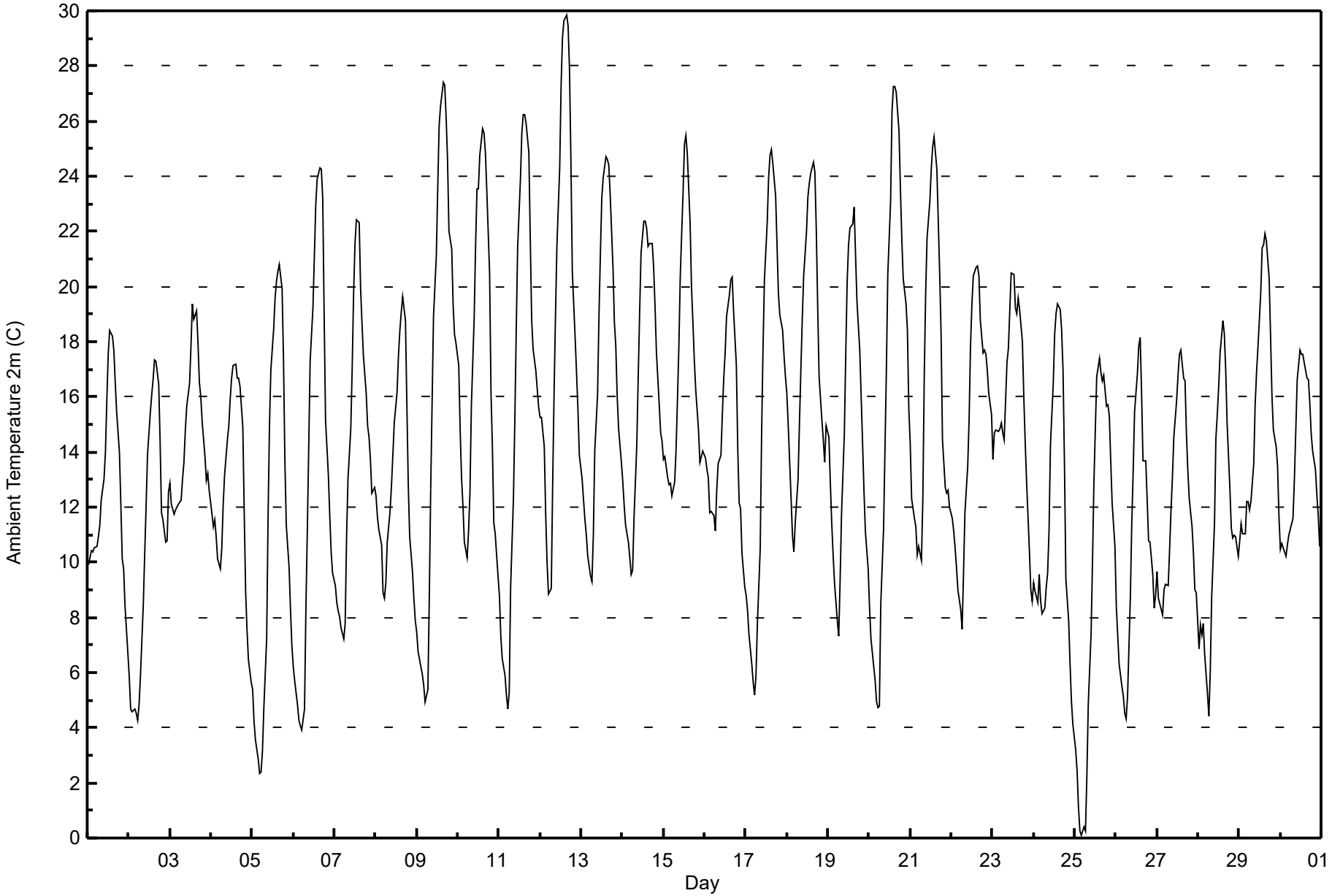
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.9	10.2	10.4	10.4	10.5	10.6	11.0	11.3	12.3	13.0	14.0	15.9	17.6	18.4	18.2	17.7	16.5	15.4	14.0	12.1	10.1	9.8	8.4	6.7	12.7	18.4
2-Sep	5.8	4.7	4.6	4.7	4.5	4.3	4.9	5.9	8.4	10.2	12.0	13.9	15.4	16.1	16.6	17.3	17.3	16.5	14.4	11.8	11.6	10.7	10.8	12.6	10.6	17.3
3-Sep	12.9	12.1	11.7	11.9	12.0	12.1	12.3	13.0	13.6	14.8	15.7	16.5	17.8	19.4	18.8	19.1	18.0	16.5	16.0	15.1	13.8	13.0	13.2	12.6	14.7	19.4
4-Sep	11.8	11.3	11.5	11.0	10.1	9.8	10.5	12.1	13.1	14.5	15.0	15.9	16.7	17.1	17.2	16.7	16.7	16.4	14.9	11.8	8.9	7.5	6.5	5.6	12.6	17.2
5-Sep	5.4	4.2	3.6	2.8	2.4	2.4	3.2	4.7	7.2	11.6	14.9	17.0	18.4	19.6	20.2	20.6	20.8	19.9	17.4	13.7	11.3	9.8	8.3	7.0	11.1	20.8
6-Sep	6.2	5.7	4.8	4.3	4.1	3.9	4.7	8.3	11.2	14.2	17.3	19.2	21.0	22.9	23.9	24.3	24.2	23.2	19.0	15.2	13.2	11.7	10.4	9.6	13.4	24.3
7-Sep	9.1	8.6	8.3	8.0	7.6	7.2	7.8	10.9	13.0	14.8	17.0	19.7	21.5	22.4	22.3	19.9	18.6	17.5	16.1	14.9	14.6	13.7	12.5	12.7	14.1	22.4
8-Sep	12.4	11.7	11.2	10.6	8.9	8.7	9.3	10.7	11.8	12.8	13.9	15.1	16.1	17.5	18.4	19.1	19.6	18.8	15.7	12.8	10.9	9.6	8.7	7.9	13.0	19.6
9-Sep	7.5	6.8	6.2	5.9	5.5	4.9	5.4	8.8	12.7	15.8	18.9	21.1	23.5	25.9	26.6	27.4	27.3	26.2	24.6	22.0	21.4	19.3	18.3	18.0	16.7	27.4
10-Sep	17.1	14.8	13.1	12.0	10.7	10.2	11.1	12.6	15.7	18.9	21.5	23.5	23.6	24.8	25.7	25.6	24.9	23.5	20.5	16.2	14.2	11.4	11.0	9.5	17.2	25.7
11-Sep	8.8	7.3	6.5	5.9	5.2	4.7	5.3	9.1	12.3	15.2	18.4	21.4	23.9	25.6	26.2	26.3	25.9	24.9	21.8	18.8	17.7	17.0	16.3	15.6	15.8	26.3
12-Sep	15.2	15.3	14.2	11.7	10.0	8.9	9.0	12.9	16.2	19.0	21.5	24.3	27.3	29.0	29.7	29.9	29.4	27.9	24.6	20.6	18.2	16.9	15.6	13.9	19.2	29.9
13-Sep	13.0	12.2	11.6	11.0	10.2	9.5	9.3	11.0	14.1	16.1	18.9	21.2	23.2	24.0	24.7	24.6	24.4	23.3	20.7	18.7	17.9	16.0	14.9	13.6	16.8	24.7
14-Sep	12.9	12.1	11.3	10.7	10.2	9.5	9.7	11.6	14.3	16.7	19.0	21.2	22.4	22.4	22.1	21.5	21.5	21.5	20.7	19.3	17.6	15.7	14.7	14.4	16.4	22.4
15-Sep	13.7	13.8	13.1	12.8	12.9	12.4	12.9	14.1	15.9	17.8	20.4	23.4	25.2	25.5	24.8	22.3	20.0	18.7	17.4	16.3	14.8	13.6	13.8	14.0	17.1	25.5
16-Sep	13.8	13.4	13.1	11.8	11.8	11.7	11.1	12.6	13.6	13.9	15.4	16.7	17.6	18.9	19.7	20.2	20.4	19.1	17.2	14.1	12.2	12.0	10.3	9.1	14.6	20.4
17-Sep	8.8	8.2	7.4	6.3	5.6	5.2	5.9	7.8	10.5	14.6	17.8	20.2	22.3	24.0	24.8	25.0	24.4	23.3	21.5	19.7	18.9	18.4	17.5	16.7	15.6	25.0
18-Sep	16.1	14.9	12.4	11.0	10.4	11.4	13.0	15.0	17.0	18.8	20.4	21.9	23.2	23.7	24.1	24.5	24.2	22.1	19.3	16.7	15.2	14.4	13.6	14.9	17.4	24.5
19-Sep	14.5	12.9	11.5	10.3	9.2	7.9	7.3	9.3	11.8	14.7	17.5	20.1	21.5	22.1	22.3	22.9	21.2	19.5	17.7	16.0	14.3	12.6	11.1	9.8	14.9	22.9
20-Sep	8.3	7.2	6.7	5.7	4.9	4.7	4.8	8.5	11.2	14.1	17.0	20.4	23.1	26.3	27.3	27.2	27.0	25.6	23.5	21.7	20.3	19.4	18.4	15.5	16.2	27.3
21-Sep	14.3	12.3	11.6	11.3	10.3	10.6	10.1	12.3	16.7	19.7	21.8	23.1	24.3	25.1	25.4	24.2	22.4	20.5	18.3	14.4	12.7	12.5	12.6	12.0	16.6	25.4
22-Sep	11.6	11.1	10.5	9.8	9.0	8.3	7.6	9.6	11.8	13.5	15.2	17.8	19.4	20.4	20.7	20.7	20.4	18.8	17.6	17.7	17.5	16.9	16.1	15.4	14.9	20.7
23-Sep	13.8	14.7	14.8	14.7	14.8	15.1	14.7	14.4	17.2	17.8	19.1	20.5	20.4	19.2	19.0	19.6	19.2	18.0	16.0	14.3	12.9	10.4	9.0	8.6	15.8	20.5
24-Sep	9.2	9.0	8.6	9.6	8.6	8.1	8.3	9.1	9.6	11.2	14.2	16.5	18.2	19.0	19.4	19.2	18.4	16.9	13.6	9.4	7.9	6.3	4.9	4.1	11.6	19.4
25-Sep	3.2	2.4	1.1	0.2	0.1	0.4	0.2	2.3	4.9	7.4	10.0	12.9	14.8	16.7	17.4	16.9	16.6	16.8	15.7	15.7	15.3	13.7	12.1	10.6	9.5	17.4
26-Sep	8.4	7.3	6.3	5.5	5.2	4.5	4.3	5.2	8.7	11.4	13.3	15.4	16.8	17.9	18.2	16.2	13.7	13.7	12.3	10.8	10.8	9.5	8.4	8.8	10.5	18.2
27-Sep	9.7	8.7	8.3	8.1	9.0	9.2	9.1	10.5	11.9	13.1	14.6	15.9	16.8	17.6	17.7	16.7	16.6	14.6	13.3	12.3	11.3	10.3	9.0	8.9	12.2	17.7
28-Sep	6.9	7.7	7.4	7.8	6.6	5.2	4.4	6.0	8.7	11.4	14.5	15.3	16.4	17.6	18.8	18.3	17.0	15.0	12.7	11.3	10.9	11.0	10.9	10.2	11.3	18.8
29-Sep	10.8	11.4	11.0	11.0	12.2	12.2	11.9	12.2	13.6	15.7	16.9	17.8	19.8	21.4	21.5	21.9	21.7	20.3	18.2	16.0	14.8	14.2	13.5	11.7	15.5	21.9
30-Sep	10.5	10.7	10.4	10.2	10.6	11.0	11.4	11.6	13.0	14.8	16.6	17.7	17.6	17.6	17.3	16.7	16.6	15.8	14.6	14.0	13.4	12.5	11.7	10.6	13.6	17.7
	10.7	10.1	9.4	8.9	8.4	8.2	8.4	10.1	12.4	14.6	16.8	18.7	20.2	21.3	21.6	21.4	20.8	19.7	17.6	15.4	14.1	13.0	12.1	11.4	Diurnal Average	
	17.1	15.3	14.8	14.7	14.8	15.1	14.7	15.0	17.2	19.7	21.8	24.3	27.3	29.0	29.7	29.9	29.4	27.9	24.6	22.0	21.4	19.4	18.4	18.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	159	22.08	22.08
10 - 20	437	60.69	82.78
> 20	124	17.22	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 99.0 % on Sep 17 08:00

Maximum Daily Average: 81.3 % on Sep 14

Minimum Value: 22.1 % on Sep 24 16:00

Minimum Daily Average: 41.7 % on Sep 23

Maximum Diurnal Average: 86.5 % at hour 7

Minimum Diurnal Average: 40.8 % at hour 15

Monthly Average: 65.99 %

Percentiles: P_1 = 26.6 P_{10} = 36.3 Q_1 = 49.9 Median = 64.8 Q_3 = 84.6 P_{90} = 94.6 P_{99} = 98.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

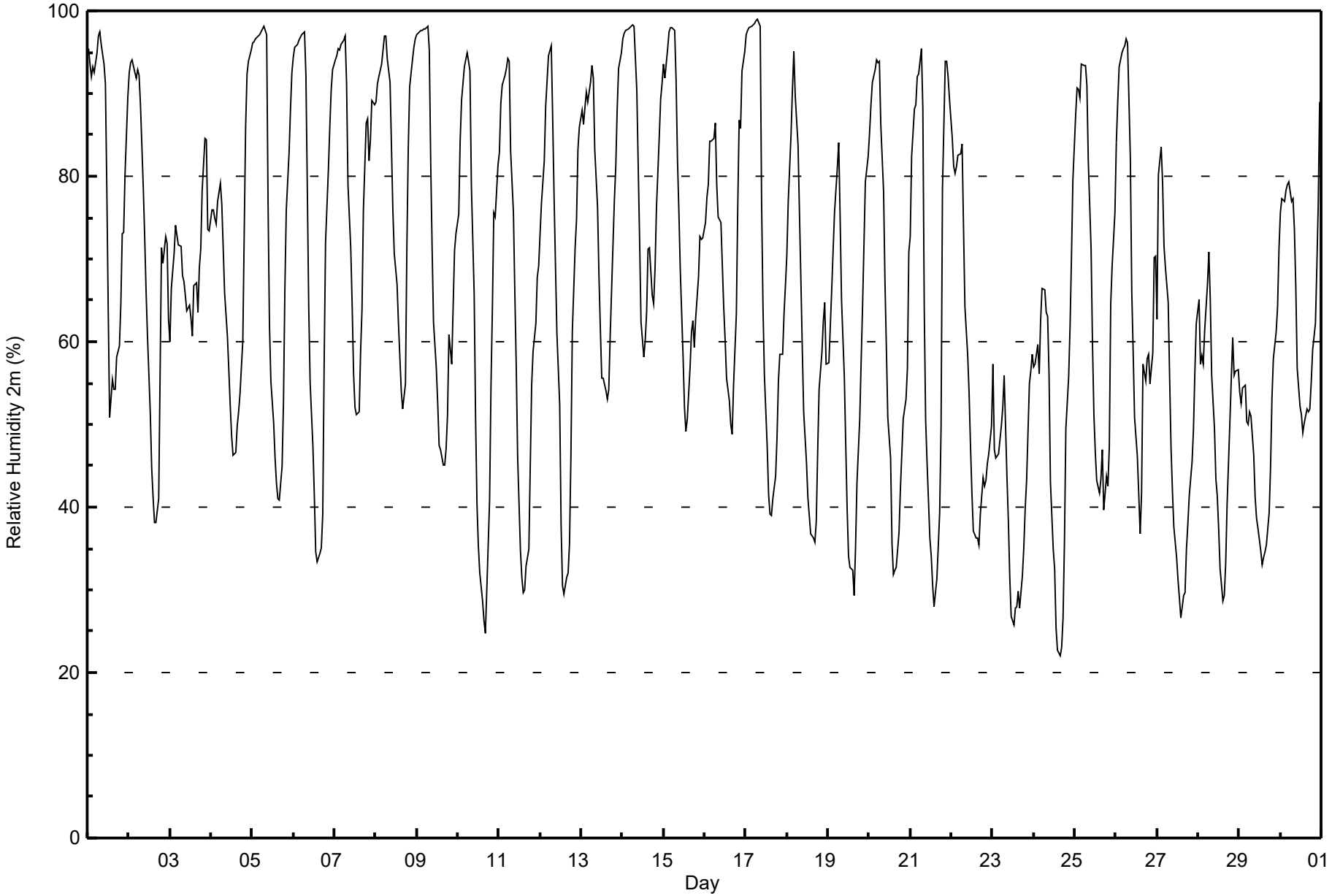
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95.4	93.6	92.0	93.2	92.5	94.9	97.0	97.4	95.9	93.6	91.2	78.4	63.8	50.9	55.4	54.2	54.3	58.1	59.5	64.6	73.1	73.3	80.3	89.7	78.8	97.4
2-Sep	92.6	93.7	94.1	92.6	91.9	92.9	92.2	88.7	78.7	72.6	66.1	60.7	51.3	44.7	41.2	38.2	38.2	41.1	56.0	71.3	69.5	72.6	71.9	62.8	69.8	94.1
3-Sep	60.0	66.5	70.7	74.1	72.8	71.6	71.5	68.0	67.4	65.6	63.7	64.3	62.8	60.7	66.8	67.1	63.6	68.9	71.2	78.3	84.6	84.4	73.6	73.4	69.7	84.6
4-Sep	75.9	75.9	74.9	74.2	76.9	79.1	76.6	71.4	66.0	60.8	56.6	52.4	48.7	46.3	46.6	49.8	51.6	53.7	60.2	73.2	86.0	92.3	93.9	95.2	68.3	95.2
5-Sep	96.2	96.3	96.6	96.9	97.1	97.5	97.8	98.2	97.2	76.7	62.0	55.3	50.2	46.0	42.9	41.1	40.9	44.8	52.6	66.5	75.9	82.9	88.2	92.5	74.7	98.2
6-Sep	94.4	95.6	96.0	96.4	96.8	97.1	97.5	92.3	78.4	64.3	55.1	47.3	41.3	34.5	33.3	34.3	35.1	39.1	57.2	72.0	80.7	85.8	90.4	92.9	71.2	97.5
7-Sep	94.0	94.6	95.4	95.3	95.9	96.4	96.9	91.1	78.9	71.1	64.2	56.1	52.0	51.2	51.5	58.8	64.0	76.0	86.4	87.0	81.9	84.4	89.1	88.7	79.2	96.9
8-Sep	89.0	91.2	92.1	93.6	95.2	97.0	97.0	94.3	91.4	83.7	75.9	70.7	66.9	62.1	58.2	54.0	51.9	54.8	71.4	83.4	90.8	94.0	95.6	96.6	81.3	97.0
9-Sep	97.1	97.3	97.7	97.7	97.7	97.8	98.1	95.2	81.7	71.3	62.4	56.7	52.5	47.5	46.9	45.1	45.1	47.1	51.2	60.9	57.2	64.3	71.0	73.1	71.4	98.1
10-Sep	75.5	84.2	89.1	91.2	93.2	94.9	93.9	92.7	79.0	65.7	50.8	40.3	35.2	32.0	28.6	26.3	24.8	29.9	40.8	54.7	64.1	75.6	75.1	81.3	63.3	94.9
11-Sep	82.9	88.9	90.9	92.3	93.1	94.3	93.9	83.0	75.5	65.9	57.1	46.1	34.7	31.6	29.7	30.0	32.9	35.0	44.9	54.8	58.9	62.2	67.8	69.1	63.1	94.3
12-Sep	73.1	76.7	81.8	88.6	91.6	94.6	95.8	87.0	77.5	69.1	61.0	52.4	37.8	30.6	29.5	31.4	32.1	35.6	46.1	61.2	71.4	74.8	83.2	85.9	65.4	95.8
13-Sep	88.0	86.3	88.2	90.2	89.0	91.3	93.4	91.9	83.3	76.3	68.0	61.5	55.6	55.7	54.0	53.1	54.2	60.7	71.7	77.1	81.3	88.1	93.1	94.8	76.9	94.8
14-Sep	96.6	97.2	97.6	97.8	98.0	98.1	98.3	98.2	90.3	81.2	72.2	62.4	58.2	60.2	63.6	71.2	71.3	65.7	64.6	68.9	76.1	84.7	89.3	91.1	81.3	98.3
15-Sep	93.6	91.9	95.4	97.4	97.9	98.0	97.7	91.8	82.0	75.7	68.7	58.2	52.1	49.2	50.7	56.9	61.3	62.5	59.4	62.9	67.8	72.6	72.4	72.5	74.5	98.0
16-Sep	74.4	77.4	79.0	84.3	84.2	84.6	86.4	79.0	75.1	74.4	69.2	64.0	60.1	55.6	52.9	49.9	48.7	54.8	63.4	76.5	86.8	85.8	92.7	95.1	73.1	95.1
17-Sep	97.2	97.7	98.0	98.1	98.3	98.5	98.7	99.0	98.1	76.7	64.1	56.0	47.3	41.5	39.1	38.9	41.1	43.8	48.4	55.2	58.5	58.5	63.4	66.9	70.1	99.0
18-Sep	70.5	77.0	85.1	90.5	95.1	89.7	83.7	75.6	67.6	59.4	51.6	45.5	41.2	39.0	36.8	36.3	35.8	38.3	46.7	54.2	58.7	62.4	64.7	57.4	60.9	95.1
19-Sep	57.5	61.8	66.2	71.0	75.5	81.1	84.1	75.1	65.2	55.7	47.7	39.8	34.1	32.8	32.4	29.4	35.1	42.9	50.7	57.7	64.3	71.8	79.3	82.3	58.1	84.1
20-Sep	85.3	88.6	91.4	92.8	94.0	93.8	93.9	86.3	78.1	67.1	59.1	50.9	46.0	35.6	31.8	32.3	32.7	37.0	42.2	46.4	50.8	53.0	56.8	70.8	63.2	94.0
21-Sep	72.7	82.4	88.1	88.7	92.1	92.3	95.4	88.1	64.1	50.4	45.5	36.2	34.0	30.4	27.9	31.4	35.3	39.3	49.7	78.4	93.8	94.0	92.1	89.3	66.3	95.4
22-Sep	84.5	81.2	80.4	81.2	82.5	82.7	83.9	74.0	64.3	58.3	53.8	47.2	41.7	37.1	36.3	36.2	35.5	39.2	43.6	42.6	43.3	45.3	46.4	49.8	57.1	84.5
23-Sep	57.3	46.9	46.0	46.4	48.2	49.8	52.0	55.9	43.5	38.4	31.6	26.7	25.7	27.9	28.0	29.9	27.9	31.7	35.0	39.8	43.3	54.9	56.4	58.5	41.7	58.5
24-Sep	56.9	57.2	59.7	56.1	62.6	66.4	66.4	63.6	63.0	56.1	43.1	34.9	32.6	25.4	22.7	22.1	23.1	26.5	35.7	49.5	55.8	61.8	70.3	79.5	49.6	79.5
25-Sep	87.5	90.8	90.5	89.4	93.6	93.4	93.3	91.1	81.8	71.2	59.7	51.1	46.6	43.2	41.7	43.4	47.0	39.7	43.7	42.6	47.4	64.6	69.2	75.6	66.6	93.6
26-Sep	84.1	89.1	93.3	95.0	95.4	95.8	96.7	96.1	82.2	66.0	58.8	50.9	46.1	41.5	36.8	41.7	57.3	55.3	58.0	58.5	54.9	58.6	70.1	70.3	68.9	96.7
27-Sep	62.7	80.2	83.6	79.1	71.5	69.0	64.8	55.7	47.2	42.0	37.6	34.0	31.3	29.1	26.7	29.4	29.7	34.9	37.9	41.4	45.4	49.4	56.2	62.3	50.0	83.6
28-Sep	65.1	57.3	58.3	57.2	61.3	67.0	70.9	65.1	55.9	49.6	43.3	41.3	37.2	32.5	28.6	29.3	33.3	40.4	50.3	55.6	60.6	56.0	56.4	56.6	51.2	70.9
29-Sep	53.9	52.6	54.4	54.7	50.4	49.9	51.6	51.1	46.3	41.1	38.6	37.5	34.7	33.0	33.9	34.6	35.5	39.4	45.0	53.1	58.0	61.2	64.2	71.2	47.7	71.2
30-Sep	75.5	77.3	77.0	78.3	79.0	79.4	77.0	77.3	73.5	66.6	56.9	52.2	51.2	48.9	50.1	51.8	51.5	51.9	55.1	59.0	62.2	68.9	76.6	88.9	66.1	88.9
	79.6	81.6	83.4	84.5	85.4	86.3	86.5	82.5	74.3	65.6	57.8	51.0	45.8	41.9	40.8	41.6	43.0	46.3	53.3	61.6	66.8	71.3	75.0	77.8	Diurnal Average	
	97.2	97.7	98.0	98.1	98.3	98.5	98.7	99.0	98.1	93.6	91.2	78.4	66.9	62.1	66.8	71.2	71.3	76.0	86.4	87.0	93.8	94.0	95.6	96.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 1.2 mm on Sep 1 06:00

Maximum Daily Total: 1.7 mm on Sep 1

Minimum Value: 0.0 mm on Sep 1 01:00

Minimum Daily Total: 0.0 mm on Sep 2

Maximum Diurnal Total: 1.4 mm at hour 20

Minimum Diurnal Total: 0.0 mm at hour 1

Monthly Total: 6.78 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} = 0.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

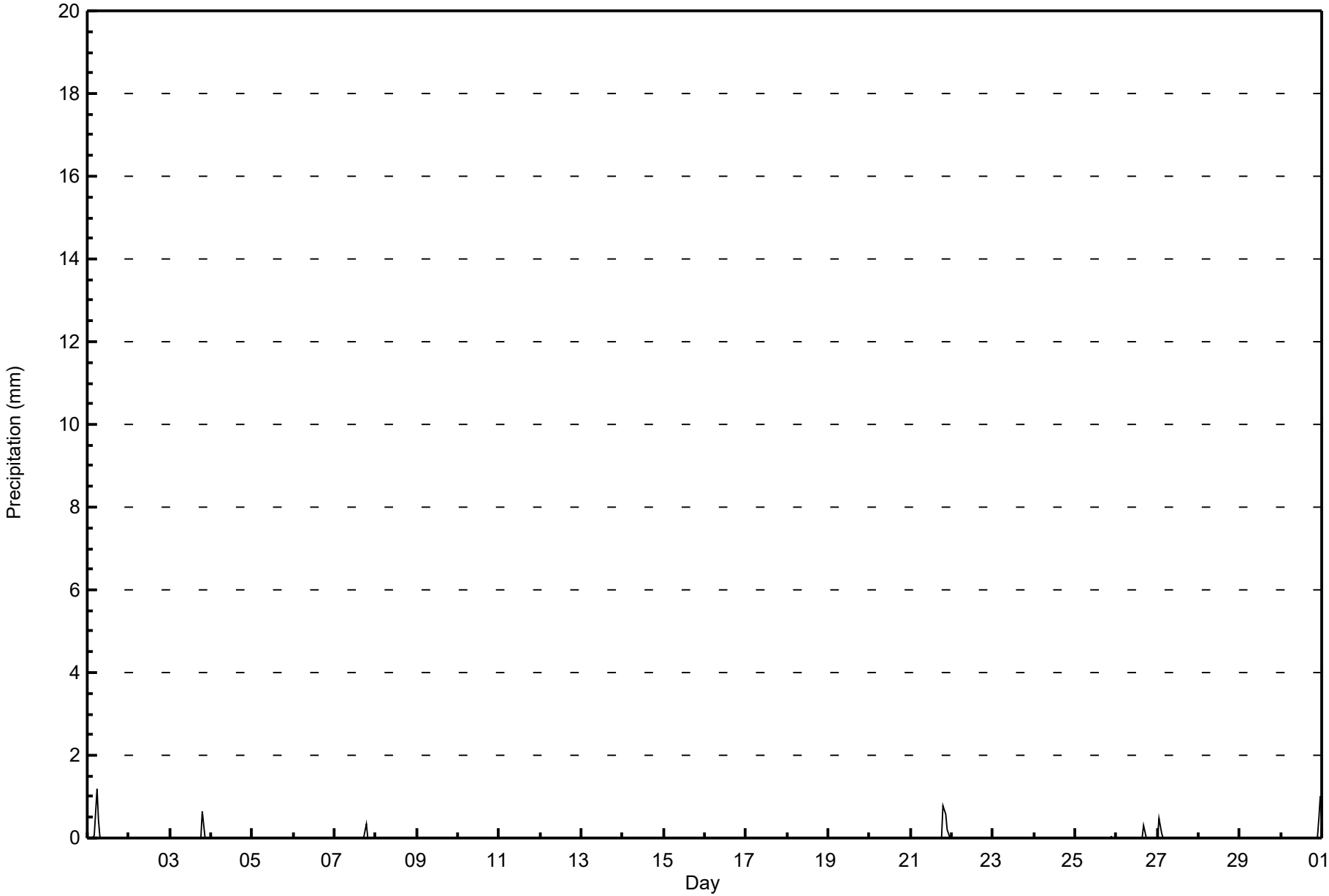
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.1	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.2
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.6	0.6
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.3	0.3
8-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.2	0.1	0.0	1.6	0.8
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1
26-Sep	0.0	0.0	0.0	0.0	0.0	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	0.3	0.3
27-Sep	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	1.0	1.5	1.0
	0.0	0.5	0.1	0.0	0.1	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	1.4	0.6	0.3	0.6	1.0	Diurnal Average	
	0.0	0.5	0.1	0.0	0.1	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.8	0.6	0.2	0.5	1.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	712	98.89	98.89
0.4 - 0.5	3	0.42	99.31
0.6 - 0.7	2	0.28	99.58
0.8 - 1.4	3	0.42	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 59.0 % on Oct 1 00:00

Maximum Daily Average: 19.7 % on Sep 7

Minimum Value: 0.2 % on Sep 21 14:00

Minimum Daily Average: 1.1 % on Sep 23

Maximum Diurnal Average: 22.2 % at hour 6

Minimum Diurnal Average: 0.8 % at hour 15

Monthly Average: 8.25 %

Percentiles: P_1 = 0.3 P_{10} = 0.8 Q_1 = 1.1 Median = 1.7 Q_3 = 8.4 P_{90} = 31.7 P_{99} = 50.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

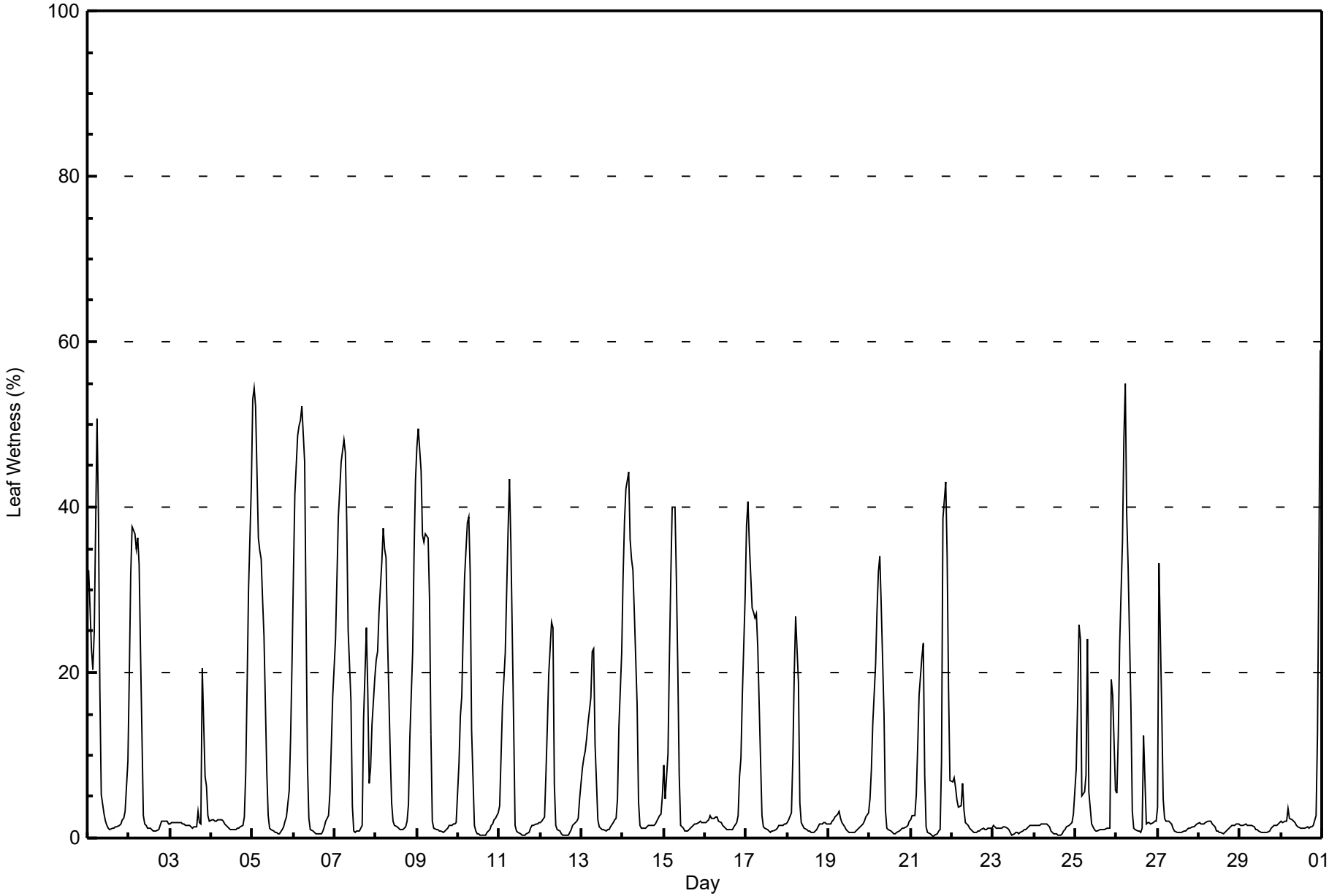
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	32.4	27.8	22.9	20.4	24.9	50.7	38.9	17.9	5.2	2.9	2.0	1.5	1.2	1.1	1.2	1.2	1.3	1.4	1.6	1.8	2.3	2.4	3.3	9.4	11.5	50.7
2-Sep	19.9	31.8	37.7	36.7	34.9	36.2	33.1	22.4	2.8	1.8	1.5	1.3	1.1	1.0	0.9	0.8	0.8	1.0	1.5	2.1	2.0	2.1	2.0	1.8	11.6	37.7
3-Sep	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.1	1.4	1.4	3.3	1.9	1.7	20.6	7.5	6.3	2.8	2.0	3.0	20.6
4-Sep	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.0	1.6	1.4	1.3	1.1	1.0	1.0	1.0	1.2	1.2	1.3	1.6	2.5	7.9	18.7	30.2	42.7	5.5	42.7
5-Sep	53.1	54.4	52.2	36.3	34.8	33.7	28.8	24.5	8.0	2.8	1.1	0.9	0.8	0.7	0.7	0.6	0.6	0.9	1.4	2.0	2.6	5.8	12.3	21.4	15.9	54.4
6-Sep	32.0	41.5	48.6	49.8	50.5	52.3	45.5	26.7	8.8	2.3	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.8	1.4	2.1	2.6	5.4	11.3	17.1	16.8	52.3
7-Sep	24.1	31.3	38.9	42.0	45.4	48.2	46.6	38.1	25.1	16.6	3.9	0.9	0.8	0.8	0.9	1.2	1.5	14.3	25.4	17.7	6.6	8.4	13.7	19.3	19.7	48.2
8-Sep	21.5	22.6	27.3	33.4	37.4	34.9	33.8	24.7	10.2	4.2	2.0	1.5	1.4	1.2	1.1	1.0	1.0	1.4	2.1	4.1	12.1	22.6	34.6	43.2	15.8	43.2
9-Sep	47.3	49.5	44.5	36.5	35.7	36.9	36.3	29.0	12.6	2.0	1.2	1.0	1.0	0.8	0.8	0.7	0.8	1.0	1.2	1.5	1.5	1.6	1.7	1.8	14.5	49.5
10-Sep	8.9	14.8	17.1	25.0	31.5	38.1	38.8	32.0	13.1	1.5	0.9	0.6	0.5	0.4	0.3	0.3	0.4	0.6	1.0	1.4	1.7	2.3	2.3	3.0	9.9	38.8
11-Sep	3.9	9.8	15.9	22.3	29.8	37.1	43.3	35.5	13.5	1.5	0.9	0.7	0.5	0.3	0.3	0.4	0.4	0.7	1.1	1.5	1.6	1.7	1.8	1.8	9.4	43.3
12-Sep	1.9	2.0	2.5	7.7	13.6	19.8	26.2	25.4	6.4	1.5	1.1	0.9	0.6	0.4	0.3	0.3	0.3	0.6	1.0	1.5	1.9	2.1	2.4	4.8	5.2	26.2
13-Sep	8.4	9.6	10.5	12.0	13.8	17.0	22.6	22.8	11.3	2.2	1.4	1.2	1.0	0.9	0.9	1.0	1.1	1.4	1.9	2.2	2.3	4.8	13.4	22.3	7.8	22.8
14-Sep	31.7	38.2	42.2	44.2	36.2	33.7	32.4	27.3	16.1	4.4	1.5	1.1	1.1	1.2	1.3	1.5	1.6	1.6	1.6	1.7	2.0	2.6	3.0	5.0	13.9	44.2
15-Sep	8.8	4.8	10.3	21.8	31.4	40.0	40.0	31.1	20.4	7.6	1.5	1.1	0.9	0.9	0.9	1.2	1.3	1.5	1.6	1.7	1.9	2.0	1.9	1.9	9.9	40.0
16-Sep	1.9	2.0	2.1	2.7	2.3	2.3	2.5	2.5	2.0	1.9	1.5	1.3	1.2	1.1	1.0	1.1	1.1	1.4	1.8	2.7	7.4	9.6	17.3	29.2	4.2	29.2
17-Sep	37.8	40.7	35.6	27.8	27.3	26.6	27.1	23.1	9.3	2.8	1.4	1.2	1.0	0.8	0.7	0.8	0.8	1.1	1.2	1.5	1.6	1.5	1.6	1.7	11.5	40.7
18-Sep	1.8	2.3	3.1	9.6	19.8	26.8	18.9	4.3	1.8	1.5	1.2	1.0	0.8	0.8	0.7	0.8	0.8	1.0	1.4	1.6	1.7	1.8	1.9	1.7	4.5	26.8
19-Sep	1.6	1.8	2.0	2.2	2.5	2.9	3.3	2.4	1.8	1.4	1.0	0.8	0.7	0.6	0.6	0.6	0.9	1.1	1.3	1.5	1.7	2.0	2.6	3.0	1.7	3.3
20-Sep	4.7	8.4	13.9	21.1	27.4	32.2	34.1	28.2	14.9	3.4	1.2	0.9	0.9	0.7	0.5	0.6	0.6	0.8	1.0	1.1	1.3	1.4	1.4	2.0	8.4	34.1
21-Sep	2.2	2.6	2.7	5.3	11.0	17.2	21.9	23.5	7.7	1.3	0.7	0.5	0.3	0.2	0.3	0.5	0.8	1.0	9.2	38.6	43.1	34.0	17.9	6.9	10.4	43.1
22-Sep	6.7	7.3	6.1	4.6	3.8	3.9	6.6	3.4	1.9	1.5	1.1	0.9	0.9	0.7	0.7	0.8	0.8	1.0	1.1	1.1	1.1	1.1	1.2	1.2	2.5	7.3
23-Sep	1.5	1.3	1.3	1.2	1.2	1.3	1.3	1.4	1.2	1.0	0.6	0.4	0.4	0.7	0.7	0.6	0.6	0.8	0.9	1.1	1.2	1.5	1.6	1.6	1.1	1.6
24-Sep	1.5	1.5	1.6	1.5	1.6	1.7	1.7	1.6	1.6	1.4	0.8	0.6	0.5	0.5	0.4	0.4	0.5	0.8	1.1	1.4	1.6	1.7	1.9	2.8	1.3	2.8
25-Sep	8.3	16.3	25.8	24.1	5.0	5.6	7.6	24.0	5.6	1.8	1.4	1.1	0.9	0.8	1.0	1.0	1.1	1.1	1.2	1.1	1.2	19.2	17.3	5.8	7.4	25.8
26-Sep	5.4	12.4	23.6	35.9	48.3	54.8	39.1	32.9	16.0	3.2	1.2	1.0	0.9	0.8	0.8	1.1	12.3	1.7	1.8	1.9	1.8	1.8	2.0	2.0	12.6	54.8
27-Sep	3.7	33.3	15.3	4.7	2.4	2.1	2.0	1.9	1.6	1.3	0.9	0.8	0.7	0.6	0.6	0.8	0.8	1.0	1.2	1.3	1.3	1.4	1.6	1.7	3.5	33.3
28-Sep	1.9	1.8	1.7	1.7	1.8	2.0	2.1	2.0	1.7	1.3	0.8	0.8	0.8	0.7	0.6	0.7	0.9	1.1	1.3	1.5	1.6	1.6	1.6	1.6	1.4	2.1
29-Sep	1.6	1.5	1.6	1.6	1.5	1.5	1.5	1.5	1.3	1.1	1.0	0.9	0.7	0.6	0.7	0.6	0.7	0.9	1.2	1.3	1.4	1.5	1.6	1.9	1.2	1.9
30-Sep	2.0	1.9	2.0	2.0	3.6	2.3	2.1	2.0	1.8	1.6	1.3	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	2.7	12.6	33.3	59.0	5.9	59.0
	12.7	15.9	17.1	17.9	19.5	22.2	21.4	17.2	7.6	2.7	1.3	1.0	0.9	0.8	0.8	0.8	1.3	1.6	2.4	4.1	4.2	6.1	8.1	10.7	Diurnal Average	
	53.1	54.4	52.2	49.8	50.5	54.8	46.6	38.1	25.1	16.6	3.9	1.5	1.4	1.2	1.4	1.5	12.3	14.3	25.4	38.6	43.1	34.0	34.6	59.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	10	1.39	1.39
0.4 - 0.5	20	2.78	4.17
0.6 - 0.7	42	5.83	10.00
0.8 - 1.4	203	28.19	38.19
1.5 - 10	263	36.53	74.72
> 10	169	23.47	98.19

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - September 2025

Maximum Value: 664.2 W/m2 on Sep 5 13:00

Maximum Daily Average: 204.5 W/m2 on Sep 5

Minimum Value: 0.0 W/m2 on Sep 1 01:00

Minimum Daily Average: 74.7 W/m2 on Sep 30

Maximum Diurnal Average: 517.4 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 1

Monthly Average: 149.52 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 18.2 Q_3 = 293.7 P_{90} = 500.9 P_{99} = 617.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

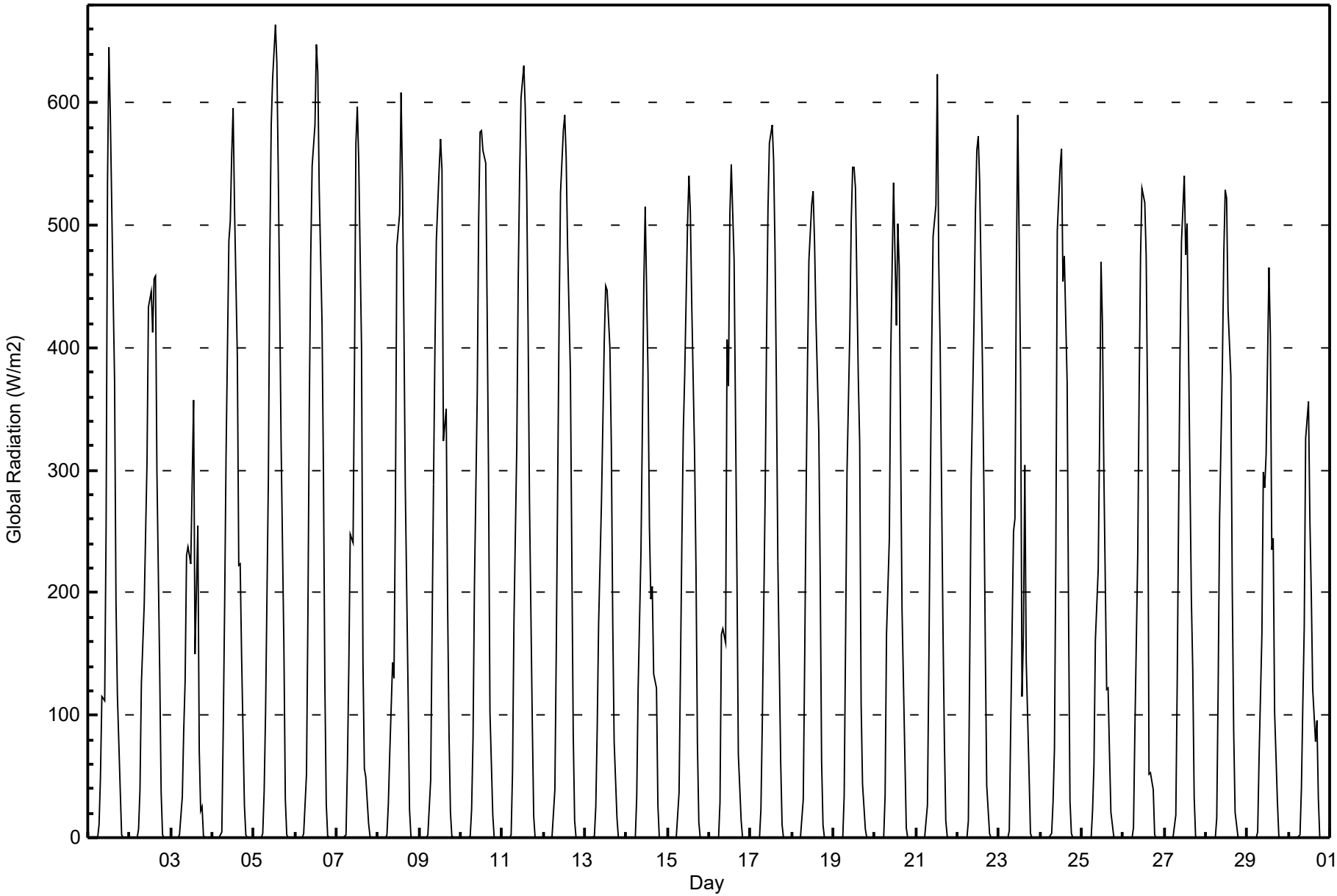
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.5	10.5	49.9	114.7	111.4	253.3	535.3	644.9	589.0	442.4	373.7	193.9	116.2	39.0	2.7	0.0	0.0	0.0	0.0	144.9	644.9
2-Sep	0.0	0.0	0.0	0.0	0.0	6.6	39.5	125.7	190.4	249.0	308.0	433.7	446.4	412.3	456.0	459.0	299.6	135.1	36.9	2.8	0.0	0.0	0.0	0.0	150.1	459.0
3-Sep	0.0	0.0	0.0	0.0	0.0	2.7	33.0	87.2	127.5	230.8	238.0	224.0	291.2	357.3	150.1	254.6	71.9	21.7	25.2	1.1	0.0	0.0	0.0	0.0	88.2	357.3
4-Sep	0.0	0.0	0.0	0.0	0.0	5.0	89.3	190.2	312.3	488.0	503.5	558.2	596.2	514.1	392.2	222.7	224.0	148.9	26.9	2.5	0.0	0.0	0.0	0.0	178.1	596.2
5-Sep	0.0	0.0	0.0	0.0	0.0	3.5	38.5	102.5	294.6	477.6	582.6	619.9	664.2	633.2	543.2	436.8	322.7	153.9	31.5	2.4	0.0	0.0	0.0	0.0	204.5	664.2
6-Sep	0.0	0.0	0.0	0.0	0.0	3.6	52.2	182.1	352.6	475.0	548.2	582.5	647.8	624.7	529.7	420.3	299.5	127.3	27.2	1.1	0.0	0.0	0.0	0.0	203.1	647.8
7-Sep	0.0	0.0	0.0	0.0	0.0	2.8	59.7	140.7	247.7	241.4	384.9	566.6	597.0	552.9	399.5	143.8	56.7	49.3	11.7	1.7	0.0	0.0	0.0	0.0	144.0	597.0
8-Sep	0.0	0.0	0.0	0.0	0.0	2.0	27.1	69.1	143.0	130.7	270.9	483.0	509.5	608.0	537.6	421.6	287.5	117.2	22.8	1.1	0.0	0.0	0.0	0.0	151.3	608.0
9-Sep	0.0	0.0	0.0	0.0	0.0	2.3	46.7	171.0	288.0	398.7	487.6	546.4	570.9	545.2	323.9	350.0	190.7	84.3	21.0	0.6	0.0	0.0	0.0	0.0	167.8	570.9
10-Sep	0.0	0.0	0.0	0.0	0.0	1.6	22.7	81.2	204.9	362.7	504.6	576.4	577.6	560.8	550.5	431.3	293.9	102.9	18.0	0.2	0.0	0.0	0.0	0.0	178.7	577.6
11-Sep	0.0	0.0	0.0	0.0	0.0	1.8	53.8	176.4	319.0	452.7	539.7	604.1	630.9	595.9	534.4	418.4	275.2	93.2	17.7	0.2	0.0	0.0	0.0	0.0	196.4	630.9
12-Sep	0.0	0.0	0.0	0.0	0.0	1.3	38.8	154.4	289.5	423.0	527.0	577.4	590.7	555.0	482.6	380.2	230.7	85.1	13.9	0.0	0.0	0.0	0.0	0.0	181.2	590.7
13-Sep	0.0	0.0	0.0	0.0	0.0	0.7	25.9	89.4	174.8	273.6	339.1	405.3	451.1	447.7	399.5	320.9	176.4	78.7	16.3	0.0	0.0	0.0	0.0	0.0	133.3	451.1
14-Sep	0.0	0.0	0.0	0.0	0.0	0.3	33.8	122.7	233.4	336.0	450.5	514.6	379.4	253.3	195.1	204.7	133.6	122.4	26.0	0.1	0.0	0.0	0.0	0.0	125.2	514.6
15-Sep	0.0	0.0	0.0	0.0	0.0	0.5	36.8	138.1	242.7	331.5	378.2	501.7	540.1	510.6	434.5	313.5	219.3	76.7	12.8	0.0	0.0	0.0	0.0	0.0	155.7	540.1
16-Sep	0.0	0.0	0.0	0.0	0.0	0.4	29.3	165.5	170.8	159.6	406.3	368.4	509.4	550.2	471.6	344.0	216.7	68.0	13.9	0.0	0.0	0.0	0.0	0.0	144.8	550.2
17-Sep	0.0	0.0	0.0	0.0	0.0	0.2	22.8	95.2	279.6	409.3	513.5	566.8	581.9	552.7	479.9	366.0	225.6	62.6	10.5	0.0	0.0	0.0	0.0	0.0	173.6	581.9
18-Sep	0.0	0.0	0.0	0.0	0.0	0.3	31.7	143.7	276.3	386.1	471.9	517.7	527.8	486.2	423.4	331.5	215.6	62.0	10.1	0.0	0.0	0.0	0.0	0.0	161.8	527.8
19-Sep	0.0	0.0	0.0	0.0	0.0	0.0	35.0	162.2	298.9	413.8	503.9	547.7	547.9	530.7	376.3	321.4	109.3	44.3	7.1	0.0	0.0	0.0	0.0	0.0	162.4	547.9
20-Sep	0.0	0.0	0.0	0.0	0.0	0.1	35.1	166.3	244.8	394.4	467.9	534.8	418.2	500.8	466.1	322.5	185.2	67.2	7.6	0.0	0.0	0.0	0.0	0.0	158.8	534.8
21-Sep	0.0	0.0	0.0	0.0	0.0	0.1	27.1	142.2	280.5	400.2	491.0	516.4	623.7	469.7	401.7	171.5	79.2	13.6	1.4	0.0	0.0	0.0	0.0	0.0	150.8	623.7
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	13.9	149.3	293.6	422.3	510.9	561.1	572.4	536.0	385.1	284.2	156.0	42.5	3.3	0.0	0.0	0.0	0.0	0.0	163.8	572.4
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	6.2	90.8	250.6	260.8	462.4	589.6	381.1	115.5	165.1	304.4	144.0	52.7	3.5	0.0	0.0	0.0	0.0	0.0	117.8	589.6
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	3.6	28.5	73.1	235.0	495.1	547.2	561.9	454.7	474.5	371.3	182.5	29.7	3.7	0.0	0.0	0.0	0.0	0.0	144.2	561.9
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	21.7	59.4	161.1	219.2	326.9	470.5	420.0	299.2	120.9	122.7	69.1	20.4	1.5	0.0	0.0	0.1	0.0	0.0	96.4	470.5
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	8.1	88.9	230.2	363.5	475.0	530.2	518.4	475.3	349.3	52.4	52.8	38.7	1.8	0.0	0.0	0.0	0.0	0.0	132.7	530.2
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	18.5	128.8	268.2	397.3	486.2	540.1	475.5	501.5	399.5	196.0	136.9	33.8	1.4	0.0	0.0	0.0	0.0	0.0	149.3	540.1
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	16.5	121.7	259.0	387.4	477.7	528.6	521.6	430.8	376.9	203.0	87.5	20.2	0.7	0.0	0.0	0.0	0.0	0.0	143.0	528.6
29-Sep	0.0	0.0	0.0	0.0	0.0	0.0	4.6	65.3	166.1	298.9	285.4	313.4	465.2	409.6	235.1	244.9	102.9	29.3	1.0	0.0	0.0	0.0	0.0	0.0	109.2	465.2
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	2.7	39.8	110.0	171.9	326.4	356.4	259.1	198.8	121.5	77.9	95.9	32.8	0.5	0.0	0.0	0.0	0.0	0.0	74.7	356.4
	0.0	0.0	0.0	0.0	0.0	1.2	29.5	117.6	229.9	330.1	433.9	507.3	517.4	475.7	387.3	295.5	177.8	71.0	13.8	0.5	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	6.6	89.3	190.2	352.6	488.0	582.6	619.9	664.2	633.2	550.5	459.0	322.7	153.9	39.0	2.8	0.0	0.1	0.0	0.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - September 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	363	50.42	50.42
21 - 100	71	9.86	60.28
101 - 300	113	15.69	75.97
301 - 600	163	22.64	98.61
601 - 900	10	1.39	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - September 2025

Maximum Speed: 21 km/h on Sep 3 17:00

Maximum Daily Speed Average: 9.8 km/h on Sep 4

Minimum Speed Value: 0 km/h on Sep 9 08:00

Minimum Daily Speed Average: 0.8 km/h on Sep 13

Maximum Diurnal Speed Average: 5.2 km/h at hour 13

Minimum Diurnal Speed Average: 1.5 km/h at hour 19

Monthly Average Velocity: 2.5 km/h 199.7 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 3 Median = 5 Q_3 = 9 P_{90} = 13 P_{99} = 17

Hours in Service: 720

Hours of Data: 712

Hours of Missing Data: 8

Percent Operational Time: 99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WNW4	W2	SW2	W2	WNW2	WNW1	SSE6	S3	SSE3	NNE3	N3	N8	NNE10	N13	NNE15	N16	N13	N13	N8	N8	NW7	NW8	NW7	WNW5	N4.8	N16
2-Sep	W4	W4	WNW4	WNW4	WNW4	W3	WSW2	W2	SSE2	SE2	SE5	SE7	SE10	SSE10	SE10	SSE11	SSE11	SSE9	SE4	SE5	SSE6	SSE5	SSE6	SSE10	SSE4.0	SSE11
3-Sep	SSE11	SSE5	SSE6	SSE5	SSE7	S8	S10	S12	S10	S9	S10	S8	S5	W3	N7	N13	N21	N17	NNW14	NNW11	NNW14	NW10	NNW17	NW13	NW1.3	N21
4-Sep	NW11	NW14	NW17	NW15	NW13	NW13	NW13	NW11	NNW15	N16	NNW17	NNW15	NNW14	NNW16	N14	N10	N9	N7	NNE5	NNW1	WNW2	WSW3	WSW3	WSW3	NNW9.8	NW17
5-Sep	SW1	WSW3	SW2	SSW2	S1	SW3	SSW3	S4	S6	SSE9	SE9	SE9	SE10	SE9	SE8	SE7	SE5	SE5	ESE4	SE1	S2	UO	WNW3	NW4	SSE3.7	SE10
6-Sep	NW3	WNW4	WNW3	W1	S2	S2	SSE3	SSE7	SSE8	SSE9	SSE7	SSE10	SSE12	SSE13	SSE12	SSE10	SSE9	SSE4	WNW3	W2	WSW2	W2	WSW2	SSW3	SSE4.2	SSE13
7-Sep	SSW3	SSW2	SSW2	SSW3	S3	SW1	SW2	SE1	SSE3	S1	N2	ENE4	ENE5	NNE7	NNE14	N14	NNE9	NNW6	NW3	NNW7	N7	NW7	NW6	N6	N2.8	NNE14
8-Sep	N8	N8	NNW8	NNW6	WNW4	WNW6	NW4	W2	N4	NE5	NNE4	NNW3	W3	W2	NW2	N2	SE3	UO	UO	W3	WNW3	WSW3	W2	W2	NNW2.6	N8
9-Sep	SW2	WNW2	W4	W3	W3	WNW3	WNW2	E0	SE4	SSE7	SE6	SSE9	SSE11	SSE11	SSE10	SSE10	SSE9	SSW7	SSW7	SW4	SSW4	SSW2	S5	S3	S4.0	SSE11
10-Sep	SSW4	SSW3	S3	SW2	WSW3	WSW3	WSW1	S1	W2	WNW3	WNW5	WNW6	C	C	C	C	NW15	NW10	NW7	WNW2	WSW2	WSW2	SW2	WNW4	WNW2.9	NW15
11-Sep	S2	WNW4	SW4	SW4	SW2	SSW4	SSW2	S5	SSE5	SE5	SE5	SSE9	SSE11	SSE10	SE13	SSE13	SSE12	SSE8	SSE4	SSE4	SSE6	S6	S7	S7	SSE5.7	SSE13
12-Sep	S8	S8	SW3	WNW3	SW2	SW3	WSW1	SSE2	SSE7	SSE9	SSE12	SSE11	S13	S15	S14	SSW11	SSW8	S6	SW3	S2	WSW3	WSW1	SSE3	SSW3	S5.7	S15
13-Sep	S2	WSW2	S3	S4	SSW2	S2	S3	SSW2	SSE2	SSE6	SSE4	WNW4	N1	NNE4	N6	N8	N7	NNW5	NW4	NW4	NNW2	NW3	WNW3	WNW2	NW0.8	N8
14-Sep	W3	W3	WSW3	WSW2	SSW2	W1	SW2	N1	SSE2	SE7	SSE9	SE6	SSE9	SSE9	SSE13	S9	S8	SSE13	SSE12	S8	S3	S4	S3	S4	SSE4.8	SSE13
15-Sep	S5	S4	SSW3	S5	S5	SSW5	S7	S6	SSE3	SE5	SE6	S4	WSW4	NW10	NW16	NW20	WNW17	NW13	WNW9	NW10	WNW7	NW8	NW8	NW12	WNW4.3	NW20
16-Sep	NW10	WNW5	WNW4	WNW5	WNW6	WNW4	WNW4	W2	WNW6	NW5	NNE2	SE1	ESE3	SSE8	SE9	SSE10	SSE8	SSE7	SSE5	SSE4	SSE4	SSE6	SSW4	S2	SSW1.7	NW10
17-Sep	SSE4	SSE2	WNW3	NW3	WNW2	WSW2	WNW1	W1	SSE5	SSE11	SSE11	SSE12	SSE14	SSE15	SSE16	SSE16	SSE17	SSE16	SSE10	SSE7	SSE10	SSE13	SSE11	SSE11	SSE8.0	SSE17
18-Sep	SSE10	SSE6	NNE2	NNW3	SSE3	SSE6	S9	SSE16	SSE14	S14	S14	SSW12	SSW9	SSW11	SSW11	SW10	SW7	WSW4	SW4	SW4	SW4	SW3	W3	WSW4	S6.5	SSE16
19-Sep	W5	W5	W3	S4	SSW6	SW5	SW4	SSW5	S8	S8	S9	SW6	WSW9	WSW8	SW8	WSW8	SW4	S2	SSW4	S3	S3	S4	S4	SSW2	SSW4.5	WSW9
20-Sep	W2	WNW2	W3	SW3	WSW3	SW3	SSW3	SSE4	SE6	SSE8	SSE9	SSE10	SSE9	S15	S16	S15	S13	S10	SSE9	S10	S8	S8	S7	SSE4	S6.8	S16
21-Sep	WNW2	SSE3	SSW3	SSW3	S4	S5	SSE4	SE5	S3	W2	ESE4	ESE5	SSE6	SSE5	W5	W6	W6	W7	WNW11	WNW7	SSW4	SSW5	SSW4	SW5	SW2.5	WNW11
22-Sep	WSW4	WSW7	WSW7	WSW6	WSW5	SSW3	S4	SSW6	SW8	WSW9	SW10	SSW10	SSW13	SW12	SSW11	SSW10	SSW11	S8	S10	S14	S13	S13	S12	SSE9	SSW8.0	S14
23-Sep	SSE3	S8	S9	S12	S10	S11	S9	SW3	W9	WSW10	WSW10	WSW11	SW11	SW9	SW10	SSW13	SSW13	SSW12	SSW8	SSW6	S5	SSE6	S5	S5	SSW7.8	SSW13
24-Sep	S4	S5	S4	S7	SSW3	SSW4	SSW5	S6	SW6	WSW6	WNW7	W5	S8	NW9	WNW12	NW14	NW12	NW12	NW6	WSW2	SSW2	SSW2	S3	S2	WSW3.5	NW14
25-Sep	S4	SSE4	S2	S3	S4	S4	SSW4	SSE4	S7	SSE8	SSE9	SSE10	SSE7	SSE5	SSE6	SE4	S2	S8	SSE7	S10	S10	WSW10	W6	SSW4	S5.1	S10
26-Sep	WSW4	SW2	S4	S3	SSW4	S4	S5	SSE4	S5	W6	W7	WSW7	W7	WSW7	WNW9	WNW6	WSW8	SSW4	SSW5	SSW6	SSW6	SSW4	SSE5	SSE7	SW4.0	WNW9
27-Sep	S7	S4	SSE9	S8	SSW8	SW8	SW7	SW7	WSW10	W10	WSW10	WSW10	WSW9	WSW10	SW11	WSW7	WSW6	SW5	W5	SW4	WSW3	SW3	SSE5	S5	SW6.0	SW11
28-Sep	SW3	W6	W6	W6	WSW3	SSW4	SSW3	SW2	W3	WSW3	SE7	SSE13	SSE15	S12	SSW7	SSW7	SSW5	S3	S3	SSE1	S4	S4	SE5	E3	S3.8	SSE15
29-Sep	SSE4	SSE5	SE4	SE6	SE9	SE10	SE9	SE13	SSE14	SSE17	SSE19	SSE18	SSE21	SSE18	S16	SSE13	S10	S8	SSE4	SSE3	WSW1	NNW3	UO	NNW4	SSE9.1	SSE21
30-Sep	NW4	W1	WNW5	N3	NNW2	W4	N3	WNW4	N1	N4	N9	N13	N14	NNE10	NNE8	NNE9	NNE9	N11	N12	N11	N8	N8	N9	NNW7	N6.3	N14
	SW2.1	SW2.1	WSW2.3	SW2.2	SW2.6	SW2.9	SSW2.8	S3.2	S3.4	S3.6	S3.6	S3.9	S5.2	S4.3	S3.2	SSW2.2	SSW2.1	SW1.7	SW1.5	SW1.7	SSW2.1	SW2.3	SW2.0	SW1.8	Diurnal Average	
	NW11	NW14	NW17	NW15	NW13	NW13	NW13	SSE16	NNW15	SSE17	SSE19	SSE18	SSE21	SSE18	S16	NW20	N21	N17	NNW14	S14	NNW14	S13	NNW17	NW13	Diurnal Maximum	

C - Calibration UO - Unstable Operation

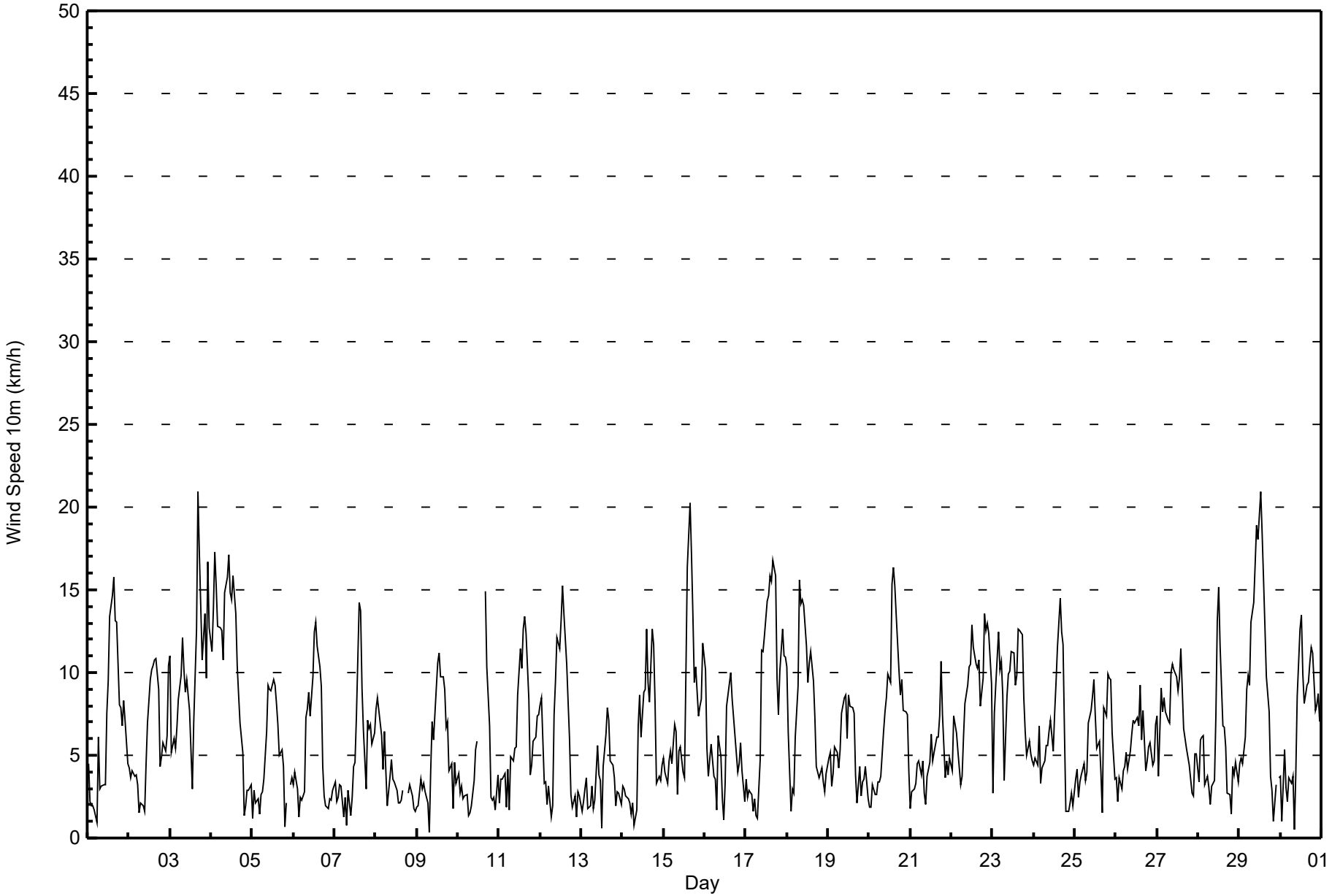
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	356	50.00	50.00
6 - 11	263	36.94	86.94
12 - 19	90	12.64	99.58
20 - 28	3	0.42	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 712

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	10	6	1	2	2	4	16	44	65	44	35	32	38	38	11	8	356
6 - 11	20	7	0	0	0	0	20	70	44	22	12	22	12	11	17	6	263
12 - 19	12	2	0	0	0	0	2	27	17	5	1	0	0	2	14	8	90
20 - 28	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3
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	43	15	1	2	2	4	38	142	126	71	48	54	50	51	43	22	712

Total Number of Valid Hours: 712

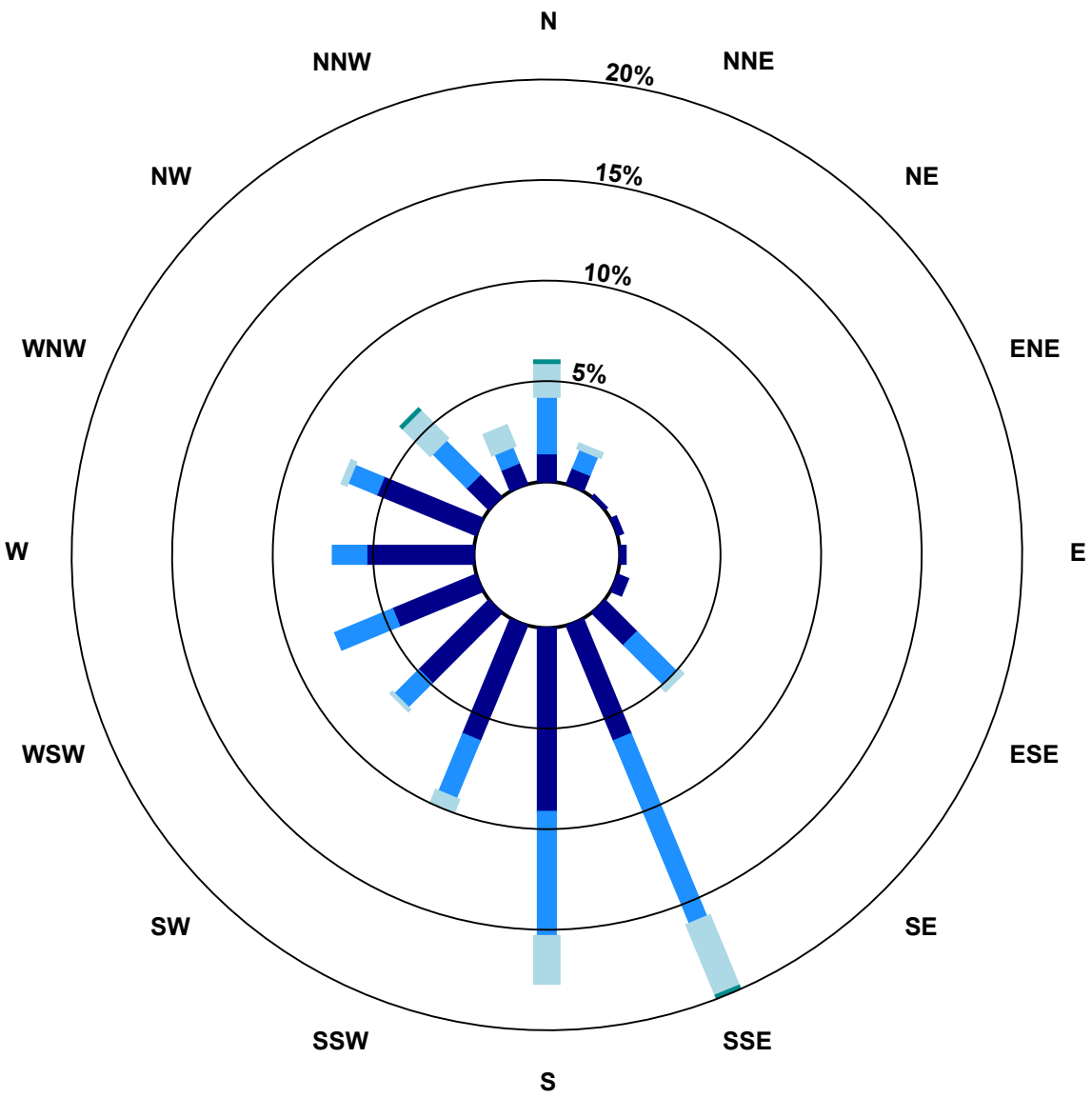
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 712

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Sep 3 17:00

Minimum Value: 0 km/h on Sep 1 21:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 5

Hours in Service:	720
Hours of Data:	712
Hours of Missing Data:	8
Hours of Calibration:	4
Percent Operational Time:	99.4

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-Sep	1	1	2	1	1	2	3	2	1	2	1	5	3	4	4	4	4	3	2	1	0	1	1	1	5
2-Sep	1	1	1	1	1	1	1	1	1	1	1	3	2	3	2	2	3	3	1	1	1	1	2	2	3
3-Sep	2	3	1	2	2	2	2	3	2	2	2	2	2	2	4	6	6	5	5	4	4	4	3	4	6
4-Sep	3	4	4	3	2	2	3	3	4	5	4	4	5	4	4	3	2	2	2	1	2	1	2	2	5
5-Sep	1	1	1	2	1	1	1	1	2	2	2	2	2	3	3	2	2	2	2	1	2	UO	2	1	3
6-Sep	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	2	2	3	1	2	2	1	1	1	3
7-Sep	1	2	1	1	2	1	1	1	2	1	2	2	2	2	4	4	3	2	1	3	2	1	1	2	4
8-Sep	2	1	1	1	1	1	2	1	1	2	2	3	2	2	2	1	1	UO	UO	1	1	1	2	2	3
9-Sep	2	2	1	1	1	1	1	1	1	2	2	3	2	2	2	3	2	2	2	1	2	2	2	2	3
10-Sep	1	2	1	2	1	1	1	1	1	2	2	4	C	C	C	C	4	2	2	2	1	2	1	1	4
11-Sep	1	1	2	1	1	1	1	1	1	1	1	2	3	2	3	3	3	3	1	1	1	1	1	1	3
12-Sep	2	2	1	2	2	1	2	1	2	2	2	2	4	4	4	4	2	2	2	1	2	1	2	2	4
13-Sep	2	2	1	2	1	2	1	2	2	1	1	2	1	1	2	2	1	1	1	1	1	1	1	2	2
14-Sep	1	1	2	1	1	1	1	1	2	2	2	2	2	2	4	2	2	3	3	3	2	1	1	1	4
15-Sep	1	2	1	1	1	1	1	1	2	1	2	2	2	4	5	6	6	4	4	3	4	3	3	3	6
16-Sep	3	1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	2	1	1	1	1	1	1	1	3
17-Sep	1	2	1	1	1	1	1	1	3	3	2	3	3	3	3	4	4	4	2	1	3	2	2	3	4
18-Sep	2	2	1	1	2	2	2	3	3	4	5	4	4	4	4	4	3	2	1	1	1	1	2	2	5
19-Sep	2	2	2	2	1	1	1	2	2	2	3	3	4	4	4	3	2	1	1	2	1	1	1	2	4
20-Sep	2	1	1	1	1	1	1	1	1	2	2	3	3	4	5	4	4	2	2	2	1	1	2	1	5
21-Sep	1	2	2	2	2	2	1	1	2	1	2	1	3	3	2	3	3	3	4	3	1	1	1	2	4
22-Sep	2	3	3	3	2	1	1	3	3	4	4	4	4	4	4	4	4	2	2	3	3	3	3	2	4
23-Sep	2	2	3	3	3	3	2	2	5	5	4	5	5	4	4	4	5	4	3	2	1	1	1	1	5
24-Sep	2	1	2	1	2	2	2	2	2	3	3	2	3	5	5	6	4	3	2	1	1	1	2	2	6
25-Sep	1	1	2	1	1	1	1	1	1	2	2	2	2	2	3	2	2	2	2	3	3	4	3	1	4
26-Sep	1	1	1	2	1	1	1	1	2	3	3	3	3	3	4	3	5	1	1	1	1	1	1	2	5
27-Sep	2	2	2	2	2	3	3	3	5	5	4	4	4	4	5	3	3	2	2	2	1	1	2	2	5
28-Sep	2	2	2	2	2	2	1	2	2	2	2	2	3	4	3	3	2	1	1	1	1	1	2	1	4
29-Sep	1	1	1	2	3	3	2	4	4	5	5	4	5	5	5	3	3	2	1	1	1	1	UO	1	5
30-Sep	2	2	1	2	2	2	1	3	2	2	3	3	3	3	2	2	3	3	3	3	2	2	2	1	3
	3	4	4	3	3	3	3	4	5	5	5	5	5	5	5	6	6	5	5	4	4	4	3	4	
	Diurnal Maximum																								

C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - September 2025

Direction of Maximum Speed: 356 deg on Sep 3 17:00
Direction of Maximum Daily Speed Average: 331.5 deg on Sep 4

Direction of Minimum Speed: 89 deg on Sep 9 08:00
Direction of Minimum Daily Speed Average: 0.8 deg on Sep 13

Monthly Average Direction: 199.7 deg

Hours in Service:	720
Hours of Data:	712
Hours of Missing Data:	8
Percent Operational Time:	99.4

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	Average
1-Sep	283	274	230	271	303	297	162	190	147	22	6	10	24	10	12	5	9	356	357	350	320	311	317	287	351.8
2-Sep	281	273	287	296	293	277	253	277	151	128	128	140	145	155	146	158	157	147	134	146	151	147	164	163	161.8
3-Sep	165	157	162	150	167	171	172	170	175	171	178	181	171	274	355	1	356	351	347	342	335	324	331	323	315.9
4-Sep	305	318	321	319	309	314	317	313	335	350	344	343	339	341	358	4	357	6	18	331	291	249	258	255	331.5
5-Sep	216	248	223	206	191	221	208	183	172	154	136	138	137	140	140	138	138	127	120	131	170	UO	300	313	154.0
6-Sep	324	288	288	259	181	174	168	154	151	151	150	164	162	156	159	157	153	168	299	278	248	267	247	200	168.7
7-Sep	202	208	211	209	174	232	222	141	147	188	354	63	70	18	13	8	18	339	322	343	358	325	326	359	358.9
8-Sep	5	350	348	345	282	290	306	270	355	52	33	347	261	273	313	352	131	UO	UO	268	287	246	260	277	327.9
9-Sep	224	293	273	281	279	283	292	89	142	152	145	160	162	159	155	153	164	193	202	231	213	213	171	187	178.0
10-Sep	195	209	172	229	251	248	248	182	262	295	302	293	C	C	C	C	316	326	325	297	251	244	217	290	286.0
11-Sep	182	286	230	230	235	204	204	169	149	141	131	156	160	150	146	153	161	161	161	168	168	180	174	171	165.0
12-Sep	173	174	233	286	220	232	239	157	154	153	160	156	171	177	189	192	194	190	222	174	245	250	166	204	180.8
13-Sep	190	243	189	185	197	188	183	206	159	152	160	299	6	31	9	9	2	337	322	313	331	319	301	282	319.9
14-Sep	273	265	242	244	210	281	226	4	157	146	149	134	153	150	147	169	175	165	160	175	178	184	175	174	167.6
15-Sep	179	184	192	177	181	201	176	174	165	146	139	173	238	305	313	317	302	313	291	307	301	307	308	313	284.0
16-Sep	310	299	292	286	297	294	288	261	291	305	21	132	107	149	146	148	153	156	155	152	158	163	200	174	196.3
17-Sep	153	156	288	320	296	256	286	265	164	165	158	162	165	160	160	158	153	155	153	160	163	165	166	164	162.7
18-Sep	161	151	21	348	166	165	170	164	165	177	186	198	202	195	193	214	223	246	219	223	215	229	265	255	189.5
19-Sep	276	280	271	187	196	214	220	194	178	177	184	214	245	241	226	238	228	176	194	180	180	181	190	202	212.1
20-Sep	277	289	281	230	247	215	201	167	141	148	150	155	157	177	182	177	178	184	167	170	178	182	177	157	175.4
21-Sep	295	166	210	197	179	173	160	134	170	268	106	110	150	166	268	270	274	279	287	286	210	205	207	225	219.6
22-Sep	237	256	248	253	257	213	184	207	224	238	223	194	193	220	211	198	201	185	180	179	177	173	172	163	202.2
23-Sep	159	191	188	182	187	182	188	215	264	244	240	247	234	214	225	202	206	203	206	205	184	158	185	173	206.7
24-Sep	181	187	183	174	192	211	193	187	224	248	282	261	175	304	296	310	304	318	308	246	208	212	174	177	256.3
25-Sep	182	160	172	173	177	184	206	168	170	159	156	152	152	160	156	126	188	185	166	176	191	239	263	210	176.5
26-Sep	241	220	176	178	205	186	176	162	188	261	281	258	260	245	290	294	241	212	211	209	207	193	155	162	224.2
27-Sep	172	174	168	181	198	228	223	236	258	265	255	256	251	248	232	249	249	225	265	228	246	219	168	186	228.7
28-Sep	228	274	276	278	254	198	201	226	261	252	144	154	152	175	210	212	201	174	173	154	174	178	142	101	190.4
29-Sep	160	152	142	141	145	143	129	138	155	158	160	156	159	167	179	165	175	175	160	154	254	342	UO	346	157.5
30-Sep	312	259	294	351	340	272	353	297	354	8	4	8	8	32	31	17	21	9	1	2	4	6	1	334	1.5
	221.3	236.1	242.0	230.6	218.1	215.4	199.3	183.6	185.0	180.3	172.8	174.2	171.5	181.5	190.3	195.2	213.2	214.0	225.3	220.8	211.5	218.1	214.3	215.5	
	Diurnal Average																								

C - Calibration UO - Unstable Operation

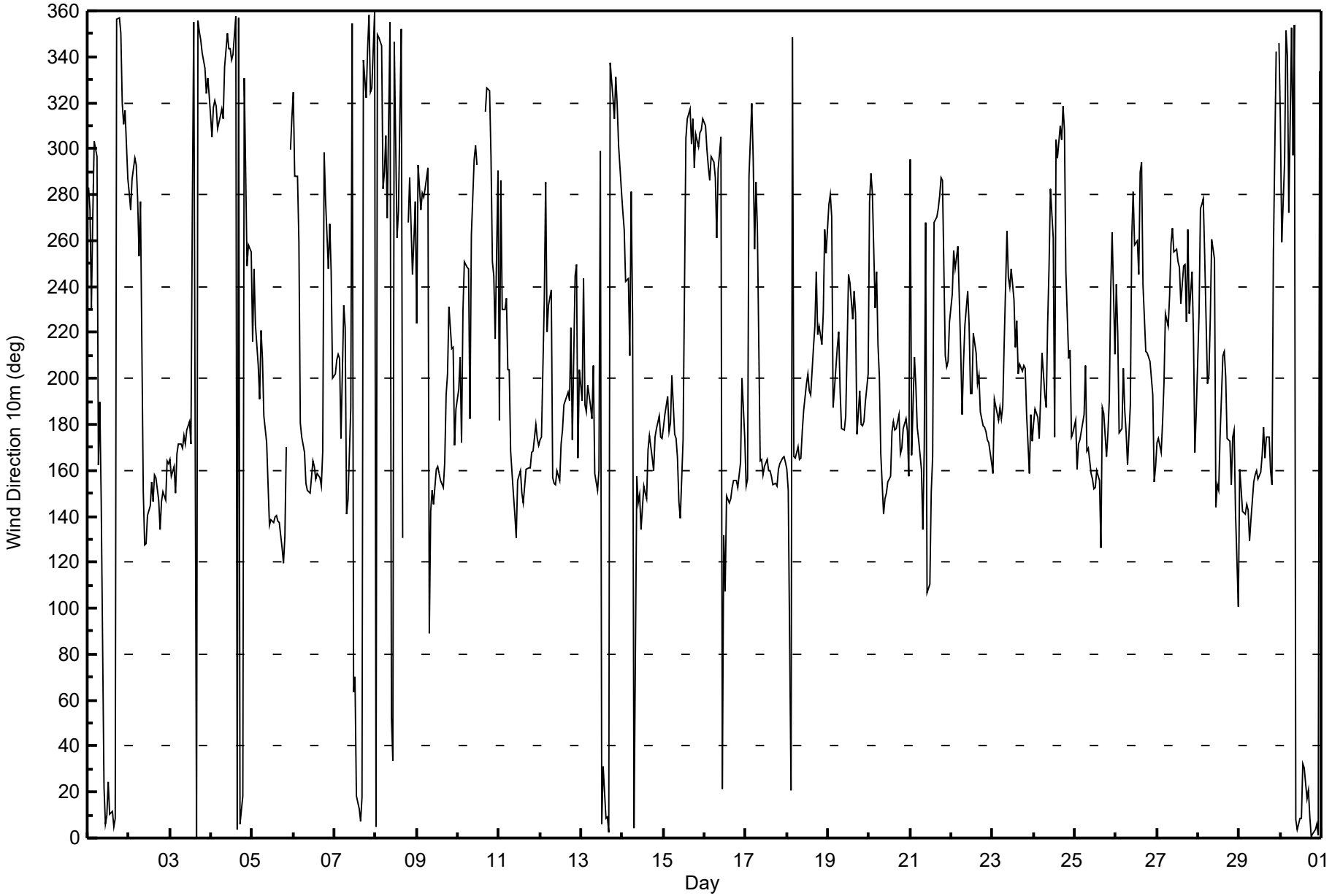
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 108 deg on Sep 16 12:00

Minimum Value: 7 deg on Sep 27 23:00

Percentiles: P_1 = 11 P_{10} = 14 Q_1 = 17 Median = 25 Q_3 = 45 P_{90} = 59 P_{99} = 87

Hours in Service:	720
Hours of Data:	712
Hours of Missing Data:	8
Hours of Calibration:	4
Percent Operational Time:	99.4

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-Sep	16	31	58	48	72	75	47	33	49	41	57	34	32	24	23	24	24	25	26	22	7	11	9	23	75
2-Sep	17	16	23	22	17	24	37	58	63	74	23	23	17	17	18	17	15	16	13	11	12	15	12	13	74
3-Sep	13	23	12	16	15	14	14	15	16	18	19	24	33	65	33	23	24	22	20	21	14	18	12	15	65
4-Sep	14	12	12	12	11	11	13	16	19	23	24	26	29	23	26	25	27	26	37	47	27	43	36	29	47
5-Sep	59	31	48	61	66	34	18	22	18	17	17	20	17	31	26	22	27	21	31	64	51	UO	13	22	66
6-Sep	24	23	24	42	21	15	21	13	18	16	21	22	17	15	16	15	14	50	12	29	47	38	69	40	69
7-Sep	25	67	30	24	50	72	62	83	42	77	49	50	46	34	25	22	22	25	48	30	21	8	19	21	83
8-Sep	20	19	17	13	27	14	15	49	26	40	63	86	74	87	89	74	55	UO	UO	12	13	13	45	76	89
9-Sep	75	56	35	22	11	15	38	70	23	21	32	20	17	16	15	15	15	20	21	47	43	51	24	52	75
10-Sep	27	50	42	48	40	32	73	67	67	68	38	56	C	C	C	C	17	12	12	68	55	58	68	22	73
11-Sep	55	34	12	19	50	16	52	17	20	16	25	23	19	16	16	18	15	12	14	8	11	12	13	11	55
12-Sep	15	13	40	28	56	29	69	20	13	18	14	14	25	22	26	30	28	19	59	35	38	53	27	53	69
13-Sep	55	53	38	38	60	47	24	63	57	18	45	54	105	35	25	20	16	17	14	21	46	44	37	32	105
14-Sep	32	18	40	23	44	59	31	64	93	15	15	28	16	15	17	18	17	14	13	18	19	19	29	16	93
15-Sep	18	25	19	19	14	21	14	15	68	21	27	70	82	33	18	20	22	16	27	15	21	14	15	14	82
16-Sep	13	19	18	22	16	35	68	93	31	31	70	108	72	23	19	16	12	12	10	14	11	20	14	21	108
17-Sep	13	29	24	15	27	35	45	53	27	17	17	17	16	16	14	15	15	14	13	12	13	13	12	13	53
18-Sep	13	16	67	28	81	23	13	14	16	21	25	35	41	33	31	41	45	43	17	17	19	42	47	49	81
19-Sep	50	31	66	27	14	16	16	33	21	24	38	58	52	55	48	49	44	32	21	54	12	11	11	63	66
20-Sep	31	27	20	40	34	27	27	20	15	20	19	19	17	23	22	21	18	19	12	11	13	13	13	16	40
21-Sep	74	39	50	28	21	27	25	18	60	85	51	46	42	66	61	52	47	33	27	26	25	26	29	40	85
22-Sep	59	55	47	57	65	60	29	47	47	45	40	35	28	40	42	30	27	18	15	16	16	14	13	12	65
23-Sep	25	19	20	17	23	17	18	47	52	53	48	52	49	42	46	32	31	27	27	28	23	11	15	16	53
24-Sep	24	16	18	15	67	48	63	16	44	59	48	59	36	50	34	25	22	13	15	46	63	34	36	57	67
25-Sep	27	14	58	15	17	17	17	28	18	20	18	17	21	39	25	33	92	17	13	16	27	47	45	29	92
26-Sep	47	53	33	29	13	22	16	25	46	50	45	55	52	56	42	36	40	33	18	19	22	16	18	15	56
27-Sep	15	42	15	20	23	44	42	50	52	44	51	52	53	55	44	56	48	36	42	32	55	51	7	12	56
28-Sep	55	43	48	43	63	49	55	92	71	70	39	14	14	28	47	41	23	22	32	52	21	13	17	18	92
29-Sep	15	12	17	16	15	14	16	16	18	16	15	15	15	17	19	18	17	17	31	39	69	32	UO	20	69
30-Sep	47	80	16	54	81	40	45	51	86	32	23	23	24	27	24	22	21	23	26	26	28	23	28	12	86
	75	80	67	61	81	75	73	93	93	85	70	108	105	87	89	74	92	50	59	68	69	58	69	76	
	Diurnal Maximum																								

C - Calibration UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS02
MILDRED LAKE
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
SEPTEMBER 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	682	38	38	100	52.7	0	6.4	0
H2S (ppb) Average	684	35	36	99.86	6.7	0	1.5	0
THC (ppm) Average	652	32	68	95	5	-	2.6	-
NMHC(ppm) Average	652	32	68	95	1.34	-	0.34	-
CH4(ppm) Average	652	32	68	95	4.2	-	2.4	-
Temperature (C) Average	720	0	0	100	29.4	-	20.7	-
Relative Humidity (%) Average	720	0	0	100	99.4	-	83.2	-
Wind Speed 10 m (km/h) Average	720	0	0	100	23	-	14	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	682	1.44	3.9	-	0	0	0.1	0.3	0.7	3.4	52.7
H2S (ppb) Average	684	0.51	0.8	-	0	0.1	0.1	0.3	0.5	1.2	6.7
THC (ppm) Average	652	2.23	0.4	-	1.9	2	2	2.1	2.3	2.7	5
NMHC(ppm) Average	652	0.093	0.185	-	0	0	0	0	0.1	0.3	1.34
CH4(ppm) Average	652	2.14	0.2	-	1.9	2	2	2.1	2.2	2.4	4.2
Temperature 2 m (C) Average	720	15.14	5	-	2.6	9.4	11.7	14.6	18.2	22	29.4
Relative Humidity (%) Average	720	62.99	19.4	-	24.5	36.1	47.3	62.1	78.4	90.3	99.4
Wind Speed 10 m (km/h) Average	720	8.6	4	-	0	3	5	8	12	14	23
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S	08 Sep 2025 13:00	08 Sep 2025 13:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	01 Sep 2025 02:00	01 Sep 2025 11:00	10	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	04 Sep 2025 05:00	04 Sep 2025 06:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	08 Sep 2025 04:00	08 Sep 2025 05:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	08 Sep 2025 07:00	08 Sep 2025 08:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	08 Sep 2025 10:00	08 Sep 2025 17:00	8	Maintenance - analyzer recalibrated
THC/NMHC/CH4	23 Sep 2025 21:00	23 Sep 2025 22:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	24 Sep 2025 00:00	24 Sep 2025 00:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	24 Sep 2025 04:00	24 Sep 2025 04:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	24 Sep 2025 07:00	24 Sep 2025 08:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	24 Sep 2025 10:00	24 Sep 2025 15:00	6	Maintenance - analyzer recalibrated

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.7 ppb on Sep 21 14:00 Maximum Daily Average: 6.4 ppb on Sep 27

Minimum Value: 0.0 ppb on Sep 1 19:00 Minimum Daily Average: 0.1 ppb on Sep 4
Maximum Diurnal Average: 4.2 ppb at hour 14 Minimum Diurnal Average: 0.4 ppb at hour 22
Monthly Average: 1.44 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 3.4 P_{99} = 18.8

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.4	8.0	1.8	0.5	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.6	8.0
2-Sep	0.2	Z	0.1	0.1	0.1	0.2	0.1	0.0	0.4	2.1	1.3	0.7	0.2	0.4	0.2	0.2	0.2	0.1	0.0	0.1	0.3	0.1	0.1	0.3	0.3	2.1
3-Sep	0.4	0.4	Z	0.1	0.3	0.2	0.3	0.2	0.3	0.3	0.1	0.1	0.1	8.1	0.7	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.5	8.1
4-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.4
5-Sep	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.6	4.1	4.1	1.7	2.6	4.1	3.4	0.9	0.3	0.0	1.4	0.3	0.0	0.0	1.1	4.1
6-Sep	0.2	0.3	0.1	0.1	0.1	Z	0.1	0.0	0.4	1.5	0.8	1.5	0.5	0.3	0.4	0.5	0.6	0.6	0.3	0.1	0.1	0.0	0.0	0.0	0.4	1.5
7-Sep	Z	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	1.3	1.5	1.0	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.0	0.2	0.1	0.1	0.3	1.5
8-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	C	C	C	C	C	C	C	C	19.8	4.8	1.9	0.7	0.3	0.2	0.5	--	19.8
9-Sep	0.4	0.1	Z	0.2	0.0	0.0	0.0	0.1	1.1	0.7	0.4	0.5	0.7	0.4	0.7	0.8	0.4	0.4	0.4	0.3	1.0	0.3	0.3	0.3	0.4	1.1
10-Sep	0.2	0.2	0.2	Z	0.2	0.3	0.5	0.3	0.4	0.6	0.5	0.3	0.6	0.3	17.2	31.4	5.9	0.3	0.2	0.4	0.2	0.2	0.2	0.3	2.6	31.4
11-Sep	0.3	0.4	0.3	0.3	Z	0.4	0.4	0.2	0.2	0.5	0.6	1.3	0.8	0.4	0.4	0.7	0.5	0.6	0.5	0.4	0.4	0.3	0.4	0.3	0.5	1.3
12-Sep	0.2	0.4	0.4	0.5	0.4	Z	0.7	0.7	0.6	0.7	0.7	0.6	0.5	0.4	0.5	0.8	0.7	0.5	0.3	0.6	0.4	0.2	0.1	0.2	0.5	0.8
13-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.5	0.5	0.6	0.7	2.5	1.5	1.9	2.0	2.0	1.6	0.9	0.6	0.5	0.7	2.5
14-Sep	0.3	Z	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.5	0.9	4.6	2.6	0.4	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.5	4.6
15-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.2	3.6	20.8	1.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	20.8
16-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.2	5.8	11.6	7.5	4.7	6.0	3.2	1.0	0.8	0.9	0.6	0.5	0.3	1.9	11.6
17-Sep	0.3	0.4	0.3	0.1	Z	0.1	0.1	0.2	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.6
18-Sep	0.5	0.5	0.5	0.5	0.5	Z	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.6	1.3	0.3	1.3
19-Sep	Z	9.6	5.3	0.6	0.3	0.2	0.3	0.5	0.4	0.4	0.4	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.9	9.6
20-Sep	0.3	Z	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.8	0.6	0.6	0.3	0.7	0.9	0.6	0.5	0.6	0.5	0.5	0.6	0.7	0.7	0.5	0.9
21-Sep	0.6	0.5	Z	0.3	0.1	0.0	0.1	0.2	1.1	3.3	0.7	0.4	16.4	52.7	0.8	3.7	0.7	0.0	0.0	0.0	0.0	0.0	0.4	0.0	3.6	52.7
22-Sep	1.6	5.2	2.4	Z	2.5	2.9	0.4	0.3	0.7	11.5	0.7	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	1.3	11.5
23-Sep	0.3	0.2	0.3	0.3	Z	0.2	0.3	0.4	0.5	18.9	10.0	1.0	0.3	0.3	0.4	0.2	0.1	0.3	0.3	0.4	0.4	0.3	0.9	0.3	1.6	18.9
24-Sep	0.2	0.3	0.3	0.3	0.3	Z	0.2	0.2	0.3	8.8	12.2	1.2	7.8	2.9	3.7	0.3	0.2	0.0	0.0	0.4	0.4	0.3	0.2	0.3	1.8	12.2
25-Sep	Z	0.4	0.4	0.8	1.0	0.9	0.9	0.9	0.9	1.1	1.1	1.3	1.1	0.8	0.8	1.0	0.7	0.5	0.5	0.5	0.3	0.6	2.1	0.7	0.8	2.1
26-Sep	0.2	Z	0.1	0.0	0.0	0.3	0.0	0.4	1.3	7.7	4.1	18.1	0.7	2.6	17.1	23.9	10.7	0.6	0.3	0.2	0.2	0.1	0.2	0.1	3.9	23.9
27-Sep	0.0	0.1	Z	0.1	0.0	0.0	0.3	6.2	18.7	15.5	15.2	19.4	18.8	9.8	9.7	16.6	6.6	5.1	0.8	1.2	1.3	1.2	0.2	0.2	6.4	19.4
28-Sep	1.5	11.2	11.1	Z	1.4	3.7	7.9	14.8	7.0	1.8	8.2	12.0	11.1	0.3	0.2	0.2	0.2	0.7	1.1	1.2	0.4	0.4	3.4	5.1	4.6	14.8
29-Sep	0.6	1.9	7.4	4.2	1.4	Z	2.7	12.8	12.3	0.6	0.3	0.2	0.2	0.4	0.4	0.3	0.4	0.3	0.5	3.4	5.6	2.5	2.6	5.0	2.9	12.8
30-Sep	4.0	2.8	6.4	1.7	1.0	0.9	1.0	0.9	Z	1.1	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.0	1.0	6.4
	0.5	1.4	1.4	0.4	0.4	0.4	0.6	1.4	1.7	2.8	2.2	2.6	2.9	4.2	2.4	3.3	1.4	1.3	0.5	0.5	0.6	0.4	0.5	0.6	Diurnal Average	
	4.0	11.2	11.1	4.2	2.5	3.7	7.9	14.8	18.7	18.9	15.2	19.4	18.8	52.7	17.2	31.4	10.7	19.8	4.8	3.4	5.6	2.5	3.4	5.1	Diurnal Maximum	

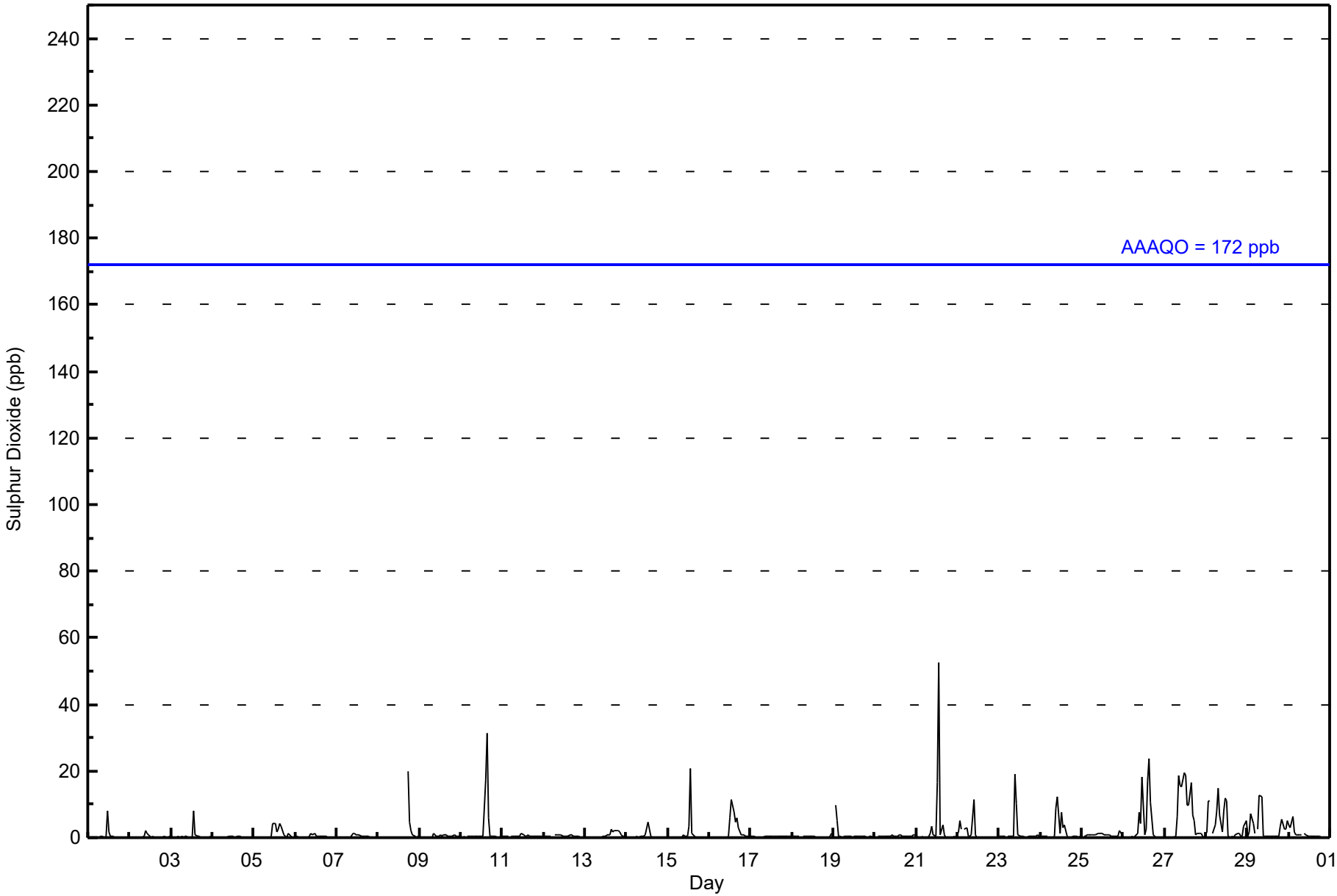
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - September 2025



Sulphur Dioxide (SO_2) - ppb
Mildred Lake - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	655	96.04	96.04
11 - 20	23	3.37	99.41
21 - 60	4	0.59	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: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	56	19	4	2	12	19	90	115	102	53	68	19	17	21	32	26	655
11 - 20	1	0	0	0	0	0	2	1	1	1	3	8	6	0	0	0	23
21 - 60	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	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	57	19	4	2	12	19	92	116	103	54	71	29	24	22	32	26	682

Total Number of Valid Hours: 682

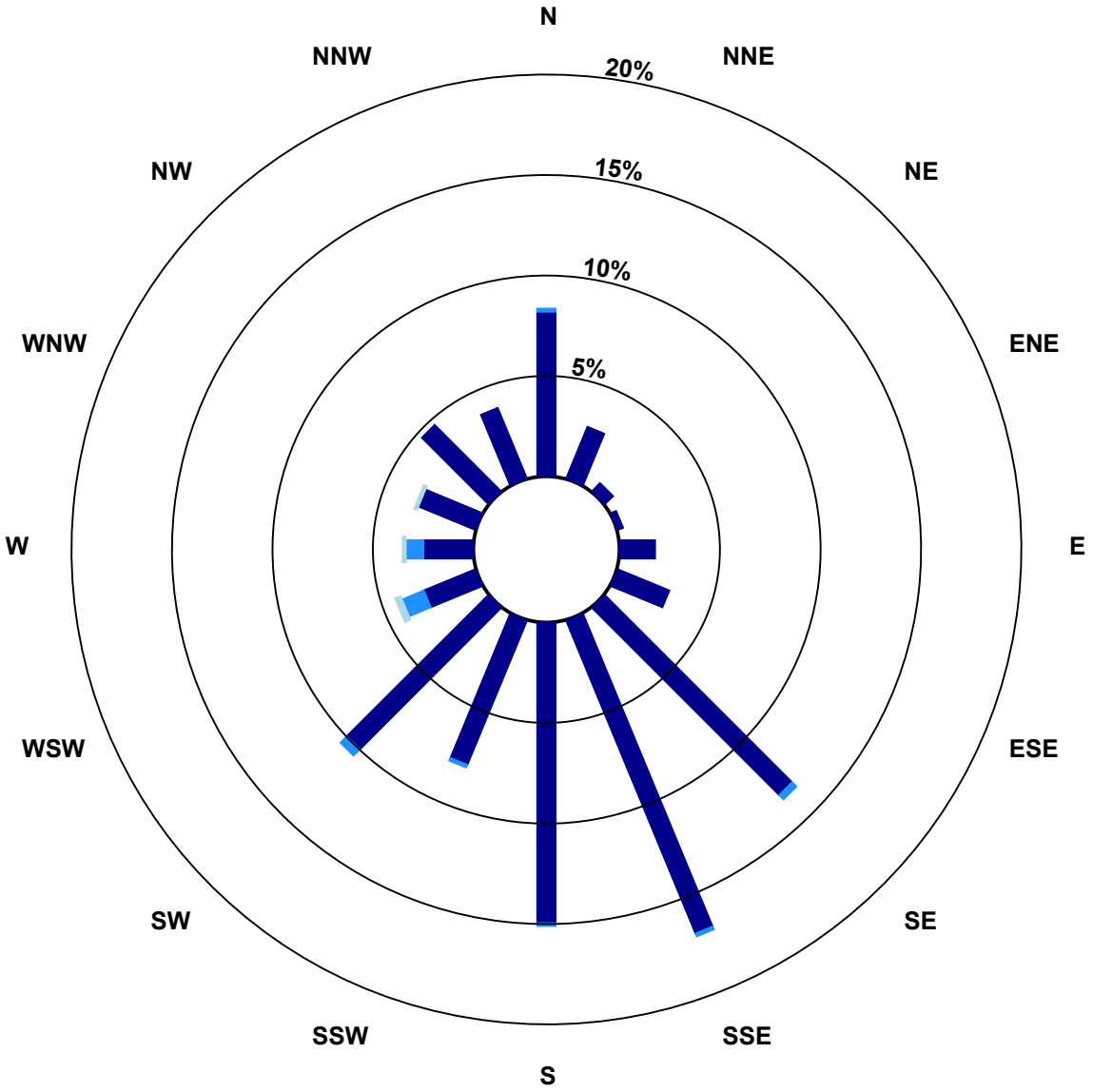
Total Number of Hours: 720

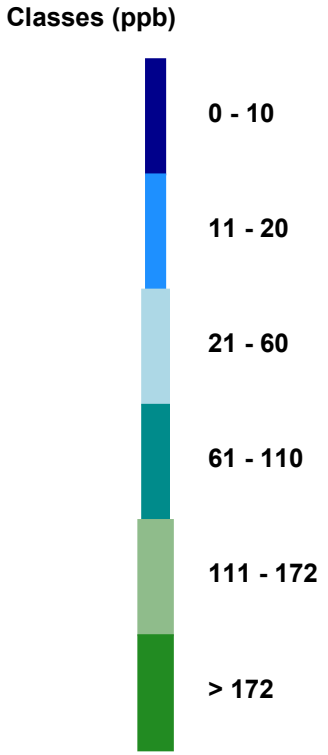
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Mildred Lake





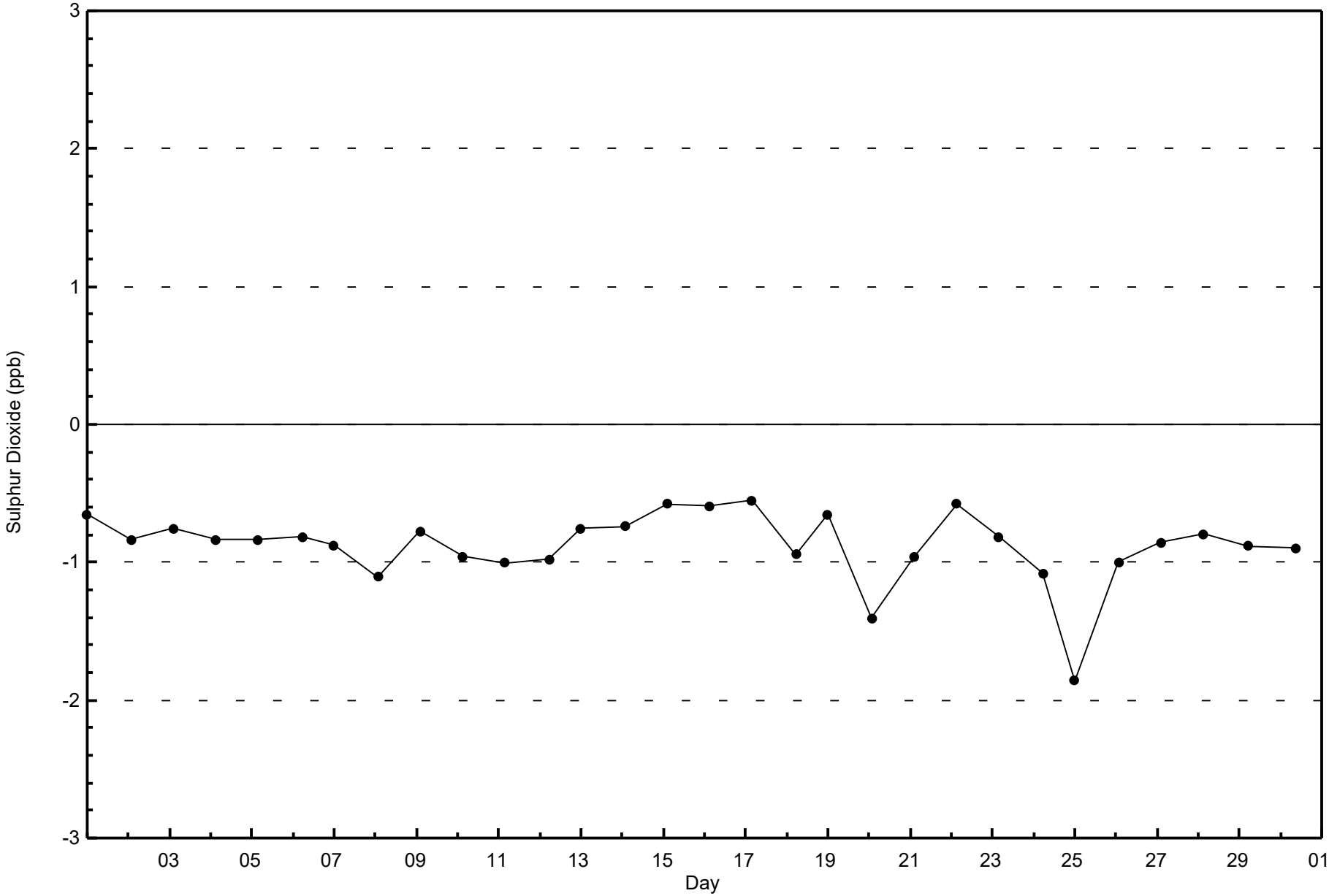
Total Number of Valid Hours: 682

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - September 2025

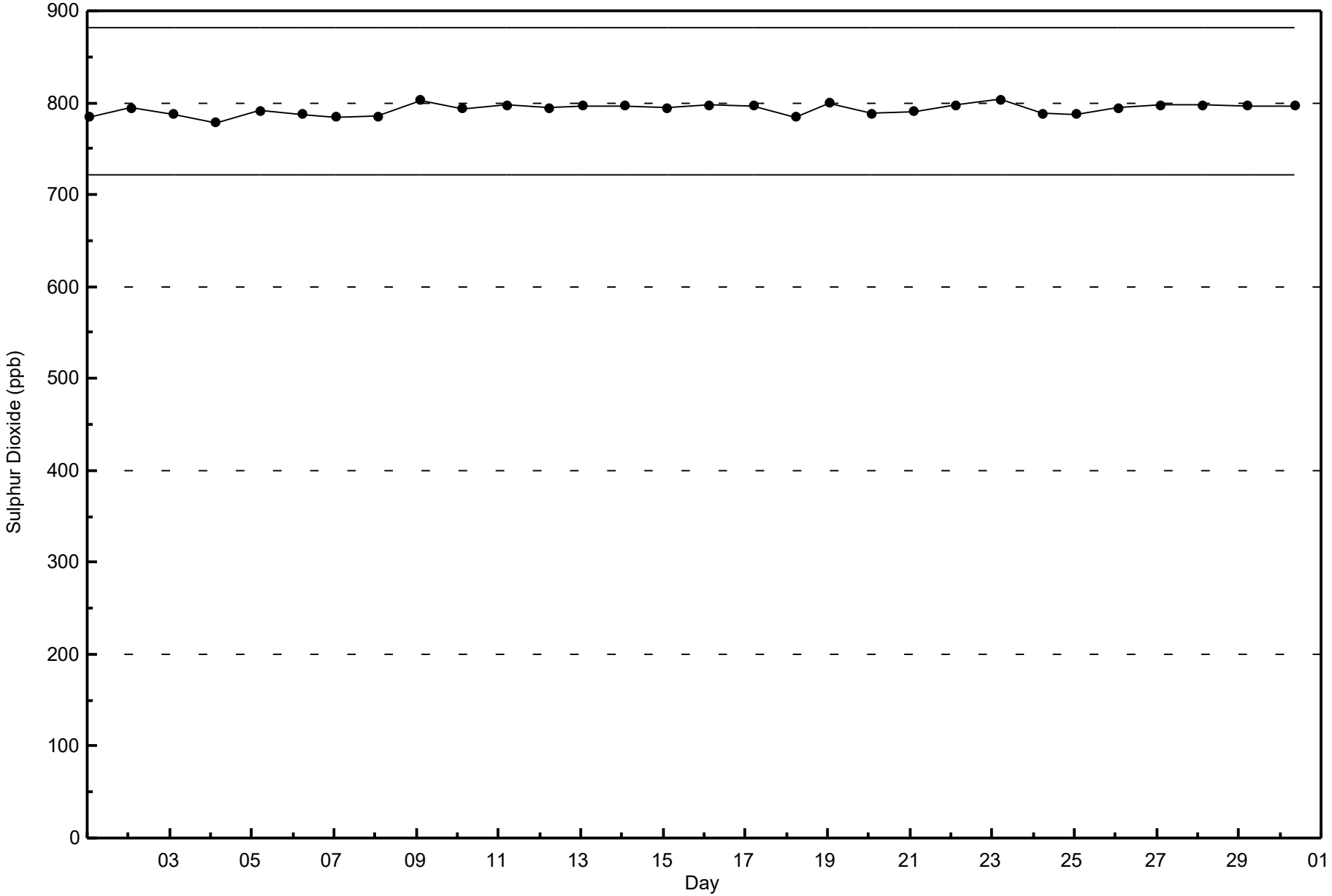


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.7 ppb on Sep 30 00:00 Maximum Daily Average: 1.5 ppb on Sep 29

Minimum Value: 0.0 ppb on Sep 10 18:00 Minimum Daily Average: 0.1 ppb on Sep 23
Maximum Diurnal Average: 0.8 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 15
Monthly Average: 0.51 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.5 P_{90} = 1.2 P_{99} = 4.0

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	Z	0.4	0.7	0.9	0.7	0.8	3.8	0.7	0.3	0.4	1.2	1.1	0.4	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.6	3.8
2-Sep	0.2	0.2	Z	0.3	0.3	0.4	0.5	0.8	1.0	1.9	2.2	1.8	0.4	0.2	0.1	0.1	0.1	0.1	0.1	1.9	2.1	0.2	0.2	0.3	0.7	2.2
3-Sep	0.3	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.5	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.6	0.4	0.3	0.6
4-Sep	0.3	0.2	0.2	0.2	Z	0.2	0.5	0.8	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	0.8
5-Sep	0.3	0.5	0.8	0.5	0.7	Z	1.1	0.6	0.5	0.3	0.4	0.8	0.6	0.3	0.4	0.6	0.6	0.2	0.1	0.1	1.9	0.5	0.2	0.1	0.5	1.9
6-Sep	Z	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.8	0.7	0.4	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.3	0.7	0.7	0.5	0.3	0.5	0.3	0.8
7-Sep	0.5	Z	0.3	0.3	0.2	0.2	0.2	0.4	0.2	0.3	0.7	0.7	0.8	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8
8-Sep	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	M	1.2	1.0	1.0	0.7	0.5	0.4	0.6	0.5	0.3	0.2	0.6	0.4	1.2
9-Sep	1.6	1.0	0.3	Z	0.1	0.2	0.3	0.4	0.7	0.6	0.5	0.8	0.5	0.4	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.6
10-Sep	0.1	0.1	0.2	0.4	Z	1.2	5.1	3.9	2.9	2.3	0.7	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.4	1.0	0.9	5.1
11-Sep	1.2	1.5	1.7	2.5	2.8	Z	1.4	1.1	0.9	1.2	0.7	1.2	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.2	0.3	0.8	2.8
12-Sep	Z	0.7	0.9	0.9	0.9	1.0	1.0	0.8	0.4	0.6	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.4	0.3	0.4	1.0
13-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.2	0.6	1.7	1.4	1.3	1.1	0.9	1.3	2.3	0.6	2.3
14-Sep	1.9	1.5	Z	0.6	0.4	0.4	0.4	0.5	0.9	0.7	0.6	0.7	2.9	1.9	0.4	1.7	0.7	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.8	2.9
15-Sep	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.1	1.9	1.4	0.5	1.1	0.6	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	1.9
16-Sep	0.3	0.4	0.6	1.0	Z	0.2	0.9	2.8	3.9	2.8	0.3	0.3	0.5	0.2	0.1	0.2	1.3	1.9	2.3	2.2	1.5	0.6	0.5	0.7	1.1	3.9
17-Sep	0.4	0.4	0.4	0.4	0.7	Z	0.6	0.6	0.7	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7
18-Sep	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.4
19-Sep	0.7	Z	0.9	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.9
20-Sep	0.1	0.3	Z	0.2	0.5	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.3	0.5	0.2	0.5
21-Sep	0.5	0.4	0.3	Z	0.2	0.2	0.3	0.2	0.7	1.0	0.6	0.3	0.3	0.3	0.1	0.2	0.5	1.4	2.7	4.4	3.8	0.8	0.5	0.3	0.9	4.4
22-Sep	0.3	0.8	0.5	0.3	Z	0.5	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.8
23-Sep	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.2	0.3	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	0.1	0.1	0.3
24-Sep	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.8	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.5	0.6	0.4	0.2	0.3	0.8
25-Sep	0.2	Z	0.3	0.4	0.3	0.4	0.4	0.3	0.3	C	C	C	C	C	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.5	0.4	0.3	0.5
26-Sep	0.2	0.2	Z	0.2	0.3	0.4	0.4	0.4	0.4	0.6	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.6
27-Sep	0.1	0.1	0.1	Z	0.0	0.1	0.1	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.2	0.5
28-Sep	0.3	0.7	0.8	0.9	Z	0.5	0.7	1.5	1.4	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.3	1.2	1.1	1.2	4.9	2.5	0.9	4.9
29-Sep	0.2	1.1	5.8	1.2	0.3	1.3	Z	1.0	1.5	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	1.6	3.1	3.8	6.1	6.7	1.5	6.7
30-Sep	6.4	2.8	2.1	Z	1.2	1.3	1.4	1.2	1.7	1.9	1.1	0.6	0.5	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.3	1.0	6.4
	0.7	0.6	0.7	0.5	0.5	0.4	0.6	0.8	0.7	0.7	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.6	0.6	0.4	0.6	0.6	Diurnal Average	
	6.4	2.8	5.8	2.5	2.8	1.3	5.1	3.9	3.9	2.8	2.2	1.8	2.9	1.9	1.0	1.7	1.3	1.9	2.7	4.4	3.8	3.8	6.1	6.7	Diurnal Maximum	

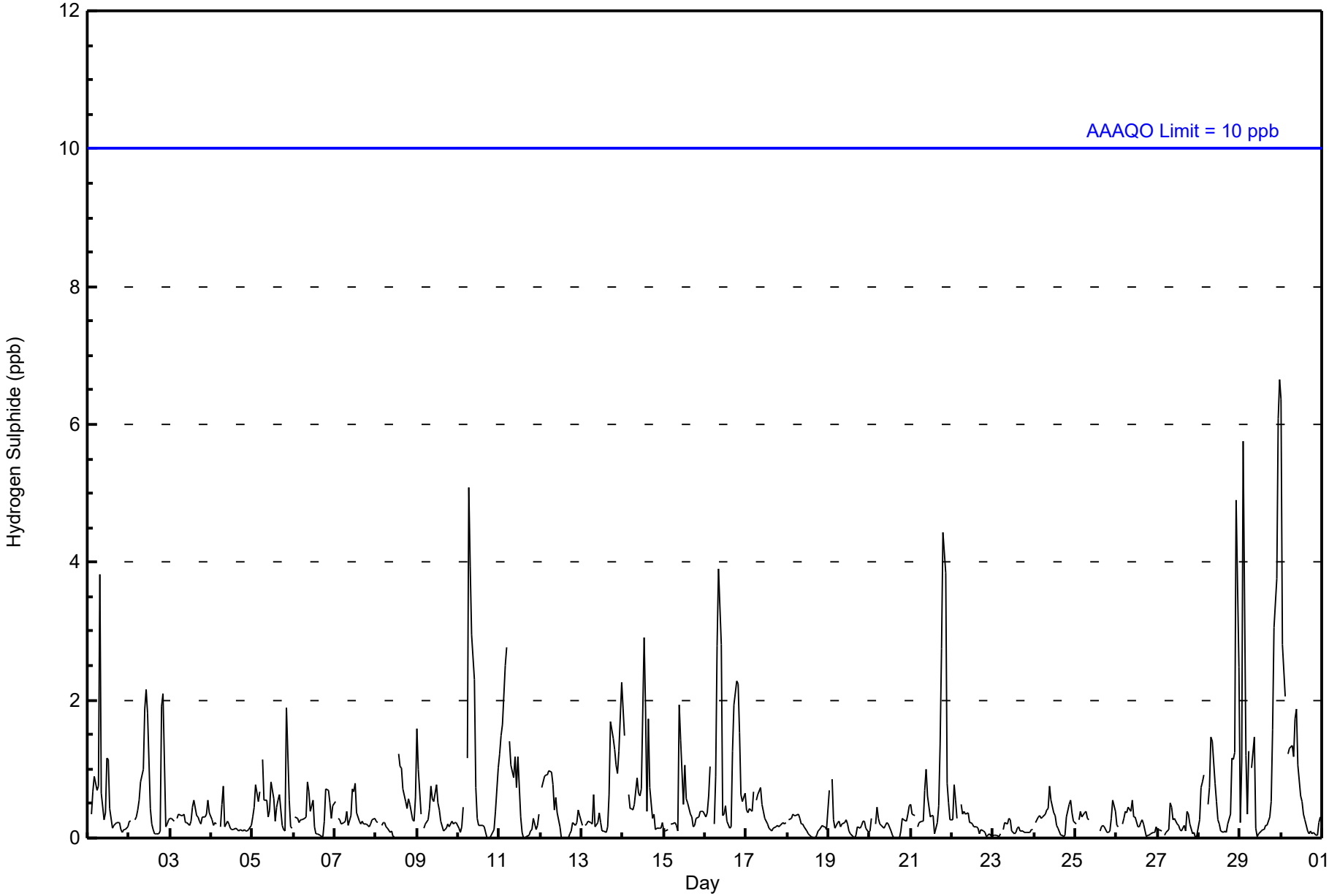
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - September 2025



Hydrogen Sulphide (H_2S) - ppb
Mildred Lake - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	663	96.93	96.93
3 - 4	15	2.19	99.12
5 - 7	6	0.88	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	60	19	3	1	12	10	87	112	101	58	74	28	24	18	30	26	663
3 - 4	0	0	0	0	0	3	3	1	0	0	0	0	2	5	1	0	15
5 - 7	0	0	0	0	0	4	1	0	0	0	0	0	0	1	0	0	6
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	60	19	3	1	12	17	91	113	101	58	74	28	26	24	31	26	684

Total Number of Valid Hours: 684

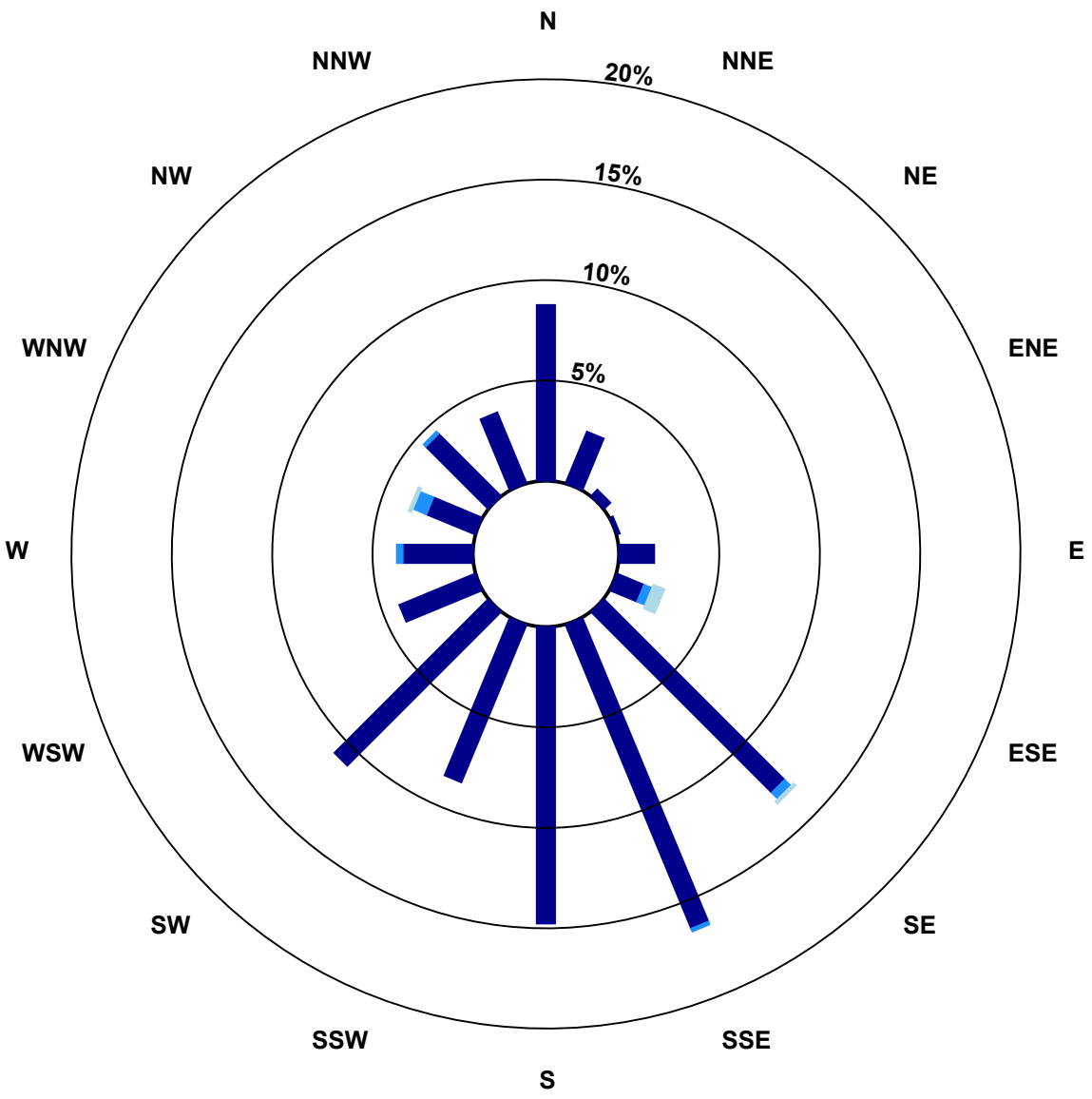
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

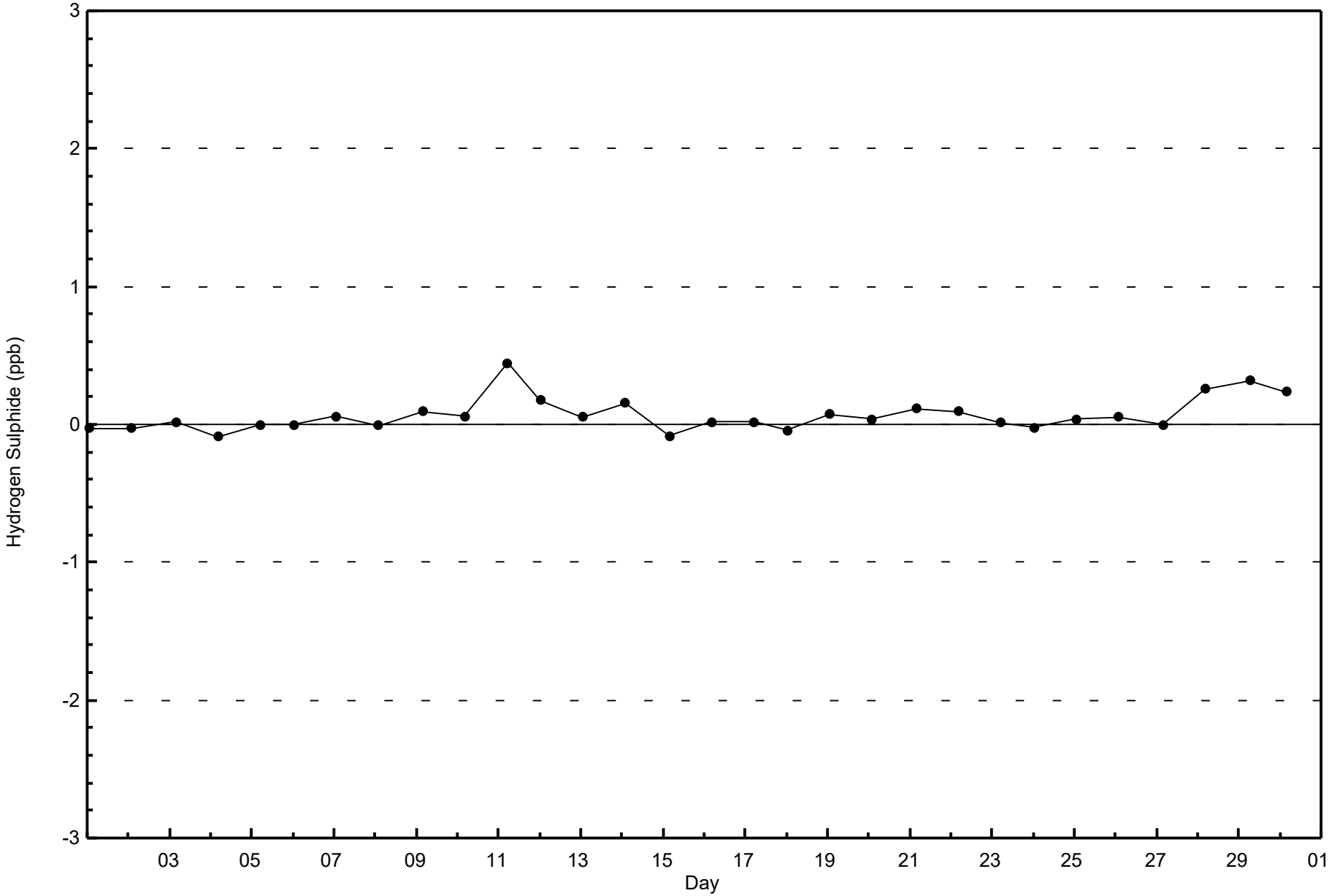
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - September 2025

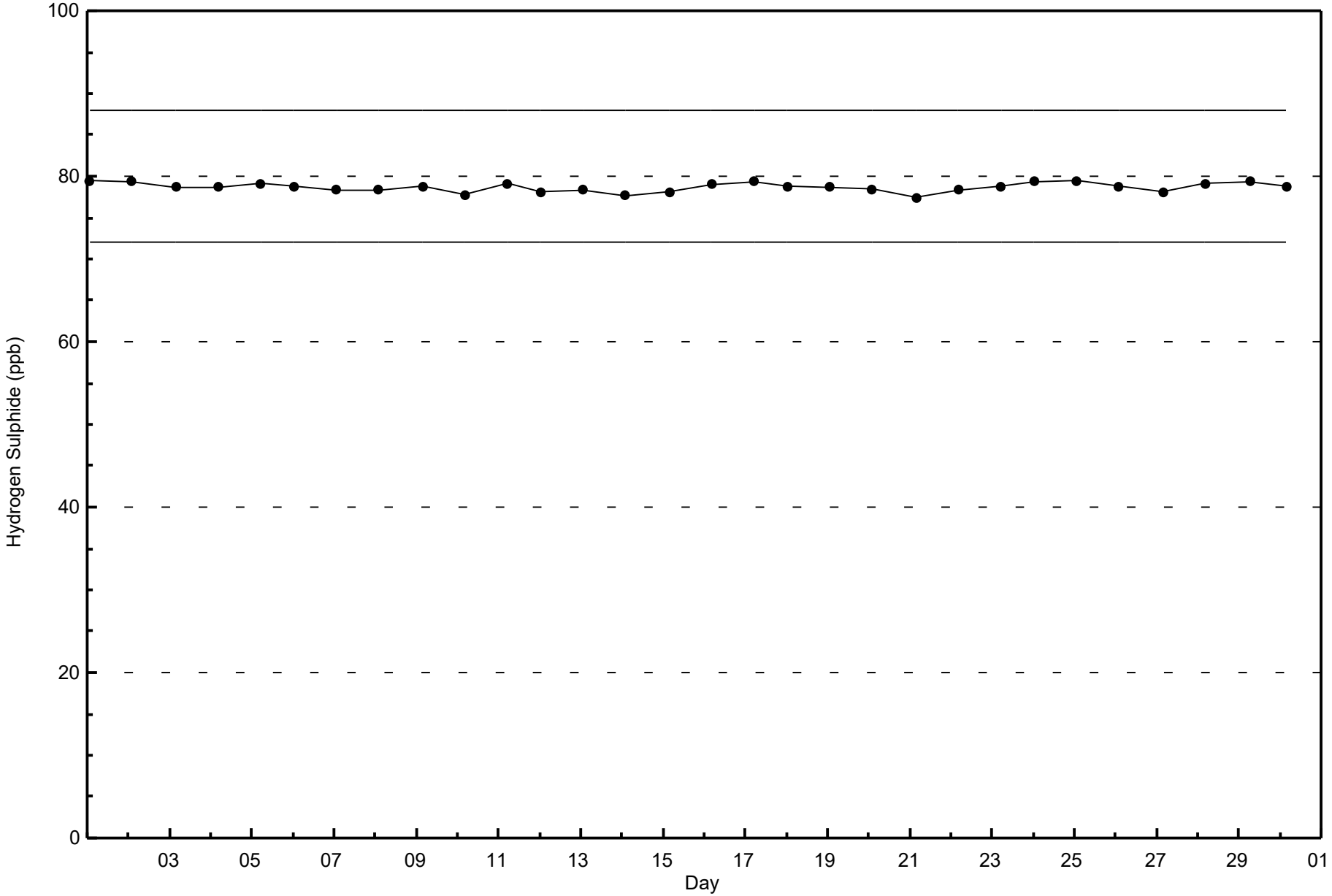


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - September 2025

Maximum Value: 5.0 ppm on Sep 30 07:00

Maximum Daily Average: 2.6 ppm on Sep 30

Minimum Value: 1.9 ppm on Sep 23 12:00

Minimum Daily Average: 2.0 ppm on Sep 23

Maximum Diurnal Average: 2.4 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.23 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.7 P_{99} = 3.9

Hours in Service:	720
Hours of Data:	652
Hours of Missing Data:	68
Hours of Calibration:	32
Percent Operational Time:	95.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	--	2.2
2-Sep	2.2	Z	2.3	2.8	2.3	2.2	2.2	2.5	2.6	2.7	2.7	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.2	2.2	2.3	2.8
3-Sep	2.2	2.1	Z	2.3	2.3	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.6	2.4	2.2	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.2	2.6
4-Sep	2.0	2.0	2.0	Z	UO	UO	2.7	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	2.7
5-Sep	2.0	2.2	2.3	2.3	Z	2.2	2.4	2.3	2.5	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.0	2.1	2.1	2.5
6-Sep	2.1	2.4	2.0	2.1	2.0	Z	2.1	2.1	2.4	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.3	2.5	2.2	2.5
7-Sep	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.4	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.2	2.5
8-Sep	2.2	Z	2.1	UO	UO	2.1	UO	UO	2.0	M	M	M	M	M	M	M	M	2.4	2.4	2.5	2.4	2.3	2.3	2.4	--	2.5
9-Sep	2.8	2.6	Z	2.2	2.1	2.1	2.1	2.5	2.5	2.4	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.2	2.8
10-Sep	2.1	2.0	2.1	Z	2.5	2.8	3.4	3.3	3.1	3.2	2.6	2.4	2.2	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.2	2.6	2.4	3.4
11-Sep	3.0	3.2	3.6	4.2	Z	3.1	2.7	2.4	2.4	2.4	2.3	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.0	2.1	2.3	2.5	4.2
12-Sep	2.7	2.7	2.7	2.6	2.7	Z	2.4	2.5	2.3	2.4	2.3	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.0	2.2	2.7
13-Sep	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.2	2.0	2.1	2.4	2.2	2.0	2.0	2.0	2.0	2.5	3.6	3.6	3.4	3.2	3.1	3.4	4.0	2.5	4.0
14-Sep	3.9	Z	3.2	2.9	2.5	2.5	2.4	2.4	3.0	2.6	2.5	2.3	2.6	2.4	2.1	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.4	3.9
15-Sep	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.7	2.7	2.4	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.4	2.2	2.7	2.7	2.5	2.2	2.7
16-Sep	2.0	2.1	2.3	Z	2.6	2.0	3.0	2.9	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.4	2.5	2.5	2.1	2.2	2.4	2.3	3.0
17-Sep	2.1	2.1	2.3	2.0	Z	2.4	2.2	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	2.0	2.0	2.0	2.0	2.1	2.4
18-Sep	2.0	2.0	2.0	2.0	2.1	Z	2.3	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.3
19-Sep	Z	2.3	3.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.1	3.1
20-Sep	2.0	Z	2.5	2.1	2.6	2.0	2.1	2.0	2.1	2.1	2.3	2.1	2.0	1.9	1.9	2.0	1.9	2.0	2.4	3.2	2.6	2.5	2.9	3.4	2.3	3.4
21-Sep	3.2	2.7	Z	2.2	2.2	2.2	2.3	2.2	3.1	3.0	2.5	2.3	2.3	2.3	2.1	2.0	2.0	2.1	2.1	2.3	2.7	2.0	2.1	2.0	2.4	3.2
22-Sep	2.1	2.9	2.4	Z	2.4	2.3	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	1.9	2.1	2.9
23-Sep	2.0	2.0	2.0	2.0	Z	2.0	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	UO	UO	2.0	UO	2.0	2.0
24-Sep	2.0	2.0	2.2	UO	2.0	Z	UO	UO	2.1	M	M	M	M	M	M	2.0	2.1	2.0	2.0	2.6	2.7	2.6	2.4	2.1	--	2.7
25-Sep	Z	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.1	2.3
26-Sep	2.0	Z	2.0	2.1	2.1	2.2	2.1	2.3	2.2	2.4	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.4
27-Sep	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.6	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4	2.4	2.1	2.1	2.0	2.0	2.2	2.6
28-Sep	2.3	3.3	3.2	Z	2.7	2.8	2.9	3.8	4.2	2.8	2.6	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.4	2.2	2.4	2.1	2.5	4.2
29-Sep	2.1	2.1	2.3	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	2.0	2.4	3.2	2.6	2.4	2.5	2.7	2.7	2.2	3.2
30-Sep	2.6	2.5	2.3	2.3	2.9	4.8	5.0	3.9	Z	4.3	3.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.6	5.0
	2.3	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.3	Diurnal Average	
	3.9	3.3	3.6	4.2	2.9	4.8	5.0	3.9	4.2	4.3	3.0	2.5	2.6	2.4	2.6	2.4	2.5	3.6	3.6	3.4	3.2	3.1	3.4	4.0	Diurnal Maximum	

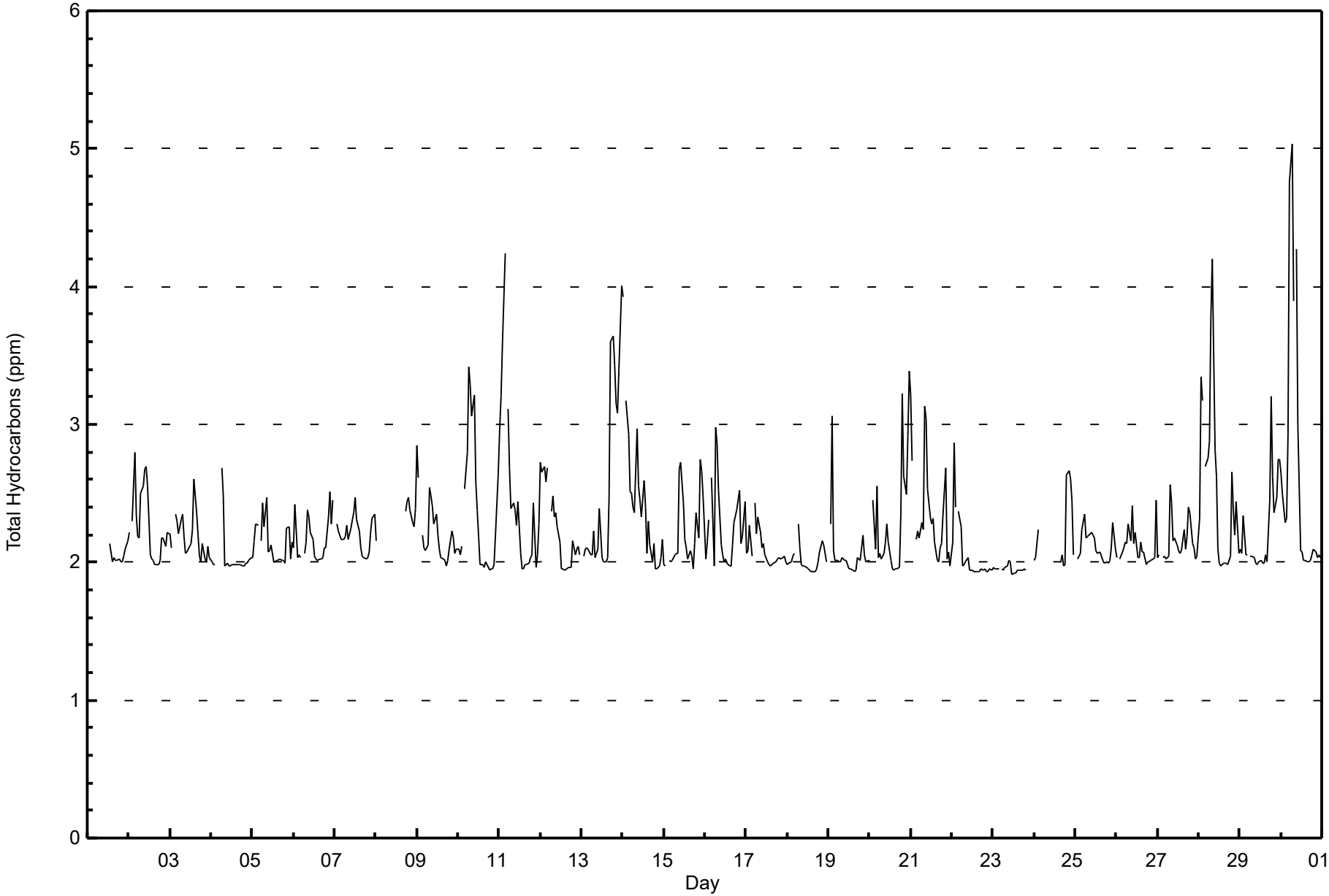
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	272	41.72	41.72
2.1 - 3.0	349	53.53	95.25
3.1 - 10.0	31	4.75	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 652

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mildred Lake - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	22	9	1	1	4	1	36	34	62	30	33	5	6	3	11	14	272
2.1 - 3.0	24	5	2	0	8	15	52	77	38	19	32	20	17	13	17	10	349
3.1 - 10.0	6	1	1	0	0	1	3	4	0	3	4	2	0	3	2	1	31
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	15	4	1	12	17	91	115	100	52	69	27	23	19	30	25	652

Total Number of Valid Hours: 652

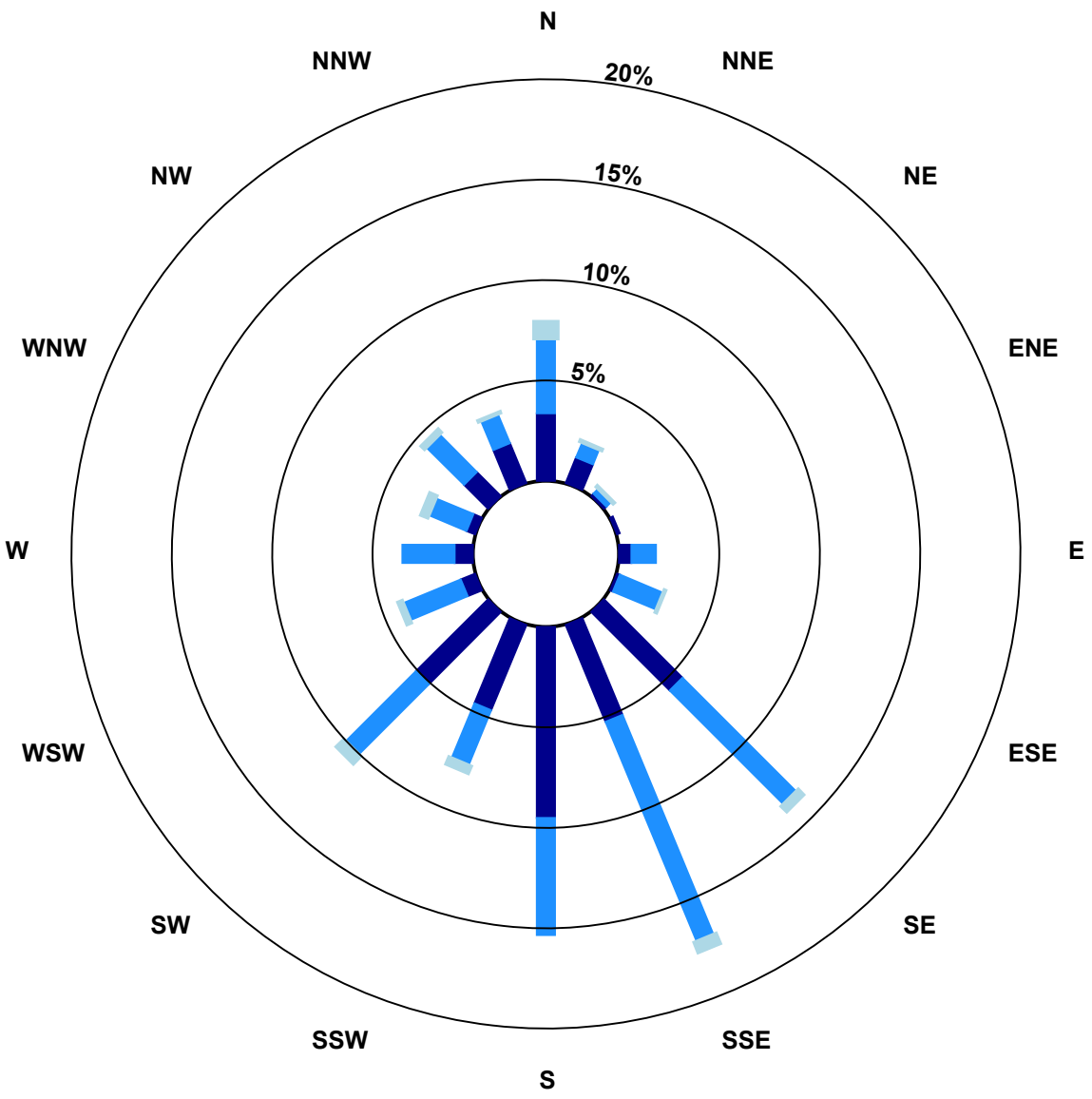
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

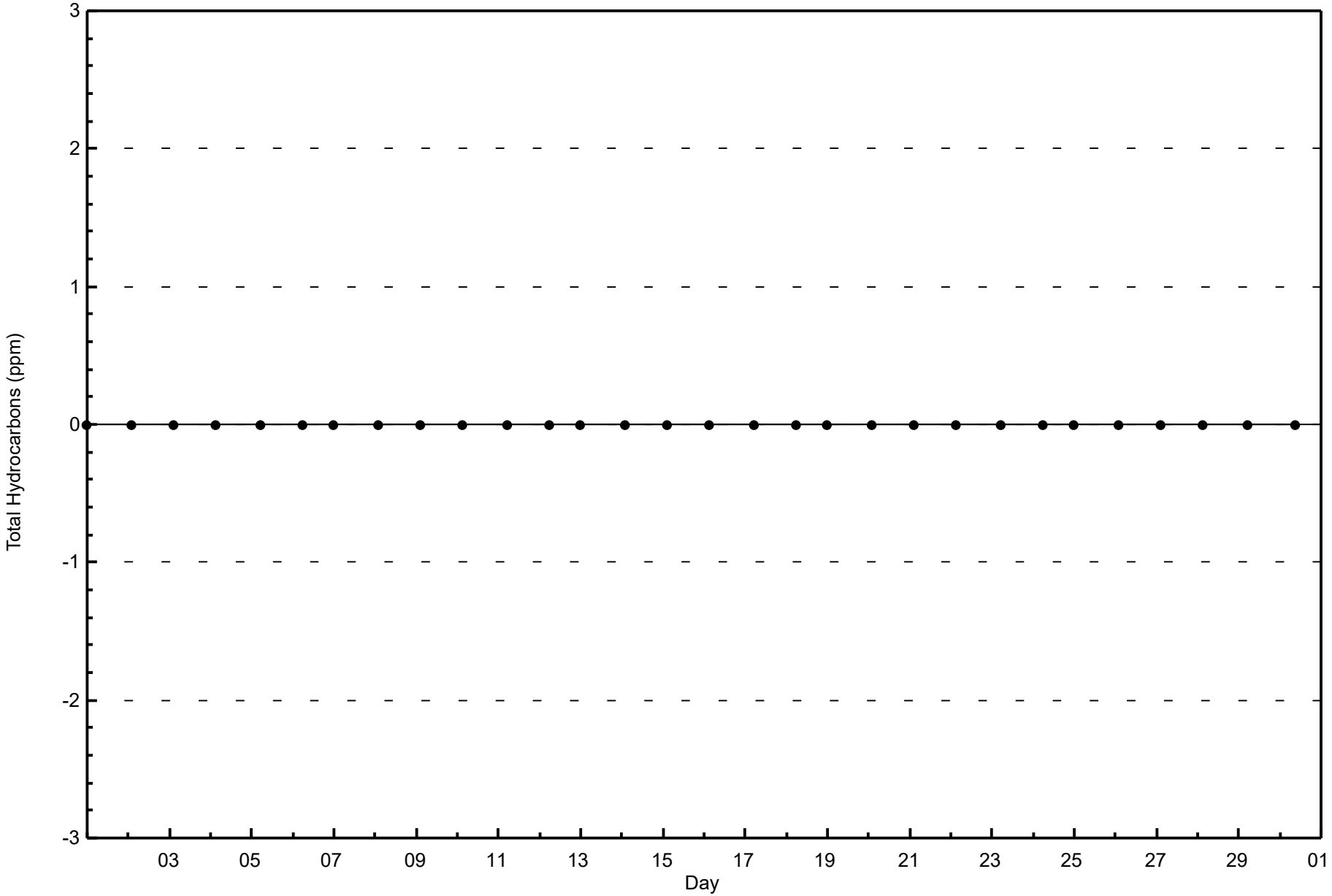
Total Number of Valid Hours: 652

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - September 2025

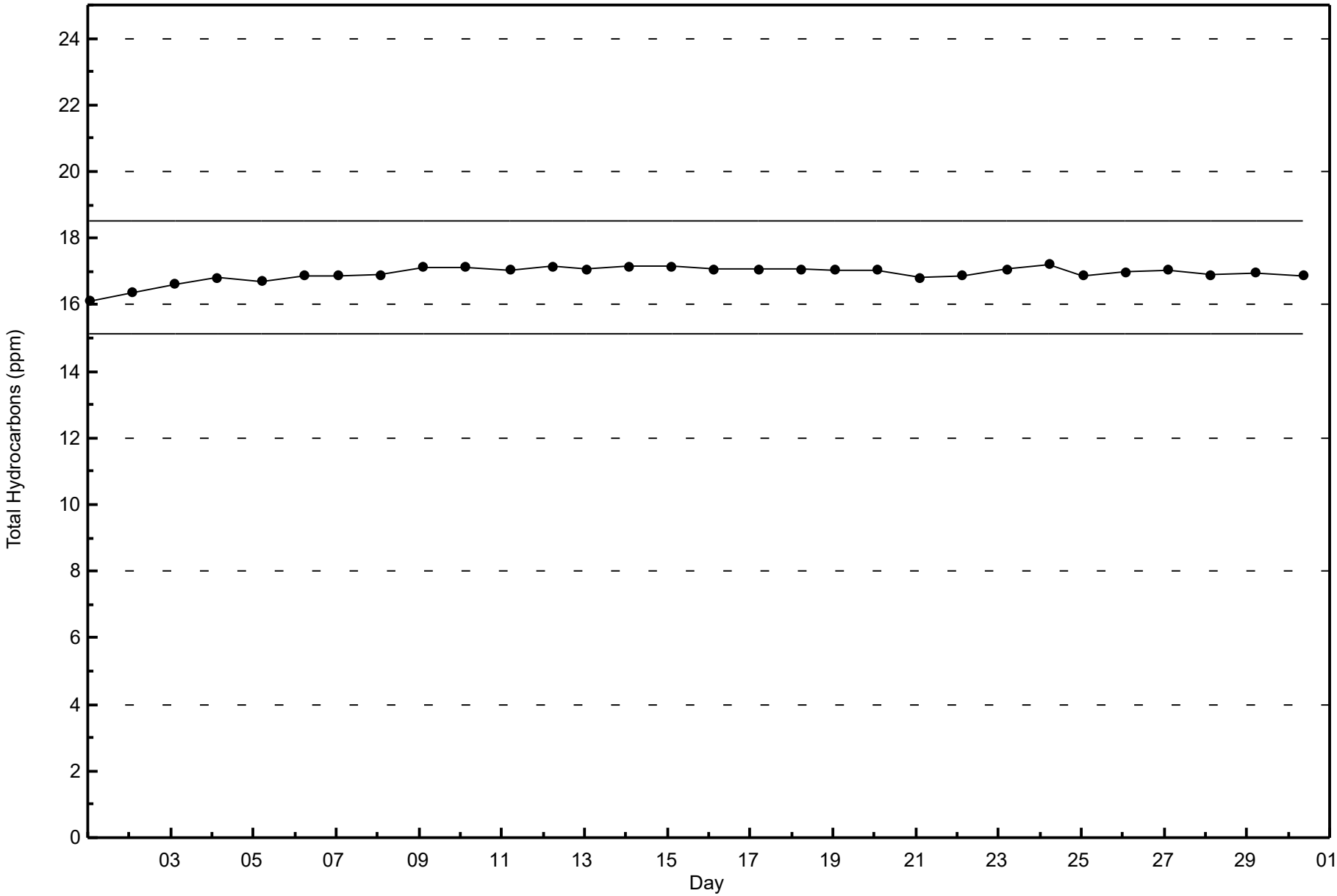


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - September 2025

Maximum Value: 1.340 ppm on Sep 28 09:00

Maximum Daily Average: 0.340 ppm on Sep 28

Minimum Value: 0.000 ppm on Sep 1 15:00

Minimum Daily Average: 0.006 ppm on Sep 23

Maximum Diurnal Average: 0.188 ppm at hour 3

Minimum Diurnal Average: 0.020 ppm at hour 16

Monthly Average: 0.093 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} = 0.9

Hours in Service:	720
Hours of Data:	652
Hours of Missing Data:	68
Hours of Calibration:	32
Percent Operational Time:	95.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.035	0.028	--	0.076
2-Sep	0.007	Z	0.065	0.168	0.060	0.000	0.000	0.066	0.090	0.157	0.190	0.213	0.012	0.018	0.000	0.000	0.000	0.000	0.000	0.101	0.071	0.006	0.034	0.019	0.056	0.213
3-Sep	0.046	0.003	Z	0.073	0.045	0.026	0.045	0.043	0.014	0.000	0.000	0.029	0.020	0.063	0.325	0.133	0.059	0.001	0.001	0.085	0.002	0.000	0.000	0.000	0.044	0.325
4-Sep	0.005	0.000	0.000	Z	UO	UO	0.242	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	0.000	0.000	0.000	0.000	0.020	0.242
5-Sep	0.000	0.029	0.059	0.046	Z	0.005	0.088	0.026	0.074	0.008	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.058	0.000	0.024	0.025	0.110
6-Sep	0.000	0.085	0.001	0.000	0.000	Z	0.000	0.000	0.073	0.063	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.007	0.061	0.129	0.040	0.101	0.026	0.129
7-Sep	Z	0.029	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.047	0.098	0.117	0.152	0.100	0.071	0.041	0.000	0.000	0.000	0.000	0.002	0.074	0.191	0.212	0.050	0.212
8-Sep	0.048	Z	0.000	UO	UO	0.000	UO	UO	0.000	M	M	M	M	M	M	M	M	0.203	0.230	0.235	0.172	0.110	0.068	0.133	--	0.235
9-Sep	0.432	0.292	Z	0.002	0.003	0.000	0.000	0.088	0.158	0.074	0.066	0.124	0.065	0.040	0.003	0.001	0.001	0.001	0.001	0.003	0.101	0.000	0.000	0.000	0.063	0.432
10-Sep	0.000	0.000	0.022	Z	0.111	0.159	0.430	0.446	0.551	0.781	0.395	0.314	0.178	0.019	0.020	0.000	0.047	0.052	0.000	0.000	0.000	0.000	0.075	0.270	0.168	0.781
11-Sep	0.370	0.383	0.617	1.174	Z	0.493	0.252	0.205	0.095	0.139	0.072	0.175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.129	0.002	0.057	0.105	0.186	1.174
12-Sep	0.341	0.319	0.279	0.240	0.259	Z	0.149	0.133	0.077	0.107	0.088	0.086	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.107	0.003	0.000	0.000	0.000	0.095	0.341
13-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.000	0.010	0.084	0.039	0.027	0.000	0.000	0.011	0.248	0.992	1.000	0.814	0.603	0.557	0.681	0.936	0.264	1.000
14-Sep	0.869	Z	0.506	0.385	0.189	0.174	0.144	0.152	0.290	0.191	0.153	0.135	0.325	0.226	0.021	0.155	0.056	0.000	0.030	0.006	0.000	0.000	0.014	0.080	0.178	0.869
15-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.362	0.351	0.206	0.091	0.089	0.029	0.049	0.034	0.000	0.057	0.154	0.038	0.241	0.192	0.090	0.086	0.362
16-Sep	0.000	0.039	0.117	Z	0.228	0.000	0.293	0.303	0.160	0.032	0.027	0.010	0.010	0.013	0.014	0.013	0.048	0.176	0.236	0.281	0.291	0.034	0.030	0.094	0.106	0.303
17-Sep	0.004	0.005	0.080	0.001	Z	0.112	0.039	0.085	0.058	0.001	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	0.017	0.112
18-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.065	0.000	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	0.078	0.063	0.016	0.011	0.078
19-Sep	Z	0.252	0.889	0.007	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	0.014	0.000	0.000	0.000	0.051	0.889
20-Sep	0.000	Z	0.133	0.003	0.130	0.000	0.000	0.000	0.000	0.000	0.064	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.232	0.163	0.147	0.246	0.318	0.066	0.318
21-Sep	0.308	0.172	Z	0.000	0.000	0.000	0.083	0.074	0.930	0.840	0.232	0.138	0.132	0.226	0.052	0.000	0.004	0.001	0.028	0.136	0.307	0.031	0.108	0.013	0.166	0.930
22-Sep	0.210	0.912	0.466	Z	0.389	0.297	0.000	0.000	0.000	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	0.102	0.912
23-Sep	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.060	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	UO	UO	0.000	UO	0.006	0.063
24-Sep	0.000	0.000	0.030	UO	0.000	Z	UO	UO	0.000	M	M	M	M	M	M	0.003	0.028	0.000	0.000	0.203	0.262	0.271	0.125	0.000	--	0.271
25-Sep	Z	0.000	0.000	0.000	0.022	0.037	0.000	0.000	0.000	0.000	0.000	0.016	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.093	0.175	0.006	0.016	0.175
26-Sep	0.000	Z	0.000	0.000	0.000	0.022	0.000	0.110	0.028	0.207	0.036	0.112	0.000	0.000	0.065	0.052	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.033	0.207
27-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.028	0.316	0.191	0.039	0.069	0.046	0.035	0.033	0.052	0.129	0.054	0.076	0.119	0.097	0.027	0.019	0.000	0.000	0.058	0.316
28-Sep	0.201	1.029	0.883	Z	0.480	0.514	0.577	0.874	1.340	0.452	0.395	0.056	0.006	0.000	0.000	0.000	0.000	0.000	0.005	0.279	0.281	0.110	0.293	0.036	0.340	1.340
29-Sep	0.000	0.002	0.186	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	0.141	0.324	0.202	0.208	0.298	0.435	0.452	0.098	0.452
30-Sep	0.379	0.247	0.168	0.093	0.321	0.644	0.820	0.628	Z	1.013	0.430	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.206	1.013
	0.129	0.158	0.188	0.100	0.097	0.108	0.121	0.141	0.148	0.172	0.105	0.069	0.039	0.032	0.023	0.020	0.022	0.055	0.071	0.098	0.099	0.078	0.095	0.104	Diurnal Average	
	0.869	1.029	0.889	1.174	0.480	0.644	0.820	0.874	1.340	1.013	0.430	0.314	0.325	0.226	0.325	0.155	0.248	0.992	1.000	0.814	0.603	0.557	0.681	0.936	Diurnal Maximum	

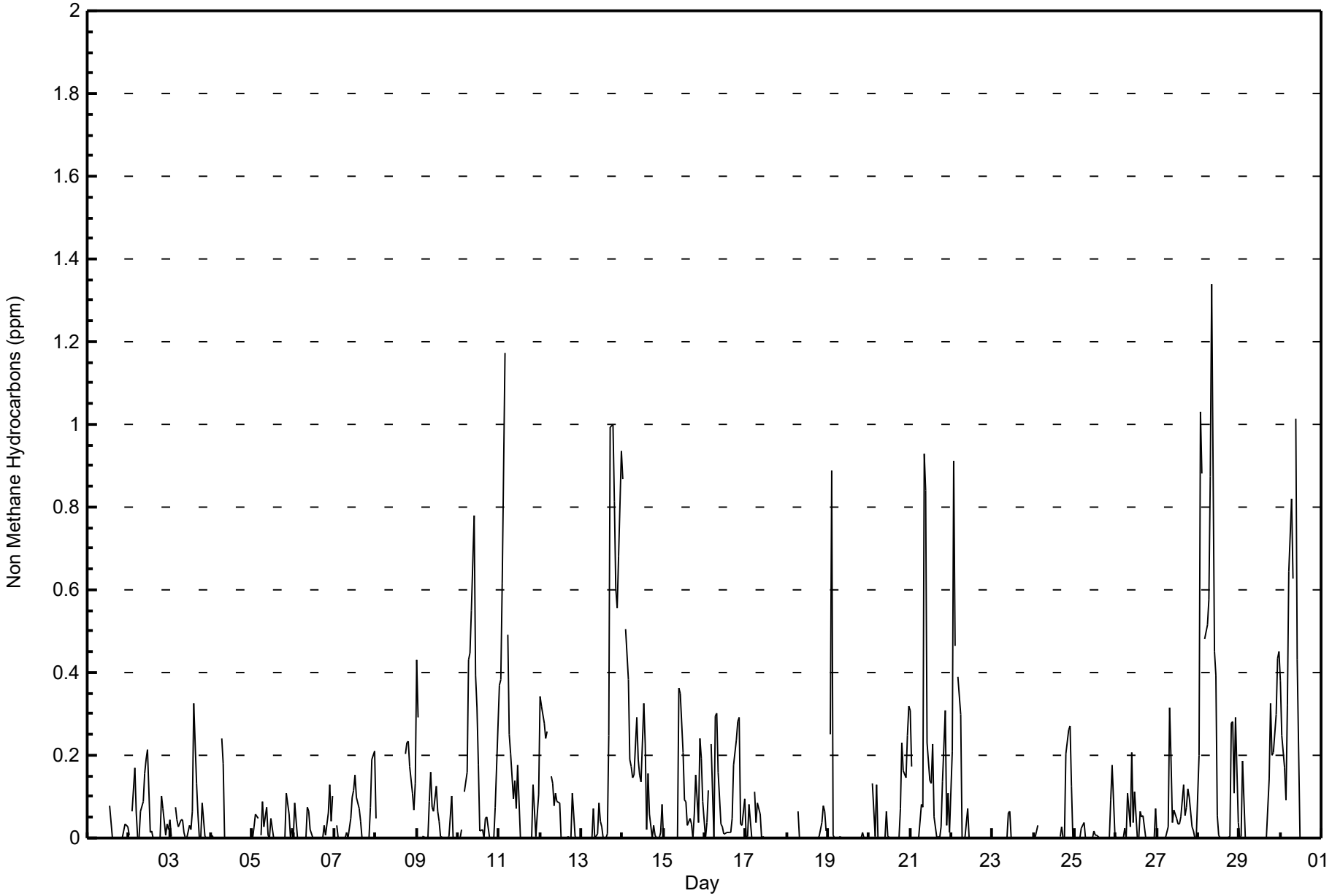
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - September 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	331	50.77	50.77
0.006 - 0.05	94	14.42	65.18
0.06 - 0.1	100	15.34	80.52
> 0.1	127	19.48	100.00

Total Number of Valid Hours: 652

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	28	8	3	1	5	1	49	51	78	38	37	2	5	2	9	14	331
0.006 - 0.05	5	2	0	0	2	4	9	21	9	6	9	8	6	2	8	3	94
0.06 - 0.1	6	3	0	0	3	1	11	32	10	1	10	7	6	3	3	4	100
> 0.1	13	2	1	0	2	11	22	11	3	7	13	10	6	12	10	4	127
Totals	52	15	4	1	12	17	91	115	100	52	69	27	23	19	30	25	652

Total Number of Valid Hours: 652

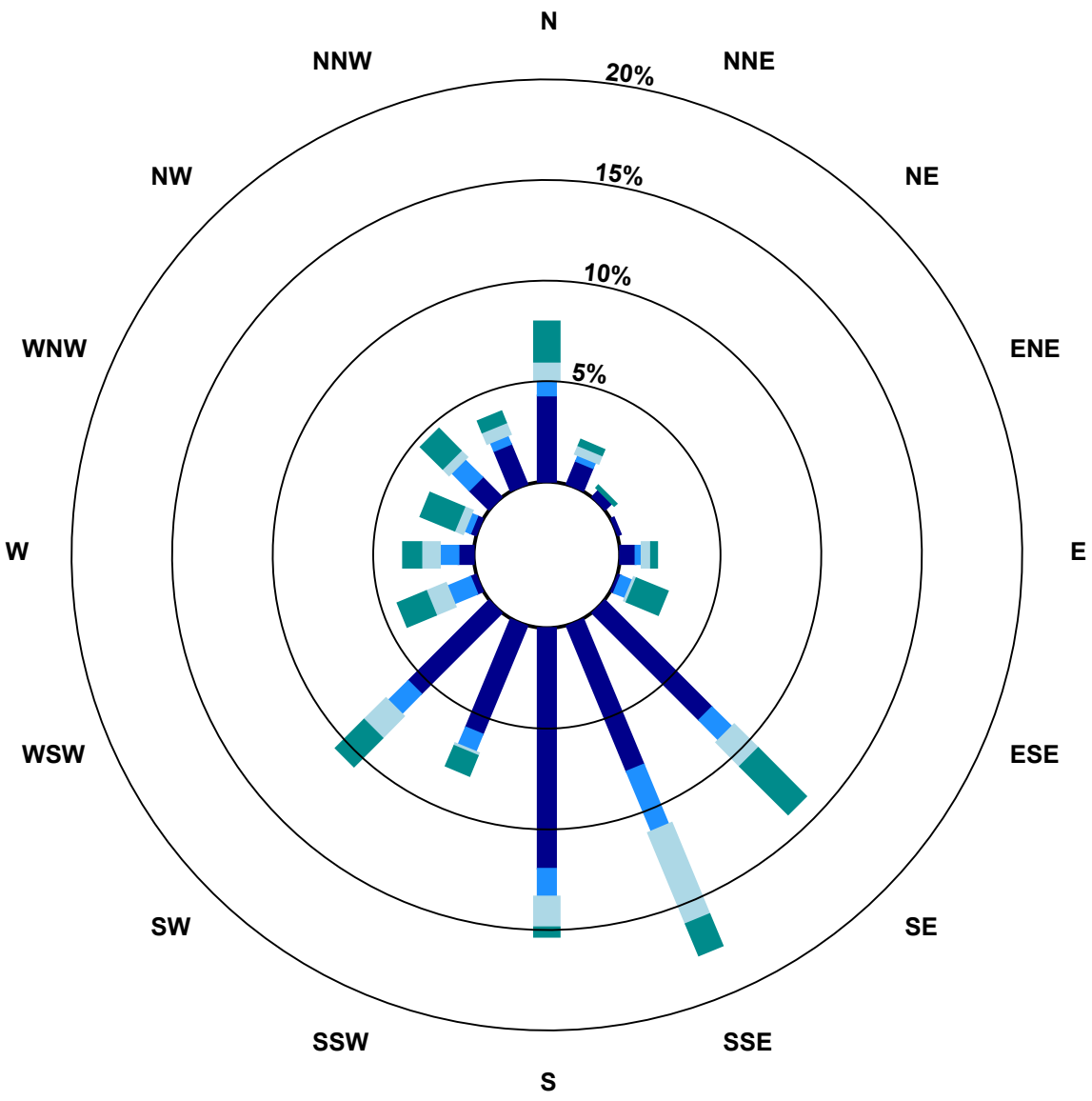
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

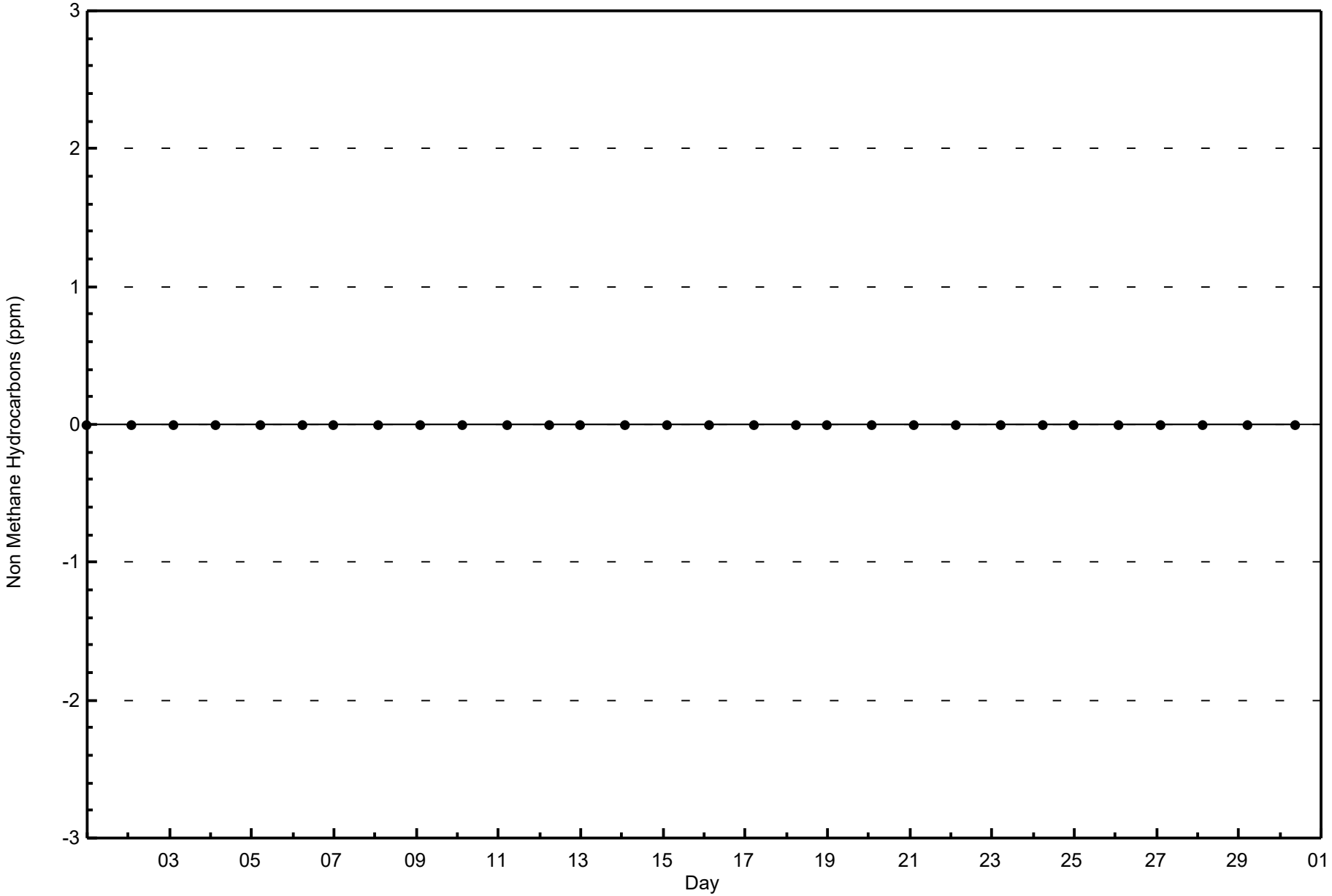
Total Number of Valid Hours: 652

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - September 2025

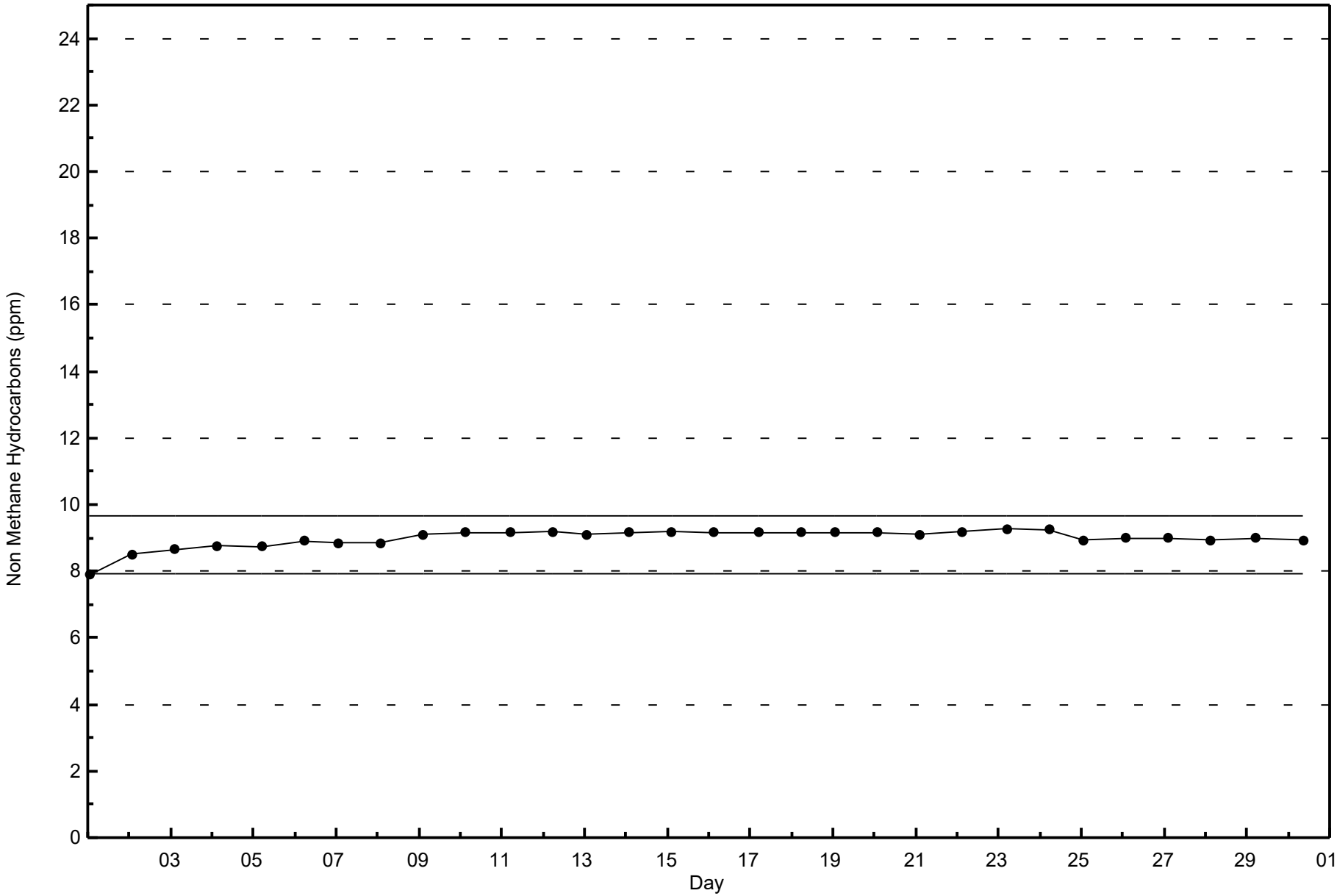


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mildred Lake - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.2 ppm on Sep 30 07:00 Maximum Daily Average: 2.4 ppm on Sep 30

Minimum Value: 1.9 ppm on Sep 23 12:00 Minimum Daily Average: 1.9 ppm on Sep 23
Maximum Diurnal Average: 2.3 ppm at hour 8 Minimum Diurnal Average: 2.0 ppm at hour 17
Monthly Average: 2.14 ppm Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.1

Hours in Service:	720
Hours of Data:	652
Hours of Missing Data:	68
Hours of Calibration:	32
Percent Operational Time:	95.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	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-Sep	2.2	Z	2.2	2.6	2.3	2.2	2.2	2.4	2.5	2.5	2.5	2.3	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	2.6
3-Sep	2.2	2.1	Z	2.3	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.3
4-Sep	2.0	2.0	2.0	Z	UO	UO	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	2.0	2.0	2.0	2.0	2.0	2.4
5-Sep	2.0	2.1	2.2	2.2	Z	2.1	2.3	2.2	2.4	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	2.0	2.1	2.1	2.4
6-Sep	2.1	2.3	2.0	2.1	2.0	Z	2.1	2.1	2.3	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.4	2.2	2.4	2.1	2.4
7-Sep	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.3
8-Sep	2.1	Z	2.1	UO	UO	2.1	UO	UO	2.0	M	M	M	M	M	M	M	M	2.2	2.2	2.2	2.2	2.2	2.2	2.3	--	2.3
9-Sep	2.4	2.3	Z	2.2	2.1	2.1	2.1	2.5	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.2	2.5
10-Sep	2.1	2.0	2.1	Z	2.4	2.6	3.0	2.8	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.4	2.2	3.0
11-Sep	2.6	2.8	3.0	3.1	Z	2.6	2.4	2.2	2.3	2.2	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.0	2.0	2.2	2.3	3.1
12-Sep	2.4	2.3	2.4	2.3	2.4	Z	2.2	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.4
13-Sep	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.2	2.0	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.2	2.6	2.6	2.6	2.5	2.5	2.7	3.1	2.3	3.1
14-Sep	3.1	Z	2.7	2.5	2.3	2.3	2.3	2.2	2.7	2.4	2.3	2.2	2.3	2.2	2.0	2.1	2.1	2.0	2.1	1.9	2.0	2.0	2.0	2.1	2.2	3.1
15-Sep	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.5	2.5	2.4	2.1	2.5
16-Sep	2.0	2.1	2.2	Z	2.4	2.0	2.7	2.6	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.4	2.2	2.7
17-Sep	2.1	2.1	2.2	2.0	Z	2.3	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	2.1	2.3
18-Sep	2.0	2.0	2.0	2.0	2.1	Z	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	2.1	2.1	2.0	2.0	2.0	2.0	2.2
19-Sep	Z	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.2
20-Sep	2.0	Z	2.3	2.1	2.4	2.0	2.1	2.0	2.1	2.1	2.2	2.1	2.0	1.9	1.9	2.0	1.9	2.0	2.3	3.0	2.5	2.3	2.7	3.1	2.2	3.1
21-Sep	2.9	2.6	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.4	2.0	2.0	2.0	2.2	2.9
22-Sep	1.9	2.0	1.9	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	1.9	1.9	1.9	2.0	1.9	1.9	2.0
23-Sep	2.0	2.0	2.0	2.0	Z	2.0	1.9	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	UO	UO	2.0	UO	1.9	2.0
24-Sep	2.0	2.0	2.2	UO	2.0	Z	UO	UO	2.1	M	M	M	M	M	M	2.0	2.0	2.0	2.0	2.4	2.4	2.3	2.3	2.1	--	2.4
25-Sep	Z	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.2	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	2.1	2.1	2.1	2.3
26-Sep	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.2	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	2.4	2.1	2.4
27-Sep	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.3	2.3	2.1	2.1	2.0	2.0	2.1	2.3
28-Sep	2.1	2.3	2.3	Z	2.2	2.2	2.3	2.9	2.9	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.1	2.2	2.0	2.2	2.9
29-Sep	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	2.0	2.3	2.9	2.4	2.1	2.2	2.3	2.3	2.1	2.9
30-Sep	2.3	2.2	2.1	2.2	2.6	4.1	4.2	3.3	Z	3.3	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.4	4.2
	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	Diurnal Average	
	3.1	2.8	3.0	3.1	2.6	4.1	4.2	3.3	2.9	3.3	2.6	2.3	2.3	2.2	2.3	2.2	2.2	2.6	2.9	3.0	2.5	2.5	2.7	3.1	Diurnal Maximum	

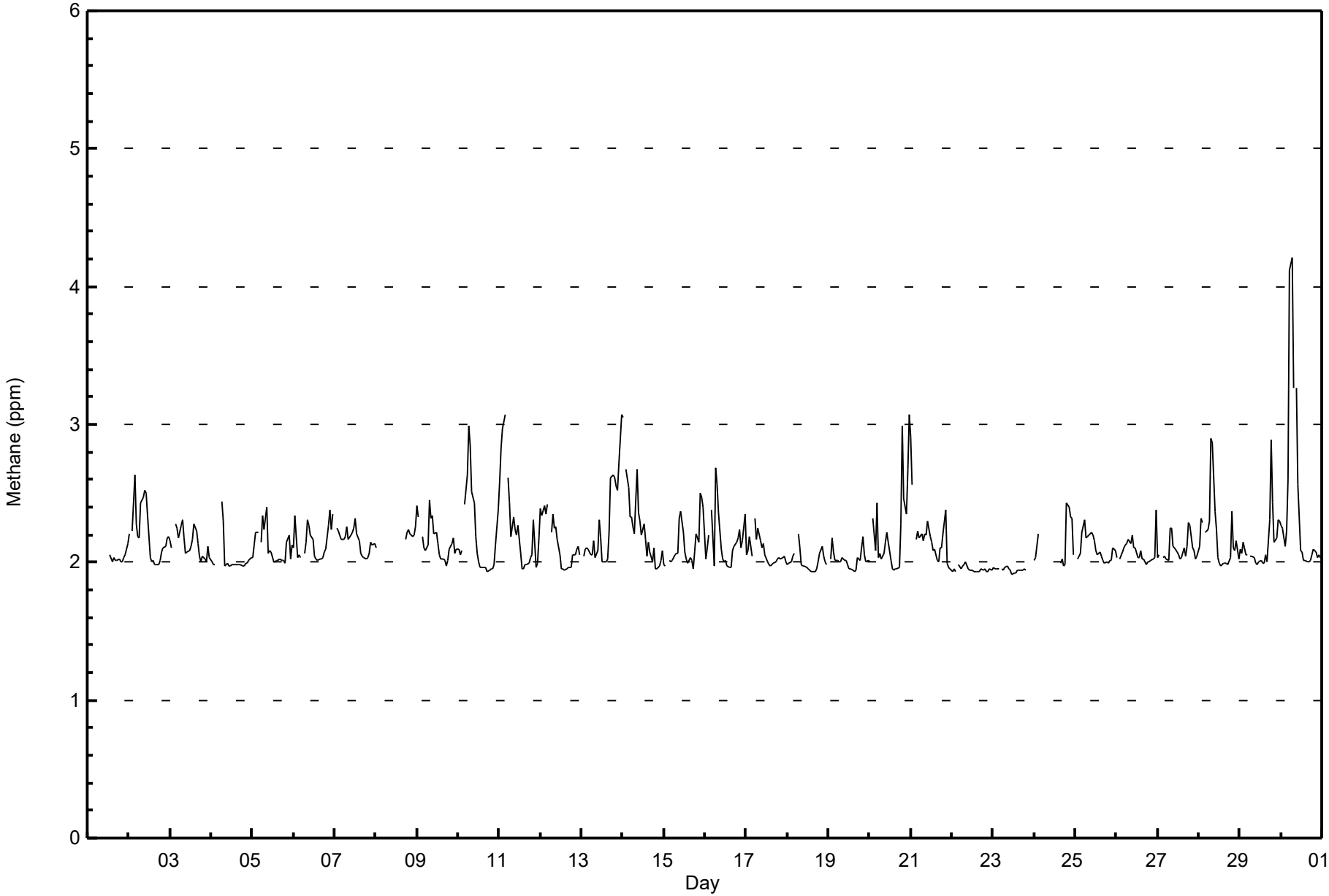
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mildred Lake - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	296	45.40	45.40
2.1 - 3.0	348	53.37	98.77
3.1 - 10.0	8	1.23	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 652

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Mildred Lake - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	22	9	1	1	4	3	36	36	62	30	39	12	9	4	13	15	296
2.1 - 3.0	28	6	3	0	8	13	54	78	38	21	30	15	14	15	16	9	348
3.1 - 10.0	2	0	0	0	0	1	1	1	0	1	0	0	0	0	1	1	8
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	15	4	1	12	17	91	115	100	52	69	27	23	19	30	25	652

Total Number of Valid Hours: 652

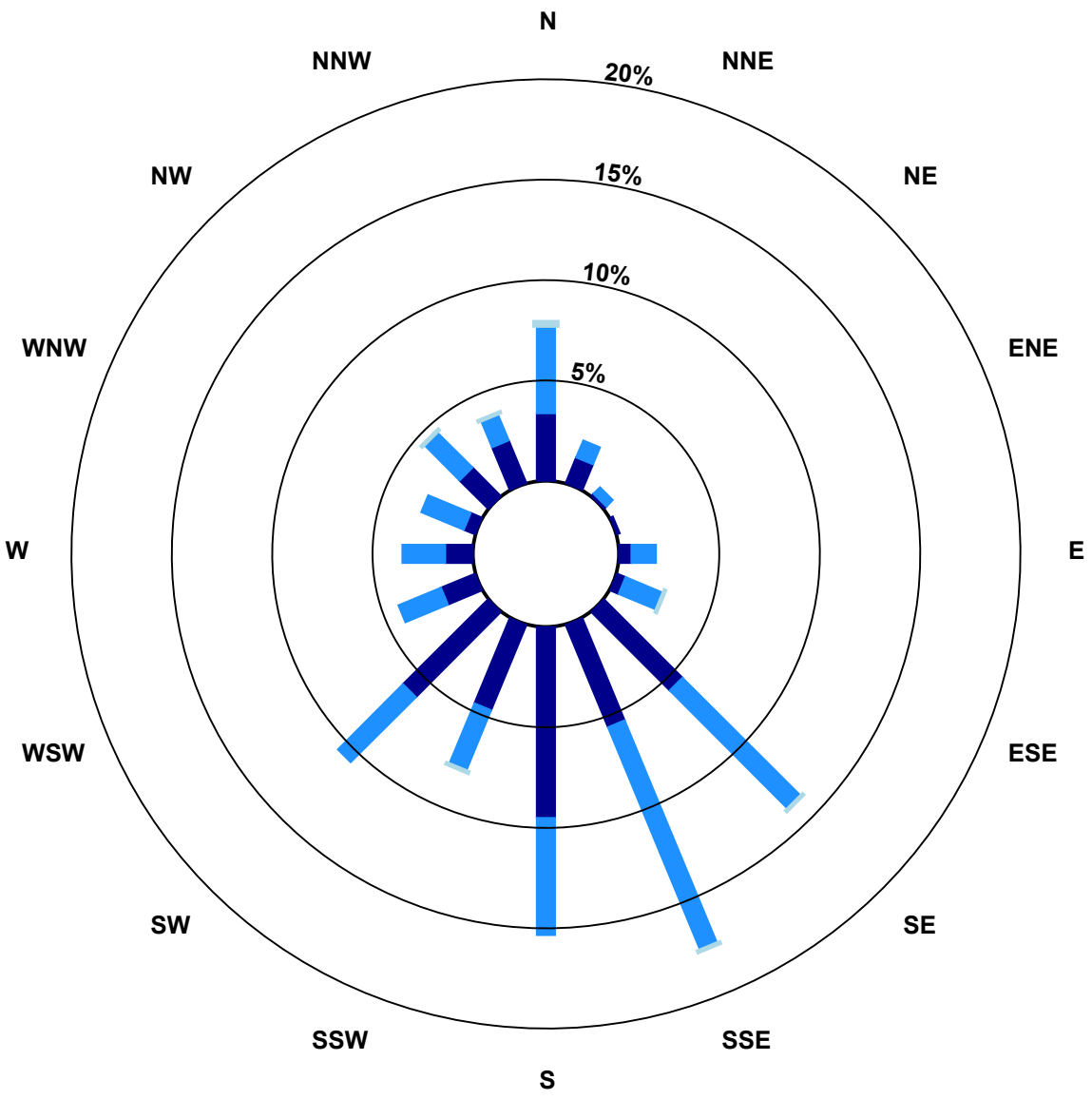
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

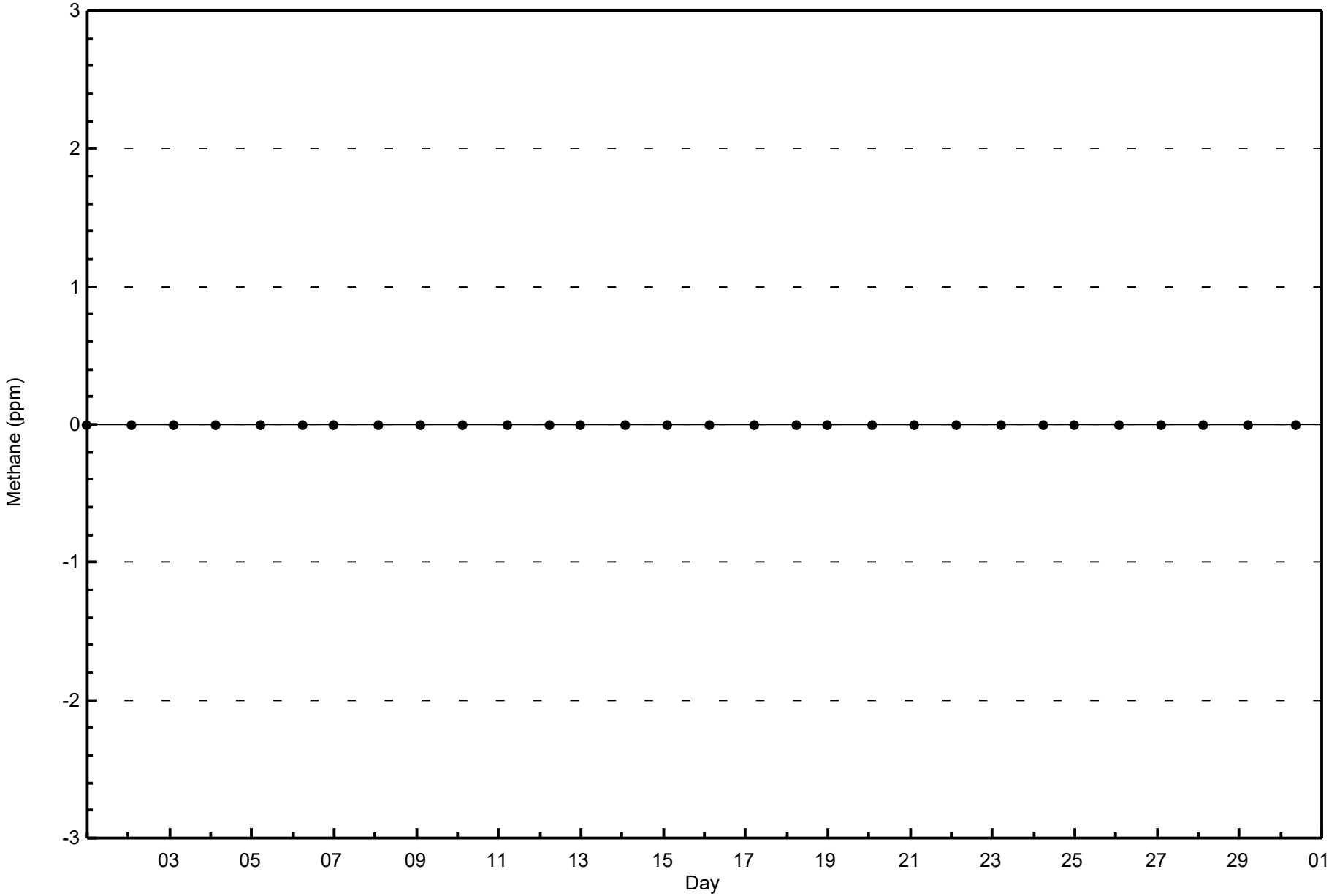
Total Number of Valid Hours: 652

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mildred Lake - September 2025

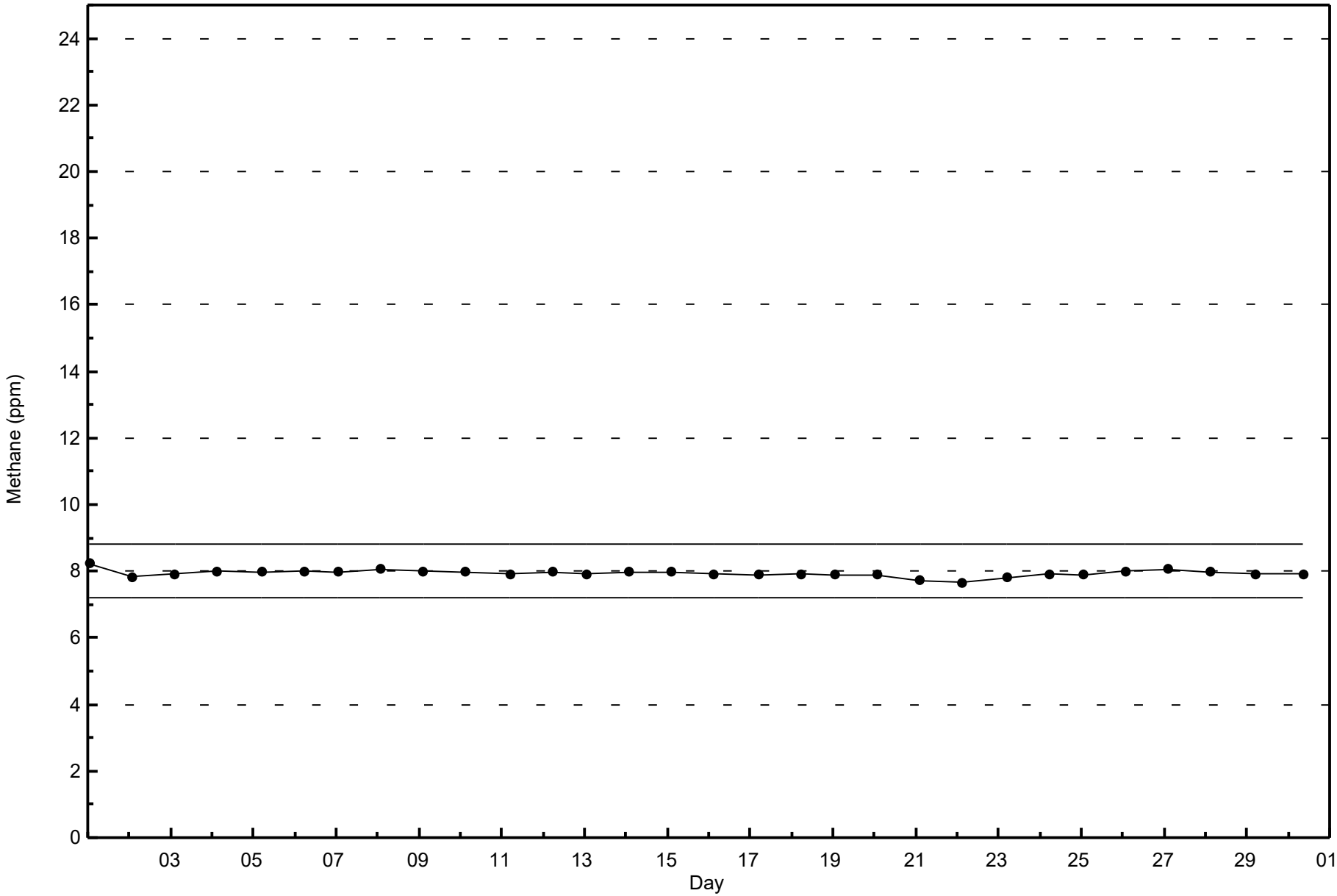


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mildred Lake - September 2025



Maximum Value: 29.4 C on Sep 12 16:00

Maximum Daily Average: 20.7 C on Sep 12

Minimum Value: 2.6 C on Sep 25 03:00

Minimum Daily Average: 10.6 C on Sep 25

Maximum Diurnal Average: 21.3 C at hour 16

Minimum Diurnal Average: 10.1 C at hour 6

Monthly Average: 15.14 C

Percentiles: P_1 = 4.1 P_{10} = 9.4 Q_1 = 11.7 Median = 14.6 Q_3 = 18.2 P_{90} = 22.0 P_{99} = 27.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

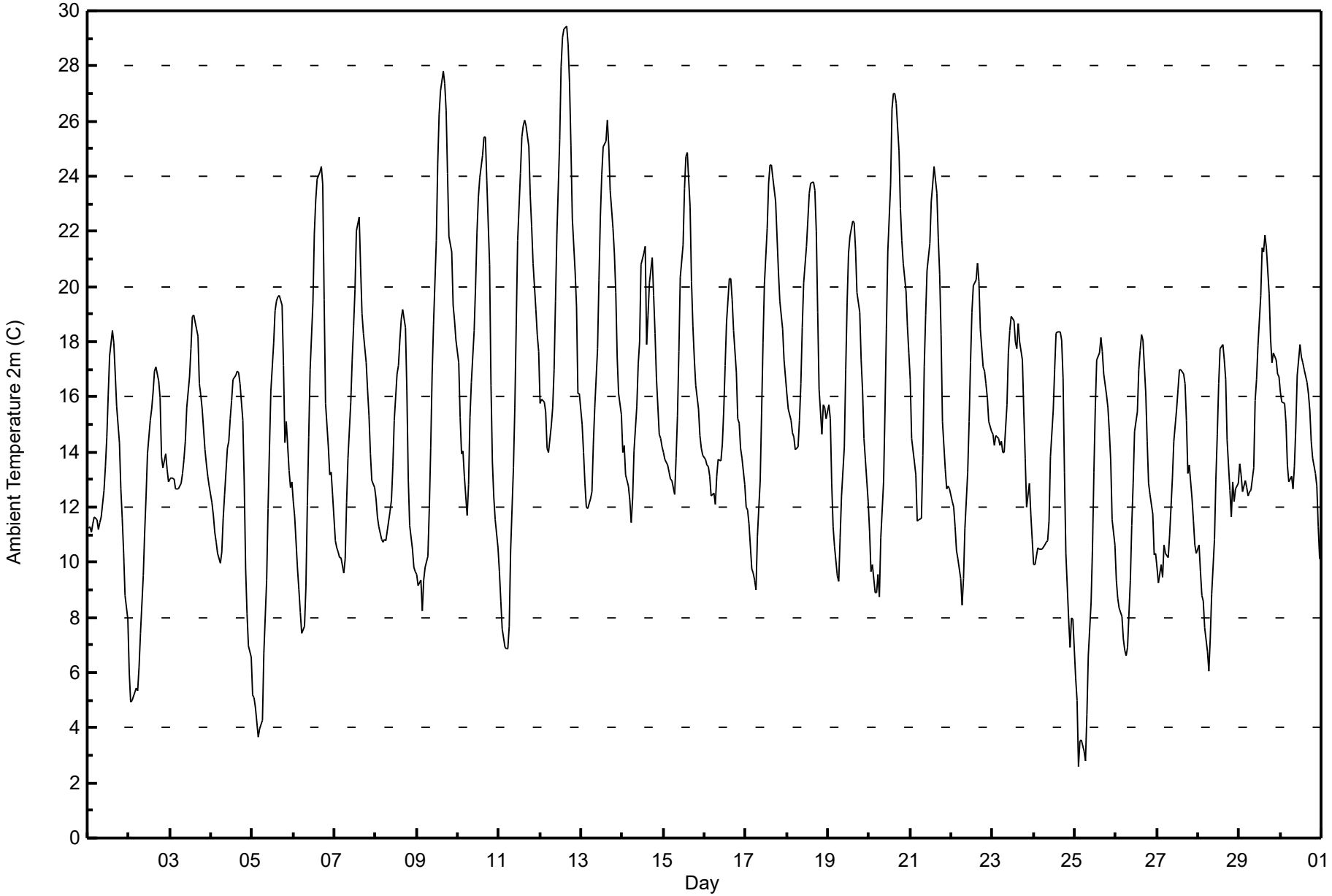
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.2	11.3	11.1	11.4	11.7	11.5	11.2	11.5	11.6	12.6	13.5	14.6	16.1	17.5	18.4	17.9	16.8	15.6	14.3	12.7	11.6	10.3	8.8	8.0	13.0	18.4
2-Sep	6.0	4.9	5.0	5.3	5.5	5.3	6.2	7.4	9.5	11.1	12.4	13.9	15.2	15.6	16.2	16.9	17.1	16.6	16.0	13.8	13.4	13.9	13.4	12.9	11.4	17.1
3-Sep	13.0	13.1	13.0	12.6	12.6	12.7	12.9	13.2	13.8	14.4	15.6	16.7	17.8	18.9	18.9	18.5	18.2	16.5	16.0	15.6	14.1	13.6	13.1	12.8	14.9	18.9
4-Sep	12.2	11.7	11.1	10.7	10.3	10.0	10.4	11.6	12.5	14.1	14.4	15.2	15.9	16.6	16.8	16.9	16.9	16.5	15.1	12.9	9.8	8.2	7.0	6.5	12.6	16.9
5-Sep	5.2	5.1	4.8	3.7	4.0	4.1	4.3	6.7	9.4	11.9	14.2	16.2	18.0	19.1	19.5	19.6	19.7	19.3	17.2	14.4	15.1	13.3	12.7	12.9	12.1	19.7
6-Sep	12.2	11.6	9.8	9.0	8.2	7.4	7.7	9.1	12.1	14.6	17.0	19.4	21.9	23.1	23.9	24.2	24.3	23.7	19.5	15.8	14.2	13.2	13.3	12.5	15.3	24.3
7-Sep	10.8	10.5	10.4	10.2	10.2	9.6	10.1	12.2	13.8	15.8	17.3	18.6	19.9	22.0	22.5	20.7	19.0	18.3	17.3	16.2	15.3	13.9	13.0	12.7	15.0	22.5
8-Sep	12.3	11.7	11.3	10.8	10.7	10.8	10.8	11.1	11.8	12.3	13.5	15.1	16.8	17.1	18.0	18.8	19.2	18.5	16.2	13.0	11.3	10.5	9.8	9.7	13.4	19.2
9-Sep	9.6	9.2	9.3	8.2	9.4	9.8	10.2	12.0	14.1	16.8	18.6	21.7	24.5	26.2	27.1	27.8	27.3	26.4	24.1	21.8	21.3	19.3	18.8	18.1	18.0	27.8
10-Sep	17.2	15.3	13.9	14.0	13.1	11.7	12.8	15.3	16.5	18.4	20.0	22.0	23.2	24.0	24.8	25.4	25.4	23.9	20.8	16.4	13.6	12.4	11.5	10.5	17.6	25.4
11-Sep	9.7	8.6	7.6	6.9	6.8	6.9	7.7	10.4	13.4	15.6	18.6	21.7	24.1	25.4	25.8	26.0	25.8	25.1	23.3	22.1	20.8	19.2	18.3	17.6	17.0	26.0
12-Sep	15.8	15.9	15.8	15.5	14.2	14.0	15.0	15.6	17.0	19.5	21.9	25.3	28.0	29.0	29.3	29.4	28.8	27.4	25.1	22.5	20.5	19.3	16.1	16.1	20.7	29.4
13-Sep	15.0	14.0	12.9	12.0	11.9	12.3	12.6	14.3	15.6	17.8	20.2	22.5	24.0	25.1	25.3	26.0	25.1	23.5	22.1	21.2	19.8	17.4	16.1	15.3	18.4	26.0
14-Sep	14.0	14.2	13.2	12.7	12.3	11.4	12.3	14.0	15.6	17.2	18.0	20.8	21.2	21.5	17.9	19.0	20.2	21.1	19.7	18.3	16.7	14.6	14.5	14.2	16.4	21.5
15-Sep	14.0	13.8	13.5	13.2	13.0	13.0	12.5	13.8	15.3	17.6	20.3	21.5	23.5	24.7	24.8	22.9	20.2	18.6	17.4	16.4	15.5	14.6	14.1	13.9	17.0	24.8
16-Sep	13.7	13.5	13.5	13.1	12.4	12.5	12.1	13.1	13.7	13.7	14.3	15.5	17.1	18.7	20.3	20.3	19.5	18.4	16.9	15.2	15.1	14.1	13.8	12.8	15.1	20.3
17-Sep	12.0	11.9	11.4	9.8	9.6	9.3	9.0	10.9	13.0	15.4	17.9	20.1	22.1	23.7	24.4	24.4	23.9	23.1	21.8	20.6	19.5	18.5	17.3	16.7	16.9	24.4
18-Sep	16.1	15.5	15.2	14.7	14.5	14.1	14.2	15.1	16.5	18.5	20.1	21.5	22.4	23.4	23.8	23.8	23.5	22.0	19.1	16.3	14.7	15.7	15.6	15.2	18.0	23.8
19-Sep	15.7	15.2	12.9	11.3	10.6	9.5	9.3	10.9	12.4	14.2	17.0	19.4	21.2	21.8	22.4	22.3	21.4	19.8	19.1	17.3	16.2	14.5	13.7	12.2	15.8	22.4
20-Sep	11.1	9.6	9.9	8.9	8.9	9.6	8.7	10.9	12.9	15.5	18.4	21.3	23.7	26.4	27.0	27.0	26.7	24.9	22.9	21.7	20.9	19.8	18.6	17.6	17.6	27.0
21-Sep	16.6	14.5	13.6	13.2	11.5	11.5	11.6	13.9	17.1	18.9	20.6	21.6	23.1	23.7	24.4	23.4	21.8	20.5	18.3	15.1	13.4	12.6	12.8	12.7	16.9	24.4
22-Sep	12.2	12.0	11.3	10.4	10.1	9.4	8.5	9.4	11.3	13.2	15.1	17.3	19.1	20.0	20.3	20.9	20.2	18.5	17.1	17.0	16.5	16.0	15.1	14.8	14.8	20.9
23-Sep	14.7	14.2	14.6	14.5	14.2	14.4	14.0	14.0	15.7	17.6	18.4	18.9	18.8	18.0	17.8	18.7	18.0	17.3	15.5	13.8	12.0	12.8	11.7	10.8	15.4	18.9
24-Sep	9.9	9.9	10.5	10.5	10.5	10.5	10.7	10.8	10.8	11.5	13.9	15.5	17.0	18.3	18.4	18.4	18.1	16.7	13.3	10.3	7.9	6.9	8.0	7.9	12.3	18.4
25-Sep	5.8	5.0	2.6	3.5	3.6	3.2	2.8	4.5	6.6	8.6	10.5	13.3	15.6	17.3	17.6	18.2	17.7	16.8	16.1	15.6	14.7	13.7	11.6	10.6	10.6	18.2
26-Sep	9.4	8.7	8.3	8.0	7.2	6.8	6.6	6.9	9.3	11.3	12.8	14.8	15.5	17.0	17.7	18.3	18.0	16.1	14.4	12.9	12.5	11.7	10.3	10.3	11.9	18.3
27-Sep	9.8	9.2	9.9	9.5	10.6	10.3	10.2	11.0	12.0	13.1	14.4	15.6	16.3	17.0	17.0	16.9	16.5	15.1	13.2	13.5	12.3	11.5	10.6	10.3	12.7	17.0
28-Sep	10.6	9.7	8.8	8.6	7.6	6.7	6.1	7.3	8.9	10.8	13.0	14.7	16.5	17.8	17.9	17.3	16.6	14.5	12.6	11.6	12.9	12.2	12.7	12.9	12.0	17.9
29-Sep	13.6	13.2	12.6	12.9	12.7	12.4	12.6	12.6	13.4	15.9	16.6	17.8	19.7	21.4	21.2	21.9	21.4	19.7	18.1	17.2	17.6	17.4	16.9	16.7	16.5	21.9
30-Sep	16.2	15.8	15.7	15.1	13.5	12.9	13.1	12.7	13.5	14.9	16.8	17.9	17.4	17.2	17.0	16.5	16.1	15.5	14.4	13.8	13.2	12.8	11.3	10.1	14.7	17.9
	12.2	11.6	11.1	10.7	10.4	10.1	10.2	11.4	13.0	14.8	16.5	18.3	19.8	20.9	21.2	21.3	20.8	19.7	17.9	16.2	15.1	14.1	13.3	12.8	Diurnal Average	
	17.2	15.9	15.8	15.5	14.5	14.4	15.0	15.6	17.1	19.5	21.9	25.3	28.0	29.0	29.3	29.4	28.8	27.4	25.1	22.5	21.3	19.8	18.8	18.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mildred Lake - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	99	13.75	13.75
10 - 20	500	69.44	83.19
> 20	121	16.81	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 99.4 % on Sep 5 07:00

Maximum Daily Average: 83.2 % on Sep 14

Minimum Value: 24.5 % on Sep 24 17:00

Minimum Daily Average: 43.5 % on Sep 23

Maximum Diurnal Average: 81.8 % at hour 6

Minimum Diurnal Average: 41.4 % at hour 15

Monthly Average: 62.99 %

Percentiles: P_1 = 28.1 P_{10} = 36.1 Q_1 = 47.3 Median = 62.1 Q_3 = 78.4 P_{90} = 90.3 P_{99} = 97.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

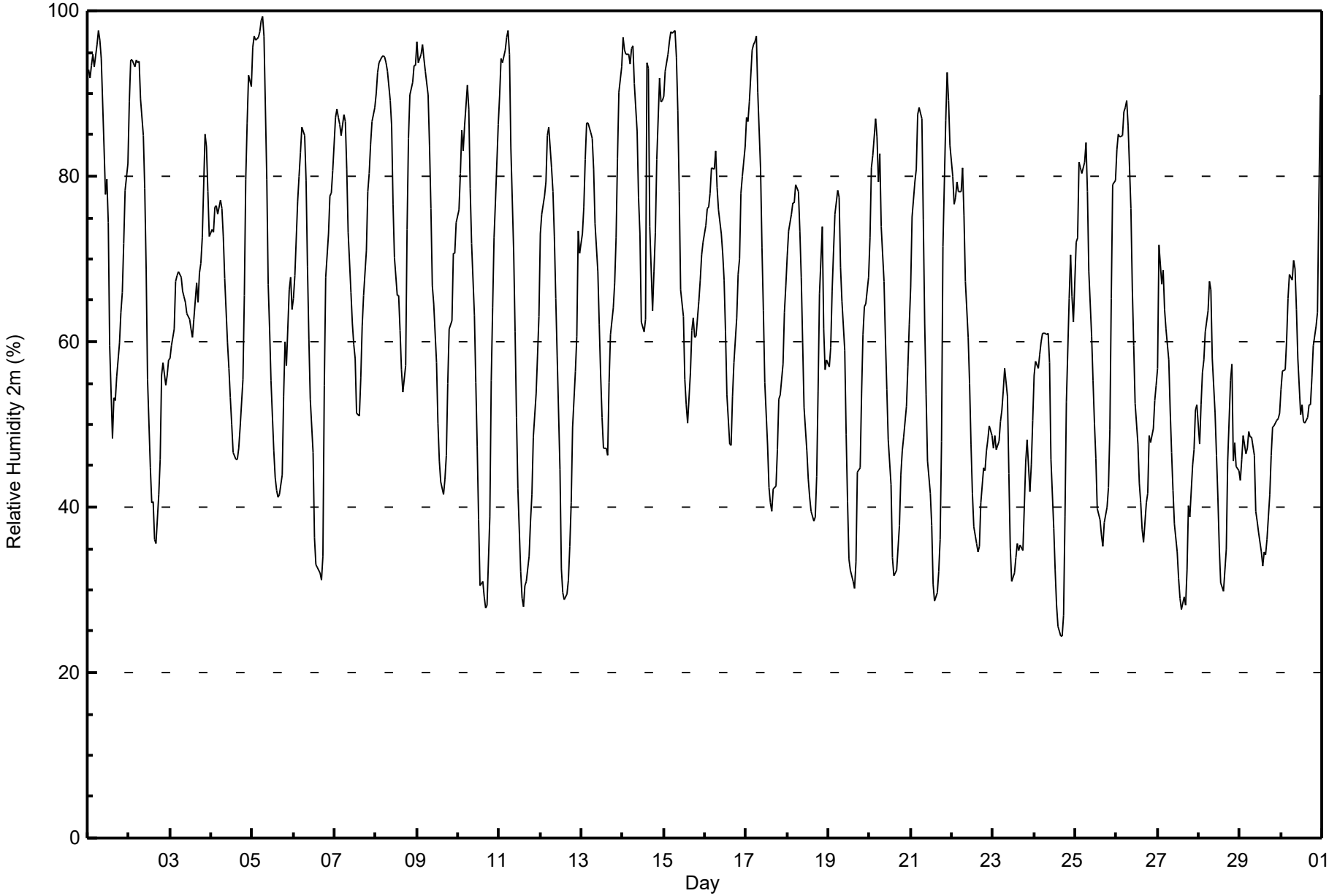
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	92.8	91.8	93.4	94.7	93.2	95.9	97.6	96.5	94.2	83.4	77.8	79.7	74.4	59.4	48.4	53.3	52.9	55.8	59.9	63.5	65.9	71.9	78.4	81.5	77.3	97.6
2-Sep	89.0	94.1	94.0	93.2	94.0	93.8	93.9	89.3	84.9	78.4	68.8	55.4	44.8	40.5	40.6	36.1	35.6	41.5	45.8	55.9	57.5	54.7	55.9	57.8	66.5	94.1
3-Sep	58.0	59.5	61.5	67.4	67.9	68.4	67.7	66.1	65.5	64.8	63.4	62.7	61.6	60.4	62.7	67.1	64.7	68.3	69.4	72.6	85.0	83.6	78.1	72.8	67.5	85.0
4-Sep	73.5	73.1	76.3	76.4	75.5	77.1	76.0	72.7	67.6	59.9	56.7	53.3	49.9	46.5	45.8	45.8	47.2	49.6	55.4	65.5	79.6	86.4	92.2	90.9	66.4	92.2
5-Sep	95.6	97.0	96.5	96.8	97.5	98.8	99.4	97.0	79.6	67.0	61.5	55.3	46.8	43.5	42.1	41.2	41.5	43.9	53.5	60.0	57.0	66.3	67.8	63.9	69.6	99.4
6-Sep	65.2	67.9	76.9	80.1	83.0	86.0	84.9	79.4	69.2	60.3	53.1	46.7	36.2	33.0	32.7	32.1	31.2	34.0	54.7	67.9	73.0	77.6	77.9	80.7	61.8	86.0
7-Sep	87.1	88.2	87.2	86.4	84.8	87.5	86.6	80.9	73.2	66.0	62.1	59.6	58.0	51.4	51.0	55.6	61.9	65.6	71.0	78.1	80.3	83.9	86.7	88.3	74.2	88.3
8-Sep	90.1	92.5	93.8	94.4	94.5	94.4	93.8	92.7	89.1	86.1	76.6	70.1	65.7	65.5	61.4	56.5	53.8	57.2	73.6	84.6	89.8	91.4	93.3	93.4	81.4	94.5
9-Sep	96.2	93.7	94.8	96.0	94.3	92.8	89.9	83.8	76.1	66.8	64.6	57.5	50.1	45.6	43.1	41.5	43.3	46.4	54.9	61.5	62.5	70.6	70.8	74.5	69.6	96.2
10-Sep	75.9	80.4	85.7	83.1	86.1	91.0	88.2	78.5	71.9	63.2	55.0	47.3	38.5	30.5	31.1	29.1	27.8	28.2	38.8	55.3	64.0	72.5	76.9	86.3	61.9	91.0
11-Sep	89.8	94.2	93.7	95.2	96.8	97.6	94.7	83.3	70.8	61.2	50.9	42.2	32.2	29.0	28.0	30.5	31.0	34.1	38.3	41.5	48.4	53.7	58.4	63.1	60.8	97.6
12-Sep	73.0	75.5	77.7	79.3	85.0	86.0	81.0	78.1	72.7	65.2	58.2	44.6	32.6	29.7	28.8	29.4	31.3	35.2	40.4	49.7	56.4	60.7	73.4	70.6	58.9	86.0
13-Sep	73.0	76.2	82.1	86.5	86.4	85.3	84.5	80.8	74.2	68.5	62.1	56.0	50.8	47.1	47.1	46.2	55.1	60.9	64.0	67.1	72.5	82.2	90.2	93.3	70.5	93.3
14-Sep	96.9	95.3	94.8	94.7	93.5	95.4	95.7	91.3	85.5	77.5	73.0	62.4	61.2	62.7	93.7	93.0	73.9	63.8	68.5	73.2	82.0	91.8	89.0	89.1	83.2	96.9
15-Sep	89.7	92.7	94.8	96.2	97.4	97.4	97.7	94.5	88.0	78.2	66.2	63.0	55.4	52.4	50.2	56.3	61.4	63.0	60.5	60.6	64.9	67.4	70.5	72.1	74.6	97.7
16-Sep	74.1	76.1	76.3	77.9	81.0	80.8	83.1	78.7	76.0	73.0	70.7	67.4	61.1	53.6	47.6	47.4	53.4	57.5	62.9	68.2	70.0	78.0	80.0	83.6	69.9	83.6
17-Sep	87.1	86.7	89.0	95.3	96.0	96.3	96.9	90.2	80.8	71.4	63.7	55.1	47.5	42.3	40.6	39.5	42.1	42.6	47.0	53.0	53.6	57.3	63.6	66.8	66.9	96.9
18-Sep	70.3	73.4	75.4	76.8	76.8	78.9	78.1	73.4	67.8	59.8	52.1	46.8	43.4	41.2	39.4	38.4	38.9	43.7	54.0	65.8	74.0	61.5	56.6	57.8	60.2	78.9
19-Sep	57.0	59.3	66.1	70.9	75.4	78.3	77.5	68.9	65.0	59.0	48.9	40.7	33.8	32.4	31.0	30.2	33.4	44.2	44.7	53.7	60.8	64.2	64.5	67.8	55.3	78.3
20-Sep	72.5	81.1	82.5	87.0	84.8	79.4	82.8	73.9	67.3	60.4	54.2	48.1	42.7	33.9	31.6	32.1	32.4	37.8	43.9	46.8	48.6	52.3	56.9	62.1	58.1	87.0
21-Sep	66.6	75.0	79.4	80.8	87.5	88.3	87.0	74.8	62.2	53.6	45.6	41.8	37.8	30.6	28.7	29.7	32.3	36.1	48.0	71.5	86.8	92.6	89.1	83.8	62.9	92.6
22-Sep	80.1	76.5	77.4	79.3	78.1	78.2	81.1	75.2	67.3	60.5	54.9	47.7	41.7	37.6	35.6	34.5	35.2	40.6	44.7	44.4	46.9	48.2	49.8	48.7	56.8	81.1
23-Sep	47.1	48.6	47.0	48.0	50.4	51.8	54.0	56.8	53.4	44.1	35.0	31.0	32.0	34.0	35.6	34.8	35.4	34.7	40.1	45.4	48.2	41.9	45.1	50.5	43.5	56.8
24-Sep	55.9	57.7	56.7	58.5	59.9	61.0	61.0	60.9	61.0	57.5	45.8	37.5	32.4	28.2	25.6	24.5	24.5	27.0	38.9	52.7	65.2	70.5	65.4	62.3	49.6	70.5
25-Sep	72.0	72.6	81.7	81.1	80.3	81.7	84.1	78.1	68.6	60.7	55.2	50.2	45.9	39.8	38.4	36.7	35.3	38.1	40.1	42.3	49.2	65.3	78.9	79.4	60.7	84.1
26-Sep	83.3	85.1	84.7	84.8	87.8	88.3	89.2	86.2	76.1	66.5	59.5	52.5	47.6	42.9	40.5	37.3	35.7	40.6	41.7	48.6	47.8	49.6	52.8	54.7	61.8	89.2
27-Sep	56.8	71.7	66.9	68.6	63.8	61.5	57.7	51.6	46.6	42.0	38.0	34.5	31.4	28.9	27.7	29.1	28.1	32.3	40.2	38.8	45.1	47.0	51.7	52.4	46.3	71.7
28-Sep	47.6	52.4	56.2	57.8	61.2	63.7	67.2	66.3	58.0	51.4	46.2	41.2	35.1	30.9	29.8	32.4	34.9	45.7	55.3	57.3	45.6	47.8	45.0	44.4	48.9	67.2
29-Sep	43.2	45.8	48.6	46.4	47.2	49.1	48.4	48.6	46.2	39.5	38.3	37.0	34.5	32.9	34.6	34.3	36.0	41.5	46.3	49.6	49.9	50.5	50.7	51.3	43.8	51.3
30-Sep	54.2	56.5	56.6	60.2	65.2	68.1	67.5	69.8	68.8	63.9	58.0	51.3	52.3	50.3	50.2	50.9	52.4	52.3	55.6	59.6	61.9	63.5	77.1	89.8	60.7	89.8
	73.8	76.3	78.2	79.8	80.8	81.8	81.6	77.3	70.9	63.7	57.2	51.3	45.9	41.9	41.4	41.5	42.1	45.4	51.7	58.5	63.1	66.8	69.6	71.1	Diurnal Average	
	96.9	97.0	96.5	96.8	97.5	98.8	99.4	97.0	94.2	86.1	77.8	79.7	74.4	65.5	93.7	93.0	73.9	68.3	73.6	84.6	89.8	92.6	93.3	93.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mildred Lake - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - September 2025

Maximum Speed: 23 km/h on Sep 29 10:00

Maximum Daily Speed Average: 13.9 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 11 04:00

Minimum Daily Speed Average: 0.8 km/h on Sep 16

Maximum Diurnal Speed Average: 5.2 km/h at hour 9

Minimum Diurnal Speed Average: 1.2 km/h at hour 18

Monthly Average Velocity: 3.5 km/h 187.5 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 8 Q_3 = 12 P_{90} = 14 P_{99} = 20

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	N4	ENE2	ESE3	N1	NNE4	NNE4	ESE6	SE6	S6	S4	NNE3	NNW5	N9	N10	N13	N14	N14	N11	N9	N7	N7	N7	N6	NNW7	N4.8	N14
2-Sep	NNW4	W1	NW2	N3	N2	E2	NE3	NNE2	SE3	SSE3	SSE5	SE6	SSE6	SSE10	SSE11	SSE11	SE10	SE11	SE11	ESE8	SE10	SE15	SE15	SE13	SE5.6	SE15
3-Sep	SSE15	SE17	SE15	SSE11	SSE11	SE12	SSE12	SSE12	SSE12	SSE12	SSE10	SSE8	SSE7	NW5	NNW8	N12	N22	N20	N19	NNW15	NNW13	NNW13	NNW17	NW16	ENE1.1	N22
4-Sep	NW15	NW17	NW15	NW14	NW13	NW14	WNW11	NW11	NNW16	NNW16	NNW18	NW17	NNW15	NNW15	N14	NNW13	N12	N8	NNE6	NNE6	NNE5	NE4	SSE1	SW2	NNW10.7	NNW18
5-Sep	ESE2	ESE3	SSE2	E2	S3	SSE4	SSE4	S7	SSE11	SSE10	SE8	SE8	SE6	SSE6	SE7	E8	E8	E7	ENE6	E7	SE9	SSE7	SSE8	SSE10	SE5.6	SSE11
6-Sep	SE10	SSE7	S7	S7	S9	S8	SSE7	S7	SSE7	SSE9	SSE9	SSE9	SSE12	SSE12	SSE12	SSE10	SE9	SE7	E3	NW1	S3	S4	SSE7	SSE3	SSE6.9	SSE12
7-Sep	SSW1	S6	SSE4	SSE5	S6	S6	S2	S3	SSW4	SSW3	NNW3	NNE6	NNW6	N8	N11	N14	N12	N10	N9	NNE6	N6	N5	N6	N8	N2.9	N14
8-Sep	N8	N8	N7	N6	N5	N6	N6	NNE6	N5	NNE5	N4	WNW5	WSW8	W7	WSW6	SW5	SSW2	N1	WNW0	N1	NNE3	E2	SSE2	E3	NNW2.7	N8
9-Sep	SE4	SE3	SSW3	NE0	S7	S6	SSW6	S9	SE8	SSE11	S6	SSE8	SSE10	SSE13	SSE12	SE14	SSE10	S8	S7	SW5	WSW5	S4	S4	S6	S6.5	SE14
10-Sep	SSE5	SE3	SSW1	SW4	SW4	NW2	WNW5	NW7	WNW6	WNW7	NW5	WNW2	WNW5	WNW8	W7	WSW6	W6	NNW9	NNW6	NNW5	NNW2	SSE1	SW2	SSW2	WNW3.1	NNW9
11-Sep	SW1	SE2	NNE2	ESE0	SSE2	SSW2	SE3	S6	SSE6	SE5	SSE5	SE7	SSE11	SSE12	SE12	SSE13	SSE11	SE9	SE9	SE11	SSE11	SSE10	SSE10	SE9	SSE6.7	SSE13
12-Sep	ESE6	SE8	SE11	SSE8	SE6	SE8	SE12	SSE12	SSE10	SSE10	SE11	SSE14	S15	SSW15	SSW15	SSW12	SSW11	S9	S9	SW5	SW4	SSW5	S3	S5	SSE8.4	SSW15
13-Sep	S5	S5	S5	SSW3	S5	SSW5	SSW6	S5	S9	S7	SSE9	S4	WSW2	W2	NNW3	N5	N8	N6	N7	N8	N6	NE0	SSW4	SSW5	SSW1.4	SSE9
14-Sep	SSE2	SSW5	SE3	SW3	SSW3	S3	S6	S6	SSE6	SSE10	SE6	SE6	SE10	ESE10	ESE11	SE5	SE13	SE15	SSE12	SSE10	S3	S4	SE5	S5	SSE6.0	SE15
15-Sep	S6	S6	SSE4	S5	SSE7	S9	SSE7	SSW6	SSW6	W2	WNW6	NW4	W6	W9	NW14	NW20	NW23	NW17	NW13	NW14	NW13	NW12	NW10	NW10	WNW5.9	NW23
16-Sep	NW9	NW9	WNW8	WNW8	NW10	NNW6	NW4	WNW3	WNW8	WNW9	NNE4	NNE3	SSE2	SSW3	SSW6	S5	SE8	ESE7	ESE7	SE6	SE9	SE10	SSE14	SSE11	SW0.8	SSE14
17-Sep	SE10	SE11	SSE9	S5	S7	S6	S6	S6	SSE11	SSE12	SSE13	SSE15	SSE15	SE15	SE16	SE19	SE18	SE18	SE17	SE16	SE14	SE13	SE11	SE13	SSE12.1	SE19
18-Sep	SE14	SE13	SE12	SE11	SE14	SE13	SE17	SSE15	SSE17	S17	SSW14	SW12	SW12	SSW10	SSW12	SSW13	SSW9	SSW6	SSW5	SSW5	SW3	SW6	WSW4	SW4	S9.1	SE17
19-Sep	W6	W8	SW5	SSW6	S7	S6	S8	S9	S8	S8	SSW10	SSW11	SW11	SW11	SW10	SW10	SW7	SSW6	SSW5	WSW1	SW2	SSW5	SSW5	S3	SSW6.4	SSW11
20-Sep	S5	SSE2	S4	SSW3	SSE6	S8	S6	S8	SSE10	SE10	SE11	SE13	SSE13	S16	S16	S16	S15	S12	SSE10	SSE11	SSE13	SSE11	SE9	SE10	SSE9.4	S16
21-Sep	SSE6	SSW4	S7	S4	S4	SW5	SW5	SW6	SW4	WSW6	W5	N0	WSW3	WNW4	NW9	W11	W13	W13	W14	WNW12	W3	SSW6	SW6	SW13	WSW5.0	W14
22-Sep	SW13	WSW12	SW12	SW14	WSW13	SW12	SW13	SW12	SW11	SW11	SW13	SW14	SW14	SW15	SW15	SW12	SW12	S9	S11	S15	S15	S15	S13	S12	SSW11.9	S15
23-Sep	S13	S7	S12	S10	S11	S12	S9	S7	S9	WSW11	WSW12	SW15	SW16	SW14	SW13	SSW15	SSW14	SSW13	SSW11	SSW7	SSW6	SW11	SSW7	S8	SSW10.3	SW16
24-Sep	SSE6	SSE8	SSE8	SSE7	S7	SSW5	SSW8	SW9	SW12	SW11	WSW10	WNW9	WNW10	W10	WNW11	WNW10	NW11	NW10	NW6	SW4	SW3	SSW4	SW6	SW6	WSW5.1	SW12
25-Sep	S4	S6	S6	S8	S8	SSE5	S4	SSE8	SSE11	SSE12	SSE12	ESE9	SE11	SE13	SE8	SSE11	S14	S10	SSE12	S14	SSW12	SW16	WSW10	SW8	S8.3	SW16
26-Sep	SW10	SW9	SW9	SW8	SW6	SW6	SSW7	SSW4	SW10	W8	W9	W9	WNW13	W12	WSW12	WSW13	W8	SE2	SW9	SW9	SW10	SW7	S7	SSE9	SW7.3	WNW13
27-Sep	S6	SSE7	SSE13	S13	SW14	SW15	WSW16	WSW16	W20	W17	W15	WSW13	WSW14	WSW15	WSW14	WSW12	WSW13	W10	WNW5	W9	SW8	SW5	S7	SSW7	WSW10.0	W20
28-Sep	SW11	SW7	SW8	SW7	WSW5	WSW9	SW7	WSW9	WSW8	WSW5	S6	SSE8	S8	S10	S8	SSW8	SSW6	SSE5	SE3	E6	E7	E6	ESE6	ESE8	SSW4.6	SW11
29-Sep	SE15	SE12	ESE11	SE16	SE17	SE14	SE18	SE18	SE16	SE23	SSE22	SE21	SSE20	SSE20	SSE16	SSE14	SSE12	SSE9	SSE8	SE8	ESE6	ESE10	ESE11	ESE9	SE13.9	SE23
30-Sep	SE6	SE8	SE8	SSE0	NNW7	NW4	N7	N4	NW4	NNW7	N8	N12	N14	N12	NNE11	NNE12	NNE10	N12	N14	N9	N8	N9	N8	N10	N6.7	N14
	S3.6	S3.6	S4.0	S3.9	S4.0	S4.0	S4.6	S5.0	S5.2	S4.6	S3.9	S3.8	SSW4.5	SSW4.4	SSW3.7	SSW3.4	SSW2.5	S1.2	S1.4	S1.4	S2.0	S3.1	S3.3	S3.4	Diurnal Average	
	SSE15	SE17	NW15	SE16	SE17	SW15	SE18	SE18	W20	SE23	SSE22	SE21	SSE20	SSE20	SE16	NW20	NW23	N20	N19	SE16	S15	SW16	NNW17	NW16	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 27 09:00

Minimum Value: 0 km/h on Sep 8 21:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

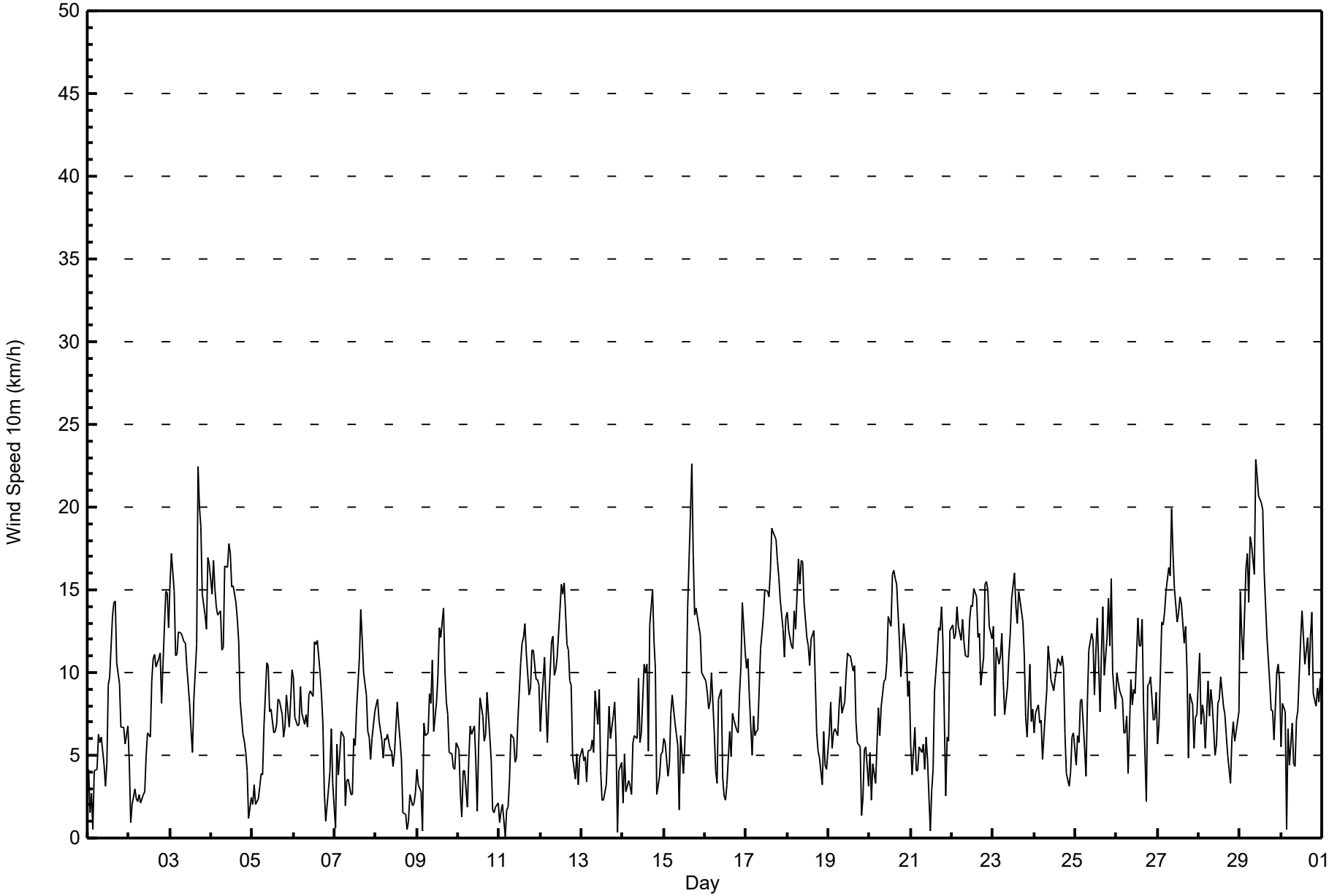
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	2	2	2	1	1	2	4	2	2	1	3	3	3	4	4	4	3	2	1	1	1	1	1	4
2-Sep	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	2	4	4	4	3	4
3-Sep	3	3	3	3	3	2	3	3	3	2	2	2	2	3	3	4	6	5	5	4	3	3	3	3	6
4-Sep	3	3	4	3	3	3	3	3	4	4	4	4	4	3	4	4	3	3	2	1	1	1	1	1	4
5-Sep	1	1	1	1	2	1	1	2	3	2	2	2	2	3	3	2	2	2	1	1	2	2	1	2	3
6-Sep	2	2	1	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	1	2	2	1	2	2	3
7-Sep	1	1	1	1	1	2	2	1	2	1	2	2	2	3	4	4	4	2	2	2	2	1	1	2	4
8-Sep	2	2	2	2	1	1	2	2	2	2	2	2	3	2	2	2	2	1	1	1	0	1	1	1	3
9-Sep	1	1	2	2	2	1	1	2	3	3	2	2	2	3	3	3	3	2	2	2	2	1	1	1	3
10-Sep	2	2	2	1	1	1	2	2	2	2	3	2	3	3	3	3	3	2	1	1	1	1	1	1	3
11-Sep	1	1	1	1	1	1	1	2	2	1	1	2	2	2	3	3	3	2	2	2	2	2	2	2	3
12-Sep	1	2	3	4	2	2	2	3	3	2	2	4	4	4	4	4	3	2	2	2	1	1	1	1	4
13-Sep	1	2	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	1	1	2	2	1	2	2	2
14-Sep	1	2	1	2	2	1	2	1	1	3	1	3	3	3	3	2	4	3	3	2	2	2	1	1	4
15-Sep	1	2	2	2	1	2	2	2	2	1	2	2	2	4	4	5	6	5	4	4	3	3	2	3	6
16-Sep	2	2	2	2	2	2	1	2	3	2	2	2	3	2	2	2	2	2	1	1	2	2	4	3	4
17-Sep	2	2	3	1	1	1	1	2	3	3	3	3	3	3	4	4	4	4	4	3	3	3	3	3	4
18-Sep	3	3	3	3	4	4	4	3	4	5	4	4	3	3	4	4	3	2	1	1	2	2	1	1	5
19-Sep	3	3	2	2	2	1	1	2	2	2	3	3	4	4	4	3	2	1	2	1	2	1	1	1	4
20-Sep	2	1	2	2	2	2	1	2	2	2	2	3	3	4	4	4	4	3	2	2	2	2	2	2	4
21-Sep	2	2	1	1	2	2	2	2	2	2	2	2	2	2	3	4	4	4	5	3	2	2	3	4	5
22-Sep	4	4	4	4	4	4	4	4	4	4	4	5	4	5	5	5	5	3	3	3	3	3	3	2	5
23-Sep	3	3	2	3	3	3	3	2	2	5	5	5	5	5	4	5	5	4	3	3	2	3	3	2	5
24-Sep	1	2	2	2	2	2	3	3	4	4	3	3	4	4	4	3	4	3	1	1	1	1	2	2	4
25-Sep	2	2	2	1	2	2	3	3	3	3	3	2	3	3	2	3	3	2	3	4	4	6	4	3	6
26-Sep	3	3	3	3	2	2	2	2	3	3	3	4	4	4	4	4	5	2	3	3	3	2	2	2	5
27-Sep	2	2	3	3	5	5	6	6	7	6	6	5	5	5	5	4	5	5	2	3	3	2	3	3	7
28-Sep	4	2	3	3	3	2	2	2	3	2	2	2	3	3	3	3	2	1	2	2	1	1	1	3	4
29-Sep	3	4	3	5	4	4	5	6	5	6	6	5	5	5	4	3	3	2	1	2	2	3	3	3	6
30-Sep	3	3	2	2	3	2	1	2	2	2	2	3	4	3	3	3	3	3	3	2	2	2	2	2	4
	4	4	4	5	5	5	6	6	7	6	6	5	5	5	5	5	6	5	5	4	4	6	4	4	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	181	25.14	25.14
6 - 11	349	48.47	73.61
12 - 19	180	25.00	98.61
20 - 28	10	1.39	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Mildred Lake - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	12	11	4	1	5	4	12	21	30	26	20	7	5	8	7	8	181
6 - 11	32	8	0	1	7	15	46	64	62	23	32	11	15	14	10	9	349
12 - 19	14	1	0	0	0	0	36	32	18	10	24	13	6	2	14	10	180
20 - 28	2	0	0	0	0	0	2	3	0	0	0	0	1	0	2	0	10
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	60	20	4	2	12	19	96	120	110	59	76	31	27	24	33	27	720

Total Number of Valid Hours: 720

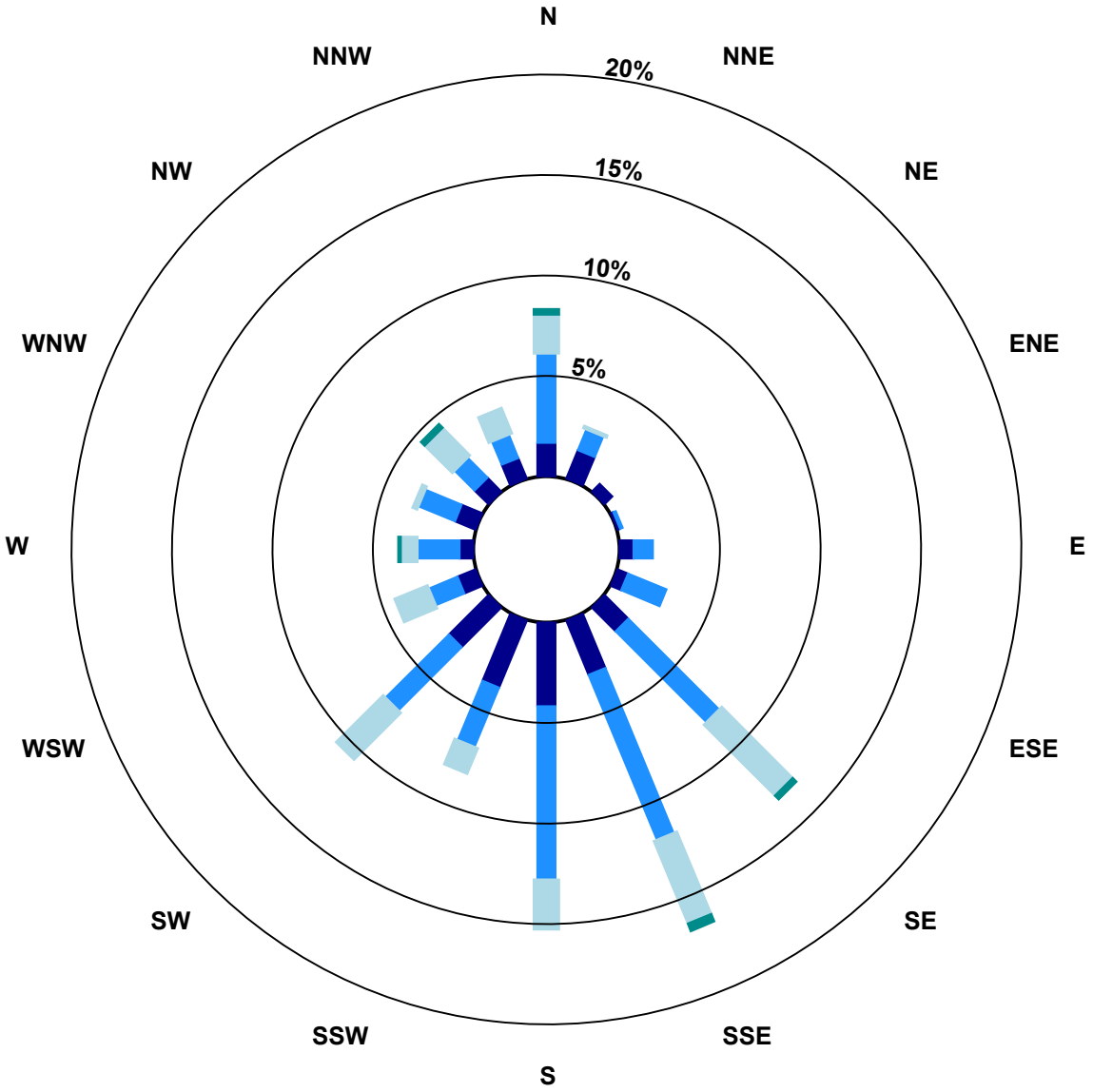
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Mildred Lake



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 720

Direction of Maximum Speed: 142 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 141.5 deg on Sep 29

Direction of Minimum Speed: 104 deg on Sep 11 04:00

Direction of Minimum Daily Speed Average: 0.8 deg on Sep 16

Monthly Average Direction: 187.5 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	354	62	102	358	20	30	116	139	189	181	17	341	5	8	4	359	359	3	5	357	356	356	356	346	7.7
2-Sep	335	281	326	352	8	88	44	31	135	155	160	145	161	148	152	149	142	142	143	114	131	144	144	141	139.3
3-Sep	147	142	144	151	152	144	154	158	161	163	159	161	148	304	341	357	351	351	350	348	338	334	330	324	59.5
4-Sep	314	319	321	315	317	318	301	304	327	336	334	324	333	347	350	344	349	353	29	24	29	44	162	214	331.6
5-Sep	107	113	168	88	175	147	150	173	148	154	136	126	127	148	125	101	90	82	71	96	136	156	166	154	132.2
6-Sep	142	158	190	182	185	181	166	187	156	147	164	150	152	154	151	150	142	143	101	307	190	186	159	167	160.2
7-Sep	197	187	155	167	179	182	185	185	198	199	345	21	342	349	354	2	8	6	7	15	4	353	359	2	1.8
8-Sep	4	3	11	356	359	354	2	13	1	21	359	286	244	265	258	230	193	9	288	356	18	81	162	96	343.2
9-Sep	125	139	198	46	181	186	195	171	138	154	179	166	163	153	152	146	168	180	185	229	240	185	187	188	169.1
10-Sep	165	141	197	228	230	307	282	305	298	285	318	284	287	299	272	257	276	338	340	348	348	162	230	208	286.6
11-Sep	219	132	14	104	168	193	133	176	158	145	163	143	153	154	141	151	148	140	140	141	153	162	149	138	149.3
12-Sep	115	124	144	151	141	141	144	147	150	147	138	164	188	192	197	202	192	176	176	225	220	200	177	183	167.3
13-Sep	187	182	190	194	189	201	202	186	177	179	155	180	253	274	332	3	357	6	359	356	358	35	196	204	201.8
14-Sep	168	204	146	225	201	178	188	169	160	163	132	131	127	108	114	132	144	143	154	168	188	172	140	183	151.5
15-Sep	184	172	164	182	165	180	166	199	211	277	296	309	260	280	305	307	311	322	309	310	315	306	304	307	288.7
16-Sep	314	307	303	299	315	333	315	292	291	298	26	20	161	204	210	179	125	116	118	132	133	139	150	148	214.1
17-Sep	135	145	158	181	181	175	189	187	152	147	160	152	147	139	141	143	140	143	142	140	141	139	133	130	147.1
18-Sep	136	137	145	137	133	144	146	155	166	181	198	217	217	213	196	197	210	203	197	194	231	224	238	220	176.1
19-Sep	264	277	224	203	190	174	170	177	178	188	208	197	227	231	232	218	222	201	203	253	230	192	194	173	208.5
20-Sep	188	164	181	195	166	183	185	178	156	146	137	143	155	185	188	176	185	172	156	155	152	150	141	142	164.9
21-Sep	153	192	172	191	171	215	217	224	218	255	271	11	242	292	313	277	274	277	281	285	263	199	227	224	248.8
22-Sep	228	237	233	228	238	231	222	217	225	234	225	222	217	222	228	219	222	191	177	176	175	178	179	179	212.7
23-Sep	183	187	180	181	182	187	175	187	188	240	243	227	221	220	217	213	212	213	200	206	210	224	213	170	205.4
24-Sep	166	157	161	160	169	210	209	223	221	236	244	284	282	278	287	301	307	322	318	233	235	208	227	222	244.0
25-Sep	176	183	174	185	171	165	173	167	157	150	151	120	145	146	140	153	171	180	168	174	199	236	256	236	172.6
26-Sep	222	224	228	223	221	222	208	201	220	275	269	262	291	279	252	241	267	126	218	224	231	218	187	152	235.4
27-Sep	188	166	152	175	227	236	240	250	262	266	260	254	258	244	242	245	238	270	294	276	230	236	185	212	238.9
28-Sep	230	236	233	235	240	242	226	258	257	242	178	150	171	187	186	205	198	152	135	93	101	99	114	117	196.7
29-Sep	143	133	118	138	138	132	139	131	131	142	147	144	155	161	167	158	167	158	156	127	118	108	115	122	141.5
30-Sep	139	136	138	157	345	316	349	8	326	345	349	359	351	9	24	22	13	1	353	1	10	359	355	351	4.1
	176.6	174.2	174.3	187.9	187.5	190.7	184.8	188.4	188.8	190.8	191.2	183.9	198.0	203.6	206.8	203.5	211.8	175.7	171.6	176.0	173.5	180.6	174.9	172.6	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 99 deg on Sep 10 12:00

Minimum Value: 8 deg on Sep 2 00:00

Percentiles: P_1 = 10 P_{10} = 13 Q_1 = 16 Median = 21 Q_3 = 29 P_{90} = 44 P_{99} = 87

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

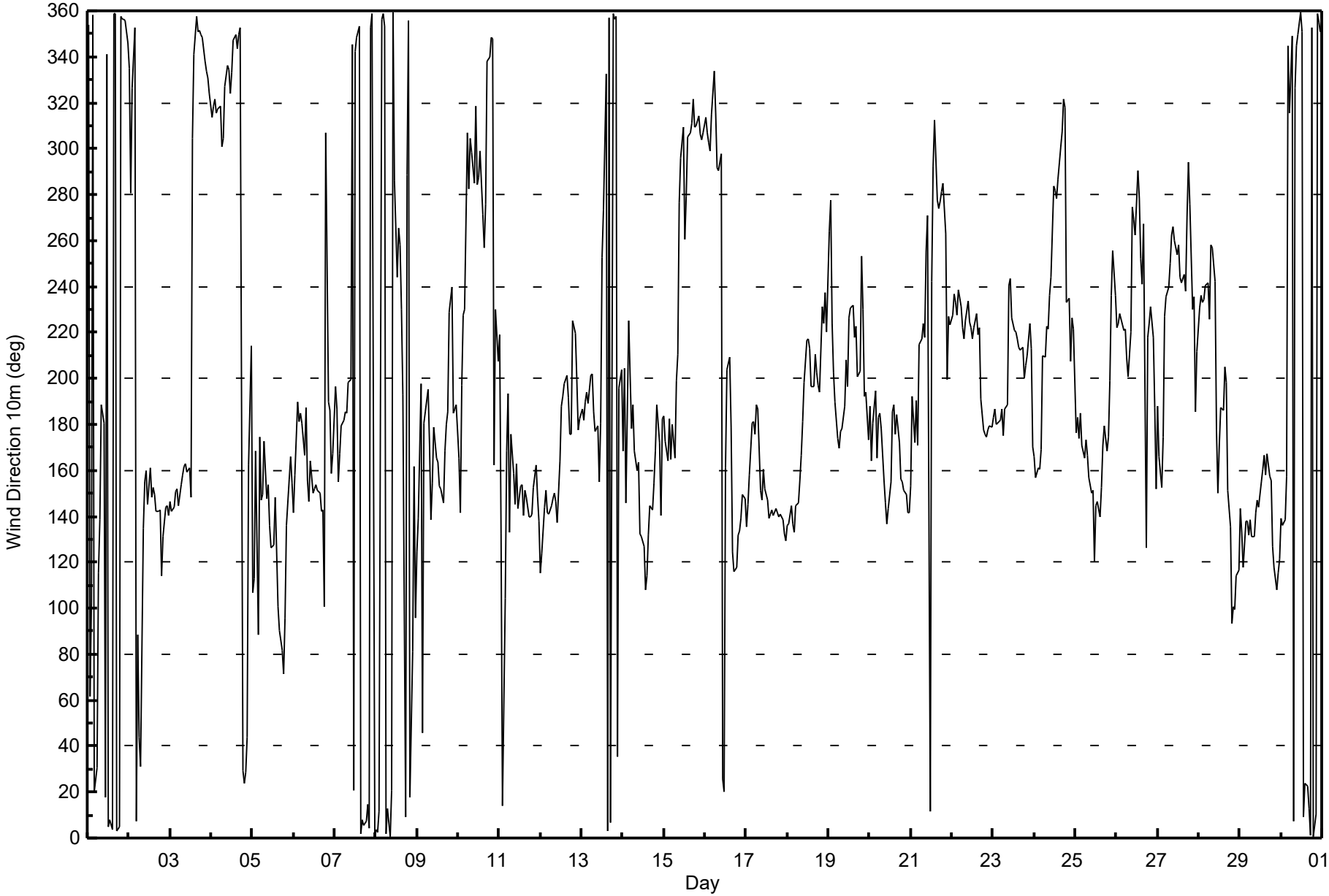
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	21	81	54	82	37	21	24	38	26	36	72	46	32	28	24	21	18	18	18	15	13	10	10	8	82
2-Sep	16	47	46	19	44	35	21	34	43	43	30	30	38	21	17	20	19	15	14	16	19	13	14	16	47
3-Sep	11	12	14	16	16	13	16	16	16	17	17	18	30	58	19	20	18	17	16	14	13	13	11	11	58
4-Sep	14	12	12	13	13	13	19	19	16	19	20	18	18	19	21	17	17	19	21	12	12	11	61	42	61
5-Sep	54	21	54	35	40	21	28	24	14	18	26	27	45	46	40	28	17	12	8	15	16	13	12	17	54
6-Sep	13	21	13	16	12	15	18	17	29	24	24	28	19	20	20	18	18	13	22	78	21	11	11	44	78
7-Sep	84	14	21	16	14	19	80	35	26	51	73	38	33	35	25	22	21	19	18	19	19	13	14	14	84
8-Sep	16	16	21	16	16	17	23	23	25	30	61	52	31	38	39	39	84	57	45	31	15	40	68	54	84
9-Sep	17	45	94	78	14	15	16	20	26	17	33	19	19	17	15	16	19	15	23	39	28	25	26	13	94
10-Sep	17	62	88	29	26	48	27	22	21	25	71	99	55	32	34	55	39	14	9	9	13	73	44	56	99
11-Sep	63	54	29	92	50	57	16	16	26	34	36	30	18	16	19	19	15	15	14	14	13	14	13	17	92
12-Sep	16	18	15	44	25	12	12	14	17	17	18	23	18	21	22	26	17	13	13	40	34	20	17	21	44
13-Sep	19	25	20	30	16	15	14	21	19	24	18	68	75	66	49	23	16	18	13	34	32	87	17	27	87
14-Sep	47	15	23	47	26	35	16	18	20	21	25	37	21	22	25	25	14	13	15	13	58	25	15	22	58
15-Sep	13	18	51	40	12	18	17	30	32	87	30	53	35	35	22	18	17	12	18	16	13	16	16	16	87
16-Sep	13	16	18	17	15	16	29	38	24	27	63	75	97	75	39	56	24	16	12	12	11	14	12	15	97
17-Sep	16	13	18	15	12	15	13	23	21	18	17	15	16	19	17	15	15	14	14	14	14	16	18	18	23
18-Sep	17	17	16	20	18	17	13	15	16	16	22	28	26	27	24	22	25	17	16	19	35	27	25	26	35
19-Sep	30	20	28	29	23	12	11	13	18	20	25	22	30	29	31	25	23	18	23	85	55	15	17	24	85
20-Sep	15	51	36	25	17	13	15	17	18	17	17	19	17	19	20	19	17	14	12	12	12	11	15	12	51
21-Sep	17	38	16	22	37	21	22	21	35	36	42	94	68	58	27	21	20	20	20	18	74	37	32	23	94
22-Sep	24	25	24	23	24	25	23	23	28	28	25	24	26	26	26	27	25	22	14	12	13	14	14	12	28
23-Sep	15	29	18	17	15	20	17	25	18	35	29	27	25	24	24	23	24	23	20	20	24	23	34	17	35
24-Sep	17	21	18	13	20	32	34	23	25	29	35	34	30	30	26	25	21	11	11	36	32	10	15	26	36
25-Sep	55	22	22	12	16	20	39	20	17	14	17	27	22	17	24	19	15	14	13	16	24	27	29	33	55
26-Sep	23	25	27	25	28	26	23	53	26	32	32	39	24	27	33	27	60	75	22	23	24	23	22	15	75
27-Sep	32	23	15	19	27	23	24	27	23	24	28	28	30	29	27	28	28	27	28	27	29	29	26	24	32
28-Sep	27	28	26	35	46	20	30	20	32	39	39	25	30	26	28	33	23	10	18	15	13	19	15	19	46
29-Sep	14	20	19	17	16	18	17	20	21	16	14	16	17	17	16	19	15	13	12	17	19	16	18	18	21
30-Sep	41	18	12	93	38	35	24	33	36	19	31	20	19	21	22	22	21	17	15	17	20	16	14	13	93
	84	81	94	93	50	57	80	53	43	87	73	99	97	75	49	56	84	75	45	85	74	87	68	56	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS03
LOWER CAMP METEOROLOGY
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
SEPTEMBER 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	720	0	0	100	29.4	-	21.0	-
Temperature 45 m (C) Average	720	0	0	100	30.7	-	21.6	-
Temperature 100 m (C) Average	720	0	0	100	28.8	-	21.8	-
Temperature 163 m (C) Average	720	0	0	100	28.1	-	21.9	-
Relative Humidity 20 m (%) Average	720	0	0	100	98.6	-	81.0	-
Relative Humidity 45 m (%) Average	664	0	56	92.22	99.5	-	72.9	-
Relative Humidity 100 m (%) Average	720	0	0	100	98.8	-	76.2	-
Relative Humidity 163 m (%) Average	720	0	0	100	96.2	-	74.4	-
Wind Speed 20 m (km/h) Average	720	0	0	100	27	-	16.0	-
Wind Speed 45 m (km/h) Average	720	0	0	100	35	-	23.0	-
Wind Speed 100 m (km/h) Average	720	0	0	100	43	-	31.0	-
Wind Speed 163 m (km/h) Average	720	0	0	100	52	-	36.0	-
Wind Direction 20 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 45 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 100 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 163 m (deg) Average	720	0	0	100	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	0	0	100	0.4	-	-0.1	-
Vertical Wind Speed 45 m (km/h) Average	720	0	0	100	1.4	-	0.4	-
Vertical Wind Speed 100 m (km/h) Average	720	0	0	100	3.5	-	1.1	-
Vertical Wind Speed 163 m (km/h) Average	720	0	0	100	5.2	-	1.7	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
Temperature 20 m (C) Average	720	15.72	4.8	-	3.6	10.1	12.5	15.3	18.6	22.6	29.4
Temperature 45 m (C) Average	720	16.19	5.2	-	3.6	10.2	12.7	15.7	19.3	23.5	30.7
Temperature 100 m (C) Average	720	15.93	4.6	-	4.1	10.7	12.8	15.7	18.7	22.5	28.8
Temperature 163 m (C) Average	720	15.89	4.4	-	4.6	10.7	12.6	15.6	18.5	22.4	28.1
Relative Humidity 20 m (%) Average	720	61.69	20	-	24.2	34.4	44.7	61.1	78.2	90.1	98.6
Relative Humidity 45 m (%) Average	664	56.28	20	-	21.3	30.4	39.7	54.9	72.8	85.1	99.5
Relative Humidity 100 m (%) Average	720	57.45	18	-	23.5	33.1	42.5	57.3	71.5	81.6	98.8
Relative Humidity 163 m (%) Average	720	54.4	16.7	-	23.3	32.5	40.2	54	67.7	77	96.2
Wind Speed 20 m (km/h) Average	720	9	6	-	0	2	4	8	13	18	27
Wind Speed 45 m (km/h) Average	720	12.6	7	-	0	3	7	11	18	24	35
Wind Speed 100 m (km/h) Average	720	16.8	9	-	0	6	10	15	24	30	43
Wind Speed 163 m (km/h) Average	720	20.1	11	-	0	7	12	19	27	35	52
Wind Direction 20 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	-0.24	0.3	-	-1.2	-0.7	-0.4	-0.2	0	0.1	0.4
Vertical Wind Speed 45 m (km/h) Average	720	0.21	0.3	-	-0.9	-0.2	0	0.2	0.4	0.6	1.4
Vertical Wind Speed 100 m (km/h) Average	720	0.14	0.6	-	-1.7	-0.4	-0.2	0	0.4	0.9	3.5
Vertical Wind Speed 163 m (km/h) Average	720	0.72	0.9	-	-1.1	-0.1	0.1	0.5	1.2	2	5.2

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Relative Humidity 45m	01 Sep 2025 01:00	01 Sep 2025 05:00	5	Sensor operated out of range
Relative Humidity 45m	01 Sep 2025 07:00	01 Sep 2025 08:00	2	Sensor operated out of range
Relative Humidity 45m	02 Sep 2025 01:00	02 Sep 2025 08:00	8	Sensor operated out of range
Relative Humidity 45m	03 Sep 2025 21:00	03 Sep 2025 21:00	1	Sensor operated out of range
Relative Humidity 45m	04 Sep 2025 23:00	05 Sep 2025 08:00	10	Sensor operated out of range
Relative Humidity 45m	08 Sep 2025 03:00	08 Sep 2025 06:00	4	Sensor operated out of range
Relative Humidity 45m	08 Sep 2025 22:00	08 Sep 2025 23:00	2	Sensor operated out of range
Relative Humidity 45m	09 Sep 2025 04:00	09 Sep 2025 07:00	4	Sensor operated out of range
Relative Humidity 45m	11 Sep 2025 03:00	11 Sep 2025 07:00	5	Sensor operated out of range
Relative Humidity 45m	14 Sep 2025 02:00	14 Sep 2025 08:00	7	Sensor operated out of range
Relative Humidity 45m	14 Sep 2025 15:00	14 Sep 2025 15:00	1	Sensor operated out of range
Relative Humidity 45m	15 Sep 2025 06:00	15 Sep 2025 07:00	2	Sensor operated out of range
Relative Humidity 45m	17 Sep 2025 04:00	17 Sep 2025 07:00	4	Sensor operated out of range
Relative Humidity 45m	01 Oct 2025 00:00	01 Oct 2025 00:00	1	Sensor operated out of range

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - September 2025

Maximum Value: 29.4 C on Sep 12 17:00

Maximum Daily Average: 21.0 C on Sep 12

Minimum Value: 3.6 C on Sep 25 07:00

Minimum Daily Average: 11.3 C on Sep 25

Maximum Diurnal Average: 21.4 C at hour 16

Minimum Diurnal Average: 10.7 C at hour 7

Monthly Average: 15.72 C

Percentiles: P_1 = 5.3 P_{10} = 10.1 Q_1 = 12.5 Median = 15.3 Q_3 = 18.6 P_{90} = 22.6 P_{99} = 27.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

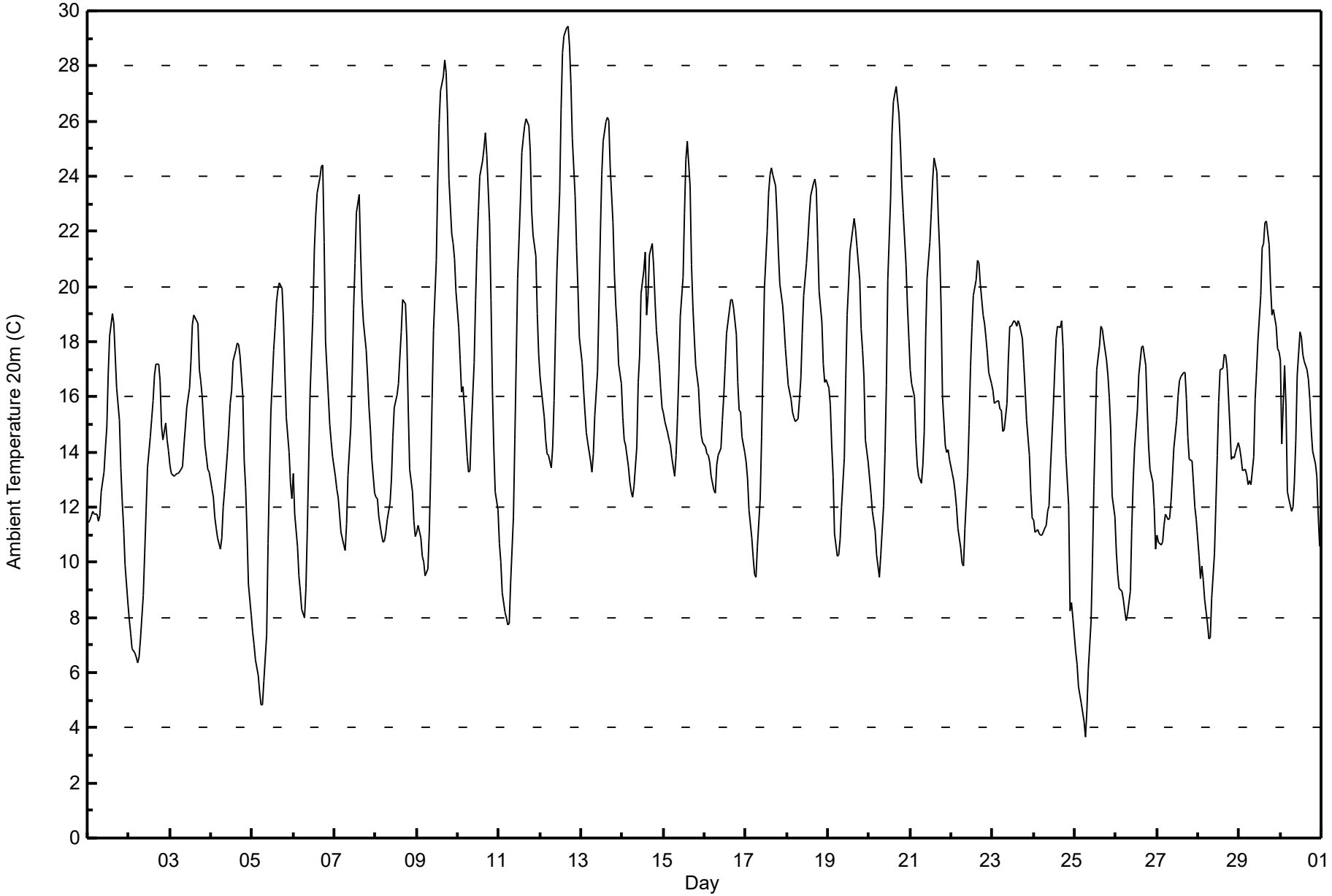
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.5	11.6	11.7	11.8	11.7	11.7	11.5	11.7	12.6	13.3	14.2	14.9	16.8	18.2	19.0	18.6	17.5	16.3	15.2	13.4	12.2	11.3	9.9	8.5	13.5	19.0
2-Sep	7.9	7.4	6.8	6.7	6.6	6.4	6.6	7.2	8.8	10.3	11.8	13.4	14.6	15.2	15.9	16.8	17.2	17.2	16.6	14.9	14.5	15.1	14.4	14.1	11.9	17.2
3-Sep	13.5	13.2	13.1	13.1	13.2	13.2	13.4	13.5	14.2	14.9	15.6	16.3	17.3	18.6	19.0	18.8	18.7	17.0	16.6	16.0	14.2	13.8	13.4	13.3	15.2	19.0
4-Sep	12.7	12.4	11.7	11.2	10.9	10.5	10.9	12.0	12.6	14.0	14.8	15.8	16.2	17.3	17.7	17.9	17.9	17.5	16.0	13.7	12.7	11.1	9.2	8.1	13.5	17.9
5-Sep	7.5	7.0	6.5	5.9	5.3	4.8	4.8	5.7	7.4	10.7	13.2	15.5	17.7	18.5	19.4	19.9	20.1	19.9	18.8	16.9	15.3	14.0	12.9	12.3	12.5	20.1
6-Sep	13.2	11.8	10.6	9.5	8.9	8.3	8.0	9.1	11.2	13.7	16.2	19.0	21.3	22.6	23.4	23.9	24.4	24.4	21.6	18.0	16.0	15.0	14.4	13.8	15.8	24.4
7-Sep	13.1	12.7	12.3	11.8	11.1	10.6	10.4	11.4	13.2	14.9	16.8	19.2	20.8	22.7	23.3	21.3	19.6	18.7	17.7	16.7	15.6	14.8	13.7	12.5	15.6	23.3
8-Sep	12.3	12.3	11.6	11.0	10.7	10.8	11.1	11.5	12.2	13.0	14.5	15.6	16.1	16.5	17.4	18.4	19.5	19.4	18.1	15.5	13.4	12.5	11.5	10.9	14.0	19.5
9-Sep	11.1	11.3	10.9	10.2	10.0	9.5	9.8	11.2	13.3	15.9	18.4	20.9	23.8	25.9	27.1	27.6	28.2	27.7	26.3	23.9	21.9	21.5	21.0	19.8	18.6	28.2
10-Sep	18.5	17.3	16.2	16.4	15.6	13.8	13.3	13.3	14.9	17.3	19.5	21.4	22.7	24.0	24.5	25.0	25.6	24.8	22.3	19.5	16.3	14.1	12.5	11.9	18.4	25.6
11-Sep	10.7	10.0	8.9	8.2	8.0	7.7	7.8	9.3	11.6	14.4	17.3	20.3	23.1	24.8	25.4	25.8	26.1	25.8	24.9	22.7	21.9	21.1	19.0	17.5	17.2	26.1
12-Sep	16.7	16.2	15.2	14.4	13.9	13.9	13.4	14.2	15.9	18.4	20.5	23.4	26.4	28.5	29.1	29.4	29.4	28.7	27.4	25.4	23.3	21.5	19.9	18.2	21.0	29.4
13-Sep	17.2	16.3	15.5	14.7	14.3	13.7	13.3	13.9	15.3	16.9	19.4	21.9	24.0	25.3	26.0	26.1	26.0	24.4	22.3	20.5	19.3	18.5	17.2	16.5	19.1	26.1
14-Sep	15.3	14.4	14.2	13.5	12.9	12.6	12.3	12.8	14.2	16.5	17.5	19.8	20.6	21.3	19.0	19.7	21.1	21.6	20.8	19.5	18.4	17.2	16.3	15.6	17.0	21.6
15-Sep	15.4	15.1	14.7	14.4	14.2	13.8	13.1	13.9	15.3	16.9	18.9	20.4	22.7	24.6	25.3	23.7	20.8	19.2	18.2	17.1	16.3	15.3	14.6	14.3	17.4	25.3
16-Sep	14.2	13.9	13.9	13.6	13.1	12.6	12.5	13.5	13.9	14.1	15.2	16.0	17.2	18.3	19.1	19.5	19.5	19.2	18.3	16.5	15.5	15.5	14.5	14.0	15.6	19.5
17-Sep	13.6	13.0	11.9	10.9	10.2	9.5	9.5	10.6	12.3	14.5	17.2	19.9	22.0	23.4	24.0	24.3	24.0	23.7	22.6	21.2	20.1	19.3	18.6	17.8	17.3	24.3
18-Sep	17.1	16.4	15.9	15.5	15.3	15.1	15.2	15.9	16.7	18.3	19.7	20.8	21.7	22.6	23.3	23.7	23.9	23.5	21.7	19.8	18.7	17.2	16.5	16.6	18.8	23.9
19-Sep	16.3	15.7	14.2	13.1	11.1	10.2	10.3	10.9	12.0	13.8	16.6	19.0	20.0	21.3	22.1	22.5	22.1	21.5	20.2	18.5	17.7	16.7	14.4	13.7	16.4	22.5
20-Sep	13.1	12.5	11.9	11.1	10.2	9.9	9.5	10.3	12.0	13.9	16.4	20.2	23.2	25.6	26.7	27.0	27.2	26.2	25.1	23.7	22.7	20.8	19.3	18.2	18.2	27.2
21-Sep	17.0	16.5	16.0	14.4	13.5	13.1	12.9	13.5	14.8	18.2	20.3	21.6	22.7	23.9	24.7	24.1	22.5	21.3	19.3	16.0	14.3	14.0	14.1	13.7	17.6	24.7
22-Sep	13.2	12.9	12.6	12.0	11.2	10.5	10.0	9.9	11.3	13.3	15.0	17.1	18.5	19.7	20.3	20.9	20.9	20.1	18.9	18.7	18.2	17.6	16.9	16.5	15.7	20.9
23-Sep	16.2	15.8	15.8	15.9	15.5	15.5	14.8	14.8	15.8	17.4	18.5	18.6	18.7	18.7	18.5	18.7	18.6	18.1	17.2	16.2	15.2	13.9	12.5	11.6	16.4	18.7
24-Sep	11.5	11.1	11.2	11.0	11.0	11.0	11.2	11.3	11.8	12.0	13.4	15.5	16.9	18.1	18.6	18.5	18.7	17.8	15.6	13.9	12.1	8.2	8.5	8.0	13.2	18.7
25-Sep	6.8	6.3	5.5	5.2	4.9	4.2	3.6	4.6	6.1	7.9	10.1	12.7	14.9	17.0	17.9	18.6	18.5	18.0	17.3	16.8	16.0	14.8	12.4	11.6	11.3	18.6
26-Sep	10.4	9.6	9.0	8.9	8.6	8.2	7.9	8.1	8.9	11.2	12.9	14.1	15.5	16.8	17.3	17.8	17.9	17.1	15.6	14.2	13.4	12.9	12.0	10.5	12.5	17.9
27-Sep	11.0	10.7	10.6	10.7	11.3	11.7	11.5	11.6	12.2	13.1	14.1	15.2	16.0	16.6	16.7	16.9	16.9	15.9	14.6	13.7	13.7	12.8	12.0	11.6	13.4	16.9
28-Sep	10.2	9.4	9.9	9.4	8.6	7.8	7.2	7.3	8.7	10.3	12.1	13.9	15.8	17.0	17.0	17.6	17.5	17.0	14.9	13.7	13.8	13.8	14.0	14.3	12.5	17.6
29-Sep	14.1	13.8	13.3	13.4	13.2	12.8	12.9	12.8	13.9	15.9	16.9	18.0	19.7	21.4	21.5	22.3	22.4	21.5	20.0	18.9	19.2	18.6	17.7	17.6	17.2	22.4
30-Sep	17.4	14.3	17.1	15.7	12.6	12.3	11.8	12.0	12.9	14.4	16.8	18.4	18.2	17.6	17.3	17.0	16.6	15.9	14.8	14.0	13.6	13.1	11.7	10.6	14.8	18.4
	13.3	12.7	12.3	11.8	11.3	10.9	10.7	11.3	12.5	14.3	16.1	18.0	19.5	20.7	21.2	21.4	21.3	20.7	19.3	17.7	16.5	15.5	14.5	13.8	Diurnal Average	
	18.5	17.3	17.1	16.4	15.6	15.5	15.2	15.9	16.7	18.4	20.5	23.4	26.4	28.5	29.1	29.4	29.4	28.7	27.4	25.4	23.3	21.5	21.0	19.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	70	9.72	9.72
10 - 20	522	72.50	82.22
> 20	128	17.78	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 30.7 C on Sep 12 16:00
Maximum Daily Average: 21.6 C on Sep 12

Minimum Value: 3.6 C on Sep 25 07:00
Minimum Daily Average: 11.4 C on Sep 25
Maximum Diurnal Average: 22.5 C at hour 16
Minimum Diurnal Average: 10.7 C at hour 6
Monthly Average: 16.19 C
Percentiles: P_1 = 5.1 P_{10} = 10.2 Q_1 = 12.7 Median = 15.7 Q_3 = 19.3 P_{90} = 23.5 P_{99} = 28.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

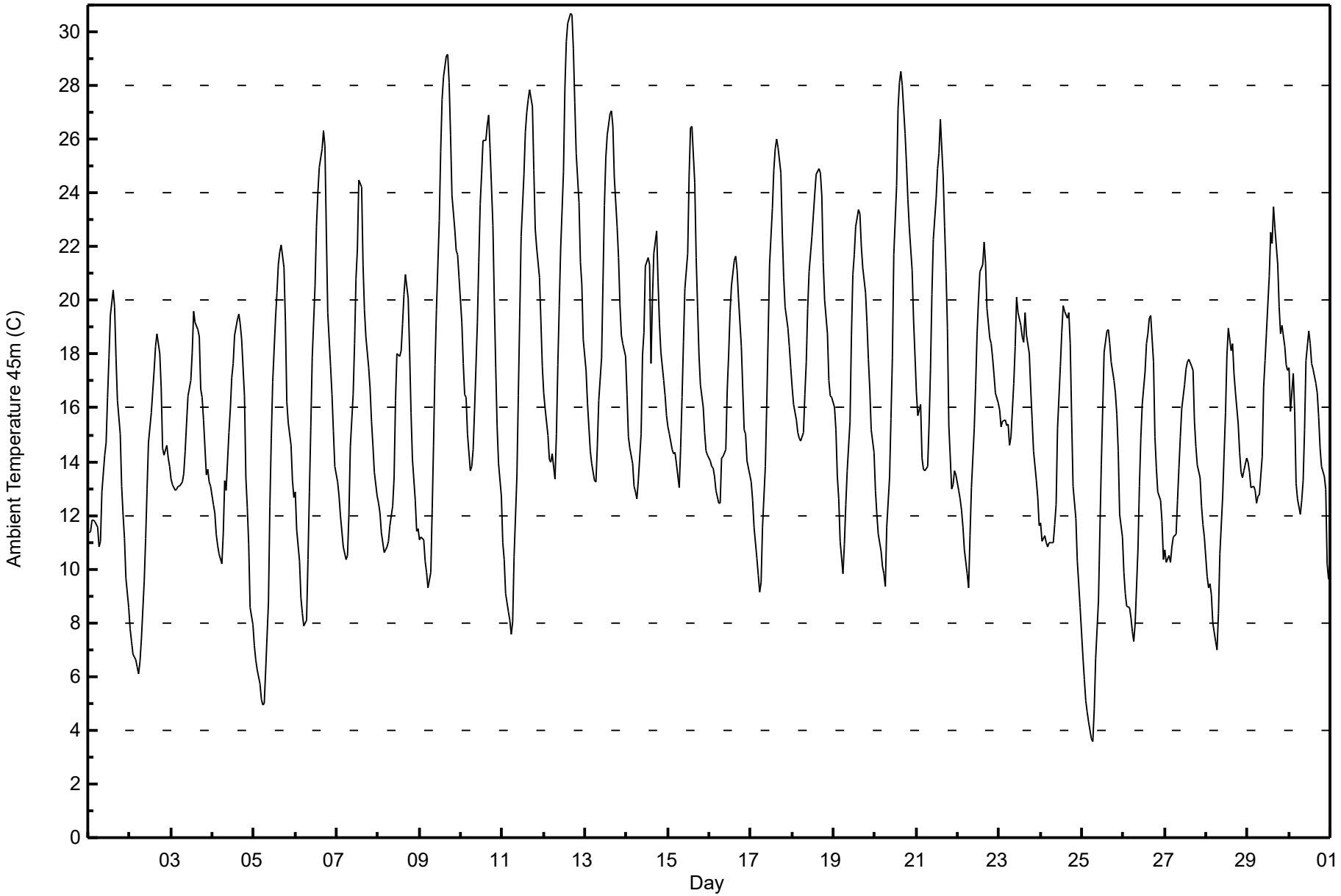
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.4	11.4	11.8	11.8	11.8	11.6	10.8	11.0	12.9	14.3	14.7	16.4	17.9	19.4	20.4	19.7	17.9	16.3	15.0	13.1	12.1	11.1	9.7	8.6	13.8	20.4
2-Sep	7.8	7.3	6.8	6.6	6.3	6.1	6.6	7.4	9.5	11.2	13.0	14.7	15.8	16.6	17.4	18.3	18.7	18.0	16.8	14.5	14.3	14.6	14.1	13.8	12.3	18.7
3-Sep	13.3	13.1	12.9	13.0	13.1	13.1	13.2	13.5	14.4	15.4	16.4	17.0	18.1	19.6	19.2	18.9	18.7	16.7	16.4	15.6	13.5	13.7	13.2	13.1	15.2	19.6
4-Sep	12.4	12.1	11.3	10.9	10.6	10.2	11.4	13.3	12.9	15.1	16.0	17.2	17.7	18.7	19.3	19.5	19.1	18.6	16.5	13.4	12.3	10.9	8.6	7.9	14.0	19.5
5-Sep	7.1	6.6	6.3	5.7	5.1	4.9	5.0	6.2	8.8	12.3	14.9	16.9	19.3	20.3	21.3	21.8	22.1	21.3	19.3	16.3	15.4	14.6	13.3	12.7	13.2	22.1
6-Sep	12.9	11.4	10.3	8.9	8.4	7.9	8.1	10.3	12.9	15.3	17.9	20.6	22.8	24.0	24.9	25.6	26.3	25.7	22.6	19.5	17.6	16.5	15.1	13.8	16.6	26.3
7-Sep	13.3	12.7	12.0	11.4	10.8	10.4	10.5	12.0	14.6	16.5	18.4	20.8	21.9	24.5	24.2	21.4	19.6	18.7	17.5	16.7	15.5	14.6	13.6	12.7	16.0	24.5
8-Sep	12.4	12.1	11.3	10.6	10.7	10.8	11.1	11.6	12.3	13.4	16.3	18.0	17.9	18.1	19.1	20.2	21.0	20.1	18.1	15.8	14.1	12.5	11.4	11.5	14.6	21.0
9-Sep	11.1	11.2	11.1	10.3	9.9	9.3	9.9	12.2	14.7	17.6	19.7	23.0	25.5	27.5	28.3	29.1	29.2	28.1	26.2	23.9	22.6	21.9	21.7	20.8	19.4	29.2
10-Sep	19.2	17.7	16.5	16.4	15.0	13.7	13.8	14.5	15.9	19.2	21.5	23.6	24.7	26.0	26.0	26.5	26.9	25.6	22.8	20.0	17.5	15.3	13.9	12.7	19.4	26.9
11-Sep	11.0	10.3	9.1	8.4	8.1	7.5	8.0	10.4	13.5	16.4	19.4	22.4	24.7	26.3	27.0	27.5	27.9	27.2	24.9	22.6	22.0	20.9	19.2	17.5	18.0	27.9
12-Sep	16.6	16.0	15.0	14.1	14.0	14.3	13.4	15.0	17.6	19.8	21.9	24.8	27.9	29.6	30.3	30.7	30.6	29.3	27.4	25.5	23.6	21.5	20.6	18.5	21.6	30.7
13-Sep	17.4	16.2	15.3	14.4	13.9	13.3	13.3	14.6	16.3	17.9	20.7	23.5	25.3	26.2	27.0	27.1	26.5	24.6	22.7	21.6	19.9	18.7	18.4	17.9	19.7	27.1
14-Sep	16.5	14.9	14.5	13.9	13.1	12.9	12.6	13.3	15.0	18.0	18.8	21.3	21.6	21.4	17.7	20.0	21.8	22.6	20.7	19.1	18.1	17.0	16.5	15.7	17.4	22.6
15-Sep	15.3	15.1	14.5	14.3	14.3	13.9	13.0	14.5	16.4	18.4	20.4	21.8	24.7	26.4	26.5	24.4	21.6	19.8	18.0	16.9	16.0	15.1	14.4	14.2	17.9	26.5
16-Sep	14.0	13.8	13.8	13.5	12.9	12.5	12.4	14.1	14.2	14.5	16.6	18.0	19.5	20.6	21.5	21.6	21.1	20.1	18.3	16.7	15.2	15.0	14.0	13.5	16.1	21.6
17-Sep	13.2	12.5	11.6	10.4	9.8	9.2	9.5	11.6	13.8	16.1	18.7	21.3	23.4	24.9	25.6	26.0	25.7	24.8	22.5	20.9	19.7	19.0	18.3	17.5	17.7	26.0
18-Sep	16.8	16.1	15.5	15.1	14.9	14.7	15.1	16.5	17.7	19.7	21.1	22.4	23.2	24.0	24.7	24.9	24.8	23.9	21.4	20.0	18.7	17.0	16.5	16.4	19.2	24.9
19-Sep	16.1	15.2	13.4	12.6	11.0	9.8	10.9	12.4	13.7	15.5	18.7	21.0	21.7	22.7	23.4	23.2	22.0	21.2	20.3	19.2	17.8	16.7	15.2	14.4	17.0	23.4
20-Sep	12.9	12.0	11.3	10.7	10.1	9.8	9.4	11.6	13.4	15.6	17.9	21.7	24.3	27.1	28.1	28.5	28.0	26.2	25.0	23.7	22.7	21.1	19.3	17.9	18.7	28.5
21-Sep	16.6	15.7	16.1	14.2	13.7	13.7	13.8	15.4	17.4	20.2	22.3	23.8	24.9	25.5	26.8	24.6	22.7	21.1	19.0	15.3	13.0	13.2	13.6	13.5	18.2	26.8
22-Sep	12.9	12.6	12.2	11.5	10.7	9.8	9.3	11.2	13.0	15.2	16.8	18.8	20.0	21.1	21.3	22.2	21.4	19.7	18.6	18.4	17.9	17.3	16.5	16.2	16.0	22.2
23-Sep	15.9	15.3	15.5	15.6	15.4	15.4	14.6	14.9	16.9	18.3	20.1	19.5	19.1	18.6	18.4	19.5	18.7	18.0	16.7	15.6	14.4	13.3	12.6	11.6	16.4	20.1
24-Sep	11.7	11.1	11.3	11.0	10.8	11.0	11.0	11.0	11.7	12.4	15.2	17.6	18.8	19.8	19.6	19.3	19.5	18.4	15.6	13.1	11.9	10.3	9.5	8.6	13.7	19.8
25-Sep	6.7	5.9	5.1	4.7	4.3	3.7	3.6	4.8	6.7	8.8	11.4	13.8	16.0	18.0	18.9	18.9	18.4	17.7	17.0	16.5	15.7	14.4	12.0	11.2	11.4	18.9
26-Sep	9.9	9.1	8.6	8.5	8.2	7.7	7.3	8.0	10.8	13.1	14.9	16.1	17.3	18.4	18.7	19.3	19.4	17.7	14.9	13.7	12.9	12.6	11.8	10.3	12.9	19.4
27-Sep	10.7	10.2	10.5	10.2	10.8	11.2	11.3	12.6	13.8	14.9	16.0	16.9	17.4	17.7	17.8	17.5	17.4	15.5	14.6	13.8	13.4	12.3	11.7	11.2	13.7	17.8
28-Sep	9.7	9.3	9.5	9.0	8.0	7.3	7.0	8.3	10.6	12.7	14.3	15.8	18.0	19.0	18.1	18.4	17.3	16.6	15.4	14.4	13.6	13.4	13.7	14.1	13.1	19.0
29-Sep	14.0	13.6	13.0	13.1	12.9	12.5	12.7	12.8	14.2	16.8	17.7	18.8	20.9	22.5	22.1	23.5	22.7	21.3	19.8	18.8	19.1	18.3	17.6	17.4	17.3	23.5
30-Sep	17.5	15.9	17.3	15.9	13.2	12.6	12.0	12.6	13.3	15.2	17.8	18.9	18.4	17.7	17.4	16.9	16.6	15.7	14.5	13.8	13.5	13.0	10.2	9.6	15.0	18.9
	13.2	12.6	12.1	11.6	11.1	10.7	10.7	11.9	13.6	15.7	17.6	19.5	21.0	22.1	22.4	22.5	22.1	21.0	19.3	17.6	16.5	15.5	14.5	13.8	Diurnal Average	
	19.2	17.7	17.3	16.4	15.4	15.4	15.1	16.5	17.7	20.2	22.3	24.8	27.9	29.6	30.3	30.7	30.6	29.3	27.4	25.5	23.6	21.9	21.7	20.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Lower Camp Met Tower - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	71	9.86	9.86
10 - 20	494	68.61	78.47
> 20	155	21.53	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 28.8 C on Sep 12 17:00

Maximum Daily Average: 21.8 C on Sep 12

Minimum Value: 4.1 C on Sep 25 07:00

Minimum Daily Average: 11.4 C on Sep 25

Maximum Diurnal Average: 20.7 C at hour 16

Minimum Diurnal Average: 11.2 C at hour 7

Monthly Average: 15.93 C

Percentiles: P_1 = 6.2 P_{10} = 10.7 Q_1 = 12.8 Median = 15.7 Q_3 = 18.7 P_{90} = 22.5 P_{99} = 27.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

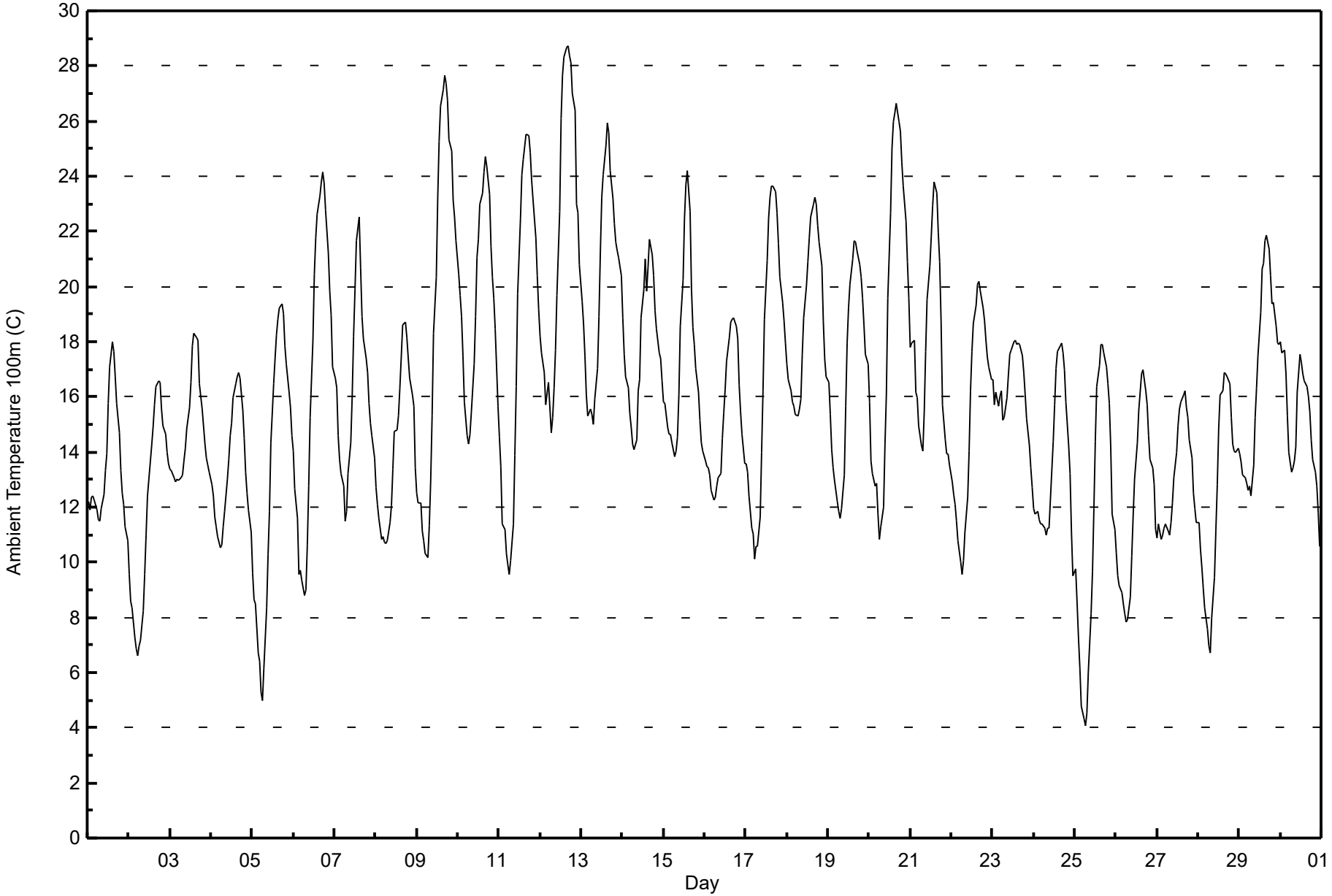
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12.2	11.9	12.4	12.4	12.2	11.9	11.6	11.5	11.9	12.5	13.3	13.9	15.8	17.1	18.0	17.7	16.7	15.7	14.7	13.3	12.5	12.1	11.3	10.8	13.5	18.0
2-Sep	9.5	8.6	8.3	7.2	6.9	6.6	6.9	7.2	8.3	9.6	11.0	12.4	13.6	14.2	14.9	15.7	16.4	16.6	16.5	15.5	14.9	14.6	14.0	13.6	11.8	16.6
3-Sep	13.4	13.3	13.1	12.9	13.0	13.0	13.0	13.2	13.7	14.1	14.8	15.6	16.5	17.8	18.3	18.2	18.1	16.5	16.0	15.6	14.3	13.8	13.5	13.3	14.8	18.3
4-Sep	12.8	12.4	11.6	11.3	10.9	10.5	10.6	11.3	11.8	13.0	13.7	14.6	15.1	16.0	16.5	16.7	16.9	16.7	15.5	14.5	13.3	12.5	11.9	11.1	13.4	16.9
5-Sep	9.6	8.6	8.5	6.7	6.4	5.3	5.0	6.2	8.3	10.3	11.9	14.4	16.5	17.4	18.2	18.8	19.2	19.4	19.0	17.9	17.2	16.2	15.6	14.6	13.0	19.4
6-Sep	14.0	12.6	11.6	9.6	9.7	9.3	8.8	9.0	10.6	12.8	15.3	18.0	20.5	21.7	22.6	23.3	23.8	24.1	23.7	22.8	21.2	19.8	18.9	17.1	16.7	24.1
7-Sep	16.7	16.3	14.6	13.7	13.2	12.8	11.5	11.9	13.2	14.3	16.0	18.2	19.9	21.7	22.5	20.7	18.9	18.1	17.4	16.9	15.8	15.0	14.6	13.8	16.2	22.5
8-Sep	12.7	12.1	11.6	10.8	10.9	10.8	10.7	10.8	11.4	12.0	13.4	14.7	14.8	15.3	16.3	17.4	18.6	18.7	18.2	17.4	16.7	16.0	15.7	13.4	14.2	18.7
9-Sep	12.5	12.1	12.1	11.1	10.8	10.3	10.2	11.3	12.9	15.3	18.3	20.3	23.2	25.3	26.5	27.2	27.7	27.4	26.8	25.3	24.9	23.2	22.5	21.7	19.1	27.7
10-Sep	20.4	19.7	18.9	17.5	15.8	14.6	14.3	14.6	15.5	17.2	18.9	21.1	21.7	23.0	23.4	24.2	24.7	24.3	23.4	21.5	20.3	19.6	18.5	15.6	19.5	24.7
11-Sep	14.5	13.5	11.4	11.2	10.3	9.9	9.6	10.1	11.4	13.9	16.4	19.7	22.4	24.1	24.6	25.1	25.5	25.5	24.9	23.9	23.2	21.7	20.4	19.2	18.0	25.5
12-Sep	18.2	17.6	16.9	15.7	16.1	16.5	14.7	15.3	16.3	17.7	19.7	22.8	26.1	27.7	28.3	28.7	28.8	28.4	28.1	27.0	26.4	23.0	22.7	20.8	21.8	28.8
13-Sep	19.5	18.6	17.5	16.1	15.3	15.6	15.4	15.0	15.9	17.0	18.9	21.2	23.2	24.0	25.1	25.9	25.6	24.2	23.2	22.3	21.6	21.3	21.0	20.4	20.2	25.9
14-Sep	18.9	17.5	16.8	16.3	15.4	14.9	14.3	14.1	14.4	16.2	16.6	18.8	19.9	21.0	19.8	20.7	21.7	21.2	20.4	19.1	18.5	17.6	17.4	16.6	17.8	21.7
15-Sep	15.8	15.8	14.9	14.6	14.6	14.4	13.8	14.0	14.5	16.1	18.6	20.2	22.5	23.7	24.2	22.7	19.9	18.5	17.9	17.1	16.2	15.2	14.3	14.1	17.2	24.2
16-Sep	13.7	13.5	13.4	13.2	12.6	12.3	12.4	12.8	13.1	13.2	14.5	15.4	16.3	17.3	18.2	18.7	18.8	18.8	18.6	18.1	16.4	15.5	14.6	13.6	15.2	18.8
17-Sep	13.6	13.3	12.4	11.2	11.0	10.1	10.6	10.6	11.7	14.0	16.2	18.8	20.9	22.5	23.2	23.7	23.7	23.5	22.7	21.6	20.3	19.4	18.7	18.0	17.1	23.7
18-Sep	17.2	16.6	16.2	15.8	15.6	15.4	15.3	15.6	15.9	17.5	18.9	20.0	20.9	21.8	22.5	23.0	23.2	23.0	22.2	21.6	20.7	18.8	17.4	16.7	18.8	23.2
19-Sep	16.5	15.4	14.1	13.4	13.0	12.2	11.8	11.6	12.0	13.2	15.6	18.0	19.2	20.1	21.0	21.6	21.6	21.3	20.8	20.3	19.6	18.6	17.5	17.2	16.9	21.6
20-Sep	15.8	13.7	13.2	12.7	12.9	11.7	10.8	11.3	12.0	14.3	16.1	19.6	22.7	25.0	26.0	26.3	26.7	26.0	25.6	24.5	23.7	22.4	20.9	19.6	18.9	26.7
21-Sep	17.8	18.0	18.0	16.2	16.0	14.9	14.2	14.1	15.4	17.7	19.5	20.8	21.8	22.9	23.8	23.4	22.0	20.9	18.8	15.7	14.4	13.9	13.9	13.5	17.8	23.8
22-Sep	12.9	12.5	12.1	11.5	10.8	10.0	9.5	10.1	11.1	12.4	14.0	16.2	17.6	18.7	19.3	20.1	20.2	19.8	19.2	18.8	18.1	17.5	17.1	16.6	15.3	20.2
23-Sep	16.6	15.7	16.2	15.7	16.0	16.2	15.2	15.2	16.0	16.8	17.5	17.7	18.0	18.0	17.9	18.0	17.9	17.5	16.9	16.1	15.2	14.2	13.4	12.7	16.3	18.0
24-Sep	11.9	11.7	11.8	11.5	11.4	11.4	11.2	11.0	11.2	11.3	12.3	14.4	15.7	17.0	17.6	17.9	17.9	17.6	17.0	15.8	14.2	13.2	11.1	9.5	13.6	17.9
25-Sep	9.8	8.5	7.3	6.2	4.8	4.3	4.1	4.5	6.0	8.2	9.7	12.0	14.4	16.4	17.1	17.9	17.9	17.6	17.1	16.5	15.8	14.2	11.8	11.2	11.4	17.9
26-Sep	10.3	9.5	9.1	8.9	8.5	8.1	7.8	7.9	8.8	10.2	11.7	13.0	14.4	15.5	16.2	16.8	17.0	16.2	15.7	14.6	13.7	13.4	12.8	11.2	12.1	17.0
27-Sep	10.9	11.4	10.8	11.0	11.2	11.4	11.1	11.0	11.4	12.2	13.1	14.0	14.9	15.6	15.8	16.1	16.2	15.6	15.3	14.5	13.8	12.5	12.0	11.4	13.0	16.2
28-Sep	11.5	10.5	9.8	9.0	8.3	7.6	7.0	6.7	8.0	9.4	11.2	12.8	14.9	16.1	16.2	16.9	16.9	16.7	16.5	15.3	14.3	14.0	14.0	14.1	12.4	16.9
29-Sep	13.9	13.6	13.2	13.1	12.9	12.6	12.8	12.4	13.5	15.2	16.3	17.5	19.1	20.7	20.9	21.7	21.8	21.4	20.4	19.4	19.4	18.6	17.9	17.9	16.9	21.8
30-Sep	18.0	17.6	17.7	16.8	15.3	14.0	13.3	13.4	13.7	14.2	16.2	17.6	17.3	16.8	16.6	16.4	16.0	15.4	14.4	13.7	13.3	12.7	11.8	10.6	15.1	18.0
	14.4	13.7	13.2	12.4	12.1	11.6	11.2	11.5	12.3	13.7	15.3	17.1	18.7	19.8	20.4	20.7	20.7	20.2	19.6	18.5	17.7	16.7	15.9	15.0	Diurnal Average	
	20.4	19.7	18.9	17.5	16.1	16.5	15.4	15.6	16.3	17.7	19.7	22.8	26.1	27.7	28.3	28.7	28.8	28.4	28.1	27.0	26.4	23.2	22.7	21.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 100m (AT100) - C

Lower Camp Met Tower - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	55	7.64	7.64
10 - 20	530	73.61	81.25
> 20	135	18.75	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 28.1 C on Sep 12 17:00
Maximum Daily Average: 21.9 C on Sep 12

Minimum Value: 4.6 C on Sep 25 07:00
Minimum Daily Average: 11.5 C on Sep 25
Maximum Diurnal Average: 20.1 C at hour 16
Minimum Diurnal Average: 11.6 C at hour 8
Monthly Average: 15.89 C
Percentiles: P_1 = 7.3 P_{10} = 10.7 Q_1 = 12.6 Median = 15.6 Q_3 = 18.5 P_{90} = 22.4 P_{99} = 26.8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

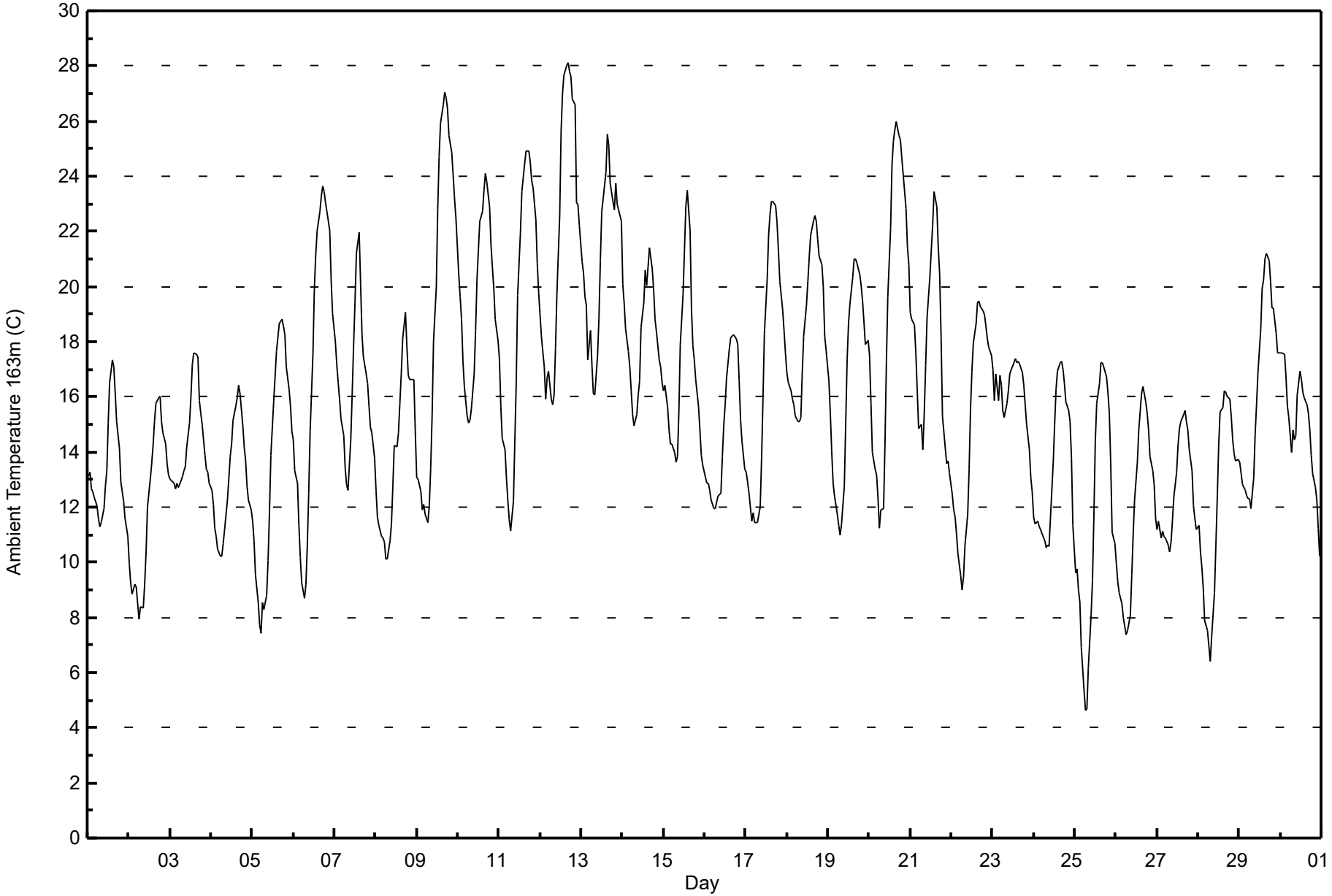
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	13.1	13.3	12.7	12.6	12.4	12.0	11.6	11.3	11.4	11.9	12.8	13.3	15.0	16.5	17.4	17.1	16.1	15.1	14.1	12.9	12.6	12.2	11.6	10.9	13.3	17.4
2-Sep	10.0	9.2	8.9	9.2	9.1	8.5	7.9	8.4	8.4	9.2	10.4	12.0	13.0	13.6	14.2	15.1	15.7	16.0	16.0	15.1	14.7	14.3	13.6	13.2	11.9	16.0
3-Sep	13.0	13.0	12.8	12.7	12.9	12.7	12.9	13.1	13.3	13.5	14.2	15.0	16.0	17.2	17.6	17.5	17.4	15.9	15.4	15.0	13.9	13.4	13.3	12.9	14.4	17.6
4-Sep	12.6	12.1	11.2	10.9	10.5	10.2	10.2	10.7	11.2	12.3	13.0	13.8	14.3	15.1	15.6	15.9	16.4	16.1	15.0	14.2	13.7	12.8	12.3	11.9	13.0	16.4
5-Sep	11.5	10.8	9.5	8.5	7.7	7.4	8.5	8.3	8.8	10.1	11.8	13.9	15.8	16.7	17.6	18.2	18.7	18.8	18.6	18.3	17.1	16.3	15.7	14.8	13.5	18.8
6-Sep	14.4	13.3	12.9	11.4	10.2	9.3	8.7	9.2	10.6	12.5	14.7	17.6	19.9	21.1	22.0	22.7	23.3	23.6	23.4	23.0	22.4	22.0	20.2	19.0	17.0	23.6
7-Sep	18.0	17.2	16.5	15.9	15.2	14.6	13.4	12.8	12.6	14.4	16.1	17.9	19.4	21.2	21.9	20.1	18.3	17.4	16.8	16.5	15.6	14.9	14.7	13.8	16.5	21.9
8-Sep	12.6	11.7	11.3	10.9	10.9	10.7	10.1	10.1	10.8	11.4	12.8	14.2	14.2	14.7	15.8	16.8	18.1	19.1	17.8	16.8	16.6	16.6	16.6	14.8	14.0	19.1
9-Sep	13.1	13.0	12.6	11.9	12.1	11.7	11.5	12.0	13.4	15.3	18.0	20.0	22.8	24.7	25.9	26.6	27.1	26.9	26.4	25.5	24.8	24.1	23.2	22.5	19.4	27.1
10-Sep	20.4	19.6	18.8	17.3	16.4	15.3	15.0	15.1	15.5	16.9	18.4	20.2	21.3	22.4	22.7	23.5	24.1	23.8	22.9	21.5	20.7	19.9	18.8	18.1	19.5	24.1
11-Sep	17.4	15.6	14.5	14.1	13.1	12.2	11.6	11.2	12.2	14.4	16.5	19.7	22.0	23.4	24.0	24.5	24.9	24.9	24.5	23.8	23.6	22.4	20.8	19.8	18.8	24.9
12-Sep	19.0	18.1	17.1	15.9	16.7	16.9	15.9	15.7	16.1	17.7	19.7	22.6	25.6	27.0	27.6	28.0	28.1	27.8	27.6	26.8	26.6	23.0	23.0	22.2	21.9	28.1
13-Sep	20.9	20.5	19.6	19.3	17.3	18.4	17.1	16.1	16.1	17.5	18.9	21.0	22.7	23.2	24.1	25.6	25.1	23.8	23.1	22.8	23.7	23.0	22.8	22.4	21.0	25.6
14-Sep	20.1	19.4	18.5	17.7	17.1	16.2	15.4	15.0	15.4	16.1	16.6	18.5	19.4	20.6	20.0	20.7	21.4	20.6	19.9	18.8	18.3	17.3	17.1	16.5	18.2	21.4
15-Sep	16.2	16.4	15.6	14.8	14.3	14.3	14.0	13.6	13.8	15.5	17.9	19.7	21.4	22.9	23.5	22.0	19.2	17.8	17.3	16.6	15.7	14.8	13.9	13.5	16.9	23.5
16-Sep	13.1	12.9	12.9	12.6	12.3	12.0	11.9	12.2	12.4	12.5	13.8	14.9	15.7	16.7	17.7	18.2	18.2	18.3	18.1	17.9	16.6	15.1	14.4	13.4	14.7	18.3
17-Sep	13.3	12.9	12.5	11.5	11.8	11.4	11.5	11.5	12.0	13.8	16.0	18.3	20.3	21.8	22.6	23.1	23.1	22.9	22.3	21.3	20.2	19.1	18.4	17.6	17.0	23.1
18-Sep	16.9	16.5	16.2	15.9	15.7	15.3	15.1	15.1	15.2	16.9	18.2	19.3	20.2	21.1	21.9	22.4	22.6	22.3	21.7	21.1	20.8	20.0	18.2	17.7	18.6	22.6
19-Sep	16.6	15.4	14.0	12.9	12.4	11.8	11.3	11.0	11.4	12.7	15.0	17.3	18.6	19.4	20.3	21.0	21.0	20.8	20.5	20.0	19.5	18.7	17.9	18.0	16.6	21.0
20-Sep	17.5	15.8	14.0	13.4	13.2	12.4	11.2	11.9	12.0	14.3	17.3	19.6	22.1	24.4	25.3	25.7	26.0	25.5	25.3	24.7	24.1	22.8	21.5	20.8	19.2	26.0
21-Sep	19.1	18.8	18.6	17.6	16.2	14.9	15.0	14.1	15.4	17.1	18.9	20.3	21.3	22.2	23.4	22.9	21.4	20.4	18.2	15.3	14.1	13.6	13.7	13.2	17.7	23.4
22-Sep	12.5	11.9	11.6	11.0	10.3	9.5	9.0	9.4	10.6	11.7	13.4	15.5	16.9	17.9	18.6	19.4	19.5	19.3	19.1	19.0	18.6	18.1	17.8	17.5	14.9	19.5
23-Sep	17.0	15.9	16.8	15.9	16.8	16.4	15.5	15.2	15.8	16.2	16.8	17.0	17.3	17.4	17.2	17.3	17.2	16.9	16.4	15.7	15.0	14.1	13.1	12.5	16.1	17.4
24-Sep	11.7	11.4	11.5	11.3	11.2	11.0	10.8	10.5	10.6	10.6	11.6	13.6	15.0	16.3	17.0	17.2	17.3	17.0	16.5	15.8	15.5	15.1	13.8	11.3	13.5	17.3
25-Sep	9.6	9.8	9.0	8.6	6.9	5.3	4.6	4.7	6.1	8.1	9.4	11.7	14.4	15.8	16.5	17.3	17.2	17.1	16.7	16.2	15.4	13.6	11.1	10.7	11.5	17.3
26-Sep	10.0	9.3	8.9	8.5	8.0	7.7	7.4	7.5	8.1	9.5	11.0	12.3	13.6	14.8	15.4	16.1	16.4	15.8	15.4	14.8	13.8	13.3	12.8	11.6	11.8	16.4
27-Sep	11.2	11.5	10.9	11.1	10.9	10.9	10.6	10.4	10.7	11.5	12.4	13.2	14.2	14.8	15.1	15.4	15.5	15.1	14.8	14.1	13.3	12.0	11.6	11.2	12.6	15.5
28-Sep	11.4	10.4	9.8	9.0	7.9	7.5	7.0	6.4	7.3	8.9	10.6	12.4	14.2	15.4	15.6	16.2	16.2	16.0	15.9	15.2	14.5	13.9	13.7	13.7	12.0	16.2
29-Sep	13.6	13.2	12.8	12.6	12.4	12.3	12.3	11.9	13.1	14.6	15.7	16.9	18.5	20.0	20.2	21.0	21.2	20.9	20.2	19.2	19.2	18.3	17.6	17.6	16.5	21.2
30-Sep	17.6	17.6	17.5	16.7	15.7	15.2	14.0	14.8	14.4	14.6	16.1	16.9	16.6	16.2	15.9	15.7	15.4	14.8	13.9	13.2	12.7	12.2	11.3	10.2	15.0	17.6
	14.8	14.2	13.7	13.1	12.6	12.1	11.7	11.6	12.2	13.4	14.9	16.6	18.1	19.2	19.8	20.1	20.1	19.7	19.1	18.4	17.8	16.9	16.1	15.4	Diurnal Average	
	20.9	20.5	19.6	19.3	17.3	18.4	17.1	16.1	16.1	17.7	19.7	22.6	25.6	27.0	27.6	28.0	28.1	27.8	27.6	26.8	26.6	24.1	23.2	22.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 163m (AT163) - C

Lower Camp Met Tower - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	52	7.22	7.22
10 - 20	534	74.17	81.39
> 20	134	18.61	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 98.6 % on Sep 5 08:00

Maximum Daily Average: 81.0 % on Sep 14

Minimum Value: 24.2 % on Sep 24 16:00

Minimum Daily Average: 39.5 % on Sep 23

Maximum Diurnal Average: 81.2 % at hour 7

Minimum Diurnal Average: 39.8 % at hour 17

Monthly Average: 61.69 %

Percentiles: P_1 = 26.7 P_{10} = 34.4 Q_1 = 44.7 Median = 61.1 Q_3 = 78.2 P_{90} = 90.1 P_{99} = 98.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

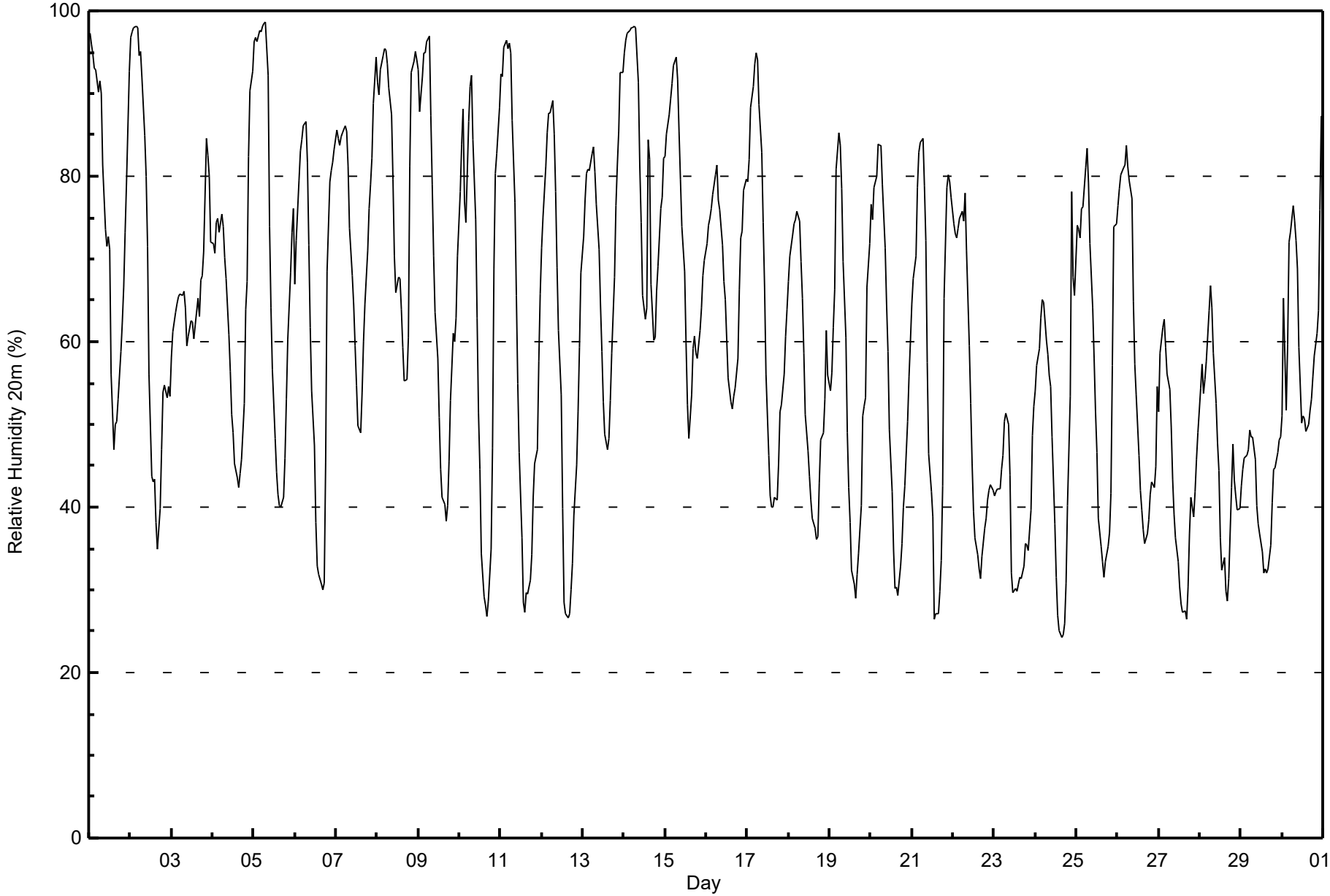
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	97.2	96.0	94.7	93.0	92.9	90.1	91.5	90.0	81.3	73.6	71.6	72.7	71.1	56.1	46.9	50.0	50.4	53.0	58.8	62.3	66.6	73.2	79.2	92.7	75.2	97.2
2-Sep	96.7	97.4	97.9	98.2	98.0	94.6	95.2	91.8	84.9	79.9	71.5	56.1	43.7	43.1	43.4	38.2	35.0	39.9	47.0	53.9	54.8	53.2	54.6	53.4	67.6	98.2
3-Sep	58.1	61.1	63.6	64.6	65.5	65.8	65.6	66.1	64.0	59.5	60.6	62.6	62.4	60.3	62.0	65.2	63.0	67.5	68.0	70.9	84.6	82.6	80.1	72.0	66.5	84.6
4-Sep	71.8	70.7	74.3	74.9	73.3	75.4	73.9	70.2	67.6	60.9	56.4	51.2	48.9	45.3	43.5	42.3	44.1	45.8	52.5	63.8	67.3	82.4	90.4	92.8	64.2	92.8
5-Sep	96.2	96.7	96.3	97.6	97.5	98.2	98.5	98.6	92.3	73.9	64.0	56.6	48.2	44.2	41.5	40.2	40.0	41.2	45.9	53.1	60.4	68.3	73.2	76.1	70.8	98.6
6-Sep	67.0	72.3	79.5	83.0	84.4	86.0	86.7	81.7	71.7	61.6	54.0	47.5	38.1	32.9	31.9	30.7	30.0	30.9	45.4	68.5	79.4	80.7	81.8	83.2	62.9	86.7
7-Sep	85.6	84.5	83.7	84.7	85.3	86.1	85.4	81.3	73.7	67.9	64.4	59.4	54.8	49.9	49.0	53.9	60.0	64.6	71.0	76.2	79.0	82.3	88.9	94.3	73.6	94.3
8-Sep	91.4	89.8	92.9	94.7	95.5	95.2	93.6	90.7	87.5	79.7	70.3	66.0	67.8	67.6	63.8	59.3	55.3	55.5	60.5	81.2	92.6	94.0	95.0	94.2	80.6	95.5
9-Sep	92.9	87.8	92.0	94.9	95.0	96.2	96.9	87.3	79.0	70.4	63.6	58.0	50.8	44.7	41.1	40.3	38.3	40.2	45.6	52.9	61.1	60.0	62.9	70.4	67.6	96.9
10-Sep	78.1	83.9	88.1	76.9	74.4	86.6	90.9	92.2	84.4	74.7	62.8	51.4	44.5	34.5	29.2	28.1	26.7	28.6	35.0	47.1	68.8	80.3	82.7	88.4	64.1	92.2
11-Sep	92.3	92.1	95.5	96.4	95.4	96.2	94.9	86.8	76.8	65.5	55.0	46.6	36.3	28.5	27.3	29.6	29.5	31.2	34.3	41.3	45.2	47.0	57.6	65.8	61.1	96.4
12-Sep	71.4	75.2	81.1	85.3	87.6	87.6	89.1	85.1	78.2	69.1	61.4	53.6	39.9	28.4	27.1	26.5	27.1	29.9	33.2	39.0	45.1	51.6	59.3	68.3	58.3	89.1
13-Sep	72.8	77.1	80.4	80.9	80.7	82.6	83.6	80.5	76.6	71.2	64.4	58.8	52.8	48.8	47.0	48.4	52.8	58.7	67.7	76.5	81.4	85.4	92.5	92.5	71.4	92.5
14-Sep	94.9	96.4	97.2	97.6	97.9	98.0	98.1	98.1	91.4	81.4	74.5	65.6	62.8	64.0	84.4	82.0	66.9	60.1	60.6	66.1	69.2	76.1	77.5	82.3	81.0	98.1
15-Sep	82.3	85.2	87.5	89.3	91.1	93.4	94.3	91.7	85.5	79.6	73.9	68.6	59.9	52.4	48.3	53.6	59.2	60.7	58.6	58.0	61.4	64.2	68.0	69.9	72.4	94.3
16-Sep	71.9	74.0	74.9	76.0	77.8	80.2	81.4	77.1	75.9	71.7	67.2	65.1	60.3	55.5	52.7	51.8	53.3	54.4	58.0	66.2	72.5	73.4	78.3	79.6	68.7	81.4
17-Sep	79.3	82.0	88.3	90.9	93.5	94.9	94.1	88.7	82.9	74.4	66.7	56.1	46.3	41.4	40.1	39.9	41.1	40.8	45.3	51.5	52.4	56.1	60.7	63.9	65.5	94.9
18-Sep	67.2	70.4	73.0	74.3	74.7	75.7	74.6	69.7	65.3	58.7	51.3	46.8	43.8	40.9	38.6	37.4	36.1	36.5	43.0	48.2	48.9	53.1	61.4	55.9	56.1	75.7
19-Sep	54.1	56.3	61.7	66.3	80.8	85.3	83.8	78.6	69.7	60.5	49.0	42.4	38.2	32.4	30.7	29.0	31.9	34.4	40.2	50.9	52.1	53.2	66.6	71.9	55.0	85.3
20-Sep	76.6	74.7	78.6	79.9	84.0	83.8	83.8	79.1	71.4	64.6	58.7	49.3	41.8	34.7	30.2	30.3	29.4	33.0	35.6	39.9	42.5	50.3	55.8	59.9	57.0	84.0
21-Sep	64.5	67.6	70.3	78.7	82.8	84.1	84.6	78.9	72.3	57.4	46.5	41.9	38.8	26.5	27.1	27.1	29.9	33.5	42.5	65.3	78.7	80.2	79.3	77.5	59.8	84.6
22-Sep	74.2	73.1	72.6	73.8	74.9	75.8	74.5	77.9	71.0	59.4	52.5	45.2	39.5	36.2	34.2	32.5	31.3	34.1	37.5	38.6	40.9	42.1	42.7	42.0	53.2	77.9
23-Sep	41.4	41.8	42.3	42.2	44.6	46.3	50.3	51.3	50.0	44.0	32.1	29.6	30.1	29.8	30.7	31.5	31.4	32.9	35.6	35.4	34.8	39.7	48.7	52.2	39.5	52.2
24-Sep	54.1	57.1	59.2	63.0	65.0	64.8	60.2	58.4	55.9	54.6	48.4	38.0	31.5	26.9	25.1	24.2	24.6	25.9	30.8	40.1	53.4	78.1	67.8	65.6	48.9	78.1
25-Sep	74.0	73.6	72.6	76.0	76.2	81.0	83.5	79.2	71.8	64.1	58.0	51.5	46.5	38.6	35.3	33.4	31.5	33.4	35.3	36.9	41.7	57.2	73.9	74.2	58.3	83.5
26-Sep	76.5	78.4	80.2	81.0	81.4	83.8	81.1	79.5	77.3	65.0	57.3	53.6	46.3	42.0	39.7	37.3	35.6	36.8	38.5	41.5	43.1	42.3	45.0	54.5	58.2	83.8
27-Sep	51.6	58.6	61.7	62.7	59.4	56.1	54.2	49.7	43.5	39.1	36.3	33.4	30.4	28.4	27.2	27.5	26.4	30.4	36.8	41.3	38.8	41.9	45.8	49.0	42.9	62.7
28-Sep	54.4	57.2	53.8	55.3	57.6	63.8	66.8	64.0	58.7	52.5	47.7	44.4	36.2	32.3	33.8	29.9	28.7	31.3	42.3	47.7	43.2	41.4	39.6	39.8	46.8	66.8
29-Sep	42.6	44.6	46.0	46.2	47.0	49.3	48.5	48.4	45.8	40.2	38.0	36.8	34.6	32.0	32.6	32.1	32.6	35.4	40.4	44.5	44.7	46.6	48.1	48.4	41.9	49.3
30-Sep	51.1	65.2	51.7	59.6	72.1	73.2	76.5	74.6	72.1	68.8	59.3	50.2	51.0	50.7	49.2	50.0	51.7	53.1	55.8	58.4	60.9	63.6	76.0	87.3	61.8	87.3
	72.7	74.7	76.4	77.9	79.5	81.0	81.2	78.2	72.6	64.8	57.9	52.0	46.6	41.6	40.5	40.1	39.8	41.8	46.7	53.9	58.8	63.3	67.8	70.6	Diurnal Average	
	97.2	97.4	97.9	98.2	98.0	98.2	98.5	98.6	92.3	81.4	74.5	72.7	71.1	67.6	84.4	82.0	66.9	67.5	71.0	81.2	92.6	94.0	95.0	94.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Lower Camp Met Tower - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	123	17.08	17.08
40 - 60	222	30.83	47.92
60 - 80	217	30.14	78.06
80 - 100	158	21.94	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 99.5 % on Sep 8 07:00

Maximum Daily Average: 72.9 % on Sep 7

Minimum Value: 21.3 % on Sep 24 16:00

Minimum Daily Average: 37.9 % on Sep 23

Maximum Diurnal Average: 78.7 % at hour 6

Minimum Diurnal Average: 34.0 % at hour 15

Monthly Average: 56.28 %

Percentiles: P_1 = 23.0 P_{10} = 30.4 Q_1 = 39.7 Median = 54.9 Q_3 = 72.8 P_{90} = 85.1 P_{99} = 96.0

Hours in Service:	720
Hours of Data:	664
Hours of Missing Data:	56
Hours of Calibration:	0
Percent Operational Time:	92.2

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	OR	OR	OR	OR	OR	96.5	OR	OR	81.3	68.0	68.7	64.1	62.8	47.6	38.9	43.2	47.2	51.8	58.3	63.2	65.2	70.9	83.2	90.0	--	96.5
2-Sep	OR	OR	OR	OR	OR	OR	OR	OR	81.3	76.4	65.8	49.1	38.1	37.6	37.3	32.1	29.4	36.1	44.6	53.8	54.3	54.2	55.2	54.5	--	81.3
3-Sep	58.3	61.2	64.2	65.2	65.9	66.2	66.0	65.4	62.7	56.8	56.8	59.0	58.3	55.0	59.8	64.2	62.9	69.3	69.3	75.1	OR	86.8	83.8	75.0	65.5	86.8
4-Sep	75.4	74.3	78.8	79.3	77.2	79.5	71.2	61.5	65.7	52.4	48.0	42.2	40.5	37.1	35.4	34.5	37.4	40.0	49.3	64.7	68.2	75.3	OR	OR	58.5	79.5
5-Sep	OR	OR	OR	OR	OR	OR	OR	OR	82.8	62.2	52.8	47.4	39.7	36.3	33.8	32.8	32.8	35.0	41.4	52.4	56.6	63.5	69.5	72.2	--	82.8
6-Sep	68.1	75.3	82.7	90.8	91.6	93.6	89.3	73.6	60.5	51.4	44.5	39.6	31.6	27.5	26.8	25.6	24.7	26.7	37.3	50.8	62.1	68.6	78.1	85.0	58.6	93.6
7-Sep	85.9	87.7	90.3	91.5	91.7	92.7	88.1	78.3	65.8	59.6	55.3	48.5	47.5	40.5	43.8	52.8	59.3	64.9	72.7	77.0	81.2	85.7	91.9	97.7	72.9	97.7
8-Sep	96.0	96.7	OR	OR	OR	OR	99.5	94.9	89.9	78.4	59.0	51.8	55.6	56.8	53.8	49.8	47.6	50.4	59.5	76.1	92.4	OR	OR	96.1	72.5	99.5
9-Sep	94.6	93.2	95.4	OR	OR	OR	OR	81.5	69.4	60.1	56.9	48.2	42.7	38.3	36.7	35.3	35.2	38.6	45.3	52.4	58.1	56.2	57.5	61.5	57.8	95.4
10-Sep	73.0	83.2	87.2	73.9	79.5	90.2	89.1	85.3	78.1	62.6	50.9	40.4	35.5	27.3	24.5	23.9	23.0	24.9	29.2	40.4	49.9	62.7	76.2	81.2	58.0	90.2
11-Sep	96.0	91.9	OR	OR	OR	OR	OR	81.0	64.7	53.6	44.4	36.8	29.5	24.1	23.0	25.2	24.8	27.6	33.6	40.1	43.5	46.8	55.2	65.7	47.8	96.0
12-Sep	73.5	78.5	85.7	91.9	91.9	88.6	93.5	80.9	67.9	59.8	52.9	45.7	33.7	25.1	24.0	23.5	24.3	28.0	32.3	37.7	42.4	50.1	53.4	64.8	56.3	93.5
13-Sep	70.1	76.8	81.7	84.4	85.6	88.0	86.2	77.2	70.4	65.6	57.2	50.0	44.9	43.3	41.3	42.0	49.4	56.7	64.2	69.2	78.9	86.1	86.3	83.6	68.3	88.0
14-Sep	91.4	OR	OR	OR	OR	OR	OR	OR	88.8	72.3	67.0	57.1	58.0	65.1	OR	79.3	63.3	55.4	61.4	68.8	71.9	76.8	78.0	82.0	--	91.4
15-Sep	86.5	90.1	95.4	97.2	98.1	OR	OR	91.5	79.5	70.2	64.3	60.6	49.1	43.7	42.2	49.6	54.6	57.4	59.2	59.5	63.5	66.2	70.1	71.8	69.1	98.1
16-Sep	74.2	76.7	77.4	78.9	81.5	84.0	84.3	72.7	74.7	70.0	57.7	53.2	47.6	44.6	42.5	43.1	45.9	49.5	55.3	63.4	74.1	76.6	82.8	84.8	66.5	84.8
17-Sep	83.6	87.8	95.7	OR	OR	OR	OR	82.5	71.6	63.1	56.8	47.6	39.2	35.1	33.8	33.6	34.9	36.6	44.8	52.3	53.3	57.1	61.7	65.6	56.8	95.7
18-Sep	69.4	72.8	75.8	77.4	77.8	78.8	76.1	66.1	58.8	51.0	44.2	39.9	37.5	35.4	33.6	33.3	33.2	34.6	42.1	45.1	47.0	53.1	59.3	56.4	54.1	78.8
19-Sep	54.5	58.0	64.3	64.9	82.8	93.1	75.9	64.5	58.3	50.1	39.2	33.7	31.0	26.9	26.3	26.3	30.8	33.7	36.4	41.3	47.2	50.5	58.0	64.0	50.5	93.1
20-Sep	76.5	78.5	83.8	84.5	87.9	85.6	86.5	70.2	61.8	53.9	49.8	41.5	37.2	29.7	26.4	26.4	27.4	32.6	35.1	38.9	41.7	47.9	54.9	60.9	55.0	87.9
21-Sep	67.0	72.1	69.7	81.2	81.7	80.8	76.7	65.5	56.3	46.3	38.3	33.9	31.1	22.2	22.1	25.3	28.6	33.7	43.7	70.1	90.5	89.5	84.8	80.5	58.0	90.5
22-Sep	77.2	76.3	76.0	77.8	79.6	81.4	78.7	66.7	58.8	47.9	42.5	37.3	33.2	30.5	29.9	28.3	29.3	33.9	37.5	38.8	41.1	42.4	43.1	42.2	51.3	81.4
23-Sep	41.2	42.5	42.3	42.5	44.6	46.0	50.2	49.8	43.9	39.8	26.5	26.1	28.5	29.4	30.5	29.0	30.5	32.2	36.0	36.0	35.6	38.5	41.5	47.1	37.9	50.2
24-Sep	46.7	54.2	55.2	60.8	65.0	61.6	59.1	58.6	56.1	52.1	38.9	30.0	25.0	21.9	21.8	21.3	21.6	23.0	28.6	39.4	54.8	63.2	57.4	58.0	44.8	65.0
25-Sep	74.3	77.7	77.0	80.5	80.8	86.6	86.2	79.4	68.3	58.2	50.6	45.3	41.0	34.2	32.1	31.9	31.2	33.6	35.6	37.2	42.2	59.7	78.1	78.3	58.3	86.6
26-Sep	80.7	82.9	85.1	85.8	87.0	90.2	86.6	81.2	64.2	53.4	45.9	42.9	37.6	34.6	33.5	31.6	30.1	33.9	39.2	42.3	43.8	42.4	44.4	54.3	56.4	90.2
27-Sep	52.0	62.2	61.6	64.8	61.4	58.2	54.7	44.2	36.2	31.4	29.0	26.8	25.3	24.3	23.6	25.1	24.3	30.4	34.2	37.9	38.5	42.9	44.9	46.8	40.9	64.8
28-Sep	51.0	56.5	55.3	56.6	60.8	66.7	68.5	57.1	47.8	40.8	37.7	35.3	28.7	26.3	29.8	27.2	28.5	31.1	36.0	40.0	42.6	42.0	40.1	39.7	43.6	68.5
29-Sep	42.2	44.6	46.5	46.6	47.3	50.8	49.0	47.8	43.4	35.7	34.2	33.1	30.1	28.4	30.6	28.8	31.2	35.3	40.8	44.8	44.9	47.1	48.4	49.3	40.9	50.8
30-Sep	49.8	56.8	50.7	57.6	68.9	71.1	75.5	71.9	69.4	63.6	53.6	46.8	49.1	49.4	47.9	49.8	51.6	54.0	57.2	59.8	62.1	64.9	90.6	OR	59.7	90.6
	70.7	73.4	74.1	74.3	76.8	78.7	76.9	71.1	66.0	56.9	49.7	43.8	39.6	35.9	34.0	35.8	36.5	39.7	45.3	52.3	56.8	61.0	65.3	68.2	Diurnal Average	
	96.0	96.7	95.7	97.2	98.1	96.5	99.5	94.9	89.9	78.4	68.7	64.1	62.8	65.1	59.8	79.3	63.3	69.3	72.7	77.0	92.4	89.5	91.9	97.7	Diurnal Maximum	

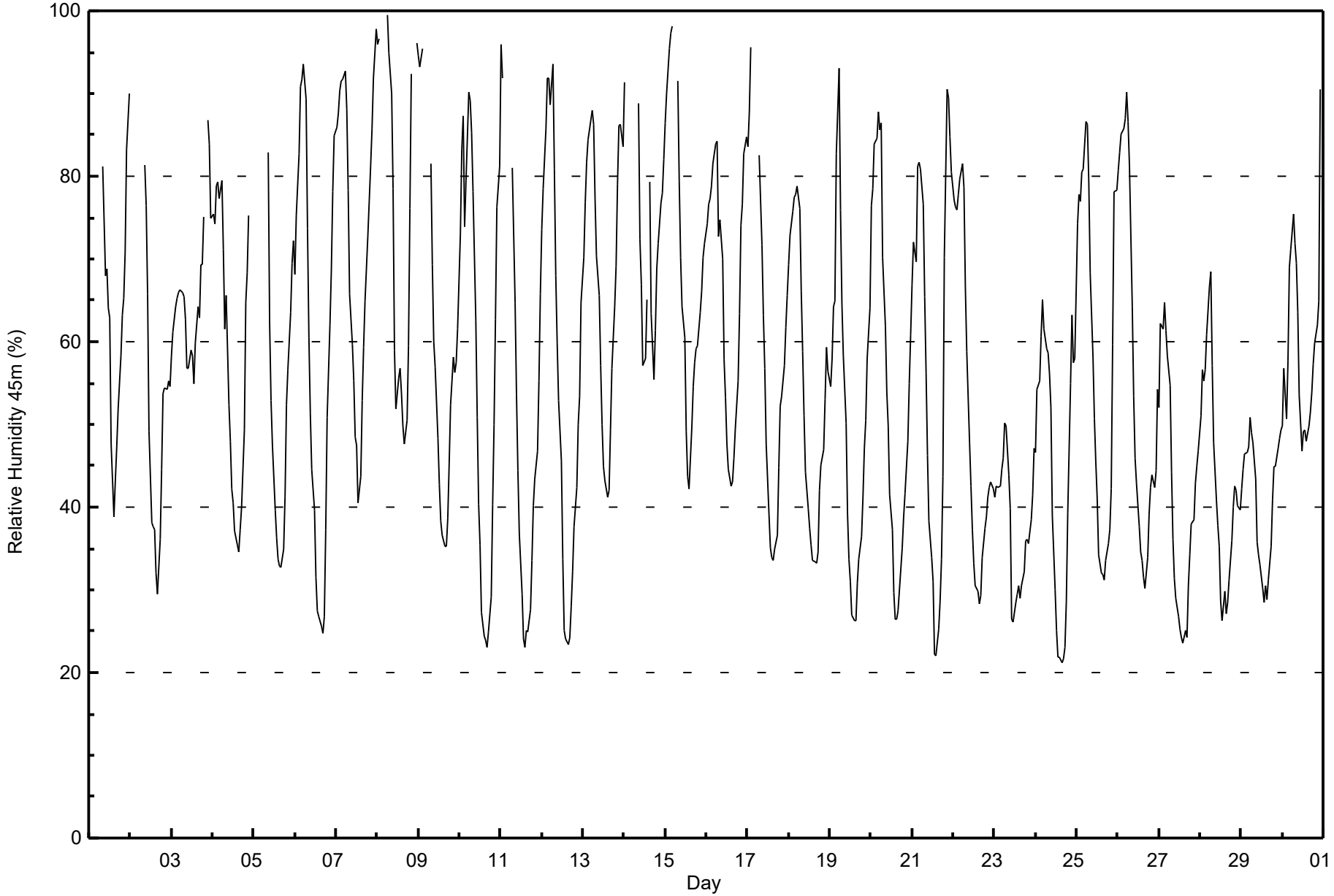
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Lower Camp Met Tower - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	170	25.60	25.60
40 - 60	222	33.43	59.04
60 - 80	167	25.15	84.19
80 - 100	105	15.81	100.00

Total Number of Valid Hours: 664

Total Number of Hours: 720

Maximum Value: 98.8 % on Sep 5 07:00

Maximum Daily Average: 76.2 % on Sep 8

Minimum Value: 23.5 % on Sep 24 16:00

Minimum Daily Average: 37.3 % on Sep 23

Maximum Diurnal Average: 76.0 % at hour 7

Minimum Diurnal Average: 39.7 % at hour 17

Monthly Average: 57.45 %

Percentiles: P_1 = 26.6 P_{10} = 33.1 Q_1 = 42.5 Median = 57.3 Q_3 = 71.5 P_{90} = 81.6 P_{99} = 94.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

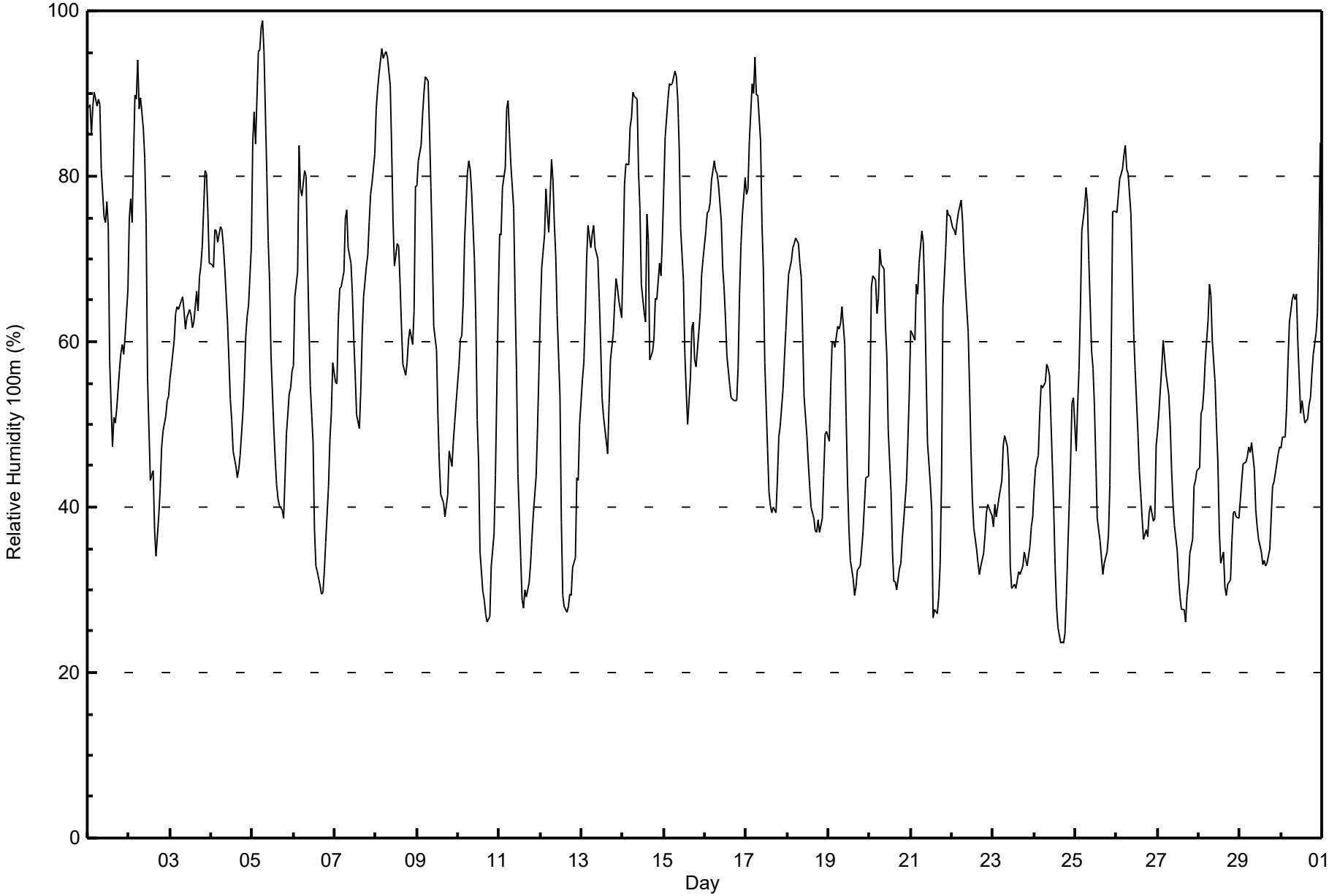
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	88.3	88.6	85.2	88.4	90.1	88.6	89.3	88.6	80.9	75.1	74.4	77.0	73.8	57.6	47.3	50.9	50.1	51.8	56.6	58.7	59.6	58.6	60.7	66.3	71.1	90.1
2-Sep	74.9	77.4	74.4	89.9	89.4	94.1	88.1	89.4	85.8	82.2	74.3	55.7	43.3	44.0	44.3	37.3	34.0	39.0	42.3	47.2	49.2	51.1	52.8	53.3	63.0	94.1
3-Sep	55.7	57.0	60.1	63.3	64.2	63.9	64.9	65.5	63.8	61.5	63.0	63.9	63.3	61.6	62.4	66.0	63.7	67.8	69.2	71.5	80.7	80.4	75.6	69.4	65.8	80.7
4-Sep	69.4	69.0	73.5	73.3	72.0	73.9	73.5	71.8	69.0	62.4	57.8	53.0	50.5	46.8	44.9	43.6	44.6	46.3	51.5	55.5	60.6	63.1	64.3	71.6	60.9	73.9
5-Sep	84.3	87.8	83.9	95.1	95.3	98.0	98.8	95.1	80.3	72.3	67.3	58.4	49.5	45.7	42.7	41.1	40.2	39.7	38.7	43.5	48.8	53.8	54.3	56.4	65.5	98.8
6-Sep	57.1	65.3	68.6	83.7	78.4	77.6	80.7	80.0	70.5	62.4	54.7	47.7	37.3	32.9	32.1	30.4	29.6	29.7	32.2	35.8	42.6	48.2	51.4	57.5	53.6	83.7
7-Sep	55.0	55.0	62.7	66.4	66.6	68.5	75.0	75.9	71.4	69.6	65.8	60.3	56.0	51.1	49.5	54.1	60.8	65.5	69.2	70.6	74.5	77.9	79.1	82.7	66.0	82.7
8-Sep	88.1	90.4	92.3	95.5	94.2	94.7	95.1	94.3	91.0	83.3	74.6	69.2	71.8	71.5	67.1	61.9	57.3	56.0	57.4	60.2	61.6	59.7	63.8	78.8	76.2	95.5
9-Sep	78.7	81.8	83.7	87.3	90.1	92.0	91.6	85.7	78.7	71.1	61.9	59.0	51.0	45.2	41.6	40.5	38.9	40.1	41.5	46.8	44.8	48.0	50.4	52.7	62.6	92.0
10-Sep	57.1	60.3	60.7	64.7	72.2	80.3	81.8	80.8	78.1	70.1	62.6	50.5	45.4	34.5	29.8	28.8	27.1	26.1	26.8	32.8	34.7	36.8	44.0	64.9	52.1	81.8
11-Sep	73.1	72.9	78.7	81.0	88.1	89.1	85.1	81.4	76.1	65.4	56.7	44.0	33.9	28.8	27.8	30.0	29.1	30.9	33.1	36.3	39.2	43.7	49.6	56.4	55.4	89.1
12-Sep	63.6	69.0	73.0	78.5	75.4	73.2	82.0	79.5	74.3	70.3	63.3	53.4	38.1	29.4	28.0	27.3	27.9	29.5	29.3	32.7	33.9	43.5	43.1	50.1	52.8	82.0
13-Sep	55.4	57.5	62.8	70.0	74.0	71.4	73.0	74.1	71.4	70.0	65.3	59.7	53.3	51.0	47.9	46.4	52.6	57.9	61.0	64.8	67.7	66.5	64.8	62.9	62.6	74.1
14-Sep	70.0	79.0	81.5	81.3	86.0	87.1	90.2	89.7	89.4	80.4	76.1	66.9	63.6	62.4	75.5	72.3	57.8	58.7	60.4	65.2	65.1	69.4	68.0	72.6	73.7	90.2
15-Sep	78.7	84.8	89.3	91.2	91.0	91.2	92.8	92.0	89.1	83.5	73.7	67.4	58.7	54.0	49.9	55.6	61.7	62.3	57.8	57.0	61.1	63.6	68.1	70.1	72.7	92.8
16-Sep	73.4	75.6	75.8	76.8	79.5	81.9	80.6	80.4	79.0	74.7	68.9	66.4	62.7	58.3	54.8	53.2	53.1	52.9	52.8	56.9	65.7	71.6	75.3	79.7	68.7	81.9
17-Sep	77.8	78.5	84.2	91.1	90.0	94.5	89.8	89.8	84.3	74.3	68.6	57.4	46.9	41.9	40.2	39.4	39.9	39.3	43.4	48.5	49.8	54.3	57.9	61.4	64.3	94.5
18-Sep	65.0	68.1	69.9	71.4	71.8	72.6	71.8	69.5	67.8	60.9	53.4	48.7	45.5	42.5	40.0	38.6	37.1	36.9	38.4	37.0	38.6	43.9	48.8	49.1	53.6	72.6
19-Sep	47.9	54.5	59.8	60.0	59.4	61.9	61.5	62.3	64.3	59.7	50.8	43.1	37.2	33.5	31.3	29.4	30.4	32.3	32.8	34.7	36.9	40.1	43.6	43.8	46.3	64.3
20-Sep	53.8	66.6	68.0	67.5	63.4	65.2	71.1	69.3	68.8	62.1	58.4	49.4	41.9	34.8	31.1	31.0	30.0	32.5	33.2	36.1	38.4	43.1	47.9	53.7	50.7	71.1
21-Sep	61.4	61.1	60.2	67.0	65.7	69.6	73.4	72.0	65.9	56.3	47.8	42.8	39.7	26.5	27.7	27.2	29.2	33.1	43.3	64.3	71.3	75.9	75.2	75.2	55.5	75.9
22-Sep	73.7	73.5	72.9	74.4	75.7	77.2	74.7	70.4	66.8	61.1	54.5	46.7	40.9	37.4	34.9	33.3	31.8	32.8	34.5	36.6	39.3	40.3	39.8	38.9	52.6	77.2
23-Sep	37.6	40.3	38.8	41.2	42.2	43.2	47.5	48.7	47.3	44.2	32.8	30.2	30.7	30.2	31.1	32.2	31.9	32.9	34.6	33.7	32.8	35.3	37.6	38.9	37.3	48.7
24-Sep	42.1	44.7	46.3	51.2	54.7	54.5	55.1	57.3	56.8	56.0	50.5	39.6	32.8	27.9	25.4	23.5	23.7	23.6	24.7	29.4	40.2	45.5	52.6	53.2	42.1	57.3
25-Sep	46.8	52.3	56.6	63.9	73.3	76.4	78.6	76.8	69.8	58.8	56.8	52.2	45.5	38.6	36.0	34.0	31.8	33.2	34.7	36.7	42.8	59.1	75.8	75.8	54.4	78.6
26-Sep	75.6	77.7	79.7	80.9	82.5	83.7	80.9	80.3	75.5	68.4	61.0	56.7	49.0	44.4	41.7	38.6	36.1	37.2	36.5	39.3	40.2	38.4	38.7	47.5	57.9	83.7
27-Sep	49.2	51.5	57.0	60.1	58.1	56.1	53.5	50.0	44.5	40.5	37.8	34.8	31.5	29.1	27.7	27.6	26.1	29.3	30.9	34.4	36.1	42.5	43.3	44.4	41.5	60.1
28-Sep	44.8	51.4	51.9	54.2	57.9	62.5	67.0	65.6	60.2	55.1	49.9	45.4	37.2	33.2	34.6	30.3	29.3	30.6	31.2	36.0	39.4	39.4	38.8	38.6	45.2	67.0
29-Sep	40.9	43.2	45.3	45.5	46.1	47.3	46.5	47.8	44.6	39.6	37.6	36.2	34.6	33.0	33.5	32.8	33.2	34.9	38.9	42.5	43.1	45.2	46.4	47.3	41.1	47.8
30-Sep	47.1	48.4	48.4	52.0	57.7	62.4	65.2	65.7	65.2	65.8	59.9	51.4	52.8	51.6	50.1	50.7	52.3	53.2	56.1	58.5	61.1	63.5	71.8	84.0	58.1	84.0
	62.9	66.1	68.2	72.2	73.5	75.1	76.0	75.0	71.0	65.2	59.3	52.9	47.3	42.7	41.0	40.3	39.7	41.2	43.1	46.8	50.0	53.4	56.1	59.9	Diurnal Average	
	88.3	90.4	92.3	95.5	95.3	98.0	98.8	95.1	91.0	83.5	76.1	77.0	73.8	71.5	75.5	72.3	63.7	67.8	69.2	71.5	80.7	80.4	79.1	84.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 100m (RH100) - %

Lower Camp Met Tower - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	156	21.67	21.67
40 - 60	237	32.92	54.58
60 - 80	238	33.06	87.64
80 - 100	89	12.36	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 96.2 % on Sep 8 08:00

Maximum Daily Average: 74.4 % on Sep 8

Minimum Value: 23.3 % on Sep 24 18:00

Minimum Daily Average: 36.0 % on Sep 23

Maximum Diurnal Average: 70.4 % at hour 8

Minimum Diurnal Average: 39.5 % at hour 17

Monthly Average: 54.40 %

Percentiles: P_1 = 26.5 P_{10} = 32.5 Q_1 = 40.2 Median = 54.0 Q_3 = 67.7 P_{90} = 77.0 P_{99} = 92.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

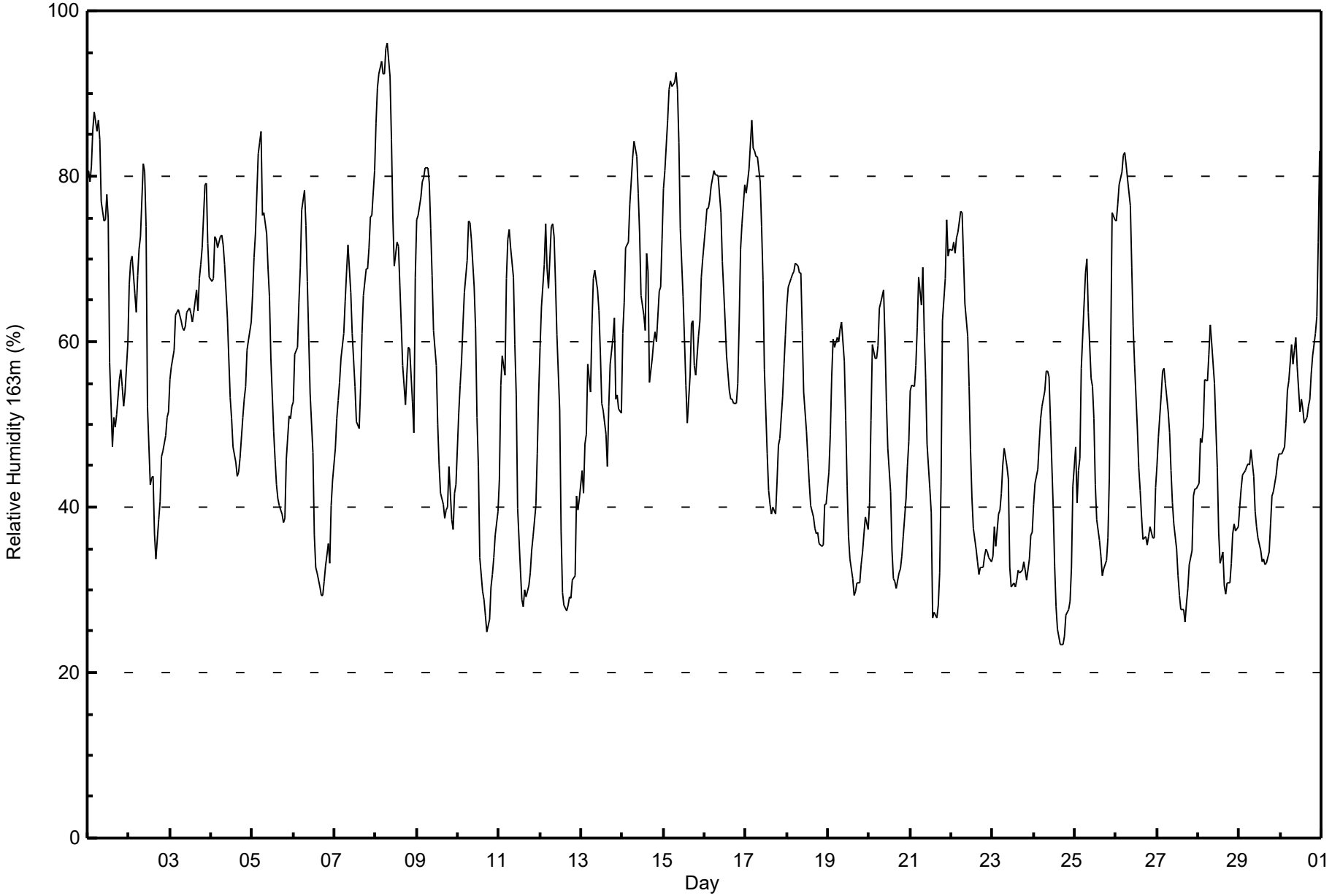
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	80.6	79.3	81.3	85.5	87.8	85.3	86.8	84.4	77.0	74.6	74.7	77.8	74.8	57.5	47.2	50.9	49.7	51.1	55.4	56.7	54.7	52.3	53.9	59.9	68.3	87.8
2-Sep	67.0	69.6	70.3	65.8	63.5	68.0	71.1	72.8	81.6	80.5	73.8	52.2	42.7	43.6	43.7	36.8	33.7	38.4	40.6	46.0	46.8	48.7	50.8	51.6	56.7	81.6
3-Sep	55.3	56.9	59.0	63.2	63.5	63.9	62.5	61.6	61.4	61.9	63.5	64.0	63.3	62.3	63.5	66.3	63.8	67.7	69.4	71.3	78.9	79.1	71.9	67.8	65.1	79.1
4-Sep	67.2	67.6	72.8	72.4	71.4	72.7	72.9	71.8	69.3	62.8	58.0	53.2	50.7	47.3	45.4	43.8	44.3	46.0	50.9	53.1	54.6	58.9	60.2	62.4	59.6	72.9
5-Sep	65.8	70.1	73.1	82.8	84.1	85.4	75.3	75.7	73.1	68.8	65.4	57.9	49.2	45.8	42.7	41.0	40.1	39.2	38.1	38.6	45.8	51.0	50.7	52.3	58.8	85.4
6-Sep	52.8	58.4	59.3	64.7	68.9	75.9	78.3	74.0	67.4	60.6	53.8	46.5	36.6	32.7	32.1	30.4	29.4	29.3	31.0	32.9	35.5	33.3	40.2	43.2	48.6	78.3
7-Sep	47.1	50.7	53.0	55.0	57.9	61.0	64.9	68.4	71.7	66.0	61.0	57.8	54.5	50.4	49.5	54.3	61.0	65.6	68.8	68.8	71.3	75.0	75.3	80.6	62.1	80.6
8-Sep	86.5	90.7	92.4	93.8	92.3	92.3	95.4	96.2	92.1	84.5	75.1	69.2	72.0	71.4	66.7	62.1	57.0	52.4	56.1	59.4	59.1	52.8	49.0	67.7	74.4	96.2
9-Sep	74.7	75.2	77.5	79.2	79.9	81.0	81.1	79.1	73.7	68.0	61.4	57.2	50.0	45.1	41.6	40.4	38.7	39.7	40.0	44.9	38.5	37.4	41.6	42.7	57.9	81.1
10-Sep	51.3	54.8	57.6	62.1	66.0	69.8	74.5	74.5	72.4	66.6	61.4	50.9	44.9	33.9	29.9	28.9	27.0	24.8	26.5	30.3	31.9	33.9	36.5	39.4	47.9	74.5
11-Sep	43.4	54.8	58.2	56.0	67.7	72.3	73.6	71.4	67.9	59.7	53.6	39.9	32.4	28.8	27.9	30.1	29.1	30.5	32.1	34.8	36.5	40.2	46.4	53.7	47.5	73.6
12-Sep	59.3	64.3	69.4	74.3	68.7	66.5	73.9	74.3	72.7	67.1	60.8	51.6	37.1	29.6	28.2	27.5	28.1	29.1	29.0	31.3	31.6	41.3	39.7	41.0	49.9	74.3
13-Sep	44.3	41.7	47.7	48.8	57.3	53.9	62.1	67.7	68.6	66.3	63.8	58.7	52.6	51.7	48.9	45.0	52.2	57.3	60.6	62.8	53.0	53.6	51.9	51.3	55.1	68.6
14-Sep	61.0	64.8	71.3	72.1	76.7	79.3	82.2	84.3	82.3	78.0	73.0	65.6	63.2	61.3	70.7	68.4	55.0	58.0	60.0	61.2	59.9	66.1	66.6	72.4	68.9	84.3
15-Sep	78.4	80.7	86.8	90.5	91.5	90.8	91.4	92.6	90.6	84.1	73.7	65.5	60.2	54.7	50.2	56.0	62.2	62.6	57.2	56.0	60.7	62.5	67.7	70.0	72.4	92.6
16-Sep	74.0	76.1	76.1	77.1	78.8	80.7	80.2	80.1	80.1	75.6	69.7	66.1	62.4	58.3	54.0	53.0	53.1	52.5	52.5	54.9	62.2	71.3	74.3	79.1	68.4	80.7
17-Sep	78.0	79.4	80.8	86.7	83.4	83.1	82.4	82.3	79.3	74.0	67.5	56.7	46.5	42.0	40.3	39.2	40.0	39.2	43.0	47.4	48.3	53.4	57.2	60.8	62.1	86.7
18-Sep	64.3	66.6	67.7	68.2	68.4	69.4	69.2	68.3	68.4	61.3	53.9	49.1	45.9	42.8	40.3	38.8	37.4	36.8	36.9	35.6	35.3	35.4	40.4	40.3	51.7	69.4
19-Sep	44.3	48.8	55.7	60.4	59.2	60.5	60.0	61.6	62.4	57.7	50.5	42.5	36.4	33.7	31.4	29.3	29.9	30.9	30.8	33.1	34.6	36.8	38.8	37.3	44.4	62.4
20-Sep	40.6	50.5	59.6	58.0	57.9	59.5	64.1	64.7	66.2	60.3	52.8	47.1	41.9	34.8	31.3	31.1	30.1	32.1	32.5	34.0	36.5	41.0	44.9	48.0	46.6	66.2
21-Sep	54.0	54.7	54.5	57.1	61.6	67.8	64.4	68.9	61.2	55.6	47.7	42.3	39.3	26.6	27.4	26.6	28.1	32.0	43.0	62.6	67.6	74.8	70.3	71.2	52.5	74.8
22-Sep	71.0	72.1	70.6	72.6	73.2	75.7	75.6	70.2	64.6	60.6	54.6	47.0	41.2	37.5	34.9	33.3	31.9	32.6	32.7	34.0	34.9	34.5	33.9	33.4	50.9	75.7
23-Sep	34.0	37.6	35.2	39.2	39.7	41.7	45.0	47.1	45.0	43.4	32.8	30.3	30.9	30.3	31.2	32.4	32.0	32.3	33.5	32.3	31.3	33.7	36.7	36.9	36.0	47.1
24-Sep	40.4	42.9	44.6	47.7	50.6	52.1	54.0	56.5	56.4	55.8	50.5	39.9	32.9	28.0	25.3	23.4	23.4	23.3	24.4	27.0	27.7	28.7	32.7	42.6	38.8	56.5
25-Sep	47.3	40.5	44.4	45.9	56.9	64.6	68.4	70.0	63.6	55.6	54.6	50.6	42.8	38.5	36.0	34.0	31.7	32.6	33.6	36.3	43.6	59.5	75.7	74.8	50.1	75.7
26-Sep	74.5	76.5	78.9	80.5	82.5	82.9	81.3	79.6	76.5	69.0	61.8	57.3	49.5	44.8	42.0	38.8	36.0	36.4	35.4	36.5	37.6	36.4	36.3	42.4	57.2	82.9
27-Sep	45.2	48.6	53.6	56.4	56.8	55.0	51.6	49.0	44.3	40.5	38.0	34.9	31.6	29.3	27.7	27.6	26.1	28.3	30.2	33.0	34.8	41.4	42.2	42.2	40.3	56.8
28-Sep	42.9	48.4	47.9	49.6	55.4	55.2	58.5	62.0	59.9	54.9	49.6	44.7	36.9	33.2	34.6	30.5	29.5	30.9	30.9	33.3	36.8	37.9	37.2	37.6	43.3	62.0
29-Sep	40.0	42.2	44.0	44.5	44.8	45.2	45.2	46.9	43.7	39.5	37.6	36.3	34.7	33.3	33.8	33.0	33.2	34.6	38.0	41.4	41.9	44.0	45.6	46.4	40.4	46.9
30-Sep	46.5	46.5	47.3	50.2	54.0	55.3	59.7	57.3	59.0	60.5	57.0	51.5	53.1	51.9	50.1	50.9	52.3	53.0	56.1	58.3	61.0	63.0	72.0	83.1	56.2	83.1
	57.7	60.4	63.0	65.3	67.4	68.9	70.2	70.4	68.4	63.8	58.4	52.1	47.0	42.7	40.9	40.1	39.5	40.6	42.3	44.9	46.4	49.3	51.4	54.4	Diurnal Average	
	86.5	90.7	92.4	93.8	92.3	92.3	95.4	96.2	92.1	84.5	75.1	77.8	74.8	71.4	70.7	68.4	63.8	67.7	69.4	71.3	78.9	79.1	75.7	83.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 163m (RH163) - %

Lower Camp Met Tower - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	178	24.72	24.72
40 - 60	265	36.81	61.53
60 - 80	225	31.25	92.78
80 - 100	52	7.22	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - September 2025

Maximum Speed: 27 km/h on Sep 29 14:00

Maximum Daily Speed Average: 15.7 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 24 22:00

Minimum Daily Speed Average: 1.0 km/h on Sep 10

Maximum Diurnal Speed Average: 5.9 km/h at hour 14

Minimum Diurnal Speed Average: 2.7 km/h at hour 2

Monthly Average Velocity: 3.9 km/h 170.4 deg

Percentiles: P_1 = 0 P_{10} = 2 Q_1 = 4 Median = 8 Q_3 = 13 P_{90} = 18 P_{99} = 23

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW2	NNE1	E2	N2	N2	N3	ESE7	SE3	S6	SE3	NNW3	NW0	N7	N8	N13	N15	N15	N13	N10	NNW5	NNW5	N3	NE1	N2	N3.9	N15
2-Sep	N2	N2	NNE1	NW3	NNW1	NE2	NNE2	NW1	E1	E1	E3	ESE6	ESE8	SE7	SE8	SE8	SE10	SSE10	SE7	SE6	SE9	SE20	SE22	SE14	SE5.3	SE22
3-Sep	SE10	ESE9	SE9	SE12	SE12	SE11	SE11	SE11	SE13	SSE17	SSE14	SE9	SE7	E2	N7	NNW12	NNW22	NNW18	NNW18	NNW17	NNW12	NNW8	NW10	NW12	ENE2.3	NNW22
4-Sep	NW12	NW13	NW10	NW11	NW11	NW9	NW9	NW11	NW12	NNW13	NNW14	NNW15	NW14	NNW12	NNW13	NW12	NNW11	N9	NNE7	N3	NNW3	NNE0	NNE1	N2	NNW9.0	NNW15
5-Sep	N1	SE1	NE1	E1	ESE3	ESE5	ESE5	SE7	SE9	SE10	SE8	SE8	SE8	ESE7	SE5	ESE5	E5	ENE4	ENE2	SE3	SE6	E3	ENE2	SE3	ESE4.4	SE10
6-Sep	SE10	E5	ESE6	ESE6	ESE6	SE8	ESE7	ESE5	SE6	SE8	SE6	SE6	SSE11	SE13	SSE12	SE9	SE9	SE8	N2	NNW2	SE2	SSE1	SE5	SE3	SE5.9	SE13
7-Sep	SE3	SE5	SE6	SE5	SE7	ESE8	ESE5	ESE3	SE2	SE2	NNE2	NNW5	NW4	NNW6	N9	NNW15	N12	N8	NNW5	N6	NNW4	NW3	NNW1	NNW2	NNE2.3	NNW15
8-Sep	NNW5	NNW5	NNW6	NW3	NNW3	NW3	NNW4	N5	N3	NNE6	NNE2	WNW1	WSW9	WSW11	WSW9	WSW6	NNE2	NW2	NW3	NNW1	N1	NE0	NNE1	NE1	NW2.4	WSW11
9-Sep	WNW1	NNE1	N2	N2	E2	N1	N1	SE3	SE5	SE6	SSE8	SSE7	SSE9	SSE14	SSE16	SSE19	SSE17	SSE15	S14	SW9	WSW9	SE5	SE6	SE6	SSE5.9	SSE19
10-Sep	SE5	SE4	SE3	SSE4	WSW3	WNW1	N1	N2	E2	ESE4	NNE4	NNE4	NE3	NW4	WSW10	WSW11	WSW9	NW6	NNW4	WSW1	SW0	S1	NNW3	SSE1	W1.0	WSW11
11-Sep	NW0	NNE1	N2	N1	ESE2	ESE1	ESE6	ESE6	SE5	SE5	SE5	SE6	SE9	SSE14	SSE14	SSE16	SSE11	SSE12	SE12	SE11	SE16	SSE19	SE16	SE10	SE7.8	SSE19
12-Sep	SE8	SE7	SE6	S3	SE7	SE13	SE7	SE5	SE9	SE9	SE11	SE11	SSE15	S23	SSW22	SSW20	SSW18	S14	S16	SSW10	SE3	SE2	SSE3	SE4	SSE8.9	S23
13-Sep	SE3	SE6	SE3	ESE4	SE6	ESE6	SE8	SE6	SE7	SE6	ESE4	E2	NNW3	N4	N5	NNW6	NNW6	NNW6	N4	N4	NW3	W0	WNW0	NW2	E1.5	SE8
14-Sep	NNW3	NNW1	SW1	NNW2	NW1	NNE0	N0	ESE2	SE2	SE6	SE6	SE7	SE9	ESE8	SE8	ESE5	SE10	SSE14	SSE19	SSE16	SE6	SSE1	ESE4	SE2	SE4.7	SSE19
15-Sep	ESE2	ESE5	SE6	SE7	SE11	SE13	ESE9	SE7	SSW6	SSW3	E3	E2	NE3	W3	NW12	NW18	NW21	NW13	NW12	NW14	NW12	NW13	NW9	NW11	NW2.9	NW21
16-Sep	NW7	NW7	NW5	NW4	NNW8	NNW6	NW4	N3	W6	NW7	N7	NNE6	E3	SE4	ESE5	SE7	SE8	SE8	SE4	ESE5	SE8	SE13	SE9	SSE14	ESE1.1	SSE14
17-Sep	SE14	SE7	SSE3	ENE4	E5	ENE4	E3	ESE4	ESE4	SSE11	SE10	SE10	SE11	SE15	SE16	SE16	SE20	SE18	SE14	SE13	SE13	SE18	SE17	SE14	SE10.6	SE20
18-Sep	SE14	SE14	SE14	SE14	SE17	SE21	SE22	SSE24	SSE25	S20	S22	SSW18	SSW17	SSW18	SSW17	S17	SSW15	SSW12	SW5	SW3	SW8	WSW10	WSW11	WSW12	S12.6	SSE25
19-Sep	WSW11	SW8	SSE5	SSE8	ESE7	ESE6	SE10	SE11	ESE7	SSE7	SW6	S5	SW9	W11	W10	WSW12	WSW8	SW5	SW3	WNW2	SSE2	ESE5	SSE1	SE6	SSW3.9	WSW12
20-Sep	SE8	SE7	SE7	SE8	SE10	SE6	ESE7	SE12	SE13	SE14	SE12	SE17	SE18	SSE18	S23	SSE21	S24	SSE19	SSE19	SSE18	SSE21	SE17	SE10	SE6	SSE13.4	SSE24
21-Sep	ESE3	SW2	SE8	SSE2	SE6	SE8	SE10	SE10	SE10	S6	WSW5	ESE1	ESE3	WSW8	NNW1	W10	W15	W14	W15	WNW10	W3	SSW9	SW12	SW15	SW3.7	W15
22-Sep	WSW16	WSW16	WSW19	WSW15	WSW12	SW7	SSE6	ESE8	SE7	WSW13	WSW16	SW17	SSW19	WSW18	WSW18	SW14	SW19	S12	SSE15	SSE21	SSE22	SSE23	SSE24	SSE24	SSW12.3	SSE24
23-Sep	SSE21	S10	S14	S16	S19	S21	S11	S10	SSW12	SW13	WSW20	WSW22	SW21	SW23	SSW19	SSW22	SSW23	SSW22	SSW19	SSW15	SSW9	SE7	SE9	SE9	SSW14.6	SW23
24-Sep	SE10	SE10	SE13	SE10	SE8	SE8	SSE7	SSE6	SW11	WSW15	WSW15	W9	W10	W13	W13	WNW9	NW6	NW8	NW6	SW2	WNW2	NE0	SE5	SE10	SSW3.4	WSW15
25-Sep	SE9	ESE8	ESE8	SE9	SE11	SE8	ESE7	SE7	SE7	SSE12	SE11	ESE9	SE15	SE16	SSE7	SSE17	SSE19	S15	SSE18	SSE22	S18	WSW20	WSW16	WSW10	SSE10.1	SSE22
26-Sep	SW13	SW10	SW4	SW4	SSW6	SSE3	SSE7	S7	SSE7	WSW12	W10	WSW13	W14	W13	W13	WSW20	W11	NNW1	SSW7	SW15	SSW12	SSW13	S13	ESE10	SW7.8	WSW20
27-Sep	SE8	SSE6	SSE19	SSE17	SSW17	SW22	WSW18	WSW18	W20	W20	WSW17	WSW15	WSW17	WSW22	WSW19	WSW16	WSW18	WSW9	W5	WSW5	SW11	SW7	SSE8	SE7	SW11.3	WSW22
28-Sep	ESE3	WSW3	WSW14	W12	W4	W7	W7	WNW5	WSW9	SW7	SSE6	SE7	SSE7	S8	SSE15	SSW7	SW9	S8	ESE2	SE4	SE6	ESE4	ESE7	SE13	SSW4.1	SSE15
29-Sep	SE15	SE13	SE11	SE14	SE16	ESE16	SE16	SE18	SE18	SE22	SE25	SE24	SSE22	SSE27	SSE23	SSE20	SSE21	SSE16	SE10	ESE9	ESE11	SE9	ESE10	E6	SE15.7	SSE27
30-Sep	ESE9	ESE2	SE12	NNW1	NW4	N6	NNW3	WNW3	NW3	NNW4	NW6	N10	NNW13	N11	NNE12	N10	N9	NNW7	NNW9	NNW4	NNW5	NNW6	NW5	NW7	N4.8	NNW13
	SSE3.8	SSE2.7	SSE3.8	SSE3.4	SSE3.9	SSE4.0	SE4.2	SE4.4	SSE5.0	S4.8	S3.9	S3.6	S4.7	SSW5.9	SSW5.1	SSW5.1	SSW4.6	S3.4	S2.8	S3.3	S3.8	SSE4.4	SSE4.3	SSE3.9	Diurnal Average	
	SSE21	WSW16	SSE19	SSE17	S19	SW22	SE22	SSE24	SSE25	SE22	SE25	SE24	SSE22	SSE27	SSE23	SSW22	SSE24	SSW22	SSW19	SSE22	SSE22	SSE23	SSE24	SSE24	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Sep 3 00:00

Minimum Value: 0 km/h on Sep 10 21:00

Percentiles: $P_1 = 1$ $P_{10} = 1$ $Q_1 = 2$ Median = 3 $Q_3 = 4$ $P_{90} = 5$ $P_{99} = 7$

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

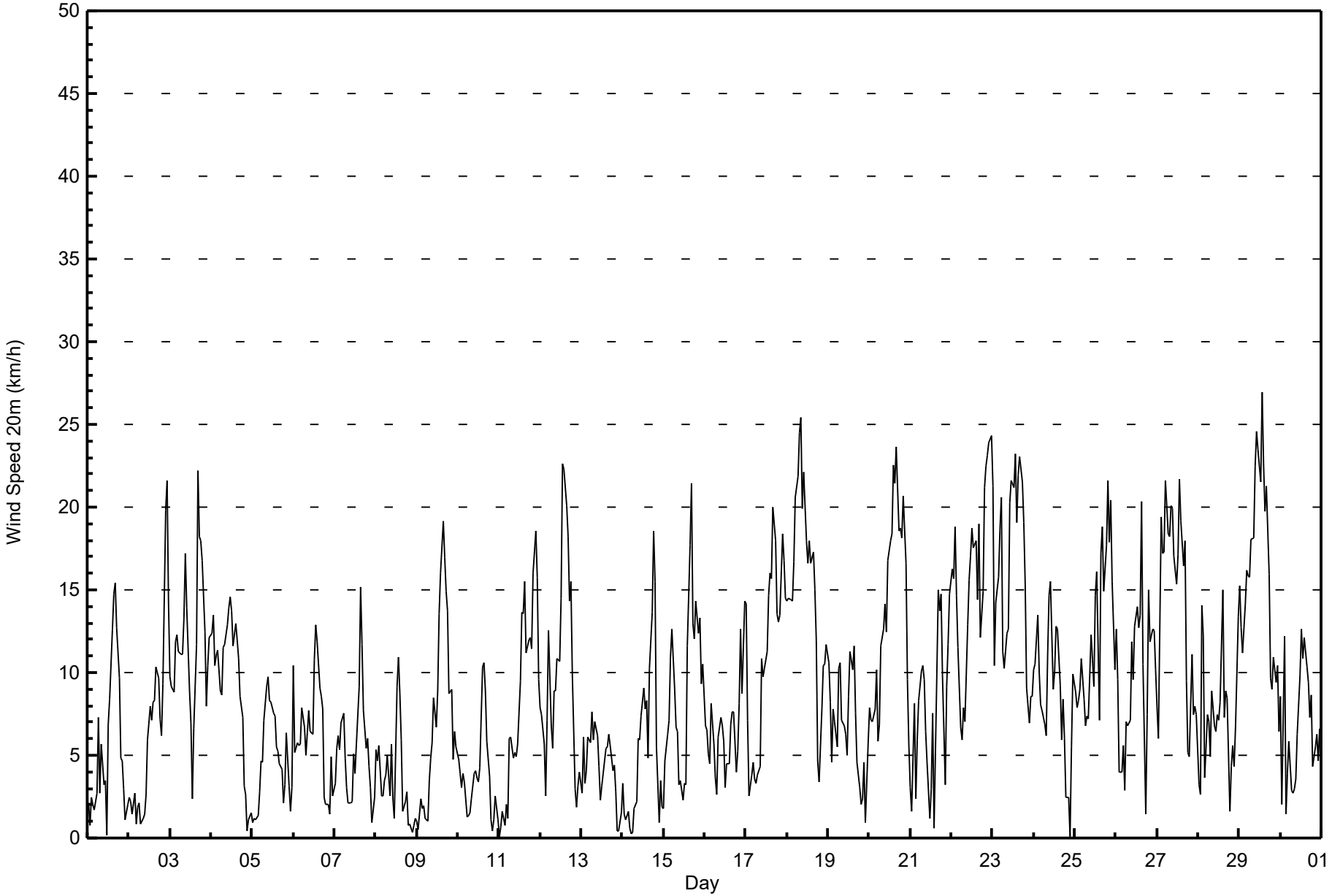
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	1	1	2	1	1	4	2	3	2	2	2	3	3	6	5	5	4	4	2	2	2	1	1	6
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	5	5	9	9
3-Sep	4	4	4	4	4	4	3	3	5	4	4	3	3	2	2	5	8	6	7	6	5	3	4	4	8
4-Sep	4	5	3	3	3	3	4	5	5	6	6	6	5	6	5	5	4	3	4	1	1	1	1	1	6
5-Sep	1	1	1	1	2	1	2	2	2	3	3	2	3	3	3	3	2	2	1	2	2	2	1	3	3
6-Sep	4	3	2	2	2	2	2	2	1	2	2	2	4	4	3	2	2	2	2	1	1	1	3	1	4
7-Sep	1	1	2	2	2	2	2	1	1	1	2	2	2	3	3	5	4	3	2	3	2	1	1	1	5
8-Sep	2	2	3	1	1	1	2	2	2	3	3	3	3	4	3	3	1	1	1	1	1	1	1	1	4
9-Sep	1	1	3	1	1	1	1	1	2	2	2	1	3	4	4	4	3	2	2	2	2	2	3	2	4
10-Sep	2	1	2	2	2	1	1	1	1	2	1	2	2	5	4	4	4	3	2	1	0	1	2	1	5
11-Sep	1	1	1	1	1	1	2	2	2	3	2	2	3	4	4	4	4	2	2	2	4	3	3	2	4
12-Sep	3	4	4	2	3	3	4	3	2	4	4	4	5	4	4	4	3	2	2	5	2	2	1	2	5
13-Sep	2	2	1	1	3	3	2	3	2	3	2	2	1	2	2	2	3	3	1	2	1	1	1	1	3
14-Sep	1	1	1	1	1	1	1	1	1	3	3	3	4	3	3	2	4	4	4	3	4	1	1	1	4
15-Sep	1	3	1	2	2	3	3	3	2	2	2	1	2	4	4	6	8	6	6	4	4	4	3	3	8
16-Sep	3	2	2	3	3	2	1	2	3	3	3	2	2	3	2	2	2	2	2	2	3	4	3	5	5
17-Sep	4	4	2	1	1	1	1	2	2	3	3	3	4	5	5	5	6	6	5	4	4	5	5	5	6
18-Sep	5	5	4	4	5	4	4	5	5	6	4	4	4	4	4	4	3	5	1	1	4	2	2	3	6
19-Sep	3	3	2	2	2	1	3	2	2	2	3	3	4	4	4	4	3	2	1	1	2	2	1	3	4
20-Sep	2	2	2	2	2	3	2	5	4	3	4	7	4	5	5	4	4	4	3	4	5	3	3	2	7
21-Sep	2	1	3	2	3	3	2	3	3	2	3	2	2	3	2	6	5	5	6	6	2	4	2	3	6
22-Sep	4	5	5	6	5	4	3	2	2	5	4	4	4	6	7	8	4	2	3	4	3	3	3	3	8
23-Sep	5	3	4	4	4	3	3	3	2	5	7	6	5	5	4	5	5	4	3	3	6	3	2	2	7
24-Sep	2	3	3	3	2	3	3	3	4	5	5	4	4	5	5	4	3	2	3	1	1	1	2	2	5
25-Sep	3	2	2	3	3	2	3	3	4	3	3	6	5	4	3	7	3	2	3	3	3	7	6	3	7
26-Sep	2	2	2	3	2	2	2	1	4	5	4	5	5	5	5	6	7	2	4	3	2	2	3	3	7
27-Sep	3	3	4	5	5	4	6	7	8	7	6	6	7	7	7	5	5	4	2	2	2	3	1	2	8
28-Sep	1	4	4	6	3	5	4	3	4	3	2	2	3	4	3	4	2	2	1	3	2	2	3	4	6
29-Sep	5	5	5	5	5	5	6	6	7	8	8	7	6	6	5	5	4	4	3	3	4	5	4	3	8
30-Sep	5	4	4	4	2	3	1	1	2	2	3	4	4	4	5	4	4	4	3	2	3	3	2	2	5
	5	5	5	6	5	5	6	7	8	8	8	7	7	7	7	8	8	6	7	6	6	7	6	9	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	229	31.81	31.81
6 - 11	267	37.08	68.89
12 - 19	177	24.58	93.47
20 - 28	47	6.53	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

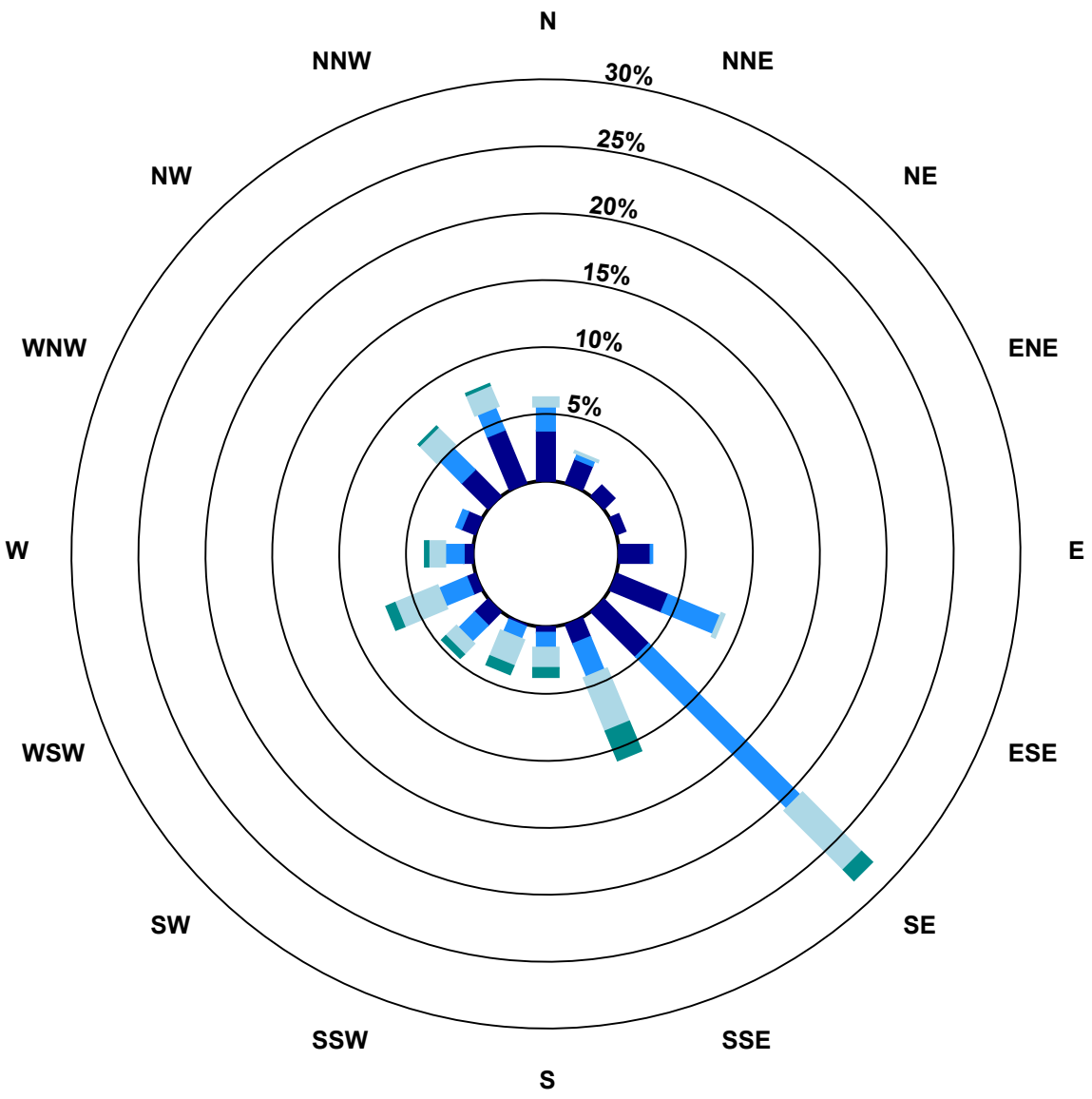
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower



Classes (km/h)

- 0 - 5
- 6 - 11
- 12 - 19
- 20 - 28
- 29 - 38
- > 38

Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - September 2025

Maximum Speed: 35 km/h on Sep 29 10:00

Maximum Daily Speed Average: 22.6 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 8 23:00

Minimum Daily Speed Average: 1.6 km/h on Sep 16

Maximum Diurnal Speed Average: 6.2 km/h at hour 1

Minimum Diurnal Speed Average: 2.9 km/h at hour 19

Monthly Average Velocity: 4.7 km/h 168.9 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 7 Median = 11 Q_3 = 18 P_{90} = 24 P_{99} = 29

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 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-Sep	NNW4	N1	E2	N2	N4	N4	ESE11	SE5	S6	ESE4	NNW4	NW1	N10	N13	N19	N21	N23	N19	N16	NNW9	NNW9	N7	N2	NW2	N6.3	N23
2-Sep	NW3	NW3	NNW3	NNW4	N3	N1	N2	N1	ENE1	E2	ESE3	ESE7	SE10	ESE8	SE10	SE11	SE13	SE12	SE12	ESE13	ESE18	SE24	SE27	SE17	SE7.0	SE27
3-Sep	SE16	ESE19	ESE16	SE19	SE20	SE19	SE17	SE16	SE17	SSE19	SSE15	SE12	SE10	ENE2	N10	NNW18	N34	NNW27	NNW28	NNW26	NNW21	NNW16	NNW20	NW21	NE4.8	N34
4-Sep	NW20	NW22	NW17	NW17	NW18	NW16	WNW15	NW17	NW18	NNW20	NNW21	NNW20	NW20	NNW17	NNW18	NW17	N16	N13	NNE13	NNE7	N4	NE2	NNW0	WNW2	NNW13.7	NW22
5-Sep	W1	SE3	SE2	SE3	SE3	SE6	ESE8	SE9	ESE11	SE11	ESE10	SE9	ESE8	ESE9	ESE7	ESE7	E7	ENE8	ENE7	SE6	ESE12	SE10	SE7	SE10	ESE6.9	ESE12
6-Sep	SE15	ESE4	SE6	ESE7	SE9	SE11	SE9	ESE6	SE7	SE9	SE8	SE8	SE13	SE15	SE14	SE12	SE11	SE11	NNE2	NW3	S2	SE5	SE11	SE8	SE8.2	SE15
7-Sep	SE9	SE11	SE9	SE8	SE11	SE12	SE7	SE4	ESE2	ESE2	N3	NNW6	NW5	NNW8	N13	N23	N19	N12	N11	N12	N10	NNW7	NNW5	NNW8	NNE3.9	N23
8-Sep	NNW12	NNW10	N10	NNW5	NNW5	NNW6	NNW7	N7	N4	NNE9	N4	NW3	WSW11	WSW12	WSW10	WSW6	N2	NW4	WNW4	NW2	NNW3	NNW1	W0	ESE6	NW3.9	WSW12
9-Sep	ESE3	SE3	ENE3	ESE3	ESE4	ESE0	SSE0	SE5	ESE7	SE8	SSE11	SSE7	SE11	SSE16	SSE19	SSE22	SSE19	S18	S18	SW13	WSW15	SSE5	SE9	SSE7	SSE8.0	SSE22
10-Sep	SE9	SE8	SSE6	SSW6	WSW7	WSW3	W4	WNW2	ESE1	ESE3	N4	N4	NE4	NW7	WSW14	WSW13	WSW11	NW10	NNW10	NNW4	NE1	SSW1	NW3	S3	W2.1	WSW14
11-Sep	SSW1	ESE4	NNW3	NW2	SE3	SE3	SE10	ESE9	ESE6	ESE6	SE5	ESE6	SE12	SSE15	SSE15	SSE18	SSE13	SSE13	SE14	SE17	SSE22	SSE24	SSE21	SE17	SE10.1	SSE24
12-Sep	SE15	SE14	SE12	SE6	SE11	SE19	SE10	SE8	SE12	ESE14	ESE17	SE17	SSE17	S25	SSW24	SSW22	SSW20	S17	S21	SSW16	S7	SE3	SE7	SE10	SSE12.2	S25
13-Sep	SE8	SE11	SE8	SE8	SE9	ESE10	SE10	SE7	SE8	SE8	ESE6	E3	N3	NNW5	N7	NNW9	NNW11	NNW11	NNW9	NNW10	NNW7	NW3	SW2	S2	ENE2.4	SE11
14-Sep	WNW2	NNW5	ENE1	WSW1	ENE1	ESE1	NNW1	ESE4	SE3	SE8	SE8	ESE10	SE12	ESE13	ESE13	SE8	SE18	SE18	SSE22	SSE19	SSE8	SSW4	SE7	SE5	SE7.0	SSE22
15-Sep	SE4	SE8	SE7	SE8	SE11	SE14	SE13	SE9	SSW7	SW3	E3	NE2	NE3	W5	NW17	NW25	NW30	NW21	NW19	NW21	NW19	NW20	WNW15	NW17	WNW5.4	NW30
16-Sep	NW11	NW10	NW9	NW8	NW12	NNW10	NW7	NNW3	W9	NW10	N8	NNE7	ENE3	SE4	ESE5	SE8	SE10	SE11	ESE10	ESE11	SE12	SE21	SE14	SE20	E1.6	SE21
17-Sep	SE24	SE15	SSE8	ESE5	SE7	ESE7	ESE7	ESE7	ESE7	SE13	SE13	SE14	SE16	SE19	SE23	SE24	SE32	SE30	SE24	SE21	SE22	SE27	SE27	SE27	SE17.3	SE32
18-Sep	SE26	SE26	SE24	SE23	SE27	SE29	SE27	SSE29	SSE29	S22	S24	SSW19	SSW18	SSW19	SSW18	S18	SSW16	SSW14	SSW8	SSW10	SSW13	WSW15	WSW16	WSW16	S15.9	SSE29
19-Sep	WSW15	SW11	S5	SSE8	SE10	SE9	SE12	SE11	SE8	SSE7	SW7	SSW6	SW11	W16	WSW14	WSW16	WSW11	SW7	SW7	SW6	SSW7	SSE5	SE3	SE9	SSW6.2	W16
20-Sep	SE13	SE11	SE10	SE9	SE14	SE10	SE11	SE16	SE15	SE15	SE17	SE22	SE21	SSE21	S24	SSE24	S26	SSE22	SSE24	SSE23	SSE26	SSE22	SE16	SE12	SSE17.0	SSE26
21-Sep	ESE8	SSE2	SE9	SSE5	SE8	SE9	SSE9	SSE8	SSE7	SSW8	W5	ENE1	ESE3	WSW9	N2	W14	W23	W20	W23	WNW17	W7	SW13	SW15	WSW19	SW6.0	W23
22-Sep	WSW22	WSW23	WSW27	WSW21	WSW17	SW10	S8	SE9	SE8	WSW15	WSW19	SW18	SW20	WSW22	WSW23	SW17	SW21	S15	S18	SSE25	S26	SSE27	SSE28	SSE28	SSW15.7	SSE28
23-Sep	S26	S14	S18	S19	S24	S25	S15	SSW13	SSW14	SW16	WSW26	WSW26	SW24	SW26	SSW22	SSW24	SSW25	SSW24	SSW23	SSW20	SSW13	SSE6	SSE9	SSE11	SSW17.9	WSW26
24-Sep	SSE10	SE13	SE16	SE13	SE11	SSE10	SSE9	S7	SW14	WSW20	WSW18	W12	W13	W17	W17	WNW14	NW10	NW15	NW13	SW4	W4	WSW4	S5	SE8	SW5.3	WSW20
25-Sep	SE12	SE11	SE13	SE13	SE15	SE11	SE11	SE10	SE10	SE14	SE13	ESE14	SE18	SE19	SSE9	SSE20	S21	S17	SSE22	SSE25	S21	WSW27	WSW22	WSW14	SSE12.6	WSW27
26-Sep	SW17	SW13	WSW8	WSW9	SW9	SSW4	S7	SSW8	S9	WSW15	W13	WSW15	W18	W18	W19	WSW25	W13	N3	SW11	SW20	SW16	SSW17	S16	ESE15	SW11.0	WSW25
27-Sep	SSE10	SSE9	SSE24	S21	SW21	SW26	WSW26	WSW27	W29	W28	WSW23	WSW22	WSW22	WSW26	WSW24	WSW22	WSW24	WSW14	W10	WSW9	SW15	SW10	S9	SE8	SW15.8	W29
28-Sep	S3	WSW7	WSW22	WSW20	W8	WSW15	W13	W8	WSW11	SW8	SSE7	SE9	SSE7	SSE9	SSE17	SSW8	SW10	S11	SE6	ESE8	ESE9	ESE7	ESE11	SE22	SSW5.7	WSW22
29-Sep	SE25	ESE21	ESE18	SE22	SE26	ESE25	ESE25	SE28	SE29	SE35	SE34	SE34	SE27	SSE30	SSE25	SSE22	SSE24	SSE19	SE14	ESE15	ESE19	SE15	ESE19	ESE12	SE22.6	SE35
30-Sep	ESE16	ESE9	SE24	NE2	NW8	NNW6	NNW5	NNW6	NW5	NW5	NW8	N16	NNW18	N18	NNE19	N16	N15	NNW12	NNW15	NNW9	NNW10	NNW12	NNW9	NNW13	N7.8	SE24
	SSE6.2	SSE4.9	SSE5.8	SSE4.9	SSE5.3	SSE5.6	SSE5.7	SSE5.5	SSE5.5	S5.1	S4.2	SSE3.9	S5.0	SSW6.1	SSW5.2	SSW5.1	SSW4.3	S3.0	S2.9	S3.8	S4.7	S5.4	SSE5.9	SSE6.0	Diurnal Average	
	SE26	SE26	WSW27	SE23	SE27	SE29	SE27	SSE29	SSE29	SE35	SE34	SE34	SE27	SSE30	SSE25	NW25	N34	SE30	NNW28	NNW26	S26	SE27	SSE28	SSE28	Diurnal Maximum		

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Sep 3 00:00

Minimum Value: 0 km/h on Sep 5 01:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

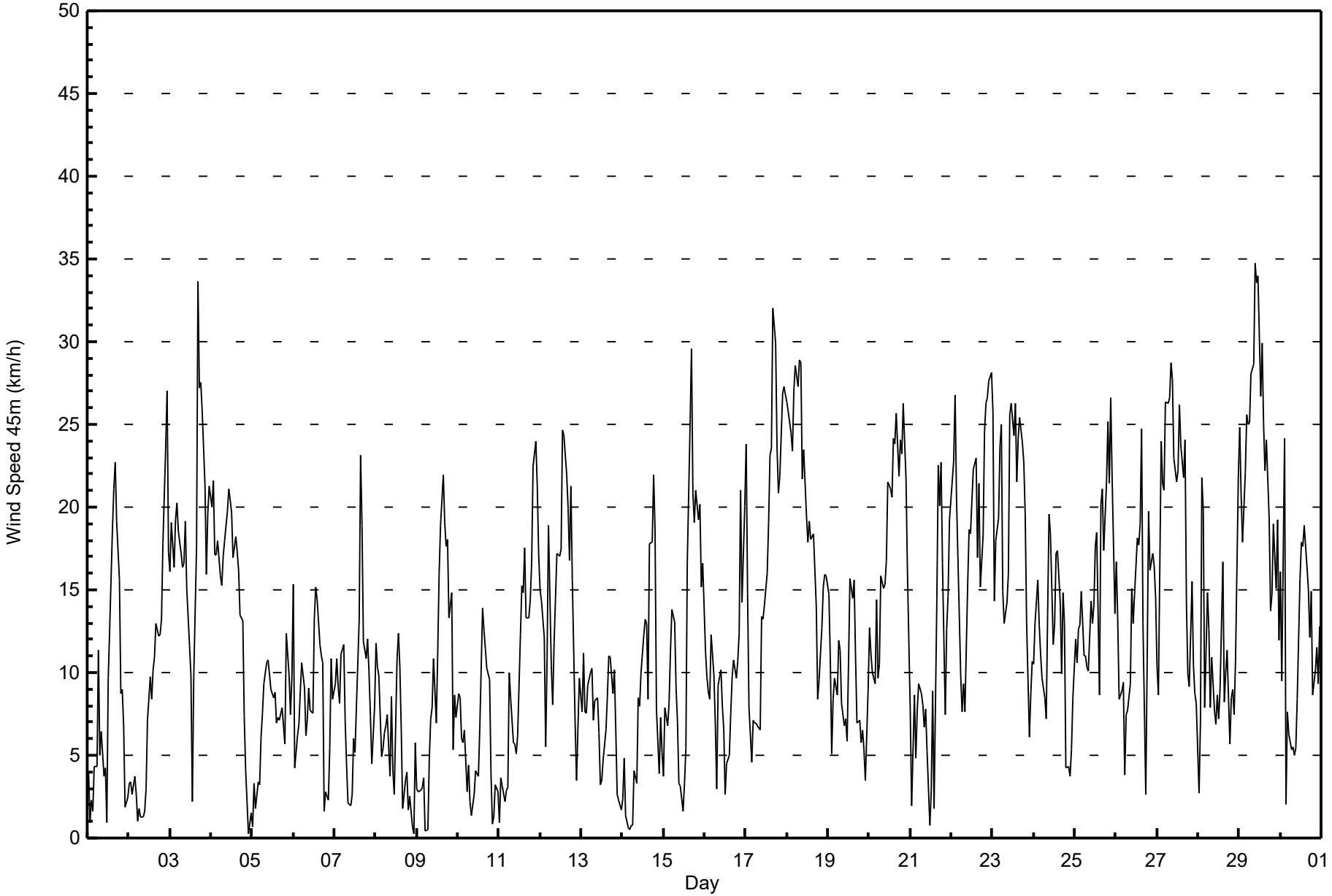
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	1	1	2	2	1	6	3	3	2	2	2	3	4	7	5	5	4	4	2	1	3	1	1	7
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	4	3	3	3	4	4	5	5	9	9
3-Sep	5	5	5	4	4	3	3	3	5	4	3	3	3	2	3	5	9	7	7	6	5	4	5	4	9
4-Sep	4	5	3	3	3	3	4	5	5	7	6	5	5	6	6	5	4	3	4	2	1	2	1	1	7
5-Sep	0	2	1	1	1	2	2	2	2	3	3	2	3	3	3	3	2	2	2	4	2	3	2	3	4
6-Sep	6	2	2	2	2	2	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	2	2	1	6
7-Sep	1	1	1	2	2	2	3	1	1	1	2	2	2	4	4	5	5	4	3	3	2	2	1	3	5
8-Sep	2	2	3	1	1	1	2	3	2	3	4	3	4	3	3	3	2	1	1	1	1	1	1	1	4
9-Sep	3	2	2	2	1	1	1	1	2	3	2	2	4	4	4	4	3	3	2	2	2	2	2	1	4
10-Sep	1	1	2	2	3	2	1	1	1	1	1	2	1	6	4	4	5	4	3	2	1	1	2	1	6
11-Sep	1	2	1	2	2	1	2	3	2	3	2	3	3	4	4	4	3	2	2	3	4	3	2	2	4
12-Sep	3	4	4	3	4	2	5	4	2	4	4	4	4	4	4	4	4	2	3	7	5	3	2	1	7
13-Sep	1	2	1	2	3	2	2	3	2	3	2	2	1	2	3	2	3	2	2	1	2	2	1	1	3
14-Sep	2	1	1	1	1	1	1	2	2	4	4	4	4	3	3	2	6	5	4	4	5	3	2	1	6
15-Sep	2	3	2	2	2	2	3	3	2	2	2	1	2	6	4	7	7	6	6	4	5	4	3	3	7
16-Sep	3	2	2	3	3	2	1	2	3	3	3	2	2	3	2	3	2	2	2	1	3	4	4	5	5
17-Sep	4	7	4	2	2	2	1	2	3	4	4	4	5	5	6	6	6	6	5	5	5	5	5	5	7
18-Sep	5	5	5	5	5	4	4	5	5	6	3	4	4	4	4	4	3	4	2	2	4	2	2	2	6
19-Sep	2	3	2	2	1	2	2	2	2	2	3	3	5	4	5	4	3	3	2	1	2	2	2	4	5
20-Sep	2	2	2	2	2	3	2	4	3	2	3	5	3	4	5	5	4	3	3	4	5	3	2	2	5
21-Sep	2	2	3	3	3	2	2	2	2	3	3	2	2	3	2	8	4	5	7	7	3	4	2	3	8
22-Sep	4	5	4	7	5	5	3	2	3	6	4	4	4	5	6	8	5	3	3	4	3	4	3	4	8
23-Sep	6	4	4	4	4	4	4	3	3	6	5	5	5	5	5	5	5	4	4	3	7	2	3	2	7
24-Sep	2	2	2	2	2	3	3	3	5	5	4	4	4	5	5	4	3	2	4	3	2	2	2	3	5
25-Sep	3	1	3	3	3	3	3	3	4	3	3	6	4	4	3	7	3	2	4	3	4	6	6	3	7
26-Sep	2	3	2	4	3	3	2	2	4	4	4	4	4	5	5	5	7	2	5	3	3	3	4	3	7
27-Sep	3	3	4	5	6	4	5	6	8	7	6	5	7	6	6	4	5	5	2	2	2	4	2	2	8
28-Sep	2	7	3	6	5	6	4	4	4	3	2	2	3	5	3	4	2	2	2	2	2	2	4	5	7
29-Sep	4	5	5	5	5	4	6	7	8	8	8	7	6	5	5	4	4	5	3	4	3	6	4	4	8
30-Sep	6	7	4	5	3	2	2	1	3	2	3	5	4	4	4	4	4	4	4	3	3	3	2	2	7
	6	7	5	7	6	6	6	7	8	8	8	7	7	6	7	8	9	7	7	7	7	6	6	9	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	134	18.61	18.61
6 - 11	239	33.19	51.81
12 - 19	204	28.33	80.14
20 - 28	130	18.06	98.19
29 - 38	13	1.81	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

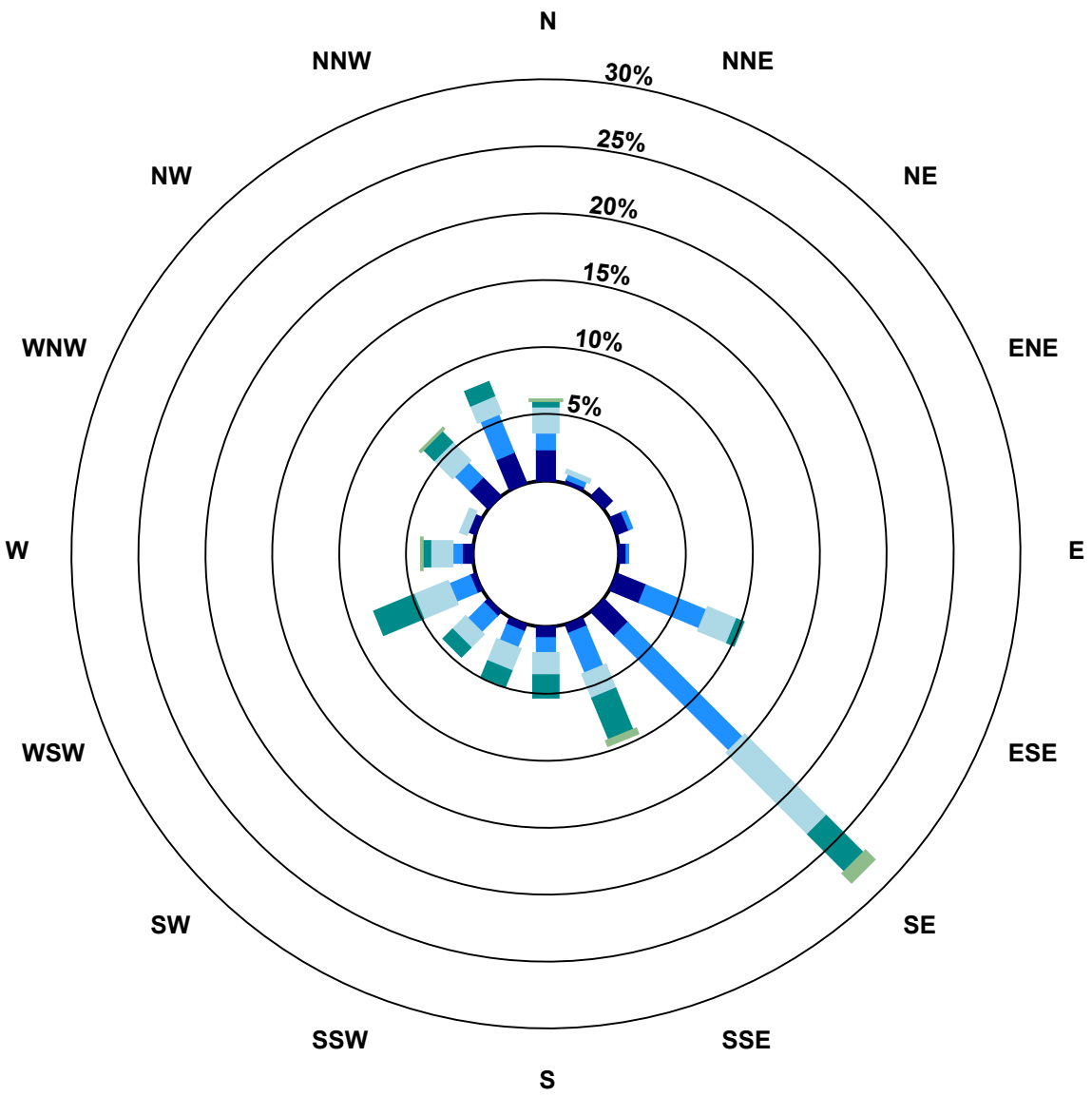
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower



Classes (km/h)

- 0 - 5
- 6 - 11
- 12 - 19
- 20 - 28
- 29 - 38
- > 38

Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - September 2025

Maximum Speed: 43 km/h on Sep 29 10:00

Maximum Daily Speed Average: 30.1 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 21 12:00

Minimum Daily Speed Average: 1.4 km/h on Sep 16

Maximum Diurnal Speed Average: 8.7 km/h at hour 23

Minimum Diurnal Speed Average: 3.7 km/h at hour 18

Monthly Average Velocity: 6.6 km/h 182.2 deg

Percentiles: P_1 = 1 P_{10} = 6 Q_1 = 10 Median = 15 Q_3 = 24 P_{90} = 30 P_{99} = 39

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW10	NNW5	NNE1	SW2	NNW5	N6	ESE15	SE11	S8	SE4	N4	NNW2	N11	NNE15	N21	N24	N27	N25	N22	N13	N12	N13	N8	NNW7	N8.5	N27
2-Sep	NNW8	NW6	NW5	NNW6	NNW6	NNW2	N2	N1	ENE1	E2	ESE4	ESE8	SE10	ESE10	SE12	SE15	SE16	SE15	SE20	SE25	SE28	SE30	SE33	SE25	SE9.0	SE33
3-Sep	SE24	SE29	SE28	SE25	SE27	SE26	SE23	SE19	SSE20	SSE20	SSE16	SE13	SE10	NE0	NNW11	N22	N41	N35	N35	N33	NNW30	NNW25	NNW31	NW32	NE5.6	N41
4-Sep	NW31	NW33	NW26	NW25	NW26	NW25	NW24	NW23	NW24	NNW24	NNW26	NNW25	NNW23	NNW21	NNW21	NNW20	N19	N16	NNE18	NNE18	NE9	ENE6	E5	SSE2	NNW18.3	NW33
5-Sep	ESE4	SE9	SSW3	SE8	SSE4	SE6	SSE11	SSE10	SSE13	SE11	ESE11	ESE10	ESE10	ESE10	ESE8	ESE9	E8	ENE9	E12	ESE15	SE21	SE18	SE17	SE21	SE9.8	SE21
6-Sep	SE28	SSE12	SSE12	SE8	SE9	SE11	SSE9	SE10	SE12	SE12	SE10	SE11	SE16	SE16	SE15	SE12	SE12	SE12	SE6	ESE2	SE7	SSE5	SSE12	SSE12	SE11.2	SE28
7-Sep	SSE13	SSE14	SSE11	S9	S10	S12	SSE8	SSE4	S1	SE1	NW3	NNW7	NNW6	NNW9	N16	N27	N22	N15	N15	N19	N18	NNW14	N13	N19	N5.0	N27
8-Sep	N17	N14	N17	N10	N12	N12	N10	N9	N5	NNE10	NNE6	NW4	W11	WSW13	W10	W6	NNW2	NW4	NW4	WNW3	N4	ENE4	ESE6	ESE15	NNW5.1	N17
9-Sep	ESE10	SE11	SE6	SE9	SE8	SE8	SE9	SE9	SE13	SE13	SE14	SE10	SE14	SSE18	SSE22	SSE25	S22	S22	S26	SW22	WSW22	SW12	S11	SSW10	SSE11.4	SSW26
10-Sep	S8	S7	SW7	SW14	WSW12	W6	W9	W6	W7	WSW5	NW4	NNW4	NNE2	NW8	WSW16	WSW14	WSW13	NNW15	NNW17	N10	N8	NE4	W4	SW4	W5.5	NNW17
11-Sep	WSW4	SSE4	ESE6	ESE3	SSE5	S4	SSE7	SSE8	SE8	ESE5	ESE5	SE8	SE14	SSE17	SSE16	SSE19	SSE15	SE15	SE18	SE24	SSE34	SSE33	SSE31	SSE25	SSE13.2	SSE34
12-Sep	SSE23	SE23	SE21	SE14	SSE17	SE22	SE19	SE16	SE15	SE18	SE19	SE20	S20	S27	SSW27	SSW24	SSW22	S21	S28	SSW23	SSW19	S6	S10	S8	SSE16.9	S28
13-Sep	S8	SSE9	SSE7	SE11	SSE11	SSE14	SE11	SE12	SSE9	SE10	SE11	ESE5	NNE3	NW5	NNW6	N9	N12	N12	N11	N11	NNE5	SE3	SE13	SE12	ESE3.5	SSE14
14-Sep	SE6	ESE3	SE5	SSE5	SSE5	SSE5	S3	SSE7	SE8	SE12	SE10	ESE12	SE15	ESE18	ESE24	SE14	SE30	SE26	SSE27	SSE25	SSE15	SSW7	SSE12	SSE11	SE12.0	SE30
15-Sep	S9	S10	S6	S8	S11	S14	SSE12	SSW9	SSW8	SW5	WSW1	WNW3	NNW2	WNW7	NW20	NW31	NW36	NW28	NW26	NW29	NW27	NW29	NW22	NW23	WNW10.3	NW36
16-Sep	NW16	NW15	WNW13	WNW14	NW18	NNW14	NW11	WNW4	W11	NW13	N8	N7	ENE2	SE4	ESE5	SE7	ESE11	SE12	ESE13	SE16	SE20	SE28	SE24	SE27	SE1.4	SE28
17-Sep	SE33	SE29	SE16	SE11	SE14	SE14	SE16	SE13	SE15	SE21	SE20	SE20	SE22	SE24	SE29	SE31	SE38	SE39	SE36	SE33	SE33	SE35	SE36	SE37	SE25.6	SE39
18-Sep	SE37	SE35	SE34	SE32	SE35	SE34	SSE34	SSE35	SSE31	S24	S25	SSW21	SSW19	SSW21	SSW19	SSW20	SSW18	SSW17	SW13	SW17	SW21	WSW27	WSW25	WSW23	S19.9	SE37
19-Sep	W20	WSW15	SW10	SSW9	S10	S13	S13	S12	S8	S7	SW8	SW8	WSW14	WSW18	WSW18	WSW18	WSW14	SW11	WSW12	SW11	SW14	SSW12	SSW8	S9	SW10.8	W20
20-Sep	SSE12	SE17	SSE15	SSE13	SSE19	SSE18	SSE15	SSE22	SSE17	SSE13	SE18	SE25	SSE23	S22	S26	SSE27	S29	S29	SSE33	SSE34	SSE37	SSE33	SSE24	SSE21	SSE22.3	SSE37
21-Sep	SE15	SE11	SSE12	S7	SSW9	SSW10	SW9	SW9	SW10	WSW11	W6	NW0	SSE2	WSW10	NNW2	W17	W28	W27	W30	WNW24	W11	SW15	WSW20	WSW25	WSW9.8	W30
22-Sep	WSW28	WSW30	WSW34	WSW28	WSW25	WSW16	SSW10	SSE8	S7	WSW19	SW20	SW20	SW23	WSW26	WSW27	SW20	SW25	SSW20	S28	S36	S38	S37	S41	S41	SW21.9	S41
23-Sep	S39	SSW25	SSW31	SSW29	SSW33	SSW33	SSW23	SW17	SW17	WSW19	WSW29	WSW30	SW27	SW31	SW27	SSW28	SSW30	SSW29	SSW30	SSW27	SW20	SW11	SSW8	SSW13	SSW24.4	S39
24-Sep	S11	S11	S16	SSE13	S12	S11	SSW11	SSW9	SW18	WSW24	WSW21	W13	W15	W20	W21	WNW18	NW13	NW20	NW22	W12	W9	WSW11	WSW12	SSW9	WSW10.1	WSW24
25-Sep	S9	S11	S11	SSE14	SE16	SSE13	SE12	SSE14	SE15	SE18	SE14	SE17	SSE20	SSE20	SSE10	SSE23	S25	S23	S30	SSE34	SSW28	WSW33	WSW26	WSW17	S15.6	SSE34
26-Sep	WSW24	WSW21	WSW16	WSW16	WSW16	WSW10	SW12	WSW13	SSW12	WSW17	W15	WSW17	W21	W20	W22	WSW27	W15	NNE4	SW18	SW29	SW24	SW24	SSW23	SSE17	WSW16.3	SW29
27-Sep	S16	SSW15	SSE30	S31	SW30	WSW34	WSW36	WSW35	W35	W32	WSW27	WSW26	WSW26	WSW30	WSW27	WSW25	WSW29	W19	W14	W15	WSW22	WSW15	SSW11	S8	WSW21.8	WSW36
28-Sep	WSW10	WSW17	WSW31	WSW29	W15	WSW24	WSW22	W12	W12	WSW8	S7	SE9	SSE8	SSE10	SSE18	SSW9	SW11	S12	SSE8	ESE13	ESE17	ESE15	SE19	SE31	SSW8.7	WSW31
29-Sep	SE33	SE29	SE26	SE31	SE36	SE35	SE35	SE38	SE39	SE43	SE41	SE41	SE32	SSE33	SSE28	SSE26	SSE29	SSE25	SE20	SE23	SE28	SE21	SE28	SE22	SE30.1	SE43
30-Sep	SE25	SE22	SE31	ESE10	N4	WNW6	NNW9	NNE13	NNW7	NNW10	NNW10	N18	N21	N21	NNE22	NNE20	NNE18	N17	NNW21	N14	N15	N18	N14	N17	NNE10.0	SE31
	SSE8.5	S7.9	S8.7	S8.0	S7.5	S7.7	S7.7	S7.2	S7.1	S6.1	S5.2	S4.8	S5.9	SSW7.0	SSW6.0	SSW5.6	SSW5.0	S3.7	SSW4.2	S5.7	S7.1	S7.5	S8.7	SSE8.6	Diurnal Average	
	S39	SE35	WSW34	SE32	SE36	SE35	WSW36	SE38	SE39	SE43	SE41	SE41	SE32	SSE33	SE29	NW31	N41	SE39	SE36	S36	S38	S37	S41	S41	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 100m (WS100) - km/h

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Sep 22 16:00

Minimum Value: 0 km/h on Sep 8 19:00

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

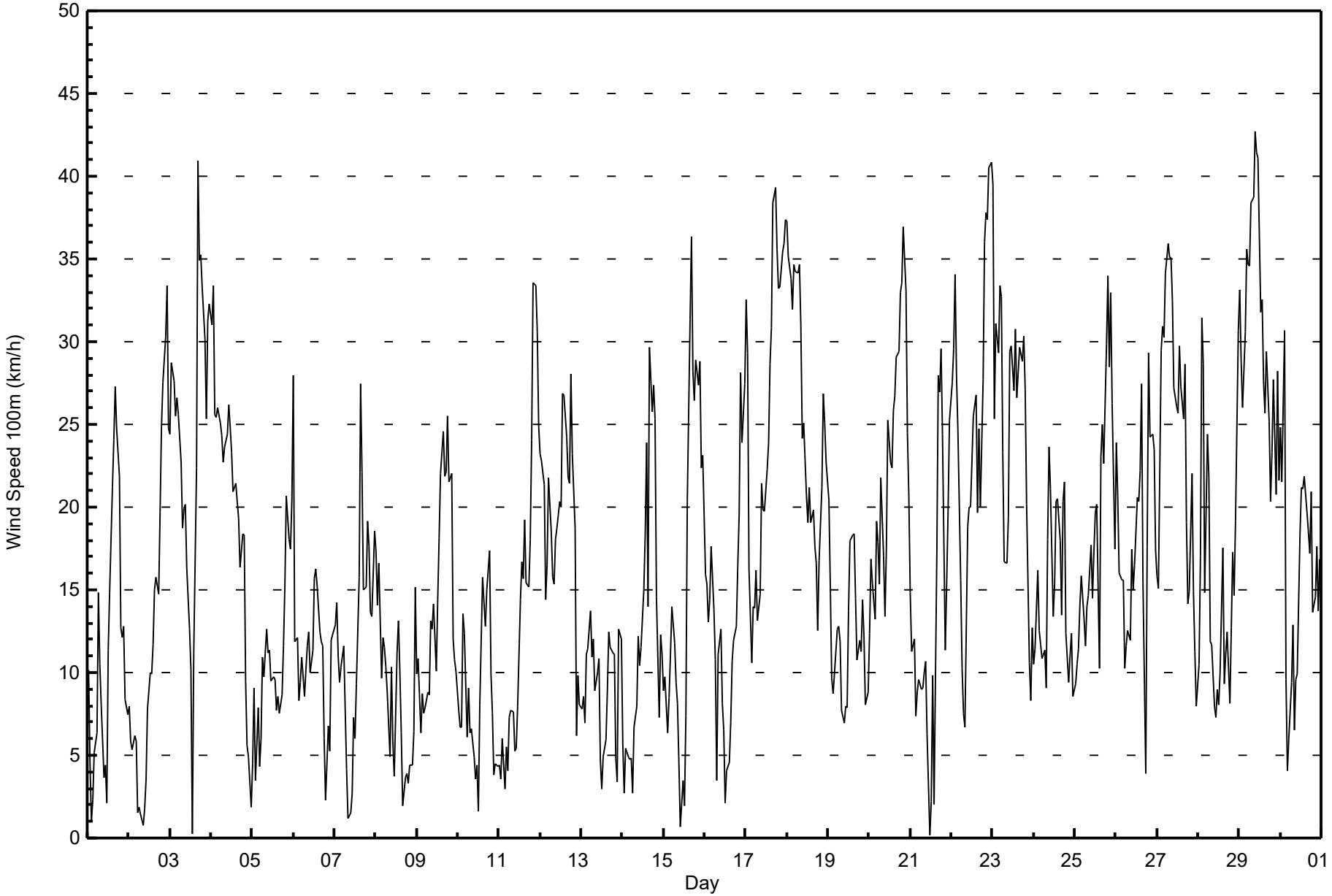
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	2	2	2	2	2	8	5	2	2	2	3	3	3	6	5	3	3	3	4	2	3	2	1	8
2-Sep	1	1	1	1	2	1	0	1	1	1	1	2	2	3	3	3	3	3	4	2	3	4	5	8	8
3-Sep	5	2	3	3	3	2	2	2	5	4	4	2	3	3	4	5	8	6	6	5	5	5	5	4	8
4-Sep	4	4	3	3	3	3	4	4	4	6	6	5	5	6	5	4	3	3	2	3	2	2	2	2	6
5-Sep	3	2	1	2	2	4	1	1	2	2	1	1	2	3	3	4	2	2	2	5	3	2	2	4	5
6-Sep	5	3	3	2	1	2	2	2	2	2	2	2	3	3	3	2	2	2	3	1	2	2	3	2	5
7-Sep	2	1	1	1	1	4	3	1	1	1	2	2	2	4	4	4	4	4	2	4	4	3	2	3	4
8-Sep	2	2	2	2	2	2	3	3	2	3	4	3	3	3	2	2	2	1	0	1	1	1	2	2	4
9-Sep	3	4	4	2	1	2	1	2	3	2	3	2	4	4	5	4	3	3	3	2	2	4	2	2	5
10-Sep	2	2	4	2	3	2	2	2	1	1	2	2	2	7	4	3	5	6	2	2	2	1	2	1	7
11-Sep	1	1	1	1	1	1	2	2	1	2	1	3	3	3	3	4	4	3	3	3	4	3	2	2	4
12-Sep	3	3	3	3	4	2	4	2	3	3	3	2	4	4	4	4	3	3	2	5	6	3	2	2	6
13-Sep	2	3	2	2	3	2	2	3	2	3	2	3	1	2	2	1	1	1	1	2	3	3	3	3	3
14-Sep	3	2	2	2	2	1	1	1	2	2	3	4	4	3	4	2	5	4	4	4	6	4	2	2	6
15-Sep	2	2	1	1	2	2	2	3	2	2	1	3	1	7	4	7	6	6	6	4	6	3	4	3	7
16-Sep	4	2	2	3	4	3	2	1	3	3	3	2	2	2	2	3	2	1	2	3	3	3	5	4	5
17-Sep	2	3	3	3	2	2	2	2	5	3	3	3	4	4	3	5	4	4	4	4	4	3	3	3	5
18-Sep	2	3	3	3	4	4	5	5	5	6	3	4	3	4	5	3	3	4	2	1	2	2	2	2	6
19-Sep	2	3	4	3	2	1	1	2	2	2	3	4	7	3	5	4	2	2	2	2	1	3	2	2	7
20-Sep	3	2	3	3	3	3	3	4	2	2	4	3	3	5	5	5	4	3	3	4	4	4	3	3	5
21-Sep	2	4	4	4	4	2	2	3	3	2	3	2	2	2	2	9	4	5	7	7	5	6	3	3	9
22-Sep	4	4	3	7	5	5	3	3	3	5	4	4	4	5	6	9	5	4	4	4	3	3	3	3	9
23-Sep	5	4	4	4	3	3	4	3	2	6	4	4	5	5	4	4	4	3	3	3	6	5	3	2	6
24-Sep	2	2	2	2	2	2	3	3	6	4	3	4	4	5	5	4	4	2	2	3	2	2	2	3	6
25-Sep	2	2	2	2	2	2	2	3	3	4	2	4	3	4	3	8	3	2	3	3	3	5	6	3	8
26-Sep	2	2	2	3	3	5	2	3	4	3	3	4	4	5	4	4	7	3	8	2	3	2	2	2	8
27-Sep	6	4	4	6	6	4	5	5	7	5	5	4	6	5	5	3	5	6	2	3	2	4	2	2	7
28-Sep	3	8	3	6	6	4	4	4	3	2	2	2	3	4	3	4	2	2	1	3	2	2	5	4	8
29-Sep	3	5	5	4	4	3	5	5	6	6	6	5	6	6	5	5	4	7	4	4	3	7	3	3	7
30-Sep	5	7	2	8	2	2	3	2	2	2	2	4	3	3	4	4	4	4	4	3	3	3	2	2	8
	6	8	5	8	6	5	8	5	7	6	6	5	7	7	6	9	8	7	8	7	6	7	6	8	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	72	10.00	10.00
6 - 11	177	24.58	34.58
12 - 19	205	28.47	63.06
20 - 28	168	23.33	86.39
29 - 38	89	12.36	98.75
> 38	9	1.25	100.00

Total Number of Valid Hours: 720

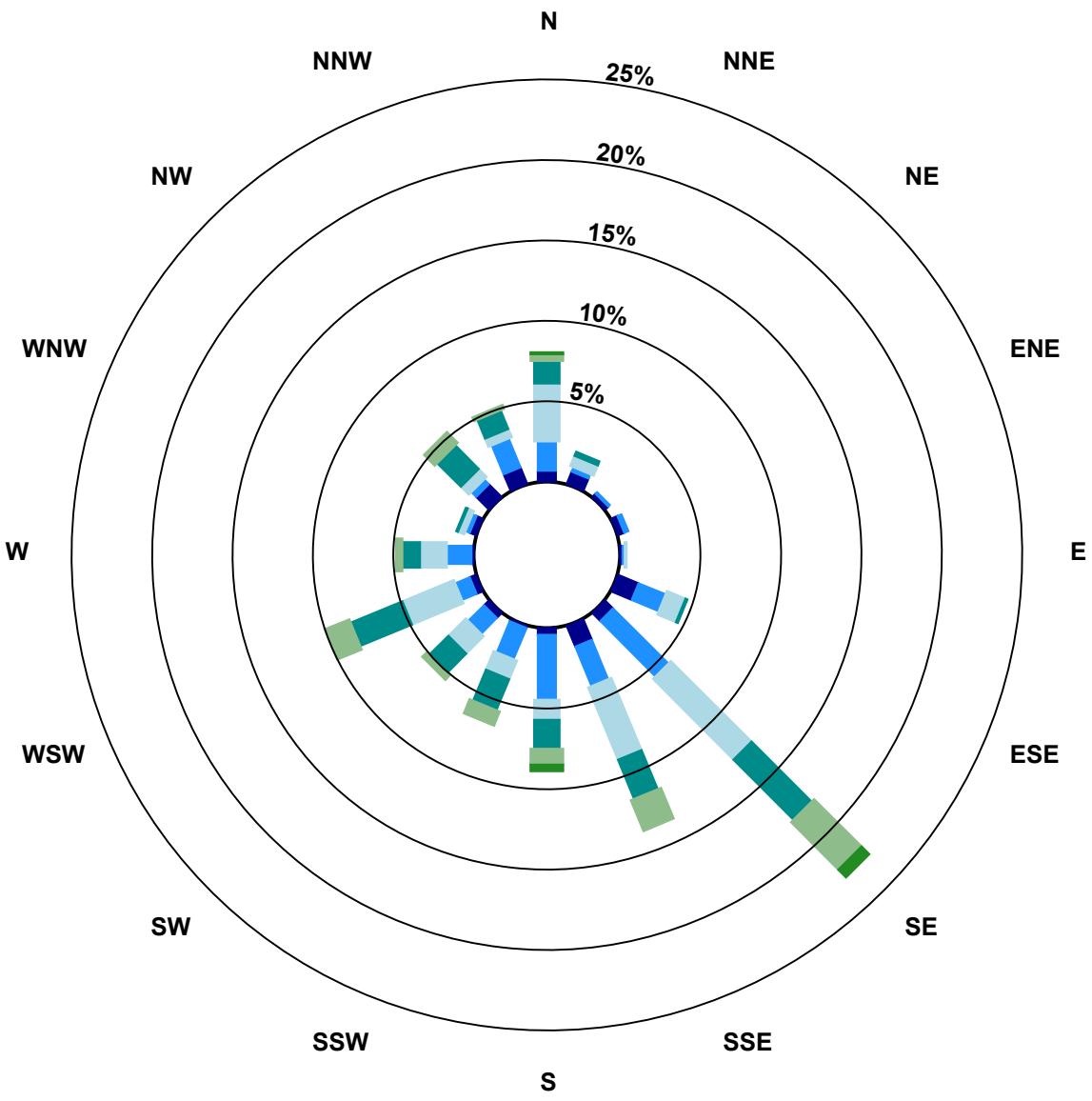
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - September 2025

Maximum Speed: 52 km/h on Sep 22 23:00

Maximum Daily Speed Average: 35.0 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 2 07:00

Minimum Daily Speed Average: 0.7 km/h on Sep 16

Maximum Diurnal Speed Average: 10.5 km/h at hour 3

Minimum Diurnal Speed Average: 4.2 km/h at hour 18

Monthly Average Velocity: 7.8 km/h 193.7 deg

Percentiles: P_1 = 2 P_{10} = 7 Q_1 = 12 Median = 19 Q_3 = 27 P_{90} = 35 P_{99} = 46

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW10	N6	NNE2	SW4	NNW6	N8	ESE15	SE16	S11	SSE4	N4	NNW3	N12	NNE15	N22	N24	N29	N28	NNE26	NNE20	NNE21	NNE20	N14	N10	NNE10.2	N29
2-Sep	NNW13	N9	NNW5	N5	NNE6	ENE3	WSW0	SSW2	SSW5	SSE3	SSE4	SE7	SE10	SE10	SE12	SE16	SE17	SSE16	SE22	SE29	SE32	SSE34	SSE37	SSE31	SE10.6	SSE37
3-Sep	SE24	SE29	SE29	SE26	SSE27	SE25	SSE26	SSE24	SSE23	SSE21	SSE17	SSE12	SSE9	W3	NNW12	N24	N44	N40	N40	N39	N36	N32	NNW40	NNW40	NE5.0	N44
4-Sep	NW39	NNW42	NNW33	NNW32	NW33	NW34	NW31	NW27	NNW27	NNW27	NNW28	NNW27	NNW25	NNW22	NNW24	NNW22	N20	N17	NNE21	NE23	NE20	NE14	ENE9	SE6	NNW22.1	NNW42
5-Sep	SSE4	S6	S9	SE8	S10	SSE7	SSE13	SSE15	SSE16	SSE13	SE9	ESE9	ESE10	SE10	SE8	ESE9	E7	E7	E10	ESE21	SE27	SSE21	SSE22	SE25	SE11.3	SE27
6-Sep	SE30	SSE20	SSE19	SSE19	SSE14	SE12	SE11	SE15	SE15	SE17	SE14	SE15	SSE16	SSE17	SSE16	SSE13	SSE13	SSE12	SE8	SSE7	S11	SSW11	SSW11	S14	SSE13.9	SE30
7-Sep	SSW8	SSW9	S8	S9	SSW9	SSW10	SSW7	SSW7	SW4	SSW3	NW3	NNE10	N7	N11	N17	N28	NNE23	NNE16	NNE19	NNE25	NNE27	N22	N25	N30	N7.8	N30
8-Sep	NNE26	N19	NNE21	N19	NNE19	NNE20	NNE14	N10	NNE6	NNE11	NNE6	NW4	W9	W11	W8	WNW6	NNW2	N4	NNW3	NNW3	NNE5	ENE4	ESE7	SE23	N7.3	NNE26
9-Sep	SE18	SE23	SE16	SE16	SSE15	SSE15	SSE15	SSE13	SE19	SE18	SE16	SE16	SSE17	SSE20	SSE23	SSE25	S24	S25	SSW29	WSW27	W26	WSW20	SW15	SW16	S15.1	SSW29
10-Sep	SSW10	SW8	WSW8	WSW15	WNW12	NW8	NW14	WNW16	WNW11	W8	WNW6	NNW5	NW1	NW9	W16	WSW15	W13	NNW18	NNW19	N18	NNW14	NNE9	N4	WNW2	WNW7.8	NNW19
11-Sep	NNW6	NNW4	NE3	N2	S4	S6	S6	S14	S10	S5	SE5	SSE11	SSE16	SSE18	SSE16	SSE20	SSE17	SSE18	SE22	SSE31	SSE43	S41	S35	S34	SSE14.7	SSE43
12-Sep	SSE34	SSE32	SSE29	SSE22	S23	SSE25	SSE23	SSE21	SSE20	SSE18	SSE18	SSE20	S22	SSW27	SSW28	SSW25	SSW23	SSW24	SSW29	SW25	SW22	SW10	SSW9	SSW12	S20.8	SSE34
13-Sep	SSW13	SW9	S14	S22	SSE21	SSE25	SSE18	SSE13	SSE11	SSE13	SE14	SSE6	NNE2	WNW5	NW5	N9	N12	NNE13	NNE15	NE10	SE13	SE16	SE19	SE21	SSE7.8	SSE25
14-Sep	SE15	SSE11	SE11	SSE11	SSE10	SE10	SSE9	SSE12	SE16	SSE14	SSE9	SE11	SE16	ESE20	SE27	SE19	SE36	SE30	SSE29	SSE32	SSE23	S12	S15	S14	SSE16.5	SE36
15-Sep	SSW12	SSW9	SW11	SW10	SW13	SSW18	SSW13	SW13	SW10	WSW6	WNW6	WNW8	W4	WNW9	NW21	NW34	NW38	NW31	NW31	NW36	NW33	NW37	NW29	NW28	WNW14.8	NW38
16-Sep	NW20	NW20	NW17	NW18	NW22	NNW18	NW14	W6	WNW11	NW13	NNW8	N6	E1	SSE3	SE3	SE6	ESE10	SE13	SE15	SE20	SE24	SE28	SE27	SE28	S0.7	SE28
17-Sep	SE32	SE29	SE21	SE20	SE19	SE23	SE23	SE21	SE24	SE23	SE22	SE22	SE25	SE25	SE30	SE33	SE39	SE42	SE40	SE37	SE37	SSE36	SSE35	SE39	SE28.9	SE42
18-Sep	SE38	SSE34	SSE32	SSE33	SSE36	SSE41	SSE44	SSE42	SSE33	S27	SSW26	SW22	SSW20	SSW22	SSW19	SSW21	SSW19	SW18	SW15	WSW18	WSW24	W33	W31	W27	S21.4	SSE44
19-Sep	W29	W23	WSW15	SW11	SW11	SSW13	SSW15	SSW13	SSW9	SSW9	SW9	SW10	WSW17	WSW19	WSW19	WSW20	WSW17	SW14	WSW15	WSW11	WSW13	SW13	SW12	SW13	WSW13.7	W29
20-Sep	S18	SSE21	SSE21	SSE24	SSE23	S28	SSE26	S24	SSE18	S15	S20	SSE27	SSE23	S24	S27	S29	S32	S34	SSE38	SSE42	SSE45	SSE42	SSE35	SSE34	SSE27.7	SSE45
21-Sep	SSE24	SSE19	SSE19	S16	SW11	WSW16	WSW19	WSW19	WSW16	WSW11	W6	WSW1	WSW3	WSW10	NNW2	W19	W30	W31	WNW34	WNW30	WNW12	WSW17	W24	WSW31	WSW13.1	WNW34
22-Sep	WSW33	WSW34	WSW39	WSW34	WSW32	WSW23	SW15	SSW11	SW11	WSW22	SW20	SW21	SW24	WSW27	WSW28	SW22	SW27	SSW23	SSW35	S46	SSW49	S49	SSW52	SSW52	SW27.7	SSW52
23-Sep	SSW52	SSW36	SSW39	SW37	SW37	SW35	SW29	WSW20	WSW19	WSW22	WSW31	WSW31	SW29	SW34	SW30	SW30	SW33	SSW32	SW35	SW32	SW27	WSW20	SW13	SW15	SW29.0	SSW52
24-Sep	SW14	SSW12	SSW15	SSW12	SSW15	SW13	SW14	SW13	WSW23	WSW26	WSW22	W15	W16	W22	W22	WNW19	NW16	NW22	NW25	WNW14	WNW13	NW12	W9	WSW17	W13.2	WSW26
25-Sep	SW10	SSW12	SSW11	S11	SSE15	SSE17	SSE16	SSE19	SSE22	SSE24	SSE17	SSE18	S20	SSE21	SSE12	SSE24	S28	S27	S38	S41	SW34	WSW36	W29	WSW19	S18.3	S41
26-Sep	WSW26	WSW26	WSW21	WSW21	WSW21	WSW17	WSW14	WSW19	SW14	WSW18	W15	WSW17	W22	W21	W23	WSW29	W16	NE4	WSW23	WSW36	WSW33	WSW29	SW27	S19	WSW20.3	WSW36
27-Sep	SSW24	SW22	S37	SSW38	SW37	WSW40	WSW43	WSW41	W39	W33	W29	WSW27	WSW27	WSW31	WSW28	WSW27	WSW30	W23	WNW17	W21	W27	W19	SW15	SW15	WSW26.7	WSW43
28-Sep	WSW19	WSW25	WSW38	W32	W22	W29	W25	W19	W11	WSW7	S8	SSE9	S9	S10	SSE18	SSW10	SW12	S13	SSE9	SE18	SE23	SE21	SE28	SE37	SSW10.3	WSW38
29-Sep	SE37	SE34	SE34	SE38	SE43	SE41	SE42	SE47	SE45	SE46	SE43	SE41	SSE33	SSE35	SSE29	SSE28	SSE33	SSE29	SSE25	SE30	SE34	SE27	SE35	SE29	SE35.0	SE47
30-Sep	SE30	SE29	SE34	SE17	ESE4	W9	NNW14	NNE16	NE12	N8	N12	NNE19	N22	NNE21	NNE25	NNE22	NNE22	N21	N25	NNE19	NNE21	NNE23	NNE19	NNE24	NNE12.2	SE34
	S10.0	S9.3	S10.5	SSW10.4	SSW9.3	SSW9.4	SSW9.2	S9.4	S8.9	SSW7.8	SSW6.4	S5.8	SSW6.8	SSW7.7	SSW6.7	SSW6.0	SSW5.6	SSW4.2	SSW5.0	S6.5	S8.1	SSW8.1	S8.6	S9.9	Diurnal Average	
	SSW52	NNW42	SSW39	SSW38	SE43	SE41	SSE44	SE47	SE45	SE46	SE43	SE41	SSE33	SSE35	SE30	NW34	N44	SE42	N40	S46	SSW49	SSW49	SSW52	SSW52	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 163m (WS163) - km/h

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10 km/h on Sep 26 19:00

Minimum Value: 1 km/h on Sep 8 21:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

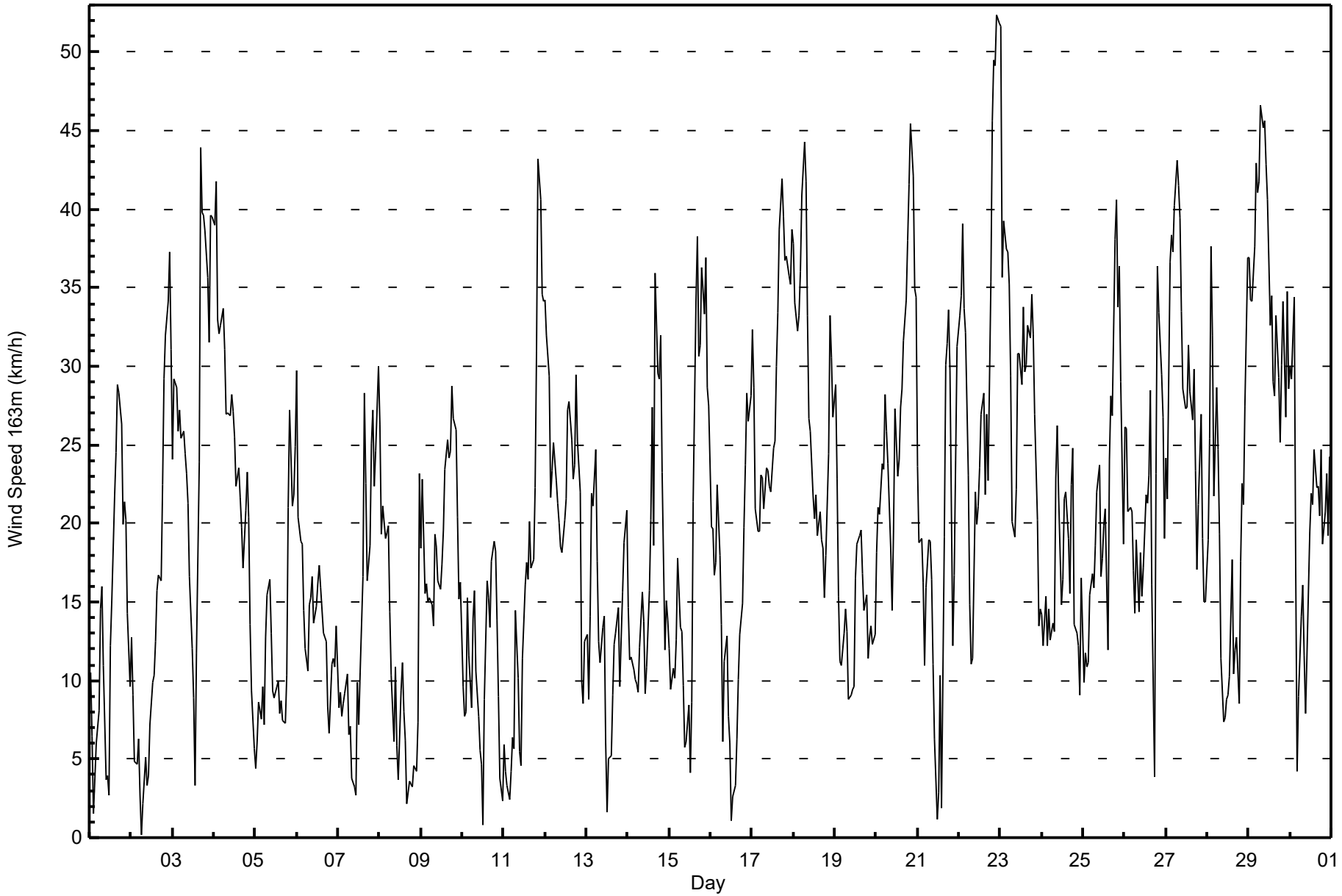
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	3	2	1	1	3	7	4	3	2	2	3	3	3	6	4	3	3	2	4	3	4	3	2	7
2-Sep	2	1	1	1	1	1	1	2	1	1	2	2	2	3	3	3	2	3	3	3	4	6	6	8	8
3-Sep	5	3	3	3	3	2	3	4	4	4	4	2	3	3	5	6	9	6	6	5	5	5	4	4	9
4-Sep	3	4	4	3	3	3	4	4	4	6	6	5	4	5	4	4	3	3	2	1	1	2	2	1	6
5-Sep	1	3	2	2	1	2	1	2	1	3	2	2	2	3	3	4	3	2	3	5	2	2	3	4	5
6-Sep	4	3	2	2	3	2	2	1	1	2	2	2	3	3	3	2	2	2	3	1	2	1	2	3	4
7-Sep	1	1	1	1	1	2	2	1	2	2	2	3	3	4	3	4	4	4	3	5	4	4	2	2	5
8-Sep	2	4	2	1	1	2	4	3	3	3	3	2	3	3	2	2	2	1	1	1	1	1	3	3	4
9-Sep	2	3	6	2	2	2	1	2	2	2	3	3	4	5	5	4	3	3	2	4	2	2	1	2	6
10-Sep	2	2	2	2	2	3	5	3	2	2	3	2	2	7	4	4	5	6	3	1	3	1	1	1	7
11-Sep	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	4	3	4	2	5	3	3	1	1	5
12-Sep	1	3	4	4	2	2	3	3	3	3	3	2	4	3	4	4	3	3	1	5	3	4	2	2	5
13-Sep	1	2	4	2	3	2	5	2	3	3	2	5	1	2	2	2	1	1	1	3	3	3	3	3	5
14-Sep	2	3	2	1	1	2	2	2	2	3	2	3	3	5	4	3	4	4	4	3	6	3	1	1	6
15-Sep	1	2	1	1	1	2	2	2	3	3	2	3	2	7	4	6	6	5	7	3	6	4	3	2	7
16-Sep	4	2	2	2	2	3	2	1	3	3	3	3	2	2	2	3	1	1	2	3	2	4	5	4	5
17-Sep	3	3	3	3	1	2	1	3	3	2	2	3	3	4	3	4	4	3	3	4	4	4	4	4	4
18-Sep	3	3	3	4	5	6	5	4	5	5	3	3	3	3	4	3	3	4	3	1	4	1	2	1	6
19-Sep	1	5	3	3	1	1	1	2	2	2	3	4	6	3	5	4	2	1	2	1	1	1	1	1	6
20-Sep	3	3	3	2	3	1	2	3	3	2	4	3	3	4	5	4	4	3	2	3	2	3	2	3	5
21-Sep	4	4	4	4	2	3	2	3	3	2	3	2	2	2	2	9	2	4	6	6	7	7	3	4	9
22-Sep	4	4	2	5	4	5	5	4	3	4	4	4	4	4	5	9	5	4	4	3	2	2	1	2	9
23-Sep	5	2	3	3	2	3	5	4	3	5	3	3	4	4	4	4	4	4	3	3	5	3	4	3	5
24-Sep	2	2	2	2	2	1	3	4	6	4	2	4	4	5	5	3	4	3	1	4	1	1	3	2	6
25-Sep	1	2	1	2	3	3	3	4	3	5	3	5	3	4	3	7	3	3	3	3	3	5	5	2	7
26-Sep	3	2	2	2	2	3	3	3	3	3	3	3	4	5	4	3	8	3	10	2	3	2	2	2	10
27-Sep	6	5	4	5	5	4	4	5	6	5	5	4	5	5	4	3	5	6	2	4	2	3	1	3	6
28-Sep	3	7	2	5	5	2	2	4	3	2	2	2	3	4	3	4	2	2	1	6	3	3	5	3	7
29-Sep	3	3	4	4	3	3	4	4	5	6	6	5	6	6	5	4	3	7	5	4	3	6	3	3	7
30-Sep	5	5	3	9	3	3	3	2	6	2	1	4	2	3	4	5	4	5	4	3	4	3	2	3	9
	6	7	6	9	5	6	7	5	6	6	6	5	6	7	6	9	9	7	10	6	7	7	6	8	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	47	6.53	6.53
6 - 11	124	17.22	23.75
12 - 19	198	27.50	51.25
20 - 28	190	26.39	77.64
29 - 38	120	16.67	94.31
> 38	41	5.69	100.00

Total Number of Valid Hours: 720

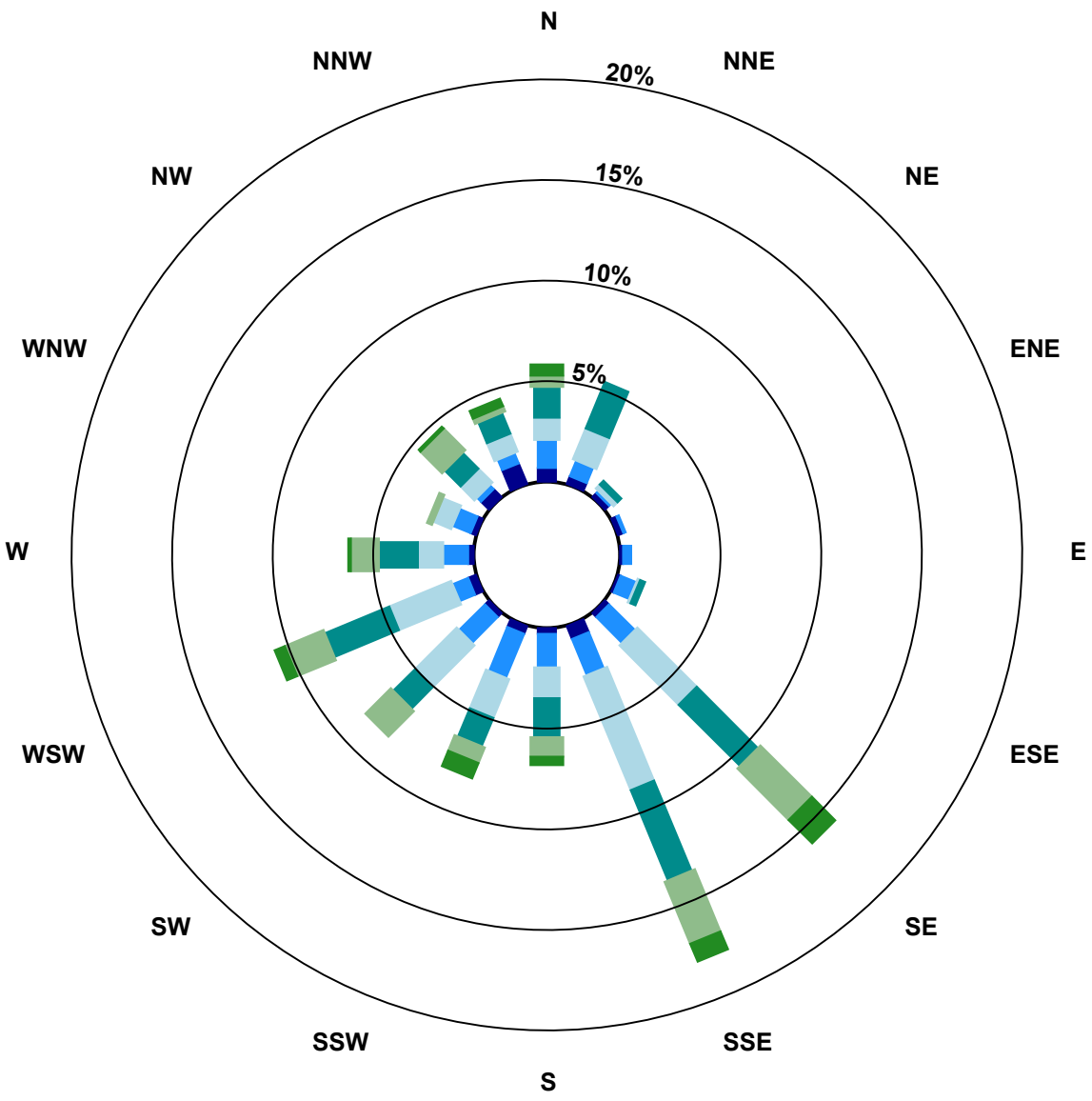
Total Number of Hours: 720

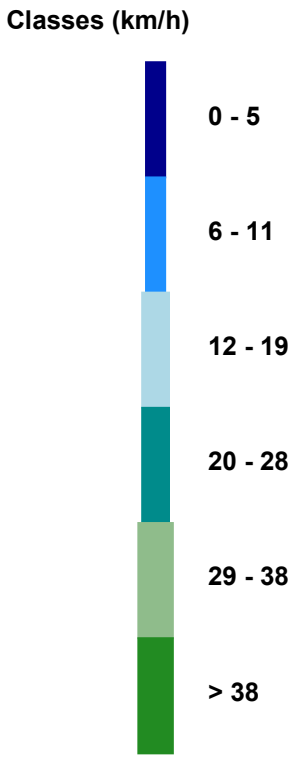
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower





Total Number of Valid Hours: 720

Direction of Maximum Speed: 160 deg on Sep 29 14:00
Direction of Maximum Daily Speed Average: 138.0 deg on Sep 29

Direction of Minimum Speed: 41 deg on Sep 24 22:00
Direction of Minimum Daily Speed Average: 1.0 deg on Sep 10

Monthly Average Direction: 170.4 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	345	32	83	357	10	2	119	137	187	126	343	316	351	8	2	356	352	358	358	332	340	355	46	359	3.0
2-Sep	352	2	13	312	327	39	29	309	82	100	99	108	122	126	134	140	145	147	137	135	131	145	145	145	133.6
3-Sep	142	121	132	135	134	131	134	131	146	151	151	136	128	81	352	347	347	343	341	342	334	330	326	322	68.9
4-Sep	312	314	315	311	310	318	309	304	319	341	337	334	324	333	330	324	347	354	21	349	336	15	21	352	327.0
5-Sep	9	126	34	96	107	105	106	126	127	136	130	139	134	121	124	109	87	65	78	145	129	96	63	136	118.9
6-Sep	146	92	120	108	120	126	121	115	143	141	144	145	147	146	147	136	131	126	355	339	140	159	137	133	133.5
7-Sep	132	124	128	131	125	122	117	120	126	142	29	345	323	330	349	347	5	357	348	351	334	313	339	335	21.4
8-Sep	332	331	346	316	329	312	336	3	357	21	16	299	255	245	248	241	29	322	320	336	355	48	18	46	308.3
9-Sep	286	27	358	357	88	2	2	136	133	136	150	162	150	154	153	153	163	167	175	225	246	139	126	137	159.1
10-Sep	139	143	146	158	243	282	349	357	95	112	27	19	41	318	257	241	252	314	331	248	234	182	348	154	262.2
11-Sep	319	12	3	3	115	105	120	114	124	137	138	125	138	160	152	157	154	150	143	127	144	153	139	130	141.9
12-Sep	133	137	130	169	138	133	130	136	140	128	124	128	165	187	198	205	196	175	171	198	144	145	149	135	164.5
13-Sep	140	136	129	118	132	115	127	131	133	133	114	85	342	358	2	344	340	337	350	358	304	281	301	326	83.6
14-Sep	346	344	227	344	319	12	357	116	125	137	127	130	140	109	133	118	132	147	159	157	144	164	118	140	138.5
15-Sep	105	122	132	139	132	132	118	125	194	205	99	95	50	277	308	307	311	321	313	306	314	304	304	305	306.4
16-Sep	315	309	315	320	329	329	320	352	264	315	351	26	89	132	120	135	135	139	125	114	135	137	145	147	112.0
17-Sep	137	133	160	68	97	72	80	111	123	149	142	138	135	142	136	136	135	132	130	139	131	138	137	130	133.0
18-Sep	128	130	135	138	135	141	144	150	152	175	187	207	199	199	195	188	206	210	221	226	226	242	249	241	175.3
19-Sep	243	227	158	147	119	119	134	130	117	148	224	190	224	264	259	249	245	224	224	294	154	117	165	136	193.1
20-Sep	133	129	136	126	129	130	118	130	138	139	133	140	146	166	171	161	169	164	157	150	149	140	135	128	147.7
21-Sep	110	234	133	162	134	129	132	130	128	179	243	106	107	246	339	274	263	268	280	300	270	213	232	235	219.6
22-Sep	242	252	249	243	249	225	162	115	131	238	239	217	213	241	237	231	224	185	165	163	167	160	160	158	204.4
23-Sep	167	187	172	183	187	182	175	191	193	227	245	238	224	216	210	204	207	196	195	198	196	131	135	142	197.9
24-Sep	133	132	140	132	128	143	148	168	220	248	243	266	261	267	271	300	317	320	315	214	285	41	135	124	213.3
25-Sep	124	122	117	130	134	133	121	133	134	149	139	123	141	144	150	156	168	170	159	159	178	237	253	238	158.4
26-Sep	224	233	235	231	212	164	167	175	168	249	260	243	267	266	260	241	264	348	212	221	209	203	176	106	226.6
27-Sep	143	159	148	160	211	234	249	255	260	260	256	258	250	240	243	246	246	252	276	242	225	224	154	133	232.2
28-Sep	114	241	255	260	281	261	280	287	246	230	165	134	162	170	154	198	214	172	118	130	127	117	117	127	191.7
29-Sep	125	124	124	127	127	120	126	130	131	133	139	138	148	160	160	161	167	160	129	118	121	128	118	97	138.0
30-Sep	108	114	125	337	306	349	336	291	323	333	315	3	345	2	13	360	3	337	327	327	331	335	319	324	351.2
	152.9	154.5	150.9	156.4	151.7	146.9	140.1	143.8	159.6	173.9	181.4	171.4	182.2	195.1	198.4	206.3	205.8	182.3	177.2	179.4	172.5	168.4	158.0	150.6	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 102 deg on Sep 13 22:00

Minimum Value: 5 deg on Sep 12 19:00

Percentiles: P_1 = 7 P_{10} = 11 Q_1 = 15 Median = 20 Q_3 = 33 P_{90} = 59 P_{99} = 96

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

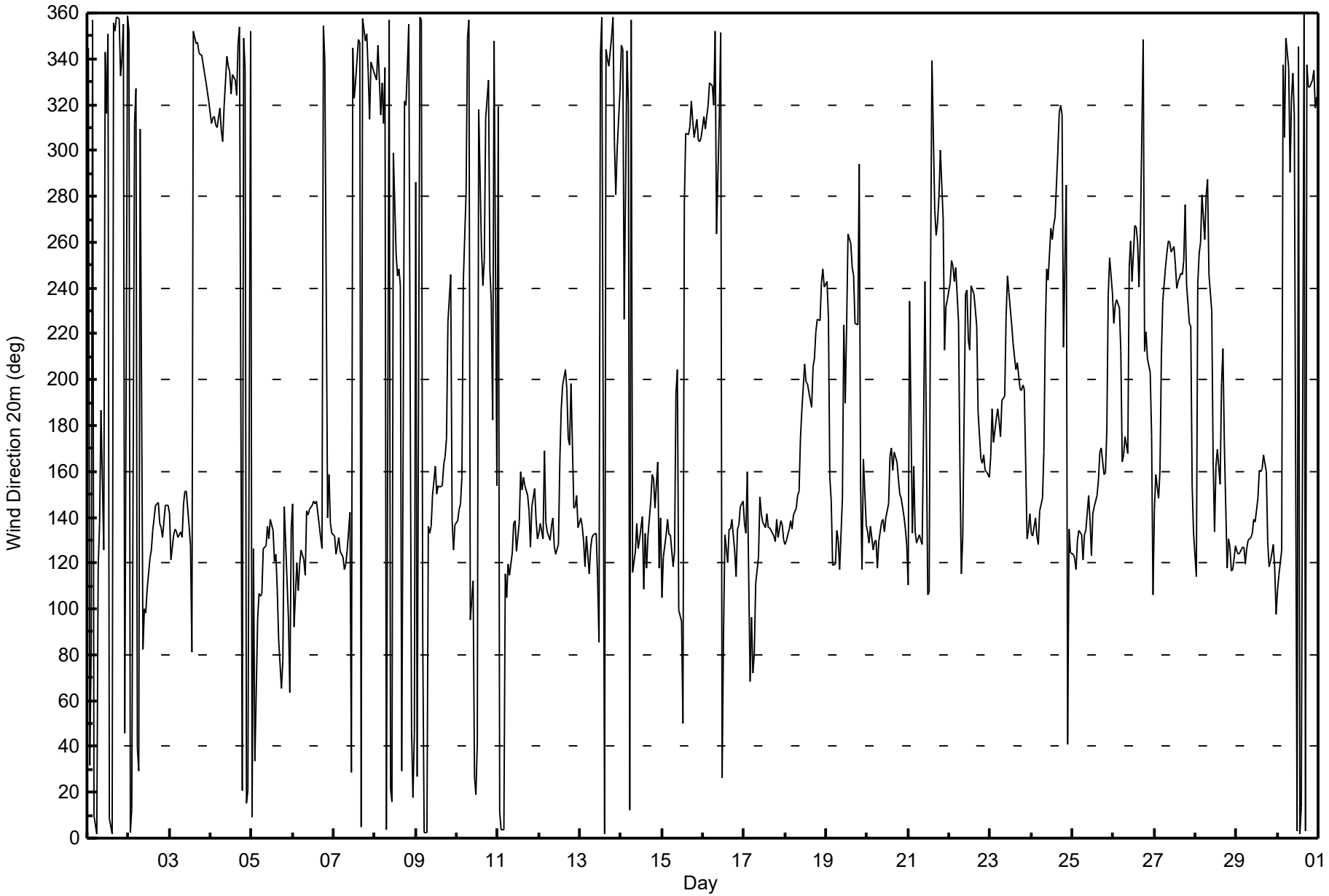
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	61	68	57	66	57	47	25	80	41	56	51	99	28	31	24	20	19	18	22	27	20	44	86	33	99
2-Sep	17	51	64	28	75	47	23	52	62	55	45	22	23	27	25	22	17	17	25	28	24	12	12	47	75
3-Sep	32	27	27	18	19	16	16	14	14	11	12	17	21	60	18	18	18	18	19	17	20	22	19	19	60
4-Sep	15	15	15	13	13	18	22	20	20	22	23	23	25	30	25	23	27	23	25	27	47	91	66	31	91
5-Sep	80	43	61	42	39	17	23	17	13	14	19	17	22	32	39	40	33	26	44	39	13	38	35	65	80
6-Sep	52	52	20	19	17	10	12	20	12	14	23	22	18	15	14	15	17	13	64	42	65	41	18	28	65
7-Sep	18	15	15	15	15	15	28	25	52	52	71	25	40	45	23	19	21	22	29	22	27	28	53	29	71
8-Sep	18	28	27	30	15	24	32	29	57	39	95	102	23	18	21	36	68	39	15	54	78	86	65	61	102
9-Sep	81	89	99	80	34	47	55	22	23	22	12	15	19	14	12	12	15	8	6	22	15	32	11	18	99
10-Sep	24	18	71	42	61	74	79	64	39	20	27	36	41	86	32	21	22	33	23	54	72	62	72	89	89
11-Sep	96	91	18	65	31	45	12	18	27	26	20	22	19	18	17	15	15	10	8	8	11	8	9	13	96
12-Sep	17	32	68	68	31	11	51	40	14	25	22	19	32	12	13	13	11	9	5	35	60	81	31	33	81
13-Sep	23	10	20	15	18	23	15	17	11	28	29	67	32	26	23	19	16	17	13	16	30	102	97	51	102
14-Sep	44	74	59	37	85	90	93	45	36	35	25	22	19	32	26	19	22	16	8	10	75	95	23	50	95
15-Sep	53	57	14	13	10	10	14	26	32	48	30	52	52	90	24	20	18	19	18	14	15	16	16	14	90
16-Sep	17	17	22	24	22	19	20	46	36	27	34	28	59	48	28	23	16	13	30	16	15	15	19	16	59
17-Sep	17	48	86	26	18	26	20	31	38	15	20	22	22	18	19	18	16	17	18	16	18	13	15	20	86
18-Sep	19	18	17	16	15	11	11	10	9	19	13	18	19	13	19	17	19	24	18	18	11	15	10	11	24
19-Sep	12	25	38	19	11	12	14	12	16	29	30	52	48	22	23	20	15	29	20	37	54	23	63	13	63
20-Sep	9	14	17	10	12	26	18	17	15	8	16	15	10	20	12	12	9	7	10	10	11	8	11	18	26
21-Sep	43	54	12	61	17	14	8	12	19	34	77	80	62	33	101	37	17	20	22	29	52	17	11	11	101
22-Sep	13	17	14	18	24	47	35	14	16	31	15	15	15	20	20	21	12	17	12	7	8	7	7	7	47
23-Sep	12	16	12	13	8	9	16	16	11	30	16	15	15	10	11	10	11	8	7	8	47	24	13	14	47
24-Sep	10	11	9	12	14	23	36	38	20	18	17	35	26	23	27	22	19	12	24	46	51	98	20	10	98
25-Sep	11	11	12	15	15	17	20	22	30	12	18	31	14	12	26	14	8	6	8	9	12	23	19	25	31
26-Sep	9	15	44	74	30	57	16	24	39	24	30	22	24	26	26	15	57	89	39	8	13	11	20	18	89
27-Sep	29	40	10	10	23	11	17	20	21	21	20	23	21	15	17	16	17	21	24	27	9	19	21	13	40
28-Sep	52	86	16	31	74	53	43	42	25	29	27	19	37	34	15	39	17	6	40	42	16	22	21	18	86
29-Sep	16	15	19	18	17	17	18	17	19	18	15	16	17	11	10	10	8	15	16	14	19	17	24	30	30
30-Sep	42	79	19	89	50	23	55	33	60	40	24	24	17	22	20	22	22	24	18	27	18	21	17	15	89
	96	91	99	89	85	90	93	80	62	56	95	102	62	90	101	40	68	89	64	54	78	102	97	89	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Lower Camp Met Tower - September 2025



Direction of Maximum Speed: 130 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 133.4 deg on Sep 29

Direction of Minimum Speed: 276 deg on Sep 8 23:00

Direction of Minimum Daily Speed Average: 1.6 deg on Sep 16

Monthly Average Direction: 168.9 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	346	11	83	359	3	11	115	126	183	123	347	319	353	9	2	359	356	0	1	343	338	350	355	323	3.6
2-Sep	313	326	348	344	1	5	353	349	61	88	106	108	125	121	128	127	135	141	124	116	120	137	138	139	125.3
3-Sep	126	118	122	126	128	127	129	129	141	149	149	131	124	66	350	348	351	348	344	344	337	335	329	322	54.1
4-Sep	308	314	316	311	312	318	302	304	320	342	339	334	325	333	329	325	350	355	25	14	351	52	337	286	327.6
5-Sep	275	127	142	138	138	126	123	125	121	127	120	124	122	120	116	105	84	69	75	124	122	130	133	139	119.3
6-Sep	133	123	145	118	126	132	130	122	131	133	137	132	141	142	143	135	133	126	33	318	184	142	130	130	133.4
7-Sep	131	131	130	133	131	130	126	126	113	122	2	339	320	334	349	350	7	0	354	357	350	330	332	344	21.1
8-Sep	337	337	353	340	340	335	345	6	355	25	10	310	258	251	252	248	1	321	297	315	329	345	276	113	322.1
9-Sep	116	132	75	122	115	111	153	132	123	130	147	147	146	151	150	150	165	169	180	224	242	167	135	150	158.4
10-Sep	132	138	157	210	237	256	260	301	111	115	9	11	34	316	257	245	252	323	329	343	40	206	308	173	263.6
11-Sep	211	123	328	307	127	139	128	123	117	121	125	123	135	159	150	155	152	147	143	131	150	155	149	134	142.9
12-Sep	130	131	129	143	131	126	128	131	130	121	120	126	161	188	198	205	197	179	176	202	185	130	144	127	157.6
13-Sep	127	129	129	127	131	122	125	125	127	125	114	86	352	347	351	344	344	344	337	340	345	323	235	175	77.7
14-Sep	290	340	74	250	63	119	332	120	128	131	124	123	130	107	122	131	126	133	156	158	151	193	131	145	134.5
15-Sep	139	139	140	141	140	140	126	139	195	220	93	48	38	280	306	306	310	321	311	305	314	305	303	304	301.0
16-Sep	313	307	307	308	322	331	314	342	264	313	350	17	77	125	115	128	127	129	114	121	131	130	130	137	99.5
17-Sep	131	127	155	110	124	113	116	115	113	132	128	126	125	129	127	128	130	128	126	130	127	132	130	128	127.9
18-Sep	127	127	127	128	128	135	142	147	151	176	188	208	202	199	196	189	208	211	208	204	211	237	248	241	170.1
19-Sep	244	235	189	164	133	135	145	145	125	152	228	208	232	262	257	247	241	219	221	224	203	152	139	131	203.2
20-Sep	127	128	133	128	133	138	124	133	135	133	127	137	146	166	171	161	170	166	157	153	149	149	136	131	146.7
21-Sep	115	159	142	156	140	145	162	152	161	208	260	65	118	249	351	272	262	267	280	293	266	215	236	237	234.1
22-Sep	243	250	249	243	249	234	174	131	140	241	239	217	214	240	238	231	223	191	174	168	171	164	165	164	209.0
23-Sep	172	189	178	188	191	188	184	199	200	233	245	238	223	217	211	206	208	198	199	201	206	163	154	157	202.1
24-Sep	149	133	142	133	134	150	164	181	224	248	245	266	264	268	272	298	316	320	312	234	277	253	181	145	231.7
25-Sep	131	129	128	131	133	133	128	132	133	142	135	122	139	145	149	155	169	172	162	161	185	238	252	239	158.7
26-Sep	226	231	239	239	233	206	189	204	191	250	259	246	265	266	260	241	266	8	216	222	214	207	186	112	231.2
27-Sep	151	167	151	169	215	235	248	254	260	259	255	257	252	239	244	246	248	254	276	256	230	230	172	145	235.3
28-Sep	178	252	252	254	269	255	262	271	251	235	163	129	161	164	153	196	215	173	142	113	116	112	120	126	195.9
29-Sep	124	123	123	124	124	119	123	127	127	130	132	131	142	157	158	160	166	159	134	120	121	125	122	113	133.4
30-Sep	118	121	124	52	326	342	343	335	322	324	317	5	347	4	12	5	7	345	333	340	344	343	336	334	359.7
	149.3	149.9	152.6	160.4	153.4	151.3	149.7	148.7	161.7	172.2	177.0	163.1	179.9	198.0	203.8	211.9	210.8	182.3	182.2	180.4	174.5	171.4	160.8	149.7	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Sep 9 06:00

Minimum Value: 4 deg on Sep 13 02:00

Percentiles: P_1 = 5 P_{10} = 8 Q_1 = 10 Median = 14 Q_3 = 22 P_{90} = 43 P_{99} = 87

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

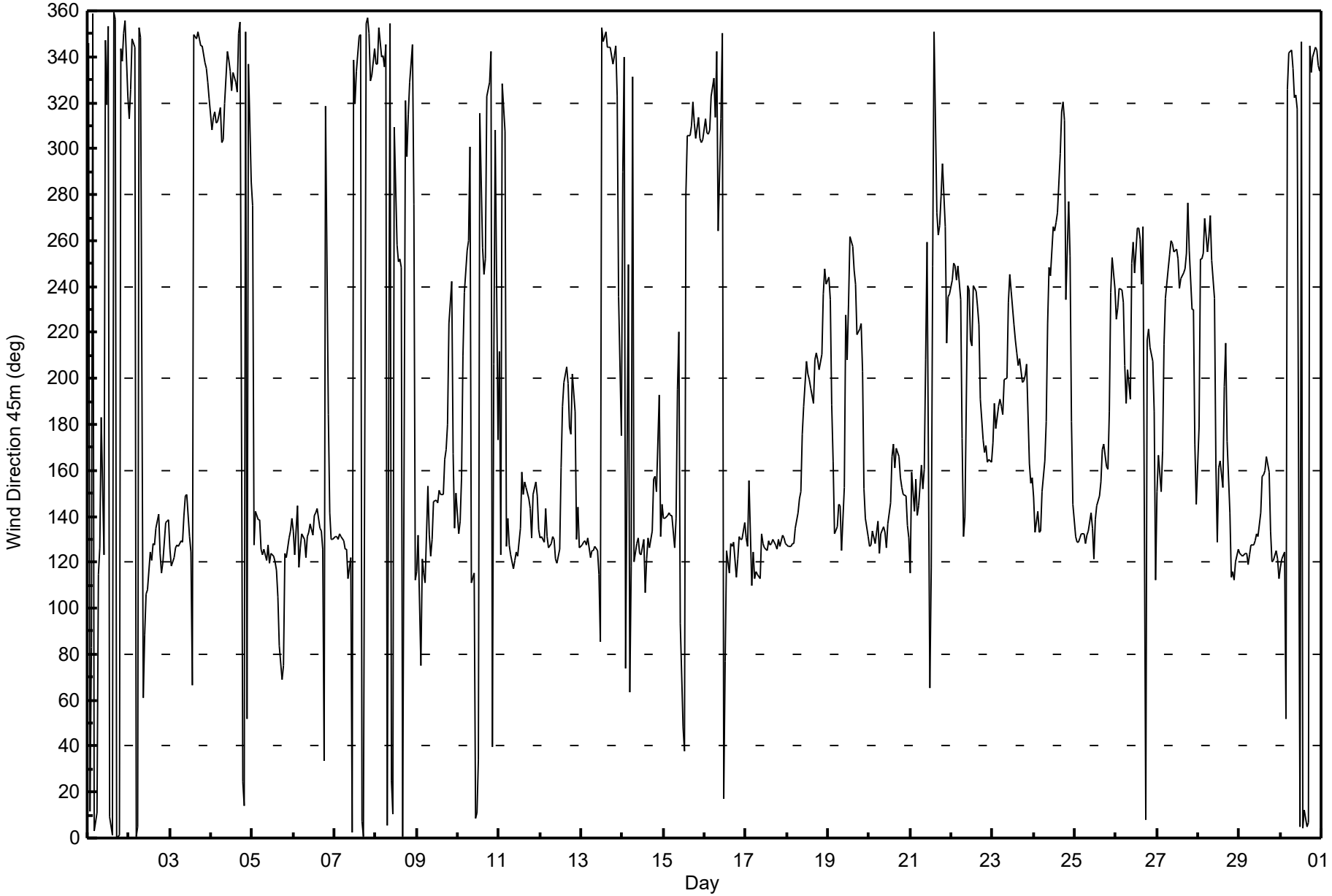
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	27	80	70	88	35	27	28	56	29	51	42	104	17	23	16	14	11	10	11	18	11	17	44	28	104
2-Sep	13	16	39	15	24	39	31	37	68	56	39	15	15	21	19	17	14	15	14	13	10	11	11	32	68
3-Sep	15	11	14	9	10	9	9	8	13	9	11	13	12	65	10	11	11	10	11	11	12	11	10	10	65
4-Sep	10	10	9	8	7	10	14	13	12	14	15	17	18	21	17	15	20	18	14	16	16	53	85	38	85
5-Sep	75	16	40	19	25	15	15	13	9	15	15	14	19	20	26	25	22	12	12	32	12	9	10	11	75
6-Sep	13	70	21	13	9	6	7	14	11	11	17	20	16	14	14	12	12	11	66	22	38	12	7	8	70
7-Sep	5	5	7	7	8	7	18	22	46	58	67	20	32	35	16	12	12	15	15	13	16	14	11	9	67
8-Sep	9	10	13	23	9	10	22	18	38	23	70	74	16	14	14	25	77	24	13	33	12	80	86	17	86
9-Sep	49	78	57	30	20	104	102	16	15	17	10	14	16	14	14	14	13	8	5	16	10	31	11	14	104
10-Sep	9	8	31	30	20	56	25	48	51	37	30	32	40	59	20	18	14	29	8	18	62	42	32	48	62
11-Sep	60	27	23	63	20	18	5	14	17	21	20	20	16	16	17	15	15	10	6	6	9	5	7	8	63
12-Sep	8	11	15	31	17	4	32	20	8	12	10	11	30	11	11	12	9	8	4	25	47	70	15	6	70
13-Sep	7	4	7	9	13	12	9	12	11	21	16	62	24	16	13	11	9	9	4	6	15	43	43	52	62
14-Sep	66	22	66	90	79	72	61	14	24	35	17	15	12	20	20	12	14	14	8	11	57	60	10	11	90
15-Sep	38	30	17	14	9	8	7	22	25	58	37	69	61	71	17	13	13	12	13	9	10	11	9	8	71
16-Sep	13	12	12	15	18	11	10	45	29	19	26	24	75	46	24	20	11	8	8	7	10	9	12	11	75
17-Sep	9	21	33	33	12	16	12	15	23	13	15	14	15	13	12	11	9	9	10	11	12	9	8	9	33
18-Sep	9	8	9	10	8	9	9	9	7	18	11	16	17	12	18	15	16	18	7	7	10	11	7	6	18
19-Sep	7	15	41	16	8	8	10	12	14	32	23	53	49	12	14	13	10	17	9	9	21	22	23	13	53
20-Sep	6	10	10	6	8	16	9	12	10	5	9	13	9	20	12	10	9	7	7	7	8	8	6	8	20
21-Sep	14	60	9	45	24	14	14	19	30	32	63	95	63	23	83	34	10	12	14	17	34	14	9	7	95
22-Sep	8	9	8	11	14	35	29	14	18	24	11	14	14	15	16	19	10	16	12	7	7	7	7	7	35
23-Sep	10	12	11	12	7	8	14	13	10	25	10	11	12	8	10	10	10	7	7	7	17	33	20	14	33
24-Sep	13	7	9	9	9	18	21	26	16	11	12	26	21	16	21	15	13	7	5	44	32	38	23	20	44
25-Sep	8	6	5	9	9	11	11	13	20	9	12	20	13	11	23	13	8	5	7	9	12	18	13	20	23
26-Sep	7	12	13	22	13	58	17	22	29	18	18	19	16	18	18	11	55	91	29	7	10	9	17	13	91
27-Sep	29	37	11	9	19	9	10	12	13	12	14	14	15	10	12	11	12	17	20	18	7	14	23	16	37
28-Sep	69	95	8	20	39	24	22	22	18	24	27	14	37	38	15	37	15	5	21	21	12	16	15	9	95
29-Sep	8	8	10	9	10	8	10	10	10	10	11	10	16	11	9	10	8	12	14	8	8	10	10	18	18
30-Sep	28	53	7	85	28	19	24	18	43	24	15	17	10	13	12	14	13	14	10	14	11	12	10	9	85
	75	95	70	90	79	104	102	56	68	58	70	104	75	71	83	37	77	91	66	44	62	80	86	52	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - September 2025

Direction of Maximum Speed: 133 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 136.1 deg on Sep 29

Direction of Minimum Speed: 318 deg on Sep 21 12:00

Direction of Minimum Daily Speed Average: 1.4 deg on Sep 16

Monthly Average Direction: 182.2 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	334	345	25	223	344	7	122	138	178	129	349	328	354	12	5	2	0	3	5	360	356	359	357	348	5.1
2-Sep	332	307	310	340	339	327	358	11	68	101	123	119	130	123	131	129	136	143	130	124	132	143	142	140	131.4
3-Sep	133	128	127	133	135	133	140	141	147	153	153	140	135	38	342	352	353	350	349	349	343	342	333	325	53.6
4-Sep	314	318	321	317	317	317	306	308	323	343	339	337	328	332	330	327	352	359	28	32	41	60	101	154	332.3
5-Sep	123	139	205	127	148	146	149	154	159	142	120	113	116	123	118	108	87	76	80	106	132	143	146	142	129.1
6-Sep	136	149	162	143	143	142	152	142	129	132	131	128	142	145	146	142	141	135	131	118	141	168	154	153	142.0
7-Sep	159	167	159	171	172	169	164	162	191	138	315	342	332	340	353	354	10	4	2	6	4	347	354	2	5.2
8-Sep	355	351	0	353	3	1	3	8	0	26	17	311	264	258	260	265	345	324	307	297	2	57	119	122	348.0
9-Sep	113	124	137	130	139	133	128	130	127	133	142	128	146	155	153	150	171	173	191	235	256	222	182	192	163.2
10-Sep	175	171	222	233	251	270	268	277	259	258	318	343	15	311	258	247	254	328	334	353	353	52	275	231	276.0
11-Sep	241	154	116	119	148	183	162	167	137	118	102	136	144	161	152	157	155	146	144	146	156	160	161	158	152.7
12-Sep	148	141	141	140	149	143	128	143	139	133	130	139	172	190	201	207	200	186	187	210	210	170	173	176	166.8
13-Sep	170	167	167	146	150	150	142	138	156	143	128	117	17	322	334	353	355	360	349	350	12	135	141	133	122.8
14-Sep	129	105	138	165	152	152	187	163	137	141	129	118	128	108	121	138	133	135	156	162	164	194	151	157	141.4
15-Sep	176	182	185	184	185	178	164	197	209	230	246	296	342	283	306	308	310	320	310	306	313	305	306	307	291.0
16-Sep	313	307	302	298	315	336	304	290	271	311	352	8	71	139	119	126	120	126	119	137	134	137	136	138	131.6
17-Sep	135	134	142	145	145	143	145	143	132	131	129	129	127	131	131	130	133	132	132	137	136	140	138	136	134.9
18-Sep	135	136	137	139	140	146	150	151	155	180	191	211	204	201	198	192	208	212	221	222	228	245	249	253	177.4
19-Sep	261	250	231	194	188	182	184	189	177	184	225	226	240	258	255	244	238	225	240	236	226	195	196	187	224.2
20-Sep	153	139	152	160	156	163	159	156	152	153	137	146	151	173	173	165	174	170	158	153	153	154	156	156	157.4
21-Sep	129	136	152	183	196	209	216	215	225	237	270	318	150	251	348	273	263	268	280	290	278	229	249	245	245.1
22-Sep	247	249	249	244	249	242	209	163	190	243	235	218	216	239	237	231	225	201	190	178	182	175	179	179	214.0
23-Sep	188	197	195	199	207	208	208	228	227	239	246	239	224	221	215	209	211	205	208	213	221	225	200	198	212.7
24-Sep	189	174	169	164	176	188	198	210	233	249	247	271	263	271	275	298	316	321	319	263	267	257	237	209	249.1
25-Sep	178	180	171	147	142	148	146	151	145	145	142	134	151	151	154	157	172	175	169	168	201	239	253	244	172.2
26-Sep	238	240	245	246	247	245	223	238	212	254	262	249	268	269	263	243	269	29	230	233	232	227	212	149	240.3
27-Sep	179	197	168	189	224	240	249	255	261	260	256	255	253	242	245	247	249	259	278	266	247	245	204	186	239.6
28-Sep	243	251	250	254	259	252	253	263	259	242	170	139	166	168	157	199	215	177	150	118	121	122	128	130	202.8
29-Sep	129	128	127	128	129	126	129	129	131	133	135	135	143	157	158	160	166	158	144	127	129	125	126	125	136.1
30-Sep	126	127	128	119	1	302	339	20	345	331	335	7	349	7	18	12	14	356	346	357	0	359	356	349	14.6
	167.1	169.5	173.1	179.4	182.2	181.2	177.6	172.9	178.6	183.3	179.8	169.9	185.0	202.5	205.5	212.6	211.3	188.9	192.0	185.9	184.0	184.3	175.3	167.2	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 102 deg on Sep 21 12:00

Minimum Value: 3 deg on Sep 18 23:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 7 Median = 10 Q_3 = 15 P_{90} = 28 P_{99} = 81

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

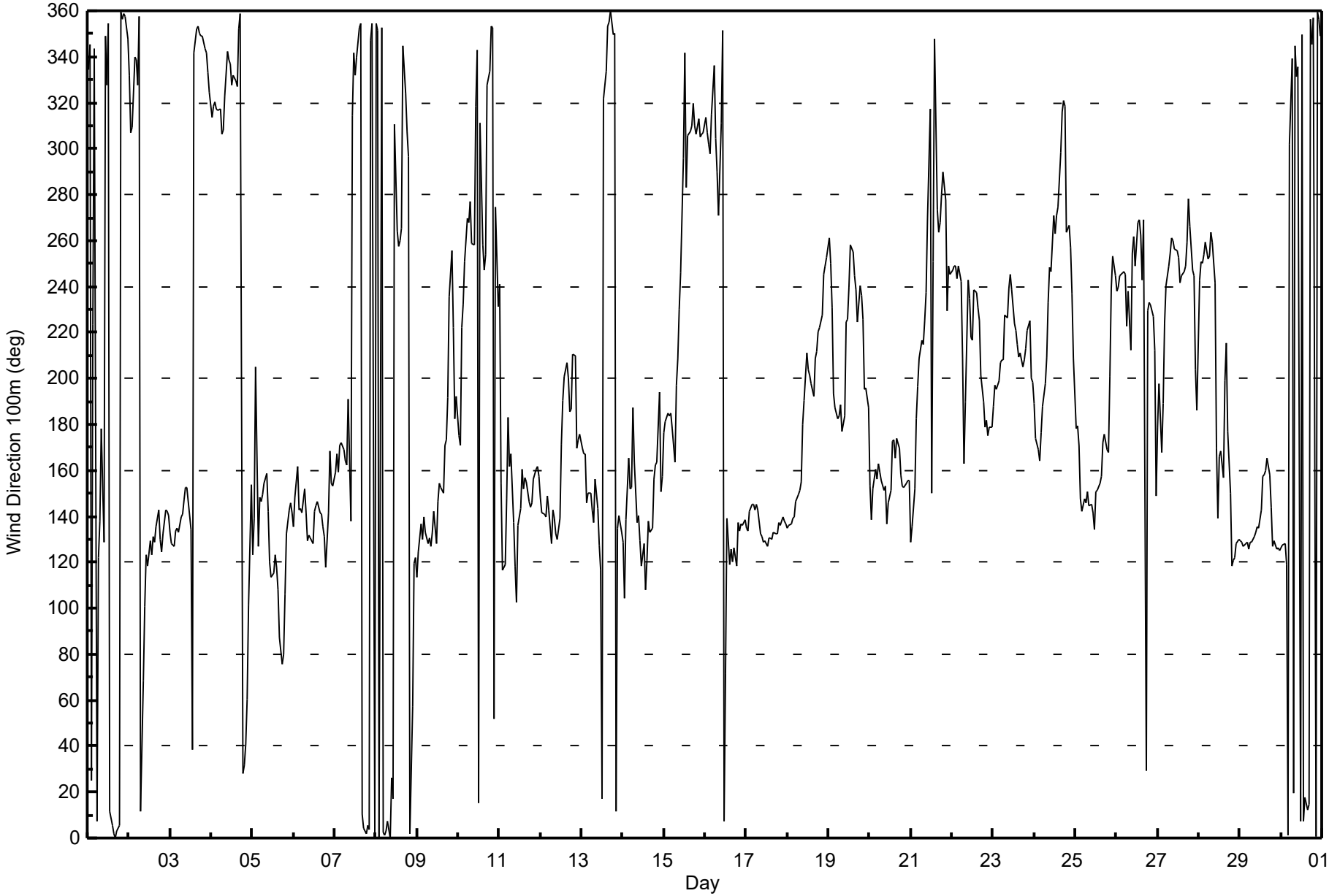
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	6	30	74	62	40	18	39	20	23	46	46	101	17	17	13	12	8	6	7	14	13	12	7	4	101
2-Sep	10	12	12	10	8	28	26	77	73	39	28	11	12	15	14	10	10	12	9	5	5	8	7	16	77
3-Sep	7	4	4	5	4	4	6	7	9	9	11	12	11	100	8	8	7	6	7	7	8	7	6	6	100
4-Sep	7	6	6	5	5	7	8	9	9	11	11	13	15	15	13	11	17	15	10	3	10	14	23	68	68
5-Sep	62	20	35	7	19	26	7	13	11	16	7	8	14	14	20	18	15	9	4	23	6	5	5	8	62
6-Sep	4	13	8	12	8	11	8	9	7	7	10	10	13	14	14	13	12	12	17	27	14	16	12	6	27
7-Sep	7	5	5	6	6	8	12	13	72	72	53	16	26	24	13	10	9	12	7	9	10	8	8	5	72
8-Sep	6	8	8	9	9	9	12	13	28	17	44	70	14	10	12	21	81	13	25	24	21	20	12	7	81
9-Sep	9	20	49	9	7	8	6	10	8	8	8	11	17	13	13	11	11	7	9	16	6	13	15	11	49
10-Sep	17	15	24	11	13	14	17	20	17	27	52	34	84	58	17	14	12	26	4	7	5	29	33	32	84
11-Sep	28	29	5	24	18	21	12	14	17	23	14	25	13	15	17	13	14	11	6	7	4	4	3	7	29
12-Sep	9	7	8	10	8	6	9	9	9	8	7	9	25	10	10	11	8	5	3	18	13	37	10	14	37
13-Sep	13	10	10	10	15	10	9	9	8	18	10	76	33	53	18	9	9	8	5	10	34	62	7	8	76
14-Sep	28	45	17	23	23	15	25	12	9	9	11	7	8	12	14	11	7	10	7	8	27	34	7	7	45
15-Sep	15	20	16	12	10	10	12	22	20	36	100	69	83	51	13	10	9	7	11	8	6	7	6	4	100
16-Sep	8	8	7	7	13	7	13	32	23	15	21	23	86	61	27	18	7	5	5	4	5	4	5	4	86
17-Sep	3	3	7	12	7	6	6	8	10	4	6	8	7	8	7	5	4	4	4	6	6	5	5	4	12
18-Sep	3	4	4	6	5	7	7	7	7	15	10	14	14	10	16	14	13	13	6	4	6	4	3	6	16
19-Sep	3	9	34	16	12	8	9	9	20	28	21	38	42	9	14	9	7	11	7	5	13	9	11	11	42
20-Sep	6	10	12	8	5	5	9	7	8	10	10	9	8	18	11	10	9	5	5	5	4	5	6	8	18
21-Sep	7	12	9	31	17	13	10	20	18	12	51	102	66	15	78	31	5	8	10	9	24	14	6	5	102
22-Sep	5	5	4	6	9	17	26	29	34	13	10	11	11	13	12	15	8	13	8	5	5	5	4	4	34
23-Sep	5	7	6	8	5	7	8	12	10	17	7	8	11	6	8	8	8	5	5	5	9	25	26	14	26
24-Sep	12	14	12	14	15	17	15	23	11	8	8	22	16	14	20	12	9	6	3	27	12	8	10	25	27
25-Sep	13	9	15	8	6	9	10	12	13	10	11	17	16	9	18	11	6	5	5	7	12	13	11	15	18
26-Sep	4	10	6	7	8	25	11	12	21	12	13	14	14	18	16	9	53	64	30	4	5	5	8	18	64
27-Sep	26	28	12	7	13	6	6	8	10	8	11	12	12	9	9	8	9	13	15	12	6	8	19	22	28
28-Sep	19	12	3	12	17	6	8	14	14	21	28	15	35	34	12	35	13	6	26	10	5	8	8	5	35
29-Sep	4	4	6	5	5	5	6	5	6	6	6	6	14	10	8	9	6	9	11	5	4	8	4	6	14
30-Sep	5	10	3	68	54	17	26	12	36	26	19	14	7	10	9	10	10	8	8	9	9	9	8	7	68
	62	45	74	68	54	28	39	77	73	72	100	102	86	100	78	35	81	64	30	27	34	62	33	68	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - September 2025



Direction of Maximum Speed: 193 deg on Sep 22 23:00
Direction of Maximum Daily Speed Average: 140.6 deg on Sep 29

Direction of Minimum Speed: 240 deg on Sep 2 07:00
Direction of Minimum Daily Speed Average: 0.7 deg on Sep 16

Monthly Average Direction: 193.7 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	335	1	23	224	329	8	122	141	172	167	355	327	357	16	10	8	7	9	13	18	19	13	11	4	14.4
2-Sep	348	353	331	355	18	76	240	200	202	154	153	140	142	135	142	136	140	147	133	130	140	148	149	147	138.4
3-Sep	141	139	135	145	148	145	153	157	158	161	162	157	154	263	335	358	358	355	354	355	350	349	341	332	43.8
4-Sep	326	328	328	328	326	325	320	319	328	345	342	341	331	335	333	332	356	3	32	38	43	54	70	141	340.9
5-Sep	161	171	180	145	171	157	161	162	164	167	138	119	113	127	124	116	96	82	90	113	136	147	147	146	140.5
6-Sep	144	150	154	163	161	142	146	145	141	136	135	134	152	151	154	150	150	147	145	147	170	211	193	187	152.9
7-Sep	198	199	191	191	203	210	198	202	220	199	321	14	355	350	360	2	16	13	13	15	13	2	10	11	3.4
8-Sep	13	9	14	11	14	16	14	11	17	28	16	309	280	269	272	287	336	351	333	348	16	61	107	133	9.6
9-Sep	128	136	142	131	151	155	156	147	139	138	143	129	153	159	156	154	178	179	200	242	260	246	216	223	169.7
10-Sep	211	216	252	246	294	320	304	302	302	272	299	330	306	309	262	250	259	333	340	357	348	14	7	301	299.1
11-Sep	328	337	42	9	185	184	191	178	169	177	131	161	155	164	154	160	159	150	145	152	164	171	172	173	163.4
12-Sep	168	160	157	154	169	163	150	154	155	155	152	158	184	193	204	210	202	192	193	216	216	215	193	194	178.4
13-Sep	203	215	174	173	163	162	153	162	159	160	146	156	18	294	316	10	6	23	31	56	129	146	146	146	149.5
14-Sep	142	165	141	156	149	144	163	149	137	157	155	130	134	114	135	142	138	140	158	166	165	188	169	180	149.4
15-Sep	205	213	221	223	218	212	212	228	223	256	284	287	281	283	308	310	312	322	312	312	316	309	315	316	292.5
16-Sep	317	314	308	306	320	335	319	279	282	308	348	355	91	161	129	128	121	130	128	142	141	145	145	146	184.0
17-Sep	143	142	145	144	146	142	143	143	140	139	139	135	131	135	136	134	138	138	139	145	145	149	147	144	141.1
18-Sep	144	148	151	152	152	154	157	160	163	185	194	214	206	203	201	196	212	216	231	237	241	260	268	276	187.0
19-Sep	273	267	251	220	216	210	211	212	207	211	221	233	244	258	254	244	240	235	250	247	245	217	226	223	238.7
20-Sep	170	163	161	162	162	173	167	170	167	178	175	163	159	179	178	171	178	174	165	160	161	160	157	159	166.4
21-Sep	152	152	163	182	223	241	256	244	248	252	280	257	237	254	348	276	270	275	284	291	297	245	262	253	251.0
22-Sep	252	253	253	248	254	251	235	209	227	244	232	220	220	239	239	231	229	209	201	191	195	191	193	195	221.6
23-Sep	199	208	212	214	228	227	232	253	253	247	248	242	227	225	219	215	215	213	217	224	234	241	233	226	224.4
24-Sep	227	212	200	204	209	219	222	233	241	253	253	274	267	275	278	301	317	324	324	294	295	313	271	248	263.9
25-Sep	219	208	206	189	164	160	164	165	159	159	155	155	172	160	163	161	175	179	178	178	215	243	260	257	185.3
26-Sep	249	251	252	253	251	251	240	251	233	258	265	253	273	273	265	248	271	37	243	245	243	242	230	187	249.1
27-Sep	206	216	189	207	233	247	253	258	264	262	259	258	255	245	248	250	252	266	282	275	262	259	232	225	245.9
28-Sep	247	250	258	267	265	264	265	273	271	256	187	159	178	181	163	203	216	183	164	129	131	131	134	135	212.1
29-Sep	137	134	131	134	134	135	135	133	135	138	141	141	149	159	161	162	168	159	153	135	137	128	129	130	140.6
30-Sep	131	133	135	133	119	279	345	27	47	359	2	12	356	14	24	21	22	7	360	12	15	15	14	12	30.6
	186.7	188.8	187.0	191.4	197.7	196.8	193.9	189.7	187.0	194.4	192.8	184.9	196.4	207.2	208.7	213.5	212.3	195.1	199.5	189.4	190.5	198.3	187.0	182.5	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Sep 10 13:00

Minimum Value: 1 deg on Sep 23 00:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 6 Median = 8 Q_3 = 13 P_{90} = 22 P_{99} = 74

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

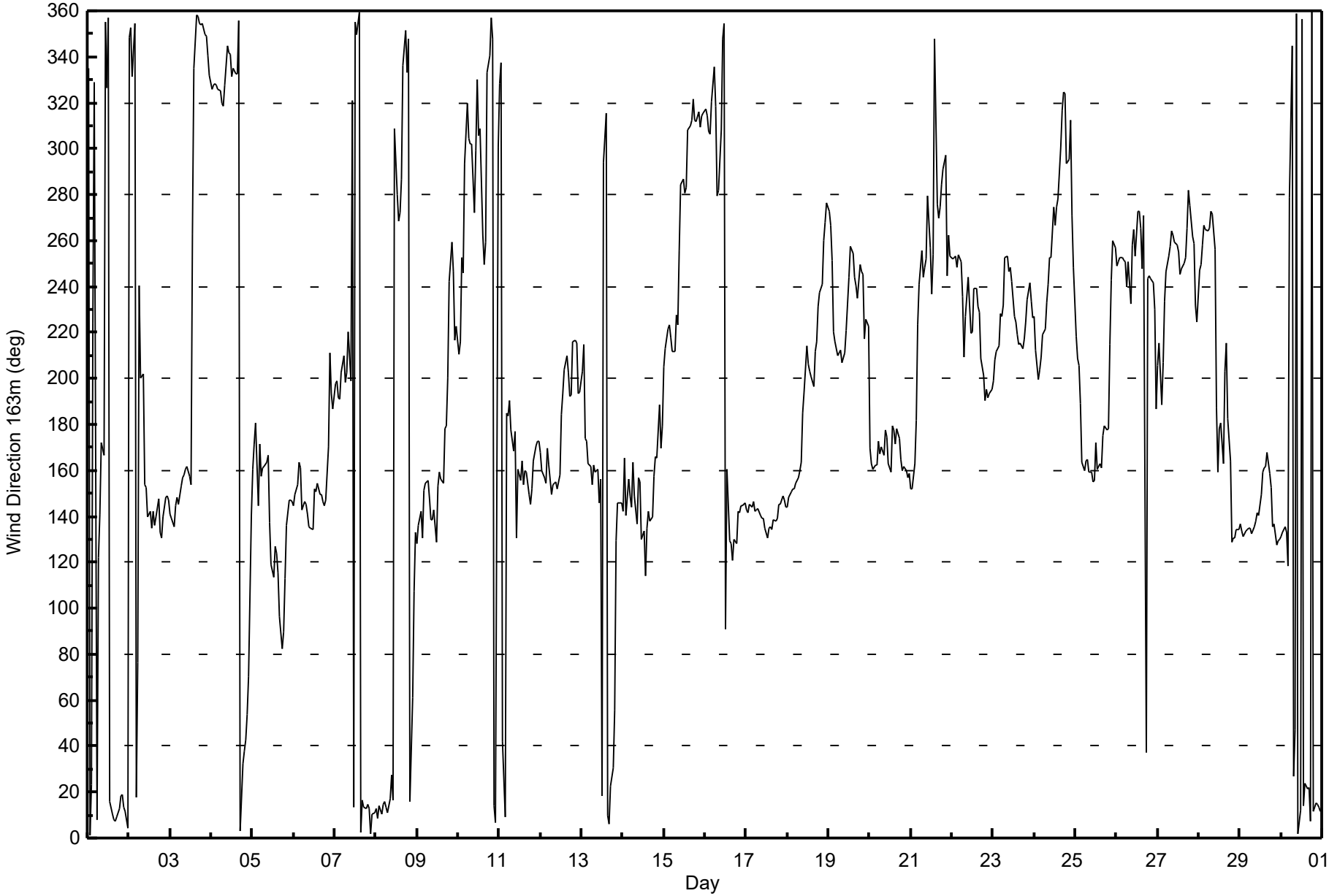
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	5	18	64	57	41	19	42	11	19	59	64	92	18	17	13	11	7	5	6	9	7	8	3	5	92
2-Sep	2	7	18	14	10	40	101	36	12	27	29	14	14	17	16	12	10	12	6	3	6	7	6	10	101
3-Sep	6	5	5	6	6	7	7	6	7	10	11	12	17	66	13	8	6	5	6	6	7	6	5	5	66
4-Sep	4	4	4	5	4	5	5	7	7	11	10	11	12	13	10	9	14	13	9	2	3	6	12	38	38
5-Sep	17	27	8	15	12	20	7	5	4	9	17	14	11	14	19	17	15	9	5	11	4	4	5	6	27
6-Sep	5	4	5	4	5	8	7	5	6	5	7	9	13	13	14	14	13	15	15	11	12	9	28	7	28
7-Sep	7	8	11	10	13	12	24	12	27	41	58	16	26	20	12	10	8	11	6	6	5	4	6	3	58
8-Sep	3	9	4	2	3	3	8	13	29	15	44	58	20	16	21	24	81	15	15	8	20	18	17	6	81
9-Sep	5	5	9	9	5	6	5	6	3	4	7	7	16	11	11	10	10	7	11	13	4	6	8	9	16
10-Sep	11	19	15	14	16	12	13	9	7	16	28	29	104	67	18	12	12	25	6	4	4	14	12	35	104
11-Sep	15	24	23	20	25	10	13	8	11	27	28	12	12	13	16	12	14	12	7	6	5	2	2	4	28
12-Sep	4	5	6	8	7	8	8	7	9	10	9	10	19	9	9	10	7	4	2	17	6	22	10	9	22
13-Sep	12	18	7	6	4	5	12	10	9	15	8	73	70	28	29	13	9	6	5	29	13	7	5	5	73
14-Sep	13	10	5	14	9	8	6	9	6	7	10	18	10	9	11	8	5	9	6	6	7	10	4	10	18
15-Sep	10	12	10	6	6	6	10	12	15	33	19	16	43	37	12	8	7	5	10	7	5	5	4	3	43
16-Sep	7	6	5	4	6	6	9	20	23	15	20	30	92	75	52	26	8	4	5	5	5	4	4	4	92
17-Sep	4	3	5	5	4	3	3	4	5	5	6	8	7	9	6	5	5	4	5	7	6	6	6	5	9
18-Sep	5	6	6	7	6	6	6	6	7	11	10	14	13	9	16	12	12	10	4	4	4	6	2	5	16
19-Sep	3	6	11	13	12	7	7	8	13	16	18	26	27	8	14	10	6	11	5	7	11	6	7	9	27
20-Sep	10	6	4	4	7	2	3	8	7	6	10	7	8	15	11	8	7	3	5	3	3	3	3	3	15
21-Sep	6	9	7	22	12	13	6	5	6	10	46	90	67	15	84	25	5	6	8	6	22	19	6	5	90
22-Sep	4	4	3	4	5	8	18	23	20	8	9	9	10	10	10	14	8	12	6	4	2	2	1	1	23
23-Sep	3	5	6	9	5	6	6	9	8	12	5	7	9	5	7	8	7	5	5	4	6	7	16	14	16
24-Sep	10	9	12	12	10	14	13	13	9	7	8	20	14	13	19	10	8	6	3	22	13	5	20	3	22
25-Sep	13	10	10	14	16	8	8	7	8	11	10	17	19	7	16	12	5	5	3	7	11	11	13	14	19
26-Sep	3	6	4	4	4	7	11	8	16	9	13	13	13	17	16	9	52	65	23	2	3	3	7	17	65
27-Sep	19	20	10	6	10	5	4	6	7	8	10	10	10	7	8	7	8	7	12	10	5	6	11	12	20
28-Sep	7	4	3	6	9	3	5	8	14	22	25	15	30	33	11	32	12	6	21	7	3	5	5	4	33
29-Sep	5	5	5	4	3	4	4	4	6	6	7	7	13	9	7	8	5	7	9	5	4	8	3	4	13
30-Sep	5	4	3	32	64	22	14	11	14	28	18	12	7	9	8	10	9	7	7	8	7	7	7	6	64
	19	27	64	57	64	40	101	36	29	59	64	92	104	75	84	32	81	65	23	29	22	22	28	38	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 163m (WD163) - deg

Lower Camp Met Tower - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - September 2025

Maximum Value: 0.4 km/h on Sep 19 07:00

Maximum Daily Average: -0.1 km/h on Sep 14

Minimum Value: -1.2 km/h on Sep 15 17:00

Minimum Daily Average: -0.5 km/h on Sep 22

Maximum Diurnal Average: -0.1 km/h at hour 24

Minimum Diurnal Average: -0.5 km/h at hour 17

Monthly Average: -0.24 km/h

Percentiles: P_1 = -1.0 P_{10} = -0.7 Q_1 = -0.4 Median = -0.2 Q_3 = 0.0 P_{90} = 0.1 P_{99} = 0.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.4	-0.1	-0.1	0.0	-0.2	-0.3	-0.2	-0.5	-0.5	-0.8	-0.8	-0.5	-0.3	-0.3	-0.3	0.1	0.1	0.0	-0.2	0.1
2-Sep	0.0	0.0	0.0	-0.2	0.1	0.1	0.2	-0.1	-0.2	0.1	-0.1	-0.1	-0.4	-0.2	-0.3	0.1	-0.3	-0.2	-0.3	-0.1	-0.2	-0.6	-0.7	-0.2	-0.2	0.2
3-Sep	-0.3	-0.2	-0.2	-0.4	-0.4	-0.2	-0.2	-0.4	-0.5	-0.5	-0.4	-0.3	-0.1	0.1	-0.5	-0.7	-1.0	-1.1	-0.8	-0.8	-0.5	0.0	-0.3	-0.3	-0.4	0.1
4-Sep	-0.6	-0.7	-0.6	-0.8	-0.7	-0.4	-0.4	-0.6	-0.5	-0.6	-0.7	-0.7	-0.8	-0.4	-0.5	-0.5	-0.6	-0.3	-0.4	0.1	0.0	0.1	0.0	0.0	-0.4	0.1
5-Sep	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.3	0.0	-0.5	-0.5	0.2	0.0	0.1	-0.4	0.0	0.0	-0.3	-0.2	0.0	0.0	0.1	0.2	0.0	0.1	-0.1	0.2
6-Sep	-0.1	-0.2	0.2	-0.3	-0.1	0.0	-0.1	-0.3	-0.4	-0.3	-0.2	-0.3	-0.4	-0.5	-0.3	-0.2	-0.3	-0.2	0.1	0.0	0.0	0.0	0.1	-0.1	-0.2	0.2
7-Sep	0.0	0.1	0.1	0.1	0.0	0.0	0.0	-0.1	0.1	-0.1	0.1	-0.2	-0.2	-0.3	-0.4	-0.8	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.0	-0.1	0.1
8-Sep	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2	0.2	-0.5	-0.3	-0.4	-0.4	-0.2	0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.1	-0.1	0.2
9-Sep	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	-0.2	-0.2	-0.2	-0.3	-0.3	-0.5	-0.4	-0.6	-0.4	-0.6	-0.5	-0.2	-0.4	0.2	0.1	0.2	-0.2	0.2
10-Sep	0.1	0.0	0.1	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	-0.1	0.1	-0.5	-0.4	-0.6	-0.3	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	0.1
11-Sep	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2	0.1	0.1	-0.1	0.0	-0.3	-0.5	-0.5	-0.5	0.0	-0.3	-0.1	-0.1	0.2	0.1	0.1	0.1	-0.1	0.2
12-Sep	0.2	-0.1	-0.1	0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.1	-0.5	0.0	-0.5	-0.9	-0.9	-0.6	-0.6	-0.5	-0.6	-0.2	0.1	0.1	0.1	0.0	-0.3	0.2
13-Sep	0.0	0.2	0.0	0.1	0.0	-0.1	0.0	-0.1	-0.3	-0.2	-0.2	-0.2	0.1	-0.1	-0.2	-0.3	-0.2	-0.3	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	0.2
14-Sep	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.2	0.3	-0.3	-0.2	-0.2	0.0	-0.1	-0.2	-0.3	-0.2	0.0	0.0	0.1	0.1	-0.1	0.3
15-Sep	0.0	0.2	-0.1	0.1	0.1	0.1	-0.1	0.2	-0.3	-0.2	0.3	0.1	0.1	0.3	-0.5	-0.8	-1.2	-0.2	-0.5	-1.1	-0.4	-0.7	-0.5	-0.6	-0.2	0.3
16-Sep	-0.2	-0.4	-0.1	-0.1	-0.3	-0.2	-0.2	-0.1	-0.2	-0.3	-0.3	-0.5	-0.4	0.0	-0.1	-0.3	-0.2	-0.2	-0.1	0.2	-0.1	-0.2	-0.1	-0.6	-0.2	0.2
17-Sep	-0.3	0.2	0.3	-0.1	-0.4	-0.2	-0.1	-0.1	0.1	-0.6	-0.4	0.0	-0.1	-0.5	-0.3	0.0	-0.3	-0.3	-0.1	-0.1	-0.3	-0.6	-0.2	-0.1	-0.2	0.3
18-Sep	-0.1	-0.3	-0.3	-0.2	-0.5	-1.0	-0.8	-0.7	-0.5	-0.6	-0.8	-0.5	-0.7	-0.6	-0.6	-0.4	-0.5	-0.5	-0.1	0.0	-0.1	-0.4	-0.5	-0.4	-0.5	0.0
19-Sep	-0.6	-0.2	0.2	0.0	0.3	0.1	0.4	0.0	-0.1	-0.2	-0.2	-0.1	-0.4	-0.4	-0.4	-0.6	-0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.3	-0.1	0.4
20-Sep	0.2	-0.3	-0.1	-0.2	-0.1	0.1	-0.1	-0.5	-0.5	-0.5	-0.6	-0.3	-0.5	-0.4	-0.8	-0.4	-0.9	-0.7	-0.4	0.2	0.0	0.2	-0.1	0.1	-0.3	0.2
21-Sep	0.0	0.0	0.1	0.0	0.1	0.3	0.2	0.2	0.2	0.3	-0.2	-0.1	0.0	-0.2	0.2	-0.4	-0.7	-0.5	-0.2	-0.4	-0.2	-0.1	-0.3	-0.4	-0.1	0.3
22-Sep	-0.7	-0.8	-0.9	-0.4	-0.6	-0.1	0.0	-0.1	-0.2	-0.7	-0.8	-0.4	-0.7	-0.7	-0.6	-0.5	-0.5	-0.5	-0.5	-0.8	-0.9	-0.7	-0.5	-0.4	-0.5	0.0
23-Sep	-0.3	-0.3	-0.3	-0.4	-0.5	-0.7	-0.3	-0.2	-0.2	-0.5	-1.0	-0.9	-0.8	-0.8	-0.5	-0.8	-0.5	-0.8	-0.5	-0.4	-0.2	0.2	0.2	0.1	-0.4	0.2
24-Sep	0.1	-0.1	0.0	-0.1	0.1	0.0	0.0	-0.2	-0.2	-0.8	-0.7	-0.2	-0.6	-0.8	-0.7	-0.5	-0.1	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.3	-0.2	0.3
25-Sep	0.2	0.2	0.0	0.1	-0.3	-0.2	-0.3	-0.4	-0.4	-0.4	-0.5	-0.4	-0.4	-0.5	-0.2	-0.5	-0.8	-0.8	-0.5	-0.6	-0.6	-0.8	-0.8	-0.4	-0.4	0.2
26-Sep	-0.3	-0.2	0.0	0.1	0.2	0.2	-0.1	0.0	-0.2	-0.2	-0.1	-0.6	-0.7	-0.4	-0.5	-0.9	-0.7	-0.1	0.0	-0.3	-0.4	-0.2	-0.2	-0.5	-0.2	0.2
27-Sep	-0.4	-0.2	-0.2	-0.3	-0.6	-0.8	-0.8	-0.7	-0.9	-1.0	-1.0	-0.6	-0.6	-0.8	-0.8	-0.8	-0.9	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	0.2	-0.5	0.2
28-Sep	0.2	-0.1	-0.6	-0.4	0.0	-0.1	-0.2	-0.2	-0.3	-0.5	-0.4	-0.2	-0.3	-0.3	-0.4	-0.3	-0.1	-0.2	0.0	0.1	0.0	-0.1	-0.3	-0.3	-0.2	0.2
29-Sep	-0.6	-0.4	-0.4	-0.6	-0.7	-0.7	-0.6	-0.4	-0.1	-0.6	-0.7	-0.6	-0.8	-0.8	-0.9	-0.7	-0.8	-0.5	-0.1	-0.3	-0.4	-0.2	-0.4	-0.1	-0.5	-0.1
30-Sep	-0.2	0.0	-0.3	0.0	-0.2	0.0	-0.1	-0.1	-0.1	0.2	-0.1	-0.2	-0.5	-0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	0.0	-0.2	-0.1	-0.1	0.2
	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.4	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	Diurnal Average	
	0.2	0.2	0.3	0.1	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.1	0.3	0.2	0.1	0.2	0.0	0.1	0.2	0.2	0.2	0.2	0.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.6 km/h on Sep 29 10:00

Minimum Value: 0.1 km/h on Sep 14 07:00

Percentiles: P_1 = 0.1 P_{10} = 0.4 Q_1 = 0.9 Median = 1.4 Q_3 = 2.1 P_{90} = 2.8 P_{99} = 4.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.3	0.5	0.4	0.5	0.5	1.7	1.0	1.0	1.1	1.1	1.3	1.9	2.3	2.8	2.9	2.9	2.5	2.1	1.0	0.7	0.8	0.3	0.2	2.9
2-Sep	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.6	0.9	1.2	1.6	1.7	1.8	1.9	2.0	1.7	1.6	1.5	1.6	2.1	2.9	3.3	2.2	3.3
3-Sep	2.2	2.6	2.3	2.5	2.8	2.4	2.3	2.0	2.0	1.8	1.6	1.8	1.7	1.2	1.3	2.3	4.3	3.6	3.6	3.3	2.6	1.9	2.3	2.5	4.3
4-Sep	2.3	2.5	1.9	1.7	1.8	1.8	1.9	2.4	2.6	3.0	3.0	3.1	3.2	2.9	2.9	2.8	2.4	1.9	1.8	0.6	0.3	0.3	0.2	0.2	3.2
5-Sep	0.1	0.2	0.1	0.2	0.5	0.9	1.0	1.4	1.5	1.8	2.1	1.8	1.9	1.8	1.8	1.6	1.3	1.1	0.7	0.6	0.7	0.6	0.3	0.7	2.1
6-Sep	1.7	1.0	0.8	0.9	1.0	0.9	0.9	1.0	1.1	1.5	1.6	1.5	1.9	1.8	1.7	1.5	1.2	1.0	0.3	0.2	0.1	0.2	0.5	0.4	1.9
7-Sep	0.3	0.6	0.8	0.7	1.0	1.2	0.8	0.7	0.9	1.1	1.1	1.5	1.3	1.7	2.0	3.0	2.8	1.7	1.2	1.2	1.0	0.5	0.1	0.4	3.0
8-Sep	0.9	1.2	1.0	0.5	0.3	0.5	0.9	1.3	1.0	1.7	1.5	1.6	2.3	2.2	1.9	1.4	1.1	0.5	0.2	0.1	0.1	0.1	0.2	0.3	2.3
9-Sep	0.4	0.5	0.7	0.4	0.4	0.2	0.2	0.7	1.2	1.3	0.9	1.0	1.5	1.9	1.9	2.1	1.7	1.2	0.7	0.8	1.0	0.5	0.5	0.6	2.1
10-Sep	0.5	0.3	0.4	0.7	0.9	0.4	0.3	0.3	0.5	1.0	0.9	1.5	1.3	2.0	2.2	1.8	1.5	1.3	0.6	0.2	0.1	0.1	0.2	0.2	2.2
11-Sep	0.2	0.2	0.1	0.1	0.2	0.1	0.8	1.2	1.3	1.4	1.5	1.7	1.9	1.7	1.7	1.8	1.4	1.2	0.8	1.0	1.6	1.7	1.5	1.6	1.9
12-Sep	1.6	1.7	1.7	0.9	0.9	1.9	1.6	1.1	1.5	2.3	2.8	2.6	2.3	2.2	2.5	2.3	1.8	1.1	0.8	1.0	0.7	0.4	0.3	0.4	2.8
13-Sep	0.4	0.6	0.4	0.5	1.1	1.1	1.2	1.0	1.0	1.4	1.3	1.2	1.2	1.1	1.0	1.0	1.3	1.0	0.6	0.6	0.3	0.2	0.2	0.3	1.4
14-Sep	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.6	1.5	1.7	1.9	1.8	1.9	1.4	0.7	2.4	2.3	1.7	1.5	1.0	0.4	0.5	0.3	2.4
15-Sep	0.3	0.9	0.8	0.9	1.3	1.6	1.4	1.4	1.3	1.1	1.2	0.9	1.2	1.8	2.5	3.4	4.0	2.8	2.2	2.2	2.3	2.3	1.7	1.7	4.0
16-Sep	1.4	1.2	1.0	1.1	1.6	1.2	0.5	0.6	1.5	1.6	1.7	1.6	1.6	1.5	1.6	1.4	1.3	1.1	1.1	0.6	1.0	2.5	1.7	2.5	2.5
17-Sep	2.9	2.2	1.0	0.8	0.7	0.8	0.7	1.0	1.5	2.0	2.1	2.5	2.6	2.8	3.5	3.3	4.1	3.8	3.0	2.6	2.8	3.2	3.3	3.3	4.1
18-Sep	3.3	3.3	3.0	3.0	3.4	3.3	2.8	2.8	2.7	2.3	2.2	2.2	2.0	2.0	2.1	1.8	1.7	1.4	0.3	0.4	0.8	1.0	1.1	1.4	3.4
19-Sep	1.5	1.2	0.9	0.8	0.7	0.7	1.2	1.4	1.4	1.4	1.6	1.8	2.3	2.5	2.4	2.1	1.2	0.6	0.3	0.3	0.4	0.5	0.3	0.6	2.5
20-Sep	0.8	1.3	1.1	0.8	1.2	1.1	1.3	1.8	1.7	1.7	2.5	2.6	2.0	2.1	2.1	2.0	2.1	1.7	1.6	1.8	1.9	1.4	1.3	1.1	2.6
21-Sep	0.7	0.4	0.4	0.7	0.5	0.8	1.0	1.5	1.4	1.6	1.4	1.3	1.4	1.6	1.3	2.3	2.9	2.7	3.2	2.4	0.8	1.2	1.2	1.8	3.2
22-Sep	2.3	2.8	3.1	2.6	2.5	1.9	1.2	1.2	1.4	2.3	2.3	2.3	2.2	2.8	2.8	2.2	2.1	1.1	1.1	1.9	1.9	2.1	2.1	2.2	3.1
23-Sep	2.1	1.6	1.7	2.0	2.0	1.9	1.4	1.0	1.2	2.2	3.2	2.8	2.5	2.7	2.5	2.7	2.8	2.2	2.0	1.8	1.4	1.1	0.8	0.9	3.2
24-Sep	1.2	1.1	1.3	1.3	1.1	0.9	0.8	0.7	1.8	2.7	2.5	2.2	2.3	2.6	2.5	1.9	1.3	1.3	0.7	0.6	0.4	0.3	0.6	1.0	2.7
25-Sep	0.9	0.9	1.0	1.6	1.7	1.4	1.3	1.4	1.4	1.3	1.7	2.3	2.1	2.0	1.3	1.7	1.6	1.1	1.6	1.9	1.6	2.9	2.8	1.5	2.9
26-Sep	1.4	1.3	1.0	1.1	1.0	0.9	0.8	1.0	1.3	2.4	2.4	2.4	2.9	2.9	2.9	2.7	2.5	0.7	1.1	1.7	1.4	1.5	1.4	1.8	2.9
27-Sep	1.5	1.1	2.0	1.8	2.4	2.7	3.3	3.7	4.0	3.8	3.3	3.2	3.1	3.0	2.8	2.6	2.7	1.8	0.6	0.6	1.3	1.1	0.8	0.8	4.0
28-Sep	0.5	1.2	2.5	2.7	1.7	2.3	2.2	1.4	1.8	1.4	1.5	1.8	1.7	1.8	1.7	1.3	0.9	0.5	0.3	0.6	0.8	0.9	1.4	2.9	2.9
29-Sep	3.1	2.4	2.5	2.9	3.4	3.2	3.3	4.0	4.0	4.6	4.3	4.3	3.3	2.9	2.2	2.0	1.9	1.6	1.2	1.4	2.2	1.8	2.4	1.4	4.6
30-Sep	1.9	0.9	2.6	1.4	0.7	0.9	0.5	0.3	0.8	1.1	1.4	2.4	2.4	2.5	2.8	2.4	2.1	1.6	1.8	1.1	1.0	1.3	0.8	1.2	2.8
	3.3	3.3	3.1	3.0	3.4	3.3	3.3	4.0	4.0	4.6	4.3	4.3	3.3	3.0	3.5	3.4	4.3	3.8	3.6	3.3	2.8	3.2	3.3	3.3	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - September 2025

Maximum Value: 1.4 km/h on Sep 21 10:00

Maximum Daily Average: 0.4 km/h on Sep 23

Minimum Value: -0.9 km/h on Sep 15 17:00

Minimum Daily Average: -0.3 km/h on Sep 4

Maximum Diurnal Average: 0.3 km/h at hour 3

Minimum Diurnal Average: 0.1 km/h at hour 18

Monthly Average: 0.21 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} = 1.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.2	0.1	0.0	-0.1	-0.1	0.0	0.4	0.1	-0.1	0.1	-0.2	-0.2	-0.4	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	0.1	0.2	0.1	0.0	0.4
2-Sep	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.0	-0.1	0.1	0.2	0.1	0.0	0.3	0.1	0.7	0.4	0.5	0.5	0.8	0.5	1.0	0.6	0.7	0.3	1.0
3-Sep	0.3	0.5	0.6	0.1	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.4	-0.3	-0.3	-0.6	-0.4	-0.3	-0.3	-0.3	0.1	-0.3	-0.6	0.0	0.6
4-Sep	-0.5	-0.6	-0.5	-0.7	-0.7	-0.5	0.0	-0.3	-0.5	-0.2	-0.2	-0.2	-0.6	0.0	-0.4	-0.4	-0.3	-0.2	-0.1	0.2	0.1	0.3	0.1	0.2	-0.3	0.3
5-Sep	0.1	0.3	0.2	0.4	0.1	0.1	-0.1	0.3	-0.1	0.1	0.5	0.4	0.8	-0.2	0.3	0.1	-0.1	-0.1	0.3	0.3	0.6	0.8	0.5	0.6	0.3	0.8
6-Sep	0.5	0.0	0.6	-0.1	0.2	0.5	0.3	-0.1	-0.1	0.0	-0.2	0.2	0.2	0.0	0.4	0.3	0.1	0.2	0.4	0.2	0.2	0.3	0.7	0.4	0.2	0.7
7-Sep	0.6	0.8	0.5	0.5	0.6	0.6	0.3	0.1	0.2	-0.1	0.4	-0.1	0.0	-0.1	-0.3	-0.4	0.0	-0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.8
8-Sep	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	-0.2	0.0	0.3	-0.1	0.3	0.1	0.1	0.2	0.5	-0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.1	0.5
9-Sep	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-0.1	-0.1	0.2	-0.1	0.0	0.0	0.1	0.1	0.2	-0.1	0.1	0.4	0.5	0.3	0.4	0.3	0.2	0.5
10-Sep	0.8	0.5	0.3	0.0	-0.1	0.2	0.2	0.1	0.3	0.2	-0.1	0.1	0.1	0.4	0.1	0.4	0.1	-0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.8
11-Sep	0.2	0.3	0.2	0.1	0.3	0.2	0.5	0.3	0.4	0.5	0.1	0.3	0.0	0.0	-0.1	-0.1	0.6	0.0	0.1	0.2	0.9	0.6	0.9	0.6	0.3	0.9
12-Sep	0.6	0.6	0.7	0.4	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.4	-0.1	0.1	0.5	0.4	0.2	0.1	0.6	0.7	0.3	0.4	0.5	0.3	0.7
13-Sep	0.3	0.7	0.4	0.4	0.4	0.4	0.4	0.2	0.0	-0.2	-0.2	-0.1	0.1	0.0	0.0	-0.2	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.7
14-Sep	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.4	0.2	0.2	0.3	0.3	0.7	0.7	0.2	0.2	0.5	0.4	0.5	0.4	0.3	0.7
15-Sep	0.3	0.9	0.2	0.5	0.8	0.5	0.2	0.8	0.1	0.1	0.4	0.3	0.3	0.7	-0.3	-0.4	-0.9	-0.5	-0.6	-0.8	-0.5	-0.7	-0.3	-0.5	0.0	0.9
16-Sep	-0.2	-0.1	0.0	0.1	-0.2	-0.1	0.0	0.2	0.3	-0.1	-0.2	-0.2	0.3	0.3	0.1	0.1	0.3	0.3	0.1	0.6	0.3	0.4	0.6	0.6	0.1	0.6
17-Sep	0.5	0.7	1.0	0.0	-0.3	-0.2	0.2	0.0	0.3	0.4	0.2	0.6	0.8	0.3	0.3	0.6	0.6	0.3	0.5	0.7	0.5	0.4	0.7	0.6	0.4	1.0
18-Sep	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.1	0.6	0.3	0.4	0.2	0.2	0.2	0.6	0.5	0.2	0.3	0.3	0.6	0.3	0.2	0.6	0.4	0.6
19-Sep	0.5	0.7	0.7	0.2	1.0	0.8	1.2	0.7	0.1	0.2	0.4	0.4	0.1	-0.1	0.3	0.1	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.8	0.4	1.2
20-Sep	0.7	-0.4	0.1	0.0	0.4	0.7	0.1	-0.3	0.0	-0.2	0.0	0.1	0.2	0.7	0.2	0.3	-0.2	-0.2	0.1	0.9	0.8	1.0	0.9	0.9	0.3	1.0
21-Sep	0.4	0.1	0.4	0.2	0.5	0.6	0.3	0.4	0.5	1.4	0.2	0.0	0.4	0.5	0.4	0.0	-0.1	0.3	0.3	-0.2	0.3	0.7	0.5	0.6	0.4	1.4
22-Sep	0.3	0.2	0.2	1.0	0.6	0.6	0.3	0.3	0.1	0.3	0.3	1.1	0.4	0.3	0.4	0.6	0.5	0.2	0.0	-0.4	-0.1	-0.3	-0.1	0.1	0.3	1.1
23-Sep	0.4	0.0	0.4	0.6	0.6	0.6	0.4	0.6	0.7	0.3	-0.2	0.4	0.6	0.4	0.5	0.1	0.7	0.3	0.4	0.4	0.5	0.6	0.5	0.3	0.4	0.7
24-Sep	0.4	0.5	0.6	0.3	0.7	0.7	0.3	0.2	0.7	0.3	0.4	0.5	-0.1	-0.3	0.0	-0.4	0.0	-0.2	0.0	0.0	0.0	0.1	0.2	0.5	0.2	0.7
25-Sep	1.0	0.7	0.5	0.7	-0.1	0.0	0.0	-0.2	-0.2	0.2	-0.1	0.2	0.1	0.0	0.1	-0.3	-0.1	-0.3	-0.3	-0.1	0.2	0.4	0.1	0.3	0.1	1.0
26-Sep	0.6	0.5	0.7	0.9	1.2	0.8	0.4	0.4	0.1	0.5	0.4	0.5	-0.1	0.0	0.0	0.2	0.0	-0.1	0.5	0.6	0.4	0.7	0.9	-0.2	0.4	1.2
27-Sep	-0.2	0.3	0.6	0.1	0.6	0.7	0.4	0.1	0.1	-0.3	-0.1	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.3	0.6	0.6	0.2	0.4	0.2	0.7
28-Sep	0.2	0.5	0.2	0.6	0.4	1.0	0.6	0.2	0.6	-0.1	-0.2	0.1	0.1	0.0	0.2	0.2	0.5	0.2	0.4	0.4	0.2	-0.2	-0.1	0.2	0.3	1.0
29-Sep	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.5	0.5	0.9	0.8	0.5	0.1	-0.4	0.0	-0.4	0.1	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.9
30-Sep	0.2	0.5	0.5	0.3	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	-0.3	0.0	-0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	-0.1	0.1	0.5
	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	Diurnal Average	
	1.0	0.9	1.0	1.0	1.2	1.0	1.2	0.8	0.7	1.4	0.9	1.1	0.8	0.7	0.5	0.7	0.7	0.7	0.5	0.9	0.9	1.0	0.9	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.1 km/h on Sep 29 11:00

Minimum Value: 0.1 km/h on Sep 8 20:00

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.9 Median = 1.5 Q_3 = 2.2 P_{90} = 2.7 P_{99} = 3.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.3	0.4	0.4	0.5	0.5	1.3	1.2	1.3	1.1	1.1	1.5	1.9	2.2	2.3	2.6	2.5	2.1	1.8	1.0	0.9	1.2	0.4	0.2	2.6
2-Sep	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.6	1.0	1.4	1.5	1.6	1.8	2.0	2.2	1.7	1.7	1.6	1.8	2.0	3.1	3.4	2.7	3.4
3-Sep	2.3	2.5	2.6	2.2	2.4	2.2	2.2	1.7	2.1	2.2	1.9	1.7	1.6	1.1	1.0	2.0	3.8	3.2	3.3	2.9	2.6	2.1	2.4	2.6	3.8
4-Sep	2.2	2.5	1.8	1.6	1.7	1.9	2.2	2.5	2.6	3.0	3.1	3.1	3.2	3.0	3.1	2.7	2.3	1.7	1.6	0.8	0.6	0.4	0.2	0.2	3.2
5-Sep	0.2	0.3	0.2	0.4	0.5	0.7	1.0	1.4	1.4	1.7	2.0	1.7	2.0	2.0	1.8	1.5	1.5	1.1	0.8	0.9	0.8	0.8	0.7	1.0	2.0
6-Sep	2.1	1.1	0.9	0.8	0.9	0.6	0.6	1.0	1.1	1.4	1.5	1.5	2.0	1.9	1.8	1.4	1.1	1.0	0.6	0.3	0.2	0.3	0.5	0.5	2.1
7-Sep	0.5	0.7	0.7	0.6	0.8	1.0	0.6	0.7	0.8	0.9	1.1	1.5	1.3	1.7	1.7	2.4	2.3	1.6	1.1	1.0	1.1	0.6	0.3	0.7	2.4
8-Sep	1.0	1.2	1.0	0.6	0.4	0.6	1.0	1.4	1.2	1.6	1.7	2.0	2.4	2.1	2.0	1.6	1.2	0.5	0.3	0.1	0.1	0.2	0.2	0.5	2.4
9-Sep	0.6	1.0	0.8	0.5	0.5	0.3	0.5	0.9	1.2	1.2	0.9	1.0	1.7	2.1	2.3	2.3	1.8	1.2	0.8	0.8	0.5	0.9	0.8	0.9	2.3
10-Sep	0.7	0.6	0.6	1.1	1.2	0.4	0.5	0.4	0.4	0.9	0.8	1.5	1.6	2.2	2.2	1.9	1.5	1.4	0.5	0.3	0.2	0.1	0.2	0.2	2.2
11-Sep	0.2	0.3	0.2	0.2	0.3	0.3	0.5	1.2	1.3	1.4	1.4	1.4	1.8	2.2	2.1	2.1	1.7	1.4	1.0	1.2	1.9	1.7	1.5	1.4	2.2
12-Sep	1.4	1.7	1.7	1.2	1.0	1.0	1.7	1.1	1.2	2.3	2.3	2.3	2.6	2.7	3.1	2.7	2.3	1.4	0.7	1.2	1.2	0.7	0.5	0.6	3.1
13-Sep	0.5	0.5	0.5	0.7	1.2	1.2	1.0	0.9	0.6	1.2	1.2	1.0	1.0	1.0	0.7	0.6	0.8	0.8	0.4	0.3	0.3	0.3	0.5	0.5	1.2
14-Sep	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.5	0.6	1.6	1.7	1.7	1.7	1.6	1.5	0.8	2.5	2.6	2.1	1.7	1.3	0.6	0.7	0.5	2.6
15-Sep	0.7	1.0	0.8	0.9	1.0	1.0	1.0	1.4	1.6	1.3	1.0	0.8	1.1	2.0	2.4	3.6	4.0	3.0	2.3	2.0	2.2	2.2	1.6	1.5	4.0
16-Sep	1.5	1.4	1.1	1.2	1.5	1.2	0.5	0.7	1.6	1.7	1.8	1.7	2.0	1.8	1.9	1.3	1.1	0.7	1.0	0.7	1.0	2.3	2.1	2.5	2.5
17-Sep	2.8	2.6	1.3	1.0	0.9	1.0	0.8	1.2	1.6	2.1	2.3	2.6	2.8	2.8	3.0	3.1	3.3	3.3	2.8	2.9	3.0	3.0	3.1	3.1	3.3
18-Sep	3.0	2.9	2.9	2.9	3.0	2.8	2.7	3.3	2.9	2.8	2.7	2.4	2.8	2.7	2.7	2.2	2.2	1.6	0.6	0.8	1.1	0.9	0.9	1.2	3.3
19-Sep	1.2	1.2	1.1	1.0	0.8	0.9	1.0	1.2	1.4	1.5	1.7	1.9	2.1	2.3	2.3	2.0	1.1	0.8	0.5	0.4	0.7	0.9	0.7	0.9	2.3
20-Sep	0.7	1.4	1.2	0.7	1.2	1.3	1.1	1.6	1.3	1.0	2.1	2.3	2.0	2.6	2.7	2.7	2.4	1.8	1.8	2.2	2.2	1.9	1.1	1.1	2.7
21-Sep	0.9	0.7	0.5	1.0	0.7	0.9	0.8	1.5	1.4	1.8	1.6	1.3	1.5	1.8	1.5	2.2	2.7	2.8	3.0	2.5	0.9	1.2	1.1	1.6	3.0
22-Sep	2.1	2.4	2.5	2.5	2.6	2.1	1.9	1.2	1.4	2.3	2.1	2.9	2.7	2.8	2.7	2.5	2.3	1.3	1.2	2.1	2.2	2.3	2.3	2.5	2.9
23-Sep	2.4	2.1	2.2	2.4	2.3	2.0	1.7	1.2	1.5	2.4	2.9	2.5	2.8	2.9	2.9	3.3	3.1	2.6	2.4	2.1	1.7	1.5	1.2	0.9	3.3
24-Sep	1.3	1.0	0.9	0.9	0.9	0.9	1.0	1.0	2.1	2.5	2.6	2.4	2.5	2.8	2.6	1.7	1.5	1.2	0.5	1.0	0.7	0.4	0.9	1.1	2.8
25-Sep	0.8	0.8	0.8	1.4	1.6	1.4	1.4	1.5	1.5	1.4	1.6	2.2	1.8	1.8	1.5	2.1	1.7	1.1	1.9	2.3	1.9	2.9	2.5	1.5	2.9
26-Sep	1.4	1.4	1.1	1.3	1.3	1.3	1.0	1.2	1.5	2.4	2.4	2.6	2.9	2.8	2.8	2.4	2.2	0.9	1.3	1.7	1.4	1.6	1.6	1.5	2.9
27-Sep	1.6	1.3	2.1	2.0	2.5	2.7	3.0	3.6	4.1	3.5	3.1	3.0	3.0	2.7	2.5	2.3	2.5	1.9	0.6	0.8	1.3	1.2	1.1	1.2	4.1
28-Sep	0.7	1.5	2.2	2.5	2.0	2.5	2.6	1.8	1.8	1.5	1.5	1.8	2.0	2.1	2.0	1.5	1.2	0.5	0.5	0.9	1.1	1.2	1.8	2.6	2.6
29-Sep	2.3	1.9	2.0	2.5	3.0	2.6	3.0	3.7	3.5	3.9	4.1	4.1	3.4	3.8	2.6	2.5	2.3	2.0	1.5	1.2	1.8	1.6	1.9	1.6	4.1
30-Sep	1.8	1.3	1.8	1.7	0.8	0.5	0.4	0.4	0.7	0.9	1.3	1.9	2.0	2.1	2.4	2.3	2.0	1.6	1.9	1.2	1.0	1.5	1.0	1.1	2.4
	3.0	2.9	2.9	2.9	3.0	2.8	3.0	3.7	4.1	3.9	4.1	4.1	3.4	3.8	3.1	3.6	4.0	3.3	3.3	2.9	3.0	3.1	3.4	3.1	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - September 2025

Maximum Value: 3.5 km/h on Sep 2 22:00

Maximum Daily Average: 1.1 km/h on Sep 17

Minimum Value: -1.7 km/h on Sep 15 17:00

Minimum Daily Average: -0.4 km/h on Sep 4

Maximum Diurnal Average: 0.3 km/h at hour 22

Minimum Diurnal Average: -0.2 km/h at hour 15

Monthly Average: 0.14 km/h

Percentiles: P_1 = -1.1 P_{10} = -0.4 Q_1 = -0.2 Median = 0.0 Q_3 = 0.4 P_{90} = 0.9 P_{99} = 2.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	-0.1	0.0	0.1	-0.1	-0.2	-0.2	0.0	0.3	0.2	0.1	-0.3	0.3	-0.3	-0.2	-0.5	-0.3	-0.3	-0.2	0.0	-0.1	-0.6	-0.1	0.1	0.0	-0.1	0.3
2-Sep	-0.2	-0.3	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.3	0.2	-0.1	-0.1	0.4	0.4	1.1	0.9	1.3	0.9	1.7	1.2	3.5	2.7	2.4	0.6	3.5
3-Sep	1.1	0.9	1.2	0.6	0.7	0.3	0.3	0.1	0.5	0.0	-0.2	0.2	-0.2	0.3	-0.4	-0.4	-0.3	0.0	0.0	0.0	-0.5	-0.1	-0.5	-1.1	0.1	1.2
4-Sep	-0.9	-0.8	-1.0	-1.0	-1.1	-0.6	-0.1	-0.5	-0.7	0.0	-0.3	-0.3	-1.0	0.3	-0.5	-0.5	-0.3	-0.2	-0.2	0.4	-0.3	-0.1	0.0	0.0	-0.4	0.4
5-Sep	0.1	0.1	-0.1	0.4	0.1	0.2	-0.2	-0.1	0.0	0.0	0.1	0.0	0.5	-0.6	0.0	-0.1	0.0	-0.2	0.3	0.5	0.6	1.0	1.1	0.9	0.2	1.1
6-Sep	1.5	0.3	0.3	-0.1	0.1	0.1	0.0	-0.3	-0.3	-0.3	-0.5	0.2	0.9	0.2	0.5	0.1	-0.3	0.3	0.4	0.1	0.1	0.0	0.2	0.2	0.2	1.5
7-Sep	0.2	-0.2	-0.1	0.0	0.0	0.1	0.0	0.0	-0.1	-0.1	0.0	-0.3	-0.3	-0.3	-0.5	-0.4	-0.2	0.0	0.0	-0.1	0.2	-0.3	-0.1	0.0	-0.1	0.2
8-Sep	-0.3	-0.1	0.0	0.0	-0.2	-0.1	0.3	0.0	0.1	0.4	0.5	-0.1	-0.2	-0.3	-0.5	0.0	0.6	-0.4	0.0	0.0	0.1	-0.1	0.1	0.5	0.0	0.6
9-Sep	0.4	0.0	0.1	-0.2	-0.1	0.2	0.3	-0.1	-0.2	0.2	0.4	-0.1	0.0	0.6	0.2	0.6	-0.3	-0.5	-0.2	0.3	0.3	0.0	-0.4	-0.4	0.0	0.6
10-Sep	0.1	0.0	-0.1	-0.4	-0.5	-0.1	-0.1	0.0	-0.1	-0.3	-0.4	-0.2	-0.4	0.4	-0.4	0.2	-0.2	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	0.4
11-Sep	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.2	-0.1	0.1	-0.3	-0.5	-0.2	-0.2	0.6	0.7	0.3	0.8	1.1	0.5	0.8	0.9	0.2	1.1
12-Sep	0.7	1.1	1.0	0.6	0.1	0.5	0.2	0.0	-0.3	-0.2	-0.1	0.3	0.5	-1.0	-0.5	0.4	-0.4	-0.1	-0.2	0.6	0.8	0.1	-0.1	-0.2	0.2	1.1
13-Sep	-0.2	-0.1	-0.1	0.5	0.4	0.6	0.1	0.5	-0.1	-0.4	-0.8	-0.2	-0.2	-0.4	-0.2	-0.3	0.0	-0.3	-0.2	-0.1	0.0	0.1	0.5	0.5	0.0	0.6
14-Sep	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.2	0.2	0.5	0.1	1.0	2.1	0.5	0.1	1.0	0.3	0.2	0.3	0.3	2.1
15-Sep	0.3	1.1	-0.3	0.0	-0.2	-0.3	-0.2	0.1	0.0	0.0	-0.1	-0.3	0.0	0.9	-0.8	-0.8	-1.7	-1.0	-1.1	-1.2	-1.1	-1.3	-0.6	-0.8	-0.4	1.1
16-Sep	-0.5	-0.3	-0.2	0.0	-0.5	-0.2	-0.1	0.0	0.4	-0.3	-0.6	-0.2	0.3	0.5	-0.2	-0.2	0.1	0.3	0.0	0.8	0.7	1.1	1.8	2.1	0.2	2.1
17-Sep	1.4	2.3	1.5	0.1	-0.5	0.1	0.6	0.4	1.0	1.6	0.6	0.8	1.2	1.5	0.5	1.3	0.8	0.6	1.1	2.3	1.9	2.2	2.1	1.5	1.1	2.3
18-Sep	1.7	1.7	1.7	1.6	1.7	1.9	0.8	0.4	-0.2	0.4	-0.4	0.6	-0.1	-0.4	-0.1	0.5	0.1	0.2	0.3	0.4	0.6	-0.2	-0.3	0.2	0.5	1.9
19-Sep	0.4	1.0	1.0	-0.2	-0.2	-0.1	0.2	0.3	-0.2	0.0	0.6	1.2	0.5	-0.5	-0.1	-0.1	0.1	0.2	0.0	0.1	0.2	-0.1	0.0	-0.1	0.2	1.2
20-Sep	0.5	-1.1	-0.6	-0.6	0.1	0.6	0.0	-0.4	-0.2	-0.8	-0.2	0.1	-0.1	1.0	0.1	0.1	-0.3	-0.6	-0.1	0.6	1.0	1.4	1.6	1.9	0.2	1.9
21-Sep	0.7	0.0	0.0	-0.1	0.0	-0.1	-0.2	0.1	0.1	2.0	0.4	-0.3	0.4	0.3	-0.1	-0.1	-0.4	-0.1	0.2	0.2	0.2	0.5	-0.2	0.0	0.1	2.0
22-Sep	0.0	0.3	0.1	1.3	1.1	1.0	0.2	-0.1	-0.1	0.4	0.2	2.0	0.4	0.2	-0.1	0.2	0.1	0.0	-0.3	-0.8	-0.7	-0.7	-0.7	-0.4	0.1	2.0
23-Sep	1.2	0.2	1.0	1.0	1.0	0.7	0.7	0.5	0.4	0.2	-0.4	-0.1	0.5	-0.1	-0.2	-0.3	0.4	-0.2	0.3	0.3	0.5	0.4	0.0	0.2	0.3	1.2
24-Sep	-0.4	-0.3	0.1	-0.4	0.5	0.2	0.1	0.1	0.9	0.3	0.2	0.6	-0.3	-0.9	-0.4	-0.8	-0.2	-0.5	-0.5	-0.4	-0.3	-0.1	0.1	0.0	-0.1	0.9
25-Sep	-0.2	-0.4	0.1	0.9	-0.3	-0.4	-0.1	-0.3	0.1	-0.2	-0.1	0.9	-0.1	-0.5	-0.4	-1.0	-0.5	-0.6	-0.8	-0.7	-0.1	0.4	0.1	0.2	-0.2	0.9
26-Sep	0.3	0.4	0.9	1.3	1.5	1.0	0.6	0.0	-0.1	0.4	0.3	0.7	-0.5	-0.2	-0.2	0.1	-0.1	-0.2	0.4	0.4	0.2	0.7	1.2	-0.2	0.4	1.5
27-Sep	0.0	0.5	0.3	0.2	0.4	0.5	0.4	-0.1	0.1	-0.7	-0.2	0.1	-0.1	0.0	-0.4	-0.3	-0.4	-0.2	-0.2	-0.1	0.0	0.0	-0.3	-0.2	0.0	0.5
28-Sep	-0.1	0.3	0.0	1.1	1.2	2.4	1.8	0.3	0.2	-0.2	-0.3	-0.2	0.4	0.2	0.1	0.1	0.3	-0.1	0.2	0.3	0.2	-0.3	-0.5	-0.1	0.3	2.4
29-Sep	0.1	-0.3	0.3	0.1	0.1	0.0	0.1	0.6	0.5	0.9	2.0	1.8	1.6	0.4	-0.4	-0.2	-0.8	0.7	0.6	-0.2	0.0	0.2	0.0	-0.2	0.3	2.0
30-Sep	-0.2	0.8	0.1	1.0	0.1	-0.3	-0.1	0.0	-0.1	-0.2	-0.2	-0.2	0.0	0.6	-0.2	-0.1	0.3	0.2	0.0	0.2	-0.1	0.2	0.0	-0.2	0.1	1.0
	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.1	0.1	0.0	0.2	0.1	0.1	-0.2	0.0	-0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.3	Diurnal Average	
	1.7	2.3	1.7	1.6	1.7	2.4	1.8	0.6	1.0	2.0	2.0	2.0	1.6	1.5	0.5	1.3	1.0	2.1	1.1	2.3	1.9	3.5	2.7	2.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.7 km/h on Sep 29 14:00

Minimum Value: 0.1 km/h on Sep 11 04:00

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 1.0 Median = 1.5 Q_3 = 2.1 P_{90} = 2.6 P_{99} = 3.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.4	0.5	0.5	0.3	0.5	0.7	1.3	1.4	1.0	1.2	1.7	2.1	2.7	2.5	2.7	2.0	1.8	1.5	1.4	1.7	1.6	0.3	0.2	2.7
2-Sep	0.4	0.4	0.3	0.2	0.5	0.2	0.2	0.3	0.6	0.7	1.4	1.1	1.5	2.0	2.1	2.0	1.7	1.8	1.1	1.3	1.5	3.1	3.3	2.9	3.3
3-Sep	1.6	1.2	1.4	1.3	1.4	1.3	1.6	1.5	2.1	2.5	2.2	1.6	1.2	1.3	0.8	1.8	3.2	2.9	3.0	2.7	2.5	1.9	2.1	2.2	3.2
4-Sep	1.8	2.2	1.8	1.7	1.6	1.9	2.1	2.4	2.4	3.2	3.3	3.4	3.3	3.4	3.6	2.8	2.1	1.8	1.3	0.5	0.7	0.7	0.4	0.3	3.6
5-Sep	0.2	0.3	0.4	0.4	0.5	0.6	0.9	1.1	1.2	1.4	1.2	1.1	1.8	2.0	2.1	1.8	1.8	1.0	0.6	1.1	1.2	1.0	1.2	1.4	2.1
6-Sep	1.7	1.7	1.1	0.8	0.6	0.6	0.6	1.0	1.1	1.2	1.4	1.4	2.3	2.2	2.5	1.8	1.5	1.3	0.9	0.4	0.3	0.5	0.6	0.5	2.5
7-Sep	0.6	0.5	0.6	0.5	0.6	1.1	0.6	0.4	0.4	0.9	1.1	1.3	1.4	2.0	1.8	1.9	2.2	2.0	1.1	1.1	1.2	1.1	0.7	1.0	2.2
8-Sep	1.0	1.2	0.7	0.5	0.8	0.9	1.5	1.6	1.7	2.1	2.2	2.4	2.5	2.1	1.9	1.7	1.7	0.5	0.3	0.2	0.2	0.2	0.3	0.6	2.5
9-Sep	1.0	1.7	1.1	0.6	0.6	0.8	0.7	1.0	1.1	1.2	1.1	1.1	2.0	2.5	2.7	2.6	2.0	1.0	0.8	0.7	0.4	0.8	1.2	1.3	2.7
10-Sep	0.9	0.8	0.7	1.1	1.4	0.5	0.5	0.8	0.5	0.8	0.9	1.5	1.6	2.6	2.2	2.3	1.6	1.4	0.4	0.6	0.3	0.2	0.2	0.2	2.6
11-Sep	0.3	0.4	0.2	0.1	0.3	0.3	0.6	0.7	0.9	0.8	0.7	1.2	1.9	2.6	2.6	2.6	2.2	1.7	1.5	2.0	1.8	0.9	1.0	1.5	2.6
12-Sep	1.8	2.0	2.1	1.9	1.6	1.4	1.5	1.5	1.7	1.8	1.5	1.7	3.0	3.1	3.2	3.1	2.5	1.4	0.3	1.4	1.4	1.2	0.6	0.8	3.2
13-Sep	0.5	0.4	0.5	0.8	1.1	1.0	1.1	1.2	0.6	1.2	1.2	0.9	0.9	0.9	1.0	0.4	0.6	0.5	0.3	0.6	0.6	0.8	0.9	0.9	1.2
14-Sep	0.7	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.5	1.2	1.1	0.9	1.2	1.2	1.5	1.5	2.2	2.1	2.2	1.8	1.7	0.6	1.0	0.8	2.2
15-Sep	1.3	1.4	0.6	0.7	1.0	1.2	1.2	1.4	1.8	1.2	0.8	1.1	1.2	2.2	2.3	3.6	3.7	2.4	2.1	1.9	1.9	1.9	1.4	1.2	3.7
16-Sep	1.5	1.2	1.0	1.1	1.5	0.6	0.7	0.7	1.6	1.8	1.8	2.0	1.8	2.2	1.6	1.5	0.9	0.6	0.7	1.0	1.1	1.4	1.3	1.8	2.2
17-Sep	1.6	1.4	1.6	1.8	1.2	1.1	1.3	1.1	1.8	1.4	1.6	1.9	2.0	2.5	2.6	2.4	2.4	2.2	2.1	2.5	2.5	2.5	2.6	2.5	2.6
18-Sep	1.8	1.8	1.9	2.1	2.2	3.2	3.6	3.7	3.2	3.3	2.9	3.1	3.2	3.2	3.3	2.8	2.4	1.5	0.6	0.6	0.7	0.6	0.7	0.7	3.7
19-Sep	0.8	1.0	1.5	1.1	0.8	0.7	0.9	1.1	1.2	1.4	2.1	2.1	2.3	2.0	2.2	2.0	0.8	0.9	0.5	0.3	0.5	1.2	1.0	1.0	2.3
20-Sep	0.7	1.3	1.4	1.3	1.4	1.2	1.1	1.8	1.5	1.0	1.1	2.0	2.4	3.2	3.3	3.0	2.4	1.4	1.8	2.4	2.2	2.2	1.8	1.8	3.3
21-Sep	1.2	1.4	0.7	1.0	0.6	0.8	0.9	1.7	1.8	1.7	1.7	1.3	1.7	2.2	1.4	2.2	2.2	2.8	2.9	2.3	0.8	0.9	1.1	1.6	2.9
22-Sep	1.8	2.1	1.9	2.2	2.5	2.3	2.1	1.7	1.5	2.5	2.2	3.3	3.2	2.9	2.5	2.6	2.2	1.3	0.8	1.6	1.8	1.8	1.6	1.6	3.3
23-Sep	2.2	2.1	2.0	2.3	1.8	1.7	1.7	1.1	1.3	2.4	2.5	2.6	2.9	2.9	2.9	3.3	3.2	2.4	2.0	1.7	1.7	1.8	1.5	1.1	3.3
24-Sep	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.3	2.2	2.3	2.5	2.8	2.4	2.8	2.7	1.6	1.5	1.1	0.5	1.0	1.0	0.9	1.4	1.4	2.8
25-Sep	0.9	0.8	0.9	1.1	1.4	1.3	1.1	1.6	2.1	2.1	1.6	1.8	1.5	2.0	1.7	2.0	1.7	1.1	1.5	1.8	1.7	2.4	2.4	1.2	2.4
26-Sep	0.8	1.1	1.1	1.3	1.4	2.0	1.0	1.6	2.0	2.5	2.6	2.9	2.9	3.0	2.6	2.3	2.1	1.2	1.2	1.0	1.1	1.0	0.9	1.8	3.0
27-Sep	1.7	1.2	2.2	2.1	2.7	2.4	2.7	3.5	4.0	3.4	3.3	3.1	3.1	2.7	2.4	1.9	1.9	1.6	0.8	1.3	1.2	1.0	1.1	1.6	4.0
28-Sep	1.0	1.6	1.2	1.7	2.4	1.7	2.2	1.9	2.0	1.6	1.7	1.3	2.1	2.4	2.3	2.0	1.5	0.4	0.6	1.1	0.8	1.2	2.0	2.1	2.4
29-Sep	1.7	1.6	2.1	2.3	2.4	2.0	2.5	2.9	3.1	3.6	4.1	3.9	3.7	4.7	3.0	2.8	2.1	2.3	2.1	1.3	1.5	1.5	1.4	1.4	4.7
30-Sep	1.6	1.5	1.0	1.8	0.8	0.5	0.5	0.7	0.6	0.7	1.2	1.8	1.8	2.2	2.8	2.3	2.2	1.5	1.7	1.4	1.4	1.5	1.2	1.0	2.8
	2.2	2.2	2.2	2.3	2.7	3.2	3.6	3.7	4.0	3.6	4.1	3.9	3.7	4.7	3.6	3.6	3.7	2.9	3.0	2.7	2.5	3.1	3.3	2.9	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - September 2025

Maximum Value: 5.2 km/h on Sep 28 06:00

Maximum Daily Average: 1.7 km/h on Sep 17

Minimum Value: -1.1 km/h on Sep 20 10:00

Minimum Daily Average: 0.0 km/h on Sep 4

Maximum Diurnal Average: 1.0 km/h at hour 6

Minimum Diurnal Average: 0.3 km/h at hour 15

Monthly Average: 0.72 km/h

Percentiles: P_1 = -0.6 P_{10} = -0.1 Q_1 = 0.1 Median = 0.5 Q_3 = 1.2 P_{90} = 2.0 P_{99} = 3.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.2	0.2	0.4	0.2	0.1	0.0	1.0	0.6	0.2	-0.1	0.5	-0.1	0.1	-0.5	0.1	-0.4	-0.3	0.2	0.1	-0.5	-0.1	0.1	0.0	0.1	1.0
2-Sep	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.4	-0.1	0.0	0.6	0.9	1.7	1.4	2.4	1.5	1.7	2.0	4.1	3.5	3.3	1.1	4.1
3-Sep	1.7	1.9	1.8	1.0	1.2	1.0	0.9	0.2	0.9	0.4	-0.1	0.2	0.0	0.7	-0.1	-0.3	-0.1	0.3	0.1	0.2	0.0	0.5	0.3	-0.2	0.5	1.9
4-Sep	0.0	-0.1	-0.3	-0.2	-0.5	0.1	0.7	0.4	-0.2	0.3	-0.1	-0.1	-0.3	0.8	-0.2	0.1	0.0	-0.1	0.1	0.2	-0.5	-0.4	-0.3	0.3	0.0	0.8
5-Sep	0.2	0.2	0.1	0.4	0.4	0.4	0.3	0.3	0.8	0.4	0.1	-0.1	0.1	-1.1	-0.1	-0.1	-0.2	0.0	0.6	0.4	0.9	1.6	1.5	1.2	0.4	1.6
6-Sep	2.0	1.2	0.8	0.4	0.8	0.4	0.4	0.4	-0.1	0.1	-0.5	0.2	2.0	0.8	0.8	0.3	-0.3	0.7	0.7	0.4	0.3	0.5	0.4	0.3	0.6	2.0
7-Sep	0.4	0.5	0.2	0.4	0.5	0.5	0.5	0.2	0.2	0.3	0.1	-0.2	0.0	-0.1	-0.1	-0.2	-0.2	0.2	0.0	0.0	0.3	-0.5	-0.1	-0.3	0.1	0.5
8-Sep	-0.5	-0.3	0.2	0.0	0.0	0.2	0.3	-0.1	0.4	0.4	0.5	-0.3	-0.1	0.2	0.2	0.3	0.9	-0.1	0.2	0.1	0.1	0.0	0.1	0.8	0.1	0.9
9-Sep	0.4	0.7	1.0	0.2	0.8	1.3	0.9	0.6	1.4	1.3	0.7	0.1	0.4	1.6	0.6	1.4	0.0	0.1	0.6	1.4	1.5	1.1	0.4	0.5	0.8	1.6
10-Sep	0.5	0.4	0.5	0.4	0.3	0.2	0.4	0.3	0.3	0.2	-0.2	-0.6	-0.6	0.6	0.3	0.9	0.7	0.6	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.9
11-Sep	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.0	0.3	0.2	0.1	0.2	-0.3	-0.2	-0.1	0.3	0.9	1.9	1.6	1.7	2.1	1.8	2.1	2.0	0.7	2.1
12-Sep	1.8	2.2	2.0	0.6	-0.1	0.8	1.4	0.2	0.0	-0.2	0.1	0.4	1.3	-0.5	0.6	1.2	0.3	0.4	0.4	1.5	1.7	0.4	0.2	0.2	0.7	2.2
13-Sep	0.3	0.5	0.3	0.5	1.3	1.4	1.0	0.6	0.5	0.0	-0.2	0.3	0.2	0.1	-0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.8	1.3	1.4	0.4	1.4
14-Sep	0.7	0.4	0.5	0.5	0.5	0.6	0.3	0.6	0.8	0.8	0.5	0.3	0.3	0.0	0.6	0.5	1.5	3.0	1.2	1.2	2.1	0.9	0.1	0.6	0.8	3.0
15-Sep	1.4	1.2	0.2	0.5	0.4	0.7	0.4	1.0	0.4	0.2	0.0	0.4	0.0	1.2	0.3	0.1	-0.8	-0.5	-0.4	-0.5	-0.5	-0.4	0.1	-0.1	0.2	1.4
16-Sep	0.1	0.3	0.4	0.8	0.0	0.3	0.5	0.4	1.2	0.3	-0.2	0.2	0.3	0.9	-0.4	-0.4	-0.1	0.5	0.4	1.0	1.2	1.1	2.1	2.5	0.5	2.5
17-Sep	1.6	2.2	2.0	0.6	-0.1	0.9	1.2	1.5	2.0	2.2	1.3	1.4	1.3	2.2	0.5	1.6	1.0	0.8	1.7	3.1	3.0	3.2	3.0	2.3	1.7	3.2
18-Sep	2.3	2.3	2.2	2.2	2.2	2.4	1.2	0.9	0.3	0.8	0.4	1.8	0.4	0.1	0.8	1.3	1.0	1.0	1.3	1.2	1.4	1.2	1.2	1.5	1.3	2.4
19-Sep	1.8	2.7	2.3	0.6	0.3	0.4	0.7	0.8	0.1	0.5	1.0	2.2	2.0	0.3	0.8	1.1	0.9	1.1	0.8	0.6	0.8	0.8	0.9	0.7	1.0	2.7
20-Sep	0.7	-0.1	-0.4	-0.7	0.0	1.0	0.7	0.2	0.0	-1.1	0.4	0.6	0.3	1.6	0.7	0.6	0.5	0.0	0.4	1.2	1.5	2.0	3.0	3.8	0.7	3.8
21-Sep	2.0	0.4	0.1	0.3	0.6	0.7	0.5	1.4	0.9	2.6	0.5	-0.1	0.6	0.9	-0.1	1.2	1.1	1.6	2.0	2.1	0.7	1.1	0.7	1.4	1.0	2.6
22-Sep	1.3	2.3	1.9	3.4	3.5	2.8	1.1	-0.2	0.5	1.3	1.3	3.1	1.5	1.4	1.2	1.2	1.2	0.7	0.6	0.3	0.9	0.6	0.9	1.5	1.4	3.5
23-Sep	3.6	2.0	2.9	3.0	2.6	2.1	2.1	1.1	0.9	1.4	0.9	1.1	1.7	1.1	1.1	0.9	1.2	0.9	1.3	1.7	2.0	1.9	0.7	0.9	1.6	3.6
24-Sep	0.1	0.4	0.8	0.1	1.5	1.0	1.0	0.8	2.4	1.6	1.2	1.7	0.6	0.1	0.7	-0.2	0.6	-0.1	0.0	0.3	0.2	0.0	0.8	1.0	0.7	2.4
25-Sep	0.4	0.4	0.4	0.7	-0.2	0.1	0.5	-0.2	0.4	-0.5	0.0	1.1	0.2	-0.4	-0.6	-0.8	0.0	0.0	-0.3	0.0	1.1	2.2	1.4	1.1	0.3	2.2
26-Sep	1.1	1.4	2.4	2.8	2.9	2.4	1.5	0.8	0.5	1.3	0.9	1.6	0.8	0.8	1.2	1.5	0.7	0.1	1.4	1.6	1.5	1.8	2.4	0.0	1.4	2.9
27-Sep	1.6	1.5	1.2	1.7	2.1	2.1	2.4	1.9	1.7	1.1	1.5	1.3	1.2	1.0	0.6	0.8	0.8	1.0	0.8	0.9	1.0	0.8	0.3	0.8	1.3	2.4
28-Sep	0.9	1.5	1.9	3.0	4.2	5.2	4.0	1.1	0.6	0.6	0.0	0.0	0.9	0.8	0.3	0.7	0.8	0.3	0.4	0.2	-0.1	-0.3	-0.7	0.1	1.1	5.2
29-Sep	0.8	-0.3	0.5	0.3	0.5	0.3	0.3	0.7	0.9	0.7	2.3	2.3	2.4	0.8	0.0	0.4	-0.5	1.8	1.5	-0.3	0.3	0.1	-0.3	-0.5	0.6	2.4
30-Sep	-0.6	1.1	0.3	1.6	0.5	0.3	0.1	0.1	-0.3	0.1	0.1	-0.2	0.4	0.5	-0.3	0.3	0.4	0.3	0.0	0.3	0.1	0.4	0.1	-0.1	0.2	1.6
	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.6	0.6	0.6	0.4	0.6	0.6	0.6	0.3	0.6	0.4	0.6	0.6	0.8	0.9	0.9	0.9	0.9	Diurnal Average	
	3.6	2.7	2.9	3.4	4.2	5.2	4.0	1.9	2.4	2.6	2.3	3.1	2.4	2.2	1.2	1.7	1.5	3.0	2.0	3.1	3.0	4.1	3.5	3.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.0 km/h on Sep 29 11:00

Minimum Value: 0.1 km/h on Sep 11 04:00

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.9 Median = 1.5 Q_3 = 2.2 P_{90} = 2.9 P_{99} = 3.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.3	0.3	0.4	0.3	0.5	0.7	1.4	1.4	1.0	1.0	1.6	2.4	3.0	3.1	3.2	2.0	1.5	1.2	1.8	1.7	1.9	0.3	0.3	3.2
2-Sep	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.4	0.7	1.3	0.9	1.9	2.1	2.3	2.1	1.8	2.0	1.1	1.3	2.2	3.9	3.7	3.0	3.9
3-Sep	2.2	2.0	2.0	2.2	2.4	2.1	2.2	2.1	2.3	2.4	2.1	1.6	1.2	1.7	0.8	2.2	3.5	3.0	3.0	2.7	2.5	1.8	1.8	1.6	3.5
4-Sep	1.2	1.6	1.7	1.7	1.5	1.9	1.8	2.5	2.1	3.4	3.0	3.2	3.1	3.8	3.7	2.8	2.6	1.7	0.9	0.3	0.3	0.7	0.7	0.5	3.8
5-Sep	0.2	0.3	0.4	0.5	0.6	0.5	0.8	0.8	1.1	1.5	1.2	0.9	1.8	2.2	2.1	2.1	2.1	1.1	0.6	0.8	1.4	1.1	1.8	2.2	2.2
6-Sep	2.6	1.6	1.3	0.9	0.7	0.7	0.8	0.8	1.2	1.2	1.4	1.7	2.8	2.6	2.8	2.2	1.9	1.6	1.2	0.7	0.4	0.6	0.7	0.7	2.8
7-Sep	0.5	0.7	0.7	0.6	0.7	0.7	0.5	0.4	0.4	0.6	1.0	1.2	1.3	2.1	2.2	2.0	2.2	2.1	1.2	1.2	0.8	0.9	0.5	0.9	2.2
8-Sep	0.9	1.7	0.7	0.4	0.5	0.8	1.6	1.6	2.0	2.5	2.2	2.3	2.2	1.8	1.7	1.7	1.7	0.5	0.3	0.2	0.2	0.3	0.5	0.9	2.5
9-Sep	0.8	1.6	1.4	0.8	0.9	0.9	0.8	0.9	0.9	0.8	1.5	1.1	2.3	3.1	3.1	3.1	1.9	0.8	0.8	0.9	0.5	0.7	1.1	1.2	3.1
10-Sep	1.0	1.0	0.8	0.9	1.3	0.5	0.6	1.0	0.9	0.8	0.9	0.9	1.5	2.7	2.3	2.5	1.7	1.2	0.5	0.5	0.2	0.3	0.2	0.2	2.7
11-Sep	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.6	0.9	0.4	0.7	1.3	2.1	3.1	3.1	3.1	2.5	1.9	1.9	2.3	0.9	0.4	0.4	0.5	3.1
12-Sep	0.9	1.6	2.0	2.3	1.4	1.4	2.1	2.1	1.9	1.9	1.6	1.9	3.6	3.4	3.5	3.2	2.5	1.2	0.3	1.9	1.1	1.2	0.7	1.1	3.6
13-Sep	0.7	0.4	0.5	0.8	1.2	0.9	1.0	0.8	0.6	1.4	1.3	1.0	0.8	1.1	0.9	0.5	0.5	0.6	0.6	0.6	0.8	1.3	1.1	0.9	1.4
14-Sep	0.8	0.7	0.6	0.5	0.4	0.5	0.5	0.7	0.7	1.4	1.0	0.9	1.3	1.0	1.2	1.8	2.2	2.2	2.3	1.4	1.4	0.7	0.7	0.7	2.3
15-Sep	1.4	0.9	0.7	0.5	0.8	1.3	1.0	1.5	1.4	1.2	1.1	1.2	1.7	2.2	2.5	3.5	3.3	2.2	1.8	1.4	1.6	1.2	0.9	0.8	3.5
16-Sep	1.3	0.9	1.0	0.8	1.0	0.5	0.7	0.7	1.6	1.7	1.8	2.5	1.8	2.5	1.4	1.6	1.1	0.7	0.8	1.4	1.3	1.9	1.8	2.2	2.5
17-Sep	2.3	2.0	1.7	2.0	1.0	1.2	1.3	0.9	1.6	1.7	2.1	2.2	2.2	2.7	3.5	2.7	3.0	2.4	2.7	3.6	3.2	3.3	3.2	3.4	3.6
18-Sep	2.8	2.7	2.8	3.3	3.5	3.7	3.4	3.1	3.0	3.4	3.3	3.3	3.5	3.3	4.1	3.0	2.4	1.5	0.7	0.6	0.4	0.5	0.6	0.6	4.1
19-Sep	0.7	1.2	1.3	1.2	0.7	0.7	1.0	1.2	1.3	1.5	2.3	2.6	2.9	1.9	2.4	2.0	0.9	0.7	0.3	0.4	0.4	0.9	0.7	0.6	2.9
20-Sep	0.7	0.9	1.3	1.5	1.5	1.2	1.3	1.7	1.4	1.1	1.0	1.9	2.5	3.7	3.3	3.0	2.2	1.1	1.3	1.6	1.3	1.3	1.6	1.4	3.7
21-Sep	2.2	2.3	0.9	1.6	0.7	1.0	1.0	1.5	1.4	1.4	2.1	1.2	1.9	2.2	1.6	2.2	1.5	1.9	2.4	1.9	0.9	1.0	1.1	1.8	2.4
22-Sep	1.6	1.6	1.4	1.7	1.7	2.0	2.2	2.6	1.9	2.2	2.4	3.5	3.6	3.0	2.5	2.6	2.1	1.3	0.5	0.7	0.9	0.8	0.6	1.0	3.6
23-Sep	2.1	1.6	1.7	1.4	1.4	1.6	1.4	1.6	1.4	2.8	2.1	2.6	2.9	2.5	2.6	3.1	3.1	2.3	1.9	1.6	1.8	1.8	1.5	1.1	3.1
24-Sep	0.9	0.9	1.2	1.1	1.2	1.2	1.1	1.6	2.2	2.2	2.2	2.9	2.6	2.8	2.7	1.7	1.4	1.0	0.5	0.7	1.0	0.4	1.2	1.1	2.9
25-Sep	0.8	0.8	0.7	1.0	1.5	1.3	1.3	1.8	2.4	2.4	1.9	2.0	1.3	2.0	1.8	2.2	1.6	1.0	1.0	1.6	1.5	2.3	2.0	1.1	2.4
26-Sep	0.8	1.1	1.1	1.0	1.2	1.9	1.2	1.7	2.0	2.4	2.5	2.8	2.9	3.3	3.0	2.3	2.5	1.7	1.2	0.8	1.2	0.9	0.7	1.8	3.3
27-Sep	1.8	1.0	1.9	2.1	2.4	2.3	2.2	3.0	3.9	3.5	3.3	3.1	3.0	2.4	2.2	1.9	1.7	1.3	0.9	1.5	1.3	1.1	0.8	1.6	3.9
28-Sep	1.4	1.3	1.1	1.4	2.5	1.2	1.5	1.7	1.9	1.7	1.6	1.3	2.5	3.1	2.4	2.6	1.7	0.5	0.9	1.2	0.9	1.2	2.2	1.9	3.1
29-Sep	2.3	1.8	2.2	2.3	2.0	1.8	2.3	2.7	3.2	4.2	5.0	4.8	4.3	4.8	3.0	2.8	1.9	2.5	2.4	1.6	1.9	1.9	1.5	1.4	5.0
30-Sep	1.7	1.6	1.6	1.9	1.1	0.8	0.4	0.5	0.9	0.5	0.9	1.7	1.8	2.3	2.7	2.4	2.4	1.7	1.8	1.8	1.6	1.8	1.2	1.1	2.7
	2.8	2.7	2.8	3.3	3.5	3.7	3.4	3.1	3.9	4.2	5.0	4.8	4.3	4.8	4.1	3.5	3.5	3.0	3.0	3.6	3.2	3.9	3.7	3.4	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS04
BUFFALO VIEWPOINT
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)
SEPTEMBER 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	687	33	33	100	55.4	0	14.8	0
H2S (ppb) Average	685	35	35	100	6.1	0	1.5	0
THC (ppm) Average	687	33	33	100	5.7	-	2.6	-
NMHC(ppm) Average	687	33	33	100	1.75	-	0.243	-
CH4(ppm) Average	687	33	33	100	3.9	-	2.4	-
O3(ppb) Average	687	33	33	100	58.4	0	36	-
NO2(ppb) Average	662	37	58	97.08	48.2	0	10.6	-
NO(ppb) Average	662	37	58	97.08	61.4	-	9.5	-
NOX(ppb) Average	662	37	58	97.08	76.6	-	16.9	-
PM2.5(ug/m3) Average	719	1	1	100	171.2	0	63	11
Temperature (C) Average	720	0	0	100	29.1	-	20.3	-
Relative Humidity (%) Average	720	0	0	100	97.5	-	82.2	-
Wind Speed 10 m (km/h) Average	720	0	0	100	25	-	13	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.79	4.5	-	0	0	0	0.1	0.2	0.5	55.4
H2S (ppb) Average	685	0.4	0.7	-	0	0.1	0.1	0.2	0.3	0.7	6.1
THC (ppm) Average	687	2.13	0.3	-	1.9	2	2	2	2.1	2.3	5.7
NMHC(ppm) Average	687	0.042	0.152	-	0	0	0	0	0	0.1	1.75
CH4(ppm) Average	687	2.09	0.2	-	1.9	1.9	2	2	2.1	2.2	3.9
O3(ppb) Average	687	24.38	10.9	-	1.6	9.2	17	25.1	32.3	37.5	58.4
NO2(ppb) Average	662	2.63	4.6	-	0	0.2	0.6	1.1	2.4	6.9	48.2
NO(ppb) Average	662	1.05	4.9	-	0	0	0.1	0.2	0.5	1.3	61.4
NOX(ppb) Average	662	3.69	8	-	0	0.4	0.7	1.3	3.1	8.7	76.6
PM2.5(ug/m3) Average	719	25.01	25.9	-	0.8	5.4	9	17.1	30.4	56.2	171.2
Temperature 2 m (C) Average	720	14.78	5.2	-	1.6	8.4	11.2	14.4	17.9	22.2	29.1
Relative Humidity (%) Average	720	63.79	19.7	-	25.2	36.3	47.8	63.4	81	91.7	97.5
Wind Speed 10 m (km/h) Average	720	8.1	4	-	1	4	6	7	10	14	25
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2	24 Sep 2025 11:00	25 Sep 2025 07:00	21	Maintenance - reaction cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 55.4 ppb on Sep 8 14:00 Maximum Daily Average: 14.8 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 1 18:00 Minimum Daily Average: 0.0 ppb on Sep 26
Maximum Diurnal Average: 3.3 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 0.79 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} = 24.2

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.0	0.0	Z	0.1	0.1	0.2	0.2	0.1	0.0	0.1	3.0	4.7	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	4.7
2-Sep	0.0	0.0	0.0	0.2	Z	0.0	0.0	0.0	0.1	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	0.2	0.1	0.4
3-Sep	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.0	0.1	0.1	2.5	3.9	9.0	5.1	1.0	9.0
4-Sep	Z	0.4	0.2	0.3	0.2	0.1	0.1	0.1	2.9	2.6	5.0	3.8	9.9	3.6	4.1	2.3	1.7	0.5	0.3	0.3	0.2	0.2	0.1	0.0	1.7	9.9
5-Sep	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.3
6-Sep	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.6	0.5	0.5	0.5	0.4	0.5	0.3	0.1	0.1	0.0	0.1	0.2	0.6
7-Sep	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	2.4	3.3	1.5	0.6	0.9	1.1	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.5	3.3
8-Sep	0.0	0.0	0.1	0.1	Z	0.1	C	C	C	0.0	0.0	1.8	34.8	55.4	52.4	45.0	30.5	23.8	21.6	18.4	8.8	1.6	0.9	0.8	14.8	55.4
9-Sep	0.7	0.3	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.3	0.5	0.4	0.4	0.6	0.6	0.6	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.3	0.7
10-Sep	Z	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.2	0.2	0.1	0.1	0.2	0.5
11-Sep	0.0	Z	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.5
12-Sep	0.2	0.2	Z	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.4	0.5	0.4	0.3	0.3	0.4	0.2	0.1	0.1	0.1	0.3	0.5
13-Sep	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.3	0.5	0.7	0.5	0.6	0.6	0.6	0.9	0.9	0.7	1.2	1.8	0.7	0.4	0.3	0.5	1.8
14-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.5	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
15-Sep	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1	0.0	0.1
16-Sep	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.5	1.2	1.2	0.8	0.2	0.0	0.2	0.3	0.2	0.3	1.2
17-Sep	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.4
18-Sep	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3
19-Sep	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	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.3	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.2	0.1	0.4
21-Sep	0.2	0.1	0.1	0.2	0.1	Z	0.0	0.0	0.1	0.3	0.3	26.4	44.9	3.4	2.2	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	3.4	44.9
22-Sep	Z	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	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.2
23-Sep	0.3	Z	0.1	0.2	0.1	0.1	0.0	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	0.2	0.2	0.2	0.1	0.1	0.3
24-Sep	0.1	0.0	Z	0.1	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
25-Sep	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	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2
26-Sep	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	0.0	0.1
27-Sep	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	0.1	0.1	0.0	0.1	0.1	0.1	0.3	0.0	0.3
28-Sep	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3
29-Sep	0.2	Z	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.5	0.5	0.3	0.3	0.4	0.3	0.2	0.2	0.4	0.3	0.3	0.5
30-Sep	0.2	0.1	Z	0.1	0.1	0.0	0.3	0.5	0.5	1.2	0.5	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	1.4	3.3	2.3	2.2	1.8	1.3	1.0	0.9	0.8	0.5	0.3	0.4	0.3	Diurnal Average	
	0.7	0.4	0.2	0.5	0.4	0.3	0.3	0.5	2.9	2.6	5.0	26.4	44.9	55.4	52.4	45.0	30.5	23.8	21.6	18.4	8.8	3.9	9.0	5.1	Diurnal Maximum	

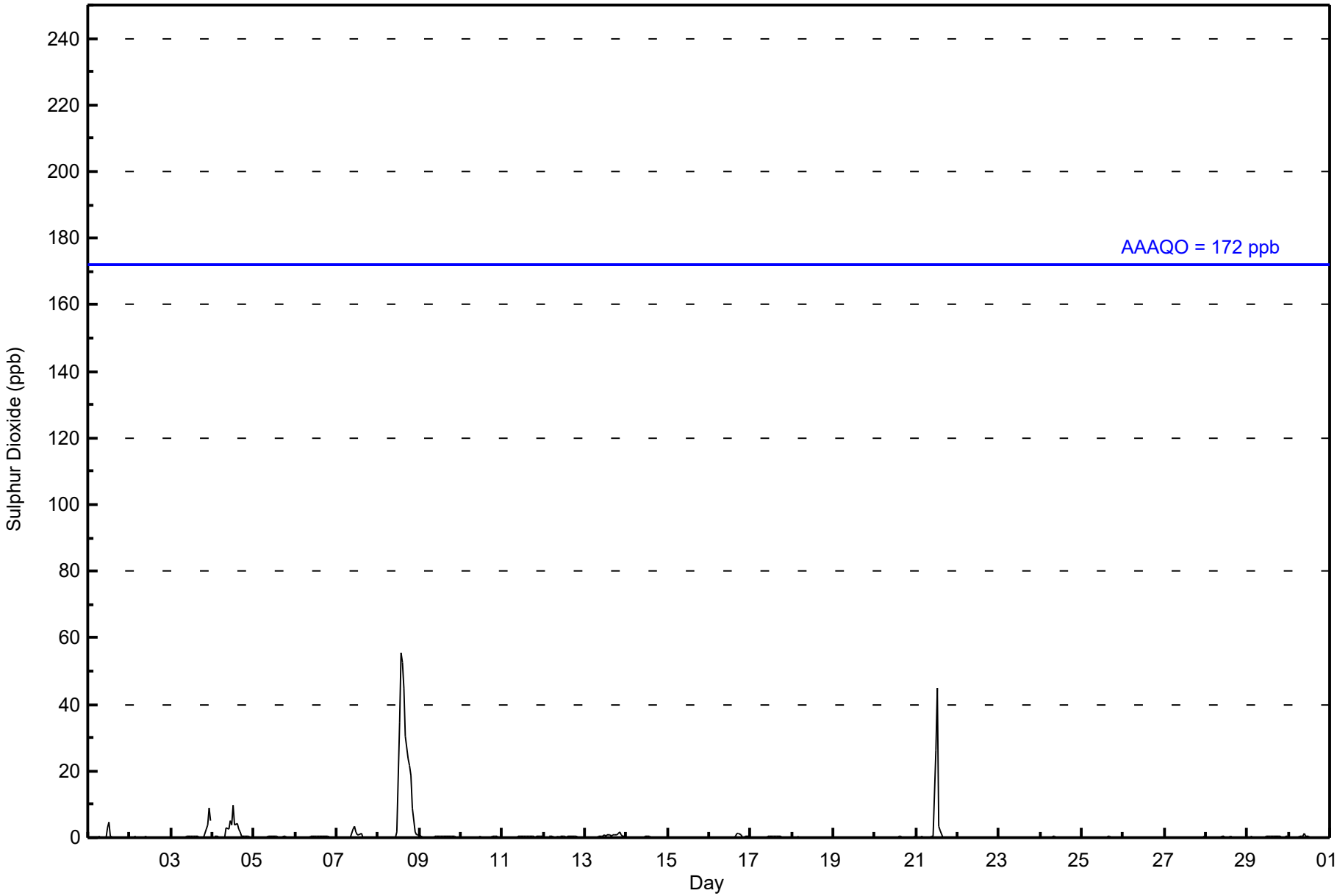
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - September 2025



Sulphur Dioxide (SO_2) - ppb
Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	677	98.54	98.54
11 - 20	1	0.15	98.69
21 - 60	9	1.31	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: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	44	19	6	1	6	17	74	186	84	42	36	44	37	27	26	28	677
11 - 20	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
21 - 60	1	0	0	0	0	0	0	0	0	0	0	2	0	4	2	0	9
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	45	19	6	1	6	17	74	186	84	42	37	46	37	31	28	28	687

Total Number of Valid Hours: 687

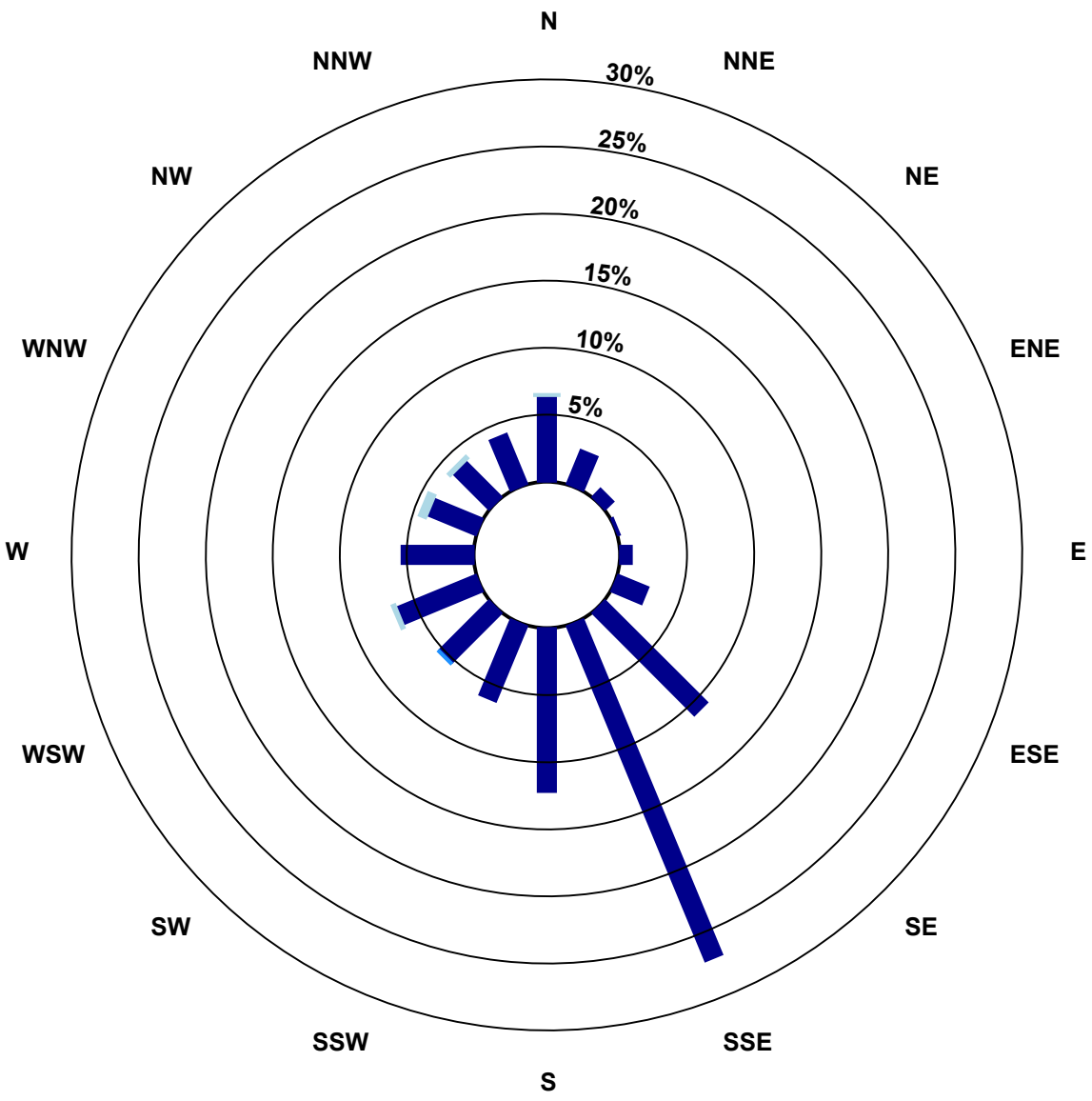
Total Number of Hours: 720

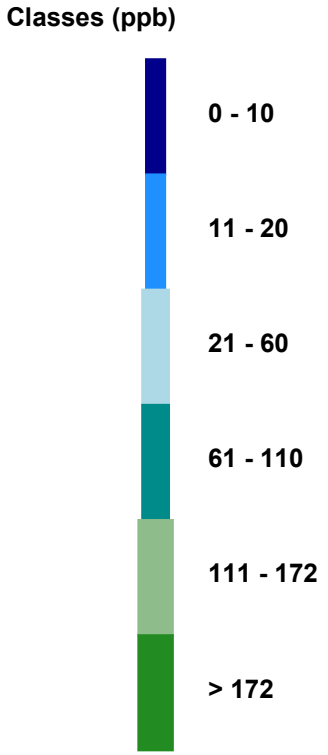
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint





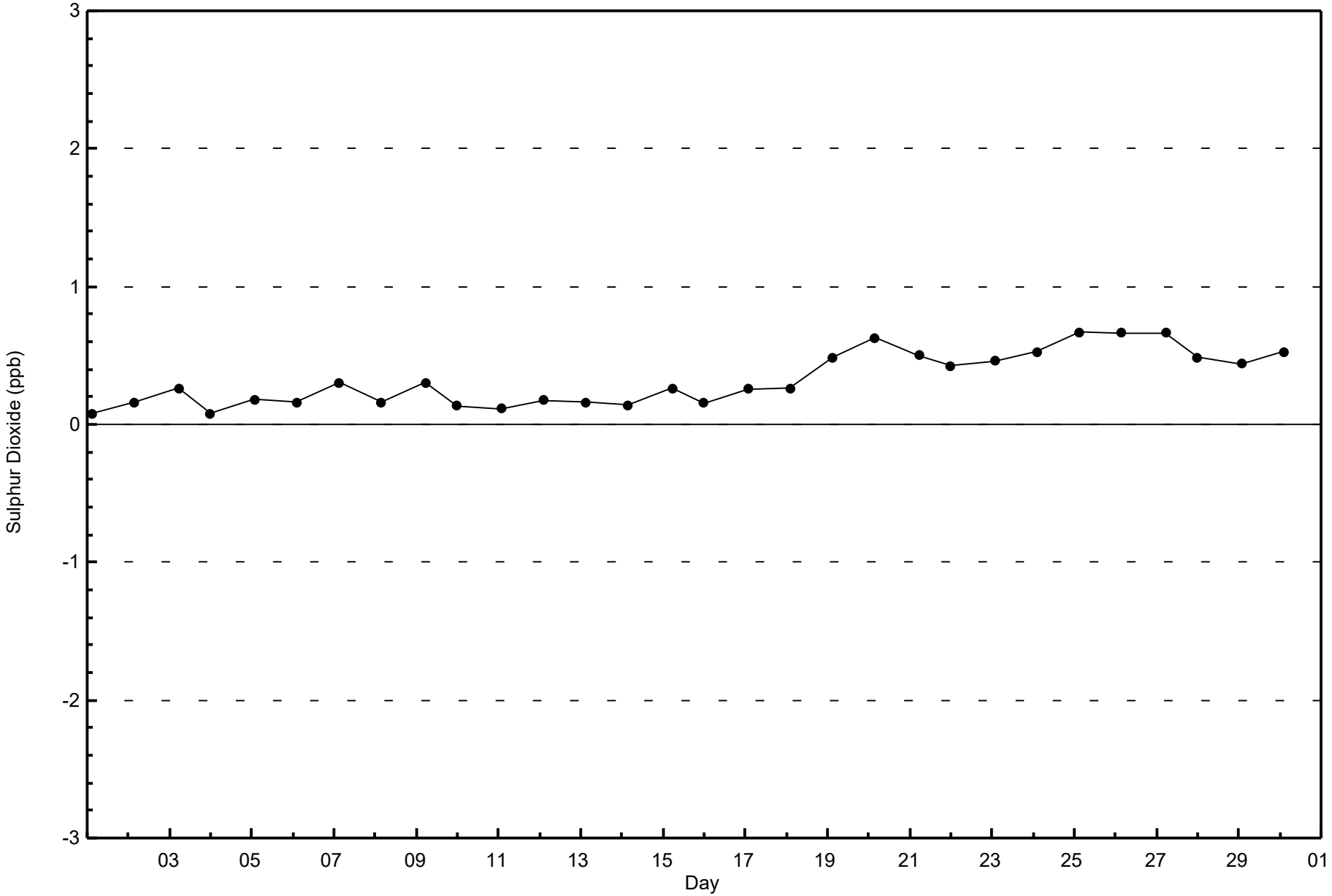
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - September 2025

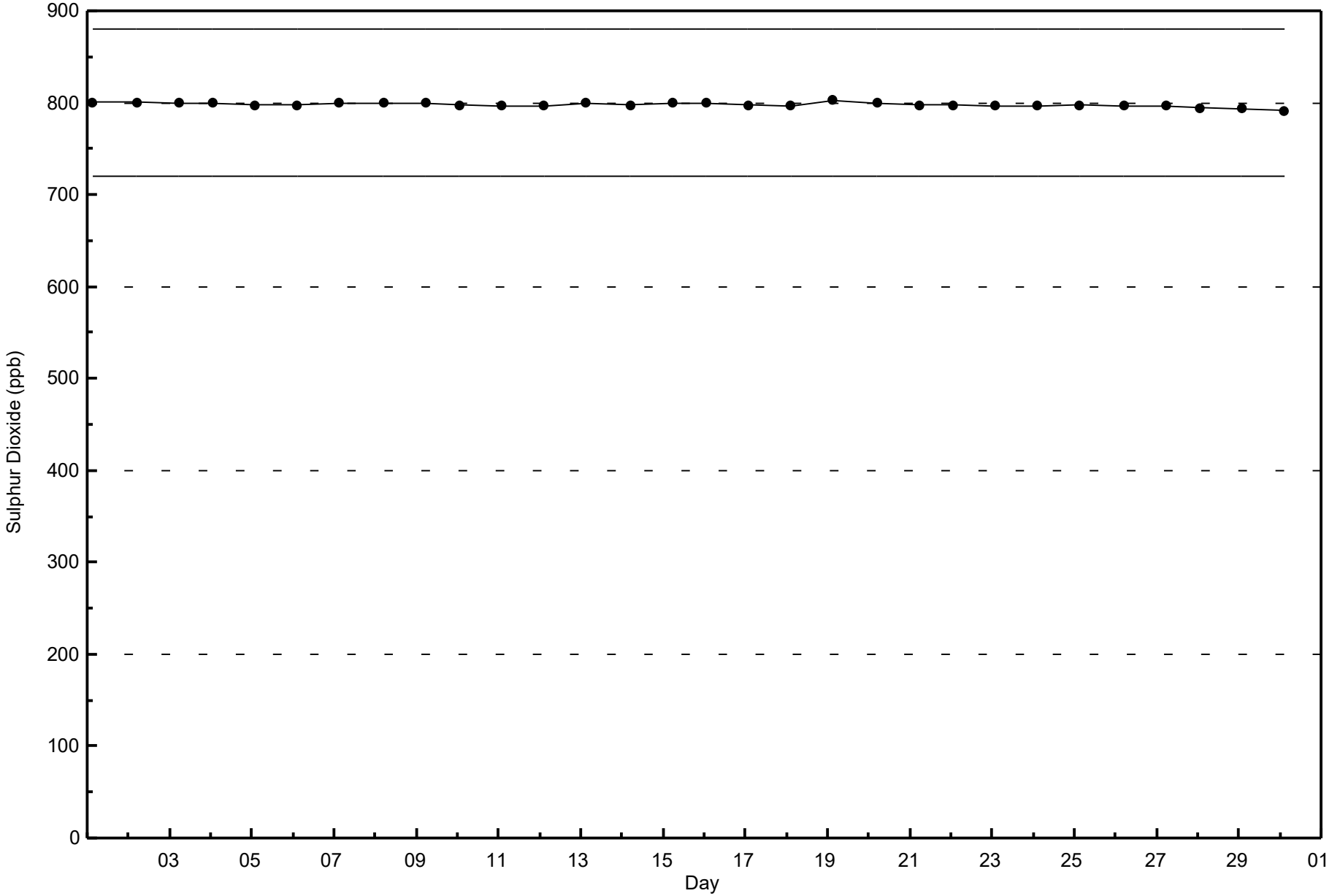


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 6.1 ppb on Sep 2 04:00 Maximum Daily Average: 1.5 ppb on Sep 2

Minimum Value: 0.0 ppb on Sep 1 15:00 Minimum Daily Average: 0.1 ppb on Sep 27

Maximum Diurnal Average: 0.9 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.40 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 4.6

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.0	2.9	2.4	1.0	Z	1.2	1.9	1.4	0.3	0.1	0.1	0.4	0.9	0.6	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.7	2.9
2-Sep	2.3	4.4	2.2	6.1	6.0	5.5	Z	1.2	0.9	1.9	1.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	1.5	6.1
3-Sep	Z	0.3	0.3	0.3	0.2	0.2	C	C	C	C	C	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.3	0.7	0.8	1.4	0.9	0.4	1.4
4-Sep	2.5	Z	5.4	3.8	5.6	5.8	2.9	0.7	0.9	0.4	0.9	0.7	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	1.4	5.8
5-Sep	0.9	0.6	Z	0.8	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.8	2.4	1.3	0.4	0.2	0.1	0.5	2.4
6-Sep	0.1	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	0.3	0.3	0.4	0.5	0.4	0.3	0.2	0.5
7-Sep	0.3	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.3	0.6	1.0	0.7	0.6	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.0
8-Sep	0.4	0.4	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.2	0.2	0.2	0.5	1.0	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.5	1.0
9-Sep	Z	0.3	0.4	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
10-Sep	0.2	Z	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.7	1.2	1.2	1.1	0.9	0.6	0.4	1.2
11-Sep	0.5	0.6	Z	0.5	0.9	0.4	0.5	0.4	0.2	0.3	0.3	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	0.2	0.9
12-Sep	0.2	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4
13-Sep	0.2	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	1.2	1.8	1.6	1.5	1.8	2.3	2.0	0.6	2.3
14-Sep	1.8	1.4	0.9	0.6	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	4.7	3.7	0.8	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.8	4.7
15-Sep	Z	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.8	0.7	0.2	0.3	3.6	4.0	0.5	0.9	0.4	0.6	4.0
16-Sep	0.5	Z	0.4	0.5	0.5	4.6	0.6	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	4.6
17-Sep	0.3	0.3	Z	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
18-Sep	0.1	0.1	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	0.2
19-Sep	0.1	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3
20-Sep	0.2	0.1	0.2	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2
21-Sep	Z	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.3
22-Sep	0.2	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
23-Sep	0.1	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.3
24-Sep	0.2	0.2	0.3	Z	0.2	0.3	0.5	0.6	0.6	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.6
25-Sep	0.3	0.2	0.2	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	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.3
26-Sep	0.1	0.2	0.2	0.4	0.4	Z	0.6	0.6	0.5	0.3	0.2	0.2	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	0.6
27-Sep	Z	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	0.1	0.2	0.1	0.2	0.2	0.1	0.2
28-Sep	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4
29-Sep	0.1	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	0.1	0.2	0.1	0.2	0.3	0.3	0.1	0.3
30-Sep	0.3	0.3	0.2	Z	0.3	0.5	1.1	2.1	1.7	2.0	1.3	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.6	2.1
	0.6	0.6	0.6	0.7	0.7	0.9	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.3	Diurnal Average	
	2.5	4.4	5.4	6.1	6.0	5.8	2.9	2.1	1.7	2.0	1.7	0.7	0.9	1.0	4.7	3.7	0.8	1.2	1.8	3.6	4.0	1.8	2.3	2.0	Diurnal Maximum	

Z - zerospan C - Calibration

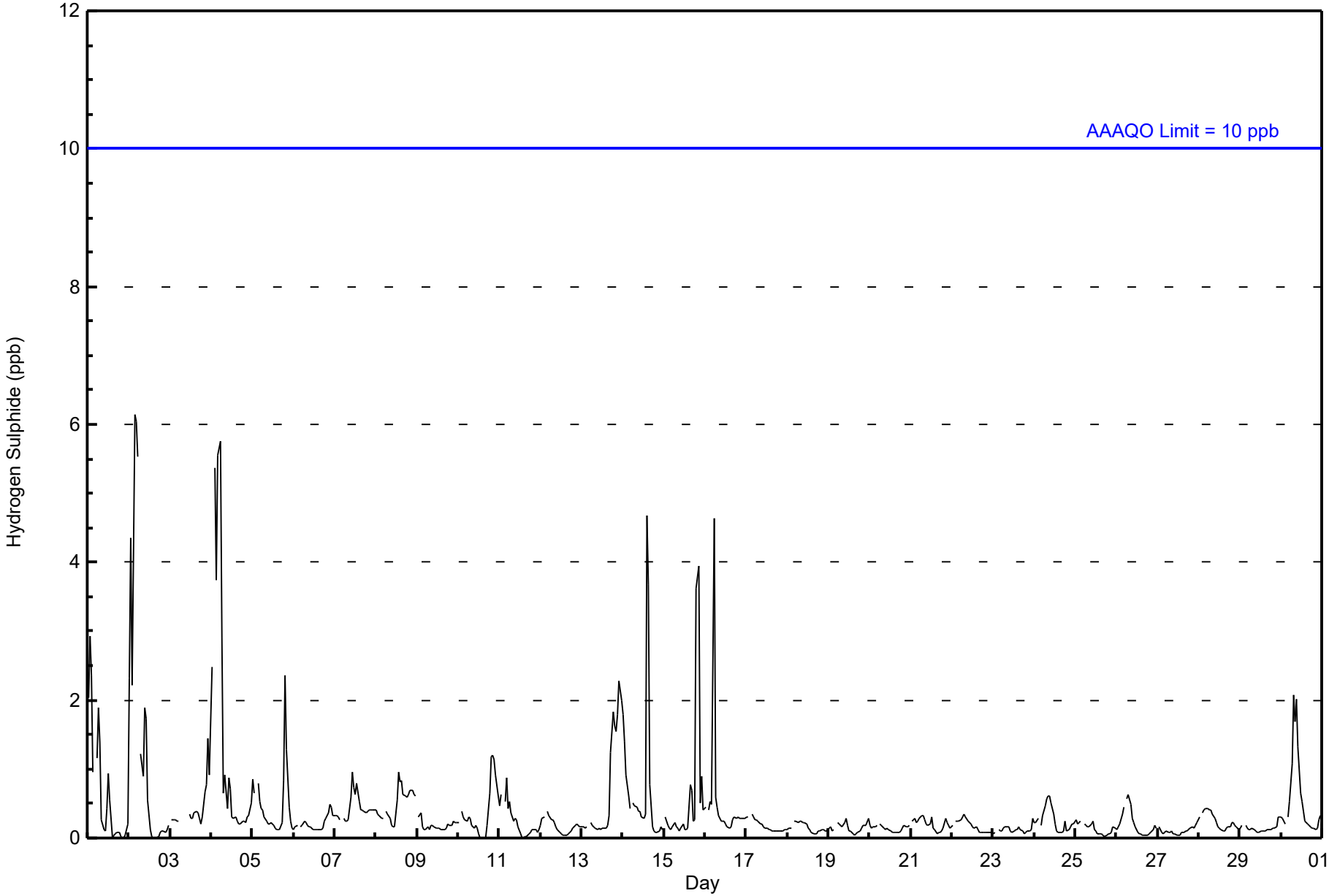
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - September 2025



Hydrogen Sulphide (H_2S) - ppb
Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	670	97.81	97.81
3 - 4	7	1.02	98.83
5 - 7	8	1.17	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: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	47	20	6	1	6	16	75	180	78	43	39	46	37	29	24	23	670
3 - 4	0	0	0	0	0	0	1	0	0	1	0	0	0	1	3	1	7
5 - 7	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	3	8
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	20	6	1	6	17	76	180	79	44	39	46	37	30	30	27	685

Total Number of Valid Hours: 685

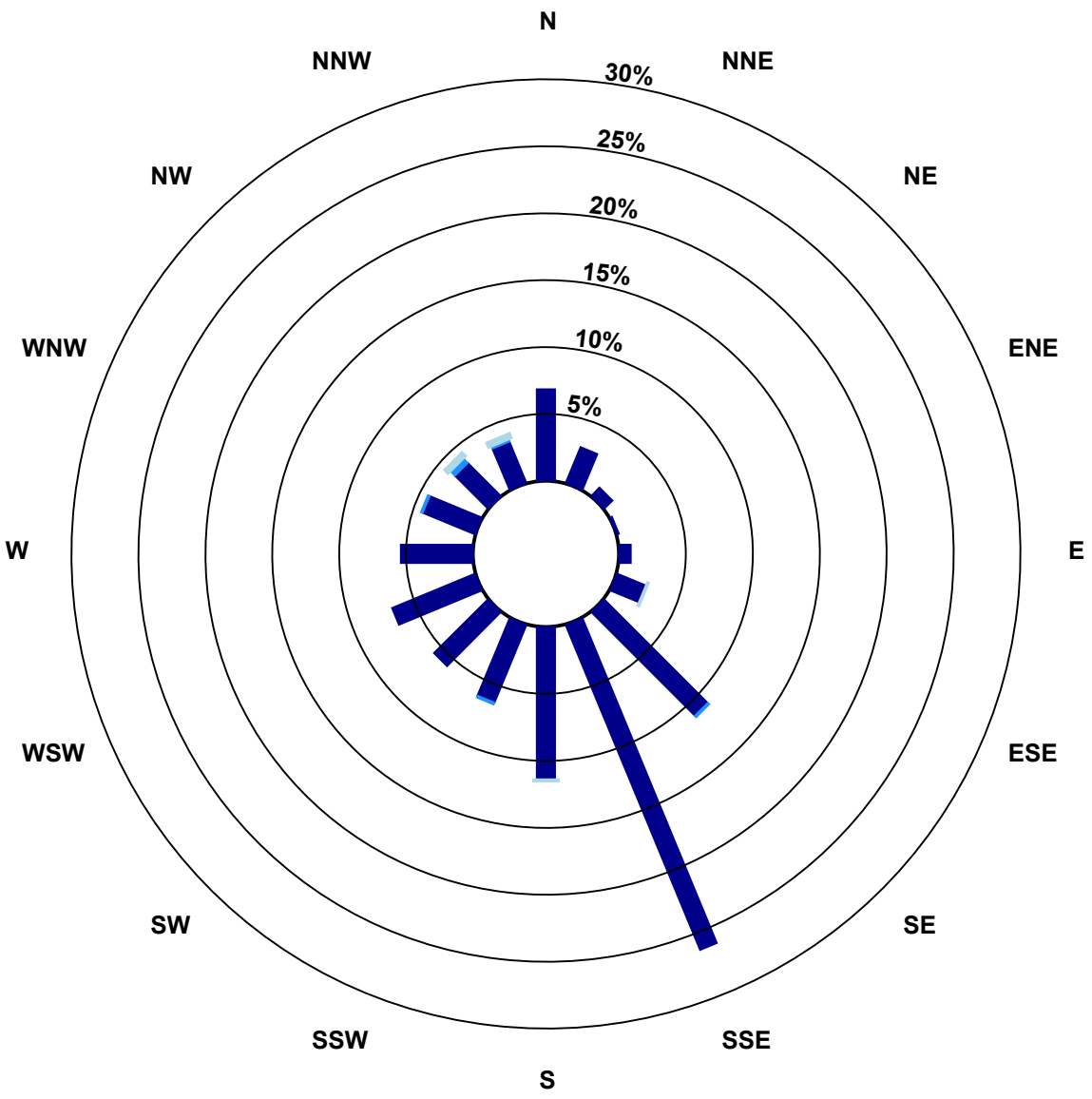
Total Number of Hours: 720

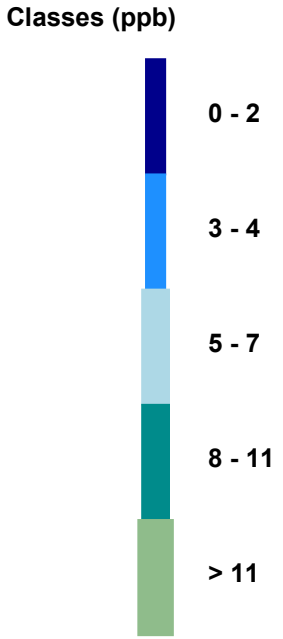
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint





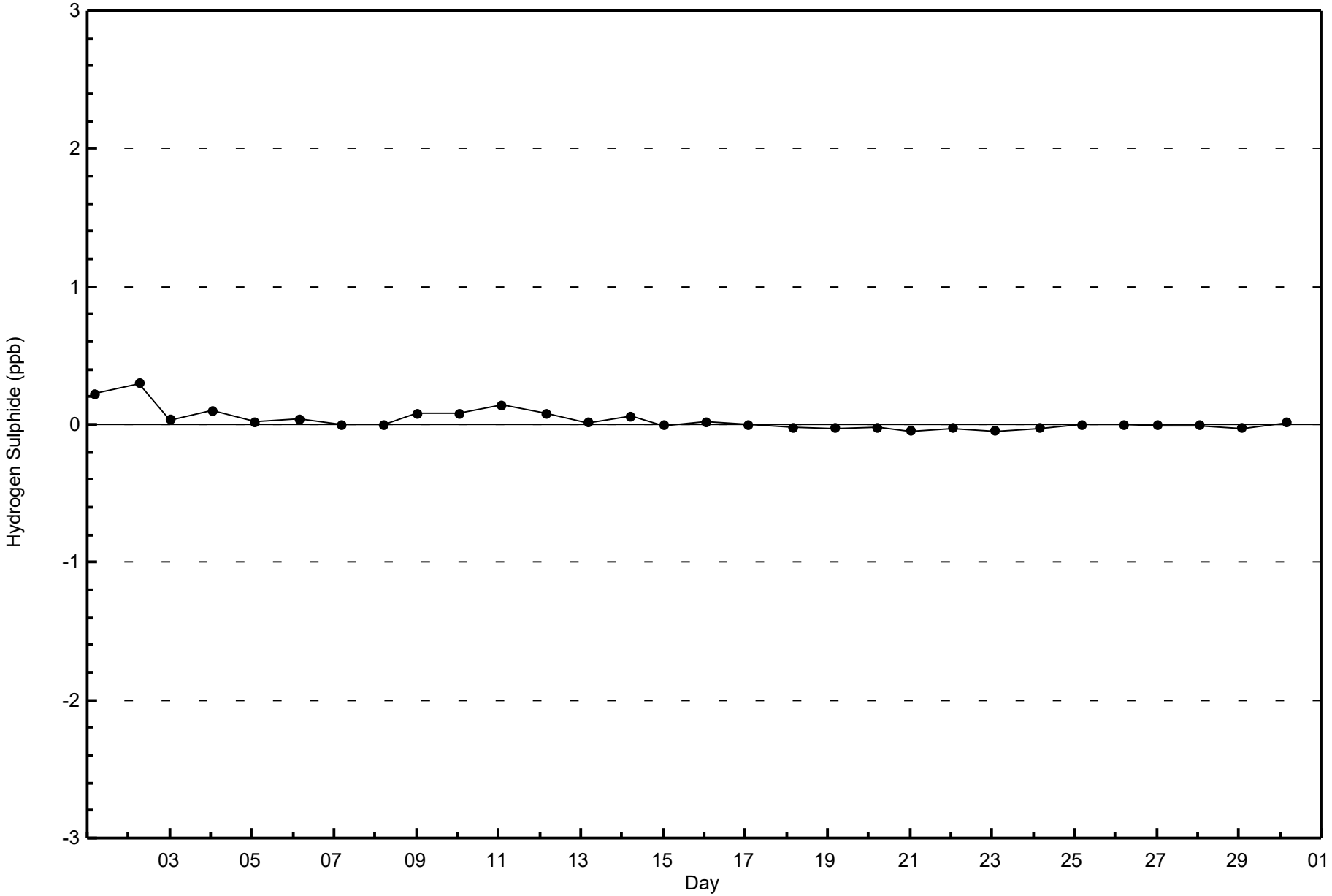
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - September 2025

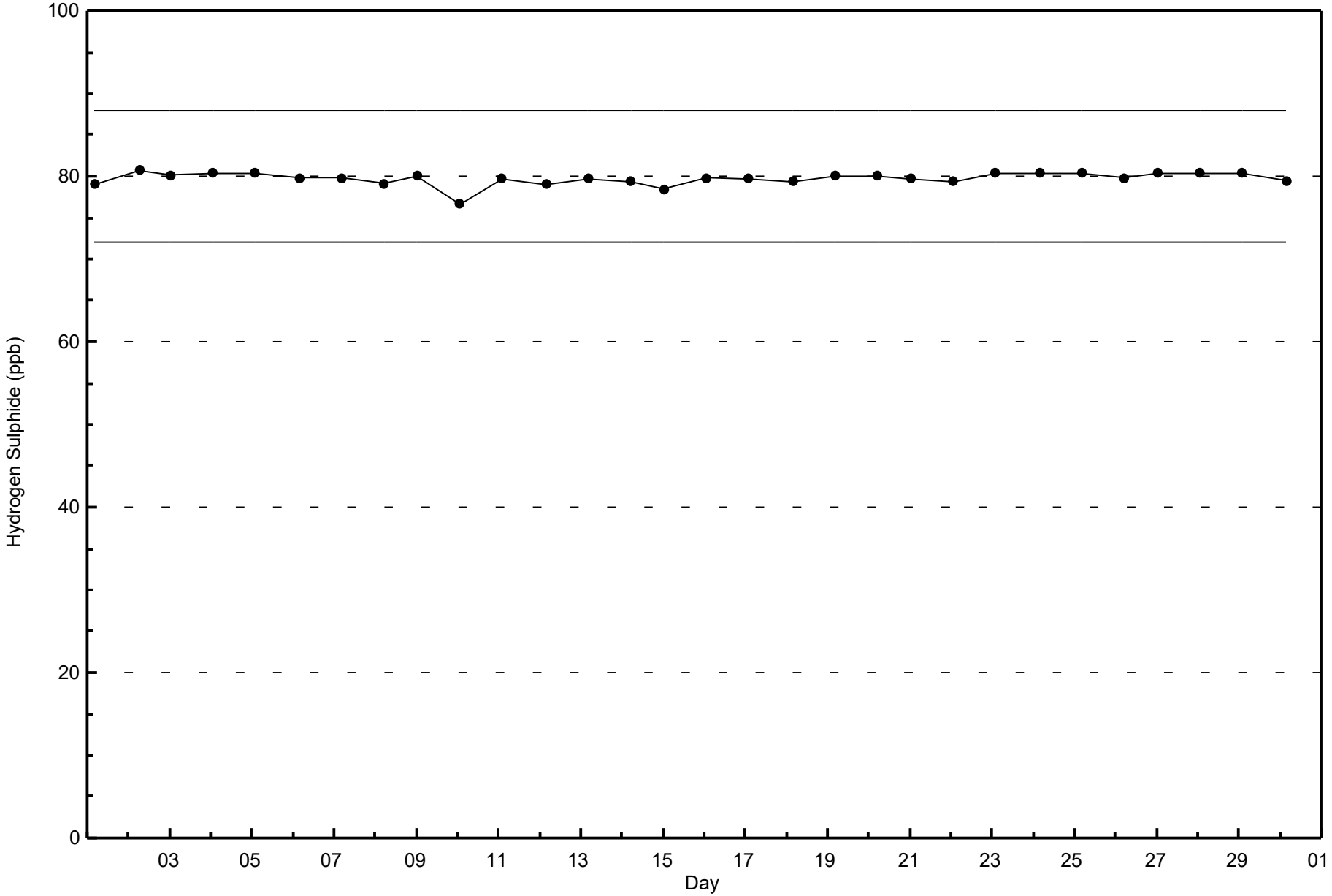


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - September 2025

Maximum Value: 5.7 ppm on Sep 30 08:00

Maximum Daily Average: 2.6 ppm on Sep 30

Minimum Value: 1.9 ppm on Sep 4 20:00

Minimum Daily Average: 2.0 ppm on Sep 4

Maximum Diurnal Average: 2.2 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 17

Monthly Average: 2.13 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.3 P_{99} = 3.8

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.7	2.6	2.7	Z	2.4	2.4	2.5	2.4	2.0	2.0	2.0	2.1	2.3	2.3	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.2	2.7
2-Sep	2.5	2.7	2.5	3.2	Z	2.9	2.6	2.5	2.4	2.6	2.4	2.1	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	3.2
3-Sep	1.9	1.9	2.0	1.9	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	1.9	1.9	2.0	2.1	2.0	2.2	2.0	2.0	2.2
4-Sep	Z	2.1	2.1	2.2	2.1	2.2	2.3	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	2.1	2.0	2.3
5-Sep	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.5	2.2	2.0	2.0	1.9	2.0	2.5
6-Sep	1.9	1.9	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	1.9	2.0	2.3	2.2	2.3	2.1	2.0	2.3
7-Sep	2.2	2.3	2.2	Z	2.1	2.2	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.3	2.3	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.3	2.1	2.3
8-Sep	2.2	2.0	2.0	1.9	Z	1.9	C	C	C	2.0	2.1	2.1	2.4	2.3	2.4	2.6	2.3	2.3	2.3	2.4	2.4	2.6	2.5	2.5	2.3	2.6
9-Sep	2.3	2.2	2.2	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	2.1	2.1	2.2	2.4	2.3	2.3	2.1	2.4
10-Sep	Z	2.3	2.1	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.2	3.5	2.6	3.0	2.5	2.5	2.3	3.5
11-Sep	2.4	Z	2.4	2.3	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.5
12-Sep	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	2.0	2.1	2.2	2.2	2.2	2.1	2.2
13-Sep	2.1	2.2	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	3.0	3.6	3.7	3.5	3.8	3.8	3.7	2.5	3.8
14-Sep	4.1	3.9	3.1	2.8	Z	2.5	2.5	2.4	2.4	2.3	2.2	2.2	2.2	2.3	3.2	2.5	2.2	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.5	4.1
15-Sep	2.1	2.2	2.1	2.1	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.1	2.2
16-Sep	Z	2.1	2.0	2.1	2.1	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	2.2	2.2	2.1	2.1	2.1	2.1	2.3
17-Sep	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	2.0	2.1	2.1
18-Sep	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	2.2	2.1	2.0	2.0	2.0	2.2
19-Sep	2.0	2.0	2.0	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	2.1	2.2	2.3	2.2	2.3	2.3	2.1	2.3
20-Sep	2.1	2.1	2.2	2.1	Z	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	2.1	2.1	2.1	2.1	2.2
21-Sep	2.1	2.1	2.2	2.3	2.3	Z	2.3	2.4	2.3	2.1	2.1	2.1	2.2	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
22-Sep	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
23-Sep	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	2.0	2.1
24-Sep	2.1	2.1	Z	2.0	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	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.2
25-Sep	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	2.0	2.0	2.0	2.0	2.1
26-Sep	2.0	2.1	2.1	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	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.2
27-Sep	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	2.1	2.1	2.0	2.1	2.1	2.0	2.1
28-Sep	Z	2.0	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	2.1	2.1	2.1	2.0	2.0	2.0	2.1
29-Sep	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	2.1	2.0	2.1
30-Sep	2.1	2.1	Z	2.1	2.1	2.9	4.2	5.7	4.3	4.6	3.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.6	5.7
	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	4.1	3.9	3.1	3.2	2.5	2.9	4.2	5.7	4.3	4.6	3.2	2.2	2.4	2.3	3.2	2.6	2.3	3.0	3.6	3.7	3.5	3.8	3.8	3.7	Diurnal Maximum	

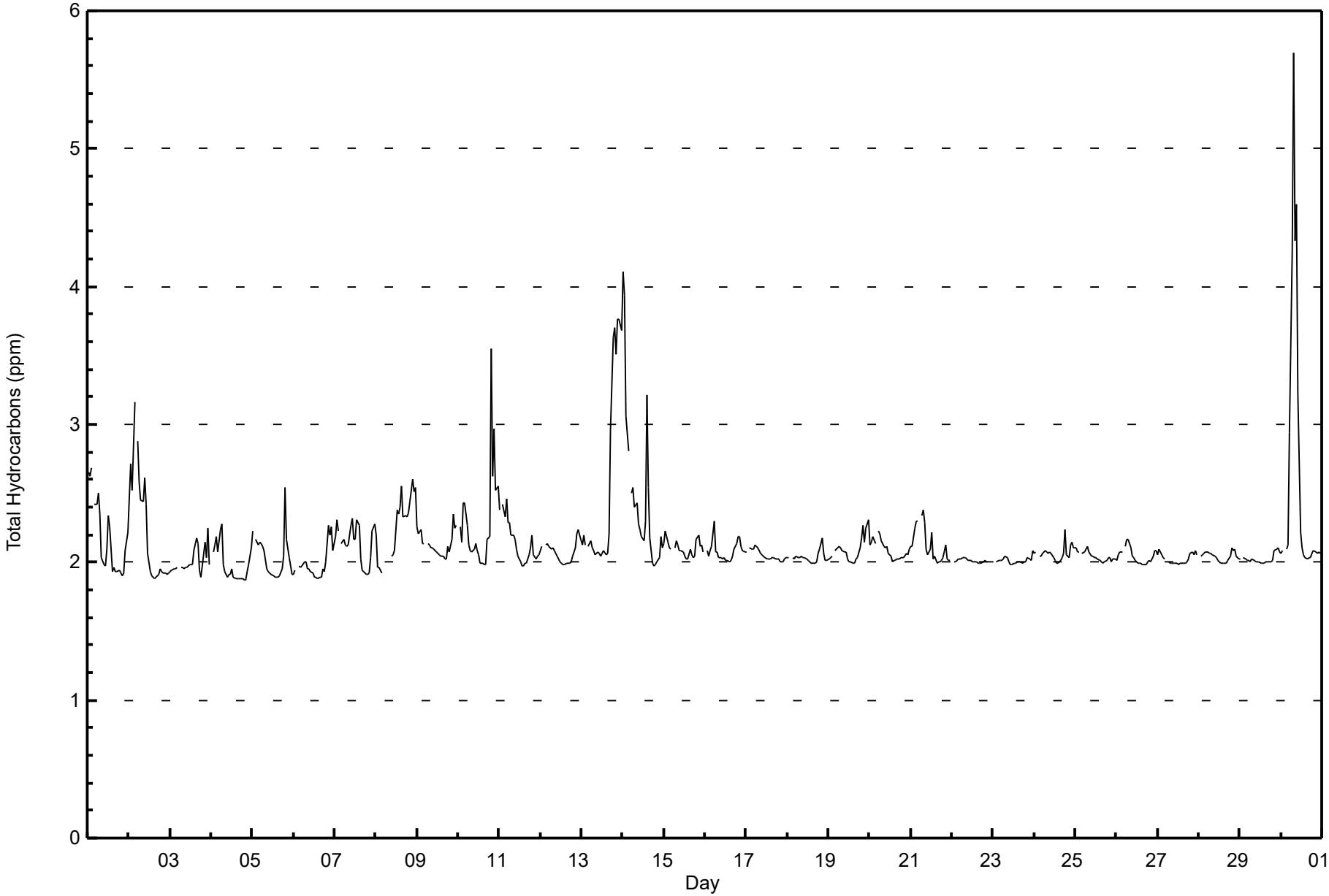
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	346	50.36	50.36
2.1 - 3.0	324	47.16	97.53
3.1 - 10.0	17	2.47	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	18	10	3	1	5	10	46	70	36	30	25	35	23	12	8	14	346
2.1 - 3.0	21	9	3	0	1	6	27	114	46	11	12	11	14	19	19	11	324
3.1 - 10.0	6	0	0	0	0	1	1	2	2	1	0	0	0	0	1	3	17
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	19	6	1	6	17	74	186	84	42	37	46	37	31	28	28	687

Total Number of Valid Hours: 687

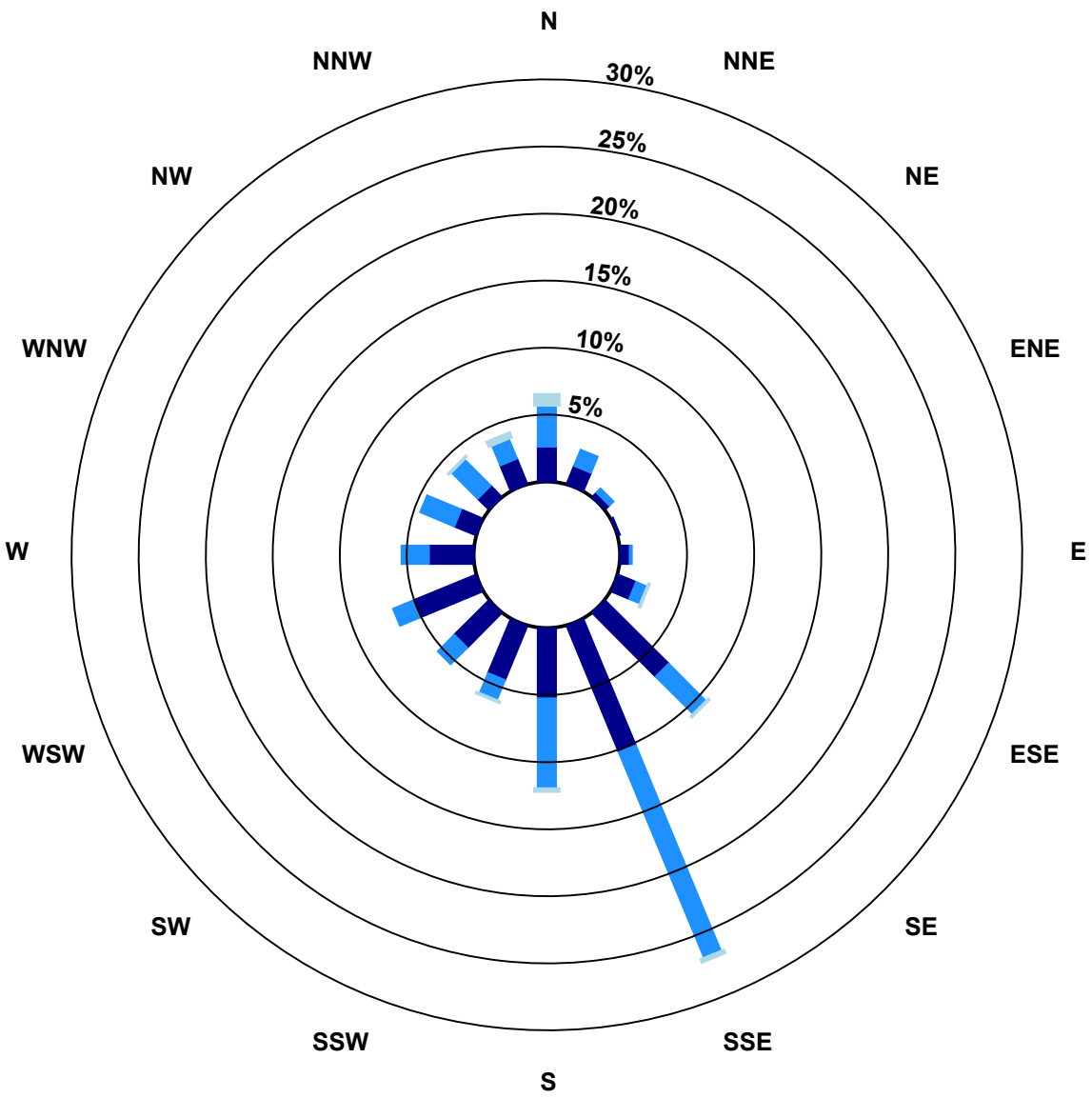
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

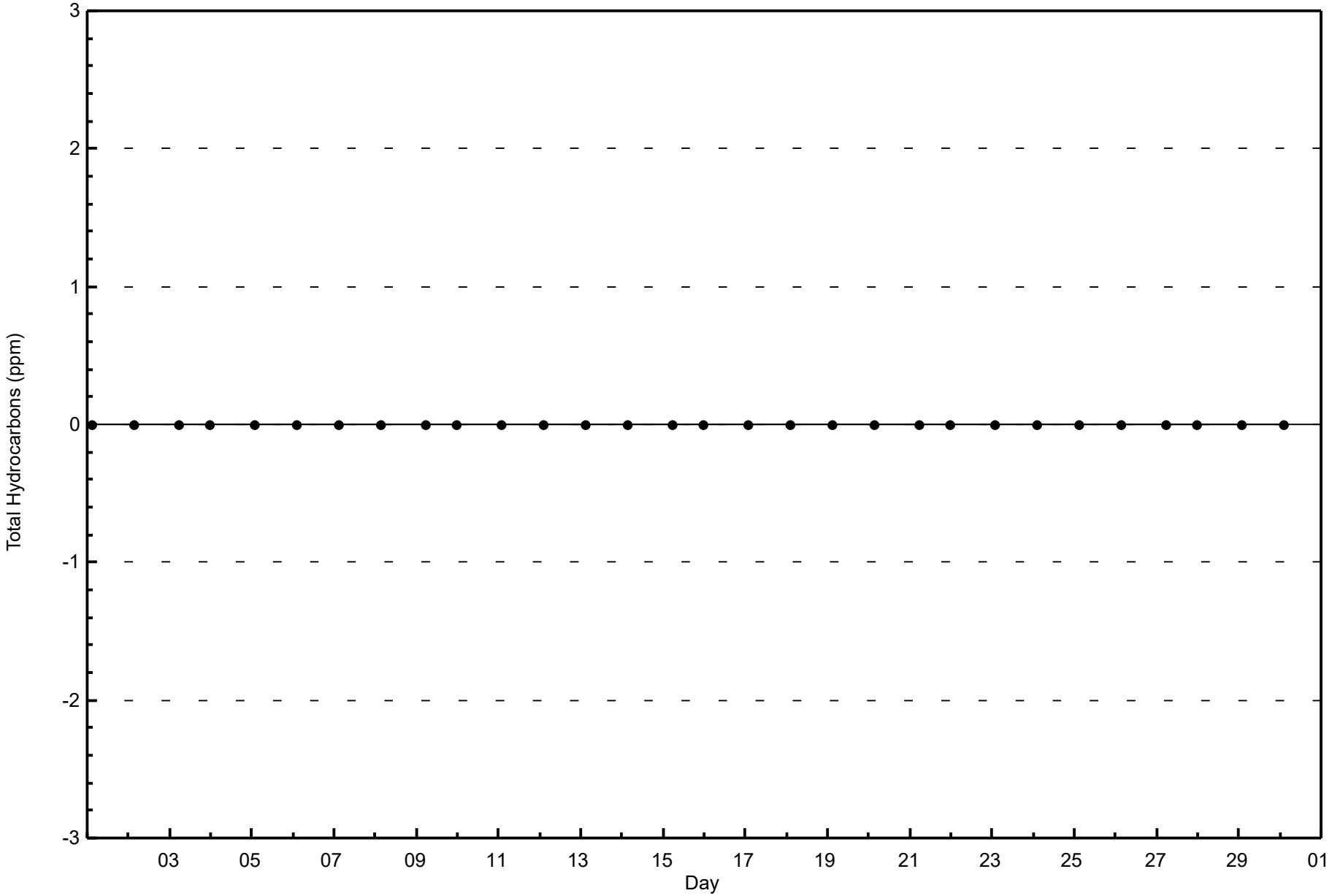
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - September 2025

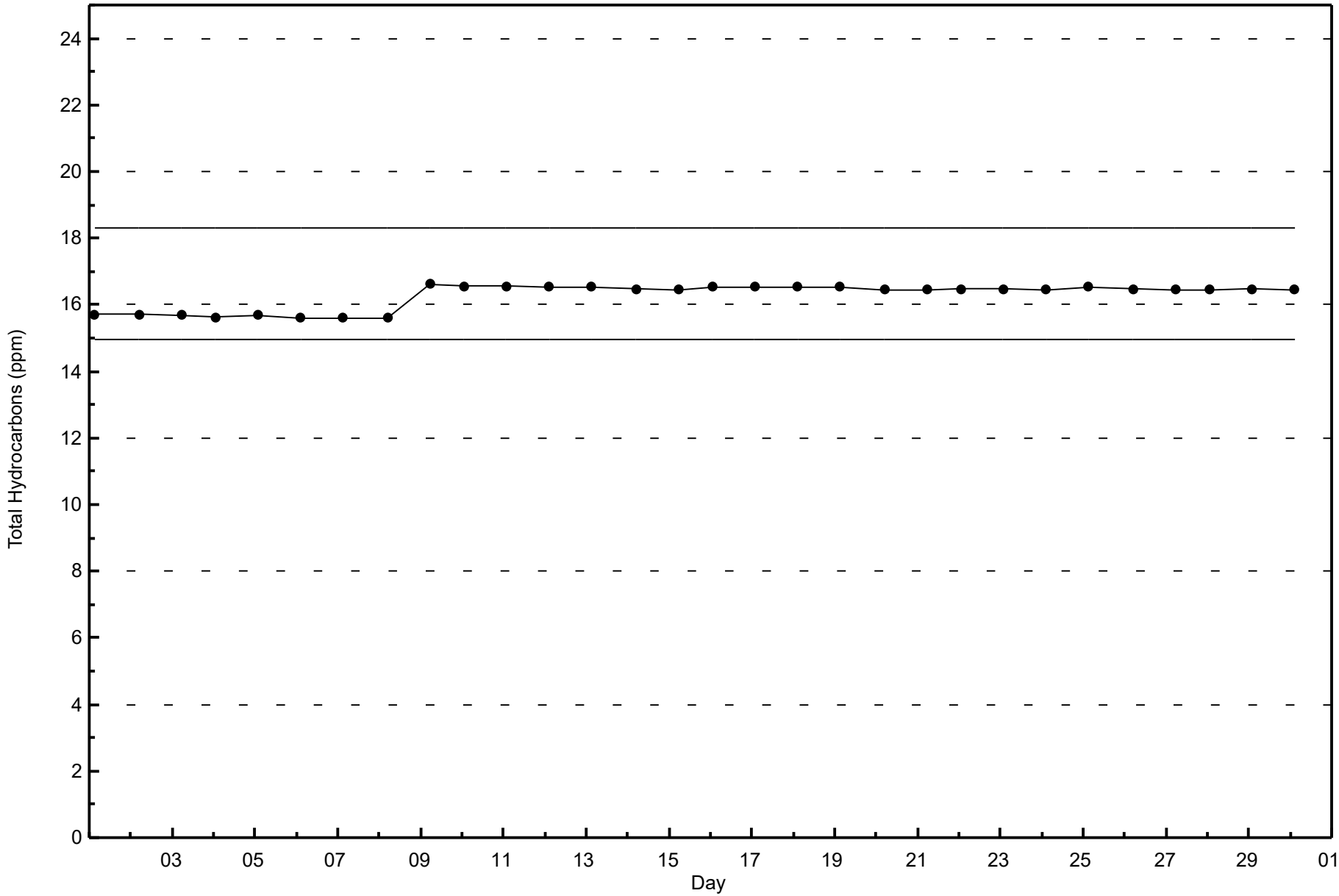


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025

Maximum Value: 1.750 ppm on Sep 30 08:00

Maximum Daily Average: 0.243 ppm on Sep 30

Minimum Value: 0.000 ppm on Sep 1 09:00

Minimum Daily Average: 0.000 ppm on Sep 18

Maximum Diurnal Average: 0.092 ppm at hour 20

Minimum Diurnal Average: 0.007 ppm at hour 5

Monthly Average: 0.042 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} = 0.8

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.332	0.263	0.219	Z	0.151	0.165	0.163	0.138	0.000	0.000	0.000	0.103	0.238	0.188	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.178	0.097	0.332
2-Sep	0.242	0.280	0.247	0.388	Z	0.205	0.066	0.086	0.169	0.269	0.210	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.096	0.388
3-Sep	0.000	0.001	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.099	0.088	0.001	0.000	0.028	0.160	0.071	0.221	0.059	0.033	0.221
4-Sep	Z	0.036	0.044	0.065	0.014	0.081	0.068	0.000	0.000	0.007	0.019	0.026	0.058	0.011	0.004	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.081
5-Sep	0.000	Z	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	0.009	0.049	0.216	0.067	0.000	0.000	0.000	0.015	0.216
6-Sep	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	0.003	0.000	0.000	0.003
7-Sep	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.141	0.194	0.095	0.099	0.154	0.152	0.060	0.000	0.000	0.000	0.000	0.000	0.047	0.220	0.257	0.062	0.257
8-Sep	0.197	0.000	0.000	0.000	Z	0.000	C	C	C	0.001	0.000	0.038	0.199	0.175	0.227	0.367	0.179	0.183	0.176	0.172	0.186	0.179	0.168	0.147	0.130	0.367
9-Sep	0.056	0.001	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.056
10-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.033	0.001	0.001	0.000	0.000	0.000	0.000	0.154	0.148	1.377	0.357	0.652	0.177	0.174	0.134	1.377
11-Sep	0.086	Z	0.091	0.017	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.091
12-Sep	0.000	0.010	Z	0.013	0.010	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	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.013
13-Sep	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	0.039	0.530	0.932	0.935	0.800	0.773	0.832	0.733	0.242	0.935
14-Sep	0.754	0.708	0.394	0.281	Z	0.162	0.163	0.147	0.141	0.099	0.078	0.038	0.008	0.096	0.556	0.243	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.171	0.754
15-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.032	0.037	0.004	0.000	0.000	0.003	0.037
16-Sep	Z	0.000	0.000	0.000	0.000	0.066	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.005	0.066
17-Sep	0.000	Z	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	0.000	0.000	0.000	0.001
18-Sep	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
19-Sep	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
20-Sep	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
21-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.046	0.145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.009	0.145
22-Sep	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
23-Sep	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
24-Sep	0.000	0.000	Z	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	0.012	0.000	0.000	0.000	0.000	0.001	0.001	0.012
25-Sep	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
26-Sep	0.000	0.000	0.000	0.000	Z	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	0.000	0.008
27-Sep	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	0.009	0.000	0.000	0.000	0.000	0.000	0.009
28-Sep	Z	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	0.000	0.000	0.000	0.000	0.000	0.002
29-Sep	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
30-Sep	0.000	0.000	Z	0.000	0.007	0.457	1.123	1.750	0.703	1.017	0.490	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.243	1.750
	0.067	0.052	0.040	0.031	0.007	0.046	0.055	0.074	0.035	0.051	0.034	0.015	0.025	0.021	0.033	0.026	0.012	0.029	0.044	0.092	0.054	0.058	0.057	0.052	Diurnal Average	
	0.754	0.708	0.394	0.388	0.151	0.457	1.123	1.750	0.703	1.017	0.490	0.103	0.238	0.188	0.556	0.367	0.179	0.530	0.932	1.377	0.800	0.773	0.832	0.733	Diurnal Maximum	

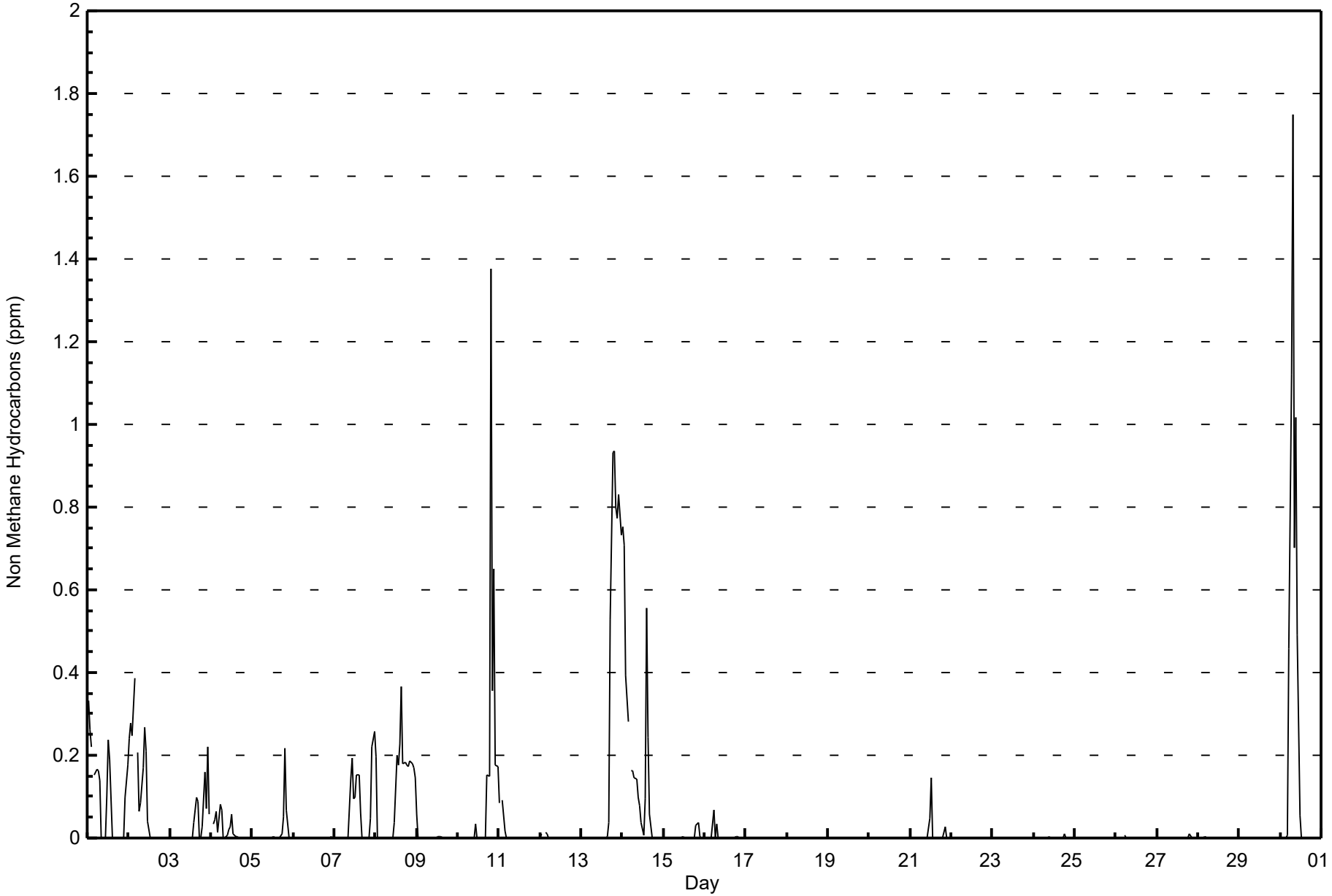
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	560	81.51	81.51
0.006 - 0.05	32	4.66	86.17
0.06 - 0.1	31	4.51	90.68
> 0.1	64	9.32	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	24	14	4	1	4	12	68	164	77	39	34	41	34	22	16	6	560
0.006 - 0.05	3	1	0	0	2	2	0	4	0	0	2	1	2	3	2	10	32
0.06 - 0.1	3	2	1	0	0	1	2	8	2	0	0	2	0	0	5	5	31
> 0.1	15	2	1	0	0	2	4	10	5	3	1	2	1	6	5	7	64
Totals	45	19	6	1	6	17	74	186	84	42	37	46	37	31	28	28	687

Total Number of Valid Hours: 687

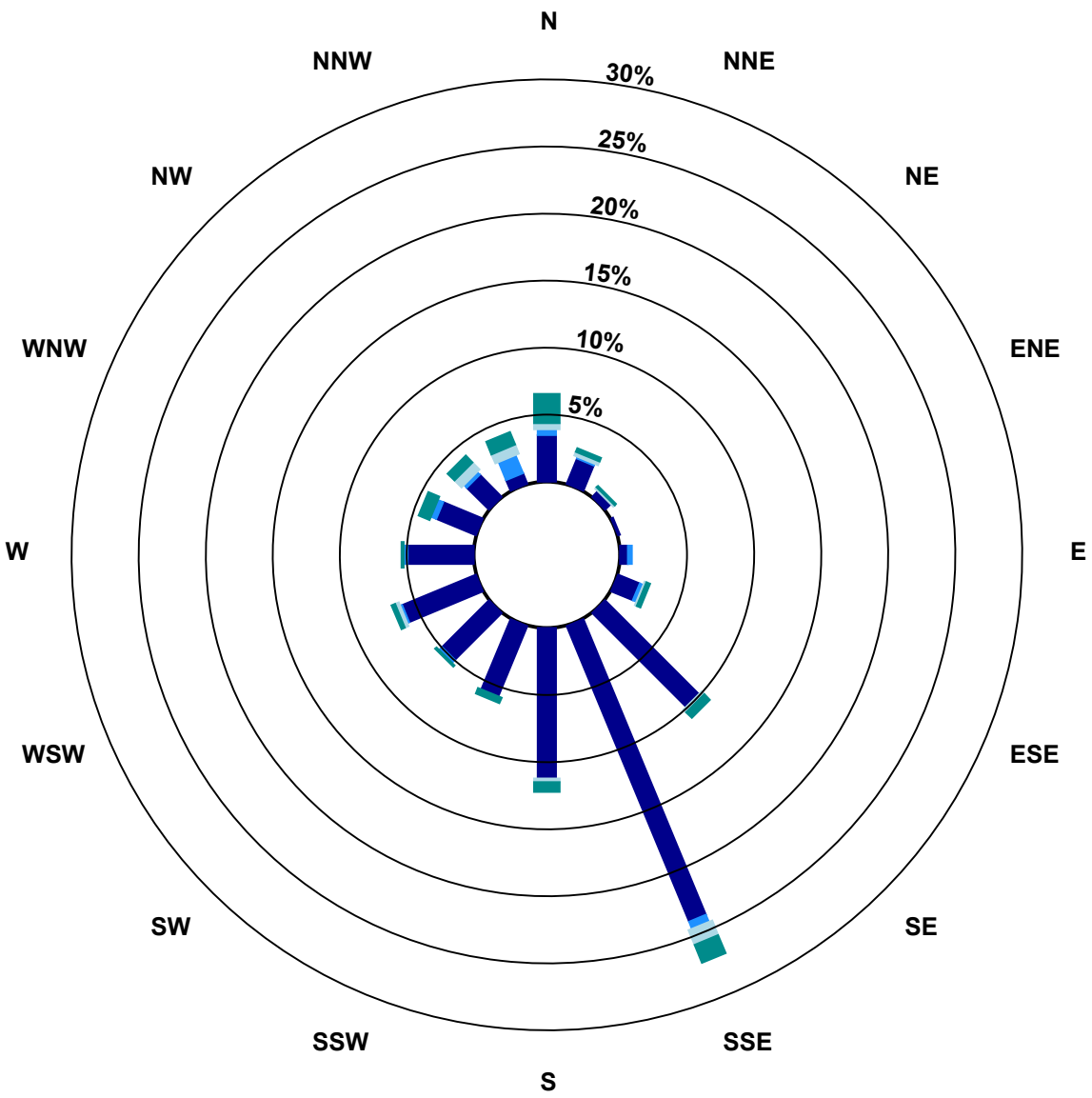
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint



Classes (ppm)

- 0 - 0.005
- 0.006 - 0.05
- 0.06 - 0.1
- > 0.1

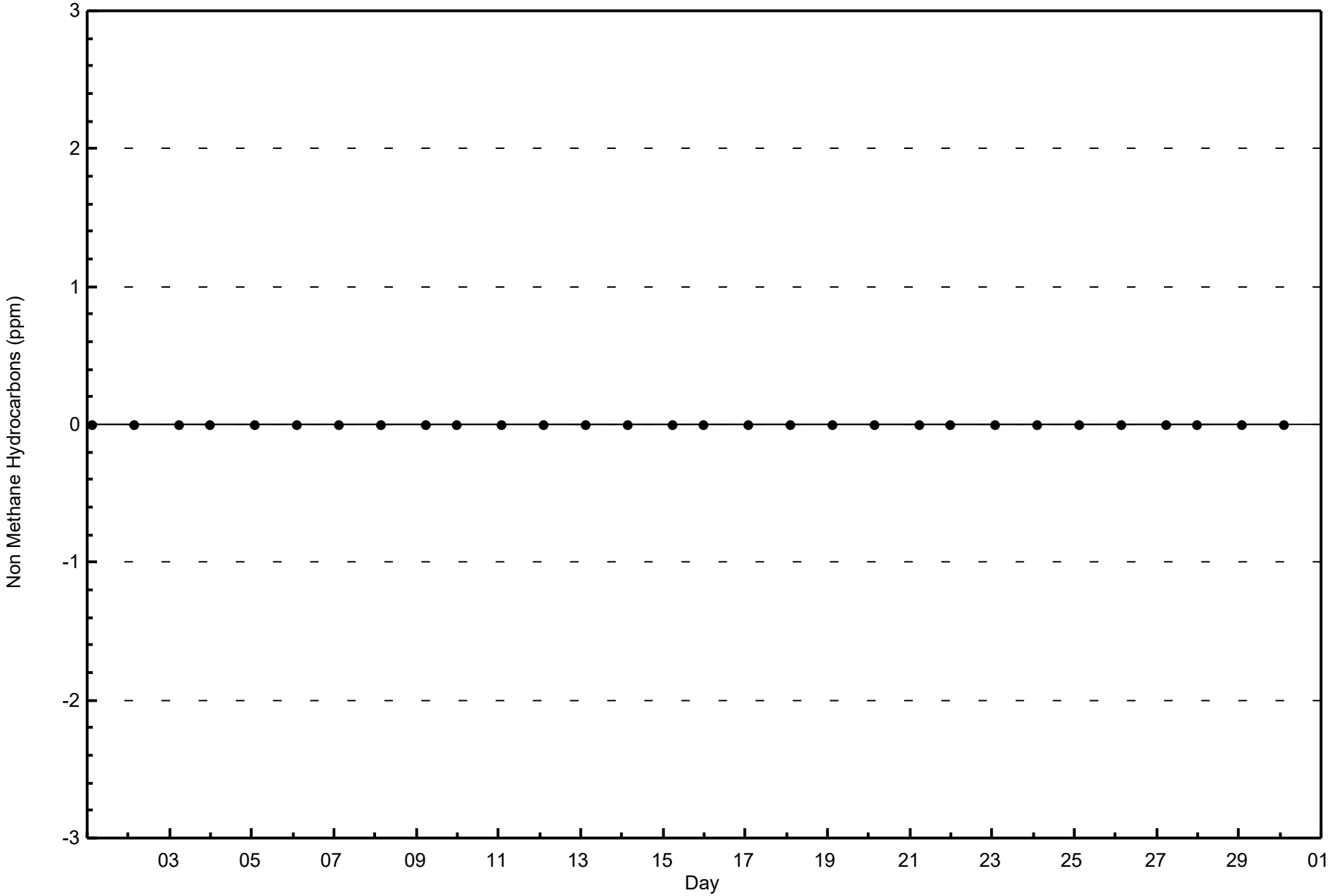
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025

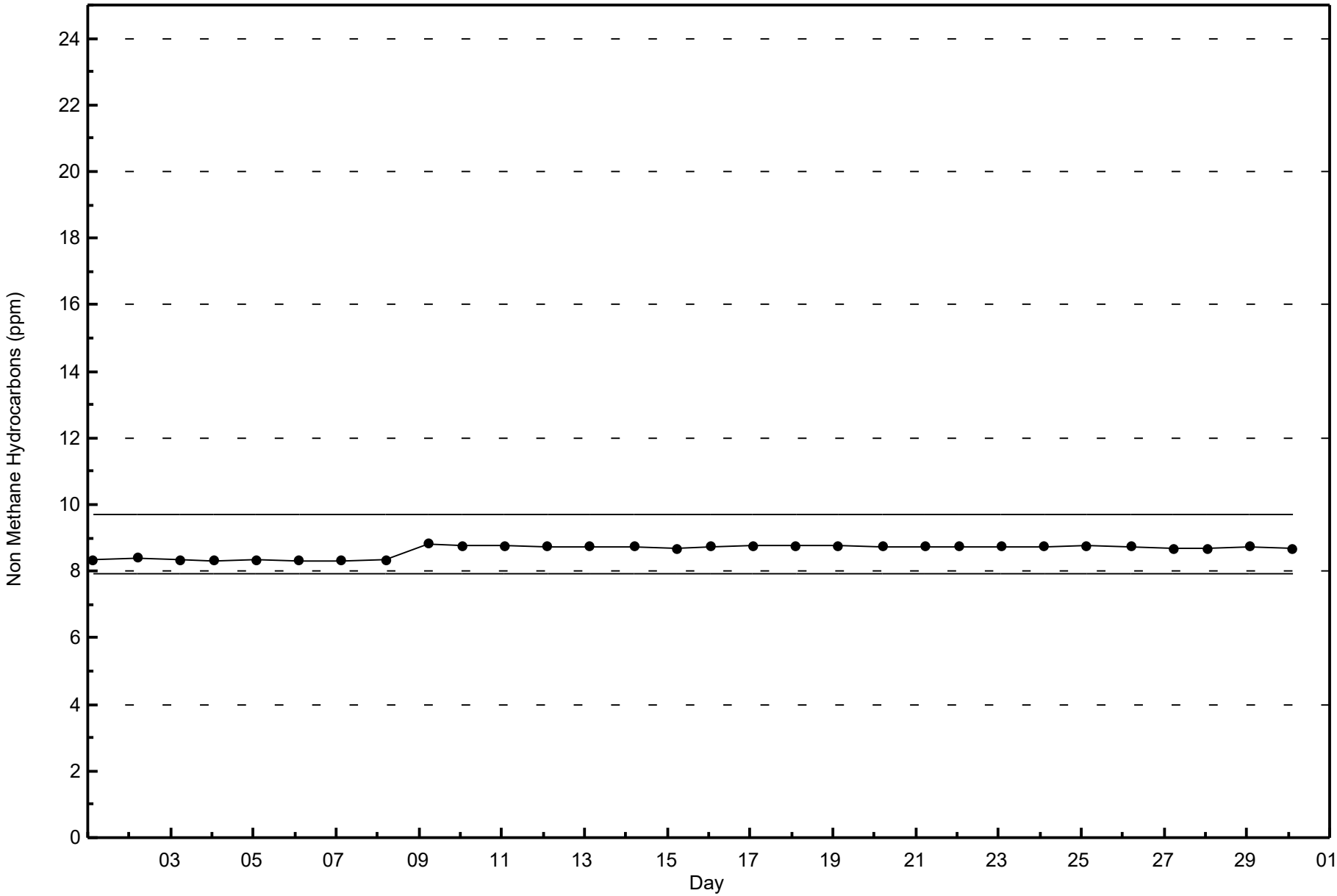


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 ppm on Sep 30 08:00
Maximum Daily Average: 2.4 ppm on Sep 30

Minimum Value: 1.9 ppm on Sep 4 20:00
Minimum Daily Average: 2.0 ppm on Sep 4
Maximum Diurnal Average: 2.2 ppm at hour 8
Minimum Diurnal Average: 2.0 ppm at hour 17
Monthly Average: 2.09 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} = 3.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.3	2.4	2.5	Z	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.5
2-Sep	2.2	2.4	2.3	2.8	Z	2.7	2.5	2.4	2.3	2.3	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	2.1	2.8
3-Sep	1.9	1.9	2.0	1.9	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.1
4-Sep	Z	2.0	2.1	2.1	2.1	2.2	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	2.0	2.1	2.0	2.2
5-Sep	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3	2.1	2.0	2.0	1.9	2.0	2.3
6-Sep	1.9	1.9	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	1.9	2.0	2.3	2.2	2.3	2.1	2.0	2.3
7-Sep	2.2	2.3	2.2	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.3
8-Sep	2.0	2.0	2.0	1.9	Z	1.9	C	C	C	2.0	2.1	2.0	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.4	2.3	2.4	2.1	2.4
9-Sep	2.2	2.2	2.2	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	2.1	2.1	2.2	2.4	2.3	2.3	2.1	2.4
10-Sep	Z	2.3	2.1	2.4	2.4	2.3	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	2.2	2.3	2.3	2.3	2.4	2.2	2.4
11-Sep	2.3	Z	2.3	2.3	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.5
12-Sep	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	2.0	2.1	2.2	2.2	2.2	2.1	2.2
13-Sep	2.1	2.2	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.4	2.7	2.8	2.7	3.0	2.9	2.9	2.3	3.0
14-Sep	3.4	3.2	2.7	2.5	Z	2.3	2.4	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.7	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.3	3.4
15-Sep	2.1	2.2	2.1	2.1	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2
16-Sep	Z	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	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
17-Sep	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	2.0	2.1	2.1
18-Sep	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	2.2	2.1	2.0	2.0	2.0	2.2
19-Sep	2.0	2.0	2.0	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	2.1	2.2	2.3	2.2	2.3	2.3	2.1	2.3
20-Sep	2.1	2.1	2.2	2.1	Z	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	2.1	2.1	2.1	2.1	2.2
21-Sep	2.1	2.1	2.2	2.3	2.3	Z	2.3	2.4	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.4
22-Sep	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
23-Sep	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	2.0	2.1
24-Sep	2.1	2.1	Z	2.0	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	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.2
25-Sep	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	2.0	2.0	2.0	2.0	2.1
26-Sep	2.0	2.1	2.1	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	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.2
27-Sep	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	2.1	2.1	2.0	2.1	2.1	2.0	2.1
28-Sep	Z	2.0	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	2.1	2.1	2.1	2.0	2.0	2.0	2.1
29-Sep	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	2.1	2.0	2.1
30-Sep	2.1	2.1	Z	2.1	2.1	2.5	3.1	3.9	3.6	3.6	2.7	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.4	3.9
	2.1	2.2	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	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	3.4	3.2	2.7	2.8	2.5	2.7	3.1	3.9	3.6	3.6	2.7	2.2	2.2	2.2	2.7	2.3	2.2	2.4	2.7	2.8	2.7	3.0	2.9	2.9	Diurnal Maximum	

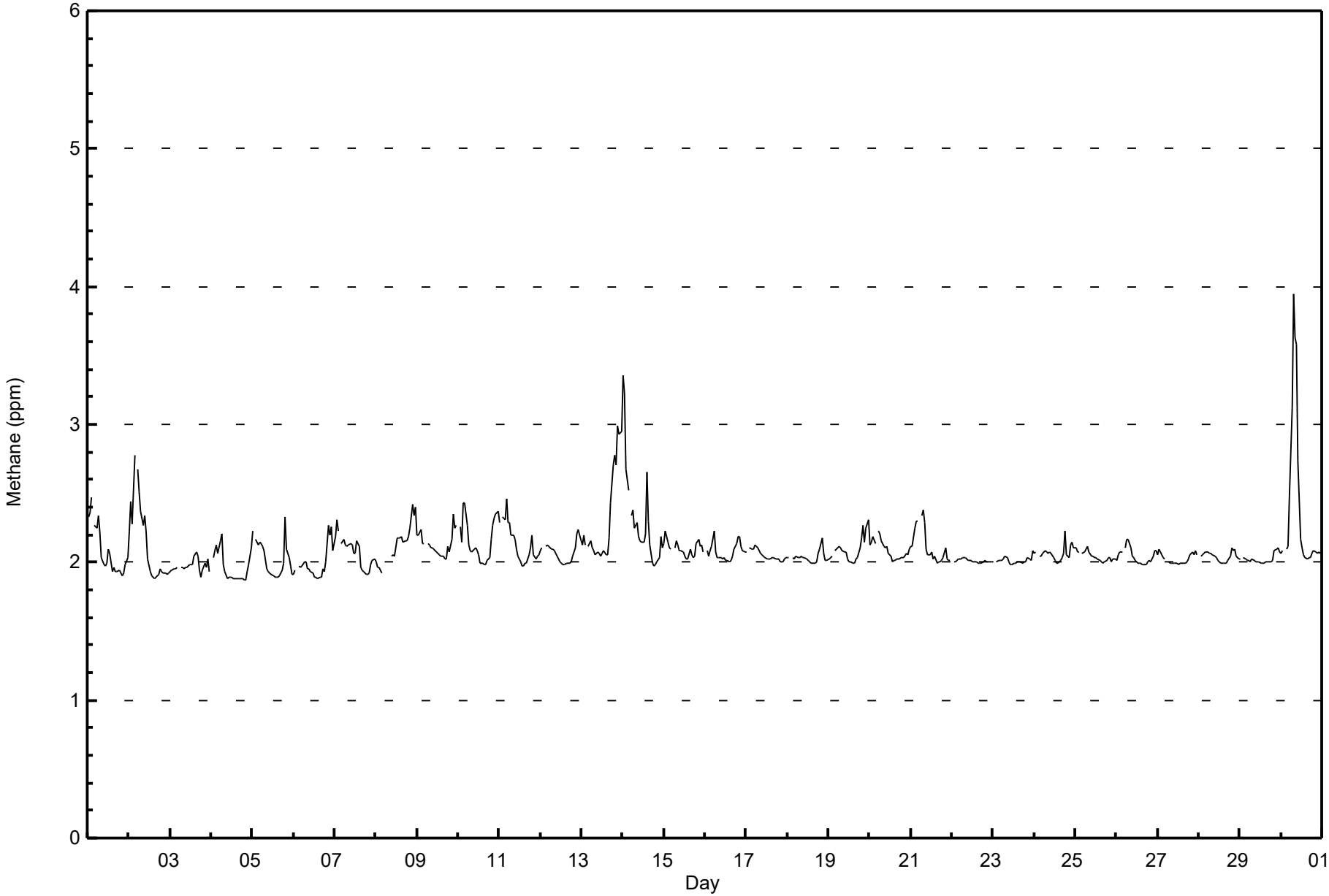
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - September 2025



Methane (CH_4) - ppm
Buffalo Viewpoint - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	362	52.69	52.69
2.1 - 3.0	319	46.43	99.13
3.1 - 10.0	6	0.87	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Buffalo Viewpoint - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	22	11	4	1	5	10	46	71	36	30	25	35	24	13	9	20	362
2.1 - 3.0	22	8	2	0	1	7	28	115	47	11	12	11	13	18	18	6	319
3.1 - 10.0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	2	6
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	19	6	1	6	17	74	186	84	42	37	46	37	31	28	28	687

Total Number of Valid Hours: 687

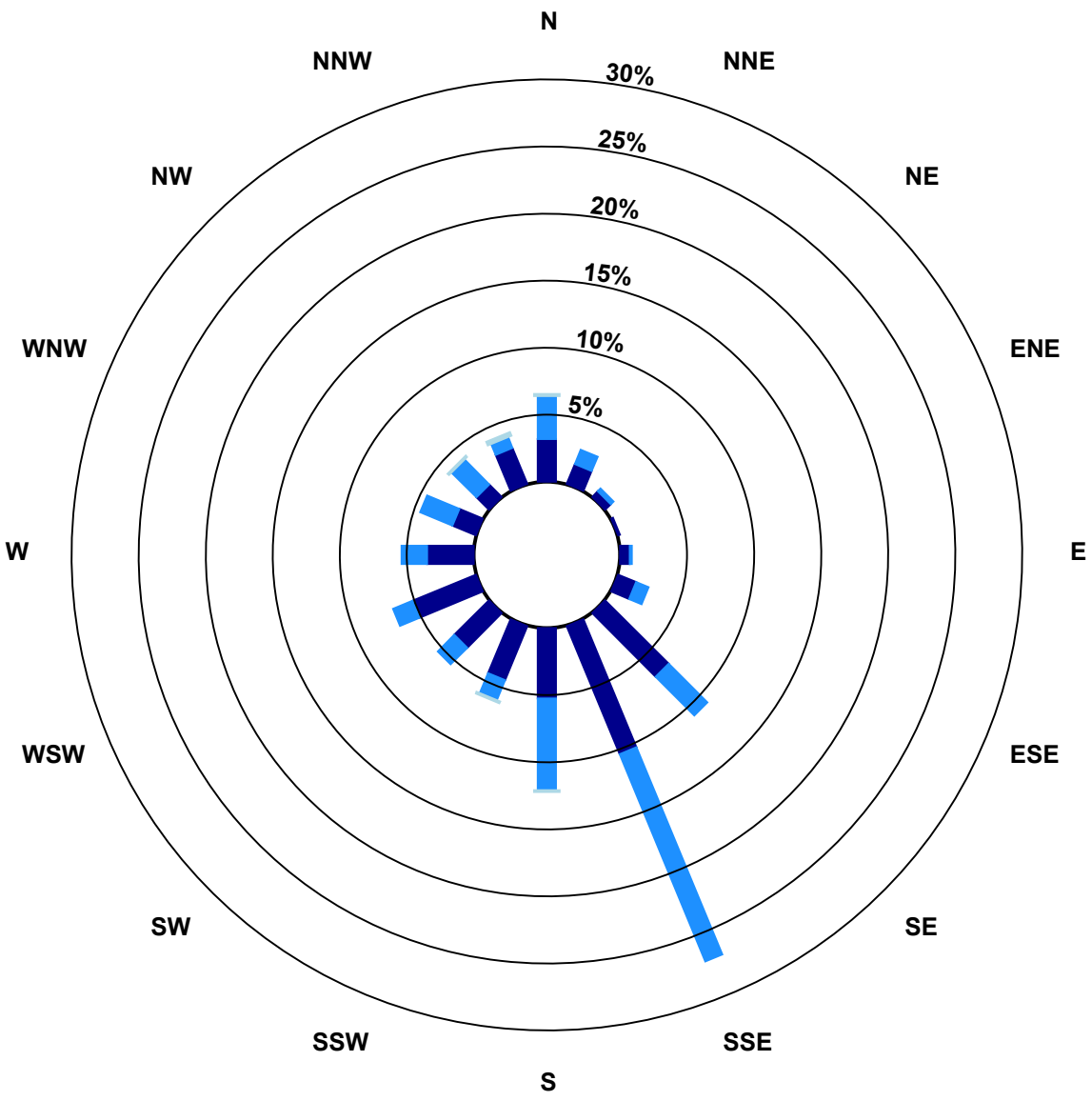
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

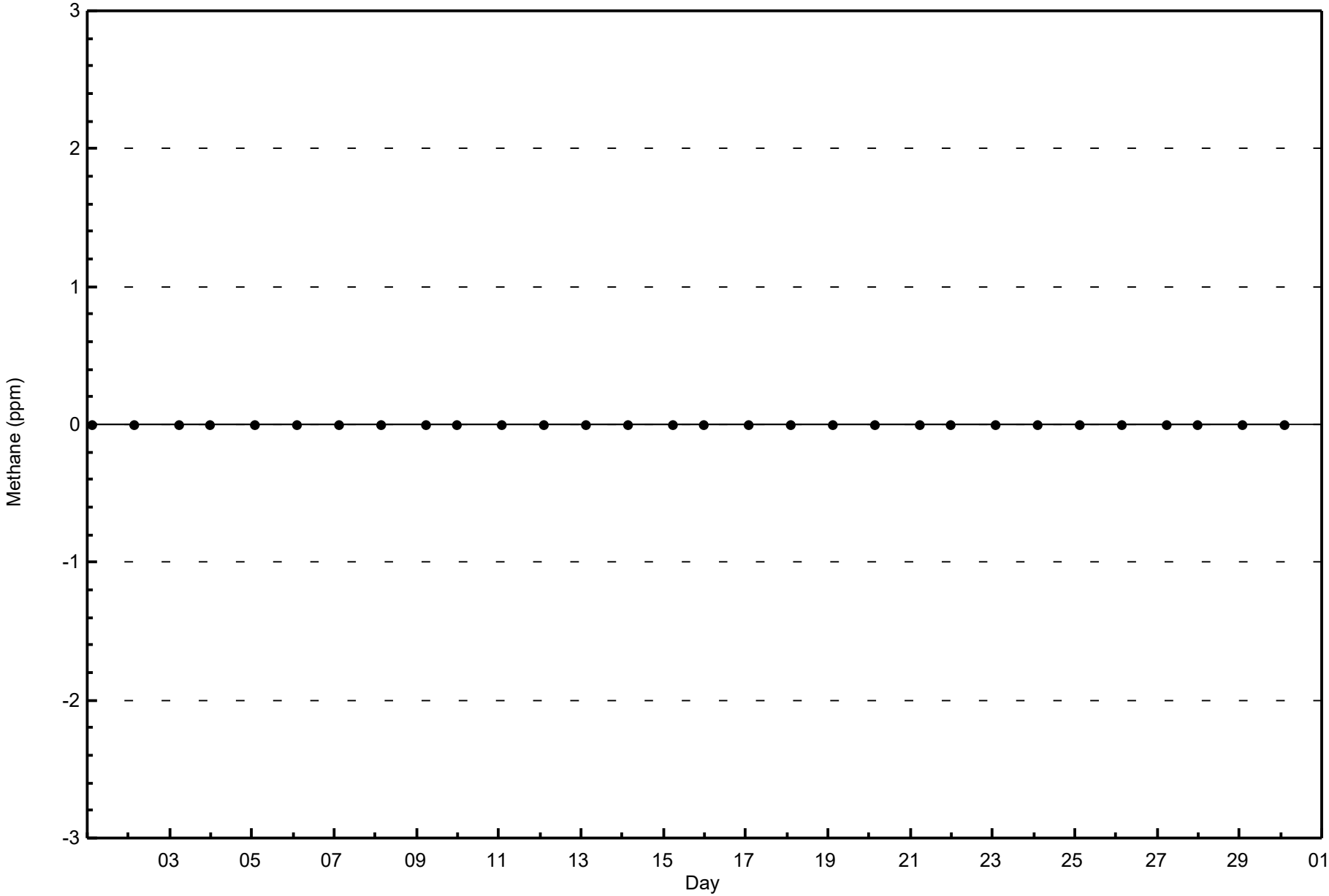
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - September 2025

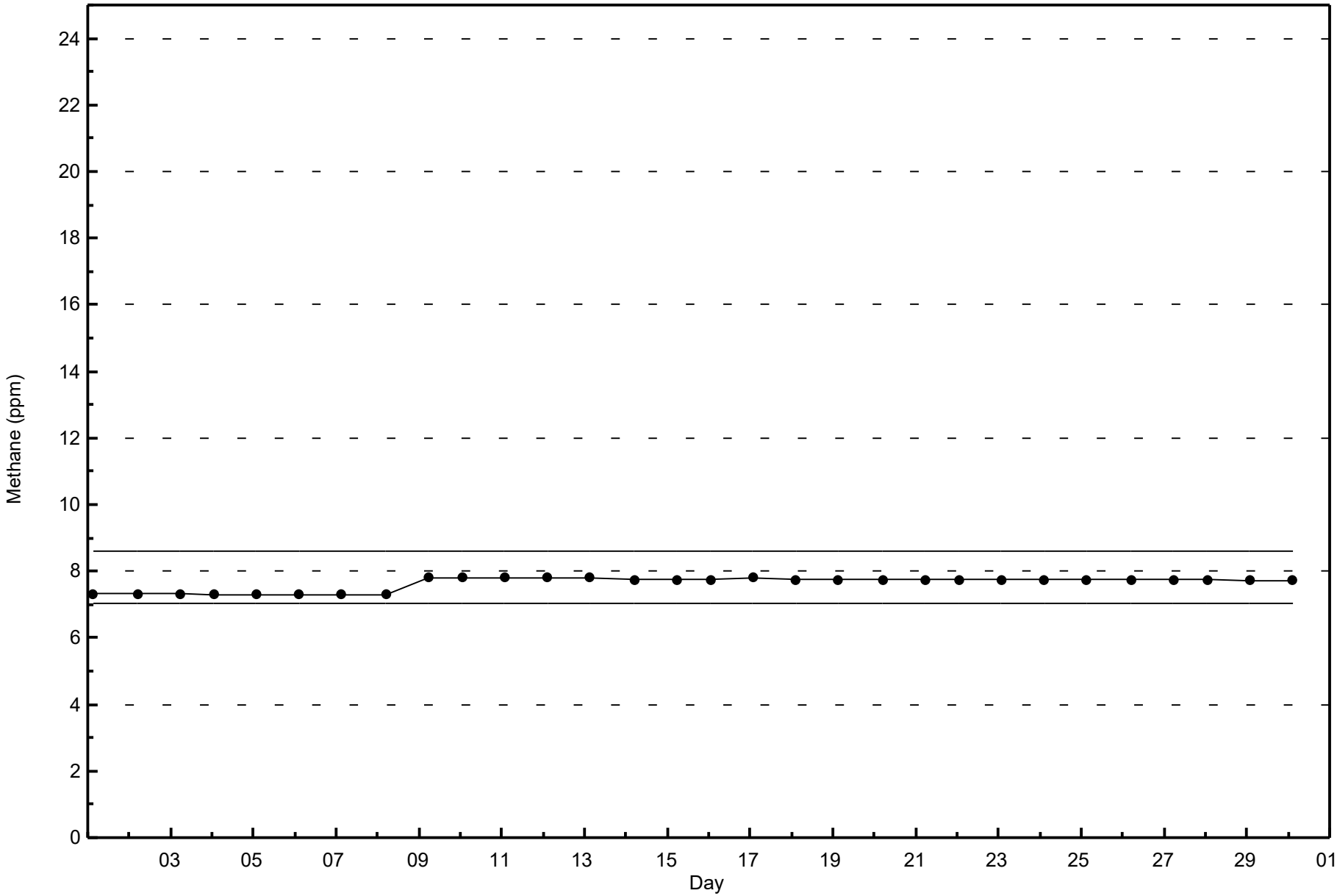


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - September 2025

Maximum Value: 61.4 ppb on Sep 2 05:00

Maximum Daily Average: 9.5 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 7 19:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 2.9 ppb at hour 8

Minimum Diurnal Average: 0.2 ppb at hour 19

Monthly Average: 1.05 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 1.3 P_{99} = 18.5

Hours in Service:	720
Hours of Data:	662
Hours of Missing Data:	58
Hours of Calibration:	37
Percent Operational Time:	97.1

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	12.8	9.4	1.1	1.3	4.9	8.8	6.8	0.9	0.5	0.6	1.8	6.3	4.9	0.5	0.5	0.2	0.2	0.3	0.2	0.1	0.1	0.5	2.2	2.8	12.8
2-Sep	9.1	Z	3.8	40.4	61.4	13.4	2.7	2.9	4.4	6.6	6.0	3.5	0.8	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.1	6.8	61.4
3-Sep	0.2	0.2	Z	0.4	0.3	0.2	0.5	0.6	0.4	0.5	0.5	0.6	0.3	0.3	0.5	1.6	1.3	0.2	0.0	0.2	1.2	1.0	3.5	0.4	0.6	3.5
4-Sep	0.3	0.2	0.4	0.6	0.4	Z	3.9	2.4	1.3	0.7	1.4	0.9	2.1	1.0	0.7	0.5	0.6	0.6	0.3	0.1	0.2	0.3	0.2	0.2	0.8	3.9
5-Sep	0.1	0.1	0.1	0.1	Z	0.4	2.3	2.3	1.4	1.4	0.8	0.6	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.1	0.2	0.5	2.3
6-Sep	0.2	0.0	0.2	0.2	0.2	Z	0.7	0.7	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.3	0.2	0.4	0.3	0.3	0.1	0.3	0.7
7-Sep	Z	0.4	0.0	0.1	0.0	0.1	0.2	0.5	0.7	3.3	3.6	2.2	1.1	1.7	1.2	0.5	0.2	0.1	0.0	0.1	0.0	0.2	0.7	1.3	0.8	3.6
8-Sep	0.9	Z	0.2	0.0	0.1	0.1	0.5	0.9	0.7	0.5	1.0	0.7	4.6	7.4	6.9	6.5	2.3	1.2	0.3	0.1	0.5	0.4	0.2	0.2	1.6	7.4
9-Sep	0.2	0.0	Z	0.3	0.1	0.1	0.3	0.5	0.9	0.5	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.9
10-Sep	0.3	0.4	0.6	Z	0.6	0.5	0.5	0.4	0.9	2.7	2.4	1.8	1.3	0.4	0.4	0.5	0.5	0.4	0.4	0.6	0.6	0.6	0.9	0.8	0.8	2.7
11-Sep	0.5	0.7	0.8	2.0	Z	0.8	0.9	1.9	2.3	2.1	2.1	1.2	0.4	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.9	2.3
12-Sep	0.4	0.2	0.4	0.4	0.4	Z	0.6	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.7
13-Sep	Z	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.2	0.0	0.3	2.0	2.4	4.3	3.8	2.5	1.4	1.0	0.9	4.3
14-Sep	0.8	Z	0.7	0.2	0.0	0.1	0.3	0.1	0.3	0.1	0.0	0.1	1.2	1.6	0.3	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.6
15-Sep	0.0	0.0	Z	0.2	0.0	0.0	0.3	0.7	0.4	0.6	0.6	0.5	0.2	0.3	0.3	0.5	0.7	0.6	0.3	0.6	0.7	0.5	0.8	0.3	0.4	0.8
16-Sep	0.5	0.6	0.2	Z	0.6	2.0	0.7	0.7	0.3	0.6	0.4	0.6	0.3	0.2	0.3	0.3	0.7	1.2	0.9	0.7	0.5	0.1	0.1	0.1	0.5	2.0
17-Sep	0.2	0.2	0.1	0.3	Z	0.4	0.4	0.7	1.1	0.9	0.4	0.3	0.1	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	1.1
18-Sep	0.1	0.2	0.2	0.2	0.4	Z	0.5	0.5	0.6	0.4	0.2	0.3	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.6
19-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.3	0.1	0.3
20-Sep	0.2	Z	0.2	0.1	0.2	0.2	0.3	0.4	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	0.0	0.1	0.4
21-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.2	2.7	6.3	0.4	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.5	6.3
22-Sep	0.1	0.1	0.0	Z	0.4	0.1	0.3	0.2	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.4
23-Sep	0.0	0.0	0.0	0.1	Z	0.3	0.2	0.2	0.4	0.3	0.2	0.0	0.0	0.2	0.2	0.1	0.2	0.0	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.4
24-Sep	0.1	0.0	0.0	0.0	0.2	Z	C	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.2
25-Sep	M	M	M	M	M	M	M	C	C	C	C	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.1	--	0.6
26-Sep	0.1	Z	0.4	0.3	0.2	0.2	0.4	0.5	0.5	0.2	0.2	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	0.2	0.5
27-Sep	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1
28-Sep	0.0	0.2	0.2	Z	0.2	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	0.2	0.3	2.0	0.3	0.3	0.1	0.2	2.0
29-Sep	0.0	0.0	0.3	0.1	Z	0.1	0.1	0.3	0.5	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.3	0.6	0.7	0.2	0.7
30-Sep	0.5	0.3	0.2	0.2	0.1	Z	26.5	55.5	47.6	53.1	31.3	2.8	1.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	9.5	55.5
	0.6	0.7	0.8	1.9	2.8	1.1	1.9	2.9	2.4	2.7	1.9	0.8	1.0	0.7	0.5	0.5	0.3	0.3	0.2	0.3	0.4	0.3	0.4	0.3	Diurnal Average	
	9.1	12.8	9.4	40.4	61.4	13.4	26.5	55.5	47.6	53.1	31.3	3.5	6.3	7.4	6.9	6.5	2.3	2.0	2.4	4.3	3.8	2.5	3.5	2.2	Diurnal Maximum	

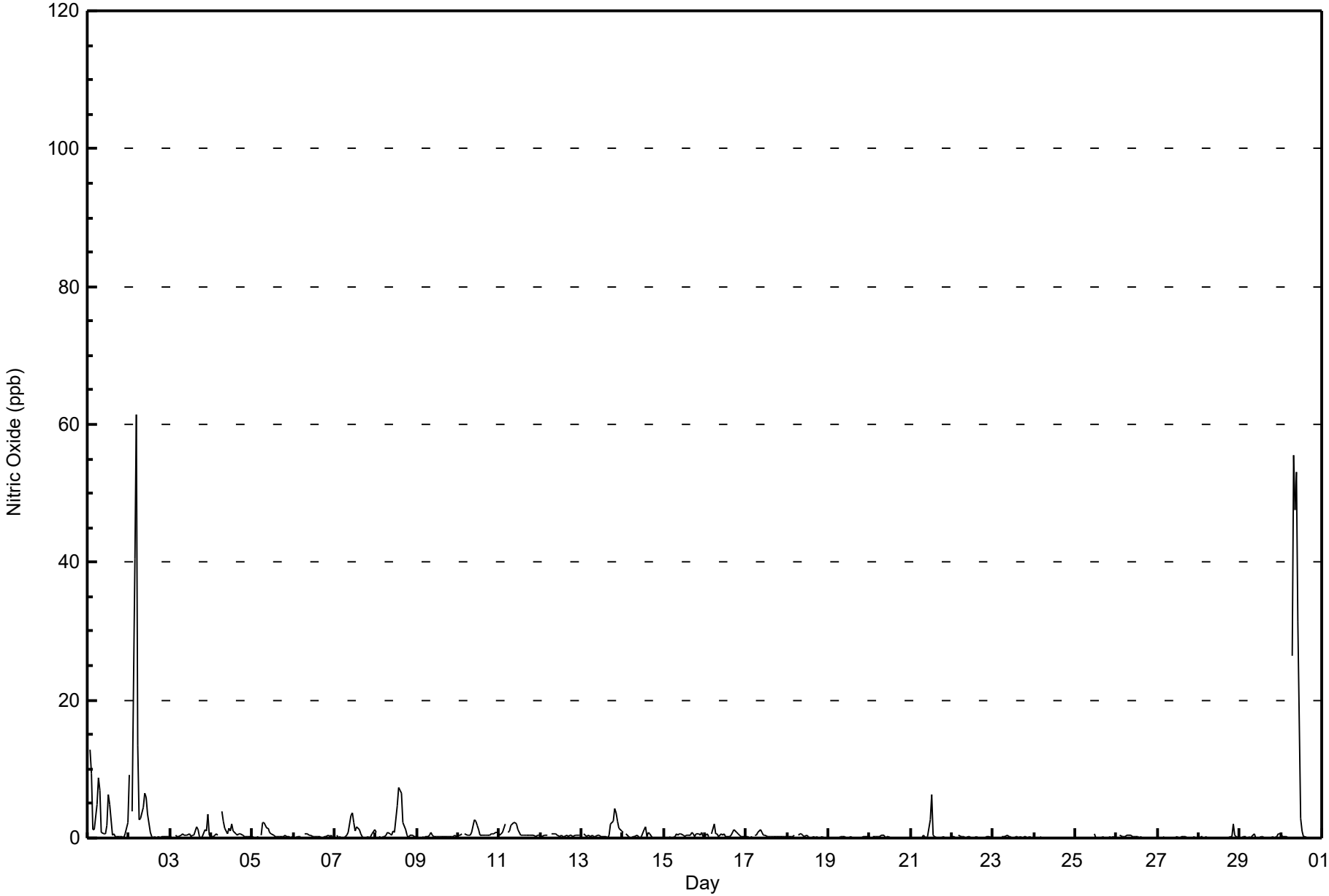
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	655	98.94	98.94
21 - 40	3	0.45	99.40
11 - 80	4	0.60	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 662

Total Number of Hours: 720

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	44	20	6	1	6	17	75	179	76	43	35	46	33	25	23	26	655
21 - 40	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
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	46	20	6	1	6	17	75	179	76	43	35	46	33	25	25	29	662

Total Number of Valid Hours: 662

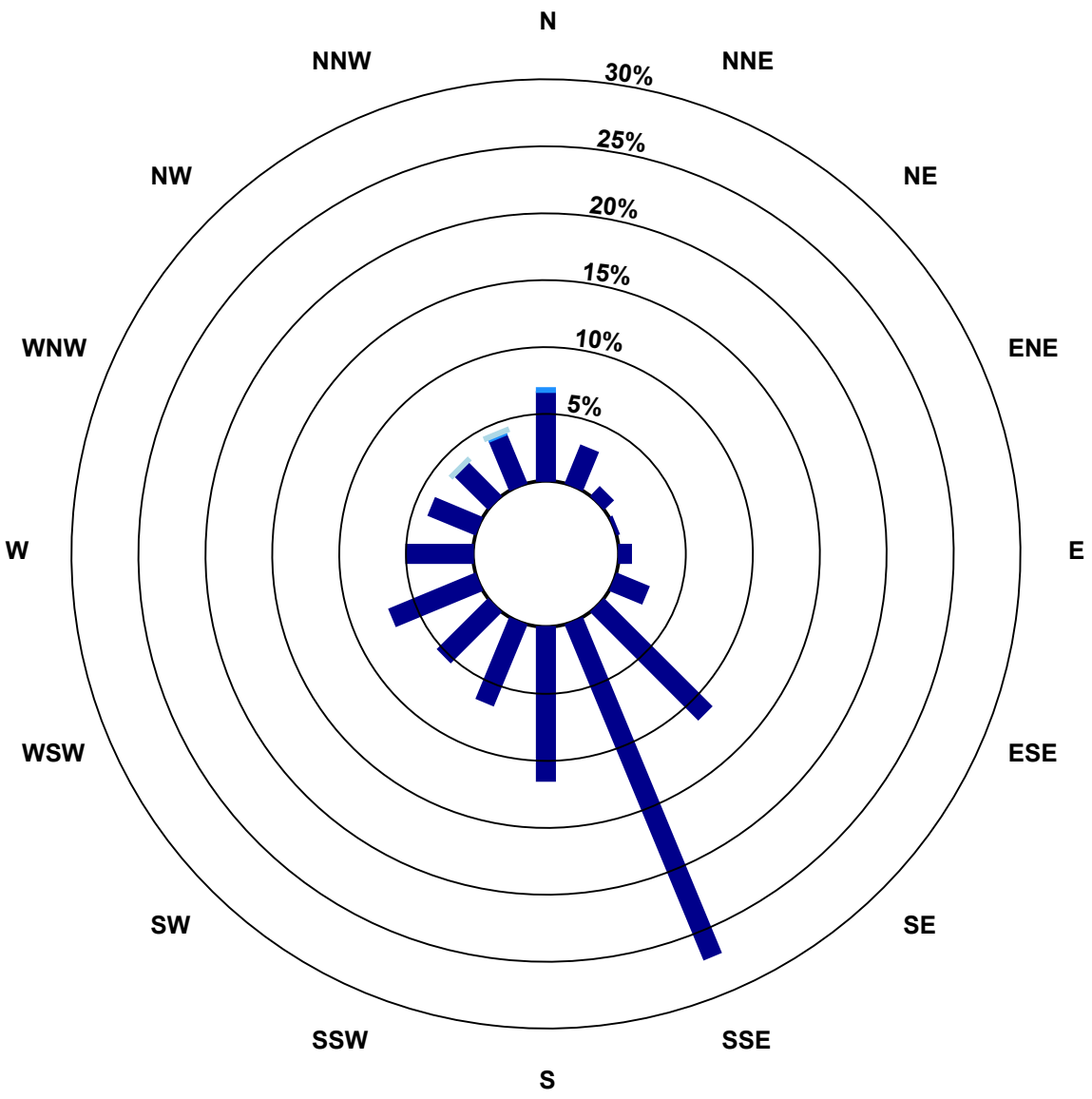
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

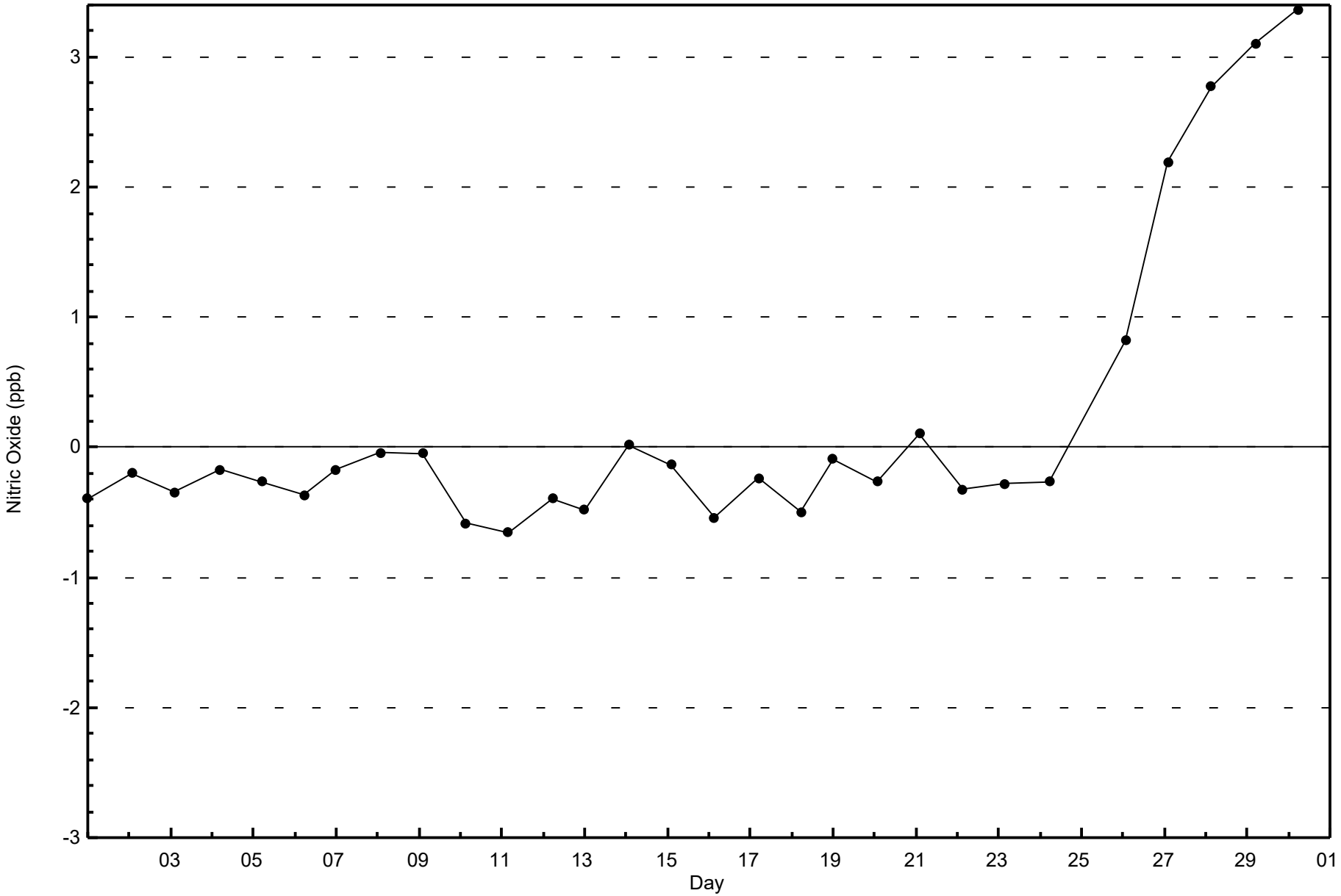
Total Number of Valid Hours: 662

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - September 2025

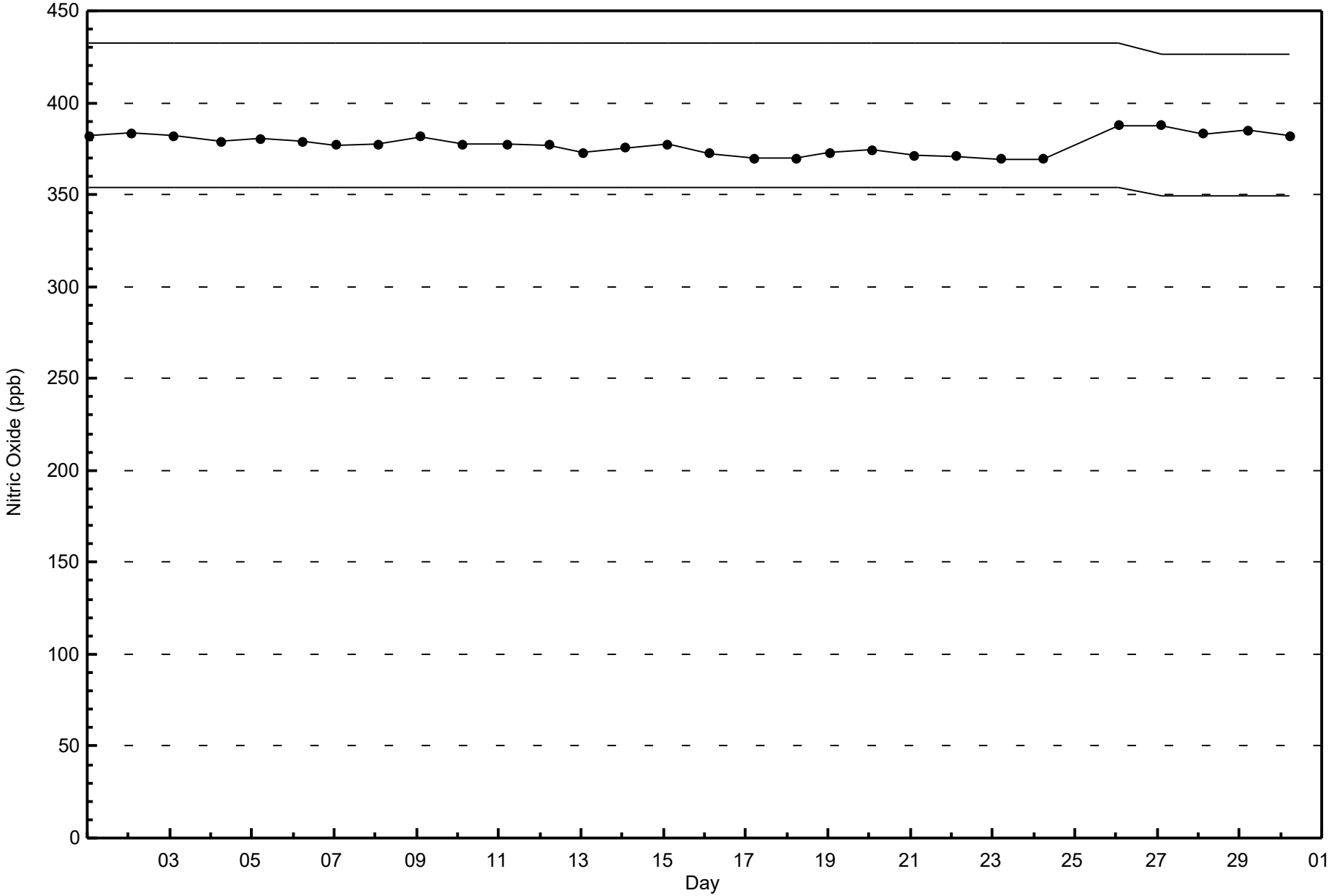


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 48.2 ppb on Sep 13 21:00
Maximum Daily Average: 10.6 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 10 15:00
Minimum Daily Average: 0.2 ppb on Sep 22
Maximum Diurnal Average: 5.0 ppb at hour 21
Minimum Diurnal Average: 1.5 ppb at hour 15
Monthly Average: 2.63 ppb
Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.6 Median = 1.1 Q_3 = 2.4 P_{90} = 6.9 P_{99} = 21.9

Hours in Service:	720
Hours of Data:	662
Hours of Missing Data:	58
Hours of Calibration:	37
Percent Operational Time:	97.1

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	8.0	4.7	3.6	4.3	6.6	6.9	5.3	1.8	0.9	1.1	3.2	9.0	8.7	1.5	2.0	2.3	2.6	3.4	3.2	2.1	3.0	11.3	17.8	4.9	17.8
2-Sep	14.9	Z	10.1	11.0	11.7	3.5	2.8	2.9	4.0	7.9	9.3	7.3	2.8	1.4	1.0	0.5	0.8	0.8	1.0	1.4	1.1	0.7	0.7	1.2	4.3	14.9
3-Sep	1.2	1.3	Z	1.7	1.7	1.9	2.7	2.2	1.7	1.6	1.7	1.5	2.0	1.7	3.0	8.1	7.3	3.6	2.3	6.4	10.4	10.8	11.5	3.9	3.9	11.5
4-Sep	4.1	5.5	9.7	11.6	7.4	Z	15.4	6.7	4.1	1.7	3.0	2.3	3.8	2.3	1.9	1.6	2.2	3.1	3.2	3.6	2.6	2.2	1.7	1.3	4.4	15.4
5-Sep	1.3	0.8	0.8	2.1	Z	2.0	2.2	1.7	1.3	1.5	1.1	1.6	1.3	0.7	0.7	0.7	0.9	1.0	3.0	6.2	4.9	1.7	0.7	0.7	1.7	6.2
6-Sep	0.5	0.8	0.8	1.0	1.0	Z	1.7	1.5	1.4	1.3	1.3	1.1	1.0	1.0	0.9	0.9	0.8	1.1	4.5	2.6	6.6	5.3	4.0	1.2	1.8	6.6
7-Sep	Z	2.0	1.3	1.1	1.1	1.1	1.2	1.8	2.0	5.8	8.8	6.2	4.5	7.3	7.7	4.7	1.9	1.6	0.9	1.3	1.2	5.7	11.6	12.7	4.1	12.7
8-Sep	7.8	Z	2.3	1.0	1.0	2.7	3.4	3.2	1.9	1.8	2.7	2.0	5.5	9.0	11.7	14.7	9.1	8.6	8.6	8.3	10.9	7.5	4.1	3.9	5.7	14.7
9-Sep	2.8	1.9	Z	1.1	0.7	0.7	0.8	0.9	2.0	1.8	1.5	1.2	0.8	0.9	0.9	0.9	0.5	0.5	0.6	0.6	2.4	1.7	0.7	0.6	1.2	2.8
10-Sep	0.6	0.3	0.7	Z	0.6	0.7	0.9	0.3	1.0	4.0	4.1	3.2	2.4	0.4	0.0	0.0	0.0	0.0	0.6	5.7	4.9	5.9	9.5	4.9	2.2	9.5
11-Sep	2.4	2.5	2.1	4.7	Z	1.0	1.2	1.8	1.5	1.9	3.2	2.0	0.9	0.2	0.0	0.1	0.2	0.3	0.7	1.2	0.8	1.4	1.1	0.8	1.4	4.7
12-Sep	1.0	1.6	2.0	1.8	1.4	Z	1.6	1.6	1.1	1.2	0.7	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.5	0.1	1.9	1.4	0.4	0.6	0.9	2.0
13-Sep	Z	0.6	0.3	0.4	0.3	0.6	0.5	0.5	0.5	0.7	1.7	0.8	0.8	0.8	0.5	1.4	3.4	20.9	33.9	47.7	48.2	35.8	25.0	17.4	10.6	48.2
14-Sep	13.1	Z	5.6	3.0	1.6	1.2	0.8	1.0	1.3	0.9	1.1	1.2	6.0	11.0	3.9	5.2	3.8	0.2	0.0	0.0	0.5	1.0	1.4	0.6	2.8	13.1
15-Sep	0.7	0.5	Z	0.4	0.4	0.8	1.3	1.3	0.8	1.6	1.8	2.2	1.2	0.7	0.7	1.5	1.6	1.9	1.1	5.2	7.8	4.2	5.8	4.4	2.1	7.8
16-Sep	5.8	4.7	1.9	Z	4.5	10.0	3.0	0.9	0.5	1.1	1.0	0.8	0.5	0.3	0.2	0.6	3.5	8.0	12.0	10.8	5.0	1.6	1.5	1.2	3.5	12.0
17-Sep	1.6	1.8	1.6	1.3	Z	1.6	2.0	1.2	1.3	1.5	1.1	1.0	0.8	0.6	0.7	0.6	0.7	0.6	0.6	0.3	0.3	0.3	0.4	0.7	1.0	2.0
18-Sep	0.7	0.6	0.7	0.8	0.9	Z	1.2	1.0	1.0	0.5	0.4	0.4	0.2	0.3	0.2	0.2	0.0	0.2	0.2	0.2	0.3	0.5	0.2	0.4	0.5	1.2
19-Sep	Z	0.5	0.5	0.6	0.4	0.8	0.9	0.9	1.1	0.9	0.7	0.4	0.2	0.3	0.2	0.2	0.2	0.0	0.3	3.5	3.5	1.4	3.2	3.6	1.1	3.6
20-Sep	0.6	Z	1.5	1.1	1.0	1.4	1.6	1.9	1.7	1.0	1.2	1.4	1.1	0.7	0.7	0.5	0.6	0.6	0.6	1.3	1.4	0.9	1.2	1.4	1.1	1.9
21-Sep	1.6	1.7	Z	1.7	1.5	1.2	2.1	2.1	1.1	1.0	1.9	7.3	13.3	2.3	2.1	0.3	0.9	1.4	0.1	2.3	4.4	0.5	0.2	0.2	2.2	13.3
22-Sep	0.2	0.3	0.3	Z	0.5	0.5	0.5	0.6	0.4	0.4	0.2	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.6
23-Sep	0.6	0.6	0.6	0.7	Z	0.6	0.6	0.7	0.8	0.3	0.2	0.1	0.0	0.2	0.2	0.3	0.2	0.4	0.2	0.1	0.3	0.2	0.2	0.4	0.4	0.8
24-Sep	0.5	0.3	0.5	0.7	0.6	Z	C	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.7
25-Sep	M	M	M	M	M	M	M	C	C	C	C	0.6	1.0	0.9	1.0	0.7	0.5	0.3	0.4	0.7	0.6	0.6	1.2	0.9	--	1.2
26-Sep	0.5	Z	1.0	0.8	0.8	0.9	1.4	1.2	0.9	0.8	0.6	0.5	0.5	0.4	0.5	0.4	0.6	0.4	0.3	0.4	0.4	0.6	0.5	0.5	0.6	1.4
27-Sep	0.5	0.5	Z	0.6	0.5	0.3	0.6	0.5	0.6	0.3	0.5	0.4	0.3	0.2	0.4	0.4	0.5	0.2	0.5	0.6	1.8	0.6	0.6	0.7	0.5	1.8
28-Sep	0.8	0.7	0.7	Z	1.0	1.3	1.4	0.8	1.2	0.9	0.5	0.4	0.1	0.2	0.1	0.2	0.2	1.1	3.7	4.6	14.6	9.3	6.6	0.4	2.2	14.6
29-Sep	0.5	0.8	7.3	2.1	Z	0.8	0.7	1.5	3.3	0.4	0.5	0.5	0.4	0.5	0.6	0.7	0.6	0.9	1.2	4.7	2.6	7.6	12.3	11.9	2.7	12.3
30-Sep	10.8	4.8	3.6	1.2	1.7	Z	14.8	18.2	18.9	23.5	23.9	10.0	5.6	2.9	2.5	2.0	2.2	2.1	3.4	5.3	4.0	2.3	4.2	1.8	7.4	23.9
	3.0	1.8	2.5	2.2	1.9	1.8	2.7	2.3	2.1	2.4	2.7	2.1	2.3	1.9	1.5	1.7	1.6	2.2	3.0	4.4	5.0	4.0	4.2	3.3	Diurnal Average	
	14.9	8.0	10.1	11.6	11.7	10.0	15.4	18.2	18.9	23.5	23.9	10.0	13.3	11.0	11.7	14.7	9.1	20.9	33.9	47.7	48.2	35.8	25.0	17.8	Diurnal Maximum	

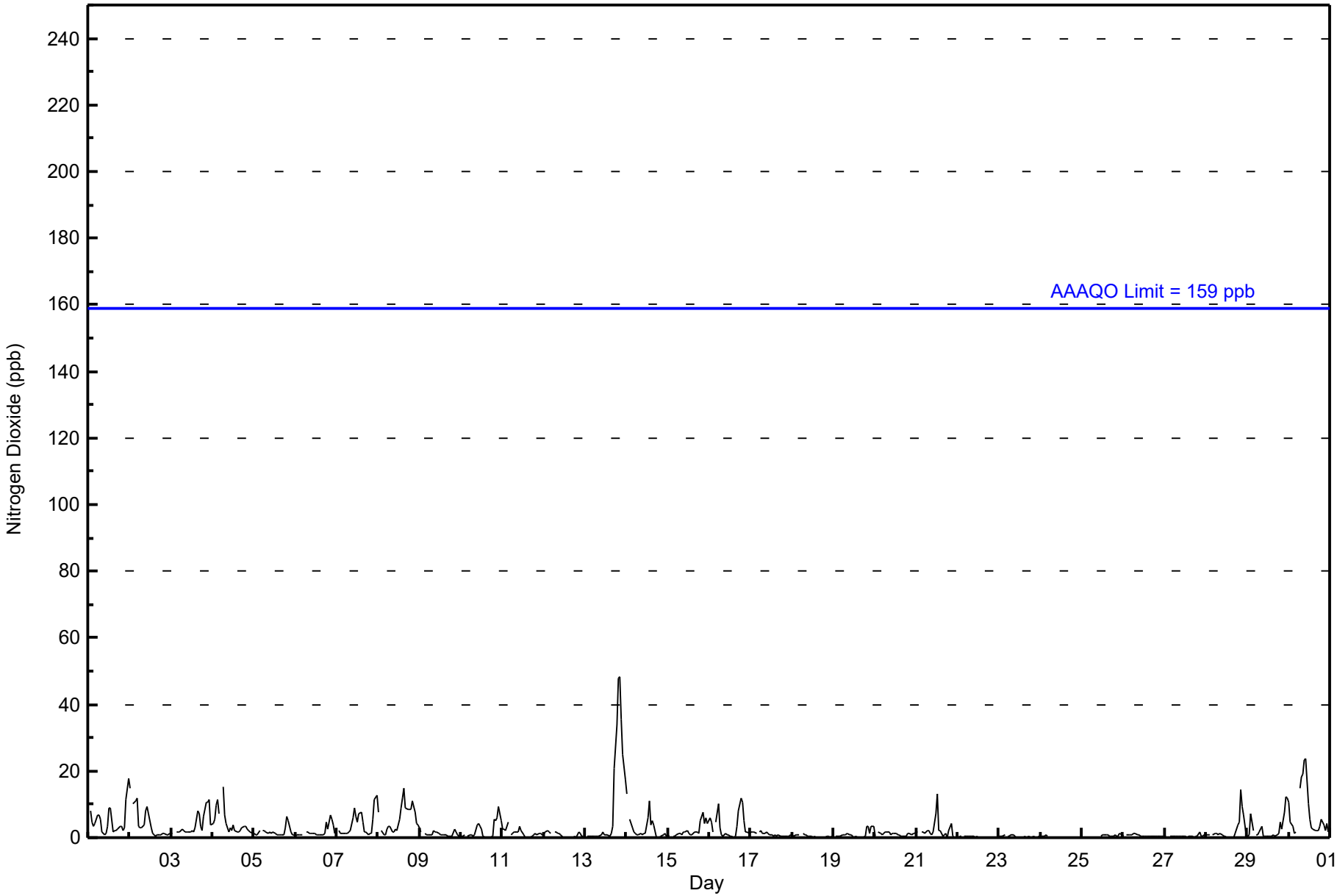
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - September 2025



Nitrogen Dioxide (NO_2) - ppb
Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	654	98.79	98.79
21 - 40	6	0.91	99.70
11 - 80	2	0.30	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 662

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	41	20	6	1	6	17	74	178	76	43	35	46	33	25	25	28	654
21 - 40	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	6
11 - 80	2	0	0	0	0	0	0	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	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	20	6	1	6	17	75	179	76	43	35	46	33	25	25	29	662

Total Number of Valid Hours: 662

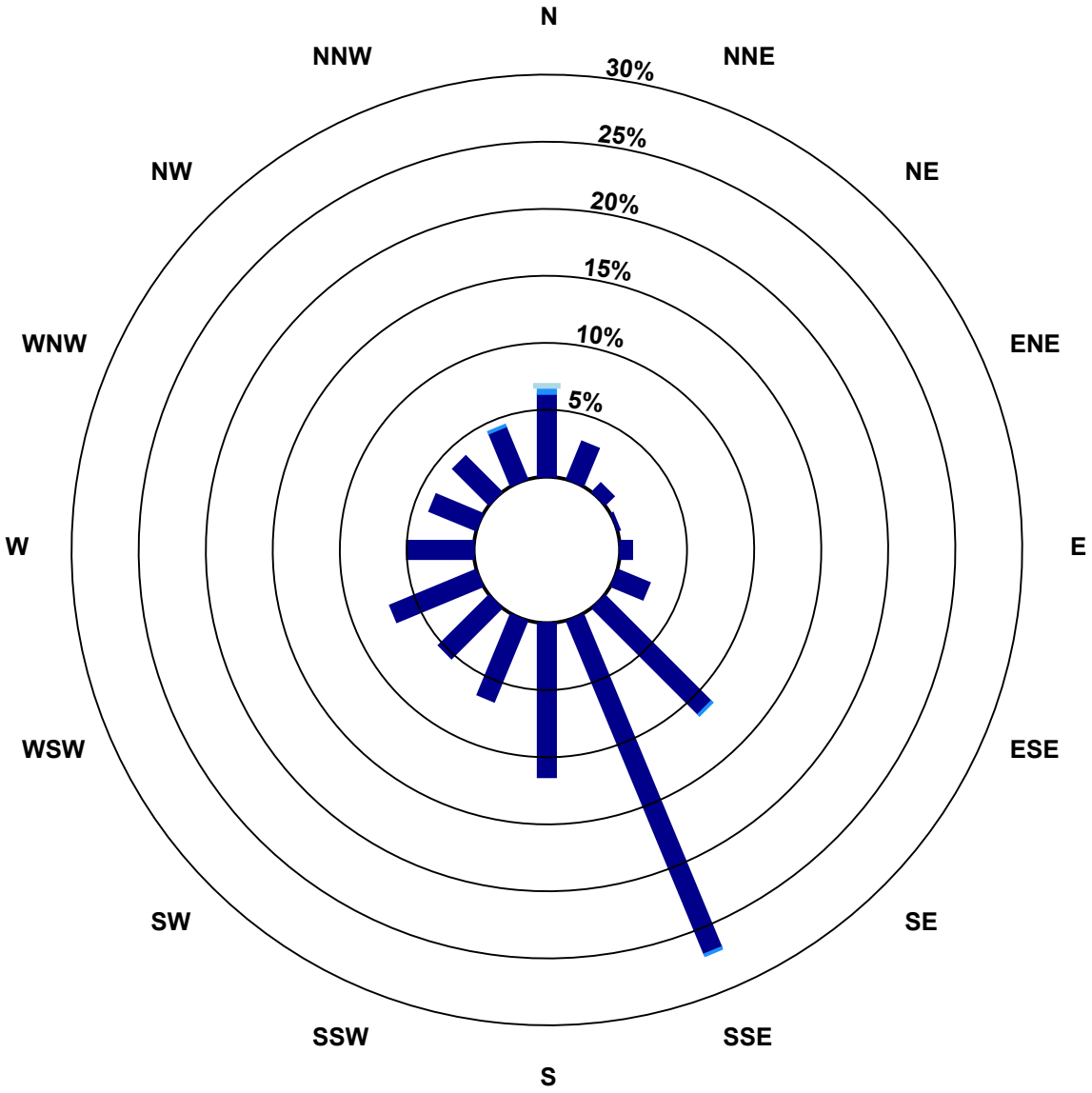
Total Number of Hours: 720

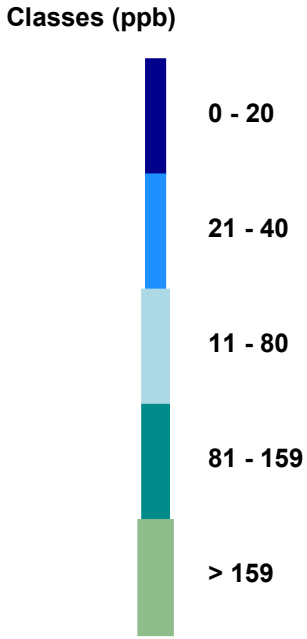
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint





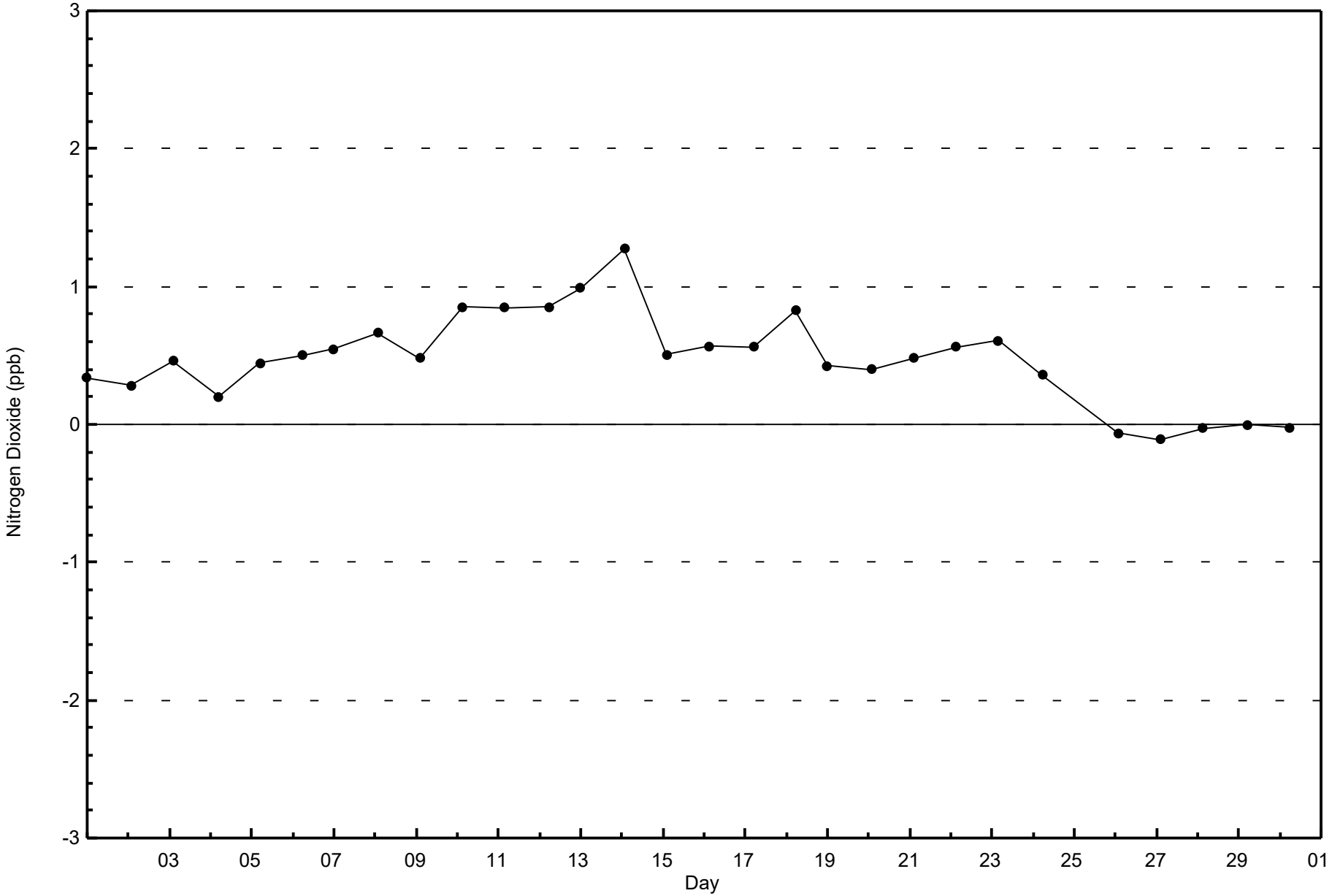
Total Number of Valid Hours: 662

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - September 2025

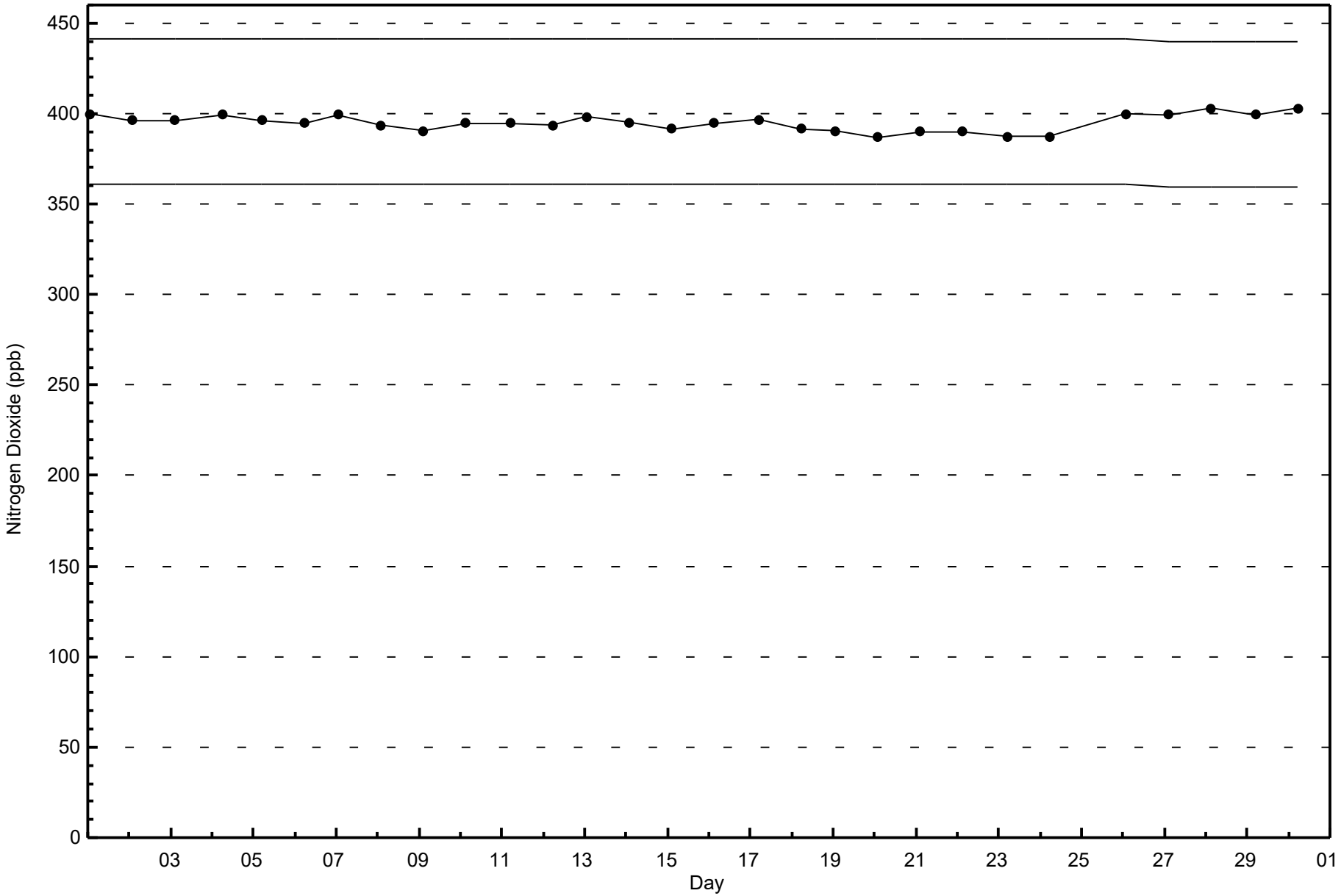


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 76.6 ppb on Sep 30 10:00
Maximum Daily Average: 16.9 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 14 19:00
Minimum Daily Average: 0.3 ppb on Sep 22
Maximum Diurnal Average: 5.4 ppb at hour 21
Minimum Diurnal Average: 1.9 ppb at hour 17
Monthly Average: 3.69 ppb
Percentiles: P_1 = 0.1 P_{10} = 0.4 Q_1 = 0.7 Median = 1.3 Q_3 = 3.1 P_{90} = 8.7 P_{99} = 51.7

Hours in Service:	720
Hours of Data:	662
Hours of Missing Data:	58
Hours of Calibration:	37
Percent Operational Time:	97.1

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	20.8	14.1	4.7	5.6	11.5	15.7	12.1	2.7	1.4	1.7	5.0	15.3	13.6	2.0	2.5	2.5	2.8	3.7	3.4	2.2	3.1	11.8	20.0	7.7	20.8
2-Sep	24.0	Z	13.9	51.4	73.1	16.9	5.5	5.8	8.4	14.5	15.3	10.8	3.6	1.7	1.1	0.6	0.9	1.0	1.1	1.6	1.4	0.9	0.9	1.3	11.1	73.1
3-Sep	1.4	1.5	Z	2.1	2.0	2.1	3.2	2.8	2.1	2.1	2.2	2.1	2.3	2.0	3.5	9.7	8.6	3.8	2.3	6.6	11.6	11.8	15.0	4.3	4.6	15.0
4-Sep	4.4	5.7	10.1	12.2	7.8	Z	19.3	9.1	5.4	2.4	4.4	3.2	5.9	3.3	2.6	2.1	2.8	3.7	3.5	3.7	2.8	2.5	1.9	1.5	5.2	19.3
5-Sep	1.4	0.9	0.9	2.2	Z	2.4	4.5	4.0	2.7	2.9	1.9	2.2	1.7	0.9	0.8	0.9	1.1	1.2	3.2	6.6	5.2	1.9	0.8	0.9	2.2	6.6
6-Sep	0.7	0.8	1.0	1.2	1.2	Z	2.4	2.2	1.9	1.8	1.6	1.4	1.2	1.2	1.1	1.1	0.9	1.1	4.8	2.8	7.0	5.6	4.3	1.3	2.1	7.0
7-Sep	Z	2.4	1.3	1.2	1.1	1.2	1.4	2.3	2.7	9.1	12.4	8.4	5.6	9.0	8.9	5.2	2.1	1.7	0.9	1.4	1.2	5.9	12.3	14.0	4.9	14.0
8-Sep	8.7	Z	2.5	1.0	1.1	2.8	3.9	4.1	2.6	2.3	3.7	2.7	10.1	16.4	18.6	21.2	11.4	9.8	8.9	8.4	11.4	7.9	4.3	4.1	7.3	21.2
9-Sep	3.0	1.9	Z	1.4	0.8	0.8	1.1	1.4	2.9	2.3	1.7	1.3	1.0	1.0	1.1	1.2	0.7	0.6	0.9	0.8	2.6	2.0	1.0	0.9	1.4	3.0
10-Sep	0.9	0.7	1.3	Z	1.2	1.2	1.4	0.7	1.9	6.7	6.5	5.0	3.7	0.8	0.4	0.5	0.5	0.4	1.0	6.3	5.5	6.5	10.4	5.7	3.0	10.4
11-Sep	2.9	3.2	2.9	6.7	Z	1.8	2.1	3.7	3.8	4.0	5.3	3.2	1.3	0.7	0.5	0.6	0.5	0.7	1.1	1.6	1.2	1.7	1.5	1.1	2.3	6.7
12-Sep	1.4	1.8	2.4	2.2	1.8	Z	2.2	2.3	1.6	1.7	1.1	0.4	0.4	0.3	0.5	0.6	0.4	0.4	0.8	0.3	2.2	1.7	0.8	1.0	1.2	2.4
13-Sep	Z	1.1	0.8	0.7	0.6	0.9	0.8	0.8	0.7	1.0	2.1	1.0	0.9	0.9	0.7	1.4	3.7	22.9	36.3	52.0	52.0	38.3	26.4	18.4	11.5	52.0
14-Sep	13.9	Z	6.3	3.2	1.6	1.3	1.1	1.1	1.6	1.0	1.1	1.3	7.2	12.6	4.2	6.1	4.4	0.2	0.0	0.0	0.5	1.0	1.4	0.6	3.1	13.9
15-Sep	0.7	0.5	Z	0.6	0.4	0.8	1.6	2.0	1.2	2.2	2.4	2.7	1.4	1.0	1.0	2.0	2.3	2.5	1.4	5.8	8.5	4.7	6.6	4.7	2.5	8.5
16-Sep	6.3	5.3	2.1	Z	5.1	12.0	3.7	1.6	0.8	1.7	1.4	1.4	0.8	0.5	0.5	0.9	4.2	9.2	12.9	11.5	5.5	1.7	1.6	1.3	4.0	12.9
17-Sep	1.8	2.0	1.7	1.6	Z	2.0	2.4	1.9	2.4	2.4	1.5	1.3	0.9	0.9	0.9	0.9	0.9	0.7	0.8	0.5	0.5	0.5	0.7	0.9	1.3	2.4
18-Sep	0.8	0.8	0.9	1.0	1.3	Z	1.7	1.5	1.6	0.9	0.6	0.7	0.5	0.4	0.3	0.3	0.0	0.3	0.2	0.2	0.4	0.5	0.2	0.4	0.7	1.7
19-Sep	Z	0.5	0.5	0.6	0.4	0.8	0.9	1.2	1.4	1.0	0.7	0.4	0.2	0.4	0.2	0.2	0.2	0.0	0.3	3.6	3.7	1.5	3.3	3.9	1.1	3.9
20-Sep	0.8	Z	1.7	1.2	1.2	1.6	1.9	2.3	2.1	1.1	1.3	1.5	1.2	0.7	0.7	0.5	0.6	0.6	0.6	1.3	1.4	0.9	1.2	1.4	1.2	2.3
21-Sep	1.6	1.7	Z	1.7	1.5	1.2	2.1	2.4	1.3	1.1	2.1	10.0	19.6	2.7	2.3	0.3	1.0	1.4	0.1	2.4	4.5	0.5	0.2	0.2	2.7	19.6
22-Sep	0.3	0.4	0.3	Z	0.9	0.6	0.8	0.8	0.5	0.6	0.4	0.3	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.9
23-Sep	0.6	0.6	0.6	0.8	Z	0.9	0.8	0.9	1.2	0.6	0.4	0.1	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.3	0.4	0.5	1.2
24-Sep	0.6	0.3	0.5	0.7	0.8	Z	C	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.8
25-Sep	M	M	M	M	M	M	M	C	C	C	C	1.2	1.0	0.9	1.0	0.7	0.6	0.3	0.4	0.7	0.8	0.6	1.3	1.0	--	1.3
26-Sep	0.6	Z	1.4	1.1	1.0	1.1	1.8	1.7	1.4	1.0	0.8	0.6	0.7	0.5	0.7	0.4	0.6	0.4	0.3	0.4	0.4	0.6	0.5	0.5	0.8	1.8
27-Sep	0.5	0.5	Z	0.7	0.5	0.3	0.6	0.5	0.6	0.3	0.5	0.5	0.3	0.2	0.5	0.5	0.6	0.3	0.6	0.7	1.8	0.7	0.6	0.7	0.6	1.8
28-Sep	0.8	0.9	0.9	Z	1.2	1.4	1.4	0.8	1.2	1.0	0.6	0.4	0.1	0.2	0.1	0.2	0.3	1.1	3.9	4.9	16.6	9.6	6.9	0.5	2.4	16.6
29-Sep	0.5	0.8	7.6	2.2	Z	0.9	0.8	1.8	3.8	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.6	1.0	1.2	4.9	2.6	7.9	12.9	12.6	2.9	12.9
30-Sep	11.3	5.1	3.8	1.4	1.8	Z	41.3	73.7	66.5	76.6	55.2	12.8	6.6	3.1	2.7	2.0	2.2	2.2	3.4	5.3	4.0	2.3	4.3	1.8	16.9	76.6
	3.6	2.5	3.3	4.2	4.7	2.9	4.5	5.2	4.5	5.1	4.6	2.8	3.3	2.7	2.0	2.2	1.9	2.4	3.3	4.8	5.4	4.3	4.6	3.6	Diurnal Average	
	24.0	20.8	14.1	51.4	73.1	16.9	41.3	73.7	66.5	76.6	55.2	12.8	19.6	16.4	18.6	21.2	11.4	22.9	36.3	52.0	52.0	38.3	26.4	20.0	Diurnal Maximum	

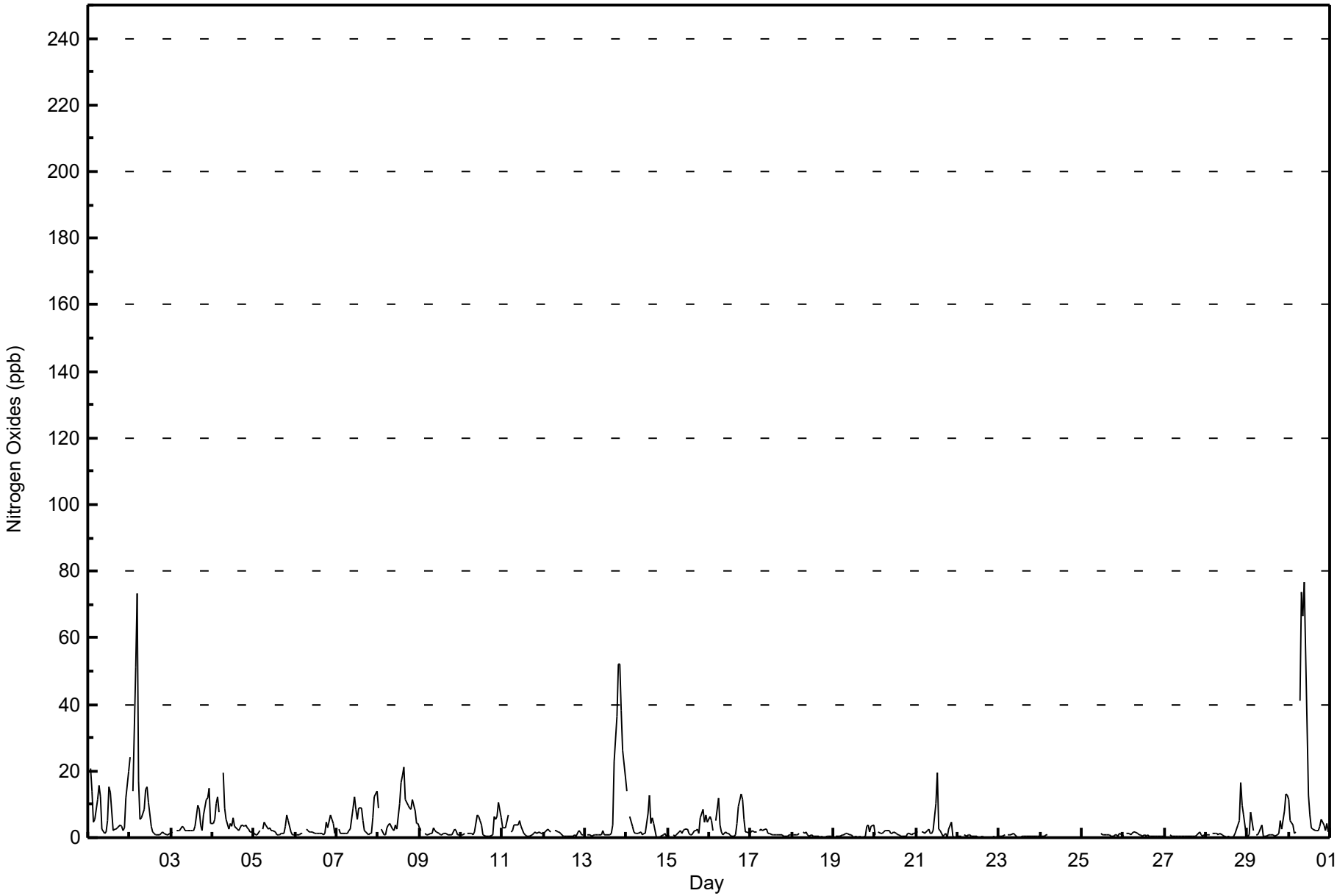
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - September 2025



Nitrogen Oxides (NO_X) - ppb
Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	646	97.58	97.58
21 - 40	7	1.06	98.64
11 - 80	9	1.36	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 662

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	39	20	6	1	6	17	74	178	76	42	35	46	33	25	22	26	646
21 - 40	3	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	7
11 - 80	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	9
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	46	20	6	1	6	17	75	179	76	43	35	46	33	25	25	29	662

Total Number of Valid Hours: 662

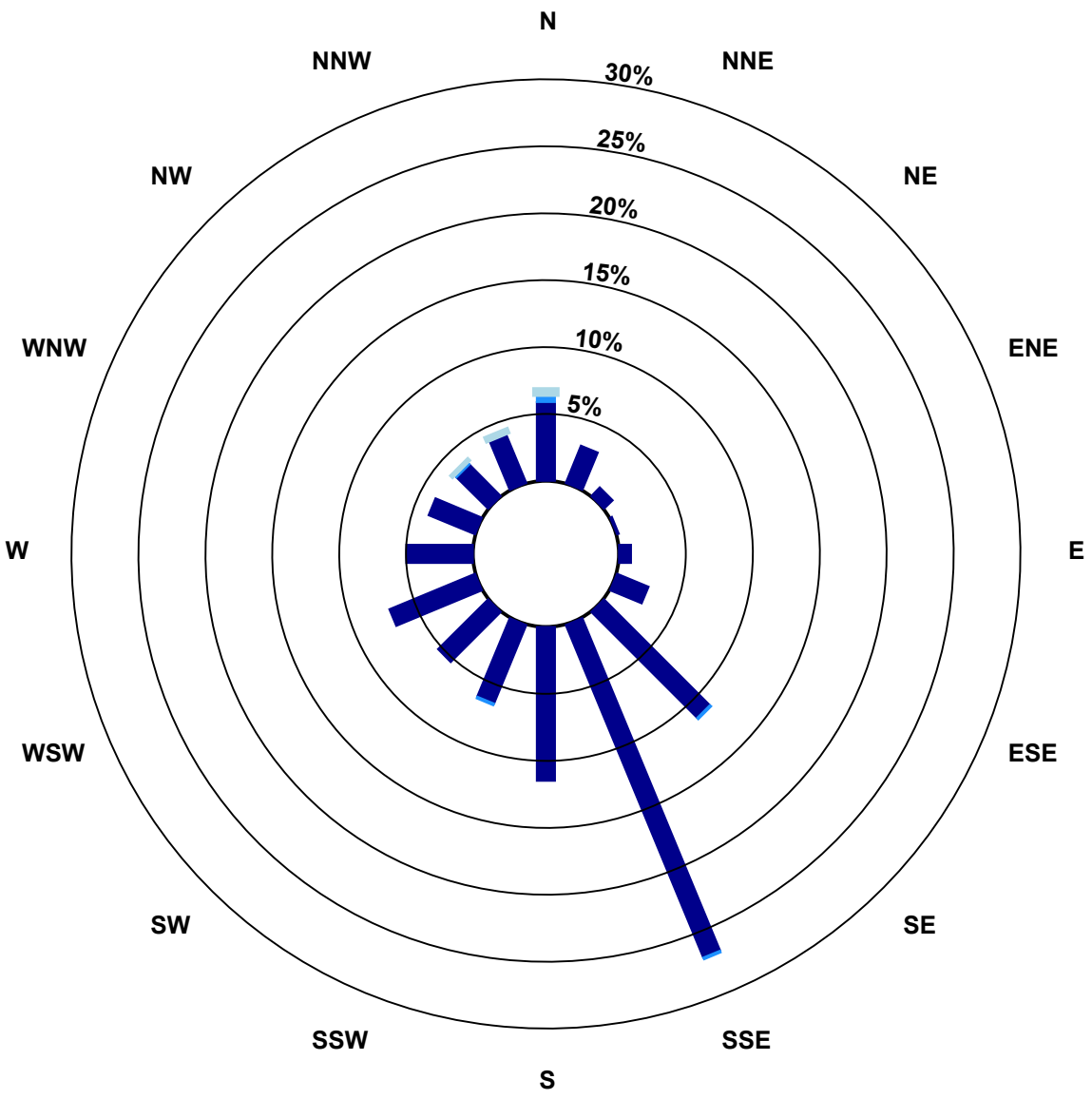
Total Number of Hours: 720

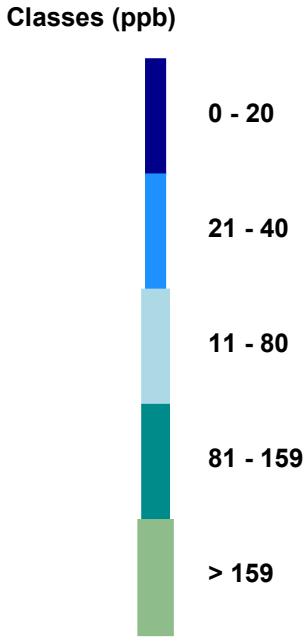
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint





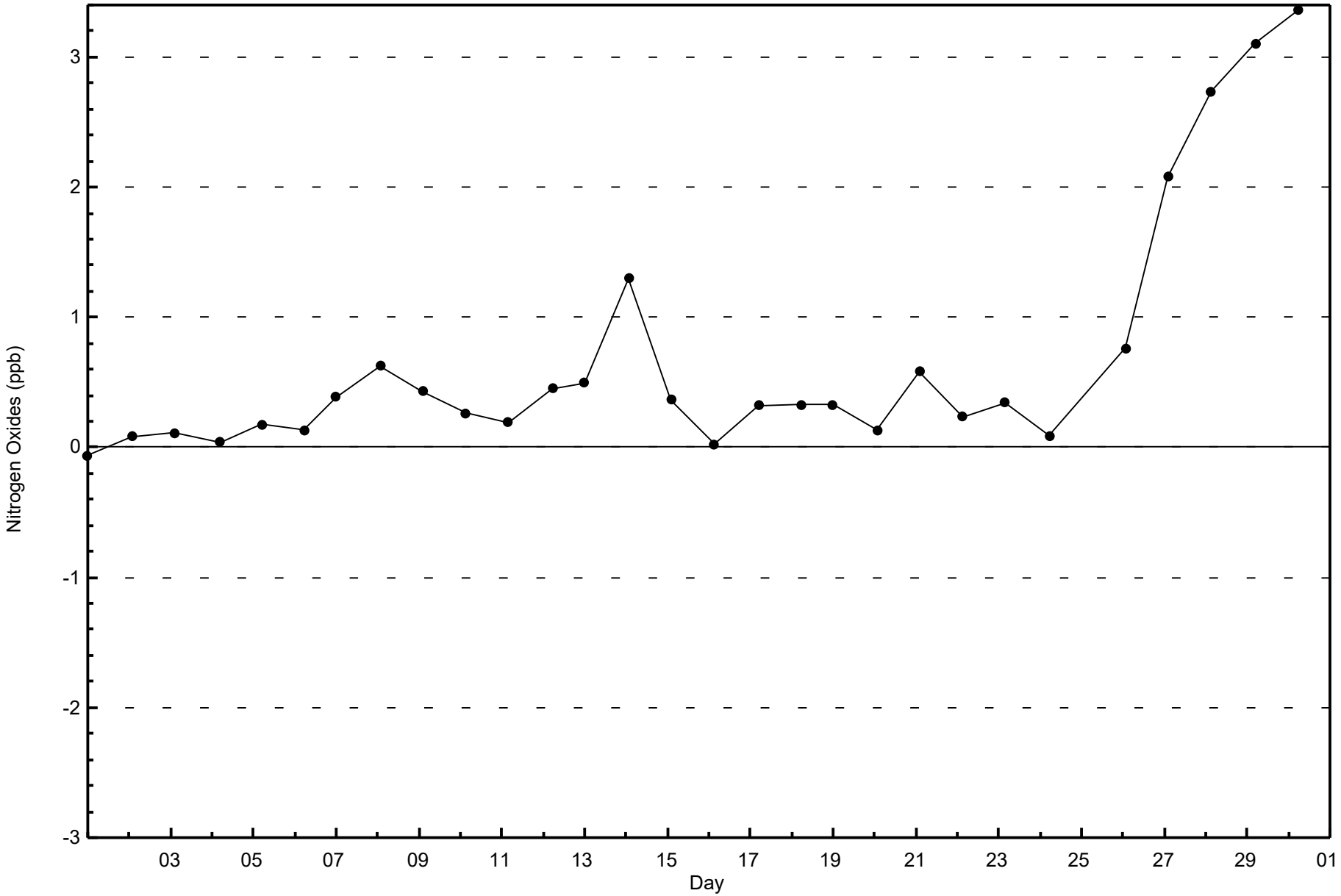
Total Number of Valid Hours: 662

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - September 2025

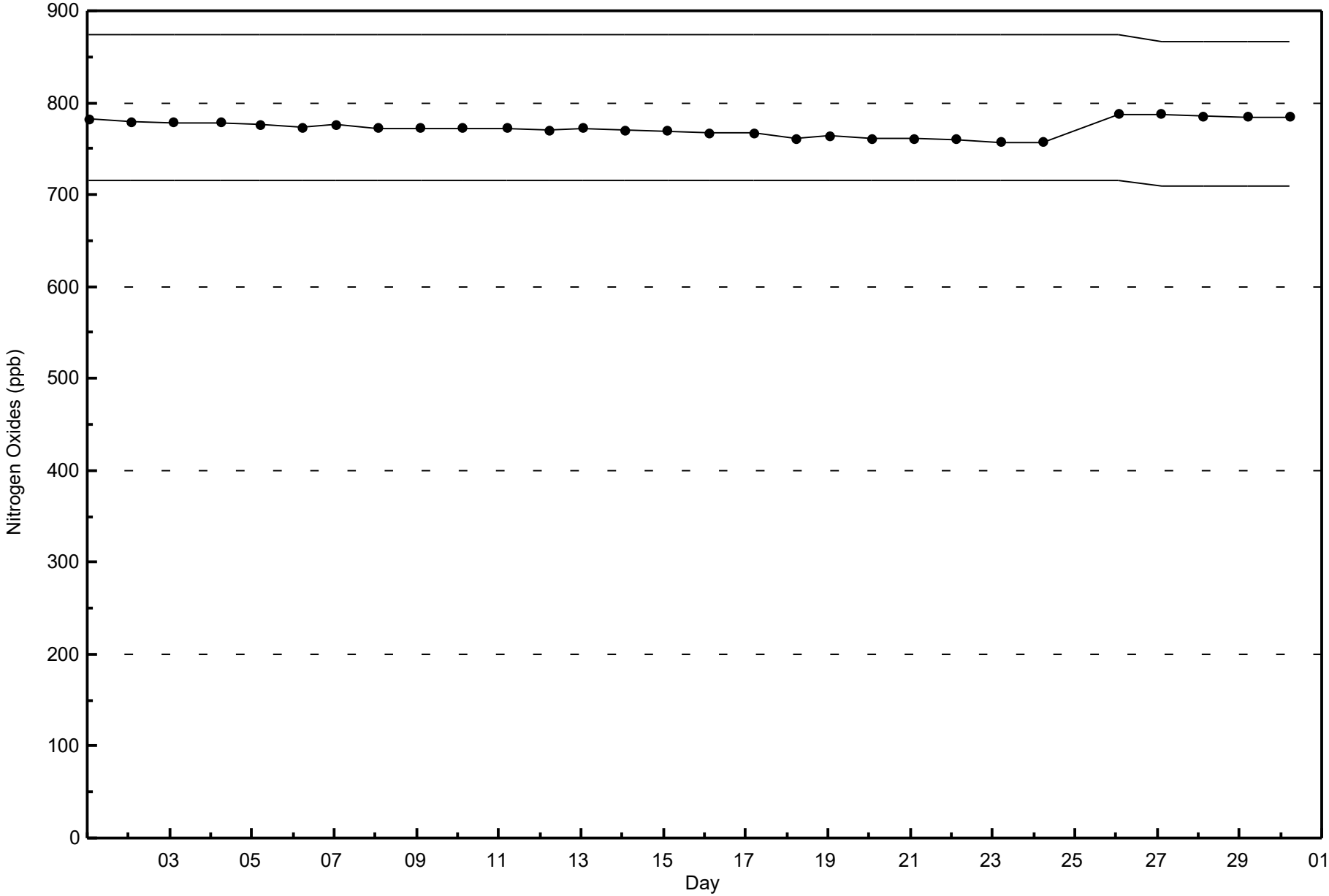


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 58.4 ppb on Sep 20 17:00
Maximum Daily Average: 36.0 ppb on Sep 20

Minimum Value: 1.6 ppb on Sep 2 04:00
Minimum Daily Average: 13.4 ppb on Sep 1
Maximum Diurnal Average: 35.2 ppb at hour 15
Minimum Diurnal Average: 15.4 ppb at hour 7
Monthly Average: 24.38 ppb
Percentiles: P_1 = 2.0 P_{10} = 9.2 Q_1 = 17.0 Median = 25.1 Q_3 = 32.3 P_{90} = 37.5 P_{99} = 52.2

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.1	1.8	1.7	2.8	2.9	Z	2.0	3.0	7.4	9.8	10.8	15.1	14.7	19.9	27.1	27.9	27.8	26.8	24.5	21.5	22.7	19.3	11.8	4.6	13.4	27.9
2-Sep	Z	2.0	2.5	1.6	1.8	1.8	2.9	4.0	6.2	9.7	14.0	20.9	27.8	31.3	30.9	33.9	32.5	29.3	24.6	23.3	23.3	24.2	24.3	21.9	17.2	33.9
3-Sep	20.6	Z	19.4	18.5	18.3	17.6	15.9	16.0	17.9	19.5	21.5	22.8	25.4	27.0	23.9	20.0	21.9	26.9	28.4	21.7	16.0	14.8	13.3	21.0	20.4	28.4
4-Sep	19.6	18.7	13.8	12.9	Z	14.6	10.3	18.3	20.9	24.2	23.6	25.0	23.3	25.8	26.3	26.6	25.5	23.4	21.2	19.8	20.2	13.4	9.9	3.5	19.2	26.6
5-Sep	2.6	4.3	3.4	Z	3.9	4.3	4.2	5.7	11.6	16.3	20.0	23.4	27.9	29.7	31.0	32.2	32.5	31.3	29.1	17.8	15.7	19.1	22.6	23.4	17.9	32.5
6-Sep	22.6	20.2	18.7	17.4	Z	14.5	12.3	13.1	18.0	22.3	27.3	33.9	39.5	41.8	42.8	44.0	44.5	41.0	38.4	31.2	15.2	13.1	10.0	17.7	26.1	44.5
7-Sep	15.0	9.5	12.2	18.4	20.0	Z	16.2	14.9	18.2	18.6	23.5	29.5	32.5	34.1	35.4	28.0	26.9	22.9	19.2	16.9	14.8	8.1	3.5	3.0	19.2	35.4
8-Sep	Z	7.7	7.1	8.3	8.7	7.5	9.0	10.4	12.6	15.1	15.4	19.5	18.7	18.2	23.3	24.5	31.4	29.0	29.0	26.8	15.5	5.7	5.7	5.6	15.4	31.4
9-Sep	8.6	Z	9.6	9.4	8.6	9.2	8.5	9.2	13.3	17.5	20.7	25.4	31.3	38.0	43.5	46.6	47.7	45.3	40.1	43.2	32.3	21.9	25.8	23.6	25.2	47.7
10-Sep	18.2	19.0	Z	11.0	9.1	10.4	13.3	13.5	15.1	17.0	21.6	26.1	31.1	35.0	34.4	33.6	32.8	31.6	29.6	24.8	19.8	12.1	7.3	5.1	20.5	35.0
11-Sep	9.0	4.4	5.3	Z	3.5	6.6	6.7	8.6	10.0	13.8	21.3	30.9	38.3	37.8	37.0	39.7	39.3	36.8	32.6	25.6	27.0	26.0	26.5	27.7	22.4	39.7
12-Sep	27.6	27.9	25.4	24.2	Z	21.1	21.6	18.6	22.5	29.4	34.9	42.4	45.3	49.1	52.4	54.5	52.2	49.0	45.0	42.6	36.0	30.0	28.5	29.6	35.2	54.5
13-Sep	30.6	27.2	27.8	26.8	25.7	Z	25.6	27.3	29.3	27.8	29.2	36.1	37.9	40.6	42.6	42.6	38.0	22.6	11.8	3.7	2.7	2.9	5.4	5.7	24.8	42.6
14-Sep	Z	3.3	13.7	15.8	20.2	15.5	13.3	13.0	12.5	16.6	22.2	28.6	32.5	26.9	26.7	17.7	23.2	37.1	39.6	37.1	33.3	32.4	20.5	22.8	22.8	39.6
15-Sep	21.6	Z	14.1	13.1	13.7	11.5	9.6	8.1	10.6	19.5	28.2	34.9	33.5	33.8	30.1	21.6	16.8	19.0	22.8	14.5	8.4	11.8	10.6	11.4	18.2	34.9
16-Sep	9.8	11.6	Z	12.2	10.3	4.1	11.2	13.7	16.2	18.6	22.8	24.0	25.4	25.9	26.3	28.4	29.5	23.9	17.2	11.5	12.7	20.8	20.5	19.3	18.1	29.5
17-Sep	16.9	14.0	13.1	Z	10.9	9.2	8.2	8.9	11.0	17.0	25.5	31.1	34.6	37.7	40.0	39.3	39.6	39.4	34.9	30.8	33.0	32.5	30.3	28.9	25.5	40.0
18-Sep	28.1	26.6	24.2	22.9	Z	21.3	21.0	22.1	22.5	28.6	33.2	36.1	38.4	41.2	44.8	46.3	47.3	45.1	39.9	34.6	29.0	32.4	33.7	32.2	32.7	47.3
19-Sep	29.6	29.2	28.5	26.0	23.1	Z	18.6	19.2	20.9	23.2	25.7	30.4	34.0	33.6	34.9	35.9	34.4	32.1	27.9	21.5	16.4	19.4	14.5	13.9	25.8	35.9
20-Sep	Z	16.0	16.0	18.9	19.2	17.9	17.1	17.7	22.6	26.8	30.2	37.5	47.5	54.5	57.6	58.3	58.4	54.3	48.6	44.3	41.9	40.7	41.0	40.0	36.0	58.4
21-Sep	37.9	Z	31.7	31.0	25.7	20.8	18.0	16.6	20.8	31.1	35.2	33.7	32.3	42.3	42.0	39.2	36.5	36.3	37.7	33.4	23.4	22.9	21.4	25.1	30.2	42.3
22-Sep	28.2	28.6	Z	25.7	23.2	21.6	21.7	21.5	22.9	24.6	25.8	27.7	29.9	31.6	32.9	34.3	35.3	34.1	32.1	30.8	30.7	29.1	28.7	31.3	28.4	35.3
23-Sep	33.8	35.0	35.6	Z	32.7	31.8	29.7	27.3	27.1	33.3	37.2	37.5	37.7	37.8	36.9	36.0	35.9	35.1	33.3	33.2	31.6	32.2	32.7	28.0	33.5	37.8
24-Sep	26.9	25.1	25.9	26.6	Z	25.7	23.6	25.3	26.1	24.4	25.4	27.6	30.5	32.3	32.9	31.3	31.2	29.5	21.8	25.8	28.6	18.7	17.2	17.9	26.1	32.9
25-Sep	17.6	20.9	20.2	17.4	18.4	Z	16.8	14.7	17.0	20.7	22.6	26.2	29.1	33.4	34.4	36.8	36.9	36.3	35.3	34.6	35.1	42.9	34.7	31.5	27.5	42.9
26-Sep	Z	23.0	20.9	20.9	18.1	15.9	12.8	12.9	C	C	C	23.5	26.5	27.7	29.0	31.0	31.9	33.2	33.1	32.1	33.7	30.6	29.0	28.4	25.7	33.7
27-Sep	28.6	Z	27.0	31.8	33.6	32.7	32.6	33.0	33.4	34.3	34.4	35.0	35.7	36.4	36.3	35.3	35.0	34.2	32.7	29.1	25.0	26.7	25.6	27.9	32.0	36.4
28-Sep	29.5	28.5	Z	25.2	23.5	22.6	22.0	21.7	22.0	22.7	25.0	28.8	32.2	32.6	33.5	32.9	31.4	26.7	21.9	15.1	8.1	13.1	20.4	27.5	24.6	33.5
29-Sep	27.1	26.1	18.3	Z	29.0	30.5	30.8	28.8	27.9	33.4	33.3	33.6	34.9	37.4	37.6	37.9	37.7	35.1	33.4	27.5	25.8	22.3	17.0	14.5	29.6	37.9
30-Sep	14.8	18.9	22.4	21.6	Z	10.3	5.9	2.5	3.0	4.2	7.3	22.2	24.8	27.6	28.1	28.1	27.3	27.5	25.0	21.5	21.9	22.5	14.3	15.3	18.1	28.1
	21.1	18.0	17.6	18.4	16.8	16.0	15.4	15.7	17.9	21.4	24.8	29.0	31.8	34.0	35.2	34.8	34.7	33.2	30.3	26.5	23.3	22.1	20.2	20.3	Diurnal Average	
	37.9	35.0	35.6	31.8	33.6	32.7	32.6	33.0	33.4	34.3	37.2	42.4	47.5	54.5	57.6	58.3	58.4	54.3	48.6	44.3	41.9	42.9	41.0	40.0	Diurnal Maximum	

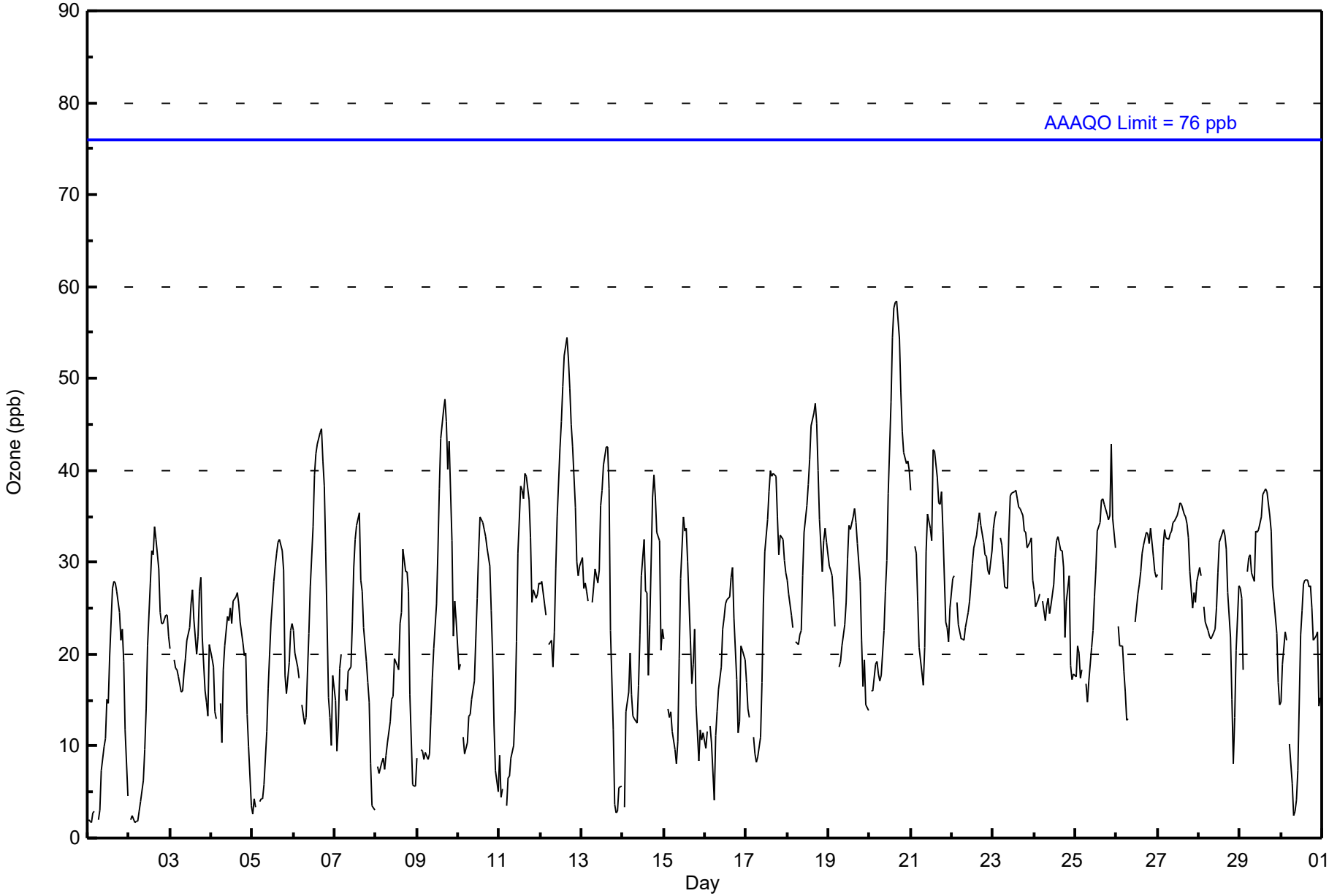
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	239	34.79	34.79
21 - 50	440	64.05	98.84
51 - 82	8	1.16	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Buffalo Viewpoint - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	5	4	1	0	3	20	85	38	5	4	5	4	13	17	13	239
21 - 50	25	14	0	0	6	14	57	101	43	31	34	41	30	17	12	15	440
51 - 82	0	0	0	0	0	0	0	1	1	6	0	0	0	0	0	0	8
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	47	19	4	1	6	17	77	187	82	42	38	46	34	30	29	28	687

Total Number of Valid Hours: 687

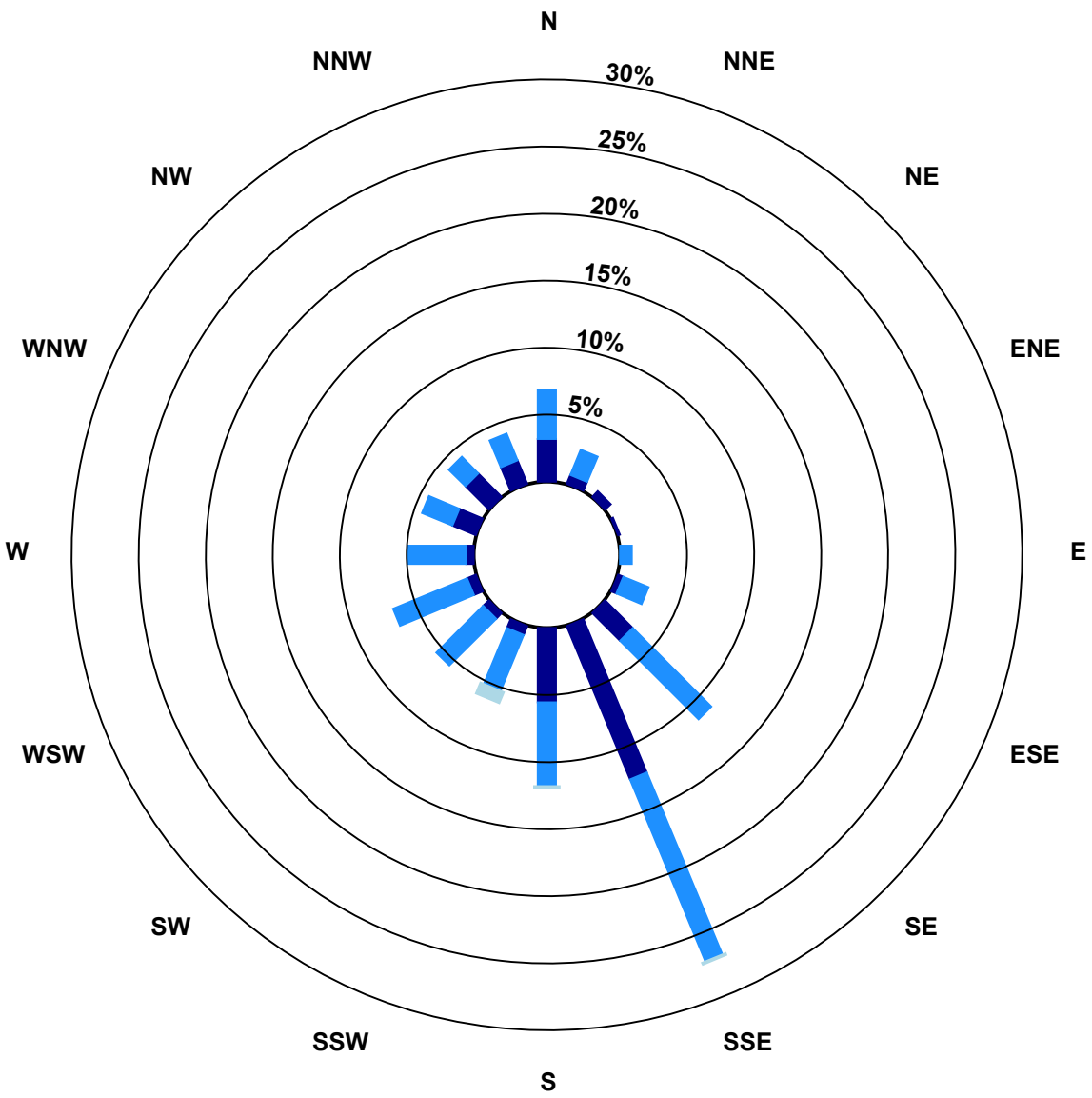
Total Number of Hours: 720

Wood Buffalo Environmental Association

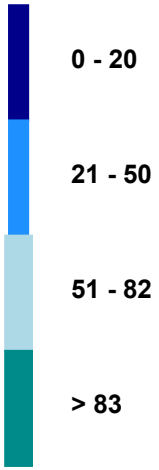
Wind Rose Sep 2025

Ozone (O_3) - ppb

Buffalo Viewpoint



Classes (ppb)



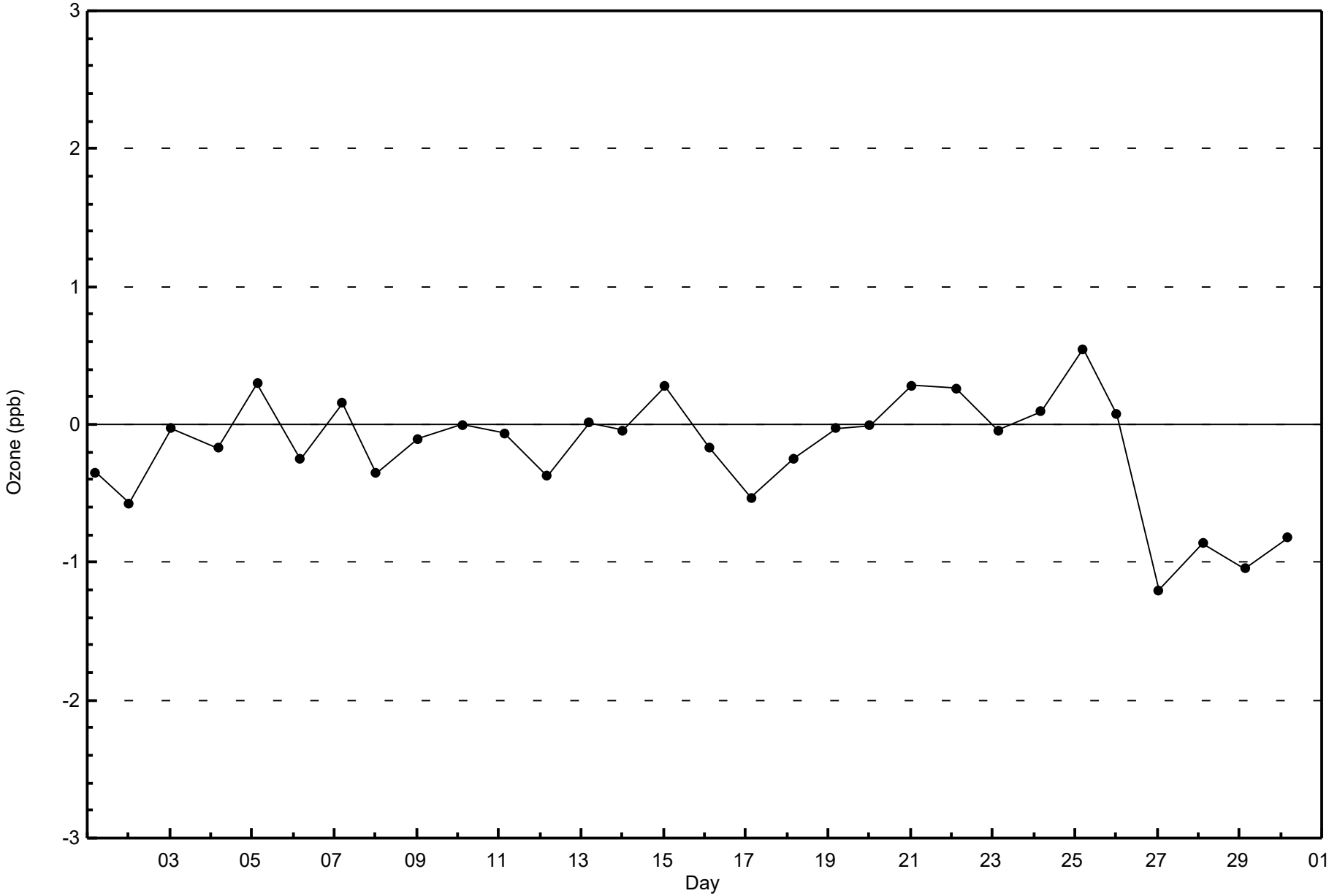
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - September 2025

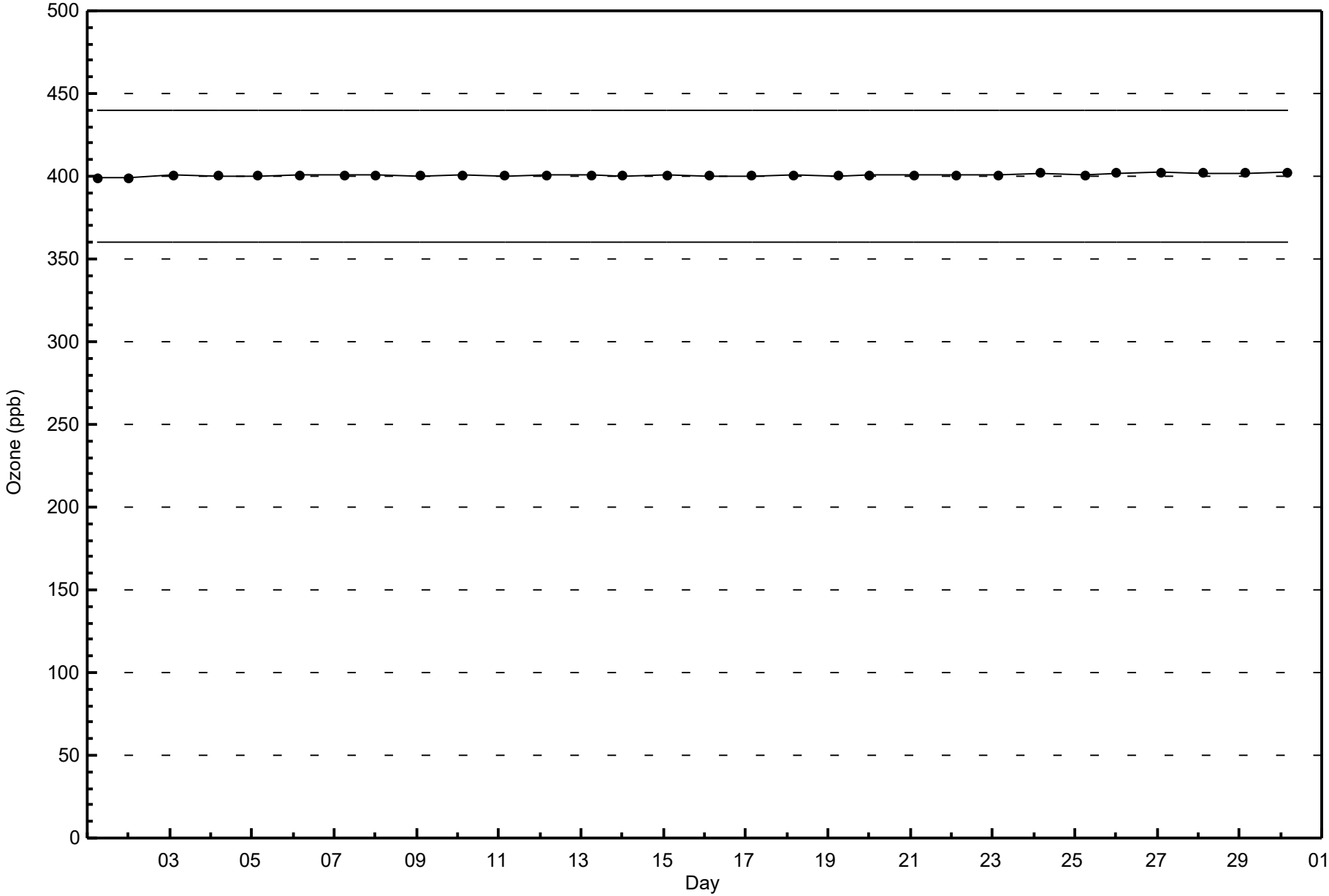


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Buffalo Viewpoint - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 11

Maximum Value: 171.2 $\mu g/m^3$ on Sep 14 09:00

Maximum Daily Average: 63.0 $\mu g/m^3$ on Sep 14

Minimum Value: 0.8 $\mu g/m^3$ on Sep 22 20:00

Minimum Daily Average: 6.5 $\mu g/m^3$ on Sep 23

Maximum Diurnal Average: 37.4 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 16.4 $\mu g/m^3$ at hour 15

Monthly Average: 25.01 $\mu g/m^3$

Percentiles: P_1 = 1.8 P_{10} = 5.4 Q_1 = 9.0 Median = 17.1 Q_3 = 30.4 P_{90} = 56.2 P_{99} = 145.0

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	32.0	31.4	29.3	30.8	31.8	31.5	27.6	26.9	16.3	11.8	11.5	12.8	34.3	29.8	16.7	54.6	87.4	116.7	115.2	93.6	56.6	45.1	46.3	46.7	43.2	116.7
2-Sep	49.9	56.2	58.0	63.5	66.9	52.5	52.2	53.7	56.3	59.6	56.2	41.4	32.4	25.4	21.2	11.3	16.0	19.0	20.9	22.4	24.6	27.7	29.3	33.8	39.6	66.9
3-Sep	39.9	54.6	62.5	63.4	62.3	59.7	54.0	48.5	45.1	41.2	40.1	38.9	39.2	44.9	49.3	54.7	62.1	47.1	27.9	44.6	62.3	66.0	66.5	32.6	50.3	66.5
4-Sep	27.5	13.1	15.7	14.5	9.6	7.8	7.5	7.8	8.4	9.8	6.5	5.7	7.6	6.1	5.4	6.7	6.3	6.9	4.9	4.4	5.2	5.3	4.5	4.4	8.4	27.5
5-Sep	4.3	4.6	4.7	5.5	5.2	7.0	13.5	8.6	5.8	4.7	5.0	6.0	7.4	7.9	9.2	9.8	10.1	9.6	11.3	12.6	11.1	8.5	6.6	6.4	7.7	13.5
6-Sep	6.8	10.1	15.1	22.6	29.1	45.1	60.6	87.5	73.5	61.1	56.1	41.0	24.3	17.3	12.3	10.6	9.2	8.9	10.5	9.4	10.2	13.0	13.1	12.7	27.5	87.5
7-Sep	12.2	11.6	12.5	13.7	13.9	15.2	21.1	19.6	19.5	19.2	24.0	23.6	25.9	27.1	30.4	26.8	26.5	23.1	20.3	18.1	16.8	19.2	22.5	24.1	20.3	30.4
8-Sep	28.1	34.2	36.3	33.7	32.4	30.0	24.6	20.4	20.9	18.4	19.8	17.1	29.5	38.4	35.0	37.4	31.3	33.7	31.8	32.1	32.6	31.6	31.8	30.6	29.7	38.4
9-Sep	25.8	19.0	16.2	14.6	15.8	23.4	25.1	33.2	57.7	64.0	58.4	49.0	37.7	30.4	23.8	22.9	23.4	24.0	24.3	25.3	23.7	23.7	23.0	22.6	29.5	64.0
10-Sep	21.3	20.0	19.5	19.4	19.2	21.3	22.4	24.2	20.6	18.7	17.8	16.3	12.5	11.9	11.4	7.8	5.8	8.2	7.7	9.0	12.8	10.7	14.4	10.0	15.1	24.2
11-Sep	6.4	6.2	6.1	6.7	4.8	6.4	10.8	13.3	12.2	10.2	11.1	8.3	6.7	7.0	8.5	7.4	7.4	7.4	8.5	7.9	9.7	11.9	17.8	36.8	10.0	36.8
12-Sep	74.6	137.7	154.5	157.8	144.1	129.5	103.0	107.8	87.3	57.1	37.2	23.8	21.1	20.7	20.4	20.6	21.2	20.7	21.0	21.4	20.4	19.7	20.4	20.3	60.9	157.8
13-Sep	20.5	20.3	20.3	19.7	19.4	22.8	21.4	21.7	20.5	19.9	21.7	20.3	21.6	22.0	24.3	22.0	27.9	47.1	44.6	47.0	44.6	42.7	44.7	43.7	28.4	47.1
14-Sep	39.9	37.3	39.3	53.5	71.0	77.0	149.1	169.4	171.2	145.2	131.6	105.9	88.6	64.1	49.2	39.8	34.1	7.9	6.2	6.4	6.5	6.7	6.4	6.4	63.0	171.2
15-Sep	6.3	6.8	8.8	10.9	10.5	10.5	10.3	10.8	9.3	11.4	19.7	30.6	22.3	22.4	24.7	45.6	38.3	27.0	21.9	27.7	35.5	32.8	21.5	18.9	20.2	45.6
16-Sep	16.8	15.9	15.4	16.4	19.8	18.8	18.2	19.1	17.5	19.6	18.0	16.6	16.5	15.6	13.8	14.3	18.6	22.0	22.7	21.1	17.8	17.7	20.1	19.7	18.0	22.7
17-Sep	19.6	20.8	20.4	22.9	26.2	29.8	34.0	34.3	28.9	25.0	20.3	15.8	14.7	12.1	11.5	11.2	12.2	11.5	10.4	10.0	8.2	8.5	9.3	9.6	17.8	34.3
18-Sep	10.2	10.3	10.4	10.7	11.2	12.2	12.7	12.2	13.0	14.5	19.4	16.5	13.4	11.1	9.4	8.2	7.2	6.5	5.4	5.0	4.7	7.1	8.3	8.0	10.3	19.4
19-Sep	5.4	3.9	3.1	3.0	3.3	5.7	15.2	13.8	11.9	23.0	42.3	27.7	11.1	10.9	4.6	3.5	5.1	1.7	2.0	3.7	4.6	5.7	5.5	5.2	9.2	42.3
20-Sep	3.9	4.4	4.6	5.1	5.3	8.1	5.3	7.3	7.1	6.6	7.5	9.5	10.9	12.5	12.8	13.4	12.3	12.4	13.0	13.8	13.6	13.1	12.9	12.5	9.5	13.8
21-Sep	12.2	11.8	11.7	11.4	11.7	12.3	15.2	22.2	21.5	19.6	14.9	16.9	21.5	10.5	14.4	11.1	10.5	16.0	12.6	6.6	6.7	9.5	13.3	11.2	13.6	22.2
22-Sep	15.6	22.0	18.2	17.3	18.3	21.1	25.8	32.7	27.8	20.2	15.9	13.0	10.0	8.9	11.4	6.6	2.6	2.8	1.0	0.8	1.1	1.3	1.8	2.5	12.5	32.7
23-Sep	3.0	3.2	3.4	3.4	3.6	4.6	5.4	5.5	7.8	11.9	6.1	5.1	5.9	9.1	15.1	18.0	11.7	12.0	8.5	2.6	2.8	1.9	2.8	3.1	6.5	18.0
24-Sep	4.8	7.1	14.5	22.2	24.2	23.4	39.6	56.0	81.2	93.8	84.5	53.3	33.2	13.5	6.9	13.2	9.7	9.2	14.8	9.8	27.3	28.2	30.0	45.9	31.1	93.8
25-Sep	52.8	55.1	55.3	43.8	42.5	56.1	55.5	41.5	25.7	20.8	18.7	9.7	10.2	7.6	5.7	3.3	2.3	1.7	1.9	2.2	2.7	8.1	45.8	34.7	25.2	56.1
26-Sep	16.6	14.5	18.3	59.4	80.6	86.7	79.5	C	59.6	41.3	31.7	20.2	8.3	9.0	12.4	8.8	7.2	4.3	4.1	5.8	5.7	7.3	14.4	23.9	26.9	86.7
27-Sep	22.8	9.4	3.6	1.6	5.2	10.1	7.9	7.5	15.0	13.5	7.7	4.5	3.5	4.7	7.4	6.2	7.2	8.4	8.5	8.2	9.0	11.1	13.7	19.9	9.0	22.8
28-Sep	51.8	50.6	56.9	60.9	65.0	66.3	64.7	63.1	55.9	42.7	27.7	16.8	6.5	6.1	4.8	5.4	7.6	9.0	15.5	17.5	20.4	17.3	10.5	7.3	31.3	66.3
29-Sep	17.2	31.6	38.6	36.3	26.7	14.9	10.9	29.5	34.3	10.9	11.9	9.4	6.7	6.8	6.9	8.2	8.2	17.8	11.4	12.9	15.2	57.6	149.8	152.8	30.3	152.8
30-Sep	105.2	87.0	36.9	68.7	58.7	75.7	77.1	79.3	90.9	83.1	58.2	35.9	15.6	16.7	13.2	22.3	22.0	20.3	19.0	21.1	21.5	21.4	22.0	22.0	45.6	105.2
	25.1	27.0	27.0	30.4	31.3	32.8	35.7	37.1	37.4	33.3	30.0	23.7	20.0	17.7	16.4	17.7	18.4	18.8	17.6	17.4	17.8	19.3	24.3	24.3	Diurnal Average	
	105.2	137.7	154.5	157.8	144.1	129.5	149.1	169.4	171.2	145.2	131.6	105.9	88.6	64.1	49.3	54.7	87.4	116.7	115.2	93.6	62.3	66.0	149.8	152.8	Diurnal Maximum	

C - Calibration

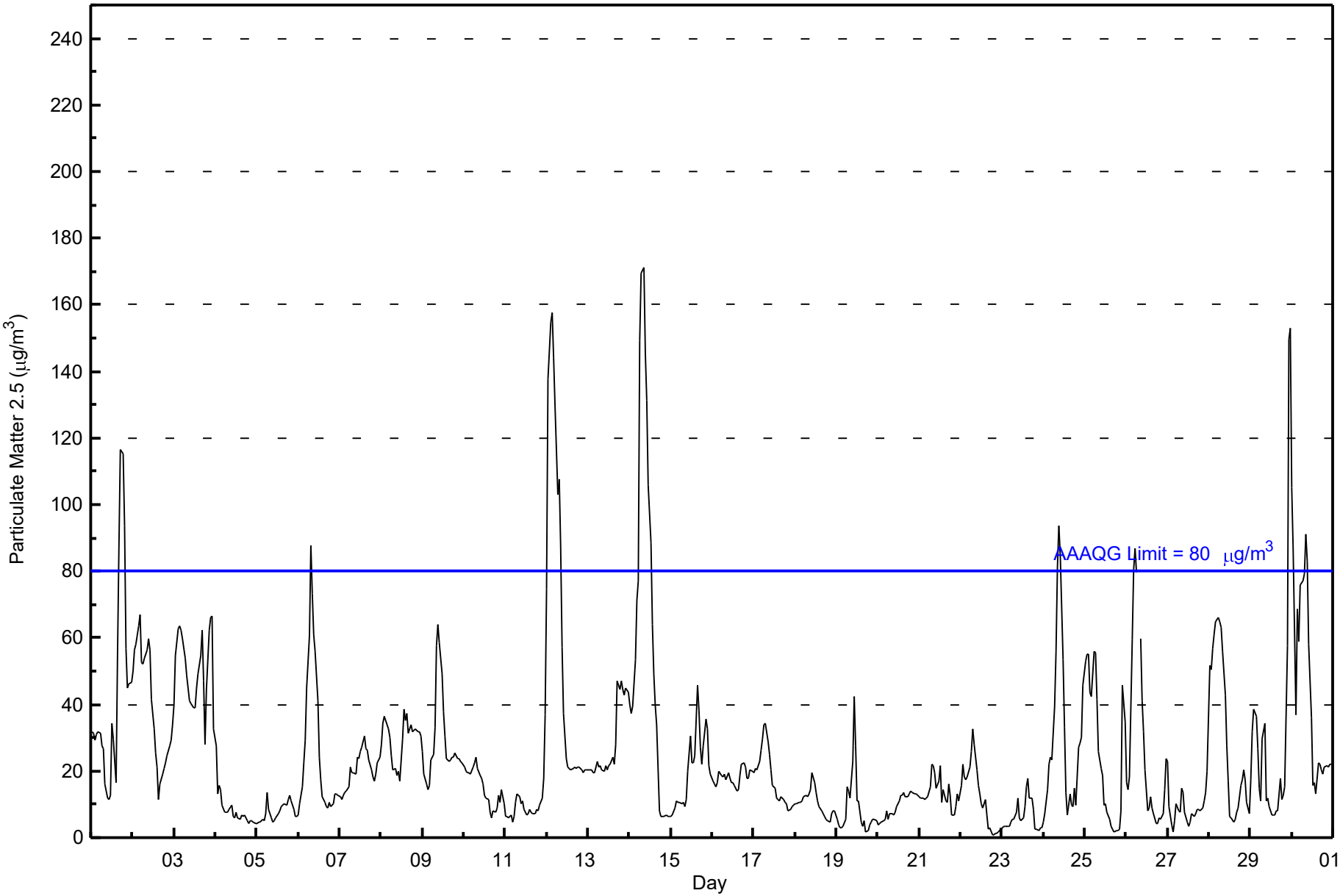
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Buffalo Viewpoint - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Buffalo Viewpoint - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	76	10.57	10.57
6 - 15	258	35.88	46.45
16 - 25	171	23.78	70.24
26 - 80	183	25.45	95.69
> 81.0	31	4.31	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Buffalo Viewpoint - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	1	2	0	0	1	3	19	21	11	7	7	2	1	0	1	76
6 - 15	2	2	1	1	5	10	33	77	28	17	17	20	14	8	12	11	258
16 - 25	18	10	1	0	0	1	20	45	14	12	6	8	9	15	8	4	171
26 - 80	25	6	2	0	1	2	19	47	20	4	7	11	11	7	9	12	183
> 81.0	3	1	0	0	0	3	3	11	3	0	1	3	1	0	1	1	31
Totals	48	20	6	1	6	17	78	199	86	44	38	49	37	31	30	29	719

Total Number of Valid Hours: 719

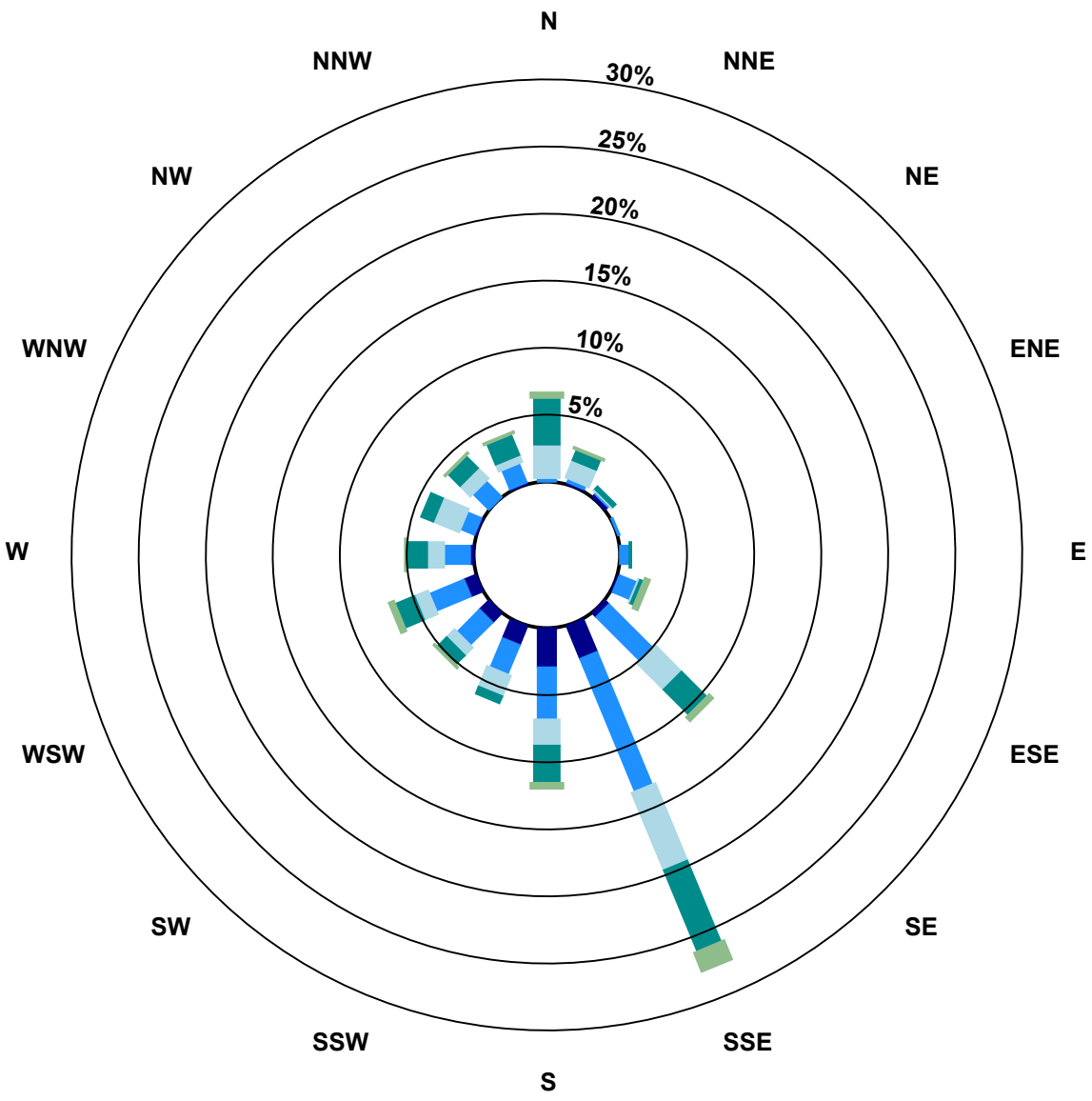
Total Number of Hours: 720

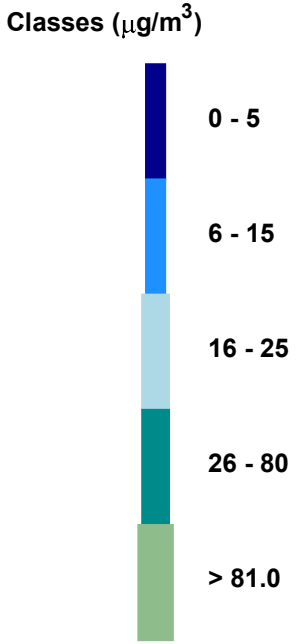
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Buffalo Viewpoint





Total Number of Valid Hours: 719

Maximum Value: 29.1 C on Sep 12 15:00
Maximum Daily Average: 20.3 C on Sep 12

Minimum Value: 1.6 C on Sep 25 07:00
Minimum Daily Average: 10.1 C on Sep 25
Maximum Diurnal Average: 21.3 C at hour 15
Minimum Diurnal Average: 9.3 C at hour 7
Monthly Average: 14.78 C
Percentiles: P_1 = 3.3 P_{10} = 8.4 Q_1 = 11.2 Median = 14.4 Q_3 = 17.9 P_{90} = 22.2 P_{99} = 27.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

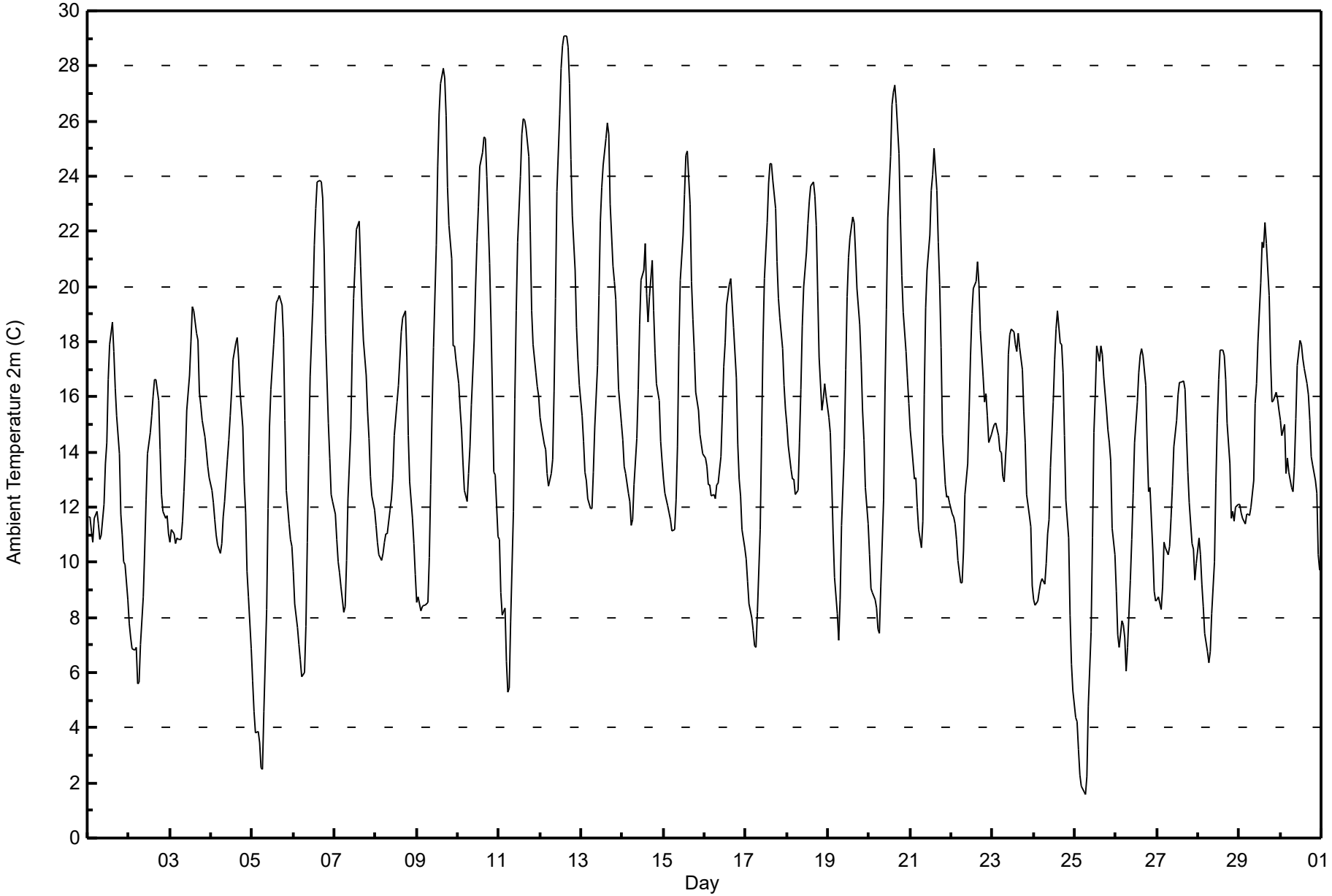
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.7	11.6	11.1	10.7	11.6	11.8	11.4	10.8	11.0	12.1	13.6	14.3	16.6	17.9	18.7	17.7	16.3	15.3	13.9	11.7	11.0	10.0	9.9	8.7	12.9	18.7
2-Sep	7.8	7.3	6.9	6.8	6.9	5.6	5.7	7.0	8.8	10.4	12.3	13.9	14.7	15.3	16.0	16.7	16.6	15.9	14.1	12.4	11.8	11.6	11.7	11.0	11.1	16.7
3-Sep	10.7	11.2	11.0	10.7	10.9	10.8	10.8	11.5	12.6	13.8	15.5	16.8	18.0	19.3	19.1	18.3	18.0	16.2	15.7	15.1	14.5	14.0	13.5	13.1	14.2	19.3
4-Sep	12.6	12.2	11.5	11.0	10.6	10.3	10.7	11.6	12.2	13.7	14.4	15.3	16.2	17.3	17.9	18.1	17.4	16.2	14.9	12.9	11.8	9.7	8.7	6.9	13.1	18.1
5-Sep	5.7	4.6	3.8	3.9	3.5	2.6	2.5	4.6	8.3	12.0	14.9	16.3	17.9	18.8	19.4	19.6	19.7	19.3	18.2	15.2	12.6	11.4	10.8	10.6	11.5	19.7
6-Sep	9.7	8.5	7.6	7.0	6.5	5.9	6.0	7.7	10.7	13.9	16.7	19.4	21.5	22.8	23.8	23.9	23.8	23.2	21.2	18.2	15.1	13.8	12.5	12.2	14.6	23.9
7-Sep	11.8	10.8	10.0	9.6	9.1	8.2	8.4	10.1	12.3	14.8	17.6	19.6	20.8	22.1	22.4	20.8	19.2	18.1	16.8	15.5	14.5	13.1	12.4	11.9	14.6	22.4
8-Sep	11.3	10.7	10.3	10.1	10.3	10.7	11.0	11.0	11.9	12.3	13.1	14.6	15.8	16.4	17.4	18.3	18.9	19.1	17.5	14.6	12.9	11.6	10.7	9.6	13.3	19.1
9-Sep	8.5	8.8	8.3	8.4	8.4	8.5	8.5	10.2	12.8	15.5	17.8	21.5	24.4	26.3	27.4	27.9	27.6	26.2	23.6	22.2	21.0	17.8	17.8	17.3	17.4	27.9
10-Sep	16.5	15.6	14.8	13.6	12.6	12.2	13.2	14.2	15.7	18.1	20.0	21.6	22.9	24.4	24.9	25.4	25.4	24.0	20.8	18.7	16.2	13.3	13.2	10.9	17.8	25.4
11-Sep	10.8	8.9	8.1	8.3	6.4	5.3	5.5	7.8	11.9	15.9	19.1	21.6	24.0	25.5	26.1	26.0	25.7	24.7	22.0	19.1	17.9	16.9	16.4	16.0	16.2	26.1
12-Sep	15.3	14.9	14.3	14.1	13.2	12.8	13.2	13.7	16.2	19.6	23.4	26.3	27.9	28.7	29.1	29.1	28.7	27.4	24.6	22.6	20.6	18.5	17.3	16.4	20.3	29.1
13-Sep	15.3	14.4	13.3	13.0	12.3	12.0	11.9	13.3	14.9	17.1	19.7	22.4	23.6	24.4	25.4	26.0	25.5	23.0	20.7	20.2	19.5	17.9	16.3	15.1	18.2	26.0
14-Sep	14.4	13.5	13.2	12.5	12.2	11.3	11.5	12.8	14.5	16.3	18.6	20.2	20.6	21.6	19.7	18.7	19.6	21.0	19.1	17.6	16.5	15.9	14.4	13.7	16.2	21.6
15-Sep	13.0	12.5	12.1	11.8	11.5	11.2	11.2	12.3	14.2	17.8	20.2	21.9	23.4	24.8	24.9	23.0	20.2	18.8	17.7	16.2	15.5	14.7	14.3	13.9	16.5	24.9
16-Sep	13.8	13.5	12.8	12.8	12.4	12.5	12.3	12.8	12.9	13.8	15.4	17.1	17.9	19.3	20.1	20.3	19.4	18.5	16.7	14.3	13.0	12.4	11.2	10.5	14.8	20.3
17-Sep	10.1	9.3	8.5	8.0	7.5	6.9	6.9	8.2	11.2	14.5	18.0	20.3	22.3	23.7	24.4	24.5	23.9	22.8	20.9	19.6	18.9	17.7	16.4	15.6	15.8	24.5
18-Sep	15.0	14.2	13.4	13.0	13.0	12.5	12.6	14.3	16.2	18.6	20.0	21.3	22.3	23.1	23.6	23.8	23.3	22.2	19.8	17.4	15.5	15.9	16.5	16.0	17.7	23.8
19-Sep	15.3	14.7	12.9	11.0	9.5	8.2	7.1	8.7	11.4	14.1	17.0	19.6	21.0	21.7	22.5	22.3	21.2	19.9	18.6	17.3	15.5	14.4	12.7	11.4	15.3	22.5
20-Sep	10.3	9.1	8.9	8.7	8.3	7.6	7.4	9.1	12.2	16.1	19.2	22.5	24.7	26.6	27.1	27.3	26.6	24.8	22.4	20.4	19.1	17.6	16.7	15.8	17.0	27.3
21-Sep	14.8	14.2	13.0	13.1	12.0	11.2	10.5	11.5	16.1	19.2	20.6	21.9	23.5	24.1	25.0	23.5	21.6	20.1	17.8	14.6	12.8	12.3	12.4	12.2	16.6	25.0
22-Sep	11.7	11.7	11.4	10.8	10.1	9.3	9.3	10.4	12.5	13.6	15.5	17.5	19.0	19.9	20.2	20.9	20.1	18.4	16.7	15.8	16.1	15.3	14.3	14.6	14.8	20.9
23-Sep	14.9	15.0	15.1	14.6	14.0	14.0	13.1	12.9	14.7	17.6	18.3	18.5	18.3	17.9	17.6	18.3	17.8	17.0	15.5	14.4	12.5	11.7	11.3	9.2	15.2	18.5
24-Sep	8.6	8.4	8.6	9.0	9.3	9.4	9.2	9.9	11.0	11.5	13.4	15.8	17.3	18.5	19.1	18.0	17.9	16.9	14.6	12.2	10.9	8.1	6.3	5.3	12.1	19.1
25-Sep	4.4	4.2	3.2	2.3	1.9	1.7	1.6	2.2	4.8	7.5	10.9	14.7	16.1	17.8	17.3	17.8	17.6	16.7	15.5	14.8	14.3	13.7	11.3	10.3	10.1	17.8
26-Sep	8.9	7.4	6.9	7.9	7.7	7.3	6.1	6.9	9.3	10.8	12.5	14.3	15.8	16.9	17.5	17.8	17.5	16.4	14.2	12.6	12.7	10.4	9.0	8.6	11.5	17.8
27-Sep	8.7	8.7	8.3	9.1	10.7	10.5	10.3	10.6	11.6	12.7	14.2	15.2	16.1	16.5	16.5	16.6	16.3	14.7	13.3	12.1	10.7	10.5	9.4	9.9	12.2	16.6
28-Sep	10.9	10.3	9.2	8.4	7.4	6.7	6.4	6.8	8.2	10.0	12.9	15.1	16.6	17.7	17.7	17.5	16.6	15.0	13.6	11.6	11.9	11.5	12.0	12.1	11.9	17.7
29-Sep	12.1	11.8	11.6	11.4	11.8	11.7	11.7	12.0	13.0	15.8	16.5	18.0	20.2	21.6	21.4	22.3	21.5	19.7	17.4	15.8	15.9	16.2	15.9	15.5	15.9	22.3
30-Sep	15.1	14.6	15.0	13.2	13.8	13.3	12.7	12.6	13.5	15.2	17.2	18.0	17.9	17.4	17.0	16.5	16.0	15.1	13.8	13.5	13.0	12.5	10.3	9.7	14.5	18.0
	11.7	11.1	10.5	10.2	9.8	9.4	9.3	10.3	12.2	14.5	16.6	18.5	19.9	20.9	21.3	21.2	20.7	19.6	17.7	16.0	14.8	13.7	12.8	12.1	Diurnal Average	
	16.5	15.6	15.1	14.6	14.0	14.0	13.2	14.3	16.2	19.6	23.4	26.3	27.9	28.7	29.1	29.1	28.7	27.4	24.6	22.6	21.0	18.5	17.8	17.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Buffalo Viewpoint - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	117	16.25	16.25
10 - 20	488	67.78	84.03
> 20	115	15.97	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 97.5 % on Sep 15 07:00

Maximum Daily Average: 82.2 % on Sep 14

Minimum Value: 25.2 % on Sep 24 15:00

Minimum Daily Average: 42.8 % on Sep 23

Maximum Diurnal Average: 82.5 % at hour 7

Minimum Diurnal Average: 41.2 % at hour 15

Monthly Average: 63.79 %

Percentiles: P_1 = 28.4 P_{10} = 36.3 Q_1 = 47.8 Median = 63.4 Q_3 = 81.0 P_{90} = 91.7 P_{99} = 97.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

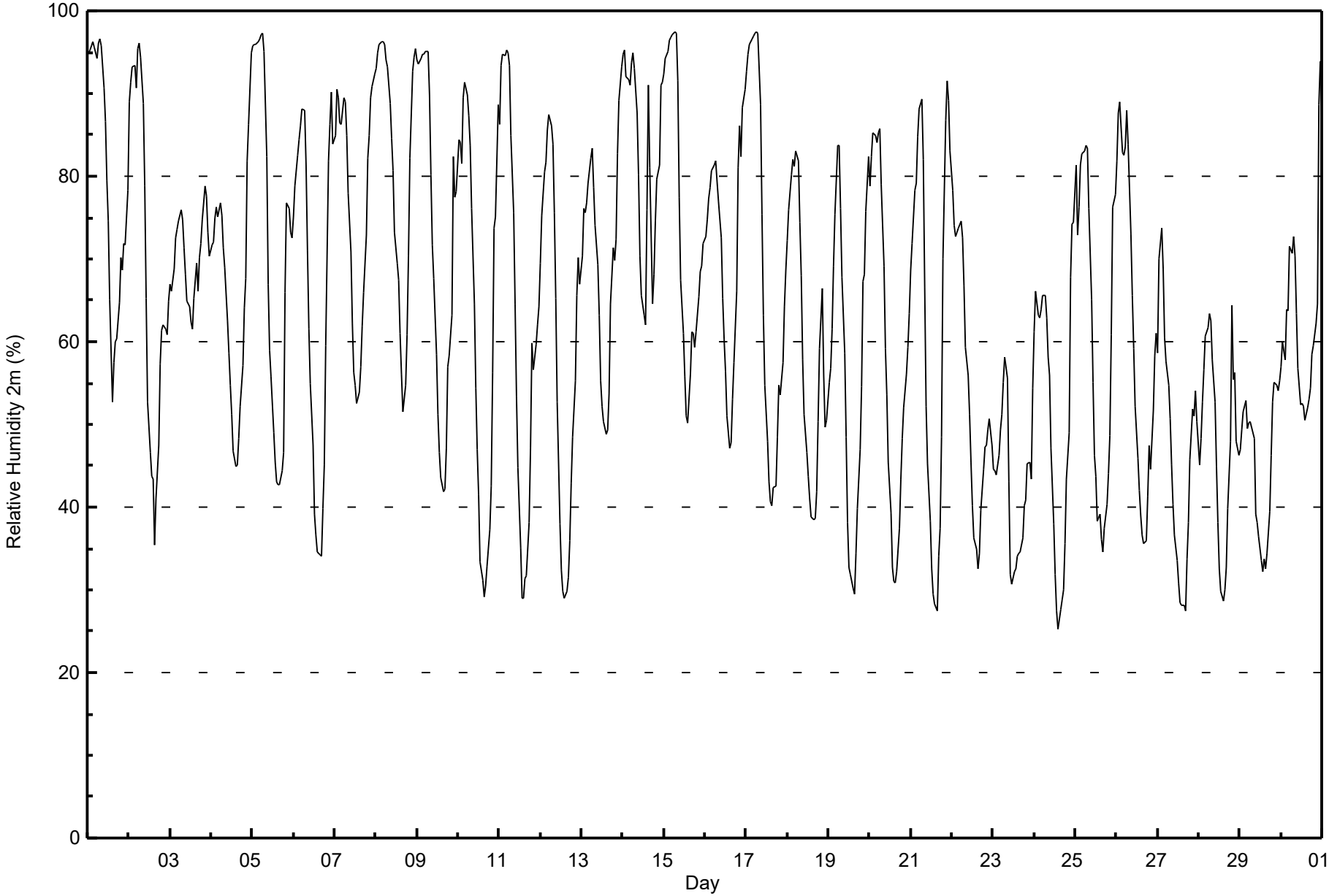
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	94.9	95.2	95.7	96.3	95.5	94.3	96.1	96.6	95.8	90.8	86.5	79.5	74.6	65.1	52.8	57.5	60.0	60.4	64.8	70.2	68.6	71.8	71.8	78.2	79.7	96.6
2-Sep	88.9	91.4	93.2	93.4	90.7	95.4	96.2	94.3	88.9	78.9	65.2	52.7	46.7	43.7	43.4	35.4	41.0	47.5	57.3	61.3	62.1	61.4	60.9	65.0	69.0	96.2
3-Sep	67.0	66.2	68.9	72.6	73.5	74.6	76.0	74.8	71.4	68.2	65.0	64.3	62.4	61.4	65.3	69.4	66.2	70.2	71.8	74.7	78.8	77.6	73.2	70.3	70.2	78.8
4-Sep	71.7	72.0	74.9	76.3	75.2	76.9	75.3	71.4	69.0	62.5	58.6	54.8	51.2	46.7	44.8	45.0	48.4	52.3	57.1	64.1	67.6	81.8	86.2	94.8	65.8	94.8
5-Sep	95.8	95.9	95.9	96.3	96.7	97.2	97.3	95.0	82.4	66.9	59.0	55.8	49.0	45.3	43.1	42.7	42.7	44.4	46.6	66.0	76.7	76.1	73.3	72.6	71.4	97.3
6-Sep	75.1	78.8	82.5	84.5	86.2	88.1	87.9	81.3	70.9	61.6	55.0	47.4	39.1	36.6	34.6	34.2	34.0	39.9	45.0	59.5	81.8	86.4	90.1	83.8	65.2	90.1
7-Sep	84.9	90.6	89.5	86.5	86.2	89.4	89.0	84.9	77.9	70.8	62.3	56.3	54.7	52.5	54.0	56.9	61.8	65.9	72.9	82.2	85.0	89.5	90.9	92.4	76.1	92.4
8-Sep	93.0	94.9	95.9	96.3	96.2	95.9	94.1	93.2	88.8	84.6	80.7	73.3	69.5	67.5	60.9	56.0	51.6	54.7	60.8	70.3	82.1	92.7	94.4	95.4	81.0	96.3
9-Sep	94.1	93.6	94.2	94.8	94.8	95.1	95.2	89.9	80.1	71.8	67.7	58.4	51.1	46.6	43.6	41.8	42.2	47.1	56.9	58.3	63.2	82.3	77.4	78.2	71.6	95.2
10-Sep	84.4	84.1	81.5	89.5	91.4	89.9	87.3	83.7	76.2	64.6	54.4	47.0	41.5	33.4	31.2	29.2	30.5	32.9	37.3	42.6	56.2	73.7	75.0	88.6	62.8	91.4
11-Sep	86.3	93.4	94.7	94.6	95.3	94.9	93.4	84.9	75.7	64.6	53.4	44.8	35.1	29.0	29.0	31.3	31.8	38.2	47.1	59.7	56.7	59.6	62.1	64.2	63.3	95.3
12-Sep	69.5	75.2	80.5	81.7	85.6	87.5	86.1	83.9	75.6	65.3	52.7	37.9	32.4	29.8	29.0	29.8	31.6	35.9	42.9	48.4	55.3	65.6	70.2	67.0	59.1	87.5
13-Sep	70.3	76.1	75.5	76.8	79.2	82.3	83.4	78.6	74.0	69.3	63.2	55.2	52.2	50.3	48.8	49.4	53.6	64.5	71.3	69.9	72.4	82.7	89.1	93.3	70.1	93.3
14-Sep	94.8	95.2	92.0	91.7	91.1	93.7	94.9	93.0	87.6	80.1	70.3	65.6	63.3	62.1	75.9	91.0	81.0	64.6	68.1	74.6	79.6	81.3	91.0	91.4	82.2	95.2
15-Sep	92.5	94.3	95.1	96.4	96.9	97.2	97.5	97.4	91.4	77.4	67.4	61.0	55.7	51.1	50.1	56.0	61.1	61.0	59.3	61.2	65.4	68.5	69.1	71.8	74.8	97.5
16-Sep	72.8	74.8	77.2	78.6	80.7	81.3	81.9	79.4	77.0	72.5	65.2	60.4	56.4	51.1	47.1	47.9	53.0	57.5	66.2	81.0	86.1	82.4	88.3	90.5	71.2	90.5
17-Sep	92.7	94.7	95.9	96.6	97.0	97.2	97.5	97.4	88.7	75.4	63.2	54.7	48.0	43.0	40.7	40.1	42.3	42.6	48.5	54.8	53.5	57.4	64.2	68.7	68.9	97.5
18-Sep	72.2	76.0	80.2	82.0	81.2	83.1	81.9	74.5	67.9	57.8	51.1	46.6	43.7	41.1	38.8	38.4	38.6	41.9	50.4	59.2	66.5	55.9	49.7	50.5	59.6	83.1
19-Sep	55.1	56.7	61.5	69.2	75.4	83.7	83.8	76.1	67.7	58.7	48.4	38.1	32.7	31.9	30.2	29.5	34.5	39.9	46.9	54.6	67.3	68.1	75.8	82.3	57.0	83.8
20-Sep	78.9	82.5	85.2	84.9	84.0	85.2	85.7	79.0	69.2	59.2	53.6	45.5	39.3	32.6	31.0	30.8	32.1	37.4	43.3	48.3	52.0	56.1	59.3	63.3	59.1	85.7
21-Sep	68.6	71.8	78.3	79.1	84.8	88.2	89.3	82.1	66.6	52.2	45.2	38.3	32.5	29.5	28.4	27.5	34.1	37.5	48.6	69.9	86.7	91.5	89.2	83.1	62.6	91.5
22-Sep	78.2	74.0	72.6	73.3	73.8	74.6	72.6	66.8	59.3	55.9	51.3	45.5	40.1	36.3	34.9	32.6	34.3	39.7	44.7	47.2	47.4	49.4	50.8	47.4	54.3	78.2
23-Sep	44.6	44.3	43.9	46.2	49.4	51.2	55.2	58.2	55.6	43.0	31.9	30.6	32.2	32.5	34.1	34.4	34.6	36.3	40.1	40.8	45.2	45.5	43.4	54.5	42.8	58.2
24-Sep	61.2	66.1	63.2	62.8	63.9	65.6	65.6	62.9	58.1	56.0	47.1	38.0	31.8	27.4	25.2	27.6	28.7	30.0	35.6	43.4	49.0	67.8	74.3	74.4	51.1	74.4
25-Sep	81.4	72.9	76.3	81.4	82.7	83.1	83.8	83.4	76.1	65.0	55.1	46.2	43.8	38.4	39.1	36.1	34.5	37.4	40.3	44.1	48.7	60.8	76.2	77.7	61.0	83.8
26-Sep	81.9	87.6	89.0	82.9	82.5	83.5	87.9	84.0	73.0	65.5	59.2	52.3	46.0	42.0	39.0	36.6	35.6	36.0	41.4	47.5	44.5	51.6	58.3	61.0	61.2	89.0
27-Sep	58.7	70.0	73.7	68.8	60.5	57.5	54.7	50.6	45.0	40.3	36.6	33.6	30.8	28.5	28.1	28.1	27.4	33.7	38.2	45.8	51.9	51.0	54.1	50.3	46.6	73.7
28-Sep	45.2	48.3	52.7	56.6	60.7	61.7	63.4	62.5	57.8	52.7	44.9	38.2	32.6	29.9	28.7	30.1	32.8	39.9	47.9	64.3	55.5	56.3	48.0	46.3	48.2	64.3
29-Sep	46.9	49.3	51.5	52.8	49.5	50.2	50.3	49.7	48.3	39.2	38.2	36.4	33.6	32.1	33.8	32.6	34.3	39.5	46.2	52.8	55.1	54.7	54.1	55.3	45.3	55.3
30-Sep	56.9	60.0	57.9	63.8	63.7	71.6	70.7	72.7	70.4	63.5	56.7	52.4	52.6	52.1	50.6	52.0	53.1	54.3	58.4	59.5	62.2	64.6	88.6	93.9	62.6	93.9
	75.3	77.5	79.0	80.2	80.8	82.3	82.5	79.4	72.9	64.5	57.0	50.4	45.8	42.3	41.2	41.7	42.9	46.1	51.9	59.2	64.1	68.8	71.6	73.5	Diurnal Average	
	95.8	95.9	95.9	96.6	97.0	97.2	97.5	97.4	95.8	90.8	86.5	79.5	74.6	67.5	75.9	91.0	81.0	70.2	72.9	82.2	86.7	92.7	94.4	95.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Buffalo Viewpoint - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - September 2025

Maximum Speed: 25 km/h on Sep 3 17:00

Maximum Daily Speed Average: 10.9 km/h on Sep 4

Minimum Speed Value: 1 km/h on Sep 16 14:00

Minimum Daily Speed Average: 2.2 km/h on Sep 7

Maximum Diurnal Speed Average: 4.1 km/h at hour 9

Minimum Diurnal Speed Average: 0.3 km/h at hour 19

Monthly Average Velocity: 2.8 km/h 200.3 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 7 Q_3 = 10 P_{90} = 14 P_{99} = 20

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	N4	SSW1	SSE3	SW3	NNW3	NE3	SE5	S6	S6	SSE4	ENE2	NE2	N8	NNE9	NNE12	N15	N16	N14	N12	N7	NNE5	NE2	NNW1	N2	NNE3.8	N16
2-Sep	NW4	WNW4	NW4	NNW5	NW1	S4	SSE4	SSE3	SSE3	SSE3	S5	SSE6	SE6	SE7	SE8	SE10	SE8	SE6	SE6	SE6	SSE8	SSE9	SSE11	SSE9	SSE4.3	SSE11
3-Sep	SSE9	SSE10	SSE8	SSE7	SSE7	SSE7	S8	SSE7	SSE9	SSE8	SSE7	SE4	E3	NW4	NNW7	N12	N25	N22	N20	N18	NNW19	NNW16	NNW20	NNW21	N3.9	N25
4-Sep	NNW19	NNW20	NNW16	NW15	NNW16	NW14	NW16	NW15	NNW14	NNW16	NNW16	NNW15	NNW15	NNW15	NNW14	NNW11	N12	NNE11	NNE8	NE6	NE5	ESE3	S4	SSW4	NNW10.9	NNW20
5-Sep	SSE5	SE7	S4	SSE6	S6	SSE7	S7	SSE6	SSE8	SSE8	SE6	ESE7	ESE8	ESE6	E7	ESE8	E7	E5	E6	ESE6	SSE5	SSE5	SSE6	SSE7	SE5.4	SSE8
6-Sep	SSE6	SSE5	SSE6	SSE7	S7	S7	S7	S7	SSE8	SE7	SE8	SE8	SE9	SE9	SE8	ESE7	ESE7	SE5	SE3	S5	SSE7	SE7	SSE5	S6	SSE6.3	SE9
7-Sep	SSE6	SSE6	SSE6	S7	S7	S8	SSE6	S5	SSW4	WSW2	N4	NNE7	NNE6	N5	N8	N15	NNE14	NNE11	N7	N6	N5	N5	N6	N6	NNE2.2	N15
8-Sep	N8	N7	N7	N7	N7	N8	N9	NNE8	N6	NNE6	NNE4	WNW4	WNW8	NW7	WNW1	N4	WSW4	WNW3	WSW3	SW2	SE4	S5	SSE5	SSE6	N2.9	N9
9-Sep	SSE4	S5	SSE5	SSE5	S5	SSE8	SSE7	SSE7	SSE9	SE8	SSE6	SSE7	SSE8	SSE8	SSE8	SSE8	S8	S5	S5	WSW7	SW5	SE9	SSE7	SSE7	SSE6.2	SE9
10-Sep	SE7	SE5	NE1	SSW5	SW4	WSW4	W7	WNW6	WNW6	WNW7	WNW8	WNW8	W6	NW7	WNW7	W7	WSW5	NW6	NNW8	N6	NW2	SSE5	W3	SSW4	W3.2	NNW8
11-Sep	WSW3	SSE5	SSE1	W2	SSE6	SSE5	SSE7	S4	S4	SSE1	E3	SE6	SE9	SSE9	SSE8	SSE10	SE8	SE5	SE4	SE5	SSE6	SSE7	SSE8	SSE9	SSE5.2	SSE10
12-Sep	SSE8	SSE8	SSE9	SSE6	SSE5	SSE6	SSE7	SSE9	SSE8	SSE8	S8	S12	SSW12	SSW14	SSW13	SSW12	SSW9	S6	S5	SSW6	SSE6	SSE7	SE7	SSE7	S7.5	SSW14
13-Sep	SSE8	SSE7	SSE6	SSE7	SSE8	SSE8	SSE7	SSE7	SSE7	SSE6	SSE7	S4	W2	N1	N3	N4	N6	N8	N7	N8	N3	SE4	SSE5	S4	SSE2.4	SSE8
14-Sep	SSW4	S5	SSE6	SSE6	SSE6	SSE5	SSE6	SSE6	S5	SSE7	SE5	ESE5	ESE9	ESE7	ESE8	SE6	SE7	SE8	SSE9	SSE7	S3	SSE4	SSE5	S5	SSE5.5	ESE9
15-Sep	SSE5	SSE6	SE7	SSE5	SSE6	SSE6	SSE5	S6	S5	WNW6	NW8	WNW7	WNW5	WNW11	WNW12	NW18	NW21	NW15	NW14	NNW13	NW13	NW14	NW14	NW10	WNW5.7	NW21
16-Sep	NW10	WNW10	WNW9	WNW9	NW10	NW7	WNW5	W6	W12	WNW9	WNW7	NNW6	NNW3	SSW1	SW4	SSE4	ESE6	SE5	SE6	SSE5	SSE6	SSE7	SSE6	SSE7	W2.4	W12
17-Sep	SSE6	SSE6	SSE6	SSE6	S6	S5	S7	S7	SSE9	SE9	SSE9	SSE10	SE10	SE13	SE13	SE14	SE15	SE13	SE10	SSE11	SSE12	SSE12	SSE11	SSE10	SSE9.3	SE15
18-Sep	SSE11	SSE10	SSE11	SSE11	SSE13	SSE12	SSE11	SSE12	SSE11	SSW13	SSW13	SSW12	SSW11	SSW12	SSW11	SSW10	SW9	SW6	SW6	SSW7	SSW8	SW9	WSW11	WSW8	S8.8	SSW13
19-Sep	WNW8	W10	WSW5	SSE4	SSE5	SSE6	SSE6	SSE6	S6	S5	SSW6	WSW9	WSW11	WSW11	WSW10	WSW11	SW5	SW5	SSW4	SSW4	SSE6	SSE6	SSE7	SSE8	SSW4.9	WSW11
20-Sep	SSE8	SSE7	S7	SSE6	S6	S6	S6	S6	SSE7	SSE7	ESE9	SSE10	S10	SSW13	SSW15	S13	SSW13	SSE8	SSE7	SSE7	SSE8	SSE8	SSE8	SSE8	S8.1	SSW15
21-Sep	S7	S6	S4	S6	SSE7	SSW6	S5	SSE6	S3	W6	WNW7	WNW4	NW5	NNW5	NW6	W14	W12	W12	WNW15	WNW10	SW2	SSW5	SW7	WSW11	WSW4.4	WNW15
22-Sep	WSW12	WSW15	WSW14	WSW10	W9	W7	WSW10	SW8	SW6	W13	SW12	SW12	SW13	WSW15	WSW13	SW14	SW11	SSW7	S7	S8	S10	S9	SSE9	S11	SW9.1	WSW15
23-Sep	S11	SSW10	S10	SSW11	S9	S9	SSE8	SSE6	S7	WSW13	WSW18	WSW15	SW16	SW15	SW13	SW14	SW13	SSW10	SSW8	SSW9	SE6	S7	S6	S8	SSW9.1	WSW18
24-Sep	SSE8	SE8	SE7	SE4	SSE5	SSE5	S6	SW6	SW8	W11	WSW15	W11	W12	WNW14	WNW11	NW8	NW7	NW10	NW7	SW6	WSW5	SW5	S5	S6	WSW4.2	WSW15
25-Sep	SE8	SSE6	SSE7	SSE6	SSE8	SSE9	SSE9	SSE7	SSE7	SSE9	SSE8	SSE10	ESE10	SE7	ESE7	SSE9	S10	S8	SSE8	S9	SSW8	WSW17	WSW12	SW8	S6.8	WSW17
26-Sep	SW7	S5	SSW5	WSW7	WSW7	WSW5	S5	SW7	WSW9	W17	W14	W12	W16	W15	W15	WSW16	WSW14	WSW11	SW10	SW11	SW11	SSE6	SE9	SE8	WSW8.2	W17
27-Sep	SSE6	SSE5	SSE8	S10	SW16	WSW16	WSW18	WSW20	W22	W20	W18	W17	WSW16	WSW17	WSW15	WSW12	W15	WSW5	W4	SW6	S7	SSW7	SSE7	S7	WSW10.4	W22
28-Sep	SW10	WSW13	WSW15	W10	W11	W15	W14	W15	W13	W9	SSW7	SW4	SSW6	SSW7	SSW6	SW8	SSW5	SE4	SE5	SE4	SE4	SSE4	SE6	SE7	WSW5.9	WSW15
29-Sep	SE6	SE7	SE9	SE8	SE11	SE12	SE11	SE12	SE12	SE16	SSE16	SE16	SSE14	S15	S12	SSE11	S11	SSE7	SSE4	SE5	SE4	SE7	SE9	SE6	SSE9.6	SE16
30-Sep	S3	SE6	SSE8	S4	NNE3	WNW5	N5	NNW4	NW5	NNW4	N7	N12	N14	N13	NNE13	N11	NNE12	N13	N15	NNE11	NNE10	N9	N8	N9	N6.6	N15
	S3.3	S3.7	S3.8	S3.5	SSW3.5	SSW3.9	S3.9	SSW4.1	SSW4.1	SW3.8	SW3.3	SW3.1	SW3.0	WSW3.6	SW2.9	SW2.5	WSW1.7	WNW0.6	W0.3	SSW1.3	S2.1	S3.3	S3.3	S3.6	Diurnal Average	
	NNW19	NNW20	NNW16	NW15	SW16	WSW16	WSW18	WSW20	W22	W20	WSW18	W17	WSW16	WSW17	SSW15	NW18	N25	N22	N20	N18	NNW19	WSW17	NNW20	NNW21	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 3 17:00

Minimum Value: 0 km/h on Sep 8 19:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

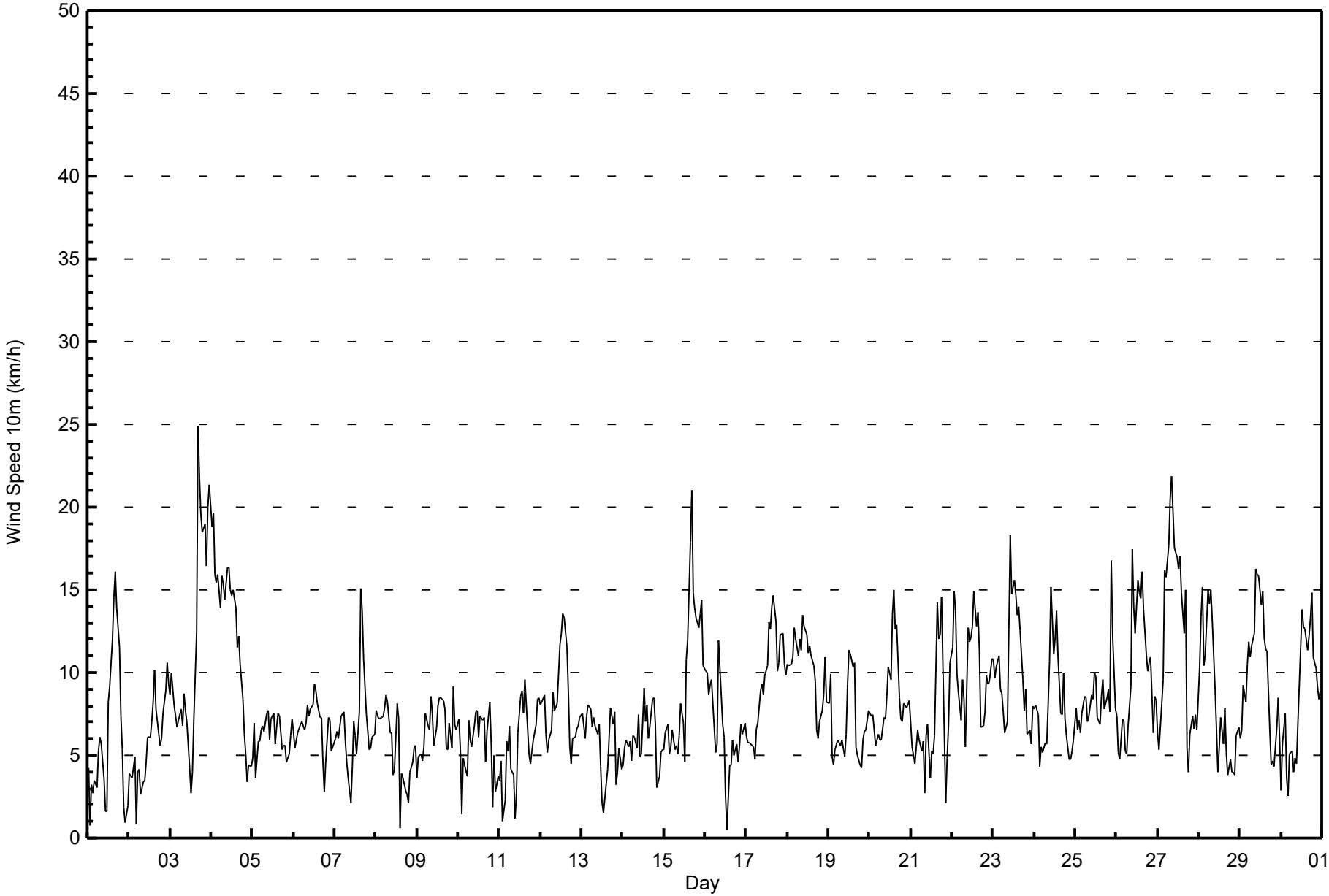
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	1	2	1	1	1	2	2	2	1	2	2	3	3	4	4	4	4	3	2	2	3	1	1	4
2-Sep	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	2	2	1	2	2	2	3	3	3
3-Sep	3	3	3	2	2	2	2	2	3	3	3	2	2	2	3	4	8	6	5	5	6	5	5	6	8
4-Sep	5	5	5	4	5	4	4	4	5	5	5	4	5	5	4	4	4	3	2	1	1	1	1	1	5
5-Sep	1	1	2	1	1	1	1	2	3	2	2	2	2	3	3	3	2	1	1	1	1	1	2	2	3
6-Sep	2	1	1	2	1	2	1	2	3	2	2	3	3	3	3	2	2	1	1	1	1	1	2	1	3
7-Sep	1	1	1	1	1	1	1	2	1	1	2	2	3	2	3	4	4	3	2	2	1	1	1	1	4
8-Sep	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	1	2	1	1	1	2
9-Sep	1	1	1	1	2	2	2	2	3	3	2	3	3	3	3	3	3	2	1	2	2	2	2	1	3
10-Sep	2	2	1	1	1	1	2	2	2	2	2	3	2	2	2	3	2	3	3	1	2	1	1	1	3
11-Sep	1	1	2	1	1	2	1	1	1	1	1	2	3	3	3	3	3	2	1	1	2	2	2	2	3
12-Sep	2	2	2	2	1	2	2	3	2	3	3	4	4	4	4	3	3	2	1	2	2	1	2	1	4
13-Sep	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	2	2	1	1	2	2	1	1	2
14-Sep	1	1	1	1	1	1	1	2	2	3	1	2	3	2	2	2	2	3	3	3	1	1	1	1	3
15-Sep	1	1	1	1	1	2	2	1	2	2	2	2	2	4	4	6	6	5	4	4	4	5	5	3	6
16-Sep	3	3	2	3	3	2	2	3	3	3	2	2	2	2	2	2	2	1	1	1	1	2	2	2	3
17-Sep	2	2	1	1	1	1	2	2	3	3	3	3	4	4	4	5	5	5	3	3	4	4	3	3	5
18-Sep	3	3	3	3	4	3	3	4	4	4	4	3	4	3	3	3	3	2	1	1	1	2	3	3	4
19-Sep	3	3	4	1	2	1	1	1	1	2	2	3	3	4	3	3	2	1	2	1	1	1	1	1	4
20-Sep	1	1	1	2	1	1	1	2	2	2	3	3	4	5	5	5	4	3	2	2	2	2	2	2	5
21-Sep	2	1	2	2	1	1	1	1	1	2	2	2	2	2	3	4	3	3	5	4	2	1	2	3	5
22-Sep	4	4	4	3	3	3	4	4	3	4	4	3	4	5	5	5	4	2	2	2	3	3	3	3	5
23-Sep	3	3	3	3	3	2	2	2	2	5	5	4	5	4	4	4	4	3	2	2	2	2	1	1	5
24-Sep	1	1	2	2	2	2	2	2	3	4	4	4	4	4	4	2	3	3	2	1	1	1	1	1	4
25-Sep	2	1	1	1	1	1	1	1	2	2	3	3	3	3	2	3	3	2	3	3	2	5	4	2	5
26-Sep	2	2	2	2	2	2	1	3	5	4	4	4	4	4	5	5	4	3	2	2	3	1	2	2	5
27-Sep	2	2	2	3	5	5	5	5	6	6	5	5	5	5	5	4	4	3	1	1	1	2	1	2	6
28-Sep	3	4	4	4	3	4	5	4	4	3	2	2	3	3	2	2	3	1	1	1	1	1	2	2	5
29-Sep	2	2	3	3	3	4	4	4	6	6	6	6	5	5	4	4	4	2	2	1	1	2	3	2	6
30-Sep	2	3	3	2	1	2	3	1	2	1	2	3	4	4	4	3	4	3	4	3	2	3	2	2	4
	5	5	5	4	5	5	5	5	6	6	6	6	5	5	5	6	8	6	5	5	6	5	5	6	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	171	23.75	23.75
6 - 11	414	57.50	81.25
12 - 19	125	17.36	98.61
20 - 28	10	1.39	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	9	5	5	1	3	2	18	39	30	12	10	10	4	9	6	8	171
6 - 11	24	10	1	0	3	15	50	153	52	21	19	16	13	19	13	5	414
12 - 19	12	5	0	0	0	0	10	7	4	11	10	22	18	3	10	13	125
20 - 28	3	0	0	0	0	0	0	0	0	0	0	1	2	0	1	3	10
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	48	20	6	1	6	17	78	199	86	44	39	49	37	31	30	29	720

Total Number of Valid Hours: 720

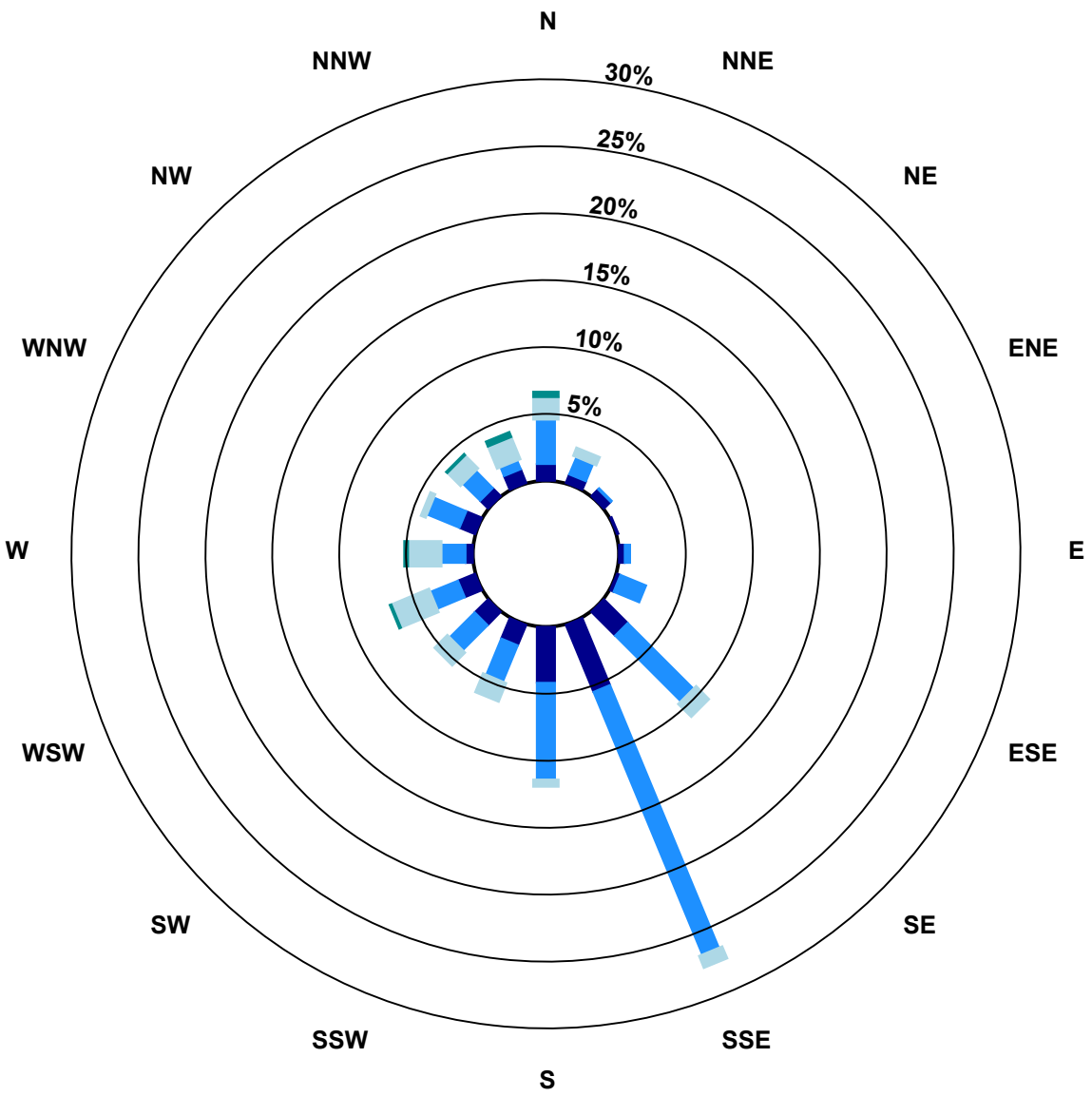
Total Number of Hours: 720

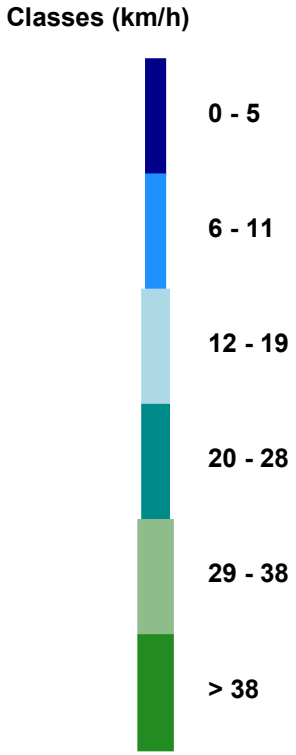
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - September 2025

Direction of Maximum Speed: 358 deg on Sep 3 17:00
Direction of Maximum Daily Speed Average: 335.9 deg on Sep 4

Direction of Minimum Speed: 210 deg on Sep 16 14:00

Direction of Minimum Daily Speed Average: 2.2 deg on Sep 7

Monthly Average Direction: 200.3 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	353	202	159	218	334	34	125	178	181	149	71	35	358	13	14	2	3	7	11	10	15	44	342	11	13.5
2-Sep	314	296	304	336	306	170	148	164	164	168	171	162	142	145	132	136	129	139	134	142	152	156	158	159	151.4
3-Sep	154	155	162	165	167	166	176	168	163	164	157	142	85	311	330	360	358	355	356	356	348	342	339	333	355.5
4-Sep	328	328	327	326	328	322	324	324	329	334	334	329	334	332	333	342	4	13	29	53	53	123	169	192	335.9
5-Sep	164	144	171	155	179	164	177	160	163	157	127	107	118	102	100	107	86	90	89	118	150	150	159	159	137.0
6-Sep	158	165	164	168	181	178	174	170	153	143	139	141	133	139	145	119	115	125	125	185	149	143	162	183	151.6
7-Sep	159	165	165	175	174	173	168	177	194	252	359	25	14	358	349	1	12	13	358	6	6	349	360	4	15.8
8-Sep	3	360	2	356	358	356	3	18	10	32	26	295	296	304	291	8	253	282	252	217	145	170	159	158	350.5
9-Sep	152	169	153	161	170	165	156	166	150	146	164	153	168	152	150	150	188	180	191	237	221	138	157	148	163.7
10-Sep	144	134	40	198	228	240	277	286	287	296	303	295	277	304	298	269	243	318	340	358	322	158	270	195	280.4
11-Sep	239	152	158	260	155	150	152	183	175	167	100	131	135	162	151	149	140	127	134	140	167	159	148	155	152.0
12-Sep	151	153	149	154	149	154	160	154	158	161	172	189	200	206	203	213	204	175	170	209	154	151	146	168	175.1
13-Sep	154	152	167	161	165	156	160	162	168	163	153	191	264	11	7	359	1	2	356	8	2	143	158	184	149.1
14-Sep	210	183	163	158	157	160	163	166	169	165	137	123	119	111	111	124	139	145	154	164	174	156	152	179	150.7
15-Sep	157	162	142	159	168	161	148	183	190	282	304	302	301	293	296	318	321	318	311	327	325	317	321	313	302.5
16-Sep	317	298	282	298	315	320	284	262	277	296	302	335	336	210	216	158	118	135	137	148	147	153	167	153	271.8
17-Sep	158	165	168	159	176	170	174	175	158	145	156	148	134	141	138	139	139	143	144	149	154	154	152	149	150.4
18-Sep	150	150	155	151	147	151	159	160	168	197	213	210	213	210	212	206	217	220	214	195	197	234	247	256	190.5
19-Sep	282	279	251	166	153	161	156	164	171	185	213	238	239	255	246	240	231	224	205	194	148	151	153	148	210.8
20-Sep	165	168	169	166	172	190	184	171	165	151	121	147	178	195	202	190	194	168	159	163	158	164	161	159	171.7
21-Sep	171	182	178	175	148	204	179	166	170	268	299	298	322	334	322	274	273	276	282	284	227	195	222	243	250.0
22-Sep	245	249	253	253	269	260	237	218	214	259	235	226	220	247	240	230	230	199	172	170	178	171	166	176	226.4
23-Sep	184	198	191	196	186	181	160	161	191	257	257	245	230	227	222	220	215	208	194	202	145	172	171	186	208.3
24-Sep	150	137	137	146	163	154	177	223	232	265	258	274	279	294	286	319	312	325	314	225	257	214	181	179	249.1
25-Sep	138	168	164	160	155	154	168	166	162	156	152	151	120	145	111	154	175	180	163	175	204	249	256	236	171.0
26-Sep	219	181	205	244	246	247	170	220	246	264	261	259	268	279	274	256	255	246	228	224	227	159	131	141	241.8
27-Sep	148	154	155	191	233	246	255	258	267	265	266	260	258	255	250	258	264	241	273	236	186	210	168	189	244.0
28-Sep	235	247	258	272	272	266	275	277	278	267	199	216	208	213	200	222	207	129	124	137	140	148	143	140	239.7
29-Sep	144	136	130	130	141	143	143	125	138	145	150	144	158	182	181	164	172	161	159	130	139	128	129	124	147.9
30-Sep	181	130	154	188	16	298	3	341	314	338	349	0	354	0	19	10	17	11	2	17	14	11	3	351	4.9
	183.3	184.6	182.8	190.0	191.8	191.5	188.2	194.8	200.6	220.5	223.8	215.8	221.7	237.0	231.7	235.2	250.9	290.1	281.0	193.3	168.9	171.2	171.9	179.5	
	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 108 deg on Sep 16 14:00

Minimum Value: 8 deg on Sep 13 01:00

Percentiles: P_1 = 10 P_{10} = 16 Q_1 = 21 Median = 26 Q_3 = 33 P_{90} = 39 P_{99} = 87

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

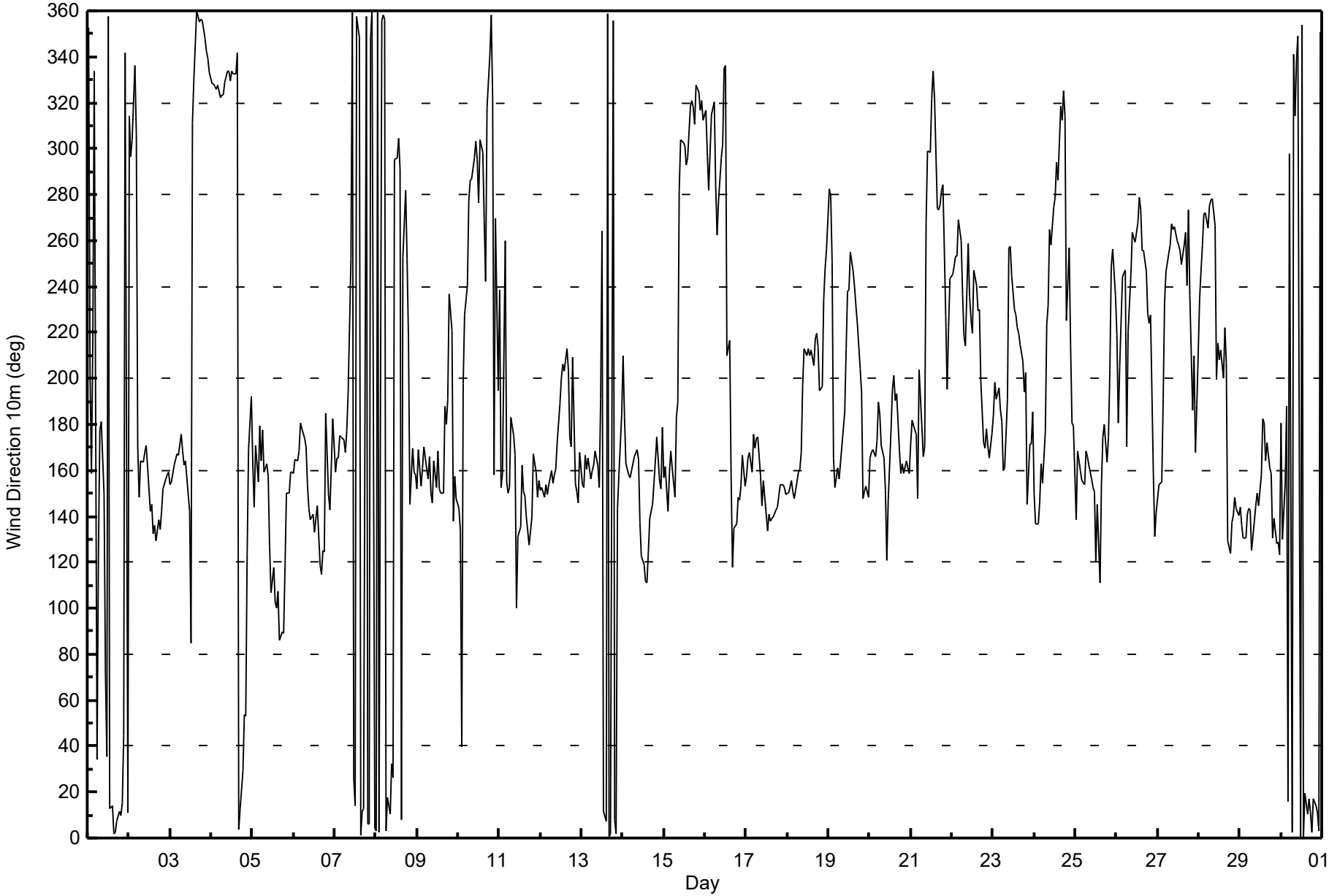
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	22	91	54	49	47	41	36	29	31	41	76	87	29	30	27	21	22	22	21	18	26	83	86	36	91
2-Sep	19	35	19	20	64	16	25	35	37	43	41	38	42	41	36	31	29	31	27	29	31	29	32	30	64
3-Sep	30	34	34	34	33	33	27	29	31	35	36	44	62	52	26	22	23	22	22	21	22	21	20	20	62
4-Sep	19	20	21	19	19	21	19	22	23	21	23	25	24	23	25	29	24	22	22	12	11	39	27	21	39
5-Sep	13	14	37	23	14	14	17	28	29	34	38	31	37	62	44	34	23	21	13	16	24	28	35	32	62
6-Sep	36	31	24	23	23	23	26	25	33	32	33	38	32	38	38	30	21	17	35	19	8	10	23	12	38
7-Sep	12	19	14	14	13	15	16	26	25	52	25	34	37	36	23	22	23	21	18	28	18	12	10	14	52
8-Sep	15	14	14	15	17	16	21	22	28	32	49	65	26	27	98	52	38	24	10	8	25	16	18	23	98
9-Sep	27	27	38	29	31	26	23	31	33	34	36	43	36	37	33	38	30	27	26	23	46	10	18	15	46
10-Sep	21	27	75	26	26	37	25	22	24	24	24	28	31	32	34	39	37	42	16	12	70	28	52	32	75
11-Sep	27	21	89	44	14	9	13	24	30	92	66	36	35	38	37	35	33	24	20	27	30	33	31	33	92
12-Sep	33	34	32	37	21	22	38	32	31	32	36	32	28	26	25	24	24	28	24	34	24	16	19	18	38
13-Sep	8	11	18	15	17	17	19	21	26	30	35	47	74	93	47	17	17	16	14	14	39	43	12	19	93
14-Sep	26	13	14	17	19	18	20	28	37	32	33	38	27	27	23	25	31	33	33	32	45	29	14	18	45
15-Sep	20	14	9	23	25	19	29	22	38	30	24	26	41	26	27	23	22	22	24	20	21	22	22	22	41
16-Sep	23	29	21	23	21	24	23	33	20	27	30	39	85	108	67	49	27	29	19	28	28	34	32	32	108
17-Sep	33	33	31	31	29	34	32	37	34	34	38	37	33	32	34	34	31	35	31	34	33	32	33	34	38
18-Sep	33	33	32	30	31	31	32	35	34	27	25	28	24	27	25	25	23	20	13	13	12	20	21	24	35
19-Sep	23	18	44	34	21	17	16	22	22	41	29	30	26	32	28	23	20	14	23	39	20	8	10	11	44
20-Sep	13	14	16	19	17	16	17	25	29	32	25	34	41	32	28	33	26	30	28	29	31	31	32	32	41
21-Sep	30	26	41	27	15	24	24	23	50	33	28	65	44	43	42	20	17	19	22	22	68	36	21	21	68
22-Sep	21	20	21	27	26	30	25	28	52	21	24	24	24	25	23	23	23	31	28	31	29	30	28	30	52
23-Sep	30	24	27	23	25	26	28	29	21	26	19	24	23	21	21	21	22	24	26	20	33	26	23	21	33
24-Sep	21	15	20	60	25	46	22	35	29	29	21	28	27	26	32	24	25	21	33	18	27	24	16	24	60
25-Sep	15	15	12	16	17	14	19	20	30	29	33	32	29	46	23	40	31	30	31	32	22	21	17	19	46
26-Sep	17	30	40	20	22	25	29	33	43	18	22	25	24	26	26	21	20	20	17	17	20	25	16	23	43
27-Sep	27	38	33	27	21	20	18	18	18	19	20	20	19	22	24	23	19	22	27	19	16	25	11	27	38
28-Sep	20	19	17	25	16	18	20	18	20	23	36	69	56	40	45	23	30	27	10	19	20	28	33	32	69
29-Sep	30	32	28	31	32	33	33	30	33	36	36	37	36	33	31	37	31	31	31	24	34	25	29	30	37
30-Sep	69	39	39	88	61	20	41	31	26	29	26	22	22	22	23	22	22	20	20	19	20	18	17	17	88
	69	91	89	88	64	46	41	37	52	92	76	87	85	108	98	52	38	42	35	39	70	83	86	36	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS05
MANNIX
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
SEPTEMBER 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	685	35	35	100	26.6	0	7.4	0
H2S (ppb) Average	677	36	43	99.03	5	0	1	0
THC (ppm) Average	683	35	37	99.72	3.3	-	2.4	-
NMHC(ppm) Average	683	35	37	99.72	0.232	-	0.058	-
CH4(ppm) Average	683	35	37	99.72	3.3	-	2.3	-
Temperature 2 m (C) Average	720	0	0	100	28.7	-	19.2	-
Temperature 20 m (C) Average	720	0	0	100	28.7	-	20.8	-
Temperature 45 m (C) Average	720	0	0	100	28.4	-	21.3	-
Temperature 75 m (C) Average	720	0	0	100	27.9	-	21.6	-
Temperature 90 m (C) Average	720	0	0	100	27.8	-	21.6	-
Relative Humidity 2 m (%) Average	720	0	0	100	100	-	84	-
Relative Humidity 20 m (%) Average	720	0	0	100	97	-	75	-
Relative Humidity 45 m (%) Average	720	0	0	100	97	-	74	-
Relative Humidity 75 m (%) Average	720	0	0	100	98	-	75	-
Relative Humidity 90 m (%) Average	720	0	0	100	99	-	76	-
Wind Speed 20 m (km/h) Average	720	0	0	100	25	-	17	-
Wind Speed 45 m (km/h) Average	720	0	0	100	36	-	24	-
Wind Speed 75 m (km/h) Average	720	0	0	100	41	-	25	-
Wind Speed 90 m (km/h) Average	720	0	0	100	43	-	27	-
Wind Direction 20 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 45 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 75 m (deg) Average	720	0	0	100	-	-	-	-
Wind Direction 90 m (deg) Average	720	0	0	100	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	0	0	100	1.3	-	0.8	-
Vertical Wind Speed 45 m (km/h) Average	720	0	0	100	2.4	-	1.6	-
Vertical Wind Speed 75 m (km/h) Average	720	0	0	100	1.7	-	0.6	-
Vertical Wind Speed 90 m (km/h) Average	720	0	0	100	2	-	0.7	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	0.81	2.8	-	0	0	0	0.1	0.3	1.2	26.6
H2S (ppb) Average	677	0.4	0.6	-	0	0.1	0.1	0.2	0.4	0.8	4.7
THC (ppm) Average	683	2.19	0.2	-	2	2.1	2.1	2.1	2.2	2.3	3.3
NMHC(ppm) Average	683	0.017	0.031	-	0	0	0	0	0	0	0.232
CH4(ppm) Average	683	2.17	0.1	-	2	2.1	2.1	2.1	2.2	2.3	3.3
Temperature 2 m (C) Average	720	14.37	5.2	-	0.9	7.8	11.1	13.8	17.6	21.8	28.7
Temperature 20 m (C) Average	720	15.36	4.8	-	3	9.6	12	15	18.3	22.1	28.7
Temperature 45 m (C) Average	720	15.5	4.8	-	2.9	10	12.1	15.2	18.5	22.3	28.4
Temperature 75 m (C) Average	720	15.68	4.5	-	3.7	10.5	12.2	15.3	18.5	22.2	27.9
Temperature 90 m (C) Average	720	15.43	4.6	-	3.5	10.1	11.9	15	18.3	22.1	27.8
Relative Humidity 2 m (%) Average	720	67.7	19	-	28	41	52	67	84	95	100
Relative Humidity 20 m (%) Average	720	59.4	18	-	25	35	45	59	73	84	97
Relative Humidity 45 m (%) Average	720	57.4	17	-	24	34	43	57	71	81	97
Relative Humidity 75 m (%) Average	720	56.8	17	-	25	34	42	56	70	80	98
Relative Humidity 90 m (%) Average	720	56.1	17	-	25	34	42	55	69	79	99
Wind Speed 20 m (km/h) Average	720	10.3	5	-	0	5	7	10	13	17	25
Wind Speed 45 m (km/h) Average	720	15.6	7	-	0	6	11	16	20	24	36
Wind Speed 75 m (km/h) Average	720	17.8	8	-	0	7	12	18	24	28	41
Wind Speed 90 m (km/h) Average	720	18.8	9	-	0	7	12	19	26	30	43
Wind Direction 20 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 75 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 90 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	0.17	0.4	-	-0.9	-0.3	-0.1	0.1	0.4	0.6	1.3
Vertical Wind Speed 45 m (km/h) Average	720	0.56	0.8	-	-2.3	-0.5	0	0.6	1.1	1.6	2.4
Vertical Wind Speed 75 m (km/h) Average	720	0.08	0.5	-	-1.3	-0.6	-0.2	0.1	0.4	0.7	1.7
Vertical Wind Speed 90 m (km/h) Average	720	0.3	0.4	-	-1.5	-0.1	0	0.2	0.5	0.8	2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S	15 Sep 2025 14:00	15 Sep 2025 14:00	1	Maintenance - sample manifold cleaned
H2S	29 Sep 2025 05:00	29 Sep 2025 10:00	6	Maintenance - analyzer rebooted
THC/NMHC/CH4	23 Sep 2025 13:00	23 Sep 2025 14:00	2	Maintenance - replaced support gas cylinder

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 26.6 ppb on Sep 8 17:00 Maximum Daily Average: 7.4 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 2 01:00 Minimum Daily Average: 0.0 ppb on Sep 18
Maximum Diurnal Average: 2.6 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 5
Monthly Average: 0.81 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 1.2 P_{99} = 16.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.0	0.1	0.1	1.0	13.7	4.4	1.7	2.1	1.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	1.1	13.7
2-Sep	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.3	1.7	1.1	1.9	0.8	0.3	0.2	0.0	0.0	0.1	0.0	0.3	1.9
4-Sep	0.1	Z	0.1	0.0	0.0	0.1	0.9	4.6	1.6	0.8	0.7	0.4	0.4	0.3	0.3	0.4	0.3	0.5	0.0	0.1	0.1	0.1	0.1	0.0	0.5	4.6
5-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
6-Sep	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.2	0.4
7-Sep	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.5	2.8	16.4	2.4	3.7	1.8	0.7	0.8	0.3	0.2	0.3	0.2	0.7	0.7	0.3	1.4	16.4
8-Sep	0.8	1.3	0.4	0.3	0.2	Z	0.1	0.2	0.2	0.2	0.7	5.8	3.3	7.7	21.2	26.0	26.6	19.6	12.6	11.3	16.8	9.8	3.7	1.6	7.4	26.6
9-Sep	Z	0.6	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.4	0.7
10-Sep	0.2	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.6	3.4	8.7	18.3	1.0	0.4	0.1	0.1	0.2	0.4	0.3	2.0	0.5	0.1	0.0	1.6	18.3
11-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4
12-Sep	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.5
13-Sep	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.7	0.7	0.6	1.7	2.0	0.7	0.4	0.4	0.4	0.3	0.3	0.4	0.4	2.0
14-Sep	0.3	0.1	0.1	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
15-Sep	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	C	C	C	C	C	0.1	4.2	2.5	2.9	2.2	2.2	4.6	1.5	3.8	4.4	1.6	4.6
16-Sep	11.2	8.8	2.2	0.8	Z	0.4	0.3	0.4	0.4	0.3	9.2	16.2	8.9	5.0	3.4	2.9	2.4	1.5	0.8	0.4	0.4	0.5	0.4	0.3	3.3	16.2
17-Sep	0.3	0.3	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
18-Sep	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1
19-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.2	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	0.0	0.0	0.0	0.2
20-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.5	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.5
21-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	2.5	13.6	17.3	8.9	1.5	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	2.0	17.3
22-Sep	0.0	Z	0.0	0.0	0.0	0.1	0.1	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	0.0	0.0	0.1	0.2
23-Sep	0.0	0.1	Z	0.1	0.1	0.0	0.0	0.0	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	0.0	0.1	0.1
24-Sep	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.6	3.1	2.0	0.2	0.1	0.1	0.1	0.1	0.3	3.1
25-Sep	0.0	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4
26-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
27-Sep	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	0.0	0.0	0.1	0.1	0.1
28-Sep	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.9	0.1	2.7	3.8	0.2	0.1	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.4	3.8
29-Sep	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.3
30-Sep	0.1	0.0	0.0	Z	0.1	0.0	0.1	0.4	0.2	0.5	0.8	1.2	1.3	0.8	0.6	0.4	0.2	0.5	5.6	10.7	1.0	9.7	8.9	2.6	2.0	10.7
	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.8	2.4	2.6	1.3	1.2	1.4	1.4	1.1	0.9	0.9	0.9	0.8	0.6	0.4	Diurnal Average	
	11.2	8.8	2.2	0.8	0.2	0.4	0.9	4.6	1.6	0.9	9.2	16.4	18.3	8.9	21.2	26.0	26.6	19.6	12.6	11.3	16.8	9.8	8.9	4.4	Diurnal Maximum	

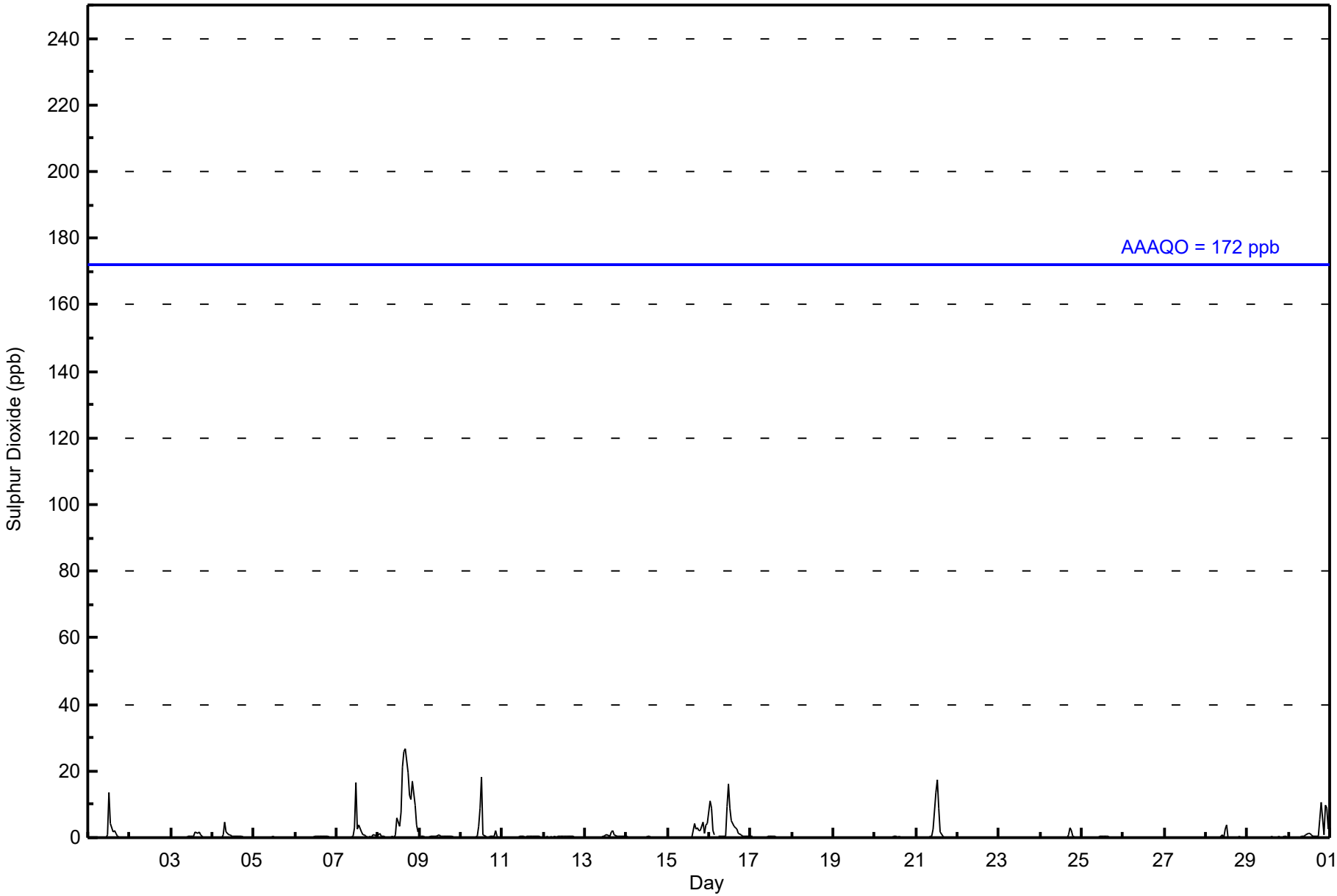
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025



Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	670	97.81	97.81
11 - 20	12	1.75	99.56
21 - 60	3	0.44	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: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	27	28	6	5	6	7	97	186	68	47	42	54	40	18	22	17	670
11 - 20	1	2	1	0	0	0	0	0	1	0	0	0	3	2	1	1	12
21 - 60	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3
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	28	30	7	5	6	7	97	186	69	47	42	55	45	20	23	18	685

Total Number of Valid Hours: 685

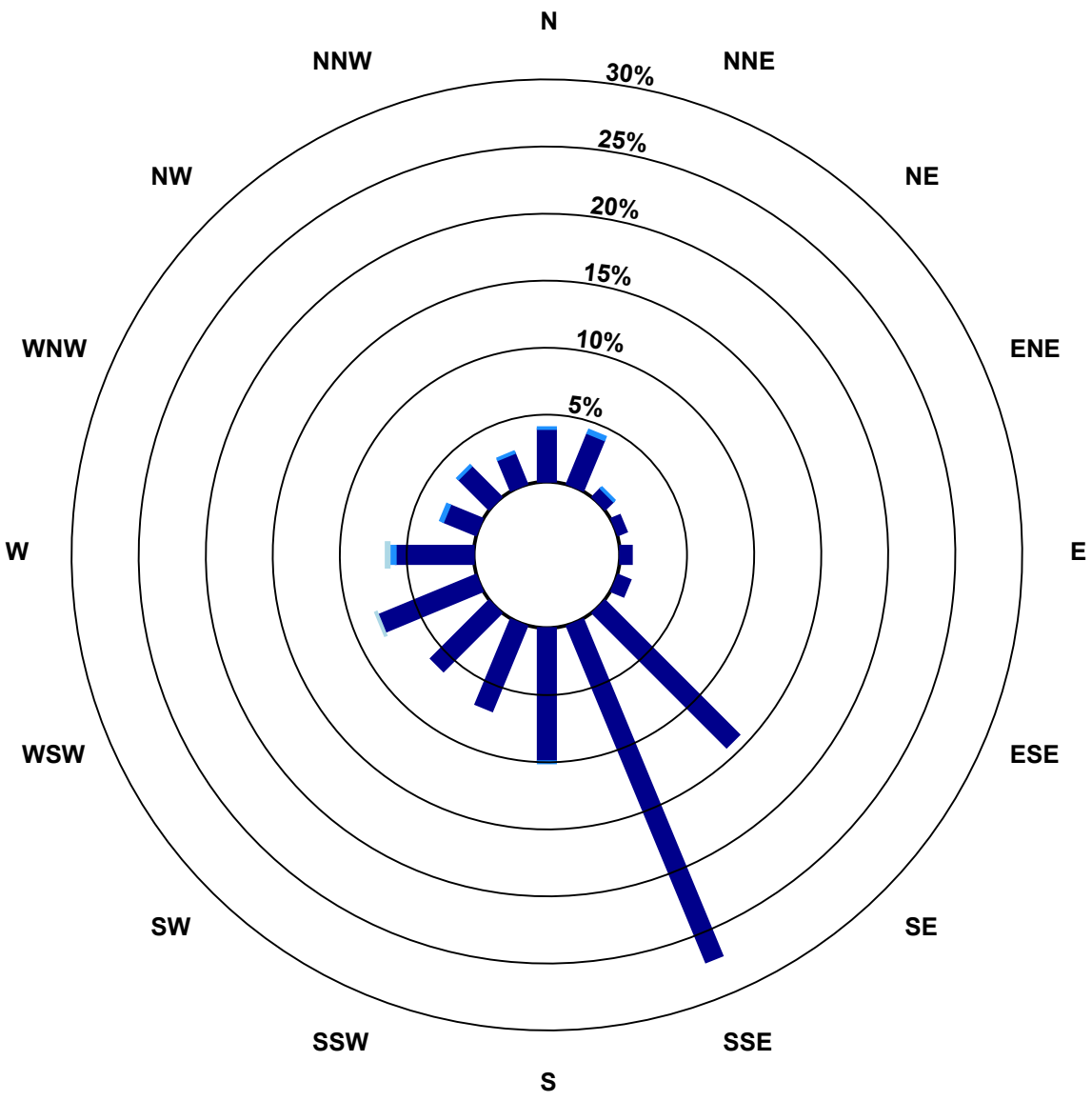
Total Number of Hours: 720

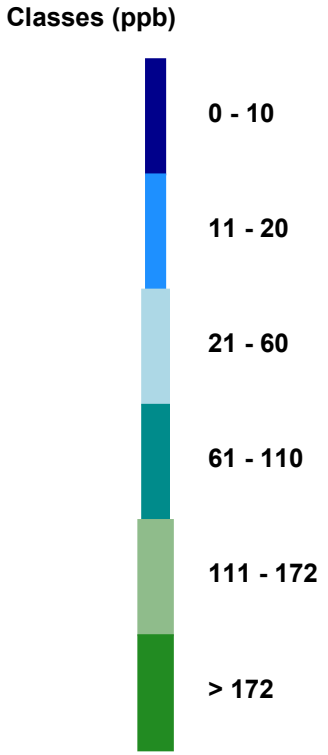
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Mannix





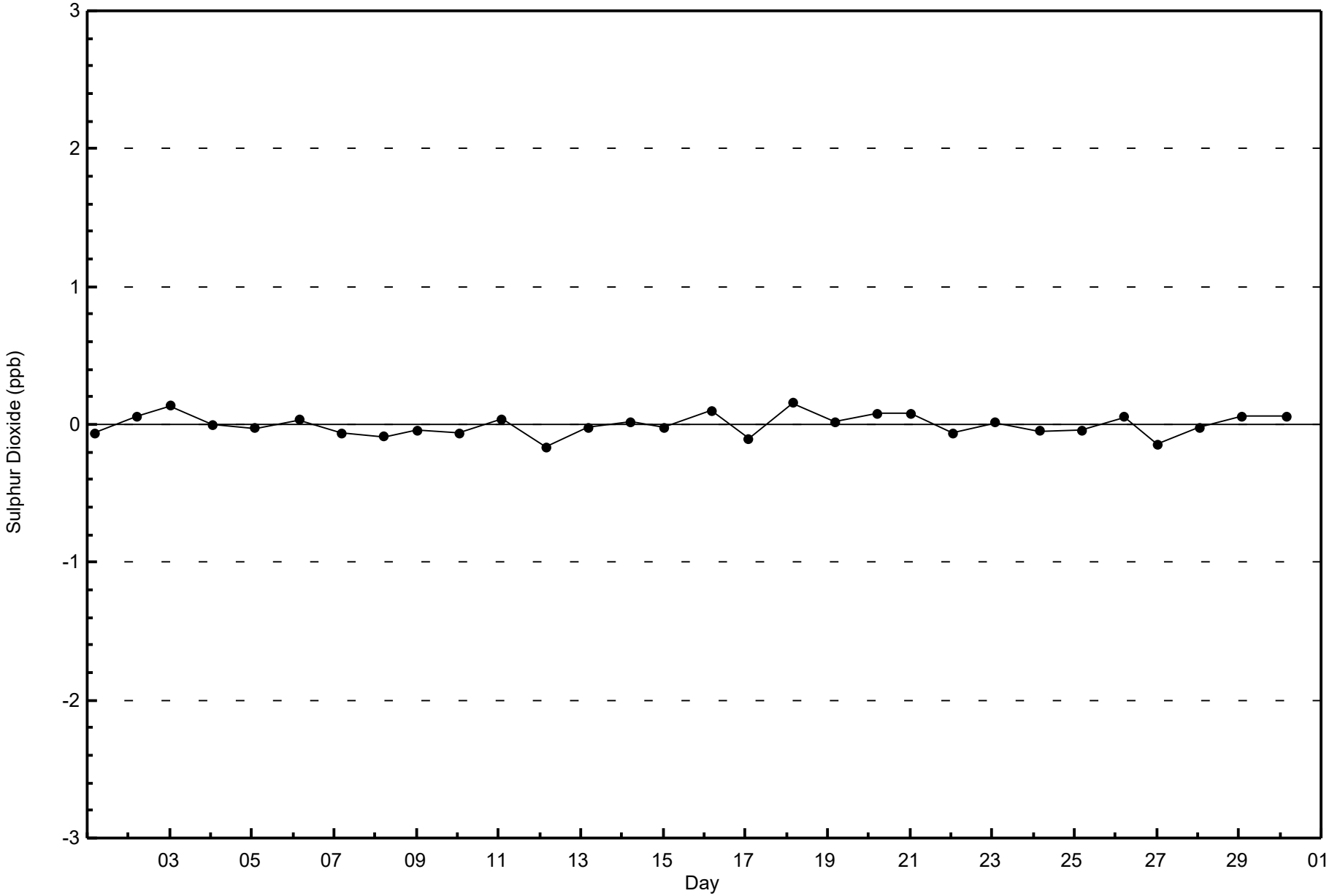
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025

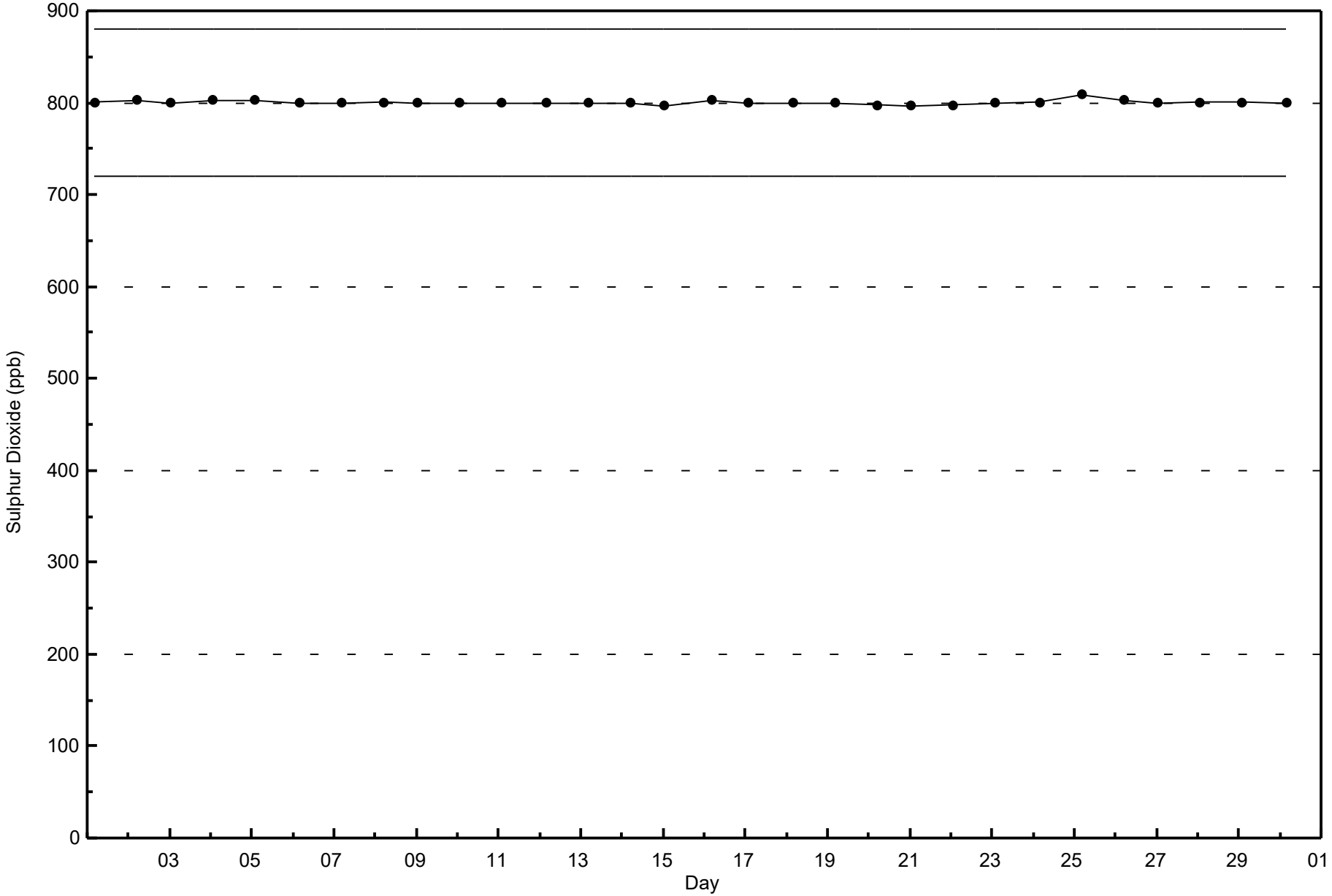


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.7 ppb on Sep 15 23:00 Maximum Daily Average: 1.0 ppb on Sep 15

Minimum Value: 0.0 ppb on Sep 21 17:00
Maximum Diurnal Average: 0.7 ppb at hour 23
Monthly Average: 0.40 ppb

Minimum Daily Average: 0.1 ppb on Sep 27
Minimum Diurnal Average: 0.2 ppb at hour 14
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.8 P_{99} = 3.4

Hours in Service:	720
Hours of Data:	677
Hours of Missing Data:	43
Hours of Calibration:	36
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.9	1.3	1.0	0.8	1.6	Z	3.5	0.4	0.1	0.0	0.1	0.8	1.4	0.8	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	3.5
2-Sep	Z	1.6	2.0	2.5	2.4	1.8	0.8	1.9	1.2	2.3	1.0	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.8	2.5
3-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	C	0.6	1.0	0.4	0.3	0.4	0.5	0.4	0.6	0.6	--	1.0
4-Sep	0.6	0.8	Z	0.6	0.4	0.7	1.1	1.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.9	0.6	3.9	4.4	0.3	0.8	4.4
5-Sep	0.4	0.9	0.7	Z	0.3	0.5	0.3	0.3	0.2	0.3	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.8	0.3	0.2	0.2	0.1	0.2	0.3	1.8
6-Sep	0.2	0.2	0.3	0.3	Z	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.4	0.3	0.2	0.4
7-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.6	2.4	0.7	0.6	0.4	0.4	0.5	0.3	0.4	0.5	0.6	0.7	0.7	0.4	0.5	2.4
8-Sep	Z	1.5	0.7	0.7	0.3	0.4	0.4	0.4	0.3	0.6	0.5	0.8	0.3	0.3	0.6	0.8	1.0	1.1	0.8	0.9	1.1	3.6	1.8	0.8	0.9	3.6
9-Sep	0.3	Z	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3
10-Sep	0.3	0.3	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.4	0.8	0.4	0.1	0.0	0.0	0.0	0.1	0.3	0.5	0.9	1.1	0.6	0.4	0.3	1.1
11-Sep	0.4	1.0	0.5	Z	1.0	0.6	0.6	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	1.0
12-Sep	0.3	0.4	0.4	0.4	Z	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5
13-Sep	0.2	0.2	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	1.0	1.5	1.8	2.9	3.1	2.3	2.6	0.5	0.9	3.1
14-Sep	Z	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.9	2.9	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5	2.9
15-Sep	0.2	Z	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.3	1.3	0.2	M	0.1	0.8	1.8	1.3	1.0	1.9	2.9	1.8	4.7	2.3	1.0	4.7
16-Sep	3.4	4.1	0.7	0.3	0.7	Z	0.9	0.3	0.3	0.2	0.8	0.9	0.6	0.4	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.7	4.1
17-Sep	0.3	0.4	0.4	Z	0.4	0.3	0.4	0.3	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	0.2	0.4
18-Sep	0.1	0.1	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	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	0.2	0.3
19-Sep	0.2	0.1	0.2	0.4	0.5	Z	0.7	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	0.2	0.2	0.7
20-Sep	Z	0.2	0.3	0.2	0.2	0.3	0.5	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	0.5
21-Sep	0.2	Z	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.5
22-Sep	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.3	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	0.1	0.1	0.1	0.2	0.3
23-Sep	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
24-Sep	0.1	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.3	0.1	0.1	0.1	0.2	0.2	0.5
25-Sep	0.3	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.3
26-Sep	Z	0.1	0.1	0.2	0.4	0.5	0.8	0.7	0.5	0.3	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	0.2	0.8
27-Sep	0.1	Z	0.1	0.0	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	0.2	0.1	0.1	0.1	0.2	0.1	0.2
28-Sep	0.2	0.3	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.8	0.5	0.4	0.2	0.2	0.3	0.8
29-Sep	0.1	0.2	0.3	Z	M	M	M	M	M	M	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	0.4	--	0.4
30-Sep	0.3	0.3	0.2	0.2	Z	0.3	0.9	1.7	3.0	3.4	0.9	0.7	0.4	0.3	0.3	0.2	0.3	0.3	0.3	1.0	0.2	0.5	0.8	1.0	0.8	3.4
	0.4	0.6	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.6	0.7	0.4	Diurnal Average	
	3.4	4.1	2.0	2.5	2.4	1.8	3.5	1.9	3.0	3.4	1.0	2.4	1.4	0.9	2.9	1.0	1.8	1.5	1.8	2.9	3.1	3.9	4.7	2.3	Diurnal Maximum	

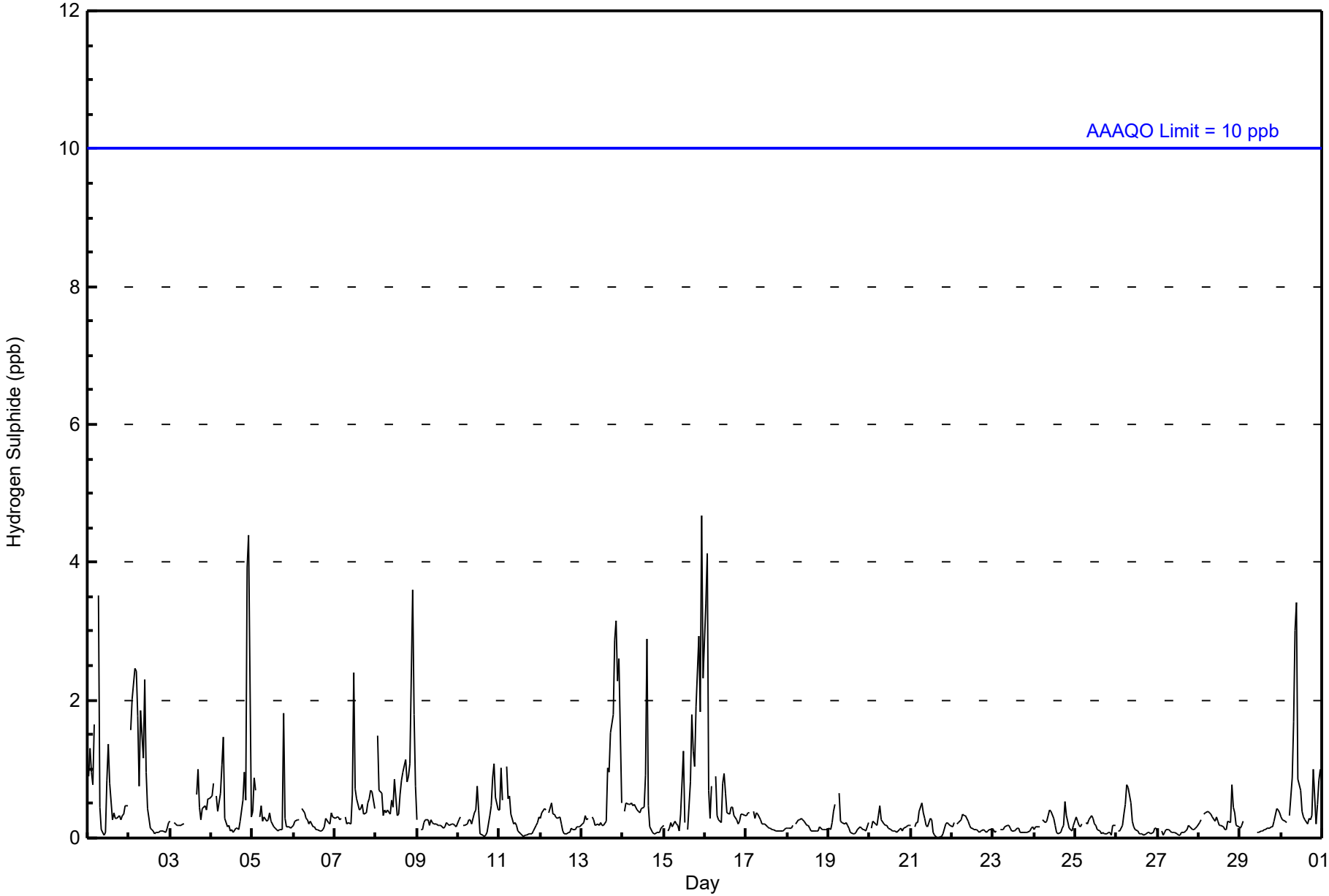
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	663	97.93	97.93
3 - 4	13	1.92	99.85
5 - 7	1	0.15	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 677

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mannix - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	27	29	6	3	4	6	87	182	71	47	42	56	45	20	20	18	663
3 - 4	1	1	1	2	1	1	1	1	1	0	0	0	0	1	2	0	13
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	28	30	7	5	5	7	88	183	72	47	42	56	45	22	22	18	677

Total Number of Valid Hours: 677

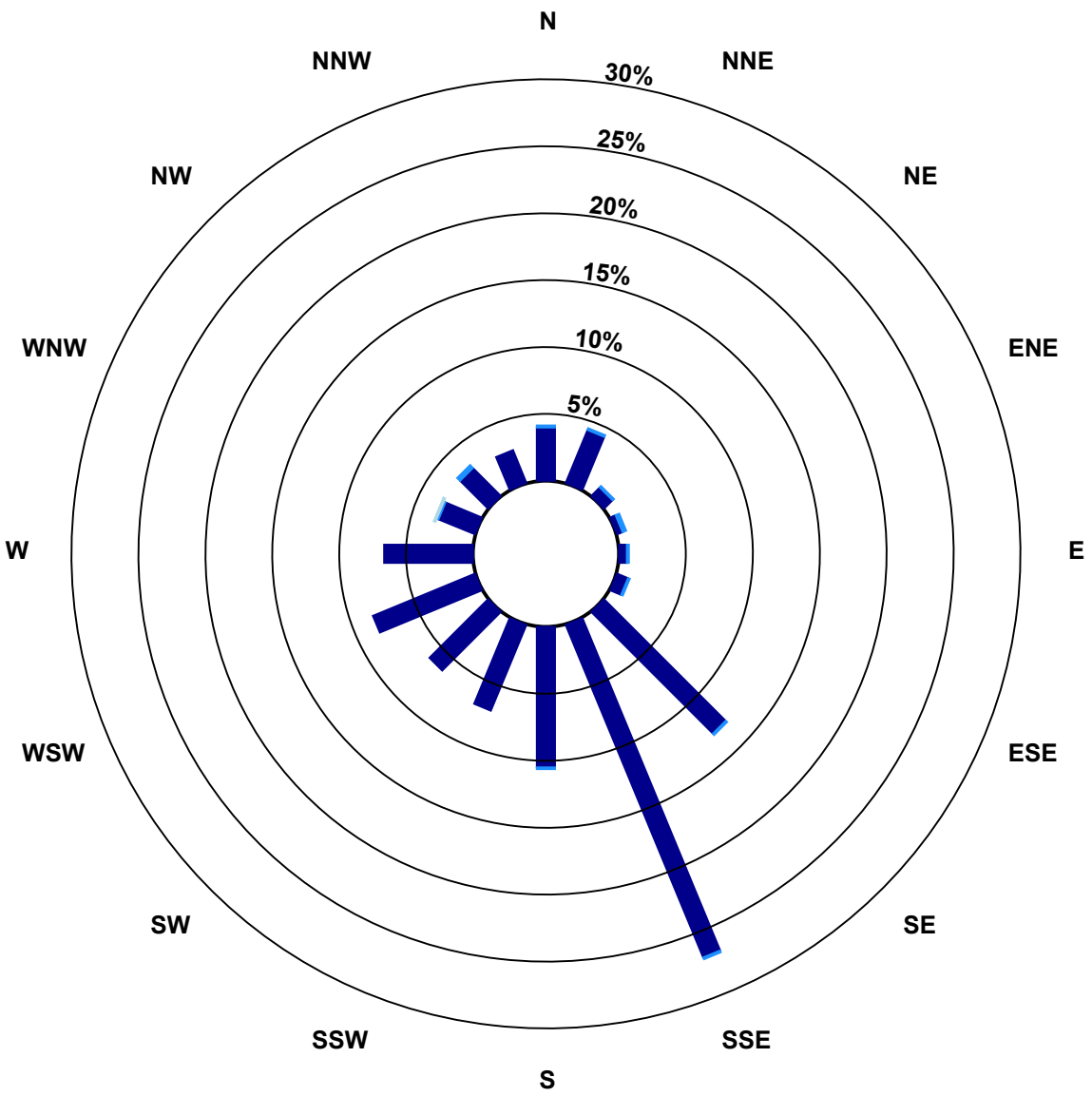
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Mannix



Classes (ppb)

- 0 - 2
- 3 - 4
- 5 - 7
- 8 - 11
- > 11

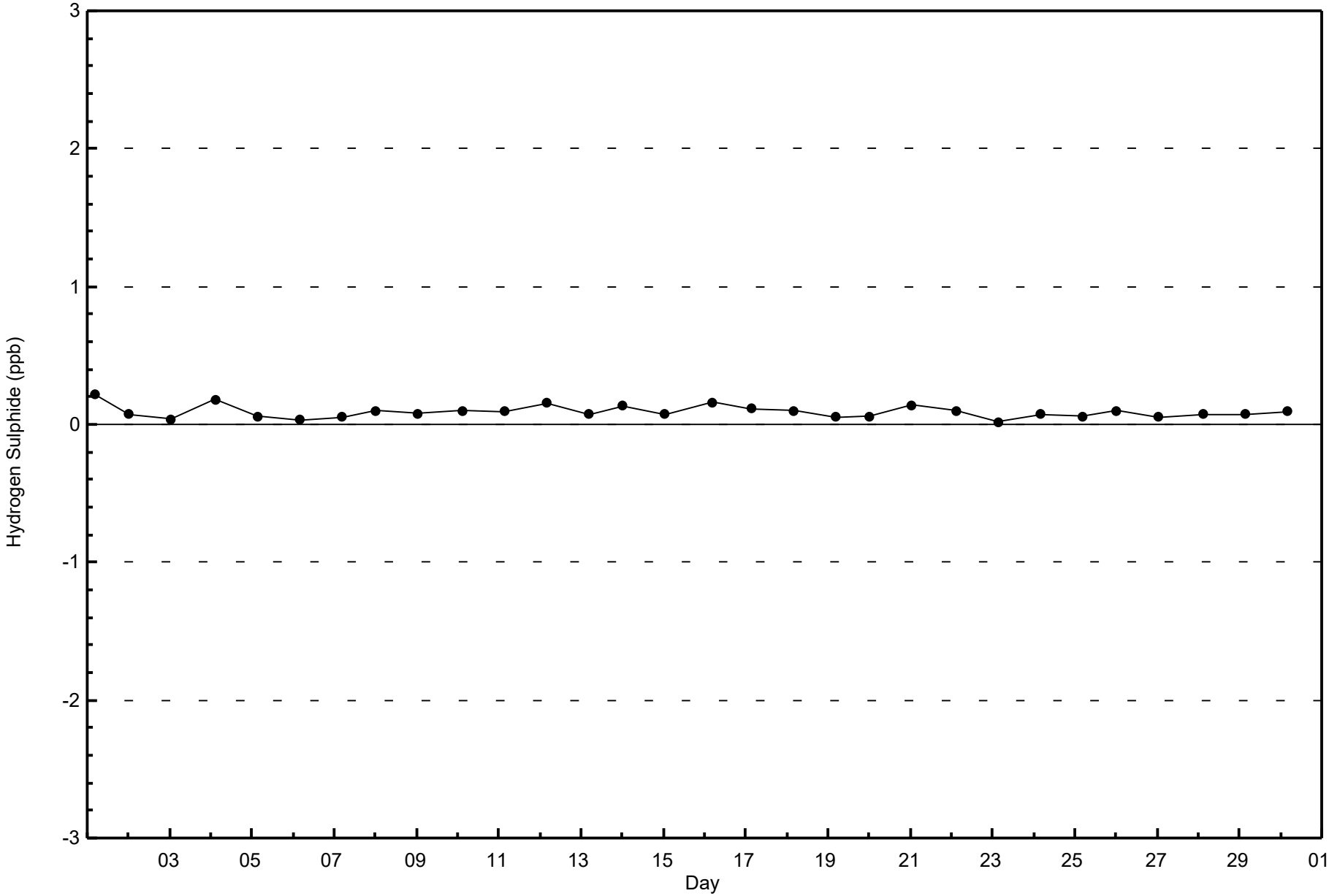
Total Number of Valid Hours: 677

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - September 2025

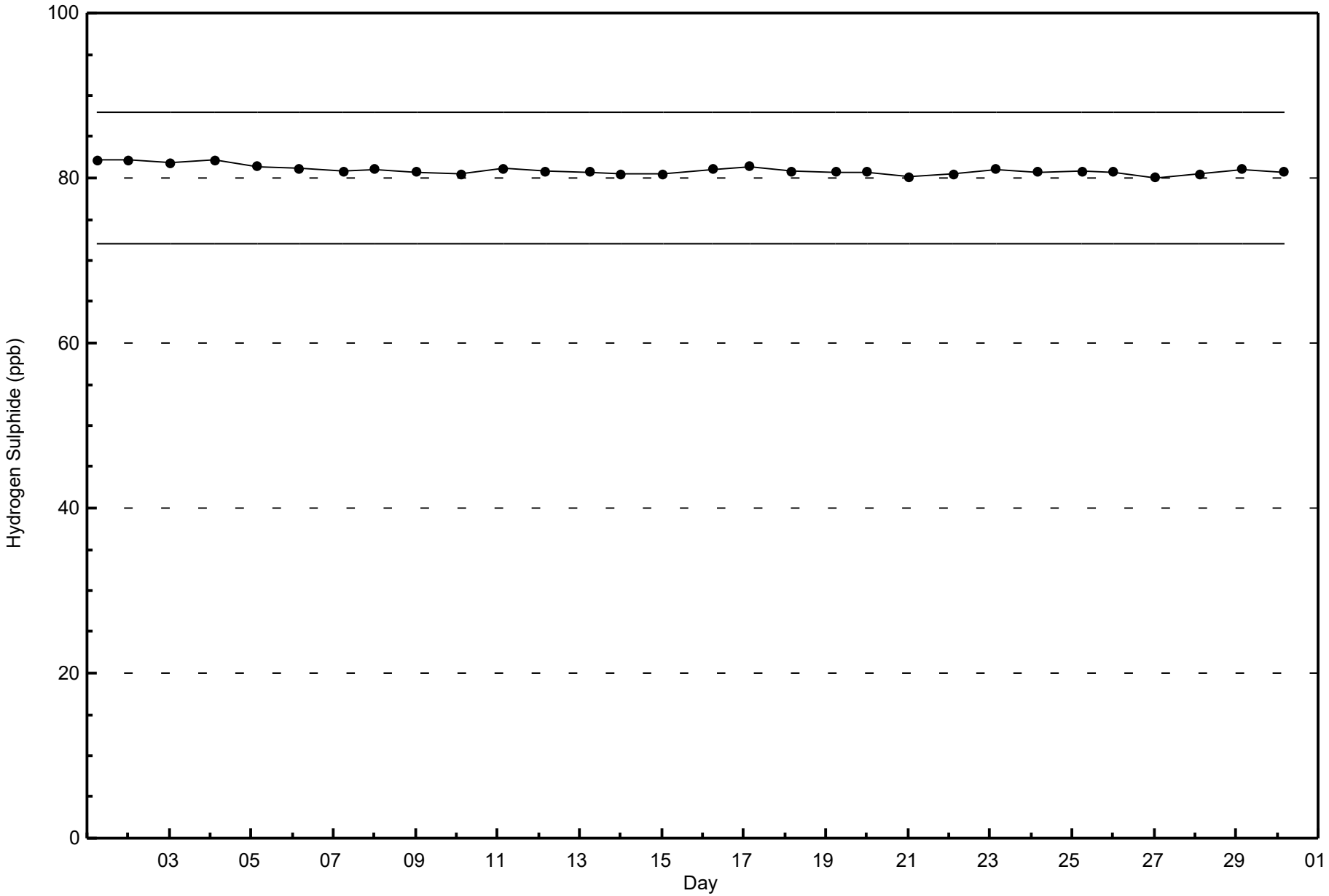


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mannix - September 2025

Maximum Value: 3.3 ppm on Sep 30 08:00

Maximum Daily Average: 2.4 ppm on Sep 13

Minimum Value: 2.0 ppm on Sep 15 15:00

Minimum Daily Average: 2.1 ppm on Sep 18

Maximum Diurnal Average: 2.2 ppm at hour 8

Minimum Diurnal Average: 2.1 ppm at hour 17

Monthly Average: 2.19 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} = 3.0

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.5	2.5	2.6	2.4	Z	3.0	2.7	2.4	2.2	2.2	2.2	2.3	2.4	2.4	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	3.0
2-Sep	2.3	2.7	2.6	2.8	2.9	Z	2.4	2.6	2.5	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.9
3-Sep	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	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.4
4-Sep	2.5	Z	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.5	2.6	2.2	2.3	2.6
5-Sep	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.4
6-Sep	2.1	2.1	2.1	Z	2.1	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	2.2	2.2	2.1	2.2
7-Sep	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.7	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
8-Sep	2.2	2.3	2.2	2.2	2.2	Z	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.3	2.4	2.6	2.6	2.3	2.3	2.3	2.6	2.5	2.4	2.3	2.6
9-Sep	Z	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2
10-Sep	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	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.3
11-Sep	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	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	2.1	2.1	2.1	2.1	2.3
12-Sep	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	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	2.1	2.2
13-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.3	2.7	2.9	3.1	3.2	3.2	3.2	2.3	2.4	3.2
14-Sep	2.2	2.2	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.3	2.4	2.3	2.5	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.6
15-Sep	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	C	C	C	C	C	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3
16-Sep	2.3	2.2	2.1	2.1	Z	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4
17-Sep	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
18-Sep	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	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Sep	2.1	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2
20-Sep	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2
21-Sep	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.1	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	2.2	2.3
22-Sep	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
23-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.7	2.2	2.1	2.1	2.1	2.2	2.2	2.7
25-Sep	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	2.1	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-Sep	2.1	2.1	2.1	2.2	2.2	Z	2.3	2.3	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	2.1	2.1	2.1	2.3
27-Sep	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
28-Sep	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	2.1	2.1	2.1	2.1	2.1	2.4	2.3	2.2	2.1	2.1	2.1	2.4
29-Sep	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	2.2	2.3	2.2	2.1	2.3
30-Sep	2.2	2.1	2.2	Z	2.1	2.1	3.2	3.3	3.0	3.1	2.6	2.5	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.4	3.3
	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	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	2.5	2.7	2.6	2.8	2.9	3.0	3.2	3.3	3.0	3.1	2.6	2.7	2.5	2.6	2.5	2.4	2.6	2.7	2.9	3.1	3.2	3.2	3.2	2.4	Diurnal Maximum	

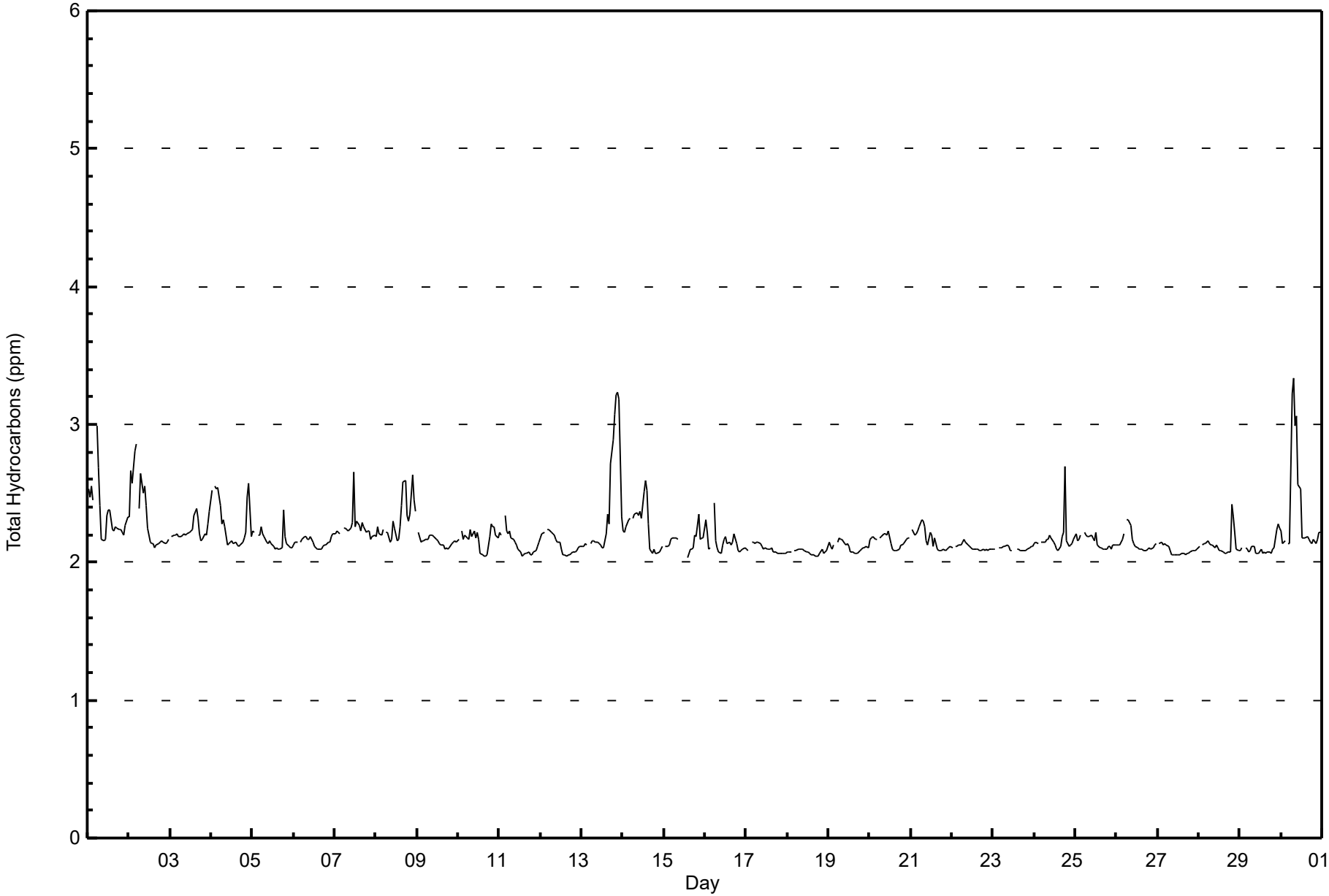
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mannix - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	8	1.17	1.17
2.1 - 3.0	668	97.80	98.98
3.1 - 10.0	7	1.02	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	1	0	4	0	1	2	0	0	0	8
2.1 - 3.0	26	29	7	5	6	7	96	184	69	42	40	54	43	20	23	17	668
3.1 - 10.0	2	1	0	0	0	0	1	1	0	1	0	0	0	0	0	1	7
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	30	7	5	6	7	97	186	69	47	40	55	45	20	23	18	683

Total Number of Valid Hours: 683

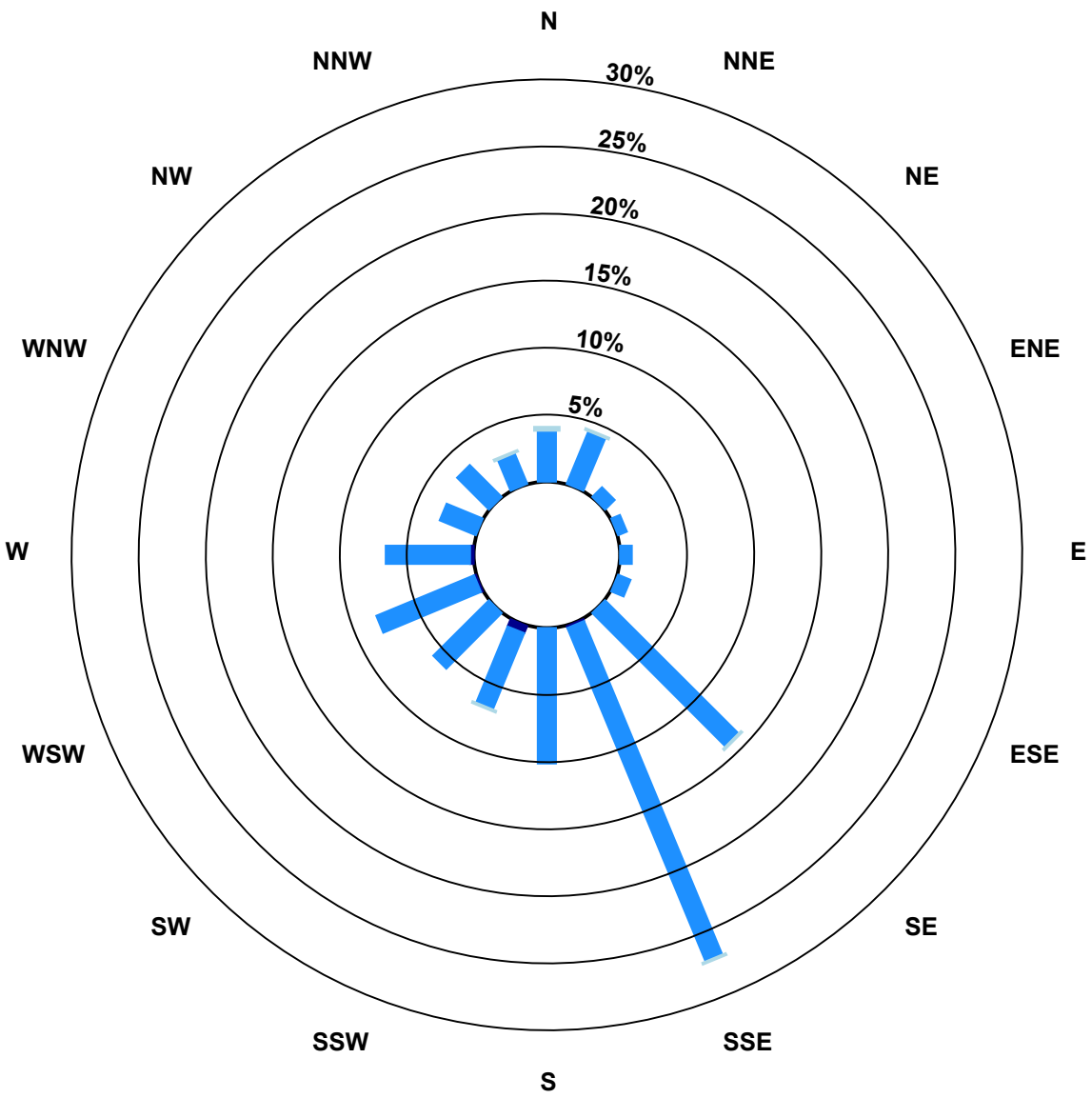
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Mannix



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

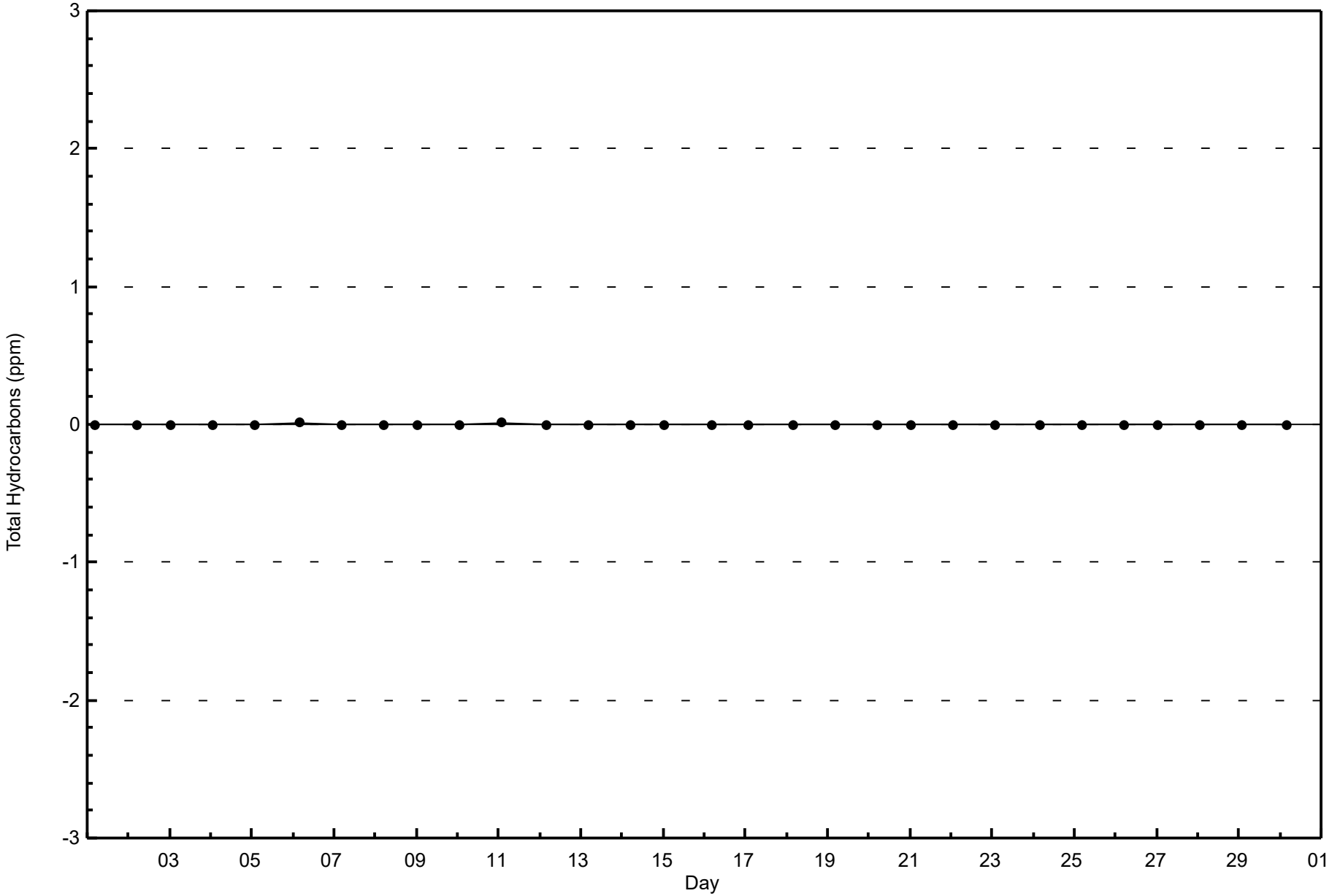
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mannix - September 2025

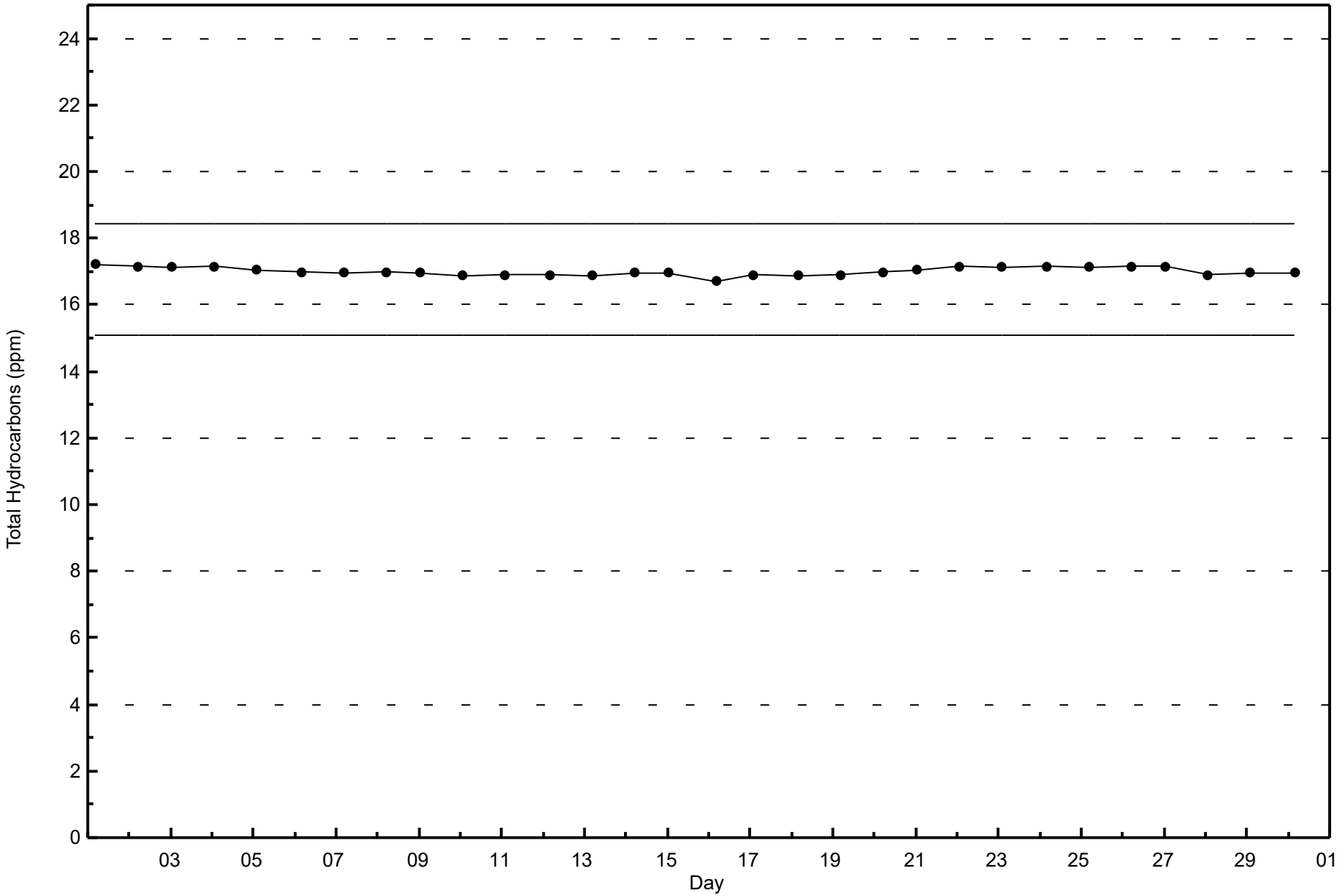


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025

Maximum Value: 0.232 ppm on Sep 1 06:00

Maximum Daily Average: 0.058 ppm on Sep 13

Minimum Value: 0.000 ppm on Sep 21 15:00

Minimum Daily Average: 0.001 ppm on Sep 27

Maximum Diurnal Average: 0.023 ppm at hour 12

Minimum Diurnal Average: 0.011 ppm at hour 24

Monthly Average: 0.017 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 in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.034	0.096	0.021	0.012	Z	0.232	0.069	0.008	0.002	0.001	0.009	0.125	0.036	0.071	0.057	0.049	0.092	0.068	0.061	0.061	0.034	0.014	0.037	0.006	0.052	0.232
2-Sep	0.002	0.012	0.006	0.045	0.112	Z	0.011	0.027	0.011	0.032	0.029	0.008	0.002	0.002	0.002	0.001	0.002	0.002	0.003	0.003	0.003	0.003	0.008	0.015	0.015	0.112
3-Sep	Z	0.025	0.028	0.022	0.020	0.009	0.011	0.015	0.016	0.011	0.013	0.013	0.013	0.021	0.013	0.029	0.031	0.011	0.020	0.010	0.018	0.022	0.009	0.009	0.017	0.031
4-Sep	0.004	Z	0.002	0.003	0.001	0.001	0.002	0.003	0.002	0.002	0.001	0.001	0.001	0.000	0.001	0.002	0.000	0.005	0.043	0.037	0.073	0.096	0.146	0.002	0.018	0.146
5-Sep	0.003	0.000	Z	0.004	0.001	0.002	0.004	0.004	0.004	0.007	0.019	0.011	0.011	0.004	0.003	0.003	0.002	0.012	0.141	0.004	0.003	0.000	0.001	0.001	0.011	0.141
6-Sep	0.003	0.002	0.006	Z	0.006	0.009	0.017	0.008	0.004	0.005	0.009	0.008	0.006	0.002	0.002	0.003	0.003	0.003	0.003	0.005	0.016	0.011	0.019	0.015	0.007	0.019
7-Sep	0.011	0.011	0.007	0.004	Z	0.007	0.011	0.010	0.007	0.016	0.027	0.121	0.024	0.017	0.038	0.042	0.123	0.112	0.083	0.078	0.080	0.011	0.037	0.044	0.040	0.123
8-Sep	0.015	0.072	0.053	0.030	0.103	Z	0.081	0.071	0.033	0.066	0.076	0.039	0.005	0.005	0.011	0.008	0.067	0.129	0.025	0.015	0.025	0.106	0.055	0.028	0.049	0.129
9-Sep	Z	0.004	0.002	0.003	0.002	0.004	0.003	0.024	0.022	0.027	0.023	0.025	0.029	0.021	0.017	0.022	0.021	0.015	0.020	0.011	0.015	0.022	0.025	0.020	0.016	0.029
10-Sep	0.027	Z	0.039	0.012	0.010	0.011	0.011	0.006	0.004	0.008	0.004	0.003	0.002	0.000	0.002	0.001	0.002	0.002	0.001	0.007	0.078	0.018	0.003	0.004	0.011	0.078
11-Sep	0.002	0.002	Z	0.015	0.001	0.001	0.007	0.011	0.019	0.007	0.007	0.003	0.003	0.000	0.003	0.004	0.007	0.018	0.008	0.006	0.005	0.005	0.005	0.019	0.007	0.019
12-Sep	0.032	0.052	0.043	Z	0.054	0.044	0.032	0.036	0.036	0.029	0.023	0.025	0.015	0.008	0.004	0.003	0.004	0.005	0.009	0.009	0.005	0.007	0.004	0.011	0.021	0.054
13-Sep	0.012	0.007	0.008	0.006	Z	0.003	0.004	0.007	0.005	0.012	0.007	0.011	0.008	0.009	0.009	0.044	0.049	0.145	0.137	0.172	0.190	0.218	0.213	0.062	0.058	0.218
14-Sep	0.050	0.034	0.034	0.067	0.084	Z	0.083	0.076	0.097	0.073	0.087	0.048	0.150	0.210	0.191	0.020	0.005	0.002	0.001	0.000	0.001	0.000	0.001	0.005	0.057	0.210
15-Sep	Z	0.001	0.000	0.002	0.002	0.007	0.017	0.006	0.005	C	C	C	C	C	0.010	0.011	0.002	0.000	0.004	0.002	0.012	0.011	0.010	0.006	0.006	0.017
16-Sep	0.004	0.002	0.004	0.010	Z	0.006	0.005	0.010	0.008	0.005	0.005	0.017	0.044	0.052	0.050	0.007	0.002	0.007	0.019	0.015	0.014	0.006	0.006	0.008	0.013	0.052
17-Sep	0.006	0.004	Z	0.013	0.012	0.014	0.011	0.008	0.015	0.009	0.005	0.009	0.007	0.016	0.018	0.020	0.004	0.003	0.003	0.003	0.002	0.001	0.003	0.002	0.008	0.020
18-Sep	0.003	0.004	0.003	Z	0.004	0.003	0.003	0.003	0.002	0.004	0.004	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.001	0.002	0.001	0.001	0.001	0.001	0.002	0.004
19-Sep	0.001	0.001	0.001	0.001	Z	0.003	0.002	0.002	0.005	0.004	0.004	0.004	0.005	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.003	0.004	0.001	0.001	0.002	0.005
20-Sep	0.012	0.012	0.007	0.003	0.005	Z	0.004	0.011	0.019	0.021	0.013	0.081	0.005	0.007	0.002	0.001	0.001	0.004	0.008	0.022	0.010	0.024	0.019	0.016	0.013	0.081
21-Sep	Z	0.026	0.005	0.007	0.017	0.020	0.026	0.015	0.017	0.004	0.002	0.004	0.015	0.002	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.002	0.002	0.007	0.026
22-Sep	0.002	Z	0.006	0.005	0.003	0.004	0.006	0.028	0.009	0.004	0.002	0.000	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.003	0.028
23-Sep	0.001	0.002	Z	0.000	0.001	0.000	0.001	0.001	0.004	0.001	0.000	0.001	M	M	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.001	0.001	0.005
24-Sep	0.003	0.006	0.008	Z	0.001	0.001	0.002	0.020	0.016	0.032	0.020	0.008	0.004	0.000	0.000	0.001	0.001	0.001	0.014	0.000	0.000	0.001	0.002	0.011	0.007	0.032
25-Sep	0.039	0.002	0.005	0.028	Z	0.026	0.032	0.028	0.025	0.034	0.023	0.006	0.068	0.003	0.002	0.003	0.001	0.002	0.000	0.000	0.000	0.001	0.005	0.004	0.015	0.068
26-Sep	0.003	0.002	0.001	0.009	0.022	Z	0.071	0.070	0.045	0.010	0.005	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.002	0.002	0.011	0.071
27-Sep	Z	0.001	0.004	0.000	0.000	0.002	0.001	0.001	0.001	0.000	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.002	0.001	0.001	0.004
28-Sep	0.004	Z	0.010	0.010	0.011	0.014	0.008	0.006	0.008	0.005	0.010	0.008	0.004	0.004	0.002	0.000	0.000	0.001	0.003	0.005	0.003	0.005	0.000	0.001	0.005	0.014
29-Sep	0.002	0.002	Z	0.007	0.009	0.002	0.012	0.013	0.004	0.005	0.003	0.001	0.034	0.001	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.022	0.027	0.023	0.007	0.034
30-Sep	0.011	0.003	0.001	Z	0.007	0.002	0.017	0.078	0.095	0.056	0.037	0.082	0.031	0.049	0.063	0.069	0.028	0.030	0.002	0.013	0.004	0.005	0.022	0.016	0.031	0.095
	0.011	0.015	0.012	0.013	0.020	0.017	0.019	0.020	0.018	0.017	0.016	0.023	0.019	0.018	0.017	0.012	0.015	0.019	0.020	0.016	0.020	0.021	0.022	0.011	Diurnal Average	
	0.050	0.096	0.053	0.067	0.112	0.232	0.083	0.078	0.097	0.073	0.087	0.125	0.150	0.210	0.191	0.069	0.123	0.145	0.141	0.172	0.190	0.218	0.213	0.062	Diurnal Maximum	

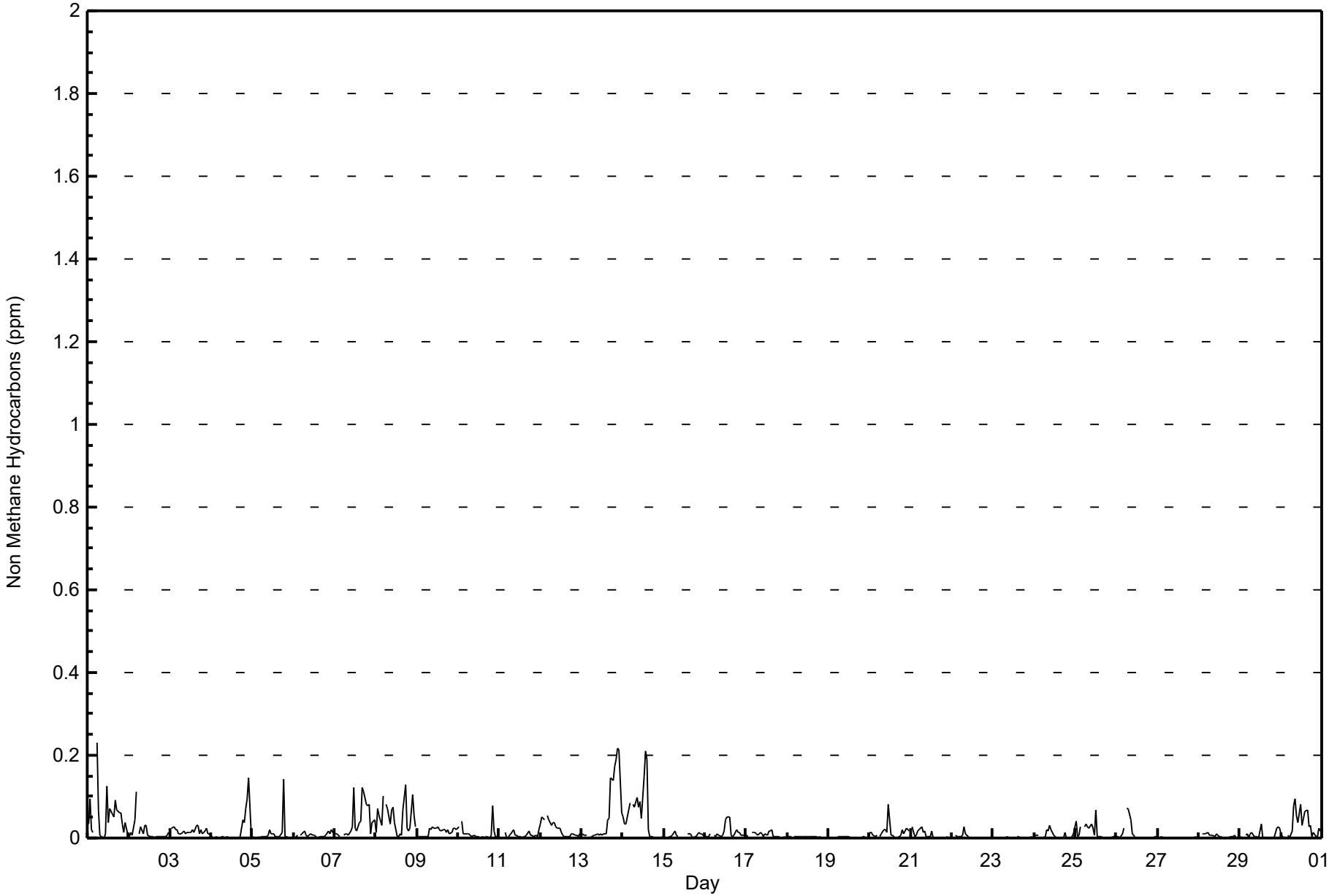
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025



Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	347	50.81	50.81
0.006 - 0.05	278	40.70	91.51
0.06 - 0.1	51	7.47	98.98
> 0.1	7	1.02	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	4	0	0	0	0	1	60	69	40	36	32	42	30	10	17	6	347
0.006 - 0.05	17	11	2	2	2	4	33	110	24	10	8	13	14	10	6	12	278
0.06 - 0.1	7	17	5	3	2	2	3	6	5	0	0	0	1	0	0	0	51
> 0.1	0	2	0	0	2	0	1	1	0	1	0	0	0	0	0	0	7
Totals	28	30	7	5	6	7	97	186	69	47	40	55	45	20	23	18	683

Total Number of Valid Hours: 683

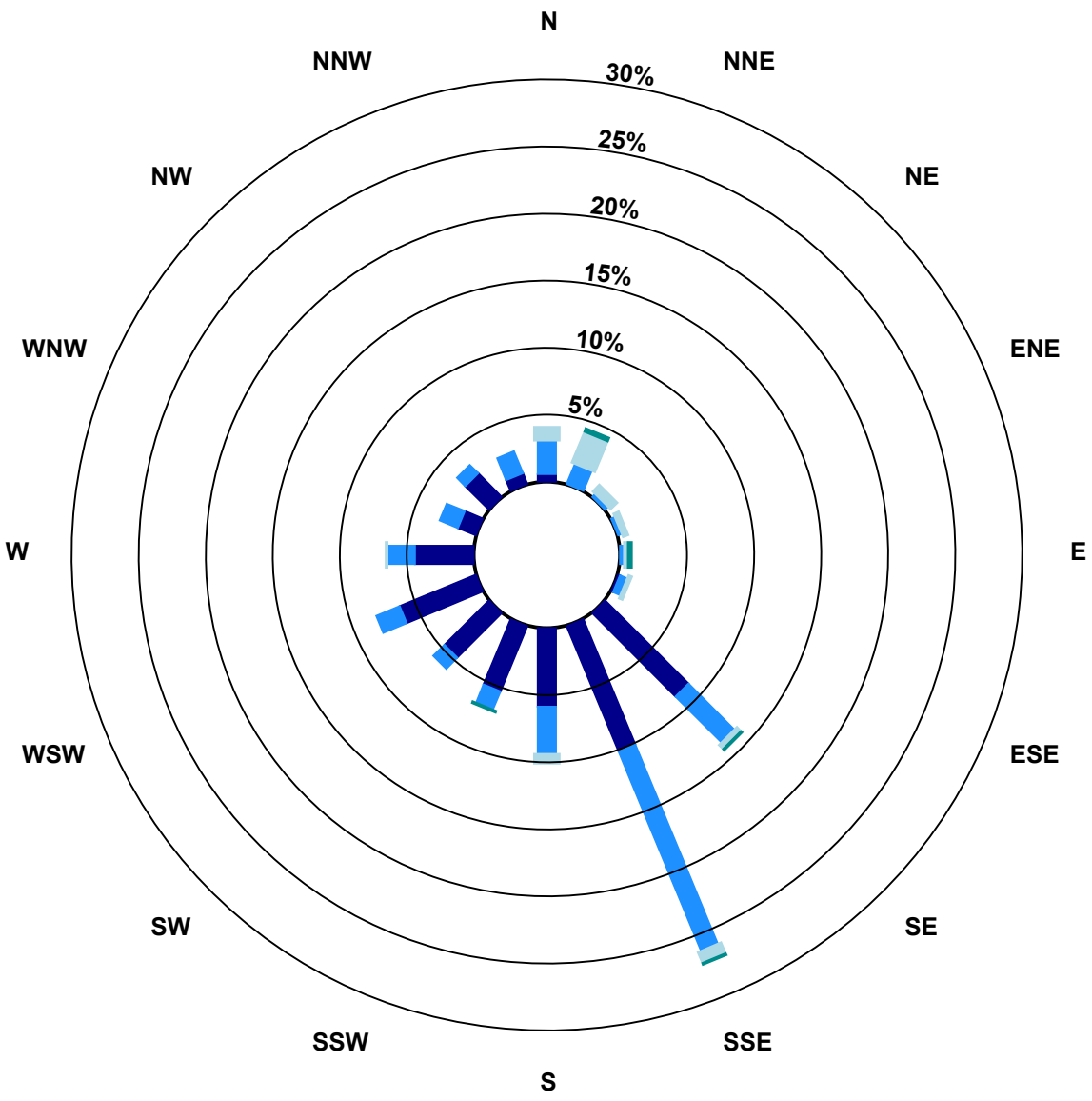
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mannix



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

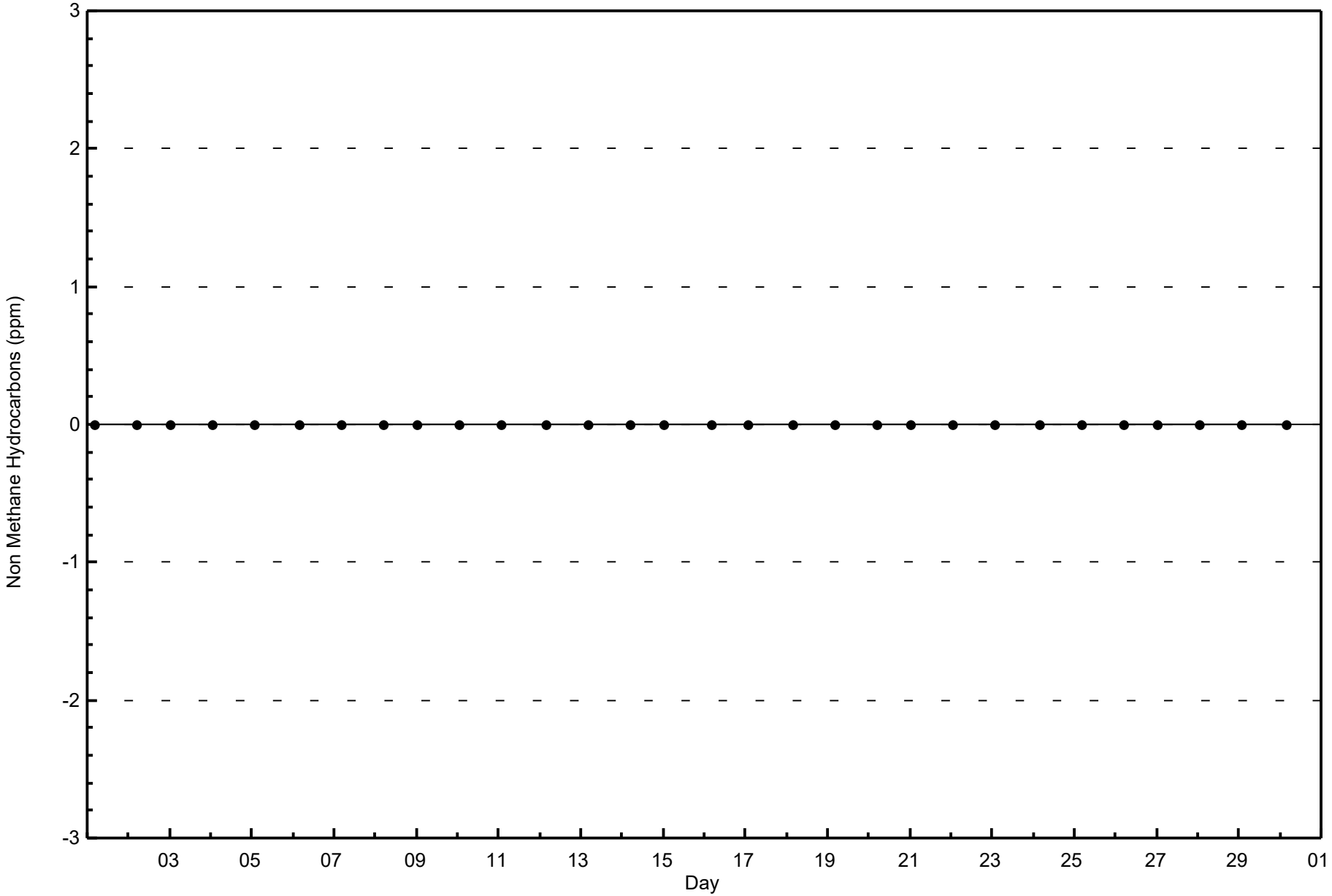
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025

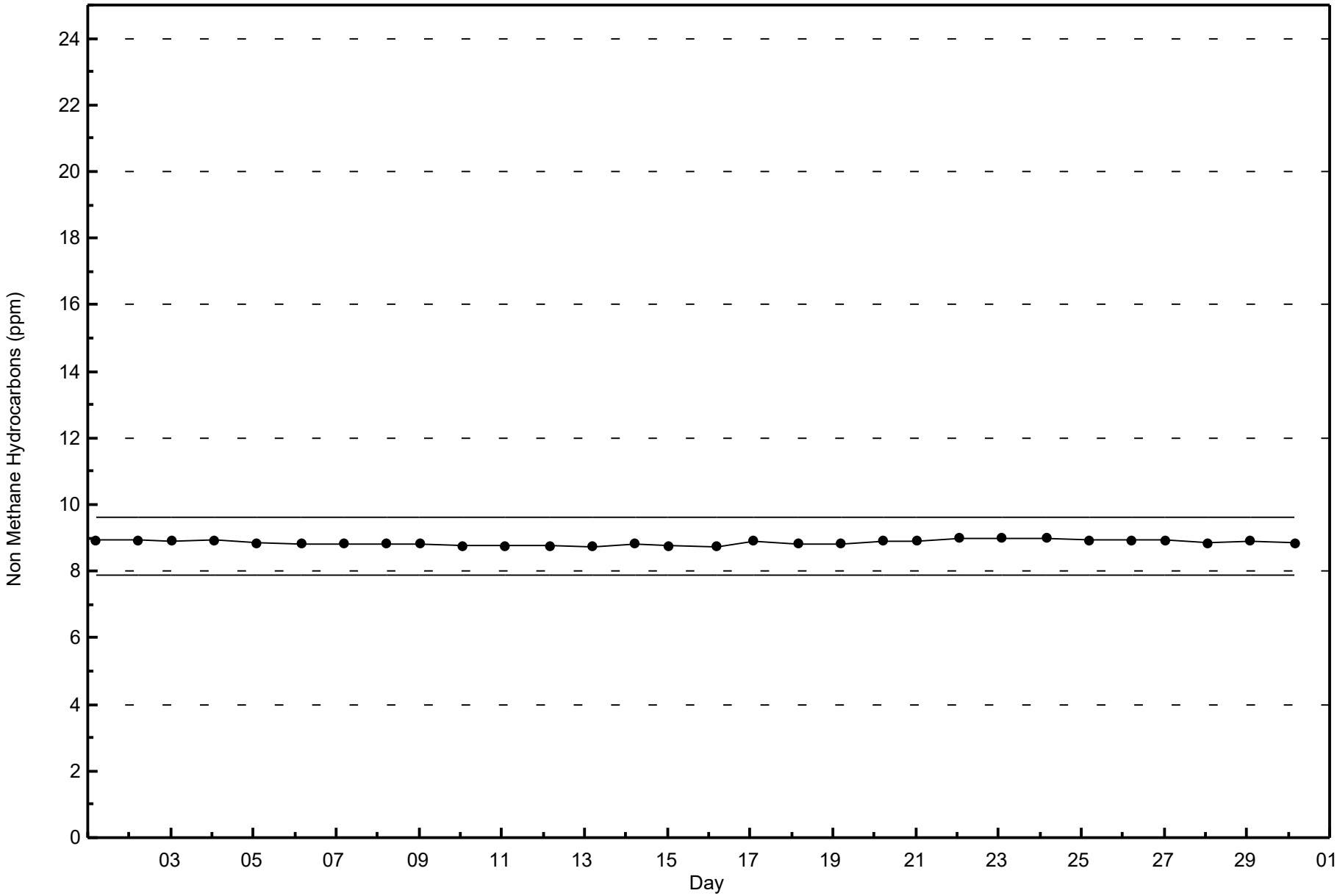


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.3 ppm on Sep 30 08:00

Maximum Daily Average: 2.3 ppm on Sep 13

Minimum Value: 2.0 ppm on Sep 15 15:00

Minimum Daily Average: 2.1 ppm on Sep 18

Maximum Diurnal Average: 2.2 ppm at hour 8

Minimum Diurnal Average: 2.1 ppm at hour 17

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} = 2.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.5	2.4	2.5	2.4	Z	2.8	2.6	2.4	2.2	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	2.3	2.3	2.8
2-Sep	2.3	2.7	2.6	2.8	2.7	Z	2.4	2.6	2.5	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.8
3-Sep	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	2.3	2.4	2.3	2.2	2.1	2.2	2.2	2.2	2.3	2.4	2.2	2.4
4-Sep	2.5	Z	2.6	2.5	2.5	2.4	2.3	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	2.4	2.4	2.2	2.3	2.6
5-Sep	2.2	2.2	Z	2.2	2.2	2.3	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	2.1	2.1	2.1	2.1	2.2	2.3
6-Sep	2.1	2.1	2.1	Z	2.1	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	2.2	2.2	2.1	2.2
7-Sep	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.5
8-Sep	2.2	2.2	2.2	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.4	2.5	2.5	2.3	2.3	2.3	2.5	2.4	2.3	2.3	2.5
9-Sep	Z	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
10-Sep	2.1	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	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3
11-Sep	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	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	2.1	2.1	2.1	2.1	2.3
12-Sep	2.1	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
13-Sep	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	2.2	2.3	2.2	2.6	2.7	2.9	3.0	3.0	3.0	2.3	2.3	3.0
14-Sep	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
15-Sep	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	C	C	C	C	C	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.3
16-Sep	2.3	2.2	2.1	2.1	Z	2.4	2.2	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	2.1	2.1	2.1	2.4
17-Sep	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
18-Sep	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	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Sep	2.1	2.1	2.1	2.1	Z	2.1	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
20-Sep	2.2	2.2	2.2	2.2	2.2	Z	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	2.2	2.2	2.1	2.2
21-Sep	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.1	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	2.2	2.3
22-Sep	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	2.1
23-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.7	2.2	2.1	2.1	2.1	2.2	2.2	2.7
25-Sep	2.2	2.2	2.2	2.2	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	2.2
26-Sep	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.2
27-Sep	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
28-Sep	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	2.4	2.3	2.2	2.1	2.1	2.1	2.4
29-Sep	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	2.2	2.2	2.2	2.1	2.2
30-Sep	2.2	2.1	2.2	Z	2.1	2.1	3.2	3.3	2.9	3.0	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	3.3
	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	2.5	2.7	2.6	2.8	2.7	2.8	3.2	3.3	2.9	3.0	2.5	2.5	2.4	2.4	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.0	3.0	2.4	Diurnal Maximum	

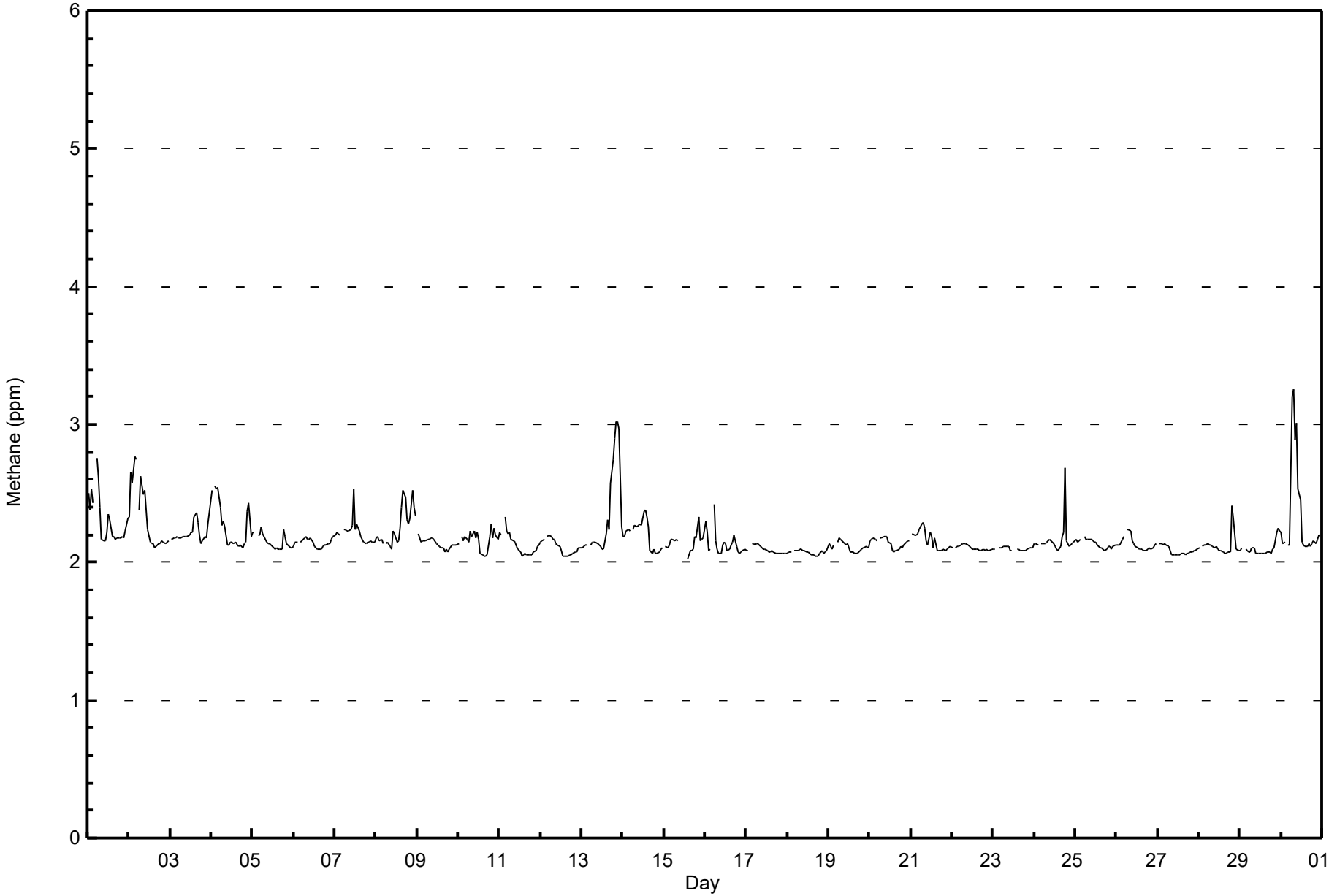
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mannix - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	11	1.61	1.61
2.1 - 3.0	670	98.10	99.71
3.1 - 10.0	2	0.29	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Methane (CH_4) - ppm
Mannix - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	1	0	7	0	1	2	0	0	0	11
2.1 - 3.0	27	30	7	5	6	7	97	185	69	40	40	54	43	20	23	17	670
3.1 - 10.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	30	7	5	6	7	97	186	69	47	40	55	45	20	23	18	683

Total Number of Valid Hours: 683

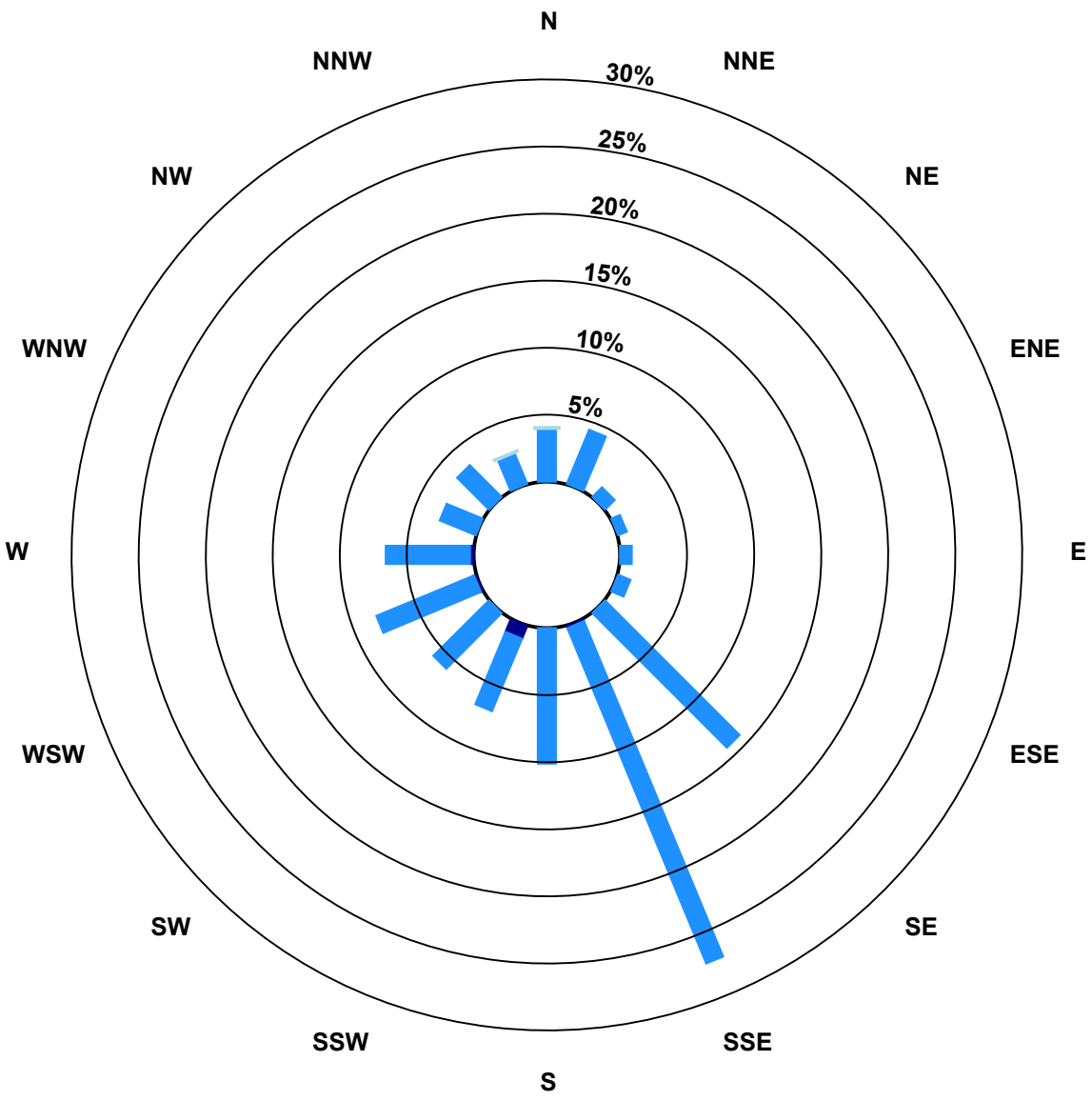
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Mannix



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

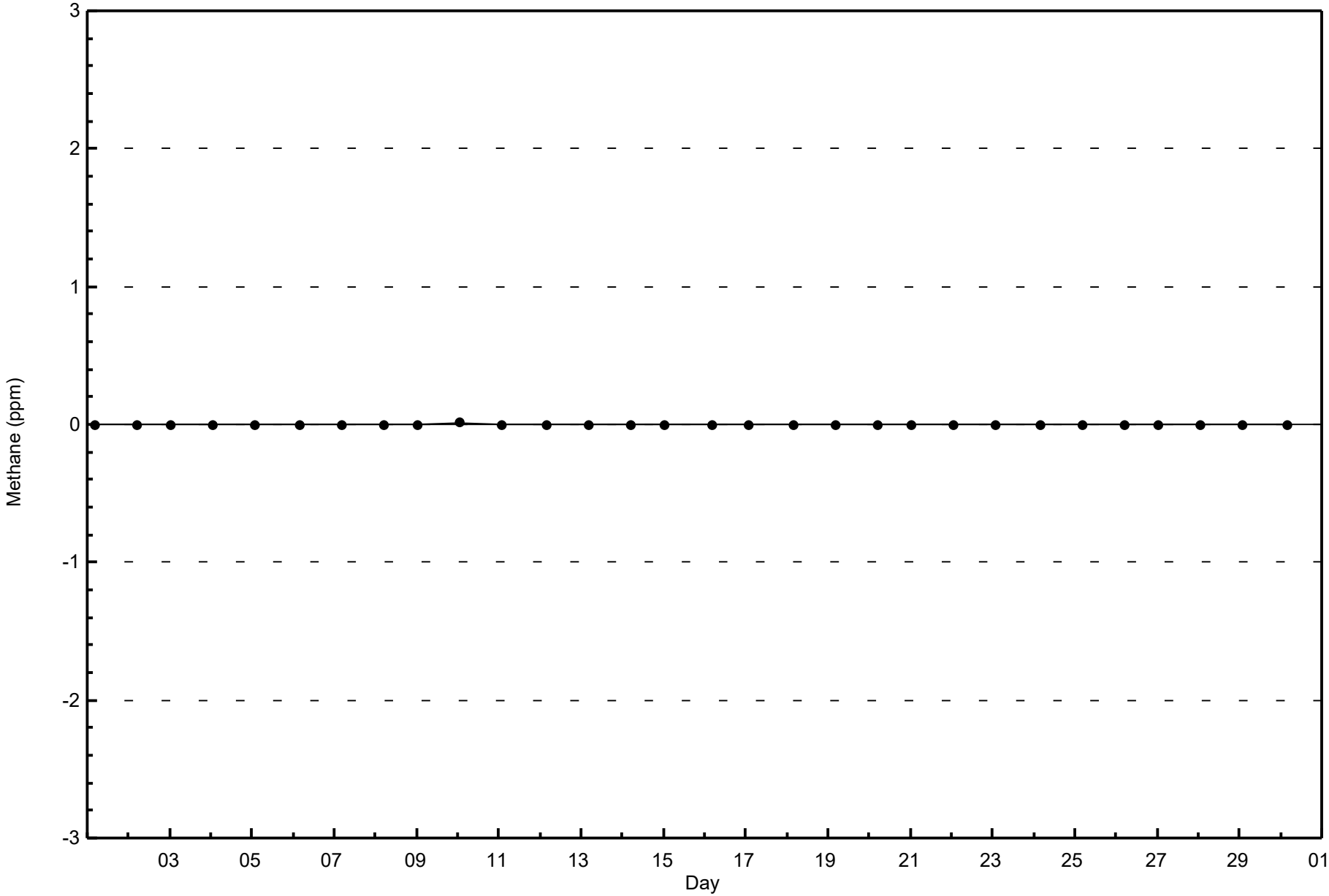
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mannix - September 2025

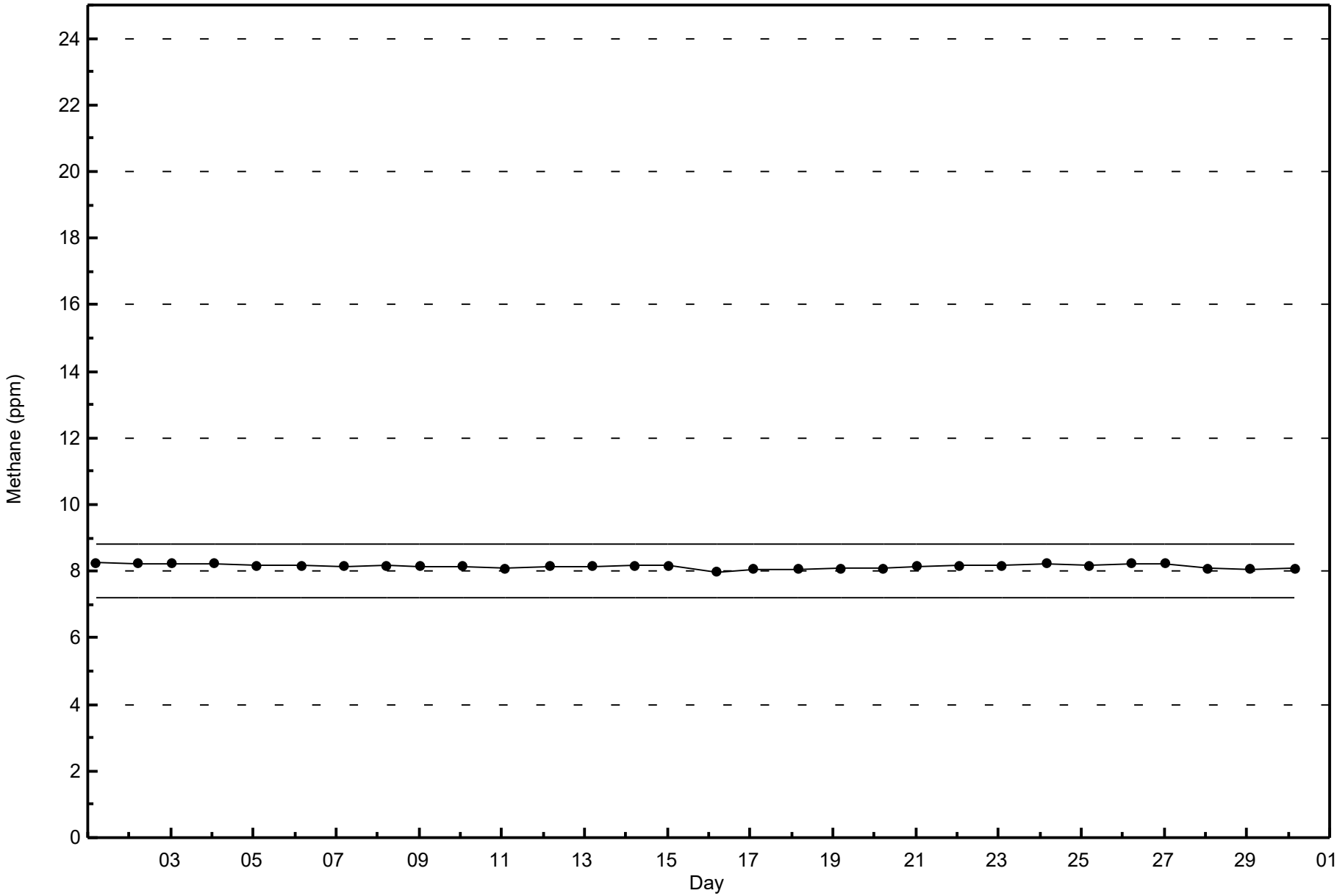


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mannix - September 2025



Maximum Value: 28.7 C on Sep 12 15:00
Maximum Daily Average: 19.2 C on Sep 12

Minimum Value: 0.9 C on Sep 25 06:00
Minimum Daily Average: 9.5 C on Sep 25
Maximum Diurnal Average: 20.9 C at hour 15
Minimum Diurnal Average: 8.9 C at hour 6
Monthly Average: 14.37 C
Percentiles: P_1 = 3.4 P_{10} = 7.8 Q_1 = 11.1 Median = 13.8 Q_3 = 17.6 P_{90} = 21.8 P_{99} = 26.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

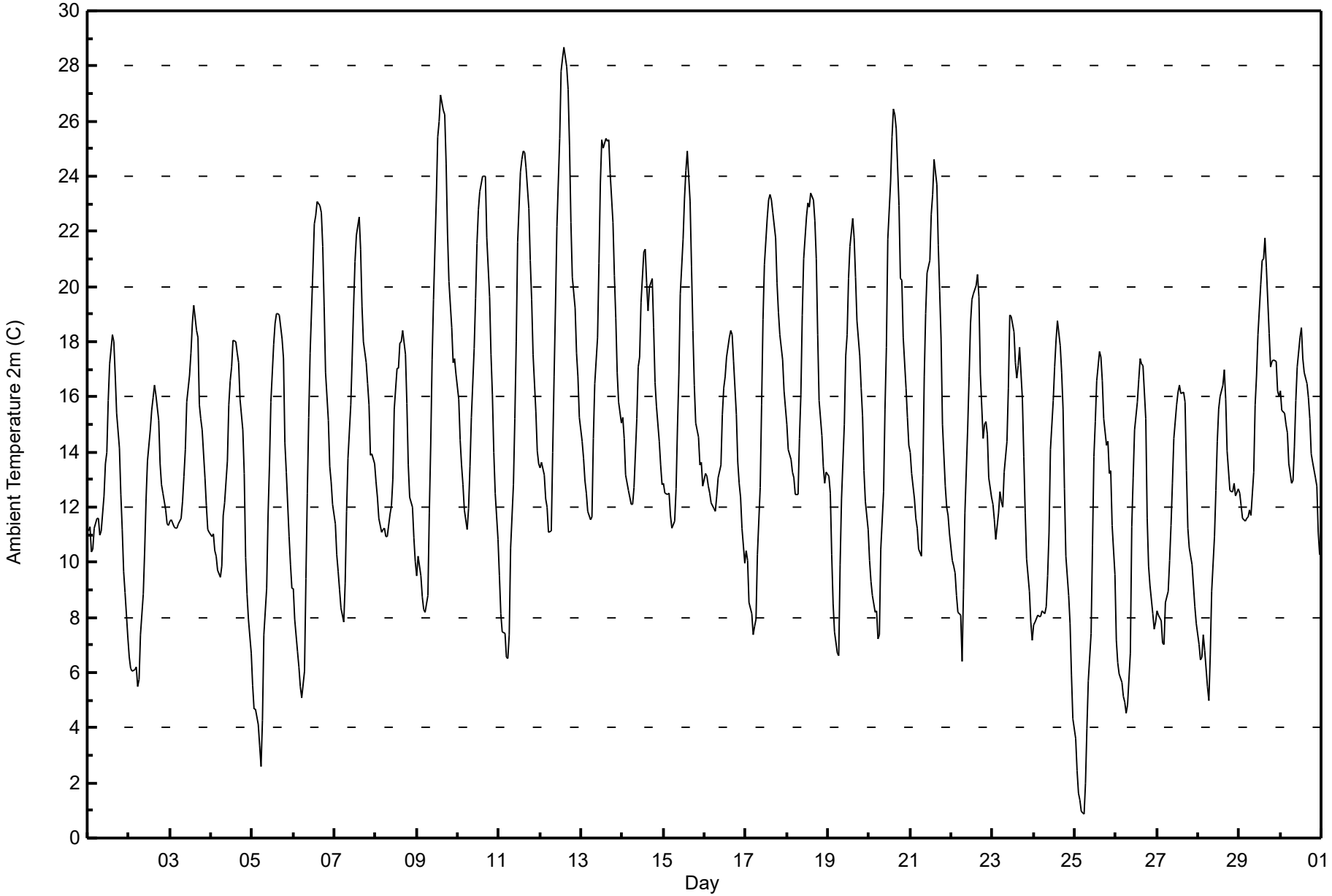
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.2	11.3	10.4	10.5	11.2	11.6	11.6	11.0	11.1	12.4	13.6	14.0	15.8	17.2	18.3	18.0	16.8	15.4	14.1	12.5	11.2	9.7	8.9	7.3	12.7	18.3
2-Sep	6.6	6.1	6.1	6.1	6.2	5.5	5.8	7.3	8.9	10.4	12.3	13.7	14.8	15.5	16.0	16.4	16.1	15.2	13.6	12.8	12.5	11.9	11.4	11.4	10.9	16.4
3-Sep	11.5	11.5	11.3	11.2	11.3	11.4	11.6	12.2	13.1	14.1	15.8	16.8	17.6	18.7	19.3	18.4	18.1	15.7	15.2	14.8	13.0	12.1	11.2	11.1	14.0	19.3
4-Sep	10.9	11.0	10.4	10.2	9.7	9.5	9.9	11.7	12.2	13.7	15.7	16.6	17.1	18.1	18.0	17.6	17.2	15.9	14.8	13.2	10.2	8.9	7.9	6.7	12.8	18.1
5-Sep	5.5	4.7	4.7	4.1	3.4	2.6	4.3	7.4	9.0	11.7	13.5	15.8	17.9	18.7	19.0	19.0	19.0	18.1	17.4	14.4	13.3	10.9	9.9	9.1	11.4	19.0
6-Sep	9.1	7.9	6.7	6.2	5.5	5.1	6.0	9.4	12.5	15.3	17.6	20.7	22.3	22.6	23.1	22.9	22.7	21.5	19.3	16.9	15.2	13.5	12.9	12.1	14.4	23.1
7-Sep	11.4	10.3	9.7	9.0	8.3	7.8	9.2	11.8	13.8	15.7	17.4	19.3	20.9	21.9	22.5	21.3	19.2	18.0	17.2	16.5	15.7	13.9	13.9	13.6	14.9	22.5
8-Sep	12.9	12.4	11.6	11.1	11.2	11.2	11.0	11.0	11.7	12.0	13.0	15.6	17.1	17.0	18.0	18.0	18.4	17.5	15.7	13.5	12.3	12.0	10.9	10.0	13.5	18.4
9-Sep	9.5	10.2	9.5	8.8	8.3	8.2	8.8	11.8	14.2	17.3	19.5	23.2	25.4	26.0	27.0	26.4	26.2	24.5	21.9	20.2	18.5	17.2	17.4	16.8	17.4	27.0
10-Sep	15.9	14.5	13.5	12.8	11.9	11.2	12.0	13.5	15.2	17.7	19.6	21.6	22.8	23.5	24.0	24.0	24.0	21.8	19.6	17.5	16.1	14.0	12.5	10.8	17.1	24.0
11-Sep	9.5	8.1	7.5	7.4	6.6	6.5	7.4	10.5	12.8	15.2	18.0	21.6	24.2	24.6	24.9	24.9	24.3	22.8	21.0	19.5	17.5	15.5	14.0	13.6	15.7	24.9
12-Sep	13.4	13.7	13.2	12.3	12.0	11.1	11.1	14.0	16.7	19.3	22.2	25.4	27.8	28.3	28.7	28.0	27.2	25.1	22.3	20.3	19.2	17.6	16.8	15.3	19.2	28.7
13-Sep	14.4	13.8	13.0	12.5	11.8	11.5	11.6	14.5	16.5	18.2	20.8	23.8	25.3	25.0	25.4	25.3	25.3	24.1	22.3	20.4	18.9	16.9	15.8	15.0	18.4	25.4
14-Sep	15.2	14.5	13.2	12.6	12.4	12.1	12.1	12.7	15.2	17.1	17.4	19.4	21.3	21.3	20.2	19.1	20.0	20.3	18.5	16.5	15.7	14.4	13.5	12.8	16.1	21.3
15-Sep	12.9	12.5	12.5	12.5	11.7	11.2	11.5	12.6	14.9	16.9	19.7	21.7	23.2	24.2	24.9	23.1	20.7	18.4	16.4	15.0	14.6	13.5	13.6	12.7	16.3	24.9
16-Sep	13.2	13.1	12.8	12.5	12.2	11.9	11.9	12.4	13.1	13.5	15.4	16.3	16.7	17.4	18.2	18.4	18.3	17.3	15.4	13.6	12.9	12.4	11.2	9.9	14.2	18.4
17-Sep	10.4	10.1	8.6	8.1	7.4	7.7	7.9	10.3	12.7	15.7	18.8	20.8	22.5	23.2	23.4	23.1	22.7	21.8	20.1	19.1	18.3	17.3	16.2	15.6	15.9	23.4
18-Sep	15.0	14.1	13.7	13.3	13.1	12.4	12.5	14.5	16.1	19.0	21.0	22.5	23.1	22.9	23.4	23.1	22.4	21.0	18.3	15.8	14.6	13.5	12.9	13.3	17.1	23.4
19-Sep	13.1	12.5	10.3	8.5	7.5	6.7	6.6	9.9	12.3	15.0	17.5	18.3	20.3	21.4	22.5	21.8	20.3	18.8	17.5	16.3	15.3	13.3	12.2	11.2	14.5	22.5
20-Sep	10.1	9.3	8.8	8.2	8.2	7.2	7.4	10.5	12.6	15.6	17.8	21.7	23.8	25.4	26.4	26.2	25.7	22.9	20.3	20.2	18.1	16.3	15.2	14.2	16.3	26.4
21-Sep	14.0	13.2	12.3	11.6	11.3	10.5	10.2	13.2	16.7	19.0	20.5	21.0	22.6	23.3	24.6	23.7	21.5	19.8	18.1	15.0	12.8	12.0	11.7	11.0	16.2	24.6
22-Sep	10.1	9.8	9.6	8.8	8.2	8.1	6.4	9.0	11.8	14.9	16.7	18.7	19.5	19.7	20.0	20.4	19.6	16.8	14.5	15.0	15.1	14.6	13.1	12.4	13.9	20.4
23-Sep	12.1	11.5	10.8	11.8	12.6	12.2	12.0	13.3	14.4	16.3	19.0	18.9	18.4	17.2	16.7	17.1	17.8	15.9	13.8	11.8	10.1	9.0	7.8	7.1	13.7	19.0
24-Sep	7.7	7.8	8.1	8.0	8.1	8.2	8.1	8.4	9.5	11.1	14.1	15.9	17.1	18.1	18.7	17.8	16.9	15.6	12.7	10.2	8.8	7.8	5.9	4.3	11.2	18.7
25-Sep	3.6	2.4	1.6	1.4	1.0	0.9	2.0	4.0	5.7	7.4	10.7	13.8	15.1	16.6	17.6	17.4	16.6	15.2	14.2	14.4	13.2	13.3	11.3	9.6	9.5	17.6
26-Sep	7.2	6.4	6.0	5.6	5.2	4.9	4.5	4.8	6.7	11.3	13.1	14.8	15.8	16.6	17.4	17.2	17.1	15.2	11.6	9.8	9.2	8.1	7.6	7.8	10.2	17.4
27-Sep	8.2	8.1	7.9	7.0	7.0	8.6	8.9	10.1	11.4	12.9	14.5	15.7	16.1	16.4	16.1	16.2	15.8	13.3	11.2	10.5	9.9	9.1	8.4	7.8	11.3	16.4
28-Sep	7.0	6.4	6.6	7.4	6.8	5.5	5.0	6.6	8.9	10.9	12.6	14.4	15.5	16.0	16.4	17.0	15.9	14.0	12.6	12.6	12.5	12.9	12.4	12.7	11.2	17.0
29-Sep	12.5	12.1	11.6	11.5	11.6	11.6	11.9	11.7	13.3	15.7	16.8	18.3	20.1	21.0	21.0	21.7	20.7	18.3	17.1	17.3	17.4	17.3	16.2	16.0	15.9	21.7
30-Sep	16.2	15.5	15.4	15.0	14.7	13.6	12.8	13.0	14.2	15.8	17.1	18.2	18.5	17.4	16.9	16.5	16.0	15.2	14.0	13.6	13.1	12.8	11.1	10.3	14.9	18.5
	11.0	10.5	9.9	9.5	9.2	8.9	9.1	10.8	12.6	14.7	16.7	18.6	19.9	20.5	20.9	20.7	20.1	18.5	16.7	15.3	14.2	13.1	12.1	11.4	Diurnal Average	
	16.2	15.5	15.4	15.0	14.7	13.6	12.8	14.5	16.7	19.3	22.2	25.4	27.8	28.3	28.7	28.0	27.2	25.1	22.3	20.4	19.2	17.6	17.4	16.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mannix - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	140	19.44	19.44
10 - 20	471	65.42	84.86
> 20	109	15.14	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 28.7 C on Sep 12 16:00

Maximum Daily Average: 20.8 C on Sep 12

Minimum Value: 3.0 C on Sep 25 06:00

Minimum Daily Average: 10.4 C on Sep 25

Maximum Diurnal Average: 20.8 C at hour 16

Minimum Diurnal Average: 10.2 C at hour 7

Monthly Average: 15.36 C

Percentiles: P_1 = 4.4 P_{10} = 9.6 Q_1 = 12.0 Median = 15.0 Q_3 = 18.3 P_{90} = 22.1 P_{99} = 26.8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

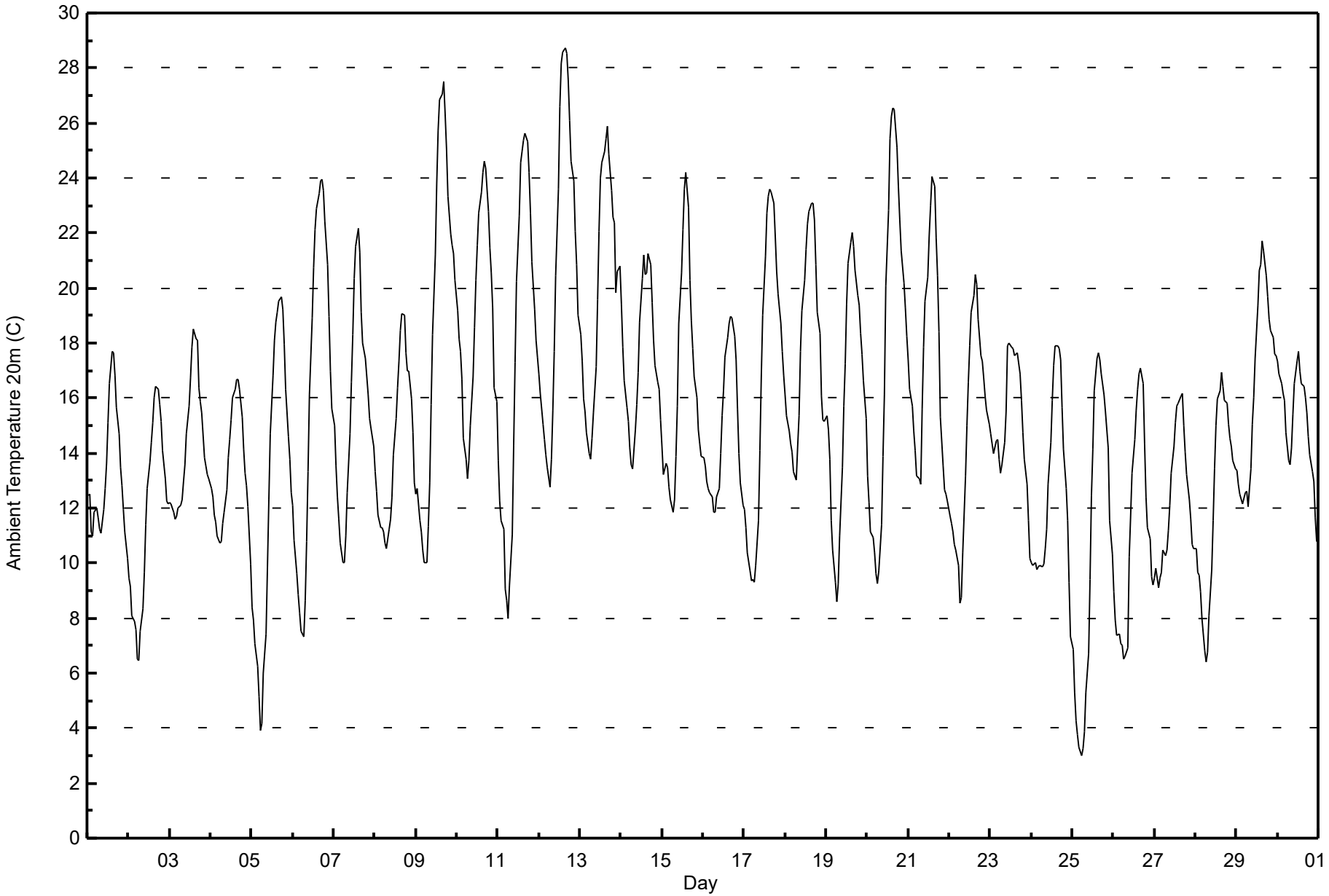
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12.4	12.5	11.1	11.0	11.9	12.0	11.7	11.2	11.1	12.0	12.7	13.6	15.1	16.5	17.7	17.6	16.8	15.7	14.7	13.5	12.8	12.0	11.1	10.2	13.2	17.7
2-Sep	9.4	9.2	8.1	7.9	7.6	6.5	6.4	7.5	8.3	9.7	11.4	12.7	13.7	14.4	15.1	16.0	16.4	16.3	15.8	15.1	14.1	13.0	12.2	12.1	11.6	16.4
3-Sep	12.2	12.1	11.8	11.6	11.7	12.0	12.1	12.3	13.0	13.6	14.7	15.7	16.7	17.8	18.5	18.2	18.1	16.4	15.9	15.5	13.8	13.5	13.2	13.1	14.3	18.5
4-Sep	12.7	12.4	11.8	11.5	11.0	10.8	10.8	11.4	11.9	12.7	13.8	14.5	15.2	16.0	16.3	16.7	16.7	16.3	15.3	14.1	13.3	12.8	12.0	10.0	13.3	16.7
5-Sep	8.4	8.0	7.0	6.2	5.1	3.9	4.1	6.0	7.4	9.9	12.3	14.7	16.8	18.1	18.8	19.1	19.5	19.7	19.2	17.9	16.3	14.6	13.8	12.6	12.5	19.7
6-Sep	12.1	10.8	9.6	8.8	8.2	7.5	7.3	8.6	10.8	13.3	16.1	18.9	20.8	22.1	22.9	23.4	23.9	24.0	23.6	22.4	20.9	19.0	17.0	15.6	16.1	24.0
7-Sep	15.0	13.5	12.4	11.6	10.7	10.0	10.0	11.0	12.6	14.7	16.6	18.3	20.3	21.5	22.2	21.3	19.1	18.0	17.4	16.8	16.1	15.3	14.9	14.2	15.6	22.2
8-Sep	13.3	12.6	11.8	11.3	11.3	11.2	10.7	10.5	11.3	11.6	12.4	13.9	15.3	16.4	17.3	18.5	19.1	19.0	17.6	17.0	17.0	16.0	14.8	12.9	14.3	19.1
9-Sep	12.5	12.7	11.5	11.1	10.5	10.0	10.0	11.3	12.9	15.7	18.3	21.2	23.8	25.7	26.8	27.0	27.5	26.4	25.1	23.3	22.0	21.6	21.3	20.3	18.7	27.5
10-Sep	19.2	18.2	17.7	16.7	14.6	13.8	13.1	13.7	15.0	16.8	18.6	20.3	21.6	22.7	23.5	24.2	24.6	24.3	22.8	21.5	20.5	19.3	16.4	15.9	18.9	24.6
11-Sep	13.7	12.3	11.5	11.2	9.0	8.7	8.0	9.2	11.1	14.3	17.3	20.2	22.6	24.6	25.0	25.4	25.6	25.3	24.2	22.7	21.0	19.2	18.1	17.5	17.4	25.6
12-Sep	16.9	16.2	15.0	14.5	13.9	13.5	12.7	13.8	15.6	17.7	20.5	23.6	26.6	28.1	28.6	28.7	28.5	27.6	26.1	24.6	23.9	22.1	20.8	19.0	20.8	28.7
13-Sep	18.3	17.4	16.0	15.5	14.8	14.0	13.8	14.5	15.5	17.2	19.6	22.0	24.0	24.6	25.0	25.4	25.9	24.9	23.5	22.6	22.4	19.8	20.6	20.8	19.9	25.9
14-Sep	19.4	17.8	16.6	15.7	15.2	14.2	13.6	13.4	14.8	15.8	16.9	18.8	20.3	21.2	20.5	20.5	21.3	20.8	19.5	18.1	17.2	16.6	16.3	15.2	17.5	21.3
15-Sep	14.3	13.2	13.6	13.5	12.8	12.3	11.9	12.3	13.9	15.7	18.7	20.6	22.1	23.6	24.2	23.0	20.3	18.8	17.8	16.8	16.0	14.9	14.4	13.9	16.6	24.2
16-Sep	13.8	13.5	13.0	12.7	12.5	12.4	11.9	11.9	12.4	12.7	14.0	15.3	16.3	17.5	18.2	18.7	19.0	18.9	18.3	17.4	15.6	14.0	12.9	12.1	14.8	19.0
17-Sep	11.9	11.3	10.4	9.7	9.4	9.4	9.3	9.9	11.5	14.1	16.8	19.0	21.2	22.7	23.4	23.6	23.5	23.1	21.9	20.6	19.8	18.7	17.7	16.8	16.5	23.6
18-Sep	16.1	15.3	14.8	14.3	14.1	13.3	13.0	14.2	15.4	17.7	19.2	20.3	21.4	22.3	22.8	23.1	23.1	22.5	20.9	19.1	18.3	16.1	15.2	15.1	17.8	23.1
19-Sep	15.4	14.9	13.8	11.5	10.4	9.3	8.6	9.3	11.0	13.5	15.7	17.2	19.4	20.9	21.6	22.0	21.5	20.7	19.7	19.4	18.4	17.6	16.6	15.3	16.0	22.0
20-Sep	13.2	12.2	11.1	10.9	10.4	9.6	9.2	9.7	11.4	13.9	16.1	20.1	22.9	25.4	26.3	26.5	26.5	25.1	23.7	22.5	21.3	20.2	19.3	18.2	17.7	26.5
21-Sep	17.4	16.3	15.7	14.8	14.1	13.2	13.1	12.9	15.6	17.9	19.5	20.4	21.8	23.0	24.0	23.7	21.8	20.4	18.4	15.3	13.5	12.7	12.5	12.3	17.1	24.0
22-Sep	11.7	11.4	11.1	10.7	10.5	9.9	8.6	8.7	10.4	13.1	15.0	16.6	17.9	19.1	19.7	20.5	20.1	18.9	17.6	17.3	16.7	16.1	15.6	15.0	14.7	20.5
23-Sep	14.7	14.3	14.0	14.4	14.5	13.8	13.3	13.6	14.4	15.5	17.9	18.0	17.8	17.8	17.5	17.6	17.7	16.9	15.9	14.7	13.8	12.8	11.6	10.2	15.1	18.0
24-Sep	10.0	9.9	10.0	9.8	9.9	9.9	9.9	10.0	10.5	11.2	12.8	14.4	15.9	17.2	17.9	17.9	17.8	17.4	15.7	14.1	12.7	11.5	9.3	7.3	12.6	17.9
25-Sep	6.9	5.3	4.3	3.8	3.3	3.0	3.2	3.9	5.3	6.7	9.4	12.4	14.1	16.3	17.4	17.6	17.4	16.9	16.1	15.5	14.8	14.2	11.5	10.3	10.4	17.6
26-Sep	9.0	7.9	7.4	7.4	7.1	7.0	6.5	6.6	6.9	10.2	11.7	13.2	14.5	15.6	16.3	16.9	17.1	16.5	14.3	12.4	11.3	10.9	9.5	9.2	11.1	17.1
27-Sep	9.5	9.8	9.1	9.5	9.6	10.5	10.3	10.5	11.2	12.1	13.3	14.2	15.1	15.7	15.8	16.1	16.2	15.0	14.0	13.2	12.3	11.6	10.7	10.5	12.3	16.2
28-Sep	10.5	9.6	9.6	9.0	8.0	6.8	6.4	6.8	8.1	9.8	11.5	13.4	15.0	16.0	16.2	16.9	16.4	15.9	15.8	15.0	14.5	14.2	13.7	13.4	12.2	16.9
29-Sep	13.4	12.9	12.5	12.1	12.4	12.5	12.6	12.0	13.4	15.1	16.0	17.4	19.4	20.6	20.8	21.7	21.4	20.4	19.7	18.9	18.4	18.2	17.6	17.5	16.5	21.7
30-Sep	17.4	16.9	16.5	16.2	15.9	14.7	13.7	13.6	14.2	15.4	16.5	17.3	17.7	17.0	16.6	16.4	16.0	15.5	14.6	13.9	13.3	12.9	11.6	10.8	15.2	17.7
	13.4	12.7	12.0	11.5	11.0	10.5	10.2	10.7	11.9	13.6	15.5	17.3	18.8	20.0	20.6	20.8	20.6	19.9	18.8	17.7	16.7	15.7	14.7	13.9	Diurnal Average	
	19.4	18.2	17.7	16.7	15.9	14.7	13.8	14.5	15.6	17.9	20.5	23.6	26.6	28.1	28.6	28.7	28.5	27.6	26.1	24.6	23.9	22.1	21.3	20.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Mannix - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	90	12.50	12.50
10 - 20	501	69.58	82.08
> 20	129	17.92	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 28.4 C on Sep 12 16:00
Maximum Daily Average: 21.3 C on Sep 12

Minimum Value: 2.9 C on Sep 25 06:00
Minimum Daily Average: 10.4 C on Sep 25
Maximum Diurnal Average: 20.5 C at hour 16
Minimum Diurnal Average: 10.6 C at hour 7
Monthly Average: 15.50 C
Percentiles: P_1 = 4.9 P_{10} = 10.0 Q_1 = 12.1 Median = 15.2 Q_3 = 18.5 P_{90} = 22.3 P_{99} = 26.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

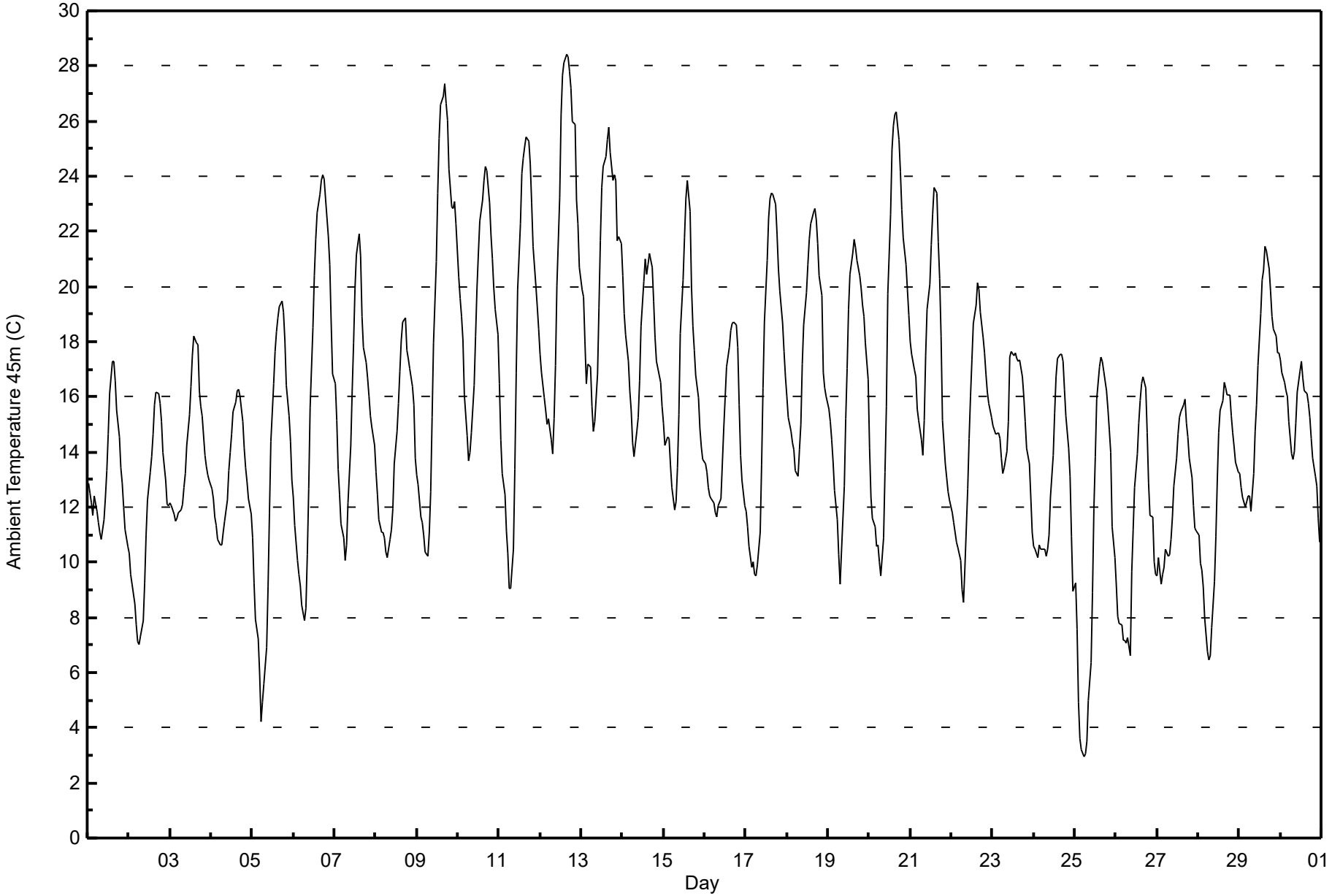
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12.8	12.5	12.2	11.7	12.4	11.9	11.4	11.1	10.8	11.5	12.3	13.3	14.6	16.1	17.3	17.3	16.6	15.5	14.6	13.4	12.9	12.0	11.2	10.6	13.2	17.3
2-Sep	10.3	9.6	9.2	8.5	7.7	7.1	7.0	7.3	7.9	9.2	11.0	12.3	13.3	13.8	14.6	15.7	16.2	16.1	15.8	15.1	14.0	13.0	12.1	12.0	11.6	16.2
3-Sep	12.2	12.1	11.8	11.5	11.6	11.8	11.9	12.1	12.7	13.2	14.2	15.3	16.4	17.5	18.2	17.9	17.9	16.2	15.7	15.3	13.9	13.5	13.2	13.0	14.1	18.2
4-Sep	12.7	12.3	11.6	11.4	10.9	10.6	10.6	11.1	11.5	12.3	13.3	14.0	14.6	15.4	15.8	16.2	16.3	16.0	15.1	14.1	13.4	12.9	12.3	11.8	13.2	16.3
5-Sep	10.9	9.2	8.0	7.2	6.0	4.2	4.9	5.6	6.9	9.1	11.8	14.4	16.5	17.6	18.3	18.9	19.3	19.5	19.1	18.0	16.4	15.3	14.4	13.0	12.7	19.5
6-Sep	12.3	11.3	10.1	9.5	9.1	8.5	7.9	8.4	10.3	12.7	15.6	18.5	20.4	21.7	22.7	23.3	23.9	24.0	23.9	23.2	21.8	20.8	18.7	16.9	16.5	24.0
7-Sep	16.5	15.1	13.4	12.4	11.4	10.9	10.1	10.6	12.2	14.2	16.2	17.9	19.9	21.2	21.9	21.1	18.9	17.8	17.3	16.7	16.0	15.3	14.9	14.2	15.7	21.9
8-Sep	13.3	12.4	11.5	11.1	11.1	10.9	10.4	10.2	10.8	11.2	12.0	13.6	14.7	15.8	16.9	18.1	18.7	18.9	17.7	17.4	17.0	16.3	15.7	13.8	14.1	18.9
9-Sep	13.2	12.8	11.6	11.4	11.0	10.4	10.2	11.1	12.6	15.2	17.9	20.9	23.4	25.4	26.6	26.9	27.4	26.7	26.0	24.2	22.9	22.8	23.1	22.3	19.0	27.4
10-Sep	20.4	19.6	18.9	18.1	16.1	14.6	13.7	14.0	14.7	16.4	18.2	20.0	21.2	22.4	23.1	23.8	24.3	24.2	23.0	21.9	21.0	20.0	19.2	18.2	19.5	24.3
11-Sep	16.5	14.5	13.2	12.5	11.1	10.3	9.1	9.0	10.5	13.4	16.9	19.9	22.3	24.1	24.6	25.1	25.4	25.3	24.4	23.0	21.5	20.0	19.3	18.5	17.9	25.4
12-Sep	17.5	16.9	16.0	15.5	15.0	15.2	14.4	13.9	15.2	17.1	20.0	23.2	26.2	27.7	28.1	28.4	28.3	27.8	27.2	26.0	25.9	23.1	22.3	20.7	21.3	28.4
13-Sep	19.9	19.6	18.0	16.5	17.2	17.1	15.7	14.7	15.1	16.8	19.2	21.7	23.6	24.3	24.7	25.3	25.8	24.9	23.8	24.1	23.9	21.7	21.8	21.6	20.7	25.8
14-Sep	20.4	19.0	18.2	17.3	16.2	15.5	14.4	13.8	14.8	15.3	16.6	18.5	20.2	21.0	20.4	20.8	21.2	20.7	19.5	18.2	17.3	16.8	16.5	15.7	17.8	21.2
15-Sep	15.1	14.2	14.6	14.5	13.5	12.7	11.9	12.2	13.4	15.4	18.3	20.2	21.8	23.2	23.8	22.7	20.0	18.6	17.7	16.8	15.9	14.8	14.2	13.7	16.6	23.8
16-Sep	13.6	13.3	12.7	12.4	12.3	12.2	11.8	11.6	12.1	12.3	13.6	14.9	16.0	17.1	17.8	18.4	18.7	18.7	18.6	17.8	15.7	13.9	13.0	12.1	14.6	18.7
17-Sep	11.8	11.3	10.6	9.8	10.0	9.6	9.5	9.9	11.1	13.5	16.3	18.7	21.0	22.5	23.2	23.4	23.3	23.0	21.9	20.6	19.8	18.7	17.7	16.7	16.4	23.4
18-Sep	16.0	15.3	14.7	14.3	14.1	13.3	13.1	14.1	15.0	17.2	18.6	19.8	20.8	21.7	22.3	22.7	22.8	22.4	21.6	20.4	19.7	16.9	16.3	16.0	17.9	22.8
19-Sep	15.6	15.1	14.4	13.6	12.6	11.6	10.3	9.2	10.4	12.7	15.2	17.0	19.2	20.4	21.2	21.7	21.4	21.0	20.4	19.9	19.3	18.9	18.0	16.7	16.5	21.7
20-Sep	14.1	12.4	11.6	11.3	10.6	10.6	10.0	9.5	10.9	13.3	15.7	19.7	22.6	25.0	25.8	26.2	26.3	25.3	24.1	22.8	21.8	20.8	19.9	19.0	17.9	26.3
21-Sep	18.0	17.6	17.0	16.7	15.6	15.2	14.4	13.9	15.2	17.5	19.2	20.1	21.5	22.6	23.6	23.4	21.6	20.3	18.2	15.1	13.6	13.0	12.5	12.3	17.4	23.6
22-Sep	11.8	11.4	11.1	10.7	10.5	10.1	9.0	8.5	9.8	12.7	14.5	16.0	17.3	18.6	19.3	20.1	19.9	19.1	18.2	17.6	16.8	16.2	15.8	15.3	14.6	20.1
23-Sep	15.0	14.8	14.7	14.7	14.5	13.8	13.2	13.4	14.0	15.1	17.4	17.7	17.5	17.6	17.4	17.3	17.4	16.7	16.0	15.1	14.1	13.6	12.4	11.1	15.2	17.7
24-Sep	10.6	10.5	10.2	10.6	10.5	10.5	10.5	10.2	10.5	11.0	12.3	13.9	15.4	16.7	17.4	17.6	17.5	17.3	16.2	15.3	14.1	13.1	11.0	8.9	13.0	17.6
25-Sep	9.2	7.6	4.9	3.6	3.2	2.9	3.1	3.5	5.0	6.4	8.9	11.9	13.8	15.9	17.1	17.5	17.3	16.9	16.2	15.6	14.8	14.0	11.3	10.2	10.4	17.5
26-Sep	9.2	8.0	7.8	7.7	7.2	7.1	7.1	7.3	6.6	9.7	11.2	12.7	14.0	15.1	15.9	16.5	16.8	16.3	14.7	12.9	11.7	11.7	10.0	9.6	11.1	16.8
27-Sep	9.5	10.2	9.2	9.5	9.8	10.5	10.2	10.3	10.8	11.7	12.7	13.8	14.7	15.3	15.5	15.7	15.9	15.0	14.5	13.8	13.0	12.0	11.2	11.1	12.3	15.9
28-Sep	11.0	10.0	9.7	9.1	8.0	6.8	6.5	6.6	7.6	9.3	10.9	13.0	14.7	15.5	15.9	16.5	16.3	16.1	16.1	15.3	14.7	14.2	13.6	13.2	12.1	16.5
29-Sep	13.2	12.7	12.4	12.0	12.2	12.4	12.4	11.8	13.2	14.7	15.7	17.1	19.0	20.3	20.6	21.5	21.3	20.6	19.8	18.9	18.4	18.2	17.6	17.6	16.4	21.5
30-Sep	17.3	16.9	16.5	16.2	16.0	15.1	13.9	13.7	14.0	15.0	16.2	17.0	17.3	16.7	16.2	16.1	15.8	15.3	14.5	13.8	13.1	12.7	11.6	10.7	15.1	17.3
	14.0	13.3	12.5	12.0	11.6	11.1	10.6	10.6	11.5	13.2	15.1	16.9	18.5	19.6	20.2	20.5	20.4	19.9	19.1	18.1	17.1	16.2	15.4	14.5	Diurnal Average	
	20.4	19.6	18.9	18.1	17.2	17.1	15.7	14.7	15.2	17.5	20.0	23.2	26.2	27.7	28.1	28.4	28.3	27.8	27.2	26.0	25.9	23.1	23.1	22.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Mannix - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	70	9.72	9.72
10 - 20	520	72.22	81.94
> 20	130	18.06	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 27.9 C on Sep 12 17:00
Maximum Daily Average: 21.6 C on Sep 12

Minimum Value: 3.7 C on Sep 25 06:00
Minimum Daily Average: 10.9 C on Sep 25
Maximum Diurnal Average: 20.2 C at hour 16
Minimum Diurnal Average: 11.2 C at hour 8
Monthly Average: 15.68 C
Percentiles: P_1 = 6.8 P_{10} = 10.5 Q_1 = 12.2 Median = 15.3 Q_3 = 18.5 P_{90} = 22.2 P_{99} = 26.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

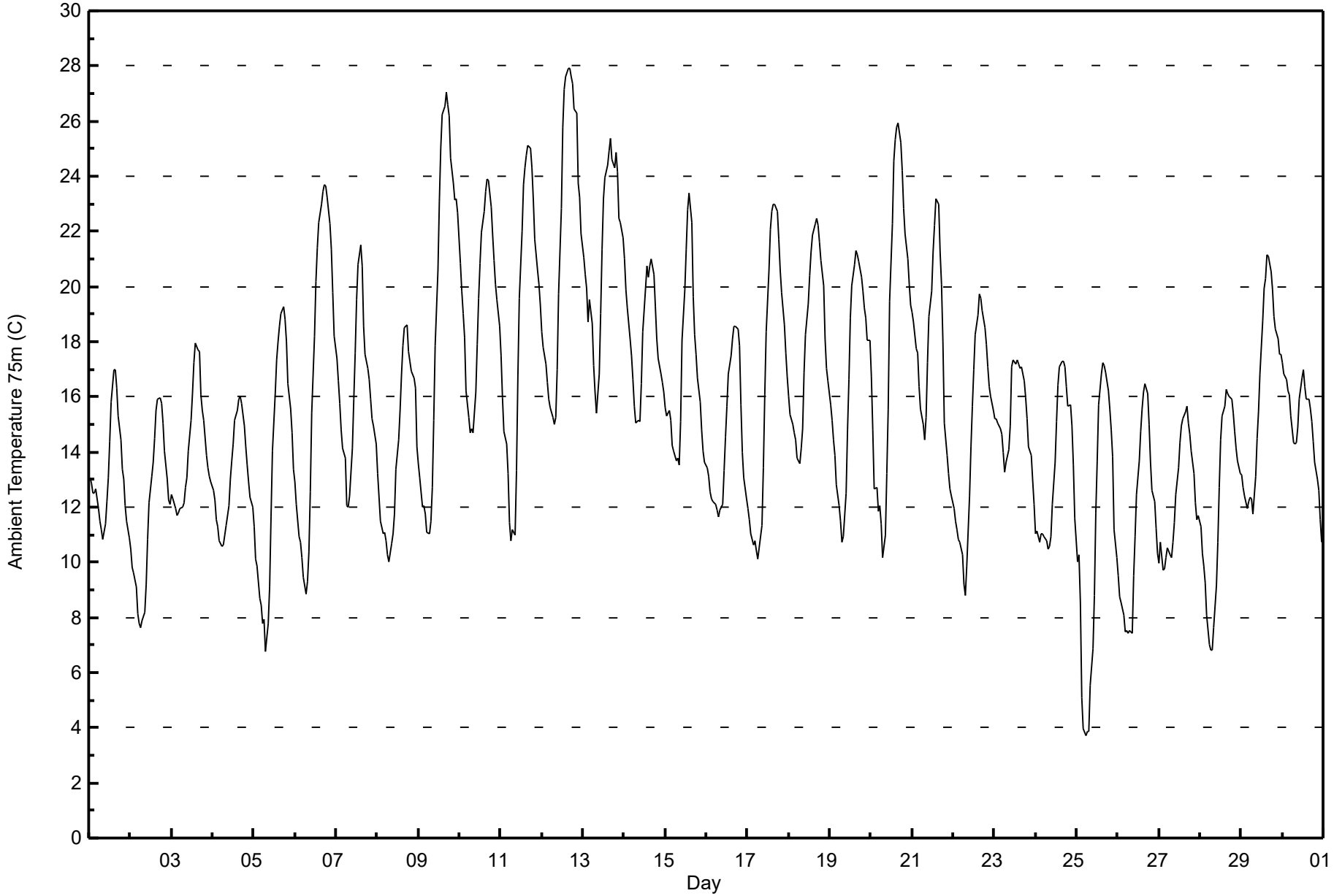
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	13.1	12.9	12.5	12.5	12.7	11.9	11.5	11.2	10.9	11.4	12.2	13.1	14.4	15.8	17.0	17.0	16.3	15.3	14.4	13.4	13.0	12.1	11.5	10.9	13.2	17.0
2-Sep	10.5	9.8	9.6	9.1	8.1	7.8	7.6	7.9	8.2	9.2	10.8	12.1	13.1	13.6	14.5	15.5	15.9	16.0	15.7	15.1	14.1	13.0	12.3	12.1	11.7	16.0
3-Sep	12.5	12.3	12.0	11.7	11.8	11.9	12.0	12.2	12.7	13.1	14.1	15.1	16.1	17.2	17.9	17.7	17.7	16.1	15.5	15.2	13.9	13.4	13.1	12.9	14.1	17.9
4-Sep	12.6	12.3	11.6	11.3	10.8	10.6	10.6	11.0	11.3	12.0	13.0	13.7	14.3	15.1	15.5	15.9	16.0	15.8	14.9	14.2	13.5	12.9	12.4	12.0	13.1	16.0
5-Sep	11.3	10.1	9.9	8.7	8.4	7.8	7.9	6.8	7.8	9.1	11.7	14.0	16.1	17.4	18.0	18.6	19.0	19.3	18.8	18.0	16.5	15.6	14.7	13.4	13.3	19.3
6-Sep	12.9	12.1	10.9	10.7	10.2	9.5	8.9	9.3	10.4	12.5	15.4	18.2	20.2	21.4	22.3	23.0	23.5	23.7	23.7	23.2	22.2	21.3	19.8	18.2	16.8	23.7
7-Sep	17.4	16.6	15.7	14.8	14.1	13.8	12.1	12.0	12.4	14.1	15.9	17.6	19.5	20.8	21.5	20.8	18.6	17.5	17.0	16.6	15.9	15.2	14.9	14.3	16.2	21.5
8-Sep	13.2	12.3	11.5	11.0	11.1	10.8	10.2	10.0	10.7	11.0	11.7	13.4	14.5	15.5	16.8	17.8	18.5	18.6	17.6	17.3	17.0	16.7	16.3	14.2	14.1	18.6
9-Sep	13.6	13.1	12.0	12.0	11.7	11.1	11.0	11.5	12.7	15.2	17.8	20.6	23.1	25.0	26.2	26.5	27.0	26.6	26.2	24.7	23.7	23.2	23.2	22.7	19.2	27.0
10-Sep	20.9	19.8	19.0	18.1	16.2	15.3	14.7	14.8	14.7	16.2	17.9	19.6	20.9	22.0	22.7	23.4	23.9	23.9	22.9	21.8	21.0	20.1	19.5	18.5	19.5	23.9
11-Sep	17.5	16.0	14.7	14.3	13.2	11.4	10.8	11.2	11.0	13.3	16.8	19.6	22.0	23.7	24.3	24.7	25.1	25.0	24.3	23.2	21.7	20.6	20.1	19.3	18.5	25.1
12-Sep	18.4	17.8	17.2	16.5	15.9	15.6	15.2	15.0	15.2	17.0	19.7	22.8	25.8	27.1	27.6	27.9	27.9	27.6	27.3	26.4	26.3	23.8	23.3	21.9	21.6	27.9
13-Sep	21.0	20.4	19.9	18.7	19.5	18.7	17.1	16.2	15.4	16.9	19.0	21.4	23.2	23.9	24.4	24.9	25.4	24.6	24.3	24.8	24.2	22.5	22.3	21.8	21.3	25.4
14-Sep	21.0	19.9	19.2	18.1	17.5	16.6	15.7	15.0	15.1	15.1	16.5	18.4	20.0	20.7	20.3	20.7	21.0	20.4	19.3	18.1	17.4	16.8	16.5	16.2	18.1	21.0
15-Sep	15.6	15.3	15.5	15.1	14.3	14.0	13.7	13.8	13.5	15.1	18.0	19.9	21.4	22.8	23.4	22.3	19.6	18.3	17.5	16.7	15.8	14.8	14.0	13.6	16.8	23.4
16-Sep	13.4	13.1	12.6	12.3	12.2	12.1	11.9	11.7	11.9	12.1	13.3	14.5	15.7	16.8	17.5	18.1	18.6	18.5	18.4	17.8	15.7	14.0	13.1	12.3	14.5	18.6
17-Sep	12.0	11.6	11.0	10.6	10.8	10.4	10.1	10.5	11.3	13.4	16.1	18.3	20.6	22.1	22.7	23.0	23.0	22.7	21.7	20.6	19.8	18.6	17.6	16.7	16.5	23.0
18-Sep	16.0	15.4	15.0	14.7	14.4	13.8	13.6	14.2	14.9	16.9	18.2	19.4	20.4	21.3	21.8	22.3	22.5	22.2	21.6	20.9	20.1	18.1	17.0	16.6	18.0	22.5
19-Sep	15.7	15.2	14.5	13.9	12.8	12.0	11.5	10.8	11.0	12.5	14.8	16.6	18.8	20.1	20.8	21.3	21.2	20.9	20.3	19.8	19.2	18.8	18.0	18.0	16.6	21.3
20-Sep	16.7	14.8	12.7	12.7	11.9	12.1	11.4	10.2	11.0	13.2	15.6	19.5	22.3	24.5	25.3	25.8	25.9	25.2	24.2	22.9	21.9	21.0	20.1	19.3	18.3	25.9
21-Sep	19.1	18.7	17.8	17.6	16.4	15.6	15.0	14.5	15.3	17.2	18.9	19.9	21.2	22.2	23.2	23.0	21.3	20.1	18.0	15.0	13.9	13.2	12.7	12.4	17.6	23.2
22-Sep	11.9	11.5	11.2	10.8	10.7	10.3	9.2	8.8	9.8	12.4	14.2	15.7	17.0	18.3	19.0	19.7	19.6	19.1	18.5	17.9	17.1	16.4	16.0	15.5	14.6	19.7
23-Sep	15.2	15.2	15.1	14.9	14.6	14.0	13.3	13.6	14.1	15.0	17.1	17.3	17.2	17.4	17.2	17.1	17.1	16.6	16.0	15.2	14.2	13.9	13.0	12.1	15.2	17.4
24-Sep	11.1	11.1	10.7	11.0	11.0	10.9	10.8	10.5	10.6	10.9	12.1	13.6	15.1	16.4	17.1	17.3	17.3	17.1	16.4	15.7	15.7	14.9	13.5	11.6	13.4	17.3
25-Sep	10.0	10.3	8.6	5.1	4.0	3.7	3.9	3.9	5.6	6.9	8.8	11.8	13.7	15.7	16.8	17.3	17.1	16.9	16.2	15.6	14.8	13.8	11.2	10.2	10.9	17.3
26-Sep	9.5	8.8	8.5	8.1	7.5	7.5	7.4	7.5	7.4	9.5	10.9	12.4	13.7	14.8	15.5	16.2	16.5	16.1	15.0	13.6	12.6	12.2	11.2	10.3	11.4	16.5
27-Sep	9.9	10.7	9.7	9.7	10.1	10.5	10.3	10.2	10.7	11.4	12.5	13.4	14.4	15.0	15.2	15.5	15.7	15.0	14.6	14.0	13.2	12.1	11.6	11.7	12.4	15.7
28-Sep	11.3	10.3	9.9	9.3	8.1	7.0	6.8	6.8	7.6	9.2	10.7	12.7	14.5	15.3	15.7	16.3	16.1	16.0	15.9	15.4	14.8	14.1	13.7	13.2	12.1	16.3
29-Sep	13.2	12.7	12.4	12.0	12.2	12.4	12.3	11.8	13.1	14.5	15.5	16.9	18.7	20.0	20.3	21.2	21.1	20.5	19.9	18.9	18.5	18.1	17.5	17.5	16.3	21.2
30-Sep	17.3	16.8	16.6	16.2	16.1	15.3	14.3	14.3	14.3	14.9	15.9	16.7	17.0	16.4	15.9	15.9	15.6	15.1	14.4	13.6	13.0	12.6	11.6	10.8	15.0	17.3
	14.5	13.9	13.2	12.7	12.3	11.8	11.4	11.2	11.7	13.0	14.8	16.6	18.2	19.3	19.9	20.2	20.1	19.7	19.0	18.2	17.4	16.5	15.7	15.0	Diurnal Average	
	21.0	20.4	19.9	18.7	19.5	18.7	17.1	16.2	15.4	17.2	19.7	22.8	25.8	27.1	27.6	27.9	27.9	27.6	27.3	26.4	26.3	23.8	23.3	22.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 75m (AT75) - C

Mannix - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	53	7.36	7.36
10 - 20	537	74.58	81.94
> 20	130	18.06	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 27.8 C on Sep 12 17:00
Maximum Daily Average: 21.6 C on Sep 12

Minimum Value: 3.5 C on Sep 25 08:00
Minimum Daily Average: 10.7 C on Sep 25
Maximum Diurnal Average: 19.9 C at hour 16
Minimum Diurnal Average: 11.0 C at hour 8
Monthly Average: 15.43 C
Percentiles: P_1 = 6.5 P_{10} = 10.1 Q_1 = 11.9 Median = 15.0 Q_3 = 18.3 P_{90} = 22.1 P_{99} = 26.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

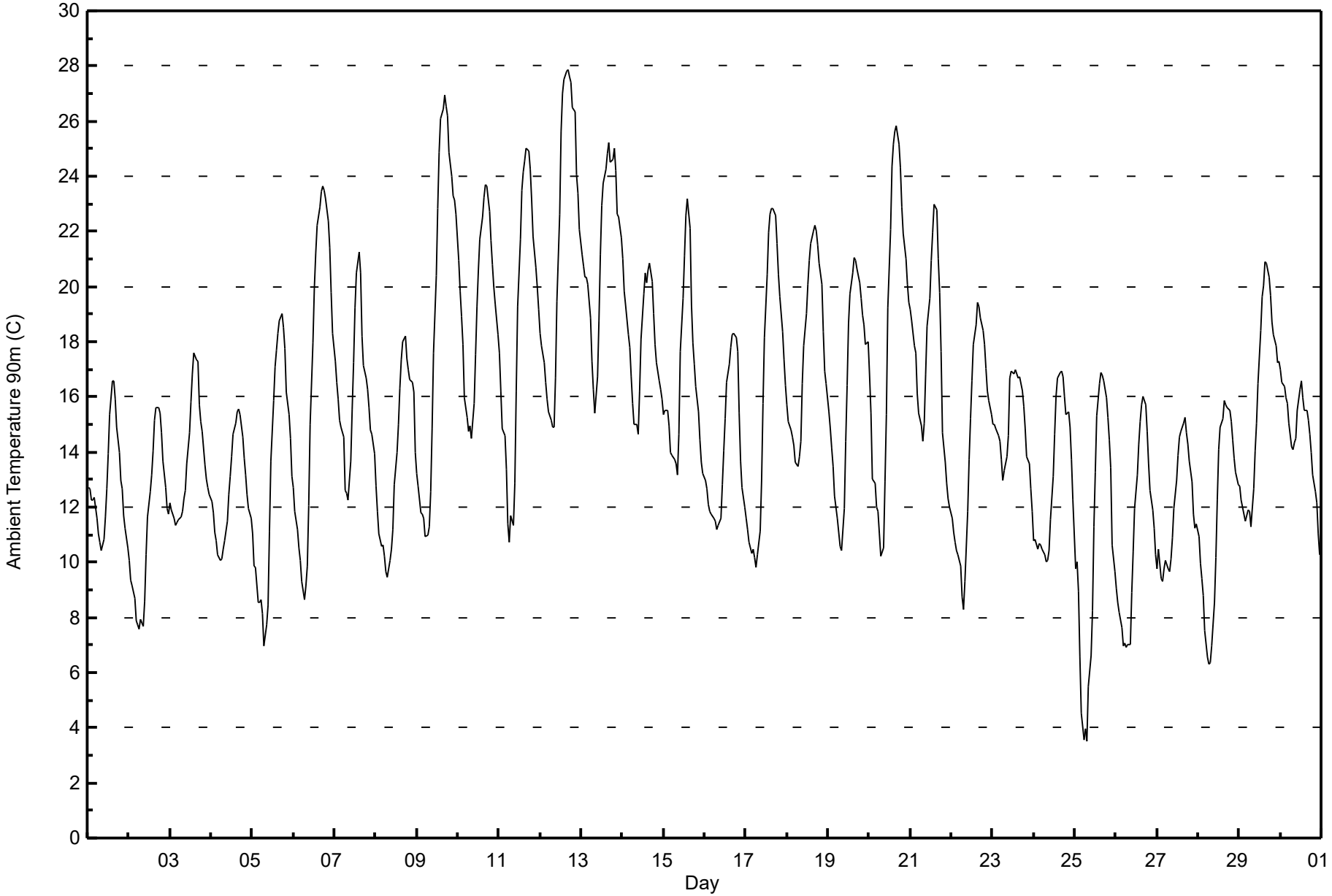
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12.7	12.6	12.3	12.3	12.4	11.6	11.0	10.7	10.4	10.9	11.7	12.6	13.9	15.4	16.6	16.6	15.9	14.9	14.0	13.0	12.7	11.7	11.2	10.5	12.8	16.6
2-Sep	10.0	9.4	9.2	8.7	7.9	7.7	7.6	7.9	7.7	8.6	10.2	11.6	12.6	13.2	14.0	15.1	15.6	15.6	15.4	14.7	13.7	12.7	12.0	11.7	11.4	15.6
3-Sep	12.2	11.9	11.6	11.4	11.5	11.5	11.7	11.8	12.3	12.6	13.6	14.7	15.8	16.8	17.6	17.3	17.3	15.7	15.1	14.8	13.5	13.0	12.7	12.5	13.7	17.6
4-Sep	12.2	11.8	11.1	10.8	10.3	10.1	10.1	10.5	10.8	11.5	12.5	13.1	13.8	14.7	15.1	15.5	15.6	15.3	14.5	13.8	13.2	12.5	11.9	11.6	12.6	15.6
5-Sep	11.0	9.9	9.8	8.5	8.5	8.6	8.1	7.0	7.7	8.4	11.1	13.7	15.9	17.1	17.7	18.3	18.8	19.0	18.5	17.7	16.2	15.4	14.5	13.1	13.1	19.0
6-Sep	12.7	11.8	11.2	10.5	10.1	9.3	8.6	9.2	9.9	12.0	15.0	18.0	19.9	21.2	22.2	22.9	23.4	23.7	23.5	23.2	22.4	21.4	19.8	18.3	16.7	23.7
7-Sep	17.3	16.5	15.9	15.2	14.9	14.5	12.6	12.5	12.3	13.7	15.6	17.2	19.2	20.5	21.2	20.5	18.2	17.2	16.7	16.3	15.6	14.8	14.6	13.9	16.1	21.2
8-Sep	12.8	11.9	11.0	10.6	10.6	10.2	9.7	9.5	10.1	10.5	11.2	12.8	14.0	15.0	16.3	17.3	18.0	18.2	17.4	17.0	16.7	16.5	16.2	14.0	13.6	18.2
9-Sep	13.2	12.7	11.8	11.8	11.6	10.9	11.0	11.3	12.6	14.9	17.6	20.4	22.8	24.9	26.1	26.4	27.0	26.5	26.2	24.9	24.0	23.3	23.1	22.6	19.1	27.0
10-Sep	21.0	19.8	18.9	17.9	16.0	15.3	14.7	14.9	14.5	15.8	17.6	19.3	20.6	21.7	22.5	23.2	23.7	23.7	22.7	21.7	20.8	20.0	19.4	18.3	19.3	23.7
11-Sep	17.6	16.2	14.9	14.6	13.4	11.4	10.7	11.7	11.3	12.9	16.2	19.3	21.7	23.5	24.2	24.5	25.0	24.9	24.2	23.1	21.8	20.7	20.0	19.2	18.5	25.0
12-Sep	18.3	17.8	17.2	16.5	15.9	15.5	15.2	14.9	14.9	16.7	19.5	22.6	25.6	27.0	27.5	27.8	27.8	27.6	27.4	26.5	26.4	24.0	23.4	22.1	21.6	27.8
13-Sep	21.1	20.8	20.4	20.4	20.1	18.8	17.3	16.3	15.4	16.7	18.7	21.1	23.0	23.8	24.3	24.8	25.2	24.5	24.6	25.0	24.2	22.6	22.5	21.7	21.4	25.2
14-Sep	21.0	19.8	19.3	18.3	17.8	16.7	15.7	15.0	15.0	14.6	16.2	18.1	19.8	20.5	20.1	20.6	20.8	20.2	19.0	17.9	17.2	16.6	16.3	15.9	18.0	21.0
15-Sep	15.4	15.5	15.5	14.9	14.0	13.9	13.7	13.6	13.2	14.7	17.7	19.6	21.1	22.6	23.2	22.1	19.3	17.9	17.2	16.3	15.5	14.4	13.6	13.2	16.6	23.2
16-Sep	13.0	12.7	12.1	11.8	11.7	11.6	11.5	11.2	11.4	11.6	12.8	14.0	15.2	16.5	17.2	17.8	18.2	18.3	18.1	17.6	15.4	13.7	12.7	12.0	14.1	18.3
17-Sep	11.6	11.2	10.7	10.3	10.5	10.2	9.8	10.3	11.1	13.0	15.8	18.2	20.5	22.0	22.6	22.8	22.8	22.6	21.6	20.5	19.6	18.4	17.3	16.4	16.2	22.8
18-Sep	15.7	15.1	14.8	14.5	14.2	13.7	13.5	13.8	14.4	16.5	17.9	19.0	20.1	21.0	21.6	22.0	22.2	22.0	21.5	20.9	20.1	18.4	17.0	16.5	17.8	22.2
19-Sep	15.5	14.8	14.1	13.5	12.4	11.6	11.1	10.6	10.4	11.9	14.4	16.4	18.6	19.7	20.5	21.0	20.9	20.7	20.1	19.6	19.0	18.6	17.9	18.0	16.3	21.0
20-Sep	16.8	15.4	13.0	12.9	12.0	11.8	11.0	10.2	10.5	12.9	15.4	19.2	22.1	24.3	25.1	25.6	25.8	25.2	24.3	22.9	21.9	21.0	20.1	19.4	18.3	25.8
21-Sep	19.2	18.8	17.9	17.6	16.1	15.4	14.9	14.4	15.0	16.9	18.6	19.6	21.0	22.0	23.0	22.8	21.0	19.8	17.6	14.7	13.6	12.8	12.3	12.0	17.4	23.0
22-Sep	11.6	11.1	10.7	10.4	10.3	9.8	8.7	8.3	9.3	11.9	13.7	15.2	16.6	17.9	18.6	19.4	19.3	18.9	18.4	17.9	17.1	16.2	15.9	15.4	14.3	19.4
23-Sep	15.0	15.0	14.8	14.6	14.4	13.7	12.9	13.3	13.8	14.6	16.7	17.0	16.8	17.0	16.8	16.7	16.7	16.2	15.6	14.9	13.8	13.6	12.7	11.9	14.9	17.0
24-Sep	10.8	10.9	10.5	10.7	10.6	10.5	10.3	10.0	10.1	10.4	11.6	13.1	14.7	16.0	16.7	16.9	16.9	16.7	16.0	15.3	15.4	14.9	13.7	12.3	13.1	16.9
25-Sep	9.8	10.0	9.0	6.6	4.5	3.6	3.9	3.5	5.5	6.6	8.2	11.3	13.3	15.3	16.5	16.9	16.8	16.6	16.0	15.3	14.4	13.4	10.7	9.6	10.7	16.9
26-Sep	9.0	8.5	8.2	7.6	7.0	7.1	6.9	7.0	7.0	8.9	10.4	11.9	13.2	14.3	15.1	15.7	16.0	15.7	14.7	13.6	12.6	11.9	11.2	10.3	11.0	16.0
27-Sep	9.8	10.5	9.4	9.3	9.7	10.0	9.8	9.6	10.1	10.9	12.0	12.9	13.9	14.5	14.8	15.0	15.3	14.7	14.3	13.7	12.9	11.7	11.2	11.4	12.0	15.3
28-Sep	10.9	10.0	9.4	8.8	7.5	6.5	6.3	6.4	7.0	8.6	10.2	12.2	14.1	14.9	15.2	15.8	15.7	15.6	15.5	15.1	14.4	13.8	13.3	12.8	11.7	15.8
29-Sep	12.8	12.2	12.0	11.5	11.7	11.9	11.8	11.3	12.7	14.1	15.1	16.5	18.4	19.6	20.0	20.9	20.8	20.3	19.7	18.7	18.2	17.8	17.2	17.3	15.9	20.9
30-Sep	17.0	16.5	16.4	16.0	15.8	15.0	14.2	14.1	14.3	14.5	15.5	16.3	16.6	15.9	15.5	15.5	15.2	14.7	14.0	13.2	12.6	12.2	11.1	10.3	14.7	17.0
	14.2	13.7	13.1	12.6	12.1	11.6	11.2	11.0	11.4	12.6	14.4	16.2	17.8	19.0	19.6	19.9	19.9	19.4	18.8	18.0	17.2	16.3	15.5	14.8	Diurnal Average	
	21.1	20.8	20.4	20.4	20.1	18.8	17.3	16.3	15.4	16.9	19.5	22.6	25.6	27.0	27.5	27.8	27.8	27.6	27.4	26.5	26.4	24.0	23.4	22.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 90m (AT90) - C

Mannix - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	65	9.03	9.03
10 - 20	527	73.19	82.22
> 20	128	17.78	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity (RH) - %

Mannix - September 2025

Maximum Value: 100 % on Sep 17 07:00

Maximum Daily Average: 83.7 % on Sep 14

Minimum Value: 28 % on Sep 24 15:00

Minimum Daily Average: 46.9 % on Sep 29

Maximum Diurnal Average: 88.0 % at hour 7

Minimum Diurnal Average: 44.8 % at hour 15

Monthly Average: 67.7 %

Percentiles: P_1 = 32 P_{10} = 41 Q_1 = 52 Median = 67 Q_3 = 84 P_{90} = 95 P_{99} = 99

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

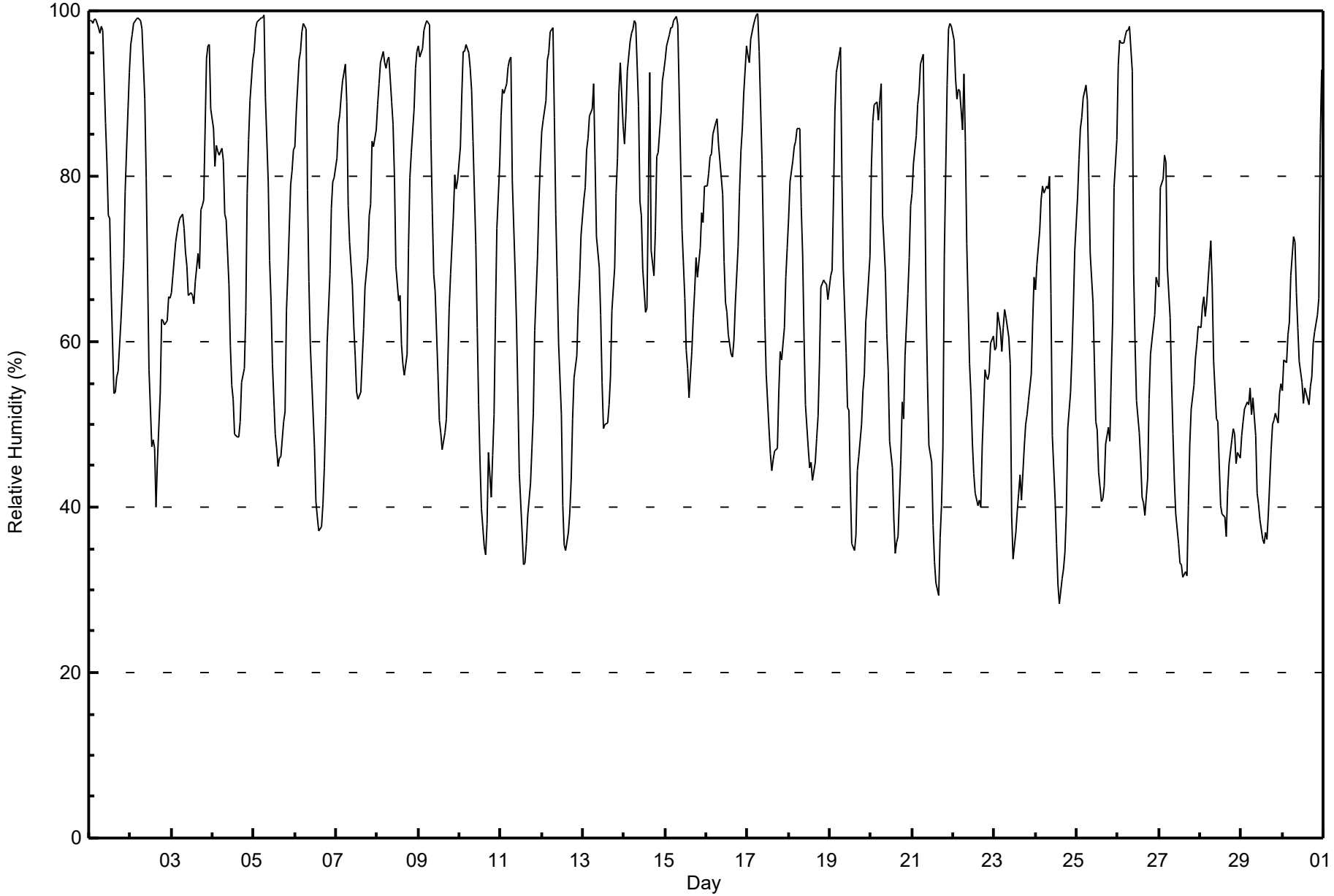
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	99	99	98	99	99	98	97	98	98	86	82	75	75	66	54	54	56	56	63	66	70	78	83	93	80.9	99
2-Sep	96	97	99	99	99	99	99	98	89	80	68	57	47	48	47	40	46	54	63	62	62	63	65	65	72.6	99
3-Sep	66	68	72	73	74	75	75	74	71	69	66	66	66	65	67	71	69	76	77	77	94	96	96	88	74.6	96
4-Sep	86	81	84	83	83	83	82	75	75	67	59	55	53	49	49	48	50	55	57	63	78	84	89	94	70.1	94
5-Sep	95	98	99	99	99	99	99	89	79	70	65	57	49	47	45	46	46	50	52	64	68	79	81	83	73.3	99
6-Sep	84	88	94	95	97	98	98	78	67	60	55	47	41	39	37	38	40	45	51	60	68	76	79	80	67.3	98
7-Sep	82	86	88	90	92	94	89	76	72	67	62	58	54	53	54	58	62	67	70	75	77	84	84	86	74.1	94
8-Sep	89	91	94	95	94	93	94	94	89	86	80	69	65	66	60	57	56	58	71	80	83	88	93	95	80.8	95
9-Sep	96	94	95	98	98	99	98	84	76	68	66	56	51	49	47	49	51	57	64	68	75	80	79	79	74.1	99
10-Sep	84	90	95	95	96	95	93	90	84	72	62	52	45	40	35	34	38	47	41	46	51	63	74	81	66.8	96
11-Sep	87	91	90	91	93	94	94	80	69	62	54	44	37	33	33	36	39	43	47	51	61	70	77	82	64.9	94
12-Sep	85	87	89	94	95	97	98	87	75	68	60	51	40	35	35	37	39	43	51	56	58	64	68	73	66.1	98
13-Sep	77	79	83	85	87	88	91	82	73	69	63	55	49	50	50	52	56	64	69	78	82	90	94	86	73.0	94
14-Sep	84	87	93	96	97	98	99	98	89	77	75	69	64	64	78	93	71	68	73	82	83	88	91	93	83.7	99
15-Sep	94	96	97	98	98	99	99	98	90	82	74	65	59	57	53	59	63	66	70	68	71	76	74	79	78.5	99
16-Sep	79	80	82	83	85	86	87	84	82	78	70	65	64	61	58	58	60	65	71	78	83	86	90	96	76.3	96
17-Sep	95	94	97	98	99	100	100	95	82	73	63	56	50	46	44	46	47	47	54	59	58	62	68	71	70.9	100
18-Sep	75	79	82	84	84	86	86	76	71	61	52	47	45	45	43	45	48	51	58	67	67	67	67	65	64.6	86
19-Sep	68	69	77	88	93	95	96	80	69	59	52	52	43	36	35	37	44	46	50	54	56	62	65	70	62.2	96
20-Sep	81	87	89	89	87	89	91	75	68	61	57	48	45	39	34	36	36	46	53	51	58	66	70	76	63.8	91
21-Sep	78	82	85	89	90	94	95	81	64	55	48	45	38	33	31	29	36	40	47	70	91	98	99	98	67.3	99
22-Sep	96	92	89	91	90	86	92	84	72	57	54	48	44	42	40	41	40	47	57	56	55	56	60	61	64.6	96
23-Sep	59	59	64	61	59	62	64	63	60	57	39	34	37	40	42	44	41	47	50	51	53	56	62	68	53.0	68
24-Sep	66	69	73	77	79	78	79	79	80	66	49	41	36	31	28	31	33	35	39	49	54	58	64	71	56.9	80
25-Sep	77	82	86	87	90	91	89	80	71	65	57	50	49	44	41	41	43	48	50	48	56	63	79	84	65.4	91
26-Sep	93	97	96	96	97	98	98	98	93	68	60	53	49	46	41	40	39	44	53	58	60	63	68	67	69.8	98
27-Sep	67	79	80	83	82	69	63	55	49	43	39	36	33	33	32	32	32	40	48	52	55	58	60	62	53.3	83
28-Sep	62	64	65	63	65	70	72	67	58	51	50	45	40	39	39	36	42	45	48	50	49	45	47	46	52.4	72
29-Sep	49	50	52	53	52	54	51	53	49	42	40	38	36	36	37	36	39	47	50	51	51	50	54	55	46.9	55
30-Sep	54	58	57	61	62	68	73	72	66	62	58	55	53	54	54	52	55	56	60	61	63	65	84	93	62.3	93
	80.1	82.4	84.8	86.4	87.2	87.8	88.0	81.5	74.2	65.9	59.2	53.0	48.5	46.2	44.8	45.9	47.2	51.7	56.9	61.7	66.4	71.2	75.4	78.0	Diurnal Average	
	99	99	99	99	99	100	100	98	98	86	82	75	75	66	78	93	71	76	77	82	94	98	99	98	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity (RH) - %

Mannix - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	57	7.92	7.92
40 - 60	224	31.11	39.03
60 - 80	216	30.00	69.03
80 - 100	223	30.97	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 97 % on Sep 15 07:00

Maximum Daily Average: 74.7 % on Sep 8

Minimum Value: 25 % on Sep 24 16:00

Minimum Daily Average: 42.0 % on Sep 29

Maximum Diurnal Average: 78.6 % at hour 7

Minimum Diurnal Average: 40.4 % at hour 16

Monthly Average: 59.4 %

Percentiles: P_1 = 28 P_{10} = 35 Q_1 = 45 Median = 59 Q_3 = 73 P_{90} = 84 P_{99} = 94

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

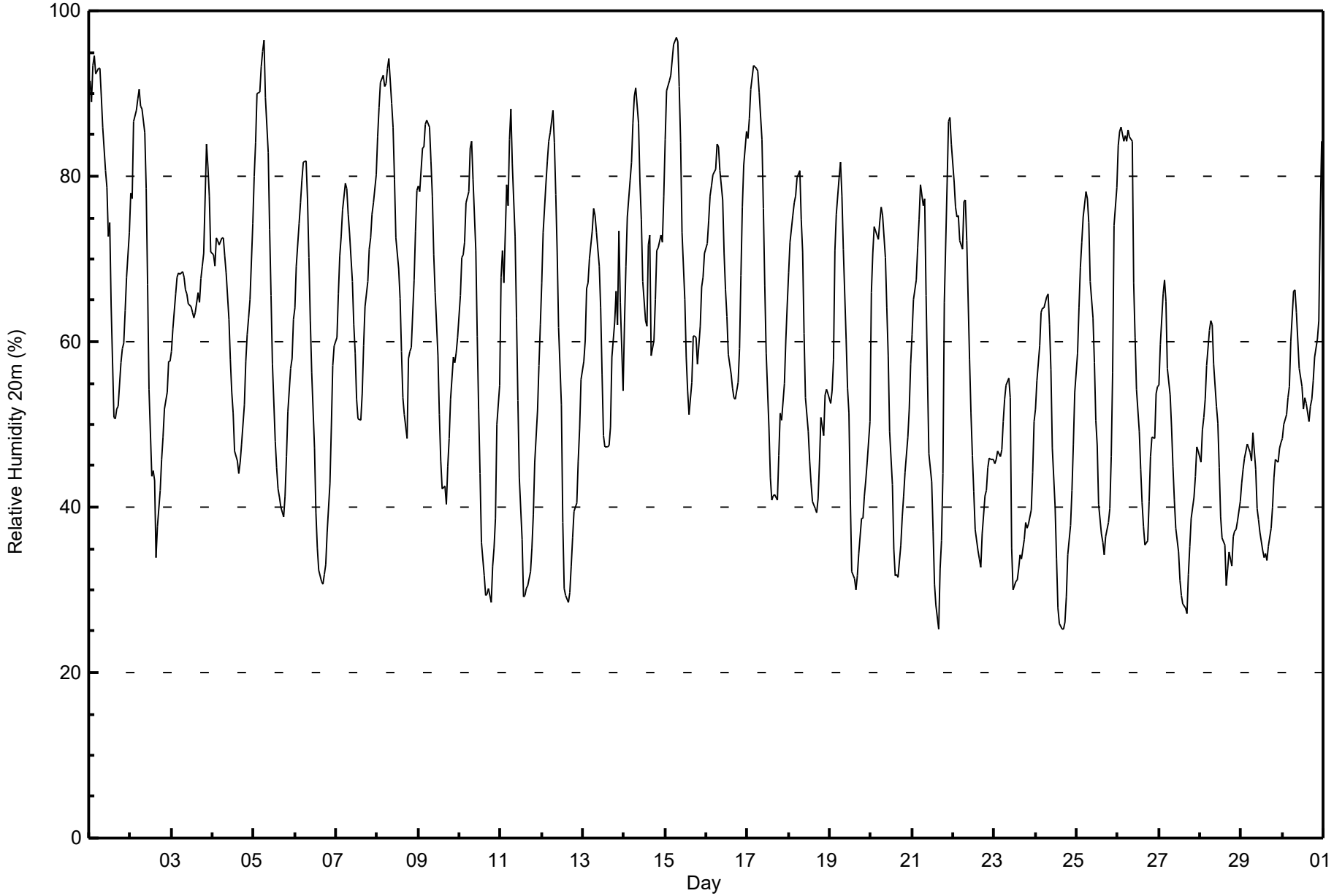
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	91	89	93	95	92	93	93	90	86	81	79	73	74	64	51	51	52	52	57	59	60	64	68	73	74.2	95
2-Sep	78	77	87	88	89	91	88	88	85	79	67	54	44	44	43	34	38	42	46	49	52	54	58	58	63.8	91
3-Sep	59	62	66	68	68	68	68	68	66	66	65	64	64	63	64	66	65	68	69	71	84	81	78	71	67.9	84
4-Sep	70	69	73	72	72	73	73	70	68	63	58	54	51	47	46	44	45	48	52	58	61	63	65	74	61.2	74
5-Sep	80	84	90	90	93	95	96	90	83	74	66	57	48	45	42	41	40	39	41	46	52	57	58	63	65.4	96
6-Sep	64	69	74	77	80	82	82	77	70	63	56	47	39	35	32	31	31	32	33	37	43	50	57	60	55.0	82
7-Sep	61	66	70	73	76	79	79	76	73	67	62	59	53	51	51	54	59	64	67	71	73	75	77	80	67.3	80
8-Sep	85	88	91	92	91	91	93	94	89	86	80	73	69	65	59	53	51	48	58	59	59	68	73	78	74.7	94
9-Sep	79	78	83	84	86	87	86	82	78	71	66	58	51	46	42	42	40	45	48	53	58	57	59	61	64.2	87
10-Sep	66	70	71	72	77	78	83	84	80	71	61	52	44	36	32	29	29	30	28	33	35	39	50	55	54.4	84
11-Sep	68	71	67	79	76	84	88	81	73	63	53	44	36	29	29	30	31	32	35	39	45	52	57	62	55.2	88
12-Sep	67	73	79	82	84	85	88	84	78	71	62	52	38	30	29	29	30	33	36	40	41	46	49	55	56.7	88
13-Sep	58	60	66	67	70	73	76	75	73	69	64	56	49	47	47	48	50	58	62	66	62	73	65	54	62.1	76
14-Sep	62	69	75	79	82	87	90	91	86	79	75	67	63	62	72	73	58	60	65	71	71	73	72	78	73.3	91
15-Sep	84	90	92	92	94	96	97	96	91	84	73	65	58	54	51	55	61	61	60	57	62	67	68	71	74.1	97
16-Sep	72	75	78	79	80	81	84	84	81	77	71	66	63	58	56	54	53	53	55	59	68	76	81	85	70.4	85
17-Sep	85	87	90	93	93	93	93	90	84	76	67	59	50	44	41	41	42	41	46	51	51	55	60	64	66.5	93
18-Sep	68	72	75	77	78	80	81	75	71	61	53	49	46	43	41	40	39	41	45	51	49	54	54	54	58.1	81
19-Sep	52	54	58	71	75	80	82	78	71	60	54	51	41	32	31	30	32	34	39	39	41	43	45	50	51.9	82
20-Sep	66	71	74	73	72	74	76	75	70	64	58	49	43	35	32	32	32	35	39	41	44	48	52	57	54.7	76
21-Sep	61	65	67	71	75	79	76	77	66	56	46	43	37	31	28	25	33	36	44	65	79	87	87	84	59.1	87
22-Sep	79	76	75	75	72	71	77	77	72	58	51	46	42	37	35	34	33	37	41	42	45	46	46	46	54.7	79
23-Sep	45	46	47	46	47	50	53	55	56	53	35	30	31	31	33	34	34	36	38	37	38	40	44	50	42.0	56
24-Sep	52	55	60	63	64	64	65	66	62	57	47	40	34	28	26	25	25	26	29	34	38	42	48	54	46.0	66
25-Sep	59	64	69	72	75	78	77	74	67	63	58	51	47	40	37	36	34	36	38	40	46	56	74	79	57.1	79
26-Sep	84	86	86	84	85	84	86	85	84	67	60	54	49	45	40	38	35	36	41	46	48	48	54	55	61.7	86
27-Sep	55	60	66	67	65	57	54	50	45	41	37	35	31	29	28	28	27	32	35	39	41	44	47	47	44.1	67
28-Sep	45	49	51	53	57	61	63	62	57	52	50	45	39	36	35	31	33	35	33	36	37	37	38	41	44.9	63
29-Sep	43	45	46	48	47	47	46	49	45	40	38	37	35	34	34	34	35	38	40	44	46	45	47	48	42.0	49
30-Sep	48	50	51	53	55	60	66	66	64	60	57	55	52	53	52	50	52	53	55	58	60	62	75	84	58.1	84
	66.2	69.0	72.3	74.6	75.7	77.4	78.6	76.9	72.4	65.7	59.0	52.8	47.3	43.2	41.3	40.4	40.6	42.7	46.0	49.7	52.9	56.7	60.2	63.0	Diurnal Average	
	91	90	93	95	94	96	97	96	91	86	80	73	74	65	72	73	65	68	69	71	84	87	87	85	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Mannix - September 2025



Relative Humidity 20m (RH20) - %

Mannix - September 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	122	16.94	16.94
40 - 60	251	34.86	51.81
60 - 80	245	34.03	85.83
80 - 100	102	14.17	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

Mannix - September 2025

Maximum Value: 97 % on Sep 15 07:00

Maximum Daily Average: 74.4 % on Sep 8

Minimum Value: 24 % on Sep 24 17:00

Minimum Daily Average: 40.4 % on Sep 23

Maximum Diurnal Average: 75.5 % at hour 8

Minimum Diurnal Average: 40.0 % at hour 16

Monthly Average: 57.4 %

Percentiles: P_1 = 27 P_{10} = 34 Q_1 = 43 Median = 57 Q_3 = 71 P_{90} = 81 P_{99} = 92

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

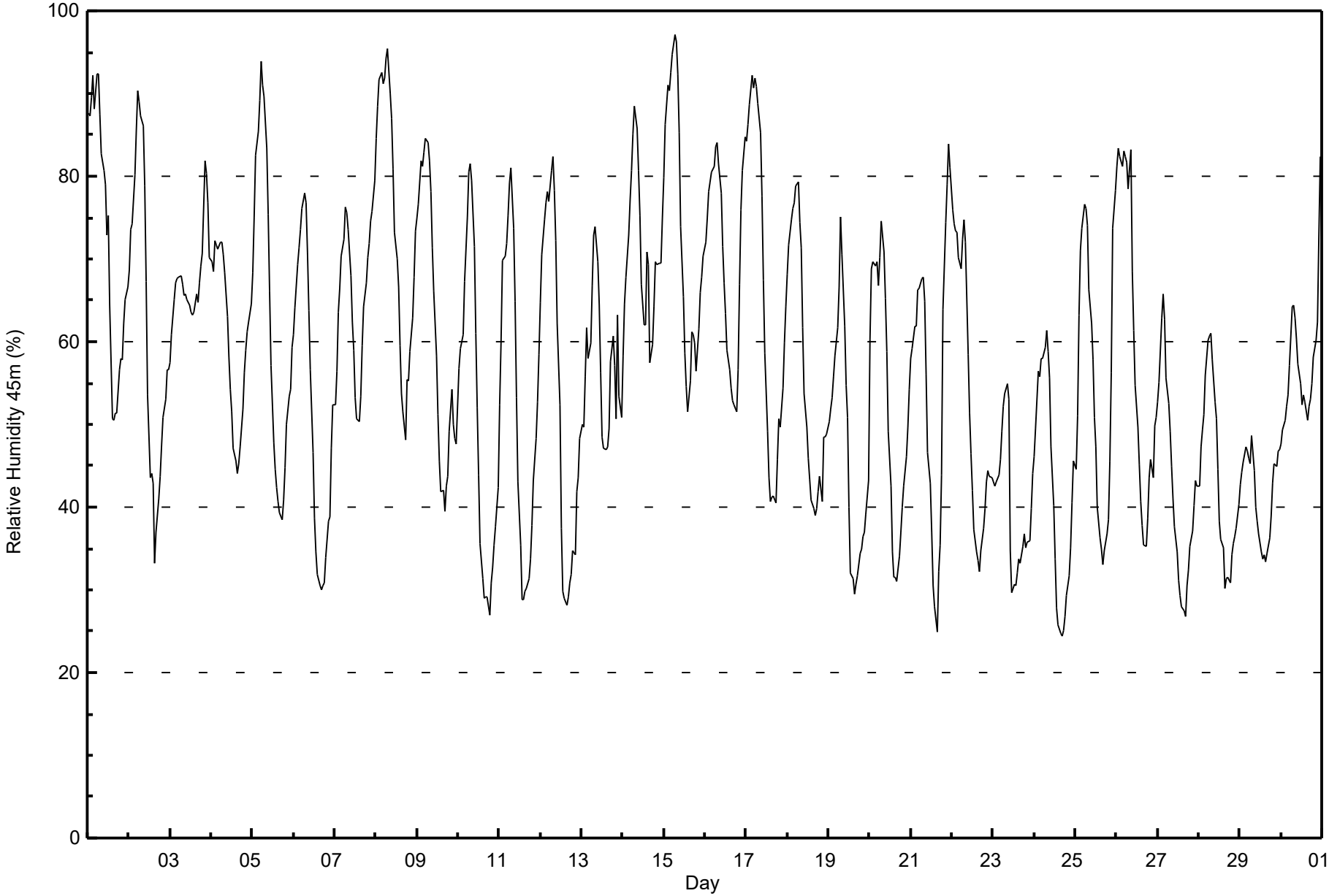
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	88	87	90	92	88	92	92	87	83	81	79	73	75	64	51	51	51	51	57	58	58	62	65	67	72.6	92
2-Sep	69	74	74	80	86	90	89	87	86	79	67	54	43	44	43	33	37	41	44	47	51	53	57	57	61.9	90
3-Sep	57	61	65	67	68	68	68	67	66	66	65	64	64	63	64	66	65	67	69	71	82	80	77	70	67.4	82
4-Sep	70	69	72	72	71	72	72	71	68	63	58	54	52	47	46	44	45	47	52	56	59	61	62	65	60.3	72
5-Sep	68	75	83	85	89	94	91	90	83	75	66	57	48	45	42	41	39	38	41	45	50	53	54	59	63.0	94
6-Sep	61	64	69	71	74	76	78	77	71	64	57	47	39	35	32	30	30	31	31	34	38	39	47	52	51.9	78
7-Sep	52	56	64	66	70	72	76	76	74	68	62	59	53	51	50	53	60	64	67	70	72	75	76	79	65.3	79
8-Sep	85	89	92	93	91	92	94	95	90	87	81	73	70	67	60	54	52	48	55	55	59	63	68	73	74.4	95
9-Sep	75	77	82	81	83	85	84	82	78	71	66	58	51	46	42	42	39	43	44	49	54	50	48	48	61.6	85
10-Sep	57	59	60	61	67	75	81	82	79	72	61	52	44	36	31	29	29	29	27	31	33	35	38	42	50.4	82
11-Sep	52	60	70	70	72	75	79	81	74	65	53	43	35	29	29	30	30	31	34	38	43	48	53	59	52.2	81
12-Sep	65	70	75	77	78	77	81	82	78	72	62	52	37	30	29	28	29	31	32	35	34	42	44	48	53.7	82
13-Sep	50	50	56	62	58	60	67	73	74	70	64	56	48	47	47	47	50	58	61	57	51	63	53	51	57.2	74
14-Sep	58	65	68	73	77	81	85	88	86	81	75	67	62	62	71	69	57	60	64	70	69	70	70	75	70.9	88
15-Sep	80	86	91	90	92	95	97	96	92	85	74	65	59	54	51	55	61	61	60	56	62	66	68	70	73.7	97
16-Sep	72	75	78	79	81	81	83	84	82	78	72	67	63	59	57	54	53	52	52	57	67	76	81	85	70.3	85
17-Sep	84	86	89	92	91	92	91	89	85	78	67	59	49	43	41	41	41	40	46	51	50	54	60	64	66.0	92
18-Sep	68	72	75	76	77	79	79	74	71	62	54	50	46	43	41	40	39	40	42	44	41	49	49	49	56.6	79
19-Sep	50	52	53	56	58	62	67	75	71	62	55	51	40	32	31	30	31	32	34	35	36	37	39	43	47.1	75
20-Sep	60	69	70	69	70	67	70	75	71	65	59	49	42	35	32	32	31	34	37	40	42	46	50	54	52.8	75
21-Sep	58	59	62	62	66	67	68	68	65	56	47	43	37	31	28	25	32	35	44	64	74	79	84	81	55.6	84
22-Sep	76	74	73	73	70	69	72	75	72	58	51	46	42	37	35	34	32	35	37	40	43	44	44	44	53.2	76
23-Sep	43	43	43	44	46	49	52	54	55	53	35	30	31	31	32	34	33	35	37	35	36	36	40	44	40.4	55
24-Sep	46	50	56	56	58	58	59	61	59	56	47	40	34	28	26	25	24	25	27	29	32	35	40	46	42.3	61
25-Sep	45	51	63	71	74	77	76	74	66	62	58	51	47	40	36	35	33	35	37	38	46	56	74	78	55.1	78
26-Sep	81	83	82	81	83	82	82	78	83	68	61	55	50	45	41	38	35	35	39	43	46	44	50	51	59.9	83
27-Sep	53	55	63	66	63	56	53	49	45	41	38	35	31	29	28	28	27	31	32	35	37	40	43	43	42.4	66
28-Sep	42	47	49	51	56	60	61	61	58	53	51	45	38	36	35	30	31	32	31	34	36	36	37	40	43.8	61
29-Sep	43	44	45	47	47	46	45	49	44	40	38	37	35	34	34	33	34	36	39	43	45	45	47	47	41.6	49
30-Sep	48	49	50	52	54	57	64	64	63	60	57	55	52	54	53	50	52	53	55	58	60	62	73	82	57.5	82
	61.9	65.0	68.7	70.6	71.9	73.5	75.2	75.5	72.4	66.3	59.4	52.9	47.3	43.2	41.2	40.0	40.2	41.7	44.2	47.3	50.2	53.4	56.3	58.9	Diurnal Average	
	88	89	92	93	92	95	97	96	92	87	81	73	75	67	71	69	65	67	69	71	82	80	84	85	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Mannix - September 2025



Relative Humidity 45m (RH45) - %

Mannix - September 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	141	19.58	19.58
40 - 60	264	36.67	56.25
60 - 80	227	31.53	87.78
80 - 100	88	12.22	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 98 % on Sep 8 08:00

Maximum Daily Average: 75.4 % on Sep 8

Minimum Value: 25 % on Sep 24 17:00

Minimum Daily Average: 40.1 % on Sep 23

Maximum Diurnal Average: 73.2 % at hour 8

Minimum Diurnal Average: 40.9 % at hour 16

Monthly Average: 56.8 %

Percentiles: P_1 = 27 P_{10} = 34 Q_1 = 42 Median = 56 Q_3 = 70 P_{90} = 80 P_{99} = 93

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

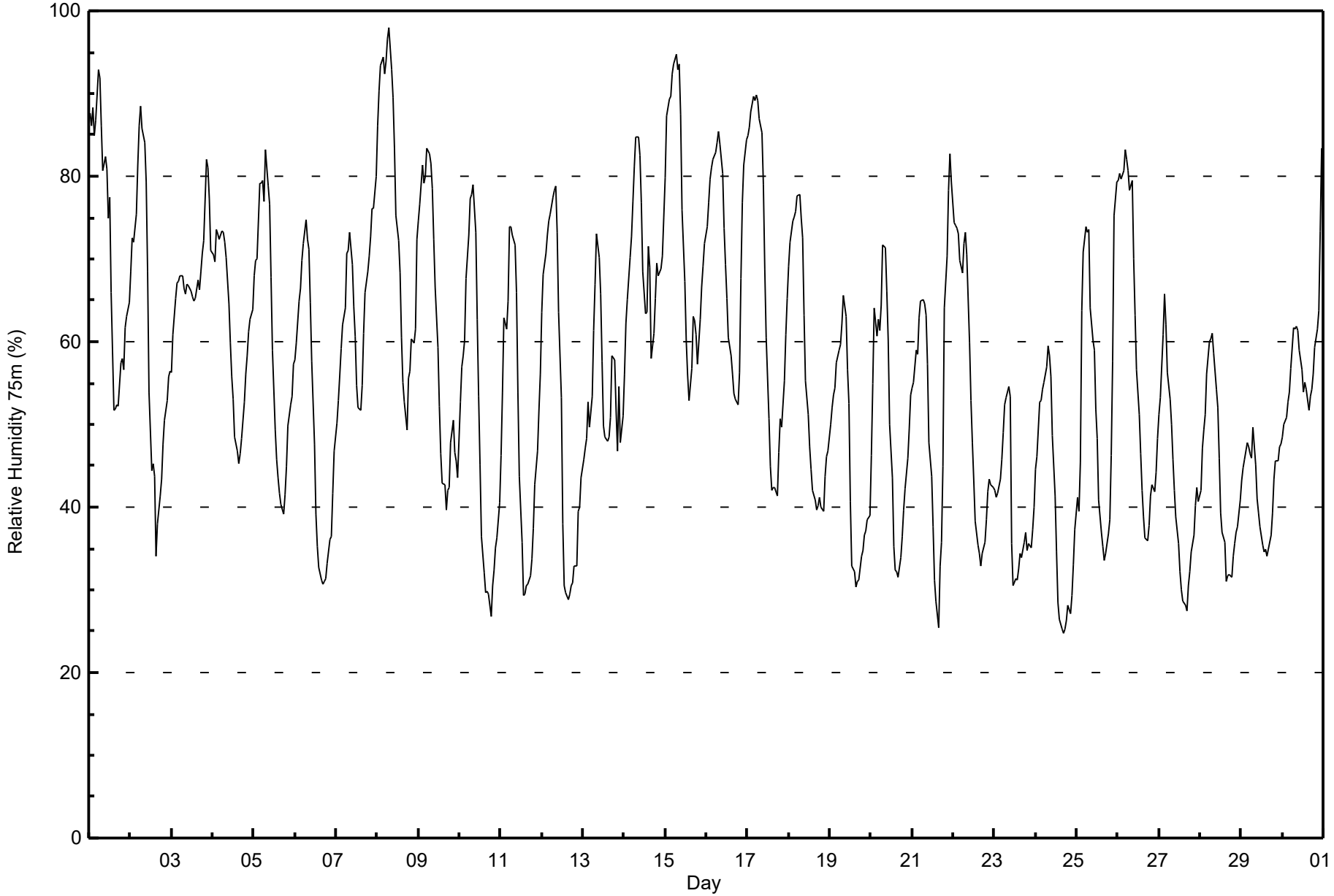
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	88	86	88	85	87	93	92	86	81	82	81	75	77	66	52	52	52	52	58	58	57	62	63	65	72.4	93
2-Sep	68	73	72	76	81	86	88	86	84	79	69	54	44	45	44	34	38	41	43	48	51	53	56	56	61.2	88
3-Sep	56	61	65	67	67	68	68	66	66	67	67	66	65	65	65	67	66	69	71	72	82	81	77	71	68.2	82
4-Sep	71	70	74	73	72	73	73	72	70	65	60	56	53	48	47	45	46	48	53	56	58	61	63	64	61.3	74
5-Sep	68	70	70	79	79	80	77	83	79	77	68	59	49	46	44	42	40	39	41	45	50	52	53	57	60.3	83
6-Sep	58	60	65	66	70	72	75	72	71	65	58	48	39	35	33	31	31	31	31	33	36	36	42	47	50.2	75
7-Sep	50	53	56	59	62	64	71	71	73	69	64	61	55	52	52	55	61	66	68	70	73	76	76	80	64.0	80
8-Sep	86	90	93	94	92	94	97	98	93	89	83	75	72	68	61	55	53	49	56	56	60	60	62	72	75.4	98
9-Sep	74	77	81	79	80	83	83	81	78	72	67	59	52	47	43	43	40	42	42	48	51	47	46	44	60.8	83
10-Sep	53	57	58	60	68	73	77	78	79	73	63	53	45	36	32	30	30	29	27	31	32	35	36	41	49.9	79
11-Sep	46	54	63	62	65	74	74	73	72	66	54	44	36	29	30	30	31	32	34	37	43	47	52	56	50.1	74
12-Sep	64	68	71	73	75	75	77	78	79	73	64	53	38	30	30	29	30	31	31	33	33	40	40	44	52.4	79
13-Sep	46	47	48	53	50	53	61	67	73	70	66	58	50	48	48	48	51	58	58	52	47	55	48	51	54.4	73
14-Sep	56	62	65	70	73	77	81	85	85	83	77	68	63	64	72	69	58	61	65	69	68	69	70	75	70.2	85
15-Sep	80	87	89	90	92	94	95	93	94	87	76	67	60	56	53	57	63	62	61	57	63	67	69	72	74.3	95
16-Sep	74	77	80	81	82	83	84	85	84	80	74	69	65	61	58	56	54	53	52	56	68	77	81	84	71.6	85
17-Sep	85	86	88	90	89	90	89	87	85	79	69	60	51	45	42	42	42	41	47	51	50	55	61	65	66.2	90
18-Sep	69	72	75	75	76	78	78	75	73	63	55	51	47	45	42	41	40	40	41	40	40	44	46	47	56.3	78
19-Sep	50	52	54	54	58	59	60	62	66	63	57	52	41	33	32	30	31	31	34	35	37	37	38	39	46.0	66
20-Sep	46	55	64	61	63	61	64	72	71	66	60	50	43	35	32	32	32	34	36	40	42	46	50	54	50.4	72
21-Sep	54	55	59	58	63	65	65	65	63	57	48	44	38	31	29	25	33	36	45	64	70	78	83	79	54.5	83
22-Sep	74	74	74	73	70	68	72	73	71	60	53	48	43	38	35	34	33	34	36	38	42	43	43	42	53.0	74
23-Sep	42	41	42	43	46	49	52	53	55	53	36	30	31	31	32	34	34	36	37	35	36	35	37	40	40.1	55
24-Sep	45	46	53	53	54	55	57	59	58	56	49	41	35	29	26	25	25	25	26	28	27	29	33	37	40.5	59
25-Sep	41	40	45	64	71	74	73	74	64	60	59	52	48	41	37	35	34	34	37	38	46	58	75	79	53.3	79
26-Sep	79	80	80	81	83	82	81	78	79	70	63	57	51	47	42	39	36	36	38	41	43	42	44	48	59.2	83
27-Sep	51	53	61	66	62	56	53	50	46	42	39	36	32	30	29	28	27	31	32	35	37	40	42	41	42.4	66
28-Sep	42	47	49	51	56	60	60	61	59	54	52	46	39	37	36	31	32	32	32	34	36	37	38	41	44.2	61
29-Sep	43	45	46	48	47	47	46	50	45	41	39	38	35	35	35	34	35	37	39	43	46	46	47	48	42.2	50
30-Sep	48	50	51	53	54	57	62	62	62	61	59	57	54	55	54	52	53	54	56	59	61	64	73	83	58.1	83
	60.3	62.9	65.9	67.9	69.6	71.4	72.9	73.2	71.9	67.5	60.8	54.3	48.5	44.3	42.2	40.9	41.0	42.2	44.2	46.8	49.4	52.4	54.8	57.4	Diurnal Average	
	88	90	93	94	92	94	97	98	94	89	83	75	77	68	72	69	66	69	71	72	82	81	83	84	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 75m (RH75) - %

Mannix - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	144	20.00	20.00
40 - 60	267	37.08	57.08
60 - 80	235	32.64	89.72
80 - 100	74	10.28	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 99 % on Sep 8 08:00

Maximum Daily Average: 75.7 % on Sep 8

Minimum Value: 25 % on Sep 24 17:00

Minimum Daily Average: 39.6 % on Sep 23

Maximum Diurnal Average: 71.7 % at hour 8

Minimum Diurnal Average: 41.0 % at hour 16

Monthly Average: 56.1 %

Percentiles: P_1 = 27 P_{10} = 34 Q_1 = 42 Median = 55 Q_3 = 69 P_{90} = 79 P_{99} = 94

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

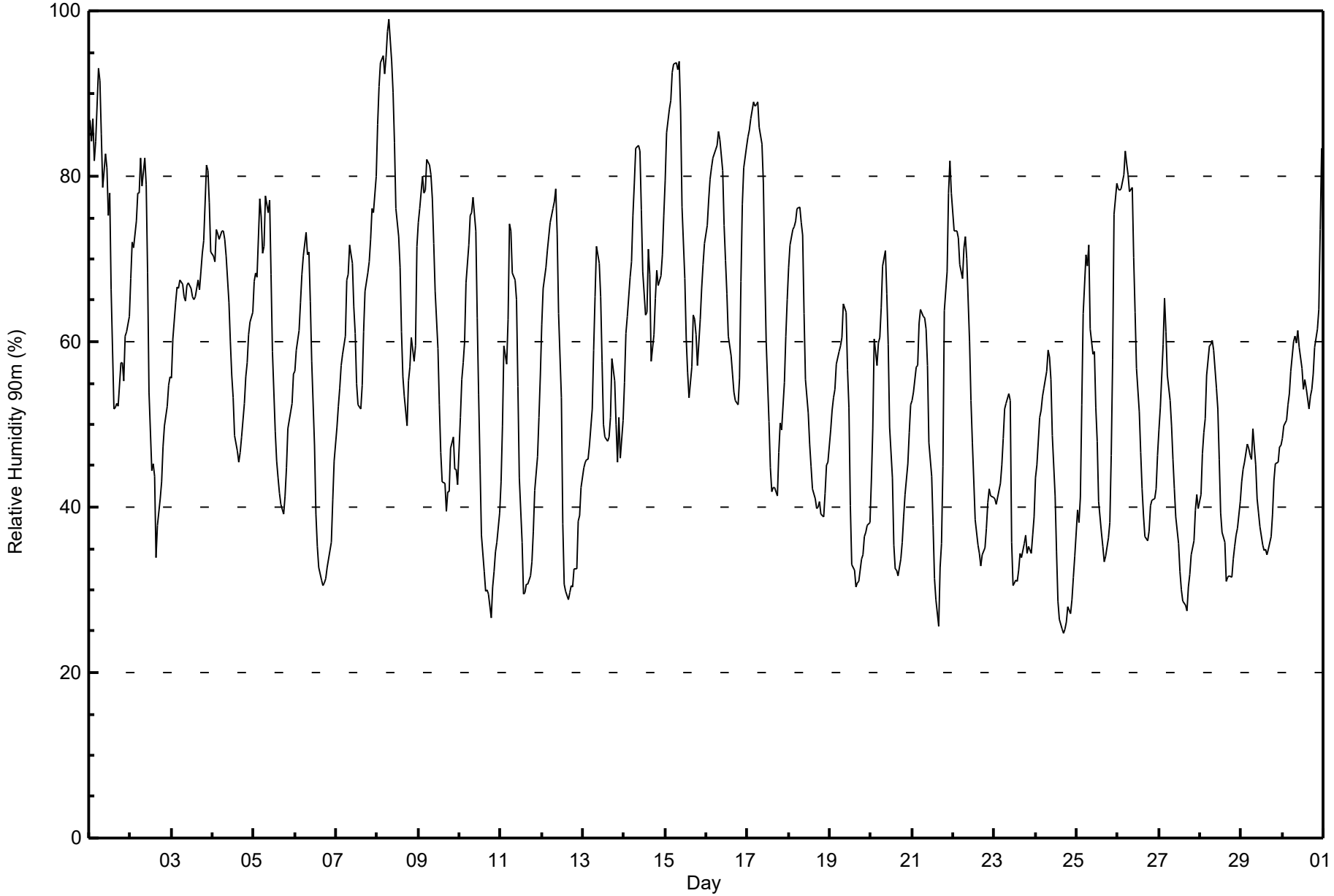
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	87	84	87	82	84	93	91	85	79	83	81	75	78	66	52	52	52	52	57	57	55	61	61	63	71.6	93
2-Sep	68	72	71	75	78	78	82	79	82	79	68	54	44	45	44	34	38	41	43	47	50	52	55	56	59.8	82
3-Sep	56	60	65	67	66	67	67	65	65	67	67	66	65	65	65	67	66	68	71	72	81	81	77	71	67.9	81
4-Sep	70	70	74	73	72	73	73	72	70	65	60	56	53	49	47	45	47	48	53	56	57	61	62	64	61.3	74
5-Sep	67	68	68	77	75	71	72	78	76	77	68	59	49	46	44	42	40	39	41	45	49	52	53	56	58.8	78
6-Sep	56	59	61	65	68	70	73	71	71	65	58	47	39	35	33	31	31	31	31	33	35	36	41	46	49.4	73
7-Sep	50	52	54	57	59	61	67	68	72	69	64	61	55	52	52	55	61	66	68	70	72	76	76	80	63.2	80
8-Sep	86	91	94	95	92	94	97	99	94	90	84	76	73	69	61	56	53	50	55	57	60	58	60	72	75.7	99
9-Sep	74	76	80	78	78	82	81	80	77	72	66	59	52	47	43	43	40	42	42	47	48	45	44	43	60.0	82
10-Sep	51	55	57	60	67	72	75	76	77	73	63	54	45	37	32	30	30	30	27	30	32	35	36	39	49.3	77
11-Sep	43	50	60	57	63	74	73	68	68	65	54	44	36	30	30	31	31	32	33	37	42	46	51	56	48.8	74
12-Sep	62	66	69	71	73	74	76	77	79	73	63	53	38	31	30	29	30	30	30	33	33	38	39	42	51.6	79
13-Sep	45	45	46	46	47	52	59	65	72	69	66	58	50	49	48	49	51	58	55	50	45	51	46	51	53.0	72
14-Sep	55	61	63	68	70	75	79	83	84	83	76	68	63	64	71	68	58	61	65	69	67	68	71	75	69.4	84
15-Sep	79	85	88	89	92	94	94	93	94	88	76	68	60	56	53	57	63	63	61	57	63	66	69	72	74.2	94
16-Sep	74	77	80	81	82	83	84	86	84	81	74	70	66	61	58	56	54	53	52	56	67	77	81	84	71.6	86
17-Sep	85	86	87	89	88	89	89	86	84	79	69	60	50	45	42	42	42	41	47	50	49	55	61	65	65.8	89
18-Sep	69	72	74	74	75	76	76	74	73	63	55	51	48	45	42	41	40	40	41	39	39	42	45	46	55.8	76
19-Sep	49	52	53	54	57	59	59	60	65	64	57	52	40	33	32	30	31	31	34	34	36	37	38	38	45.7	65
20-Sep	43	50	60	57	60	60	64	69	71	66	60	50	43	35	32	32	32	34	36	39	42	45	49	52	49.3	71
21-Sep	53	54	57	57	62	64	63	63	62	57	48	44	38	31	29	26	33	36	45	64	69	78	82	78	53.8	82
22-Sep	73	73	73	73	69	68	71	73	70	60	53	48	43	38	35	34	33	34	35	37	41	42	41	41	52.6	73
23-Sep	41	40	41	43	45	48	52	52	54	53	36	30	31	31	32	34	34	36	37	34	35	34	37	39	39.6	54
24-Sep	43	45	51	52	53	54	56	59	58	55	49	41	35	29	27	25	25	25	26	28	27	29	32	34	39.9	59
25-Sep	40	38	41	52	63	70	69	72	62	58	59	52	48	41	37	35	33	34	36	38	46	58	75	79	51.6	79
26-Sep	79	78	78	80	83	82	80	78	79	70	64	57	51	47	42	39	36	36	37	40	41	41	42	46	58.6	83
27-Sep	49	52	60	65	61	56	53	50	46	42	39	36	32	30	29	28	27	30	32	34	36	40	42	40	42.0	65
28-Sep	42	46	49	51	56	59	60	60	59	54	52	46	39	37	36	31	32	32	32	34	35	37	37	41	44.0	60
29-Sep	43	45	45	48	47	46	46	50	45	41	39	38	35	35	35	34	35	36	39	43	45	45	47	47	42.1	50
30-Sep	48	50	50	52	54	56	60	61	60	61	59	57	54	55	54	52	53	54	56	59	62	64	73	83	57.9	83
	59.4	61.8	64.6	66.2	68.1	70.1	71.5	71.7	70.9	67.5	60.9	54.3	48.5	44.4	42.3	41.0	41.0	42.1	43.9	46.3	48.7	51.6	54.1	56.6	Diurnal Average	
	87	91	94	95	92	94	97	99	94	90	84	76	78	69	71	68	66	68	71	72	81	81	82	84	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 90m (RH90) - %

Mannix - September 2025



Relative Humidity 90m (RH90) - %

Mannix - September 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	149	20.69	20.69
40 - 60	274	38.06	58.75
60 - 80	232	32.22	90.97
80 - 100	65	9.03	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Mannix - September 2025

Maximum Speed: 25 km/h on Sep 29 10:00

Maximum Daily Speed Average: 17.0 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 8 18:00

Minimum Daily Speed Average: 1.8 km/h on Sep 3

Maximum Diurnal Speed Average: 5.7 km/h at hour 7

Minimum Diurnal Speed Average: 1.5 km/h at hour 19

Monthly Average Velocity: 4.2 km/h 185.3 deg

Percentiles: P_1 = 2 P_{10} = 5 Q_1 = 7 Median = 10 Q_3 = 13 P_{90} = 17 P_{99} = 23

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW3	NE2	SW2	WSW5	N2	NNE2	ESE8	SSE8	S5	S2	SW2	NE2	NNE5	NNE10	NNE11	NNE16	NNE17	NNE20	N16	N13	N11	N7	N5	W3	NNE5.0	NNE20
2-Sep	WNW4	WNW3	NW3	NW2	E1	SSW3	SW2	S2	S2	SSE4	SSE4	SSE6	SSE7	SSE7	SSE9	SE10	SE9	SSE10	SE10	SE12	SE15	SE14	SSE12	SSE12	SSE5.6	SE15
3-Sep	SSE14	SE14	SE14	SSE13	SSE11	SE11	SE11	SSE10	SSE13	SSE12	SSE12	SSE8	SE7	WSW1	NW8	NNW13	N23	NNW24	NNW23	NNW21	NNW18	NNW15	NNW14	NNW18	NNE1.8	NNW24
4-Sep	NW18	NW20	NW18	NW18	NW18	NW15	NW16	NW15	NW16	NNW17	NNW15	NW16	NW14	NW15	NW14	NNW13	NNW11	N9	NNE10	NE8	NE5	ENE3	S2	WSW7	NW11.7	NW20
5-Sep	SW6	SSE5	S4	SSE5	S5	SSE5	SSE8	SSE6	SSE10	SSE8	SE6	ESE7	ESE8	SE7	ESE8	SE8	SE6	SE5	E6	SE8	SE12	SSE11	SSE11	SSE9	SSE6.6	SE12
6-Sep	SSE10	SSE10	SSE10	SSE10	SSE11	SSE10	SSE10	SSE10	SSE8	SSE9	SE7	SSE8	SSE10	SE10	SE10	SE9	SE9	SE8	SE7	SSE5	S5	SSE6	SSE10	SSE9	SSE8.6	SSE11
7-Sep	SSE10	SSE10	SSE6	SSE5	SSE5	SSE6	SSE5	SSE5	SSW2	SW1	SSE1	NNE6	NNE6	N6	N9	N14	NNE16	NNE16	NNE14	NNE15	NNE15	N11	N12	N16	NNE4.7	NNE16
8-Sep	N15	NNE15	NNE12	N10	NNE14	NNE13	NNE10	NNE7	NNE8	NE9	ENE6	SSW3	WSW5	W4	W4	WSW2	W2	S0	WNW5	WNW4	NE2	ENE3	S1	SSE9	NNE4.3	N15
9-Sep	SSE9	SE11	SSE9	SSE10	SSE11	SSE11	SSE10	SSE9	SSE11	SSE10	SSE10	SSE9	SSE10	SSE12	SSE14	SSE14	S10	SSE11	S11	SW9	SW7	S7	S8	S7	SSE9.4	SSE14
10-Sep	SSE6	SSE7	SSE6	SSW7	WSW9	WSW5	W7	W7	WNW5	W7	W9	W7	W10	W11	W9	W10	WSW8	WSW4	NNW10	N9	N7	NW2	W8	WNW5	W5.0	W11
11-Sep	W4	WSW5	WNW3	E1	SSW6	SSW5	SSE7	SSE7	SSE5	SE3	SE3	SSE7	SSE10	SSE9	SE10	SSE12	SSE9	SE10	SE11	SE13	SSE14	SSE13	SSE11	SSE11	SSE7.1	SSE14
12-Sep	SSE11	SSE11	SSE12	SSE12	SSE9	SSE10	SSE10	SSE10	SSE11	SSE10	SSE11	SSE12	S12	SSW13	SSW14	SSW15	SSW13	S9	S10	SSW9	SSW11	S6	SSE9	SSE8	S10.0	SSW15
13-Sep	S7	SSE8	SSE8	SSE7	SSE12	SSE11	SSE10	S6	S5	SSE9	SSE8	S9	SSW5	WSW5	NW3	N7	NNW6	N8	NNE10	NNE7	SE5	SSW5	SSE6	SE10	SSE3.7	SSE12
14-Sep	SSE10	S8	S7	S8	S6	S6	S7	SSE8	SSE9	SSE11	ESE4	SE6	SE9	E10	E12	SSE9	SE15	SE14	SSE13	SSE11	SSE7	WSW5	SSE7	SSE6	SSE7.7	SE15
15-Sep	SW6	SSW5	S5	S7	SSE7	SSE9	SSE7	SSE7	S4	WSW4	WNW5	W8	WNW10	WNW10	W18	WNW21	NW24	NW17	WNW13	NW16	NW15	WNW14	WNW17	WNW14	WNW7.4	NW24
16-Sep	NW12	WNW10	WNW11	WNW12	WNW10	WNW6	W6	SW5	WSW10	W12	NW5	NW2	ENE4	ENE4	E5	ESE6	SSE5	SSE6	SSE8	SSE10	SSE11	SE12	SSE9	SE9	SW2.0	WNW12
17-Sep	SE11	SE10	SSE8	SSE8	SSE9	SSE10	SSE9	SSE10	SSE12	SSE12	SSE12	SSE11	SE11	SE15	SE18	SE19	SE21	SE19	SE16	SE17	SE17	SE16	SE15	SE17	SE13.3	SE21
18-Sep	SE16	SE15	SE17	SE16	SE18	SE14	SSE15	SSE16	SSE18	S15	SSW15	SSW14	SSW12	SSW11	SSW13	SSW12	SSW10	SSW8	SSW8	SW9	SW11	WSW10	WSW10	WSW9	S10.6	SSE18
19-Sep	WSW8	SW6	S7	SSE8	SSE9	SSE9	SSE8	SSE8	SSE6	S4	S4	SE7	SSW5	WSW11	SW13	SW9	SW8	SW7	SW7	SW8	S8	S9	SSW9	S7	SSW6.5	SW13
20-Sep	SSE8	SE7	SSE7	SE8	SE7	SSE11	SSE10	SSE10	SSE11	SSE9	SE9	SSE14	SE12	S13	S15	S15	S17	S13	SSE12	SSE14	SSE13	SSE12	SSE12	SSE12	SSE11.1	S17
21-Sep	SSE11	SSE10	S9	S9	S7	SSE5	S5	S5	SSW2	WSW7	W8	W3	W4	WNW5	WNW8	W18	W18	W19	W24	W19	W10	SW8	SW7	WSW11	WSW6.8	W24
22-Sep	WSW13	WSW12	WSW13	WSW12	WSW12	SW11	S8	SSE7	S5	SW7	SW14	SW16	SSW16	SW19	SW18	SW15	SW16	SSW9	S10	S14	S14	S14	S13	S11	SSW11.1	SW19
23-Sep	S11	S10	S11	SSW11	SSW12	SSW11	SSW11	S9	S8	SSW9	WSW17	WSW20	SW21	SW20	SW17	SW16	SSW16	SSW14	SSW10	SSW10	SSW9	SSW9	S9	S8	SSW11.7	SW21
24-Sep	SSE7	SSE8	SSE10	SSE9	SSE9	SSE9	S7	S6	SSW10	WSW13	WSW15	W15	W14	W18	W17	WNW9	NW6	WNW10	WNW7	WSW8	W8	WSW10	WSW9	SSW7	WSW6.6	W18
25-Sep	SSE9	S9	SSE9	SE6	SSE8	SSE7	SSE10	SSE10	SSE12	SSE13	SSE11	SSE12	SE9	SSE8	SE5	SSE13	SSE12	S10	S14	SSE14	SSW12	WSW18	WSW17	SW8	S9.0	WSW18
26-Sep	SW9	SW10	WSW9	WSW8	SW5	SSW7	SSE7	SSE6	SSE4	W13	W12	WSW14	W18	W19	W19	WSW19	WSW18	WSW10	SW8	SW13	SW13	SSW10	S10	SSE12	WSW9.4	WSW19
27-Sep	S10	S8	SSE12	S12	SW15	WSW17	WSW20	WSW22	WSW23	WSW22	WSW20	WSW21	WSW21	WSW23	WSW19	WSW16	WSW16	WSW10	W7	W8	SW9	SW10	S8	SSW9	WSW13.4	WSW23
28-Sep	SW10	WSW10	W11	WSW15	W11	WSW10	W12	W11	W6	WSW4	SE6	SE6	SE7	SE8	SSE11	SSW10	S8	SSE5	SE7	SE8	SE11	SE10	SE15	SE15	SSW5.7	WSW15
29-Sep	SE15	SE14	SE15	SE18	SE17	SE18	SE20	SE16	SE20	SE25	SE24	SE22	SSE20	SSE23	SSE17	SSE18	SSE16	SSE13	SE11	SE14	SE16	ESE14	SE13	SE15	SE17.0	SE25
30-Sep	SE15	SE11	SE15	SSE11	SSE7	W5	NNW5	N7	NE6	N4	NNE3	N8	N12	NNE13	NNE18	NNE17	NNE15	NNE14	N16	N16	N17	N16	N12	N12	NNE7.2	NNE18
	S5.1	S5.2	S5.2	S5.5	S5.3	S5.4	S5.7	S5.3	S5.2	S4.8	SSW4.4	SSW4.7	SSW4.4	SW4.6	SW3.9	SW3.8	SW3.4	SSW2.0	S1.5	S2.3	S3.5	S4.1	S4.5	S4.6	Diurnal Average	
	NW18	NW20	NW18	SE18	NW18	SE18	SE20	WSW22	WSW23	SE25	SE24	SE22	SW21	WSW23	WSW19	WNW21	NW24	NNW24	W24	NNW21	NNW18	WSW18	WSW17	NNW18	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Sep 29 10:00

Minimum Value: 1 km/h on Sep 11 02:00

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 6 P_{99} = 8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

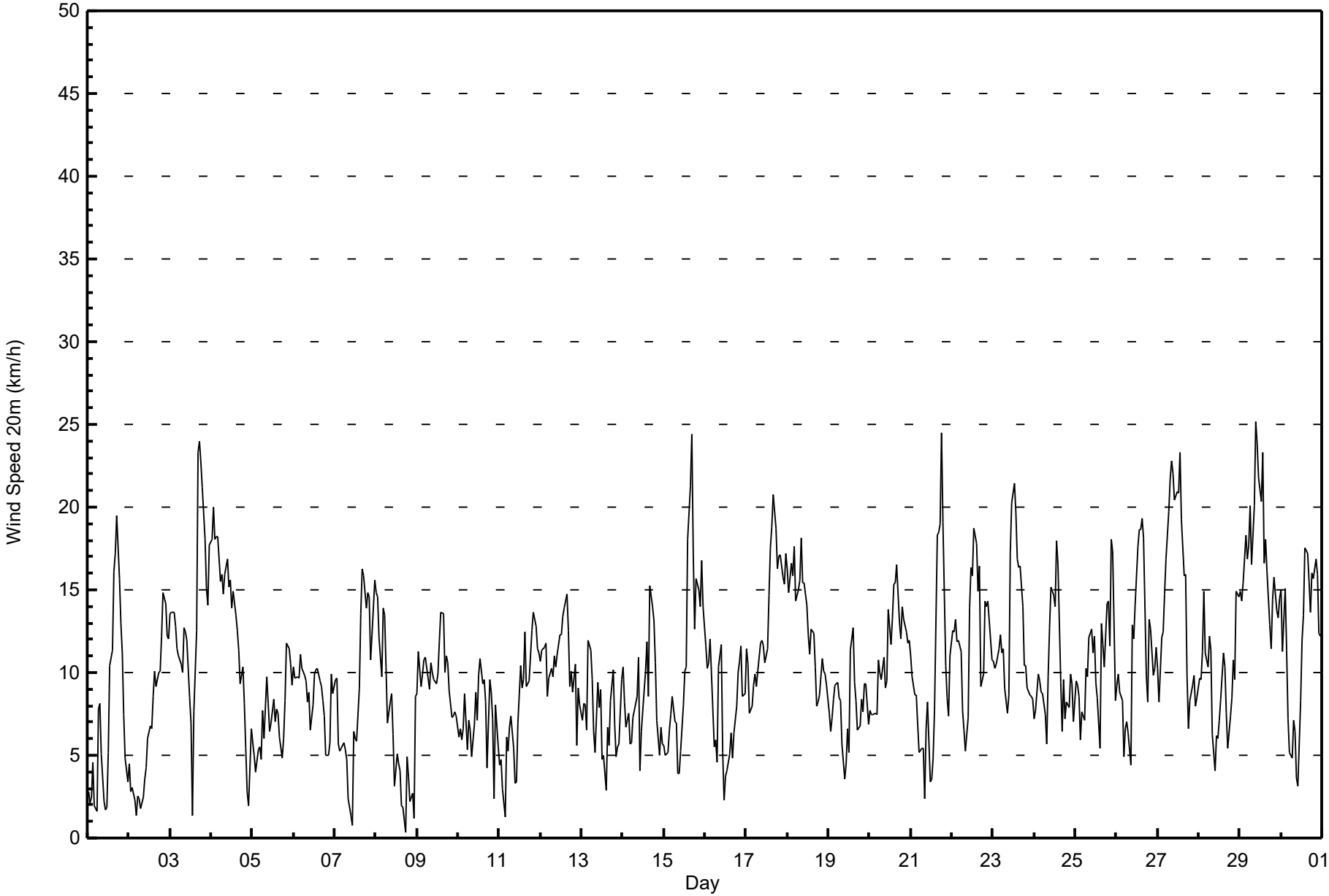
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	1	2	2	1	1	5	3	3	2	2	2	3	5	5	6	6	5	4	4	3	2	3	2	6
2-Sep	1	1	1	1	1	2	2	1	2	2	2	3	3	3	4	4	3	3	3	4	5	5	4	4	5
3-Sep	4	4	4	4	4	4	3	4	4	4	4	3	3	2	4	5	9	9	7	7	7	5	5	6	9
4-Sep	6	7	6	6	6	6	6	6	6	7	6	6	6	6	6	5	4	4	3	2	1	1	2	1	7
5-Sep	1	1	2	2	2	1	2	3	4	3	2	3	3	3	3	3	3	2	4	5	3	2	2	2	5
6-Sep	3	2	2	2	2	2	2	3	3	4	3	3	4	4	4	3	3	2	1	1	1	2	2	1	4
7-Sep	2	2	2	2	2	1	2	2	1	1	2	3	3	3	5	5	5	5	4	5	5	3	4	5	5
8-Sep	5	5	4	3	4	4	4	3	3	3	3	3	3	3	2	2	1	1	1	1	1	1	1	3	5
9-Sep	3	4	3	2	2	2	2	3	3	3	3	3	4	5	5	6	4	3	3	2	1	1	2	2	6
10-Sep	2	1	2	2	1	2	2	2	2	2	4	3	4	4	4	4	3	2	3	2	2	1	1	1	4
11-Sep	2	1	1	1	2	1	2	3	2	2	2	3	4	4	4	5	3	4	3	4	3	3	2	3	5
12-Sep	3	3	3	3	3	2	2	3	4	4	5	5	5	6	6	6	5	3	2	2	2	3	2	2	6
13-Sep	1	2	2	4	2	2	2	2	3	3	3	3	3	2	1	2	2	2	2	3	2	1	2	3	4
14-Sep	2	2	2	2	2	3	1	2	3	5	2	3	3	4	4	3	5	5	4	3	2	2	2	1	5
15-Sep	2	2	1	2	1	2	3	2	2	2	2	3	4	4	5	7	8	7	5	5	5	4	6	4	8
16-Sep	4	3	3	3	3	2	2	3	3	4	3	2	3	2	2	3	2	2	2	2	3	4	3	3	4
17-Sep	4	4	2	2	2	2	2	3	4	5	4	4	4	5	6	6	7	7	5	5	6	6	5	5	7
18-Sep	5	4	5	4	5	4	4	5	6	6	6	6	6	5	5	5	4	3	2	2	2	2	1	2	6
19-Sep	1	2	1	2	1	1	2	2	2	2	2	3	5	5	5	4	3	2	1	1	2	1	1	2	5
20-Sep	2	2	2	3	3	2	2	4	4	3	4	5	4	6	6	6	6	4	3	4	3	3	2	3	6
21-Sep	3	2	2	2	3	2	1	2	2	2	4	3	2	3	3	5	4	4	6	5	4	2	2	3	6
22-Sep	3	3	3	4	5	5	2	2	3	4	5	6	6	6	6	6	6	3	3	5	5	4	4	3	6
23-Sep	3	3	3	4	4	4	4	3	3	3	5	6	6	7	6	6	6	5	3	3	3	3	3	2	7
24-Sep	1	2	3	3	2	2	2	2	3	4	4	4	4	5	5	4	3	3	2	2	1	1	2	2	5
25-Sep	2	2	2	2	3	2	3	4	4	4	4	5	4	4	3	5	4	4	4	5	4	6	6	2	6
26-Sep	2	2	1	1	1	1	1	2	3	7	4	5	5	5	5	5	5	4	4	3	3	2	2	3	7
27-Sep	3	2	4	4	5	5	5	7	7	6	5	6	6	7	5	5	5	2	1	1	2	2	2	2	7
28-Sep	2	3	2	3	3	3	2	4	4	2	3	3	3	4	5	4	3	1	2	3	3	4	5	4	5
29-Sep	5	5	5	5	5	6	7	6	9	9	8	8	8	7	6	6	5	3	3	4	5	5	5	4	9
30-Sep	5	5	4	4	3	2	2	2	2	2	2	5	4	4	5	5	5	5	5	5	5	5	4	4	5
	6	7	6	6	6	6	7	7	9	9	8	8	8	7	6	7	9	9	7	7	7	6	6	6	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Mannix - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	108	15.00	15.00
6 - 11	366	50.83	65.83
12 - 19	218	30.28	96.11
20 - 28	28	3.89	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

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

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	3	3	4	4	3	1	5	16	17	10	6	11	8	9	5	3	108
6 - 11	13	10	3	1	2	5	46	139	43	25	23	20	21	10	2	3	366
12 - 19	12	17	0	0	1	1	42	43	13	14	12	18	16	5	15	9	218
20 - 28	1	1	0	0	0	0	6	2	0	0	2	9	1	1	2	3	28
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	29	31	7	5	6	7	99	200	73	49	43	58	46	25	24	18	720

Total Number of Valid Hours: 720

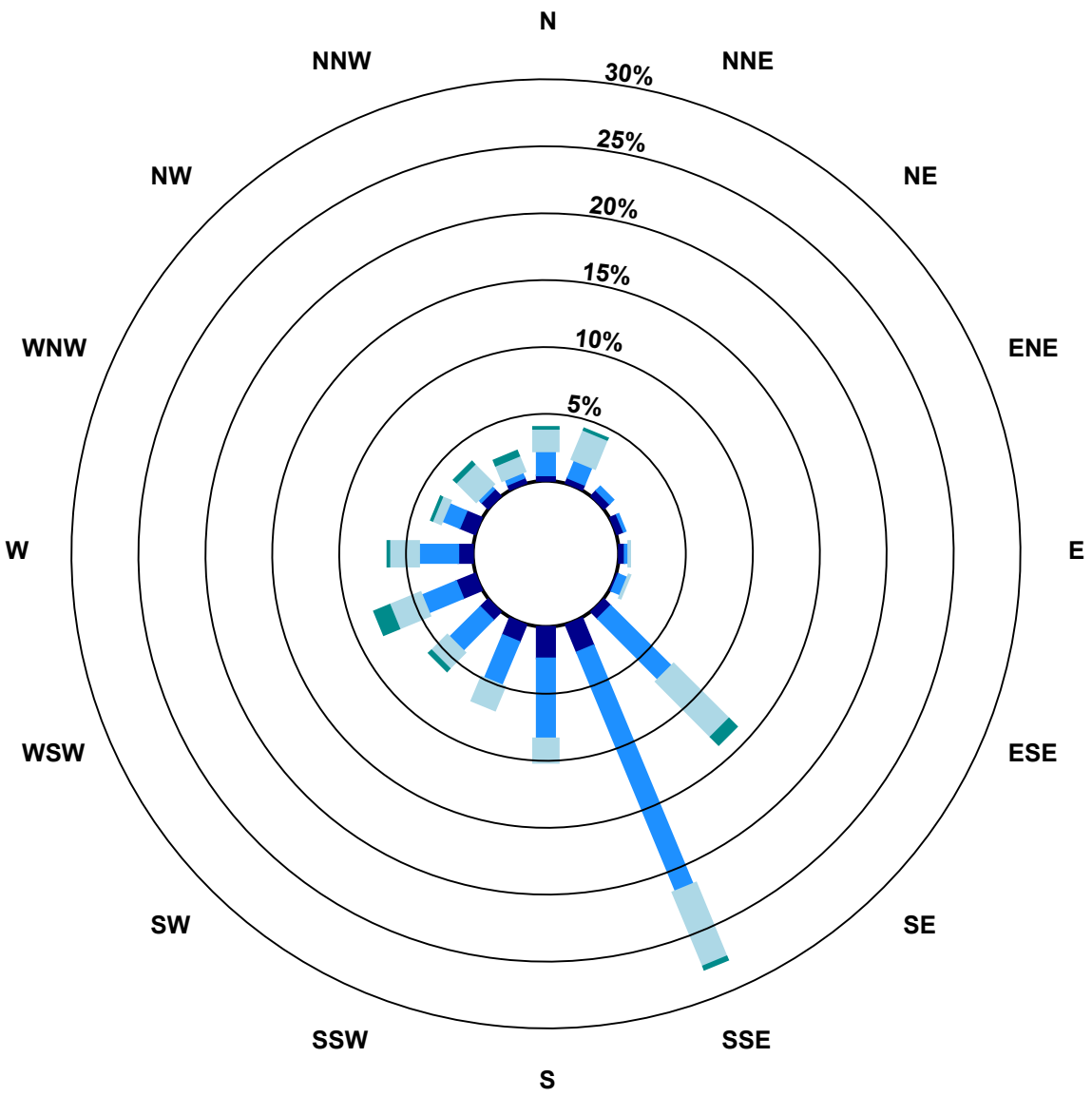
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Mannix



Classes (km/h)

- 0 - 5
- 6 - 11
- 12 - 19
- 20 - 28
- 29 - 38
- > 38

Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Mannix - September 2025

Maximum Speed: 36 km/h on Sep 15 17:00

Maximum Daily Speed Average: 23.1 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 8 18:00

Minimum Daily Speed Average: 2.6 km/h on Sep 16

Maximum Diurnal Speed Average: 9.1 km/h at hour 4

Minimum Diurnal Speed Average: 3.4 km/h at hour 19

Monthly Average Velocity: 6.4 km/h 181.3 deg

Percentiles: P_1 = 2 P_{10} = 6 Q_1 = 11 Median = 16 Q_3 = 20 P_{90} = 24 P_{99} = 31

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW6	NNE4	NW2	SW6	NNW5	NNE3	ESE10	SE12	S9	S3	SW2	NNE2	N7	NNE13	N15	N21	NNE23	N27	N22	N19	N17	N11	N8	NW2	NNE7.4	N27
2-Sep	NNW7	NNW4	NNW6	NNW5	NNE3	ENE2	SSW2	S3	SSW3	S4	SSE5	SSE8	SSE9	SSE9	SSE11	SE13	SE13	SE14	SE16	SE18	SE23	SE23	SE20	SSE19	SE7.7	SE23
3-Sep	SE22	SE22	SE22	SE20	SE19	SE18	SE17	SE16	SSE18	SSE17	SSE16	SSE12	SE10	W2	NW11	NNW19	N34	NNW36	NNW33	NNW31	NNW28	NNW23	NNW22	NW28	NE3.2	NNW36
4-Sep	NW29	NW32	NW29	NW29	NW30	NW26	NW27	NW24	NW25	NNW25	NNW22	NW22	NW21	NW22	NW21	NNW19	NNW17	NNW14	NNE15	NE13	NE10	ENE6	E4	S5	NNW18.0	NW32
5-Sep	SSW6	SSE9	SSE9	SE10	SSE13	SSE10	SSE16	SSE9	SSE13	SSE11	SE7	ESE8	ESE10	SE9	ESE9	SE10	SE8	SE6	E9	ESE12	SE18	SSE18	SSE18	SSE17	SE10.4	SSE18
6-Sep	SE18	SSE17	SSE16	SSE17	SSE18	SSE16	SSE16	SSE13	SE11	SE12	SE9	SSE11	SE13	SE14	SE14	SE12	SE13	SE13	SE11	SE8	S8	SSW7	SSE18	SSE17	SSE13.2	SSE18
7-Sep	SSE15	SSE18	SSE15	SSE12	SSE13	SSE14	SSE11	SSE6	SSW3	SW2	SW1	N8	NNE8	N8	N12	N19	NNE22	NNE21	NNE19	NNE21	NNE22	N17	N19	N24	NE6.0	N24
8-Sep	N23	N21	NNE17	N14	NNE20	NNE19	NNE14	NNE9	NNE11	NNE11	NE7	SSW3	WSW7	W6	W5	W2	W2	SSW0	W6	W3	NNE3	NE5	E4	SE15	NNE6.2	N23
9-Sep	SE16	SE18	SE16	SE16	SSE17	SSE18	SSE16	SSE14	SE15	SE13	SSE13	SSE12	SSE14	SSE16	SSE19	SSE20	S17	SSE19	S22	SW17	WSW12	SSW11	S13	SSW14	SSE14.2	S22
10-Sep	S10	S10	S4	SW10	WSW13	W10	W13	WNW11	WNW8	W8	W10	W8	W12	W14	W12	WSW12	WSW10	W6	NNW16	N14	N12	NNE6	WNW3	NW6	W7.0	NNW16
11-Sep	NW5	W2	NNW5	NE3	S6	SSW8	SSE13	SSE12	SSE7	SE4	SE4	SSE9	SSE14	SSE13	SE13	SSE16	SE13	SE15	SE19	SE21	SSE24	SSE24	SSE23	SSE22	SSE10.9	SSE24
12-Sep	SSE19	SSE21	SSE22	SSE22	SSE18	SE17	SE18	SSE17	SSE15	SSE15	SSE16	SSE17	S19	SSW22	SSW23	SSW23	SSW20	S17	S21	SSW19	SSW21	S11	SSE18	SSE17	S17.3	SSW23
13-Sep	S15	SSE14	SSE19	SSE16	SSE24	SE21	SE17	SSE11	S8	SSE13	SSE10	S12	SSW7	WSW6	NW4	N8	N8	N12	NNE15	NE9	SE11	SSE9	SE12	SE17	SSE7.5	SSE24
14-Sep	SE17	SSE14	SSE13	SSE16	SSE13	SSE14	SSE14	SSE14	SSE13	SSE15	SE5	SE9	SE11	E12	E15	SE14	SE21	SE19	SSE20	SSE18	SSE13	SSW7	SSE11	SSE12	SSE13.0	SE21
15-Sep	SSW13	S12	SSW10	S12	SSE12	SSE14	SSE12	SSE10	S6	WSW5	WNW7	W10	W12	WNW13	W22	WNW30	WNW36	NW27	WNW20	NW26	NW24	WNW23	WNW27	WNW22	W10.8	WNW36
16-Sep	NW20	WNW16	WNW15	WNW17	WNW16	WNW9	W8	WSW6	WSW12	W15	NW7	NW3	ENE3	ENE4	E6	ESE8	SE7	SE9	SE13	SE16	SE18	SE19	SE15	SE15	SW2.6	NW20
17-Sep	SE19	SE18	SSE15	SSE15	SE17	SE17	SE15	SE15	SE17	SE16	SE15	SE14	SE15	SE19	SE23	SE25	SE28	SE26	SE25	SE26	SE26	SE25	SE23	SE25	SE19.9	SE28
18-Sep	SE24	SE22	SE25	SE25	SE27	SE23	SSE25	SSE24	SSE25	S24	S25	SSW22	SSW18	S18	SSW19	SSW19	SSW17	SSW14	SSW18	SW18	SW21	WSW19	WSW17	WSW16	S16.8	SE27
19-Sep	WSW12	WSW10	SW9	SSW11	S11	S12	SSE15	SSE12	SSE7	S5	S6	SE8	SSW6	WSW15	SW16	SW13	SW13	SW12	SW13	WSW13	SSW12	S15	SSW12	S9	SSW9.6	SW16
20-Sep	SSE16	SE16	SSE17	SSE16	SSE15	SSE21	SSE20	SSE16	SSE16	SSE13	SE13	SSE19	SE16	S21	S23	SSE23	S26	SSE21	SSE20	SSE23	SSE22	SSE20	SSE20	SSE20	SSE18.5	S26
21-Sep	SSE20	SE18	SSE13	SSE15	S10	SSW7	SW6	SSW11	SSW4	WSW8	W9	W5	WSW4	WNW7	WNW11	W23	W22	W23	W30	W25	W14	SW14	WSW11	WSW17	WSW9.0	W30
22-Sep	WSW19	WSW18	WSW18	WSW18	WSW18	SW18	SSW13	S11	S8	SW10	SW18	SW22	SSW23	SW24	SW24	SW21	SW22	SSW16	S21	S26	S26	S24	S23	S20	SSW17.1	S26
23-Sep	S20	S20	S20	SSW21	SSW22	SSW21	SSW20	S17	S14	SSW13	WSW22	WSW26	SW29	SW27	SW24	SSW24	SSW25	SSW22	SSW18	SSW19	SSW15	SW16	S14	SSW15	SSW19.2	SW29
24-Sep	S11	SSE12	SSE17	SSE15	SSE15	S14	S14	SSW11	SW16	WSW17	WSW19	W17	W17	W23	W20	WNW14	NW11	WNW16	NW15	W14	W13	W14	WSW14	SW12	WSW10.0	W23
25-Sep	SSE14	SSE17	SSE16	SE12	SSE15	SSE14	SSE17	SSE16	SSE19	SSE19	SSE15	SSE17	SE12	SSE11	SE8	SSE19	SSE18	S18	S23	SSE23	SSW20	SW24	WSW23	SW13	SSE14.3	SW24
26-Sep	SW16	SW17	WSW15	WSW14	WSW10	SW11	SSW9	S8	SSE7	W15	W14	WSW17	W21	W23	W22	WSW24	WSW23	WSW14	SW16	SW23	SW22	SSW20	S18	SSE21	SW14.4	WSW24
27-Sep	S19	S16	SSE21	S23	SW24	WSW24	WSW27	WSW29	WSW28	WSW27	WSW26	WSW25	WSW25	SW30	WSW24	WSW20	WSW20	SW16	W12	W14	WSW17	SW17	SSW15	SSW17	SW19.4	SW30
28-Sep	SW18	WSW17	W15	WSW22	W17	WSW16	W19	W15	W8	WSW5	SE9	SSE8	SE9	SE11	SSE15	SSW15	S13	SSE9	SE10	SE13	SE16	SE13	SE21	SE21	SSW7.7	WSW22
29-Sep	SE22	SE20	SE21	SE23	SE22	SE25	SE27	ESE20	SE26	SE34	SE32	SE29	SSE27	SSE31	SSE22	SSE24	SSE23	SSE20	SE19	SE21	SE22	ESE17	SE18	SE20	SE23.1	SE34
30-Sep	SE19	SE17	SE21	SE17	SE11	W7	NNW9	N12	NE10	N6	N4	N11	N16	NNE18	NNE24	NNE23	NNE21	N19	N23	N21	N24	N23	N18	N19	NNE10.4	NNE24
	S8.3	SSE8.5	SSE8.7	S9.1	S8.5	S8.4	S9.0	S7.9	S7.4	S6.5	SSW5.9	S6.2	SSW5.9	SSW6.3	SSW5.3	SSW5.2	SSW4.8	SSW3.5	S3.4	S4.3	S5.4	S6.2	S7.1	S7.7	Diurnal Average	
	NW29	NW32	NW29	NW29	NW30	NW26	WSW27	WSW29	WSW28	SE34	SE32	SE29	SW29	SSE31	SW24	WNW30	WNW36	NNW36	NNW33	NNW31	NNW28	SE25	WNW27	NW28	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 9 km/h on Sep 29 09:00

Minimum Value: 1 km/h on Sep 19 22:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

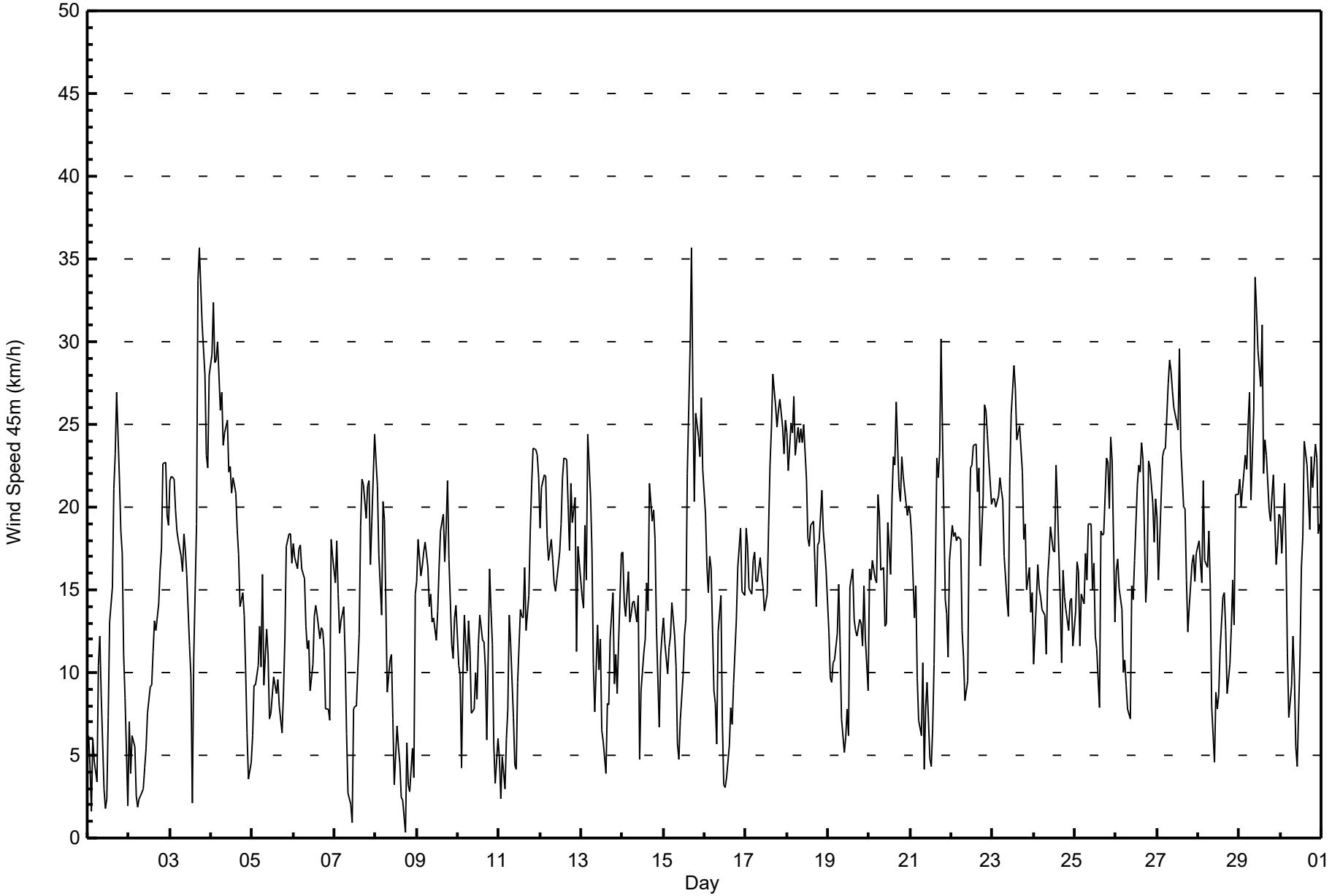
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	2	1	2	2	1	7	3	4	2	2	2	2	5	4	5	5	4	4	3	3	2	5	2	7
2-Sep	2	2	1	2	2	1	2	1	1	1	1	3	2	3	4	3	3	3	2	3	4	4	4	4	4
3-Sep	3	3	3	3	3	4	3	3	3	3	2	2	2	2	3	5	9	8	6	6	6	5	4	5	9
4-Sep	5	5	4	4	4	4	4	5	5	6	6	5	5	5	5	4	3	4	3	3	2	2	1	1	6
5-Sep	1	2	3	2	2	3	2	3	3	3	2	2	3	3	3	3	3	2	5	6	2	2	2	3	6
6-Sep	2	1	1	2	1	2	2	2	3	3	3	3	3	4	3	3	2	1	2	1	1	3	2	2	4
7-Sep	2	2	2	3	2	3	3	3	1	1	2	3	3	4	4	5	4	4	4	5	5	2	3	5	5
8-Sep	4	4	4	4	3	3	3	3	3	3	3	3	3	3	2	2	1	2	1	1	2	1	1	5	5
9-Sep	3	3	2	2	1	1	3	2	2	2	2	3	3	3	4	5	4	2	2	4	2	1	1	2	5
10-Sep	1	2	1	3	2	2	1	3	1	2	3	2	3	3	3	4	2	3	2	3	2	1	1	1	4
11-Sep	3	1	3	2	2	3	4	3	2	2	2	3	3	4	4	4	2	4	3	3	3	2	2	3	4
12-Sep	3	2	3	2	2	2	2	2	3	2	3	4	5	4	5	5	4	2	2	3	2	6	2	2	6
13-Sep	2	2	3	5	1	1	2	3	2	3	3	2	2	2	1	2	2	2	2	3	3	2	2	2	5
14-Sep	2	2	1	3	1	2	1	1	2	4	2	4	3	4	4	3	5	4	3	3	2	2	2	1	5
15-Sep	2	2	1	1	1	2	4	3	2	2	2	2	3	4	4	6	6	6	5	4	4	3	4	3	6
16-Sep	3	2	2	2	2	3	1	2	3	3	4	2	3	2	2	2	2	2	1	1	3	3	3	3	4
17-Sep	3	4	2	2	1	2	2	2	4	4	3	3	3	5	5	5	6	6	4	4	5	5	4	4	6
18-Sep	4	3	3	3	4	4	3	4	4	6	5	5	4	4	5	4	4	3	3	3	1	2	1	1	6
19-Sep	2	2	1	1	1	1	1	2	2	2	2	3	5	4	5	4	4	1	1	1	1	1	3	2	5
20-Sep	2	2	2	3	4	2	3	3	3	3	3	4	4	6	6	5	5	4	3	3	3	2	2	3	6
21-Sep	2	3	1	2	2	2	2	1	2	2	3	3	2	3	4	4	4	3	5	4	5	3	2	3	5
22-Sep	3	3	3	4	6	5	2	1	3	4	4	4	4	5	6	5	5	3	2	4	3	3	3	3	6
23-Sep	3	3	3	4	3	3	4	3	3	3	5	6	5	6	5	5	6	4	3	3	2	3	3	3	6
24-Sep	1	3	3	2	2	2	1	2	2	3	4	4	4	4	5	4	3	3	2	2	2	1	1	4	5
25-Sep	2	2	2	3	3	3	3	3	3	4	3	3	3	3	4	4	4	3	3	4	4	5	7	2	7
26-Sep	2	2	1	2	2	1	1	2	4	7	3	5	4	4	4	4	4	4	6	2	3	2	2	2	7
27-Sep	3	3	3	4	5	4	5	7	6	6	5	5	5	6	5	5	5	3	2	2	1	1	1	1	7
28-Sep	2	3	2	3	3	2	2	4	5	2	3	3	3	4	5	4	2	1	2	4	4	4	5	4	5
29-Sep	4	4	5	5	5	5	6	7	9	8	7	7	7	6	5	5	4	3	3	4	5	5	5	4	9
30-Sep	5	5	3	4	4	2	3	2	2	2	3	4	4	4	4	4	4	5	5	4	5	5	4	4	5
	5	5	5	5	6	5	7	7	9	8	7	7	7	6	6	6	9	8	6	6	6	6	7	5	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Mannix - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	52	7.22	7.22
6 - 11	142	19.72	26.94
12 - 19	321	44.58	71.53
20 - 28	186	25.83	97.36
29 - 38	19	2.64	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 45m (WS45) - km/h

Mannix - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	5	2	3	2	0	2	2	6	6	3	3	7	1	5	4	52
6 - 11	8	6	4	1	2	5	23	24	16	13	5	9	12	6	4	4	142
12 - 19	16	8	1	0	2	2	69	102	20	22	19	27	19	8	1	5	321
20 - 28	10	9	0	0	0	1	40	33	17	16	12	16	10	4	13	5	186
29 - 38	1	0	0	0	0	0	3	1	0	0	2	1	1	2	5	3	19
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	28	7	4	6	8	137	162	59	57	41	56	49	21	28	21	720

Total Number of Valid Hours: 720

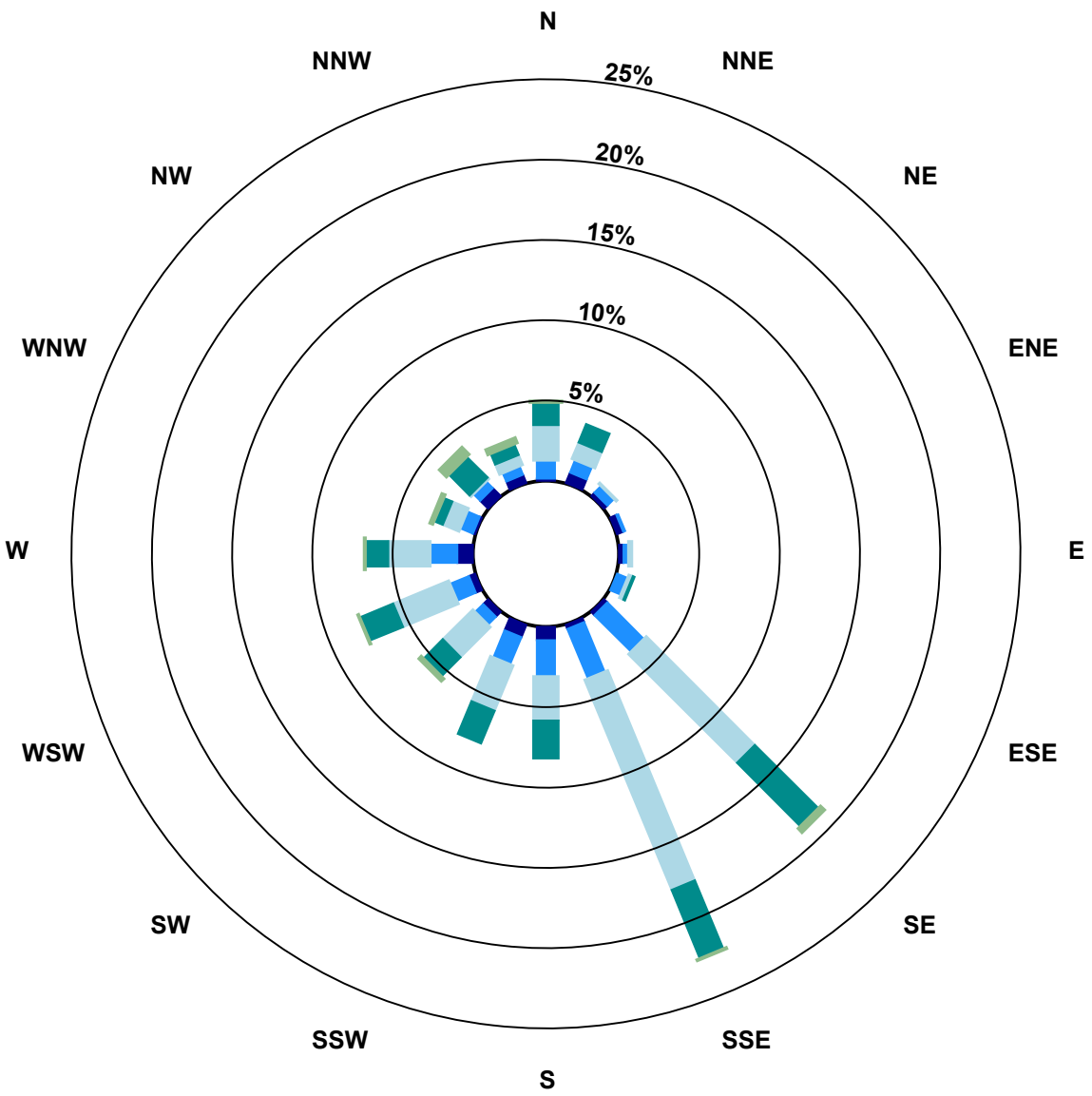
Total Number of Hours: 720

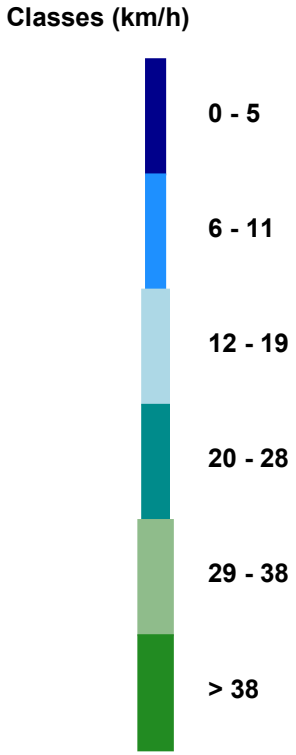
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 45m (WS45) - km/h

Mannix





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 75m (WS75) - km/h

Mannix - September 2025

Maximum Speed: 41 km/h on Sep 3 18:00

Maximum Daily Speed Average: 24.2 km/h on Sep 20

Minimum Speed Value: 0 km/h on Sep 8 18:00

Minimum Daily Speed Average: 2.3 km/h on Sep 16

Maximum Diurnal Speed Average: 10.4 km/h at hour 4

Minimum Diurnal Speed Average: 4.3 km/h at hour 18

Monthly Average Velocity: 7.2 km/h 187.3 deg

Percentiles: P_1 = 2 P_{10} = 7 Q_1 = 12 Median = 18 Q_3 = 24 P_{90} = 28 P_{99} = 35

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	N8	N7	N3	SSW3	N5	NE5	ESE9	SE14	S11	S3	SW1	NNE3	NNE8	NNE15	NNE17	NNE23	NNE26	NNE30	NNE25	NNE23	NNE22	NNE14	NNE13	N5	NNE9.3	NNE30
2-Sep	NNW8	NNW7	N7	NNW7	N4	NE3	SSE2	S2	S2	S4	SSE5	SSE8	SSE10	SSE10	SSE12	SE13	SE12	SSE17	SE18	SE15	SE27	SSE29	SSE27	SSE25	SE8.5	SSE29
3-Sep	SE28	SE27	SE27	SE27	SE25	SE23	SE23	SE22	SSE23	SSE20	SSE17	SSE12	SE10	WSW2	NW11	N22	N39	N41	N38	N36	N33	NW28	NNW27	NNW34	ENE4.6	N41
4-Sep	NW34	NW37	NW32	NW33	NW34	NW30	NW31	NW26	NNW26	NNW28	NNW25	NNW23	NNW22	NNW22	NNW22	NNW20	NNW18	N16	NE18	NE18	NE15	ENE9	E5	SE6	NNW20.0	NW37
5-Sep	SSE7	SSE11	SSE13	SE8	SSE10	SSE12	SSE14	SSE13	SSE16	SSE12	SE7	ESE6	ESE9	SE9	ESE8	SE9	SE8	SE7	E9	SE10	SE20	SSE24	SSE24	SSE23	SE11.7	SSE24
6-Sep	SE24	SE22	SSE22	SE22	SE17	SE17	SE14	SE13	SSE13	SSE13	SE9	SSE11	SSE14	SSE14	SE13	SE12	SE12	SE13	SE11	SSE9	S10	SW9	SSE16	S17	SSE13.9	SE24
7-Sep	S10	SSE12	SSE13	SSE15	SSE14	SSE12	SSE15	SSE6	SSW3	SW2	SW0	NNE8	NNE8	N8	NNE14	NNE22	NNE26	NNE25	NNE23	NNE27	NNE28	N19	NNE25	NNE31	NE7.7	NNE31
8-Sep	N28	NNE25	NNE21	NNE17	NNE26	NNE23	NNE16	NNE10	NE12	NE12	NE8	S3	WSW6	W5	W4	WNW2	WSW2	ESE0	W4	WNW2	NE4	ENE7	ESE5	SE15	NNE7.8	N28
9-Sep	SE13	SE19	SE19	SE16	SE22	SE23	SE23	SE18	SE17	SE14	SSE16	SSE13	SSE15	SSE17	SSE20	SSE22	S20	S23	SSW27	SW22	WSW18	SW12	SSW12	SW15	SSE15.4	SSW27
10-Sep	SSW13	SW11	WSW4	WSW9	W14	WNW11	WNW18	NW16	WNW11	W8	W10	W8	W11	WNW14	W12	W12	WSW11	W6	NNW19	N16	N13	NNE9	NNE4	NNW2	WNW7.7	NNW19
11-Sep	NNW5	NNW2	NNE5	NE5	SSE5	SSW8	S13	SSE18	SSE9	SSE4	SSE4	SSE10	SSE15	SSE14	SSE14	SSE18	SSE13	SE17	SE23	SSE28	SSE31	SSE30	SSE31	SSE27	SSE13.1	SSE31
12-Sep	SSE27	SSE28	SSE29	SSE29	SSE25	SSE21	SSE23	SSE24	SSE20	SSE17	SSE17	SSE19	S22	SSW24	SSW25	SSW25	SSW23	SSW21	S27	SSW25	SW24	S15	S18	S19	S21.3	SSE29
13-Sep	SSW13	SSW10	S19	S23	S24	SSE21	SE17	SE11	SSE10	SSE16	SSE12	S12	SSW7	WSW6	NW3	N9	N9	NNE14	NE15	E9	SE14	SSE15	SSE17	SE20	SSE8.9	S24
14-Sep	SE18	SE19	SE13	SSE17	SE15	SE14	SSE17	SE15	SE17	SSE16	SSE5	SE6	SE9	E12	ESE14	SE16	SE23	SE21	SSE24	SSE23	SSE19	S9	SSE14	S16	SSE14.9	SSE24
15-Sep	SSW15	SSW13	SW12	SW11	SSW9	S12	S12	SSW8	SSW7	WSW5	NW7	WNW10	WNW12	WNW14	W23	WNW31	NW37	NW28	NW23	NW30	NW27	NW27	NW29	NW25	WNW13.1	NW37
16-Sep	NW21	NW18	WNW16	WNW19	WNW19	NW10	WNW9	W6	W13	WNW14	NW7	NNW3	E4	ENE3	E6	ESE7	SSE6	SE10	SE14	SE19	SE21	SE24	SSE20	SSE20	SW2.3	SE24
17-Sep	SE24	SE24	SSE20	SE19	SE21	SE20	SE19	SE16	SE20	SE18	SE16	SE14	SE14	SE17	SE21	SE24	SE30	SE30	SE30	SE32	SE33	SSE31	SE28	SE29	SE22.8	SSE33
18-Sep	SE28	SE27	SE31	SE30	SE33	SSE31	SSE33	SSE31	SSE28	S27	SSW28	SSW24	SSW19	SSW19	SSW21	SSW21	SSW19	SSW17	SSW22	SW21	SW23	WSW27	W24	W22	S19.8	SSE33
19-Sep	W17	WSW13	SW10	SW11	SSW10	SSW12	S11	S11	S7	S6	S7	SSE8	SW7	WSW16	SW17	SW15	SW15	SW15	SW15	WSW15	SW12	SSW14	SSW11	SSW11	SW10.5	W17
20-Sep	S20	SSE22	SSE26	SSE26	SSE26	S27	S27	SSE24	SSE21	S16	SSE15	SSE22	SSE17	S23	S26	S25	S30	S27	SSE28	SSE30	SSE29	SSE27	SSE26	SSE27	SSE24.2	S30
21-Sep	SSE28	SSE24	SSE15	S18	SW7	WSW10	WSW11	SW13	WSW7	WSW8	WNW9	WNW4	WSW4	WNW6	WNW11	WNW23	W23	W26	W32	WNW27	W16	SW15	WSW14	WSW22	WSW10.4	W32
22-Sep	WSW24	WSW23	WSW23	WSW22	WSW23	WSW22	SW15	SSW12	SSW11	SW10	SW19	SW24	SSW24	SW26	SW26	SW23	SW24	SSW21	SSW27	S35	S35	S32	S31	S28	SW20.9	S35
23-Sep	S28	SSW27	SSW26	SSW27	SSW28	SSW28	SSW26	SSW21	SSW18	SSW16	WSW24	WSW27	SW31	SW30	SW28	SW28	SSW28	SSW25	SSW22	SW23	SW18	SW21	SW16	SW17	SW23.4	SW31
24-Sep	SSW12	S13	S18	S13	S14	SSW12	SSW14	SW14	SW18	WSW20	WSW20	W18	WNW18	WNW23	W20	NW15	NW11	NW18	NW17	W15	WNW14	WNW13	W13	WSW16	WSW11.5	WNW23
25-Sep	S10	S10	S15	SSE20	SSE24	SSE23	SSE25	SSE22	SSE26	SSE24	SSE17	SSE18	SE13	SSE13	SSE10	SSE22	SSE21	S23	S29	S28	SSW25	WSW28	W26	WSW16	S17.7	S29
26-Sep	SW20	SW24	WSW21	WSW20	WSW15	WSW13	SW11	SSW7	SSW9	W16	W14	W17	W22	W23	W23	WSW25	WSW25	WSW17	WSW22	SW31	SW31	SW25	SSW23	S24	WSW18.2	SW31
27-Sep	SSW26	SSW22	S27	SSW29	SW30	WSW28	WSW33	WSW33	WSW31	WSW29	WSW28	WSW26	WSW26	WSW32	WSW25	WSW21	WSW22	WSW20	W16	W17	WSW20	WSW19	SW18	SW23	WSW22.9	WSW33
28-Sep	WSW24	WSW23	W19	W26	W20	W21	W23	W19	W9	W4	SSE9	SSE8	SSE9	SSE12	SSE16	SSW16	S14	S10	SE10	SE10	SE11	SE10	SE17	SE20	SSW8.6	W26
29-Sep	SE24	SE18	SE18	SE18	SE22	SE27	SE25	SE17	SE24	SE35	SE34	SSE32	SSE30	SSE34	SSE25	SSE27	SSE27	SSE25	SSE25	SE21	SE22	ESE12	SE15	SE15	SE23.4	SE35
30-Sep	SE16	SE16	SE17	SE20	SE11	WSW6	NNW12	NNE15	NE14	NNE7	NNE5	N12	N18	NNE21	NNE27	NNE25	NNE24	NNE22	N27	NNE25	NNE27	NNE27	NNE22	N22	NNE12.7	N27
	S9.2	S9.2	S9.6	S10.4	S9.1	S9.0	S9.4	S8.7	S8.7	S7.2	SSW6.4	SSW6.6	SSW6.3	SSW6.7	SSW5.7	SSW5.4	SSW5.1	SSW4.3	S4.5	S5.2	S6.1	SSW7.0	S7.6	S8.7	Diurnal Average	
	NW34	NW37	NW32	NW33	NW34	SSE31	SSE33	WSW33	WSW31	SE35	SE34	SSE32	SW31	SSE34	SW28	WNW31	N39	N41	N38	N36	S35	S32	S31	NNW34	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 12 km/h on Sep 29 09:00

Minimum Value: 1 km/h on Sep 15 00:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

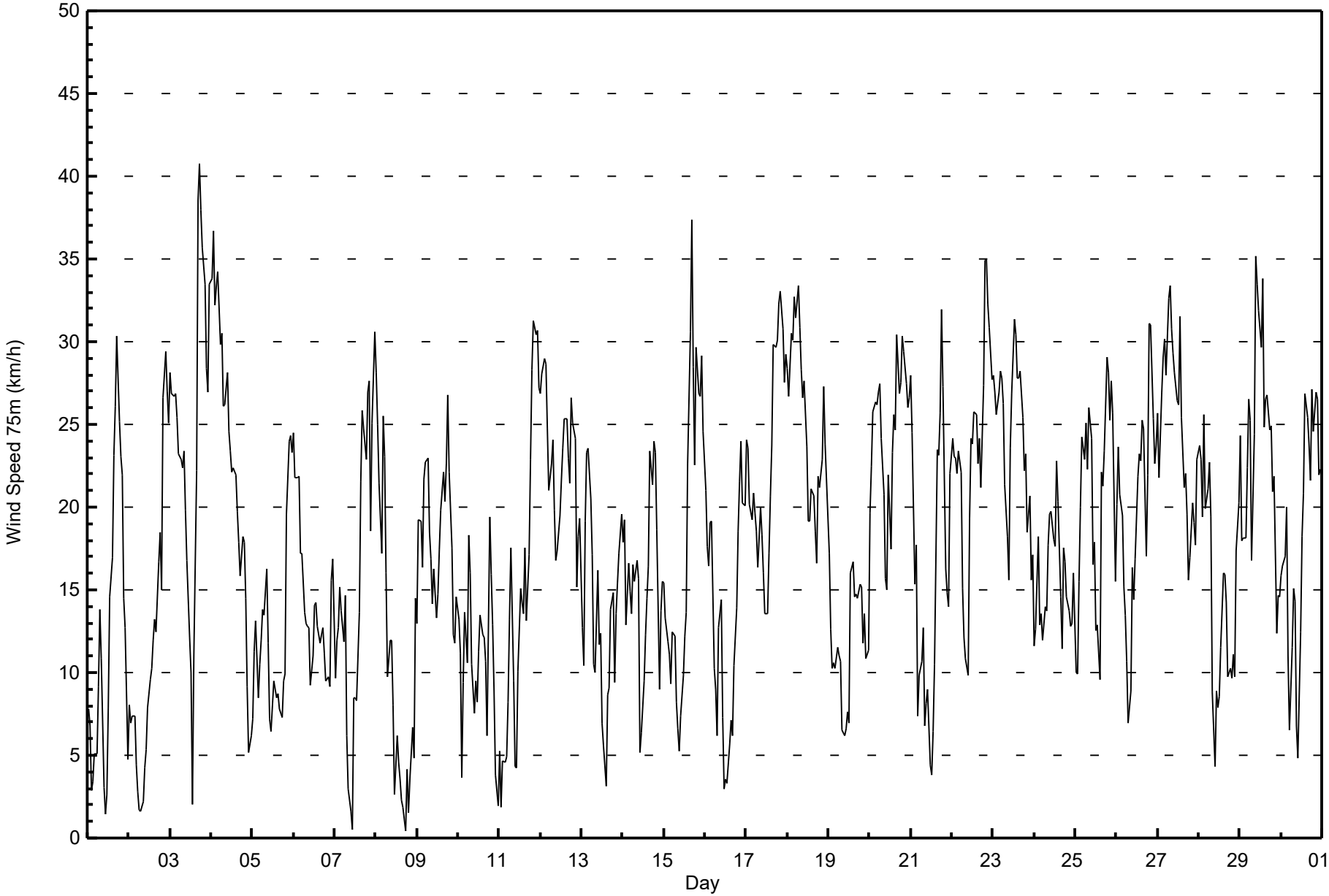
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	2	1	2	1	1	6	4	5	1	2	2	3	5	5	5	5	3	4	3	3	3	4	2	6
2-Sep	2	1	1	1	2	1	1	1	1	1	2	2	2	2	3	4	3	3	3	5	6	4	3	3	6
3-Sep	3	3	3	3	3	3	3	3	3	3	2	2	3	2	3	5	9	8	6	6	6	6	4	5	9
4-Sep	5	5	4	4	4	4	4	5	4	6	6	5	5	4	5	3	3	3	3	3	1	2	2	2	6
5-Sep	1	1	2	3	2	3	3	3	3	3	2	2	3	3	3	3	3	3	5	5	4	2	2	2	5
6-Sep	2	1	2	3	2	3	3	3	3	3	3	3	3	4	4	3	3	2	2	1	1	3	3	4	4
7-Sep	2	2	2	2	3	2	2	3	2	1	2	3	2	4	4	6	4	4	3	5	5	2	4	3	6
8-Sep	3	3	4	5	2	3	3	3	3	2	3	2	3	3	2	2	1	1	1	1	2	1	2	5	5
9-Sep	5	6	4	5	3	2	3	3	3	3	3	3	3	4	4	5	4	3	2	4	3	1	1	1	6
10-Sep	2	2	1	4	2	2	2	4	1	3	3	2	3	3	3	3	2	4	2	3	3	1	2	1	4
11-Sep	2	1	2	1	3	1	7	3	3	2	3	3	3	4	4	4	3	4	3	3	2	2	2	1	7
12-Sep	1	2	2	2	2	3	2	2	3	2	3	4	5	4	5	5	4	2	2	5	2	6	2	2	6
13-Sep	2	1	4	2	1	2	3	2	3	3	3	2	2	2	1	2	2	2	1	3	4	2	2	2	4
14-Sep	4	2	3	1	3	3	1	3	3	4	3	4	4	4	4	4	6	4	3	3	2	2	2	1	6
15-Sep	1	1	1	1	1	2	3	2	3	2	2	2	3	4	3	6	6	6	6	4	4	3	3	3	6
16-Sep	3	2	3	2	2	4	2	3	2	3	3	2	3	2	3	3	2	2	2	2	3	4	3	3	4
17-Sep	3	3	1	2	3	3	3	5	4	5	3	3	4	6	7	7	7	7	4	4	6	4	4	5	7
18-Sep	5	4	3	3	3	3	3	4	5	6	5	4	4	4	5	4	4	3	3	1	3	2	1	2	6
19-Sep	2	3	2	2	1	1	1	1	1	2	2	3	6	5	4	4	5	2	1	1	1	1	2	2	6
20-Sep	1	1	2	2	2	1	2	2	4	3	4	4	4	6	6	5	4	3	2	3	3	2	2	2	6
21-Sep	2	3	2	4	1	2	2	1	2	2	3	3	2	4	3	4	3	3	5	4	7	3	3	3	7
22-Sep	2	4	3	4	6	5	3	1	3	4	4	4	4	5	6	6	5	4	4	3	3	3	3	3	6
23-Sep	3	4	4	3	3	3	4	3	2	3	4	6	5	6	5	6	6	4	3	3	3	3	2	2	6
24-Sep	2	3	2	2	1	2	2	2	2	3	4	4	3	4	5	4	3	3	2	2	1	1	2	4	5
25-Sep	2	2	3	3	2	2	2	2	2	3	3	3	4	4	4	4	4	2	3	3	3	5	6	2	6
26-Sep	2	3	1	2	2	1	2	2	3	6	3	5	5	4	4	4	4	4	7	2	3	2	2	2	7
27-Sep	4	4	4	4	5	5	5	7	7	6	5	5	5	5	4	6	5	3	2	4	1	2	2	2	7
28-Sep	2	3	2	3	3	2	2	4	5	2	3	3	4	5	5	4	2	2	2	4	5	4	7	6	7
29-Sep	5	6	7	7	8	7	9	7	12	10	8	7	7	6	5	6	4	3	3	6	7	5	6	6	12
30-Sep	6	6	6	5	5	3	4	1	2	3	3	5	4	3	3	3	4	5	5	4	5	4	3	3	6
	6	6	7	7	8	7	9	7	12	10	8	7	7	6	7	7	9	8	7	6	7	6	7	6	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 75m (WS75) - km/h

Mannix - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	50	6.94	6.94
6 - 11	125	17.36	24.31
12 - 19	230	31.94	56.25
20 - 28	252	35.00	91.25
29 - 38	61	8.47	99.72
> 38	2	0.28	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 75m (WS75) - km/h

Mannix - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	5	3	1	2	2	0	6	5	2	3	5	4	3	1	4	50
6 - 11	5	6	1	2	3	5	20	18	12	12	9	9	7	7	5	4	125
12 - 19	6	9	7	0	1	2	53	51	18	18	19	11	16	11	5	3	230
20 - 28	4	25	0	0	0	0	41	53	20	29	15	31	14	3	7	10	252
29 - 38	3	2	0	0	0	0	10	16	6	1	5	5	1	1	10	1	61
> 38	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	24	47	11	3	6	9	124	144	61	62	51	61	42	25	28	22	720

Total Number of Valid Hours: 720

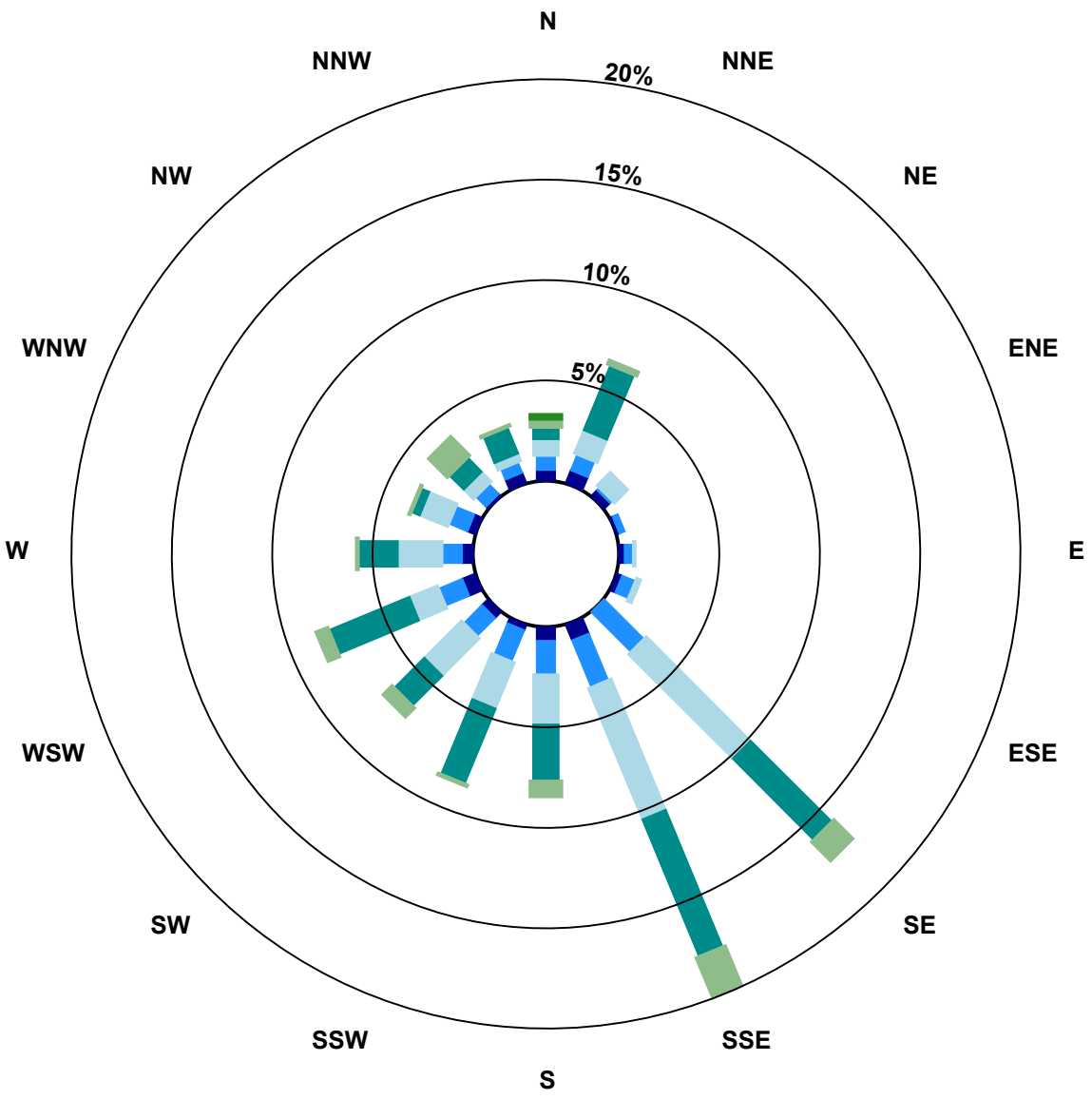
Total Number of Hours: 720

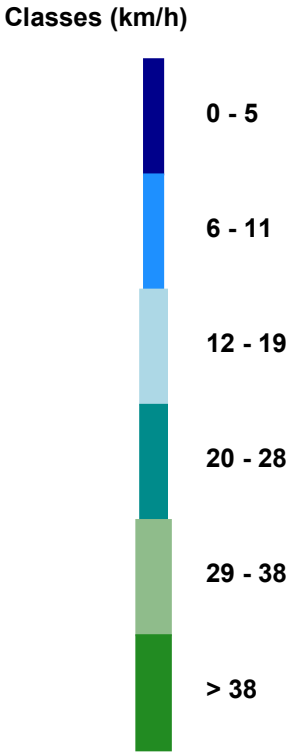
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 75m (WS75) - km/h

Mannix





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 90m (WS90) - km/h

Mannix - September 2025

Maximum Speed: 43 km/h on Sep 3 18:00

Maximum Daily Speed Average: 26.1 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 8 18:00

Minimum Daily Speed Average: 2.4 km/h on Sep 16

Maximum Diurnal Speed Average: 10.1 km/h at hour 4

Minimum Diurnal Speed Average: 4.5 km/h at hour 18

Monthly Average Velocity: 7.3 km/h 190.6 deg

Percentiles: P_1 = 2 P_{10} = 7 Q_1 = 12 Median = 19 Q_3 = 26 P_{90} = 30 P_{99} = 38

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NNW8	N7	N4	S4	N5	NNE5	ESE10	SE15	S12	S3	SW2	NNE3	N8	NNE15	NNE18	NNE23	NNE27	NNE31	NNE26	NNE25	NNE24	NNE16	NNE15	N7	NNE9.9	NNE31
2-Sep	NNW9	NNW8	NNW7	N8	N6	N3	NE1	S1	S3	S4	SSE5	SSE8	SSE10	SSE10	SSE12	SE14	SE13	SE18	SE20	SE18	SE28	SSE32	SSE29	SSE27	SE8.8	SSE32
3-Sep	SE29	SE29	SE29	SE28	SE27	SE25	SE25	SE24	SSE25	SSE20	SSE17	SSE12	SE10	WSW2	NW12	N24	N40	N43	N40	N38	NNW36	NNW31	NNW30	NNW36	NE4.7	N43
4-Sep	NW37	NW39	NW35	NW36	NW37	NW32	NW33	NW28	NW27	NNW30	NNW26	NNW25	NNW23	NNW23	NNW23	NNW20	NNW19	N17	NNE19	NE19	NE16	ENE10	E7	SE6	NNW21.4	NW39
5-Sep	SSE8	SSE11	SSE13	SE9	SSE8	S9	SSE12	SSE17	SSE18	SSE12	SE8	ESE7	ESE10	SE9	ESE9	SE10	SE8	SE8	E11	ESE13	SE21	SSE25	SSE26	SSE25	SE12.2	SSE26
6-Sep	SE26	SE23	SSE24	SE22	SE19	SE17	SE12	SE12	SSE14	SE13	SE10	SSE11	SSE14	SE15	SE14	SE12	SE13	SE13	SE11	SSE10	S11	SW10	S13	S14	SSE14.0	SE26
7-Sep	S8	S8	SSE8	SSE10	SSE8	SSE6	SSE10	SSE3	WSW3	SSW2	WSW1	NNE8	NNE8	N9	NNE14	N22	NNE27	NNE25	NNE24	NNE29	NNE30	N19	NNE27	NNE32	NNE9.0	NNE32
8-Sep	N30	NNE26	NNE23	NNE19	NNE27	NNE24	NNE16	NNE10	NNE12	NE12	NE8	S2	WSW6	W5	W4	WNW3	WSW2	SE0	W4	NW1	NNE4	ENE7	ESE7	SE16	NNE8.2	N30
9-Sep	SE16	SE22	SE19	SE17	SE23	SE23	SE25	SE19	SE17	SE15	SSE17	SSE14	SSE15	SSE18	SSE20	SSE23	S21	S23	SSW28	SW25	WSW20	WSW14	SSW12	SW16	SSE15.5	SSW28
10-Sep	SW16	SW13	W5	WSW9	W14	NW11	WNW20	NW19	WNW13	WNW8	WNW10	W8	W11	W14	W13	W12	WSW11	W7	NNW20	N17	N14	NNE10	NNE5	NNE1	WNW8.7	NNW20
11-Sep	NNW4	NNW3	NNE5	NNE7	SE5	SSW7	S13	SSE17	S11	S5	SSE4	SSE10	SSE15	SSE14	SSE14	SSE18	SE14	SE18	SE24	SSE30	SSE34	SSE32	SSE31	S27	SSE13.3	SSE34
12-Sep	SSE26	SSE28	SSE30	SSE30	SSE26	SSE23	SSE25	SSE26	SSE21	SSE17	S18	SSE20	S22	SSW24	SSW26	SSW26	SSW24	SSW22	S28	SSW26	SW25	SSW17	S16	SSW18	S21.9	SSE30
13-Sep	SW12	SSW10	S16	S22	S20	SSE19	SE18	SE12	SSE11	SSE18	SSE12	S12	SSW7	WSW6	NW3	N9	N10	NNE14	NE14	E10	SE16	SSE18	SSE19	SE21	SSE9.0	S22
14-Sep	SE22	SE20	SE14	SE17	SE15	SE12	SE16	SE16	SE17	SSE16	SSE6	SE7	SE11	E14	ESE18	SE18	SE26	SE23	SSE25	SSE25	SSE21	S10	S14	S14	SE15.6	SE26
15-Sep	SSW14	SW14	SW13	SW12	SSW10	SSW11	SSW11	SW7	SW8	W6	WNW8	WNW10	WNW13	WNW14	W23	WNW32	NW39	NW30	NW24	NW32	NW29	WNW29	NW31	NW26	WNW15.0	NW39
16-Sep	NW22	NW19	WNW18	WNW20	WNW21	NW11	WNW10	W7	W13	WNW15	NW8	NW3	E4	ENE3	E5	ESE8	SSE6	SE10	SE14	SE19	SE22	SE26	SSE22	SE21	SW2.4	SE26
17-Sep	SE25	SE25	SSE22	SE21	SE23	SE24	SE22	SE18	SE21	SE19	SE17	SE14	SE15	SE19	SE24	SE26	SE32	SE32	SE31	SE34	SE35	SSE32	SE29	SE31	SE24.6	SE35
18-Sep	SE31	SE29	SE32	SE32	SE34	SSE34	SSE36	SSE33	SSE29	S27	SSW28	SSW24	SSW19	SSW19	SSW21	SSW21	SSW19	SSW18	SSW22	SW21	SW24	WSW31	W27	W25	S20.4	SSE36
19-Sep	W20	WSW15	WSW11	SW11	SW11	SSW11	SSW10	S8	S6	SSW6	S7	SSE8	SW7	WSW16	SW17	SW15	SW16	SW15	WSW16	WSW16	SW12	SSW13	SW11	SSW12	SW11.0	W20
20-Sep	S18	S22	SSE26	SSE28	SSE28	S27	S28	SSE27	S23	S17	SSE16	SSE23	SSE18	S23	S26	S25	S31	S28	SSE30	SSE33	SSE32	SSE30	SSE28	SSE29	SSE25.3	SSE33
21-Sep	SSE30	SSE26	SSE17	S17	SW7	WSW12	W14	WSW15	WSW9	WSW9	WNW9	WNW5	WSW4	WNW7	WNW11	WNW24	W25	W28	W34	WNW30	WNW17	WSW16	WSW16	WSW25	WSW11.9	W34
22-Sep	WSW27	WSW26	WSW25	WSW24	WSW26	WSW24	SW16	SSW12	SSW12	SW10	SW20	SW24	SSW24	SW26	SW26	SW23	SW25	SSW22	SSW29	S38	S38	S35	S34	S31	SW22.4	S38
23-Sep	S31	SSW29	SSW27	SSW29	SSW31	SSW30	SSW28	SSW22	SSW19	SW17	WSW24	WSW28	SW33	SW32	SW29	SW29	SW29	SW27	SW24	SW25	SW20	WSW23	SW16	SW18	SW25.0	SW33
24-Sep	SW13	SSW13	S17	SSW12	SSW13	SSW12	SW14	SW14	SW19	WSW21	WSW20	W19	W18	WNW24	W21	WNW15	NW12	NW19	NW18	W15	WNW14	NW12	WNW10	WSW17	W12.4	WNW24
25-Sep	SSW9	S8	S10	SSE17	SSE24	SSE24	S25	SSE25	SSE28	SSE25	SSE17	SSE18	SSE14	SSE13	SSE10	SSE23	SSE22	S24	S31	S29	SSW27	WSW30	W27	WSW17	S18.1	S31
26-Sep	WSW22	WSW27	WSW24	WSW22	WSW18	WSW15	WSW12	SW8	SW10	W17	W15	W17	W23	W24	W24	WSW26	WSW26	WSW18	WSW25	WSW35	WSW35	SW27	SSW24	S23	WSW20.2	WSW35
27-Sep	SSW28	SSW24	S29	SSW31	SW33	WSW30	WSW35	WSW36	WSW32	WSW30	WSW29	WSW27	WSW27	WSW32	WSW26	WSW22	WSW23	WSW21	W17	W18	WSW22	WSW21	SW19	SW25	WSW24.7	WSW36
28-Sep	WSW27	WSW26	W22	W28	W22	W24	W25	W22	W10	W5	SSE9	SSE8	SSE9	SSE12	SSE16	SSW16	S14	S10	SE10	SE12	SE14	SE13	SE21	SE23	SW9.1	W28
29-Sep	SE27	SE21	SE23	SE24	SE27	SE30	SE30	SE24	SE29	SE38	SE35	SE33	SSE30	SSE34	SSE25	SSE27	SSE27	SSE26	SSE26	SE23	SE25	ESE18	SE19	SE20	SE26.1	SE38
30-Sep	SE21	SE19	SE20	SE22	SE13	WSW6	NNW11	NNE14	NE16	NNE7	N5	N13	N19	NNE21	NNE27	NNE26	NNE25	NNE22	N28	NNE26	NNE28	N28	NNE23	N24	NNE13.1	N28
	S9.4	S9.2	S9.4	S10.1	S8.9	S8.7	S9.2	S8.6	S8.9	S7.5	SSW6.7	SSW6.7	SSW6.5	SSW6.9	SSW5.9	SSW5.6	SW5.4	SSW4.5	SSW4.7	SSW5.4	S6.3	SSW7.3	S7.4	S8.8	Diurnal Average	
	NW37	NW39	NW35	NW36	NW37	SSE34	SSE36	WSW36	WSW32	SE38	SE35	SSE33	SW33	SSE34	SW29	WNW32	N40	N43	N40	N38	S38	S35	S34	NNW36	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 9 km/h on Sep 29 09:00

Minimum Value: 1 km/h on Sep 11 00:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

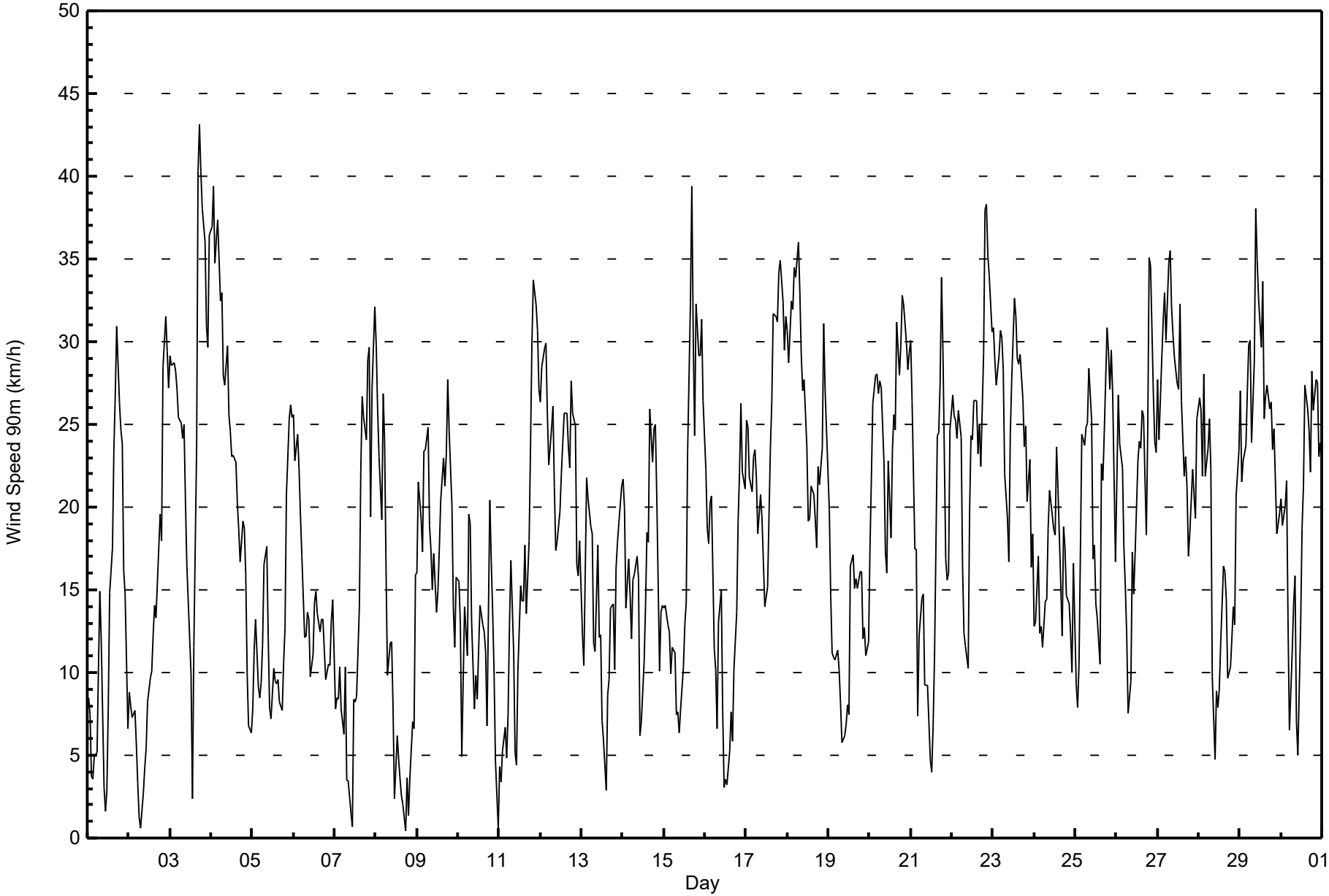
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	2	2	2	2	1	4	3	5	1	2	2	3	6	5	5	4	3	3	3	3	3	4	2	6
2-Sep	2	1	1	1	2	1	1	1	1	1	2	2	2	2	3	3	3	3	2	4	5	3	3	3	5
3-Sep	2	2	2	2	2	2	2	2	2	3	2	2	2	2	3	5	9	7	6	6	6	6	4	5	9
4-Sep	4	5	4	4	4	4	4	5	4	6	6	5	5	4	5	4	3	3	3	3	1	3	2	2	6
5-Sep	1	1	2	2	1	1	3	2	2	3	2	2	3	3	3	3	3	2	6	4	3	2	2	2	6
6-Sep	2	1	2	3	1	3	3	2	3	3	3	3	3	3	3	2	2	1	2	1	1	4	3	4	4
7-Sep	2	2	2	2	3	2	2	2	2	1	2	3	3	4	5	6	4	4	3	5	4	2	3	3	6
8-Sep	3	3	4	4	2	3	3	3	3	2	3	2	3	3	2	2	1	1	1	1	2	1	2	4	4
9-Sep	4	5	4	5	3	3	2	4	3	2	3	3	3	4	4	5	4	2	2	3	2	2	1	2	5
10-Sep	2	2	2	4	1	2	2	4	2	3	3	2	3	3	3	4	2	4	2	3	3	1	3	1	4
11-Sep	2	1	2	1	2	1	4	2	3	1	3	3	3	4	4	4	2	3	2	3	2	2	1	1	4
12-Sep	1	1	1	2	3	2	2	2	4	2	3	3	5	4	5	5	4	2	2	5	2	6	2	2	6
13-Sep	2	1	4	2	1	3	2	2	4	3	3	2	2	2	1	2	2	2	1	3	3	2	1	1	4
14-Sep	3	2	3	1	5	4	2	3	3	3	3	4	3	4	4	4	5	4	3	2	2	2	2	1	5
15-Sep	1	1	1	2	1	2	3	2	3	3	2	2	3	4	3	7	5	6	6	4	4	3	3	3	7
16-Sep	3	2	3	1	2	4	2	3	2	4	3	3	3	3	3	2	2	1	2	2	2	3	2	2	4
17-Sep	2	2	1	1	2	2	2	5	3	4	3	3	3	5	5	6	6	5	3	4	5	4	3	3	6
18-Sep	3	2	2	2	2	2	2	4	5	6	5	4	4	4	4	3	3	4	2	2	4	1	2	3	6
19-Sep	2	4	2	2	1	1	1	1	1	2	2	2	6	5	4	4	5	2	1	1	1	1	2	2	6
20-Sep	2	1	2	1	1	2	1	2	4	3	4	4	4	6	6	5	4	3	2	2	2	2	2	2	6
21-Sep	1	3	3	4	1	2	2	2	3	2	3	3	2	4	3	4	3	3	5	4	8	3	3	3	8
22-Sep	2	4	3	4	5	5	3	1	3	4	3	4	4	4	6	6	5	4	4	3	3	3	3	3	6
23-Sep	3	4	4	3	3	3	4	2	2	3	4	6	5	6	5	5	6	4	3	3	3	3	2	2	6
24-Sep	2	3	2	2	1	2	2	3	2	3	4	4	3	4	5	4	3	3	2	1	1	1	2	4	5
25-Sep	2	1	2	3	2	2	2	2	2	3	3	2	4	4	4	4	4	2	3	3	3	5	7	2	7
26-Sep	1	3	1	2	2	1	2	2	3	5	3	5	5	4	4	4	4	4	7	2	3	2	2	2	7
27-Sep	4	4	4	3	5	5	5	7	7	6	5	5	5	5	4	6	5	3	2	5	1	2	2	2	7
28-Sep	2	3	3	3	3	2	2	4	5	2	3	3	3	4	4	4	2	2	2	3	4	4	5	5	5
29-Sep	4	5	6	5	6	5	7	6	9	8	8	7	7	6	4	5	4	3	3	5	6	5	5	5	9
30-Sep	5	4	5	5	4	3	3	1	2	3	3	5	4	3	3	3	4	5	5	4	5	4	3	3	5
	5	5	6	5	6	5	7	7	9	8	8	7	7	6	6	7	9	7	7	6	8	6	7	5	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 90m (WS90) - km/h

Mannix - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	45	6.25	6.25
6 - 11	126	17.50	23.75
12 - 19	210	29.17	52.92
20 - 28	234	32.50	85.42
29 - 38	100	13.89	99.31
> 38	5	0.69	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 90m (WS90) - km/h

Mannix - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	6	1	1	2	1	1	3	7	1	1	5	5	2	3	2	45
6 - 11	8	6	1	2	3	6	14	22	11	11	11	8	6	9	3	5	126
12 - 19	6	11	5	0	1	4	47	38	14	18	21	16	12	9	7	1	210
20 - 28	5	21	0	0	0	0	47	42	18	22	14	31	17	5	5	7	234
29 - 38	2	4	0	0	0	0	20	22	10	6	6	11	1	3	10	5	100
> 38	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5
Totals	28	48	7	3	6	11	129	127	60	58	53	71	41	28	30	20	720

Total Number of Valid Hours: 720

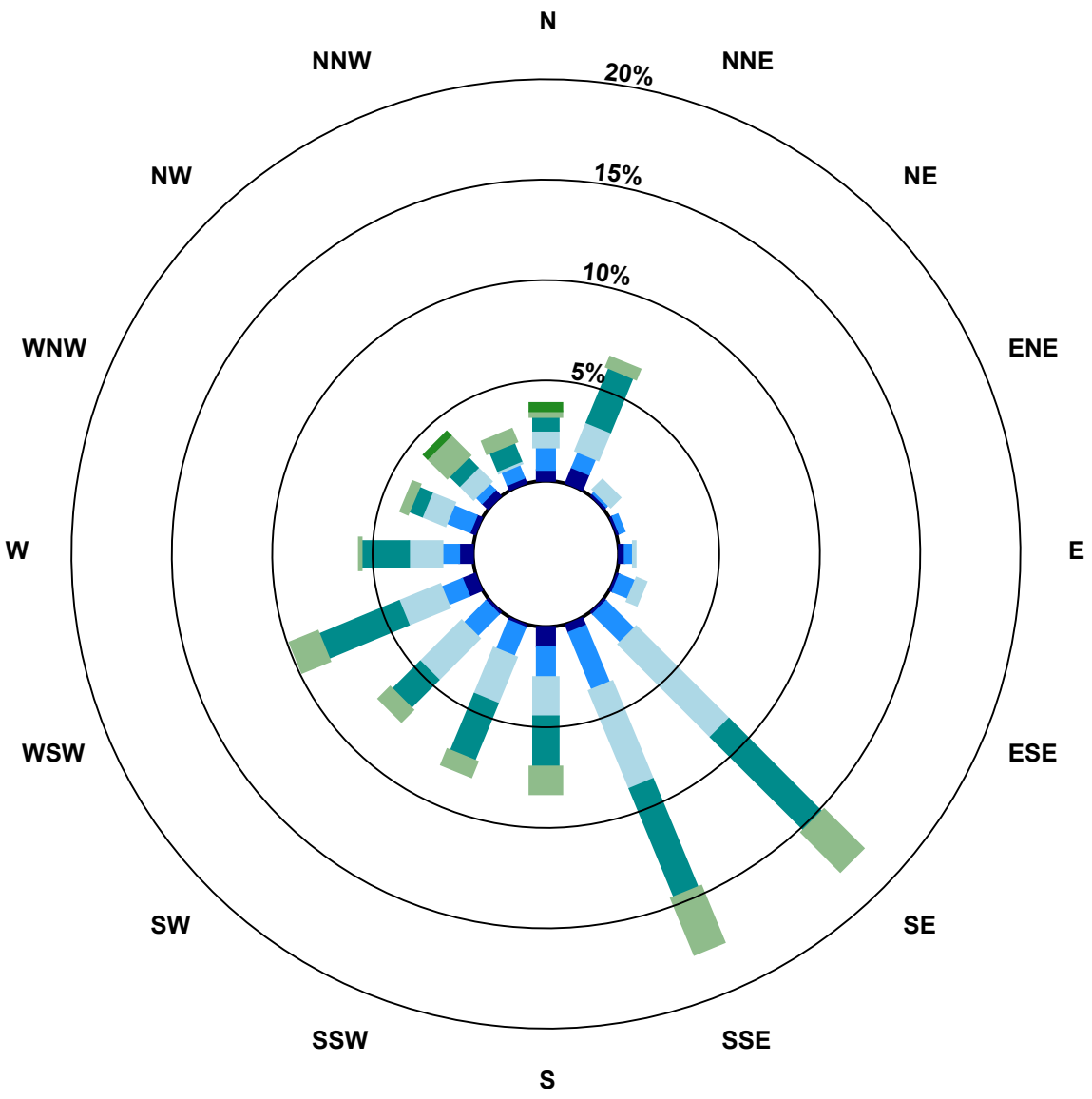
Total Number of Hours: 720

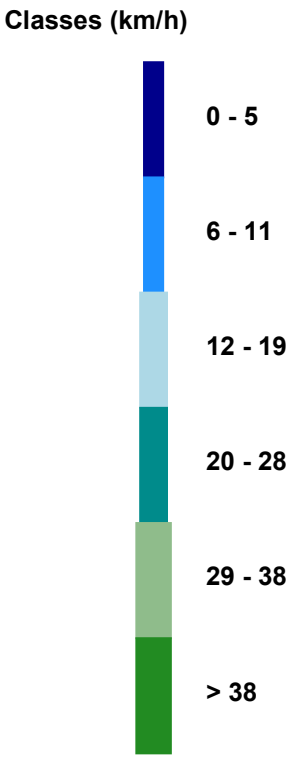
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 90m (WS90) - km/h

Mannix





Total Number of Valid Hours: 720

Direction of Maximum Speed: 139 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 140.7 deg on Sep 29

Direction of Minimum Speed: 173 deg on Sep 8 18:00

Direction of Minimum Daily Speed Average: 1.8 deg on Sep 3

Monthly Average Direction: 185.3 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	340	37	227	251	354	17	122	147	191	173	223	44	17	17	14	13	13	13	11	11	10	7	10	270	14.4
2-Sep	300	287	310	325	92	201	223	188	190	166	160	149	152	167	155	143	138	149	144	137	141	143	147	150	151.6
3-Sep	148	143	146	148	147	141	143	148	153	157	156	148	141	258	314	348	351	347	346	346	341	338	328	328	28.9
4-Sep	315	313	314	316	315	310	309	309	320	339	340	326	324	326	325	336	339	350	30	38	36	64	177	250	326.0
5-Sep	226	166	186	157	176	161	156	157	161	151	128	114	114	134	107	138	143	144	91	130	146	159	159	153	146.5
6-Sep	148	157	159	160	166	167	165	156	147	149	146	155	149	145	139	139	140	142	145	166	188	167	151	153	153.3
7-Sep	152	159	148	160	156	152	149	161	193	226	164	19	24	1	6	7	18	15	16	18	19	356	9	9	28.4
8-Sep	7	16	19	9	15	19	14	20	31	35	62	202	246	267	265	258	270	173	287	292	35	72	177	149	12.0
9-Sep	150	143	153	156	165	159	158	154	148	151	157	157	161	154	150	149	180	163	190	216	215	184	180	188	163.6
10-Sep	164	163	161	198	240	243	265	273	286	268	270	269	268	277	278	260	246	258	333	354	10	315	269	288	267.1
11-Sep	272	242	286	79	207	194	167	160	152	140	134	151	151	157	145	158	148	143	142	143	155	162	161	162	158.9
12-Sep	153	149	150	151	152	159	163	157	155	147	155	156	181	200	197	203	202	188	176	210	195	191	165	165	172.2
13-Sep	180	159	159	153	161	157	160	178	178	151	156	174	205	257	324	357	347	9	14	17	138	201	152	138	156.5
14-Sep	151	174	178	174	178	172	187	162	158	156	123	136	136	90	98	152	139	142	156	162	153	242	157	160	151.7
15-Sep	216	198	188	173	158	157	153	160	176	250	291	278	282	284	276	298	305	306	303	306	309	296	301	303	282.4
16-Sep	309	301	293	283	294	288	261	233	257	280	305	326	74	76	98	119	148	148	153	148	147	142	149	146	226.1
17-Sep	139	142	154	151	156	150	156	156	147	149	152	147	138	135	133	135	139	141	139	140	140	143	138	137	142.5
18-Sep	136	138	139	139	137	142	148	151	158	185	194	196	201	195	197	204	205	208	196	222	218	241	245	253	177.5
19-Sep	243	216	189	168	162	161	157	157	157	178	181	130	209	248	235	232	231	218	220	229	188	186	199	175	197.2
20-Sep	148	142	149	142	144	157	157	149	154	151	144	155	142	181	181	170	178	169	152	151	155	157	156	160	158.1
21-Sep	150	152	178	172	175	164	170	176	199	253	278	279	263	291	293	281	270	270	276	278	266	217	234	242	246.5
22-Sep	244	249	253	237	239	229	183	166	175	229	223	219	211	236	234	224	231	201	179	177	178	173	175	175	213.6
23-Sep	184	184	180	197	200	195	194	187	190	204	249	248	233	226	220	215	212	206	207	204	201	212	174	177	209.3
24-Sep	153	151	160	163	162	163	183	181	209	243	258	265	280	281	268	301	306	299	299	254	267	258	245	201	242.4
25-Sep	162	169	155	143	147	152	154	149	154	151	152	152	132	149	143	153	165	174	170	164	206	239	255	230	169.7
26-Sep	222	234	245	237	222	209	167	153	150	262	270	258	268	269	272	254	253	245	225	227	226	203	169	162	237.6
27-Sep	181	179	162	185	220	238	244	250	255	253	250	252	255	238	255	248	250	239	269	264	226	216	190	201	237.1
28-Sep	229	242	264	257	260	253	260	261	265	249	144	143	144	146	159	212	187	166	145	140	142	137	139	135	196.1
29-Sep	137	136	136	131	131	136	132	126	134	139	141	145	152	156	152	159	160	152	141	139	139	123	136	135	140.7
30-Sep	135	143	139	151	150	281	334	7	50	10	27	5	1	16	16	16	14	14	359	11	9	6	11	358	23.0
	172.7	171.3	173.1	176.3	177.8	177.5	174.7	171.3	172.9	188.0	194.5	193.8	199.4	214.3	215.2	214.2	219.0	198.0	185.9	185.5	175.6	187.5	180.0	174.2	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 87 deg on Sep 1 12:00

Minimum Value: 4 deg on Sep 18 23:00

Percentiles: P_1 = 7 P_{10} = 10 Q_1 = 12 Median = 15 Q_3 = 20 P_{90} = 33 P_{99} = 77

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

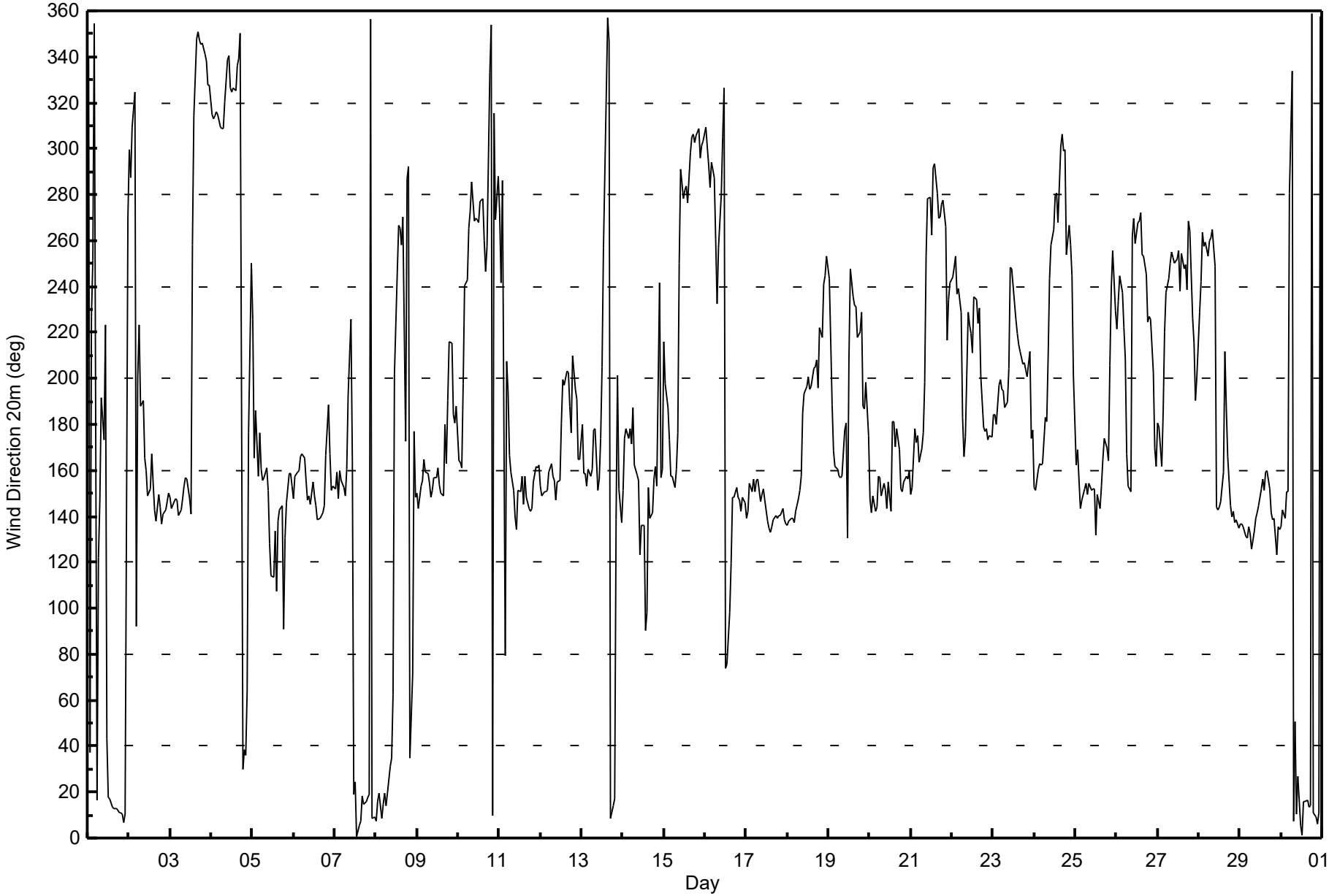
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	46	66	57	47	68	62	38	17	25	62	76	87	39	23	27	20	15	12	12	11	12	13	68	56	87
2-Sep	25	33	46	56	70	51	52	31	40	25	29	20	22	31	19	16	15	12	11	12	12	13	12	12	70
3-Sep	12	12	11	12	12	13	13	13	13	13	14	16	18	77	29	19	16	15	15	15	15	15	15	15	77
4-Sep	14	14	14	14	14	16	15	15	17	18	22	22	25	21	19	22	22	25	17	12	13	25	54	11	54
5-Sep	15	23	36	21	14	17	13	19	16	20	18	24	29	30	33	20	20	28	40	18	11	9	11	13	40
6-Sep	10	10	8	9	6	8	11	12	17	18	22	19	17	19	16	14	12	11	9	24	20	18	8	8	24
7-Sep	8	11	17	16	21	16	17	32	35	71	86	33	34	37	24	20	15	14	14	13	16	13	16	14	86
8-Sep	14	14	18	14	14	14	18	20	22	21	30	83	42	47	37	63	77	84	12	15	33	28	65	14	84
9-Sep	12	13	12	10	9	9	10	13	12	14	15	17	18	17	17	16	16	11	13	19	23	18	12	13	23
10-Sep	16	10	26	23	12	25	17	18	16	22	19	23	20	24	23	23	20	49	11	19	7	30	8	17	49
11-Sep	19	16	41	54	24	26	13	16	20	28	37	20	17	25	19	17	16	13	11	11	10	9	9	9	54
12-Sep	10	10	10	10	10	10	10	12	14	16	19	16	27	22	21	19	18	15	9	35	18	47	12	10	47
13-Sep	12	8	11	19	9	7	10	20	29	14	18	25	36	34	37	16	18	12	10	24	41	22	19	10	41
14-Sep	9	10	11	13	16	19	10	12	12	16	24	18	16	24	24	17	12	12	12	16	14	38	18	16	38
15-Sep	14	33	16	13	9	10	20	14	31	32	23	18	18	17	13	15	14	16	19	15	15	13	13	13	33
16-Sep	15	14	11	11	16	32	14	32	14	13	34	79	59	57	46	28	18	13	9	8	11	13	13	11	79
17-Sep	12	12	14	10	8	11	9	12	15	14	16	16	15	12	12	12	12	12	11	11	12	13	11	11	16
18-Sep	11	11	11	11	11	11	11	13	13	20	20	23	26	27	22	19	19	16	20	10	9	10	4	8	27
19-Sep	17	21	17	12	7	7	8	11	19	41	39	19	59	30	22	25	20	12	11	8	16	8	8	23	59
20-Sep	12	13	14	13	14	9	10	14	15	17	15	16	15	26	20	18	17	12	10	11	10	9	9	9	26
21-Sep	10	9	19	16	24	21	20	18	47	21	23	77	63	35	29	12	9	9	9	10	15	14	12	11	77
22-Sep	9	11	11	12	17	23	21	16	26	33	20	19	19	17	17	21	15	19	13	13	15	13	13	13	33
23-Sep	14	13	11	17	15	16	17	16	18	22	16	19	14	13	15	16	18	16	15	13	14	17	19	12	22
24-Sep	8	13	11	13	11	11	19	20	13	18	16	16	17	15	18	18	18	15	23	10	14	13	12	37	37
25-Sep	9	9	12	14	15	15	12	15	14	13	14	15	15	19	34	14	13	14	13	13	19	17	12	13	34
26-Sep	8	10	7	6	19	13	13	12	25	37	19	21	16	18	15	15	13	16	15	9	11	13	12	11	37
27-Sep	17	20	19	16	19	12	12	13	13	15	15	17	15	13	16	16	15	12	19	7	19	12	10	14	20
28-Sep	10	11	7	9	11	11	9	18	35	40	24	23	28	23	18	21	21	9	8	14	13	15	11	11	40
29-Sep	11	12	12	10	10	11	11	14	14	13	13	14	15	12	12	13	12	11	11	11	12	16	12	11	16
30-Sep	11	18	10	14	32	23	39	15	23	45	56	32	19	16	16	13	14	14	15	13	12	14	13	18	56
	46	66	57	56	70	62	52	32	47	71	86	87	63	77	46	63	77	84	40	35	41	47	68	56	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Mannix - September 2025



Direction of Maximum Speed: 303 deg on Sep 15 17:00
Direction of Maximum Daily Speed Average: 137.5 deg on Sep 29

Direction of Minimum Speed: 203 deg on Sep 8 18:00

Direction of Minimum Daily Speed Average: 2.6 deg on Sep 16

Monthly Average Direction: 181.3 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	345	13	305	236	341	27	118	140	183	177	230	27	5	14	8	8	12	10	9	9	11	6	8	326	12.7
2-Sep	332	335	346	343	31	77	196	182	192	169	159	147	151	164	151	141	135	143	138	130	138	142	144	148	142.3
3-Sep	144	139	140	142	141	138	140	143	150	154	155	147	140	259	309	347	349	347	345	346	341	338	328	326	34.7
4-Sep	315	313	314	316	314	310	309	310	319	338	337	326	323	326	324	335	337	348	26	35	37	68	99	178	326.8
5-Sep	203	163	165	145	165	156	148	152	158	150	129	112	113	130	105	132	136	139	83	123	140	149	150	149	142.9
6-Sep	143	152	152	149	150	148	147	147	146	145	145	149	146	142	135	137	135	136	135	146	182	192	153	156	147.5
7-Sep	153	153	149	156	156	153	149	159	192	229	225	11	17	354	8	6	16	14	14	13	15	357	9	8	35.2
8-Sep	4	10	14	7	13	16	13	18	27	30	52	207	242	268	264	278	260	203	278	273	24	54	99	136	12.1
9-Sep	132	136	146	142	149	151	149	147	143	145	153	152	160	151	147	147	178	162	191	218	237	202	178	193	160.6
10-Sep	183	188	174	220	253	269	277	286	285	269	271	267	269	276	275	257	247	263	334	352	4	17	300	318	275.7
11-Sep	320	281	345	48	188	199	168	155	151	146	141	149	150	156	142	155	144	140	140	143	152	160	161	160	153.7
12-Sep	154	151	152	153	152	141	142	149	155	149	155	156	179	196	193	200	200	187	179	203	209	180	168	167	170.6
13-Sep	178	166	158	159	158	146	143	160	173	149	156	172	204	251	317	357	350	8	13	36	130	161	138	135	148.9
14-Sep	137	150	152	158	158	154	167	153	147	152	130	132	130	88	100	143	135	139	153	161	149	208	160	162	146.3
15-Sep	193	190	200	186	161	158	154	158	185	248	293	278	281	282	274	297	303	305	303	306	307	298	301	302	278.4
16-Sep	309	301	289	283	295	298	274	245	256	278	306	321	66	66	96	119	144	142	140	141	142	140	144	143	223.4
17-Sep	138	138	153	147	144	142	142	143	143	144	146	143	135	131	130	132	135	137	138	140	140	142	136	134	139.0
18-Sep	133	134	136	136	134	140	147	150	155	184	191	193	196	191	193	200	202	205	194	214	219	241	251	258	177.4
19-Sep	256	237	216	194	189	175	163	157	158	177	183	134	207	243	232	229	229	219	224	242	202	188	201	186	205.7
20-Sep	152	145	149	148	147	158	156	152	155	157	145	155	141	181	179	168	176	167	151	149	152	152	152	154	157.0
21-Sep	147	140	154	164	177	210	220	203	210	251	279	278	258	294	295	279	268	270	274	277	268	221	241	241	242.2
22-Sep	243	248	253	240	245	236	201	178	185	227	221	214	208	232	231	220	228	201	182	176	177	173	174	175	210.5
23-Sep	182	187	185	199	200	194	194	188	191	201	247	245	230	223	217	211	209	204	206	206	207	224	191	197	207.5
24-Sep	172	162	158	167	165	172	190	195	216	240	255	263	278	281	266	298	306	300	308	259	275	271	255	231	242.9
25-Sep	162	162	154	145	148	153	154	150	154	151	152	152	134	150	145	153	162	173	169	163	203	235	255	231	167.9
26-Sep	224	230	243	245	241	232	196	173	158	260	267	257	266	267	271	251	251	246	228	227	225	209	177	165	235.0
27-Sep	182	189	165	186	220	237	244	249	253	251	249	249	253	236	252	246	248	236	264	265	239	227	203	211	233.9
28-Sep	231	242	259	258	263	256	261	263	261	252	146	147	145	146	156	210	185	166	137	129	131	128	131	131	196.4
29-Sep	133	131	129	126	128	132	129	121	130	136	139	143	150	155	149	157	158	149	143	134	134	119	128	127	137.5
30-Sep	128	135	132	143	139	272	334	7	46	5	3	359	359	12	12	15	12	10	358	8	7	4	8	359	21.1
	169.8	168.0	166.2	173.1	174.0	173.6	170.8	169.1	171.4	183.9	192.7	190.5	196.6	210.1	210.3	210.1	212.4	194.3	184.0	183.0	179.4	186.3	174.7	171.7	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 92 deg on Sep 8 18:00

Minimum Value: 2 deg on Sep 12 19:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 7 Median = 9 Q_3 = 15 P_{90} = 26 P_{99} = 72

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

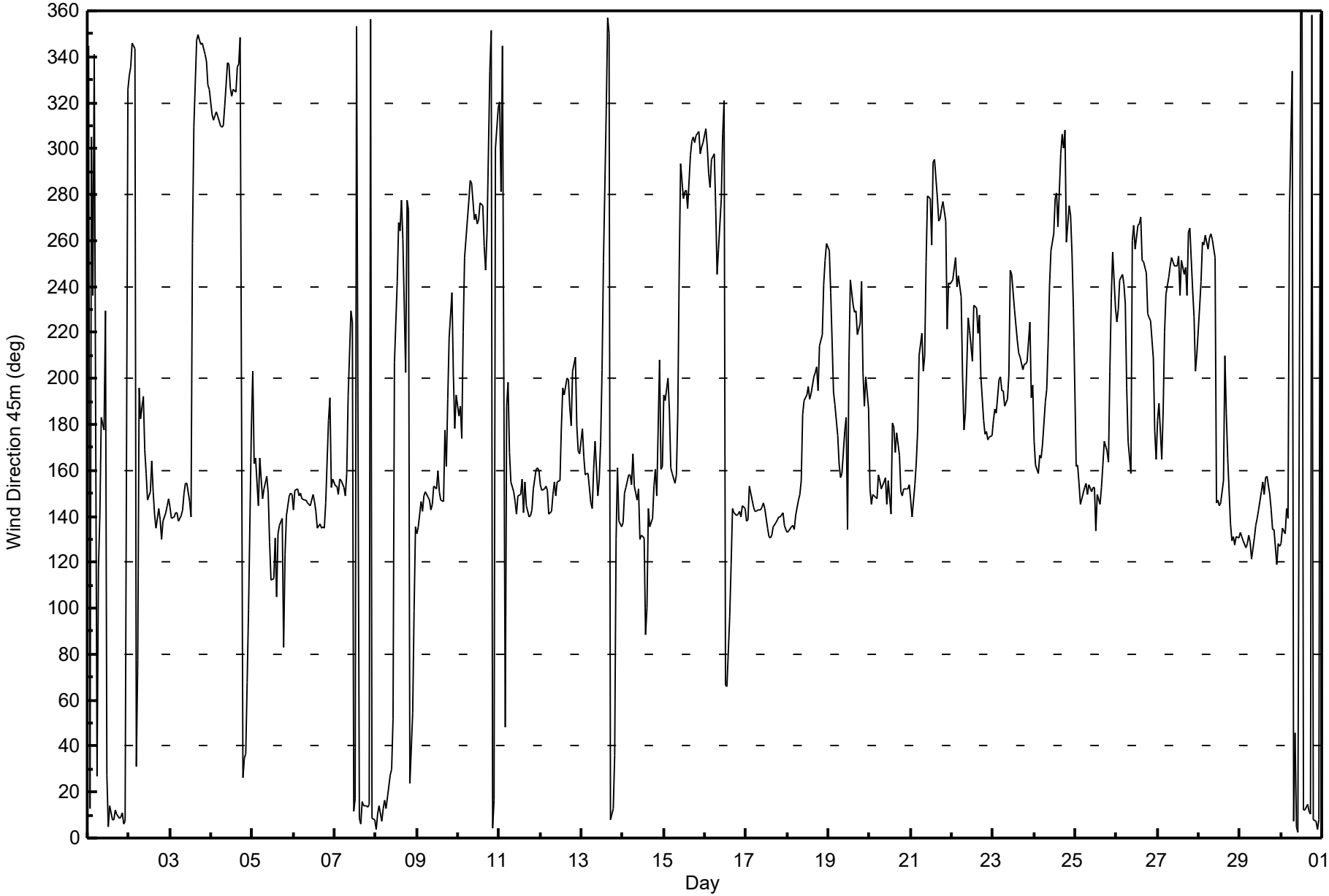
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	27	32	83	50	51	33	37	12	18	45	74	78	32	15	22	16	9	7	8	7	7	9	37	59	83
2-Sep	17	27	12	18	39	34	50	25	34	17	21	15	14	22	12	12	9	7	6	6	7	7	7	7	50
3-Sep	6	6	6	6	7	7	7	8	8	8	8	10	9	72	25	14	10	8	8	9	9	9	10	9	72
4-Sep	8	7	7	8	7	9	8	9	10	12	16	18	16	16	13	15	14	20	12	6	9	12	29	25	29
5-Sep	11	8	10	12	6	8	5	7	7	12	12	21	25	22	30	15	16	20	30	15	7	4	5	8	30
6-Sep	6	4	3	3	2	4	4	6	9	10	14	12	11	13	10	10	6	4	3	5	11	24	4	4	24
7-Sep	8	5	6	7	8	7	9	25	38	51	90	28	26	29	18	16	9	8	9	9	10	7	8	8	90
8-Sep	7	9	11	11	7	8	11	12	14	14	27	83	33	39	37	66	72	92	7	15	28	23	25	8	92
9-Sep	7	8	7	6	4	4	5	8	7	9	9	12	12	11	12	11	8	5	8	18	17	23	8	7	23
10-Sep	17	12	25	16	13	10	11	11	11	17	14	17	15	20	17	21	13	47	6	15	5	11	34	12	47
11-Sep	45	18	26	41	28	16	8	8	11	22	30	10	10	18	12	12	11	8	5	5	5	4	3	5	45
12-Sep	5	3	3	3	3	7	8	6	9	9	12	10	21	12	11	11	10	8	2	30	14	30	9	5	30
13-Sep	6	6	4	6	2	9	5	18	20	10	13	18	23	27	29	11	10	6	7	28	14	17	6	3	29
14-Sep	6	5	4	5	4	6	3	11	8	10	22	11	12	20	21	10	7	8	7	10	7	35	15	11	35
15-Sep	8	19	14	8	8	7	13	9	26	28	17	14	14	12	9	11	8	10	14	10	8	6	7	7	28
16-Sep	7	7	6	7	11	22	11	35	11	8	33	60	80	63	43	22	11	6	5	4	6	8	9	6	80
17-Sep	5	6	9	5	4	5	6	9	7	8	9	11	11	8	7	7	7	7	6	7	7	7	6	5	11
18-Sep	5	5	5	5	5	6	6	8	8	14	12	15	20	17	14	12	12	8	10	5	4	9	2	5	20
19-Sep	10	15	14	17	12	10	3	5	12	29	27	13	59	24	17	21	16	7	11	5	15	4	9	28	59
20-Sep	5	6	6	7	8	2	4	7	8	11	9	9	10	20	12	12	11	6	5	6	5	5	4	3	20
21-Sep	5	4	18	9	10	20	17	9	31	16	20	60	61	26	22	9	6	6	6	7	12	11	9	7	61
22-Sep	6	8	8	6	10	15	16	12	16	26	16	13	11	14	13	15	11	14	8	6	6	6	6	6	26
23-Sep	7	5	5	9	7	7	8	7	8	17	12	15	9	8	9	11	11	8	7	6	10	8	21	12	21
24-Sep	10	15	6	11	10	10	12	12	9	14	13	13	13	12	14	12	14	10	16	8	13	8	9	30	30
25-Sep	5	3	8	9	8	8	7	8	8	6	8	9	12	14	23	9	7	8	6	8	14	15	8	11	23
26-Sep	5	8	6	4	8	8	17	18	20	25	16	18	13	15	14	12	9	11	9	5	6	7	10	5	25
27-Sep	10	15	15	8	15	8	8	10	10	12	12	14	11	11	13	12	10	8	13	4	13	8	4	8	15
28-Sep	5	7	6	5	6	6	5	15	28	40	17	17	26	19	15	17	14	7	8	8	8	10	6	6	40
29-Sep	6	7	7	6	6	6	7	10	11	9	9	9	11	8	8	9	8	7	6	7	8	11	9	7	11
30-Sep	8	11	5	9	24	27	21	7	20	37	50	30	14	9	9	8	9	9	10	9	6	8	7	11	50
	45	32	83	50	51	34	50	35	38	51	90	83	80	72	43	66	72	92	30	30	28	35	37	59	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Mannix - September 2025



Direction of Maximum Speed: 355 deg on Sep 3 18:00
Direction of Maximum Daily Speed Average: 164.6 deg on Sep 20

Direction of Minimum Speed: 118 deg on Sep 8 18:00

Direction of Minimum Daily Speed Average: 2.3 deg on Sep 16

Monthly Average Direction: 187.3 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	350	9	355	199	357	36	111	143	178	176	222	25	13	23	17	16	20	18	16	18	20	17	18	10	22.7
2-Sep	343	342	349	348	11	43	160	189	191	173	164	153	158	166	154	144	141	147	141	134	143	147	149	153	145.0
3-Sep	146	141	141	144	144	142	145	146	154	160	159	153	144	256	316	356	358	355	354	354	349	347	337	334	57.1
4-Sep	324	321	323	325	323	319	318	319	327	344	345	334	331	333	333	344	345	358	34	44	46	71	90	145	336.8
5-Sep	162	163	153	138	160	168	147	157	159	159	139	119	117	132	109	134	138	141	88	124	142	149	151	152	145.1
6-Sep	145	145	150	142	140	139	138	140	149	148	145	150	151	147	140	143	138	140	141	160	189	220	168	177	149.7
7-Sep	176	166	158	165	164	162	157	166	211	215	236	21	26	5	17	13	23	22	21	20	20	5	17	15	34.2
8-Sep	11	16	19	15	20	23	21	24	35	37	56	189	246	271	272	284	256	118	275	299	34	62	103	137	22.5
9-Sep	133	138	145	138	141	146	145	142	142	145	152	152	162	154	151	151	182	169	201	231	254	228	196	215	164.4
10-Sep	210	215	237	239	268	297	294	304	296	279	280	273	278	282	280	259	253	272	343	0	8	27	31	332	289.7
11-Sep	341	341	12	35	155	196	174	157	168	166	150	156	156	159	147	159	148	145	144	149	157	165	166	168	157.4
12-Sep	164	159	159	162	160	152	147	150	162	160	165	165	183	200	197	205	204	194	188	208	219	189	178	184	177.2
13-Sep	201	192	170	173	172	160	140	141	162	150	156	174	201	251	321	8	4	19	37	81	139	156	149	141	153.4
14-Sep	139	142	140	147	143	141	150	144	143	157	152	131	132	95	111	144	140	144	158	166	156	189	168	173	146.9
15-Sep	192	211	228	220	194	184	184	194	211	256	304	287	286	285	279	303	308	312	309	314	316	305	309	310	286.3
16-Sep	316	309	295	291	303	316	298	264	263	285	316	329	86	77	100	123	149	143	142	142	145	145	148	147	219.7
17-Sep	143	143	153	145	141	139	139	139	142	145	146	145	139	137	137	139	141	143	144	146	146	147	142	141	142.8
18-Sep	141	141	141	141	141	147	153	156	162	189	195	197	200	196	197	203	206	209	202	219	230	252	260	265	182.8
19-Sep	265	254	235	218	213	198	184	176	174	190	187	147	217	244	235	231	233	227	234	253	214	195	211	209	220.7
20-Sep	169	163	160	159	159	170	169	163	165	171	158	163	149	184	183	173	181	172	157	155	156	156	156	157	164.6
21-Sep	151	148	150	180	214	248	255	233	241	256	289	284	254	303	298	283	274	276	280	284	280	232	254	247	249.8
22-Sep	248	252	256	247	252	247	222	200	203	234	225	218	211	234	235	223	231	207	192	183	184	181	182	183	216.1
23-Sep	188	198	198	208	207	203	202	201	202	210	251	249	233	226	221	216	213	210	212	215	219	236	216	222	214.7
24-Sep	205	191	172	191	185	197	211	216	228	247	258	267	282	286	271	304	312	309	318	270	298	300	278	253	256.0
25-Sep	181	178	173	158	158	161	163	159	161	157	162	162	146	158	152	157	167	178	174	169	208	239	260	240	175.4
26-Sep	234	236	249	252	251	252	228	207	197	264	270	260	271	271	275	255	256	249	237	235	234	221	202	181	242.6
27-Sep	194	203	177	195	228	243	249	254	257	255	253	254	257	240	255	249	251	241	264	273	253	243	224	226	239.5
28-Sep	238	249	262	263	270	264	268	271	264	260	158	160	153	150	160	213	188	174	142	132	130	127	134	137	213.7
29-Sep	140	135	133	132	137	139	136	127	137	142	144	148	155	159	154	161	162	153	149	138	138	123	131	130	143.8
30-Sep	132	138	135	143	138	251	339	18	54	25	13	10	9	20	21	23	19	18	5	16	16	13	16	10	27.8
	180.2	179.3	174.0	179.7	180.5	181.7	179.2	175.8	177.3	187.5	196.0	194.5	200.1	211.8	212.6	211.1	213.6	193.4	185.3	189.6	186.4	191.3	182.1	183.6	
	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93 deg on Sep 7 11:00

Minimum Value: 2 deg on Sep 12 19:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 14 P_{90} = 22 P_{99} = 71

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

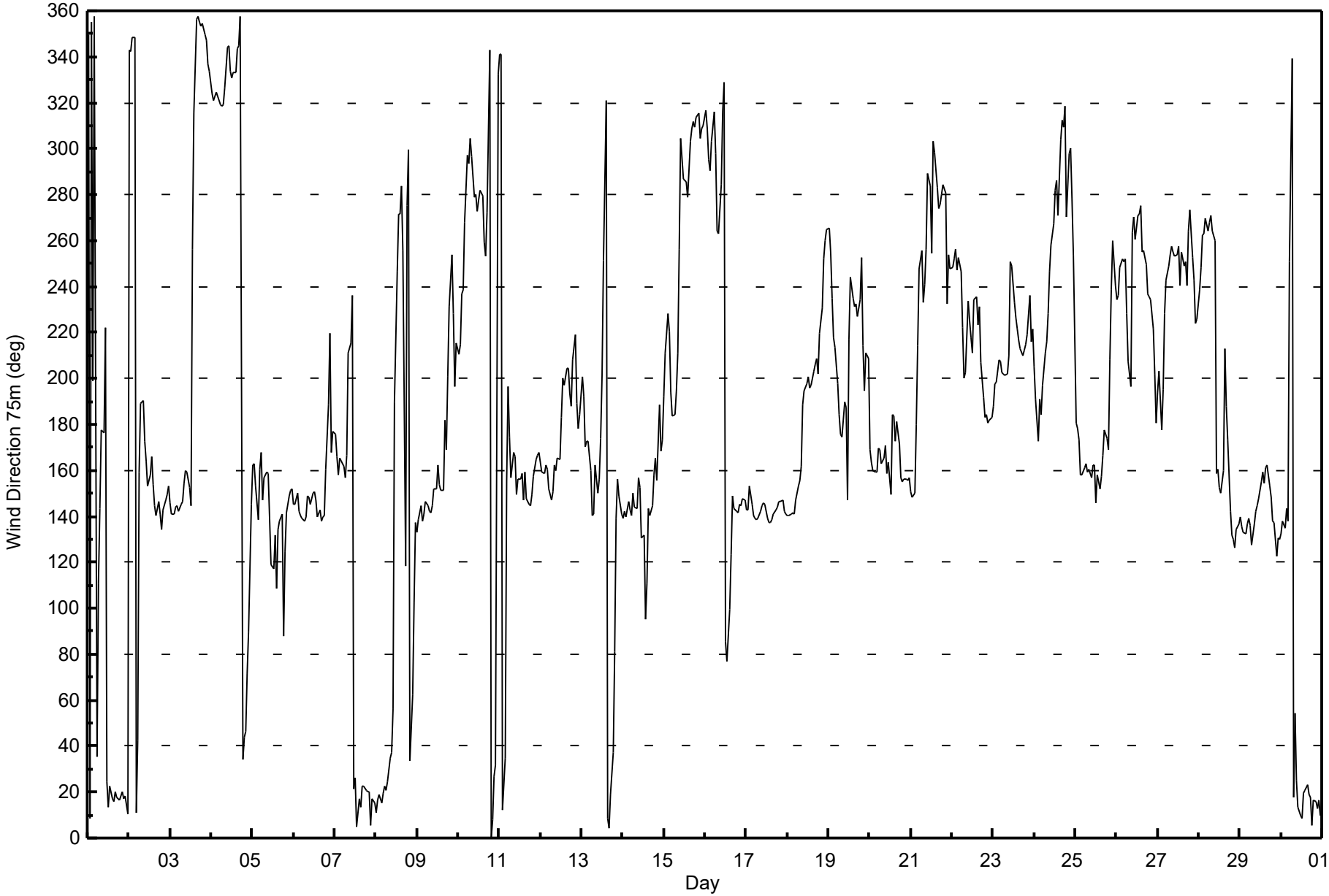
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	13	16	65	62	42	17	38	11	16	42	81	79	27	12	21	14	7	5	6	5	6	9	8	25	81
2-Sep	11	10	6	9	20	22	46	35	32	20	21	15	14	17	11	10	10	6	5	9	5	5	6	5	46
3-Sep	4	3	3	4	4	4	5	4	7	7	7	9	8	72	25	13	9	7	7	7	7	7	9	7	72
4-Sep	7	6	6	6	6	8	7	9	9	10	14	17	15	15	12	14	13	19	9	4	7	9	18	12	19
5-Sep	8	12	9	12	12	10	4	10	6	11	16	22	22	19	25	16	16	20	21	15	7	4	4	6	25
6-Sep	4	3	3	3	4	4	6	7	8	10	14	12	9	11	10	9	7	4	5	8	18	29	6	6	29
7-Sep	15	8	7	4	6	3	5	44	33	56	93	23	20	26	16	14	7	6	7	6	7	6	6	5	93
8-Sep	4	6	7	9	4	5	8	11	12	10	21	71	36	53	52	69	75	83	9	48	13	20	19	7	83
9-Sep	10	7	7	8	4	4	3	4	6	8	8	11	10	8	10	10	7	6	9	18	9	25	10	9	25
10-Sep	13	12	32	16	18	10	10	9	8	18	14	18	14	18	18	21	14	47	4	12	6	11	20	31	47
11-Sep	7	40	18	25	26	10	10	7	13	27	37	11	8	15	11	12	9	8	4	4	3	3	2	3	40
12-Sep	3	2	2	3	3	6	3	6	7	8	10	9	18	12	10	10	9	7	2	25	9	13	6	6	25
13-Sep	13	14	4	4	2	13	4	8	11	9	11	17	20	26	35	10	8	6	14	23	10	5	4	4	35
14-Sep	6	3	5	4	6	4	5	10	7	9	28	15	14	17	20	7	6	7	6	7	4	28	10	7	28
15-Sep	12	8	12	11	11	9	14	15	28	31	17	14	14	12	9	12	7	9	14	10	8	5	6	7	31
16-Sep	6	7	5	4	10	15	8	34	11	9	28	63	61	62	42	21	15	5	4	3	5	6	6	5	63
17-Sep	3	3	5	6	3	4	4	9	5	7	8	9	11	9	8	8	6	6	4	5	5	5	4	4	11
18-Sep	4	3	2	3	2	4	5	6	8	13	10	14	18	17	12	10	11	6	4	7	5	7	2	4	18
19-Sep	6	10	13	12	12	9	6	5	14	26	26	17	57	23	15	20	16	5	11	5	14	4	13	23	57
20-Sep	2	6	4	5	4	3	3	4	7	9	10	7	10	17	11	10	9	5	4	4	4	4	3	3	17
21-Sep	3	4	11	16	15	9	6	8	20	18	20	72	54	28	20	9	5	7	6	6	11	11	10	6	72
22-Sep	4	7	6	6	9	11	12	13	12	24	14	11	10	14	11	14	11	12	7	5	4	4	4	5	24
23-Sep	6	5	4	7	6	6	6	6	8	15	11	14	8	7	8	9	9	7	6	5	9	6	18	10	18
24-Sep	12	22	9	14	9	12	12	9	7	12	12	13	12	11	13	14	14	11	14	9	13	7	14	17	22
25-Sep	11	9	11	3	3	4	4	5	5	4	8	8	14	13	17	8	7	8	6	7	13	15	8	11	17
26-Sep	5	7	6	3	5	6	13	24	23	17	15	17	12	15	14	12	8	9	7	3	4	7	9	6	24
27-Sep	10	14	13	7	12	8	6	9	9	10	10	13	11	10	13	12	10	8	12	5	11	7	5	6	14
28-Sep	3	5	6	5	6	4	4	10	28	43	17	18	27	18	14	15	13	7	9	11	11	13	9	7	43
29-Sep	5	9	10	9	7	6	8	12	12	8	7	8	10	7	8	8	7	6	5	8	8	13	11	11	13
30-Sep	11	10	8	7	20	31	19	7	15	30	43	27	13	7	8	6	8	8	9	7	5	6	5	9	43
	15	40	65	62	42	31	46	44	33	56	93	79	61	72	52	69	75	83	21	48	18	29	20	31	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 75m (WD75) - deg

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 90m (WD90) - deg

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 98 deg on Sep 7 11:00

Minimum Value: 2 deg on Sep 12 19:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 5 Median = 8 Q_3 = 13 P_{90} = 21 P_{99} = 69

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

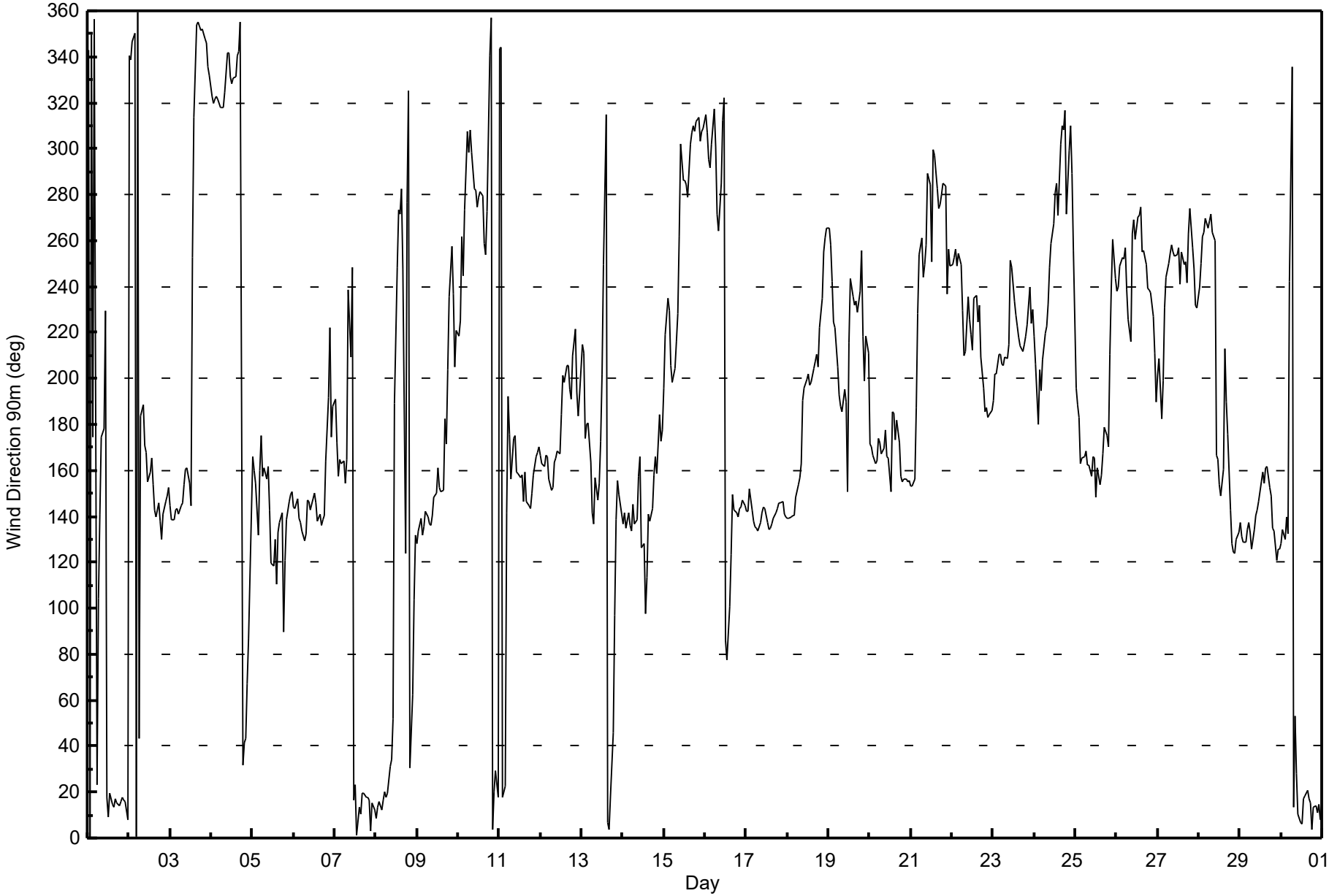
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	11	16	60	64	38	17	37	11	14	44	78	77	25	12	21	13	7	4	5	4	5	8	6	21	78
2-Sep	10	8	6	13	10	16	69	76	29	19	20	15	13	17	11	10	9	5	5	6	6	4	5	5	76
3-Sep	3	2	3	3	3	4	4	3	6	7	7	10	8	69	24	13	9	6	6	7	7	7	8	7	69
4-Sep	7	5	5	5	5	7	6	8	9	10	15	16	14	14	11	13	13	18	9	4	7	9	17	11	18
5-Sep	11	15	10	9	21	17	8	8	6	11	17	20	19	18	22	14	15	18	23	11	7	4	4	5	23
6-Sep	3	2	2	3	2	3	5	8	9	9	14	12	10	10	10	9	6	4	5	9	19	28	7	10	28
7-Sep	19	12	12	5	13	11	8	57	33	53	98	23	20	27	17	14	6	6	6	5	7	5	5	4	98
8-Sep	4	5	6	8	3	4	8	11	12	10	22	79	34	47	50	59	64	83	9	46	10	21	17	7	83
9-Sep	7	6	7	6	2	3	2	4	5	8	7	11	10	9	10	11	7	7	9	16	6	24	10	8	24
10-Sep	9	12	24	14	21	13	10	9	6	16	14	18	14	17	16	20	14	44	4	11	6	10	16	80	80
11-Sep	7	8	16	15	36	12	6	8	14	24	54	13	8	15	11	12	9	8	4	4	3	3	2	3	54
12-Sep	4	3	3	3	3	6	3	5	8	8	10	9	17	11	9	9	8	6	2	23	8	15	5	7	23
13-Sep	13	13	8	5	6	14	4	7	9	9	11	16	19	26	37	10	8	5	18	22	7	4	4	4	37
14-Sep	5	3	4	3	5	5	5	8	7	10	29	11	12	15	18	7	5	8	6	6	4	25	8	6	29
15-Sep	14	7	13	9	10	9	14	16	23	26	16	13	13	11	8	11	6	9	13	9	7	4	5	6	26
16-Sep	6	6	5	4	9	13	7	32	10	8	25	65	66	64	43	19	17	5	3	3	5	5	6	4	66
17-Sep	2	3	4	6	2	2	2	6	4	6	7	9	11	8	7	7	6	6	4	5	6	5	4	4	11
18-Sep	3	3	2	3	2	3	4	5	8	12	10	13	18	16	12	11	11	6	4	7	5	6	2	3	18
19-Sep	6	8	12	11	12	9	7	7	16	27	25	19	56	21	14	19	14	4	10	5	14	4	13	23	56
20-Sep	3	2	3	4	4	2	2	4	6	8	10	8	10	17	11	10	8	5	4	3	3	3	3	2	17
21-Sep	2	3	10	19	15	7	5	6	15	15	19	61	47	27	18	8	5	6	6	5	11	12	10	5	61
22-Sep	4	6	5	5	8	10	10	13	11	21	13	11	10	13	11	13	10	11	7	5	3	4	4	5	21
23-Sep	5	5	4	6	5	5	5	7	9	13	10	13	7	7	7	9	9	6	6	5	9	5	16	9	16
24-Sep	10	23	11	14	10	13	12	8	6	11	12	13	11	10	13	14	13	11	12	10	13	7	20	6	23
25-Sep	16	11	14	3	3	3	3	4	4	4	9	9	16	13	17	8	7	8	5	7	13	14	8	10	17
26-Sep	5	5	5	3	5	5	11	24	22	13	14	16	12	15	13	11	8	9	6	2	3	6	6	9	24
27-Sep	9	13	12	6	11	7	6	8	9	9	9	12	10	10	12	11	10	7	11	6	9	5	4	5	13
28-Sep	3	4	5	5	5	4	4	8	25	40	19	20	28	18	13	14	13	6	8	8	9	11	7	6	40
29-Sep	4	8	8	6	6	5	6	9	11	8	8	8	10	7	8	8	7	6	5	7	7	9	9	8	11
30-Sep	8	9	6	8	18	30	20	8	14	29	42	26	13	6	7	6	8	7	9	6	5	6	5	8	42
	19	23	60	64	38	30	69	76	33	53	98	79	66	69	50	59	64	83	23	46	19	28	20	80	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 90m (WD90) - deg

Mannix - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - September 2025

Maximum Value: 1.3 km/h on Sep 29 10:00

Maximum Daily Average: 0.8 km/h on Sep 29

Minimum Value: -0.9 km/h on Sep 3 19:00

Minimum Daily Average: -0.4 km/h on Sep 4

Maximum Diurnal Average: 0.3 km/h at hour 9

Minimum Diurnal Average: 0.1 km/h at hour 18

Monthly Average: 0.17 km/h

Percentiles: P_1 = -0.7 P_{10} = -0.3 Q_1 = -0.1 Median = 0.1 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 1.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	-0.1	0.1	-0.1	-0.1	0.1	0.0	0.5	0.4	0.1	0.1	0.0	0.3	0.0	-0.2	-0.1	-0.6	-0.4	-0.7	-0.5	-0.5	-0.4	-0.3	-0.2	0.0	-0.1	0.5
2-Sep	-0.3	-0.2	-0.2	-0.1	0.1	-0.1	-0.1	0.1	0.3	0.0	0.2	0.1	0.3	0.2	0.3	0.4	0.4	0.5	0.3	0.4	0.6	0.7	0.5	0.6	0.2	0.7
3-Sep	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.7	0.6	0.5	0.5	0.0	-0.1	-0.2	-0.9	-0.7	-0.9	-0.8	-0.6	-0.6	-0.5	-0.7	0.1	0.7
4-Sep	-0.7	-0.6	-0.7	-0.7	-0.7	-0.5	-0.6	-0.4	-0.6	-0.5	-0.2	-0.5	-0.5	-0.6	-0.4	-0.3	-0.4	-0.2	-0.2	-0.1	-0.1	0.1	0.0	-0.2	-0.4	0.1
5-Sep	-0.2	0.1	0.0	0.1	0.2	0.2	0.3	0.5	0.4	0.4	0.3	0.3	0.8	0.9	0.5	0.4	0.3	0.1	0.5	0.5	0.4	0.6	0.5	0.4	0.4	0.9
6-Sep	0.4	0.4	0.5	0.5	0.4	0.3	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.4	0.3	0.3	0.1	-0.1	0.0	0.4	0.3	0.4	0.6
7-Sep	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	-0.1	0.4	0.0	-0.1	-0.4	-0.4	-0.5	-0.3	-0.4	-0.2	-0.4	-0.4	-0.4	0.0	0.4
8-Sep	-0.5	-0.3	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	0.1	-0.1	0.3	-0.3	-0.1	0.2	-0.2	-0.3	0.2	0.1	-0.1	-0.2	0.0	0.0	0.1	0.4	-0.1	0.4
9-Sep	0.6	0.4	0.5	0.4	0.4	0.5	0.4	0.3	0.5	0.5	0.5	0.3	0.5	0.6	0.8	0.8	0.2	0.6	0.1	-0.1	-0.1	0.0	0.1	0.0	0.4	0.8
10-Sep	0.1	0.1	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	0.0	-0.2	0.0	-0.1	-0.1	-0.2	-0.1	0.0	0.1	0.0	-0.4	-0.4	-0.3	-0.1	-0.3	-0.4	-0.1	0.1
11-Sep	0.0	0.0	-0.3	0.0	-0.2	-0.1	0.2	0.4	0.3	0.4	0.3	0.3	0.6	0.6	0.6	0.6	0.4	0.5	0.5	0.6	0.8	0.7	0.7	0.7	0.4	0.8
12-Sep	0.6	0.6	0.7	0.7	0.5	0.4	0.4	0.4	0.6	0.6	0.6	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.4	0.4	0.4	0.8
13-Sep	0.0	0.3	0.4	0.3	0.7	0.6	0.4	0.3	0.1	0.4	0.2	0.2	0.2	0.0	0.1	-0.4	-0.2	-0.3	-0.4	-0.2	0.4	-0.1	0.1	0.6	0.2	0.7
14-Sep	0.4	0.2	0.4	0.3	0.3	0.4	0.0	0.4	0.4	0.6	0.4	0.6	0.4	0.7	0.8	0.4	0.5	0.7	0.7	0.5	0.3	0.0	0.3	0.2	0.4	0.8
15-Sep	0.0	0.1	0.0	0.1	0.2	0.5	0.3	0.3	0.4	-0.3	0.0	-0.1	-0.3	0.0	-0.2	-0.6	-0.8	-0.5	-0.3	-0.6	-0.6	-0.4	-0.5	-0.5	-0.2	0.5
16-Sep	-0.3	-0.3	-0.4	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.2	0.5	0.3	0.2	0.7	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.4	0.2	0.7
17-Sep	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.5	0.5	0.7	0.8	0.7	0.9	0.8	0.8	0.8	1.0	1.0	0.8	0.8	0.6	1.0
18-Sep	0.8	0.6	0.7	0.7	0.8	0.6	0.8	0.9	0.9	0.2	0.1	0.2	0.2	0.4	0.1	0.1	0.2	0.1	0.0	-0.1	-0.2	-0.1	-0.1	-0.2	0.3	0.9
19-Sep	-0.1	-0.2	-0.1	0.0	0.1	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.2	0.1	0.1	0.4
20-Sep	0.3	0.5	0.4	0.4	0.3	0.5	0.6	0.4	0.5	0.4	0.5	0.8	0.7	0.5	0.2	0.7	0.4	0.5	0.7	0.8	0.8	0.8	0.7	0.7	0.5	0.8
21-Sep	0.5	0.4	0.1	0.1	0.1	0.0	-0.1	0.0	0.2	-0.2	-0.1	0.1	0.1	0.0	0.2	-0.3	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.5
22-Sep	-0.1	0.0	0.0	0.1	-0.1	0.0	0.1	0.3	0.4	0.0	0.1	0.1	0.0	-0.1	0.2	0.3	0.1	0.0	0.2	0.3	0.4	0.4	0.2	0.3	0.1	0.4
23-Sep	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.2	0.1	0.0	0.0	-0.2	0.0	0.0	-0.1	0.0	-0.1	-0.2	-0.1	0.2	0.1	0.0	0.2
24-Sep	0.2	0.3	0.5	0.4	0.4	0.3	0.1	0.0	-0.1	-0.1	0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	-0.2	-0.2	0.0	-0.1	-0.2	-0.1	0.1	0.0	0.5
25-Sep	0.2	0.3	0.4	0.2	0.5	0.3	0.5	0.5	0.6	0.6	0.5	0.7	0.4	0.3	0.3	0.7	0.6	0.3	0.5	0.6	0.0	0.2	0.1	0.0	0.4	0.7
26-Sep	-0.1	0.0	-0.1	-0.1	-0.1	-0.2	0.1	0.2	0.5	0.0	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	0.1	0.0	0.0	-0.1	-0.1	0.0	0.4	0.6	0.0	0.6
27-Sep	0.2	0.2	0.5	0.0	-0.1	-0.1	0.0	0.0	0.1	-0.1	0.1	0.1	-0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.1	0.0	-0.1	0.0	0.5
28-Sep	-0.1	0.0	0.0	-0.1	-0.1	-0.2	0.0	0.0	-0.1	-0.2	0.6	0.4	0.2	0.4	0.4	-0.1	0.1	0.1	0.4	0.6	0.7	0.7	0.6	0.7	0.2	0.7
29-Sep	0.7	0.6	0.7	0.6	0.6	0.9	0.9	1.2	1.0	1.3	1.1	1.0	1.2	1.1	0.9	0.7	0.8	0.7	0.6	0.6	0.4	1.1	0.7	0.7	0.8	1.3
30-Sep	0.4	0.6	0.6	0.5	0.3	-0.1	-0.2	-0.2	0.1	0.1	0.3	-0.1	-0.1	-0.3	-0.4	-0.5	-0.4	-0.5	-0.6	-0.5	-0.6	-0.6	-0.3	-0.4	-0.1	0.6
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	Diurnal Average	
	0.8	0.6	0.7	0.7	0.8	0.9	0.9	1.2	1.0	1.3	1.1	1.0	1.2	1.1	0.9	0.8	0.9	0.8	0.8	0.8	1.0	1.1	0.8	0.8	Diurnal Maximum	

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.2 km/h on Sep 3 18:00

Minimum Value: 0.1 km/h on Sep 8 21:00

Percentiles: P_1 = 0.3 P_{10} = 0.6 Q_1 = 1.0 Median = 1.5 Q_3 = 2.1 P_{90} = 2.6 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.4	0.4	0.7	0.7	0.5	1.4	1.2	1.0	1.1	1.0	1.1	1.6	2.1	2.4	2.5	2.7	2.7	2.2	1.8	1.6	0.8	0.5	0.4	2.7
2-Sep	0.4	0.2	0.2	0.3	0.4	0.3	0.3	0.5	1.0	1.0	1.2	1.3	1.4	1.6	1.6	1.7	1.6	1.5	1.4	1.8	2.3	2.3	1.9	1.8	2.3
3-Sep	2.0	2.1	2.0	1.9	1.8	1.9	1.9	1.7	1.8	1.9	1.8	1.5	1.4	1.2	1.5	2.4	4.0	4.2	3.9	3.6	3.1	2.6	2.4	3.1	4.2
4-Sep	2.9	3.4	3.0	3.1	3.1	2.8	2.8	2.7	2.8	3.1	3.0	2.9	2.9	2.9	2.7	2.5	2.3	2.0	1.6	1.1	0.6	0.6	0.4	0.4	3.4
5-Sep	0.3	0.4	0.4	0.6	0.6	0.6	1.1	1.2	1.5	1.6	1.5	1.5	1.7	1.7	1.8	1.5	1.2	0.8	1.0	1.5	1.5	1.2	1.2	1.2	1.8
6-Sep	1.3	1.0	1.0	1.0	1.0	0.9	1.1	1.4	1.5	1.7	1.6	1.7	1.8	1.9	1.8	1.5	1.5	1.1	0.7	0.3	0.2	0.4	0.8	0.7	1.9
7-Sep	0.8	0.8	0.7	0.6	0.7	0.7	0.8	1.0	1.0	1.0	1.3	1.8	1.7	1.6	1.8	2.3	2.5	2.4	2.2	2.3	2.4	1.5	1.9	2.6	2.6
8-Sep	2.5	2.2	2.0	1.4	2.2	2.2	1.9	1.3	1.7	1.6	1.5	1.8	1.9	1.8	1.6	1.5	0.9	0.6	0.5	0.2	0.1	0.3	0.3	1.3	2.5
9-Sep	1.3	1.8	1.3	1.2	1.1	1.3	1.2	1.4	1.7	1.6	1.7	1.7	1.8	2.0	2.1	2.2	1.8	1.4	1.4	0.9	0.4	0.5	0.6	0.7	2.2
10-Sep	0.5	0.4	0.5	0.6	0.5	0.6	0.7	0.8	0.9	1.2	1.3	1.5	1.7	1.9	1.7	1.6	1.4	0.9	1.3	0.9	0.5	0.3	0.4	0.3	1.9
11-Sep	0.3	0.2	0.4	0.1	0.3	0.4	1.0	1.3	1.3	1.3	1.3	1.5	1.7	2.0	1.8	1.9	1.5	1.5	1.6	1.8	1.8	1.5	1.2	1.4	2.0
12-Sep	1.2	1.4	1.4	1.5	1.1	0.9	1.0	1.4	1.7	2.0	1.9	2.2	2.5	2.8	2.9	2.9	2.4	1.4	1.2	1.1	1.0	0.9	1.0	0.8	2.9
13-Sep	0.5	0.6	0.8	0.9	1.3	1.0	1.0	1.0	1.2	1.5	1.5	1.6	1.3	1.0	1.0	1.0	1.0	1.0	0.9	0.7	0.8	0.3	0.6	1.1	1.6
14-Sep	1.0	0.7	0.8	0.7	0.6	0.8	0.6	1.0	1.3	1.7	1.2	1.5	1.6	1.6	1.7	1.2	2.3	2.2	1.9	1.6	1.0	0.4	0.6	0.6	2.3
15-Sep	0.5	0.6	0.4	0.7	0.7	1.0	1.1	1.1	1.2	1.2	1.3	1.6	1.7	1.9	2.1	2.9	3.6	2.8	2.2	2.6	2.4	2.0	2.7	2.2	3.6
16-Sep	2.1	1.6	1.4	1.7	1.7	1.2	0.7	0.8	1.4	1.6	1.6	1.7	1.6	1.7	1.6	1.5	1.0	0.9	0.8	1.0	1.5	1.9	1.3	1.2	2.1
17-Sep	1.9	1.6	1.0	1.0	0.9	1.3	1.1	1.4	1.9	2.0	1.9	1.9	2.0	2.3	2.6	2.9	3.2	2.8	2.4	2.7	2.7	2.5	2.3	2.6	3.2
18-Sep	2.5	2.2	2.4	2.3	2.6	2.2	2.2	2.4	2.6	3.0	3.2	2.8	2.6	2.6	2.6	2.5	2.2	1.4	1.1	0.6	0.8	0.6	0.3	0.5	3.2
19-Sep	0.8	0.7	0.5	0.6	0.6	0.7	0.8	1.1	1.1	1.4	1.6	1.4	1.8	2.2	2.1	1.8	1.3	0.8	0.6	0.4	0.6	0.7	0.6	0.4	2.2
20-Sep	1.0	1.3	1.2	1.1	1.2	1.2	1.1	1.6	1.8	1.7	1.7	2.2	2.0	2.7	2.9	2.7	2.9	1.9	1.5	1.9	1.7	1.4	1.2	1.3	2.9
21-Sep	1.3	1.1	0.7	0.8	0.7	0.4	0.3	0.9	1.0	1.4	1.5	1.1	1.3	1.5	1.8	2.2	1.6	1.7	2.6	2.1	0.9	1.1	0.7	1.4	2.6
22-Sep	1.4	1.7	1.5	1.6	1.9	1.9	1.0	1.1	1.3	1.6	2.4	2.8	2.9	2.8	2.8	2.7	2.5	1.4	1.4	2.3	2.5	2.3	2.1	1.7	2.9
23-Sep	1.7	1.5	1.4	2.0	2.2	2.1	2.1	1.7	1.6	1.7	2.6	2.9	3.0	2.9	2.6	2.9	2.9	2.5	1.8	1.6	1.1	1.1	0.9	0.8	3.0
24-Sep	0.7	1.0	1.2	1.1	1.0	1.0	0.9	0.8	1.3	1.8	2.2	2.1	2.2	2.4	2.1	1.8	1.3	1.5	1.0	0.4	0.3	0.3	0.4	0.5	2.4
25-Sep	0.7	1.0	1.0	1.0	1.3	1.1	1.6	1.7	1.9	1.9	1.8	1.9	1.6	1.5	1.3	1.9	1.9	1.7	2.1	2.1	2.0	2.5	2.4	1.0	2.5
26-Sep	0.8	0.8	0.6	0.4	0.6	0.7	0.6	0.6	1.1	1.8	1.9	2.2	2.3	2.5	2.3	2.6	2.6	1.5	1.0	1.4	1.5	1.3	1.2	1.4	2.6
27-Sep	1.8	1.1	1.8	2.2	2.2	2.4	3.0	3.2	3.4	3.1	2.8	2.7	2.7	3.1	2.4	2.2	2.0	1.2	0.5	0.5	0.8	1.1	0.9	1.0	3.4
28-Sep	0.9	0.8	0.7	1.6	1.3	1.2	1.1	1.1	1.3	1.3	1.5	1.6	1.7	1.7	1.8	2.0	1.3	0.4	0.8	1.3	1.7	1.9	2.2	2.2	2.2
29-Sep	2.3	2.2	2.3	2.4	2.3	2.7	2.8	2.8	3.1	3.6	3.3	3.1	2.9	2.9	2.3	2.4	2.1	1.6	1.7	2.1	2.4	2.3	2.2	2.3	3.6
30-Sep	2.2	1.9	2.2	1.6	1.3	0.7	0.8	0.9	1.1	1.2	1.3	1.7	2.3	2.2	2.7	2.3	2.4	2.2	2.6	2.3	2.4	2.6	1.9	2.1	2.7
	2.9	3.4	3.0	3.1	3.1	2.8	3.0	3.2	3.4	3.6	3.3	3.1	3.0	3.1	2.9	2.9	4.0	4.2	3.9	3.6	3.1	2.6	2.7	3.1	
	Diurnal Maximum																								

Maximum Value: 2.4 km/h on Sep 29 14:00

Maximum Daily Average: 1.6 km/h on Sep 20

Minimum Value: -2.3 km/h on Sep 3 18:00

Minimum Daily Average: -0.7 km/h on Sep 4

Maximum Diurnal Average: 0.7 km/h at hour 9

Minimum Diurnal Average: 0.3 km/h at hour 18

Monthly Average: 0.56 km/h

Percentiles: P_1 = -1.4 P_{10} = -0.5 Q_1 = 0.0 Median = 0.6 Q_3 = 1.1 P_{90} = 1.6 P_{99} = 2.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	-0.3	-0.1	-0.1	0.1	0.0	0.0	0.9	1.0	0.6	0.5	0.1	0.5	-0.1	-0.4	-0.4	-1.0	-0.8	-1.4	-1.1	-0.9	-0.6	-0.6	-0.3	0.1	-0.2	1.0
2-Sep	-0.3	-0.1	-0.2	-0.2	0.0	0.1	0.1	0.2	0.5	0.1	0.6	0.5	0.6	0.4	0.7	1.0	0.5	1.1	1.0	0.8	1.5	1.9	1.5	1.6	0.6	1.9
3-Sep	1.7	1.7	1.4	1.7	1.4	1.5	1.5	1.5	1.7	1.7	1.4	0.9	1.1	0.3	-0.2	-0.7	-1.8	-2.3	-2.3	-2.0	-1.8	-1.5	-1.2	-1.6	0.2	1.7
4-Sep	-1.3	-1.2	-1.3	-1.2	-1.2	-0.8	-1.0	-0.5	-0.9	-1.3	-0.4	-0.5	-0.7	-0.7	-0.8	-0.7	-0.7	-0.5	-0.4	-0.3	-0.2	0.1	0.1	0.2	-0.7	0.2
5-Sep	0.2	0.6	0.5	0.7	0.9	0.7	1.3	0.9	0.9	1.1	0.6	0.4	1.5	1.9	1.3	0.9	0.9	0.3	0.7	1.4	1.1	1.5	1.5	1.3	1.0	1.9
6-Sep	1.2	1.1	1.1	1.4	1.1	1.0	1.0	0.8	1.0	1.0	0.9	1.1	1.1	1.2	0.8	0.3	0.7	0.7	0.7	0.6	0.4	0.3	1.2	1.0	0.9	1.4
7-Sep	1.0	1.3	1.2	0.9	0.8	1.0	0.6	0.5	0.4	0.3	0.5	-0.1	0.9	0.4	-0.1	-0.7	-0.5	-0.9	-1.0	-0.9	-0.8	-1.0	-0.7	-0.8	0.1	1.3
8-Sep	-0.9	-0.9	-0.8	-0.3	-0.4	-0.7	-0.4	0.0	0.1	-0.2	0.4	-0.1	0.2	0.4	-0.1	-0.1	0.9	0.4	0.0	0.0	0.0	0.0	0.2	1.1	-0.1	1.1
9-Sep	1.2	1.0	1.0	1.0	1.2	1.3	1.0	0.7	0.9	1.0	1.0	0.8	1.2	1.1	1.8	1.9	0.9	1.5	0.8	0.2	0.1	0.3	0.8	0.5	1.0	1.9
10-Sep	0.4	0.3	0.2	0.1	0.0	-0.2	-0.2	-0.4	-0.2	0.2	0.0	0.1	0.3	-0.4	0.1	0.2	0.2	0.0	-1.1	-0.8	-0.6	-0.2	-0.1	-0.3	-0.1	0.4
11-Sep	-0.1	0.0	-0.2	0.0	0.1	0.1	0.8	1.0	0.7	0.4	0.6	0.7	1.1	2.2	1.3	1.2	0.7	1.2	1.3	1.7	2.1	1.7	1.8	1.9	0.9	2.2
12-Sep	1.6	1.8	1.9	1.9	1.4	1.3	1.3	1.4	1.5	1.5	1.7	2.0	1.4	1.3	1.2	0.7	0.7	0.8	1.3	0.7	0.3	0.6	1.2	1.2	1.3	2.0
13-Sep	0.6	0.7	1.4	1.0	2.1	1.7	1.5	0.6	0.6	0.9	0.7	0.6	0.8	0.2	-0.1	-0.6	-0.3	-0.3	-0.7	-0.1	0.9	0.6	0.9	1.4	0.6	2.1
14-Sep	1.1	0.8	1.3	1.3	1.3	1.7	0.6	1.1	1.0	1.4	0.3	1.2	0.9	1.1	0.8	0.8	1.4	1.2	1.6	1.4	1.1	0.3	0.8	0.9	1.1	1.7
15-Sep	0.5	0.4	0.2	0.5	0.6	0.9	0.8	0.5	0.6	0.0	0.0	0.2	0.0	0.1	0.0	-0.5	-1.0	-0.6	-0.6	-0.8	-0.8	-0.5	-0.5	-0.5	0.0	0.9
16-Sep	-0.7	-0.3	-0.2	-0.3	-0.4	-0.1	0.0	0.1	0.1	0.1	-0.2	0.3	1.0	0.2	0.3	1.3	0.8	0.7	0.9	1.1	1.4	1.5	1.2	0.9	0.4	1.5
17-Sep	1.2	1.2	1.1	0.8	1.1	1.2	1.0	1.2	1.2	1.4	1.2	1.0	0.9	0.9	1.0	1.5	1.8	1.6	1.6	1.8	2.0	2.1	1.6	1.6	1.3	2.1
18-Sep	1.7	1.6	1.7	1.8	2.0	1.7	2.0	2.4	2.2	1.2	1.4	1.2	0.8	1.5	0.9	0.6	1.0	0.4	0.7	0.2	0.1	-0.1	-0.1	-0.1	1.1	2.4
19-Sep	-0.1	0.1	0.1	0.3	0.3	0.6	0.8	0.7	0.6	0.7	0.6	0.5	0.7	0.3	0.4	0.6	0.4	0.1	0.1	-0.1	0.3	0.6	0.3	0.4	0.4	0.8
20-Sep	1.3	1.5	1.4	1.4	1.0	1.6	1.5	1.5	1.8	1.3	1.1	1.9	1.3	1.8	1.8	2.1	1.8	1.6	1.8	1.9	2.0	1.7	1.6	1.8	1.6	2.1
21-Sep	1.7	1.3	0.9	0.8	0.5	0.1	0.0	0.2	0.4	0.0	0.1	0.4	0.4	-0.1	0.3	-0.3	0.3	0.1	-0.1	-0.1	0.0	0.2	0.0	0.0	0.3	1.7
22-Sep	0.0	0.1	0.0	0.2	0.2	0.5	0.5	0.7	0.8	0.4	0.8	0.9	0.7	0.3	0.4	0.9	0.6	0.4	1.0	1.6	1.6	1.6	1.5	1.3	0.7	1.6
23-Sep	1.0	0.9	1.0	0.6	0.7	0.8	0.8	0.7	0.7	0.7	0.6	0.2	0.5	0.5	0.3	0.7	0.8	0.4	0.4	0.3	0.3	0.3	0.6	0.3	0.6	1.0
24-Sep	0.5	0.9	1.1	1.2	1.0	0.8	0.5	0.4	0.1	0.0	0.1	0.2	0.0	-0.1	0.3	0.0	-0.3	-0.4	-0.6	-0.1	-0.2	-0.1	0.1	0.3	0.2	1.2
25-Sep	0.7	1.1	1.3	0.8	1.5	1.0	1.5	1.3	1.7	1.5	1.4	1.5	0.9	0.9	0.6	1.7	1.6	1.1	1.6	1.7	0.5	0.6	0.3	0.2	1.1	1.7
26-Sep	0.2	0.2	0.0	-0.1	0.0	-0.1	0.2	0.5	0.5	0.4	0.0	0.1	0.0	0.0	-0.1	0.1	0.0	0.3	0.2	0.2	0.2	0.3	1.0	1.6	0.2	1.6
27-Sep	1.1	0.7	1.4	1.0	0.6	0.3	0.1	0.4	0.4	0.1	0.5	0.5	0.1	0.3	0.5	0.1	0.3	0.2	0.0	0.0	0.0	0.2	0.3	0.3	0.4	1.4
28-Sep	0.2	0.1	-0.1	-0.1	0.1	-0.1	-0.1	-0.1	-0.1	0.0	1.2	0.7	0.6	0.9	1.3	0.3	0.7	0.5	0.8	1.6	1.4	1.8	1.0	1.0	0.6	1.8
29-Sep	1.5	1.0	0.9	0.8	0.9	1.6	1.3	1.8	1.5	2.2	2.1	2.4	2.3	2.4	2.0	1.6	1.9	1.6	1.5	1.0	0.9	1.6	1.1	0.9	1.5	2.4
30-Sep	0.4	1.1	1.3	1.3	0.9	0.0	-0.5	-0.4	-0.1	0.1	0.3	-0.4	-0.4	-0.6	-1.1	-0.9	-0.8	-0.6	-1.1	-1.0	-1.2	-1.3	-0.8	-0.9	-0.3	1.3
	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.5	0.6	0.6	Diurnal Average	
	1.7	1.8	1.9	1.9	2.1	1.7	2.0	2.4	2.2	2.2	2.1	2.4	2.3	2.4	2.0	2.1	1.9	1.6	1.8	1.9	2.1	2.1	1.8	1.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.3 km/h on Sep 29 10:00

Minimum Value: 0.1 km/h on Sep 8 20:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.8 Median = 1.5 Q_3 = 2.1 P_{90} = 2.6 P_{99} = 3.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.4	0.5	0.3	0.5	0.6	0.6	1.5	1.2	1.0	1.3	1.2	1.3	2.0	2.3	2.6	2.6	2.7	2.3	2.1	1.6	1.5	0.9	0.7	0.6	2.7
2-Sep	0.3	0.3	0.2	0.3	0.4	0.2	0.2	0.4	1.0	1.2	1.5	1.6	1.6	1.8	2.0	2.2	1.7	1.5	1.3	1.6	2.1	2.4	2.1	1.9	2.4
3-Sep	1.8	1.8	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.9	1.8	1.5	1.7	1.5	1.6	2.5	4.0	4.0	3.8	3.6	3.1	2.8	2.7	3.2	4.0
4-Sep	2.7	3.0	2.7	2.9	2.8	2.4	2.5	2.8	2.7	3.5	3.5	3.2	3.1	3.2	3.1	2.9	2.6	2.1	1.6	1.0	0.6	0.8	0.6	0.5	3.5
5-Sep	0.2	0.3	0.4	0.7	0.5	0.7	0.8	1.0	1.2	1.7	1.6	1.7	2.2	2.2	2.2	2.0	1.7	1.1	1.1	1.6	1.4	1.1	1.2	1.3	2.2
6-Sep	1.2	0.6	0.7	0.7	0.6	0.5	0.7	1.2	1.6	1.8	2.0	2.2	2.2	2.3	2.0	1.6	1.4	0.8	0.5	0.3	0.3	0.5	0.5	0.5	2.3
7-Sep	0.6	0.4	0.8	0.4	0.6	0.7	0.8	0.9	1.0	1.1	1.3	2.0	2.1	1.9	2.0	2.3	2.5	2.3	2.2	2.4	2.6	1.1	1.9	2.4	2.6
8-Sep	2.3	2.1	2.0	1.8	2.1	2.0	1.8	1.4	2.0	1.7	1.7	2.2	2.4	2.0	1.9	1.8	1.2	0.8	0.4	0.1	0.1	0.2	0.4	1.0	2.4
9-Sep	1.3	1.9	1.3	1.1	0.8	0.8	1.0	1.3	1.6	1.7	1.7	1.9	2.0	2.2	2.3	2.3	1.7	1.0	0.9	0.6	0.4	0.6	0.4	0.5	2.3
10-Sep	0.7	0.5	0.6	0.5	0.4	0.4	0.5	0.7	0.9	1.3	1.5	1.9	2.0	2.1	1.9	1.9	1.6	1.1	1.0	0.8	0.7	0.3	0.3	0.2	2.1
11-Sep	0.3	0.3	0.3	0.2	0.3	0.2	0.8	1.0	1.3	1.4	1.6	1.9	1.9	2.3	2.1	2.0	1.6	1.4	1.3	1.6	1.6	0.9	0.7	0.9	2.3
12-Sep	1.0	1.0	0.9	0.8	0.9	0.8	0.8	1.1	1.7	1.6	2.0	2.2	2.5	2.6	2.8	2.4	2.1	1.1	0.4	0.9	0.5	1.2	0.7	0.5	2.8
13-Sep	0.4	0.4	0.8	1.0	0.6	0.4	0.6	0.8	1.2	1.5	1.5	1.4	1.7	1.3	1.0	0.9	1.1	0.9	0.7	0.9	1.0	0.4	0.4	0.5	1.7
14-Sep	0.8	0.4	0.4	0.4	0.6	0.7	0.4	0.7	1.3	1.7	1.2	1.4	1.9	1.7	1.7	1.3	2.3	2.2	1.8	1.5	1.1	0.6	0.4	0.4	2.3
15-Sep	0.4	0.4	0.2	0.4	0.5	0.7	0.8	0.8	1.2	1.4	1.6	1.8	2.0	2.1	2.0	2.7	3.2	2.7	1.9	2.4	2.1	1.8	2.2	1.9	3.2
16-Sep	1.5	1.4	1.2	1.2	1.5	1.1	0.6	0.8	1.4	1.5	1.8	2.0	1.8	1.9	2.0	1.7	1.4	0.9	0.5	0.6	1.4	1.8	1.3	1.1	2.0
17-Sep	1.7	1.4	0.8	0.9	0.8	1.2	1.1	1.4	1.9	2.1	2.2	2.3	2.4	2.3	2.6	2.7	3.0	3.1	2.2	2.5	2.8	2.8	2.1	2.3	3.1
18-Sep	2.1	1.8	1.9	1.9	2.0	2.1	1.9	2.7	2.5	2.6	2.8	2.8	2.5	2.7	2.5	2.1	2.1	1.1	0.7	0.3	0.4	0.5	0.3	0.4	2.8
19-Sep	1.0	1.0	0.5	0.6	0.6	0.5	0.4	0.7	1.0	1.8	1.9	1.6	2.1	2.4	2.3	2.2	1.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	2.4
20-Sep	0.7	1.3	1.1	1.4	1.5	0.6	0.8	1.7	1.9	1.6	1.5	2.3	2.2	2.8	2.6	2.6	2.6	1.5	1.5	1.9	1.6	1.4	1.2	0.9	2.8
21-Sep	1.1	0.9	0.6	1.0	0.8	0.4	0.4	0.6	1.2	1.8	1.9	1.5	1.7	1.8	1.9	1.8	1.8	1.7	2.3	1.7	0.7	0.9	0.9	1.4	2.3
22-Sep	1.4	1.7	1.6	1.6	2.1	2.0	1.2	0.8	1.5	1.9	2.3	2.7	2.8	3.0	2.7	2.6	2.3	1.2	0.9	1.9	2.1	1.9	1.8	1.6	3.0
23-Sep	1.6	1.3	1.2	1.8	1.9	1.7	1.8	1.2	1.4	1.7	2.8	2.8	2.9	2.7	2.5	2.8	3.0	2.1	1.7	1.3	1.3	1.0	0.8	0.8	3.0
24-Sep	0.9	0.9	1.0	0.7	0.6	0.7	0.7	0.8	1.1	1.8	2.4	2.3	2.4	2.5	2.5	1.8	1.3	1.3	0.6	0.4	0.4	0.2	0.3	0.5	2.5
25-Sep	0.4	0.4	0.6	1.3	1.5	1.3	1.5	1.8	1.6	1.6	1.8	1.9	1.5	1.7	1.5	2.1	1.5	1.4	1.7	1.8	1.9	2.6	2.4	0.8	2.6
26-Sep	0.5	0.7	0.5	0.6	0.6	0.5	0.6	0.7	1.0	2.0	1.9	2.5	2.8	2.7	2.6	2.7	2.5	1.8	0.9	1.0	1.2	0.7	0.7	0.8	2.8
27-Sep	1.4	1.1	1.7	2.0	2.3	2.6	2.9	3.7	3.6	3.4	3.1	3.1	2.9	3.1	2.7	2.3	2.3	1.1	0.3	0.5	0.5	0.7	0.5	0.7	3.7
28-Sep	1.0	1.1	1.1	1.4	1.0	1.1	0.9	1.1	1.4	1.5	1.8	1.8	1.9	2.1	1.9	2.0	1.1	0.4	0.3	1.4	2.0	2.1	2.0	1.9	2.1
29-Sep	2.0	2.1	2.4	2.2	2.2	2.5	2.8	3.2	3.5	4.3	3.6	3.6	3.1	3.0	2.5	2.3	2.0	1.7	1.5	1.9	2.2	2.5	2.5	2.2	4.3
30-Sep	2.4	1.9	1.6	1.7	1.5	0.5	0.7	0.7	1.1	1.4	1.7	1.9	2.2	2.1	2.2	2.3	2.4	2.0	2.5	2.2	2.0	2.3	1.6	2.1	2.5
	2.7	3.0	2.7	2.9	2.8	2.6	2.9	3.7	3.6	4.3	3.6	3.6	3.1	3.2	3.1	2.9	4.0	4.0	3.8	3.6	3.1	2.8	2.7	3.2	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - September 2025

Maximum Value: 1.7 km/h on Sep 11 14:00

Maximum Daily Average: 0.6 km/h on Sep 20

Minimum Value: -1.3 km/h on Sep 17 17:00

Minimum Daily Average: -0.6 km/h on Sep 17

Maximum Diurnal Average: 0.4 km/h at hour 14

Minimum Diurnal Average: -0.1 km/h at hour 19

Monthly Average: 0.08 km/h

Percentiles: P_1 = -1.1 P_{10} = -0.6 Q_1 = -0.2 Median = 0.1 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 1.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	-0.2	-0.2	0.0	0.0	-0.2	-0.1	-0.3	0.3	0.3	-0.2	0.2	-0.2	-0.4	0.0	-0.5	-0.1	-1.0	-0.7	-0.5	-0.3	-0.5	-0.3	0.0	-0.2	0.3
2-Sep	0.0	0.0	-0.1	0.0	-0.1	-0.1	0.0	0.0	0.1	-0.1	0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.7	-0.3	-0.7	-0.7	-0.7	-0.2	-0.2	0.1	-0.2	0.1
3-Sep	-0.4	-0.6	-0.7	-0.4	-0.4	-0.2	-0.2	-0.2	0.3	0.4	0.3	0.0	0.1	0.5	0.6	0.1	-0.7	-1.1	-1.2	-0.9	-0.8	-1.0	-0.2	-0.3	-0.3	0.6
4-Sep	0.2	0.3	0.1	0.1	0.2	0.3	0.3	0.7	0.3	-0.4	0.5	0.7	0.4	0.5	0.2	0.2	0.0	0.0	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1	0.1	0.7
5-Sep	0.2	0.2	0.1	-0.1	0.2	0.3	0.0	0.1	0.1	0.3	0.0	0.2	1.1	1.4	1.1	0.1	0.5	-0.3	0.4	0.7	-0.8	-0.2	-0.1	0.0	0.2	1.4
6-Sep	-0.4	-0.4	-0.4	-0.2	-0.5	-0.6	-0.5	-0.6	-0.1	0.0	0.0	0.2	-0.1	-0.1	-0.6	-1.0	-0.9	-0.8	-0.5	0.2	0.2	0.1	0.2	0.1	-0.3	0.2
7-Sep	0.1	0.2	0.4	0.4	0.3	0.3	0.1	-0.1	0.1	0.5	0.5	0.0	1.0	1.0	0.2	-0.1	-0.3	-0.8	-0.9	-0.7	-0.7	-0.7	-0.3	0.0	0.0	1.0
8-Sep	-0.4	-0.5	-0.9	-0.1	0.0	-0.7	0.0	0.1	0.0	-0.3	0.5	-0.5	0.3	0.4	-0.4	-0.2	1.0	0.4	0.1	0.0	-0.1	-0.2	-0.1	-0.5	-0.1	1.0
9-Sep	-0.4	-0.7	-0.4	-0.5	-0.6	-0.5	-0.7	-0.7	-0.7	-0.3	-0.1	-0.3	0.3	-0.2	0.1	0.2	0.4	0.6	0.0	0.2	0.4	0.1	0.1	0.1	-0.2	0.6
10-Sep	0.0	0.0	0.0	0.1	0.3	0.1	0.4	0.0	-0.1	0.5	0.2	0.1	0.5	-0.1	0.2	0.5	0.3	0.1	-0.5	-0.4	-0.4	-0.2	-0.1	0.0	0.1	0.5
11-Sep	0.0	0.0	-0.1	-0.1	0.0	0.0	0.3	0.3	0.4	-0.1	0.1	-0.2	-0.1	1.7	0.1	0.0	-0.6	-0.4	-0.6	-0.2	0.4	0.8	0.9	1.0	0.1	1.7
12-Sep	0.9	0.5	0.6	0.7	0.5	0.0	-0.3	0.1	0.6	0.5	0.8	0.9	0.7	0.7	0.3	0.0	0.1	0.0	0.2	0.3	0.0	0.2	0.4	0.7	0.4	0.9
13-Sep	0.1	0.1	0.5	0.4	0.7	0.2	-0.1	-0.4	0.2	-0.2	0.0	0.1	0.6	0.2	0.0	-0.5	-0.3	-0.2	-0.4	-0.2	-0.2	0.2	-0.1	-0.3	0.0	0.7
14-Sep	-0.4	-0.4	-0.3	-0.1	-0.1	0.0	-0.1	-0.2	-0.4	0.4	0.0	0.4	-0.1	0.4	-0.6	-0.6	-0.7	-0.7	0.4	0.6	0.2	0.1	0.2	0.5	-0.1	0.6
15-Sep	0.2	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.3	-0.1	0.2	0.5	0.3	0.4	0.4	1.0	0.7	0.8	0.6	0.5	0.6	0.6	0.8	0.7	0.4	1.0
16-Sep	0.1	0.5	0.5	0.5	0.3	0.2	0.1	0.2	0.3	0.5	-0.3	0.6	1.2	0.1	-0.3	0.9	0.1	-0.4	-0.5	-0.4	-0.3	-0.3	-0.2	-0.4	0.1	1.2
17-Sep	-0.6	-0.4	0.1	-0.5	-0.6	-0.4	-0.5	-0.2	-0.4	-0.1	-0.3	-0.1	-0.4	-1.0	-1.0	-0.7	-1.3	-0.9	-1.0	-0.7	-0.4	-0.1	-0.8	-1.0	-0.6	0.1
18-Sep	-0.9	-0.7	-0.7	-0.7	-0.6	-0.6	-0.1	0.7	0.6	0.3	0.2	0.5	0.2	1.1	0.4	0.0	0.5	0.2	0.0	0.1	0.2	0.3	0.3	0.3	0.1	1.1
19-Sep	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	-0.1	0.6	0.2	0.4	0.6	0.5	0.1	0.1	0.2	0.0	0.1	0.0	0.2	0.2	0.6
20-Sep	0.5	0.8	0.7	0.7	0.4	0.7	0.6	0.7	0.9	0.6	0.1	0.7	0.0	1.1	1.0	1.3	0.7	0.6	0.3	0.2	0.4	0.3	0.2	0.5	0.6	1.3
21-Sep	0.1	-0.2	-0.2	0.3	0.1	0.2	0.2	0.1	0.3	0.2	0.2	0.4	0.3	-0.1	0.9	0.4	0.8	0.9	1.0	0.8	0.3	0.1	0.1	0.3	0.3	1.0
22-Sep	0.3	0.4	0.1	0.6	0.7	0.9	0.3	0.1	0.4	0.2	0.8	0.6	0.3	0.6	0.3	0.9	0.5	0.1	0.2	0.5	0.5	0.6	0.6	0.6	0.5	0.9
23-Sep	0.4	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	1.1	0.7	0.4	0.6	0.0	0.6	0.4	-0.2	0.0	0.0	0.0	0.4	0.2	0.0	0.2	1.1
24-Sep	-0.1	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.4	0.4	0.4	0.6	1.0	1.1	0.8	0.3	0.5	0.0	0.2	0.3	0.5	0.6	0.6	0.4	1.1
25-Sep	0.1	0.2	0.6	0.5	0.8	0.5	0.7	0.7	0.8	0.2	0.6	0.4	-0.2	0.1	-0.1	0.3	0.6	0.4	0.7	0.6	0.2	0.9	0.8	0.3	0.5	0.9
26-Sep	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.8	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.7	0.4	0.3	0.4	0.2	0.2	0.7	0.4	0.8
27-Sep	0.4	0.2	0.5	0.2	0.4	0.6	0.6	1.0	1.0	0.6	0.9	1.1	0.5	0.5	0.9	0.6	0.7	0.3	0.4	0.4	0.3	0.2	0.2	0.3	0.5	1.1
28-Sep	0.4	0.4	0.1	0.3	0.7	0.4	0.5	0.2	0.0	-0.1	0.4	0.0	-0.1	0.0	0.4	0.1	0.3	0.1	-0.3	0.4	0.0	0.8	-0.8	-1.1	0.1	0.8
29-Sep	-0.7	-1.1	-1.0	-1.0	-0.9	-0.9	-1.1	0.0	-0.5	-1.2	-0.7	-0.1	0.4	0.4	0.3	0.1	0.6	0.1	-0.3	-1.0	-1.2	0.3	-0.5	-0.7	-0.4	0.6
30-Sep	-1.2	-0.2	-0.6	-0.4	0.2	0.1	0.0	-0.2	-0.3	0.0	0.2	0.0	0.3	-0.3	-0.8	-0.8	-0.5	-0.3	-0.3	-0.7	-0.8	-0.6	-0.3	-0.4	-0.3	0.3
	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.2	0.1	0.1	-0.1	-0.1	0.0	-0.1	0.1	0.0	0.1	Diurnal Average	
	0.9	0.8	0.7	0.7	0.8	0.9	0.7	1.0	1.0	0.8	1.1	1.1	1.2	1.7	1.1	1.3	1.0	0.9	1.0	0.8	0.6	0.9	0.9	1.0	Diurnal Maximum	

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.2 km/h on Sep 29 10:00

Minimum Value: 0.1 km/h on Sep 11 02:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.4 Q_3 = 2.1 P_{90} = 2.7 P_{99} = 3.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.3	0.4	0.3	0.4	0.4	0.5	1.4	1.1	1.1	1.3	1.2	1.4	2.1	2.3	3.0	2.6	2.8	1.8	2.0	1.4	1.3	1.0	0.7	0.7	3.0
2-Sep	0.5	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.8	1.1	1.3	1.6	1.8	2.1	2.1	2.3	1.9	1.4	1.1	1.7	1.9	2.0	1.9	1.7	2.3
3-Sep	1.2	1.3	1.5	1.4	1.6	1.6	1.5	1.5	1.5	1.7	1.7	1.5	1.5	1.5	1.7	2.3	3.7	3.6	3.5	3.5	2.9	2.5	2.8	2.9	3.7
4-Sep	2.5	2.7	2.4	2.5	2.5	2.5	2.5	2.7	2.7	3.3	3.6	3.6	3.3	3.8	3.2	3.0	2.7	2.2	1.4	0.6	0.5	0.9	0.9	0.4	3.8
5-Sep	0.2	0.2	0.4	0.7	0.4	0.4	0.4	1.0	1.2	1.7	1.7	1.8	3.0	2.7	2.7	2.4	2.0	1.3	1.3	2.2	1.5	1.1	1.3	1.1	3.0
6-Sep	0.9	0.4	0.5	0.6	0.7	0.9	0.9	1.0	1.5	1.7	2.0	2.5	2.5	2.6	2.3	1.7	1.6	1.0	0.7	0.3	0.3	0.4	0.5	0.4	2.6
7-Sep	0.8	0.4	0.6	0.4	0.4	0.3	0.6	0.6	0.7	1.1	1.3	2.2	2.4	2.1	2.1	2.0	2.2	1.9	2.1	2.0	2.3	1.2	1.5	1.6	2.4
8-Sep	1.7	1.7	1.7	2.0	1.4	1.6	1.7	1.6	2.2	1.8	2.1	2.3	2.6	2.4	1.9	2.0	1.3	1.1	0.4	0.2	0.2	0.3	0.8	1.3	2.6
9-Sep	1.9	1.8	1.1	1.3	1.0	0.8	1.0	1.1	1.4	1.5	1.5	2.0	2.0	2.3	2.3	2.2	1.6	0.8	0.8	0.5	0.4	0.6	0.6	0.5	2.3
10-Sep	0.8	0.6	0.8	0.6	0.4	0.3	0.4	0.5	0.9	1.3	1.6	2.1	2.3	2.3	2.1	2.3	1.7	1.1	0.7	1.0	0.9	0.5	0.3	0.2	2.3
11-Sep	0.1	0.1	0.1	0.2	0.3	0.1	0.4	0.9	0.8	1.0	1.2	1.7	1.9	2.7	2.3	2.1	1.6	1.3	1.2	1.0	1.2	0.5	0.4	0.5	2.7
12-Sep	0.6	0.7	0.6	0.7	0.6	0.9	0.5	0.8	1.5	1.4	2.0	2.1	2.8	2.9	2.8	2.4	2.0	0.9	0.3	0.9	0.3	1.1	0.7	0.5	2.9
13-Sep	0.3	0.3	0.7	0.6	0.4	0.5	0.8	0.8	0.9	1.4	1.5	1.5	2.0	1.4	1.0	0.9	1.0	0.6	0.7	1.3	1.3	0.4	0.3	0.7	2.0
14-Sep	1.1	0.5	0.7	0.4	0.7	0.8	0.4	0.9	1.2	1.7	1.1	1.4	2.5	2.2	2.3	1.3	2.2	2.1	1.5	1.4	0.8	0.5	0.4	0.3	2.5
15-Sep	0.2	0.2	0.2	0.4	0.6	0.6	0.6	0.7	1.1	1.4	1.7	1.9	2.1	2.4	2.2	2.9	3.1	2.7	1.8	2.2	2.0	1.8	2.1	1.8	3.1
16-Sep	1.4	1.3	1.1	0.9	1.1	1.1	0.6	0.7	1.3	1.6	2.1	2.3	2.1	2.2	2.3	2.0	1.4	0.8	0.5	0.6	1.1	1.5	1.2	0.7	2.3
17-Sep	1.1	0.9	0.6	0.7	0.8	1.1	1.2	1.4	1.4	1.8	2.2	2.4	2.6	2.4	2.6	2.9	3.0	3.0	1.8	2.1	2.6	2.3	1.9	2.0	3.0
18-Sep	1.8	1.5	1.4	1.4	1.4	1.5	1.4	2.5	2.4	2.7	2.8	3.1	2.6	2.9	2.8	2.3	2.0	1.1	0.5	0.3	0.3	0.3	0.4	0.5	3.1
19-Sep	1.1	1.2	0.7	0.8	0.7	0.7	0.5	0.5	0.9	1.9	2.1	1.7	2.5	2.8	2.5	2.4	1.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	2.8
20-Sep	0.3	0.5	0.7	1.0	0.9	0.5	0.5	1.2	1.7	1.4	1.0	2.2	2.2	3.0	2.8	2.7	2.3	1.4	1.1	1.5	1.5	1.3	1.0	0.8	3.0
21-Sep	0.7	0.6	0.8	1.0	0.8	0.5	0.5	0.5	1.2	1.7	2.0	1.7	1.9	2.0	2.3	1.9	1.8	1.7	2.2	1.7	0.5	1.1	1.1	1.5	2.3
22-Sep	1.3	1.9	1.7	1.7	2.3	2.2	1.4	0.9	1.4	2.1	2.4	2.7	2.9	3.3	2.7	2.8	2.1	1.1	0.6	1.6	1.8	1.8	1.9	1.7	3.3
23-Sep	1.7	1.1	1.2	1.6	1.5	1.4	1.5	0.9	1.1	1.7	2.9	2.9	2.9	2.6	2.4	2.9	3.1	2.0	1.7	1.4	1.5	1.3	0.7	0.6	3.1
24-Sep	1.1	0.9	0.9	0.8	0.5	0.8	0.9	0.9	1.2	1.8	2.6	2.4	2.5	2.9	2.7	2.0	1.4	1.4	0.6	0.5	0.3	0.4	0.4	0.6	2.9
25-Sep	0.5	0.4	0.5	0.6	0.8	0.8	1.0	1.3	1.1	1.1	1.6	1.7	1.5	1.8	1.6	2.0	1.5	1.3	1.6	1.5	1.8	2.5	2.3	0.7	2.5
26-Sep	0.3	0.4	0.5	0.7	0.6	0.6	0.8	1.0	0.9	2.2	2.2	3.0	2.9	2.9	2.7	2.7	2.3	2.0	0.9	0.7	0.7	0.6	0.6	0.7	3.0
27-Sep	1.2	1.2	1.5	1.9	2.3	2.8	3.0	3.7	3.9	3.4	3.2	3.3	3.1	3.1	2.7	2.3	2.3	1.0	0.4	0.6	0.6	0.8	0.6	0.7	3.9
28-Sep	1.1	1.1	1.3	1.6	1.1	0.8	0.8	1.1	1.4	1.6	1.7	2.0	2.1	2.3	2.0	2.1	1.2	0.3	0.4	1.9	2.4	2.5	2.2	2.0	2.5
29-Sep	1.8	2.2	2.4	2.1	2.3	2.4	2.8	3.8	3.6	4.2	3.7	3.7	3.4	2.8	2.4	2.3	1.9	1.5	1.3	2.0	2.3	3.3	2.6	2.6	4.2
30-Sep	2.3	2.1	1.8	1.7	1.9	0.5	0.7	0.5	1.0	1.5	1.8	2.0	2.2	1.8	1.9	2.1	2.4	2.0	2.4	2.3	1.8	1.9	1.5	2.1	2.4
	2.5	2.7	2.4	2.5	2.5	2.8	3.0	3.8	3.9	4.2	3.7	3.7	3.4	3.8	3.2	3.0	3.7	3.6	3.5	3.5	2.9	3.3	2.8	2.9	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - September 2025

Maximum Value: 2.0 km/h on Sep 11 14:00

Maximum Daily Average: 0.7 km/h on Sep 20

Minimum Value: -1.5 km/h on Sep 29 04:00

Minimum Daily Average: -0.1 km/h on Sep 23

Maximum Diurnal Average: 0.5 km/h at hour 14

Minimum Diurnal Average: 0.2 km/h at hour 18

Monthly Average: 0.30 km/h

Percentiles: P_1 = -0.7 P_{10} = -0.1 Q_1 = 0.0 Median = 0.2 Q_3 = 0.5 P_{90} = 0.8 P_{99} = 1.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.1	0.0	0.2	0.2	0.1	0.2	0.1	0.4	0.4	-0.1	0.3	0.1	0.2	0.5	0.5	1.0	0.0	0.2	0.3	0.7	0.1	0.3	0.3	0.3	1.0
2-Sep	0.2	0.1	0.1	0.2	0.1	0.0	0.2	0.1	0.2	0.1	0.2	0.0	-0.1	0.0	-0.2	0.1	-0.2	0.4	0.2	-0.7	0.6	1.1	0.9	0.8	0.2	1.1
3-Sep	1.2	1.0	0.8	1.3	1.2	1.3	1.2	0.9	0.9	0.6	0.4	0.3	0.4	0.7	0.7	0.6	0.0	-0.4	-0.7	-0.1	-0.4	-0.7	-0.1	-0.2	0.5	1.3
4-Sep	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.7	0.4	-0.2	0.8	1.0	0.4	0.4	0.3	0.5	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.3	1.0
5-Sep	0.2	0.4	0.5	0.1	0.3	0.3	0.4	0.4	0.3	0.5	0.3	0.6	1.6	1.8	1.6	0.5	0.9	-0.1	1.2	1.3	0.0	0.8	0.8	0.8	0.6	1.8
6-Sep	1.1	0.9	0.4	1.0	0.5	-0.2	-0.4	-0.3	0.4	0.4	0.2	0.6	0.1	0.2	-0.4	-0.8	-0.5	-0.4	0.0	0.3	0.2	0.1	0.2	-0.1	0.1	1.1
7-Sep	0.1	0.2	0.4	0.3	0.3	0.2	0.3	0.1	0.3	0.6	0.6	0.5	1.5	1.4	0.7	0.8	0.8	0.1	-0.2	0.4	0.4	-0.1	0.9	1.0	0.5	1.5
8-Sep	0.5	0.3	-0.1	0.6	1.1	0.3	0.8	0.6	0.6	0.3	1.0	-0.5	0.4	0.5	-0.4	-0.2	1.2	0.6	0.2	0.1	0.1	0.2	0.1	-0.3	0.3	1.2
9-Sep	-0.5	-0.2	0.6	-0.4	0.3	0.8	0.6	0.1	0.0	0.2	0.4	0.0	0.5	0.1	0.5	0.9	0.3	0.5	-0.3	0.0	0.3	0.0	0.0	0.0	0.2	0.9
10-Sep	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.0	0.1	0.4	0.2	0.1	0.4	-0.2	0.1	0.4	0.3	0.2	-0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.4
11-Sep	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.6	0.6	-0.1	0.3	0.0	0.0	2.0	0.4	0.1	-0.4	0.3	0.5	0.9	0.9	0.6	0.5	0.6	0.4	2.0
12-Sep	0.7	0.5	0.8	0.5	0.4	0.6	0.7	1.0	0.7	0.6	0.9	0.9	0.6	0.5	-0.1	-0.4	-0.1	-0.2	0.0	-0.1	-0.2	0.2	0.2	0.3	0.4	1.0
13-Sep	0.0	0.0	0.4	0.3	0.4	0.6	1.1	-0.1	0.3	0.5	0.2	0.2	0.6	0.2	0.2	-0.1	0.0	0.3	0.2	0.2	0.5	0.5	0.7	1.1	0.4	1.1
14-Sep	0.4	0.8	0.0	0.9	0.3	0.3	0.5	0.1	0.2	0.6	0.2	0.8	0.3	1.2	0.3	0.1	0.2	0.1	0.7	0.6	0.5	0.3	0.1	0.3	0.4	1.2
15-Sep	0.1	0.0	0.1	0.0	-0.1	-0.1	0.2	0.1	0.2	-0.1	0.2	0.5	0.1	0.3	0.2	0.8	0.6	0.8	0.5	0.4	0.6	0.5	0.6	0.6	0.3	0.8
16-Sep	0.1	0.4	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.4	-0.2	0.7	1.7	0.3	0.0	1.4	0.2	0.0	0.1	0.7	0.7	0.9	0.7	0.6	0.4	1.7
17-Sep	1.0	1.2	0.7	0.5	0.6	0.5	0.3	0.1	0.7	0.6	0.2	0.4	0.0	-0.5	-0.4	0.0	0.1	0.4	0.5	0.8	1.1	1.4	0.7	0.5	0.5	1.4
18-Sep	0.7	0.9	1.2	1.3	1.6	1.0	0.9	1.4	0.9	0.1	-0.1	0.1	0.0	0.9	0.2	-0.2	0.5	0.1	-0.2	0.0	-0.1	0.0	0.0	0.0	0.5	1.6
19-Sep	0.0	0.2	0.1	0.0	-0.1	-0.1	0.0	0.0	0.1	0.1	0.3	0.1	0.8	-0.1	0.1	0.5	0.4	0.0	0.0	0.1	0.0	-0.1	-0.1	0.1	0.1	0.8
20-Sep	0.3	0.6	0.8	1.1	0.6	0.5	0.4	0.8	1.0	0.5	0.3	0.7	0.5	1.0	0.8	1.3	0.5	0.4	0.8	0.9	0.9	0.8	0.8	1.0	0.7	1.3
21-Sep	1.2	0.8	0.4	0.1	0.2	0.2	0.3	0.1	0.3	0.2	0.2	0.4	0.4	-0.2	0.9	0.1	0.4	0.5	0.5	0.3	0.1	0.0	-0.1	0.0	0.3	1.2
22-Sep	0.0	0.1	-0.2	0.4	0.5	0.5	0.2	0.0	0.3	0.2	0.6	0.3	0.0	0.4	0.0	0.6	0.1	-0.1	-0.1	0.1	0.0	0.2	0.1	0.3	0.2	0.6
23-Sep	0.1	-0.3	-0.3	-0.2	-0.3	-0.3	-0.4	-0.2	0.0	-0.1	0.8	0.2	-0.1	0.1	-0.3	0.3	-0.1	-0.5	-0.3	-0.3	-0.3	0.1	0.0	-0.1	-0.1	0.8
24-Sep	-0.2	0.2	0.1	0.1	0.1	0.0	-0.1	0.0	-0.2	0.1	0.1	0.2	0.5	0.8	0.9	0.7	0.3	0.6	0.0	0.1	0.2	0.2	0.4	0.5	0.2	0.9
25-Sep	0.1	0.1	0.3	0.7	1.0	0.5	0.6	1.0	1.1	0.7	0.8	0.5	0.2	0.3	0.1	0.6	0.6	0.2	0.5	0.5	-0.1	0.3	0.4	0.2	0.5	1.1
26-Sep	0.0	-0.1	0.0	-0.1	0.1	0.2	0.1	0.2	0.2	0.6	0.4	0.4	0.3	0.3	0.2	0.0	0.1	0.4	0.1	-0.3	-0.1	0.0	-0.1	0.2	0.1	0.6
27-Sep	0.0	0.0	0.3	-0.3	-0.1	0.2	0.0	0.5	0.4	0.0	0.5	0.7	0.0	-0.2	0.6	0.2	0.3	0.1	0.3	0.2	0.1	0.0	0.2	0.1	0.2	0.7
28-Sep	-0.1	0.1	-0.2	0.0	0.5	0.2	0.2	0.0	0.1	-0.1	0.4	0.2	0.2	0.2	0.6	-0.1	0.2	0.1	0.2	0.5	0.1	1.0	-0.7	-0.7	0.1	1.0
29-Sep	0.4	-0.7	-1.1	-1.5	-0.5	0.1	-0.7	0.0	0.1	-0.2	0.4	1.0	0.7	0.8	0.8	0.2	0.7	0.7	0.7	-0.3	-0.6	0.5	-0.3	-0.6	0.0	1.0
30-Sep	-1.0	0.1	-0.6	0.4	0.5	0.1	0.2	0.3	0.4	0.4	0.4	0.4	1.1	0.5	0.2	0.1	0.4	0.5	0.6	0.1	0.1	0.3	0.4	0.3	0.3	1.1
	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	Diurnal Average	
	1.2	1.2	1.2	1.3	1.6	1.3	1.2	1.4	1.1	0.7	1.0	1.0	1.7	2.0	1.6	1.4	1.2	0.8	1.2	1.3	1.1	1.4	0.9	1.1	Diurnal Maximum	

Summary of Hour Standard Deviations

Mannix - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.4 km/h on Sep 29 10:00

Minimum Value: 0.1 km/h on Sep 11 02:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.4 Q_3 = 2.2 P_{90} = 2.8 P_{99} = 3.8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	0.3	0.3	0.3	0.5	0.4	0.5	1.3	1.1	1.1	1.2	1.1	1.4	2.1	2.3	3.0	2.8	2.8	1.7	1.9	1.3	1.2	1.0	0.8	0.8	3.0
2-Sep	0.6	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.8	1.1	1.2	1.7	2.0	2.3	2.1	2.3	2.0	1.2	1.1	1.7	2.0	2.2	1.7	1.7	2.3
3-Sep	1.2	0.8	1.2	1.2	1.4	1.4	1.3	1.2	1.3	1.7	1.8	1.5	1.5	1.6	1.7	2.2	3.7	3.7	3.5	3.6	2.7	2.5	2.8	2.7	3.7
4-Sep	2.2	2.4	2.2	2.4	2.4	2.3	2.4	2.8	2.8	3.4	3.7	3.6	3.5	4.0	3.4	3.2	2.8	2.1	1.3	0.5	0.5	1.0	0.8	0.5	4.0
5-Sep	0.2	0.2	0.3	0.6	0.3	0.3	0.4	1.1	1.2	1.6	1.6	1.7	2.9	2.8	2.8	2.8	2.3	1.5	1.1	2.2	1.7	1.2	1.2	1.2	2.9
6-Sep	1.0	0.6	0.4	0.5	0.4	0.7	0.8	1.1	1.5	1.8	2.1	2.4	2.6	2.7	2.3	1.7	1.8	0.9	0.6	0.4	0.4	0.4	0.5	0.5	2.7
7-Sep	0.9	0.4	0.8	0.4	0.5	0.4	0.4	0.5	0.6	1.1	1.3	2.3	2.5	2.3	2.1	2.0	2.1	1.9	1.9	1.7	2.2	1.4	1.5	1.5	2.5
8-Sep	1.5	1.5	1.7	2.0	1.3	1.5	1.7	1.6	2.2	1.8	2.1	2.3	2.6	2.5	2.0	2.0	1.3	1.1	0.4	0.2	0.2	0.3	0.5	1.3	2.6
9-Sep	1.9	1.7	1.1	1.2	0.8	0.8	0.8	0.8	1.2	1.4	1.4	1.9	2.1	2.3	2.3	2.1	1.5	0.8	0.8	0.5	0.4	0.6	0.6	0.5	2.3
10-Sep	0.8	0.6	0.9	0.6	0.4	0.3	0.4	0.6	0.8	1.2	1.7	2.1	2.3	2.3	2.2	2.4	1.8	1.2	0.7	1.0	1.1	0.6	0.3	0.2	2.4
11-Sep	0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.7	0.8	0.9	1.2	1.7	1.9	2.9	2.4	2.2	1.7	1.2	1.3	1.0	1.0	0.5	0.3	0.4	2.9
12-Sep	0.5	0.8	0.7	0.7	0.6	0.9	0.7	0.7	1.5	1.5	2.0	2.2	2.9	3.1	2.9	2.3	2.1	0.7	0.2	1.0	0.4	1.1	0.8	0.5	3.1
13-Sep	0.3	0.3	0.6	0.4	0.3	0.5	0.7	0.7	0.8	1.3	1.4	1.4	2.0	1.4	1.0	0.8	1.0	0.6	0.8	1.3	1.1	0.4	0.3	0.5	2.0
14-Sep	0.8	0.5	0.6	0.5	0.6	0.7	0.4	0.6	1.0	1.6	1.0	1.5	2.6	1.9	1.6	1.4	2.2	2.1	1.5	1.3	0.7	0.6	0.3	0.2	2.6
15-Sep	0.2	0.2	0.2	0.4	0.6	0.7	0.7	0.8	0.9	1.3	1.7	2.0	2.1	2.5	2.2	2.9	3.1	2.6	1.9	2.1	2.1	1.7	2.0	1.8	3.1
16-Sep	1.3	1.2	1.0	0.8	0.9	1.1	0.6	0.7	1.2	1.6	2.3	2.4	2.2	2.3	2.4	2.0	1.4	0.8	0.5	0.6	1.0	1.4	1.1	0.7	2.4
17-Sep	1.0	0.8	0.6	0.3	0.5	0.6	0.7	1.3	1.1	1.7	2.3	2.4	2.7	2.4	2.7	2.9	3.0	3.0	2.0	2.2	2.7	2.4	1.8	1.9	3.0
18-Sep	1.5	1.3	1.0	1.2	1.0	1.3	1.3	2.4	2.5	2.8	2.9	3.2	2.8	2.9	2.9	2.4	2.0	1.1	0.5	0.3	0.3	0.3	0.4	0.5	3.2
19-Sep	1.1	1.2	0.8	0.9	0.9	0.8	0.5	0.4	0.8	1.9	2.0	1.7	2.6	2.8	2.6	2.3	1.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	2.8
20-Sep	0.3	0.4	0.7	0.7	0.7	0.5	0.4	1.1	1.6	1.4	0.9	2.3	2.3	3.1	3.0	2.9	2.3	1.4	1.0	1.4	1.4	1.2	0.9	0.9	3.1
21-Sep	0.7	0.7	0.8	1.1	0.8	0.5	0.5	0.5	1.2	1.6	2.1	1.7	2.0	1.9	2.5	1.8	1.7	1.6	2.2	1.6	0.5	1.2	1.0	1.4	2.5
22-Sep	1.4	1.9	1.6	1.7	2.3	2.2	1.5	0.9	1.3	2.1	2.4	2.9	3.0	3.5	2.8	2.9	2.2	1.1	0.5	1.5	1.5	1.7	1.7	1.8	3.5
23-Sep	1.7	1.1	1.3	1.7	1.5	1.4	1.3	0.8	1.0	1.6	2.9	3.1	2.8	2.6	2.5	2.9	3.2	2.1	1.8	1.5	1.6	1.5	0.8	0.7	3.2
24-Sep	1.1	1.0	0.9	0.8	0.6	0.8	0.9	0.9	1.3	1.9	2.6	2.5	2.5	3.0	2.9	2.0	1.4	1.4	0.7	0.6	0.4	0.3	0.4	0.5	3.0
25-Sep	0.5	0.3	0.4	0.5	0.6	0.8	0.8	1.2	1.0	1.2	1.6	1.8	1.5	1.8	1.7	2.0	1.6	1.2	1.5	1.5	1.8	2.5	2.2	0.7	2.5
26-Sep	0.3	0.3	0.6	0.7	0.7	0.6	0.9	1.1	0.9	2.2	2.2	3.2	3.0	3.0	2.6	2.7	2.3	2.0	0.9	0.5	0.5	0.7	0.5	0.7	3.2
27-Sep	1.1	1.1	1.7	1.9	2.4	2.9	2.9	3.9	4.0	3.6	3.3	3.3	3.2	3.2	2.8	2.5	2.3	1.0	0.5	0.6	0.6	0.9	0.6	0.8	4.0
28-Sep	1.0	1.1	1.5	1.6	1.1	0.8	0.7	1.0	1.4	1.8	1.8	2.1	2.1	2.2	2.1	2.1	1.1	0.3	0.2	2.0	2.5	2.6	2.2	1.9	2.6
29-Sep	1.6	2.3	2.6	2.1	2.3	2.6	2.9	3.8	3.8	4.4	3.9	3.9	3.3	3.1	2.4	2.2	1.9	1.6	1.3	2.1	2.2	3.1	2.8	2.7	4.4
30-Sep	2.5	2.2	1.8	1.8	1.9	0.5	0.7	0.5	0.9	1.4	1.9	1.9	2.3	1.7	1.9	2.0	2.5	2.0	2.4	2.4	1.8	2.0	1.6	2.2	2.5
	2.5	2.4	2.6	2.4	2.4	2.9	2.9	3.9	4.0	4.4	3.9	3.9	3.5	4.0	3.4	3.2	3.7	3.7	3.5	3.6	2.7	3.1	2.8	2.7	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS06
PATRICIA MCINNES
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
SEPTEMBER 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	684	36	36	100	-	-	16.2	0	2.5	0
TRS (ppb) Average	683	36	37	99.86	1.5	0	1.4	0	0.6	0
THC (ppm) Average	684	36	36	100	-	-	2.8	-	2.3	-
NMHC(ppm) Average	684	36	36	100	-	-	0.048	-	0.005	-
CH4(ppm) Average	684	36	36	100	-	-	2.8	-	2.3	-
O3 (ppb) Average	685	34	35	99.86	-	-	55.4	0	33.9	-
NO2 (ppb) Average	683	36	37	99.86	-	-	16.6	0	5.9	-
NO (ppb) Average	683	36	37	99.86	-	-	11	-	2.4	-
NOX (ppb) Average	683	36	37	99.86	-	-	24.3	-	8.3	-
NH3 (ppb) Average	618	43	102	91.81	-	-	17.5	0	3.2	-
PM2.5 (ug/m3) Average	718	2	2	100	-	-	265	0	75.9	8
Temperature 2 m (C) Average	720	0	0	100	-	-	28.9	-	18.9	-
Relative Humidity (%) Average	720	0	0	100	-	-	99.4	-	79.6	-
Wind Speed 10 m (km/h) Average	720	0	0	100	-	-	28	-	17	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	0.49	1.4	-	0	0	0.1	0.2	0.4	0.7	16.2
TRS (ppb) Average	683	0.23	0.2	-	0	0.1	0.1	0.2	0.3	0.4	1.4
THC (ppm) Average	684	2.06	0.1	-	1.9	2	2	2	2.1	2.2	2.8
NMHC(ppm) Average	684	0	0.003	-	0	0	0	0	0	0	0.048
CH4(ppm) Average	684	2.06	0.1	-	1.9	2	2	2	2.1	2.2	2.8
O3 (ppb) Average	685	26.23	10.7	-	3.4	11.7	18.5	27.5	33.4	38.8	55.4
NO2 (ppb) Average	683	2.35	2.6	-	0	0.1	0.5	1.6	3.3	5.7	16.6
NO (ppb) Average	683	0.8	1.3	-	0	0	0.1	0.3	0.9	1.9	11
NOX (ppb) Average	683	3.15	3.5	-	0	0.2	0.9	2	4	7.3	24.3
NH3 (ppb) Average	618	0.57	2.6	-	0	0	0	0	0	0	17.5
PM2.5 (ug/m3) Average	718	25.45	29.4	-	0.7	4.1	7.9	16.7	30.7	55	265
Temperature 2 m (C) Average	720	14.5	5.7	-	0.9	7.8	10.6	13.7	18.2	22.5	28.9
Relative Humidity (%) Average	720	63.08	20.3	-	25	35.2	46.5	62.4	80.9	91.1	99.4
Wind Speed 10 m (km/h) Average	720	9.5	5	-	1	3	5	9	12	17	28
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	11 Sep 2025 15:00	11 Sep 2025 15:00	1	Maintenance - sample manifold cleaned
NH3	01 Sep 2025 03:00	30 Sep 2025 02:00	58	Stabilization after daily span

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.2 ppb on Sep 1 14:00 Maximum Daily Average: 2.5 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 1 07:00
Maximum Diurnal Average: 1.5 ppb at hour 14
Monthly Average: 0.49 ppb

Minimum Daily Average: 0.0 ppb on Sep 26
Minimum Diurnal Average: 0.1 ppb at hour 4
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 6.7

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	4.2	14.4	16.2	3.7	0.7	0.8	0.1	0.1	0.2	0.2	0.1	0.2	0.2	1.8	16.2
2-Sep	0.1	0.0	0.0	0.0	0.0	Z	0.2	0.4	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.2	0.7
3-Sep	Z	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.6	0.6	0.5	0.4	0.4	0.4	4.6	2.4	0.5	0.2	0.2	0.4	0.6	3.0	2.2	0.9	4.6
4-Sep	0.2	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.6	2.7	2.4	2.4	1.0	0.1	0.0	0.2	0.8	3.5	0.9	0.2	0.2	0.1	0.0	0.0	0.7	3.5
5-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.4	0.3	0.4	0.4	0.4	0.3	0.5
6-Sep	0.3	0.3	0.2	Z	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.7	1.1	0.8	0.8	0.8	0.6	0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.4	1.1
7-Sep	0.3	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.4	0.5	0.6	1.8	11.2	10.9	6.5	1.0	0.4	0.3	0.4	0.3	0.3	0.4	0.4	1.6	11.2
8-Sep	0.3	0.3	0.3	0.2	0.2	Z	4.6	7.7	2.9	3.1	5.7	5.9	4.2	3.0	4.2	4.7	3.4	2.7	1.9	0.8	0.7	0.6	0.5	0.3	2.5	7.7
9-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.8	0.7	0.8	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.8
10-Sep	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	1.1	13.4	10.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	1.2	13.4
11-Sep	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.3	C	C	C	C	C	C	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.1	0.1	--	0.4
12-Sep	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.2	0.3	0.6	0.6	0.4	0.4	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.6
13-Sep	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.4	0.5	0.6	0.8	1.2	1.0	1.0	1.0	0.9	1.4	2.5	1.5	0.8	0.5	0.3	0.2	0.7	2.5
14-Sep	0.3	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.3	0.2	0.2	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.5
15-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2
16-Sep	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	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.3
17-Sep	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.6	0.2	0.3	0.2	0.2	0.2	0.3	0.6
18-Sep	0.2	0.2	0.2	Z	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
19-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2
20-Sep	0.1	0.1	0.2	0.1	0.2	Z	0.2	0.2	0.5	1.0	0.9	0.4	0.4	1.2	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.5	0.5	0.4	1.2
21-Sep	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3
22-Sep	0.1	Z	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.2	1.4	2.1	1.3	0.3	2.1
23-Sep	0.6	0.4	Z	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.6
24-Sep	0.1	0.1	0.0	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.5	0.4	0.4	0.1	0.1	0.2	0.5
25-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.4	0.4	0.4	0.5	0.7	0.5	0.8	0.4	0.2	0.1	0.5	0.4	0.1	0.0	0.0	0.0	0.3	0.8
26-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1
27-Sep	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2
28-Sep	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
29-Sep	0.2	0.1	Z	0.2	0.1	0.2	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.6	0.5	0.2	0.2	0.4	0.3	0.3	0.6
30-Sep	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.4	0.8	1.2	0.5	2.8	4.0	0.6	0.4	0.3	0.2	0.2	1.0	1.0	0.3	0.1	0.4	0.7	4.0
	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.5	1.0	1.0	1.1	1.5	0.9	0.8	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.6	0.5	0.4	0.4	0.4	0.3	4.6	7.7	2.9	3.1	13.4	10.2	14.4	16.2	10.9	6.5	3.4	3.5	2.5	1.5	1.0	1.4	3.0	2.2	Diurnal Maximum	

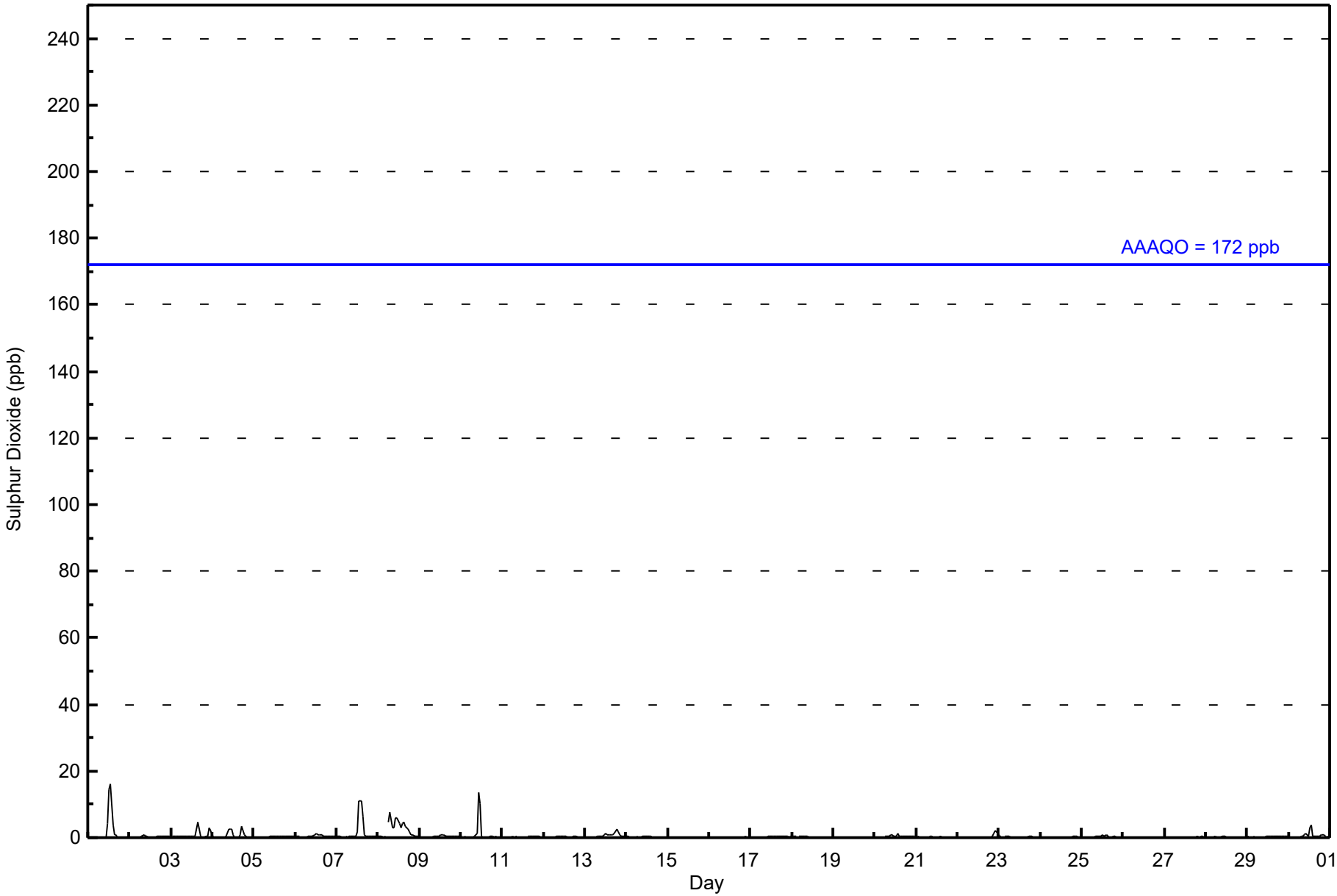
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	679	99.27	99.27
11 - 20	5	0.73	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: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	39	14	2	3	7	41	114	44	56	71	84	78	30	35	28	33	679
11 - 20	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
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	42	16	2	3	7	41	114	44	56	71	84	78	30	35	28	33	684

Total Number of Valid Hours: 684

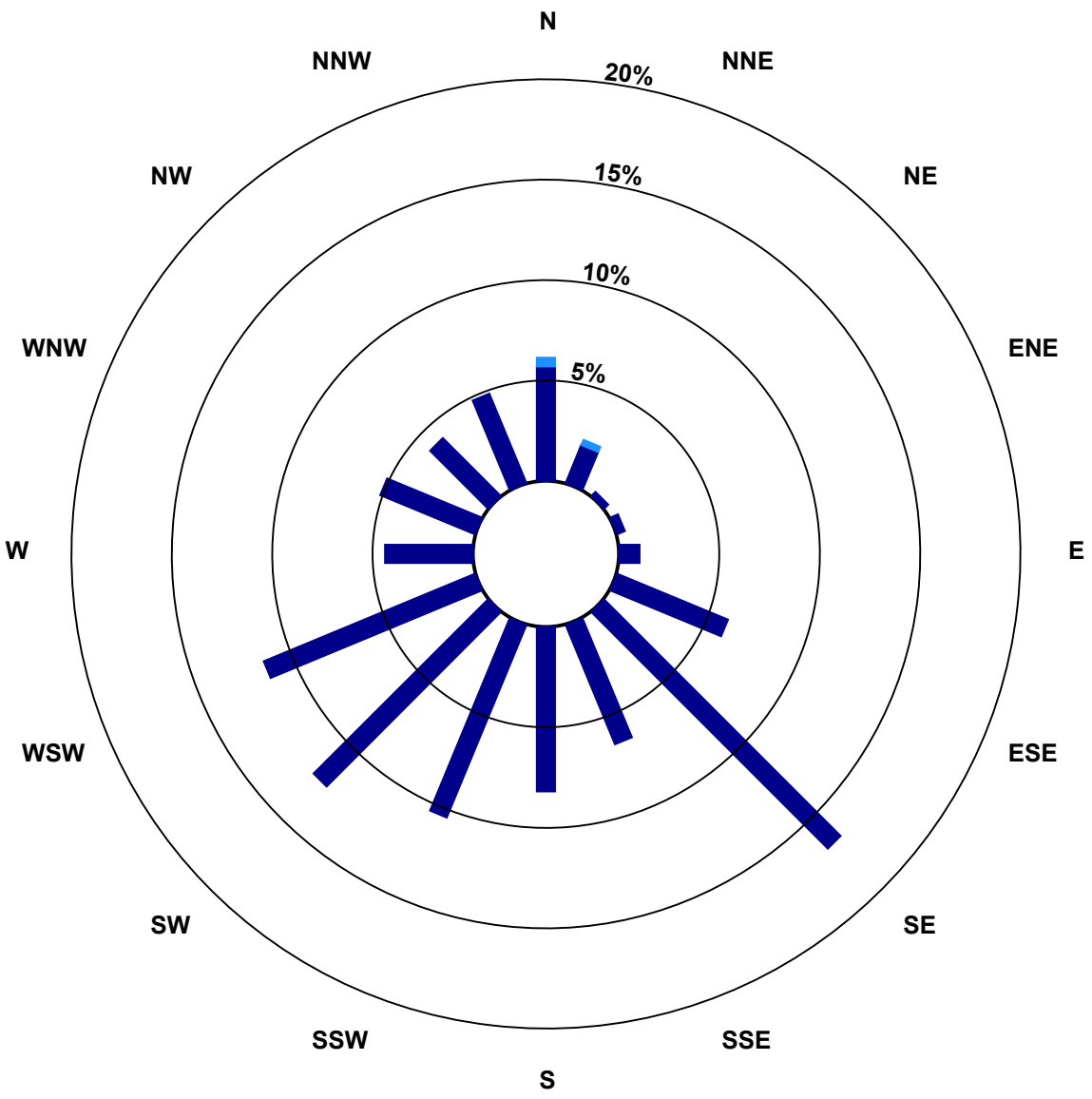
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

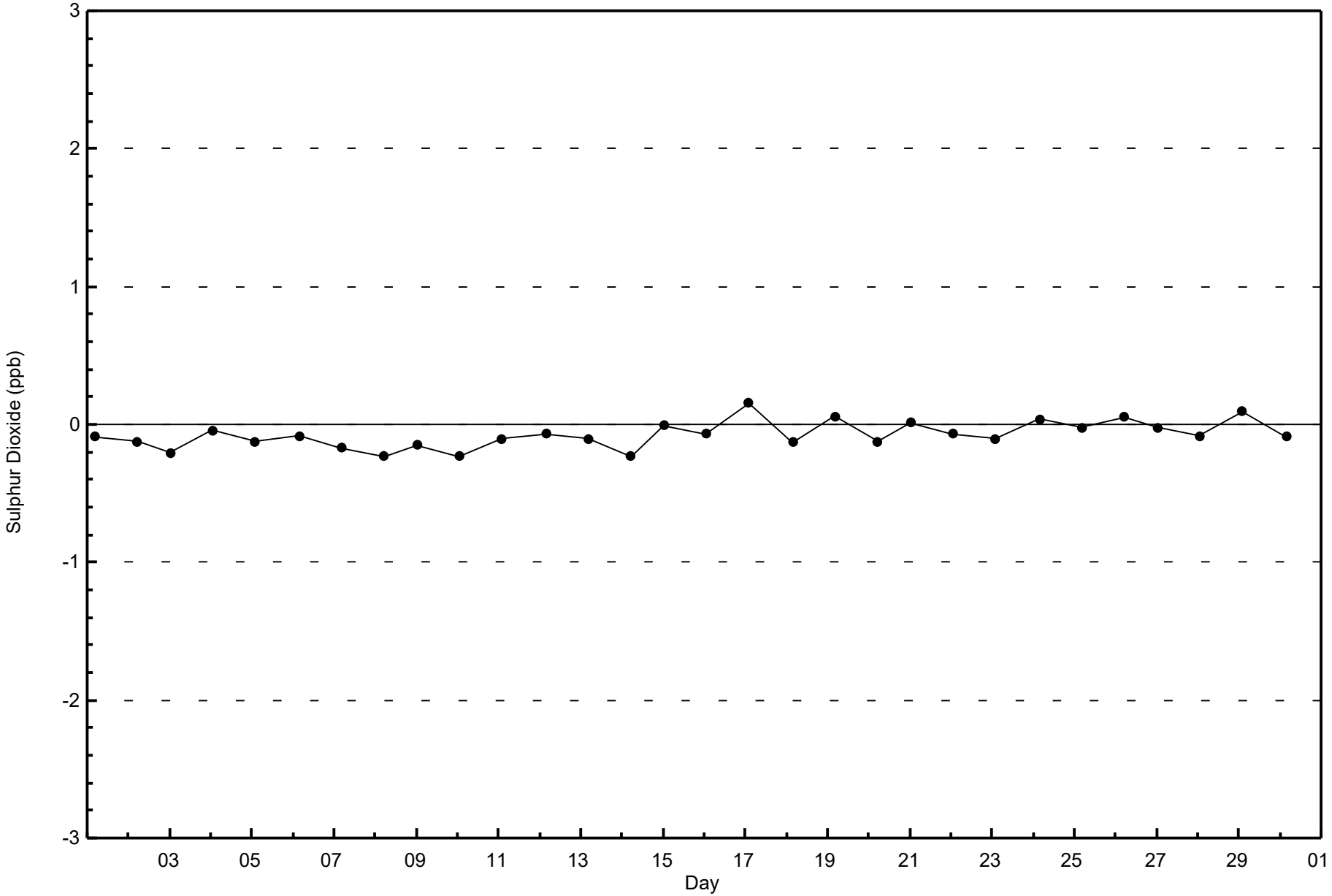
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025

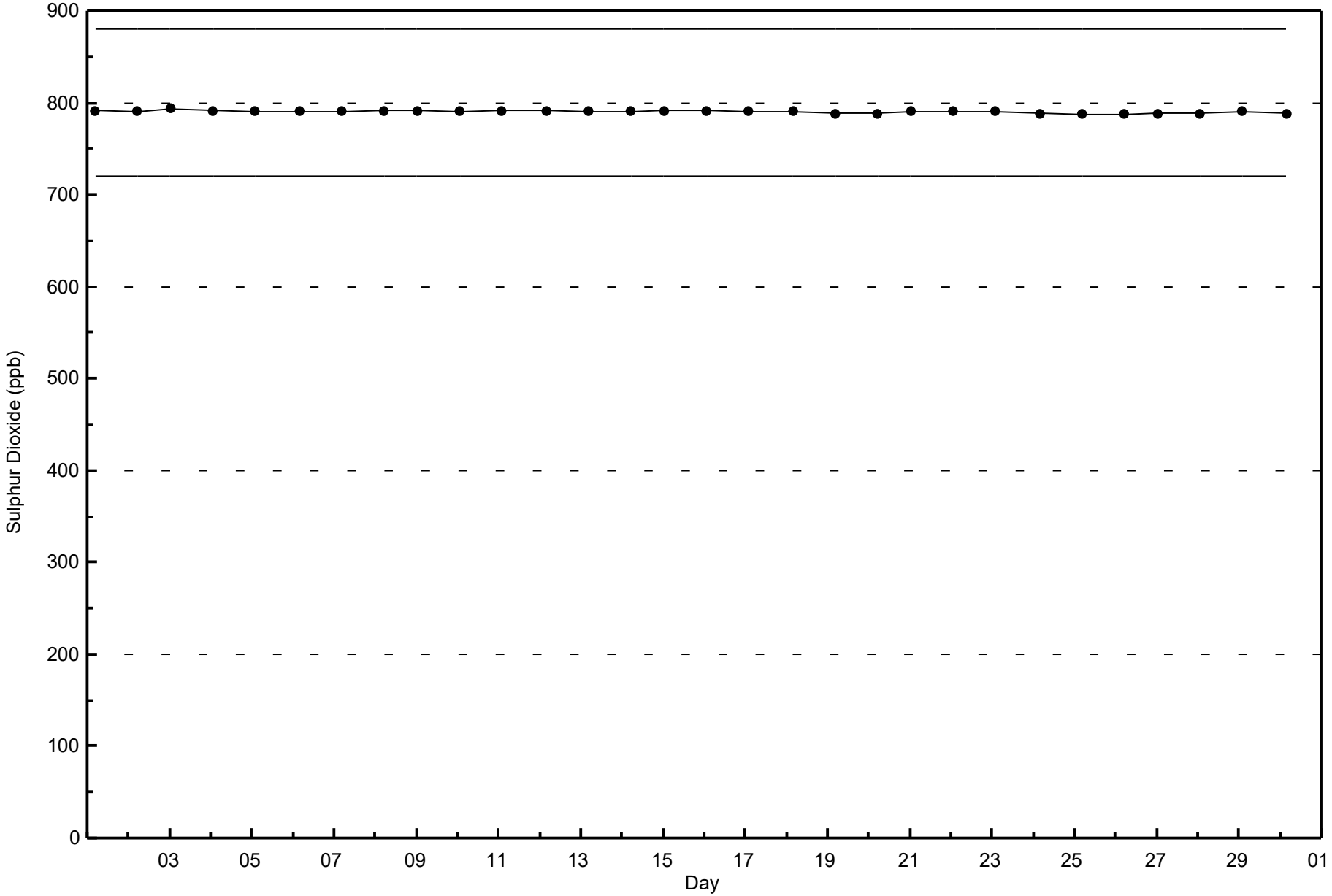


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 1.5 ppb on Sep 7 18:30 Maximum Daily Average: 0.6 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 24 04:00 Minimum Daily Average: 0.1 ppb on Sep 19

Maximum Diurnal Average: 0.3 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.23 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 1.0

Periods in Service:	1440
Periods of Valid Data:	1366
Periods of Invalid Data:	74
Periods of Calibration:	72
Percent Operational Time:	99.9

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	0.4	0.5	0.3	0.3	0.5	Z	0.4	0.2	0.3	0.2	0.2	0.4	0.4	0.7	0.7	0.6	0.4	0.6	0.7	0.5	0.5	0.3	0.4	0.2	0.4	0.9
	0.5	0.5	0.3	0.5	0.3	SP	0.3	0.2	0.3	0.2	0.2	0.5	0.6	0.9	0.9	0.5	0.5	0.6	0.5	0.9	0.4	0.3	0.3	0.3		
2-Sep	Z	0.8	0.7	0.6	0.3	0.3	0.4	0.4	0.6	0.8	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.9
	SP	0.8	0.7	0.5	0.3	0.3	0.3	0.4	0.9	0.5	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2		
3-Sep	0.2	Z	0.3	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	0.4	0.3	0.3	0.2	0.3	0.3	0.5	1.2	0.3	1.2
	0.3	SP	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.4	0.4	0.8	1.0		
4-Sep	0.5	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.5	0.6	0.4	0.3	0.2	0.2	0.3	0.8
	0.3	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.8	0.4	0.3	0.3	0.2	0.2		
5-Sep	0.2	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.4
	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2		
6-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2		
7-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.7	1.0	0.4	0.4	1.0	1.5	1.5	0.8	1.2	0.3	0.3	0.5	1.5
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9	0.7	0.5	0.5	1.3	1.4	1.1	1.3	0.5	0.3	0.4		
8-Sep	Z	0.3	0.4	0.5	0.3	0.3	0.7	0.9	0.9	1.1	0.6	1.1	1.0	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.5	1.2
	SP	0.3	0.9	0.3	0.4	0.5	0.6	0.9	1.0	0.9	0.9	1.2	0.7	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2		
9-Sep	0.3	Z	0.2	0.1	0.1	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	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
	0.2	SP	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2		
10-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	--	0.6
	0.2	0.1	SP	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.2	0.6	0.3	0.3	0.3		
11-Sep	0.2	0.2	0.4	Z	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.1	0.1	M	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.5
	0.2	0.4	0.4	SP	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	M	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2		
12-Sep	0.2	0.3	0.2	0.3	Z	0.4	0.5	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	0.2	0.1	0.2	0.2	0.2	0.5
	0.2	0.3	0.3	0.3	SP	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	0.2	0.1	0.1	0.2	0.2		
13-Sep	0.2	0.1	0.1	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.6	0.5	0.4	0.5	0.3	0.3	0.2	0.6
	0.1	0.2	0.2	0.1	0.1	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.6	0.6	0.4	0.4	0.4	0.3	0.2		
14-Sep	Z	0.2	0.3	0.3	0.2	0.4	0.3	0.4	0.5	0.5	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
	SP	0.3	0.2	0.3	0.3	0.3	0.4	0.6	0.5	0.5	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1		
15-Sep	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3
	0.1	SP	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	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.3	0.3	Z	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	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3
	0.3	0.3	SP	0.3	0.3	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	0.2	0.2	0.2	0.3	0.2	0.3		
17-Sep	0.3	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3
	0.3	0.3	0.2	SP	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	0.2	0.1	0.1	0.2	0.2	0.1	0.1		
18-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.3	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	0.1	0.1	0.1	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.3	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	0.1	0.1	0.1	0.1		
19-Sep	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	0.1	0.1	0.1	SP	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	0.1	0.1		
20-Sep	Z	0.1	0.2	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2
	SP	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	0.2	0.2	0.2	0.2		
21-Sep	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	0.1	0.2
	0.2	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	0.2	0.2	0.2		
22-Sep	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	0.2	0.2	0.2	0.2	0.2
	0.2	0.1	SP	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	0.2	0.1	0.2	0.1		
23-Sep	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	0.1	SP	0.1	0.1	0.1	0.1	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		
24-Sep	0.1	0.0	0.1	0.1	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.4
	0.1	0.1	0.1	0.0	SP	0.1	0.1	0.1	0.2	0.3	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		
25-Sep	0.1	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.3	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	0.1	0.3
	0.1	0.1	0.1	0.2	0.2	SP	0.2	0.3	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	0.2	0.1		
26-Sep	Z	0.1	0.2	0.2	0.2	0.3	0.3	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	0.4
	SP	0.2	0.2	0.2	0.3	0.3	0.3	0.4	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	0.2	0.2	0.1		
27-Sep	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3
	0.1	SP	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
28-Sep	0.1	0.1	Z	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3	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	0.2	0.5
	0.1	0.1	SP	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1		
29-Sep	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	0.2	0.2	0.2	0.1	0.3	0.4	0.2	0.4
	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.4	0.3		
30-Sep	0.3	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.7	0.9	0.9	0.8	0.5	0.4	0.9	1.1	0.9	0.9	0.2	0.6	0.5	0.6	0.8	0.6	1.1
	0.3	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.5	0.8	1.0	1.0	0.6	0.3	0.7	1.0	1.1	0.5	0.6	0.3	0.7	0.7	0.5	0.4		
	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	Diurnal Average	
	0.5	0.8	0.9	0.6	0.5	0.5	0.7	0.9	1.0	1.1	1.0	1.2	1.0	0.9	1.0	1.0	1.1	1.3	1.5	1.5	1.3	1.2	0.8	1.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance 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 - September 2025

Maximum Value: 1.4 ppb on Sep 7 19:00

Maximum Daily Average: 0.6 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 19 17:00

Minimum Daily Average: 0.1 ppb on Sep 19

Maximum Diurnal Average: 0.3 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.23 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 1.0

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.5	0.3	0.4	0.4	Z	0.3	0.2	0.3	0.2	0.2	0.4	0.5	0.8	0.8	0.5	0.5	0.6	0.6	0.7	0.4	0.3	0.3	0.2	0.4	0.8
2-Sep	Z	0.8	0.7	0.5	0.3	0.3	0.4	0.4	0.8	0.7	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.8
3-Sep	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.4	0.4	0.6	1.1	0.3	1.1
4-Sep	0.4	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.7	0.5	0.3	0.3	0.2	0.2	0.3	0.7
5-Sep	0.2	0.2	0.3	Z	0.3	0.2	0.3	0.3	0.4	0.3	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	0.4
6-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
7-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.8	0.8	0.4	0.4	1.1	1.4	1.3	1.0	0.9	0.3	0.3	0.5	1.4
8-Sep	Z	0.3	0.7	0.4	0.3	0.4	0.7	0.9	0.9	1.0	0.8	1.2	0.9	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.2
9-Sep	0.2	Z	0.2	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
10-Sep	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.2	0.5	0.3	0.3	0.2	--	0.5
11-Sep	0.2	0.3	0.4	Z	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	M	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4
12-Sep	0.2	0.3	0.2	0.3	Z	0.4	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	0.2	0.1	0.1	0.2	0.2	0.2	0.4
13-Sep	0.1	0.1	0.1	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.6
14-Sep	Z	0.2	0.2	0.3	0.3	0.4	0.3	0.5	0.5	0.5	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	0.5
15-Sep	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3
16-Sep	0.3	0.3	Z	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	0.3	0.3	0.3	0.2	0.3
17-Sep	0.3	0.3	0.2	Z	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	0.2	0.2	0.1	0.1	0.2	0.3
18-Sep	0.2	0.2	0.2	0.2	Z	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	0.1	0.1	0.1	0.1	0.2	0.3
19-Sep	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
20-Sep	Z	0.1	0.2	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2
21-Sep	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	0.2	0.2	0.2	0.1	0.2
22-Sep	0.2	0.1	Z	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	0.2	0.2
23-Sep	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	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	0.1	0.1	0.1	0.2
24-Sep	0.1	0.1	0.1	0.0	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.3
25-Sep	0.1	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.3	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	0.1	0.3
26-Sep	Z	0.1	0.2	0.2	0.2	0.3	0.3	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	0.1	0.2	0.4
27-Sep	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28-Sep	0.1	0.1	Z	0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.2	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	0.2	0.5
29-Sep	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	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.4
30-Sep	0.3	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.8	1.0	1.0	0.7	0.4	0.5	1.0	1.1	0.7	0.8	0.3	0.6	0.6	0.6	0.6	0.6	1.1
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.4	0.8	0.7	0.5	0.4	0.4	0.7	0.9	0.9	1.0	1.0	1.2	0.9	0.8	0.8	1.0	1.1	1.1	1.4	1.3	1.0	0.9	0.6	1.1	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

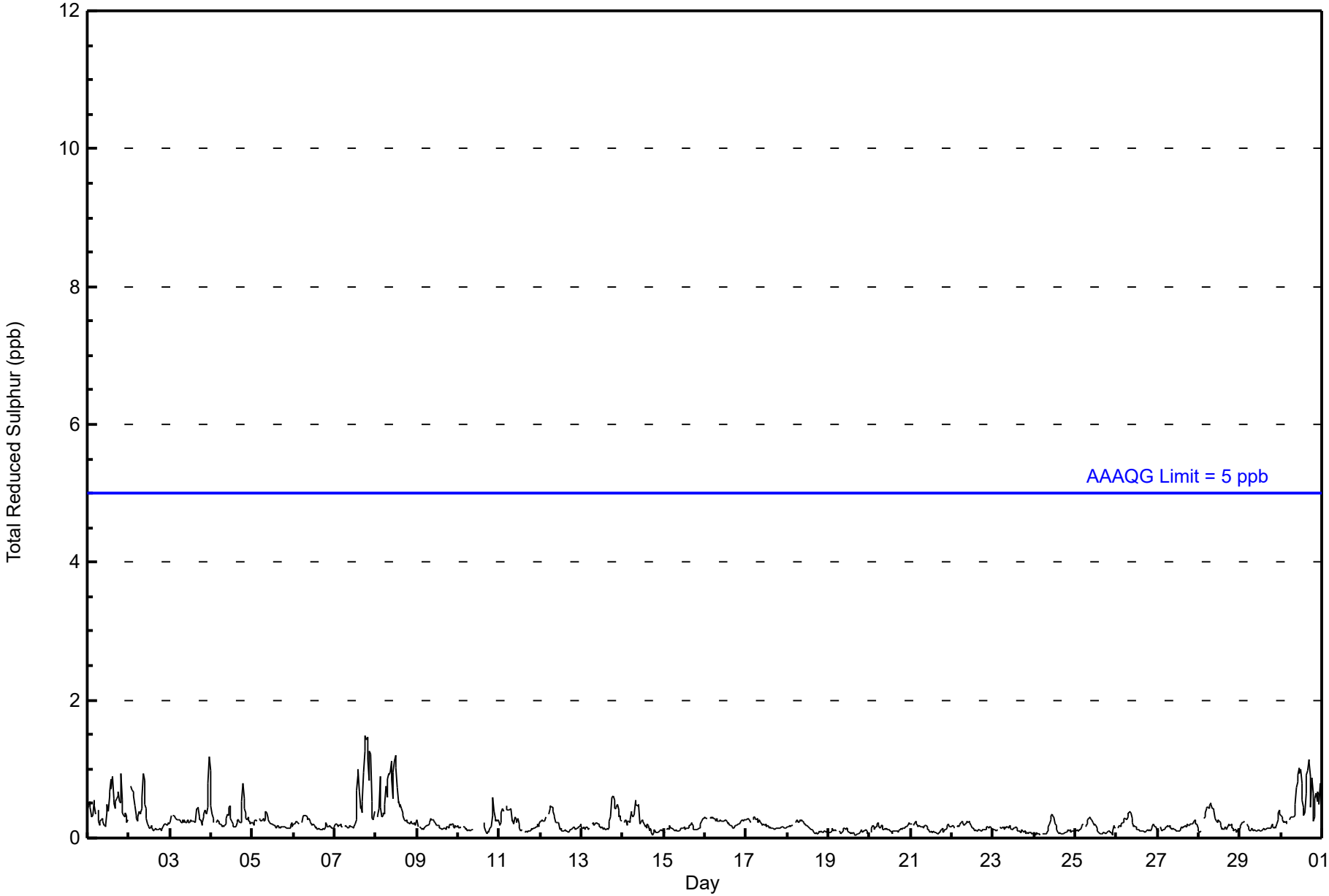
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	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: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	42	15	2	2	7	44	115	43	57	75	83	78	30	32	26	32	683
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	15	2	2	7	44	115	43	57	75	83	78	30	32	26	32	683

Total Number of Valid Hours: 683

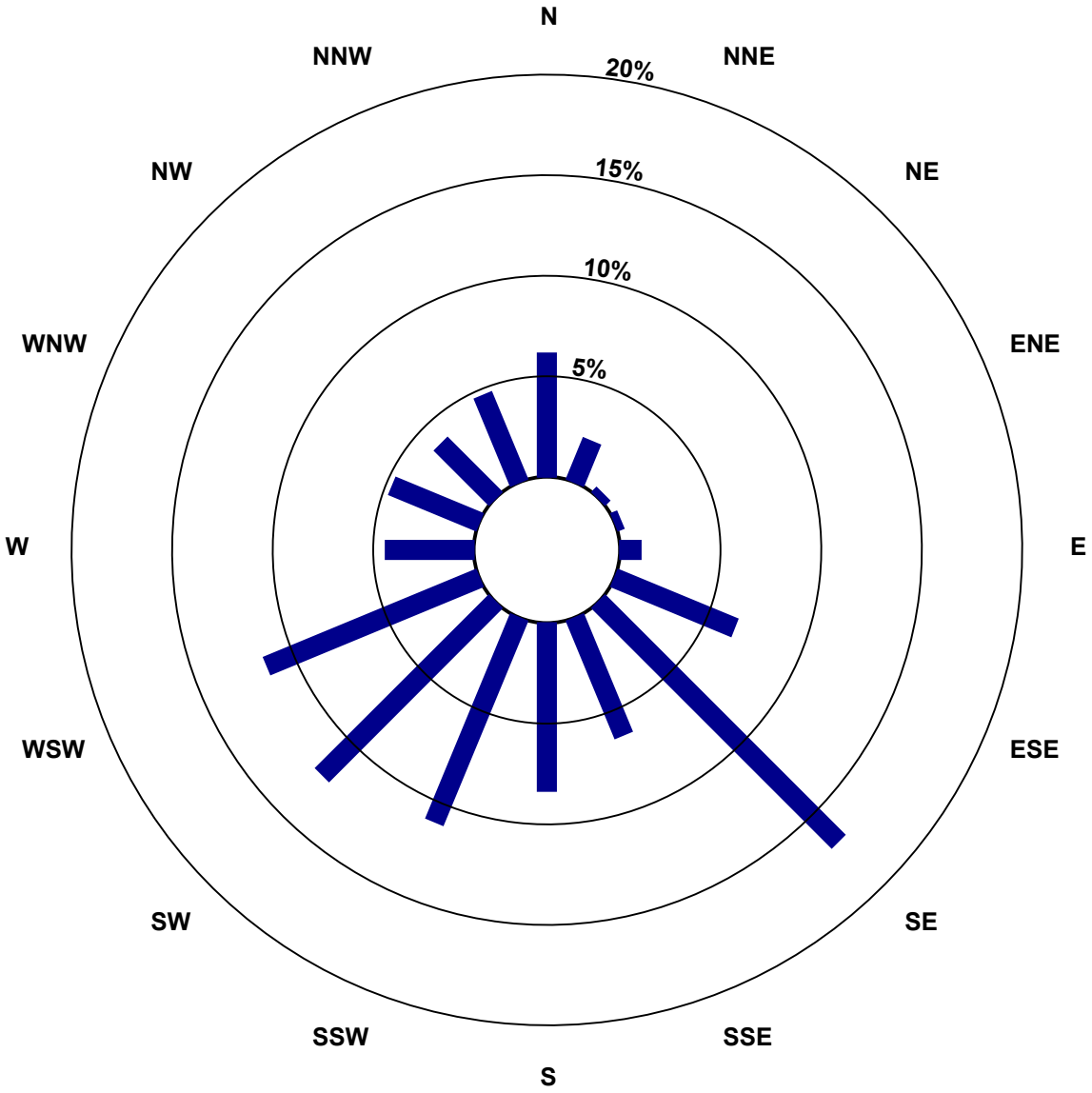
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

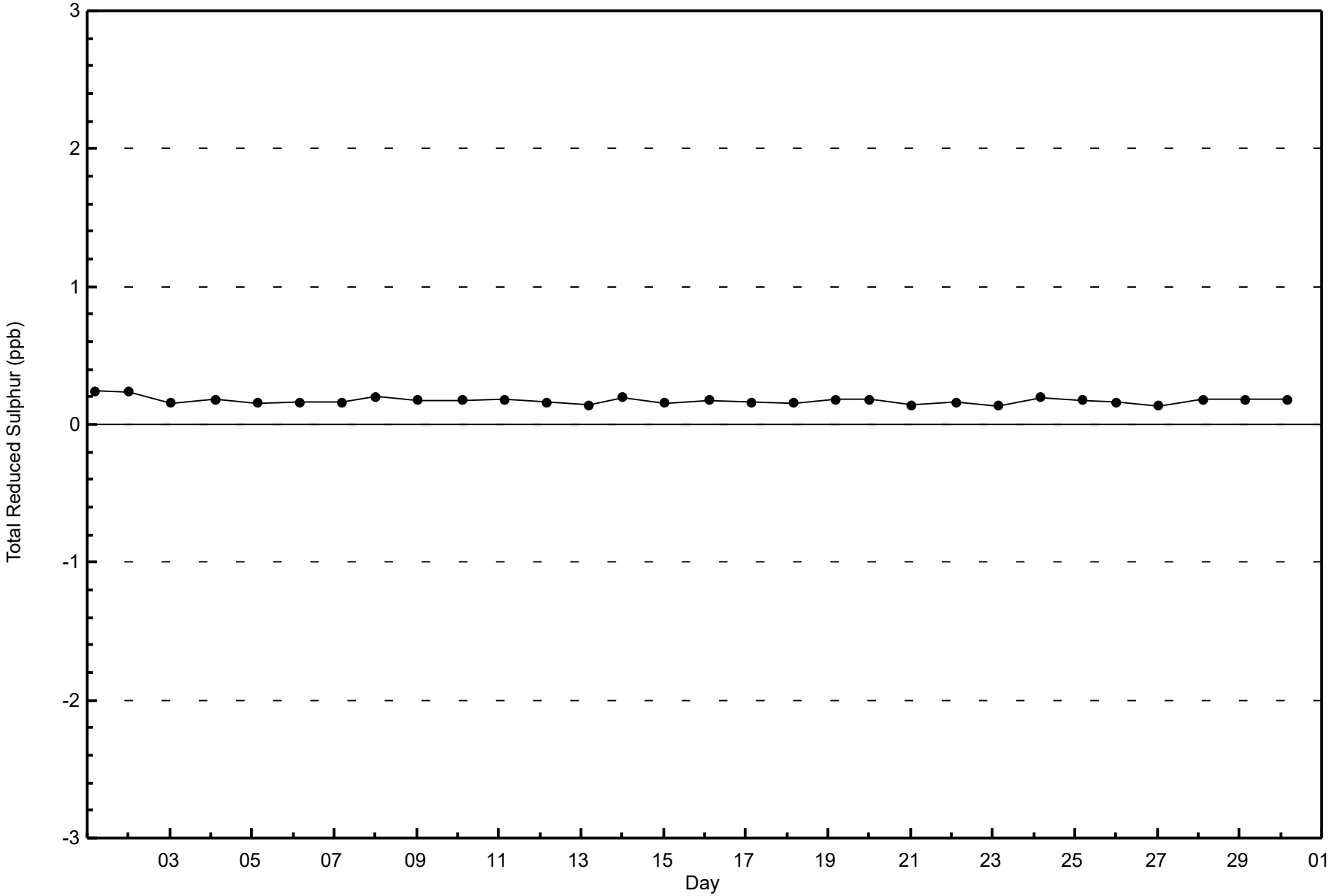
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025

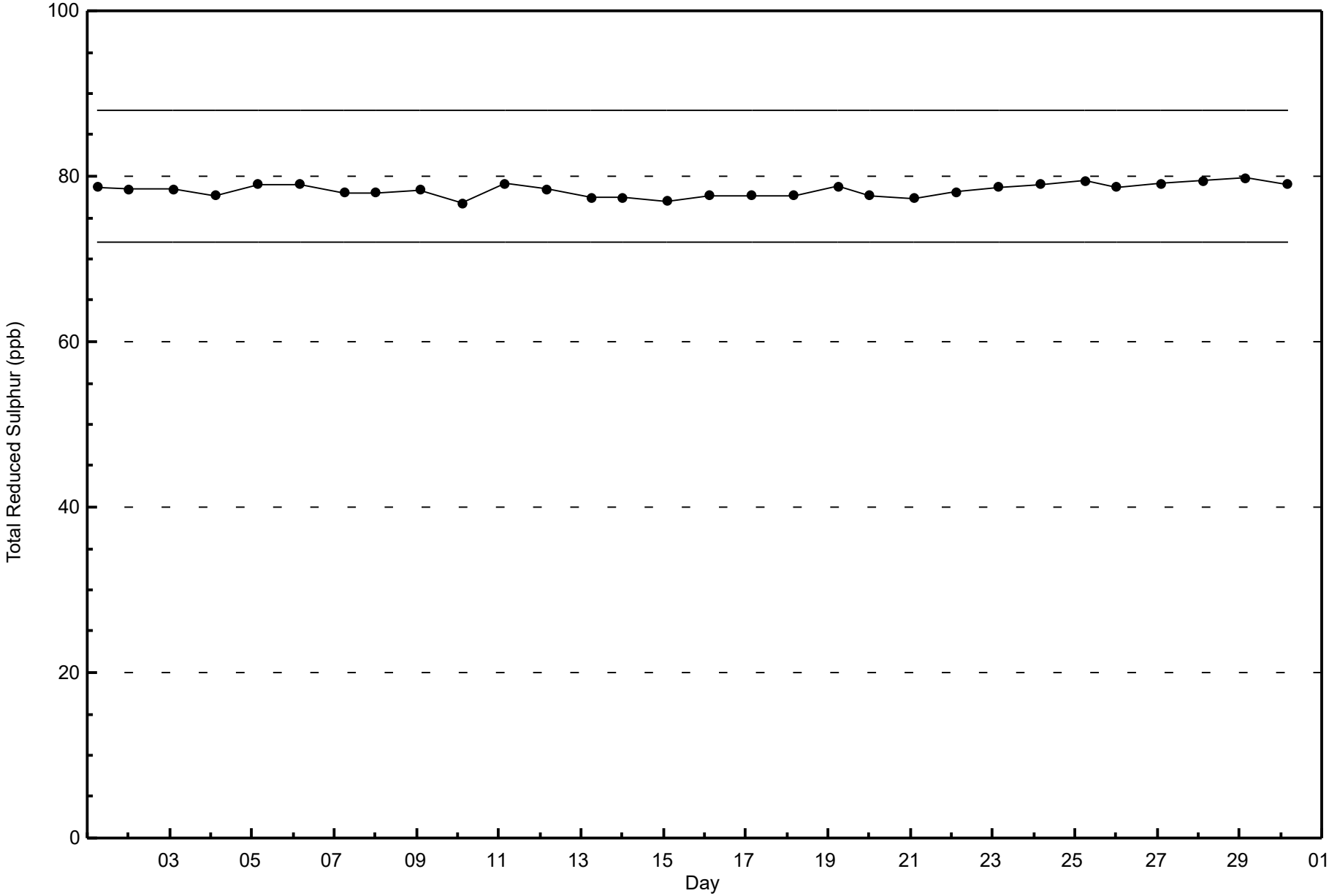


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - September 2025

Maximum Value: 2.8 ppm on Sep 14 00:00

Maximum Daily Average: 2.3 ppm on Sep 13

Minimum Value: 1.9 ppm on Sep 10 16:00

Minimum Daily Average: 2.0 ppm on Sep 22

Maximum Diurnal Average: 2.1 ppm at hour 24

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.06 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.6

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.4	2.4	2.2	2.3	Z	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.4
2-Sep	2.3	2.3	2.4	2.4	2.3	Z	2.3	2.2	2.2	2.2	2.1	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	2.1	2.4
3-Sep	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
4-Sep	2.0	Z	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	2.0	2.0	2.3	2.5	2.4	2.3	2.4	2.0	2.5
5-Sep	2.3	2.3	Z	2.2	2.2	2.1	2.1	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	2.0	2.0	2.0	2.3
6-Sep	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	2.2	2.5	2.1	2.1	2.0	2.0	2.0	2.5
7-Sep	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	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2
8-Sep	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	2.2	2.5	2.5	2.3	2.2	2.5	2.1	2.5
9-Sep	Z	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	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.2	2.3	2.1	2.0	2.3
10-Sep	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.4	2.3	2.3	2.0	2.4
11-Sep	2.3	2.4	Z	2.4	2.4	2.3	2.4	2.1	2.1	C	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6	2.6	--	2.6
12-Sep	2.2	2.2	2.3	Z	2.3	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	2.3
13-Sep	2.1	2.2	2.2	2.4	Z	2.6	2.4	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.5	2.6	2.7	2.6	2.8	2.3	2.8
14-Sep	2.4	2.5	2.5	2.6	2.7	Z	2.4	2.5	2.2	2.3	2.1	2.2	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.4	2.2	2.7
15-Sep	Z	2.0	2.0	2.0	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	2.1	2.0	2.0	2.0	2.0	2.1
16-Sep	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
17-Sep	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
18-Sep	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-Sep	2.0	2.0	2.1	2.1	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	2.1	2.1	2.1	2.0	2.7	2.5	2.2	2.1	2.7
20-Sep	2.1	2.1	2.2	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.1	2.1	2.3
21-Sep	Z	2.3	2.3	2.4	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	2.4
22-Sep	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-Sep	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	2.0	2.1
24-Sep	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	2.1	2.0	2.0	2.1
25-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.1
26-Sep	2.0	2.0	2.0	2.0	2.0	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
27-Sep	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
28-Sep	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	2.0	2.0	2.0	2.0	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.3
29-Sep	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
30-Sep	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.3	2.6	2.5	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.6
	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	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.4	2.5	2.5	2.6	2.7	2.6	2.4	2.5	2.3	2.6	2.5	2.4	2.4	2.2	2.1	2.1	2.2	2.2	2.3	2.5	2.6	2.7	2.6	2.8	Diurnal Maximum	

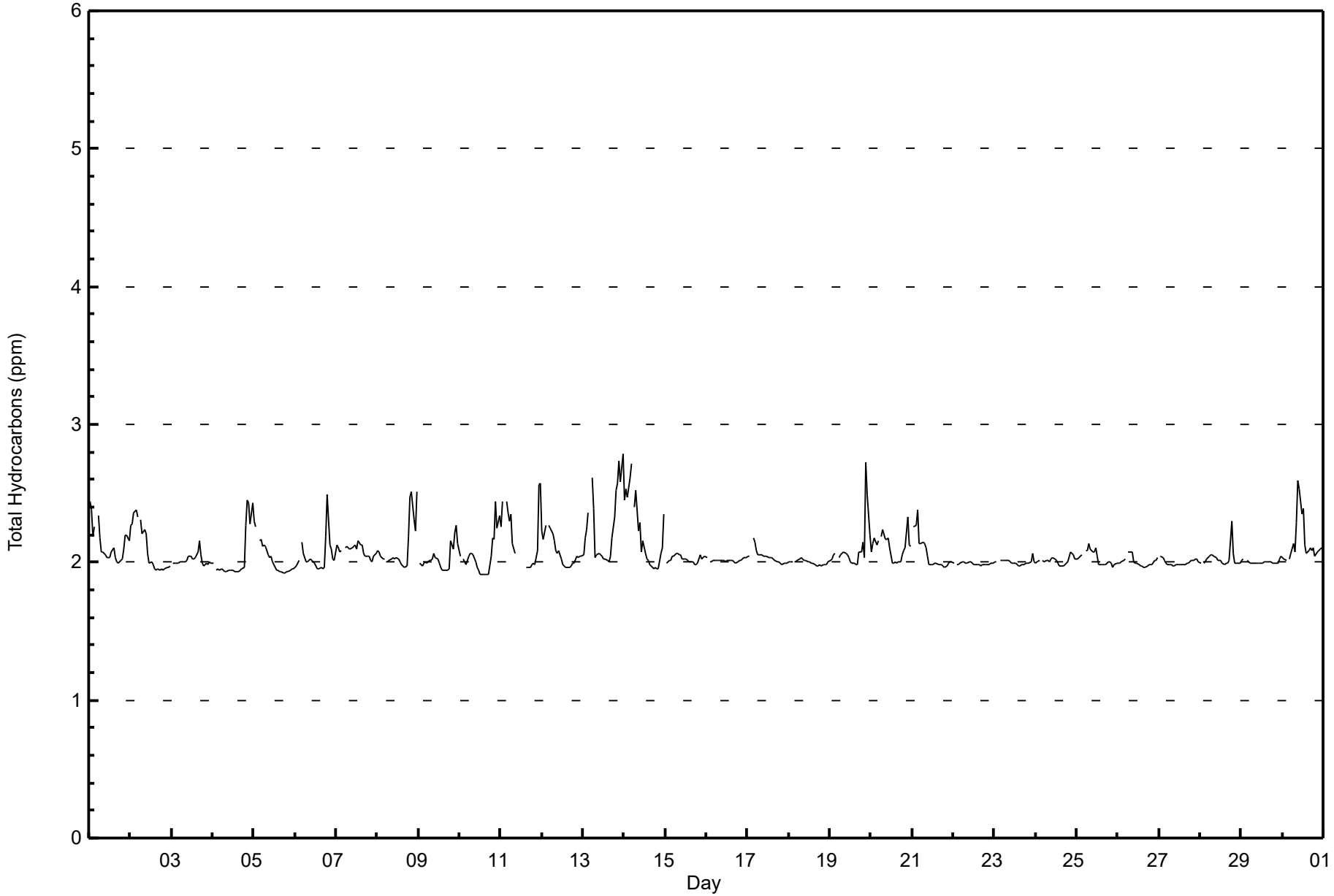
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	462	67.54	67.54
2.1 - 3.0	222	32.46	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Patricia McInnes - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	23	10	1	3	5	35	91	24	26	40	55	62	23	25	19	20	462
2.1 - 3.0	19	6	1	0	2	6	23	20	30	31	29	16	7	10	9	13	222
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	42	16	2	3	7	41	114	44	56	71	84	78	30	35	28	33	684

Total Number of Valid Hours: 684

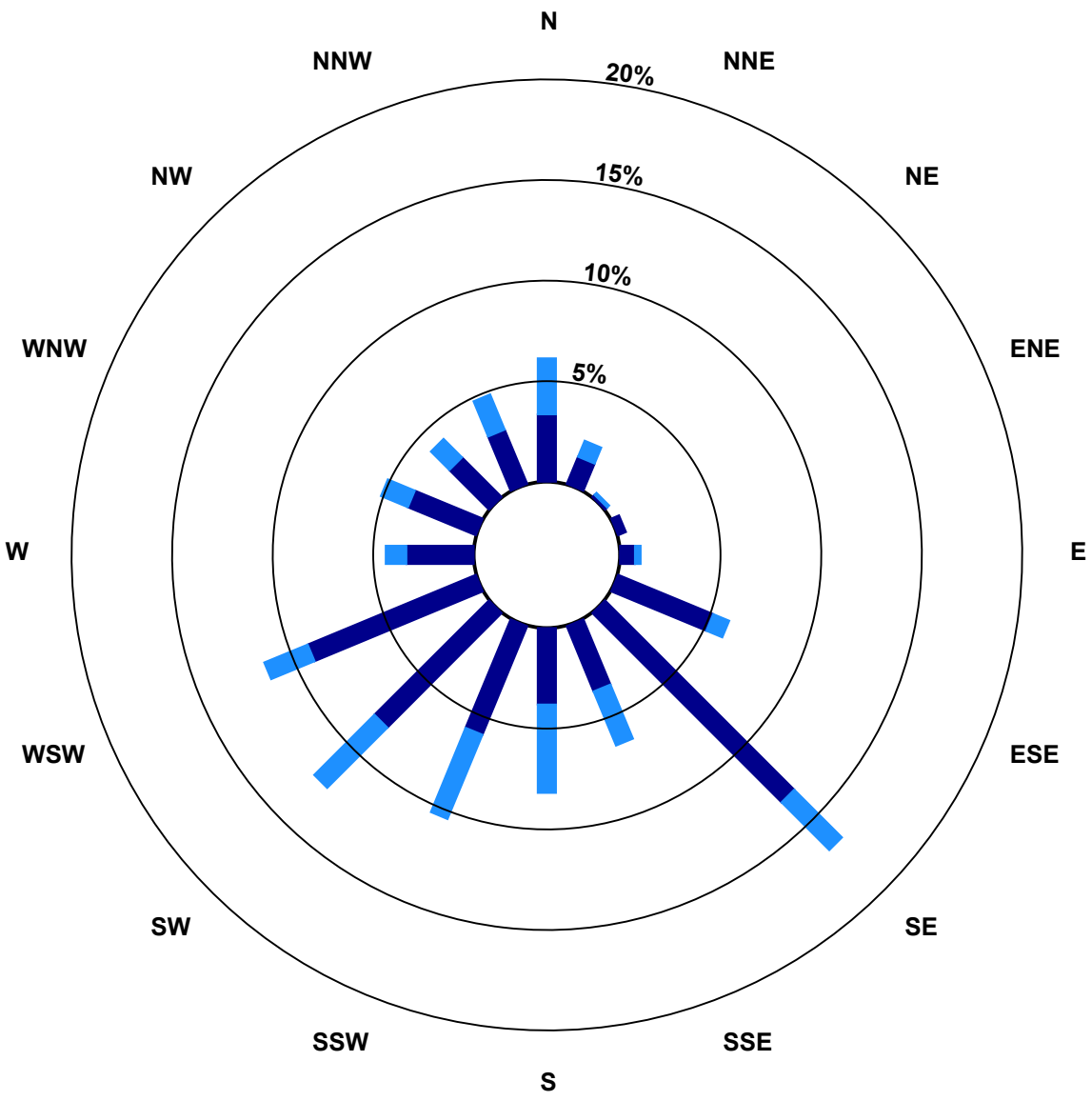
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

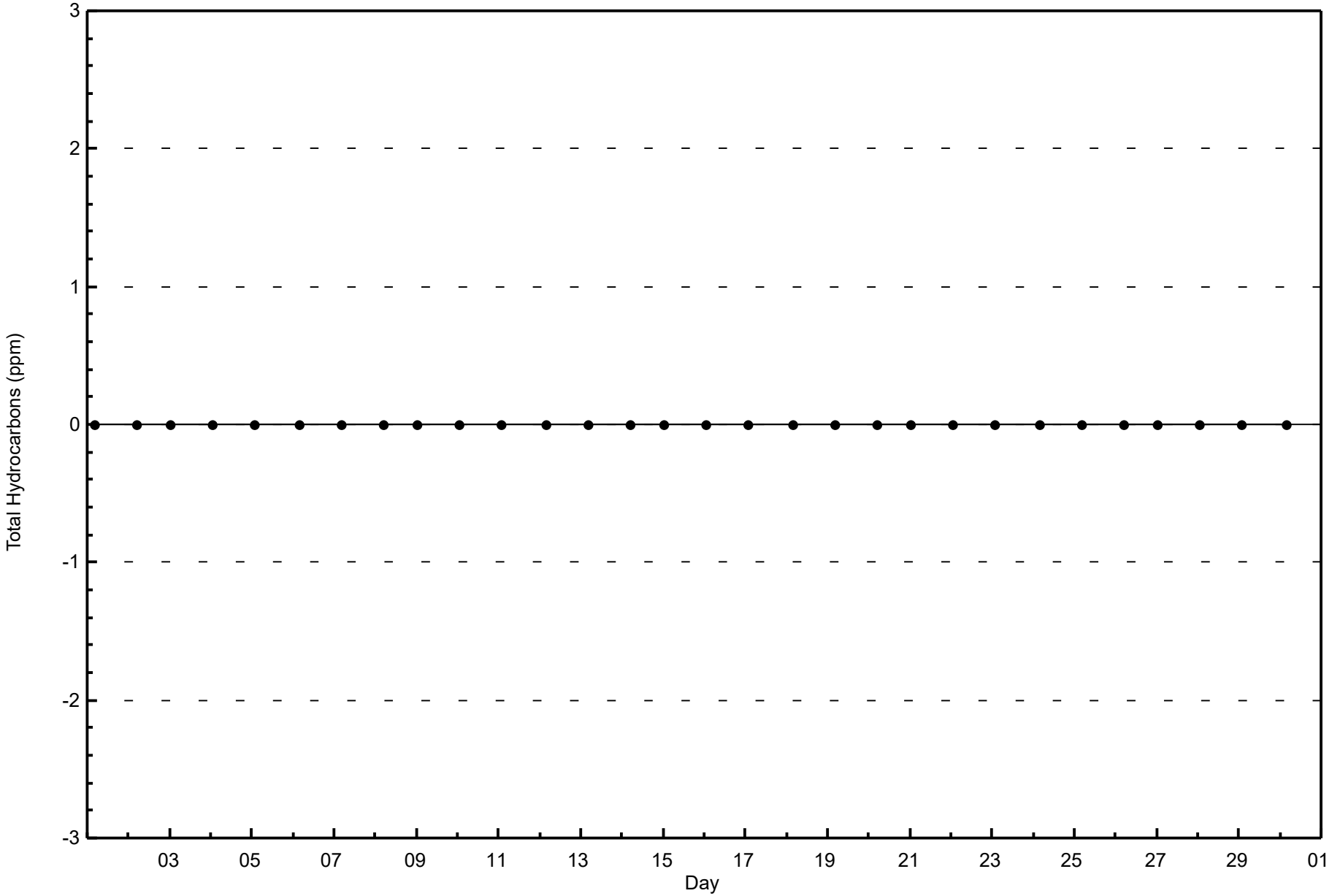
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - September 2025

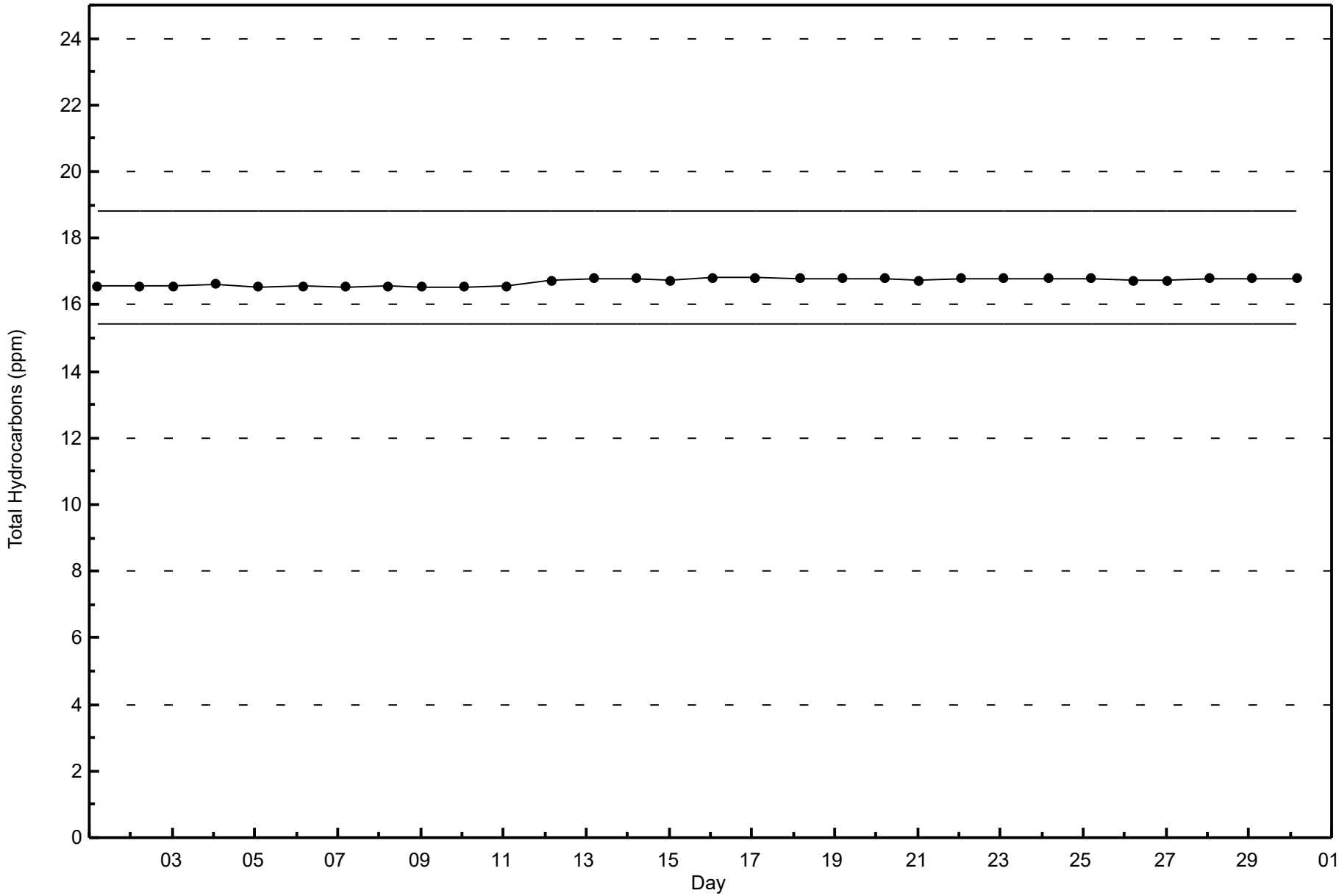


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - September 2025

Maximum Value: 0.048 ppm on Sep 14 08:00

Maximum Daily Average: 0.005 ppm on Sep 14

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.000 ppm on Sep 4

Maximum Diurnal Average: 0.003 ppm at hour 8

Minimum Diurnal Average: 0.000 ppm at hour 15

Monthly Average: 0.000 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 in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.000	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
2-Sep	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	0.004	0.000	0.004
3-Sep	Z	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
4-Sep	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
5-Sep	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
6-Sep	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	0.001	0.002	0.000	0.001	0.000	0.000	0.000	0.002
7-Sep	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
8-Sep	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	0.002	0.020	0.000	0.000	0.001	0.020
9-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.002	0.038
10-Sep	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	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.002
11-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
12-Sep	0.000	0.000	0.001	Z	0.012	0.005	0.006	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	0.012
13-Sep	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	0.002	0.013	0.000	0.000	0.001	0.013
14-Sep	0.000	0.000	0.001	0.000	0.001	Z	0.002	0.048	0.028	0.033	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	0.005	0.048
15-Sep	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
16-Sep	0.000	Z	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	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001
17-Sep	0.000	0.000	Z	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	0.000	0.000	0.000	0.000	0.000	0.002
18-Sep	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
19-Sep	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	0.008	0.000	0.000	0.008
20-Sep	0.000	0.000	0.000	0.000	0.000	Z	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	0.002	0.000	0.001	0.010
21-Sep	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	0.000	0.000	0.000	0.000	0.000	0.001
22-Sep	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
23-Sep	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
24-Sep	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
25-Sep	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.036	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	0.002	0.036
26-Sep	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
27-Sep	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
28-Sep	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	0.000	0.001
29-Sep	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
30-Sep	0.000	0.000	0.000	Z	0.000	0.000	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	0.000	0.000	0.000	0.000	0.000	0.001
	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.003	0.001	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	0.000	0.000	Diurnal Average	
	0.000	0.000	0.001	0.001	0.012	0.005	0.010	0.048	0.028	0.038	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.002	0.001	0.004	0.002	0.020	0.008	0.004	Diurnal Maximum	

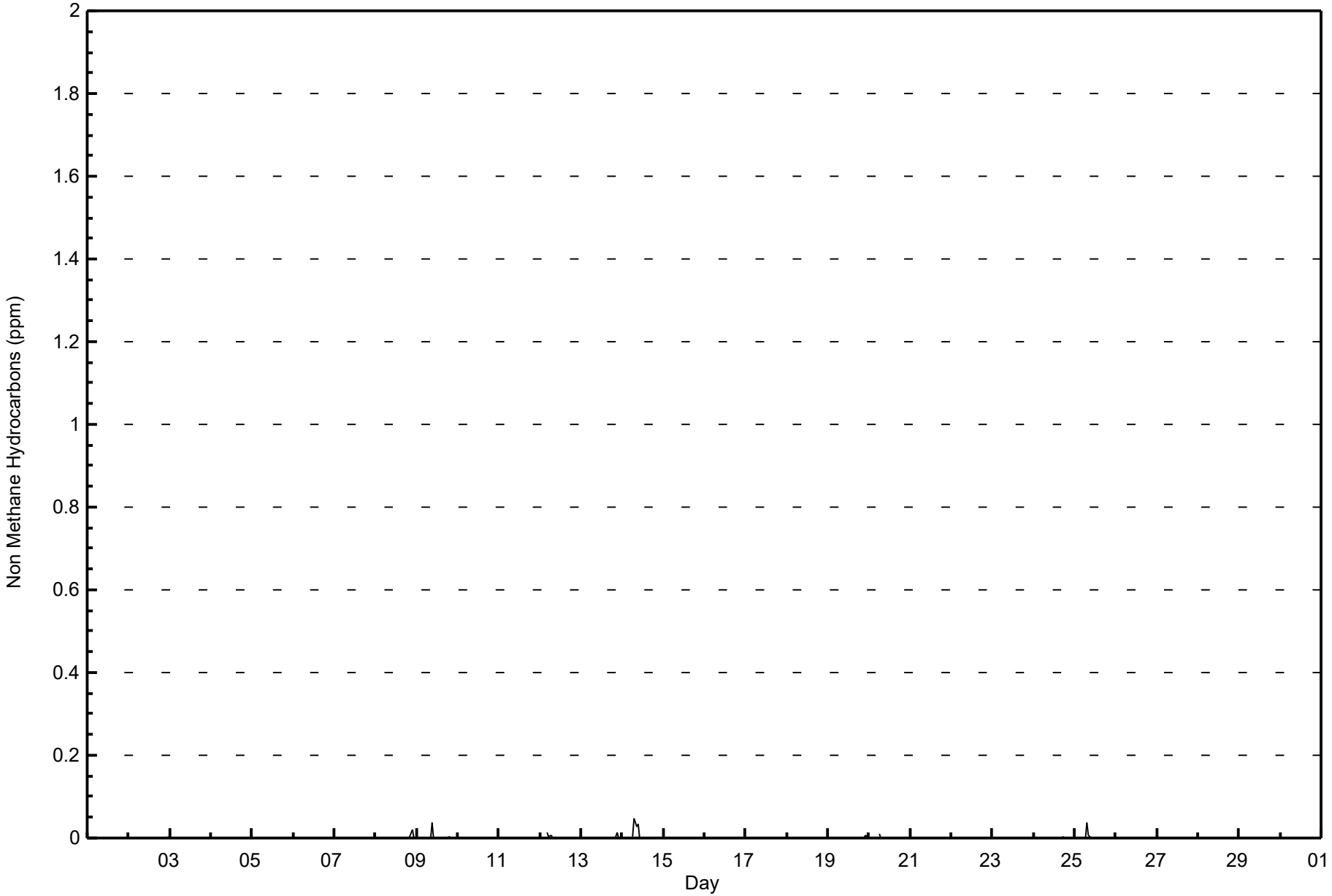
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	674	98.54	98.54
0.006 - 0.05	10	1.46	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	42	16	2	3	7	41	110	42	56	70	83	78	30	33	28	33	674
0.006 - 0.05	0	0	0	0	0	0	4	2	0	1	1	0	0	2	0	0	10
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	0	0	0	0
Totals	42	16	2	3	7	41	114	44	56	71	84	78	30	35	28	33	684

Total Number of Valid Hours: 684

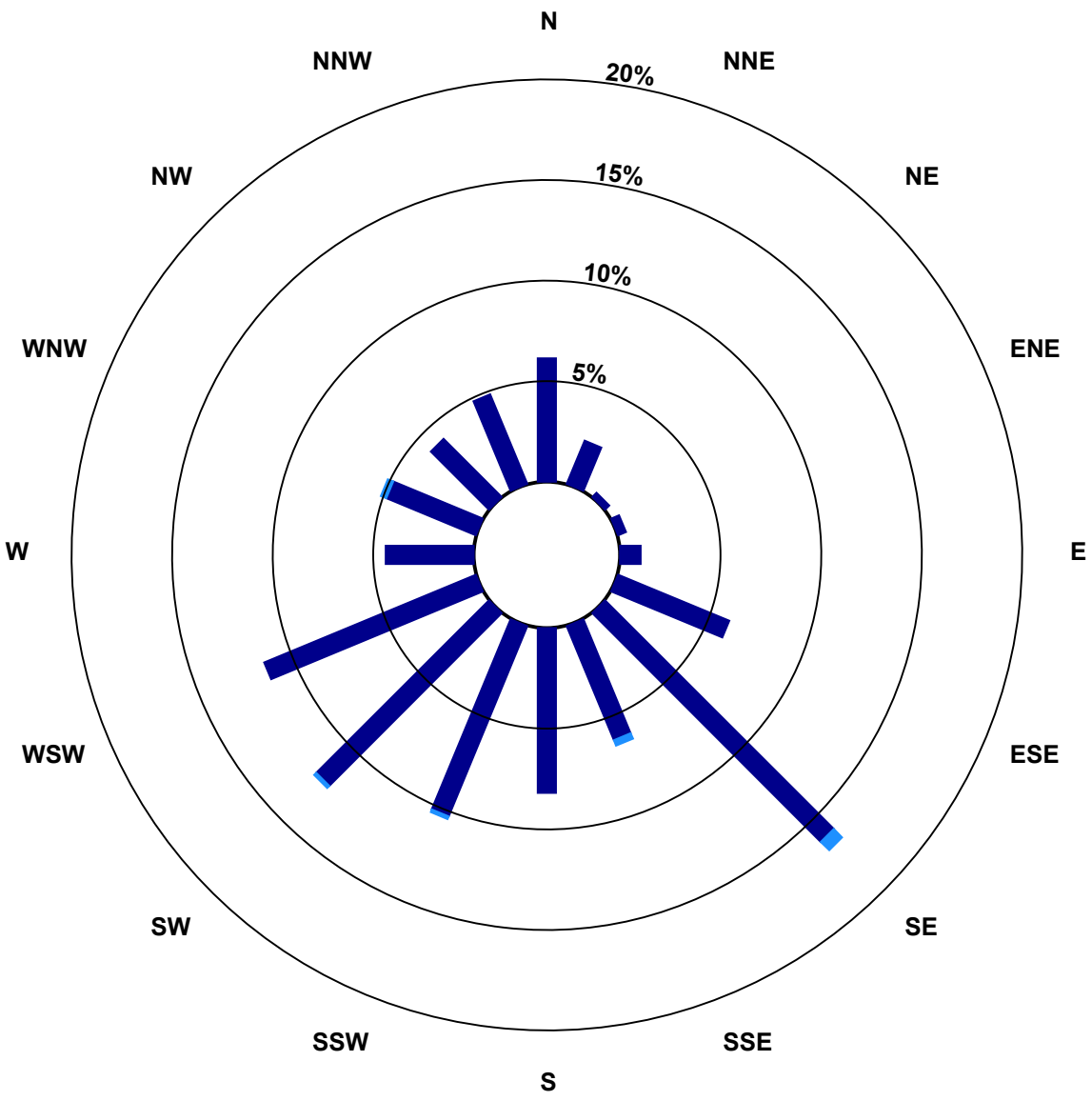
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

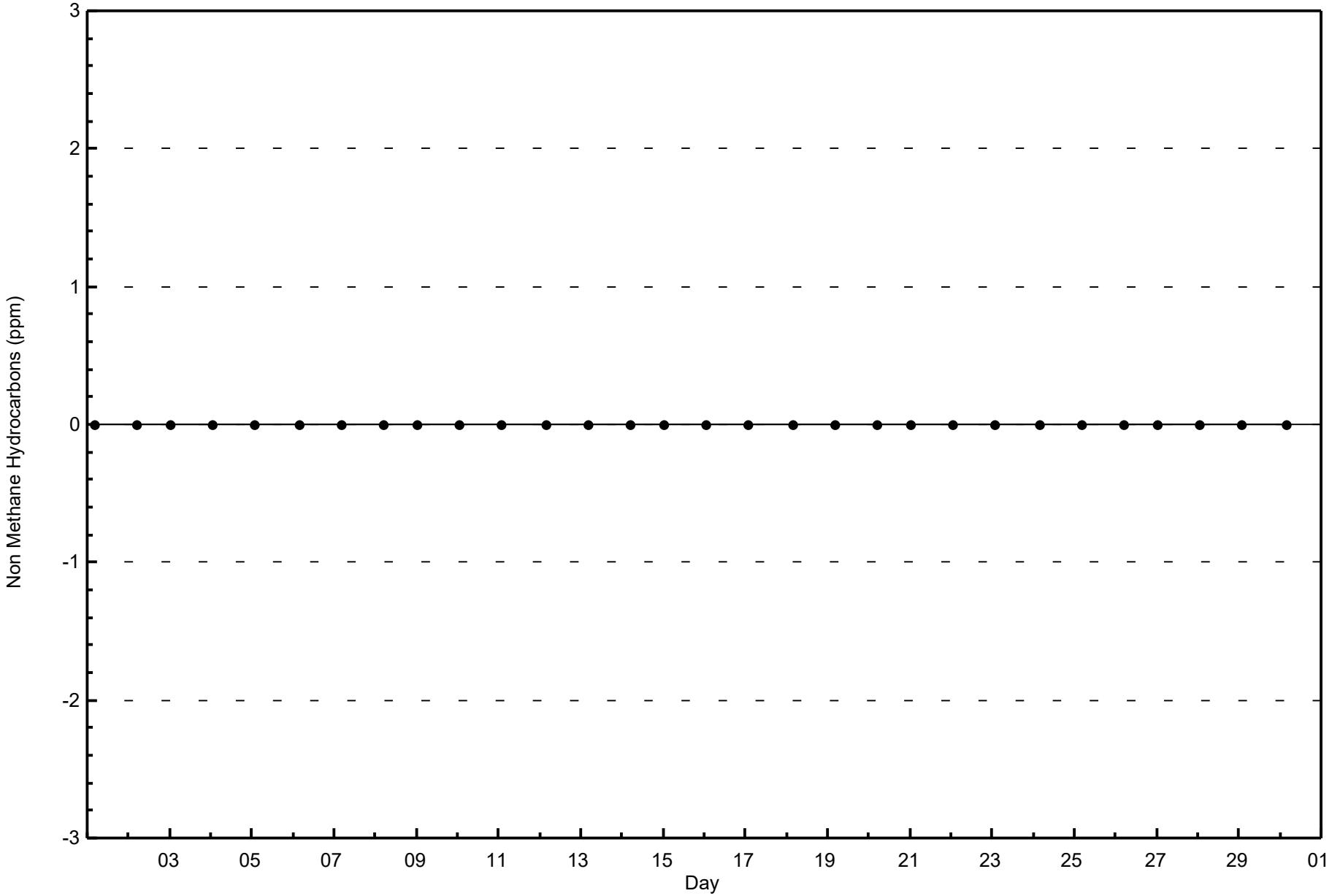
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - September 2025

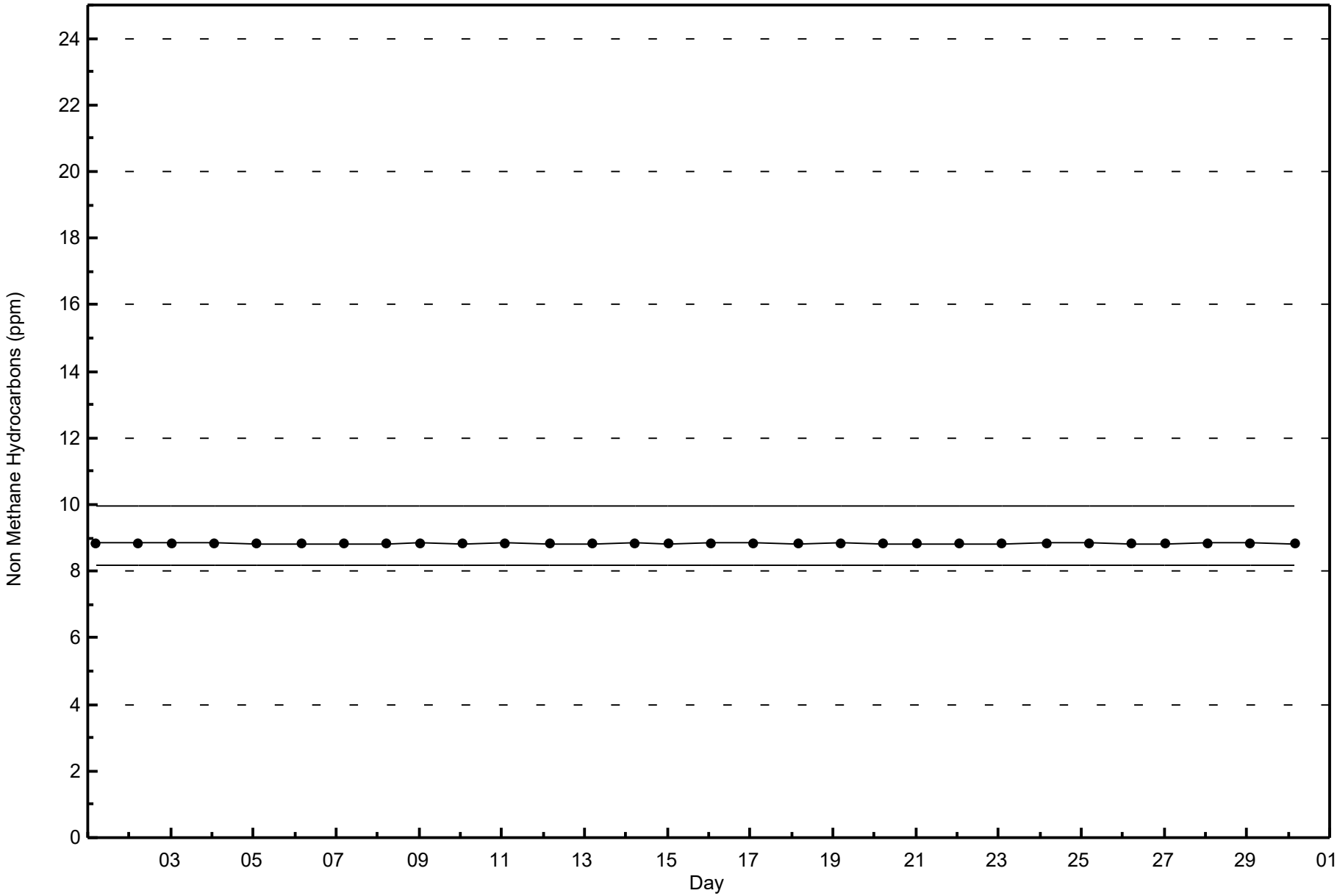


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.8 ppm on Sep 14 00:00 Maximum Daily Average: 2.3 ppm on Sep 13

Minimum Value: 1.9 ppm on Sep 10 16:00 Minimum Daily Average: 2.0 ppm on Sep 22
Maximum Diurnal Average: 2.1 ppm at hour 24 Minimum Diurnal Average: 2.0 ppm at hour 16
Monthly Average: 2.06 ppm Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.6

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.4	2.4	2.2	2.3	Z	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.4
2-Sep	2.3	2.3	2.4	2.4	2.3	Z	2.3	2.2	2.2	2.2	2.1	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	2.1	2.4
3-Sep	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
4-Sep	2.0	Z	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	2.0	2.0	2.3	2.5	2.4	2.3	2.4	2.0	2.5
5-Sep	2.3	2.3	Z	2.2	2.2	2.1	2.1	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	2.0	2.0	2.0	2.3
6-Sep	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	2.2	2.5	2.1	2.1	2.0	2.0	2.0	2.5
7-Sep	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	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2
8-Sep	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	2.2	2.5	2.5	2.3	2.2	2.5	2.1	2.5
9-Sep	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	1.9	1.9	1.9	2.0	2.2	2.1	2.2	2.3	2.1	2.0	2.3
10-Sep	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.4	2.3	2.3	2.0	2.4
11-Sep	2.3	2.4	Z	2.4	2.4	2.3	2.4	2.1	2.1	C	C	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6	2.6	--	2.6
12-Sep	2.2	2.2	2.3	Z	2.3	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	2.3
13-Sep	2.1	2.2	2.2	2.4	Z	2.6	2.4	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.5	2.6	2.7	2.6	2.8	2.3	2.8
14-Sep	2.4	2.5	2.5	2.6	2.7	Z	2.4	2.5	2.2	2.3	2.1	2.2	2.1	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.4	2.2	2.7
15-Sep	Z	2.0	2.0	2.0	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	2.1	2.0	2.0	2.0	2.0	2.1
16-Sep	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
17-Sep	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
18-Sep	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-Sep	2.0	2.0	2.1	2.1	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	2.1	2.1	2.1	2.0	2.7	2.5	2.2	2.1	2.7
20-Sep	2.1	2.1	2.2	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.1	2.1	2.1	2.3
21-Sep	Z	2.3	2.3	2.4	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	2.4
22-Sep	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-Sep	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	2.0	2.1
24-Sep	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	2.1	2.0	2.0	2.1
25-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.1
26-Sep	2.0	2.0	2.0	2.0	2.0	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
27-Sep	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
28-Sep	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	2.0	2.0	2.0	2.0	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.3
29-Sep	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
30-Sep	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.3	2.6	2.5	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.6
	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	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.4	2.5	2.5	2.6	2.7	2.6	2.4	2.5	2.3	2.6	2.5	2.4	2.4	2.2	2.1	2.1	2.2	2.2	2.3	2.5	2.6	2.7	2.6	2.8	Diurnal Maximum	

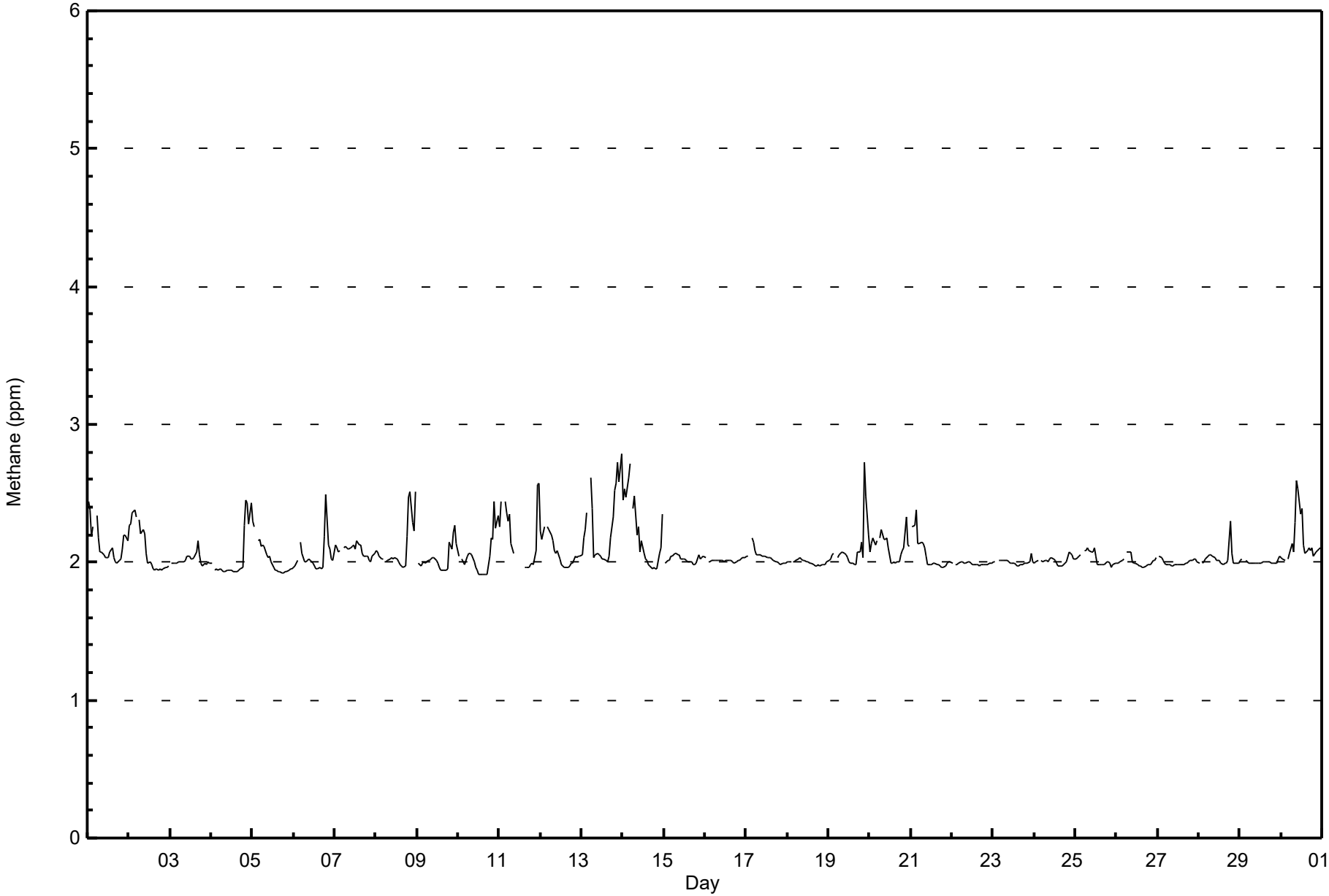
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Patricia McInnes - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	463	67.69	67.69
2.1 - 3.0	221	32.31	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Patricia McInnes - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	23	10	1	3	5	35	92	24	26	40	55	62	23	25	19	20	463
2.1 - 3.0	19	6	1	0	2	6	22	20	30	31	29	16	7	10	9	13	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	42	16	2	3	7	41	114	44	56	71	84	78	30	35	28	33	684

Total Number of Valid Hours: 684

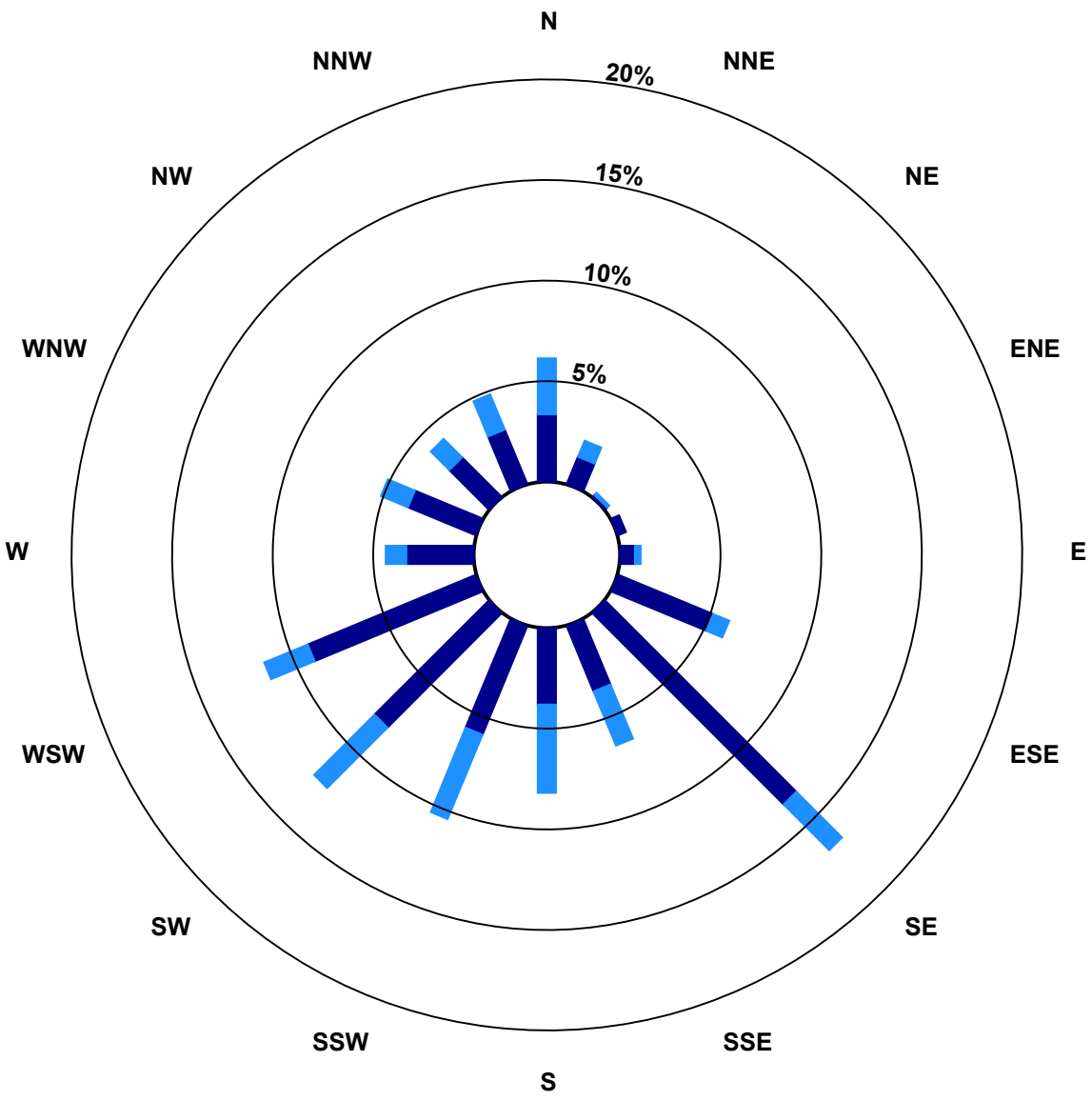
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

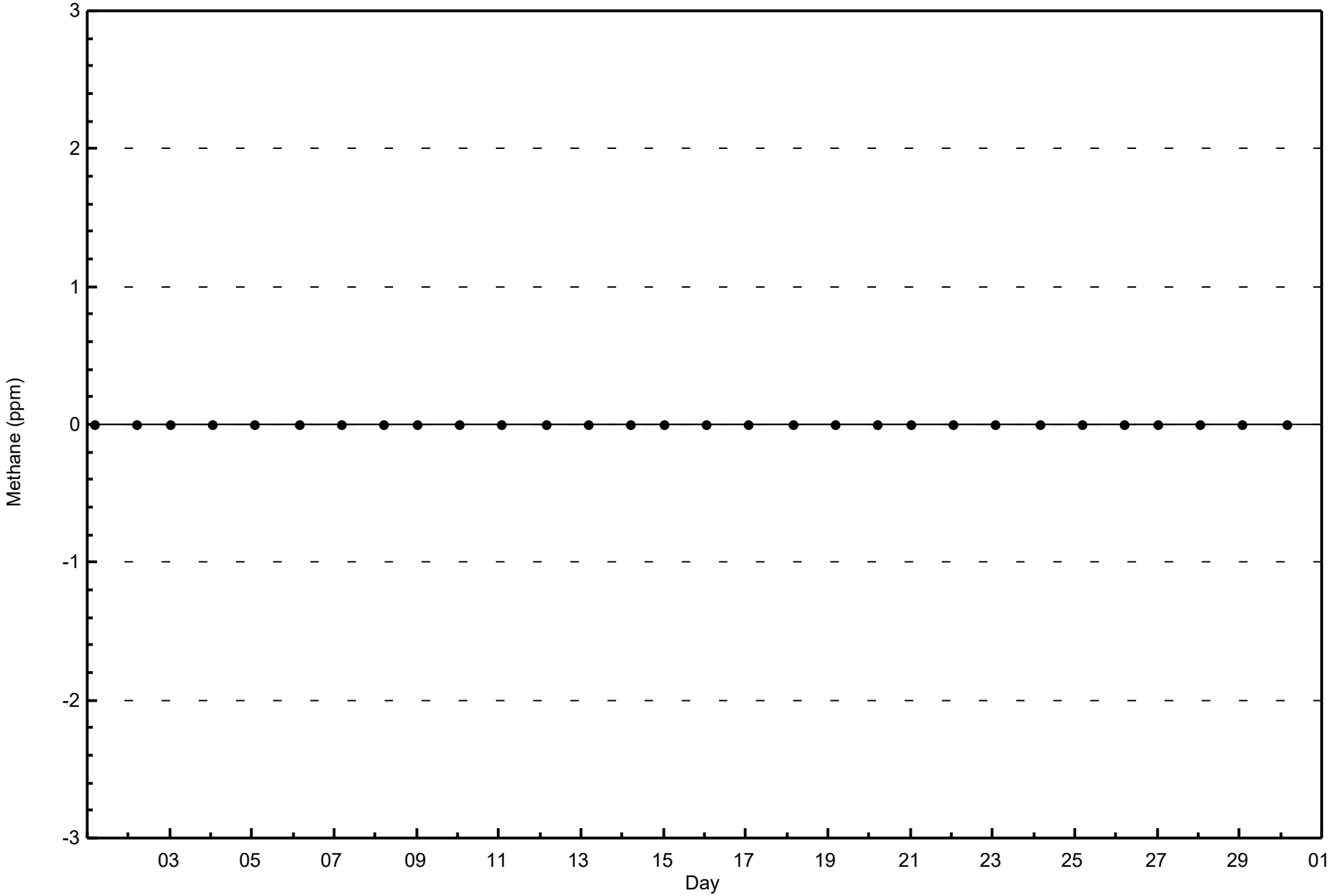
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Patricia McInnes - September 2025

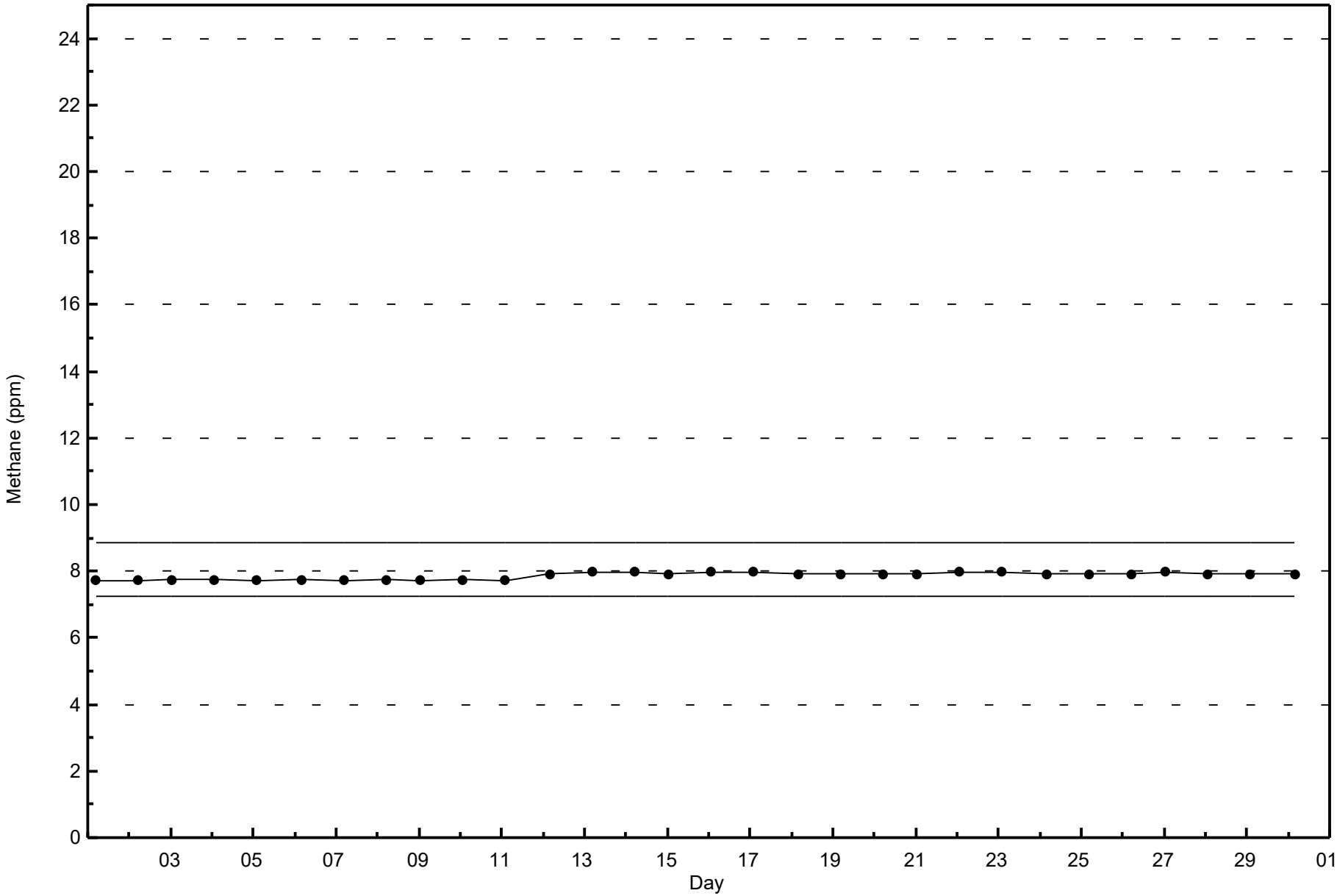


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 55.4 ppb on Sep 20 16:00 Maximum Daily Average: 33.9 ppb on Sep 21

Minimum Value: 3.4 ppb on Sep 2 03:00 Minimum Daily Average: 16.8 ppb on Sep 1
Maximum Diurnal Average: 38.0 ppb at hour 16 Minimum Diurnal Average: 16.2 ppb at hour 6
Monthly Average: 26.23 ppb Percentiles: P_1 = 4.8 P_{10} = 11.7 Q_1 = 18.5 Median = 27.5 Q_3 = 33.4 P_{90} = 38.8 P_{99} = 51.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	7.5	8.0	5.8	7.5	4.5	5.3	6.2	7.2	11.0	13.3	15.6	17.1	22.4	28.2	33.8	32.3	31.6	28.0	24.3	22.7	18.5	17.9	17.6	16.8	33.8
2-Sep	13.4	Z	3.4	4.0	5.2	5.3	5.9	8.7	9.1	8.9	19.2	26.5	28.5	31.2	32.5	32.8	34.4	30.7	27.9	27.5	26.3	24.3	22.9	21.7	19.6	34.4
3-Sep	22.4	22.0	Z	20.3	18.6	17.4	17.4	15.5	17.1	19.2	19.5	23.9	31.0	31.1	29.0	26.8	26.1	27.1	28.6	27.1	24.0	24.6	21.3	22.6	23.2	31.1
4-Sep	23.4	25.0	25.4	Z	24.1	22.9	23.6	24.2	25.7	26.1	27.0	27.5	28.6	29.0	28.4	28.6	28.8	27.3	23.8	14.0	7.5	6.8	6.7	5.5	22.2	29.0
5-Sep	6.7	5.5	4.9	4.1	Z	3.5	3.6	5.8	11.4	15.5	19.1	23.9	28.3	30.9	32.4	32.4	32.3	31.0	29.8	29.4	27.7	27.7	27.4	25.9	20.0	32.4
6-Sep	24.1	22.3	17.1	7.5	5.8	Z	14.7	16.2	19.2	22.7	26.7	32.8	40.4	43.4	45.8	48.1	50.3	50.7	32.0	18.8	17.3	20.0	35.5	35.6	28.1	50.7
7-Sep	Z	30.6	29.4	20.5	22.7	23.3	18.5	21.7	19.6	17.9	21.3	25.6	32.5	38.2	43.0	40.9	34.3	28.7	24.1	19.9	19.0	17.4	15.5	13.9	25.2	43.0
8-Sep	11.8	Z	10.9	12.3	12.3	12.4	11.8	11.4	12.3	13.2	14.4	15.6	19.0	24.1	30.5	35.7	38.7	34.5	25.1	11.8	10.0	9.8	9.7	5.6	17.1	38.7
9-Sep	8.0	12.2	Z	13.5	12.2	11.0	10.2	12.1	15.2	17.4	20.5	25.9	33.9	43.8	50.0	51.3	50.4	43.7	43.2	22.4	25.4	20.7	27.0	31.2	26.1	51.3
10-Sep	30.0	34.6	28.8	Z	19.7	14.2	13.1	11.1	10.8	17.2	22.6	28.8	32.7	34.0	35.1	35.4	34.0	32.8	21.9	20.1	21.0	13.4	12.3	7.0	23.1	35.4
11-Sep	7.8	7.3	5.8	5.8	Z	5.0	3.8	6.9	10.0	15.2	23.8	34.0	38.0	39.0	M	39.9	38.1	34.4	29.4	27.4	28.6	20.6	11.3	14.0	20.3	39.9
12-Sep	15.5	14.6	12.8	13.9	10.4	Z	7.8	12.2	20.8	28.3	31.6	39.8	45.2	48.0	49.7	50.5	50.7	48.7	38.7	35.1	29.4	36.4	27.3	30.7	30.4	50.7
13-Sep	Z	19.7	19.2	18.1	13.2	11.1	13.9	26.2	26.8	28.2	31.8	40.0	46.6	48.0	52.2	52.4	48.1	47.4	42.8	34.7	22.7	13.5	12.8	11.9	29.6	52.4
14-Sep	17.1	Z	13.4	17.3	10.6	14.5	13.3	11.0	15.9	20.2	33.1	29.4	34.8	38.8	37.4	42.5	41.0	44.5	41.5	41.0	38.3	35.1	20.4	15.3	27.2	44.5
15-Sep	16.2	28.6	Z	18.5	14.4	13.0	11.9	10.9	11.0	14.6	30.9	35.6	38.5	36.3	36.3	29.2	18.6	20.8	23.9	22.6	19.1	16.5	14.5	13.6	21.6	38.5
16-Sep	14.9	15.9	16.9	Z	16.4	15.8	14.6	13.9	14.6	C	C	C	C	24.7	25.4	26.9	26.0	24.6	18.2	18.8	21.7	23.3	22.2	20.0	19.7	26.9
17-Sep	18.8	17.5	11.7	8.3	Z	9.3	10.9	11.6	14.6	17.6	21.7	27.2	34.9	38.7	40.2	41.8	42.4	40.6	38.8	35.8	32.1	31.0	29.8	28.8	26.3	42.4
18-Sep	28.0	26.0	24.3	23.1	22.4	Z	18.8	18.4	25.0	31.0	35.0	38.0	40.0	41.1	41.9	43.8	48.1	47.6	42.7	35.4	33.0	35.4	34.1	30.4	33.2	48.1
19-Sep	Z	28.4	24.2	23.3	19.8	22.8	20.4	22.6	24.6	26.9	27.9	29.2	35.6	36.2	36.3	38.4	37.0	32.5	28.8	13.8	22.5	7.8	13.2	13.2	25.5	38.4
20-Sep	22.6	Z	16.3	15.3	12.6	6.4	14.9	15.0	23.8	26.5	28.3	33.4	53.5	54.1	54.7	55.4	55.3	49.3	44.7	44.0	46.0	35.6	35.4	35.3	33.8	55.4
21-Sep	24.5	23.6	Z	22.9	30.7	29.3	29.1	30.3	31.2	35.3	41.6	41.6	41.8	42.5	42.7	42.6	42.4	38.6	39.1	41.3	35.7	28.8	23.0	22.1	33.9	42.7
22-Sep	24.9	26.7	25.1	Z	21.9	19.9	19.1	19.2	22.0	24.3	25.6	27.9	30.3	33.1	34.0	35.3	36.2	33.8	30.3	31.4	29.9	29.2	29.6	30.3	27.8	36.2
23-Sep	33.0	33.0	32.4	32.3	Z	31.0	30.4	28.7	29.0	29.7	33.9	38.7	38.7	37.8	36.2	35.3	35.2	34.1	34.6	34.4	33.2	27.4	25.8	32.1	32.9	38.7
24-Sep	31.3	29.5	29.0	30.3	30.3	Z	30.4	29.4	29.6	28.9	29.1	30.5	32.1	33.1	34.0	34.2	35.4	34.8	36.9	36.0	31.6	28.0	25.0	28.1	31.2	36.9
25-Sep	Z	25.0	25.1	22.4	12.7	11.0	13.9	10.0	16.3	19.2	21.6	23.5	29.6	38.3	38.7	38.1	37.4	36.1	36.3	35.2	40.7	43.1	39.0	32.9	28.1	43.1
26-Sep	30.0	Z	27.6	24.5	20.6	16.4	16.6	17.4	17.3	25.3	28.1	29.0	30.1	32.4	33.1	33.6	34.2	35.2	33.6	31.3	32.1	32.1	31.1	29.1	27.8	35.2
27-Sep	29.8	29.2	Z	32.1	32.4	32.7	32.7	32.9	34.1	34.8	35.5	35.7	36.1	36.6	36.6	36.4	36.8	36.7	33.4	31.1	28.9	27.6	30.3	30.4	33.2	36.8
28-Sep	30.6	30.0	29.0	Z	25.6	23.6	21.6	21.3	22.0	24.6	28.1	27.8	28.7	31.7	32.6	32.0	30.5	20.2	10.9	20.0	27.0	28.7	29.6	29.6	26.3	32.6
29-Sep	28.1	27.8	26.7	26.7	Z	29.2	30.2	31.0	31.5	32.3	33.5	34.7	36.6	37.1	37.2	37.9	37.2	35.6	32.5	30.7	33.0	33.5	31.9	29.1	32.3	37.9
30-Sep	29.2	29.1	29.1	29.2	27.6	Z	18.6	19.9	15.1	11.8	16.8	22.0	20.3	27.5	27.6	27.6	27.0	24.7	21.5	24.8	24.0	22.5	19.5	17.6	23.2	29.2
	21.7	22.9	19.8	18.1	18.0	16.2	16.6	17.4	19.4	22.2	26.3	29.8	33.9	36.1	37.3	38.0	37.3	35.3	31.4	28.0	27.0	24.6	23.4	22.7	Diurnal Average	
	33.0	34.6	32.4	32.3	32.4	32.7	32.7	32.9	34.1	35.3	41.6	41.6	53.5	54.1	54.7	55.4	55.3	50.7	44.7	44.0	46.0	43.1	39.0	35.6	Diurnal Maximum	

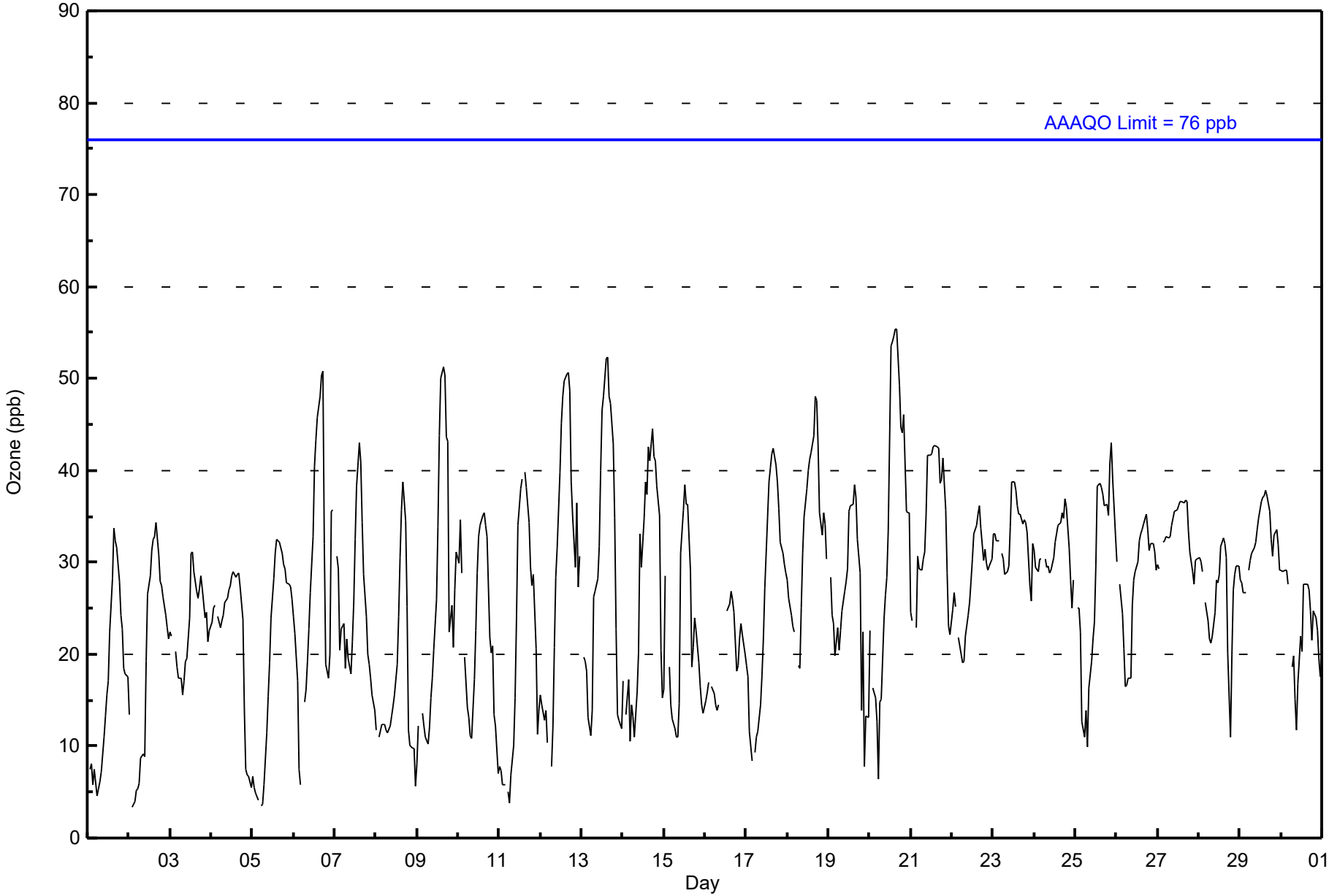
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Patricia McInnes - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	211	30.80	30.80
21 - 50	463	67.59	98.39
51 - 82	11	1.61	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	14	7	0	1	2	6	35	18	28	23	18	17	7	13	11	11	211
21 - 50	28	8	2	2	5	38	80	26	25	43	67	59	23	19	15	23	463
51 - 82	1	1	0	0	0	0	0	0	3	4	0	2	0	0	0	0	11
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	16	2	3	7	44	115	44	56	70	85	78	30	32	26	34	685

Total Number of Valid Hours: 685

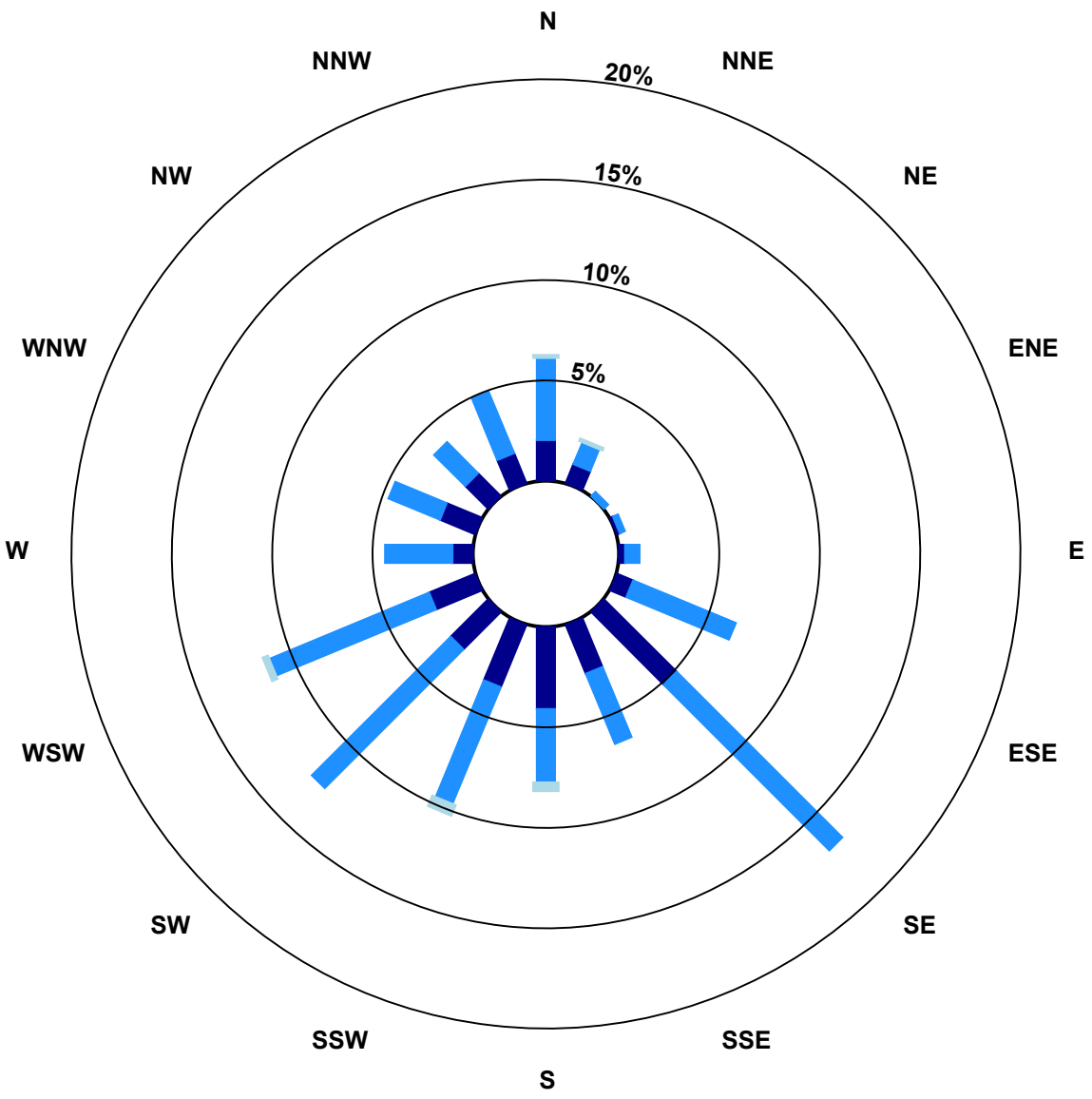
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

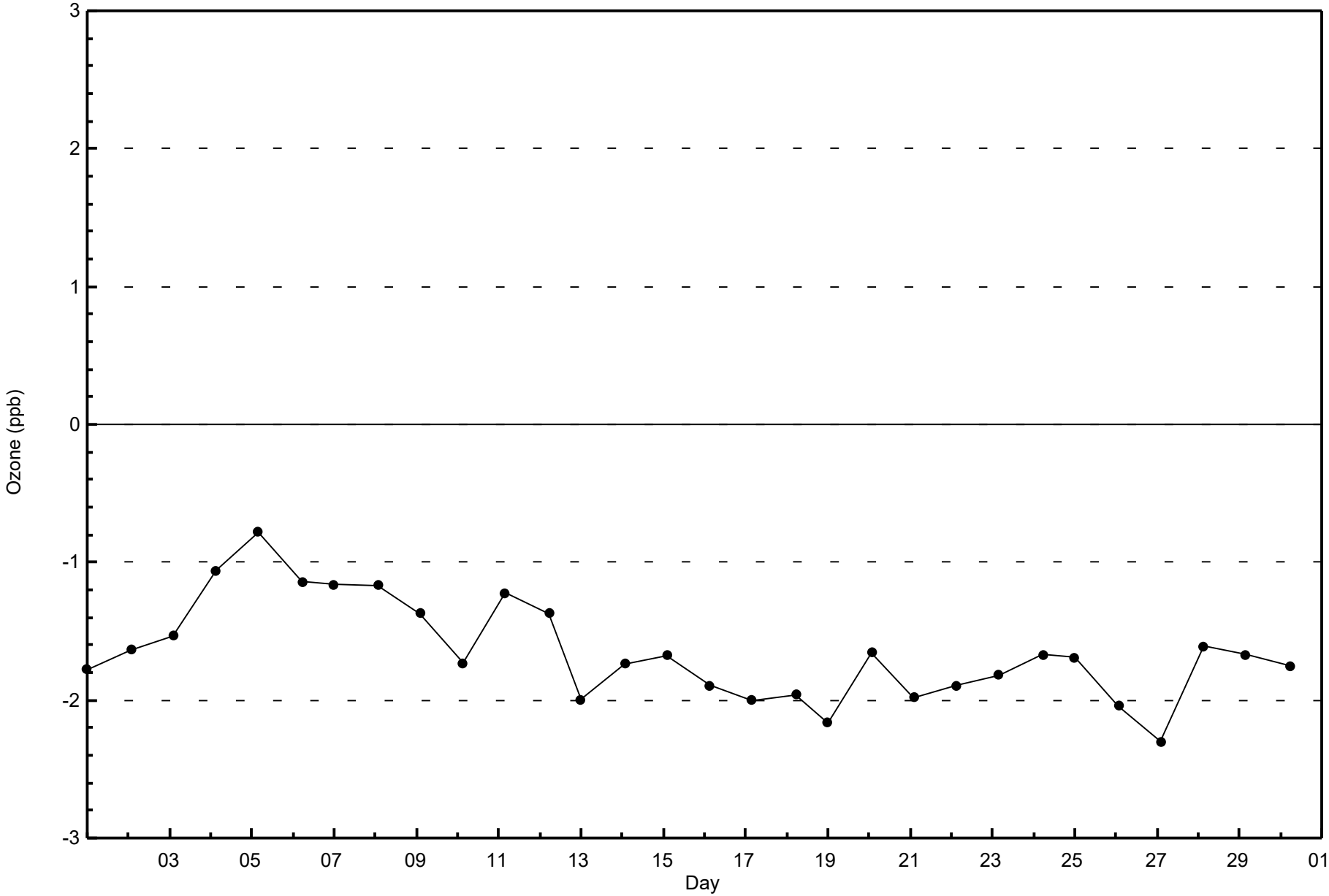
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Patricia McInnes - September 2025

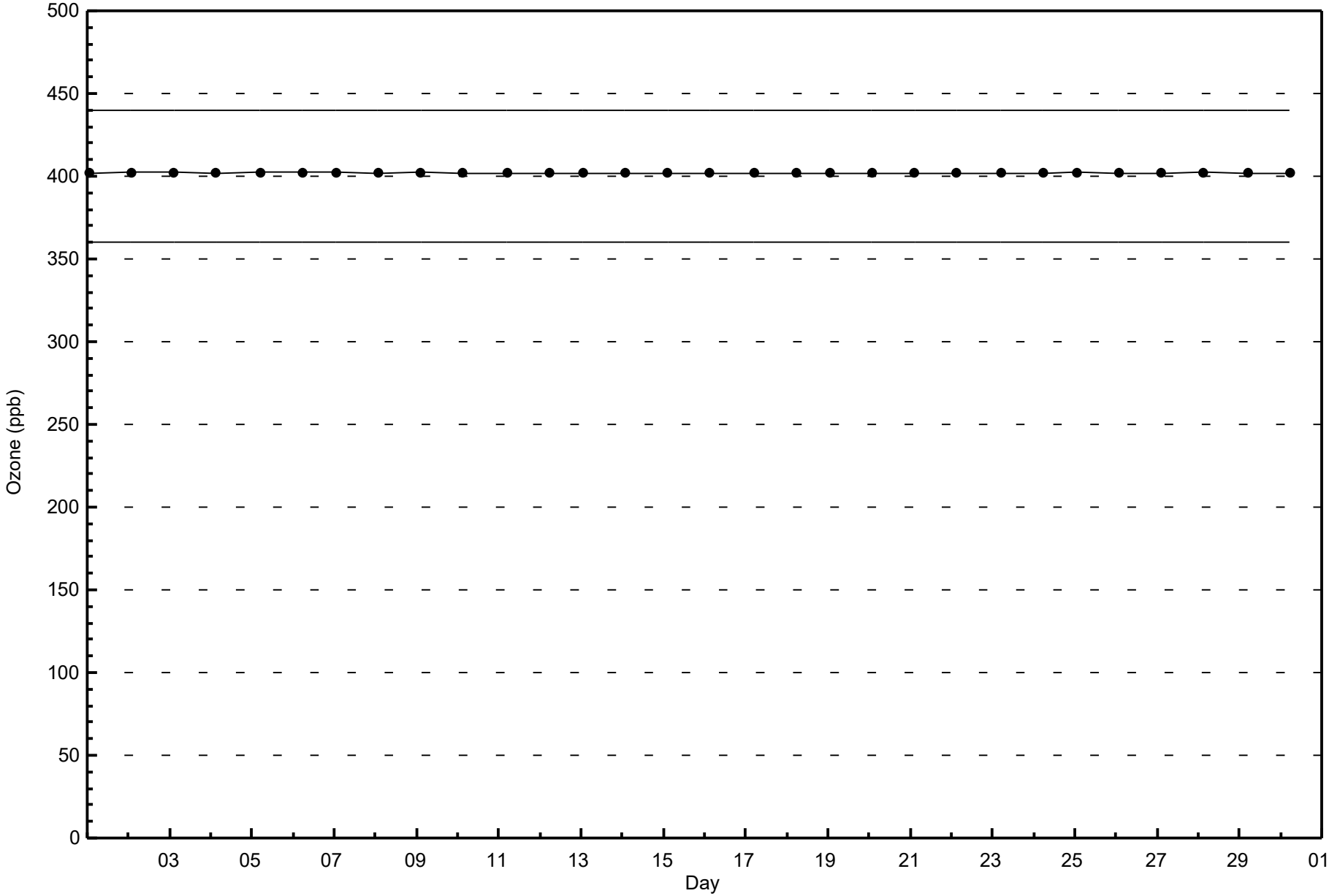


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - September 2025

Maximum Value: 11.0 ppb on Sep 19 22:00

Maximum Daily Average: 2.4 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 1 21:00

Minimum Daily Average: 0.0 ppb on Sep 21

Maximum Diurnal Average: 1.6 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 2

Monthly Average: 0.80 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.9 P_{90} = 1.9 P_{99} = 7.2

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.2	Z	0.9	0.5	1.5	1.1	1.6	1.2	0.9	0.8	2.2	5.0	4.4	3.5	1.4	0.3	0.4	0.4	0.3	0.0	0.5	0.2	0.1	1.2	5.0
2-Sep	0.1	0.3	0.4	Z	0.3	1.2	2.8	3.7	9.9	9.7	3.0	1.1	1.3	1.3	1.3	0.9	1.0	1.4	1.5	1.2	0.3	0.2	0.0	0.0	1.9	9.9
3-Sep	0.0	0.0	0.0	0.1	Z	0.5	0.5	1.5	0.9	0.9	1.4	0.9	0.1	0.0	0.1	0.9	1.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.4	1.5
4-Sep	0.1	0.0	0.0	0.1	0.0	Z	0.1	0.4	0.6	C	C	C	C	C	C	0.5	1.2	0.8	0.6	0.4	0.9	1.1	0.7	0.2	--	1.2
5-Sep	Z	0.3	0.3	1.0	0.9	5.1	5.3	3.5	4.3	3.1	1.5	0.8	0.7	0.8	0.3	0.6	1.1	1.4	1.3	0.9	0.6	0.4	0.1	0.3	1.5	5.3
6-Sep	0.1	Z	0.2	0.3	1.0	1.0	0.6	0.8	0.5	0.9	1.0	1.0	0.7	0.5	0.4	0.7	0.7	0.3	0.1	0.4	1.7	1.0	0.1	0.1	0.6	1.7
7-Sep	0.9	0.1	Z	1.7	0.4	0.2	0.2	0.1	0.8	1.4	0.3	0.3	1.0	2.0	1.2	1.5	0.6	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.6	2.0
8-Sep	0.3	0.2	0.1	Z	0.2	0.3	0.9	1.3	1.7	2.1	2.3	2.8	2.2	1.4	1.4	1.2	1.4	0.7	0.8	2.1	8.2	4.2	2.5	0.1	1.7	8.2
9-Sep	2.2	0.1	0.2	0.2	Z	1.2	1.5	1.3	0.9	1.0	0.8	0.5	1.4	0.4	0.3	0.2	0.3	0.4	0.1	2.6	1.7	0.5	0.1	0.1	0.8	2.6
10-Sep	0.3	0.2	0.1	0.2	0.3	Z	0.5	0.6	1.8	0.9	2.7	1.4	1.3	0.6	0.0	0.2	0.2	0.1	6.3	3.0	0.2	0.2	0.2	0.1	0.9	6.3
11-Sep	Z	0.0	0.3	0.4	1.2	1.6	7.5	6.6	5.1	3.8	2.1	1.6	0.5	0.3	M	0.8	1.3	1.2	1.5	1.9	1.3	4.8	7.1	0.3	2.3	7.5
12-Sep	0.2	Z	0.1	0.4	1.1	2.7	3.1	3.6	2.1	0.7	0.8	0.6	0.1	0.3	0.1	0.1	0.1	0.2	0.7	0.2	2.7	0.8	1.0	0.1	0.9	3.6
13-Sep	0.1	0.3	Z	0.2	0.2	0.2	0.7	0.3	0.9	0.9	0.5	0.4	0.1	0.0	0.1	0.1	0.4	0.2	0.0	0.0	0.8	2.2	0.4	0.1	0.4	2.2
14-Sep	0.0	0.0	0.0	Z	0.5	0.8	0.7	1.9	0.8	0.3	0.2	0.6	0.3	0.3	0.7	0.5	0.3	0.3	0.7	0.6	0.5	0.1	0.3	0.1	0.5	1.9
15-Sep	0.1	0.1	0.3	0.4	Z	0.7	0.9	0.7	0.9	1.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	1.6
16-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.9	0.8	2.7	1.7	2.3	1.5	0.1	0.0	0.2	0.0	0.5	2.7
17-Sep	Z	0.0	0.0	0.1	2.7	1.5	1.1	1.3	1.6	1.8	0.8	0.9	0.9	0.9	0.7	0.5	0.5	0.7	0.4	0.7	1.1	0.1	0.4	0.1	0.8	2.7
18-Sep	0.2	Z	0.1	0.1	0.2	0.4	1.0	1.4	0.8	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.2	1.4
19-Sep	0.0	0.0	Z	0.0	0.6	0.5	0.9	0.2	0.1	0.0	0.0	0.5	0.2	0.1	0.0	0.1	0.1	0.2	0.1	2.9	0.7	11.0	0.6	1.6	0.9	11.0
20-Sep	0.2	0.2	0.5	Z	2.1	3.1	0.6	1.9	1.5	1.4	1.2	0.8	0.0	0.0	0.1	0.1	0.2	0.5	0.2	0.7	0.7	0.3	1.5	0.4	0.8	3.1
21-Sep	0.1	0.0	0.0	0.1	Z	0.3	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	0.0	0.0	0.0	0.0	0.0	0.0	0.3
22-Sep	0.0	0.0	0.2	0.1	0.1	Z	0.3	0.3	0.3	0.1	0.3	0.3	0.5	1.5	0.5	0.4	0.3	0.2	0.5	0.3	0.3	0.2	0.2	0.1	0.3	1.5
23-Sep	Z	0.1	0.0	0.1	0.0	0.2	0.2	0.3	0.2	0.2	0.5	0.1	0.1	0.7	0.4	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.1	0.2	0.7
24-Sep	0.2	Z	0.1	0.0	0.2	0.2	0.1	0.3	0.1	0.0	0.2	0.3	0.9	0.9	1.0	1.1	1.0	0.3	0.0	0.0	0.3	0.1	0.3	0.0	0.3	1.1
25-Sep	0.2	0.1	Z	0.2	2.0	3.0	1.8	5.8	2.9	2.2	2.4	2.0	1.2	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	1.1	5.8
26-Sep	0.0	0.0	0.0	Z	0.3	0.9	0.4	0.8	1.8	1.2	1.3	0.3	0.7	0.7	1.0	1.7	1.4	0.5	0.1	0.2	0.2	0.6	0.3	0.5	0.6	1.8
27-Sep	0.2	0.1	0.2	0.0	Z	0.1	0.1	0.2	0.3	0.3	0.0	0.1	0.2	0.8	0.8	0.3	0.2	0.3	0.6	0.4	0.7	0.7	0.5	0.3	0.3	0.8
28-Sep	0.3	0.2	0.2	0.1	0.3	Z	0.3	0.4	1.0	0.6	0.2	0.7	0.4	0.2	0.2	0.2	0.9	2.5	1.5	2.2	0.3	0.3	0.1	0.2	0.6	2.5
29-Sep	Z	0.0	0.1	0.2	0.5	0.4	0.2	0.5	0.4	0.7	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.8	0.9	1.0	0.4	0.2	0.4	0.5	1.0
30-Sep	0.0	Z	0.2	0.3	0.3	0.3	2.2	3.9	3.1	8.8	8.9	5.8	5.4	4.4	7.1	0.5	0.9	0.8	0.5	0.2	0.2	0.2	0.2	0.1	2.4	8.9
	0.2	0.1	0.1	0.3	0.6	1.1	1.2	1.5	1.6	1.6	1.2	0.9	0.9	0.8	0.8	0.5	0.6	0.6	0.7	0.8	0.8	1.0	0.6	0.2	Diurnal Average	
	2.2	0.3	0.5	1.7	2.7	5.1	7.5	6.6	9.9	9.7	8.9	5.8	5.4	4.4	7.1	1.7	2.7	2.5	6.3	3.0	8.2	11.0	7.1	1.6	Diurnal Maximum	

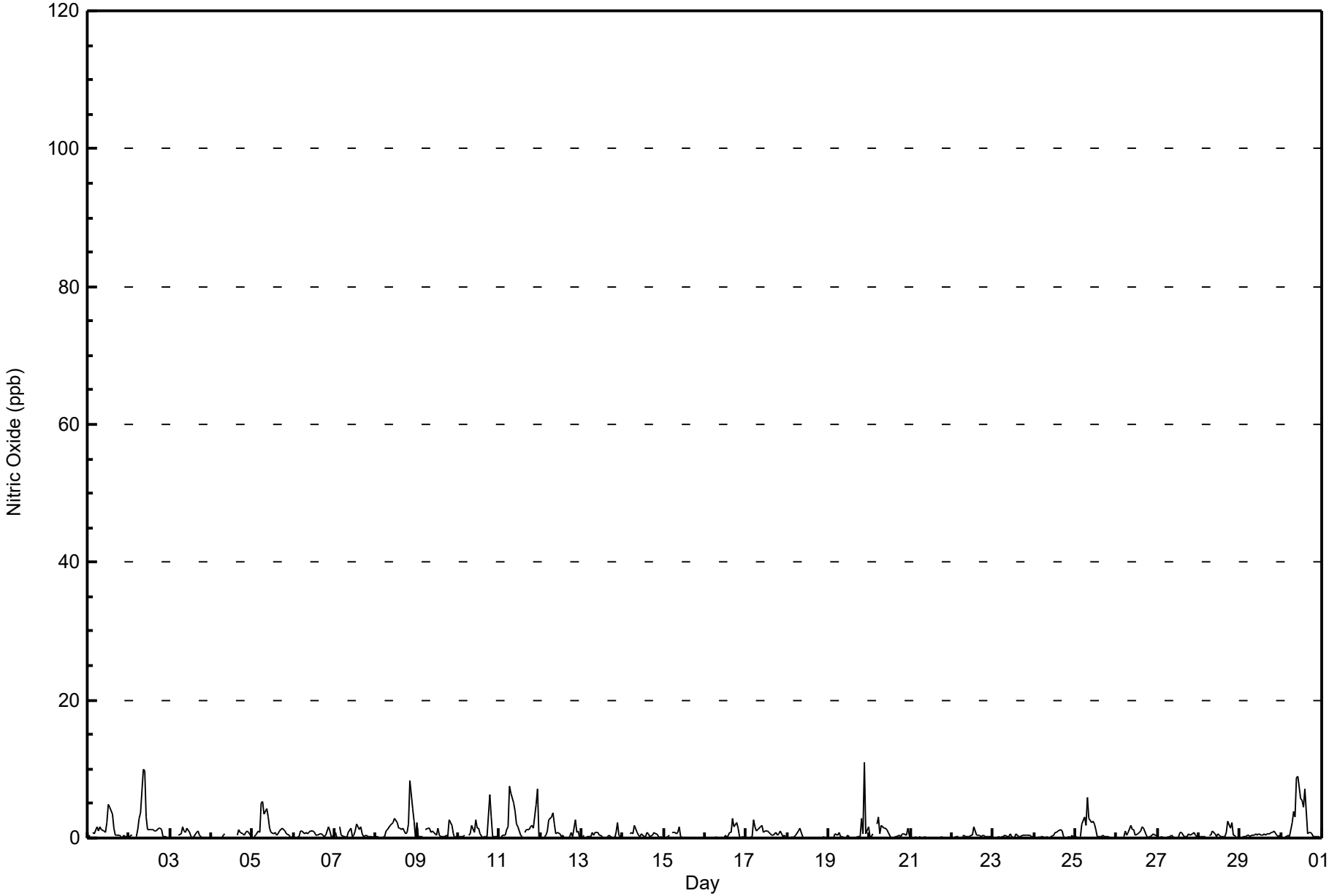
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

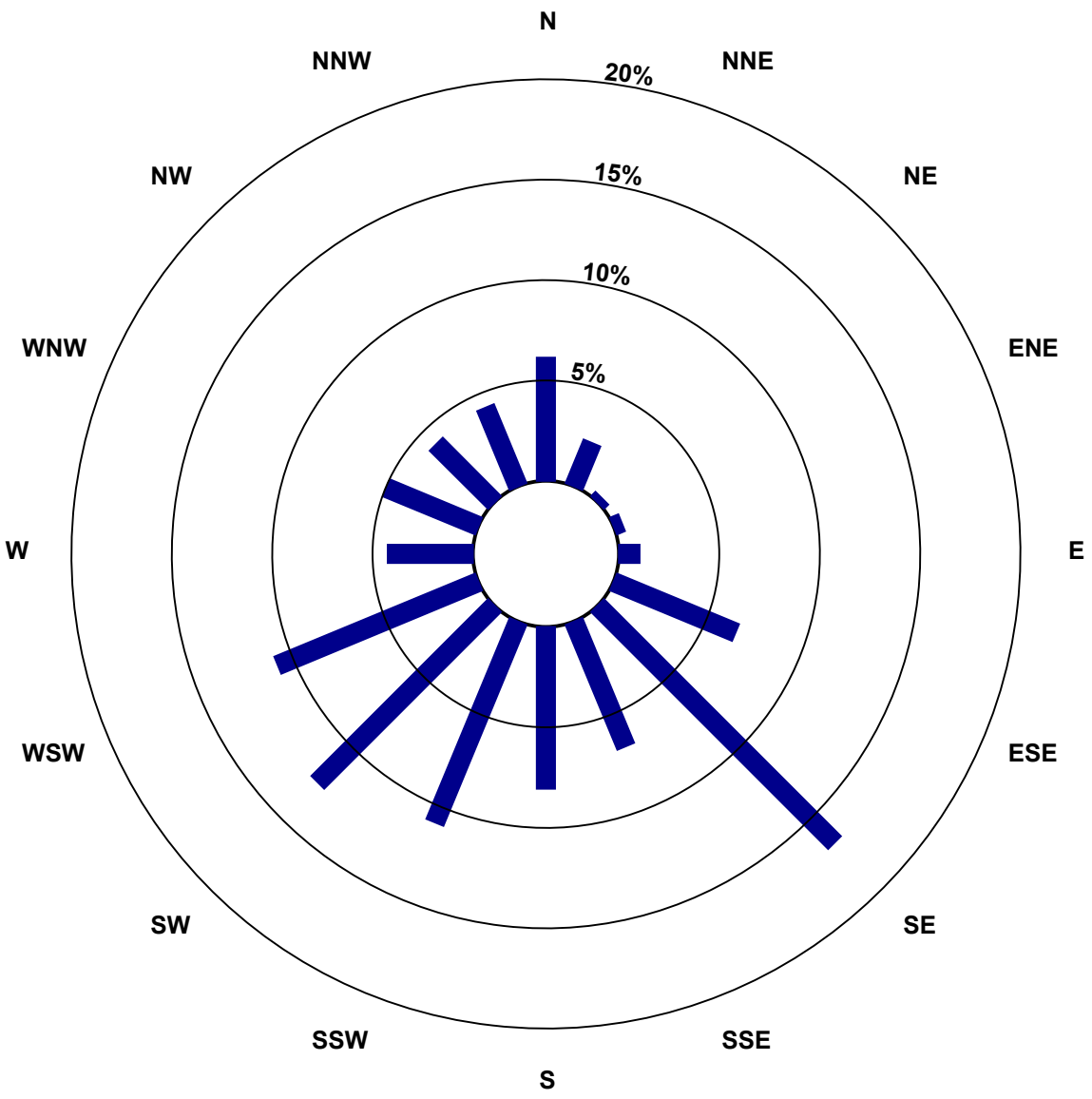
Total Number of Valid Hours: 683

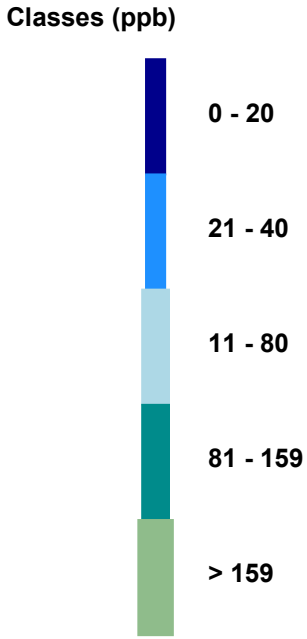
Total Number of Hours: 720

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	42	16	2	3	7	45	114	46	55	74	85	74	29	34	28	29	683
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	42	16	2	3	7	45	114	46	55	74	85	74	29	34	28	29	683

Total Number of Valid Hours: 683

Total Number of Hours: 720





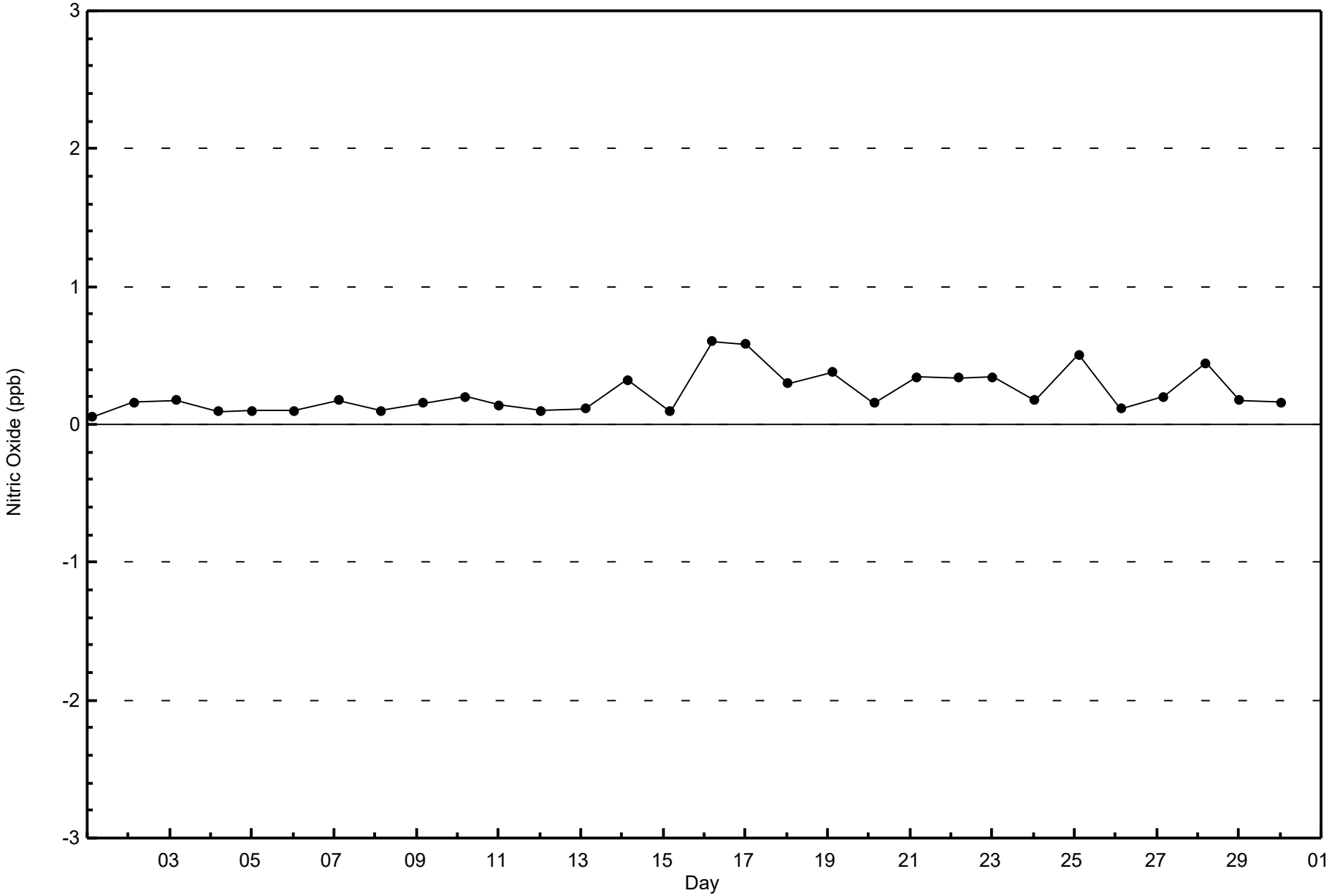
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - September 2025

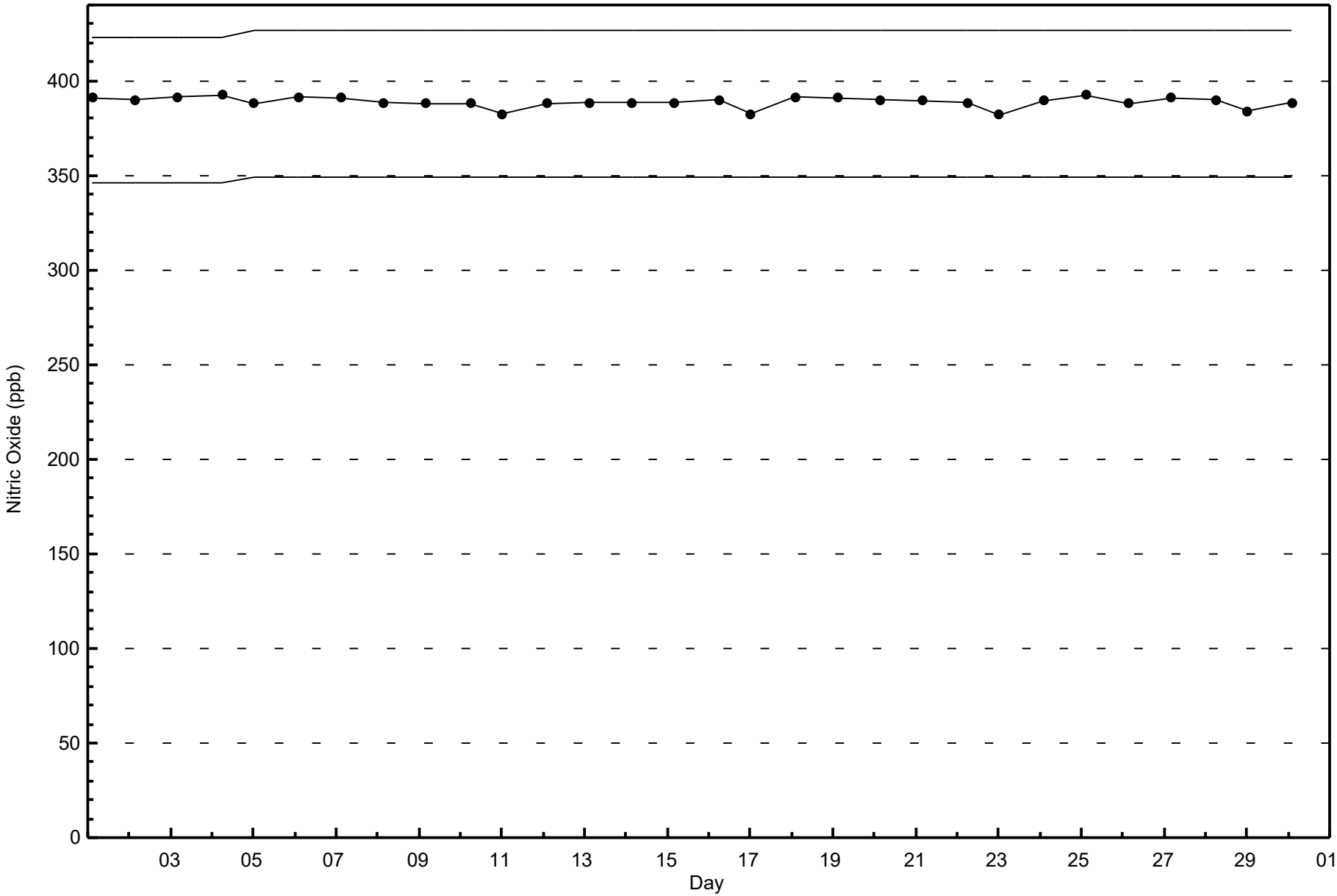


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.6 ppb on Sep 30 13:00 Maximum Daily Average: 5.9 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 4 02:00 Minimum Daily Average: 0.2 ppb on Sep 15
Maximum Diurnal Average: 4.3 ppb at hour 20 Minimum Diurnal Average: 1.2 ppb at hour 4
Monthly Average: 2.35 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.5 Median = 1.6 Q_3 = 3.3 P_{90} = 5.7 P_{99} = 11.2

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.5	0.4	Z	2.2	1.8	3.7	2.9	2.5	1.4	0.6	0.1	1.7	5.6	8.6	7.9	4.1	1.4	1.9	3.5	4.5	2.3	2.8	1.3	1.5	2.8	8.6
2-Sep	3.7	9.0	7.8	Z	5.2	4.4	4.3	6.1	9.7	8.0	5.3	2.0	2.7	2.3	1.8	1.3	1.9	2.6	3.4	2.2	1.5	1.6	1.2	1.2	3.9	9.7
3-Sep	1.0	1.0	1.1	0.9	Z	2.4	2.3	3.7	2.8	2.4	2.8	2.4	0.9	0.4	0.7	3.6	6.0	3.7	2.8	3.5	4.0	2.6	4.1	2.4	2.5	6.0
4-Sep	1.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.4	C	C	C	C	C	C	0.6	1.2	2.8	4.7	4.0	2.3	1.5	1.5	0.9	--	4.7
5-Sep	Z	1.1	2.0	2.4	2.3	5.2	3.7	1.6	3.4	2.5	1.7	1.2	0.7	0.7	0.6	0.6	1.6	2.2	3.3	2.8	2.1	1.3	0.9	1.4	2.0	5.2
6-Sep	1.3	Z	2.1	2.4	4.6	3.7	1.4	1.2	1.2	1.4	1.5	1.9	2.0	1.4	1.6	1.7	1.5	1.7	2.1	1.3	5.5	8.5	3.3	1.3	2.4	8.5
7-Sep	3.0	1.4	Z	1.9	2.3	2.0	1.0	0.7	2.6	3.8	0.5	0.8	3.5	8.6	6.2	7.8	3.5	2.9	2.3	2.5	2.2	1.8	1.7	2.6	2.9	8.6
8-Sep	4.2	2.2	2.1	Z	1.3	1.8	3.4	4.4	4.0	4.2	4.2	5.1	2.9	2.1	3.1	3.8	4.6	6.1	8.1	4.6	5.6	7.2	4.5	2.3	4.0	8.1
9-Sep	3.0	0.9	0.2	0.8	Z	2.3	2.7	2.0	1.5	1.6	1.4	1.4	2.1	1.5	0.9	1.1	1.9	7.0	4.9	14.4	10.8	8.2	1.3	0.5	3.1	14.4
10-Sep	1.0	0.2	0.2	0.5	1.4	Z	0.7	0.7	1.9	0.9	4.7	2.6	0.6	0.0	0.0	0.0	0.3	0.1	6.8	1.9	1.4	1.6	2.5	4.9	1.5	6.8
11-Sep	Z	2.3	3.3	2.9	5.5	3.2	6.4	4.4	3.4	3.5	3.6	2.6	1.5	0.9	M	1.2	2.0	2.8	5.4	6.0	3.0	6.5	6.0	0.6	3.5	6.5
12-Sep	2.2	Z	2.9	4.3	8.5	10.6	8.8	7.4	4.3	2.0	2.8	1.6	0.2	0.4	0.1	0.1	0.4	1.6	8.6	7.0	9.4	3.4	5.8	2.1	4.1	10.6
13-Sep	1.8	2.0	Z	0.3	1.4	0.5	3.0	1.3	2.4	2.1	1.9	1.9	1.6	1.3	1.7	1.9	5.9	7.8	10.8	7.4	9.0	11.1	5.7	2.6	3.7	11.1
14-Sep	3.7	1.7	2.4	Z	3.4	6.1	3.7	5.1	3.4	2.5	1.6	2.3	1.6	1.2	1.6	1.2	1.3	1.1	2.3	4.7	5.5	2.2	7.7	1.9	3.0	7.7
15-Sep	0.0	0.0	0.1	0.2	Z	0.6	0.5	0.4	0.2	0.9	0.4	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	0.2	0.9
16-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.5	0.0	0.0	0.0	0.3	1.5	0.8	1.9	1.6	3.6	3.6	9.1	8.0	3.3	1.8	1.7	2.0	1.7	9.1
17-Sep	Z	2.4	2.3	2.3	6.2	4.6	2.6	2.0	1.6	2.0	1.9	2.5	2.5	1.9	2.4	1.9	2.2	3.4	3.0	2.6	3.0	1.6	1.0	0.7	2.5	6.2
18-Sep	0.7	Z	0.9	1.0	1.7	3.6	3.9	4.2	1.8	0.7	0.7	0.5	0.3	0.2	0.3	0.5	0.6	1.2	3.0	6.9	5.1	1.8	0.1	0.4	1.7	6.9
19-Sep	0.1	0.4	Z	1.1	4.0	1.6	2.6	0.7	0.3	0.1	0.3	0.4	0.2	0.0	0.0	0.1	0.9	2.0	2.5	11.9	6.3	8.8	1.3	4.1	2.2	11.9
20-Sep	0.9	1.4	2.9	Z	6.6	11.0	3.5	3.4	2.2	2.0	2.8	2.7	0.9	0.7	0.8	0.9	1.7	3.6	5.6	6.1	3.3	5.7	8.0	4.2	3.5	11.0
21-Sep	3.7	5.7	2.4	1.6	Z	2.1	0.9	0.4	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	1.0	0.1	0.1	0.0	0.8	5.7
22-Sep	0.0	0.0	0.0	0.1	0.1	Z	0.5	0.3	0.2	0.2	0.2	0.3	0.3	0.5	0.0	0.1	0.3	1.7	4.0	1.6	1.1	1.4	1.2	0.8	0.6	4.0
23-Sep	Z	1.0	1.1	1.3	1.8	1.8	1.7	1.9	0.7	0.5	0.6	0.0	0.0	0.4	0.2	0.2	0.2	0.5	0.5	0.6	1.0	5.2	4.1	0.2	1.1	5.2
24-Sep	0.3	Z	0.4	0.4	1.1	0.8	0.8	1.1	0.5	0.4	0.7	0.9	1.0	0.9	0.8	1.1	0.6	0.6	0.3	2.2	2.6	2.1	3.9	0.9	1.1	3.9
25-Sep	1.5	0.8	Z	1.9	8.6	9.9	7.3	11.1	6.3	4.1	4.1	3.5	2.4	0.2	0.9	0.6	1.1	2.4	2.2	1.8	0.6	0.0	0.1	0.5	3.1	11.1
26-Sep	0.2	0.0	0.1	Z	1.0	3.0	1.5	1.6	1.9	0.4	0.5	0.1	0.3	0.4	0.6	1.3	1.3	0.2	0.6	1.9	1.1	2.1	1.8	1.7	1.0	3.0
27-Sep	0.3	0.9	1.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.2	0.5	1.8	3.8	4.5	5.3	1.5	0.5	0.9	5.3
28-Sep	0.0	0.0	0.0	0.5	0.6	Z	1.0	1.1	1.5	0.8	0.1	0.5	0.2	0.1	0.0	0.1	1.4	9.9	11.4	9.2	3.9	1.4	0.0	0.1	1.9	11.4
29-Sep	Z	0.8	1.2	1.1	1.2	1.3	0.6	0.8	0.4	0.4	0.4	0.5	0.3	1.1	1.5	0.8	1.4	2.7	5.0	3.7	1.7	0.8	1.7	1.9	1.4	5.0
30-Sep	1.0	Z	0.5	0.5	1.5	3.5	5.1	2.9	6.9	14.2	15.4	12.0	16.6	9.4	6.1	3.0	4.1	6.4	7.7	3.3	3.1	3.7	4.6	4.1	5.9	16.6
	1.4	1.4	1.5	1.2	2.9	3.6	2.6	2.5	2.2	2.1	2.1	1.8	1.8	1.6	1.5	1.4	1.8	2.8	4.2	4.3	3.5	3.4	2.6	1.6	Diurnal Average	
	4.2	9.0	7.8	4.3	8.6	11.0	8.8	11.1	9.7	14.2	15.4	12.0	16.6	9.4	7.9	7.8	6.0	9.9	11.4	14.4	10.8	11.1	8.0	4.9	Diurnal Maximum	

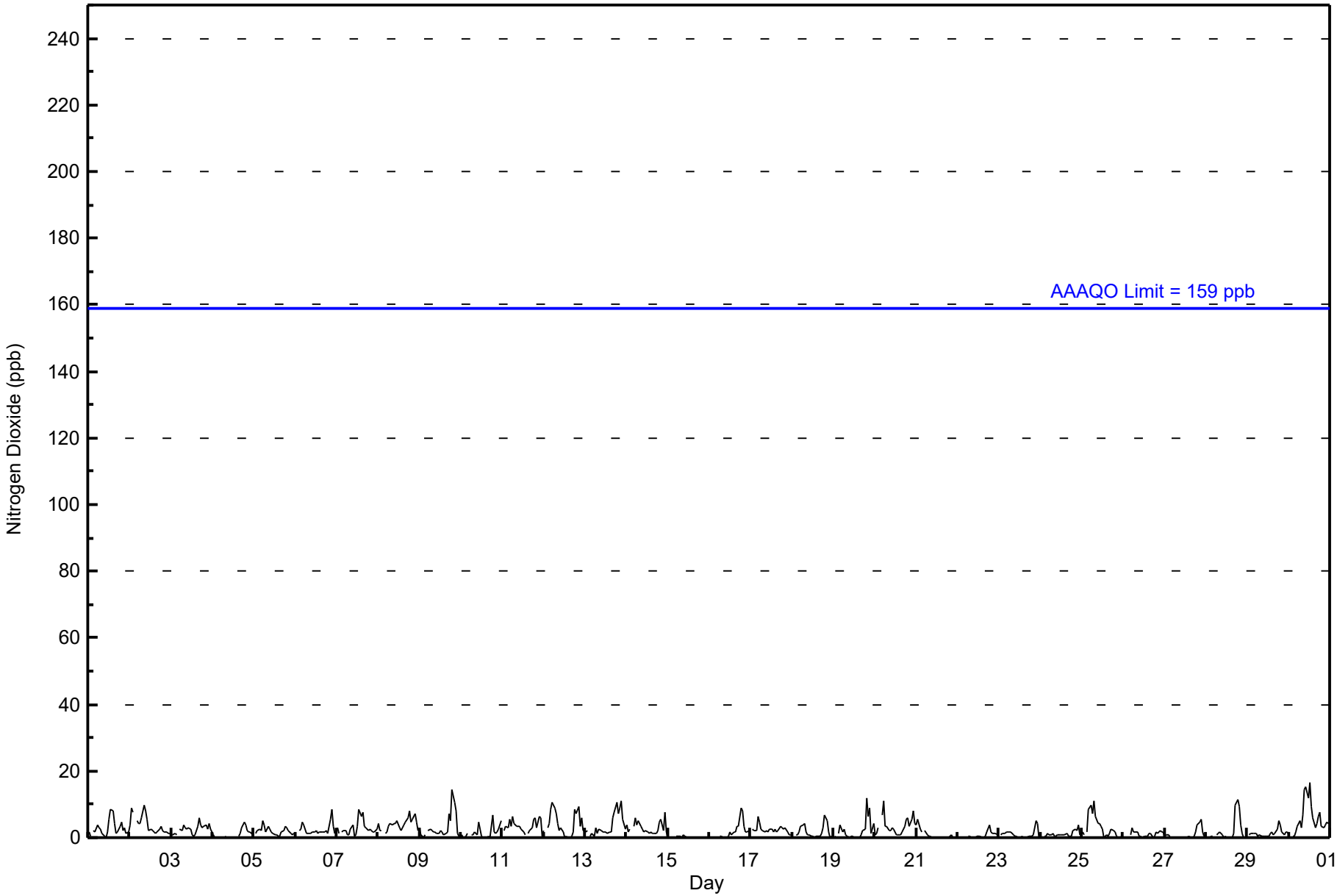
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025



Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	42	16	2	3	7	45	114	46	55	74	85	74	29	34	28	29	683
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	42	16	2	3	7	45	114	46	55	74	85	74	29	34	28	29	683

Total Number of Valid Hours: 683

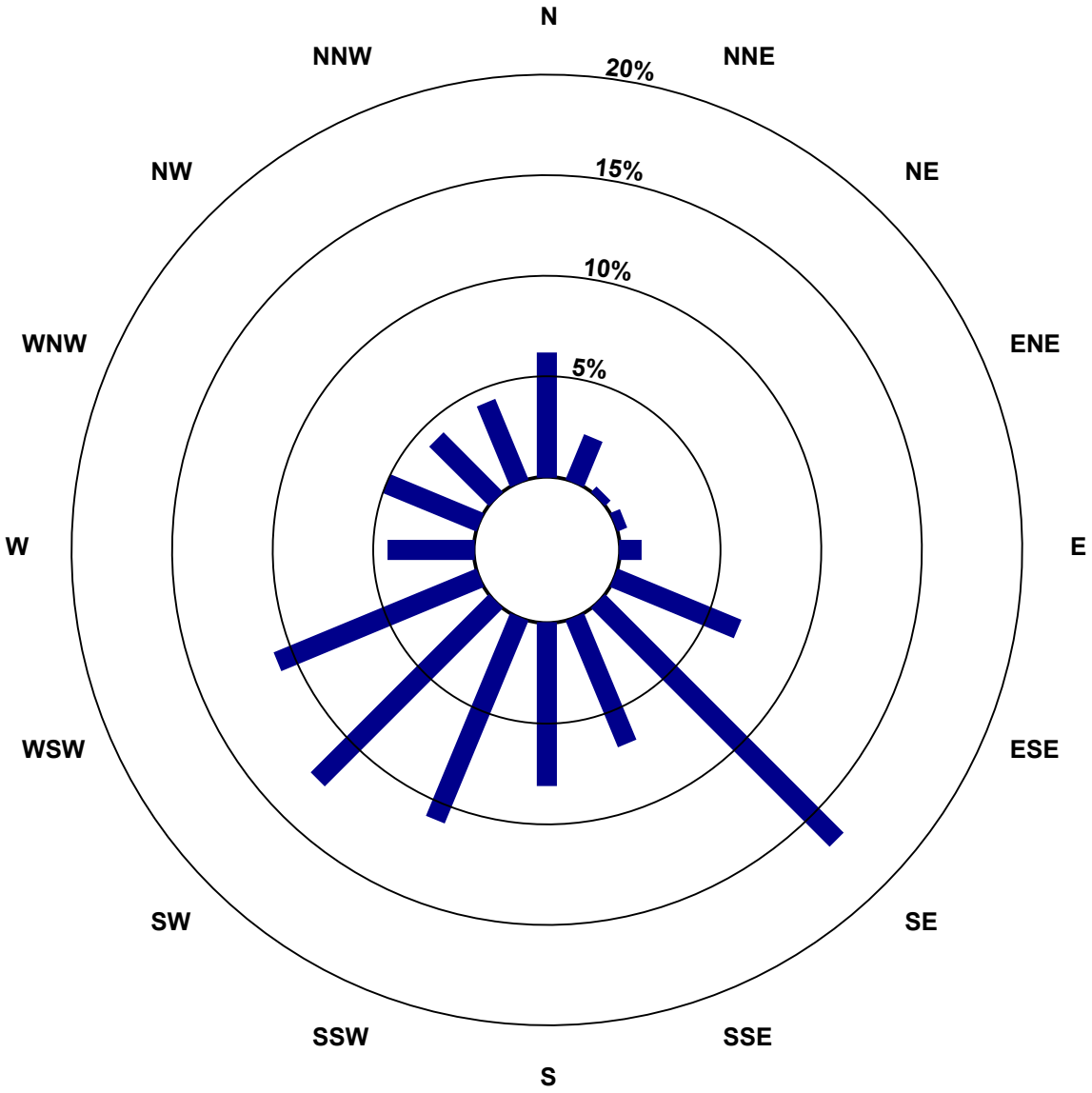
Total Number of Hours: 720

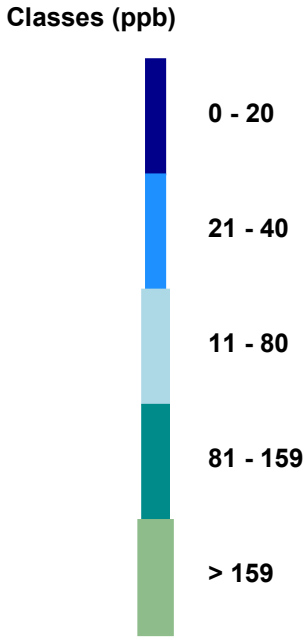
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes





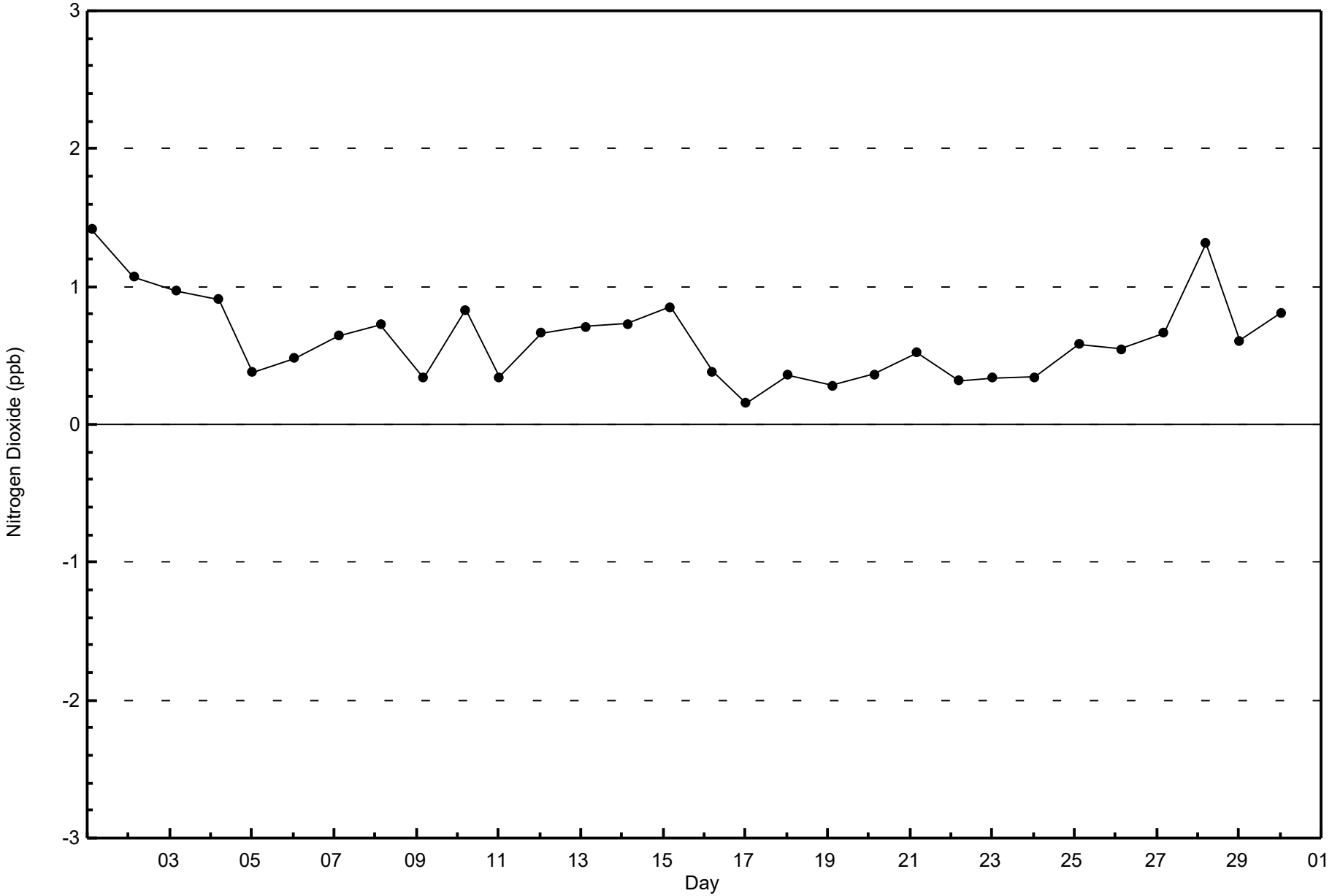
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025

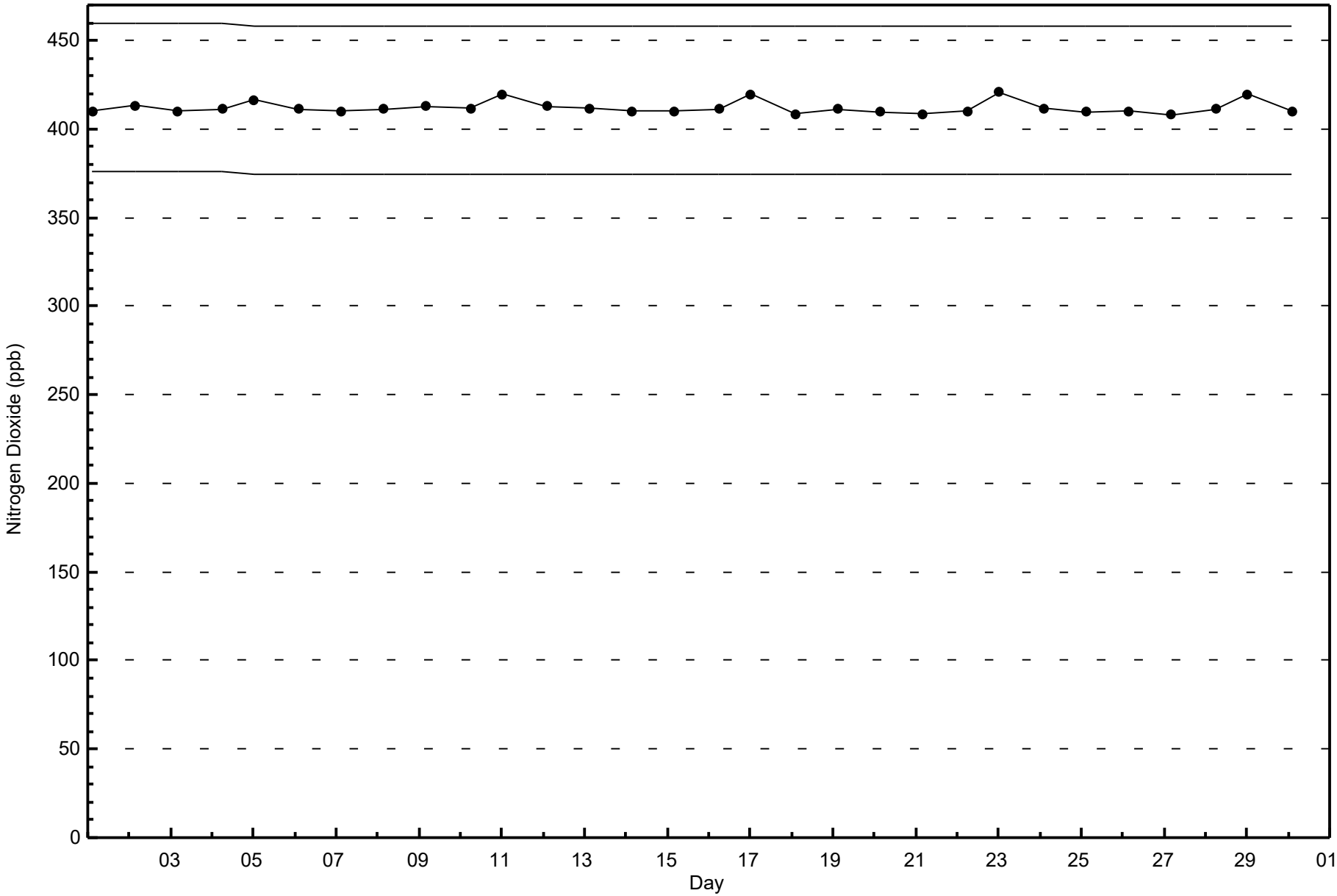


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025

Maximum Value: 24.3 ppb on Sep 30 11:00

Maximum Daily Average: 8.3 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 4 02:00

Minimum Daily Average: 0.4 ppb on Sep 15

Maximum Diurnal Average: 5.2 ppb at hour 20

Minimum Diurnal Average: 1.5 ppb at hour 4

Monthly Average: 3.15 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.9 Median = 2.0 Q_3 = 4.0 P_{90} = 7.3 P_{99} = 17.1

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.9	0.6	Z	3.1	2.3	5.2	4.0	4.1	2.6	1.5	0.9	3.9	10.6	13.0	11.4	5.5	1.7	2.3	3.9	4.8	2.3	3.3	1.5	1.6	4.0	13.0
2-Sep	3.8	9.3	8.2	Z	5.5	5.6	7.1	9.8	19.6	17.7	8.3	3.1	4.0	3.6	3.1	2.2	2.9	4.0	4.9	3.4	1.8	1.8	1.2	1.2	5.7	19.6
3-Sep	1.0	1.0	1.1	1.0	Z	2.9	2.8	5.2	3.7	3.3	4.2	3.3	1.0	0.4	0.8	4.5	7.0	4.0	2.9	3.6	4.0	2.6	4.1	2.4	2.9	7.0
4-Sep	1.1	0.0	0.0	0.1	0.0	Z	0.1	0.4	1.0	C	C	C	C	C	C	1.1	2.4	3.6	5.3	4.4	3.2	2.6	2.2	1.1	--	5.3
5-Sep	Z	1.4	2.3	3.4	3.2	10.3	9.0	5.1	7.7	5.6	3.2	2.0	1.4	1.5	0.9	1.2	2.7	3.6	4.6	3.7	2.7	1.7	1.0	1.7	3.5	10.3
6-Sep	1.4	Z	2.3	2.7	5.6	4.7	2.0	2.0	1.7	2.3	2.5	2.9	2.7	1.9	2.0	2.4	2.2	2.0	2.2	1.7	7.2	9.5	3.4	1.4	3.0	9.5
7-Sep	3.9	1.5	Z	3.6	2.7	2.2	1.2	0.8	3.4	5.2	0.8	1.1	4.5	10.6	7.4	9.3	4.1	3.1	2.6	2.7	2.4	2.0	1.9	2.7	3.5	10.6
8-Sep	4.5	2.4	2.2	Z	1.5	2.1	4.3	5.7	5.7	6.3	6.5	7.9	5.1	3.5	4.5	5.0	6.0	6.8	8.9	6.7	13.8	11.4	7.0	2.4	5.7	13.8
9-Sep	5.2	1.0	0.4	1.0	Z	3.5	4.2	3.3	2.4	2.6	2.2	1.9	3.5	1.9	1.2	1.3	2.2	7.4	5.0	17.0	12.5	8.7	1.4	0.6	3.9	17.0
10-Sep	1.3	0.4	0.3	0.7	1.7	Z	1.2	1.3	3.7	1.8	7.4	4.0	1.9	0.6	0.0	0.2	0.5	0.2	13.1	4.9	1.6	1.8	2.7	5.0	2.4	13.1
11-Sep	Z	2.3	3.6	3.3	6.7	4.8	13.9	11.0	8.5	7.3	5.7	4.2	2.0	1.2	M	2.0	3.3	4.0	6.9	7.9	4.3	11.3	13.1	0.9	5.8	13.9
12-Sep	2.4	Z	3.0	4.7	9.6	13.3	11.9	11.0	6.4	2.7	3.6	2.2	0.3	0.7	0.2	0.2	0.5	1.8	9.3	7.2	12.1	4.2	6.8	2.2	5.0	13.3
13-Sep	1.9	2.3	Z	0.5	1.6	0.7	3.7	1.6	3.3	3.0	2.4	2.3	1.7	1.3	1.8	2.0	6.3	8.0	10.8	7.4	9.8	13.3	6.1	2.7	4.1	13.3
14-Sep	3.7	1.7	2.4	Z	3.9	6.9	4.4	7.0	4.2	2.8	1.8	2.9	1.9	1.5	2.3	1.7	1.6	1.4	3.0	5.3	6.0	2.3	8.0	2.0	3.4	8.0
15-Sep	0.1	0.1	0.4	0.6	Z	1.3	1.4	1.1	1.1	2.5	0.6	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.4	2.5
16-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.6	0.0	0.0	0.0	0.3	2.0	0.8	2.8	2.4	6.3	5.3	11.4	9.5	3.4	1.8	1.9	2.0	2.2	11.4
17-Sep	Z	2.4	2.3	2.4	8.9	6.1	3.7	3.3	3.2	3.8	2.7	3.4	3.4	2.8	3.1	2.4	2.7	4.1	3.4	3.3	4.1	1.7	1.4	0.8	3.3	8.9
18-Sep	0.9	Z	1.0	1.1	1.9	4.0	4.9	5.6	2.6	0.8	0.8	0.6	0.3	0.2	0.3	0.5	0.7	1.3	3.0	7.0	5.1	1.9	0.1	0.4	2.0	7.0
19-Sep	0.1	0.4	Z	1.1	4.6	2.1	3.5	0.9	0.4	0.1	0.3	0.9	0.4	0.1	0.0	0.2	1.0	2.2	2.6	14.8	7.0	19.8	1.9	5.7	3.0	19.8
20-Sep	1.1	1.6	3.4	Z	8.7	14.1	4.1	5.3	3.7	3.4	4.0	3.5	0.9	0.7	0.9	1.0	1.9	4.1	5.8	6.8	4.0	6.0	9.5	4.6	4.3	14.1
21-Sep	3.8	5.7	2.4	1.7	Z	2.4	0.9	0.4	0.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	1.0	0.1	0.1	0.0	0.9	5.7
22-Sep	0.0	0.0	0.2	0.2	0.2	Z	0.8	0.6	0.5	0.3	0.5	0.6	0.8	2.0	0.5	0.5	0.6	1.9	4.5	1.9	1.4	1.6	1.4	0.9	1.0	4.5
23-Sep	Z	1.1	1.1	1.4	1.8	2.0	1.9	2.2	0.9	0.7	1.1	0.1	0.1	1.1	0.6	0.4	0.5	0.8	0.8	0.9	1.4	5.6	4.3	0.3	1.4	5.6
24-Sep	0.5	Z	0.5	0.4	1.3	1.0	0.9	1.4	0.6	0.4	0.9	1.2	1.9	1.8	1.8	2.2	1.6	0.9	0.3	2.2	2.9	2.2	4.2	0.9	1.4	4.2
25-Sep	1.7	0.9	Z	2.1	10.6	12.9	9.1	16.9	9.2	6.3	6.5	5.5	3.6	0.4	1.2	0.8	1.5	2.6	2.4	2.0	0.7	0.1	0.1	0.5	4.2	16.9
26-Sep	0.2	0.0	0.1	Z	1.3	3.9	1.9	2.4	3.7	1.6	1.8	0.4	1.0	1.1	1.6	3.0	2.7	0.7	0.7	2.1	1.3	2.7	2.1	2.2	1.7	3.9
27-Sep	0.5	1.0	1.2	0.0	Z	0.2	0.2	0.2	0.3	0.3	0.0	0.1	0.2	1.0	1.4	0.3	0.4	0.8	2.4	4.2	5.2	6.0	2.0	0.8	1.2	6.0
28-Sep	0.3	0.2	0.2	0.6	0.9	Z	1.3	1.5	2.5	1.4	0.3	1.2	0.6	0.3	0.2	0.3	2.3	12.4	12.9	11.4	4.2	1.7	0.1	0.3	2.5	12.9
29-Sep	Z	0.8	1.3	1.3	1.7	1.7	0.8	1.3	0.8	1.1	0.8	1.0	0.8	1.6	2.1	1.3	1.9	3.3	5.8	4.6	2.7	1.2	1.9	2.3	1.8	5.8
30-Sep	1.0	Z	0.7	0.8	1.8	3.8	7.3	6.8	10.0	23.0	24.3	17.8	22.0	13.8	13.2	3.5	5.0	7.2	8.2	3.5	3.3	3.9	4.8	4.2	8.3	24.3
	1.7	1.5	1.6	1.5	3.5	4.7	3.8	4.0	3.8	3.7	3.2	2.7	2.7	2.4	2.3	1.9	2.4	3.3	4.9	5.2	4.4	4.4	3.2	1.8	Diurnal Average	
	5.2	9.3	8.2	4.7	10.6	14.1	13.9	16.9	19.6	23.0	24.3	17.8	22.0	13.8	13.2	9.3	7.0	12.4	13.1	17.0	13.8	19.8	13.1	5.7	Diurnal Maximum	

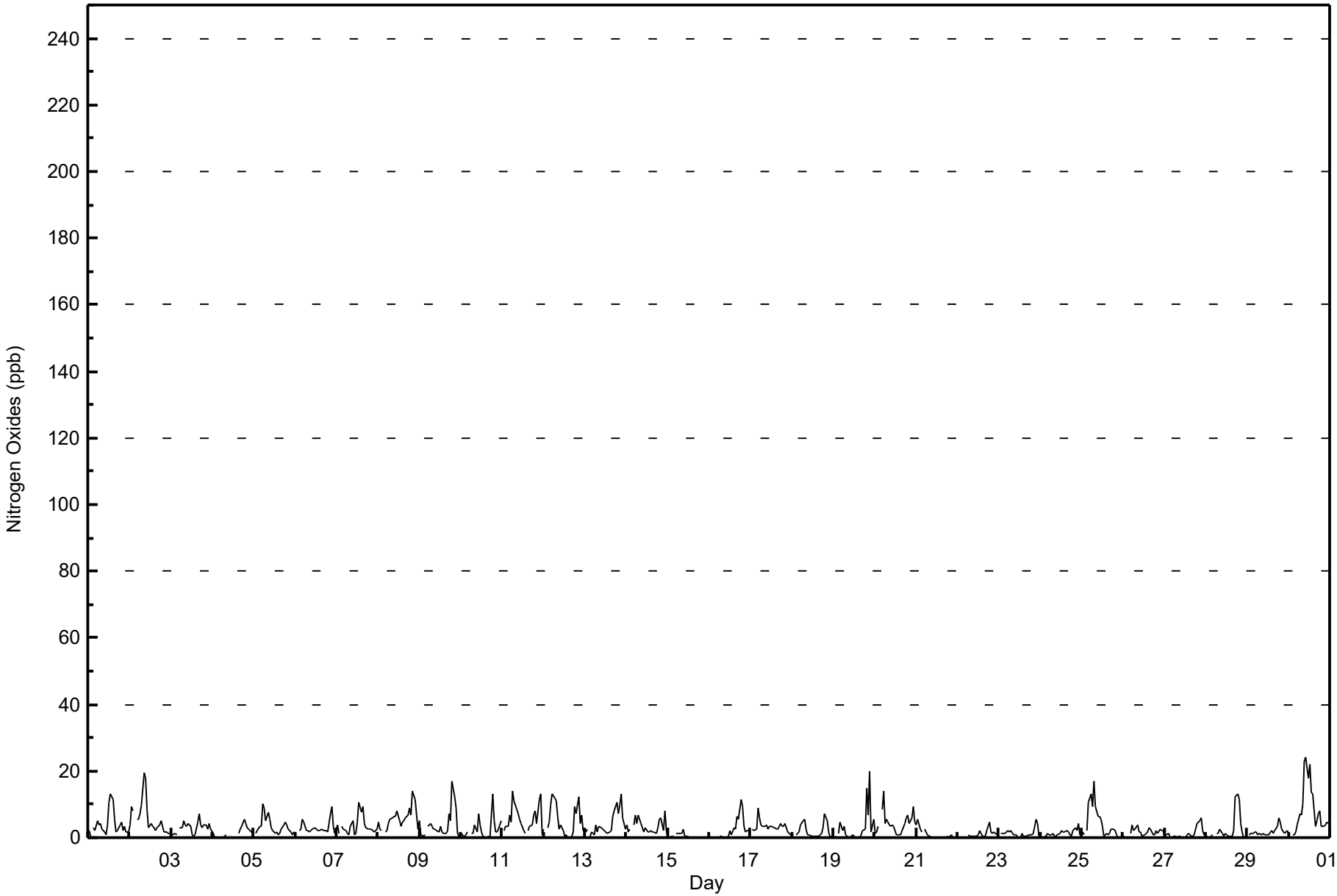
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025



Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	99.56	99.56
21 - 40	3	0.44	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	42	15	2	3	7	45	114	46	55	74	85	73	29	34	28	28	680
21 - 40	0	1	0	0	0	0	0	0	0	0	0	1	0	0	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	42	16	2	3	7	45	114	46	55	74	85	74	29	34	28	29	683

Total Number of Valid Hours: 683

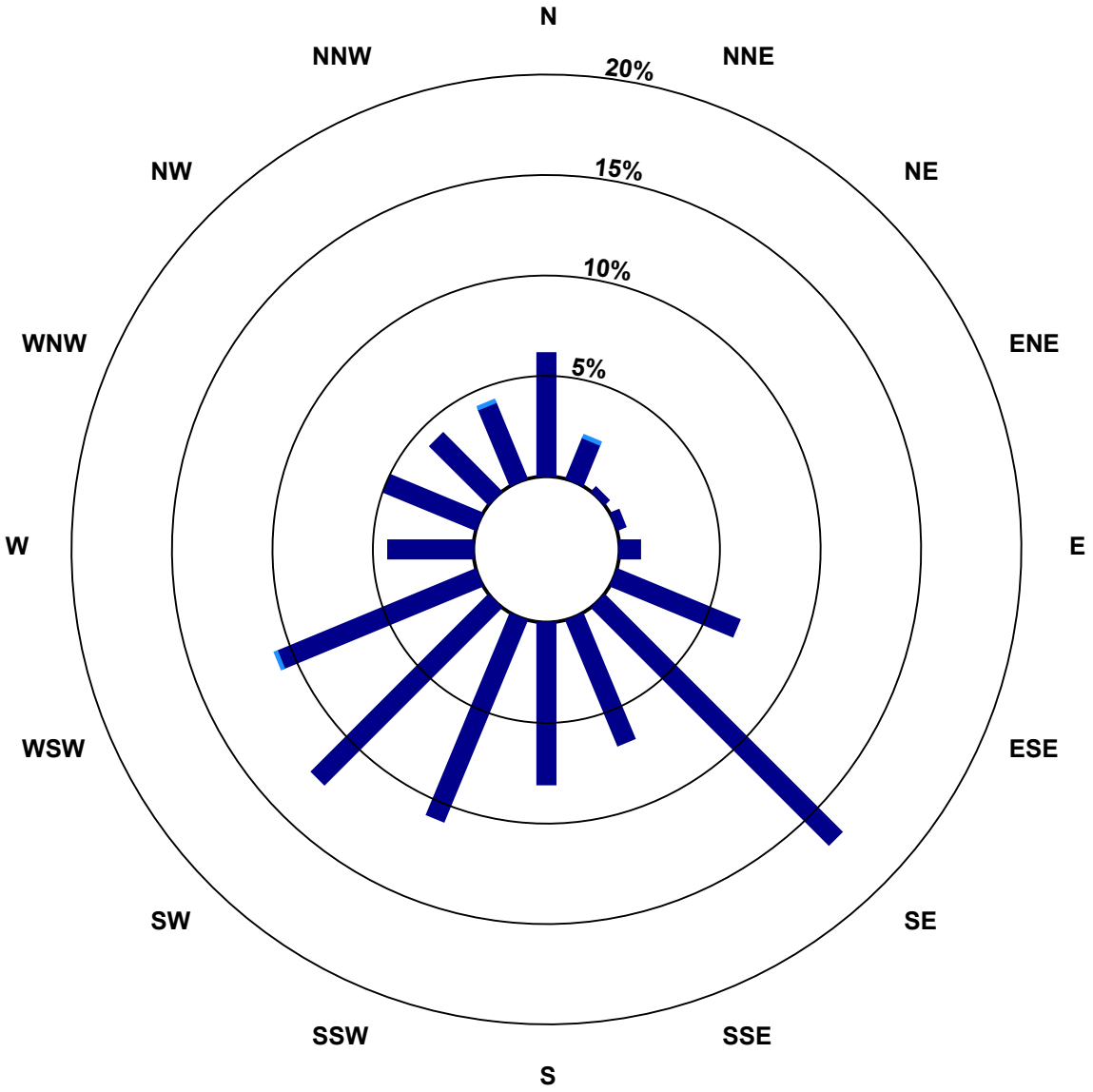
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

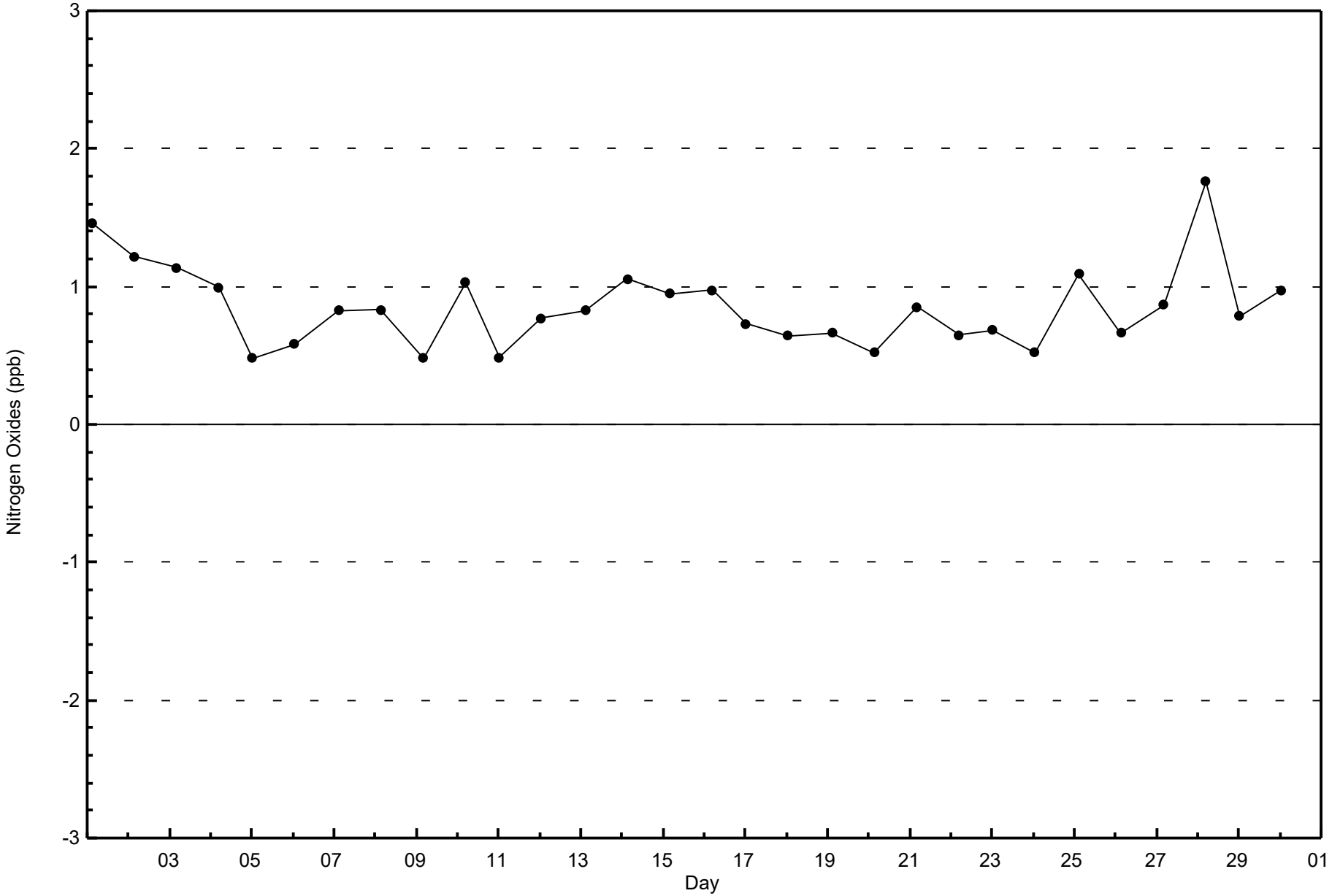
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025

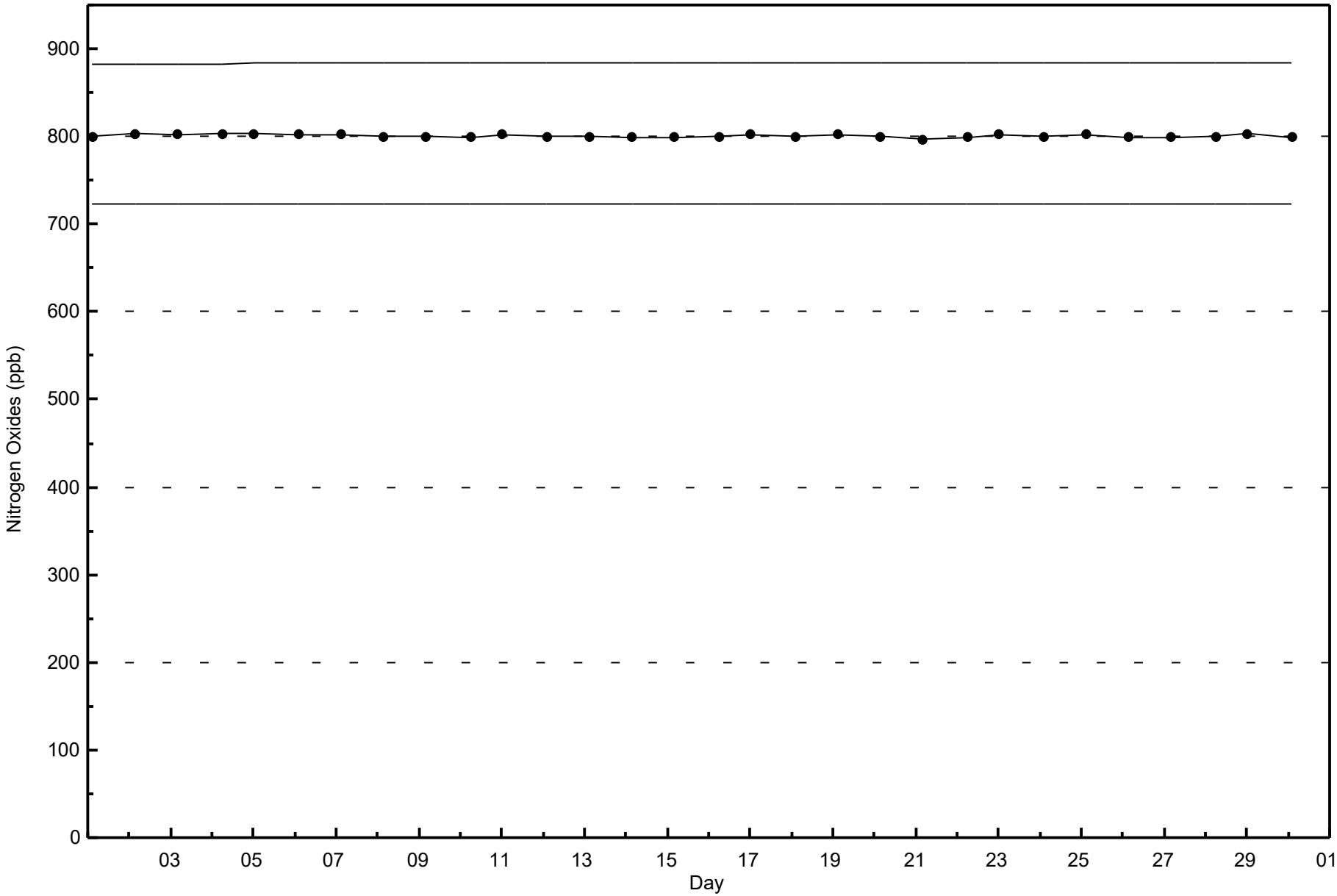


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0

Maximum Value: 17.5 ppb on Sep 24 12:00

Maximum Daily Average: 3.2 ppb on Sep 14

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 2

Maximum Diurnal Average: 1.8 ppb at hour 7

Minimum Diurnal Average: 0.0 ppb at hour 1

Monthly Average: 0.57 ppb

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} = 13.5

Hours in Service:	720
Hours of Data:	618
Hours of Missing Data:	102
Hours of Calibration:	43
Percent Operational Time:	91.8

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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	10.3	10.2	10.4	0.0	0.0	0.0	1.5	10.4
2-Sep	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
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	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
7-Sep	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
8-Sep	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
9-Sep	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
10-Sep	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
11-Sep	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	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12-Sep	Z	RE	RE	12.4	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	12.4
13-Sep	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
14-Sep	0.0	0.0	Z	RE	RE	11.5	10.3	13.4	15.6	16.0	0.0	0.0	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	16.0
15-Sep	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
16-Sep	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
17-Sep	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
18-Sep	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	C	0.0	0.0	--	0.0
19-Sep	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
20-Sep	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
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	17.5	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	17.5
25-Sep	0.0	Z	RE	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
26-Sep	0.0	0.0	Z	RE	0.0	0.0	0.0	10.5	10.7	0.0	0.0	0.0	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	10.7
27-Sep	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	10.3	11.2	11.1	10.3	10.7	11.0	0.0	3.1	11.2
28-Sep	0.0	0.0	0.0	0.0	Z	RE	16.5	15.0	13.7	12.5	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	2.6	16.5
29-Sep	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	10.8	0.5	10.8
30-Sep	Z	RE	11.5	0.0	0.0	10.3	10.4	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	1.5	11.5
	0.0	0.0	0.7	0.8	0.8	1.5	1.8	1.6	1.4	1.0	0.5	0.6	0.5	0.0	0.0	0.0	0.0	0.4	0.7	0.7	0.7	0.4	0.4	0.4	Diurnal Average	
	0.0	0.0	11.5	12.4	12.0	11.5	16.5	15.0	15.6	16.0	13.4	17.5	13.5	0.0	0.0	0.0	0.0	10.3	11.2	11.1	10.4	10.7	11.0	10.8	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance RE - Recovery

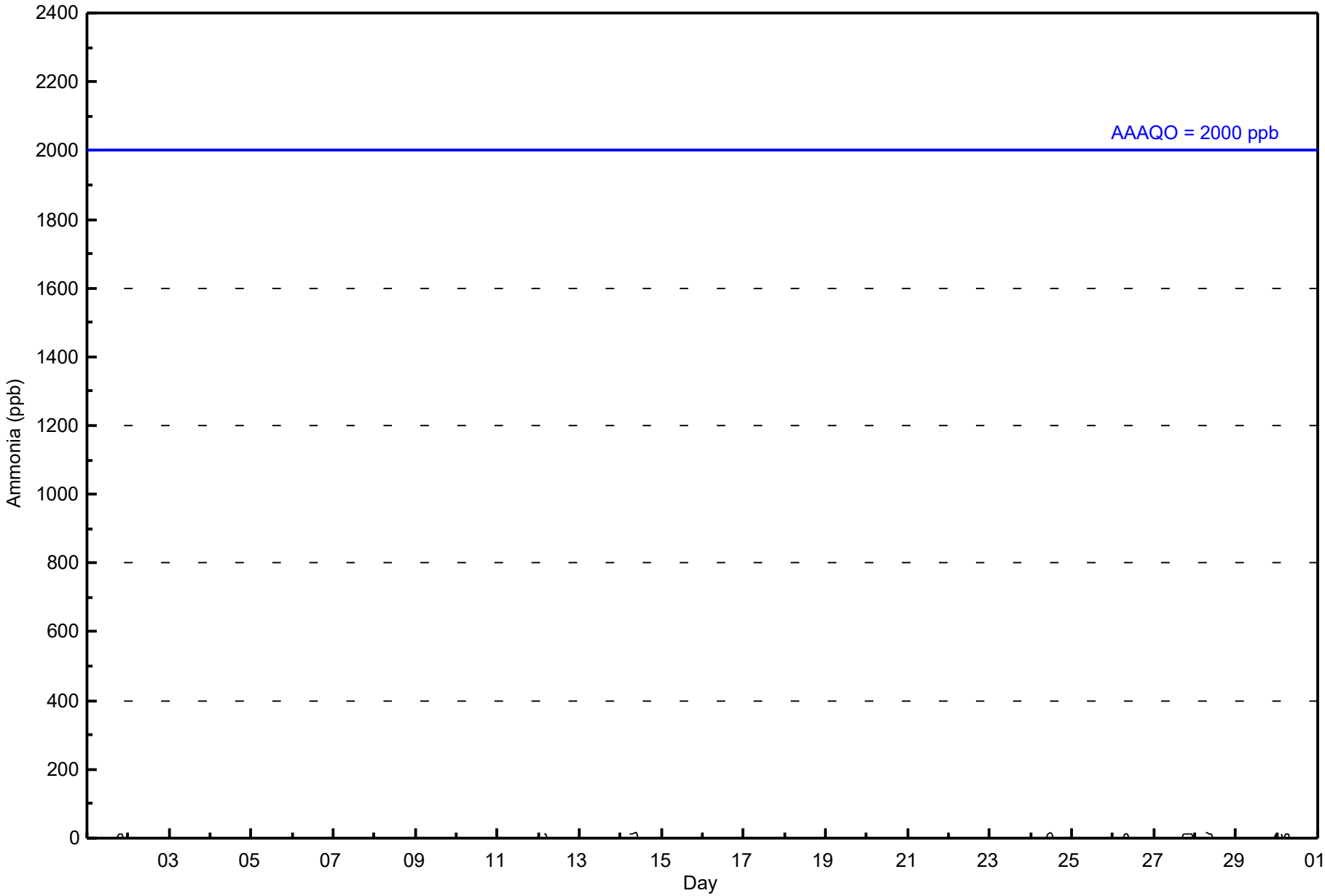
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Patricia McInnes - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	589	95.31	95.31
6 - 10	9	1.46	96.76
11 - 15	16	2.59	99.35
16 - 20	4	0.65	100.00
21 - 25	0	0.00	100.00
> 26	0	0.00	100.00

Total Number of Valid Hours: 618

Total Number of Hours: 720

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	37	16	2	3	7	43	101	39	44	54	62	63	27	31	26	34	589
6 - 10	3	0	0	0	0	0	0	0	0	2	1	2	0	0	0	1	9
11 - 15	0	0	0	0	0	1	2	3	0	2	3	4	1	0	0	0	16
16 - 20	0	0	0	0	0	0	0	1	0	0	2	0	1	0	0	0	4
21 - 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	16	2	3	7	44	103	43	44	58	68	69	29	31	26	35	618

Total Number of Valid Hours: 618

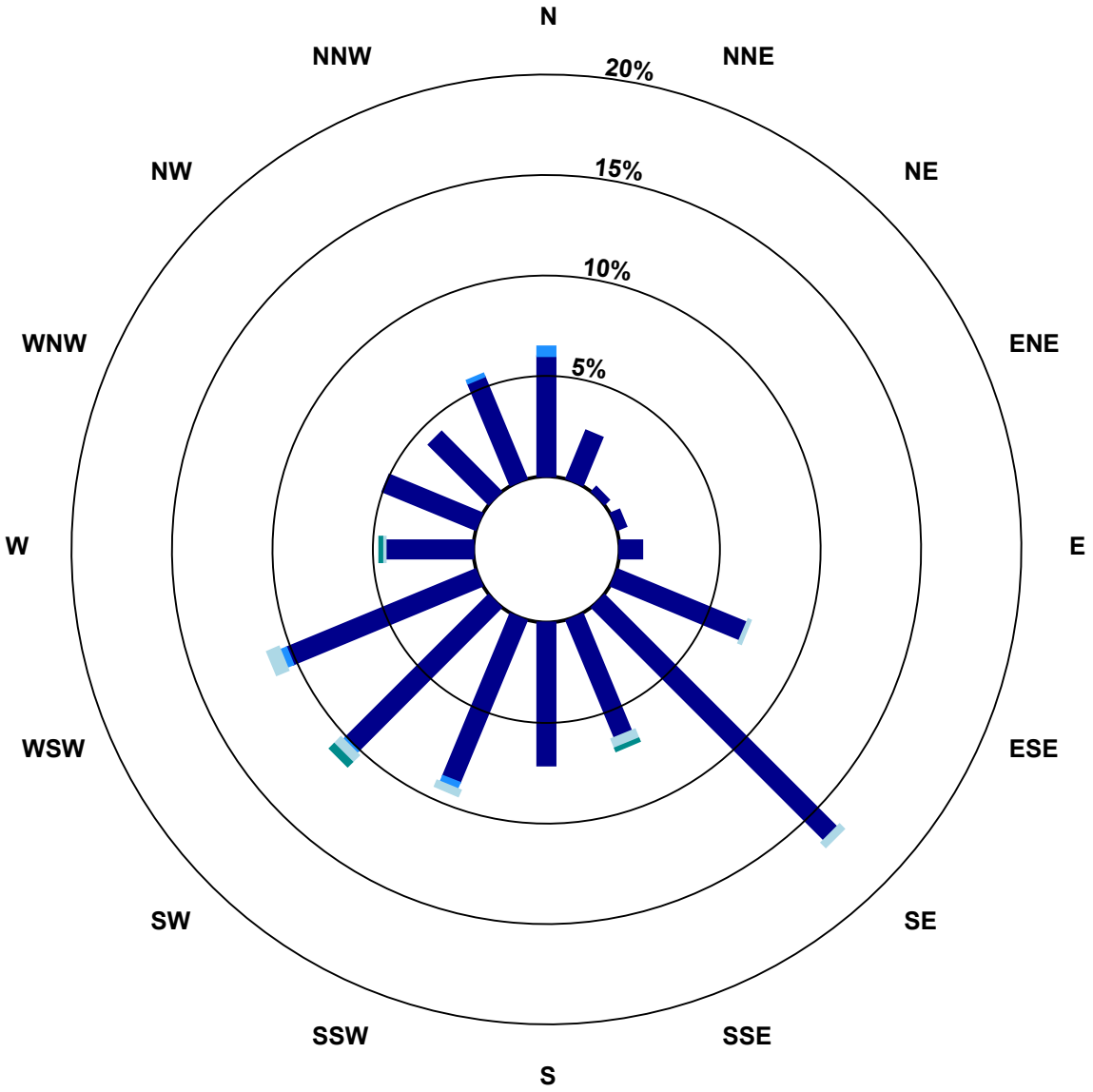
Total Number of Hours: 720

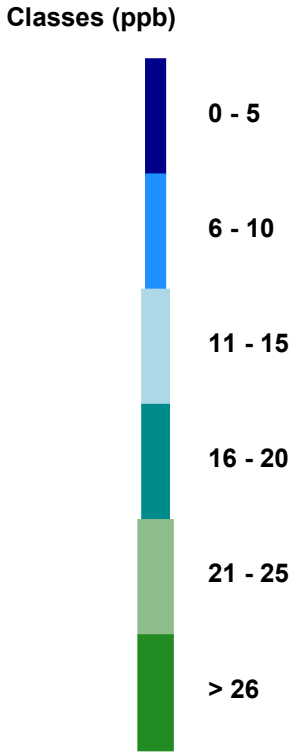
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ammonia (NH_3) - ppb

Patricia McInnes





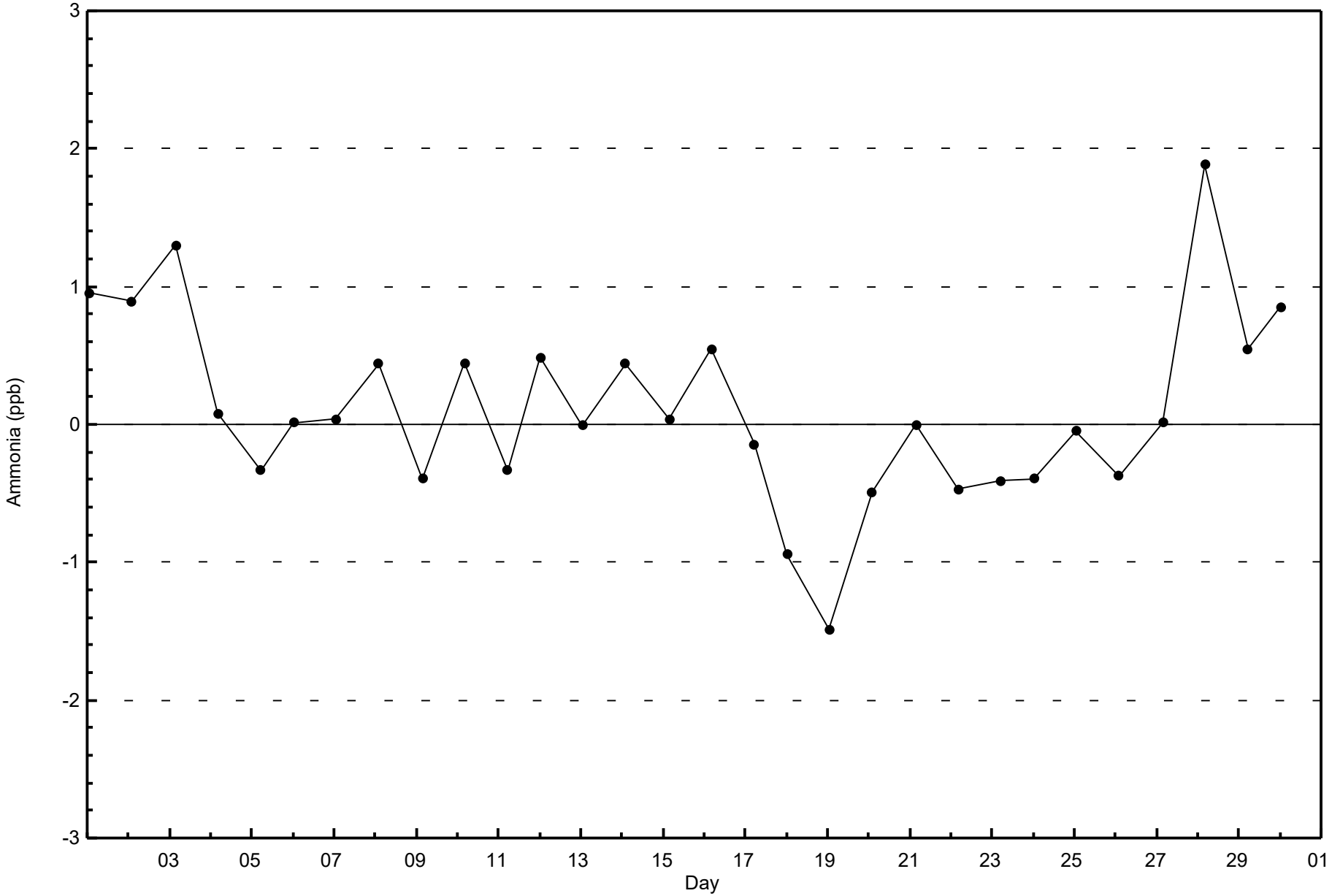
Total Number of Valid Hours: 618

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Patricia McInnes - September 2025

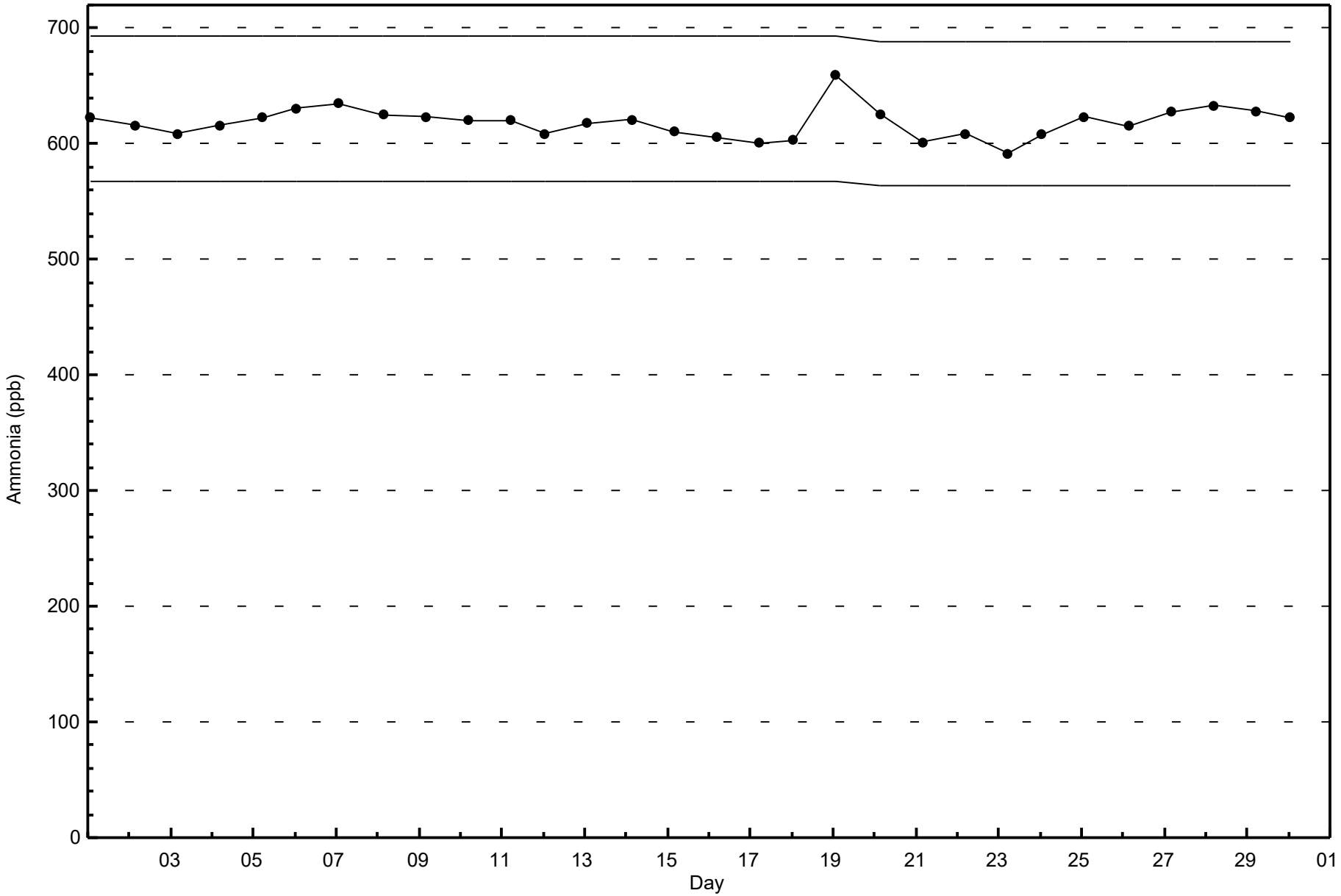


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Patricia McInnes - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 8

Maximum Value: 265.0 $\mu g/m^3$ on Sep 14 10:00

Maximum Daily Average: 75.9 $\mu g/m^3$ on Sep 14

Minimum Value: 0.7 $\mu g/m^3$ on Sep 22 17:00

Minimum Daily Average: 4.2 $\mu g/m^3$ on Sep 23

Maximum Diurnal Average: 39.3 $\mu g/m^3$ at hour 8

Minimum Diurnal Average: 15.1 $\mu g/m^3$ at hour 16

Monthly Average: 25.45 $\mu g/m^3$

Percentiles: P_1 = 1.5 P_{10} = 4.1 Q_1 = 7.9 Median = 16.7 Q_3 = 30.7 P_{90} = 55.0 P_{99} = 147.8

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	46.0	39.4	40.0	46.3	40.0	40.7	35.0	32.3	39.2	32.7	26.5	28.0	32.6	43.1	42.1	33.5	53.6	95.0	134.2	128.9	122.0	101.3	78.8	62.8	57.3	134.2
2-Sep	53.6	55.8	55.0	54.7	54.2	53.0	53.2	60.5	63.8	60.3	57.4	41.4	33.6	33.8	23.8	21.7	21.1	22.8	25.3	28.9	31.3	34.3	34.8	38.7	42.2	63.8
3-Sep	50.7	71.6	77.3	72.5	68.3	60.9	52.2	48.5	45.6	42.8	42.5	42.8	43.9	43.7	46.1	53.5	61.6	66.3	39.3	43.2	67.0	65.1	66.3	41.4	54.7	77.3
4-Sep	35.0	19.3	12.0	16.7	14.0	9.5	6.3	5.8	6.2	9.0	8.2	7.9	5.9	4.8	4.7	5.4	5.6	7.0	7.5	8.0	9.1	8.2	7.4	6.3	9.6	35.0
5-Sep	8.1	9.1	6.7	5.4	4.8	4.8	4.8	4.6	5.8	5.2	5.6	6.4	7.0	7.2	8.0	8.1	9.0	8.4	7.7	7.5	6.9	7.3	7.3	7.9	6.8	9.1
6-Sep	12.6	21.0	25.8	21.8	26.6	73.7	106.5	111.7	105.4	95.9	71.1	45.4	22.6	12.0	9.5	9.9	12.0	15.4	15.3	14.4	17.3	26.1	23.6	18.3	38.1	111.7
7-Sep	19.4	17.9	16.8	19.7	17.5	15.9	14.6	16.3	16.7	17.0	19.1	17.8	20.5	29.1	31.7	32.7	27.8	24.0	25.5	24.7	21.7	21.7	22.5	24.4	21.5	32.7
8-Sep	28.0	32.4	36.1	36.7	36.3	33.4	30.1	29.1	27.9	29.3	27.6	29.8	29.2	29.0	23.6	19.2	14.9	16.5	17.5	16.7	22.4	16.9	17.5	16.3	25.7	36.7
9-Sep	15.2	13.3	13.5	17.8	21.7	27.9	39.5	61.8	89.0	90.3	80.0	62.4	40.4	28.1	26.0	26.7	27.6	29.2	29.7	31.8	28.8	28.9	26.3	26.5	36.8	90.3
10-Sep	26.8	27.0	27.1	26.4	26.5	26.1	24.5	24.5	23.1	19.7	21.7	17.2	7.7	6.2	5.5	6.2	6.9	6.7	6.2	5.7	6.3	7.4	7.1	7.4	15.4	27.1
11-Sep	14.1	14.0	11.9	12.4	11.4	9.1	10.0	9.1	7.6	9.4	9.1	8.6	7.7	8.5	8.0	8.3	8.8	10.0	12.2	16.3	21.2	24.3	27.6	36.7	13.2	36.7
12-Sep	85.7	112.1	135.9	159.5	161.6	152.8	149.5	137.6	98.1	67.5	64.7	41.3	22.4	22.2	21.9	21.9	22.1	22.9	23.9	23.7	22.9	23.9	24.7	23.5	68.4	161.6
13-Sep	22.8	24.8	19.9	20.1	19.7	18.9	23.4	33.4	24.9	21.9	22.8	23.0	22.1	21.9	22.2	22.6	27.4	33.6	35.3	33.9	31.2	41.2	32.5	28.7	26.2	41.2
14-Sep	60.2	51.9	49.0	63.2	99.5	139.5	180.6	248.9	227.8	265.0	64.7	124.1	63.3	30.7	29.6	34.6	24.5	8.2	11.9	8.5	8.7	7.7	11.2	8.8	75.9	265.0
15-Sep	7.5	8.0	8.8	10.4	13.9	15.6	13.9	12.0	9.6	11.3	19.4	26.4	28.4	23.9	22.9	31.3	30.9	18.6	13.1	13.2	14.5	22.9	29.0	26.2	18.0	31.3
16-Sep	18.5	16.1	15.8	16.6	17.1	17.9	18.2	19.0	17.8	17.3	17.2	17.0	17.8	C	C	14.3	14.0	12.6	14.2	19.8	17.1	16.9	18.7	19.4	17.0	19.8
17-Sep	20.8	23.4	22.2	21.6	33.2	39.3	43.8	37.7	29.5	22.4	17.3	14.9	13.8	12.6	12.0	12.5	12.4	13.0	12.6	10.5	9.6	9.4	9.7	10.0	19.3	43.8
18-Sep	10.1	10.3	10.7	11.1	11.8	12.2	12.8	13.1	14.9	15.7	15.5	14.2	11.8	11.0	10.5	10.0	7.9	6.9	8.4	6.4	5.1	4.0	2.8	2.6	10.0	15.7
19-Sep	2.4	2.3	2.6	2.7	3.0	2.7	3.1	2.9	3.8	12.7	14.6	11.6	3.7	3.1	3.6	3.1	3.0	3.1	2.9	4.2	4.6	5.4	3.2	3.3	4.5	14.6
20-Sep	2.9	3.6	4.5	4.6	5.2	5.1	5.3	7.8	6.1	8.1	7.2	8.7	12.8	15.0	14.3	13.0	13.2	14.4	15.9	20.2	16.4	16.5	21.5	15.0	10.7	21.5
21-Sep	16.5	21.7	14.1	12.3	12.0	12.3	13.8	15.6	18.9	17.2	10.0	8.2	7.7	7.9	7.2	6.0	4.7	9.5	14.2	7.6	7.7	14.7	22.1	15.2	12.4	22.1
22-Sep	16.9	12.2	7.6	6.2	7.8	12.0	14.5	8.3	9.6	12.8	11.9	8.7	3.2	2.4	1.1	0.8	0.7	1.9	3.2	1.5	1.5	2.0	2.4	2.8	6.3	16.9
23-Sep	3.2	3.0	3.1	3.5	3.7	3.8	3.9	4.3	4.7	5.0	7.4	6.2	10.1	12.6	7.6	3.3	1.1	1.7	1.6	1.3	1.4	3.5	2.5	1.8	4.2	12.6
24-Sep	2.4	4.1	3.3	2.7	2.0	2.4	3.4	4.4	13.0	30.5	50.5	46.8	32.5	22.0	11.7	8.6	9.6	13.2	32.4	55.2	61.8	66.2	68.6	62.7	25.4	68.6
25-Sep	49.3	29.7	30.1	41.0	44.3	47.8	39.8	34.8	41.5	46.1	38.2	31.5	16.1	2.9	2.3	2.0	2.0	2.2	3.0	3.0	2.9	2.3	17.9	21.2	23.0	49.3
26-Sep	20.0	15.4	15.6	23.7	31.9	39.9	41.2	50.1	48.3	22.5	12.7	10.7	8.3	5.8	4.2	3.9	5.5	6.2	6.5	5.8	6.6	26.9	27.3	14.8	18.9	50.1
27-Sep	6.7	2.4	2.1	1.1	2.5	7.6	11.5	8.2	5.9	5.4	5.0	5.0	5.4	5.7	14.4	11.7	15.4	21.6	23.4	28.2	28.8	41.6	43.8	25.3	13.7	43.8
28-Sep	4.9	5.1	13.6	31.7	49.6	59.0	60.2	64.8	59.1	44.8	22.0	23.0	22.1	11.7	7.9	9.2	11.0	14.0	15.6	13.3	8.5	6.4	5.2	7.9	23.8	64.8
29-Sep	24.2	54.9	69.1	57.4	30.7	8.8	8.3	19.8	14.8	11.9	4.6	4.1	5.4	6.1	6.5	7.0	7.5	7.7	9.5	12.1	21.5	36.9	111.2	136.3	28.2	136.3
30-Sep	87.5	54.9	39.3	35.2	33.6	49.7	55.7	53.3	64.2	57.4	52.2	41.1	42.7	29.4	18.2	10.9	12.8	22.2	22.2	14.3	13.3	15.2	16.8	17.0	35.8	87.5
	25.7	25.9	26.3	28.5	30.2	33.4	36.0	39.3	38.1	36.9	27.6	25.8	20.0	17.0	15.4	15.1	15.8	17.8	19.7	20.3	21.3	23.5	26.4	24.3	Diurnal Average	
	87.5	112.1	135.9	159.5	161.6	152.8	180.6	248.9	227.8	265.0	80.0	124.1	63.3	43.7	46.1	53.5	61.6	95.0	134.2	128.9	122.0	101.3	111.2	136.3	Diurnal Maximum	

C - Calibration

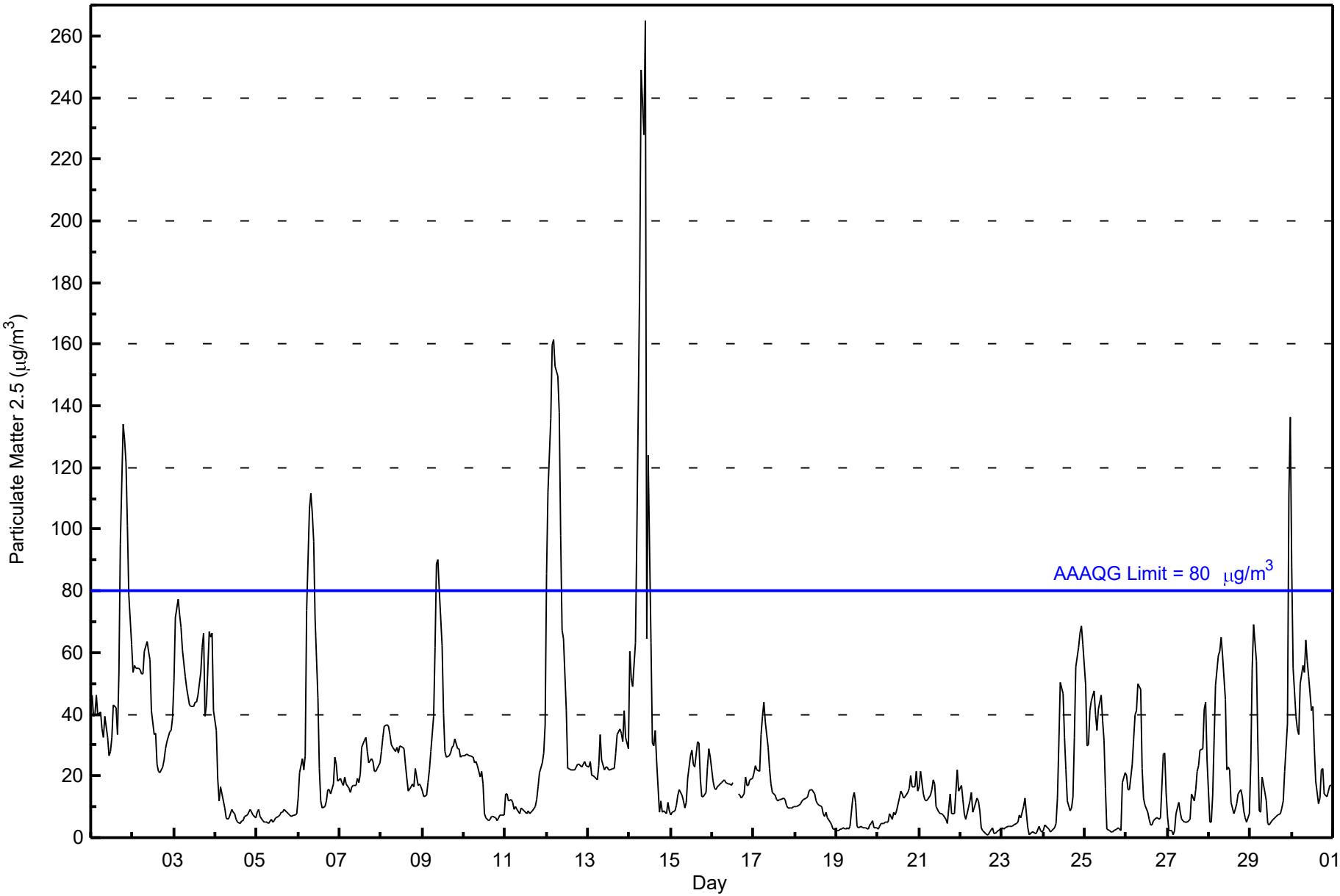
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Patricia McInnes - September 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	107	14.90	14.90
6 - 15	232	32.31	47.21
16 - 25	147	20.47	67.69
26 - 80	202	28.13	95.82
> 81.0	30	4.18	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Patricia McInnes - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	0	0	0	0	3	2	20	23	31	17	4	4	0	3	107
6 - 15	6	2	1	1	3	20	45	15	14	20	24	33	15	13	10	10	232
16 - 25	11	2	1	2	1	13	22	11	6	20	11	15	4	13	10	5	147
26 - 80	23	12	0	0	2	9	43	13	15	12	20	17	7	5	9	15	202
> 81.0	3	0	0	0	0	4	8	4	4	3	2	0	0	0	0	2	30
Totals	43	16	2	3	6	46	121	45	59	78	88	82	30	35	29	35	718

Total Number of Valid Hours: 718

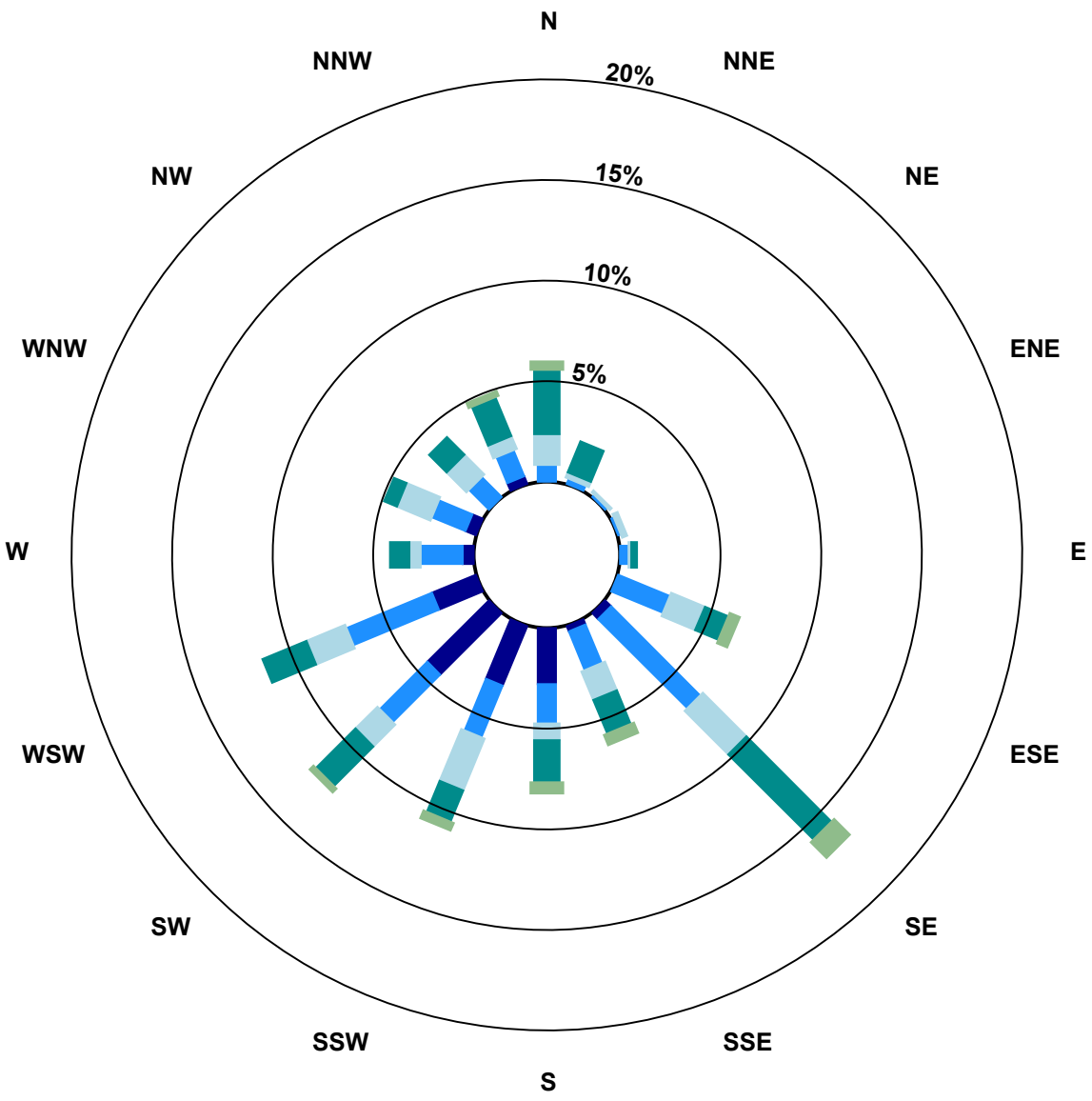
Total Number of Hours: 720

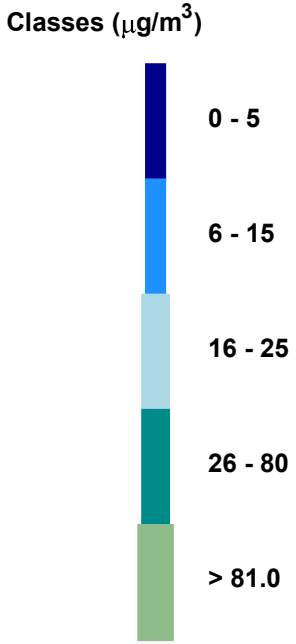
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Patricia McInnes





Total Number of Valid Hours: 718

Maximum Value: 28.9 C on Sep 12 15:00

Maximum Daily Average: 18.9 C on Sep 12

Minimum Value: 0.9 C on Sep 5 05:00

Minimum Daily Average: 10.3 C on Sep 25

Maximum Diurnal Average: 21.6 C at hour 16

Minimum Diurnal Average: 8.6 C at hour 6

Monthly Average: 14.50 C

Percentiles: P_1 = 2.2 P_{10} = 7.8 Q_1 = 10.6 Median = 13.7 Q_3 = 18.2 P_{90} = 22.5 P_{99} = 28.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

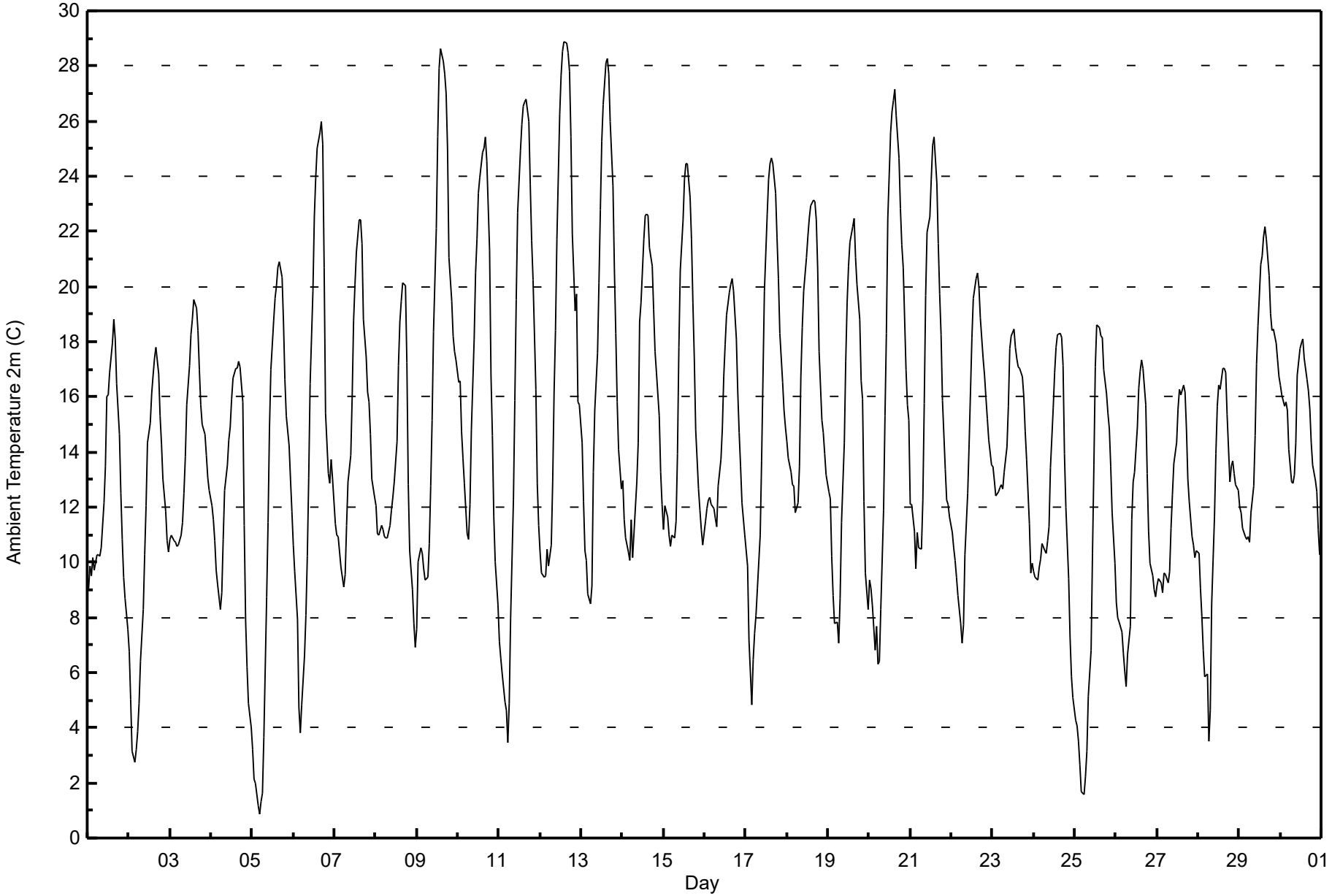
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.0	9.9	9.5	10.2	9.7	10.3	10.3	10.2	10.5	12.2	13.5	16.0	16.1	16.9	18.0	18.8	18.1	16.5	14.6	12.5	10.9	9.5	8.7	7.6	12.5	18.8
2-Sep	6.8	5.0	3.1	2.7	3.2	3.8	4.9	6.4	8.3	10.3	12.1	14.3	15.1	16.1	16.8	17.4	17.8	16.8	15.3	14.3	13.0	11.8	10.8	10.4	10.7	17.8
3-Sep	10.8	11.0	10.8	10.7	10.6	10.6	11.0	11.5	12.5	13.8	15.7	17.2	18.3	18.8	19.5	19.2	18.4	17.0	15.7	15.0	14.6	13.9	13.1	12.6	14.3	19.5
4-Sep	12.0	11.6	10.8	9.7	9.2	8.3	8.9	10.8	12.6	13.5	14.5	14.9	15.9	16.7	17.0	17.0	17.3	17.1	15.8	11.3	7.9	6.2	4.9	4.0	12.0	17.3
5-Sep	3.2	2.1	2.0	1.2	0.9	1.3	1.6	3.7	8.8	11.4	14.8	17.0	18.8	19.6	20.1	20.7	20.9	20.3	18.7	16.6	15.3	14.2	13.0	11.8	11.6	20.9
6-Sep	10.6	9.6	7.9	4.7	3.8	4.8	6.6	8.1	10.2	13.1	16.5	19.8	22.5	23.9	25.0	25.6	26.0	25.2	20.7	15.4	13.2	12.9	13.7	13.0	14.7	26.0
7-Sep	11.4	11.0	10.9	10.4	9.8	9.1	9.6	11.3	12.9	13.9	16.0	18.8	20.1	21.3	22.4	22.4	21.6	18.8	17.4	16.2	15.8	14.6	13.0	12.4	15.0	22.4
8-Sep	12.0	11.0	11.0	11.3	11.2	10.9	10.9	10.9	11.3	11.9	12.3	12.9	14.4	17.1	18.7	19.5	20.1	20.0	17.2	12.8	10.4	9.0	7.8	6.9	13.0	20.1
9-Sep	7.6	10.0	10.5	10.3	9.7	9.3	9.4	10.7	12.8	15.2	18.3	22.1	25.4	27.9	28.6	28.2	27.7	27.0	25.0	21.1	19.5	18.2	17.6	17.4	17.9	28.6
10-Sep	16.5	16.6	14.8	13.8	12.9	11.0	10.8	12.1	14.8	18.1	20.5	21.7	23.4	24.0	24.8	25.0	25.4	24.6	21.3	16.8	14.6	11.6	10.0	8.4	17.2	25.4
11-Sep	7.1	6.5	6.0	4.9	4.6	3.5	4.9	8.0	12.3	15.9	19.5	22.7	24.9	25.9	26.5	26.7	26.8	26.0	23.7	21.6	20.2	16.3	12.9	11.4	15.8	26.8
12-Sep	10.4	9.6	9.5	9.5	10.5	9.9	10.6	12.9	16.1	18.4	21.7	26.3	27.6	28.5	28.9	28.8	28.5	27.8	25.4	21.9	19.1	19.7	15.8	15.7	18.9	28.9
13-Sep	14.3	12.2	10.4	10.1	8.9	8.5	9.2	13.3	15.5	17.6	20.1	22.8	25.3	26.6	28.1	28.3	27.7	26.0	23.6	20.7	18.3	15.8	14.1	12.7	17.9	28.3
14-Sep	13.0	11.5	10.9	10.4	10.1	11.5	10.2	11.1	12.9	14.4	18.7	19.4	21.7	22.6	22.6	22.6	21.4	20.7	19.2	17.6	16.9	15.3	13.3	12.1	15.8	22.6
15-Sep	11.2	12.0	11.7	11.0	10.6	11.0	10.9	11.5	13.9	17.8	20.6	22.4	23.9	24.5	24.5	23.3	21.7	19.4	17.4	14.8	12.7	11.9	11.2	10.6	15.8	24.5
16-Sep	11.5	12.0	12.3	12.3	12.1	11.9	11.6	11.3	12.8	13.7	14.8	16.7	17.9	19.0	19.8	20.1	20.3	19.9	18.1	16.2	14.7	13.5	12.2	11.0	14.8	20.3
17-Sep	10.4	9.9	7.2	4.8	6.4	7.4	8.1	9.0	11.0	13.7	16.8	19.8	22.6	23.9	24.5	24.7	24.5	23.4	21.7	20.3	18.3	16.5	15.5	14.9	15.6	24.7
18-Sep	14.4	13.8	13.3	12.8	12.7	11.8	12.2	13.5	16.7	18.5	19.8	21.1	21.8	22.4	22.9	23.1	23.1	22.4	20.6	17.6	15.1	14.7	13.9	13.2	17.2	23.1
19-Sep	12.6	12.3	10.2	8.8	7.8	7.8	7.1	8.7	11.4	14.3	17.3	19.4	20.7	21.6	22.2	22.5	21.0	20.1	18.8	16.6	15.9	12.2	9.6	8.3	14.5	22.5
20-Sep	9.4	9.0	8.4	6.8	7.7	6.3	6.4	8.3	11.9	15.3	18.3	22.5	25.6	26.4	26.7	27.1	26.2	24.7	22.8	21.5	20.7	17.0	15.7	15.2	16.7	27.1
21-Sep	12.1	12.1	11.1	9.7	11.1	10.6	10.5	12.3	15.8	19.7	21.9	22.5	23.9	25.1	25.4	23.8	21.6	19.7	18.3	15.9	13.4	12.3	12.1	11.6	16.3	25.4
22-Sep	11.1	10.5	10.1	9.5	8.8	7.8	7.0	7.8	10.3	12.5	14.3	16.2	18.2	19.6	20.3	20.5	20.0	18.8	17.4	16.8	16.0	15.2	14.5	13.5	14.0	20.5
23-Sep	13.5	13.0	12.4	12.6	12.7	12.8	12.7	13.3	14.2	15.7	17.7	18.2	18.5	17.8	17.4	17.1	17.1	16.7	16.0	14.7	13.8	11.4	9.6	10.0	14.5	18.5
24-Sep	9.6	9.5	9.3	9.8	10.1	10.7	10.4	10.3	10.8	11.3	13.4	15.6	16.9	17.8	18.2	18.3	18.1	17.1	13.9	12.0	9.4	7.3	5.9	5.1	12.1	18.3
25-Sep	4.3	4.1	3.5	2.7	1.7	1.6	2.2	3.2	5.1	6.8	10.3	13.5	17.1	18.6	18.5	18.2	18.1	17.0	16.1	15.4	14.8	13.5	11.8	10.0	10.3	18.6
26-Sep	8.6	8.0	7.8	7.5	6.7	6.0	5.5	6.6	7.7	11.5	12.9	13.3	14.9	16.3	16.9	17.3	17.0	15.7	13.2	11.1	9.9	9.5	9.0	8.8	10.9	17.3
27-Sep	9.2	9.4	9.3	8.9	9.6	9.5	9.3	9.7	11.2	12.4	13.6	14.3	15.5	16.3	16.1	16.4	16.2	14.9	13.0	12.2	10.9	10.6	10.2	10.4	12.0	16.4
28-Sep	10.3	9.0	8.0	6.8	5.8	6.0	3.5	4.6	8.5	11.7	13.9	15.7	16.4	16.3	17.0	17.0	16.9	15.4	12.9	13.5	13.7	13.2	12.8	12.6	11.7	17.0
29-Sep	12.0	11.8	11.2	10.9	10.8	10.9	10.7	11.8	12.8	14.6	17.2	18.6	20.8	21.1	21.8	22.2	21.7	20.4	19.0	18.4	18.4	17.9	17.3	16.7	16.2	22.2
30-Sep	16.4	16.0	15.7	15.8	15.5	14.1	12.9	12.9	13.2	14.3	16.8	17.7	18.0	18.1	17.4	16.6	16.2	15.6	14.3	13.5	13.0	12.5	11.2	10.3	14.9	18.1
	10.7	10.3	9.6	9.0	8.8	8.6	8.7	9.9	12.0	14.1	16.5	18.4	20.1	21.0	21.6	21.6	21.2	20.2	18.2	16.1	14.7	13.3	12.0	11.3	Diurnal Average	
	16.5	16.6	15.7	15.8	15.5	14.1	12.9	13.5	16.7	19.7	21.9	26.3	27.6	28.5	28.9	28.8	28.5	27.8	25.4	21.9	20.7	19.7	17.6	17.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Patricia McInnes - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	144	20.00	20.00
10 - 20	448	62.22	82.22
> 20	128	17.78	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 99.4 % on Sep 15 08:00

Maximum Daily Average: 79.6 % on Sep 1

Minimum Value: 25.0 % on Sep 21 16:00

Minimum Daily Average: 43.7 % on Sep 29

Maximum Diurnal Average: 83.9 % at hour 7

Minimum Diurnal Average: 38.8 % at hour 16

Monthly Average: 63.08 %

Percentiles: P_1 = 28.2 P_{10} = 35.2 Q_1 = 46.5 Median = 62.4 Q_3 = 80.9 P_{90} = 91.1 P_{99} = 98.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

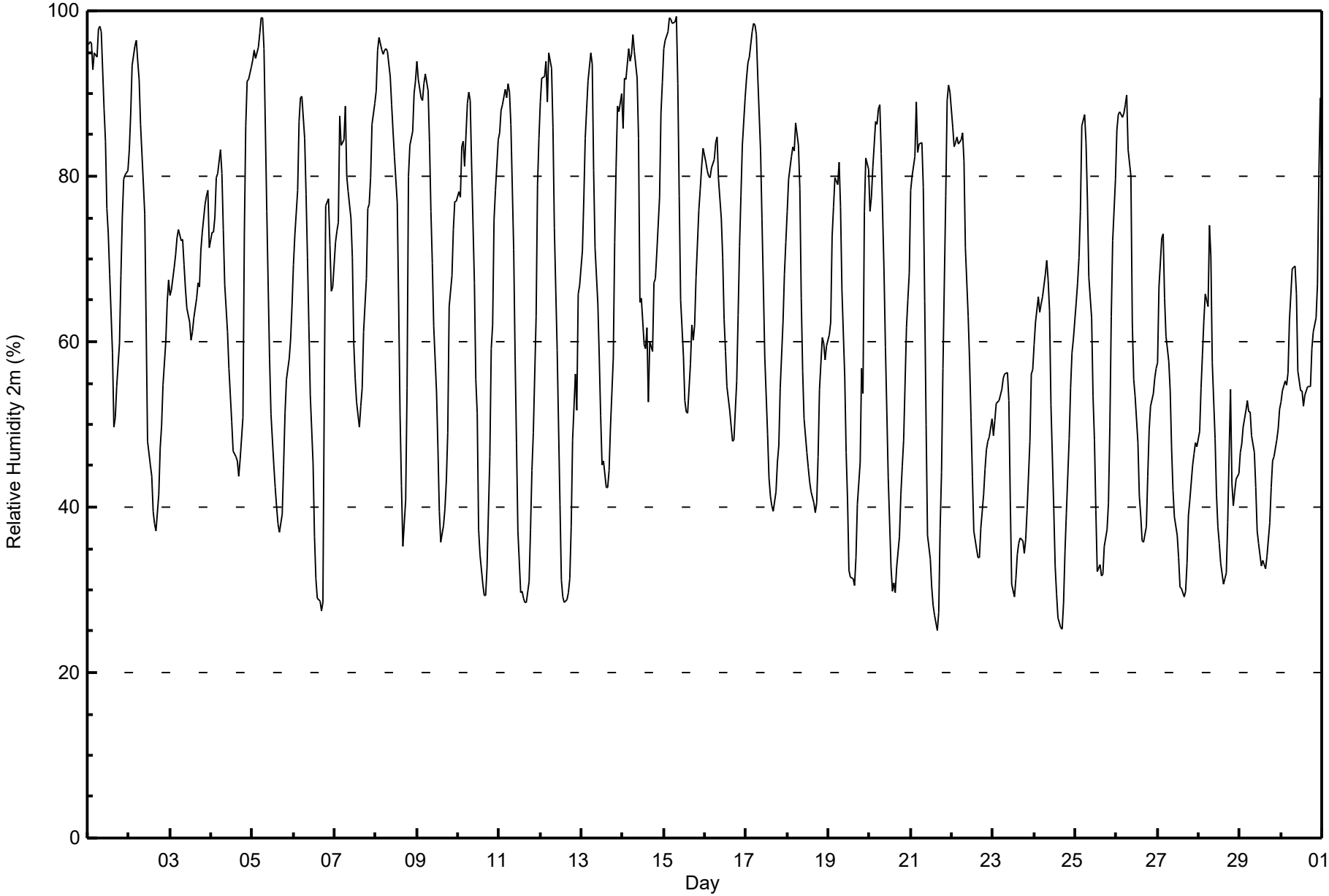
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	96.0	96.3	96.1	92.8	94.9	94.4	97.7	98.1	97.5	88.2	84.3	76.1	73.1	68.2	58.7	49.7	50.8	54.6	59.9	68.0	75.0	79.7	80.1	80.7	79.6	98.1
2-Sep	83.2	87.6	93.4	95.8	96.5	93.9	91.7	86.2	79.2	75.4	62.0	48.0	45.1	43.7	39.6	37.9	37.1	41.6	47.2	49.8	54.7	60.0	64.8	67.5	65.9	96.5
3-Sep	65.6	66.2	69.0	70.6	72.5	73.6	72.2	72.3	69.3	66.5	64.0	62.3	60.1	61.3	62.9	65.3	67.2	66.7	71.0	73.2	76.5	77.6	78.3	71.3	69.0	78.3
4-Sep	73.2	73.1	75.0	79.8	80.4	83.2	80.3	73.5	66.9	61.2	56.8	53.6	50.4	46.8	46.1	45.6	43.8	45.8	50.8	73.1	86.2	91.4	91.7	93.2	67.6	93.2
5-Sep	94.1	95.2	94.2	95.6	97.3	99.1	99.2	95.4	75.7	66.7	57.9	51.2	45.1	42.3	40.0	37.9	37.0	39.2	45.0	51.3	55.4	58.0	60.3	64.4	66.6	99.2
6-Sep	69.4	72.8	78.3	86.6	89.6	89.7	84.6	77.8	70.1	61.9	53.5	45.3	36.5	31.4	29.0	28.7	27.4	28.5	54.0	76.5	77.2	71.7	66.1	66.7	61.4	89.7
7-Sep	72.1	73.5	74.4	87.2	83.8	84.4	88.4	80.0	78.1	74.8	70.1	59.7	55.6	52.7	49.7	52.2	54.4	61.2	67.6	76.1	76.6	79.9	86.3	88.8	72.0	88.8
8-Sep	90.3	95.2	96.7	95.2	94.7	95.3	95.4	95.0	92.0	88.6	85.4	82.3	76.8	64.6	51.2	42.6	35.2	40.8	54.4	80.1	83.7	85.5	90.0	91.5	79.3	96.7
9-Sep	93.9	91.7	89.6	89.1	91.2	92.3	90.3	84.0	75.7	69.4	61.8	53.9	47.1	39.6	35.8	37.8	39.7	43.2	49.0	64.2	68.0	73.6	77.0	76.9	68.1	93.9
10-Sep	78.1	77.4	83.6	84.2	81.3	88.9	90.1	89.2	81.3	67.1	55.5	51.3	37.4	34.2	30.7	29.3	29.4	32.7	46.1	59.2	62.1	74.7	78.3	84.5	63.6	90.1
11-Sep	85.3	87.9	88.6	90.5	89.5	91.1	90.1	86.3	71.1	58.2	47.8	37.1	29.7	29.9	29.0	28.5	28.5	31.0	37.3	44.3	49.1	63.0	79.1	84.5	60.7	91.1
12-Sep	89.0	91.8	92.1	93.9	89.0	94.9	93.0	86.0	73.7	66.3	58.9	40.4	31.3	29.1	28.5	28.8	29.6	31.4	37.7	48.1	56.2	51.7	65.7	66.7	61.4	94.9
13-Sep	71.1	77.4	84.6	88.2	91.5	95.0	93.6	80.7	71.3	64.6	58.2	51.0	45.0	45.7	42.4	42.4	44.4	49.6	57.9	72.1	80.9	88.5	87.7	90.0	69.7	95.0
14-Sep	85.8	91.8	91.7	95.5	93.9	94.8	97.2	95.1	91.8	84.6	64.7	65.2	59.7	59.2	61.7	52.8	60.0	58.8	67.1	67.7	70.7	77.5	87.7	91.3	77.8	97.2
15-Sep	95.4	96.5	97.5	99.2	99.0	98.6	98.6	99.4	91.2	77.6	65.0	58.3	52.8	51.5	51.4	57.3	62.1	60.2	62.0	67.8	76.0	78.5	81.2	83.4	77.5	99.4
16-Sep	81.7	80.6	80.0	79.9	81.0	82.0	84.0	84.7	79.7	74.9	70.1	62.7	58.9	54.6	51.6	49.8	48.0	48.1	55.2	63.2	71.5	77.6	83.7	89.6	70.5	89.6
17-Sep	91.8	93.7	94.3	97.4	98.4	98.3	97.0	92.0	83.1	74.8	66.6	58.2	48.8	43.6	41.4	40.2	39.4	41.8	45.5	47.4	54.5	62.4	68.1	72.0	68.8	98.4
18-Sep	75.7	79.7	82.4	83.6	83.1	86.4	83.8	78.5	65.3	56.4	50.6	46.6	44.7	43.1	41.8	40.6	39.4	40.5	46.1	54.2	60.5	59.9	57.8	59.5	60.8	86.4
19-Sep	60.8	62.3	72.8	76.2	79.9	79.0	81.7	76.3	66.3	55.8	46.6	40.8	32.4	31.5	31.4	30.4	33.9	40.4	45.4	56.7	53.7	75.7	82.2	80.8	58.0	82.2
20-Sep	75.8	77.4	81.0	86.6	86.3	88.2	88.7	82.7	68.5	59.2	51.5	43.5	32.7	29.8	30.9	29.7	32.8	36.5	41.6	44.9	48.2	61.7	65.1	68.3	58.8	88.7
21-Sep	78.3	80.0	82.3	88.9	82.9	83.9	84.1	78.6	64.9	50.0	36.6	33.7	30.3	28.2	27.0	25.0	27.2	37.5	44.3	56.9	77.7	89.2	91.0	90.1	61.2	91.0
22-Sep	85.9	83.5	84.1	84.7	83.9	84.4	85.3	81.9	71.3	63.1	57.7	50.8	43.8	37.1	34.9	33.9	33.9	37.4	41.6	44.5	46.9	48.0	48.6	50.6	59.1	85.9
23-Sep	48.7	50.4	52.6	52.9	53.5	54.3	55.5	56.0	56.3	52.8	40.8	30.7	29.2	31.4	34.3	35.6	36.2	36.0	34.4	36.1	39.6	47.9	56.0	56.7	44.9	56.7
24-Sep	59.7	62.3	65.4	63.6	64.6	65.4	68.2	69.8	67.5	63.7	52.4	39.9	32.9	29.5	26.6	25.5	25.2	28.5	34.5	39.3	48.3	54.5	58.7	60.4	50.3	69.8
25-Sep	64.8	67.2	70.2	75.8	86.2	87.5	84.0	77.2	67.8	62.8	53.3	48.1	39.6	32.2	33.1	31.8	31.8	35.3	37.3	40.6	49.9	63.0	72.2	79.6	58.0	87.5
26-Sep	85.5	87.5	87.8	87.1	87.7	88.7	89.8	83.3	79.9	62.2	55.4	53.4	47.9	41.4	38.9	35.9	35.7	37.7	43.8	49.3	52.3	53.8	55.6	56.8	62.4	89.8
27-Sep	57.5	66.6	72.6	73.1	65.2	60.7	57.6	54.0	47.2	42.1	38.8	36.7	33.8	30.3	30.1	29.1	29.9	33.1	39.0	40.9	45.0	46.4	47.8	47.2	46.9	73.1
28-Sep	49.1	54.4	58.5	62.5	65.8	64.3	74.0	70.4	57.5	48.3	41.5	37.7	35.6	33.2	30.7	31.3	32.1	38.1	54.2	42.9	40.2	41.8	43.3	44.1	48.0	74.0
29-Sep	46.6	47.7	49.7	51.6	52.9	51.5	51.4	48.6	46.6	42.3	37.1	35.5	32.9	33.6	33.0	32.5	34.1	38.1	42.4	45.6	46.1	48.1	49.6	51.9	43.7	52.9
30-Sep	52.8	54.1	55.2	54.8	56.3	62.6	68.8	69.1	69.1	65.7	56.5	54.1	54.1	52.1	53.6	54.6	54.6	54.5	59.2	61.2	62.9	67.0	80.1	89.5	60.9	89.5
	75.2	77.4	79.8	82.1	82.4	83.5	83.9	80.1	72.5	64.8	56.7	50.3	44.8	41.7	39.9	38.8	39.4	42.3	49.0	56.5	61.5	66.9	71.1	73.3	Diurnal Average	
	96.0	96.5	97.5	99.2	99.0	99.1	99.2	99.4	97.5	88.6	85.4	82.3	76.8	68.2	62.9	65.3	67.2	66.7	71.0	80.1	86.2	91.4	91.7	93.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Patricia McInnes - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - September 2025

Maximum Speed: 28 km/h on Sep 29 08:00

Maximum Daily Speed Average: 16.6 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 10 10:00

Minimum Daily Speed Average: 0.5 km/h on Sep 16

Maximum Diurnal Speed Average: 4.4 km/h at hour 8

Minimum Diurnal Speed Average: 0.9 km/h at hour 19

Monthly Average Velocity: 2.9 km/h 211.0 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 9 Q_3 = 12 P_{90} = 17 P_{99} = 24

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 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-Sep	WNW2	NW3	W2	S3	NNW3	NNE1	E5	SE6	SW4	NW1	WSW2	NNE6	NNE12	NNE13	NNE14	NNE14	N16	N16	N10	N9	NNW7	NNW7	NNW7	NW8	N5.4	N16
2-Sep	NNW7	NW3	SW1	WSW3	WSW3	SSW1	SSW1	SW1	S3	SE3	S4	SE6	ESE6	ESE8	ESE9	ESE10	ESE12	ESE12	ESE10	ESE13	SE12	SE9	SE8	SE7	SE4.9	ESE13
3-Sep	SE10	SE11	SE11	SE11	SE10	SE10	SE11	SE9	SE10	SSE9	SE8	SSE7	SW8	W9	NW12	N14	N20	N26	N21	N18	NNW19	N19	NNW17	NNW20	NNE4.1	N26
4-Sep	NNW20	NNW20	NW15	WNW14	WNW13	WNW10	NW13	NW16	NNW22	NNW21	NNW19	NNW19	NNW18	NNW20	NNW17	NNW16	NNW16	N11	NNE8	NNE3	WNW3	NW3	W4	W3	NNW12.8	NNW22
5-Sep	WSW3	SSW2	SSW2	S3	SSW2	S3	SSW3	SSW3	SSE5	SSE6	SSE7	SSE7	SE7	SE9	SSE8	SE8	ESE9	ESE9	ESE10	ESE11	SE11	SE11	SE11	SE8	SE5.9	ESE11
6-Sep	SE8	SE8	SSE5	SSE4	SE5	SE8	SE10	SE11	SE12	SE11	SE9	SE10	ESE11	E11	ESE10	E7	SSE3	SSW5	SW3	WSW3	SW4	SW5	SSW7	SW7	SE5.8	SE12
7-Sep	SSW6	SSW6	S6	S5	SSW7	SSW5	SSW5	SW3	WNW2	S2	SSW6	SE3	NE7	N8	N8	N11	N17	N13	N12	N9	N12	N9	NNW8	NNW8	N2.9	N17
8-Sep	NNW9	NNW9	N10	N11	N11	N12	N11	NNE10	N9	N8	NNE8	N3	NNW4	NNE4	ENE4	NNE6	NE5	W2	WNW3	WNW3	NW4	WNW3	WSW1	E1	N5.5	N12
9-Sep	ESE4	ESE6	SE11	SE7	SE7	SE8	SE8	SE9	SE11	SE9	SE10	ESE11	ESE12	SE10	S14	SSW12	S11	S5	SW5	SSW4	WSW4	SW3	SW4	WSW4	SSE6.4	S14
10-Sep	SW7	SW10	SW9	WSW7	SW6	SW6	SW7	SW5	S3	ENE1	N2	NW8	NNW11	WNW8	WNW8	W10	NW8	W5	W6	NW6	NW7	WNW5	W3	WSW2	W4.5	NNW11
11-Sep	W3	W2	WSW1	WNW3	SSW1	SW3	SSE3	S3	SE4	ESE2	SE4	ESE7	SE8	SE6	ESE7	ESE10	SE11	SE9	SE8	SSE9	SSE9	SSW4	SW2	W2	SE3.8	SE11
12-Sep	SSW2	S4	S3	SSW4	SSE5	SSE5	S4	SSE5	SE7	SSE9	SSE6	S9	SSW15	SSW15	SW15	WSW16	WSW14	SW8	S5	SSW5	SW5	SSW6	SSW5	SSW5	SSW6.7	WSW16
13-Sep	SSW5	SSW5	SSW3	SSW2	SSW3	WSW1	S3	SE8	SE5	ESE6	SE6	SSE6	SE4	NW5	N5	NNE10	NNE10	N8	NNE5	NNW4	NW4	SE3	S2	S2	ESE0.8	NNE10
14-Sep	SSE5	SSW2	SSE3	WSW1	S4	SSW4	SW2	SE3	SSE6	SW5	SSE5	ESE9	ESE7	ESE11	E11	SE13	SE12	SE12	SE12	SSE7	SE7	SSW3	S3	S2	SE5.4	SE13
15-Sep	WSW3	SW6	SSW5	SSW7	SSW9	SW9	SW10	SSW7	S5	SSE3	NNW11	NNW11	NW11	WNW11	NW15	NW20	NW22	NW19	NW12	NW8	NW8	WNW10	WNW11	WNW10	WNW7.1	NW22
16-Sep	WNW10	NW11	NW11	NW11	WNW10	NW8	WNW5	WSW7	W7	WNW8	NW3	SE3	ESE10	SSE5	E8	ESE7	E7	ESE7	SE6	SE7	SE10	SE12	SE8	ESE7	S0.5	SE12
17-Sep	SE7	SE8	SSE4	SSE5	SSE6	SE9	SE9	SE11	SE13	SE12	ESE12	ESE13	ESE15	ESE19	ESE20	SE20	SE18	SE18	SE15	SE16	SE13	SE11	SE10	SE14	SE12.2	SE20
18-Sep	SE15	SE14	SE13	SE12	SE14	SE10	SE10	SSE11	S14	SSW17	SSW16	SSW14	SW15	SW14	SW13	SW14	SW13	SW11	SW6	SW5	WSW6	WSW9	WSW10	SW7	SSW8.4	SSW17
19-Sep	SW11	SSW5	S4	SSW4	S5	SSW9	SSW7	SW9	SW10	SW8	SSW6	SSW10	SW15	SW14	SW13	WSW12	WSW7	WSW5	WSW4	SSW3	SW4	WSW2	WNW3	SW4	SW6.9	SW15
20-Sep	SW6	S5	S5	S4	S5	S4	SSW5	S5	S7	SSE7	SSE6	SE7	SSW15	SSW16	S15	S15	S13	SSE9	SSE8	SSE9	SSE9	ESE4	SE7	SE6	S7.5	SSW16
21-Sep	SE5	SE6	SSW4	SW5	SW7	SW7	SW9	WSW12	SW7	WNW5	NW10	NNW6	NNW2	ENE2	W11	WNW17	WNW18	WNW14	WNW19	WNW17	WSW8	WSW8	WSW9	WSW13	W6.9	WNW19
22-Sep	WSW16	WSW17	WSW17	WSW16	WSW17	WSW14	SW14	WSW15	WSW18	SW18	SW19	SW16	SW17	WSW22	SW19	WSW18	WSW16	SSW8	S7	S10	SSW9	SSW8	SSW7	SSW7	SW13.8	WSW22
23-Sep	SSW8	SSW7	SW7	SW9	SW9	SSW10	SSW11	SSW8	SSW9	SSW11	WSW14	WSW21	WSW24	WSW21	SW20	SW19	SW17	SW18	SW16	SW12	SW9	S4	SW7	WSW11	SW12.3	WSW24
24-Sep	WSW10	SW8	SW8	SW10	SW7	SW10	SW9	SW9	SW14	WSW16	WSW19	W21	W19	WNW20	WNW21	WNW17	W17	WNW10	W10	WNW8	WNW8	W5	SSW5	SW6	WSW10.6	WNW21
25-Sep	S5	SSW7	SSW8	S7	S4	S5	S5	SE5	SSE7	SE7	SSE7	SE7	ESE8	S10	S14	S15	S14	S11	S11	S11	SW16	SW17	W15	WSW8	S7.8	SW17
26-Sep	WSW9	WSW9	WSW10	WSW10	WSW8	SW7	SW9	SSW8	SW6	W18	W17	W19	W22	W23	W21	WNW20	W18	W14	WSW9	WSW9	WSW10	SSW7	S6	S5	WSW11.3	W23
27-Sep	SSW8	SSW3	S9	SSW12	WSW16	WSW15	WSW15	WSW16	WSW17	W25	W26	W21	WSW22	WSW24	WSW20	WSW18	WSW17	WSW9	WSW6	WSW7	WSW6	SW5	WSW9	WSW9	WSW13.4	W26
28-Sep	WSW11	WSW15	WSW16	WSW12	WSW13	WSW7	SW13	SW10	SSE5	SSE5	SW5	SSE8	SSE9	SSW10	SW8	SW9	SSW5	SSE3	ESE4	ESE6	ESE8	ESE12	SE13	SE15	SSW5.6	WSW16
29-Sep	SE13	ESE16	ESE15	SE18	SE16	SE20	SE21	SE28	SE27	SE25	SE24	SE22	SSE21	S17	S16	S17	SSE13	SSE11	SE10	SE12	SE14	SE16	ESE17	ESE13	SE16.6	SE28
30-Sep	ESE14	SE9	SE11	SE10	SE9	SSW4	N5	N7	NNW5	WSW4	NNE1	N9	NNW11	N14	N16	N16	N15	N15	N11	N10	N11	N11	N11	NNW13	NNE6.0	N16
	SSW3.1	SSW3.1	SSW3.6	SSW4.0	SSW3.9	SSW4.2	SSW4.3	S4.4	S4.2	SSW3.7	SSW3.5	SSW2.9	SW3.6	SW4.3	WSW3.8	WSW3.6	WSW2.7	WSW1.3	SW0.9	SSW1.6	SSW1.8	SSW1.8	SSW2.1	SW2.3	Diurnal Average	
	NNW20	NNW20	WSW17	SE18	WSW17	SE20	SE21	SE28	SE27	SE25	W26	SE22	WSW24	WSW24	WNW21	SE20	NW22	N26	N21	N18	NNW19	N19	NNW17	NNW20	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 29 08:00

Minimum Value: 0 km/h on Sep 6 04:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

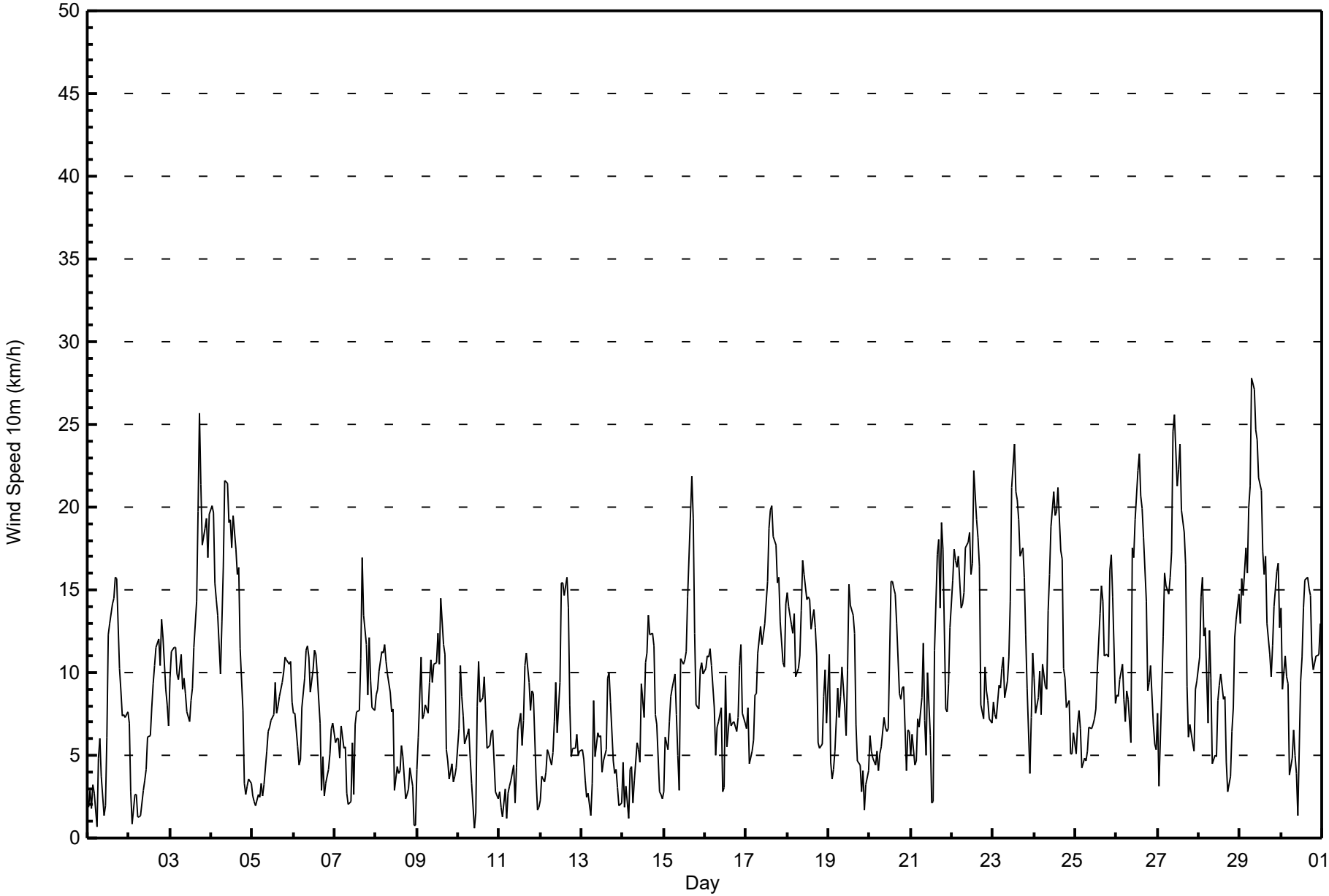
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	1	1	2	1	1	3	3	1	1	1	3	3	3	4	3	4	3	2	2	1	1	1	1	4
2-Sep	1	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	2	2	3	3	2	1	1	3
3-Sep	2	2	2	3	2	2	2	2	2	2	2	2	3	2	3	3	6	7	5	5	4	5	6	4	7
4-Sep	4	4	3	3	3	2	2	4	5	5	4	5	5	5	4	3	3	3	2	1	1	1	1	1	5
5-Sep	1	1	1	1	1	1	1	1	1	2	2	2	3	4	3	3	3	2	2	2	2	2	2	2	4
6-Sep	1	1	1	0	1	3	2	3	3	2	2	3	3	3	3	3	2	1	1	1	1	1	1	1	3
7-Sep	1	1	1	1	2	1	2	1	1	2	2	2	3	2	3	3	4	3	3	2	3	2	1	1	4
8-Sep	1	1	2	2	3	3	3	2	2	2	2	2	3	2	2	2	2	1	1	1	1	1	1	1	3
9-Sep	1	2	3	2	2	2	3	2	3	3	3	3	3	4	4	3	3	1	1	1	3	1	1	2	4
10-Sep	3	2	2	1	2	2	2	1	2	2	2	3	3	3	3	3	2	1	1	1	1	1	1	1	3
11-Sep	1	1	1	1	1	1	1	1	1	1	1	3	2	3	3	3	4	2	1	2	3	2	1	1	4
12-Sep	1	1	1	1	1	1	1	2	2	2	2	5	4	5	4	4	3	3	1	1	2	2	1	1	5
13-Sep	1	1	1	1	1	1	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2
14-Sep	2	1	1	1	2	1	1	2	2	1	1	2	3	3	3	5	3	3	3	2	1	2	1	1	5
15-Sep	1	1	1	1	2	2	3	2	2	1	3	3	3	3	4	5	5	5	3	1	1	1	2	2	5
16-Sep	2	2	2	2	2	2	1	3	2	2	2	3	3	2	3	2	2	1	1	1	2	3	2	2	3
17-Sep	2	2	2	1	1	2	2	3	3	3	3	3	4	5	4	5	5	4	4	3	3	3	3	3	5
18-Sep	3	3	2	2	3	2	3	2	4	5	4	4	4	5	4	4	3	3	1	1	1	1	1	1	5
19-Sep	2	2	1	1	2	2	2	2	3	3	2	3	4	4	4	4	2	1	1	1	1	1	1	1	4
20-Sep	1	1	1	1	1	1	1	1	1	1	2	2	4	5	4	4	4	1	1	2	2	2	1	1	5
21-Sep	1	1	1	1	2	2	4	3	2	4	4	2	1	2	5	3	5	3	5	5	2	2	2	2	5
22-Sep	3	3	3	3	3	3	2	3	4	3	4	4	4	5	4	5	5	2	2	3	3	2	2	2	5
23-Sep	2	1	1	2	2	2	2	2	2	3	5	4	6	4	5	4	5	4	4	3	2	2	3	2	6
24-Sep	1	2	2	3	2	2	2	2	3	3	4	5	5	4	5	4	5	3	2	1	1	2	1	2	5
25-Sep	2	2	2	2	1	1	1	1	2	1	2	2	2	4	4	4	4	3	2	3	5	5	5	2	5
26-Sep	1	1	2	2	1	1	3	3	2	6	4	4	5	5	4	5	4	4	1	2	2	2	1	1	6
27-Sep	2	2	4	3	3	3	3	3	5	6	5	5	5	5	4	4	3	3	1	1	1	1	2	1	6
28-Sep	2	2	2	2	2	3	2	2	2	3	2	3	3	3	3	2	3	1	1	1	1	3	3	3	3
29-Sep	3	3	3	4	4	5	5	7	6	7	6	5	5	5	4	5	4	2	2	3	3	3	4	3	7
30-Sep	3	2	2	3	4	1	2	1	3	1	2	3	2	4	4	3	3	4	3	2	2	2	2	2	4
	4	4	4	4	4	5	5	7	6	7	6	5	6	5	5	5	6	7	5	5	5	5	6	4	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	193	26.81	26.81
6 - 11	321	44.58	71.39
12 - 19	167	23.19	94.58
20 - 28	39	5.42	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Patricia McInnes - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	5	1	3	2	4	12	18	35	37	21	18	9	11	8	5	193
6 - 11	21	7	1	0	5	27	73	26	13	32	42	28	6	13	12	15	321
12 - 19	15	4	0	0	0	14	28	1	11	9	24	29	8	8	7	9	167
20 - 28	3	0	0	0	0	1	8	1	0	0	1	7	7	3	2	6	39
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	43	16	2	3	7	46	121	46	59	78	88	82	30	35	29	35	720

Total Number of Valid Hours: 720

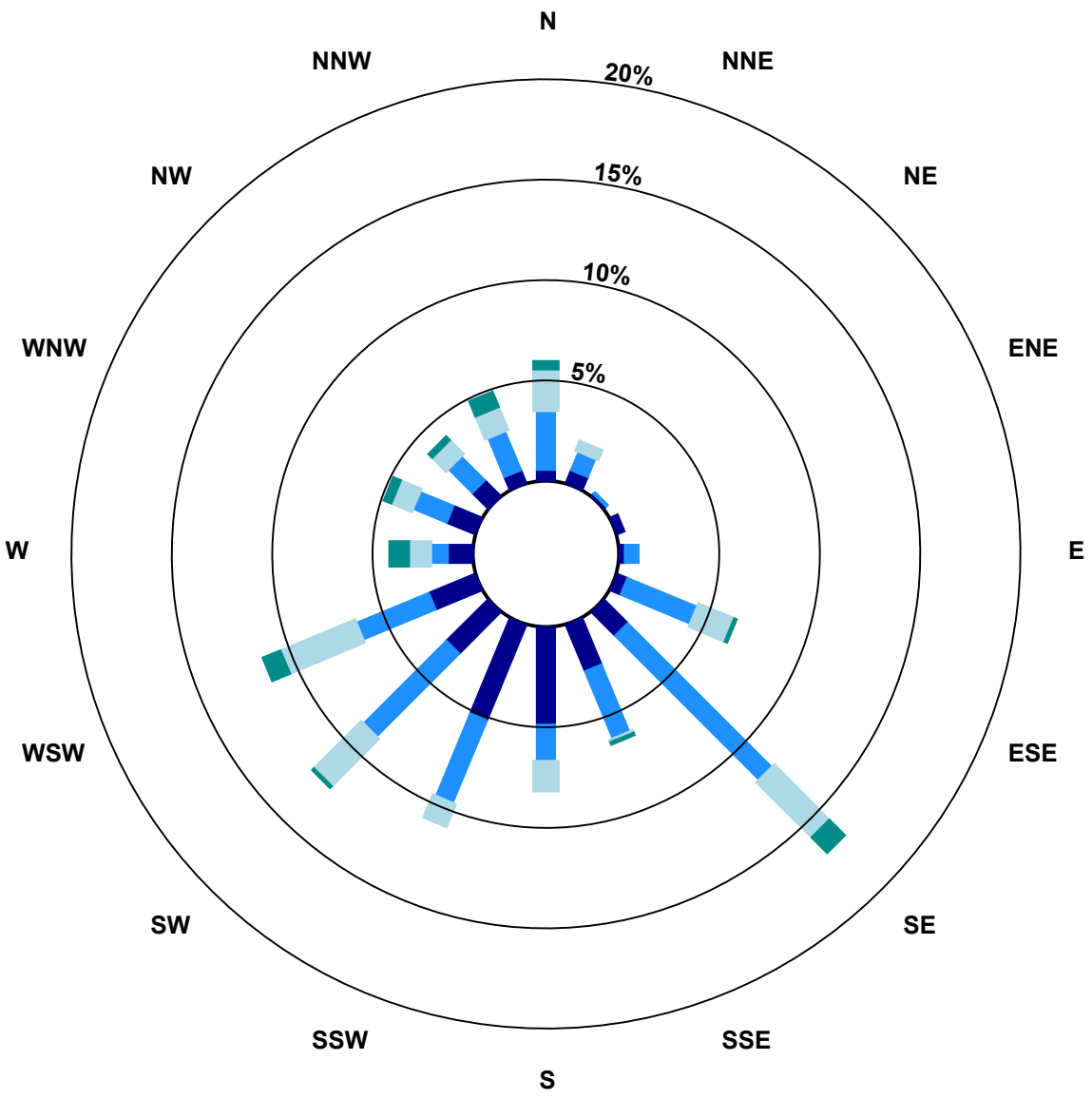
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Patricia McInnes



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 720

Direction of Maximum Speed: 125 deg on Sep 29 08:00
Direction of Maximum Daily Speed Average: 137.3 deg on Sep 29

Direction of Minimum Speed: 62 deg on Sep 10 10:00

Direction of Minimum Daily Speed Average: 0.5 deg on Sep 16

Monthly Average Direction: 211.0 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	290	323	267	179	335	16	85	138	232	325	256	14	25	22	17	20	11	5	3	355	339	333	328	318	2.8
2-Sep	328	318	219	256	251	211	205	214	169	141	181	140	115	109	112	117	113	123	116	121	133	135	132	136	128.3
3-Sep	126	129	130	135	134	131	132	133	130	148	128	156	228	264	317	354	356	359	359	350	347	351	343	338	20.5
4-Sep	333	329	317	299	302	293	309	324	341	348	345	336	337	338	339	343	342	357	17	15	303	310	265	279	331.6
5-Sep	245	204	192	171	195	181	213	213	149	157	150	149	145	145	149	131	120	110	118	123	128	132	133	129	140.9
6-Sep	137	144	149	151	144	140	138	132	134	128	135	125	113	100	108	99	161	208	233	248	225	216	210	219	142.0
7-Sep	198	194	174	177	202	194	197	215	297	169	201	140	38	2	7	349	4	5	5	355	9	5	343	344	354.3
8-Sep	346	343	350	353	5	5	4	15	1	8	24	359	332	15	61	28	55	278	295	299	304	296	252	88	358.9
9-Sep	102	115	133	143	134	138	138	142	133	129	134	117	113	138	181	203	179	187	223	201	246	217	234	238	152.3
10-Sep	228	234	226	237	230	215	225	231	178	62	10	319	346	299	298	280	316	267	266	316	326	299	276	251	272.2
11-Sep	259	278	256	284	198	222	157	187	128	120	124	109	137	126	116	114	137	137	131	152	160	213	218	264	144.6
12-Sep	198	185	181	201	157	162	175	161	144	150	164	191	207	208	220	237	238	220	189	212	233	206	210	197	200.7
13-Sep	213	199	212	198	208	242	172	140	140	111	129	163	138	318	3	26	15	11	18	327	305	131	171	189	109.3
14-Sep	162	210	166	237	172	202	222	130	164	214	163	116	111	111	98	128	142	131	134	156	134	202	170	178	141.8
15-Sep	253	230	192	203	209	216	214	203	188	160	336	338	312	290	304	309	316	314	310	306	306	299	302	298	290.1
16-Sep	297	304	304	307	302	307	284	249	263	299	306	141	115	148	94	104	96	104	127	143	133	132	140	123	183.4
17-Sep	134	130	150	147	149	138	143	136	133	131	121	111	110	112	114	130	134	138	140	141	140	129	126	127	129.6
18-Sep	126	127	129	127	129	137	136	151	186	210	204	206	225	236	223	221	227	227	217	233	240	248	251	236	192.4
19-Sep	232	197	173	194	175	211	206	216	227	229	205	201	231	232	232	240	239	248	249	211	224	242	282	221	223.0
20-Sep	216	189	176	186	180	184	193	180	172	151	148	146	200	197	191	186	187	159	147	152	152	121	133	140	174.1
21-Sep	143	144	204	218	223	229	227	239	236	292	316	342	340	60	272	292	297	293	293	294	252	242	244	242	268.2
22-Sep	247	251	247	246	249	241	235	239	240	236	233	230	228	240	236	241	238	206	188	188	194	209	205	212	233.5
23-Sep	207	202	214	221	216	213	212	206	211	207	244	257	248	245	230	227	227	227	229	234	227	184	223	241	228.5
24-Sep	237	217	225	225	217	225	230	218	235	240	250	265	276	286	294	286	270	296	274	300	301	264	196	220	258.5
25-Sep	180	194	197	181	177	178	185	142	152	143	147	145	118	190	184	182	177	187	178	190	227	231	262	238	189.4
26-Sep	239	250	243	243	239	233	223	210	218	274	263	260	263	275	274	284	267	266	249	241	239	207	184	190	254.1
27-Sep	208	198	188	211	240	242	242	247	256	264	261	264	252	250	252	251	246	252	258	244	240	223	238	237	246.5
28-Sep	243	252	258	254	256	254	226	230	161	148	224	148	158	205	218	217	206	155	123	121	118	123	128	130	199.7
29-Sep	127	122	122	126	125	127	127	125	130	133	137	140	160	179	180	174	165	154	145	131	127	124	121	118	137.3
30-Sep	122	124	125	137	138	209	350	358	334	246	18	7	345	359	5	6	8	11	4	355	356	359	358	344	13.4
	207.5	202.9	198.1	205.5	204.5	201.0	197.0	186.3	185.8	199.0	208.5	203.5	216.7	235.4	238.9	246.5	255.3	258.4	221.3	208.8	211.9	201.7	211.9	216.5	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 95 deg on Sep 10 10:00

Minimum Value: 6 deg on Sep 10 19:00

Percentiles: P_1 = 8 P_{10} = 11 Q_1 = 13 Median = 17 Q_3 = 25 P_{90} = 40 P_{99} = 82

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

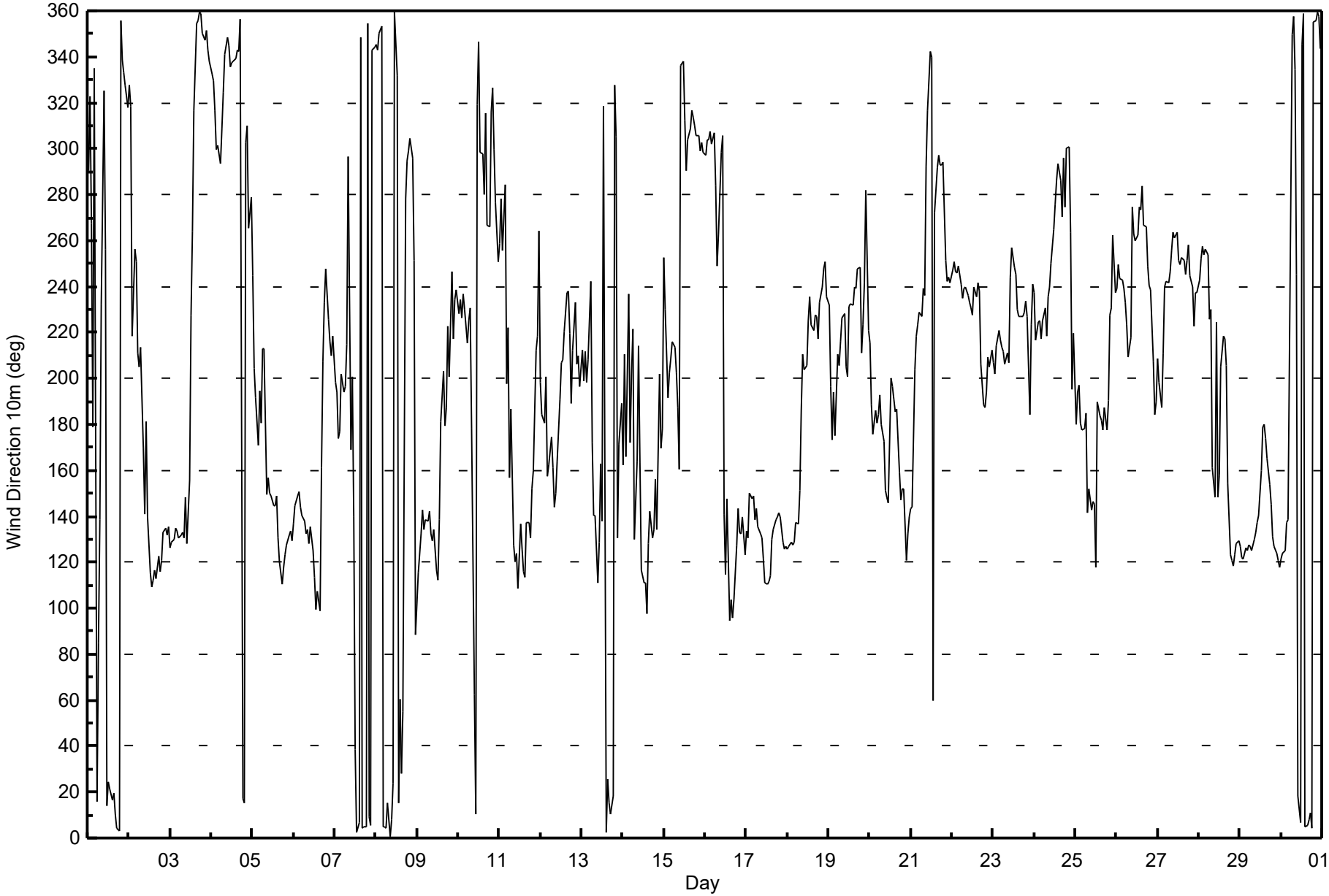
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	53	28	41	37	56	88	49	38	41	81	79	40	22	22	19	19	16	16	14	14	10	6	7	7	88
2-Sep	8	64	43	13	33	27	40	40	33	37	33	35	41	30	21	23	17	14	13	12	13	13	10	12	64
3-Sep	13	12	14	13	12	12	12	15	14	16	21	28	34	20	30	16	16	18	15	15	16	15	14	11	34
4-Sep	10	11	14	10	10	10	15	11	14	18	17	20	21	19	17	17	13	17	17	17	32	21	11	16	32
5-Sep	22	41	34	29	35	29	46	34	24	27	33	35	45	34	51	30	23	18	14	12	12	12	13	12	51
6-Sep	12	11	10	10	10	11	14	14	15	15	22	20	20	23	20	35	84	27	40	21	19	8	11	10	84
7-Sep	21	19	21	21	17	22	19	40	43	75	32	77	38	29	25	18	17	14	14	18	12	14	13	12	77
8-Sep	12	10	13	14	14	15	15	17	17	21	28	71	69	66	65	40	39	45	26	16	12	24	71	57	71
9-Sep	21	21	14	13	13	12	15	15	16	17	18	17	17	33	20	23	17	18	18	24	44	28	29	19	44
10-Sep	18	8	16	14	23	21	22	30	51	95	89	34	26	34	21	33	24	15	6	18	11	21	46	31	95
11-Sep	12	58	60	43	49	12	21	32	24	66	39	28	24	52	47	20	19	14	9	13	14	40	54	46	66
12-Sep	32	23	18	22	24	19	20	18	14	14	29	47	20	21	20	18	13	17	14	12	25	23	26	15	47
13-Sep	19	13	19	26	29	49	38	18	42	23	22	28	69	30	43	16	18	15	24	21	12	64	39	46	69
14-Sep	30	38	46	67	21	32	53	64	31	23	35	16	21	15	15	19	14	14	13	15	19	36	23	26	67
15-Sep	39	13	21	14	17	15	16	22	30	64	21	20	28	22	15	12	12	13	12	10	7	6	9	10	64
16-Sep	10	10	10	10	10	11	13	12	19	24	82	83	29	49	38	32	26	14	12	12	14	13	15	13	83
17-Sep	14	13	22	14	12	11	14	15	15	16	17	16	15	15	15	15	15	14	14	13	12	14	13	12	22
18-Sep	12	12	12	11	12	11	15	13	20	19	20	23	26	23	21	18	19	15	14	11	10	6	8	22	26
19-Sep	11	38	20	29	25	16	16	18	16	22	43	31	24	25	26	24	14	19	10	30	24	30	21	19	43
20-Sep	13	21	17	11	14	15	15	16	17	20	23	26	21	22	20	20	17	15	10	11	16	32	10	12	32
21-Sep	11	10	32	24	18	19	21	11	15	69	28	34	82	89	36	12	10	9	10	10	22	27	11	11	89
22-Sep	10	10	10	10	10	11	11	11	12	13	14	18	19	14	17	16	14	19	19	16	18	17	17	15	19
23-Sep	17	15	17	13	14	15	15	22	17	19	30	16	15	16	14	14	15	13	14	12	15	24	18	9	30
24-Sep	13	19	16	16	20	16	19	18	12	13	18	16	20	18	17	23	22	16	9	31	9	40	25	27	40
25-Sep	27	18	18	20	18	16	17	15	16	19	19	29	28	35	20	18	18	16	14	21	15	12	16	15	35
26-Sep	9	9	9	10	10	14	14	18	33	15	16	17	16	15	17	17	14	11	10	9	11	19	19	17	33
27-Sep	21	61	31	16	12	11	12	12	15	15	13	15	21	19	16	14	15	11	10	17	17	14	10	9	61
28-Sep	11	10	9	9	13	42	12	11	35	63	61	34	34	25	28	25	41	35	16	12	13	11	12	13	63
29-Sep	12	11	12	12	12	13	14	12	14	15	16	16	25	17	24	16	21	13	12	13	12	12	13	14	25
30-Sep	12	15	13	16	30	37	49	28	28	39	94	28	22	16	15	15	14	16	14	14	14	14	15	14	94
	53	64	60	67	56	88	53	64	51	95	94	83	82	89	65	40	84	45	40	31	44	64	71	57	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Patricia McInnes - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS07
ATHABASCA VALLEY
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
SEPTEMBER 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	683	36	37	99.86	-	-	20	0	1.8	0
TRS (ppb) Average	684	35	36	99.86	2.8	0	2.5	0	0.9	0
THC (ppm) Average	653	34	67	95.42	-	-	2.6	-	2.2	-
NMHC (ppm) Average	653	34	67	95.42	-	-	0.181	-	0.022	-
CH4(ppm) Average	653	34	67	95.42	-	-	2.5	-	2.2	-
O3 (ppb) Average	685	35	35	100	-	-	52.4	0	29.7	-
NO2 (ppb) Average	683	36	37	99.86	-	-	24	0	7	-
NO (ppb) Average	683	36	37	99.86	-	-	30.6	-	3.3	-
NOX (ppb) Average	683	36	37	99.86	-	-	47.7	-	10	-
PM2.5 (ug/m3) Average	718	2	2	100	-	-	249.2	0	70.8	8
CO(ppm) Average	685	34	35	99.86	-	-	1.2	0	0.5	-
Temperature 2 m (C) Average	720	0	0	100	-	-	30.1	-	19.3	-
Relative Humidity (%) Average	718	0	2	99.72	-	-	97.8	-	80.1	-
Barometric Pressure (inHg) Average	720	0	0	100	-	-	29.4	-	29.4	-
Wind Speed 10 m (km/h) Average	720	0	0	100	-	-	27	-	14	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	683	0.52	1.1	-	0	0.1	0.2	0.3	0.5	0.9	20
TRS (ppb) Average	684	0.31	0.3	-	0.1	0.1	0.2	0.2	0.3	0.5	2.5
THC (ppm) Average	653	2.1	0.1	-	2	2	2	2.1	2.1	2.2	2.6
NMHC (ppm) Average	653	0.003	0.014	-	0	0	0	0	0	0	0.181
CH4(ppm) Average	653	2.1	0.1	-	2	2	2	2.1	2.1	2.2	2.5
O3 (ppb) Average	685	22.3	10.9	-	2.5	7.8	14	21.9	30	36.2	52.4
NO2 (ppb) Average	683	4.74	3.5	-	0.4	1.4	2.3	3.8	6.1	9.5	24
NO (ppb) Average	683	1.32	2.1	-	0	0.1	0.2	0.6	1.6	3	30.6
NOX (ppb) Average	683	6.06	4.8	-	0.5	1.7	2.8	4.7	7.7	12	47.7
PM2.5 (ug/m3) Average	718	26.67	29.4	-	1	5.3	8.3	18.4	31	60.7	249.2
CO(ppm) Average	685	0.25	0.1	-	0.1	0.1	0.2	0.2	0.3	0.4	1.2
Temperature 2 m (C) Average	720	15.26	5.5	-	1.1	8.8	11.7	14.5	18.6	23	30.1
Relative Humidity (%) Average	718	63.8	20.1	-	24.3	34.1	48.2	64.5	82.3	90.7	97.8
Barometric Pressure (inHg) Average	720	28.98	0.2	-	28.6	28.7	28.9	29	29.1	29.3	29.4
Wind Speed 10 m (km/h) Average	720	8.1	5	-	0	2	4	6	11	16	27
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
CO, NO2,SO2,THC, TRS	19 Sep 2025 13:00	19 Sep 2025 13:00	1	Maintenance
THC/NMHC/CH4	11 Sep 2025 03:00	12 Sep 2025 10:00	32	Unstable Operations - excessive baseline drift
Relative Humidity	17 Sep 2025 07:00	17 Sep 2025 08:00	2	Sensor operated out of range

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 20.0 ppb on Sep 1 14:00 Maximum Daily Average: 1.8 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 22 17:00 Minimum Daily Average: 0.1 ppb on Sep 2

Maximum Diurnal Average: 1.4 ppb at hour 14 Minimum Diurnal Average: 0.3 ppb at hour 1

Monthly Average: 0.52 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.3 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 4.4

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2	13.2	20.0	4.7	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	1.8	20.0
2-Sep	0.1	0.1	0.1	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	0.1	0.2
3-Sep	0.1	0.1	0.2	0.2	0.2	Z	0.4	0.4	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.6	1.6	0.5	0.6	0.6	1.1	0.8	0.8	3.1	0.7	3.1
4-Sep	Z	1.4	0.7	0.4	0.3	0.2	0.2	0.2	2.4	3.1	2.0	2.9	3.5	2.9	3.1	4.5	4.7	4.3	0.5	0.3	0.3	0.2	0.1	0.1	1.7	4.7
5-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.4
6-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.8	0.8	0.7	0.7	0.8	0.5	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.8
7-Sep	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.8	2.1	1.6	0.7	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.4	2.1
8-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.9	0.4	0.4	0.4	1.2	2.4	4.4	5.5	4.3	3.2	2.2	0.8	0.4	0.2	0.2	0.1	1.2	5.5
9-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.9	0.8	0.6	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.9
10-Sep	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	4.4	5.0	1.8	1.6	0.2	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.1	0.7	5.0
11-Sep	0.0	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.4	0.3	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.1	0.2	0.5
12-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	C	C	C	C	C	C	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	--	0.6
13-Sep	0.5	0.6	0.6	Z	0.7	0.6	0.6	0.6	0.7	0.8	0.9	1.1	1.4	1.4	1.4	1.4	1.3	1.8	1.9	1.5	1.1	0.9	0.8	0.6	1.0	1.9
14-Sep	0.7	0.6	0.5	0.6	Z	0.8	1.2	1.3	1.1	1.4	1.5	1.2	1.0	0.8	0.8	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.7	1.5
15-Sep	0.2	0.4	0.4	0.4	0.3	Z	0.4	0.4	0.4	0.3	0.4	0.5	0.8	1.1	0.9	0.9	0.9	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.5	1.1
16-Sep	Z	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	1.2	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.9	0.8	0.8	0.7	1.2
17-Sep	0.7	Z	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.7	0.9	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.6	1.0
18-Sep	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.6	0.8	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8
19-Sep	0.2	0.2	0.1	Z	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	M	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
20-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.4	0.4	0.5	0.7	1.2	0.7	0.7	0.7	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.4	1.2
21-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.5
22-Sep	Z	0.3	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	0.0	0.1	0.1	0.3	0.9	0.4	0.2	0.2	0.2	0.9
23-Sep	0.1	Z	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.3
24-Sep	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.4	0.2	0.1	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.5
25-Sep	0.2	0.2	0.3	Z	0.3	0.2	0.4	0.2	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.5
26-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.4
27-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4
28-Sep	Z	0.2	0.3	0.4	0.7	0.9	1.0	1.0	0.8	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.4	1.0
29-Sep	0.4	Z	0.8	0.7	0.5	0.2	0.3	0.4	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.3	0.4	0.6	1.4	1.4	0.5	1.4
30-Sep	1.0	0.7	Z	0.4	0.3	0.5	0.5	0.4	0.5	0.6	1.0	0.8	0.6	0.8	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.5	1.0
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.7	1.3	1.4	0.9	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.4	Diurnal Average	
	1.0	1.4	0.8	0.7	0.7	0.9	1.2	1.3	2.4	3.1	2.0	4.4	13.2	20.0	4.7	5.5	4.7	4.3	2.2	1.5	1.1	0.9	1.4	3.1	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

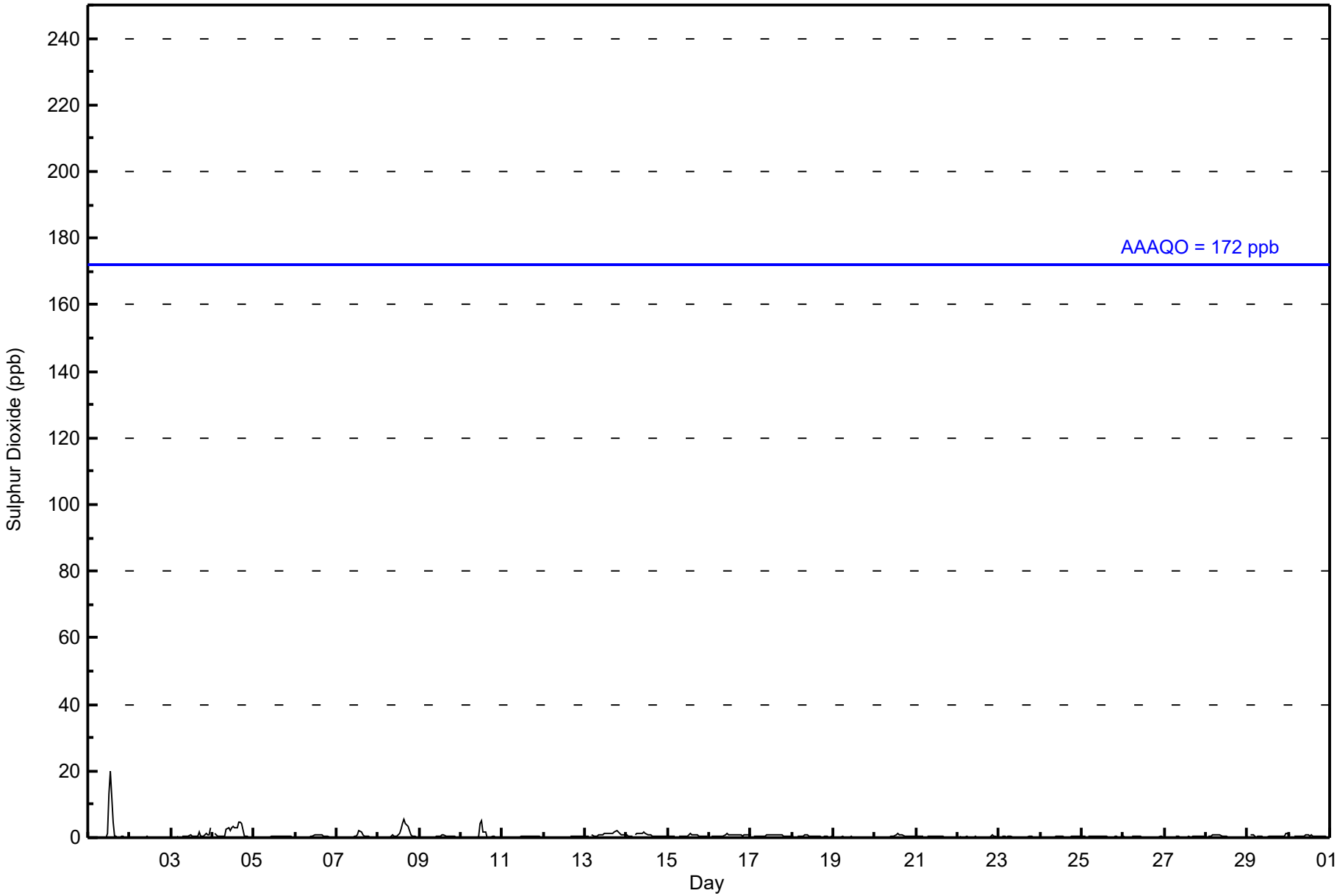
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - September 2025



Sulphur Dioxide (SO_2) - ppb
Athabasca Valley - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	681	99.71	99.71
11 - 20	2	0.29	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: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	8	3	7	25	47	156	94	39	50	57	46	29	13	20	43	44	681
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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	8	3	7	25	47	156	94	39	50	57	46	29	13	20	45	44	683

Total Number of Valid Hours: 683

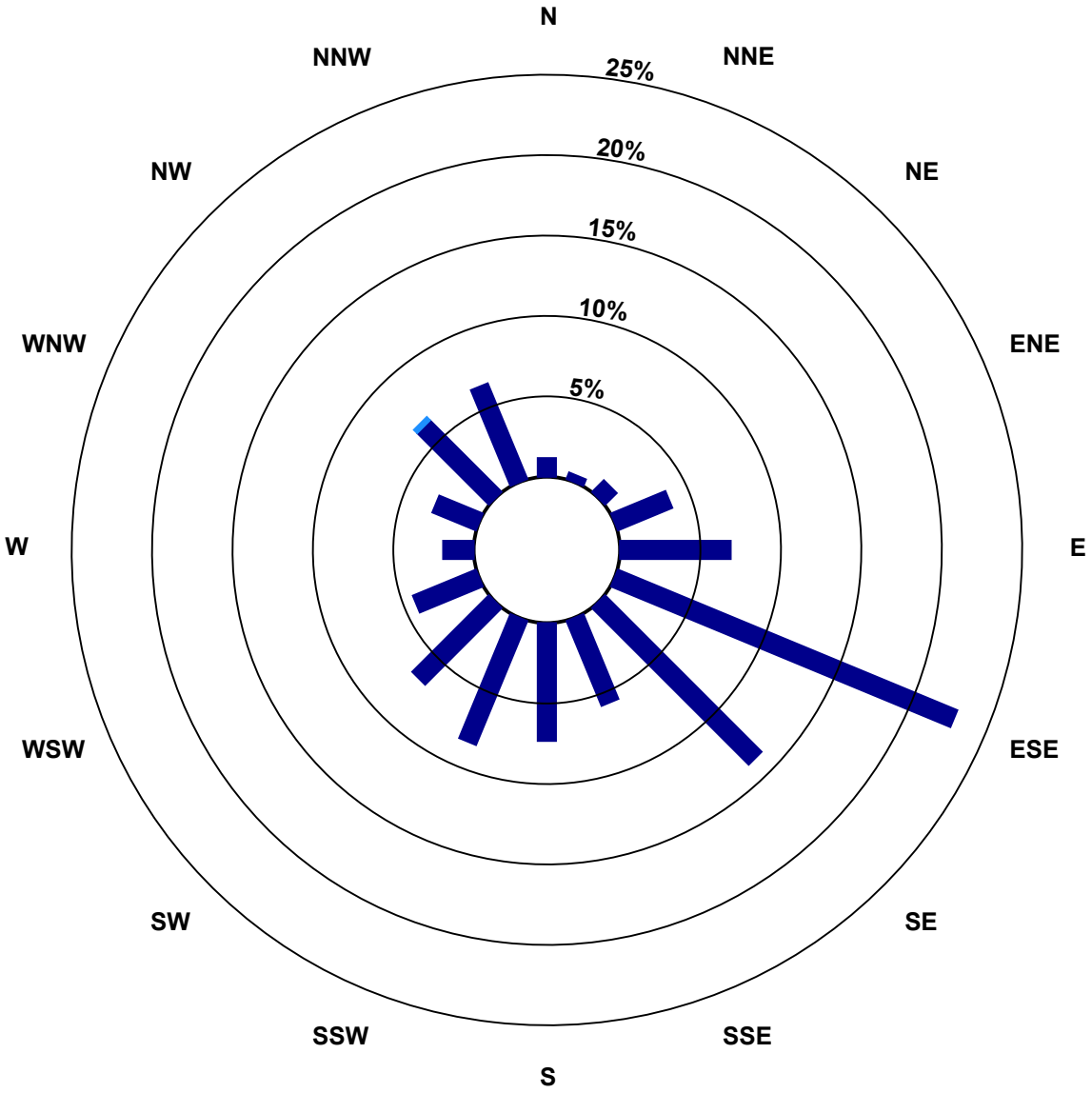
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

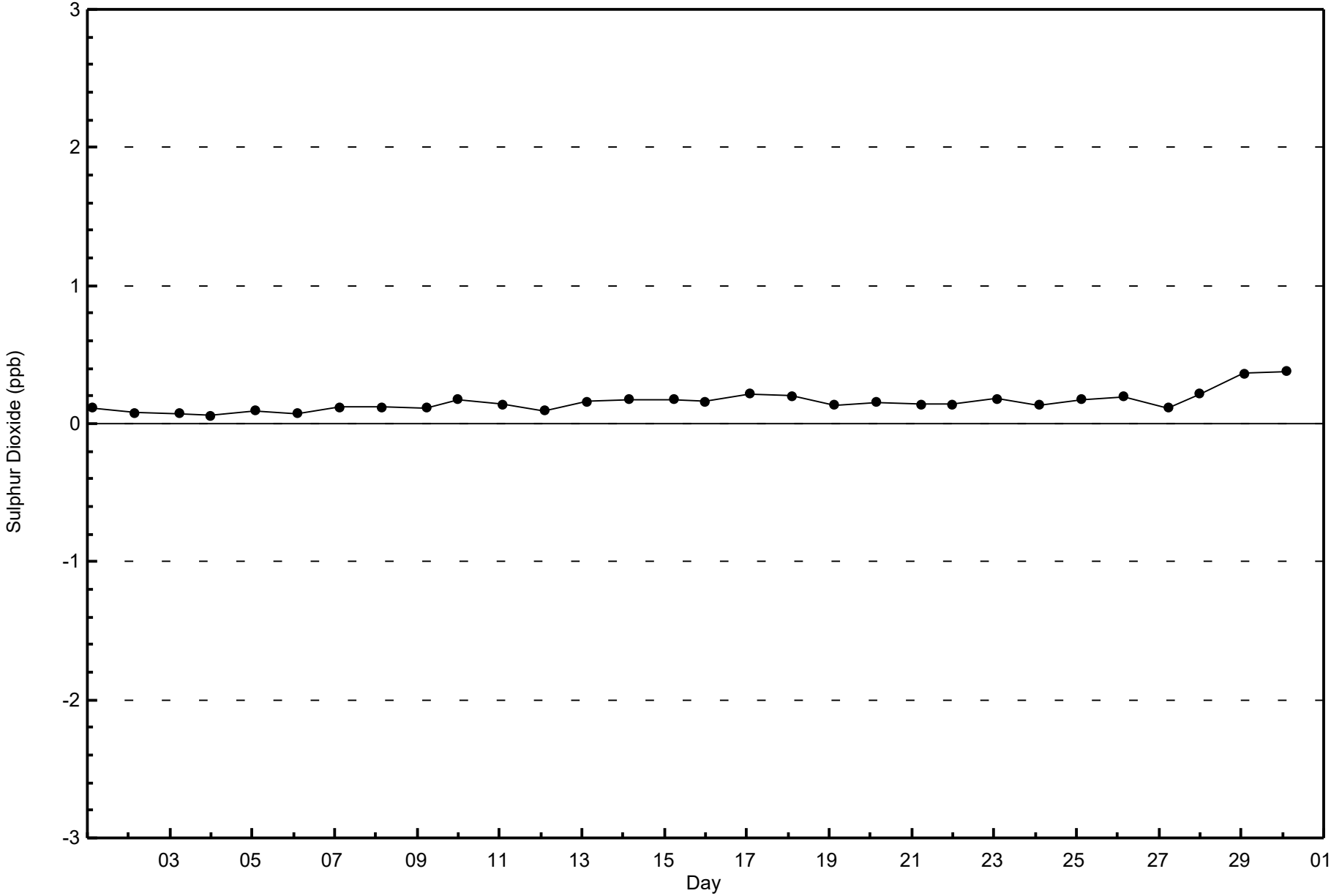
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - September 2025

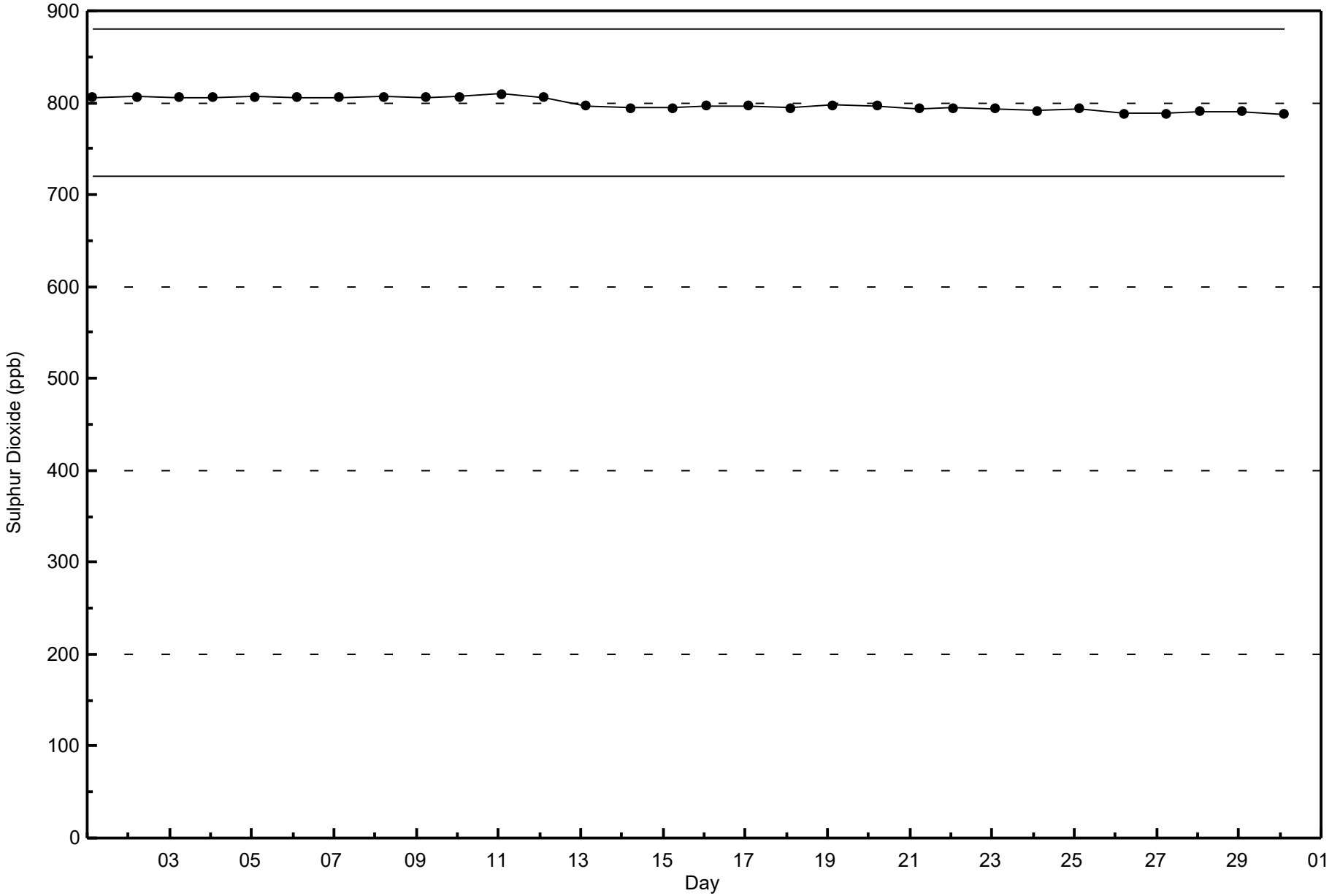


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 2.8 ppb on Sep 30 23:00 Maximum Daily Average: 0.9 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 14 17:30 Minimum Daily Average: 0.2 ppb on Sep 21

Maximum Diurnal Average: 0.4 ppb at hour 23 Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.31 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.9

Periods in Service:	1440
Periods of Valid Data:	1366
Periods of Invalid Data:	74
Periods of Calibration:	71
Percent Operational Time:	99.8

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	0.6	0.4	0.6	0.4	Z	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	1.2	1.2	0.5	0.5	0.4	0.3	0.3	2.3	1.8	0.8	0.6	0.6	2.3
	0.6	0.5	0.4	0.4	SP	0.4	0.4	0.3	0.4	0.3	0.2	0.4	1.0	1.5	0.8	0.3	0.3	0.4	0.3	0.7	1.4	2.0	0.8	0.5		
2-Sep	0.4	0.4	0.4	0.4	0.5	Z	0.4	0.3	0.3	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	0.2	0.2	0.2	0.3	0.5
	0.4	0.3	0.4	0.4	0.4	SP	0.4	0.3	0.4	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2		
3-Sep	Z	0.3	0.3	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	0.7	0.5	0.8	0.3	0.6	0.8	0.9	1.2	0.4	1.2
	SP	0.3	0.3	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	0.6	0.8	0.4	0.5	0.7	0.7	1.0	0.9		
4-Sep	1.5	Z	0.4	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.3	0.3	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	1.5
	1.4	SP	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.2	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.4	0.2	0.2	0.3	0.3	0.2	0.2		
5-Sep	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4
	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.3	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		
6-Sep	0.2	0.1	0.1	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2		
7-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.6	1.2	0.9	1.1	1.1	1.0	0.7	1.3	1.4	2.4	2.0	0.7	2.6
	0.2	0.2	0.2	0.3	SP	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.7	1.0	0.7	1.8	1.6	0.7	1.0	1.4	1.7	2.6	0.6		
8-Sep	0.8	2.2	1.2	1.3	0.9	Z	1.6	1.4	1.6	0.8	1.2	0.9	0.6	0.9	0.9	0.8	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.9	2.2
	0.9	2.1	1.1	1.0	1.1	SP	1.5	1.6	1.2	0.8	1.2	0.8	0.7	0.9	0.8	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2		
9-Sep	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4
	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3		
10-Sep	0.3	Z	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.5	0.5	--	0.6
	0.3	SP	0.3	0.3	0.3	0.2	0.2	0.2	0.1	C	C	C	C	C	C	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.6	0.3		
11-Sep	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.3	0.3	SP	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
12-Sep	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.4
	0.2	0.3	0.3	SP	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2		
13-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.2	0.5	1.0	2.0	1.6	0.9	0.5	0.4	0.3	0.5	2.0
	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.6	0.5	2.0	1.7	1.3	0.8	0.5	0.3	0.2		
14-Sep	0.2	0.3	0.2	0.2	0.2	Z	0.5	0.5	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
	0.2	0.2	0.2	0.2	0.2	SP	0.5	0.4	0.4	0.5	0.4	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		
15-Sep	Z	0.3	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	0.3	0.2	0.2	0.1	0.1	0.5	0.3	0.4	0.2	0.5
	SP	0.2	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	0.1	0.1	0.1	0.3	0.2	0.4	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025

Day	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	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Sep	0.3	Z	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5
	0.3	SP	0.4	0.4	0.4	0.5	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	0.3	0.3	0.3	0.3		
17-Sep	0.3	0.3	Z	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	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.4
	0.3	0.3	SP	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2		
18-Sep	0.2	0.2	0.2	Z	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	0.3
	0.2	0.2	0.2	SP	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2		
19-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.1	0.2	0.2	M	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
	0.2	0.1	0.2	0.2	SP	0.3	0.2	0.2	0.1	0.2	0.2	M	M	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2		
20-Sep	0.2	0.2	0.2	0.1	0.2	Z	0.3	0.3	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	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.3	SP	0.3	0.3	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	0.2	0.2	0.2		
21-Sep	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
	SP	0.3	0.2	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	0.2	0.2	0.1		
22-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3		
23-Sep	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1		
24-Sep	0.1	0.1	0.1	Z	0.2	0.1	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	0.3	0.2	0.2	0.2	0.2	0.4
	0.1	0.1	0.1	SP	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	0.4	0.2	0.2	0.2	0.2		
25-Sep	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.3	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	0.2	0.2	0.4
	0.1	0.1	0.2	0.2	SP	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2		
26-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	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	0.1		
27-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
	SP	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	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
28-Sep	0.3	Z	0.2	0.2	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.6
	0.2	SP	0.2	0.3	0.4	0.5	0.5	0.6	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		
29-Sep	0.2	0.2	Z	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.5
	0.2	0.3	SP	0.2	0.2	0.1	0.2	0.2	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	0.3	0.5	0.4		
30-Sep	0.4	0.4	0.3	Z	0.3	0.3	0.3	0.8	0.4	0.4	0.5	0.8	0.9	0.6	0.9	0.8	0.6	0.2	0.2	1.1	0.8	2.1	1.3	2.3	0.8	2.8
	0.4	0.3	0.3	SP	0.3	0.3	0.5	0.6	0.4	0.4	0.6	1.0	1.1	0.7	1.5	0.7	0.2	0.2	0.2	0.8	2.0	1.5	2.8	2.0		
	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	0.3	0.3	0.3	0.4	0.4	0.4	0.4	Diurnal Average	
	1.5	2.2	1.2	1.3	1.1	0.5	1.6	1.6	1.6	0.8	1.2	1.0	1.1	1.5	1.5	0.9	1.8	2.0	2.0	1.6	2.3	2.1	2.8	2.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance 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 - September 2025

Maximum Value: 2.5 ppb on Sep 7 23:00

Maximum Daily Average: 0.9 ppb on Sep 8

Minimum Value: 0.1 ppb on Sep 14 17:00

Minimum Daily Average: 0.2 ppb on Sep 21

Maximum Diurnal Average: 0.4 ppb at hour 23

Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.31 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.8

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.6	0.5	0.5	0.4	Z	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.7	1.4	1.0	0.4	0.4	0.4	0.3	0.5	1.9	1.9	0.8	0.6	0.6	1.9
2-Sep	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5
3-Sep	Z	0.3	0.3	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	0.6	0.7	0.6	0.4	0.7	0.8	1.0	1.0	0.4	1.0
4-Sep	1.5	Z	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	1.5
5-Sep	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.3	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	0.2	0.4
6-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3
7-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.7	1.1	0.8	1.5	1.4	0.8	0.8	1.4	1.6	2.5	1.3	0.7	2.5
8-Sep	0.8	2.1	1.1	1.2	1.0	Z	1.5	1.5	1.4	0.8	1.2	0.8	0.6	0.9	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.9	2.1
9-Sep	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4
10-Sep	0.3	Z	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.5	0.4	0.3	0.5
11-Sep	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
12-Sep	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.4
13-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	1.5	1.9	1.5	0.9	0.5	0.4	0.3	0.5	1.9
14-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.5	0.4	0.4	0.5	0.5	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	0.5
15-Sep	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.2	0.4
16-Sep	0.3	Z	0.4	0.4	0.4	0.4	0.4	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	0.3	0.3	0.3	0.3	0.3	0.4
17-Sep	0.3	0.3	Z	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	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3
18-Sep	0.2	0.2	0.2	Z	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	0.3
19-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	M	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
20-Sep	0.2	0.2	0.2	0.2	0.3	Z	0.3	0.3	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	0.2	0.2	0.2	0.2	0.3
21-Sep	Z	0.3	0.2	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	0.2	0.2	0.2	0.2	0.3
22-Sep	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3
23-Sep	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	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2
24-Sep	0.1	0.1	0.1	Z	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	0.3	0.3	0.2	0.2	0.2	0.2	0.3
25-Sep	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4
26-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	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	0.1	0.2	0.3
27-Sep	Z	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
28-Sep	0.2	Z	0.2	0.3	0.4	0.5	0.5	0.5	0.5	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	0.1	0.2	0.3	0.5
29-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.4
30-Sep	0.4	0.4	0.3	Z	0.3	0.3	0.4	0.7	0.4	0.4	0.5	0.9	1.0	0.6	1.2	0.8	0.4	0.2	0.2	1.0	1.4	1.8	2.1	2.1	0.8	2.1
	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	0.3	0.3	0.3	0.4	0.4	0.4	0.4	Diurnal Average	
	1.5	2.1	1.1	1.2	1.0	0.5	1.5	1.5	1.4	0.8	1.2	0.9	1.0	1.4	1.2	0.8	1.5	1.5	1.9	1.5	1.9	1.9	2.5	2.1	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

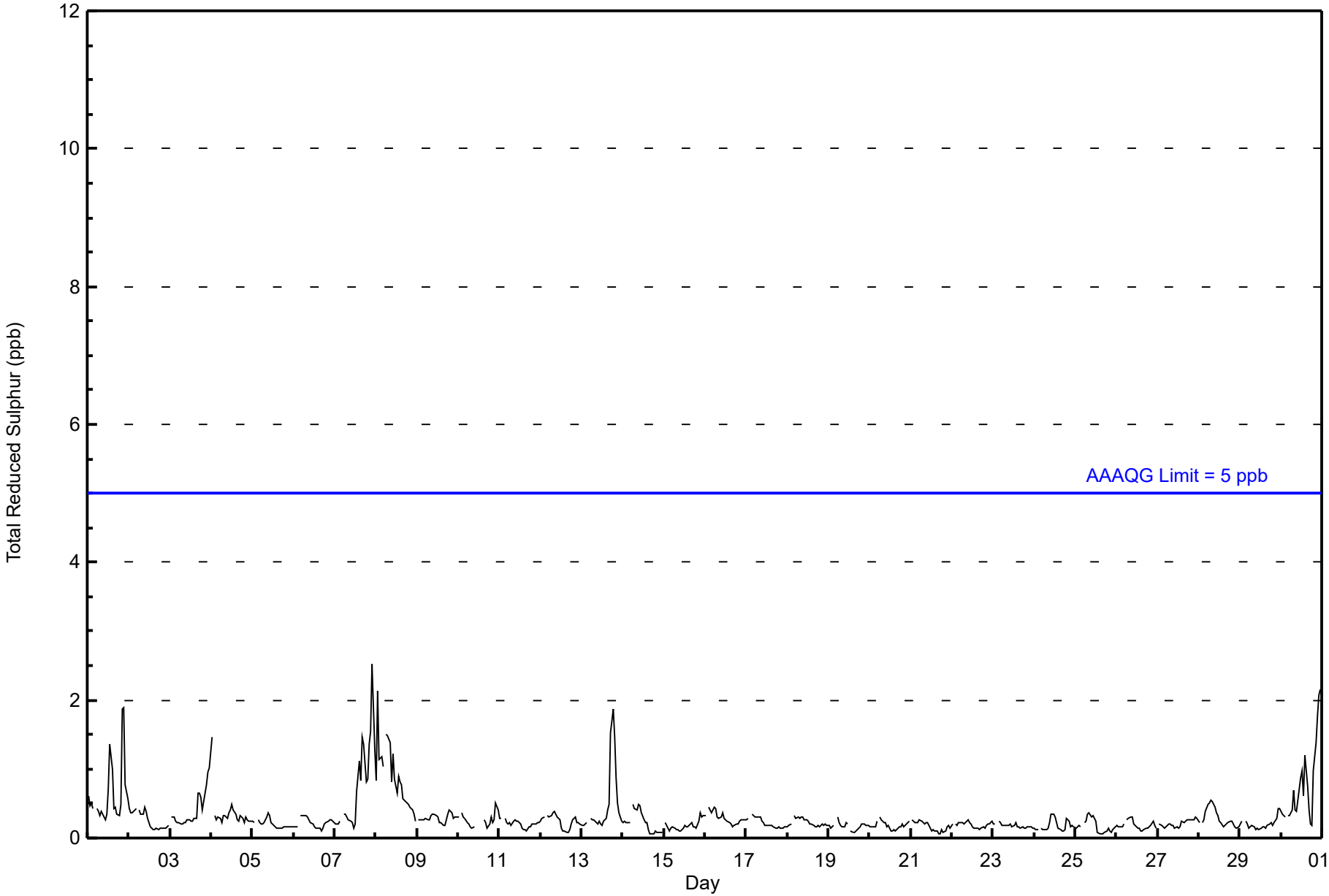
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	99.85	99.85
3 - 4	1	0.15	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: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	5	3	6	24	45	158	97	39	52	59	46	29	13	20	45	42	683
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	5	3	6	24	45	158	97	39	52	59	46	29	13	20	45	43	684

Total Number of Valid Hours: 684

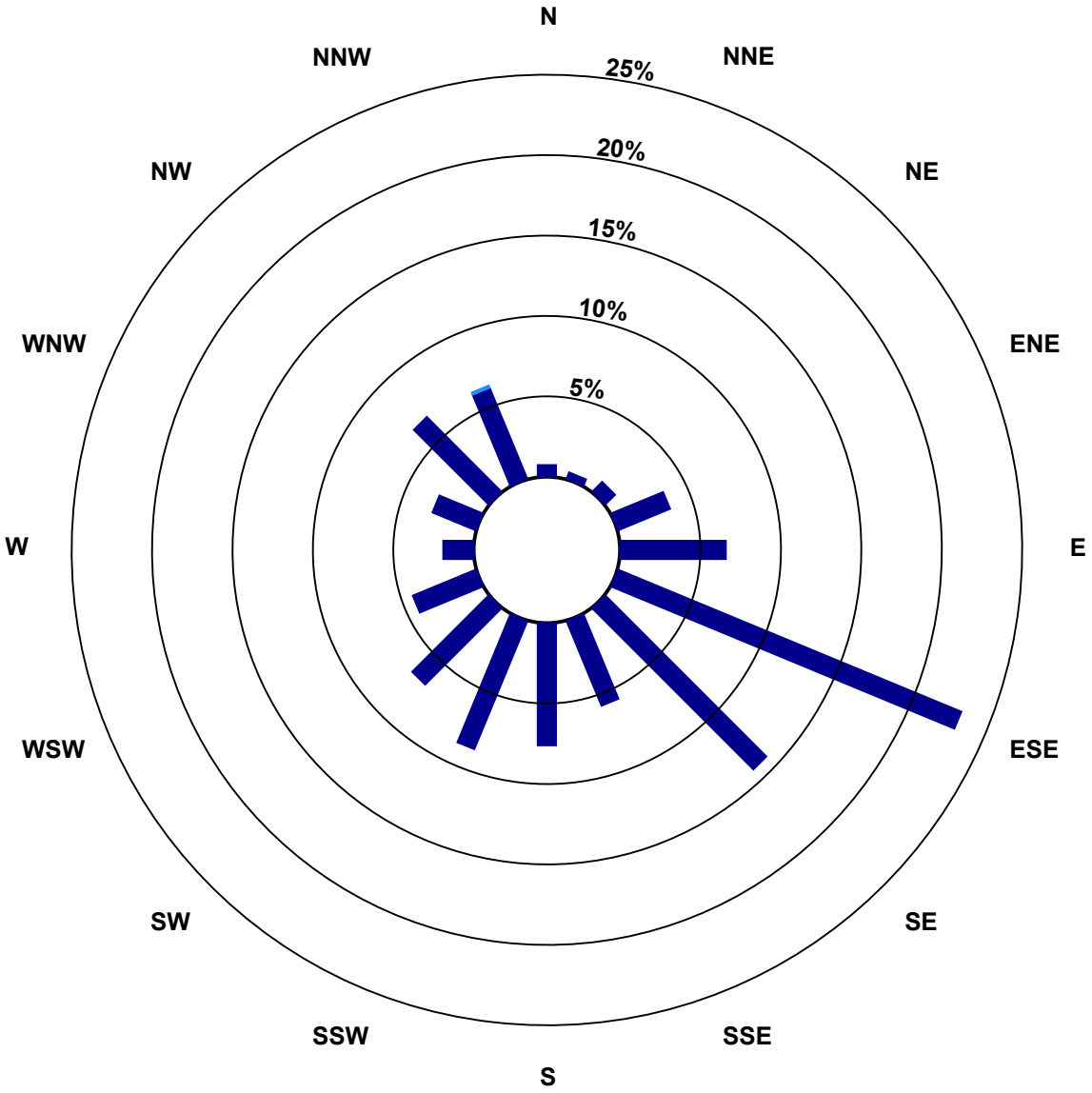
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

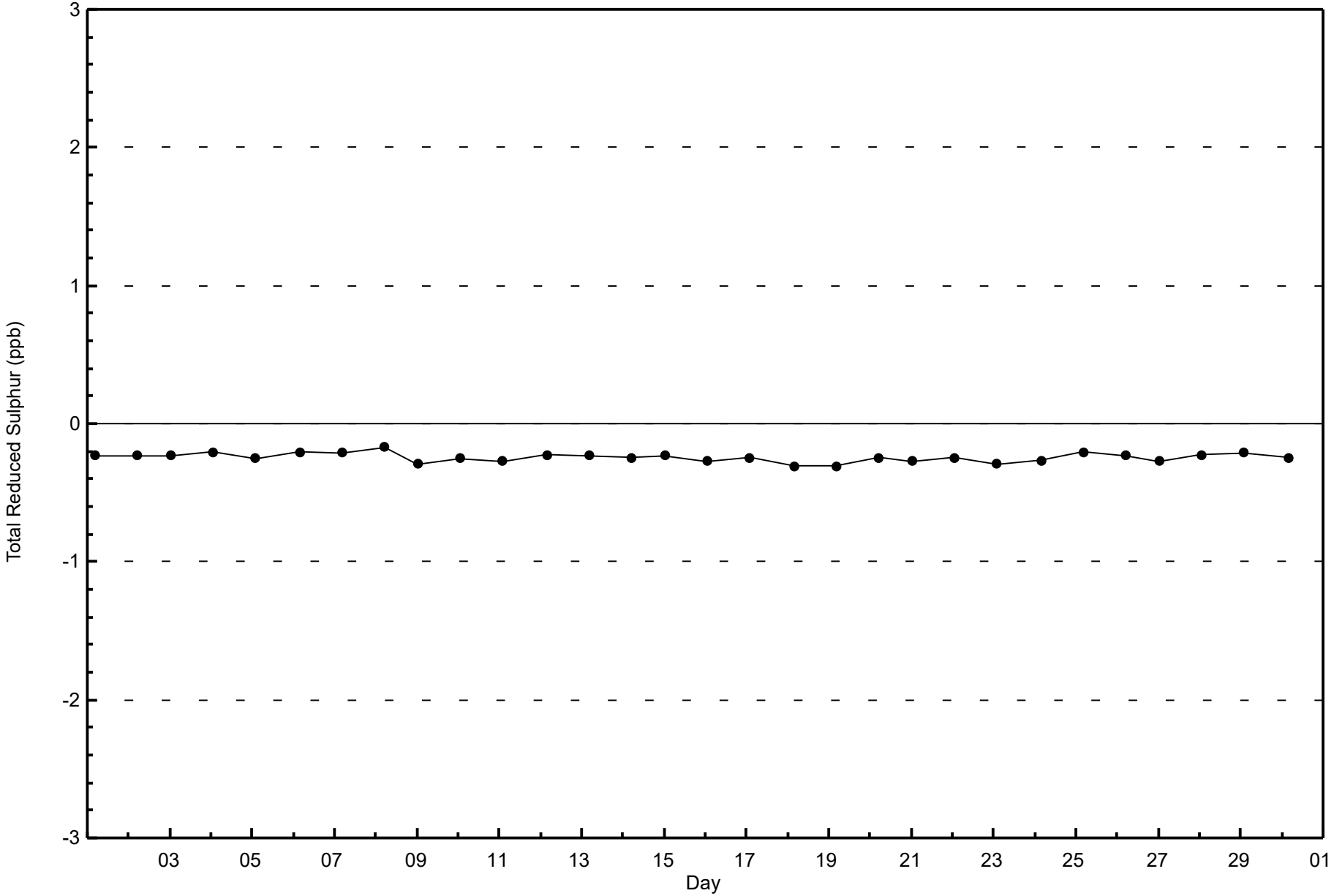
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025

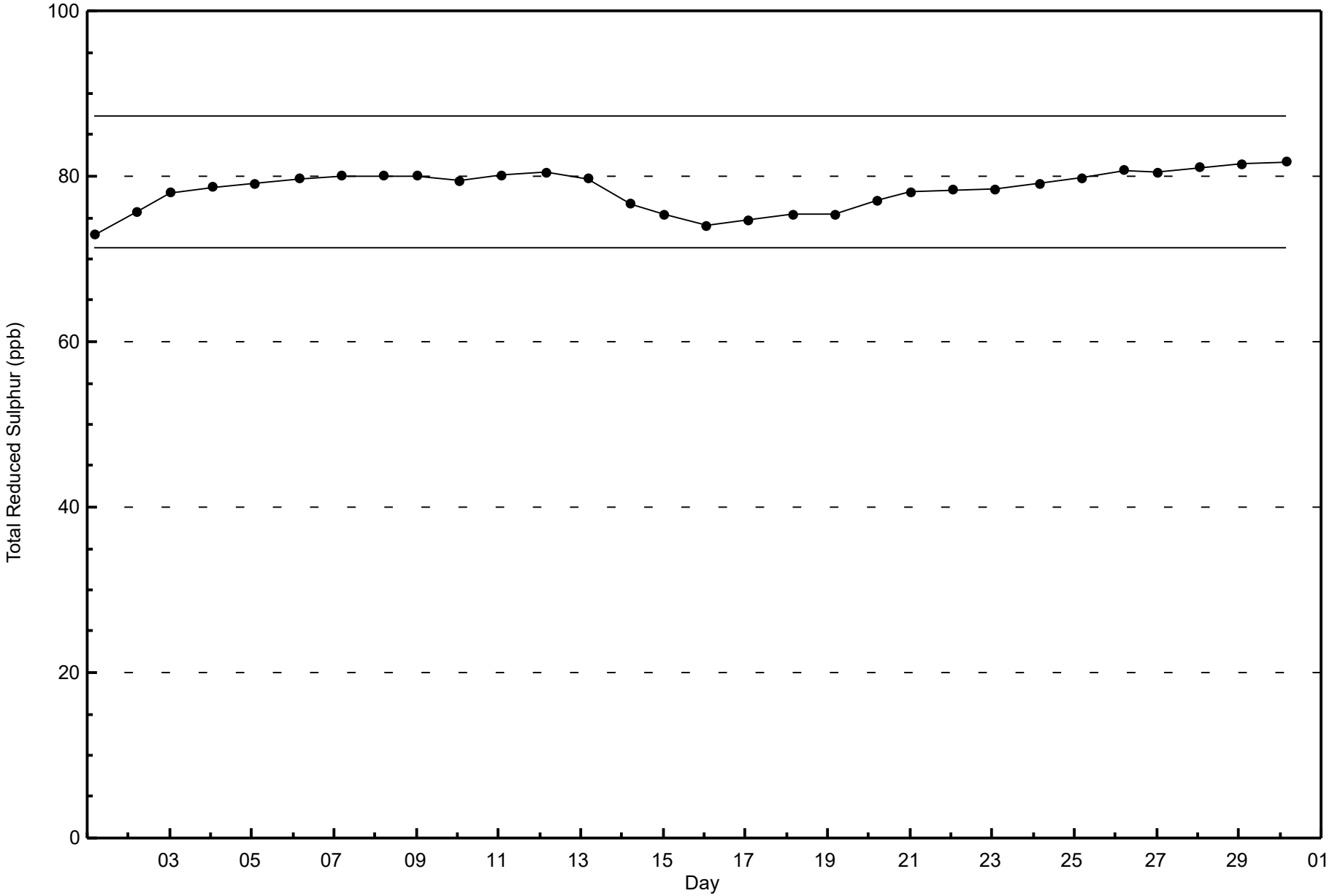


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - September 2025

Maximum Value: 2.6 ppm on Sep 14 07:00

Maximum Daily Average: 2.2 ppm on Sep 7

Minimum Value: 2.0 ppm on Sep 10 17:00

Minimum Daily Average: 2.0 ppm on Sep 22

Maximum Diurnal Average: 2.2 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.10 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.4

Hours in Service:	720
Hours of Data:	653
Hours of Missing Data:	67
Hours of Calibration:	34
Percent Operational Time:	95.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.3	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	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	2.3
2-Sep	2.1	2.2	2.3	2.4	Z	2.4	2.3	2.2	2.2	2.3	2.2	2.2	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
3-Sep	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
4-Sep	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	2.2	2.0	2.2
5-Sep	2.4	Z	2.4	2.4	2.3	2.2	2.2	2.1	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	2.1	2.1	2.1	2.4
6-Sep	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.1	2.5
7-Sep	2.3	2.4	2.4	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4
8-Sep	2.2	2.2	2.2	2.1	Z	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	2.2	2.2	2.1	2.2
9-Sep	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	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.1	2.2	2.1	2.3
10-Sep	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.3
11-Sep	2.3	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.3
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.2	2.2	--	2.2
13-Sep	2.1	2.1	2.1	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	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3
14-Sep	2.2	2.2	2.3	2.3	Z	2.5	2.6	2.5	2.4	2.4	2.4	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.6
15-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
16-Sep	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
17-Sep	2.1	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
18-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
19-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	M	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.1	2.3
20-Sep	2.5	2.4	2.3	2.2	Z	2.2	2.3	2.2	2.2	2.3	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	2.2	2.2	2.5
21-Sep	2.2	2.2	2.2	2.3	2.3	Z	2.5	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	2.5
22-Sep	Z	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
23-Sep	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	2.1	2.1	2.1	2.0	2.1
24-Sep	2.1	2.1	Z	2.1	2.1	2.1	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	2.1	2.1	2.1	2.2	2.1	2.2
25-Sep	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2
26-Sep	2.0	2.0	2.1	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.2
27-Sep	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	2.1	2.0	2.1	2.2	2.2	2.1	2.2
28-Sep	Z	2.0	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	2.1	2.0	2.1	2.1	2.1	2.1
29-Sep	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	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
30-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.3	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4
	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.5	2.4	2.4	2.4	2.3	2.5	2.6	2.5	2.4	2.4	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.4	2.5	Diurnal Maximum	

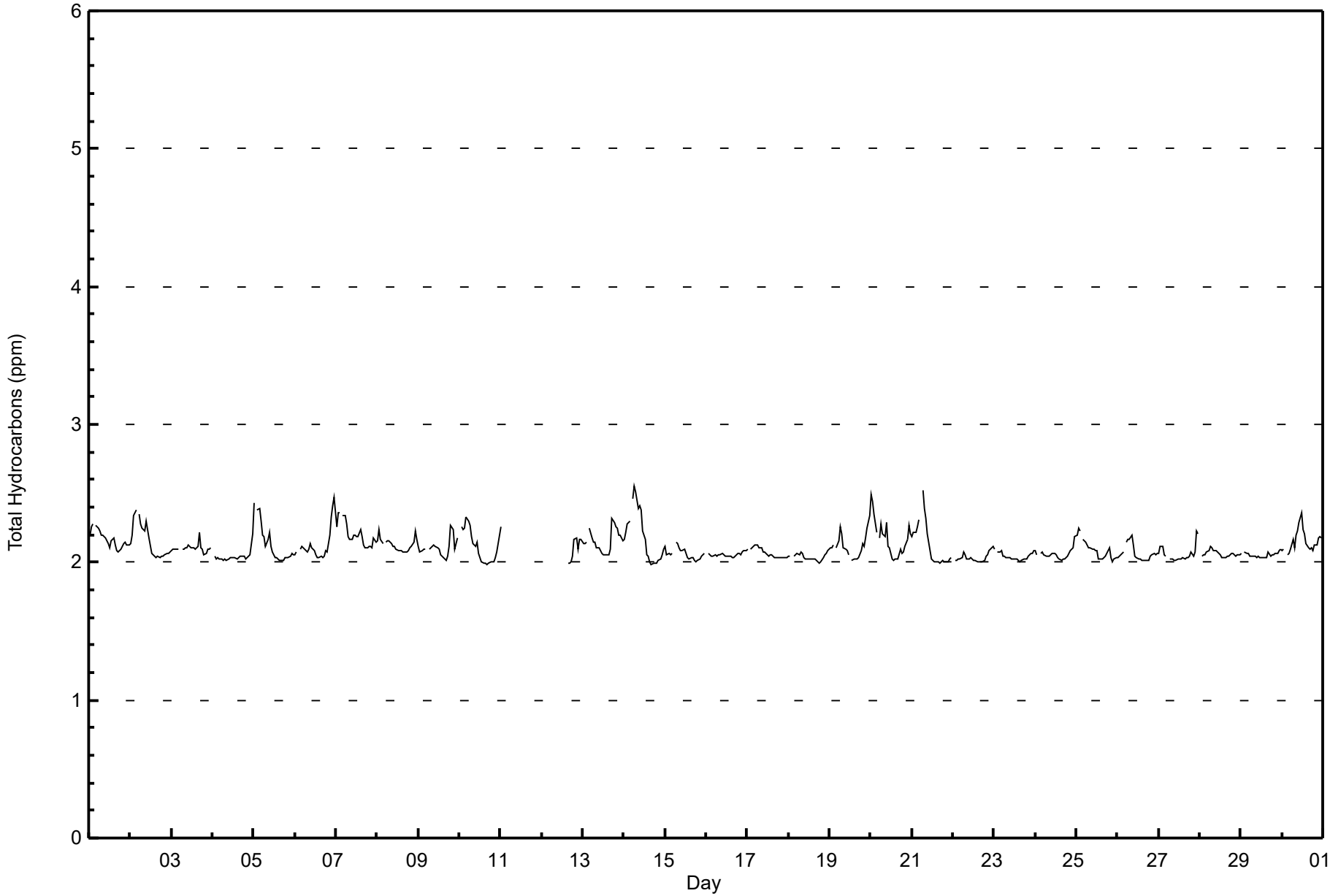
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	239	36.60	36.60
2.1 - 3.0	414	63.40	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 653

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Athabasca Valley - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	6	1	0	10	12	32	13	13	18	30	35	22	12	13	14	8	239
2.1 - 3.0	2	2	6	14	30	116	77	24	25	26	11	7	1	6	31	36	414
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	8	3	6	24	42	148	90	37	43	56	46	29	13	19	45	44	653

Total Number of Valid Hours: 653

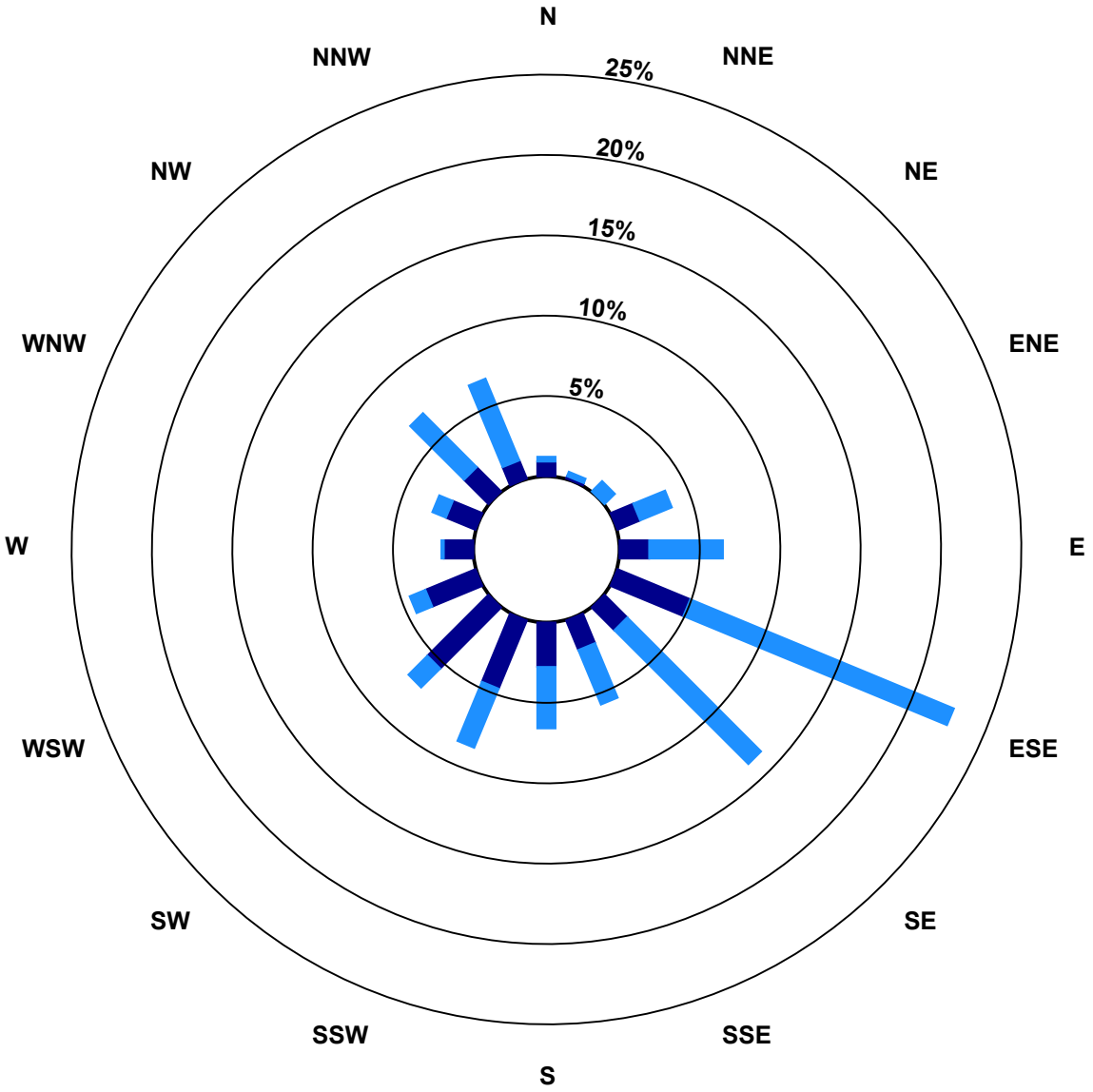
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Athabasca Valley



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

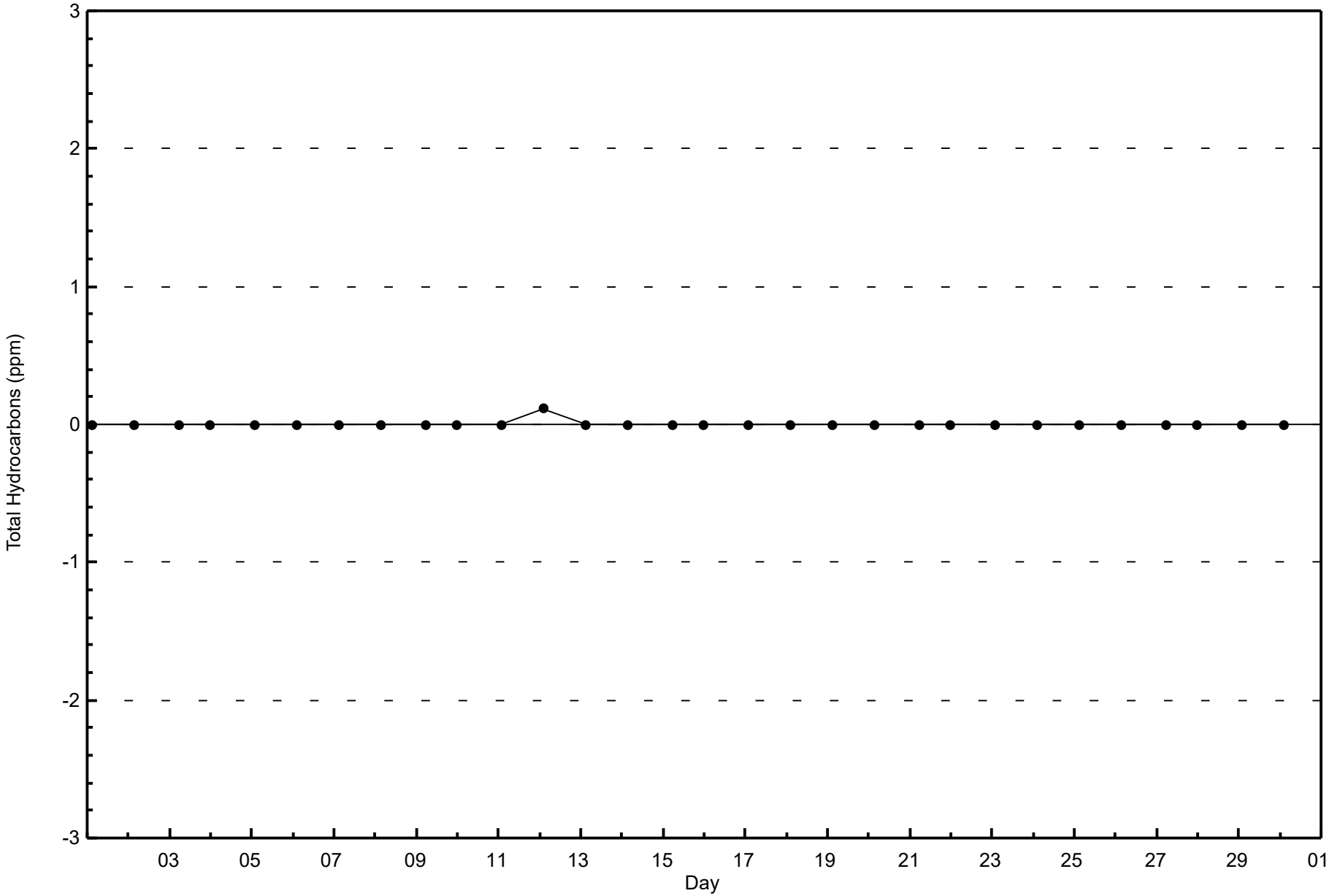
Total Number of Valid Hours: 653

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - September 2025

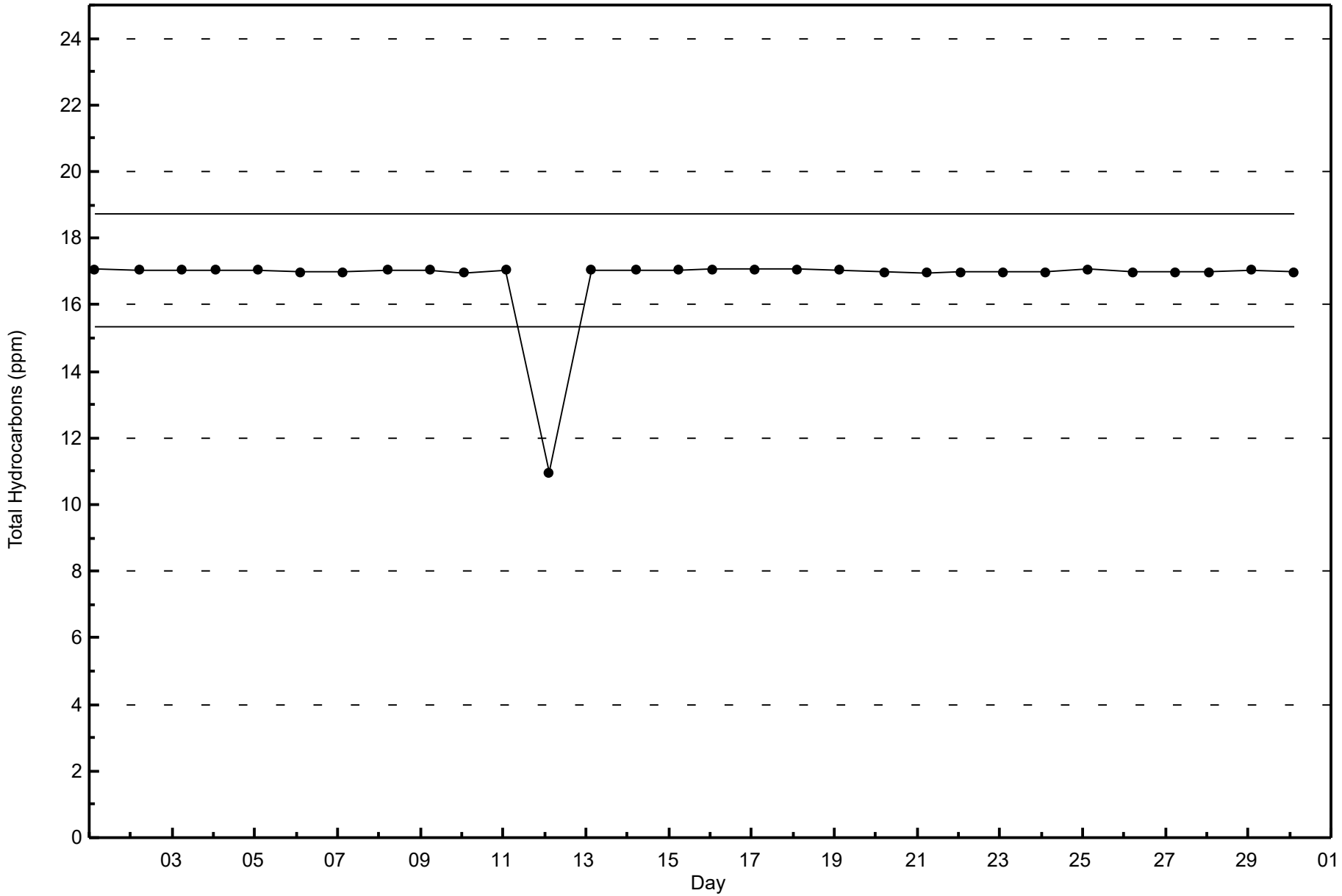


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - September 2025

Maximum Value: 0.181 ppm on Sep 20 10:00

Maximum Daily Average: 0.022 ppm on Sep 14

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.000 ppm on Sep 1

Maximum Diurnal Average: 0.017 ppm at hour 10

Minimum Diurnal Average: 0.000 ppm at hour 16

Monthly Average: 0.003 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 in Service:	720
Hours of Data:	653
Hours of Missing Data:	67
Hours of Calibration:	34
Percent Operational Time:	95.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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
2-Sep	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.006	0.000	0.002	0.001	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	0.001	0.008
3-Sep	0.000	0.002	0.000	0.000	0.000	Z	0.000	0.000	0.004	0.000	0.014	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	0.001	0.014
4-Sep	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
5-Sep	0.000	Z	0.000	0.002	0.000	0.000	0.000	0.000	0.062	0.120	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.120
6-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.002	0.013	0.006	0.000	0.000	0.000	0.001	0.028	0.033	0.030	0.102	0.059	0.040	0.015	0.102
7-Sep	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.001	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.022
8-Sep	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	0.001	0.007	0.000	0.000	0.007
9-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.003	0.007	0.012	0.002	0.004	0.000	0.000	0.011	0.036	0.072	0.062	0.019	0.013	0.015	0.011	0.072
10-Sep	Z	0.007	0.001	0.001	0.015	0.005	0.006	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.002	0.001	0.000	0.000	0.000	0.004	0.041
11-Sep	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	0.000	0.000	0.000	0.017	0.032	0.037	0.045	0.037	0.005	--	0.045
13-Sep	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	0.001	0.000	0.008	0.003	0.000	0.001	0.005	0.011	0.005	0.000	0.002	0.011
14-Sep	0.001	0.005	0.005	0.004	Z	0.034	0.060	0.066	0.052	0.085	0.093	0.043	0.055	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.004	0.000	0.000	0.022	0.093
15-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.020
16-Sep	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	0.000	0.000	0.000	0.001
17-Sep	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	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
18-Sep	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	0.001	0.000	0.001
19-Sep	0.000	0.000	0.000	Z	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	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	0.002
20-Sep	0.001	0.003	0.000	0.000	Z	0.000	0.000	0.000	0.057	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.002	0.011	0.181
21-Sep	0.000	0.000	0.000	0.000	0.001	Z	0.034	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	0.034
22-Sep	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	0.000	0.000	0.000	0.001
23-Sep	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	0.000	0.000	0.000	0.000	0.000	0.000	0.001
24-Sep	0.000	0.000	Z	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
25-Sep	0.000	0.000	0.002	Z	0.000	0.001	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	0.000	0.000	0.000	0.000	0.000	0.002
26-Sep	0.000	0.000	0.000	0.000	Z	0.003	0.000	0.010	0.000	0.037	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.037
27-Sep	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
28-Sep	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
29-Sep	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	0.047	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.047
30-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
	0.000	0.001	0.000	0.000	0.001	0.002	0.004	0.003	0.006	0.017	0.007	0.003	0.003	0.000	0.000	0.000	0.002	0.001	0.003	0.005	0.005	0.006	0.004	0.002	Diurnal Average	
	0.001	0.007	0.005	0.004	0.015	0.034	0.060	0.066	0.062	0.181	0.093	0.043	0.055	0.006	0.004	0.000	0.047	0.011	0.036	0.072	0.062	0.102	0.059	0.040	Diurnal Maximum	

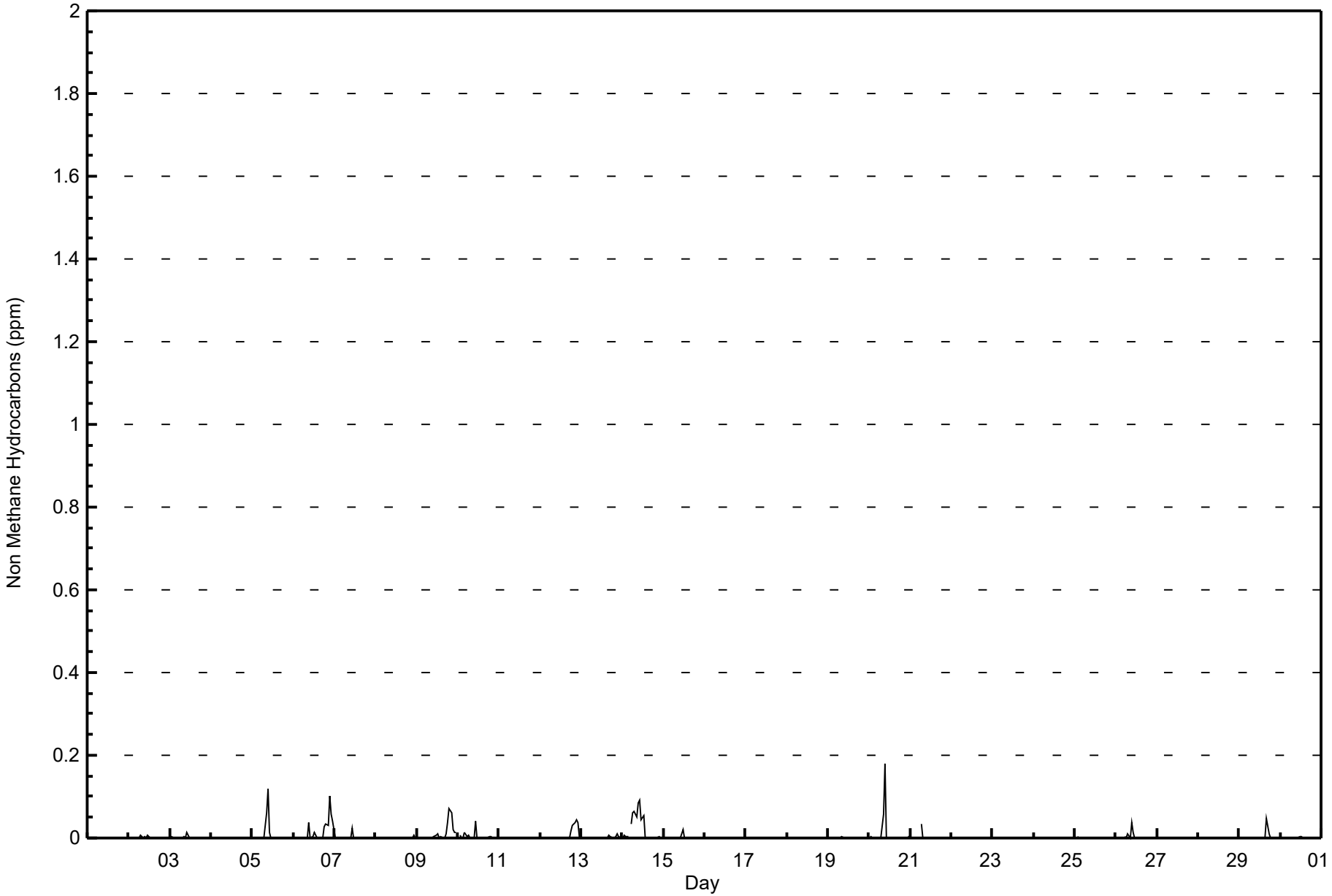
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - September 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	599	91.73	91.73
0.006 - 0.05	41	6.28	98.01
0.06 - 0.1	12	1.84	99.85
> 0.1	1	0.15	100.00

Total Number of Valid Hours: 653

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	8	2	4	22	38	140	73	33	36	51	46	26	13	19	45	43	599
0.006 - 0.05	0	1	2	1	4	5	12	4	5	4	0	2	0	0	0	1	41
0.06 - 0.1	0	0	0	1	0	2	5	0	2	1	0	1	0	0	0	0	12
> 0.1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Totals	8	3	6	24	42	148	90	37	43	56	46	29	13	19	45	44	653

Total Number of Valid Hours: 653

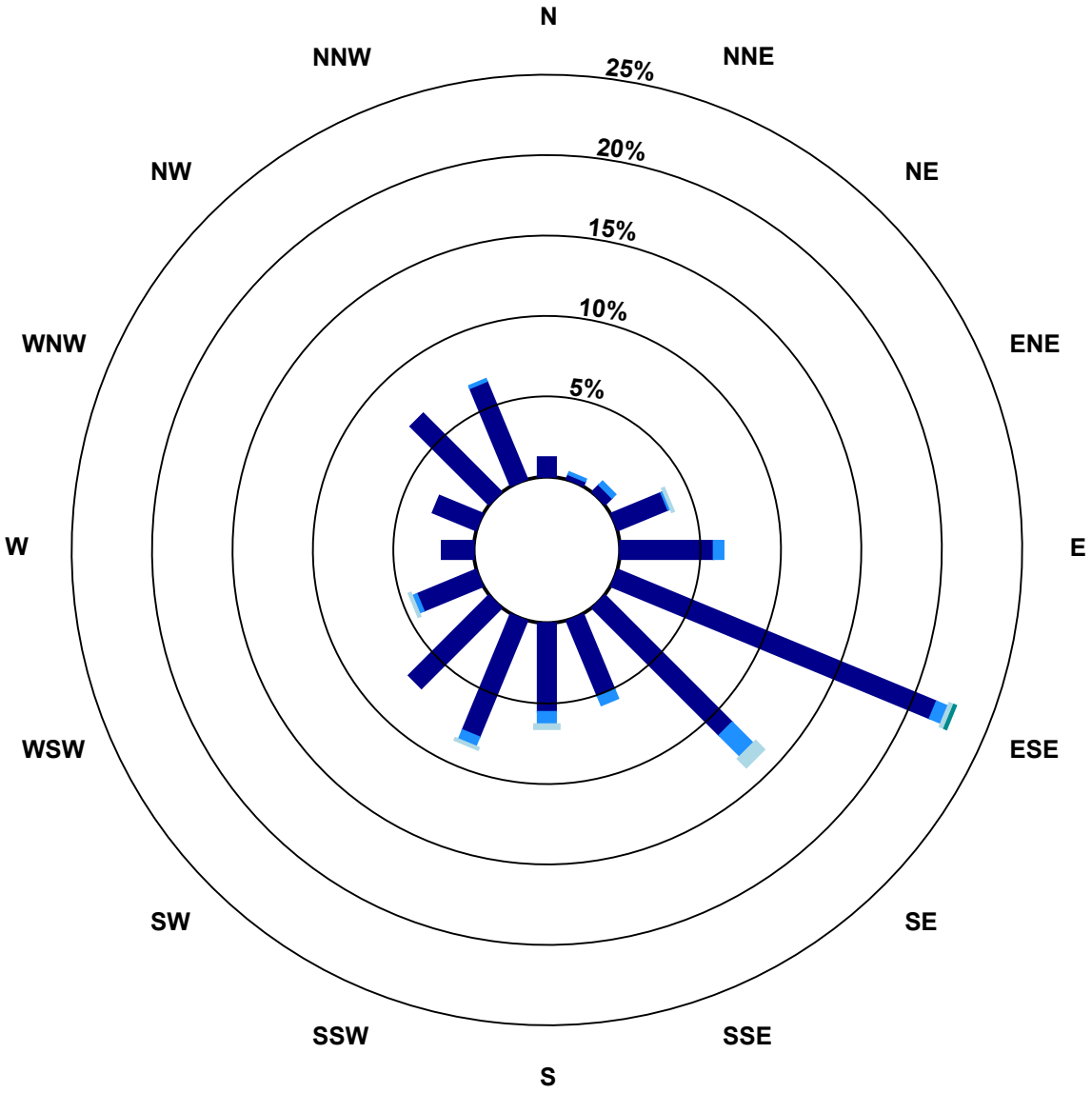
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

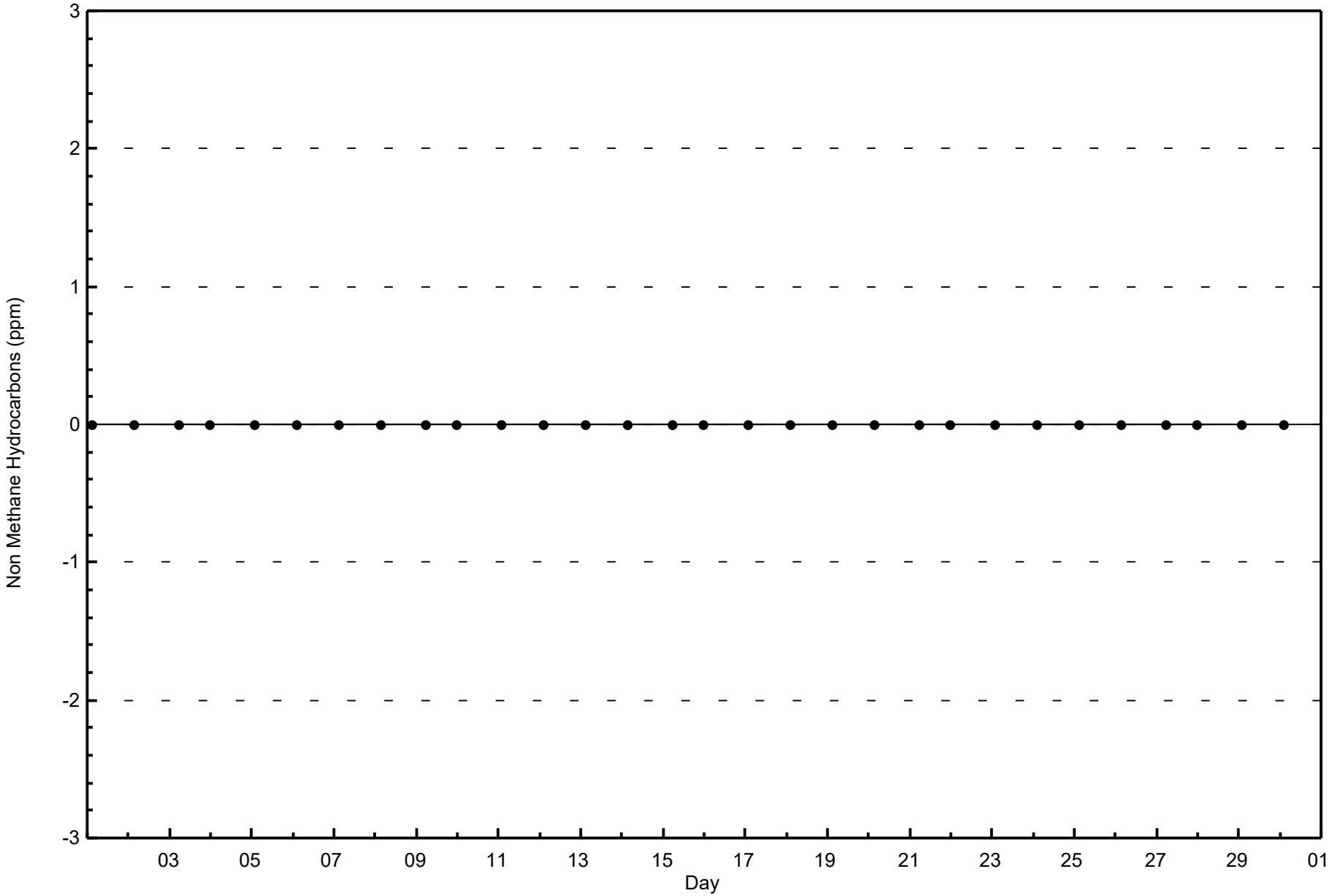
Total Number of Valid Hours: 653

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - September 2025

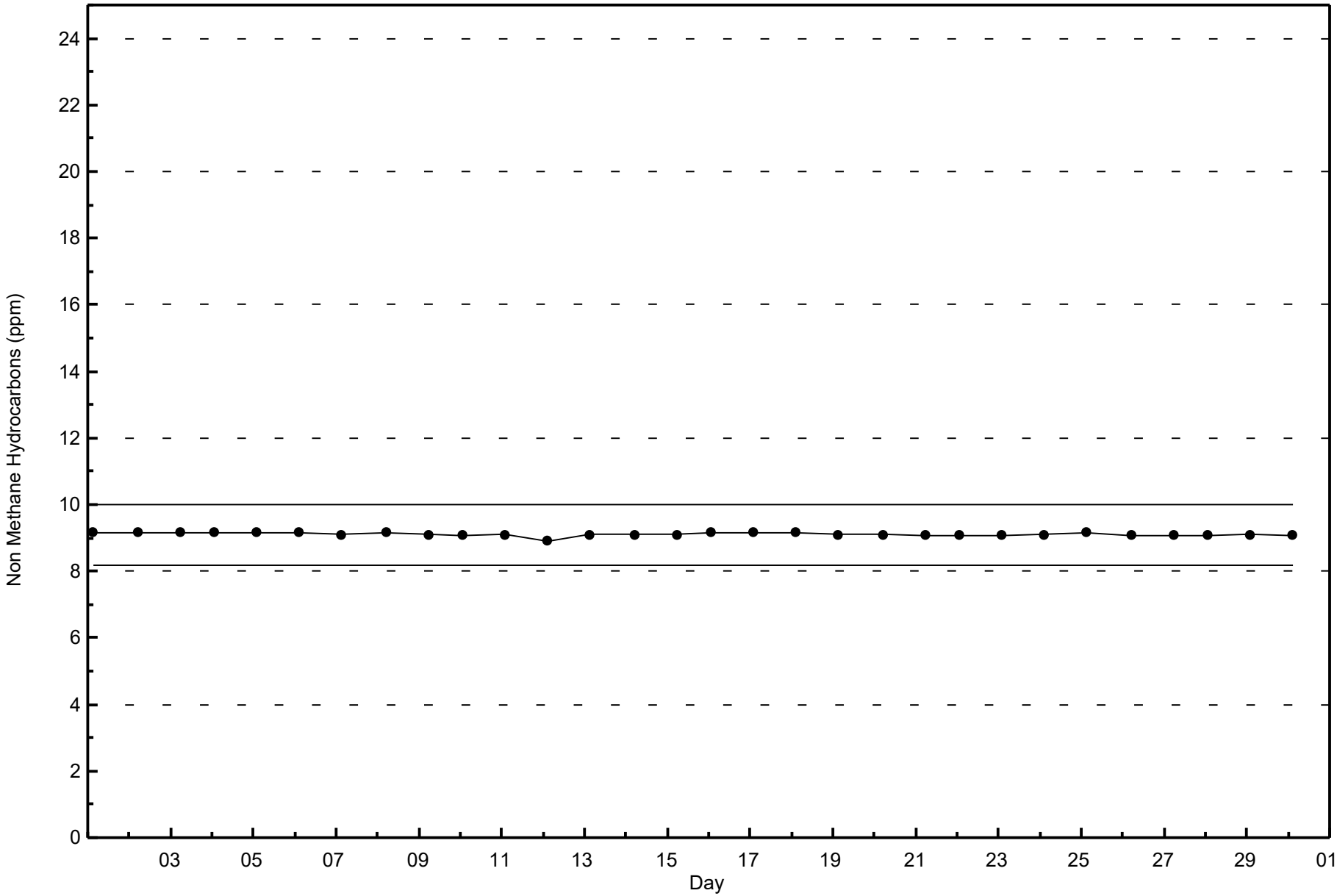


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.5 ppm on Sep 20 01:00

Maximum Daily Average: 2.2 ppm on Sep 7

Minimum Value: 2.0 ppm on Sep 10 17:00

Minimum Daily Average: 2.0 ppm on Sep 22

Maximum Diurnal Average: 2.2 ppm at hour 3

Minimum Diurnal Average: 2.0 ppm at hour 17

Monthly Average: 2.10 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.4

Hours in Service:	720
Hours of Data:	653
Hours of Missing Data:	67
Hours of Calibration:	34
Percent Operational Time:	95.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.3	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	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	2.3
2-Sep	2.1	2.2	2.3	2.4	Z	2.4	2.3	2.2	2.2	2.3	2.2	2.2	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
3-Sep	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
4-Sep	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	2.2	2.0	2.2
5-Sep	2.4	Z	2.4	2.4	2.3	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	2.0	2.0	2.1	2.1	2.1	2.4
6-Sep	2.1	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	2.1	2.0	2.2	2.2	2.3	2.4	2.1	2.4
7-Sep	2.3	2.4	2.4	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4
8-Sep	2.2	2.2	2.2	2.1	Z	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	2.2	2.2	2.1	2.2
9-Sep	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	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.2
10-Sep	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.3
11-Sep	2.3	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.3
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	--	2.2
13-Sep	2.1	2.1	2.1	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	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.3
14-Sep	2.2	2.2	2.3	2.3	Z	2.4	2.5	2.4	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	2.1	2.1	2.2	2.5
15-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
16-Sep	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
17-Sep	2.1	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
18-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
19-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	M	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.1	2.3
20-Sep	2.5	2.4	2.3	2.2	Z	2.2	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	2.2	2.3	2.2	2.2	2.5
21-Sep	2.2	2.2	2.2	2.3	2.3	Z	2.5	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	2.5
22-Sep	Z	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
23-Sep	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	2.1	2.1	2.1	2.0	2.1
24-Sep	2.1	2.1	Z	2.1	2.1	2.1	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	2.1	2.1	2.1	2.2	2.1	2.2
25-Sep	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2
26-Sep	2.0	2.0	2.1	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.2
27-Sep	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	2.1	2.0	2.1	2.2	2.2	2.1	2.2
28-Sep	Z	2.0	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	2.1	2.0	2.1	2.1	2.1	2.1
29-Sep	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	2.1
30-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.3	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4
	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.5	2.4	2.4	2.4	2.3	2.4	2.5	2.4	2.3	2.3	2.3	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.4	Diurnal Maximum	

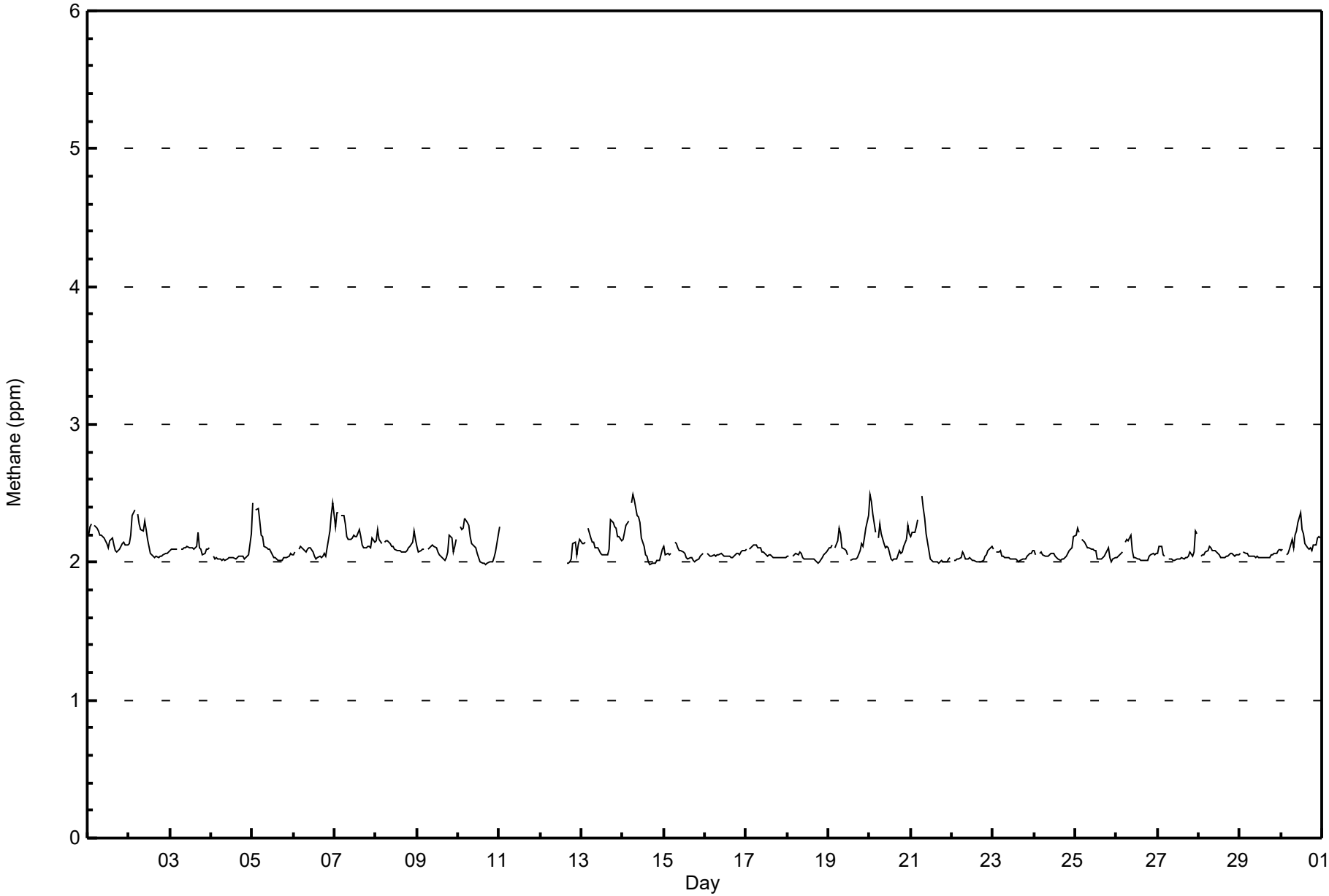
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Athabasca Valley - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	242	37.06	37.06
2.1 - 3.0	411	62.94	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 653

Total Number of Hours: 720

Methane (CH_4) - ppm
Athabasca Valley - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	6	1	0	11	12	32	14	13	18	31	35	22	12	13	14	8	242
2.1 - 3.0	2	2	6	13	30	116	76	24	25	25	11	7	1	6	31	36	411
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	8	3	6	24	42	148	90	37	43	56	46	29	13	19	45	44	653

Total Number of Valid Hours: 653

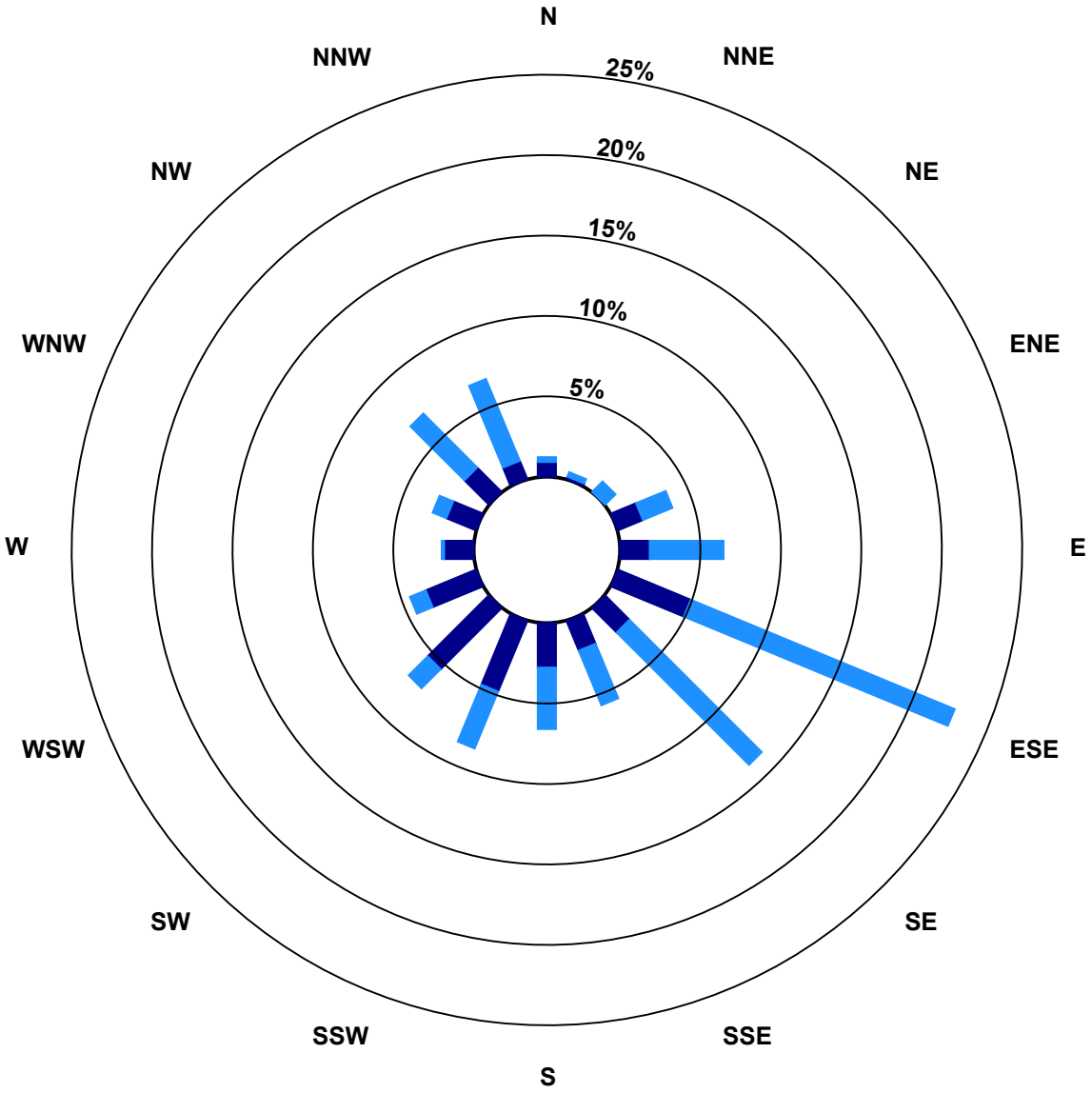
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Athabasca Valley



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

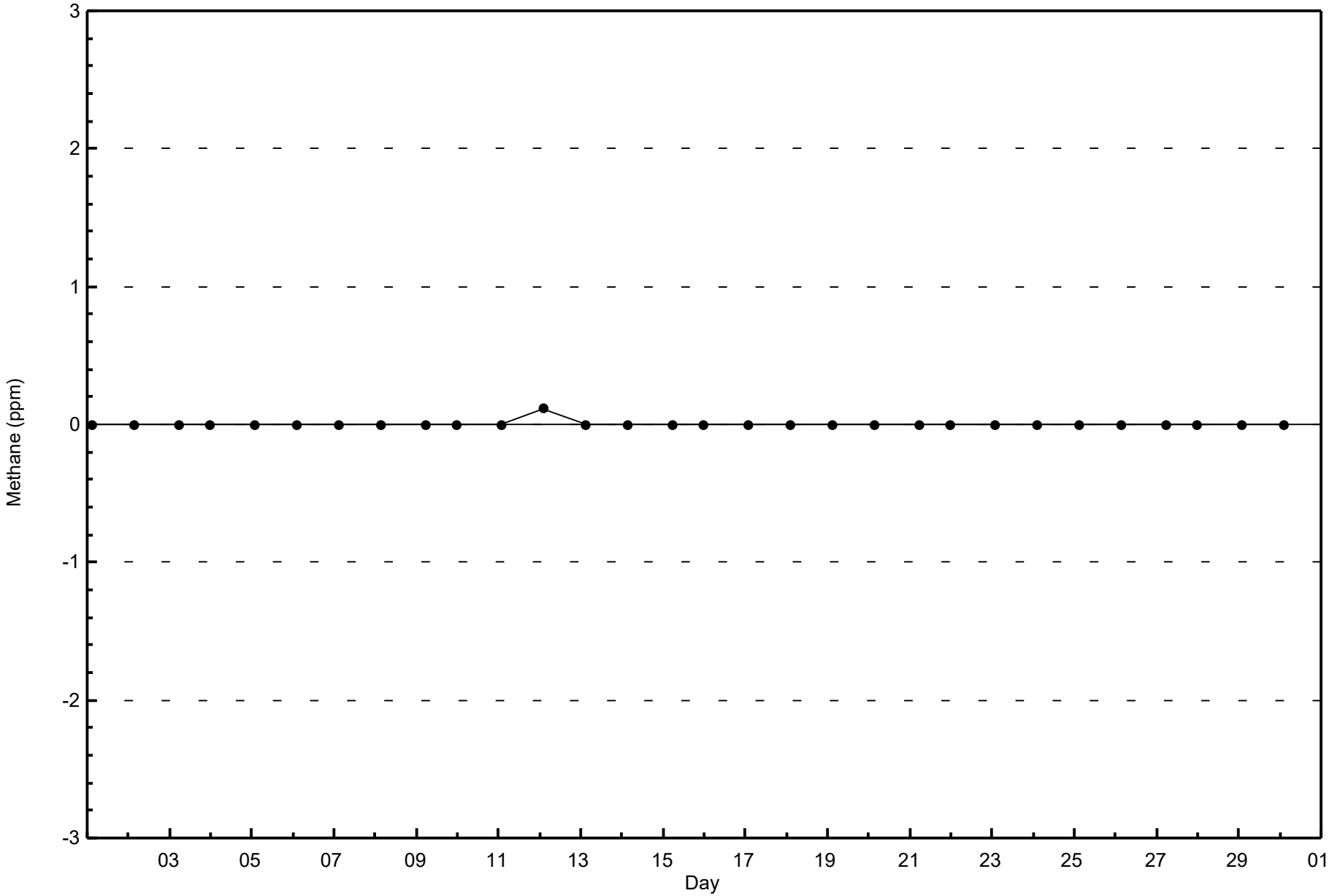
Total Number of Valid Hours: 653

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Athabasca Valley - September 2025

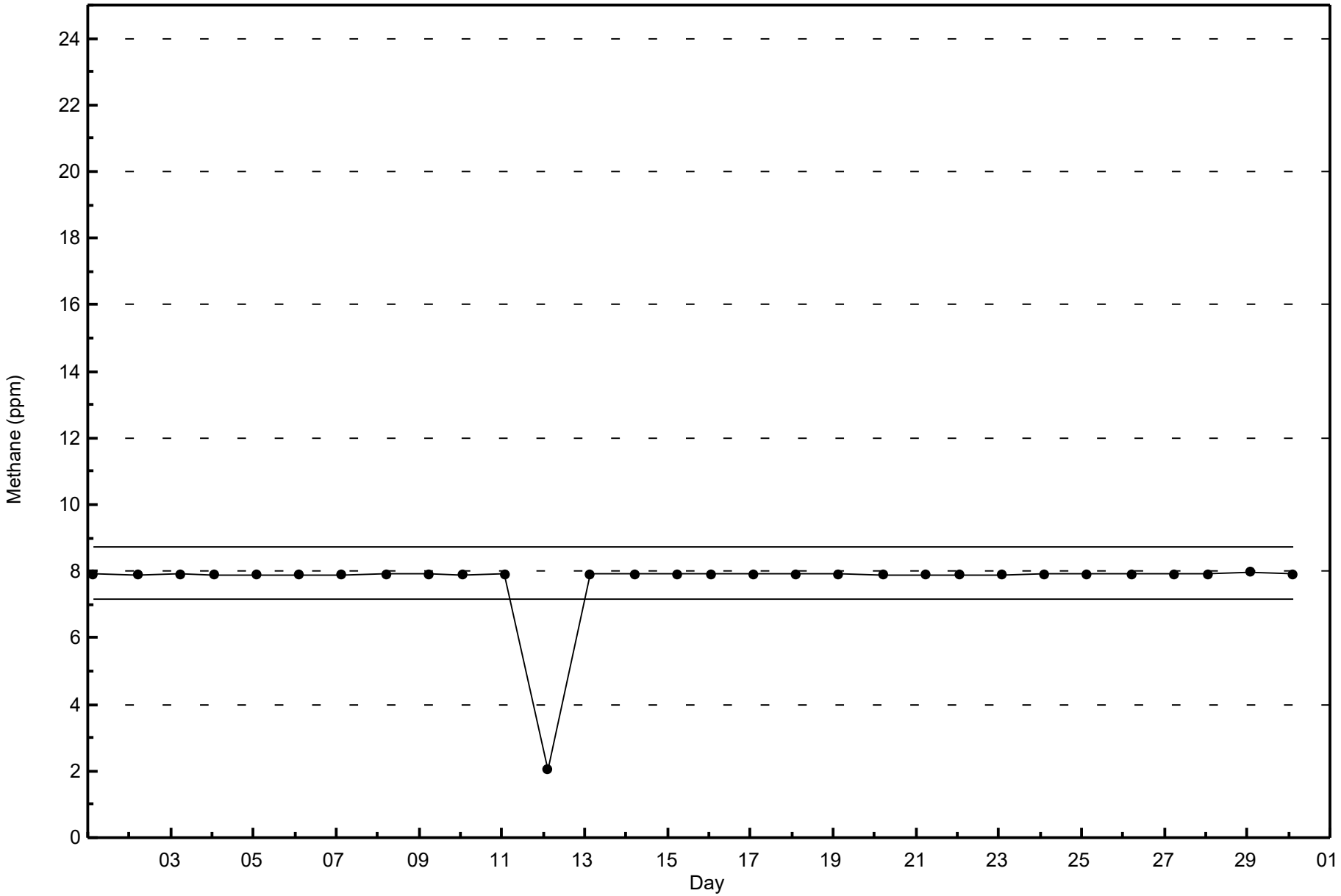


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 52.4 ppb on Sep 20 16:00

Maximum Daily Average: 29.7 ppb on Sep 29

Minimum Value: 2.5 ppb on Sep 2 06:00

Minimum Daily Average: 13.9 ppb on Sep 8

Maximum Diurnal Average: 36.7 ppb at hour 16

Minimum Diurnal Average: 11.3 ppb at hour 7

Monthly Average: 22.30 ppb

Percentiles: P_1 = 3.6 P_{10} = 7.8 Q_1 = 14.0 Median = 21.9 Q_3 = 30.0 P_{90} = 36.2 P_{99} = 48.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	7.2	3.9	4.6	3.3	3.5	Z	3.6	4.6	4.6	8.7	12.1	14.4	16.1	19.2	26.5	32.6	31.7	30.7	28.0	22.0	15.9	13.6	11.0	10.2	14.3	32.6
2-Sep	Z	4.8	4.4	4.2	3.0	2.5	3.2	4.4	5.4	7.2	13.2	18.6	28.9	31.5	31.2	32.3	32.1	29.8	26.6	23.6	22.4	21.2	19.9	19.4	17.0	32.3
3-Sep	19.4	Z	20.0	19.7	18.1	16.5	15.7	14.9	14.9	17.5	19.1	22.5	22.1	25.7	28.0	29.4	28.2	28.9	27.1	28.2	25.6	21.7	21.0	19.9	21.9	29.4
4-Sep	21.7	23.7	Z	24.2	22.9	21.4	22.6	21.6	24.9	27.1	27.6	28.6	28.9	29.2	29.3	29.3	29.4	28.2	24.0	21.7	13.7	10.3	9.1	5.3	22.8	29.4
5-Sep	4.1	3.9	3.6	Z	3.7	4.0	4.0	5.3	8.0	10.4	16.0	24.1	29.6	31.2	32.0	32.5	32.2	31.9	29.6	26.7	22.9	17.7	14.6	16.9	17.6	32.5
6-Sep	14.8	16.9	16.0	12.5	Z	7.8	7.8	10.2	14.4	18.3	23.4	30.7	38.1	42.7	44.8	47.3	49.8	42.2	27.8	19.3	14.5	11.3	10.7	10.2	23.1	49.8
7-Sep	13.9	12.9	14.1	14.1	11.3	Z	12.3	13.8	14.8	16.4	18.4	23.4	30.1	35.8	41.2	41.2	32.0	26.8	23.3	18.3	16.3	14.8	12.4	12.8	20.5	41.2
8-Sep	Z	8.2	8.1	9.8	8.3	4.7	6.7	7.3	8.6	11.0	12.4	14.0	18.5	23.9	28.8	32.5	33.3	28.9	18.5	9.7	8.3	7.3	5.4	6.1	13.9	33.3
9-Sep	6.7	Z	7.8	8.6	7.4	6.6	6.6	7.7	10.2	13.1	16.7	21.9	29.7	44.3	45.4	47.9	47.0	30.4	17.5	16.3	10.8	14.6	16.4	17.0	19.6	47.9
10-Sep	15.3	14.2	Z	8.6	6.9	4.2	4.9	8.0	11.5	15.8	18.2	24.4	32.2	34.8	36.0	35.3	34.5	28.6	20.0	15.2	12.8	8.9	5.6	5.6	17.5	36.0
11-Sep	5.1	4.8	5.0	Z	3.2	3.0	3.7	5.9	8.2	13.4	20.2	25.0	32.8	36.7	37.6	39.1	36.2	26.9	24.5	13.4	15.2	22.9	19.3	13.4	18.1	39.1
12-Sep	13.4	13.2	12.3	10.6	Z	6.0	5.4	8.8	14.1	18.4	23.3	29.9	42.2	45.5	47.8	47.0	46.4	39.4	21.8	15.2	12.7	17.1	14.2	15.8	22.6	47.8
13-Sep	19.1	19.7	16.2	9.0	6.7	Z	10.8	11.6	17.0	22.3	25.3	35.6	42.1	47.5	49.7	48.6	45.0	48.2	39.7	32.0	20.4	17.4	13.6	15.2	26.6	49.7
14-Sep	Z	11.4	12.5	12.0	8.0	4.1	6.5	6.8	9.1	15.5	22.4	25.4	28.4	36.1	37.0	42.7	45.8	44.0	41.4	31.1	34.5	31.3	26.3	23.2	24.1	45.8
15-Sep	17.6	Z	18.7	16.4	11.7	5.5	6.7	7.8	10.5	14.1	16.0	25.2	35.4	38.7	37.3	32.1	19.4	19.6	20.2	22.2	18.5	17.1	16.2	14.6	19.2	38.7
16-Sep	13.5	13.9	Z	16.9	15.9	14.4	13.3	13.2	14.0	15.3	19.1	22.4	25.7	27.1	27.7	27.1	27.4	18.5	13.6	13.3	18.2	21.5	19.7	17.6	18.7	27.7
17-Sep	15.4	14.3	12.4	Z	7.8	7.1	6.7	7.2	9.2	13.9	19.0	25.3	34.4	37.5	39.3	40.3	41.2	39.3	34.4	27.9	29.3	29.1	28.4	26.7	23.7	41.2
18-Sep	25.5	23.4	21.2	19.8	Z	16.6	16.8	16.4	18.7	27.8	33.7	35.6	36.7	38.4	39.5	39.8	40.1	38.5	37.2	23.4	21.2	23.5	21.4	17.0	27.5	40.1
19-Sep	21.1	21.4	17.6	11.1	7.8	Z	4.7	10.5	17.3	C	C	C	C	C	35.9	35.2	30.0	22.6	17.3	15.2	13.4	11.4	9.4	8.6	17.3	35.9
20-Sep	Z	8.9	9.9	10.7	9.7	9.4	6.3	11.7	17.0	19.1	22.3	27.3	48.0	50.6	52.3	52.4	50.6	31.5	36.2	26.4	30.1	28.9	25.3	23.9	26.5	52.4
21-Sep	24.3	Z	21.8	21.1	17.3	5.6	7.9	11.3	17.6	24.9	31.1	39.4	40.2	41.6	42.6	41.7	41.9	37.6	38.2	41.2	37.0	28.4	24.4	24.3	28.8	42.6
22-Sep	26.4	26.6	Z	24.0	19.0	16.1	6.3	13.7	20.2	22.5	24.0	25.8	27.7	31.0	32.5	34.0	34.0	27.3	19.1	24.7	19.6	14.0	14.2	12.4	22.4	34.0
23-Sep	13.5	18.4	19.2	Z	15.5	24.2	23.1	25.3	25.6	27.4	31.4	36.7	37.5	36.8	34.2	33.2	33.0	32.2	32.5	30.4	26.2	20.2	17.3	18.8	26.6	37.5
24-Sep	23.8	23.8	26.2	23.5	Z	21.3	25.3	19.8	25.4	27.7	28.1	29.6	31.3	32.7	33.8	34.1	34.2	33.4	33.9	31.9	24.8	21.9	15.8	12.8	26.7	34.2
25-Sep	11.8	11.1	15.6	14.0	12.0	Z	8.8	10.9	12.4	14.8	18.4	19.8	23.8	35.5	35.7	34.0	33.0	30.8	30.4	28.9	36.4	42.1	39.0	34.3	24.1	42.1
26-Sep	Z	28.4	24.9	15.9	8.3	9.0	4.5	6.3	7.5	20.3	27.1	28.2	29.3	31.2	32.5	33.4	33.7	33.1	31.9	20.2	21.8	27.8	29.7	29.2	23.2	33.7
27-Sep	29.1	Z	24.0	30.1	30.9	32.1	32.6	32.3	32.8	33.8	34.3	34.7	35.1	35.7	35.8	35.1	35.2	34.7	21.7	21.9	28.3	23.2	13.8	15.0	29.7	35.8
28-Sep	22.6	28.7	Z	27.0	25.0	22.9	16.1	19.7	22.8	23.4	24.4	25.7	28.3	29.4	31.2	30.5	26.8	15.8	18.6	16.5	20.7	23.6	26.1	26.5	24.0	31.2
29-Sep	25.5	25.4	25.0	Z	25.2	28.0	29.1	29.9	30.7	31.6	32.8	33.9	35.3	35.3	35.5	36.1	35.0	26.3	23.4	26.6	29.7	30.6	27.9	24.9	29.7	36.1
30-Sep	23.6	22.2	23.3	25.4	Z	20.2	15.2	8.5	13.2	15.3	20.1	19.6	24.2	27.7	27.1	25.5	23.1	24.2	21.7	19.9	19.6	18.5	15.5	14.1	20.3	27.7
	17.4	16.2	15.4	15.7	12.4	12.5	11.3	12.5	15.4	18.9	22.4	26.5	31.5	34.9	36.3	36.7	35.4	31.0	26.7	22.8	21.4	20.4	18.1	17.0	Diurnal Average	
	29.1	28.7	26.2	30.1	30.9	32.1	32.6	32.3	32.8	33.8	34.3	39.4	48.0	50.6	52.3	52.4	50.6	48.2	41.4	41.2	37.0	42.1	39.0	34.3	Diurnal Maximum	

Z - zerospan C - Calibration

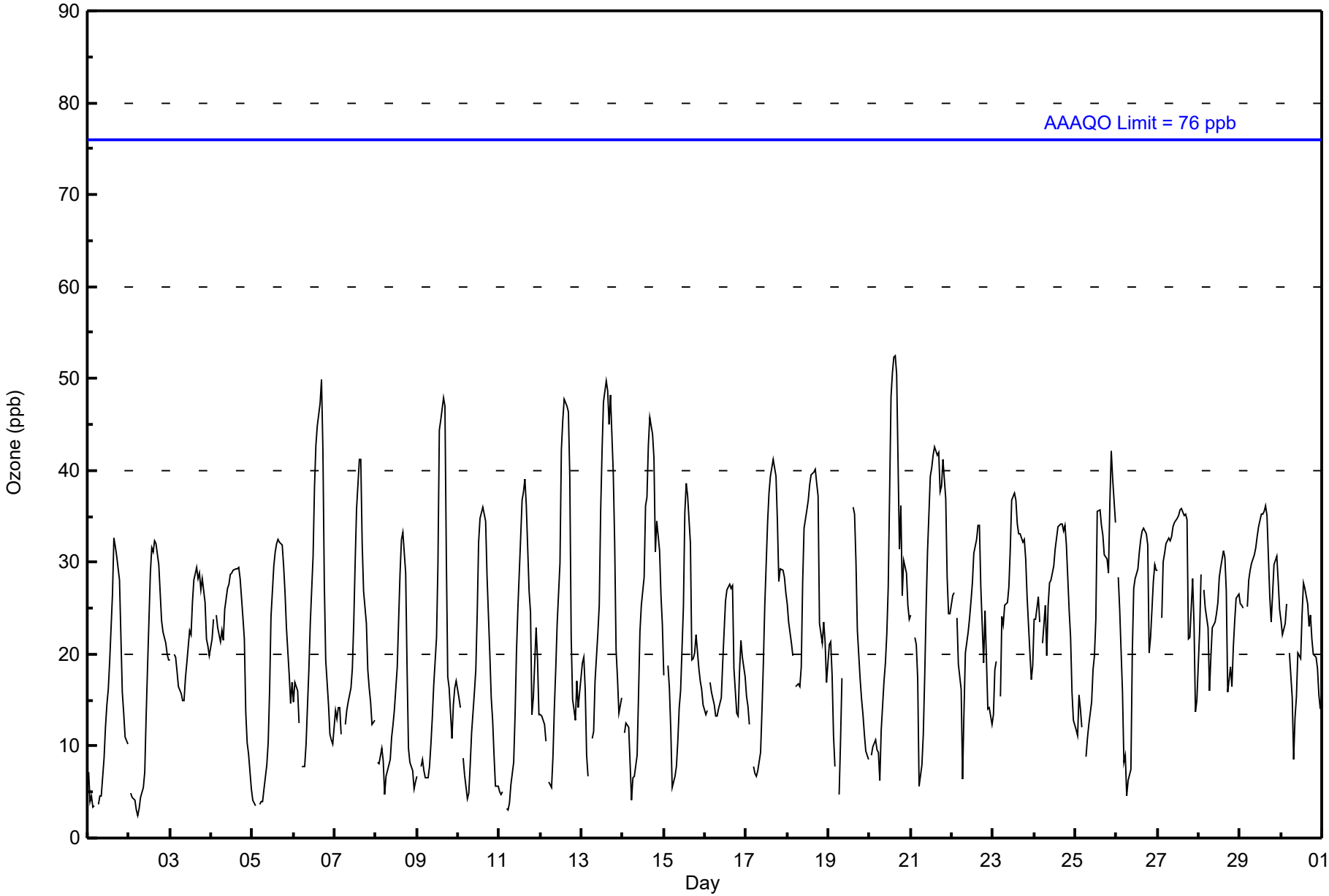
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Athabasca Valley - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	319	46.57	46.57
21 - 50	362	52.85	99.42
51 - 82	4	0.58	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Athabasca Valley - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	1	2	5	8	27	94	60	23	26	16	10	5	2	6	23	11	319
21 - 50	7	1	2	16	20	68	34	15	21	38	37	23	11	12	24	33	362
51 - 82	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	4
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	8	3	7	24	47	162	94	40	48	55	47	28	13	18	47	44	685

Total Number of Valid Hours: 685

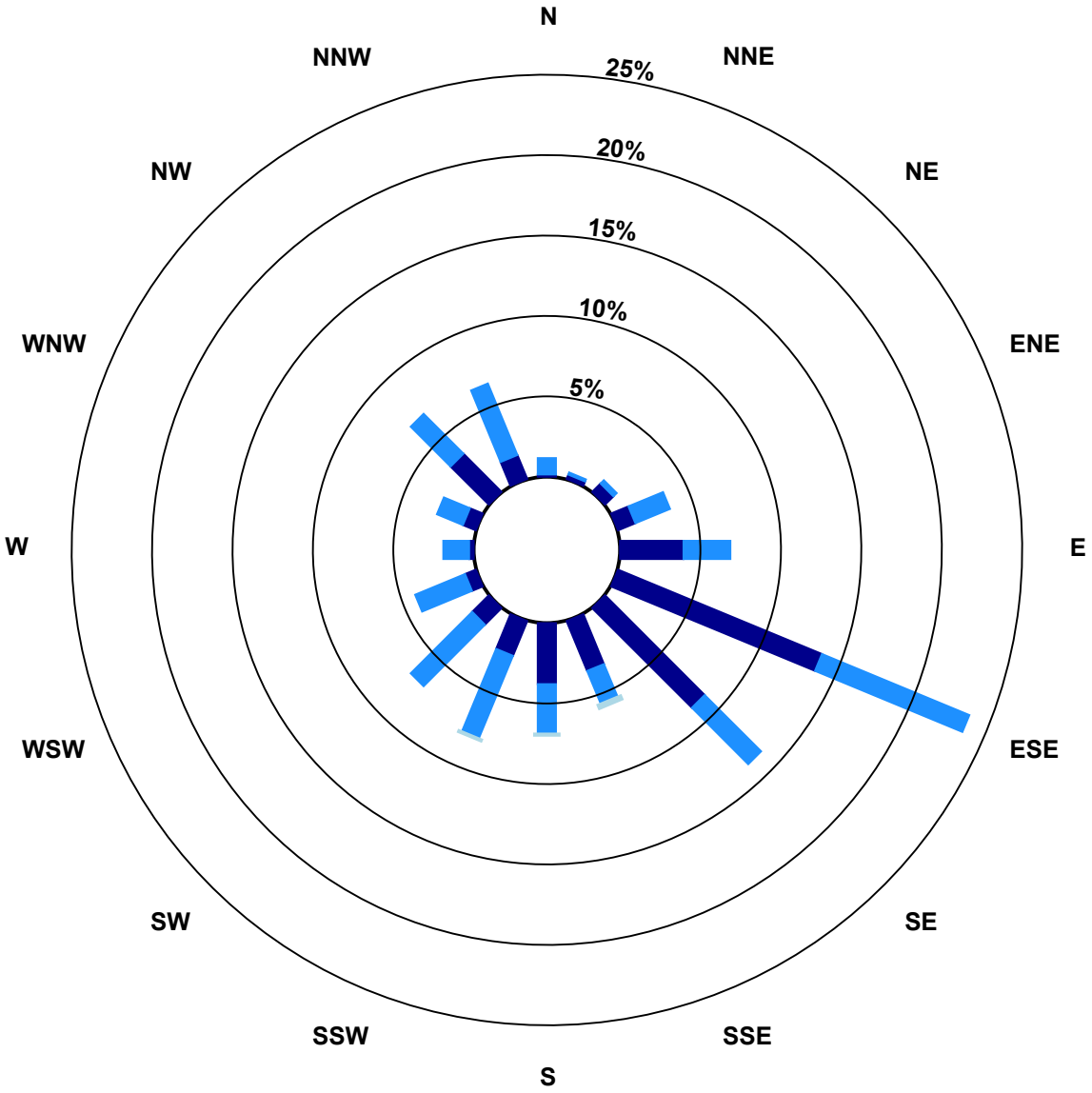
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

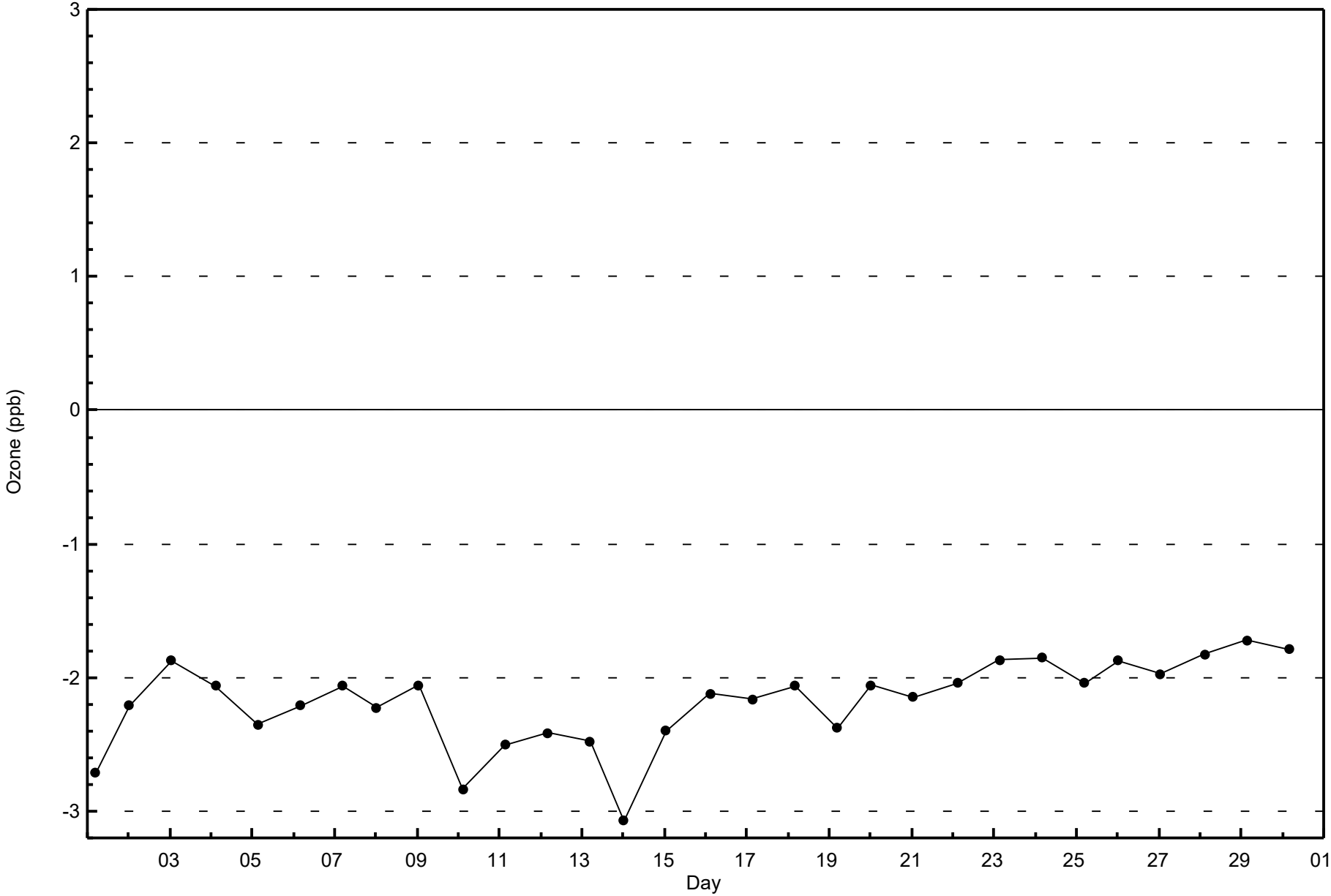
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Athabasca Valley - September 2025

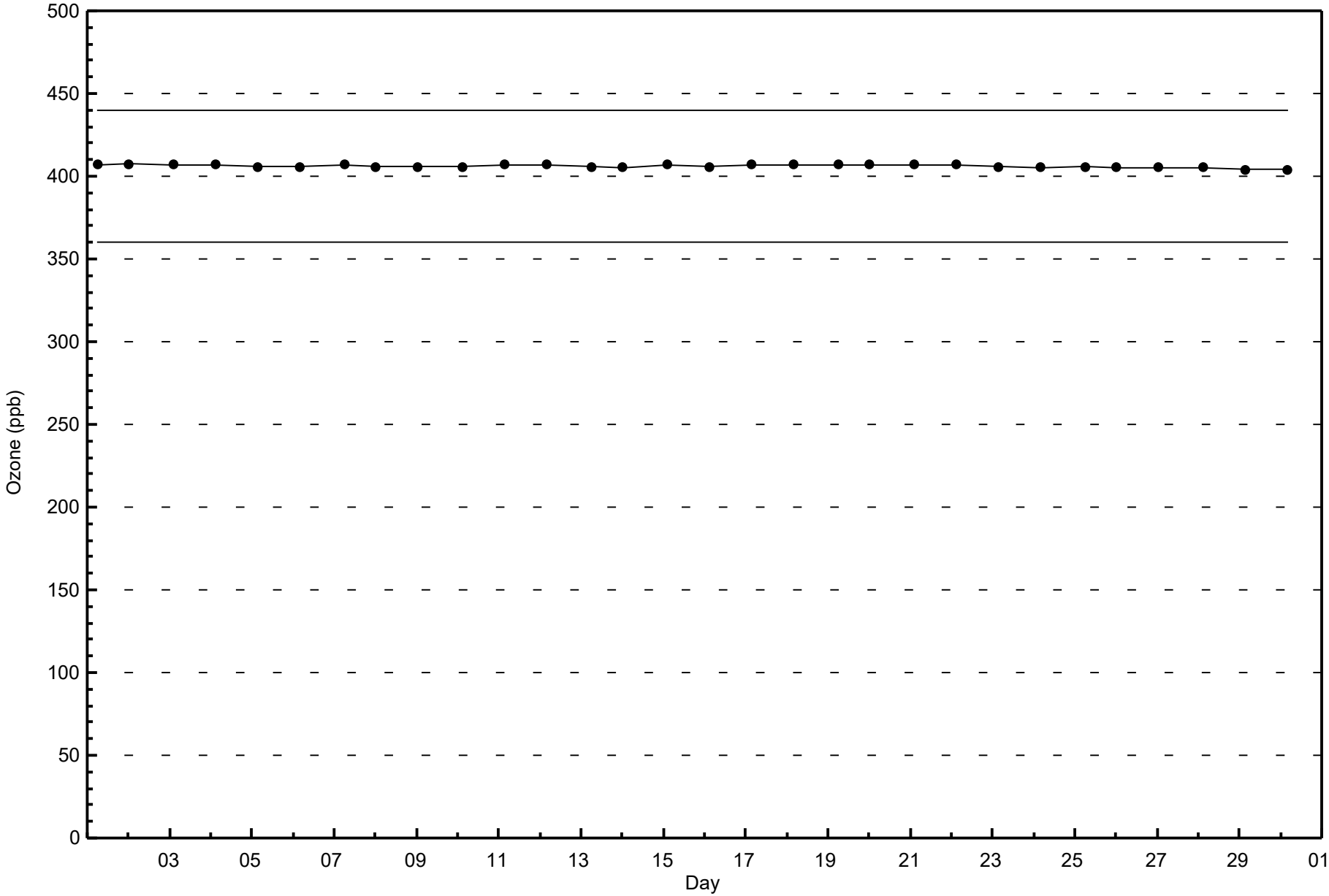


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - September 2025

Maximum Value: 30.6 ppb on Sep 19 06:00

Maximum Daily Average: 3.3 ppb on Sep 19

Minimum Value: 0.0 ppb on Sep 3 21:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 4.0 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 3

Monthly Average: 1.32 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.6 Q_3 = 1.6 P_{90} = 3.0 P_{99} = 10.0

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.3	1.2	0.8	3.4	2.2	1.8	2.8	1.5	1.4	1.8	5.0	6.6	3.5	1.4	0.2	0.1	0.3	0.4	0.1	0.1	0.2	0.4	1.5	6.6
2-Sep	0.4	0.2	Z	0.9	3.6	8.7	6.1	7.4	9.1	9.9	6.5	3.8	0.9	0.9	0.5	0.4	0.8	0.4	0.6	0.3	0.3	0.2	0.1	0.2	2.7	9.9
3-Sep	0.1	0.0	0.0	Z	0.4	0.5	0.7	1.5	2.0	1.7	2.5	2.1	2.6	1.1	0.5	0.1	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	2.6
4-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.8	1.0	0.9	0.9	0.9	1.0	0.8	0.7	1.1	0.9	0.7	0.8	0.1	0.5	1.2	0.5	0.5	0.6	1.2
5-Sep	1.3	1.8	2.2	4.5	3.8	Z	5.7	5.7	4.6	4.0	2.8	1.3	0.5	0.3	0.3	0.2	0.3	0.3	0.5	0.2	0.6	2.1	0.7	0.0	1.9	5.7
6-Sep	Z	0.1	0.1	0.2	1.0	1.2	1.8	1.9	1.7	1.6	1.5	1.3	0.6	0.4	0.3	0.5	0.3	0.9	0.5	0.7	1.0	0.2	1.1	1.2	0.9	1.9
7-Sep	1.1	Z	0.2	0.3	1.6	0.5	1.1	1.2	1.4	1.7	2.3	0.9	0.6	1.6	1.1	0.5	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.0	0.7	2.3
8-Sep	0.1	0.1	Z	0.0	0.2	1.3	1.3	2.9	3.8	2.6	2.9	3.4	3.7	2.3	1.6	1.4	1.1	1.1	1.0	1.8	1.3	0.5	0.7	0.6	1.6	3.8
9-Sep	0.1	0.0	0.1	Z	0.7	1.4	1.9	2.2	1.9	C	C	C	C	C	C	0.7	0.7	4.8	6.4	1.0	4.0	0.3	0.1	0.1	--	6.4
10-Sep	0.0	0.0	0.1	2.0	Z	7.2	7.7	4.8	3.3	1.5	2.0	1.9	0.8	0.4	0.3	0.2	0.2	0.8	1.0	0.5	0.9	1.0	0.7	0.4	1.6	7.7
11-Sep	0.5	0.6	0.5	1.9	7.1	Z	5.1	6.5	4.1	2.9	2.9	3.0	1.4	0.6	0.5	0.6	0.9	2.5	1.6	2.5	2.8	0.2	0.2	0.2	2.1	7.1
12-Sep	Z	0.2	0.0	0.6	3.6	5.2	7.1	4.6	2.3	2.6	1.9	1.9	0.9	0.8	0.4	0.5	0.4	2.6	6.3	2.3	2.1	0.5	0.7	0.7	2.1	7.1
13-Sep	0.2	Z	0.3	1.8	3.6	3.0	1.2	1.9	1.7	1.4	1.4	1.0	0.6	0.2	0.2	0.2	1.7	0.4	0.2	0.2	1.4	0.1	0.3	0.1	1.0	3.6
14-Sep	0.2	0.6	Z	0.3	2.2	4.5	4.5	4.2	2.9	1.3	1.4	0.8	0.8	0.3	0.3	0.3	0.4	0.3	0.6	1.3	0.7	0.3	0.0	0.1	1.2	4.5
15-Sep	0.0	0.1	0.3	Z	3.6	12.1	4.0	3.3	3.5	0.8	1.4	1.0	0.3	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	1.4	12.1
16-Sep	0.2	0.1	0.1	0.0	Z	0.0	0.3	2.5	1.7	1.9	0.6	0.6	0.8	0.5	0.5	0.8	0.5	3.4	2.7	2.0	0.5	0.2	0.3	0.2	0.9	3.4
17-Sep	0.1	0.2	0.5	0.9	1.8	Z	2.0	2.9	2.4	2.4	2.0	1.4	0.8	0.6	0.6	0.6	0.5	0.6	0.2	0.4	0.3	0.2	0.2	0.0	0.9	2.9
18-Sep	Z	0.0	0.0	0.1	0.3	0.6	0.9	1.9	2.3	1.5	0.7	0.7	0.8	0.6	0.6	0.7	1.1	0.7	0.4	2.2	1.0	0.2	0.3	0.7	0.8	2.3
19-Sep	0.1	Z	0.3	1.0	3.5	30.6	11.7	7.3	3.0	1.3	0.8	1.3	M	1.0	0.6	0.9	1.8	2.3	1.2	0.9	0.5	0.3	1.4	1.4	3.3	30.6
20-Sep	1.3	0.7	Z	0.6	2.5	2.4	7.9	2.8	1.7	1.4	1.7	1.9	0.6	0.6	0.6	0.6	0.6	2.2	0.7	0.7	0.6	0.5	0.2	0.3	1.4	7.9
21-Sep	0.1	0.1	0.0	Z	0.7	4.1	3.2	1.9	3.1	1.7	0.9	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.7	4.1
22-Sep	0.1	0.1	0.1	0.1	Z	2.0	10.2	3.8	2.6	1.6	1.2	1.1	1.4	1.0	1.0	0.7	0.8	1.7	4.7	0.8	1.9	2.6	1.3	0.3	1.8	10.2
23-Sep	0.5	0.4	0.2	2.2	0.9	Z	2.8	2.2	1.9	1.3	0.7	0.4	0.4	0.4	0.8	0.5	0.5	0.5	0.4	0.7	0.6	0.5	0.7	0.4	0.9	2.8
24-Sep	Z	2.4	0.2	0.5	0.8	3.1	1.3	2.6	1.0	0.7	0.7	0.3	0.3	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.3	0.4	0.3	1.2	0.8	3.1
25-Sep	1.1	Z	0.4	0.6	0.8	1.5	2.2	1.9	2.3	2.3	1.6	2.0	2.1	1.3	1.1	1.1	1.4	1.2	0.7	0.5	0.2	0.1	0.0	0.0	1.1	2.3
26-Sep	0.2	0.5	Z	0.9	10.3	2.8	6.3	17.4	13.9	3.0	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.1	0.2	3.6	1.5	0.2	0.1	0.0	2.8	17.4
27-Sep	0.0	0.4	0.0	Z	0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.4	0.4	0.1	0.7	0.4	0.2	0.2	0.4	1.0	0.3	1.0
28-Sep	0.0	0.0	0.0	0.4	Z	1.2	3.4	0.8	0.8	0.7	0.5	0.4	0.4	0.8	0.4	0.6	2.2	4.9	1.0	1.8	0.4	0.2	0.2	0.1	0.9	4.9
29-Sep	0.1	0.1	0.1	0.2	0.3	Z	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.7	1.1	0.8	0.6	1.3	1.0	0.4	0.2	0.1	0.1	0.2	0.5	1.3
30-Sep	Z	0.0	0.0	0.0	0.9	1.1	0.6	2.2	2.1	2.2	3.4	6.0	2.2	1.0	0.4	0.4	0.6	0.3	0.1	0.1	0.0	0.0	0.1	0.0	1.0	6.0
	0.3	0.3	0.2	0.8	2.2	4.0	3.5	3.4	2.9	2.0	1.7	1.5	1.1	0.9	0.7	0.6	0.7	1.2	1.1	0.9	0.8	0.4	0.4	0.4	Diurnal Average	
	1.3	2.4	2.2	4.5	10.3	30.6	11.7	17.4	13.9	9.9	6.5	6.0	5.0	6.6	3.5	1.4	2.2	4.9	6.4	3.6	4.0	2.6	1.4	1.4	Diurnal Maximum	

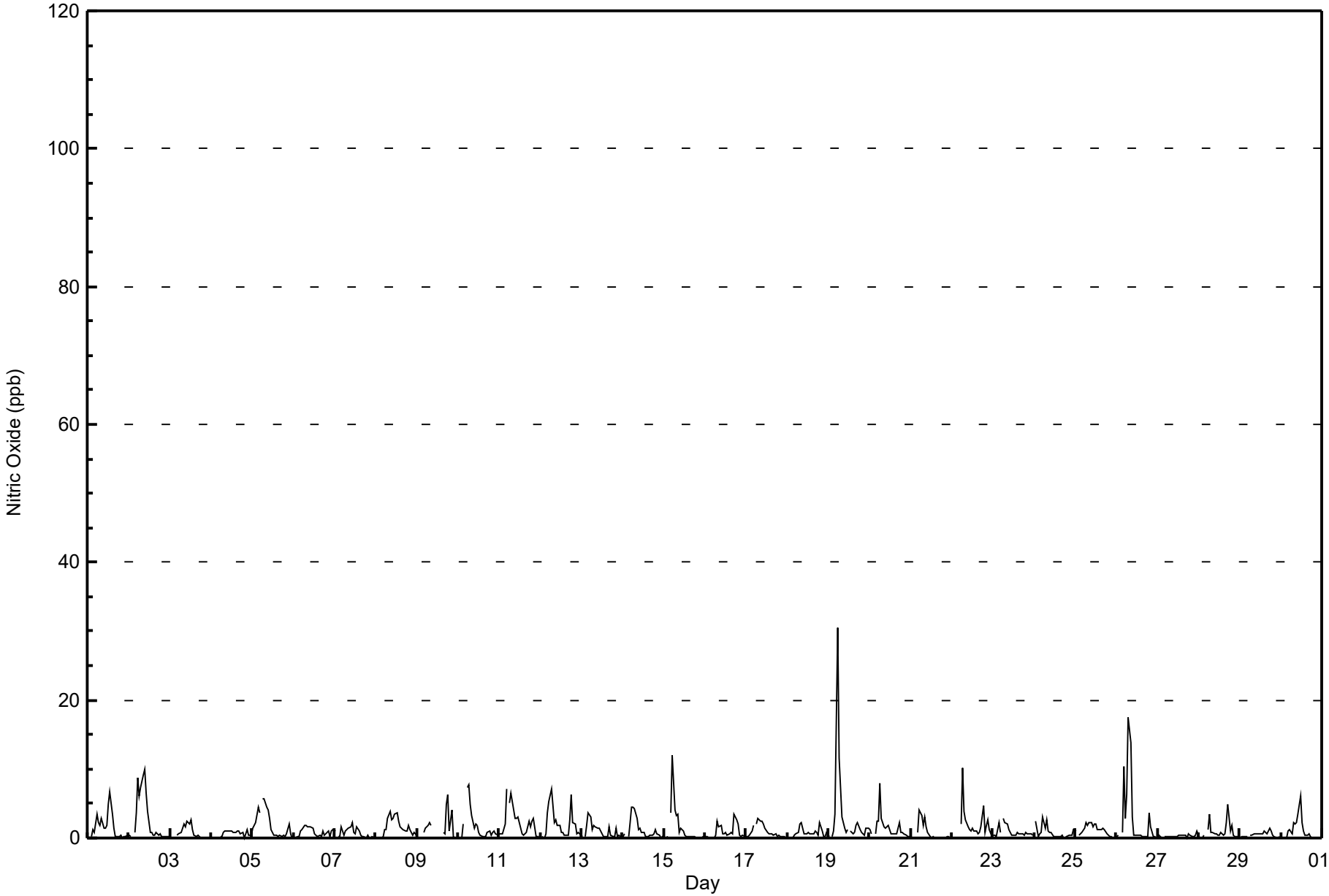
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	8	3	7	24	47	159	93	35	47	60	49	29	13	20	44	44	682
21 - 40	0	0	0	0	0	0	0	1	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	8	3	7	24	47	159	93	36	47	60	49	29	13	20	44	44	683

Total Number of Valid Hours: 683

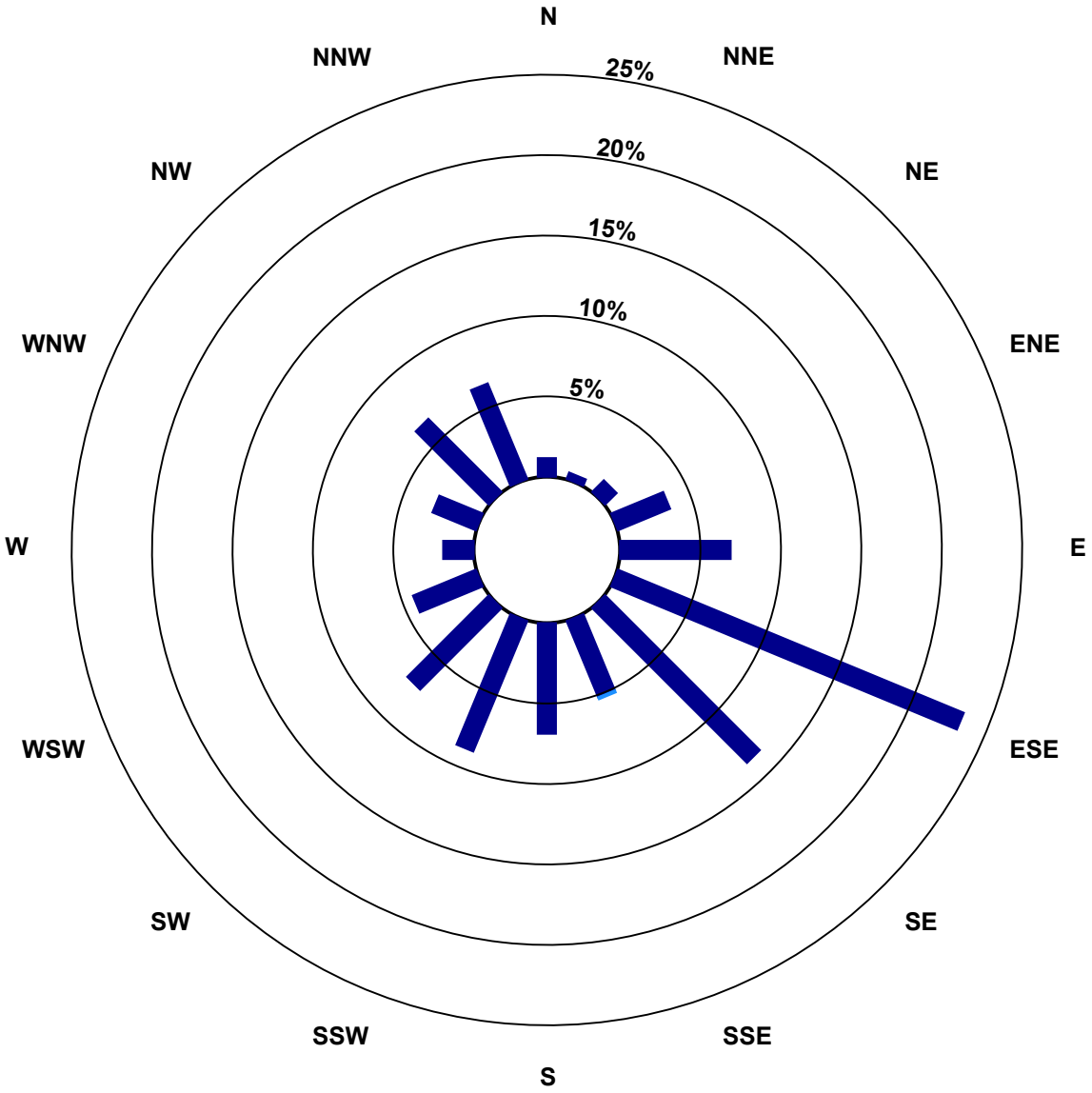
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

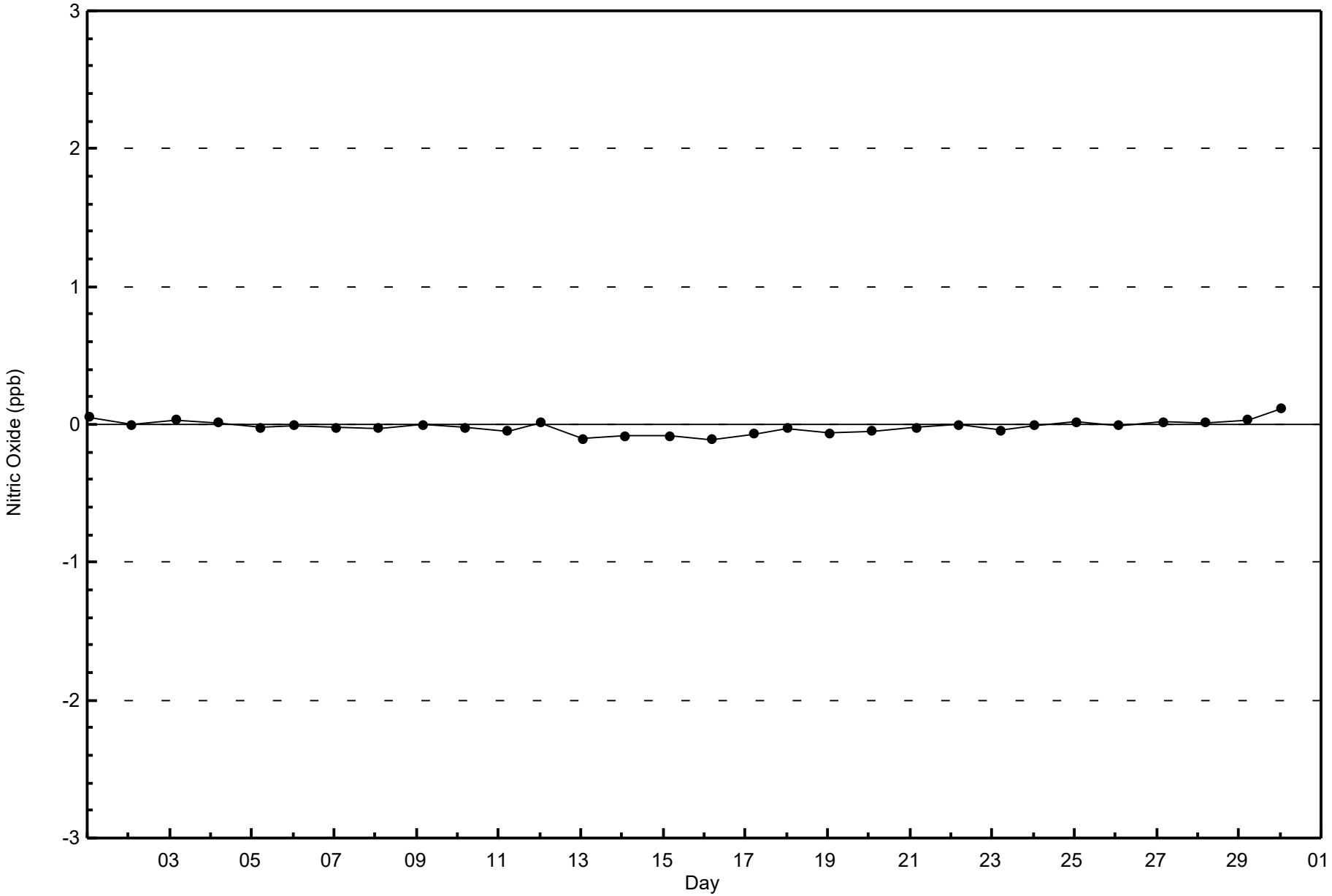
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - September 2025

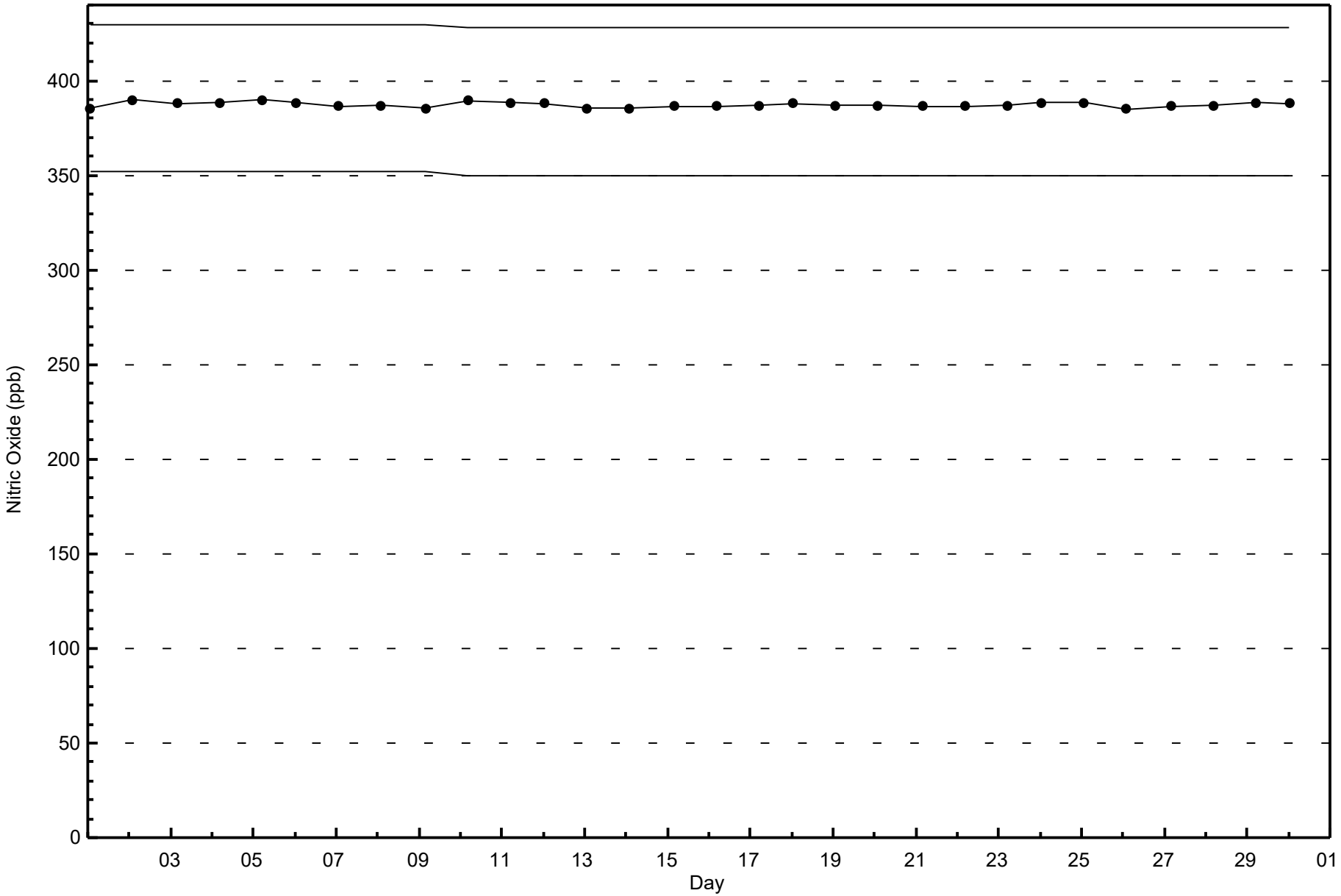


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 24.0 ppb on Sep 9 19:00

Maximum Daily Average: 7.0 ppb on Sep 30

Minimum Value: 0.4 ppb on Sep 22 02:00

Minimum Daily Average: 2.8 ppb on Sep 17

Maximum Diurnal Average: 8.2 ppb at hour 20

Minimum Diurnal Average: 2.6 ppb at hour 15

Monthly Average: 4.74 ppb

Percentiles: P_1 = 0.7 P_{10} = 1.4 Q_1 = 2.3 Median = 3.8 Q_3 = 6.1 P_{90} = 9.5 P_{99} = 17.1

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	3.6	Z	3.9	4.5	3.8	4.6	3.9	2.7	3.1	1.9	2.1	2.6	6.3	10.7	8.7	5.5	2.0	2.3	4.1	6.8	10.6	8.9	6.3	4.1	4.9	10.7
2-Sep	3.2	3.9	Z	4.6	6.3	7.2	4.8	4.5	5.5	7.1	8.0	6.7	2.7	1.6	1.5	1.5	2.3	2.6	3.7	4.3	3.7	3.6	3.2	2.9	4.1	8.0
3-Sep	2.6	2.5	2.4	Z	3.2	3.9	4.4	4.8	5.1	4.1	5.1	5.0	6.8	4.7	3.7	3.0	6.0	2.3	3.2	3.4	4.3	5.9	5.0	6.0	4.2	6.8
4-Sep	3.8	2.0	1.2	1.2	Z	4.0	2.7	3.1	2.6	2.1	2.3	2.4	2.6	2.1	2.3	2.7	3.0	3.6	5.2	4.6	7.2	3.9	2.4	5.7	3.2	7.2
5-Sep	6.6	5.9	4.4	4.8	4.3	Z	3.3	2.8	2.2	2.4	2.9	2.2	1.4	1.3	1.3	1.0	1.3	0.8	3.9	5.3	4.6	6.1	7.8	1.6	3.4	7.8
6-Sep	Z	1.9	2.6	2.5	3.3	3.7	3.3	2.3	2.8	3.2	3.5	4.0	2.1	2.1	2.0	3.4	2.8	5.5	8.3	6.5	3.7	6.7	11.3	12.2	4.3	12.2
7-Sep	9.7	Z	4.5	3.6	6.8	4.3	4.3	3.0	4.4	5.1	4.4	2.1	2.5	7.5	8.1	5.6	3.2	4.2	4.5	6.2	5.7	5.3	5.7	4.4	5.0	9.7
8-Sep	3.8	6.0	Z	4.2	6.2	10.3	9.0	8.4	7.6	6.0	6.0	6.2	5.0	4.2	4.3	4.9	5.9	8.7	14.5	13.6	8.3	6.1	7.1	5.1	7.0	14.5
9-Sep	2.5	1.3	1.0	Z	2.7	3.2	2.8	2.2	2.2	C	C	C	C	C	C	5.0	6.7	20.5	24.0	9.5	10.5	4.3	3.9	3.2	--	24.0
10-Sep	3.7	3.1	3.0	6.1	Z	9.4	9.1	8.5	5.1	1.8	3.9	4.2	2.9	1.2	1.2	1.0	0.9	4.5	5.6	6.6	4.7	5.7	6.5	6.8	4.6	9.4
11-Sep	6.1	6.0	4.6	5.3	5.3	Z	4.0	3.6	2.5	2.6	4.1	5.7	3.7	1.9	1.6	2.0	3.6	10.6	10.0	18.1	15.5	6.0	4.9	4.3	5.7	18.1
12-Sep	Z	3.8	2.9	3.2	5.6	6.3	6.8	5.5	3.8	4.0	4.3	4.9	2.8	2.9	2.3	2.8	3.6	10.1	23.0	13.1	10.6	6.9	8.7	8.3	6.4	23.0
13-Sep	6.0	Z	2.7	7.9	8.9	7.3	4.3	4.0	3.0	3.0	3.7	4.1	3.7	2.8	2.2	2.7	5.8	10.4	17.0	13.4	12.5	9.5	7.6	4.1	6.4	17.0
14-Sep	3.6	6.1	Z	3.2	5.0	8.7	7.0	5.5	4.3	4.0	5.8	3.7	3.4	2.3	1.9	2.0	2.4	2.1	3.5	14.5	9.2	5.5	3.8	5.5	4.9	14.5
15-Sep	3.6	1.0	3.3	Z	4.4	10.5	7.2	5.5	3.4	1.0	2.3	2.4	1.8	1.4	1.3	1.3	1.2	1.3	2.5	2.7	4.0	2.1	1.2	1.1	2.9	10.5
16-Sep	0.8	0.9	0.9	0.9	Z	2.9	3.5	3.5	2.9	2.9	1.9	1.6	1.8	1.5	1.4	1.7	1.4	10.2	12.4	9.6	4.4	3.5	3.7	3.4	3.4	12.4
17-Sep	3.3	3.0	3.5	3.4	3.8	Z	2.8	2.5	2.1	2.6	3.0	3.1	2.4	2.5	2.3	2.4	3.0	3.2	3.6	4.6	2.9	2.3	1.6	1.5	2.8	4.6
18-Sep	Z	1.6	1.6	1.6	3.1	4.5	4.9	5.0	3.9	3.4	2.0	2.0	2.2	2.0	2.2	2.7	5.8	8.3	8.0	17.3	11.8	3.2	2.4	9.1	4.7	17.3
19-Sep	4.6	Z	4.8	9.9	11.5	17.1	14.0	9.9	4.5	2.2	1.8	2.3	M	1.9	1.5	2.7	8.0	12.5	8.6	6.5	5.8	4.1	6.2	5.9	6.7	17.1
20-Sep	10.7	7.0	Z	3.7	5.9	5.6	7.8	3.9	3.1	2.8	3.2	4.0	3.0	2.9	2.9	4.0	6.2	20.3	11.3	17.1	11.8	6.7	5.1	7.5	6.8	20.3
21-Sep	2.7	2.4	3.1	Z	5.4	12.5	10.0	4.8	6.0	3.9	2.8	1.3	0.7	0.9	0.9	1.0	1.2	2.0	1.1	0.8	1.4	3.3	1.2	0.5	3.0	12.5
22-Sep	0.6	0.4	0.6	1.2	Z	5.6	12.5	6.0	2.5	1.9	1.4	1.6	1.9	1.6	1.5	1.4	2.2	8.6	15.7	8.1	11.2	14.0	11.5	8.8	5.3	15.7
23-Sep	10.3	6.8	4.5	8.5	7.2	Z	9.3	6.1	4.6	2.6	1.8	1.4	1.2	1.6	2.3	2.2	2.2	2.3	2.5	4.7	7.2	10.7	10.1	8.5	5.2	10.7
24-Sep	Z	6.0	4.6	6.8	10.4	9.6	6.9	11.6	5.2	2.3	2.0	1.8	1.5	1.2	0.9	1.0	1.9	2.2	4.2	5.7	7.1	5.3	9.3	11.7	5.2	11.7
25-Sep	9.9	Z	4.8	3.6	3.9	4.7	6.2	3.3	3.5	3.4	2.7	3.4	3.7	3.3	4.2	4.6	6.1	7.4	7.6	7.2	2.8	1.1	0.9	1.1	4.3	9.9
26-Sep	2.6	2.3	Z	8.0	13.5	8.4	10.9	10.8	10.3	4.2	1.3	1.4	1.1	1.0	1.0	1.0	1.4	2.6	3.0	11.4	8.3	4.8	3.3	2.5	5.0	13.5
27-Sep	1.9	5.8	3.7	Z	1.6	1.6	1.3	1.2	1.1	0.9	0.7	0.7	0.8	0.8	1.6	1.4	2.0	2.9	9.8	4.8	2.7	3.9	8.1	7.7	2.9	9.8
28-Sep	3.5	0.9	0.6	1.7	Z	3.0	7.3	3.8	2.0	1.7	1.4	1.4	1.3	1.9	1.2	2.0	5.6	13.5	5.4	6.6	4.0	3.2	2.1	1.7	3.3	13.5
29-Sep	2.3	2.2	2.1	1.9	3.1	Z	2.2	2.0	2.0	1.5	1.6	1.9	1.9	2.6	3.2	3.3	4.3	12.2	12.7	6.2	4.2	3.6	4.5	4.5	3.7	12.7
30-Sep	Z	2.3	2.2	2.6	5.0	5.8	5.6	14.1	7.6	5.3	8.0	14.1	10.8	8.6	4.8	5.1	6.9	6.7	7.7	8.0	7.7	7.5	7.9	7.7	7.0	14.1
	4.5	3.4	2.9	4.2	5.6	6.6	6.1	5.2	4.0	3.1	3.2	3.4	2.9	2.8	2.6	2.7	3.6	6.8	8.2	8.2	6.9	5.5	5.4	5.2	Diurnal Average	
	10.7	7.0	4.8	9.9	13.5	17.1	14.0	14.1	10.3	7.1	8.0	14.1	10.8	10.7	8.7	5.6	8.0	20.5	24.0	18.1	15.5	14.0	11.5	12.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

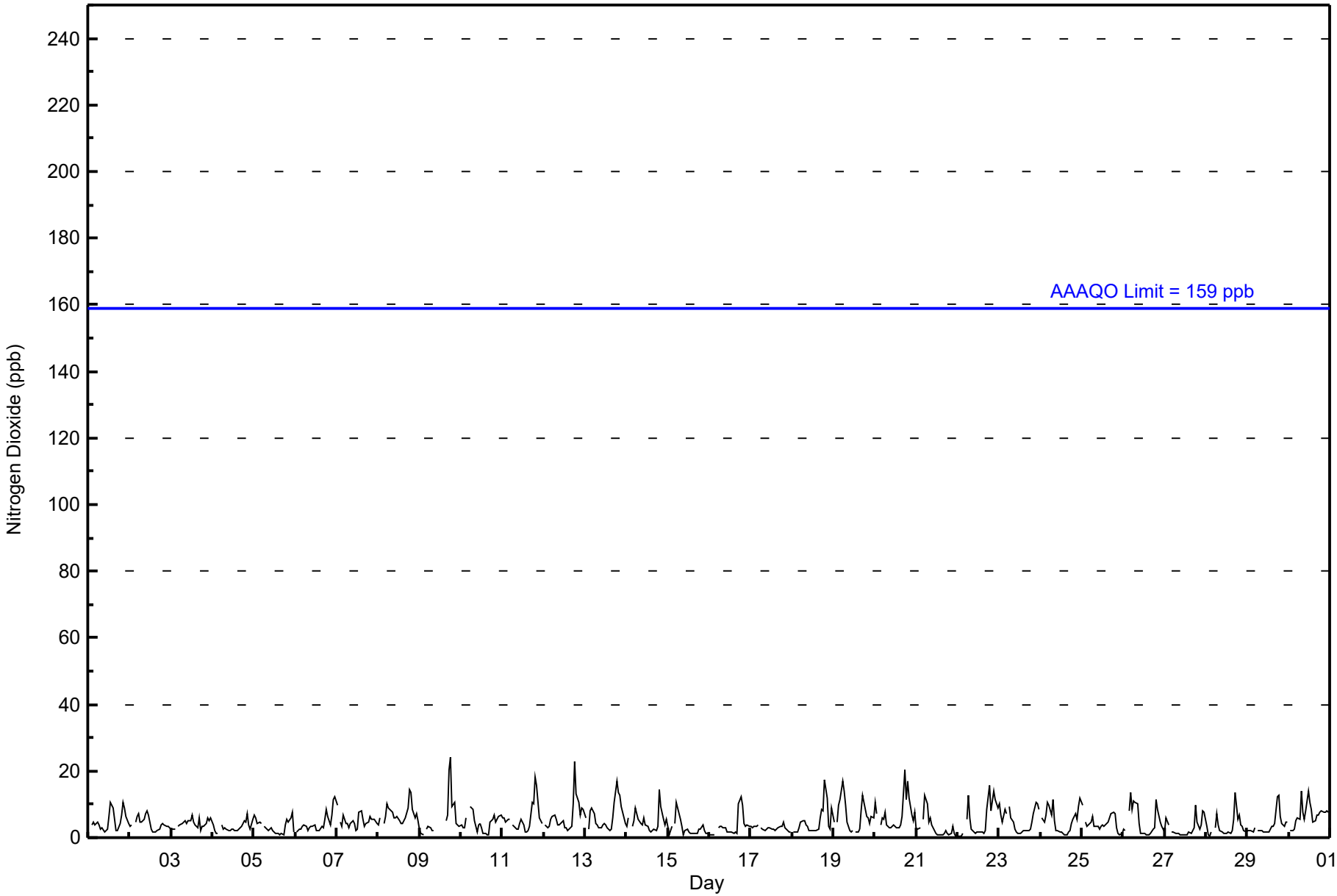
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - September 2025



Nitrogen Dioxide (NO_2) - ppb
Athabasca Valley - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	99.56	99.56
21 - 40	3	0.44	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	8	3	7	24	47	159	93	34	46	60	49	29	13	20	44	44	680
21 - 40	0	0	0	0	0	0	0	2	1	0	0	0	0	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	8	3	7	24	47	159	93	36	47	60	49	29	13	20	44	44	683

Total Number of Valid Hours: 683

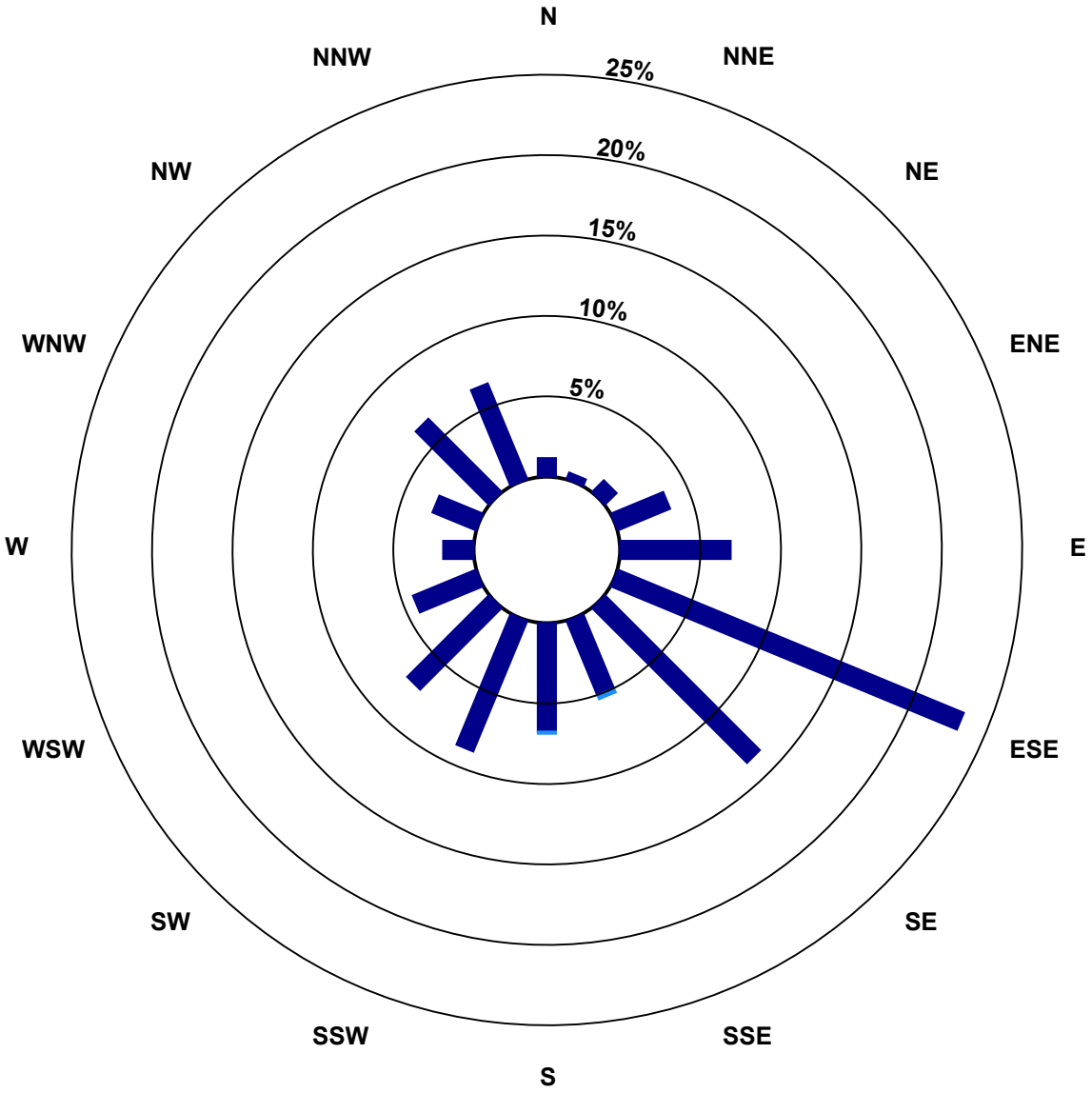
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

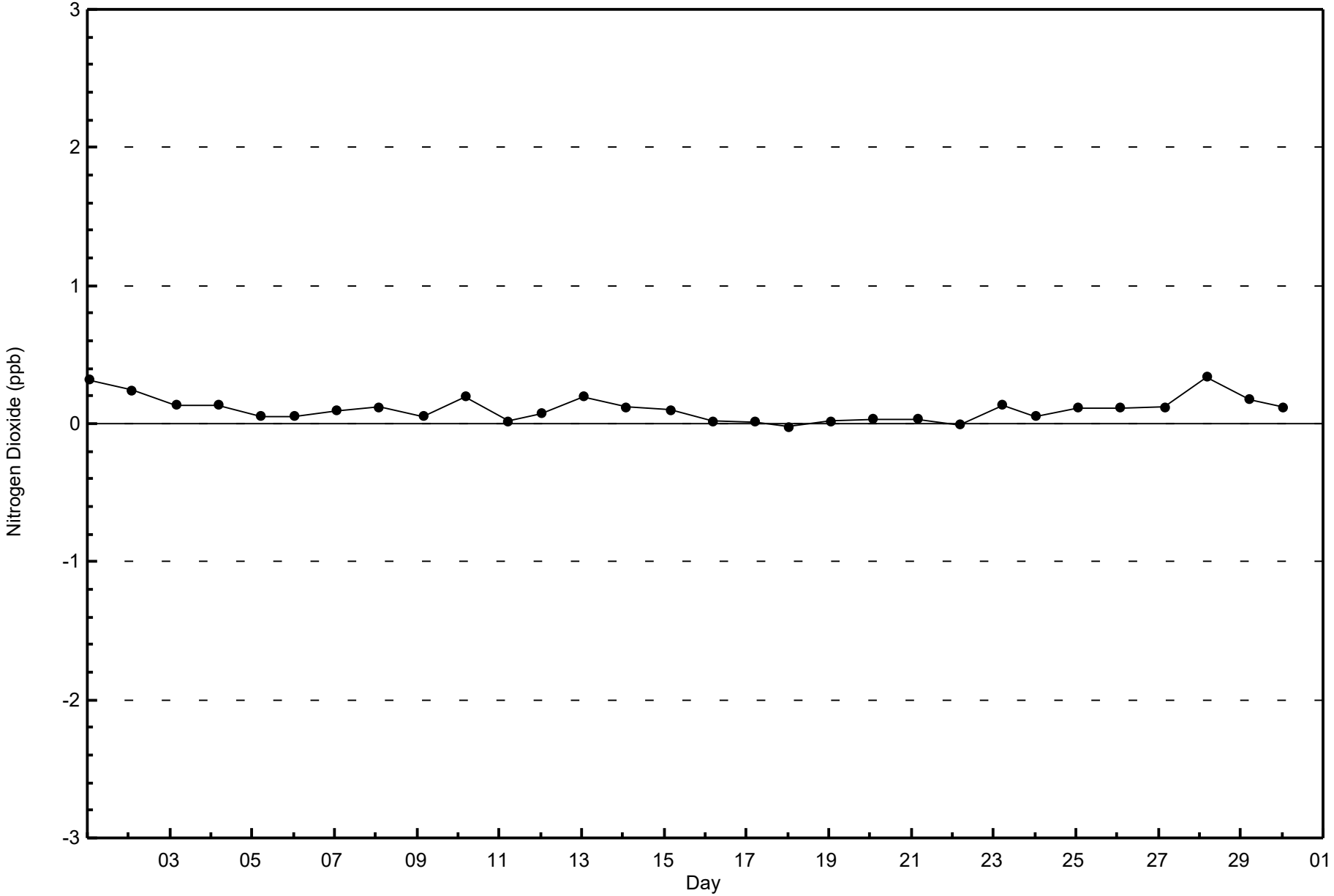
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - September 2025

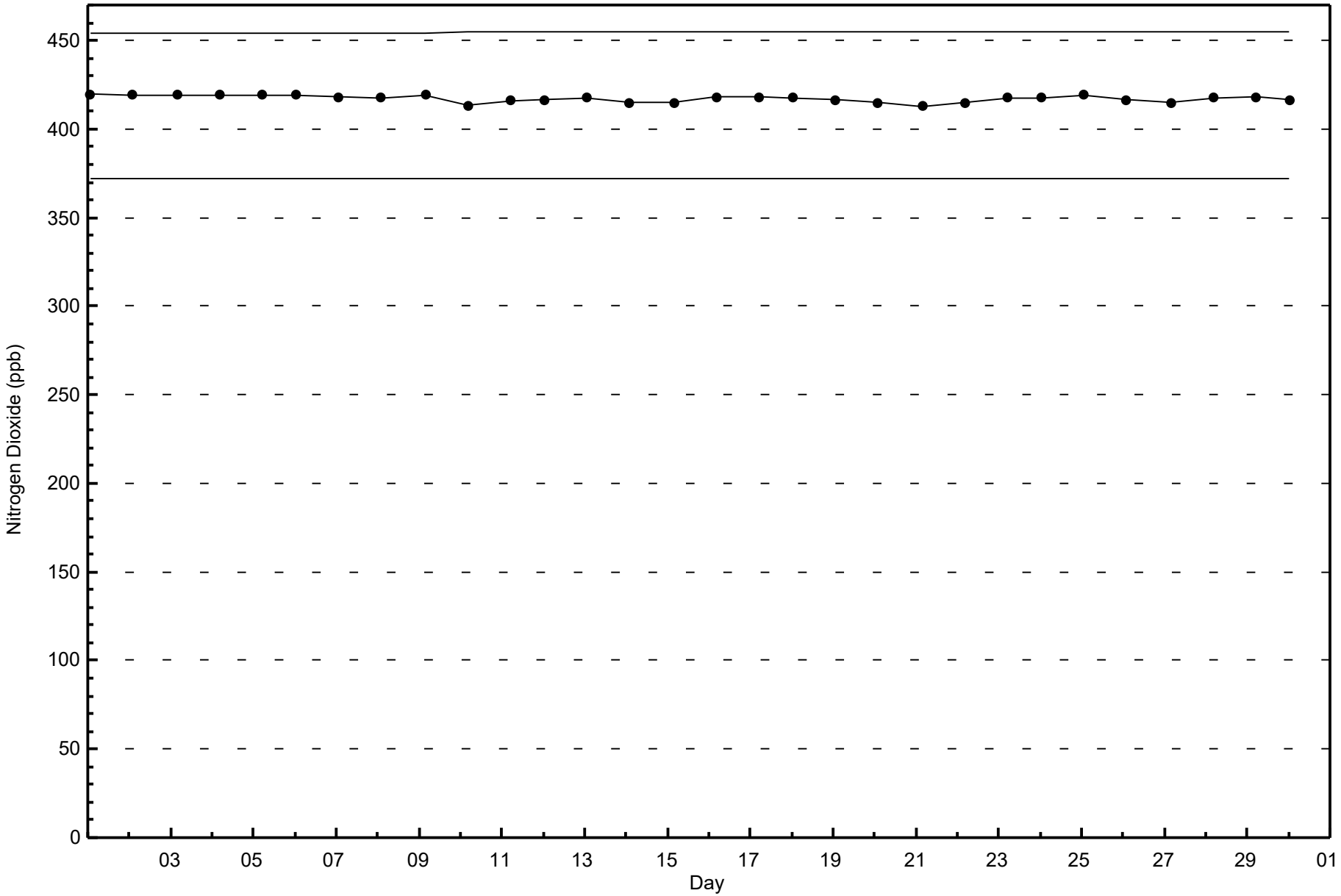


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - September 2025

Maximum Value: 47.7 ppb on Sep 19 06:00

Maximum Daily Average: 10.0 ppb on Sep 19

Minimum Value: 0.5 ppb on Sep 22 02:00

Minimum Daily Average: 3.2 ppb on Sep 27

Maximum Diurnal Average: 10.5 ppb at hour 6

Minimum Diurnal Average: 3.2 ppb at hour 3

Monthly Average: 6.06 ppb

Percentiles: P_1 = 0.8 P_{10} = 1.7 Q_1 = 2.8 Median = 4.7 Q_3 = 7.7 P_{90} = 12.0 P_{99} = 23.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	3.8	Z	4.2	5.7	4.6	8.0	6.1	4.5	5.9	3.4	3.5	4.4	11.3	17.3	12.2	6.9	2.2	2.4	4.4	7.2	10.7	9.0	6.5	4.5	6.5	17.3
2-Sep	3.6	4.1	Z	5.5	9.9	15.9	10.9	11.9	14.6	17.0	14.5	10.5	3.6	2.5	2.0	1.9	3.1	3.0	4.3	4.6	4.0	3.8	3.3	3.1	6.9	17.0
3-Sep	2.7	2.5	2.4	Z	3.6	4.4	5.1	6.3	7.1	5.8	7.6	7.1	9.4	5.8	4.2	3.1	6.5	2.4	3.3	3.4	4.3	5.9	5.0	6.0	5.0	9.4
4-Sep	3.8	2.0	1.2	1.2	Z	4.1	2.9	3.9	3.6	3.0	3.2	3.3	3.6	2.9	3.0	3.8	3.9	4.3	6.0	4.7	7.7	5.1	2.9	6.2	3.8	7.7
5-Sep	7.9	7.7	6.6	9.3	8.1	Z	9.0	8.5	6.8	6.4	5.7	3.5	1.9	1.6	1.6	1.2	1.6	1.1	4.4	5.5	5.2	8.2	8.5	1.6	5.3	9.3
6-Sep	Z	2.0	2.7	2.7	4.3	4.9	5.1	4.2	4.5	4.8	5.0	5.3	2.7	2.5	2.3	3.9	3.1	6.4	8.8	7.2	4.7	6.9	12.4	13.4	5.2	13.4
7-Sep	10.8	Z	4.7	3.9	8.4	4.8	5.4	4.2	5.8	6.8	6.7	3.0	3.1	9.1	9.2	6.1	3.5	4.4	4.6	6.5	5.8	5.4	5.8	4.4	5.8	10.8
8-Sep	3.9	6.1	Z	4.2	6.4	11.6	10.3	11.3	11.4	8.6	8.9	9.6	8.7	6.5	5.9	6.3	7.0	9.8	15.5	15.4	9.6	6.6	7.8	5.7	8.6	15.5
9-Sep	2.6	1.3	1.1	Z	3.4	4.6	4.7	4.4	4.1	C	C	C	C	C	C	5.7	7.4	25.3	30.4	10.5	14.5	4.6	4.0	3.3	--	30.4
10-Sep	3.7	3.1	3.1	8.1	Z	16.6	16.8	13.3	8.4	3.3	5.9	6.1	3.7	1.6	1.5	1.2	1.1	5.3	6.6	7.1	5.6	6.7	7.2	7.2	6.2	16.8
11-Sep	6.6	6.6	5.1	7.2	12.4	Z	9.1	10.1	6.6	5.5	7.0	8.7	5.1	2.5	2.1	2.6	4.5	13.1	11.6	20.6	18.3	6.2	5.1	4.5	7.9	20.6
12-Sep	Z	4.0	2.9	3.8	9.2	11.5	13.9	10.1	6.1	6.6	6.2	6.8	3.7	3.7	2.7	3.3	4.0	12.7	29.3	15.4	12.7	7.4	9.4	9.0	8.5	29.3
13-Sep	6.2	Z	3.0	9.7	12.5	10.3	5.5	5.9	4.7	4.4	5.1	5.1	4.3	3.0	2.4	2.9	7.5	10.8	17.2	13.6	13.9	9.6	7.9	4.2	7.4	17.2
14-Sep	3.8	6.7	Z	3.5	7.2	13.2	11.5	9.7	7.2	5.3	7.2	4.5	4.2	2.6	2.2	2.3	2.8	2.4	4.1	15.8	9.9	5.8	3.8	5.6	6.1	15.8
15-Sep	3.6	1.1	3.6	Z	8.0	22.6	11.2	8.8	6.9	1.8	3.7	3.4	2.1	1.6	1.4	1.4	1.5	1.5	2.6	2.8	4.1	2.2	1.2	1.2	4.3	22.6
16-Sep	1.0	1.0	1.0	0.9	Z	2.9	3.8	6.0	4.6	4.8	2.5	2.2	2.6	2.0	1.9	2.5	1.9	13.6	15.1	11.6	4.9	3.7	4.0	3.6	4.3	15.1
17-Sep	3.4	3.2	4.0	4.3	5.6	Z	4.8	5.4	4.5	5.0	5.0	4.5	3.2	3.1	2.9	3.0	3.5	3.8	3.8	5.0	3.2	2.5	1.8	1.5	3.8	5.6
18-Sep	Z	1.6	1.6	1.7	3.4	5.1	5.8	6.9	6.2	4.9	2.7	2.7	3.0	2.6	2.8	3.4	6.9	9.0	8.4	19.5	12.8	3.4	2.7	9.8	5.5	19.5
19-Sep	4.7	Z	5.1	10.9	15.0	47.7	25.7	17.2	7.5	3.5	2.6	3.6	M	2.9	2.1	3.6	9.8	14.8	9.8	7.4	6.3	4.4	7.6	7.3	10.0	47.7
20-Sep	12.0	7.7	Z	4.3	8.4	8.0	15.7	6.7	4.8	4.2	4.9	5.9	3.6	3.5	3.5	4.6	6.8	22.5	12.0	17.8	12.4	7.2	5.3	7.8	8.2	22.5
21-Sep	2.8	2.5	3.1	Z	6.1	16.6	13.2	6.7	9.1	5.6	3.7	1.4	0.8	1.1	1.0	1.0	1.2	2.0	1.1	0.8	1.4	3.5	1.3	0.6	3.8	16.6
22-Sep	0.7	0.5	0.7	1.3	Z	7.6	22.7	9.8	5.1	3.5	2.6	2.7	3.3	2.6	2.5	2.1	3.0	10.3	20.4	8.9	13.1	16.6	12.8	9.1	7.0	22.7
23-Sep	10.8	7.2	4.7	10.7	8.1	Z	12.1	8.3	6.5	3.9	2.5	1.8	1.6	2.0	3.1	2.7	2.7	2.8	2.9	5.4	7.8	11.2	10.8	8.9	6.0	12.1
24-Sep	Z	8.4	4.8	7.3	11.2	12.7	8.2	14.2	6.2	3.0	2.7	2.1	1.8	1.4	1.1	1.2	2.3	2.3	4.3	5.8	7.4	5.7	9.6	12.9	5.9	14.2
25-Sep	11.0	Z	5.2	4.2	4.7	6.2	8.4	5.2	5.8	5.7	4.3	5.4	5.8	4.6	5.3	5.7	7.5	8.6	8.3	7.7	3.0	1.2	0.9	1.1	5.5	11.0
26-Sep	2.8	2.8	Z	8.9	23.8	11.2	17.2	28.2	24.2	7.2	1.8	1.8	1.6	1.3	1.3	1.2	1.7	2.7	3.2	15.0	9.8	5.0	3.4	2.5	7.8	28.2
27-Sep	1.9	6.2	3.7	Z	1.8	1.8	1.4	1.5	1.4	1.2	1.0	0.9	1.1	1.2	2.1	1.8	2.4	3.0	10.5	5.2	2.9	4.1	8.5	8.7	3.2	10.5
28-Sep	3.5	0.9	0.6	2.1	Z	4.2	10.7	4.6	2.8	2.4	1.9	1.8	1.7	2.7	1.6	2.6	7.8	18.4	6.4	8.4	4.4	3.4	2.3	1.8	4.2	18.4
29-Sep	2.4	2.3	2.2	2.1	3.4	Z	2.5	2.5	2.6	2.1	2.2	2.5	2.5	3.3	4.3	4.1	4.9	13.5	13.7	6.6	4.4	3.7	4.6	4.7	4.2	13.7
30-Sep	Z	2.3	2.2	2.6	5.9	6.9	6.2	16.3	9.7	7.5	11.4	20.1	13.0	9.6	5.2	5.5	7.5	7.0	7.8	8.1	7.7	7.5	8.0	7.7	8.1	20.1
	4.8	3.8	3.2	5.0	7.8	10.5	9.5	8.6	6.8	5.1	4.9	4.9	4.0	3.7	3.2	3.3	4.3	8.0	9.4	9.1	7.8	5.9	5.8	5.6	Diurnal Average	
	12.0	8.4	6.6	10.9	23.8	47.7	25.7	28.2	24.2	17.0	14.5	20.1	13.0	17.3	12.2	6.9	9.8	25.3	30.4	20.6	18.3	16.6	12.8	13.4	Diurnal Maximum	

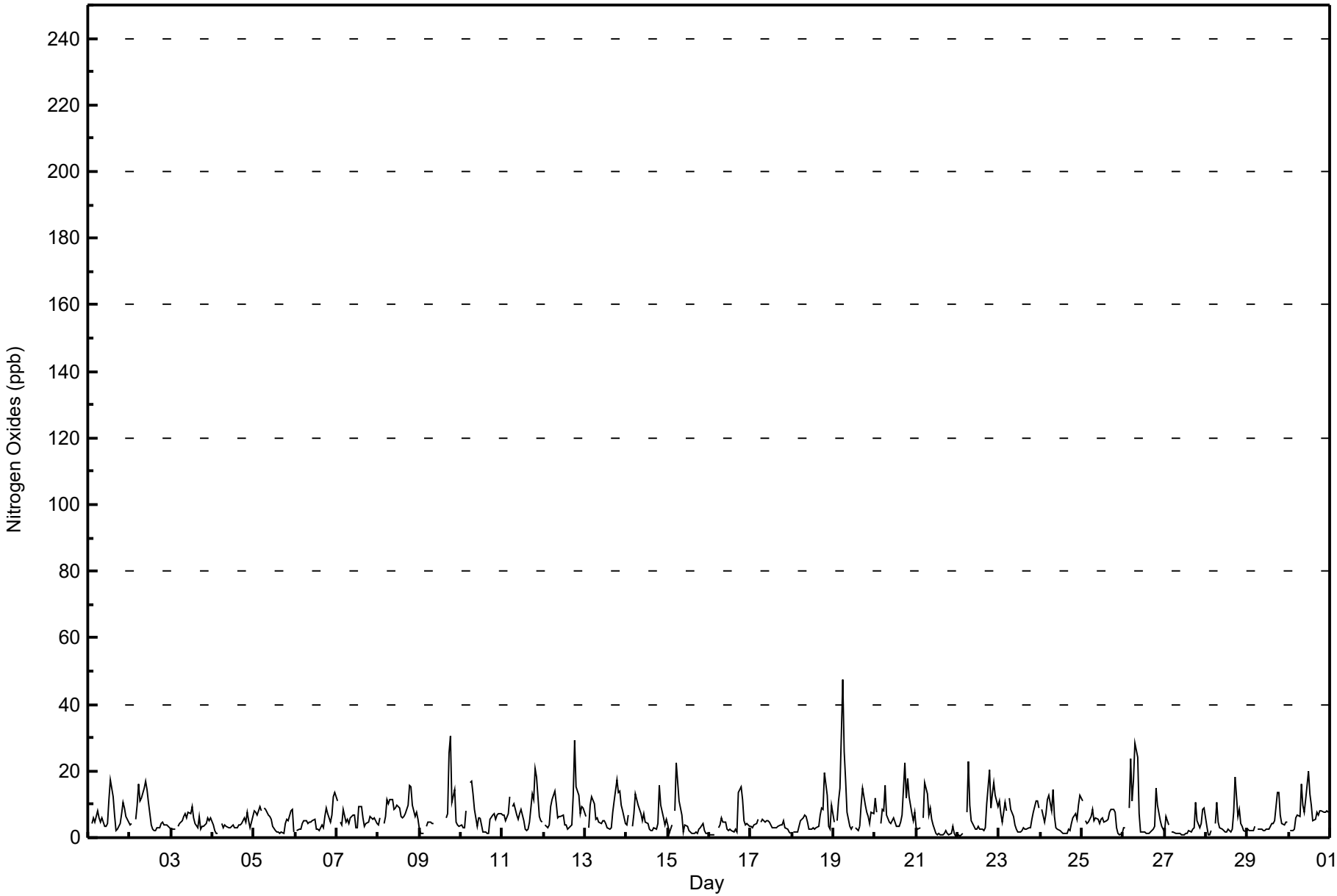
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - September 2025



Nitrogen Oxides (NO_X) - ppb
Athabasca Valley - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	671	98.24	98.24
21 - 40	11	1.61	99.85
11 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	8	3	7	23	47	157	89	32	46	60	49	29	13	20	44	44	671
21 - 40	0	0	0	1	0	2	4	3	1	0	0	0	0	0	0	0	11
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	8	3	7	24	47	159	93	36	47	60	49	29	13	20	44	44	683

Total Number of Valid Hours: 683

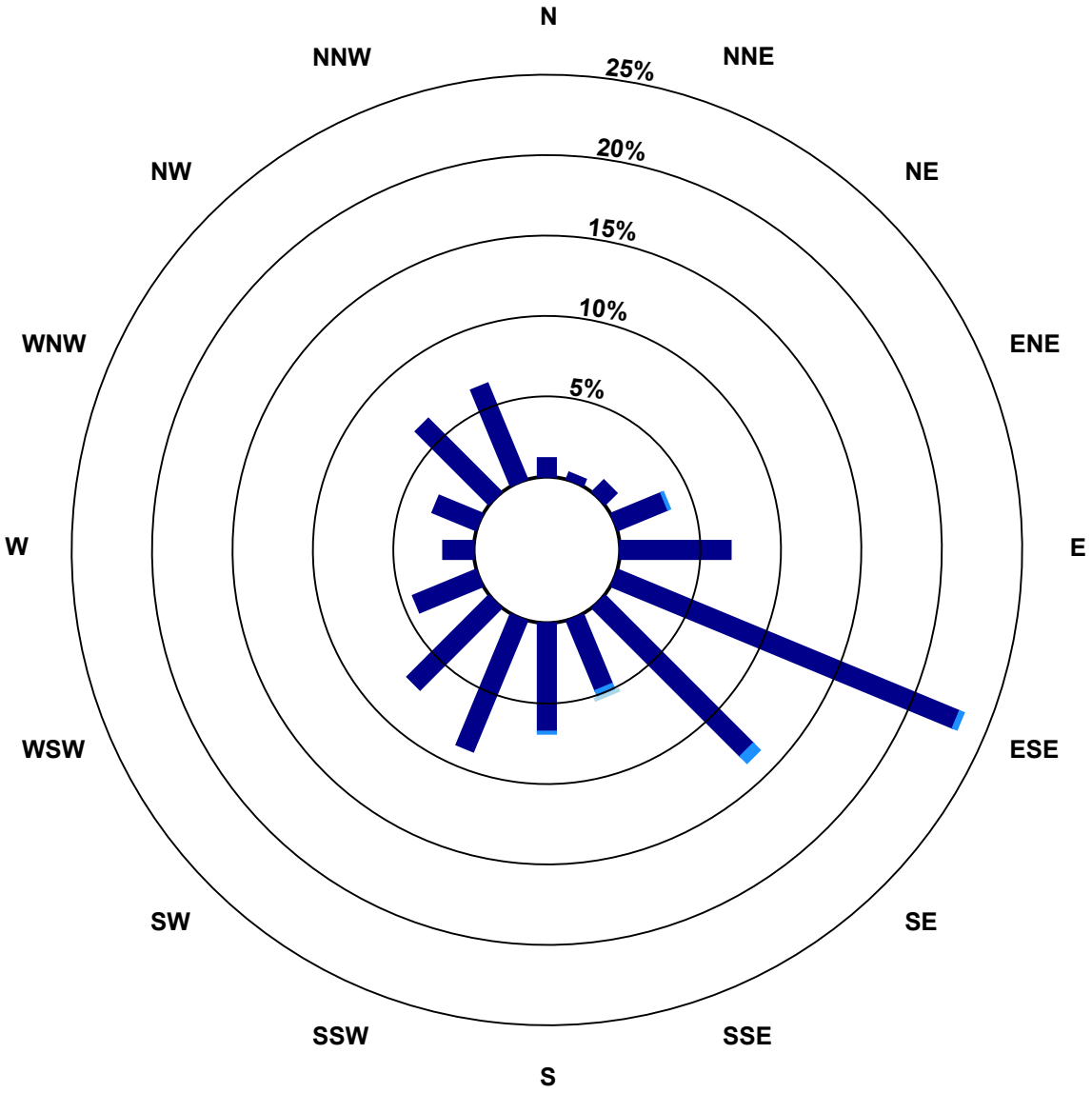
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

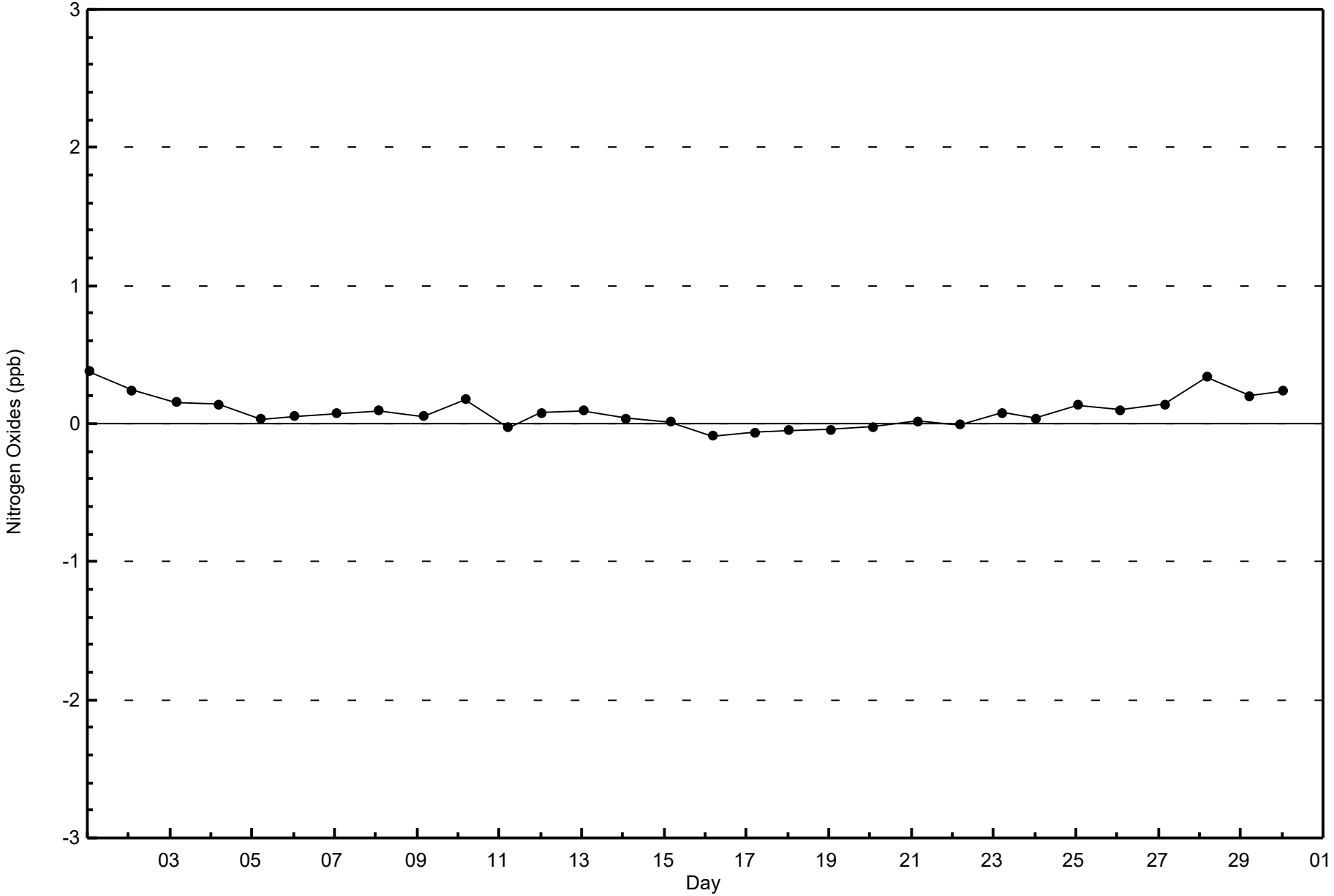
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - September 2025

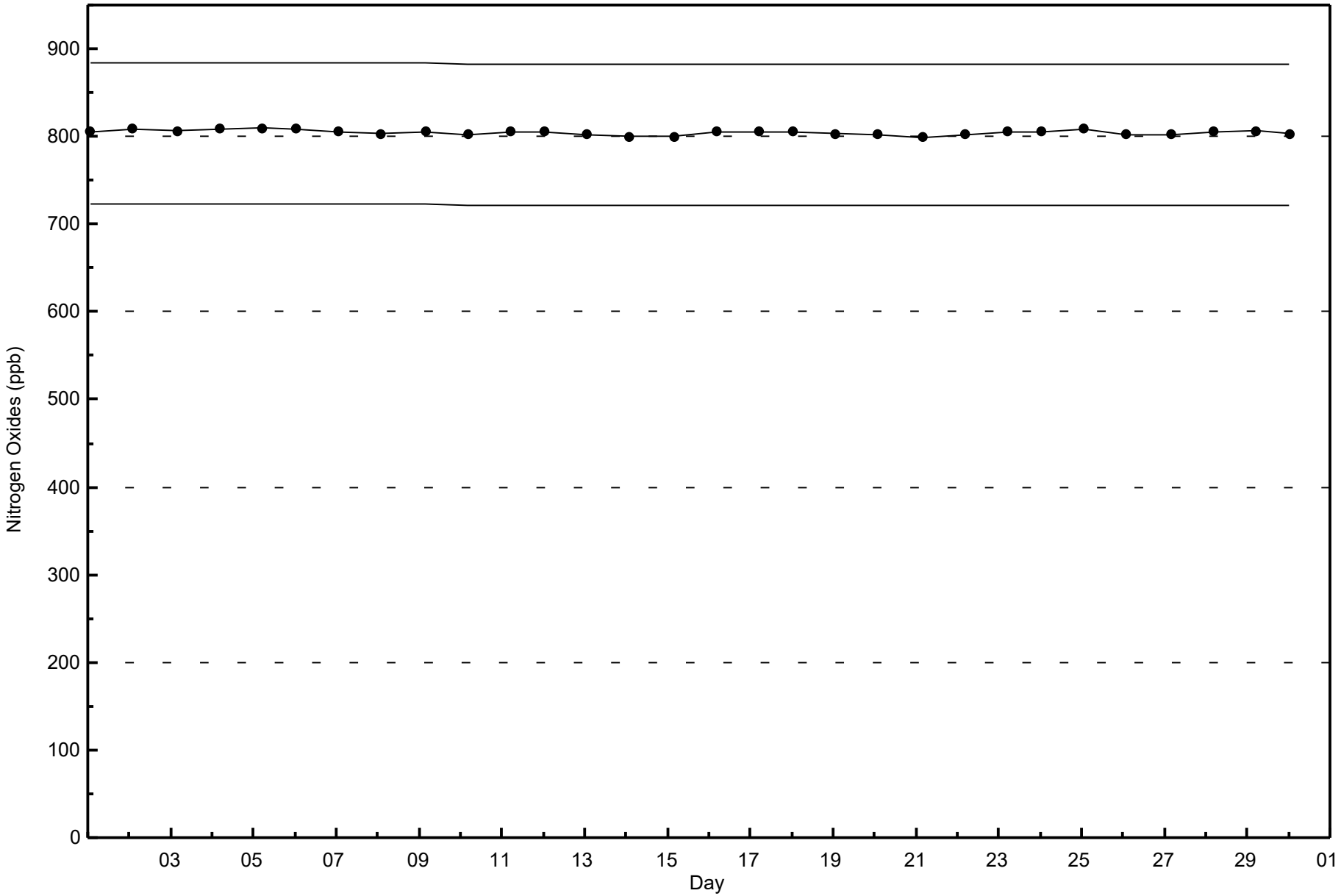


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 8

Maximum Value: 249.2 $\mu g/m^3$ on Sep 14 11:00

Maximum Daily Average: 70.8 $\mu g/m^3$ on Sep 14

Minimum Value: 1.0 $\mu g/m^3$ on Sep 22 17:00

Minimum Daily Average: 4.6 $\mu g/m^3$ on Sep 23

Maximum Diurnal Average: 38.4 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 15.5 $\mu g/m^3$ at hour 16

Monthly Average: 26.67 $\mu g/m^3$

Percentiles: P_1 = 1.6 P_{10} = 5.3 Q_1 = 8.3 Median = 18.4 Q_3 = 31.0 P_{90} = 60.7 P_{99} = 149.0

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	43.6	45.9	44.9	45.1	50.1	50.4	47.9	45.6	50.6	44.1	35.2	31.4	23.3	38.2	41.9	37.7	57.6	93.1	140.3	132.3	130.4	113.9	107.9	103.1	64.8	140.3
2-Sep	92.0	84.7	87.0	79.7	74.8	71.9	67.9	67.4	68.5	74.4	69.9	62.8	35.7	26.3	22.4	22.3	22.3	24.5	26.9	28.9	30.0	31.7	33.6	37.6	51.8	92.0
3-Sep	50.0	79.7	82.1	76.4	69.7	61.3	53.0	48.6	46.1	43.0	43.2	43.6	42.7	43.1	45.5	45.8	60.5	63.9	50.3	49.7	73.1	71.3	71.8	50.5	56.9	82.1
4-Sep	36.7	23.8	12.1	15.7	16.6	11.3	7.1	6.6	6.9	7.3	7.1	8.6	7.8	7.6	7.1	7.4	7.5	7.1	6.6	5.5	6.0	5.8	5.7	6.8	10.0	36.7
5-Sep	6.9	6.3	6.3	6.0	5.6	4.8	4.7	4.6	4.7	5.2	5.4	5.9	7.5	7.7	8.0	8.3	8.5	7.6	7.6	8.2	8.6	8.4	9.3	7.6	6.8	9.3
6-Sep	7.9	11.2	16.4	18.7	26.0	31.8	36.6	52.2	81.3	90.3	69.7	49.4	22.3	10.7	9.6	10.5	12.6	13.4	14.0	13.6	14.6	21.7	24.3	23.4	28.4	90.3
7-Sep	18.4	17.6	17.1	16.6	15.6	15.4	15.8	15.6	15.6	15.8	16.1	17.0	20.0	26.1	34.9	34.1	26.9	24.6	24.8	24.5	23.1	22.0	23.7	23.4	21.0	34.9
8-Sep	24.5	27.9	34.6	38.1	37.2	36.4	36.9	33.6	33.0	28.4	29.1	28.2	29.5	29.2	25.5	23.6	22.0	21.5	20.6	21.7	21.9	23.1	23.9	21.0	28.0	38.1
9-Sep	19.5	15.8	13.9	15.4	17.9	21.1	25.3	37.4	64.3	79.2	74.5	62.1	42.5	27.3	26.8	28.1	29.4	30.9	31.3	31.1	30.4	28.3	29.2	29.3	33.8	79.2
10-Sep	29.1	30.4	30.3	30.1	30.9	31.1	30.5	30.2	27.8	22.3	23.0	21.4	17.7	9.8	7.5	5.9	6.7	7.9	8.3	7.3	7.2	7.3	8.3	10.6	18.4	31.1
11-Sep	9.3	8.3	7.6	7.8	7.6	8.2	8.8	8.0	7.9	8.4	9.4	9.9	9.0	7.8	7.7	8.6	9.3	10.9	13.6	16.7	18.5	27.6	50.3	42.3	13.5	50.3
12-Sep	63.7	103.7	130.2	131.1	147.5	149.3	149.7	136.4	127.5	103.7	83.1	61.3	28.4	22.8	22.1	21.2	21.8	23.4	25.4	24.0	26.3	24.7	24.6	22.7	69.8	149.7
13-Sep	21.7	21.5	21.3	22.0	21.9	23.3	25.0	28.5	30.2	28.2	28.8	24.5	22.9	23.7	23.3	22.3	27.0	39.0	40.4	39.4	33.8	27.7	23.6	22.0	26.8	40.4
14-Sep	30.0	36.7	48.6	52.6	57.1	101.3	158.7	195.3	175.4	236.3	249.2	131.9	64.7	38.0	39.3	22.6	8.4	8.0	8.0	7.6	7.7	7.3	7.4	7.8	70.8	249.2
15-Sep	7.9	8.1	9.1	9.8	13.1	18.4	20.2	18.7	14.9	8.8	10.3	14.8	26.5	27.0	23.6	29.8	32.6	22.8	17.3	15.4	17.8	23.7	28.1	26.8	18.6	32.6
16-Sep	23.5	19.5	17.3	17.3	17.5	18.2	18.2	19.1	18.9	19.3	18.8	18.6	17.8	17.7	17.5	16.4	14.8	16.4	17.2	16.5	19.2	21.3	22.0	23.1	18.6	23.5
17-Sep	24.7	25.0	27.5	30.4	32.8	34.4	30.0	31.6	31.9	27.2	21.5	18.5	15.3	14.8	13.6	14.5	13.5	12.8	12.8	12.2	10.0	10.0	10.9	11.3	20.3	34.4
18-Sep	11.5	11.2	11.5	12.9	13.8	13.7	13.7	13.6	13.9	16.4	17.4	16.0	14.7	13.5	12.7	12.5	10.3	8.3	8.5	8.0	51.4	24.0	7.8	7.2	14.3	51.4
19-Sep	5.4	4.8	4.8	4.5	5.1	5.8	7.0	6.4	5.3	7.9	16.8	13.4	C	C	4.2	3.9	3.8	4.7	4.9	5.0	6.3	6.6	7.1	6.5	6.4	16.8
20-Sep	6.7	6.8	6.4	6.2	5.9	5.9	6.6	6.4	7.0	8.7	9.7	10.8	13.9	17.8	15.3	14.9	15.2	18.4	19.3	20.2	18.8	17.7	17.6	17.4	12.2	20.2
21-Sep	14.6	14.0	13.6	13.5	14.0	15.0	17.4	18.7	19.3	22.2	25.5	13.5	10.3	9.1	9.2	7.1	4.6	8.9	17.8	8.9	8.2	12.2	20.6	18.5	14.0	25.5
22-Sep	22.3	15.6	8.7	7.3	8.8	13.0	11.1	7.9	8.7	12.5	11.5	8.4	3.7	1.9	1.4	1.0	1.0	1.6	2.7	2.4	2.6	3.3	3.3	3.5	6.8	22.3
23-Sep	3.6	3.1	3.4	3.7	4.3	4.4	4.5	4.8	5.0	4.9	7.9	8.6	10.9	14.0	6.7	3.1	1.6	1.6	1.5	1.5	2.1	2.8	3.1	2.9	4.6	14.0
24-Sep	2.4	2.7	2.4	2.1	2.5	3.1	3.7	5.0	8.2	24.7	44.7	53.3	39.4	27.8	14.0	10.0	10.2	14.1	35.7	57.3	61.4	63.7	69.1	61.9	25.8	69.1
25-Sep	42.1	33.2	51.8	50.7	45.0	35.2	32.2	28.7	29.8	35.7	36.8	32.4	22.3	4.6	2.7	2.6	3.1	3.1	3.4	4.0	3.0	2.7	13.3	27.0	22.7	51.8
26-Sep	26.3	21.1	19.4	19.4	21.5	22.6	25.6	30.9	31.2	34.8	15.8	12.2	10.0	7.4	4.8	4.4	6.1	7.0	7.3	6.7	9.6	28.3	22.4	6.1	16.7	34.8
27-Sep	2.8	2.7	3.2	1.7	2.2	7.4	14.3	12.2	9.2	6.8	6.2	6.1	7.5	8.0	20.8	13.7	20.7	26.9	29.7	29.9	33.3	36.2	37.9	38.4	15.7	38.4
28-Sep	24.8	10.9	14.9	24.1	43.0	61.1	66.8	68.9	69.8	56.7	43.4	36.9	24.9	14.8	10.2	9.2	11.7	12.2	11.9	11.2	8.7	6.9	5.6	7.6	27.4	69.8
29-Sep	27.8	49.5	67.8	55.2	35.7	13.8	22.1	24.3	17.1	15.0	8.8	4.9	6.1	6.2	6.8	7.9	8.3	9.8	10.6	8.9	47.4	88.0	147.7	150.5	35.0	150.5
30-Sep	99.0	67.6	45.9	28.4	27.1	41.7	53.4	50.5	66.3	65.2	63.3	58.7	42.3	34.5	14.2	14.4	13.9	18.5	23.0	21.0	18.3	18.7	20.3	20.8	38.6	99.0
	26.6	27.0	28.7	28.1	29.0	31.0	33.8	35.3	36.6	38.4	36.7	29.5	22.0	18.5	16.6	15.5	16.4	18.8	21.4	21.3	25.0	26.2	29.3	27.9	Diurnal Average	
	99.0	103.7	130.2	131.1	147.5	149.3	158.7	195.3	175.4	236.3	249.2	131.9	64.7	43.1	45.5	45.8	60.5	93.1	140.3	132.3	130.4	113.9	147.7	150.5	Diurnal Maximum	

C - Calibration

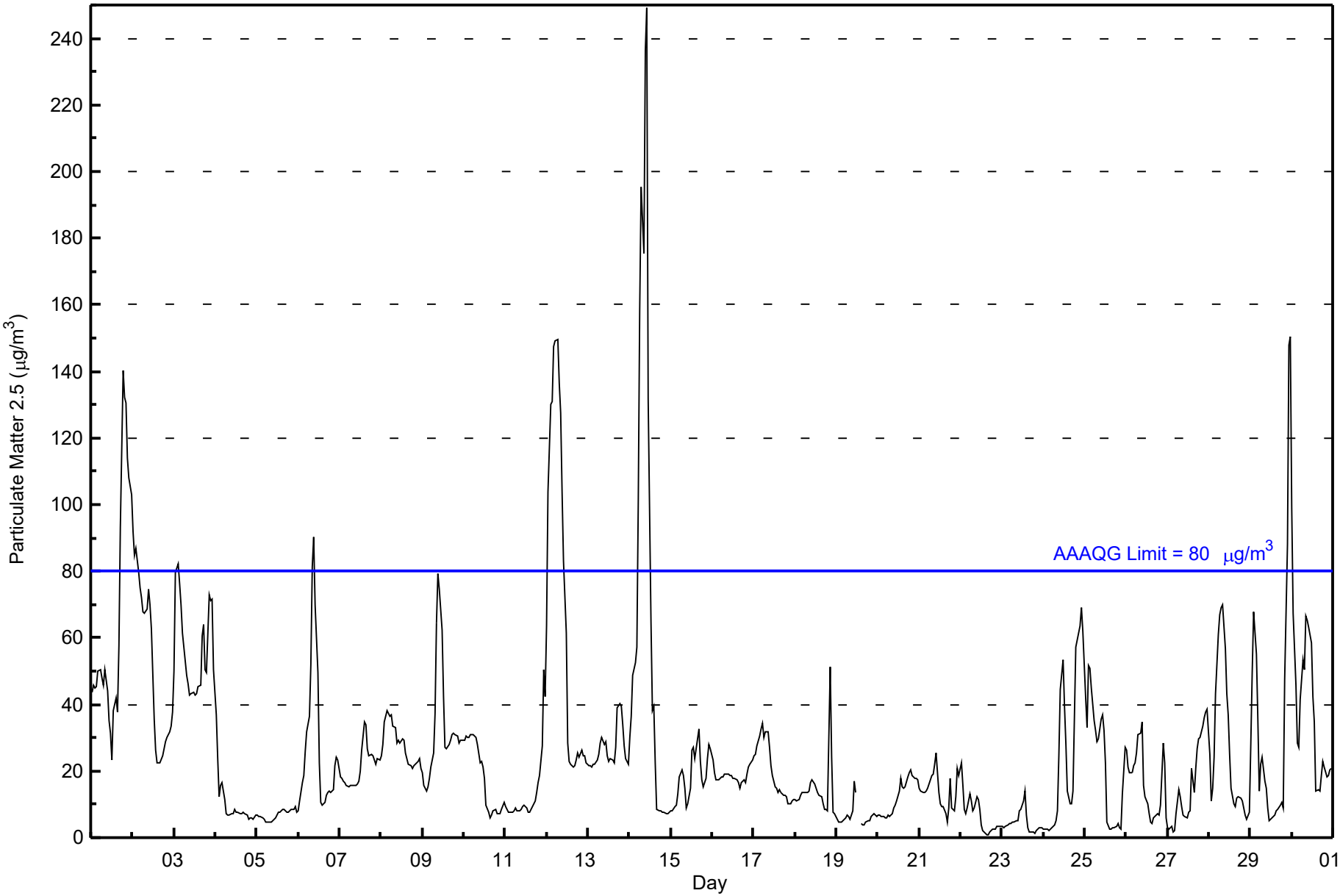
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Athabasca Valley - September 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	76	10.58	10.59
6 - 15	237	33.01	43.59
16 - 25	160	22.28	65.88
26 - 80	211	29.39	95.26
> 81.0	34	4.74	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Athabasca Valley - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	0	0	3	19	15	9	7	13	6	1	2	0	1	0	76
6 - 15	3	2	4	9	23	60	25	11	14	19	21	16	6	7	6	11	237
16 - 25	4	0	2	9	9	31	20	11	7	13	14	3	4	7	14	12	160
26 - 80	0	1	0	6	14	53	33	10	16	14	7	7	1	6	26	17	211
> 81.0	1	0	1	1	0	6	8	1	8	1	1	2	0	0	0	4	34
Totals	8	3	7	25	49	169	101	42	52	60	49	29	13	20	47	44	718

Total Number of Valid Hours: 718

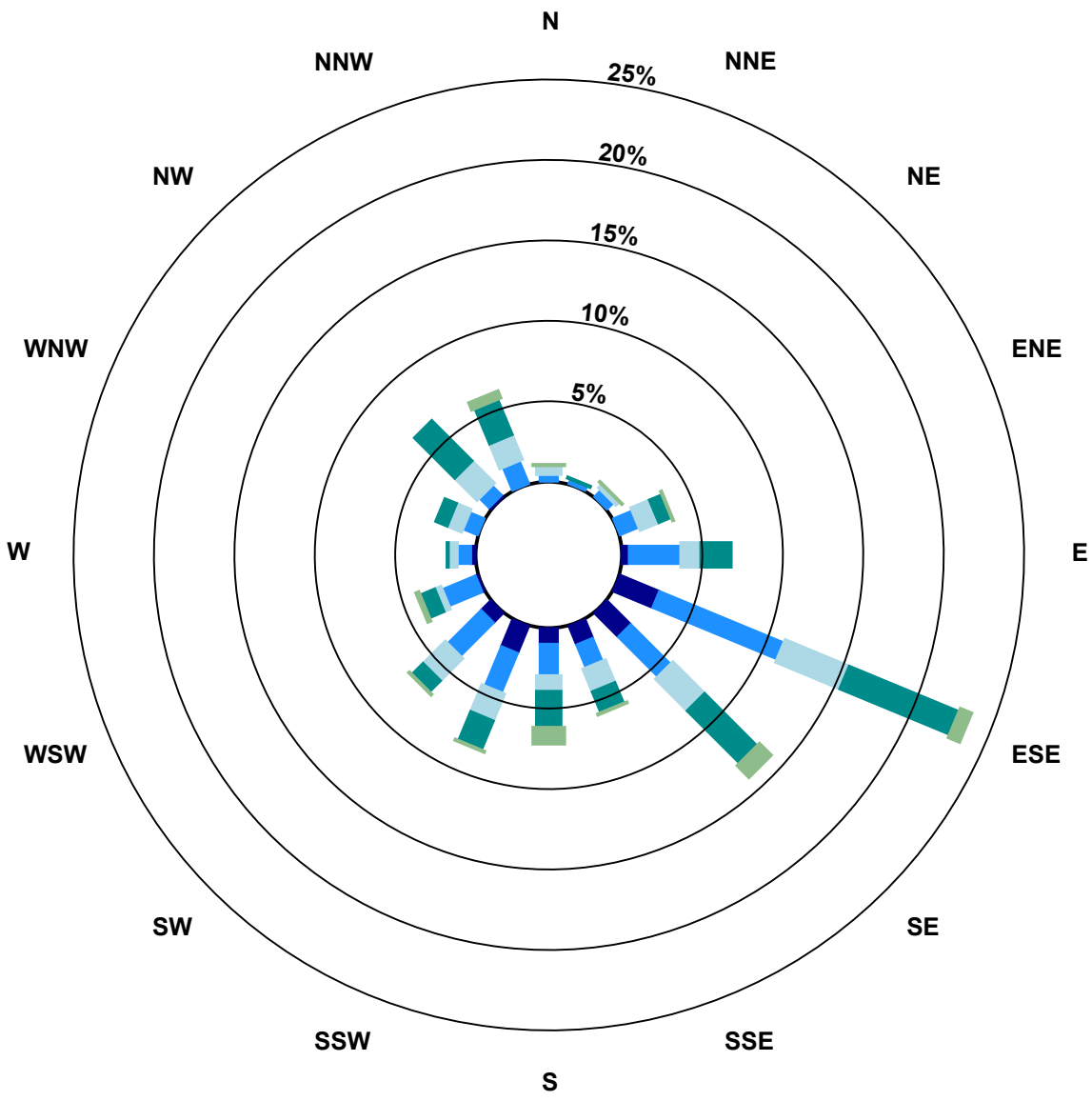
Total Number of Hours: 720

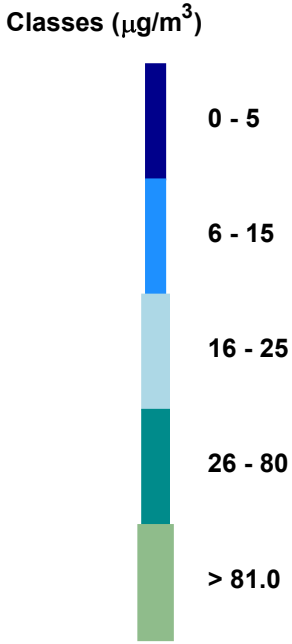
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Athabasca Valley





Total Number of Valid Hours: 718

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.2 ppm on Sep 14 11:00

Maximum Daily Average: 0.5 ppm on Sep 14

Minimum Value: 0.1 ppm on Sep 27 04:00

Minimum Daily Average: 0.1 ppm on Sep 23

Maximum Diurnal Average: 0.3 ppm at hour 10

Minimum Diurnal Average: 0.2 ppm at hour 16

Monthly Average: 0.25 ppm

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 0.7

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.6
2-Sep	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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
3-Sep	0.4	0.5	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5
4-Sep	0.3	0.2	0.2	0.2	0.2	Z	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	0.2	0.2	0.1	0.2	0.2	0.3
5-Sep	Z	0.1	0.1	0.1	0.1	0.1	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	0.2	0.2	0.1	0.1	0.2
6-Sep	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.4	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	0.5
7-Sep	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	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
8-Sep	0.2	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	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3
9-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.4	0.5	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.6
10-Sep	0.3	0.2	0.2	0.2	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3
11-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3
12-Sep	0.4	Z	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.2	0.5	0.8
13-Sep	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	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
14-Sep	0.2	0.3	0.3	Z	0.3	0.5	0.8	0.9	0.8	1.2	1.2	0.8	0.5	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	1.2
15-Sep	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.3	0.5
16-Sep	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	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4
17-Sep	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
18-Sep	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	0.3	0.2	0.2	0.1	0.2	0.2	0.3
19-Sep	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	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
20-Sep	0.2	0.2	0.1	Z	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	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
21-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3
22-Sep	0.2	0.2	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
23-Sep	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
24-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4
25-Sep	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3
26-Sep	0.2	0.2	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4
27-Sep	0.1	0.1	0.1	0.1	Z	0.1	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	0.3	0.3	0.3	0.3	0.3	0.2	0.3
28-Sep	0.2	0.1	0.2	0.2	0.3	Z	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.5
29-Sep	Z	0.3	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.7	0.3	0.7
30-Sep	0.6	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6
	0.3	0.2	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	0.3	0.3	0.2	0.2	0.3	0.2	Diurnal Average	
	0.6	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.8	1.2	1.2	0.8	0.5	0.4	0.4	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.7	0.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

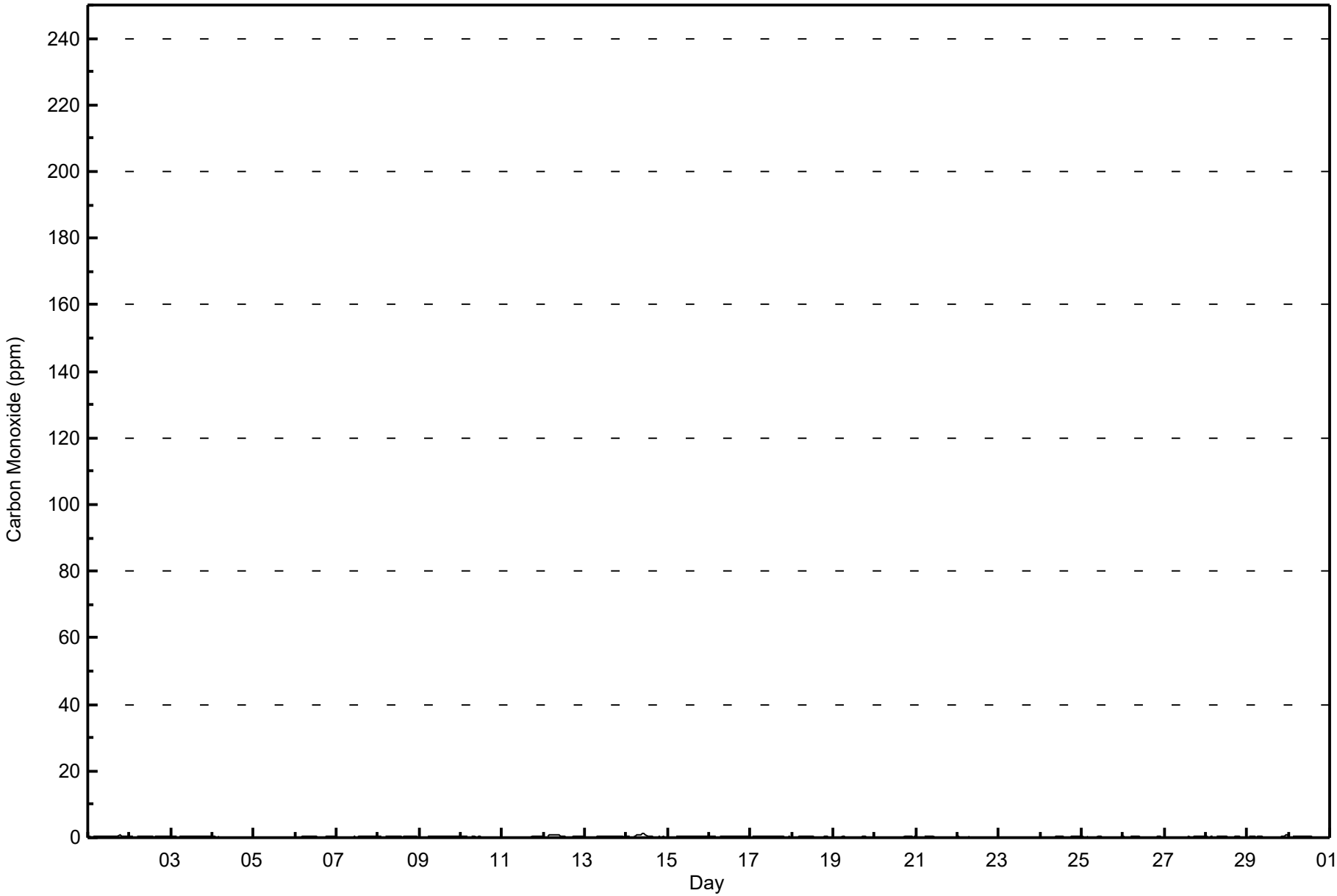
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	562	82.04	82.04
0.4 - 0.5	100	14.60	96.64
0.6 - 0.7	16	2.34	98.98
0.8 - 1.4	7	1.02	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Athabasca Valley - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.3	5	2	6	18	39	127	72	35	39	51	42	24	13	16	38	35	562
0.4 - 0.5	2	1	1	5	5	26	18	3	5	8	5	4	0	3	7	7	100
0.6 - 0.7	1	0	0	0	0	4	4	1	3	1	0	0	0	0	0	2	16
0.8 - 1.4	0	0	0	0	0	0	3	0	3	0	0	1	0	0	0	0	7
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	8	3	7	23	44	157	97	39	50	60	47	29	13	19	45	44	685

Total Number of Valid Hours: 685

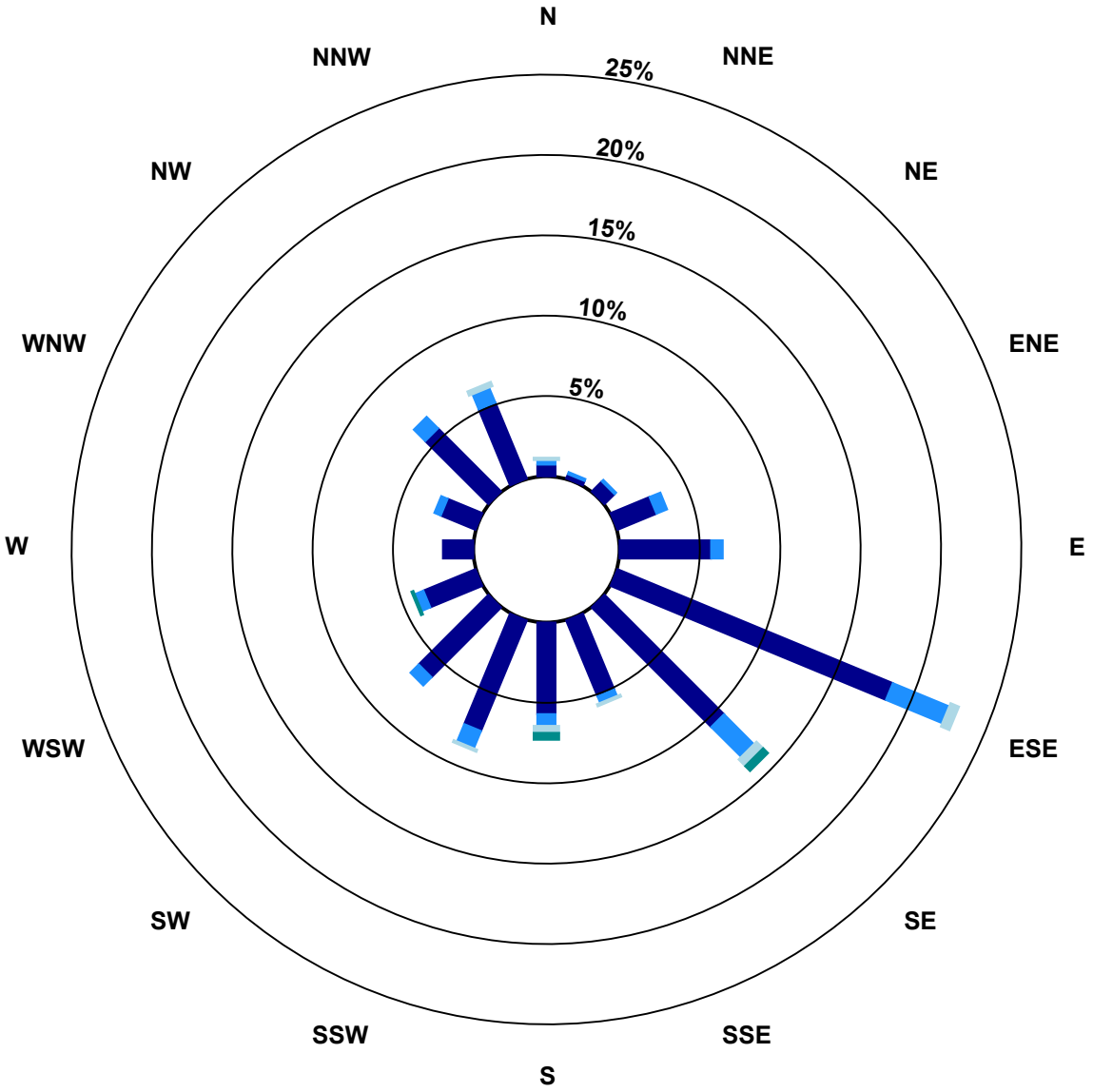
Total Number of Hours: 720

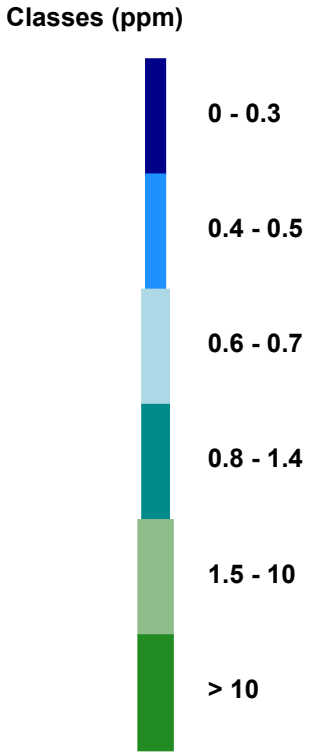
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Carbon Monoxide (CO) - ppm

Athabasca Valley





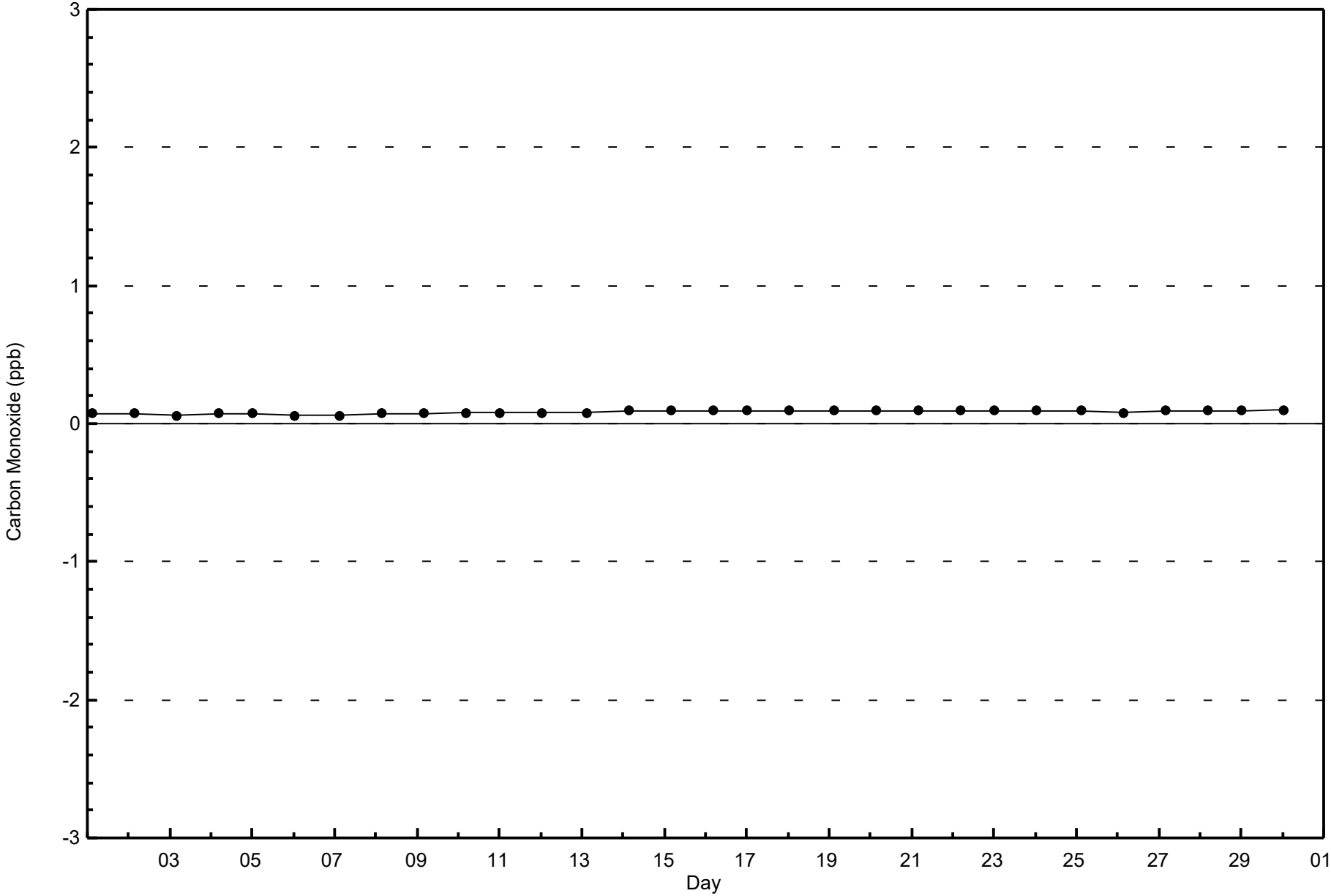
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - September 2025

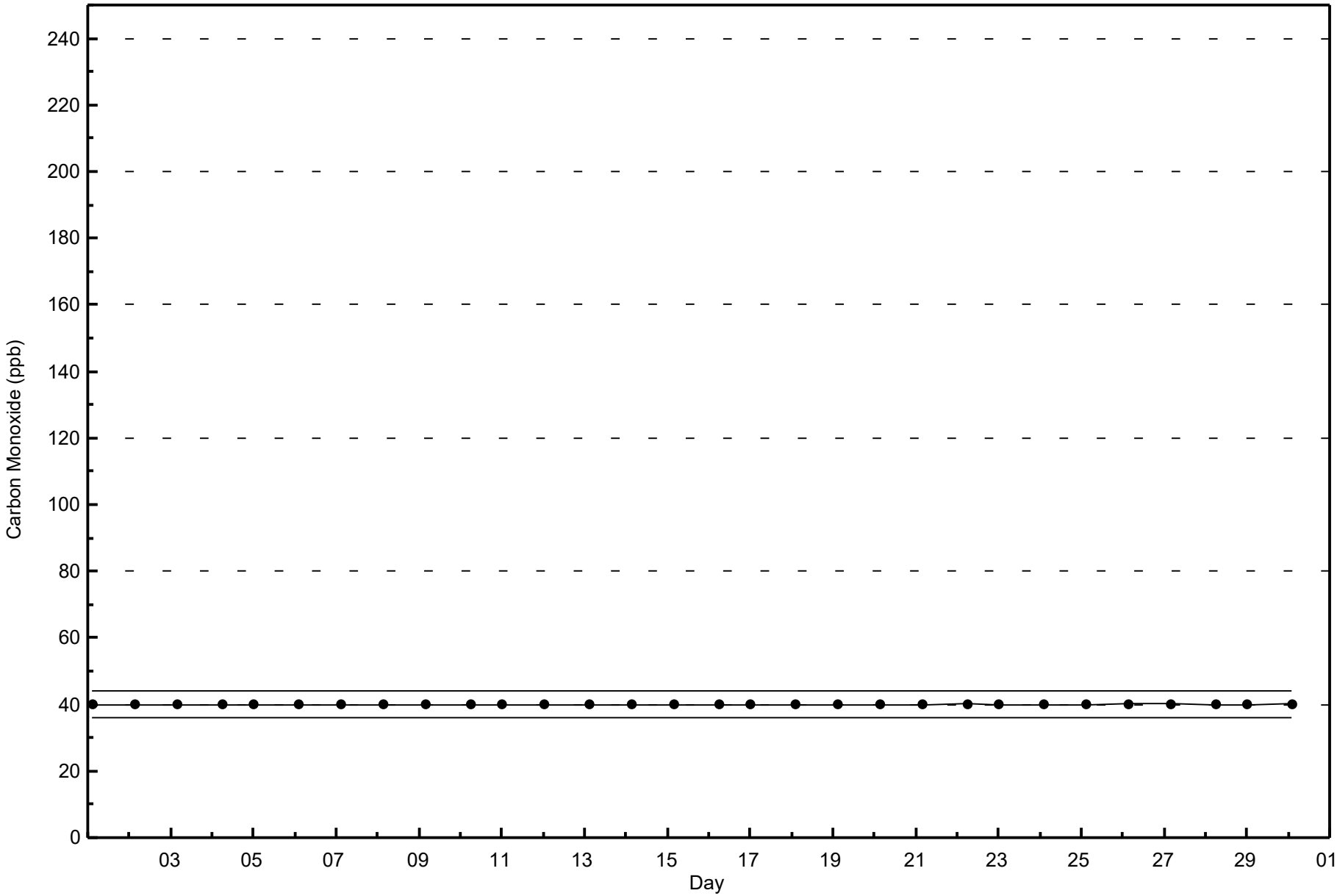


Wood Buffalo Environmental Association

Span Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - September 2025



Maximum Value: 30.1 C on Sep 12 16:00

Maximum Daily Average: 19.3 C on Sep 12

Minimum Value: 1.1 C on Sep 25 07:00

Minimum Daily Average: 10.4 C on Sep 25

Maximum Diurnal Average: 22.4 C at hour 16

Minimum Diurnal Average: 9.4 C at hour 7

Monthly Average: 15.26 C

Percentiles: P_1 = 2.9 P_{10} = 8.8 Q_1 = 11.7 Median = 14.5 Q_3 = 18.6 P_{90} = 23.0 P_{99} = 28.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

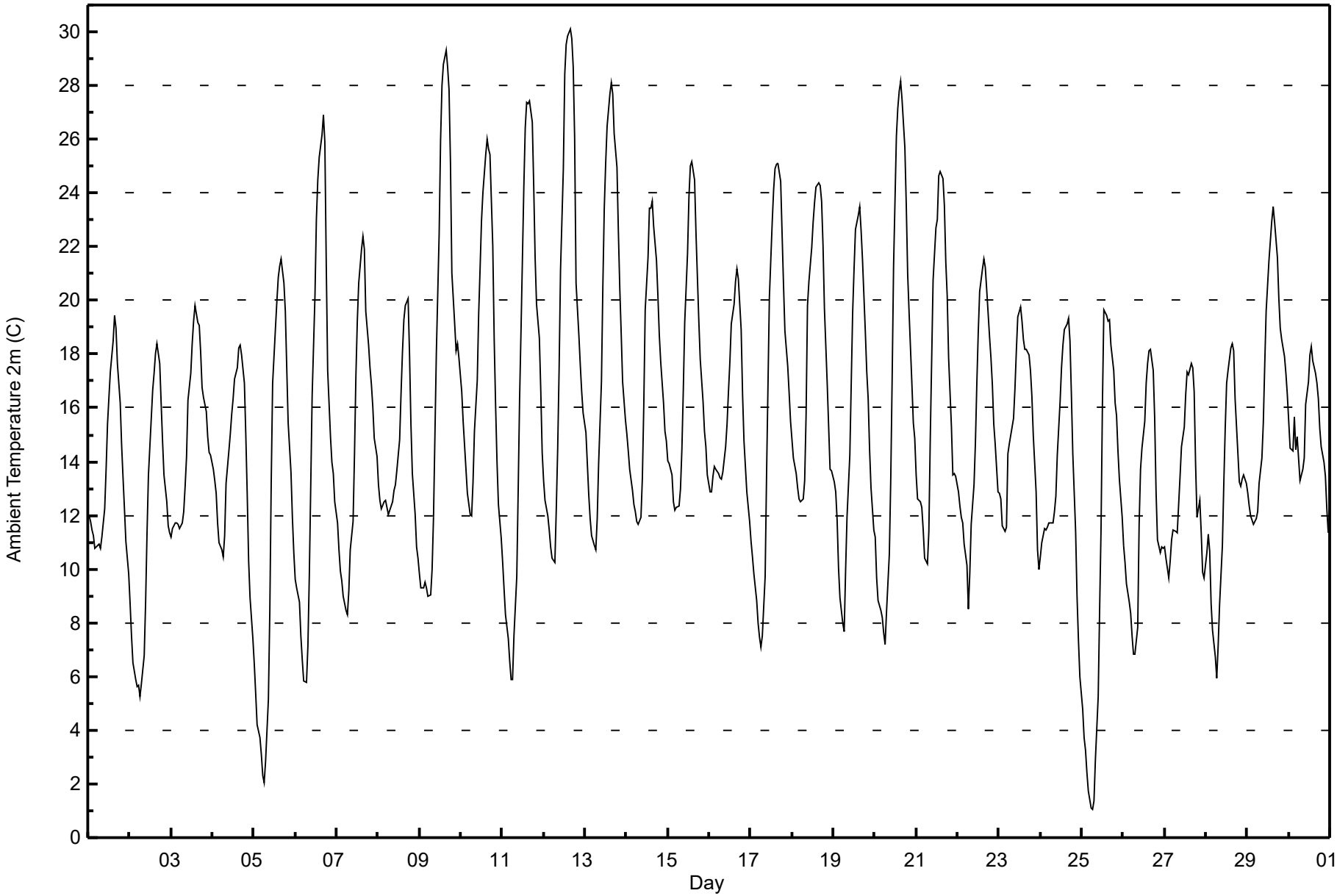
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	12.0	11.8	11.5	11.3	10.8	10.9	10.9	10.8	11.2	12.2	13.7	15.4	16.4	17.4	18.5	19.4	19.0	17.7	16.2	14.6	13.4	12.2	11.0	9.8	13.7	19.4
2-Sep	8.7	7.5	6.5	5.9	5.6	5.7	5.3	5.7	6.8	8.8	11.3	13.5	15.6	16.7	17.3	18.0	18.4	17.7	16.2	14.7	13.5	12.5	11.6	11.3	11.5	18.4
3-Sep	11.2	11.5	11.7	11.7	11.7	11.5	11.7	12.2	13.1	14.2	16.3	17.3	18.4	19.2	19.8	19.2	19.1	18.1	16.7	16.4	15.9	14.9	14.4	14.3	15.0	19.8
4-Sep	13.7	13.3	12.8	11.7	11.0	10.7	10.5	11.2	13.2	14.4	15.0	15.8	16.3	17.1	17.5	18.2	18.3	18.0	16.9	15.0	12.8	10.3	8.9	7.4	13.8	18.3
5-Sep	6.4	5.4	4.2	3.8	3.1	2.3	2.0	2.9	5.2	8.4	13.2	16.9	18.9	19.9	20.9	21.3	21.6	20.7	19.6	17.5	15.4	13.6	11.9	10.6	11.9	21.6
6-Sep	9.6	9.3	8.8	7.5	6.6	5.8	5.8	7.1	9.8	13.1	16.5	20.2	23.0	24.5	25.3	26.1	26.9	25.9	21.4	17.4	14.9	14.0	13.6	12.5	15.2	26.9
7-Sep	11.7	10.7	9.9	9.6	9.0	8.5	8.3	9.2	10.7	11.7	14.2	17.2	19.2	20.7	21.9	22.4	21.9	19.6	18.4	17.5	16.8	16.0	14.9	14.2	14.8	22.4
8-Sep	13.1	12.5	12.3	12.5	12.5	12.3	12.1	12.2	12.5	12.9	13.1	13.6	14.8	16.6	18.1	19.3	19.8	20.1	18.0	15.4	13.6	12.0	10.8	10.4	14.2	20.1
9-Sep	9.8	9.3	9.3	9.5	9.3	9.0	9.0	10.0	11.9	15.0	18.0	22.5	25.9	28.0	28.8	29.3	28.7	27.8	25.2	21.0	19.1	18.1	18.4	17.8	18.0	29.3
10-Sep	16.6	15.5	14.6	13.7	12.8	12.1	12.0	13.2	15.1	17.1	19.5	21.2	23.0	24.0	25.4	26.0	25.6	25.4	22.0	18.5	16.1	14.0	12.4	11.1	17.8	26.0
11-Sep	10.2	9.2	8.3	7.4	6.6	5.9	5.9	7.5	9.7	12.9	16.3	18.9	24.2	26.4	27.4	27.3	27.4	26.6	24.3	21.6	19.8	18.6	16.7	14.4	16.4	27.4
12-Sep	13.3	12.5	12.0	11.5	10.8	10.4	10.2	12.2	14.5	17.4	21.1	24.9	28.4	29.5	29.8	30.1	29.7	28.7	26.0	20.7	18.7	17.6	16.6	15.8	19.3	30.1
13-Sep	15.1	13.9	12.8	11.9	11.3	10.9	10.7	11.9	13.9	17.0	20.5	23.4	25.1	26.5	27.7	28.1	27.7	26.2	25.0	22.6	20.4	18.7	17.0	15.6	18.9	28.1
14-Sep	15.0	14.4	13.7	12.9	12.4	12.2	11.8	11.7	11.9	13.4	16.1	19.7	21.6	23.4	23.4	23.7	22.8	21.5	20.2	18.7	17.7	16.2	15.1	14.8	16.8	23.7
15-Sep	14.0	13.9	13.5	12.5	12.2	12.3	12.3	13.0	14.4	16.7	19.2	21.7	23.9	25.0	25.1	24.5	22.5	20.8	19.2	17.8	16.2	15.1	14.6	13.5	17.3	25.1
16-Sep	12.9	12.9	13.4	13.8	13.7	13.6	13.4	13.3	13.6	14.5	15.4	16.6	17.7	19.1	19.9	20.7	21.2	20.8	18.9	16.5	14.8	13.8	12.9	11.8	15.6	21.2
17-Sep	11.0	10.4	9.8	8.9	8.0	7.5	7.1	7.5	9.7	13.5	16.8	20.1	22.9	24.1	24.9	25.1	25.1	24.4	22.5	20.6	18.9	17.5	16.6	15.5	16.2	25.1
18-Sep	14.8	14.1	13.5	13.0	12.6	12.5	12.6	13.3	15.7	19.8	20.7	21.9	22.9	23.7	24.2	24.4	24.3	23.7	22.1	19.7	16.9	15.3	13.7	13.7	17.9	24.4
19-Sep	13.2	12.9	11.8	10.0	8.9	8.0	7.7	9.9	11.9	14.2	16.9	19.6	21.2	22.6	23.2	23.5	22.6	21.5	18.8	17.3	16.3	14.5	13.0	11.5	15.5	23.5
20-Sep	11.2	9.7	8.8	8.5	8.2	7.6	7.2	8.4	10.5	13.3	17.2	21.3	26.1	27.2	27.8	28.2	27.5	25.7	23.5	21.0	19.5	16.9	15.4	14.9	16.9	28.2
21-Sep	13.5	12.6	12.5	12.3	11.5	10.4	10.2	11.4	14.8	17.8	20.8	22.7	23.0	24.6	24.8	24.5	23.6	21.4	20.2	17.8	15.3	13.5	13.5	13.4	16.9	24.8
22-Sep	12.9	12.4	11.9	11.7	10.9	10.1	8.5	9.8	11.7	13.2	14.7	16.9	18.8	20.4	21.2	21.5	21.2	20.4	18.7	17.8	16.9	15.4	14.7	12.9	15.2	21.5
23-Sep	12.8	12.6	11.6	11.4	11.5	14.3	14.6	15.0	15.6	16.7	18.1	19.4	19.7	19.2	18.5	18.2	18.2	18.0	17.4	16.4	15.0	12.9	10.7	10.0	15.3	19.7
24-Sep	10.5	11.0	11.5	11.4	11.6	11.7	11.7	11.7	12.1	12.7	14.2	16.2	17.5	18.3	18.9	19.1	19.4	18.5	16.5	14.3	11.4	9.0	7.4	6.0	13.4	19.4
25-Sep	4.8	3.7	3.3	2.4	1.7	1.1	1.1	1.4	2.9	5.2	8.5	11.5	16.2	19.6	19.5	19.2	19.3	18.3	17.4	16.2	15.7	14.4	13.4	12.0	10.4	19.6
26-Sep	10.9	10.2	9.4	8.8	8.3	7.5	6.8	6.8	7.8	11.7	13.7	14.5	15.5	16.9	17.7	18.1	18.2	17.4	15.6	12.9	11.1	10.6	10.8	10.8	12.2	18.2
27-Sep	10.8	10.4	9.6	10.3	11.1	11.5	11.4	11.4	12.4	13.5	14.5	15.3	16.5	17.4	17.2	17.7	17.5	16.6	13.9	11.9	12.6	11.3	9.9	9.7	13.1	17.7
28-Sep	10.6	11.3	10.6	8.7	7.7	6.7	5.9	7.1	8.7	10.9	13.2	15.3	16.9	17.4	18.2	18.4	18.1	16.3	14.3	13.2	13.1	13.3	13.5	13.2	12.6	18.4
29-Sep	12.8	12.4	12.0	11.7	11.8	11.9	12.1	13.2	14.1	15.5	17.6	19.6	21.5	22.2	23.0	23.5	22.9	21.6	20.1	19.0	18.5	17.9	17.3	16.5	17.0	23.5
30-Sep	15.5	14.5	14.4	15.6	14.4	14.9	13.3	13.5	13.7	14.1	16.2	17.0	18.0	18.3	17.8	17.3	16.9	16.4	15.3	14.6	14.0	13.4	12.2	11.3	15.1	18.3
	12.0	11.4	10.9	10.4	9.9	9.7	9.4	10.2	11.6	13.7	16.1	18.3	20.3	21.5	22.1	22.4	22.2	21.2	19.3	17.3	15.8	14.5	13.4	12.6	Diurnal Average	
	16.6	15.5	14.6	15.6	14.4	14.9	14.6	15.0	15.7	19.8	21.1	24.9	28.4	29.5	29.8	30.1	29.7	28.7	26.0	22.6	20.4	18.7	18.4	17.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Athabasca Valley - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	105	14.58	14.58
10 - 20	481	66.81	81.39
> 20	134	18.61	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 29.4 inHg on Sep 2 06:00

Maximum Daily Average: 29.4 inHg on Sep 2

Minimum Value: 28.6 inHg on Sep 21 15:00

Minimum Daily Average: 28.6 inHg on Sep 21

Maximum Diurnal Average: 29.0 inHg at hour 9

Minimum Diurnal Average: 28.9 inHg at hour 17

Monthly Average: 28.98 inHg

Percentiles: P_1 = 28.6 P_{10} = 28.7 Q_1 = 28.9 Median = 29.0 Q_3 = 29.1 P_{90} = 29.3 P_{99} = 29.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

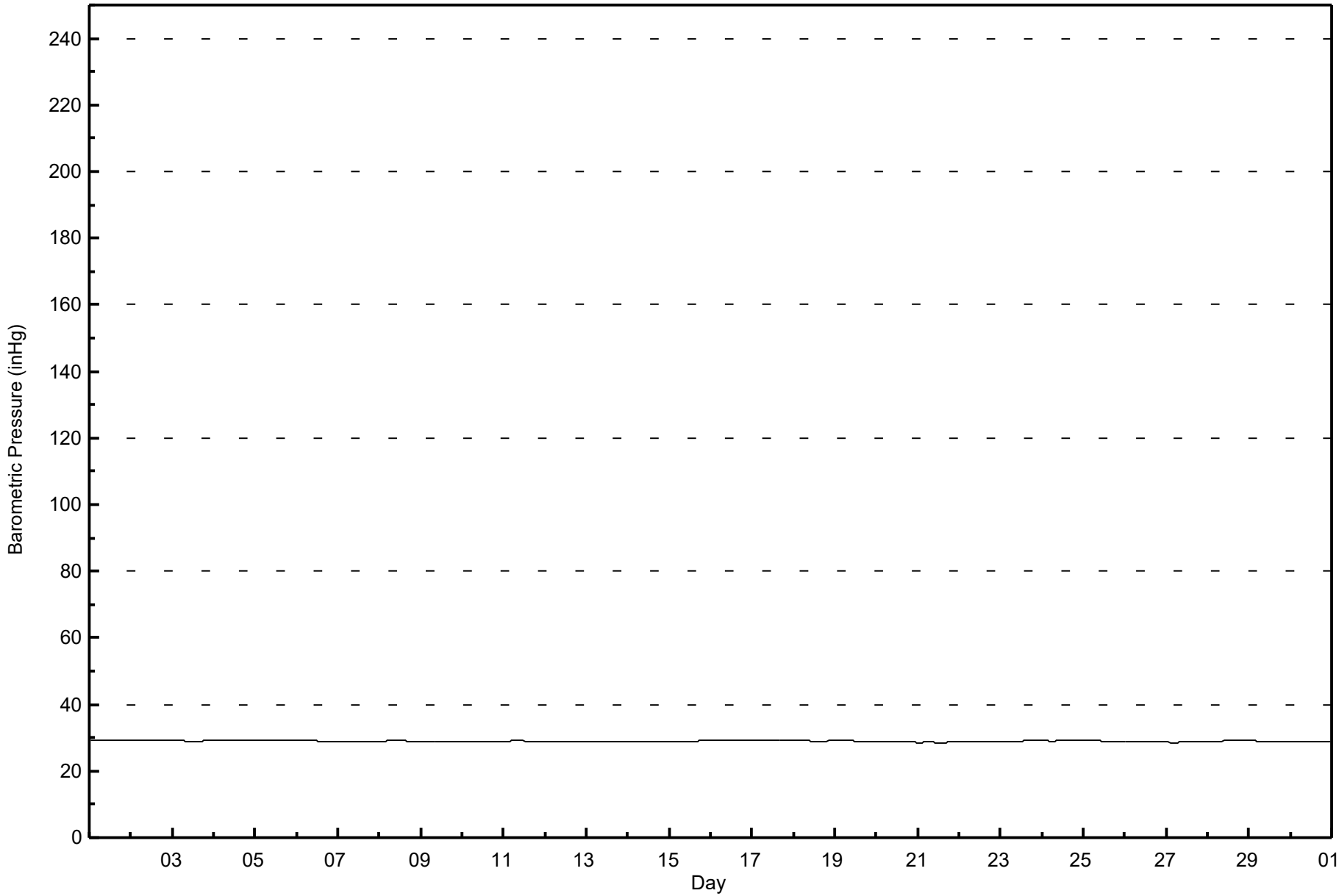
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.4
2-Sep	29.4	29.4	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	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.4	29.4
3-Sep	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.0	29.2
4-Sep	29.2	29.2	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	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3
5-Sep	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
6-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1
7-Sep	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	29.0	29.0	28.9	29.0
8-Sep	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1
9-Sep	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
10-Sep	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	29.0	29.0	29.0	29.0	29.0	28.9	29.0
11-Sep	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.1
12-Sep	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	29.0	29.0	29.0	29.0	29.0
13-Sep	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	28.9	29.0
14-Sep	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	28.9	28.9	28.9	28.8	28.9
15-Sep	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	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.0	29.2
16-Sep	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	29.3	29.3	29.3	29.3	29.3	29.3
17-Sep	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.3
18-Sep	29.1	29.1	29.1	29.1	29.1	29.1	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	29.0	29.0	29.0	29.0	29.0	29.0	29.1
19-Sep	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	28.9	28.9	28.9	28.9	28.9	29.0	28.9	28.9	28.9	29.0	29.1
20-Sep	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.8	28.9
21-Sep	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	28.6	28.6	28.6	28.7	28.7	28.7	28.8	28.7	28.8	28.6	28.8
22-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
23-Sep	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.0	29.1
24-Sep	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	29.1	29.1
25-Sep	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	28.8	28.8	28.8	28.7	29.0	29.1
26-Sep	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	28.7	28.6	28.7	28.6	28.7	28.7
27-Sep	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	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-Sep	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.1
29-Sep	29.1	29.1	29.1	29.0	29.0	29.0	29.0	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	28.7	28.7	28.9	29.1
30-Sep	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.8	28.8
	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	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	Diurnal Average	
	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	29.4	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

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Athabasca Valley - September 2025

Maximum Value: 97.8 % on Sep 17 06:00

Maximum Daily Average: 80.1 % on Sep 8

Minimum Value: 24.3 % on Sep 24 17:00

Minimum Daily Average: 42.4 % on Sep 29

Maximum Diurnal Average: 81.8 % at hour 6

Minimum Diurnal Average: 38.6 % at hour 16

Monthly Average: 63.80 %

Percentiles: P_1 = 27.5 P_{10} = 34.1 Q_1 = 48.2 Median = 64.5 Q_3 = 82.3 P_{90} = 90.7 P_{99} = 94.4

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	92.8	92.7	92.8	91.3	93.9	92.4	92.9	94.2	94.3	88.4	80.5	76.7	72.9	68.7	62.1	51.6	51.9	54.7	56.9	65.5	70.9	75.7	84.9	88.9	78.7	94.3
2-Sep	91.9	95.1	92.9	92.9	91.6	90.8	93.5	92.4	87.8	80.2	68.4	59.3	43.4	40.3	39.4	37.9	38.1	41.3	47.0	52.7	56.9	60.2	64.0	65.8	67.7	95.1
3-Sep	66.9	66.4	66.0	66.1	67.1	69.1	69.0	68.7	67.4	64.6	60.6	59.3	59.0	59.6	61.3	68.3	67.2	65.3	72.2	71.3	74.5	79.1	79.2	70.5	67.5	79.2
4-Sep	70.1	69.8	70.0	73.5	75.5	75.4	75.4	75.2	67.3	60.0	57.3	53.5	50.2	48.2	46.6	43.9	43.4	46.6	48.3	56.5	72.5	86.0	91.2	90.7	64.5	91.2
5-Sep	90.2	90.0	92.2	91.7	92.2	94.7	96.3	96.1	87.8	76.0	61.2	50.1	43.1	41.5	38.3	37.2	36.9	40.9	44.5	51.3	60.2	66.9	71.5	80.8	68.0	96.3
6-Sep	84.1	81.0	78.8	84.8	87.3	89.5	88.9	82.6	74.0	63.9	55.1	46.9	36.6	30.8	30.0	28.7	26.4	32.4	54.5	76.2	86.4	87.5	81.9	81.2	65.4	89.5
7-Sep	77.7	80.0	83.8	85.1	85.4	85.9	85.1	82.4	77.5	74.3	68.8	63.9	59.3	56.0	53.1	55.4	56.8	63.2	67.6	73.6	76.3	78.5	82.4	84.4	73.2	85.9
8-Sep	89.2	91.3	91.4	91.1	90.2	90.5	90.9	90.1	88.4	85.7	84.2	80.4	73.8	65.1	57.3	51.4	50.1	50.9	63.0	80.8	88.6	93.2	93.0	92.3	80.1	93.2
9-Sep	93.8	94.4	94.0	92.9	92.6	92.7	92.0	87.4	80.7	71.1	63.5	53.8	47.2	40.0	38.0	35.9	37.5	42.4	55.7	77.4	83.4	87.2	84.1	84.5	71.8	94.4
10-Sep	88.8	90.8	91.2	93.5	94.3	93.2	91.9	85.7	79.0	70.9	64.1	58.0	48.2	38.4	32.7	29.2	30.3	33.2	52.4	64.6	76.1	84.2	91.1	88.3	69.6	94.3
11-Sep	89.3	88.1	90.0	90.4	90.2	92.6	91.2	83.7	79.6	70.7	58.8	53.5	37.6	30.0	27.6	28.9	28.0	31.6	38.2	47.0	52.3	58.9	70.8	84.5	63.1	92.6
12-Sep	85.6	88.9	91.2	92.9	94.0	93.6	94.2	88.6	81.3	72.9	62.9	52.3	32.1	29.0	28.0	26.9	28.3	32.0	40.6	69.4	75.2	77.5	78.0	75.2	66.3	94.2
13-Sep	75.1	79.2	86.1	86.7	88.9	90.7	90.5	85.6	78.8	69.5	61.2	52.8	49.6	48.4	46.3	46.3	47.7	49.8	55.4	69.4	79.8	82.1	88.3	91.9	70.8	91.9
14-Sep	89.9	92.2	91.0	93.1	95.2	93.7	94.1	94.4	93.3	89.3	77.1	67.7	63.4	58.9	59.5	49.2	50.5	57.7	63.2	63.8	67.5	76.5	83.6	83.7	77.0	95.2
15-Sep	88.5	90.2	89.6	93.4	92.5	91.8	90.8	88.7	86.8	80.8	72.8	63.5	56.0	50.7	50.0	53.1	61.4	59.0	61.3	59.6	66.7	70.5	69.7	73.4	73.4	93.4
16-Sep	75.9	77.1	76.2	74.8	75.7	76.6	77.3	77.1	76.2	72.8	69.2	64.3	59.7	54.4	51.7	48.2	45.3	47.7	56.9	68.2	75.2	77.8	81.3	86.1	68.6	86.1
17-Sep	88.6	89.9	91.1	92.5	94.7	97.8	OR	OR	91.6	77.2	67.8	58.6	48.2	43.2	40.5	40.2	37.9	38.9	44.8	52.0	55.0	60.0	64.4	70.2	65.7	97.8
18-Sep	74.6	79.2	82.4	84.3	85.4	84.7	83.5	80.0	71.7	53.6	48.9	45.4	43.0	41.4	40.1	39.3	38.8	40.6	44.9	53.8	69.7	77.7	81.9	72.1	63.2	85.4
19-Sep	70.0	69.7	73.1	78.3	83.4	84.7	84.0	71.9	65.9	57.8	48.6	39.3	32.9	29.6	29.0	29.5	32.1	38.8	57.7	67.6	72.0	82.4	83.2	87.6	61.2	87.6
20-Sep	79.2	83.7	85.8	87.6	86.6	87.2	87.0	80.6	71.9	64.5	55.3	47.8	33.7	29.0	29.3	28.0	30.5	35.4	41.5	48.5	52.5	65.5	74.8	76.2	60.9	87.6
21-Sep	82.5	86.2	84.8	86.3	87.9	90.6	90.1	85.6	71.6	61.0	51.3	38.6	36.2	30.8	30.8	28.3	24.5	34.1	40.6	50.5	69.1	87.6	87.2	82.7	63.3	90.6
22-Sep	78.6	77.6	77.3	76.3	78.1	77.7	84.3	75.3	66.1	61.5	56.5	49.8	43.7	37.5	33.8	32.4	32.8	34.1	39.2	41.6	45.4	51.8	57.1	70.9	57.5	84.3
23-Sep	63.6	60.1	65.9	67.3	67.8	51.7	50.2	50.9	52.7	50.7	43.8	31.2	26.6	28.5	33.2	34.6	35.1	34.7	33.2	33.1	39.0	49.7	59.3	59.5	46.8	67.8
24-Sep	59.5	58.9	57.5	59.1	60.5	63.1	65.0	66.7	65.7	61.4	52.6	40.6	33.3	30.4	27.5	26.5	24.3	28.9	31.6	38.8	52.9	65.1	66.8	65.2	50.1	66.8
25-Sep	69.8	71.1	74.4	78.6	81.4	84.0	83.4	82.0	77.0	69.5	59.2	52.6	43.2	30.1	30.0	29.4	29.7	32.8	34.5	39.2	47.5	62.0	66.7	70.8	58.3	84.0
26-Sep	76.4	80.1	83.6	85.0	86.2	91.5	92.0	89.2	85.5	64.0	53.4	49.7	46.1	41.5	38.0	35.7	34.5	34.8	38.5	49.2	55.3	52.4	48.3	48.2	60.8	92.0
27-Sep	49.7	60.9	72.2	68.7	61.9	55.4	50.6	48.7	44.2	39.9	37.2	34.9	32.2	28.8	28.0	26.8	28.5	30.2	45.7	57.8	47.9	55.6	65.6	63.1	47.3	72.2
28-Sep	55.5	51.2	49.9	55.9	59.3	63.0	68.8	65.5	56.0	49.7	44.1	39.4	34.3	31.8	29.3	28.8	29.3	39.6	51.9	55.7	51.9	46.8	43.8	44.9	47.8	68.8
29-Sep	46.3	47.4	48.6	50.5	50.5	48.5	47.0	44.4	42.5	39.8	35.9	33.2	31.5	31.4	31.0	30.7	32.3	36.1	41.3	45.9	47.4	49.2	51.1	54.5	42.4	54.5
30-Sep	58.3	63.9	63.6	57.3	63.6	61.8	72.7	70.9	69.6	68.4	59.6	57.9	56.2	55.1	55.8	56.5	57.2	56.9	60.7	62.2	63.1	67.1	79.2	87.6	63.5	87.6
	76.7	78.2	79.6	80.7	81.8	81.8	81.8	78.8	74.4	67.0	59.3	52.5	45.8	41.6	39.9	38.6	38.9	42.2	49.5	58.1	64.4	70.5	74.1	75.9	Diurnal Average	
	93.8	95.1	94.0	93.5	95.2	97.8	96.3	96.1	94.3	89.3	84.2	80.4	73.8	68.7	62.1	68.3	67.2	65.3	72.2	80.8	88.6	93.2	93.0	92.3	Diurnal Maximum	

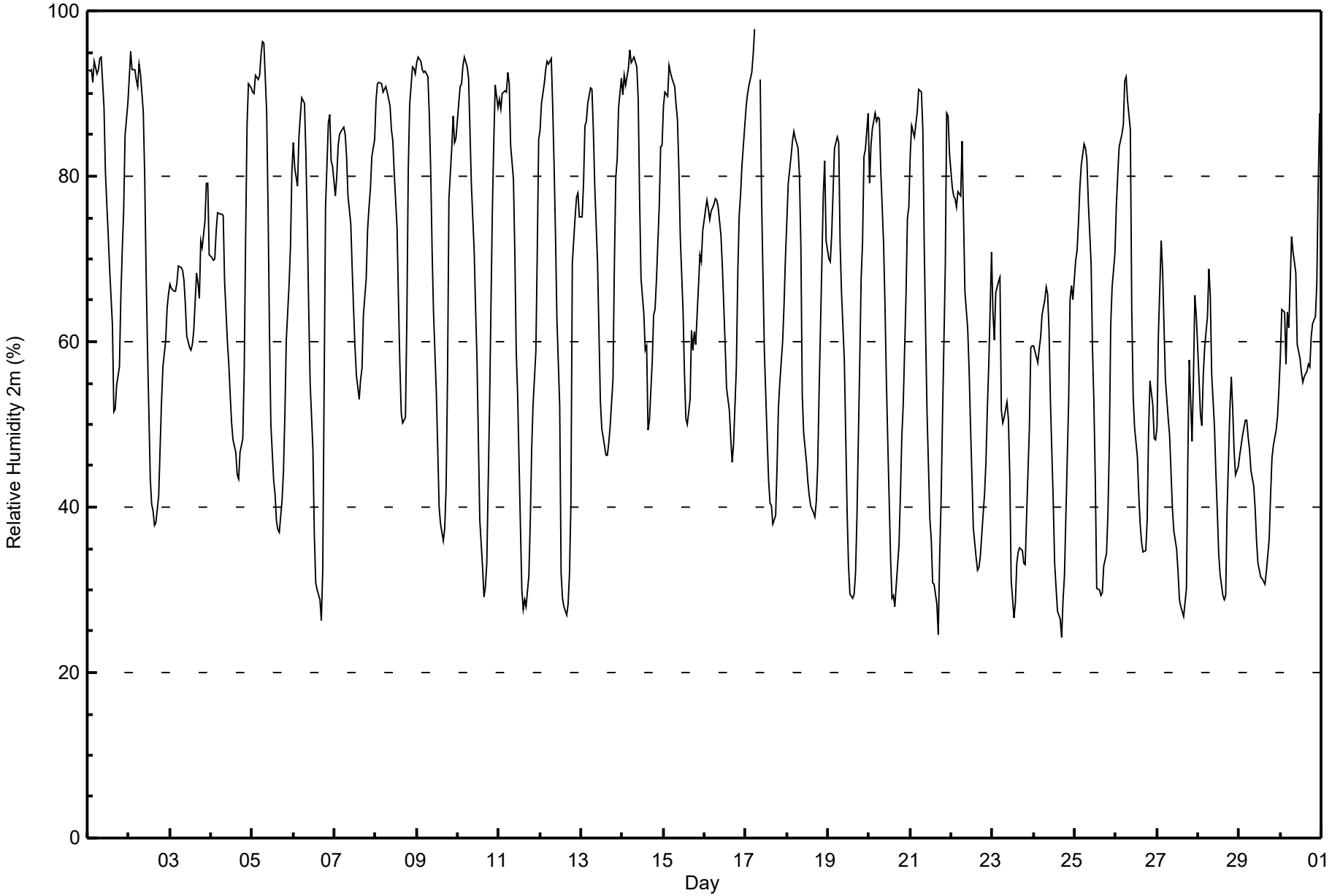
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Athabasca Valley - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - September 2025

Maximum Speed: 27 km/h on Sep 21 19:00

Maximum Daily Speed Average: 14.1 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 13 21:00

Minimum Daily Speed Average: 0.2 km/h on Sep 10

Maximum Diurnal Speed Average: 4.7 km/h at hour 8

Minimum Diurnal Speed Average: 0.8 km/h at hour 20

Monthly Average Velocity: 2.2 km/h 170.7 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 6 Q_3 = 11 P_{90} = 16 P_{99} = 23

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	S2	SE1	SSE2	ESE7	E5	ESE5	E4	SE7	SSE3	NNW2	SW2	NNW4	NW12	NW14	NW13	NNW15	NNW14	NNW13	N11	NNW7	NNW5	NNW4	WSW4	SW6	NNW3.4	NNW15
2-Sep	S3	NE3	ENE2	E1	E3	ESE5	SE7	ESE6	ESE6	ESE5	ENE4	NNE4	ESE5	ENE8	E8	E10	E10	E8	E8	ESE10	ESE9	SE9	SE6	SE6	E5.4	ESE10
3-Sep	ESE9	ESE8	ESE14	ESE17	ESE16	ESE15	ESE15	ESE14	ESE12	ESE12	ESE8	ESE7	ESE5	ENE5	NW6	NW12	NNW19	NNW23	NNW14	NNW19	NNW21	NW19	NW15	NW20	NNE3.6	NNW23
4-Sep	NW19	NW19	WNW13	W8	NW3	WNW5	WNW9	WNW9	NW22	NNW19	NW19	NW19	NW19	NW19	NNW16	NNW15	NNW13	NNW12	N7	NW2	WSW3	SSW3	ESE2	E3	NW10.4	NW22
5-Sep	ESE3	ESE4	ESE4	SE4	ESE7	ESE9	ESE8	SE8	ESE9	ESE8	ESE6	E6	ENE6	ENE6	ENE4	E1	ENE5	ENE10	ESE8	ESE10	ESE8	ESE6	SE3	ENE5	ESE5.9	ESE10
6-Sep	E3	ESE7	SE6	ESE4	SE8	SE7	ESE6	ESE7	SE8	SE9	SE9	SE4	ENE10	E11	E10	SE4	SW2	E1	SSW2	SSW3	E2	ENE2	SE2	SSE4	ESE4.7	E11
7-Sep	SSE5	SSE5	SE4	ESE7	SE7	ESE8	ESE10	ESE9	ESE6	ESE6	ESE5	S5	NW4	NW7	NW6	NW9	NNW15	NW12	NNW9	NNW6	NNW7	NNW8	NNW5	NW4	NNE1.4	NNW15
8-Sep	WNW2	NW7	NW6	NW10	NW10	NW10	NW8	NW7	NW9	NW9	NW9	NW6	NW5	NW6	WNW6	WNW5	NW6	WSW4	W3	SW1	S1	ENE2	E3	ESE4	NW4.8	NW10
9-Sep	E3	ENE3	E4	ESE6	ESE5	ESE5	ESE6	ESE8	ESE10	SE9	SE8	SE7	SE7	ESE15	SE12	S11	SSE9	SSE5	S3	SE1	SSW1	SSW2	S3	SSW3	SE5.4	ESE15
10-Sep	SSE3	SE2	SE2	SE2	E4	ESE4	ESE2	E2	SSE2	SSW7	NE2	N2	N6	N7	NNW2	WNW4	NW6	WSW3	SW5	WSW4	SW2	S2	E2	E4	SSE0.2	N7
11-Sep	E3	ESE3	E2	E3	SE4	ESE3	ESE5	ESE5	E6	ENE6	NE3	WNW3	E4	E5	ESE6	E9	ESE11	ESE7	ESE8	SE5	S5	S6	SSE4	S1	ESE4.0	ESE11
12-Sep	S3	S2	S2	SSW4	S2	S4	SSE2	SE5	SE9	ESE10	SE7	ESE3	SSW12	SSW13	SSW14	SSW13	SW9	SSW5	SSE3	SE2	SE2	S3	S2	SE3	S4.5	SSW14
13-Sep	SSE4	SSE5	ESE3	SSE5	SE4	ESE4	ESE6	E5	SE4	SE7	SE6	SSE3	WNW3	NW5	NNW10	NNW9	NNW9	NNW13	NNW7	NNW2	S0	SSE1	SSE0	ESE1	NE0.7	NNW13
14-Sep	SSW2	SE2	S1	SW2	S4	SE1	S2	SE2	S4	S3	WSW1	SE6	SE5	ENE6	E9	ESE12	ESE14	ESE11	ESE10	SE5	ESE6	ESE3	ESE2	SSE2	ESE4.0	ESE14
15-Sep	ENE2	S6	S5	S7	SSE6	SSE6	SE7	ESE6	S5	SSW6	NNE2	NE2	NNW5	NW6	WNW16	WNW23	WNW26	NW22	WNW14	WNW15	WNW6	W11	WNW12	WSW6	W5.3	WNW26
16-Sep	SW10	SW8	WSW5	NW7	NW7	NW9	WNW4	SSW6	SW7	SSW7	N4	N2	ENE8	ENE4	ENE8	ENE5	ENE5	ESE5	ESE6	ESE6	ESE8	ESE7	SE7	SE5	SE1.0	SW10
17-Sep	ESE6	SE7	SSE6	SE5	SE4	SE9	ESE10	ESE10	ESE10	SE9	SE9	ESE10	E14	E16	ESE18	ESE19	ESE19	ESE15	SE12	SE14	ESE15	ESE14	ESE12	ESE9	ESE11.0	ESE19
18-Sep	ESE8	ESE10	ESE10	ESE11	ESE11	ESE13	ESE14	ESE15	ESE12	S12	SSW15	SSW14	SSW15	SW11	SW12	SSW13	SSW10	SSW6	S4	S4	S2	SSE2	ESE4	SE5	SSE6.8	SSW15
19-Sep	ESE6	ESE7	ESE6	SE3	SSE3	SSE3	SE3	ESE3	E5	S7	SSW7	SSW11	SSW16	SSW14	SW16	SSW11	SSW6	S2	SSW2	SSW1	NE2	SSE1	NE1	ESE3	S4.4	SW16
20-Sep	SSE4	SE5	SSE4	SE5	SE7	ESE6	SE5	ESE7	SE10	SE8	ESE6	ESE6	SSW10	SSW16	S15	SSE15	SSE12	SE7	ESE9	SE6	SE5	ENE3	NE2	SE1	SSE6.1	SSW16
21-Sep	SSW5	SSW3	SSW4	SSE4	S4	SE3	SE3	E4	ESE5	E5	ENE3	N3	NNW6	NNE2	NNW4	W13	W22	W15	W27	W27	WSW13	S3	SW10	SW18	WSW5.2	W27
22-Sep	SW18	SW21	SW18	S6	SSE2	SSE4	ESE7	E5	S11	SSW16	SSW19	SW15	SSW15	SSW19	SW20	SW18	SW15	S7	SSE6	SSE5	SE6	ESE5	SE3	SE3	SSW9.3	SW21
23-Sep	SE6	SE7	ESE5	SE3	E4	S9	S9	S9	SSW12	SSW12	SW14	WSW20	SW21	SW20	SW19	SSW14	SW12	SSW12	SSW10	S7	ESE6	ESE5	ESE2	ESE6	SSW8.0	SW21
24-Sep	ESE6	E4	ESE4	ESE5	SE6	ESE4	SE4	SE5	SSW6	SW12	SW15	WSW22	WSW22	W22	W23	W19	WSW18	W13	WSW14	WNW4	S3	SSE4	ESE4	ESE4	WSW6.2	W23
25-Sep	SE3	SE5	ESE7	ESE10	ESE12	ESE13	ESE12	ESE10	ESE10	ESE9	ESE10	ESE8	E5	S12	SSE14	SSE13	SSE13	SSE10	SE10	SE6	SSW12	SSW15	WSW16	WSW12	SSE7.5	WSW16
26-Sep	SSW6	SW7	S4	SE3	ESE3	E3	E2	SE3	ENE5	WSW6	WSW18	WSW20	WSW23	WSW24	WSW23	W22	WSW21	WSW17	SW11	S5	SE4	ESE6	SE7	SE8	WSW7.4	WSW24
27-Sep	SSE9	SE6	SE7	SSE8	SW12	SW14	SW18	SW17	WSW15	WSW25	WSW25	WSW22	SW21	SW21	SW19	SW16	SW14	WSW9	SW4	SW5	SW9	S3	ESE3	SE0	SW11.0	WSW25
28-Sep	SSW4	SW15	SW21	SSW13	SSW11	SSW11	E3	SSW3	SSW9	SSW8	S7	S4	SW4	SSW7	SW5	SW5	SSW4	ESE2	E2	E5	E7	ESE9	SE11	ESE12	S5.3	SW21
29-Sep	ESE10	ESE11	ESE14	ESE14	ESE15	ESE15	ESE17	ESE19	ESE20	ESE23	ESE22	ESE21	SE21	SE17	SE15	SE15	SE14	SE8	SE8	ESE10	ESE11	ESE10	ESE7	ESE8	ESE14.1	ESE23
30-Sep	ESE6	E4	E3	ESE6	E4	S6	SSW3	WNW3	SW5	SSW6	SSW3	NW7	NNW9	NNW12	NNW11	NNW13	NNW10	NNW10	NNW7	NNW9	NW9	NNW7	NNW7	NW11	NNW3.9	NNW13
	SSE2.8	SSE2.7	SSE3.0	SE4.0	SE4.1	SE4.3	SE4.5	SE4.7	SE4.4	SSE4.4	S3.4	SW2.9	SW3.0	SW3.2	SW3.5	WSW3.6	WSW2.9	W1.8	SW1.0	SSW0.8	SE1.4	SE1.7	SSE1.4	SSE1.8	Diurnal Average	
	NW19	SW21	SW21	ESE17	ESE16	ESE15	SW18	ESE19	NW22	WSW25	WSW25	WSW22	WSW23	WSW24	WSW23	WNW23	WNW26	NNW23	W27	W27	NNW21	NW19	WSW16	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 21 16:00

Minimum Value: 1 km/h on Sep 8 19:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

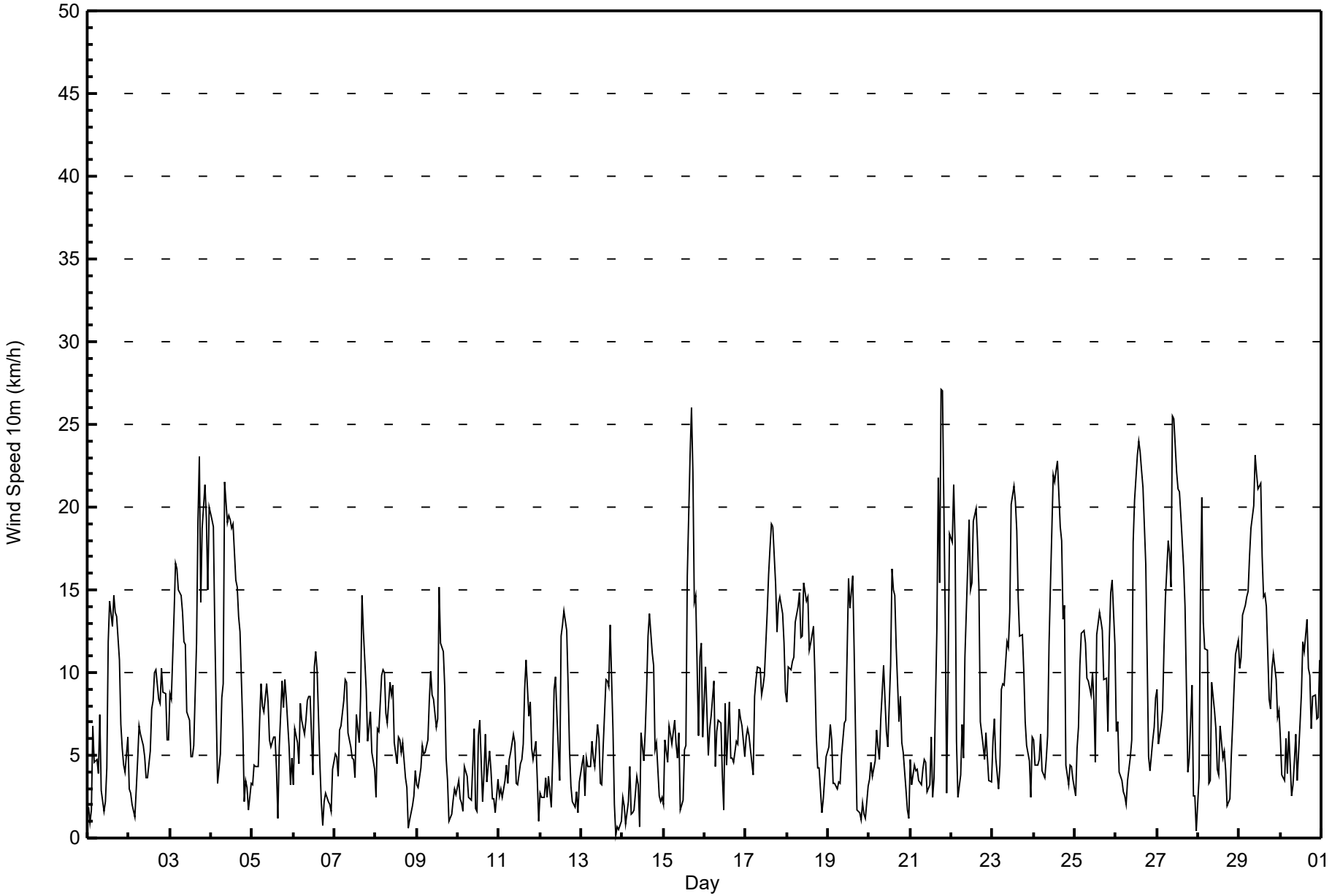
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	2	1	1	3	1	1	2	3	2	1	1	3	3	3	3	4	4	3	3	2	1	1	1	1	4
2-Sep	2	1	1	1	1	2	1	2	1	1	1	1	2	2	2	3	3	3	2	2	2	2	2	2	3
3-Sep	2	2	2	3	3	2	3	3	2	2	2	2	2	2	2	3	5	7	4	5	5	5	4	4	7
4-Sep	3	4	3	3	2	2	3	2	7	5	4	5	5	4	4	4	3	3	3	2	2	2	2	1	7
5-Sep	1	1	1	1	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	1	1	3
6-Sep	1	2	2	1	2	2	2	2	2	2	2	2	3	3	3	2	2	1	1	1	2	1	1	2	3
7-Sep	2	1	1	1	1	2	2	2	2	2	2	2	2	1	2	2	4	3	3	2	2	2	1	1	4
8-Sep	1	2	2	2	1	2	2	2	1	2	2	2	2	2	2	1	1	1	1	1	2	1	1	1	2
9-Sep	1	1	2	2	1	2	2	2	2	3	2	2	3	4	4	4	2	1	1	2	1	2	2	2	4
10-Sep	2	1	2	1	1	1	1	1	2	2	1	1	2	2	2	2	3	1	1	2	2	2	1	1	3
11-Sep	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	2	1	3	3	1	3
12-Sep	1	2	2	2	2	2	1	3	3	2	2	3	4	4	3	4	2	2	1	1	1	2	2	2	4
13-Sep	1	1	1	1	1	1	2	2	2	2	2	2	1	1	2	3	3	3	3	2	1	1	1	1	3
14-Sep	2	1	1	1	2	1	1	2	1	1	1	3	2	3	2	4	3	3	3	2	2	1	1	1	4
15-Sep	2	1	1	1	1	1	2	2	1	2	1	1	2	4	4	6	6	5	5	2	3	5	3	2	6
16-Sep	3	2	2	2	2	2	2	3	2	3	1	2	2	3	2	1	2	2	2	2	2	2	2	2	3
17-Sep	1	2	1	2	2	2	2	2	2	2	2	2	4	5	5	5	5	4	3	3	3	3	3	2	5
18-Sep	2	2	2	2	3	3	3	3	3	4	4	4	4	3	4	4	3	2	1	1	1	1	2	1	4
19-Sep	1	1	2	1	1	1	1	1	2	2	1	3	3	4	4	3	2	1	1	2	1	1	1	1	4
20-Sep	1	1	1	2	2	2	1	2	2	2	2	2	6	4	5	4	3	2	2	1	2	1	1	1	6
21-Sep	2	2	2	2	2	1	1	1	1	2	2	1	1	1	1	8	4	4	7	6	4	2	5	3	8
22-Sep	4	4	6	4	2	3	2	1	4	3	3	4	4	4	4	5	4	2	2	2	2	1	1	1	6
23-Sep	2	1	3	2	1	2	2	3	3	2	3	5	6	6	5	3	3	3	3	2	1	2	2	2	6
24-Sep	2	2	1	1	1	1	2	2	3	4	5	6	4	5	5	4	4	5	2	4	2	3	1	1	6
25-Sep	1	2	2	2	3	3	2	2	2	3	2	2	2	4	4	4	3	2	3	2	6	4	6	3	6
26-Sep	3	1	2	1	1	1	1	2	2	7	4	5	6	5	5	4	5	4	2	3	1	2	2	2	7
27-Sep	2	2	3	3	3	3	4	4	4	6	7	5	6	6	5	5	4	3	1	2	1	2	1	1	7
28-Sep	3	7	4	3	5	3	2	3	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	3	7
29-Sep	2	3	3	3	3	4	4	5	5	6	6	6	6	4	4	4	4	3	2	3	2	3	2	3	6
30-Sep	1	1	3	4	2	3	3	2	1	3	2	2	2	4	3	4	4	4	2	3	3	2	2	2	4
	4	7	6	4	5	4	4	5	7	7	7	6	6	6	5	8	6	7	7	6	6	5	6	4	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	285	39.58	39.58
6 - 11	262	36.39	75.97
12 - 19	137	19.03	95.00
20 - 28	36	5.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Athabasca Valley - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	3	7	16	35	45	48	29	35	19	12	7	1	9	6	9	285
6 - 11	4	0	0	9	12	88	45	8	14	20	10	3	2	4	25	18	262
12 - 19	0	0	0	0	2	32	7	5	3	23	20	8	4	5	13	15	137
20 - 28	0	0	0	0	0	4	1	0	0	0	7	11	6	2	3	2	36
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	8	3	7	25	49	169	101	42	52	62	49	29	13	20	47	44	720

Total Number of Valid Hours: 720

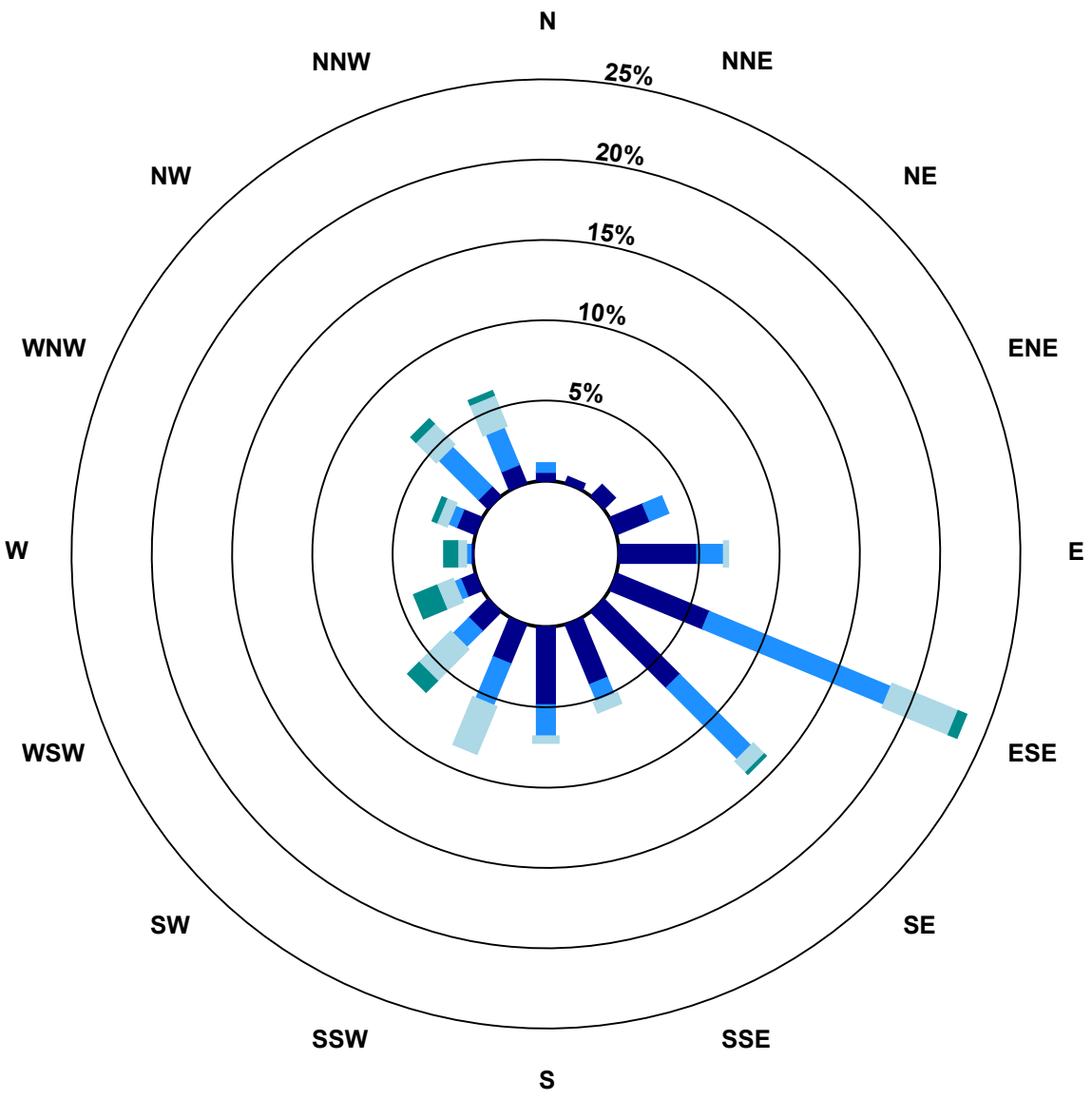
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Athabasca Valley



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - September 2025

Direction of Maximum Speed: 268 deg on Sep 21 19:00
Direction of Maximum Daily Speed Average: 118.7 deg on Sep 29

Direction of Minimum Speed: 173 deg on Sep 13 21:00

Direction of Minimum Daily Speed Average: 0.2 deg on Sep 10

Monthly Average Direction: 170.7 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	173	137	167	115	85	113	93	131	148	330	235	331	321	322	323	327	336	339	353	344	335	340	240	217	335.7
2-Sep	191	50	58	91	99	112	124	118	121	111	72	22	102	74	80	80	79	89	95	104	107	128	130	128	99.5
3-Sep	121	107	109	119	119	120	120	120	119	117	123	119	119	75	319	326	328	342	339	329	328	323	316	315	33.4
4-Sep	313	308	300	261	311	288	291	302	319	338	318	318	319	321	330	340	343	330	11	317	244	199	121	79	318.8
5-Sep	111	116	104	125	112	116	120	124	114	113	112	90	62	67	66	94	75	71	103	109	109	112	125	77	102.4
6-Sep	86	114	127	112	128	130	116	116	128	141	144	137	78	84	79	139	223	82	206	212	81	77	124	152	117.5
7-Sep	149	150	136	122	127	118	121	121	115	118	105	191	318	321	321	323	331	325	332	338	345	330	331	315	15.9
8-Sep	288	316	312	311	310	310	306	313	307	319	315	304	322	315	292	297	306	247	272	226	181	59	95	116	308.5
9-Sep	81	62	86	103	111	108	112	119	116	138	139	128	127	114	138	170	157	153	182	132	199	201	188	193	131.5
10-Sep	161	128	133	139	101	104	111	90	154	199	43	1	2	0	336	298	306	239	222	258	218	191	100	84	162.9
11-Sep	100	113	87	99	128	106	104	107	84	60	37	292	91	101	109	82	113	120	108	132	171	178	150	171	108.8
12-Sep	188	172	189	196	171	188	156	124	126	123	127	102	206	204	209	203	214	208	164	129	139	187	180	145	178.2
13-Sep	154	159	110	149	142	115	119	87	126	133	129	160	294	318	331	330	340	332	332	347	173	159	152	110	44.5
14-Sep	197	134	179	221	187	130	190	127	183	171	239	127	133	71	81	107	112	106	120	142	119	112	111	165	122.8
15-Sep	60	185	177	184	168	148	125	108	172	195	28	36	346	312	282	289	297	305	295	283	296	274	286	244	277.7
16-Sep	218	223	243	322	306	318	303	211	224	211	358	7	66	75	68	61	65	122	116	117	109	111	134	141	137.0
17-Sep	119	127	147	142	142	127	123	119	121	132	128	110	95	99	103	106	110	118	124	124	123	120	118	107	116.7
18-Sep	107	104	113	109	113	115	116	118	119	179	200	205	208	224	218	210	204	205	189	183	186	154	113	126	159.7
19-Sep	123	116	120	144	151	149	137	120	83	189	198	202	201	213	219	206	194	177	205	206	54	156	53	123	180.5
20-Sep	152	143	148	128	129	120	134	123	131	124	123	108	193	200	183	166	168	142	113	142	124	62	43	141	148.4
21-Sep	205	201	205	156	181	135	137	80	112	85	74	357	340	25	330	277	279	273	268	272	252	173	220	225	255.1
22-Sep	231	232	222	180	165	160	115	98	186	205	201	218	212	209	215	220	217	176	162	152	133	108	138	126	202.1
23-Sep	135	133	118	133	86	170	173	183	204	207	214	249	233	230	214	207	214	209	207	181	121	122	105	118	199.8
24-Sep	110	94	115	115	131	112	129	140	192	220	236	256	258	265	274	273	247	275	257	296	170	156	109	118	242.8
25-Sep	145	135	118	117	115	112	116	112	115	119	120	112	101	175	159	156	150	155	138	139	208	211	245	242	148.4
26-Sep	212	217	177	128	118	93	96	135	78	239	255	254	250	257	258	264	254	256	235	177	129	121	144	146	238.2
27-Sep	152	128	125	155	224	232	236	234	239	249	253	249	232	235	222	231	226	239	230	221	229	190	105	137	229.4
28-Sep	209	233	229	200	201	197	90	197	204	192	191	189	217	203	232	227	204	115	86	99	101	104	125	115	187.0
29-Sep	112	109	109	115	112	115	113	113	112	109	110	121	126	137	136	142	127	142	131	112	117	119	107	118	118.7
30-Sep	120	92	91	111	100	176	207	296	228	200	202	323	329	330	332	327	334	337	343	330	326	343	333	323	329.7
	158.4	157.4	151.3	137.1	133.8	135.7	129.6	128.7	142.8	166.8	186.1	219.9	223.2	229.2	230.4	239.9	251.1	279.9	220.4	191.7	143.7	137.7	154.1	156.8	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 98 deg on Sep 28 00:00

Minimum Value: 8 deg on Sep 21 19:00

Percentiles: P_1 = 10 P_{10} = 14 Q_1 = 17 Median = 23 Q_3 = 43 P_{90} = 67 P_{99} = 90

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

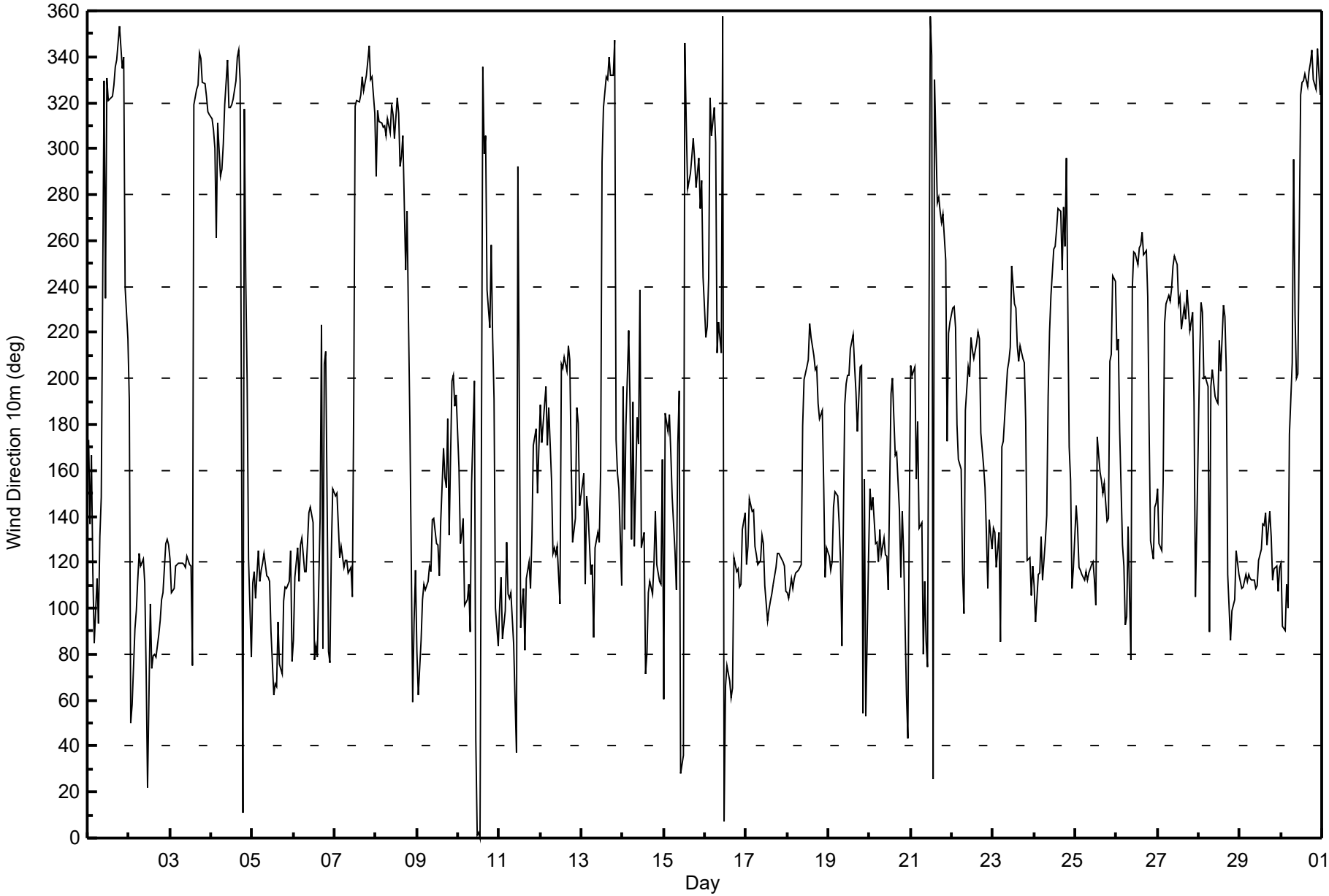
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	67	72	73	26	20	30	54	25	52	82	56	61	12	13	16	17	19	18	18	22	16	26	38	14	82
2-Sep	62	56	52	68	43	22	14	17	22	30	41	43	47	28	28	22	19	21	19	15	19	17	24	25	68
3-Sep	13	18	10	11	12	11	12	12	12	15	23	22	37	39	28	13	15	20	19	17	17	15	12	9	39
4-Sep	11	12	24	29	62	38	29	29	15	20	16	21	19	20	18	20	19	16	24	62	43	56	71	44	71
5-Sep	37	31	29	28	19	14	16	19	18	18	31	38	42	62	68	96	46	11	20	13	14	23	44	25	96
6-Sep	53	25	21	22	16	19	22	20	21	21	23	69	28	23	25	52	64	84	52	68	69	57	60	30	84
7-Sep	38	19	38	19	20	16	14	14	15	24	29	67	52	11	21	14	16	13	19	30	18	19	23	18	67
8-Sep	50	20	21	10	10	11	23	29	14	17	13	29	46	23	20	19	14	31	26	89	70	63	47	30	89
9-Sep	41	52	39	30	28	28	25	18	16	21	20	26	29	20	31	24	18	35	35	82	86	78	56	74	86
10-Sep	49	59	72	78	40	45	63	60	71	17	86	76	46	34	88	56	32	44	17	45	75	57	82	37	88
11-Sep	36	38	41	34	28	27	23	19	25	16	51	35	62	49	48	27	22	21	16	17	21	35	71	75	75
12-Sep	35	43	56	38	49	33	69	51	24	16	23	84	16	19	15	22	14	16	36	65	72	69	90	64	90
13-Sep	37	19	47	26	27	26	20	37	57	25	26	72	64	14	14	17	21	13	27	60	97	89	93	72	97
14-Sep	55	59	84	74	48	54	67	65	41	49	93	55	57	35	20	18	16	20	18	21	24	54	59	51	93
15-Sep	55	26	24	19	15	16	17	22	43	18	83	65	40	58	24	14	13	11	13	12	28	26	19	45	83
16-Sep	18	16	41	27	20	14	36	34	22	47	48	85	27	81	16	32	13	40	17	38	20	25	26	31	85
17-Sep	18	18	22	40	70	17	15	15	15	20	19	23	21	20	18	17	16	17	15	14	14	14	16	18	70
18-Sep	20	15	15	16	16	14	16	13	16	29	16	20	17	20	19	16	20	19	19	17	78	68	44	30	78
19-Sep	19	15	18	32	33	44	26	25	28	43	16	15	15	16	20	18	20	73	75	96	74	58	76	39	96
20-Sep	29	27	31	38	22	30	28	19	17	17	22	54	53	17	24	21	16	17	18	22	38	64	62	83	83
21-Sep	29	73	29	41	46	32	43	27	30	28	90	67	25	68	52	30	11	10	8	12	17	80	21	9	90
22-Sep	11	11	16	71	83	59	23	27	25	13	12	15	15	15	13	15	14	22	29	54	16	13	35	40	83
23-Sep	13	12	61	51	39	19	20	26	14	15	15	16	16	15	13	16	17	17	20	24	24	68	67	28	68
24-Sep	33	42	45	34	22	52	49	28	41	18	24	17	18	14	18	19	14	22	9	67	64	57	48	32	67
25-Sep	45	26	20	13	14	13	15	16	17	20	16	17	74	35	22	19	20	15	19	45	17	13	22	15	74
26-Sep	21	13	62	30	33	57	54	51	24	79	17	17	15	16	16	14	13	10	14	45	45	28	22	18	79
27-Sep	20	25	39	30	27	14	12	13	16	13	15	17	19	20	15	20	19	13	15	31	11	70	47	98	98
28-Sep	74	32	10	16	24	21	54	90	20	24	27	69	74	37	40	28	36	67	44	24	25	19	15	15	90
29-Sep	13	13	14	14	14	17	15	18	17	15	15	18	18	20	21	22	21	18	20	17	14	16	23	24	24
30-Sep	23	43	59	59	47	43	94	44	45	22	60	16	18	16	18	16	20	19	18	17	18	21	19	11	94
	74	73	84	78	83	59	94	90	71	82	93	85	74	81	88	96	64	84	75	96	97	89	93	98	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS08
FORT CHIPEWYAN
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
SEPTEMBER 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	686	34	34	100	-	-	4.6	0	0.8	0
TRS (ppb) Average	684	36	36	100	0.8	0	0.8	-	0.4	-
O3(ppb) Average	686	34	34	100	-	-	58.8	0	35.7	-
NO2(ppb) Average	682	38	38	100	-	-	14.8	0	6.2	-
NO(ppb) Average	682	38	38	100	-	-	5.6	-	1.1	-
NOX(ppb) Average	682	38	38	100	-	-	19.3	-	7.3	-
PM2.5(ug/m3) Average	718	2	2	100	-	-	144.5	0	60.2	6
Temperature 2 m (C) Average	720	0	0	100	-	-	27.3	-	20.7	-
Relative Humidity (%) Average	720	0	0	100	-	-	99	-	87.9	-
Wind Speed 10 m (km/h) Average	715	0	5	99.31	-	-	35	-	21	-
Wind Direction 10 m (deg) Average	715	0	5	99.31	-		-	-	-	-
PC(mm) Total	720	0	0	100	-	-	1.6	-	2.9	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	38.7	-	8.3	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	624.5	-	211.1	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	686	0.2	0.4	-	0	0	0	0	0.1	0.6	4.6
TRS (ppb) Average	684	0.26	0.1	-	0.1	0.2	0.2	0.2	0.3	0.4	0.8
O3(ppb) Average	686	26.54	7.9	-	8.2	16.9	21.5	26.1	30.5	36.3	58.8
NO2(ppb) Average	682	1.19	2	-	0.1	0.2	0.3	0.5	1.1	2.7	14.8
NO(ppb) Average	682	0.12	0.5	-	0	0	0	0	0	0.2	5.6
NOX(ppb) Average	682	1.3	2.3	-	0.1	0.2	0.3	0.5	1.2	2.8	19.3
PM2.5(ug/m3) Average	718	19.62	22.5	-	0.7	2.3	4.1	11.9	25.7	44.9	144.5
Temperature 2 m (C) Average	720	14.31	4.2	-	3.8	8.9	11.4	14.2	17.1	20	27.3
Relative Humidity (%) Average	720	68.1	15.5	-	28.2	46	56.4	69.7	79.1	88.8	99
Wind Speed 10 m (km/h) Average	715	13.3	6	-	0	6	9	12	18	21	35
Wind Direction 10 m (deg) Average	715	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	5.55	-	-	-	0	0	0	1.6
Leaf Wetness (% of range) Average	720	2.4	4.5	-	0.4	0.9	1.1	1.3	1.5	2.5	38.7
Global Solar Radiation (W/m2) Average	720	142.5	188.8	-	0	0	0	15.7	280.1	467	624.5

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	05 Sep 2025 05:00	05 Sep 2025 05:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	13 Sep 2025 09:00	13 Sep 2025 10:00	2	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	20 Sep 2025 03:00	20 Sep 2025 04:00	2	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.6 ppb on Sep 18 10:00 Maximum Daily Average: 0.8 ppb on Sep 6

Minimum Value: 0.0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 4

Maximum Diurnal Average: 0.4 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.20 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.6 P_{99} = 2.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	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	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
2-Sep	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
3-Sep	0.1	0.1	0.1	0.1	0.3	Z	0.5	0.8	1.2	1.5	1.4	1.2	0.7	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.5
4-Sep	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
5-Sep	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
6-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	1.1	1.2	1.2	1.0	0.6	0.7	1.9	1.4	0.8	0.4	0.4	0.4	1.6	2.5	2.1	0.8	2.5
7-Sep	1.6	1.1	0.5	Z	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	0.1	0.1	0.1	0.0	0.3	1.6
8-Sep	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-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.4	0.5	0.4	0.5	0.6	0.3	0.3	0.5	0.9	2.1	3.8	3.5	2.1	0.3	0.7	3.8
10-Sep	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	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
11-Sep	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	0.1	0.2	0.4	1.4	1.1	0.5	0.4	0.2	1.4
12-Sep	0.3	0.4	Z	0.9	0.9	0.9	0.8	0.7	0.9	0.9	0.8	0.9	0.6	0.6	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0.9
13-Sep	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.2	0.5
14-Sep	0.4	0.4	0.3	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	0.0	0.1	0.0	0.1	0.1	0.1	0.4
15-Sep	0.1	0.1	0.2	0.2	0.1	Z	0.1	0.1	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	0.1	0.2
16-Sep	Z	0.1	0.0	0.0	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	0.1
17-Sep	0.0	Z	0.5	0.6	0.6	0.6	0.7	0.8	0.9	1.2	1.4	1.2	1.2	1.1	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.5	1.4
18-Sep	0.1	0.1	Z	0.2	0.2	0.3	0.5	1.0	3.4	4.6	1.8	1.2	1.0	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.7	4.6
19-Sep	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	0.1	0.1	0.0	0.1
20-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.5	0.8	1.3	1.2	0.4	0.7	0.7	0.2	0.6	0.9	1.5	1.1	0.5	0.4	0.3	0.5	0.5	1.5
21-Sep	0.4	0.4	0.3	0.5	0.9	Z	0.5	0.3	0.3	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.9
22-Sep	Z	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	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
23-Sep	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-Sep	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
25-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.6	0.6	2.1	1.1	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.3	2.1
26-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
27-Sep	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
28-Sep	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
29-Sep	0.0	Z	0.1	0.1	0.2	0.1	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	0.0	0.1	0.1	0.2
30-Sep	0.1	0.0	Z	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	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	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	Diurnal Average	
	1.6	1.1	0.5	0.9	0.9	0.9	0.8	1.0	3.4	4.6	1.8	1.2	1.2	1.1	2.1	1.9	1.4	0.9	1.5	2.1	3.8	3.5	2.5	2.1	Diurnal Maximum	

Z - zerospan C - Calibration

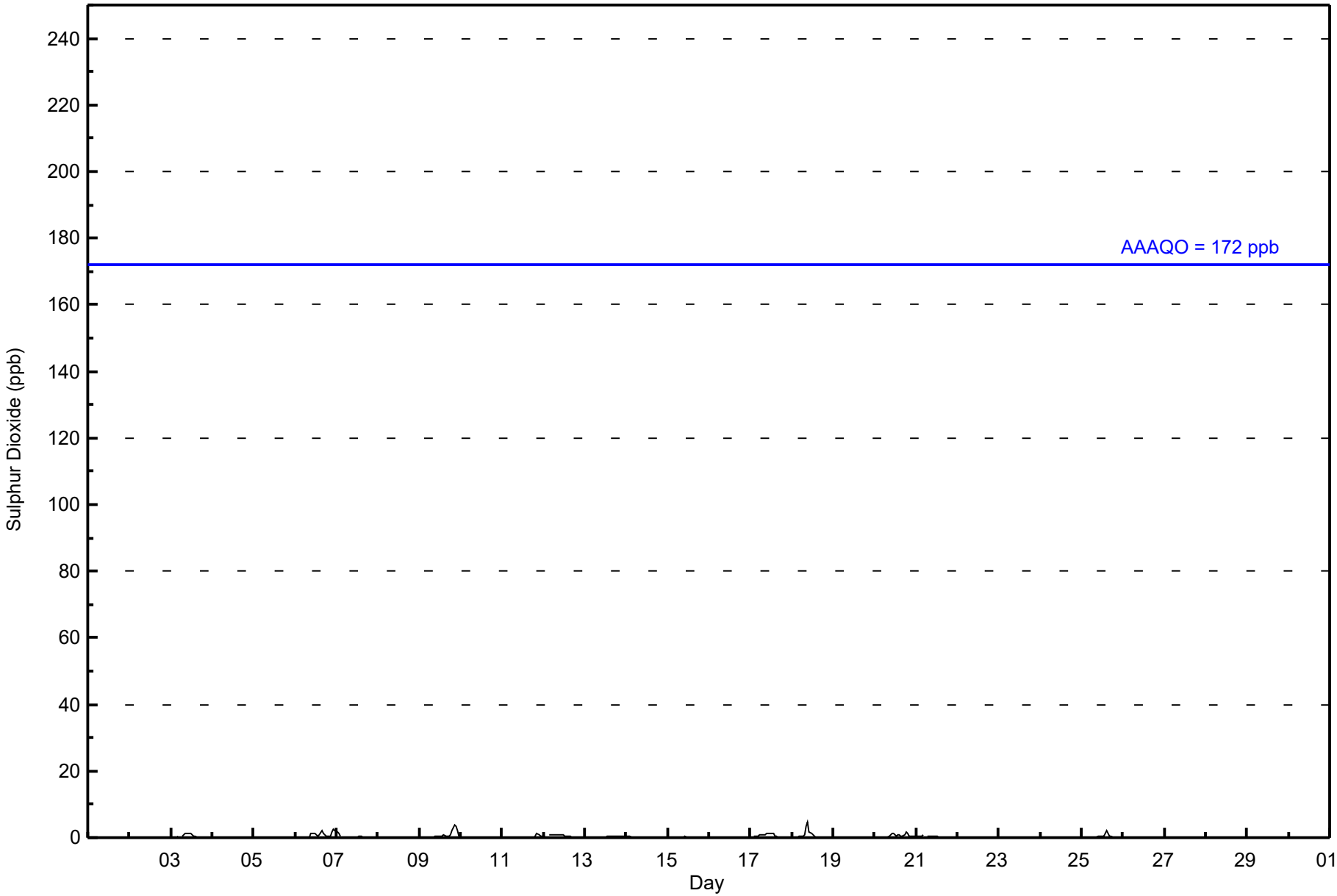
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - September 2025



Sulphur Dioxide (SO_2) - ppb
Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	10	8	3	31	75	60	50	40	62	18	49	76	82	40	38	39	681
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	10	8	3	31	75	60	50	40	62	18	49	76	82	40	38	39	681

Total Number of Valid Hours: 681

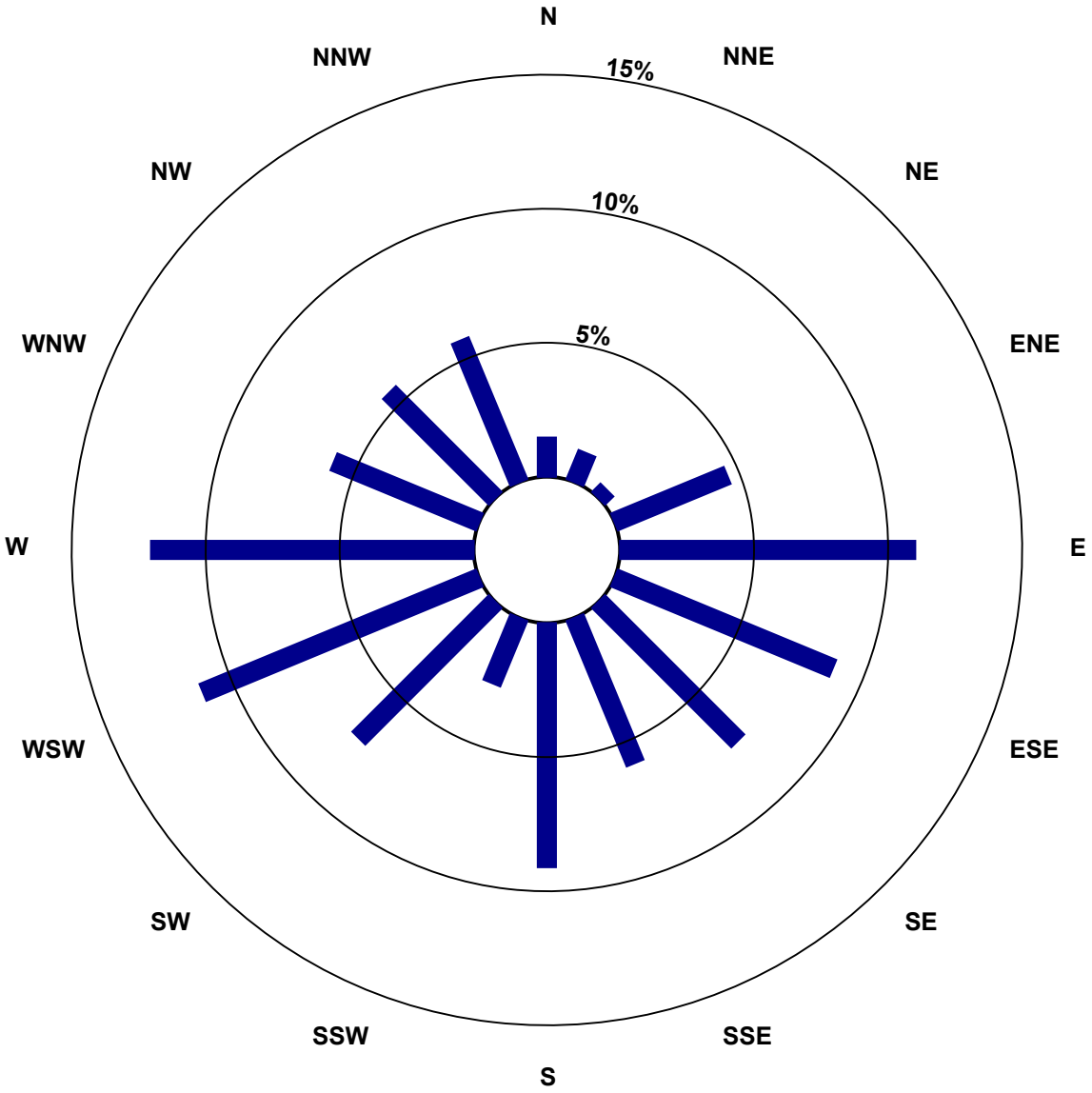
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

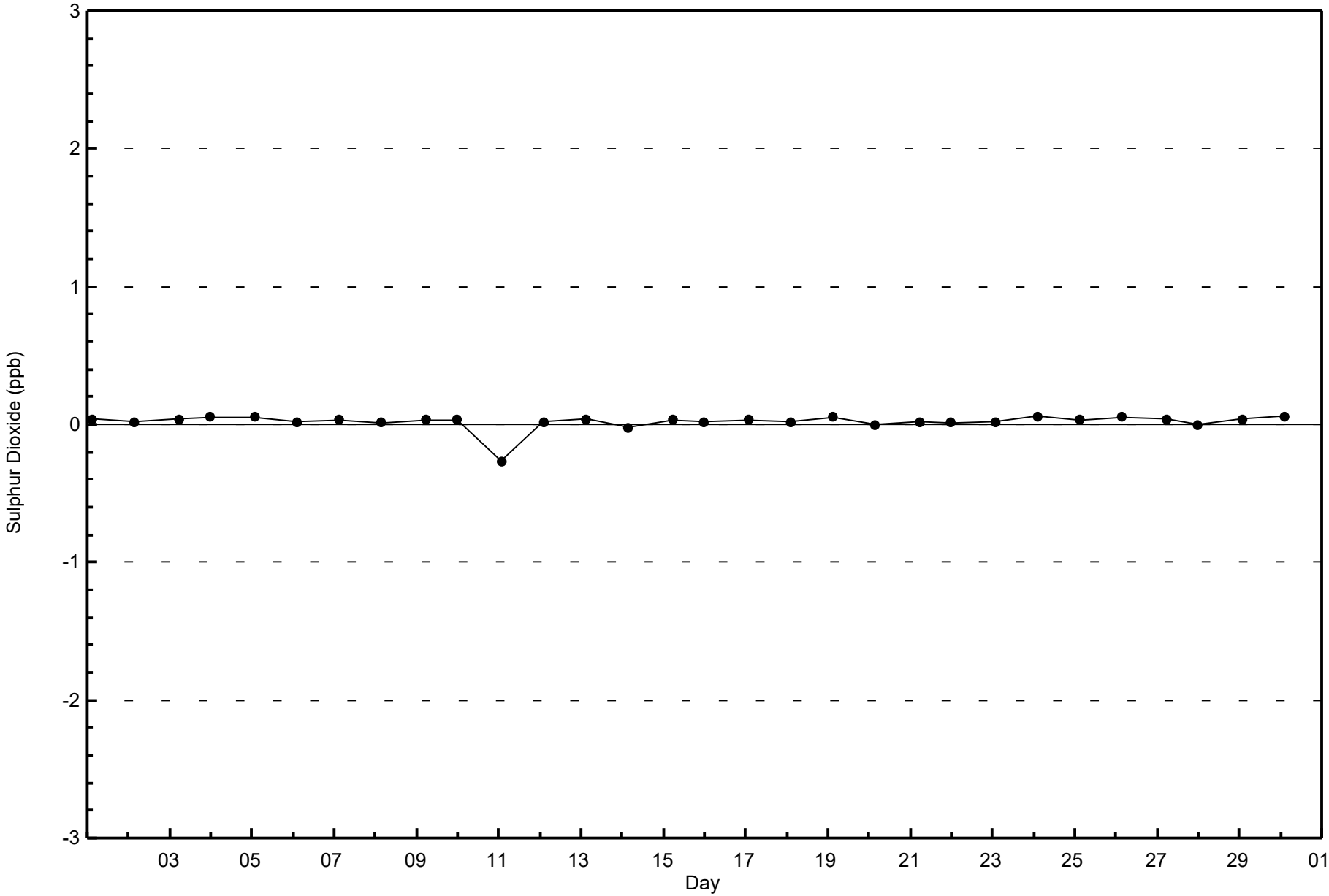
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - September 2025

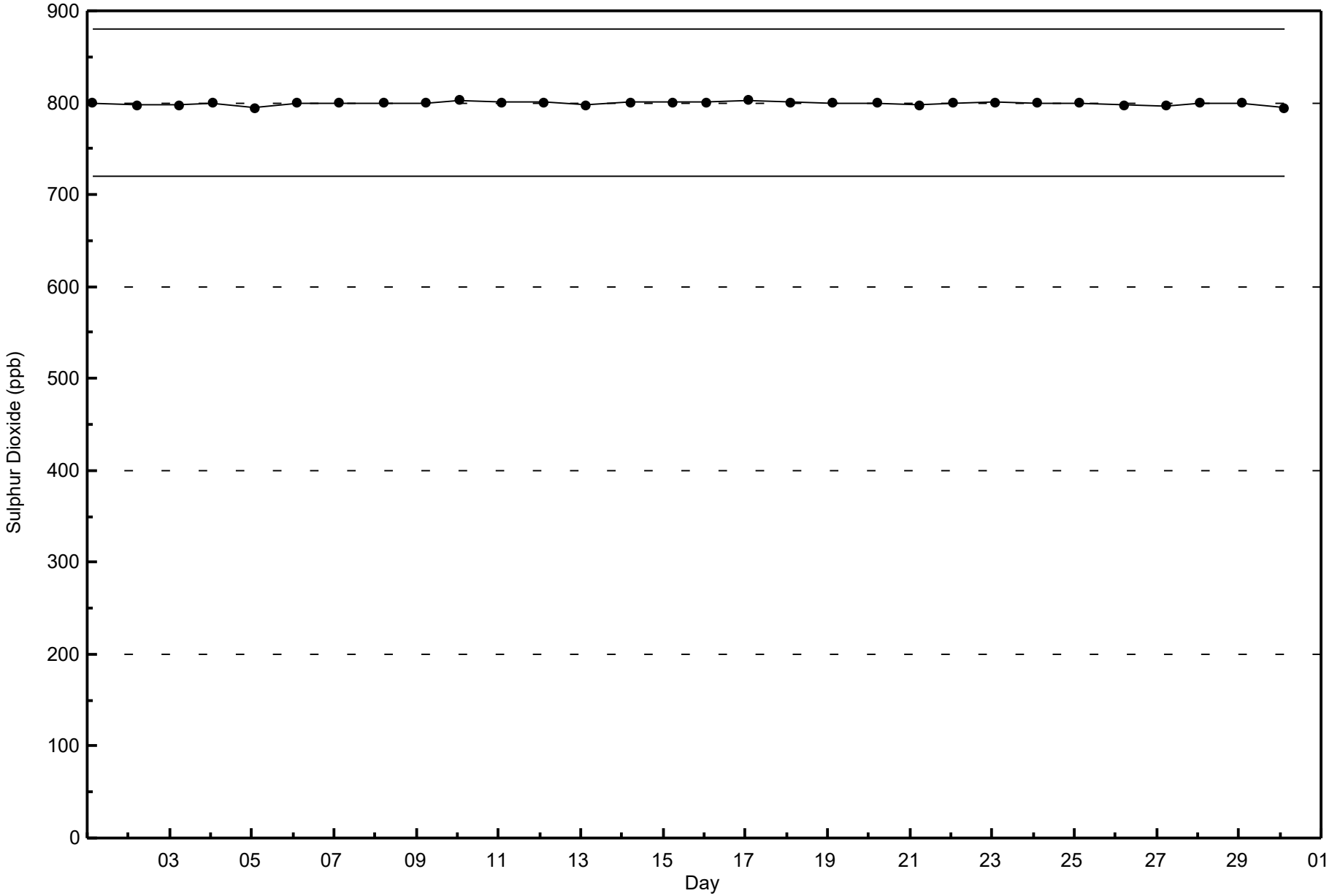


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.8 ppb on Sep 13 13:30 Maximum Daily Average: 0.4 ppb on Sep 13

Minimum Value: 0.1 ppb on Sep 5 22:00 Minimum Daily Average: 0.2 ppb on Sep 29

Maximum Diurnal Average: 0.3 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 2

Monthly Average: 0.26 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 0.7

Periods in Service:	1440
Periods of Valid Data:	1368
Periods of Invalid Data:	72
Periods of Calibration:	72
Percent Operational Time:	100.0

Period Ending At (MST)

Day	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	Daily Average	Daily Maximum
1-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5
	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3		
2-Sep	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	0.3	0.2	0.3
	0.2	0.2	0.2	0.3	0.2	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	0.3	0.3		
3-Sep	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.5	0.3	0.2	0.2	0.3	0.5
	SP	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.5	0.4	0.4	0.3	0.2	0.2		
4-Sep	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3
	0.2	SP	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	0.2	0.2	0.3	0.3	0.3		
5-Sep	0.3	0.3	Z	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	0.1	0.2	0.3
	0.3	0.3	SP	0.2	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	0.2	0.2	0.1	0.1	0.2		
6-Sep	0.2	0.1	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	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
	0.2	0.2	0.2	SP	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	0.3	0.3		
7-Sep	0.3	0.3	0.2	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
	0.3	0.2	0.3	0.4	SP	0.4	0.4	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	0.4	0.3		
8-Sep	0.3	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	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3
	0.3	0.3	0.3	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1		
9-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.3	0.2	0.5
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.4	0.3		
10-Sep	0.3	Z	0.4	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	0.3	0.3	0.3	0.2	0.2	0.3	0.4
	0.3	SP	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	0.4	0.3	0.3	0.2	0.2	0.2		
11-Sep	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	0.2	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	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	0.3	0.2	0.2	0.2		
12-Sep	0.2	0.2	0.3	Z	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.7
	0.2	0.3	0.4	SP	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2		
13-Sep	0.2	0.2	0.3	0.2	Z	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.8	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.2	0.2	0.4	0.8
	0.3	0.2	0.2	0.2	SP	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.7	0.8	0.7	0.7	0.7	0.6	0.4	0.4	0.3	0.2	0.2	0.2		
14-Sep	0.2	0.2	0.2	0.2	0.2	Z	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	0.2	0.2	0.2	0.2	SP	0.2	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	0.2	0.2	0.2		
15-Sep	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	C	C	C	C	C	C	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	--	0.6
	SP	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	C	C	C	C	C	C	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.3	Z	0.3	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	0.3	SP	0.2	0.2	0.2	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		
17-Sep	0.2	0.3	Z	0.5	0.5	0.4	0.4	0.4	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	0.3	0.6
	0.3	0.3	SP	0.6	0.4	0.4	0.4	0.5	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	0.2	0.2		
18-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
19-Sep	0.3	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.3	0.2	0.3	0.2	SP	0.3	0.3	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
20-Sep	0.2	0.2	0.3	0.3	0.4	Z	0.4	0.5	0.7	0.7	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.7
	0.2	0.3	0.4	0.3	0.4	SP	0.4	0.6	0.7	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3		
21-Sep	Z	0.3	0.3	0.2	0.4	0.6	0.6	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.6
	SP	0.3	0.2	0.3	0.5	0.6	0.6	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	0.2	0.3	0.2	0.2		
22-Sep	0.3	Z	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4
	0.2	SP	0.3	0.3	0.3	0.3	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	0.3	0.3	0.3	0.2		
23-Sep	0.2	0.2	Z	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	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3
	0.2	0.2	SP	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	0.3	0.2	0.2	0.2		
24-Sep	0.2	0.2	0.2	Z	0.3	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	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
25-Sep	0.2	0.3	0.3	0.2	Z	0.3	0.2	0.2	0.3	0.5	0.8	0.7	0.7	0.4	0.3	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.3	0.8
	0.2	0.3	0.2	0.3	SP	0.3	0.2	0.3	0.3	0.7	0.8	0.8	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2		
26-Sep	0.2	0.2	0.2	0.3	0.3	Z	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	0.3
	0.2	0.2	0.3	0.3	0.3	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		
27-Sep	Z	0.2	0.2	0.2	0.2	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	0.1	0.1	0.2	0.2	0.2	0.3
	SP	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
28-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.2	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	0.3
	0.3	SP	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	0.2	0.2	0.2	0.2		
29-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	SP	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
30-Sep	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.6
	0.3	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.4	0.3	0.3	0.3	0.2	0.3	0.2	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	0.3	0.3	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.3	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 Chipewyan - September 2025

Maximum Value: 0.8 ppb on Sep 13 14:00

Maximum Daily Average: 0.4 ppb on Sep 13

Minimum Value: 0.1 ppb on Sep 5 22:00

Minimum Daily Average: 0.2 ppb on Sep 29

Maximum Diurnal Average: 0.3 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 2

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 0.7

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.5
2-Sep	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	0.3	0.2	0.3
3-Sep	Z	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	0.3	0.3	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.5
4-Sep	0.2	Z	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3
5-Sep	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.3
6-Sep	0.2	0.2	0.2	Z	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	0.3	0.3	0.2	0.3
7-Sep	0.3	0.3	0.2	0.3	Z	0.4	0.4	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	0.4	0.3	0.3	0.5
8-Sep	0.3	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	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
9-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.3	0.2	0.5
10-Sep	0.3	Z	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	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3
11-Sep	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3
12-Sep	0.2	0.2	0.3	Z	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6
13-Sep	0.3	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.8	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.4	0.8
14-Sep	0.2	0.2	0.2	0.2	0.2	Z	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
15-Sep	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	C	C	C	C	C	C	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	--	0.5
16-Sep	0.3	Z	0.3	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
17-Sep	0.3	0.3	Z	0.5	0.4	0.4	0.4	0.4	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	0.3	0.5
18-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
19-Sep	0.3	0.3	0.3	0.3	Z	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	0.2	0.2	0.4
20-Sep	0.2	0.3	0.3	0.3	0.4	Z	0.4	0.6	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.7
21-Sep	Z	0.3	0.2	0.3	0.5	0.6	0.6	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	0.3	0.2	0.2	0.3	0.6
22-Sep	0.3	Z	0.3	0.3	0.3	0.3	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	0.3	0.3	0.3	0.3	0.4
23-Sep	0.2	0.2	Z	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	0.3	0.3	0.2	0.2	0.2	0.3
24-Sep	0.2	0.2	0.2	Z	0.3	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	0.2	0.2	0.2	0.3
25-Sep	0.2	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.3	0.6	0.8	0.8	0.6	0.4	0.3	0.2	0.3	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.3	0.8
26-Sep	0.2	0.2	0.2	0.3	0.3	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
27-Sep	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3
28-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.2	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	0.3
29-Sep	0.2	0.2	Z	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
30-Sep	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.6
	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	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	0.3	0.3	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.8	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.5	0.4	0.5	0.5	0.5	0.3	Diurnal Maximum	

Z - zerospan C - Calibration

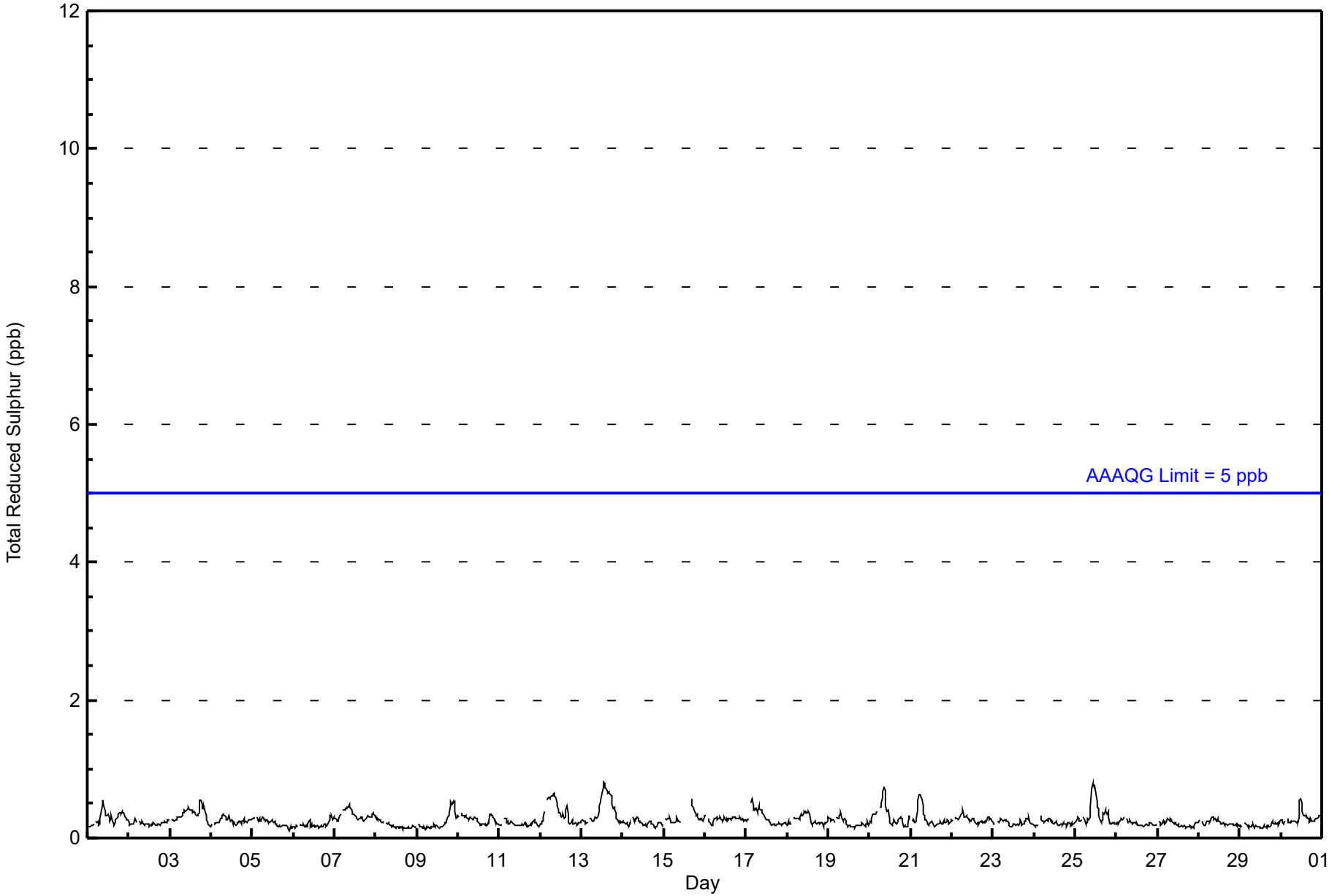
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	684	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: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	10	8	4	29	75	60	50	41	60	19	47	76	84	39	39	38	679
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	10	8	4	29	75	60	50	41	60	19	47	76	84	39	39	38	679

Total Number of Valid Hours: 679

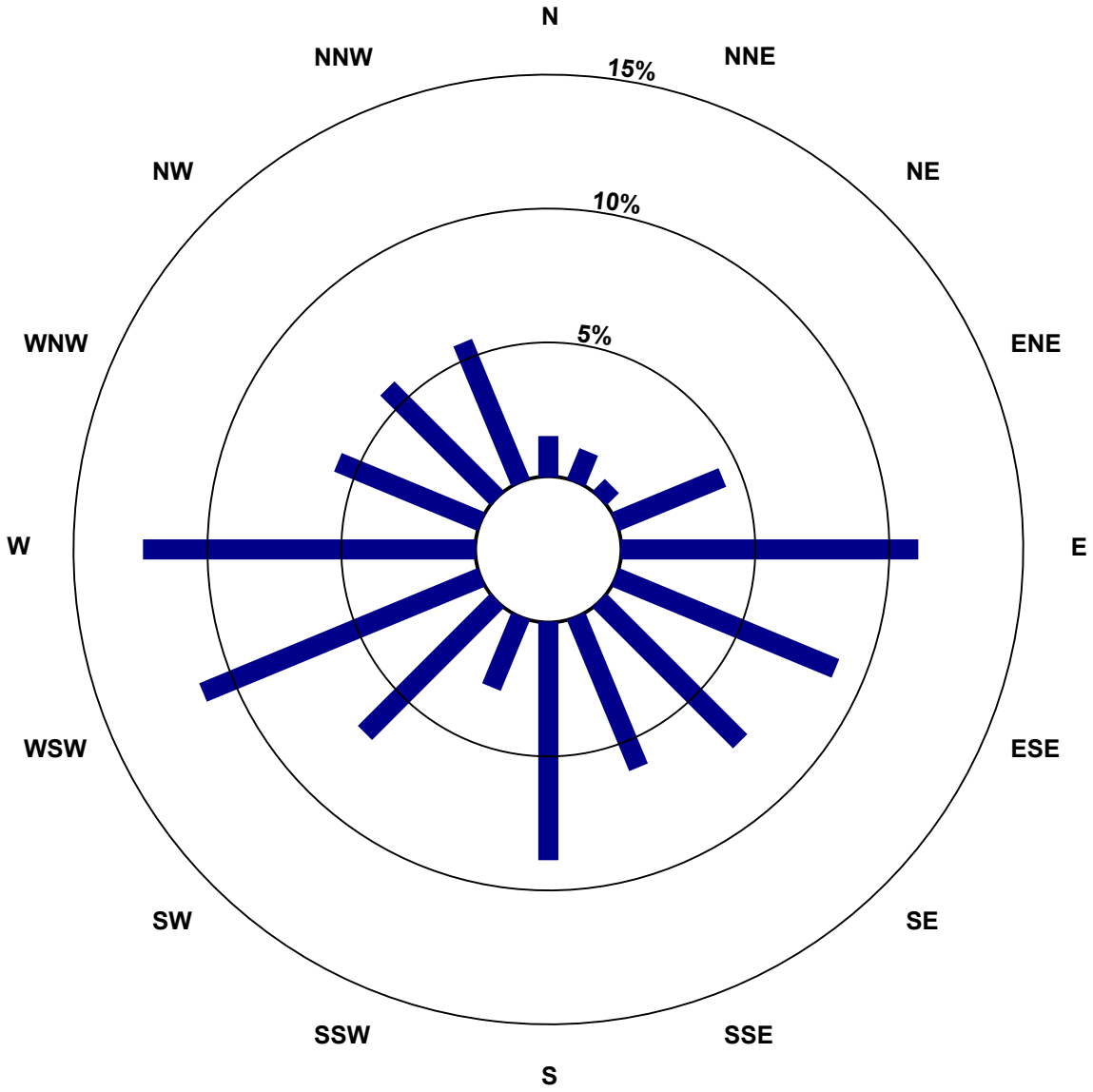
Total Number of Hours: 720

Wood Buffalo Environmental Association

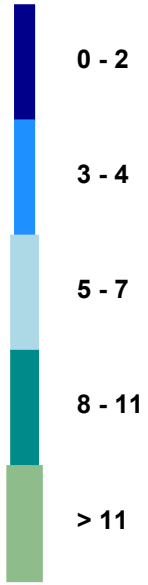
Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan



Classes (ppb)



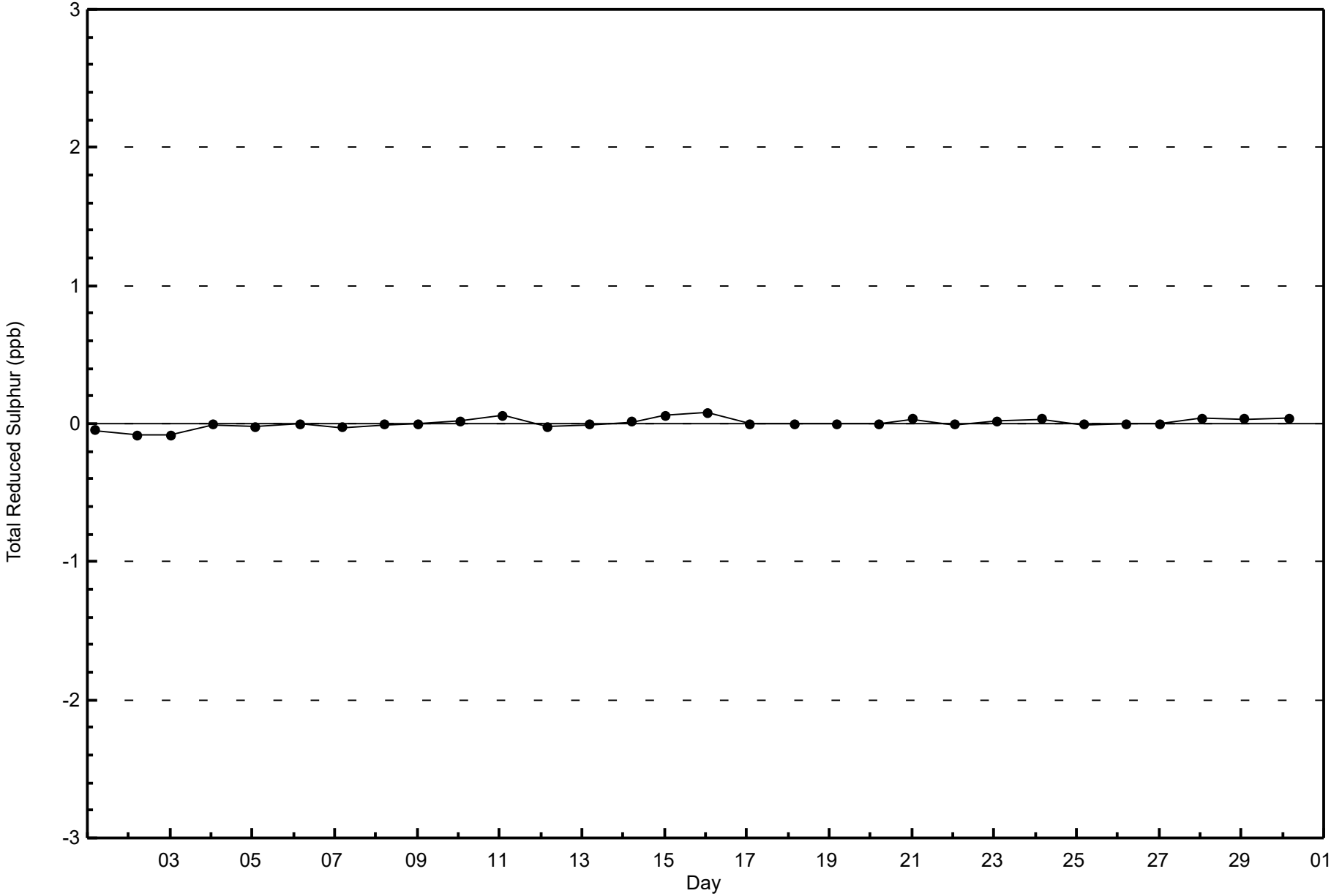
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025

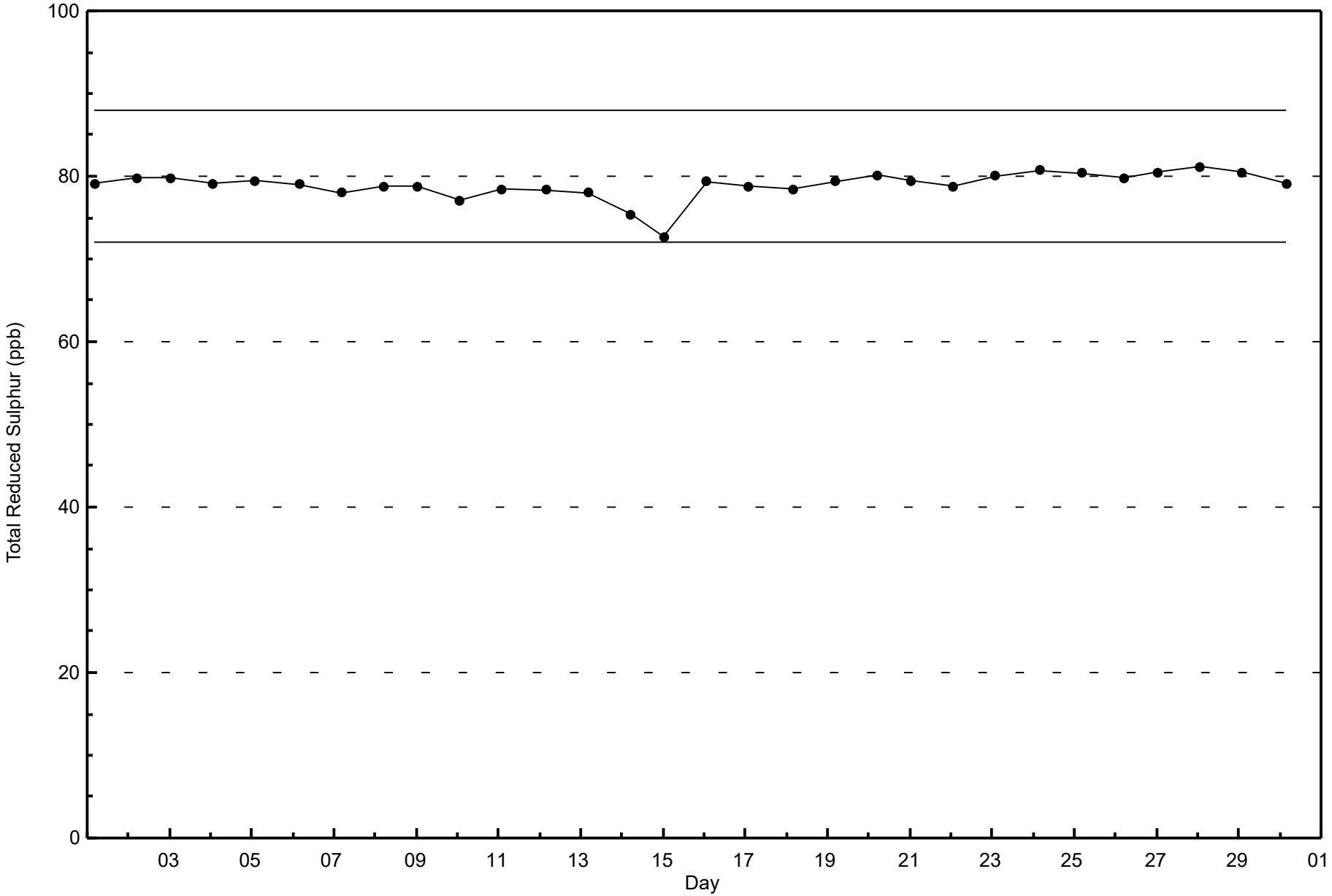


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - September 2025

Maximum Value: 5.6 ppb on Sep 13 12:00

Maximum Daily Average: 1.1 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 5

Maximum Diurnal Average: 0.5 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 24

Monthly Average: 0.12 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} = 2.6

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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
2-Sep	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
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.4	0.8	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
4-Sep	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Sep	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
6-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	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	0.3
7-Sep	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
8-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.6	3.9	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	3.9
9-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.3	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	0.1	0.3
10-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.5	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	0.1	0.5
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	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
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.4	1.1	1.2	0.5	1.9	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	0.3	1.9
13-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.8	1.3	3.8	5.6	4.5	2.8	2.6	1.8	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	1.1	5.6
14-Sep	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	0.0	0.1
15-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.2	0.3	0.3	0.8	0.3	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	1.2
16-Sep	0.0	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	0.0	0.1
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.4	C	C	C	C	C	C	C	C	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	--	0.4
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.5	0.7	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
19-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.3	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	0.4
20-Sep	0.0	0.0	Z	0.0	0.0	0.1	0.9	2.1	3.6	2.5	0.9	0.6	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.5	3.6
21-Sep	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
22-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
23-Sep	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
24-Sep	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	0.0	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-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.3	2.3	0.9	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.3
26-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	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	0.3
27-Sep	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
28-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
29-Sep	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
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.3	0.0	0.3	0.3	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.4	0.5	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	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.1	0.9	3.9	3.6	4.3	3.8	5.6	4.5	2.8	2.6	1.8	0.8	0.4	0.1	0.1	0.0	0.0	0.0	0.0	Diurnal Maximum	

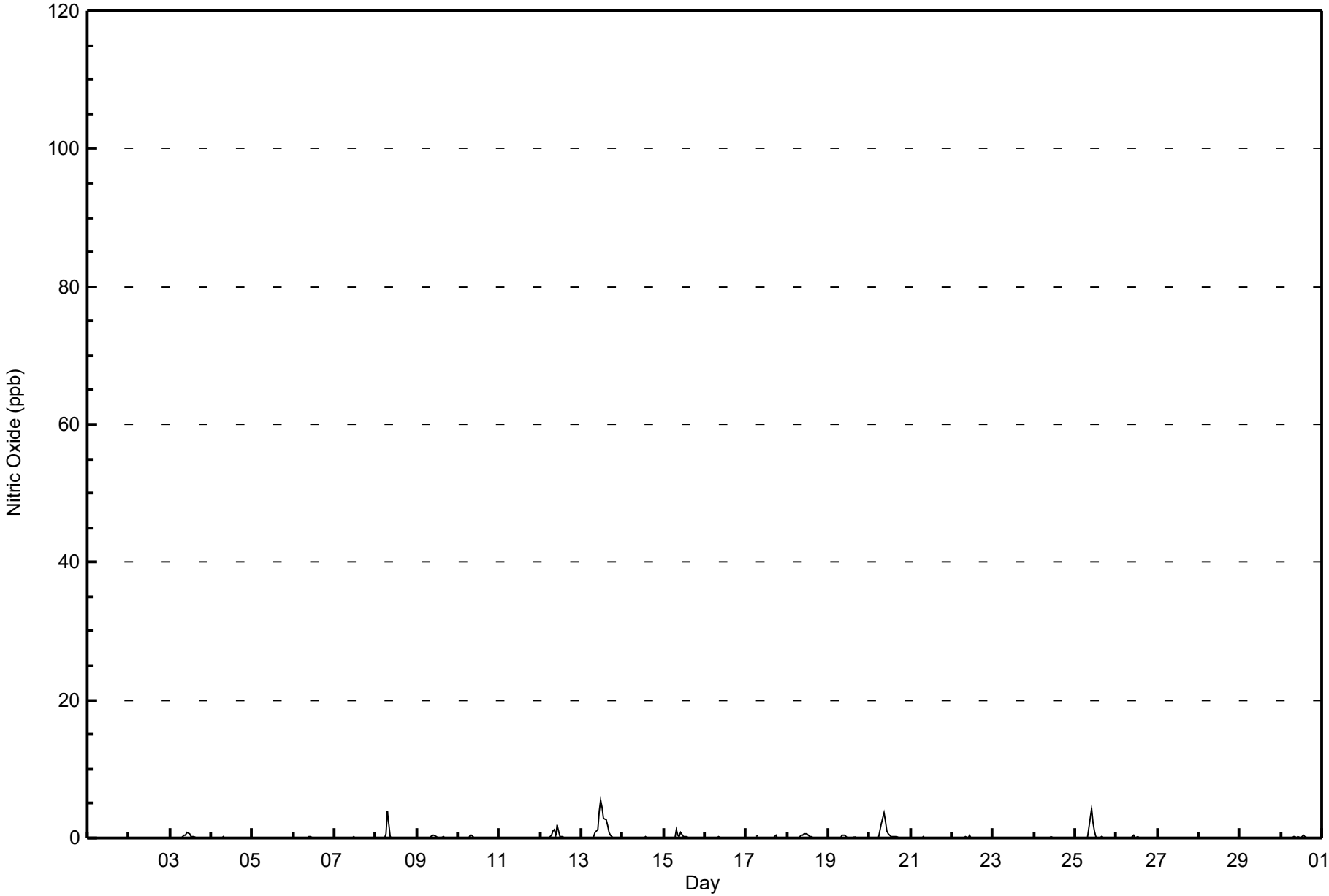
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678
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	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678

Total Number of Valid Hours: 678

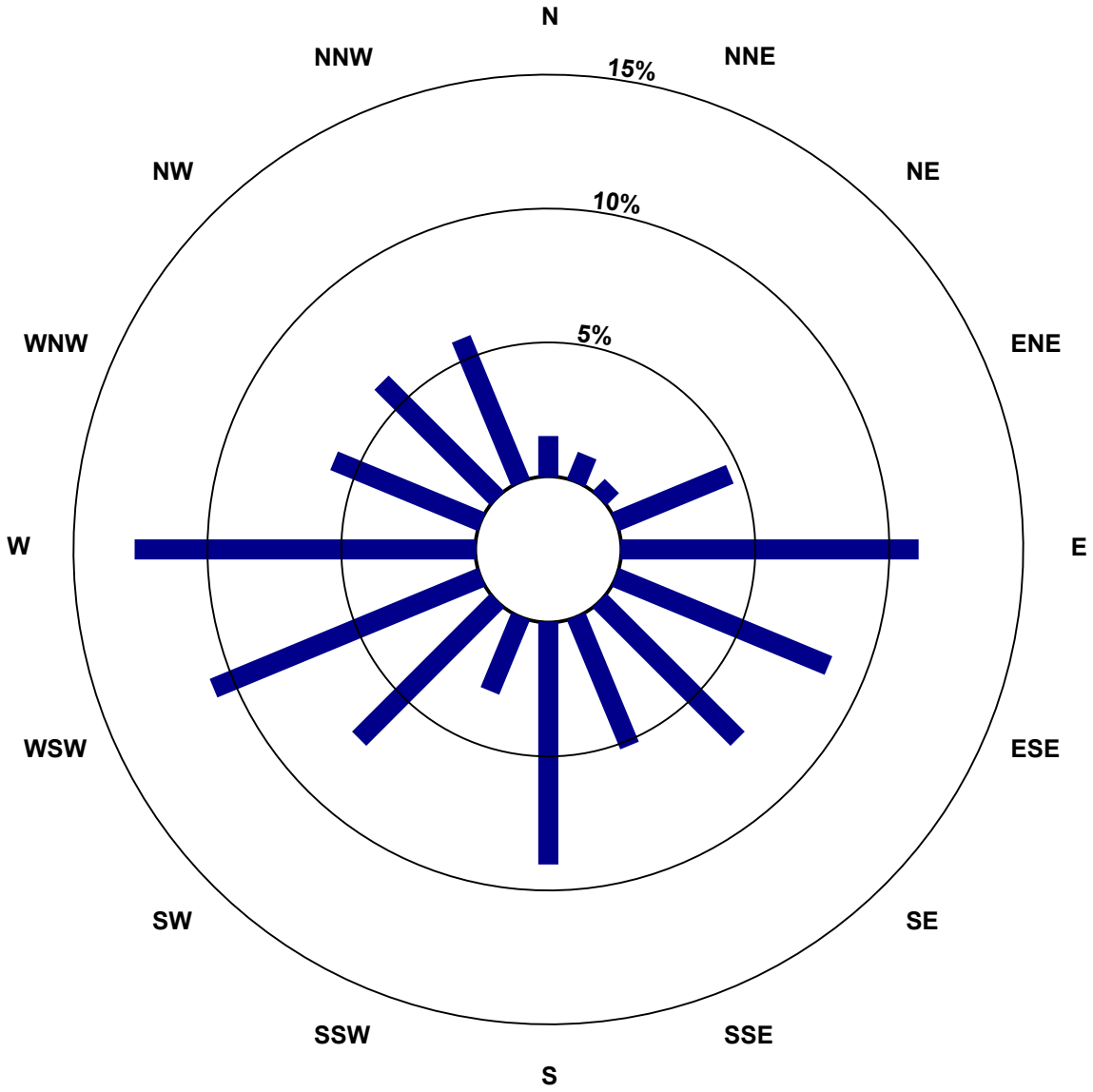
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

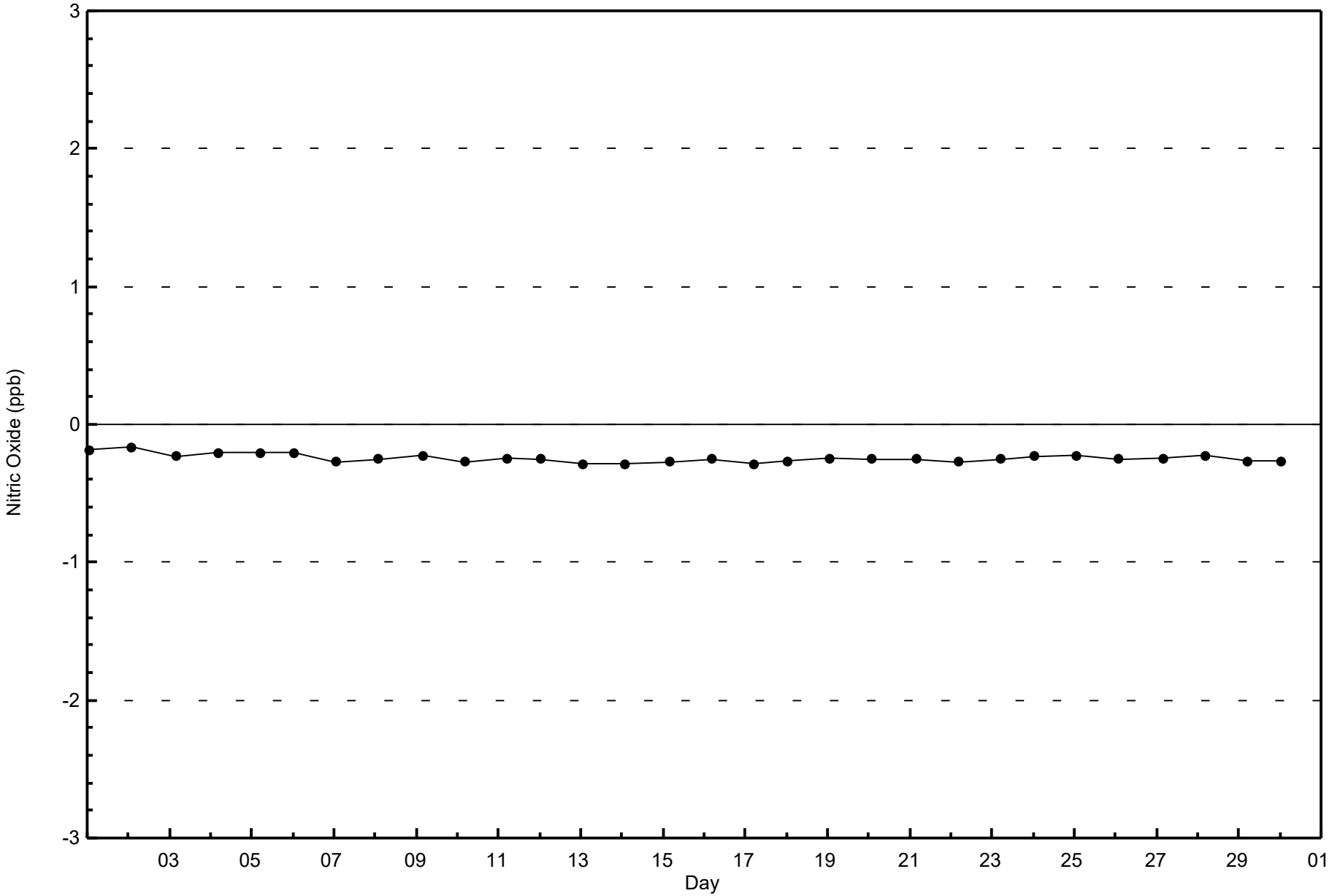
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - September 2025

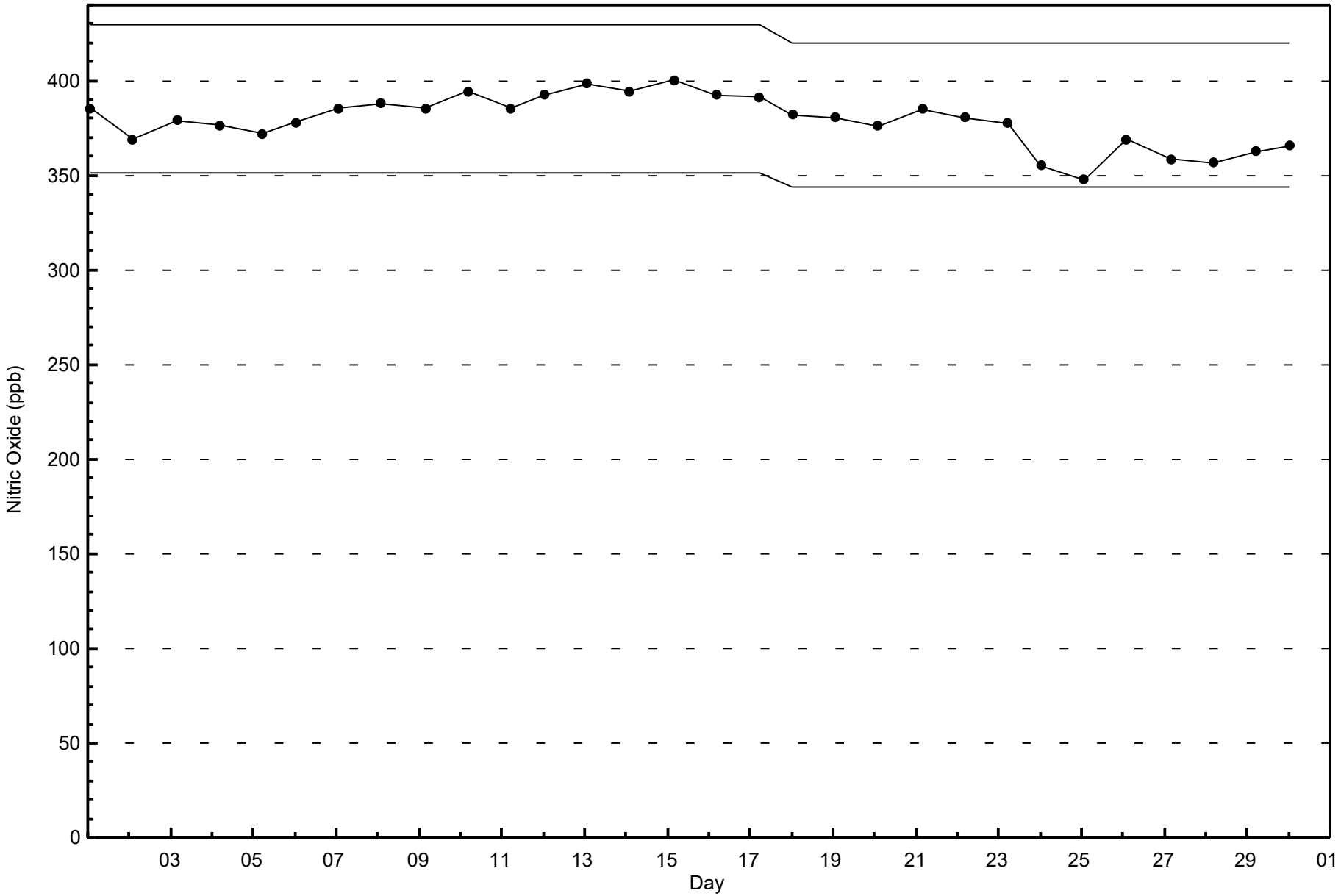


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 14.8 ppb on Sep 20 06:00 Maximum Daily Average: 6.2 ppb on Sep 13

Minimum Value: 0.1 ppb on Sep 2 05:00 Minimum Daily Average: 0.2 ppb on Sep 24
Maximum Diurnal Average: 1.7 ppb at hour 6 Minimum Diurnal Average: 0.6 ppb at hour 1
Monthly Average: 1.19 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.5 Q_3 = 1.1 P_{90} = 2.7 P_{99} = 12.2

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.2	0.3	0.5	0.5	0.9	0.5	1.3	1.6	1.3	1.2	0.9	0.8	0.9	0.5	0.7	1.0	1.3	1.3	1.3	1.0	0.7	0.5	0.8	1.6
2-Sep	0.4	1.8	Z	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.3	1.8
3-Sep	1.0	0.9	1.1	Z	1.3	1.5	1.5	1.9	2.5	3.2	3.8	4.1	3.2	2.6	2.6	1.8	1.1	1.2	1.3	1.0	0.9	0.4	0.2	0.2	1.7	4.1
4-Sep	0.1	0.2	0.1	0.1	Z	0.2	0.3	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.5
5-Sep	0.2	0.2	0.4	0.4	0.3	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.3	0.5
6-Sep	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.7	1.4	1.3	1.0	0.9	0.7	0.8	1.4	1.6	1.5	1.8	2.2	1.9	3.0	3.6	2.8	1.2	3.6
7-Sep	2.5	Z	1.5	1.3	1.1	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.9	0.9	0.7	0.7	1.0	0.7	0.6	0.7	0.6	0.9	2.5
8-Sep	0.5	0.4	Z	0.4	0.4	0.3	2.5	4.9	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.3	0.3	0.2	0.2	0.2	0.6	4.9
9-Sep	0.2	0.2	0.2	Z	0.6	0.5	0.4	0.5	0.8	1.1	1.4	1.1	0.7	0.8	0.8	1.2	1.7	2.3	4.2	5.9	6.4	6.0	4.0	1.2	1.8	6.4
10-Sep	0.8	0.7	0.7	0.7	Z	0.7	0.7	1.5	0.9	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	1.0	0.9	6.1	1.0	0.4	0.9	6.1
11-Sep	0.4	0.4	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.9	1.3	1.2	1.2	1.0	0.5	1.3
12-Sep	Z	2.6	3.8	4.5	4.8	5.5	6.5	6.5	5.8	3.7	3.5	2.9	2.7	2.8	2.5	3.1	1.6	0.9	0.9	0.7	0.5	0.4	0.4	0.4	2.9	6.5
13-Sep	0.5	Z	0.6	0.6	0.7	0.7	0.8	1.8	3.9	4.8	10.3	13.7	13.2	12.4	14.1	13.1	12.1	10.7	8.6	8.6	5.1	2.7	2.0	2.0	6.2	14.1
14-Sep	1.7	1.5	Z	1.2	1.1	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.6	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.8	1.7
15-Sep	0.8	1.3	2.0	Z	1.2	1.0	1.4	3.1	1.9	1.5	2.0	1.5	0.9	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1.1	3.1
16-Sep	0.4	0.4	0.4	0.4	Z	0.4	0.4	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	0.4	0.5	0.5	0.6
17-Sep	0.6	1.2	2.7	4.4	4.1	Z	2.0	1.8	C	C	C	C	C	C	C	C	0.6	0.6	0.4	0.5	0.3	0.3	0.4	0.4	--	4.4
18-Sep	Z	0.7	0.8	0.9	1.0	1.1	1.3	1.5	1.6	1.6	2.2	2.7	2.6	1.8	1.2	0.5	0.4	0.5	0.4	0.6	0.4	0.4	0.4	0.4	1.1	2.7
19-Sep	0.4	Z	0.3	0.3	0.3	0.3	0.4	0.5	0.5	1.1	0.9	0.4	0.3	0.3	0.3	0.5	0.5	0.9	0.9	0.7	0.7	0.6	0.8	0.6	0.5	1.1
20-Sep	0.4	0.4	Z	1.3	6.2	14.8	13.1	8.0	8.3	5.9	3.2	2.7	1.5	1.6	2.0	1.6	3.1	3.5	2.8	2.2	1.4	1.0	1.7	4.3	4.0	14.8
21-Sep	2.1	2.0	1.8	Z	6.3	8.4	7.5	2.8	1.0	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	1.6	8.4
22-Sep	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.8	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.7	1.6	1.3	1.7	0.6	1.7
23-Sep	1.1	0.6	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.3	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	0.2	0.3	1.1
24-Sep	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.4	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	0.4
25-Sep	0.2	Z	0.2	0.2	0.2	0.3	0.4	0.4	5.7	11.4	7.4	5.1	3.0	1.8	1.7	1.7	2.8	3.9	3.5	2.6	0.8	0.7	0.5	0.5	2.4	11.4
26-Sep	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.4	0.3	0.7	0.7	0.4	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.7
27-Sep	0.2	0.2	0.3	Z	0.5	2.5	2.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.5	0.3	0.5	0.4	0.3	0.2	0.2	0.5	2.5
28-Sep	0.2	0.3	0.3	0.2	Z	0.3	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.2	1.3	2.0	0.5	0.2	0.2	0.2	0.5	2.2
29-Sep	0.2	0.5	0.6	0.6	0.5	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.9	2.1	0.8	0.7	0.7	0.7	0.6	0.9	0.6	2.1
30-Sep	Z	0.7	0.6	0.6	0.7	0.6	0.7	1.1	1.3	0.8	1.0	1.1	1.4	1.5	1.2	0.8	0.7	1.4	0.8	0.9	0.7	0.7	0.7	0.7	0.9	1.5
	0.6	0.7	0.8	0.9	1.3	1.7	1.6	1.4	1.5	1.5	1.5	1.5	1.3	1.1	1.2	1.1	1.1	1.3	1.2	1.3	1.0	1.1	0.8	0.8	Diurnal Average	
	2.5	2.6	3.8	4.5	6.3	14.8	13.1	8.0	8.3	11.4	10.3	13.7	13.2	12.4	14.1	13.1	12.1	10.7	8.6	8.6	6.4	6.1	4.0	4.3	Diurnal Maximum	

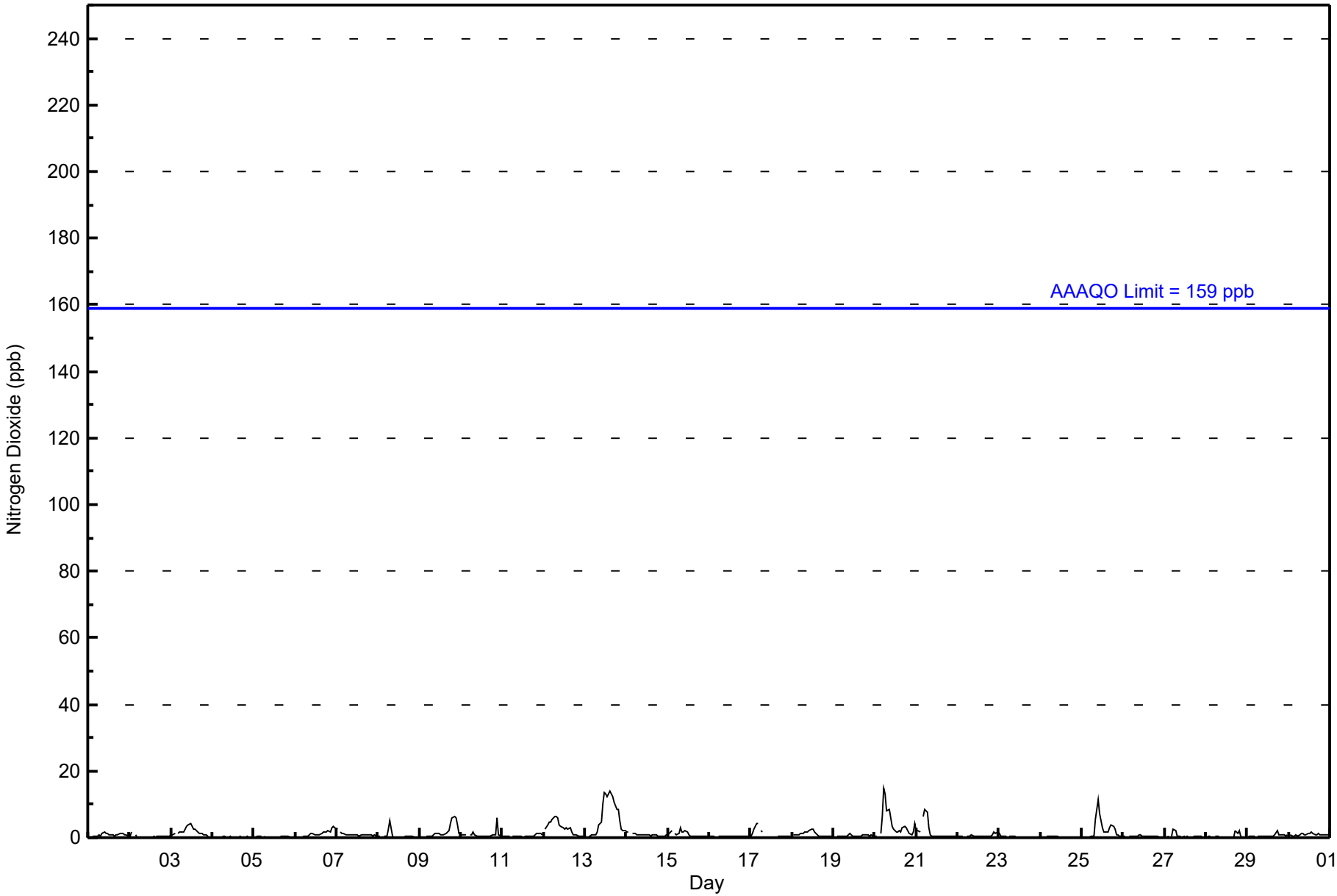
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - September 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678
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	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678

Total Number of Valid Hours: 678

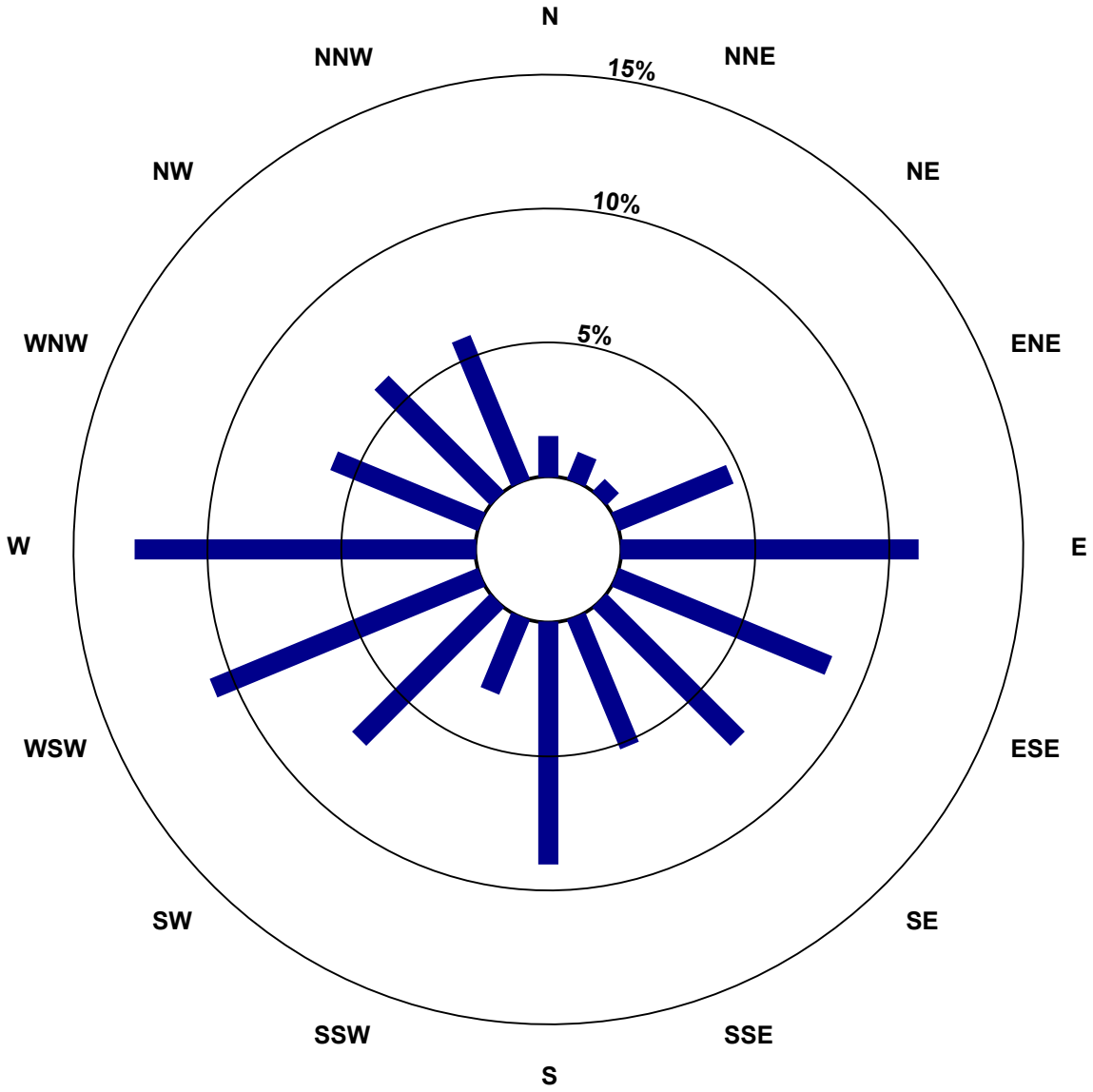
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

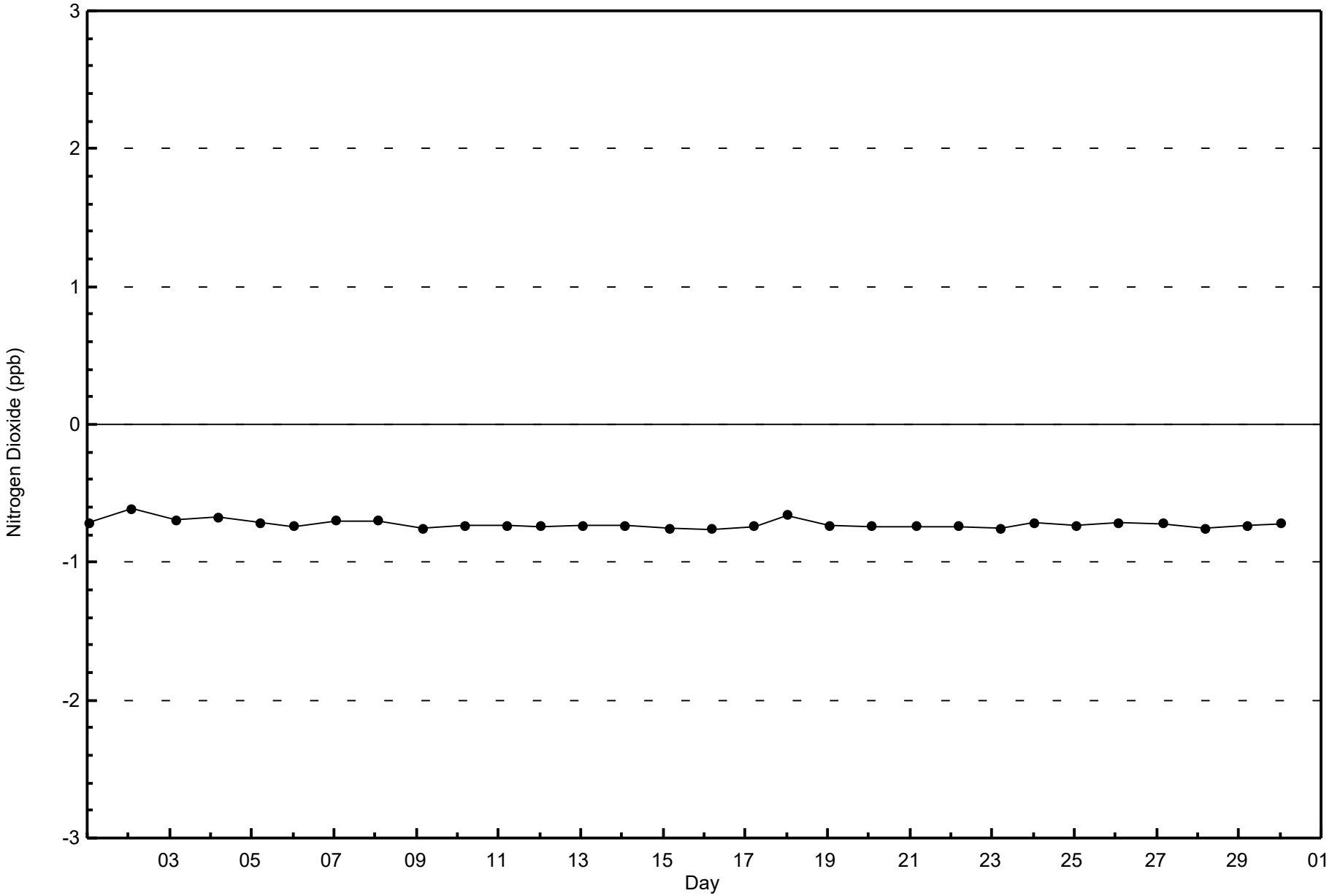
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - September 2025

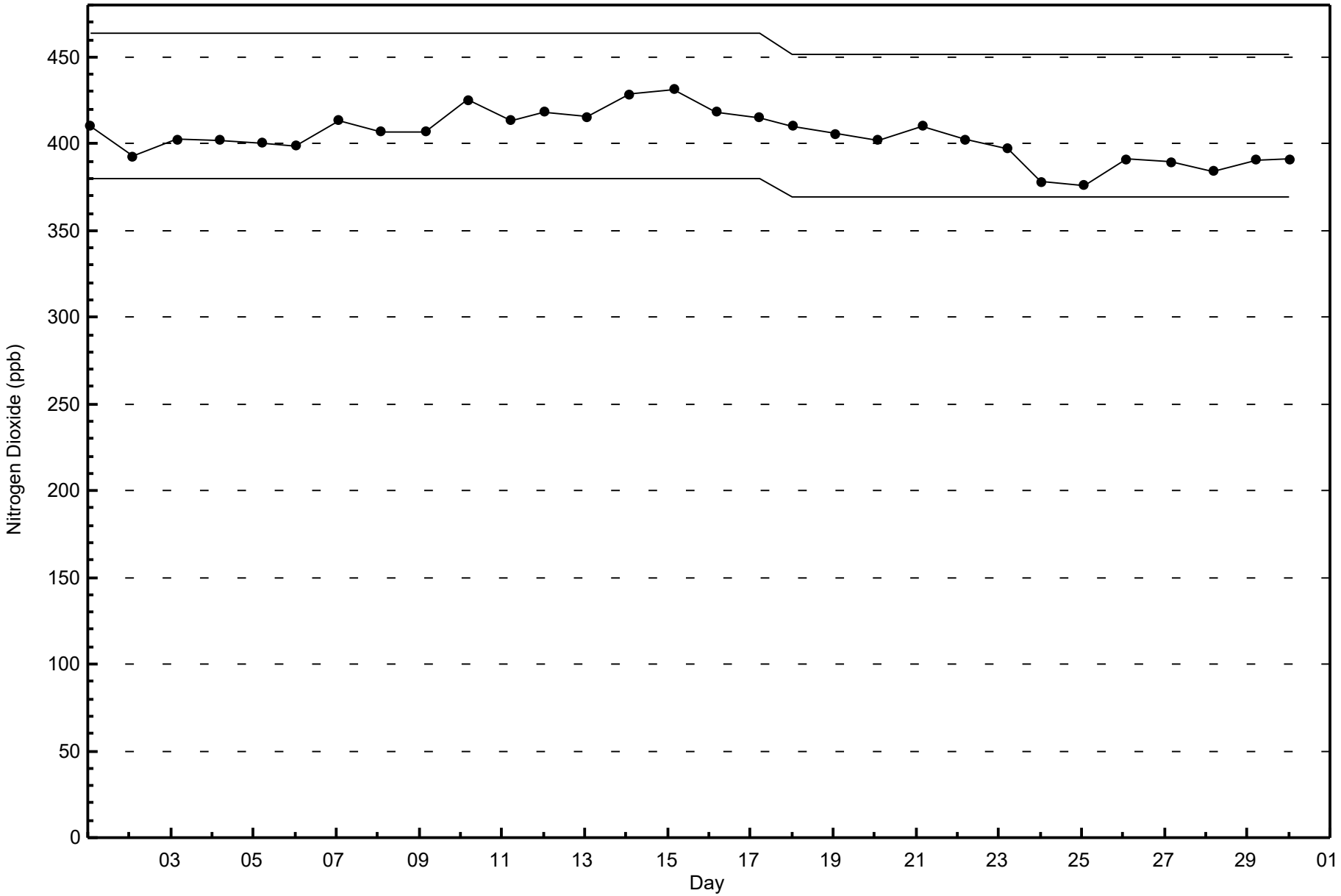


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - September 2025

Maximum Value: 19.3 ppb on Sep 13 12:00

Maximum Daily Average: 7.3 ppb on Sep 13

Minimum Value: 0.1 ppb on Sep 2 06:00

Minimum Daily Average: 0.2 ppb on Sep 24

Maximum Diurnal Average: 2.0 ppb at hour 11

Minimum Diurnal Average: 0.6 ppb at hour 1

Monthly Average: 1.30 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.5 Q_3 = 1.2 P_{90} = 2.8 P_{99} = 14.3

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.2	0.3	0.5	0.5	0.9	0.5	1.3	1.6	1.3	1.2	0.9	0.8	0.9	0.5	0.7	1.0	1.3	1.3	1.3	1.0	0.7	0.5	0.9	1.6
2-Sep	0.4	1.8	Z	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.3	1.8
3-Sep	1.0	0.9	1.1	Z	1.3	1.5	1.5	2.1	2.8	3.6	4.6	4.7	3.5	2.8	2.7	1.9	1.1	1.2	1.3	1.0	0.9	0.4	0.2	0.2	1.8	4.7
4-Sep	0.1	0.2	0.1	0.1	Z	0.2	0.3	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.5
5-Sep	0.2	0.2	0.4	0.4	0.3	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.3	0.5
6-Sep	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8	1.7	1.4	1.1	0.9	0.7	0.8	1.4	1.7	1.5	1.8	2.2	1.9	3.0	3.6	2.8	1.3	3.6
7-Sep	2.5	Z	1.5	1.3	1.1	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.9	0.9	0.7	0.7	1.0	0.7	0.6	0.7	0.6	0.9	2.5
8-Sep	0.5	0.4	Z	0.4	0.4	0.3	3.1	8.8	0.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.3	0.3	0.2	0.2	0.2	0.8	8.8
9-Sep	0.2	0.2	0.2	Z	0.6	0.5	0.4	0.6	1.1	1.4	1.7	1.2	0.7	0.8	0.8	1.3	1.7	2.3	4.2	5.9	6.4	6.0	4.0	1.2	1.9	6.4
10-Sep	0.8	0.7	0.7	0.7	Z	0.7	0.8	2.0	1.3	0.5	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	1.0	0.9	6.1	1.0	0.4	0.9	6.1
11-Sep	0.4	0.4	0.3	0.3	0.3	Z	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.4	0.3	0.3	0.3	0.3	0.5	0.9	1.3	1.2	1.2	1.0	0.5	1.3
12-Sep	Z	2.6	3.8	4.5	4.8	5.5	6.9	7.6	7.0	4.2	5.4	3.1	2.8	2.9	2.6	3.2	1.6	0.9	0.9	0.7	0.5	0.4	0.4	0.4	3.2	7.6
13-Sep	0.5	Z	0.6	0.6	0.7	0.7	0.8	2.0	4.7	6.1	14.1	19.3	17.7	15.2	16.7	14.9	12.9	11.1	8.7	8.6	5.1	2.7	2.0	2.0	7.3	19.3
14-Sep	1.7	1.5	Z	1.2	1.1	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.9	0.6	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.8	1.7
15-Sep	0.8	1.3	2.0	Z	1.2	1.0	1.4	4.3	2.2	1.8	2.8	1.8	1.1	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1.2	4.3
16-Sep	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.6	0.7	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	0.4	0.5	0.5	0.7
17-Sep	0.6	1.2	2.7	4.4	4.1	Z	2.1	2.2	C	C	C	C	C	C	C	C	0.6	1.0	0.4	0.5	0.3	0.3	0.4	0.4	--	4.4
18-Sep	Z	0.7	0.8	0.9	1.0	1.1	1.3	1.7	2.0	1.9	2.7	3.4	3.0	1.9	1.3	0.5	0.4	0.5	0.4	0.6	0.4	0.4	0.4	0.4	1.2	3.4
19-Sep	0.4	Z	0.3	0.3	0.3	0.3	0.4	0.6	0.8	1.5	1.2	0.4	0.3	0.3	0.3	0.6	0.5	0.9	0.9	0.7	0.7	0.6	0.8	0.6	0.6	1.5
20-Sep	0.4	0.4	Z	1.3	6.2	14.9	14.0	10.1	11.9	8.4	4.1	3.3	1.6	1.7	2.2	1.7	3.3	3.6	2.8	2.3	1.4	1.0	1.7	4.3	4.5	14.9
21-Sep	2.1	2.0	1.8	Z	6.3	8.4	7.6	2.9	1.1	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	1.7	8.4
22-Sep	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	1.1	0.4	0.9	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.7	1.6	1.3	1.7	0.6	1.7
23-Sep	1.1	0.6	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.3	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	0.2	0.3	1.1
24-Sep	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.5	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	0.5
25-Sep	0.2	Z	0.2	0.2	0.2	0.3	0.4	0.4	7.1	15.7	9.7	6.0	3.2	1.8	1.7	1.9	2.9	3.9	3.5	2.6	0.8	0.7	0.5	0.5	2.8	15.7
26-Sep	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.4	1.0	1.0	0.4	0.8	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.4	1.0
27-Sep	0.2	0.2	0.3	Z	0.5	2.5	2.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.5	0.3	0.5	0.4	0.3	0.2	0.2	0.5	2.5
28-Sep	0.2	0.3	0.3	0.2	Z	0.3	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.3	1.3	2.0	0.5	0.2	0.2	0.2	0.5	2.3
29-Sep	0.2	0.5	0.6	0.6	0.5	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.9	2.1	0.8	0.7	0.7	0.7	0.6	0.9	0.6	2.1
30-Sep	Z	0.7	0.6	0.6	0.7	0.6	0.7	1.2	1.6	0.9	1.3	1.1	1.7	1.8	1.4	0.8	0.7	1.5	0.8	0.9	0.7	0.7	0.7	0.7	1.0	1.8
	0.6	0.7	0.8	0.9	1.4	1.7	1.7	1.8	1.8	1.9	2.0	1.8	1.5	1.3	1.3	1.2	1.2	1.3	1.2	1.3	1.0	1.1	0.8	0.8	Diurnal Average	
	2.5	2.6	3.8	4.5	6.3	14.9	14.0	10.1	11.9	15.7	14.1	19.3	17.7	15.2	16.7	14.9	12.9	11.1	8.7	8.6	6.4	6.1	4.0	4.3	Diurnal Maximum	

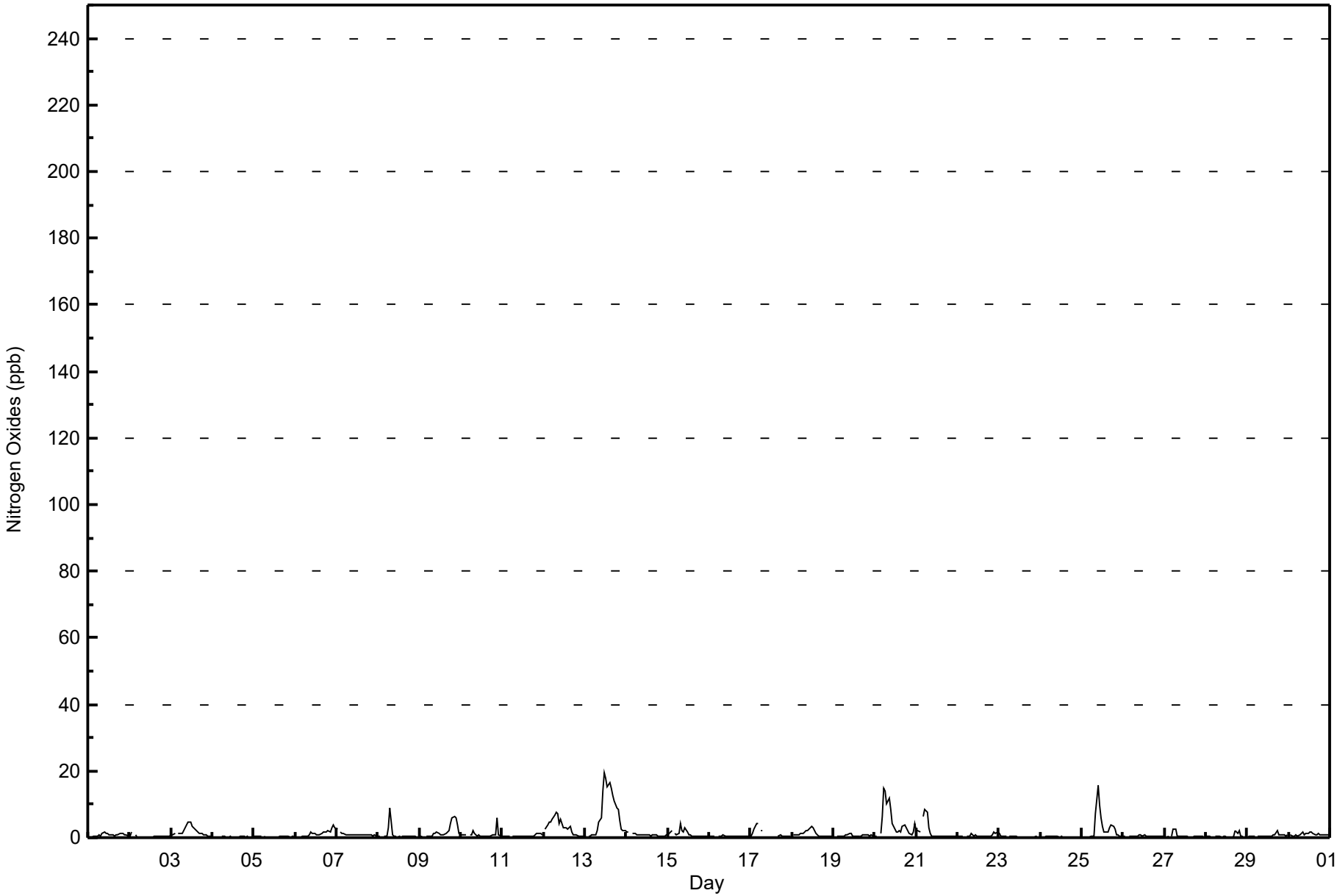
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - September 2025



Nitrogen Oxides (NO_X) - ppb
Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720

Nitrogen Oxides (NO_X) - ppb
Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678
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	10	7	4	31	75	58	49	35	61	20	49	73	86	40	41	39	678

Total Number of Valid Hours: 678

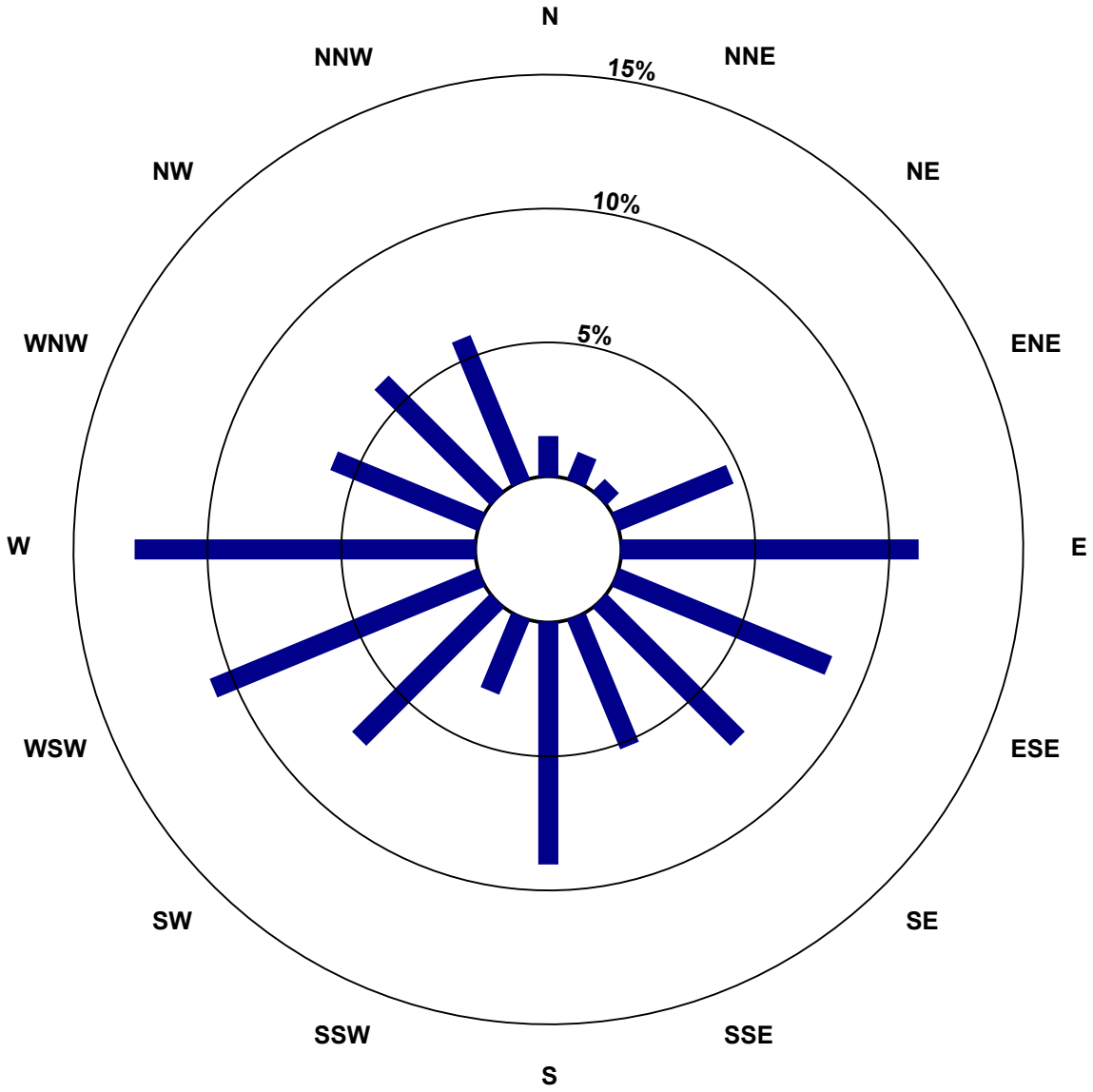
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

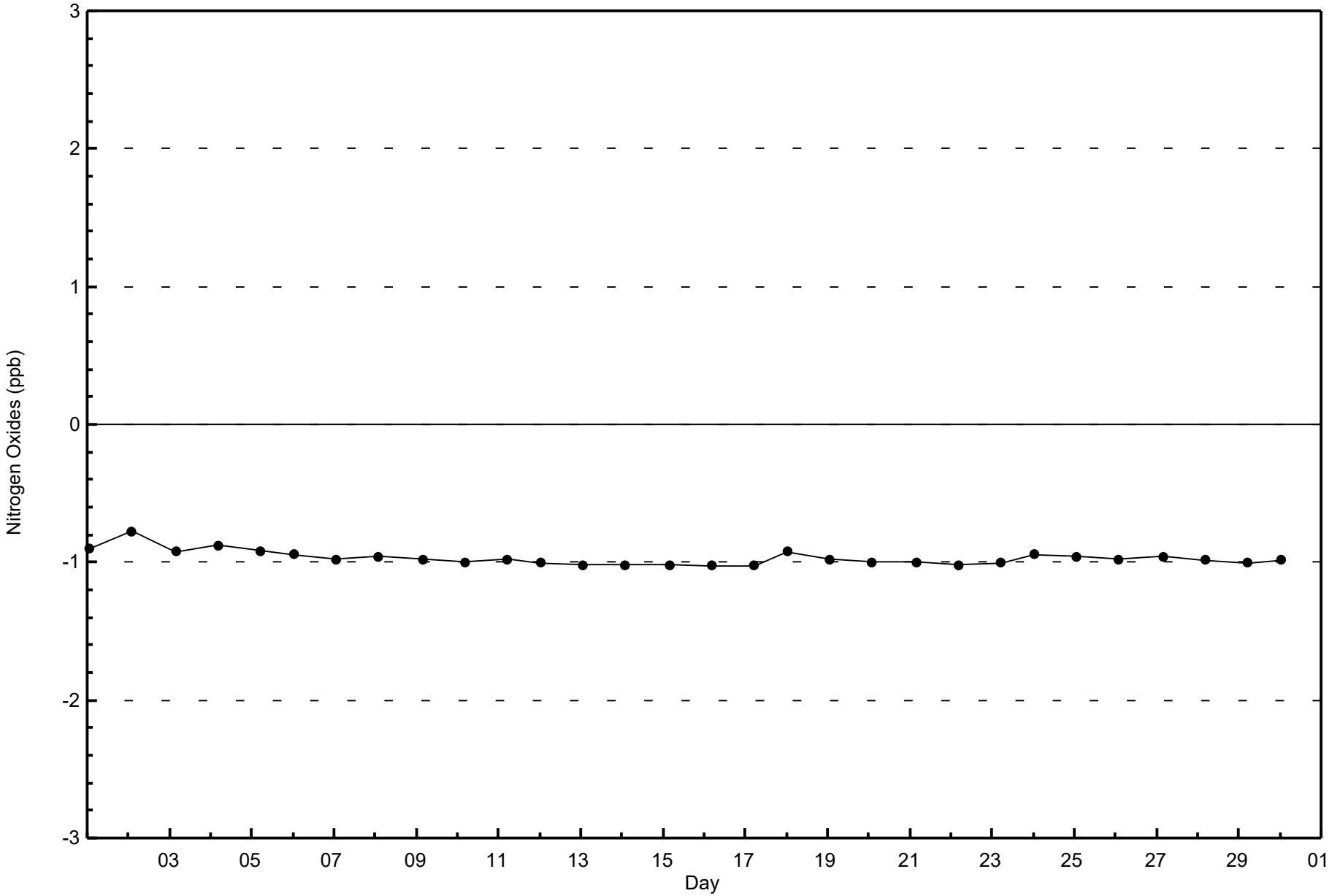
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - September 2025

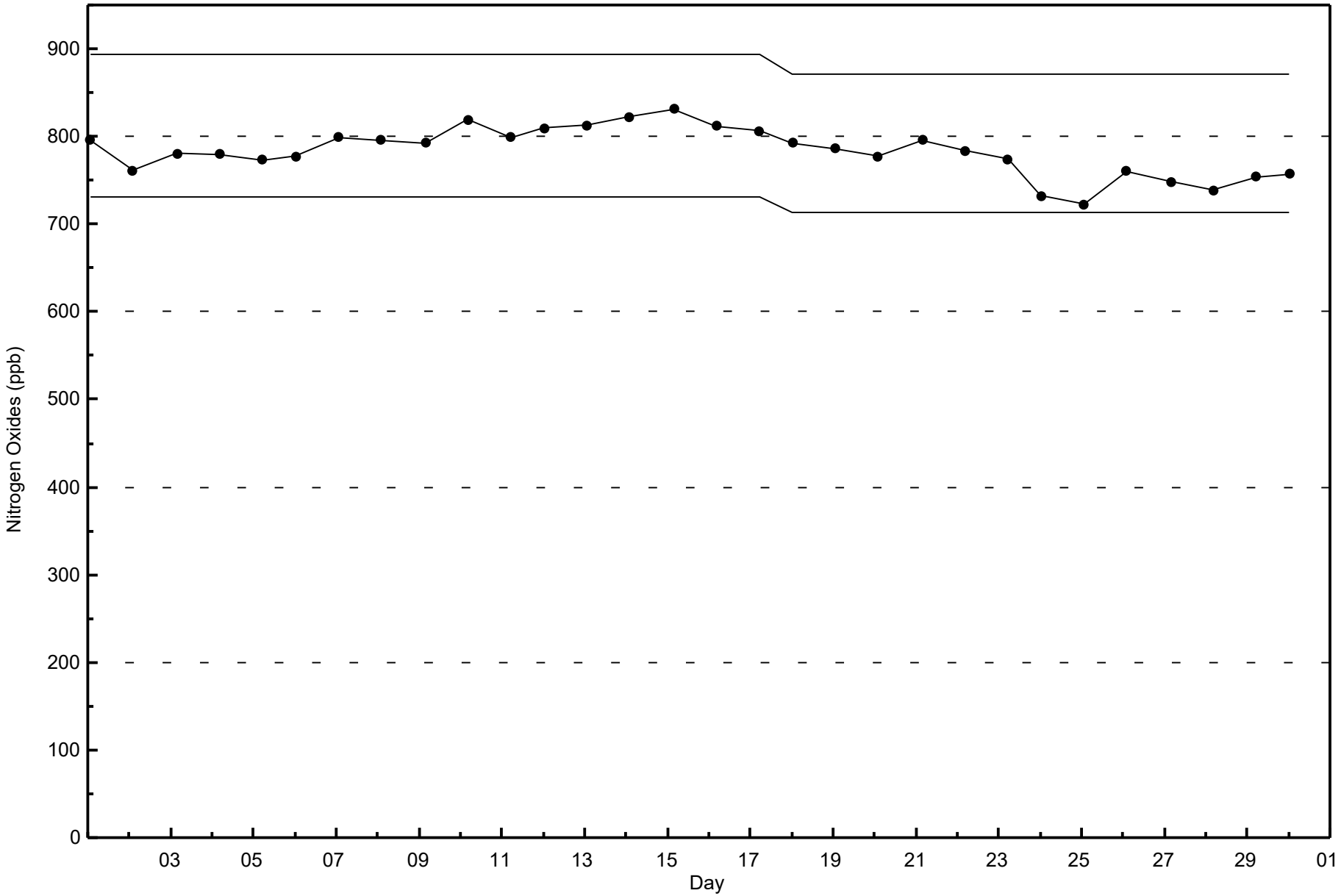


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 58.8 ppb on Sep 12 16:00 Maximum Daily Average: 35.7 ppb on Sep 12

Minimum Value: 8.2 ppb on Sep 20 06:00 Minimum Daily Average: 17.9 ppb on Sep 15
Maximum Diurnal Average: 31.7 ppb at hour 16 Minimum Diurnal Average: 20.3 ppb at hour 7
Monthly Average: 26.54 ppb Percentiles: P_1 = 10.3 P_{10} = 16.9 Q_1 = 21.5 Median = 26.1 Q_3 = 30.5 P_{90} = 36.3 P_{99} = 50.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	21.5	20.6	19.3	15.9	17.1	Z	14.7	16.6	21.7	27.2	28.6	28.2	27.9	31.1	32.7	30.5	31.4	32.0	32.6	31.0	30.8	29.4	27.9	26.7	25.9	32.7
2-Sep	Z	23.4	21.2	25.6	25.2	24.6	23.2	21.5	20.3	22.4	24.0	26.5	27.7	27.7	28.0	29.0	29.1	28.8	27.6	26.6	25.0	23.4	22.1	22.9	25.0	29.1
3-Sep	23.3	Z	22.8	22.6	22.0	21.2	20.4	19.6	20.7	21.1	21.4	21.2	20.3	20.8	21.3	24.8	28.0	27.0	26.3	24.6	22.8	23.6	23.9	23.8	22.8	28.0
4-Sep	24.4	25.7	Z	26.0	25.2	22.8	23.3	22.4	22.9	25.7	26.1	26.3	26.4	26.9	27.1	27.6	27.0	27.4	24.9	24.1	22.6	22.6	21.3	21.0	24.8	27.6
5-Sep	17.5	17.4	19.8	Z	12.4	10.4	13.0	13.4	14.2	14.2	17.0	19.4	21.1	24.2	26.3	26.3	26.1	26.1	25.8	25.1	24.7	26.1	24.8	24.3	20.4	26.3
6-Sep	23.3	22.3	21.1	20.1	Z	18.8	18.0	17.5	19.1	24.2	27.6	29.0	31.8	36.5	40.1	46.3	45.9	44.9	38.5	36.2	36.8	41.7	38.3	36.5	31.1	46.3
7-Sep	35.7	32.7	30.1	25.7	24.7	Z	20.8	20.3	21.7	21.2	21.4	22.7	24.9	24.3	23.7	23.0	22.1	21.3	19.3	20.9	17.4	16.6	16.0	15.2	22.7	35.7
8-Sep	Z	13.8	12.9	11.3	10.8	10.3	10.4	10.0	18.5	21.2	21.5	23.0	24.6	25.6	25.3	25.3	24.9	24.6	23.2	21.9	21.1	21.0	18.8	16.7	19.0	25.6
9-Sep	15.2	Z	14.7	14.0	13.3	14.1	15.8	16.1	15.8	18.9	22.7	26.1	26.0	31.0	32.8	38.9	47.2	46.6	48.1	44.4	42.7	39.7	33.9	26.5	28.0	48.1
10-Sep	22.6	21.6	Z	19.1	17.3	17.1	16.8	15.1	17.2	20.9	22.8	24.1	25.6	27.6	26.8	26.7	27.5	26.9	26.9	26.3	24.1	16.9	22.3	24.1	22.4	27.6
11-Sep	23.9	22.1	18.3	Z	19.5	18.6	17.5	17.6	17.6	19.5	20.0	20.6	23.1	24.9	26.0	26.6	27.6	28.5	29.0	30.5	38.1	37.6	38.1	35.3	25.2	38.1
12-Sep	29.8	25.2	24.4	23.7	Z	22.0	21.2	24.0	29.5	36.9	42.3	49.3	54.7	57.6	58.4	58.8	41.8	33.7	31.2	33.5	33.5	31.4	30.4	28.5	35.7	58.8
13-Sep	26.7	22.8	23.9	23.5	22.9	Z	23.2	20.4	19.1	19.2	16.7	14.6	16.6	20.8	19.3	19.9	23.0	24.1	32.1	29.8	36.9	40.8	39.8	39.6	25.0	40.8
14-Sep	Z	36.2	35.5	36.0	32.1	27.5	27.8	28.6	29.6	30.1	29.3	30.6	30.1	30.0	29.7	30.2	31.2	30.9	36.4	39.8	37.6	29.3	25.7	27.0	31.4	39.8
15-Sep	30.0	Z	29.7	27.0	29.3	25.9	20.8	16.7	20.2	21.3	26.1	22.8	17.7	13.6	12.5	12.2	14.4	14.0	11.3	9.1	8.2	8.5	9.3	11.0	17.9	30.0
16-Sep	12.2	13.3	Z	13.7	12.5	14.2	14.2	14.8	C	C	C	C	23.5	22.7	23.6	23.5	23.8	22.3	20.9	21.2	21.6	19.6	20.3	19.0	18.8	23.8
17-Sep	18.2	16.9	15.2	Z	13.5	15.0	15.2	15.8	17.0	19.7	24.8	31.2	35.4	36.3	38.1	41.9	37.7	36.5	34.7	32.7	30.5	29.2	28.1	27.8	26.6	41.9
18-Sep	27.6	28.1	27.8	27.1	Z	24.6	24.1	24.6	25.3	27.3	29.2	32.9	37.0	38.6	38.9	39.2	39.8	39.4	37.8	35.9	38.9	38.2	35.2	34.4	32.7	39.8
19-Sep	31.4	30.4	29.6	26.9	25.8	Z	26.8	24.9	23.2	26.4	27.4	28.8	30.7	33.2	34.1	33.9	31.9	30.3	29.6	28.6	27.5	28.6	26.6	23.8	28.7	34.1
20-Sep	Z	24.0	24.4	22.2	16.5	8.2	11.2	17.0	20.1	26.8	33.2	38.0	42.9	48.1	50.1	47.2	51.7	55.5	54.3	50.6	46.4	43.2	42.0	39.1	35.3	55.5
21-Sep	40.8	Z	39.3	33.8	26.6	21.0	21.7	30.0	33.6	36.1	37.3	35.9	35.5	36.0	36.3	35.6	34.9	32.7	34.6	31.3	30.2	26.1	26.9	24.3	32.2	40.8
22-Sep	20.1	20.0	Z	18.6	23.1	25.2	24.4	24.0	24.7	27.1	27.5	28.5	29.3	29.7	29.6	29.5	29.8	29.1	28.6	27.7	27.8	28.8	29.3	27.3	26.5	29.8
23-Sep	27.5	28.3	27.6	Z	29.9	30.8	30.7	31.2	31.9	32.6	34.0	34.8	35.1	35.4	36.0	36.3	36.2	34.9	33.1	32.0	30.5	28.7	29.8	30.7	32.1	36.3
24-Sep	30.9	29.9	29.0	27.3	Z	26.8	26.2	25.3	24.7	27.3	29.2	30.8	31.2	32.3	34.0	34.9	34.5	33.4	33.1	32.2	30.5	30.2	30.1	29.3	30.1	34.9
25-Sep	27.6	26.3	26.1	25.3	24.4	Z	22.4	22.3	15.7	12.7	23.1	31.9	37.2	37.3	40.2	35.9	32.6	33.5	34.2	32.9	32.5	29.8	28.6	30.1	28.8	40.2
26-Sep	Z	18.9	18.8	19.8	18.7	16.1	15.2	15.8	17.2	18.8	20.3	22.7	24.5	25.2	27.1	28.1	27.7	26.5	25.7	24.1	24.0	24.3	24.0	22.4	22.0	28.1
27-Sep	23.4	Z	25.9	31.2	28.3	22.5	20.2	22.0	22.6	24.5	24.8	25.8	29.0	28.9	30.0	31.3	30.7	29.7	34.8	32.6	30.5	28.4	25.7	24.8	27.3	34.8
28-Sep	24.3	21.9	Z	23.6	22.2	21.1	19.1	18.4	19.4	21.7	23.3	24.4	26.1	27.7	29.1	28.3	28.0	25.1	26.0	21.3	24.1	25.3	24.1	26.5	23.9	29.1
29-Sep	24.8	24.8	24.5	Z	28.0	29.5	27.7	28.1	29.3	28.6	29.2	30.5	33.1	32.4	32.0	32.2	33.7	28.4	31.1	31.7	31.7	29.9	28.4	29.0	29.5	33.7
30-Sep	27.6	27.6	28.3	27.9	Z	25.7	22.0	16.4	17.1	18.0	16.9	19.1	21.9	23.9	26.5	26.2	26.2	24.0	23.2	21.9	22.3	22.4	20.5	18.8	22.8	28.3
	25.2	23.8	24.4	23.5	21.7	20.6	20.3	20.3	21.7	23.8	25.8	27.6	29.0	30.3	31.2	31.7	31.5	30.6	30.5	29.4	29.0	28.0	27.1	26.2	Diurnal Average	
	40.8	36.2	39.3	36.0	32.1	30.8	30.7	31.2	33.6	36.9	42.3	49.3	54.7	57.6	58.4	58.8	51.7	55.5	54.3	50.6	46.4	43.2	42.0	39.6	Diurnal Maximum	

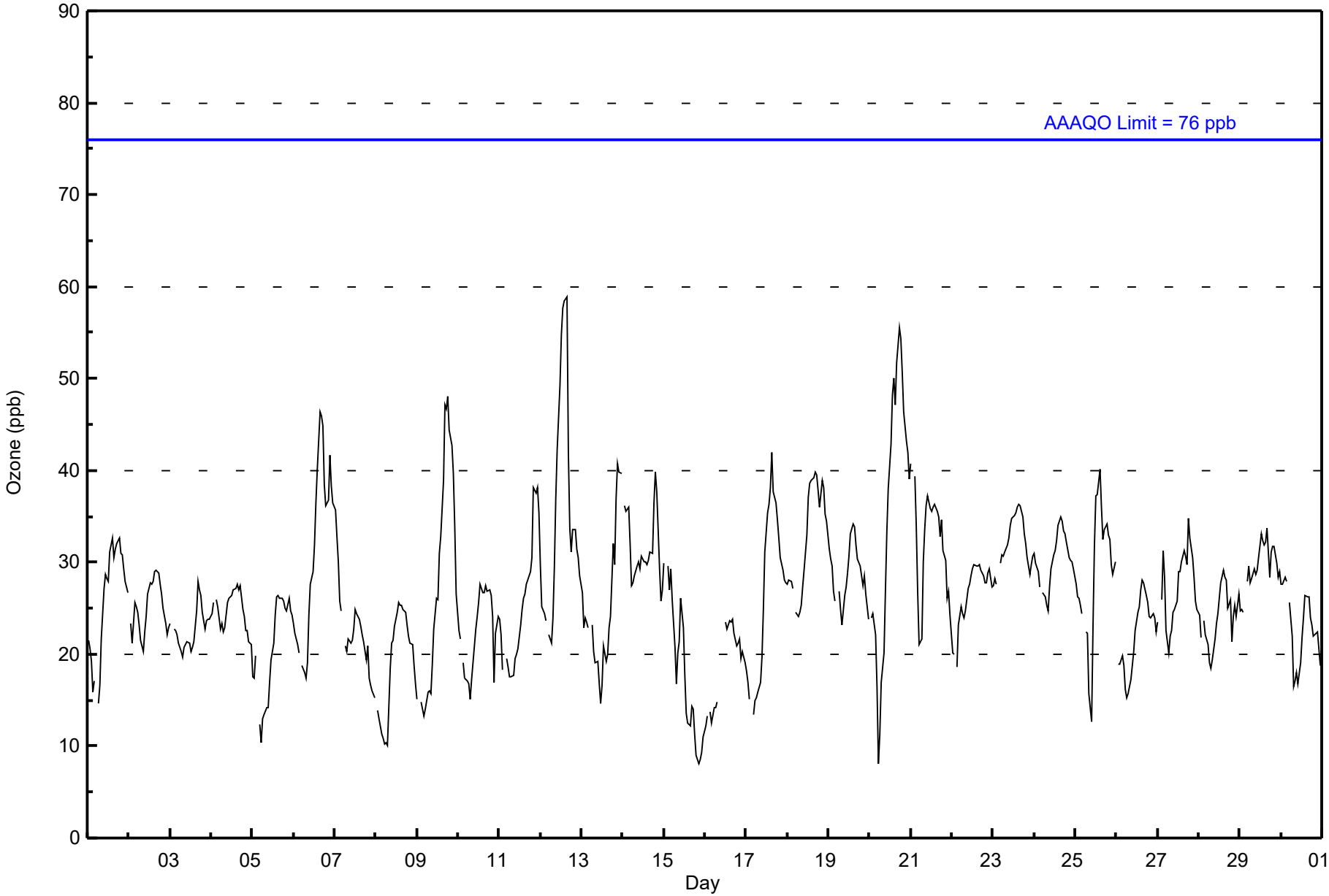
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort Chipewyan - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	136	19.83	19.83
21 - 50	542	79.01	98.83
51 - 82	8	1.17	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Fort Chipewyan - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	1	1	1	1	14	20	14	9	4	0	9	8	10	18	9	14	133
21 - 50	7	7	3	30	60	40	39	29	47	20	40	68	75	19	31	25	540
51 - 82	0	0	0	0	0	0	0	2	5	0	0	0	1	0	0	0	8
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	8	8	4	31	74	60	53	40	56	20	49	76	86	37	40	39	681

Total Number of Valid Hours: 681

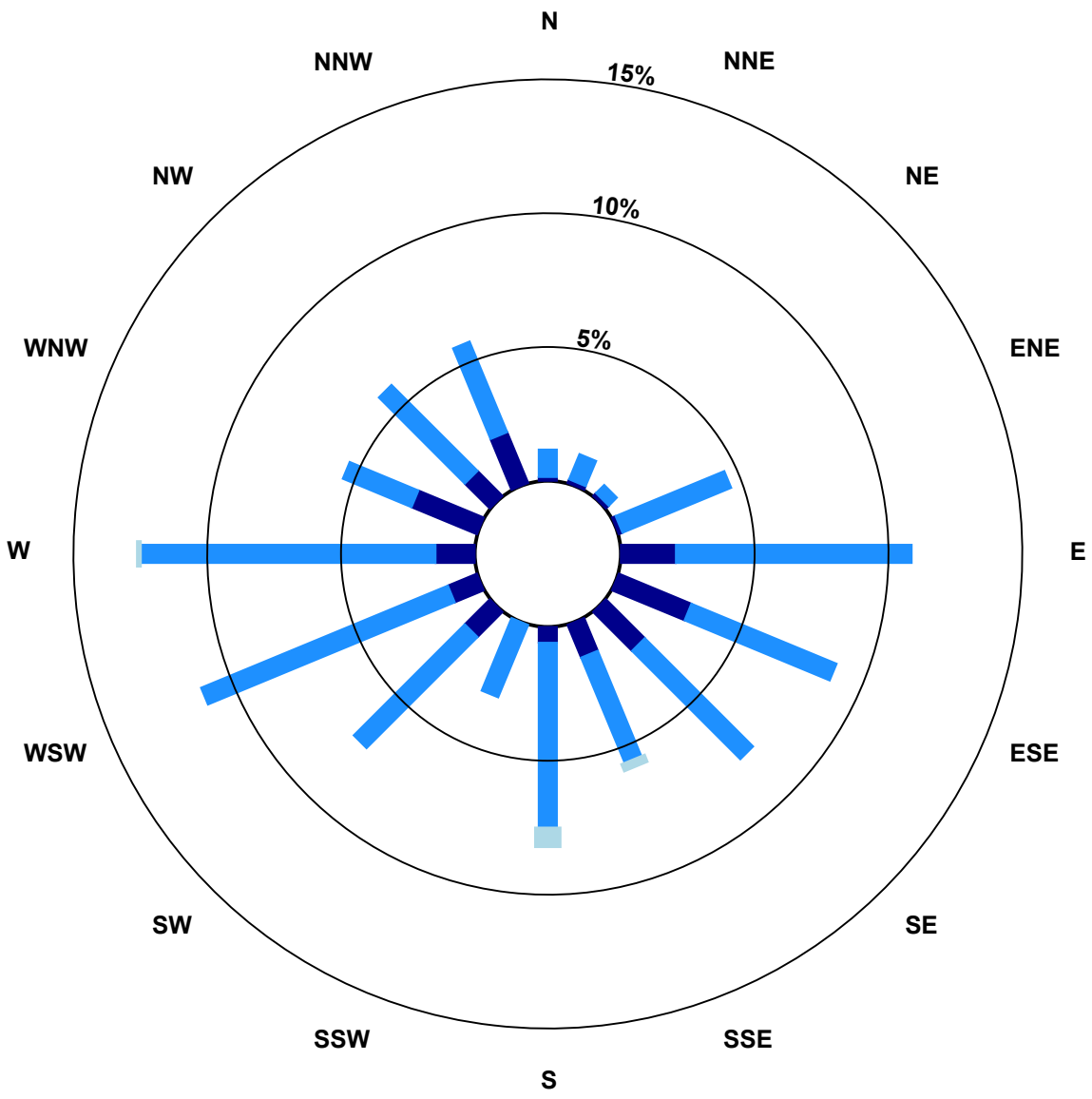
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

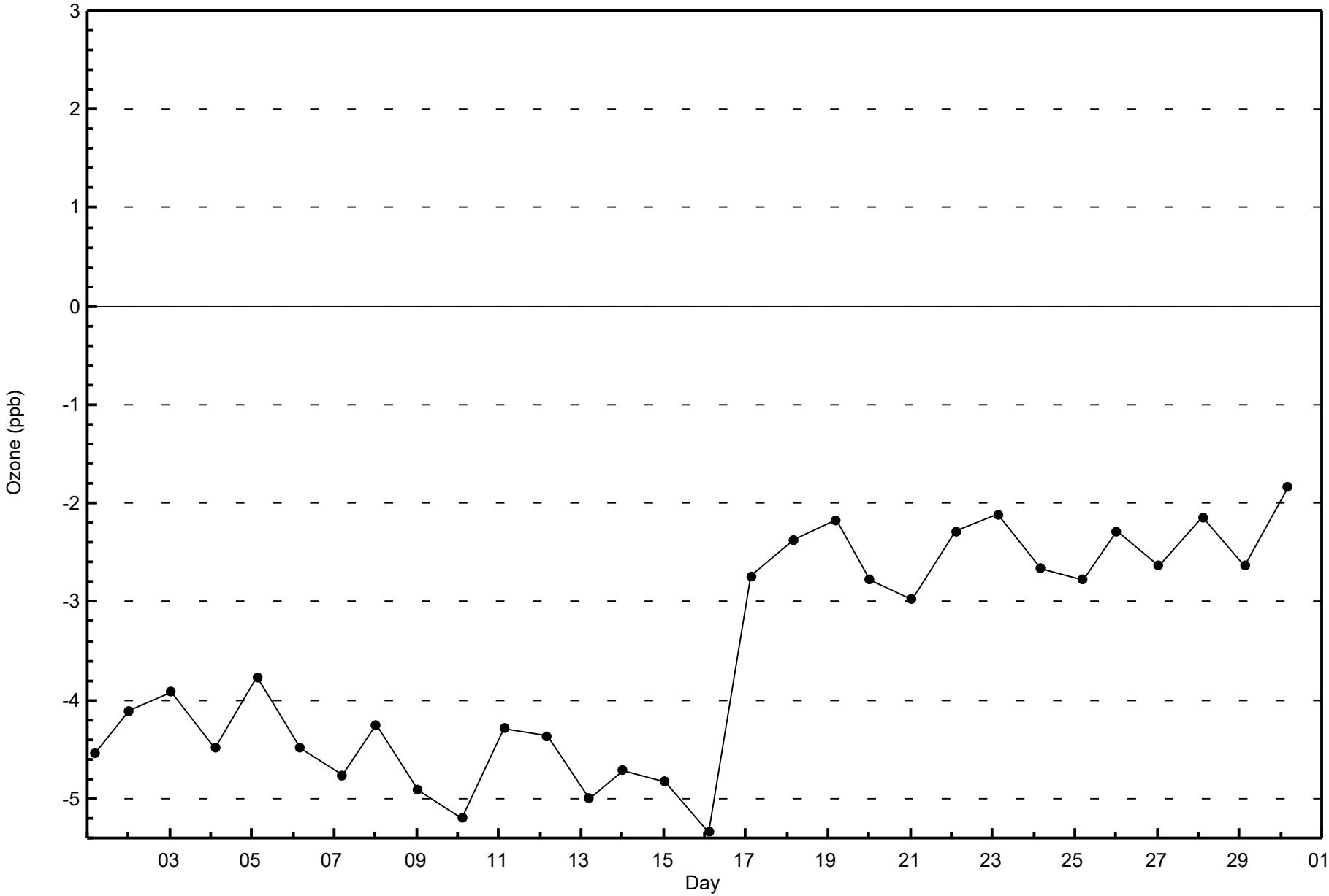
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort Chipewyan - September 2025

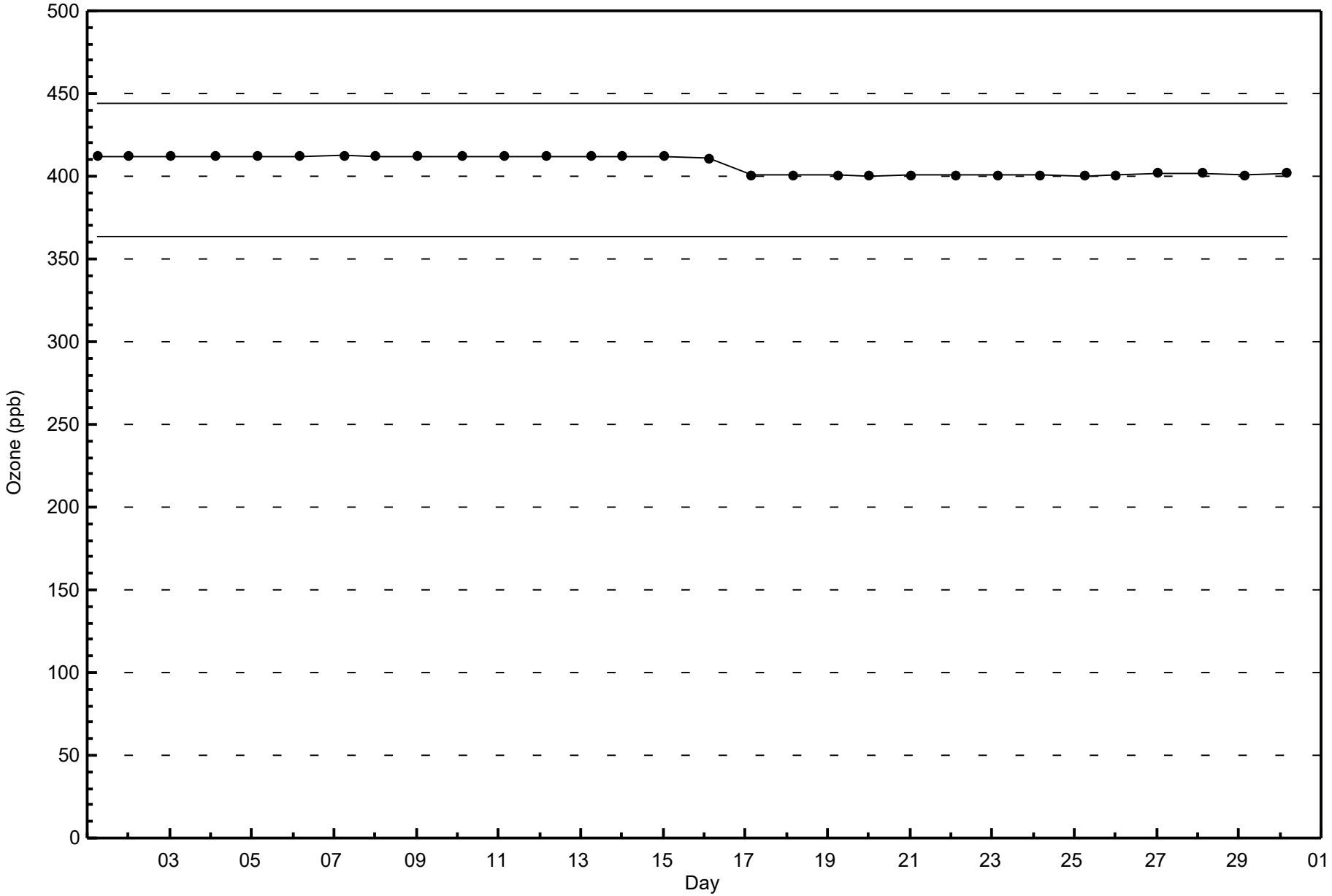


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort Chipewyan - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 6

Maximum Value: 144.5 $\mu g/m^3$ on Sep 12 06:00

Maximum Daily Average: 60.2 $\mu g/m^3$ on Sep 12

Minimum Value: 0.7 $\mu g/m^3$ on Sep 27 21:00

Minimum Daily Average: 2.1 $\mu g/m^3$ on Sep 28

Maximum Diurnal Average: 25.2 $\mu g/m^3$ at hour 12

Minimum Diurnal Average: 12.7 $\mu g/m^3$ at hour 2

Monthly Average: 19.62 $\mu g/m^3$

Percentiles: P_1 = 0.8 P_{10} = 2.3 Q_1 = 4.1 Median = 11.9 Q_3 = 25.7 P_{90} = 44.9 P_{99} = 107.5

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	1.5	1.7	2.4	2.7	2.4	3.4	12.9	115.3	136.8	105.7	97.1	82.7	66.3	70.3	42.0	54.8	78.3	102.8	96.2	96.5	75.2	54.6	48.1	56.3	136.8
2-Sep	32.3	19.7	19.7	30.6	21.9	11.9	14.9	17.4	16.4	16.5	18.2	16.3	17.8	19.8	24.6	22.2	23.0	29.3	31.7	31.1	32.6	33.8	37.1	37.0	24.0	37.1
3-Sep	33.3	34.4	38.0	45.9	55.7	62.4	65.6	65.5	63.2	64.8	64.6	67.2	66.5	65.9	71.3	56.1	58.7	84.4	99.4	74.4	67.7	34.2	16.9	8.2	56.8	99.4
4-Sep	5.2	3.7	2.8	2.5	2.1	1.9	2.8	4.7	4.9	5.3	12.1	6.3	4.6	2.9	3.4	3.5	5.7	6.1	4.1	5.8	6.5	4.6	4.0	4.2	4.6	12.1
5-Sep	4.1	4.7	9.4	6.7	5.3	4.2	4.8	4.8	5.3	5.3	4.9	4.6	4.6	4.4	4.7	4.2	4.0	4.3	4.8	5.0	4.5	3.3	3.8	3.8	4.8	9.4
6-Sep	3.7	3.7	3.8	4.1	5.0	6.4	7.5	11.4	21.1	30.3	25.1	21.3	19.2	15.2	15.4	18.9	19.0	17.4	16.5	17.7	17.4	22.4	26.2	24.6	15.6	30.3
7-Sep	22.9	22.0	19.3	19.1	20.8	19.3	18.8	17.2	17.0	17.8	19.5	17.2	20.2	22.6	28.2	31.5	37.5	26.6	23.9	49.3	32.8	32.1	39.9	40.1	25.6	49.3
8-Sep	36.5	31.5	29.0	29.0	25.7	21.3	13.2	8.7	7.0	7.3	7.3	5.9	5.0	4.9	5.5	6.0	6.1	6.3	7.5	6.7	6.0	5.6	5.4	5.3	12.2	36.5
9-Sep	5.4	5.7	6.2	6.9	7.5	7.9	7.9	9.1	11.9	19.9	22.4	24.6	23.5	24.2	24.0	27.6	31.9	33.5	40.9	46.4	50.7	52.2	48.4	31.5	23.8	52.2
10-Sep	25.0	22.2	22.1	22.1	22.5	22.6	20.2	19.2	16.9	23.7	29.0	25.5	21.5	17.4	16.9	14.9	12.8	12.6	24.0	44.5	37.2	21.8	10.2	6.2	21.3	44.5
11-Sep	6.1	6.1	6.8	7.4	7.3	7.6	7.6	7.2	7.1	6.9	6.9	7.0	7.1	7.4	8.0	7.7	7.5	6.9	6.5	7.5	11.3	12.8	13.8	13.4	8.1	13.8
12-Sep	12.6	19.2	46.9	98.9	138.5	144.5	139.2	121.2	108.5	95.7	80.7	63.8	47.3	43.6	39.3	49.0	44.6	35.6	31.9	22.0	17.1	13.9	14.0	16.8	60.2	144.5
13-Sep	19.0	26.0	38.1	40.4	40.2	40.0	40.1	40.5	44.1	42.5	44.9	44.3	43.0	46.9	44.3	41.8	42.9	43.6	42.9	44.3	46.7	44.4	42.8	42.7	41.1	46.9
14-Sep	43.1	43.3	43.4	43.7	43.1	44.3	44.9	54.0	52.5	52.3	49.4	47.2	37.2	38.0	28.2	45.0	55.3	40.3	27.4	21.0	26.7	40.2	37.2	27.5	41.1	55.3
15-Sep	19.7	15.0	13.2	12.7	11.0	10.8	11.3	11.6	12.1	11.9	15.2	20.2	25.2	34.1	41.4	48.9	37.6	30.4	20.8	11.1	7.4	11.5	14.6	9.8	19.1	48.9
16-Sep	8.2	7.1	7.2	6.7	6.3	10.0	11.2	12.4	14.5	17.1	19.0	19.9	20.8	18.8	16.0	15.2	15.8	16.8	16.2	15.5	13.2	12.7	11.5	11.5	13.5	20.8
17-Sep	11.9	12.7	15.4	18.7	19.8	21.3	22.2	22.2	22.9	20.0	17.5	15.7	14.2	12.9	11.5	11.3	13.0	11.9	11.2	10.6	13.6	18.1	18.8	15.7	16.0	22.9
18-Sep	13.3	11.9	11.2	12.5	15.4	16.0	15.9	15.1	15.5	16.3	17.8	19.9	20.6	20.0	14.2	11.9	11.5	11.1	9.3	9.5	8.5	7.0	6.4	5.4	13.2	20.6
19-Sep	5.1	4.5	4.2	4.0	4.0	4.2	3.8	4.3	3.7	3.5	4.5	3.3	3.1	2.3	2.2	1.9	2.7	3.8	3.4	3.1	3.1	3.9	7.1	5.5	3.8	7.1
20-Sep	7.1	14.2	34.0	35.9	39.6	33.8	21.2	9.8	6.5	6.0	6.1	7.5	8.5	16.0	19.2	17.3	17.4	18.0	18.9	18.8	18.3	16.1	15.7	17.9	17.7	39.6
21-Sep	15.7	15.5	15.5	16.6	19.4	20.7	21.1	16.5	11.3	7.5	5.5	5.4	5.1	3.9	3.7	4.2	4.3	4.6	4.3	3.9	4.1	4.2	4.0	4.1	9.2	21.1
22-Sep	4.1	4.1	3.8	4.0	3.2	2.6	2.7	2.6	2.6	2.6	2.9	2.4	2.8	2.0	1.8	1.7	1.7	1.5	1.1	1.0	4.6	10.7	8.4	6.5	3.4	10.7
23-Sep	4.8	3.5	2.5	3.5	7.7	6.3	3.9	2.6	2.1	2.3	2.3	2.3	C	C	2.4	2.7	2.2	2.1	2.1	2.0	1.7	1.7	1.8	2.4	3.0	7.7
24-Sep	2.5	2.7	2.7	2.7	2.7	2.7	2.9	3.2	3.4	3.5	3.9	3.1	4.7	3.7	2.9	2.3	3.0	2.5	2.8	2.6	2.8	2.2	2.2	2.4	2.9	4.7
25-Sep	2.1	2.2	2.5	2.6	2.6	2.6	2.7	2.7	3.7	25.1	79.8	88.5	95.2	77.8	47.5	20.0	12.6	39.4	43.8	38.3	13.8	10.9	10.8	11.1	26.6	95.2
26-Sep	10.7	9.2	19.2	32.3	33.2	27.8	25.6	19.5	12.5	6.2	3.6	3.4	3.4	3.0	2.8	2.7	2.5	2.5	2.1	2.0	2.0	1.9	1.9	1.9	9.7	33.2
27-Sep	2.0	2.5	3.7	6.0	7.4	8.1	11.9	2.6	1.1	0.9	0.8	0.9	0.8	0.8	1.4	1.0	0.8	0.9	0.8	0.8	0.7	0.7	0.9	0.9	2.4	11.9
28-Sep	1.1	1.3	1.1	1.4	1.5	1.5	1.7	1.5	1.7	1.9	2.2	3.1	3.3	1.7	1.7	2.2	2.1	2.3	3.4	4.2	2.8	1.9	2.1	1.9	2.1	4.2
29-Sep	2.1	2.5	2.8	3.1	3.9	4.0	4.9	5.7	5.2	5.4	5.1	4.3	4.4	4.6	5.8	8.4	10.3	11.8	15.7	25.4	28.9	27.3	25.0	39.2	10.7	39.2
30-Sep	53.2	29.5	20.0	20.8	20.7	17.3	19.7	32.9	40.0	40.5	46.2	107.9	81.5	44.0	48.8	48.7	35.1	31.0	29.5	27.8	28.4	33.6	39.1	36.5	38.9	107.9
	13.8	12.7	14.9	18.1	19.9	19.6	19.1	18.6	21.7	23.2	24.1	25.2	23.9	21.6	20.2	19.0	19.2	20.5	21.7	21.6	20.3	18.7	17.5	16.1	Diurnal Average	
	53.2	43.3	46.9	98.9	138.5	144.5	139.2	121.2	115.3	136.8	105.7	107.9	95.2	77.8	71.3	56.1	58.7	84.4	102.8	96.2	96.5	75.2	54.6	48.1	Diurnal Maximum	

C - Calibration

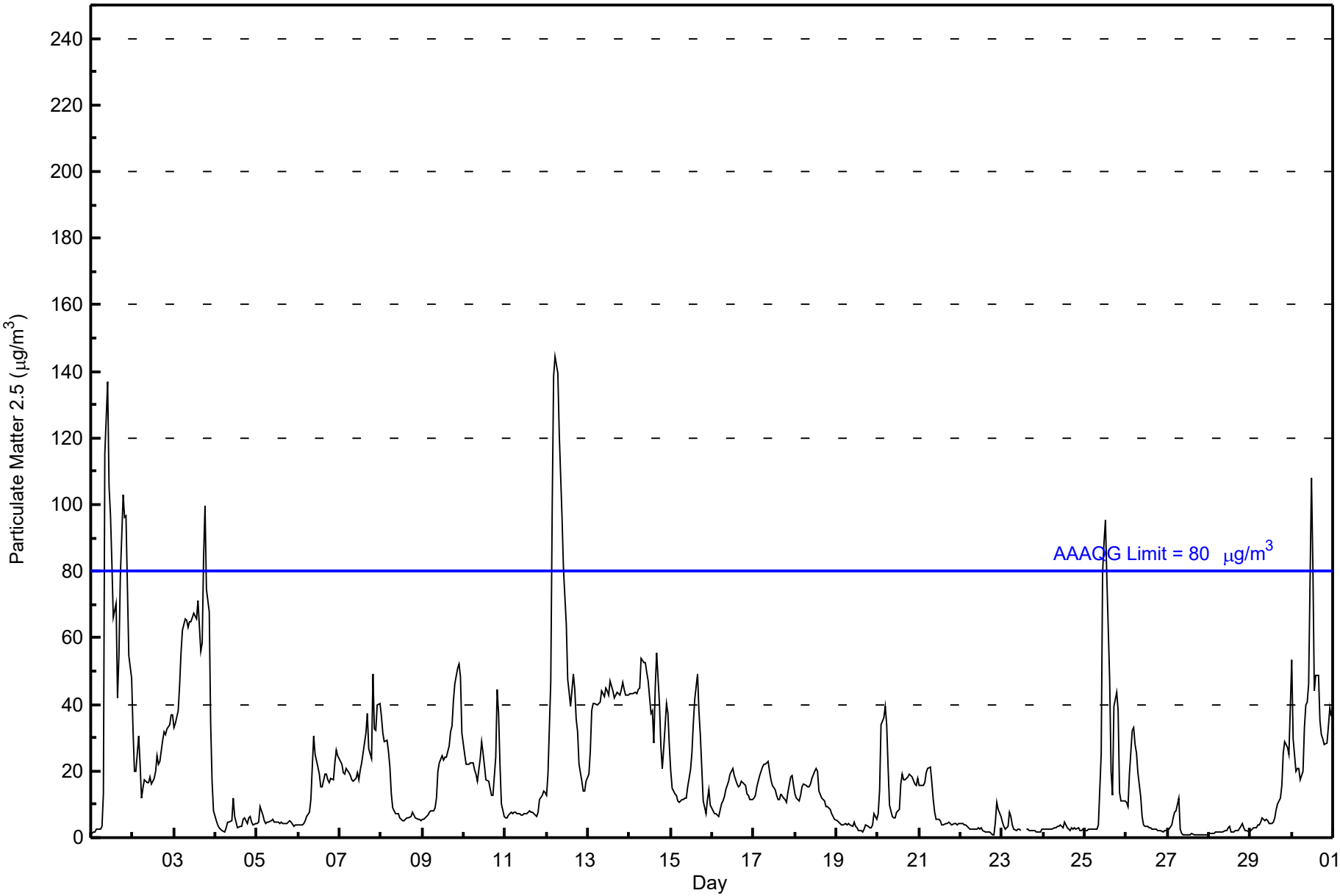
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Chipewyan - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Chipewyan - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	241	33.57	33.57
6 - 15	162	22.56	56.13
16 - 25	134	18.66	74.79
26 - 80	159	22.14	96.94
> 81.0	22	3.06	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Chipewyan - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	2	0	0	12	22	21	6	3	5	6	29	50	58	12	9	5	240
6 - 15	1	1	3	7	16	24	18	14	20	5	8	12	11	11	7	4	162
16 - 25	0	2	1	1	10	13	18	17	16	3	9	10	13	12	7	2	134
26 - 80	4	2	0	12	29	5	11	9	12	6	6	4	7	7	16	25	155
> 81.0	3	3	0	0	0	0	0	0	10	0	0	0	0	0	2	4	22
Totals	10	8	4	32	77	63	53	43	63	20	52	76	89	42	41	40	713

Total Number of Valid Hours: 713

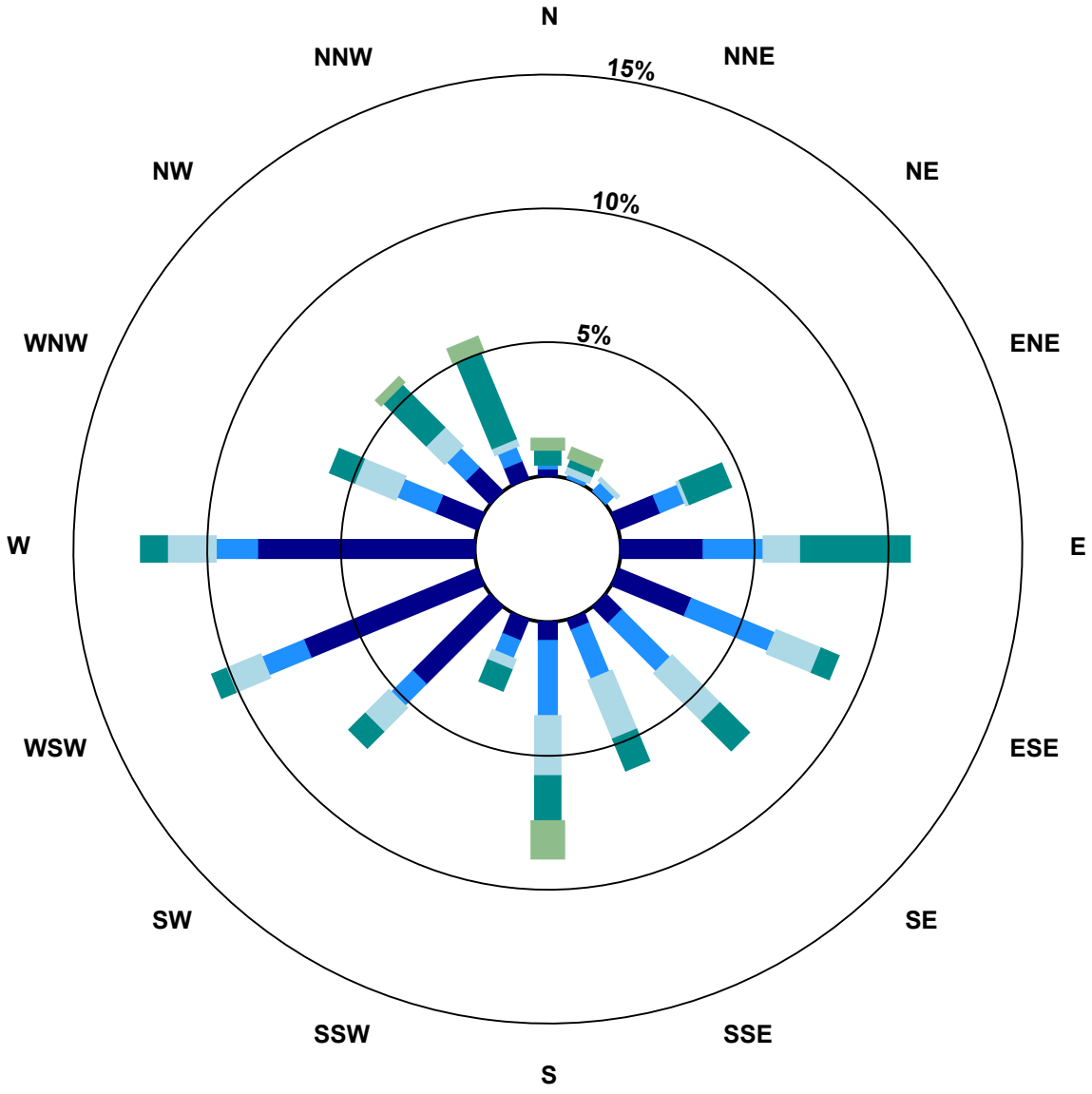
Total Number of Hours: 720

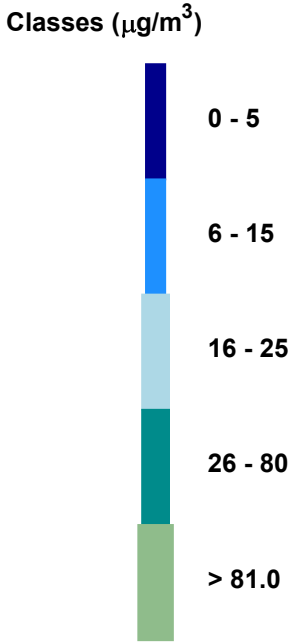
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Fort Chipewyan





Total Number of Valid Hours: 713

Maximum Value: 27.3 C on Sep 12 16:00
Maximum Daily Average: 20.7 C on Sep 12

Minimum Value: 3.8 C on Sep 26 07:00
Minimum Daily Average: 9.3 C on Sep 26
Maximum Diurnal Average: 18.6 C at hour 16
Minimum Diurnal Average: 10.7 C at hour 7
Monthly Average: 14.31 C
Percentiles: P_1 = 5.2 P_{10} = 8.9 Q_1 = 11.4 Median = 14.2 Q_3 = 17.1 P_{90} = 20.0 P_{99} = 24.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

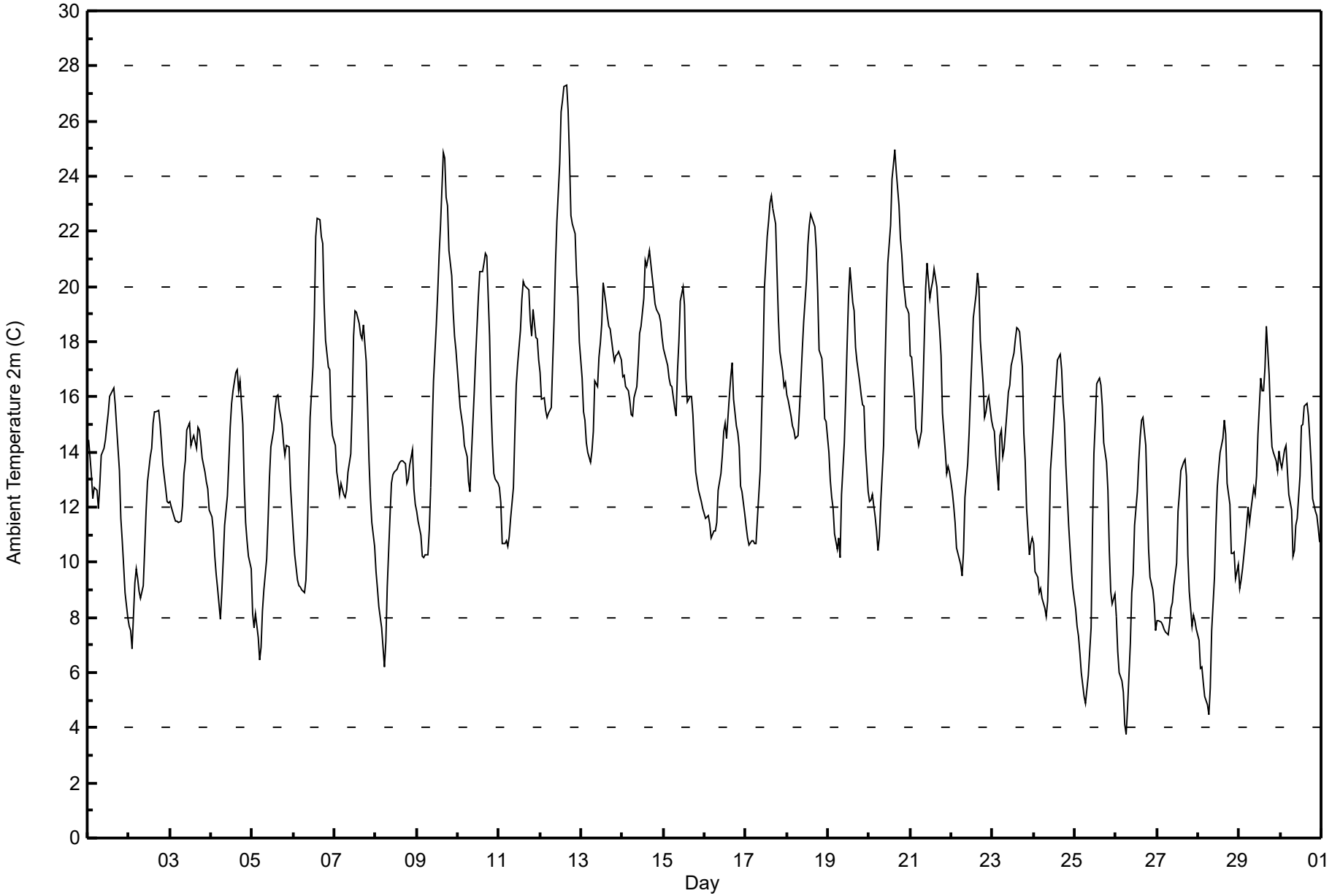
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	14.5	13.8	13.2	12.3	12.7	12.6	11.9	12.8	13.9	14.1	14.5	15.0	15.4	16.0	16.2	16.3	15.7	14.9	13.3	11.6	10.8	9.9	8.9	8.0	13.3	16.3
2-Sep	7.7	7.5	6.9	9.3	9.8	9.4	8.9	8.7	9.2	10.5	11.9	12.9	13.8	14.2	15.1	15.5	15.4	15.5	15.0	14.3	13.5	12.7	12.2	12.1	11.7	15.5
3-Sep	12.2	12.0	11.6	11.5	11.5	11.4	11.5	12.0	13.2	13.7	14.8	15.0	14.2	14.4	14.6	14.2	14.9	14.8	14.3	13.8	13.3	12.9	12.6	11.9	13.2	15.0
4-Sep	11.7	11.1	10.2	9.6	9.0	7.9	8.9	10.1	11.4	12.4	13.6	14.9	15.7	16.2	16.9	17.0	16.2	16.6	15.0	12.9	11.4	10.8	10.2	9.7	12.5	17.0
5-Sep	8.2	7.6	8.1	7.3	6.4	6.9	8.2	9.0	10.1	11.5	13.1	14.2	14.8	15.5	16.0	16.1	15.6	15.0	14.3	13.9	14.2	14.2	12.7	11.9	11.9	16.1
6-Sep	11.0	10.3	9.4	9.2	9.1	9.0	8.9	9.3	11.0	13.3	15.3	17.1	18.9	21.8	22.5	22.4	21.8	21.6	19.4	18.1	17.1	17.0	15.2	14.6	15.1	22.5
7-Sep	14.2	13.3	12.9	12.5	12.9	12.4	12.4	12.6	13.3	13.9	15.6	18.2	19.1	19.1	18.6	18.3	18.1	18.6	17.3	15.6	13.7	12.4	11.4	10.6	14.9	19.1
8-Sep	9.7	9.1	8.4	7.6	6.9	6.2	7.1	9.1	11.7	12.8	13.1	13.3	13.4	13.5	13.7	13.7	13.7	13.6	12.9	13.0	13.5	14.1	12.6	12.1	11.4	14.1
9-Sep	11.9	11.5	11.0	10.2	10.2	10.3	10.3	11.2	12.7	14.8	16.6	18.6	19.8	21.2	22.2	24.9	24.7	23.2	22.9	21.3	20.4	19.1	18.2	17.7	16.9	24.9
10-Sep	16.3	15.6	15.3	14.9	14.2	13.8	12.9	12.6	13.9	16.1	17.4	18.5	19.6	20.5	20.5	20.8	21.2	21.1	18.2	15.7	14.3	13.2	13.0	12.9	16.4	21.2
11-Sep	12.7	12.2	10.7	10.7	10.8	10.6	10.9	11.6	12.7	14.7	16.4	17.2	18.4	19.5	20.2	20.0	20.0	19.9	18.7	18.2	19.2	18.2	18.1	17.3	15.8	20.2
12-Sep	16.9	15.9	16.0	15.5	15.3	15.4	15.6	17.2	18.8	20.9	22.4	24.5	26.3	26.8	27.2	27.3	26.4	24.6	22.6	22.2	21.9	20.5	19.6	18.0	20.7	27.3
13-Sep	16.7	15.5	15.2	14.3	14.0	13.6	14.0	14.8	16.6	16.4	17.4	17.9	18.7	20.1	19.4	18.9	18.6	18.4	17.7	17.3	17.5	17.6	17.6	17.4	16.9	20.1
14-Sep	16.8	16.8	16.4	16.2	15.9	15.4	15.3	16.0	16.4	17.3	18.3	18.6	19.6	20.9	20.8	21.0	21.3	20.4	19.9	19.4	19.2	19.0	18.7	18.1	18.2	21.3
15-Sep	17.8	17.5	17.1	16.7	16.4	16.4	15.6	15.3	16.9	18.0	19.5	20.0	19.3	16.7	15.8	16.0	16.0	15.4	14.2	13.3	12.6	12.4	12.2	11.9	16.0	20.0
16-Sep	11.6	11.6	11.7	11.4	10.9	11.1	11.2	11.4	12.6	13.2	13.9	14.8	15.0	14.5	16.0	16.7	17.2	15.9	15.0	14.7	14.2	12.8	12.6	11.8	13.4	17.2
17-Sep	11.3	10.9	10.6	10.8	10.8	10.7	10.7	11.6	13.3	15.3	17.3	19.9	21.8	22.4	23.0	23.3	22.8	22.3	20.5	18.8	17.7	16.9	16.4	16.5	16.5	23.3
18-Sep	16.1	15.9	15.3	15.0	14.8	14.5	14.6	15.5	16.6	17.7	18.7	20.2	21.5	22.2	22.6	22.3	22.2	21.4	19.8	17.7	17.4	16.5	15.2	15.1	17.9	22.6
19-Sep	14.0	13.0	12.4	12.0	11.0	10.5	10.9	10.1	12.5	14.4	16.0	17.9	19.6	20.7	19.4	19.1	17.8	17.3	16.5	16.0	15.7	15.6	14.2	12.5	15.0	20.7
20-Sep	12.2	12.3	12.4	11.6	11.2	10.4	10.9	12.2	14.2	17.1	19.2	20.9	22.2	23.9	24.4	25.0	24.2	22.9	21.8	21.1	20.2	19.3	19.2	19.0	17.8	25.0
21-Sep	17.5	17.4	16.0	14.9	14.6	14.2	14.7	16.1	18.0	20.0	20.9	19.6	19.9	20.2	20.7	20.0	19.1	18.4	17.5	15.4	14.0	13.2	13.5	13.2	17.0	20.9
22-Sep	12.6	12.0	11.5	10.5	10.3	9.9	9.5	10.4	12.3	13.6	14.7	16.1	17.4	18.9	19.7	20.5	20.0	18.1	16.5	15.2	15.5	15.9	16.0	15.1	14.7	20.5
23-Sep	14.9	14.8	13.9	12.6	14.6	14.8	13.8	14.1	15.4	16.2	16.4	17.1	17.6	18.1	18.5	18.4	18.3	17.1	14.7	13.7	12.0	10.3	10.7	10.9	15.0	18.5
24-Sep	10.7	9.7	9.5	8.9	9.1	8.7	8.3	8.0	8.6	10.5	13.3	14.8	15.8	16.5	17.3	17.5	17.0	15.8	15.1	13.5	11.4	10.5	9.7	9.1	12.0	17.5
25-Sep	8.3	7.7	7.3	6.7	6.0	5.1	4.9	5.4	5.9	7.6	11.2	13.9	15.1	16.5	16.7	16.4	15.6	14.3	13.6	12.6	10.4	9.0	8.5	8.9	10.3	16.7
26-Sep	8.0	6.8	6.0	5.7	5.3	4.1	3.8	4.7	7.1	8.9	9.5	11.3	12.6	13.7	14.6	15.2	15.2	14.2	12.4	10.5	9.5	9.0	8.5	7.5	9.3	15.2
27-Sep	7.9	7.9	7.8	7.7	7.6	7.5	7.3	7.8	8.3	8.5	9.2	10.0	11.8	12.5	13.3	13.6	13.7	13.1	10.3	8.9	7.7	8.1	7.9	7.6	9.4	13.7
28-Sep	7.2	6.2	6.2	5.6	5.1	4.8	4.5	5.4	7.5	9.5	11.3	12.7	13.4	14.0	14.5	15.1	14.6	12.9	12.1	10.3	10.3	10.4	9.4	9.9	9.7	15.1
29-Sep	9.0	9.4	9.8	10.8	11.4	12.0	11.5	11.9	12.7	12.5	13.1	14.6	16.7	16.2	16.2	17.1	18.6	16.8	15.2	14.2	14.0	13.7	13.3	14.1	13.5	18.6
30-Sep	13.6	13.4	14.1	14.2	13.3	12.5	11.9	10.2	10.4	11.4	11.6	13.1	14.9	15.0	15.7	15.8	15.3	14.5	13.5	12.3	11.9	11.7	11.2	10.7	13.0	15.8
	12.4	11.9	11.6	11.2	11.0	10.7	10.7	11.2	12.6	13.9	15.2	16.4	17.4	18.1	18.4	18.6	18.4	17.6	16.3	15.2	14.5	13.9	13.3	12.9	Diurnal Average	
	17.8	17.5	17.1	16.7	16.4	16.4	15.6	17.2	18.8	20.9	22.4	24.5	26.3	26.8	27.2	27.3	26.4	24.6	22.9	22.2	21.9	20.5	19.6	19.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Chipewyan - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	111	15.42	15.42
10 - 20	541	75.14	90.56
> 20	68	9.44	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - September 2025

Maximum Value: 99.0 % on Sep 26 07:00

Maximum Daily Average: 87.9 % on Sep 15

Minimum Value: 28.2 % on Sep 23 16:00

Minimum Daily Average: 48.5 % on Sep 23

Maximum Diurnal Average: 82.2 % at hour 6

Minimum Diurnal Average: 51.9 % at hour 16

Monthly Average: 68.10 %

Percentiles: P_1 = 34.2 P_{10} = 46.0 Q_1 = 56.4 Median = 69.7 Q_3 = 79.1 P_{90} = 88.8 P_{99} = 98.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

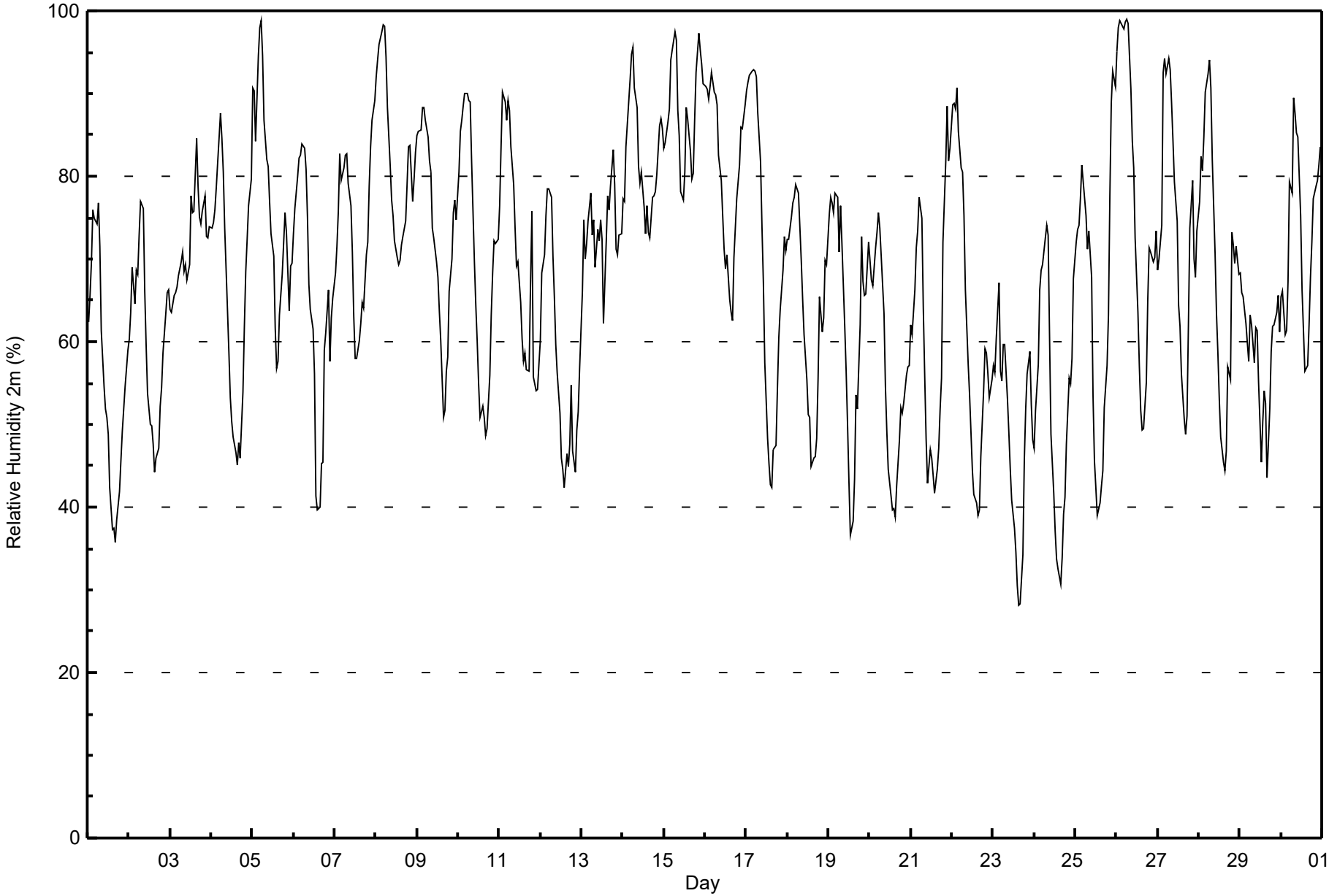
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	62.4	65.7	69.6	75.9	74.9	74.2	76.8	71.6	61.3	54.6	51.9	50.9	48.7	42.3	37.3	37.4	35.8	38.5	41.9	45.6	49.2	51.9	54.6	59.0	55.5	76.8
2-Sep	60.3	63.6	69.1	64.5	68.6	68.1	72.9	76.9	76.0	66.2	59.6	53.7	50.0	49.9	47.7	44.3	46.0	47.1	52.3	54.4	58.7	63.4	65.9	66.2	60.2	76.9
3-Sep	63.8	63.6	65.6	65.9	66.6	68.0	69.6	70.8	68.6	69.4	67.4	69.4	77.7	75.7	75.8	84.5	78.7	75.1	74.3	75.8	77.5	72.8	72.5	73.9	71.8	84.5
4-Sep	73.7	74.4	75.9	78.6	81.8	87.7	84.6	80.5	73.7	63.8	58.7	53.3	50.4	48.5	46.7	45.1	47.8	46.0	53.9	61.7	68.4	72.3	76.5	79.7	66.0	87.7
5-Sep	90.7	90.3	84.3	94.6	98.0	98.8	94.6	86.8	82.1	81.2	77.0	73.1	70.4	61.7	56.7	57.7	63.3	68.2	71.9	75.6	73.2	63.8	69.2	69.5	77.2	98.8
6-Sep	73.1	76.0	79.9	82.3	82.5	83.8	83.3	80.8	75.1	67.0	64.0	61.5	56.2	41.4	39.7	40.0	45.2	45.5	59.0	61.1	66.2	57.7	62.9	65.3	64.6	83.8
7-Sep	68.2	71.6	75.8	82.7	79.4	80.9	82.5	82.7	79.1	76.4	70.8	63.1	57.9	57.9	60.1	62.2	64.7	64.1	70.5	72.0	78.9	83.6	86.8	89.2	73.4	89.2
8-Sep	92.0	94.1	96.0	97.4	98.2	98.2	94.5	88.4	81.1	77.1	75.2	72.2	70.2	69.4	69.8	71.7	72.7	74.5	79.0	83.5	83.7	77.0	79.7	82.8	82.4	98.2
9-Sep	84.9	85.4	85.5	88.2	88.2	86.7	84.7	81.9	80.4	73.7	72.5	69.6	67.8	63.7	60.2	50.8	51.8	56.4	58.2	66.0	70.0	75.6	77.1	74.7	73.1	88.2
10-Sep	80.5	85.3	86.8	88.5	90.1	90.0	89.1	88.9	81.9	69.7	64.4	60.1	55.0	50.8	52.3	50.8	48.6	49.4	55.9	63.3	68.3	72.2	71.9	72.3	70.2	90.1
11-Sep	76.5	83.6	90.2	88.9	86.8	89.1	87.9	83.5	79.0	73.8	69.1	69.7	64.8	60.4	57.7	58.7	56.7	56.5	67.0	75.8	55.8	54.1	54.3	57.2	70.7	90.2
12-Sep	60.2	68.3	70.5	75.3	78.4	78.5	77.4	70.4	65.5	59.7	56.2	51.3	45.9	44.6	42.4	46.4	44.8	47.7	54.7	46.8	44.2	49.3	51.5	56.8	57.8	78.5
13-Sep	66.1	74.7	70.0	71.8	74.6	78.0	72.9	74.7	68.9	73.6	72.3	74.7	72.3	62.2	72.2	77.7	75.9	78.8	83.2	78.9	71.1	70.5	73.0	73.1	73.4	83.2
14-Sep	77.3	76.9	83.5	88.9	91.7	94.8	95.6	90.6	88.2	81.1	79.1	80.5	76.2	73.0	76.5	73.3	72.5	77.4	77.7	78.1	80.2	86.1	87.0	85.7	82.2	95.6
15-Sep	83.4	84.1	86.7	88.1	94.0	95.2	97.4	96.5	87.9	84.9	78.2	77.1	80.5	88.4	86.9	83.1	79.7	80.3	86.7	92.5	97.3	95.3	93.6	91.2	87.9	97.4
16-Sep	90.8	90.4	89.2	90.9	92.5	90.1	89.8	88.6	82.6	79.5	75.3	71.2	68.9	70.5	65.1	63.5	62.6	70.1	77.2	79.4	81.4	86.0	85.8	88.6	80.4	92.5
17-Sep	90.3	91.4	92.2	92.8	92.8	92.8	92.1	87.7	81.7	73.8	67.1	57.5	48.3	45.3	42.6	42.3	46.9	47.5	54.3	60.5	63.9	68.7	72.6	71.0	69.8	92.8
18-Sep	72.3	72.4	75.1	76.7	77.5	79.0	78.0	73.9	69.9	65.1	60.9	55.4	51.3	50.9	44.9	46.0	46.1	48.4	55.6	65.4	61.2	62.8	69.9	69.3	63.7	79.0
19-Sep	75.4	77.4	76.7	75.5	77.9	77.4	70.9	76.5	71.9	61.9	56.4	50.0	43.1	36.5	38.4	43.5	53.6	51.9	62.1	72.7	67.3	65.6	65.7	72.1	63.4	77.9
20-Sep	69.8	67.4	66.8	71.4	73.2	75.7	73.7	70.3	63.4	54.5	49.1	44.7	41.3	39.7	39.8	38.8	42.6	48.1	52.1	51.3	52.5	56.0	56.9	57.0	56.5	75.7
21-Sep	62.0	60.8	66.2	71.3	73.4	77.5	74.9	64.0	55.9	48.3	42.8	46.9	46.0	43.9	41.6	44.5	47.1	51.9	55.6	72.0	81.7	88.5	81.8	83.5	61.8	88.5
22-Sep	88.7	88.8	88.2	90.7	85.4	81.0	80.4	75.2	66.2	57.3	53.6	49.0	44.4	41.5	40.5	39.0	39.7	46.1	54.0	59.1	58.7	56.3	53.2	55.4	62.2	90.7
23-Sep	57.1	56.3	60.3	67.1	56.5	55.3	59.6	59.7	53.0	48.9	44.5	40.8	37.4	34.6	30.5	28.2	28.2	34.2	45.5	51.9	56.2	58.8	52.4	48.1	48.5	67.1
24-Sep	47.1	51.7	57.2	66.3	68.7	69.3	72.5	74.1	72.8	60.8	48.8	41.7	37.0	33.7	32.5	30.7	33.9	39.1	41.3	47.6	55.6	54.9	57.9	67.7	52.6	74.1
25-Sep	72.1	73.6	74.1	77.2	81.3	77.2	75.3	71.2	73.4	67.8	53.4	45.6	42.4	39.0	40.5	42.6	44.5	52.1	57.1	63.2	77.7	88.9	92.8	90.9	65.6	92.8
26-Sep	95.1	98.0	98.8	98.2	97.9	98.6	99.0	98.4	90.5	84.3	81.0	72.6	63.5	57.1	51.7	49.3	49.5	55.1	64.9	71.3	70.8	69.6	70.1	73.4	77.4	99.0
27-Sep	68.6	70.0	74.1	92.5	94.2	92.3	94.2	92.9	88.8	84.3	79.3	74.6	64.5	61.9	56.2	50.6	48.8	51.0	62.0	73.8	79.4	70.1	67.7	73.4	73.5	94.2
28-Sep	77.0	82.3	80.8	84.8	90.2	92.3	94.1	90.7	82.1	70.8	63.4	58.6	53.1	48.4	45.4	44.5	46.8	57.0	55.4	73.2	71.6	69.5	71.6	68.1	69.6	94.1
29-Sep	68.2	66.0	65.4	62.3	59.8	57.6	63.2	62.1	57.5	61.8	61.4	55.1	45.5	50.3	54.1	52.6	43.6	51.8	58.8	61.9	62.0	63.6	65.5	61.1	58.8	68.2
30-Sep	65.3	66.2	60.8	61.3	67.3	79.3	78.0	89.5	87.7	85.2	84.8	75.3	66.2	61.4	56.4	57.2	62.1	67.8	72.1	77.2	78.8	79.4	81.4	83.6	72.7	89.5
	73.8	75.7	77.2	80.4	81.4	82.2	82.0	80.0	74.9	69.2	64.6	60.6	56.6	53.5	52.1	51.9	52.7	55.9	61.8	67.1	68.7	69.5	70.7	72.0	Diurnal Average	
	95.1	98.0	98.8	98.2	98.2	98.8	99.0	98.4	90.5	85.2	84.8	80.5	80.5	88.4	86.9	84.5	79.7	80.3	86.7	92.5	97.3	95.3	93.6	91.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	26	3.61	3.61
40 - 60	197	27.36	30.97
60 - 80	329	45.69	76.67
80 - 100	168	23.33	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 38.7 % on Sep 8 06:00

Maximum Daily Average: 8.3 % on Sep 8

Minimum Value: 0.4 % on Sep 12 13:00

Minimum Daily Average: 1.0 % on Sep 23

Maximum Diurnal Average: 5.8 % at hour 6

Minimum Diurnal Average: 0.9 % at hour 12

Monthly Average: 2.40 %

Percentiles: P_1 = 0.6 P_{10} = 0.9 Q_1 = 1.1 Median = 1.3 Q_3 = 1.5 P_{90} = 2.5 P_{99} = 25.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

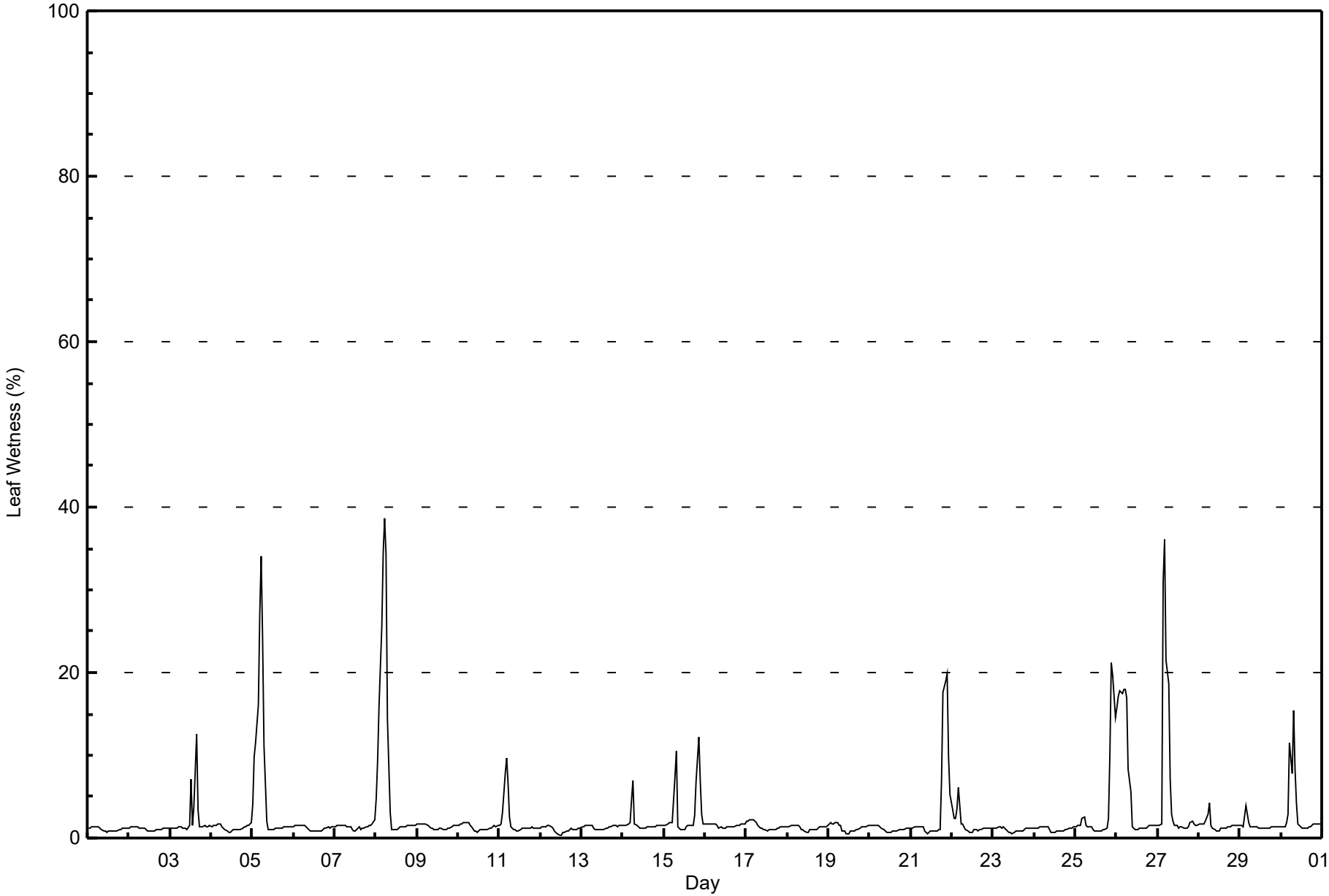
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.2	1.0	0.9	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.1	1.4
2-Sep	1.3	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.2	1.1	0.9	0.9	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.1	1.4
3-Sep	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.1	1.2	1.0	1.4	7.1	1.5	3.7	12.5	3.5	1.4	1.4	1.4	1.5	1.4	1.4	1.5	2.2	12.5
4-Sep	1.4	1.5	1.5	1.5	1.6	1.8	1.4	1.2	1.0	0.8	0.8	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.2	1.3	1.4	1.5	1.6	1.8	1.2	1.8
5-Sep	4.0	9.9	11.6	16.2	27.1	34.1	24.2	11.1	2.1	1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.3	1.4	1.4	6.6	34.1
6-Sep	1.4	1.5	1.5	1.6	1.6	1.6	1.5	1.3	1.1	1.0	0.9	0.9	0.9	0.8	0.9	0.8	0.9	0.9	1.1	1.2	1.3	1.3	1.3	1.4	1.2	1.6
7-Sep	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.0	0.9	0.9	1.0	1.3	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.2	1.4	2.2
8-Sep	4.8	9.3	16.0	25.5	34.5	38.7	34.2	14.4	3.1	0.9	0.9	1.0	1.1	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.5	1.6	1.6	8.3	38.7
9-Sep	1.6	1.7	1.7	1.8	1.8	1.8	1.6	1.4	1.2	1.2	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.1	1.1	1.2	1.3	1.5	1.6	1.5	1.3	1.8
10-Sep	1.5	1.6	1.7	1.8	1.8	1.8	1.8	1.6	1.3	0.9	0.8	0.7	0.8	1.0	1.1	1.1	1.0	1.1	1.2	1.3	1.4	1.5	1.4	1.5	1.3	1.8
11-Sep	1.5	1.7	3.0	7.9	9.7	6.6	2.5	1.3	1.1	1.0	0.9	0.9	0.9	1.1	1.1	1.1	1.1	1.1	1.3	1.4	1.2	1.2	1.2	1.2	2.2	9.7
12-Sep	1.3	1.3	1.4	1.4	1.5	1.5	1.4	1.1	0.8	0.7	0.6	0.4	0.4	0.7	0.7	0.8	0.8	0.9	1.1	1.1	1.0	1.1	1.2	1.2	1.0	1.5
13-Sep	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.2	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.2	1.3	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.3	1.5
14-Sep	1.5	1.5	1.6	1.7	1.9	4.6	6.9	1.7	1.5	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.8	6.9
15-Sep	1.6	1.6	1.6	1.8	1.8	1.9	7.4	10.4	1.4	1.2	1.0	1.0	1.1	1.4	1.5	1.5	1.4	1.5	2.7	6.8	12.2	6.9	2.9	1.7	3.1	12.2
16-Sep	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.6	1.3	1.3	1.2	1.1	1.2	1.3	1.3	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.5	1.8
17-Sep	2.0	2.1	2.1	2.2	2.1	2.1	1.9	1.5	1.2	1.1	1.0	0.9	0.8	1.0	1.0	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4	2.2
18-Sep	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.3	1.1	0.9	0.8	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.2	1.4	1.4	1.3	1.4	1.4	1.2	1.5
19-Sep	1.7	1.8	1.7	1.7	1.8	1.9	1.5	1.5	0.9	0.8	0.6	0.5	0.5	0.9	0.9	0.9	1.1	1.1	1.2	1.3	1.4	1.4	1.4	1.5	1.2	1.9
20-Sep	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.0	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.1	1.5
21-Sep	1.2	1.2	1.3	1.4	1.4	1.4	1.4	1.3	0.8	0.6	0.5	0.9	0.8	0.8	0.9	0.9	1.0	1.0	6.9	17.6	19.0	19.8	9.9	5.2	4.0	19.8
22-Sep	3.4	2.4	2.4	3.6	6.2	1.8	1.7	1.3	1.0	0.8	0.7	0.7	0.7	1.0	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.6	6.2
23-Sep	1.2	1.2	1.3	1.4	1.3	1.2	1.3	1.1	0.8	0.7	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.2	1.2	1.2	1.0	1.4
24-Sep	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.0	0.7	0.6	0.7	0.9	0.8	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.3	1.4	1.1	1.4
25-Sep	1.4	1.5	1.5	1.6	2.3	2.5	1.5	1.4	1.4	1.3	1.1	0.9	0.9	0.8	0.9	0.9	1.0	1.0	1.2	2.4	10.0	21.3	19.6	14.7	3.9	21.3
26-Sep	15.8	17.1	17.8	17.4	18.0	18.0	17.0	8.4	5.5	1.3	1.2	1.0	1.0	1.2	1.2	1.2	1.2	1.2	1.4	1.5	1.5	1.5	1.5	1.5	6.4	18.0
27-Sep	1.5	1.5	1.8	31.1	36.1	21.6	18.6	7.2	2.9	2.0	1.6	1.5	1.2	1.3	1.3	1.2	1.2	1.3	1.4	1.8	2.0	1.7	1.6	1.6	6.0	36.1
28-Sep	1.7	1.6	1.6	1.8	2.1	2.9	4.2	1.5	1.2	1.0	0.8	0.8	0.9	1.2	1.1	1.1	1.2	1.3	1.3	1.5	1.5	1.5	1.5	1.5	1.5	4.2
29-Sep	1.5	1.4	1.4	3.9	2.9	1.9	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.1	1.2	1.2	1.1	1.2	1.3	1.3	1.3	1.3	1.4	1.3	1.5	3.9
30-Sep	1.4	1.4	1.3	1.9	2.9	11.4	7.7	15.5	8.2	4.2	1.7	1.3	1.2	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.6	1.6	1.7	3.2	15.5
	2.2	2.6	3.0	4.7	5.8	5.8	5.1	3.3	1.7	1.2	0.9	0.9	1.1	1.1	1.1	1.4	1.1	1.1	1.5	2.1	2.6	2.8	2.3	2.0	Diurnal Average	
	15.8	17.1	17.8	31.1	36.1	38.7	34.2	15.5	8.2	4.2	1.7	1.5	7.1	1.5	3.7	12.5	3.5	1.5	6.9	17.6	19.0	21.3	19.6	14.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort Chipewyan - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	0	0.00	0.00
0.4 - 0.5	5	0.69	0.69
0.6 - 0.7	23	3.19	3.89
0.8 - 1.4	443	61.53	65.42
1.5 - 10	180	25.00	90.42
> 10	35	4.86	95.28

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Fort Chipewyan - September 2025

Maximum Value: 1.6 mm on Sep 27 04:00

Maximum Daily Total: 2.9 mm on Sep 27

Minimum Value: 0.0 mm on Sep 1 01:00

Minimum Daily Total: 0.0 mm on Sep 1

Maximum Diurnal Total: 1.6 mm at hour 4

Minimum Diurnal Total: 0.0 mm at hour 1

Monthly Total: 5.55 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} = 0.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

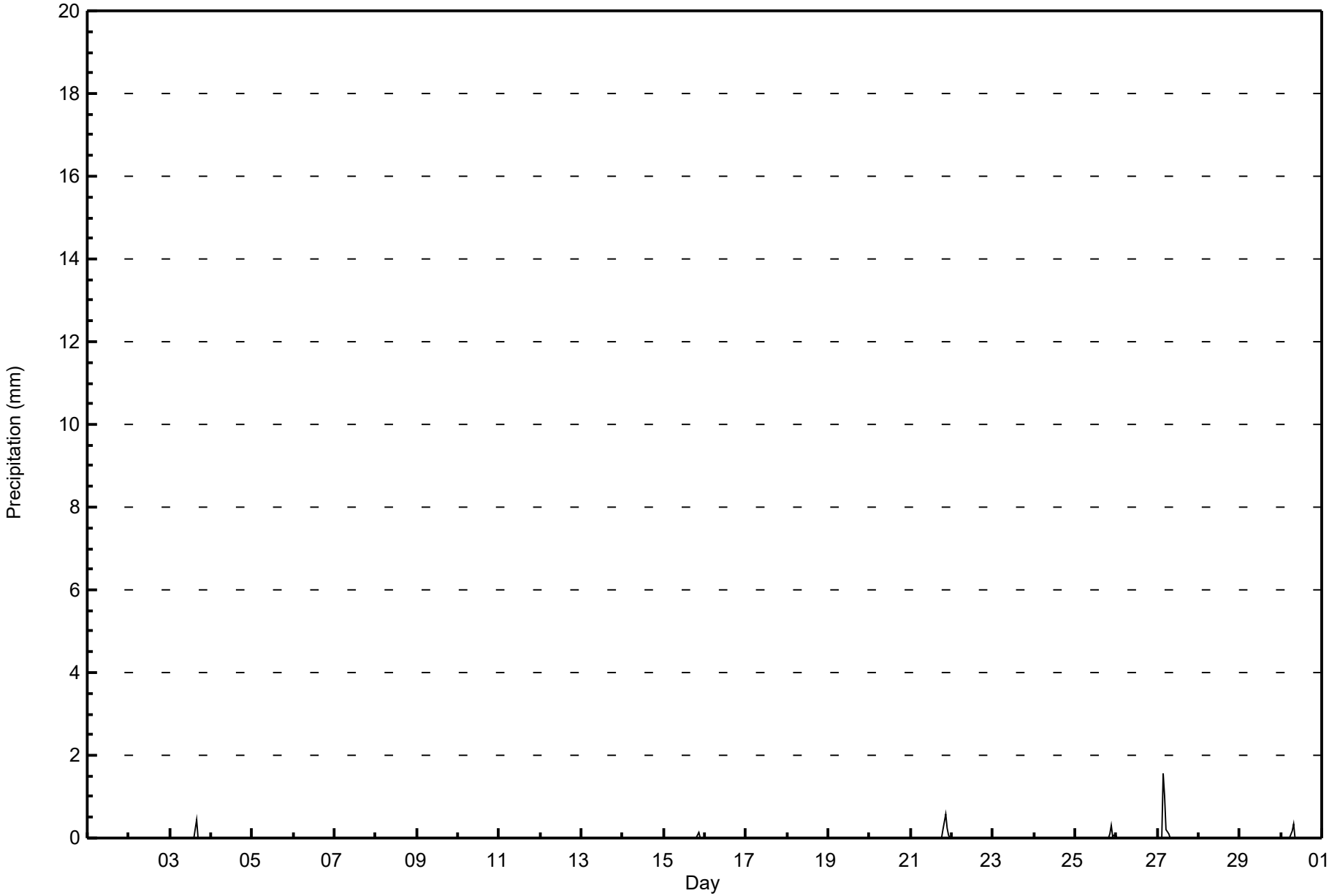
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.5	0.5
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1
16-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.2	0.1	0.0	1.1	0.6
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.1	0.5	0.3
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	1.6	1.0	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	0.0	0.0	0.0	0.0	0.0	2.9	1.6
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	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	0.5	0.3
	0.0	0.0	0.0	1.6	1.0	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2	0.8	0.5	0.1	0.1	Diurnal Average	
	0.0	0.0	0.0	1.6	1.0	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2	0.6	0.3	0.1	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort Chipewyan - September 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	716	99.44	99.44
0.4 - 0.5	1	0.14	99.58
0.6 - 0.7	1	0.14	99.72
0.8 - 1.4	1	0.14	99.86
1.5 - 10	1	0.14	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - September 2025

Maximum Value: 624.5 W/m2 on Sep 5 13:00

Maximum Daily Average: 211.1 W/m2 on Sep 5

Minimum Value: 0.0 W/m2 on Sep 1 01:00

Minimum Daily Average: 59.5 W/m2 on Sep 3

Maximum Diurnal Average: 471.3 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 5

Monthly Average: 142.50 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 15.7 Q_3 = 280.1 P_{90} = 467.0 P_{99} = 598.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

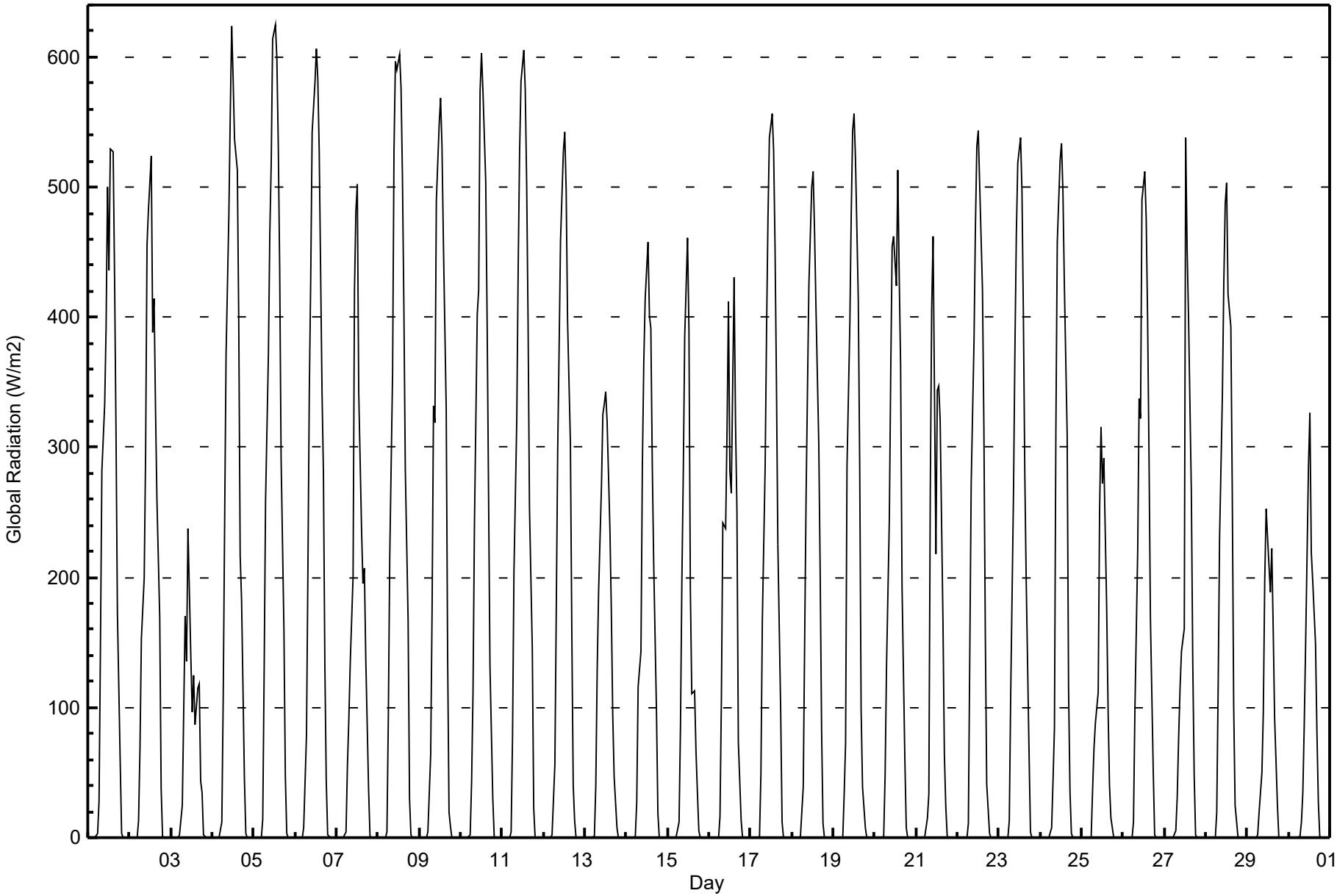
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	3.7	27.9	148.7	281.7	332.6	392.7	499.9	435.9	529.2	527.6	430.9	314.6	173.6	57.1	3.3	0.1	0.0	0.0	0.0	173.3	529.2
2-Sep	0.0	0.0	0.0	0.0	0.0	12.5	68.7	152.6	199.8	296.1	455.7	483.1	524.3	387.8	414.0	331.0	260.7	168.9	38.3	1.5	0.0	0.0	0.0	0.0	158.1	524.3
3-Sep	0.0	0.0	0.0	0.0	0.0	2.7	24.6	97.1	170.2	135.4	237.3	141.3	96.2	124.3	87.1	114.9	117.8	43.6	34.5	1.8	0.0	0.0	0.0	0.0	59.5	237.3
4-Sep	0.0	0.0	0.0	0.0	0.0	12.1	109.1	243.4	370.6	479.7	557.5	623.8	583.9	536.6	512.6	396.4	217.0	181.8	45.3	3.5	0.0	0.0	0.0	0.0	203.1	623.8
5-Sep	0.0	0.0	0.0	0.0	0.0	14.1	129.0	259.6	371.0	464.1	518.4	614.5	624.5	598.6	532.9	436.9	292.0	160.1	48.0	2.9	0.0	0.0	0.0	0.0	211.1	624.5
6-Sep	0.0	0.0	0.0	0.0	0.0	8.1	79.5	206.1	344.3	430.4	542.6	580.2	606.3	583.5	528.4	342.6	279.8	133.3	43.2	1.8	0.0	0.0	0.0	0.0	196.3	606.3
7-Sep	0.0	0.0	0.0	0.0	0.0	4.6	55.5	91.4	134.5	200.4	420.8	481.4	502.3	343.2	237.3	195.4	207.2	137.5	36.6	1.5	0.0	0.0	0.0	0.0	127.1	502.3
8-Sep	0.0	0.0	0.0	0.0	0.0	4.6	93.1	216.6	356.8	527.9	596.8	590.0	602.2	575.8	506.7	407.5	284.6	166.7	30.3	2.2	0.0	0.0	0.0	0.0	206.7	602.2
9-Sep	0.0	0.0	0.0	0.0	0.0	4.7	63.8	176.7	332.2	318.9	489.6	547.3	567.9	532.0	457.8	329.6	139.9	19.9	8.5	0.3	0.0	0.0	0.0	0.0	166.2	567.9
10-Sep	0.0	0.0	0.0	0.0	0.0	2.1	43.4	113.3	239.2	402.7	420.5	574.1	603.5	575.3	503.9	396.1	266.2	132.6	30.5	0.6	0.0	0.0	0.0	0.0	179.3	603.5
11-Sep	0.0	0.0	0.0	0.0	0.0	4.2	78.6	203.4	320.9	438.3	527.6	581.7	605.8	575.0	503.1	397.1	254.1	145.2	23.3	0.4	0.0	0.0	0.0	0.0	194.1	605.8
12-Sep	0.0	0.0	0.0	0.0	0.0	2.5	56.0	175.6	298.4	375.8	459.3	527.5	542.4	498.0	396.7	303.8	158.2	40.2	13.3	0.1	0.0	0.0	0.0	0.0	160.3	542.4
13-Sep	0.0	0.0	0.0	0.0	0.0	1.6	40.2	130.7	189.6	269.6	325.2	333.1	343.2	319.6	237.1	174.6	94.9	47.0	7.2	0.1	0.0	0.0	0.0	0.0	104.7	343.2
14-Sep	0.0	0.0	0.0	0.0	0.0	0.7	27.3	115.6	142.9	286.6	365.5	414.8	457.6	401.3	391.7	288.7	212.3	96.3	18.5	0.0	0.0	0.0	0.0	0.0	134.2	457.6
15-Sep	0.0	0.0	0.0	0.0	0.0	0.7	12.5	86.0	198.3	280.8	384.6	460.6	390.2	190.8	110.6	113.2	66.0	34.8	5.1	0.0	0.0	0.0	0.0	0.0	97.3	460.6
16-Sep	0.0	0.0	0.0	0.0	0.0	0.3	15.9	107.0	242.3	237.7	313.1	412.3	281.8	264.3	430.6	318.5	251.3	73.7	12.8	0.0	0.0	0.0	0.0	0.0	123.4	430.6
17-Sep	0.0	0.0	0.0	0.0	0.0	0.9	48.5	165.8	285.4	390.9	476.3	537.7	557.0	528.3	454.8	349.8	225.9	97.6	12.3	0.0	0.0	0.0	0.0	0.0	172.1	557.0
18-Sep	0.0	0.0	0.0	0.0	0.0	0.8	39.1	151.5	261.1	345.0	424.8	500.0	511.8	466.6	407.7	302.6	203.2	82.5	11.4	0.0	0.0	0.0	0.0	0.0	154.5	511.8
19-Sep	0.0	0.0	0.0	0.0	0.0	0.5	33.4	73.2	285.5	393.4	479.3	543.7	556.3	521.5	413.6	284.8	98.5	39.1	7.5	0.0	0.0	0.0	0.0	0.0	155.4	556.3
20-Sep	0.0	0.0	0.0	0.0	0.0	0.8	47.6	130.8	244.9	359.5	454.1	462.3	423.9	512.7	431.0	362.2	193.6	60.1	7.8	0.0	0.0	0.0	0.0	0.0	153.8	512.7
21-Sep	0.0	0.0	0.0	0.0	0.0	0.1	15.4	34.0	263.7	406.1	462.3	217.7	344.3	347.4	321.0	165.6	63.8	24.3	0.8	0.0	0.0	0.0	0.0	0.0	111.1	462.3
22-Sep	0.0	0.0	0.0	0.0	0.0	0.2	11.2	140.9	272.1	382.3	470.2	531.3	543.7	502.4	420.7	314.5	156.9	41.1	2.8	0.0	0.0	0.0	0.0	0.0	157.9	543.7
23-Sep	0.0	0.0	0.0	0.0	0.0	0.1	12.6	110.2	266.6	376.5	464.1	518.9	538.1	495.8	400.7	279.3	196.1	65.4	4.3	0.0	0.0	0.0	0.0	0.0	155.4	538.1
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	7.7	44.0	84.1	311.8	458.3	521.1	534.1	497.2	426.4	310.5	114.9	35.9	3.2	0.0	0.0	0.0	0.0	0.0	139.5	534.1
25-Sep	0.0	0.0	0.0	0.0	0.0	0.2	36.0	68.3	87.8	111.4	252.3	315.2	271.8	292.3	176.5	98.8	39.8	14.7	0.5	0.0	0.0	0.0	0.0	0.0	73.6	315.2
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	12.4	97.5	221.4	337.4	321.8	490.2	511.8	475.8	399.0	294.2	169.8	50.5	2.0	0.0	0.0	0.0	0.0	0.0	141.0	511.8
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	5.5	31.2	76.8	114.6	143.0	160.1	538.3	451.9	400.2	266.3	135.7	48.9	1.9	0.0	0.0	0.0	0.0	0.0	98.9	538.3
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	19.8	116.4	229.8	340.4	426.6	487.0	503.6	417.3	392.3	265.3	102.4	25.5	0.8	0.0	0.0	0.0	0.0	0.0	138.6	503.6
29-Sep	0.0	0.0	0.0	0.0	0.0	0.0	2.6	19.1	49.7	96.4	197.0	253.0	209.2	189.3	222.1	160.2	92.0	24.8	0.5	0.0	0.0	0.0	0.0	0.0	63.2	253.0
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.7	12.2	34.5	86.6	149.2	284.9	326.7	219.2	197.4	148.6	80.0	27.2	0.6	0.0	0.0	0.0	0.0	0.0	65.3	326.7
	0.0	0.0	0.0	0.0	0.0	2.8	40.6	124.0	228.5	317.6	406.2	456.3	471.3	431.8	381.4	286.0	176.3	79.8	17.0	0.7	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	14.1	129.0	259.6	371.0	527.9	596.8	623.8	624.5	598.6	532.9	436.9	314.6	181.8	57.1	3.5	0.1	0.0	0.0	0.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - September 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	365	50.69	50.69
21 - 100	72	10.00	60.69
101 - 300	118	16.39	77.08
301 - 600	158	21.94	99.03
601 - 900	7	0.97	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - September 2025

Maximum Speed: 35 km/h on Sep 29 13:00

Maximum Daily Speed Average: 20.2 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 15 09:00

Minimum Daily Speed Average: 2.9 km/h on Sep 19

Maximum Diurnal Speed Average: 5.3 km/h at hour 14

Minimum Diurnal Speed Average: 1.6 km/h at hour 18

Monthly Average Velocity: 3.8 km/h 186.8 deg

Percentiles: P_1 = 2 P_{10} = 6 Q_1 = 9 Median = 12 Q_3 = 18 P_{90} = 21 P_{99} = 31

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	ESE5	S4	SE1	NW5	NNW1	N1	NNW6	NNW9	N12	NNE13	NNE11	NNE11	N8	NNW11	NNW11	NNW11	NNW11	NNW9	N7	NNW7	NNW8	NNW9	N9	N10	N6.8	NNE13
2-Sep	N11	NNE8	NNE8	E15	ESE20	SE19	SE18	SE16	SE16	SE18	ESE16	ESE15	ESE14	ESE15	SE14	SSE15	SE18	SE19	SE20	SE21	SE18	SE17	SE17	SSE17	SE14.2	SE21
3-Sep	SSE23	S24	S23	SSE19	SSE13	SSE11	SSE11	S12	S14	SSW11	SW6	WNW5	NW7	NW9	NW11	NW12	NNW16	NNW15	NNW15	NNW10	NW11	NW11	NW11	WNW12	SW3.7	S24
4-Sep	WNW13	NW13	WNW12	WNW13	WNW12	WNW11	NW12	NW13	NW15	NNW15	NNW15	NNW17	NW15	NW15	NNW12	NNW12	NW9	NW8	WNW6	NW7	WNW6	WNW8	WNW8	NW4	NW11.1	NNW17
5-Sep	WNW7	NW3	ENE1	S3	UO	ESE3	SE4	E8	E9	E11	E13	E15	E19	E21	ENE21	ENE22	ENE23	ENE22	ENE20	ENE20	ENE21	E31	E27	ESE24	E13.7	E31
6-Sep	ESE25	ESE19	E15	E15	E17	ESE18	ESE18	ESE17	ESE17	ESE17	ESE17	ESE16	ESE14	S23	S21	S19	SSE13	SSE10	E5	E8	E9	SE5	SW8	SW8	SE12.3	ESE25
7-Sep	SSW5	SW6	WSW8	WNW9	NW12	NW12	WNW10	WNW10	WNW13	WNW12	NW12	WNW13	NW15	NW15	NW12	NW14	NW11	NW8	WNW7	NNW11	NNW12	NNW10	NNW10	NNW7	NW9.5	NW15
8-Sep	NNW8	NNW9	NNW8	NNW8	NNW8	N5	NNE6	N6	E7	ESE8	ESE13	E15	E17	E17	E17	E20	E20	ENE20	ENE17	ENE22	ENE20	ESE20	ESE18	ESE16	ENE10.5	ENE22
9-Sep	ESE17	ESE17	SE16	ESE12	SE11	ESE11	ESE14	ESE16	ESE17	SE16	ESE14	ESE15	E16	E18	E18	SE19	SSE18	S20	S18	SSW17	SSW14	SW10	WSW12	WSW15	SE10.9	S20
10-Sep	W10	W10	W7	WSW7	WNW9	WNW9	WNW10	W10	WNW12	W10	W10	W12	W14	W14	WSW14	WSW12	W9	W6	NNW9	N10	NNE6	NE6	NE10	NE9	WNW6.9	WSW14
11-Sep	ENE9	SE7	S10	S9	SSE6	SE6	ESE10	ESE12	E11	ESE12	E11	E15	E15	E16	E19	E21	E20	E21	E19	E16	SE18	SSE21	S20	S18	ESE11.5	E21
12-Sep	S23	S21	S21	S18	S16	S20	S13	S10	S13	S14	S16	S15	S15	S18	S16	W13	W8	W7	WSW5	WSW8	WSW10	WSW8	SW8	SW6	SSW11.6	S23
13-Sep	SE2	E4	SSW7	SSW5	ENE0	E3	SSW3	E4	UO	UO	E7	E7	E8	E4	E4	E3	E5	E7	E10	ENE8	ENE10	ENE9	ENE7	ENE5	E4.3	ENE10
14-Sep	ENE6	ENE8	ENE12	E14	E13	ENE8	E11	E11	E10	E9	E10	E15	E18	E14	E18	ENE19	E15	E18	E12	E11	E13	E13	ESE14	ESE11	E12.5	ENE19
15-Sep	ESE13	ESE10	ESE7	E7	ENE9	NE5	E3	W3	WSW0	W7	W8	WSW12	WSW16	W19	W19	WNW19	WNW19	WNW15	NW14	WNW11	WNW13	WNW15	WNW13	NW17	WNW6.9	W19
16-Sep	NW14	WNW13	WNW11	W9	W9	NW10	WNW8	W6	WNW7	WNW11	W10	WSW12	W12	W13	W7	SSW7	S7	SSE11	SE11	SE12	SE18	SSE16	SSE19	SSE15	SW4.9	SSE19
17-Sep	SE10	ESE10	SE10	SSE11	SSE12	SSE13	SE11	SE10	SSE11	SE13	SE17	SSE20	SSE24	SSE24	SSE26	SE25	SE24	SE24	SE23	ESE22	SE20	SE17	SE17	SSE21	SE16.9	SSE26
18-Sep	SSE18	SSE20	SSE22	SSE21	SSE23	SSE29	SSE30	S31	S30	S31	S26	SSW24	SSW22	SW19	WSW16	WSW13	W11	WSW8	W7	SW3	WSW7	WSW6	SW6	WSW8	S14.8	S31
19-Sep	SW7	WSW5	WSW6	WSW9	SW8	WSW9	WSW11	WSW7	WSW8	W14	W9	SW10	SSW10	S7	ESE7	E9	ENE8	ENE6	ENE8	ENE8	ENE10	E8	S5	SW8	SW2.9	W14
20-Sep	SW8	SSW6	UO	UO	SE8	ESE8	SSE8	S15	S18	S22	S26	S31	S28	S28	S26	S26	S27	S21	SSE19	SSE24	SSE22	S21	S21	S21	S19.2	S31
21-Sep	S22	SSE20	S9	SW9	SW11	SW11	SW12	WSW12	WSW13	W18	W18	W14	W12	W13	W11	W11	W8	W6	WSW10	SW11	SW17	SW8	WSW13	WSW9	WSW10.5	S22
22-Sep	SW9	SW9	SW10	SW9	WSW13	WSW14	WSW14	WSW13	WSW14	WSW17	WSW20	WSW23	WSW21	WSW17	SW13	WSW11	SW11	SW9	SW8	SSW11	S21	S20	SSW22	SSW19	SW13.3	WSW23
23-Sep	SSW19	SSW19	SSW20	SW14	SW19	WSW21	WSW20	WSW20	WSW23	WSW23	WSW27	WSW28	WSW27	WSW25	WSW25	WSW22	WSW20	WSW17	WSW14	WSW13	SW12	SW12	SW16	WSW13	WSW18.8	WSW28
24-Sep	WSW13	W13	W13	W12	W15	W13	W13	W12	W14	W17	W18	WSW22	W26	W30	W25	W24	W21	W19	W20	W15	W11	W11	W11	WSW11	W16.4	WSW30
25-Sep	W12	W13	W11	W9	SW7	S3	ESE7	SSE10	ESE9	SE9	SSE13	S19	S20	SSE20	S24	S20	SSW14	WNW6	NNE2	W6	WNW9	NW7	NNW4	SE4	SSW6.4	S24
26-Sep	S5	SW8	WSW8	WSW8	SW8	SW12	SW11	SW10	SW12	WSW14	WSW14	WSW16	W17	W18	W19	W16	WSW14	WSW11	WSW10	SW12	SW13	SW12	SW11	SW11	WSW11.7	W19
27-Sep	SW7	S7	SW17	SW17	ESE7	SSE9	WSW15	WSW18	W21	W25	W25	W25	W25	W18	W19	W19	W12	W9	N7	SSE3	SSW9	SW9	W10	W9	WSW11.9	W25
28-Sep	W9	WNW12	WNW11	WNW11	W12	W12	W11	W11	W11	W11	WSW11	SW12	WSW13	WSW14	W13	WSW11	WSW6	SSE2	E4	E7	ESE11	ESE14	ESE13	ESE15	WSW5.2	ESE15
29-Sep	E13	SE17	SE20	ESE19	ESE17	ESE18	ESE28	ESE30	ESE31	E30	E31	ESE30	SE35	SE31	ESE26	SE10	S5	ESE5	SE15	SE20	SE20	SE14	ESE15	SE19	ESE20.2	SE35
30-Sep	ESE18	E12	E12	E7	E8	ENE6	W6	WNW11	NNW9	WNW4	NW9	NW5	NW11	NW8	NW6	NW6	NNW5	NW3	NW4	NNW6	NNW7	NNW6	NNW8	NNW8	NNW3.4	ESE18
	S4.7	S4.5	S4.6	S4.2	S3.9	S4.0	S3.9	SSW4.3	SSW4.3	SSW4.7	SSW4.1	SSW5.2	SSW5.2	SSW5.3	SSW4.5	SSW3.8	SSW2.6	S1.6	ESE1.7	SE2.8	SSE3.7	SSE4.0	S4.0	S4.5	Diurnal Average	
	ESE25	S24	S23	SSE21	SSE23	SSE29	SSE30	S31	ESE31	S31	E31	S31	SE35	SE31	ESE26	S26	S27	SE24	SE23	SSE24	SSE22	E31	E27	ESE24	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 Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11 km/h on Sep 27 04:00

Minimum Value: 1 km/h on Sep 4 20:00

Percentiles: $P_1 = 1$ $P_{10} = 1$ $Q_1 = 2$ Median = 2 $Q_3 = 3$ $P_{90} = 4$ $P_{99} = 7$

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

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-Sep	1	2	3	3	2	2	3	2	4	5	4	4	3	4	5	5	4	3	2	1	1	1	1	1	5
2-Sep	2	3	2	5	2	2	2	2	2	2	2	2	2	3	3	3	3	2	2	3	2	2	2	3	5
3-Sep	4	3	3	4	3	2	2	2	3	2	2	2	2	3	3	4	6	6	6	4	3	3	3	4	6
4-Sep	4	4	3	4	4	3	3	4	5	6	6	6	5	5	5	4	3	3	1	1	2	1	1	3	6
5-Sep	2	3	2	1	UO	1	1	2	1	1	1	2	2	2	2	3	4	4	4	3	3	3	3	2	4
6-Sep	2	2	2	2	2	2	2	2	2	2	2	1	3	4	4	3	3	2	2	2	1	2	2	2	4
7-Sep	2	1	2	2	3	3	3	3	4	4	4	4	5	5	4	5	4	3	2	4	4	3	3	1	5
8-Sep	1	1	1	2	2	2	2	2	1	2	2	2	2	2	2	2	2	3	3	3	3	2	2	1	3
9-Sep	2	2	3	2	2	3	2	2	2	2	2	2	1	2	2	3	2	2	3	2	3	2	3	4	4
10-Sep	3	2	2	2	1	1	2	2	3	3	3	3	3	3	4	3	3	1	2	2	2	2	1	1	4
11-Sep	1	2	3	2	2	1	2	1	1	1	1	2	2	2	2	3	2	2	3	1	2	2	3	2	3
12-Sep	3	2	3	2	2	3	3	2	2	2	2	3	3	3	4	3	2	1	1	2	2	2	2	2	4
13-Sep	1	2	2	2	1	2	2	1	UO	UO	2	2	1	1	1	1	1	2	2	2	1	1	2	1	2
14-Sep	2	3	2	2	2	2	2	1	1	2	2	3	3	2	3	3	2	3	2	1	2	2	2	2	3
15-Sep	2	3	1	3	2	1	1	3	1	3	2	3	4	5	4	5	5	4	5	3	4	3	4	5	5
16-Sep	5	4	3	2	2	3	3	2	2	3	3	3	3	3	3	2	2	1	1	2	2	2	3	3	5
17-Sep	2	2	2	2	2	2	2	2	3	3	2	3	5	4	3	3	3	2	3	3	3	2	3	4	5
18-Sep	3	4	4	3	4	4	5	5	5	4	5	4	4	4	4	4	3	3	1	1	1	2	2	1	5
19-Sep	2	2	2	2	1	2	2	2	3	3	3	2	2	2	1	1	1	1	1	1	1	2	2	3	3
20-Sep	1	2	UO	UO	2	1	2	4	3	3	3	4	4	4	3	4	5	3	2	3	4	3	3	3	5
21-Sep	3	4	3	2	2	2	2	2	3	4	4	4	3	3	3	3	3	1	2	3	3	2	3	2	4
22-Sep	2	2	1	1	3	3	3	3	5	5	5	5	6	4	3	2	3	2	2	4	2	2	5	3	6
23-Sep	3	3	2	2	4	4	4	5	6	6	7	7	7	7	6	6	6	4	3	3	2	2	3	3	7
24-Sep	2	2	3	2	3	3	2	2	3	4	5	7	7	8	7	6	6	5	5	4	2	2	3	2	8
25-Sep	2	2	2	2	2	2	1	2	3	2	2	3	4	4	3	3	3	3	1	3	2	2	2	2	4
26-Sep	1	2	1	2	1	1	2	2	3	4	4	4	4	5	5	4	4	2	2	2	2	2	2	2	5
27-Sep	2	3	5	11	4	2	5	5	5	6	6	7	7	6	5	5	4	3	2	1	2	2	2	2	11
28-Sep	2	2	2	2	2	2	2	2	2	3	2	3	3	4	3	3	3	1	1	1	5	2	2	2	5
29-Sep	1	3	2	3	2	5	3	3	2	3	4	3	5	4	4	4	3	4	1	3	3	1	2	3	5
30-Sep	3	2	2	2	3	2	3	3	3	3	4	2	4	4	2	3	2	1	1	1	1	1	1	2	4
	5	4	5	11	4	5	5	5	6	6	7	7	7	8	7	6	6	6	6	4	5	3	5	5	
	Diurnal Maximum																								

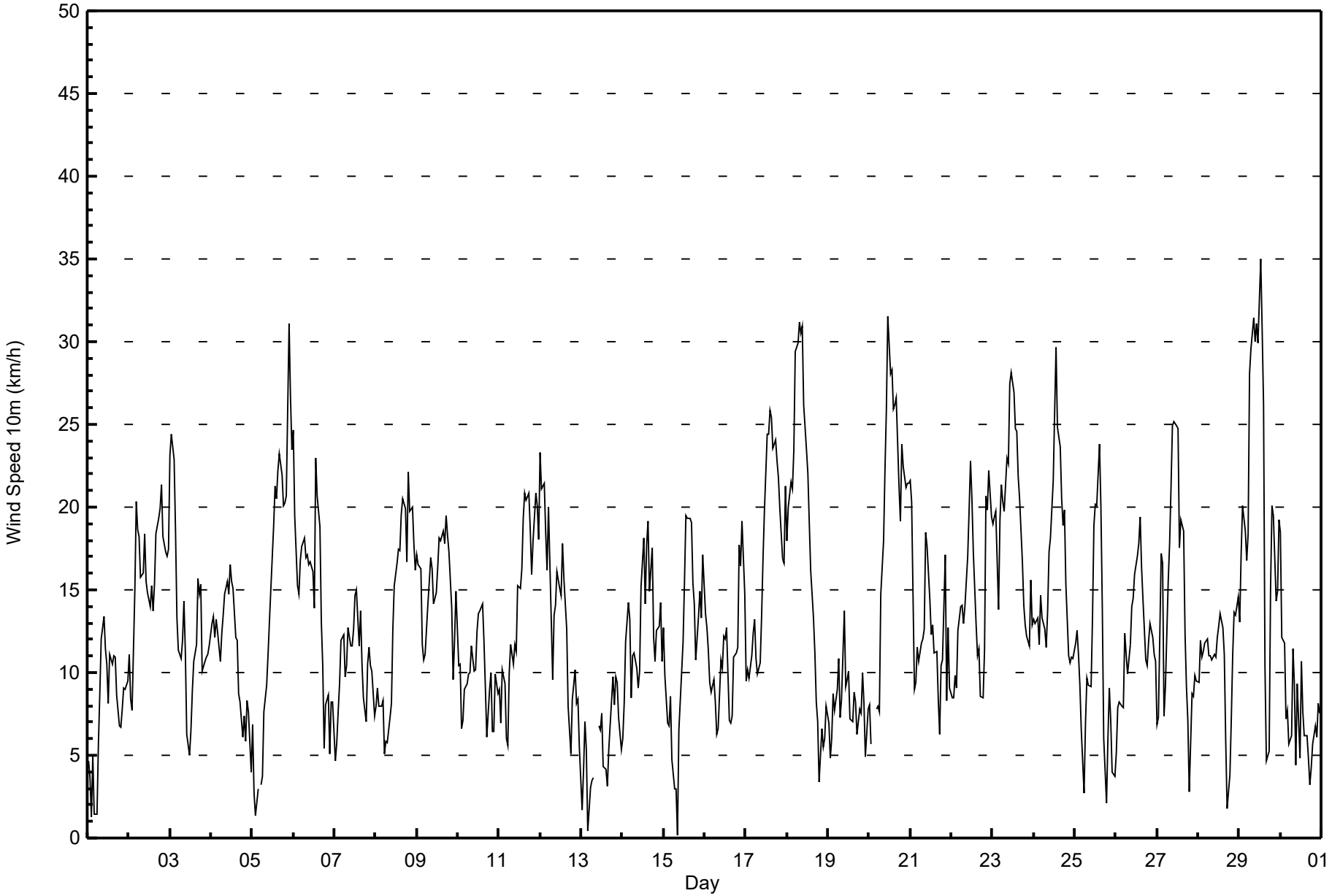
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	52	7.27	7.27
6 - 11	272	38.04	45.31
12 - 19	269	37.62	82.94
20 - 28	107	14.97	97.90
29 - 38	15	2.10	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 715

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	1	1	3	10	3	5	2	6	3	1	3	1	2	6	4	52
6 - 11	8	6	3	15	24	14	11	10	7	7	34	26	39	23	18	27	272
12 - 19	1	1	0	4	33	36	25	14	18	6	17	32	39	17	17	9	269
20 - 28	0	0	0	10	7	7	10	15	28	4	0	16	10	0	0	0	107
29 - 38	0	0	0	0	3	3	2	2	4	0	0	1	0	0	0	0	15
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	10	8	4	32	77	63	53	43	63	20	52	78	89	42	41	40	715

Total Number of Valid Hours: 715

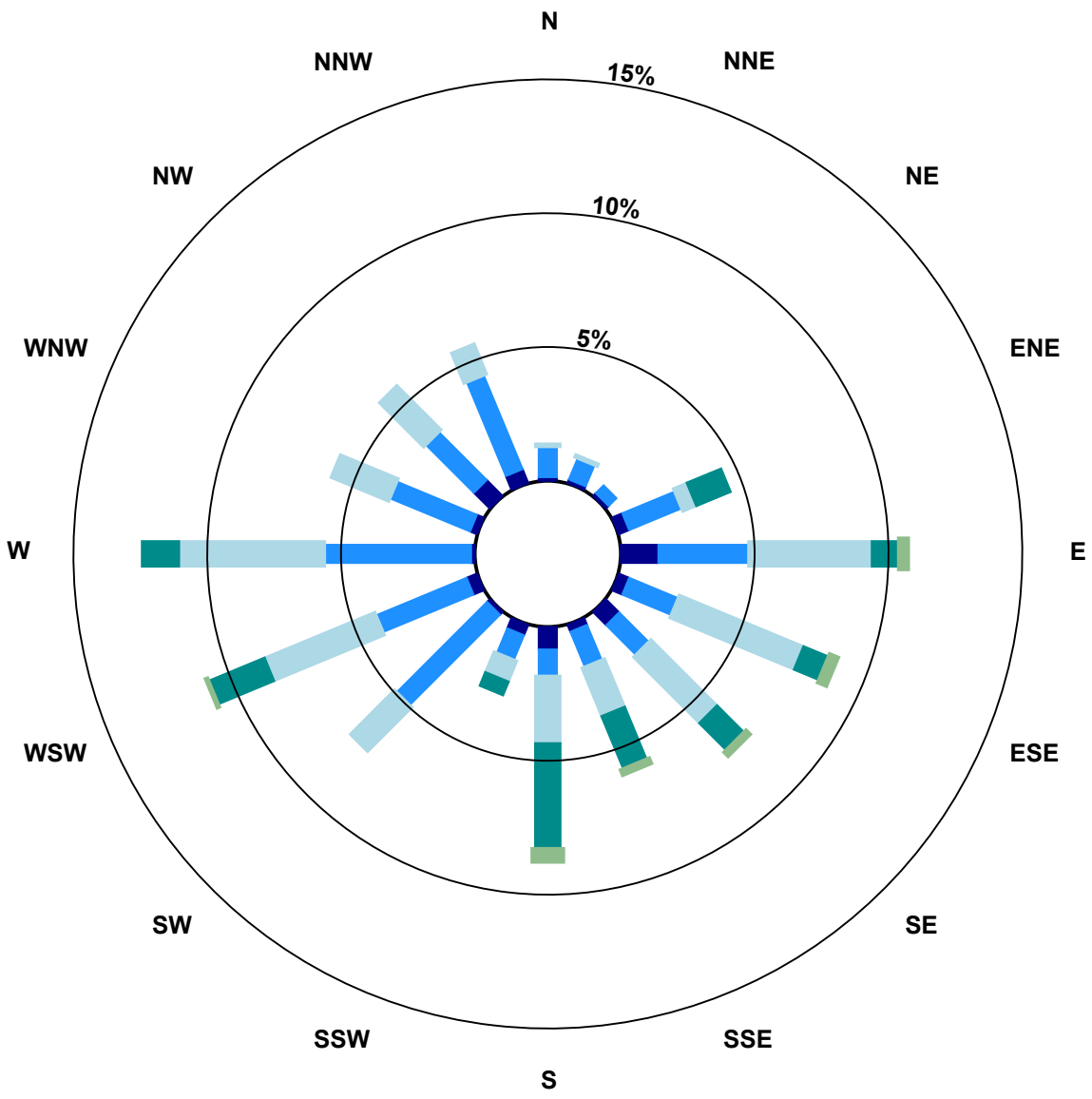
Total Number of Hours: 720

Wood Buffalo Environmental Association

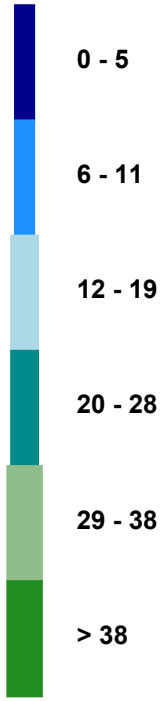
Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Fort Chipewyan



Classes (km/h)



Total Number of Valid Hours: 715

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - September 2025

Direction of Maximum Speed: 132 deg on Sep 29 13:00
Direction of Maximum Daily Speed Average: 117.8 deg on Sep 29

Direction of Minimum Speed: 248 deg on Sep 15 09:00

Direction of Minimum Daily Speed Average: 2.9 deg on Sep 19

Monthly Average Direction: 186.8 deg

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Percent Operational Time:	99.3

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	Average
1-Sep	119	188	144	318	337	351	340	343	8	23	14	28	352	328	330	337	347	347	351	343	338	348	351	350	352.3
2-Sep	5	23	17	100	116	126	128	126	124	126	121	116	116	119	144	154	134	134	135	139	141	140	140	151	126.2
3-Sep	163	169	172	167	160	164	161	175	175	195	222	285	323	323	311	313	329	329	336	332	314	309	306	299	229.3
4-Sep	301	306	302	303	297	295	310	310	322	333	332	329	324	324	327	327	319	314	296	305	294	294	294	311	313.5
5-Sep	292	316	64	190	UO	116	127	96	98	90	87	89	87	84	78	73	67	63	57	62	73	94	95	109	81.9
6-Sep	113	105	88	89	99	108	110	107	117	123	118	110	114	175	174	169	152	156	96	79	80	142	218	217	124.4
7-Sep	201	236	258	290	307	310	295	288	300	303	305	292	316	319	324	326	321	314	292	331	332	333	346	344	309.7
8-Sep	343	340	336	335	338	349	16	10	90	115	102	91	89	91	89	87	79	69	62	69	76	104	111	110	75.3
9-Sep	118	117	128	110	136	115	108	106	119	127	112	106	89	90	90	142	166	172	184	200	213	226	239	257	136.8
10-Sep	271	272	277	257	290	302	289	280	283	275	265	271	273	264	245	253	264	270	348	359	30	44	48	55	285.8
11-Sep	63	130	189	190	161	139	118	110	101	102	88	89	89	87	85	82	80	81	87	99	144	153	170	169	111.5
12-Sep	174	179	177	180	179	180	176	175	177	172	182	188	191	179	191	274	271	261	239	250	255	244	234	222	193.8
13-Sep	137	91	210	203	70	79	211	101	UO	UO	86	87	91	86	90	85	83	83	85	71	61	71	59	68	87.3
14-Sep	72	71	74	82	79	70	85	98	100	99	88	88	84	85	85	77	84	84	88	87	87	86	105	108	86.1
15-Sep	109	112	118	93	74	56	81	261	248	270	275	256	257	270	281	283	287	293	307	293	283	284	292	308	284.7
16-Sep	307	297	297	280	276	305	294	273	289	282	273	258	264	267	262	203	190	158	143	131	145	151	160	151	233.8
17-Sep	132	121	129	157	159	155	137	145	151	139	136	148	165	150	149	142	135	134	127	123	129	127	131	151	140.7
18-Sep	150	154	151	148	159	167	166	179	186	188	185	198	213	218	247	256	261	258	263	231	245	258	232	244	189.4
19-Sep	229	241	251	252	235	238	254	258	244	265	263	235	205	189	119	98	75	63	70	75	74	92	174	222	216.9
20-Sep	222	192	UO	UO	128	121	156	172	173	174	174	172	177	174	174	179	186	181	155	152	159	169	183	182	172.2
21-Sep	177	163	186	221	219	222	228	242	258	262	266	274	266	261	267	270	268	275	252	227	226	230	240	248	238.1
22-Sep	222	226	227	224	239	250	247	241	249	256	246	239	241	239	231	237	234	232	221	197	178	182	204	201	226.9
23-Sep	204	203	208	217	233	241	243	241	247	254	258	244	245	244	249	253	253	248	255	244	231	235	231	243	239.9
24-Sep	242	265	262	268	269	267	265	262	270	261	260	254	259	259	259	262	262	260	259	265	271	275	260	255	261.5
25-Sep	261	259	267	263	231	183	114	149	121	137	167	172	171	168	175	176	206	292	32	260	294	316	331	127	193.7
26-Sep	191	224	239	237	232	223	225	233	232	248	256	258	261	259	261	262	249	242	244	231	230	229	218	224	241.8
27-Sep	216	183	225	216	121	168	239	257	261	263	266	271	278	281	260	259	259	268	1	165	203	219	264	270	252.7
28-Sep	270	285	291	282	277	277	273	265	269	271	251	235	244	240	262	255	249	161	88	83	108	112	102	108	254.1
29-Sep	101	134	130	123	116	117	104	117	113	97	92	113	132	126	113	136	177	109	128	127	126	126	104	135	117.8
30-Sep	121	83	82	88	91	76	281	297	329	286	307	324	306	309	315	307	330	312	319	328	340	348	345	330	346.2
	171.7	175.5	188.8	189.9	180.1	183.4	185.6	192.0	192.2	204.7	205.1	199.3	207.0	205.4	202.9	212.9	210.9	172.6	123.0	131.2	153.3	153.5	176.1	182.3	
	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 Chipewyan - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Sep 15 09:00

Minimum Value: 4 deg on Sep 29 15:00

Percentiles: P_1 = 5 P_{10} = 7 Q_1 = 9 Median = 14 Q_3 = 19 P_{90} = 29 P_{99} = 73

Hours in Service:	720
Hours of Data:	715
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

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-Sep	25	57	88	60	80	89	34	18	24	20	26	30	43	33	33	33	28	25	19	12	13	14	14	13	89
2-Sep	16	15	13	37	10	7	6	7	7	7	9	9	13	11	16	15	10	7	6	8	8	9	9	11	37
3-Sep	10	8	8	11	13	14	15	11	11	14	36	44	25	28	22	25	27	27	26	28	24	22	20	19	44
4-Sep	19	19	19	19	18	19	20	23	26	28	28	28	30	29	35	27	26	29	14	6	28	7	12	61	61
5-Sep	24	73	78	35	UO	31	30	15	9	9	7	5	6	6	10	9	10	10	10	9	10	5	6	7	78
6-Sep	5	10	9	9	10	9	9	8	8	9	7	15	36	13	11	9	18	11	36	13	10	41	14	10	41
7-Sep	32	15	27	19	15	16	20	19	19	20	22	23	25	24	26	27	27	26	27	23	21	20	18	14	32
8-Sep	18	13	14	16	17	39	18	26	18	13	14	7	8	6	7	6	9	10	10	9	9	10	5	7	39
9-Sep	6	8	11	14	11	13	10	10	8	10	8	16	6	8	7	19	10	6	10	7	12	12	14	15	19
10-Sep	16	14	18	17	13	10	13	12	14	19	20	21	22	21	19	20	20	25	23	20	27	12	7	9	27
11-Sep	13	41	16	8	28	14	10	9	10	6	7	6	6	6	6	7	6	6	8	12	9	6	8	8	41
12-Sep	6	7	7	7	8	8	11	13	8	8	10	11	14	10	15	21	15	12	15	12	12	14	8	33	33
13-Sep	60	47	12	43	90	45	40	26	UO	UO	13	11	7	14	14	43	8	19	7	9	8	7	14	11	90
14-Sep	29	15	7	6	6	10	8	8	9	13	8	6	7	8	7	8	7	7	7	6	8	7	23	14	29
15-Sep	15	6	10	28	8	16	57	65	100	29	21	19	18	15	15	16	16	17	22	19	15	16	17	21	100
16-Sep	22	21	18	17	19	21	19	20	25	16	19	22	19	19	37	31	18	11	7	6	12	8	9	10	37
17-Sep	17	14	20	13	12	13	16	19	22	12	10	12	11	13	9	10	6	6	8	9	9	10	15	10	22
18-Sep	12	12	10	10	11	9	9	10	9	9	9	10	11	14	18	17	17	14	9	25	22	14	11	12	25
19-Sep	12	23	21	14	12	11	13	16	23	16	26	30	13	32	15	9	8	10	8	11	7	18	39	12	39
20-Sep	9	30	UO	UO	16	14	19	16	8	7	8	6	8	9	10	9	8	7	9	7	10	7	8	8	30
21-Sep	7	14	26	14	12	10	10	14	16	15	17	17	18	19	20	17	19	16	12	15	10	14	15	16	26
22-Sep	14	8	8	10	13	13	13	14	17	17	16	15	16	17	16	19	15	11	15	20	5	8	9	8	20
23-Sep	8	9	8	8	13	14	14	15	17	17	16	15	16	16	17	16	15	14	15	14	11	12	10	15	17
24-Sep	13	14	11	12	13	13	13	13	13	15	16	18	17	16	16	16	16	16	15	17	13	13	13	12	18
25-Sep	12	11	12	13	19	54	15	22	20	19	11	10	11	9	9	6	34	31	69	59	17	18	34	27	69
26-Sep	28	13	12	13	13	8	8	13	13	18	16	17	16	17	16	16	17	13	11	9	8	9	10	17	28
27-Sep	45	35	16	13	19	34	17	15	15	15	15	15	17	21	18	17	16	30	19	47	10	18	19	15	47
28-Sep	13	12	14	14	13	13	12	12	13	17	21	23	22	20	17	20	20	44	14	11	19	7	7	7	44
29-Sep	7	12	11	16	15	15	7	5	5	8	8	7	10	6	4	43	37	56	8	6	6	7	9	11	56
30-Sep	8	13	7	13	17	53	41	15	27	75	33	40	22	33	29	29	27	23	19	12	12	14	14	14	75
	60	73	88	60	90	89	57	65	100	75	36	44	43	33	37	43	37	56	69	59	28	41	39	61	
	Diurnal Maximum																								

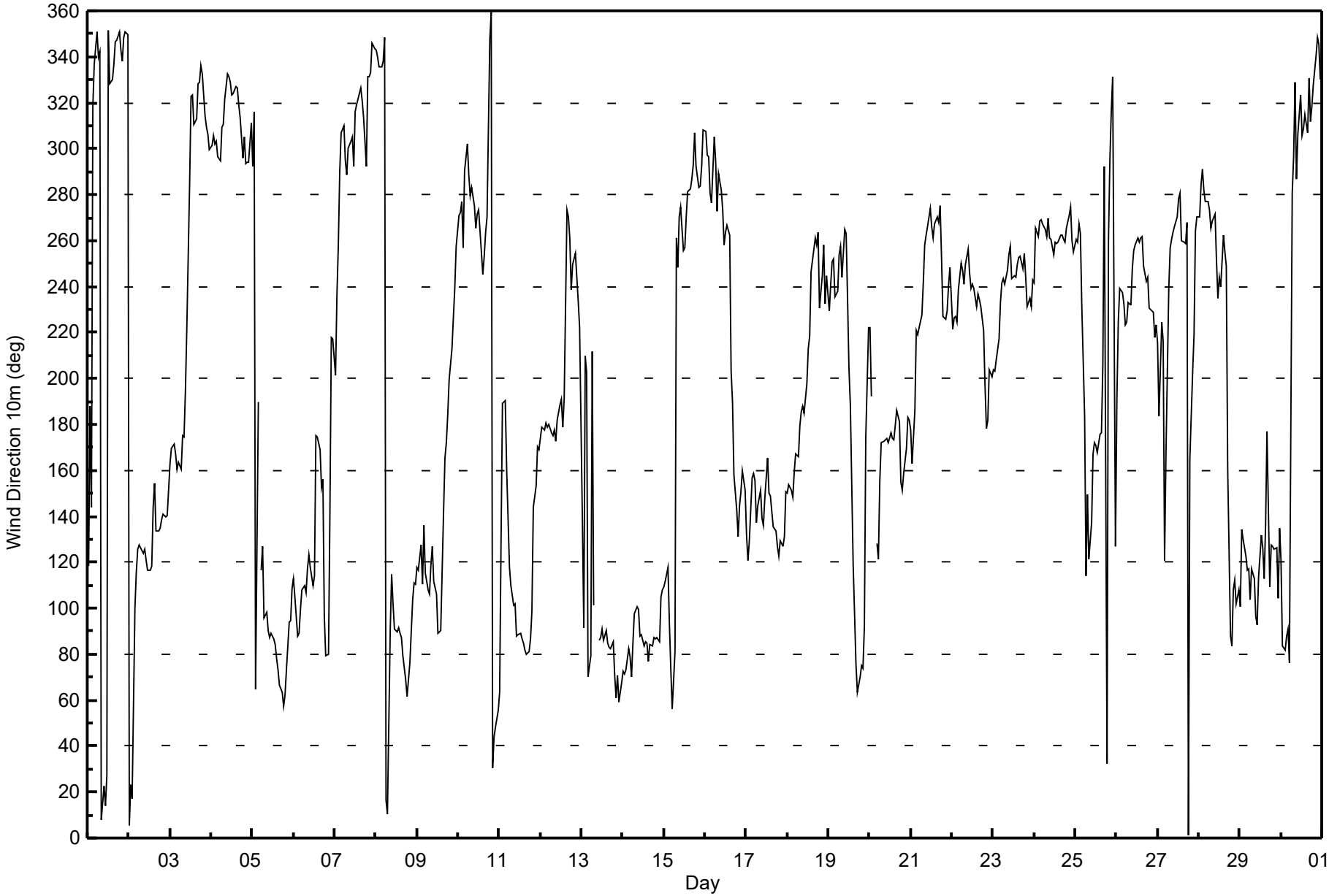
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS09
BARGE LANDING
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
SEPTEMBER 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	686	34	34	100	-	-	260	1	18.2	0
TRS(ppb) Average	685	35	35	100	11.5	9	8.2	0	1.8	0
THC(ppm) Average	686	34	34	100	-	-	3.3	-	2.4	-
NMHC(ppm) Average	686	34	34	100	-	-	0.431	-	0.093	-
CH4(ppm) Average	686	34	34	100	-	-	3.2	-	2.3	0
NO2 (ppb) Average	685	35	35	100	-	-	38.7	0	15.5	-
NO (ppb) Average	685	35	35	100	-	-	74.9	-	13.7	-
NOX (ppb) Average	685	35	35	100	-	-	82.1	-	26	-
PM2.5(ug/m3) Average	718	1	2	99.86	-	-	185.5	0	84.1	12
Temperature (C) Average	720	0	0	100	-	-	30.1	-	19.4	-
Relative Humidity (%) Average	720	0	0	100	-	-	100	-	81.7	-
Barometric Pressure (inHg) Average	720	0	0	100	-	-	29.3	-	29.3	-
Wind Speed 20 m (km/h) Average	720	0	0	100	-	-	24	-	15	-
Wind Direction 20 m (deg) Average	720	0	0	100	-	-	0	-	0	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

						Percentile					
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	1.29	10.7	-	0	0	0	0.1	0.4	1.9	260
TRS(ppb) Average	685	0.84	0.9	-	0.2	0.3	0.4	0.5	0.9	1.8	8.2
THC(ppm) Average	686	2.09	0.2	-	1.9	1.9	1.9	2	2.2	2.4	3.3
NMHC(ppm) Average	686	0.027	0.048	-	0	0	0	0	0	0.1	0.431
CH4(ppm) Average	686	2.06	0.2	-	1.9	1.9	1.9	2	2.1	2.3	3.2
NO2 (ppb) Average	685	6.1	5.1	-	0	0.5	2	4.9	8.7	13.5	38.7
NO (ppb) Average	685	3.91	9.3	-	0	0	0.1	0.4	3	9.6	74.9
NOX (ppb) Average	685	10.01	12.5	-	0	0.5	2.4	6.2	12.5	23.1	82.1
PM2.5(ug/m3) Average	718	29.27	25.5	-	1.9	6.9	13	22.8	37.8	57.9	185.5
Temperature (C) Average	720	14.39	5.9	-	0	7	10.3	13.8	18.4	22.6	30.1
Relative Humidity (%) Average	720	66.55	22.3	-	20.7	36.2	48.6	64.8	87.8	98	100
Barometric Pressure (inHg) Average	720	28.87	0.2	-	28.4	28.6	28.8	28.9	29	29.2	29.3
Wind Speed 20 m (km/h) Average	720	9.5	5	-	1	4	6	9	12	16	24
Wind Direction 20 m (deg) Average	720	210.7	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
PM2.5	05 Sep 2025 00:00	05 Sep 2025 00:00	1	DAS Failure - data not recorded

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - September 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0
Maximum Value: 260.0 ppb on Sep 17 13:00 Maximum Daily Average: 18.2 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 1 01:00 Minimum Daily Average: 0.0 ppb on Sep 15
Maximum Diurnal Average: 11.3 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 3
Monthly Average: 1.29 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 1.9 P_{99} = 11.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.4	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	0.6
2-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.6	5.5	9.0	9.9	7.0	7.3	6.5	1.4	0.5	0.2	0.1	0.0	0.0	1.1	2.1	9.9
3-Sep	0.5	0.1	0.0	0.0	0.0	Z	0.2	0.5	1.2	6.9	6.3	3.0	1.8	0.7	0.4	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	6.9
4-Sep	Z	0.2	0.4	0.4	0.5	0.5	0.7	0.7	0.6	0.2	0.1	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	0.2	0.7
5-Sep	0.0	Z	0.0	0.0	0.1	0.0	0.2	0.1	0.5	1.5	2.2	1.7	1.8	2.5	5.9	4.2	4.8	4.8	1.6	0.9	0.6	0.5	0.4	0.4	1.5	5.9
6-Sep	0.4	0.4	Z	0.4	0.4	0.4	0.3	0.3	2.8	11.2	11.1	9.4	12.2	3.9	4.6	3.3	3.2	2.0	1.4	0.8	0.6	0.3	0.3	0.2	3.0	12.2
7-Sep	0.1	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.4	0.6	0.6	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
8-Sep	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	1.5	2.7	1.0	0.2	0.0	0.1	0.0	0.3	2.7
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.3	6.2	7.3	3.0	3.5	1.1	1.1	1.3	0.5	0.7	0.3	0.3	0.2	0.2	0.3	1.2	7.3
10-Sep	Z	0.3	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3
11-Sep	0.3	Z	0.3	0.3	0.4	0.4	0.5	0.4	0.5	1.4	1.5	4.5	9.6	19.5	2.0	2.0	0.9	1.1	0.6	0.4	0.3	0.5	0.6	0.6	2.1	19.5
12-Sep	0.4	0.4	Z	0.2	0.2	0.2	0.2	0.2	0.2	3.0	4.2	3.4	1.5	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.2	0.1	0.0	0.8	4.2
13-Sep	0.1	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.0	0.2	0.4	0.9	2.5	5.8	3.6	3.8	2.8	1.9	1.4	1.0	0.9	0.5	0.4	0.1	1.2	5.8
14-Sep	0.1	0.1	0.1	0.2	Z	0.3	0.3	0.2	0.1	0.3	1.8	9.5	12.5	5.4	1.3	0.8	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	1.5	12.5
15-Sep	0.0	0.0	0.0	0.0	0.0	0.0	Z	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	0.0	0.0
16-Sep	Z	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	0.3	1.3	0.8	4.1	2.9	2.0	1.4	0.7	0.5	0.3	0.6	4.1
17-Sep	0.2	Z	0.1	0.1	0.1	0.1	0.3	0.1	0.3	5.4	8.4	9.5	260.0	95.0	24.0	8.6	3.0	0.8	0.6	0.6	0.5	0.4	0.3	0.3	18.2	260.0
18-Sep	0.2	0.1	Z	0.0	0.1	0.1	4.3	4.9	3.8	4.2	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	4.9
19-Sep	0.0	0.0	0.0	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	0.1
20-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.9	1.7	3.3	3.8	1.5	0.3	0.9	3.5	0.4	0.3	0.6	0.6	0.9	0.6	0.4	0.9	3.8
21-Sep	0.3	0.1	0.1	0.2	0.2	0.1	Z	0.2	0.5	0.6	0.9	1.0	0.8	0.6	0.4	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.3	1.0
22-Sep	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	1.3	1.3	0.6	1.7	2.0	0.4	2.0
23-Sep	1.2	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	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.0	0.1	1.2
24-Sep	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25-Sep	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.3	0.6	1.4	5.3	6.0	3.7	1.8	1.0	0.8	0.5	0.3	0.4	0.1	0.0	0.0	0.0	1.0	6.0
26-Sep	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	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
27-Sep	0.3	0.1	0.0	0.1	0.0	Z	0.0	0.0	0.1	0.0	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	0.3
28-Sep	Z	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4	1.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.4
29-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.9	0.7	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.2	0.9
30-Sep	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.4
	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4	1.3	1.7	2.3	11.3	5.2	1.8	1.2	1.0	0.7	0.5	0.4	0.3	0.2	0.2	0.2	Diurnal Average	
	1.2	0.4	0.4	0.4	0.5	0.5	4.3	4.9	3.8	11.2	11.1	9.5	260.0	95.0	24.0	8.6	6.5	4.8	2.9	2.0	1.4	0.9	1.7	2.0	Diurnal Maximum	

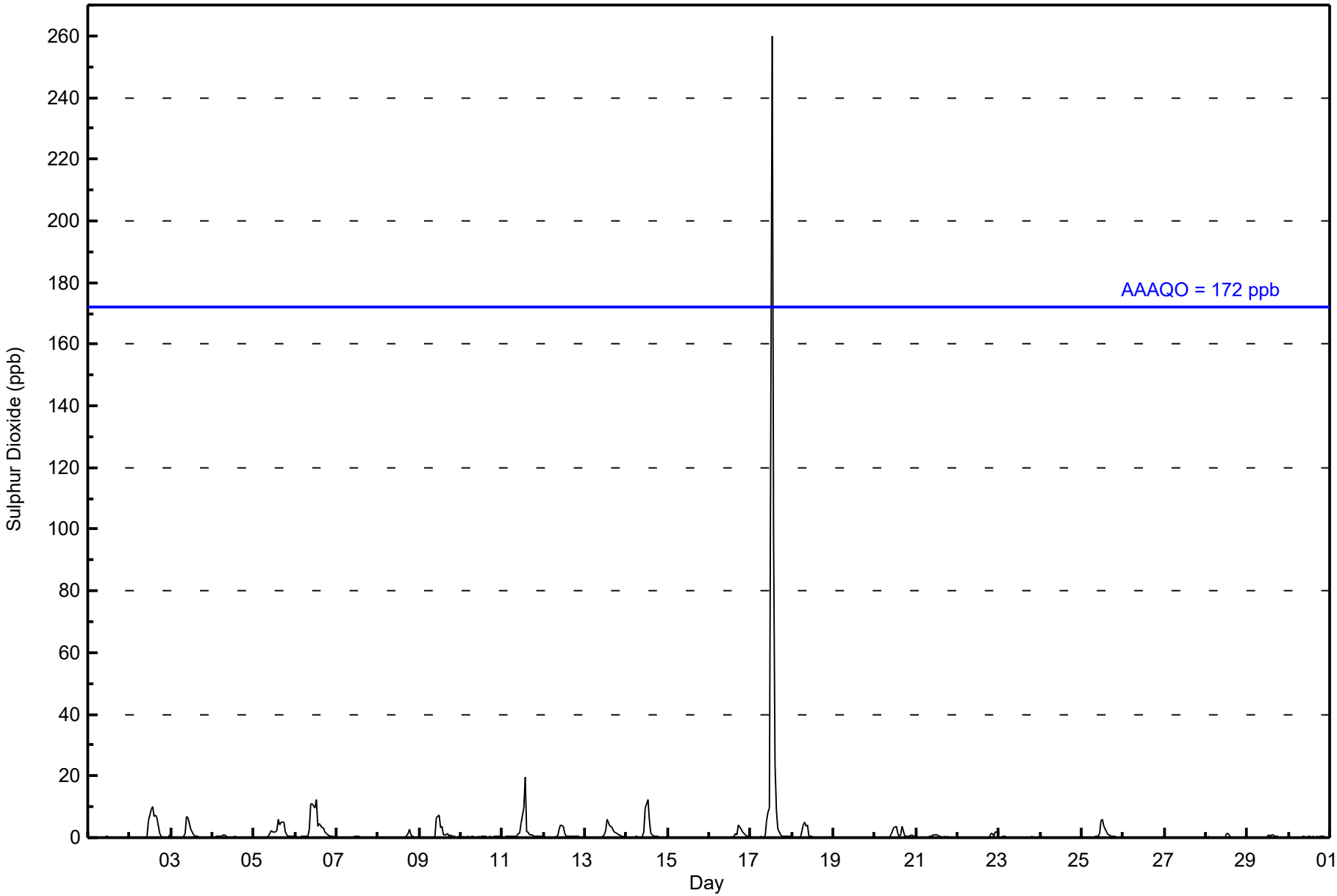
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - September 2025



Sulphur Dioxide (SO_2) - ppb
Barge Landing - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	678	98.83	98.83
11 - 20	5	0.73	99.56
21 - 60	1	0.15	99.71
61 - 110	1	0.15	99.85
111 - 172	0	0.00	99.85
> 172	1	0.15	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Barge Landing - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	36	16	9	2	4	16	86	117	95	70	72	58	14	30	25	28	678
11 - 20	0	0	0	0	0	0	0	2	1	0	2	0	0	0	0	0	5
21 - 60	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	1	0	0	0	0	0	0	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	1	0	0	0	0	0	0	0	0	1
Totals	36	16	9	2	4	16	86	122	96	70	74	58	14	30	25	28	686

Total Number of Valid Hours: 686

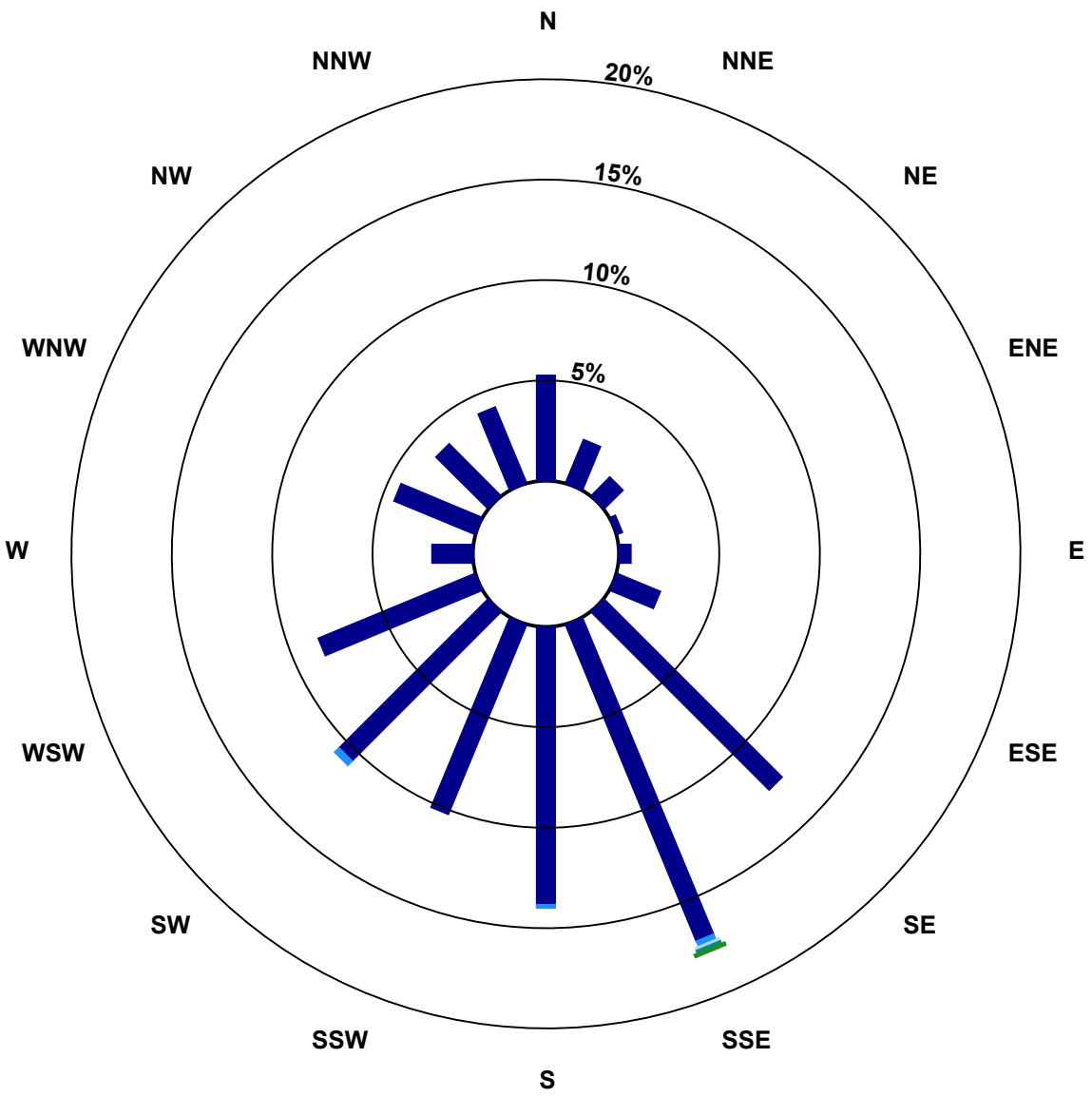
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Barge Landing



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

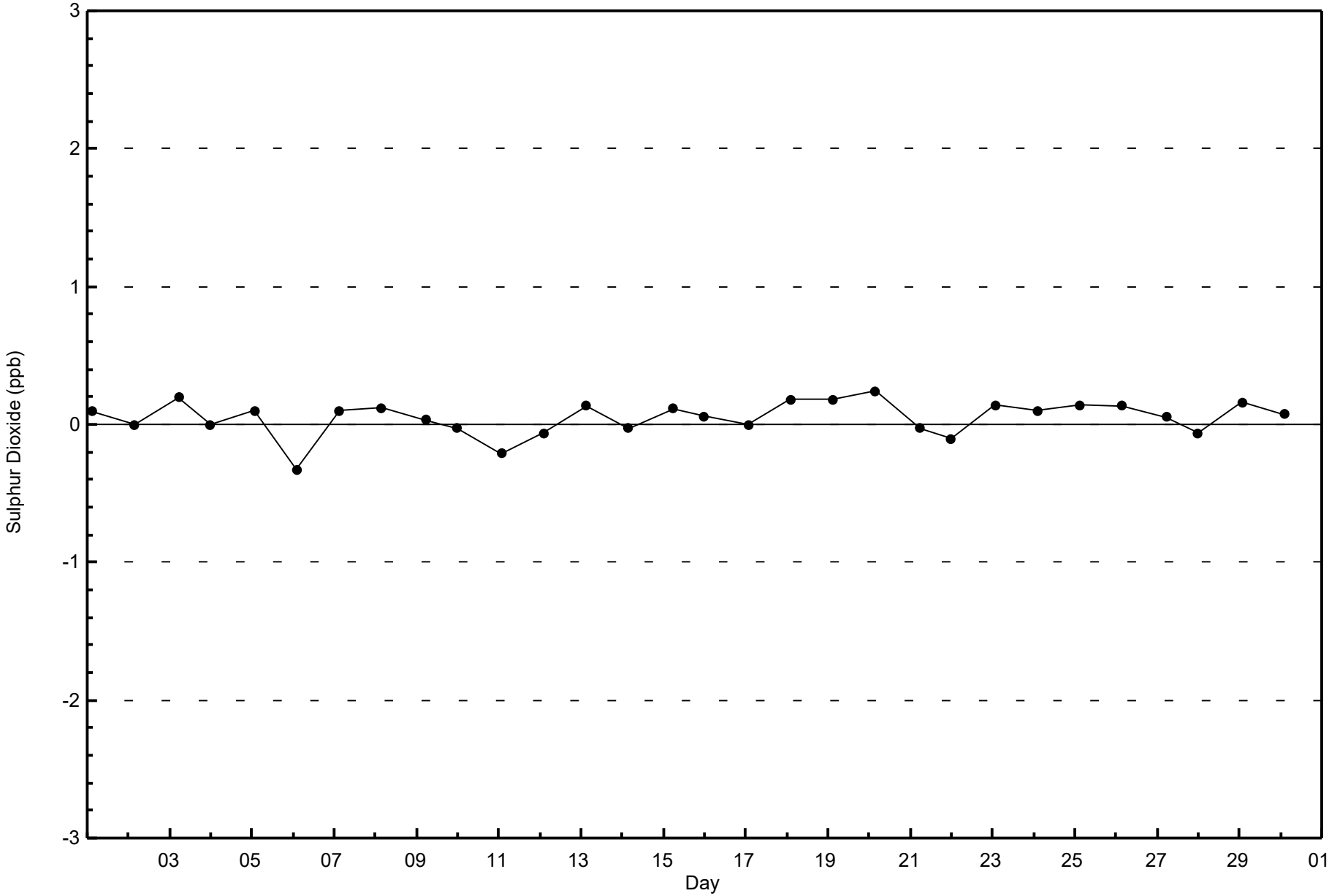
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - September 2025

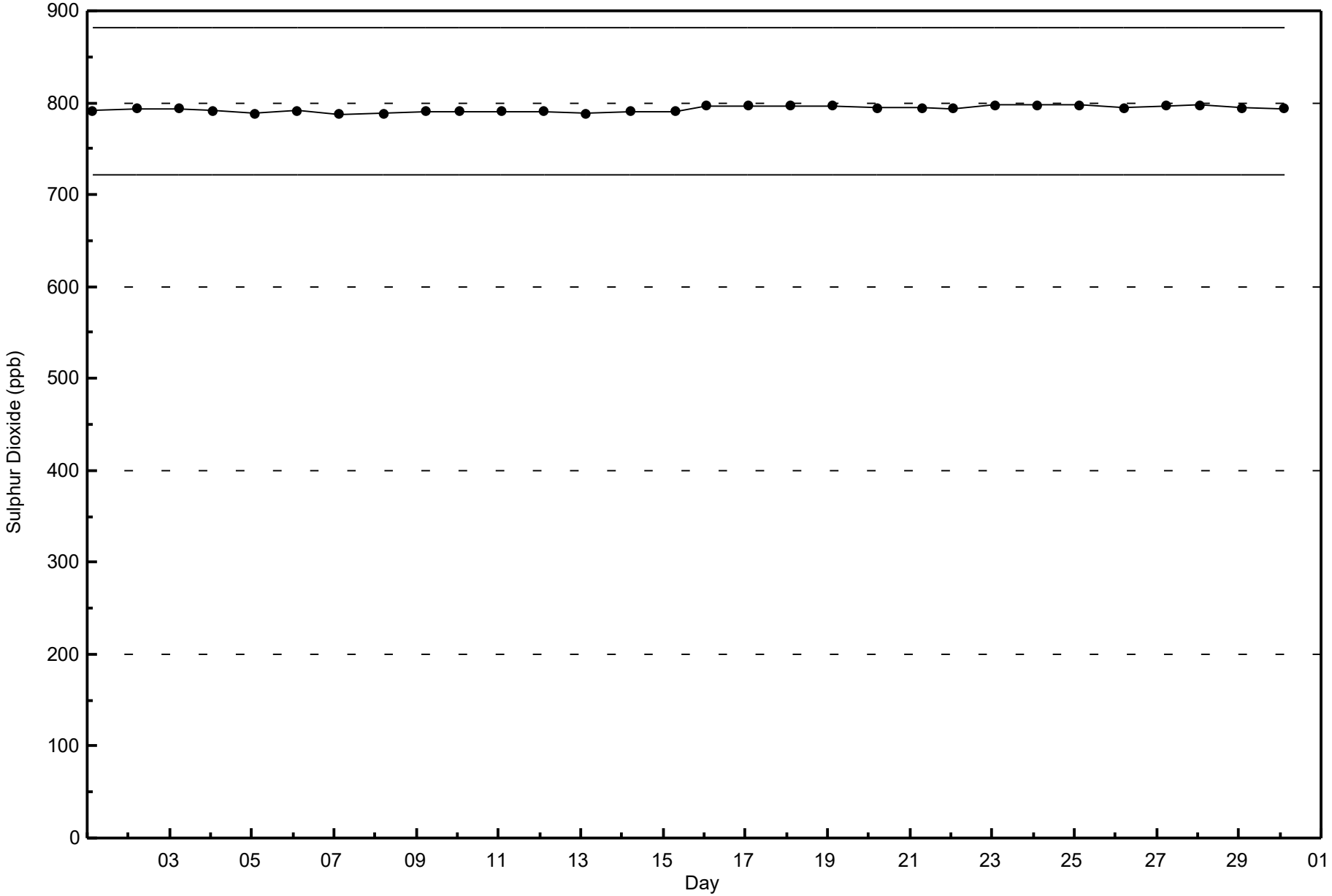


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025

Number of Exceedences (AAAQG): 30-Min: 9

Maximum Value: 11.5 ppb on Sep 11 09:00

Maximum Daily Average: 1.8 ppb on Sep 12

Minimum Value: 0.2 ppb on Sep 24 17:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 17

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.9$ $P_{90} = 1.8$ $P_{99} = 4.5$

Periods in Service:	1440
Periods of Valid Data:	1367
Periods of Invalid Data:	73
Periods of Calibration:	71
Percent Operational Time:	99.9

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	0.4	0.4	0.4	0.6	Z	0.5	0.6	0.5	1.0	2.0	2.5	1.9	0.6	0.4	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.7	2.7
	0.4	0.4	0.5	0.5	SP	0.6	0.5	0.4	1.5	2.3	2.7	0.9	0.5	0.4	0.5	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.5		
2-Sep	0.5	0.4	0.3	0.3	0.4	Z	0.5	1.3	0.8	1.2	1.3	3.5	1.7	1.0	0.9	0.8	0.8	1.2	1.3	0.6	0.3	0.2	0.3	1.4	0.9	3.5
	0.5	0.4	0.3	0.3	0.4	SP	1.2	1.0	0.7	1.5	1.4	2.7	1.1	1.3	0.8	0.7	1.0	1.4	0.9	0.3	0.2	0.2	0.4	1.7		
3-Sep	Z	0.6	0.4	0.4	0.6	1.0	1.3	2.2	0.6	C	C	C	C	C	C	1.4	DF	0.7	0.6	0.7	0.7	0.7	0.7	0.7	--	2.3
	SP	0.5	0.4	0.4	0.8	1.9	2.3	1.0	0.6	C	C	C	C	C	1.3	1.2	0.8	0.6	0.7	0.7	0.7	0.7	0.8	1.0		
4-Sep	0.7	Z	0.8	0.7	0.6	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	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.9
	0.6	SP	0.7	0.9	0.5	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5		
5-Sep	0.6	0.5	Z	1.0	0.6	0.6	1.5	1.9	4.0	2.4	1.1	0.8	0.6	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.9	4.3
	0.5	0.5	SP	0.7	0.6	0.9	1.5	2.0	4.3	1.2	0.9	0.7	0.5	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.4	0.3	0.3	0.3		
6-Sep	0.3	0.3	0.3	Z	0.5	0.5	0.5	0.4	0.9	4.3	3.3	2.1	2.2	0.9	0.4	0.4	0.4	0.4	0.6	0.8	0.5	0.5	0.5	0.5	0.9	4.3
	0.3	0.3	0.4	SP	0.5	0.5	0.5	0.5	2.8	4.1	2.4	1.8	1.9	0.4	0.4	0.4	0.4	0.4	0.8	0.6	0.6	0.5	0.4	0.6		
7-Sep	1.0	1.8	1.3	1.3	Z	1.5	2.3	2.9	1.7	1.8	1.8	1.5	1.1	0.9	0.5	0.5	0.6	0.5	0.6	0.5	0.4	0.5	0.6	0.7	1.1	2.9
	1.2	1.5	1.3	1.3	SP	1.9	2.7	2.4	1.7	2.2	1.9	1.2	1.0	0.7	0.5	0.5	0.6	0.6	0.5	0.4	0.5	0.6	0.7	0.7		
8-Sep	0.6	0.5	0.5	0.5	0.5	Z	0.6	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.8
	0.5	0.5	0.5	0.5	0.6	SP	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.6	0.5	0.5	0.4		
9-Sep	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.4	1.3	1.2	3.1	2.1	1.6	1.5	0.5	0.6	0.8	0.9	1.5	3.4	1.4	0.6	0.7	1.6	1.1	3.4
	SP	0.4	0.3	0.3	0.3	0.3	0.3	0.5	1.2	1.7	3.3	1.9	1.4	0.8	0.5	0.9	0.6	2.9	2.3	3.1	0.8	0.5	1.1	1.6		
10-Sep	1.3	Z	0.7	0.5	0.7	0.5	0.5	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	1.3
	1.0	SP	0.5	0.8	0.7	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4		
11-Sep	0.4	0.4	Z	0.5	0.5	0.7	0.7	1.4	3.8	9.8	6.0	1.5	1.2	0.9	0.4	0.4	0.4	0.5	0.6	0.4	0.3	1.2	1.4	0.8	1.5	11.5
	0.4	0.4	SP	0.5	0.5	0.6	0.6	2.9	11.5	6.7	3.7	0.9	1.4	0.6	0.4	0.4	0.4	0.7	0.5	0.3	0.5	1.8	0.9	0.8		
12-Sep	0.9	2.6	3.7	Z	2.1	2.0	2.1	2.0	4.5	1.6	1.0	0.8	1.0	0.7	0.6	0.4	0.4	1.6	2.1	4.5	2.1	2.5	2.2	1.8	1.8	4.5
	1.3	3.7	2.6	SP	1.9	2.0	2.0	3.3	2.5	1.1	1.0	0.8	0.9	0.6	0.5	0.4	0.8	0.8	3.9	3.2	2.2	2.6	2.2	1.4		
13-Sep	1.6	3.0	2.6	2.1	Z	3.2	4.1	3.5	2.1	1.5	0.9	0.8	1.5	0.9	0.8	0.9	0.8	0.7	0.7	0.9	1.2	1.5	1.4	1.2	1.7	4.3
	2.4	3.1	2.0	2.3	SP	3.6	4.3	3.0	2.0	1.0	1.0	1.9	1.0	0.9	0.8	0.8	0.7	0.7	0.8	0.9	3.2	1.3	1.4	1.1		
14-Sep	1.1	0.9	0.8	0.8	0.7	Z	1.0	1.0	1.3	1.7	3.0	1.4	0.9	1.2	0.5	0.5	0.6	0.8	0.6	0.9	0.5	0.4	0.4	0.4	0.9	3.0
	1.0	0.8	0.8	0.8	0.8	SP	1.0	1.1	1.4	2.9	2.0	1.1	0.8	1.2	0.4	0.5	1.5	0.4	1.2	0.6	0.4	0.4	0.4	0.5		
15-Sep	Z	0.8	6.1	1.4	2.8	4.0	6.0	2.9	1.3	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.7	1.4	6.1
	SP	3.1	2.5	1.7	3.9	4.4	3.8	2.0	0.6	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.6	0.6	0.6	0.7	0.6		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025

Day	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	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Sep	0.6	Z	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.7	0.5	0.5	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.9
	0.6	SP	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.6	0.9	0.9	0.6	0.6	0.6	0.6		
17-Sep	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.5	DF	1.4	2.9	2.1	5.3	4.0	1.4	1.1	0.7	0.4	0.4	0.3	0.4	0.4	0.7	0.3	1.1	5.7
	0.5	0.5	SP	0.6	0.6	0.6	0.7	0.5	0.8	2.0	2.0	2.0	5.7	2.3	1.3	0.7	0.6	0.4	0.4	0.3	0.4	0.6	0.4	0.3		
18-Sep	0.4	0.3	0.3	Z	0.5	0.7	1.8	2.7	0.8	0.6	1.4	0.6	0.5	0.5	0.4	0.5	0.3	0.4	0.4	0.4	0.4	0.6	4.5	1.6	0.9	4.5
	0.3	0.3	0.4	SP	0.5	0.8	3.7	1.1	0.6	1.0	1.1	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	3.8	3.0	1.1		
19-Sep	0.9	0.5	0.4	0.4	Z	1.8	2.1	2.4	1.4	1.0	1.6	1.1	0.7	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.4	1.2	1.1	0.8	2.6
	0.6	0.5	0.4	0.4	SP	1.9	2.1	2.6	0.9	1.8	1.0	1.1	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.3	1.2	1.4	0.8		
20-Sep	0.6	0.5	0.9	2.6	2.2	Z	1.6	1.2	0.6	1.2	0.8	0.6	0.8	0.4	0.3	0.3	0.3	0.5	0.5	0.4	5.8	4.7	3.9	2.7	1.4	5.8
	0.5	0.7	1.5	2.3	2.0	SP	1.3	0.9	0.9	1.1	0.7	0.6	0.5	0.5	0.3	0.3	0.4	0.5	0.3	2.5	5.0	4.1	4.8	1.5		
21-Sep	1.5	Z	1.1	1.4	1.3	1.3	1.3	1.2	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.8	0.4	0.7	1.7
	1.4	SP	1.3	1.3	1.5	1.3	1.7	0.9	0.5	0.5	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	0.3		
22-Sep	0.3	Z	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	0.3	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.7
	0.3	SP	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	0.6	0.5	0.6	0.4	0.4		
23-Sep	0.3	0.4	Z	0.6	1.1	0.4	1.0	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	1.1
	0.3	0.4	SP	1.1	0.9	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4		
24-Sep	0.4	0.4	0.5	Z	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.9
	0.4	0.5	0.5	SP	0.8	0.8	0.7	0.9	0.7	0.6	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		
25-Sep	0.2	0.5	1.0	1.3	Z	1.6	1.4	1.6	1.4	1.2	0.8	0.8	0.9	0.7	0.4	0.3	0.4	0.3	0.5	0.2	0.3	0.3	0.4	0.4	0.7	1.8
	0.3	0.7	1.3	1.3	SP	1.5	1.8	1.3	1.4	0.9	0.8	1.0	0.8	0.4	0.3	0.4	0.3	0.5	0.3	0.4	0.4	0.4	0.4	0.4		
26-Sep	0.4	0.3	0.3	0.3	0.4	Z	0.7	0.9	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.6	0.4	0.9
	0.4	0.3	0.3	0.4	0.4	SP	0.7	0.8	0.8	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	0.7	0.4		
27-Sep	Z	0.7	0.6	0.8	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	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.8
	SP	0.7	0.6	0.6	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	0.2	0.3	0.2	0.2	0.3	0.5		
28-Sep	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.4	0.6	0.3	0.3	0.2	0.4	0.6
	0.4	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.5	0.3	0.2	0.2	0.2	0.4	0.4	0.6	0.3	0.3	0.3	0.3		
29-Sep	0.3	0.2	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.3	0.9	0.4	0.3	0.3	0.3	0.4	0.4	1.3	0.4	0.4	0.4	0.5	0.5	1.3
	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.9	1.0	1.0	0.3	0.4	0.4	0.3	0.4	0.4	1.0	0.4	0.4	0.4	0.5		
30-Sep	0.6	0.7	0.5	Z	1.0	1.3	1.1	1.4	1.7	1.9	0.6	0.5	0.4	0.5	0.6	0.4	0.9	0.3	0.4	0.4	0.5	1.0	0.5	0.3	0.8	1.9
	0.7	0.6	0.7	SP	1.4	1.1	1.2	1.3	1.7	0.8	1.0	0.4	0.5	0.6	0.4	0.7	0.7	0.3	0.4	0.5	0.6	0.5	0.4	0.4		
	0.6	0.8	0.9	0.8	0.8	1.1	1.3	1.2	1.3	1.3	1.2	0.9	0.9	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.7	Diurnal Average	
	2.4	3.7	6.1	2.6	3.9	4.4	6.0	3.5	11.5	9.8	6.0	3.5	5.7	4.0	1.4	1.4	1.5	2.9	3.9	4.5	5.8	4.7	4.8	2.7	Diurnal Maximum	

Z - zerospan C - Calibration 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

Barge Landing - September 2025

Maximum Value: 8.2 ppb on Sep 11 10:00

Maximum Daily Average: 1.8 ppb on Sep 12

Minimum Value: 0.2 ppb on Sep 24 18:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 17

Monthly Average: 0.84 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.9$ $P_{90} = 1.8$ $P_{99} = 4.4$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.4	0.4	0.5	Z	0.6	0.6	0.4	1.2	2.2	2.6	1.4	0.6	0.4	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.7	2.6
2-Sep	0.5	0.4	0.3	0.3	0.4	Z	0.9	1.2	0.8	1.3	1.4	3.1	1.4	1.1	0.8	0.8	0.9	1.3	1.1	0.5	0.2	0.2	0.3	1.5	0.9	3.1
3-Sep	Z	0.6	0.4	0.4	0.7	1.5	1.8	1.6	0.6	C	C	C	C	C	1.3	1.3	0.8	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	1.8
4-Sep	0.7	Z	0.7	0.8	0.5	0.8	0.6	0.5	0.6	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	0.5	0.8
5-Sep	0.5	0.5	Z	0.8	0.6	0.7	1.5	1.9	4.2	1.8	1.0	0.8	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.3	0.3	0.3	0.9	4.2
6-Sep	0.3	0.3	0.3	Z	0.5	0.5	0.5	0.5	1.8	4.2	2.9	1.9	2.0	0.7	0.4	0.4	0.4	0.4	0.7	0.7	0.5	0.5	0.5	0.5	0.9	4.2
7-Sep	1.1	1.7	1.3	1.3	Z	1.7	2.5	2.7	1.7	2.0	1.8	1.3	1.0	0.8	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.7	0.7	1.1	2.7
8-Sep	0.6	0.5	0.5	0.5	0.5	Z	0.6	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.4	0.5	0.8
9-Sep	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	1.2	1.5	3.2	2.0	1.5	1.2	0.5	0.7	0.7	1.9	1.9	3.2	1.1	0.6	0.9	1.6	1.1	3.2
10-Sep	1.2	Z	0.6	0.6	0.7	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	1.2
11-Sep	0.4	0.4	Z	0.5	0.5	0.6	0.6	2.2	7.7	8.2	4.9	1.2	1.3	0.7	0.4	0.4	0.4	0.6	0.5	0.4	0.4	1.5	1.2	0.8	1.5	8.2
12-Sep	1.1	3.1	3.2	Z	2.0	2.0	2.0	2.7	3.5	1.3	1.0	0.8	1.0	0.6	0.6	0.4	0.6	1.2	3.0	3.9	2.1	2.5	2.2	1.6	1.8	3.9
13-Sep	2.0	3.0	2.3	2.2	Z	3.4	4.2	3.3	2.1	1.2	1.0	1.3	1.3	0.9	0.8	0.9	0.7	0.7	0.7	0.9	2.2	1.4	1.4	1.1	1.7	4.2
14-Sep	1.0	0.9	0.8	0.8	0.8	Z	1.0	1.1	1.4	2.3	2.5	1.2	0.8	1.2	0.5	0.5	1.1	0.6	0.9	0.8	0.4	0.4	0.4	0.4	0.9	2.5
15-Sep	Z	2.0	4.3	1.6	3.4	4.2	4.9	2.4	1.0	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.6	1.4	4.9
16-Sep	0.6	Z	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.9
17-Sep	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.5	0.8	1.7	2.4	2.0	5.5	3.1	1.4	0.9	0.6	0.4	0.4	0.3	0.4	0.5	0.5	0.3	1.1	5.5
18-Sep	0.3	0.3	0.4	Z	0.5	0.8	2.7	1.9	0.7	0.8	1.3	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	2.2	3.7	1.4	0.9	3.7
19-Sep	0.7	0.5	0.4	0.4	Z	1.8	2.1	2.5	1.1	1.4	1.3	1.1	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.8	1.3	0.9	0.8	2.5
20-Sep	0.6	0.6	1.2	2.5	2.1	Z	1.4	1.1	0.8	1.1	0.8	0.6	0.6	0.4	0.3	0.3	0.3	0.5	0.4	1.4	5.4	4.4	4.4	2.1	1.4	5.4
21-Sep	1.4	Z	1.2	1.4	1.4	1.3	1.5	1.1	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.7	0.4	0.7	1.5
22-Sep	0.3	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	0.4	0.4	0.4	0.6	0.6	0.5	0.6	0.4	0.4	0.5	0.6
23-Sep	0.3	0.4	Z	0.8	1.0	0.6	0.8	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	1.0
24-Sep	0.4	0.5	0.5	Z	0.8	0.8	0.8	0.8	0.7	0.6	0.5	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	0.4	0.8
25-Sep	0.3	0.6	1.2	1.3	Z	1.5	1.6	1.4	1.4	1.1	0.8	0.9	0.9	0.6	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.7	1.6
26-Sep	0.4	0.3	0.3	0.3	0.4	Z	0.7	0.9	0.8	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	0.5	0.5	0.4	0.9
27-Sep	Z	0.7	0.6	0.7	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	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.7
28-Sep	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.5	0.3	0.3	0.3	0.4	0.5
29-Sep	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	1.2	1.0	0.3	0.3	0.4	0.3	0.4	0.4	1.1	0.4	0.4	0.4	0.5	0.5	1.2
30-Sep	0.6	0.6	0.6	Z	1.2	1.2	1.2	1.4	1.7	1.4	0.8	0.5	0.4	0.6	0.5	0.6	0.8	0.3	0.4	0.4	0.5	0.8	0.4	0.4	0.8	1.7
	0.6	0.8	0.9	0.8	0.8	1.1	1.3	1.2	1.3	1.3	1.2	0.9	0.9	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.7	Diurnal Average	
	2.0	3.1	4.3	2.5	3.4	4.2	4.9	3.3	7.7	8.2	4.9	3.1	5.5	3.1	1.4	1.3	1.1	1.9	3.0	3.9	5.4	4.4	4.4	2.1	Diurnal Maximum	

Z - zerospan C - Calibration

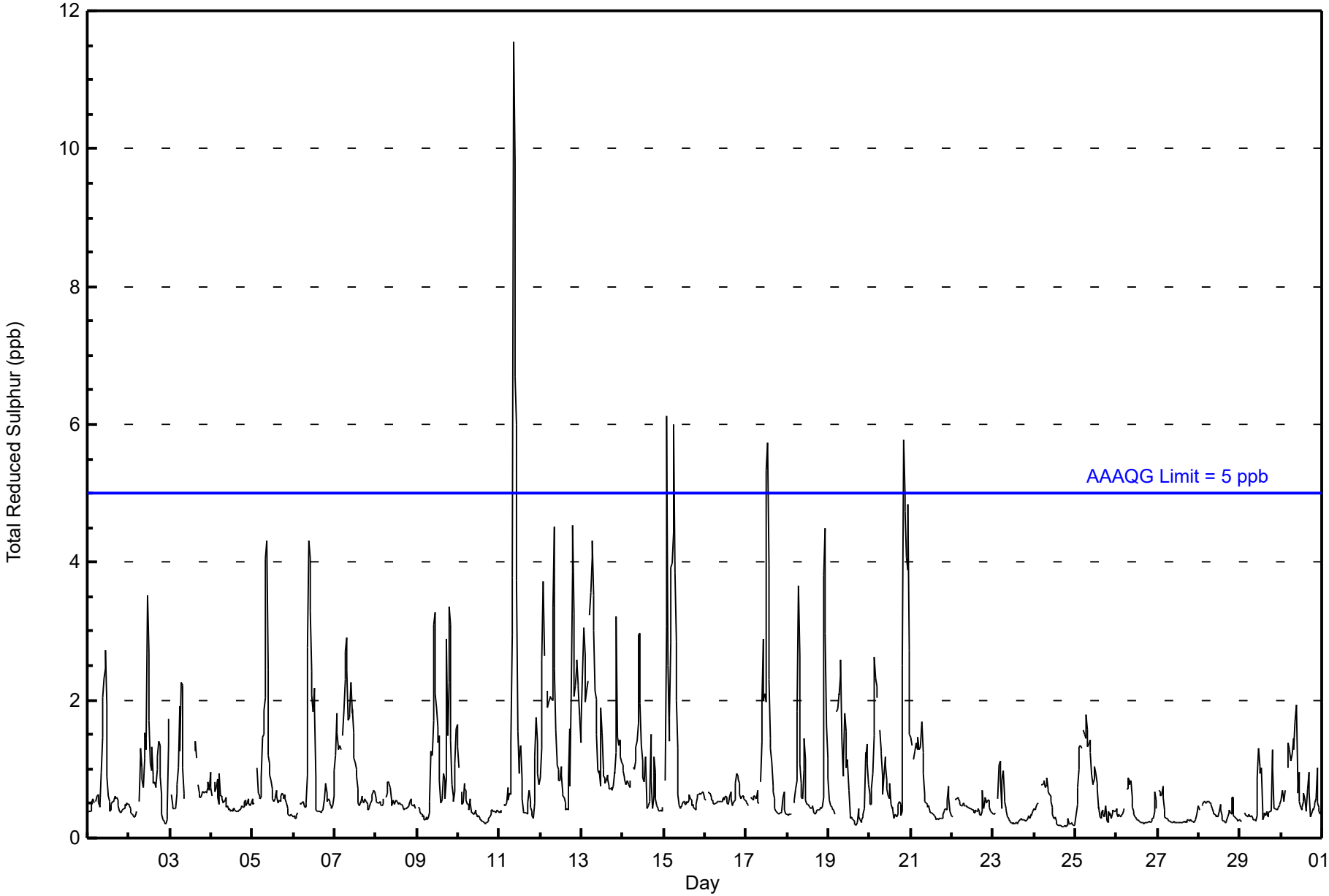
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	652	95.18	95.18
3 - 4	27	3.94	99.12
5 - 7	4	0.58	99.71
8 - 11	2	0.29	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	36	17	9	2	4	15	81	117	80	68	69	56	13	29	28	28	652
3 - 4	0	0	0	0	0	0	3	6	10	3	3	1	0	0	1	0	27
5 - 7	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	4
8 - 11	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	17	9	2	4	15	85	124	91	72	74	57	13	29	29	28	685

Total Number of Valid Hours: 685

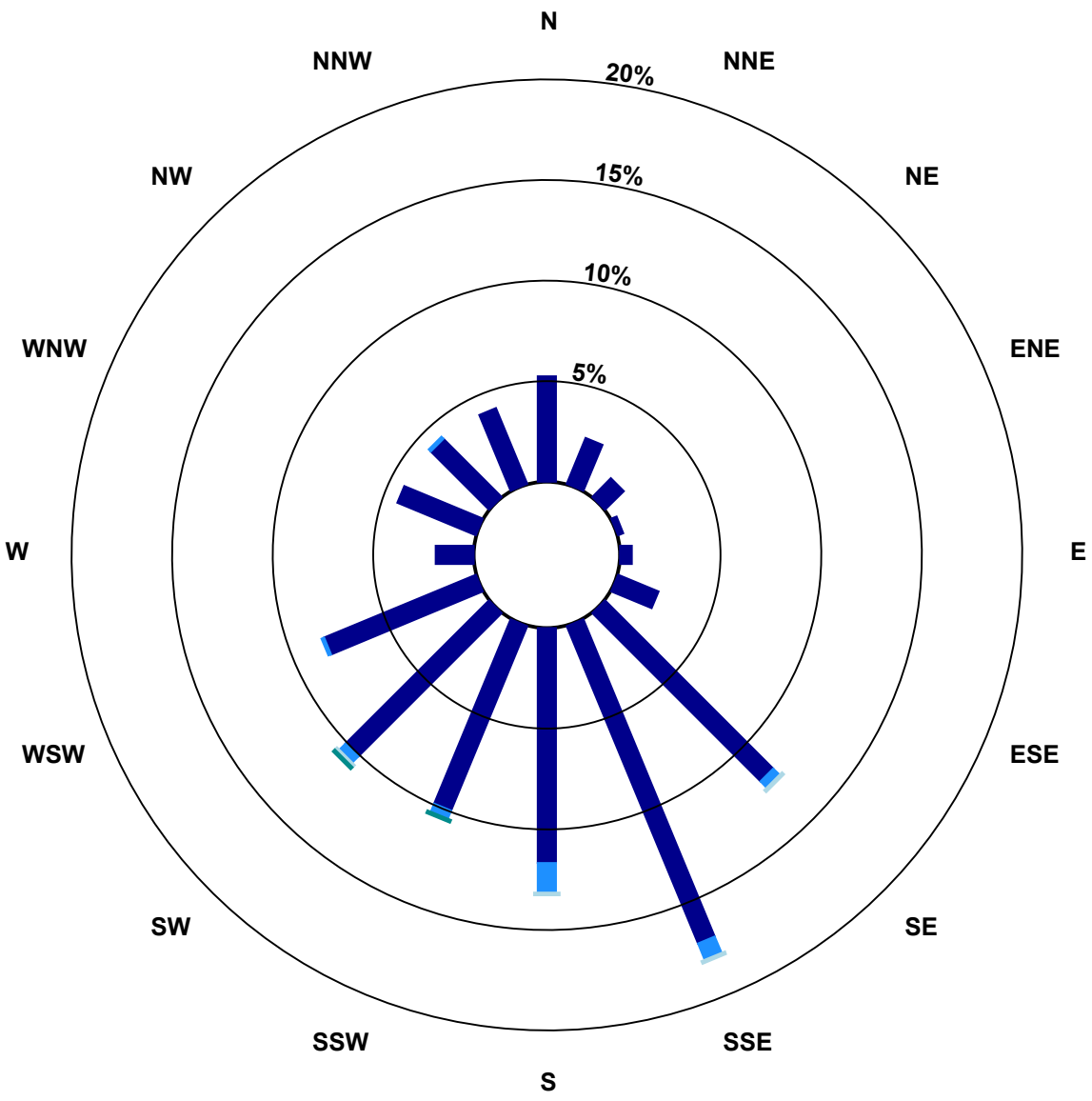
Total Number of Hours: 720

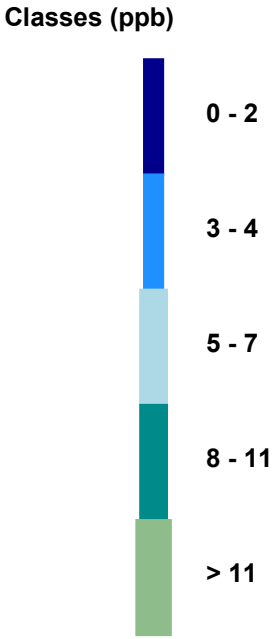
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Barge Landing





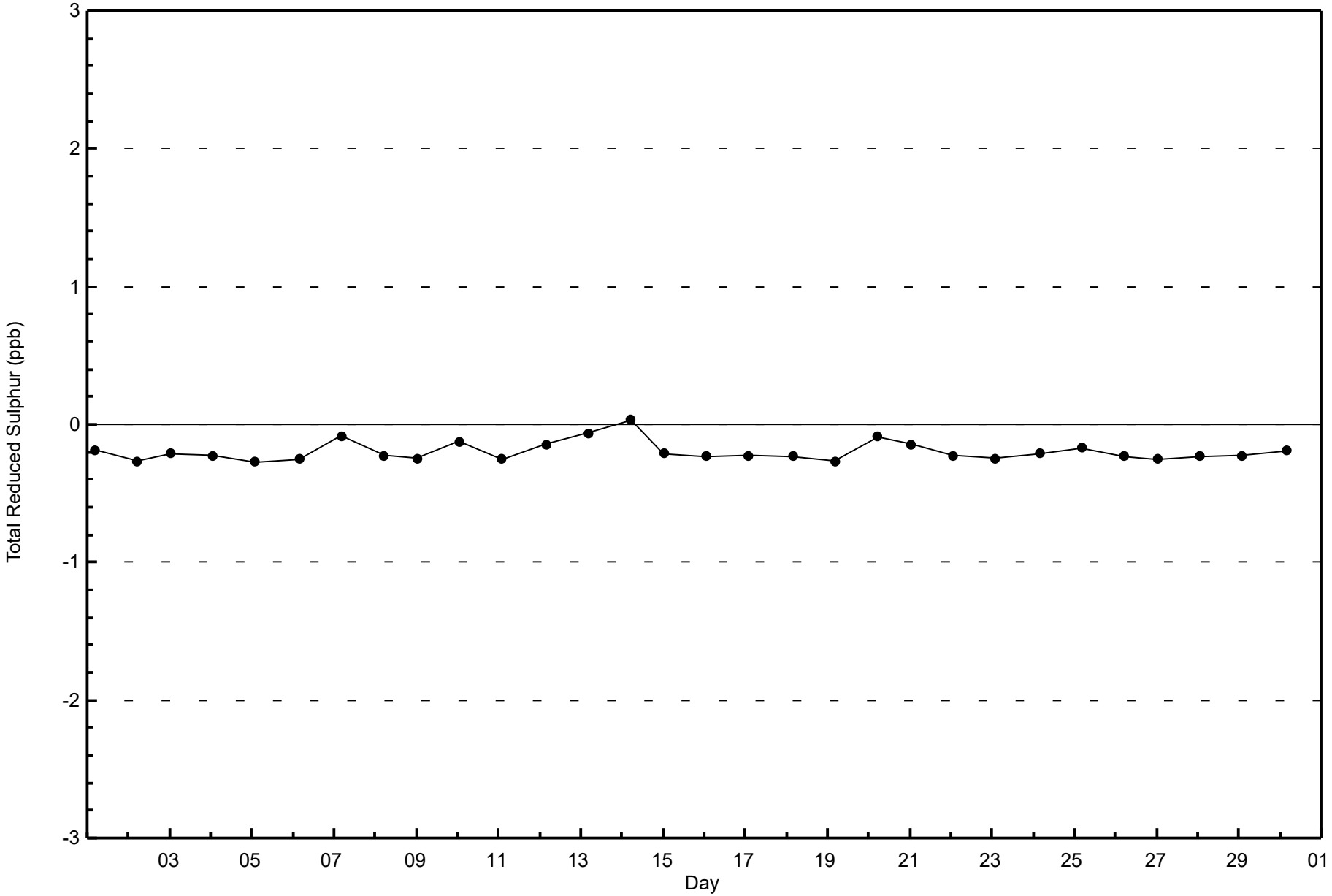
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025

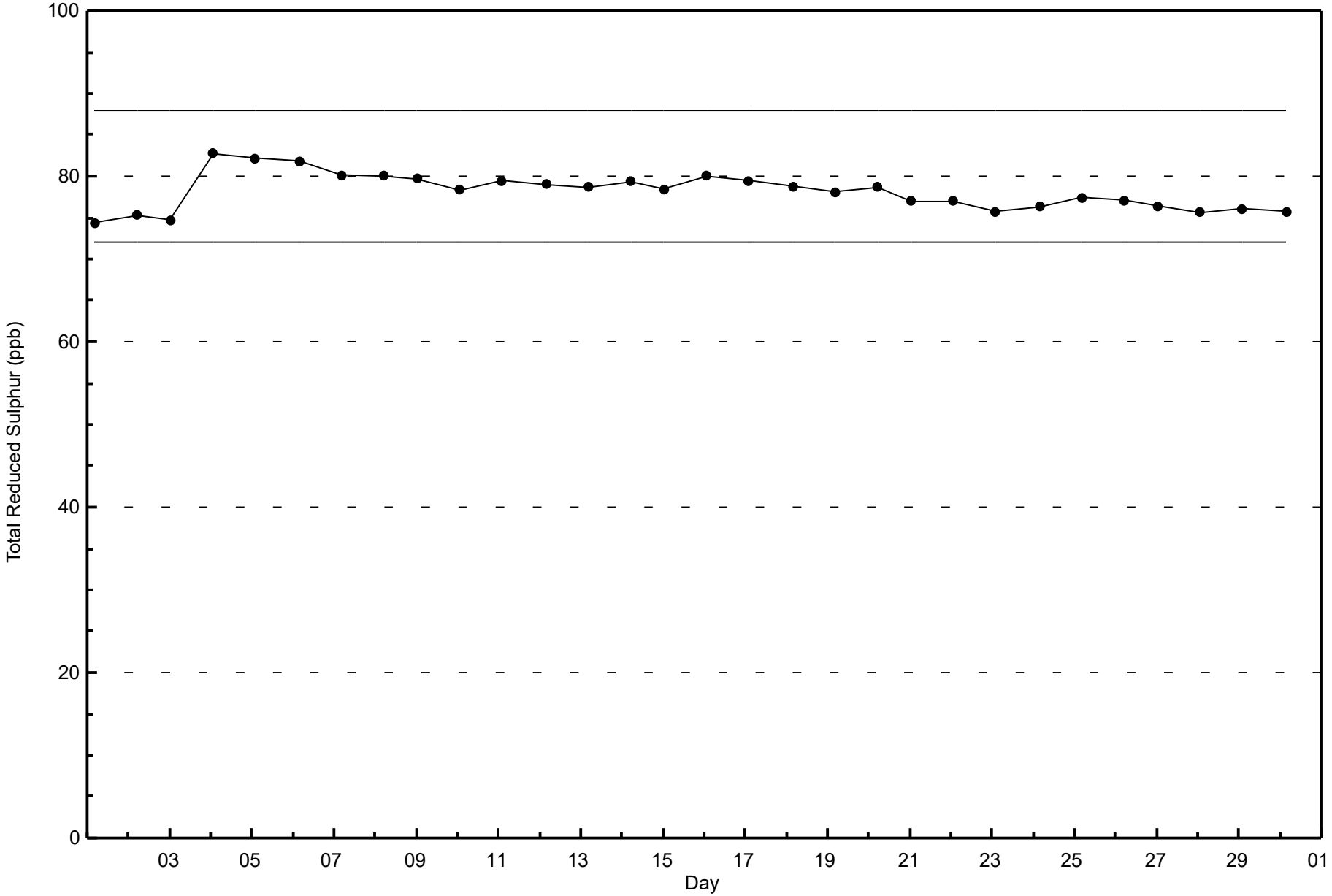


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025

Maximum Value: 3.3 ppm on Sep 30 08:00

Maximum Daily Average: 2.4 ppm on Sep 13

Minimum Value: 1.9 ppm on Sep 10 17:00

Minimum Daily Average: 1.9 ppm on Sep 29

Maximum Diurnal Average: 2.2 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 15

Monthly Average: 2.09 ppm

Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 2.9

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.3	2.3	Z	2.1	2.2	2.2	2.1	2.1	2.2	2.4	2.3	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.1	2.1	2.1	2.4
2-Sep	2.3	2.2	2.3	2.3	Z	2.2	2.3	2.1	2.2	2.3	2.3	2.5	2.2	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5
3-Sep	2.1	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.2	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.1	2.3
4-Sep	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	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	2.1
5-Sep	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.4	2.4	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.4
6-Sep	2.0	2.0	Z	2.0	2.1	2.0	2.1	2.0	2.1	2.3	2.2	2.1	2.1	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.3
7-Sep	2.3	2.4	2.6	Z	2.4	2.3	2.5	2.5	2.4	2.6	2.5	2.5	2.7	2.6	2.0	2.0	2.1	2.2	2.2	2.1	2.3	2.1	2.1	2.0	2.3	2.7
8-Sep	1.9	2.0	2.1	2.0	Z	2.1	2.2	2.2	2.2	1.9	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.1	2.3
9-Sep	2.1	2.1	2.1	2.1	2.2	Z	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.4	2.2	2.1	2.1	2.1	2.3	2.1	2.4
10-Sep	Z	2.3	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.3
11-Sep	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.3	3.0	3.3	3.0	2.3	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	3.3
12-Sep	2.0	2.2	Z	2.3	2.3	2.3	2.2	2.4	2.4	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.3	2.3	2.5	2.4	2.2	2.5
13-Sep	2.3	2.5	2.5	Z	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.6	3.1	2.6	2.7	2.6	2.4	3.1
14-Sep	2.6	2.7	2.7	2.8	Z	2.8	2.9	2.8	2.6	2.5	2.5	2.2	2.1	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	2.9
15-Sep	2.0	2.3	2.5	2.2	2.4	2.4	Z	2.2	2.0	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.5
16-Sep	Z	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	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
17-Sep	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.0	2.1	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	1.9	2.0	2.1
18-Sep	1.9	2.0	Z	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	2.0	2.3	2.4	2.2	2.0	2.4
19-Sep	2.1	2.0	2.0	Z	2.1	2.4	2.6	2.4	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.7	2.5	2.1	2.7
20-Sep	2.3	2.3	2.3	2.5	Z	2.5	2.5	2.3	2.2	2.2	2.2	2.1	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.1	2.4	2.3	2.3	2.2	2.2	2.5
21-Sep	2.2	2.2	2.3	2.6	2.6	2.5	Z	2.6	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	2.0	1.9	2.1	2.6
22-Sep	Z	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	1.9	1.9	2.1	2.2	2.1	2.2	2.0	2.0	2.0	2.2
23-Sep	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	1.9	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1
24-Sep	2.3	2.2	Z	2.3	2.2	2.2	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	2.0	2.0	1.9	1.9	1.9	2.0	2.3
25-Sep	2.1	2.4	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	1.9	1.9	1.9	2.1	2.4
26-Sep	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.3	2.3	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	2.1	2.1	2.0	2.3
27-Sep	2.2	2.1	2.1	2.1	2.1	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	2.2	2.0	2.2
28-Sep	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1
29-Sep	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	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0
30-Sep	2.1	2.1	Z	2.6	2.6	2.8	3.1	3.3	3.1	2.8	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.4	2.1	2.4	2.4	2.0	2.5	2.4	3.3
	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	Diurnal Average	
	2.6	2.7	2.7	2.8	2.6	2.8	3.1	3.3	3.1	3.3	3.0	2.5	2.7	2.6	2.2	2.2	2.3	2.4	2.5	2.6	3.1	2.6	2.7	2.6	Diurnal Maximum	

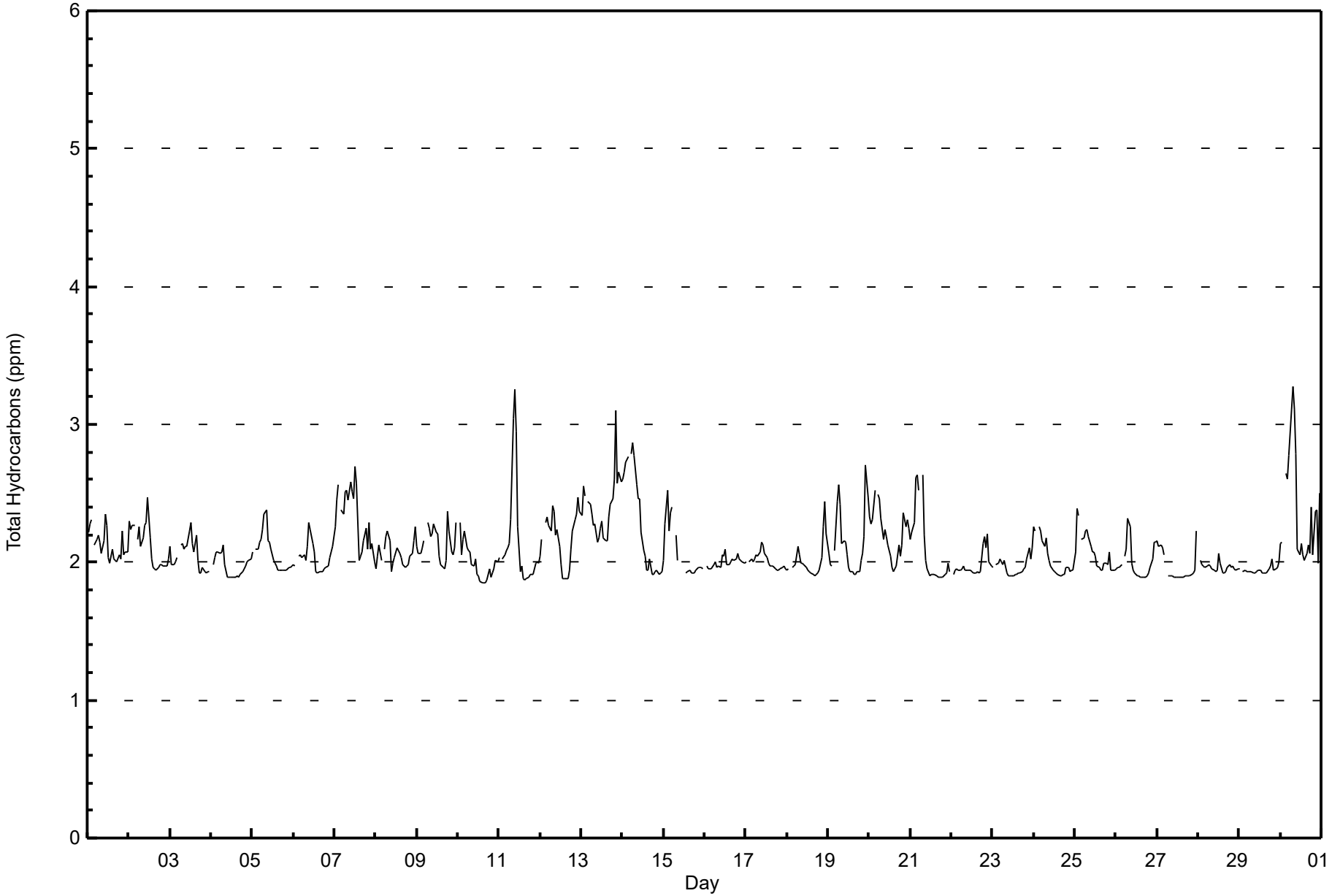
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Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	390	56.85	56.85
2.1 - 3.0	291	42.42	99.27
3.1 - 10.0	5	0.73	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	16	4	6	1	3	13	62	63	24	42	50	44	11	24	11	16	390
2.1 - 3.0	17	12	3	1	1	3	24	59	72	28	23	14	3	6	14	11	291
3.1 - 10.0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	5
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	16	9	2	4	16	86	122	96	70	74	58	14	30	25	28	686

Total Number of Valid Hours: 686

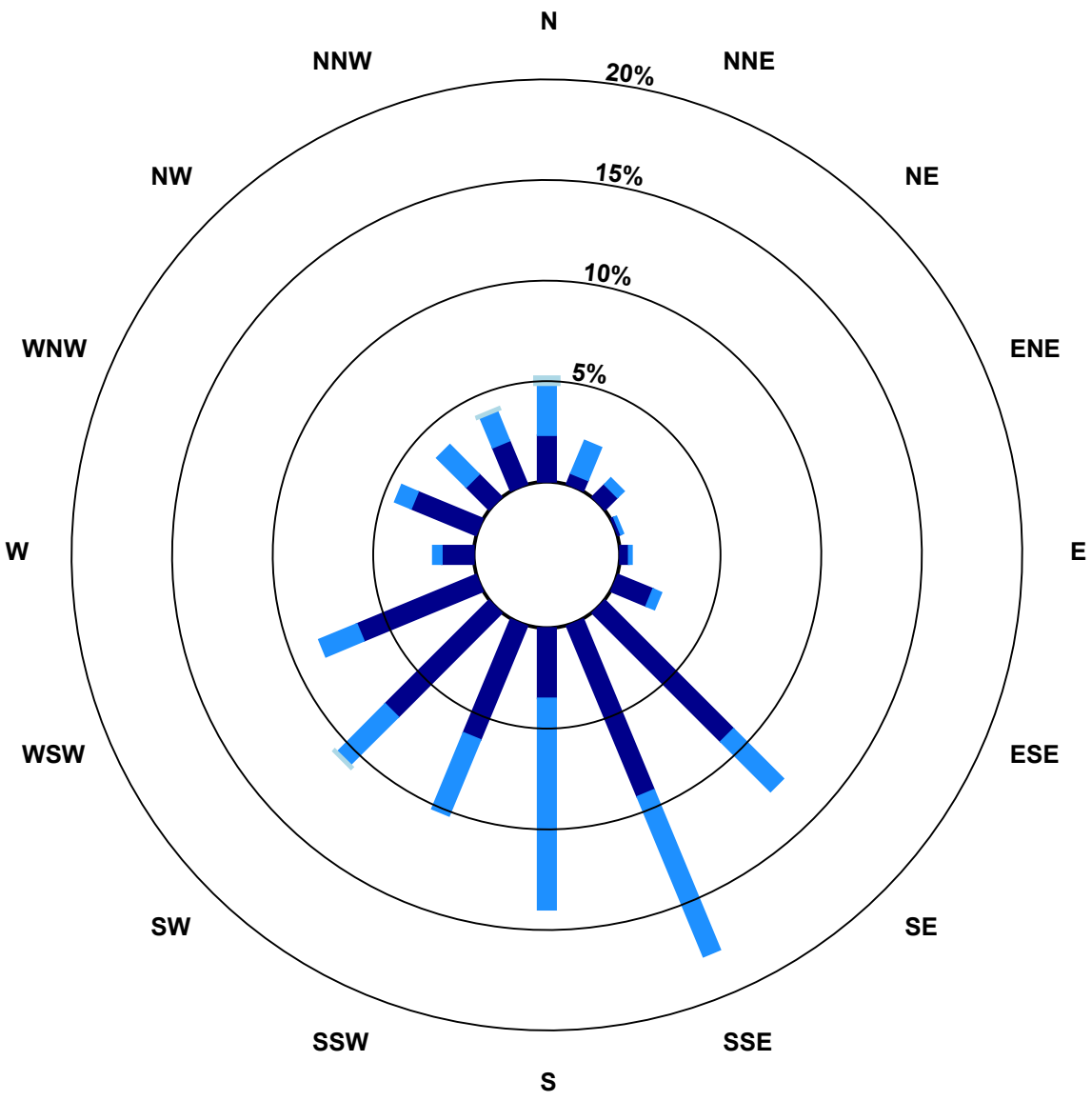
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

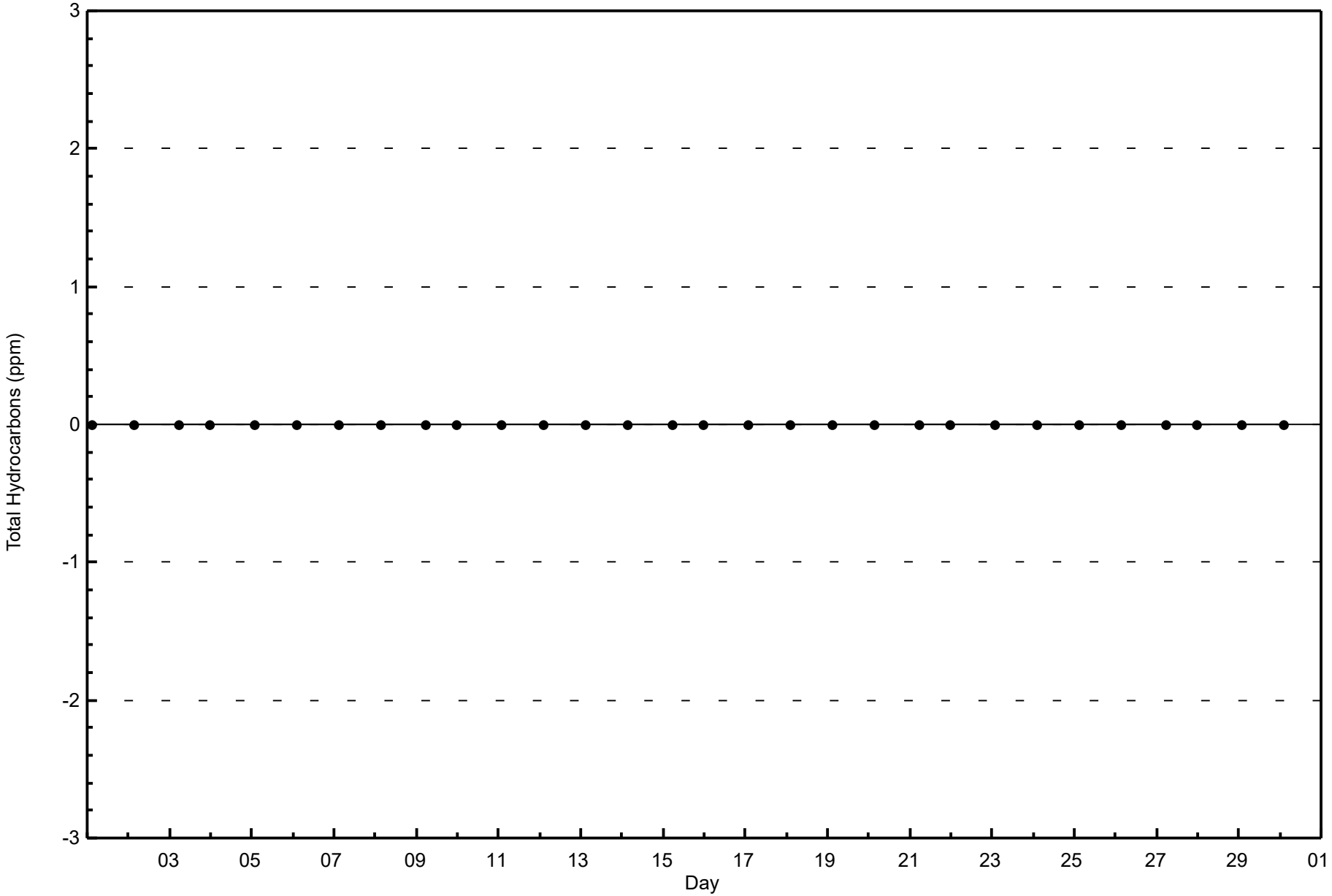
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025

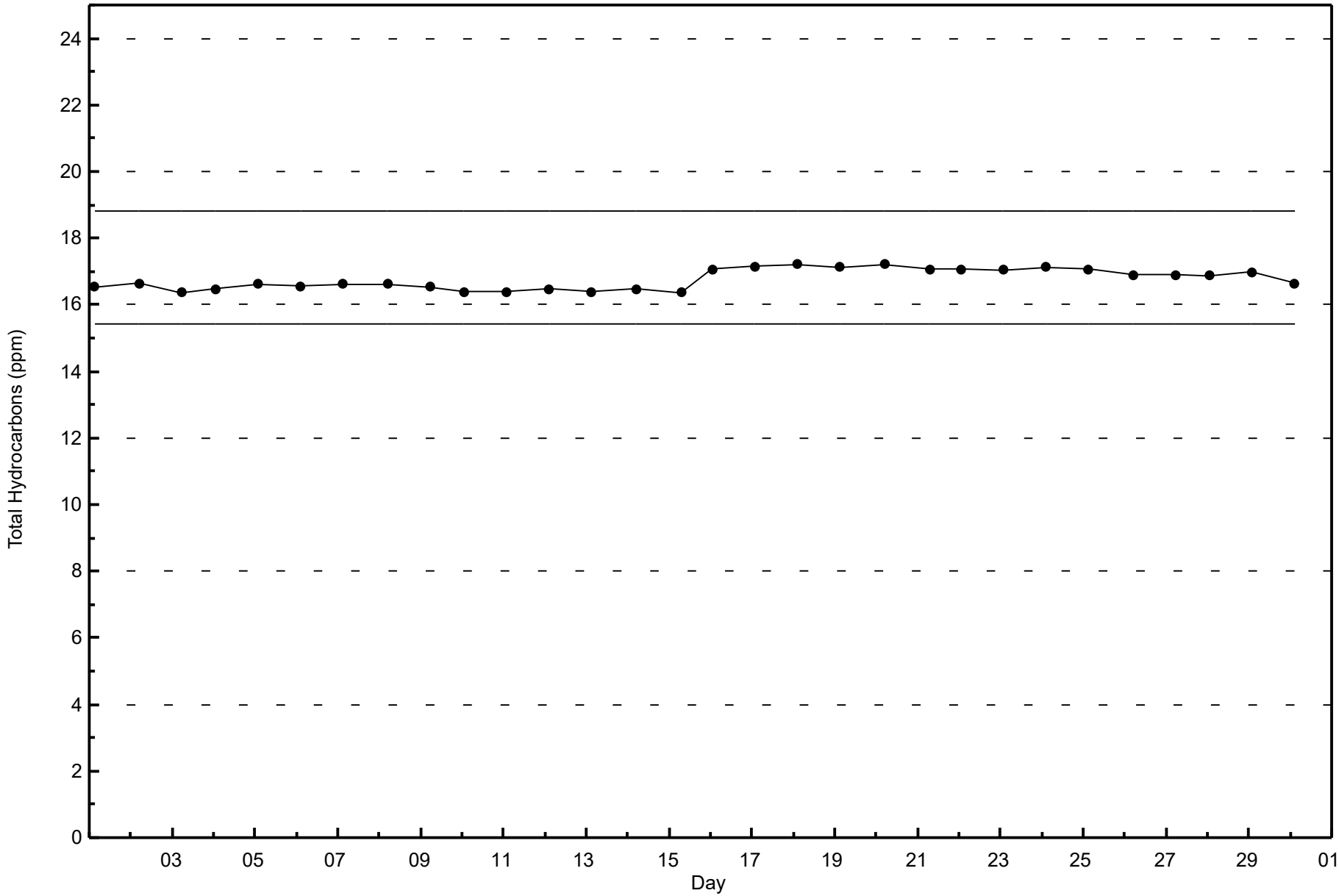


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025

Maximum Value: 0.431 ppm on Oct 1 00:00

Maximum Daily Average: 0.093 ppm on Sep 30

Minimum Value: 0.000 ppm on Sep 2 07:00

Minimum Daily Average: 0.000 ppm on Sep 29

Maximum Diurnal Average: 0.043 ppm at hour 11

Minimum Diurnal Average: 0.009 ppm at hour 17

Monthly Average: 0.027 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} = 0.2

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.038	0.030	0.027	Z	0.003	0.002	0.008	0.001	0.009	0.044	0.065	0.078	0.031	0.041	0.088	0.049	0.046	0.043	0.082	0.003	0.159	0.038	0.012	0.001	0.039	0.159
2-Sep	0.029	0.031	0.013	0.003	Z	0.001	0.000	0.000	0.016	0.046	0.061	0.096	0.042	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.016	0.096
3-Sep	0.053	0.003	0.000	0.000	0.016	Z	0.048	0.034	0.035	0.057	0.079	0.107	0.099	0.021	0.005	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.107
4-Sep	Z	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	0.001	0.009	0.003	0.006	0.003	0.000	0.000	0.001	0.009
5-Sep	0.000	Z	0.000	0.000	0.000	0.000	0.008	0.026	0.062	0.052	0.091	0.069	0.041	0.031	0.023	0.000	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.091
6-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.007	0.058	0.091	0.070	0.052	0.027	0.000	0.001	0.000	0.000	0.000	0.007	0.001	0.000	0.000	0.001	0.021	0.015	0.091
7-Sep	0.041	0.050	0.062	Z	0.016	0.027	0.040	0.043	0.064	0.049	0.062	0.100	0.280	0.245	0.045	0.070	0.029	0.111	0.220	0.135	0.332	0.001	0.000	0.000	0.088	0.332
8-Sep	0.000	0.095	0.127	0.045	Z	0.018	0.006	0.002	0.001	0.000	0.014	0.039	0.089	0.091	0.081	0.060	0.031	0.014	0.016	0.020	0.015	0.017	0.051	0.069	0.039	0.127
9-Sep	0.008	0.001	0.000	0.001	0.000	Z	0.006	0.020	0.037	0.044	0.085	0.057	0.061	0.041	0.026	0.021	0.017	0.029	0.121	0.027	0.021	0.019	0.019	0.057	0.031	0.121
10-Sep	Z	0.079	0.010	0.010	0.002	0.000	0.003	0.002	0.000	0.008	0.031	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.008	0.007	0.079
11-Sep	0.004	Z	0.001	0.004	0.001	0.016	0.003	0.029	0.105	0.299	0.259	0.175	0.007	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.027	0.035	0.040	0.045	0.299
12-Sep	0.053	0.076	Z	0.082	0.081	0.075	0.046	0.093	0.106	0.076	0.093	0.070	0.035	0.000	0.000	0.000	0.000	0.018	0.036	0.048	0.088	0.077	0.107	0.090	0.059	0.107
13-Sep	0.069	0.075	0.060	Z	0.047	0.043	0.029	0.033	0.032	0.031	0.043	0.068	0.071	0.064	0.066	0.067	0.068	0.066	0.064	0.167	0.298	0.104	0.122	0.083	0.077	0.298
14-Sep	0.073	0.062	0.069	0.060	Z	0.081	0.160	0.101	0.096	0.113	0.103	0.080	0.069	0.036	0.000	0.000	0.033	0.004	0.002	0.001	0.000	0.000	0.000	0.000	0.050	0.160
15-Sep	0.012	0.107	0.218	0.108	0.061	0.088	Z	0.075	0.015	C	C	C	C	0.000	0.005	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.218
16-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.021	0.055	0.008	0.002	0.010	0.016	0.032	0.024	0.040	0.022	0.000	0.001	0.000	0.011	0.055
17-Sep	0.000	Z	0.000	0.000	0.000	0.012	0.010	0.001	0.009	0.050	0.028	0.004	0.010	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.050
18-Sep	0.000	0.001	Z	0.000	0.000	0.002	0.044	0.010	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	0.030	0.065	0.028	0.008	0.065
19-Sep	0.021	0.000	0.000	Z	0.010	0.088	0.089	0.040	0.001	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.082	0.075	0.018	0.089
20-Sep	0.068	0.043	0.045	0.081	Z	0.056	0.039	0.028	0.014	0.052	0.065	0.058	0.020	0.000	0.000	0.002	0.017	0.018	0.022	0.016	0.073	0.056	0.067	0.067	0.039	0.081
21-Sep	0.038	0.028	0.045	0.126	0.119	0.079	Z	0.047	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	0.021	0.126
22-Sep	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	0.018	0.139	0.099	0.129	0.065	0.030	0.021	0.139
23-Sep	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	0.018	0.026	0.000	0.005	0.002	0.026
24-Sep	0.055	0.052	Z	0.049	0.038	0.010	0.006	0.028	0.003	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	0.011	0.055
25-Sep	0.032	0.070	0.060	Z	0.037	0.038	0.051	0.045	0.034	0.012	0.027	0.046	0.031	0.000	0.000	0.000	0.000	0.012	0.010	0.012	0.007	0.000	0.000	0.000	0.023	0.070
26-Sep	0.000	0.000	0.003	0.000	Z	0.000	0.003	0.050	0.048	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	0.012	0.005	0.050
27-Sep	0.045	0.024	0.021	0.021	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	0.030	0.006	0.045
28-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.049	0.010	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.003	0.049
29-Sep	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	0.000	0.000	0.000	0.001	0.000	0.010
30-Sep	0.032	0.030	Z	0.075	0.098	0.088	0.101	0.092	0.062	0.149	0.038	0.059	0.160	0.001	0.000	0.008	0.001	0.037	0.412	0.024	0.141	0.091	0.000	0.431	0.093	0.431
	0.027	0.034	0.030	0.026	0.021	0.027	0.025	0.027	0.027	0.041	0.043	0.041	0.041	0.021	0.011	0.011	0.009	0.013	0.035	0.022	0.043	0.021	0.021	0.036	Diurnal Average	
	0.073	0.107	0.218	0.126	0.119	0.088	0.160	0.101	0.106	0.299	0.259	0.175	0.280	0.245	0.088	0.070	0.068	0.111	0.412	0.167	0.332	0.129	0.122	0.431	Diurnal Maximum	

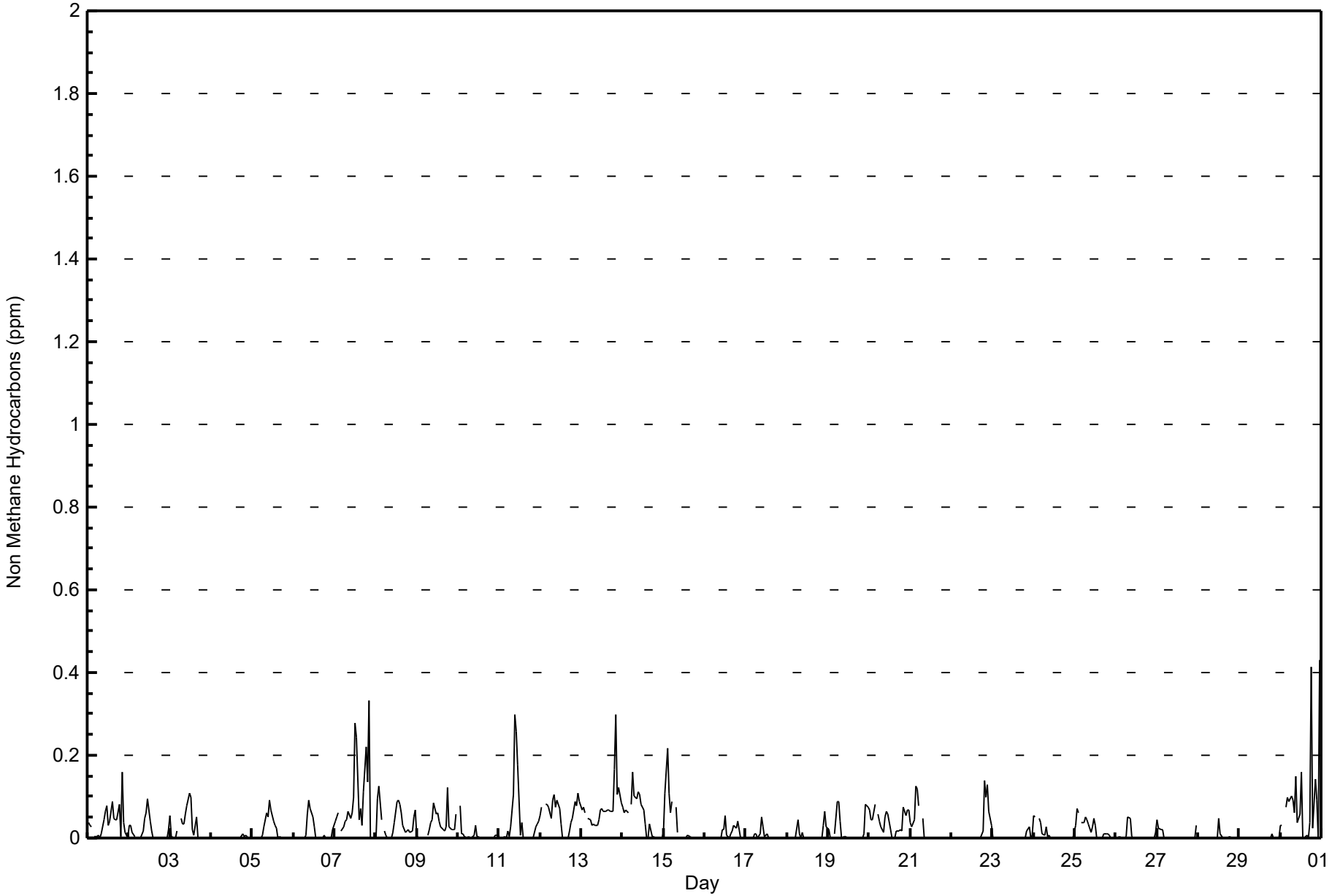
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Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	370	53.94	53.94
0.006 - 0.05	188	27.41	81.34
0.06 - 0.1	113	16.47	97.81
> 0.1	15	2.19	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	8	4	4	1	3	12	57	45	19	48	55	45	9	22	17	21	370
0.006 - 0.05	11	5	3	1	1	3	22	56	43	14	11	7	4	3	4	0	188
0.06 - 0.1	11	5	2	0	0	1	7	21	32	7	6	6	1	5	4	5	113
> 0.1	6	2	0	0	0	0	0	0	2	1	2	0	0	0	0	2	15
Totals	36	16	9	2	4	16	86	122	96	70	74	58	14	30	25	28	686

Total Number of Valid Hours: 686

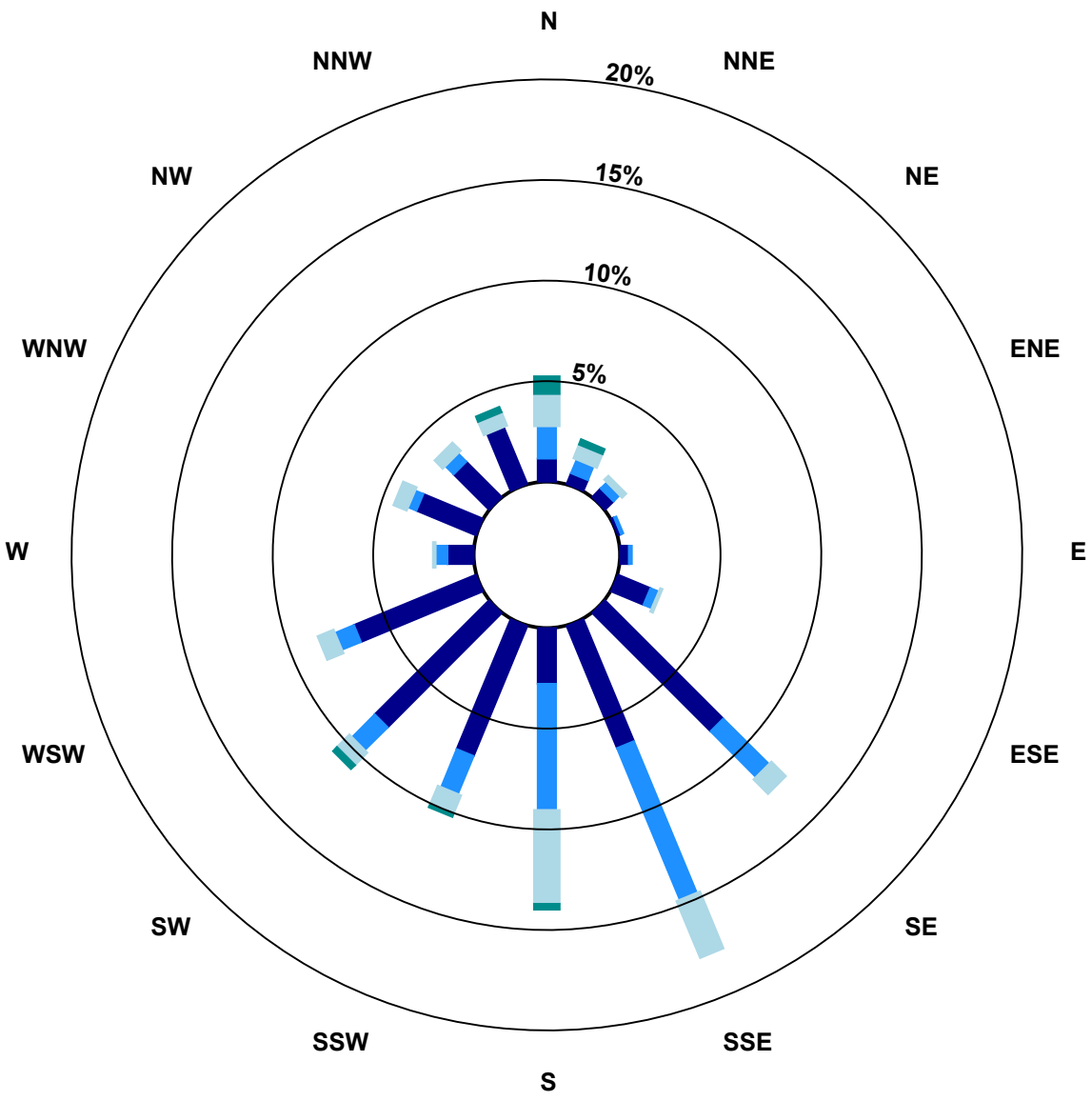
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

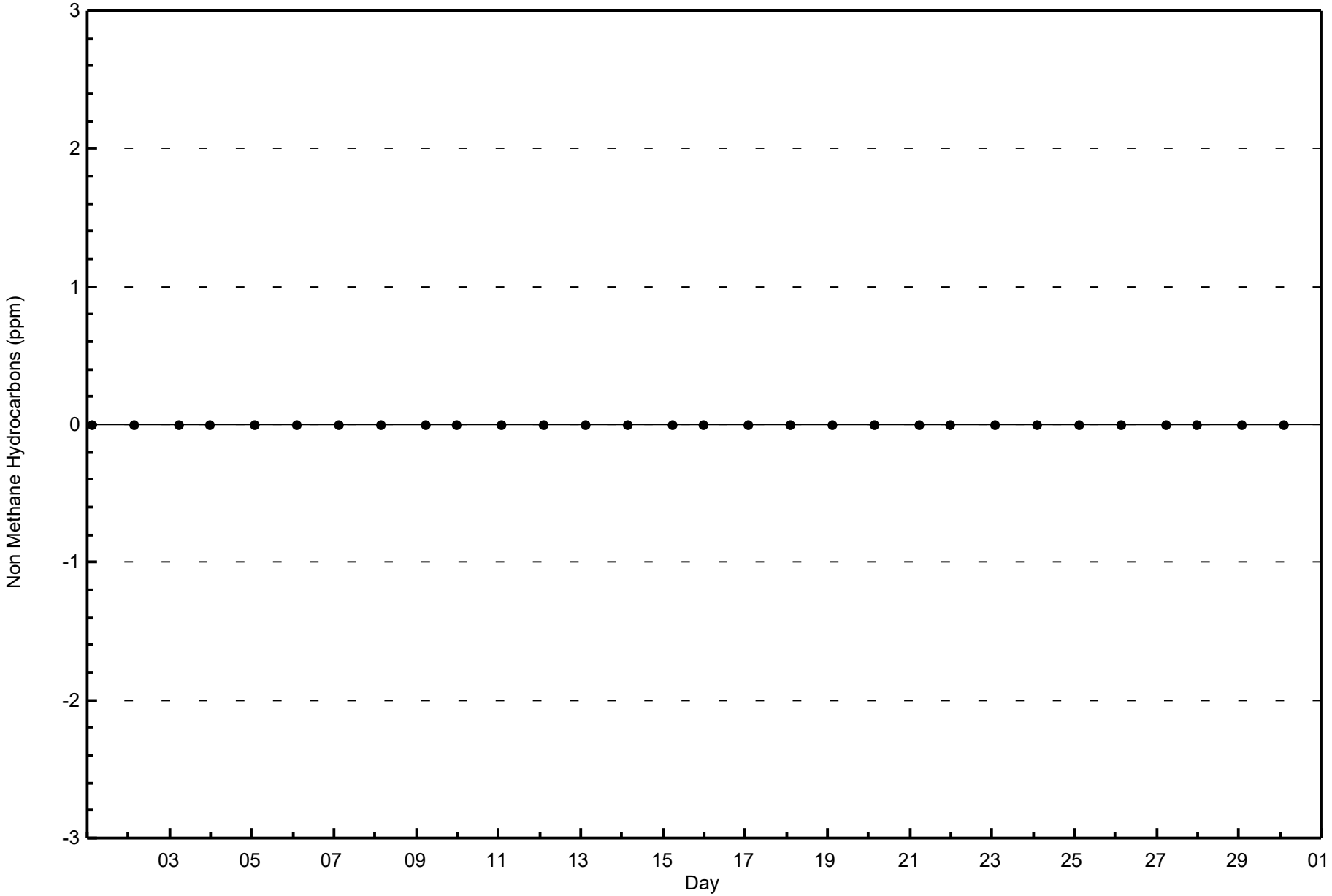
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025

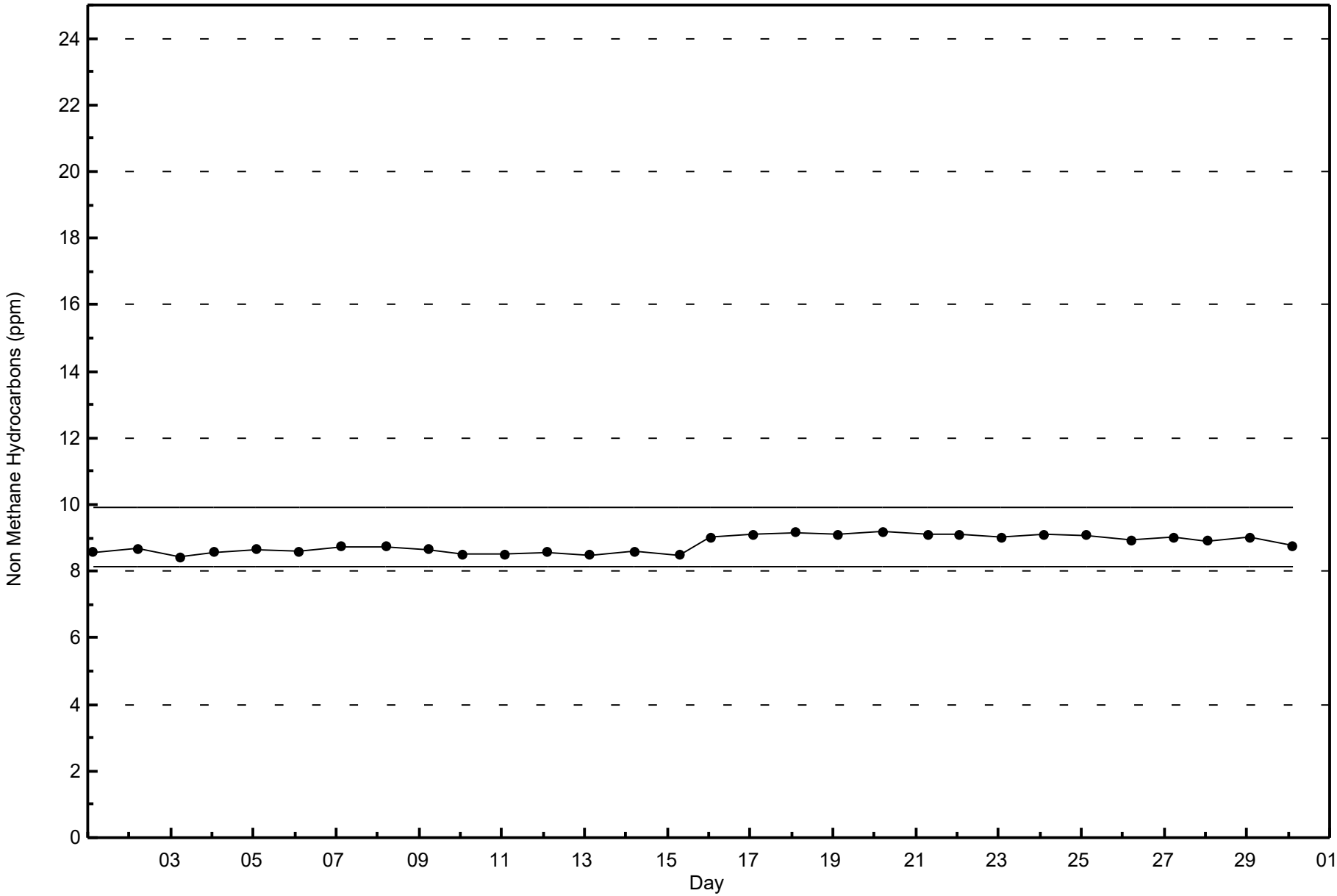


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Barge Landing - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.2 ppm on Sep 30 08:00 Maximum Daily Average: 2.3 ppm on Sep 13

Minimum Value: 1.9 ppm on Sep 10 17:00 Minimum Daily Average: 1.9 ppm on Sep 29
Maximum Diurnal Average: 2.2 ppm at hour 8 Minimum Diurnal Average: 1.9 ppm at hour 15
Monthly Average: 2.06 ppm Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.1 P_{90} = 2.3 P_{99} = 2.7

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.3	Z	2.1	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.3
2-Sep	2.3	2.2	2.3	2.3	Z	2.2	2.3	2.1	2.2	2.2	2.2	2.4	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
3-Sep	2.1	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.2
4-Sep	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	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	2.1
5-Sep	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.1	2.1	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
6-Sep	2.0	2.0	Z	2.0	2.1	2.0	2.1	2.0	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.2
7-Sep	2.2	2.4	2.5	Z	2.4	2.3	2.5	2.5	2.4	2.5	2.4	2.4	2.4	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.2	2.5
8-Sep	1.9	1.9	2.0	2.0	Z	2.1	2.2	2.2	2.2	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	2.1	2.2	2.0	2.2
9-Sep	2.1	2.1	2.1	2.1	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	1.9	1.9	2.0	2.3	2.2	2.1	2.0	2.1	2.2	2.1	2.3
10-Sep	Z	2.2	2.0	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.2
11-Sep	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.3	2.9	3.0	2.7	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	3.0
12-Sep	2.0	2.1	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.2	2.3	2.4	2.3	2.1	2.4
13-Sep	2.3	2.5	2.4	Z	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.3	2.4	2.4	2.4	2.8	2.5	2.5	2.5	2.3	2.8
14-Sep	2.5	2.6	2.7	2.7	Z	2.7	2.7	2.7	2.5	2.4	2.4	2.1	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.7
15-Sep	2.0	2.2	2.3	2.1	2.3	2.3	Z	2.1	2.0	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.3
16-Sep	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
17-Sep	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	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	1.9	2.0	2.1
18-Sep	1.9	2.0	Z	2.0	2.0	2.0	2.1	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	2.2	2.4	2.2	2.0	2.4
19-Sep	2.0	2.0	2.0	Z	2.1	2.4	2.5	2.4	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.6	2.4	2.1	2.6
20-Sep	2.3	2.2	2.3	2.4	Z	2.4	2.4	2.3	2.1	2.2	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.1	2.3	2.2	2.2	2.2	2.2	2.4
21-Sep	2.1	2.2	2.2	2.5	2.5	2.4	Z	2.6	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	2.0	1.9	2.1	2.6
22-Sep	Z	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	1.9	1.9	2.1	2.0	2.0	2.1	1.9	1.9	2.0	2.1
23-Sep	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	1.9	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1
24-Sep	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.1	2.1	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	2.0	2.2
25-Sep	2.0	2.3	2.3	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	1.9	1.9	1.9	2.1	2.3
26-Sep	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.3	2.2	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	2.1	2.1	2.0	2.3
27-Sep	2.1	2.1	2.1	2.1	2.1	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	2.2	2.0	2.2
28-Sep	Z	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	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0
29-Sep	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	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0
30-Sep	2.1	2.1	Z	2.6	2.5	2.7	3.0	3.2	3.1	2.6	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.0	2.1	2.3	3.2
	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	Diurnal Average	
	2.5	2.6	2.7	2.7	2.5	2.7	3.0	3.2	3.1	3.0	2.7	2.4	2.4	2.3	2.1	2.1	2.3	2.4	2.4	2.4	2.8	2.5	2.6	2.5	Diurnal Maximum	

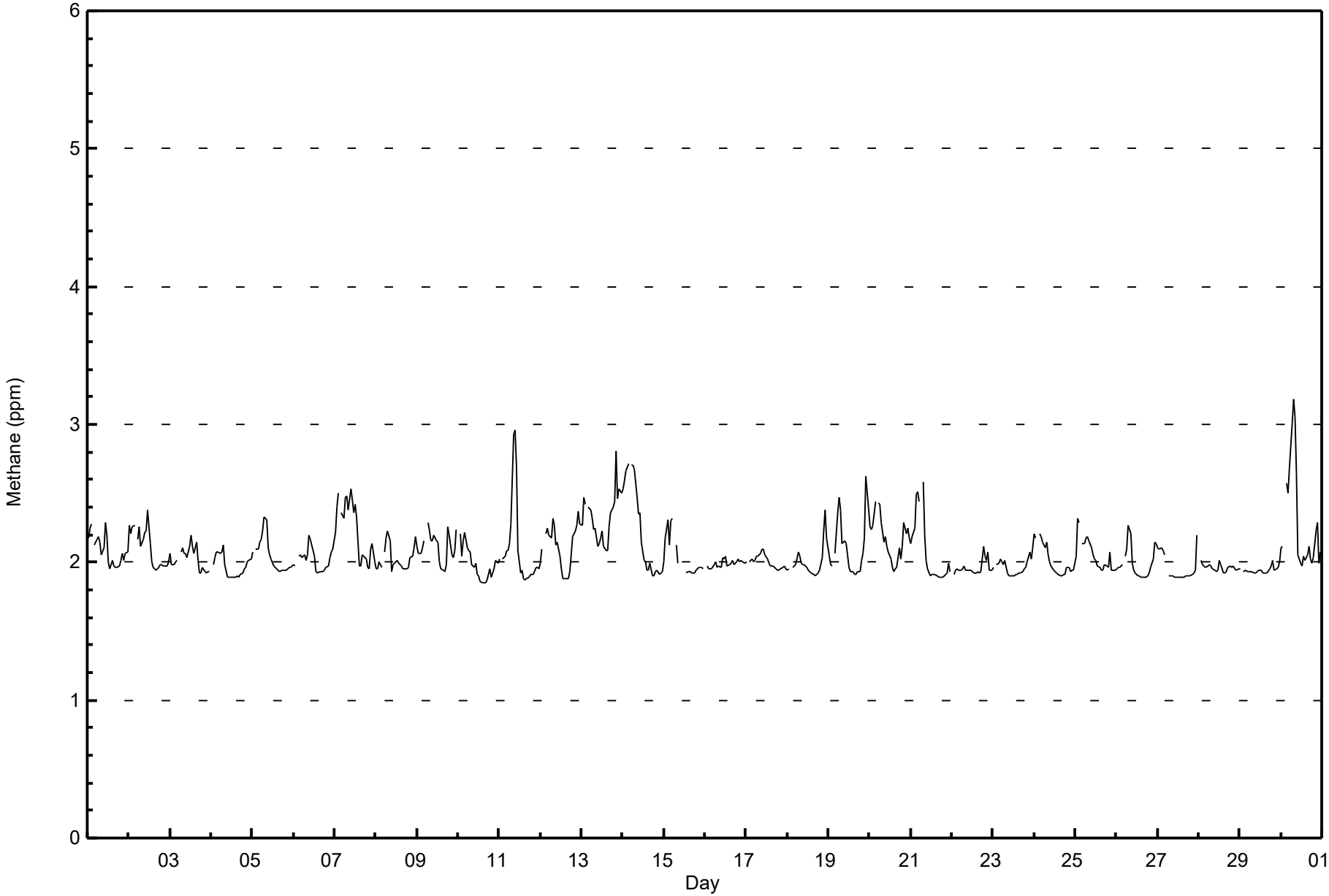
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Barge Landing - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	428	62.39	62.39
2.1 - 3.0	256	37.32	99.71
3.1 - 10.0	2	0.29	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Barge Landing - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	25	9	6	1	4	14	64	71	29	44	51	45	12	25	12	16	428
2.1 - 3.0	10	7	3	1	0	2	22	51	67	26	23	13	2	5	13	11	256
3.1 - 10.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	16	9	2	4	16	86	122	96	70	74	58	14	30	25	28	686

Total Number of Valid Hours: 686

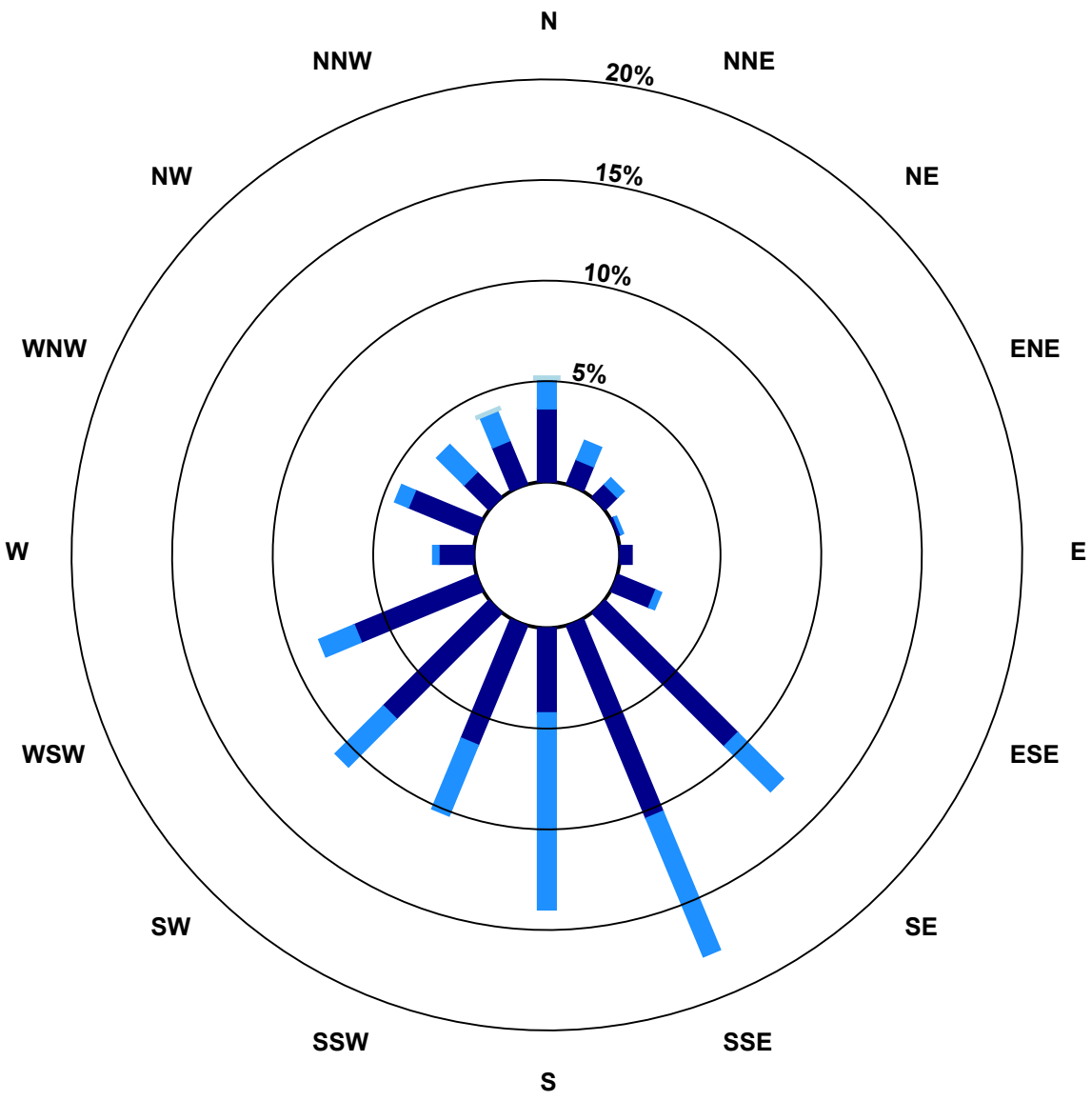
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

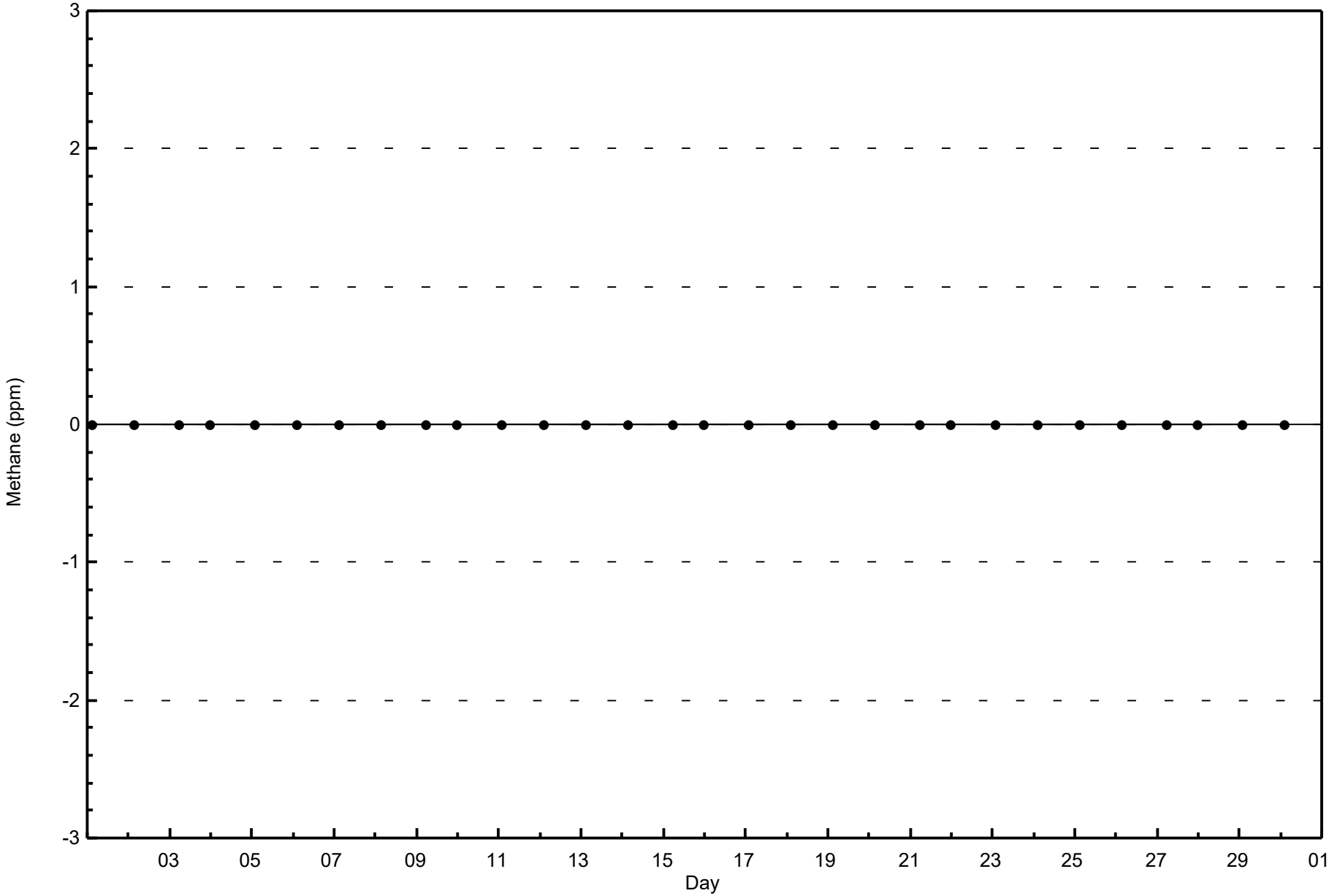
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Barge Landing - September 2025

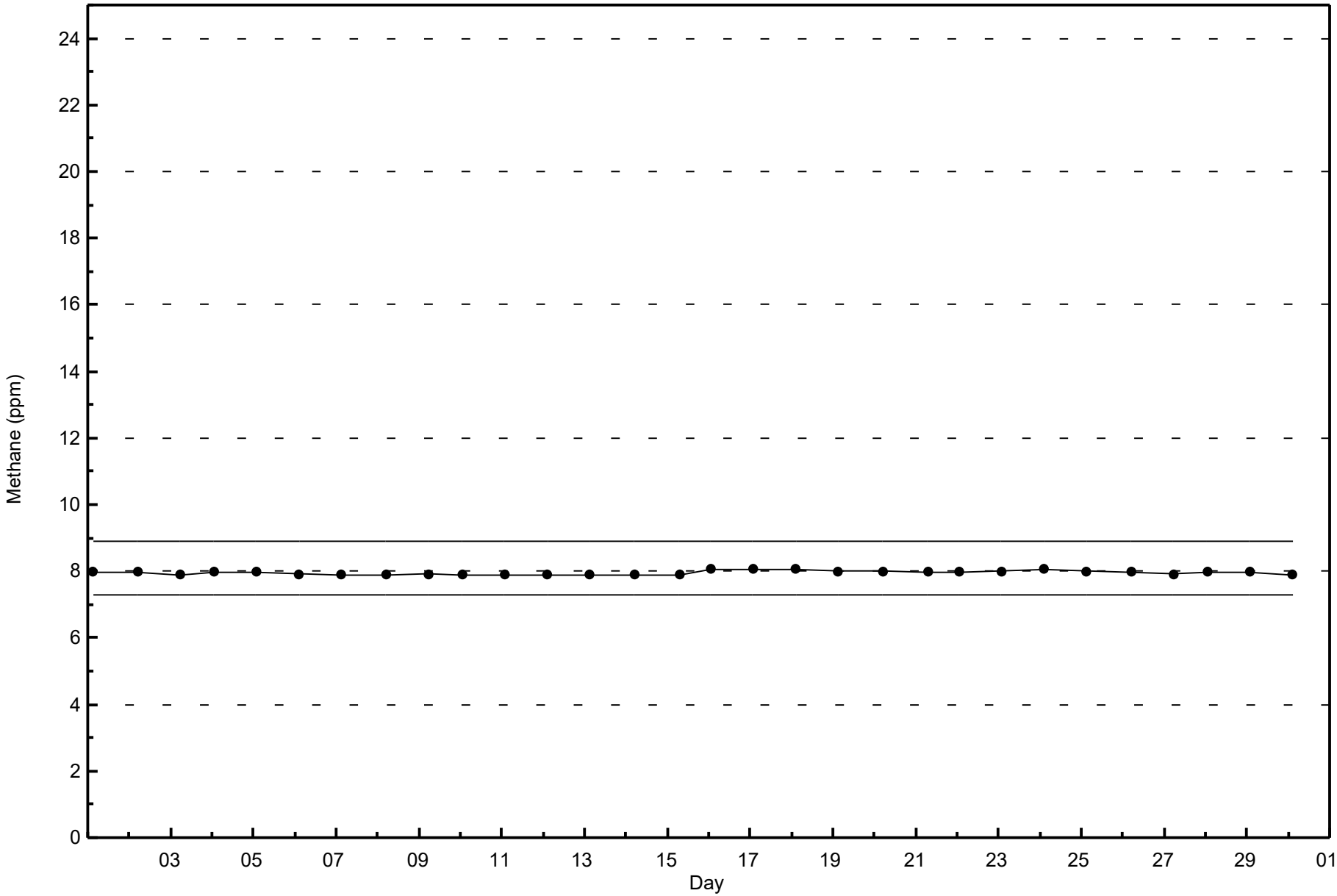


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Span Responses

Methane (CH_4) - ppm

Barge Landing - September 2025



Maximum Value: 74.9 ppb on Sep 11 07:00

Maximum Daily Average: 13.7 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 2 22:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 21.0 ppb at hour 7

Minimum Diurnal Average: 0.3 ppb at hour 19

Monthly Average: 3.91 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 3.0 P_{90} = 9.6 P_{99} = 49.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.4	Z	1.6	0.1	0.5	3.8	4.6	2.8	2.8	3.3	8.3	6.9	2.0	1.2	0.7	0.7	0.2	0.1	0.3	0.4	4.0	0.2	0.4	0.1	2.0	8.3
2-Sep	5.8	0.6	Z	0.4	9.2	9.5	4.5	3.0	3.7	8.7	6.9	11.5	4.6	2.3	1.7	1.7	1.1	0.9	0.9	0.8	0.1	0.0	0.0	0.1	3.4	11.5
3-Sep	0.2	0.0	0.0	Z	1.5	5.5	4.0	4.6	2.9	2.1	1.8	0.7	0.8	1.6	0.5	2.5	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.3	5.5
4-Sep	0.0	0.0	0.0	0.1	Z	0.2	0.8	3.2	1.0	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.2	0.5	0.2	0.1	0.1	1.5	3.0	2.0	0.6	3.2
5-Sep	1.5	2.5	5.6	2.3	20.6	Z	27.5	19.1	18.5	8.9	3.7	2.2	1.3	0.8	1.4	0.6	0.7	0.7	0.3	0.2	0.4	0.0	0.1	0.0	5.2	27.5
6-Sep	Z	0.1	3.0	7.8	18.3	19.6	15.5	3.2	2.3	7.8	8.8	5.1	3.1	0.9	0.4	0.4	0.4	0.4	0.3	0.7	0.4	0.9	6.4	9.7	5.0	19.6
7-Sep	3.4	Z	3.5	8.0	17.2	9.4	43.8	28.9	8.7	5.1	3.8	8.9	13.9	10.1	1.3	0.5	1.3	0.9	0.4	0.1	0.3	4.2	8.9	1.8	8.0	43.8
8-Sep	0.0	0.0	Z	0.1	9.2	7.1	10.2	9.7	8.0	2.6	3.0	3.7	3.9	2.7	2.2	1.4	0.7	0.5	0.2	0.2	8.5	8.1	9.3	6.0	4.2	10.2
9-Sep	0.9	2.0	1.1	Z	0.4	3.4	5.6	24.4	16.4	C	C	C	C	C	0.2	0.4	0.1	0.0	0.0	0.9	0.2	0.4	0.9	0.1	3.2	24.4
10-Sep	0.5	0.1	0.1	0.7	Z	25.2	27.4	49.0	6.2	0.9	1.7	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.1	3.2	3.1	1.7	0.3	0.8	5.3	49.0
11-Sep	1.4	1.3	1.6	9.7	28.3	Z	74.9	36.9	29.7	22.4	14.4	5.8	3.2	2.7	0.7	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	10.2	74.9
12-Sep	Z	0.2	0.3	0.2	22.9	30.4	55.5	35.6	4.6	3.2	2.5	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.7	0.2	0.6	6.9	55.5
13-Sep	0.6	Z	9.7	20.4	18.5	35.7	40.5	25.3	7.3	4.4	1.8	2.3	3.6	1.8	0.9	0.6	0.7	0.9	0.5	0.9	24.2	5.3	8.4	3.5	9.5	40.5
14-Sep	5.2	9.3	Z	27.8	24.6	39.0	58.7	29.8	14.4	3.1	4.6	2.5	1.4	0.9	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	9.7	58.7
15-Sep	0.3	0.0	0.5	2.5	Z	1.8	7.8	0.8	0.4	0.1	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	0.6	7.8
16-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.1	0.1	1.6	1.7	3.3	0.7	0.3	0.6	0.3	0.9	0.6	3.0	0.7	0.0	0.1	0.1	0.6	3.3
17-Sep	0.1	0.0	0.4	6.3	10.6	Z	51.4	16.5	7.0	7.2	6.4	3.9	2.3	1.7	0.8	0.6	0.5	0.3	0.1	0.1	0.0	0.1	0.1	0.1	5.1	51.4
18-Sep	Z	0.1	0.2	0.3	0.4	1.2	4.0	3.1	1.3	1.3	0.2	0.3	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.7	0.6	0.7	0.8	0.5	0.7	4.0
19-Sep	0.0	Z	0.0	0.0	2.8	16.6	21.9	3.1	2.8	3.1	1.9	1.8	0.3	0.1	0.0	0.0	0.0	10.8	0.2	0.8	5.8	6.0	2.6	0.3	3.5	21.9
20-Sep	0.1	0.2	Z	12.5	27.6	45.3	63.0	12.7	4.2	3.9	3.3	2.5	1.1	0.2	0.0	0.0	0.2	0.0	0.0	0.1	0.4	0.2	0.4	0.3	7.7	63.0
21-Sep	0.2	0.3	0.6	0.4	Z	4.9	4.1	11.4	1.9	0.2	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	1.1	11.4
22-Sep	0.0	0.0	0.1	0.0	Z	0.0	3.8	2.5	0.3	0.1	0.0	0.7	0.5	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.4	3.8
23-Sep	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.4	0.1	0.1	0.3	0.1	0.6
24-Sep	Z	0.3	0.2	0.2	2.1	3.0	9.3	4.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	7.9	2.3	3.6	0.0	1.5	9.3
25-Sep	4.2	Z	4.6	6.6	5.8	20.4	39.9	29.8	5.7	3.6	2.5	4.0	2.7	1.2	0.6	1.6	0.5	0.1	0.3	0.0	0.0	0.0	0.0	0.0	5.8	39.9
26-Sep	0.0	0.1	Z	1.0	3.8	11.4	3.7	1.7	1.4	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	0.9	0.1	1.1	11.4
27-Sep	0.0	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	0.1	0.1	0.0	0.0	0.1
28-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.4	1.2	0.9	0.1	0.1	0.1	3.2	1.7	0.6	0.1	0.1	0.1	0.2	0.4	3.2
29-Sep	0.0	0.0	0.0	0.0	0.3	Z	0.6	0.6	0.6	0.5	0.4	0.5	0.8	0.3	0.3	0.4	0.2	1.4	0.8	0.2	0.0	0.2	0.1	0.0	0.4	1.4
30-Sep	Z	3.4	0.1	22.7	26.3	31.0	45.2	55.2	56.5	41.4	3.2	2.5	2.2	2.1	0.8	0.6	0.9	0.3	0.3	1.4	17.3	1.9	0.0	0.2	13.7	56.5
	1.0	0.8	1.3	4.8	10.9	13.0	21.0	13.9	7.0	4.6	2.8	2.4	1.8	1.1	0.4	0.5	0.3	0.8	0.3	0.5	2.5	1.2	1.6	0.9	Diurnal Average	
	5.8	9.3	9.7	27.8	28.3	45.3	74.9	55.2	56.5	41.4	14.4	11.5	13.9	10.1	2.2	2.5	1.3	10.8	1.7	3.2	24.2	8.1	9.3	9.7	Diurnal Maximum	

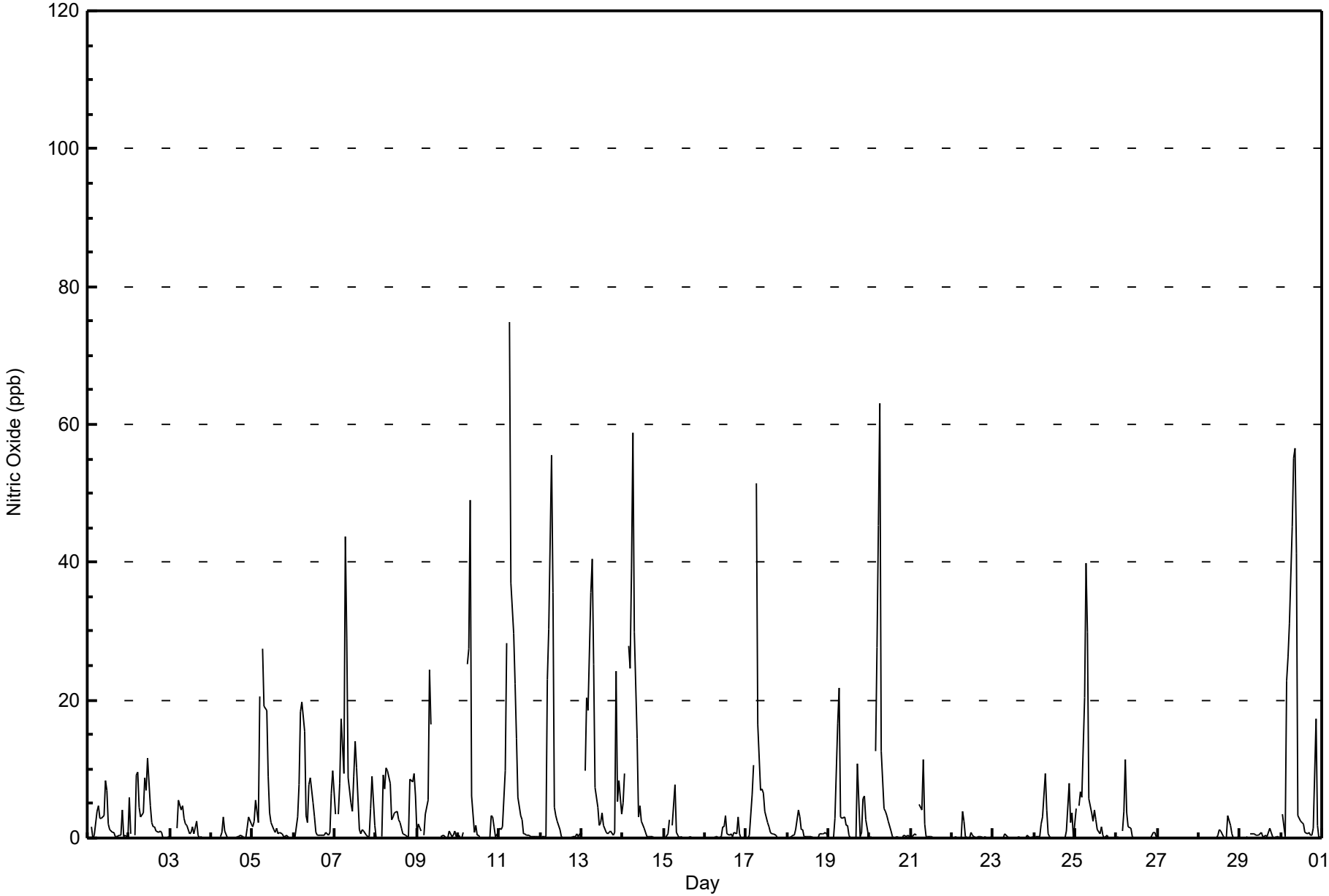
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Barge Landing - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	645	94.16	94.16
21 - 40	27	3.94	98.10
11 - 80	13	1.90	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Barge Landing - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	30	17	8	2	3	16	77	117	87	68	70	51	14	30	27	28	645
21 - 40	2	0	0	0	0	0	3	7	5	2	4	2	0	1	0	1	27
11 - 80	2	0	1	0	0	0	3	2	1	1	2	0	0	0	0	1	13
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	34	17	9	2	3	16	83	126	93	71	76	53	14	31	27	30	685

Total Number of Valid Hours: 685

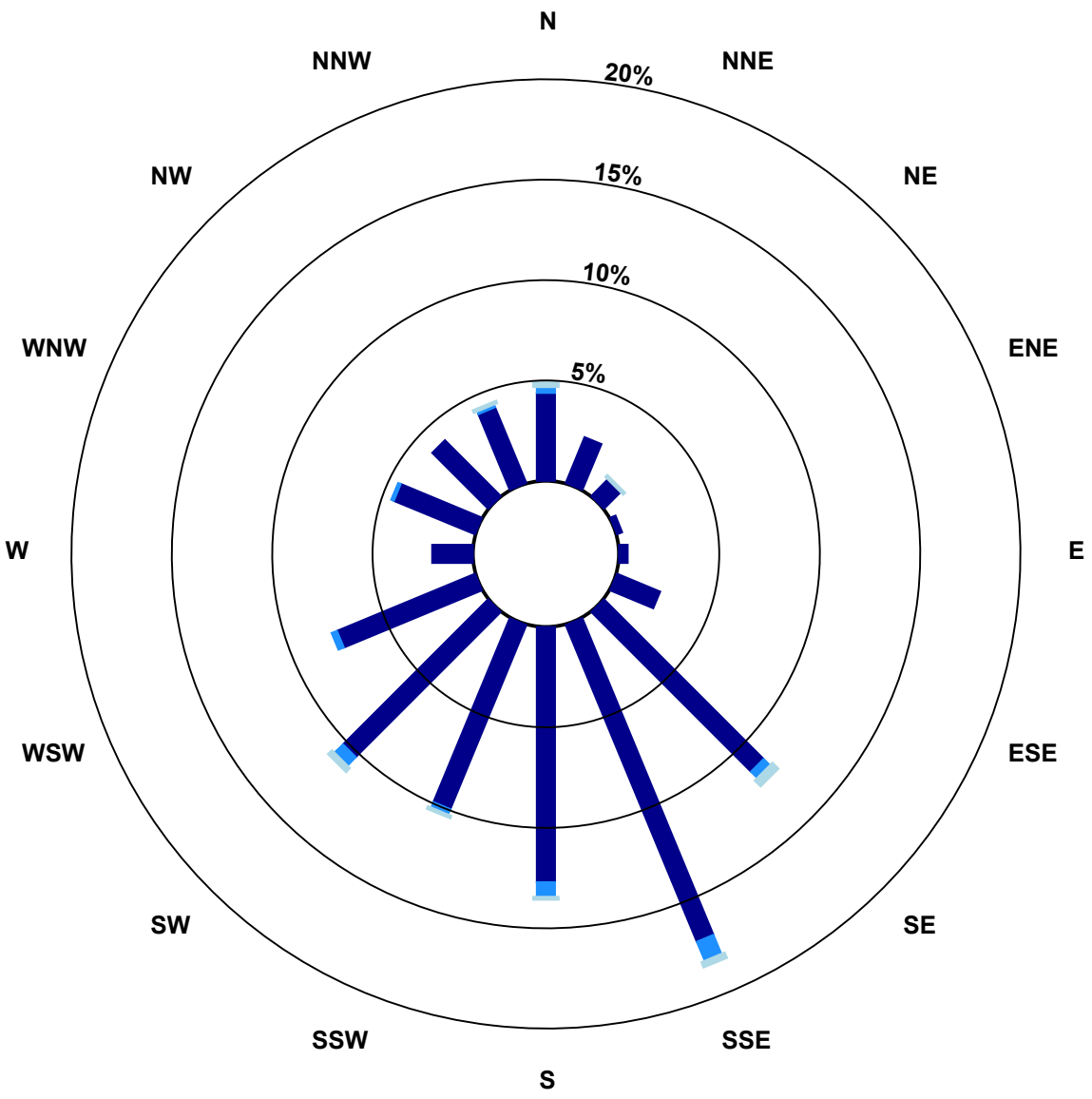
Total Number of Hours: 720

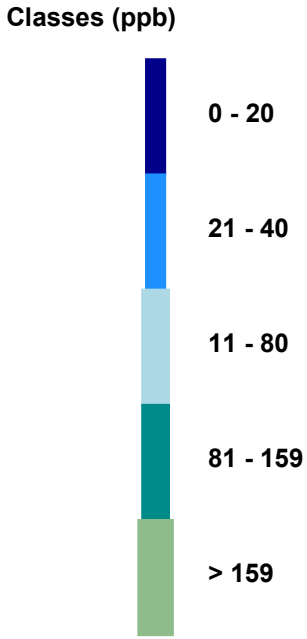
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Barge Landing





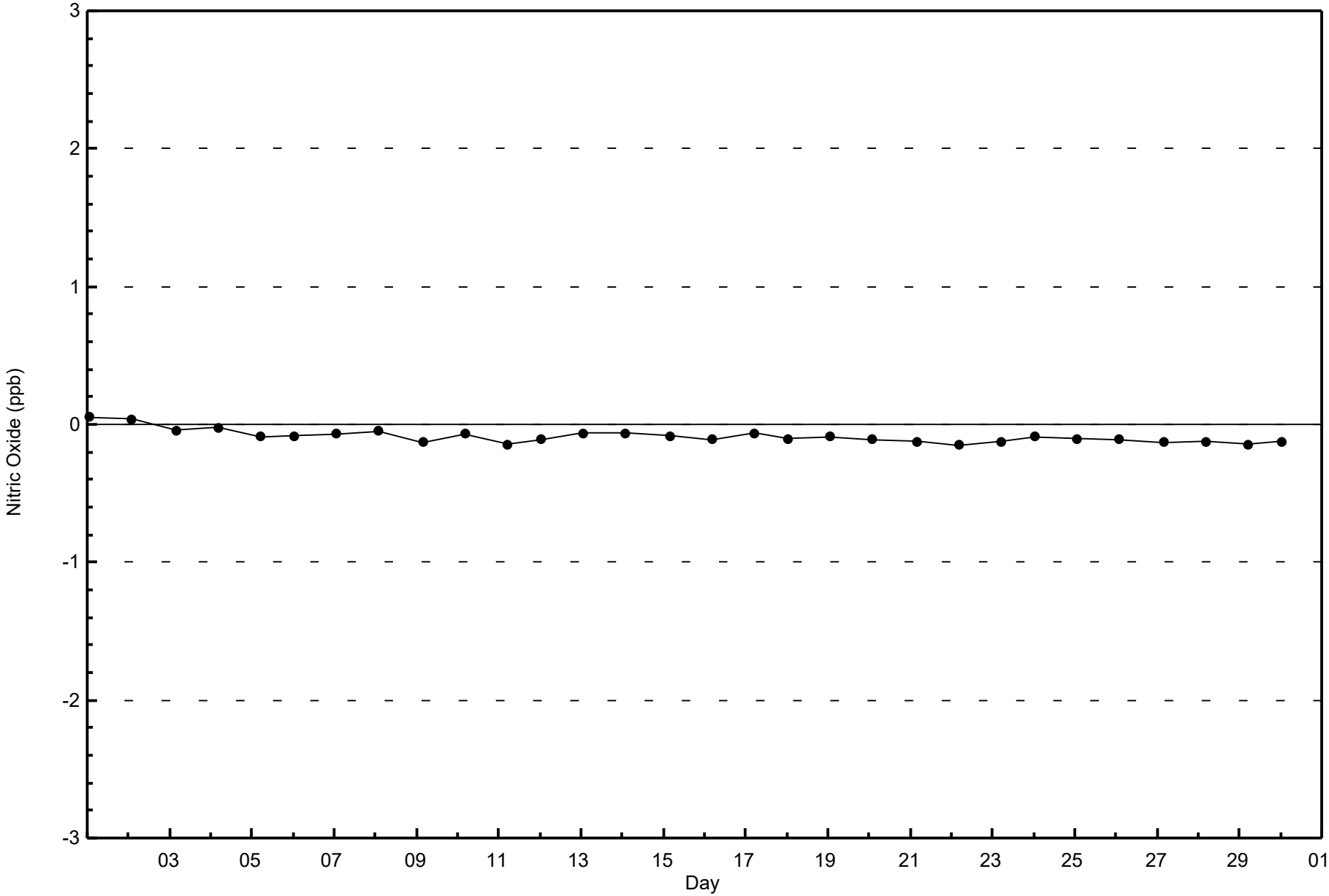
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Barge Landing - September 2025

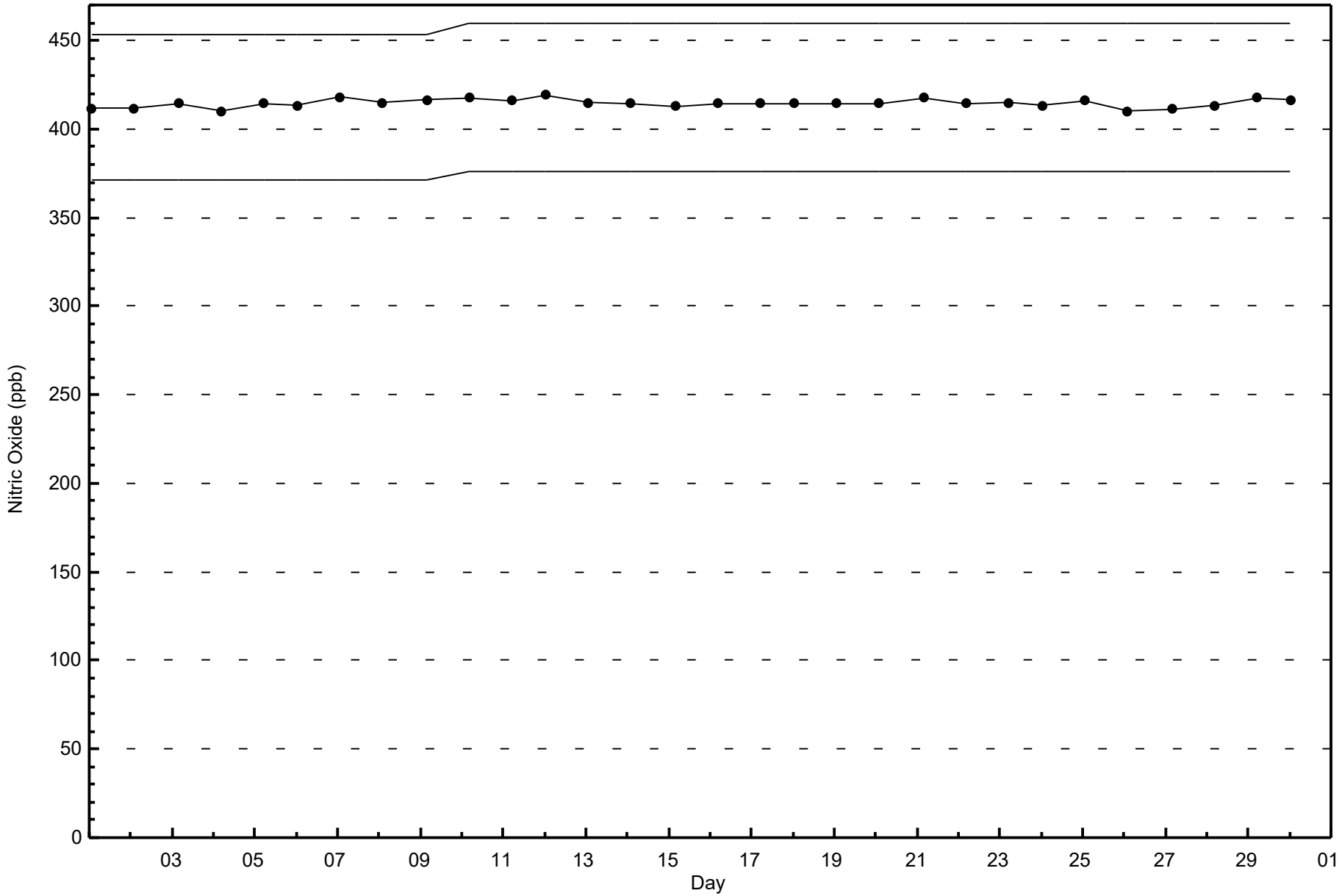


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.7 ppb on Sep 13 21:00
Maximum Daily Average: 15.5 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 27 10:00
Minimum Daily Average: 1.4 ppb on Sep 27
Maximum Diurnal Average: 9.4 ppb at hour 21
Minimum Diurnal Average: 2.5 ppb at hour 15
Monthly Average: 6.10 ppb
Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 2.0 Median = 4.9 Q_3 = 8.7 P_{90} = 13.5 P_{99} = 20.5

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	4.0	Z	2.4	1.6	1.1	2.1	3.5	3.7	3.3	4.2	5.8	7.0	3.8	3.1	3.2	4.0	3.1	3.5	6.4	12.0	18.9	10.8	9.0	4.5	5.3	18.9
2-Sep	7.3	4.3	Z	1.0	1.7	3.0	2.1	1.9	3.6	7.0	9.2	14.1	9.9	7.4	6.4	7.0	5.8	6.6	9.9	7.5	1.5	1.0	2.6	7.3	5.6	14.1
3-Sep	9.1	3.9	3.6	Z	7.9	10.5	10.3	13.0	10.1	7.1	6.3	3.8	3.9	5.6	4.0	8.5	6.1	2.3	5.7	7.9	2.3	1.6	1.1	1.2	5.9	13.0
4-Sep	8.0	3.2	7.3	8.1	Z	8.1	6.5	9.0	3.5	0.4	0.4	0.4	0.2	0.5	0.3	1.5	1.4	3.6	3.5	4.9	8.0	11.6	9.2	7.4	4.7	11.6
5-Sep	4.4	4.4	3.7	3.8	3.7	Z	5.6	5.3	8.8	8.2	5.6	4.4	3.6	3.1	4.9	3.1	4.2	6.0	5.6	7.8	8.1	3.1	4.0	2.4	4.9	8.8
6-Sep	Z	4.0	2.6	6.6	9.0	10.1	7.9	5.2	5.0	11.0	14.3	11.9	10.4	4.6	3.3	3.6	4.4	6.3	10.0	12.7	10.7	14.0	14.3	15.4	8.6	15.4
7-Sep	13.5	Z	10.2	11.1	12.8	13.4	14.0	14.4	10.6	8.9	8.4	16.2	25.9	23.4	5.5	4.5	8.9	8.6	7.5	6.3	7.2	16.6	15.7	10.3	11.9	25.9
8-Sep	3.7	4.2	Z	6.2	8.5	8.0	5.7	6.9	6.0	4.1	5.0	4.7	5.6	5.2	5.4	4.9	4.0	4.5	5.3	5.6	15.0	11.4	8.7	7.1	6.3	15.0
9-Sep	5.7	4.1	2.5	Z	1.8	1.7	1.4	3.0	6.8	C	C	C	C	C	3.4	4.9	3.7	2.7	3.4	14.2	9.1	12.6	14.6	8.4	5.8	14.6
10-Sep	7.9	6.2	6.3	6.6	Z	8.1	6.4	7.9	4.3	1.6	3.7	1.5	1.9	0.2	0.2	0.1	0.1	0.6	1.9	6.2	12.8	7.0	5.7	7.8	4.6	12.8
11-Sep	5.8	3.5	5.6	7.1	6.5	Z	7.2	8.5	10.9	17.3	17.8	13.4	9.1	8.9	2.8	2.5	2.5	4.3	7.2	6.4	3.5	7.1	7.1	6.1	7.4	17.8
12-Sep	Z	9.7	12.1	8.6	11.5	12.6	13.6	14.5	9.2	9.3	8.8	5.8	2.2	1.1	1.3	1.4	1.3	2.4	3.2	10.1	11.8	10.8	9.7	13.8	8.0	14.5
13-Sep	12.3	Z	15.4	14.2	14.2	16.0	16.0	15.9	11.7	12.9	8.1	8.6	10.5	9.2	7.8	7.5	11.5	16.1	16.5	27.7	38.7	25.3	24.3	16.2	15.5	38.7
14-Sep	14.0	11.4	Z	9.7	9.2	8.3	11.8	8.2	11.6	9.3	16.7	12.2	9.5	8.2	2.1	1.8	3.1	2.7	4.5	4.7	3.0	4.2	3.5	3.6	7.5	16.7
15-Sep	5.2	4.9	8.5	8.7	Z	6.2	8.7	4.3	1.5	0.6	1.0	0.9	0.6	0.7	0.8	0.7	0.5	0.4	0.3	0.5	0.5	0.5	0.8	0.6	2.5	8.7
16-Sep	1.7	1.4	0.6	0.6	Z	2.7	2.7	0.6	0.5	0.7	3.0	3.1	5.1	2.4	2.2	3.6	2.5	7.3	11.1	16.7	8.4	3.7	4.6	4.2	3.9	16.7
17-Sep	4.0	3.1	3.1	6.8	6.2	Z	9.1	5.6	5.5	8.2	11.1	9.4	7.8	6.8	4.7	4.3	4.3	3.5	2.1	2.4	2.7	4.3	5.3	2.9	5.4	11.1
18-Sep	Z	3.0	4.4	4.8	4.7	7.7	13.9	9.7	4.5	3.7	1.4	2.0	1.5	1.8	1.5	1.2	0.7	0.4	0.5	8.7	16.1	19.7	16.0	9.4	6.0	19.7
19-Sep	3.5	Z	1.6	1.5	12.0	14.1	15.1	8.0	6.3	7.5	5.7	5.3	1.3	0.4	0.4	0.2	0.2	7.9	4.4	14.4	19.9	17.0	12.3	7.9	7.3	19.9
20-Sep	4.9	8.5	Z	12.2	13.3	13.1	13.2	9.5	7.9	7.2	7.4	7.1	5.7	2.4	0.9	1.5	3.1	2.1	4.2	5.9	16.2	12.5	14.8	16.3	8.3	16.3
21-Sep	12.3	12.7	14.1	10.0	Z	12.9	13.3	16.0	6.0	1.3	0.8	0.9	1.4	0.7	0.3	0.1	0.1	0.1	0.1	0.2	0.9	1.1	2.5	0.4	4.7	16.0
22-Sep	0.3	0.3	1.8	0.9	Z	0.5	5.9	4.8	1.1	0.4	0.4	1.9	1.6	0.6	0.5	1.2	1.7	2.8	4.9	7.2	3.9	1.7	6.1	4.0	2.4	7.2
23-Sep	2.7	3.2	6.2	2.9	3.7	Z	3.2	5.8	1.0	0.2	0.1	0.1	0.1	0.3	0.3	2.2	1.2	3.0	6.4	4.8	9.3	7.7	7.0	12.9	3.7	12.9
24-Sep	Z	6.9	6.7	6.3	9.8	14.8	13.0	14.1	5.4	1.5	0.8	0.5	0.5	0.5	0.3	0.4	0.1	0.1	0.2	5.1	13.1	3.3	9.8	2.8	5.0	14.8
25-Sep	10.3	Z	14.7	13.4	12.9	15.7	16.8	14.3	8.7	7.8	6.5	8.0	6.5	4.6	4.4	8.4	5.5	4.1	7.9	2.4	2.6	1.6	0.7	0.6	7.8	16.8
26-Sep	0.8	3.4	Z	5.4	7.3	8.7	6.7	4.7	2.6	0.6	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.1	0.3	2.9	4.6	12.7	10.8	5.0	3.4	12.7
27-Sep	4.9	5.7	3.2	Z	5.6	0.8	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	2.1	2.9	6.4	1.4	6.4
28-Sep	5.6	2.4	0.6	1.2	Z	0.6	0.6	1.1	0.3	0.1	0.2	1.1	3.5	3.2	0.7	0.7	1.0	12.9	12.2	11.9	5.5	4.6	3.0	4.1	3.4	12.9
29-Sep	1.8	0.8	2.8	1.4	2.2	Z	3.9	2.8	1.7	1.9	1.9	2.5	3.0	1.5	2.4	3.2	3.6	8.1	8.9	11.3	3.6	6.5	6.8	3.8	3.8	11.3
30-Sep	Z	8.8	6.1	15.9	15.6	14.7	17.8	17.9	18.5	15.2	7.7	7.3	8.5	8.4	6.0	6.4	8.5	8.1	17.1	16.5	24.6	16.7	5.6	11.3	12.3	24.6
	6.1	5.0	5.8	6.5	7.9	8.6	8.5	7.9	5.9	5.5	5.5	5.3	5.0	4.0	2.5	3.0	3.1	4.4	5.7	8.2	9.4	8.4	8.0	6.8	Diurnal Average	
	14.0	12.7	15.4	15.9	15.6	16.0	17.8	17.9	18.5	17.3	17.8	16.2	25.9	23.4	7.8	8.5	11.5	16.1	17.1	27.7	38.7	25.3	24.3	16.3	Diurnal Maximum	

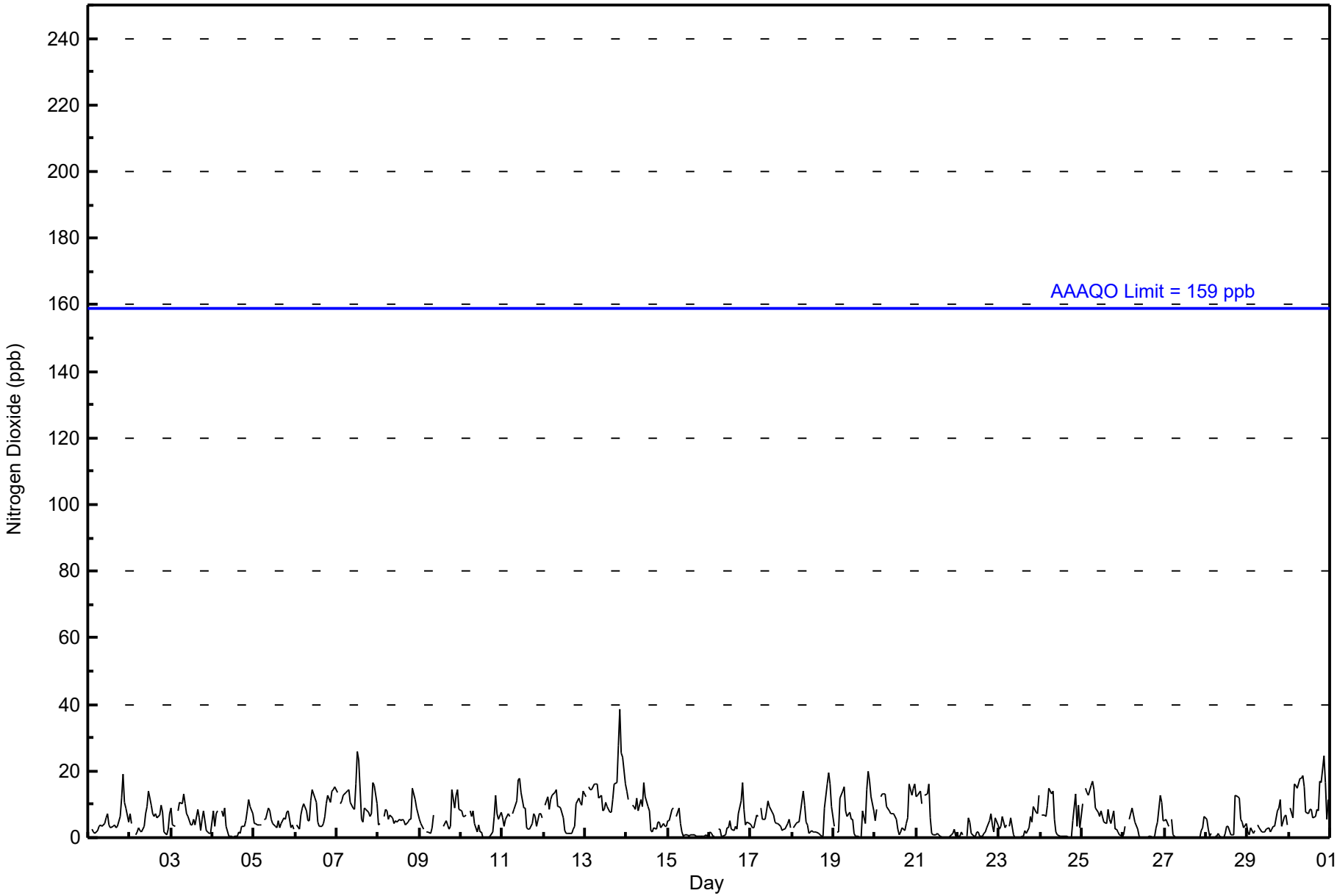
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - September 2025



Nitrogen Dioxide (NO_2) - ppb
Barge Landing - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	678	98.98	98.98
21 - 40	7	1.02	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	32	14	9	2	3	16	82	126	93	71	76	53	14	31	27	29	678
21 - 40	2	3	0	0	0	0	1	0	0	0	0	0	0	0	0	1	7
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	34	17	9	2	3	16	83	126	93	71	76	53	14	31	27	30	685

Total Number of Valid Hours: 685

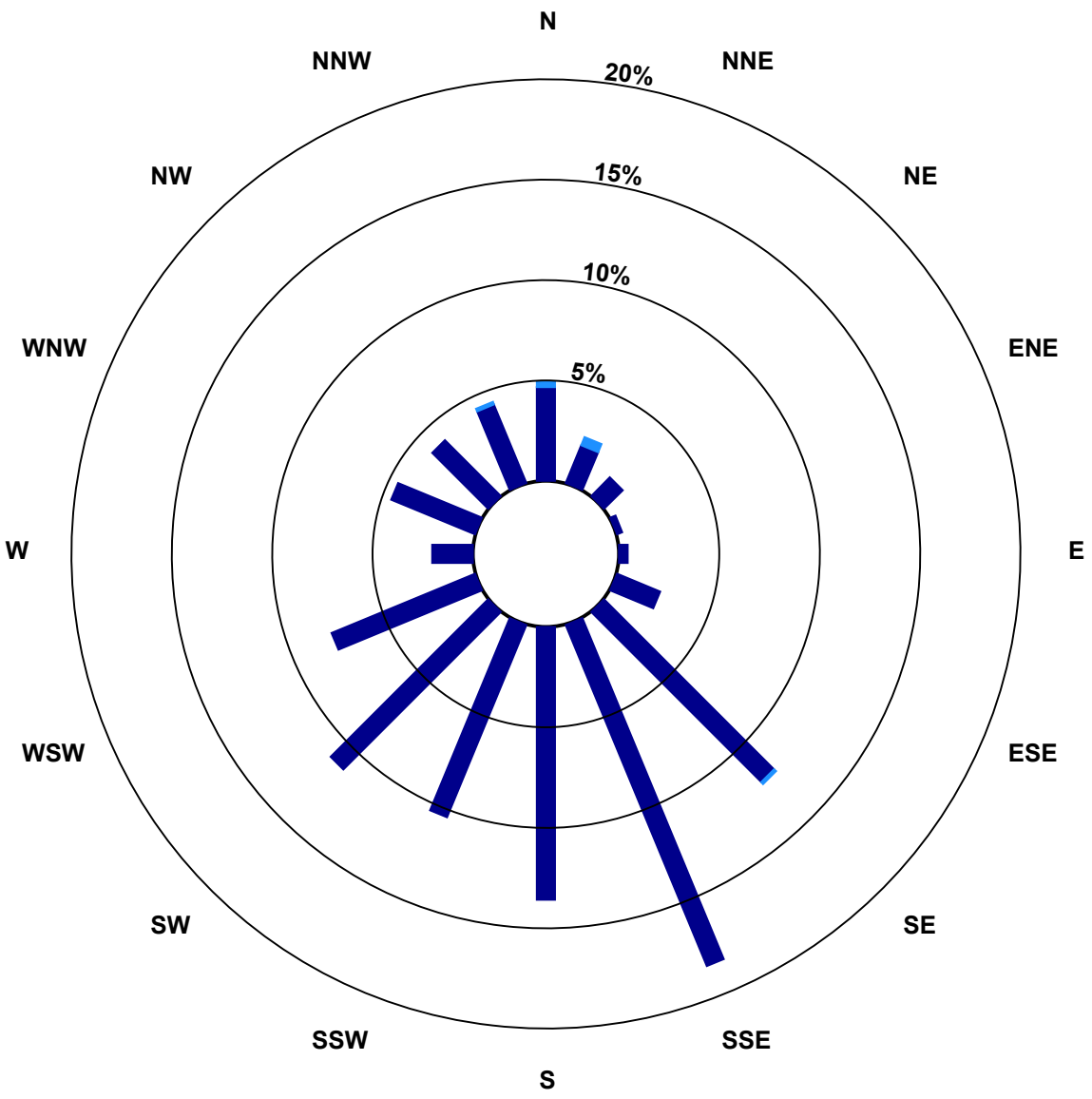
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

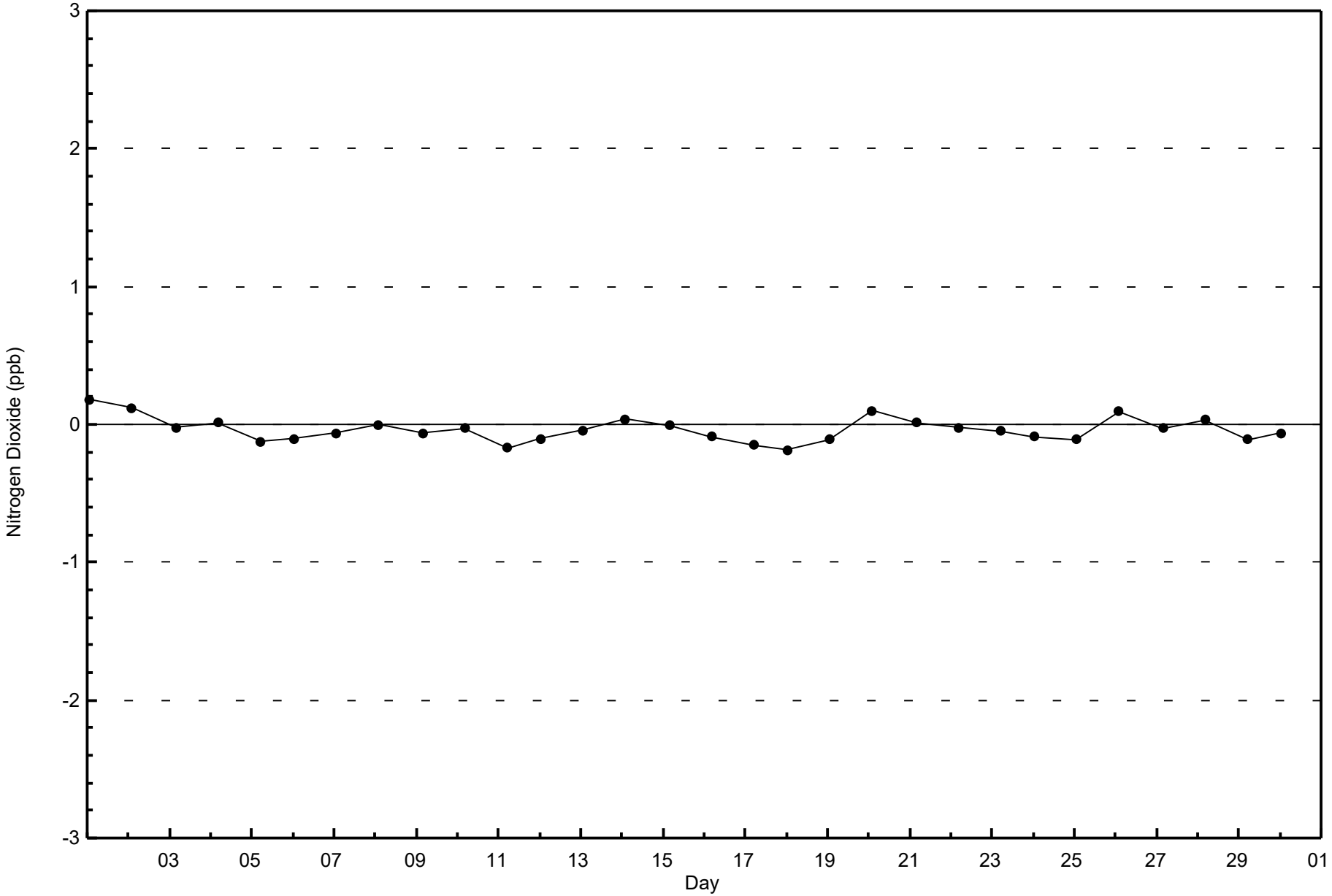
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - September 2025

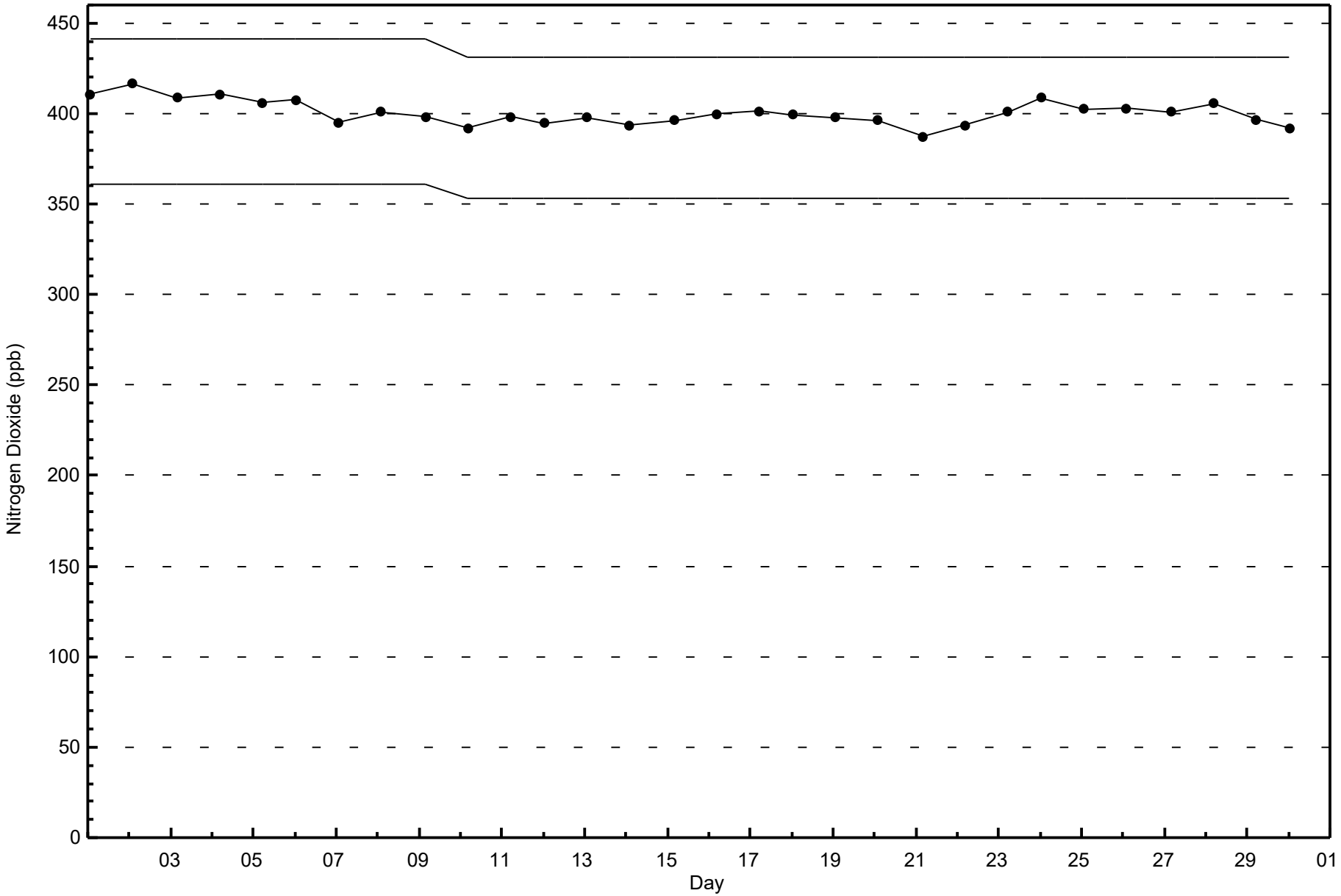


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - September 2025

Maximum Value: 82.1 ppb on Sep 11 07:00

Maximum Daily Average: 26.0 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 27 12:00

Minimum Daily Average: 1.4 ppb on Sep 27

Maximum Diurnal Average: 29.5 ppb at hour 7

Minimum Diurnal Average: 3.0 ppb at hour 15

Monthly Average: 10.01 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 2.4 Median = 6.2 Q_3 = 12.5 P_{90} = 23.1 P_{99} = 62.9

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	5.4	Z	4.0	1.7	1.6	5.9	8.1	6.5	6.1	7.5	14.1	13.9	5.8	4.3	3.9	4.7	3.3	3.6	6.7	12.4	22.9	11.0	9.4	4.6	7.3	22.9
2-Sep	13.1	4.9	Z	1.4	10.9	12.5	6.6	4.9	7.3	15.7	16.1	25.6	14.5	9.7	8.1	8.7	6.9	7.5	10.8	8.3	1.6	1.0	2.6	7.4	9.0	25.6
3-Sep	9.3	3.9	3.6	Z	9.4	16.0	14.3	17.6	13.0	9.2	8.1	4.5	4.7	7.2	4.5	11.0	6.6	2.3	5.8	8.0	2.3	1.6	1.1	1.2	7.2	17.6
4-Sep	8.0	3.2	7.3	8.2	Z	8.3	7.3	12.2	4.5	0.5	0.4	0.5	0.2	0.5	0.3	1.8	1.6	4.1	3.7	5.0	8.1	13.1	12.2	9.4	5.2	13.1
5-Sep	5.9	6.9	9.3	6.1	24.3	Z	33.1	24.4	27.3	17.1	9.3	6.6	4.9	3.9	6.3	3.7	4.9	6.7	5.9	8.0	8.5	3.1	4.1	2.4	10.1	33.1
6-Sep	Z	4.1	5.6	14.4	27.3	29.7	23.4	8.4	7.3	18.8	23.1	17.0	13.5	5.5	3.7	4.0	4.8	6.7	10.3	13.4	11.1	14.9	20.7	25.1	13.6	29.7
7-Sep	16.9	Z	13.7	19.1	30.0	22.8	57.8	43.3	19.3	14.0	12.2	25.1	39.8	33.5	6.8	5.0	10.2	9.5	7.9	6.4	7.5	20.8	24.6	12.1	19.9	57.8
8-Sep	3.7	4.2	Z	6.3	17.7	15.1	15.9	16.6	14.0	6.7	8.0	8.4	9.5	7.9	7.6	6.3	4.7	5.0	5.5	5.8	23.5	19.5	18.0	13.1	10.6	23.5
9-Sep	6.6	6.1	3.6	Z	2.2	5.1	7.0	27.4	23.2	C	C	C	C	C	3.6	5.3	3.8	2.7	3.4	15.1	9.3	13.0	15.5	8.5	9.0	27.4
10-Sep	8.4	6.3	6.4	7.3	Z	33.3	33.8	56.9	10.5	2.5	5.4	1.9	2.3	0.2	0.2	0.1	0.1	0.6	2.0	9.4	15.9	8.7	6.0	8.6	9.9	56.9
11-Sep	7.2	4.8	7.2	16.8	34.8	Z	82.1	45.4	40.6	39.7	32.2	19.2	12.3	11.6	3.5	3.1	2.8	4.6	7.5	6.6	3.7	7.3	7.3	6.3	17.7	82.1
12-Sep	Z	9.9	12.4	8.8	34.4	43.0	69.1	50.1	13.8	12.5	11.3	6.9	2.4	1.1	1.3	1.4	1.3	2.4	3.2	10.3	12.0	11.5	9.9	14.4	14.9	69.1
13-Sep	12.9	Z	25.1	34.6	32.7	51.7	56.5	41.2	19.0	17.3	9.9	10.9	14.1	11.0	8.7	8.1	12.2	17.0	17.0	28.6	62.9	30.6	32.7	19.7	25.0	62.9
14-Sep	19.2	20.7	Z	37.5	33.8	47.3	70.5	38.0	26.0	12.4	21.3	14.7	10.9	9.1	2.2	2.0	3.3	2.8	4.6	4.7	3.0	4.2	3.5	3.6	17.2	70.5
15-Sep	5.5	4.9	9.0	11.2	Z	8.0	16.5	5.1	1.9	0.7	1.2	1.0	0.6	0.7	0.9	0.8	0.5	0.4	0.3	0.5	0.5	0.5	0.8	0.6	3.1	16.5
16-Sep	1.7	1.4	0.6	0.6	Z	2.8	2.9	0.8	0.6	0.8	4.6	4.8	8.4	3.1	2.5	4.2	2.8	8.2	11.7	19.7	9.1	3.7	4.7	4.3	4.5	19.7
17-Sep	4.1	3.1	3.5	13.1	16.8	Z	60.5	22.1	12.5	15.4	17.5	13.3	10.1	8.5	5.5	4.9	4.8	3.8	2.2	2.5	2.7	4.4	5.4	3.0	10.4	60.5
18-Sep	Z	3.1	4.6	5.1	5.1	8.9	17.9	12.8	5.8	5.0	1.6	2.3	1.6	2.0	1.6	1.3	0.7	0.4	0.5	9.4	16.7	20.4	16.8	9.9	6.7	20.4
19-Sep	3.5	Z	1.6	1.5	14.8	30.7	37.0	11.1	9.1	10.6	7.6	7.1	1.6	0.5	0.4	0.2	0.2	18.7	4.6	15.2	25.7	23.0	14.9	8.2	10.8	37.0
20-Sep	5.0	8.7	Z	24.7	40.9	58.4	76.2	22.2	12.1	11.1	10.7	9.6	6.8	2.6	0.9	1.5	3.3	2.1	4.2	6.0	16.6	12.7	15.2	16.6	16.0	76.2
21-Sep	12.5	13.0	14.7	10.4	Z	17.8	17.4	27.4	7.9	1.5	0.9	1.0	1.6	0.7	0.3	0.1	0.1	0.1	0.1	0.2	0.9	1.1	2.5	0.4	5.8	27.4
22-Sep	0.3	0.3	1.9	0.9	Z	0.5	9.7	7.3	1.4	0.5	0.4	2.6	2.1	0.7	0.5	1.3	1.8	2.9	5.0	7.3	3.9	1.7	6.2	4.1	2.8	9.7
23-Sep	2.7	3.2	6.3	2.9	3.7	Z	3.2	6.4	1.1	0.2	0.1	0.1	0.1	0.3	0.3	2.5	1.2	3.1	6.5	4.8	9.7	7.8	7.1	13.2	3.8	13.2
24-Sep	Z	7.2	6.9	6.5	11.9	17.8	22.3	18.1	6.1	1.6	0.8	0.5	0.5	0.5	0.3	0.4	0.1	0.1	0.2	6.1	21.0	5.6	13.4	2.8	6.6	22.3
25-Sep	14.5	Z	19.3	20.0	18.7	36.1	56.7	44.1	14.4	11.4	9.0	12.0	9.2	5.8	5.0	10.0	6.0	4.2	8.2	2.4	2.6	1.6	0.7	0.6	13.6	56.7
26-Sep	0.8	3.5	Z	6.4	11.1	20.1	10.4	6.4	4.0	0.7	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.1	0.3	2.9	4.7	13.5	11.7	5.1	4.5	20.1
27-Sep	4.9	5.8	3.2	Z	5.6	0.8	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	2.2	3.0	6.4	1.4	6.4
28-Sep	5.6	2.4	0.6	1.2	Z	0.6	0.6	1.2	0.3	0.1	0.3	1.5	4.7	4.1	0.8	0.8	1.1	16.1	13.9	12.5	5.6	4.7	3.1	4.3	3.7	16.1
29-Sep	1.8	0.8	2.8	1.4	2.5	Z	4.5	3.4	2.3	2.4	2.3	3.0	3.8	1.8	2.7	3.6	3.8	9.5	9.7	11.5	3.6	6.7	6.9	3.8	4.1	11.5
30-Sep	Z	12.2	6.2	38.6	41.9	45.7	63.0	73.1	75.0	56.6	10.9	9.8	10.7	10.5	6.8	7.0	9.4	8.4	17.4	17.9	41.9	18.6	5.6	11.5	26.0	75.0
	7.2	5.8	7.2	11.4	18.8	21.6	29.5	21.8	12.9	10.1	8.3	7.7	6.8	5.1	3.0	3.5	3.4	5.1	6.0	8.7	11.9	9.6	9.5	7.7	Diurnal Average	
	19.2	20.7	25.1	38.6	41.9	58.4	82.1	73.1	75.0	56.6	32.2	25.6	39.8	33.5	8.7	11.0	12.2	18.7	17.4	28.6	62.9	30.6	32.7	25.1	Diurnal Maximum	

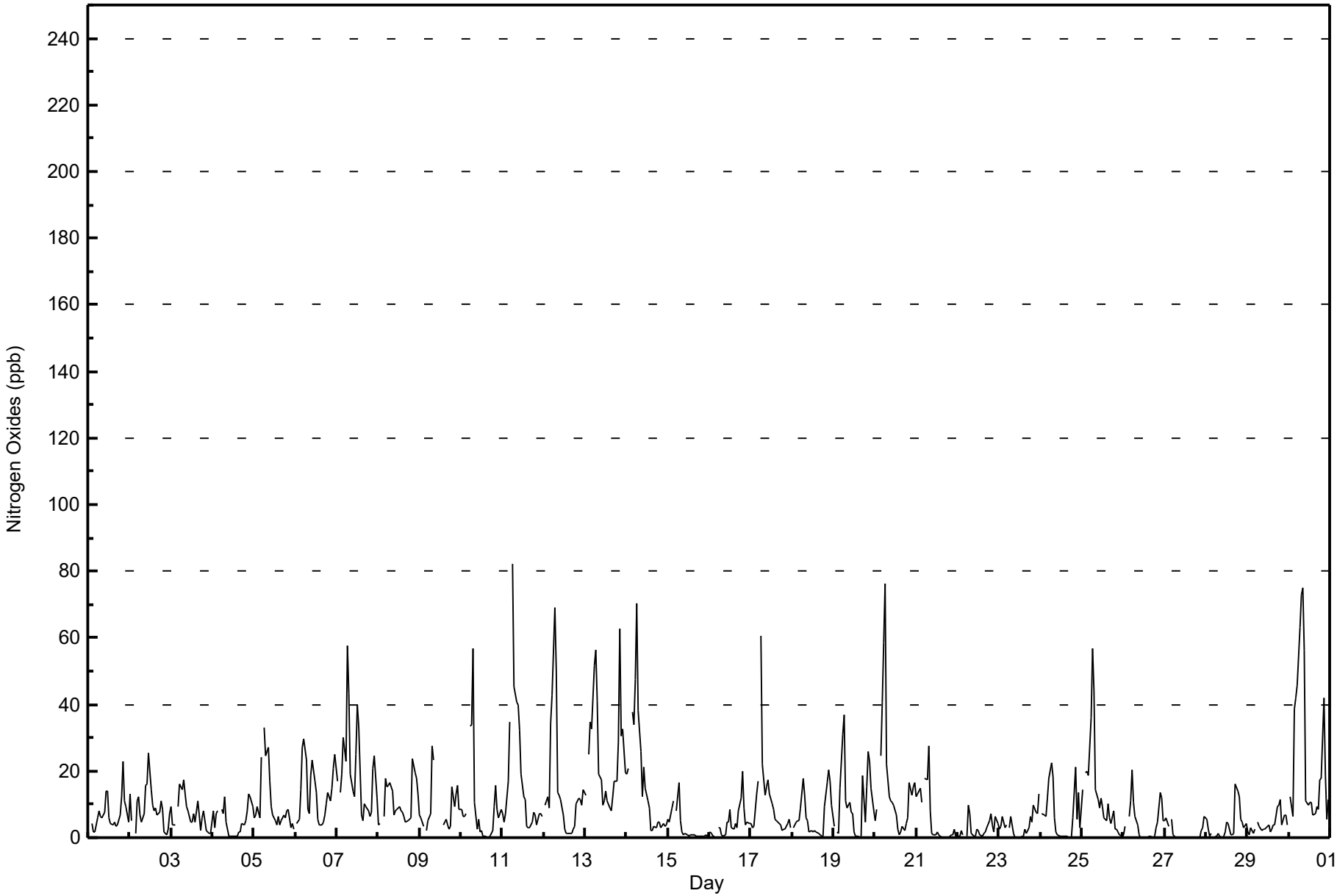
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - September 2025



Nitrogen Oxides (NO_X) - ppb
Barge Landing - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	605	88.32	88.32
21 - 40	52	7.59	95.91
11 - 80	27	3.94	99.85
81 - 159	1	0.15	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Barge Landing - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	27	14	7	2	3	16	72	107	80	66	66	49	14	30	27	25	605
21 - 40	3	2	1	0	0	0	7	12	9	2	8	4	0	0	0	4	52
11 - 80	4	1	1	0	0	0	4	7	4	3	1	0	0	1	0	1	27
81 - 159	0	0	0	0	0	0	0	0	0	0	1	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	34	17	9	2	3	16	83	126	93	71	76	53	14	31	27	30	685

Total Number of Valid Hours: 685

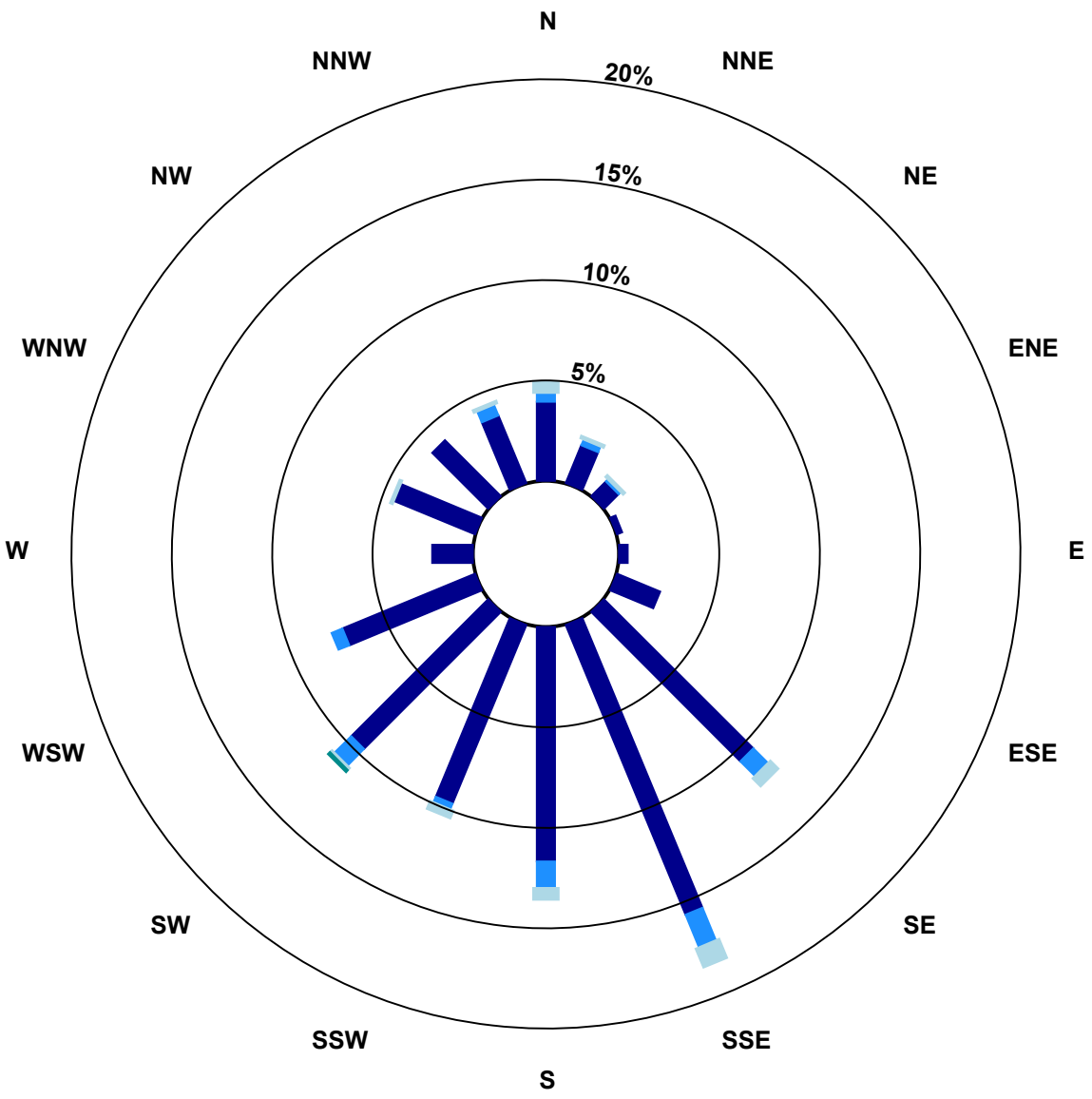
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

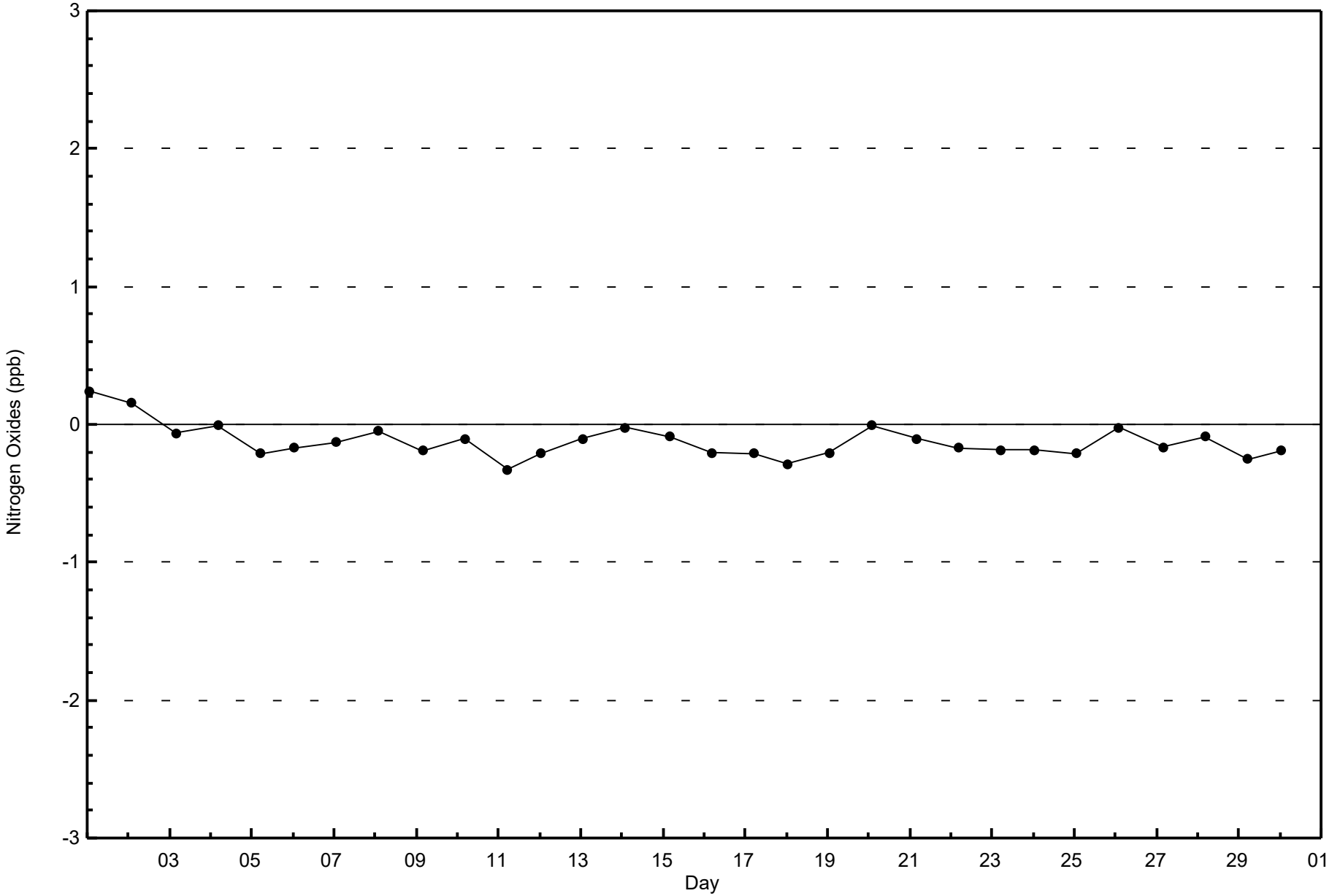
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - September 2025

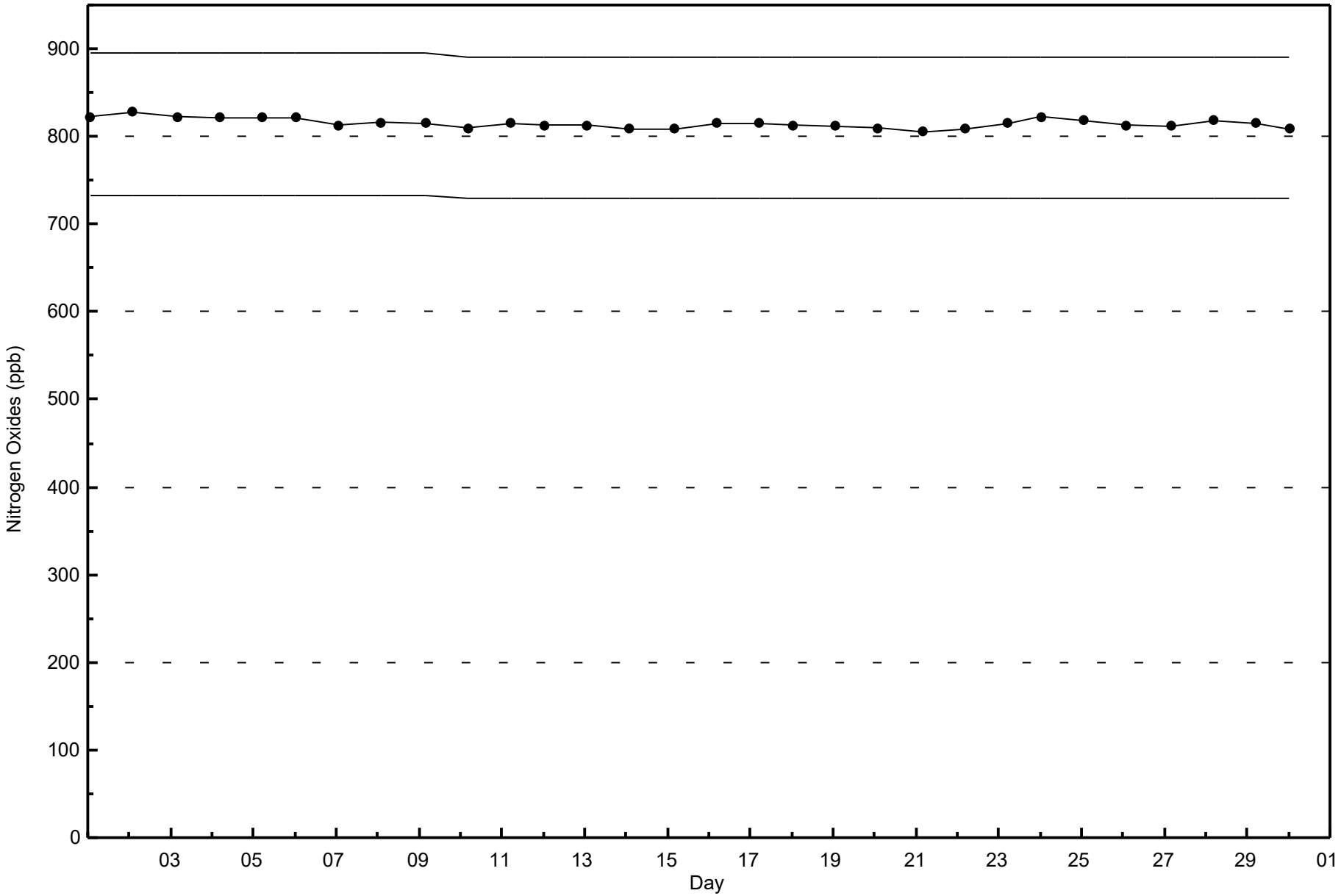


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Barge Landing - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 12

Maximum Value: 185.5 $\mu g/m^3$ on Sep 12 03:00

Maximum Daily Average: 84.1 $\mu g/m^3$ on Sep 12

Minimum Value: 1.9 $\mu g/m^3$ on Sep 23 13:00

Minimum Daily Average: 7.5 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 38.9 $\mu g/m^3$ at hour 7

Minimum Diurnal Average: 21.1 $\mu g/m^3$ at hour 19

Monthly Average: 29.27 $\mu g/m^3$

Percentiles: P_1 = 2.6 P_{10} = 6.9 Q_1 = 13.0 Median = 22.8 Q_3 = 37.8 P_{90} = 57.9 P_{99} = 147.1

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	31.9	28.6	27.6	28.2	28.9	29.9	28.1	18.0	9.6	12.8	28.2	29.6	21.6	16.3	67.0	105.1	132.8	135.0	85.2	52.1	51.7	51.6	51.0	51.7	46.8	135.0
2-Sep	52.0	60.0	58.0	58.6	60.9	63.4	61.2	63.8	60.8	60.5	65.3	61.3	50.7	33.0	29.1	29.1	22.2	18.3	20.7	23.3	21.8	24.3	30.7	40.8	44.6	65.3
3-Sep	54.4	68.5	75.3	73.7	71.7	69.6	64.1	58.6	54.6	58.4	57.2	54.8	53.4	52.2	52.9	61.5	74.5	39.4	37.6	63.7	69.4	70.9	56.0	34.7	59.5	75.3
4-Sep	23.4	12.1	15.7	11.6	6.9	5.8	5.3	5.9	6.9	6.4	5.8	4.5	4.1	3.7	3.7	6.4	5.1	6.0	5.0	6.1	6.6	7.3	9.4	DF	7.6	23.4
5-Sep	8.1	9.8	10.1	9.1	10.9	15.8	10.7	8.2	12.5	16.5	16.1	14.7	15.2	18.8	20.1	16.5	16.8	19.2	21.9	20.2	17.0	11.4	10.0	10.1	14.2	21.9
6-Sep	11.5	10.5	12.1	19.1	29.8	47.3	70.8	76.1	72.2	77.7	68.9	54.3	40.2	23.0	18.3	16.4	15.4	15.5	18.0	21.9	19.8	22.5	22.4	24.2	33.7	77.7
7-Sep	23.2	23.8	21.5	28.1	33.9	27.5	33.2	27.9	23.8	22.9	23.0	29.3	35.0	35.7	25.1	23.5	29.2	24.2	21.8	21.4	23.9	26.3	26.9	35.6	26.9	35.7
8-Sep	41.0	38.3	36.2	33.3	35.4	32.5	29.5	28.9	27.9	19.0	18.3	17.8	20.6	22.9	24.5	24.2	23.0	23.6	23.0	23.8	30.0	34.0	32.1	29.6	27.9	41.0
9-Sep	21.9	18.4	15.4	18.4	18.2	16.7	27.0	21.3	29.5	39.6	57.9	57.1	53.9	47.9	34.7	31.6	29.2	32.1	35.6	40.9	32.9	31.1	30.5	27.6	32.1	57.9
10-Sep	29.0	28.9	21.7	21.2	24.8	24.4	26.2	29.4	23.4	26.7	16.0	12.3	15.7	11.2	13.6	3.4	2.9	7.2	9.7	4.9	8.2	17.1	9.6	9.3	16.5	29.4
11-Sep	8.5	7.5	10.8	11.5	13.7	23.6	17.4	17.5	22.2	37.1	38.6	30.5	13.2	20.7	11.7	10.6	9.3	11.5	12.9	14.6	9.9	16.3	21.0	41.7	18.0	41.7
12-Sep	89.4	144.5	185.5	160.0	160.7	175.3	173.1	155.3	124.0	92.4	81.9	56.8	36.4	25.5	27.6	29.1	27.8	31.0	36.1	37.8	40.8	39.4	41.4	45.3	84.1	185.5
13-Sep	44.4	52.4	58.8	55.8	49.8	42.5	42.4	43.1	44.3	33.0	32.9	36.6	40.8	44.0	40.2	41.0	37.8	45.4	39.7	53.1	65.6	47.1	46.3	42.8	45.0	65.6
14-Sep	44.9	42.7	40.1	38.6	49.6	51.6	53.1	47.0	87.3	144.3	167.9	147.6	101.4	69.7	47.9	44.3	57.4	18.9	11.5	10.5	7.9	8.0	9.8	9.1	54.6	167.9
15-Sep	8.6	9.2	12.8	13.0	15.9	18.5	17.6	13.2	13.3	14.2	17.7	31.5	C	28.9	39.7	53.7	44.5	41.4	32.4	41.8	45.6	42.5	29.3	22.8	26.4	53.7
16-Sep	16.5	16.2	16.0	17.1	18.1	17.4	25.4	24.6	23.6	19.3	19.1	18.5	23.1	20.8	26.3	26.5	20.4	21.4	21.8	31.2	25.2	25.4	27.2	26.3	22.0	31.2
17-Sep	26.3	25.8	25.8	29.0	32.6	38.6	42.8	40.6	33.2	34.9	27.7	26.3	38.1	23.0	18.5	19.1	18.8	17.1	14.0	13.2	12.1	14.2	14.2	13.4	25.0	42.8
18-Sep	12.5	12.4	12.8	13.3	14.0	15.5	18.5	16.6	18.5	24.2	27.3	37.3	32.3	27.1	20.9	12.8	11.6	20.1	21.6	21.3	30.4	32.6	23.6	34.0	21.3	37.3
19-Sep	37.5	42.6	38.7	26.3	26.5	25.1	17.6	18.2	58.5	81.1	64.8	45.5	39.0	25.8	22.1	16.3	4.5	11.6	9.1	19.8	25.5	20.2	17.2	8.6	29.3	81.1
20-Sep	6.7	10.4	12.6	17.3	25.5	28.4	24.3	14.7	12.6	14.3	14.3	21.6	17.8	18.0	17.2	18.3	18.1	23.1	20.6	19.0	23.4	25.1	21.7	24.1	18.7	28.4
21-Sep	22.8	34.8	30.6	23.5	26.4	22.8	23.5	23.6	19.1	17.8	15.3	13.6	10.6	10.7	11.2	8.9	12.0	15.5	8.8	6.5	6.5	6.5	11.7	10.7	16.4	34.8
22-Sep	9.7	14.6	21.5	28.9	29.1	24.4	21.0	19.2	19.0	21.8	22.5	19.2	16.0	14.6	18.6	21.7	17.4	13.1	8.5	7.7	7.6	3.6	9.2	7.9	16.5	29.1
23-Sep	6.4	6.0	4.9	4.5	7.7	11.2	10.6	13.3	10.3	2.4	2.0	2.3	1.9	7.0	6.6	16.3	17.1	25.8	40.0	23.8	14.7	21.0	36.1	33.3	13.6	40.0
24-Sep	27.4	23.0	33.1	39.7	71.5	79.4	81.9	76.0	83.0	86.7	56.9	25.9	23.3	10.9	2.5	3.6	2.5	5.1	2.5	2.7	5.9	2.5	4.4	12.8	31.8	86.7
25-Sep	15.1	32.4	51.7	59.5	53.9	52.5	63.4	66.7	55.5	32.7	33.1	42.5	27.3	11.3	8.2	6.9	6.6	5.9	5.1	4.0	6.0	30.8	43.9	43.3	31.6	66.7
26-Sep	42.1	31.2	22.7	22.5	30.2	39.5	46.3	58.1	65.1	52.1	28.3	14.0	12.2	6.1	4.4	11.4	2.6	4.4	5.0	5.6	6.7	10.2	13.2	18.4	23.0	65.1
27-Sep	21.2	18.9	12.0	6.8	3.5	6.0	4.9	3.2	3.5	4.1	4.8	4.6	4.8	4.3	4.3	6.4	7.6	7.3	8.1	8.9	8.2	6.6	6.6	14.0	7.5	21.2
28-Sep	17.1	19.9	35.6	53.1	47.7	54.4	54.7	51.4	36.0	20.0	15.3	11.6	14.8	13.2	5.9	6.1	7.0	10.0	23.5	15.8	12.6	9.3	7.8	8.2	23.0	54.7
29-Sep	9.3	11.6	17.8	20.3	23.5	27.2	28.5	28.3	13.7	11.1	17.9	27.7	19.3	9.9	9.6	9.6	10.3	11.9	13.3	17.0	25.2	49.7	84.2	86.3	24.3	86.3
30-Sep	74.5	83.9	53.3	42.0	38.5	41.8	42.9	52.9	53.6	58.5	23.3	17.5	17.9	15.5	17.0	24.0	21.1	21.9	20.5	22.7	30.4	36.8	21.9	20.3	35.5	83.9
	27.9	31.3	33.0	32.8	35.3	37.6	38.9	37.4	37.3	38.1	35.6	32.2	27.6	22.4	21.7	23.5	23.5	22.8	21.1	21.8	23.0	24.8	25.6	27.1	Diurnal Average	
	89.4	144.5	185.5	160.0	160.7	175.3	173.1	155.3	124.0	144.3	167.9	147.6	101.4	69.7	67.0	105.1	132.8	135.0	85.2	63.7	69.4	70.9	84.2	86.3	Diurnal Maximum	

C - Calibration DF - DAS Failure

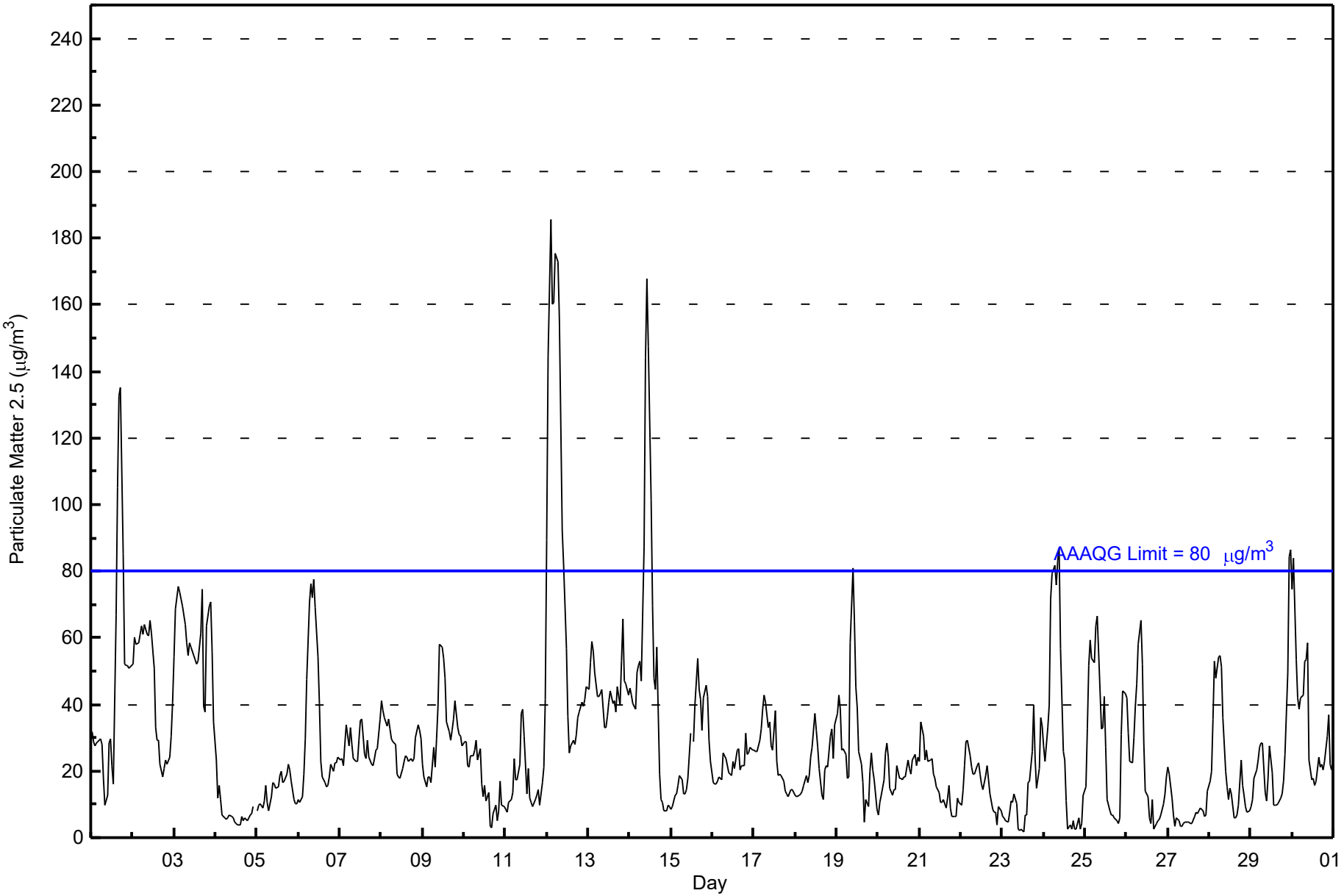
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Barge Landing - September 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	42	5.85	5.85
6 - 15	177	24.65	30.50
16 - 25	194	27.02	57.52
26 - 80	278	38.72	96.24
> 81.0	27	3.76	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Barge Landing - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	1	0	0	0	0	1	4	2	5	13	0	6	5	5	42
6 - 15	1	2	2	1	1	5	28	35	21	22	19	16	6	4	7	7	177
16 - 25	13	7	3	0	2	8	25	41	24	23	20	8	4	8	7	1	194
26 - 80	19	7	3	1	1	2	31	49	43	26	31	21	4	13	10	17	278
> 81.0	3	1	0	0	0	1	5	5	7	3	1	1	0	0	0	0	27
Totals	36	17	9	2	4	16	89	131	99	76	76	59	14	31	29	30	718

Total Number of Valid Hours: 718

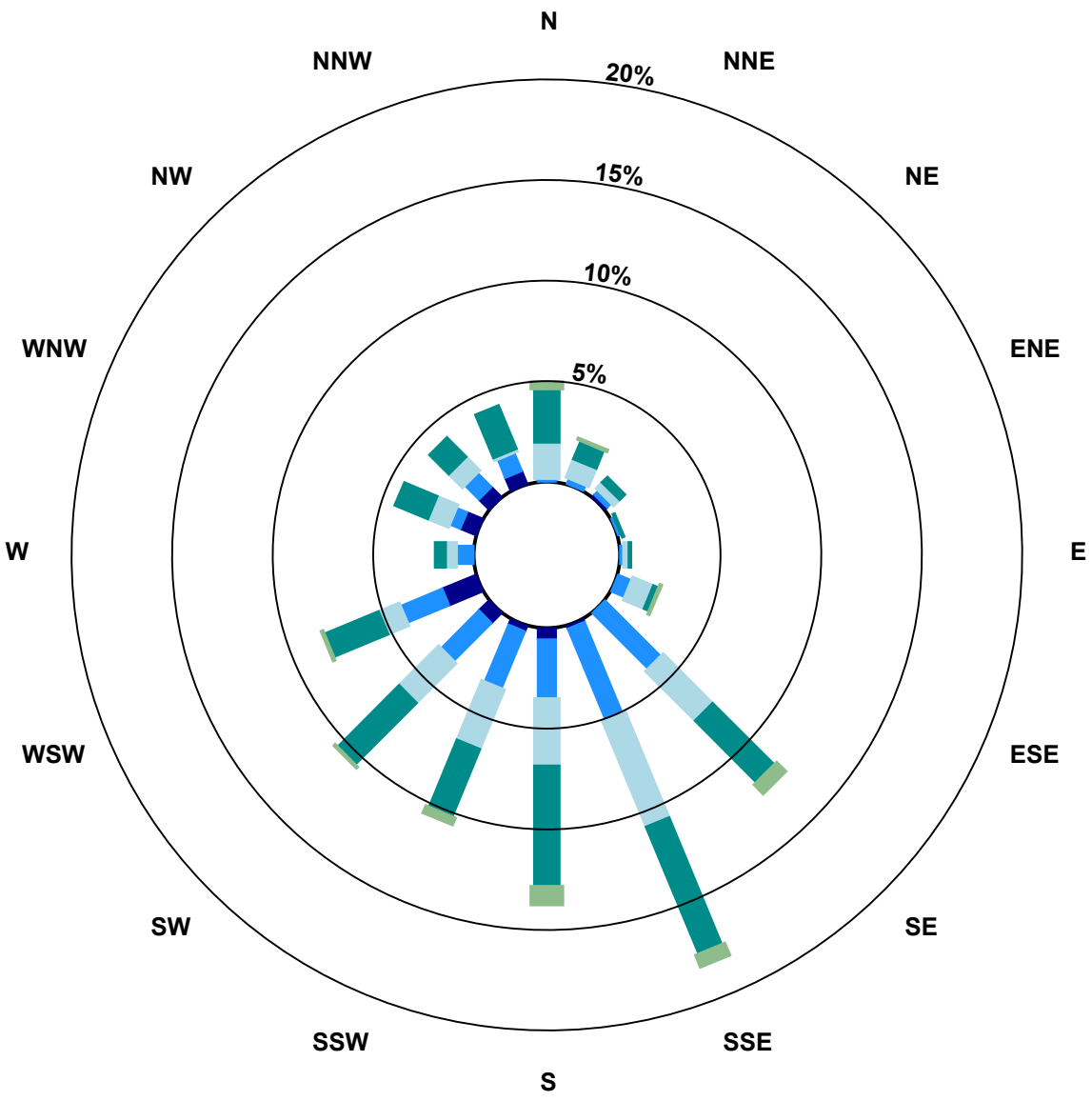
Total Number of Hours: 720

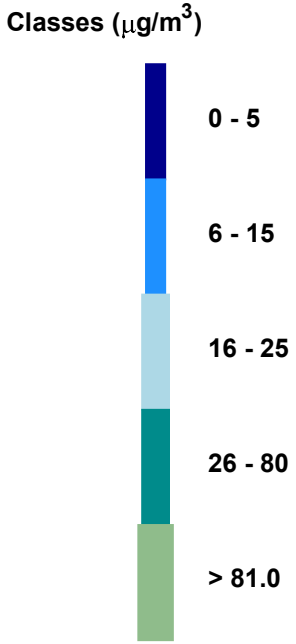
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Barge Landing





Total Number of Valid Hours: 718

Maximum Value: 30.1 C on Sep 12 16:00
Maximum Daily Average: 19.4 C on Sep 12

Minimum Value: 0.0 C on Sep 25 06:00
Minimum Daily Average: 9.5 C on Sep 25
Maximum Diurnal Average: 21.9 C at hour 15
Minimum Diurnal Average: 8.1 C at hour 6
Monthly Average: 14.39 C
Percentiles: P_1 = 1.8 P_{10} = 7.0 Q_1 = 10.3 Median = 13.8 Q_3 = 18.4 P_{90} = 22.6 P_{99} = 27.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

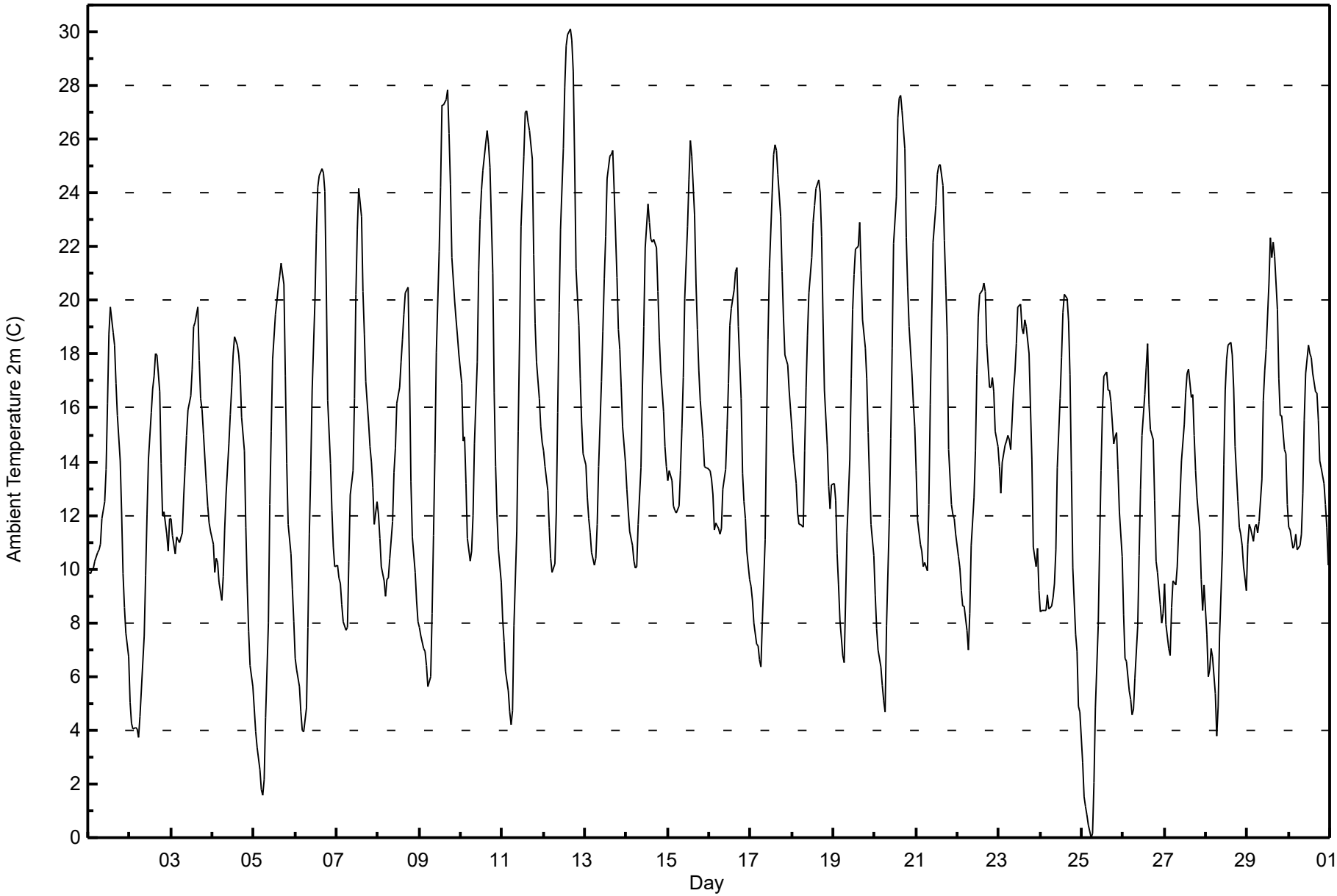
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.9	9.9	10.0	10.1	10.3	10.6	10.7	10.9	11.9	12.5	13.7	16.2	18.8	19.7	18.8	18.4	16.9	15.7	14.1	12.1	9.8	8.6	7.6	6.7	12.7	19.7
2-Sep	5.1	4.3	4.0	4.1	4.1	3.7	4.5	5.5	7.5	9.8	12.0	14.1	15.8	16.7	17.2	18.0	18.0	16.6	13.9	12.0	12.1	11.3	10.7	11.9	10.5	18.0
3-Sep	11.9	11.2	10.6	11.2	11.1	11.0	11.3	12.7	13.8	15.0	15.9	16.5	17.5	19.0	19.2	19.8	17.8	16.3	15.9	15.0	13.2	12.3	11.7	11.4	14.2	19.8
4-Sep	10.9	9.9	10.4	10.3	9.5	8.9	9.7	11.5	12.8	14.7	15.7	16.7	18.0	18.7	18.3	18.0	17.2	15.7	14.4	11.5	9.4	7.7	6.4	5.6	12.6	18.7
5-Sep	4.8	3.9	3.4	2.5	1.8	1.6	2.2	4.5	8.0	12.4	15.2	17.8	19.5	20.0	20.5	20.9	21.4	20.6	17.2	13.9	11.6	10.5	9.3	8.0	11.3	21.4
6-Sep	6.7	6.3	5.6	4.7	4.0	3.9	4.9	7.8	11.3	13.7	16.7	20.0	22.5	24.2	24.6	24.9	24.8	24.0	20.6	16.3	13.9	12.2	10.8	10.1	13.9	24.9
7-Sep	10.1	9.7	9.4	8.7	8.1	7.7	7.8	10.3	12.8	13.6	16.4	20.3	22.6	24.2	23.1	20.3	18.7	17.0	15.5	14.5	14.0	13.0	11.7	12.5	14.2	24.2
8-Sep	12.1	11.2	10.1	9.6	9.0	9.6	9.7	10.4	11.8	13.6	14.5	16.2	16.7	17.7	18.5	19.5	20.3	20.5	17.4	13.2	11.2	9.9	8.8	8.0	13.3	20.5
9-Sep	7.8	7.5	7.1	6.9	6.4	5.6	6.0	8.4	11.3	14.3	18.1	21.8	24.2	27.3	27.3	27.5	27.9	26.2	24.3	21.6	19.9	19.3	18.7	18.0	16.8	27.9
10-Sep	16.9	14.7	14.9	13.2	11.1	10.3	10.7	12.0	14.7	17.7	21.1	23.0	24.1	24.8	25.8	26.3	25.8	25.0	21.0	16.6	13.8	12.0	10.7	9.5	17.3	26.3
11-Sep	8.1	7.3	6.2	5.4	4.7	4.2	4.7	7.9	11.4	15.2	18.6	22.7	25.4	27.0	27.1	26.7	26.3	25.3	21.7	19.1	17.7	16.3	15.3	14.7	15.8	27.1
12-Sep	14.4	13.8	12.9	11.5	10.4	9.9	10.2	12.1	15.8	19.6	22.6	25.6	27.9	29.5	29.9	30.1	29.7	28.5	25.2	21.2	19.1	17.1	15.4	14.3	19.4	30.1
13-Sep	13.9	12.6	11.9	11.4	10.6	10.1	10.4	11.6	13.8	17.0	18.9	20.8	22.4	24.5	25.4	25.4	25.6	24.1	20.9	18.9	18.2	16.8	15.3	14.0	17.3	25.6
14-Sep	13.0	12.1	11.4	10.9	10.3	10.0	10.1	11.7	13.8	16.7	19.0	22.0	23.6	22.9	22.3	22.2	22.3	22.0	20.4	18.6	17.4	15.9	14.5	13.8	16.5	23.6
15-Sep	13.3	13.6	13.3	12.3	12.2	12.1	12.4	13.6	15.3	17.1	20.1	22.8	24.5	26.0	25.4	23.2	20.7	18.9	17.4	16.3	14.9	13.8	13.8	13.7	16.9	26.0
16-Sep	13.6	13.3	12.8	11.5	11.7	11.5	11.3	11.5	13.0	13.7	15.2	16.9	19.1	19.7	20.4	21.1	21.2	19.0	16.3	13.6	12.5	11.9	10.6	9.6	14.6	21.2
17-Sep	9.4	8.8	8.0	7.2	7.1	6.6	6.3	8.0	11.1	15.3	18.5	21.2	24.0	25.4	25.8	25.6	24.7	23.1	21.1	19.3	18.0	17.6	16.7	15.9	16.0	25.8
18-Sep	15.2	14.3	13.2	12.1	11.7	11.7	11.6	14.4	16.8	18.7	20.3	21.6	22.9	23.5	24.2	24.5	24.0	22.4	19.4	16.6	14.6	13.1	12.3	13.1	17.2	24.5
19-Sep	13.2	12.5	10.6	9.4	8.1	6.8	6.5	8.8	11.3	14.1	17.1	19.7	20.9	21.9	22.0	22.9	21.1	19.3	18.2	17.1	15.1	13.2	11.6	10.5	14.7	22.9
20-Sep	9.0	7.8	7.0	6.3	5.7	5.1	4.7	7.9	11.9	14.9	18.2	22.1	23.9	26.8	27.6	27.6	27.1	25.7	22.3	20.5	19.0	17.3	16.2	15.3	16.2	27.6
21-Sep	13.7	11.8	11.0	10.6	10.1	10.2	9.9	12.4	16.1	19.3	22.2	23.6	24.7	25.0	25.1	24.3	22.3	20.5	18.7	14.5	12.4	12.0	11.9	11.3	16.4	25.1
22-Sep	10.4	10.0	9.2	8.6	8.6	7.7	7.0	8.3	10.9	12.7	14.4	17.3	19.4	20.2	20.4	20.6	20.3	18.4	16.8	16.8	17.1	16.6	15.1	14.5	14.2	20.6
23-Sep	13.8	12.8	14.0	14.6	14.8	15.0	14.8	14.4	16.6	17.3	18.4	19.7	19.9	19.0	18.7	19.3	19.0	18.0	16.0	14.1	10.8	10.1	10.8	9.2	15.5	19.9
24-Sep	8.4	8.4	8.5	8.4	9.1	8.5	8.6	8.9	9.5	10.7	13.8	16.4	17.9	19.5	20.2	20.1	19.2	17.2	13.7	10.0	7.6	6.9	4.9	4.7	11.7	20.2
25-Sep	2.8	1.5	1.2	0.8	0.5	0.0	0.1	2.0	4.8	7.9	10.9	13.7	15.9	17.2	17.3	16.6	16.7	16.2	14.7	14.9	15.1	13.7	12.2	10.5	9.5	17.3
26-Sep	8.3	6.7	6.5	5.5	5.1	4.6	4.8	5.9	7.9	10.5	13.0	15.0	16.5	17.5	18.4	16.1	15.2	14.8	12.6	10.3	9.9	8.7	8.0	8.4	10.4	18.4
27-Sep	9.4	7.9	7.0	6.8	8.5	9.6	9.4	10.1	11.4	12.7	14.0	15.4	16.5	17.3	17.4	16.4	16.5	15.0	13.7	12.7	11.4	9.6	8.4	9.4	11.9	17.4
28-Sep	7.5	6.0	6.3	7.0	6.7	5.4	3.8	4.9	7.5	10.7	13.9	16.7	17.8	18.3	18.4	17.9	16.7	14.6	12.5	11.6	11.3	10.9	10.1	9.2	11.1	18.4
29-Sep	10.9	11.7	11.5	11.0	11.6	11.7	11.4	11.8	13.3	16.3	17.4	18.2	20.7	22.3	21.6	22.2	21.7	19.6	17.1	15.7	15.7	14.4	14.3	12.4	15.6	22.3
30-Sep	11.5	11.4	10.8	10.9	11.3	10.7	10.9	11.3	12.8	15.5	17.3	18.3	18.0	17.9	17.3	16.6	16.5	15.5	14.0	13.8	13.2	12.4	11.6	10.1	13.7	18.3
	10.5	9.8	9.3	8.8	8.5	8.1	8.2	9.7	12.0	14.4	16.8	19.1	20.7	21.8	21.9	21.8	21.2	19.9	17.6	15.4	14.0	12.8	11.8	11.2	Diurnal Average	
	16.9	14.7	14.9	14.6	14.8	15.0	14.8	14.4	16.8	19.6	22.6	25.6	27.9	29.5	29.9	30.1	29.7	28.5	25.2	21.6	19.9	19.3	18.7	18.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Barge Landing - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	160	22.22	22.22
10 - 20	430	59.72	81.94
> 20	130	18.06	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Barge Landing - September 2025

Maximum Value: 100.0 % on Sep 1 01:00

Maximum Daily Average: 81.7 % on Sep 14

Minimum Value: 20.7 % on Sep 24 16:00

Minimum Daily Average: 41.7 % on Sep 23

Maximum Diurnal Average: 89.2 % at hour 7

Minimum Diurnal Average: 39.8 % at hour 15

Monthly Average: 66.55 %

Percentiles: P_1 = 26.3 P_{10} = 36.2 Q_1 = 48.6 Median = 64.8 Q_3 = 87.8 P_{90} = 98.0 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

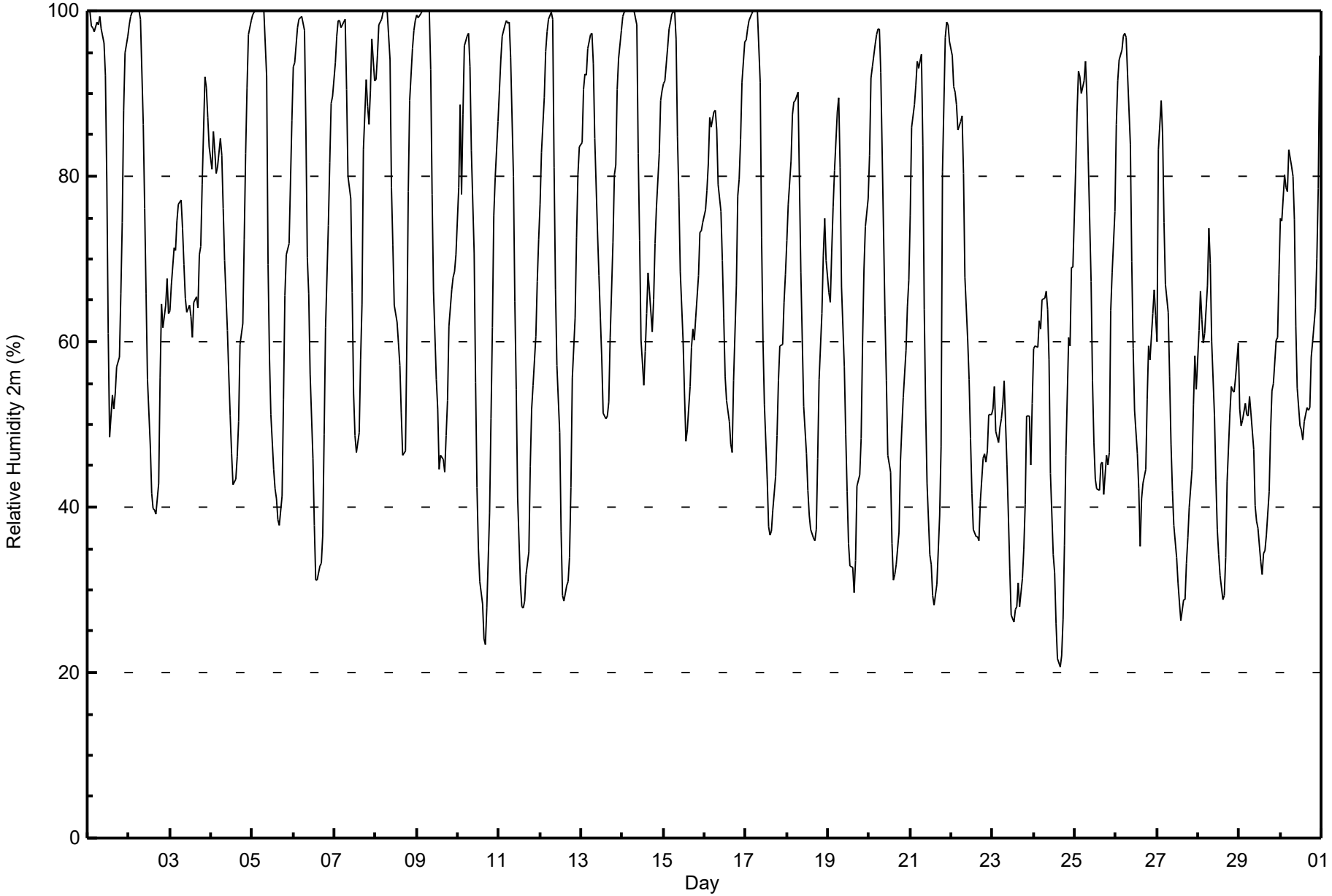
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	100.0	99.9	98.1	98.0	97.4	98.6	98.3	99.4	97.8	96.1	92.3	79.4	61.0	48.5	53.6	51.9	53.8	57.0	58.1	65.8	74.4	88.0	95.0	97.0	81.6	100.0
2-Sep	98.3	99.3	99.8	100.0	100.0	100.0	100.0	99.0	86.2	76.2	65.7	55.4	47.5	41.7	39.8	39.7	39.2	42.9	55.6	64.6	61.6	64.4	67.7	63.3	71.2	100.0
3-Sep	63.8	66.7	71.3	70.9	74.6	76.6	77.1	73.8	69.2	65.2	63.5	64.5	63.1	60.6	64.7	65.5	64.0	70.5	71.6	79.0	92.0	90.7	87.2	83.6	72.1	92.0
4-Sep	80.9	85.5	83.0	80.3	81.2	84.6	82.5	76.0	69.9	61.4	56.0	51.0	46.4	42.7	43.4	46.1	50.4	59.7	62.1	72.4	82.7	90.8	97.2	98.8	70.2	98.8
5-Sep	99.4	99.8	100.0	100.0	100.0	100.0	100.0	100.0	92.1	69.2	58.2	51.1	44.6	42.2	41.0	38.5	37.8	41.3	53.0	65.7	70.5	71.8	79.3	86.7	72.6	100.0
6-Sep	93.2	93.7	97.9	99.1	99.2	99.4	97.7	85.6	70.2	65.8	56.0	46.0	37.7	31.2	31.2	32.9	33.2	36.5	48.8	61.7	74.1	81.7	88.9	89.7	68.8	99.4
7-Sep	93.8	97.0	98.8	98.8	98.0	98.6	98.9	90.5	80.1	77.3	65.9	53.7	48.6	46.6	48.9	57.8	64.6	83.2	91.7	88.6	86.2	90.4	96.7	91.5	81.1	98.9
8-Sep	91.7	94.6	98.2	99.0	99.8	100.0	100.0	99.9	94.0	78.7	71.8	64.4	62.4	59.8	57.2	51.3	46.2	46.8	60.2	78.2	89.1	95.3	97.6	98.8	80.6	100.0
9-Sep	99.5	99.2	99.6	100.0	100.0	100.0	100.0	100.0	92.9	77.8	66.1	55.4	51.8	44.6	46.3	45.7	44.3	48.7	52.9	61.8	66.4	67.8	68.5	70.5	73.3	100.0
10-Sep	78.6	88.6	77.8	87.4	95.8	97.0	97.4	93.2	83.1	70.6	55.1	42.4	35.1	31.1	28.3	24.1	23.5	27.8	39.3	50.7	61.7	75.2	79.8	86.6	63.8	97.4
11-Sep	90.4	94.1	97.0	98.3	98.9	98.5	98.7	94.4	80.0	64.8	54.3	41.1	30.7	28.0	27.7	28.7	31.8	34.5	45.0	51.8	54.7	60.7	67.3	72.3	64.3	98.9
12-Sep	76.7	82.9	89.5	95.1	97.5	99.0	99.8	99.0	81.0	66.3	57.2	49.1	37.1	29.4	28.6	30.5	31.0	34.0	42.3	55.6	62.9	72.5	80.2	83.5	65.9	99.8
13-Sep	84.0	90.5	92.4	92.2	95.4	97.1	97.4	93.6	84.7	73.0	68.0	62.8	57.9	51.3	50.6	51.1	52.8	60.5	72.1	80.1	81.4	90.4	94.2	97.6	78.0	97.6
14-Sep	99.4	99.8	100.0	100.0	100.0	100.0	100.0	100.0	98.3	82.6	72.2	60.1	54.8	58.9	63.4	68.3	66.2	61.2	65.1	71.9	76.3	82.8	89.2	90.4	81.7	100.0
15-Sep	91.2	91.6	95.6	97.8	98.6	99.7	100.0	96.7	84.7	77.4	68.5	60.1	53.7	48.0	49.3	54.5	59.2	61.5	60.1	62.9	67.9	73.2	73.4	74.5	75.0	100.0
16-Sep	76.0	78.4	81.5	87.1	86.0	87.8	88.0	85.6	78.9	75.8	69.9	62.9	55.7	52.9	50.3	47.6	46.6	55.2	66.8	77.5	79.6	84.4	91.4	96.3	73.4	96.3
17-Sep	96.4	97.8	98.9	99.7	100.0	100.0	100.0	100.0	91.4	72.5	60.1	52.3	43.3	37.6	36.6	37.1	39.6	43.8	48.6	55.3	59.5	59.6	64.7	68.2	69.3	100.0
18-Sep	72.2	76.7	81.9	87.4	89.1	89.1	90.2	79.2	68.2	60.3	52.2	46.4	42.0	39.0	37.2	36.3	35.9	37.3	45.9	55.4	63.4	70.3	74.8	69.9	62.5	90.2
19-Sep	65.9	64.8	70.8	76.3	80.6	87.8	89.4	81.0	66.6	57.0	48.7	41.9	35.5	32.9	32.7	29.6	33.5	42.6	43.9	48.3	59.9	68.6	73.9	77.3	58.7	89.4
20-Sep	82.6	91.8	93.2	95.9	97.2	97.8	97.8	92.6	73.1	63.1	55.2	46.4	44.2	35.6	31.2	31.9	33.0	36.9	45.5	49.6	53.3	58.9	64.3	67.4	64.1	97.8
21-Sep	75.3	85.9	88.6	91.1	93.9	93.1	94.8	83.8	63.9	51.9	42.8	34.2	33.1	29.4	28.1	30.7	34.8	39.0	47.2	80.5	96.8	98.6	98.3	96.3	67.2	98.6
22-Sep	94.6	90.8	90.2	88.7	85.6	86.6	87.2	80.3	67.8	60.1	55.4	48.4	41.6	37.2	36.4	36.5	35.9	40.6	46.0	46.5	45.5	46.8	51.1	51.2	60.5	94.6
23-Sep	51.8	54.5	49.1	47.8	49.7	50.6	52.3	55.3	45.1	39.0	32.6	26.9	26.1	27.6	28.0	30.8	28.0	31.4	35.0	40.4	51.0	50.9	45.2	52.5	41.7	55.3
24-Sep	59.1	59.5	59.3	62.5	61.6	65.1	65.2	66.1	63.9	57.8	44.1	34.2	32.0	26.0	21.7	20.7	22.0	26.5	35.5	46.3	60.6	59.4	69.0	69.0	49.5	69.0
25-Sep	80.8	87.8	92.7	92.1	90.0	91.6	93.9	89.7	81.8	67.3	55.2	47.8	43.4	42.2	42.1	45.3	45.4	41.5	46.2	45.2	46.6	63.7	68.4	75.8	65.7	93.9
26-Sep	86.3	91.5	94.0	95.3	97.0	97.3	96.8	92.3	83.9	69.6	59.2	51.6	46.4	42.2	35.3	41.0	42.9	44.6	53.1	59.4	57.9	63.5	66.4	63.2	67.9	97.3
27-Sep	60.0	83.2	89.1	85.1	74.3	66.9	63.5	55.8	47.6	42.1	37.8	33.8	30.9	28.4	26.3	28.7	28.8	33.2	36.2	39.9	44.7	52.4	58.3	54.2	50.1	89.1
28-Sep	61.4	66.2	62.7	59.8	61.0	66.7	73.7	69.5	60.1	50.9	43.4	37.3	34.3	31.8	28.8	29.4	33.9	43.1	51.3	54.5	54.0	53.8	55.6	59.8	51.8	73.7
29-Sep	51.9	49.8	50.5	52.5	51.2	50.9	53.4	51.4	46.9	40.2	38.3	37.4	33.4	31.8	34.4	34.7	36.6	41.9	49.1	54.1	54.9	60.2	60.5	68.1	47.3	68.1
30-Sep	74.9	74.6	80.2	78.7	78.1	83.2	81.2	80.0	74.8	61.9	54.4	49.8	49.3	48.1	50.3	52.0	51.7	52.0	58.1	59.9	64.1	70.1	78.5	94.6	66.7	94.6
	81.0	84.5	86.1	87.2	87.7	88.8	89.2	85.4	75.9	65.7	57.3	49.6	44.1	40.2	39.8	40.6	41.6	45.9	52.9	60.8	66.5	71.9	76.1	78.3	Diurnal Average	
	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0	98.3	96.1	92.3	79.4	63.1	60.6	64.7	68.3	66.2	83.2	91.7	88.6	96.8	98.6	98.3	98.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Barge Landing - September 2025



Maximum Value: 29.3 inHg on Sep 2 04:00

Maximum Daily Average: 29.3 inHg on Sep 2

Minimum Value: 28.4 inHg on Sep 27 04:00

Minimum Daily Average: 28.5 inHg on Sep 21

Maximum Diurnal Average: 28.9 inHg at hour 9

Minimum Diurnal Average: 28.8 inHg at hour 17

Monthly Average: 28.87 inHg

Percentiles: P_1 = 28.5 P_{10} = 28.6 Q_1 = 28.8 Median = 28.9 Q_3 = 29.0 P_{90} = 29.2 P_{99} = 29.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

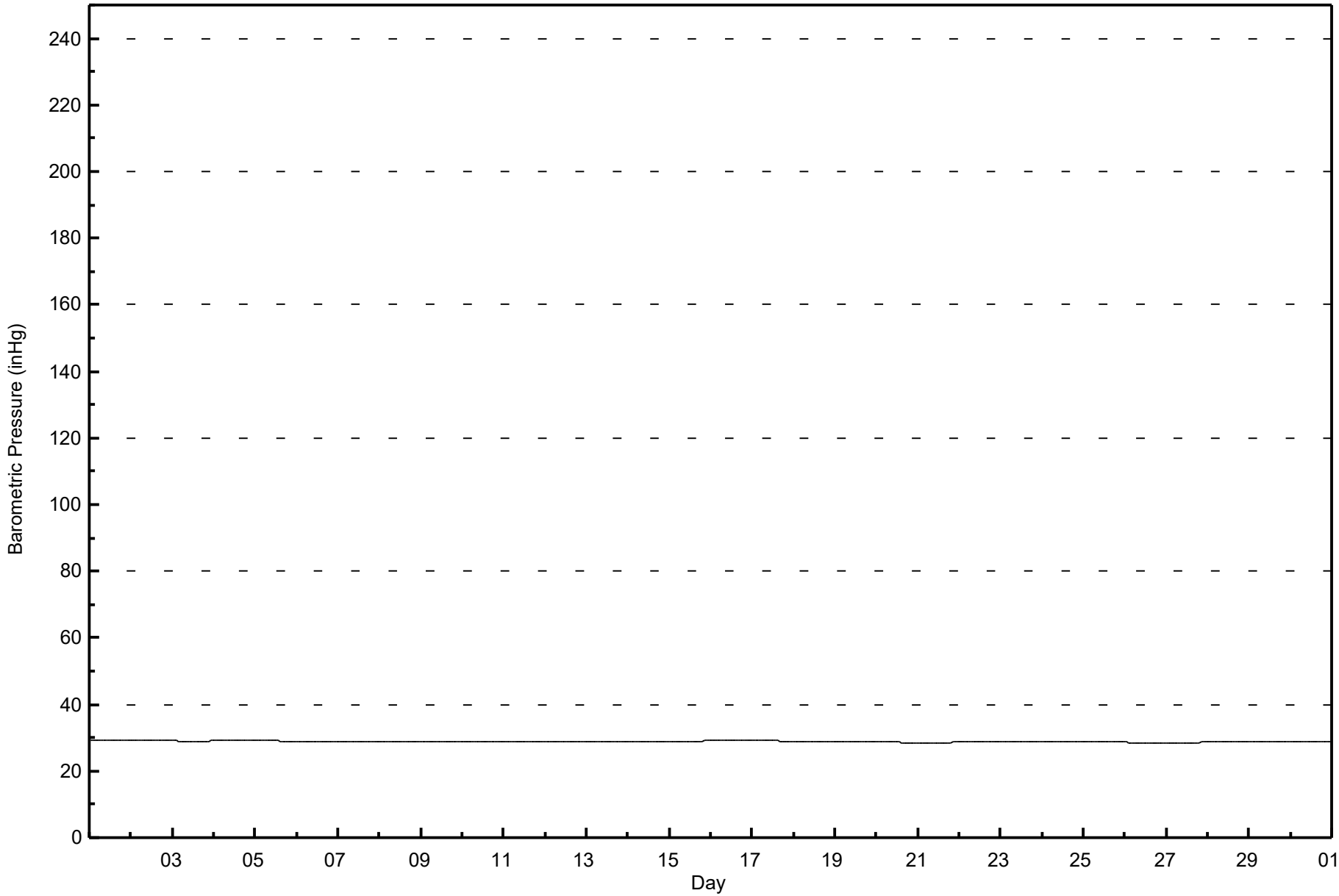
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.3
2-Sep	29.3	29.3	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	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.3	29.3
3-Sep	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	28.9	29.1
4-Sep	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2
5-Sep	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	29.0	29.1
6-Sep	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
7-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.9
8-Sep	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	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
9-Sep	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	28.7	28.7	28.8	28.9
10-Sep	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	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.9
11-Sep	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	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	28.9	28.9	28.9	29.0
12-Sep	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	28.9	28.9	28.8	28.9
13-Sep	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
14-Sep	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	28.8	28.8	28.8	28.8	28.7	28.8
15-Sep	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	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	28.9	29.1
16-Sep	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	29.2	29.2	29.2	29.2	29.2
17-Sep	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
18-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
19-Sep	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9
20-Sep	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	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.7	28.8
21-Sep	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	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.6	28.6	28.6	28.5	28.6
22-Sep	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	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
23-Sep	28.8	28.8	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9
24-Sep	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	29.0	29.0	29.0	29.0	28.9	29.0
25-Sep	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	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.8	29.0
26-Sep	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	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.6	28.6
27-Sep	28.5	28.5	28.5	28.4	28.4	28.4	28.5	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.5	28.7
28-Sep	28.7	28.7	28.7	28.7	28.8	28.8	28.8	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	29.0	29.0	29.0	29.0	28.9	29.0
29-Sep	29.0	29.0	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	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.8	29.0
30-Sep	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	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
	28.9	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	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	Diurnal Average	
	29.3	29.3	29.3	29.3	29.3	29.3	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	29.3	29.3	29.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Barge Landing - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - September 2025

Maximum Speed: 24 km/h on Sep 29 13:00

Maximum Daily Speed Average: 13.6 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 30 06:00

Minimum Daily Speed Average: 0.9 km/h on Sep 3

Maximum Diurnal Speed Average: 5.5 km/h at hour 14

Minimum Diurnal Speed Average: 2.3 km/h at hour 19

Monthly Average Velocity: 4.1 km/h 188.9 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 12 P_{90} = 16 P_{99} = 21

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NW6	WSW3	SSE3	SW4	WSW1	ENE2	SE8	SSE5	SE5	NW2	NW5	N6	NE12	NNE15	NNE16	N18	N16	N16	NNE15	NNE11	NNW8	NW8	NW9	NW8	N5.6	N18
2-Sep	W4	WSW4	WSW5	WSW5	WNW2	SW3	SSW4	SW2	S2	SW1	S4	S6	S7	SSE10	SSE11	SSE12	SSE12	SSE10	SE9	ESE13	SE13	SE12	SE12	SSE13	SSE5.9	SE13
3-Sep	SE11	SE10	SSE11	SE10	SE12	SE11	SSE12	SSE12	S12	S12	S11	S9	SSW7	W4	N8	N13	N23	N22	N17	NNW14	NNW14	NNW11	NNW14	NNW13	NNE0.9	N23
4-Sep	NW10	NNW12	NNW16	NNW16	NW12	NW12	NNW14	NW12	NW15	NNW15	NNW16	NNW15	NNW15	NW16	NW14	NNW11	NNW9	N8	NE11	NE10	ENE4	NE3	SSE3	SW5	NNW9.9	NNW16
5-Sep	SW4	SSW3	SW5	S5	SSE4	SE7	SE6	SSE7	S9	S10	SSE7	SSE7	S7	SW4	S7	SSW4	SE4	ESE8	ESE9	E11	SE9	SE10	SE8	ESE6	SSE5.5	E11
6-Sep	E9	SE5	NNE2	ESE7	SE9	SE9	SE10	SSE10	SSE8	SW6	SW6	S8	SSE11	SSE14	SSE13	SSE13	SSE13	SSE8	ESE4	E6	ESE6	SE4	SSW3	SSE8	SSE7.0	SSE14
7-Sep	S7	S9	S7	SSE8	SSE9	SE5	SE6	S2	S3	WSW4	WNW4	NE6	NNE8	NNE11	N16	N16	NNE14	N9	N9	N13	N12	NNW10	N9	N12	NNE3.8	N16
8-Sep	N11	N10	N9	N10	NNW4	WNW3	NNW4	NW4	NE4	NE11	NE7	N4	WNW8	W8	WSW4	WSW3	W3	SW3	WSW3	WNW3	N3	E1	SSE5	ESE6	NNW2.8	N11
9-Sep	SSE8	SE5	SE5	SSE1	NW3	NW3	SW3	SE3	SW3	WSW5	SW6	S7	S7	SSE13	SSE11	SE12	SSE13	S10	SSW11	SSW7	SW7	S6	S7	SSE6	S5.7	SSE13
10-Sep	SSE6	SW4	SSW8	SW7	WSW3	SW6	WSW5	SW4	WSW1	WSW4	SW4	SW5	WNW6	WSW8	WSW9	NW15	NW15	NW11	NNW9	NNW5	WNW3	SSE3	W5	WNW4	W4.4	NW15
11-Sep	WSW5	NW5	SW5	SSW6	SW6	SSW6	SW6	SSE7	SSW5	SW5	SW4	S9	SSE11	S10	SE14	SE16	SSE16	SE11	SE11	SE13	SE14	SE12	SSE11	SSE12	SSE7.5	SSE16
12-Sep	SE12	SE10	S5	WSW4	SE3	SSE7	SSE6	S4	S8	S11	SSE12	SSE10	SSW12	SSW17	SSW18	SSW15	SSW12	S9	SSW7	SSE6	S7	WSW5	S5	SSE8	S8.1	SSW18
13-Sep	S7	SSW6	SW7	SSE8	SSE7	SSE8	SE10	S6	S4	S9	SSW5	WNW5	NW5	NW2	NW5	NNW6	NNW6	NNW5	N9	NNW8	N3	N4	SE7	SE3	SSW1.0	SE10
14-Sep	WNW2	WSW2	S2	SW4	S5	SSW2	SSW3	WSW1	S3	S9	S8	SSE3	SSE9	SE11	SE16	SSE15	SSE13	SSE16	SSE15	SSE10	S8	S8	SSE8	SSE8	SSE6.8	SSE16
15-Sep	SSE8	S8	S7	S9	SSE9	S9	S8	SSW7	SSW4	SSW5	SSW5	SSW5	SW6	WNW11	NW17	WNW22	WNW22	WNW16	W14	WNW14	WNW12	WNW9	WNW10	WNW12	W6.0	WNW22
16-Sep	NW11	WNW6	NW5	W6	NW7	NW5	WNW5	SW4	W8	WNW5	N2	SSW2	ESE5	SE2	SSE8	SSE8	SSE7	SE9	SE10	SE9	SE13	SE12	SE10	SE9	SSE2.3	SE13
17-Sep	SE11	SE9	SE6	SE9	SSE8	SE8	SE5	SSE5	S7	S10	S13	S15	SSE13	SSE16	SSE17	SSE17	SE21	SE19	SE17	SE15	SE15	SE18	SE16	SE17	SSE12.5	SE21
18-Sep	SE14	SE12	SSE10	SE10	SE11	SSE11	SSE12	SSE19	SSE20	S18	SSW16	SSW15	SW13	SW15	SSW14	SSW13	SW15	WSW11	SW9	SSW8	S8	S7	S5	SSW5	S10.5	SSE20
19-Sep	SW6	WSW6	SW8	SW7	S9	S10	S9	S6	SSW9	SSW10	S9	SSW9	WSW14	SW13	SW13	WSW12	SW9	SSW5	SSW8	SSW8	S7	S8	SSE10	SSE8	SSW8.0	WSW14
20-Sep	S5	SSE5	SSW3	SSE4	SSE5	S5	SSE7	SSE9	SSE8	S6	S6	SSE10	SSE12	S15	SSW18	S16	S17	S13	SSE13	SE14	SE12	SSE9	SE11	SE10	SSE9.2	SSW18
21-Sep	SW3	SSE3	S6	SSW7	S7	SSE9	SSE8	S5	SSW4	SW3	WSW1	NNW1	SW3	WSW5	WSW9	W12	WSW14	W13	W16	WNW8	SSW6	SSW9	SSW8	SW10	SW5.3	W16
22-Sep	SW8	SSW9	S6	SSW6	SW8	SW8	SSW7	SW7	SW12	SW14	SW17	SSW15	SSW17	SW18	SW18	SSW14	SW16	SSW12	S14	S15	S16	S16	SSE15	SSE14	SSW11.5	SW18
23-Sep	SSE12	S11	S12	S16	SSW14	SSW14	SSW13	SW8	W17	WSW20	WSW20	WSW22	SW21	SW18	SW19	SSW18	SW20	SW18	SW14	SSW10	SSE8	S12	SSW9	S8	SSW13.2	WSW22
24-Sep	SSE7	S9	SSE10	SSE10	S8	S8	SSW7	S10	SSW9	SW9	W10	WSW7	SSW8	WNW7	WNW15	WNW17	WNW17	WNW13	NW8	WNW4	SW6	WSW6	SSW6	SW6	WSW5.2	WNW17
25-Sep	SSE6	SSE8	S8	SSE10	SSE12	SSE10	SE8	SSE7	SSE8	SSE9	SSE10	S9	SSE9	SE8	SSE9	ESE7	SE9	S11	SSE12	S14	SSW15	WSW22	WSW15	SW7	S8.2	WSW22
26-Sep	SW8	S5	SSW7	S5	SSW7	SSW7	SSW10	SSW6	SSW8	WSW10	WSW9	WSW10	WSW13	WSW14	W12	W9	WSW15	SW9	SSW10	SW10	SSW10	S8	SSE11	SSE14	SW8.0	WSW15
27-Sep	S12	SSE7	SE13	S13	SW15	WSW19	WSW17	WSW19	WSW21	W20	WSW20	WSW19	WSW16	WSW17	SW19	WSW16	WSW13	SW12	WSW14	WSW12	SW9	SW7	S9	S9	SW12.6	WSW21
28-Sep	SSW9	S4	SW6	WSW6	WSW12	SW11	SW8	SW5	WSW7	SW6	SSW6	SSE10	SSE13	S13	SW10	SSW11	SSW8	SSE7	SE8	ESE10	ESE10	ESE10	SE8	ESE9	S6.1	S13
29-Sep	SE13	SE13	SE15	SE12	SE13	SE14	SE14	SE19	SE19	SSE20	SSE21	SSE23	SSE24	SSE21	S19	SSE15	SSE12	SSE9	SSE9	SE10	SSE6	ESE7	SE7	SE6	SE13.6	SSE24
30-Sep	N5	E9	NNW6	NNW10	N6	WNW1	N8	NNW4	N4	NE11	NNE11	NNE15	N15	NNE14	NE14	NNE14	NNE14	NNE15	N12	N11	NNE9	NNE11	N13	N10	NNE9.3	NNE15
	S4.0	SSE3.9	S4.0	S4.1	S4.5	S5.0	S4.9	S5.0	SSW5.3	SSW5.3	SSW5.3	SSW5.1	SSW5.4	SSW5.5	SSW5.1	SW3.7	SW4.1	SSW2.7	S2.3	SSE2.3	SSE3.6	S3.9	S4.3	SSE4.2	Diurnal Average	
	SE14	SE13	NNW16	NNW16	SW15	WSW19	WSW17	SE19	WSW21	SSE20	SSE21	SSE23	SSE24	SSE21	SW19	WNW22	N23	N22	SE17	SE15	S16	WSW22	SE16	SE17	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 23 09:00

Minimum Value: 0 km/h on Sep 6 05:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 5 P_{99} = 6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

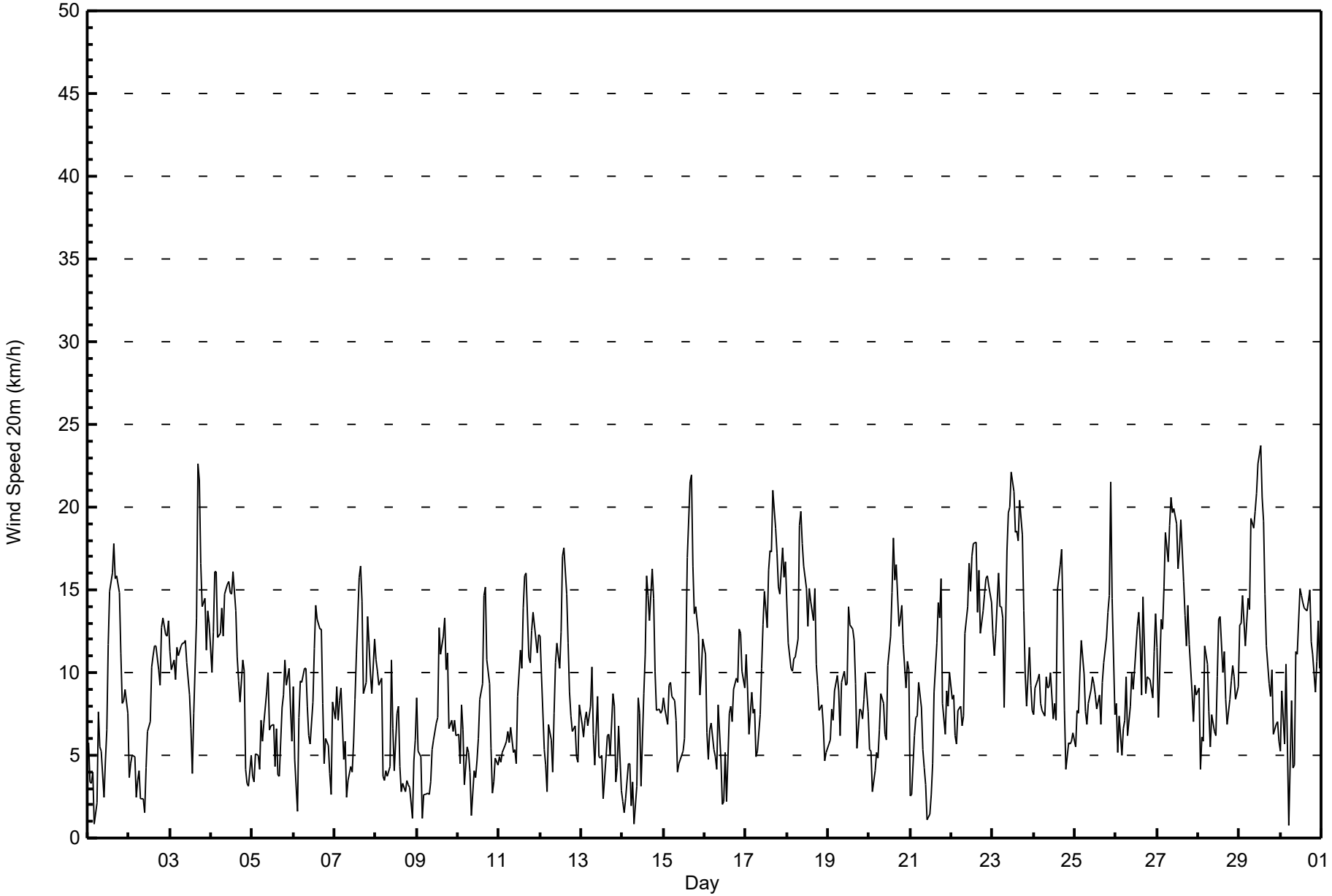
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	2	2	1	2	3	4	2	2	2	1	4	4	5	5	5	5	5	4	3	1	1	1	2	5
2-Sep	1	1	1	1	2	1	1	2	1	1	2	2	2	3	3	4	3	3	1	1	2	1	2	2	4
3-Sep	2	2	2	1	1	1	2	3	3	3	3	3	3	2	4	7	7	8	6	4	4	4	4	3	8
4-Sep	2	3	4	4	3	3	3	3	4	5	5	5	5	6	4	4	3	2	3	3	2	1	1	1	6
5-Sep	2	1	1	1	1	1	1	2	2	3	2	3	2	3	3	3	2	2	1	1	1	1	1	1	3
6-Sep	1	2	1	2	0	1	1	2	2	2	2	2	4	4	4	4	3	2	1	1	1	1	1	2	4
7-Sep	2	1	1	2	1	3	2	1	1	1	1	3	3	4	4	5	4	4	3	5	2	3	3	3	5
8-Sep	3	2	2	2	2	1	1	1	4	3	3	2	2	3	2	2	1	1	1	1	1	2	1	4	4
9-Sep	1	2	1	2	1	1	1	1	1	1	2	2	3	4	3	3	3	2	2	2	2	1	2	1	4
10-Sep	1	2	2	2	1	2	2	1	1	1	1	2	3	3	5	5	5	3	2	2	1	2	2	2	5
11-Sep	2	1	1	1	1	1	1	2	1	1	1	2	3	3	4	4	4	3	1	1	2	1	2	2	4
12-Sep	1	1	1	1	3	1	3	1	4	3	3	3	5	5	6	5	3	2	2	1	1	1	1	1	6
13-Sep	1	1	1	2	1	2	1	2	1	2	3	2	2	1	2	2	1	1	2	1	2	2	3	1	3
14-Sep	1	1	1	1	1	1	1	1	1	3	3	2	3	2	4	3	3	4	4	2	1	1	1	1	4
15-Sep	1	2	1	1	1	1	2	2	1	2	1	2	2	4	5	6	6	6	4	5	4	2	3	3	6
16-Sep	3	2	1	2	2	1	2	2	2	2	1	2	2	2	3	2	2	1	1	1	2	2	1	1	3
17-Sep	2	1	1	1	1	1	2	1	3	4	4	4	4	5	5	4	5	4	3	2	3	3	3	3	5
18-Sep	3	2	1	1	2	2	3	4	5	5	5	4	4	4	4	4	4	3	1	1	1	1	1	1	5
19-Sep	2	2	2	3	1	1	1	2	2	3	3	3	5	4	4	3	3	1	1	1	1	1	1	1	5
20-Sep	1	1	2	2	2	1	2	2	2	2	3	3	3	5	5	4	4	3	2	2	2	1	1	2	5
21-Sep	1	3	3	1	2	2	2	2	1	1	2	2	2	2	3	3	4	3	5	3	1	2	2	2	5
22-Sep	2	3	2	3	3	2	2	3	4	4	4	5	5	5	5	4	5	3	3	3	4	4	3	2	5
23-Sep	2	2	3	4	4	3	4	2	8	6	6	7	6	6	6	5	6	5	4	3	2	2	2	2	8
24-Sep	2	2	1	1	2	2	3	3	3	3	3	2	3	4	5	6	5	3	2	1	2	1	1	2	6
25-Sep	1	1	2	1	1	1	1	1	2	2	3	3	2	3	3	2	3	2	2	3	4	6	4	1	6
26-Sep	1	2	2	1	2	2	2	2	2	2	3	3	4	4	4	3	5	2	2	2	2	1	1	2	5
27-Sep	3	3	2	3	3	4	4	5	5	6	6	5	5	5	5	5	4	3	2	2	2	1	2	2	6
28-Sep	3	2	2	3	3	2	2	2	2	2	2	3	4	4	3	3	2	1	1	1	1	1	1	2	4
29-Sep	2	2	3	2	3	3	3	4	6	6	5	6	6	6	5	4	3	2	2	3	2	2	3	1	6
30-Sep	3	3	4	2	3	4	2	2	3	5	4	4	4	4	4	4	4	4	3	4	2	3	4	3	5
	3	3	4	4	4	4	4	5	8	6	6	7	6	6	6	7	7	8	6	5	4	6	4	4	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	154	21.39	21.39
6 - 11	340	47.22	68.61
12 - 19	206	28.61	97.22
20 - 28	20	2.78	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Barge Landing - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	1	2	2	1	2	12	14	18	17	24	21	4	12	11	6	154
6 - 11	14	6	6	0	3	13	42	75	60	40	34	13	5	8	9	12	340
12 - 19	13	10	1	0	0	1	34	36	21	19	18	18	5	9	9	12	206
20 - 28	2	0	0	0	0	0	1	6	0	0	2	7	0	2	0	0	20
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	36	17	9	2	4	16	89	131	99	76	78	59	14	31	29	30	720

Total Number of Valid Hours: 720

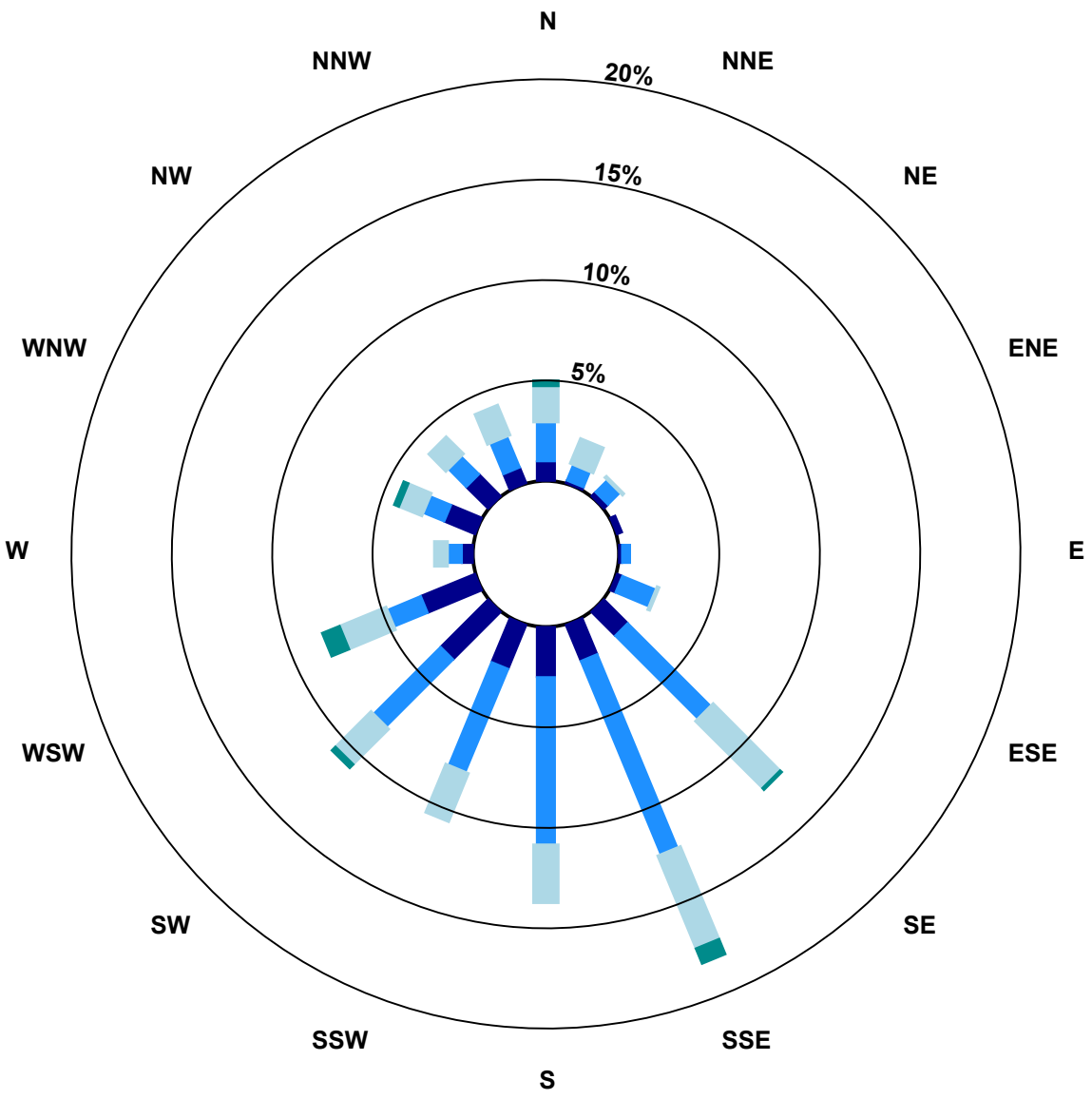
Total Number of Hours: 720

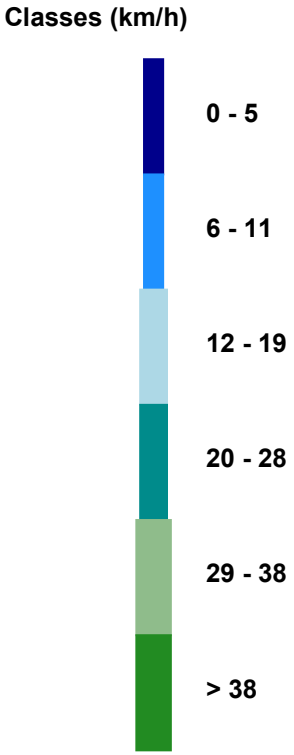
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Barge Landing





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Barge Landing - September 2025

Direction of Maximum Speed: 153 deg on Sep 29 13:00
Direction of Maximum Daily Speed Average: 144.3 deg on Sep 29

Direction of Minimum Speed: 301 deg on Sep 30 06:00

Direction of Minimum Daily Speed Average: 0.9 deg on Sep 3

Monthly Average Direction: 188.9 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	305	247	167	226	255	63	141	163	135	325	314	4	39	16	13	6	2	2	14	16	341	318	322	320	1.3
2-Sep	275	244	252	256	282	235	195	218	190	219	169	181	180	162	153	161	165	148	124	122	131	133	145	147	160.8
3-Sep	143	142	148	133	145	146	152	161	169	171	180	191	198	264	349	357	351	350	351	348	342	337	334	331	22.4
4-Sep	308	331	327	327	316	320	327	319	323	341	336	339	327	326	325	343	347	1	46	41	61	37	166	223	334.7
5-Sep	235	199	225	185	168	136	146	150	169	171	168	158	170	214	177	197	129	110	110	100	126	129	131	112	150.3
6-Sep	100	128	21	118	128	141	144	155	166	230	222	183	165	157	165	153	153	147	107	101	120	145	197	166	150.5
7-Sep	177	186	173	167	159	145	136	172	175	249	297	37	26	27	8	4	19	356	8	5	0	341	353	6	15.4
8-Sep	1	352	357	358	339	303	338	308	41	56	45	353	285	273	258	244	279	232	253	285	2	100	154	113	342.9
9-Sep	148	141	138	161	307	311	223	145	223	247	222	180	186	161	157	145	155	176	196	210	216	189	176	167	177.0
10-Sep	166	220	199	230	244	229	247	233	256	258	228	228	282	247	257	304	308	318	341	336	294	161	264	287	268.0
11-Sep	247	308	215	210	236	197	216	162	198	216	220	170	167	170	141	142	150	146	128	128	141	146	154	152	162.9
12-Sep	145	143	186	255	138	159	166	181	171	170	167	166	194	194	196	202	199	187	211	162	170	238	177	162	180.7
13-Sep	181	194	221	166	148	159	141	173	179	170	210	296	313	317	321	332	333	346	352	348	1	9	124	130	191.9
14-Sep	286	258	184	222	180	204	197	241	186	177	184	151	151	130	134	147	152	149	150	163	169	169	149	150	158.8
15-Sep	156	177	176	172	158	171	172	194	194	212	211	205	217	299	307	301	295	303	278	291	286	291	293	298	263.2
16-Sep	305	299	306	278	311	316	285	233	261	284	351	206	103	132	148	162	167	138	125	128	134	131	140	138	167.7
17-Sep	130	130	144	135	151	144	142	163	173	176	173	169	164	156	151	148	143	141	139	134	136	146	145	146	148.4
18-Sep	142	144	149	136	145	159	161	154	163	180	192	204	217	218	200	212	226	241	221	206	190	174	189	194	183.3
19-Sep	229	241	226	215	181	169	170	188	197	192	190	196	241	233	225	237	236	213	200	206	189	170	166	158	204.2
20-Sep	170	148	208	156	158	173	161	160	156	172	172	165	147	182	195	181	178	182	156	145	140	151	139	137	164.4
21-Sep	216	166	171	196	174	166	163	179	193	220	258	332	217	243	249	267	255	266	276	298	198	195	202	220	225.4
22-Sep	217	213	185	198	216	221	206	214	225	225	228	213	199	224	228	210	214	192	178	173	178	175	164	151	201.7
23-Sep	155	169	191	186	195	192	198	228	260	246	241	241	234	224	231	209	218	215	217	210	157	173	198	174	212.9
24-Sep	152	169	160	164	176	177	193	183	212	220	264	239	206	299	297	303	303	303	311	302	236	248	213	234	239.0
25-Sep	152	155	172	156	152	153	142	147	161	165	165	170	155	143	156	107	142	175	154	171	199	238	255	229	171.8
26-Sep	232	183	207	189	208	206	206	199	192	239	252	239	245	239	281	276	238	215	208	216	213	186	159	157	218.5
27-Sep	170	160	144	173	215	240	240	243	251	259	246	247	246	244	233	242	250	233	255	239	236	235	188	182	231.7
28-Sep	210	172	216	243	250	232	232	227	248	232	199	158	152	172	218	210	203	148	140	109	116	121	139	119	184.0
29-Sep	132	132	125	130	132	129	126	129	139	149	151	149	153	168	174	161	164	156	154	135	153	111	129	130	144.3
30-Sep	349	101	342	338	6	301	354	329	356	44	24	13	8	29	34	28	27	13	360	353	13	17	9	3	14.0
	172.3	168.2	182.5	183.3	181.2	181.8	179.6	183.2	197.4	205.0	209.6	199.3	197.4	205.7	211.4	217.1	219.7	203.1	179.5	151.2	163.9	170.4	168.8	161.8	
	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 96 deg on Sep 30 06:00

Minimum Value: 4 deg on Sep 17 06:00

Percentiles: $P_1 = 5$ $P_{10} = 9$ $Q_1 = 14$ Median = 18 $Q_3 = 26$ $P_{90} = 43$ $P_{99} = 84$

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

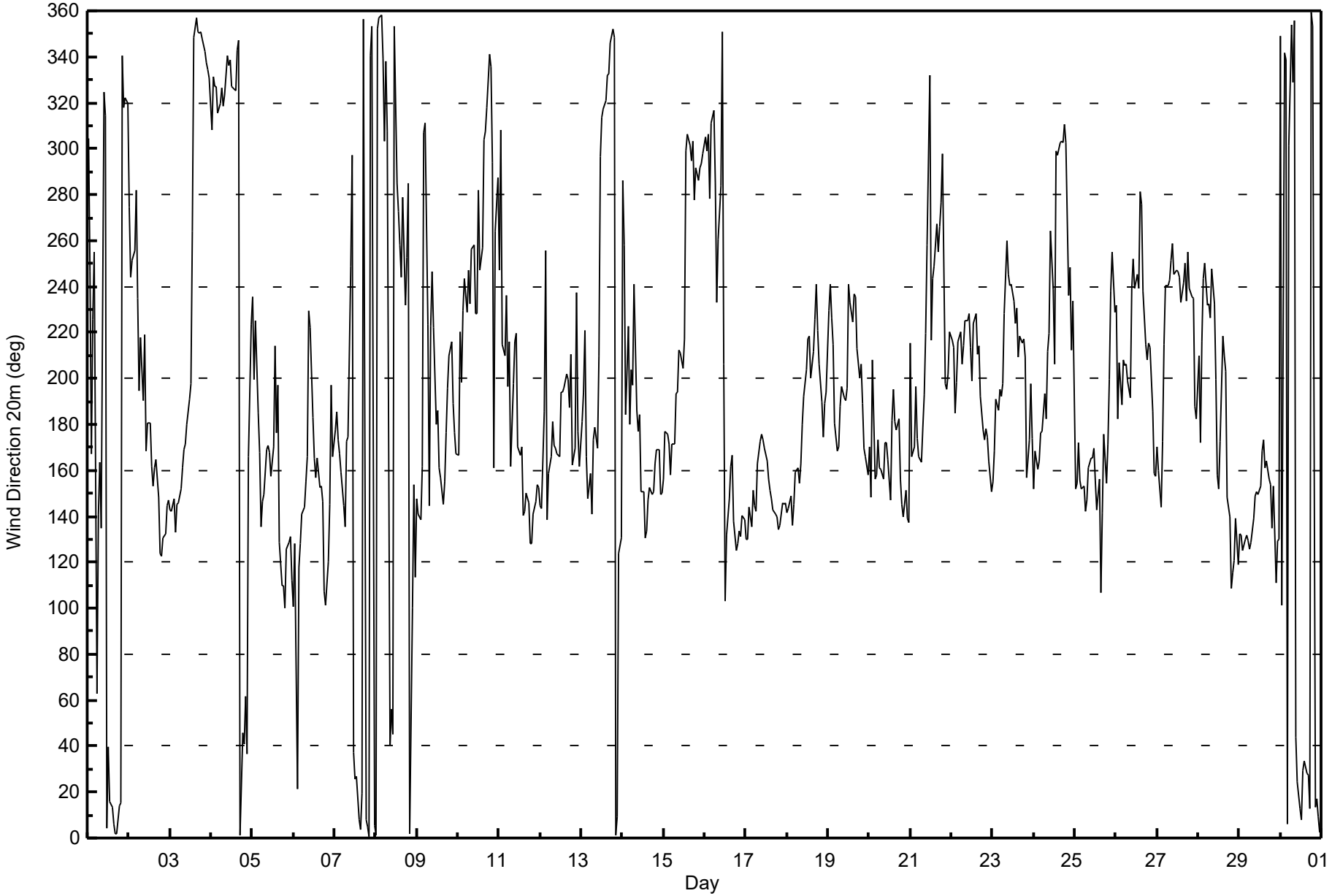
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	14	42	63	33	92	72	30	22	31	69	31	52	27	21	20	19	18	17	16	16	12	9	8	12	92
2-Sep	38	15	9	12	30	21	27	51	47	85	40	32	32	25	26	23	17	16	4	4	7	7	10	9	85
3-Sep	8	8	8	10	9	8	9	13	16	17	21	22	35	58	23	23	19	18	18	16	15	20	16	14	58
4-Sep	14	13	15	14	15	14	15	18	19	27	25	25	21	23	20	26	19	18	23	9	34	51	26	34	51
5-Sep	27	22	18	18	43	13	21	15	19	22	43	44	47	74	49	69	75	20	7	4	21	9	6	15	75
6-Sep	10	42	38	10	6	6	8	11	22	42	47	29	23	20	23	19	15	11	19	6	9	25	54	15	54
7-Sep	11	8	7	10	9	69	32	63	54	29	38	67	29	23	23	20	17	22	16	17	17	11	15	15	69
8-Sep	16	12	14	12	31	34	20	21	65	16	45	66	29	32	78	70	53	38	12	15	15	59	25	55	78
9-Sep	10	52	10	83	21	20	30	29	52	27	45	39	43	22	18	17	15	14	18	16	30	15	25	11	83
10-Sep	12	42	17	25	38	15	22	37	85	32	50	52	46	34	43	22	16	15	12	11	43	64	16	28	85
11-Sep	21	17	22	15	10	13	14	16	30	29	43	25	26	24	21	17	16	13	4	6	6	6	6	6	43
12-Sep	6	5	46	42	84	16	31	19	29	25	21	24	27	21	24	23	19	15	22	14	22	27	26	17	84
13-Sep	18	20	23	17	6	10	6	22	29	16	46	35	40	64	26	17	13	14	13	10	49	44	32	21	64
14-Sep	48	70	50	23	36	45	19	86	43	27	29	82	29	13	13	13	14	14	13	14	13	19	12	9	86
15-Sep	17	18	18	12	8	14	16	20	36	31	33	41	42	39	22	20	20	18	19	17	16	18	16	16	42
16-Sep	14	21	15	13	17	19	30	34	18	29	80	78	52	94	43	26	25	9	8	7	6	6	8	7	94
17-Sep	7	6	15	4	7	4	15	24	24	26	23	20	23	17	19	16	13	11	10	8	9	11	11	11	26
18-Sep	9	10	9	6	12	13	10	12	15	20	21	23	25	22	24	22	19	14	8	16	11	13	21	25	25
19-Sep	17	22	12	17	12	6	9	22	20	21	27	29	22	30	24	21	14	13	14	11	11	7	7	10	30
20-Sep	14	11	17	27	15	18	28	15	16	42	62	25	17	27	19	20	19	18	10	6	6	6	4	4	62
21-Sep	53	55	51	23	26	10	26	20	30	45	94	84	80	60	28	21	15	16	21	34	28	16	15	13	94
22-Sep	17	27	39	44	24	17	25	26	19	20	16	23	21	21	19	22	17	18	13	14	16	15	11	10	44
23-Sep	9	15	18	17	22	18	18	22	18	17	19	21	19	19	20	20	17	18	17	18	18	11	15	16	22
24-Sep	15	11	14	14	14	21	38	17	20	24	26	31	34	59	25	20	16	16	16	17	16	13	14	16	59
25-Sep	25	14	9	6	8	10	15	19	16	18	23	20	20	31	24	21	24	13	7	18	22	18	17	19	31
26-Sep	16	42	24	32	17	15	17	22	24	22	26	25	20	20	26	23	20	22	11	11	14	16	8	11	42
27-Sep	13	38	10	21	16	14	14	15	17	19	18	18	22	22	21	20	18	15	12	13	11	20	12	15	38
28-Sep	28	49	23	36	17	12	14	28	18	32	33	22	20	24	35	24	16	15	9	13	5	8	7	7	49
29-Sep	7	8	10	10	11	11	12	11	16	16	15	15	17	18	17	19	15	12	22	12	10	15	19	18	22
30-Sep	52	32	68	15	41	96	10	39	58	23	29	19	18	17	16	15	15	16	16	17	21	15	14	15	96
	53	70	68	83	92	96	38	86	85	85	94	84	80	94	78	70	75	38	23	34	49	64	54	55	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Barge Landing - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS11
LOWER CAMP
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
SEPTEMBER 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	683	37	37	100	60.6	0	8.9	0
H2S (ppb) Average	685	35	35	100	9.7	0	2.8	0
THC (ppm) Average	654	39	66	96.25	4.6	-	3.2	-
CH4(ppm) Average	654	39	66	96.25	3.7	-	2.5	-
NMHC(ppm) Average	654	39	66	96.25	1.58	-	0.633	-
Temperature (C) Average	720	0	0	100	30.6	-	20.9	-
Relative Humidity (%) Average	720	0	0	100	100	-	87.3	-
Barometric Pressure (inHg) Average	720	0	0	100	29.5	-	29.4	-
Wind Speed 10 m (km/h) Average	707	0	13	98.19	31	-	16	-
Wind Direction 10 m (deg) Average	707	0	13	98.19	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	683	1.36	4.6	-	0	0	0.1	0.3	0.7	1.7	60.6
H2S (ppb) Average	685	0.95	1.1	-	0	0.1	0.2	0.5	1.3	2.1	9.7
THC (ppm) Average	654	2.38	0.4	-	2	2	2.1	2.2	2.6	2.9	4.6
CH4(ppm) Average	654	2.2	0.2	-	2	2	2	2.1	2.3	2.5	3.7
NMHC(ppm) Average	654	0.175	0.226	-	0	0	0	0.1	0.3	0.5	1.58
Temperature 2 m (C) Average	720	15.61	5.1	-	3.6	9.7	12.2	15.1	18.7	22.8	30.6
Relative Humidity (%) Average	720	67.3	20.9	-	26.2	37.6	50.8	67	85.9	95.8	100
Barometric Pressure (inHg) Average	720	29.05	0.2	-	28.6	28.8	28.9	29	29.2	29.4	29.5
Wind Speed 10 m (km/h) Average	707	8.3	5	-	0	2	4	8	11	16	31
Wind Direction 10 m (deg) Average	707	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	01 Sep 2025 01:00	01 Sep 2025 03:00	3	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Sep 2025 06:00	01 Sep 2025 10:00	5	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Sep 2025 12:00	01 Sep 2025 17:00	6	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Sep 2025 19:00	01 Sep 2025 20:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Sep 2025 22:00	02 Sep 2025 04:00	7	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Sep 2025 07:00	02 Sep 2025 10:00	4	Unstable Operation - excessive baseline noise
Wind Speed, Wind Direction	02 Sep 2025 00:00	02 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	02 Sep 2025 06:00	02 Sep 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	05 Sep 2025 02:00	05 Sep 2025 03:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	10 Sep 2025 20:00	10 Sep 2025 22:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 00:00	11 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Sep 2025 06:00	14 Sep 2025 07:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Sep 2025 00:00	15 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	19 Sep 2025 22:00	19 Sep 2025 23:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 60.6 ppb on Sep 8 15:00 Maximum Daily Average: 8.9 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 1 02:00 Minimum Daily Average: 0.1 ppb on Sep 4
Maximum Diurnal Average: 4.5 ppb at hour 15 Minimum Diurnal Average: 0.2 ppb at hour 3
Monthly Average: 1.36 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 1.7 P_{99} = 19.1

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.4	5.2	6.4	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	6.4
2-Sep	0.1	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.2	0.6	C	C	C	C	C	C	C	1.0	0.5	0.0	0.1	10.3	10.7	2.0	--	10.7
3-Sep	Z	0.3	0.1	0.1	0.0	0.1	0.0	0.2	0.6	0.8	0.6	0.4	0.3	0.5	1.4	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.3	1.4
4-Sep	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
5-Sep	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.6	0.2	0.1	0.8	1.1	0.4	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	1.1
6-Sep	0.1	0.0	0.2	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.4	0.4	0.7	0.9	1.0	1.1	0.5	0.6	0.3	0.1	0.1	0.1	0.0	0.1	0.3	1.1
7-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	1.2	0.8	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
8-Sep	0.0	0.0	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	7.7	46.4	60.6	52.5	20.1	8.7	4.9	1.5	1.2	0.5	0.3	0.2	8.9	60.6
9-Sep	Z	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.4	0.5	1.2	1.1	1.4	0.7	0.4	0.4	0.6	0.5	0.2	0.2	0.1	0.4	1.4
10-Sep	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.3	2.7	1.6	0.3	1.5	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.4	2.7
11-Sep	0.1	0.2	Z	0.2	0.2	0.3	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.7	1.0	1.0	1.2	0.7	0.3	0.3	0.3	0.2	0.0	0.3	1.2
12-Sep	0.1	0.0	0.1	Z	0.0	0.1	0.0	0.3	0.4	0.5	0.5	0.4	0.5	0.7	0.7	0.9	0.9	0.8	0.4	0.6	0.7	0.3	0.2	0.2	0.4	0.9
13-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.3	0.4	1.0	1.3	1.7	2.5	1.4	1.3	1.1	0.9	0.6	0.5	0.3	0.3	0.7	2.5
14-Sep	0.2	0.2	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.1	0.0	0.2	0.3
15-Sep	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	1.0	1.6	1.6	8.6	4.4	2.2	0.6	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.9	8.6
16-Sep	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.3	0.9	1.0	0.3	3.3	7.8	6.8	5.5	7.4	3.1	1.6	0.9	0.6	0.4	0.4	0.5	0.6	1.8	7.8
17-Sep	0.5	0.3	Z	3.1	0.8	0.6	0.4	0.4	0.4	0.5	0.4	0.9	1.2	18.9	18.9	3.0	13.0	1.8	1.6	10.4	11.2	12.8	15.0	10.2	5.5	18.9
18-Sep	4.9	1.8	1.0	Z	0.6	23.9	12.4	5.0	2.0	1.2	0.8	0.5	0.5	0.3	0.4	0.5	0.5	0.4	1.4	0.5	0.5	0.5	0.6	0.0	2.6	23.9
19-Sep	0.0	0.5	0.6	0.3	Z	0.0	0.0	0.0	0.2	0.8	0.8	1.7	0.6	0.3	0.4	0.5	0.4	0.6	0.2	0.2	0.1	0.0	0.1	0.1	0.4	1.7
20-Sep	0.0	0.1	0.1	0.1	0.0	Z	0.1	0.5	1.5	0.7	0.5	0.6	0.9	0.6	0.7	0.5	0.3	0.3	0.3	0.7	0.5	0.3	0.2	0.3	0.4	1.5
21-Sep	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.7	3.3	1.0	4.8	8.9	19.7	3.3	1.7	1.6	9.5	7.0	1.1	0.5	0.3	0.3	2.8	19.7
22-Sep	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.2	0.4	0.8	0.2	0.4	0.4	0.2	0.4	0.5	0.5	0.8	0.4	0.0	0.0	0.0	0.1	0.2	0.3	0.8
23-Sep	0.4	0.9	Z	0.8	0.8	0.7	0.7	0.9	0.9	0.8	0.4	0.3	0.5	0.8	0.6	0.4	0.4	0.8	1.1	1.3	1.1	0.6	0.6	0.3	0.7	1.3
24-Sep	0.4	0.3	0.4	Z	0.3	0.2	0.3	0.6	0.9	0.3	0.2	14.1	9.6	8.2	3.3	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.0	1.7	14.1
25-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.0	3.4	3.0	2.3	5.5	1.3	0.8	0.5	0.7	0.9	0.3	0.2	0.2	0.4	0.9	0.7	0.6	0.9	1.0	5.5
26-Sep	0.7	0.6	0.7	0.2	0.5	Z	0.5	0.5	1.3	0.8	10.0	0.6	5.7	2.4	1.4	0.4	0.3	0.2	1.5	0.9	1.3	1.4	1.1	0.3	1.5	10.0
27-Sep	Z	0.6	0.6	0.3	0.5	0.4	0.3	0.7	1.1	0.9	0.7	0.5	0.5	0.3	0.5	0.4	0.8	2.2	1.6	0.5	1.4	1.3	1.0	0.9	0.8	2.2
28-Sep	0.7	Z	0.4	0.5	0.9	0.4	0.3	1.2	0.7	2.6	9.4	6.6	9.9	1.0	0.4	0.5	0.8	0.7	0.6	0.6	0.4	0.4	0.4	0.3	1.7	9.9
29-Sep	0.3	0.2	Z	0.3	0.3	0.2	0.3	0.2	1.5	14.8	34.3	17.8	5.8	6.0	1.4	1.1	0.5	2.2	1.0	0.6	0.5	0.3	0.2	0.2	3.9	34.3
30-Sep	0.2	0.0	0.1	Z	0.2	0.2	0.2	1.2	0.7	0.7	0.6	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	1.2
	0.4	0.3	0.2	0.3	0.2	1.1	0.6	0.5	0.6	1.1	2.5	2.1	2.4	4.2	4.5	2.9	1.7	1.0	1.0	1.0	0.8	1.1	1.1	0.6	Diurnal Average	
	4.9	1.8	1.0	3.1	0.9	23.9	12.4	5.0	3.0	14.8	34.3	17.8	9.9	46.4	60.6	52.5	20.1	8.7	9.5	10.4	11.2	12.8	15.0	10.2	Diurnal Maximum	

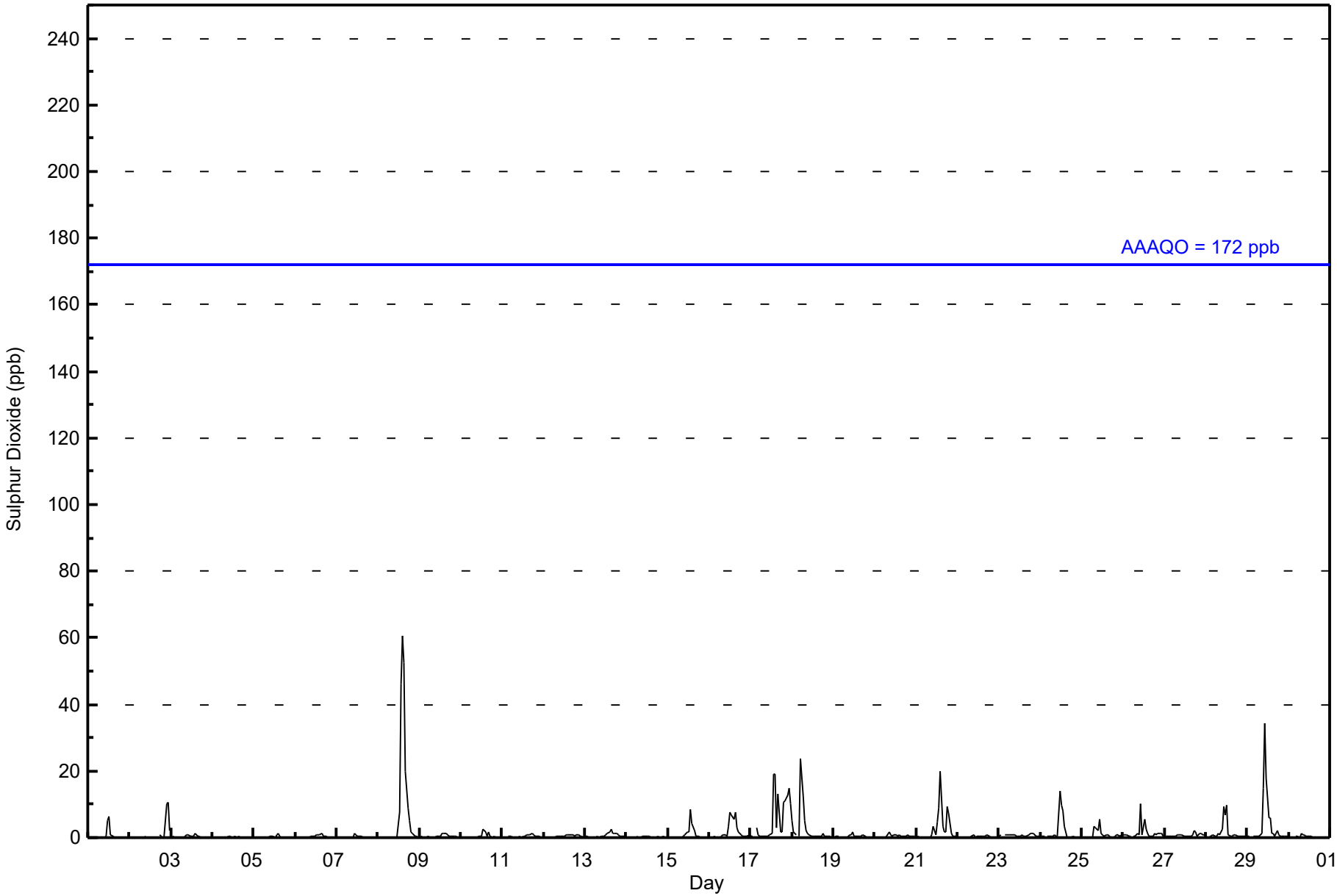
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	665	97.36	97.36
11 - 20	13	1.90	99.27
21 - 60	4	0.59	99.85
61 - 110	1	0.15	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	29	17	23	11	16	58	181	49	20	31	21	44	43	39	49	24	655
11 - 20	1	0	0	0	0	0	10	0	0	0	0	0	1	0	0	1	13
21 - 60	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	4
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	1	0	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	30	17	23	11	16	58	193	49	20	31	21	44	47	39	49	25	673

Total Number of Valid Hours: 673

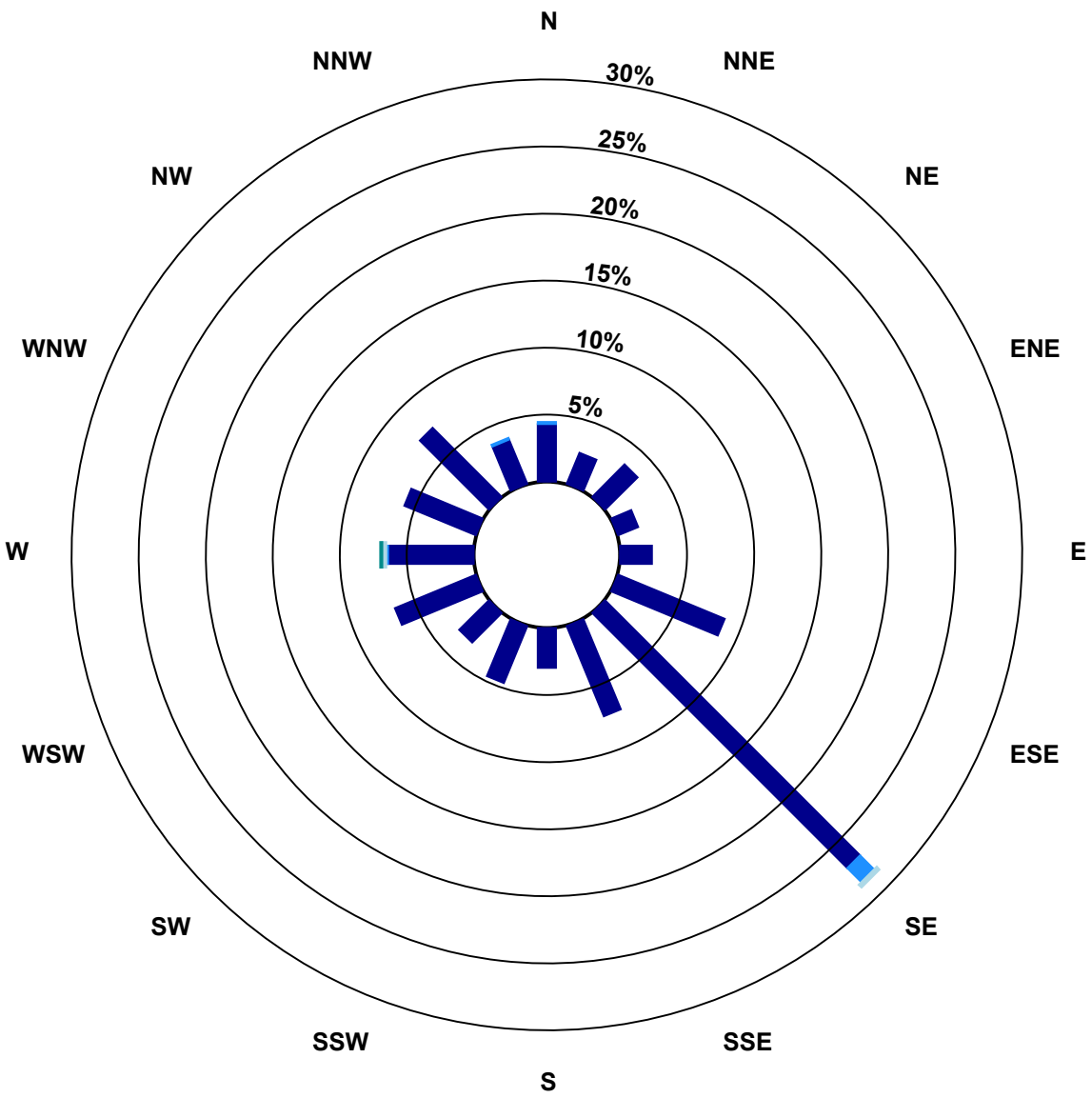
Total Number of Hours: 720

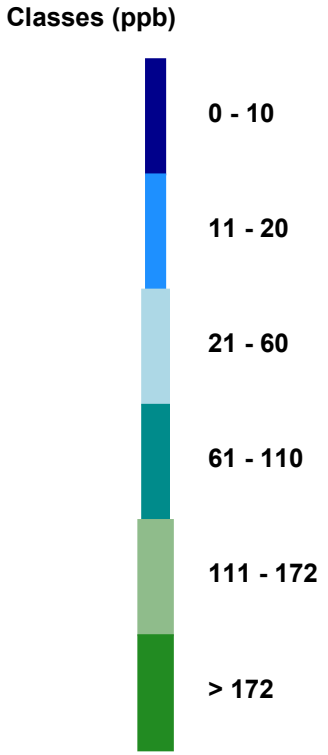
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Lower Camp





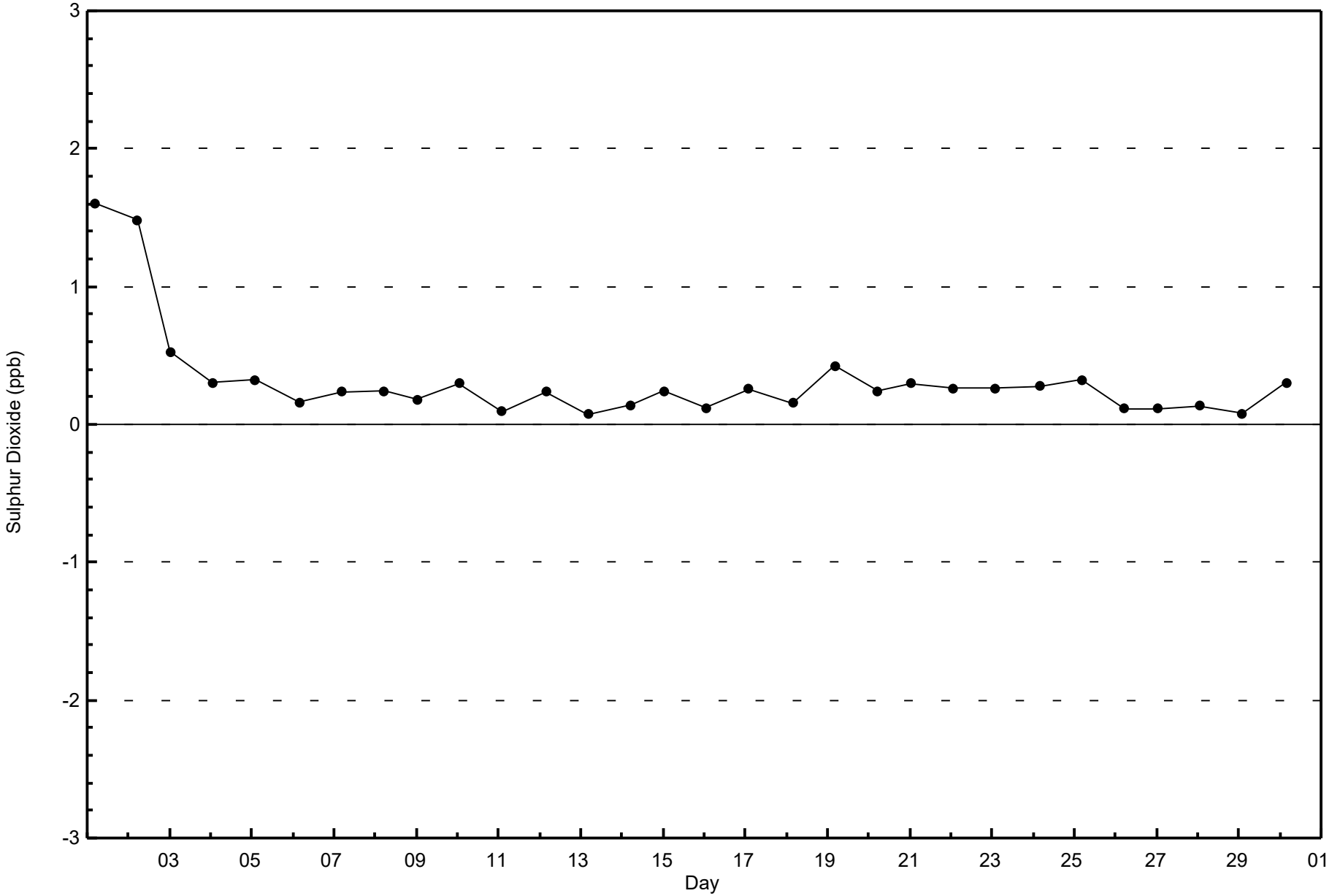
Total Number of Valid Hours: 673

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025

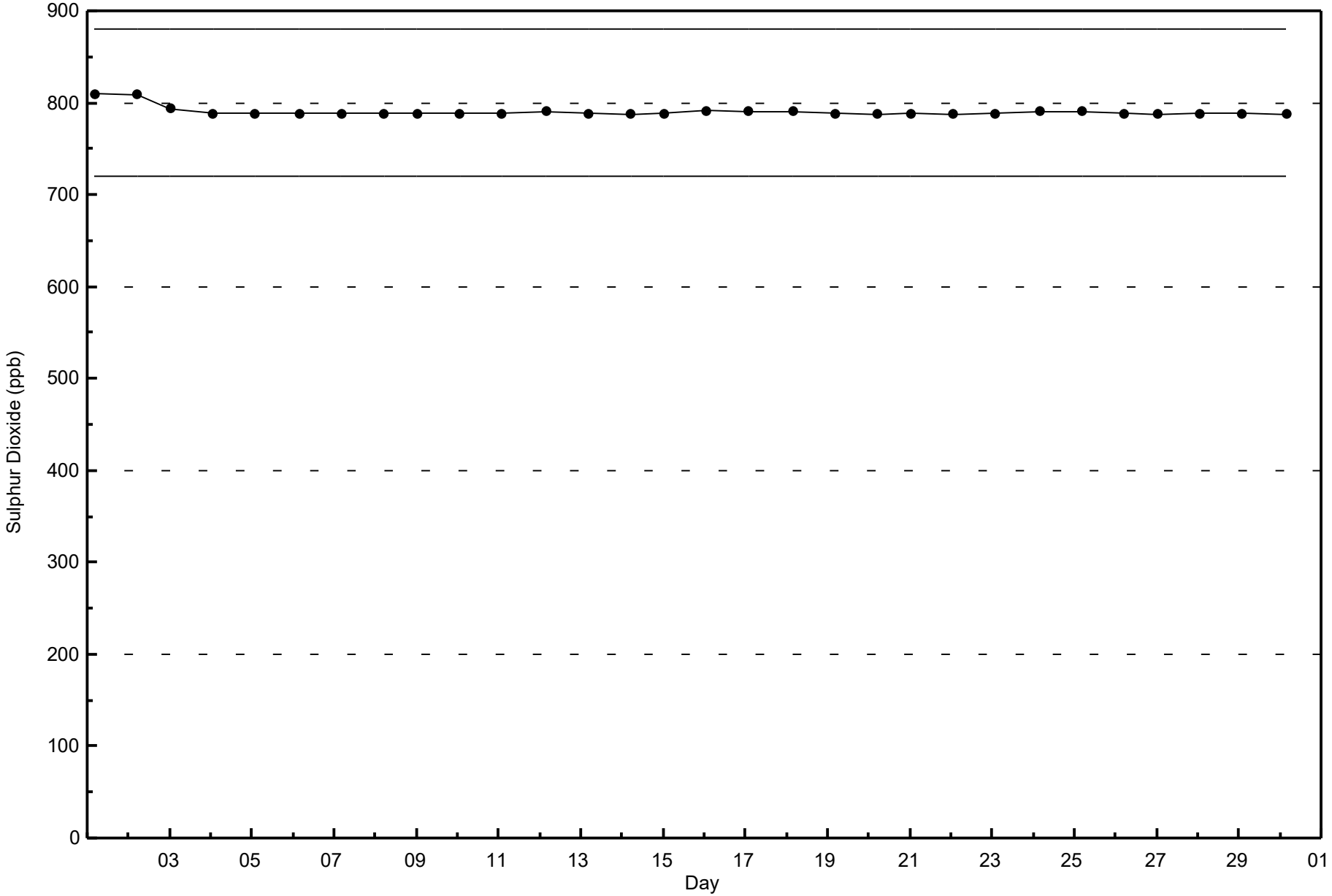


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.7 ppb on Sep 29 23:00 Maximum Daily Average: 2.8 ppb on Sep 29

Minimum Value: 0.0 ppb on Sep 12 15:00 Minimum Daily Average: 0.2 ppb on Sep 4
Maximum Diurnal Average: 1.6 ppb at hour 3 Minimum Diurnal Average: 0.3 ppb at hour 15
Monthly Average: 0.95 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.5 Q_3 = 1.3 P_{90} = 2.1 P_{99} = 6.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	0.7	0.6	0.6	1.1	Z	1.7	3.8	0.5	0.5	0.7	0.9	1.3	0.6	0.2	0.2	0.2	0.3	0.3	0.4	1.1	0.2	0.2	0.4	0.8	3.8
2-Sep	Z	0.3	0.4	0.8	0.5	0.4	0.3	0.5	1.8	3.9	2.4	1.0	0.3	0.3	0.3	0.2	0.2	0.3	0.5	1.6	4.2	3.0	3.4	1.1	1.2	4.2
3-Sep	0.7	Z	1.4	0.9	0.7	0.6	0.6	0.6	0.7	0.5	0.5	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.3	0.5	0.7	0.7	0.7	0.6	0.6	1.4
4-Sep	0.3	0.3	Z	0.3	0.2	0.2	0.4	0.6	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.6
5-Sep	0.4	1.3	1.4	Z	1.2	1.5	2.6	1.2	1.0	0.6	0.5	0.5	1.2	1.0	0.6	0.9	0.5	0.1	0.1	0.1	1.3	1.5	3.9	3.3	1.2	3.9
6-Sep	0.7	0.9	0.9	0.8	Z	0.8	0.9	1.0	1.5	1.1	1.2	3.1	0.3	0.1	0.1	0.1	0.1	1.0	1.2	1.1	1.3	0.8	1.2	2.4	1.0	3.1
7-Sep	2.1	1.6	1.3	1.3	1.2	Z	1.2	1.4	1.4	1.3	1.6	0.9	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.5	0.5	0.9	2.1
8-Sep	Z	1.0	0.5	0.5	0.8	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.5	1.1	1.0	1.0	0.7	0.5	0.4	1.6	1.2	0.4	0.4	0.5	0.6	1.6
9-Sep	2.5	Z	1.2	0.8	1.1	1.6	1.4	1.2	1.0	1.7	1.7	1.5	1.7	0.4	0.4	0.5	0.3	0.3	0.4	0.7	0.4	0.6	1.1	1.2	1.0	2.5
10-Sep	1.4	1.6	Z	1.6	1.3	0.9	0.7	1.7	1.5	1.8	1.6	0.4	0.2	0.3	0.1	0.0	0.0	0.2	0.0	0.2	0.2	0.2	1.3	0.6	0.8	1.8
11-Sep	0.4	1.6	2.4	Z	1.9	2.7	2.0	1.8	3.0	2.1	3.0	1.4	0.5	0.1	0.1	0.1	0.1	0.7	1.1	3.5	1.0	0.4	0.7	1.1	1.4	3.5
12-Sep	1.4	2.0	3.4	2.4	Z	5.1	6.1	3.3	4.0	1.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.3	0.2	0.1	0.2	0.7	0.8	1.9	1.5	6.1
13-Sep	2.1	2.6	3.8	7.0	6.6	4.3	5.2	Z	1.8	1.1	1.4	0.9	1.0	0.7	0.4	0.5	0.6	1.3	1.7	1.7	1.7	1.7	1.0	1.0	2.2	7.0
14-Sep	Z	1.1	0.8	1.0	1.0	1.2	1.3	1.2	1.2	0.9	0.6	3.2	4.9	1.1	0.5	3.8	2.0	0.7	0.3	0.1	0.5	0.8	0.4	0.6	1.3	4.9
15-Sep	1.4	Z	0.7	0.6	0.9	1.3	0.7	0.6	0.3	0.2	1.0	1.6	1.0	0.5	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.6	1.6
16-Sep	0.4	0.4	Z	1.5	0.9	0.5	0.9	0.6	0.7	2.6	0.3	0.5	0.7	0.6	0.9	1.6	2.0	2.7	3.5	2.4	5.4	1.6	1.7	1.3	1.5	5.4
17-Sep	1.0	0.8	0.8	Z	1.3	1.9	1.9	2.1	1.6	0.8	2.5	0.5	0.4	1.0	0.4	1.1	1.0	0.7	0.9	1.6	1.5	1.2	0.9	2.0	1.2	2.5
18-Sep	2.2	0.6	0.4	0.5	Z	1.2	1.9	2.1	1.2	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.5	0.2	0.1	0.2	0.1	0.6	2.2
19-Sep	0.1	0.1	0.2	0.6	1.4	Z	1.8	1.2	0.5	1.1	0.6	0.9	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.5	0.2	0.2	0.5	1.0	0.5	1.8
20-Sep	Z	1.6	1.9	1.5	1.9	1.6	1.4	1.8	1.3	0.3	0.2	0.3	0.5	0.3	0.1	0.1	0.1	0.1	0.3	1.2	0.7	0.7	0.7	1.1	0.9	1.9
21-Sep	2.3	Z	1.9	1.6	2.3	2.2	2.3	2.1	1.8	3.0	0.9	0.6	1.0	0.3	0.3	0.2	0.2	0.2	0.6	2.7	0.9	0.3	0.2	0.2	1.2	3.0
22-Sep	0.2	0.3	Z	0.3	0.3	0.3	0.3	0.6	0.7	0.5	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.7
23-Sep	0.2	0.2	0.2	Z	0.1	0.2	0.2	0.3	0.3	0.3	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.8	2.2	0.7	0.3	2.2
24-Sep	1.6	0.8	1.4	1.3	Z	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.4	0.3	1.8	0.5	1.8
25-Sep	2.5	1.8	1.7	1.9	1.6	Z	1.6	1.7	1.3	1.6	1.5	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.9	2.5
26-Sep	Z	0.1	0.2	0.3	0.5	0.6	0.6	0.6	0.9	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.9
27-Sep	0.1	Z	0.6	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	0.1	0.2	0.7	0.3	0.2	0.2	0.9	1.8	0.3	1.8
28-Sep	0.8	0.7	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.6	0.3	0.2	0.2	0.1	0.1	0.2	0.4	1.3	1.2	0.9	2.4	3.1	0.7	3.1
29-Sep	2.3	4.0	7.4	4.2	2.0	Z	4.2	1.5	2.2	1.4	1.2	2.1	0.9	0.9	0.3	0.3	0.1	0.4	0.6	2.6	4.2	6.1	9.7	6.1	2.8	9.7
30-Sep	7.3	1.7	3.4	4.5	2.0	Z	1.9	1.4	2.2	1.5	1.1	0.4	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.3	0.4	0.5	0.3	0.4	1.3	7.3
	1.4	1.1	1.6	1.4	1.3	1.3	1.5	1.2	1.2	1.1	0.9	0.8	0.7	0.4	0.3	0.4	0.3	0.4	0.5	0.9	1.0	0.8	1.2	1.2	Diurnal Average	
	7.3	4.0	7.4	7.0	6.6	5.1	6.1	3.8	4.0	3.9	3.0	3.2	4.9	1.1	1.0	3.8	2.0	2.7	3.5	3.5	5.4	6.1	9.7	6.1	Diurnal Maximum	

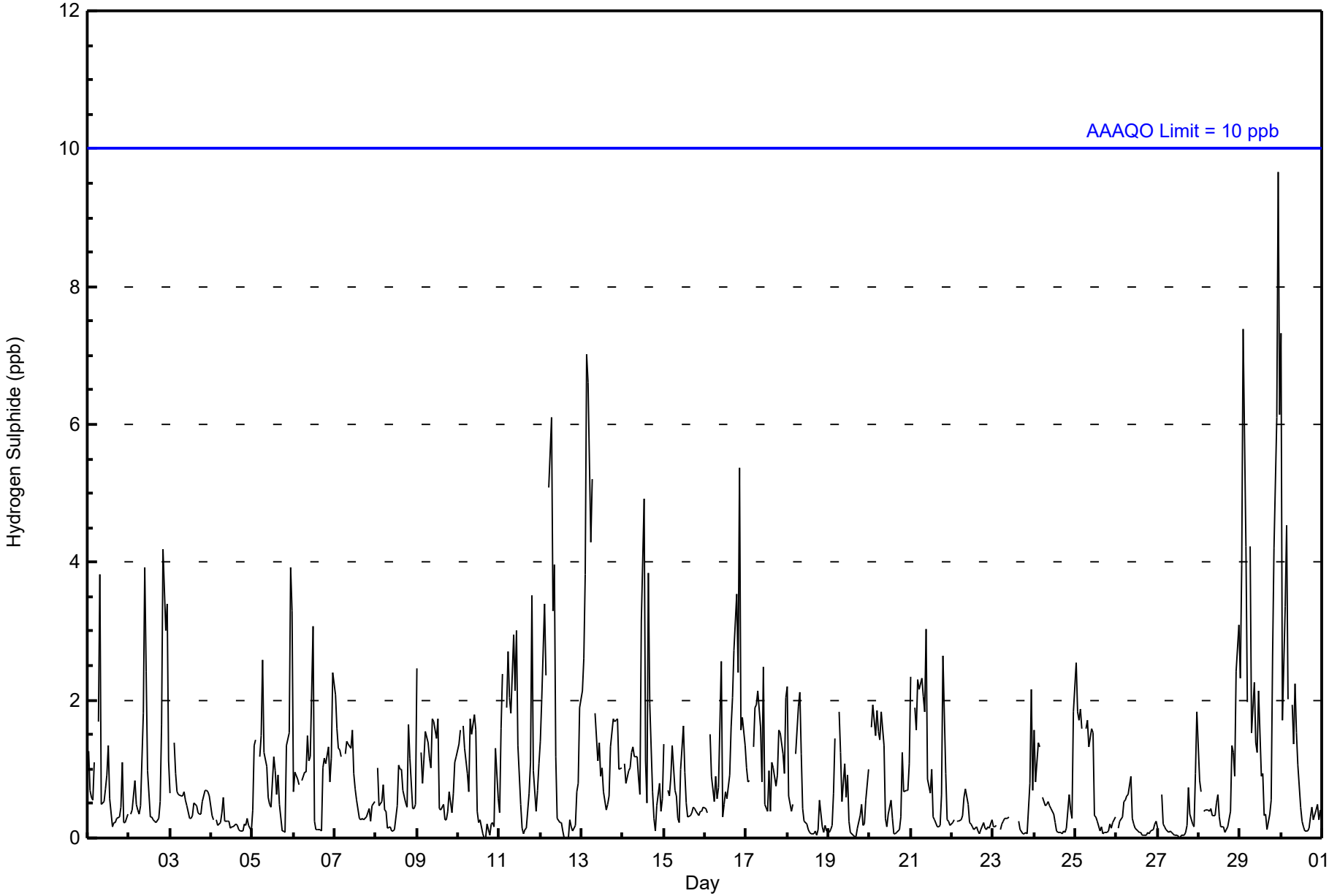
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	638	93.14	93.14
3 - 4	34	4.96	98.10
5 - 7	12	1.75	99.85
8 - 11	1	0.15	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	30	15	21	10	15	50	171	50	20	31	17	42	46	36	47	24	625
3 - 4	0	0	2	0	0	10	17	1	0	0	0	0	0	2	0	2	34
5 - 7	0	0	0	1	1	2	7	0	0	0	0	0	0	0	0	1	12
8 - 11	0	0	0	0	0	1	0	0	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	30	15	23	11	16	63	195	51	20	31	17	42	46	38	47	27	672

Total Number of Valid Hours: 672

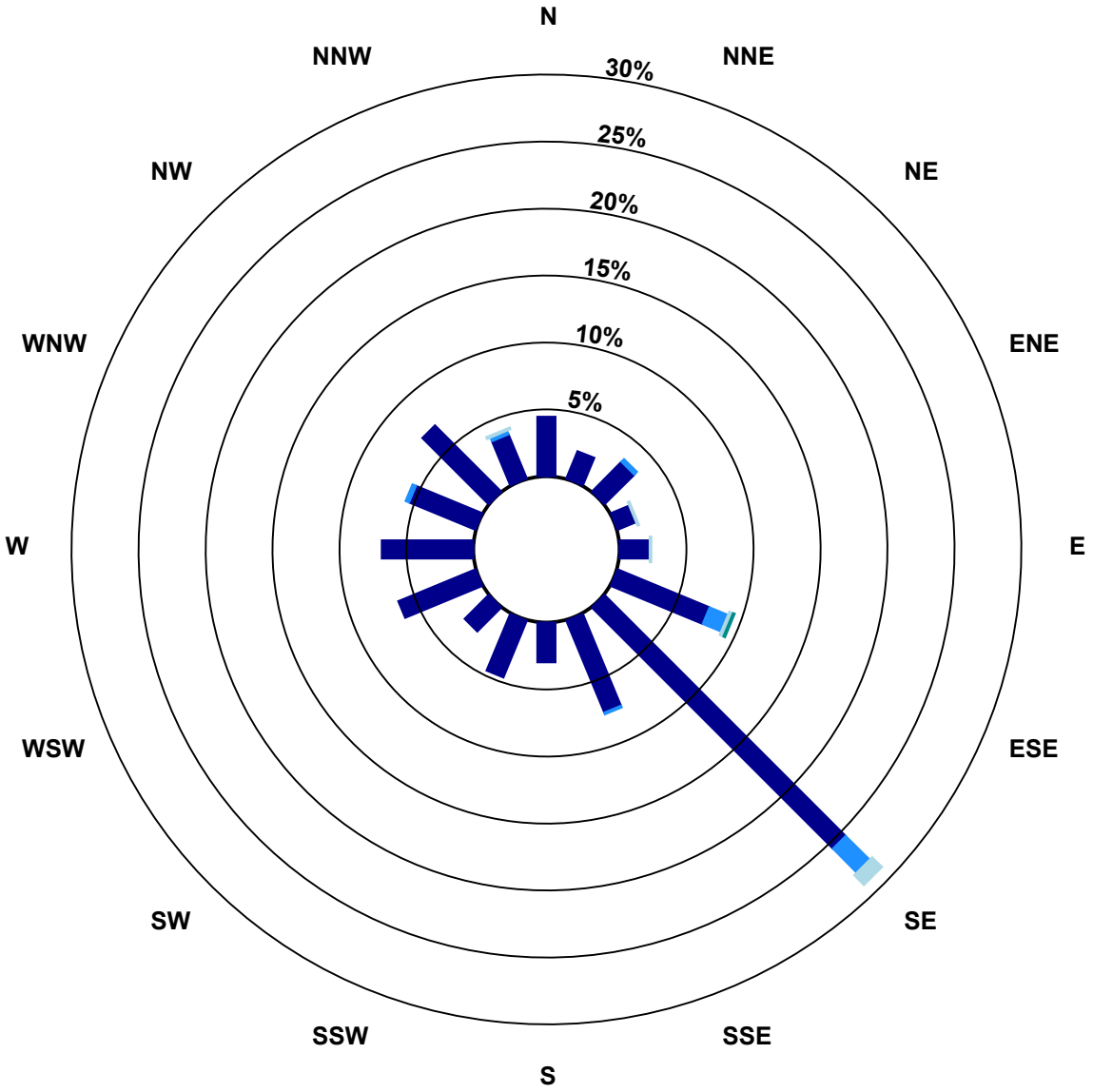
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Lower Camp



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

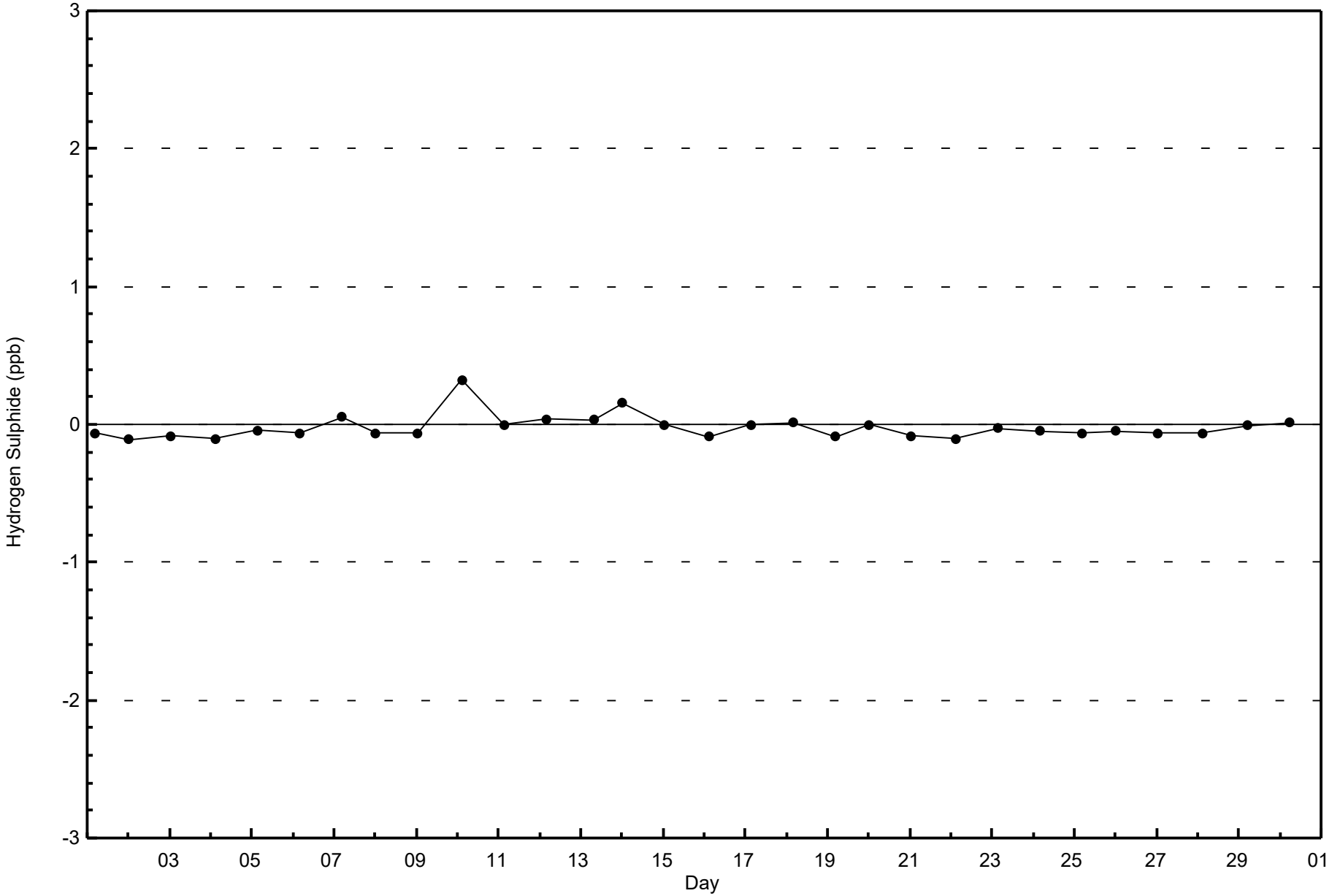
Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025

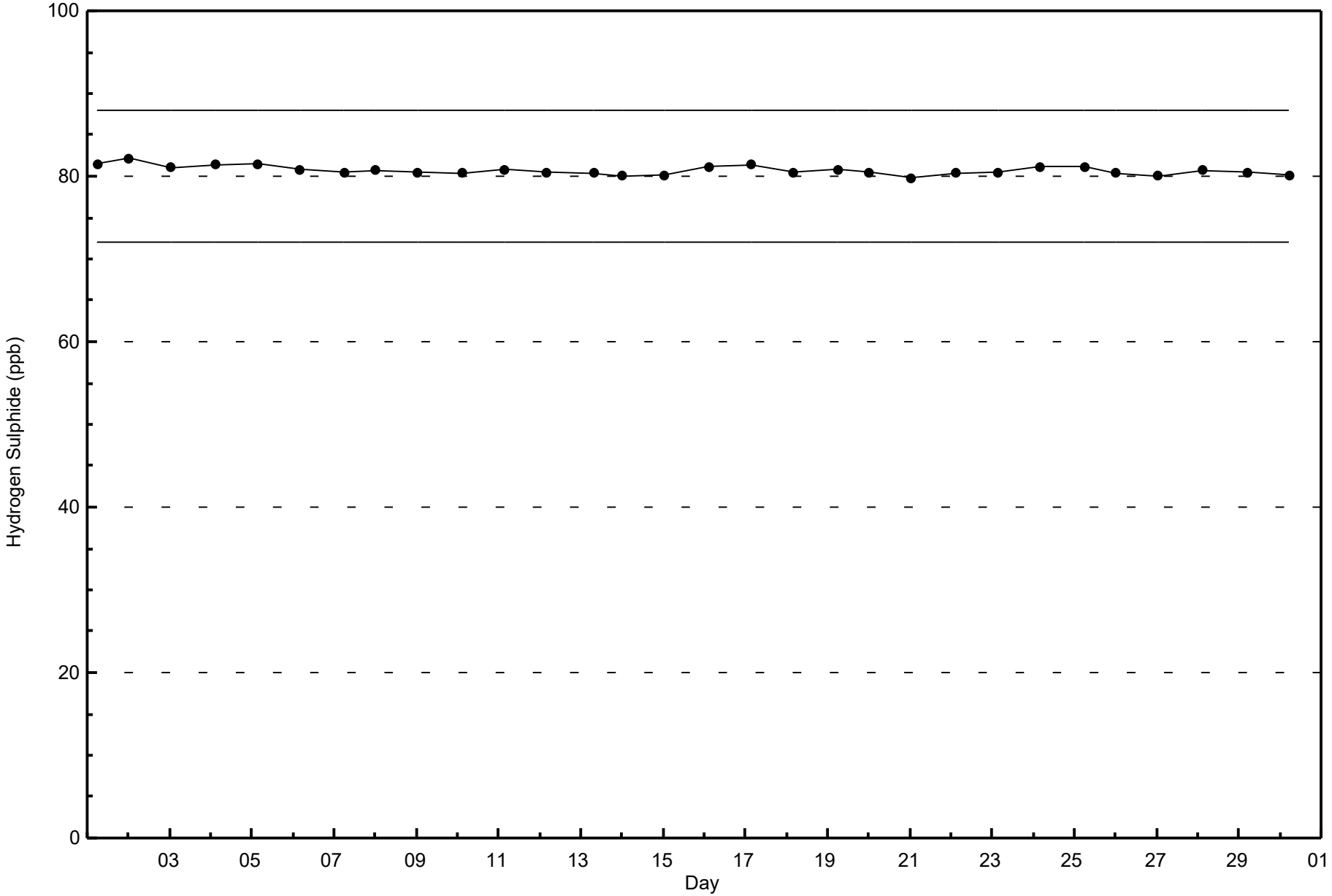


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025

Maximum Value: 4.6 ppm on Sep 30 10:00

Maximum Daily Average: 3.2 ppm on Sep 13

Minimum Value: 2.0 ppm on Sep 18 18:00

Minimum Daily Average: 2.1 ppm on Sep 22

Maximum Diurnal Average: 2.7 ppm at hour 2

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.38 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.6 P_{90} = 2.9 P_{99} = 4.2

Hours in Service:	720
Hours of Data:	654
Hours of Missing Data:	66
Hours of Calibration:	39
Percent Operational Time:	96.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	UO	UO	UO	2.2	Z	UO	UO	UO	UO	UO	2.1	UO	UO	UO	UO	UO	UO	2.0	UO	UO	2.1	UO	UO	UO	--	2.2
2-Sep	UO	UO	UO	UO	2.3	Z	UO	UO	UO	UO	C	C	C	C	C	C	C	C	C	2.2	2.4	2.4	2.4	2.3	--	2.4
3-Sep	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.2	2.3	2.3	2.2	2.4	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.6
4-Sep	2.2	Z	2.2	2.1	2.1	2.1	2.3	2.4	2.1	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	2.4
5-Sep	2.3	2.6	Z	2.8	2.9	2.9	2.9	2.6	2.7	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.5	2.7	2.8	2.8	2.5	2.9
6-Sep	2.5	2.8	2.6	Z	2.6	2.7	2.7	2.6	2.7	2.6	2.8	2.6	2.2	2.1	2.1	2.1	2.1	2.2	2.5	2.8	2.7	2.8	3.1	3.2	2.6	3.2
7-Sep	3.4	3.4	3.0	2.9	Z	2.7	2.9	3.1	3.0	3.1	3.0	2.6	2.5	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.6	3.4
8-Sep	2.3	2.1	2.1	2.1	2.2	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.7	2.8	2.5	2.2	2.3	2.4	2.5	2.4	2.4	2.4	2.3	2.8
9-Sep	Z	2.8	2.6	2.5	2.6	2.7	2.7	2.6	2.5	3.1	3.0	2.7	2.4	2.0	2.1	2.1	2.2	2.2	2.8	2.7	2.3	2.4	2.9	3.2	2.6	3.2
10-Sep	3.4	Z	3.7	3.1	2.9	2.7	2.7	3.0	2.9	3.1	3.1	2.2	2.1	2.2	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.2	2.3	2.4	2.5	3.7
11-Sep	2.3	2.6	Z	2.8	2.8	2.9	2.7	2.4	2.6	2.5	2.8	2.5	2.2	2.0	2.0	2.0	2.0	2.1	2.2	2.6	2.3	2.2	2.4	2.9	2.4	2.9
12-Sep	3.1	2.8	2.8	Z	2.9	3.4	2.8	2.6	2.7	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.6	2.4	2.3	2.3	2.7	3.0	3.3	2.5	3.4
13-Sep	3.4	3.1	2.9	3.0	Z	2.6	2.9	2.9	3.3	2.8	2.8	2.6	2.5	2.3	2.2	2.6	2.9	3.6	4.0	4.2	4.3	4.4	3.8	3.5	3.2	4.4
14-Sep	4.1	4.3	3.5	3.4	4.2	Z	3.7	3.4	2.9	2.6	2.5	3.1	2.9	2.4	2.3	2.8	2.4	2.2	2.0	2.0	2.2	2.2	2.3	2.4	2.9	4.3
15-Sep	Z	2.7	2.2	2.3	2.5	2.2	2.3	2.3	2.2	2.1	2.7	2.7	2.6	2.2	2.1	2.1	2.1	2.0	2.1	2.3	2.1	2.4	2.3	2.4	2.3	2.7
16-Sep	2.1	Z	2.4	2.5	2.5	2.1	2.2	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.5	2.6	2.6	2.9	2.5	2.4	2.3	2.3	2.9
17-Sep	2.4	2.5	Z	2.4	2.5	2.4	2.6	2.6	2.5	2.5	2.5	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.3	2.3	2.2	2.3	2.4	2.3	2.6
18-Sep	2.4	2.4	2.2	Z	2.3	2.4	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.4
19-Sep	2.0	2.1	2.1	2.3	Z	2.3	2.3	2.1	2.2	2.5	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.7	3.0	2.2	3.0
20-Sep	3.2	3.0	3.1	2.7	2.7	Z	2.5	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	3.2
21-Sep	Z	3.1	3.3	2.8	3.3	3.3	2.7	2.8	3.0	4.0	2.6	2.6	2.6	2.1	2.2	2.1	2.0	2.1	2.2	2.5	2.4	2.0	2.0	2.0	2.6	4.0
22-Sep	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.6	2.1	2.2	2.1	2.1	2.1	2.1	2.6
23-Sep	2.2	2.6	Z	2.3	2.2	2.5	2.6	2.5	3.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.7	2.2	2.2	3.2
24-Sep	2.3	2.3	2.2	Z	2.2	2.2	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.2	2.3	2.7	2.2	2.7
25-Sep	2.7	2.3	2.4	2.6	Z	2.5	2.3	2.3	2.4	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.5	2.0	2.0	2.0	2.2	2.7
26-Sep	2.0	2.0	2.1	2.1	2.1	Z	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	2.0	2.1	2.6	2.1	2.1	2.6
27-Sep	Z	2.4	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	2.1	2.2	2.0	2.0	2.3	2.5	2.1	2.5
28-Sep	2.4	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.4	2.4	2.3	2.3	2.1	2.1	2.4
29-Sep	2.2	2.3	Z	2.2	2.1	2.6	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.6	2.5	2.7	3.1	2.9	2.3	3.1
30-Sep	2.9	2.5	2.6	Z	2.5	3.1	3.7	4.0	4.2	4.6	3.5	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.6	4.6
	2.6	2.7	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.5	2.5	Diurnal Average	
	4.1	4.3	3.7	3.4	4.2	3.4	3.7	4.0	4.2	4.6	3.5	3.1	2.9	2.5	2.7	2.8	2.9	3.6	4.0	4.2	4.3	4.4	3.8	3.5	Diurnal Maximum	

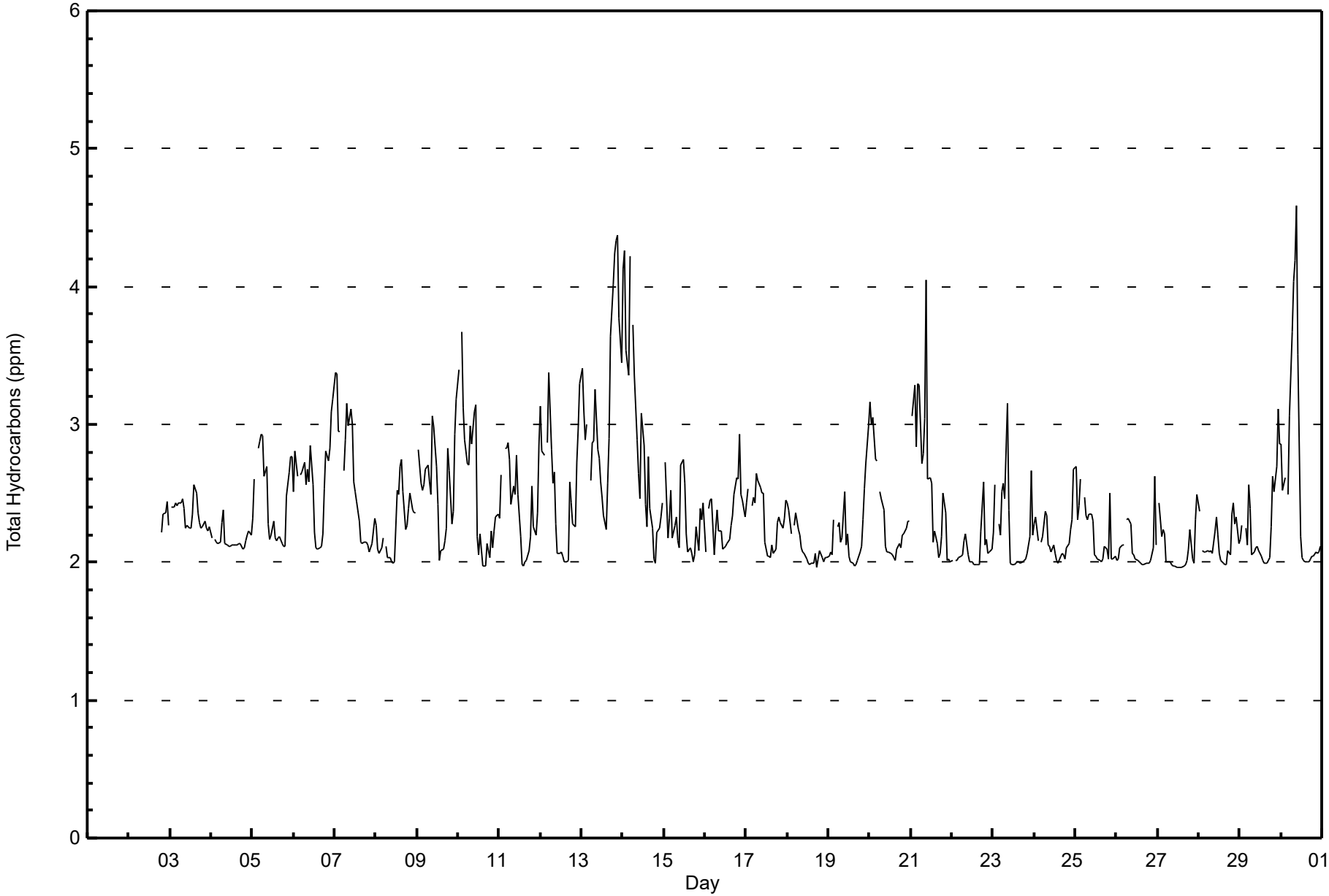
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	129	19.72	19.72
2.1 - 3.0	476	72.78	92.51
3.1 - 10.0	49	7.49	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	6	2	3	0	0	0	8	16	3	17	15	37	14	4	3	1	129
2.1 - 3.0	15	10	14	7	14	51	167	32	17	12	6	7	28	29	37	22	468
3.1 - 10.0	1	2	1	2	1	4	16	1	0	1	0	0	5	6	6	2	48
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	14	18	9	15	55	191	49	20	30	21	44	47	39	46	25	645

Total Number of Valid Hours: 645

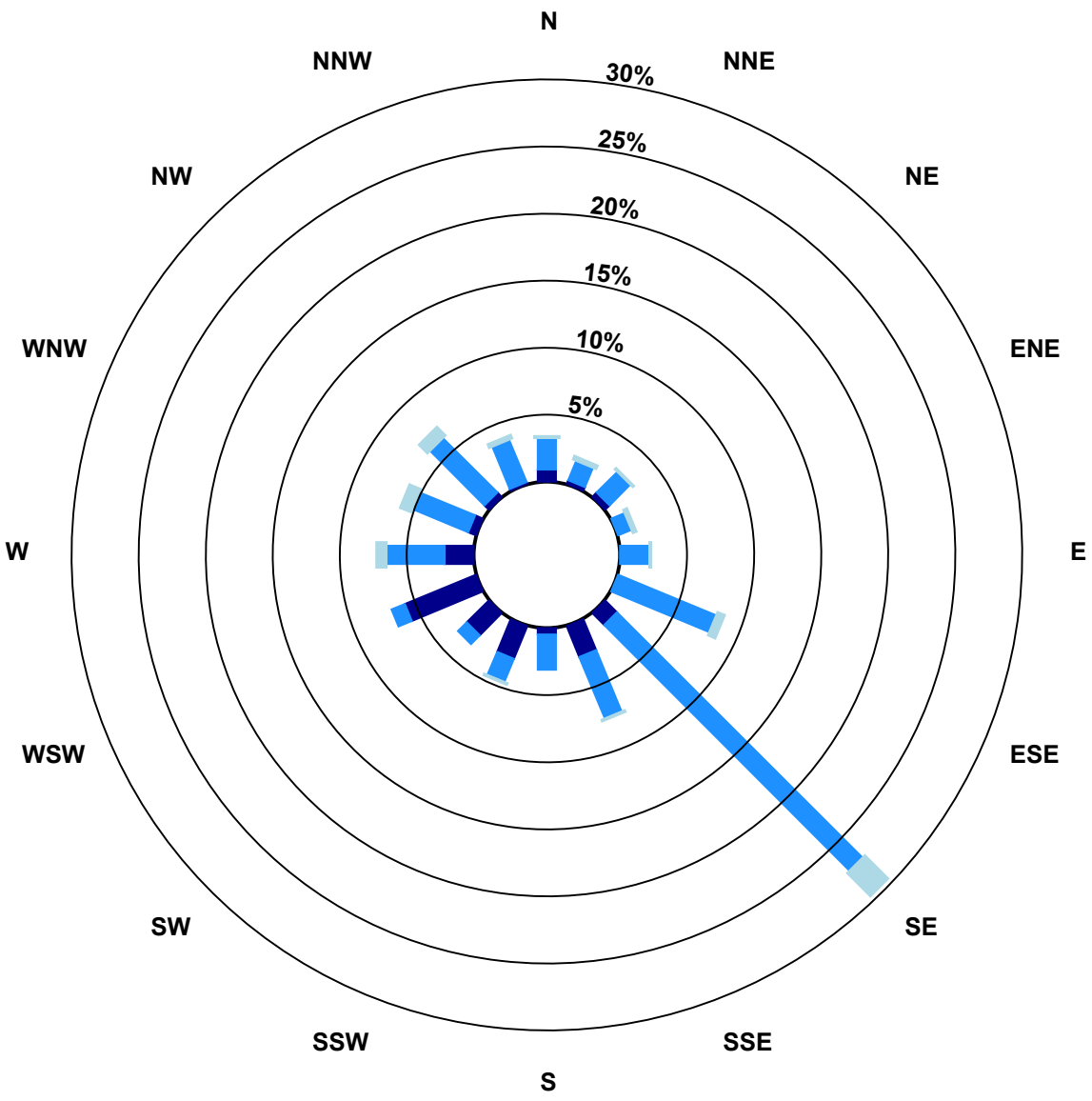
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

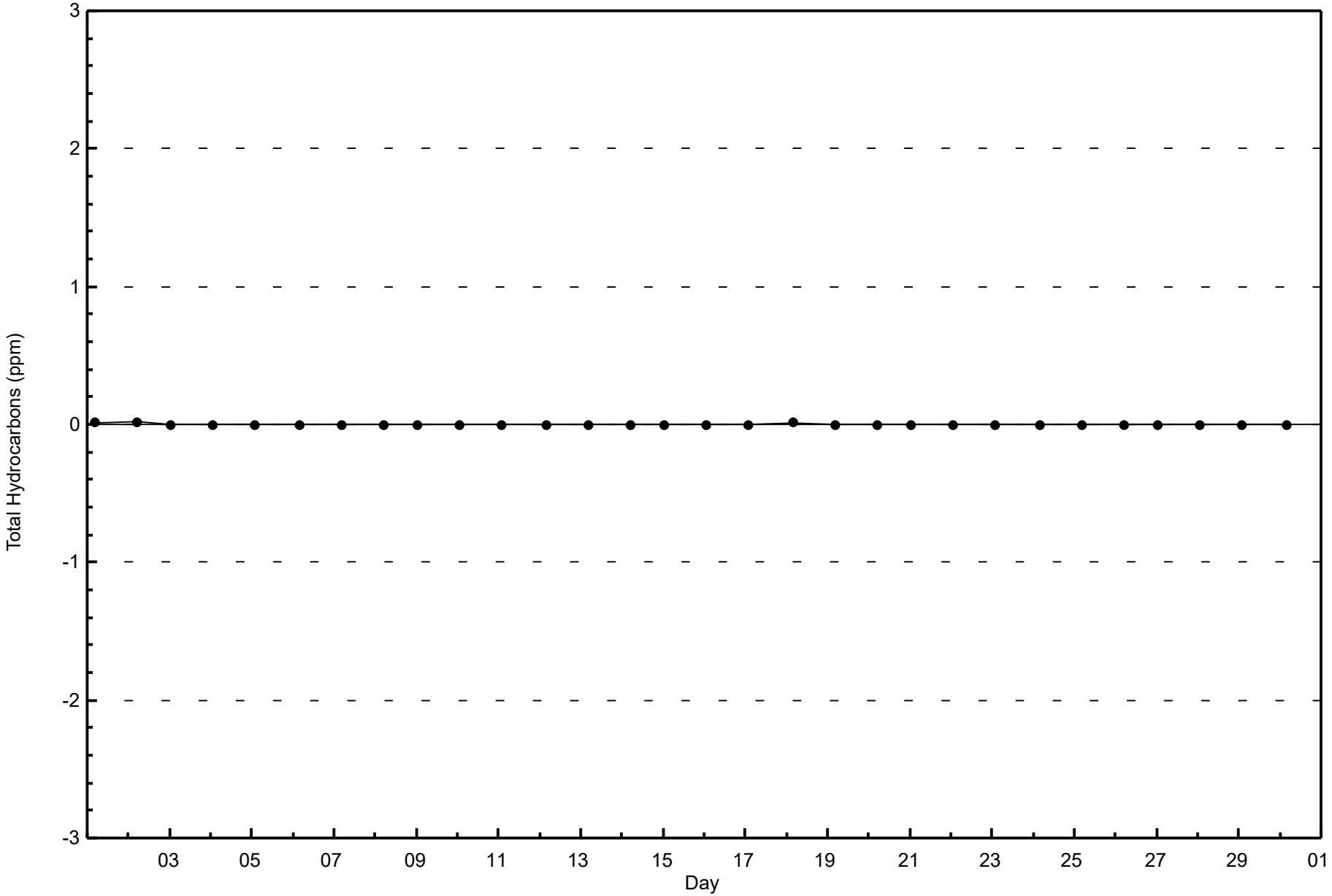
Total Number of Valid Hours: 645

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025

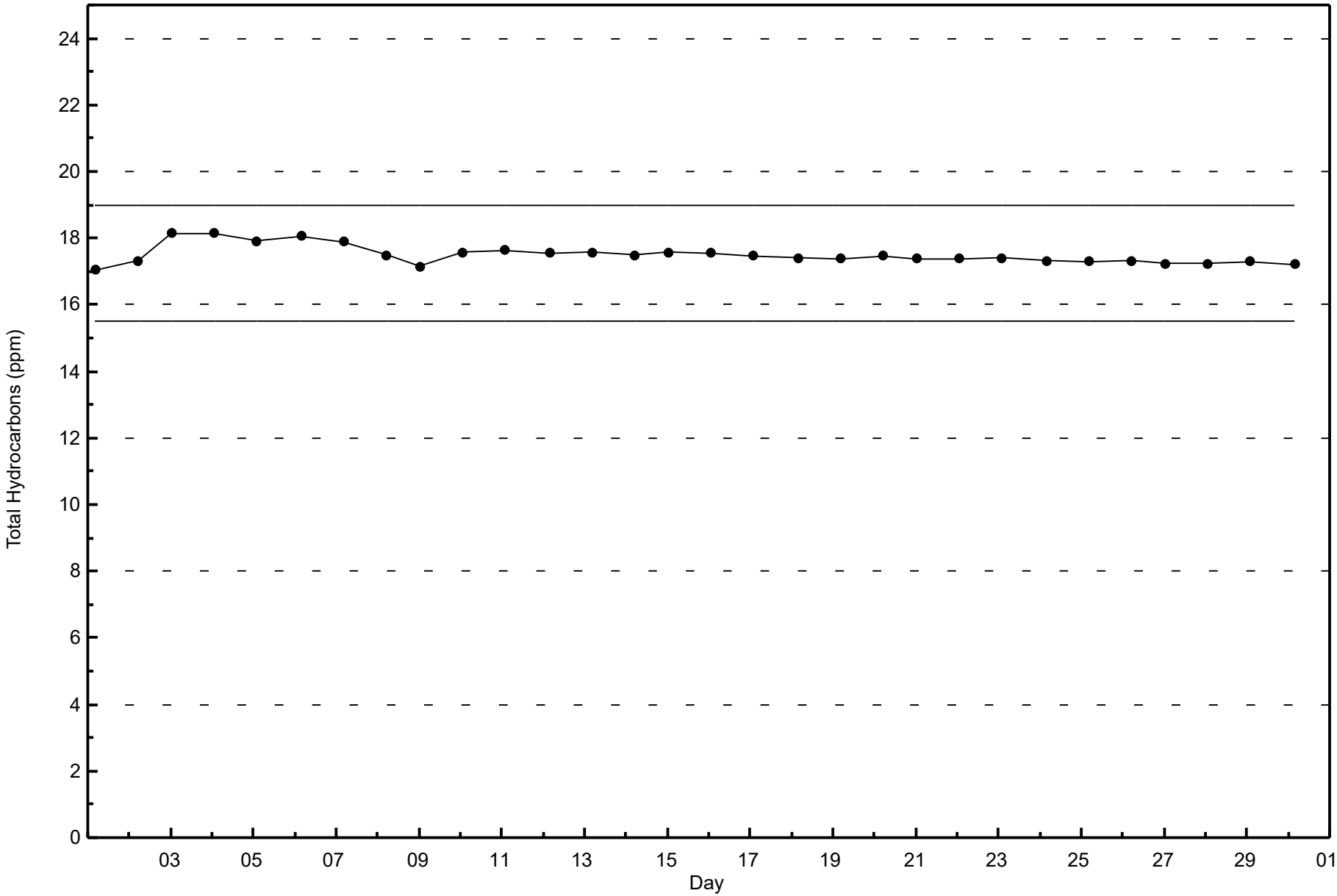


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Lower Camp - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.7 ppm on Sep 30 10:00 Maximum Daily Average: 2.5 ppm on Sep 13

Minimum Value: 2.0 ppm on Sep 9 14:00 Minimum Daily Average: 2.0 ppm on Sep 18
Maximum Diurnal Average: 2.3 ppm at hour 2 Minimum Diurnal Average: 2.1 ppm at hour 15
Monthly Average: 2.20 ppm Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	654
Hours of Missing Data:	66
Hours of Calibration:	39
Percent Operational Time:	96.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	UO	UO	UO	2.2	Z	UO	UO	UO	UO	UO	2.1	UO	UO	UO	UO	UO	UO	2.0	UO	UO	2.1	UO	UO	UO	--	2.2
2-Sep	UO	UO	UO	UO	2.3	Z	UO	UO	UO	UO	C	C	C	C	C	C	C	C	C	2.1	2.2	2.3	2.3	2.2	--	2.3
3-Sep	Z	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	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4
4-Sep	2.2	Z	2.2	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	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3
5-Sep	2.3	2.4	Z	2.5	2.6	2.6	2.5	2.3	2.3	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.4	2.4	2.4	2.3	2.6
6-Sep	2.2	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.5	2.7	2.6	2.7	2.8	2.7	2.4	2.8
7-Sep	2.8	2.8	2.5	2.5	Z	2.3	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.8
8-Sep	2.2	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.3
9-Sep	Z	2.4	2.4	2.4	2.4	2.5	2.4	2.2	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.6	2.5	2.2	2.3	2.5	2.5	2.3	2.6
10-Sep	2.6	Z	3.1	2.6	2.6	2.5	2.5	2.8	2.6	2.4	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.1	2.1	2.2	2.3	2.3	3.1
11-Sep	2.2	2.4	Z	2.5	2.5	2.5	2.4	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.1	2.2	2.2	2.5
12-Sep	2.3	2.2	2.2	Z	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	2.4	2.3	2.2	2.2	2.5	2.6	2.7	2.2	2.7
13-Sep	2.6	2.4	2.4	2.3	Z	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.6	2.8	2.9	3.0	3.2	3.4	3.0	2.8	2.5	3.4
14-Sep	3.4	3.5	3.0	2.9	3.5	Z	3.2	2.9	2.3	2.3	2.2	2.4	2.4	2.2	2.1	2.3	2.2	2.1	2.0	2.0	2.0	2.2	2.2	2.3	2.5	3.5
15-Sep	Z	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.3	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.2	2.1	2.2	2.2	2.3	2.1	2.3
16-Sep	2.1	Z	2.2	2.3	2.3	2.0	2.2	2.3	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.3	2.2	2.2	2.1	2.2	2.3
17-Sep	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.3
18-Sep	2.1	2.1	2.1	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	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.2
19-Sep	2.0	2.1	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	2.1	2.1	2.3	2.5	2.6	2.7	2.1	2.7
20-Sep	2.4	2.3	2.3	2.2	2.2	Z	2.2	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	2.4
21-Sep	Z	2.6	2.8	2.5	2.9	2.7	2.3	2.3	2.3	2.5	2.3	2.4	2.3	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.3	2.9
22-Sep	2.0	Z	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	2.0	2.2	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.5
23-Sep	2.2	2.5	Z	2.2	2.2	2.4	2.4	2.4	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.5
24-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.2	2.3	2.3	2.1	2.3
25-Sep	2.2	2.1	2.1	2.2	Z	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	2.4	2.0	2.0	2.0	2.1	2.4
26-Sep	2.0	2.0	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	2.5	2.1	2.1	2.5
27-Sep	Z	2.3	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	2.0	2.0	2.1	2.2	2.0	2.0	2.1	2.2	2.1	2.3
28-Sep	2.2	Z	2.1	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	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2
29-Sep	2.0	2.1	Z	2.1	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	2.1	2.3	2.2	2.3	2.5	2.3	2.1	2.5
30-Sep	2.3	2.3	2.2	Z	2.3	2.8	3.3	3.5	3.6	3.7	2.9	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	2.4	3.7
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	Diurnal Average	
	3.4	3.5	3.1	2.9	3.5	2.8	3.3	3.5	3.6	3.7	2.9	2.4	2.4	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.2	3.4	3.0	2.8	Diurnal Maximum	

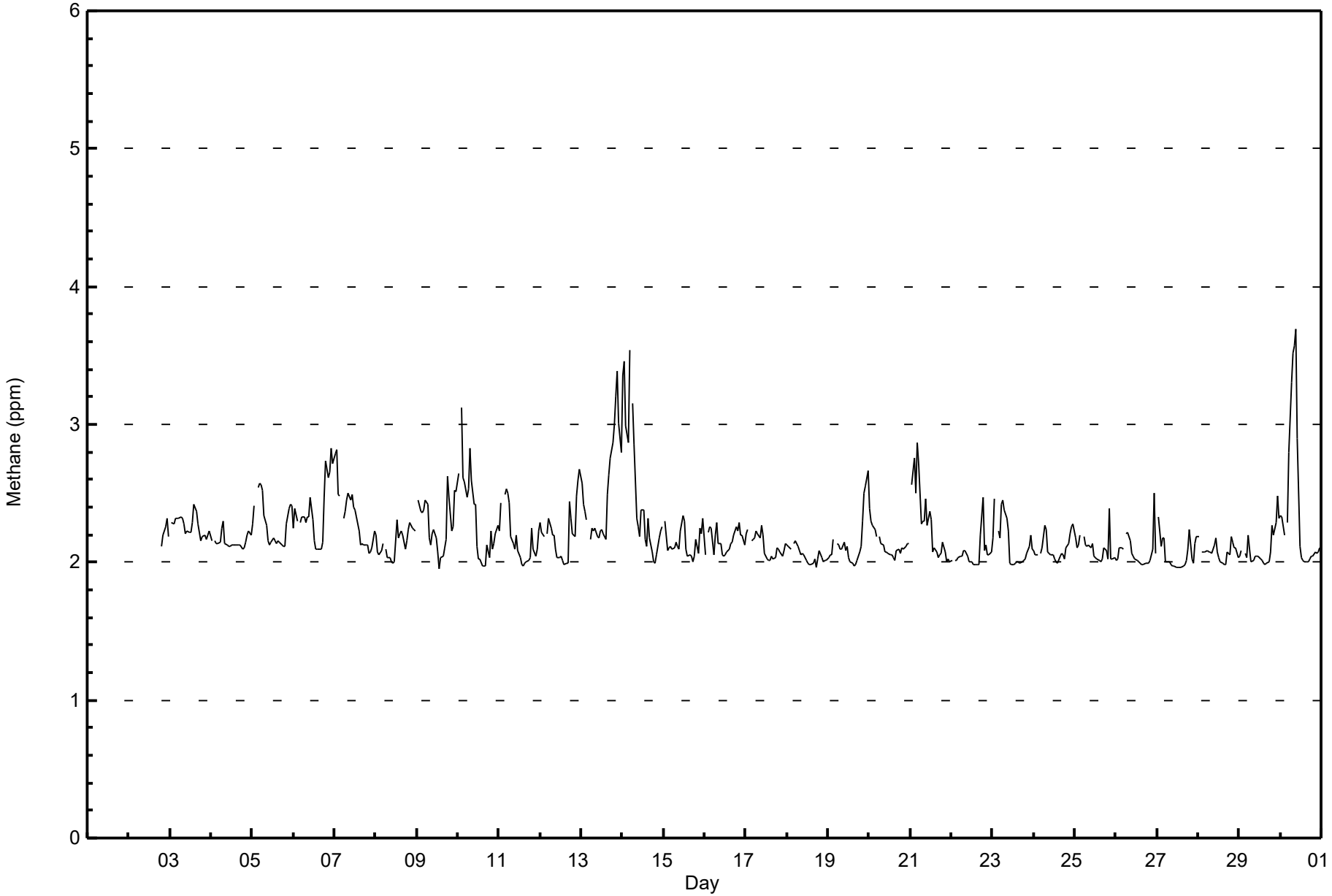
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Lower Camp - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Methane (CH_4) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	165	25.23	25.23
2.1 - 3.0	478	73.09	98.32
3.1 - 10.0	11	1.68	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	6	2	5	0	0	3	25	21	3	18	15	38	16	6	6	1	165
2.1 - 3.0	16	12	12	9	15	52	165	28	17	12	6	6	27	31	38	24	470
3.1 - 10.0	0	0	1	0	0	0	1	0	0	0	0	0	4	2	2	0	10
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	14	18	9	15	55	191	49	20	30	21	44	47	39	46	25	645

Total Number of Valid Hours: 645

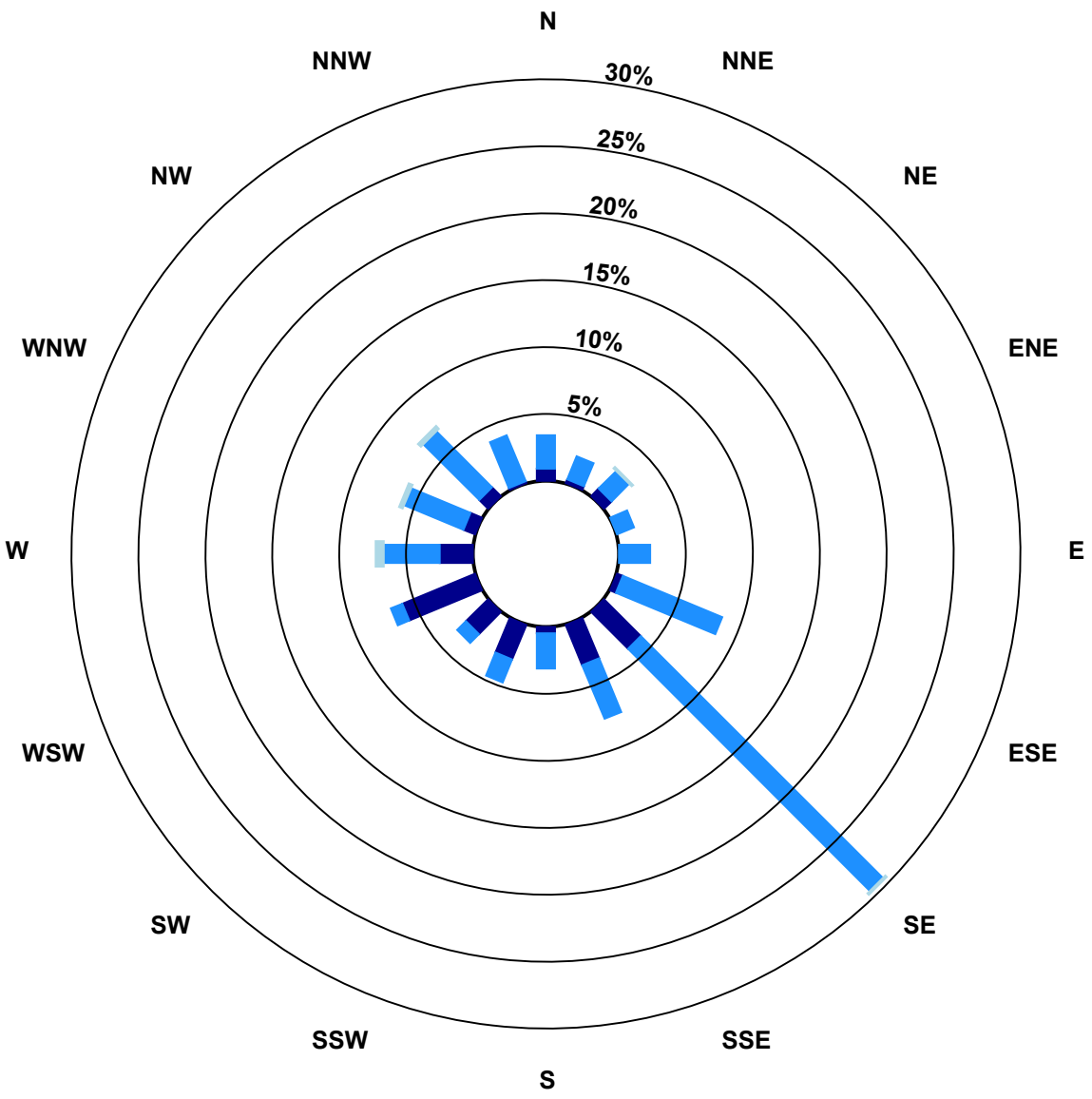
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

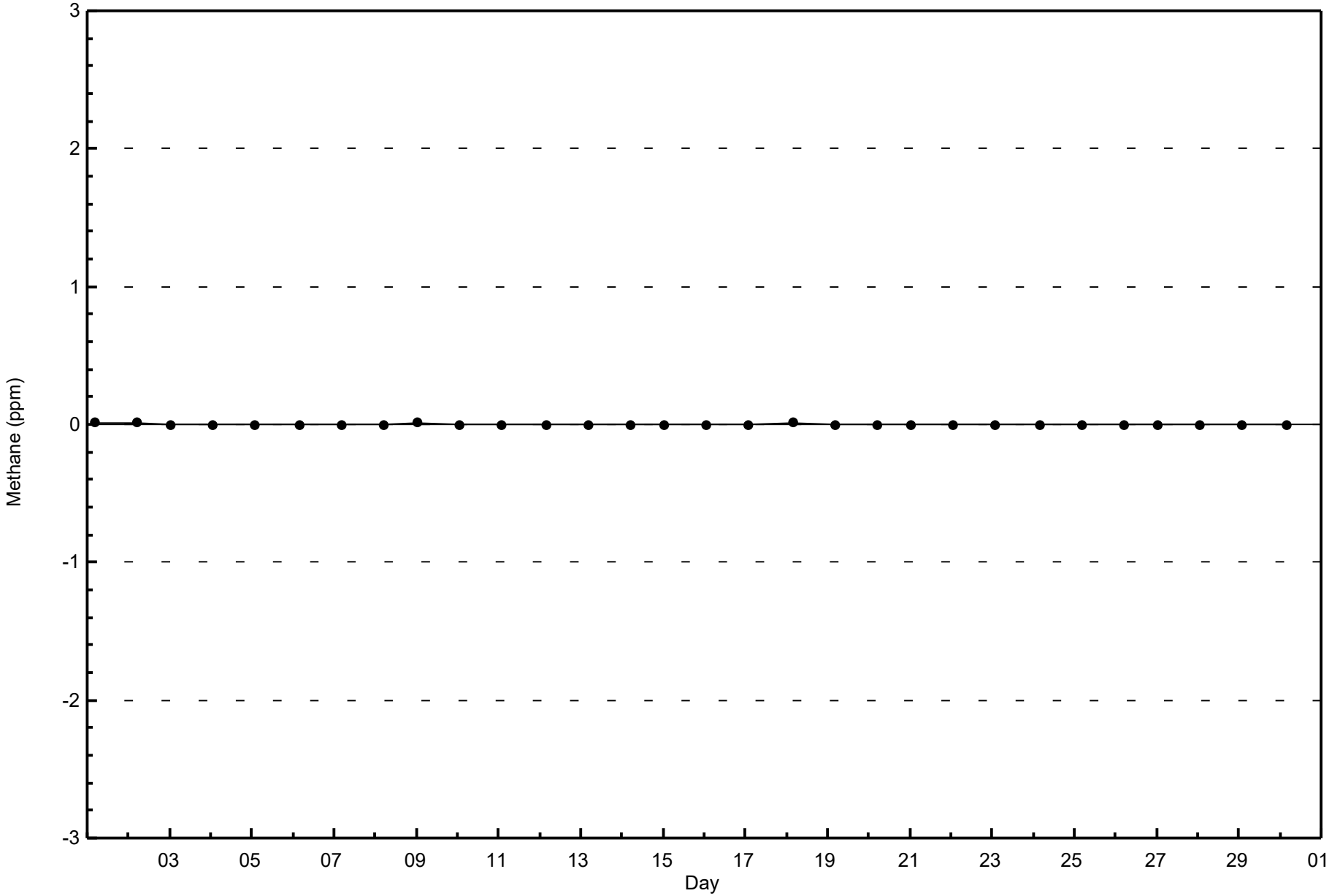
Total Number of Valid Hours: 645

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Lower Camp - September 2025

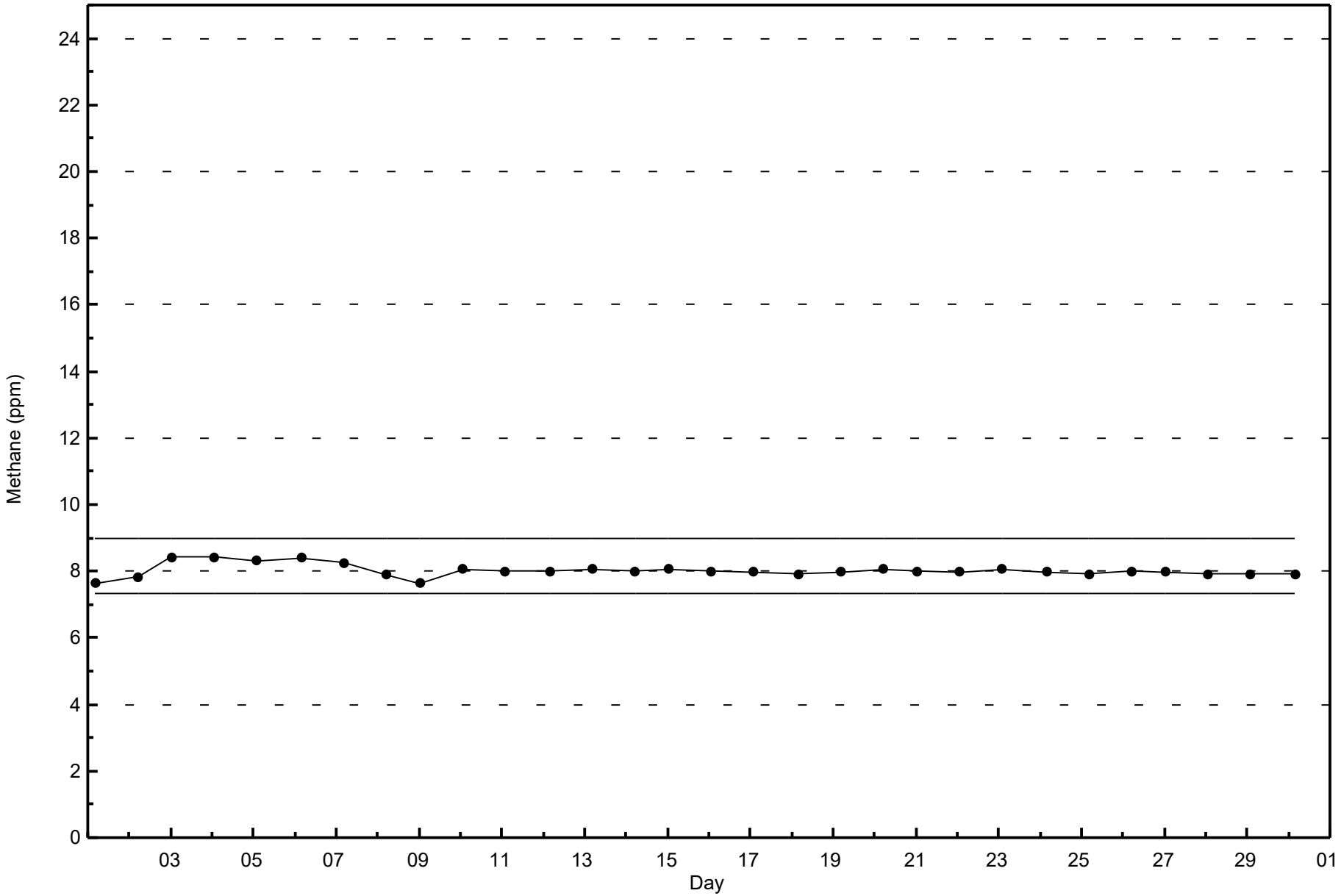


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025

Maximum Value: 1.580 ppm on Sep 21 10:00

Maximum Daily Average: 0.633 ppm on Sep 13

Minimum Value: 0.000 ppm on Sep 1 04:00

Minimum Daily Average: 0.009 ppm on Sep 4

Maximum Diurnal Average: 0.313 ppm at hour 1

Minimum Diurnal Average: 0.045 ppm at hour 15

Monthly Average: 0.175 ppm

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} = 0.9

Hours in Service:	720
Hours of Data:	654
Hours of Missing Data:	66
Hours of Calibration:	39
Percent Operational Time:	96.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	UO	UO	UO	0.000	Z	UO	UO	UO	UO	UO	0.000	UO	UO	UO	UO	UO	UO	0.000	UO	UO	0.000	UO	UO	UO	--	0.000
2-Sep	UO	UO	UO	UO	0.000	Z	UO	UO	UO	UO	C	C	C	C	C	C	C	C	C	0.098	0.157	0.102	0.120	0.084	--	0.157
3-Sep	Z	0.109	0.120	0.116	0.099	0.108	0.099	0.137	0.114	0.043	0.045	0.035	0.029	0.062	0.146	0.137	0.081	0.072	0.094	0.069	0.104	0.077	0.035	0.038	0.086	0.146
4-Sep	0.025	Z	0.012	0.006	0.004	0.002	0.046	0.079	0.002	0.002	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.008	0.005	0.001	0.008	0.005	0.003	0.000	0.009	0.079
5-Sep	0.037	0.192	Z	0.285	0.297	0.366	0.402	0.285	0.429	0.120	0.035	0.058	0.124	0.020	0.019	0.023	0.043	0.009	0.002	0.001	0.204	0.266	0.347	0.353	0.170	0.429
6-Sep	0.271	0.420	0.321	Z	0.341	0.330	0.393	0.278	0.347	0.247	0.374	0.260	0.066	0.004	0.003	0.011	0.014	0.055	0.059	0.079	0.118	0.176	0.257	0.472	0.213	0.472
7-Sep	0.596	0.545	0.457	0.470	Z	0.345	0.519	0.701	0.485	0.658	0.505	0.184	0.139	0.115	0.068	0.023	0.010	0.022	0.021	0.008	0.002	0.028	0.032	0.093	0.262	0.701
8-Sep	0.076	0.017	0.015	0.025	0.038	Z	0.025	0.001	0.002	0.000	0.004	0.000	0.218	0.314	0.487	0.521	0.312	0.133	0.119	0.153	0.217	0.130	0.125	0.128	0.133	0.521
9-Sep	Z	0.365	0.203	0.165	0.181	0.226	0.278	0.402	0.368	0.852	0.747	0.516	0.346	0.059	0.051	0.051	0.057	0.079	0.202	0.194	0.054	0.114	0.407	0.673	0.286	0.852
10-Sep	0.758	Z	0.550	0.508	0.304	0.237	0.174	0.166	0.264	0.673	0.718	0.073	0.030	0.178	0.000	0.000	0.000	0.002	0.002	0.000	0.006	0.091	0.115	0.087	0.215	0.758
11-Sep	0.087	0.205	Z	0.331	0.290	0.364	0.315	0.237	0.426	0.393	0.583	0.405	0.144	0.004	0.001	0.008	0.014	0.070	0.146	0.305	0.161	0.151	0.257	0.624	0.240	0.624
12-Sep	0.848	0.593	0.595	Z	0.652	1.061	0.566	0.369	0.458	0.182	0.031	0.026	0.029	0.026	0.020	0.017	0.016	0.145	0.112	0.072	0.065	0.246	0.375	0.622	0.310	1.061
13-Sep	0.831	0.678	0.521	0.687	Z	0.427	0.615	0.648	0.999	0.628	0.579	0.361	0.226	0.133	0.075	0.076	0.268	0.886	1.152	1.241	1.133	0.982	0.759	0.653	0.633	1.241
14-Sep	0.776	0.799	0.542	0.485	0.682	Z	0.567	0.499	0.573	0.390	0.272	0.692	0.468	0.247	0.142	0.446	0.220	0.171	0.020	0.001	0.172	0.067	0.104	0.170	0.370	0.799
15-Sep	Z	0.431	0.093	0.219	0.410	0.084	0.168	0.183	0.039	0.010	0.484	0.404	0.280	0.115	0.032	0.049	0.025	0.000	0.008	0.088	0.021	0.150	0.093	0.108	0.152	0.484
16-Sep	0.015	Z	0.180	0.189	0.206	0.005	0.047	0.088	0.090	0.092	0.032	0.053	0.058	0.067	0.075	0.125	0.193	0.295	0.357	0.375	0.636	0.300	0.253	0.199	0.171	0.636
17-Sep	0.220	0.291	Z	0.255	0.298	0.256	0.408	0.390	0.365	0.231	0.304	0.075	0.024	0.025	0.015	0.077	0.040	0.057	0.175	0.229	0.214	0.197	0.242	0.310	0.204	0.408
18-Sep	0.301	0.263	0.109	Z	0.128	0.202	0.116	0.109	0.053	0.011	0.007	0.004	0.000	0.000	0.002	0.004	0.043	0.000	0.000	0.000	0.000	0.000	0.015	0.019	0.060	0.301
19-Sep	0.006	0.015	0.001	0.140	Z	0.124	0.166	0.049	0.082	0.366	0.035	0.095	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.155	0.323	0.069	0.366
20-Sep	0.768	0.700	0.784	0.514	0.541	Z	0.330	0.315	0.252	0.039	0.001	0.017	0.009	0.005	0.000	0.001	0.006	0.033	0.039	0.095	0.106	0.129	0.161	0.158	0.218	0.784
21-Sep	Z	0.496	0.527	0.329	0.424	0.574	0.436	0.483	0.742	1.580	0.341	0.247	0.269	0.073	0.120	0.058	0.000	0.005	0.123	0.352	0.279	0.003	0.008	0.000	0.325	1.580
22-Sep	0.002	Z	0.000	0.000	0.000	0.000	0.013	0.079	0.120	0.018	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.036	0.111	0.038	0.040	0.015	0.019	0.023	0.022	0.120
23-Sep	0.046	0.105	Z	0.044	0.024	0.091	0.122	0.090	0.829	0.155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.468	0.102	0.093	0.829
24-Sep	0.191	0.269	0.103	Z	0.090	0.084	0.108	0.096	0.048	0.050	0.022	0.069	0.040	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.003	0.029	0.051	0.395	0.072	0.395
25-Sep	0.514	0.202	0.289	0.416	Z	0.290	0.211	0.184	0.229	0.241	0.167	0.019	0.004	0.000	0.000	0.000	0.000	0.008	0.014	0.002	0.111	0.006	0.000	0.005	0.126	0.514
26-Sep	0.000	0.000	0.000	0.014	0.034	Z	0.100	0.107	0.120	0.000	0.003	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.124	0.054	0.025	0.124
27-Sep	Z	0.099	0.069	0.057	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.177	0.306	0.032	0.306
28-Sep	0.190	Z	0.012	0.000	0.000	0.002	0.000	0.001	0.002	0.097	0.157	0.127	0.033	0.009	0.000	0.000	0.000	0.011	0.003	0.169	0.288	0.175	0.223	0.102	0.070	0.288
29-Sep	0.128	0.182	Z	0.182	0.096	0.366	0.298	0.046	0.060	0.057	0.065	0.045	0.019	0.001	0.000	0.003	0.000	0.029	0.180	0.358	0.308	0.407	0.627	0.538	0.174	0.627
30-Sep	0.517	0.198	0.413	Z	0.201	0.261	0.367	0.514	0.615	0.888	0.614	0.069	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.203	0.888
	0.313	0.312	0.257	0.226	0.215	0.242	0.246	0.233	0.290	0.287	0.211	0.137	0.092	0.052	0.045	0.058	0.048	0.073	0.105	0.135	0.147	0.136	0.191	0.229	Diurnal Average	
	0.848	0.799	0.784	0.687	0.682	1.061	0.615	0.701	0.999	1.580	0.747	0.692	0.468	0.314	0.487	0.521	0.312	0.886	1.152	1.241	1.133	0.982	0.759	0.673	Diurnal Maximum	

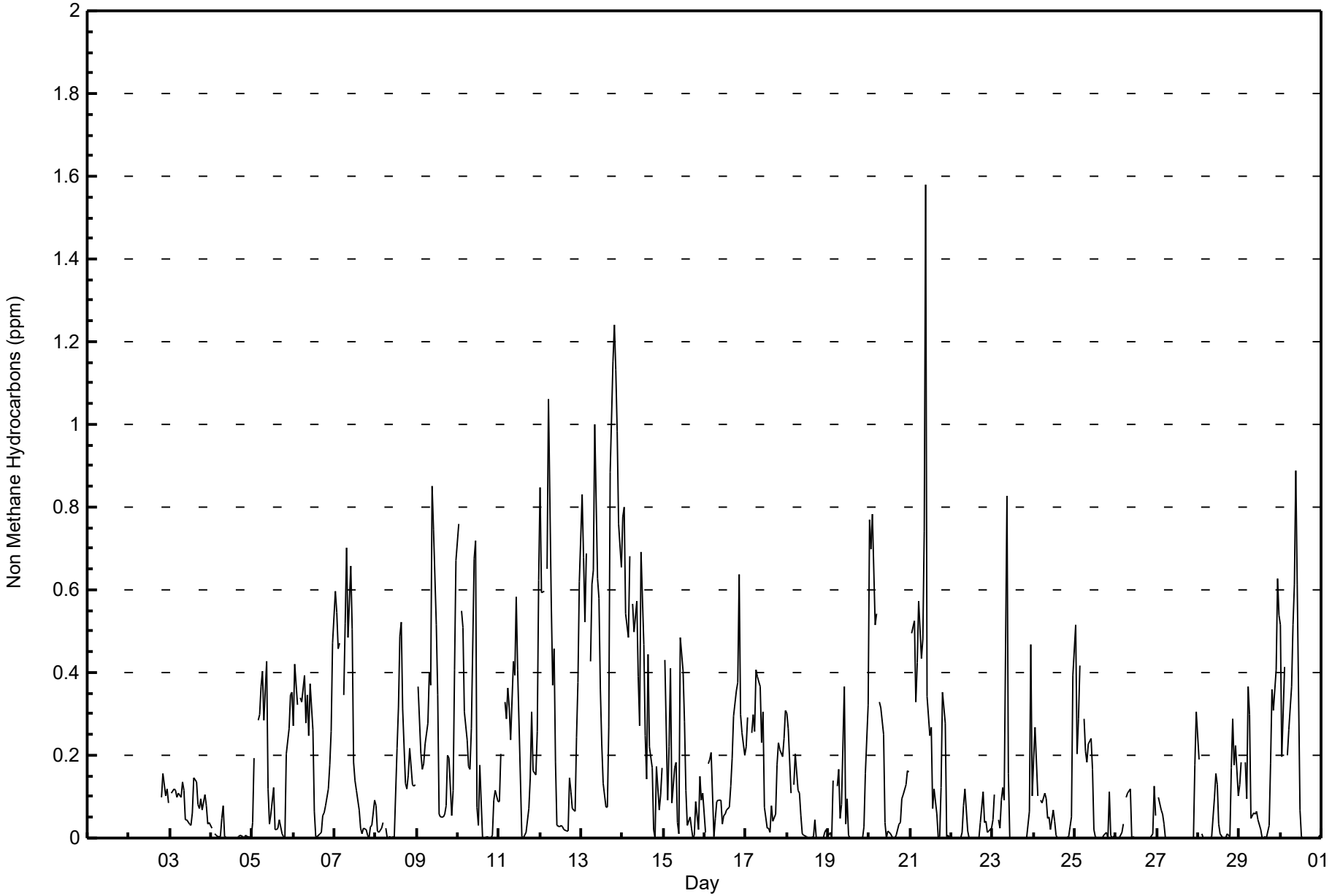
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	164	25.08	25.08
0.006 - 0.05	119	18.20	43.27
0.06 - 0.1	125	19.11	62.39
> 0.1	246	37.61	100.00

Total Number of Valid Hours: 654

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	11	6	4	2	1	1	6	13	4	14	15	34	21	8	18	5	163
0.006 - 0.05	4	0	3	2	3	6	23	19	6	10	3	9	5	11	8	5	117
0.06 - 0.1	5	3	2	1	2	9	46	10	8	3	2	1	6	10	6	9	123
> 0.1	2	5	9	4	9	39	116	7	2	3	1	0	15	10	14	6	242
Totals	22	14	18	9	15	55	191	49	20	30	21	44	47	39	46	25	645

Total Number of Valid Hours: 645

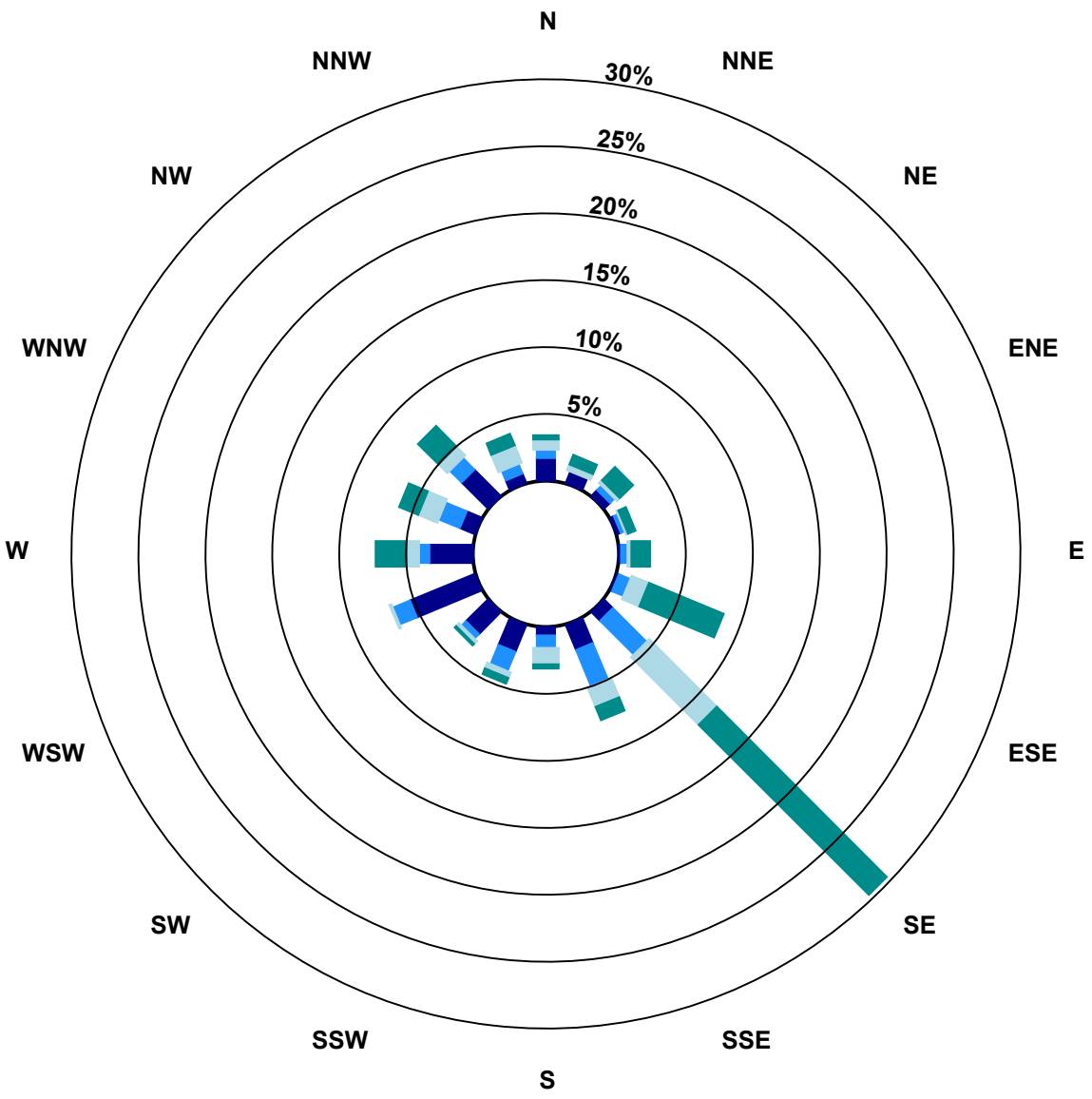
Total Number of Hours: 720

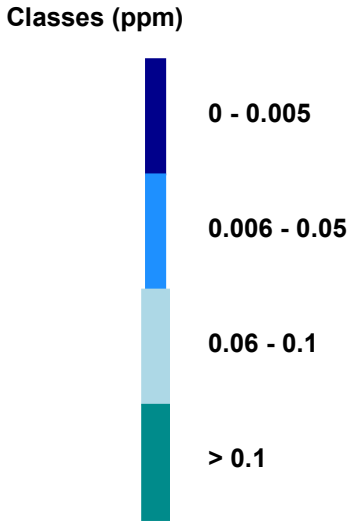
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp





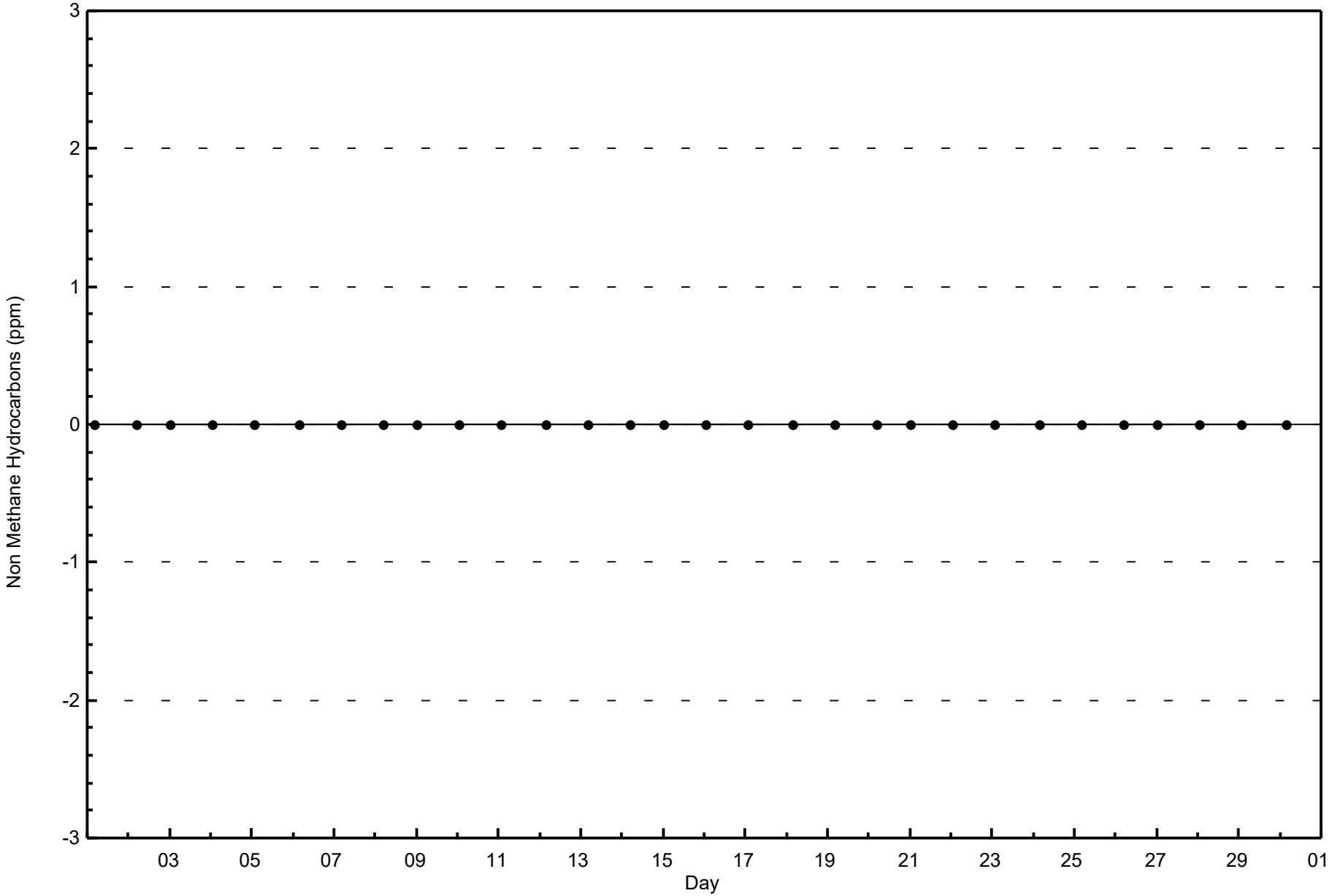
Total Number of Valid Hours: 645

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025

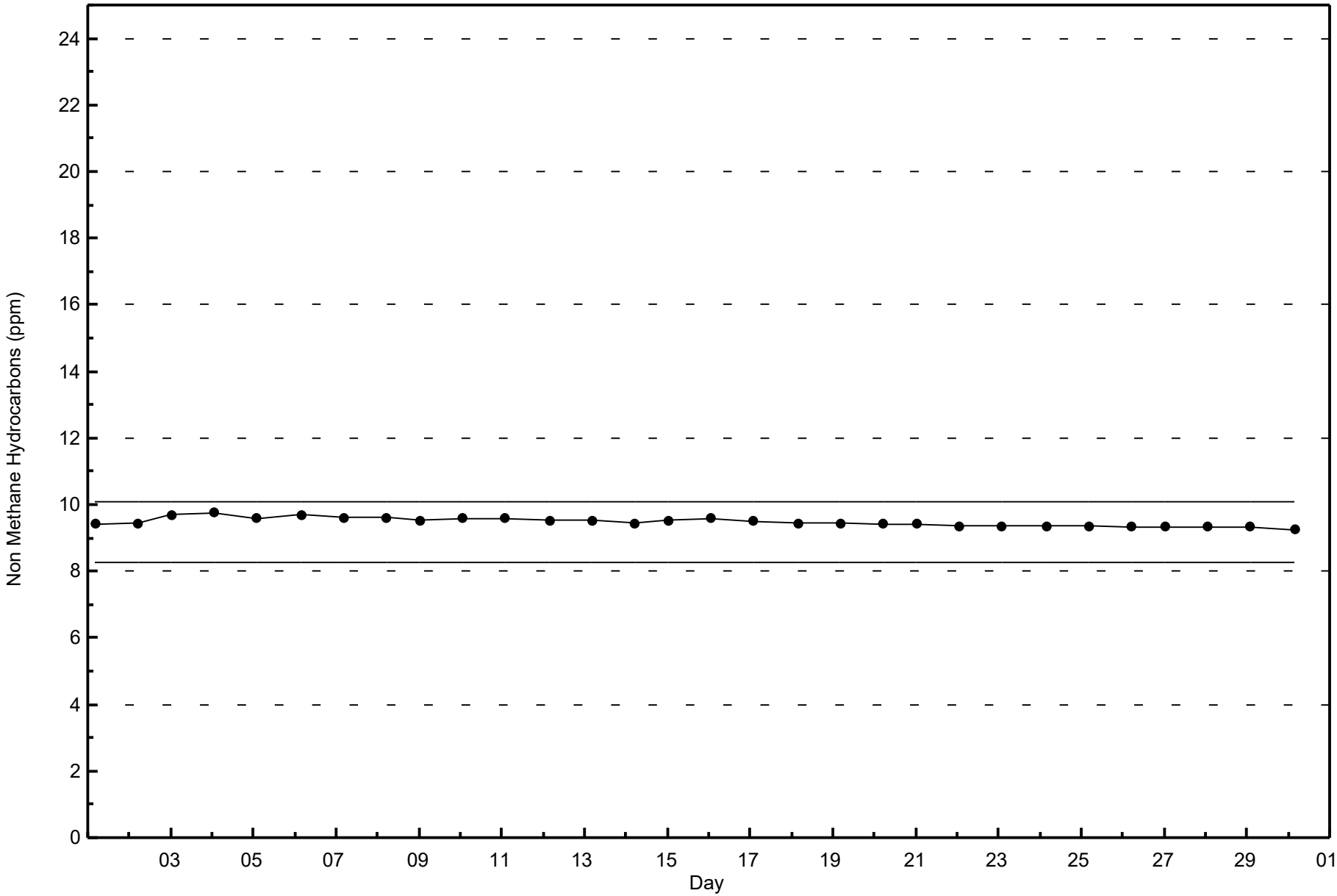


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - September 2025



Maximum Value: 30.6 C on Sep 12 16:00
Maximum Daily Average: 20.9 C on Sep 12

Minimum Value: 3.6 C on Sep 25 07:00
Minimum Daily Average: 11.4 C on Sep 25
Maximum Diurnal Average: 22.0 C at hour 16
Minimum Diurnal Average: 10.5 C at hour 6
Monthly Average: 15.61 C
Percentiles: P_1 = 5.2 P_{10} = 9.7 Q_1 = 12.2 Median = 15.1 Q_3 = 18.7 P_{90} = 22.8 P_{99} = 28.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

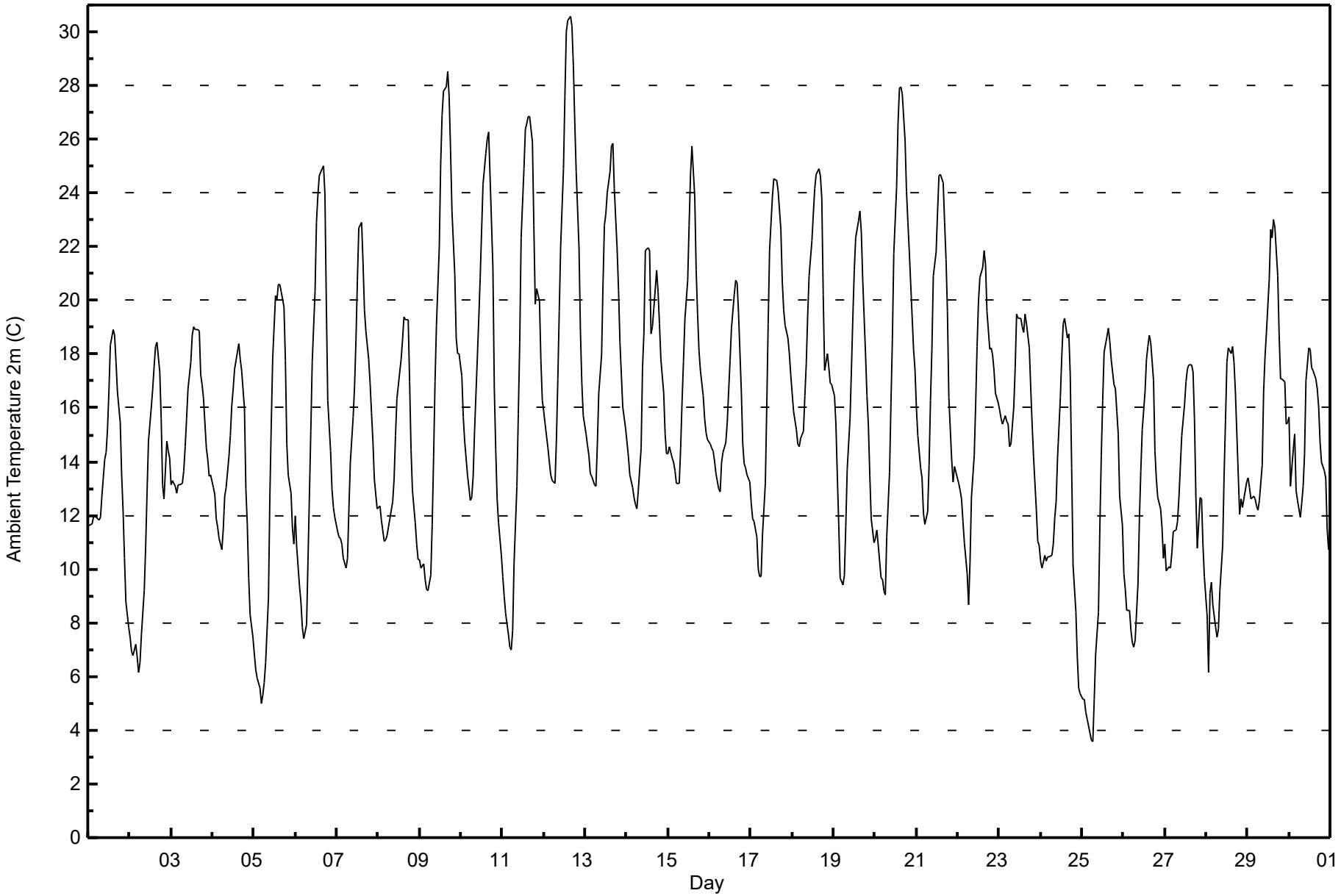
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.6	11.6	11.6	11.9	12.0	11.9	11.8	11.9	12.7	14.1	14.4	15.2	16.6	18.3	18.9	18.7	17.7	16.6	15.4	13.5	12.2	10.4	8.8	7.8	13.6	18.9
2-Sep	7.5	6.9	6.8	7.2	6.7	6.1	6.5	7.6	9.2	10.8	12.9	14.7	16.0	16.7	17.6	18.3	18.4	17.3	15.6	13.1	12.6	14.7	14.4	14.2	12.2	18.4
3-Sep	13.1	13.3	13.1	12.8	13.1	13.1	13.2	13.7	14.6	15.6	16.7	17.7	18.7	19.0	18.9	18.9	18.9	17.3	16.8	16.3	14.5	14.1	13.5	13.5	15.4	19.0
4-Sep	13.0	12.8	11.9	11.6	11.1	10.7	11.5	12.7	13.0	14.2	15.0	16.1	16.7	17.4	18.0	18.4	17.8	17.4	16.0	13.0	11.7	9.7	8.3	7.4	13.6	18.4
5-Sep	6.8	6.3	5.9	5.6	5.0	5.3	5.8	6.5	8.9	12.7	15.5	17.9	20.2	20.0	20.6	20.6	20.4	19.7	17.8	14.6	13.5	12.8	11.5	10.9	12.7	20.6
6-Sep	12.0	10.8	9.3	8.8	7.8	7.4	7.9	10.3	12.7	15.1	17.7	20.3	22.9	23.9	24.6	24.9	25.0	24.0	19.9	16.3	14.4	13.0	12.3	11.9	15.6	25.0
7-Sep	11.4	11.2	11.1	10.9	10.4	10.0	10.4	12.2	14.0	15.7	16.8	18.6	20.8	22.7	22.9	21.4	19.6	18.8	17.8	16.9	15.8	14.7	13.3	12.2	15.4	22.9
8-Sep	12.3	12.3	11.8	11.0	11.1	11.3	11.5	11.9	12.5	13.4	15.0	16.3	17.4	17.8	18.6	19.4	19.3	19.3	17.0	14.5	12.9	11.7	10.9	10.3	14.1	19.4
9-Sep	10.3	10.1	10.2	9.6	9.3	9.2	9.8	11.7	14.2	17.0	19.1	21.9	25.1	26.9	27.8	28.0	28.5	27.6	25.6	23.3	21.0	18.6	18.0	18.0	18.4	28.5
10-Sep	17.2	15.7	14.8	14.2	13.5	12.6	12.6	13.5	15.1	17.9	19.4	20.9	22.6	24.3	25.5	26.0	26.3	24.6	21.2	16.7	14.5	12.6	11.7	10.5	17.7	26.3
11-Sep	9.7	9.0	8.4	7.6	7.1	7.0	7.7	10.2	13.1	15.8	18.5	22.3	24.9	26.4	26.6	26.8	26.9	25.9	22.8	19.8	20.4	20.0	17.7	16.3	17.1	26.9
12-Sep	15.9	15.4	14.5	14.0	13.5	13.3	13.2	14.8	17.1	19.6	22.0	24.9	27.6	30.0	30.4	30.6	30.2	28.8	26.6	24.8	21.9	18.9	16.9	15.7	20.9	30.6
13-Sep	15.0	14.6	14.2	13.6	13.4	13.1	13.1	14.7	16.5	18.0	20.6	22.8	23.2	24.0	24.8	25.8	25.9	24.2	21.9	20.4	18.4	17.2	16.0	15.3	18.6	25.9
14-Sep	14.7	14.2	13.5	13.0	12.7	12.4	12.2	12.9	14.5	17.5	18.8	21.9	22.0	21.9	18.8	19.0	19.7	21.1	20.3	19.1	17.8	16.5	15.0	14.3	16.8	22.0
15-Sep	14.3	14.6	14.1	14.0	13.7	13.2	13.2	14.5	16.2	17.7	19.3	20.7	22.8	24.7	25.7	23.9	21.1	19.5	18.1	17.4	16.4	15.6	15.1	14.8	17.5	25.7
16-Sep	14.6	14.5	14.4	14.1	13.6	13.0	12.8	14.0	14.3	14.7	15.4	16.6	17.7	19.0	20.3	20.7	20.6	19.5	16.6	14.7	13.9	13.8	13.5	13.3	15.7	20.7
17-Sep	12.5	11.9	11.8	11.2	10.0	9.7	9.7	11.3	13.2	16.0	19.1	21.9	23.8	24.5	24.5	24.5	24.1	22.6	20.7	19.7	19.0	18.6	18.0	17.3	17.3	24.5
18-Sep	16.6	15.9	15.2	14.7	14.6	14.9	15.2	16.5	17.7	19.4	20.9	22.2	23.2	24.2	24.7	24.9	24.6	23.8	20.2	17.4	18.0	17.5	16.9	16.9	19.0	24.9
19-Sep	16.5	15.4	13.4	11.7	9.7	9.4	9.8	11.6	13.7	15.6	17.4	19.4	21.1	22.3	23.0	23.3	22.5	20.7	18.0	16.4	15.3	13.5	11.9	11.0	15.9	23.3
20-Sep	11.1	11.5	10.9	9.7	9.6	9.2	9.0	11.2	13.6	16.2	18.6	21.8	24.2	26.6	27.9	28.0	27.7	26.0	24.1	22.9	21.8	19.4	18.2	17.5	18.2	28.0
21-Sep	16.0	15.0	13.8	13.4	12.1	11.6	12.1	13.9	16.3	18.2	20.9	21.8	23.3	24.6	24.7	24.4	22.9	21.5	19.6	16.4	14.1	13.3	13.8	13.6	17.4	24.7
22-Sep	13.2	12.9	12.6	11.8	11.0	9.8	8.7	10.3	12.7	14.2	16.1	18.3	20.0	20.8	21.2	21.9	21.3	19.6	18.2	18.2	18.0	17.4	16.5	16.2	15.9	21.9
23-Sep	15.9	15.6	15.4	15.7	15.5	15.4	14.6	14.7	16.0	17.5	19.5	19.4	19.3	19.0	18.8	19.5	19.1	18.2	16.7	15.4	14.2	12.2	11.0	10.9	16.2	19.5
24-Sep	10.3	10.0	10.5	10.3	10.5	10.5	10.5	10.9	11.9	12.5	14.1	16.4	17.9	19.1	19.3	18.6	18.7	17.2	13.8	10.1	8.4	6.7	5.6	5.3	12.5	19.3
25-Sep	5.2	5.2	4.7	4.4	4.2	3.6	3.6	5.2	6.9	8.4	11.6	14.2	16.3	18.1	18.6	19.0	18.5	17.8	16.9	16.7	15.9	15.0	12.7	11.6	11.4	19.0
26-Sep	9.8	9.3	8.4	8.5	7.7	7.2	7.1	7.4	9.5	11.9	13.7	15.2	16.6	17.8	18.3	18.7	18.4	17.0	14.4	13.4	12.7	12.2	11.6	10.4	12.4	18.7
27-Sep	10.9	10.0	10.1	10.0	10.6	11.4	11.5	11.8	12.7	13.8	15.0	16.1	17.0	17.4	17.6	17.6	17.3	15.6	12.7	10.8	12.7	12.6	10.9	9.7	13.2	17.6
28-Sep	8.3	6.1	9.1	9.5	8.7	7.8	7.5	7.8	9.2	10.9	13.5	15.5	17.7	18.2	18.0	18.3	17.7	16.6	13.5	12.1	12.6	12.3	12.6	13.2	12.4	18.3
29-Sep	13.4	13.0	12.6	12.7	12.6	12.3	12.2	12.6	13.9	16.6	17.9	18.8	20.8	22.6	22.3	23.0	22.7	20.9	18.7	17.1	17.1	17.0	15.4	15.4	16.7	23.0
30-Sep	15.6	13.1	14.4	15.0	12.9	12.5	12.0	12.4	13.1	14.3	17.0	18.2	18.2	17.5	17.4	17.1	16.7	16.0	14.7	14.0	13.7	13.4	11.5	10.7	14.6	18.2
	12.5	11.9	11.6	11.3	10.8	10.5	10.6	11.7	13.3	15.2	17.1	18.9	20.5	21.5	21.9	22.0	21.6	20.5	18.4	16.5	15.5	14.5	13.5	12.9	Diurnal Average	
	17.2	15.9	15.4	15.7	15.5	15.4	15.2	16.5	17.7	19.6	22.0	24.9	27.6	30.0	30.4	30.6	30.2	28.8	26.6	24.8	21.9	20.0	18.2	18.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Lower Camp - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	85	11.81	11.81
10 - 20	506	70.28	82.08
> 20	129	17.92	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Lower Camp - September 2025

Maximum Value: 100.0 % on Sep 2 03:00

Maximum Daily Average: 87.3 % on Sep 14

Minimum Value: 26.2 % on Sep 24 15:00

Minimum Daily Average: 42.5 % on Sep 23

Maximum Diurnal Average: 86.7 % at hour 6

Minimum Diurnal Average: 43.1 % at hour 16

Monthly Average: 67.30 %

Percentiles: P_1 = 28.2 P_{10} = 37.6 Q_1 = 50.8 Median = 67.0 Q_3 = 85.9 P_{90} = 95.8 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

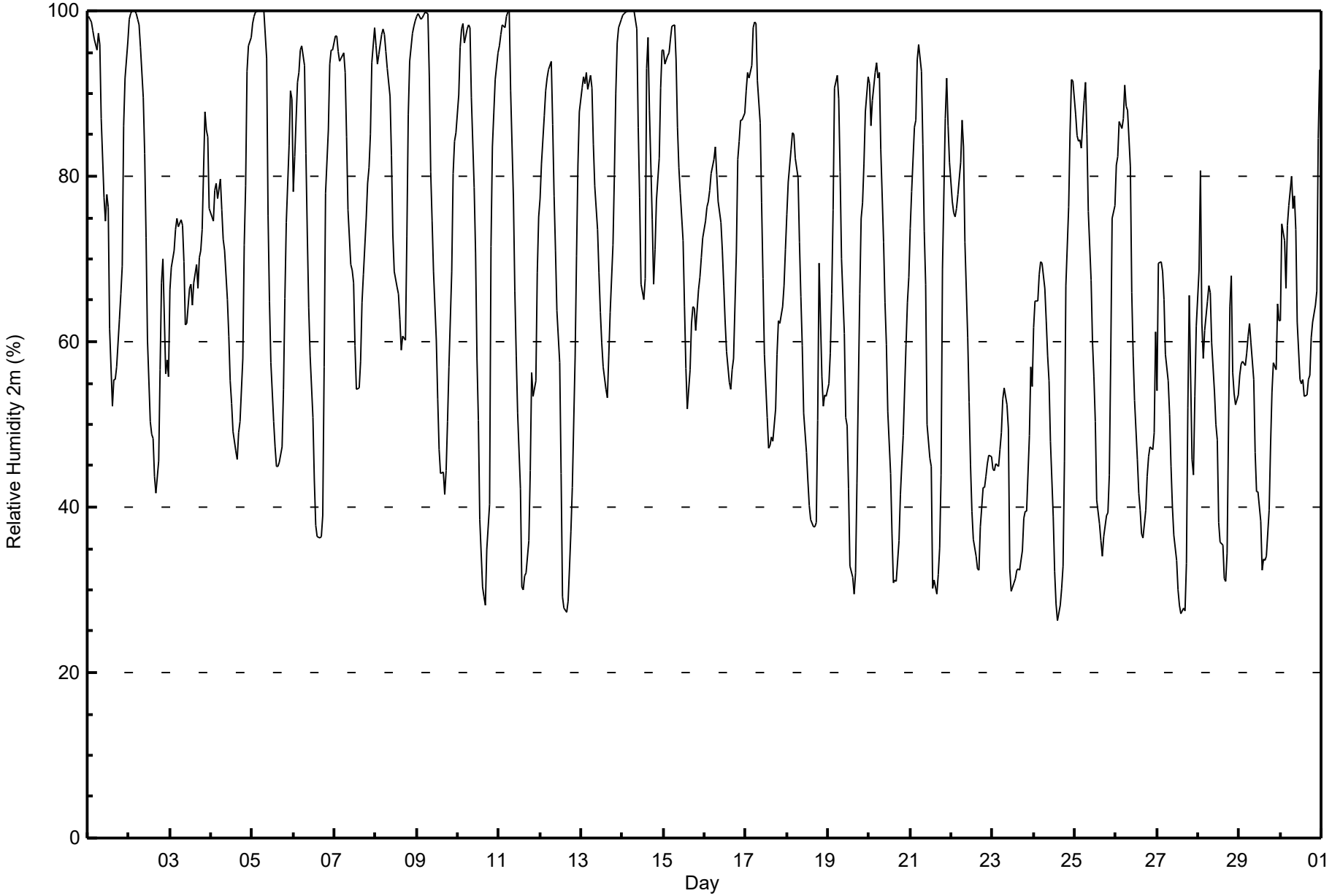
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	99.3	99.0	98.6	97.7	96.5	95.3	97.3	95.9	86.9	77.4	74.6	77.8	76.3	61.6	52.2	55.5	55.4	57.0	62.7	65.7	69.2	86.1	91.8	96.3	80.3	99.3
2-Sep	99.0	99.7	100.0	100.0	99.6	99.0	98.3	95.6	89.5	82.7	72.6	60.2	50.4	48.7	48.2	43.7	41.8	45.5	56.6	67.1	69.9	56.1	57.7	55.8	72.4	100.0
3-Sep	66.3	69.0	71.0	73.6	74.8	73.9	74.7	74.1	69.7	62.1	62.2	66.5	66.9	64.4	67.1	69.3	66.5	70.2	70.9	73.5	87.7	85.5	84.7	76.0	71.7	87.7
4-Sep	75.2	74.5	78.2	79.2	77.4	79.6	75.9	72.4	71.0	65.0	60.7	55.3	52.5	49.1	46.9	45.8	49.0	50.3	58.0	71.7	78.9	92.6	95.8	96.9	68.8	96.9
5-Sep	98.5	99.4	99.8	100.0	100.0	100.0	100.0	100.0	94.2	75.2	64.8	57.4	50.3	47.2	44.9	44.9	45.4	47.2	54.3	65.3	74.4	83.7	90.3	89.4	76.1	100.0
6-Sep	78.2	82.3	91.3	92.5	95.2	95.7	93.3	82.8	73.0	64.1	58.4	50.8	43.3	37.7	36.4	36.4	36.5	39.0	57.0	77.9	85.7	93.5	95.2	95.3	70.5	95.7
7-Sep	97.0	96.9	95.1	94.0	94.2	94.9	92.5	84.7	76.0	69.4	68.6	67.1	59.6	54.3	54.5	57.6	64.8	68.1	74.9	79.2	81.1	85.2	93.7	98.0	79.2	98.0
8-Sep	95.8	93.6	94.8	97.1	97.7	97.2	95.1	93.0	89.7	82.5	72.9	68.5	66.5	65.8	62.7	59.0	60.7	60.2	72.7	87.5	93.9	97.3	98.2	98.8	83.4	98.8
9-Sep	99.3	99.6	99.1	99.2	99.5	99.8	99.7	92.1	80.4	74.6	68.5	60.2	53.0	46.9	44.1	44.3	41.5	44.3	50.3	57.0	68.5	80.4	84.3	85.3	73.8	99.8
10-Sep	89.8	95.5	97.8	98.5	96.0	97.8	98.4	97.9	89.5	78.6	70.7	58.0	50.4	38.5	30.3	29.1	28.2	34.9	40.3	71.5	83.6	87.7	91.7	94.9	72.9	98.5
11-Sep	95.8	97.2	98.3	98.0	99.3	99.8	100.0	90.3	77.2	66.1	58.3	51.3	42.2	30.3	30.0	31.7	32.1	35.9	44.3	56.3	53.4	55.3	68.3	75.1	66.1	100.0
12-Sep	77.3	81.5	87.3	90.3	91.9	92.9	93.9	86.3	77.7	71.0	63.8	57.5	44.0	29.1	27.9	27.4	28.7	32.7	37.1	42.3	58.2	70.4	81.4	87.9	64.1	93.9
13-Sep	90.7	92.1	91.2	92.5	90.5	92.2	90.6	83.9	78.8	73.5	68.4	63.5	59.8	57.0	54.2	53.2	58.3	63.6	71.8	80.1	90.0	96.1	98.0	99.1	78.7	99.1
14-Sep	99.5	99.7	99.9	100.0	100.0	100.0	100.0	100.0	97.9	86.0	77.4	66.9	65.1	67.6	93.0	96.8	87.9	74.7	67.0	71.2	77.2	82.2	90.6	95.2	87.3	100.0
15-Sep	95.3	93.6	94.6	94.8	96.5	98.2	98.4	94.1	86.0	81.0	78.0	72.3	64.3	56.7	51.8	56.6	62.2	64.2	64.1	61.4	66.3	67.8	70.1	72.6	76.7	98.4
16-Sep	74.6	76.3	77.0	78.4	80.3	82.0	83.5	80.2	77.0	74.4	71.0	66.9	62.4	58.8	55.0	54.3	56.7	58.0	70.8	82.0	84.3	86.8	86.7	87.6	73.5	87.6
17-Sep	90.4	92.6	91.8	93.3	98.0	98.6	98.5	91.6	86.5	76.7	67.6	58.4	50.8	47.2	47.4	48.5	48.0	51.8	58.6	62.5	62.2	64.2	66.8	71.2	71.8	98.6
18-Sep	75.4	79.3	83.3	85.3	85.1	82.2	79.8	72.0	65.5	59.5	51.3	46.6	43.2	40.3	38.4	37.7	37.7	38.2	50.5	69.5	55.7	52.3	53.6	53.4	59.8	85.3
19-Sep	54.9	58.7	65.8	76.0	90.7	92.2	89.4	80.6	69.9	60.9	50.9	49.9	42.2	32.9	31.5	29.5	32.0	42.9	65.8	74.9	76.7	81.6	87.8	92.0	63.7	92.2
20-Sep	91.2	86.2	89.2	92.5	93.8	91.8	92.5	83.1	72.0	64.7	59.7	51.5	44.1	36.8	30.8	31.2	31.0	36.0	41.5	45.3	48.7	59.7	64.8	67.7	62.7	93.8
21-Sep	73.6	78.2	85.9	86.8	94.0	96.0	92.7	83.9	73.4	67.0	50.0	45.9	44.9	30.2	31.3	29.4	31.8	35.1	43.9	68.7	87.0	91.8	86.2	81.7	66.2	96.0
22-Sep	77.0	75.6	75.0	76.1	77.8	81.6	86.8	83.5	72.1	60.6	52.7	45.2	39.5	36.2	34.1	32.6	32.5	37.7	42.4	42.3	43.8	45.3	46.3	46.1	55.9	86.8
23-Sep	44.6	44.4	45.3	44.9	47.0	49.1	53.0	54.4	52.4	49.6	32.5	29.9	30.9	31.3	32.4	32.5	32.4	34.8	38.7	39.5	39.5	48.7	57.0	54.6	42.5	57.0
24-Sep	61.7	65.0	65.0	68.2	69.7	69.5	66.5	62.6	58.3	55.3	48.0	38.8	32.3	28.3	26.2	28.1	30.2	32.9	45.7	66.9	76.2	85.4	91.7	91.6	56.8	91.7
25-Sep	87.5	84.9	84.2	84.4	83.4	89.1	91.3	85.2	75.8	67.5	60.0	55.8	50.3	40.9	38.0	36.0	34.1	36.4	39.0	39.4	44.0	58.0	74.9	76.5	63.2	91.3
26-Sep	81.4	82.4	86.6	85.7	87.0	91.1	88.4	88.0	81.1	66.0	58.3	53.0	45.8	41.7	39.6	36.7	36.3	39.7	43.8	46.2	47.3	46.9	49.1	61.1	61.8	91.1
27-Sep	54.0	69.4	69.6	68.4	65.2	58.4	55.2	51.3	44.8	40.0	36.6	33.5	30.1	28.1	27.1	27.9	27.5	33.2	52.0	65.6	45.8	44.0	53.4	61.9	47.6	69.6
28-Sep	68.6	80.6	62.2	58.0	61.4	65.0	66.7	65.9	59.8	53.9	50.1	48.1	38.1	35.8	35.4	31.4	31.0	34.5	64.2	67.9	56.3	53.8	52.4	53.6	53.9	80.6
29-Sep	56.0	57.2	57.6	57.1	58.7	60.7	62.2	59.8	55.4	46.6	41.8	41.9	38.3	32.3	33.7	33.6	34.0	39.6	47.4	53.8	57.4	56.6	64.6	62.5	50.4	64.6
30-Sep	62.5	74.2	72.2	66.4	74.1	76.5	80.0	76.1	77.6	73.6	62.4	55.4	54.8	55.5	53.3	53.5	55.4	55.9	60.6	62.3	64.5	66.2	84.6	92.8	67.1	92.8
	80.3	82.6	83.6	84.3	85.8	86.7	86.5	82.0	75.3	67.5	60.4	55.1	49.7	44.4	43.3	43.1	43.6	46.5	54.9	63.8	67.6	72.0	77.1	79.0	Diurnal Average	
	99.5	99.7	100.0	100.0	100.0	100.0	100.0	100.0	97.9	86.0	78.0	77.8	76.3	67.6	93.0	96.8	87.9	74.7	74.9	87.5	93.9	97.3	98.2	99.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

Lower Camp - September 2025

Maximum Value: 29.5 inHg on Sep 2 06:00

Maximum Daily Average: 29.4 inHg on Sep 2

Minimum Value: 28.6 inHg on Sep 27 04:00

Minimum Daily Average: 28.7 inHg on Sep 21

Maximum Diurnal Average: 29.1 inHg at hour 9

Minimum Diurnal Average: 29.0 inHg at hour 17

Monthly Average: 29.05 inHg

Percentiles: P_1 = 28.7 P_{10} = 28.8 Q_1 = 28.9 Median = 29.0 Q_3 = 29.2 P_{90} = 29.4 P_{99} = 29.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

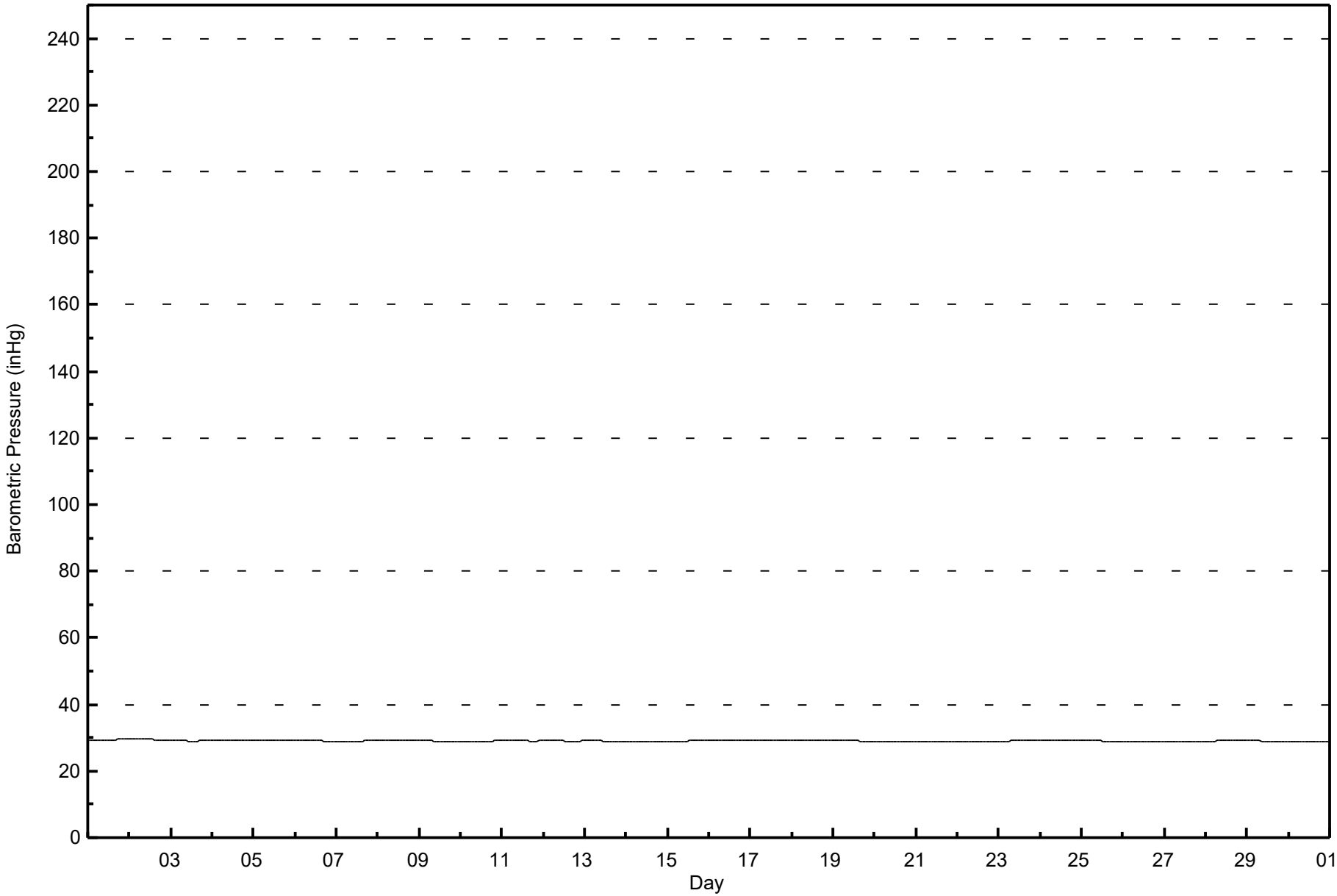
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.5
2-Sep	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.4	29.5
3-Sep	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	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.1	29.3
4-Sep	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4
5-Sep	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	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.3
6-Sep	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
7-Sep	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	29.1	29.1	29.1	29.0	29.1
8-Sep	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.1	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
9-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1
10-Sep	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	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.0	29.1
11-Sep	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
12-Sep	29.0	29.0	29.0	29.0	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
13-Sep	29.0	29.0	29.0	29.0	29.0	29.0	29.0	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	28.9	28.9	29.0	29.1
14-Sep	28.9	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
15-Sep	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	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.1	29.3
16-Sep	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	29.4	29.4	29.4	29.4	29.4
17-Sep	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	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	29.2	29.2	29.3	29.4
18-Sep	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
19-Sep	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	29.0	29.0	29.1	29.1
20-Sep	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	29.0
21-Sep	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	28.8	28.8	28.8	28.8	28.7	28.8
22-Sep	28.8	28.8	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	29.0
23-Sep	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	29.1	29.1	29.1	29.1	29.1	29.0	29.1
24-Sep	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
25-Sep	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	29.0	29.2
26-Sep	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	28.8
27-Sep	28.7	28.7	28.6	28.6	28.6	28.6	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	28.8	28.8	28.7	28.8
28-Sep	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	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2
29-Sep	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.2
30-Sep	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.9
	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	29.0	29.0	Diurnal Average	
	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Lower Camp - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - September 2025

Maximum Speed: 31 km/h on Sep 29 10:00

Maximum Daily Speed Average: 15.8 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 10 06:00

Minimum Daily Speed Average: 0.4 km/h on Sep 16

Maximum Diurnal Speed Average: 4.6 km/h at hour 9

Minimum Diurnal Speed Average: 0.8 km/h at hour 18

Monthly Average Velocity: 2.4 km/h 167.9 deg

Percentiles: P_1 = 0 P_{10} = 2 Q_1 = 4 Median = 8 Q_3 = 11 P_{90} = 16 P_{99} = 23

Hours in Service: 720

Hours of Data: 707

Hours of Missing Data: 13

Percent Operational Time: 98.2

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NW2	N1	E2	NW2	N2	N3	ESE10	ESE4	SSW3	ESE5	N4	N3	N8	NNE10	N14	N16	N16	N13	N11	NW6	NW5	NE1	ENE1	UO	N4.5	N16
2-Sep	NNE1	NNE0	NE1	NW3	N2	UO	ENE3	NE1	NE3	NE3	ESE5	ESE8	ESE11	ESE9	SE9	SE11	SE9	SE7	SE5	SE6	ESE9	SE14	SE16	SE12	ESE5.5	SE16
3-Sep	ESE11	ESE16	ESE14	ESE13	SE14	SE11	SE10	SE10	SE9	SSE10	SE9	SE9	ESE9	NE3	NNW7	NNW11	NNW20	NNW18	NNW16	NNW15	NW13	NW10	NW12	NW15	ENE2.8	NNW20
4-Sep	WNW16	WNW17	WNW13	WNW13	WNW13	NW11	WNW14	WNW16	NW16	NNW15	NNW16	NNW15	NW15	NNW14	NW15	NW14	N12	N9	NNE9	WNW3	W3	NNE1	NE1	NNE1	NW10.4	WNW17
5-Sep	NE1	UO	UO	NNE1	SSE1	E6	ESE7	ESE9	SE10	SE11	SE11	SE9	SE10	ESE9	ESE8	ESE8	E8	ENE8	ESE4	SSE2	SSE3	E2	NNW3	SSE3	ESE5.5	SE11
6-Sep	SE8	E5	SE3	SE4	SE6	SE6	SE6	SE7	SE9	SE8	SE7	SE6	SE9	SE10	SE9	SE8	SE7	SE6	W2	WNW2	E1	NE1	ENE2	NNW2	SE4.9	SE10
7-Sep	NNE2	E3	SE5	SE5	SE6	SE7	ESE5	ESE5	ESE3	SE4	NNE3	NNW6	WNW7	NNW6	NNW9	NNW13	N14	N9	NNW6	NNW6	NW5	WNW5	WNW1	W4	N2.3	N14
8-Sep	WNW6	NW6	NNW5	WNW4	NW4	WNW5	NNW6	NNE6	NE2	NE10	NE4	N2	W10	W11	W9	W6	NNW4	NW4	WNW3	NW1	WNW2	NNE1	NNE1	NNW2	NW3.4	W11
9-Sep	W2	WNW4	NW4	W3	W3	W3	WNW1	ESE7	SE6	SE7	SE6	SE6	SE7	SSE8	SSE10	SSE10	SSE8	SSE6	S6	SW6	WSW4	SE3	SE2	SSE2	SSE3.4	SSE10
10-Sep	SE2	S1	SE2	SE3	NE1	E0	NE2	NW2	ESE3	SE7	NNE3	N4	NE4	NW4	W12	W10	WSW10	NW7	WNW3	UO	UO	UO	NW1	UO	WNW1.3	W12
11-Sep	ENE1	NNE1	NNW1	NE1	NE1	NE1	ESE5	ESE9	ESE9	SE8	SE7	SE7	SE10	SSE8	SE9	SSE9	SE7	SSE6	SE6	SE7	SE8	SSE8	SE9	SE10	SE5.8	SE10
12-Sep	SE9	SE12	SE11	SE8	SSE7	SE10	SE11	SE8	SE11	ESE16	ESE16	SE14	SE10	SSW10	SSW12	SSW10	SSW8	SSE6	S7	SSW7	SSW2	SE2	ESE0	N0	SSE7.4	ESE16
13-Sep	SE0	SE2	NNW1	ESE2	SE6	SE9	SE9	SE8	SE7	SE8	SE9	ESE3	N4	N5	N7	NW6	NW6	NW6	WNW3	WNW3	W3	NE0	NNW1	NW1	E1.2	SE9
14-Sep	WNW2	W2	NW1	WNW1	W2	UO	UO	ENE1	ESE3	SE8	SE10	SE10	SE9	ESE12	SE7	ESE2	ESE9	SE11	SSE9	SSE8	SSE3	SW2	ESE2	UO	SE4.5	ESE12
15-Sep	NE1	ESE5	SE4	SE6	SE7	SE9	SE9	SE7	S3	ENE1	SE6	ESE2	NE3	NW5	WNW14	WNW23	WNW23	NW16	NW14	WNW17	NW14	WNW16	WNW13	WNW13	WNW4.6	WNW23
16-Sep	NW10	WNW9	NW8	NW7	NW8	NW7	NW5	NNE2	WSW11	NW8	N7	NE4	NE4	E5	ESE6	SE8	SE9	SE6	SE5	ESE3	SE6	SE10	SE9	SE11	ENE0.4	SE11
17-Sep	SE14	SE12	SSE6	SE5	ESE5	SE7	E6	ESE9	SE10	SE11	SE12	SE12	SE15	SE15	SE20	SE19	SE22	SE22	SE15	SE13	SE14	SE17	SE18	SE19	SE13.2	SE22
18-Sep	SE18	SE16	SE16	SE14	SE17	SE17	SE14	SE13	SSE14	SSE10	SSW11	SW10	SW12	SSW10	SSW9	SSW8	SSW8	SW7	SSW4	SSW4	SSW7	WSW10	WSW9	WSW11	S8.1	SE18
19-Sep	WSW9	SSW4	S4	SSE4	SE6	SE7	SE9	SE10	SE8	SE7	SSW4	SE7	SSW5	W14	W12	WSW11	WSW8	WSW2	N1	N2	ENE3	UO	UO	SE3	SSW3.0	W14
20-Sep	SE6	SE11	SE7	SE4	ESE8	SE8	ESE10	ESE13	SE12	SE13	SE16	SE15	SE11	SSE10	SSE10	SSE10	SSE10	SSE7	SSE8	SE9	SE10	SE10	SE9	SE9	SE9.7	SE16
21-Sep	SE4	W2	SE4	S2	ESE3	SE4	SE8	SE11	SE10	SE9	W2	ENE3	ESE4	W6	N4	W12	W16	W17	W20	WNW11	W5	SW6	WSW10	WSW13	SW3.6	W20
22-Sep	WSW15	WSW15	WSW19	WSW7	WSW9	S2	SE4	ESE7	SE8	WSW10	WSW13	SW13	SW12	WSW16	WSW18	WSW14	SW14	S5	SSE6	SSE8	SSE9	SSE10	SSE10	SSE11	SW7.8	WSW19
23-Sep	SSE11	S6	SSE8	S8	S10	S9	S6	SSW6	SSW8	SSW7	WSW20	WSW19	SW16	SW15	SW11	SSW12	SW14	SSW10	SSW9	SSW7	SSW6	SE5	SE6	SE6	SSW8.2	WSW20
24-Sep	SE7	SE8	SE8	SE8	SE7	SSE5	SE4	S4	SW6	WSW14	WSW16	W12	W12	W15	W15	WNW11	NW8	NW9	WNW2	E3	W0	E1	E3	SE5	WSW3.4	WSW16
25-Sep	SE8	SE7	SE8	SE10	SE10	SE7	SE10	SE12	SE10	SE9	SE12	SE15	SE14	SE10	SSE4	SSE10	S8	S6	SSE7	SSE9	S7	WSW18	WSW17	WSW9	SSE7.4	WSW18
26-Sep	SW9	WSW8	NW2	W3	SW3	SSE3	S4	SE4	SE6	WSW13	W12	WSW13	W17	W16	W16	WSW19	W12	N1	SSW5	SW9	SW8	SSW7	S6	ESE10	WSW6.3	WSW19
27-Sep	SSE6	SSE6	SE11	SSE9	SW10	WSW16	WSW19	W20	W24	W20	WSW20	WSW19	WSW19	WSW20	WSW18	WSW16	WSW16	WSW9	W3	ENE0	SW9	WSW7	SE5	SE4	WSW10.5	W24
28-Sep	ESE2	ESE1	W13	W13	WNW8	W12	W13	W12	WSW10	SW7	SE7	ESE9	SE6	SSE8	SSE9	SSW5	SW7	S4	NNE1	ESE1	E2	NE1	E5	SE16	SW3.0	SE16
29-Sep	ESE18	ESE16	ESE15	ESE18	ESE22	ESE22	ESE21	SE25	SE26	SE31	SE27	SE27	SE18	SSE15	SSE10	SSE10	S10	SSE7	SE6	SE4	ESE11	SE11	ESE15	ENE7	SE15.8	SE31
30-Sep	E9	SSW1	ESE15	NNW1	W5	NW5	WNW4	W4	NW4	NW5	WNW7	N11	NNW12	N14	NNE15	N12	N10	NW7	NW10	WNW6	NW6	NW7	WNW6	WNW8	NNW4.9	ESE15
	SSE2.9	SSE2.6	SSE3.2	SSE2.7	SSE3.0	SSE3.7	SE3.9	SE4.6	SSE4.6	SSE4.2	SSE3.5	SSE3.4	S2.8	SSW2.7	SW2.7	WSW3.2	WSW2.4	SW0.8	SW1.0	SSW1.4	S1.8	S2.5	SSE2.3	SSE2.7	Diurnal Average	
	SE18	WNW17	WSW19	ESE18	ESE22	ESE22	ESE21	SE25	SE26	SE31	SE27	SE27	WSW19	WSW20	SE20	WNW23	WNW23	SE22	W20	WNW17	SE14	WSW18	SE18	SE19	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 29 13:00

Minimum Value: 1 km/h on Sep 8 18:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	707
Hours of Missing Data:	13
Hours of Calibration:	0
Percent Operational Time:	98.2

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-Sep	1	1	2	1	1	2	5	2	2	2	2	2	3	3	5	4	4	3	3	2	1	2	1	UO	5
2-Sep	1	1	2	1	1	UO	2	2	1	1	2	2	2	3	3	3	3	2	2	2	3	4	4	4	4
3-Sep	4	3	4	3	3	3	3	2	3	3	3	3	3	2	2	3	6	7	5	4	3	3	3	3	7
4-Sep	3	4	2	3	2	2	4	3	4	5	4	4	4	4	4	3	4	2	3	1	2	1	1	1	5
5-Sep	1	UO	UO	1	1	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	1	1	1	3	3
6-Sep	2	2	1	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2
7-Sep	1	2	2	2	2	2	2	1	2	1	1	1	2	3	2	3	3	3	2	2	1	1	1	2	3
8-Sep	1	1	2	1	1	1	2	2	3	2	2	2	3	2	2	2	1	1	1	1	1	1	1	1	3
9-Sep	2	2	3	1	1	1	1	2	2	2	2	1	2	3	4	4	3	2	2	2	2	2	2	1	4
10-Sep	1	1	1	1	1	1	1	2	2	2	1	1	1	4	3	3	4	2	2	UO	UO	UO	1	UO	4
11-Sep	1	1	1	1	1	1	3	2	2	2	1	2	2	3	3	3	2	2	1	2	2	2	2	2	3
12-Sep	3	3	3	2	2	2	3	2	2	4	3	3	4	4	5	4	3	2	2	3	2	2	1	1	5
13-Sep	2	2	1	2	2	2	2	2	2	3	2	2	1	1	2	1	2	1	1	1	2	1	1	1	3
14-Sep	2	1	2	2	1	UO	UO	2	1	3	2	3	3	3	3	2	4	3	3	3	2	2	2	UO	4
15-Sep	1	3	2	2	2	2	3	2	2	2	2	1	1	4	4	5	5	5	4	3	4	3	3	3	5
16-Sep	3	2	2	2	2	2	1	1	3	2	2	2	1	2	2	2	1	2	2	2	2	3	3	4	4
17-Sep	3	3	2	2	2	2	2	2	2	2	2	3	3	3	4	4	4	4	4	4	4	4	4	4	4
18-Sep	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	3	4	3	1	2	2	2	2	2	4
19-Sep	2	2	2	1	2	2	2	2	2	2	2	3	4	3	3	3	3	1	1	1	1	UO	UO	2	4
20-Sep	3	2	2	2	2	2	2	3	2	2	3	3	3	4	4	4	4	2	3	3	3	2	2	2	4
21-Sep	3	2	2	2	1	3	2	2	2	2	2	2	1	3	2	7	3	4	6	5	4	3	3	3	7
22-Sep	3	3	4	6	3	3	2	2	2	5	3	4	4	4	5	6	5	2	2	3	3	3	3	3	6
23-Sep	4	3	3	3	4	3	2	2	2	3	4	5	5	5	4	5	5	4	3	3	3	2	2	2	5
24-Sep	2	2	3	2	2	2	2	2	3	4	3	3	3	4	3	3	3	2	2	1	2	2	1	1	4
25-Sep	2	2	3	2	3	3	2	3	3	3	3	3	3	4	2	4	3	3	2	3	3	7	5	3	7
26-Sep	2	2	2	2	1	1	1	1	2	3	3	3	4	4	4	4	6	2	2	3	3	3	3	3	6
27-Sep	2	3	3	3	5	4	4	5	6	5	5	4	4	5	5	4	4	4	2	1	3	4	2	1	6
28-Sep	1	1	5	4	3	3	3	3	2	2	3	2	3	4	3	3	3	1	1	2	2	2	4	3	5
29-Sep	3	3	3	3	3	4	4	5	5	6	6	6	7	5	4	4	4	3	3	4	3	3	2	2	7
30-Sep	3	4	3	4	2	2	1	1	2	2	2	4	3	4	4	4	3	2	2	1	2	2	1	1	4
	4	4	5	6	5	4	5	5	6	6	6	6	7	5	5	7	6	7	6	5	4	7	5	4	
	Diurnal Maximum																								

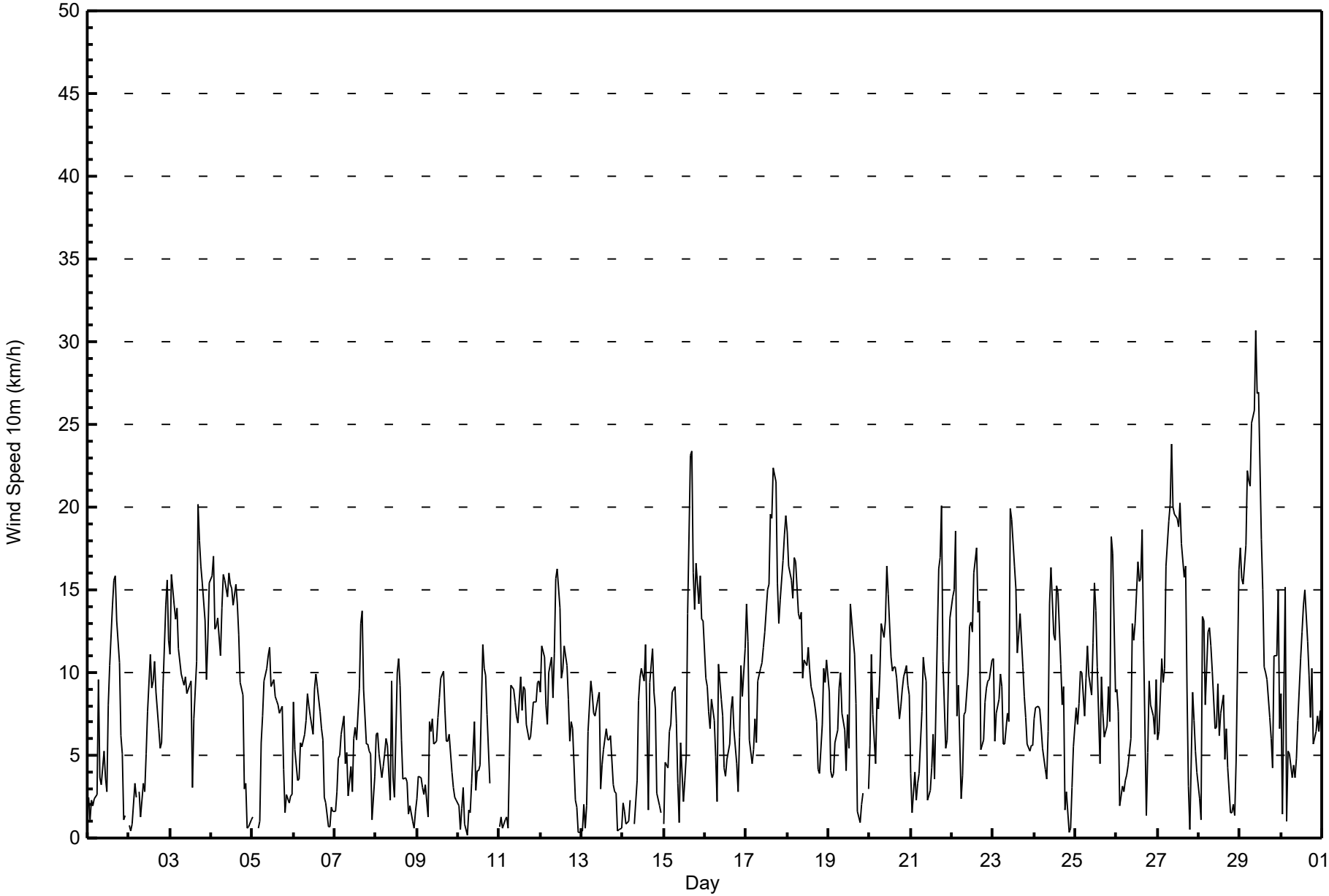
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	223	31.54	31.54
6 - 11	319	45.12	76.66
12 - 19	144	20.37	97.03
20 - 28	20	2.83	99.86
29 - 38	1	0.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Lower Camp - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	15	13	23	9	12	25	29	10	9	10	2	2	18	17	20	9	223
6 - 11	8	3	1	2	4	25	131	41	12	18	13	17	6	11	19	8	319
12 - 19	8	1	0	0	0	13	37	2	0	3	6	23	20	12	10	9	144
20 - 28	0	0	0	0	0	3	7	0	0	0	0	3	4	2	0	1	20
29 - 38	0	0	0	0	0	0	1	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	31	17	24	11	16	66	205	53	21	31	21	45	48	42	49	27	707

Total Number of Valid Hours: 707

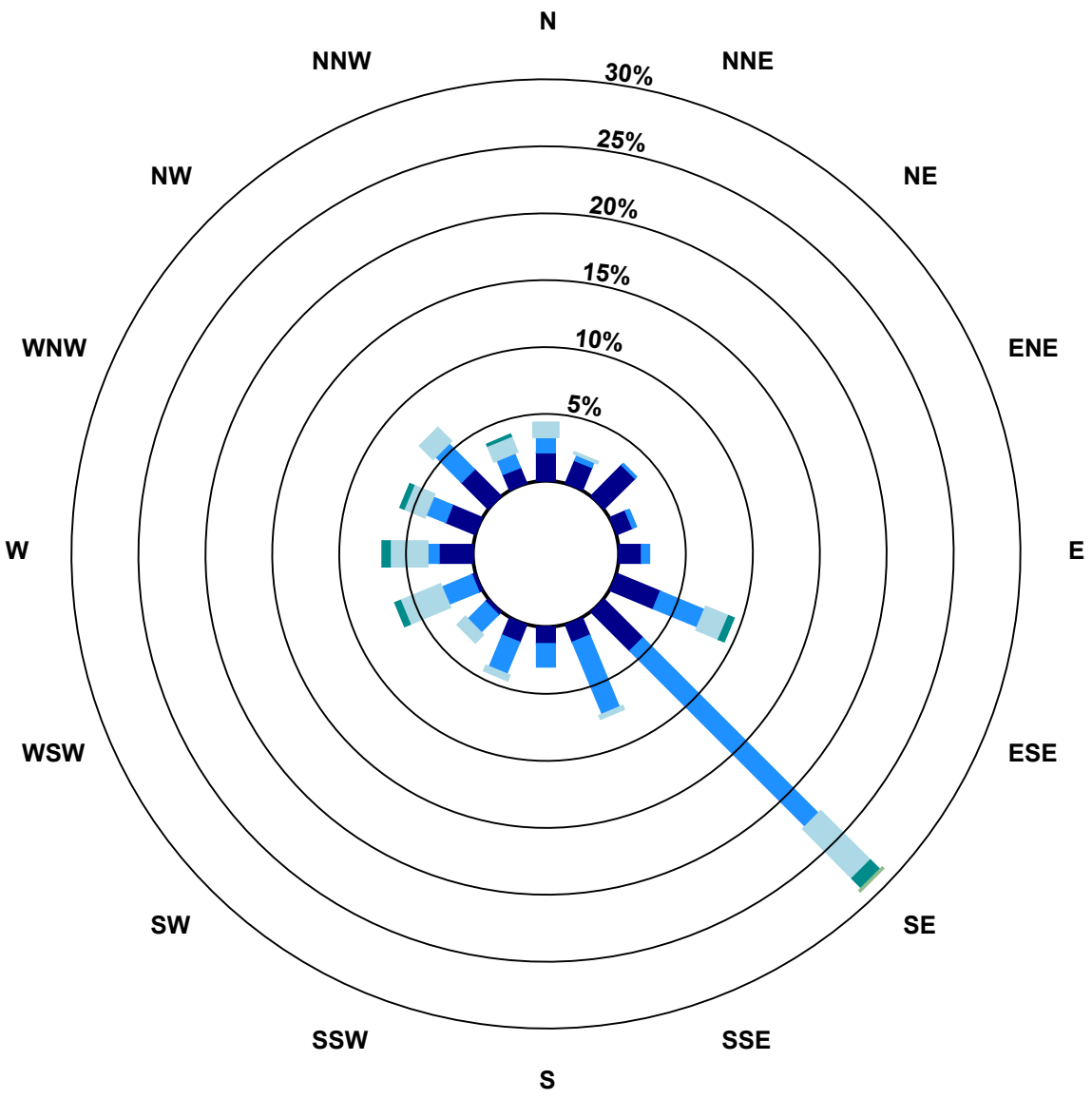
Total Number of Hours: 720

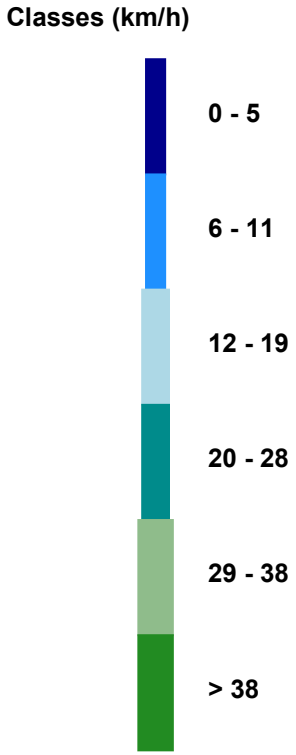
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Lower Camp





Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Lower Camp - September 2025

Direction of Maximum Speed: 129 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 128.5 deg on Sep 29

Direction of Minimum Speed: 84 deg on Sep 10 06:00
Direction of Minimum Daily Speed Average: 0.4 deg on Sep 16

Monthly Average Direction: 167.9 deg

Hours in Service:	720
Hours of Data:	707
Hours of Missing Data:	13
Percent Operational Time:	98.2

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	Average
1-Sep	323	1	93	322	349	356	116	122	205	102	9	354	357	17	0	5	358	356	0	320	324	38	60	UO	6.8
2-Sep	19	14	37	316	354	UO	58	50	56	51	117	118	116	120	127	126	134	146	133	127	123	139	138	137	123.2
3-Sep	120	115	120	122	127	129	130	130	140	147	146	130	123	56	348	342	347	346	340	340	326	320	312	313	58.8
4-Sep	296	301	301	299	296	307	296	296	310	338	336	329	323	330	323	315	350	356	26	298	278	21	53	28	317.6
5-Sep	39	UO	UO	18	166	94	102	118	125	125	125	128	127	109	118	112	85	75	123	150	157	98	333	158	114.4
6-Sep	143	84	130	125	129	135	127	124	126	132	132	133	135	136	138	133	131	127	263	299	82	48	68	346	129.5
7-Sep	15	90	133	138	135	133	116	118	104	124	25	340	298	328	344	344	7	360	344	341	308	286	296	280	3.1
8-Sep	297	306	331	291	309	294	338	16	34	37	55	358	274	262	260	275	338	317	298	305	303	14	21	343	311.0
9-Sep	280	284	309	267	272	270	285	115	128	136	142	145	136	147	147	148	159	168	174	229	254	128	133	160	161.4
10-Sep	143	190	127	125	35	84	37	305	103	130	26	10	37	314	266	259	257	309	285	UO	UO	UO	325	UO	285.7
11-Sep	58	14	331	41	54	34	104	120	122	128	131	131	129	153	144	149	145	147	139	132	144	147	137	135	133.7
12-Sep	137	136	138	140	148	140	136	134	133	121	122	127	146	193	208	208	203	167	172	204	194	142	103	349	150.8
13-Sep	128	125	347	116	136	124	128	132	131	124	127	116	350	356	355	321	319	316	285	296	277	36	339	325	99.3
14-Sep	286	274	312	298	274	UO	UO	77	107	127	128	130	133	114	132	109	122	134	157	154	151	230	111	UO	133.9
15-Sep	46	112	139	136	136	134	129	128	186	57	127	108	46	308	297	300	303	316	306	296	304	298	294	299	298.8
16-Sep	307	301	308	315	322	314	313	15	256	304	2	42	56	91	116	130	132	135	133	116	135	127	135	136	62.8
17-Sep	126	128	160	131	123	129	97	107	126	130	126	126	128	129	128	129	130	128	125	130	127	134	133	130	127.9
18-Sep	129	129	127	127	129	133	138	144	148	162	193	214	222	213	200	201	212	216	207	210	205	244	258	249	170.6
19-Sep	247	205	185	158	134	140	137	134	126	138	210	142	212	275	268	257	251	246	6	349	78	UO	UO	129	196.0
20-Sep	131	135	136	145	123	124	120	123	134	129	129	133	143	153	160	158	167	165	156	145	145	140	139	138	139.5
21-Sep	146	260	129	174	118	132	140	133	130	134	262	60	107	262	358	274	263	264	271	286	275	219	242	243	234.1
22-Sep	248	254	251	239	242	183	143	114	126	248	242	222	221	243	246	237	231	187	154	154	158	153	152	150	217.0
23-Sep	156	175	156	177	184	180	174	200	199	211	255	250	230	225	219	212	214	200	195	195	198	138	139	145	204.0
24-Sep	134	134	141	134	139	149	145	185	222	254	251	262	269	280	271	291	306	306	284	81	280	83	91	125	240.8
25-Sep	131	133	132	134	136	135	124	125	134	142	126	124	133	143	148	155	169	177	154	154	175	244	255	244	153.2
26-Sep	227	241	316	281	229	157	173	146	137	257	266	251	273	268	265	248	271	8	208	221	214	204	173	115	240.5
27-Sep	153	149	143	149	216	238	254	260	265	260	258	255	256	249	251	255	255	256	277	70	233	237	146	141	243.6
28-Sep	114	116	260	262	282	261	269	273	254	235	125	122	132	151	151	199	225	185	15	122	92	48	88	125	213.9
29-Sep	123	120	121	120	123	116	121	128	128	129	132	130	135	151	158	156	169	154	132	128	117	126	116	70	128.5
30-Sep	98	192	119	341	277	319	286	264	325	324	298	1	346	7	15	5	359	324	310	294	305	315	288	298	338.2
	152.8	149.5	150.0	153.8	153.5	148.6	138.7	137.7	149.5	149.9	161.5	154.0	174.9	212.6	230.0	238.5	247.2	235.9	220.7	209.5	191.2	182.7	164.7	158.0	
	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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 96 deg on Sep 30 04:00

Minimum Value: 9 deg on Sep 29 23:00

Percentiles: P_1 = 10 P_{10} = 14 Q_1 = 18 Median = 26 Q_3 = 40 P_{90} = 65 P_{99} = 90

Hours in Service:	720
Hours of Data:	707
Hours of Missing Data:	13
Hours of Calibration:	0
Percent Operational Time:	98.2

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-Sep	48	80	77	75	76	62	30	76	42	41	45	58	28	26	23	22	21	18	20	25	19	84	89	UO	89
2-Sep	41	42	53	22	48	UO	55	90	49	54	48	16	13	20	21	19	23	35	44	45	35	24	23	32	90
3-Sep	28	14	17	21	16	21	26	23	30	31	31	20	16	52	16	21	22	21	21	20	20	18	15	11	52
4-Sep	12	12	13	11	11	13	16	13	15	24	23	25	21	23	22	18	26	27	17	50	30	73	59	38	73
5-Sep	42	UO	UO	71	87	53	28	17	16	17	16	20	17	29	21	25	33	21	47	79	54	82	43	80	87
6-Sep	26	52	59	59	25	36	31	17	16	20	22	25	24	20	23	17	23	20	61	33	91	84	65	52	91
7-Sep	55	69	42	38	29	24	48	27	90	24	60	25	26	36	24	21	18	23	30	26	31	13	31	23	90
8-Sep	15	17	22	31	15	13	33	37	83	23	65	84	24	18	21	29	33	29	15	21	30	85	90	59	90
9-Sep	40	27	50	35	27	21	71	32	18	30	27	29	19	30	31	35	32	28	23	26	74	68	63	65	74
10-Sep	82	93	87	55	85	95	56	55	47	15	35	18	29	66	22	21	22	19	16	UO	UO	UO	36	UO	95
11-Sep	81	49	44	55	52	48	61	15	14	15	13	21	21	39	31	34	30	30	22	17	26	26	15	15	81
12-Sep	19	17	18	24	26	18	21	18	15	12	12	13	38	40	35	35	35	30	23	34	92	79	73	79	92
13-Sep	90	74	49	71	29	19	19	20	20	28	13	78	17	12	17	19	18	22	15	20	31	89	59	44	90
14-Sep	54	49	70	44	19	UO	UO	83	43	19	14	13	14	17	30	73	45	26	34	33	70	59	76	UO	83
15-Sep	81	63	31	22	30	23	29	27	63	92	20	56	42	54	18	13	15	14	15	11	13	12	11	11	92
16-Sep	14	13	20	19	18	22	27	67	19	25	21	48	41	44	24	16	12	20	25	52	22	21	25	26	67
17-Sep	16	22	32	57	45	28	33	14	23	20	16	15	12	14	12	12	12	11	15	23	19	16	15	14	57
18-Sep	13	15	16	18	16	18	23	28	30	41	40	36	30	33	41	38	35	26	19	35	31	18	14	13	41
19-Sep	15	41	40	41	24	22	15	15	29	37	67	39	68	18	25	21	17	66	70	24	39	UO	UO	51	70
20-Sep	26	16	30	47	23	23	16	17	15	15	11	18	26	35	34	34	34	31	31	28	27	16	18	20	47
21-Sep	59	76	52	77	31	46	20	10	11	16	87	44	34	61	50	41	12	12	14	19	37	28	15	14	87
22-Sep	13	15	13	60	32	67	49	26	27	51	22	26	27	23	19	25	23	31	25	25	28	23	24	21	67
23-Sep	28	47	33	37	36	38	50	40	30	39	15	17	21	22	28	30	28	32	30	29	43	21	23	30	50
24-Sep	16	17	20	14	22	33	36	35	33	16	15	21	21	18	19	13	12	12	84	39	84	80	41	21	84
25-Sep	14	21	22	18	24	35	22	18	23	24	15	16	14	26	51	31	35	32	27	27	31	24	13	24	51
26-Sep	17	19	59	68	33	45	31	28	52	18	22	20	17	18	18	15	46	89	31	21	26	31	41	27	89
27-Sep	38	36	21	21	40	16	14	14	14	15	15	16	17	17	17	15	14	18	50	94	19	26	26	29	94
28-Sep	65	82	16	18	26	16	18	14	18	22	47	18	46	59	32	59	24	26	64	78	46	74	53	12	82
29-Sep	10	10	12	11	10	9	12	10	10	10	14	12	23	29	35	33	32	31	29	44	15	15	9	30	44
30-Sep	48	70	10	96	37	31	33	17	52	32	18	23	20	19	17	21	21	24	14	16	19	20	17	12	96
	90	93	87	96	87	95	71	90	90	92	87	84	68	66	51	73	46	89	84	94	92	89	90	80	
	Diurnal Maximum																								

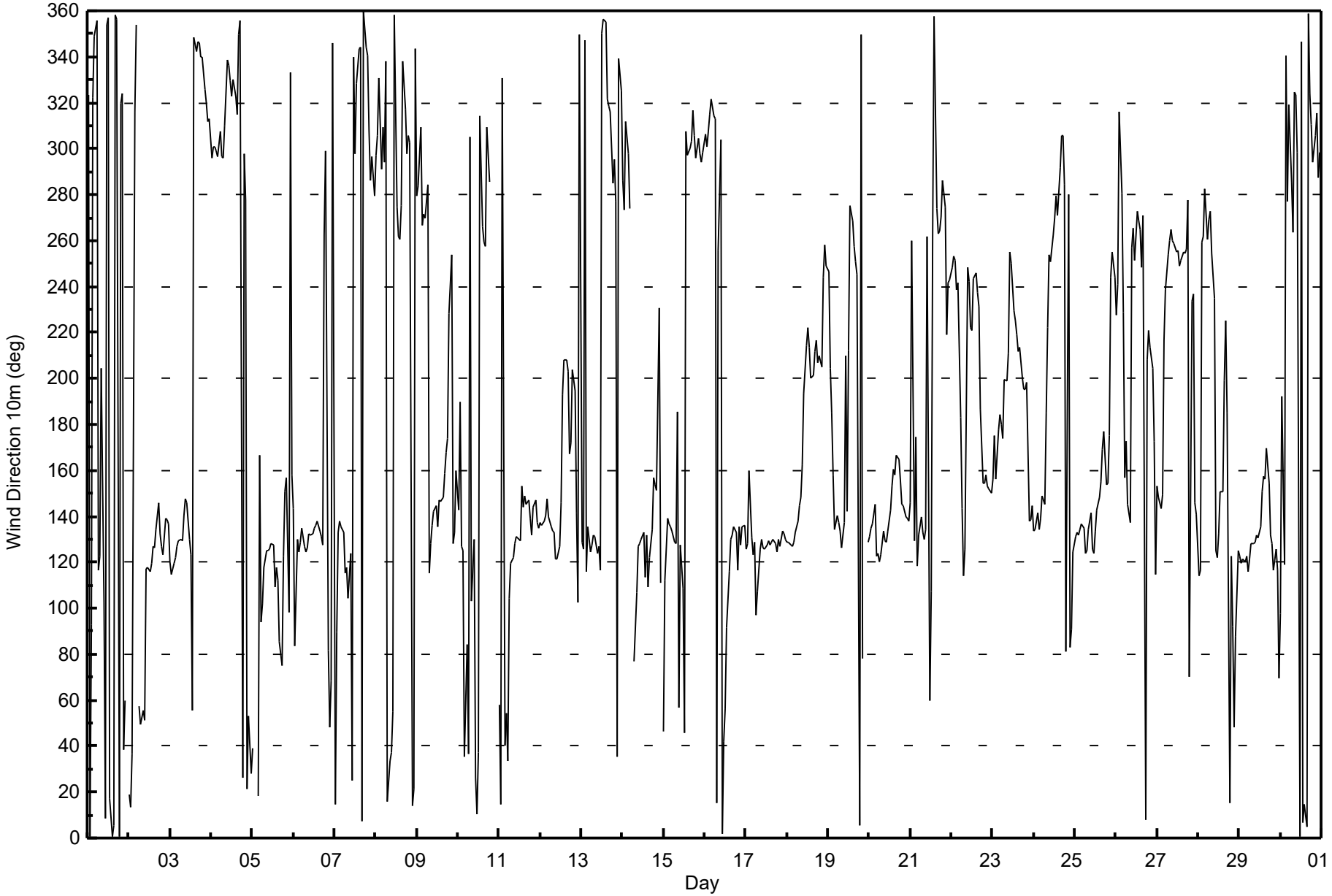
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Lower Camp - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS13
FORT MCKAY SOUTH
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
SEPTEMBER 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	687	33	33	100	-	-	128.8	0	15.2	0
TRS(ppb) Average	686	34	34	100	7.3	7	5.6	0	1.9	0
THC(ppm) Average	687	33	33	100	-	-	4.2	-	2.7	-
NMHC(ppm) Average	687	33	33	100	-	-	0.52	-	0.162	-
CH4(ppm) Average	687	33	33	100	-	-	3.9	-	2.6	-
O3(ppb) Average	686	34	34	100	-	-	60.2	0	29.4	-
NO2(ppb) Average	632	33	88	92.36	-	-	28.3	0	11	-
NO(ppb) Average	632	33	88	92.36	-	-	76.3	-	13.9	-
NOX(ppb) Average	632	33	88	92.36	-	-	89.8	-	24.8	-
PM2.5(ug/m3) Average	719	1	1	100	-	-	168.2	0	78.4	13
ET(C) Average	720	0	0	100	-	-	29.9	-	18	-
RH(%) Average	712	0	8	98.89	-	-	100	-	84.8	-
WS(km/h) Average	720	0	0	100	-	-	23	-	10	-
WD(deg) Average	720	0	0	100	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	687	1.57	6.7	-	0	0.3	0.4	0.5	0.8	2.8	128.8
TRS(ppb) Average	686	0.8	0.7	-	0.3	0.4	0.4	0.6	0.9	1.5	5.6
THC(ppm) Average	687	2.31	0.3	-	2	2.1	2.1	2.2	2.4	2.7	4.2
NMHC(ppm) Average	687	0.076	0.077	-	0	0	0	0.1	0.1	0.2	0.52
CH4(ppm) Average	687	2.23	0.3	-	2	2	2.1	2.1	2.3	2.5	3.9
O3(ppb) Average	686	19.16	13.1	-	2.2	3	6.4	18.1	29.4	36.5	60.2
NO2(ppb) Average	632	4.68	4.2	-	0.1	0.5	1.5	3.5	6.6	10.7	28.3
NO(ppb) Average	632	2.42	7.5	-	0	0	0.1	0.2	1.4	5.5	76.3
NOX(ppb) Average	632	7.1	10.1	-	0.2	0.6	1.6	4.1	8.7	15.7	89.8
PM2.5(ug/m3) Average	719	30.04	25.4	-	1.2	6.3	13.3	24.5	38	58	168.2
Temperature 2 m (C) Average	720	13.47	6.5	-	-3.2	5.3	8.8	13.2	18.1	22.2	29.9
Relative Humidity (%) Average	712	69.38	22.1	-	22.3	37.2	50.8	70.7	90.3	98.1	100
Wind Speed 10 m (km/h) Average	720	6.2	4	-	0	2	3	5	9	12	23
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2/NO/NOx	21 Sep 2025 07:00	22 Sep 2025 10:00	28	Unstable Operation - inconsistent response
NO2/NO/NOx	22 Sep 2025 11:00	23 Sep 2025 13:00	27	Maintenance - station operator activities
Relative Humidity	05 Sep 2025 07:00	05 Sep 2025 09:00	3	Sensor operated out of range
Relative Humidity	14 Sep 2025 08:00	14 Sep 2025 08:00	1	Sensor operated out of range
Relative Humidity	17 Sep 2025 06:00	17 Sep 2025 09:00	4	Sensor operated out of range

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 128.8 ppb on Sep 17 13:00 Maximum Daily Average: 15.2 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 8 12:00 Minimum Daily Average: 0.4 ppb on Sep 22
Maximum Diurnal Average: 6.4 ppb at hour 13 Minimum Diurnal Average: 0.5 ppb at hour 6
Monthly Average: 1.57 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.4 Median = 0.5 Q_3 = 0.8 P_{90} = 2.8 P_{99} = 13.1

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.6	0.6	0.6	0.6	0.6	Z	0.6	0.5	0.6	1.5	2.9	1.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.6	0.6	0.5	0.5	0.7	2.9
2-Sep	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.9	5.6	4.9	3.6	2.2	1.3	5.0	2.9	0.8	0.5	0.5	0.5	0.5	0.7	1.5	5.6
3-Sep	0.8	Z	0.8	0.7	0.7	0.7	0.9	1.7	3.9	18.4	13.1	3.4	1.7	1.4	1.2	1.7	0.9	0.7	0.6	0.6	0.7	0.7	1.4	0.9	2.5	18.4
4-Sep	0.8	0.7	Z	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.3	0.4	0.8
5-Sep	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.5	0.3	1.0	1.6	2.2	4.8	8.3	8.8	6.7	7.7	7.0	1.7	0.5	0.4	0.5	0.4	0.4	2.4	8.8
6-Sep	0.4	0.4	0.3	0.3	Z	0.3	0.4	0.4	0.5	0.6	3.6	7.2	5.6	5.6	8.8	5.7	3.2	1.6	1.0	0.6	0.4	0.5	0.6	0.5	2.1	8.8
7-Sep	0.5	0.5	0.8	0.6	0.5	Z	0.7	0.6	0.5	0.4	0.4	0.7	0.8	1.0	0.7	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	1.0
8-Sep	Z	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.5	0.2	0.1	0.0	0.1	0.2	0.2	0.3	9.7	12.3	0.7	0.4	0.3	0.5	0.3	0.3	1.2	12.3
9-Sep	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.5	1.2	4.1	1.8	2.5	3.5	10.2	2.9	2.2	1.2	1.1	1.0	0.8	0.7	0.7	0.6	1.6	10.2
10-Sep	0.5	0.5	Z	0.6	0.7	0.6	0.7	0.6	0.6	0.5	C	C	C	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.5	0.7
11-Sep	0.3	0.4	0.3	Z	0.3	0.4	0.7	0.7	1.0	0.8	1.3	6.8	5.1	5.5	4.9	1.4	1.4	0.7	0.7	0.5	0.4	0.4	0.5	0.5	1.5	6.8
12-Sep	0.6	0.6	0.5	0.5	Z	0.4	0.4	0.5	1.4	5.4	5.6	2.8	1.0	0.9	1.0	1.0	0.9	0.9	0.7	0.7	0.6	0.5	0.6	0.6	1.2	5.6
13-Sep	0.5	0.8	0.8	0.9	0.8	Z	0.6	0.6	0.5	0.6	0.7	4.8	8.9	7.2	5.1	5.5	4.8	2.8	1.2	0.8	0.7	0.6	0.6	0.6	2.2	8.9
14-Sep	Z	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.9	1.1	4.8	4.4	14.1	2.1	1.3	1.3	1.7	0.6	0.9	0.9	0.5	0.4	0.2	1.8	14.1
15-Sep	0.3	Z	0.3	0.3	0.5	0.4	0.4	0.5	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5
16-Sep	0.4	0.5	Z	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.3	2.1	0.7	3.1	5.9	2.2	0.5	0.5	0.5	0.4	0.4	0.9	5.9
17-Sep	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.7	3.0	9.8	4.5	128.8	108.1	21.4	16.5	10.4	13.5	12.8	9.1	1.4	1.3	1.0	3.8	15.2	128.8
18-Sep	6.1	4.9	2.1	0.9	0.7	Z	0.7	1.4	6.3	2.0	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.5	0.5	1.4	6.3
19-Sep	0.5	0.4	0.4	0.4	0.5	Z	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.8
20-Sep	Z	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.6	1.2	2.1	2.3	2.9	0.7	0.8	1.1	1.0	0.7	1.1	0.6	0.6	0.7	0.7	0.6	0.9	2.9
21-Sep	0.6	Z	0.7	0.6	0.5	0.6	0.6	0.7	1.0	1.1	1.2	1.3	1.3	1.1	0.8	0.7	0.7	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.8	1.3
22-Sep	0.5	0.6	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.6
23-Sep	0.5	0.6	0.6	Z	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.4	0.3	0.4	0.4	0.6
24-Sep	0.4	0.5	0.5	0.5	Z	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	0.5	0.5	0.4	0.4	0.3	0.6	0.5	0.6
25-Sep	1.4	1.7	1.6	1.2	0.9	Z	0.4	0.4	0.4	0.6	4.0	5.4	3.1	2.6	0.8	1.0	1.2	0.8	1.2	1.3	0.7	0.7	0.5	0.5	1.4	5.4
26-Sep	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	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.6
27-Sep	0.5	Z	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	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.6
28-Sep	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	1.1	2.5	0.5	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	2.5
29-Sep	0.3	0.4	0.4	Z	0.5	0.3	0.4	0.4	0.4	3.4	2.0	2.0	1.0	9.8	2.3	2.3	4.2	2.5	2.2	1.1	0.7	0.5	0.4	0.4	1.7	9.8
30-Sep	0.3	0.3	0.3	0.3	Z	1.1	1.3	1.2	1.7	2.1	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.7	2.1
	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.9	1.6	2.1	2.2	6.4	6.0	2.6	1.9	2.1	2.1	1.2	0.9	0.6	0.5	0.5	0.6	Diurnal Average	
	6.1	4.9	2.1	1.2	0.9	1.1	1.3	1.7	6.3	18.4	13.1	7.2	128.8	108.1	21.4	16.5	10.4	13.5	12.8	9.1	1.4	1.3	1.4	3.8	Diurnal Maximum	

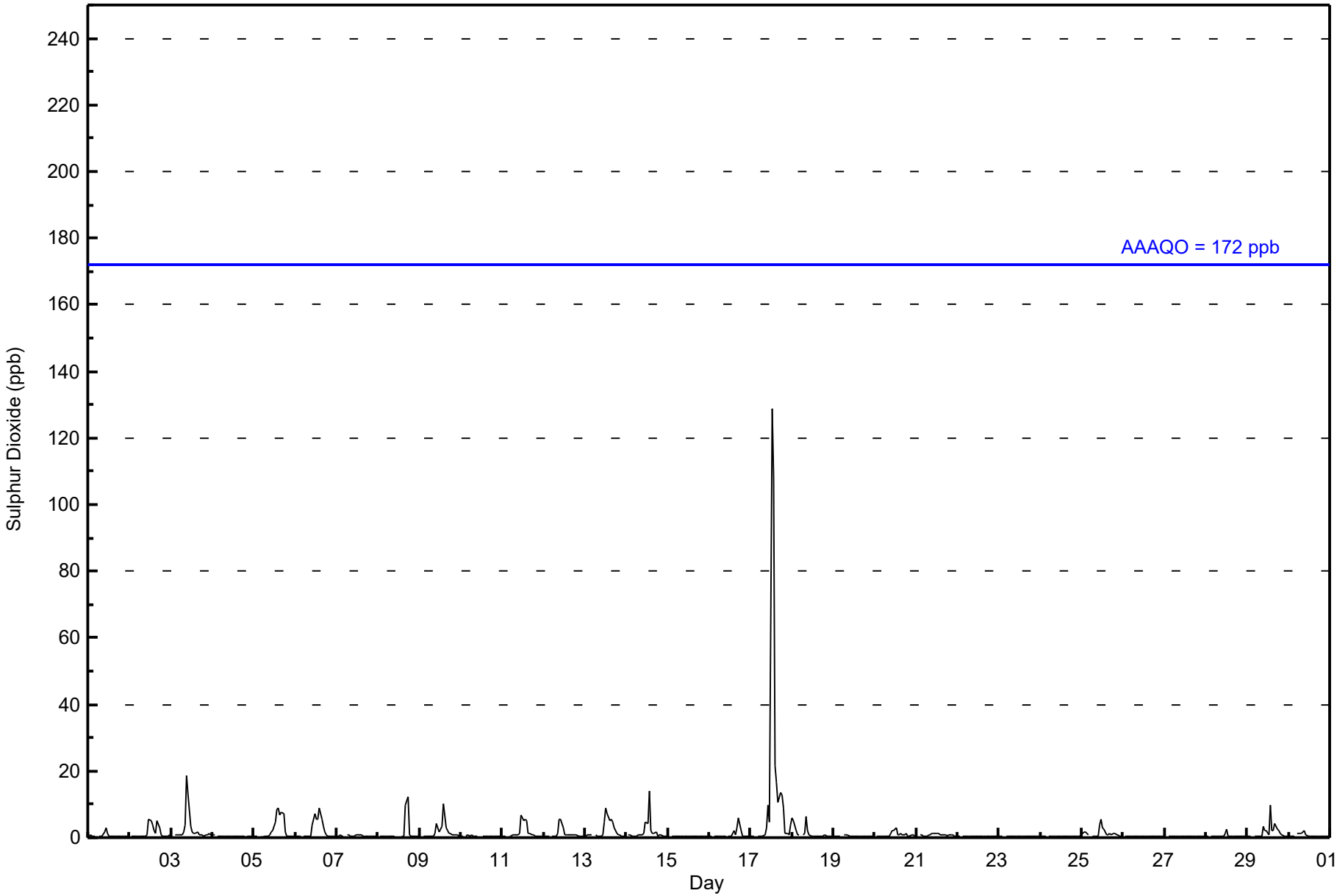
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - September 2025



Sulphur Dioxide (SO_2) - ppb
Fort McKay South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	677	98.54	98.54
11 - 20	7	1.02	99.56
21 - 60	1	0.15	99.71
61 - 110	1	0.15	99.85
111 - 172	1	0.15	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	38	18	8	4	4	15	41	54	102	105	107	70	29	28	34	20	677
11 - 20	0	0	0	0	0	0	0	4	2	0	0	0	0	1	0	0	7
21 - 60	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
111 - 172	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	18	8	4	4	15	41	61	104	105	107	70	29	29	34	20	687

Total Number of Valid Hours: 687

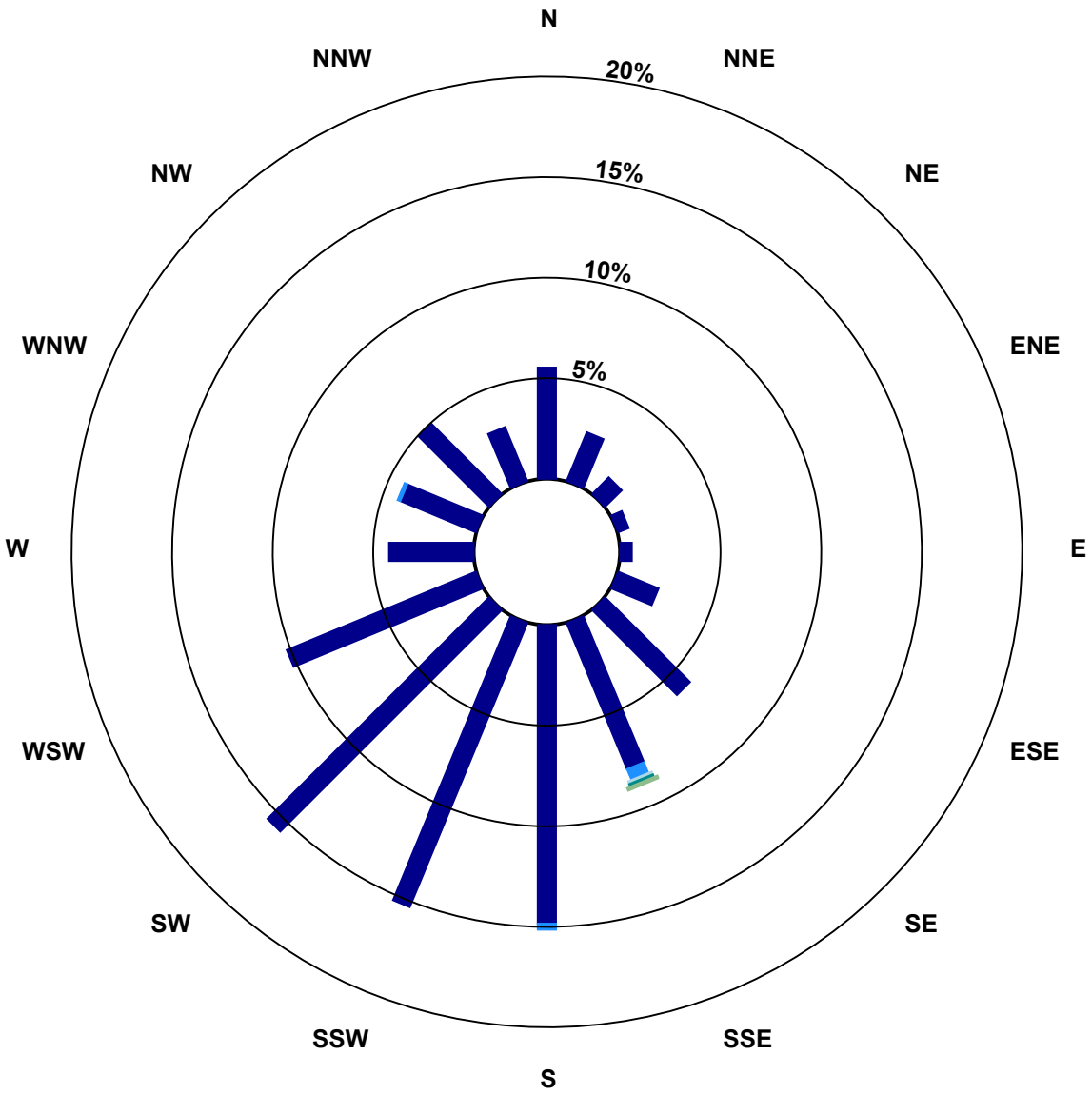
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay South



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

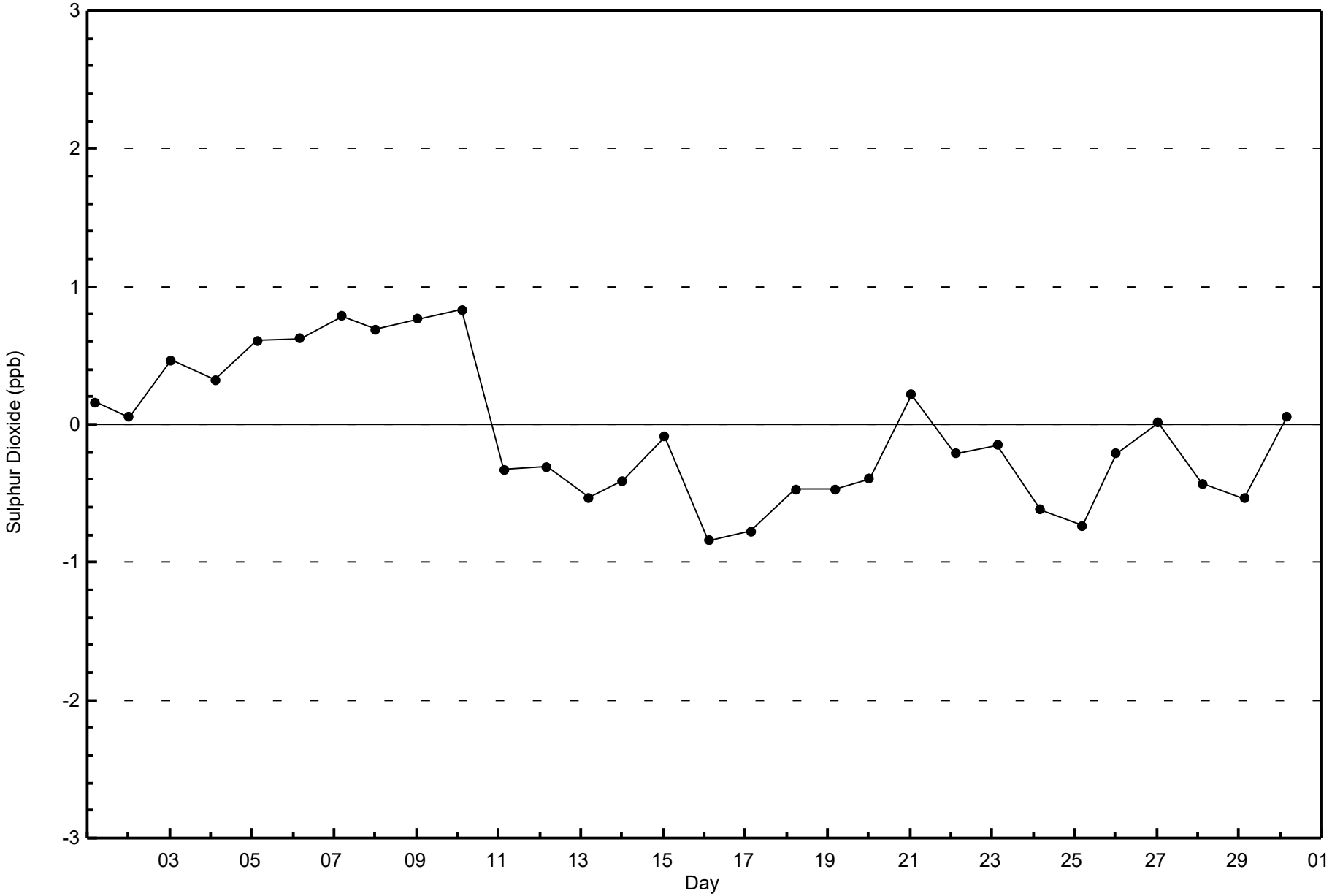
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - September 2025

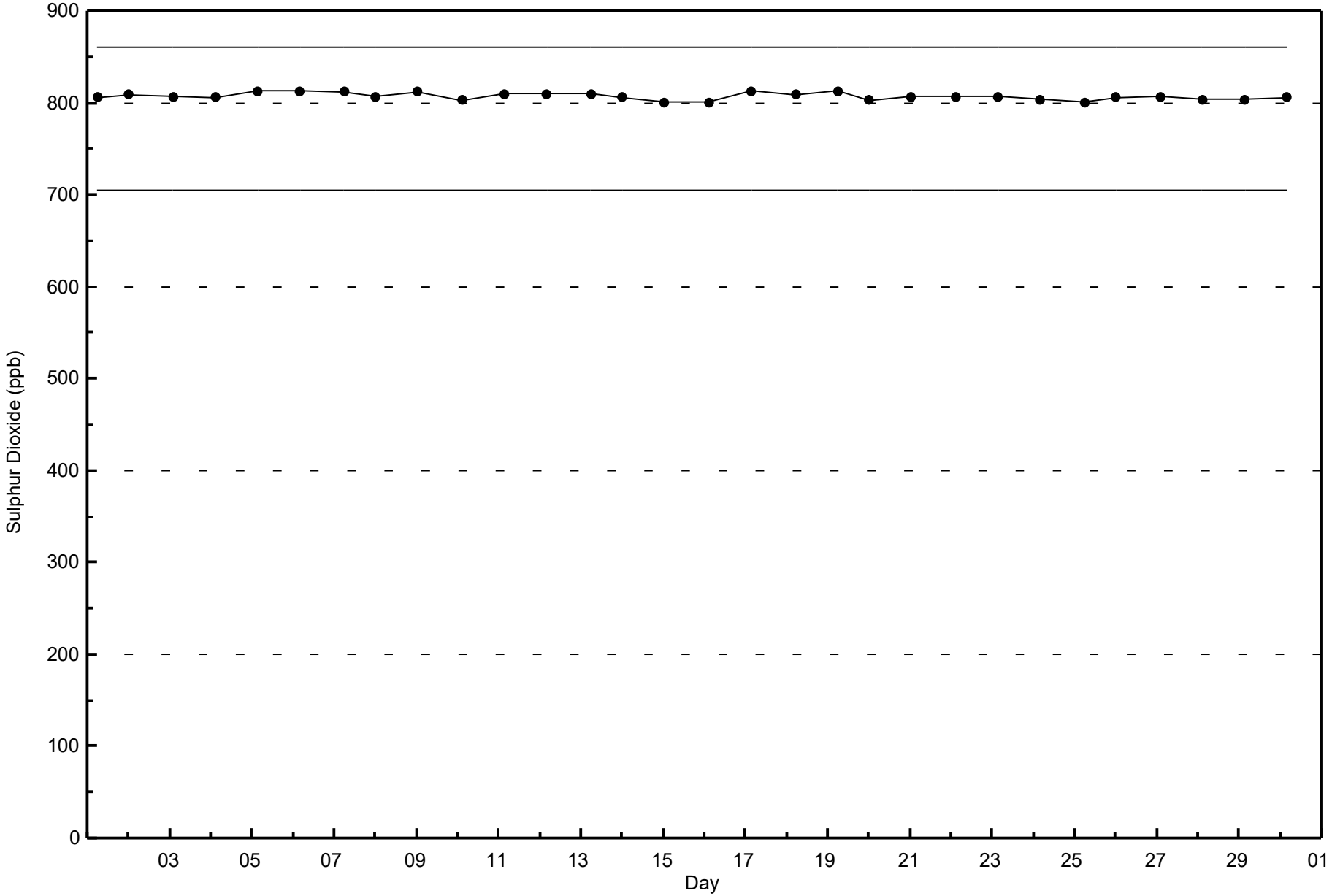


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025

Number of Exceedences (AAAQG): 30-Min: 7

Maximum Value: 7.3 ppb on Sep 11 09:00 Maximum Daily Average: 1.9 ppb on Sep 12

Minimum Value: 0.3 ppb on Sep 5 02:00 Minimum Daily Average: 0.4 ppb on Sep 27

Maximum Diurnal Average: 1.2 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.80 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.8 P_{90} = 1.5 P_{99} = 4.0

Periods in Service:	1440
Periods of Valid Data:	1370
Periods of Invalid Data:	70
Periods of Calibration:	69
Percent Operational Time:	99.9

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	Z	0.5	0.6	0.4	0.5	0.4	0.6	0.6	1.6	2.6	2.6	2.2	0.8	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.5	0.4	0.5	0.5	0.9	2.6
	SP	0.5	0.5	0.4	0.5	0.5	0.6	0.7	2.6	2.3	2.4	1.3	0.7	0.6	0.7	0.7	0.8	0.8	0.6	0.5	0.4	0.4	0.5	0.6		
2-Sep	0.5	Z	0.6	0.5	0.4	0.3	0.5	0.5	0.5	0.7	0.9	3.7	1.5	0.9	0.7	0.5	0.6	0.7	0.6	0.6	0.4	0.4	0.8	0.5	0.8	3.7
	0.5	SP	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.7	1.3	3.7	1.4	0.7	0.5	0.5	0.9	0.5	0.6	0.5	0.4	0.5	0.5	0.5		
3-Sep	0.6	0.6	Z	0.6	0.6	0.6	0.6	0.5	0.5	0.8	1.5	2.2	1.2	0.6	0.5	0.7	0.6	0.6	0.5	0.6	0.8	1.0	1.0	0.8	0.8	2.7
	0.6	0.7	SP	0.6	0.6	0.6	0.6	0.5	0.6	1.9	2.7	1.2	1.0	0.5	0.5	0.7	0.6	0.5	0.5	0.6	0.8	1.0	1.0	0.8		
4-Sep	0.7	0.5	0.6	Z	0.5	0.5	0.4	0.4	0.4	C	C	C	C	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7
	0.7	0.6	0.6	SP	0.5	0.5	0.4	0.5	C	C	C	C	C	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
5-Sep	0.4	0.3	0.3	0.3	Z	0.3	0.3	1.1	1.2	1.1	1.2	0.8	0.8	0.9	0.7	0.6	0.7	0.6	0.6	0.6	0.4	0.4	0.4	0.5	0.6	1.2
	0.3	0.3	0.4	0.3	SP	0.3	0.5	1.2	1.1	1.0	1.0	0.7	1.0	0.8	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.5	0.4		
6-Sep	0.5	0.5	0.4	0.4	0.5	Z	0.4	0.4	0.8	0.9	2.2	1.6	1.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.9	1.0	0.7	2.2
	0.5	0.4	0.3	0.4	0.4	SP	0.3	0.6	0.9	1.5	2.2	1.6	1.2	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.7	1.3	0.7		
7-Sep	Z	0.6	1.0	0.7	1.0	1.8	0.8	1.2	1.2	1.0	1.0	1.0	1.2	1.0	0.8	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.8	1.9
	SP	0.7	0.7	0.7	1.4	1.0	0.6	1.9	1.0	1.1	0.9	1.2	1.1	1.0	0.6	0.6	0.7	0.6	0.7	0.6	0.5	0.5	0.4	0.4		
8-Sep	0.4	Z	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.7	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.7
	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.4	0.4	0.4	0.3		
9-Sep	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.5	0.8	1.2	2.1	1.5	1.0	0.8	0.7	0.5	0.6	3.4	1.2	1.2	0.6	0.5	1.3	1.3	1.0	5.0
	0.4	0.3	SP	0.3	0.3	0.3	0.3	0.7	0.8	1.9	1.7	1.0	1.0	0.7	0.6	0.6	1.6	4.1	5.0	0.7	0.5	0.6	1.8	1.9		
10-Sep	1.5	1.2	0.8	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	1.5
	1.4	1.0	0.7	SP	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
11-Sep	0.4	0.4	0.4	0.4	Z	0.4	0.5	0.6	3.9	3.9	1.9	1.6	1.1	0.8	0.5	0.5	0.4	0.4	0.5	0.5	0.6	1.8	0.7	0.6	1.1	7.3
	0.4	0.4	0.4	0.4	SP	0.4	0.5	2.0	7.3	2.1	1.9	1.5	1.4	0.6	0.5	0.5	0.4	0.4	0.5	0.5	1.4	1.0	0.5	0.8		
12-Sep	1.0	1.2	1.1	1.2	2.6	Z	1.8	1.7	3.1	1.5	2.0	1.0	0.8	0.9	1.1	0.5	0.6	4.9	5.4	4.5	2.7	1.4	1.7	0.8	1.9	5.5
	1.3	1.1	1.0	1.6	2.2	SP	1.6	3.1	1.6	1.9	1.1	1.0	1.0	1.1	1.1	0.4	2.3	5.5	5.3	3.6	2.0	1.5	1.2	0.6		
13-Sep	Z	2.3	3.6	1.9	1.0	0.9	1.5	1.7	2.4	2.0	1.1	0.8	1.0	1.5	1.2	1.2	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.8	1.3	3.6
	SP	3.0	2.7	1.3	0.8	1.1	2.0	1.6	2.0	1.5	1.0	0.8	1.3	1.2	1.3	1.1	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8		
14-Sep	0.8	Z	0.6	0.6	0.5	0.5	0.5	0.4	1.0	1.5	1.4	1.3	1.3	2.7	0.8	0.7	1.6	2.2	0.5	0.4	2.0	1.0	2.3	3.0	1.2	3.1
	0.7	SP	0.6	0.6	0.5	0.5	0.5	0.6	1.1	1.7	1.5	1.2	1.5	1.9	0.6	1.2	2.7	0.7	0.5	1.1	1.4	1.3	3.1	2.3		
15-Sep	2.1	1.8	Z	3.1	1.3	1.7	2.9	4.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.7	0.7	1.2	6.2
	2.0	3.9	SP	1.4	1.7	1.0	6.2	2.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.6	0.6	0.6	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.5	0.4	0.8	1.4	1.2	1.3	1.3	1.6	1.1	0.8	1.6
	0.6	0.6	0.6	SP	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.4	0.4	1.4	1.2	1.4	1.3	1.2	1.2	1.1		
17-Sep	0.8	0.6	0.5	0.5	Z	0.6	0.6	0.7	DF	3.1	1.6	1.3	3.1	2.4	0.9	0.8	1.3	0.9	1.4	1.6	0.4	0.4	0.4	0.7	1.2	4.0
	0.6	0.6	0.5	0.5	SP	0.5	0.4	1.1	1.8	3.6	0.7	0.8	4.0	2.6	0.7	1.1	1.0	1.1	1.8	0.7	0.4	0.4	0.4	3.4		
18-Sep	5.1	4.8	1.8	0.7	0.8	0.6	Z	0.6	0.6	1.0	1.3	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	1.0	5.8
	5.8	3.2	1.0	0.7	0.8	0.6	SP	0.5	0.9	1.5	0.6	0.5	0.4	0.4	0.6	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5		
19-Sep	Z	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.8	0.9	1.5	1.8	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.7	2.1
	SP	0.5	0.5	0.6	0.5	0.6	0.6	0.8	0.9	1.6	1.8	1.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.6	2.1		
20-Sep	2.6	Z	1.3	1.0	0.9	0.7	0.7	1.1	1.7	0.7	1.0	0.6	0.8	0.8	0.5	0.6	0.8	1.2	1.2	0.7	0.5	0.4	0.4	0.5	0.9	2.6
	2.3	SP	1.1	1.0	0.8	0.7	0.9	1.4	1.1	0.9	0.8	0.8	0.6	0.6	0.6	0.5	0.7	1.2	0.8	0.5	0.5	0.5	0.5	0.5		
21-Sep	0.6	1.5	Z	1.6	2.0	2.5	1.3	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.5	0.6	0.6	0.5	0.8	2.5
	1.1	1.5	SP	1.6	2.3	2.2	1.4	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.6	1.4	0.5	0.5		
22-Sep	0.5	0.5	0.6	Z	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1.0	0.5	0.4	0.4	0.4	0.4	0.5	1.0
	0.5	0.5	0.6	SP	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	0.6	0.7	0.5	0.4	0.3	0.4	0.4		
23-Sep	0.7	0.4	0.3	0.4	Z	0.4	0.4	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.5	2.4
	1.8	0.3	0.3	2.4	SP	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4		
24-Sep	0.5	0.6	0.5	0.5	0.6	Z	0.5	0.5	0.5	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.7
	0.5	0.6	0.5	0.6	0.5	SP	0.5	0.5	0.7	0.7	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	0.5		
25-Sep	Z	0.8	0.8	0.7	1.2	1.2	1.1	1.2	0.8	0.6	0.6	0.7	0.9	0.7	0.3	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.5	0.5	0.7	1.4
	SP	0.8	0.7	1.0	1.4	1.1	1.2	1.3	0.6	0.5	0.7	0.9	1.0	0.4	0.4	0.4	0.5	0.4	0.8	0.4	0.5	0.5	0.5	0.5		
26-Sep	0.5	Z	0.4	0.4	0.4	0.4	0.5	0.7	0.9	0.5	0.5	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	0.4	0.9
	0.4	SP	0.4	0.4	0.4	0.4	0.6	0.5	0.9	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.7		
27-Sep	0.7	0.4	Z	0.6	0.4	0.4	0.4	0.4	0.4	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	0.7
	0.6	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.5		
28-Sep	0.4	0.5	0.7	Z	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.6	0.5	0.5	0.8
	0.4	0.6	0.8	SP	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.5	0.4		
29-Sep	0.4	0.9	0.8	0.5	Z	0.7	0.5	1.0	0.8	1.6	1.0	0.4	0.5	0.4	0.4	0.5	0.5	0.6	1.1	0.9	0.6	1.0	1.5	1.2	0.8	2.9
	0.4	1.4	0.5	0.5	SP	0.4	0.5	2.9	0.5	1.6	0.4	0.5	0.4	0.4	0.4	0.4	0.7	0.7	1.0	0.7	0.7	1.4	1.4	1.0		
30-Sep	0.8	0.7	0.6	0.7	0.9	Z	1.2	1.1	1.5	1.8	1.0	0.8	0.6	0.6	0.6	0.5	0.7	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.8	1.8
	0.7	0.6	0.6	0.8	0.9	SP	1.2	1.2	1.6	1.8	0.9	0.6	0.6	0.8	0.4	0.6	0.6	0.4	0.5	0.4	0.4	0.5	0.5	0.6		
	1.0	0.9	0.7	0.8	0.8	0.7	0.8	0.9	1.1	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.6	0.9	0.9	0.7	0.6	0.6	0.7	0.8	Diurnal Average	
	5.8	4.8	3.6	3.1	2.6	2.5	6.2	4.6	7.3	3.9	2.7	3.7	4.0	2.7	1.3	1.2	2.7	5.5	5.4	4.5	2.7	1.8	3.1	3.4	Diurnal Maximum	

Z - zerospan C - Calibration 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 McKay South - September 2025

Maximum Value: 5.6 ppb on Sep 11 09:00

Maximum Daily Average: 1.9 ppb on Sep 12

Minimum Value: 0.3 ppb on Sep 5 02:00

Minimum Daily Average: 0.4 ppb on Sep 27

Maximum Diurnal Average: 1.2 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.80 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.6 Q_3 = 0.9 P_{90} = 1.5 P_{99} = 3.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	0.5	0.6	0.4	0.5	0.5	0.6	0.6	2.1	2.5	2.5	1.8	0.8	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.4	0.4	0.5	0.5	0.9	2.5
2-Sep	0.5	Z	0.6	0.5	0.4	0.4	0.5	0.5	0.6	0.7	1.1	3.7	1.4	0.8	0.6	0.5	0.8	0.6	0.6	0.5	0.4	0.5	0.7	0.5	0.8	3.7
3-Sep	0.6	0.7	Z	0.6	0.6	0.6	0.6	0.5	0.6	1.4	2.1	1.7	1.1	0.5	0.5	0.7	0.6	0.5	0.5	0.6	0.8	1.0	1.0	0.8	0.8	2.1
4-Sep	0.7	0.6	0.6	Z	0.5	0.5	0.4	0.4	0.4	C	C	C	C	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7
5-Sep	0.3	0.3	0.3	0.3	Z	0.3	0.4	1.2	1.2	1.1	1.1	0.8	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.6	1.2
6-Sep	0.5	0.5	0.3	0.4	0.4	Z	0.3	0.5	0.9	1.2	2.2	1.6	1.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	1.1	0.9	0.7	2.2
7-Sep	Z	0.6	0.9	0.7	1.2	1.4	0.7	1.5	1.1	1.1	1.0	1.1	1.2	1.0	0.7	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.8	1.5
8-Sep	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.7
9-Sep	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.6	0.8	1.5	1.9	1.3	1.0	0.7	0.6	0.6	1.1	3.7	3.1	0.9	0.5	0.6	1.6	1.6	1.0	3.7
10-Sep	1.4	1.1	0.8	Z	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	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.4
11-Sep	0.4	0.4	0.4	0.4	Z	0.4	0.5	1.3	5.6	3.0	1.9	1.5	1.3	0.7	0.5	0.5	0.4	0.4	0.5	0.5	1.0	1.4	0.6	0.7	1.1	5.6
12-Sep	1.1	1.2	1.0	1.4	2.4	Z	1.7	2.4	2.3	1.7	1.6	1.0	0.9	1.0	1.1	0.5	1.5	5.2	5.4	4.0	2.3	1.4	1.4	0.7	1.9	5.4
13-Sep	Z	2.7	3.2	1.6	0.9	1.0	1.8	1.7	2.2	1.8	1.0	0.8	1.2	1.4	1.2	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.8	0.8	1.3	3.2
14-Sep	0.8	Z	0.6	0.6	0.5	0.5	0.5	0.5	1.0	1.6	1.4	1.2	1.4	2.3	0.7	1.0	2.2	1.4	0.5	0.7	1.7	1.1	2.7	2.7	1.2	2.7
15-Sep	2.1	2.8	Z	2.2	1.5	1.3	4.5	3.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.7	1.2	4.5
16-Sep	0.6	0.6	0.6	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.4	1.1	1.3	1.3	1.3	1.3	1.4	1.1	0.8	1.4
17-Sep	0.7	0.6	0.5	0.5	Z	0.6	0.5	0.9	1.6	3.4	1.1	1.1	3.5	2.5	0.8	1.0	1.2	1.0	1.6	1.1	0.4	0.4	0.4	2.1	1.2	3.5
18-Sep	5.4	4.0	1.4	0.7	0.8	0.6	Z	0.6	0.8	1.2	1.0	0.5	0.4	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	1.0	5.4
19-Sep	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.9	1.3	1.7	1.6	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	1.5	0.7	1.7
20-Sep	2.5	Z	1.2	1.0	0.8	0.7	0.8	1.2	1.4	0.8	0.9	0.7	0.7	0.7	0.6	0.5	0.7	1.2	1.0	0.6	0.5	0.4	0.4	0.5	0.9	2.5
21-Sep	0.8	1.5	Z	1.6	2.2	2.3	1.3	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.6	1.0	0.6	0.5	0.8	2.3
22-Sep	0.5	0.5	0.6	Z	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.9	0.5	0.4	0.4	0.4	0.4	0.5	0.9
23-Sep	1.2	0.4	0.3	1.4	Z	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	1.4
24-Sep	0.5	0.6	0.5	0.5	0.5	Z	0.5	0.5	0.6	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.7
25-Sep	Z	0.8	0.8	0.9	1.3	1.1	1.2	1.3	0.7	0.5	0.7	0.8	0.9	0.5	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.7	1.3
26-Sep	0.5	Z	0.4	0.4	0.4	0.4	0.5	0.6	0.9	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.6	0.4	0.9
27-Sep	0.7	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	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	0.5	0.4	0.7
28-Sep	0.4	0.5	0.7	Z	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.6	0.5	0.5	0.8
29-Sep	0.4	1.1	0.6	0.5	Z	0.5	0.5	2.0	0.7	1.6	0.7	0.5	0.4	0.4	0.4	0.4	0.6	0.7	1.0	0.8	0.7	1.2	1.4	1.1	0.8	2.0
30-Sep	0.8	0.6	0.6	0.7	0.9	Z	1.2	1.2	1.5	1.8	0.9	0.7	0.6	0.7	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.8	1.8
	1.0	0.9	0.7	0.8	0.8	0.7	0.8	0.9	1.1	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.6	0.9	0.9	0.7	0.6	0.6	0.7	0.8	Diurnal Average	
	5.4	4.0	3.2	2.2	2.4	2.3	4.5	3.6	5.6	3.4	2.5	3.7	3.5	2.5	1.2	1.1	2.2	5.2	5.4	4.0	2.3	1.4	2.7	2.7	Diurnal Maximum	

Z - zerospan C - Calibration

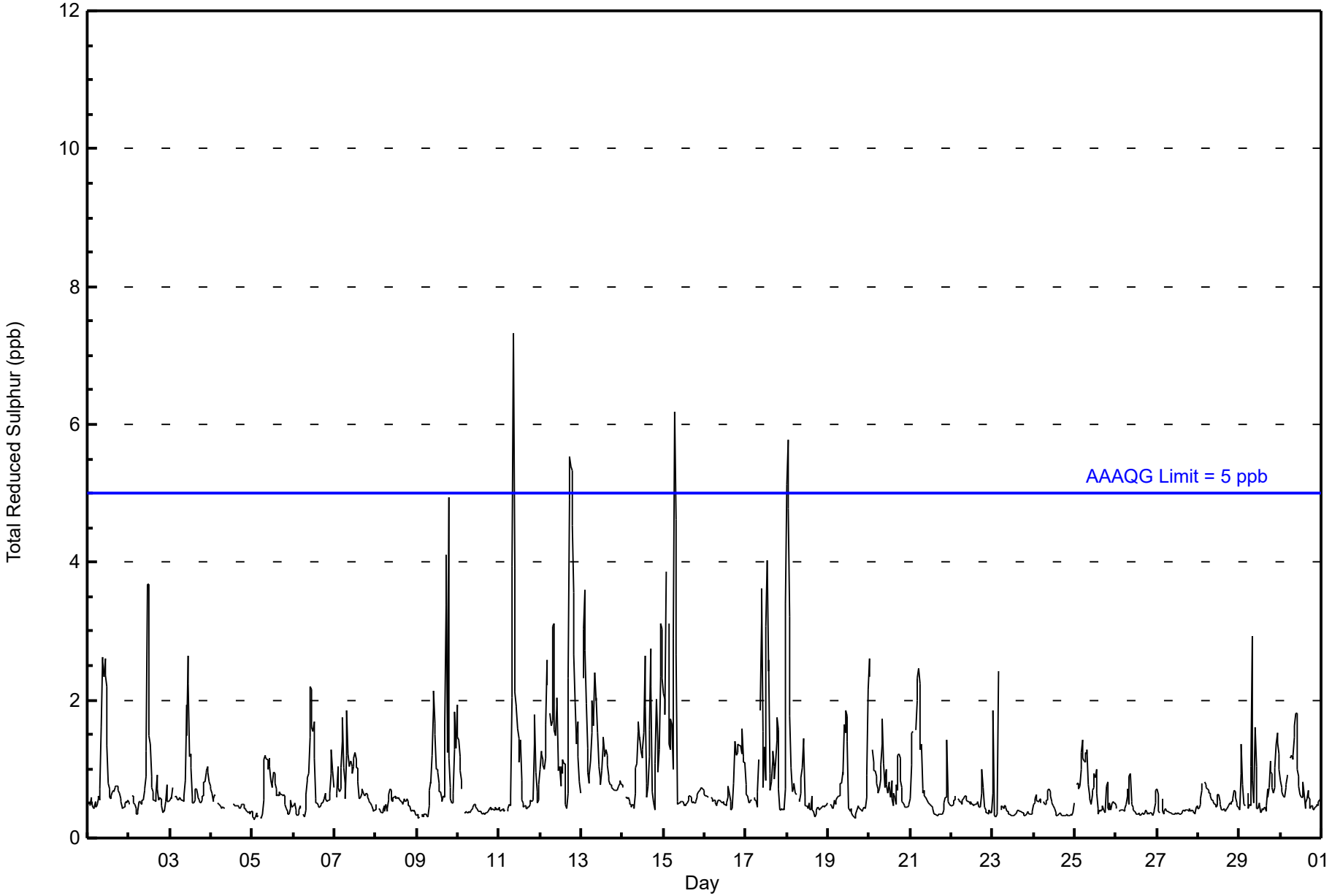
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	666	97.08	97.08
3 - 4	15	2.19	99.27
5 - 7	5	0.73	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	38	18	8	4	3	13	40	58	101	99	103	70	27	31	36	17	666
3 - 4	0	0	0	0	1	1	1	2	4	4	2	0	0	0	0	0	15
5 - 7	0	0	0	0	0	1	0	0	1	2	0	1	0	0	0	0	5
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	18	8	4	4	15	41	60	106	105	105	71	27	31	36	17	686

Total Number of Valid Hours: 686

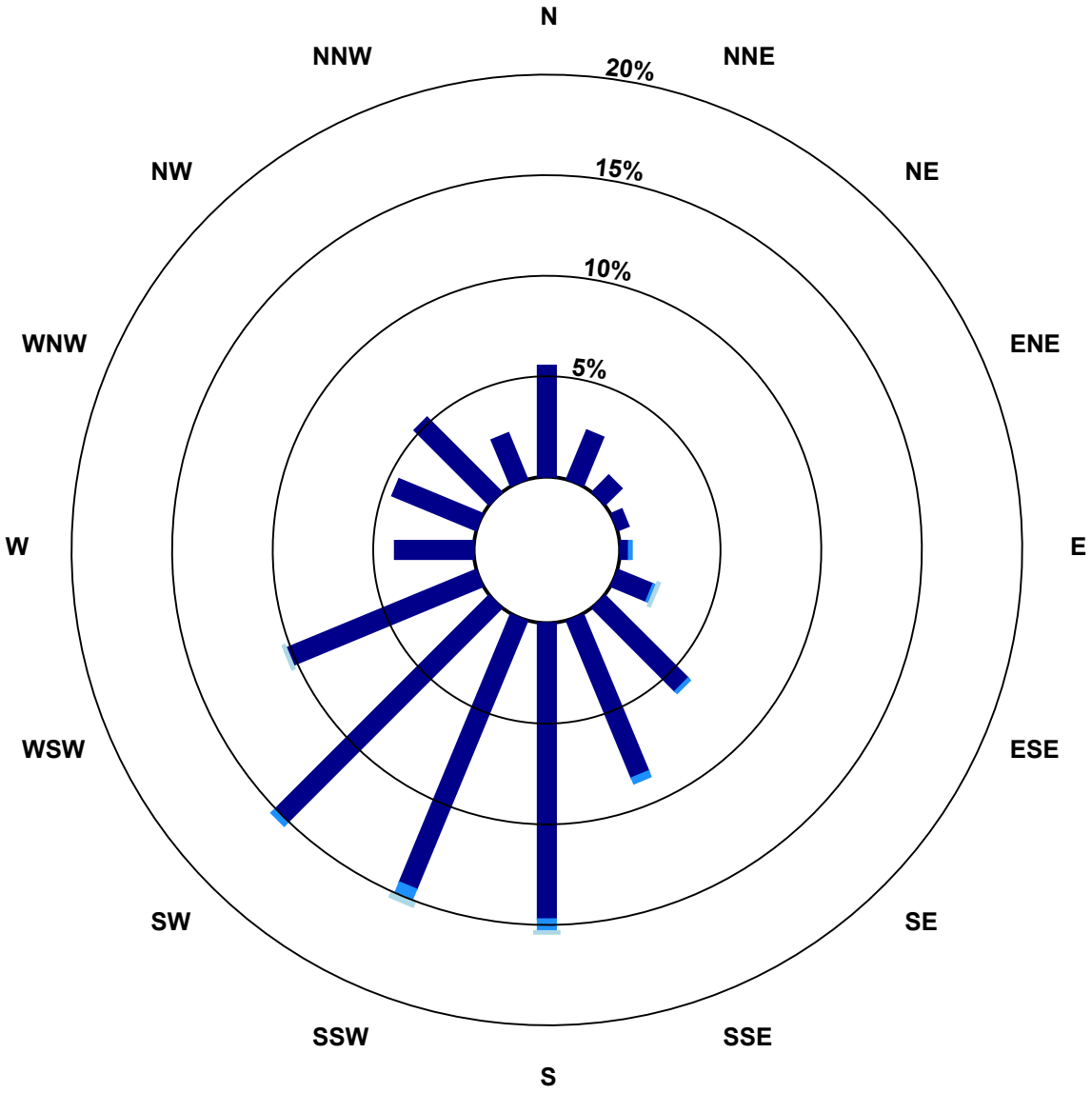
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay South



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

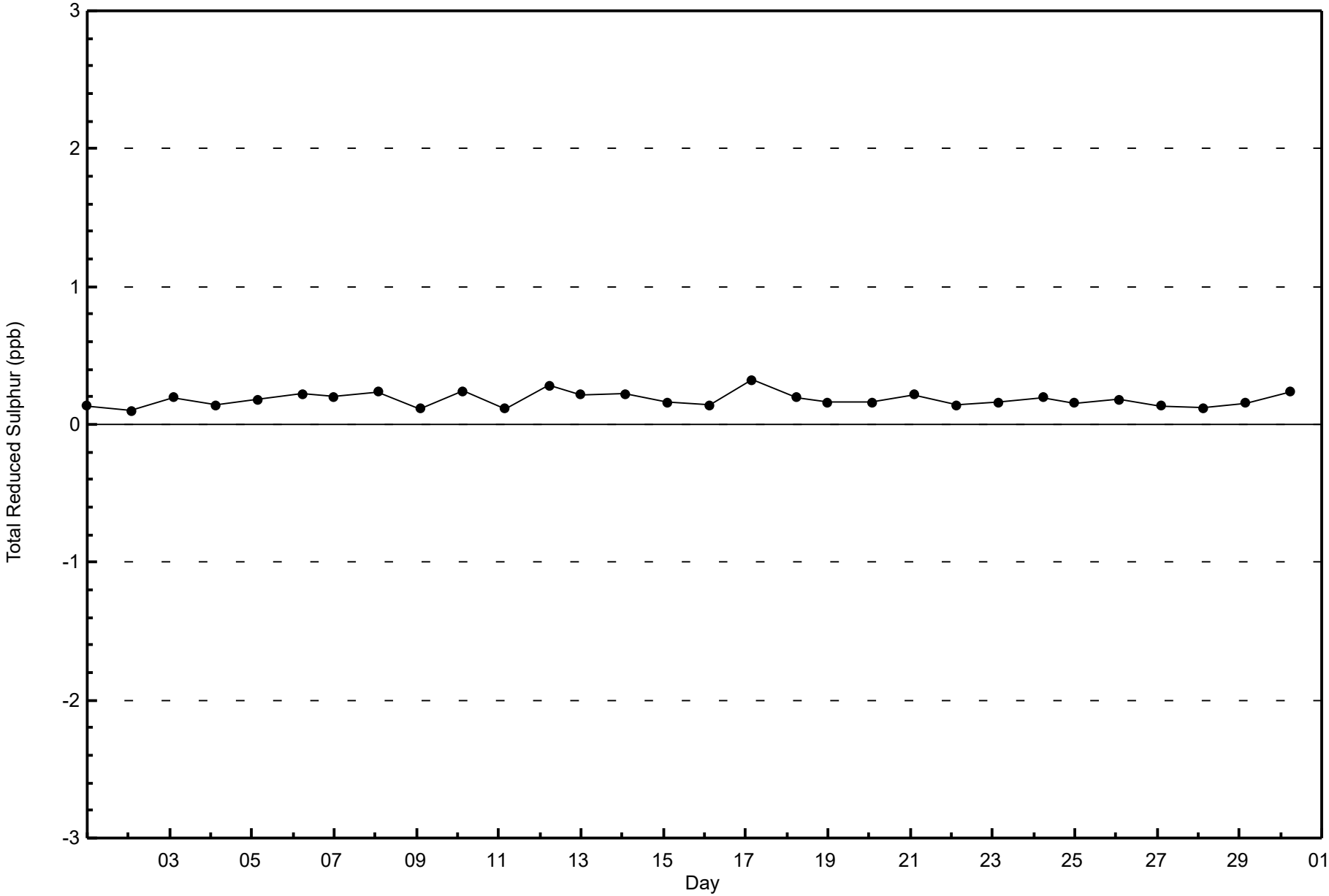
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025

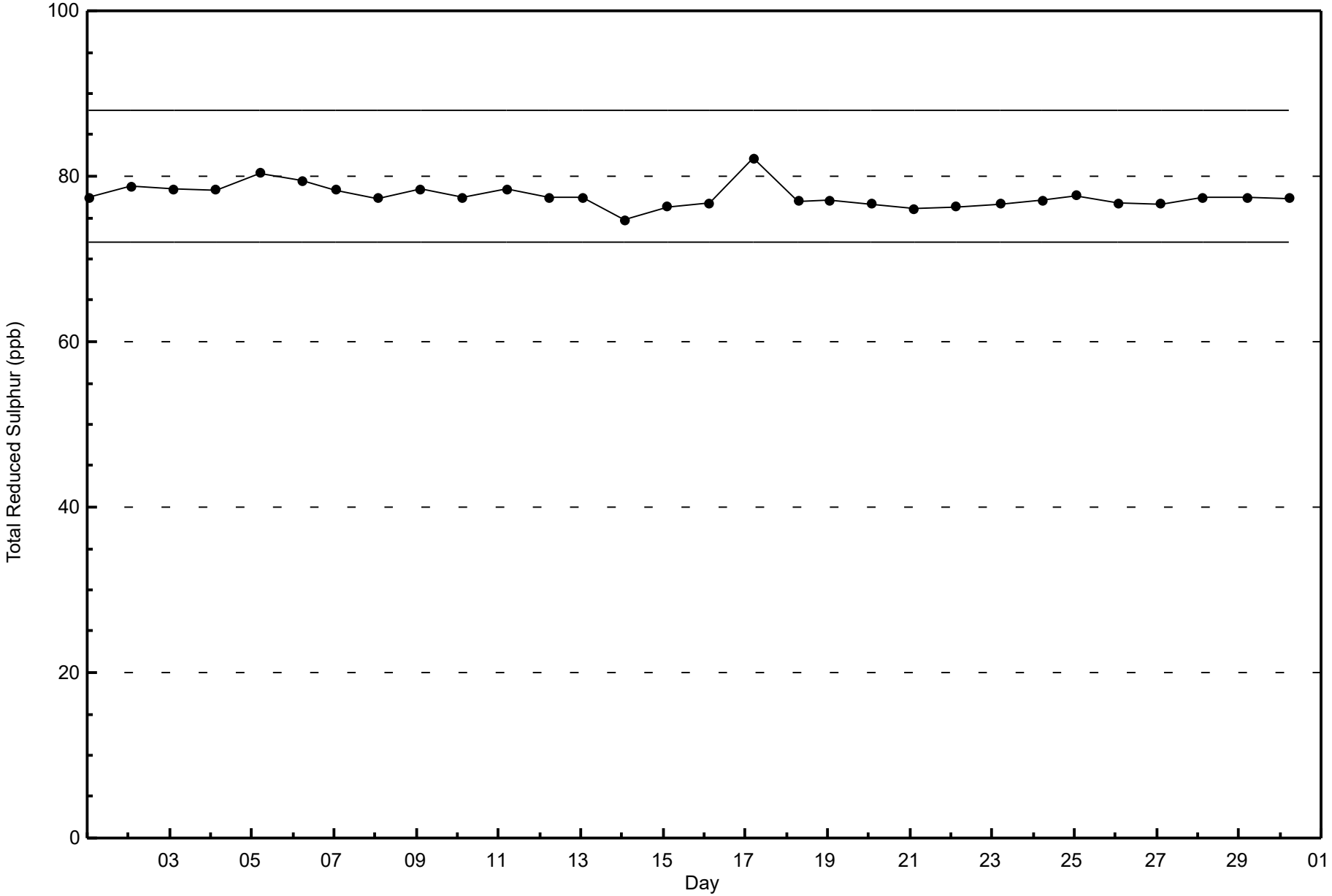


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - September 2025

Maximum Value: 4.2 ppm on Sep 30 06:00

Maximum Daily Average: 2.7 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 16:00

Minimum Daily Average: 2.1 ppm on Sep 4

Maximum Diurnal Average: 2.5 ppm at hour 8

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.31 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 2.7 P_{99} = 3.6

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.4	2.5	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.4	2.5	2.3	2.5
2-Sep	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	3.0	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	3.0
3-Sep	2.2	Z	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.5	2.7	2.4	2.4	2.2	2.2	2.4	2.2	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.7
4-Sep	2.1	2.1	Z	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	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
5-Sep	2.1	2.2	2.2	Z	2.2	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.4
6-Sep	2.2	2.3	2.3	2.4	Z	2.4	2.3	2.3	2.4	2.4	2.5	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	3.5	3.4	2.4	3.5
7-Sep	2.8	2.7	3.1	3.1	3.1	Z	3.1	3.0	2.6	2.6	2.6	2.4	2.7	3.1	2.6	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.6	3.1
8-Sep	Z	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.5	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.5
9-Sep	2.3	Z	2.3	2.4	2.5	2.6	2.5	2.5	2.4	2.5	2.5	2.6	2.4	2.2	2.2	2.1	2.2	2.3	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.6
10-Sep	2.4	2.4	Z	2.3	2.2	2.2	2.2	2.1	2.1	2.1	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.4
11-Sep	2.2	2.1	2.1	Z	2.1	2.2	2.3	2.6	3.1	2.9	2.9	2.6	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	3.1
12-Sep	2.4	2.5	2.5	2.7	Z	2.7	2.6	2.9	2.8	3.2	2.7	2.3	2.1	2.1	2.0	2.0	2.1	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.5	3.2
13-Sep	2.4	2.6	2.8	2.8	2.7	Z	2.8	2.8	2.7	2.6	2.3	2.3	2.5	2.5	2.5	2.4	2.4	2.5	2.6	2.6	2.6	2.7	2.9	2.9	2.6	2.9
14-Sep	Z	3.1	3.0	2.9	2.9	2.8	2.8	2.9	3.0	2.9	2.6	2.5	2.5	2.4	2.2	2.2	2.4	2.2	2.1	2.1	2.3	2.1	2.2	2.3	2.5	3.1
15-Sep	2.4	Z	2.8	2.6	2.6	2.6	2.5	2.4	2.1	2.1	2.2	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	2.2	2.8
16-Sep	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	2.2	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.4
17-Sep	2.3	2.3	2.2	Z	2.2	2.2	2.2	2.3	2.4	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.5
18-Sep	2.4	2.3	2.2	2.1	2.2	Z	2.3	2.2	2.3	2.4	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.3	2.2	2.2	2.4
19-Sep	2.2	2.1	2.1	2.2	2.3	Z	2.5	2.5	2.3	2.4	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.4	2.5	2.6	2.2	2.6
20-Sep	Z	2.7	2.6	2.7	2.7	2.7	2.9	3.2	2.9	2.3	2.3	2.3	2.2	2.0	2.1	2.1	2.3	2.3	2.9	2.5	2.3	2.1	2.1	2.2	2.5	3.2
21-Sep	2.8	Z	4.0	3.7	3.4	3.5	3.4	2.8	2.6	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	2.5	4.0
22-Sep	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.4
23-Sep	2.3	2.1	2.1	Z	2.2	2.2	2.1	2.2	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	2.3
24-Sep	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.3	2.2	2.3
25-Sep	2.7	3.0	3.0	3.1	3.1	Z	2.9	2.9	2.5	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.7	2.6	2.4	2.1	2.2	2.2	2.5	3.1
26-Sep	Z	2.2	2.3	2.3	2.3	2.3	2.4	2.5	2.9	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	2.4	2.4	2.2	2.9
27-Sep	2.4	Z	2.3	2.4	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.4
28-Sep	2.2	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.3	2.2	2.2	2.4
29-Sep	2.1	2.2	2.1	Z	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.6	3.0	3.2	3.2	2.8	2.6	2.6	2.5	2.4	3.2
30-Sep	2.4	2.4	2.4	2.6	Z	4.2	4.1	4.1	4.1	4.1	2.5	2.3	2.3	2.3	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.4	2.6	2.4	2.7	4.2
	2.3	2.3	2.5	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	Diurnal Average	
	2.8	3.1	4.0	3.7	3.4	4.2	4.1	4.1	4.1	4.1	2.9	3.0	2.7	3.1	2.6	2.4	2.6	3.0	3.2	3.2	2.8	2.7	3.5	3.4	Diurnal Maximum	

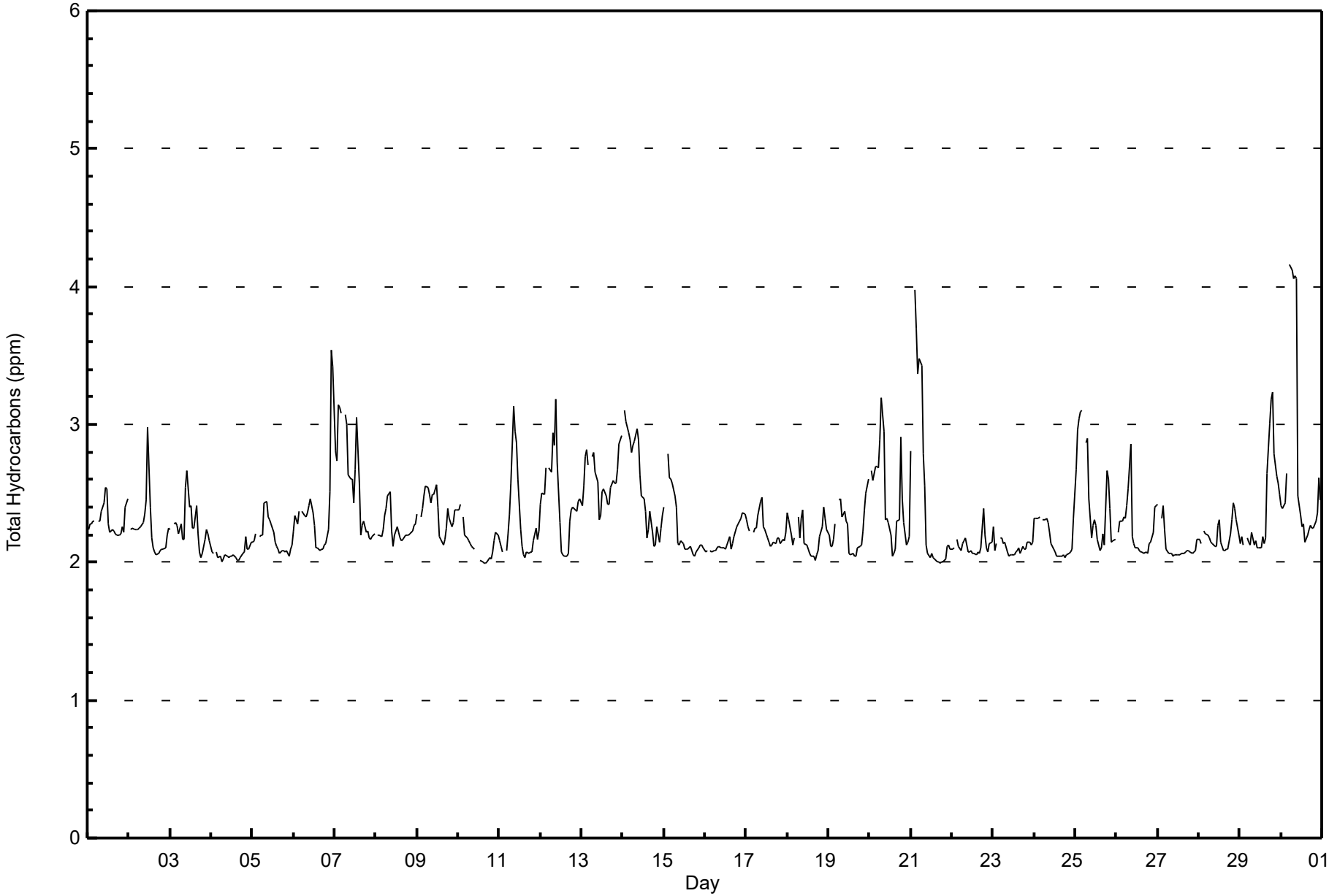
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - September 2025



Total Hydrocarbons (THC) - ppm
Fort McKay South - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	49	7.13	7.13
2.1 - 3.0	613	89.23	96.36
3.1 - 10.0	25	3.64	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay South - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	4	1	0	0	1	0	1	0	3	3	6	5	4	11	4	6	49
2.1 - 3.0	30	17	8	4	3	14	40	60	97	95	96	64	23	18	30	14	613
3.1 - 10.0	4	0	0	0	0	1	0	1	4	7	5	1	2	0	0	0	25
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	18	8	4	4	15	41	61	104	105	107	70	29	29	34	20	687

Total Number of Valid Hours: 687

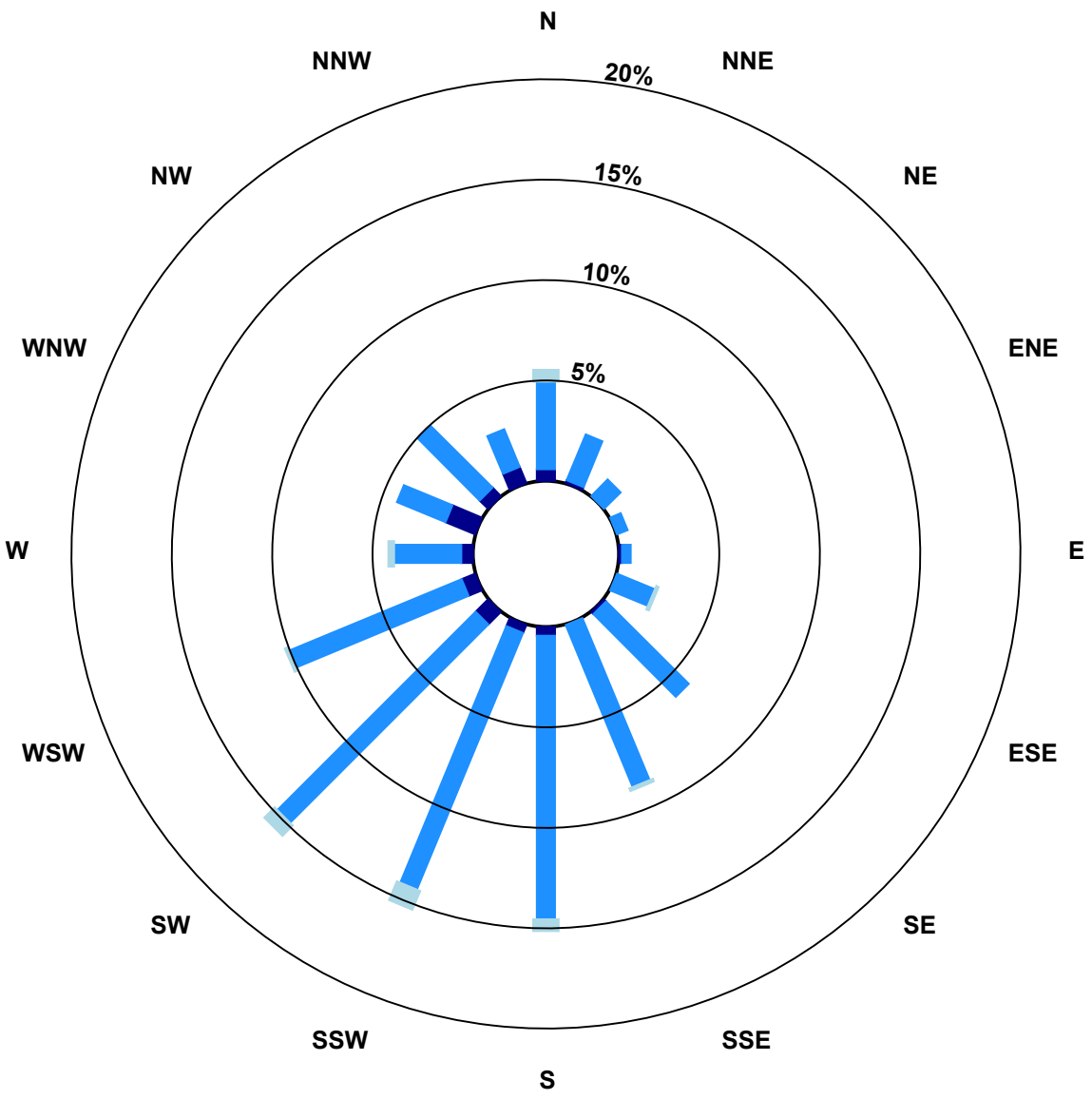
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

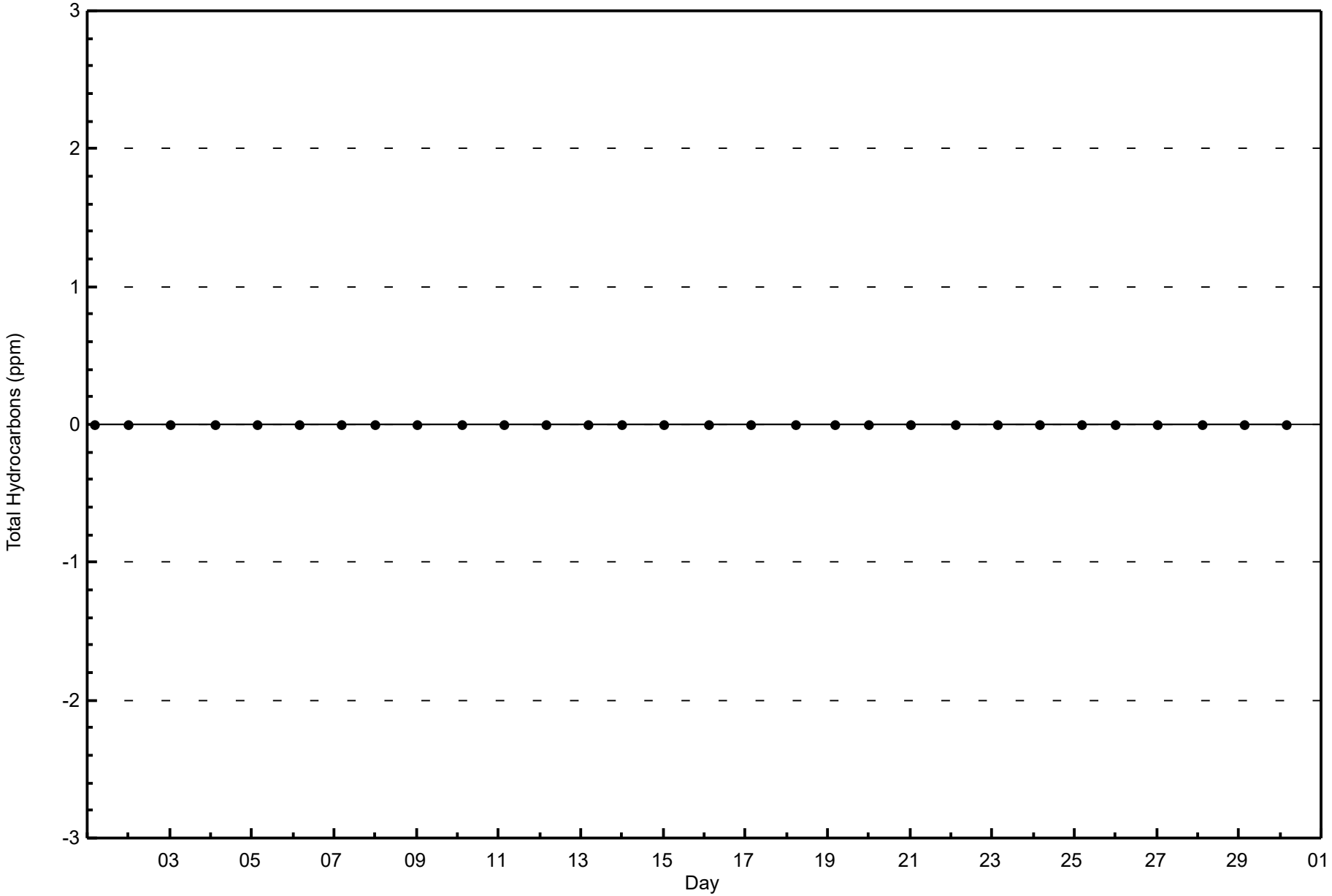
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - September 2025

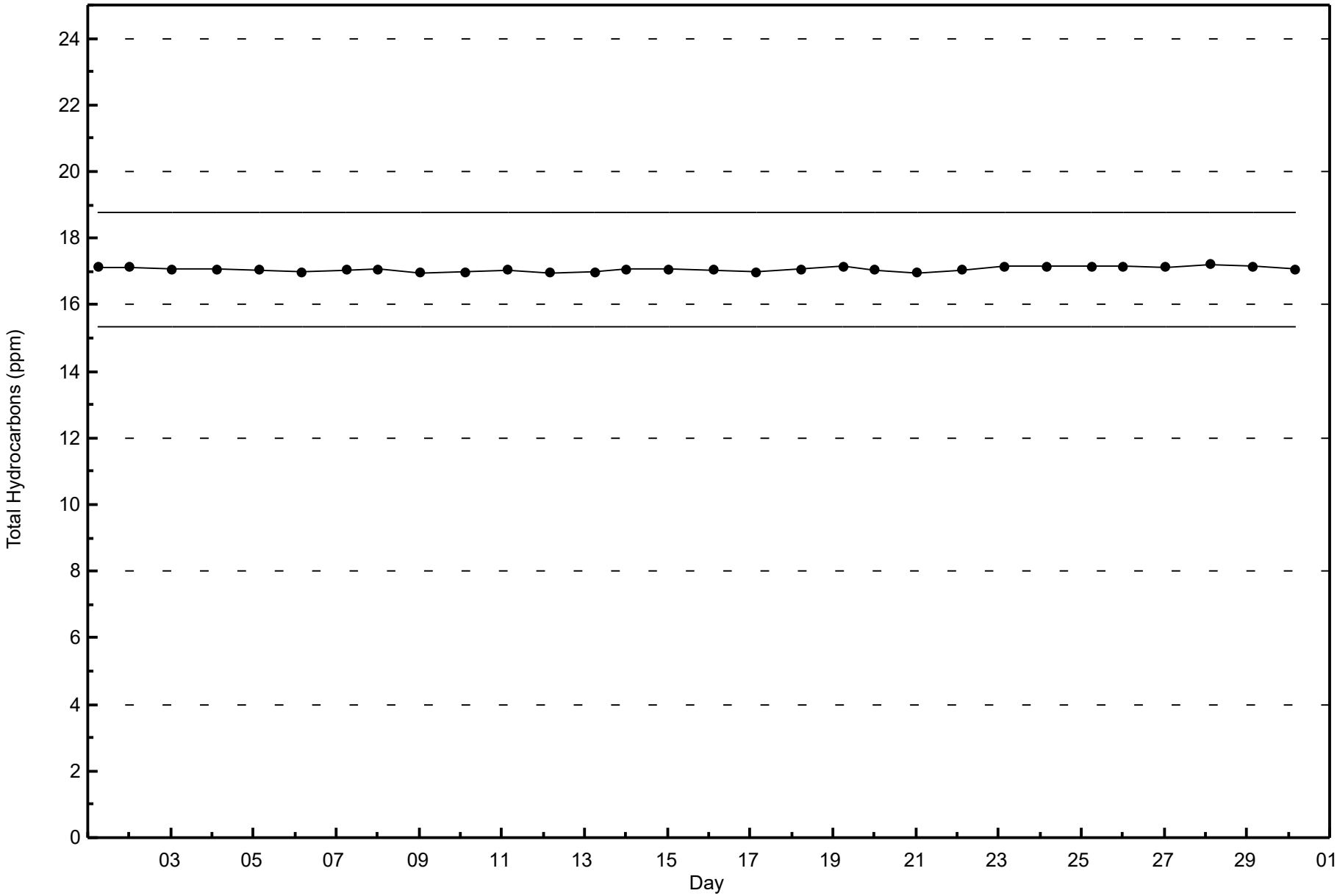


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025

Maximum Value: 0.520 ppm on Sep 21 03:00

Maximum Daily Average: 0.162 ppm on Sep 30

Minimum Value: 0.000 ppm on Sep 21 19:00

Minimum Daily Average: 0.005 ppm on Sep 23

Maximum Diurnal Average: 0.105 ppm at hour 10

Minimum Diurnal Average: 0.039 ppm at hour 16

Monthly Average: 0.076 ppm

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 in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.053	0.052	0.053	0.056	0.057	Z	0.059	0.064	0.097	0.113	0.136	0.135	0.121	0.121	0.104	0.109	0.116	0.091	0.102	0.132	0.149	0.096	0.075	0.094	0.095	0.149
2-Sep	Z	0.061	0.055	0.052	0.046	0.036	0.033	0.038	0.061	0.075	0.107	0.238	0.119	0.062	0.034	0.022	0.017	0.019	0.043	0.050	0.044	0.043	0.069	0.080	0.061	0.238
3-Sep	0.078	Z	0.101	0.098	0.080	0.073	0.078	0.060	0.067	0.206	0.246	0.109	0.088	0.061	0.062	0.106	0.069	0.032	0.017	0.036	0.056	0.069	0.074	0.070	0.084	0.246
4-Sep	0.051	0.038	Z	0.038	0.024	0.013	0.001	0.006	0.022	0.011	0.006	0.013	0.008	0.010	0.010	0.001	0.003	0.015	0.041	0.032	0.027	0.018	0.008	0.011	0.018	0.051
5-Sep	0.019	0.019	0.022	Z	0.002	0.004	0.018	0.079	0.087	0.094	0.137	0.108	0.100	0.076	0.056	0.052	0.040	0.049	0.056	0.050	0.033	0.013	0.030	0.039	0.051	0.137
6-Sep	0.065	0.087	0.067	0.098	Z	0.111	0.102	0.090	0.096	0.114	0.141	0.107	0.083	0.045	0.048	0.047	0.053	0.053	0.083	0.078	0.075	0.093	0.201	0.170	0.092	0.201
7-Sep	0.099	0.087	0.116	0.119	0.113	Z	0.107	0.127	0.097	0.104	0.105	0.110	0.219	0.485	0.329	0.090	0.108	0.159	0.096	0.108	0.084	0.071	0.065	0.069	0.133	0.485
8-Sep	Z	0.071	0.077	0.082	0.081	0.073	0.079	0.082	0.092	0.057	0.059	0.102	0.158	0.116	0.085	0.070	0.066	0.081	0.090	0.085	0.078	0.072	0.075	0.075	0.083	0.158
9-Sep	0.075	Z	0.075	0.086	0.101	0.110	0.108	0.108	0.100	0.140	0.161	0.163	0.145	0.098	0.094	0.081	0.089	0.099	0.105	0.105	0.082	0.083	0.096	0.100	0.105	0.163
10-Sep	0.096	0.097	Z	0.076	0.049	0.039	0.037	0.039	0.041	0.048	C	C	C	0.020	0.008	0.006	0.003	0.005	0.040	0.044	0.055	0.068	0.072	0.056	0.045	0.097
11-Sep	0.042	0.023	0.004	Z	0.001	0.009	0.025	0.101	0.230	0.290	0.372	0.327	0.096	0.065	0.037	0.032	0.061	0.042	0.072	0.066	0.082	0.095	0.066	0.092	0.097	0.372
12-Sep	0.171	0.193	0.191	0.250	Z	0.272	0.218	0.307	0.291	0.394	0.261	0.130	0.049	0.036	0.037	0.041	0.041	0.089	0.116	0.111	0.104	0.100	0.108	0.092	0.157	0.394
13-Sep	0.084	0.104	0.124	0.119	0.101	Z	0.113	0.117	0.131	0.143	0.105	0.094	0.144	0.165	0.167	0.139	0.126	0.156	0.167	0.158	0.164	0.187	0.211	0.202	0.140	0.211
14-Sep	Z	0.241	0.243	0.238	0.222	0.197	0.191	0.193	0.234	0.245	0.192	0.192	0.191	0.147	0.083	0.104	0.171	0.106	0.050	0.055	0.103	0.066	0.074	0.090	0.158	0.245
15-Sep	0.115	Z	0.181	0.134	0.118	0.105	0.088	0.077	0.025	0.039	0.066	0.061	0.052	0.059	0.064	0.078	0.056	0.039	0.026	0.048	0.056	0.063	0.062	0.056	0.073	0.181
16-Sep	0.044	0.045	Z	0.041	0.034	0.037	0.035	0.039	0.044	0.039	0.051	0.058	0.052	0.062	0.079	0.046	0.061	0.089	0.132	0.130	0.137	0.136	0.140	0.129	0.072	0.140
17-Sep	0.106	0.082	0.079	Z	0.077	0.081	0.081	0.104	0.140	0.159	0.080	0.083	0.070	0.061	0.045	0.050	0.055	0.050	0.061	0.064	0.066	0.065	0.064	0.079	0.078	0.159
18-Sep	0.131	0.109	0.076	0.049	0.058	Z	0.074	0.044	0.154	0.135	0.042	0.050	0.034	0.022	0.015	0.008	0.003	0.020	0.049	0.049	0.053	0.065	0.056	0.040	0.058	0.154
19-Sep	0.039	0.017	0.009	0.029	0.040	Z	0.059	0.061	0.073	0.082	0.066	0.062	0.003	0.001	0.002	0.001	0.006	0.046	0.049	0.032	0.038	0.052	0.066	0.081	0.040	0.082
20-Sep	Z	0.106	0.111	0.127	0.109	0.081	0.123	0.207	0.246	0.088	0.096	0.091	0.057	0.012	0.018	0.015	0.054	0.067	0.197	0.127	0.067	0.034	0.052	0.064	0.093	0.246
21-Sep	0.210	Z	0.520	0.444	0.269	0.201	0.201	0.096	0.059	0.014	0.005	0.001	0.007	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.003	0.028	0.029	0.008	0.091	0.520
22-Sep	0.007	0.009	Z	0.034	0.018	0.008	0.019	0.020	0.037	0.006	0.008	0.014	0.006	0.005	0.005	0.009	0.000	0.012	0.076	0.035	0.016	0.005	0.023	0.023	0.017	0.076
23-Sep	0.043	0.000	0.005	Z	0.015	0.015	0.007	0.012	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.002	0.000	0.000	0.000	0.001	0.000	0.003	0.005	0.043
24-Sep	0.050	0.049	0.040	0.057	Z	0.064	0.068	0.070	0.068	0.069	0.030	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.026	0.070
25-Sep	0.063	0.088	0.087	0.097	0.117	Z	0.183	0.199	0.091	0.012	0.074	0.089	0.074	0.029	0.000	0.001	0.024	0.003	0.105	0.145	0.045	0.021	0.033	0.033	0.070	0.199
26-Sep	Z	0.006	0.007	0.009	0.025	0.035	0.056	0.072	0.124	0.028	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.005	0.046	0.052	0.020	0.124
27-Sep	0.062	Z	0.046	0.075	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.009	0.075
28-Sep	0.001	0.000	Z	0.058	0.049	0.038	0.024	0.011	0.003	0.000	0.000	0.063	0.081	0.011	0.000	0.000	0.000	0.001	0.028	0.056	0.080	0.079	0.061	0.036	0.030	0.081
29-Sep	0.005	0.037	0.014	Z	0.046	0.023	0.014	0.072	0.025	0.032	0.004	0.000	0.000	0.049	0.012	0.027	0.168	0.362	0.433	0.440	0.325	0.256	0.232	0.190	0.120	0.440
30-Sep	0.147	0.123	0.128	0.139	Z	0.254	0.319	0.307	0.336	0.403	0.110	0.168	0.108	0.094	0.020	0.037	0.040	0.091	0.087	0.065	0.055	0.092	0.398	0.198	0.162	0.403
	0.074	0.070	0.097	0.104	0.072	0.078	0.084	0.093	0.102	0.105	0.092	0.089	0.071	0.064	0.047	0.039	0.048	0.059	0.077	0.077	0.069	0.066	0.083	0.075	Diurnal Average	
	0.210	0.241	0.520	0.444	0.269	0.272	0.319	0.307	0.336	0.403	0.372	0.327	0.219	0.485	0.329	0.139	0.171	0.362	0.433	0.440	0.325	0.256	0.398	0.202	Diurnal Maximum	

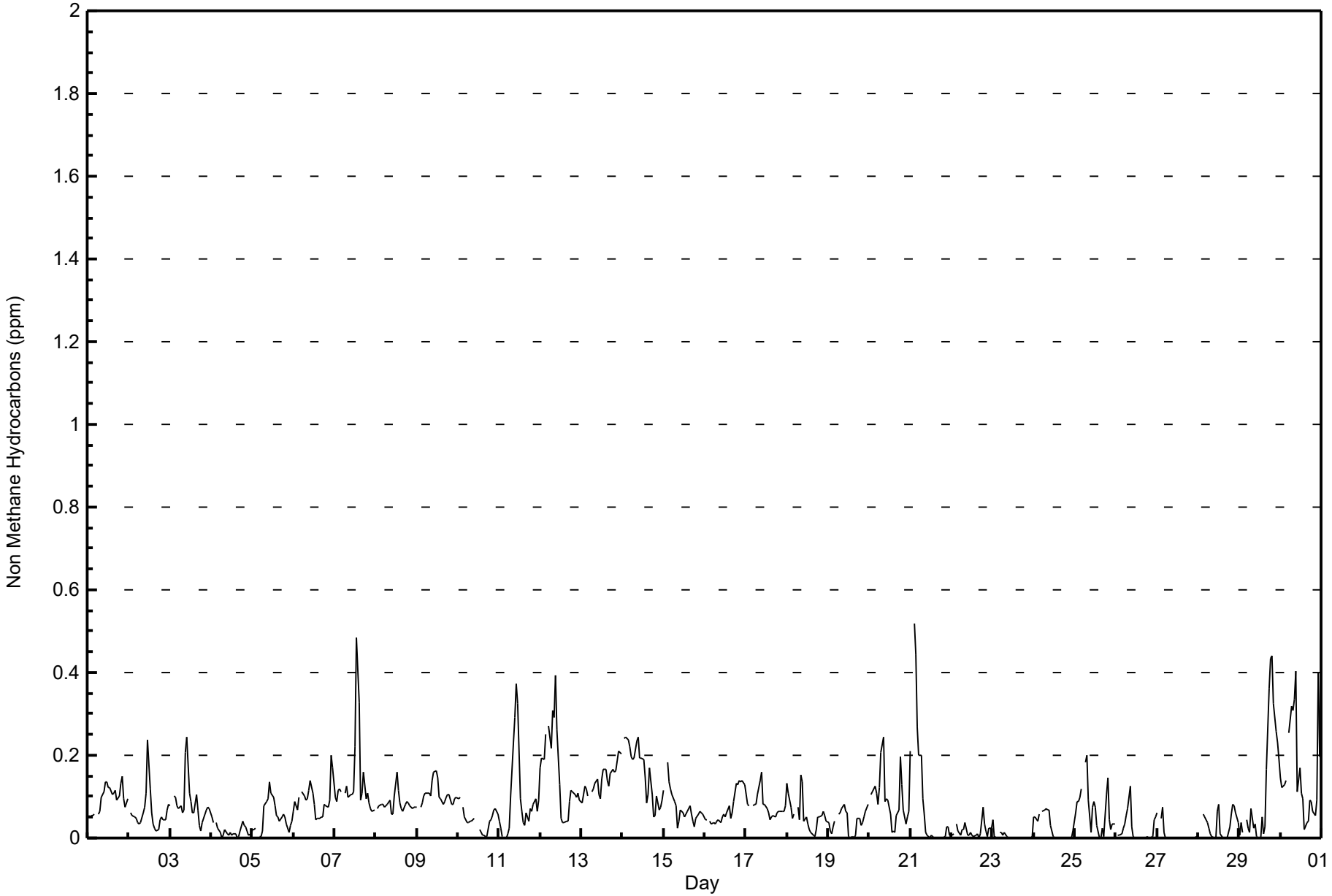
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Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	105	15.28	15.28
0.006 - 0.05	204	29.69	44.98
0.06 - 0.1	300	43.67	88.65
> 0.1	78	11.35	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	1	1	1	1	1	0	0	4	7	23	25	23	6	6	5	1	105
0.006 - 0.05	6	4	1	0	1	5	8	19	39	31	31	20	9	11	12	7	204
0.06 - 0.1	22	11	5	3	1	4	26	34	44	41	43	23	10	9	14	10	300
> 0.1	9	2	1	0	1	6	7	4	14	10	8	4	4	3	3	2	78
Totals	38	18	8	4	4	15	41	61	104	105	107	70	29	29	34	20	687

Total Number of Valid Hours: 687

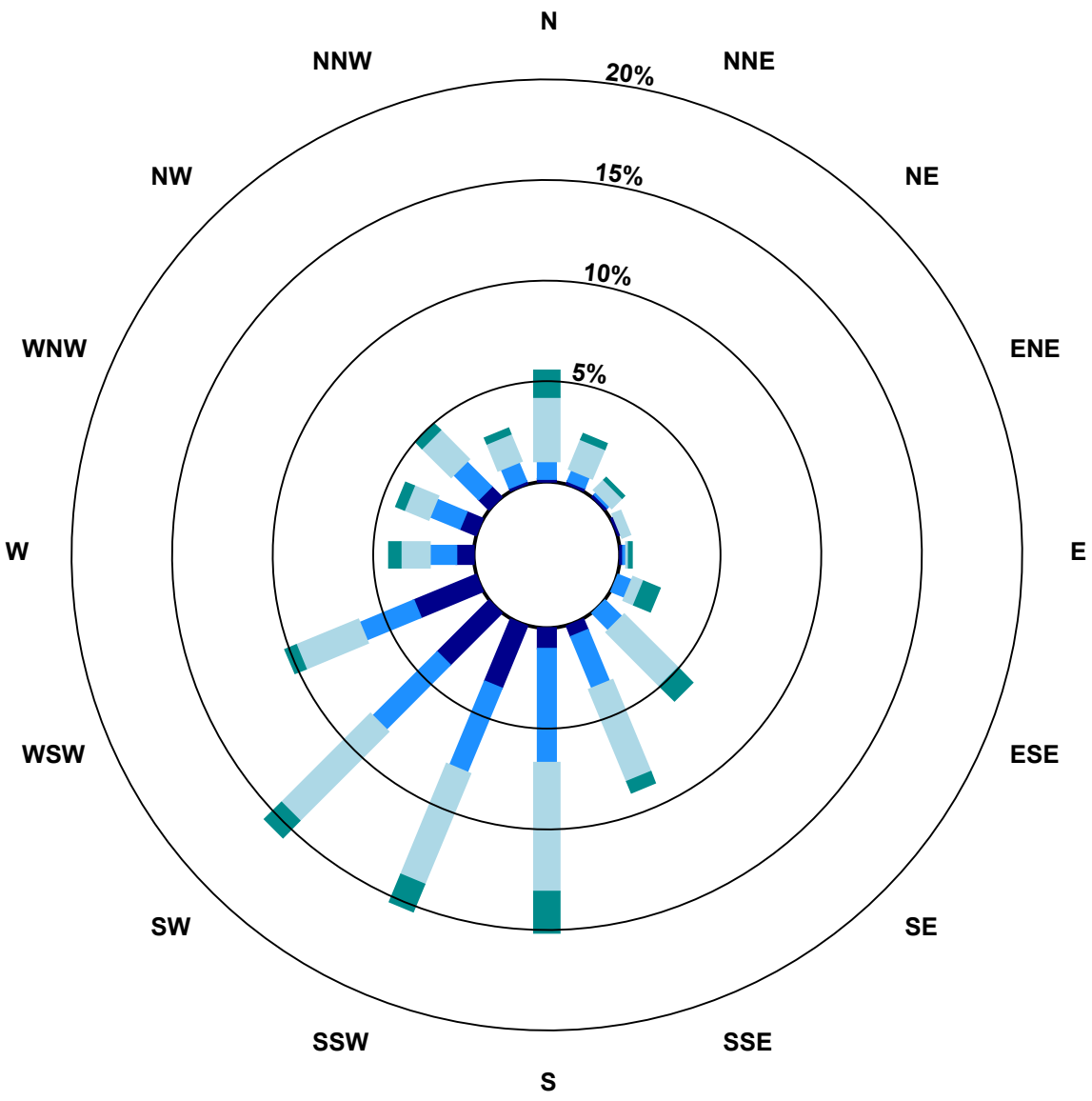
Total Number of Hours: 720

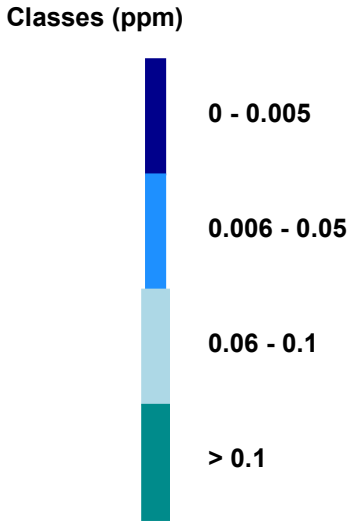
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South





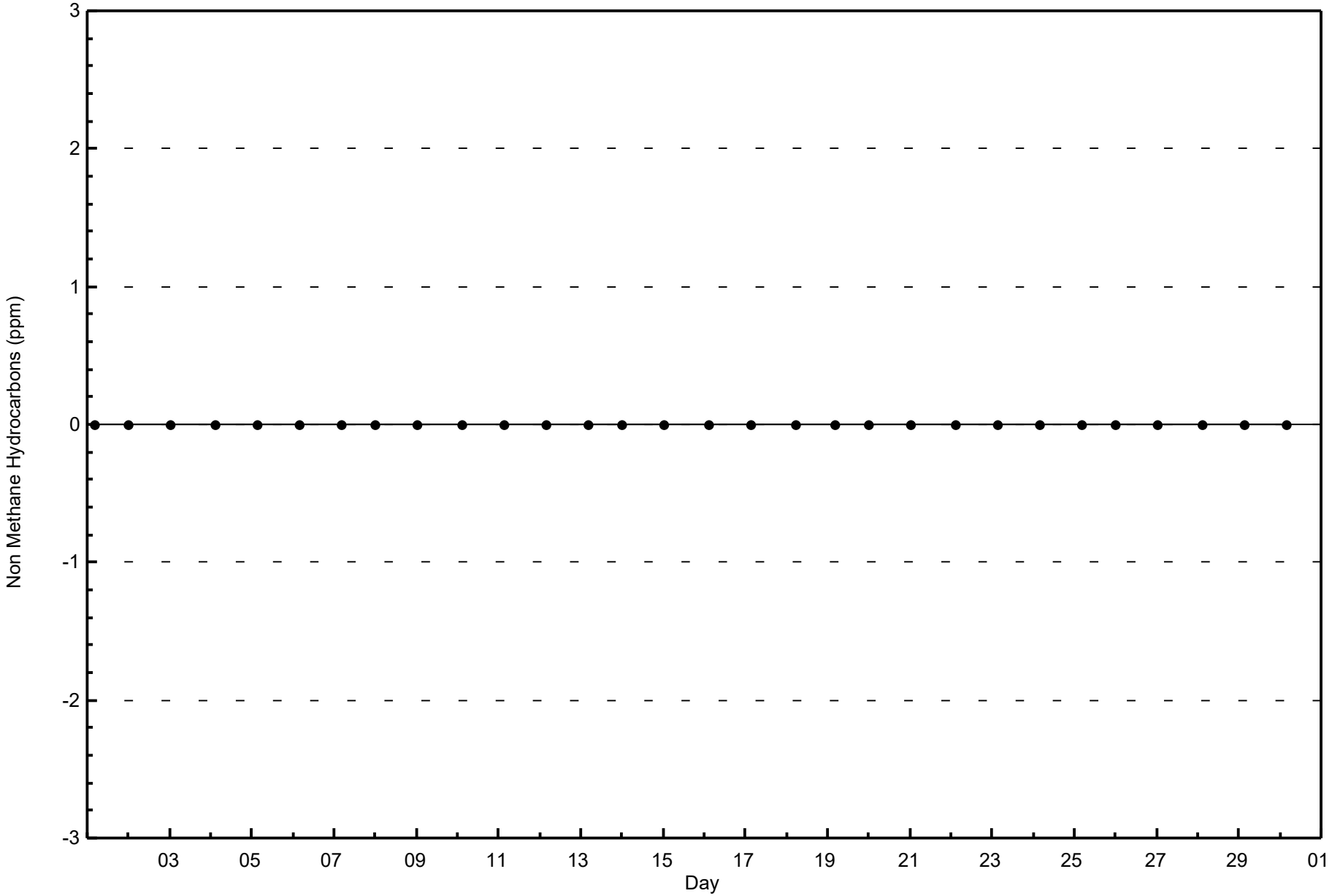
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025

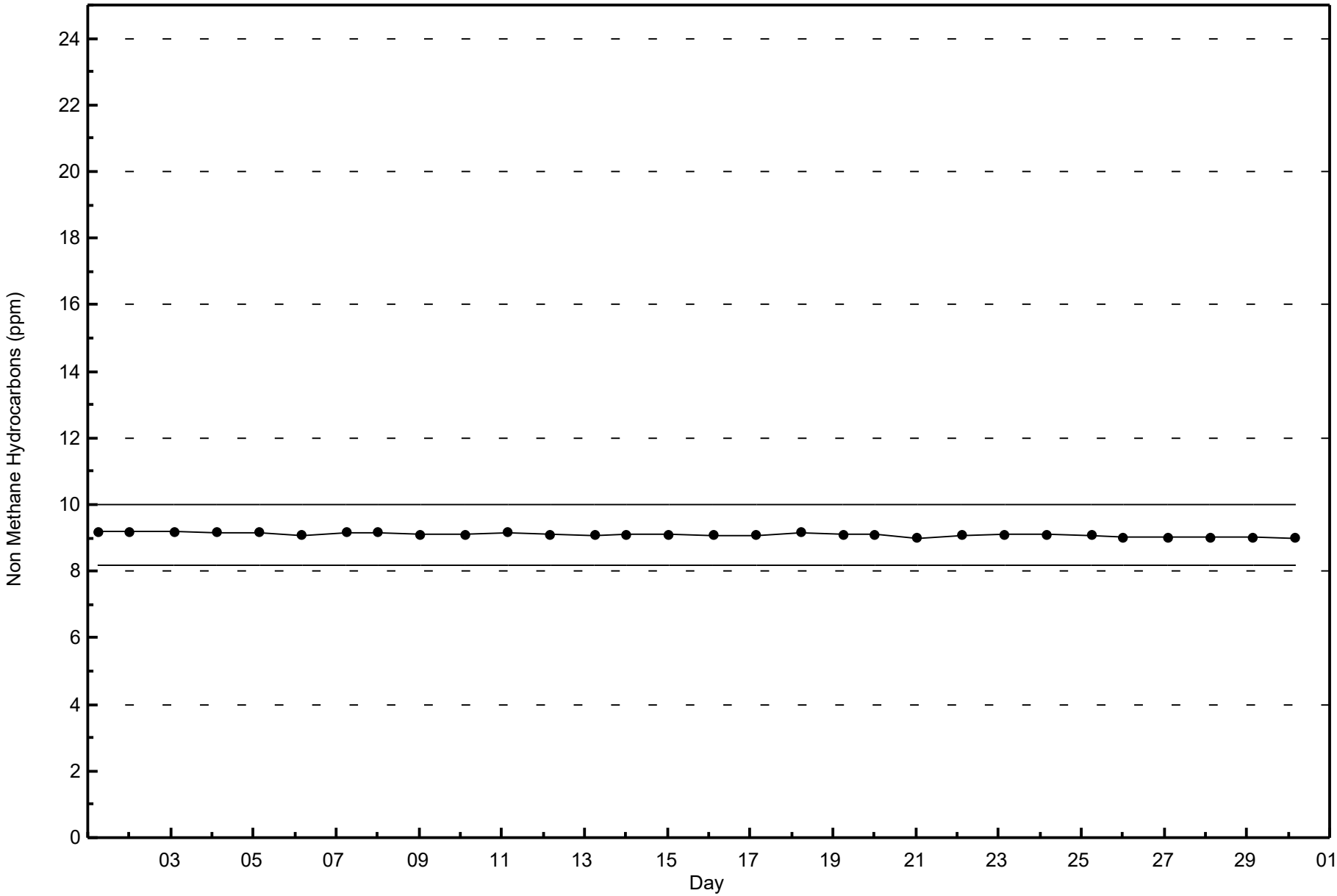


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 ppm on Sep 30 06:00 Maximum Daily Average: 2.6 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 20:00 Minimum Daily Average: 2.0 ppm on Sep 4
Maximum Diurnal Average: 2.4 ppm at hour 8 Minimum Diurnal Average: 2.1 ppm at hour 16
Monthly Average: 2.23 ppm Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.2	2.4
2-Sep	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.7	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.7
3-Sep	2.2	Z	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.3	2.4	2.3	2.3	2.2	2.2	2.3	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.2	2.4
4-Sep	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	2.2	2.1	2.1	2.1	2.0	2.2
5-Sep	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.4	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4
6-Sep	2.2	2.3	2.2	2.3	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.4	3.3	3.3	2.3	3.3
7-Sep	2.7	2.6	3.0	3.0	3.0	Z	3.0	2.9	2.5	2.5	2.5	2.3	2.5	2.6	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	3.0
8-Sep	Z	2.1	2.1	2.1	2.2	2.3	2.3	2.4	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	2.2	2.2	2.2	2.2	2.4
9-Sep	2.3	Z	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.3	2.1	2.1	2.0	2.1	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.4
10-Sep	2.3	2.3	Z	2.3	2.2	2.1	2.1	2.1	2.1	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3
11-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.5	2.9	2.7	2.5	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	2.9
12-Sep	2.3	2.3	2.3	2.4	Z	2.4	2.4	2.6	2.6	2.8	2.5	2.2	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.8
13-Sep	2.3	2.5	2.6	2.7	2.6	Z	2.6	2.7	2.5	2.4	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.7	2.7	2.5	2.7
14-Sep	Z	2.9	2.8	2.7	2.7	2.6	2.7	2.7	2.7	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.4	2.9
15-Sep	2.3	Z	2.6	2.5	2.5	2.5	2.4	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	2.1	2.1	2.1	2.0	2.2	2.6
16-Sep	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
17-Sep	2.2	2.2	2.2	Z	2.1	2.2	2.2	2.2	2.3	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	2.1	2.1	2.3
18-Sep	2.2	2.2	2.1	2.1	2.1	Z	2.3	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.2	2.1	2.3
19-Sep	2.2	2.1	2.1	2.1	2.2	Z	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.4	2.5	2.2	2.5
20-Sep	Z	2.6	2.5	2.6	2.6	2.6	2.8	3.0	2.7	2.2	2.2	2.2	2.1	2.0	2.0	2.1	2.2	2.2	2.7	2.3	2.2	2.1	2.1	2.1	2.4	3.0
21-Sep	2.6	Z	3.5	3.3	3.1	3.3	3.2	2.7	2.5	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	2.4	3.5
22-Sep	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	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.3
23-Sep	2.2	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
24-Sep	2.3	2.3	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.3	2.1	2.3
25-Sep	2.6	2.9	3.0	3.0	3.0	Z	2.7	2.7	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.6	2.5	2.3	2.1	2.1	2.1	2.4	3.0
26-Sep	Z	2.2	2.3	2.3	2.3	2.3	2.4	2.5	2.7	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	2.4	2.4	2.2	2.7
27-Sep	2.4	Z	2.3	2.3	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.4
28-Sep	2.2	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.3
29-Sep	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	2.2	2.5	2.7	2.8	2.8	2.5	2.4	2.3	2.3	2.3	2.8
30-Sep	2.3	2.3	2.3	2.5	Z	3.9	3.8	3.8	3.7	3.7	2.4	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.6	3.9
	2.2	2.3	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	Diurnal Average	
	2.7	2.9	3.5	3.3	3.1	3.9	3.8	3.8	3.7	3.7	2.5	2.7	2.5	2.6	2.3	2.3	2.5	2.7	2.8	2.8	2.5	2.5	3.3	3.3	Diurnal Maximum	

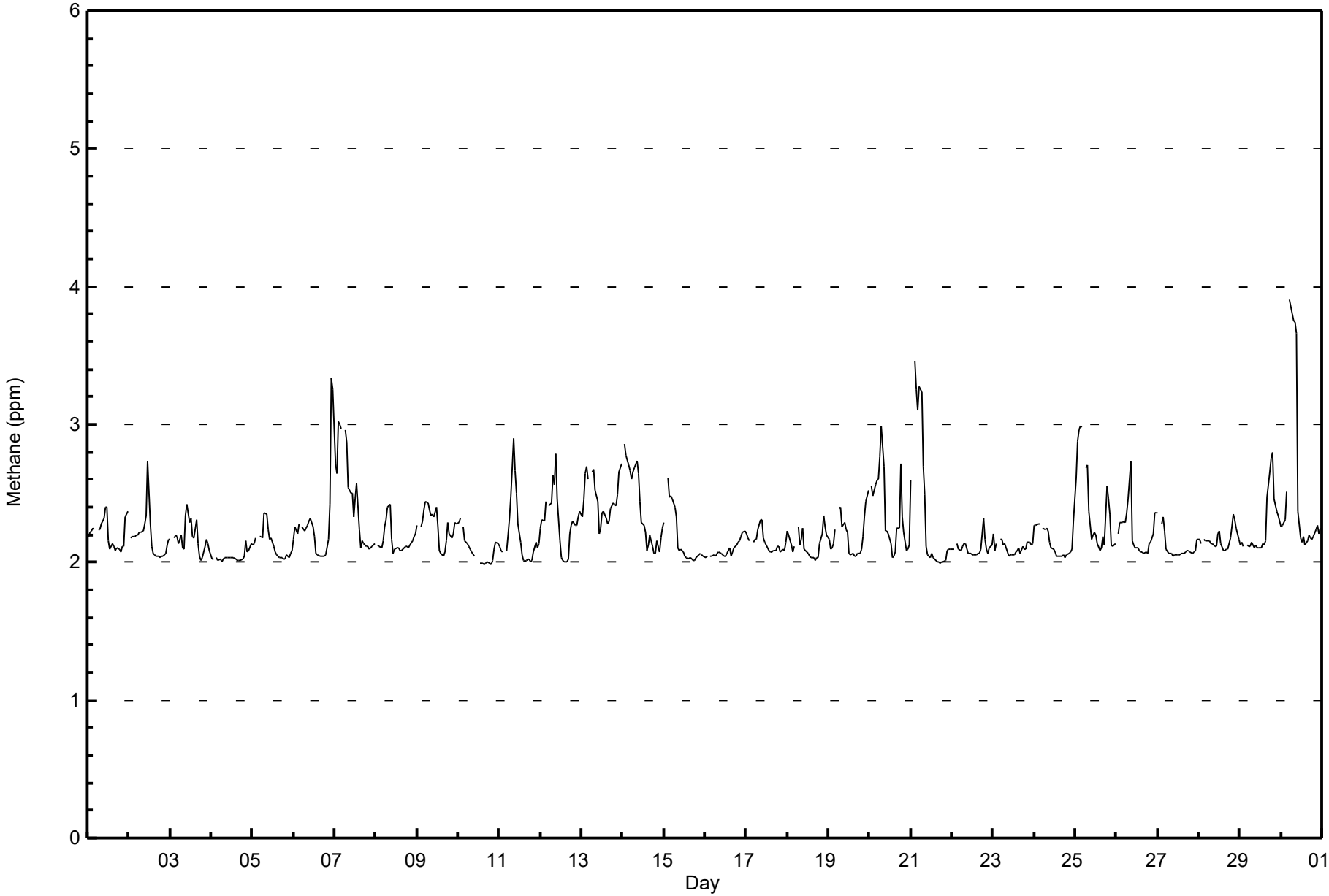
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay South - September 2025



Methane (CH_4) - ppm
Fort McKay South - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	104	15.14	15.14
2.1 - 3.0	571	83.11	98.25
3.1 - 10.0	12	1.75	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay South - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	7	1	0	1	1	4	6	4	9	6	12	9	6	15	14	9	104
2.1 - 3.0	28	17	8	3	3	11	35	57	93	95	94	61	21	14	20	11	571
3.1 - 10.0	3	0	0	0	0	0	0	0	2	4	1	0	2	0	0	0	12
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	18	8	4	4	15	41	61	104	105	107	70	29	29	34	20	687

Total Number of Valid Hours: 687

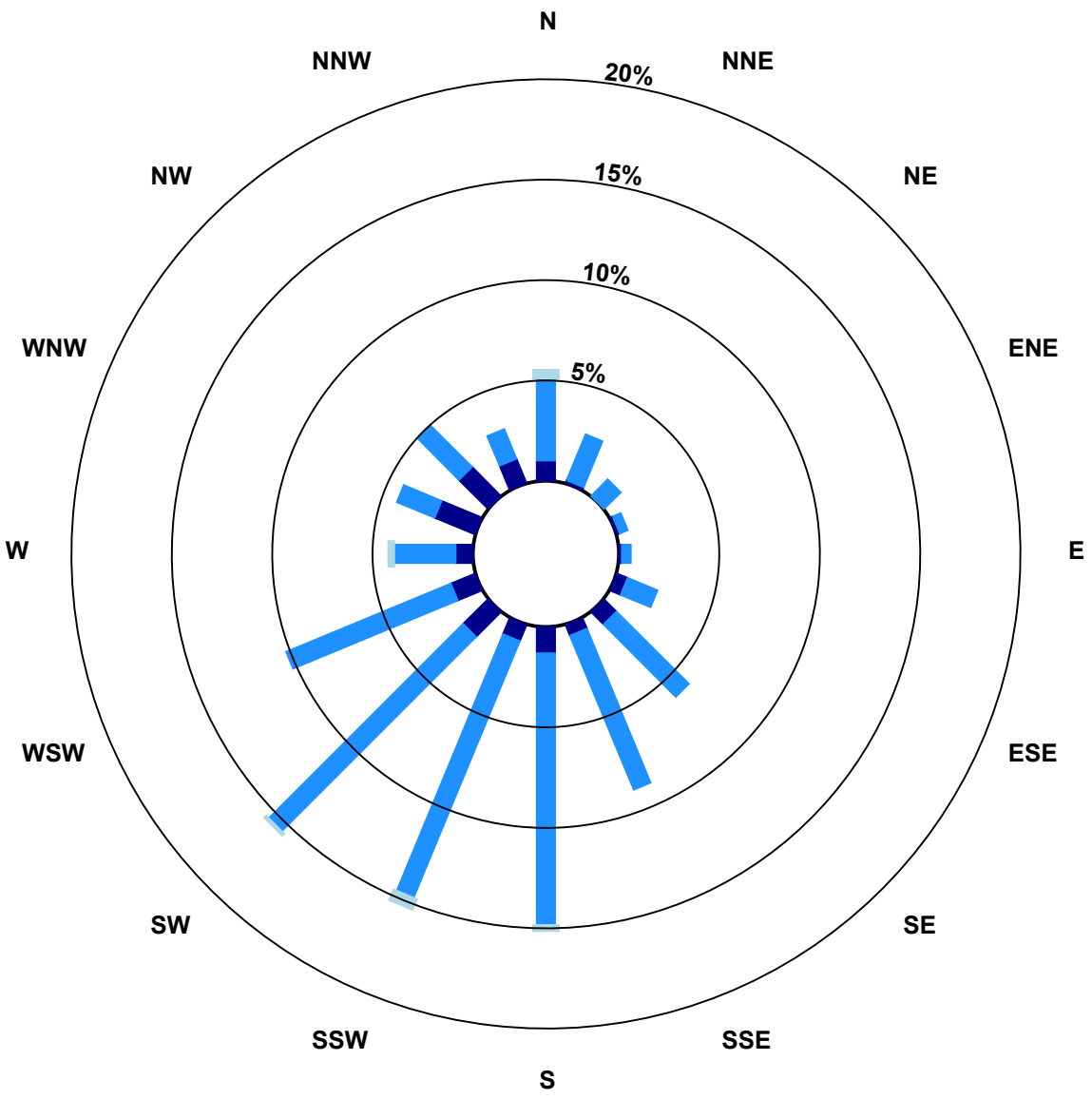
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

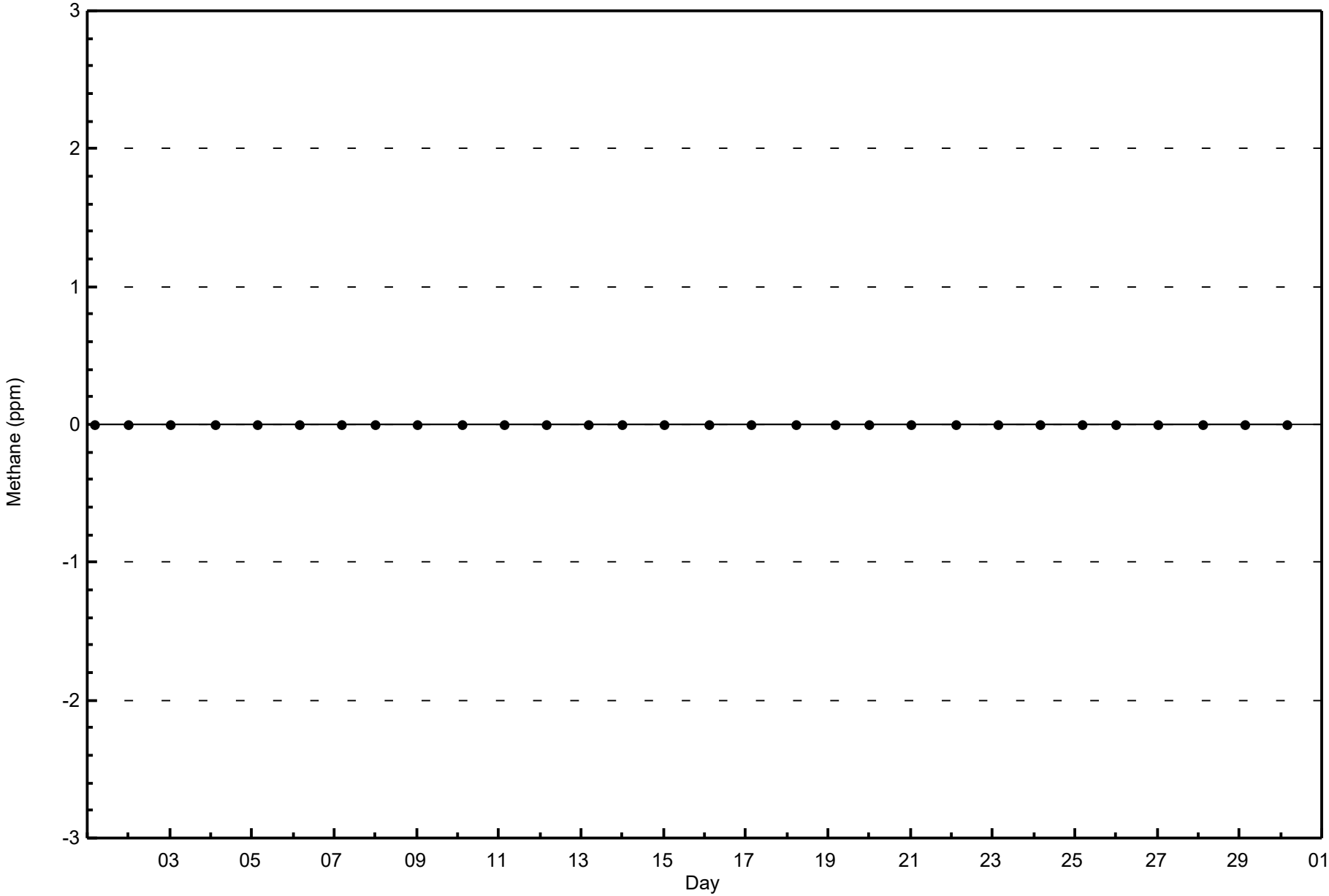
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay South - September 2025

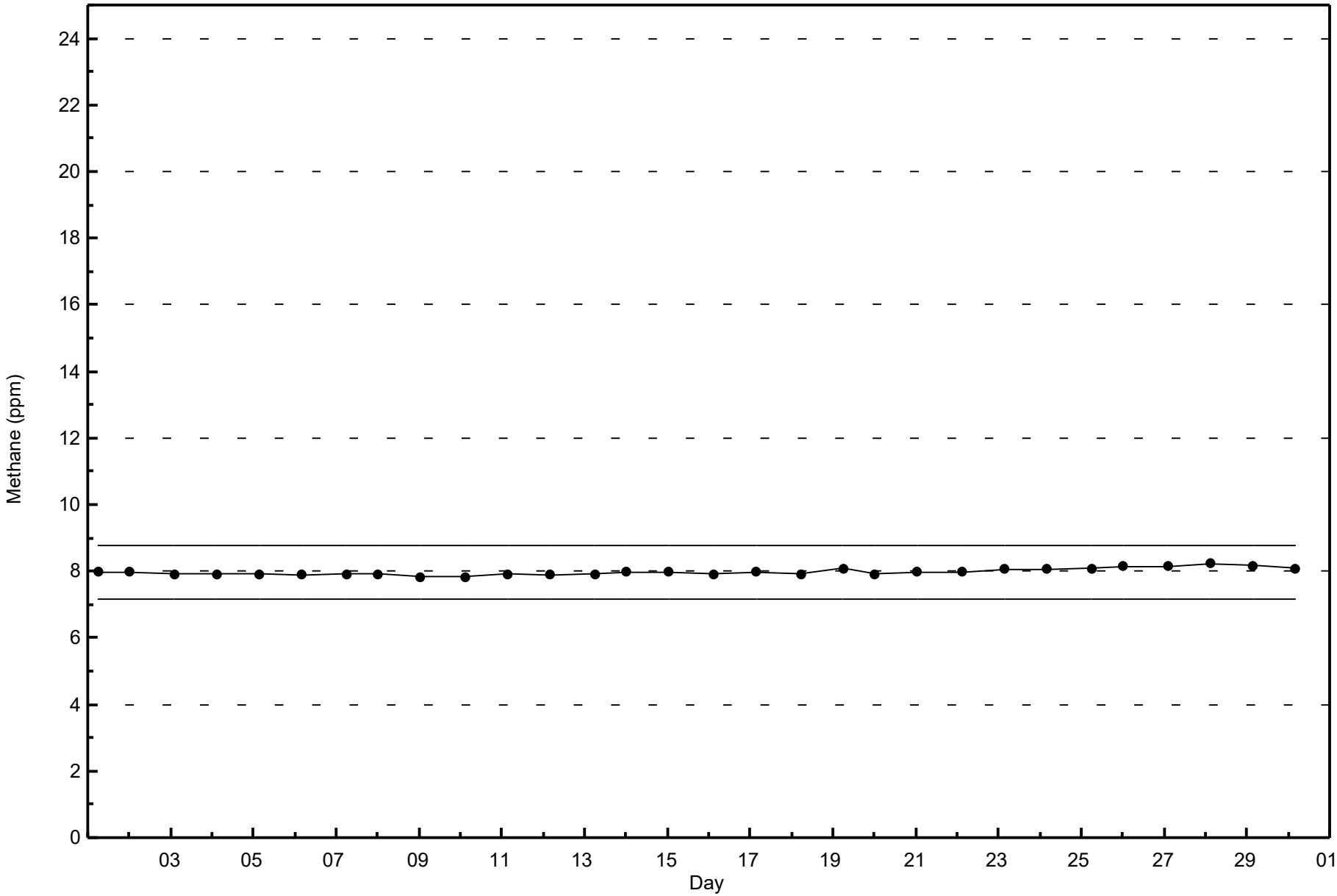


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 60.2 ppb on Sep 20 16:00 Maximum Daily Average: 29.4 ppb on Sep 20

Minimum Value: 2.2 ppb on Sep 5 02:00 Minimum Daily Average: 10.6 ppb on Sep 8
Maximum Diurnal Average: 35.7 ppb at hour 15 Minimum Diurnal Average: 6.9 ppb at hour 5
Monthly Average: 19.16 ppb Percentiles: P_1 = 2.3 P_{10} = 3.0 Q_1 = 6.4 Median = 18.1 Q_3 = 29.4 P_{90} = 36.5 P_{99} = 52.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	4.5	Z	4.3	3.7	4.6	4.0	4.1	4.3	5.0	5.8	6.7	11.3	22.3	27.0	29.6	31.0	32.0	28.8	26.1	14.6	6.2	5.3	6.5	3.4	12.7	32.0
2-Sep	5.7	8.4	Z	8.5	5.0	3.9	5.3	6.0	8.8	C	C	C	C	28.7	32.2	34.2	29.4	27.1	13.2	7.7	5.4	5.9	12.7	23.1	14.3	34.2
3-Sep	21.6	17.9	10.8	Z	19.2	19.1	18.1	17.9	16.0	20.3	24.6	23.6	23.9	25.8	24.8	20.5	28.2	31.2	31.6	26.9	23.0	14.9	18.7	18.6	21.6	31.6
4-Sep	22.0	20.8	20.7	21.4	Z	23.4	23.4	24.2	24.6	25.7	26.3	26.9	27.3	27.7	28.0	27.9	26.3	22.6	18.1	9.2	5.6	3.9	3.2	3.2	20.1	28.0
5-Sep	3.2	2.2	2.7	2.4	2.2	Z	2.5	3.5	7.2	12.7	22.7	23.1	25.8	29.0	30.5	32.3	31.8	30.3	17.9	10.5	7.8	7.7	5.3	4.6	13.8	32.3
6-Sep	Z	2.9	3.0	2.6	2.5	2.4	2.5	7.9	12.7	15.9	17.9	18.2	30.1	41.6	42.9	44.1	44.6	37.1	15.8	12.5	9.8	6.7	5.6	2.6	16.6	44.6
7-Sep	2.6	Z	2.3	2.4	2.4	2.4	2.5	4.3	10.4	10.6	12.5	27.7	27.0	24.4	29.6	30.9	20.5	17.3	13.0	9.3	12.5	5.1	2.9	2.5	12.0	30.9
8-Sep	3.1	4.0	Z	2.5	2.3	2.5	2.6	3.3	3.9	10.2	17.4	19.7	19.7	22.2	25.3	28.3	29.6	20.2	9.2	5.7	4.4	2.9	2.9	2.6	10.6	29.6
9-Sep	2.3	2.3	2.4	Z	2.3	2.5	2.3	4.0	6.6	10.8	15.8	26.7	31.4	37.7	40.8	45.9	46.1	40.8	39.9	28.4	20.4	8.4	9.6	4.4	18.8	46.1
10-Sep	3.4	2.8	2.5	5.9	Z	8.1	9.8	7.6	10.4	18.6	25.1	28.9	34.0	35.0	35.4	36.3	37.0	35.2	19.6	14.7	11.0	8.0	8.3	6.4	17.6	37.0
11-Sep	6.9	7.5	6.2	5.4	5.6	Z	2.4	3.2	4.1	9.6	21.4	27.2	37.2	39.3	37.0	38.4	40.1	37.1	16.3	15.8	9.6	11.7	11.6	15.8	17.8	40.1
12-Sep	Z	18.4	12.3	5.4	4.2	3.4	3.3	7.2	14.1	23.7	31.5	39.2	47.9	53.1	56.3	53.8	52.1	44.3	23.3	13.0	5.9	3.8	3.1	2.8	22.7	56.3
13-Sep	3.0	Z	2.7	2.6	2.4	2.6	2.6	2.7	6.0	10.7	23.2	27.3	26.6	32.1	40.6	39.4	40.2	26.6	13.3	8.2	4.6	2.9	2.6	2.6	14.2	40.6
14-Sep	2.7	2.7	Z	2.8	2.7	2.4	2.7	3.0	6.3	13.3	27.7	37.8	44.4	33.9	35.8	29.7	27.6	33.4	39.0	36.0	18.7	10.2	7.3	5.7	18.5	44.4
15-Sep	4.7	5.7	3.1	Z	3.7	3.4	4.0	9.2	16.2	17.5	24.3	32.7	31.9	33.8	30.2	22.0	18.7	21.2	25.7	21.1	17.6	16.7	16.4	16.6	17.2	33.8
16-Sep	16.4	15.2	13.8	12.7	Z	12.6	10.9	10.1	14.6	16.5	18.4	20.5	23.5	30.0	32.7	31.7	28.1	27.7	15.1	9.2	5.6	4.7	3.1	3.4	16.4	32.7
17-Sep	3.5	4.6	3.1	3.1	3.0	Z	2.3	3.4	5.5	10.5	21.7	28.3	35.0	38.3	40.5	40.4	36.5	34.6	26.0	18.6	27.2	23.2	23.6	15.6	19.5	40.5
18-Sep	Z	11.1	8.2	8.9	6.9	11.4	16.5	19.9	20.2	28.3	32.6	37.6	41.5	44.1	46.1	47.0	46.0	39.5	23.3	13.2	6.3	8.6	14.5	21.5	24.0	47.0
19-Sep	24.0	Z	26.5	13.9	4.3	3.3	3.3	5.7	13.4	21.5	26.1	29.1	33.7	34.2	33.3	34.9	30.2	15.6	10.5	6.8	3.7	2.9	2.9	3.3	16.7	34.9
20-Sep	4.5	4.0	Z	3.4	2.9	2.8	2.9	6.0	13.5	20.2	24.9	33.0	43.9	55.5	57.7	60.2	58.2	52.7	43.1	37.7	37.5	40.9	41.5	30.1	29.4	60.2
21-Sep	13.6	11.3	10.8	Z	4.9	2.9	4.8	9.7	16.6	31.8	34.9	39.5	42.5	43.9	39.9	39.2	37.3	37.1	38.7	34.5	15.8	15.7	17.7	18.1	24.4	43.9
22-Sep	20.3	22.7	16.9	14.4	Z	16.7	10.5	15.9	17.4	24.9	25.4	26.8	29.4	31.8	33.2	33.1	34.2	29.0	23.6	30.6	28.8	28.6	28.3	27.2	24.8	34.2
23-Sep	29.1	26.3	25.0	30.4	26.6	Z	24.6	25.8	35.0	37.3	37.6	38.5	38.7	35.6	33.8	34.6	36.4	33.3	31.2	26.9	18.3	18.9	13.0	9.1	28.9	38.7
24-Sep	Z	11.5	10.9	14.3	9.7	6.6	5.4	5.0	12.5	23.9	26.2	27.8	29.6	32.6	36.2	36.1	36.2	33.8	21.9	15.7	13.1	12.5	11.3	4.0	19.0	36.2
25-Sep	2.8	Z	2.8	2.7	2.5	2.9	3.1	4.0	9.8	16.2	19.9	22.5	25.7	30.6	34.2	29.6	28.7	34.1	30.1	34.3	31.6	37.2	32.4	23.7	20.1	37.2
26-Sep	10.9	13.7	Z	3.4	2.9	3.0	3.1	3.5	9.1	19.8	22.3	24.8	26.1	28.7	30.9	31.3	30.6	17.7	6.0	14.8	13.3	9.8	10.9	14.7	15.3	31.3
27-Sep	11.6	14.4	12.9	Z	23.2	29.1	31.6	32.7	33.9	34.1	34.3	35.1	35.7	36.2	36.7	36.2	35.2	33.5	28.7	27.7	30.2	29.1	16.8	13.7	28.4	36.7
28-Sep	11.0	25.0	24.9	24.0	Z	23.8	23.5	22.9	22.9	23.9	24.2	26.8	29.4	32.3	33.0	32.3	29.5	15.7	12.3	9.0	8.2	8.2	8.9	11.0	21.0	33.0
29-Sep	9.8	13.1	19.4	19.5	24.2	Z	26.0	28.8	29.8	30.4	32.6	32.6	34.6	34.2	37.8	37.7	36.5	30.4	26.6	20.7	12.2	9.8	7.3	7.3	24.4	37.8
30-Sep	Z	6.5	5.8	6.8	3.5	3.4	3.6	3.2	4.5	4.6	17.5	24.3	23.2	24.1	26.1	25.4	26.3	25.6	21.0	15.6	9.7	8.6	16.4	3.5	13.4	26.3
	9.7	11.0	10.2	8.9	6.9	8.0	8.7	10.2	13.7	18.9	24.0	28.2	31.8	34.1	35.7	35.5	34.5	30.5	22.7	18.3	14.1	12.4	12.2	10.7	Diurnal Average	
	29.1	26.3	26.5	30.4	26.6	29.1	31.6	32.7	35.0	37.3	37.6	39.5	47.9	55.5	57.7	60.2	58.2	52.7	43.1	37.7	37.5	40.9	41.5	30.1	Diurnal Maximum	

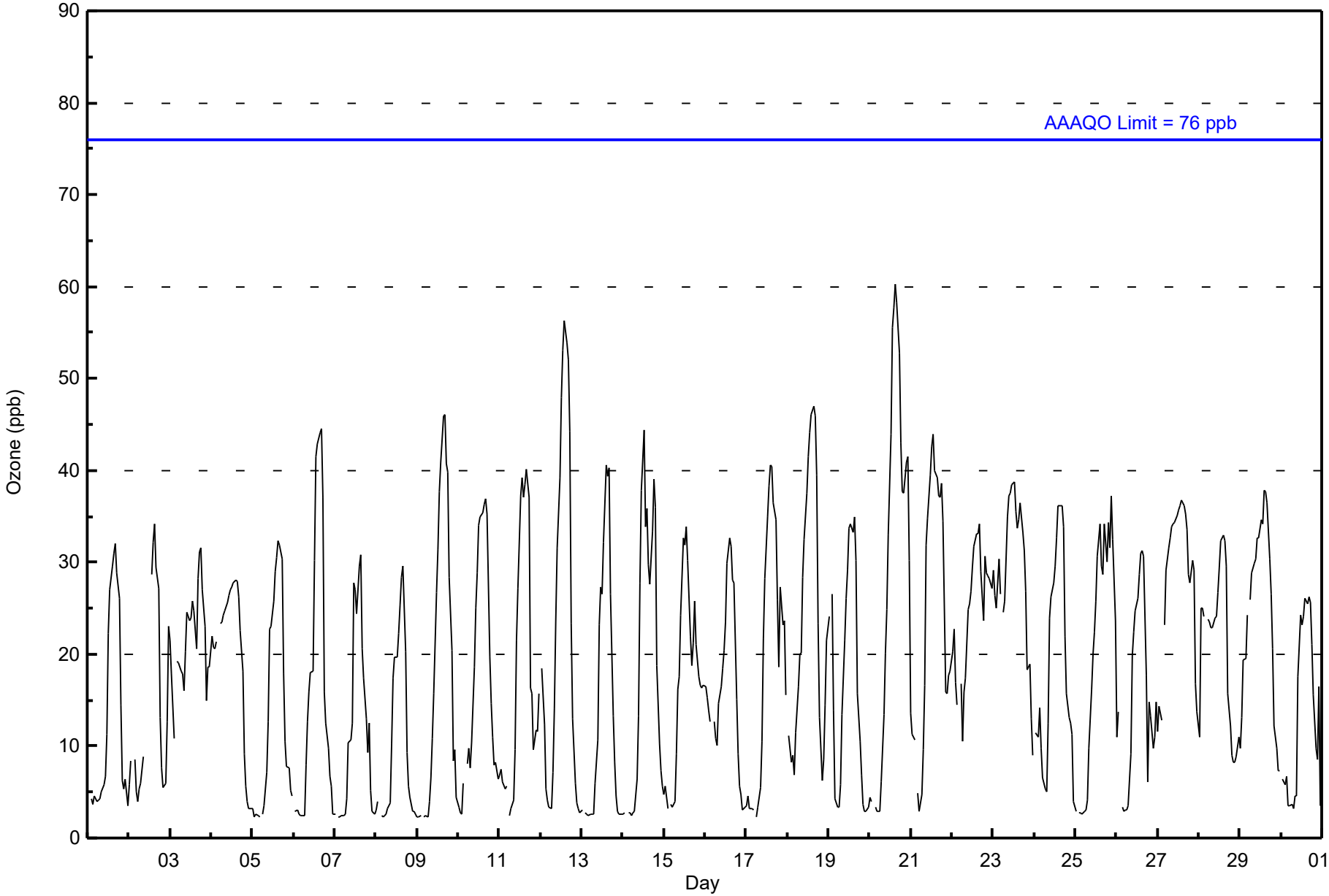
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay South - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	373	54.37	54.37
21 - 50	304	44.31	98.69
51 - 82	9	1.31	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	16	4	5	2	2	3	14	18	60	69	79	33	20	17	21	10	373
21 - 50	22	14	3	1	1	11	26	42	37	37	27	35	8	14	13	13	304
51 - 82	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	18	8	3	3	14	40	60	106	106	106	68	28	31	34	23	686

Total Number of Valid Hours: 686

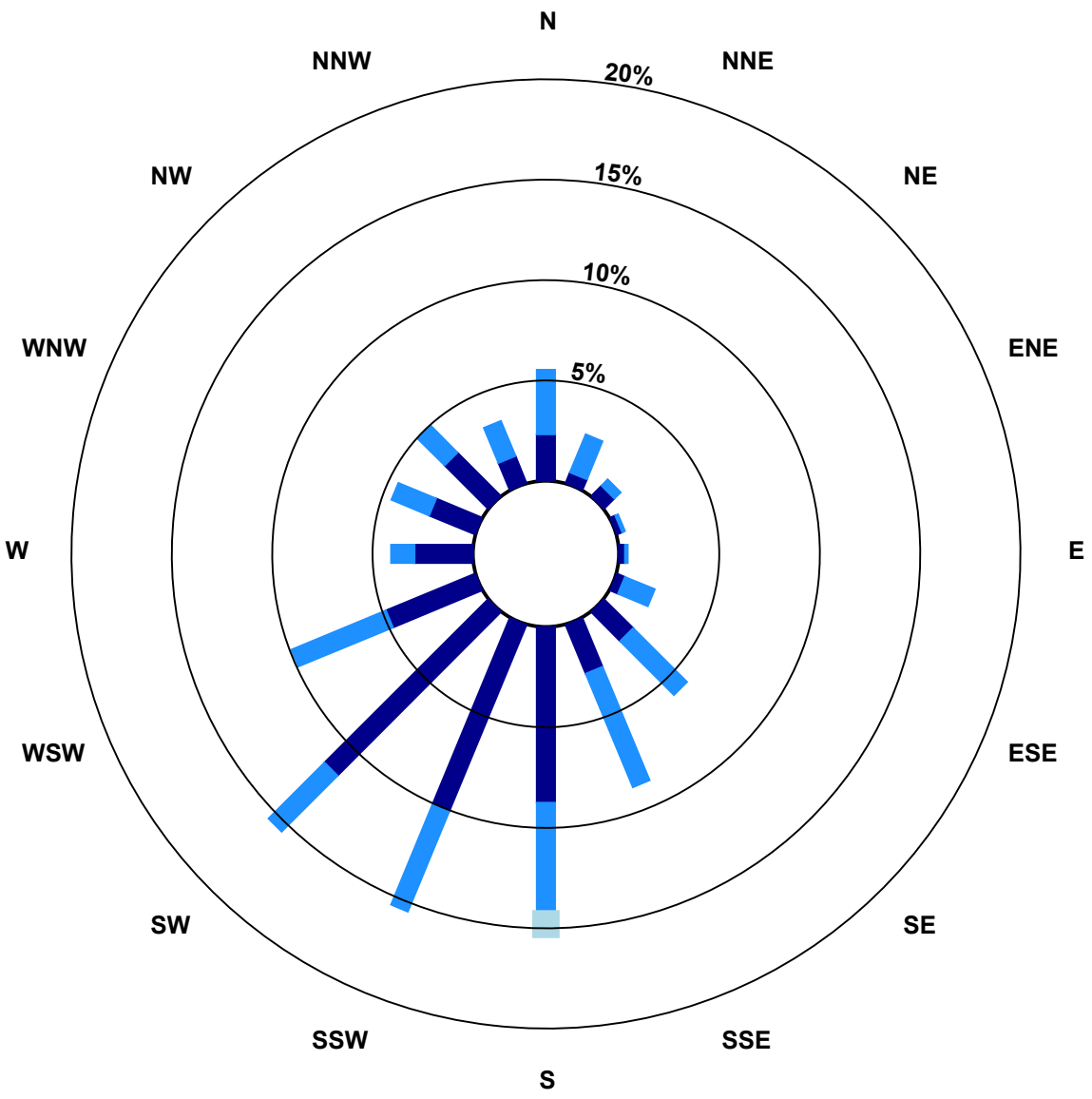
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

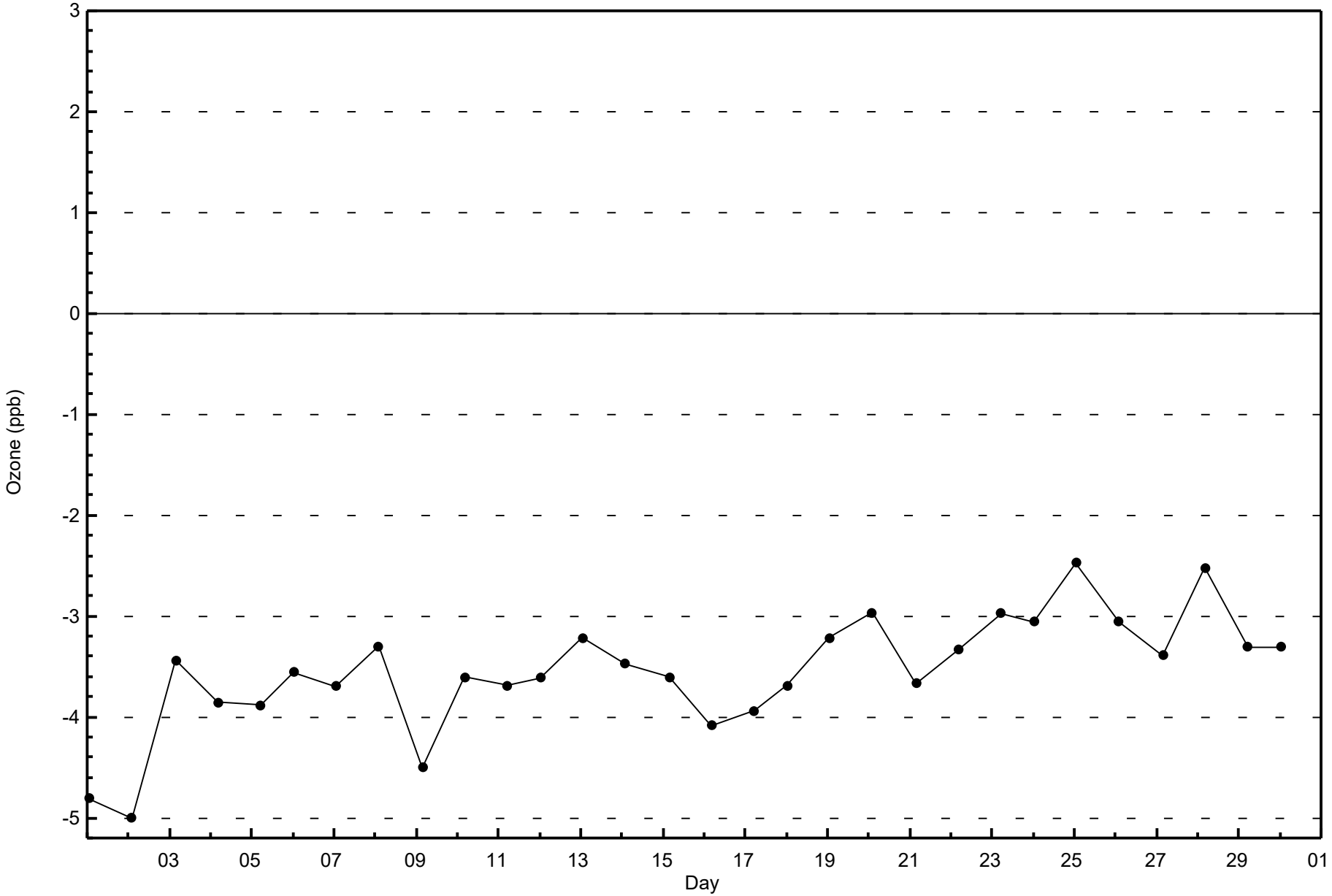
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay South - September 2025

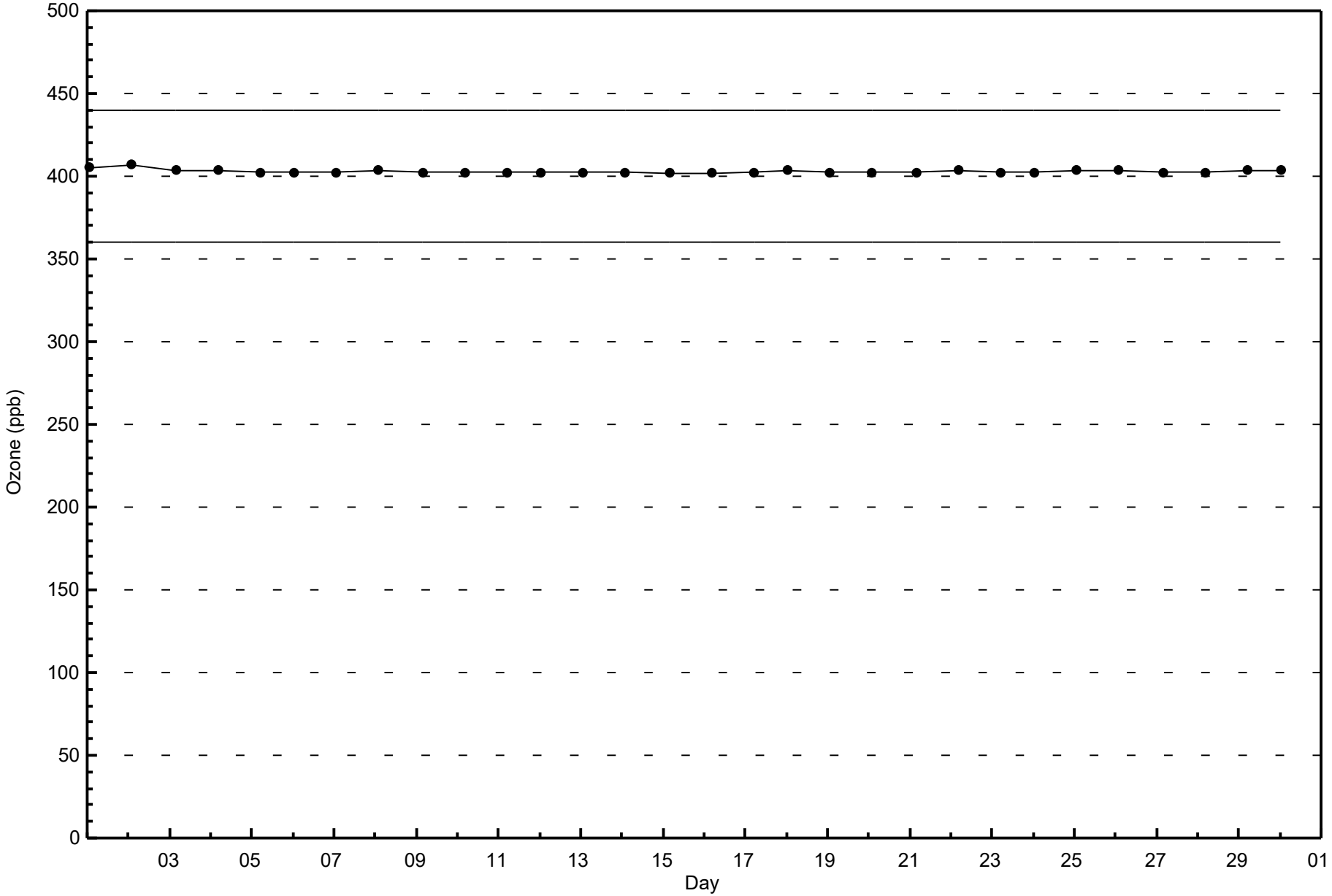


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort McKay South - September 2025

Maximum Value: 76.3 ppb on Sep 25 02:00

Maximum Daily Average: 13.9 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 1 20:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 7.4 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 20

Monthly Average: 2.42 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 1.4 P_{90} = 5.5 P_{99} = 44.7

Hours in Service:	720
Hours of Data:	632
Hours of Missing Data:	88
Hours of Calibration:	33
Percent Operational Time:	92.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.1	Z	0.1	0.2	1.7	1.9	4.6	7.3	9.5	8.4	2.1	1.1	0.5	0.3	0.1	0.1	0.1	0.0	0.0	0.4	0.5	2.3	1.8	9.5
2-Sep	0.5	0.1	0.0	0.0	Z	0.1	0.1	0.2	1.3	3.0	5.6	18.2	3.2	1.3	0.5	0.3	0.9	0.4	0.2	0.0	0.0	0.1	0.1	0.0	1.6	18.2
3-Sep	0.0	0.0	0.1	0.1	0.0	Z	0.3	0.7	1.7	1.3	0.5	0.5	1.4	1.0	0.2	1.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
4-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	0.8	0.6	0.7	0.6	0.5	0.4	0.1	0.2	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.3	0.8
5-Sep	0.1	Z	0.1	0.2	0.3	0.3	2.0	13.7	9.0	5.9	1.5	2.1	2.5	2.2	1.6	0.8	0.9	0.5	0.1	0.0	0.0	0.0	0.0	0.0	1.9	13.7
6-Sep	0.1	0.1	Z	0.1	0.2	0.2	0.7	3.6	6.5	7.9	10.3	13.0	5.4	0.7	0.6	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.1	2.5	2.3	13.0
7-Sep	4.1	8.9	22.7	Z	8.2	11.8	21.7	13.3	4.7	4.8	4.5	2.6	6.3	11.6	4.0	0.3	0.6	0.6	0.1	0.0	0.0	0.0	0.5	1.3	5.8	22.7
8-Sep	0.8	0.3	0.3	0.4	Z	1.5	4.6	8.1	17.5	5.0	1.7	2.6	2.6	2.5	1.8	1.3	1.5	1.3	0.5	0.0	0.0	0.1	0.2	0.2	2.4	17.5
9-Sep	0.2	0.3	0.2	0.6	1.7	Z	1.3	2.8	7.1	10.6	9.0	3.1	3.4	0.7	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.4	0.1	0.6	1.9	10.6
10-Sep	Z	2.2	7.2	3.9	0.4	0.2	0.1	0.2	1.1	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	0.1	0.7	7.2
11-Sep	0.1	Z	0.1	0.1	0.1	9.4	22.7	22.3	39.8	15.3	5.4	4.9	1.3	0.7	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	39.8
12-Sep	0.0	0.0	Z	0.1	0.1	0.1	2.0	3.3	5.3	4.7	2.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	6.7	9.5	1.5	9.5
13-Sep	2.8	6.6	13.9	Z	12.3	14.1	13.3	10.0	5.9	5.0	1.2	1.6	2.6	2.1	0.9	0.6	0.4	0.5	0.2	0.0	0.1	2.8	6.8	8.2	4.9	14.1
14-Sep	5.2	2.4	1.1	0.7	Z	0.5	2.6	5.0	7.7	6.2	1.6	1.1	0.5	2.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	7.7
15-Sep	0.0	0.0	0.4	1.0	0.8	Z	1.1	1.2	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	1.2
16-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	C	C	C	C	C	0.7	0.4	0.3	0.4	0.1	0.0	0.0	0.1	0.4	0.3	0.2	0.7
17-Sep	0.2	Z	0.1	0.1	0.1	0.1	0.5	6.0	12.9	10.8	4.6	2.4	1.7	1.3	0.7	0.8	0.9	0.5	0.3	0.2	0.1	0.1	0.1	0.2	1.9	12.9
18-Sep	0.3	0.3	0.4	Z	0.4	0.3	0.5	0.9	2.2	0.5	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.7	0.2	0.1	0.4	2.2
19-Sep	0.2	0.1	0.1	Z	0.5	0.8	2.4	4.4	8.5	4.5	3.0	1.8	0.1	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.7	5.2	7.8	4.0	2.0	8.5
20-Sep	1.1	0.6	0.4	0.7	Z	2.5	2.7	4.9	3.4	2.7	2.5	1.4	0.7	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.2	1.1	4.9
21-Sep	0.2	0.3	0.3	0.3	0.9	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.9
22-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
23-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	0.2	0.3	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	--	0.5
24-Sep	0.1	0.0	Z	0.1	0.1	0.1	0.4	1.6	1.6	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	17.3	1.0	17.3
25-Sep	58.5	76.3	68.3	Z	29.7	13.8	5.5	4.5	4.7	2.5	3.4	3.5	1.8	0.9	0.1	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	11.9	76.3
26-Sep	0.3	0.1	0.5	0.6	Z	2.3	3.3	4.2	6.9	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	0.9	6.9
27-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.0	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	0.0	0.0	0.1
28-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.1	0.5	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	2.1
29-Sep	0.1	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.9	0.6	0.7	0.4	1.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.3
30-Sep	0.1	0.0	Z	3.7	39.0	44.5	53.1	46.9	44.8	66.5	6.9	2.8	2.6	1.8	0.6	0.5	0.5	0.2	0.1	0.1	0.2	1.0	0.1	2.9	13.9	66.5
	3.1	4.1	4.9	0.6	4.1	4.5	5.3	5.9	7.4	6.4	2.9	2.8	1.6	1.2	0.5	0.4	0.3	0.2	0.1	0.0	0.1	0.4	0.9	1.8	Diurnal Average	
	58.5	76.3	68.3	3.9	39.0	44.5	53.1	46.9	44.8	66.5	10.3	18.2	6.3	11.6	4.0	1.9	1.5	1.3	0.5	0.3	0.7	5.2	7.8	17.3	Diurnal Maximum	

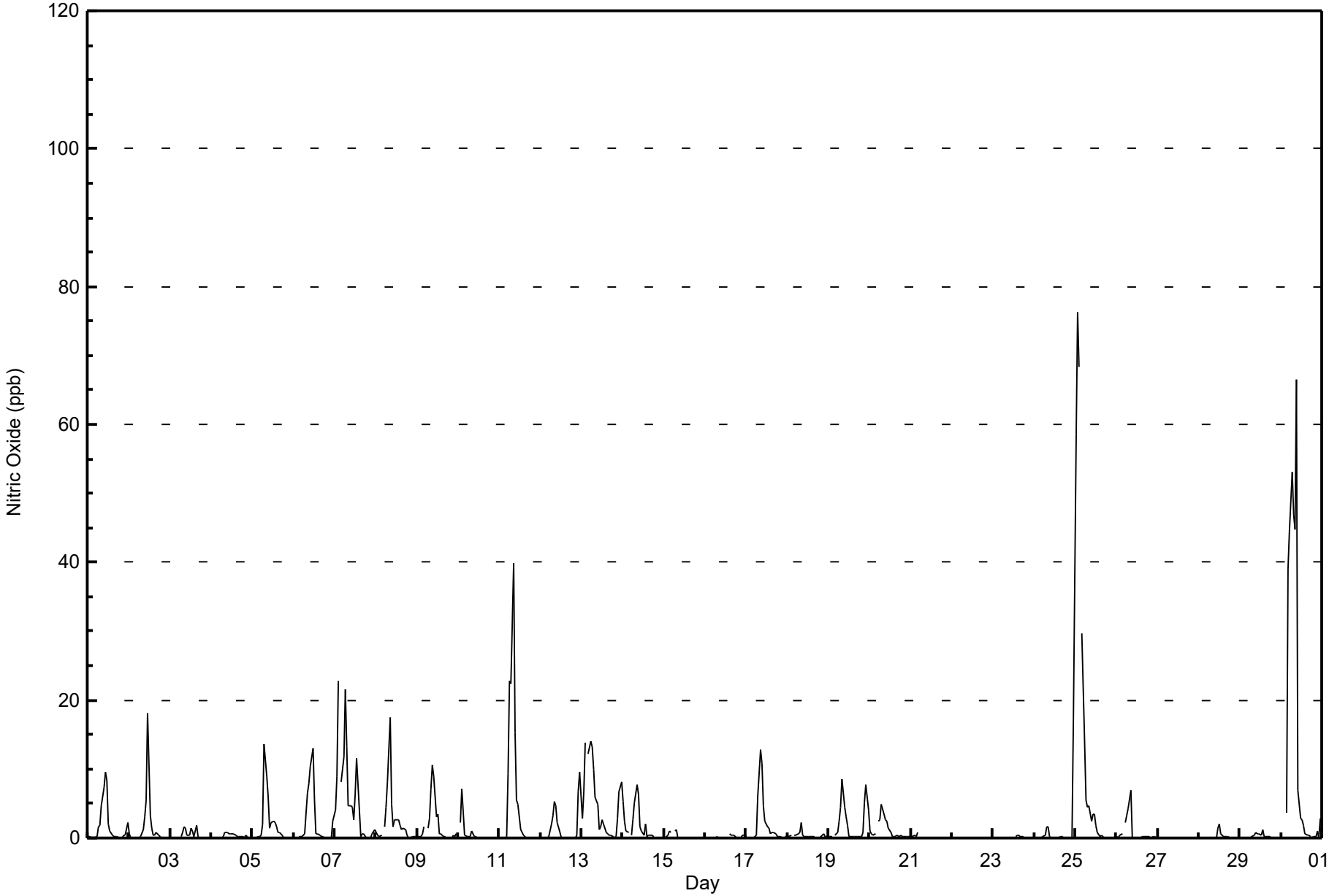
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay South - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	617	97.63	97.63
21 - 40	7	1.11	98.73
11 - 80	8	1.27	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 632

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	35	17	7	3	3	12	40	58	96	89	87	61	26	28	33	22	617
21 - 40	0	0	0	0	0	1	0	1	0	2	2	0	0	0	0	1	7
11 - 80	3	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	8
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	7	3	3	13	40	59	96	91	92	61	28	28	33	23	632

Total Number of Valid Hours: 632

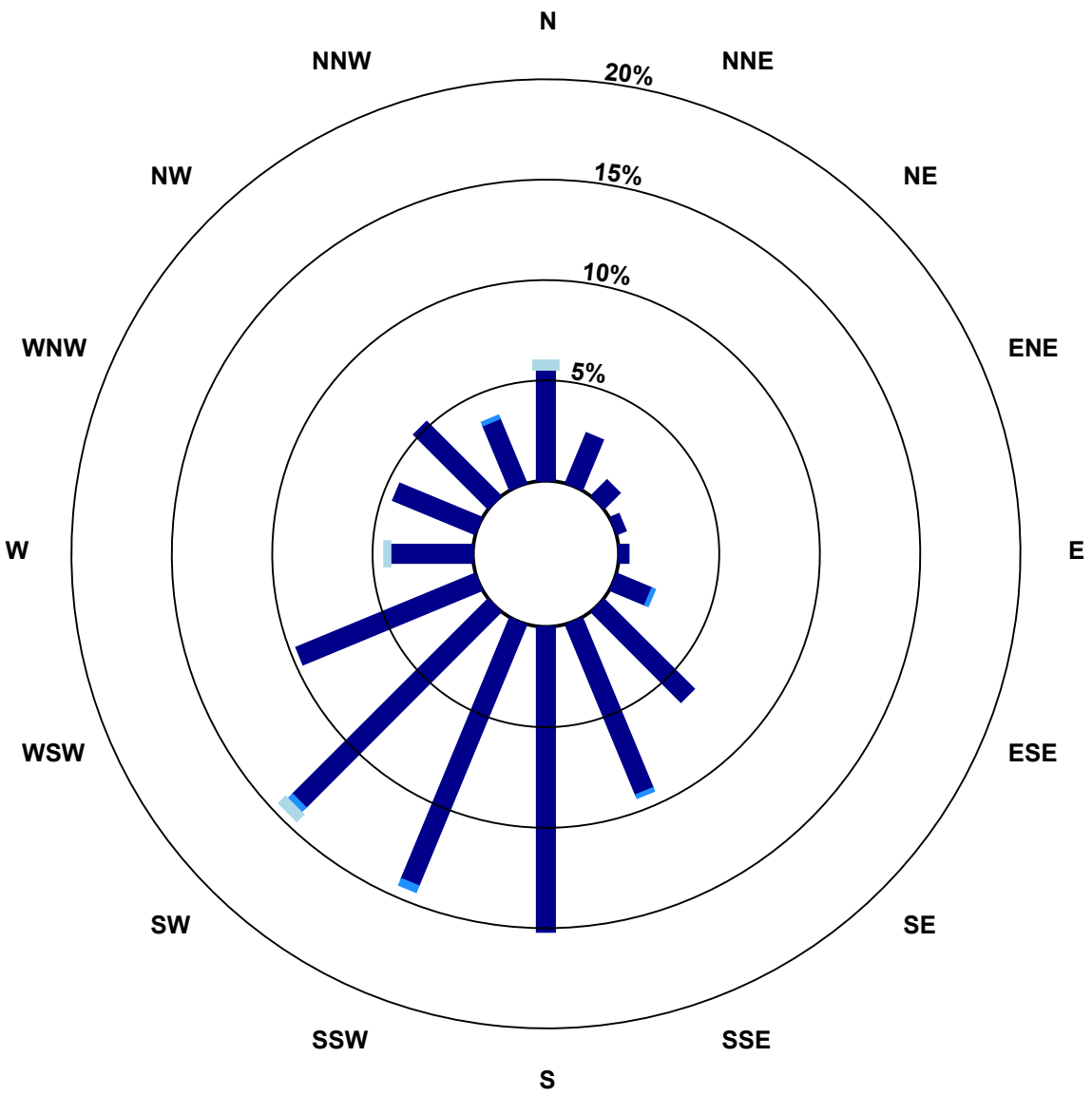
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

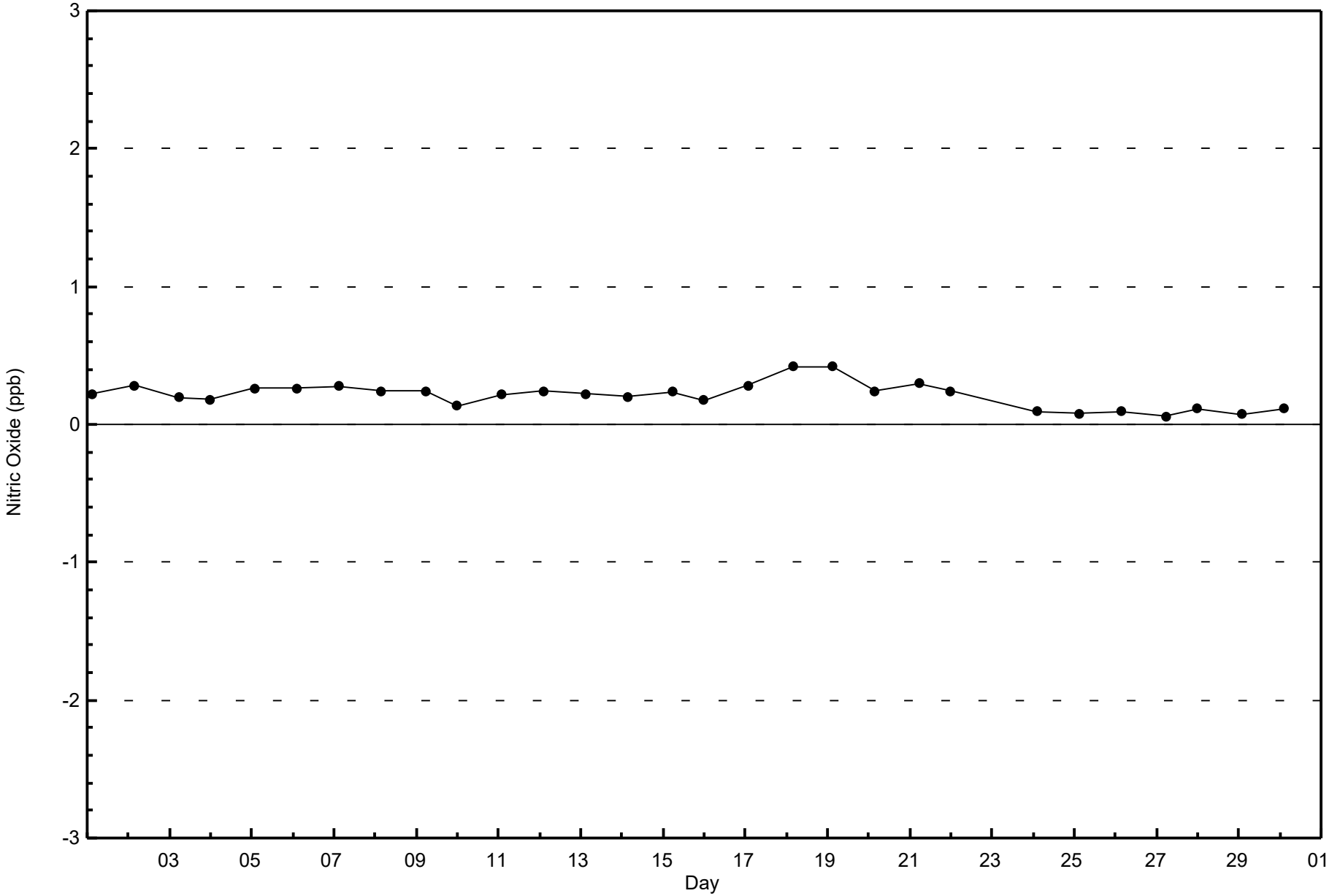
Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay South - September 2025

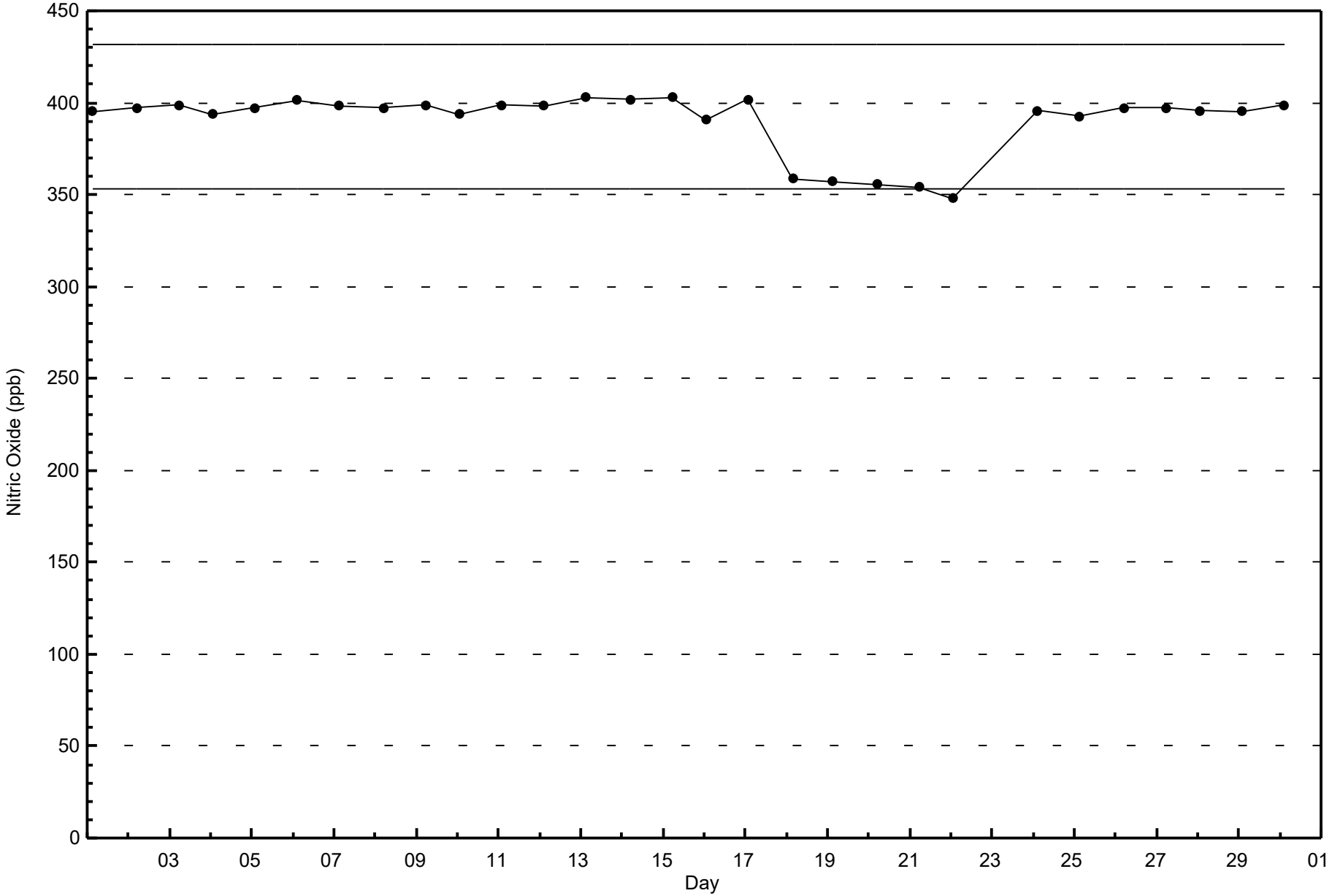


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.3 ppb on Sep 7 14:00 Maximum Daily Average: 11.0 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 24 15:00 Minimum Daily Average: 1.6 ppb on Sep 27
Maximum Diurnal Average: 6.6 ppb at hour 22 Minimum Diurnal Average: 2.7 ppb at hour 16
Monthly Average: 4.68 ppb Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 1.5 Median = 3.5 Q_3 = 6.6 P_{90} = 10.7 P_{99} = 18.0

Hours in Service:	720
Hours of Data:	632
Hours of Missing Data:	88
Hours of Calibration:	33
Percent Operational Time:	92.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.8	0.6	0.5	Z	0.6	0.6	2.0	2.9	5.1	5.7	6.2	7.9	4.2	3.0	2.9	3.0	3.2	4.3	4.9	5.5	4.2	7.6	10.4	6.8	4.0	10.4
2-Sep	3.4	1.2	1.5	1.5	Z	0.5	0.5	0.5	2.0	3.5	5.7	13.4	8.7	5.7	3.3	2.6	4.6	4.6	3.1	2.3	2.1	2.7	3.5	2.3	3.4	13.4
3-Sep	2.8	5.2	8.7	4.1	3.5	Z	4.8	5.4	7.0	4.9	3.3	3.1	5.7	4.3	2.3	8.1	3.3	1.0	0.9	1.8	2.8	4.8	5.8	5.6	4.3	8.7
4-Sep	Z	3.1	4.3	4.3	1.9	0.9	0.2	0.5	2.1	2.1	1.8	1.9	2.0	2.0	1.6	1.0	1.2	2.1	3.1	1.6	2.1	2.7	3.1	1.8	2.1	4.3
5-Sep	1.4	Z	1.1	0.7	0.7	0.7	1.1	3.9	5.3	5.8	3.1	4.7	5.9	6.0	5.6	4.5	5.1	5.2	3.3	2.5	1.6	1.5	2.0	1.6	3.2	6.0
6-Sep	1.3	1.0	Z	1.1	1.7	1.2	0.8	4.7	9.4	11.7	16.6	21.1	14.0	4.3	4.1	3.9	4.1	3.7	2.9	3.1	2.3	1.8	3.0	5.3	5.4	21.1
7-Sep	6.9	6.1	6.2	Z	4.2	3.9	3.1	7.6	7.3	6.8	6.6	7.9	15.8	28.3	13.1	3.9	6.8	7.8	6.3	5.2	5.6	6.8	6.6	6.3	7.8	28.3
8-Sep	7.5	7.3	5.1	2.7	Z	3.7	3.4	4.9	8.5	6.0	3.9	4.2	4.5	4.6	4.5	4.7	6.9	8.0	5.3	4.3	3.3	2.7	2.7	2.1	4.8	8.5
9-Sep	1.7	1.2	1.7	1.2	1.0	Z	0.8	1.8	5.0	11.2	14.1	9.6	11.8	4.5	5.3	3.3	2.8	1.8	3.8	10.9	14.1	19.6	13.2	10.1	6.5	19.6
10-Sep	Z	8.7	7.8	5.6	1.7	0.8	0.6	0.7	1.6	0.7	0.8	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.4	0.4	1.8	1.9	0.8	1.9	1.7	8.7
11-Sep	2.3	Z	0.4	0.3	1.1	3.5	5.0	5.3	10.6	10.4	11.1	13.2	6.0	4.3	2.6	1.8	1.7	1.9	1.8	3.9	6.5	7.9	4.7	4.3	4.8	13.2
12-Sep	3.9	4.2	Z	3.6	2.3	1.9	1.8	3.2	10.8	12.6	8.8	5.1	1.6	1.2	1.4	1.4	1.5	1.9	3.3	6.2	10.0	13.6	16.9	14.4	5.7	16.9
13-Sep	10.2	8.6	10.5	Z	7.1	6.7	4.9	2.5	8.2	11.0	6.6	8.3	11.4	11.1	8.6	8.2	8.8	10.4	8.4	8.6	9.4	12.0	13.2	12.7	9.0	13.2
14-Sep	8.1	6.1	4.3	3.0	Z	1.2	1.5	2.3	7.7	12.5	8.3	8.2	6.9	14.5	3.1	3.6	6.0	7.0	3.5	3.2	2.4	1.2	1.5	2.1	5.1	14.5
15-Sep	2.0	4.4	7.2	5.7	7.6	Z	2.1	2.8	1.0	0.5	1.0	0.9	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	1.9	7.6
16-Sep	Z	0.9	0.7	0.6	0.6	0.5	0.5	0.8	0.4	C	C	C	C	C	3.8	2.6	3.1	6.3	6.7	5.1	5.6	7.5	8.4	6.4	3.4	8.4
17-Sep	2.9	Z	1.7	1.6	1.5	1.4	1.1	3.0	6.5	10.4	6.9	5.6	4.8	4.8	2.8	4.0	5.0	5.8	9.6	11.2	2.5	3.0	3.1	11.2	4.8	11.2
18-Sep	13.1	13.9	12.8	Z	11.2	8.6	5.5	3.9	5.8	1.7	1.5	1.6	1.6	1.2	1.0	1.1	1.4	1.2	1.8	7.2	15.1	22.6	18.0	10.6	7.1	22.6
19-Sep	7.6	1.3	2.3	Z	12.2	11.8	8.1	4.8	11.5	8.4	6.6	4.7	0.7	1.0	0.8	0.9	0.4	0.5	0.7	4.9	9.6	12.7	13.7	12.5	6.0	13.7
20-Sep	8.2	6.2	5.1	4.6	Z	4.7	2.9	3.9	6.1	5.5	5.9	4.3	3.5	1.2	1.1	1.3	1.5	2.8	3.2	3.5	3.3	2.5	2.0	2.0	3.7	8.2
21-Sep	4.6	6.0	5.1	3.7	6.6	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	6.6
22-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
23-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	2.8	3.8	3.2	2.4	5.1	5.6	6.6	14.1	8.1	7.0	8.8	--	14.1
24-Sep	6.9	4.3	Z	7.8	6.7	6.2	6.9	6.2	7.0	1.6	0.7	0.5	0.4	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.5	1.8	12.0	3.1	12.0
25-Sep	13.6	12.7	10.1	Z	8.2	6.6	5.3	4.3	7.4	5.8	7.3	7.1	5.5	3.4	1.5	2.8	2.6	1.2	1.8	2.0	5.6	3.0	1.1	4.0	5.3	13.6
26-Sep	16.3	10.7	14.3	10.5	Z	5.1	2.9	2.0	5.0	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	6.6	10.4	9.8	11.3	5.9	5.0	16.3
27-Sep	5.4	5.9	3.5	4.3	7.8	Z	0.6	0.4	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.4	3.0	1.6	7.8
28-Sep	Z	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	3.5	5.0	1.7	0.9	1.0	1.3	1.1	2.0	2.6	2.9	3.3	2.3	1.5	1.6	5.0
29-Sep	1.8	Z	2.4	2.3	3.7	4.0	4.5	2.3	2.4	4.1	2.8	3.1	1.4	4.4	1.0	1.7	2.2	4.7	3.8	4.1	3.0	3.9	3.8	3.1	3.1	4.7
30-Sep	2.1	1.7	Z	6.0	14.5	14.0	16.9	11.1	17.6	23.3	11.3	8.2	9.5	8.4	5.1	5.8	5.4	6.9	9.4	13.6	18.0	18.6	8.5	16.7	11.0	23.3
	5.6	5.1	4.9	3.5	4.7	3.9	3.3	3.4	6.0	6.4	5.5	5.7	5.1	4.6	2.9	2.7	3.0	3.5	3.5	4.6	5.7	6.6	6.1	6.3	Diurnal Average	
	16.3	13.9	14.3	10.5	14.5	14.0	16.9	11.1	17.6	23.3	16.6	21.1	15.8	28.3	13.1	8.2	8.8	10.4	9.6	13.6	18.0	22.6	18.0	16.7	Diurnal Maximum	

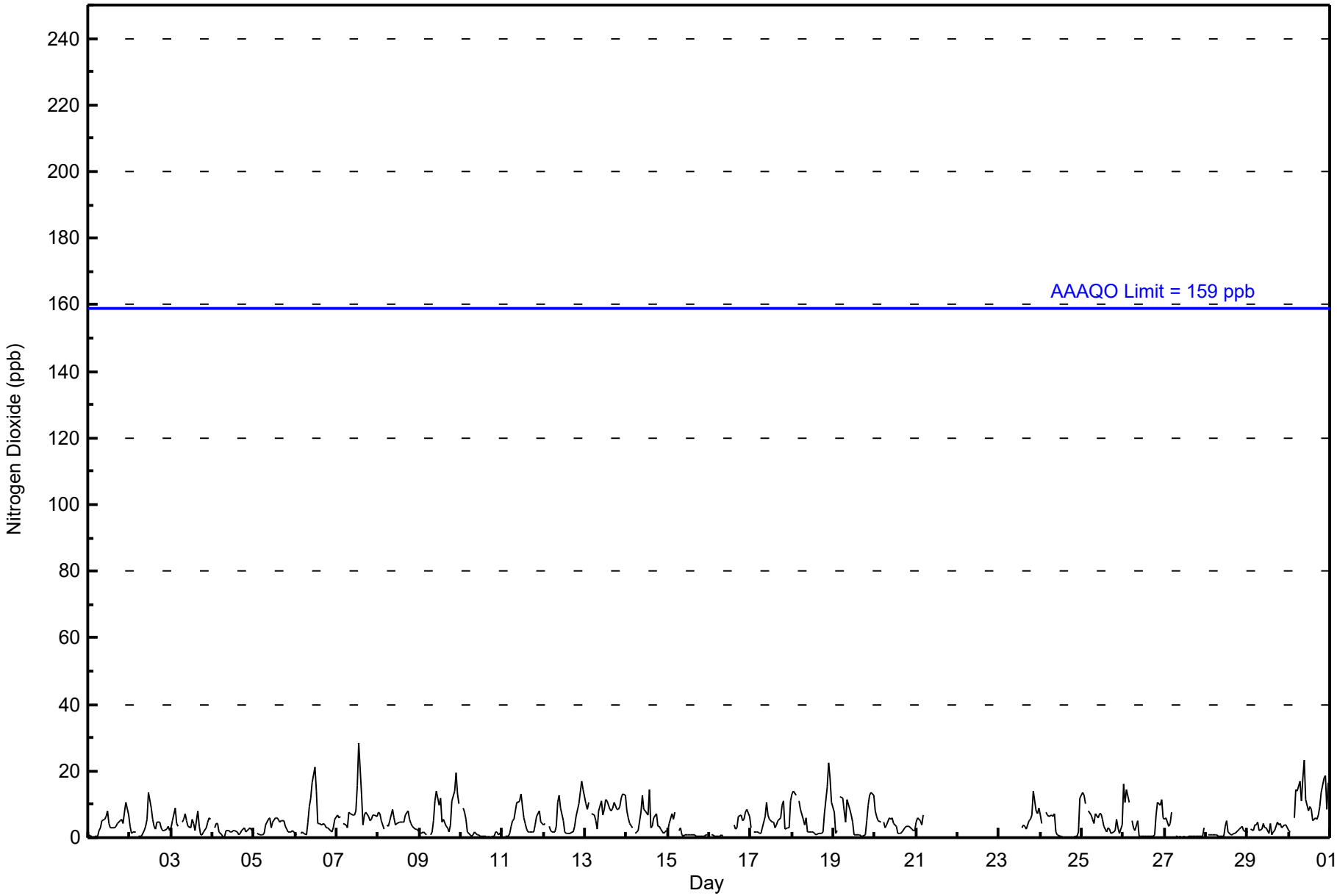
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - September 2025



Nitrogen Dioxide (NO_2) - ppb
Fort McKay South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	628	99.37	99.37
21 - 40	4	0.63	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 632

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	36	17	7	3	3	13	39	59	96	91	91	61	28	28	33	23	628
21 - 40	2	0	0	0	0	0	1	0	0	0	1	0	0	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	38	17	7	3	3	13	40	59	96	91	92	61	28	28	33	23	632

Total Number of Valid Hours: 632

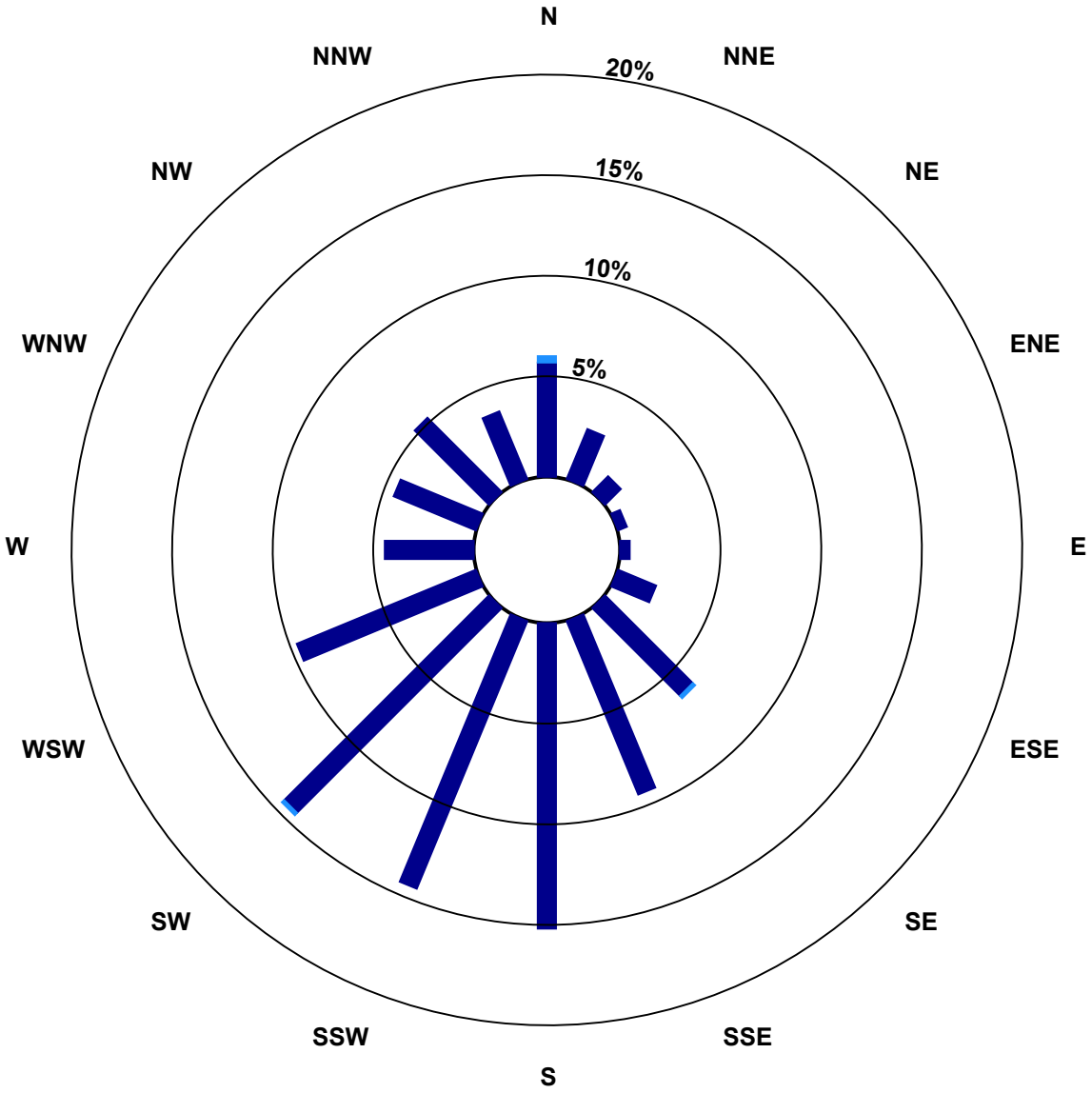
Total Number of Hours: 720

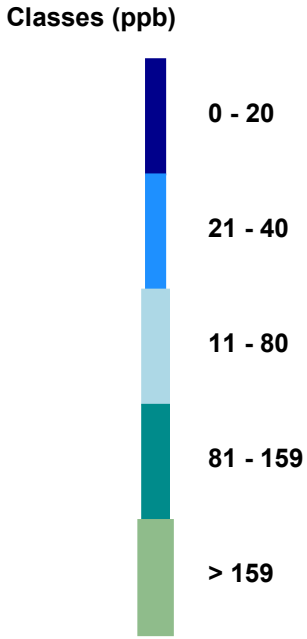
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South





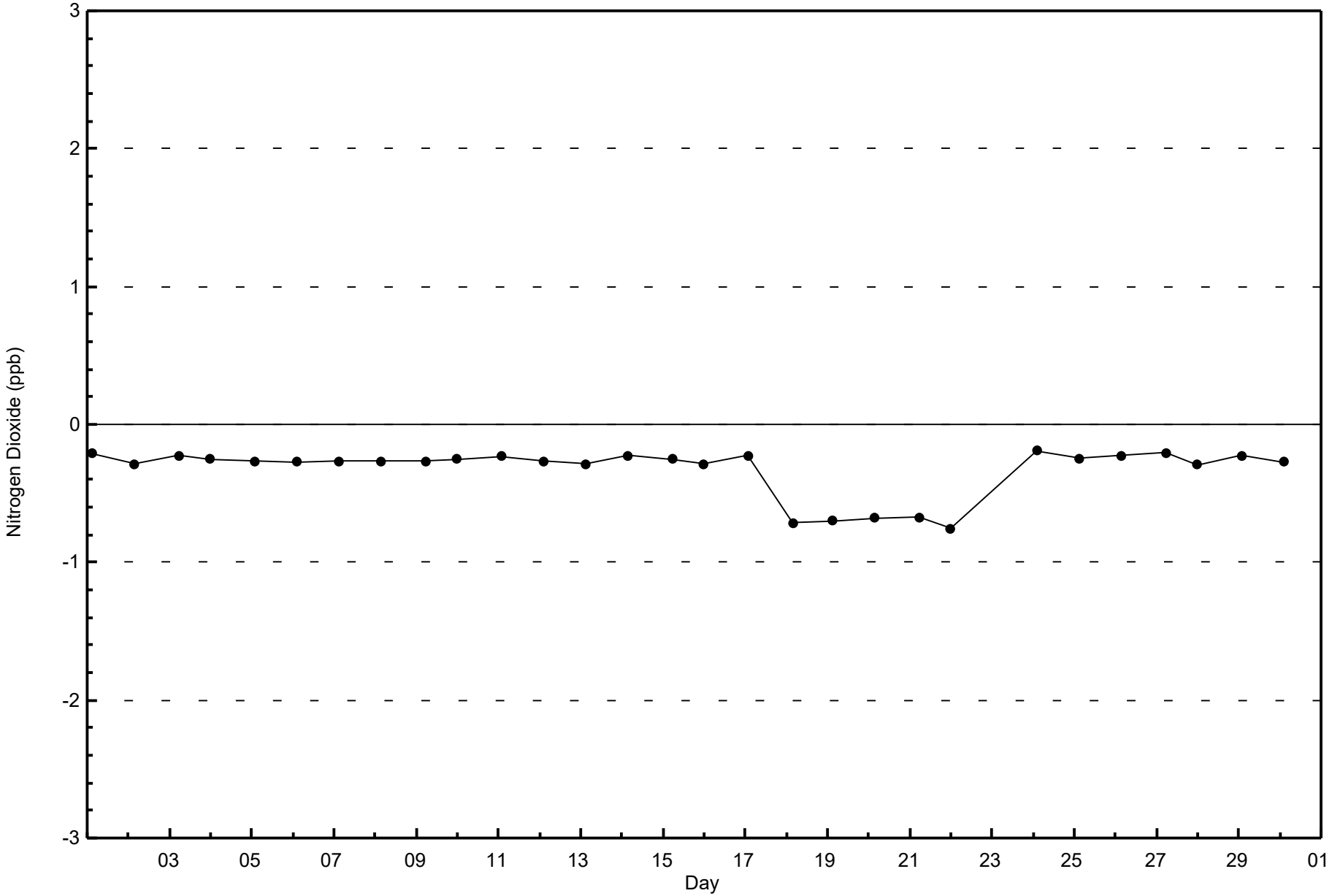
Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - September 2025

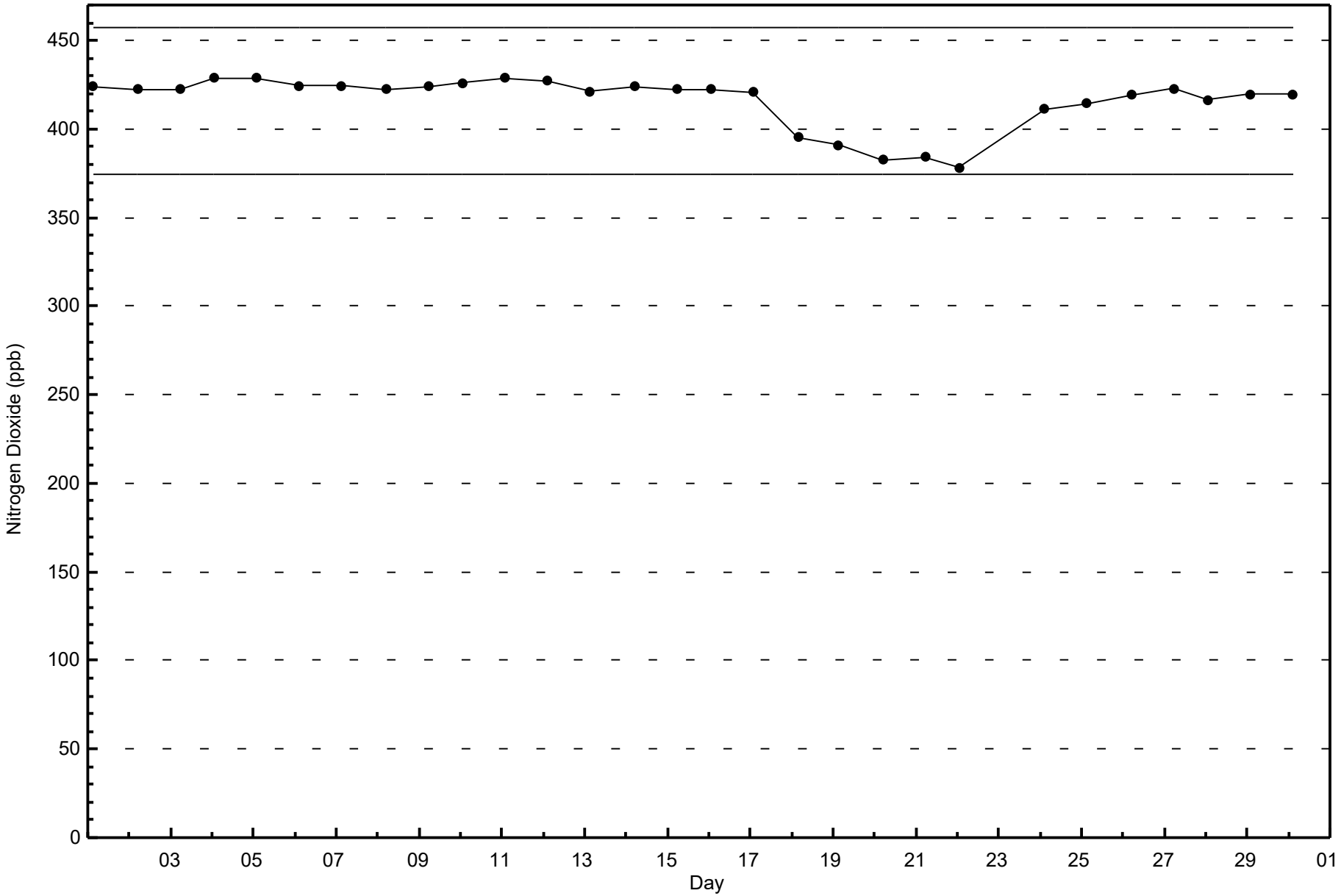


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - September 2025

Maximum Value: 89.8 ppb on Sep 30 10:00

Maximum Daily Average: 24.8 ppb on Sep 30

Minimum Value: 0.2 ppb on Sep 24 15:00

Minimum Daily Average: 1.6 ppb on Sep 27

Maximum Diurnal Average: 13.4 ppb at hour 9

Minimum Diurnal Average: 3.1 ppb at hour 16

Monthly Average: 7.10 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.6 Q_1 = 1.6 Median = 4.1 Q_3 = 8.7 P_{90} = 15.7 P_{99} = 58.3

Hours in Service:	720
Hours of Data:	632
Hours of Missing Data:	88
Hours of Calibration:	33
Percent Operational Time:	92.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.9	0.7	0.6	Z	0.7	0.8	3.7	4.8	9.7	13.0	15.7	16.3	6.3	4.1	3.4	3.3	3.3	4.4	5.0	5.5	4.2	8.0	10.9	9.1	5.8	16.3
2-Sep	3.9	1.3	1.5	1.5	Z	0.6	0.6	0.7	3.3	6.5	11.3	31.6	11.9	7.0	3.8	2.9	5.5	5.0	3.3	2.3	2.1	2.8	3.6	2.3	5.0	31.6
3-Sep	2.8	5.2	8.8	4.2	3.5	Z	5.1	6.1	8.7	6.2	3.8	3.6	7.1	5.3	2.5	10.0	3.6	1.0	0.9	1.8	2.8	4.8	5.8	5.6	4.7	10.0
4-Sep	Z	3.2	4.4	4.4	2.0	1.0	0.3	0.6	2.9	2.9	2.4	2.6	2.6	2.5	2.0	1.1	1.4	2.4	3.3	1.6	2.4	2.9	3.2	1.9	2.3	4.4
5-Sep	1.5	Z	1.2	0.9	1.0	1.0	3.1	17.6	14.3	11.7	4.6	6.8	8.4	8.2	7.2	5.3	6.0	5.7	3.4	2.5	1.6	1.5	2.0	1.6	5.1	17.6
6-Sep	1.4	1.1	Z	1.2	1.9	1.4	1.5	8.3	15.9	19.6	26.9	34.1	19.4	5.0	4.7	4.3	4.4	3.8	2.9	3.1	2.3	1.8	3.1	7.8	7.7	34.1
7-Sep	11.0	15.0	28.9	Z	12.4	15.7	24.8	20.9	12.0	11.6	11.1	10.5	22.1	39.9	17.1	4.2	7.4	8.4	6.4	5.2	5.6	6.8	7.1	7.6	13.5	39.9
8-Sep	8.3	7.6	5.4	3.1	Z	5.2	8.0	13.0	26.0	11.0	5.6	6.8	7.1	7.1	6.3	6.0	8.4	9.3	5.8	4.3	3.3	2.8	2.9	2.3	7.2	26.0
9-Sep	1.9	1.5	1.9	1.8	2.7	Z	2.1	4.6	12.1	21.8	23.1	12.7	15.2	5.2	5.9	3.5	3.0	1.9	3.9	11.0	14.2	20.0	13.3	10.7	8.4	23.1
10-Sep	Z	10.9	15.0	9.5	2.1	1.0	0.7	0.9	2.7	0.9	0.9	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.4	0.4	1.8	1.9	0.9	2.0	2.4	15.0
11-Sep	2.4	Z	0.5	0.4	1.2	12.9	27.7	27.6	50.4	25.7	16.5	18.1	7.3	5.0	3.1	1.9	1.8	1.9	1.8	3.9	6.5	7.9	4.7	4.3	10.2	50.4
12-Sep	3.9	4.2	Z	3.7	2.4	2.0	3.8	6.5	16.1	17.3	11.0	5.8	1.6	1.2	1.4	1.4	1.5	1.9	3.3	6.2	10.1	14.1	23.6	23.9	7.3	23.9
13-Sep	13.0	15.2	24.4	Z	19.4	20.8	18.2	12.5	14.1	16.0	7.8	9.9	14.0	13.2	9.5	8.8	9.2	10.9	8.6	8.6	9.5	14.8	20.0	20.9	13.9	24.4
14-Sep	13.3	8.5	5.4	3.7	Z	1.7	4.1	7.3	15.4	18.7	9.9	9.3	7.4	16.6	3.2	3.9	6.5	7.5	3.5	3.2	2.4	1.2	1.5	2.1	6.8	18.7
15-Sep	2.0	4.4	7.6	6.7	8.4	Z	3.2	4.0	1.1	0.6	1.0	0.9	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	2.1	8.4
16-Sep	Z	0.9	0.7	0.6	0.6	0.5	0.5	1.0	0.5	C	C	C	C	C	4.5	3.0	3.4	6.7	6.8	5.1	5.6	7.6	8.8	6.7	3.5	8.8
17-Sep	3.1	Z	1.8	1.7	1.6	1.5	1.6	9.0	19.4	21.2	11.5	8.0	6.5	6.1	3.5	4.8	5.9	6.3	9.9	11.4	2.6	3.1	3.2	11.4	6.7	21.2
18-Sep	13.4	14.2	13.2	Z	11.6	8.9	6.0	4.8	8.0	2.2	1.7	1.8	1.8	1.4	1.1	1.2	1.5	1.2	1.8	7.3	15.4	23.3	18.2	10.7	7.4	23.3
19-Sep	7.8	1.4	2.4	Z	12.7	12.6	10.5	9.2	20.0	12.9	9.6	6.5	0.8	1.3	0.9	1.1	0.6	0.7	0.9	5.1	10.3	17.9	21.5	16.5	8.0	21.5
20-Sep	9.3	6.8	5.5	5.3	Z	7.2	5.6	8.8	9.5	8.2	8.4	5.7	4.2	1.5	1.3	1.5	1.8	3.1	3.6	3.8	3.5	2.7	2.1	2.2	4.8	9.5
21-Sep	4.8	6.3	5.4	4.0	7.5	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	7.5
22-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
23-Sep	M	M	M	M	M	M	M	M	M	M	M	M	M	3.0	4.1	3.7	2.6	5.2	5.6	6.6	14.1	8.1	7.0	8.8	--	14.1
24-Sep	7.0	4.3	Z	7.9	6.8	6.3	7.3	7.8	8.6	1.8	0.8	0.5	0.5	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.4	0.5	1.8	29.3	4.1	29.3
25-Sep	72.1	89.0	78.4	Z	37.9	20.4	10.8	8.8	12.1	8.3	10.7	10.6	7.3	4.3	1.6	3.1	2.8	1.2	1.8	2.0	5.7	3.1	1.2	4.0	17.3	89.0
26-Sep	16.6	10.8	14.8	11.1	Z	7.4	6.2	6.2	11.9	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	6.7	10.5	9.9	11.4	6.0	5.8	16.6
27-Sep	5.5	6.0	3.6	4.4	7.9	Z	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.4	3.0	1.6	7.9
28-Sep	Z	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.5	0.4	0.4	5.0	7.1	2.2	1.1	1.2	1.4	1.2	2.1	2.6	3.0	3.4	2.4	1.6	1.8	7.1
29-Sep	1.9	Z	2.5	2.3	3.7	4.0	4.6	2.4	2.7	5.0	3.4	3.8	1.8	5.7	1.1	1.9	2.4	4.9	3.9	4.2	3.1	4.0	3.9	3.2	3.3	5.7
30-Sep	2.2	1.7	Z	9.7	53.5	58.5	70.0	58.0	62.4	89.8	18.2	11.0	12.1	10.2	5.7	6.3	5.9	7.1	9.5	13.7	18.2	19.6	8.6	19.6	24.8	89.8
	8.8	9.2	9.8	4.1	8.8	8.4	8.6	9.3	13.4	12.9	8.3	8.6	6.7	5.8	3.5	3.1	3.3	3.7	3.6	4.6	5.8	7.0	6.9	8.1	Diurnal Average	
	72.1	89.0	78.4	11.1	53.5	58.5	70.0	58.0	62.4	89.8	26.9	34.1	22.1	39.9	17.1	10.0	9.2	10.9	9.9	13.7	18.2	23.3	23.6	29.3	Diurnal Maximum	

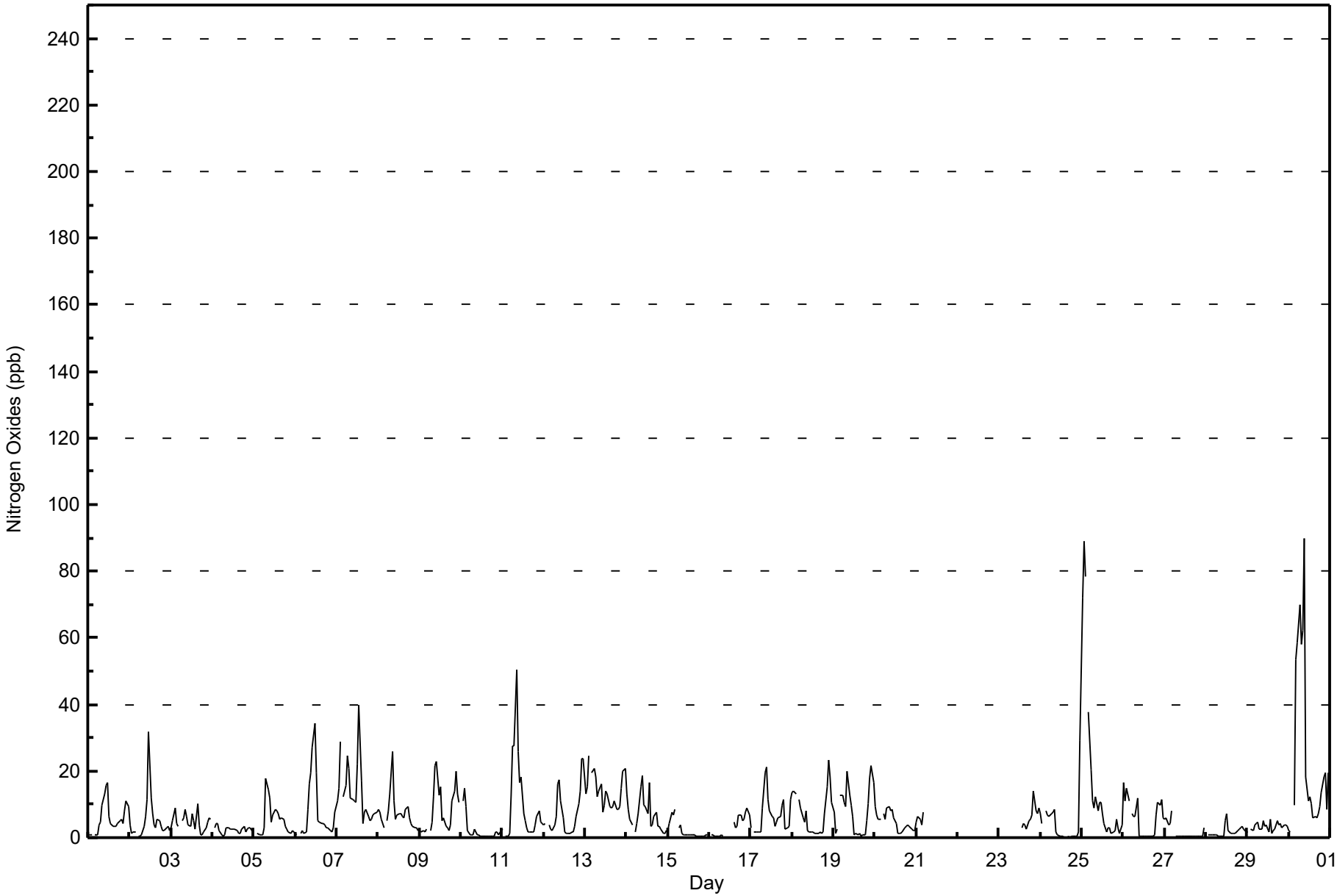
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - September 2025



Nitrogen Oxides (NO_X) - ppb
Fort McKay South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	598	94.62	94.62
21 - 40	24	3.80	98.42
11 - 80	8	1.27	99.68
81 - 159	2	0.32	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 632

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	33	16	7	3	2	11	35	57	95	87	82	61	26	28	33	22	598
21 - 40	2	1	0	0	1	1	5	2	1	4	7	0	0	0	0	0	24
11 - 80	2	0	0	0	0	1	0	0	0	0	2	0	2	0	0	1	8
81 - 159	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	38	17	7	3	3	13	40	59	96	91	92	61	28	28	33	23	632

Total Number of Valid Hours: 632

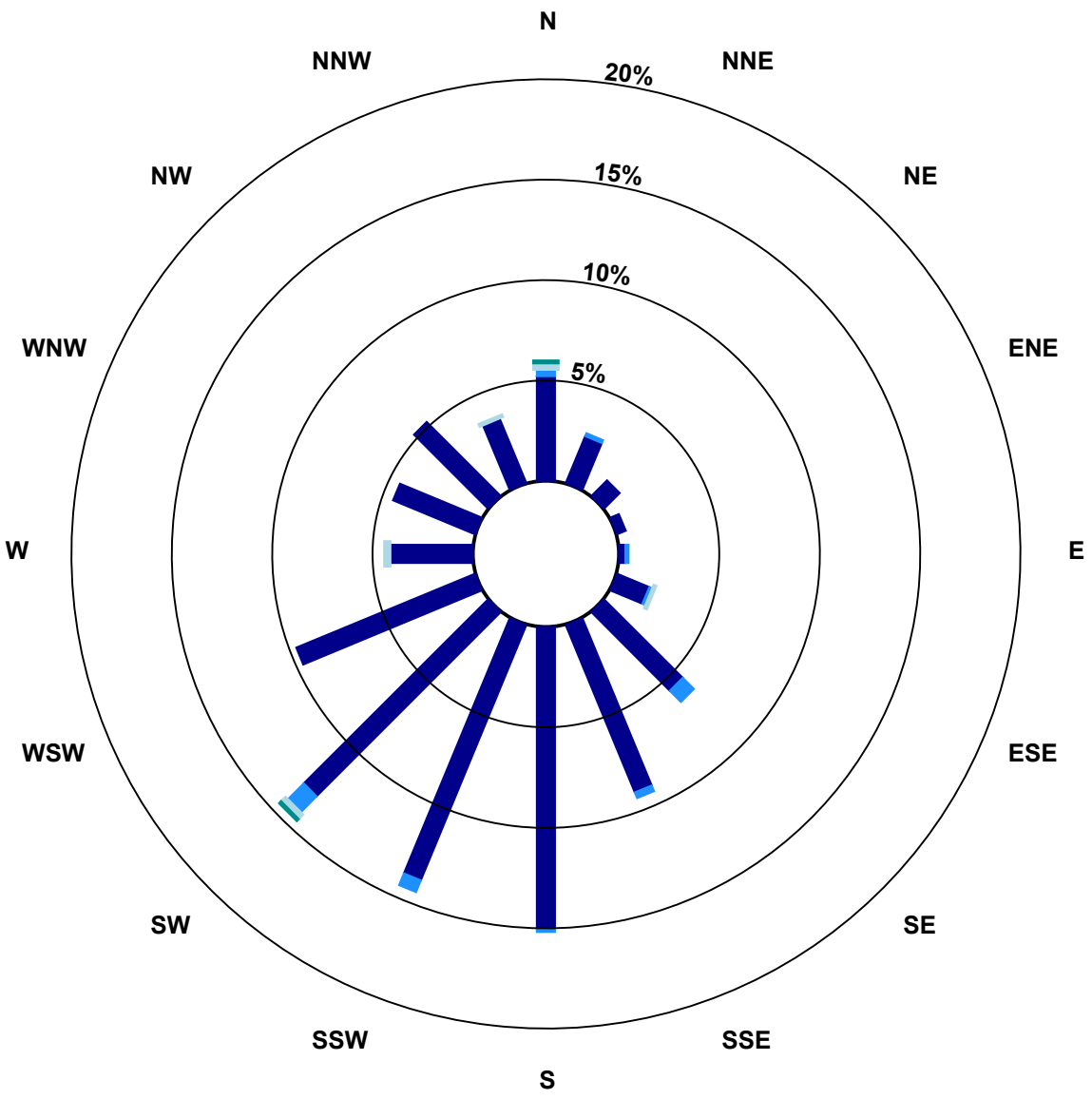
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay South



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

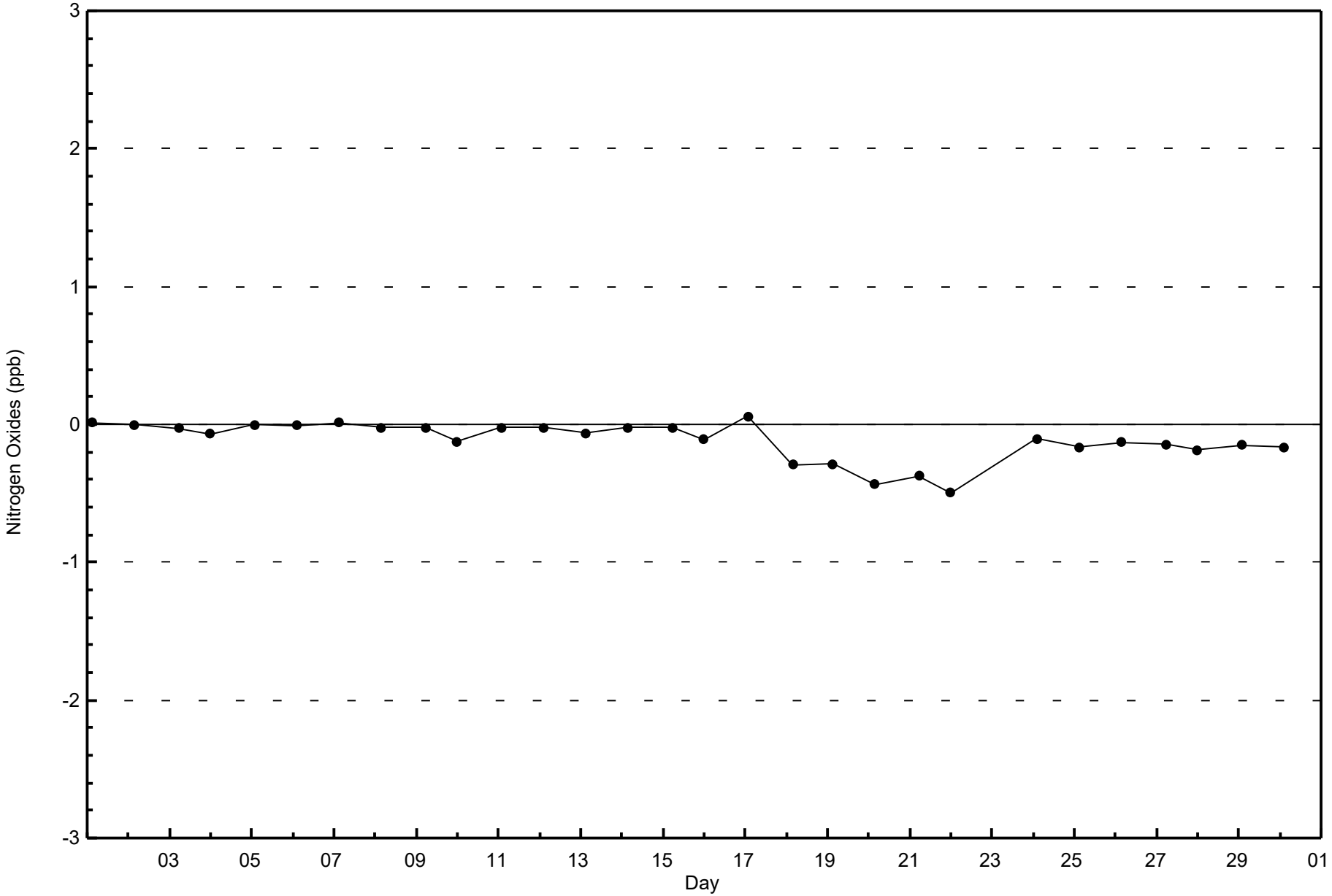
Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - September 2025

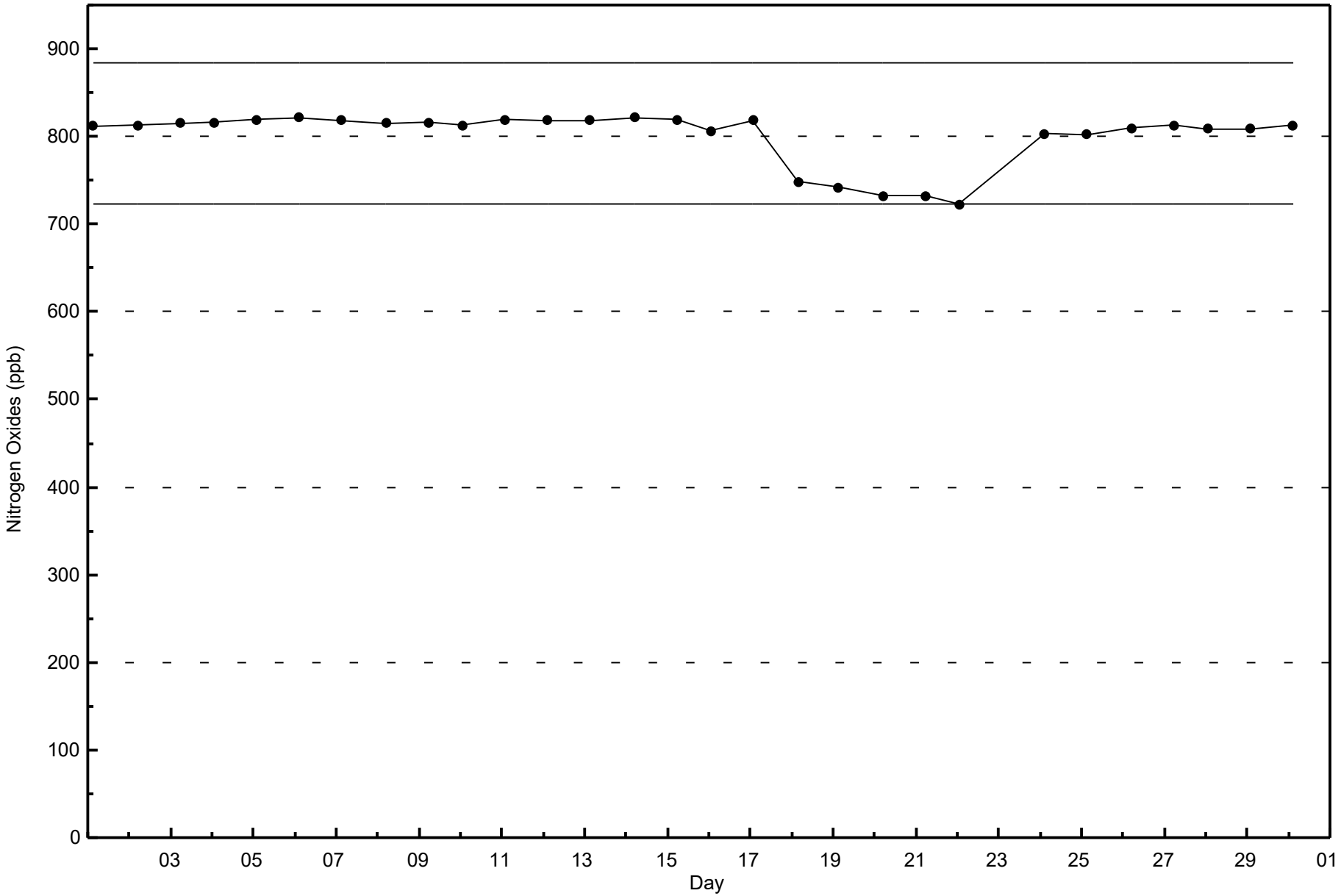


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 13

Maximum Value: 168.2 $\mu g/m^3$ on Sep 14 11:00

Maximum Daily Average: 78.4 $\mu g/m^3$ on Sep 12

Minimum Value: 1.2 $\mu g/m^3$ on Sep 24 17:00

Minimum Daily Average: 5.7 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 40.2 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 21.8 $\mu g/m^3$ at hour 20

Monthly Average: 30.04 $\mu g/m^3$

Percentiles: P_1 = 1.8 P_{10} = 6.3 Q_1 = 13.3 Median = 24.5 Q_3 = 38.0 P_{90} = 58.0 P_{99} = 141.1

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	30.9	30.0	29.8	29.6	30.3	30.6	31.6	30.3	22.9	19.9	37.7	47.7	33.6	19.5	67.1	131.0	150.9	140.8	124.5	72.4	64.7	56.4	54.3	54.1	55.9	150.9
2-Sep	63.7	69.3	81.1	76.5	74.2	71.0	73.8	72.2	69.9	64.7	65.4	77.0	56.9	38.2	29.4	28.0	18.0	17.5	20.2	21.6	23.6	27.5	33.6	42.5	50.7	81.1
3-Sep	51.4	58.6	66.8	75.1	72.1	69.3	62.9	56.9	56.6	54.5	51.4	51.4	53.9	52.2	51.3	61.0	68.3	41.6	30.4	42.7	63.7	66.5	53.5	35.8	56.2	75.1
4-Sep	28.2	14.3	18.6	12.4	7.1	5.9	5.5	6.1	7.1	7.1	5.3	5.0	5.1	5.2	5.3	5.3	5.6	6.5	7.3	6.6	6.9	7.8	7.2	7.4	8.3	28.2
5-Sep	7.7	7.6	7.6	7.3	7.4	9.4	8.1	8.5	13.3	16.8	13.6	17.3	25.5	24.0	21.6	20.4	23.3	23.8	20.0	19.5	17.8	16.5	17.3	15.7	15.4	25.5
6-Sep	14.2	14.4	15.8	24.2	36.9	39.4	49.2	78.0	96.0	87.1	76.1	66.2	54.2	25.1	21.2	17.8	15.9	14.1	12.4	16.1	14.0	14.1	17.5	19.3	35.0	96.0
7-Sep	18.2	18.2	20.3	18.5	17.7	18.4	17.8	19.4	24.0	24.9	25.2	33.3	39.6	49.1	40.6	30.8	38.1	34.5	34.1	32.1	32.2	32.6	31.9	32.9	28.5	49.1
8-Sep	40.5	48.1	46.4	43.9	41.7	35.5	34.9	33.7	37.3	31.7	24.4	27.2	32.0	33.5	33.6	33.0	32.1	32.1	30.9	31.0	31.2	31.8	32.9	33.0	34.7	48.1
9-Sep	33.0	32.8	32.5	32.2	32.7	31.9	28.7	28.9	37.8	61.7	76.5	75.7	74.9	57.6	48.9	38.2	37.9	39.3	46.6	48.3	42.9	38.6	34.1	32.1	43.5	76.5
10-Sep	29.6	30.0	30.9	27.3	25.4	26.4	27.5	26.2	24.5	20.3	15.1	11.0	10.8	10.7	7.2	4.0	3.3	3.4	3.6	4.1	5.2	6.1	6.1	7.5	15.3	30.9
11-Sep	7.7	6.7	6.2	6.4	6.9	8.3	10.2	10.1	25.6	28.3	28.3	38.8	20.9	16.2	15.4	13.7	13.5	12.9	11.0	14.7	19.6	21.8	21.7	30.8	16.5	38.8
12-Sep	68.1	121.2	141.2	140.1	165.4	165.9	150.8	145.4	124.9	102.9	79.4	55.1	28.9	25.7	25.5	27.4	28.1	28.5	30.1	35.5	38.9	42.9	51.5	59.0	78.4	165.9
13-Sep	57.5	58.2	60.5	62.7	56.8	54.9	51.6	44.9	37.0	34.9	29.9	39.0	47.8	47.3	41.3	40.0	38.3	38.4	36.5	38.6	39.4	42.5	42.5	42.8	45.1	62.7
14-Sep	38.8	37.3	35.3	33.5	33.9	32.5	31.8	30.8	66.5	134.3	168.2	157.2	131.0	92.6	52.3	53.9	61.9	28.0	9.9	9.3	11.8	10.9	11.4	11.6	53.5	168.2
15-Sep	12.4	13.6	17.7	21.3	21.6	22.7	21.0	17.1	14.0	16.4	25.3	45.4	29.3	32.2	41.3	64.9	52.7	40.3	36.8	41.3	46.3	40.0	33.2	29.0	30.7	64.9
16-Sep	22.5	22.4	22.8	23.5	22.3	21.5	22.7	22.8	23.0	23.3	23.7	23.3	23.1	28.6	35.7	29.1	26.8	30.1	35.1	33.4	35.8	39.6	38.8	38.2	27.8	39.6
17-Sep	35.0	33.3	32.2	33.4	33.5	30.7	33.7	33.5	39.4	38.0	36.7	32.1	33.9	29.2	21.6	22.7	28.1	29.9	32.1	24.3	17.4	17.2	18.3	22.1	29.5	39.4
18-Sep	26.4	25.8	23.0	21.1	20.8	21.3	20.9	22.1	37.7	28.6	34.0	35.7	35.1	27.8	20.0	13.8	11.2	18.5	22.1	31.6	40.3	35.5	45.2	53.6	28.0	53.6
19-Sep	61.3	45.9	38.1	34.7	26.3	18.7	15.0	17.4	79.6	101.0	79.3	65.0	23.8	24.5	19.7	6.9	4.8	4.6	5.6	13.5	20.7	22.2	15.0	9.0	31.4	101.0
20-Sep	7.3	7.4	6.8	7.3	7.3	7.7	7.7	12.2	18.3	14.1	14.9	16.6	20.3	20.9	21.3	23.2	25.4	29.1	26.8	24.6	23.3	20.6	19.9	21.0	16.8	29.1
21-Sep	27.5	33.1	31.0	25.1	23.8	25.1	24.4	27.8	26.3	17.9	13.8	11.9	13.1	11.5	7.5	8.1	10.7	13.5	11.1	7.6	8.6	10.0	16.6	12.4	17.4	33.1
22-Sep	13.3	24.0	36.9	38.8	30.1	23.9	23.8	26.6	38.1	28.1	26.5	24.4	20.6	21.5	26.6	29.5	18.8	17.9	11.2	4.8	6.3	5.0	4.5	5.5	21.1	38.8
23-Sep	12.7	6.3	6.9	5.7	10.2	12.4	13.7	17.4	11.3	3.5	C	2.8	3.7	10.1	13.3	18.4	18.3	26.4	34.7	15.1	24.5	26.5	25.3	27.9	15.1	34.7
24-Sep	22.4	18.2	22.9	35.9	48.3	53.3	54.0	54.3	63.0	75.4	51.5	33.9	22.0	7.6	1.5	1.3	1.2	1.4	1.3	1.4	1.7	1.6	3.3	20.9	24.9	75.4
25-Sep	45.9	49.2	41.7	36.5	36.9	35.6	39.4	44.7	51.0	24.5	28.9	31.5	22.0	10.1	3.5	5.0	4.9	6.8	7.9	5.3	7.6	30.7	45.4	43.0	27.4	51.0
26-Sep	31.8	17.6	15.4	17.1	20.0	27.9	27.8	31.7	49.0	33.7	21.5	11.8	7.9	5.6	4.1	2.9	2.0	2.2	3.2	7.8	11.5	10.4	11.8	16.6	16.3	49.0
27-Sep	17.4	8.9	8.0	5.1	3.1	5.7	4.0	3.1	3.1	3.3	3.5	3.7	3.9	3.5	3.3	5.7	6.1	5.6	7.1	7.4	6.3	5.8	5.5	8.6	5.7	17.4
28-Sep	10.9	22.5	51.0	70.5	64.3	55.6	47.8	41.8	31.8	19.4	15.1	15.8	14.5	7.3	4.2	4.9	5.4	5.7	9.1	11.6	12.2	11.9	9.3	7.4	22.9	70.5
29-Sep	7.8	13.3	15.6	18.8	25.9	23.2	21.4	26.0	16.8	28.8	28.6	18.4	10.2	10.6	12.3	8.2	11.4	11.3	13.5	12.6	10.0	10.0	14.1	25.7	16.4	28.8
30-Sep	45.0	58.4	55.7	55.7	43.6	44.6	49.1	45.1	58.0	59.9	30.8	14.6	15.1	14.6	12.2	18.3	16.6	16.6	16.8	18.5	18.7	23.1	20.0	17.5	32.0	59.9
	29.6	31.6	34.0	34.7	34.9	34.3	33.7	34.5	40.1	40.2	39.0	36.3	30.5	25.4	23.6	25.6	26.0	24.0	23.1	21.8	23.4	24.2	24.7	26.1	Diurnal Average	
	68.1	121.2	141.2	140.1	165.4	165.9	150.8	145.4	124.9	134.3	168.2	157.2	131.0	92.6	67.1	131.0	150.9	140.8	124.5	72.4	64.7	66.5	54.3	59.0	Diurnal Maximum	

C - Calibration

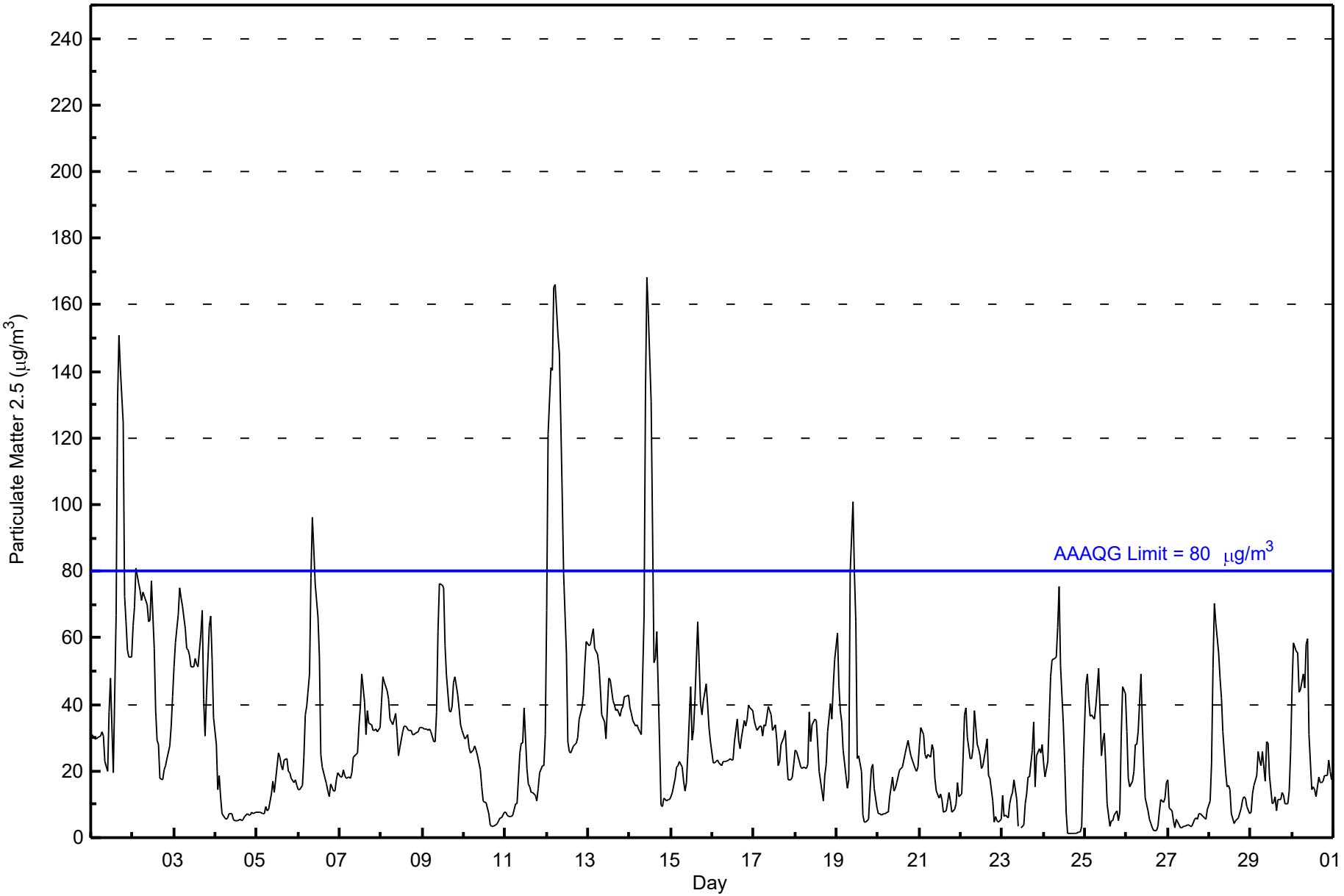
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay South - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort McKay South - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	53	7.37	7.37
6 - 15	161	22.39	29.76
16 - 25	158	21.97	51.74
26 - 80	325	45.20	96.94
> 81.0	22	3.06	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay South - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	1	0	1	0	0	0	1	6	6	11	10	0	6	5	5	53
6 - 15	5	2	1	0	1	0	5	10	33	26	30	20	9	7	7	5	161
16 - 25	6	6	4	1	1	7	12	15	32	28	21	7	7	4	6	1	158
26 - 80	22	9	3	2	2	7	19	32	40	46	49	34	15	15	17	13	325
> 81.0	4	0	0	0	0	1	5	3	2	3	1	2	0	0	1	0	22
Totals	38	18	8	4	4	15	41	61	113	109	112	73	31	32	36	24	719

Total Number of Valid Hours: 719

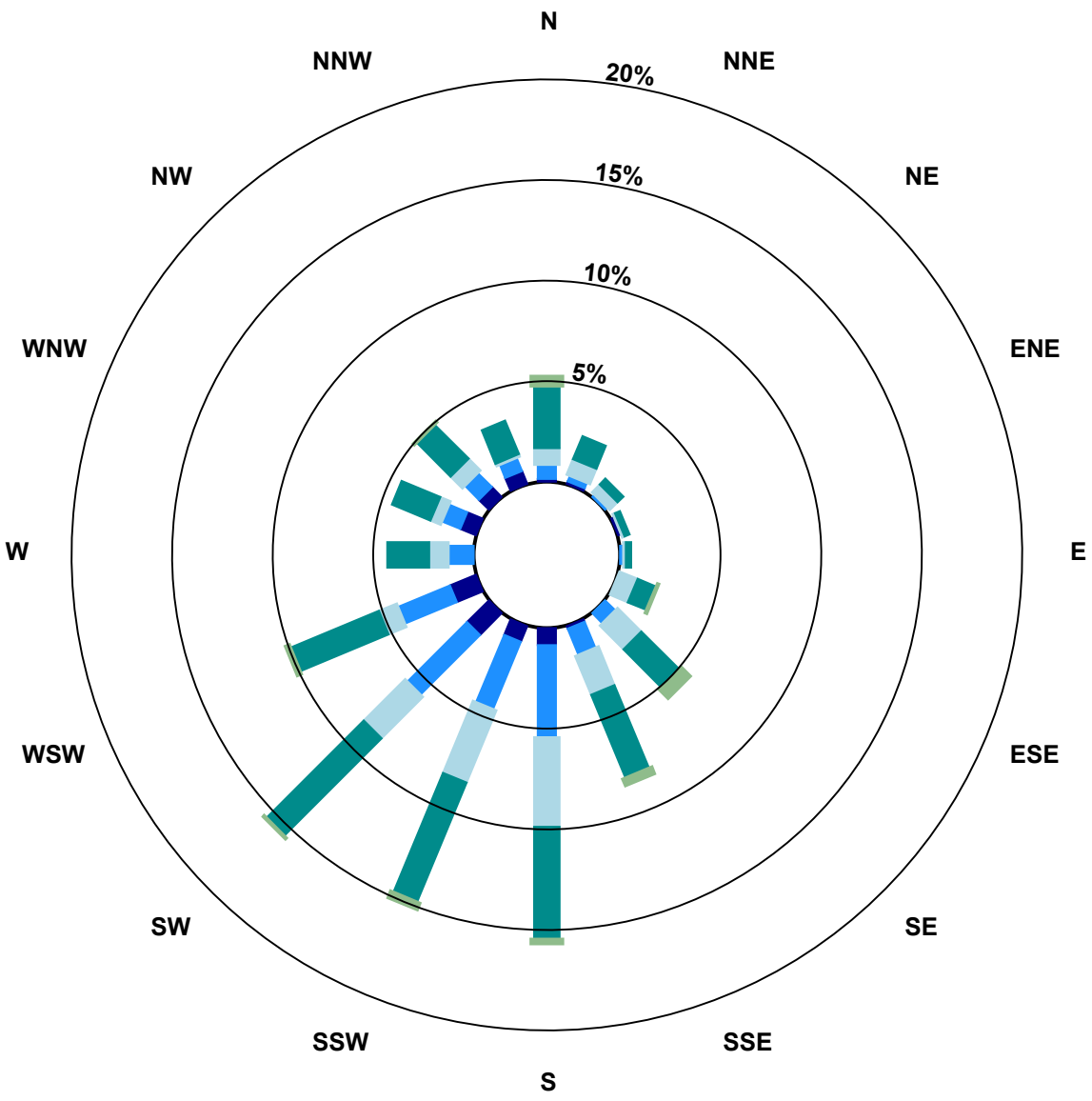
Total Number of Hours: 720

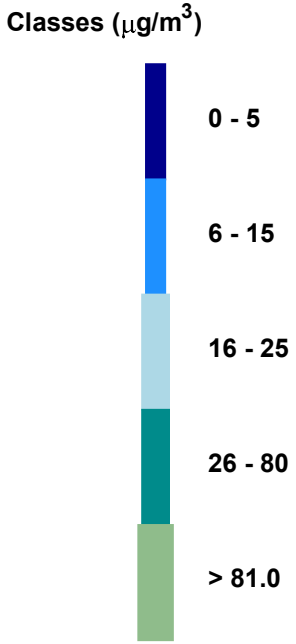
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Fort McKay South





Total Number of Valid Hours: 719

Maximum Value: 29.9 C on Sep 12 16:00

Maximum Daily Average: 18.0 C on Sep 12

Minimum Value: -3.2 C on Sep 25 06:00

Minimum Daily Average: 8.2 C on Sep 25

Maximum Diurnal Average: 21.8 C at hour 15

Minimum Diurnal Average: 6.6 C at hour 6

Monthly Average: 13.47 C

Percentiles: P_1 = -0.4 P_{10} = 5.3 Q_1 = 8.8 Median = 13.2 Q_3 = 18.1 P_{90} = 22.2 P_{99} = 27.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

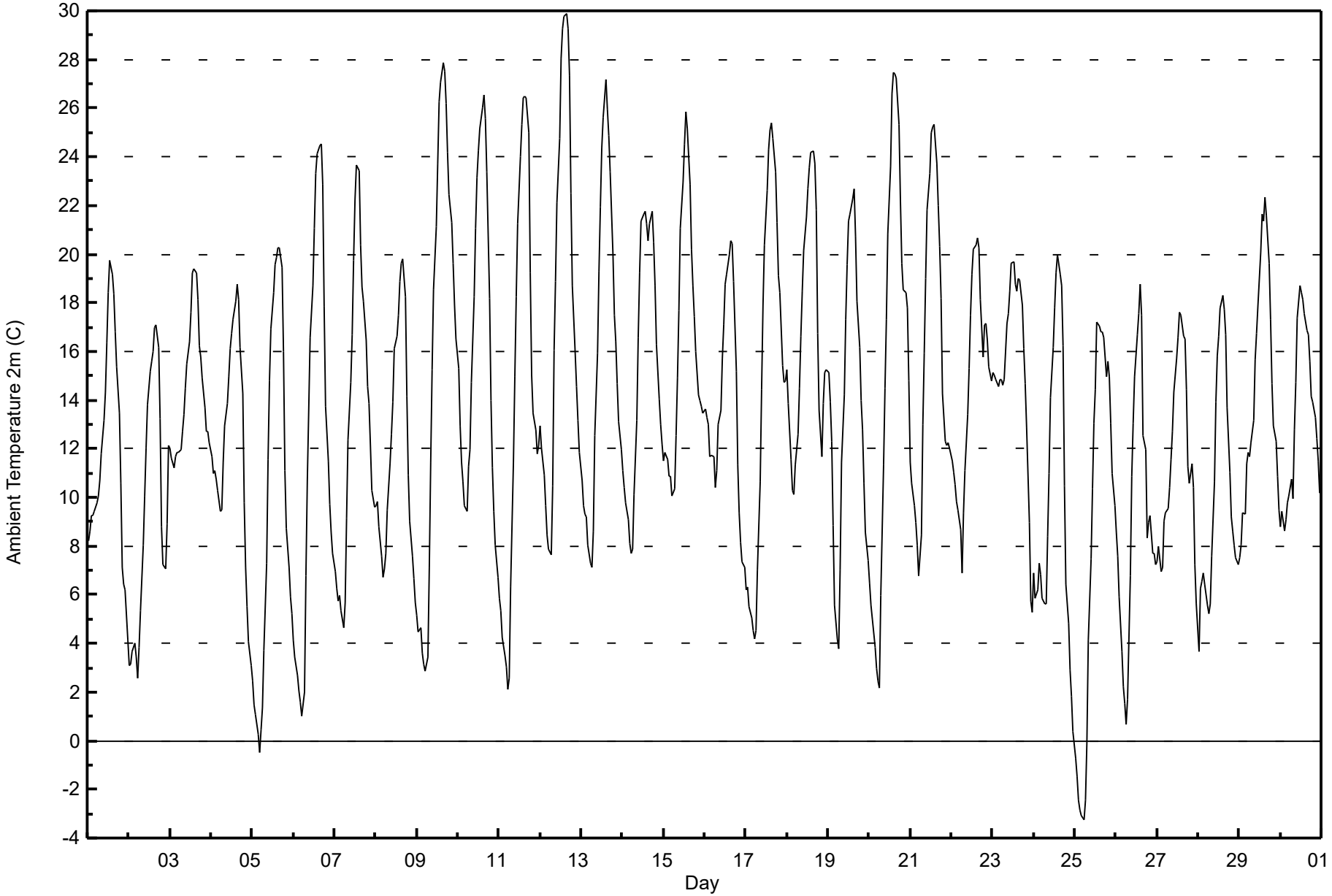
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	8.2	8.6	9.2	9.2	9.4	9.8	10.1	10.7	11.8	13.2	14.3	16.4	18.4	19.8	19.1	18.4	16.8	15.4	13.5	10.6	7.1	6.5	6.2	4.1	11.9	19.8
2-Sep	3.1	3.2	3.7	4.0	3.4	2.6	3.9	5.4	8.0	10.0	12.0	13.8	15.2	15.6	16.0	17.0	17.1	16.2	13.2	8.8	7.2	7.1	8.9	12.2	9.5	17.1
3-Sep	12.0	11.6	11.2	11.7	11.9	11.8	12.0	12.7	13.4	14.5	15.5	16.4	17.6	19.2	19.4	19.2	18.1	16.2	15.8	14.9	13.7	12.7	12.7	12.2	14.4	19.4
4-Sep	11.7	11.0	11.1	10.8	10.3	9.4	9.5	11.5	13.0	13.9	15.0	16.1	16.7	17.3	18.1	18.8	18.1	16.2	14.2	9.8	7.1	5.5	4.1	3.1	12.2	18.8
5-Sep	2.4	1.5	1.1	0.3	-0.5	0.4	1.4	3.7	7.3	11.5	14.8	16.9	18.4	19.6	19.9	20.2	20.3	19.5	16.0	11.1	8.7	7.1	5.9	5.2	9.7	20.3
6-Sep	4.1	3.4	2.7	2.0	1.6	1.0	2.0	6.8	10.7	13.6	16.6	18.7	21.1	23.3	24.1	24.5	24.5	22.9	17.8	13.7	11.5	9.7	8.6	7.7	12.2	24.5
7-Sep	6.9	6.2	5.8	6.0	5.3	4.7	5.7	9.1	12.4	14.7	16.7	19.7	22.2	23.7	23.5	20.4	18.7	18.1	16.5	14.6	13.9	12.1	10.3	9.6	13.2	23.7
8-Sep	9.6	9.8	8.8	7.6	6.7	7.1	7.7	9.5	11.4	12.6	13.9	16.1	16.6	17.5	18.9	19.6	19.8	18.3	14.1	10.9	9.0	7.6	6.7	5.7	11.9	19.8
9-Sep	5.2	4.5	4.6	3.6	3.2	2.9	3.4	7.1	11.5	15.2	18.6	21.1	23.7	26.3	27.1	27.9	27.5	26.2	24.2	22.5	21.3	19.6	17.9	16.5	15.9	27.9
10-Sep	15.3	13.0	11.4	10.6	9.7	9.4	11.3	12.0	14.7	18.3	21.1	23.2	24.2	25.1	26.0	26.6	25.6	23.4	18.2	14.0	11.2	9.4	8.0	6.7	16.2	26.6
11-Sep	5.9	5.3	4.2	3.5	3.1	2.1	2.6	6.3	11.4	14.9	18.2	21.3	24.0	25.4	26.4	26.5	26.4	25.0	19.2	15.0	13.5	12.7	11.8	12.1	14.0	26.5
12-Sep	12.9	12.0	10.9	9.7	8.4	7.9	7.6	10.5	16.0	18.9	22.1	24.8	28.1	29.2	29.8	29.9	29.3	27.4	22.5	18.7	16.0	14.6	13.2	11.8	18.0	29.9
13-Sep	10.7	9.7	9.3	9.2	8.0	7.3	7.1	8.6	12.5	15.9	19.3	22.0	24.3	25.6	27.2	26.0	24.8	23.4	20.0	17.5	16.4	14.7	13.1	12.0	16.0	27.2
14-Sep	11.1	10.4	9.8	9.1	8.1	7.7	7.9	10.1	13.2	16.6	19.2	21.3	21.7	21.7	21.2	20.6	21.3	21.8	20.5	18.7	16.3	14.1	13.0	12.2	15.3	21.8
15-Sep	11.5	11.8	11.5	10.9	10.9	10.1	10.3	12.5	14.9	17.7	21.1	23.0	24.5	25.9	25.2	22.8	20.2	18.7	17.4	16.0	14.2	14.0	13.7	13.5	16.3	25.9
16-Sep	13.6	13.3	13.0	11.7	11.7	11.7	10.4	11.1	13.0	13.6	15.7	17.1	18.8	19.2	19.9	20.5	20.4	18.9	15.2	11.3	9.4	8.1	7.4	7.1	13.8	20.5
17-Sep	6.2	6.3	5.5	5.0	4.5	4.2	4.5	7.0	10.6	14.4	17.9	20.4	22.6	24.3	25.1	25.4	24.8	23.4	21.3	19.1	18.4	15.4	14.8	14.8	14.8	25.4
18-Sep	15.2	13.9	11.6	10.3	10.1	11.3	12.6	14.5	16.6	18.5	20.2	21.5	22.7	23.6	24.2	24.2	23.7	21.8	16.8	13.6	11.7	13.9	15.1	15.2	16.8	24.2
19-Sep	15.1	13.9	12.3	8.8	5.5	4.2	3.8	7.0	11.5	14.2	17.3	19.6	21.3	21.7	22.3	22.7	20.7	18.1	16.2	14.0	12.7	10.6	8.6	7.4	13.7	22.7
20-Sep	6.5	5.6	5.0	3.9	3.0	2.4	2.2	6.0	11.3	14.5	17.3	20.9	23.6	26.6	27.4	27.4	27.3	25.3	22.2	19.6	18.5	18.4	17.8	14.8	15.3	27.4
21-Sep	11.5	10.6	9.7	9.0	8.0	6.8	8.4	13.0	15.9	19.0	21.8	23.3	25.0	25.2	25.3	23.7	22.0	20.3	18.2	14.3	12.3	12.2	12.2	12.0	15.8	25.3
22-Sep	11.5	11.0	10.5	9.8	9.5	8.7	6.9	9.4	11.1	13.4	15.3	17.5	19.2	20.2	20.4	20.7	20.3	18.1	15.8	17.1	17.1	16.5	15.4	14.8	14.6	20.7
23-Sep	15.1	15.0	14.8	14.5	14.8	14.9	14.6	14.8	17.1	17.5	18.5	19.6	19.7	18.8	18.5	19.0	18.9	17.9	16.1	14.6	12.9	9.0	5.7	5.3	15.3	19.7
24-Sep	6.9	5.9	6.2	7.3	6.8	5.9	5.6	5.6	8.4	11.0	14.1	16.2	17.8	19.2	20.0	19.2	18.7	16.2	10.4	6.4	4.8	2.9	1.8	0.4	9.9	20.0
25-Sep	-0.7	-1.5	-2.5	-2.8	-3.1	-3.2	-2.4	-0.1	4.1	7.5	10.4	13.1	14.4	17.2	17.1	16.8	16.8	16.6	15.0	15.6	15.0	13.1	11.0	9.6	8.2	17.2
26-Sep	8.5	7.6	5.9	3.7	2.2	1.5	0.7	1.7	6.8	10.9	13.1	15.0	16.7	17.6	18.8	17.5	12.5	12.0	8.3	9.0	9.2	7.7	7.7	7.2	9.2	18.8
27-Sep	7.4	8.0	6.9	7.1	9.0	9.4	9.5	10.4	11.6	12.7	14.3	15.7	16.6	17.6	17.5	16.6	16.5	14.4	11.3	10.6	11.4	10.4	7.2	5.6	11.6	17.6
28-Sep	3.7	6.3	6.6	6.9	6.4	5.6	5.2	5.7	7.6	10.6	14.0	15.8	16.6	17.8	18.3	17.7	16.7	13.7	11.0	9.2	8.6	8.1	7.5	7.2	10.3	18.3
29-Sep	7.5	8.1	9.4	9.3	11.4	11.9	11.7	12.3	13.2	15.7	16.8	17.9	20.1	21.7	21.4	22.3	21.6	19.6	17.3	14.7	12.9	12.3	10.9	9.5	14.6	22.3
30-Sep	8.8	9.4	8.6	9.1	9.8	10.1	10.8	9.9	12.8	14.7	17.4	18.7	18.4	18.1	17.6	16.9	16.7	15.6	14.1	13.9	13.3	12.4	11.5	10.2	13.3	18.7
	8.9	8.5	8.0	7.4	7.0	6.6	6.9	8.8	11.8	14.3	16.7	18.8	20.3	21.5	21.8	21.6	20.9	19.3	16.4	14.0	12.5	11.3	10.3	9.5	Diurnal Average	
	15.3	15.0	14.8	14.5	14.8	14.9	14.6	14.8	17.1	19.0	22.1	24.8	28.1	29.2	29.8	29.9	29.3	27.4	24.2	22.5	21.3	19.6	17.9	16.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay South - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	9	1.25	1.25
0 - 10	217	30.14	31.39
10 - 20	378	52.50	83.89
> 20	116	16.11	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - September 2025

Maximum Value: 100.0 % on Sep 5 06:00

Maximum Daily Average: 84.8 % on Sep 8

Minimum Value: 22.3 % on Sep 24 15:00

Minimum Daily Average: 43.0 % on Sep 23

Maximum Diurnal Average: 88.9 % at hour 6

Minimum Diurnal Average: 41.2 % at hour 15

Monthly Average: 69.38 %

Percentiles: P_1 = 27.2 P_{10} = 37.2 Q_1 = 50.8 Median = 70.7 Q_3 = 90.3 P_{90} = 98.1 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	712
Hours of Missing Data:	8
Hours of Calibration:	0
Percent Operational Time:	98.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	99.1	98.4	98.0	98.2	98.5	99.1	99.7	99.9	98.8	96.4	90.4	80.8	64.5	51.9	53.1	54.5	55.9	61.6	63.7	75.4	90.3	92.2	91.4	95.8	83.6	99.9
2-Sep	97.8	98.0	97.8	96.3	97.0	98.3	98.1	95.1	84.5	78.5	74.4	67.2	54.4	47.7	44.8	42.3	39.8	45.3	68.0	85.0	90.2	91.2	80.3	62.2	76.4	98.3
3-Sep	62.9	67.0	73.1	71.3	71.2	71.8	72.1	69.8	69.1	66.8	65.3	66.2	64.1	62.1	67.2	68.6	65.2	71.8	73.8	80.1	86.7	88.0	77.1	75.8	71.1	88.0
4-Sep	76.7	77.6	77.5	75.7	76.4	80.6	81.0	73.9	67.4	61.5	57.2	53.1	49.7	47.4	45.9	45.8	49.5	57.5	66.5	84.2	92.1	95.1	96.8	98.0	70.3	98.0
5-Sep	98.6	98.6	99.4	99.4	99.6	100.0	OR	OR	OR	77.4	59.8	56.3	52.0	46.0	45.2	43.9	43.2	46.8	65.0	83.9	89.2	92.4	95.3	97.1	75.7	100.0
6-Sep	97.9	98.8	99.2	99.3	99.7	99.7	100.0	94.4	78.5	68.1	59.6	52.4	44.7	33.7	33.8	34.2	35.7	43.2	67.9	80.7	86.3	90.9	93.8	94.3	74.5	100.0
7-Sep	96.5	97.9	98.5	98.9	98.8	99.1	99.7	96.0	82.1	77.2	73.6	57.9	52.2	49.4	50.6	58.9	66.7	70.9	82.4	92.0	85.9	91.6	96.2	98.0	82.1	99.7
8-Sep	98.7	97.8	98.8	99.3	99.9	100.0	100.0	100.0	96.0	87.9	77.1	68.0	67.3	63.7	58.1	53.8	48.7	60.7	80.7	90.9	95.1	96.1	97.6	98.2	84.8	100.0
9-Sep	99.0	99.2	99.8	99.5	99.6	99.7	100.0	100.0	89.4	75.9	66.1	59.7	54.6	47.7	45.9	44.5	45.1	49.6	54.0	59.9	60.8	63.8	72.3	80.1	73.6	100.0
10-Sep	86.7	94.0	95.4	95.9	96.5	97.8	93.5	93.7	85.0	67.5	52.8	43.7	34.9	31.6	28.2	25.9	26.0	30.6	53.6	68.0	78.0	83.6	87.4	91.2	68.4	97.8
11-Sep	92.8	96.3	97.0	97.8	98.0	98.3	99.0	95.8	81.2	72.6	60.9	50.9	38.3	33.1	29.6	30.4	32.2	36.0	61.1	73.3	77.0	79.8	84.1	83.4	70.8	99.0
12-Sep	80.9	88.2	93.9	95.7	97.4	98.4	99.4	97.5	81.4	70.0	61.2	52.9	34.9	30.2	29.1	30.9	31.5	38.2	57.4	69.8	79.2	83.2	87.4	89.8	69.9	99.4
13-Sep	92.4	95.0	95.7	94.1	96.3	97.6	97.7	96.6	90.1	80.0	69.4	61.0	56.2	53.2	49.9	53.5	56.3	65.6	78.8	86.8	89.0	93.4	95.7	97.7	80.9	97.7
14-Sep	98.8	99.8	100.0	100.0	100.0	100.0	100.0	OR	97.2	84.5	73.6	65.2	62.4	63.4	69.8	78.4	75.7	64.8	65.6	72.2	82.8	89.7	92.9	94.6	84.0	100.0
15-Sep	96.0	97.0	98.1	99.3	100.0	100.0	100.0	98.5	86.8	77.9	67.0	59.3	54.3	49.0	50.3	56.5	61.4	62.8	58.8	63.8	70.5	71.1	72.9	75.4	76.1	100.0
16-Sep	75.7	78.0	79.9	85.2	84.7	85.2	88.9	87.5	78.1	76.0	68.9	64.2	57.7	56.0	52.4	48.4	49.1	57.1	73.3	88.1	92.5	96.2	98.1	99.0	75.8	99.0
17-Sep	99.0	100.0	100.0	100.0	100.0	OR	OR	OR	OR	81.2	63.7	56.9	48.2	41.9	39.6	38.5	40.9	43.6	49.0	57.8	59.4	68.7	72.3	74.2	66.7	100.0
18-Sep	73.8	79.6	87.9	94.3	93.8	90.0	85.8	77.6	69.1	60.8	52.7	46.6	42.5	39.6	37.6	37.2	36.8	42.0	61.4	71.8	78.0	65.2	57.4	56.4	64.1	94.3
19-Sep	55.6	58.3	62.8	76.4	88.0	92.4	95.0	87.0	67.0	56.6	48.4	42.5	34.1	32.9	33.0	30.3	39.8	59.0	67.5	72.5	74.6	80.3	85.9	88.8	63.7	95.0
20-Sep	91.3	94.2	96.6	97.0	97.6	98.4	98.8	94.1	78.9	67.2	59.3	50.9	44.6	34.3	31.7	32.3	32.8	38.6	47.8	53.9	56.3	56.2	58.7	69.4	65.9	98.8
21-Sep	83.1	87.3	90.7	93.5	95.8	97.2	94.6	78.2	66.0	53.4	44.9	39.7	35.6	30.1	28.9	30.8	36.0	38.9	50.3	79.3	97.5	96.9	92.8	87.2	67.8	97.5
22-Sep	83.5	81.3	81.1	81.3	79.6	79.7	86.3	73.4	67.9	57.6	52.9	47.8	41.7	37.7	36.6	36.0	35.5	42.5	51.9	45.1	45.4	47.4	49.5	49.6	58.0	86.3
23-Sep	47.2	45.5	45.8	49.0	49.9	50.9	52.9	54.2	44.1	38.7	32.7	28.0	26.8	31.1	31.7	31.9	28.7	32.0	34.7	39.1	43.0	54.7	66.9	71.7	43.0	71.7
24-Sep	66.8	74.7	72.5	67.8	73.1	80.2	82.1	83.8	72.0	56.6	43.6	37.2	32.8	27.1	22.3	23.1	23.2	29.4	48.9	64.7	69.8	76.1	79.7	84.3	58.0	84.3
25-Sep	88.7	91.5	93.3	93.9	95.4	96.5	97.1	94.6	83.6	68.3	57.4	50.5	48.1	41.5	41.3	47.6	46.5	40.2	46.4	43.0	48.4	70.1	81.4	84.4	68.7	97.1
26-Sep	86.4	89.3	92.5	97.0	98.4	99.3	99.7	100.0	90.6	68.6	59.3	52.0	46.6	42.2	37.0	48.0	68.6	78.4	94.2	73.3	66.7	75.9	71.5	74.6	75.4	100.0
27-Sep	78.7	87.1	92.9	85.1	72.5	67.2	61.3	53.9	46.8	42.5	38.0	34.4	31.6	29.0	27.2	29.2	30.1	35.2	46.4	49.0	45.5	49.3	68.4	73.0	53.1	92.9
28-Sep	81.5	63.8	61.6	61.1	62.5	65.9	67.2	65.7	59.8	51.9	44.3	40.2	36.0	32.4	29.4	30.7	35.0	56.4	63.8	71.6	73.5	76.3	77.4	77.7	57.7	81.5
29-Sep	78.0	73.3	63.2	63.4	54.9	52.0	53.5	51.2	48.3	41.5	38.5	37.1	34.1	33.2	35.1	34.1	36.6	42.5	50.4	60.0	69.0	72.5	77.7	82.0	53.4	82.0
30-Sep	84.5	82.7	86.2	84.8	83.3	83.8	80.4	85.8	74.8	67.4	55.5	49.9	49.9	48.8	50.8	52.9	52.3	53.6	57.7	59.4	63.9	69.1	79.4	93.8	68.8	93.8
	85.0	86.3	87.6	88.3	88.6	88.9	88.7	85.1	76.2	67.7	58.9	52.4	46.5	42.3	41.2	42.4	44.2	49.8	61.4	69.8	74.6	78.6	81.3	83.2	Diurnal Average	
	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.8	96.4	90.4	80.8	67.3	63.7	69.8	78.4	75.7	78.4	94.2	92.0	97.5	96.9	98.1	99.0	Diurnal Maximum	

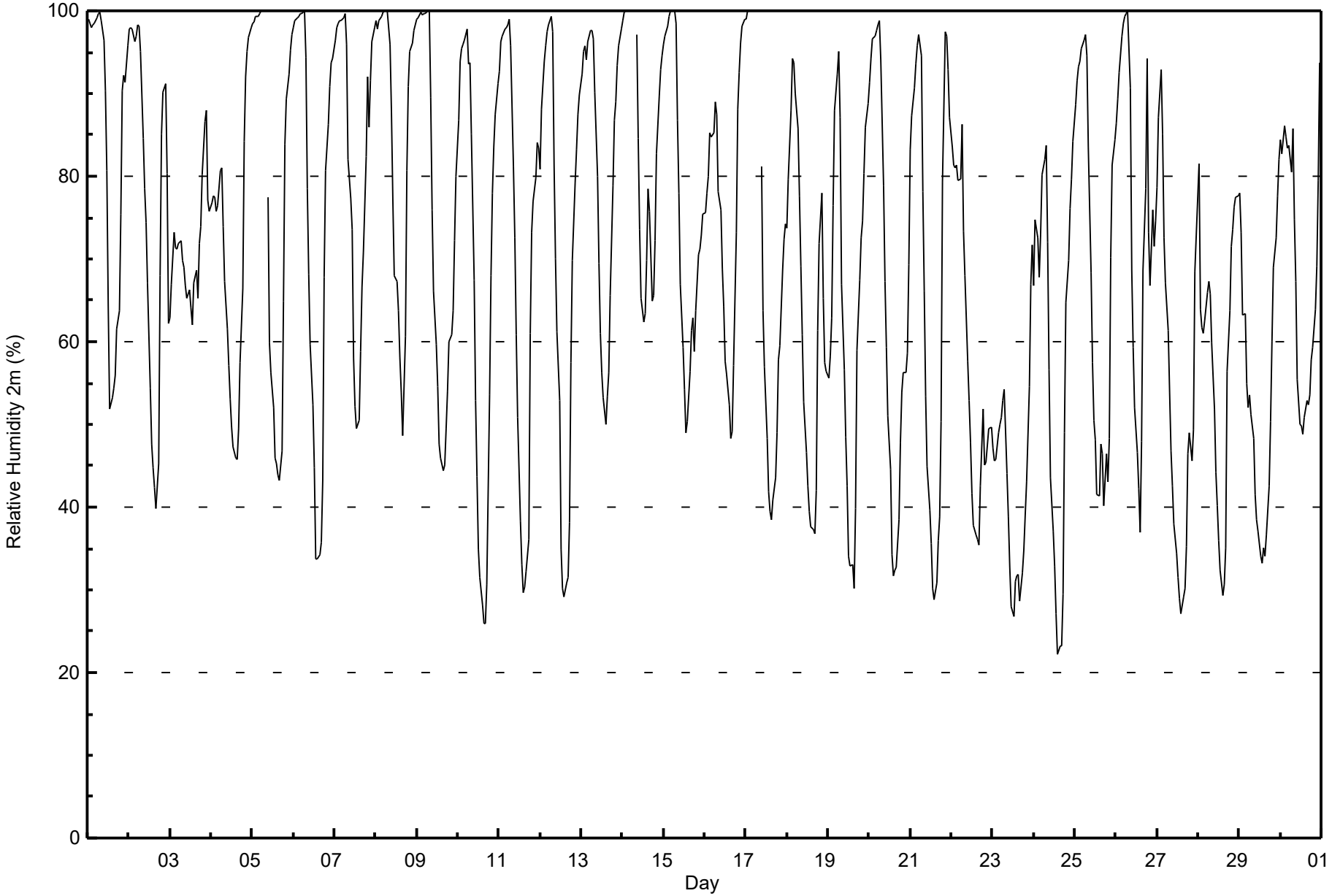
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - September 2025

Maximum Speed: 23 km/h on Sep 29 13:00

Maximum Daily Speed Average: 9.7 km/h on Sep 22

Minimum Speed Value: 0 km/h on Sep 17 08:00

Minimum Daily Speed Average: 0.3 km/h on Sep 13

Maximum Diurnal Speed Average: 4.3 km/h at hour 14

Minimum Diurnal Speed Average: 2.0 km/h at hour 17

Monthly Average Velocity: 2.7 km/h 205.2 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 3 Median = 5 Q_3 = 9 P_{90} = 12 P_{99} = 17

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	S1	SW2	S2	SSW2	ENE1	WNW1	S4	S3	SE2	NE3	NNE3	NNE5	NNE11	NNE11	N14	N15	N13	N11	N8	NNW4	W3	NW3	NNW3	S2	N3.5	N15
2-Sep	WSW2	W2	WSW2	W2	SSW1	SSW2	WSW1	SSW1	SSE1	ENE2	E3	ESE4	SE6	SE8	ESE9	SE9	SE10	SE7	SSW3	SW3	SW3	SSW4	S7	S11	SSE3.2	S11
3-Sep	S11	S9	SSW3	S9	S13	S10	S9	SSE12	S10	S10	S10	S8	SSW5	WNW3	N7	N11	N21	N14	N12	N7	NNW12	NW6	NNW11	NW9	SW0.6	N21
4-Sep	WNW9	NW9	NW12	NW13	NW12	WNW8	WNW7	NW10	NNW14	NNW16	NNW15	NNW13	NNW13	NNW12	N11	NNE11	N8	N5	N4	WNW3	WSW2	SW2	SW1	SW2	NNW7.8	NNW16
5-Sep	W1	WSW3	SW2	S3	S3	WSW3	S3	S3	SSE5	SE7	SSE7	SE6	SE7	SSE7	ESE8	ESE7	ESE6	ESE5	S1	WSW2	SW3	SW2	W1	NW2	SSE2.9	ESE8
6-Sep	W2	WSW2	SW1	SW2	SW2	SW2	SSW2	SSE5	SE6	SE6	SE6	SE6	SE7	SSE12	SSE11	SSE11	SE8	SSE6	WSW2	WSW2	SW2	WSW2	SW2	SSW3	SSE3.6	SSE12
7-Sep	SW3	SSW2	SW2	SSW2	SW3	W3	SW2	SSE1	SE3	NE3	NE4	NE5	NNE5	N8	N13	N16	NNE9	N7	NNW3	N5	N6	NW3	NW3	NW3	N3.1	N16
8-Sep	NNW5	NNW5	NNW5	NW3	WSW2	WSW2	NW3	WNW2	N4	NE4	NNE6	N4	W4	WSW6	WSW3	WNW2	SSW3	WNW1	W1	SW2	WSW1	SW3	WSW2	W1	NW1.7	NNE6
9-Sep	SW2	WNW2	SW2	WSW3	WSW2	WSW1	SW2	SSE0	ESE3	SE5	SE4	SE6	SE8	SSE11	SSE11	SE11	SSE9	SSW7	SSW7	SW6	SW6	SW5	S3	WSW1	S3.7	SSE11
10-Sep	SW2	W2	S4	W2	WSW3	WSW3	SW0	NW1	NE1	NW4	NW4	NNW3	NNW8	WNW4	W7	WNW7	NNW10	NW7	WNW4	SW2	WSW4	S2	SSW2	W1	WNW2.6	NNW10
11-Sep	SSW1	NW1	SW2	WSW2	S2	SW2	SSW2	SSE4	ESE3	E4	ESE4	ESE6	SE8	ESE9	SE11	SE13	SSE12	SSE8	SW3	SSW3	SSW4	SSW4	SSW5	SSW5	SSE3.8	SE13
12-Sep	SSW7	SSW4	SW2	WSW2	S3	SSW2	NW0	S1	SSE5	SSE8	SSE9	SE8	S13	S16	S16	S13	S12	SSW7	WSW6	SSW3	SW4	SSE1	SW2	SW3	S5.6	S16
13-Sep	SSW2	SW2	SW3	SSW3	SSW2	SW2	SSW3	SW2	SSE2	SSE4	SE5	N4	NNE4	NE5	NNE6	NNE8	N7	NNW3	WNW2	WNW2	WSW1	WSW1	SW2	SSW2	NNW0.3	NNE8
14-Sep	SW1	WSW1	SW1	S2	SW2	SW1	SSW2	N1	SE1	SE5	SE6	ESE5	SE9	SSE8	SSE11	SSE10	SSE7	SSE12	SSE10	S7	SSW1	S2	SSW3	S3	SSE4.2	SSE12
15-Sep	SSW4	S4	S3	S3	S5	SSW3	SSW3	S4	SW2	WNW2	N1	SW4	SW4	NW10	NNW12	NW16	NW15	NW11	WNW9	NW6	WNW5	NW7	NW6	NW7	WNW3.9	NW16
16-Sep	NW7	WNW5	W4	W5	NW6	WNW4	W3	E1	W7	NW5	NNE4	ENE4	ESE4	ESE7	SE7	S6	SSE7	SSE8	SSW3	SW3	SSW3	SSW3	SW2	SSE3	SW1.4	SSE8
17-Sep	WNW1	S2	SW1	WNW1	NNW1	W1	WNW1	SSE0	SE4	SE7	SSE13	SSE11	SSE12	SSE13	SSE16	SSE15	SSE17	SSE16	SSE10	S9	S8	S5	S6	S9	SSE6.9	SSE17
18-Sep	S11	S9	SSW4	S4	S6	S7	S10	SSE14	S17	S17	SSW15	SSW13	SSW13	SSW12	SSW12	SSW12	SW9	SW5	WSW5	SW5	SW5	SW7	WSW7	WSW6	SSW8.7	S17
19-Sep	WSW8	WSW9	WSW8	SSE3	SSW3	SSW2	WSW3	SW2	SSW5	SSW7	SSW8	S9	SW10	SW14	SW9	SW8	SW3	SW3	SW3	SW2	S3	SSW2	SSW3	SW3	SW4.9	SW14
20-Sep	WSW2	WNW1	W1	SW3	WSW1	SW3	SW2	S3	ESE4	SE5	SE7	SE9	SSE11	S17	S17	S17	S14	S10	S8	S9	SSE8	S9	S10	SSW6	S6.8	S17
21-Sep	SW3	S1	SSW2	S3	SSW3	SSW4	S1	WSW7	WSW8	WNW4	NE2	E4	SE3	SW2	WNW6	WSW8	W7	W7	WNW12	W7	SSW4	SSW5	SSW5	SW7	WSW3.4	WNW12
22-Sep	SW7	SW9	SW11	SW10	SW8	SSW4	SW5	SW8	SSW7	WSW11	SW11	SSW13	SSW14	SW14	SW13	SSW12	SSW13	S8	S9	S13	S14	S14	S11	S10	SSW9.7	S14
23-Sep	S9	SSW8	SSW10	S11	S11	S12	S10	SSW4	WSW10	WSW12	WSW12	SW15	SW14	SSW12	SSW12	SSW13	SSW15	SSW14	SSW11	SSW7	SSW5	S6	SSW2	SSW3	SSW9.4	SSW15
24-Sep	SSW2	SSW3	S5	S5	SSW2	SW2	SW2	S4	SSW3	WSW9	W9	WSW7	SW8	W8	WNW11	WNW10	NW11	NW7	WNW5	WSW2	SW3	SSW2	S4	S2	WSW3.5	WNW11
25-Sep	SW3	SW3	SW3	SW3	SSW3	SSW3	SW3	S4	S5	S7	SSE8	SE7	SE7	SSE5	SSE7	ENE2	SSW4	S9	S8	S10	SSW12	SW13	WSW6	SSW5	S5.0	SW13
26-Sep	SW7	SW6	S3	S2	WSW1	SSW2	SSW4	SSW2	S5	WSW9	W8	WSW10	WSW9	WSW10	WSW9	NW6	NW8	SW6	SW5	SW6	SSW6	SSW5	S6	SSE6	SW4.7	WSW10
27-Sep	S4	SSW3	S8	S10	SSW10	SW9	SW8	SW10	WSW13	WSW13	WSW12	WSW12	WSW12	WSW10	SW13	WSW8	WSW7	SW6	WSW4	SW6	SW5	SW4	S5	SW3	SW7.4	WSW13
28-Sep	W3	WSW8	WSW9	WSW9	WSW9	WSW9	WSW7	W8	W6	WSW2	SSW5	SSE10	S12	S10	SSW9	SSW8	SSW6	SSW2	SSW2	SW2	SW2	SSW2	SW1	WSW1	SW4.8	S12
29-Sep	SSW3	S3	S5	S5	SSE8	SSE9	SE8	SE17	SSE15	SSE18	SSE22	SSE21	SSE23	S19	S18	SSE14	S13	S8	SSW6	S2	NW2	NW2	WNW2	W2	SSE9.3	SSE23
30-Sep	WNW2	SSW2	NNW3	N3	NW2	W3	N3	W2	N2	N5	N9	N14	N13	NNE11	NNE8	NNE8	NNE9	NNE11	N9	N11	N7	N8	N7	NNW5	N5.8	N14
	SW2.8	SW2.9	SW2.8	SW2.8	SSW2.9	SW3.0	SSW2.8	SSW3.0	SSW2.8	SSW2.8	S2.9	S3.2	S3.9	S4.3	SSW3.6	S2.3	SSW2.0	SSW2.1	SW2.5	SW2.7	SW2.7	SW2.8	SW2.4	SSW2.5	Diurnal Average	
	S11	S9	NW12	NNW13	S13	S12	S10	SE17	S17	SSE18	SSE22	SSE21	SSE23	S19	S18	S17	N21	SSE16	N12	S13	S14	S14	NNW11	S11	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

Fort McKay South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Sep 29 12:00

Minimum Value: 0 km/h on Sep 19 22:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

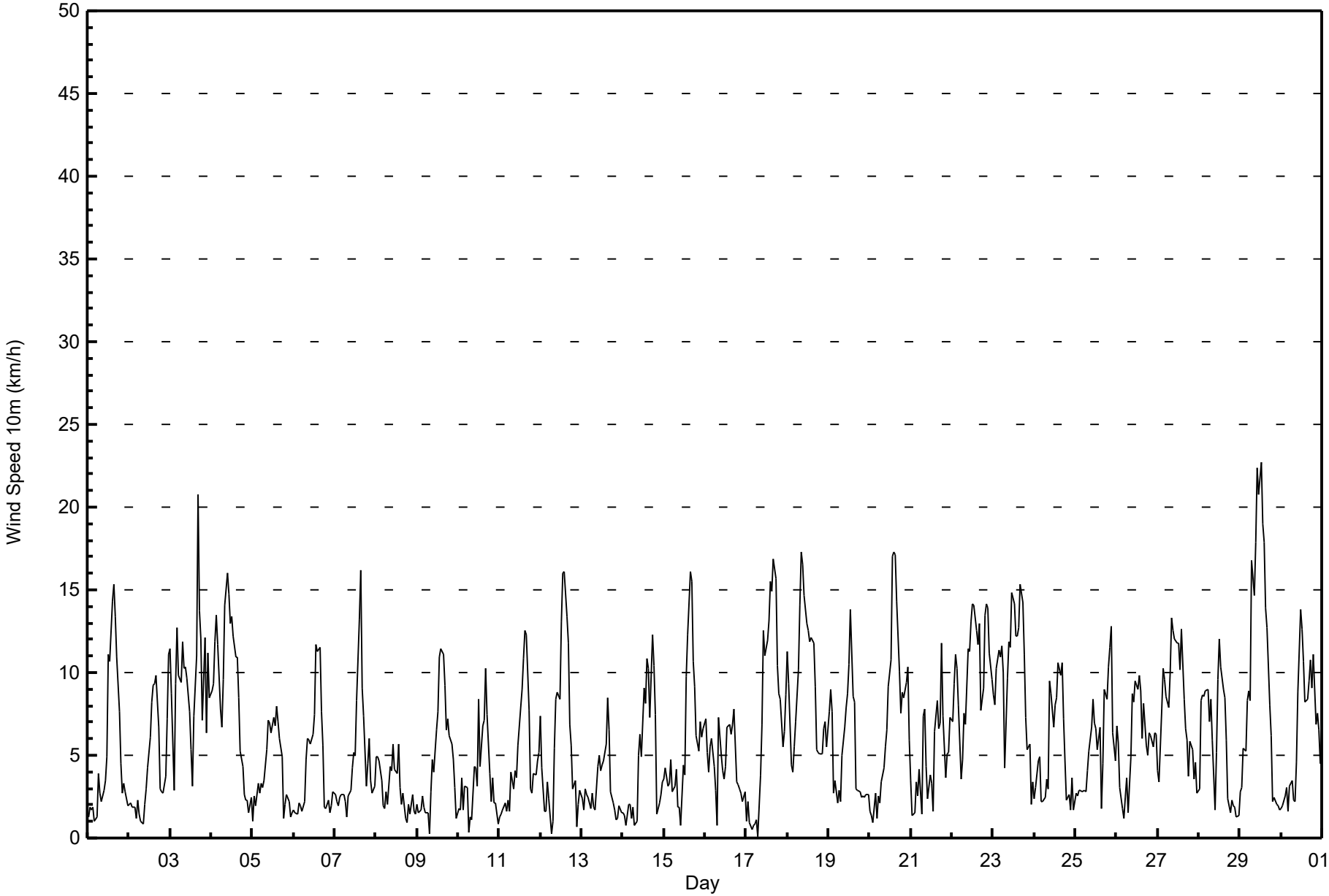
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	1	1	1	1	1	2	1	1	1	2	3	3	4	4	4	4	3	2	2	1	1	1	2	4
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	2	1	1	1	1	3	3	3
3-Sep	2	2	2	2	3	4	2	3	2	3	2	2	2	2	3	4	6	5	4	3	4	3	4	2	6
4-Sep	2	3	3	4	3	2	2	3	4	5	5	4	4	4	4	3	3	2	2	1	1	1	1	1	5
5-Sep	1	1	2	1	1	1	1	1	2	2	2	2	3	3	3	2	2	1	1	1	1	1	1	1	3
6-Sep	1	1	1	1	1	1	1	2	1	2	2	2	3	3	3	3	2	2	1	1	1	1	1	1	3
7-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	4	3	2	1	3	2	2	2	1	4
8-Sep	2	1	1	1	1	1	1	1	2	2	3	3	2	2	2	2	2	1	1	1	1	1	1	1	3
9-Sep	1	2	1	1	1	1	1	1	1	2	2	3	2	4	3	3	2	2	1	1	1	1	1	1	4
10-Sep	1	1	1	1	1	2	1	2	1	2	2	3	3	3	3	3	3	3	1	1	1	1	1	1	3
11-Sep	1	1	1	1	1	1	1	1	1	1	1	2	3	3	3	4	4	3	0	1	1	1	1	1	4
12-Sep	2	1	1	1	1	1	1	1	3	2	2	3	5	4	5	4	3	2	1	1	1	1	1	1	5
13-Sep	1	1	1	2	1	1	1	1	1	1	3	1	1	1	2	2	1	1	1	1	1	1	1	1	3
14-Sep	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	2	2	3	3	3	1	1	1	1	3
15-Sep	1	1	1	1	1	1	1	2	1	1	2	2	2	4	4	5	5	4	3	2	2	3	2	3	5
16-Sep	2	1	1	2	2	1	2	1	2	2	2	2	2	3	2	2	2	2	1	1	1	1	1	1	3
17-Sep	1	1	1	1	1	1	1	1	2	2	4	4	4	4	4	4	5	4	2	2	4	2	1	3	5
18-Sep	2	2	1	1	2	2	2	3	4	5	4	4	4	4	4	3	3	2	0	1	1	1	1	2	5
19-Sep	2	2	3	1	1	1	1	1	2	2	3	3	4	4	4	3	1	1	1	1	1	0	1	1	4
20-Sep	1	1	1	1	1	1	1	1	1	2	2	3	4	5	5	4	4	2	1	1	2	2	2	1	5
21-Sep	1	1	1	1	1	1	2	2	3	2	2	2	2	2	3	3	2	3	4	3	1	1	1	2	4
22-Sep	2	3	3	3	2	2	3	3	3	5	4	4	4	5	5	4	4	2	1	3	3	2	3	1	5
23-Sep	3	2	3	3	3	3	2	2	5	5	4	5	5	4	3	4	5	4	3	2	2	2	1	1	5
24-Sep	2	1	1	1	2	1	1	1	2	3	3	3	3	4	4	4	3	4	1	2	2	1	1	1	4
25-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	3	2	2	4	2	2	2	4	5	3	1	5
26-Sep	2	2	1	1	1	1	1	2	2	3	3	4	4	4	4	4	4	1	1	1	2	1	2	1	4
27-Sep	2	3	2	3	3	3	3	4	5	6	5	4	5	5	5	4	3	3	1	1	2	1	1	1	6
28-Sep	1	2	3	3	3	3	2	3	3	2	2	3	3	4	4	3	2	1	1	1	1	1	1	1	4
29-Sep	1	0	1	1	3	3	3	5	5	5	6	6	5	5	5	4	3	2	2	1	1	1	1	1	6
30-Sep	1	1	2	2	1	2	1	1	2	2	3	3	3	3	2	2	3	3	3	3	2	2	2	1	3
	3	3	3	4	3	4	3	5	5	6	6	6	5	5	5	5	6	5	4	3	4	5	4	3	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	377	52.36	52.36
6 - 11	249	34.58	86.94
12 - 19	90	12.50	99.44
20 - 28	4	0.56	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay South - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	12	5	8	4	4	8	10	14	48	75	80	37	22	23	15	12	377
6 - 11	16	13	0	0	0	7	29	29	45	18	25	30	9	8	17	3	249
12 - 19	9	0	0	0	0	0	2	15	20	16	7	7	0	1	4	9	90
20 - 28	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	4
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	38	18	8	4	4	15	41	61	113	109	112	74	31	32	36	24	720

Total Number of Valid Hours: 720

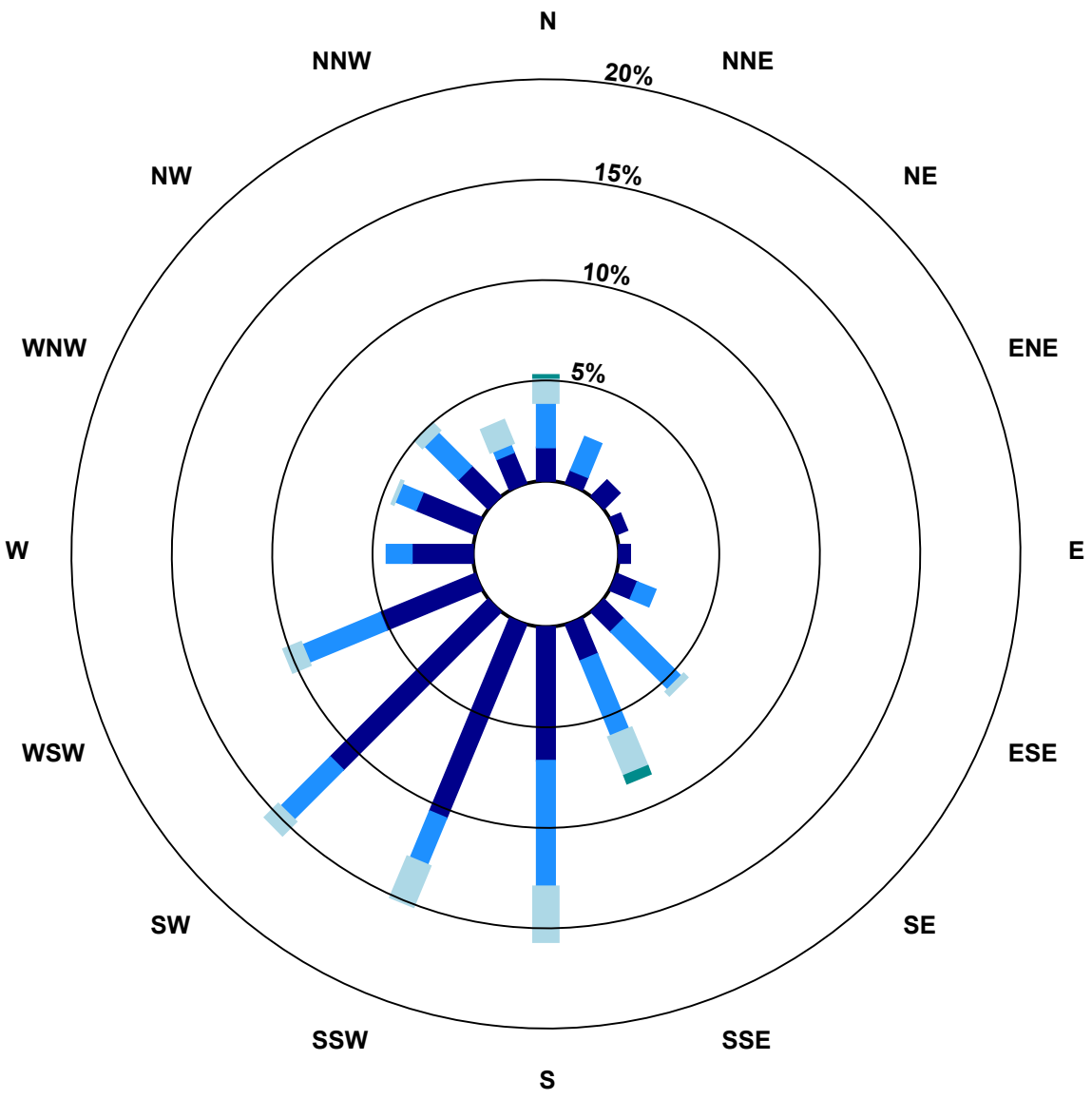
Total Number of Hours: 720

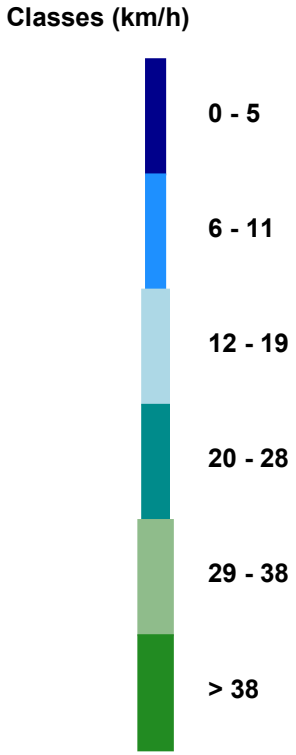
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Fort McKay South





Total Number of Valid Hours: 720

Direction of Maximum Speed: 159 deg on Sep 29 13:00
Direction of Maximum Daily Speed Average: 207.4 deg on Sep 22

Direction of Minimum Speed: 158 deg on Sep 17 08:00

Direction of Minimum Daily Speed Average: 0.3 deg on Sep 13

Monthly Average Direction: 205.2 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	180	217	191	193	68	298	189	185	145	54	24	21	15	16	11	10	8	1	354	333	277	309	333	185	5.0
2-Sep	238	264	246	270	196	207	242	209	147	63	83	121	130	138	120	136	143	145	194	232	222	194	186	172	158.7
3-Sep	181	174	194	176	175	169	171	168	171	175	184	179	193	284	11	6	1	1	360	354	343	324	341	321	216.0
4-Sep	302	315	323	326	323	300	286	317	338	340	344	339	345	344	354	19	11	3	6	299	238	223	218	216	333.0
5-Sep	261	254	218	187	184	238	189	189	148	140	168	137	125	155	112	113	123	122	172	245	223	236	276	305	156.2
6-Sep	260	258	236	229	219	229	213	161	138	140	125	124	134	153	158	154	144	159	251	243	218	243	229	210	162.0
7-Sep	216	195	224	212	222	266	232	148	131	41	39	53	16	1	11	8	16	5	343	355	354	320	310	326	1.6
8-Sep	346	332	334	320	248	244	308	302	359	43	29	358	280	238	242	290	209	293	259	234	238	218	255	279	305.6
9-Sep	232	284	236	237	257	237	234	158	120	130	131	136	144	154	163	139	167	197	210	235	226	219	175	248	176.0
10-Sep	234	261	180	261	244	244	233	311	56	311	314	335	333	288	271	302	338	325	298	223	245	191	211	261	293.3
11-Sep	196	315	220	239	176	218	193	163	114	91	104	116	143	119	144	146	160	158	220	201	194	204	209	209	158.4
12-Sep	195	195	221	255	184	212	305	173	148	165	149	143	187	189	191	191	191	192	242	206	217	163	219	220	187.3
13-Sep	201	226	224	206	211	216	208	235	157	148	134	2	30	38	20	19	10	329	292	286	246	254	230	213	343.8
14-Sep	220	237	226	187	217	232	203	4	131	142	134	102	134	148	156	157	163	159	163	175	211	190	212	180	160.2
15-Sep	195	179	187	184	171	204	202	186	216	297	1	236	221	322	327	319	314	321	296	308	295	310	317	321	295.2
16-Sep	318	294	275	276	305	286	271	85	272	304	19	61	121	121	146	170	156	159	207	235	192	204	235	161	225.4
17-Sep	303	185	221	300	328	261	296	158	128	130	161	152	147	147	154	154	152	157	162	170	173	185	185	172	158.8
18-Sep	170	181	195	184	186	185	174	163	171	185	195	202	204	202	196	201	229	232	238	230	228	224	237	238	196.4
19-Sep	243	251	245	161	201	196	243	229	195	192	194	178	234	218	225	232	232	236	233	225	188	202	207	215	218.7
20-Sep	244	283	260	228	247	223	236	172	122	134	138	141	163	188	188	180	182	189	179	179	165	169	175	212	177.8
21-Sep	235	188	212	191	204	198	181	238	247	295	37	94	129	216	303	257	259	270	286	279	194	208	213	217	243.8
22-Sep	223	230	230	232	235	210	217	230	211	239	225	206	205	219	216	205	208	191	183	182	183	178	179	176	207.4
23-Sep	181	197	195	187	191	188	190	208	254	239	242	230	225	212	208	211	208	204	203	212	209	176	207	196	208.9
24-Sep	193	196	177	180	192	227	217	191	208	240	262	239	225	263	303	298	325	323	287	245	216	209	176	188	251.8
25-Sep	236	227	227	233	204	197	219	173	176	171	165	143	140	148	168	73	194	188	178	184	196	224	244	207	188.0
26-Sep	226	224	190	181	246	201	194	197	191	257	275	244	252	245	251	304	305	229	225	214	213	198	189	157	233.3
27-Sep	173	197	184	185	199	216	222	235	251	252	241	243	246	256	232	243	248	234	239	215	226	234	184	221	229.0
28-Sep	270	241	244	254	253	247	247	262	275	243	201	148	174	175	205	201	200	207	197	225	228	198	223	245	221.1
29-Sep	207	182	171	173	152	147	144	146	151	151	158	159	159	179	182	166	180	185	201	177	322	325	293	277	165.4
30-Sep	299	202	329	350	326	274	360	269	360	358	6	8	8	26	26	19	22	13	1	359	8	1	0	331	3.9
	221.2	226.8	224.9	218.2	212.7	215.2	209.1	197.5	191.4	193.8	182.2	168.8	180.7	190.9	193.1	189.5	204.3	204.4	233.7	224.5	219.0	217.3	218.9	212.8	
	Diurnal Average																								

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 112 deg on Sep 10 07:00

Minimum Value: 6 deg on Sep 18 19:00

Percentiles: P_1 = 10 P_{10} = 15 Q_1 = 20 Median = 27 Q_3 = 44 P_{90} = 63 P_{99} = 90

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

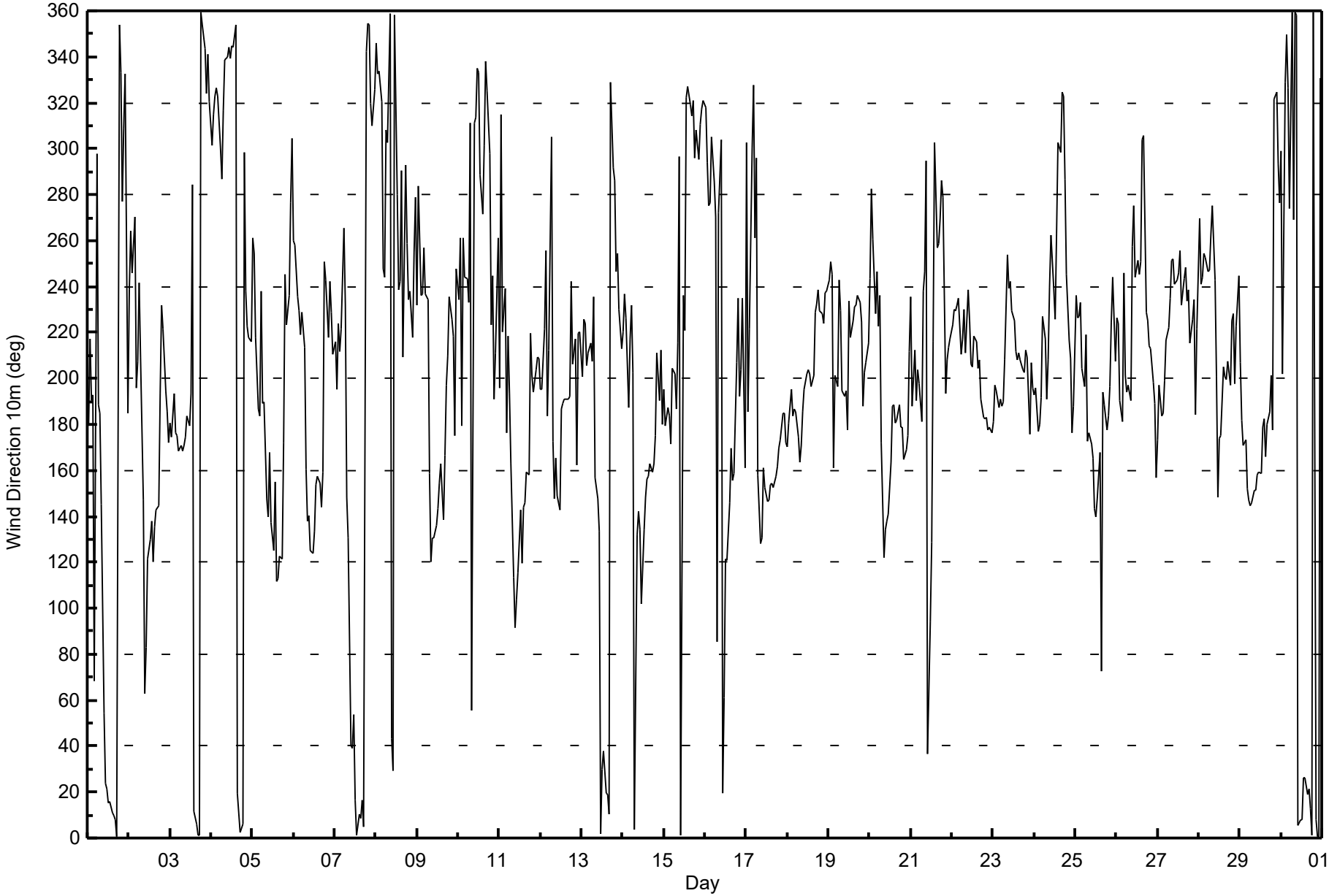
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	67	51	73	48	75	69	53	58	48	50	75	45	26	27	21	19	19	20	18	25	19	30	31	69	75
2-Sep	37	40	62	47	61	39	65	44	85	55	47	51	52	28	23	27	22	18	35	10	21	16	11	13	85
3-Sep	11	23	79	14	13	17	13	12	14	18	18	24	38	68	23	20	21	20	19	22	19	24	19	20	79
4-Sep	19	21	19	19	19	24	23	24	22	24	26	31	26	28	27	22	24	23	31	32	24	38	48	25	48
5-Sep	60	41	44	25	31	12	32	19	30	29	34	40	41	49	36	32	32	20	64	33	13	37	36	46	64
6-Sep	39	67	62	25	20	17	14	21	20	31	31	35	34	22	24	21	22	31	35	37	23	55	61	34	67
7-Sep	43	27	51	24	33	46	45	62	48	48	24	48	43	26	21	19	19	17	43	34	20	46	34	19	62
8-Sep	17	16	12	15	19	43	36	60	23	30	45	72	67	54	74	81	47	61	38	14	47	18	63	61	81
9-Sep	28	63	65	24	40	46	48	98	50	37	51	33	26	28	17	24	22	15	16	19	19	20	35	44	98
10-Sep	45	56	30	78	34	37	112	89	71	60	56	82	27	67	50	43	22	18	32	23	10	78	46	74	112
11-Sep	68	70	54	63	68	24	57	21	30	35	49	35	32	28	28	21	19	13	16	16	12	11	24	16	70
12-Sep	15	16	65	58	20	40	91	67	22	22	24	23	24	20	20	19	16	11	12	21	33	76	32	31	91
13-Sep	36	46	33	29	55	51	27	46	62	28	36	42	37	29	33	18	13	25	23	35	51	60	58	63	63
14-Sep	40	61	79	51	34	74	27	81	97	23	33	37	23	21	19	16	17	15	14	16	48	26	37	22	97
15-Sep	21	16	22	26	20	38	25	33	77	79	99	60	78	29	26	24	25	26	27	21	23	24	23	24	99
16-Sep	22	23	20	20	19	26	83	85	31	38	64	82	67	48	42	33	28	14	28	14	21	19	48	31	85
17-Sep	71	19	76	92	76	63	51	85	41	25	22	28	26	23	19	20	16	15	12	12	13	12	10	15	92
18-Sep	12	13	15	11	20	18	13	13	15	20	22	25	27	28	27	24	25	18	6	8	16	12	15	18	28
19-Sep	20	21	31	43	20	38	16	32	32	32	34	34	38	26	36	30	27	15	20	37	23	23	17	49	49
20-Sep	56	56	30	27	66	25	43	23	31	29	29	28	30	21	20	17	15	15	9	9	10	11	14	18	66
21-Sep	43	70	79	31	30	23	88	24	31	62	79	58	79	95	44	32	27	29	27	28	20	20	17	19	95
22-Sep	20	21	20	23	25	64	44	37	39	35	32	28	27	28	28	25	21	14	7	12	12	11	10	9	64
23-Sep	21	19	18	14	17	14	14	40	48	32	35	29	28	24	22	25	22	20	19	20	22	14	72	26	72
24-Sep	73	30	23	25	66	51	58	27	76	26	42	50	46	46	44	30	24	19	14	56	55	49	15	45	76
25-Sep	26	28	26	27	24	28	23	18	21	21	24	35	30	57	32	47	66	13	9	15	22	23	31	15	66
26-Sep	18	20	51	73	55	26	23	61	33	36	37	39	47	40	47	51	41	21	10	14	19	22	14	12	73
27-Sep	33	59	15	11	17	26	30	32	39	38	39	38	36	45	31	39	35	25	32	16	22	32	18	30	59
28-Sep	50	18	24	31	29	30	40	39	59	94	40	23	25	28	39	25	16	19	66	51	27	52	34	30	94
29-Sep	20	15	17	15	21	18	21	19	18	18	15	17	15	17	14	18	14	14	15	68	24	49	36	44	68
30-Sep	44	68	45	64	71	58	37	39	75	38	22	20	22	22	21	18	20	18	17	18	16	17	18	15	75
	73	70	79	92	76	74	112	98	97	94	99	82	79	95	74	81	66	61	66	68	55	78	72	74	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS14
ANZAC
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
SEPTEMBER 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	684	34	36	99.72	-	-	7	0	1.1	0
TRS(ppb) Average	625	42	95	92.64	3.4	0	3.3	-	0.7	-
THC(ppm) Average	684	34	36	99.72	-	-	2.2	-	2	-
NMHC(ppm) Average	684	34	36	99.72	-	-	0.019	-	0.001	-
CH4(ppm) Average	684	34	36	99.72	-	-	2.2	-	2	-
NO2(ppb) Average	683	35	37	99.72	-	-	22.3	0	3.3	-
NO(ppb) Average	683	35	37	99.72	-	-	31.3	-	2.3	-
NOX(ppb) Average	683	35	37	99.72	-	-	53.6	-	5.4	-
O3(ppb) Average	684	34	36	99.72	-	-	57.1	0	34.8	-
PM2.5(ug/m3) Average	720	0	0	100	-	-	161	0	54.6	7
AT 2m(C) Average	720	0	0	100	-	-	28.4	-	18.3	-
RH(%) Average	720	0	0	100	-	-	99.9	-	86.8	-
WS(km/h) Average	720	0	0	100	-	-	29	-	18	-
WD(deg) Average	720	0	0	100	-	-	-	-	-	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	64.9	-	17.5	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	684	0.47	0.6	-	0	0	0.1	0.3	0.6	0.9	7
TRS(ppb) Average	625	0.27	0.3	-	0.1	0.1	0.1	0.2	0.3	0.5	3.3
THC(ppm) Average	684	1.98	0	-	1.9	1.9	1.9	2	2	2	2.2
NMHC (ppm) Average	684	0	0.001	-	0	0	0	0	0	0	0.019
CH4(ppm) Average	684	1.98	0	-	1.9	1.9	1.9	2	2	2	2.2
NO2(ppb) Average	683	1.56	1.6	-	0	0.5	0.7	1.1	1.9	3	22.3
NO(ppb) Average	683	0.3	1.5	-	0	0	0	0.1	0.2	0.6	31.3
NOX(ppb) Average	683	1.86	2.8	-	0	0.5	0.8	1.2	2.1	3.6	53.6
O3(ppb) Average	684	24.48	10.8	-	0	9.5	17.4	24.9	31.9	37.3	57.1
PM2.5(ug/m3) Average	720	20.92	23.3	-	0.6	3.5	6.1	13.1	25.3	49.9	161
Temperature 2 m (C) Average	720	14.04	5.6	-	-0.6	7.6	10.4	13.4	17.3	22	28.4
Relative Humidity (%) Average	720	64.98	20.9	-	26.4	35.5	46.7	65.1	83.6	94.2	99.9
Wind Speed 20 m (km/h) Average	720	11.5	5	-	1	5	8	11	15	18	29
Wind Direction 20 m (deg) Average	720	223.2	-	-	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	720	3.78	11.2	-	0	0	0	0	0	12.1	64.9

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
TRS	15 Sep 2025 16:00	16 Sep 2025 09:00	18	Maintenance - converter efficincy test
TRS	24 Sep 2025 05:00	25 Sep 2025 08:00	28	Unstable Operation - excessive baseline drift
TRS	25 Sep 2025 09:00	25 Sep 2025 15:00	7	Maintenance - to repalced the converter
NO2, O3,THC/NMHC/CH4	15 Sep 2025 11:00	15 Sep 2025 12:00	2	Maintenance - sample manifold cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 7.0 ppb on Sep 1 15:00 Maximum Daily Average: 1.1 ppb on Sep 4

Minimum Value: 0.0 ppb on Sep 1 22:00 Minimum Daily Average: 0.1 ppb on Sep 27

Maximum Diurnal Average: 0.7 ppb at hour 15 Minimum Diurnal Average: 0.3 ppb at hour 20

Monthly Average: 0.47 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 0.9 P_{99} = 3.1

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.1	0.7	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.5	0.4	2.2	6.5	7.0	2.8	0.5	0.2	0.2	0.1	0.1	0.0	0.0	0.0	1.0	7.0
2-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.0	1.1	1.3	0.9	0.4	0.6	0.9	0.4	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.3
3-Sep	0.4	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.6	0.7	0.6	0.5	0.4	0.8	0.6	0.3	3.1	1.4	0.1	0.0	0.0	0.0	0.0	0.1	0.6	3.1
4-Sep	Z	2.7	1.9	1.1	0.5	0.6	0.2	0.4	1.5	1.8	0.8	0.5	1.5	2.0	2.8	2.8	2.2	1.4	0.3	0.2	0.2	0.2	0.1	0.2	1.1	2.8
5-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.5	0.6	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.8
6-Sep	0.2	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.9	2.4	3.1	1.1	1.1	0.9	0.9	0.4	0.4	0.4	0.4	0.2	0.2	0.1	0.1	0.2	0.6	3.1
7-Sep	0.3	0.3	0.2	Z	0.1	0.3	0.2	0.4	0.7	0.8	0.8	0.7	0.4	0.6	0.5	2.5	1.5	0.9	0.4	0.4	0.5	0.4	0.4	0.4	0.6	2.5
8-Sep	0.4	0.4	0.4	0.3	Z	0.2	0.2	0.2	0.1	0.1	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4
9-Sep	0.6	1.4	2.0	0.8	0.2	Z	0.3	0.5	1.0	2.2	2.2	1.9	1.1	0.8	0.8	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.8	2.2
10-Sep	Z	0.0	0.0	0.0	0.2	0.2	0.4	0.9	0.4	0.6	0.4	0.2	0.2	0.4	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.9
11-Sep	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.4	0.7	0.6	1.2	1.5	0.7	0.6	0.6	0.5	0.5	0.4	0.2	0.3	0.4	0.3	0.2	0.4	1.5
12-Sep	0.2	0.2	Z	0.0	0.1	0.3	0.4	0.5	0.4	0.3	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.5
13-Sep	0.2	0.3	0.1	Z	0.1	0.0	0.1	0.6	0.9	1.5	3.8	3.0	1.2	0.7	1.1	0.9	0.7	0.6	0.5	0.2	0.5	0.2	0.2	0.2	0.8	3.8
14-Sep	0.2	0.1	0.0	0.0	Z	0.0	0.0	0.2	0.3	0.5	0.7	1.4	0.4	0.1	0.1	0.2	0.3	0.6	0.0	0.1	0.5	0.2	0.1	0.2	0.3	1.4
15-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.6	0.2	M	M	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	0.6
16-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.6	0.4	0.4	0.5	0.4	0.2	1.5
17-Sep	0.3	Z	0.4	0.3	0.2	0.3	0.3	0.3	0.7	1.0	1.5	2.1	0.8	0.7	0.5	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.5	2.1
18-Sep	0.2	0.4	Z	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.4	0.3	0.4	0.6
19-Sep	0.2	0.3	0.4	Z	0.2	0.2	0.3	1.0	1.2	0.6	0.5	0.7	0.7	0.7	0.6	0.5	1.0	0.8	0.3	0.2	0.1	0.2	0.2	0.1	0.5	1.2
20-Sep	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.3	0.4	0.4	0.7	0.8	0.9	0.6	0.5	0.5	0.5	0.4	0.5	0.6	1.1	0.9	0.8	1.0	0.5	1.1
21-Sep	1.1	1.5	1.1	0.7	0.8	Z	0.9	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.5	1.5
22-Sep	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.4	0.5	0.3	0.2	0.3	0.5	0.3	0.1	0.2	0.1	0.2	0.4	0.8	0.3	0.8
23-Sep	0.6	Z	0.6	0.7	0.6	0.7	0.7	0.6	0.4	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.5	1.6	0.5	0.5	1.0	0.7	0.8	0.6	0.5	1.6
24-Sep	0.5	0.8	Z	0.6	0.6	0.5	0.7	0.8	0.7	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.4	0.8
25-Sep	0.3	1.0	0.8	Z	0.6	0.2	0.1	0.3	0.3	0.6	0.5	0.4	0.7	0.4	0.4	0.3	0.7	0.6	0.6	0.9	0.6	0.3	0.7	0.1	0.5	1.0
26-Sep	0.0	0.1	0.2	0.3	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	0.0	0.1	0.7	0.6	0.5	0.1	0.1	0.7
27-Sep	0.1	0.0	0.0	0.0	0.4	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	0.9	0.1	0.9
28-Sep	Z	0.6	0.3	0.2	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.5	1.7	0.2	0.3	1.7
29-Sep	0.3	Z	0.3	0.2	1.2	4.0	1.0	0.8	1.0	0.2	0.3	0.3	0.4	0.7	0.8	1.0	0.8	0.7	0.9	0.8	3.1	3.2	2.5	1.2	1.1	4.0
30-Sep	0.7	2.0	Z	0.7	0.5	0.6	0.5	0.6	0.6	0.8	0.6	0.5	0.6	1.0	1.2	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.6	2.0
	0.3	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.4	0.3	0.3	0.4	0.3	0.4	0.3	Diurnal Average	
	1.1	2.7	2.0	1.1	1.2	4.0	1.0	1.0	1.5	2.4	3.8	3.0	2.2	6.5	7.0	2.8	3.1	1.6	0.9	0.9	3.1	3.2	2.5	1.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

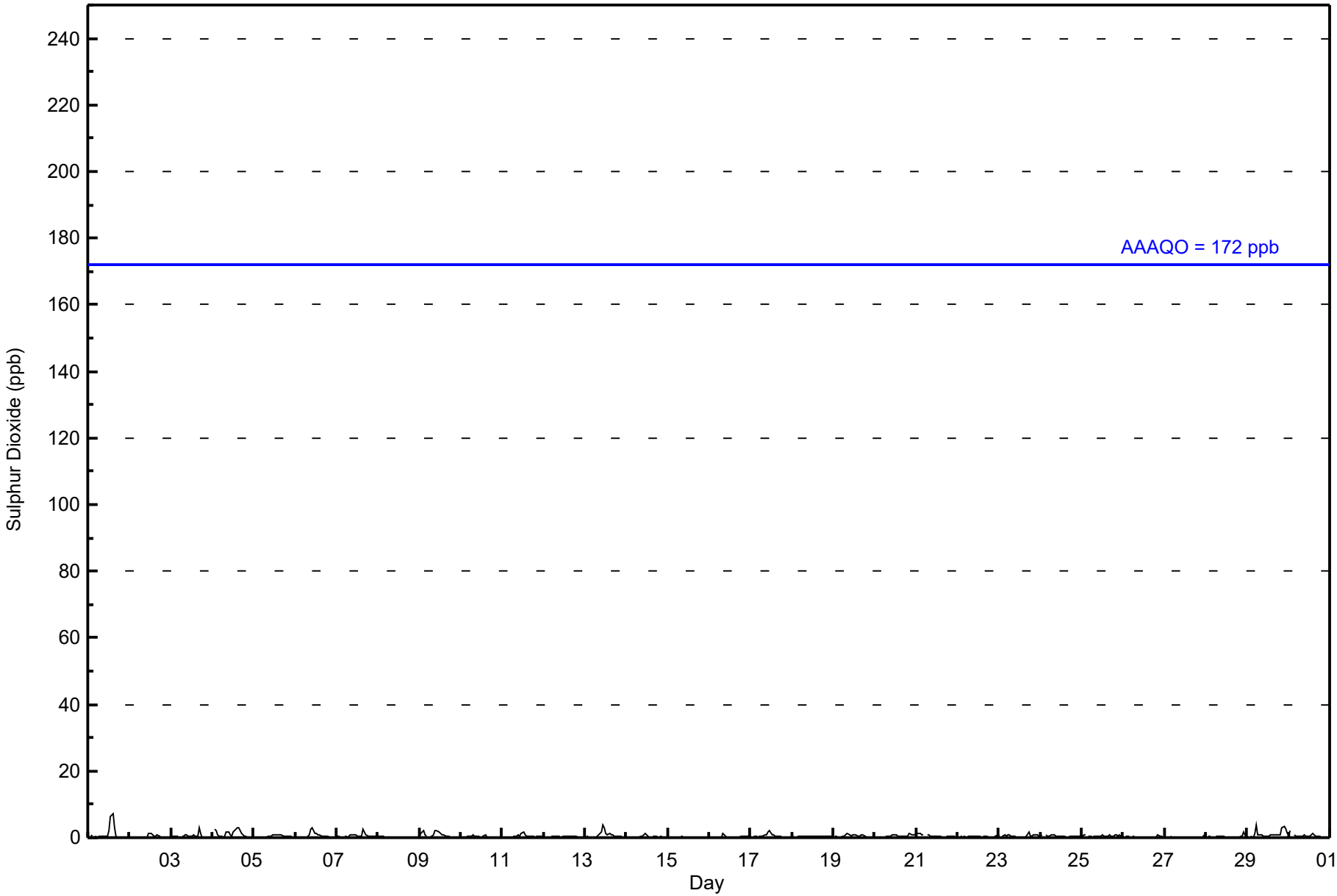
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - September 2025



Sulphur Dioxide (SO_2) - ppb
Anzac - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	684	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: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	10	6	4	6	4	22	68	129	57	54	33	51	80	79	45	36	684
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	10	6	4	6	4	22	68	129	57	54	33	51	80	79	45	36	684

Total Number of Valid Hours: 684

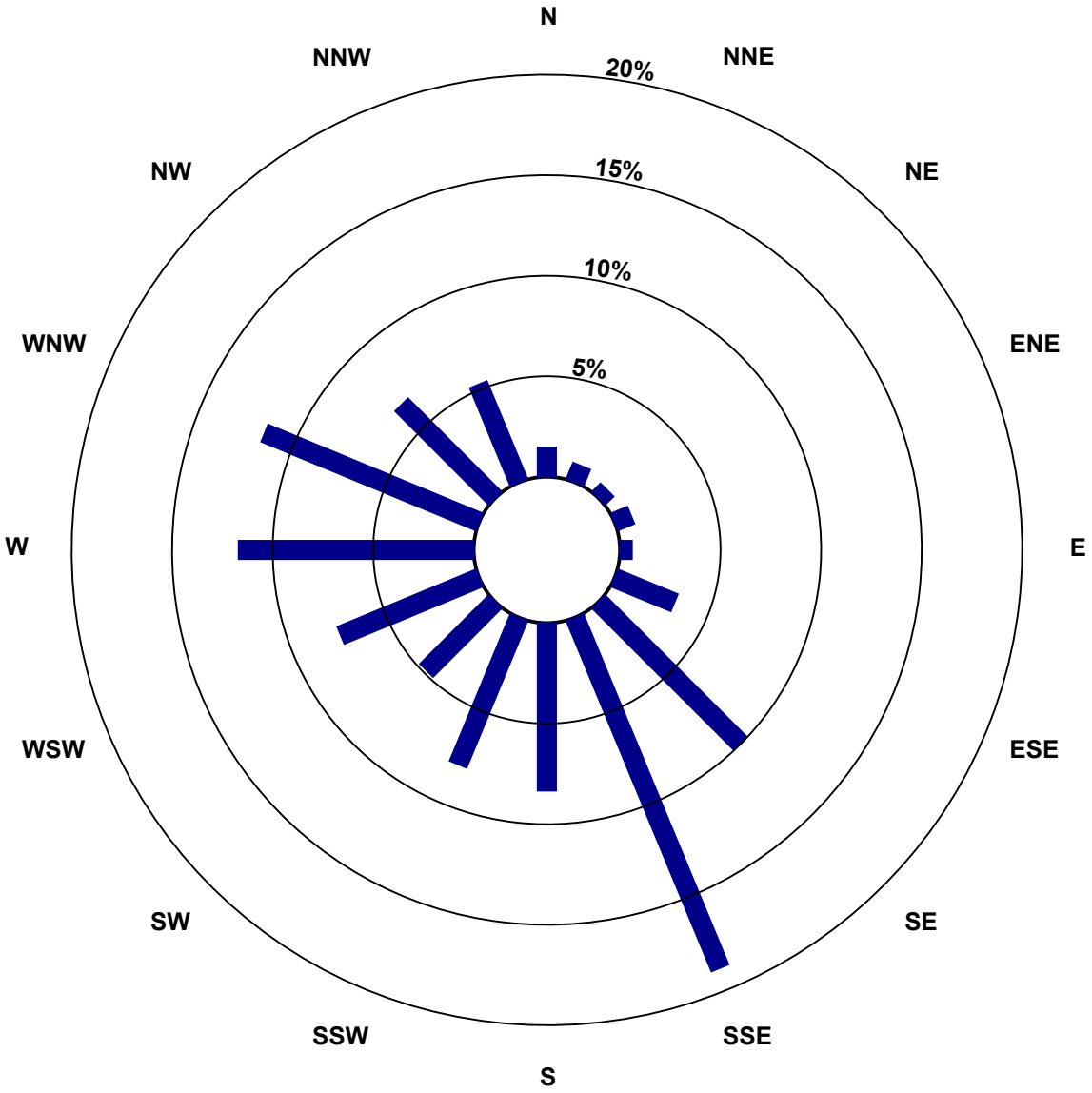
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Anzac



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

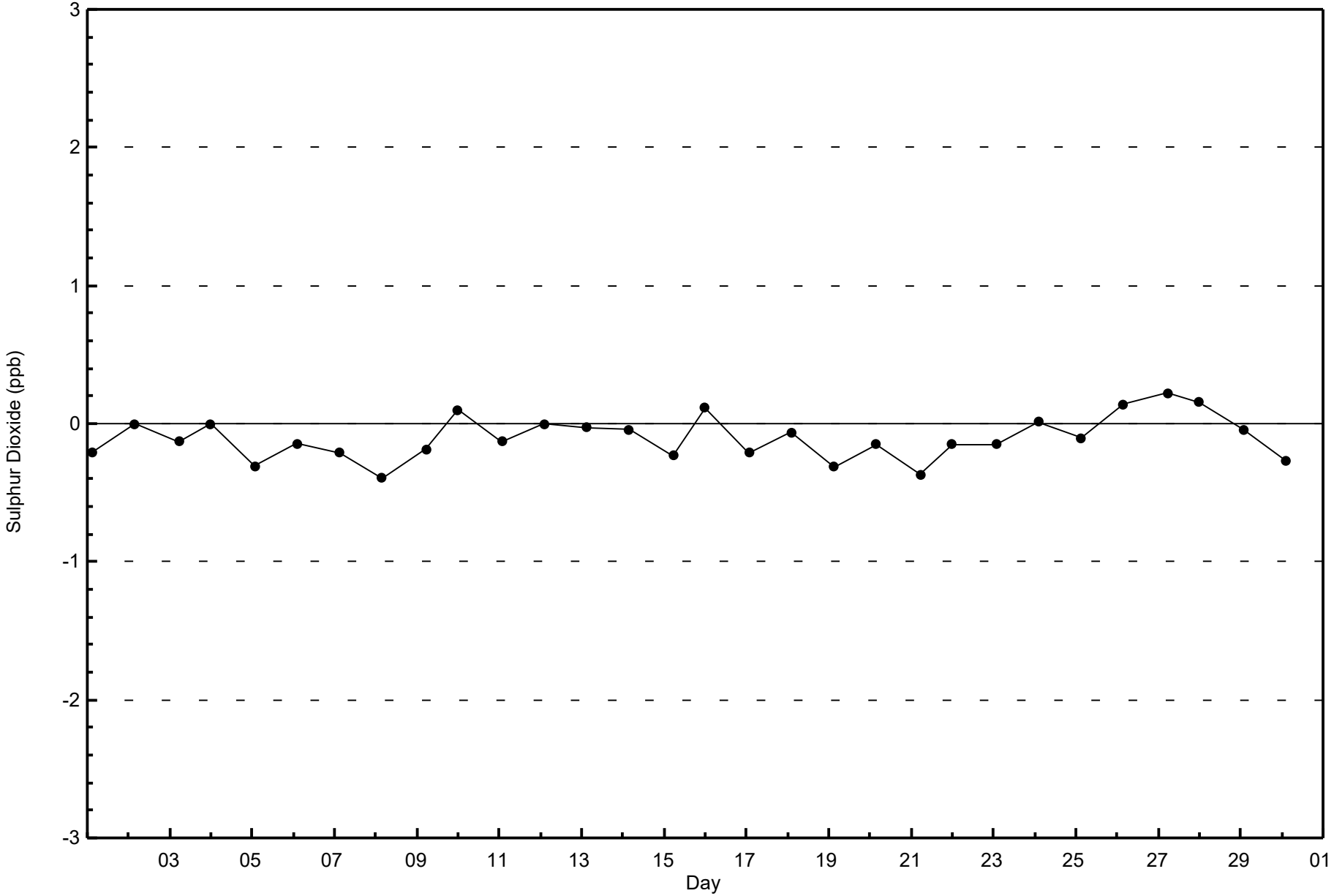
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - September 2025

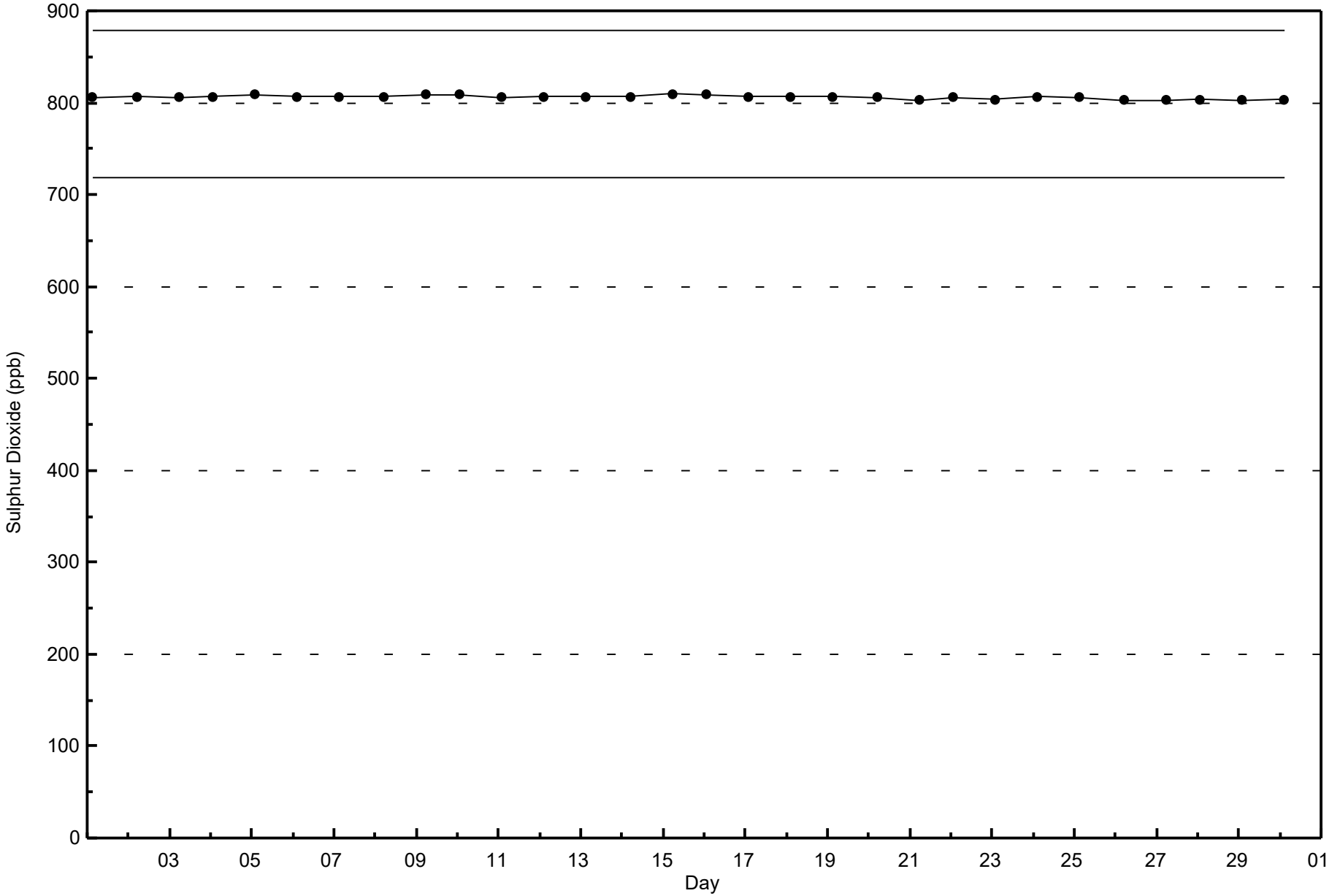


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 3.4 ppb on Sep 6 08:30 Maximum Daily Average: 0.7 ppb on Sep 6

Minimum Value: 0.0 ppb on Sep 14 19:00 Minimum Daily Average: 0.1 ppb on Sep 23

Maximum Diurnal Average: 0.5 ppb at hour 8 Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.28 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.4

Periods in Service:	1440
Periods of Valid Data:	1252
Periods of Invalid Data:	188
Periods of Calibration:	82
Percent Operational Time:	92.6

Period Ending At (MST)

Day	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	Daily Average	Daily Maximum
1-Sep	0.2	0.3	0.5	0.5	Z	0.5	0.8	0.5	0.5	1.2	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.4	1.2
	0.2	0.3	0.5	0.6	SP	0.6	0.5	0.6	1.0	0.6	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2		
2-Sep	0.2	0.1	0.2	0.3	0.4	Z	0.3	0.4	1.0	0.5	0.2	0.6	0.6	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	1.3
	0.2	0.2	0.2	0.3	0.5	SP	0.4	1.3	0.7	0.3	0.3	0.7	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.1	0.2	0.2	0.2	0.3		
3-Sep	Z	0.3	0.2	0.6	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	0.6	0.3	0.3	0.3	0.5	0.4	0.6	0.3	0.7
	SP	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.4	0.3	0.3	0.3	0.6	0.5	0.7		
4-Sep	0.6	Z	0.6	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.4	0.5	0.3	0.3	0.4	0.4	0.8	0.5	0.2	0.3	0.1	0.1	0.3	0.8
	0.6	SP	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.6	0.2	0.2	0.2	0.2	0.2		
5-Sep	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.1	0.2	0.2	0.4
	0.1	0.1	SP	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2		
6-Sep	0.2	0.7	0.6	Z	0.3	1.0	0.8	2.1	3.4	2.6	1.2	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	3.4
	0.1	1.7	0.4	SP	1.0	0.7	1.0	2.6	3.2	1.6	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	0.2		
7-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
	0.2	0.2	0.2	0.1	SP	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3		
8-Sep	0.3	0.2	0.3	0.6	0.5	Z	0.4	0.4	0.4	0.5	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.3	1.2
	0.3	0.3	0.6	0.6	0.4	SP	0.4	0.4	0.5	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	1.2		
9-Sep	Z	0.7	2.6	1.4	0.3	0.3	0.2	1.4	1.8	0.9	0.9	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	2.6
	SP	1.2	0.9	0.4	0.4	0.2	0.2	1.7	1.5	1.3	0.6	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2		
10-Sep	0.2	Z	0.3	0.2	0.2	0.1	0.2	0.3	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	0.2	0.2	0.2	0.4
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.2	M	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2		
11-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.3	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	0.3	0.3	0.3	0.2	1.2
	0.2	0.2	SP	0.2	0.1	0.1	0.1	0.3	0.2	1.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3		
12-Sep	0.4	0.3	0.3	Z	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	0.2	0.1	0.2	0.4
	0.4	0.3	0.3	SP	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		
13-Sep	0.2	0.1	0.2	0.1	Z	0.2	0.3	1.1	0.2	0.2	0.6	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.7	0.3	1.1
	0.1	0.1	0.1	0.1	SP	0.2	0.7	0.3	0.2	0.9	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.7		
14-Sep	0.8	0.4	0.6	0.7	0.4	Z	0.3	0.5	0.3	0.2	0.2	0.5	0.2	0.2	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	1.1
	0.4	0.4	0.6	0.7	0.4	SP	0.2	1.1	0.2	0.2	0.6	0.4	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2		
15-Sep	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	0.3
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	C	C	C	C	C	C	M	M	M	M	M	M	M	M	M		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025

Day	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	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Sep	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 C	C C	C 0.5	0.3 0.4	0.3 0.4	0.4 0.3	0.4 0.2	0.2 0.2	0.3 0.3	0.3 0.3	--	0.5
17-Sep	0.4 0.4	0.4 0.4	Z SP	0.4 0.3	0.3 0.4	0.7 0.3	0.3 0.4	0.9 0.5	0.3 0.3	0.5 0.4	0.6 0.6	0.7 0.5	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	0.3	0.9
18-Sep	0.2 0.2	0.2 0.2	0.2 0.2	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 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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	0.3
19-Sep	0.1 0.1	0.2 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 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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	0.2 0.2	0.1 0.1	0.1 0.1	0.1	0.2
20-Sep	0.1 0.1	0.1 0.1	0.1 0.1	0.4 0.6	0.5 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	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 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.3 0.3	0.2	0.6
21-Sep	Z SP	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 0.2	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	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2	0.3
22-Sep	0.2 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 0.3	0.3 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	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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
23-Sep	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	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	0.1 0.1	0.1 0.1	0.1 0.1	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-Sep	0.1 0.1	0.1 0.1	0.1 0.1	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	--	0.1
25-Sep	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	M M	M M	M M	M M	M M	M M	M 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	--	0.3
26-Sep	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.3	0.4 0.4	Z SP	0.5 0.4	0.4 0.5	0.5 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.3	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 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.5
27-Sep	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	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.1	0.2
28-Sep	0.1 0.1	Z SP	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 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.6	0.4 0.5	0.1 0.2	0.5 0.7	0.3 0.3	0.3	0.7
29-Sep	0.4 0.3	0.3 0.3	Z SP	0.3 0.2	0.6 1.1	1.0 0.7	0.3 0.2	0.2 0.3	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 0.1	0.1 0.1	0.1 0.1	0.2 0.5	0.3 0.2	0.2 0.3	1.1 0.7	0.6 0.9	0.4 0.5	0.5 0.4	0.3	1.1
30-Sep	0.4 0.4	0.5 0.6	0.5 0.6	Z SP	1.3 0.6	0.7 0.5	0.3 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.3 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.7 0.5	0.4 0.6	0.9 0.3	0.5 0.3	0.5 0.2	0.2 0.2	0.2 0.2	0.4	1.3
	0.2 0.8	0.3 1.7	0.3 2.6	0.3 1.4	0.4 1.3	0.3 1.0	0.3 1.0	0.5 2.6	0.5 3.4	0.4 2.6	0.3 1.2	0.3 0.7	0.2 0.6	0.2 0.5	0.2 0.5	0.2 0.5	0.2 0.6	0.2 0.9	0.2 0.8	0.2 0.9	0.2 1.1	0.2 0.9	0.2 0.7	0.3 1.2	Diurnal Average Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation 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 - September 2025

Maximum Value: 3.3 ppb on Sep 6 09:00

Maximum Daily Average: 0.7 ppb on Sep 6

Minimum Value: 0.1 ppb on Sep 14 19:00

Minimum Daily Average: 0.1 ppb on Sep 23

Maximum Diurnal Average: 0.5 ppb at hour 8

Minimum Diurnal Average: 0.2 ppb at hour 15

Monthly Average: 0.27 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.2

Hours in Service:	720
Hours of Data:	625
Hours of Missing Data:	95
Hours of Calibration:	42
Percent Operational Time:	92.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.3	0.5	0.5	Z	0.5	0.7	0.5	0.8	0.9	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.4	0.9
2-Sep	0.2	0.2	0.2	0.3	0.4	Z	0.3	0.9	0.8	0.4	0.3	0.7	0.5	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.9
3-Sep	Z	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.3	0.3	0.3	0.6	0.4	0.7	0.3	0.7
4-Sep	0.6	Z	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.7	0.3	0.2	0.2	0.2	0.1	0.3	0.7
5-Sep	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.3
6-Sep	0.2	1.2	0.5	Z	0.7	0.9	0.9	2.4	3.3	2.1	1.0	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	0.7	3.3
7-Sep	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	0.1	0.2	0.5	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7
8-Sep	0.3	0.2	0.4	0.6	0.5	Z	0.4	0.4	0.5	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.7	0.3	0.7
9-Sep	Z	0.9	1.7	0.9	0.4	0.3	0.2	1.6	1.6	1.1	0.7	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	1.7
10-Sep	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
11-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.3	0.2	0.7	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.7
12-Sep	0.4	0.3	0.3	Z	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	0.2	0.1	0.2	0.4
13-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.5	0.7	0.2	0.5	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.7	0.3	0.7
14-Sep	0.6	0.4	0.6	0.7	0.4	Z	0.2	0.8	0.3	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.8
15-Sep	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	C	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	0.3
16-Sep	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	C	C	0.3	0.4	0.3	0.3	0.2	0.3	0.3	--	0.4
17-Sep	0.4	0.4	Z	0.4	0.4	0.5	0.4	0.7	0.3	0.5	0.6	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
18-Sep	0.2	0.2	0.2	Z	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	0.1	0.2	0.3
19-Sep	0.1	0.1	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	0.2	0.1	0.1	0.1	0.2
20-Sep	0.1	0.1	0.1	0.5	0.3	Z	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	0.2	0.3	0.3	0.2	0.5
21-Sep	Z	0.3	0.3	0.2	0.2	0.3	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	0.2	0.1	0.1	0.2	0.2	0.2	0.3
22-Sep	0.2	Z	0.2	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	0.1	0.1	0.1	0.1	0.2	0.3
23-Sep	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
24-Sep	0.1	0.1	0.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.1
25-Sep	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	--	0.2
26-Sep	0.2	0.2	0.2	0.3	0.4	Z	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.5
27-Sep	Z	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
28-Sep	0.1	Z	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.5	0.2	0.6	0.3	0.3	0.6
29-Sep	0.4	0.3	Z	0.2	0.9	0.9	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.9	0.7	0.5	0.5	0.3	0.9
30-Sep	0.4	0.6	0.6	Z	0.9	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.3	0.2	0.2	0.4	0.9
	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.5	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	0.3	Diurnal Average	
	0.6	1.2	1.7	0.9	0.9	0.9	0.9	2.4	3.3	2.1	1.0	0.7	0.5	0.4	0.5	0.5	0.5	0.7	0.7	0.6	0.9	0.7	0.6	0.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

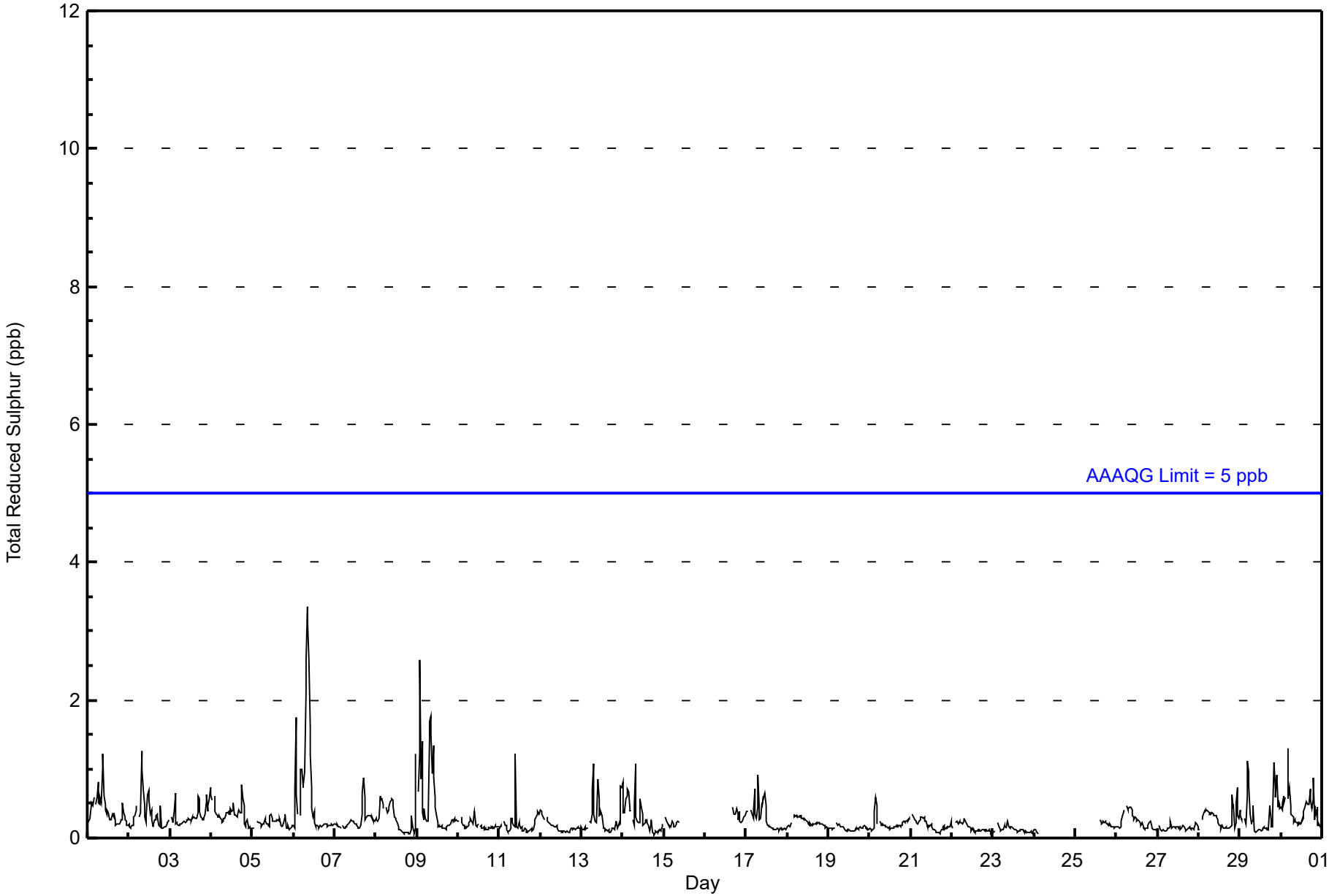
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	624	99.84	99.84
3 - 4	1	0.16	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: 625

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	12	8	4	6	4	22	64	123	57	51	31	42	69	59	37	35	624
3 - 4	0	0	0	0	0	0	1	0	0	0	0	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	12	8	4	6	4	22	65	123	57	51	31	42	69	59	37	35	625

Total Number of Valid Hours: 625

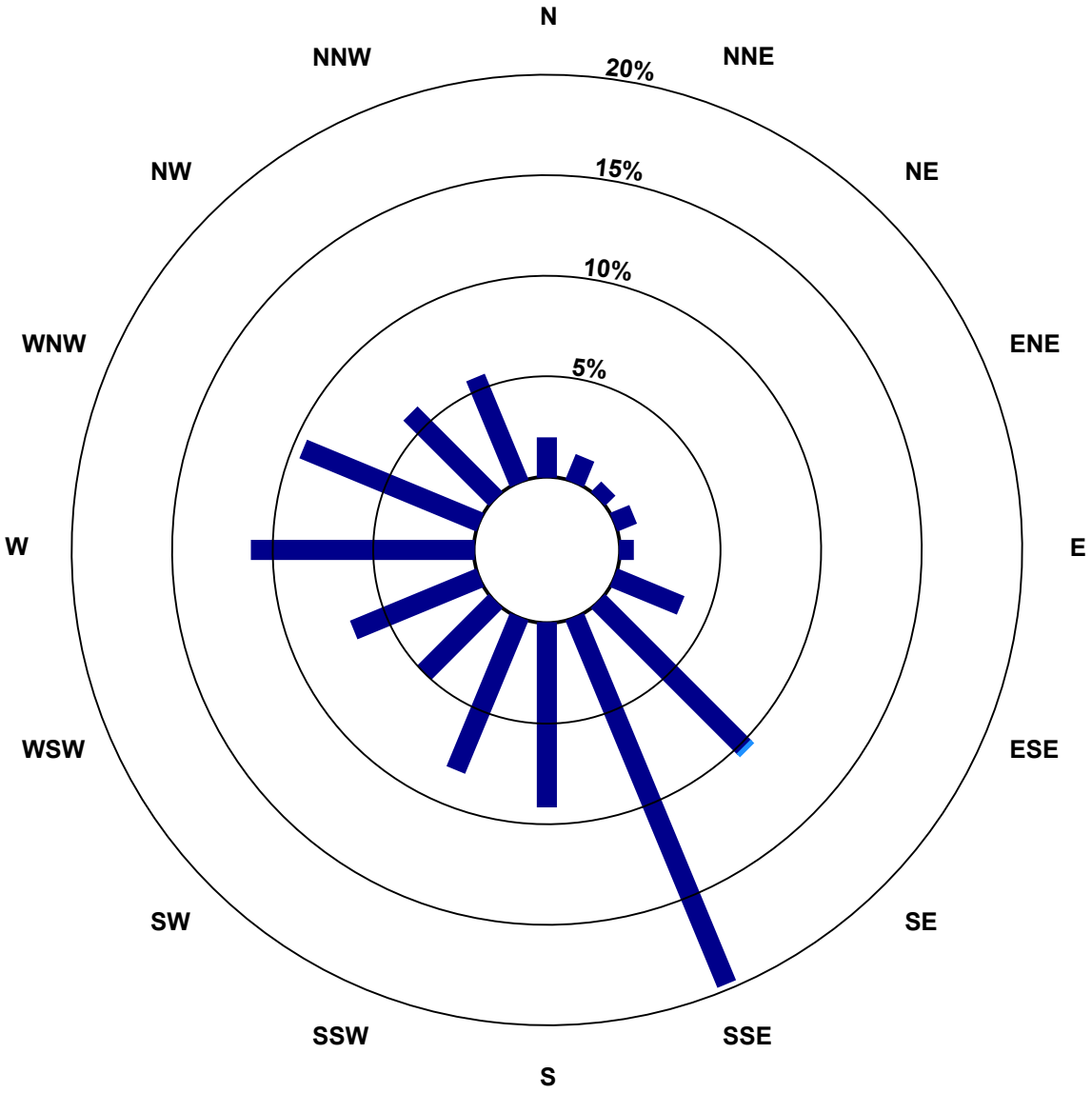
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Anzac



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

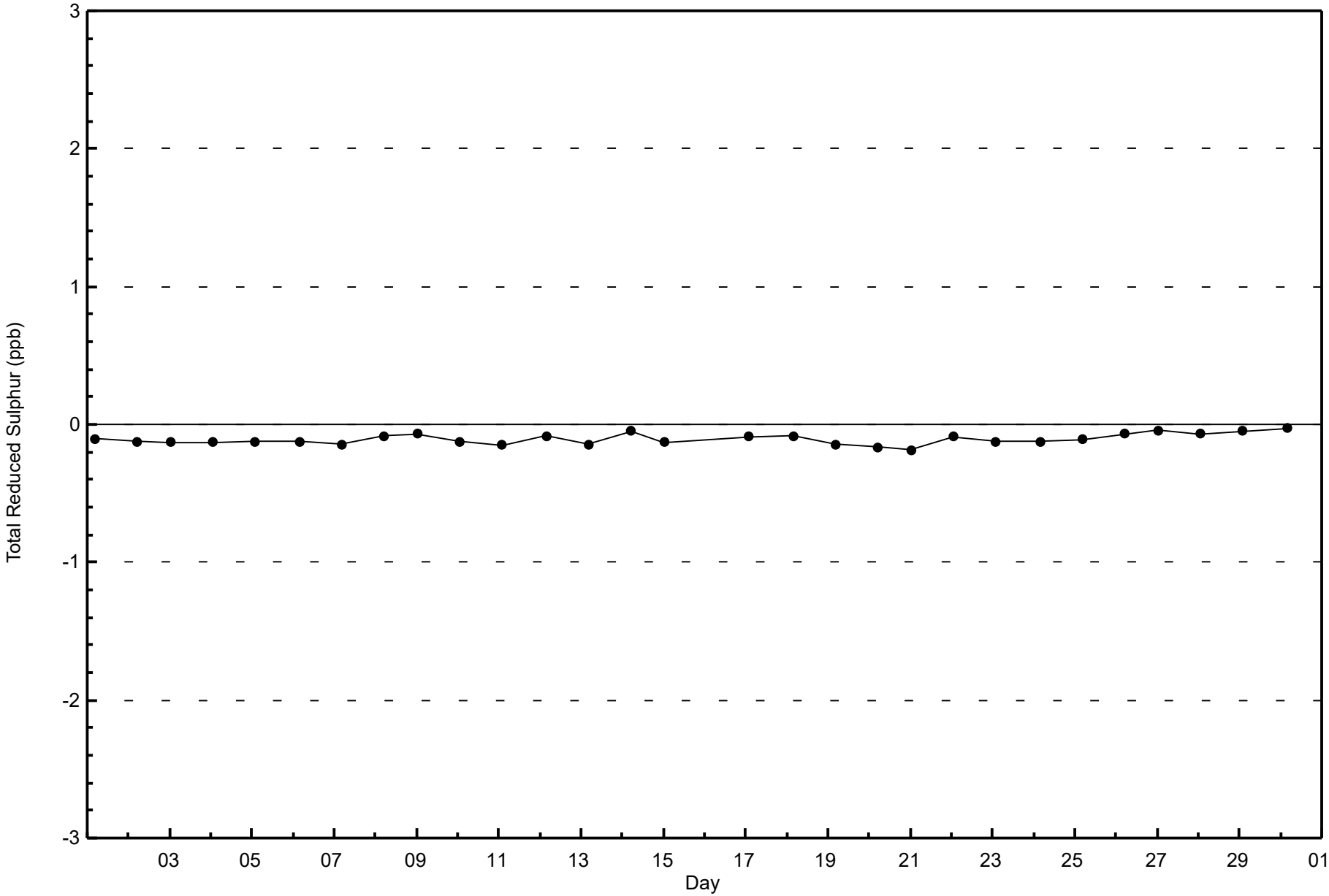
Total Number of Valid Hours: 625

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025

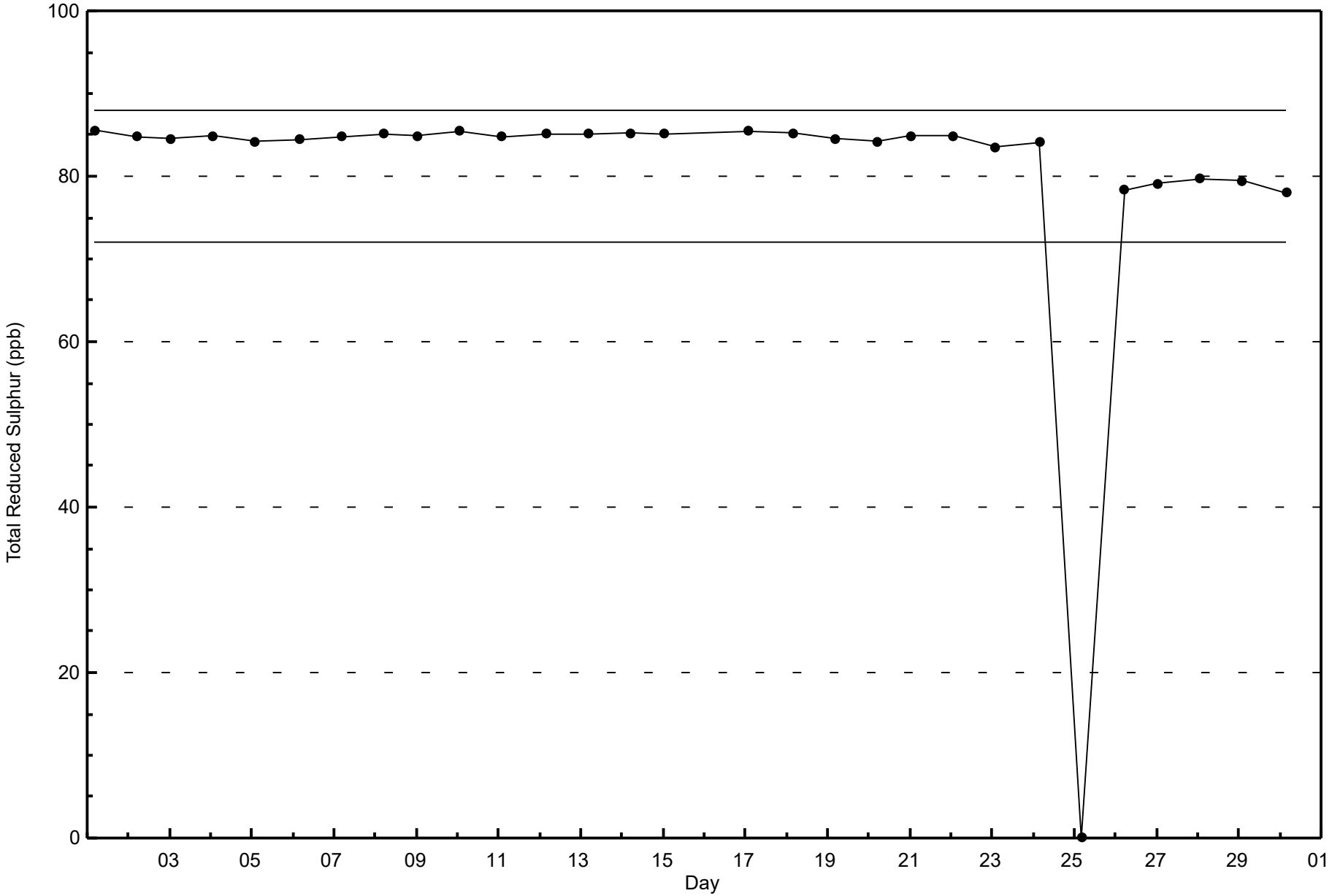


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Anzac - September 2025

Maximum Value: 2.2 ppm on Sep 30 17:00

Maximum Daily Average: 2.0 ppm on Sep 1

Minimum Value: 1.9 ppm on Sep 11 17:00

Minimum Daily Average: 1.9 ppm on Sep 23

Maximum Diurnal Average: 2.0 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 19

Monthly Average: 1.98 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} = 2.1

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.1	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	2.0	2.0	2.0	2.0	2.0	2.1
2-Sep	2.0	2.0	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	2.0	2.0	2.0	2.1
3-Sep	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	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-Sep	Z	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0
5-Sep	2.0	Z	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	2.0	2.0	2.0
6-Sep	2.0	2.0	Z	2.0	2.0	2.1	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	2.0	2.2
7-Sep	2.0	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-Sep	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1
9-Sep	2.0	2.1	2.1	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.0	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	2.0	2.1
10-Sep	Z	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0
11-Sep	2.0	Z	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	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
12-Sep	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
13-Sep	1.9	1.9	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1
14-Sep	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.1	2.1	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	2.1
15-Sep	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	M	M	2.0	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
16-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
17-Sep	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
18-Sep	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
19-Sep	2.0	2.0	2.0	Z	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	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0
20-Sep	2.0	2.0	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0
21-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0
22-Sep	Z	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	2.0	2.0	1.9	1.9	2.0
23-Sep	1.9	Z	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
24-Sep	1.9	2.0	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0
25-Sep	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	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	1.9	1.9	1.9	2.0	2.1
26-Sep	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0
27-Sep	2.0	2.0	2.0	1.9	1.9	Z	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	2.0	2.0	2.0	1.9	1.9	2.0
28-Sep	Z	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
29-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0
30-Sep	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	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	Diurnal Maximum	

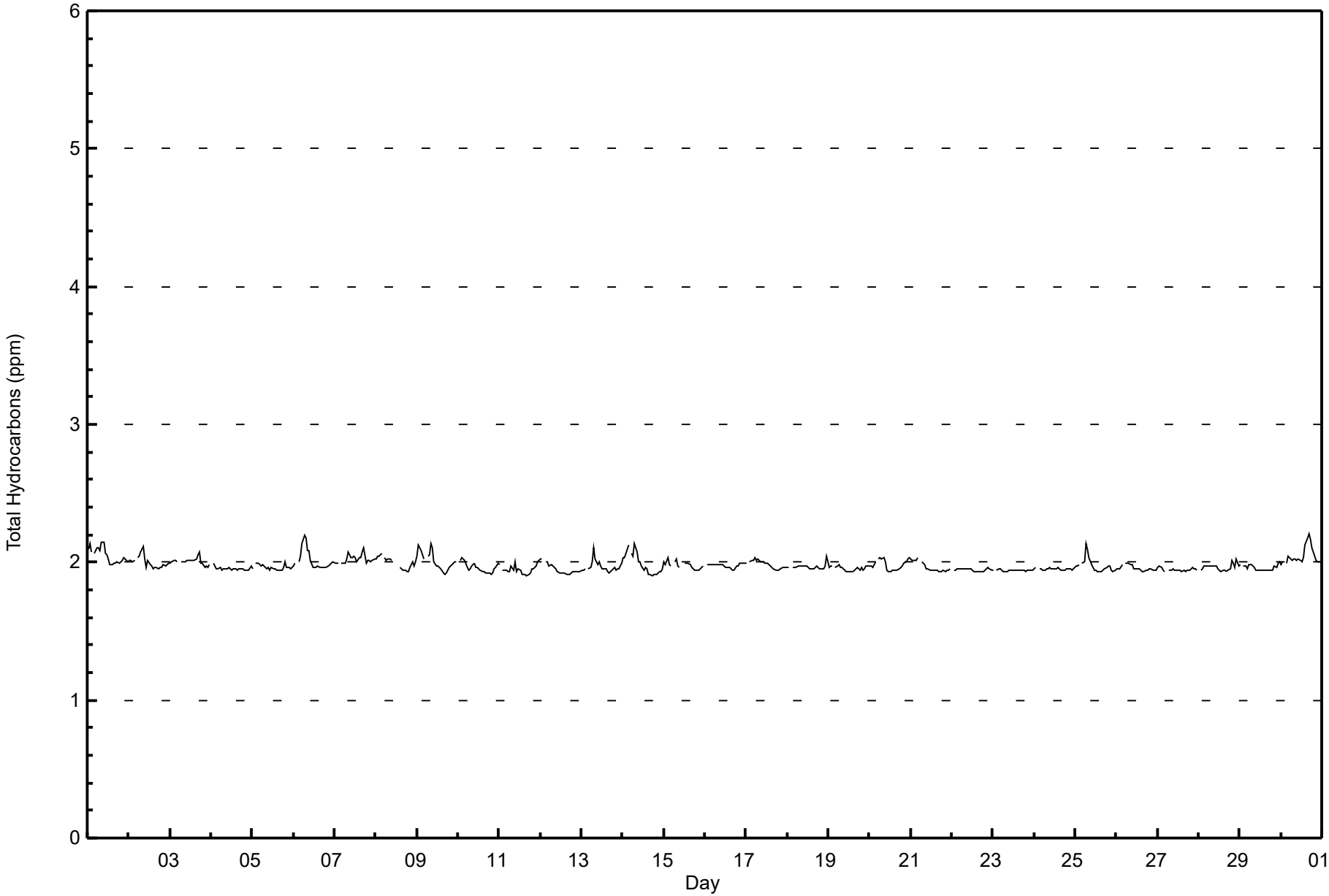
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Anzac - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Anzac - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	640	93.57	93.57
2.1 - 3.0	44	6.43	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Anzac - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	7	3	4	6	4	21	58	121	56	50	33	51	79	76	39	32	640
2.1 - 3.0	3	3	0	0	0	1	10	8	1	4	0	0	1	3	6	4	44
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	10	6	4	6	4	22	68	129	57	54	33	51	80	79	45	36	684

Total Number of Valid Hours: 684

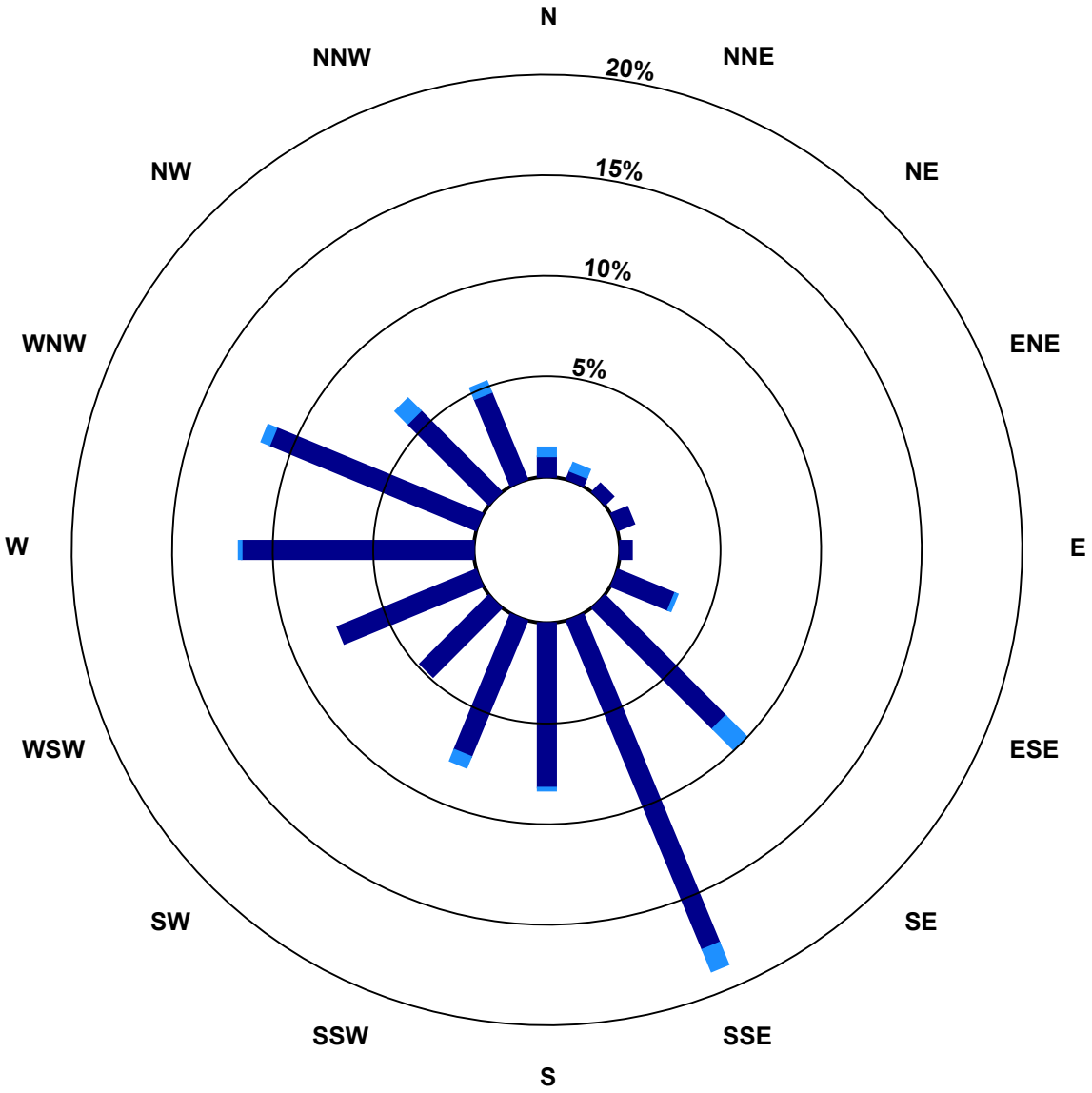
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Anzac



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

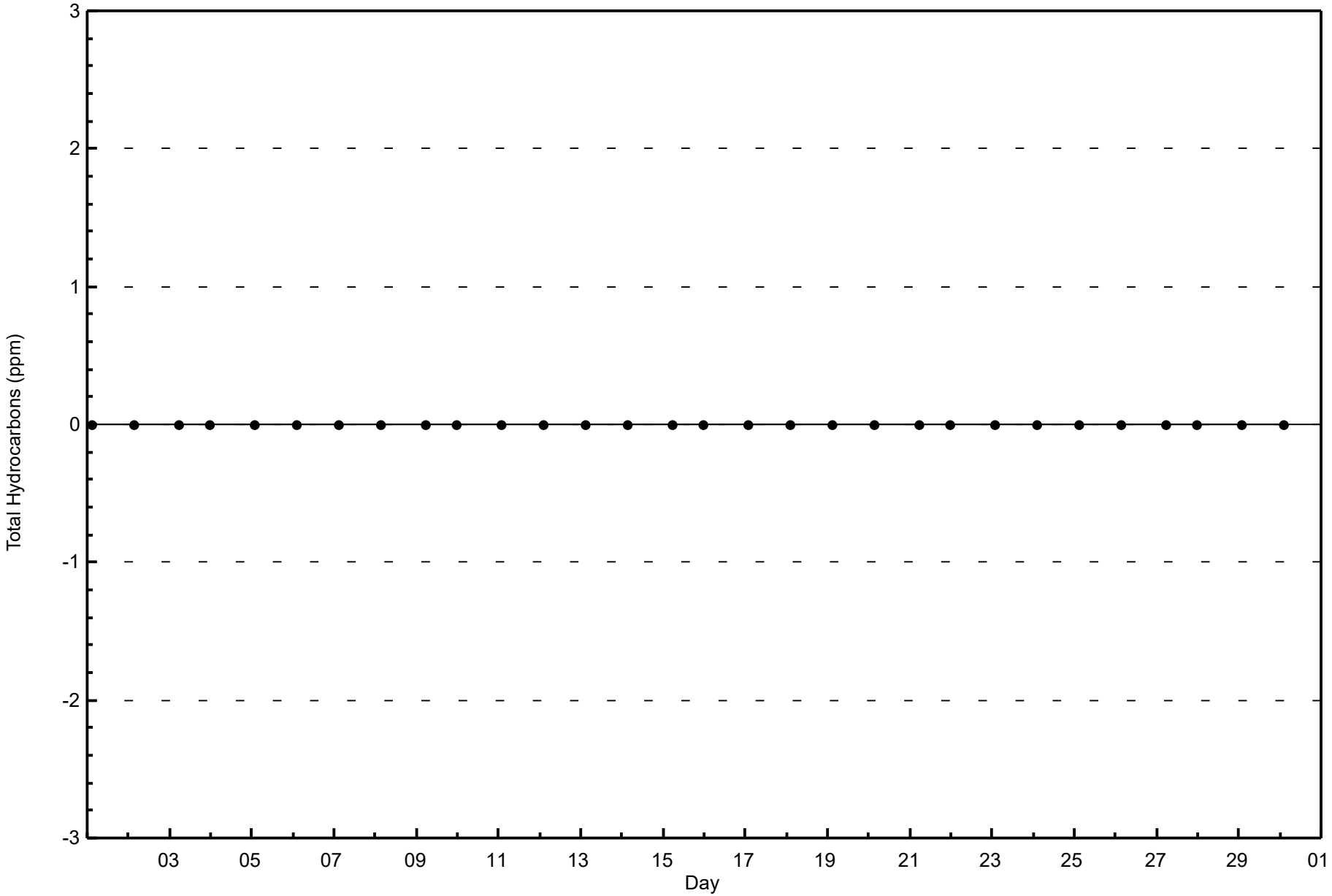
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Anzac - September 2025

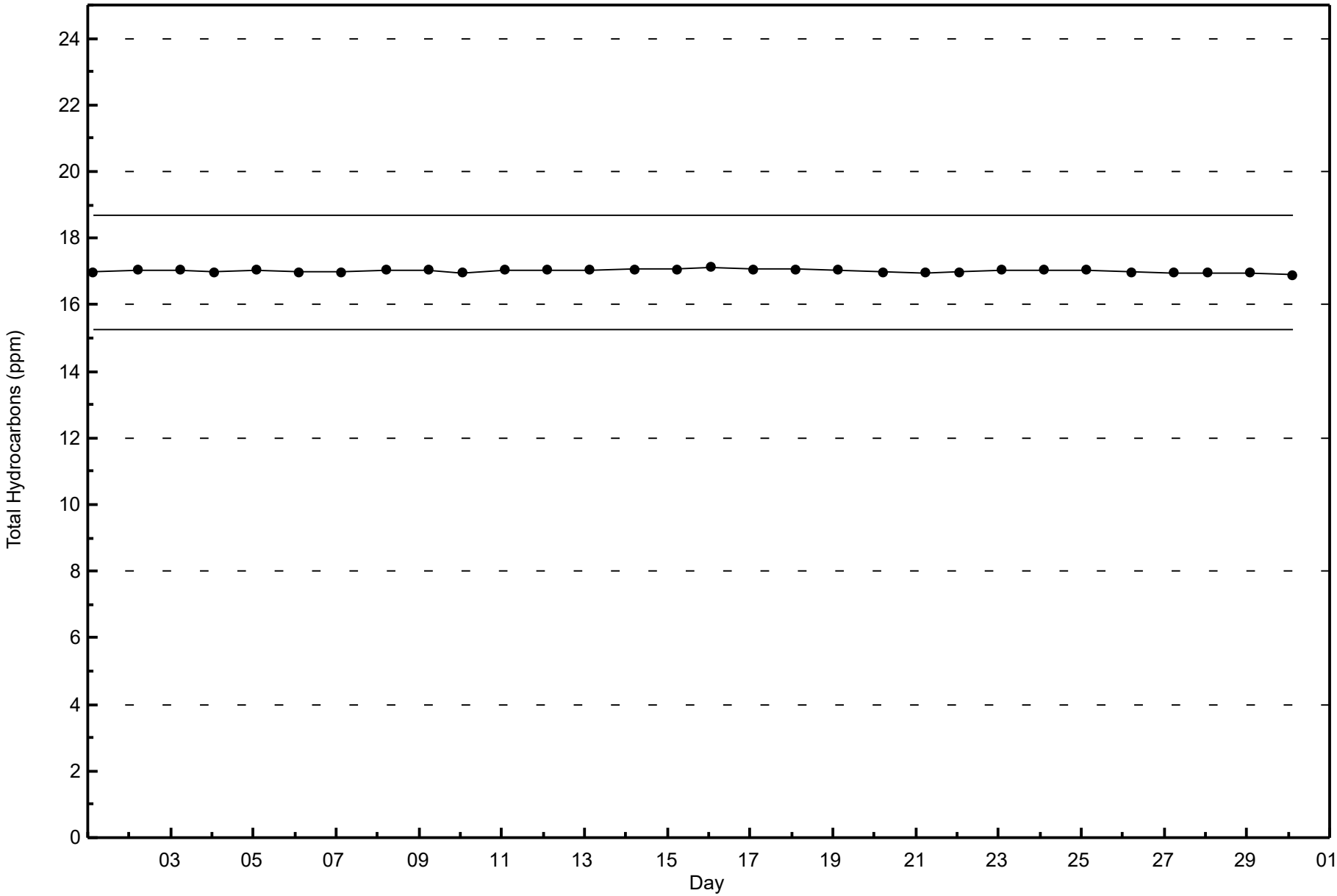


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025

Maximum Value: 0.019 ppm on Sep 6 10:00

Maximum Daily Average: 0.001 ppm on Sep 6

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.000 ppm on Sep 1

Maximum Diurnal Average: 0.001 ppm at hour 10

Minimum Diurnal Average: 0.000 ppm at hour 1

Monthly Average: 0.000 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 in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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
2-Sep	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
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	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
7-Sep	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
8-Sep	0.000	0.000	0.000	0.000	Z	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-Sep	0.000	0.000	0.005	0.007	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	0.007
10-Sep	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
11-Sep	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	0.000	0.001	0.014
12-Sep	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
13-Sep	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
14-Sep	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
15-Sep	0.000	0.000	0.000	0.000	0.000	Z	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	0.000
16-Sep	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
17-Sep	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
18-Sep	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
19-Sep	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
20-Sep	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
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	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
28-Sep	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
29-Sep	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
30-Sep	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	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	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Average	
	0.000	0.000	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Maximum	

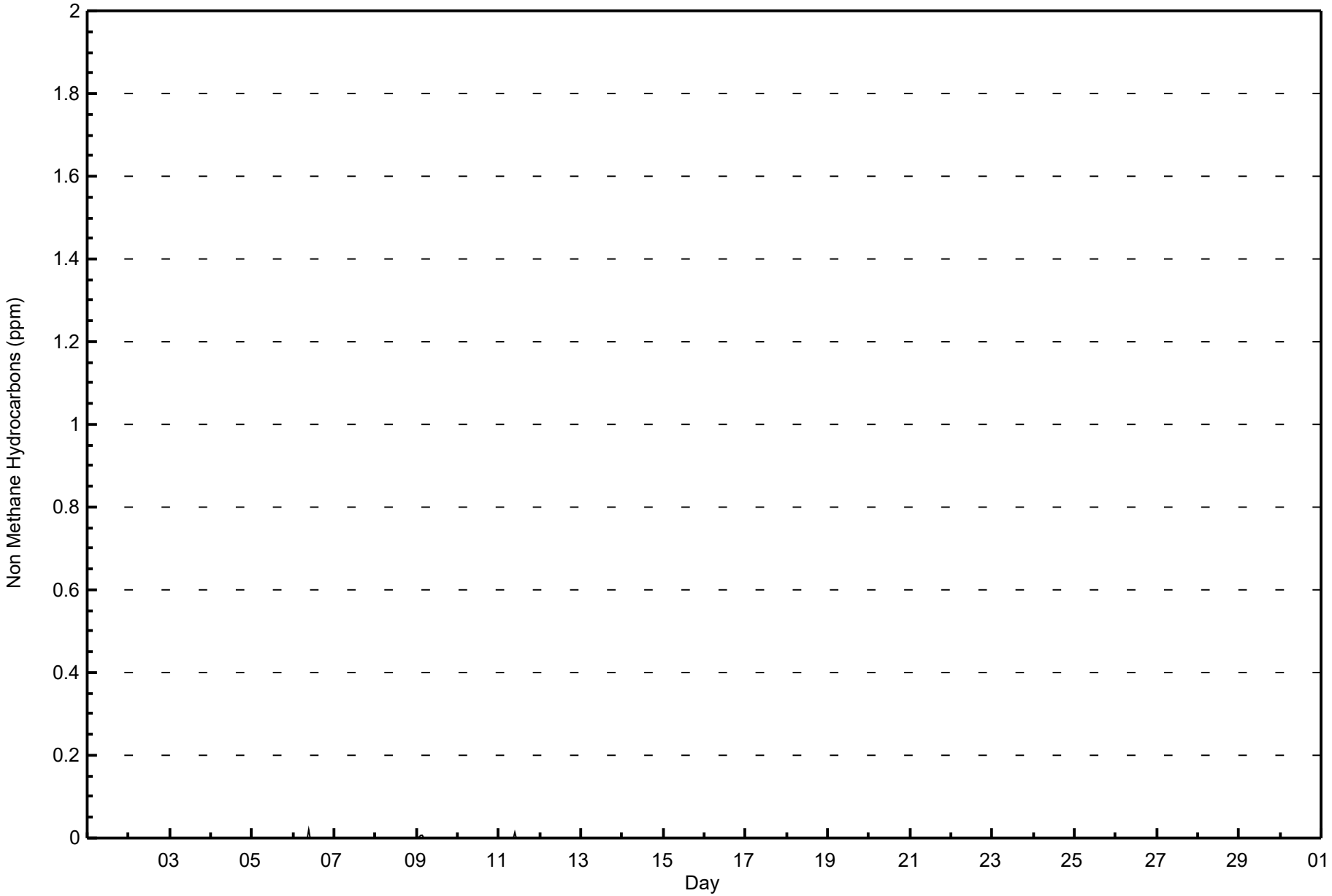
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	681	99.56	99.56
0.006 - 0.05	3	0.44	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	10	6	4	6	4	22	67	127	57	54	33	51	80	79	45	36	681
0.006 - 0.05	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	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	0	0	0	0
Totals	10	6	4	6	4	22	68	129	57	54	33	51	80	79	45	36	684

Total Number of Valid Hours: 684

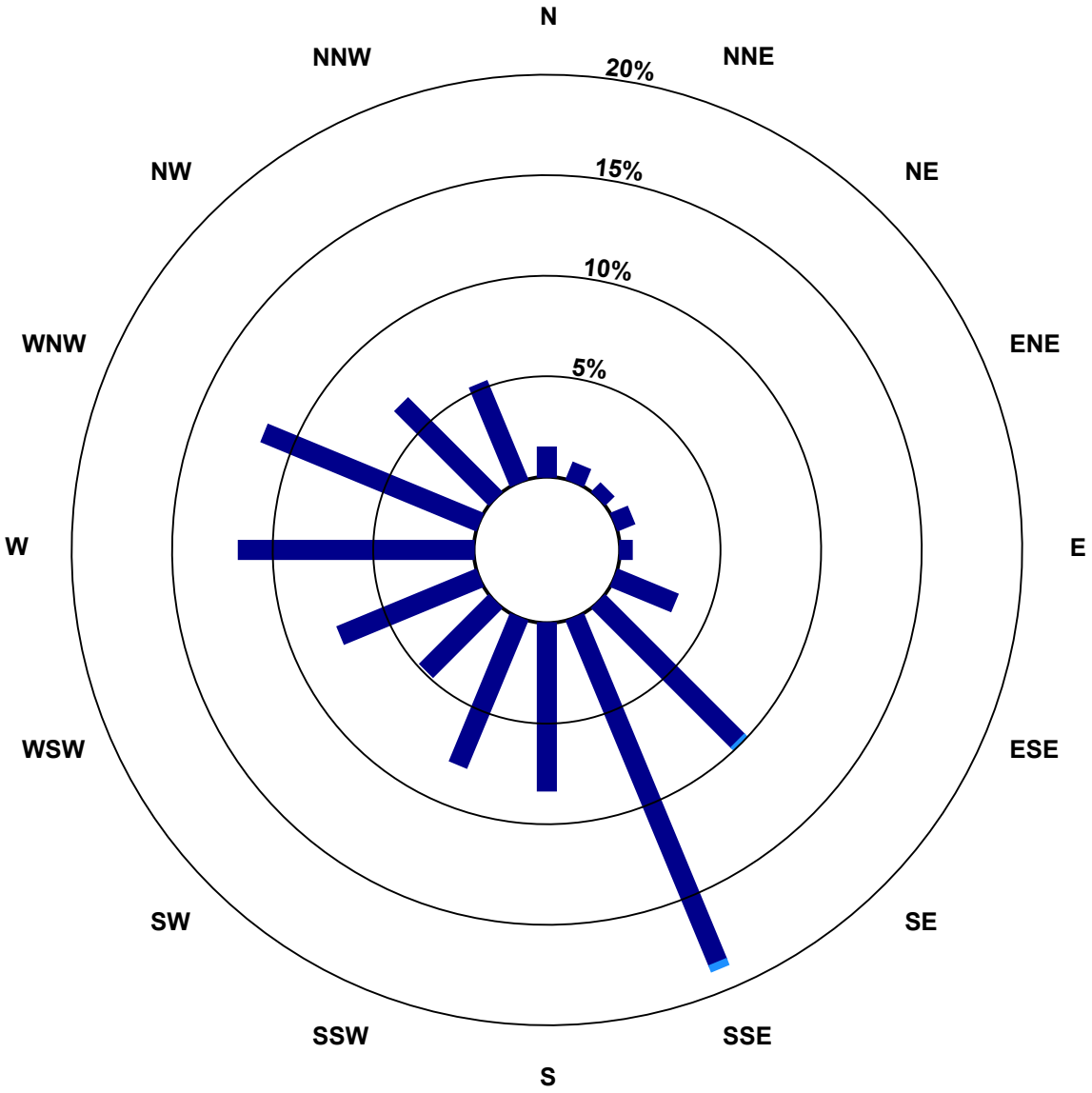
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Anzac



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

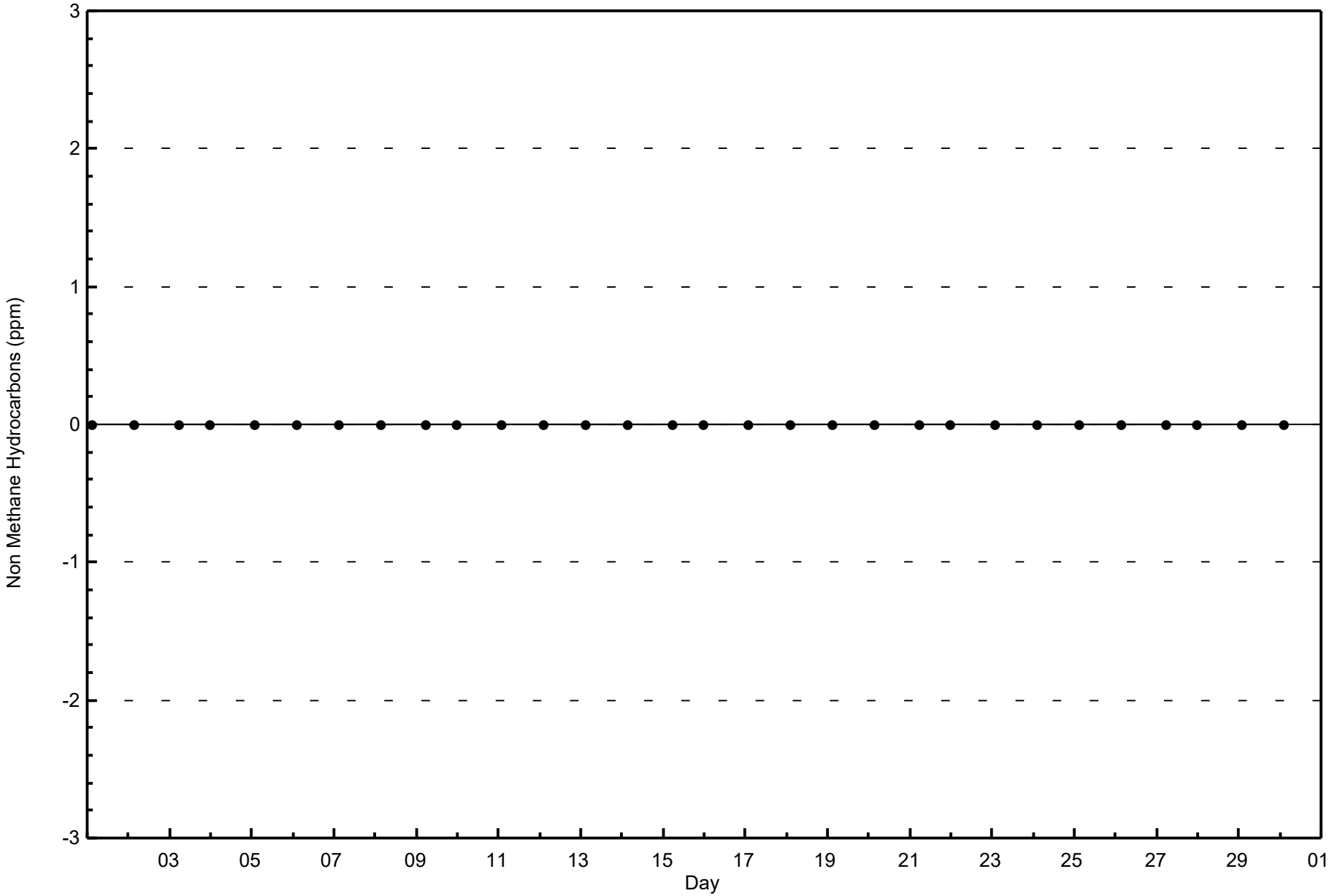
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025

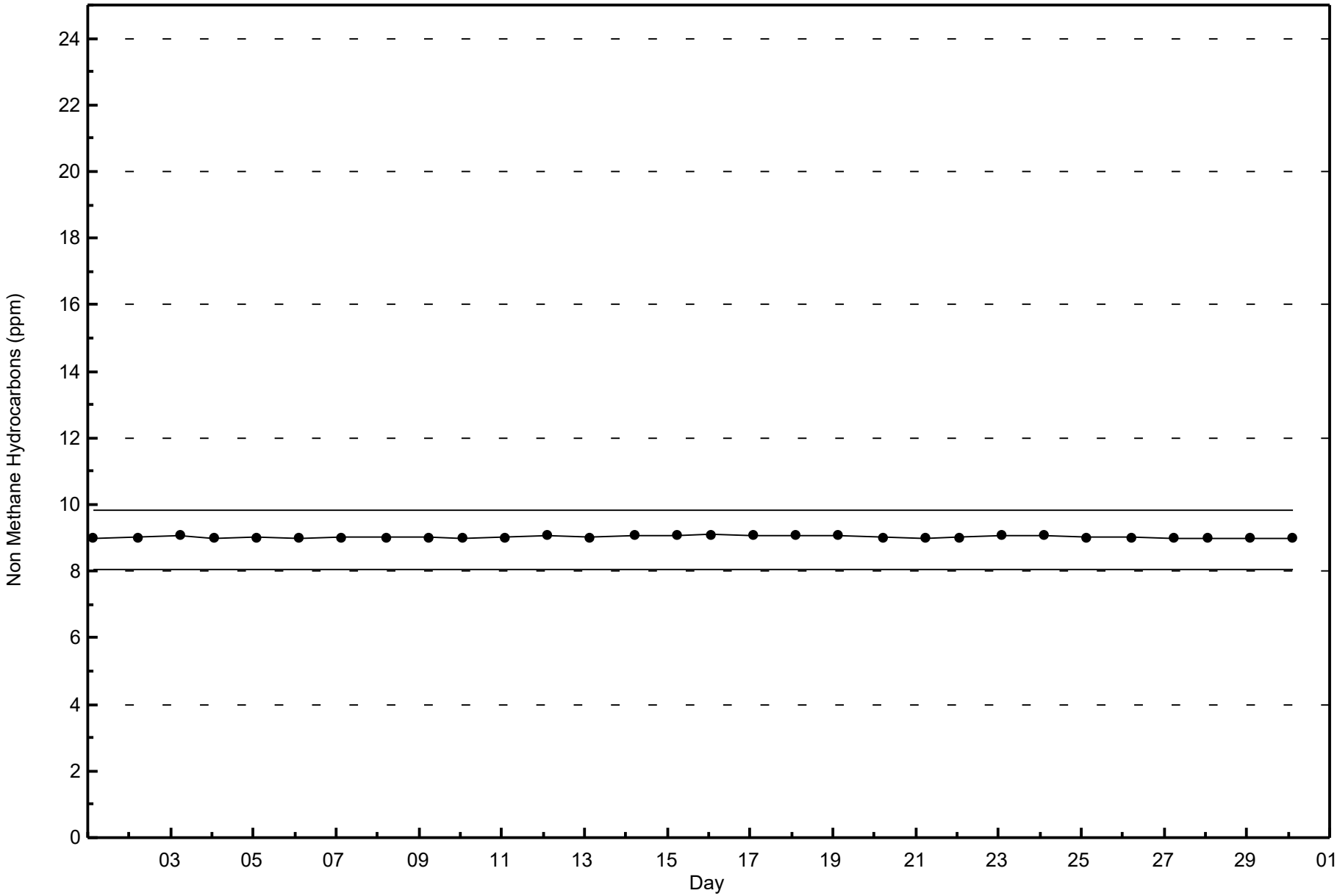


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.2 ppm on Sep 30 17:00

Maximum Daily Average: 2.0 ppm on Sep 1

Minimum Value: 1.9 ppm on Sep 11 17:00

Minimum Daily Average: 1.9 ppm on Sep 23

Maximum Diurnal Average: 2.0 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 19

Monthly Average: 1.98 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} = 2.1

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.1	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	2.0	2.0	2.0	2.0	2.0	2.1
2-Sep	2.0	2.0	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	2.0	2.0	2.0	2.1
3-Sep	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	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-Sep	Z	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0
5-Sep	2.0	Z	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	2.0	2.0	2.0
6-Sep	2.0	2.0	Z	2.0	2.0	2.1	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	2.0	2.2
7-Sep	2.0	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-Sep	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1
9-Sep	2.0	2.1	2.1	2.0	2.0	Z	2.0	2.1	2.1	2.1	2.0	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	2.0	2.1
10-Sep	Z	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0
11-Sep	2.0	Z	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0	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
12-Sep	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
13-Sep	1.9	1.9	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1
14-Sep	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.1	2.1	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	2.1
15-Sep	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	M	M	2.0	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
16-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
17-Sep	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
18-Sep	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
19-Sep	2.0	2.0	2.0	Z	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	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0
20-Sep	2.0	2.0	2.0	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0
21-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0
22-Sep	Z	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	2.0	2.0	1.9	1.9	2.0
23-Sep	1.9	Z	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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
24-Sep	1.9	2.0	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0
25-Sep	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	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	1.9	1.9	1.9	2.0	2.1
26-Sep	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	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.0	2.0
27-Sep	2.0	2.0	2.0	1.9	1.9	Z	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	2.0	2.0	2.0	1.9	1.9	2.0
28-Sep	Z	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
29-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0
30-Sep	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	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	Diurnal Maximum	

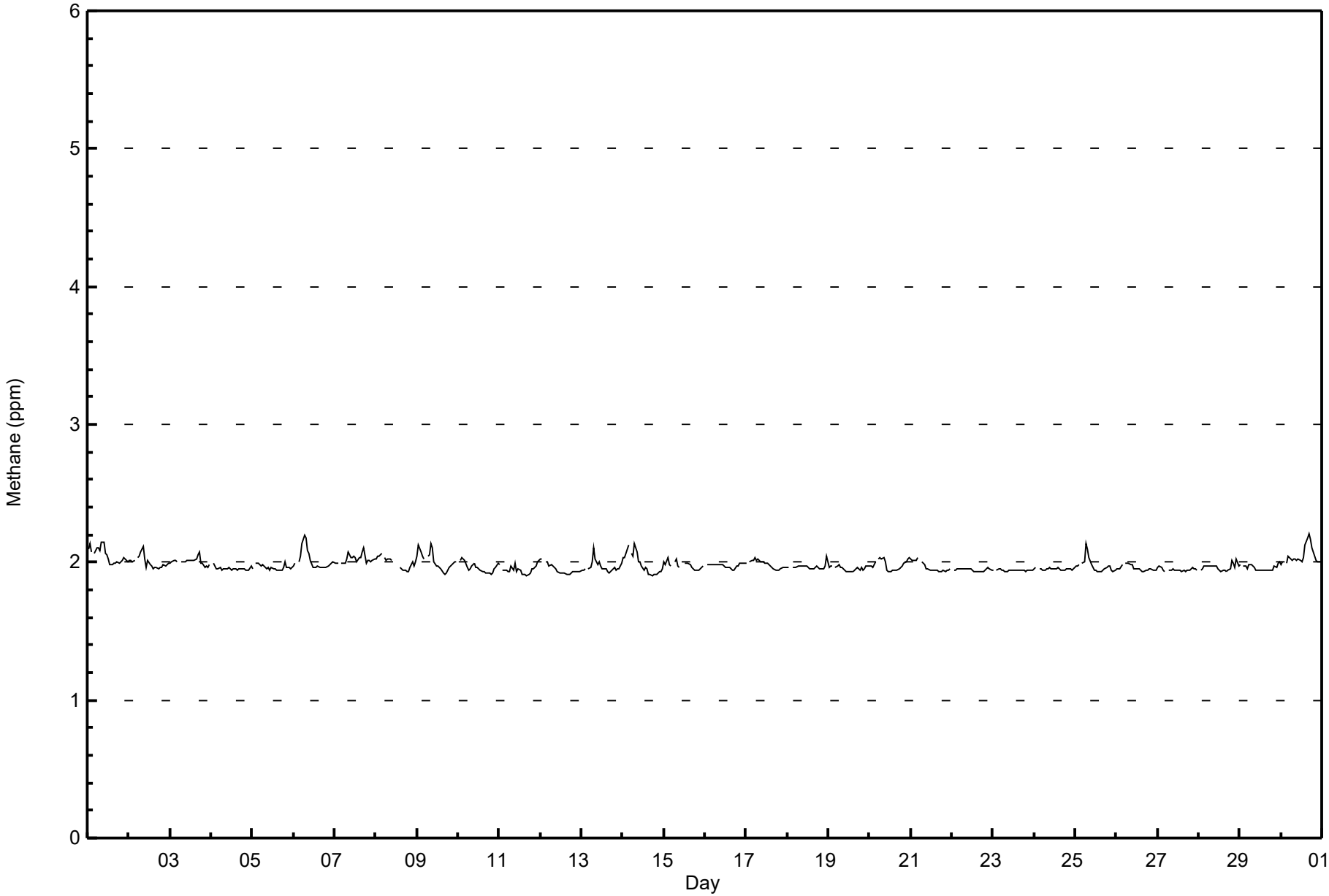
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Anzac - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	641	93.71	93.71
2.1 - 3.0	43	6.29	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Anzac - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	7	3	4	6	4	21	58	122	56	50	33	51	79	76	39	32	641
2.1 - 3.0	3	3	0	0	0	1	10	7	1	4	0	0	1	3	6	4	43
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	10	6	4	6	4	22	68	129	57	54	33	51	80	79	45	36	684

Total Number of Valid Hours: 684

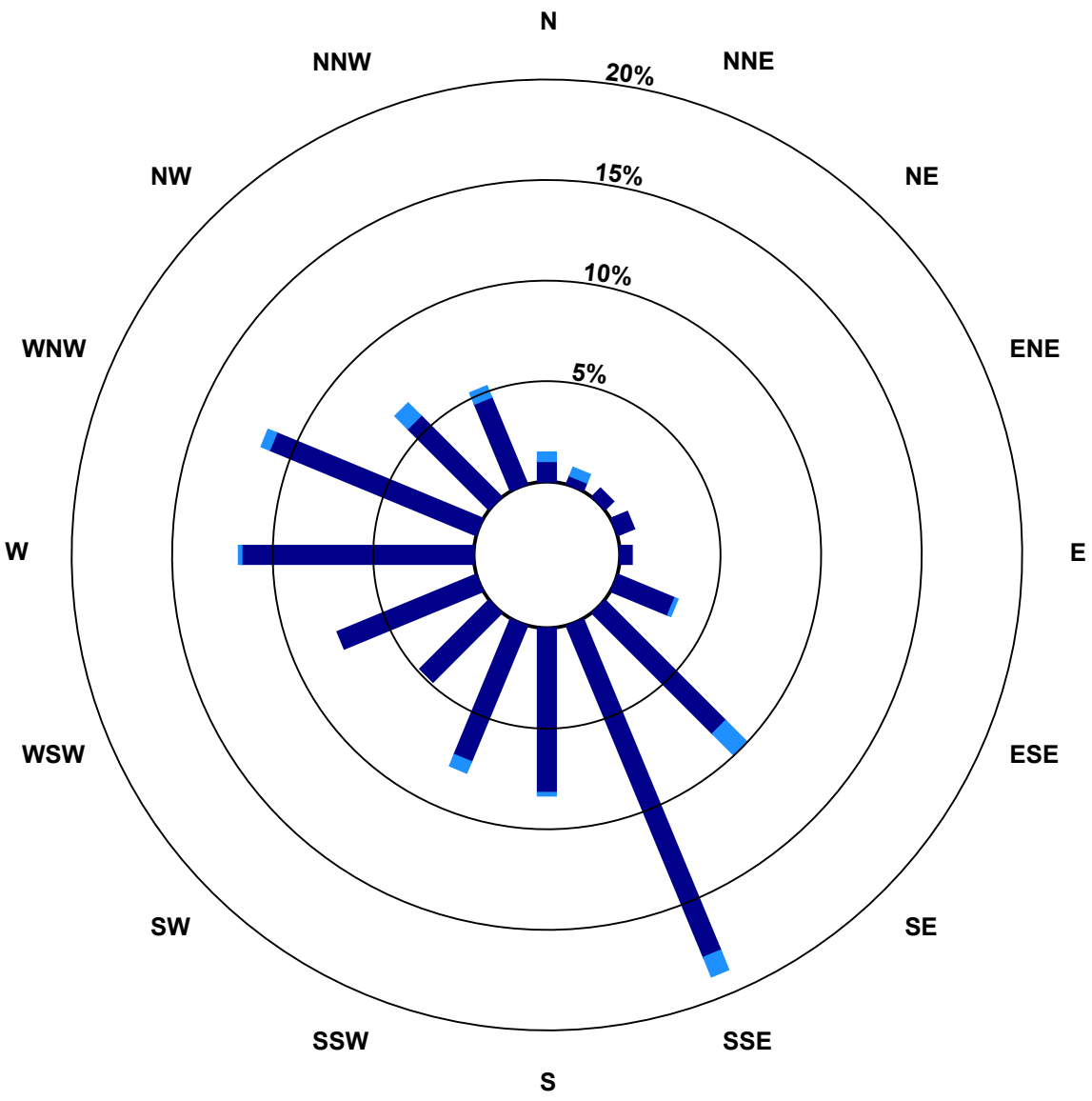
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Anzac



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

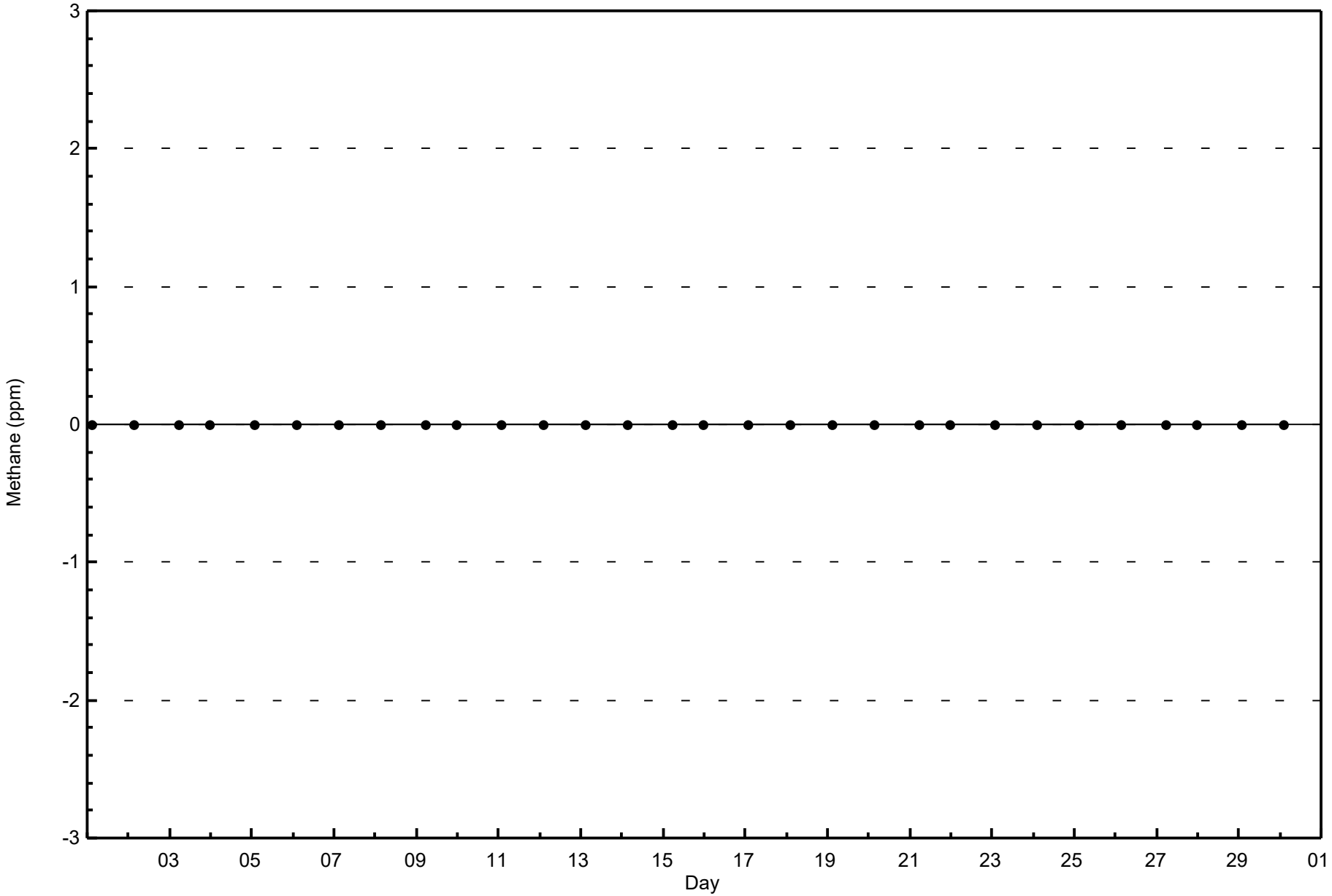
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Anzac - September 2025

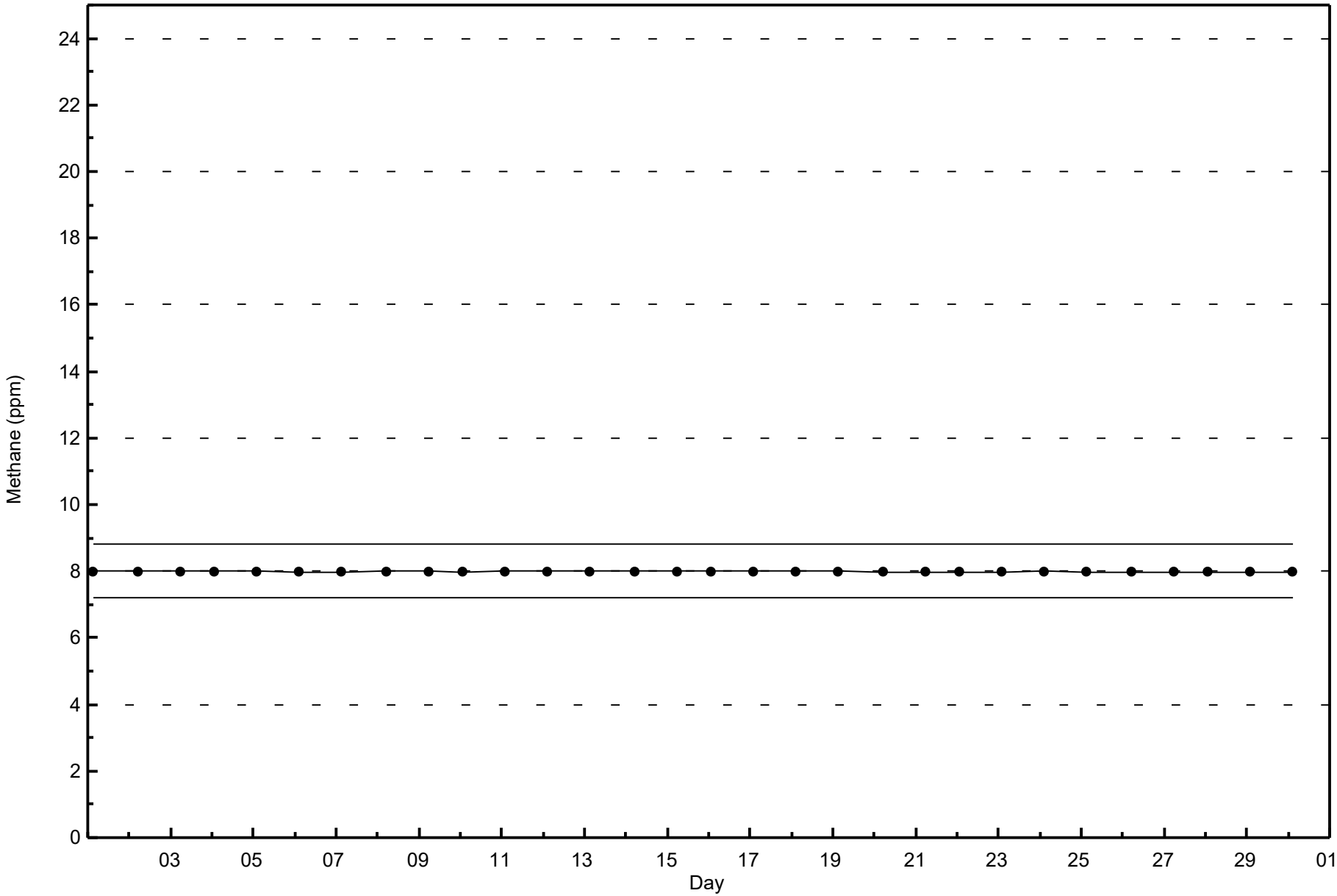


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Anzac - September 2025

Maximum Value: 31.3 ppb on Sep 19 08:00

Maximum Daily Average: 2.3 ppb on Sep 19

Minimum Value: 0.0 ppb on Sep 1 20:00

Minimum Daily Average: 0.0 ppb on Sep 28

Maximum Diurnal Average: 1.6 ppb at hour 8

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.30 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.6 P_{99} = 2.7

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.0	0.0	0.1	1.8	0.7	0.2	1.2	0.7	0.9	0.8	0.7	0.6	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.4	1.8
2-Sep	0.0	0.0	Z	0.0	0.0	0.2	0.7	2.0	3.5	1.0	0.2	1.0	1.9	2.1	1.7	0.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.5
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.9	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
4-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.8	0.9	0.6	0.5	0.6	0.5	0.6	0.4	0.4	0.1	0.0	0.3	0.0	0.0	0.0	0.3	0.9
5-Sep	0.0	0.0	0.0	0.1	0.5	Z	0.2	0.1	0.3	0.2	0.1	0.2	0.2	0.3	0.3	2.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0
6-Sep	Z	0.0	0.0	0.0	0.0	5.3	0.2	0.5	0.9	1.7	1.8	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.2	0.5	5.3
7-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.8	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.4	0.2	0.1	0.0	0.7	0.0	0.0	0.0	0.2	0.8
8-Sep	0.0	0.0	Z	0.1	2.5	0.1	0.3	0.8	1.0	0.9	1.2	1.4	1.7	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.5	2.5
9-Sep	0.0	0.0	0.1	Z	0.8	0.1	0.2	0.7	1.1	1.1	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.3	1.1
10-Sep	0.0	0.0	0.0	0.0	Z	0.0	1.6	0.2	0.1	0.2	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6
11-Sep	0.1	0.0	0.1	1.2	0.1	Z	0.1	5.4	0.7	0.8	0.3	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.4	5.4
12-Sep	Z	0.2	0.0	0.0	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	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
13-Sep	0.0	Z	0.0	0.2	0.1	0.0	0.1	0.2	0.2	0.3	1.7	1.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7
14-Sep	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.4	0.8	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	0.8
15-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.0	0.1	0.1	M	M	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	1.0
16-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	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	0.0	0.0	0.1	0.3
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.4	0.9	1.1	1.2	1.1	0.2	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.2
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	6.8	0.1	0.1	0.1	0.1	0.5	1.2	0.0	0.0	0.0	0.4	6.8
19-Sep	0.0	Z	0.0	0.0	0.1	1.8	17.2	31.3	1.1	0.4	0.1	0.1	0.0	0.1	0.0	0.0	0.7	0.2	0.1	0.2	0.1	0.0	0.0	0.0	2.3	31.3
20-Sep	0.0	1.3	Z	0.3	0.0	0.0	0.0	0.4	0.6	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	0.6	0.0	0.2	1.3
21-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	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
22-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.9	0.2	0.1	0.2	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	0.1	0.9
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	6.9	0.7	0.0	0.1	0.0	0.0	0.4	6.9
24-Sep	Z	0.0	0.0	0.0	1.2	0.0	0.1	1.4	0.1	0.1	0.2	0.1	1.2	0.1	0.1	0.1	0.0	0.1	0.0	1.8	0.6	0.0	0.0	0.0	0.3	1.8
25-Sep	0.0	Z	0.2	0.0	0.3	0.1	0.1	0.3	0.6	0.5	0.3	0.2	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.6
26-Sep	0.0	0.0	Z	0.0	0.8	0.1	0.6	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.8
27-Sep	0.0	0.0	0.0	Z	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.0	0.6	0.0	0.0	0.0	0.1	0.6
28-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.2	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	0.2
29-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.4	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	0.1	0.0	0.4
30-Sep	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.5	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.6
	0.0	0.1	0.0	0.1	0.3	0.4	0.8	1.6	0.5	0.4	0.4	0.3	0.3	0.2	0.4	0.2	0.1	0.1	0.3	0.1	0.2	0.0	0.0	0.0	Diurnal Average	
	0.2	1.3	0.2	1.2	2.5	5.3	17.2	31.3	3.5	1.7	1.8	1.4	1.9	2.1	6.8	2.0	0.7	0.4	6.9	1.8	1.2	0.1	0.6	0.2	Diurnal Maximum	

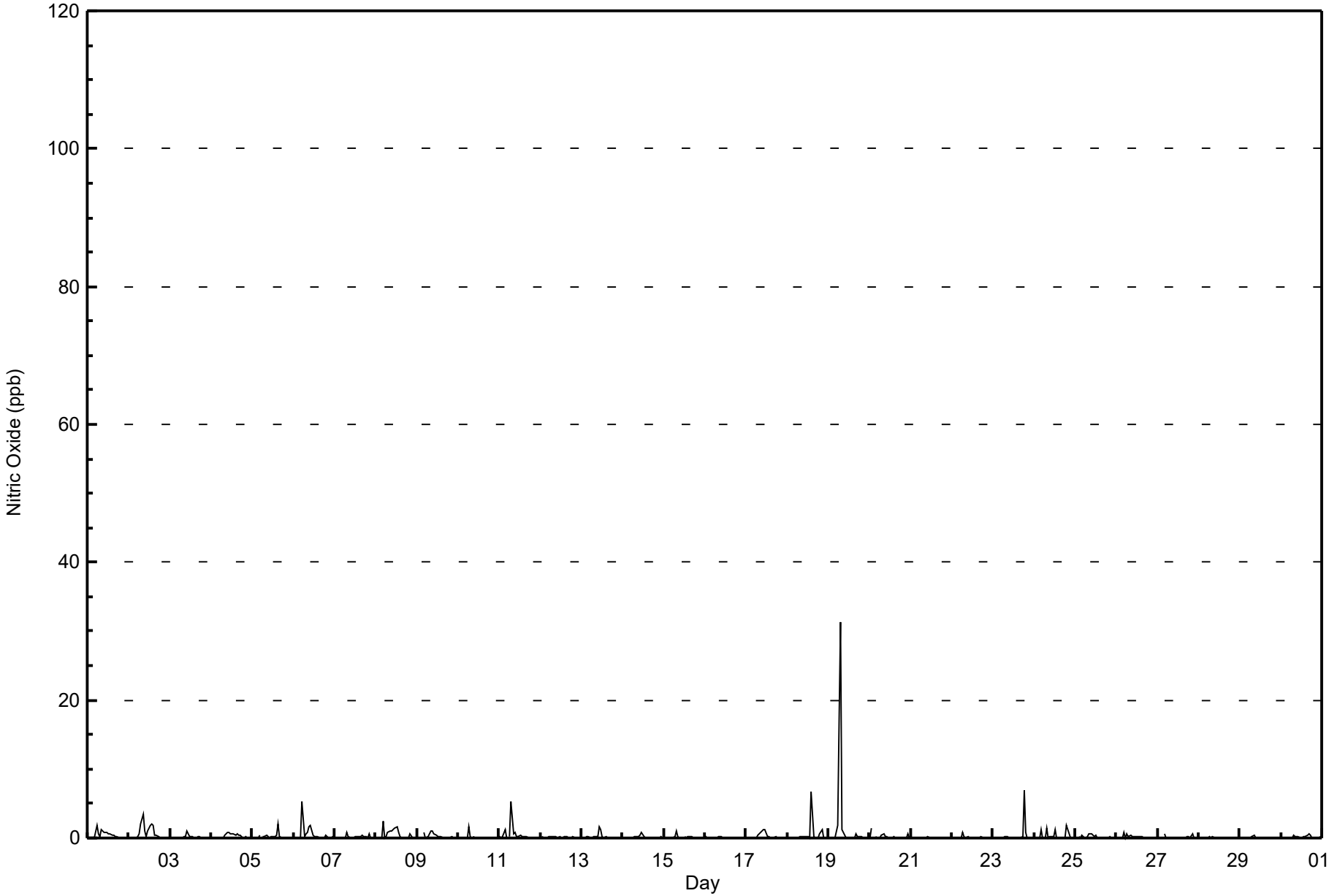
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Anzac - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	12	8	4	6	4	21	64	129	61	55	33	48	81	75	44	37	682
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	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	12	8	4	6	4	21	64	129	61	55	33	49	81	75	44	37	683

Total Number of Valid Hours: 683

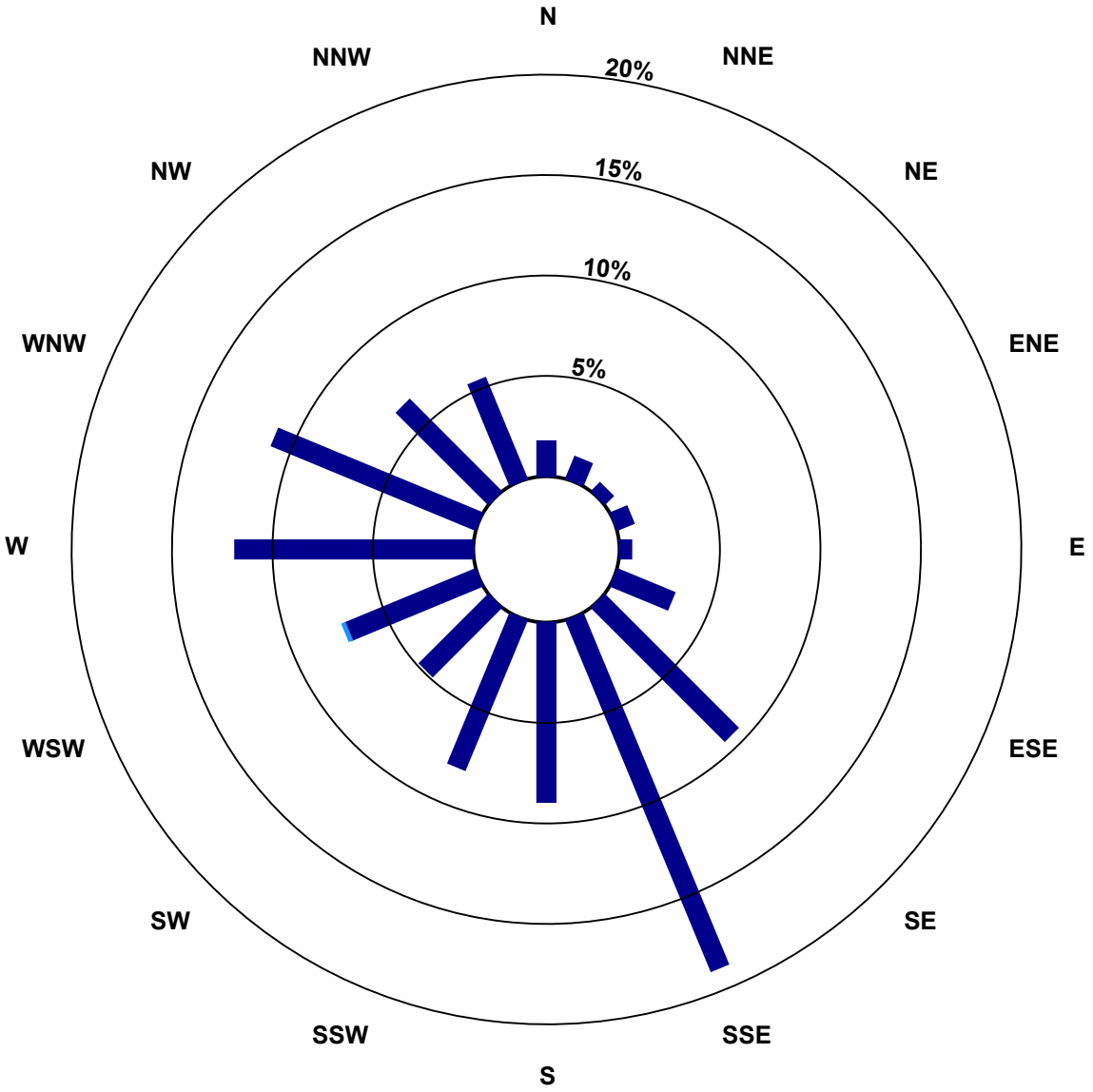
Total Number of Hours: 720

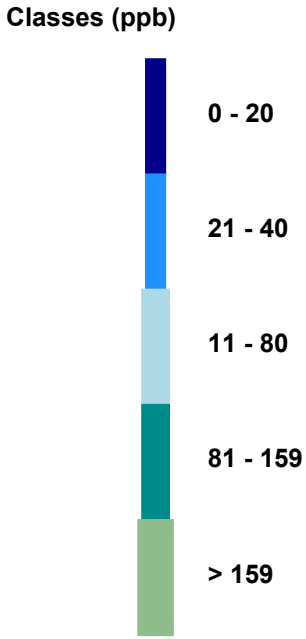
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Anzac





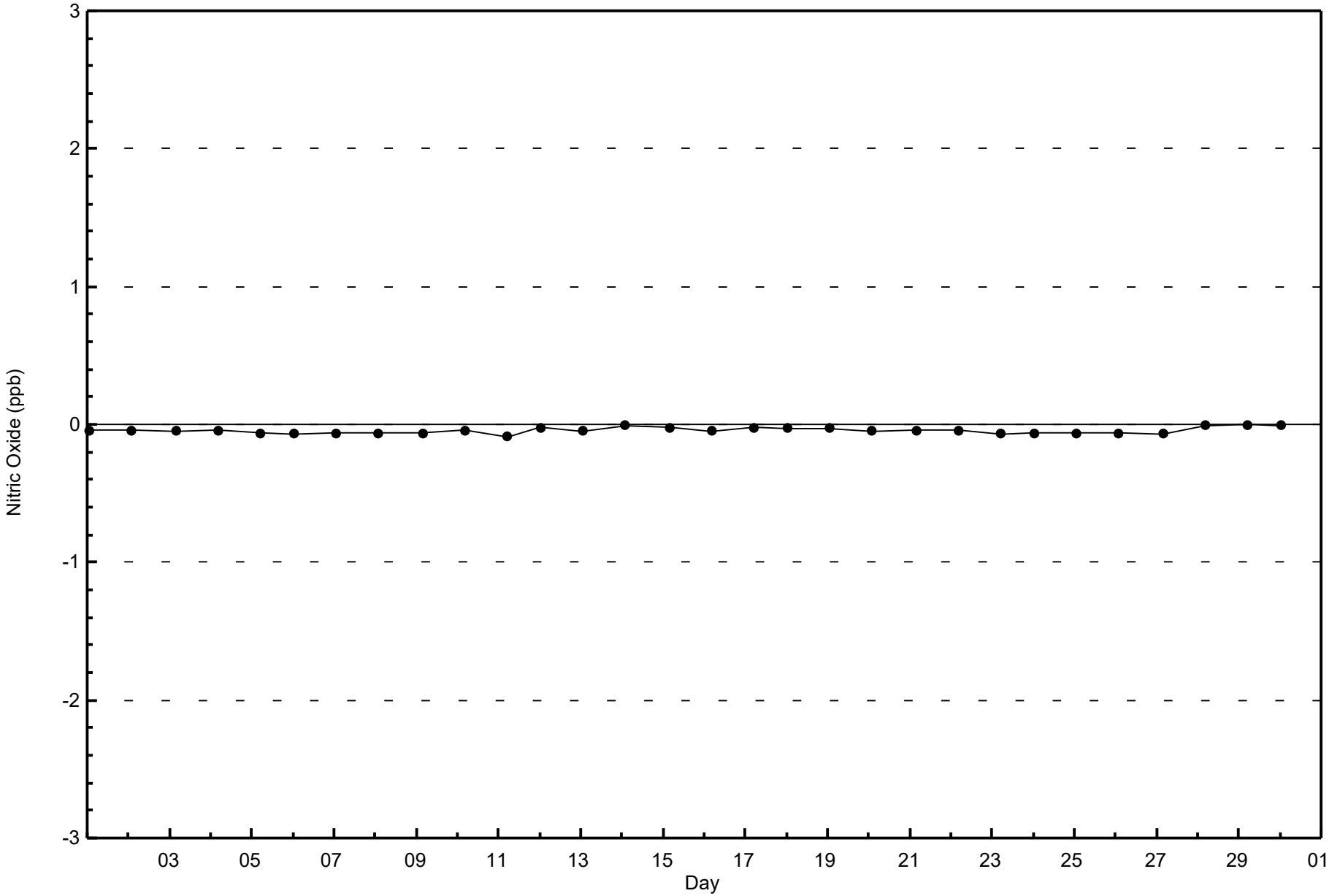
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Anzac - September 2025

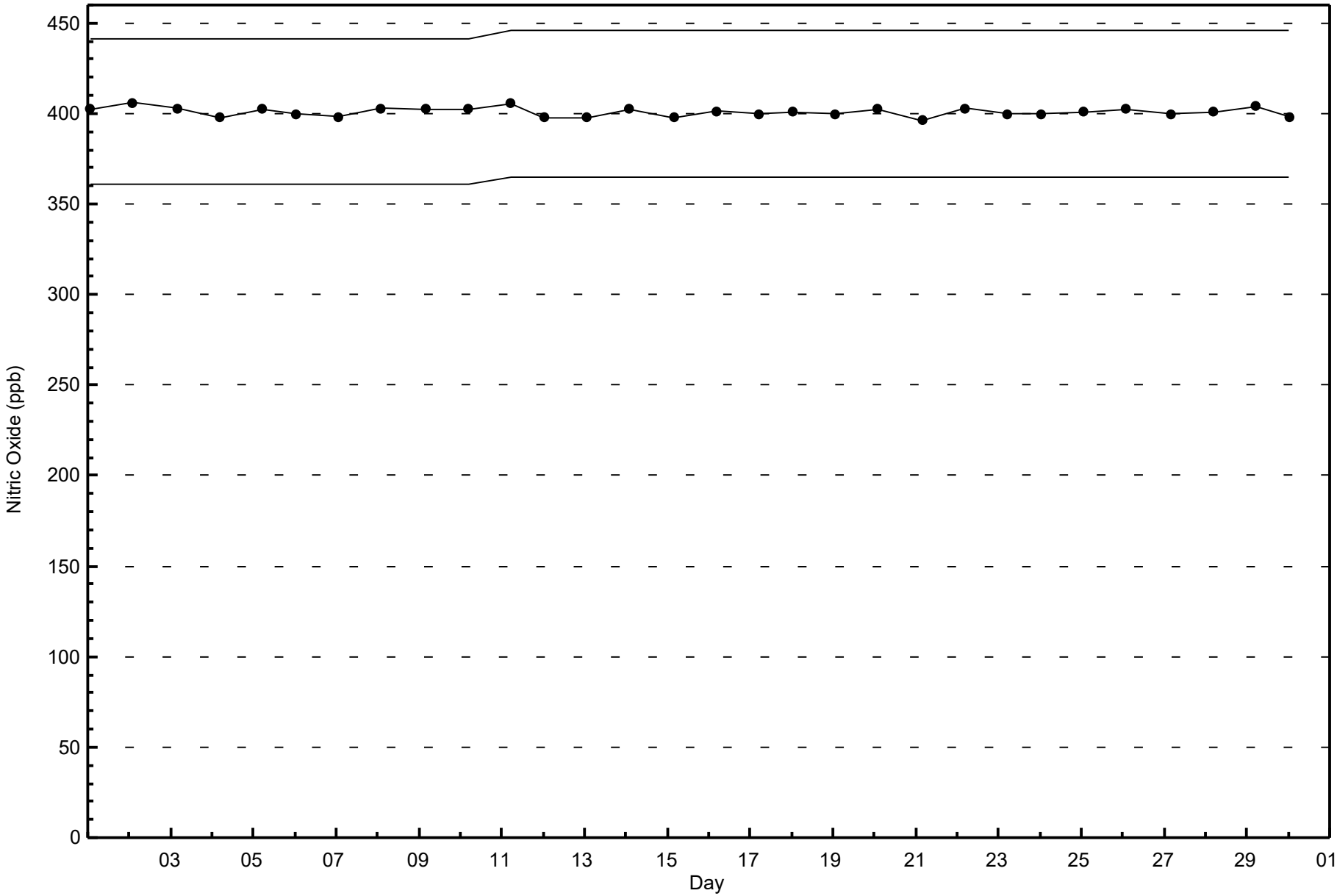


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 22.3 ppb on Sep 19 08:00 Maximum Daily Average: 3.3 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 23 19:00 Minimum Daily Average: 0.5 ppb on Sep 27
Maximum Diurnal Average: 2.6 ppb at hour 8 Minimum Diurnal Average: 1.1 ppb at hour 19
Monthly Average: 1.56 ppb Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 0.7 Median = 1.1 Q_3 = 1.9 P_{90} = 3.0 P_{99} = 7.4

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	Z	3.5	3.4	2.7	3.2	3.4	2.2	2.9	2.4	2.1	1.6	1.8	2.9	3.5	3.8	2.8	2.9	1.3	1.8	1.6	1.5	1.3	0.8	2.4	3.8
2-Sep	0.8	1.0	Z	3.8	4.1	2.2	2.6	5.0	6.5	3.1	1.1	3.2	5.1	4.1	1.9	2.0	2.7	1.5	0.7	0.6	0.7	0.8	0.8	1.1	2.4	6.5
3-Sep	1.5	1.3	1.5	Z	2.1	1.6	1.6	1.6	1.8	2.0	2.7	1.9	1.8	1.9	1.9	1.5	4.3	4.0	1.1	1.4	1.7	2.3	1.7	3.1	2.0	4.3
4-Sep	3.3	3.5	1.9	0.9	Z	1.0	0.7	0.8	1.6	2.4	2.3	2.0	1.8	2.0	2.2	2.1	2.2	3.0	1.4	0.6	0.9	0.5	0.6	0.7	1.7	3.5
5-Sep	0.6	0.8	0.6	0.6	1.0	Z	0.7	0.7	1.1	0.9	0.7	0.9	1.2	1.5	1.6	2.2	1.4	0.8	0.4	0.4	0.4	0.5	0.4	0.5	0.9	2.2
6-Sep	Z	1.0	0.8	0.5	0.7	1.8	0.8	1.6	2.3	3.5	4.2	1.6	1.5	1.4	1.6	1.0	1.1	0.9	1.4	1.7	1.2	1.6	1.0	1.9	1.5	4.2
7-Sep	1.2	Z	1.5	1.5	0.8	0.6	0.6	2.3	1.9	1.7	1.8	1.9	1.6	1.7	1.2	1.8	7.0	5.7	1.8	1.8	2.1	1.5	2.1	2.6	2.0	7.0
8-Sep	2.5	3.5	Z	6.6	7.3	3.4	2.5	3.3	3.3	2.6	3.0	3.4	2.5	1.7	0.7	0.4	0.4	0.3	0.3	0.3	0.9	0.6	0.7	1.2	2.2	7.3
9-Sep	1.3	3.9	4.5	Z	2.1	1.0	1.2	1.9	3.0	3.2	2.7	2.4	1.7	1.4	1.5	1.0	1.1	1.4	1.5	1.4	2.1	1.8	1.6	1.4	2.0	4.5
10-Sep	1.6	1.5	1.3	1.0	Z	1.2	2.1	1.6	1.1	0.9	C	C	C	C	C	0.7	0.3	0.3	0.2	0.5	0.5	0.7	0.8	0.8	1.0	2.1
11-Sep	0.8	0.8	0.7	5.3	2.6	Z	0.7	4.3	2.0	2.5	1.3	1.4	1.9	0.8	0.6	0.7	0.6	0.6	0.5	0.6	1.0	2.2	2.8	2.8	1.6	5.3
12-Sep	Z	3.2	2.9	1.7	1.6	2.2	2.4	2.1	1.5	1.6	0.9	0.8	0.7	0.8	1.0	1.1	0.9	0.9	0.8	1.7	1.1	1.0	0.8	0.7	1.4	3.2
13-Sep	1.0	Z	1.3	7.6	4.6	1.0	0.8	1.5	1.7	2.2	6.8	5.5	2.0	1.1	1.5	1.5	1.2	1.2	1.3	1.2	1.0	1.1	1.8	2.4	2.2	7.6
14-Sep	2.5	2.2	Z	2.2	2.1	1.6	1.3	2.2	1.9	1.6	2.6	3.8	1.4	1.0	0.9	0.9	1.4	1.7	0.3	0.7	1.2	1.1	2.7	1.5	1.7	3.8
15-Sep	1.1	1.1	0.9	Z	1.9	2.4	1.3	3.2	1.2	0.7	M	M	0.9	0.7	0.8	0.8	0.7	0.5	0.4	0.3	0.4	0.5	0.5	0.5	1.0	3.2
16-Sep	0.7	0.5	0.6	0.6	Z	1.0	0.9	0.8	1.5	0.9	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.7	1.0	1.0	0.8	1.1	1.4	0.8	1.5
17-Sep	1.3	1.2	1.2	1.0	1.1	Z	1.5	1.8	1.9	2.1	2.7	3.3	1.6	1.4	1.1	1.0	0.8	0.9	0.5	0.4	0.4	0.5	0.5	0.5	1.2	3.3
18-Sep	Z	1.4	1.7	1.9	1.9	1.9	1.9	1.7	1.3	1.1	1.0	1.0	1.1	1.0	7.0	1.0	1.0	1.2	1.9	2.4	3.6	1.4	1.1	0.9	1.8	7.0
19-Sep	0.6	Z	1.0	0.8	1.4	3.1	12.5	22.3	3.6	1.7	0.7	0.7	0.7	0.7	0.8	0.8	3.0	2.4	1.9	4.3	3.4	1.7	1.0	0.8	3.0	22.3
20-Sep	0.8	6.8	Z	1.7	0.9	0.9	1.1	2.3	3.2	2.0	2.3	1.1	1.0	0.9	0.9	0.8	1.0	1.1	1.1	1.2	1.2	1.6	2.5	2.0	1.7	6.8
21-Sep	2.3	2.6	2.4	Z	1.7	1.2	1.0	0.9	0.9	0.8	1.0	0.6	0.6	0.4	0.4	0.4	0.4	0.3	0.5	0.6	0.5	0.6	0.5	0.6	0.9	2.6
22-Sep	0.6	0.5	0.5	0.6	Z	0.8	1.6	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.8	0.6	1.1	2.3	1.3	1.1	1.3	0.8	2.3
23-Sep	0.9	1.0	1.0	1.2	1.1	Z	1.0	1.1	1.0	0.6	0.6	0.6	0.4	0.3	0.4	0.4	0.5	0.9	0.0	1.1	0.7	0.7	0.6	0.7	0.7	1.2
24-Sep	Z	0.9	0.9	1.0	1.6	0.7	0.9	2.8	0.9	0.8	0.6	0.5	0.5	0.5	0.6	0.3	0.4	0.7	1.0	2.9	2.2	1.4	1.2	0.9	1.1	2.9
25-Sep	1.1	Z	1.8	1.2	1.8	1.0	1.8	2.2	2.8	2.1	1.7	1.0	1.1	0.5	0.5	0.6	1.2	2.0	1.8	2.4	1.9	1.2	0.7	0.6	1.4	2.8
26-Sep	0.6	0.7	Z	1.5	1.8	1.2	1.6	1.3	1.3	1.2	1.1	0.8	0.7	0.7	0.6	0.6	0.4	0.6	1.0	1.1	1.3	0.7	0.5	0.6	1.0	1.8
27-Sep	0.5	0.4	0.3	Z	0.9	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	1.6	1.5	0.6	1.6	0.4	0.2	0.2	0.5	1.6
28-Sep	0.1	0.3	0.3	0.5	Z	0.9	0.9	0.7	0.7	0.6	0.5	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.6	0.5	3.5	0.7	0.5	3.5
29-Sep	0.8	0.9	0.8	0.6	1.7	Z	4.3	3.3	2.3	0.3	0.3	0.3	0.4	0.6	1.0	1.1	1.0	0.9	0.9	0.8	5.8	6.2	7.7	4.6	2.0	7.7
30-Sep	Z	7.1	5.5	1.9	1.4	2.0	1.4	2.4	2.6	2.0	1.1	1.1	1.5	2.9	6.6	8.0	8.3	8.0	5.6	3.3	1.0	0.8	0.7	0.9	3.3	8.3
	1.2	1.9	1.6	2.0	2.0	1.5	1.9	2.6	2.0	1.6	1.7	1.5	1.3	1.2	1.4	1.3	1.6	1.6	1.1	1.3	1.5	1.3	1.4	1.3	Diurnal Average	
	3.3	7.1	5.5	7.6	7.3	3.4	12.5	22.3	6.5	3.5	6.8	5.5	5.1	4.1	7.0	8.0	8.3	8.0	5.6	4.3	5.8	6.2	7.7	4.6	Diurnal Maximum	

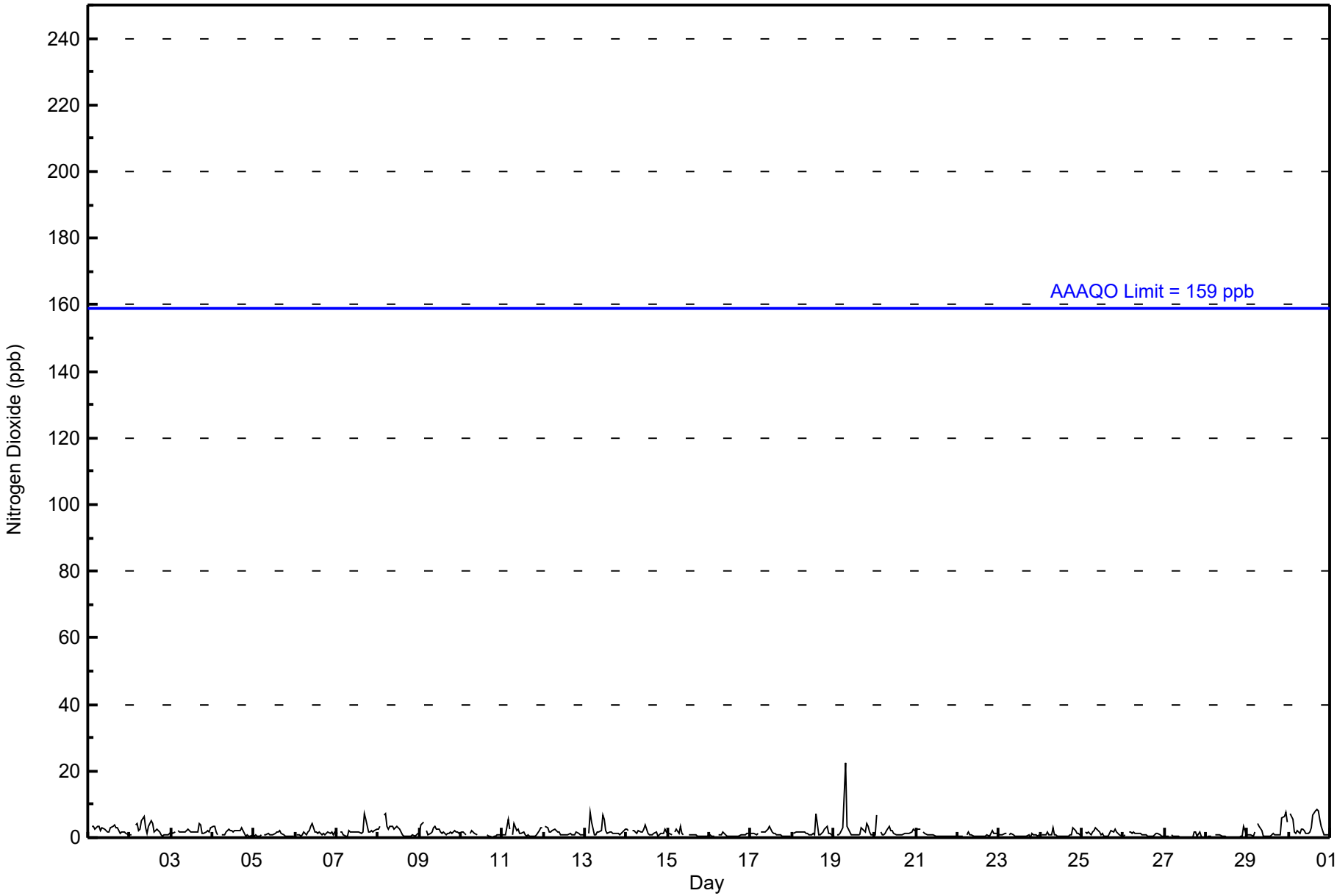
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - September 2025



Nitrogen Dioxide (NO_2) - ppb
Anzac - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	12	8	4	6	4	21	64	129	61	55	33	48	81	75	44	37	682
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	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	12	8	4	6	4	21	64	129	61	55	33	49	81	75	44	37	683

Total Number of Valid Hours: 683

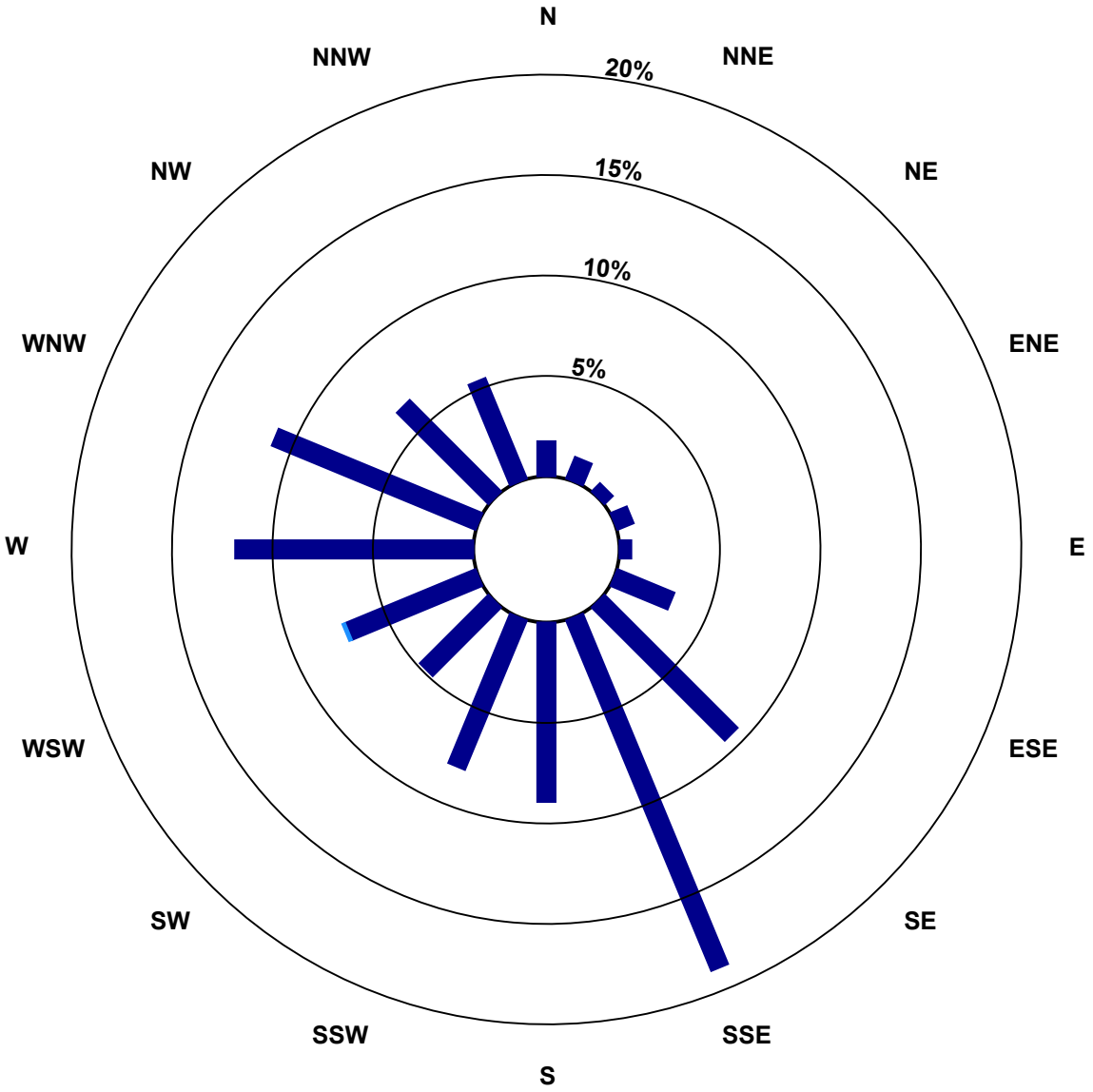
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

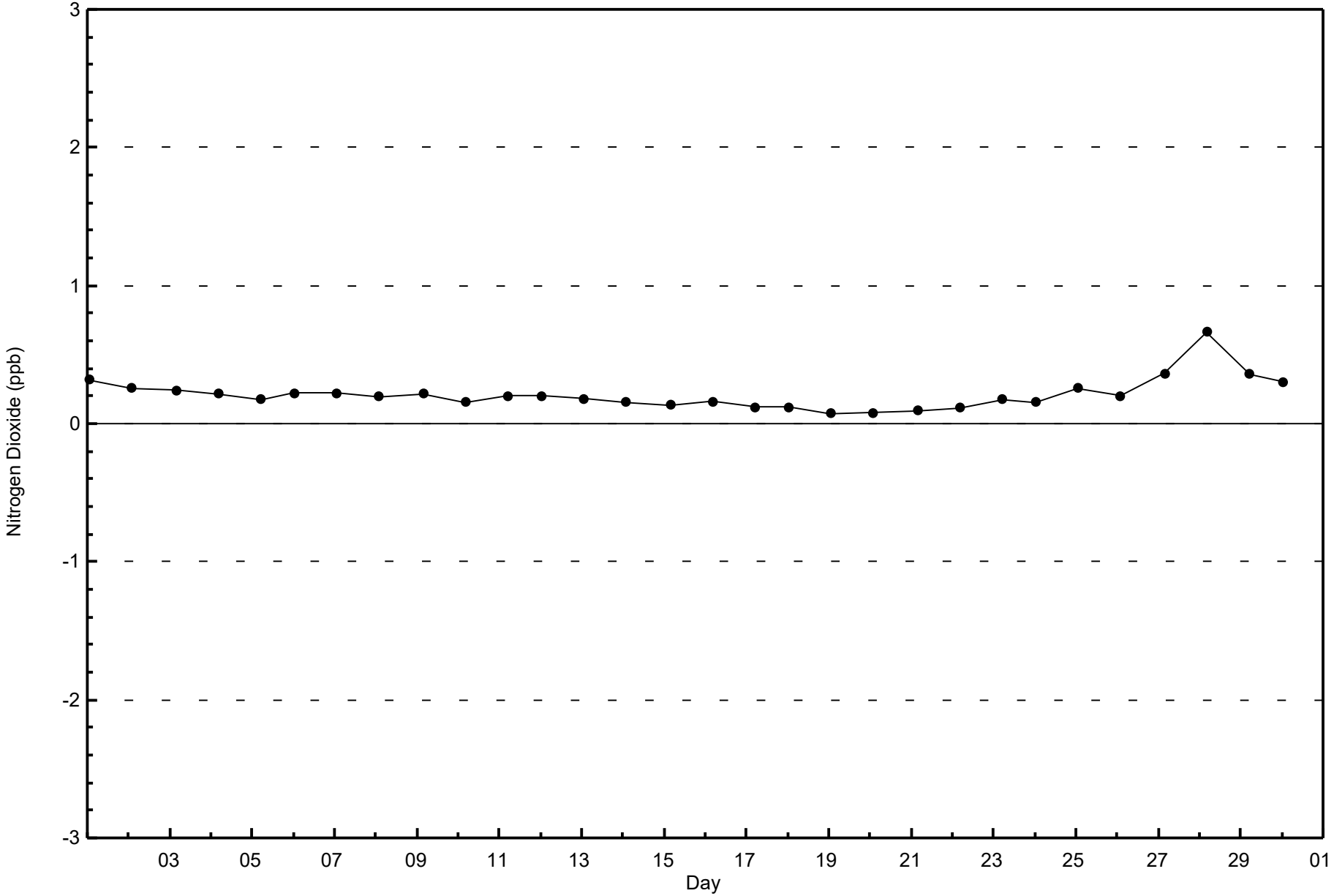
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - September 2025

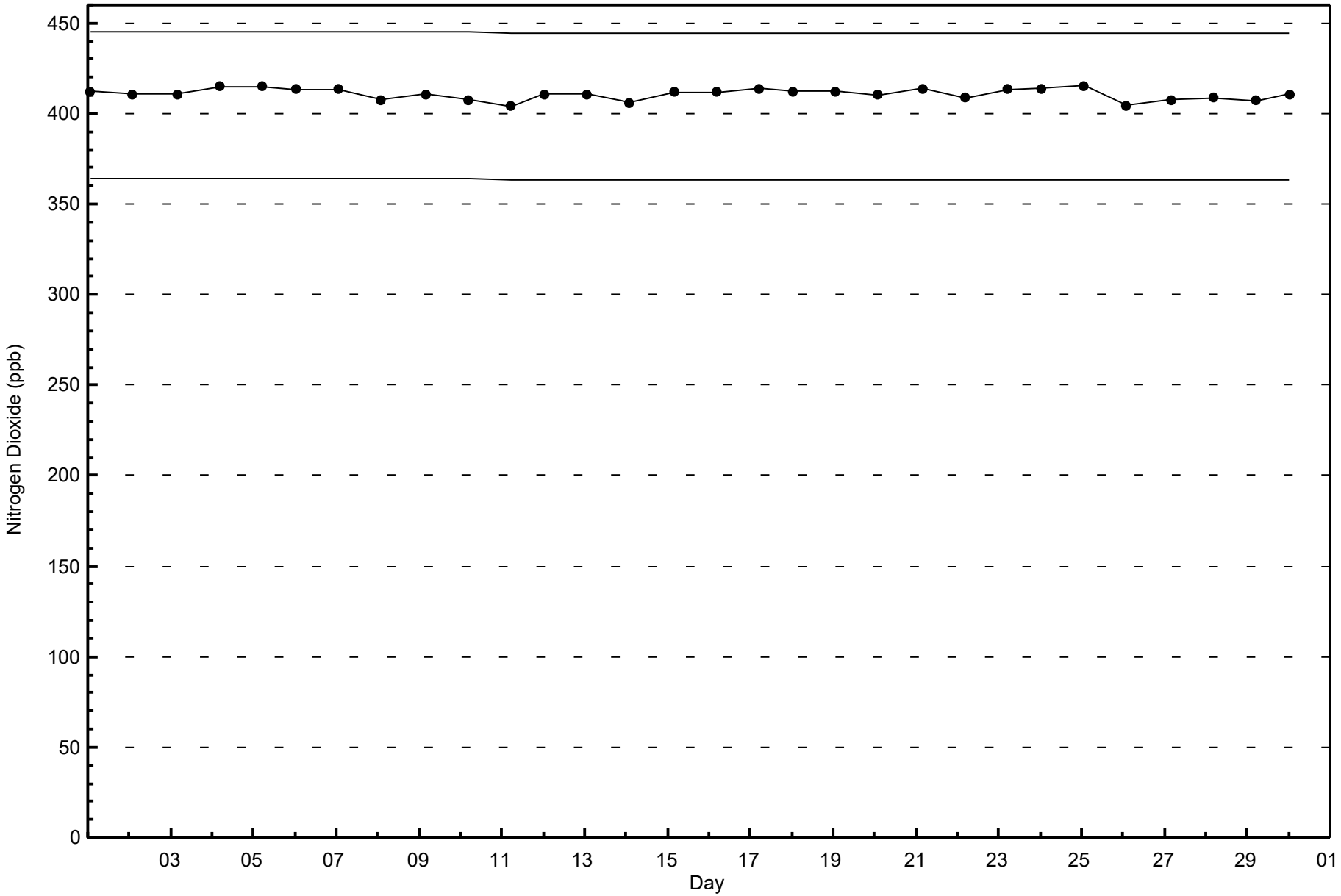


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - September 2025

Maximum Value: 53.6 ppb on Sep 19 08:00

Maximum Daily Average: 5.4 ppb on Sep 19

Minimum Value: 0.0 ppb on Sep 28 14:00

Minimum Daily Average: 0.5 ppb on Sep 28

Maximum Diurnal Average: 4.2 ppb at hour 8

Minimum Diurnal Average: 1.2 ppb at hour 1

Monthly Average: 1.86 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 0.8 Median = 1.2 Q_3 = 2.1 P_{90} = 3.6 P_{99} = 8.6

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.5	Z	3.5	3.4	2.8	5.0	4.1	2.4	4.1	3.1	3.0	2.4	2.5	3.5	3.9	4.3	2.9	3.0	1.3	1.8	1.6	1.6	1.3	0.8	2.8	5.0
2-Sep	0.8	1.0	Z	3.8	4.1	2.4	3.3	7.0	10.0	4.1	1.3	4.2	7.0	6.2	3.6	2.3	3.2	1.7	0.7	0.6	0.7	0.8	0.8	1.1	3.1	10.0
3-Sep	1.5	1.3	1.5	Z	2.1	1.6	1.6	1.7	2.0	2.2	3.6	2.1	1.9	2.0	2.0	1.6	4.5	4.3	1.1	1.4	1.7	2.3	1.7	3.1	2.1	4.5
4-Sep	3.3	3.5	1.9	0.9	Z	1.0	0.8	0.9	2.0	3.2	3.2	2.6	2.3	2.6	2.7	2.7	2.6	3.4	1.5	0.6	1.2	0.5	0.6	0.7	1.9	3.5
5-Sep	0.6	0.8	0.6	0.7	1.5	Z	0.9	0.8	1.4	1.1	0.8	1.1	1.4	1.8	1.9	4.2	1.7	0.9	0.4	0.4	0.4	0.5	0.4	0.5	1.1	4.2
6-Sep	Z	1.0	0.8	0.5	0.7	7.1	1.0	2.1	3.2	5.2	6.0	1.9	1.8	1.6	1.7	1.1	1.2	1.0	1.4	2.0	1.2	1.6	1.0	2.1	2.0	7.1
7-Sep	1.2	Z	1.5	1.5	0.8	0.6	0.7	3.1	2.1	1.8	1.9	2.0	1.7	1.9	1.4	1.9	7.4	5.9	1.9	1.8	2.8	1.5	2.1	2.6	2.2	7.4
8-Sep	2.5	3.5	Z	6.7	9.8	3.5	2.8	4.1	4.3	3.5	4.2	4.8	4.2	2.6	0.9	0.5	0.4	0.3	0.3	0.3	1.6	0.6	0.7	1.2	2.7	9.8
9-Sep	1.3	3.9	4.6	Z	2.9	1.1	1.4	2.6	4.1	4.3	3.3	2.8	1.9	1.5	1.6	1.1	1.2	1.5	1.6	1.4	2.3	1.9	1.6	1.4	2.2	4.6
10-Sep	1.6	1.5	1.3	1.0	Z	1.2	3.7	1.8	1.2	1.1	C	C	C	C	C	0.7	0.3	0.3	0.2	0.5	0.5	0.7	0.8	0.8	1.1	3.7
11-Sep	0.9	0.8	0.8	6.5	2.7	Z	0.8	9.7	2.7	3.3	1.6	1.6	2.3	1.0	0.7	0.8	0.7	0.7	0.5	0.6	1.1	2.2	2.8	2.8	2.1	9.7
12-Sep	Z	3.4	2.9	1.7	1.7	2.4	2.6	2.3	1.7	1.8	1.0	0.9	0.8	0.9	1.1	1.2	1.0	0.9	0.8	1.8	1.1	1.0	0.8	0.7	1.5	3.4
13-Sep	1.0	Z	1.3	7.8	4.7	1.0	0.9	1.7	1.9	2.5	8.5	6.8	2.3	1.2	1.6	1.6	1.3	1.2	1.3	1.2	1.0	1.1	1.8	2.4	2.4	8.5
14-Sep	2.5	2.2	Z	2.3	2.1	1.6	1.4	2.4	2.1	1.7	3.0	4.6	1.5	1.0	0.9	0.9	1.4	1.7	0.3	0.7	1.2	1.1	2.8	1.5	1.8	4.6
15-Sep	1.1	1.1	0.9	Z	1.9	2.4	1.4	4.2	1.3	0.8	M	M	1.0	0.8	0.9	0.9	0.8	0.5	0.4	0.3	0.4	0.5	0.5	0.5	1.1	4.2
16-Sep	0.8	0.5	0.6	0.6	Z	1.0	0.9	0.9	1.8	1.0	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7	1.1	1.0	0.8	1.1	1.4	0.8	1.8
17-Sep	1.3	1.2	1.2	1.0	1.1	Z	1.6	2.2	2.8	3.2	3.9	4.4	1.8	1.5	1.2	1.0	0.8	1.1	0.5	0.5	0.4	0.5	0.5	0.5	1.5	4.4
18-Sep	Z	1.4	1.7	1.9	1.9	1.9	2.0	2.0	1.6	1.3	1.1	1.1	1.2	1.1	13.8	1.1	1.1	1.3	2.0	2.9	4.8	1.4	1.1	0.9	2.2	13.8
19-Sep	0.6	Z	1.0	0.8	1.5	4.9	29.7	53.6	4.7	2.1	0.8	0.8	0.7	0.8	0.8	0.8	3.7	2.6	2.0	4.5	3.5	1.7	1.0	0.8	5.4	53.6
20-Sep	0.8	8.1	Z	2.0	0.9	0.9	1.1	2.7	3.8	2.2	2.5	1.2	1.1	1.0	1.0	0.9	1.1	1.1	1.1	1.2	1.2	1.6	3.1	2.0	1.8	8.1
21-Sep	2.3	2.6	2.4	Z	1.7	1.2	1.0	0.9	1.0	0.9	1.2	0.6	0.7	0.4	0.4	0.4	0.4	0.3	0.5	0.6	0.5	0.6	0.5	0.6	0.9	2.6
22-Sep	0.6	0.5	0.5	0.6	Z	0.8	2.5	1.1	0.8	0.8	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.9	0.6	1.1	2.4	1.3	1.1	1.4	0.9	2.5
23-Sep	0.9	1.0	1.0	1.2	1.1	Z	1.1	1.3	1.2	0.7	0.7	0.7	0.5	0.4	0.5	0.4	0.5	1.0	6.9	1.8	0.7	0.8	0.6	0.7	1.1	6.9
24-Sep	Z	0.9	0.9	1.0	2.8	0.7	1.0	4.2	1.0	0.9	0.8	0.6	1.7	0.6	0.7	0.4	0.4	0.8	1.0	4.7	2.8	1.4	1.2	0.9	1.4	4.7
25-Sep	1.1	Z	2.0	1.2	2.1	1.1	1.9	2.5	3.4	2.6	2.0	1.2	1.5	0.5	0.5	0.6	1.3	2.0	1.8	2.4	2.0	1.3	0.8	0.6	1.6	3.4
26-Sep	0.6	0.7	Z	1.5	2.6	1.3	2.2	1.5	1.6	1.4	1.3	1.0	0.9	0.8	0.8	0.8	0.5	0.6	1.1	1.2	1.4	0.7	0.5	0.6	1.1	2.6
27-Sep	0.5	0.4	0.3	Z	1.4	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.1	0.1	0.1	1.9	1.7	0.6	2.2	0.4	0.2	0.2	0.6	2.2
28-Sep	0.1	0.3	0.3	0.5	Z	0.9	1.1	0.7	0.8	0.7	0.6	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.6	0.5	3.5	0.7	0.5	3.5
29-Sep	0.8	0.9	0.8	0.6	1.7	Z	4.3	3.6	2.7	0.3	0.3	0.3	0.4	0.7	1.1	1.2	1.0	0.9	0.9	0.8	5.8	6.2	7.7	4.7	2.1	7.7
30-Sep	Z	7.2	5.6	1.9	1.4	2.0	1.5	2.9	2.8	2.2	1.3	1.2	1.6	3.0	6.9	8.5	8.9	8.4	5.7	3.3	1.0	0.8	0.7	1.1	3.5	8.9
	1.2	2.0	1.6	2.1	2.3	1.9	2.7	4.2	2.5	2.0	2.1	1.9	1.6	1.4	1.9	1.4	1.7	1.7	1.3	1.4	1.6	1.3	1.4	1.3	Diurnal Average	
	3.3	8.1	5.6	7.8	9.8	7.1	29.7	53.6	10.0	5.2	8.5	6.8	7.0	6.2	13.8	8.5	8.9	8.4	6.9	4.7	5.8	6.2	7.7	4.7	Diurnal Maximum	

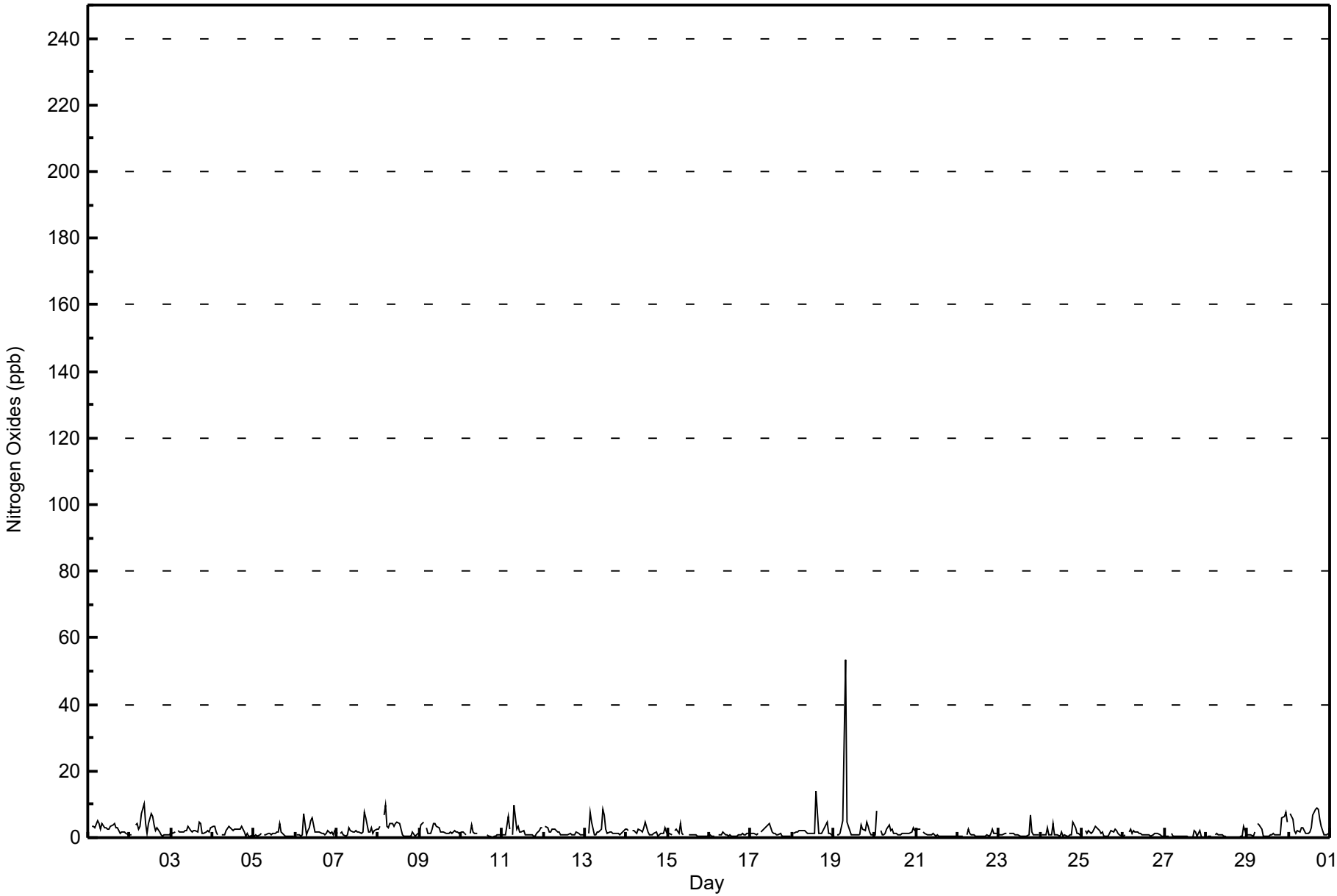
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - September 2025



Nitrogen Oxides (NO_X) - ppb
Anzac - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	99.71	99.71
21 - 40	1	0.15	99.85
11 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	12	8	4	6	4	21	64	129	61	55	33	47	81	75	44	37	681
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	1	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	12	8	4	6	4	21	64	129	61	55	33	49	81	75	44	37	683

Total Number of Valid Hours: 683

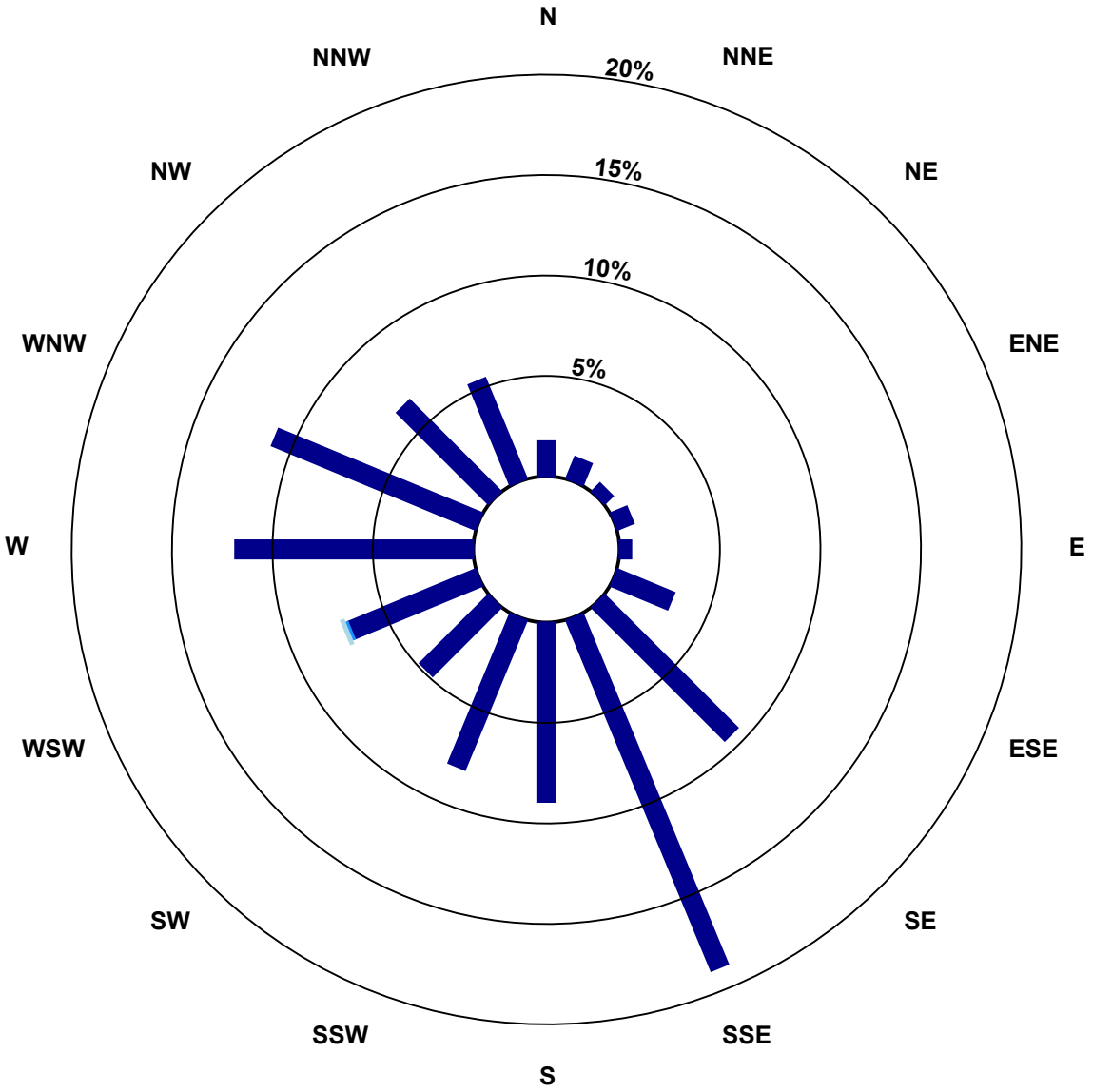
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

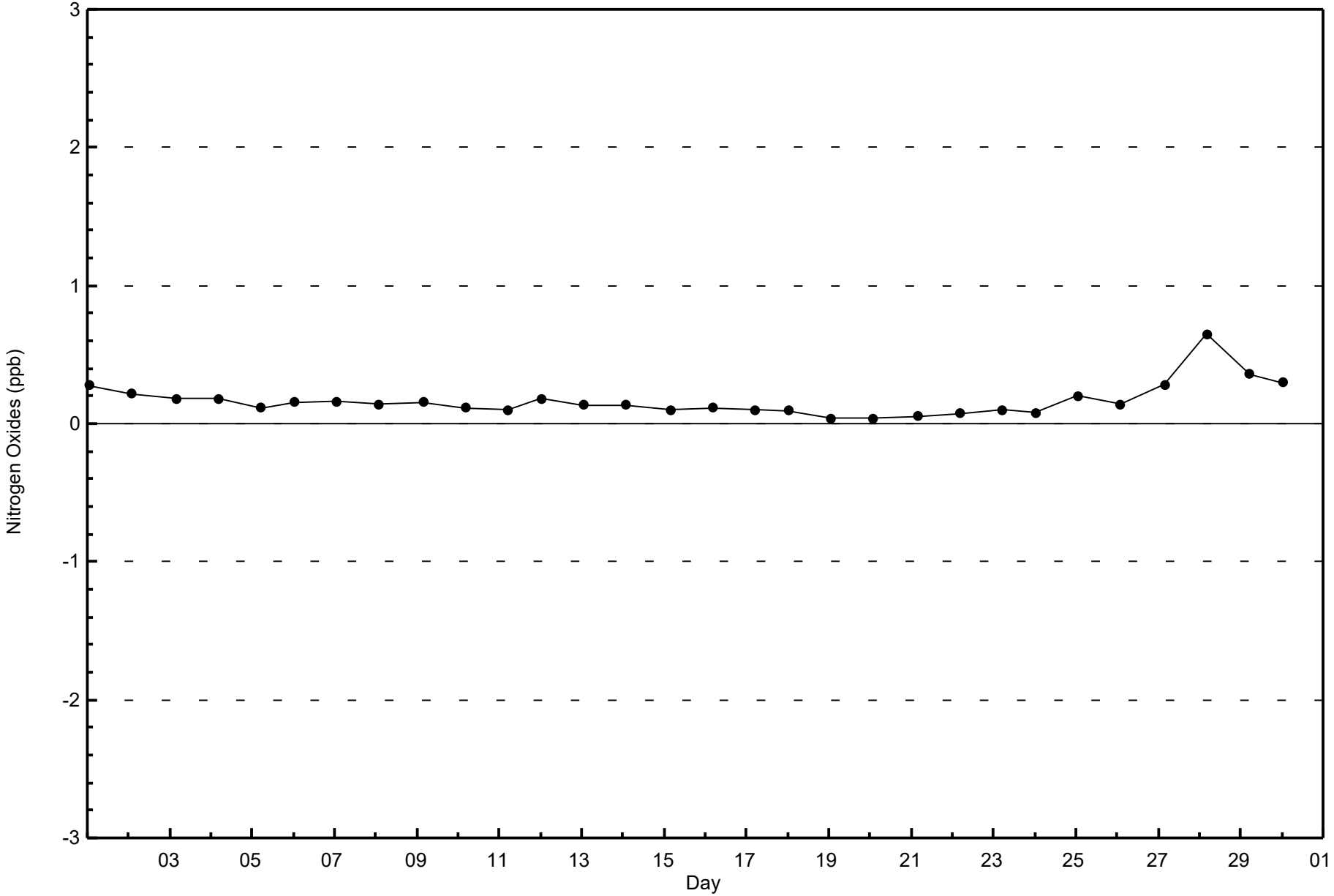
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - September 2025

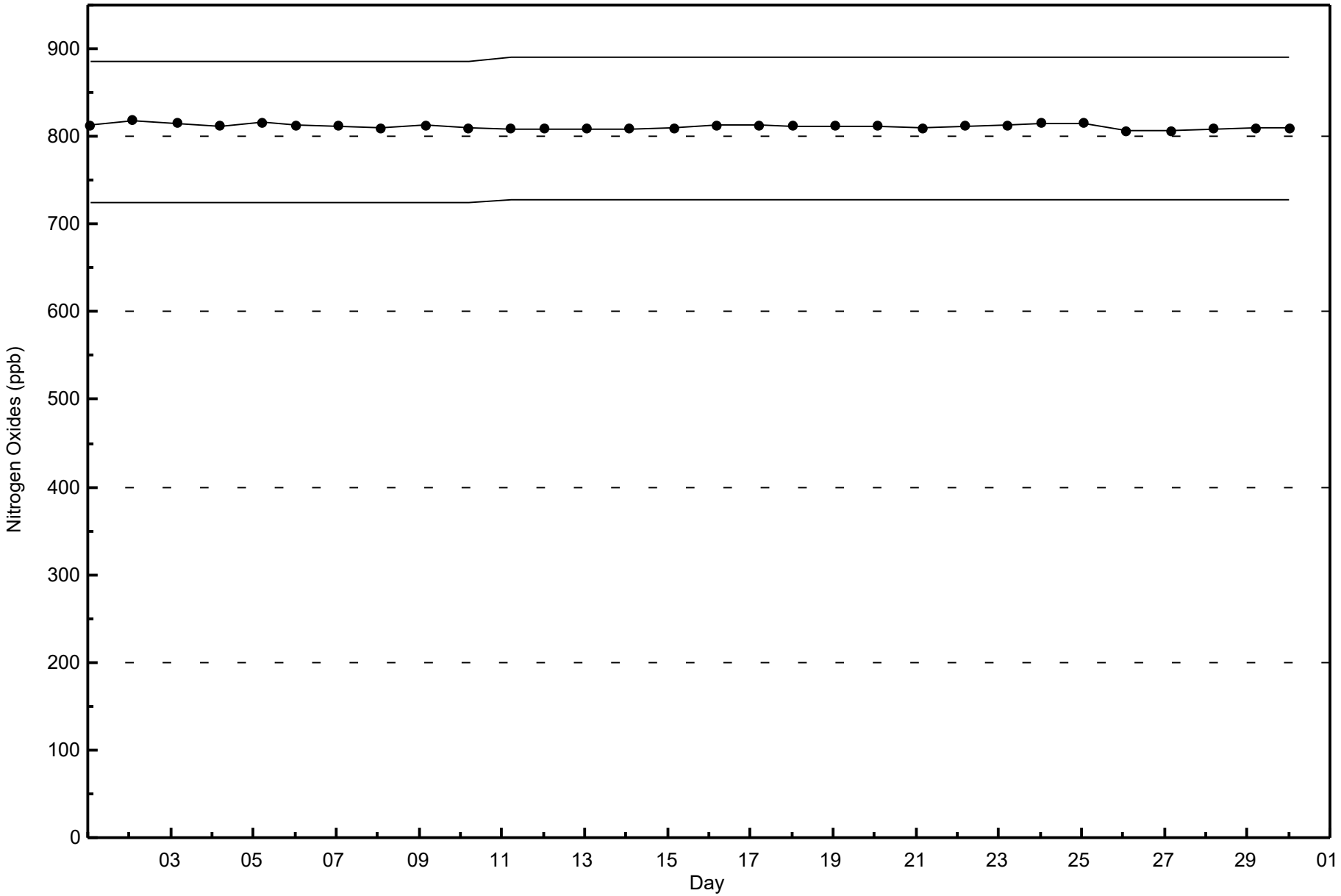


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 57.1 ppb on Sep 13 16:00

Maximum Daily Average: 34.8 ppb on Sep 21

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 11.1 ppb on Sep 8

Maximum Diurnal Average: 34.6 ppb at hour 16

Minimum Diurnal Average: 15.4 ppb at hour 7

Monthly Average: 24.48 ppb

Percentiles: P_1 = 0.8 P_{10} = 9.5 Q_1 = 17.4 Median = 24.9 Q_3 = 31.9 P_{90} = 37.3 P_{99} = 49.3

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	1.0	8.6	6.3	2.6	Z	3.9	4.1	3.4	7.8	10.2	11.5	17.4	25.4	30.5	33.7	35.8	29.4	25.2	24.1	21.4	18.0	13.0	4.6	14.7	35.8
2-Sep	Z	7.8	10.6	10.6	6.1	0.5	0.8	5.3	9.4	18.1	26.1	27.3	29.1	29.8	30.9	29.4	27.1	27.2	25.7	24.0	21.5	20.0	20.5	21.4	18.7	30.9
3-Sep	20.1	Z	18.1	18.3	18.4	21.3	20.4	20.7	20.5	22.6	26.2	C	C	C	C	29.0	27.4	26.8	26.7	25.1	24.4	23.0	23.3	19.1	22.7	29.0
4-Sep	18.1	17.4	Z	20.6	20.8	20.8	20.9	20.6	20.6	21.8	23.4	25.5	26.9	27.8	28.1	28.2	27.4	26.1	23.7	16.8	9.6	8.4	3.3	2.4	20.0	28.2
5-Sep	0.7	0.7	0.0	Z	0.0	0.2	2.5	12.4	16.5	20.8	25.4	26.3	28.1	29.8	29.6	28.5	28.0	26.7	23.5	22.2	24.1	22.4	22.7	21.3	17.9	29.8
6-Sep	12.4	6.1	8.3	3.4	Z	2.7	3.3	10.2	17.0	18.1	23.9	32.3	34.1	41.2	45.4	49.3	49.1	47.0	37.8	25.9	32.3	30.4	23.2	18.9	24.9	49.3
7-Sep	30.3	35.4	25.7	13.5	12.9	Z	9.1	13.2	21.1	30.6	34.3	32.0	31.6	36.9	35.5	41.3	38.7	36.0	24.1	22.3	18.2	15.9	13.4	11.5	25.4	41.3
8-Sep	Z	7.3	5.8	3.7	3.6	5.3	6.4	6.8	8.0	10.2	11.3	11.4	13.8	17.4	18.2	19.3	23.2	24.7	15.7	9.4	7.9	8.0	5.8	12.1	11.1	24.7
9-Sep	17.0	Z	10.4	11.1	8.4	9.4	8.2	9.6	13.0	16.6	25.6	34.3	38.7	41.5	46.4	49.6	51.2	52.5	47.4	40.2	38.1	35.8	29.2	27.8	28.8	52.5
10-Sep	25.7	17.3	Z	11.8	20.2	23.8	22.4	21.1	18.9	18.8	19.8	21.4	23.4	26.6	29.6	29.7	30.8	28.6	21.8	12.9	9.7	9.2	6.6	4.1	19.8	30.8
11-Sep	4.3	6.3	4.5	Z	5.6	3.6	5.3	8.1	19.2	24.9	30.3	32.7	35.3	33.3	33.4	33.5	33.2	30.9	24.9	21.7	27.4	27.0	24.4	17.3	21.2	35.3
12-Sep	17.1	15.1	17.0	13.3	Z	20.9	21.2	22.6	26.9	32.1	37.9	40.1	43.5	44.3	43.2	43.6	43.6	42.0	28.8	26.5	29.7	21.7	21.1	17.7	29.1	44.3
13-Sep	23.5	23.5	26.0	9.5	9.6	Z	9.6	20.2	24.8	31.8	32.2	37.6	43.0	47.2	53.0	57.1	56.6	48.4	40.2	34.5	36.4	30.3	25.3	21.5	32.2	57.1
14-Sep	Z	13.3	11.4	11.4	22.1	9.6	10.9	14.8	19.6	25.6	25.1	34.6	38.2	36.0	36.9	41.7	41.9	42.5	41.7	38.0	36.8	22.1	12.5	9.4	25.9	42.5
15-Sep	12.9	Z	14.9	10.0	4.1	11.1	5.2	10.3	25.0	25.3	M	M	27.1	27.7	26.7	27.8	24.3	16.4	16.4	20.8	19.5	17.7	14.7	12.1	17.6	27.8
16-Sep	11.4	12.0	Z	12.8	12.4	11.9	11.8	11.3	11.4	12.6	13.4	16.7	20.3	21.7	22.4	23.1	23.1	16.4	16.6	18.9	17.0	18.7	18.1	18.0	16.2	23.1
17-Sep	16.8	14.9	13.1	Z	8.9	7.7	9.2	11.0	12.8	15.2	19.6	25.5	30.2	33.4	36.3	37.9	38.1	35.2	31.7	30.6	29.3	27.5	26.1	24.5	23.3	38.1
18-Sep	22.7	20.8	20.2	21.1	Z	21.7	18.9	18.9	21.9	24.4	27.1	30.0	33.6	36.0	36.8	36.2	35.3	33.8	30.0	21.4	13.7	25.0	24.4	24.2	26.0	36.8
19-Sep	13.2	14.4	23.5	21.3	13.8	Z	8.6	5.5	23.9	30.3	36.5	38.5	40.0	40.8	41.0	40.0	38.6	31.0	22.6	14.8	15.6	19.9	18.4	14.0	24.6	41.0
20-Sep	Z	6.7	3.7	6.4	7.7	10.8	13.8	17.6	28.2	36.7	45.8	46.6	47.7	46.7	47.7	49.6	48.4	45.1	44.9	46.0	45.3	42.1	38.2	35.6	33.1	49.6
21-Sep	33.3	Z	30.5	30.2	38.6	38.4	35.7	34.3	34.3	35.9	36.5	37.0	37.0	38.8	39.1	38.2	37.4	38.2	34.4	34.1	35.9	30.7	26.8	25.2	34.8	39.1
22-Sep	28.0	27.8	Z	24.3	23.3	23.2	22.2	22.8	23.6	23.9	24.5	25.1	28.0	29.8	30.9	31.9	32.4	31.5	25.0	24.4	22.6	23.8	27.4	34.0	26.5	34.0
23-Sep	35.2	35.4	34.7	Z	33.1	31.9	31.7	30.0	30.5	31.5	32.0	32.3	32.3	33.2	33.2	33.5	32.2	33.4	34.8	34.8	36.1	35.7	34.9	35.4	33.4	36.1
24-Sep	34.6	30.5	30.0	30.6	Z	33.2	31.4	28.5	28.1	26.6	26.1	27.7	28.9	30.0	30.2	30.8	30.7	29.5	29.9	25.9	21.2	23.9	14.2	13.0	27.6	34.6
25-Sep	14.9	21.7	19.9	15.7	20.4	Z	9.7	16.7	17.1	22.1	25.4	31.0	31.9	35.0	35.7	34.6	36.1	34.4	32.6	29.7	31.0	40.4	38.8	35.0	27.4	40.4
26-Sep	Z	27.5	18.1	23.0	22.2	21.2	20.5	20.2	21.7	22.8	24.7	26.1	27.8	28.4	29.5	30.8	32.1	32.0	30.5	33.4	30.7	27.1	27.2	28.3	26.3	33.4
27-Sep	30.3	Z	31.5	33.1	33.6	32.2	31.3	31.2	31.5	32.1	32.3	32.4	33.0	33.3	33.2	32.6	31.7	28.5	25.2	25.7	24.8	27.9	30.0	30.1	30.8	33.6
28-Sep	29.8	29.3	Z	27.5	26.6	26.1	25.1	24.6	24.6	24.4	24.8	26.7	29.4	30.8	29.6	29.7	28.0	21.9	25.8	27.2	25.5	25.6	22.8	25.1	26.6	30.8
29-Sep	23.6	22.7	23.2	Z	24.6	15.9	22.6	23.2	26.2	29.3	30.9	32.2	32.8	33.6	34.8	35.1	33.9	32.7	32.5	32.1	25.4	23.5	21.2	23.0	27.6	35.1
30-Sep	23.8	19.2	20.2	22.4	Z	20.1	19.4	18.3	18.8	21.4	21.8	22.8	25.7	29.2	24.2	13.6	11.6	13.6	15.8	17.3	18.4	16.6	16.4	15.5	19.4	29.2
	20.0	17.4	17.2	16.5	16.0	16.9	15.4	17.1	20.6	23.8	26.7	29.2	31.3	33.3	34.2	34.6	34.3	32.1	28.5	26.0	25.0	23.9	21.5	20.1	Diurnal Average	
	35.2	35.4	34.7	33.1	38.6	38.4	35.7	34.3	34.3	36.7	45.8	46.6	47.7	47.2	53.0	57.1	56.6	52.5	47.4	46.0	45.3	42.1	38.8	35.6	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

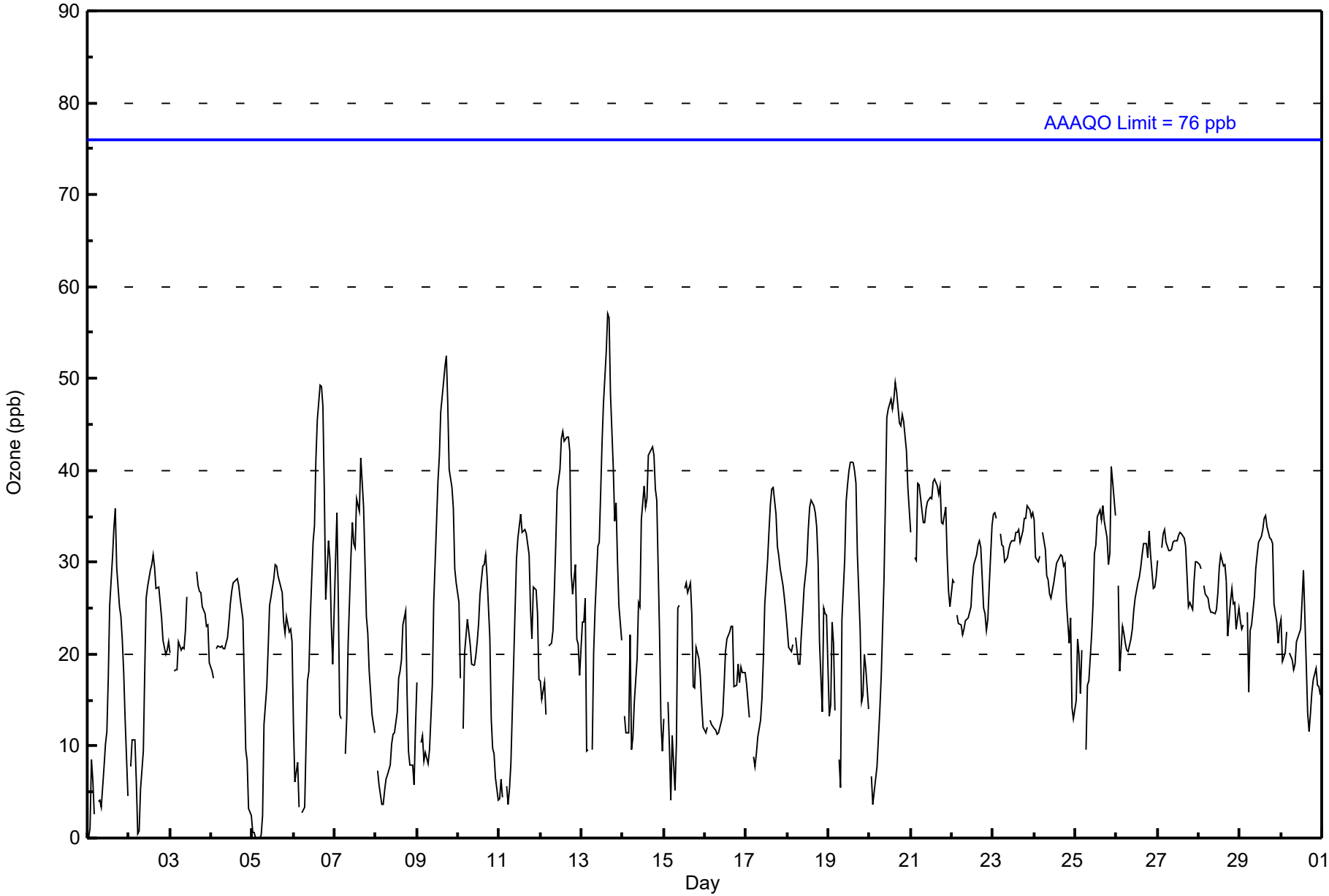
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Anzac - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	224	32.75	32.75
21 - 50	455	66.52	99.27
51 - 82	5	0.73	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

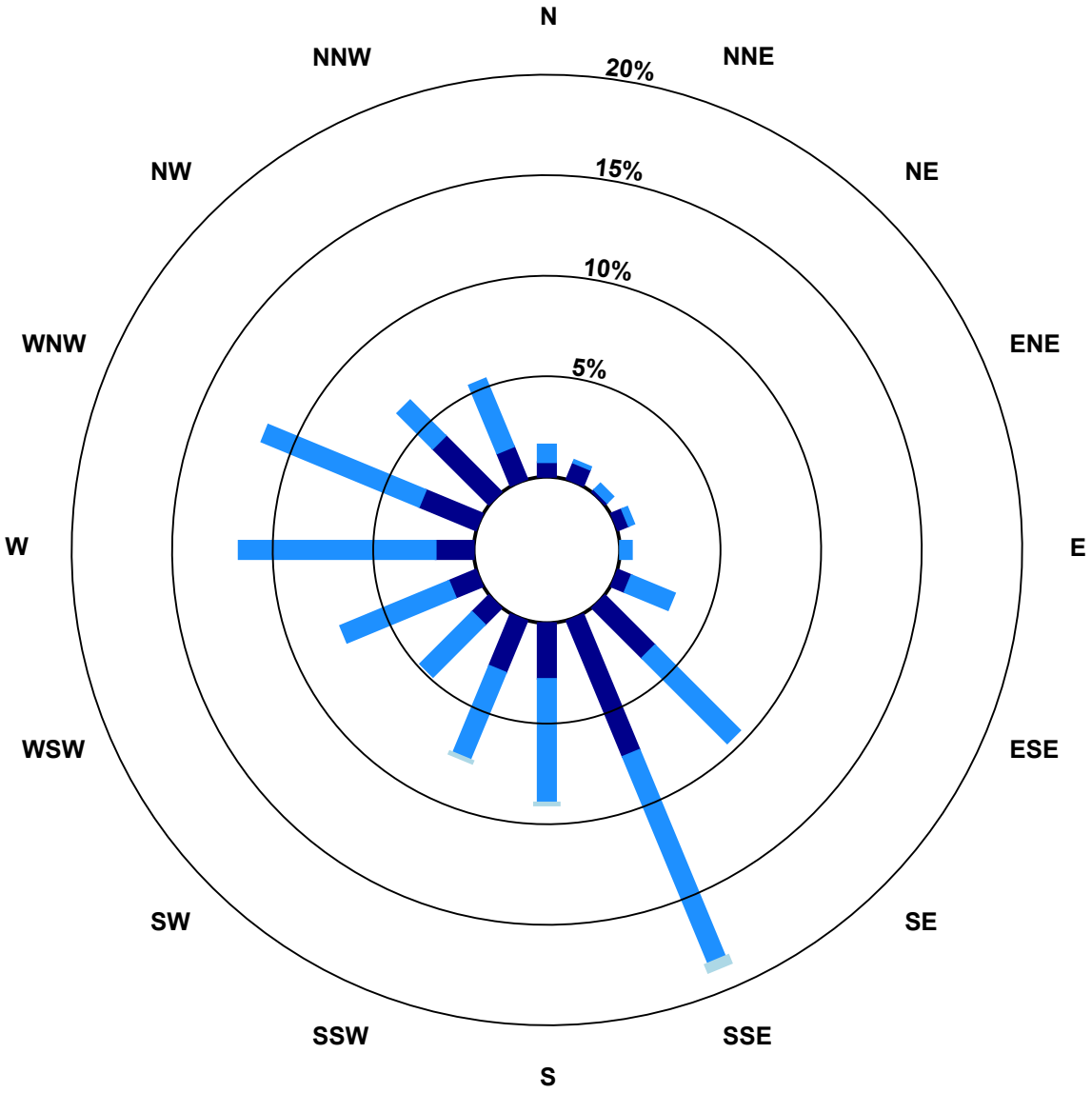
Anzac - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	5	6	1	4	0	5	24	50	19	19	8	10	13	21	27	12	224
21 - 50	6	1	3	2	4	16	41	76	42	32	25	40	67	58	17	25	455
51 - 82	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0	5
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	11	7	4	6	4	21	65	129	62	52	33	50	80	79	44	37	684

Total Number of Valid Hours: 684

Total Number of Hours: 720

Ozone (O_3) - ppb
Anzac



Classes (ppb)

0 - 20
21 - 50
51 - 82
> 83

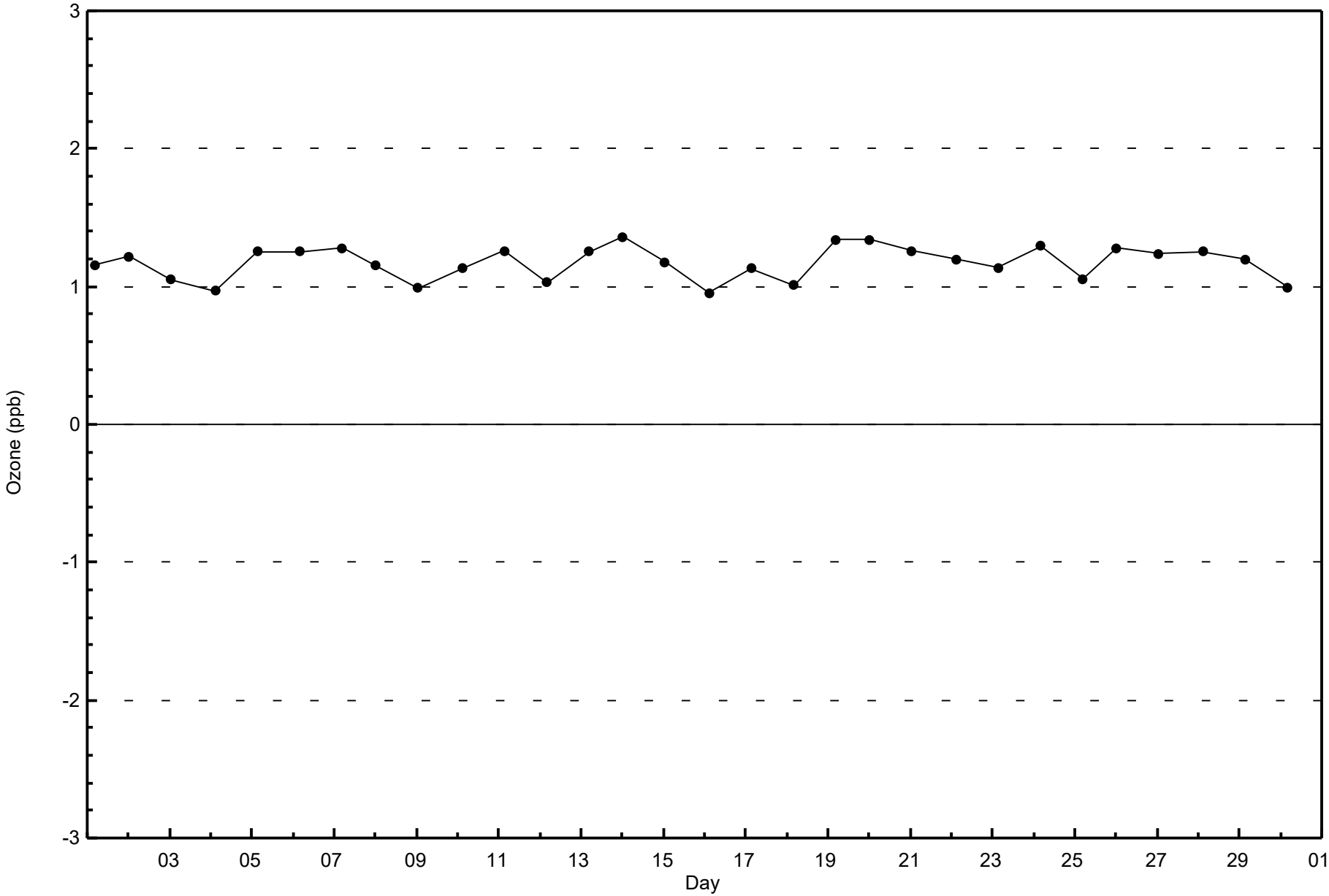
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Anzac - September 2025

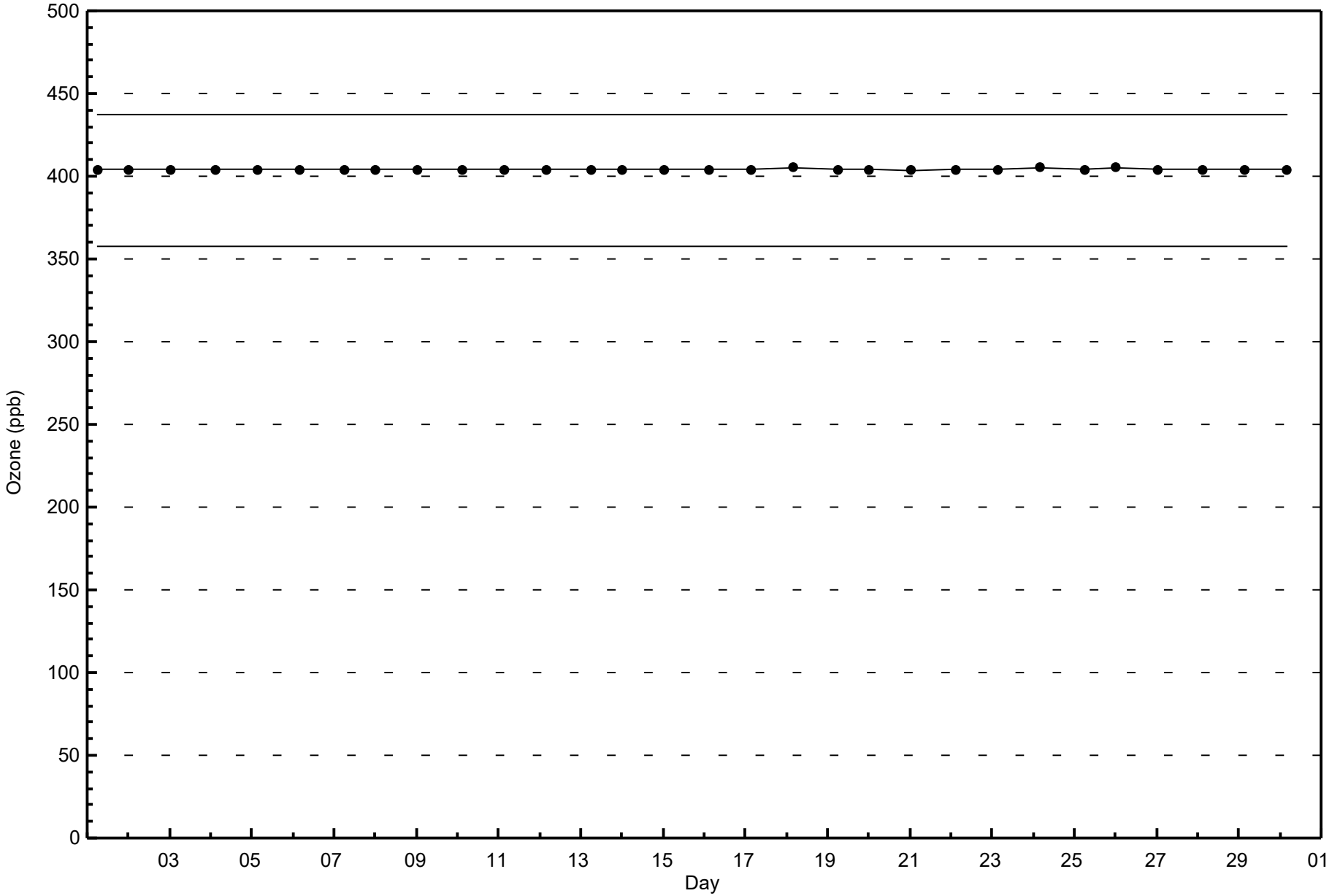


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Anzac - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 7

Maximum Value: 161.0 $\mu g/m^3$ on Sep 12 01:00

Maximum Daily Average: 54.6 $\mu g/m^3$ on Sep 1

Minimum Value: 0.6 $\mu g/m^3$ on Sep 22 17:00

Minimum Daily Average: 3.4 $\mu g/m^3$ on Sep 23

Maximum Diurnal Average: 32.1 $\mu g/m^3$ at hour 4

Minimum Diurnal Average: 13.6 $\mu g/m^3$ at hour 13

Monthly Average: 20.92 $\mu g/m^3$

Percentiles: P_1 = 0.9 P_{10} = 3.5 Q_1 = 6.1 Median = 13.1 Q_3 = 25.3 P_{90} = 49.9 P_{99} = 114.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	42.1	38.0	56.8	54.5	49.1	48.6	52.5	53.3	48.4	31.7	19.1	30.1	21.7	28.0	41.0	52.0	37.3	37.6	55.4	84.3	103.6	111.8	113.2	99.3	54.6	113.2
2-Sep	83.7	67.3	59.4	60.8	60.3	51.7	49.5	51.9	53.4	45.4	25.2	21.0	15.8	16.4	15.0	18.7	23.2	26.1	30.8	29.9	30.5	32.5	41.4	61.8	40.5	83.7
3-Sep	58.5	54.4	51.4	46.9	45.0	41.5	39.5	37.9	36.9	35.8	37.7	40.2	40.6	43.8	43.6	41.6	48.0	56.1	44.0	33.7	43.2	66.4	49.9	46.6	45.1	66.4
4-Sep	33.3	27.9	21.9	12.8	13.7	11.9	8.3	6.2	5.9	6.6	5.5	5.3	6.5	6.5	7.3	7.0	5.8	5.9	4.8	3.8	3.5	3.6	3.7	4.0	9.2	33.3
5-Sep	4.3	4.8	4.6	4.3	4.0	3.9	3.6	3.6	3.6	3.8	4.3	4.9	5.1	5.3	5.6	5.8	5.9	5.5	5.2	5.3	6.1	6.2	6.6	14.4	5.3	14.4
6-Sep	28.3	48.3	66.0	65.4	67.3	76.8	79.3	50.2	22.0	15.0	13.5	7.5	7.9	7.5	9.8	16.0	17.1	15.7	14.9	14.7	13.9	13.3	11.6	10.5	28.8	79.3
7-Sep	10.0	9.0	9.6	10.1	11.0	11.8	11.8	11.9	13.4	16.7	18.7	19.0	18.3	19.1	18.2	20.2	28.9	32.3	17.6	18.4	19.0	19.3	18.8	18.6	16.7	32.3
8-Sep	18.9	20.8	23.3	23.8	23.7	28.1	25.1	23.1	26.1	24.4	25.1	26.6	25.6	23.3	20.3	18.6	16.2	12.7	11.2	12.5	11.3	11.3	13.0	12.7	19.9	28.1
9-Sep	10.9	15.4	45.6	61.8	68.2	80.6	79.4	60.6	59.3	54.1	28.9	22.6	22.8	22.3	22.7	25.3	25.9	25.4	24.2	24.8	26.0	26.6	27.1	27.0	37.0	80.6
10-Sep	27.0	27.0	25.8	24.9	26.4	27.3	32.3	33.7	25.2	21.5	17.6	16.5	15.6	12.5	8.5	6.0	4.5	4.4	4.8	5.6	5.1	5.5	6.1	8.2	16.3	33.7
11-Sep	9.7	7.8	5.4	5.9	5.0	4.9	5.0	5.2	5.4	7.1	6.7	6.4	7.4	7.2	7.5	8.2	9.6	11.9	14.8	16.9	45.1	90.4	121.6	150.3	23.6	150.3
12-Sep	161.0	141.1	124.5	101.7	74.7	46.7	44.5	31.4	23.5	23.7	21.2	19.4	19.0	18.9	18.5	17.3	16.3	16.2	16.0	17.3	17.4	18.1	18.0	17.0	42.6	161.0
13-Sep	17.7	18.1	18.2	17.5	18.3	18.2	18.2	19.4	19.7	19.0	19.7	20.0	17.9	16.9	17.6	17.7	16.9	17.1	18.4	17.6	17.3	18.4	31.2	87.0	21.6	87.0
14-Sep	105.5	91.4	117.4	152.0	114.2	90.8	66.0	51.4	33.0	14.4	12.7	10.8	12.1	38.1	39.3	16.5	6.6	5.6	5.3	5.5	5.5	5.8	6.7	7.1	42.2	152.0
15-Sep	7.3	7.2	7.0	7.3	7.6	7.8	8.5	8.6	7.2	6.6	9.1	13.3	17.9	20.2	19.7	19.9	24.0	22.1	18.6	11.8	11.3	12.9	17.9	20.5	13.1	24.0
16-Sep	19.8	16.0	14.0	13.7	13.4	13.8	14.2	14.2	15.0	14.7	14.7	13.8	12.5	11.9	11.8	11.5	10.6	9.3	10.7	14.4	14.7	15.6	17.1	20.1	14.1	20.1
17-Sep	28.2	33.7	33.8	31.8	27.8	24.3	19.1	14.9	12.5	12.2	12.6	12.6	11.9	11.9	12.3	11.1	9.8	9.0	8.0	8.7	8.9	8.3	8.9	9.1	15.9	33.8
18-Sep	9.4	9.9	10.6	11.7	12.0	12.0	11.6	11.4	11.9	12.6	13.6	14.0	14.0	12.6	12.9	12.6	13.0	12.5	12.6	11.7	11.1	9.3	6.5	3.9	11.4	14.0
19-Sep	3.4	3.2	3.0	3.0	3.2	3.2	5.5	10.2	7.2	3.1	3.0	2.6	2.9	3.9	4.4	4.2	5.7	6.8	7.2	7.6	5.8	4.8	4.7	4.5	4.7	10.2
20-Sep	4.7	4.9	5.0	5.2	5.6	5.8	6.1	7.5	9.3	10.7	12.7	16.3	16.0	13.9	13.1	12.5	13.8	13.7	13.1	12.2	11.6	12.4	11.7	11.1	10.4	16.3
21-Sep	10.9	11.2	11.7	11.1	12.3	15.7	14.9	15.9	18.6	18.9	14.0	11.4	10.3	7.8	6.2	5.3	5.1	5.5	13.5	22.8	14.3	17.6	13.6	17.2	12.7	22.8
22-Sep	13.3	5.4	5.4	7.1	7.7	7.8	5.8	7.8	7.9	5.4	3.6	2.7	1.2	1.0	1.0	0.6	0.6	0.7	0.9	1.3	1.9	2.1	2.7	2.7	4.0	13.3
23-Sep	3.0	3.4	3.5	3.6	3.5	3.2	3.6	4.8	3.7	5.0	7.0	5.9	4.2	3.0	2.5	2.1	0.9	1.4	3.3	1.9	3.3	3.0	2.1	3.3	3.4	7.0
24-Sep	11.2	7.4	2.8	1.7	2.4	2.6	6.4	11.0	14.5	14.6	8.0	4.5	6.6	20.1	28.6	13.5	10.0	8.3	11.5	18.2	28.0	40.1	31.7	23.6	13.6	40.1
25-Sep	23.1	46.8	52.4	49.8	62.6	68.2	55.0	53.1	31.6	8.7	4.6	2.2	2.6	1.9	2.0	2.0	2.3	2.7	2.6	2.7	2.7	4.8	3.9	3.6	20.5	68.2
26-Sep	4.4	3.5	4.2	18.9	32.1	31.5	28.3	28.2	30.4	23.2	18.6	18.0	16.7	15.6	9.2	5.3	4.3	5.9	9.4	26.3	24.7	7.8	3.0	1.7	15.5	32.1
27-Sep	1.1	0.9	1.0	0.9	0.8	2.9	4.5	6.1	7.5	7.9	8.2	9.3	8.5	6.8	4.1	7.4	2.5	3.0	3.3	2.3	2.8	2.7	9.6	10.7	4.8	10.7
28-Sep	1.3	3.5	13.9	30.7	31.9	31.6	29.9	28.9	28.2	27.5	25.4	16.6	8.4	4.0	6.6	5.4	5.1	5.3	4.8	4.5	5.0	6.6	13.5	49.9	16.2	49.9
29-Sep	63.1	78.4	72.4	48.0	12.2	3.3	7.0	14.6	5.1	3.3	3.9	4.6	4.8	5.5	6.8	7.4	7.3	7.7	8.2	8.4	8.8	11.7	50.8	94.6	22.4	94.6
30-Sep	103.8	86.7	83.5	76.5	75.5	64.5	51.7	31.8	20.7	12.2	14.3	27.0	32.3	37.5	41.6	43.6	43.2	36.0	32.8	25.0	12.8	10.9	15.6	15.9	41.5	103.8
	30.6	29.8	31.8	32.1	29.7	28.0	26.2	23.6	20.2	16.9	14.3	14.2	13.6	14.8	15.2	14.5	14.0	14.1	14.3	15.7	17.2	20.0	22.7	28.6	Diurnal Average	
	161.0	141.1	124.5	152.0	114.2	90.8	79.4	60.6	59.3	54.1	37.7	40.2	40.6	43.8	43.6	52.0	48.0	56.1	55.4	84.3	103.6	111.8	121.6	150.3	Diurnal Maximum	

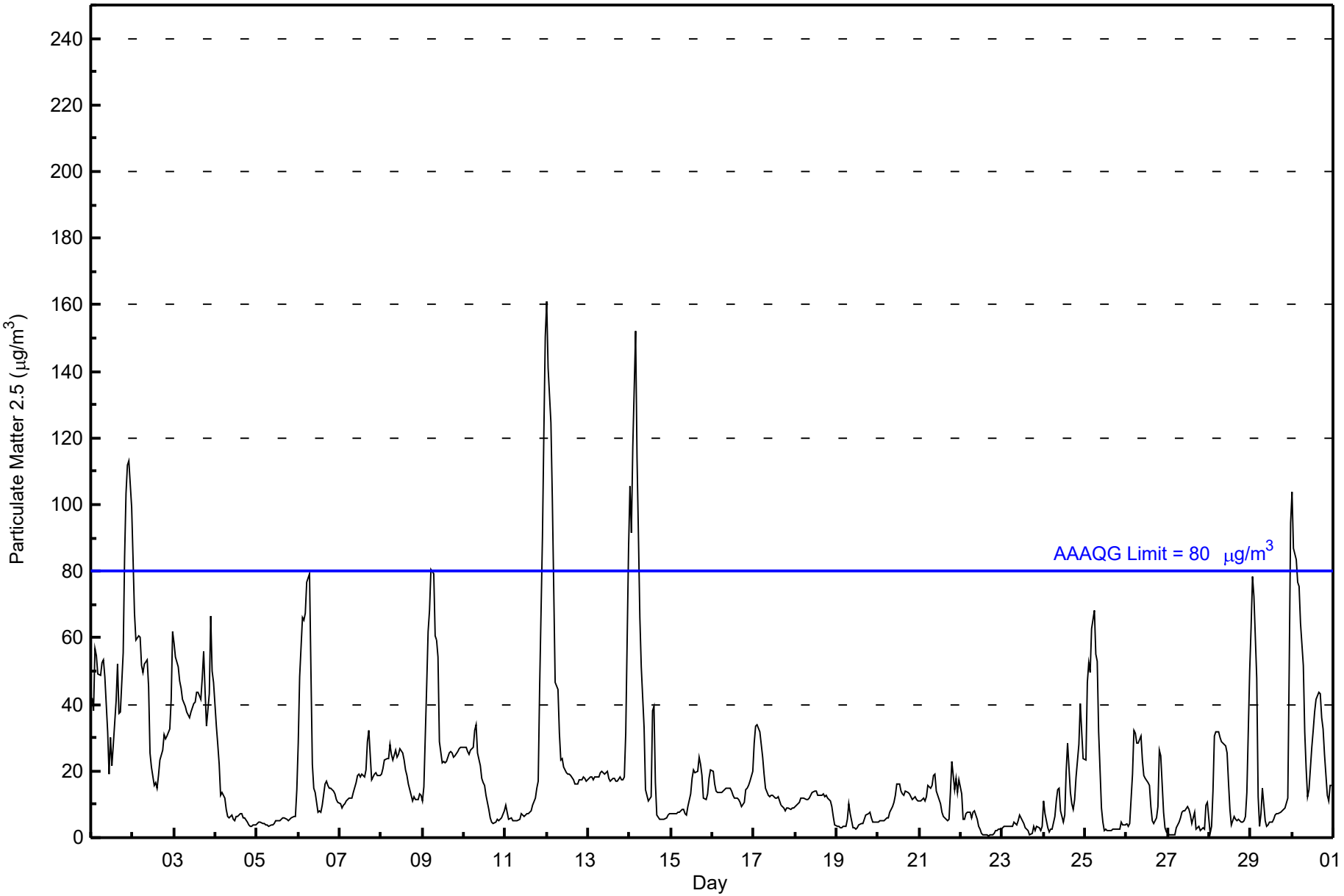
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Anzac - September 2025



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

Anzac - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	156	21.67	21.67
6 - 15	251	34.86	56.53
16 - 25	135	18.75	75.28
26 - 80	153	21.25	96.53
> 81.0	25	3.47	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Anzac - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	2	4	1	2	6	4	14	19	15	13	32	28	8	3	4	156
6 - 15	3	0	0	2	2	8	31	50	16	26	14	14	31	32	15	7	251
16 - 25	1	2	0	3	0	2	12	24	17	9	2	1	7	34	15	6	135
26 - 80	5	4	0	0	0	5	16	39	8	5	7	6	18	9	14	17	153
> 81.0	2	0	0	0	0	2	5	8	3	1	0	0	0	0	1	3	25
Totals	12	8	4	6	4	23	68	135	63	56	36	53	84	83	48	37	720

Total Number of Valid Hours: 720

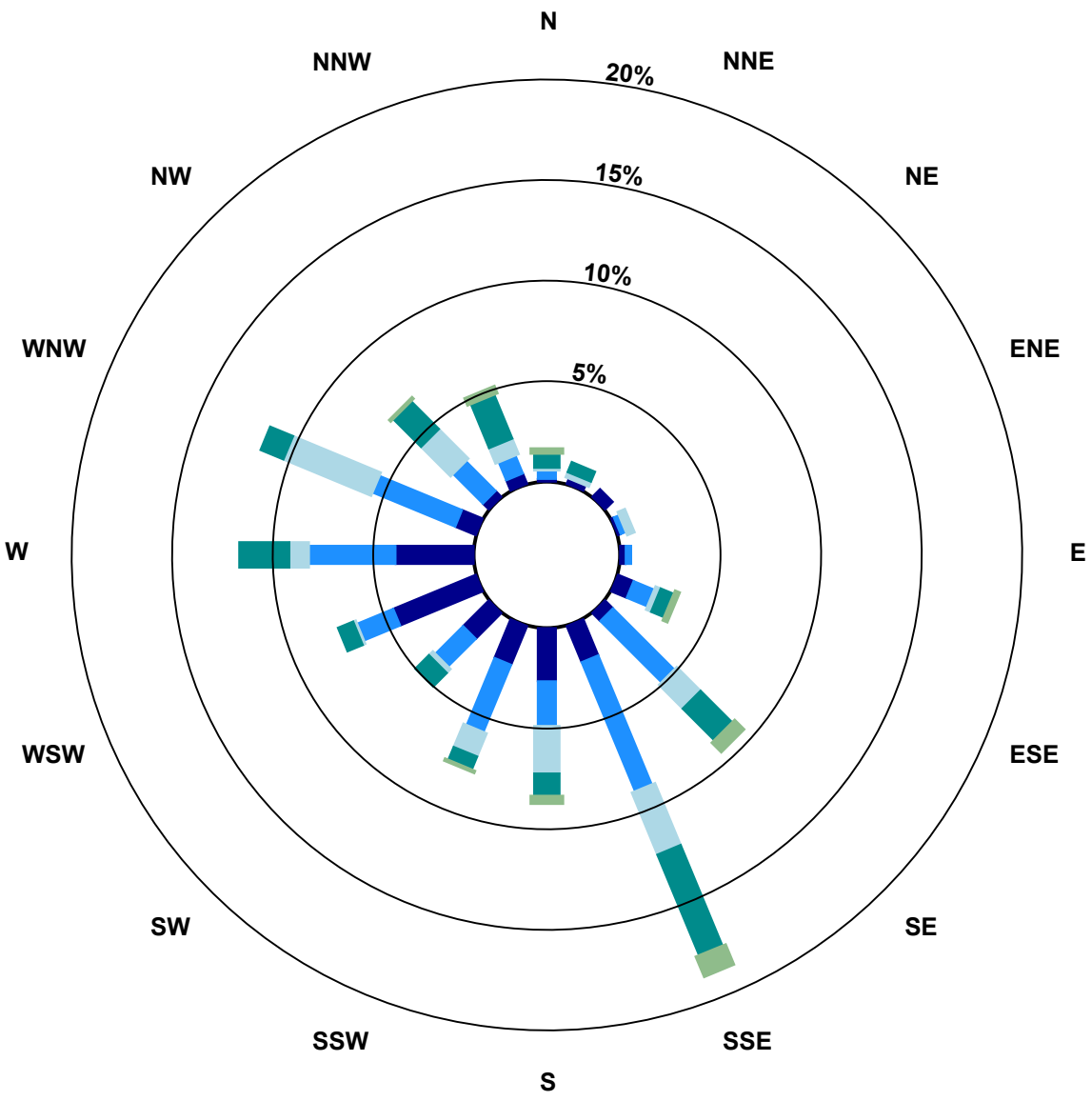
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Anzac



Classes ($\mu g/m^3$)

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 81.0

Total Number of Valid Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Anzac - September 2025

Maximum Value: 28.4 C on Sep 13 15:00

Maximum Daily Average: 18.3 C on Sep 12

Minimum Value: -0.6 C on Sep 5 06:00

Minimum Daily Average: 9.8 C on Sep 2

Maximum Diurnal Average: 20.8 C at hour 15

Minimum Diurnal Average: 8.7 C at hour 6

Monthly Average: 14.04 C

Percentiles: P_1 = 0.8 P_{10} = 7.6 Q_1 = 10.4 Median = 13.4 Q_3 = 17.3 P_{90} = 22.0 P_{99} = 27.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

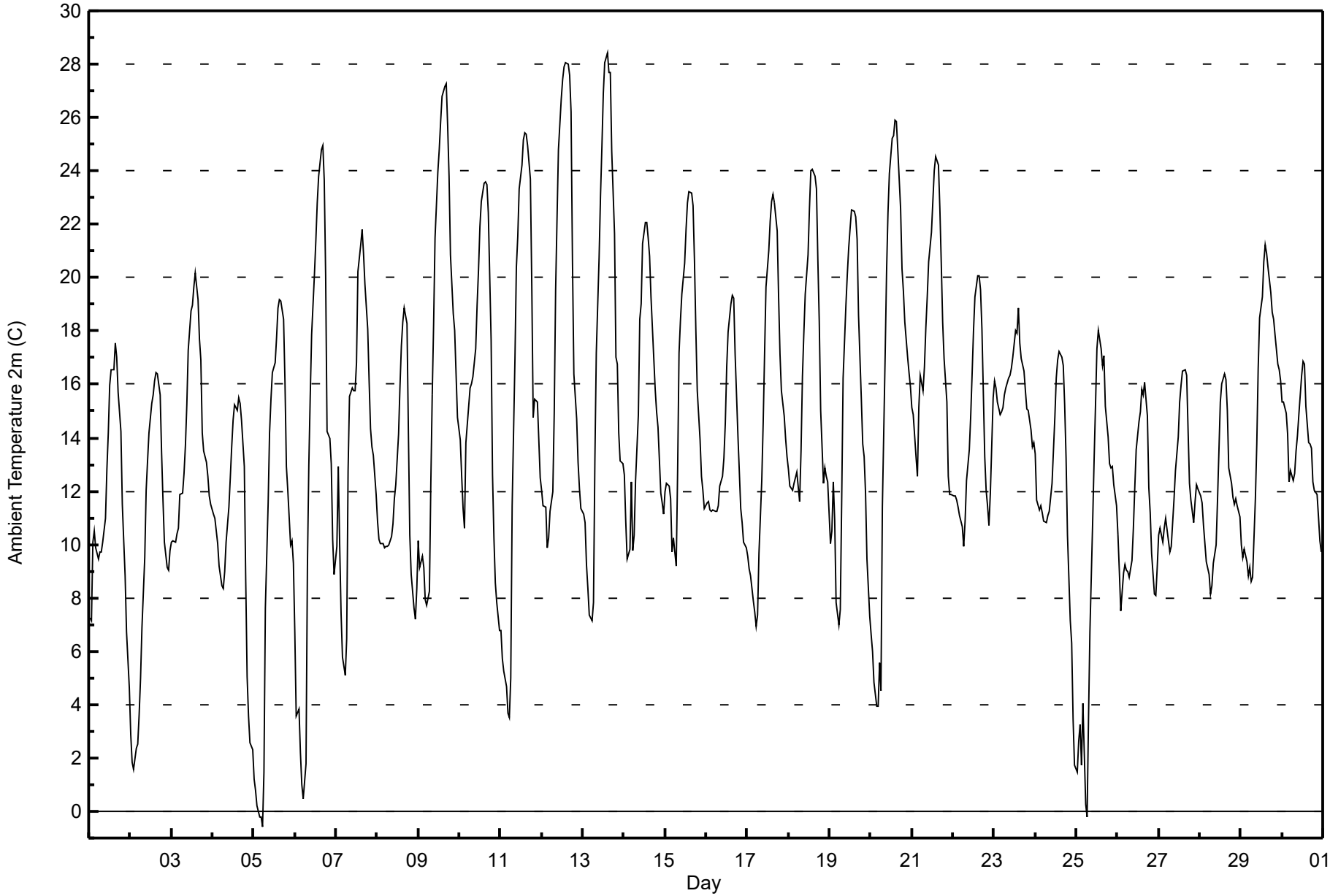
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	7.2	7.2	10.1	10.5	9.9	9.4	9.7	9.7	10.1	11.0	12.8	14.2	16.0	16.6	16.5	17.6	17.0	15.7	14.2	11.5	10.2	8.8	6.7	4.6	11.6	17.6
2-Sep	2.9	1.8	1.6	2.4	2.5	3.6	5.0	6.9	9.5	12.0	13.1	14.2	15.3	15.6	16.2	16.5	16.4	15.6	13.4	11.7	10.1	9.1	9.0	9.8	9.8	16.5
3-Sep	10.1	10.2	10.1	10.4	10.6	11.9	11.9	12.6	13.7	15.2	17.3	18.8	19.0	19.7	20.2	19.2	17.7	16.9	14.2	13.5	13.1	12.6	11.8	11.5	14.3	20.2
4-Sep	11.2	11.0	10.5	10.0	9.2	8.5	8.4	9.0	10.1	11.4	12.5	13.7	14.6	15.2	15.0	15.5	15.3	14.7	12.9	8.7	5.0	3.6	2.6	2.3	10.5	15.5
5-Sep	1.2	0.8	0.2	-0.2	-0.2	-0.6	1.5	7.6	11.5	14.2	15.4	16.5	16.8	17.7	18.8	19.2	19.1	18.4	16.1	12.9	12.1	10.0	10.1	9.3	10.4	19.2
6-Sep	6.7	3.6	3.8	2.2	1.0	0.5	1.8	9.2	13.0	15.5	17.9	20.1	21.4	22.8	23.8	24.8	24.9	23.7	20.0	14.2	14.0	13.1	10.2	8.9	13.2	24.9
7-Sep	9.9	12.9	10.0	7.4	5.8	5.1	6.5	12.8	15.5	15.9	15.7	15.7	16.8	20.2	21.2	21.8	20.9	19.8	18.1	16.2	14.4	13.7	13.3	11.9	14.2	21.8
8-Sep	10.9	10.2	10.0	10.0	9.9	9.9	9.9	10.0	10.3	10.8	11.7	12.3	14.1	15.9	17.5	18.3	18.9	18.3	14.2	10.4	8.9	7.6	7.2	8.3	11.9	18.9
9-Sep	10.1	9.1	9.5	9.1	7.9	7.7	8.3	12.3	15.6	18.3	21.5	23.9	24.8	25.9	26.8	27.2	27.3	25.7	23.8	20.9	18.7	18.0	16.4	14.8	17.6	27.3
10-Sep	13.9	12.5	11.3	10.6	13.8	15.2	15.9	16.0	16.3	17.3	19.0	20.3	21.9	22.8	23.5	23.6	23.5	22.5	17.6	12.6	10.2	8.6	7.8	6.8	16.0	23.6
11-Sep	6.8	5.7	5.3	4.7	3.7	3.5	5.0	11.4	16.9	20.4	21.6	23.3	24.2	25.1	25.4	25.4	25.0	23.7	19.7	14.8	15.5	15.4	13.9	12.5	15.4	25.4
12-Sep	12.0	11.4	11.4	9.9	10.2	11.2	12.0	14.9	19.5	22.2	24.8	26.7	27.4	27.9	28.0	28.0	27.6	26.2	20.6	16.4	14.7	13.1	12.1	11.3	18.3	28.0
13-Sep	11.1	10.8	9.2	8.4	7.3	7.1	7.8	13.2	17.2	20.8	23.0	24.9	26.9	28.0	28.4	27.7	27.7	24.8	21.6	17.0	16.7	14.2	13.1	13.1	17.5	28.4
14-Sep	12.6	10.9	9.5	9.8	12.4	9.8	10.4	12.4	14.9	18.4	19.0	21.3	22.0	22.1	21.5	20.8	19.3	17.0	15.8	15.0	14.4	11.9	11.5	11.1	15.2	22.1
15-Sep	12.0	12.3	12.2	11.7	9.7	10.3	9.2	12.8	17.2	18.4	19.4	20.6	21.8	22.8	23.2	23.2	22.7	20.7	18.0	15.7	13.9	12.6	12.0	11.3	16.0	23.2
16-Sep	11.6	11.6	11.3	11.3	11.3	11.2	11.2	11.5	12.2	12.6	13.2	14.6	16.6	18.0	19.0	19.3	19.3	17.1	14.1	12.7	11.3	10.8	10.1	9.9	13.4	19.3
17-Sep	9.5	9.1	8.8	7.9	7.5	6.9	7.4	9.7	12.4	14.5	17.1	19.7	21.0	22.1	22.9	23.1	22.8	21.7	19.3	17.1	15.8	14.8	14.0	13.3	14.9	23.1
18-Sep	12.8	12.2	12.0	12.3	12.5	12.7	11.6	13.5	16.3	17.9	19.4	20.8	22.6	24.0	24.1	23.8	23.3	20.7	18.4	15.0	12.3	12.9	12.6	12.4	16.5	24.1
19-Sep	10.0	10.5	12.4	10.9	7.8	7.0	7.6	11.7	16.2	19.0	20.1	21.1	21.8	22.5	22.5	22.3	21.5	18.6	15.4	13.8	13.3	11.9	9.5	7.3	14.8	22.5
20-Sep	6.6	6.0	4.8	4.0	4.0	5.6	4.5	11.4	17.1	20.2	22.4	23.9	25.2	25.3	25.9	25.8	24.8	22.6	20.3	19.5	18.3	17.0	16.5	15.9	16.2	25.9
21-Sep	15.1	14.9	13.3	12.6	15.1	16.3	15.8	16.7	18.1	19.3	20.6	21.7	22.9	24.0	24.5	24.2	22.6	20.5	18.3	17.0	15.3	12.6	11.9	11.9	17.7	24.5
22-Sep	11.8	11.8	11.7	11.4	11.1	10.6	10.0	10.9	12.4	13.6	14.8	16.4	18.0	19.3	20.1	20.0	19.5	18.1	13.3	12.0	11.5	10.7	11.9	15.5	14.0	20.1
23-Sep	16.1	15.9	15.3	14.9	15.0	15.2	15.6	15.9	16.2	16.4	16.6	17.0	18.0	17.9	18.9	17.5	17.0	16.5	15.8	15.1	15.0	14.3	13.6	13.8	16.0	18.9
24-Sep	13.4	11.7	11.3	11.5	11.2	10.9	10.8	11.1	11.2	11.8	12.3	14.7	16.3	16.9	17.2	17.0	16.7	15.2	13.2	10.4	7.1	6.3	3.5	1.7	11.8	17.2
25-Sep	1.5	2.6	3.3	1.8	4.0	0.3	-0.2	3.5	6.7	10.9	13.2	15.2	17.4	18.0	17.3	16.7	17.1	15.2	14.0	13.0	12.9	12.9	12.2	11.5	10.0	18.0
26-Sep	10.4	9.0	7.5	9.0	9.3	9.0	9.0	8.8	9.4	10.6	12.1	13.5	14.6	15.0	15.8	15.6	16.1	14.8	12.1	11.2	9.7	8.1	8.1	9.1	11.2	16.1
27-Sep	10.4	10.6	10.1	10.6	11.0	10.6	9.7	9.9	10.8	11.7	12.8	14.0	15.3	16.0	16.5	16.6	16.3	14.3	12.3	11.6	10.8	11.6	12.3	12.1	12.4	16.6
28-Sep	11.8	11.5	10.7	10.0	9.4	8.9	8.1	8.4	9.3	10.0	11.6	13.5	15.3	16.0	16.4	16.2	15.0	12.9	12.3	11.8	11.5	11.7	11.5	11.0	11.9	16.4
29-Sep	10.0	9.5	9.8	9.3	8.8	9.2	8.6	8.8	11.7	13.7	16.6	18.5	19.3	20.6	21.2	20.9	20.4	19.4	18.7	18.4	17.9	16.7	16.5	16.1	15.0	21.2
30-Sep	15.3	15.4	14.9	14.1	12.3	12.8	12.4	12.7	13.5	14.1	14.8	16.4	16.8	16.7	15.2	13.8	13.8	13.6	12.3	12.0	11.9	11.1	10.2	9.7	13.6	16.8
	10.2	9.8	9.4	8.9	8.8	8.7	8.8	11.2	13.5	15.3	16.8	18.2	19.5	20.4	20.8	20.7	20.3	18.8	16.4	14.1	12.9	11.9	11.1	10.6	Diurnal Average	
	16.1	15.9	15.3	14.9	15.1	16.3	15.9	16.7	19.5	22.2	24.8	26.7	27.4	28.0	28.4	28.0	27.7	26.2	23.8	20.9	18.7	18.0	16.5	16.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Anzac - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	4	0.56	0.56
0 - 10	150	20.83	21.39
10 - 20	451	62.64	84.03
> 20	115	15.97	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Anzac - September 2025

Maximum Value: 99.9 % on Sep 8 08:00

Maximum Daily Average: 86.8 % on Sep 8

Minimum Value: 26.4 % on Sep 27 15:00

Minimum Daily Average: 38.6 % on Sep 23

Maximum Diurnal Average: 82.1 % at hour 7

Minimum Diurnal Average: 42.4 % at hour 16

Monthly Average: 64.98 %

Percentiles: P_1 = 28.9 P_{10} = 35.5 Q_1 = 46.7 Median = 65.1 Q_3 = 83.6 P_{90} = 94.2 P_{99} = 99.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

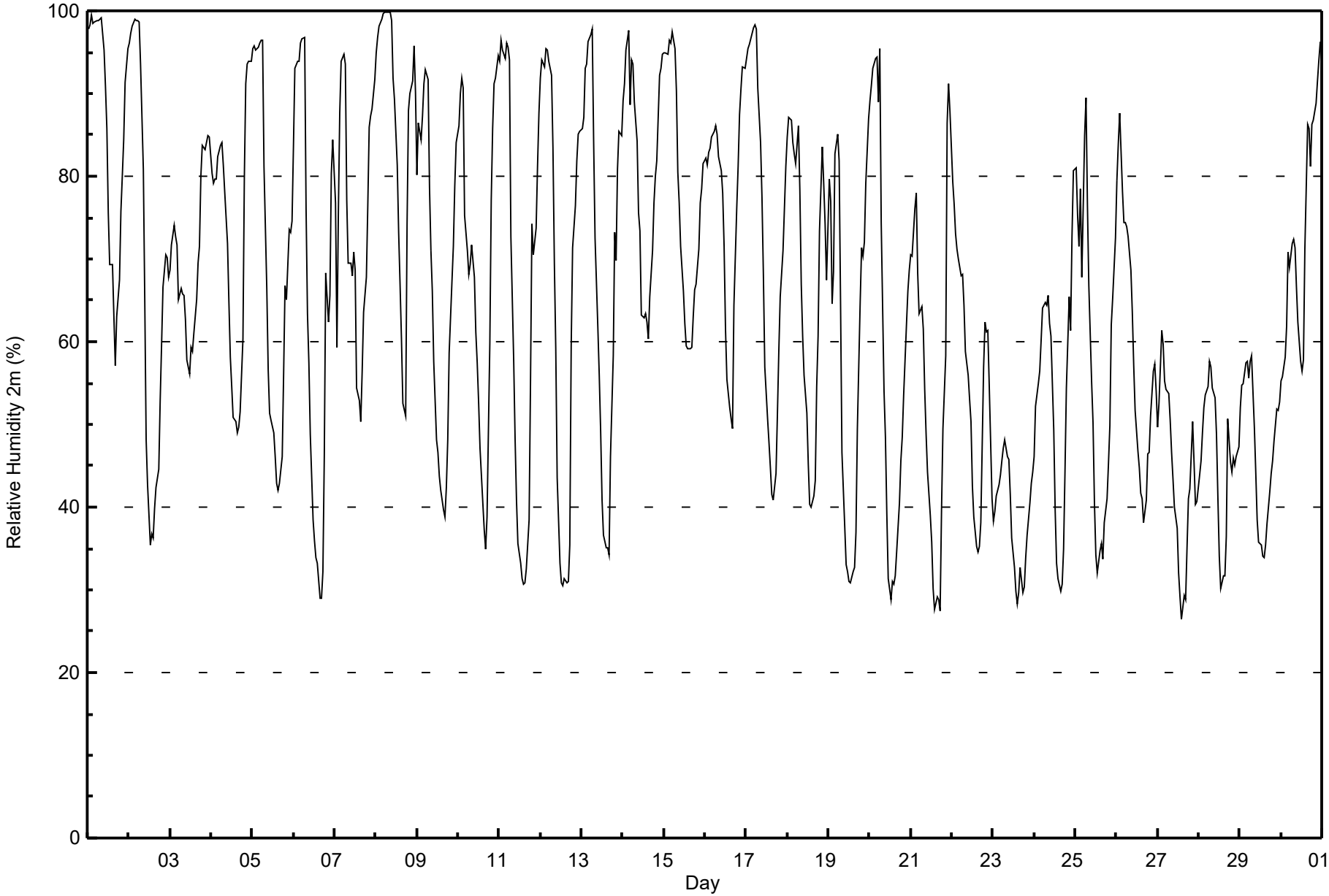
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	97.7	98.4	99.5	98.5	98.6	98.9	98.8	99.1	99.2	95.3	90.9	85.7	75.6	69.4	69.4	63.0	57.1	63.1	67.5	75.8	80.0	84.5	91.4	95.5	85.5	99.5
2-Sep	96.2	97.3	98.1	99.0	98.9	98.9	98.6	93.6	80.9	65.3	48.1	42.8	35.5	36.8	36.3	39.8	42.3	44.6	52.9	59.6	66.6	70.4	70.2	67.7	68.3	99.0
3-Sep	68.6	71.7	74.1	72.8	71.6	65.0	66.5	65.7	65.6	62.7	57.8	56.1	59.3	58.9	61.1	65.1	69.5	71.5	80.0	83.7	83.3	84.1	84.9	84.8	70.2	84.9
4-Sep	80.3	79.1	79.7	79.7	82.4	83.8	84.1	81.3	78.1	71.9	64.8	58.1	54.6	50.8	50.4	48.9	49.7	51.6	60.4	79.8	91.2	93.5	93.9	94.0	72.6	94.0
5-Sep	95.4	95.7	95.3	95.6	96.1	96.5	96.4	81.2	66.5	56.6	51.3	50.4	49.0	46.1	42.8	42.0	42.9	46.2	56.0	66.8	65.1	73.5	73.2	74.6	69.0	96.5
6-Sep	83.6	93.0	93.9	93.9	96.1	96.6	96.8	76.1	63.4	57.4	48.8	38.5	35.9	33.8	33.2	28.9	29.0	32.2	46.2	68.3	62.3	65.7	80.3	84.4	64.1	96.8
7-Sep	76.8	59.3	75.3	87.6	93.8	94.7	93.5	77.0	69.4	69.6	68.0	70.9	68.7	54.4	52.9	50.4	56.5	63.5	67.8	76.5	85.9	87.3	88.2	91.7	74.2	94.7
8-Sep	94.9	96.9	98.2	99.0	99.6	99.8	99.9	99.9	99.9	98.9	91.9	89.3	81.3	73.3	66.9	60.3	52.6	51.0	74.3	88.0	90.1	91.6	95.8	90.1	86.8	99.9
9-Sep	80.1	86.5	84.3	87.2	91.2	92.9	91.8	78.7	70.9	66.0	57.6	48.2	46.6	43.7	42.0	39.6	38.8	42.4	48.1	58.6	67.3	71.5	78.9	84.1	66.5	92.9
10-Sep	86.1	90.1	91.9	90.6	75.3	71.0	68.1	69.3	71.6	67.7	61.2	57.5	52.7	47.1	40.6	37.3	34.9	38.8	59.9	77.2	85.8	91.2	91.8	94.6	68.8	94.6
11-Sep	93.8	96.4	95.2	94.3	96.1	95.6	94.2	72.7	57.8	48.4	40.9	35.5	33.2	31.3	30.6	30.8	32.6	38.4	55.3	74.2	70.5	73.8	81.3	87.7	65.0	96.4
12-Sep	91.9	94.0	93.3	95.4	95.3	93.9	92.2	83.4	69.5	59.2	43.5	33.2	30.8	30.6	31.4	30.8	31.0	35.4	59.4	71.4	76.4	81.8	85.1	85.4	66.4	95.4
13-Sep	85.7	87.1	93.1	93.6	96.2	97.2	97.9	84.3	72.5	61.7	55.9	49.2	40.8	36.6	35.1	35.1	34.3	46.1	58.3	73.2	69.8	80.8	85.4	85.0	69.0	97.9
14-Sep	89.1	91.3	95.3	97.6	88.7	94.1	93.5	89.1	84.3	75.6	73.4	63.3	62.8	63.4	62.4	60.3	65.4	71.0	76.8	80.0	81.8	92.2	93.0	94.7	80.8	97.6
15-Sep	94.9	94.8	94.8	96.5	96.2	97.4	95.4	90.3	80.4	76.8	71.5	66.1	62.2	59.5	59.2	59.2	59.3	63.1	66.2	66.9	71.2	76.7	78.5	81.5	77.4	97.4
16-Sep	82.1	81.3	82.9	83.3	84.7	85.5	86.1	85.1	82.4	80.8	77.9	71.6	61.6	55.5	52.1	50.6	49.5	64.4	76.2	81.2	87.5	90.5	93.3	93.1	76.6	93.3
17-Sep	94.3	95.4	95.9	97.4	97.9	98.3	97.8	90.7	84.1	77.5	68.1	57.0	50.6	47.8	44.7	41.5	40.9	44.0	51.2	58.9	65.4	70.9	76.1	81.2	72.0	98.3
18-Sep	84.8	87.2	86.8	84.1	82.8	81.5	86.1	78.3	66.9	60.7	55.9	51.3	45.3	40.4	40.0	41.3	43.3	54.5	60.7	73.3	83.6	79.2	74.3	67.5	67.1	87.2
19-Sep	79.7	77.0	64.6	68.5	82.6	85.0	81.8	64.9	46.6	37.6	33.1	32.2	30.9	30.8	32.2	32.7	36.9	49.5	64.8	71.3	70.4	72.1	79.2	86.9	58.8	86.9
20-Sep	89.2	90.9	93.1	94.2	94.4	89.0	95.4	74.5	54.1	48.4	39.2	31.4	28.8	31.0	30.7	31.7	34.5	40.6	45.6	48.4	53.5	62.1	66.2	68.6	59.8	95.4
21-Sep	70.4	70.3	76.0	78.0	68.3	63.4	64.3	61.5	54.2	48.8	44.2	39.0	35.8	30.2	27.7	29.2	28.7	27.4	39.7	49.6	58.4	86.4	91.2	87.7	55.4	91.2
22-Sep	79.4	76.6	73.0	71.2	70.0	68.0	68.2	64.4	58.7	56.0	53.0	50.4	42.6	38.8	35.3	34.6	35.3	38.1	56.9	62.3	61.2	61.4	54.7	41.0	56.3	79.4
23-Sep	38.4	39.5	41.3	42.7	43.8	45.5	47.1	48.2	46.0	45.8	41.6	36.2	32.7	29.8	28.3	29.6	32.7	29.6	30.3	33.9	36.6	40.5	42.8	44.3	38.6	48.2
24-Sep	46.1	52.3	55.0	56.5	60.3	64.1	64.7	64.4	65.5	62.1	60.6	49.3	39.6	33.2	31.3	29.8	30.6	34.9	44.3	54.4	65.4	61.3	72.8	80.7	53.3	80.7
25-Sep	81.1	75.3	71.5	78.4	67.7	85.0	89.6	76.6	66.9	55.1	50.2	40.5	34.3	32.0	34.8	35.6	33.8	38.2	40.9	45.3	49.8	62.0	65.2	72.6	57.6	89.6
26-Sep	79.5	84.0	87.7	78.2	74.4	74.4	74.0	72.7	68.6	63.5	57.1	51.8	46.7	44.7	41.6	41.0	38.1	40.9	46.4	46.5	50.9	56.5	57.2	54.1	59.6	87.7
27-Sep	49.7	52.5	61.4	59.6	55.3	54.3	53.7	50.5	46.5	43.3	40.0	37.4	32.0	29.2	26.4	29.3	28.9	35.1	41.0	42.3	50.4	45.4	40.3	40.7	43.6	61.4
28-Sep	43.8	45.5	49.0	52.1	53.5	54.7	57.7	56.9	54.4	53.2	48.8	41.2	34.1	30.2	31.6	31.8	36.5	50.6	45.4	44.2	46.0	45.1	46.1	47.4	45.8	57.7
29-Sep	52.0	54.8	54.8	57.5	57.6	55.6	57.6	58.2	49.6	44.2	38.5	35.8	35.4	34.0	33.9	35.4	38.0	41.9	44.0	45.6	48.0	51.9	51.7	52.6	47.0	58.2
30-Sep	55.2	55.8	58.1	61.9	70.8	69.0	71.9	72.4	71.3	66.7	62.4	57.6	56.5	57.8	71.2	86.3	85.8	81.3	86.3	86.8	88.8	91.5	94.0	96.3	73.1	96.3
	78.0	79.0	80.4	81.5	81.3	81.6	82.1	75.4	68.2	62.6	56.5	50.9	46.5	43.4	42.5	42.4	43.0	47.7	56.8	64.8	68.8	73.2	75.9	77.0	Diurnal Average	
	97.7	98.4	99.5	99.0	99.6	99.8	99.9	99.9	99.9	98.9	91.9	89.3	81.3	73.3	71.2	86.3	85.8	81.3	86.3	88.0	91.2	93.5	95.8	96.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Anzac - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	107	14.86	14.86
40 - 60	204	28.33	43.19
60 - 80	194	26.94	70.14
80 - 100	215	29.86	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Anzac - September 2025

Maximum Value: 64.9 % on Sep 5 07:00

Maximum Daily Average: 17.5 % on Sep 5

Minimum Value: 0.0 % on Sep 1 12:00

Minimum Daily Average: 0.0 % on Sep 9

Maximum Diurnal Average: 12.7 % at hour 7

Minimum Diurnal Average: 0.0 % at hour 12

Monthly Average: 3.78 %

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 12.1 P_{99} = 52.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

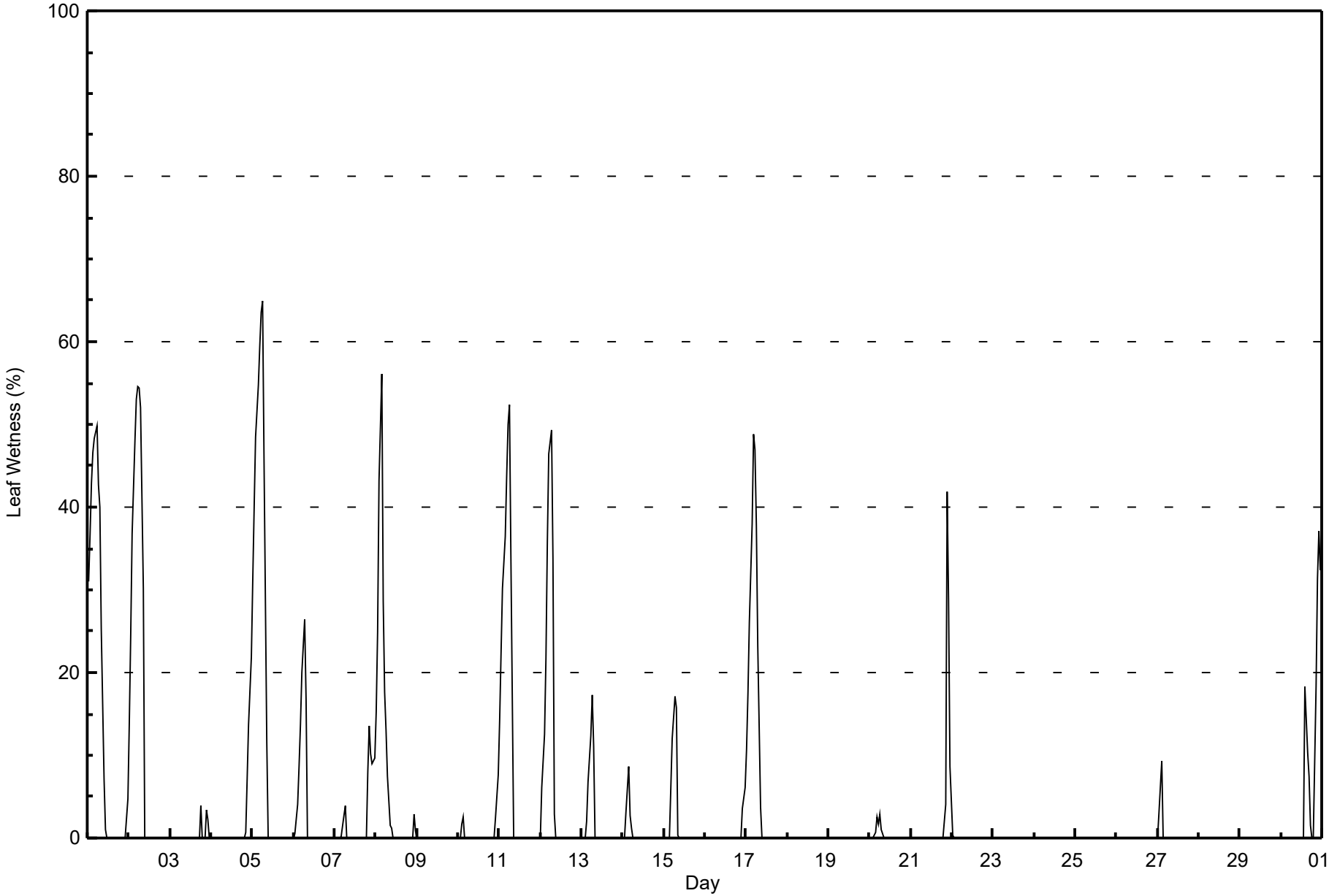
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	31.1	36.6	42.9	46.7	48.4	49.8	42.7	40.0	25.2	7.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	15.7	49.8
2-Sep	14.1	24.6	36.8	48.0	53.0	54.5	54.4	52.0	30.2	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	15.3	54.5
3-Sep	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	3.3	2.2	0.0	0.4	3.9
4-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.1	13.7	21.9	1.8	21.9
5-Sep	31.3	40.1	48.4	54.8	59.5	63.6	64.9	46.3	11.5	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	17.5	64.9
6-Sep	0.0	0.5	4.0	8.6	13.8	20.0	26.4	16.8	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	3.8	26.4
7-Sep	0.0	0.0	0.0	0.0	0.1	2.7	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	13.5	10.2	8.9	9.7	2.4	13.5
8-Sep	15.3	24.9	43.2	56.2	28.7	17.6	13.0	7.5	1.6	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	2.9	0.8	8.9	56.2
9-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	1.7	2.5	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	0.0	0.0	2.3	7.6	0.6	7.6
11-Sep	14.2	22.3	30.2	36.5	43.8	50.0	52.4	34.3	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	11.8	52.4
12-Sep	0.1	6.1	12.6	21.7	35.8	46.5	49.4	33.7	2.9	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	8.7	49.4
13-Sep	0.0	0.0	0.0	2.1	6.8	12.4	17.2	11.2	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	2.1	17.2
14-Sep	0.0	0.0	3.1	8.7	2.7	1.3	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	0.7	8.7
15-Sep	0.0	0.0	0.0	0.0	5.9	12.1	17.2	15.8	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	2.1	17.2
16-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	6.1	0.4	6.1
17-Sep	10.7	17.5	26.0	37.9	48.8	46.9	37.9	23.3	3.8	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	10.5	48.8
18-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.7	2.5	1.7	2.9	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	0.4	2.9
21-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	41.9	28.8	8.7	3.5	41.9
22-Sep	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	0.0	0.0	0.3
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	3.1	9.4	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	0.5	9.4
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	10.3	7.4	1.5	0.0	0.0	18.3	31.4	37.0	32.3	6.5	37.0
	3.9	5.9	8.6	10.8	11.7	12.6	12.7	9.4	2.5	0.3	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.0	0.1	0.3	1.2	3.1	3.3	3.1	Diurnal Average	
	31.3	40.1	48.4	56.2	59.5	63.6	64.9	52.0	30.2	7.2	1.0	0.0	0.0	0.0	18.4	10.3	7.4	1.5	3.9	7.9	18.3	41.9	37.0	32.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Anzac - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	593	82.36	82.36
0.4 - 0.5	2	0.28	82.64
0.6 - 0.7	2	0.28	82.92
0.8 - 1.4	5	0.69	83.61
1.5 - 10	39	5.42	89.03
> 10	78	10.83	99.86

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Anzac - September 2025

Maximum Speed: 29 km/h on Sep 29 11:00

Maximum Daily Speed Average: 17.2 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 11 05:00

Minimum Daily Speed Average: 1.9 km/h on Sep 30

Maximum Diurnal Speed Average: 5.6 km/h at hour 15

Minimum Diurnal Speed Average: 1.7 km/h at hour 19

Monthly Average Velocity: 4.4 km/h 227.1 deg

Percentiles: $P_1 = 2$ $P_{10} = 5$ $Q_1 = 8$ Median = 11 $Q_3 = 15$ $P_{90} = 18$ $P_{99} = 27$

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	W4	NW7	NW9	NW6	NNW5	N6	N6	ESE1	SSE6	SSW2	NW6	WNW8	WNW10	NNW13	NNW14	NNW12	NNW13	NNW12	N13	N12	N12	NNW8	NNW7	NNW5	NNW7.0	NNW14
2-Sep	NW5	WNW7	NW7	NW7	WNW6	WNW3	NW1	N3	SSE2	SSE4	SE6	SSE6	SSE6	ESE8	SE9	SE11	SE12	SE13	SE12	SSE13	SSE14	SSE14	SSE14	SSE16	SSE5.0	SSE16
3-Sep	SSE17	SSE14	SSE13	SSE15	SSE15	SSE15	S11	S11	SSE8	SSE6	S5	SSW3	N1	WNW1	NW14	NNW19	NNW21	NNW27	NNW24	NNW17	NNW19	NNW24	NNW23	NNW23	NNW3.4	NNW27
4-Sep	NNW20	NW18	NW17	NW19	NW20	NW18	NW18	NW18	NNW20	NNW26	NNW25	NNW24	NNW24	NNW24	NNW22	NNW20	N19	N16	N11	NNE8	NE5	ENE5	S2	SW6	NNW15.4	NNW26
5-Sep	SSW5	S5	SSW5	SW5	S6	S5	SSW7	S7	SE4	SSE5	ESE4	NE8	NNE7	NE6	E7	ESE7	ESE9	ESE9	ESE9	ESE11	SE11	SSE11	SSE14	SSE13	SE5.1	SSE14
6-Sep	SE9	SSE9	SSE8	SE5	ESE5	SE5	SE6	SE7	SE9	SE10	SE12	SE16	SE16	SSE17	SSE15	SSW12	SW9	SSW9	SSW8	SSW9	SSW10	SSW10	S9	SSW5	SSE8.6	SSE17
7-Sep	SW8	SW9	SW7	SSW7	SSW4	SSW3	SSW4	SSW3	WNW2	NW8	WNW15	W9	WNW3	WNW8	NW11	WNW10	NW10	NW9	NNW14	NNW13	NNW12	NNW9	NW8	NW8	WNW5.9	WNW15
8-Sep	WNW8	WNW8	WNW9	WNW11	NW10	WNW9	NW10	NW10	NW9	NW8	N6	N4	NNE6	NNE6	ENE6	ENE6	ENE5	ESE7	ESE6	SE7	SSE7	S7	SSE10	SE10	NNW1.9	WNW11
9-Sep	SE11	SE12	SE12	SSE12	SSE9	SSE10	SSE7	SSE7	SE8	SE10	SE13	SE17	SE18	SSE21	SSE17	S14	S14	SSW11	S11	S11	S11	SSW7	SW6	SW7	SSE10.4	SSE21
10-Sep	SW7	WSW9	WSW8	W9	W11	W12	W13	W18	WNW18	WNW15	WNW13	WNW12	WNW12	NW12	WNW10	WNW9	WNW7	NW7	NNW5	SW5	SW6	WNW7	NW7	WNW6	WNW9.2	WNW18
11-Sep	W5	W4	WSW5	SW4	NW1	ESE4	SSE7	S7	SSE3	SSE6	SE7	ESE7	E10	SE11	SSE12	SSE14	SSE13	SSE11	SSE9	SSE10	SSE11	SSE12	SSE11	SSE10	SSE6.7	SSE14
12-Sep	SSE9	SSE10	S10	SSE10	SSE11	SSE12	S10	SSE8	SSE7	SSE9	S12	S12	S15	S15	SSW14	SSW12	SSW11	S8	S8	S9	S9	S9	S9	S8	S10.1	S15
13-Sep	S10	S8	SSW5	S7	SSE7	SSE6	SE6	SSE9	SSE9	SE8	ESE8	SE12	SE15	SE17	SSE15	SSE13	SSE14	SSE9	SSE9	SSE9	SSE9	SSE8	SSE8	SE9	SSE9.2	SE17
14-Sep	S10	SE8	SE5	SSE8	S10	SSW6	S4	SSE9	SSW6	SSE6	SE7	SE9	ESE14	ESE18	SSE18	SE17	SE14	SSE12	S9	S7	S6	ENE5	SE4	SSE3	SSE8.0	SSE18
15-Sep	S5	SSW5	WNW5	SE2	SSE3	S9	S7	SW6	W11	WNW16	WNW15	WNW16	WNW16	WNW17	WNW16	WNW16	WNW18	NW22	NNW21	NW19	NW13	WNW10	NW12	NW14	WNW9.8	NW22
16-Sep	NW13	WNW16	NW15	NW14	WNW12	WNW13	NW11	NW8	WNW9	WNW11	W9	W8	WSW9	W9	WNW8	W5	W4	ENE3	ESE9	SE9	SSE12	SSE13	SSE13	SSE14	W4.8	WNW16
17-Sep	SSE12	SSE12	SSE11	SSE9	SSE10	SSE10	SSE10	SSE12	SSE13	SE14	SE12	SE15	SE18	SSE19	SSE19	SSE20	SSE19	SSE18	SSE14	SSE15	SSE16	SSE17	SE15	SSE15	SSE14.2	SSE20
18-Sep	SSE15	SSE15	SSE16	SSE17	SSE16	SSE17	SSE11	SSE10	S12	SSW15	SSW14	S15	SSW14	SSW13	SW16	SSW14	SW11	W8	WSW8	SW7	WSW7	SW9	WSW10	W8	SSW10.1	SSE17
19-Sep	WSW6	WSW8	W9	W8	W8	W8	WSW8	WSW7	SSW5	SW4	WNW8	WNW14	W15	W15	W14	WNW12	W9	WSW6	SW5	SSW3	SSW7	SW6	SSW5	SSW4	W7.3	W15
20-Sep	WSW4	SSE5	SSE8	S8	S9	S9	SSW6	SSW4	SSW8	S8	SSW12	SSW15	SSW16	SSW14	SSW14	S17	S13	SSE11	SSE13	SSE14	SSE13	SSE13	SSE14	SSE16	S10.4	S17
21-Sep	SSE14	SSE15	S10	SW8	WNW11	WNW14	WNW13	WNW14	WNW13	WNW12	WNW11	WNW7	W9	W12	WNW12	WNW12	WNW15	NW17	NW14	WNW19	WNW20	WNW17	WNW17	WNW17	WNW10.5	WNW20
22-Sep	W19	W21	W18	W18	W19	W18	WSW14	W14	W15	W15	W14	W13	W17	W19	WSW18	WSW16	WSW14	SW8	S8	S9	S11	S12	S13	SSW16	WSW12.7	W21
23-Sep	SW19	SSW19	SW17	SW16	WSW12	WSW13	WSW15	WSW15	WSW15	W15	WSW16	WSW16	W16	W18	W20	W19	WSW16	WSW20	WSW17	WSW15	WSW17	WSW12	WSW9	W12	WSW15.1	W20
24-Sep	WSW10	SSW7	SW8	SW10	WSW11	WSW12	WSW11	W13	W15	W16	W18	W19	WNW22	WNW21	WNW17	WNW16	WNW13	WNW10	WNW9	W8	WSW8	WSW8	WSW8	W8	W11.4	WNW22
25-Sep	WSW8	SW8	SW8	SW8	SW10	SE5	SSE8	S10	SSE9	SSE11	SSE9	SSE8	S11	S16	S16	SSE17	S21	S13	S11	SSE11	SW8	WSW16	WSW18	W16	SSW9.3	S21
26-Sep	W11	SW5	SSW6	W12	W14	W15	W17	W16	W20	W20	WNW19	WNW18	WNW21	WNW21	WNW21	WNW20	W18	W13	WSW9	WSW11	SW9	SW8	SSW7	SW9	W13.0	WNW21
27-Sep	SSW11	SSW10	SSW10	WSW18	WSW22	WSW25	WSW24	WSW27	W27	W29	W27	W22	W21	W19	W20	W14	WSW15	WSW7	SW8	W7	WNW6	W9	WSW12	SW12	WSW15.8	W29
28-Sep	WSW13	WSW16	W15	W17	W18	W20	W15	W15	WNW16	W16	WNW13	WNW9	WNW7	NW7	WNW6	NNW4	NE6	E6	E9	ESE9	SE10	SE10	SE11	SE12	W5.8	W20
29-Sep	SE12	SSE13	SSE13	SE14	SE14	SE14	ESE16	SE17	SE22	SSE28	SSE29	SSE28	SSE28	S24	S21	S19	SSE15	SE14	SSE14	SE16	SE13	SE13	SE16	SE14	SSE17.2	SSE29
30-Sep	ESE13	SE12	ESE11	ESE8	ESE6	SSE10	NW2	W6	W6	WNW10	WNW9	W8	W9	NW8	NW7	NNW3	SSW2	N7	NNE8	NNE9	N8	NNW7	NW8	NW9	NNW1.9	ESE13
	SSW5.3	SSW5.3	SW5.0	SW5.3	SW5.2	SW5.4	SW4.9	SW5.1	WSW5.1	WSW4.9	WSW5.1	SW4.7	SW5.3	WSW5.2	WSW5.6	WSW5.0	SW4.2	WSW2.4	SSW1.7	S2.8	SSW3.8	SSW3.9	SSW4.5	SSW4.5	Diurnal Average	
	NNW20	W21	W18	NW19	WSW22	WSW25	WSW24	WSW27	W27	W29	SSE29	SSE28	SSE28	SSE24	NNW22	NNW20	S21	NNW27	NNW24	NW19	WNW20	NNW24	NNW23	NNW23	Diurnal Maximum	

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 8 km/h on Sep 27 10:00

Minimum Value: 0 km/h on Sep 11 06:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

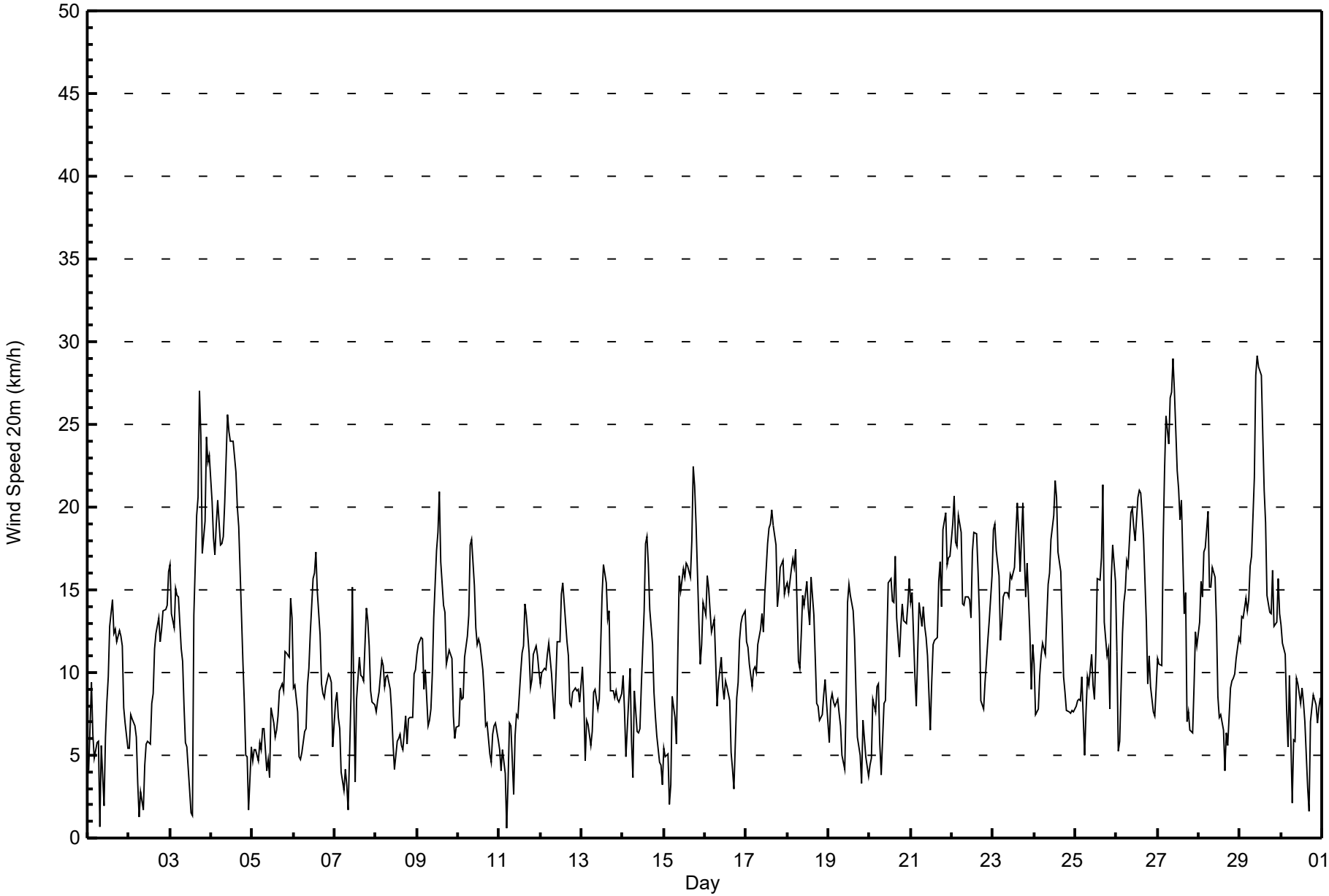
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	1	2	2	2	1	3	1	1	2	1	3	2	3	3	3	3	3	2	2	2	1	1	1	1	3
2-Sep	1	1	1	1	1	1	1	1	1	1	2	2	3	2	3	3	3	3	2	2	1	2	2	3	3
3-Sep	3	3	3	3	3	3	3	3	2	2	2	2	1	2	5	4	5	8	8	4	5	6	5	5	8
4-Sep	5	4	4	5	4	4	4	4	5	7	7	6	6	6	6	5	4	4	2	1	1	1	1	1	7
5-Sep	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	2	2	1	2	2	2	2	2	3
6-Sep	2	1	2	2	1	1	1	1	2	2	3	4	4	4	4	4	3	2	2	2	2	1	1	1	4
7-Sep	2	1	1	1	1	1	1	1	1	3	3	3	1	2	3	3	2	2	3	3	2	2	2	1	3
8-Sep	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1	1	2	1	1	2	2
9-Sep	2	2	2	2	2	2	2	1	2	2	4	4	4	5	4	4	4	3	2	2	2	2	1	1	5
10-Sep	1	1	1	1	2	3	3	4	4	4	3	3	3	3	3	3	2	2	2	2	1	1	2	1	4
11-Sep	1	1	1	1	1	0	2	2	1	2	2	3	4	3	4	4	3	3	2	1	1	1	1	1	4
12-Sep	1	1	1	2	2	1	1	1	2	2	3	4	4	4	5	4	3	2	1	1	1	1	1	1	5
13-Sep	1	1	1	1	2	1	1	2	2	2	2	3	4	4	4	4	4	2	1	1	2	1	1	2	4
14-Sep	1	2	2	2	3	2	2	2	2	2	2	5	4	5	4	5	4	3	2	2	3	2	1	1	5
15-Sep	1	1	1	1	1	1	1	1	5	4	4	4	4	4	4	4	5	6	5	4	3	2	3	3	6
16-Sep	3	3	4	3	3	3	3	2	2	3	2	2	2	2	3	2	2	1	3	1	2	2	2	2	4
17-Sep	2	2	2	1	1	1	2	2	2	3	3	4	4	4	4	5	5	4	3	3	3	3	3	3	5
18-Sep	3	3	3	4	4	3	4	5	4	4	4	5	4	4	5	4	4	2	2	1	1	1	2	1	5
19-Sep	1	1	1	1	1	1	1	1	1	1	2	4	4	4	4	3	3	1	1	1	1	1	1	1	4
20-Sep	1	1	1	1	2	1	2	1	2	2	4	5	5	5	4	5	4	2	2	2	2	2	2	2	5
21-Sep	2	2	3	3	4	3	3	3	3	3	3	2	3	3	4	3	5	4	3	5	5	5	5	5	5
22-Sep	5	6	5	5	5	5	3	4	5	4	4	3	5	5	5	5	5	2	1	2	2	1	3	5	6
23-Sep	6	5	5	5	3	3	4	4	5	4	4	5	5	6	6	6	5	6	6	5	5	4	3	3	6
24-Sep	3	2	2	3	3	3	3	4	4	5	5	6	6	5	4	4	4	2	2	1	2	1	1	1	6
25-Sep	1	1	1	2	2	1	1	1	2	2	2	3	5	5	4	5	5	3	2	1	3	5	5	4	5
26-Sep	4	1	1	5	4	5	5	4	6	5	5	5	6	5	5	5	5	4	2	3	2	2	2	3	6
27-Sep	4	3	4	6	6	7	6	7	7	8	8	6	6	5	6	4	4	2	2	1	1	3	4	3	8
28-Sep	4	5	4	5	5	5	4	4	4	4	3	2	2	2	2	2	1	1	2	2	1	2	3	2	5
29-Sep	2	2	3	3	3	4	4	4	6	6	8	7	7	6	6	5	4	3	3	3	4	4	3	3	8
30-Sep	2	3	2	3	2	4	2	2	2	3	2	2	2	2	2	2	2	3	2	2	2	1	2	1	4
	6	6	5	6	6	7	6	7	7	8	8	7	7	6	6	6	5	8	8	5	5	6	5	5	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Anzac - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	76	10.56	10.56
6 - 11	316	43.89	54.44
12 - 19	277	38.47	92.92
20 - 28	49	6.81	99.72
29 - 38	2	0.28	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Anzac - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	2	1	1	4	0	4	7	7	6	17	6	2	5	5	4	5	76
6 - 11	5	7	3	2	4	15	26	58	39	22	27	22	24	32	25	5	316
12 - 19	5	0	0	0	0	4	34	63	16	17	3	24	44	39	17	11	277
20 - 28	0	0	0	0	0	0	1	6	2	0	0	5	10	7	2	16	49
29 - 38	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	12	8	4	6	4	23	68	135	63	56	36	53	84	83	48	37	720

Total Number of Valid Hours: 720

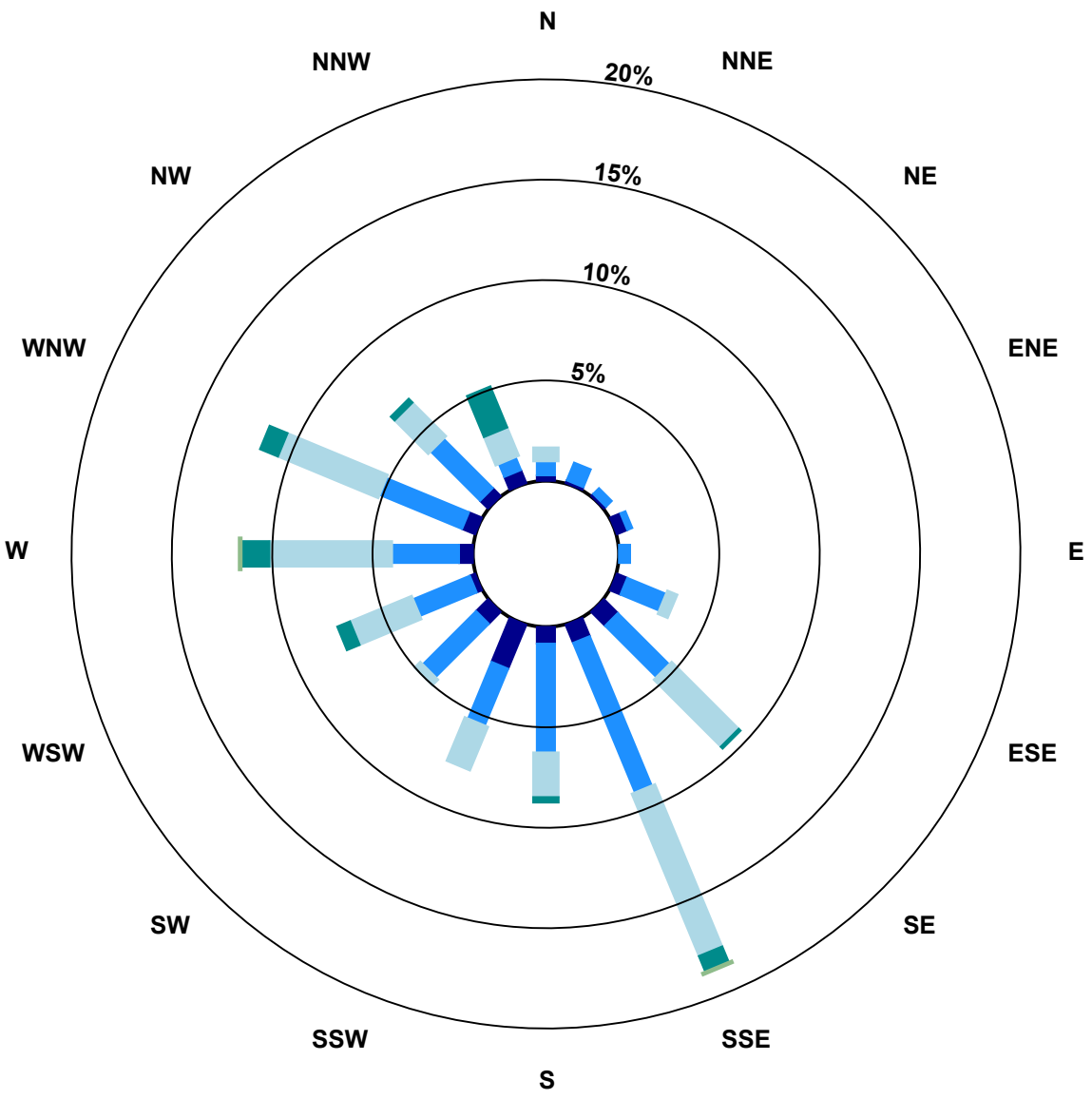
Total Number of Hours: 720

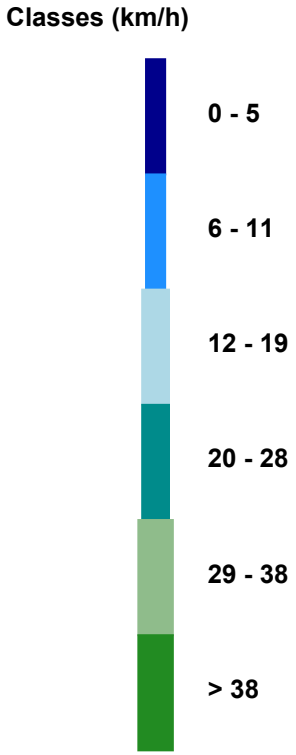
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Anzac





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Anzac - September 2025

Direction of Maximum Speed: 156 deg on Sep 29 11:00
Direction of Maximum Daily Speed Average: 148.6 deg on Sep 29

Direction of Minimum Speed: 319 deg on Sep 11 05:00

Direction of Minimum Daily Speed Average: 1.9 deg on Sep 30

Monthly Average Direction: 227.1 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	272	326	304	317	335	350	349	113	163	211	322	284	300	340	343	327	340	336	349	0	4	343	327	330	332.5
2-Sep	312	300	309	319	298	303	322	0	164	153	143	149	147	121	127	131	133	138	139	150	158	158	158	156	150.0
3-Sep	153	154	154	157	160	163	169	175	160	165	178	206	11	291	313	328	338	346	348	341	336	340	345	334	332.4
4-Sep	331	318	312	314	315	309	307	319	330	337	338	341	333	331	335	342	358	349	1	24	37	62	175	215	331.9
5-Sep	212	185	213	222	190	180	196	175	139	150	118	46	18	42	81	104	104	109	115	109	125	159	158	158	137.3
6-Sep	146	150	152	146	119	140	140	145	145	135	138	140	139	154	158	204	218	192	202	203	199	196	181	202	163.5
7-Sep	227	221	219	213	201	202	208	204	295	304	284	277	288	288	319	294	305	317	344	342	335	332	313	311	294.2
8-Sep	300	300	295	299	311	301	319	319	316	326	354	10	24	14	63	68	71	116	119	126	148	169	159	144	336.7
9-Sep	140	129	135	151	149	160	147	150	141	128	142	141	142	153	159	182	191	196	188	185	187	197	232	226	160.5
10-Sep	229	256	258	261	274	274	273	277	293	290	290	283	284	305	293	295	301	314	330	227	228	283	306	285	281.4
11-Sep	270	276	254	224	319	110	168	172	153	154	141	116	99	143	150	163	155	158	154	164	164	164	165	166	159.2
12-Sep	167	166	177	159	158	163	169	166	162	148	178	189	186	190	195	204	196	190	176	175	174	176	179	179	177.2
13-Sep	174	186	194	174	158	150	145	155	151	144	118	134	143	146	154	158	160	160	155	159	158	164	162	142	154.6
14-Sep	172	138	130	164	180	212	181	159	193	161	132	142	119	123	161	127	136	154	175	191	190	77	139	154	151.5
15-Sep	188	207	286	139	162	177	176	223	281	289	289	287	287	285	286	285	293	322	328	321	315	301	313	313	292.8
16-Sep	308	303	309	308	301	302	308	324	294	291	275	271	252	278	285	278	260	60	113	137	157	158	156	153	277.1
17-Sep	149	147	151	151	149	151	148	147	148	145	136	133	142	151	151	151	160	159	152	148	151	147	143	149	148.6
18-Sep	153	157	158	158	159	164	159	152	177	203	206	187	200	211	235	213	225	271	244	232	238	234	253	264	194.1
19-Sep	253	256	264	266	271	275	256	239	212	226	297	288	277	273	279	282	281	252	228	211	204	225	205	208	261.4
20-Sep	241	159	160	173	177	184	207	202	193	182	199	196	207	198	192	182	178	160	157	153	151	156	156	155	177.3
21-Sep	160	164	170	227	287	288	286	289	290	302	292	299	267	278	291	293	301	314	311	301	296	293	288	283	284.7
22-Sep	280	279	272	269	275	271	257	262	267	269	273	281	267	267	258	256	242	229	185	181	183	170	187	207	254.3
23-Sep	214	212	214	231	246	252	253	252	257	271	257	250	260	266	265	260	239	246	244	240	248	245	246	270	247.0
24-Sep	257	192	227	231	241	247	249	263	267	266	269	275	288	292	295	294	295	297	287	272	250	248	252	262	269.0
25-Sep	242	233	233	234	228	135	156	176	167	163	168	163	188	191	174	165	172	185	184	166	215	255	252	271	196.8
26-Sep	271	235	196	272	274	275	281	272	277	281	290	285	288	293	289	285	274	265	243	238	227	217	210	215	271.1
27-Sep	211	203	199	241	246	258	255	257	271	281	276	274	261	270	272	276	257	242	229	259	285	270	253	236	258.4
28-Sep	239	254	262	272	267	274	268	275	287	281	285	294	283	311	298	348	56	79	94	105	136	138	130	144	264.9
29-Sep	146	151	148	145	139	132	122	125	143	148	156	159	166	169	174	170	157	145	148	143	132	128	135	125	148.6
30-Sep	122	126	118	103	116	162	308	274	277	299	296	275	280	311	313	329	203	11	21	18	5	330	308	312	328.9
	209.8	208.2	214.9	225.7	233.3	232.5	235.3	235.4	242.7	248.7	248.0	236.0	235.6	238.8	243.2	236.6	229.2	240.4	204.7	188.7	197.8	204.6	204.6	210.7	
	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

Anzac - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 94 deg on Sep 3 14:00

Minimum Value: 4 deg on Sep 12 21:00

Percentiles: $P_1 = 5$ $P_{10} = 9$ $Q_1 = 13$ Median = 16 $Q_3 = 20$ $P_{90} = 28$ $P_{99} = 67$

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

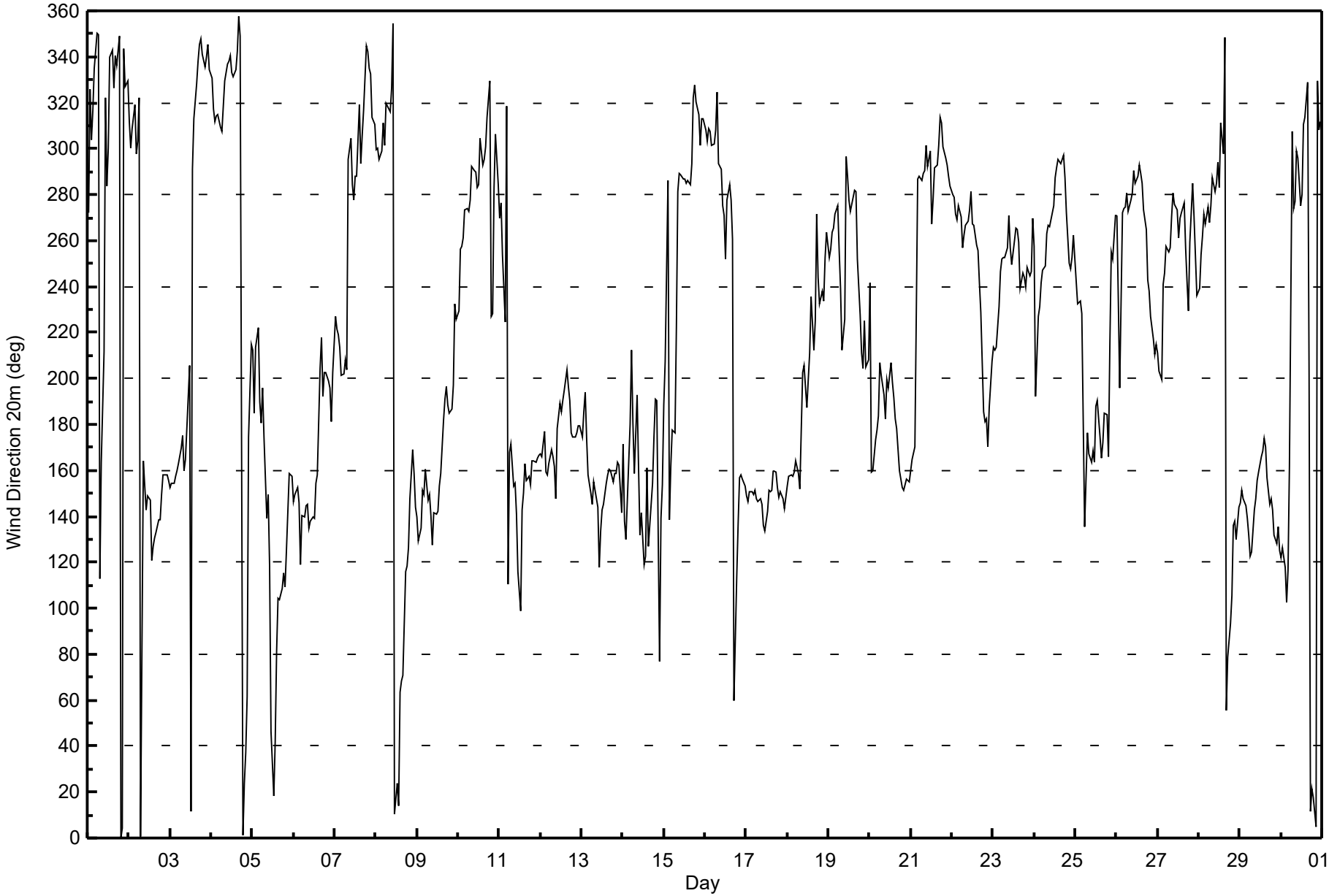
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Sep	28	15	15	13	21	28	15	84	27	82	35	30	28	24	21	22	19	12	13	12	12	17	14	9	84
2-Sep	9	11	7	12	10	17	42	33	66	31	32	41	47	31	27	21	18	13	11	10	7	7	9	10	66
3-Sep	11	13	14	13	11	15	17	15	25	32	34	69	72	94	18	14	14	16	16	16	14	15	16	14	94
4-Sep	14	13	14	13	13	14	14	14	15	17	19	21	19	18	16	19	16	14	14	13	8	13	57	13	57
5-Sep	14	18	10	12	10	13	14	11	23	35	67	35	48	50	49	43	22	20	13	12	14	8	6	7	67
6-Sep	10	11	11	17	20	10	10	15	14	18	20	17	18	16	24	24	28	19	15	12	12	11	7	16	28
7-Sep	11	10	8	9	14	20	15	25	56	22	15	18	43	25	23	20	18	25	14	12	15	18	13	12	56
8-Sep	14	13	12	11	12	14	13	15	16	23	35	50	44	41	50	34	33	14	7	10	18	5	10	10	50
9-Sep	10	12	17	11	12	9	20	13	17	19	15	15	15	16	18	19	20	17	13	9	11	25	29	18	29
10-Sep	11	5	6	8	11	13	14	13	15	15	18	14	18	25	27	24	22	23	14	20	5	18	17	12	27
11-Sep	14	11	15	31	80	20	6	5	40	20	23	33	30	30	29	20	15	12	9	6	5	5	5	7	80
12-Sep	6	6	7	8	6	5	6	8	14	13	26	32	20	21	25	24	20	15	8	7	4	5	5	8	32
13-Sep	9	9	12	9	12	10	10	11	16	17	24	22	17	18	17	15	17	8	9	9	13	9	7	18	24
14-Sep	9	27	26	19	20	21	61	15	18	28	27	26	19	17	19	21	17	15	14	15	18	19	25	30	61
15-Sep	10	29	13	63	25	6	7	27	18	18	17	15	17	16	16	18	19	16	13	12	11	11	14	13	63
16-Sep	14	13	15	15	16	14	16	18	17	17	22	27	26	28	34	53	42	33	15	10	8	7	8	9	53
17-Sep	9	10	10	9	9	9	11	11	12	13	17	17	17	17	16	14	14	13	11	11	11	11	12	13	17
18-Sep	13	12	11	12	12	12	15	32	27	22	25	23	26	25	22	21	30	17	13	13	13	11	15	10	32
19-Sep	20	7	10	7	8	9	20	12	26	47	20	17	19	21	20	20	18	16	13	37	13	16	17	32	47
20-Sep	16	18	7	5	6	7	15	18	20	20	24	23	26	23	23	18	17	10	8	9	10	10	11	9	26
21-Sep	9	6	11	19	18	15	13	14	16	22	22	46	26	16	22	20	18	15	14	17	17	16	17	18	46
22-Sep	16	18	17	16	16	17	15	19	18	19	18	19	20	20	19	21	19	19	11	12	10	5	17	18	21
23-Sep	18	18	18	18	17	14	15	16	20	18	17	18	22	18	19	20	18	18	18	18	19	21	23	16	23
24-Sep	18	34	22	21	17	16	17	18	18	18	19	19	18	18	21	21	18	16	13	16	14	10	9	14	34
25-Sep	9	11	8	11	13	22	17	6	10	12	16	32	44	24	22	15	15	16	13	9	31	17	18	17	44
26-Sep	17	27	19	22	16	17	17	17	17	17	16	19	18	18	17	17	18	16	16	17	15	15	21	18	27
27-Sep	18	20	22	20	18	16	15	15	17	17	17	18	19	19	21	21	19	19	13	18	24	20	16	17	24
28-Sep	18	18	18	17	18	17	17	17	17	16	19	23	34	28	27	45	15	9	11	9	14	14	17	12	45
29-Sep	12	11	14	13	15	16	14	15	16	14	15	14	15	15	17	15	14	15	13	13	17	17	13	16	17
30-Sep	13	14	12	43	47	31	59	26	34	18	19	16	19	27	25	56	84	23	12	11	17	19	14	15	84
	28	34	26	63	80	31	61	84	66	82	67	69	72	94	50	56	84	33	18	37	31	25	57	32	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Anzac - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS17
WAPASU
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
SEPTEMBER 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	682	34	38	99.44	9.6	0	3	0
H2S (ppb) Average	683	35	37	99.72	1.8	0	0.6	0
THC (ppm) Average	679	35	41	99.17	3.6	-	2.5	-
O3 (ppb) Average	661	32	59	96.25	52.8	0	41.7	-
NO2 (ppb) Average	684	36	36	100	31.5	0	4.2	-
NO (ppb) Average	684	36	36	100	8.3	-	1.3	-
NOX (ppb) Average	684	36	36	100	37.7	-	5.4	-
PM2.5 (ug/m3) Average	718	2	2	100	609.1	0	172.2	8
Temperature 2 m (C) Average	720	0	0	100	27.5	-	20.9	-
Relative Humidity (%) Average	720	0	0	100	100	-	82.3	-
Wind Speed 10 m (km/h) Average	716	0	4	99.44	26	-	17	-
Wind Direction 10 m (deg) Average	716	0	4	99.44	-	-	-	-
Precipitation (mm) Total	720	0	0	100	1.8	-	2.1	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	682	0.54	1.2	-	0	0	0	0.1	0.4	1.7	9.6
H2S (ppb) Average	683	0.22	0.2	-	0	0	0.1	0.2	0.3	0.5	1.8
THC (ppm) Average	679	2.3	0.2	-	2	2.1	2.2	2.3	2.4	2.5	3.6
O3 (ppb) Average	661	25.94	10.8	-	1.9	11.1	18.7	27.2	33.1	39.4	52.8
NO2 (ppb) Average	684	2.5	2.5	-	0	0.5	0.9	1.6	3.5	5.7	31.5
NO (ppb) Average	684	0.29	0.8	-	0	0	0	0	0.2	0.8	8.3
NOX (ppb) Average	684	2.78	3	-	0	0.5	0.9	1.7	4	6.2	37.7
PM2.5 (ug/m3) Average	718	27.61	50	-	1	4.8	8.6	16.3	29.1	51.7	609.1
Temperature 2 m (C) Average	720	14.1	5.4	-	-0.3	7.8	10.6	14.1	17.5	21.1	27.5
Relative Humidity (%) Average	720	64.05	18.6	-	27.1	39.5	48.6	63.1	78.4	91.2	100
Wind Speed 10 m (km/h) Average	716	9.2	4	-	1	4	6	8	12	16	26
Wind Direction 10 m (deg) Average	716	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	7.98	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Start	End	(Hours)	Notes
ALL GASEOUS ANALYZERS (except NO2)	25 Sep 2025 13:00	25 Sep 2025 14:00	2	Maintenance - sample manifold cleaned
O3	03 Sep 2025 11:00	04 Sep 2025 11:00	25	Maintenance - analyzer replaced
SO2, THC	16 Sep 2025 12:00	16 Sep 2025 13:00	2	Maintenance - replaced calibration gas cylinder
THC	15 Sep 2025 11:00	15 Sep 2025 12:00	2	Maintenance - replaced calibration gas cylinder

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.6 ppb on Sep 19 10:00 Maximum Daily Average: 3.0 ppb on Sep 19

Minimum Value: 0.0 ppb on Sep 1 02:00
Maximum Diurnal Average: 1.1 ppb at hour 9
Monthly Average: 0.54 ppb

Minimum Daily Average: 0.0 ppb on Sep 4
Minimum Diurnal Average: 0.2 ppb at hour 1
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 1.7 P_{99} = 6.3

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	2.5	0.7	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	2.5
2-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
3-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.3	0.4	0.8	3.5	7.0	4.4	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	7.0
4-Sep	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
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7	3.3	0.9	0.7	0.7	1.3	2.2	1.7	0.7	0.1	0.2	0.3	0.2	0.3	0.6	3.3
6-Sep	0.2	0.2	Z	0.2	0.3	0.2	0.1	0.4	0.4	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.4
7-Sep	0.1	0.5	0.5	Z	1.5	1.1	0.3	4.1	1.9	0.5	0.2	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	0.5	4.1
8-Sep	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-Sep	0.0	0.0	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.2	0.4	0.0	0.4
10-Sep	Z	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	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
11-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	1.2	0.4	2.6	1.9	1.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.5	2.8
12-Sep	0.0	0.1	Z	0.2	0.0	0.1	0.1	0.5	0.5	0.3	0.4	0.2	0.6	2.2	1.8	1.6	2.2	0.7	0.0	0.0	0.0	0.2	0.2	0.2	0.5	2.2
13-Sep	0.2	0.3	0.3	Z	0.3	0.6	0.9	1.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.2
14-Sep	0.1	0.3	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.5	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
15-Sep	0.0	0.4	0.7	1.7	1.6	Z	1.7	3.6	4.8	1.9	C	C	C	C	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.8
16-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.2	0.1	0.2	2.2	0.7	0.1	0.0	0.0	0.0	0.0	0.1	0.2	2.2
17-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
18-Sep	0.0	0.0	Z	0.1	0.1	0.2	0.2	0.3	0.6	0.4	0.2	1.0	3.2	5.6	1.9	1.1	4.8	0.0	0.0	0.1	0.0	0.5	1.3	1.3	1.0	5.6
19-Sep	0.6	0.5	0.6	Z	1.0	0.7	1.1	4.0	9.0	9.6	6.8	2.0	7.0	7.2	3.3	4.6	6.2	2.2	0.8	0.5	0.3	0.2	0.1	0.1	3.0	9.6
20-Sep	0.1	0.0	0.0	0.0	Z	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.1	0.3	0.5	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5
21-Sep	0.1	0.1	0.1	0.2	0.3	Z	0.3	1.2	4.1	1.9	0.9	0.5	0.4	0.5	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.5	4.1
22-Sep	Z	0.1	1.0	0.7	1.6	1.3	0.9	3.5	3.5	2.7	5.2	7.1	3.8	1.6	2.8	4.0	1.9	0.3	0.2	0.0	0.0	0.1	0.1	0.0	1.8	7.1
23-Sep	0.2	Z	0.3	0.3	0.8	1.6	1.1	2.3	1.7	0.2	0.2	0.0	2.3	1.9	1.5	1.7	2.1	2.0	1.9	2.1	3.7	4.3	2.6	1.6	1.6	4.3
24-Sep	1.5	2.3	Z	1.1	1.7	1.3	0.9	1.2	2.8	5.0	3.5	0.3	0.2	0.1	0.3	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.0	5.0
25-Sep	0.0	0.1	0.1	Z	0.3	0.1	0.1	0.2	0.5	0.8	0.6	0.3	M	M	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.0	0.0	0.2	0.8
26-Sep	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.6	1.5	1.4	1.2	0.4	0.5	0.5	0.1	0.3	0.2	0.3	0.1	2.6	1.4	1.0	1.3	0.8	0.6	2.6
27-Sep	0.5	0.4	0.1	0.1	2.2	Z	0.9	0.3	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	1.0	3.2	0.4	3.2
28-Sep	Z	4.3	1.6	0.8	0.5	0.3	0.4	0.3	0.6	0.8	1.1	0.7	0.5	0.7	4.2	5.1	0.5	0.3	0.3	0.1	0.1	0.1	0.3	0.3	1.0	5.1
29-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	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	0.1	0.0	0.1	0.1
30-Sep	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.0	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	0.1	0.1	0.1	0.1	0.2
	0.2	0.4	0.2	0.2	0.5	0.3	0.3	0.8	1.1	0.9	0.9	0.8	1.0	1.1	0.9	0.8	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.3	Diurnal Average	
	1.5	4.3	1.6	1.7	2.2	1.6	1.7	4.1	9.0	9.6	6.8	7.1	7.0	7.2	4.4	5.1	6.2	2.2	1.9	2.6	3.7	4.3	2.6	3.2	Diurnal Maximum	

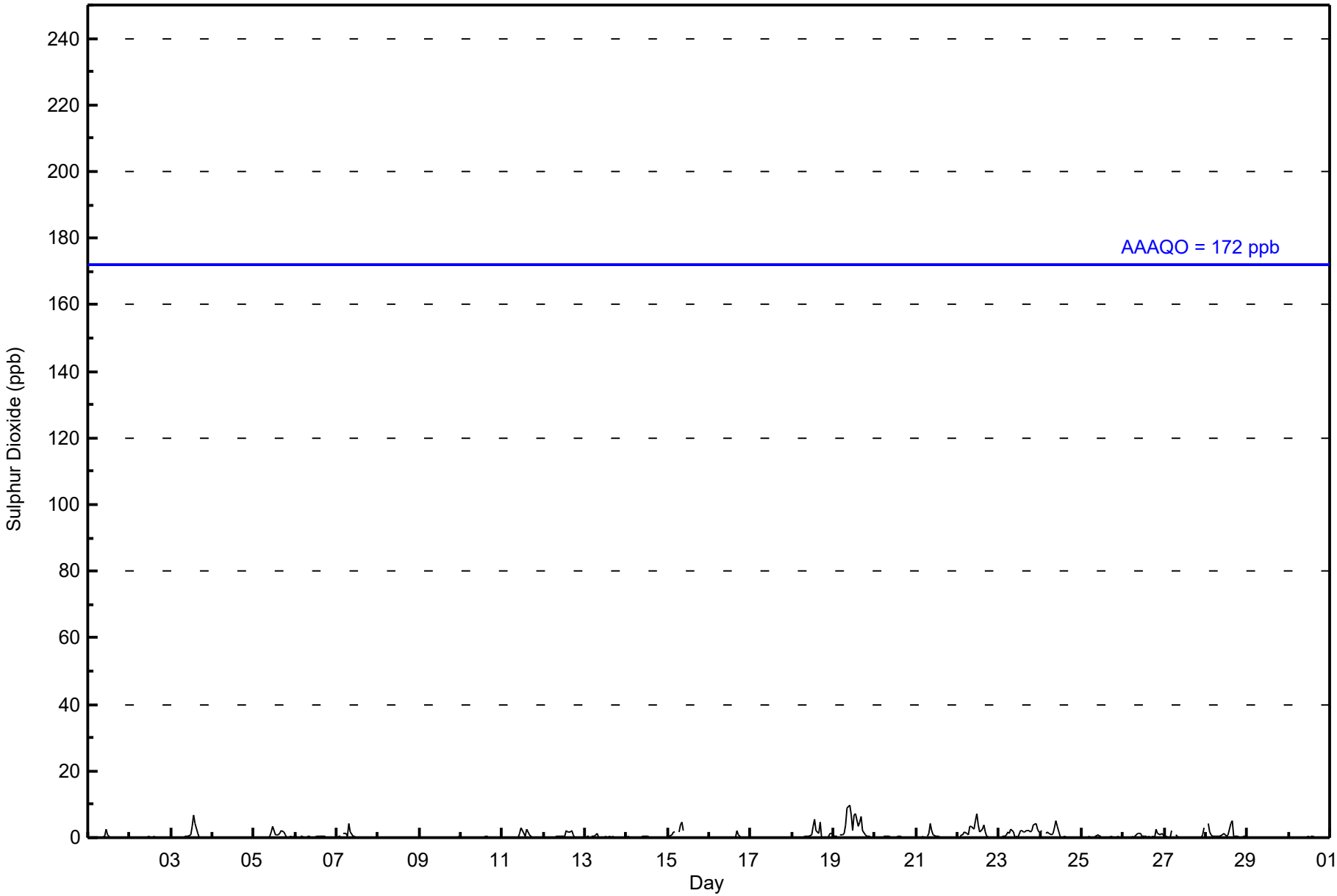
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - September 2025



Sulphur Dioxide (SO_2) - ppb
Wapasu - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	682	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: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	37	16	7	3	6	8	72	188	86	64	69	29	12	20	23	38	678
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	37	16	7	3	6	8	72	188	86	64	69	29	12	20	23	38	678

Total Number of Valid Hours: 678

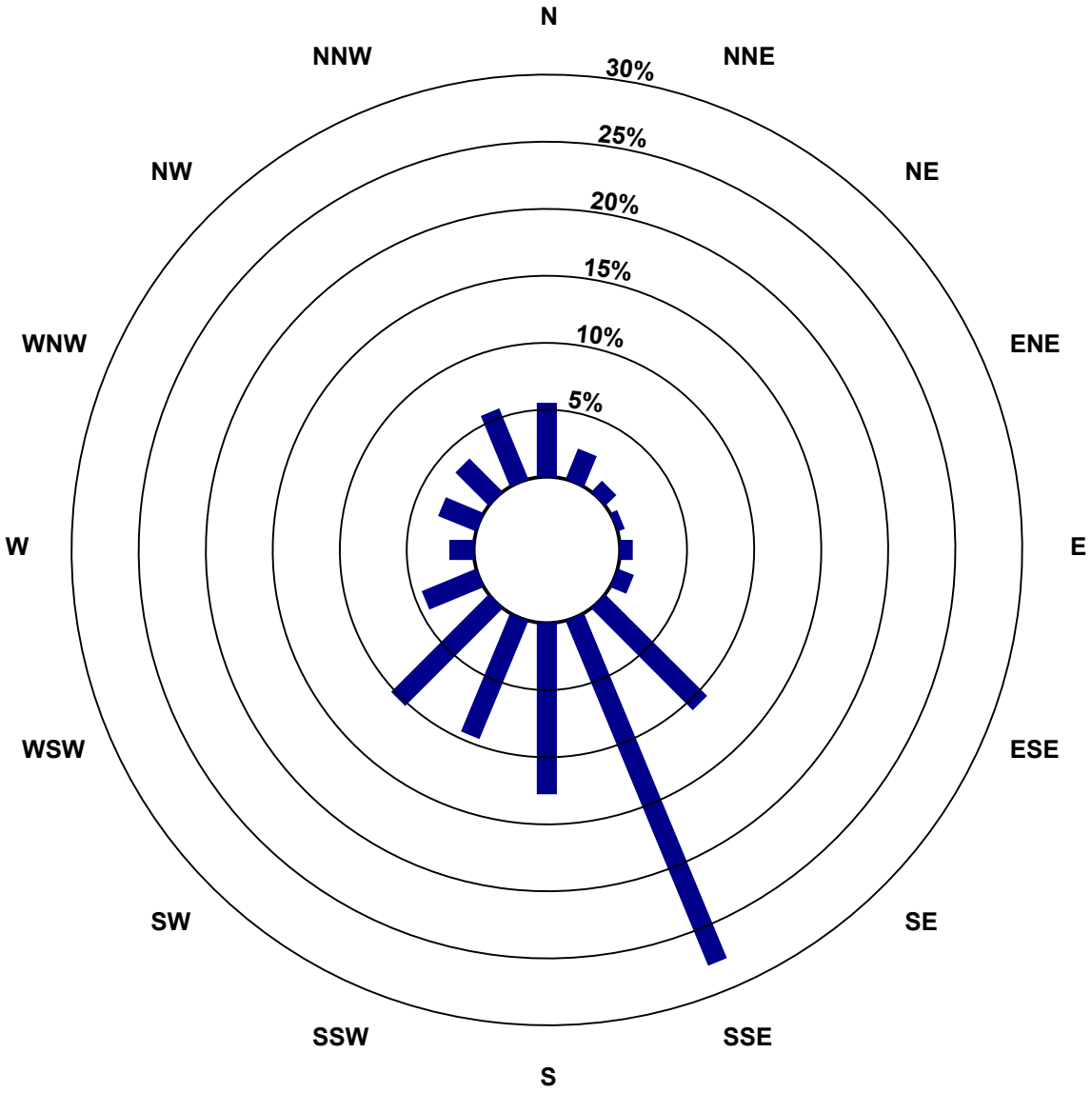
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Wapasu



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

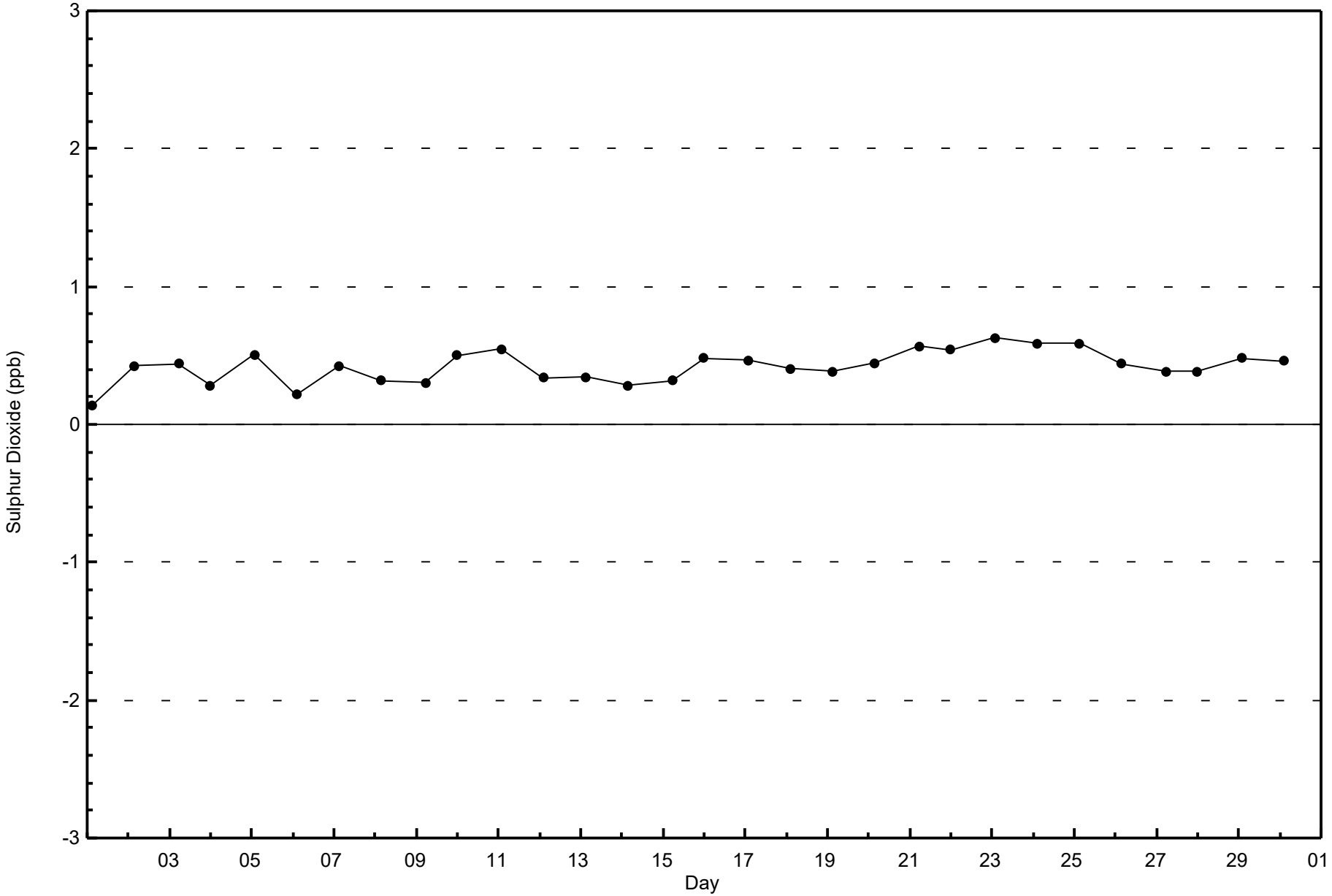
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - September 2025

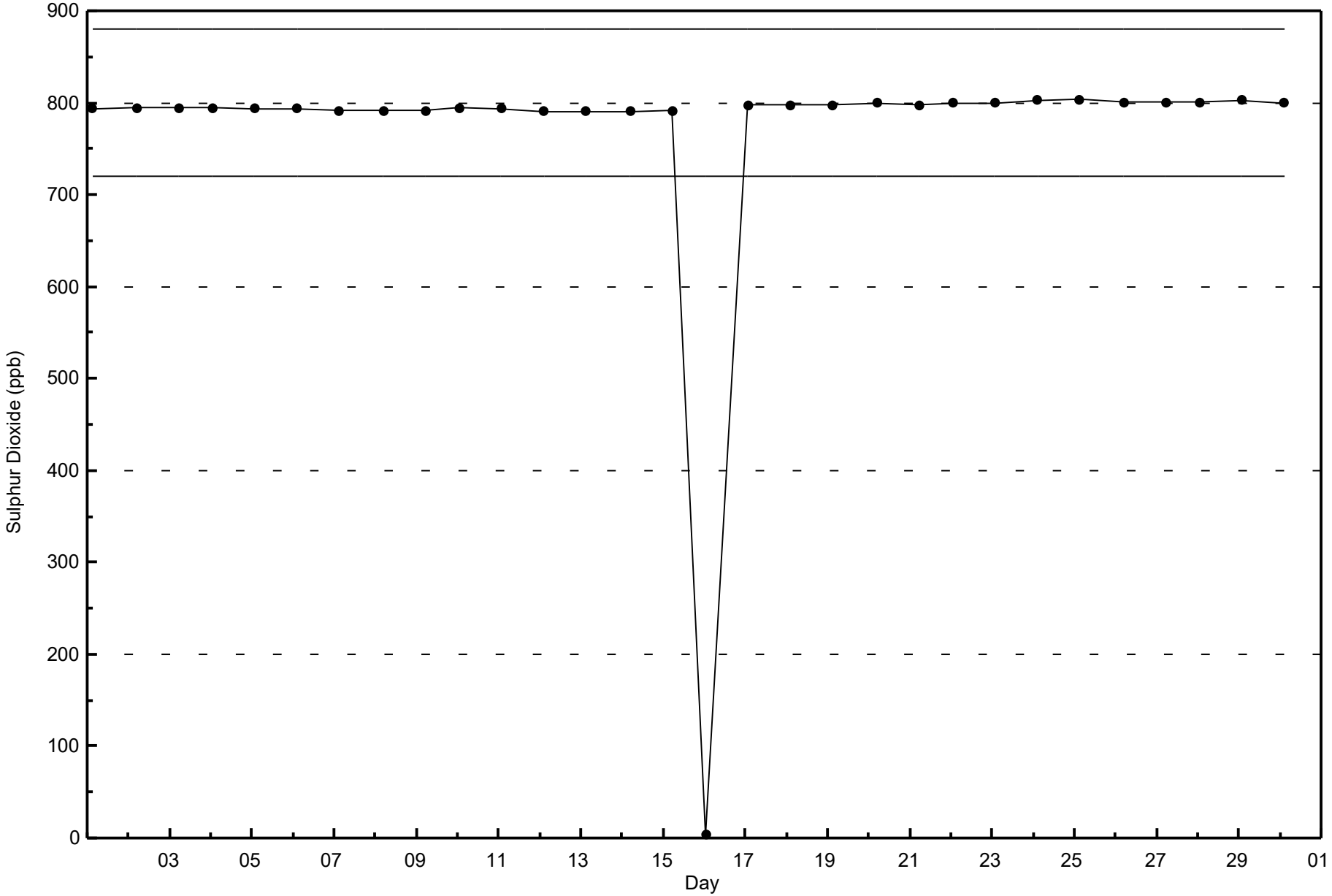


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.8 ppb on Sep 23 19:00 Maximum Daily Average: 0.6 ppb on Sep 23

Minimum Value: 0.0 ppb on Sep 6 01:00 Minimum Daily Average: 0.0 ppb on Sep 20
Maximum Diurnal Average: 0.3 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 16
Monthly Average: 0.22 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} = 1.1

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.2	0.3	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	0.3
2-Sep	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	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2
3-Sep	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.5	0.3	0.4	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.6
4-Sep	0.3	Z	0.4	0.3	0.2	0.4	0.3	0.4	0.3	0.3	0.2	0.2	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	0.4
5-Sep	0.2	0.2	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.3
6-Sep	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2
7-Sep	0.2	0.2	0.2	0.2	Z	0.4	0.4	0.8	0.6	0.3	0.3	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.8
8-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	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	0.1	0.2	0.2	0.2	0.1	0.2
9-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2
10-Sep	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.2	1.0	0.6	0.2	0.1	0.2	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	1.0
11-Sep	0.1	0.0	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2
12-Sep	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3
13-Sep	0.2	0.2	0.2	0.2	Z	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.2	0.8
14-Sep	0.0	0.2	0.5	0.5	0.5	Z	0.7	0.5	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	0.1	0.7
15-Sep	Z	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.5
16-Sep	0.3	Z	0.3	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	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4
17-Sep	0.3	0.3	Z	0.2	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3
18-Sep	0.0	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.0	0.1	0.1	0.1	0.0	0.3	0.5	0.9	1.0	0.2	1.0
19-Sep	0.9	0.5	0.7	0.8	Z	0.4	0.3	0.4	0.7	0.6	0.4	0.4	0.3	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.9
20-Sep	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
21-Sep	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	1.2	0.5	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.1	0.1	0.7	0.4	0.3	1.2
22-Sep	1.0	Z	0.8	0.6	0.7	0.6	0.5	0.6	0.9	0.9	0.8	0.8	0.7	0.3	0.2	0.2	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.5	1.0
23-Sep	0.1	0.0	Z	0.2	0.2	0.2	0.3	0.6	0.7	0.2	0.2	0.1	0.2	0.4	0.5	0.6	0.8	0.9	1.8	1.7	1.5	1.1	0.6	0.5	0.6	1.8
24-Sep	0.5	0.4	0.3	Z	0.3	0.1	0.1	0.3	0.4	0.6	0.4	C	C	C	C	C	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.6
25-Sep	0.2	0.8	0.4	0.2	Z	0.2	0.2	0.4	0.2	0.2	0.2	0.1	M	M	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.8
26-Sep	0.2	0.3	0.4	0.4	0.4	Z	0.7	0.9	1.5	1.4	0.6	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.5	0.6	0.5	0.7	0.3	0.5	1.5
27-Sep	Z	0.2	0.2	0.1	0.3	0.7	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.7	0.6	0.3	0.2	0.7
28-Sep	1.7	Z	1.0	0.5	0.5	0.8	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	1.7
29-Sep	0.0	0.0	Z	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.3
30-Sep	0.3	0.3	0.3	Z	0.4	0.2	0.3	0.4	0.3	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	0.2	0.4
	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	1.7	0.8	1.0	0.8	0.7	0.8	0.7	0.9	1.5	1.4	0.8	0.8	0.7	0.5	0.6	0.6	0.8	0.9	1.8	1.7	1.5	1.1	0.9	1.0	Diurnal Maximum	

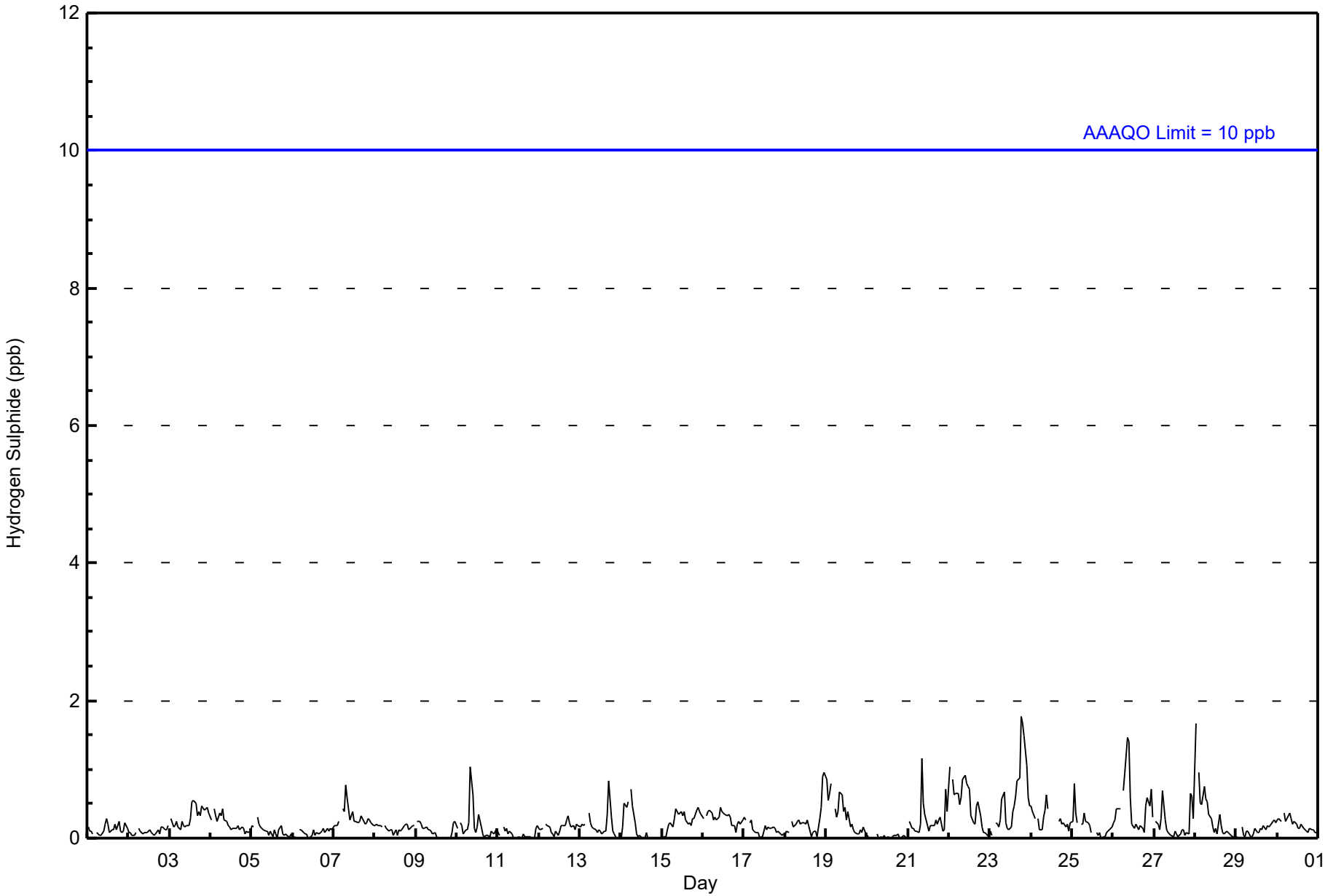
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	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: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	38	16	6	3	6	8	73	186	87	64	70	28	11	20	24	39	679
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	16	6	3	6	8	73	186	87	64	70	28	11	20	24	39	679

Total Number of Valid Hours: 679

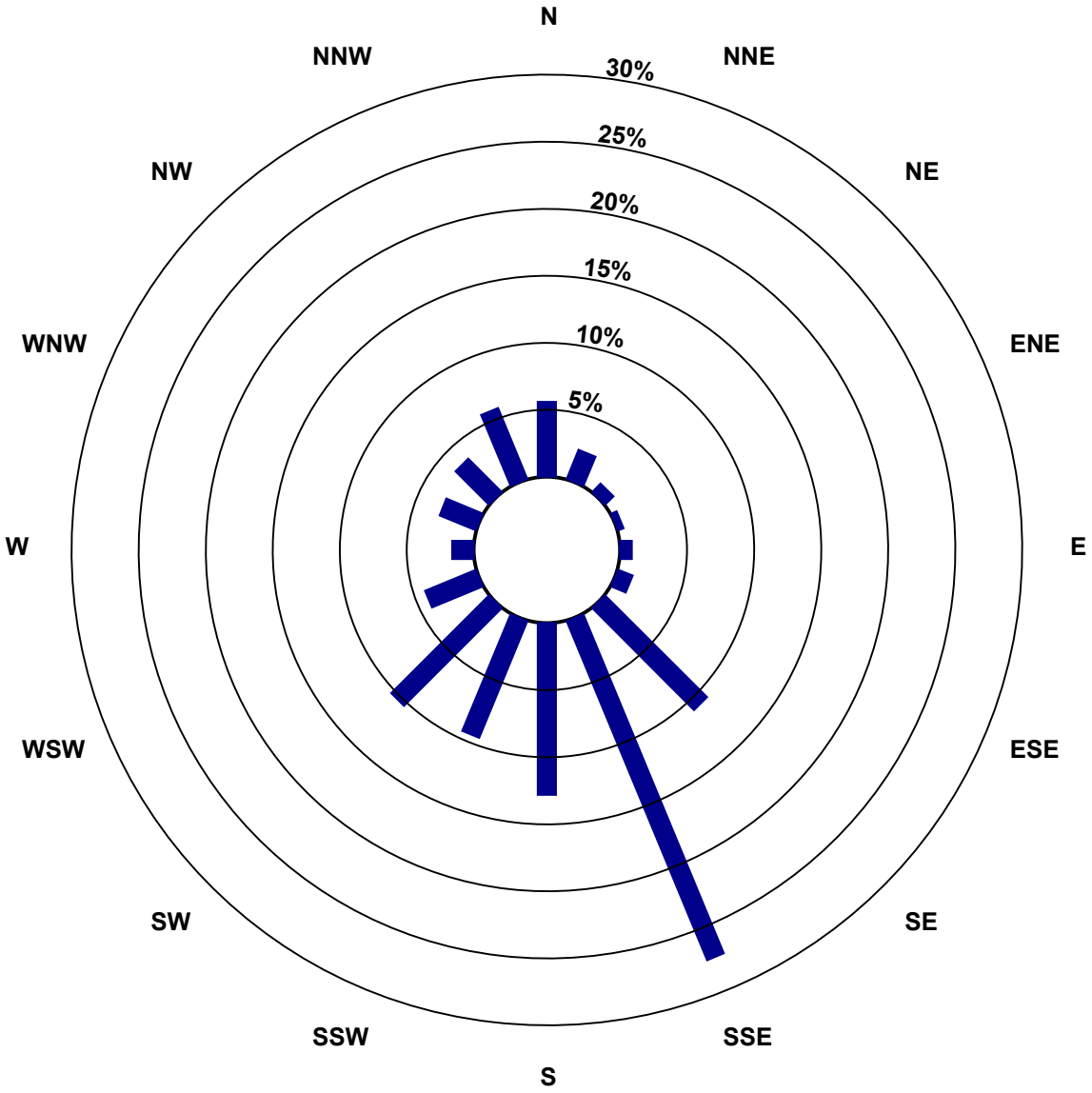
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Wapasu



Classes (ppb)

- 0 - 2
- 3 - 4
- 5 - 7
- 8 - 11
- > 11

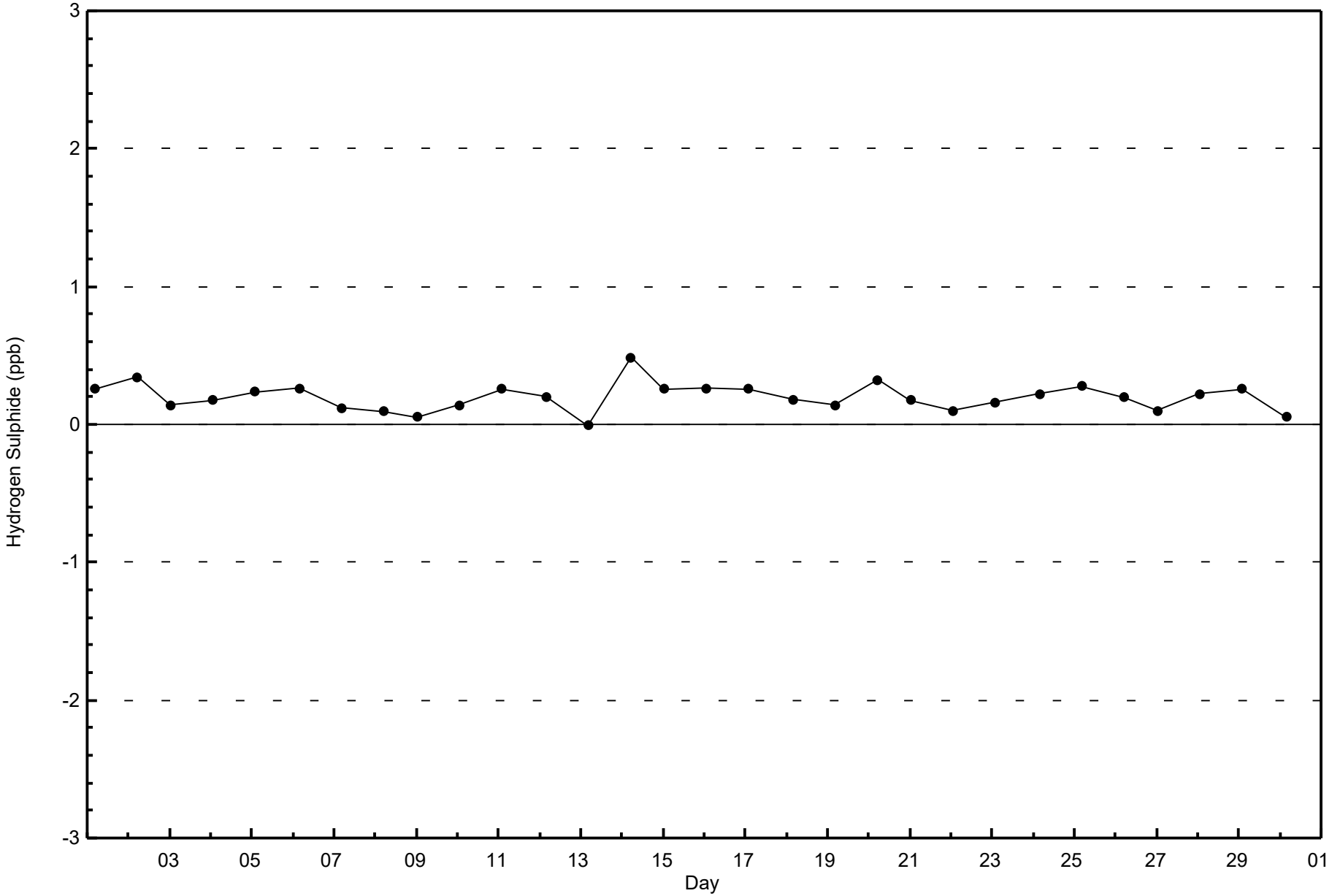
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - September 2025

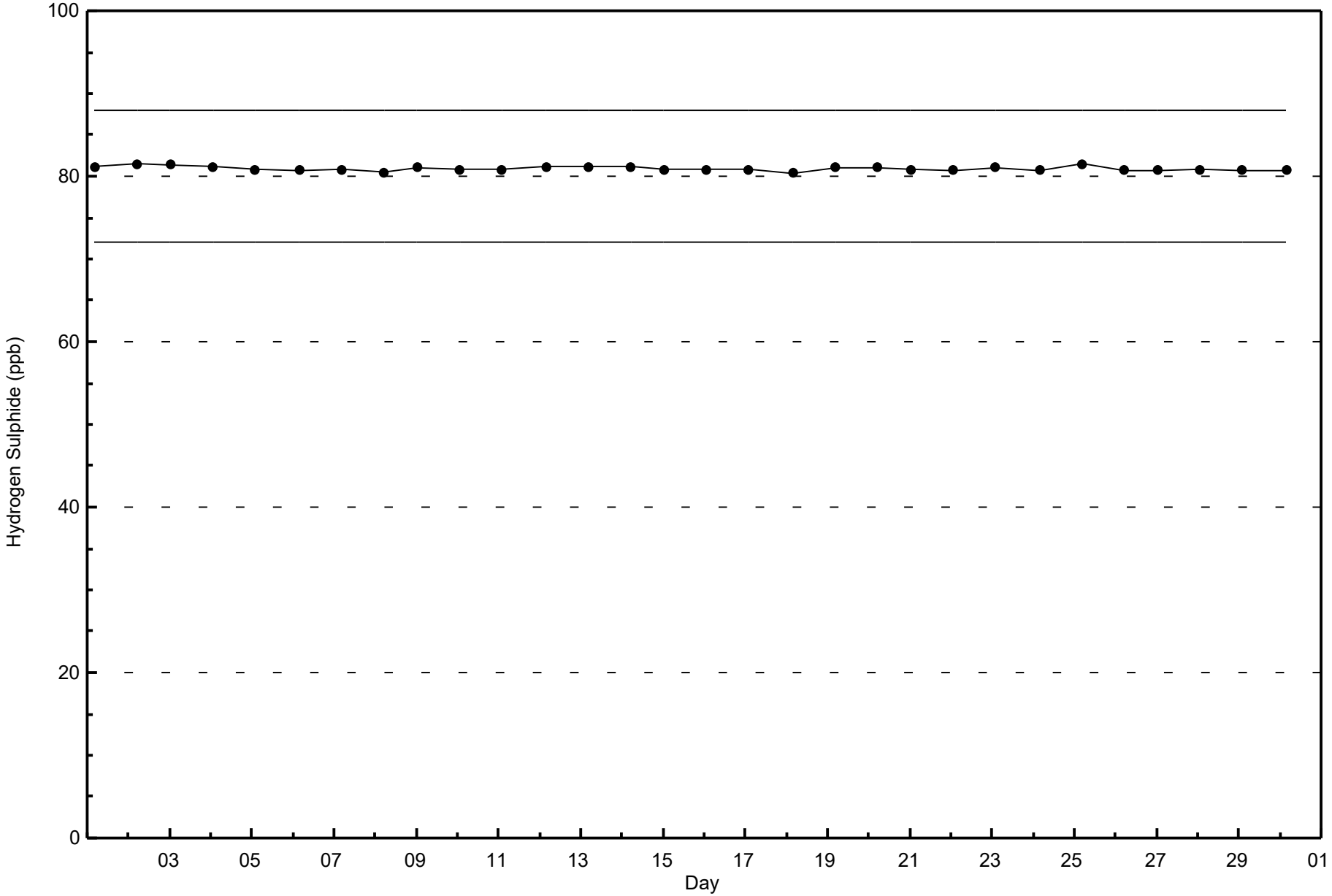


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Wapasu - September 2025

Maximum Value: 3.6 ppm on Sep 13 18:00

Maximum Daily Average: 2.5 ppm on Sep 10

Minimum Value: 2.0 ppm on Sep 6 17:00

Minimum Daily Average: 2.1 ppm on Sep 6

Maximum Diurnal Average: 2.4 ppm at hour 8

Minimum Diurnal Average: 2.2 ppm at hour 17

Monthly Average: 2.30 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.2 Median = 2.3 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 2.8

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.2	Z	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.4	2.4	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.4
2-Sep	2.2	2.3	2.3	2.3	Z	2.3	2.4	2.4	2.3	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	2.2	2.4
3-Sep	2.1	2.1	2.2	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.5
4-Sep	Z	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2
5-Sep	2.3	Z	2.3	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.4
6-Sep	2.1	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	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.2
7-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.4	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
8-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.1	2.1	2.1	2.3
9-Sep	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	C	C	C	C	C	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.2	2.4
10-Sep	Z	2.3	2.3	2.4	2.5	2.6	2.5	2.7	2.9	2.7	2.3	2.3	2.6	2.8	2.5	2.3	2.2	2.2	2.2	2.5	2.5	2.5	2.6	2.6	2.5	2.9
11-Sep	2.6	Z	2.6	2.7	2.7	2.6	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.7
12-Sep	2.4	2.4	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.4
13-Sep	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.7	3.6	2.7	2.4	2.4	2.3	2.3	2.4	2.4	3.6
14-Sep	2.5	2.8	3.2	2.9	Z	3.1	3.1	2.8	2.6	2.5	2.4	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	2.5	3.2
15-Sep	2.2	2.2	2.2	2.3	2.4	Z	2.3	2.3	2.4	2.4	M	M	2.4	2.7	2.6	2.4	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.7
16-Sep	Z	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.3	2.3	2.5	M	M	2.3	2.4	2.4	2.4	2.4	2.6	2.5	2.4	2.3	2.3	2.3	2.4	2.6
17-Sep	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	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3
18-Sep	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	2.2	2.3	2.3	2.4	2.5	2.6	2.5	2.3	2.6
19-Sep	2.6	2.6	2.6	Z	2.6	2.5	2.4	2.4	2.5	2.6	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.6
20-Sep	2.4	2.3	2.3	2.3	Z	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	2.3	2.3	2.4
21-Sep	2.3	2.3	2.4	2.4	2.4	Z	2.4	2.4	2.8	2.5	2.4	2.3	2.3	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.3	2.4	2.5	2.4	2.4	2.8
22-Sep	Z	2.4	2.6	2.5	2.5	2.5	2.4	2.5	2.5	2.4	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.4	2.6
23-Sep	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.8	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.5	2.4	2.5	2.4	2.8
24-Sep	2.5	2.4	Z	2.3	2.3	2.4	2.3	2.4	2.5	2.6	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.4	2.7	2.8	2.7	2.7	2.6	2.4	2.8
25-Sep	2.6	2.7	2.5	Z	2.3	2.4	2.4	2.5	2.3	2.3	2.3	2.2	M	M	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.7
26-Sep	2.3	2.4	2.4	2.4	Z	2.5	2.6	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.7
27-Sep	2.3	2.3	2.3	2.3	2.4	Z	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.3	2.5
28-Sep	Z	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.4	2.7
29-Sep	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.3	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
30-Sep	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	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	2.4
	2.3	2.3	2.4	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.6	2.8	3.2	2.9	2.7	3.1	3.1	2.8	2.9	2.7	2.5	2.4	2.6	2.8	2.6	2.5	2.7	3.6	2.7	2.7	2.8	2.7	2.7	2.6	Diurnal Maximum	

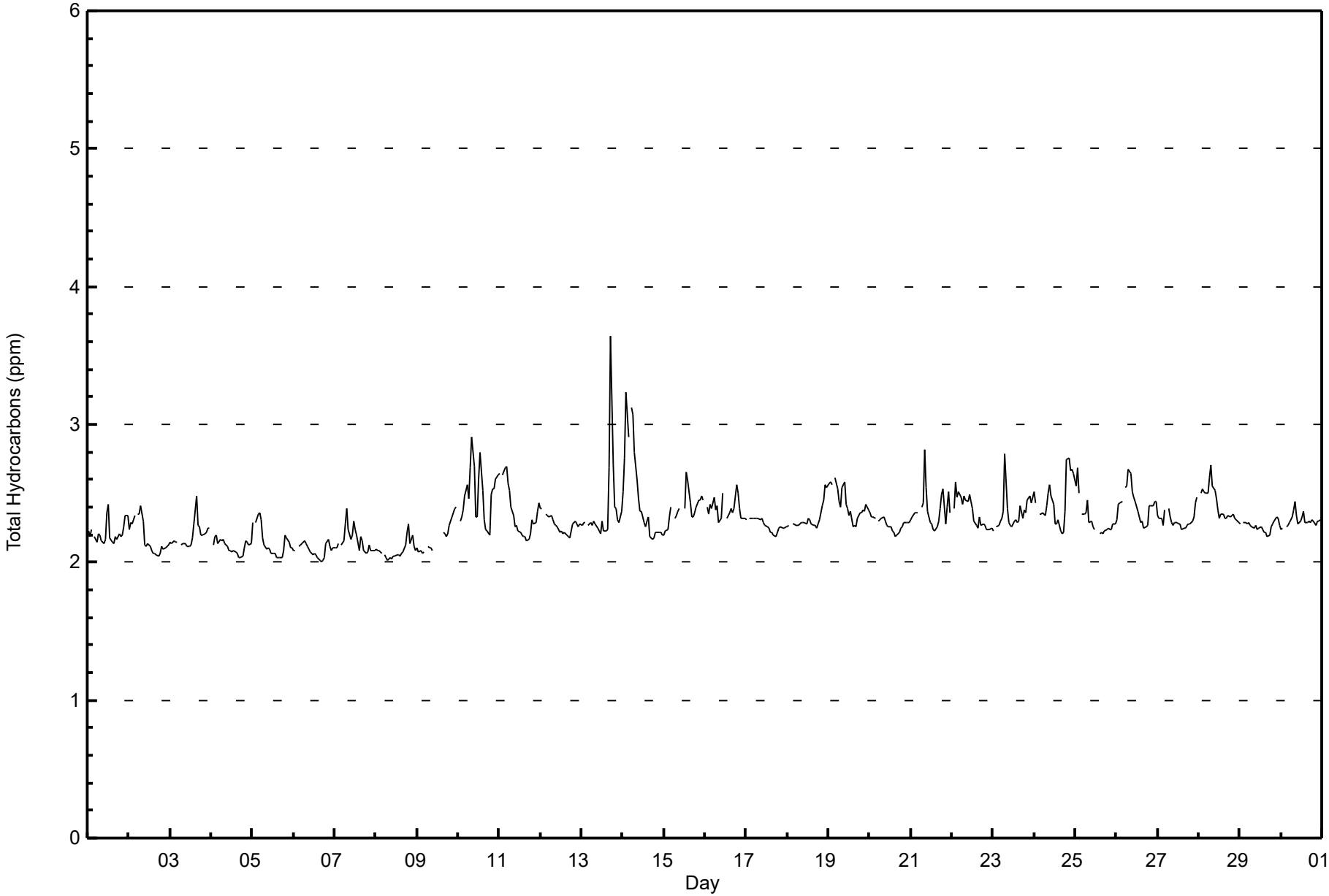
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Wapasu - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	21	3.09	3.09
2.1 - 3.0	654	96.32	99.41
3.1 - 10.0	4	0.59	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Wapasu - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	5	2	2	0	0	0	1	1	4	1	0	1	2	0	0	2	21
2.1 - 3.0	32	14	5	2	6	8	68	184	80	63	69	28	10	21	24	36	650
3.1 - 10.0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	4
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	16	7	3	6	8	72	185	84	64	69	29	12	21	24	38	675

Total Number of Valid Hours: 675

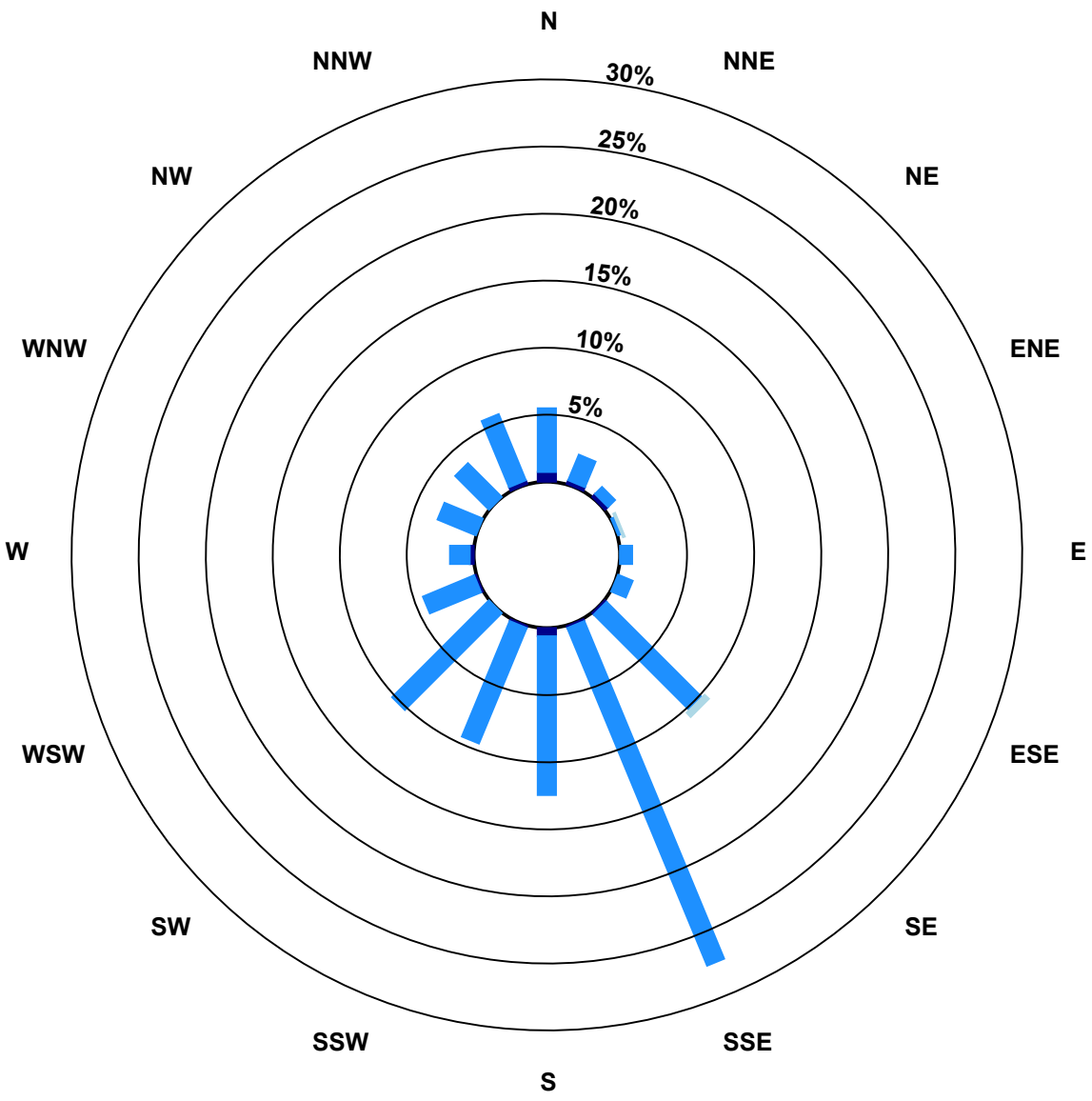
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Wapasu



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

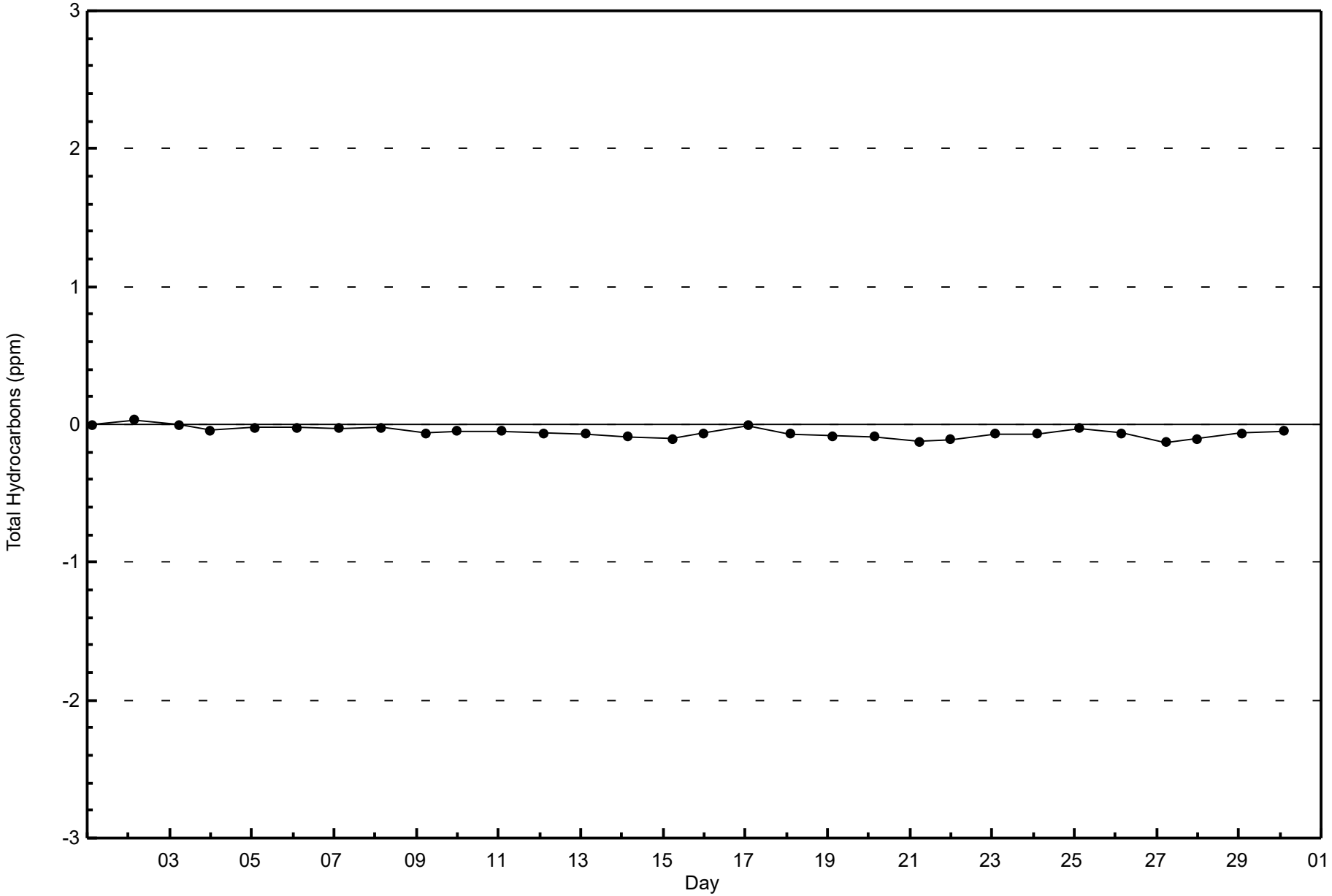
Total Number of Valid Hours: 675

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Wapasu - September 2025

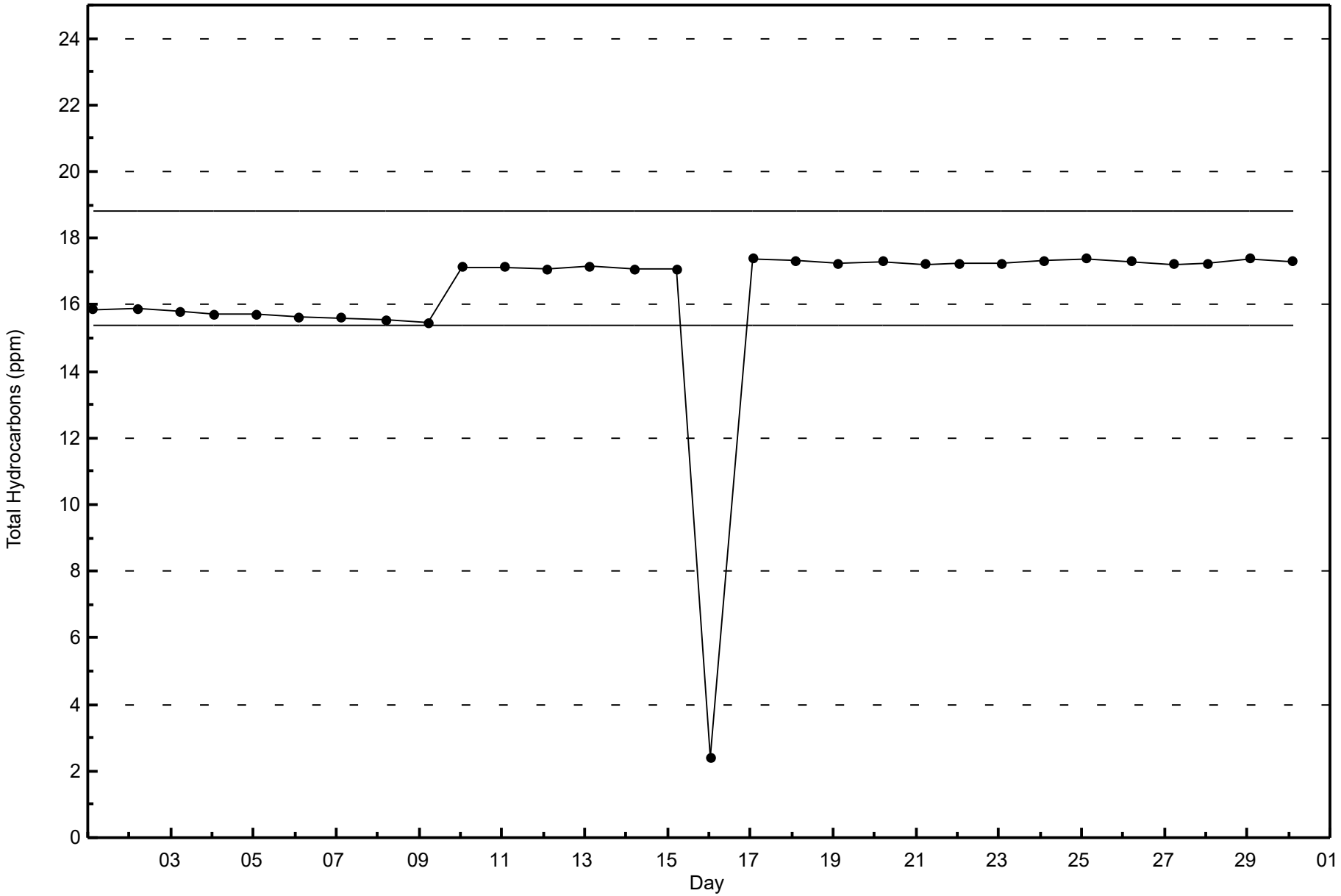


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.8 ppb on Sep 20 15:00
Maximum Daily Average: 41.7 ppb on Sep 20

Minimum Value: 1.9 ppb on Sep 24 23:00
Minimum Daily Average: 13.7 ppb on Sep 16
Maximum Diurnal Average: 36.1 ppb at hour 15
Minimum Diurnal Average: 17.5 ppb at hour 6
Monthly Average: 25.94 ppb
Percentiles: P_1 = 2.5 P_{10} = 11.1 Q_1 = 18.7 Median = 27.2 Q_3 = 33.1 P_{90} = 39.4 P_{99} = 50.5

Hours in Service:	720
Hours of Data:	661
Hours of Missing Data:	59
Hours of Calibration:	32
Percent Operational Time:	96.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	11.8	12.0	8.2	9.2	8.9	Z	9.3	11.6	13.2	17.4	16.3	14.0	19.1	28.3	30.5	32.2	32.4	30.8	24.8	18.1	12.4	7.9	4.6	3.8	16.4	32.4
2-Sep	Z	3.3	2.4	2.8	2.5	2.5	3.1	3.2	17.7	29.7	29.9	27.6	28.9	32.9	35.7	34.2	29.6	27.5	24.1	21.8	24.4	26.5	27.4	27.2	20.2	35.7
3-Sep	27.4	Z	24.4	23.9	23.4	22.7	21.9	20.9	22.2	24.5	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	27.4
4-Sep	M	M	M	M	M	M	M	M	M	M	M	C	C	C	27.5	27.4	27.2	26.4	23.1	11.5	4.2	4.2	8.4	8.3	--	27.5
5-Sep	2.5	2.1	2.4	Z	3.8	3.6	11.3	14.7	19.7	25.6	26.8	27.2	30.2	33.1	34.9	37.6	40.6	39.8	25.1	12.3	15.8	23.6	28.0	27.7	21.2	40.6
6-Sep	26.6	25.6	24.8	24.7	Z	21.5	19.5	22.0	26.7	30.0	33.1	36.5	38.4	41.5	45.4	44.9	42.5	42.1	27.5	17.1	22.8	29.9	35.9	35.6	31.1	45.4
7-Sep	37.4	35.3	32.6	30.2	29.9	Z	11.1	18.3	26.9	27.4	27.1	27.9	29.5	30.7	29.3	24.7	23.3	21.9	20.4	18.1	12.6	12.9	13.7	13.8	24.1	37.4
8-Sep	Z	12.3	11.7	12.0	12.0	11.3	12.4	11.4	11.5	17.7	19.0	21.2	22.7	26.0	29.4	31.5	31.3	27.5	14.7	6.6	12.4	11.8	17.7	13.9	17.3	31.5
9-Sep	13.8	Z	19.9	18.9	19.0	16.9	16.1	16.8	21.2	26.8	31.3	35.4	39.0	40.3	41.3	39.9	42.0	45.2	42.9	37.4	31.4	29.5	28.7	24.8	29.5	45.2
10-Sep	26.7	27.5	Z	17.0	10.0	5.5	5.9	3.0	5.3	16.8	27.5	30.6	28.8	28.7	37.5	38.2	36.2	34.8	28.6	14.5	6.2	3.1	2.2	3.3	19.0	38.2
11-Sep	4.7	3.6	2.8	Z	3.1	5.1	8.1	18.1	25.5	30.0	32.9	34.7	35.2	36.0	36.3	36.5	36.7	35.1	28.9	21.1	29.4	30.9	31.1	27.1	24.0	36.7
12-Sep	25.7	26.1	27.6	28.5	Z	30.9	29.9	30.7	37.1	38.7	39.4	42.5	46.4	48.0	50.6	50.8	49.6	47.8	41.0	36.1	35.7	38.1	40.6	39.5	38.3	50.8
13-Sep	39.7	39.2	40.0	40.1	39.4	Z	39.7	36.7	36.6	43.5	46.9	46.1	39.3	47.4	50.5	48.9	34.8	7.7	18.9	33.7	40.5	41.2	39.7	34.3	38.5	50.5
14-Sep	Z	22.1	15.0	15.2	13.9	10.5	10.3	14.8	22.5	28.1	31.8	31.3	37.7	32.8	27.6	25.8	37.7	39.0	36.9	34.7	33.5	32.6	35.3	39.3	27.3	39.3
15-Sep	37.3	Z	29.5	20.9	15.9	14.2	14.1	14.2	18.4	23.5	31.0	36.6	42.9	39.8	42.7	39.7	17.8	16.2	16.6	18.8	13.4	9.1	6.5	8.5	22.9	42.9
16-Sep	10.7	8.4	Z	7.7	7.4	2.9	7.7	6.7	8.3	7.1	3.0	9.6	14.6	19.2	25.5	29.0	29.7	23.5	10.8	12.9	17.1	17.7	17.8	17.8	13.7	29.7
17-Sep	19.0	20.0	18.9	Z	16.4	15.3	14.8	15.5	16.8	23.9	28.6	31.2	33.7	35.3	35.5	33.7	33.1	32.4	31.7	33.6	30.5	30.5	30.6	30.5	26.6	35.5
18-Sep	28.6	26.4	25.1	24.8	Z	24.5	23.4	23.1	24.9	27.2	30.1	34.5	38.1	39.4	40.9	40.8	39.4	37.5	34.8	33.8	30.7	28.1	27.3	26.1	30.9	40.9
19-Sep	23.5	20.7	20.5	17.3	14.7	Z	18.4	20.1	23.4	29.7	33.0	35.0	36.2	36.9	35.9	34.1	31.7	26.5	22.6	22.3	20.7	19.7	18.3	19.6	25.3	36.9
20-Sep	Z	24.8	27.1	28.7	30.5	31.1	31.6	31.8	33.5	38.0	45.5	49.3	52.6	50.8	52.8	52.3	51.9	47.7	45.6	46.6	48.0	48.8	46.4	43.5	41.7	52.8
21-Sep	40.7	Z	36.0	35.2	33.9	31.9	28.9	26.9	27.7	32.3	38.4	42.0	45.0	45.6	45.4	45.0	40.4	32.2	23.5	26.4	34.3	23.8	18.2	18.3	33.6	45.6
22-Sep	18.5	18.6	Z	15.8	14.9	13.2	10.7	11.8	17.8	21.1	23.2	27.1	29.3	31.4	31.8	31.4	29.9	30.4	26.9	26.8	29.9	29.2	29.9	31.0	23.9	31.8
23-Sep	32.5	32.5	32.3	Z	29.2	26.4	24.2	21.1	28.7	34.2	34.9	37.0	36.1	32.7	31.2	31.4	29.9	30.9	28.5	27.7	23.1	23.2	21.4	19.7	29.1	37.0
24-Sep	19.1	20.5	20.8	22.6	Z	21.8	20.8	18.0	17.3	18.9	27.8	34.1	33.1	35.9	33.9	34.1	34.0	31.9	20.7	9.6	3.3	2.5	1.9	5.4	21.2	35.9
25-Sep	13.5	9.7	16.8	20.5	22.8	Z	22.9	20.2	24.9	26.8	28.7	31.8	M	M	34.7	34.5	33.5	32.9	33.3	34.3	34.7	32.0	34.6	25.8	27.1	34.7
26-Sep	Z	20.4	18.6	18.4	13.8	11.2	8.7	7.5	11.5	15.4	19.2	25.7	26.4	25.5	26.9	30.0	25.3	29.5	27.0	23.1	23.5	22.3	20.4	18.7	20.4	30.0
27-Sep	24.7	Z	20.8	25.9	24.3	24.9	25.7	27.0	30.2	31.7	32.1	32.6	33.2	33.6	34.1	34.0	33.2	31.0	28.2	29.3	28.9	25.1	22.7	19.7	28.4	34.1
28-Sep	19.0	20.0	Z	20.5	19.7	17.7	13.1	14.5	20.3	24.3	27.1	30.3	31.7	33.0	32.6	30.3	27.8	21.2	21.3	20.7	24.6	26.6	29.0	29.2	24.1	33.0
29-Sep	28.5	28.6	26.7	Z	29.8	29.9	28.4	29.3	31.2	33.3	32.3	32.3	34.8	35.6	37.7	35.5	34.2	32.0	34.5	33.1	30.9	29.1	28.2	30.2	31.6	37.7
30-Sep	30.5	30.1	29.4	28.9	Z	25.2	21.2	14.5	11.2	15.7	22.0	27.5	27.3	23.8	28.4	29.0	28.0	26.4	24.5	24.2	22.6	22.0	20.0	15.2	23.8	30.5
	23.4	20.4	21.4	21.2	18.3	17.5	17.7	18.1	21.8	26.2	29.2	31.8	33.7	35.0	36.1	35.8	33.9	31.3	27.1	24.4	24.1	23.5	23.7	22.7	Diurnal Average	
	40.7	39.2	40.0	40.1	39.4	31.9	39.7	36.7	37.1	43.5	46.9	49.3	52.6	50.8	52.8	52.3	51.9	47.8	45.6	46.6	48.0	48.8	46.4	43.5	Diurnal Maximum	

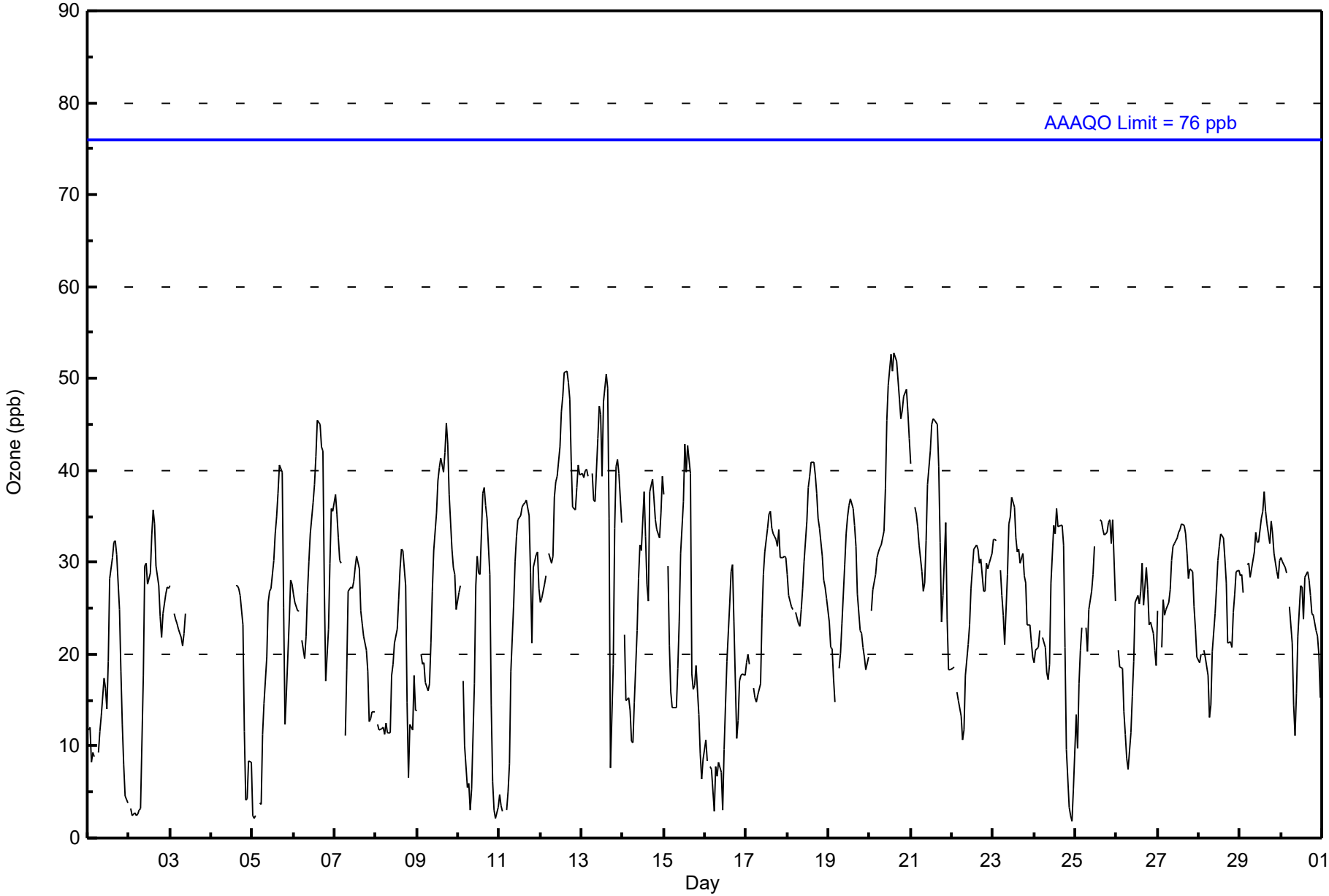
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Wapasu - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	198	29.95	29.95
21 - 50	455	68.84	98.79
51 - 82	8	1.21	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 661

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	16	7	4	2	6	8	37	44	16	14	18	0	0	5	11	7	195
21 - 50	20	9	3	0	0	0	35	142	70	44	50	29	11	18	14	9	454
51 - 82	0	0	0	0	0	0	0	1	1	6	0	0	0	0	0	0	8
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	16	7	2	6	8	72	187	87	64	68	29	11	23	25	16	657

Total Number of Valid Hours: 657

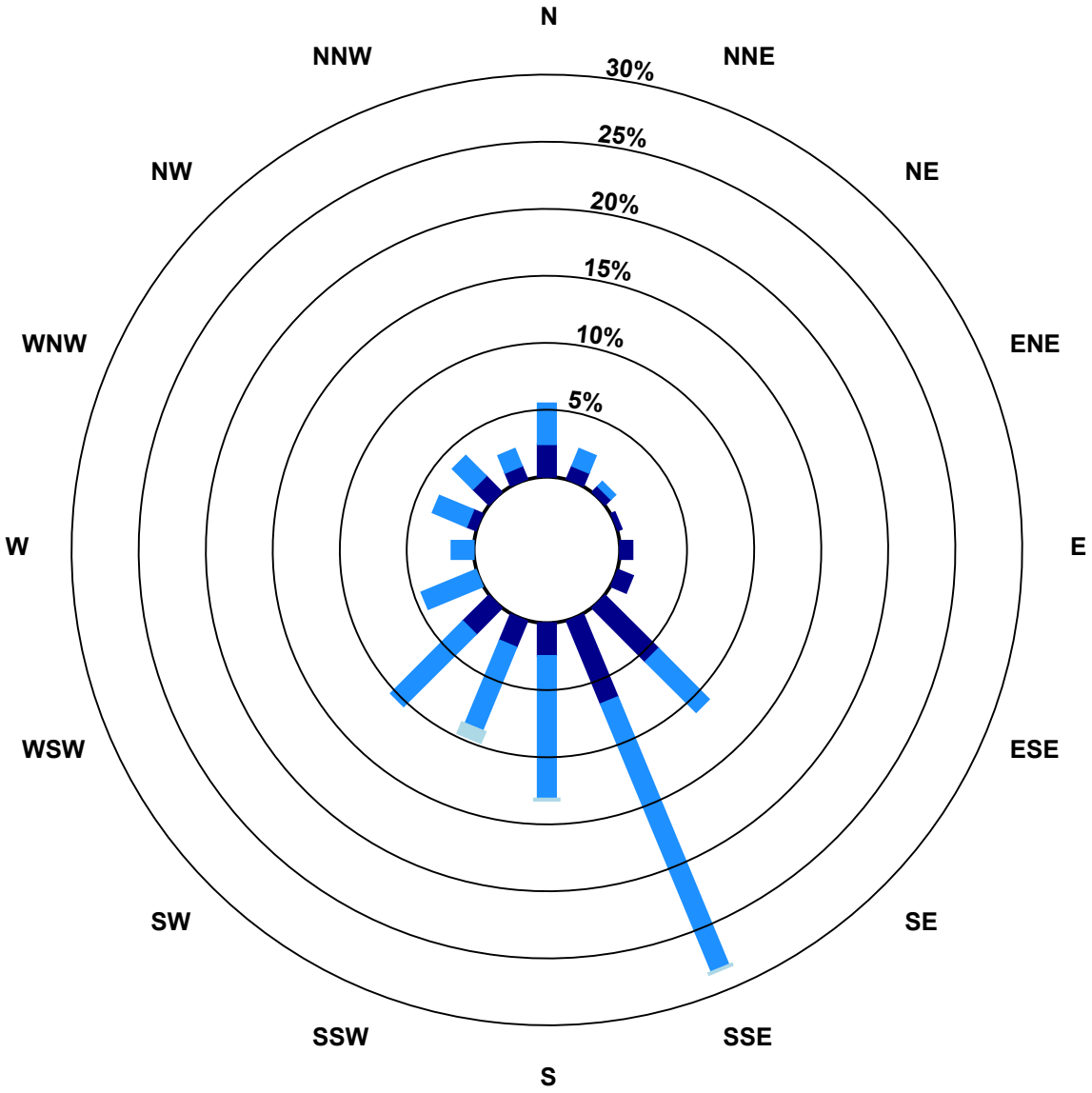
Total Number of Hours: 720

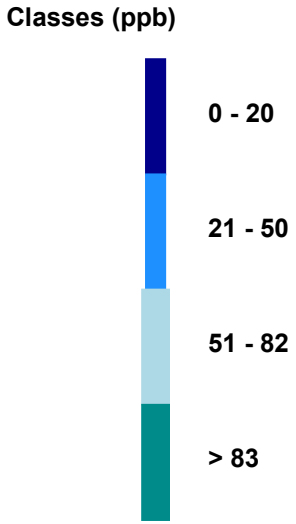
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Wapasu





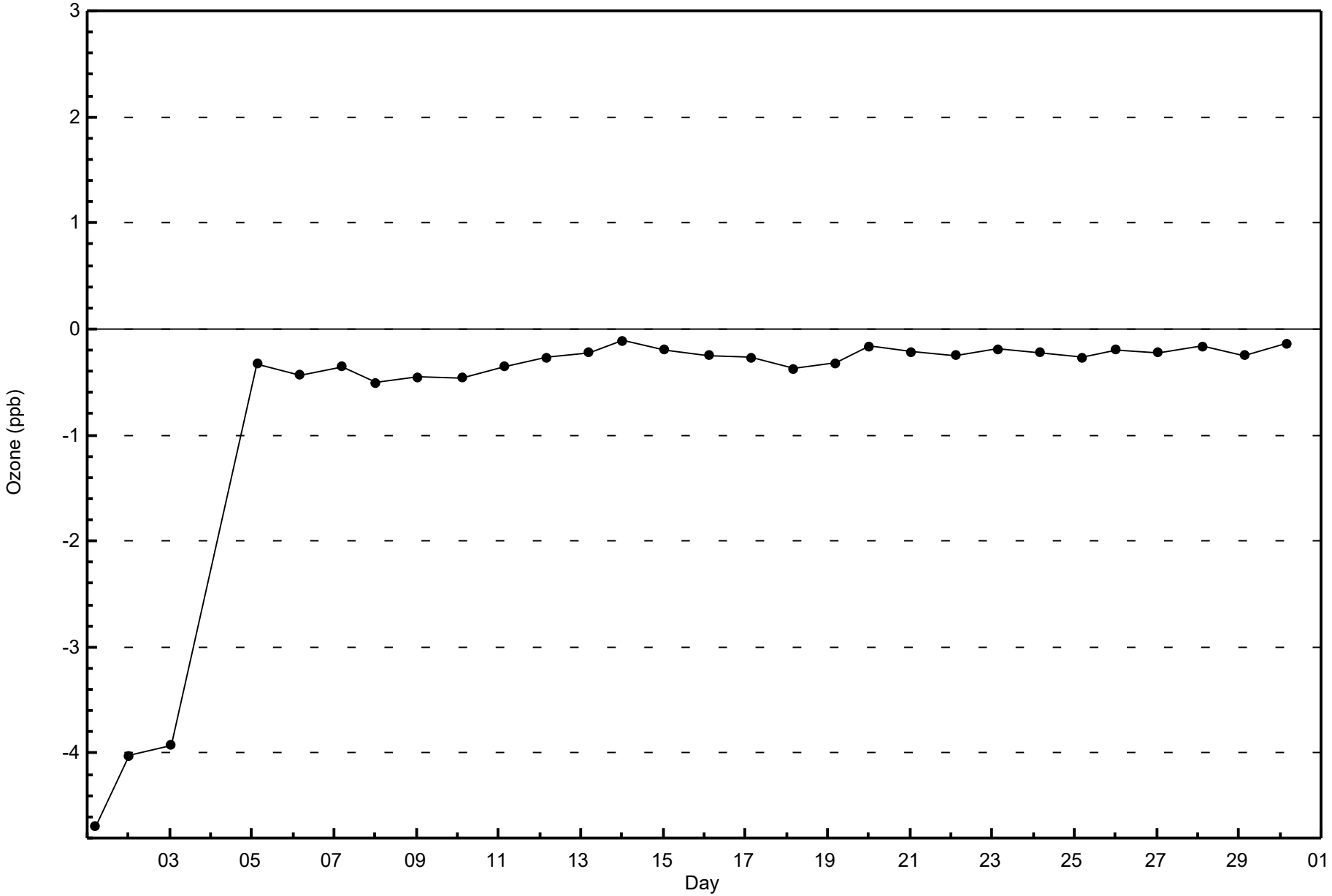
Total Number of Valid Hours: 657

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Wapasu - September 2025

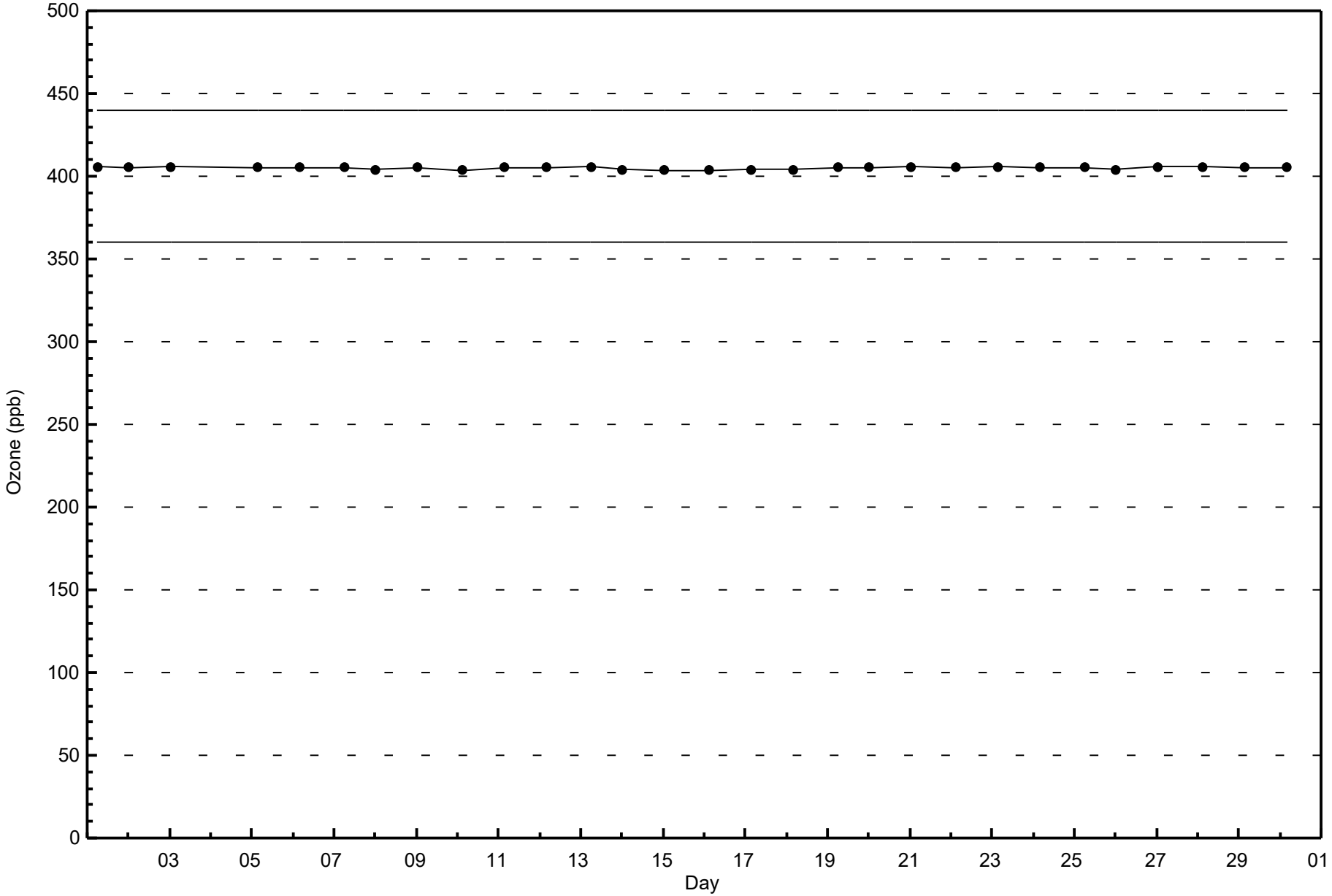


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Wapasu - September 2025

Maximum Value: 8.3 ppb on Sep 16 11:00

Maximum Daily Average: 1.3 ppb on Sep 10

Minimum Value: 0.0 ppb on Sep 2 17:00

Minimum Daily Average: 0.0 ppb on Sep 29

Maximum Diurnal Average: 0.9 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.29 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 0.8 P_{99} = 3.3

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	1.4	4.8	5.0	1.0	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.6	5.0
2-Sep	0.0	0.1	Z	0.4	1.9	0.9	0.8	0.7	0.6	0.0	0.1	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.7	1.1	1.0	1.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.8
4-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.6	0.5	0.7	0.3	0.2	0.0	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7
5-Sep	0.0	0.0	0.0	0.1	0.1	Z	0.3	0.4	0.3	0.2	0.2	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	0.4
6-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	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
7-Sep	0.0	Z	0.0	0.0	0.0	0.1	0.7	1.5	1.2	0.7	0.9	2.4	1.9	1.6	0.2	0.8	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.4
8-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.7	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.9
9-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
10-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.5	2.0	8.0	5.4	0.8	0.6	3.0	5.9	1.7	0.5	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	1.3	8.0
11-Sep	0.1	0.0	0.0	0.0	0.0	Z	0.5	1.3	0.4	0.3	0.3	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
13-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.1	2.4	6.2	0.4	0.0	0.0	0.0	0.0	0.0	0.4	6.2
14-Sep	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.4	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	0.0	0.0	0.0	0.1	0.4
15-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.3	0.9	1.3	0.9	0.5	0.4	0.4	1.9	1.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
16-Sep	0.0	0.0	0.0	0.0	Z	0.6	0.4	1.3	0.4	0.9	8.3	1.7	0.5	0.9	1.3	1.3	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	8.3
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	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	0.0	0.0	0.0	0.1	0.3
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
19-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.2	1.0	2.1	1.9	1.2	0.8	0.9	0.8	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.1
20-Sep	0.0	0.0	Z	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
21-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.6	2.0	1.3	0.5	0.1	0.2	0.1	0.0	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	2.0
22-Sep	0.0	0.1	0.5	0.2	Z	0.3	0.3	2.7	3.0	1.9	2.4	1.7	1.1	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.0
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.8	0.7	0.2	0.2	0.2	0.4	0.3	0.5	0.6	0.6	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.2	0.8
24-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	1.5	1.0	0.2	0.0	0.2	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.5
25-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.2
26-Sep	0.0	0.0	Z	0.0	0.1	0.1	0.3	2.4	2.1	2.0	1.5	0.6	1.2	1.0	0.5	0.7	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.5	2.4
27-Sep	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
28-Sep	0.1	0.1	0.0	0.0	Z	0.0	0.3	1.3	1.3	1.4	1.0	0.5	0.4	0.3	0.7	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4
29-Sep	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.1	0.1	0.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.7	0.9	0.7	0.8	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.5	0.4	1.9	0.9	0.8	2.7	8.0	5.4	8.3	4.8	5.0	5.9	1.7	1.8	2.4	6.2	0.4	0.1	0.2	0.1	0.1	0.1	Diurnal Maximum	

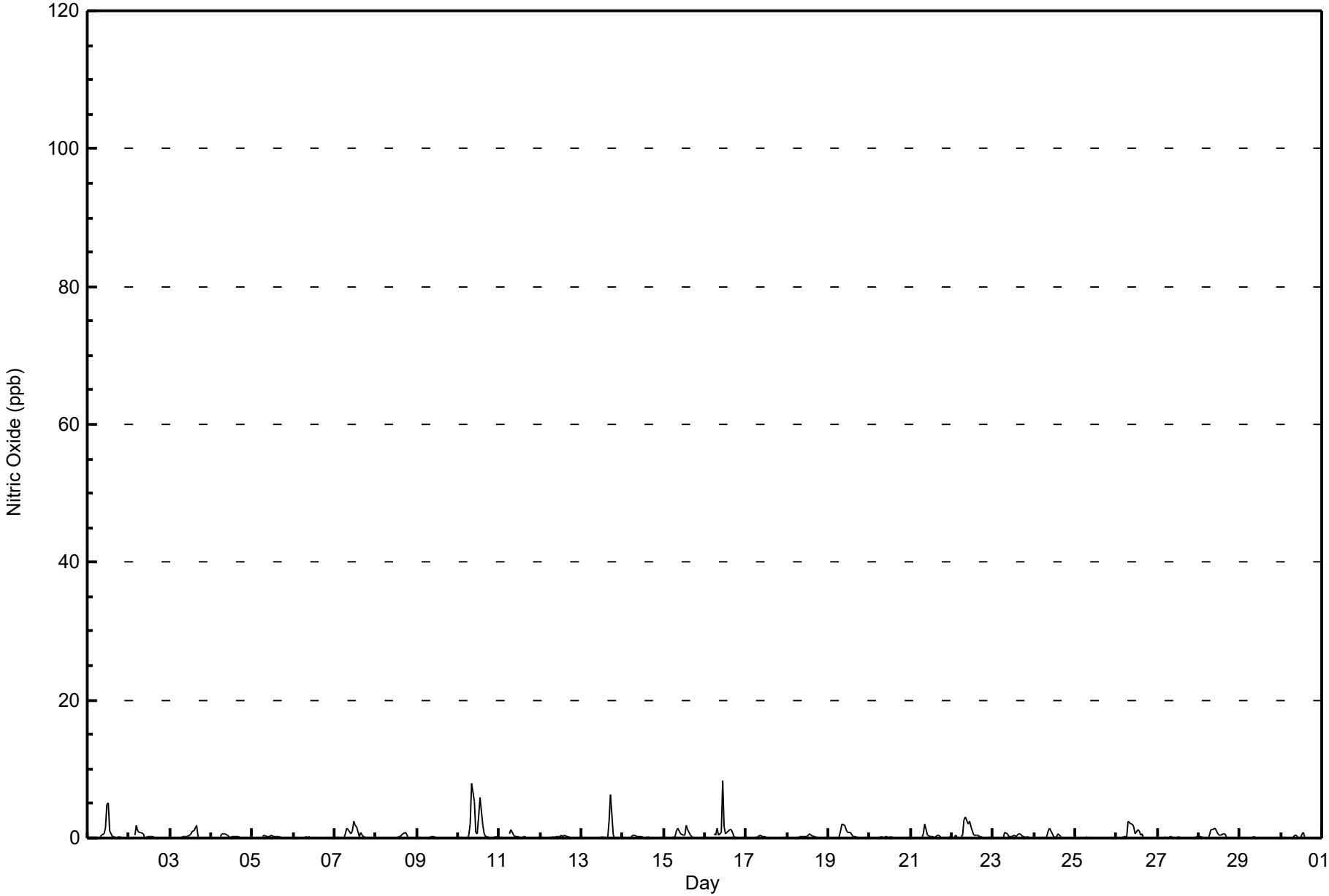
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Wapasu - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	37	16	7	3	6	7	72	188	83	65	69	29	12	23	25	38	680
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	37	16	7	3	6	7	72	188	83	65	69	29	12	23	25	38	680

Total Number of Valid Hours: 680

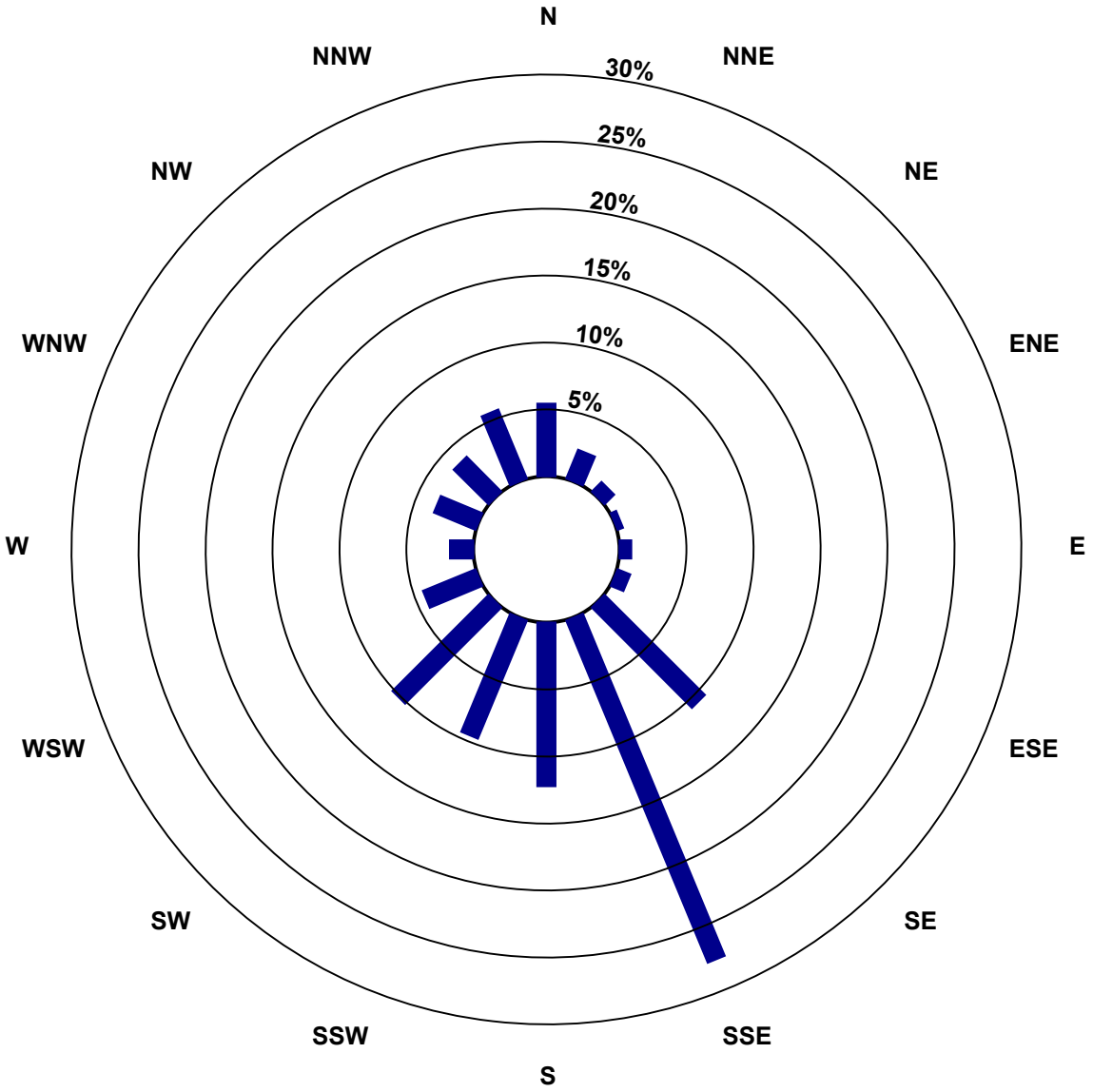
Total Number of Hours: 720

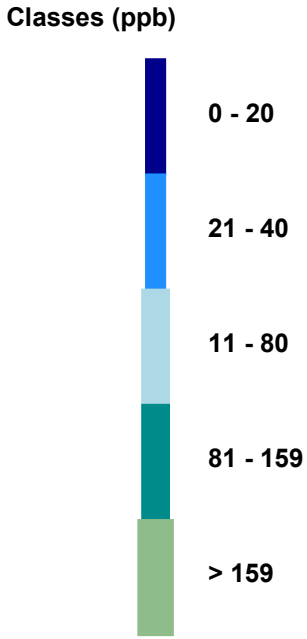
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Wapasu





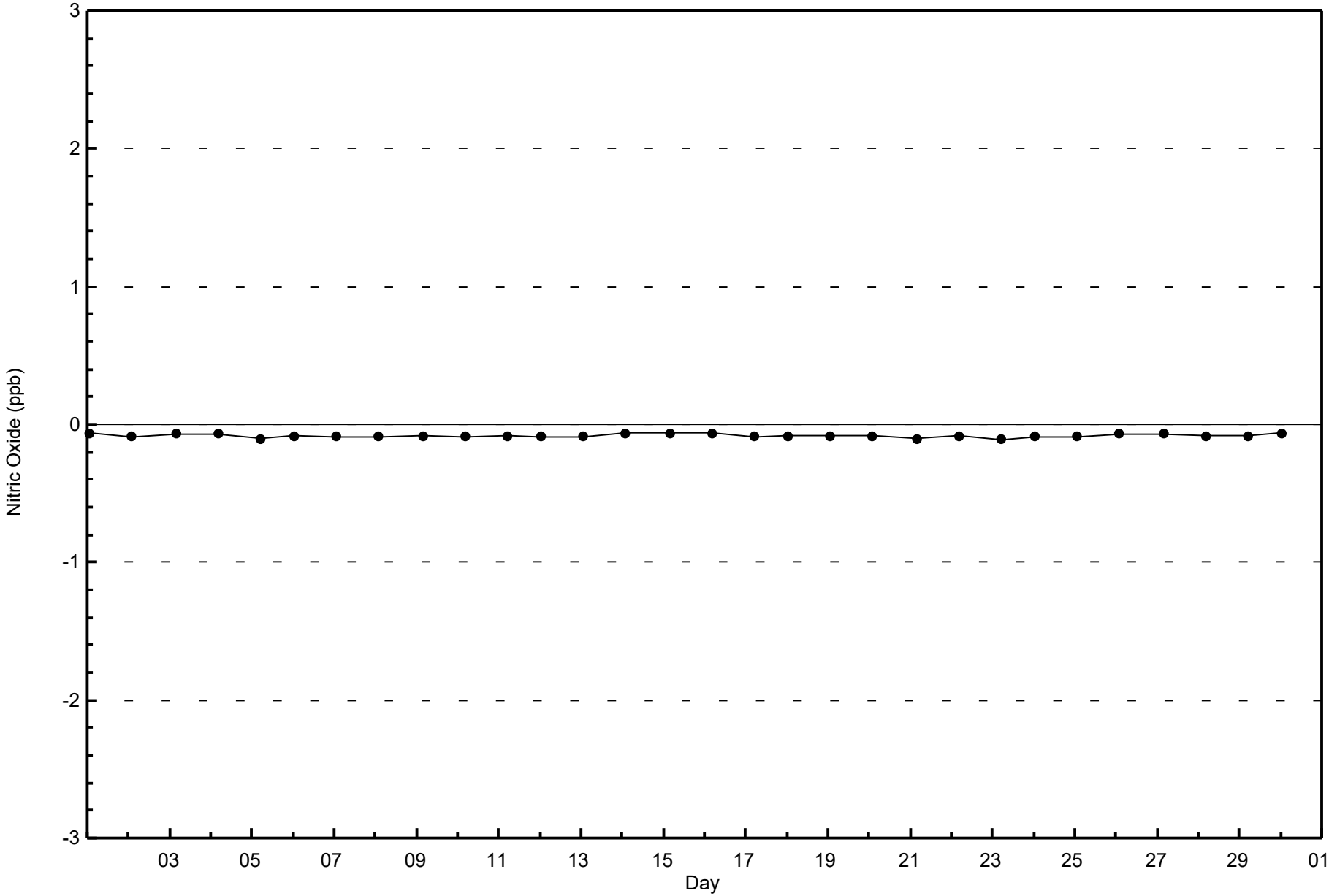
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Wapasu - September 2025

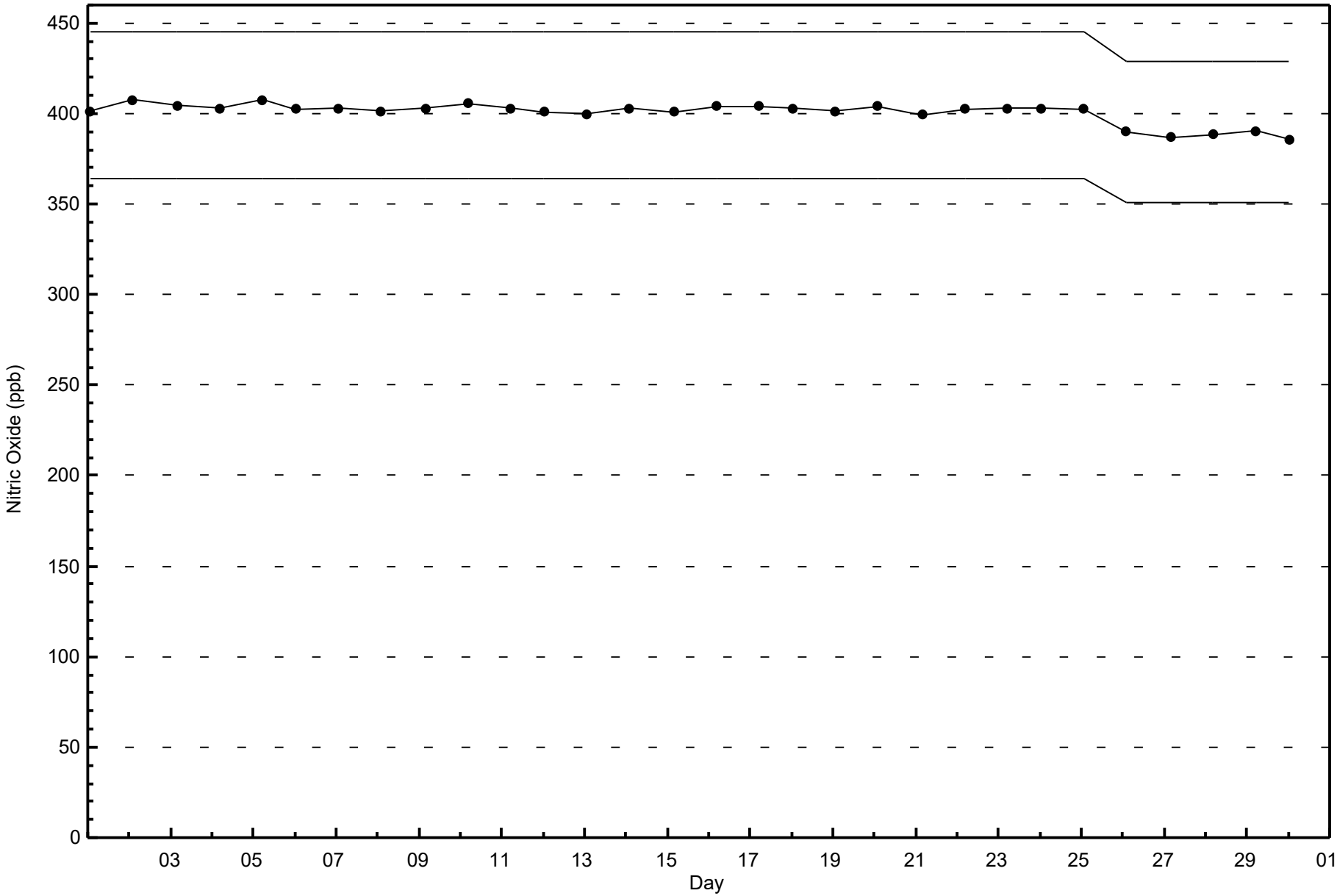


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 31.5 ppb on Sep 13 18:00 Maximum Daily Average: 4.2 ppb on Sep 15

Minimum Value: 0.0 ppb on Sep 2 01:00 Minimum Daily Average: 0.9 ppb on Sep 17
Maximum Diurnal Average: 3.4 ppb at hour 8 Minimum Diurnal Average: 1.9 ppb at hour 12
Monthly Average: 2.50 ppb Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.9 Median = 1.6 Q_3 = 3.5 P_{90} = 5.7 P_{99} = 9.5

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.1	Z	0.9	0.6	0.4	0.3	0.8	0.2	0.6	1.0	2.6	6.7	8.6	2.4	1.2	1.4	1.7	1.6	4.4	3.2	2.0	1.2	0.3	0.1	1.9	8.6
2-Sep	0.0	0.1	Z	1.2	2.1	1.7	0.9	0.5	1.9	0.5	0.5	1.3	1.2	1.5	1.7	0.8	0.2	0.3	0.9	1.5	0.6	0.3	0.4	0.5	0.9	2.1
3-Sep	0.8	0.9	0.9	Z	1.1	1.1	1.3	2.2	1.5	1.4	1.6	2.3	3.9	5.2	7.0	10.9	4.3	3.8	4.6	4.1	4.5	6.7	5.2	4.5	3.5	10.9
4-Sep	5.9	6.4	4.8	4.0	Z	5.9	6.9	4.8	3.4	1.1	0.4	0.2	0.4	0.4	0.7	0.6	0.5	0.5	1.3	1.2	0.3	0.5	0.1	0.1	2.2	6.9
5-Sep	0.2	0.9	1.5	2.0	1.3	Z	1.5	1.1	0.7	0.6	0.9	1.1	0.8	1.2	1.0	1.3	1.9	2.0	1.7	1.9	4.4	3.4	0.7	0.7	1.4	4.4
6-Sep	Z	0.5	0.9	1.4	1.4	1.2	1.3	1.4	0.9	1.1	0.7	0.8	0.8	0.9	1.0	1.0	0.8	0.8	1.1	1.6	5.7	4.1	1.2	2.7	1.4	5.7
7-Sep	1.6	Z	2.6	3.6	2.8	4.5	6.1	7.0	5.5	3.7	4.0	6.3	5.2	4.6	1.6	4.6	2.9	2.4	1.4	2.8	5.2	2.5	1.5	1.2	3.6	7.0
8-Sep	1.1	1.3	Z	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.8	1.1	2.0	3.3	6.6	6.9	4.1	3.9	2.7	0.6	0.9	1.7	6.9
9-Sep	0.5	0.4	0.3	Z	0.5	0.7	0.9	0.9	1.1	1.6	1.1	1.0	1.1	1.1	1.0	1.0	1.3	1.8	1.4	1.2	1.2	1.9	3.1	5.1	1.3	5.1
10-Sep	3.6	2.8	2.2	2.8	Z	1.8	3.7	3.5	10.3	8.6	2.5	2.0	7.9	12.8	6.7	3.1	2.0	1.8	0.4	0.5	0.7	3.0	6.7	6.5	4.2	12.8
11-Sep	3.7	1.6	1.2	1.2	1.7	Z	3.1	4.1	1.7	1.2	1.3	1.3	0.9	0.7	1.1	1.1	0.9	1.1	1.2	7.3	0.9	0.6	1.9	2.4	1.8	7.3
12-Sep	Z	1.9	1.7	1.5	1.6	1.7	1.9	2.9	1.5	1.6	1.2	1.3	2.3	2.2	2.8	2.1	2.4	1.9	2.4	4.7	1.9	1.0	1.2	1.4	2.0	4.7
13-Sep	1.4	Z	1.2	1.0	0.9	1.0	1.2	1.9	1.2	1.1	1.2	1.0	2.2	1.3	1.3	1.5	12.5	31.5	7.8	2.1	2.7	1.0	0.7	2.0	3.5	31.5
14-Sep	3.1	5.1	Z	8.3	7.7	7.3	7.8	5.2	3.2	2.0	2.0	2.2	1.6	1.5	1.0	1.8	0.2	0.5	0.1	0.3	0.2	0.2	0.3	0.5	2.7	8.3
15-Sep	0.5	1.1	1.8	Z	6.9	7.7	5.1	4.8	4.7	3.4	2.8	2.3	2.7	9.5	8.0	4.3	3.6	1.9	2.4	2.5	2.8	4.7	7.5	5.0	4.2	9.5
16-Sep	1.6	2.7	0.9	5.6	Z	7.9	2.8	3.9	1.6	2.6	8.3	3.3	1.9	2.4	3.3	4.6	4.9	3.9	2.6	4.1	2.7	1.4	1.5	1.7	3.3	8.3
17-Sep	1.6	1.4	1.2	0.9	1.0	Z	1.2	1.2	1.2	1.2	1.2	0.9	0.7	0.7	0.8	0.7	0.5	0.4	0.4	0.6	0.5	0.4	0.4	0.5	0.9	1.6
18-Sep	Z	0.7	0.8	0.9	0.9	1.0	1.1	1.6	1.1	1.1	1.2	1.7	2.6	3.0	2.5	2.4	3.3	2.4	1.7	3.6	4.9	4.4	5.5	5.3	2.3	5.5
19-Sep	5.2	Z	4.3	4.5	6.6	7.7	4.6	4.9	7.1	6.8	4.4	3.2	3.5	3.6	1.5	2.0	2.9	2.3	2.3	1.4	2.0	4.1	5.7	5.0	4.2	7.7
20-Sep	5.0	2.4	Z	0.8	0.6	0.7	1.0	1.7	1.0	1.2	1.6	1.4	1.7	1.3	1.3	1.2	1.0	1.3	0.8	0.8	0.8	0.9	0.9	0.8	1.3	5.0
21-Sep	0.8	1.0	1.3	Z	1.3	1.8	2.3	4.4	7.9	4.8	2.3	1.4	1.7	1.5	0.9	3.4	4.6	5.9	9.7	8.3	3.4	7.4	6.9	3.7	3.8	9.7
22-Sep	3.1	3.1	8.6	4.7	Z	5.8	3.8	6.8	6.0	4.1	4.9	4.2	3.2	1.5	1.5	2.1	2.1	1.7	2.0	2.7	0.6	0.8	0.5	0.6	3.2	8.6
23-Sep	0.9	0.9	1.3	2.0	3.2	Z	5.3	8.5	3.2	1.0	1.4	0.8	2.2	3.2	4.5	4.4	5.5	4.6	5.0	4.6	8.7	8.2	4.6	4.7	3.9	8.7
24-Sep	Z	6.4	5.3	3.7	3.9	3.9	4.2	6.0	7.7	8.2	4.1	2.4	0.9	1.1	2.5	1.0	0.5	0.2	0.3	0.4	0.3	0.5	1.2	10.6	3.3	10.6
25-Sep	7.0	Z	7.3	3.3	1.4	0.7	1.1	2.2	C	C	C	C	C	C	0.4	0.5	0.6	0.7	0.4	0.5	0.7	1.6	1.5	1.9	--	7.3
26-Sep	2.1	2.5	Z	2.5	5.0	5.1	4.7	5.7	6.1	4.8	3.3	1.8	2.5	2.5	1.5	2.4	1.8	1.2	0.9	5.4	4.2	3.4	4.4	6.2	3.5	6.2
27-Sep	2.8	2.5	1.9	Z	5.2	4.2	2.4	1.7	0.7	0.2	0.3	0.2	0.5	0.2	0.3	0.6	0.5	0.2	0.5	0.5	0.5	2.2	4.7	7.2	1.7	7.2
28-Sep	7.9	6.6	4.5	3.3	Z	2.7	5.8	6.0	3.6	3.2	2.3	1.5	1.0	1.2	2.5	3.4	1.8	1.4	1.1	1.8	0.9	0.5	0.4	0.8	2.8	7.9
29-Sep	0.8	0.4	1.6	0.5	0.7	Z	1.3	1.5	1.4	0.5	0.4	0.5	0.8	0.9	1.2	0.8	0.6	0.5	1.4	1.5	1.6	2.2	1.6	1.2	1.0	2.2
30-Sep	Z	0.8	0.9	0.8	0.9	1.5	2.2	4.4	3.4	2.5	0.8	1.2	3.2	4.4	1.0	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	1.5	4.4
	2.5	2.2	2.4	2.5	2.4	3.1	2.9	3.4	3.1	2.5	2.1	1.9	2.3	2.5	2.1	2.3	2.3	2.9	2.3	2.5	2.3	2.4	2.4	2.8	Diurnal Average	
	7.9	6.6	8.6	8.3	7.7	7.9	7.8	8.5	10.3	8.6	8.3	6.7	8.6	12.8	8.0	10.9	12.5	31.5	9.7	8.3	8.7	8.2	7.5	10.6	Diurnal Maximum	

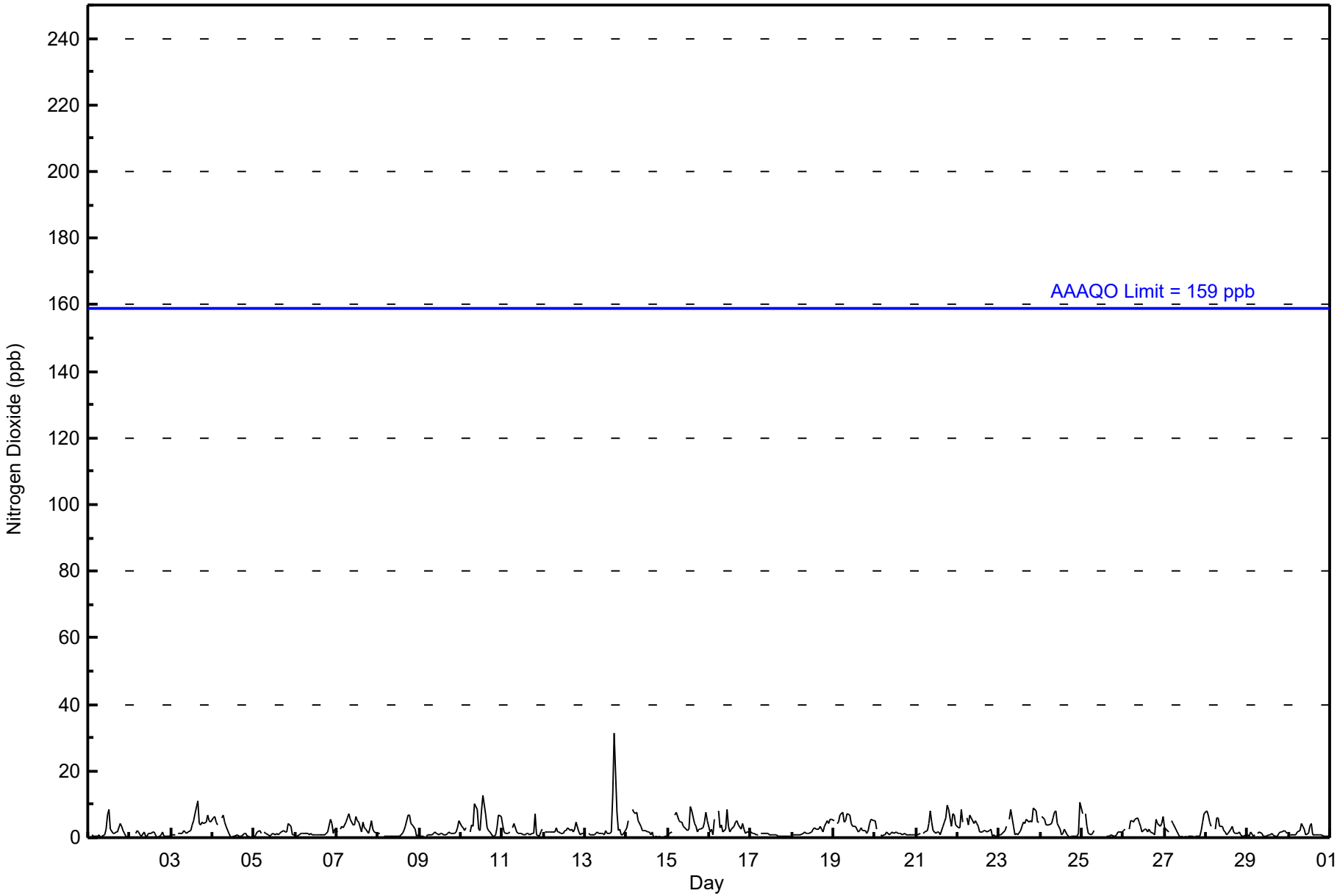
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - September 2025



Nitrogen Dioxide (NO_2) - ppb
Wapasu - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	37	16	7	2	6	7	72	188	83	65	69	29	12	23	25	38	679
21 - 40	0	0	0	1	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	37	16	7	3	6	7	72	188	83	65	69	29	12	23	25	38	680

Total Number of Valid Hours: 680

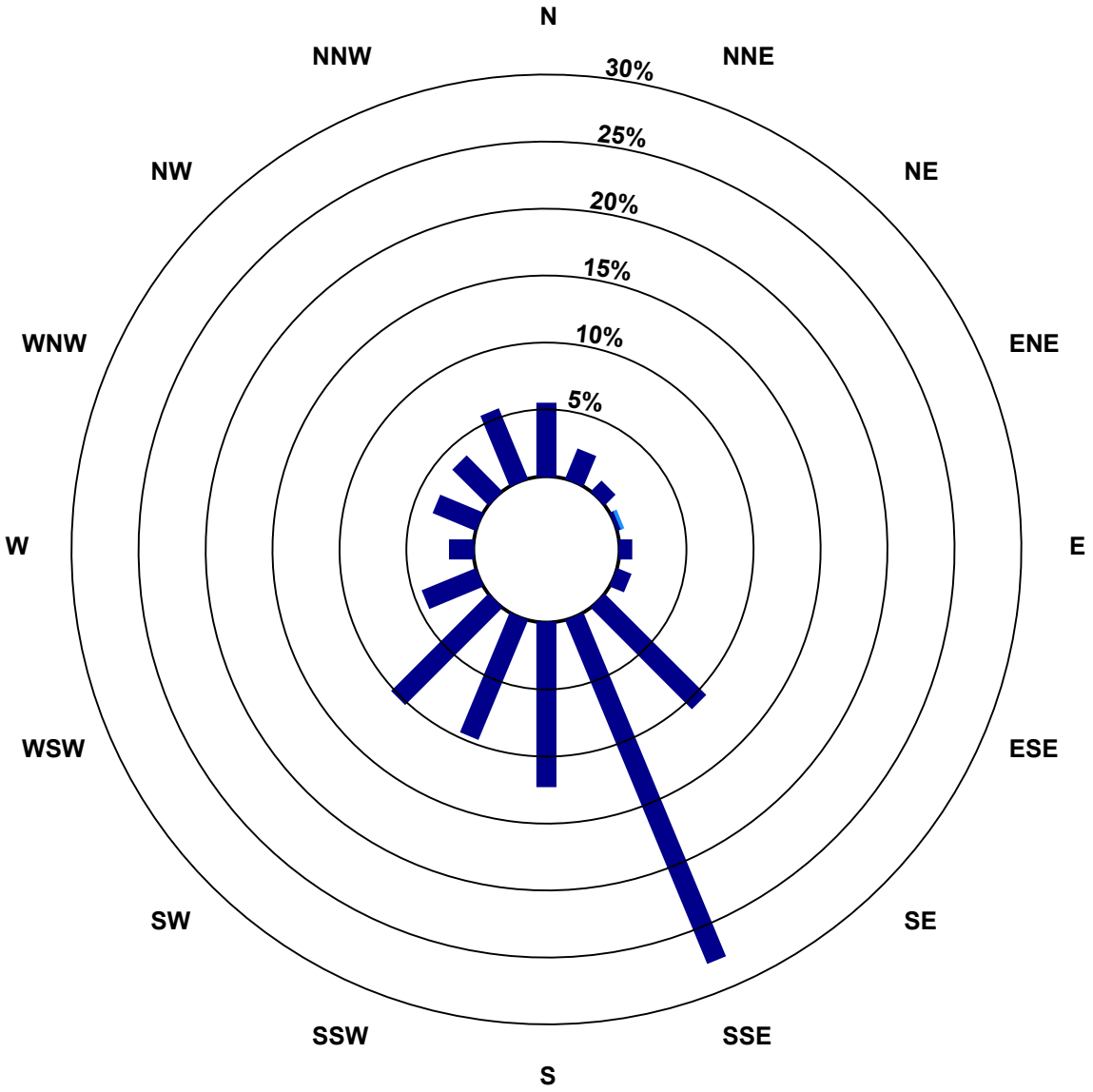
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Wapasu



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

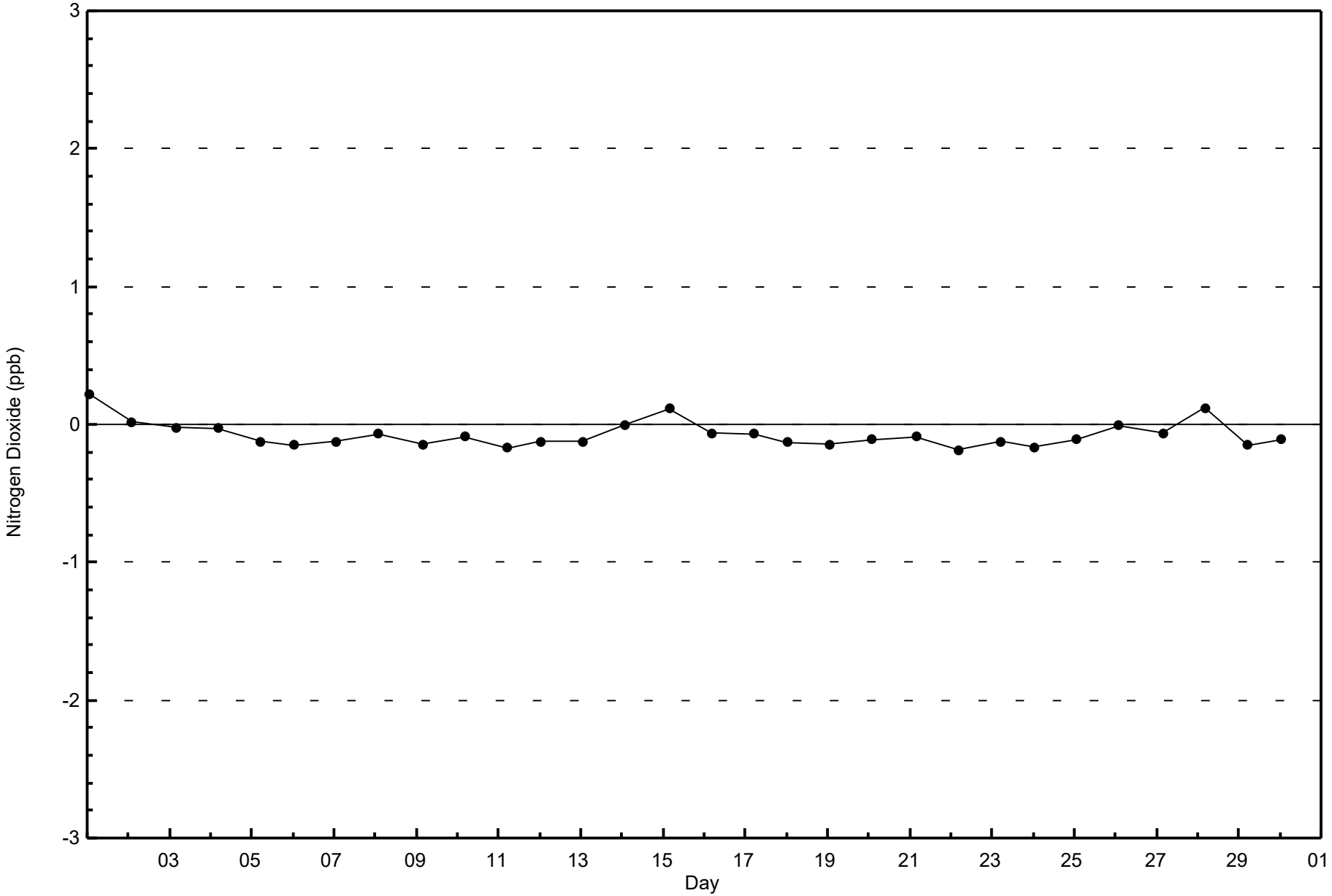
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - September 2025

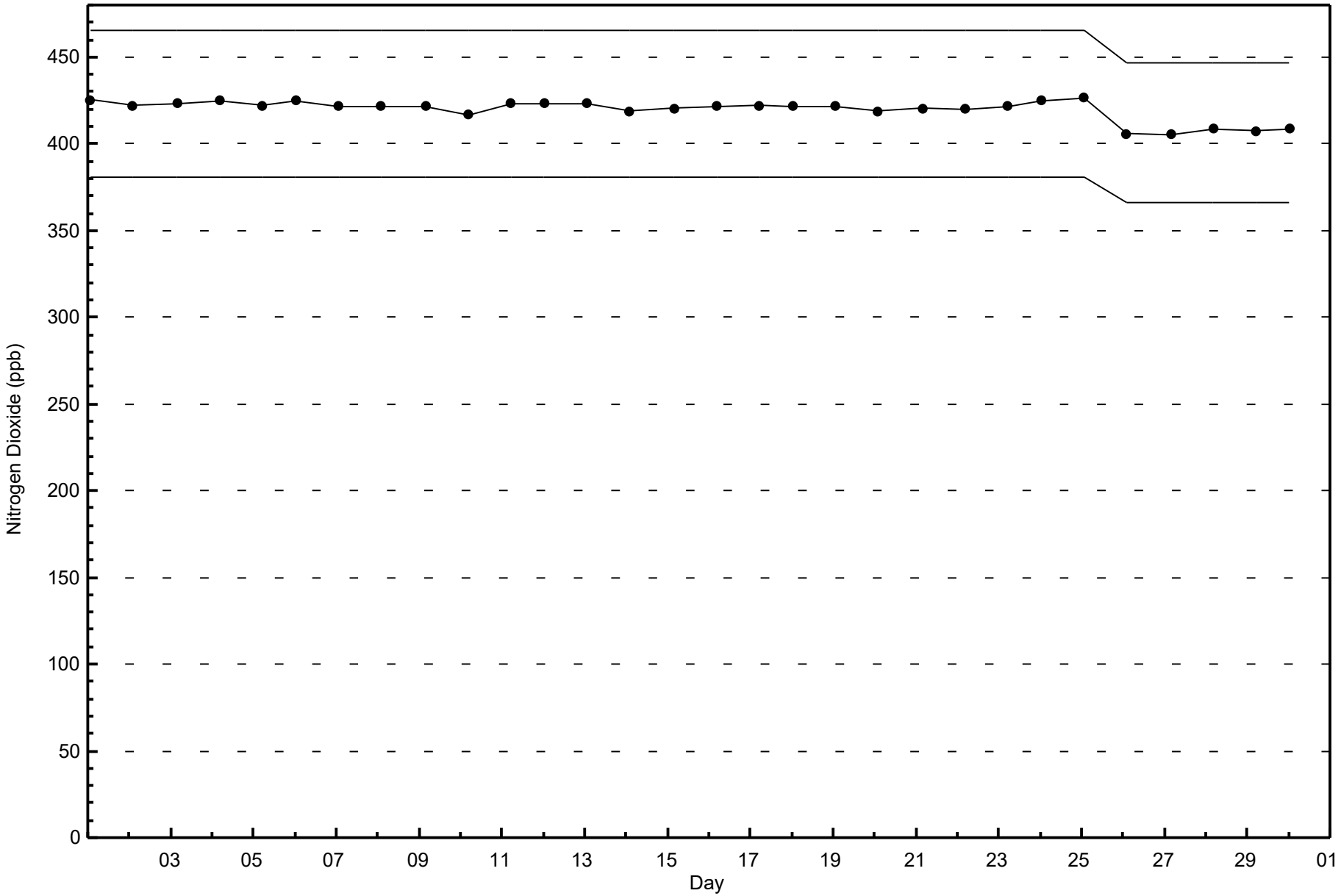


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - September 2025

Maximum Value: 37.7 ppb on Sep 13 18:00

Maximum Daily Average: 5.4 ppb on Sep 10

Minimum Value: 0.0 ppb on Sep 2 01:00

Minimum Daily Average: 0.9 ppb on Sep 17

Maximum Diurnal Average: 4.1 ppb at hour 9

Minimum Diurnal Average: 2.2 ppb at hour 2

Monthly Average: 2.78 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.9 Median = 1.7 Q_3 = 4.0 P_{90} = 6.2 P_{99} = 12.9

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.1	Z	0.9	0.6	0.4	0.3	0.8	0.2	1.0	1.6	4.0	11.5	13.6	3.4	1.3	1.5	1.7	1.6	4.6	3.2	2.0	1.2	0.3	0.1	2.5	13.6
2-Sep	0.0	0.2	Z	1.6	4.0	2.6	1.7	1.2	2.5	0.5	0.6	1.5	1.4	1.8	1.9	0.8	0.2	0.3	0.9	1.5	0.6	0.3	0.4	0.5	1.2	4.0
3-Sep	0.8	0.9	0.9	Z	1.1	1.1	1.4	2.4	1.7	1.6	1.8	2.6	4.6	6.3	8.0	12.7	4.6	3.9	4.7	4.1	4.5	6.7	5.2	4.5	3.7	12.7
4-Sep	5.9	6.4	4.8	4.0	Z	6.0	7.5	5.3	4.1	1.4	0.6	0.2	0.5	0.6	1.0	0.8	0.7	0.6	1.4	1.2	0.3	0.5	0.1	0.1	2.4	7.5
5-Sep	0.2	0.9	1.5	2.1	1.4	Z	1.8	1.5	1.0	0.8	1.1	1.4	1.0	1.4	1.1	1.4	2.0	2.1	1.7	1.9	4.4	3.4	0.7	0.7	1.5	4.4
6-Sep	Z	0.5	0.9	1.4	1.4	1.2	1.3	1.6	1.0	1.2	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.8	1.1	1.6	5.7	4.1	1.2	2.7	1.5	5.7
7-Sep	1.6	Z	2.6	3.6	2.8	4.6	6.8	8.5	6.7	4.4	4.9	8.7	7.1	6.2	1.8	5.4	3.2	2.6	1.4	2.8	5.2	2.5	1.5	1.2	4.2	8.7
8-Sep	1.1	1.3	Z	0.5	0.4	0.4	0.3	0.3	0.5	0.3	0.3	0.3	0.5	1.0	1.3	2.4	4.0	7.5	7.3	4.1	3.9	2.7	0.6	0.9	1.8	7.5
9-Sep	0.5	0.4	0.3	Z	0.5	0.7	0.9	1.0	1.2	1.8	1.2	1.1	1.2	1.2	1.1	1.0	1.3	1.8	1.4	1.2	1.2	1.9	3.1	5.1	1.3	5.1
10-Sep	3.6	2.8	2.2	2.8	Z	1.8	4.2	5.5	18.3	14.0	3.3	2.6	10.9	18.7	8.4	3.6	2.2	2.0	0.4	0.5	0.7	3.0	6.8	6.6	5.4	18.7
11-Sep	3.8	1.6	1.2	1.2	1.7	Z	3.6	5.4	2.1	1.5	1.6	1.5	1.0	0.7	1.3	1.3	1.0	1.1	1.2	7.3	0.9	0.6	1.9	2.4	2.0	7.3
12-Sep	Z	1.9	1.7	1.5	1.6	1.7	1.9	3.1	1.6	1.7	1.3	1.4	2.6	2.5	3.1	2.3	2.5	1.9	2.4	4.7	1.9	1.0	1.2	1.4	2.0	4.7
13-Sep	1.4	Z	1.2	1.0	0.9	1.0	1.2	2.0	1.3	1.1	1.3	1.0	2.4	1.3	1.3	1.6	14.9	37.7	8.2	2.1	2.7	1.0	0.7	2.0	3.9	37.7
14-Sep	3.1	5.1	Z	8.3	7.7	7.5	8.2	5.6	3.4	2.1	2.1	2.3	1.7	1.6	1.1	1.9	0.2	0.5	0.1	0.3	0.2	0.2	0.3	0.5	2.8	8.3
15-Sep	0.5	1.1	1.8	Z	6.9	7.7	5.4	5.7	6.0	4.3	3.3	2.7	3.1	11.4	9.2	4.6	3.9	2.0	2.4	2.5	2.8	4.7	7.5	5.0	4.5	11.4
16-Sep	1.6	2.7	0.9	5.6	Z	8.5	3.2	5.2	2.0	3.5	16.6	5.0	2.4	3.3	4.6	5.9	5.7	4.2	2.6	4.1	2.7	1.4	1.5	1.7	4.1	16.6
17-Sep	1.6	1.4	1.2	0.9	1.0	Z	1.3	1.4	1.5	1.4	1.4	1.0	0.8	0.8	0.9	0.8	0.5	0.4	0.4	0.6	0.5	0.4	0.4	0.5	0.9	1.6
18-Sep	Z	0.7	0.8	0.9	0.9	1.0	1.2	1.8	1.3	1.3	1.4	2.0	3.1	3.6	2.8	2.6	3.6	2.5	1.7	3.6	4.9	4.4	5.5	5.3	2.5	5.5
19-Sep	5.2	Z	4.3	4.5	6.6	7.7	4.8	5.9	9.2	8.7	5.6	4.0	4.4	4.4	1.8	2.3	3.2	2.4	2.3	1.4	2.0	4.1	5.7	5.0	4.6	9.2
20-Sep	5.0	2.4	Z	0.8	0.6	0.7	1.0	1.9	1.1	1.3	1.7	1.5	1.8	1.4	1.3	1.3	1.0	1.3	0.8	0.8	0.8	0.9	0.9	0.8	1.4	5.0
21-Sep	0.8	1.0	1.3	Z	1.3	1.8	2.4	5.0	9.9	6.1	2.8	1.5	1.9	1.6	0.9	3.9	5.0	6.1	9.8	8.3	3.4	7.4	6.9	3.8	4.0	9.9
22-Sep	3.1	3.2	9.1	4.9	Z	6.1	4.1	9.5	9.0	6.0	7.3	5.9	4.3	1.9	1.8	2.4	2.3	1.8	2.0	2.7	0.6	0.8	0.5	0.6	3.9	9.5
23-Sep	0.9	0.9	1.3	2.0	3.2	Z	5.4	9.3	3.9	1.2	1.6	1.0	2.6	3.5	5.0	5.0	6.1	4.9	5.1	4.7	8.9	8.3	4.6	4.7	4.1	9.3
24-Sep	Z	6.4	5.3	3.7	3.9	3.9	4.2	6.2	8.7	9.7	5.1	2.6	0.9	1.3	3.1	1.2	0.5	0.2	0.3	0.4	0.3	0.5	1.2	10.7	3.5	10.7
25-Sep	7.0	Z	7.3	3.3	1.4	0.7	1.1	2.4	C	C	C	C	C	C	0.4	0.5	0.6	0.7	0.4	0.5	0.7	1.6	1.5	1.9	--	7.3
26-Sep	2.1	2.5	Z	2.5	5.1	5.2	5.0	8.1	8.2	6.8	4.8	2.4	3.7	3.5	2.0	3.1	1.9	1.2	0.9	5.5	4.2	3.4	4.4	6.2	4.0	8.2
27-Sep	2.8	2.5	1.9	Z	5.4	4.3	2.4	1.9	0.8	0.3	0.3	0.3	0.6	0.3	0.3	0.7	0.5	0.2	0.5	0.5	0.5	2.2	4.7	7.3	1.8	7.3
28-Sep	8.0	6.7	4.5	3.3	Z	2.7	6.1	7.3	4.9	4.6	3.3	2.0	1.4	1.5	3.2	4.0	1.9	1.4	1.1	1.8	0.9	0.5	0.4	0.8	3.2	8.0
29-Sep	0.8	0.4	1.6	0.5	0.7	Z	1.3	1.6	1.5	0.5	0.4	0.5	0.8	0.9	1.2	0.8	0.6	0.5	1.4	1.5	1.6	2.2	1.6	1.2	1.0	2.2
30-Sep	Z	0.8	0.9	0.8	0.9	1.5	2.2	4.5	3.7	2.9	0.9	1.3	3.9	5.3	1.0	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	1.6	5.3
	2.5	2.2	2.4	2.5	2.5	3.2	3.1	4.0	4.1	3.2	2.8	2.4	2.9	3.2	2.4	2.6	2.6	3.2	2.3	2.5	2.3	2.4	2.4	2.8	Diurnal Average	
	8.0	6.7	9.1	8.3	7.7	8.5	8.2	9.5	18.3	14.0	16.6	11.5	13.6	18.7	9.2	12.7	14.9	37.7	9.8	8.3	8.9	8.3	7.5	10.7	Diurnal Maximum	

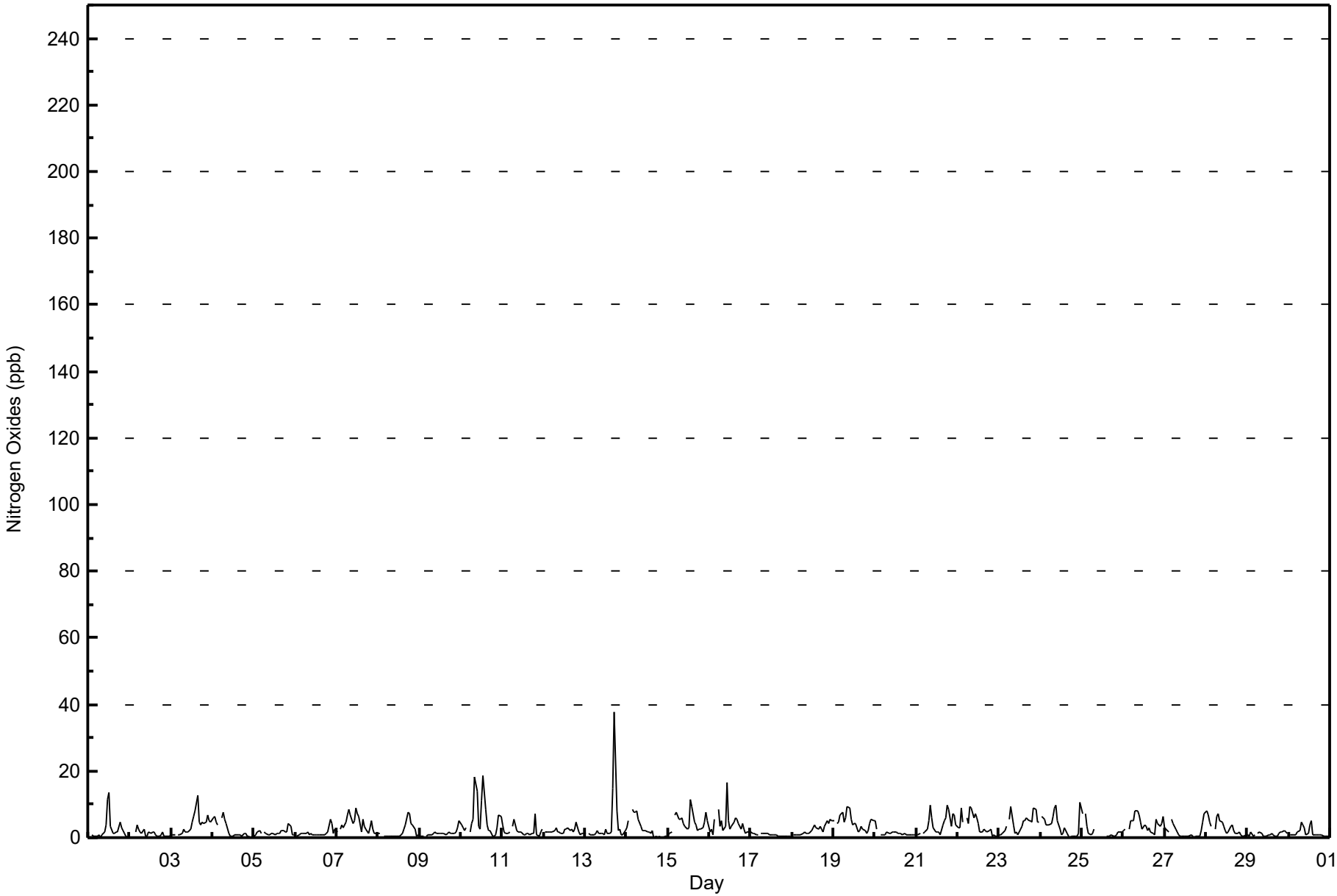
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - September 2025



Nitrogen Oxides (NO_X) - ppb
Wapasu - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Wapasu - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	37	16	7	2	6	7	72	188	83	65	69	29	12	23	25	38	679
21 - 40	0	0	0	1	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	37	16	7	3	6	7	72	188	83	65	69	29	12	23	25	38	680

Total Number of Valid Hours: 680

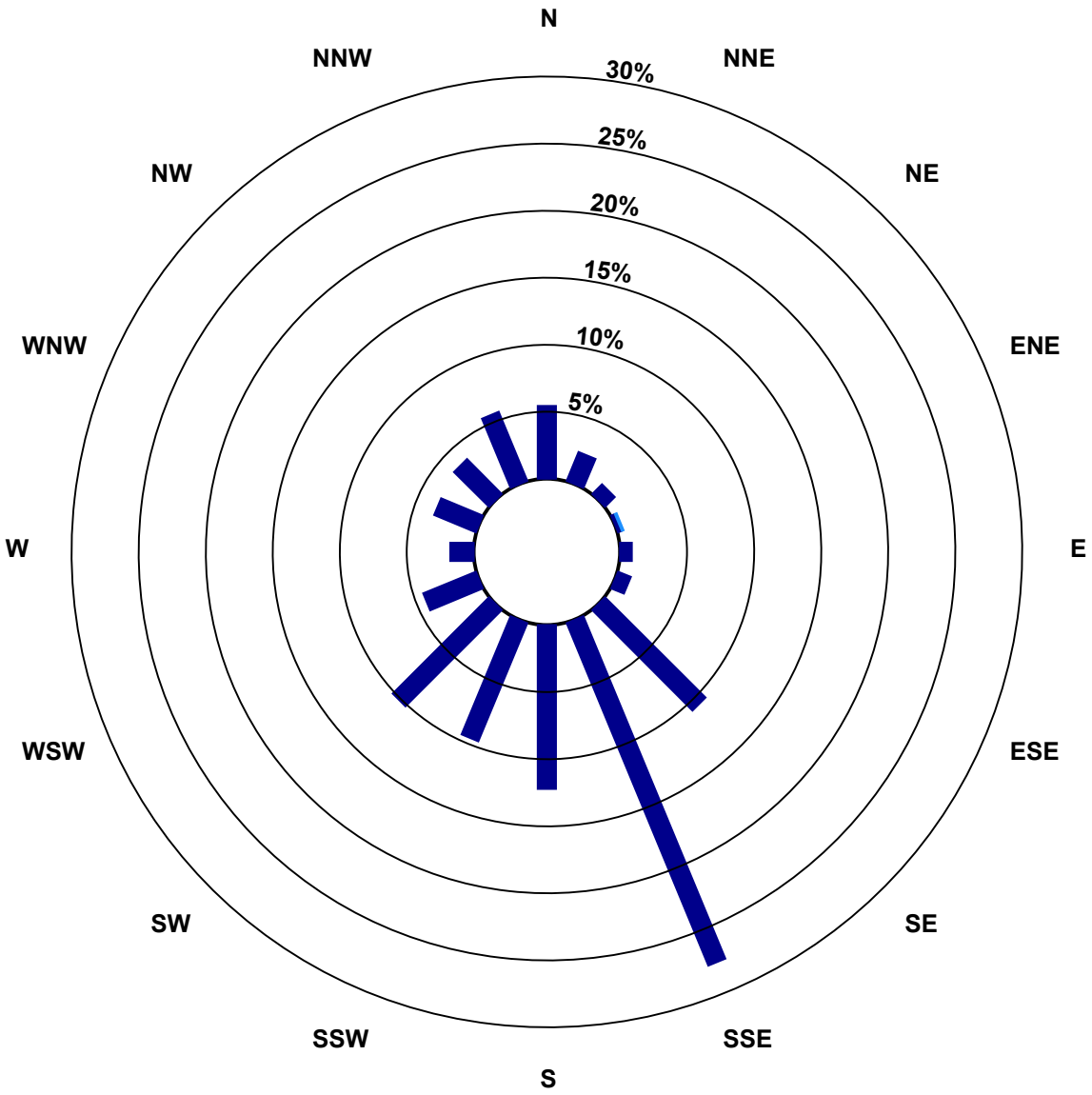
Total Number of Hours: 720

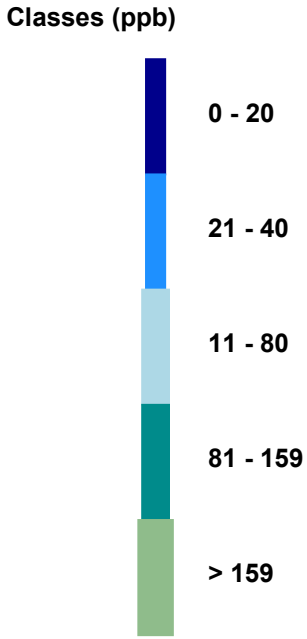
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Wapasu





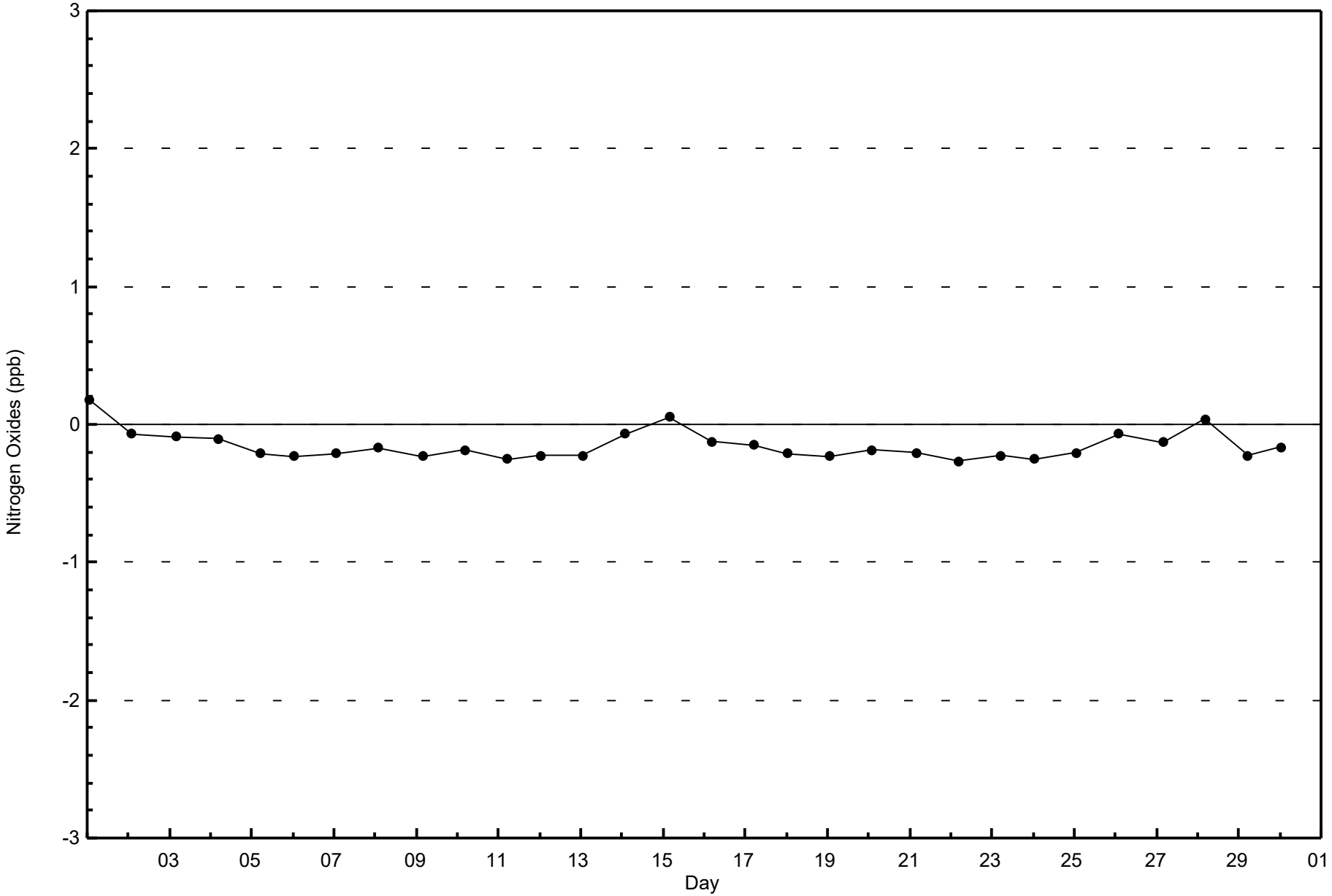
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - September 2025

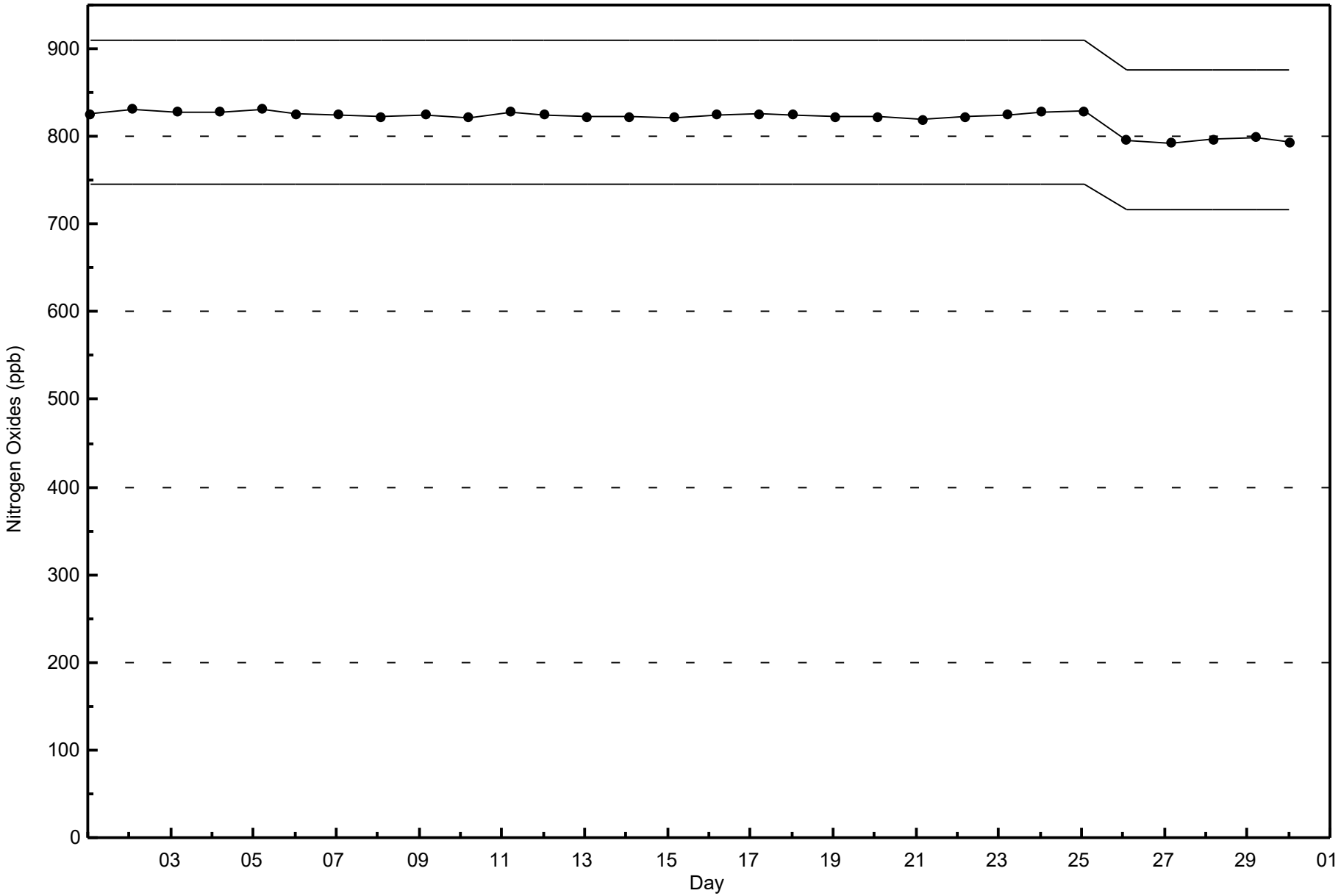


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 8

Maximum Value: 609.1 $\mu g/m^3$ on Sep 14 03:00

Maximum Daily Average: 172.2 $\mu g/m^3$ on Sep 14

Minimum Value: 1.0 $\mu g/m^3$ on Sep 22 21:00

Minimum Daily Average: 6.5 $\mu g/m^3$ on Sep 4

Maximum Diurnal Average: 44.0 $\mu g/m^3$ at hour 3

Minimum Diurnal Average: 17.6 $\mu g/m^3$ at hour 14

Monthly Average: 27.61 $\mu g/m^3$

Percentiles: P_1 = 2.6 P_{10} = 4.8 Q_1 = 8.6 Median = 16.3 Q_3 = 29.1 P_{90} = 51.7 P_{99} = 222.3

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	4.2	3.5	3.3	3.8	4.6	4.7	4.5	3.0	2.7	3.4	7.1	23.0	23.7	20.3	65.3	76.2	128.8	119.3	97.7	61.7	46.5	42.6	39.0	35.6	34.4	128.8
2-Sep	33.8	32.0	35.9	36.6	39.5	37.0	36.9	38.4	47.7	32.6	30.2	31.6	27.0	21.3	18.4	16.5	18.6	19.2	19.4	26.3	26.1	30.5	35.6	42.2	30.5	47.7
3-Sep	63.6	59.5	60.8	57.3	54.6	51.0	46.5	44.1	40.1	40.7	44.4	48.1	46.9	49.9	52.7	60.1	64.3	50.5	43.8	67.9	79.8	73.8	65.0	33.7	54.1	79.8
4-Sep	15.7	10.0	8.3	9.4	7.8	6.1	6.4	9.4	10.4	9.0	6.8	5.0	4.3	4.1	3.5	3.9	4.4	4.2	4.9	5.3	4.3	4.8	4.2	3.8	6.5	15.7
5-Sep	3.6	3.7	4.0	3.7	3.5	3.6	3.4	3.4	3.4	3.8	4.7	4.9	6.4	8.1	9.0	10.3	12.4	12.8	11.9	12.8	17.5	11.0	6.7	6.2	7.1	17.5
6-Sep	6.2	13.1	39.1	81.6	60.7	58.4	64.7	58.6	32.9	22.0	13.7	11.0	14.1	14.8	13.2	13.8	12.1	11.3	9.1	10.1	11.8	27.2	28.6	24.9	27.2	81.6
7-Sep	21.2	17.9	16.0	15.1	18.5	19.6	23.1	25.2	23.2	23.5	24.3	24.9	24.7	22.5	19.6	20.6	21.8	19.5	17.6	18.7	21.1	22.8	23.8	29.2	21.4	29.2
8-Sep	34.8	35.4	34.4	32.4	28.6	22.6	11.9	13.5	13.0	12.1	10.4	8.6	8.4	9.8	10.1	11.6	12.7	15.2	17.0	15.7	13.1	7.9	6.9	8.3	16.4	35.4
9-Sep	8.3	10.5	10.6	11.1	19.0	35.6	42.2	45.6	40.0	33.4	27.9	25.6	26.3	29.1	29.5	30.6	27.3	24.5	25.0	34.8	48.4	44.2	33.3	30.6	28.9	48.4
10-Sep	28.4	25.6	24.3	24.6	25.6	26.0	27.3	24.3	27.6	23.0	12.4	13.5	15.3	16.6	13.0	10.8	8.0	5.2	3.2	3.8	5.3	7.7	8.4	8.2	16.2	28.4
11-Sep	6.8	5.9	5.5	5.5	5.7	5.8	6.8	6.7	7.1	7.8	6.7	5.3	8.4	9.9	8.7	8.0	8.9	7.9	7.7	9.1	9.4	17.1	104.7	160.9	18.2	160.9
12-Sep	131.4	116.7	98.3	96.8	94.6	84.6	81.9	62.0	45.7	45.9	41.8	30.4	27.4	27.6	27.5	26.8	27.4	27.4	22.9	22.9	20.9	18.2	18.1	17.8	50.6	131.4
13-Sep	18.3	18.5	18.8	19.3	19.6	19.7	20.0	20.2	21.6	19.4	17.7	18.9	20.3	33.5	40.0	49.3	49.9	51.9	50.5	40.2	35.5	39.4	40.9	114.5	33.2	114.5
14-Sep	228.5	367.7	609.1	430.8	427.0	564.3	499.9	325.5	191.9	112.5	64.1	66.4	42.6	29.9	41.4	71.1	15.6	7.0	6.8	6.1	6.3	6.3	6.0	5.7	172.2	609.1
15-Sep	6.0	7.0	7.8	10.7	16.3	18.0	18.5	15.6	14.4	15.0	18.8	25.1	33.9	35.6	37.6	32.9	45.5	44.6	43.3	46.7	50.2	51.6	39.5	29.8	27.7	51.6
16-Sep	23.8	19.1	13.2	11.5	11.9	13.0	12.4	12.5	11.3	10.4	11.4	10.2	12.1	14.6	15.5	17.3	18.0	17.2	16.5	16.3	15.7	15.7	16.9	18.5	14.8	23.8
17-Sep	18.5	19.6	24.1	22.3	22.6	21.8	22.5	24.0	22.0	17.9	14.6	12.2	11.0	11.6	10.6	10.3	10.2	9.4	10.7	20.6	17.0	10.7	10.0	9.8	16.0	24.1
18-Sep	11.2	16.0	15.8	14.6	13.6	13.2	13.3	13.8	13.3	13.3	14.6	17.4	20.7	20.7	18.9	18.2	14.9	25.1	13.9	10.3	9.9	8.8	11.7	18.7	15.1	25.1
19-Sep	22.7	23.8	30.2	30.8	18.4	12.1	11.0	12.4	50.1	59.0	28.3	17.1	16.1	18.7	11.4	9.4	9.7	10.8	14.1	9.4	8.0	7.6	6.6	5.2	18.5	59.0
20-Sep	4.8	3.3	3.0	3.2	5.4	5.4	6.1	6.6	6.9	7.8	9.3	11.9	13.0	14.6	14.9	16.4	14.7	14.3	13.7	13.5	12.8	12.7	11.9	12.3	9.9	16.4
21-Sep	13.1	24.3	41.3	35.1	28.1	24.8	24.1	23.0	24.4	17.6	12.5	9.0	10.5	7.2	5.7	7.3	10.0	8.1	10.1	15.3	6.4	5.4	6.8	7.8	15.7	41.3
22-Sep	10.7	12.1	18.0	24.3	24.4	19.0	19.3	21.6	19.2	21.2	22.1	18.0	11.5	7.5	9.9	13.0	10.6	5.1	5.0	2.9	1.0	1.6	1.8	2.4	12.6	24.4
23-Sep	2.8	2.9	3.5	3.8	4.8	8.4	10.7	14.3	11.8	7.8	5.3	5.7	8.4	7.7	7.9	13.9	17.8	13.3	11.0	8.1	5.7	9.5	7.8	7.8	8.4	17.8
24-Sep	12.9	16.1	15.9	20.2	26.4	26.1	18.0	25.4	39.3	66.2	69.9	55.7	21.1	12.0	8.8	4.4	1.7	1.4	1.6	2.6	2.7	4.6	6.7	6.0	19.4	69.9
25-Sep	4.7	18.0	38.2	43.0	43.3	28.8	50.8	123.2	23.9	28.2	32.6	14.2	C	C	4.3	4.1	4.0	3.4	3.5	2.9	3.1	3.5	37.1	57.4	26.0	123.2
26-Sep	60.2	54.3	35.6	25.3	33.6	50.1	68.1	77.3	83.5	73.9	56.4	42.0	17.4	11.2	7.5	4.3	3.6	4.1	3.9	6.4	7.3	9.5	9.9	18.7	31.8	83.5
27-Sep	25.9	14.3	7.2	2.6	2.6	7.1	9.8	5.5	4.6	6.1	5.8	5.4	4.3	4.2	4.4	5.4	8.7	7.9	8.7	10.3	10.4	10.0	9.6	13.0	8.1	25.9
28-Sep	25.7	35.6	54.0	67.7	69.8	72.0	66.2	59.2	39.8	24.7	18.1	10.4	4.7	5.5	12.3	12.8	17.9	16.5	13.8	11.5	9.5	8.2	7.0	7.0	27.9	72.0
29-Sep	8.1	12.7	16.0	19.3	22.1	22.9	22.9	10.0	9.8	8.4	8.7	11.5	23.2	25.9	38.9	20.6	7.9	8.5	78.4	89.3	89.7	123.6	82.0	42.0	33.4	123.6
30-Sep	32.2	27.6	29.0	33.7	34.7	35.9	35.1	36.4	34.8	33.3	25.1	29.1	16.2	15.7	13.4	22.4	24.7	21.1	19.6	17.1	17.9	18.3	21.2	24.1	25.8	36.4
	29.6	34.2	44.0	39.9	39.6	43.9	42.8	38.7	30.5	26.7	22.2	20.4	17.9	17.6	19.1	20.7	21.1	19.6	20.2	20.6	20.4	21.8	23.6	26.7	Diurnal Average	
	228.5	367.7	609.1	430.8	427.0	564.3	499.9	325.5	191.9	112.5	69.9	66.4	46.9	49.9	65.3	76.2	128.8	119.3	97.7	89.3	89.7	123.6	104.7	160.9	Diurnal Maximum	

C - Calibration

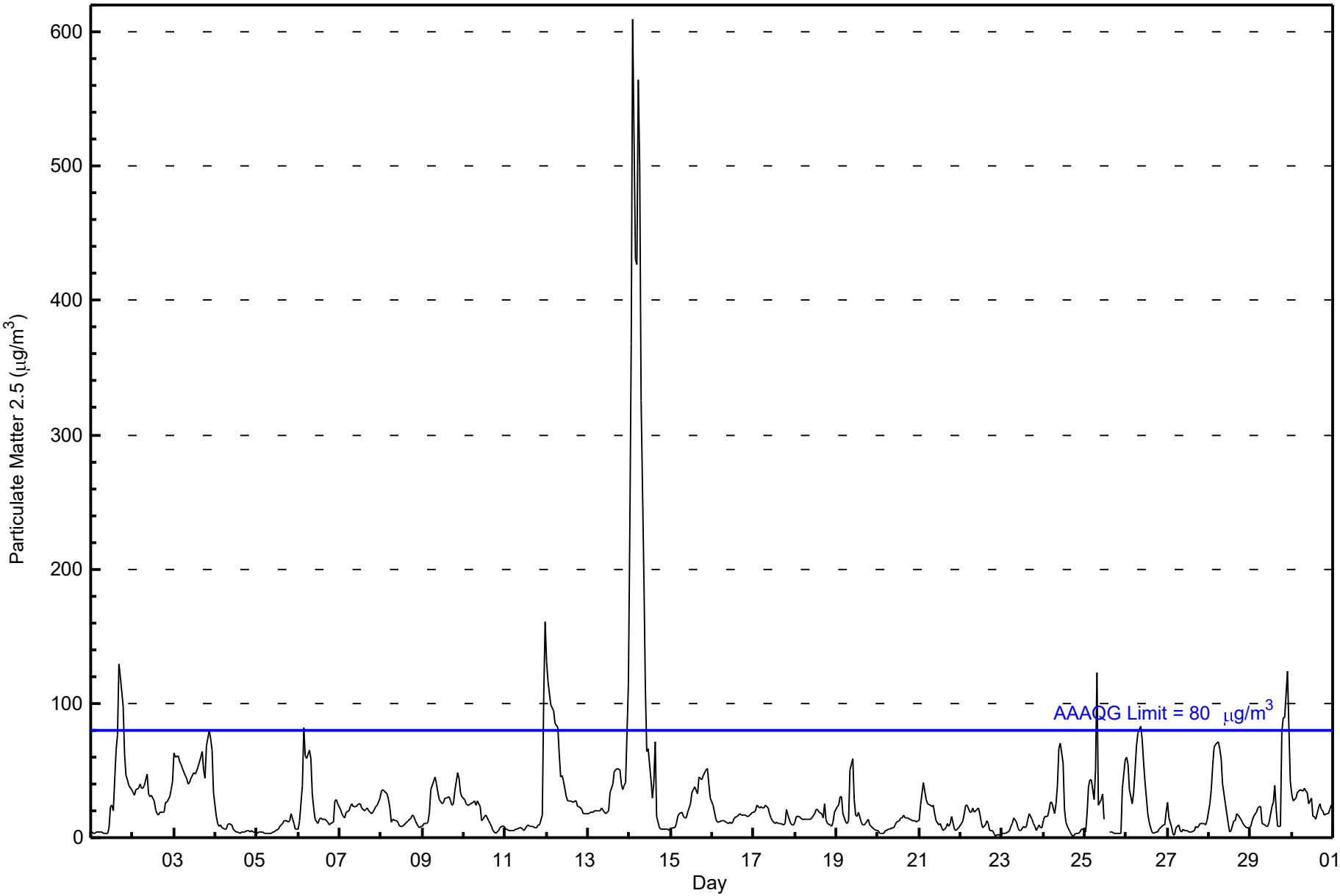
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Wapasu - September 2025



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

Wapasu - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	91	12.67	12.67
6 - 15	250	34.82	47.49
16 - 25	164	22.84	70.33
26 - 80	183	25.49	95.82
> 81.0	30	4.18	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Wapasu - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	2	0	1	3	1	11	18	15	9	4	9	1	4	5	4	91
6 - 15	4	4	3	0	1	3	28	58	34	25	30	15	8	10	5	22	250
16 - 25	16	9	3	0	1	1	12	50	23	12	18	1	1	4	6	5	162
26 - 80	11	1	1	2	1	3	19	56	19	20	19	4	2	5	9	9	181
> 81.0	3	0	0	0	0	0	8	18	0	0	1	0	0	0	0	0	30
Totals	38	16	7	3	6	8	78	200	91	66	72	29	12	23	25	40	714

Total Number of Valid Hours: 714

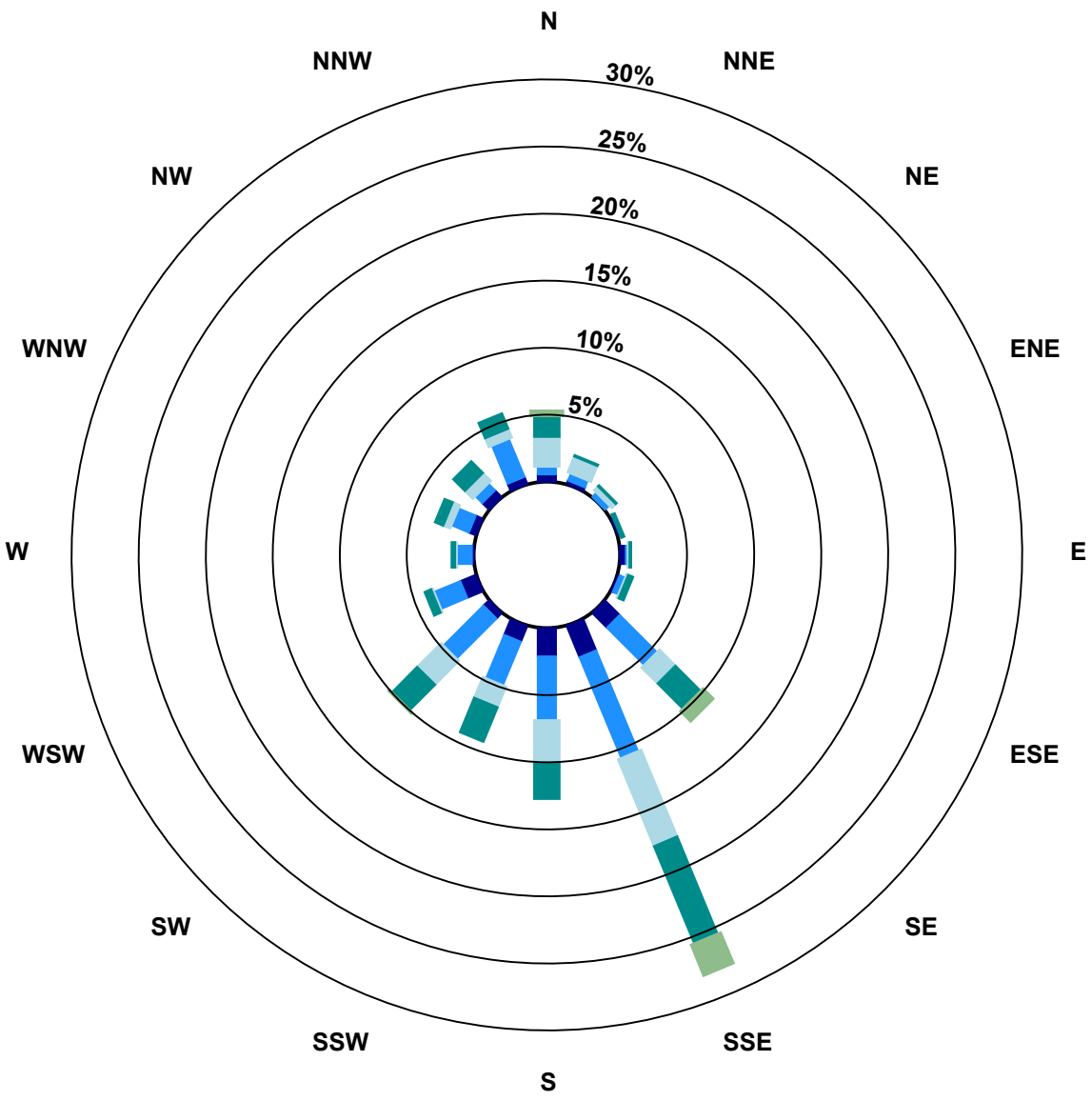
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Wapasu



Classes ($\mu g/m^3$)

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 714

Maximum Value: 27.5 C on Sep 12 16:00

Maximum Daily Average: 20.9 C on Sep 13

Minimum Value: -0.3 C on Sep 2 04:00

Minimum Daily Average: 9.0 C on Sep 2

Maximum Diurnal Average: 19.7 C at hour 16

Minimum Diurnal Average: 9.6 C at hour 6

Monthly Average: 14.10 C

Percentiles: P_1 = 0.9 P_{10} = 7.8 Q_1 = 10.6 Median = 14.1 Q_3 = 17.5 P_{90} = 21.1 P_{99} = 26.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

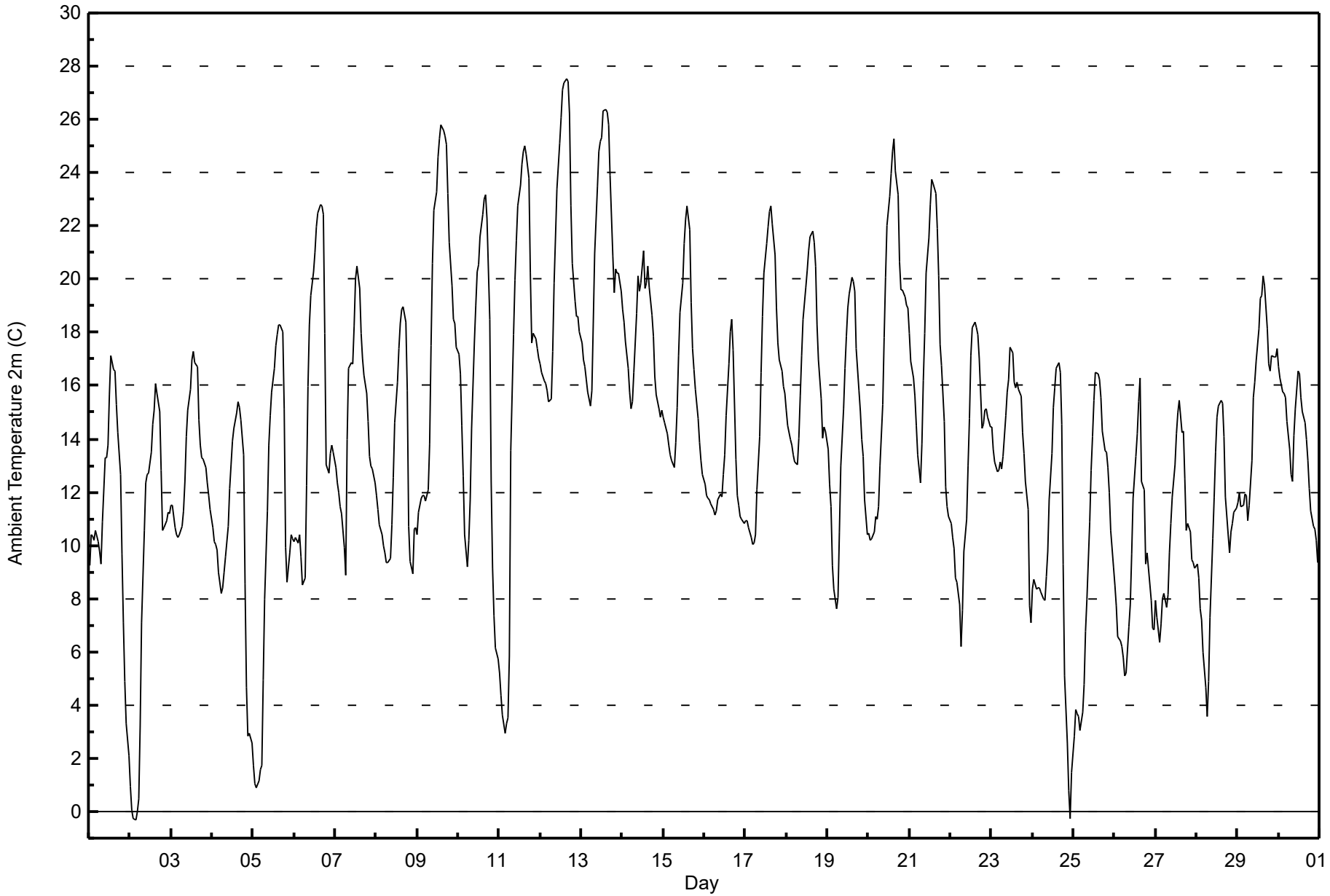
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.2	10.4	10.3	10.2	10.5	10.1	9.8	9.3	10.9	13.3	13.3	13.8	15.6	17.1	16.6	16.5	15.3	14.2	12.7	9.7	7.1	4.9	3.3	2.1	11.1	17.1
2-Sep	1.0	0.0	-0.3	-0.3	0.0	0.5	3.2	7.1	10.6	12.4	12.7	12.7	13.5	14.5	15.1	16.1	15.7	15.0	12.8	10.6	10.7	10.9	11.2	11.2	9.0	16.1
3-Sep	11.5	11.5	10.7	10.4	10.3	10.4	10.7	11.3	12.4	14.1	15.1	15.9	17.0	17.3	16.9	16.7	14.7	13.8	13.3	13.2	12.9	12.3	11.9	11.3	13.1	17.3
4-Sep	10.7	10.1	10.0	9.8	9.0	8.2	8.4	9.0	9.5	10.7	12.1	13.0	13.9	14.4	15.0	15.4	15.2	14.7	13.4	8.6	4.7	2.8	2.9	2.6	10.2	15.4
5-Sep	1.7	1.0	0.9	1.2	1.5	1.7	4.9	8.0	11.3	13.8	14.9	15.7	16.7	17.5	17.9	18.3	18.3	18.0	15.1	10.0	8.6	9.7	10.4	10.2	10.3	18.3
6-Sep	10.1	10.3	10.1	10.4	9.5	8.5	8.7	12.3	16.0	18.3	19.4	20.3	21.0	21.9	22.5	22.8	22.8	22.4	18.0	13.0	12.7	13.5	13.8	13.5	15.5	22.8
7-Sep	12.9	12.4	12.0	11.4	11.2	10.0	8.9	14.0	16.7	16.9	16.8	18.2	20.0	20.5	19.6	18.0	17.0	16.4	15.7	14.7	13.3	13.0	12.9	12.3	14.8	20.5
8-Sep	11.9	11.4	10.8	10.4	10.0	9.7	9.4	9.3	9.5	10.7	12.6	14.6	16.1	17.4	18.3	18.9	19.0	18.4	15.8	10.7	9.4	8.9	10.6	10.6	12.7	19.0
9-Sep	10.4	11.2	11.8	11.9	11.9	11.7	12.1	13.8	17.5	20.6	22.6	23.3	24.6	25.3	25.8	25.6	25.4	25.1	23.2	21.4	19.8	18.5	18.3	17.5	18.7	25.8
10-Sep	17.2	16.5	14.5	12.6	10.4	9.2	10.2	11.7	14.4	17.7	19.0	20.3	20.5	21.6	22.4	23.0	23.2	22.3	18.5	12.4	9.1	7.3	6.1	5.7	15.2	23.2
11-Sep	5.2	4.4	3.6	3.0	3.3	3.5	5.8	13.6	17.9	20.0	21.5	22.7	23.5	24.3	24.8	25.0	24.7	23.8	20.2	17.6	18.0	17.8	17.4	17.0	15.8	25.0
12-Sep	16.8	16.5	16.2	16.1	15.8	15.4	15.5	17.3	19.8	21.6	23.4	25.1	26.1	27.1	27.4	27.5	27.4	26.2	22.8	20.6	19.2	18.6	18.6	18.0	20.8	27.5
13-Sep	17.6	16.9	16.7	16.3	15.8	15.2	15.8	18.4	21.0	23.5	24.8	25.2	25.3	26.3	26.4	26.3	25.8	23.9	20.9	19.5	20.4	20.2	20.2	19.5	20.9	26.4
14-Sep	18.8	18.4	17.6	16.7	15.8	15.1	15.4	16.5	18.7	20.1	19.5	19.9	21.1	19.7	19.9	20.5	19.7	18.6	17.9	16.4	15.7	15.1	14.8	15.1	17.8	21.1
15-Sep	14.8	14.6	14.2	13.8	13.4	13.2	12.9	13.8	15.2	17.1	18.8	19.9	21.3	22.2	22.7	21.9	19.1	17.4	16.6	15.9	14.8	13.9	13.2	12.6	16.4	22.7
16-Sep	12.3	11.9	11.8	11.7	11.6	11.3	11.1	11.3	11.7	11.9	11.8	12.7	13.4	14.9	16.8	18.0	18.5	17.3	13.2	11.9	11.5	11.1	11.0	10.8	12.9	18.5
17-Sep	10.9	11.0	10.7	10.3	10.0	10.1	10.4	12.1	14.1	16.5	18.6	20.2	21.3	21.9	22.5	22.8	22.1	20.9	18.9	17.6	17.0	16.6	16.0	15.7	16.2	22.8
18-Sep	15.1	14.5	14.0	13.8	13.4	13.1	13.0	14.0	15.6	17.1	18.5	19.7	20.3	21.1	21.6	21.8	21.4	20.5	18.3	17.0	15.5	14.0	14.4	14.3	16.7	21.8
19-Sep	13.6	12.3	11.4	9.2	8.4	7.6	8.0	10.5	13.0	15.1	16.7	17.9	18.9	19.4	20.0	19.9	19.6	17.4	15.8	15.0	14.0	13.3	11.7	10.4	14.1	20.0
20-Sep	10.4	10.2	10.2	10.5	11.1	11.0	11.4	13.0	15.3	17.8	20.1	22.0	23.1	24.0	24.8	25.3	24.1	23.2	20.6	19.6	19.6	19.4	19.0	18.9	17.7	25.3
21-Sep	18.0	16.9	16.3	15.6	14.5	13.4	12.3	13.8	16.2	18.0	20.2	21.5	22.8	23.8	23.6	23.2	21.9	20.1	17.5	16.8	14.7	12.2	11.5	11.1	17.3	23.8
22-Sep	10.8	10.3	9.9	8.7	8.6	7.8	6.2	7.6	9.8	11.0	13.0	14.7	17.1	18.2	18.4	18.2	17.9	17.0	14.4	14.6	15.1	15.1	14.8	14.4	13.1	18.4
23-Sep	14.4	13.6	13.1	12.8	12.8	13.1	12.9	13.3	14.9	15.7	16.2	17.5	17.2	16.2	15.9	16.1	15.9	15.6	14.2	13.4	12.4	11.3	7.7	7.1	13.9	17.5
24-Sep	8.3	8.7	8.4	8.4	8.4	8.2	8.0	7.9	8.8	9.8	11.7	13.4	15.2	15.9	16.7	16.9	16.5	14.6	9.3	5.1	2.6	0.8	-0.2	1.4	9.4	16.9
25-Sep	2.9	3.9	3.7	3.6	3.1	3.8	4.8	6.8	8.0	10.9	12.8	14.1	15.5	16.5	16.4	16.2	15.6	14.3	13.6	13.5	12.9	12.0	10.6	9.2	10.2	16.5
26-Sep	8.5	7.7	6.6	6.4	6.2	5.8	5.1	5.2	7.0	7.8	9.7	11.8	13.4	14.2	15.4	16.3	12.4	12.1	9.3	9.7	9.1	7.9	6.9	6.8	9.2	16.3
27-Sep	8.0	7.3	6.3	7.0	8.0	8.2	7.7	8.2	9.7	10.8	11.8	13.0	14.2	15.0	15.4	14.2	14.3	12.5	10.6	10.8	10.5	9.5	9.3	9.2	10.5	15.4
28-Sep	9.3	8.8	7.6	7.2	6.0	4.7	3.6	4.9	7.3	10.3	11.8	13.5	14.8	15.2	15.4	15.4	14.1	11.8	10.4	9.7	10.5	10.8	11.3	11.4	10.2	15.4
29-Sep	11.6	12.0	11.5	11.5	11.9	11.9	10.9	11.5	13.2	15.6	16.1	16.9	18.1	19.3	19.4	20.1	19.7	18.1	16.8	16.5	17.1	17.1	17.1	17.4	15.5	20.1
30-Sep	16.7	16.3	15.8	15.7	15.5	14.7	13.6	12.6	12.4	14.1	15.1	16.5	16.4	15.5	15.0	14.6	14.0	13.2	12.1	11.3	10.7	10.6	10.2	9.3	13.8	16.7
	11.4	11.0	10.5	10.2	9.9	9.6	9.7	11.3	13.3	15.1	16.3	17.5	18.6	19.3	19.6	19.7	19.0	18.0	15.7	13.9	13.0	12.3	11.9	11.6	Diurnal Average	
	18.8	18.4	17.6	16.7	15.8	15.4	15.8	18.4	21.0	23.5	24.8	25.2	26.1	27.1	27.4	27.5	27.4	26.2	23.2	21.4	20.4	20.2	20.2	19.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Wapasu - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.42	0.42
0 - 10	138	19.17	19.58
10 - 20	479	66.53	86.11
> 20	100	13.89	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Wapasu - September 2025

Maximum Value: 100.0 % on Sep 5 06:00

Maximum Daily Average: 82.3 % on Sep 16

Minimum Value: 27.1 % on Sep 24 17:00

Minimum Daily Average: 45.0 % on Sep 29

Maximum Diurnal Average: 81.5 % at hour 7

Minimum Diurnal Average: 43.7 % at hour 16

Monthly Average: 64.05 %

Percentiles: P_1 = 30.4 P_{10} = 39.5 Q_1 = 48.6 Median = 63.1 Q_3 = 78.4 P_{90} = 91.2 P_{99} = 99.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

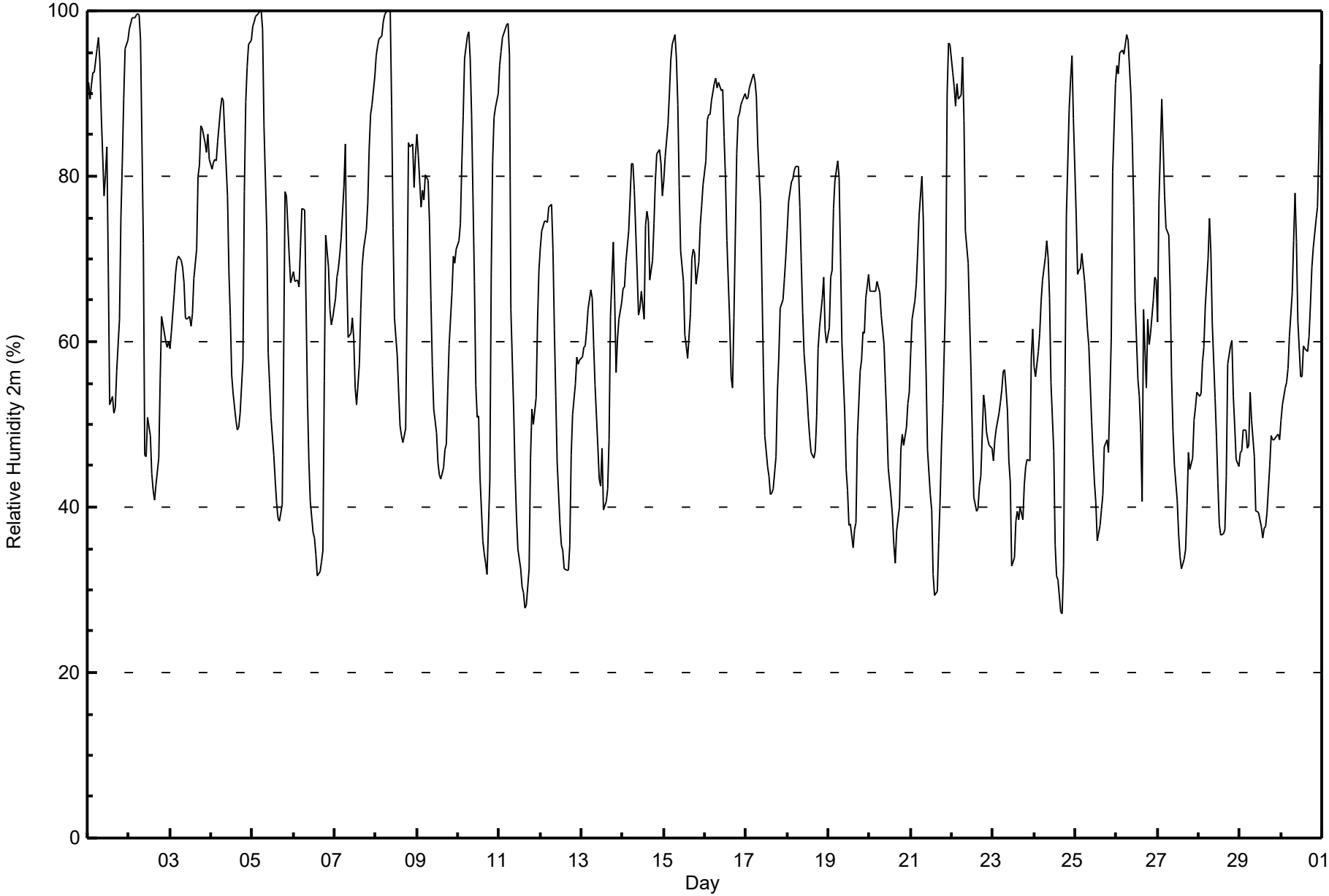
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	91.4	89.4	91.1	92.6	92.5	95.5	96.7	93.9	87.5	77.6	80.1	83.5	69.1	52.5	53.4	51.4	52.0	56.5	62.7	74.9	81.8	89.3	95.4	96.4	79.5	96.7
2-Sep	97.8	98.5	99.1	99.2	99.6	99.7	99.5	96.5	71.8	46.3	46.1	50.8	48.6	44.1	42.1	40.8	42.7	45.9	55.5	63.1	62.1	60.0	59.2	60.0	67.9	99.7
3-Sep	59.2	61.2	65.8	68.4	69.8	70.3	69.9	69.1	67.1	62.9	62.8	63.1	61.9	63.4	67.7	71.2	80.0	81.4	86.1	85.8	84.1	82.9	85.0	82.0	71.7	86.1
4-Sep	80.9	81.6	82.1	81.8	84.3	88.1	89.6	89.2	85.1	77.7	68.5	63.1	55.9	53.7	50.6	49.3	49.7	51.4	57.9	78.1	89.0	93.2	95.9	96.4	74.7	96.4
5-Sep	98.2	98.7	99.3	99.7	100.0	100.0	97.8	86.1	73.5	58.6	54.9	50.9	46.2	43.3	40.5	38.6	38.3	40.3	57.8	78.1	77.6	70.4	67.1	67.7	70.1	100.0
6-Sep	68.5	67.2	67.4	66.7	71.6	76.2	76.0	64.5	53.0	45.6	40.7	37.0	36.3	34.3	31.6	32.3	33.4	34.7	55.2	73.0	69.1	63.9	62.0	62.9	55.1	76.2
7-Sep	65.3	67.8	68.8	70.6	72.6	78.7	84.0	68.1	60.5	61.1	62.9	60.4	54.3	52.5	57.3	64.0	69.2	71.2	73.5	76.7	83.4	87.5	88.6	92.1	70.5	92.1
8-Sep	94.7	95.8	96.7	97.0	98.6	99.4	99.9	100.0	100.0	88.5	73.7	62.8	58.3	53.9	49.9	48.6	47.8	49.5	64.7	84.1	83.6	83.8	78.7	82.6	78.9	100.0
9-Sep	85.1	82.6	76.3	78.4	77.2	80.1	79.4	74.4	65.1	57.2	51.9	49.0	45.4	43.9	43.3	44.7	47.0	47.6	54.0	59.6	65.9	70.4	69.4	71.1	63.3	85.1
10-Sep	72.3	74.2	81.4	87.2	94.3	97.0	97.4	94.3	87.3	67.2	54.8	50.9	51.0	43.6	35.9	34.4	33.2	31.8	43.2	68.4	81.9	87.1	88.3	90.0	68.6	97.4
11-Sep	93.5	95.1	96.9	97.8	98.4	98.4	94.5	63.9	51.6	44.1	38.8	34.9	32.5	30.3	29.7	27.7	28.1	32.5	45.9	51.9	49.9	53.3	62.4	68.6	59.2	98.4
12-Sep	71.4	73.4	74.5	74.5	74.4	76.2	76.6	71.2	61.5	53.3	45.4	37.9	35.4	34.7	32.5	32.4	32.4	35.5	46.3	51.2	54.9	58.2	57.4	57.8	55.0	76.6
13-Sep	58.1	59.3	59.6	61.3	63.9	66.2	65.2	59.6	54.8	47.2	43.3	42.5	47.1	39.6	40.6	42.1	48.1	63.0	72.0	65.1	56.2	60.3	62.7	64.8	55.9	72.0
14-Sep	66.4	66.7	69.7	73.3	77.5	81.5	81.6	78.3	68.5	63.2	64.0	66.2	62.7	74.1	75.8	74.5	67.4	69.8	74.2	79.5	82.7	83.2	81.5	77.7	73.3	83.2
15-Sep	79.6	82.4	86.3	89.9	94.0	96.0	97.0	94.2	88.7	78.7	71.1	67.2	60.8	59.5	58.0	63.3	70.0	71.1	70.7	67.0	69.7	74.1	76.4	79.0	76.9	97.0
16-Sep	81.8	86.8	87.5	87.4	89.2	91.3	91.9	90.8	91.4	90.4	90.4	84.7	79.7	72.2	62.3	55.7	54.4	62.8	82.7	87.1	87.6	88.6	89.2	89.9	82.3	91.9
17-Sep	89.3	89.5	90.7	91.8	92.3	91.4	89.7	83.7	76.7	66.8	56.8	48.6	44.9	43.8	41.5	41.6	42.2	46.1	53.8	58.2	64.0	65.1	67.5	70.3	66.9	92.3
18-Sep	73.6	77.0	79.2	79.7	80.8	81.2	81.1	76.2	69.7	63.6	58.7	53.9	50.8	48.4	46.6	45.9	46.7	51.1	59.1	61.7	65.3	67.8	61.4	59.8	64.1	81.2
19-Sep	61.7	67.7	68.6	76.2	79.6	81.9	79.9	70.1	59.8	51.3	44.6	42.0	37.9	38.0	35.0	37.3	38.1	48.5	56.5	57.8	61.2	61.1	65.2	68.2	57.8	81.9
20-Sep	66.1	66.2	66.1	66.2	67.4	66.6	65.9	63.2	59.7	54.9	50.3	44.7	41.2	38.9	35.4	33.2	37.1	40.0	46.9	48.7	47.5	49.6	52.6	53.9	52.6	67.4
21-Sep	58.7	62.7	64.8	67.0	70.8	75.3	79.9	74.8	64.2	56.0	47.0	41.6	39.7	31.8	29.3	29.8	35.7	41.0	47.6	52.5	66.4	89.9	96.2	96.0	59.1	96.2
22-Sep	92.5	90.8	88.5	91.2	89.3	89.8	94.4	86.8	73.3	69.5	63.1	56.4	48.3	41.2	39.6	39.8	42.6	43.8	53.5	52.0	49.1	48.2	47.5	47.2	64.1	94.4
23-Sep	45.7	48.1	49.5	51.4	52.7	54.2	56.5	56.7	51.8	45.6	43.1	32.9	33.8	38.3	39.4	38.5	40.1	38.5	42.7	44.9	45.7	45.5	58.1	61.5	46.5	61.5
24-Sep	57.0	55.8	58.8	61.1	64.8	67.4	70.2	72.3	70.1	65.2	55.0	46.8	35.4	31.7	31.1	27.3	27.1	33.0	54.5	75.2	88.2	91.6	94.6	87.0	59.2	94.6
25-Sep	75.3	68.2	68.6	68.8	70.6	67.3	64.5	61.6	59.5	50.3	46.4	43.1	40.5	35.9	37.8	39.6	41.5	47.2	48.1	46.6	53.2	60.5	80.5	91.2	57.0	91.2
26-Sep	93.3	92.4	94.9	95.2	94.7	95.9	97.1	96.4	89.8	84.3	76.5	64.8	55.4	53.4	48.9	40.7	63.9	54.4	62.6	59.6	61.0	65.1	67.7	67.4	74.0	97.1
27-Sep	62.4	76.9	89.3	83.8	77.7	73.7	72.8	66.5	55.6	49.2	45.1	40.8	36.7	34.1	32.5	33.7	34.9	40.2	46.6	44.6	46.0	50.5	52.0	53.9	54.2	89.3
28-Sep	53.4	53.8	57.5	59.3	64.2	70.0	74.8	70.8	62.3	53.2	48.6	42.9	37.9	36.6	36.7	37.3	43.8	57.3	59.5	60.2	53.4	49.9	45.7	44.9	53.1	74.8
29-Sep	46.6	46.7	49.4	49.4	47.2	47.4	53.9	50.5	46.1	39.4	39.5	39.3	37.6	36.3	37.4	37.6	39.3	45.1	48.7	48.1	48.2	48.6	48.8	48.2	45.0	53.9
30-Sep	50.5	52.4	54.3	55.1	56.7	60.6	65.9	72.2	78.0	72.0	62.6	55.7	55.8	59.4	59.2	58.8	60.7	64.5	69.0	71.4	74.8	76.3	83.3	93.6	65.1	93.6
	73.0	74.3	76.1	77.4	78.9	80.6	81.5	76.5	69.5	61.4	56.2	51.9	48.0	45.5	44.1	43.7	46.2	49.9	58.4	64.2	66.8	69.2	71.3	72.7	Diurnal Average	
	98.2	98.7	99.3	99.7	100.0	100.0	99.9	100.0	100.0	90.4	90.4	84.7	79.7	74.1	75.8	74.5	80.0	81.4	86.1	87.1	89.0	93.2	96.2	96.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Wapasu - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	77	10.69	10.69
40 - 60	240	33.33	44.03
60 - 80	237	32.92	76.94
80 - 100	163	22.64	99.58

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 1.8 mm on Oct 1 00:00

Maximum Daily Total: 2.1 mm on Sep 21

Minimum Value: 0.0 mm on Sep 1 01:00

Minimum Daily Total: 0.0 mm on Sep 2

Maximum Diurnal Total: 2.0 mm at hour 24

Minimum Diurnal Total: 0.0 mm at hour 1

Monthly Total: 7.98 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 in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

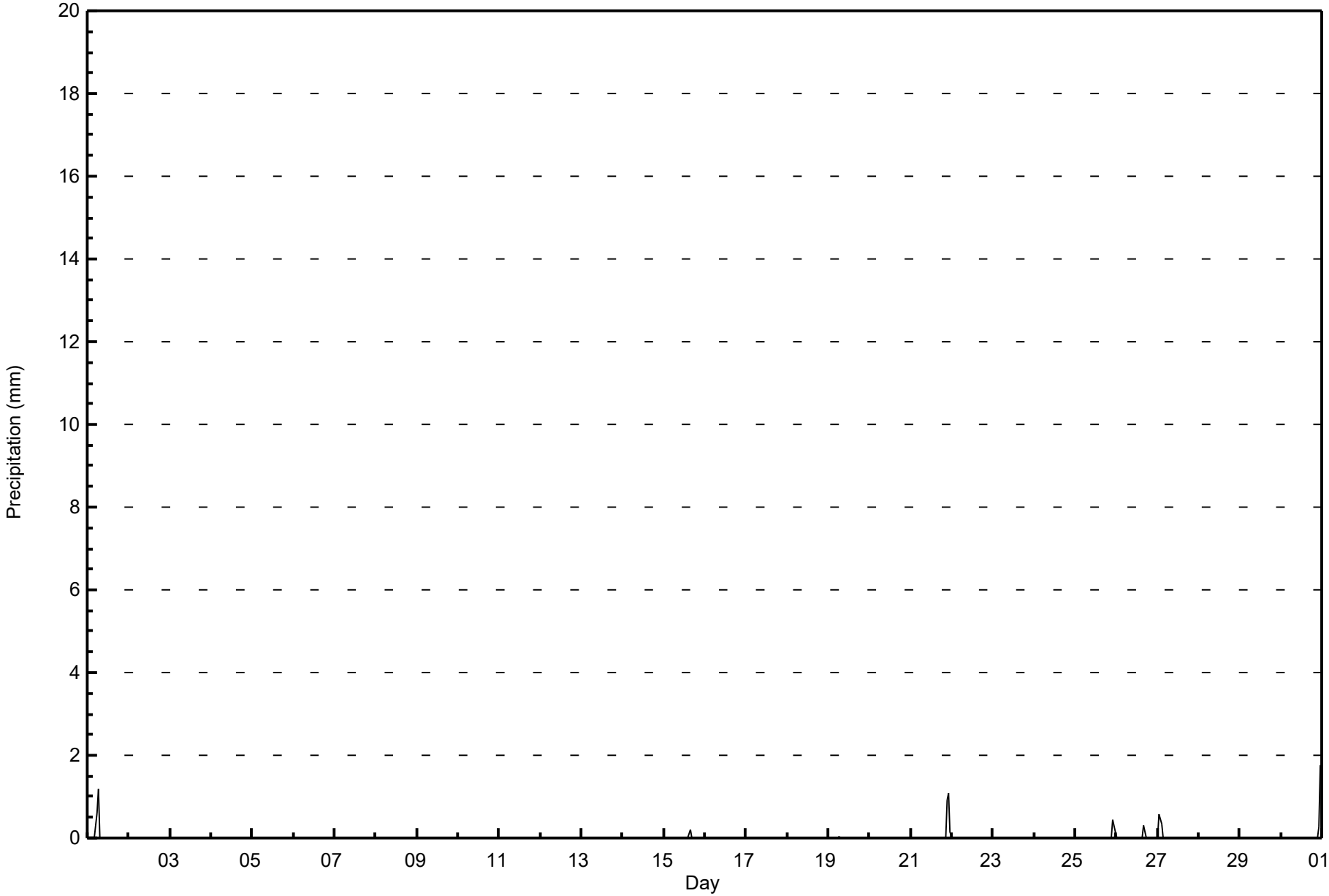
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.2
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	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	0.2	0.2
16-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	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	0.0	0.1	0.1
20-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.1	2.1	1.1
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.6	0.4
26-Sep	0.0	0.0	0.0	0.0	0.0	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	0.3	0.3
27-Sep	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.8	2.1	1.8
	0.0	0.6	0.4	0.0	0.0	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.9	1.8	2.0	Diurnal Average	
	0.0	0.6	0.4	0.0	0.0	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.9	1.1	1.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Wapasu - September 2025

Maximum Speed: 26 km/h on Sep 29 10:00

Maximum Daily Speed Average: 17.0 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 13 17:00

Minimum Daily Speed Average: 0.8 km/h on Sep 3

Maximum Diurnal Speed Average: 6.6 km/h at hour 2

Minimum Diurnal Speed Average: 2.3 km/h at hour 19

Monthly Average Velocity: 4.6 km/h 184.3 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 8 Q_3 = 12 P_{90} = 16 P_{99} = 20

Hours in Service: 720

Hours of Data: 716

Hours of Missing Data: 4

Percent Operational Time: 99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	SE5	SE5	SW3	SE5	SSE1	ENE3	SE8	SSE5	SSE5	WNW5	NW7	NNW7	N9	N12	N15	N13	N13	N8	N8	N4	N4	ENE3	ESE2	SE2	N3.0	N15
2-Sep	SE2	SE4	ESE3	SE4	SE3	SE3	SE3	UO	UO	NW1	SW2	W3	WSW2	SW5	S5	SSW6	SSW7	S7	SE7	SE10	SSE13	SSE15	SSE16	SSE16	SSE5.3	SSE16
3-Sep	SSE17	SSE16	SSE16	SSE16	SSE16	SSE15	SSE15	S12	S12	S12	SSW10	SSW9	SW8	W8	NNW9	NNW13	NNW20	N16	NNW17	NNW20	NNW18	NNW15	NNW16	NNW14	WSW0.8	NNW20
4-Sep	NNW15	NNW17	NNW16	NNW18	NNW17	NNW17	NNW16	NNW18	NNW17	NNW18	NNW18	NNW18	NNW21	NNW19	N16	N14	N13	N10	NNE5	NE3	E3	E4	E5	ESE4	NNW12.4	NNW21
5-Sep	SE3	SE4	SE4	SSE5	SSE5	SSE5	SSE6	SSE7	S8	SSW8	SW9	SW8	SW5	WSW5	W4	WSW6	W5	SSE3	SE2	ESE4	SE6	SE8	SE10	SE9	S4.2	SSE10
6-Sep	SSE11	SSE12	SSE11	SSE11	SSE9	SE8	SE9	SSE8	SSE8	S9	S11	S11	S11	S11	S10	SSW10	S7	S5	SE3	SE4	SE6	SE6	SSE7	SSE7	SSE8.1	SSE12
7-Sep	SSE7	SSE7	SSE7	SSE7	SSE7	SE5	ESE2	NW2	NNE6	NNE8	N8	N9	N12	NNW13	N11	NNW14	N10	N8	N9	N8	N5	N4	N5	N8	N4.3	NNW14
8-Sep	N9	N7	N6	N6	N6	NE5	NNE4	N6	N6	NE7	NE4	NNW5	WSW4	NNW5	N6	WNW5	NNW5	NNW5	UO	E4	E4	SE7	SSE9	SE9	NNE3.0	SE9
9-Sep	SSE10	SE12	SSE14	SSE12	SSE12	SSE11	SSE11	SSE11	SSE8	SSE10	S11	S12	SSE14	SSE15	SSE15	SSE13	SSE12	SSE11	SSE10	SSE9	S6	SSE7	SSE6	SSE6	SSE10.6	SSE15
10-Sep	SSE6	SSE5	SSE4	SSE3	SSE4	SSE5	SE1	SSE1	S1	N6	NNW10	NW6	WNW8	WNW8	WNW7	W8	W8	NW7	NNW5	SE3	SE4	SE4	ESE4	SE4	WSW1.2	NNW10
11-Sep	ESE3	SE4	SE4	SE4	SSE6	SE5	SSE6	SSE6	SSE6	SSW7	SSW7	SSW7	SSW7	SSW8	SW9	SSW9	SSW8	S6	SE6	SE9	SSE11	SSE13	SSE13	SSE13	S6.4	SSE13
12-Sep	SSE13	SSE12	SSE12	SSE11	SSE9	SSE9	SSE10	SSE11	S11	SSW12	SSW14	SSW15	SSW18	SSW15	SSW16	SSW13	SSW11	SSW8	S6	SSE7	S6	SSE9	SSE8	SSE8	S10.3	SSW18
13-Sep	SSE8	SSE7	SSE8	SSE8	SSE7	SSE7	SSE6	SSE6	SSE7	SSE9	S7	S8	SW2	SSE8	S7	SSE6	SSE1	ENE3	ESE5	SE7	SE8	SE10	SSE10	SSE10	SSE6.5	SSE10
14-Sep	SE10	SE9	SE8	SE7	SE6	SE7	SE8	SE8	SSE10	SSE10	S8	S7	SSE10	SE11	SSE8	SSE10	SSE13	SSE9	S6	SSE6	SSE7	S5	S6	S6	SSE7.9	SSE13
15-Sep	S5	S5	SSW5	S5	S6	S7	S7	S6	SW7	WSW4	WNW6	W6	NW8	WNW8	WNW9	NW9	NW11	NW10	WNW7	WNW10	NW10	NW9	WNW7	NW7	W4.7	NW11
16-Sep	NW5	NW4	NNW6	NNW6	NNW10	NNW8	NNW6	NNE5	N5	NW5	NNW5	NW1	SSW1	NNE2	NW3	NW3	NW1	UO	SE3	SE8	SE9	SE11	SSE11	SSE11	NNE0.9	SSE11
17-Sep	SSE12	SSE13	SSE13	SSE13	SSE12	SSE11	SSE11	SSE12	SSE13	SSE13	SSE13	SSE14	S13	SSE15	SSE14	SSE14	SSE15	SSE15	SSE14	SSE15	SSE17	SSE18	SSE17	SSE18	SSE13.9	SSE18
18-Sep	SSE18	SSE18	SSE18	SSE19	SSE18	SSE20	SSE18	S17	S18	S17	SSW16	SSW17	SW17	SW16	SW15	SSW13	SSW13	SSW7	S6	SSW6	S5	S5	SW8	SW6	S12.4	SSE20
19-Sep	SSW5	S5	S6	S6	S6	SSE6	S7	S7	SSW9	SSW7	SW10	SW11	SW13	SW13	WSW14	WSW9	WSW8	S4	SSE5	SSE5	SSE5	SSE6	SSE6	SSE6	SSW6.3	WSW14
20-Sep	SSE7	SE7	SE7	SSE8	SSE9	SSE10	SSE9	SSE10	S11	S12	SSW13	SSW14	SSW15	SSW14	SSW14	SSW12	S9	SSE10	SSE9	SSE13	SSE13	SSE15	SSE16	SSE15	S10.6	SSE16
21-Sep	SSE15	SSE11	SSE11	S9	S6	S6	SSE6	S6	SSW7	WSW5	NW5	NE2	S2	WSW7	WNW9	WNW9	WNW6	W6	W7	WNW9	WNW8	WSW5	SSW6	SSW6	SW3.7	SSE15
22-Sep	SW9	SW10	SW10	SSW8	SW11	SSW8	S6	SSW11	SW15	SW15	SW14	SW16	SW15	SW18	SW18	SW17	SW9	SW10	S7	S9	S12	SSW13	SSW12	S12	SW11.5	SW18
23-Sep	S13	S11	SSW11	S10	SSW10	SSW10	SSW9	SSW8	SW12	WSW15	WSW16	SW18	SW19	SW15	SW17	SW17	SW15	SW19	SW13	SW14	SW11	SW9	SSE6	S6	SW12.0	SW19
24-Sep	S7	S7	S7	S8	S7	S7	S7	S7	SSW8	SW10	SW12	WSW10	WNW6	WNW6	W10	WNW11	NW11	NW8	NW3	WNW2	SSE2	SSE5	SE7	SSE7	SW4.2	SW12
25-Sep	SSE8	SSE8	SSE7	SSE7	SSE7	SSE8	SSE10	SSE10	SSE11	S10	S11	S10	SSW10	SSW12	S10	SSE10	SSE10	S7	S9	S11	S11	SSW10	SW14	SW8	S8.7	SW14
26-Sep	SW6	SW8	SW6	SW7	SSW5	SSW5	SSW4	SSW6	SW9	SW10	SW9	WSW10	W10	WNW9	W9	W9	NW2	SSW6	S5	SSW7	S6	S5	S7	SSE8	SW5.8	WSW10
27-Sep	S9	S8	SSE9	S11	SSW14	SW15	SW13	WSW10	WSW18	WSW18	WSW19	WSW17	WSW16	WSW16	WSW14	WSW13	WSW11	WSW7	SW7	SW8	SW8	SW8	SW7	SSW7	SW10.6	WSW19
28-Sep	SW10	SW12	SW10	SW9	SW7	SSW7	SSW5	SW9	SW7	SW5	SW9	NW8	WNW8	WSW9	WSW10	SW9	S6	SE5	SE6	SE6	SE8	SE9	SE12	SE13	SSW5.5	SE13
29-Sep	SE13	SE12	SE13	SE14	SE17	SE19	SE19	SE21	SE23	SSE26	SSE25	SSE23	SSE20	SSE20	SSE16	S14	SSE14	SSE12	SSE14	SSE14	SSE16	SE16	SSE16	SE16	SSE17.0	SSE26
30-Sep	SE15	SSE12	SSE14	SSE12	SE7	WSW2	SSE2	NW2	E4	NE4	NE7	N8	NNW12	N11	NNE9	NNE8	NNE7	NNE5	N7	NNE6	NE6	NNE6	NNE6	NNE5	NE3.2	SE15
	SSE6.5	SSE6.6	SSE6.3	SSE6.4	SSE5.9	SSE5.7	SSE5.8	S5.4	S5.9	SSW5.4	SW5.6	SW5.8	SW5.7	SW5.5	SW5.3	SW4.8	SW3.1	SSW2.5	S2.3	SSE3.4	SSE4.4	SSE5.6	SSE6.0	SSE6.1	Diurnal Average	
	SSE18	SSE18	SSE18	SSE19	SSE18	SSE20	SE19	SE21	SE23	SSE26	SSE25	SSE23	NNW21	SSE20	SW18	SW17	NNW20	SW19	NNW17	NNW20	NNW18	SSE18	SSE17	SSE18	Diurnal Maximum	

UO - Unstable Operation

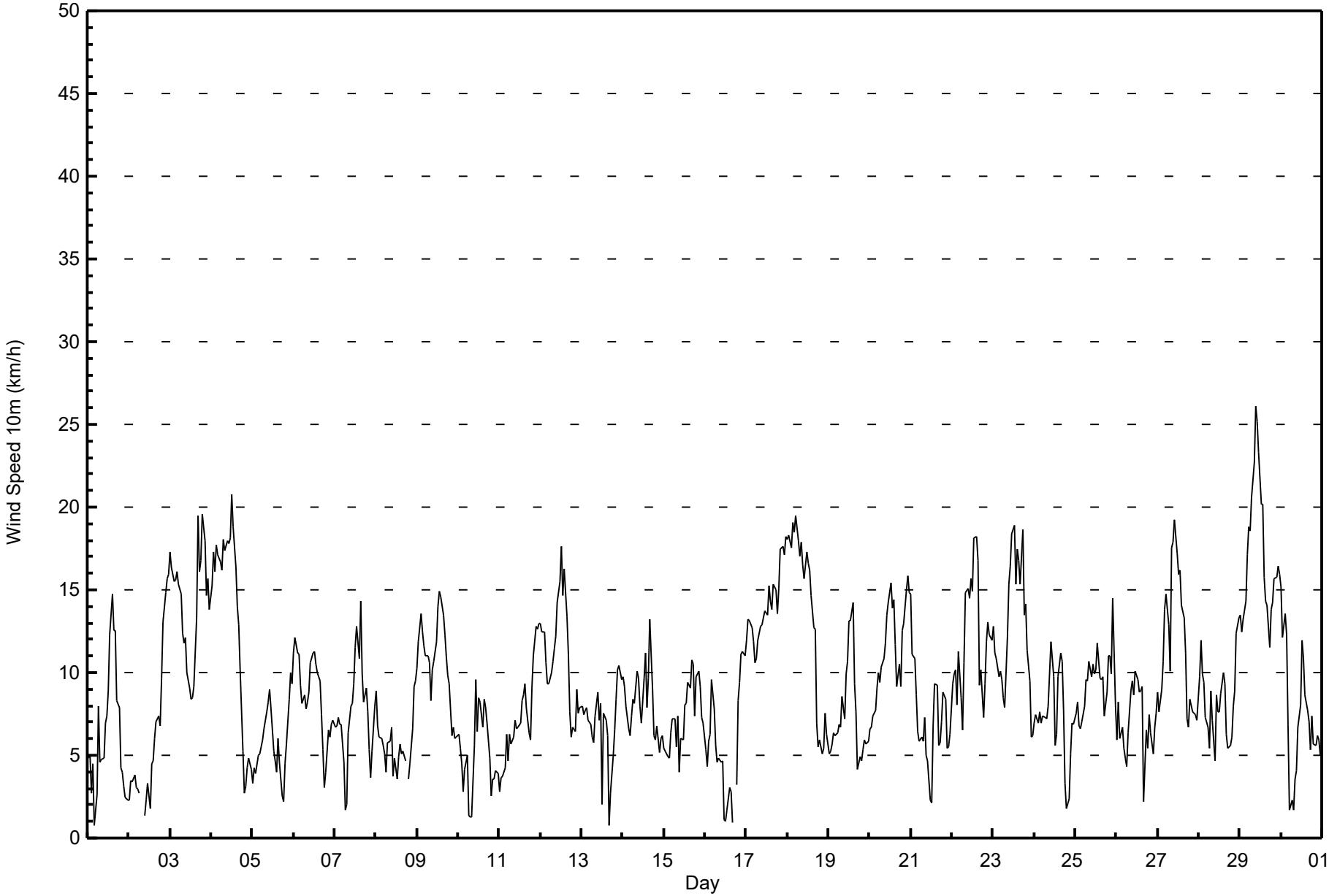
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Wapasu - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	141	19.69	19.69
6 - 11	377	52.65	72.35
12 - 19	188	26.26	98.60
20 - 28	10	1.40	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 716

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Wapasu - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	6	7	4	3	6	8	28	21	13	7	6	7	3	3	12	7	141
6 - 11	23	9	3	0	0	0	37	101	66	38	39	11	9	20	13	8	377
12 - 19	9	0	0	0	0	0	11	73	12	23	27	11	0	0	0	22	188
20 - 28	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	3	10
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	38	16	7	3	6	8	78	200	91	68	72	29	12	23	25	40	716

Total Number of Valid Hours: 716

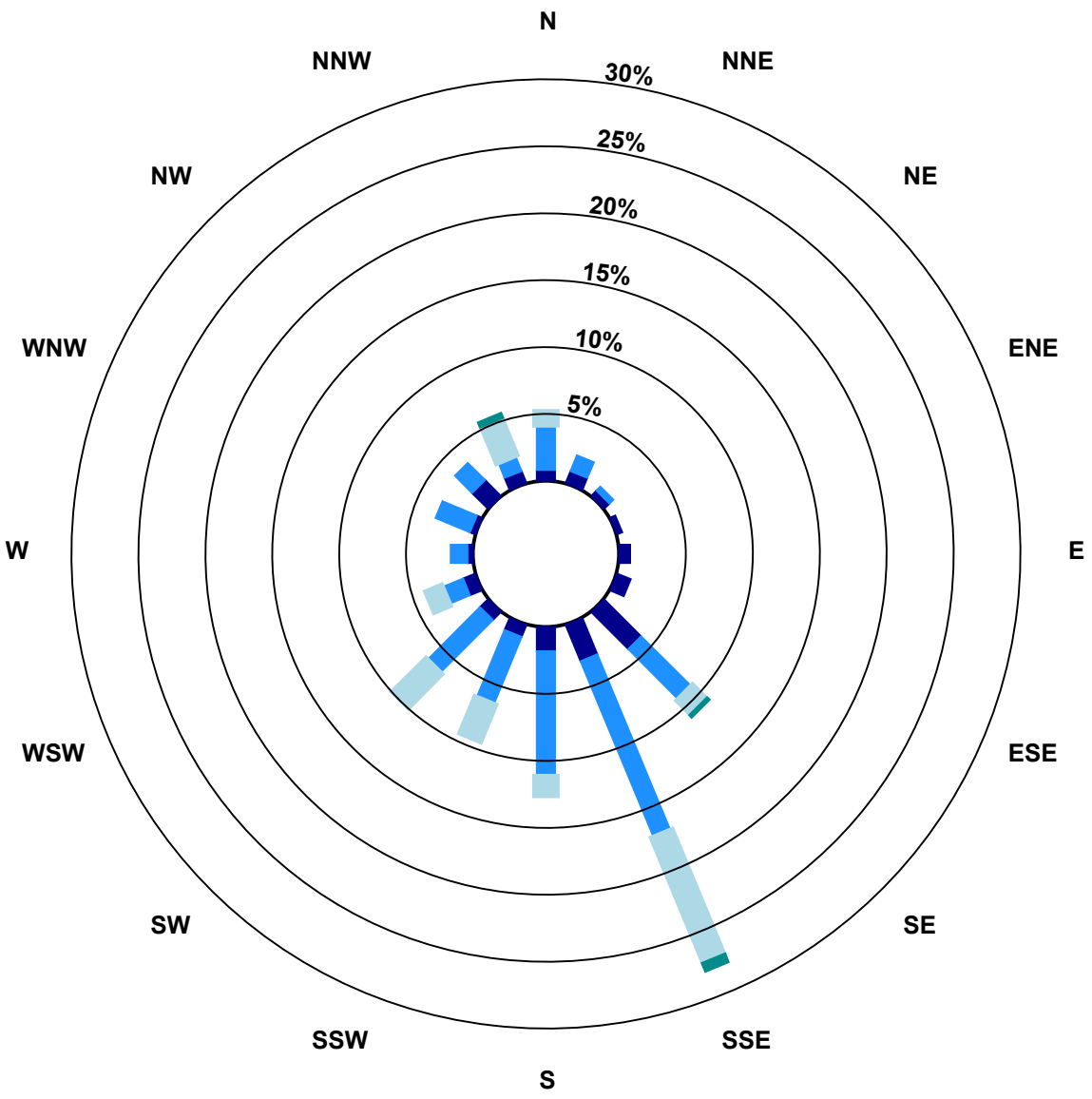
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Wapasu



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 716

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 29 11:00

Minimum Value: 0 km/h on Sep 2 06:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 6

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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-Sep	1	1	1	1	2	1	3	2	2	3	2	3	3	4	4	4	4	3	3	1	1	1	0	1	4
2-Sep	1	1	1	1	1	0	1	UO	UO	1	2	2	2	2	2	3	3	3	1	2	3	4	4	4	4
3-Sep	5	5	5	4	4	4	5	4	4	4	3	3	3	3	4	5	5	5	5	6	6	4	4	4	6
4-Sep	4	4	4	4	4	4	4	5	5	5	5	5	6	6	5	5	4	3	3	1	1	1	1	1	6
5-Sep	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3	2	2	1	2	1	1	1	2	2	3
6-Sep	3	3	3	3	2	2	2	2	2	3	4	4	4	4	4	3	2	2	1	1	1	1	1	1	4
7-Sep	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	3	3	3	2	2	2	2	2	4
8-Sep	3	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	1	UO	1	1	2	2	2	3
9-Sep	2	3	3	3	3	3	3	3	3	3	4	4	5	5	5	5	4	4	3	3	2	1	1	1	5
10-Sep	1	2	1	2	1	2	2	1	1	4	3	2	3	3	3	3	3	2	2	2	1	1	1	1	4
11-Sep	2	1	1	1	1	1	1	1	2	2	2	3	3	4	3	4	3	2	1	2	2	3	3	3	4
12-Sep	3	3	3	3	3	3	3	3	4	4	5	5	5	5	5	5	4	3	1	1	2	2	2	2	5
13-Sep	2	1	1	2	2	1	1	1	2	3	3	3	3	2	2	2	2	1	1	1	2	2	2	2	3
14-Sep	2	2	1	1	1	1	1	2	3	3	3	3	3	4	3	4	4	3	2	1	2	2	2	2	4
15-Sep	2	2	1	1	2	2	2	2	2	2	2	2	3	3	3	4	4	4	3	3	3	3	3	2	4
16-Sep	1	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	1	UO	2	2	2	3	3	3	3
17-Sep	3	3	3	3	3	2	3	3	3	4	4	4	4	5	5	5	5	4	4	4	5	5	5	5	5
18-Sep	5	5	5	5	5	5	5	6	6	6	5	6	5	5	5	4	4	2	1	2	1	1	2	2	6
19-Sep	1	1	1	1	1	1	2	2	3	2	3	3	4	4	4	3	3	1	1	1	1	1	1	1	4
20-Sep	1	1	1	1	2	3	3	3	4	4	4	5	5	5	5	4	3	3	2	3	3	4	4	5	5
21-Sep	4	4	3	3	2	1	1	2	2	2	3	2	2	3	3	3	2	2	2	3	3	2	2	4	4
22-Sep	3	3	3	3	4	4	2	5	4	4	4	5	5	5	5	5	4	5	2	3	4	4	4	4	5
23-Sep	5	4	3	3	3	3	3	3	3	5	5	5	5	5	5	5	5	5	4	3	3	3	1	1	5
24-Sep	2	2	2	3	2	2	2	2	3	3	4	3	3	2	4	4	3	3	1	2	2	1	1	1	4
25-Sep	1	1	1	2	1	2	2	3	3	4	4	3	4	4	4	4	3	2	3	4	4	4	5	3	5
26-Sep	2	2	2	3	3	3	2	3	3	3	3	3	3	3	3	3	4	3	1	3	2	2	2	2	4
27-Sep	3	3	3	3	5	4	3	4	6	6	6	5	5	5	5	4	3	3	2	2	2	2	2	3	6
28-Sep	3	3	3	2	2	2	1	3	2	2	3	3	3	3	3	3	2	1	1	1	1	2	3	3	3
29-Sep	3	3	3	4	5	5	5	6	6	8	8	7	7	7	6	5	5	3	4	4	4	4	4	4	8
30-Sep	4	5	4	3	4	1	1	2	1	3	2	3	3	3	3	3	3	2	3	2	2	2	2	2	5
	5	5	5	5	5	5	5	6	6	8	8	7	7	7	6	5	5	5	5	6	6	5	5	5	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Wapasu - September 2025

Direction of Maximum Speed: 149 deg on Sep 29 10:00
Direction of Maximum Daily Speed Average: 150.6 deg on Sep 29

Direction of Minimum Speed: 151 deg on Sep 13 17:00

Direction of Minimum Daily Speed Average: 0.8 deg on Sep 3

Monthly Average Direction: 184.3 deg

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Percent Operational Time:	99.4

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	Average
1-Sep	125	141	225	145	152	62	144	157	163	284	321	331	351	350	357	3	357	2	350	359	6	69	103	124	6.6
2-Sep	126	135	117	142	129	132	133	UO	UO	314	224	274	251	218	189	193	194	175	141	142	147	153	156	156	159.9
3-Sep	156	155	156	153	155	159	165	169	177	189	192	198	224	277	337	348	345	349	344	347	346	343	342	340	236.8
4-Sep	344	343	340	341	342	344	342	344	343	336	335	333	340	342	349	3	1	2	12	34	100	94	96	103	347.6
5-Sep	131	142	137	147	149	151	153	153	170	198	221	236	224	249	266	241	269	167	125	119	130	141	146	146	172.6
6-Sep	152	154	151	154	152	144	143	147	157	181	171	182	189	179	187	195	187	181	131	124	133	143	156	157	162.9
7-Sep	155	156	158	155	156	144	116	307	29	15	9	349	353	347	1	345	6	6	357	353	357	7	11	2	8.6
8-Sep	3	9	7	11	7	38	26	356	3	36	41	335	256	331	353	303	344	327	UO	98	86	134	149	145	18.1
9-Sep	147	145	150	151	154	152	153	157	161	168	171	172	167	167	167	168	164	166	166	165	179	166	168	157	161.4
10-Sep	163	161	167	156	159	147	136	156	186	356	345	308	289	292	289	259	268	314	344	136	136	134	121	129	257.0
11-Sep	123	129	128	135	152	144	149	155	166	210	206	204	210	197	216	210	199	176	146	138	148	153	157	157	169.5
12-Sep	155	154	154	159	168	168	165	167	180	193	195	199	212	209	211	211	209	197	171	164	174	161	164	168	182.8
13-Sep	168	163	162	158	161	156	152	149	148	154	184	175	228	166	169	160	151	67	106	126	135	146	147	147	154.2
14-Sep	145	142	140	144	142	143	139	138	148	151	173	177	155	134	152	161	156	165	185	161	167	169	172	182	154.4
15-Sep	190	191	194	184	176	183	187	188	227	240	287	281	310	298	291	307	309	311	296	299	304	310	303	310	274.4
16-Sep	321	313	332	343	343	345	336	21	9	319	347	326	201	20	311	308	308	UO	132	136	145	145	149	147	17.9
17-Sep	151	154	155	155	155	157	156	155	153	159	166	168	175	166	168	159	162	158	150	149	154	160	159	158	158.5
18-Sep	156	154	155	154	157	156	158	171	181	191	199	209	215	217	214	210	213	192	183	194	187	186	221	219	182.8
19-Sep	200	174	184	172	175	164	170	183	201	205	224	236	234	234	237	245	239	174	163	163	163	159	162	155	201.7
20-Sep	153	145	143	150	156	154	164	168	175	185	203	199	209	193	195	194	185	163	153	153	153	154	153	158	171.4
21-Sep	151	162	161	171	178	173	160	172	212	242	317	47	180	250	298	303	286	272	267	292	290	252	211	199	219.7
22-Sep	228	223	214	201	217	207	184	210	225	225	222	219	222	232	234	231	221	219	187	188	190	194	192	184	214.0
23-Sep	184	185	198	190	196	195	195	208	232	250	241	236	226	222	223	224	218	226	224	223	219	215	158	169	216.3
24-Sep	172	174	173	179	185	189	190	188	199	214	232	244	302	293	261	289	317	322	304	287	161	147	146	153	219.0
25-Sep	153	152	151	164	149	150	154	167	164	175	173	185	195	205	187	166	158	169	172	171	183	197	231	231	176.9
26-Sep	226	230	225	221	210	207	192	205	215	220	236	251	276	288	269	270	307	192	176	201	188	177	177	167	223.7
27-Sep	170	189	156	181	210	226	235	249	252	256	255	257	256	248	245	237	244	238	234	234	236	223	219	207	233.9
28-Sep	221	222	223	229	223	211	195	225	217	222	232	313	293	252	243	223	185	144	144	132	133	127	134	137	203.8
29-Sep	138	145	141	146	145	144	138	139	142	149	153	156	160	163	164	175	167	157	153	152	153	146	147	146	150.6
30-Sep	145	155	151	151	139	246	152	318	95	41	42	7	346	355	12	25	24	23	7	27	40	27	25	25	54.4
	160.8	163.8	162.8	162.9	166.9	164.9	163.0	172.9	184.9	202.0	214.5	222.9	230.7	230.0	232.9	232.8	227.1	203.6	173.6	164.2	162.0	160.0	161.8	159.6	
	Diurnal Average																								

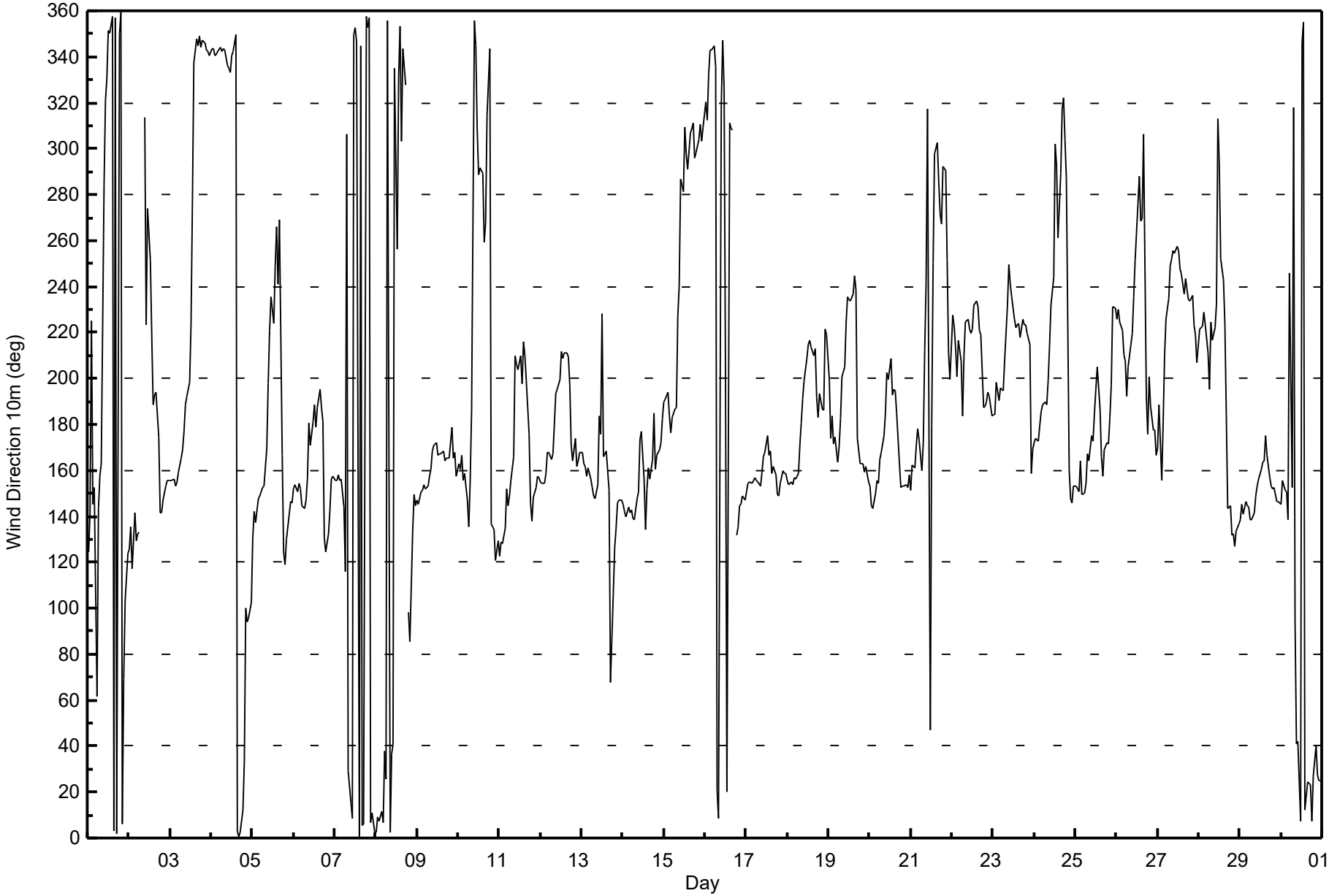
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Wapasu - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Wapasu - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 95 deg on Sep 2 13:00

Minimum Value: 4 deg on Sep 11 05:00

Percentiles: P_1 = 7 P_{10} = 13 Q_1 = 18 Median = 23 Q_3 = 29 P_{90} = 36 P_{99} = 84

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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-Sep	16	10	33	16	88	50	16	20	28	48	30	29	34	30	29	31	27	30	21	21	21	30	14	12	88
2-Sep	15	8	21	12	11	5	8	UO	UO	75	63	66	95	52	58	40	31	25	15	13	16	18	19	19	95
3-Sep	21	20	22	19	19	23	25	26	27	27	30	28	29	35	31	22	21	21	21	21	21	21	19	17	35
4-Sep	18	18	16	17	17	17	18	20	18	21	22	21	22	24	26	31	31	29	34	37	16	10	9	11	37
5-Sep	13	15	10	7	7	6	15	16	29	32	31	37	72	75	71	48	46	61	23	11	11	11	14	14	75
6-Sep	17	18	18	18	18	15	14	17	21	31	30	33	33	34	31	31	29	24	12	9	9	12	11	11	34
7-Sep	11	10	12	11	9	27	44	35	33	30	32	29	27	26	30	21	31	30	24	25	28	29	29	28	44
8-Sep	27	30	30	32	29	32	36	27	27	35	71	62	74	66	41	43	36	26	UO	18	10	16	14	14	74
9-Sep	16	16	17	17	19	20	20	21	29	28	30	30	27	28	28	28	24	22	21	21	23	16	15	10	30
10-Sep	15	13	26	18	8	8	62	67	72	55	28	46	33	35	42	33	32	34	22	54	9	12	13	16	72
11-Sep	56	15	11	14	4	7	5	13	25	28	37	40	47	38	37	29	31	23	12	12	16	17	19	19	56
12-Sep	19	18	19	21	23	24	22	25	29	30	29	28	22	28	26	27	26	28	14	12	34	18	18	18	34
13-Sep	18	14	16	15	15	15	13	14	17	21	31	32	79	30	30	26	90	26	11	12	15	15	16	15	90
14-Sep	14	15	11	10	9	11	12	17	19	23	28	31	29	25	28	24	22	25	26	16	22	24	22	27	31
15-Sep	24	26	24	26	22	24	28	30	20	42	37	37	40	37	33	29	25	28	29	30	27	24	26	26	42
16-Sep	25	33	21	18	17	15	21	33	36	24	25	77	91	91	75	73	84	UO	9	14	15	17	18	17	91
17-Sep	17	18	19	19	19	18	19	20	19	24	27	27	31	26	28	26	24	21	19	18	21	22	21	20	31
18-Sep	21	19	20	19	20	20	23	28	29	30	30	27	24	24	24	24	24	26	21	24	19	21	17	17	30
19-Sep	33	19	19	14	15	14	17	29	27	28	23	25	24	28	23	27	25	17	14	21	10	9	9	8	33
20-Sep	9	10	9	14	16	19	22	25	27	28	27	27	26	29	29	31	28	22	17	16	18	18	17	27	31
21-Sep	20	29	27	24	23	18	13	33	21	34	54	80	93	38	32	30	28	27	29	31	29	27	23	35	93
22-Sep	17	18	22	25	20	25	23	26	17	17	20	23	22	20	20	20	23	24	25	28	29	28	28	30	30
23-Sep	29	30	29	29	32	26	28	29	19	26	21	21	19	20	17	20	22	16	18	17	22	22	19	16	32
24-Sep	18	22	23	26	26	26	27	28	28	28	27	32	53	46	33	34	25	18	20	36	51	7	6	9	53
25-Sep	8	7	9	15	11	14	18	22	25	30	28	32	30	28	33	28	20	26	25	25	30	34	17	17	34
26-Sep	18	15	16	16	21	20	22	24	22	20	28	28	34	35	33	33	87	27	18	26	23	30	19	19	87
27-Sep	24	26	19	29	26	17	18	24	24	28	25	27	29	27	27	20	23	18	20	16	18	15	19	28	29
28-Sep	20	17	17	18	19	21	20	19	26	41	26	40	43	37	29	27	26	11	15	11	13	16	17	18	43
29-Sep	18	19	18	20	21	19	18	19	20	22	23	24	28	26	26	29	25	22	19	19	19	18	20	19	29
30-Sep	20	34	19	19	61	81	63	84	29	56	31	29	23	29	35	31	32	35	27	29	28	28	31	25	84
	56	34	33	32	88	81	63	84	72	75	71	80	95	91	75	73	90	61	34	54	51	34	31	35	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS18
STONY MOUNTAIN
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
SEPTEMBER 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	686	34	34	100	-	-	2.6	0	0.9	0
TRS(ppb) Average	684	36	36	100	1.1	0	1.1	-	0.6	-
THC(ppm) Average	679	34	41	99.03	-	-	2.2	-	2.1	-
NMHC(ppm) Average	679	34	41	99.03	-	-	0.041	-	0.002	-
CH4(ppm) Average	679	34	41	99.03	-	-	2.2	-	2.1	-
O3 (ppb) Average	686	34	34	100	-	-	52.2	0	40.2	-
NO2 (ppb) Average	685	35	35	100	-	-	4.1	0	2	-
NO (ppb) Average	685	35	35	100	-	-	1.1	-	0.2	-
NOX (ppb) Average	685	35	35	100	-	-	5.2	-	2.2	-
PM2.5 (ug/m3) Average	691	6	29	96.81	-	-	225.6	0	68.1	4
Temperature 2 m (C) Average	720	0	0	100	-	-	27.9	-	20	-
Relative Humidity (%) Average	720	0	0	100	-	-	99.4	-	90.2	-
Wind Speed 20 m (km/h) Average	719	1	1	100	-	-	23	-	16	-
Wind Direction 20 m (deg) Average	719	1	1	100	-	-	-	-	-	-
Precipitation (mm) Total	720	0	0	100	-	-	2.3	-	5.9	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	38.7	-	16.7	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	706.5	-	215	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.32	0.3	-	0	0	0.1	0.2	0.5	0.7	2.6
TRS (ppb) Average	684	0.46	0.1	-	0.3	0.4	0.4	0.5	0.5	0.6	1.1
THC (ppm) Average	679	2.09	0	-	2	2.1	2.1	2.1	2.1	2.1	2.2
NMHC(ppm) Average	679	0	0.002	-	0	0	0	0	0	0	0.041
CH4(ppm) Average	679	2.09	0	-	2	2.1	2.1	2.1	2.1	2.1	2.2
O3 (ppb) Average	686	28.42	8.3	-	7.5	17.8	23.2	28.5	33.1	38.6	52.2
NO2 (ppb) Average	685	0.94	0.7	-	0	0.2	0.4	0.8	1.3	1.9	4.1
NO (ppb) Average	685	0.04	0.1	-	0	0	0	0	0	0.1	1.1
NOX (ppb) Average	685	0.98	0.7	-	0	0.2	0.4	0.8	1.4	1.9	5.2
PM2.5 (ug/m3) Average	691	17.38	21.5	-	0.6	1.4	4.6	11.6	20.7	39.8	225.6
Temperature 2 m (C) Average	720	14.28	4.9	-	3.9	8.2	10.6	13.9	17.3	21.5	27.9
Relative Humidity (%) Average	720	64.28	19.8	-	20.9	37.6	48.9	64.3	80.1	91.9	99.4
Wind Speed 20 m (km/h) Average	719	10.3	4	-	1	5	7	10	13	16	23
Wind Direction 20 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	14.37	-	-	-	-	-	-	-
Surface Wetness (% of range) Average	720	5.7	9.6	-	0	0.4	1	1.3	2.5	25.6	38.7
Global Solar Radiation (W/m2) Average	720	155.4	213.5	-	0	0	0.1	14.6	316.2	521.4	706.5

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
SEPTEMBER 2025

MONTHLY SUMMARY

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	18 Sep 2025 05:00	18 Sep 2025 11:00	7	Unstable Operations - depleting support gas cylinder
PM2.5	22 Sep 2025 17:00	23 Sep 2025 12:00	20	Unstable Operations - inconsistent response
PM2.5	23 Sep 2025 13:00	23 Sep 2025 15:00	3	Maintenance - analyzer replaced

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.6 ppb on Sep 11 10:00 Maximum Daily Average: 0.9 ppb on Sep 11

Minimum Value: 0.0 ppb on Sep 2 03:00 Minimum Daily Average: 0.0 ppb on Sep 27
Maximum Diurnal Average: 0.5 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.32 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.7 P_{99} = 1.5

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.4	0.3	0.4	Z	0.2	0.2	0.3	0.4	0.7	0.4	0.2	0.2	0.4	0.7	0.5	1.0	0.4	0.2	0.4	0.4	0.7	0.3	0.2	0.4	1.0
2-Sep	0.1	0.1	0.0	0.0	0.0	Z	0.3	0.2	0.3	1.5	0.8	0.5	0.5	0.4	0.7	0.9	0.9	1.1	1.1	0.6	0.2	0.1	0.6	0.2	0.5	1.5
3-Sep	Z	0.0	0.0	0.0	0.2	0.3	0.2	0.9	0.3	0.3	0.5	0.5	0.7	0.6	0.5	0.4	0.4	0.2	0.6	0.4	0.2	0.5	0.7	0.2	0.4	0.9
4-Sep	0.4	Z	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4
5-Sep	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2
6-Sep	0.3	0.9	0.8	Z	0.5	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.5	0.3	0.9
7-Sep	1.6	0.9	0.3	0.3	Z	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	0.2	0.2	0.4	0.4	0.5	0.7	0.3	1.6
8-Sep	0.6	0.4	0.1	0.2	0.1	Z	0.0	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.2	0.6
9-Sep	Z	0.2	0.8	0.5	0.5	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.3	0.3	0.2	0.3	0.1	0.4	0.8	0.9	0.7	0.7	0.4	0.9
10-Sep	0.4	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.6	0.5	0.6	0.5	0.2	0.3	0.4	0.2	0.3	0.3	0.2	0.4	0.2	0.6
11-Sep	0.4	0.6	Z	0.4	0.6	0.8	0.7	0.4	1.8	2.6	1.6	1.8	1.2	1.4	1.2	1.3	0.9	0.9	0.5	0.5	1.0	0.4	0.2	0.3	0.9	2.6
12-Sep	0.5	0.5	0.7	Z	0.4	0.3	0.7	1.3	1.3	1.1	1.5	0.6	0.4	0.8	0.9	0.9	0.8	0.7	0.5	0.2	0.0	0.0	0.0	0.2	0.6	1.5
13-Sep	0.3	0.3	0.6	0.8	Z	0.8	0.9	0.9	2.5	1.8	1.2	0.4	0.3	0.4	0.5	0.3	0.4	0.4	0.3	0.2	0.2	0.4	0.4	0.5	0.6	2.5
14-Sep	0.6	0.6	1.0	0.3	0.2	Z	0.3	0.2	0.3	0.1	0.2	0.8	0.8	0.5	0.5	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.3	1.0
15-Sep	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3
16-Sep	0.5	Z	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.6	0.6	0.4	0.4	0.4	0.4	0.6
17-Sep	0.5	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.5	0.6	0.8	0.6	0.5	0.4	0.1	0.4	0.7	0.9	0.8	0.4	0.9
18-Sep	0.8	0.5	0.6	Z	0.7	0.8	0.8	0.6	0.5	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.3	0.2	0.3	0.8
19-Sep	0.1	0.1	0.1	0.1	Z	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
20-Sep	0.3	0.1	0.1	0.1	0.2	Z	0.6	0.8	0.6	0.4	0.4	0.7	0.7	0.4	0.3	0.5	0.4	0.3	0.5	0.4	0.4	0.8	1.1	0.8	0.5	1.1
21-Sep	Z	0.6	0.6	1.2	0.6	0.3	0.8	0.9	1.0	0.6	0.4	0.2	0.5	0.5	0.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2
22-Sep	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	0.1	0.3	0.4	0.3	0.5	0.1	0.5
23-Sep	0.5	0.1	Z	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
24-Sep	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	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.3
25-Sep	0.2	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.2	1.4	0.6	0.7	0.4	0.3	0.3	0.4	0.4	0.2	0.3	0.4	0.3	0.2	0.1	0.2	0.3	1.4
26-Sep	0.1	0.2	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	0.1	0.0	0.1	0.0	0.0	0.1	0.2
27-Sep	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	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
28-Sep	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.4	0.6	0.6	0.3	0.5	0.5	0.2	0.6
29-Sep	0.6	0.7	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.5	0.5	0.5	0.4	0.3	0.5	0.8	0.4	1.3	1.4	0.5	0.6	1.2	0.6	1.4
30-Sep	0.9	0.6	0.5	Z	0.5	0.6	0.7	1.0	0.7	0.8	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	1.0
	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	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	Diurnal Average	
	1.6	0.9	1.0	1.2	0.7	0.8	0.9	1.3	2.5	2.6	1.6	1.8	1.2	1.4	1.2	1.3	1.0	1.1	1.1	1.3	1.4	0.9	1.1	1.2	Diurnal Maximum	

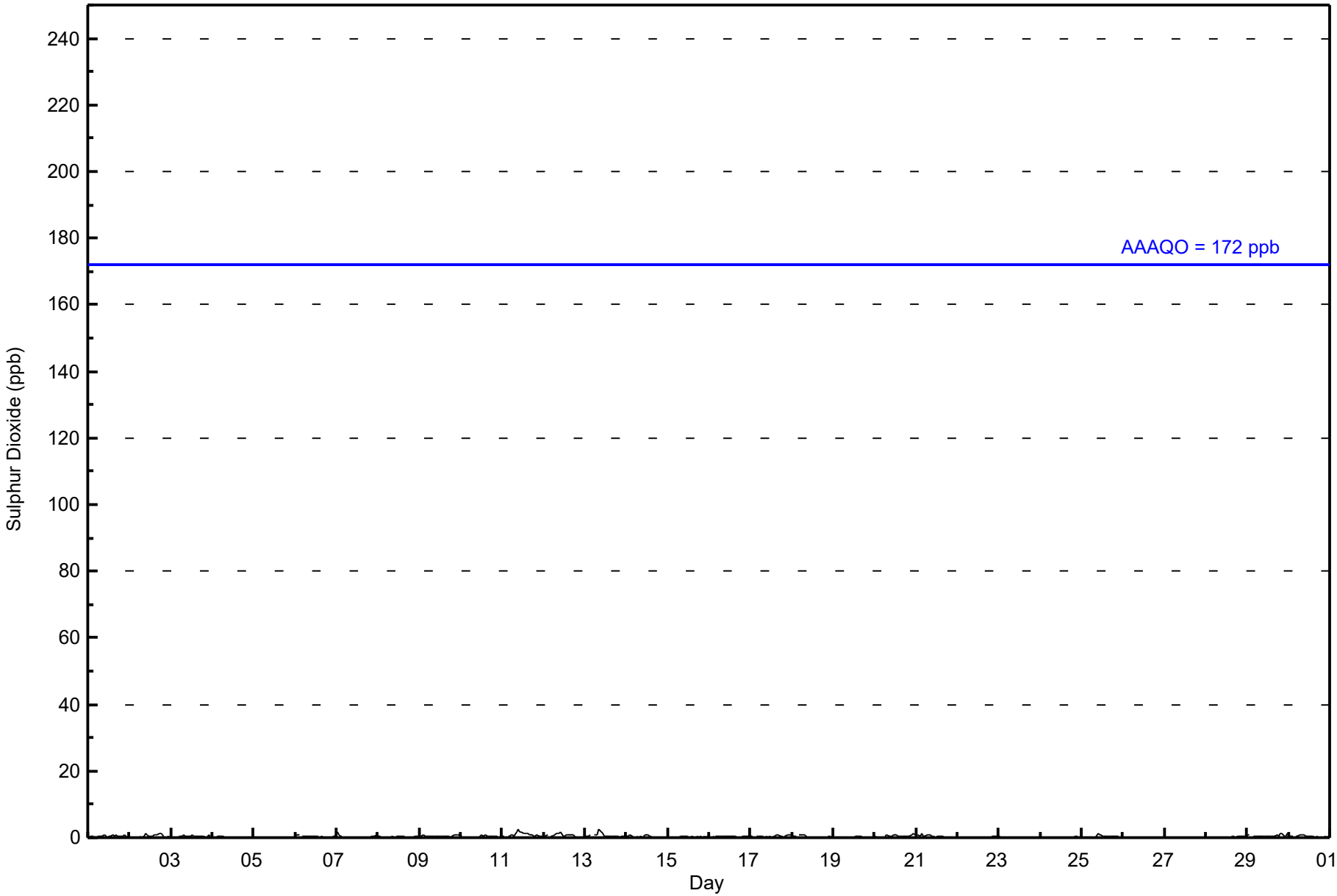
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - September 2025



Sulphur Dioxide (SO_2) - ppb
Stony Mountain - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	19	15	14	10	19	16	18	58	89	126	42	56	71	52	38	42	685
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	15	14	10	19	16	18	58	89	126	42	56	71	52	38	42	685

Total Number of Valid Hours: 685

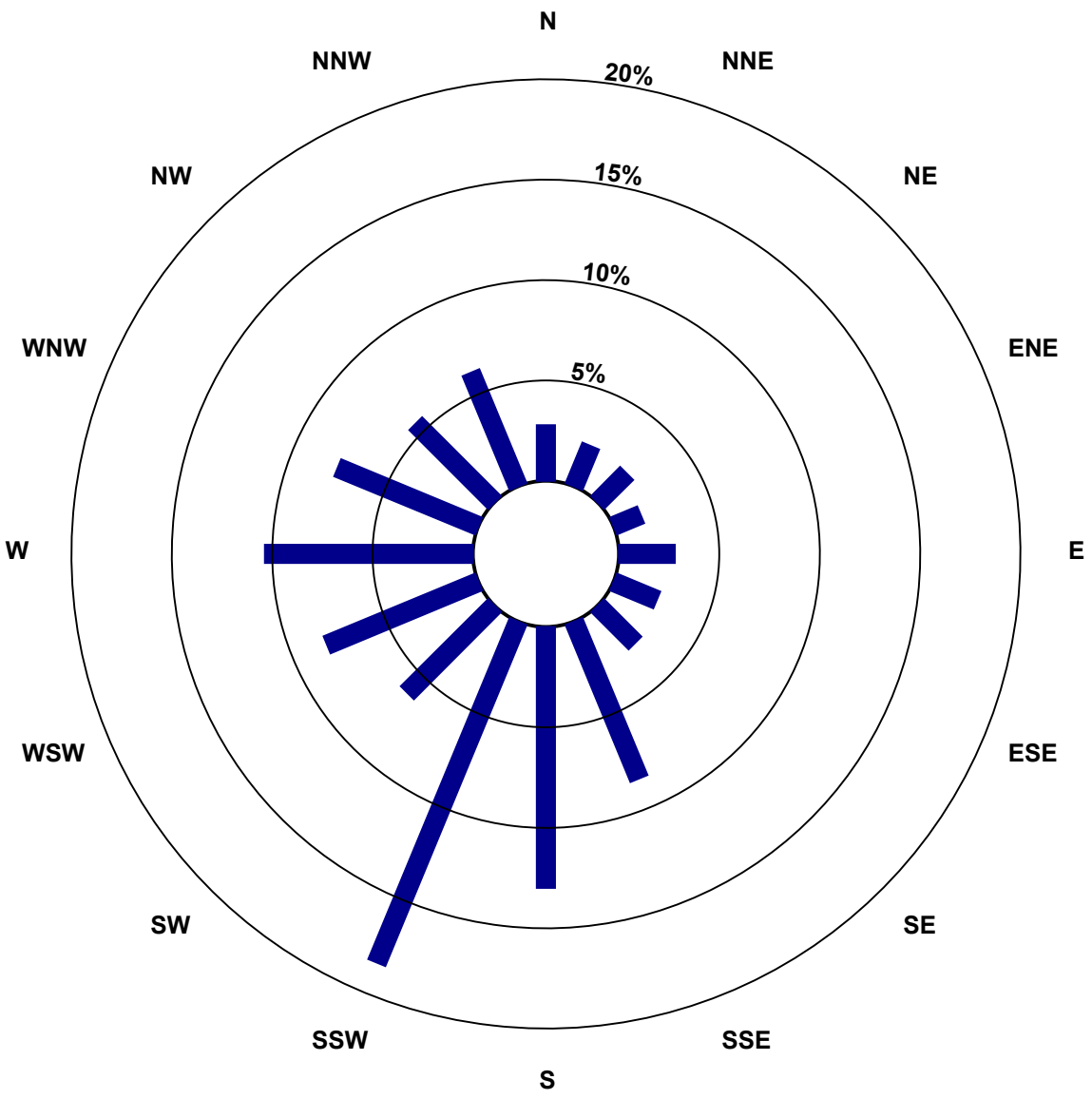
Total Number of Hours: 720

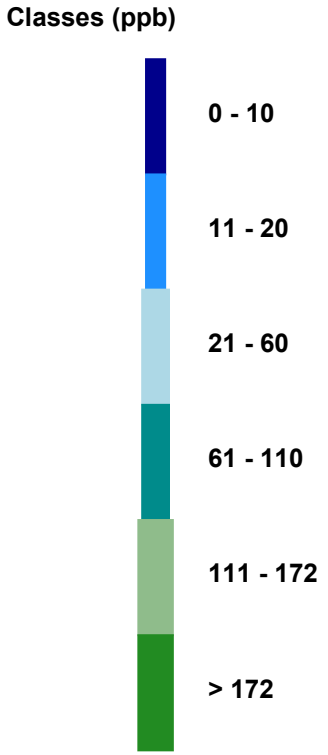
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Stony Mountain





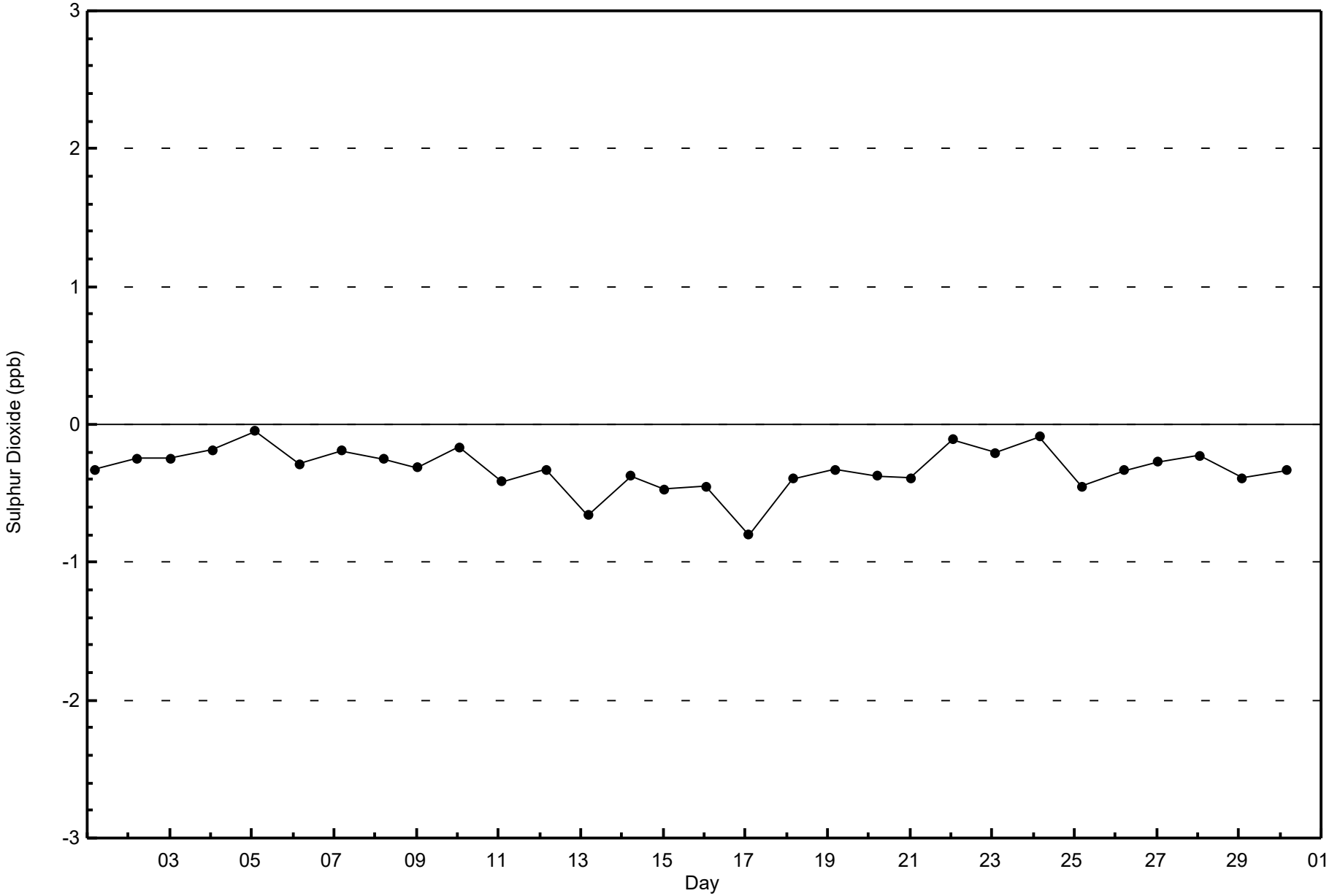
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - September 2025

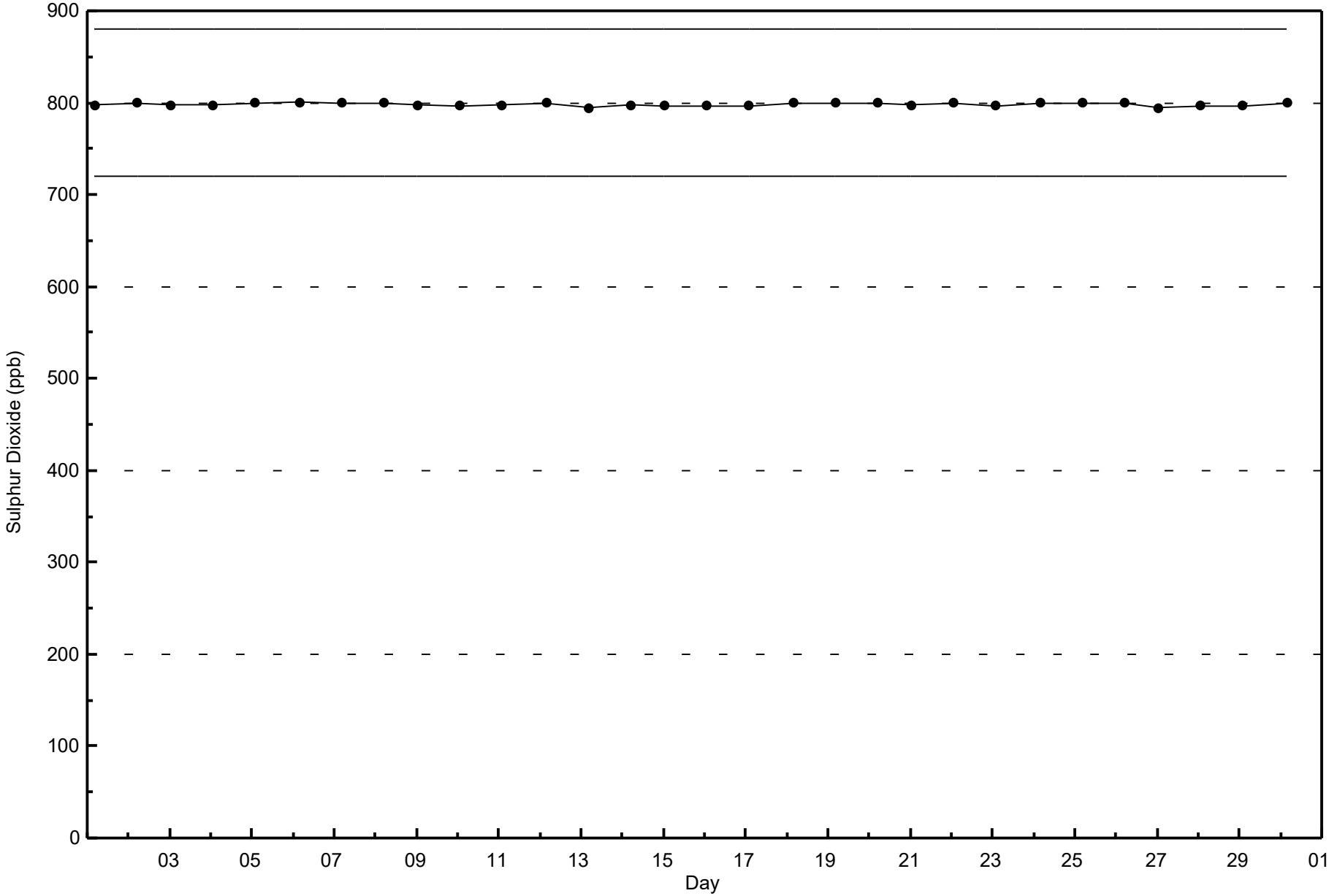


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 1.1 ppb on Sep 11 20:30 Maximum Daily Average: 0.6 ppb on Sep 18

Minimum Value: 0.3 ppb on Sep 22 07:30 Minimum Daily Average: 0.3 ppb on Sep 22

Maximum Diurnal Average: 0.5 ppb at hour 4 Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 0.46 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.5 P_{90} = 0.6 P_{99} = 0.8

Periods in Service:	1440
Periods of Valid Data:	1368
Periods of Invalid Data:	72
Periods of Calibration:	72
Percent Operational Time:	100.0

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	0.6	0.6	0.7	0.8	0.8	Z	0.6	0.5	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.5	0.6	0.8
	0.7	0.7	0.7	0.8	0.7	SP	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.6		
2-Sep	Z	0.6	0.6	0.5	0.5	0.5	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	0.4	0.5	0.6
	SP	0.5	0.6	0.5	0.5	0.6	0.6	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	0.5	0.4	0.4	0.3		
3-Sep	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.8	0.5	0.7	0.6	0.7	0.6	0.8
	0.4	SP	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.7		
4-Sep	0.7	0.8	Z	0.8	0.6	0.8	0.7	0.6	0.5	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	0.8
	0.7	0.7	SP	0.7	0.7	0.7	0.6	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		
5-Sep	0.4	0.4	0.4	Z	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	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.5	SP	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	0.4	0.4	0.4	0.4	0.4	0.4		
6-Sep	0.4	0.4	0.4	0.4	Z	0.4	0.4	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	0.4	0.4	0.4	0.5	0.5
	0.4	0.4	0.4	0.4	SP	0.4	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	0.5		
7-Sep	0.5	0.5	0.5	0.5	0.5	Z	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	0.4	0.4	0.4	0.5	0.5	0.4	0.5
	0.5	0.5	0.4	0.4	0.4	SP	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	0.5	0.5		
8-Sep	Z	0.5	0.5	0.5	0.5	0.5	0.5	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	0.5	0.5	0.5	0.5	0.5
	SP	0.5	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	0.5	0.5	0.5	0.5		
9-Sep	0.5	Z	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	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6
	0.5	SP	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	0.6	0.6	0.6	0.6	0.5	0.5	0.5		
10-Sep	0.5	0.5	Z	0.4	0.5	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	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.6
	0.5	0.5	SP	0.4	0.5	0.4	0.4	0.4	0.4	0.4	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		
11-Sep	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.4	0.4	0.7	0.9	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.9	1.1	0.9	0.7	0.5	0.6	1.1
	0.5	0.5	0.5	SP	0.5	0.5	0.5	0.4	0.5	0.8	0.7	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.7	1.0	1.0	0.8	0.6	0.5		
12-Sep	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.6
	0.5	0.5	0.5	0.5	SP	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.5		
13-Sep	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.6
	0.5	0.5	0.5	0.5	0.5	SP	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		
14-Sep	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.6	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	0.7
	SP	0.5	0.6	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	0.5	0.5	0.5	0.5	0.5		
15-Sep	0.5	Z	0.5	0.5	0.4	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	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.7
	0.6	SP	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025

Day	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	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Sep	0.4	0.5	Z	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.7
	0.5	0.5	SP	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.4		
17-Sep	0.5	0.4	0.5	Z	0.4	0.4	0.5	0.4	0.4	0.5	C	C	C	C	C	C	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	--	0.5
	0.4	0.4	0.4	SP	0.4	0.5	0.4	0.4	0.5	0.5	C	C	C	C	C	C	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5		
18-Sep	0.6	0.6	0.6	0.6	Z	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.8
	0.6	0.6	0.6	0.7	SP	0.7	0.8	0.8	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5		
19-Sep	0.6	0.4	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.6
	0.5	0.4	0.4	0.3	0.4	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4		
20-Sep	Z	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
	SP	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5		
21-Sep	0.5	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	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.4	0.5	0.6
	0.5	SP	0.5	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	0.5	0.6	0.5	0.5	0.4		
22-Sep	0.4	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	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4
	0.3	0.3	SP	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	0.3	0.3	0.4	0.4	0.3	0.4	0.4		
23-Sep	0.4	0.4	0.4	Z	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.5
	0.4	0.4	0.4	SP	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	0.3	0.3	0.4	0.3	0.4	0.3	0.4		
24-Sep	0.4	0.3	0.4	0.3	Z	0.4	0.4	0.4	0.4	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	0.4	0.4
	0.3	0.4	0.3	0.3	SP	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3		
25-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
	0.3	0.3	0.3	0.3	0.3	SP	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3		
26-Sep	Z	0.4	0.3	0.4	0.4	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	0.3	0.4	0.4	0.4	0.4
	SP	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4		
27-Sep	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	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		
28-Sep	0.4	0.4	Z	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	0.3	0.4	0.3	0.4	0.5
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3		
29-Sep	0.4	0.4	0.4	Z	0.4	0.3	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	0.4	0.5	0.5	0.4	0.5	0.4	0.5
	0.4	0.4	0.4	SP	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5		
30-Sep	0.5	0.5	0.5	0.6	Z	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.6
	0.5	0.5	0.5	0.6	SP	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	0.6	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	Diurnal Average	
	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	1.0	1.1	0.9	0.7	0.7	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

Stony Mountain - September 2025

Maximum Value: 1.1 ppb on Sep 11 21:00

Maximum Daily Average: 0.6 ppb on Sep 18

Minimum Value: 0.3 ppb on Sep 22 08:00

Minimum Daily Average: 0.3 ppb on Sep 22

Maximum Diurnal Average: 0.5 ppb at hour 4

Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 0.46 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.5 P_{90} = 0.6 P_{99} = 0.8

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.6	0.7	0.7	0.8	0.7	Z	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.8
2-Sep	Z	0.5	0.6	0.5	0.5	0.5	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	0.5	0.4	0.4	0.4	0.5	0.6
3-Sep	0.4	Z	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.7	0.6	0.7	0.7	0.7	0.6	0.7
4-Sep	0.7	0.8	Z	0.7	0.6	0.8	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	0.5	0.8
5-Sep	0.4	0.4	0.5	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	0.4	0.5
6-Sep	0.4	0.4	0.4	0.4	Z	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
7-Sep	0.5	0.5	0.5	0.4	0.5	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	0.5	0.5	0.5	0.4	0.5
8-Sep	Z	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	0.5	0.5	0.5	0.5	0.5	0.5
9-Sep	0.5	Z	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	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6
10-Sep	0.5	0.5	Z	0.4	0.5	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	0.5	0.4	0.4	0.4	0.5	0.5	0.6
11-Sep	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.5	0.7	0.8	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.6	1.0	1.1	0.9	0.7	0.5	0.6	1.1
12-Sep	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	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5
13-Sep	0.5	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	0.5	0.4	0.5	0.5	0.5	0.5	0.5
14-Sep	Z	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	0.5	0.5	0.5	0.5	0.5	0.5	0.6
15-Sep	0.6	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6
16-Sep	0.4	0.5	Z	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.7
17-Sep	0.4	0.4	0.4	Z	0.4	0.5	0.5	0.4	0.5	0.5	C	C	C	C	C	C	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	--	0.5
18-Sep	0.6	0.6	0.6	0.7	Z	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.8
19-Sep	0.6	0.4	0.4	0.4	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6
20-Sep	Z	0.3	0.3	0.3	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	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
21-Sep	0.5	Z	0.5	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	0.6	0.5	0.5	0.4	0.5	0.6
22-Sep	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	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4
23-Sep	0.4	0.4	0.4	Z	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	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.5
24-Sep	0.4	0.4	0.4	0.3	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4
25-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
26-Sep	Z	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	0.3	0.4	0.4	0.4
27-Sep	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
28-Sep	0.4	0.4	Z	0.4	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	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.5
29-Sep	0.4	0.4	0.4	Z	0.4	0.3	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	0.4	0.5	0.4	0.5
30-Sep	0.5	0.5	0.5	0.6	Z	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	Diurnal Average	
	0.7	0.8	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	1.0	1.1	0.9	0.7	0.7	Diurnal Maximum	

Z - zerospan C - Calibration

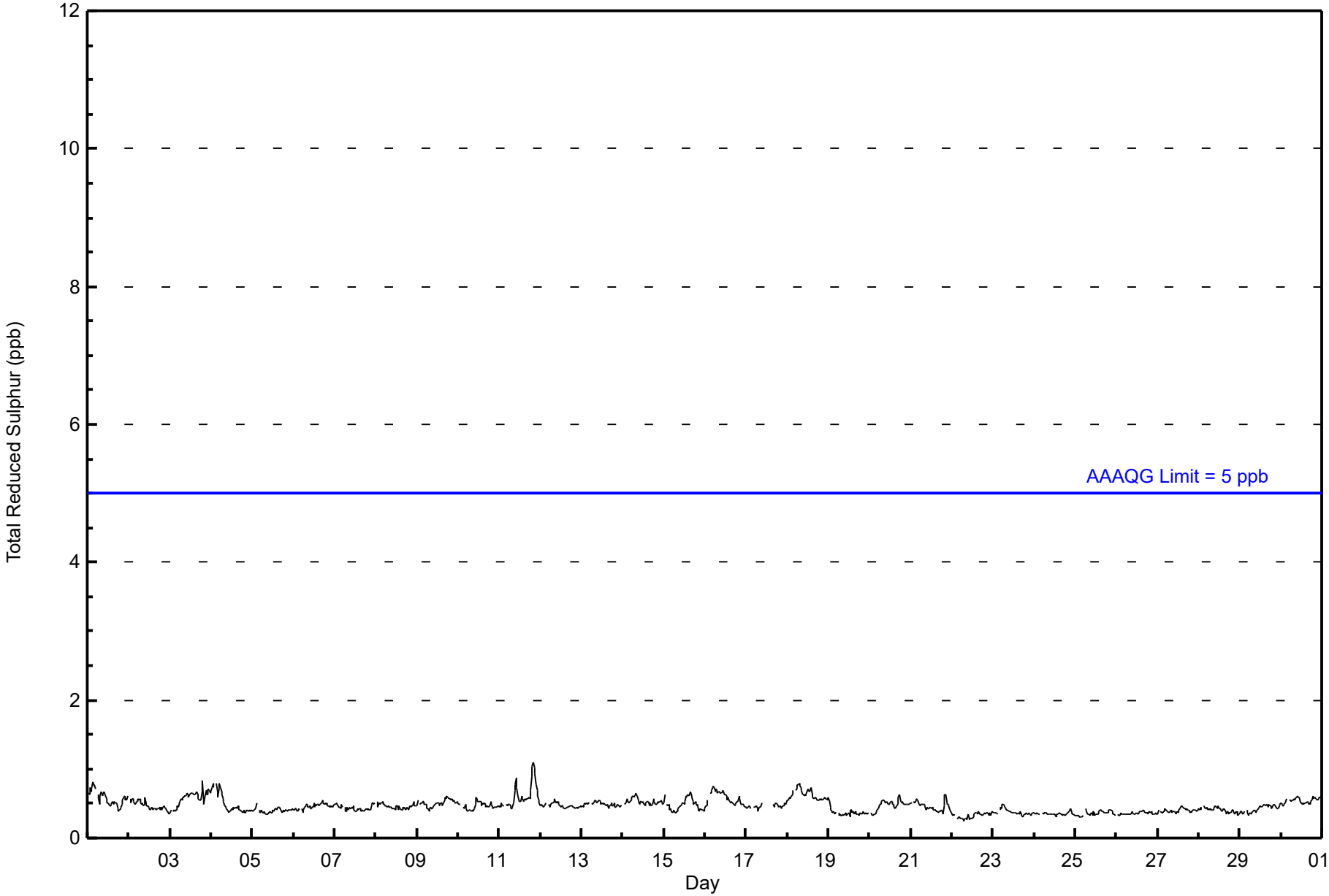
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	684	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: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	18	14	14	10	19	16	17	55	90	129	40	56	71	51	40	43	683
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	18	14	14	10	19	16	17	55	90	129	40	56	71	51	40	43	683

Total Number of Valid Hours: 683

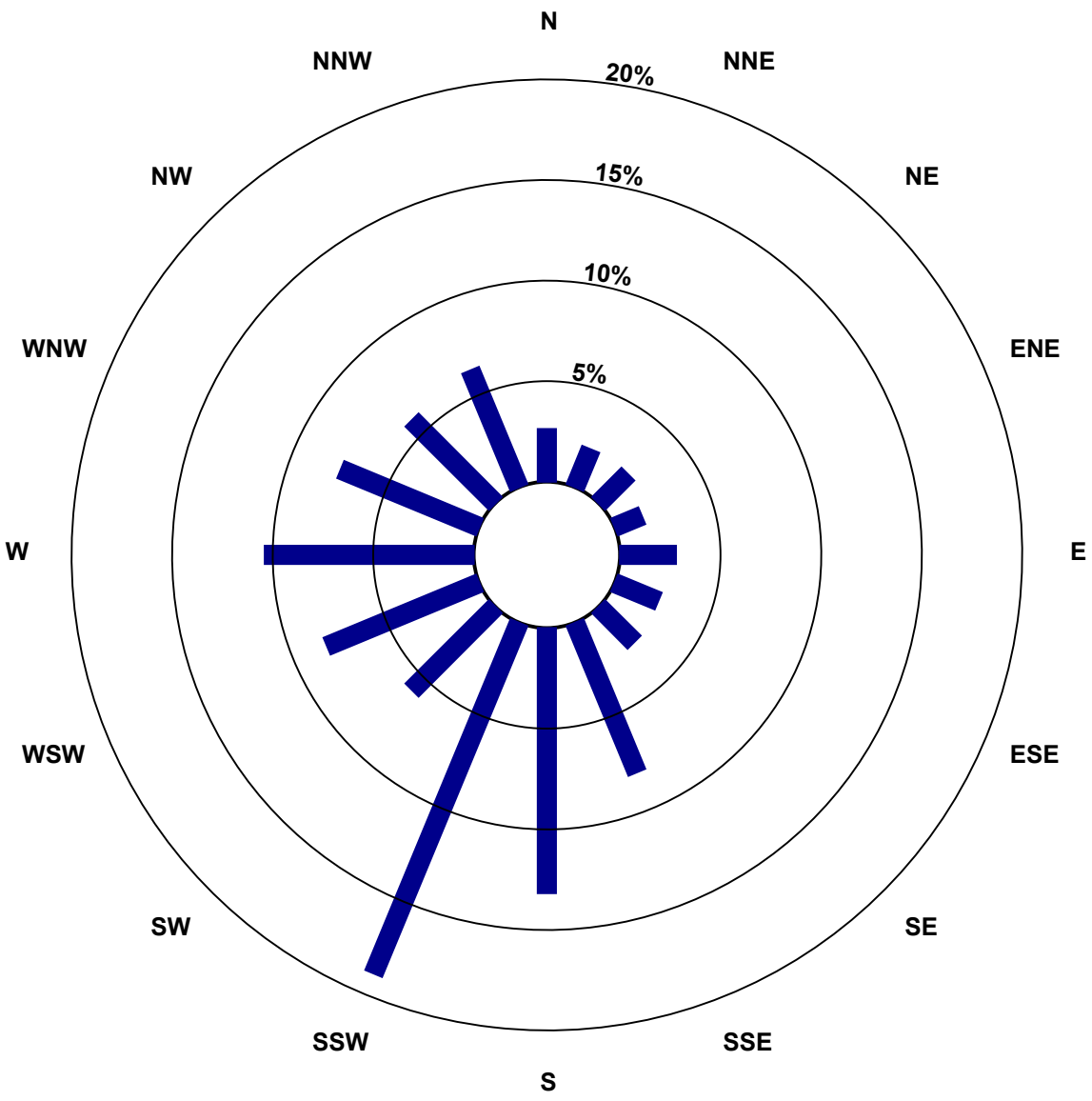
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Stony Mountain



Classes (ppb)

- 0 - 2
- 3 - 4
- 5 - 7
- 8 - 11
- > 11

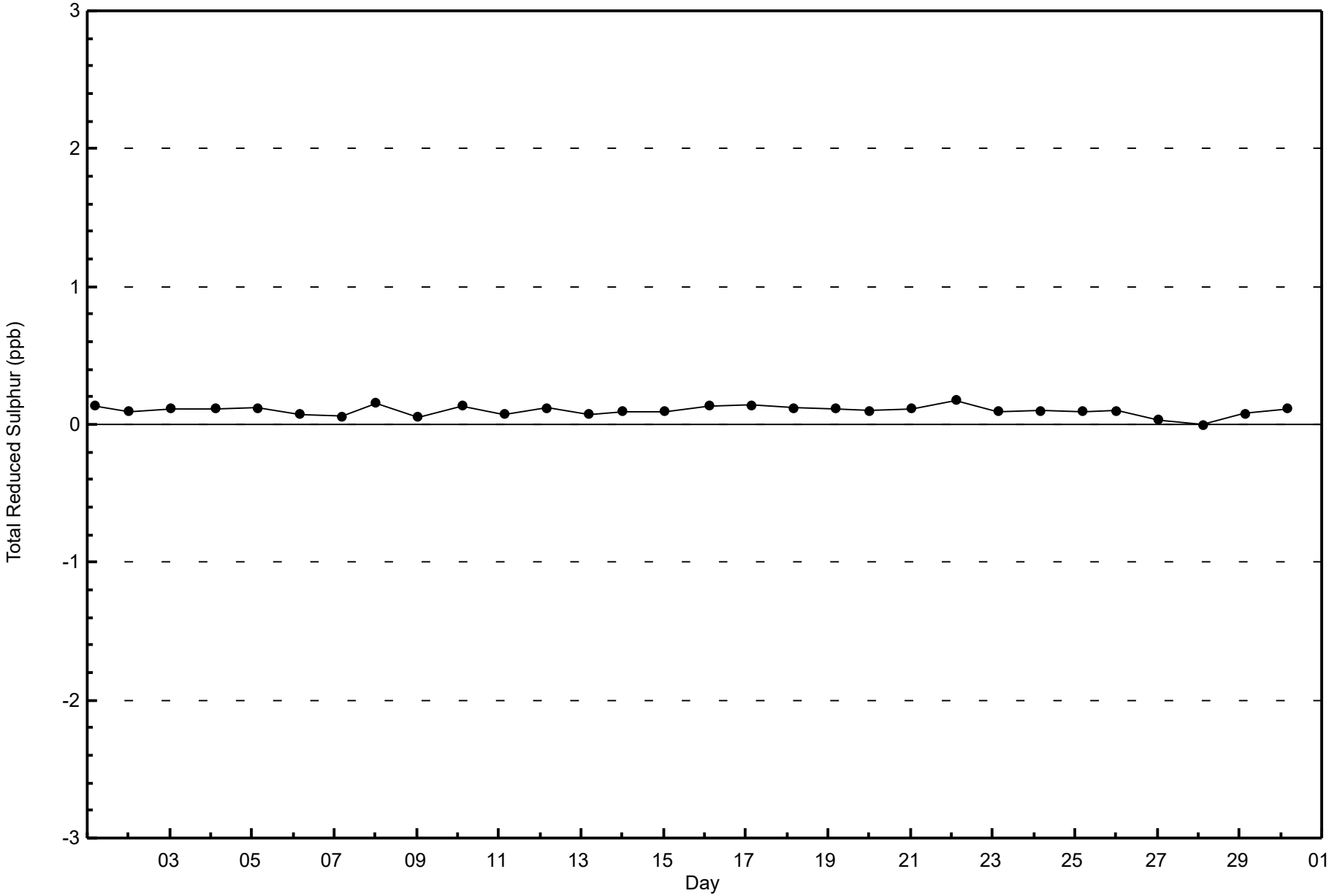
Total Number of Valid Hours: 683

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025

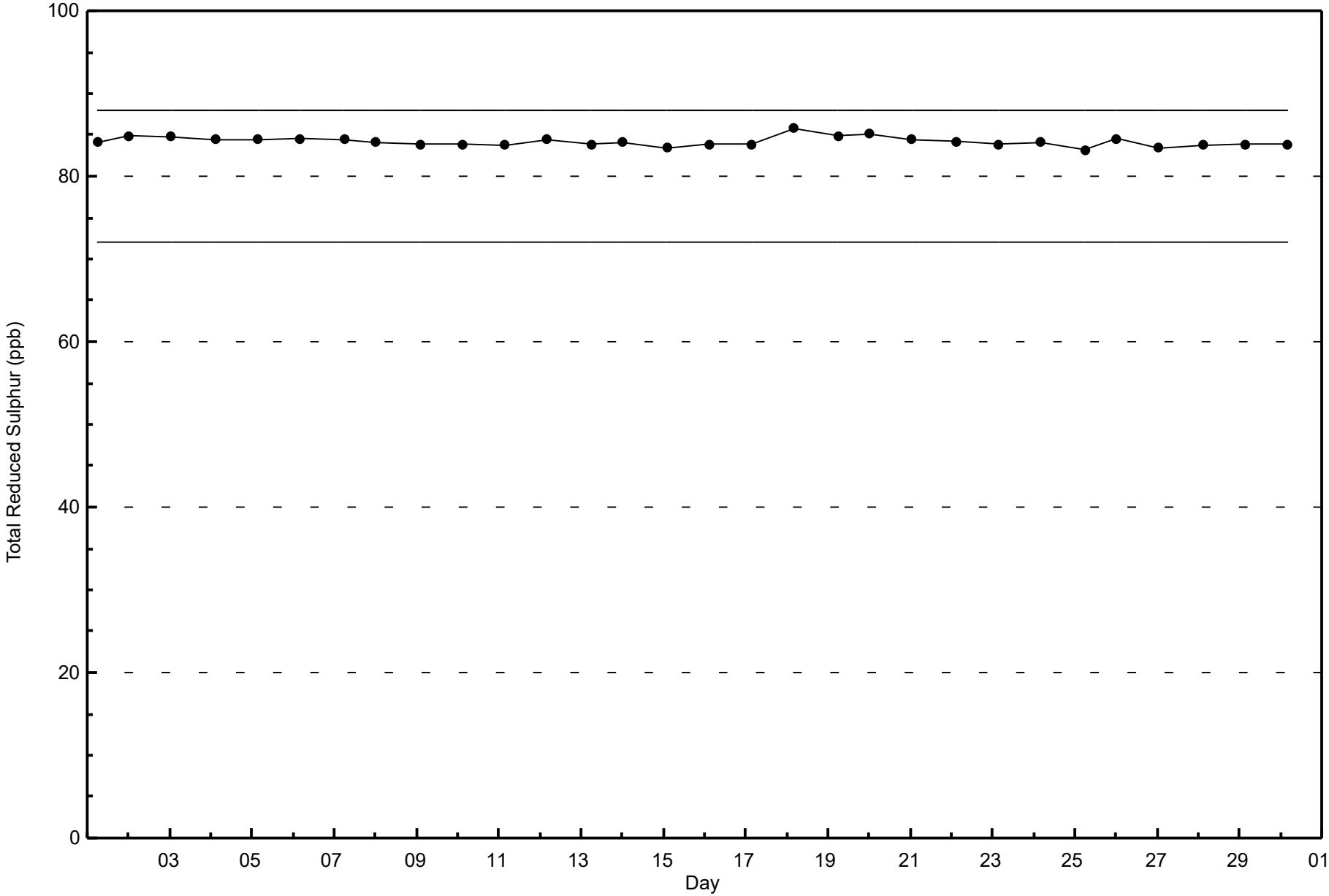


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025

Maximum Value: 2.2 ppm on Sep 11 21:00

Maximum Daily Average: 2.1 ppm on Sep 1

Minimum Value: 2.0 ppm on Sep 14 13:00

Minimum Daily Average: 2.1 ppm on Sep 26

Maximum Diurnal Average: 2.1 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.09 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.1 Q_3 = 2.1 P_{90} = 2.1 P_{99} = 2.2

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
2-Sep	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
3-Sep	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	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2
4-Sep	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	2.1
5-Sep	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-Sep	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
7-Sep	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	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2
8-Sep	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
9-Sep	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
10-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
11-Sep	2.0	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2
12-Sep	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
13-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
14-Sep	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
15-Sep	Z	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	2.1	2.1	2.1	2.1	2.1
16-Sep	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	2.1
17-Sep	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
18-Sep	2.1	2.1	2.1	Z	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
19-Sep	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
20-Sep	2.1	2.1	2.1	2.1	2.1	Z	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	2.2
21-Sep	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
22-Sep	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1
23-Sep	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
24-Sep	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
25-Sep	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	2.0	2.1	2.1
26-Sep	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
27-Sep	Z	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1
28-Sep	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
29-Sep	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
30-Sep	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	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	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	2.2	2.2	2.2	2.2	Diurnal Maximum	

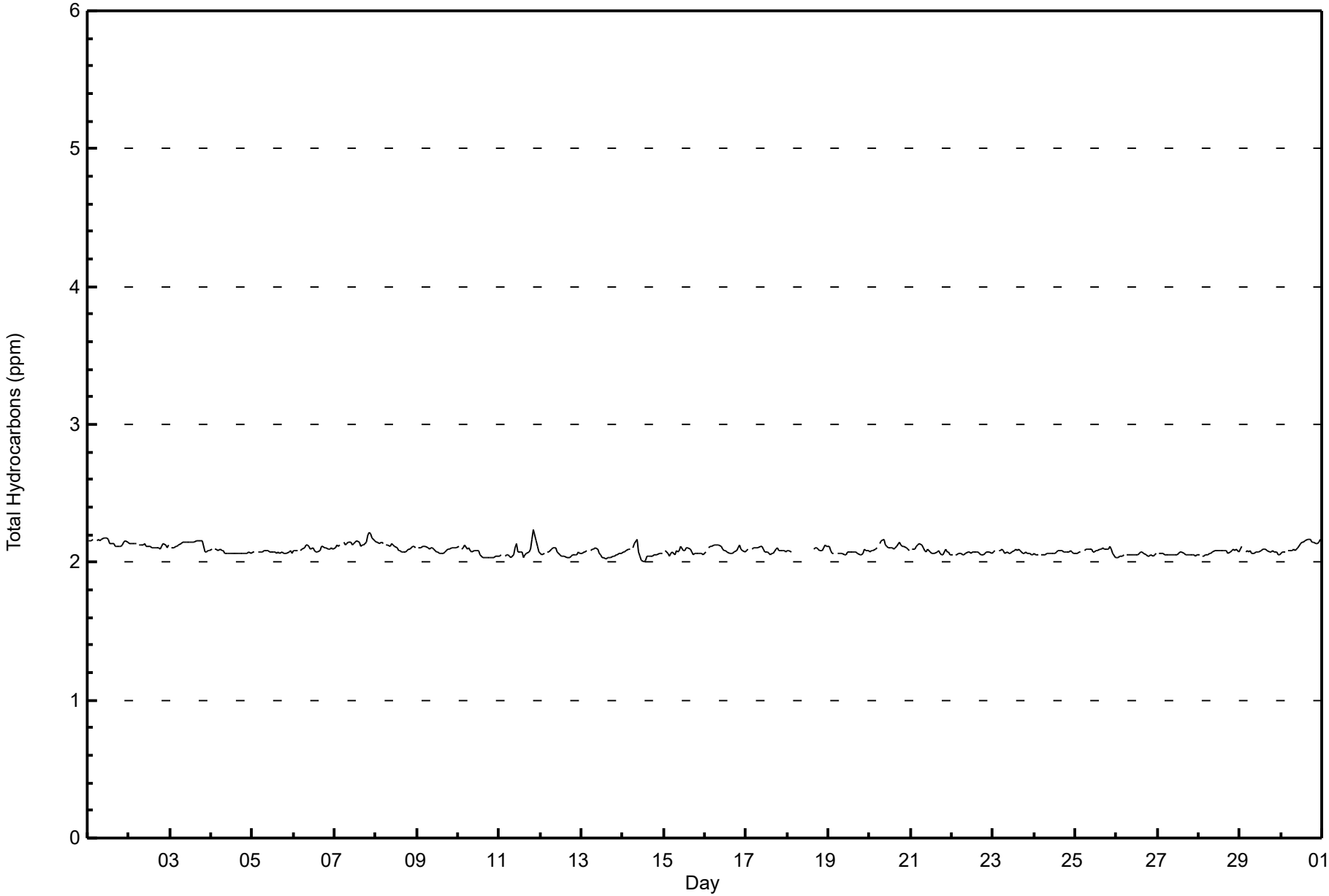
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	61	8.98	8.98
2.1 - 3.0	618	91.02	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	1	4	2	1	4	4	0	4	4	9	3	10	6	2	6	1	61
2.1 - 3.0	18	11	12	9	15	12	18	54	80	115	39	46	65	50	32	41	617
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	15	14	10	19	16	18	58	84	124	42	56	71	52	38	42	678

Total Number of Valid Hours: 678

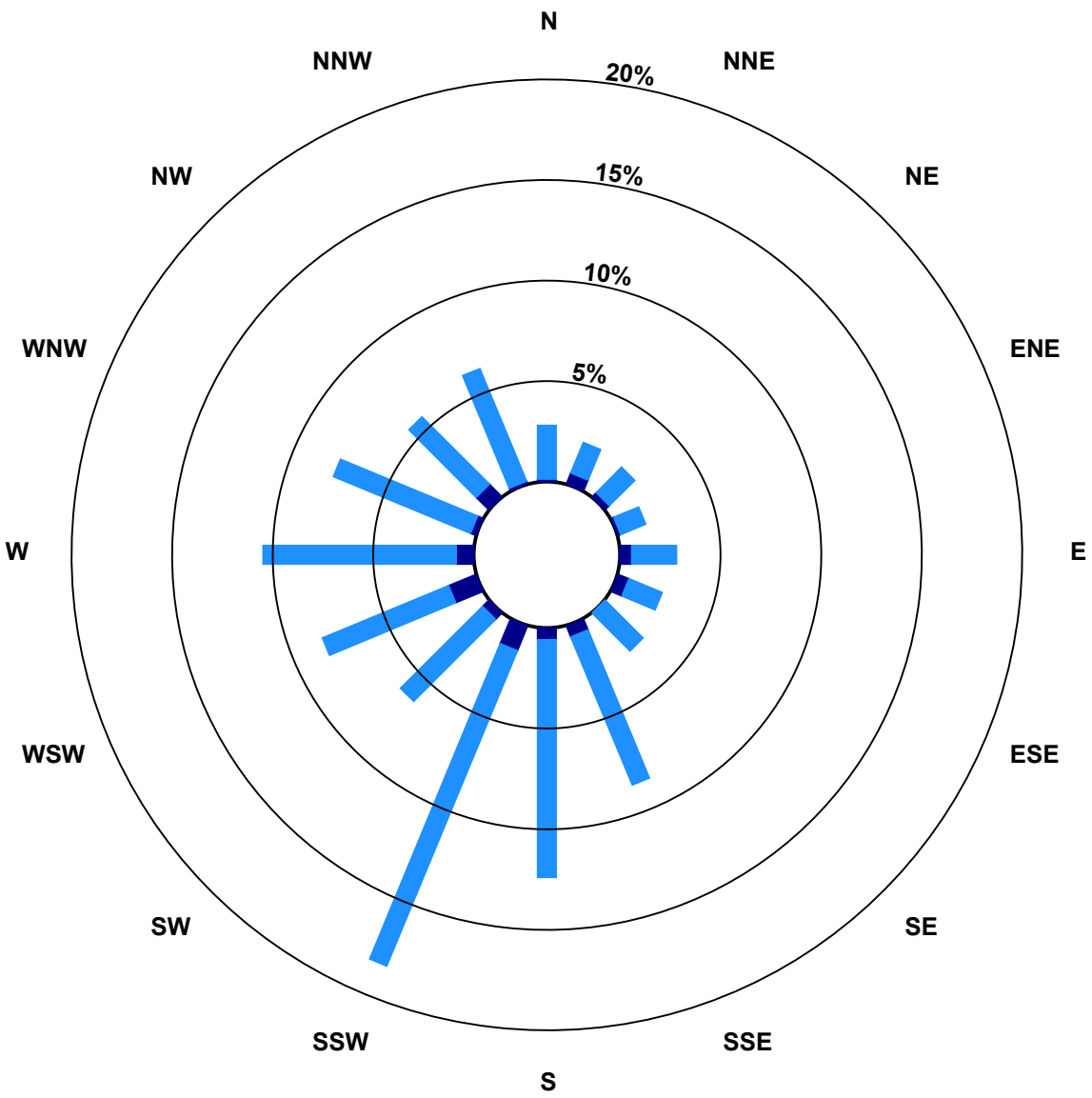
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Stony Mountain



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

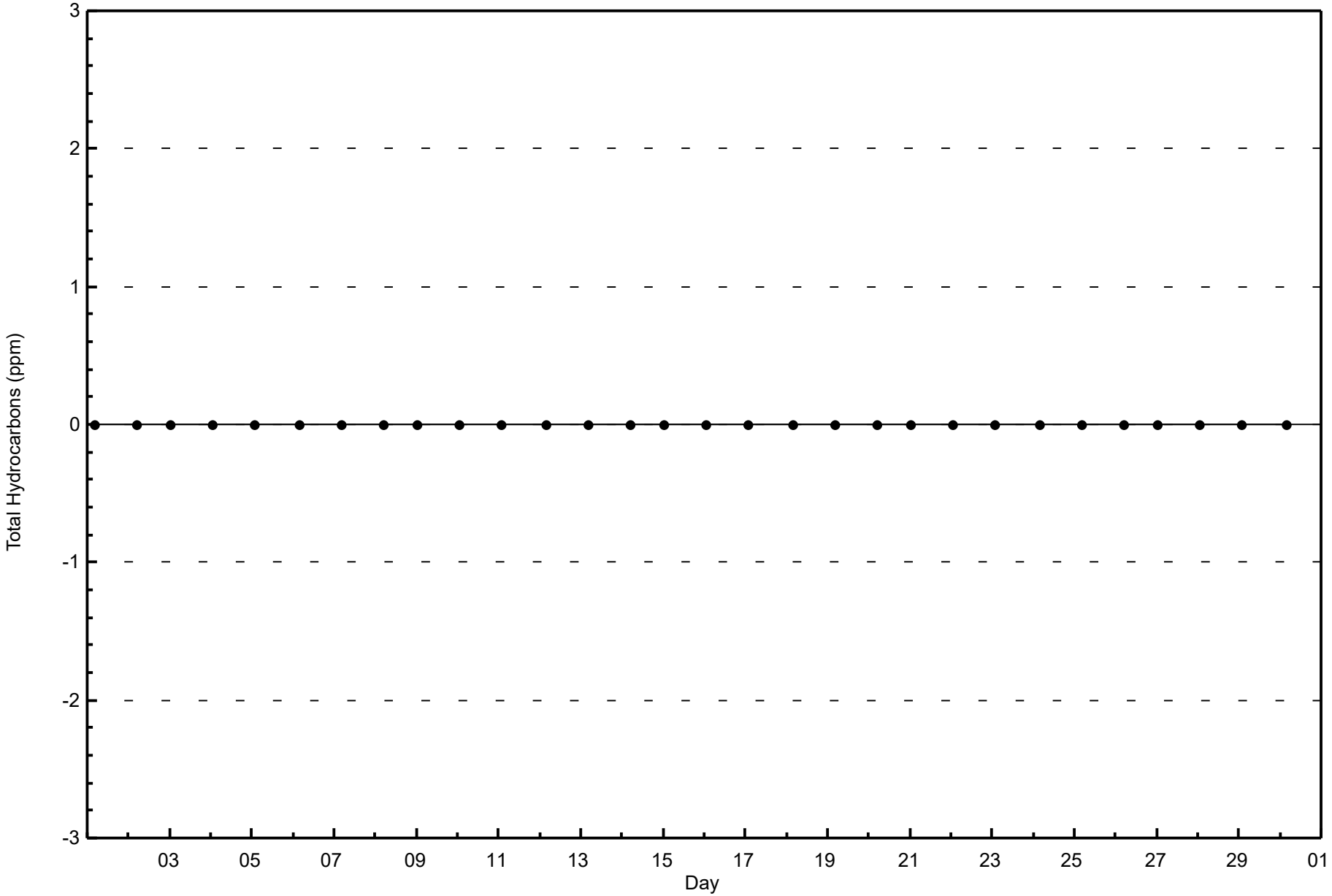
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025

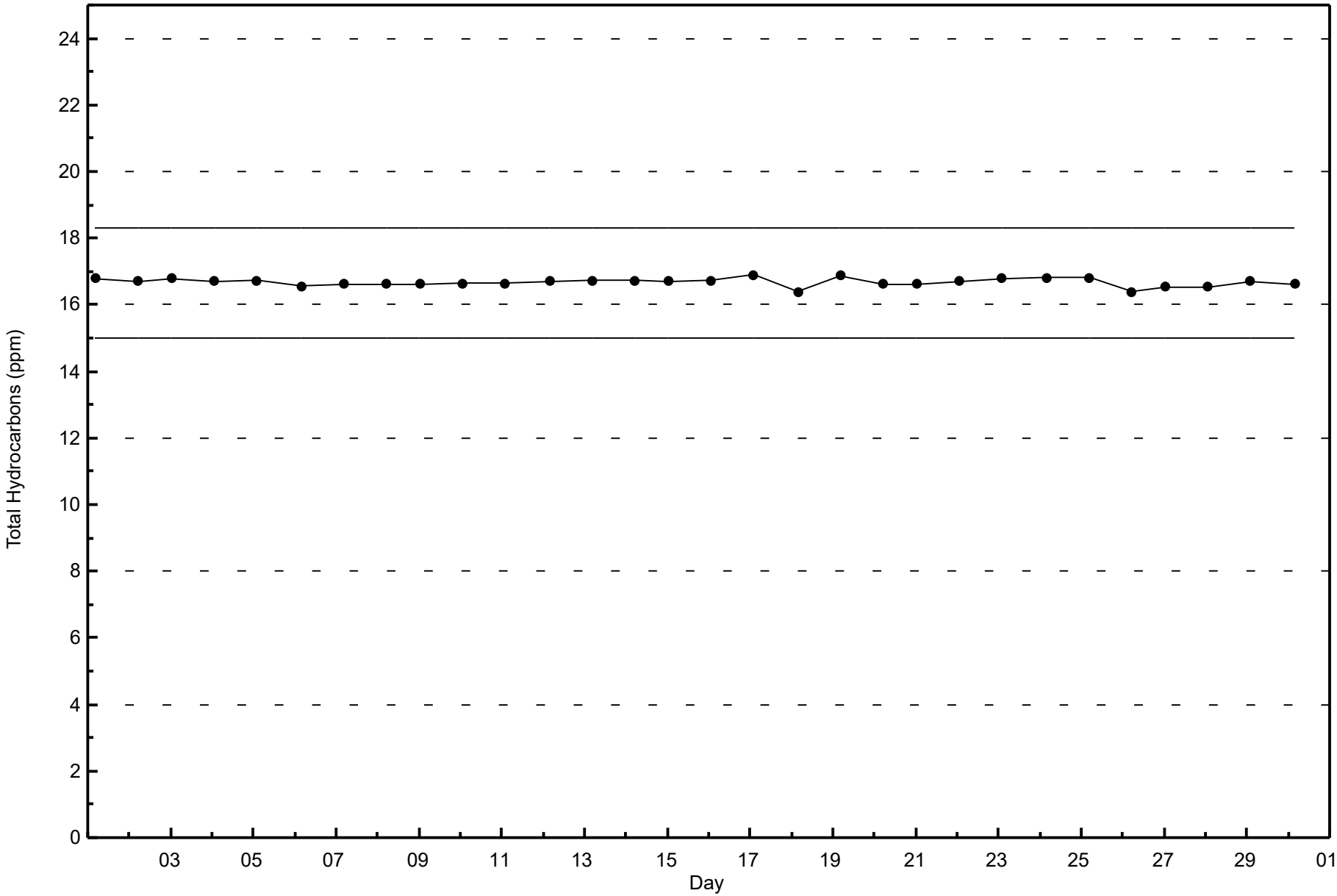


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025

Maximum Value: 0.041 ppm on Sep 11 21:00

Maximum Daily Average: 0.002 ppm on Sep 11

Minimum Value: 0.000 ppm on Sep 1 02:00

Minimum Daily Average: 0.000 ppm on Sep 2

Maximum Diurnal Average: 0.001 ppm at hour 21

Minimum Diurnal Average: 0.000 ppm at hour 3

Monthly Average: 0.000 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 in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.003	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	0.003
2-Sep	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
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	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
7-Sep	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
8-Sep	0.000	0.003	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	0.003
9-Sep	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
10-Sep	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
11-Sep	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	0.041	0.000	0.000	0.000	0.002	0.041
12-Sep	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
13-Sep	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
14-Sep	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
15-Sep	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
16-Sep	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
17-Sep	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
18-Sep	0.000	0.000	0.000	Z	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
19-Sep	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
20-Sep	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
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	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
28-Sep	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
29-Sep	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
30-Sep	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	Diurnal Average	
	0.003	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	0.041	0.000	0.000	0.000	Diurnal Maximum	

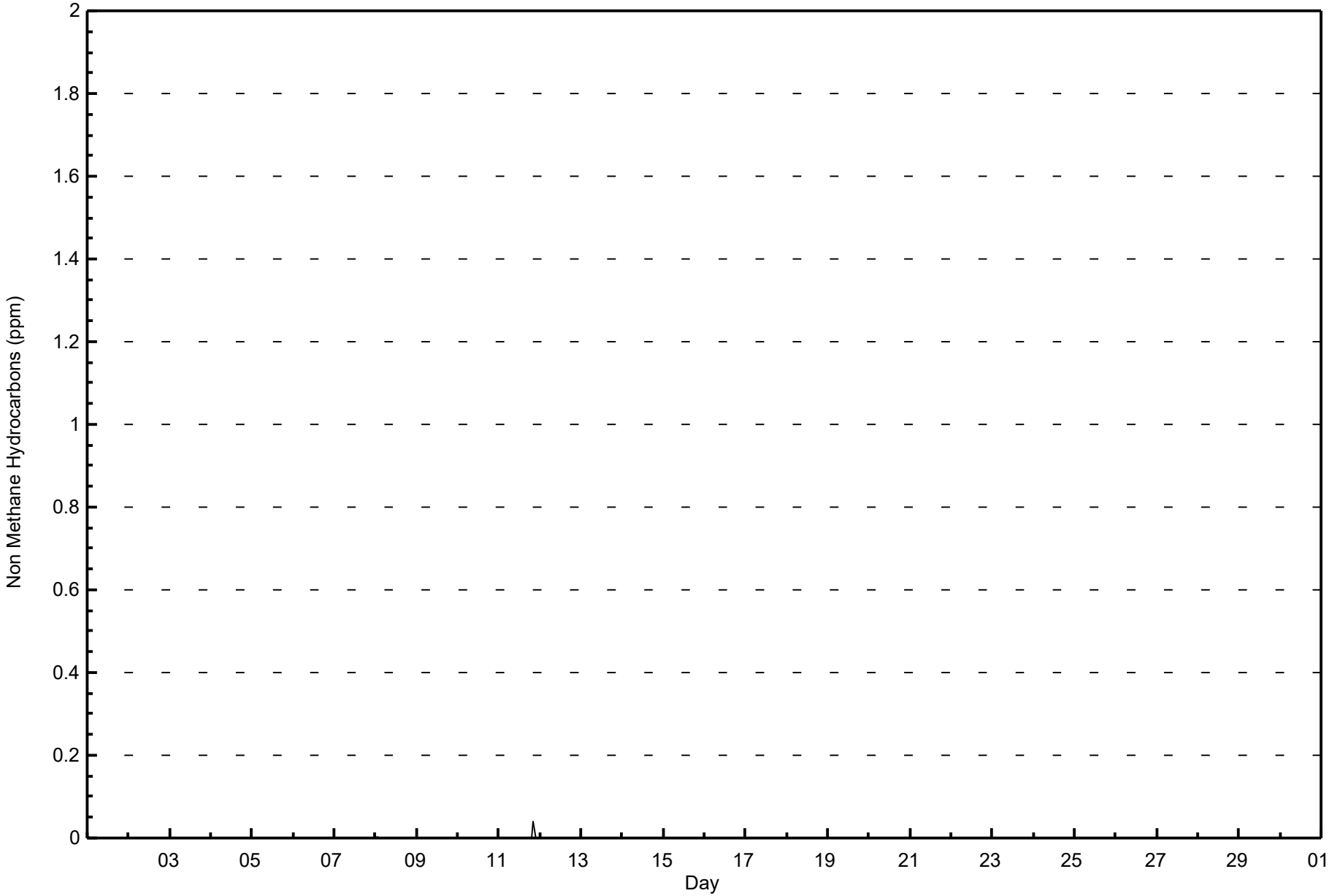
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	678	99.85	99.85
0.006 - 0.05	1	0.15	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	19	15	14	10	19	16	17	58	84	124	42	56	71	52	38	42	677
0.006 - 0.05	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0
Totals	19	15	14	10	19	16	18	58	84	124	42	56	71	52	38	42	678

Total Number of Valid Hours: 678

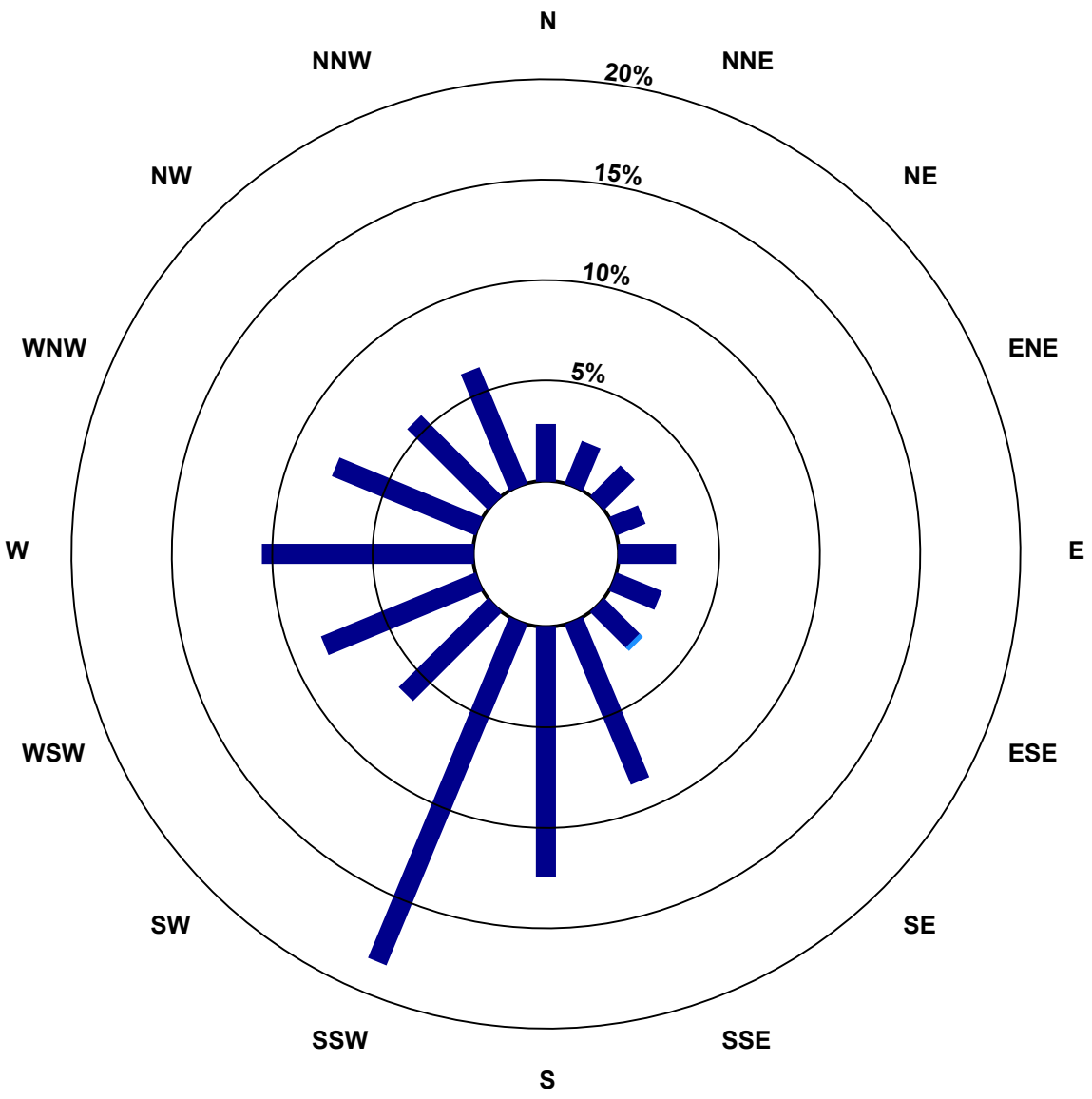
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

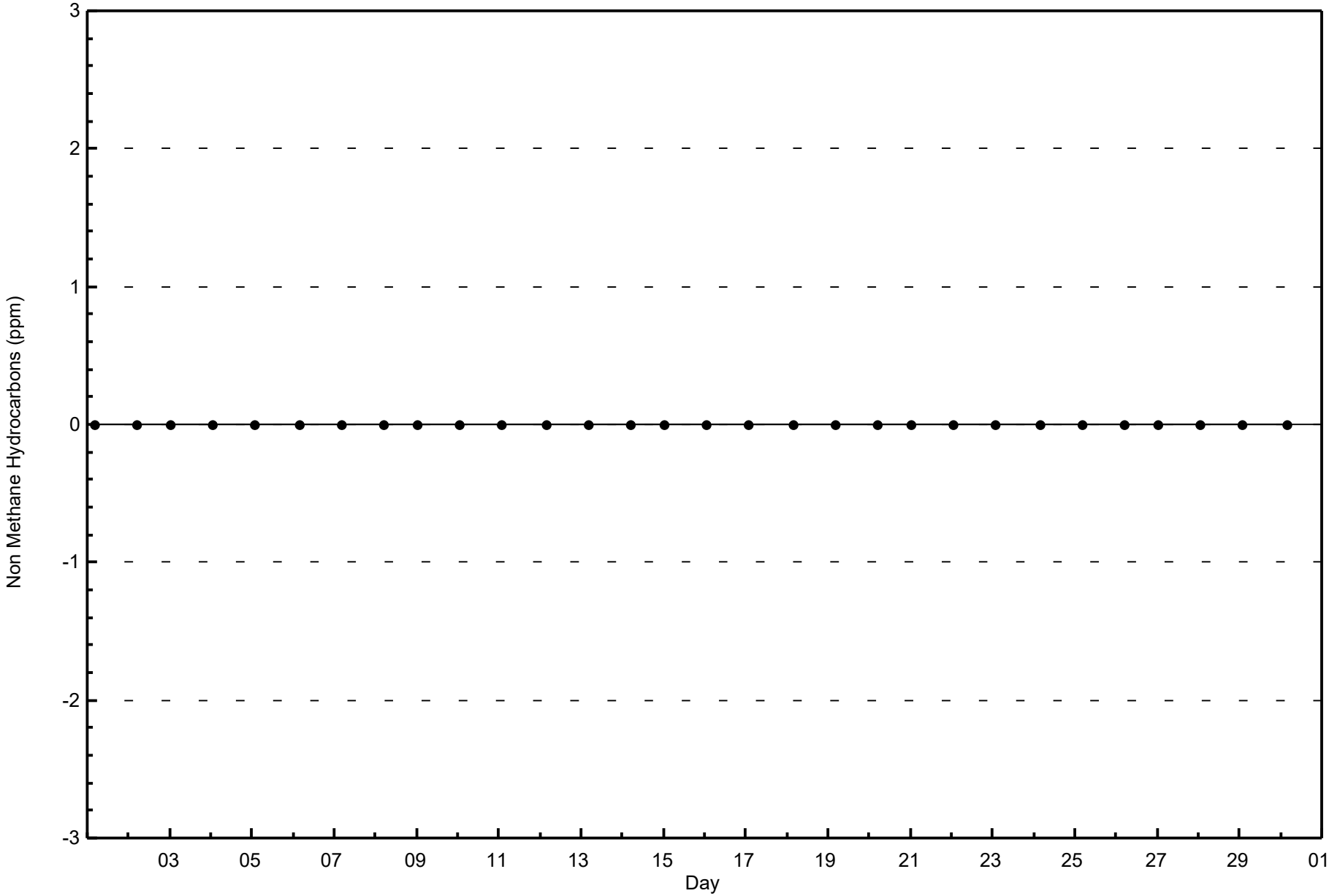
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025

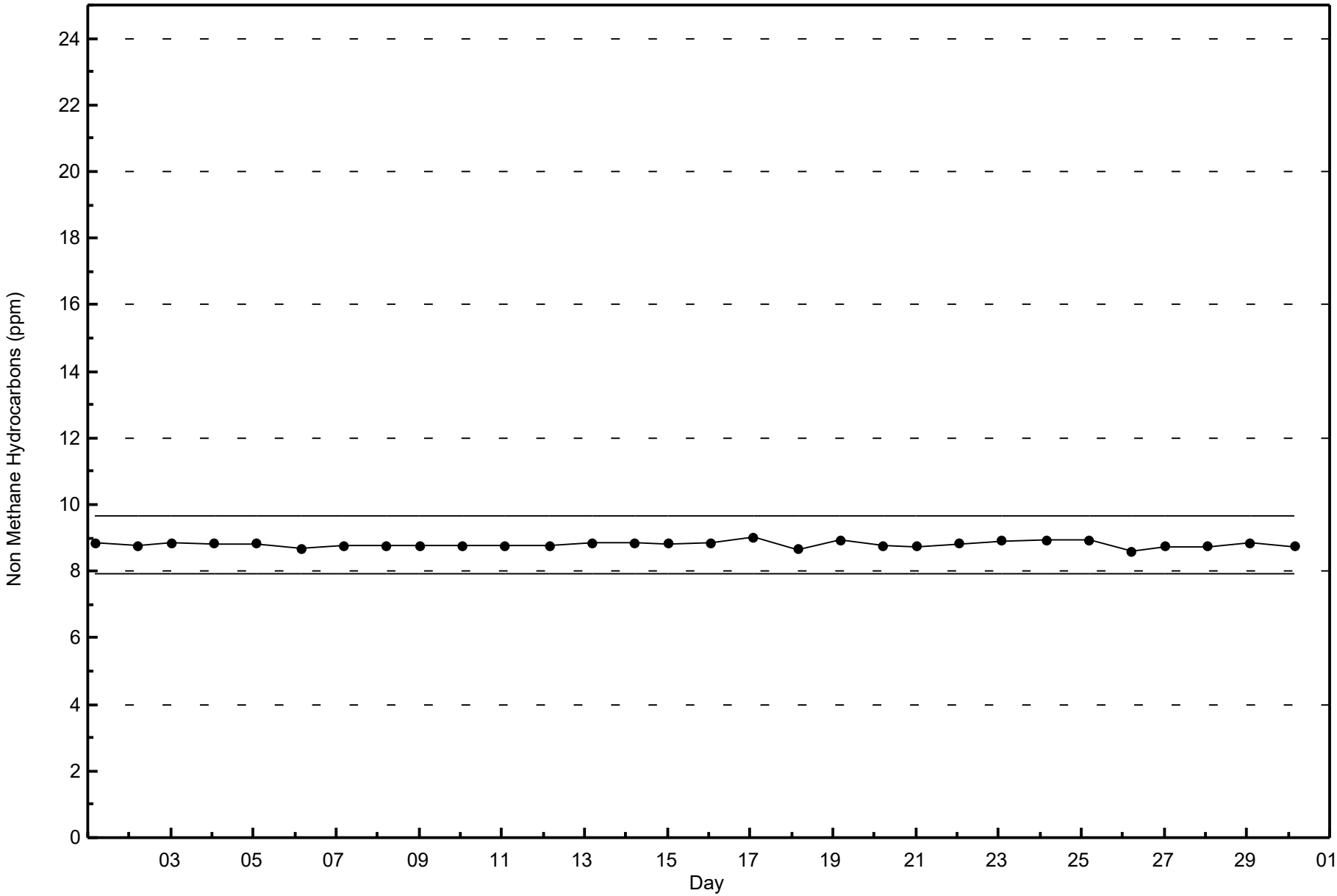


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Stony Mountain - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.2 ppm on Sep 7 21:00

Maximum Daily Average: 2.1 ppm on Sep 1

Minimum Value: 2.0 ppm on Sep 14 13:00

Minimum Daily Average: 2.1 ppm on Sep 26

Maximum Diurnal Average: 2.1 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.09 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.1 Q_3 = 2.1 P_{90} = 2.1 P_{99} = 2.2

Hours in Service:	720
Hours of Data:	679
Hours of Missing Data:	41
Hours of Calibration:	34
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
2-Sep	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
3-Sep	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	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2
4-Sep	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	2.1
5-Sep	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-Sep	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
7-Sep	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	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2
8-Sep	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
9-Sep	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
10-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
11-Sep	2.0	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2
12-Sep	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
13-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
14-Sep	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
15-Sep	Z	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	2.1	2.1	2.1	2.1	2.1
16-Sep	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	2.1
17-Sep	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
18-Sep	2.1	2.1	2.1	Z	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
19-Sep	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
20-Sep	2.1	2.1	2.1	2.1	2.1	Z	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	2.2
21-Sep	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
22-Sep	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1
23-Sep	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
24-Sep	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
25-Sep	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	2.0	2.1	2.1
26-Sep	2.0	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
27-Sep	Z	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1
28-Sep	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
29-Sep	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
30-Sep	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	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	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	2.2	2.2	2.2	2.2	Diurnal Maximum	

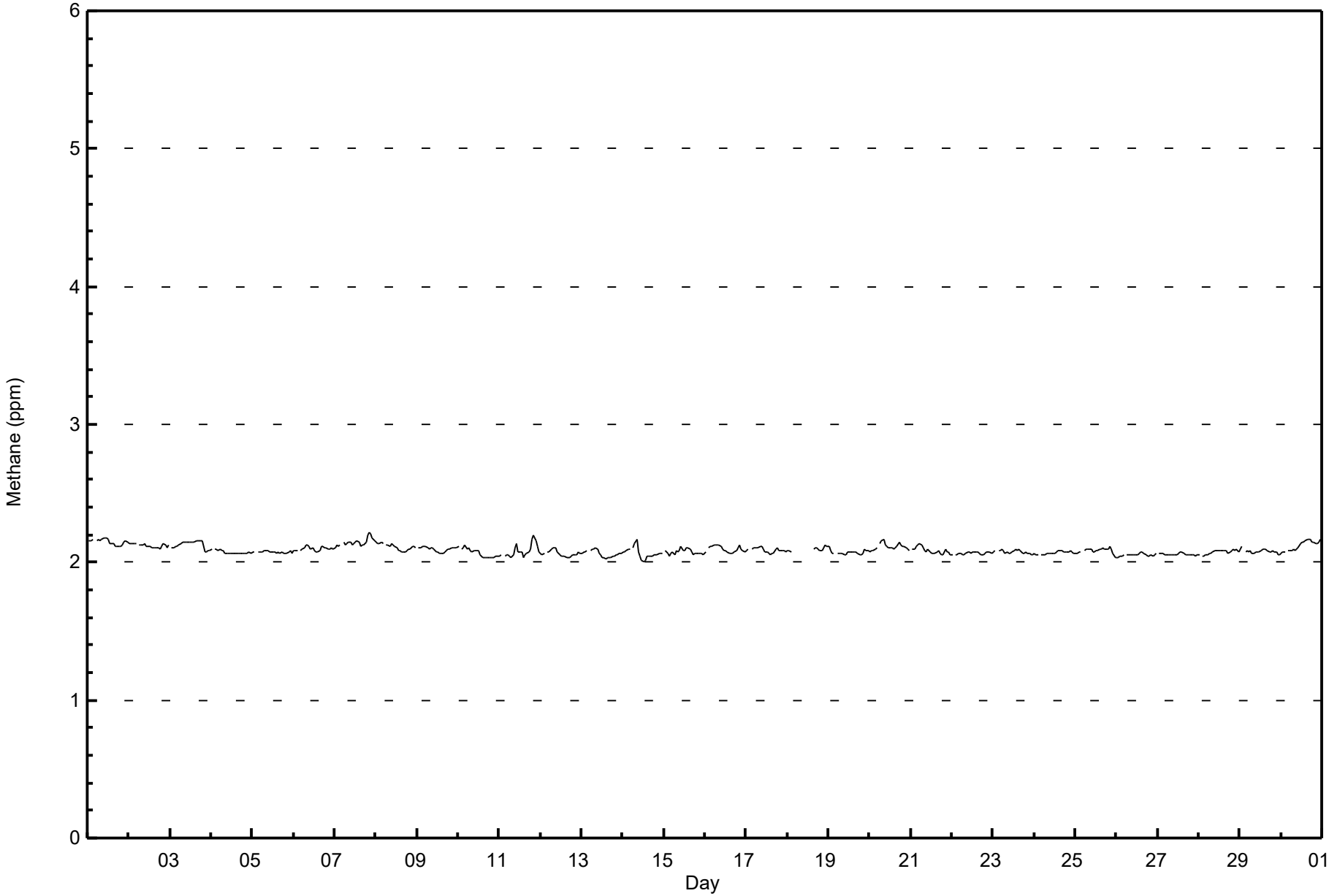
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Stony Mountain - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	61	8.98	8.98
2.1 - 3.0	618	91.02	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Stony Mountain - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	1	4	2	1	4	4	0	4	4	9	3	10	6	2	6	1	61
2.1 - 3.0	18	11	12	9	15	12	18	54	80	115	39	46	65	50	32	41	617
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	15	14	10	19	16	18	58	84	124	42	56	71	52	38	42	678

Total Number of Valid Hours: 678

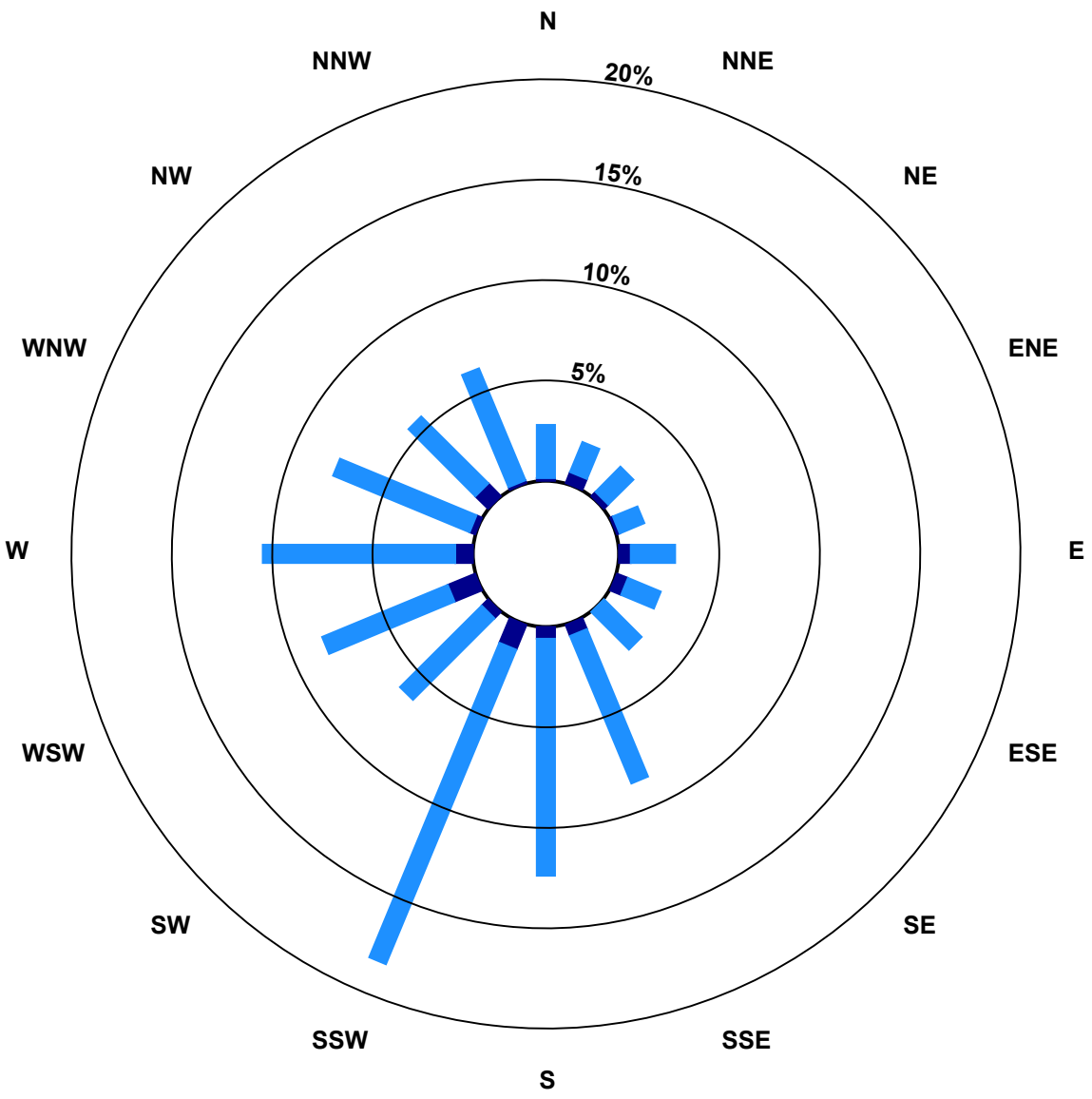
Total Number of Hours: 720

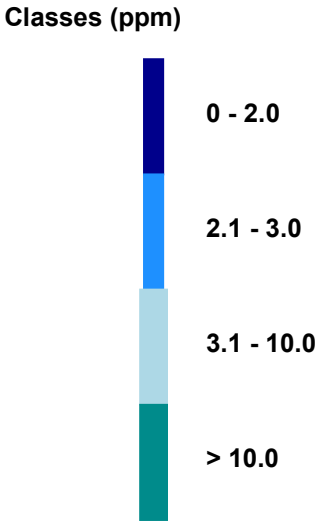
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Stony Mountain





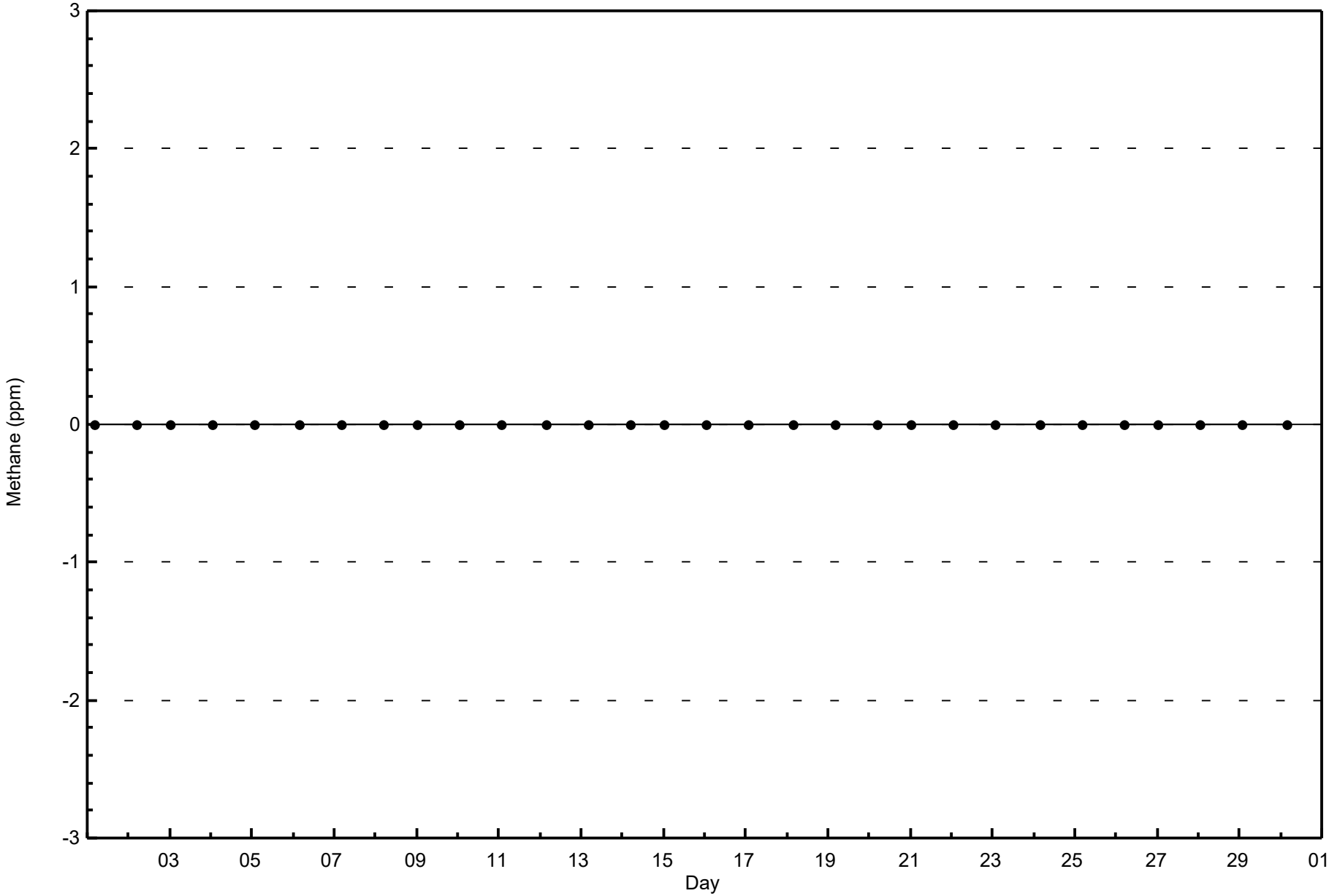
Total Number of Valid Hours: 678

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Stony Mountain - September 2025

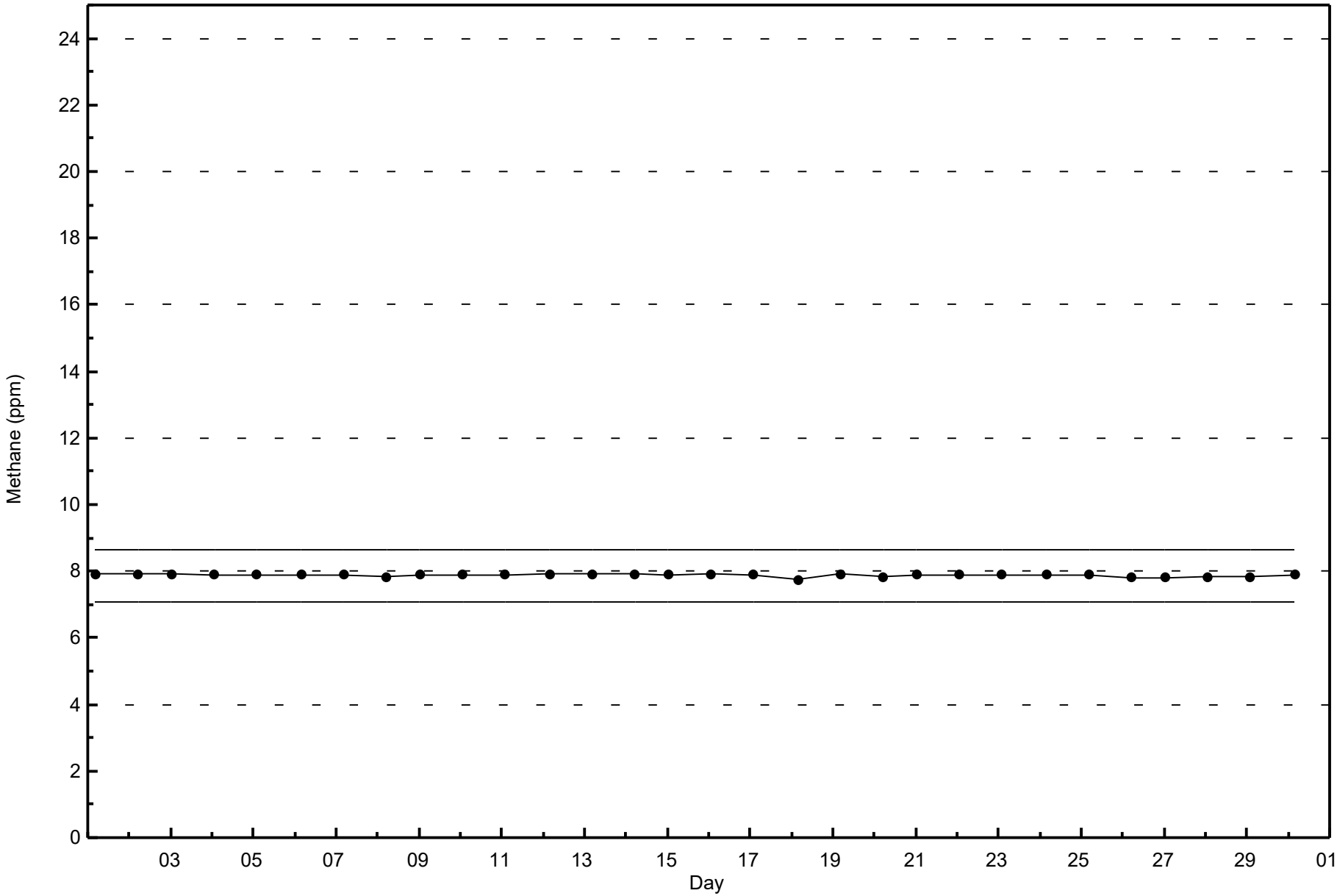


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Stony Mountain - September 2025

Maximum Value: 1.1 ppb on Sep 1 10:00

Maximum Daily Average: 0.2 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 1 18:00

Minimum Daily Average: 0.0 ppb on Sep 19

Maximum Diurnal Average: 0.2 ppb at hour 10

Minimum Diurnal Average: 0.0 ppb at hour 20

Monthly Average: 0.04 ppb

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} = 0.5

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.3	0.4	1.1	0.7	0.6	0.6	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
2-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	1.0	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	0.1	1.0
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.2	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	0.1	0.3
4-Sep	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Sep	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	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	0.0	0.0	0.3
7-Sep	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
8-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	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	0.1	0.4
9-Sep	0.0	0.0	0.0	Z	0.0	0.0	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	0.0	0.0	0.1	0.3
10-Sep	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
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.3	0.3	0.2	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	0.1	0.3
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	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	0.4
13-Sep	0.0	Z	0.0	0.0	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	0.3
14-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15-Sep	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	0.0	0.1
16-Sep	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
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	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	0.1	0.4
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2
19-Sep	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
20-Sep	0.0	0.0	Z	0.0	0.0	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	0.2
21-Sep	0.0	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	0.1
22-Sep	0.0	0.0	0.0	0.0	Z	0.0	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	0.0	0.0	0.0
23-Sep	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-Sep	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	0.0	0.1
25-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	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	0.5
26-Sep	0.0	0.0	Z	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.1
27-Sep	0.0	0.0	0.0	Z	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
28-Sep	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	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1
29-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2
30-Sep	Z	0.1	0.1	0.1	0.0	0.0	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	0.0	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	0.2	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	Diurnal Average	
	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	1.1	0.7	0.6	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Maximum	

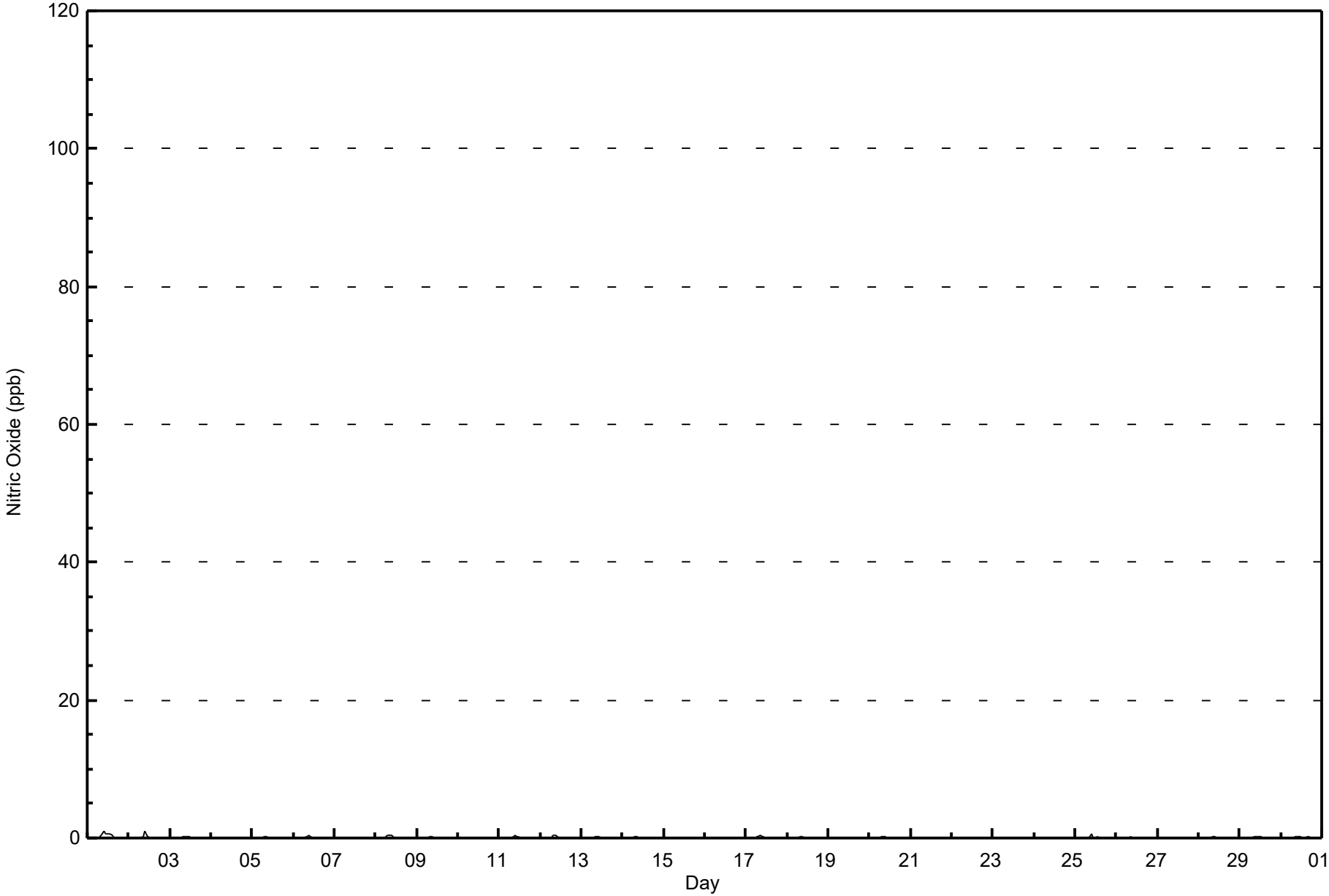
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Stony Mountain - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684
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	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684

Total Number of Valid Hours: 684

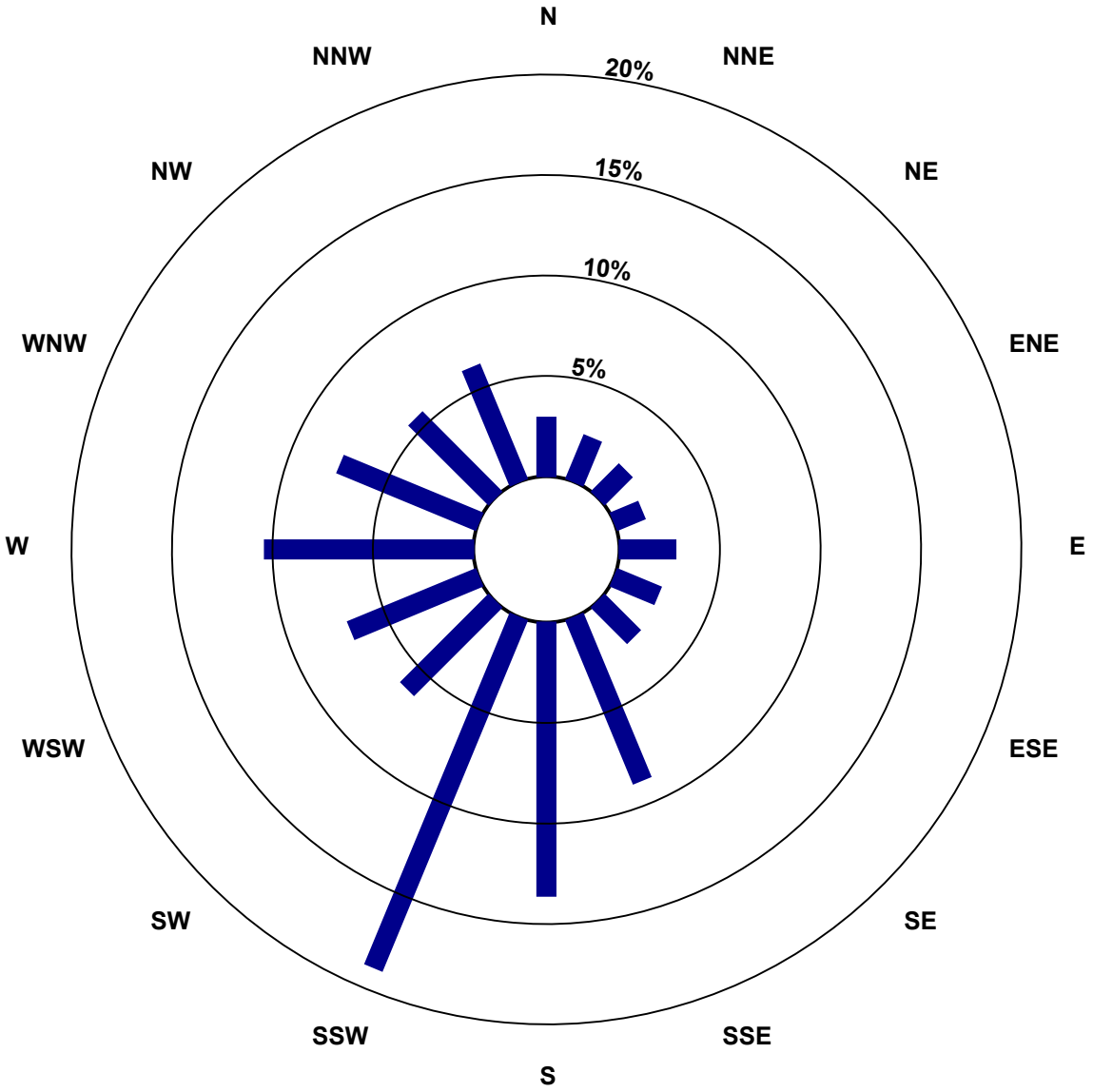
Total Number of Hours: 720

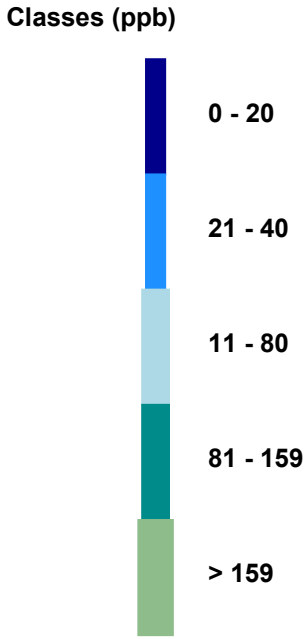
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Stony Mountain





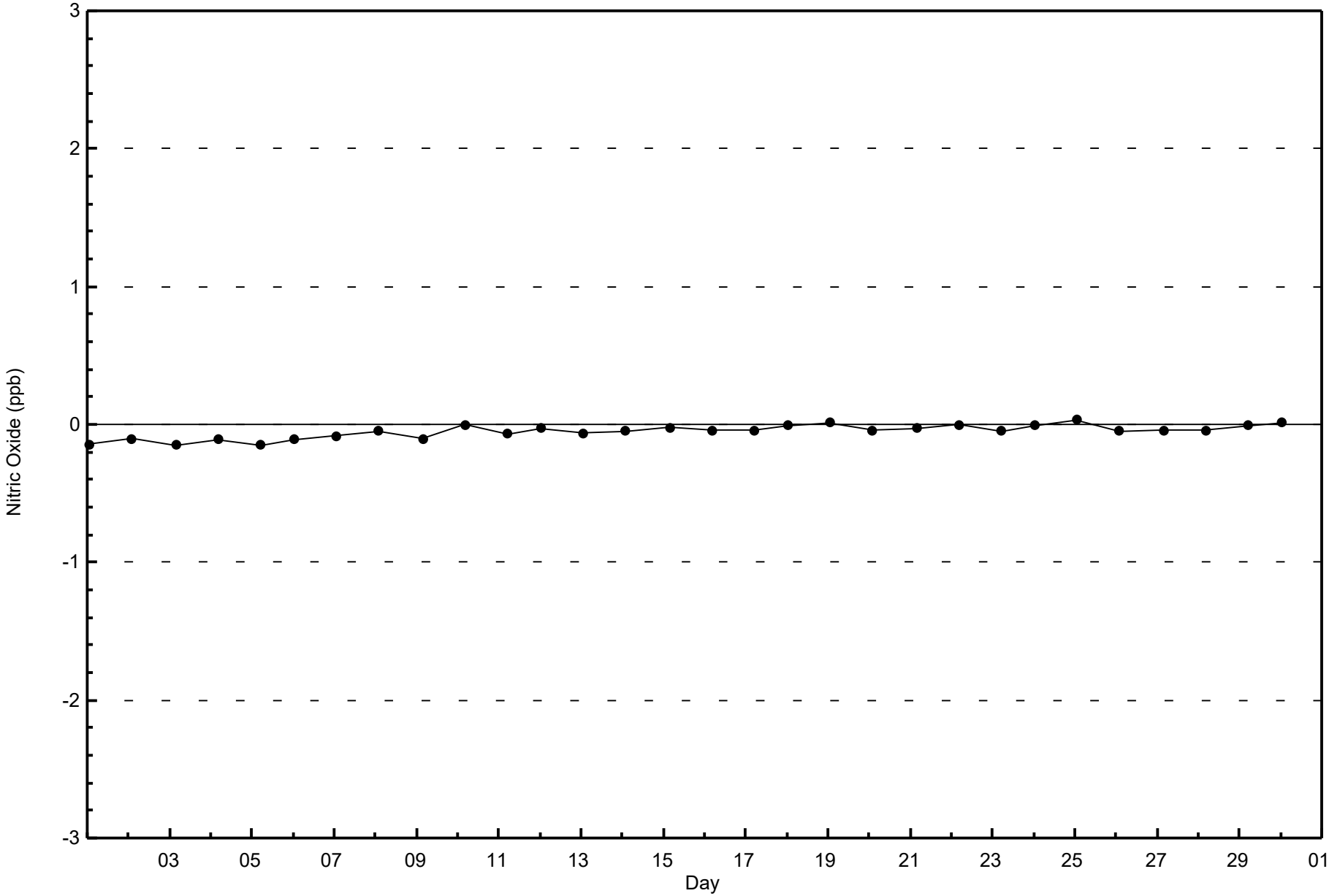
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Stony Mountain - September 2025

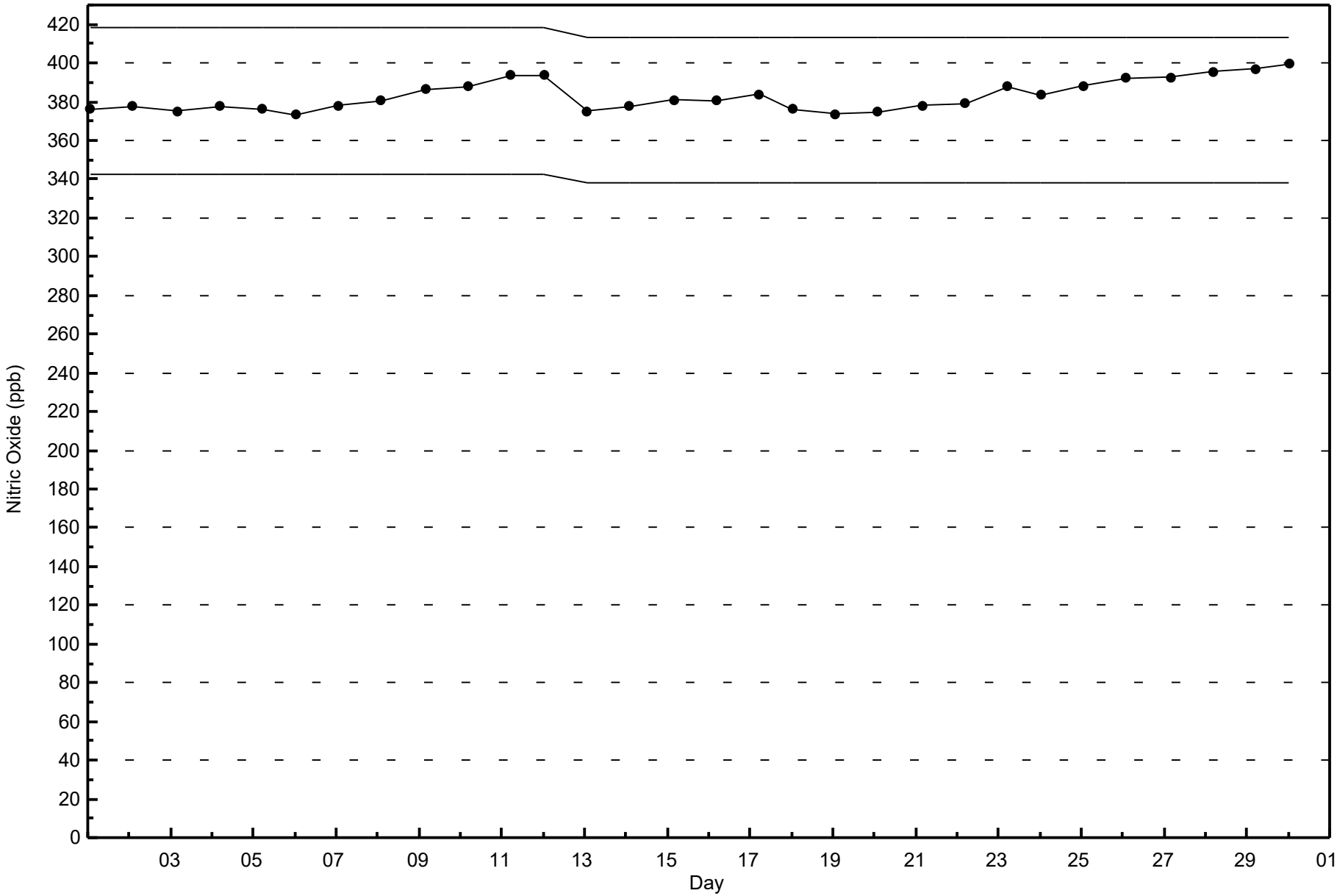


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.1 ppb on Sep 1 10:00 Maximum Daily Average: 2.0 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 22 17:00 Minimum Daily Average: 0.2 ppb on Sep 27

Maximum Diurnal Average: 1.2 ppb at hour 5 Minimum Diurnal Average: 0.6 ppb at hour 16

Monthly Average: 0.94 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.4 Median = 0.8 Q_3 = 1.3 P_{90} = 1.9 P_{99} = 2.9

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.6	Z	2.3	2.7	2.4	2.1	1.7	1.6	2.2	4.1	4.1	2.5	1.7	1.6	1.9	1.0	1.1	1.1	1.1	1.5	1.7	2.3	2.0	2.2	2.0	4.1
2-Sep	1.9	1.2	Z	1.3	1.4	1.5	1.8	1.3	1.5	3.3	2.3	1.6	1.6	1.4	1.6	1.8	1.8	1.8	2.2	1.9	2.2	0.9	1.5	1.2	1.7	3.3
3-Sep	1.0	1.0	1.1	Z	1.4	1.5	1.7	2.4	1.6	1.7	1.6	1.5	1.6	1.5	1.4	1.4	1.3	1.1	2.0	2.9	1.2	1.9	2.3	1.7	1.6	2.9
4-Sep	1.4	1.3	0.5	0.4	Z	0.9	0.8	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.4	1.4
5-Sep	0.9	1.0	1.0	0.8	0.5	Z	0.4	0.5	0.4	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	1.0
6-Sep	Z	1.9	1.9	1.5	1.2	1.2	1.4	1.4	1.2	1.2	1.1	0.9	0.9	0.6	0.5	0.7	1.0	1.0	0.9	0.9	1.0	1.2	1.5	1.5	1.2	1.9
7-Sep	2.5	Z	2.0	1.8	1.7	1.5	1.1	1.1	1.0	1.0	1.0	0.9	0.8	0.8	0.9	0.8	0.7	0.6	0.7	0.7	1.0	1.3	1.7	2.5	1.2	2.5
8-Sep	2.5	2.1	Z	1.8	1.7	1.4	1.5	1.4	1.4	1.1	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.9	0.9	1.1	0.8	0.8	1.1	2.5
9-Sep	0.8	0.8	2.7	Z	2.6	2.3	1.9	1.8	1.5	1.3	1.1	1.0	1.0	1.2	1.0	1.0	1.2	1.3	1.3	1.6	1.9	2.2	2.3	2.4	1.6	2.7
10-Sep	2.1	1.8	1.4	1.4	Z	0.9	0.7	0.6	0.7	0.8	0.9	0.9	0.9	0.7	0.5	0.4	0.3	0.3	0.4	0.5	0.3	0.3	0.4	0.5	0.8	2.1
11-Sep	0.6	0.7	0.4	0.4	0.5	Z	1.0	0.6	1.7	3.6	3.6	2.5	1.3	1.4	0.7	1.0	1.1	1.2	1.3	2.4	3.1	1.4	1.0	0.8	1.4	3.6
12-Sep	Z	1.4	2.3	2.5	1.7	1.4	2.2	2.6	2.3	1.7	1.5	0.9	0.6	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.7	0.7	0.7	1.2	1.3	2.6
13-Sep	1.2	Z	2.0	2.2	2.1	1.9	2.0	1.8	2.6	1.8	1.3	0.7	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.9	1.1	1.3	1.2	2.6
14-Sep	1.9	1.6	Z	1.4	1.3	2.1	1.7	2.1	2.1	0.7	0.4	0.5	0.5	0.8	1.3	0.6	0.6	0.4	0.5	0.5	0.8	0.6	0.5	0.5	1.0	2.1
15-Sep	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.2	0.4	0.6	0.5	0.6	0.4	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.3	0.3	0.6	0.4	0.6
16-Sep	0.8	0.6	0.4	0.4	Z	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.9	1.0	0.8	0.8	0.7	0.5	1.0
17-Sep	0.9	1.0	1.4	2.2	2.5	Z	1.6	1.2	1.1	0.9	0.9	0.7	0.6	0.8	0.9	1.2	1.1	1.2	1.3	0.8	0.8	1.2	2.3	1.4	1.2	2.5
18-Sep	Z	1.2	1.7	1.5	1.2	1.2	1.6	1.4	1.1	0.8	0.7	0.7	0.8	0.9	0.8	0.6	0.6	0.6	0.7	0.7	0.7	1.5	1.5	1.1	1.0	1.7
19-Sep	1.1	Z	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.6	0.4	1.1
20-Sep	0.5	0.3	Z	1.3	1.4	1.6	1.7	1.8	1.4	1.1	0.9	1.0	1.0	0.8	0.8	0.9	1.1	1.3	1.3	1.2	1.2	1.3	1.7	1.6	1.2	1.8
21-Sep	1.5	1.5	1.5	Z	1.5	1.3	1.3	1.1	1.0	0.8	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.8	0.5	0.5	0.3	0.7	1.5
22-Sep	0.2	0.4	0.4	0.4	Z	0.6	0.4	0.4	0.4	0.3	C	C	C	C	C	0.1	0.0	0.0	0.0	0.1	0.4	0.6	0.7	0.8	0.3	0.8
23-Sep	1.1	1.0	0.9	0.9	1.0	Z	1.2	0.8	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.5	1.2
24-Sep	Z	0.6	0.4	0.3	0.3	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	0.6	1.1	1.5	0.8	0.3	0.4	1.5
25-Sep	0.3	Z	0.4	0.3	0.3	0.5	0.6	0.4	0.5	1.5	0.5	0.4	0.4	0.9	1.0	0.7	1.0	0.8	0.8	1.0	1.1	0.9	0.6	0.4	0.7	1.5
26-Sep	0.4	0.5	Z	0.8	0.8	0.8	0.8	0.5	0.5	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.4	0.8
27-Sep	0.7	0.5	0.4	Z	0.6	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	0.1	0.1	0.2	0.2	0.2	0.2	0.7
28-Sep	0.3	0.2	0.2	0.2	Z	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.5	0.8	0.7	0.6	0.9	1.1	0.4	1.1
29-Sep	2.1	2.1	1.4	0.8	0.8	Z	1.2	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	1.0	1.4	1.0	1.5	1.6	1.0	1.0	1.9	1.1	2.1
30-Sep	Z	1.3	1.3	1.3	1.5	1.5	1.6	2.0	1.9	2.0	1.5	1.1	0.9	0.9	0.9	1.1	0.9	1.0	1.7	1.8	2.0	1.6	2.3	2.9	1.5	2.9
	1.1	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.0	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.9	1.0	1.0	1.0	1.1	Diurnal Average	
	2.5	2.1	2.7	2.7	2.6	2.3	2.2	2.6	2.6	4.1	4.1	2.5	1.7	1.6	1.9	1.8	1.8	1.8	2.2	2.9	3.1	2.3	2.3	2.9	Diurnal Maximum	

Z - zerospan C - Calibration

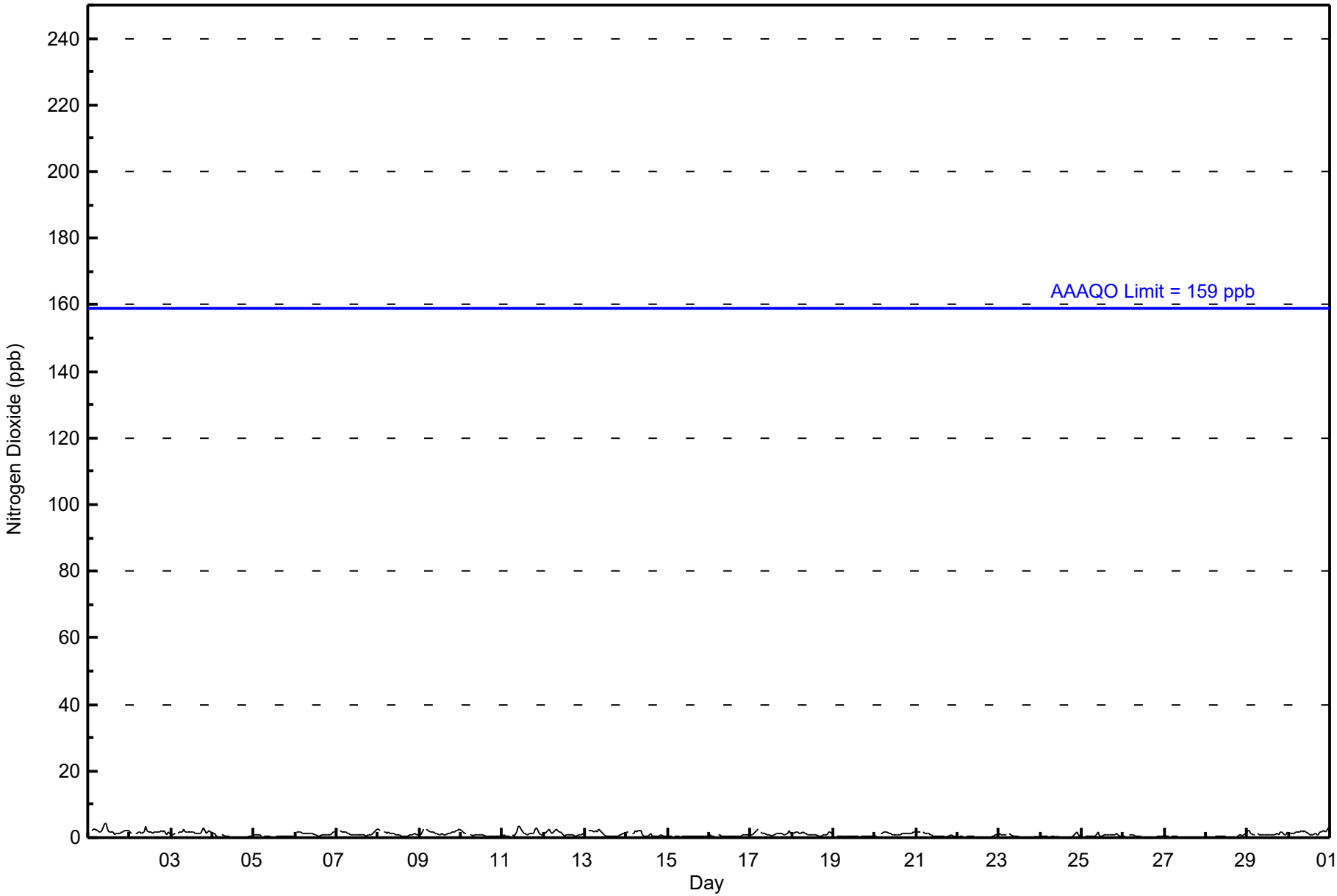
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - September 2025



Nitrogen Dioxide (NO_2) - ppb
Stony Mountain - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684
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	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684

Total Number of Valid Hours: 684

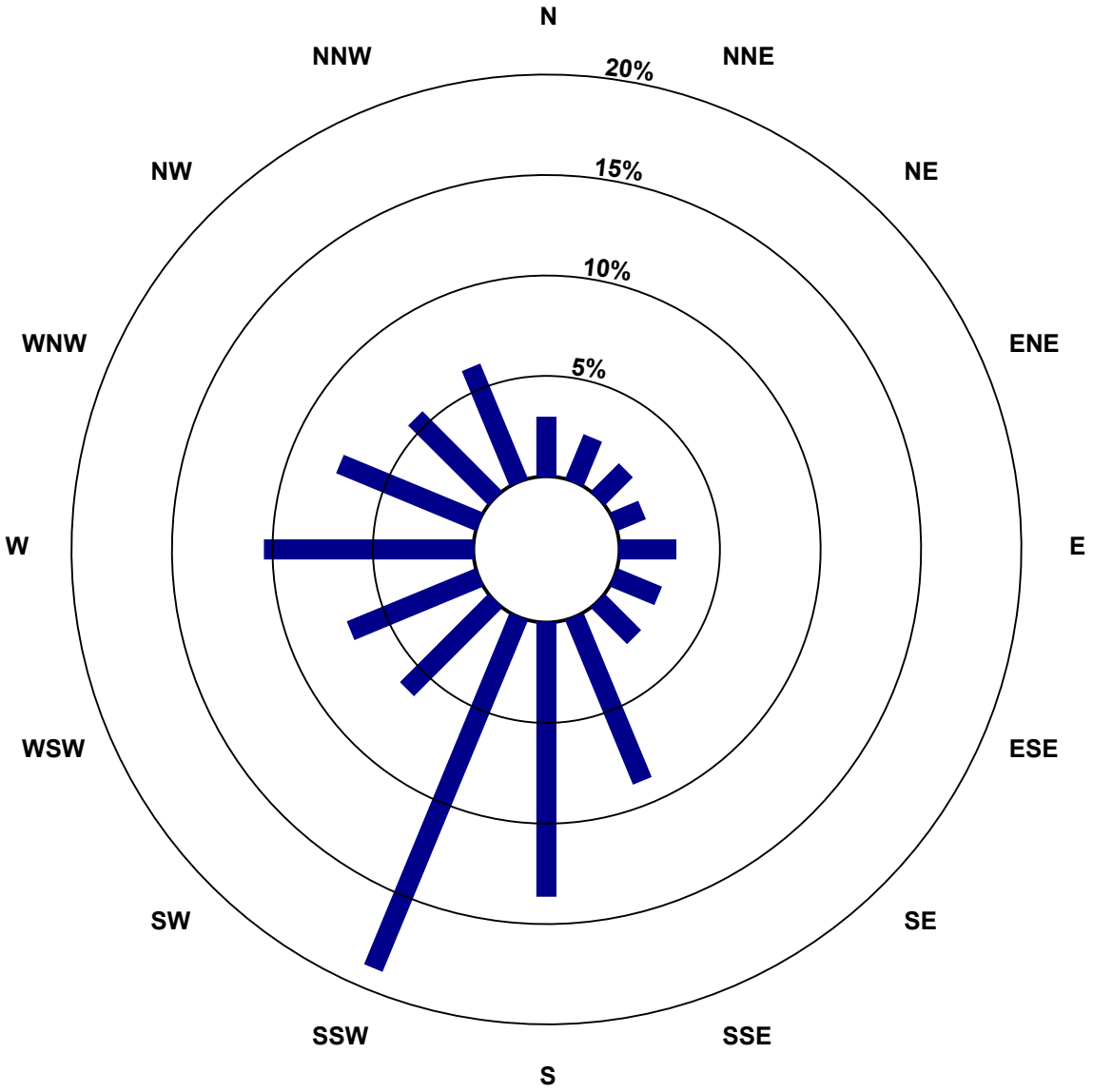
Total Number of Hours: 720

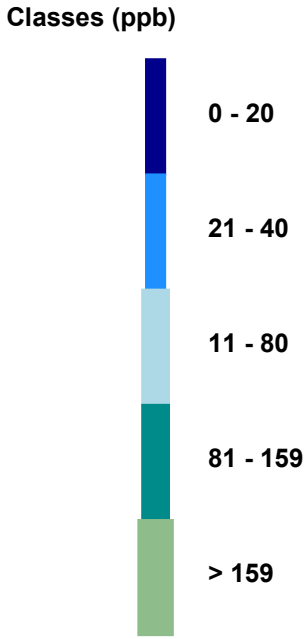
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain





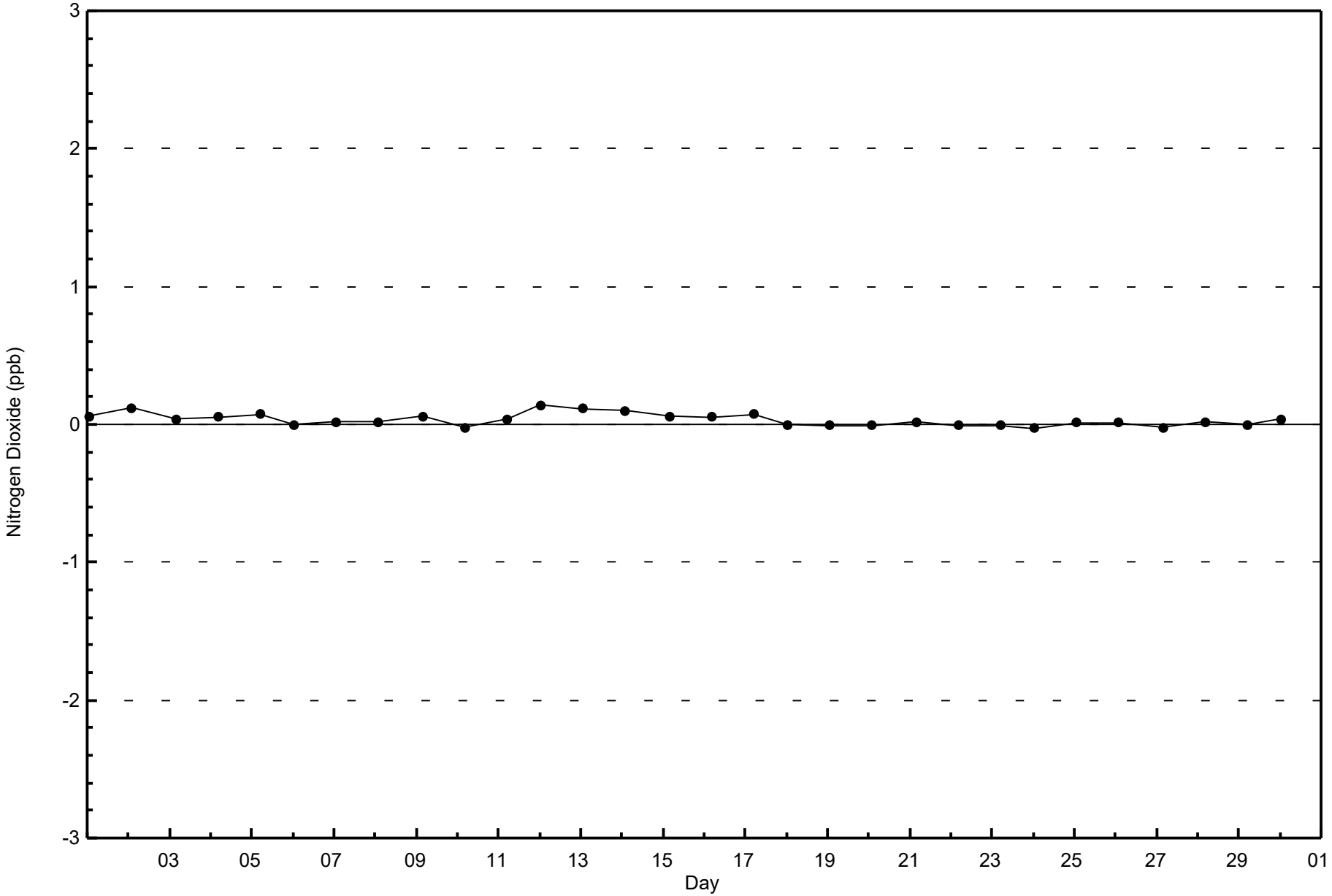
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - September 2025

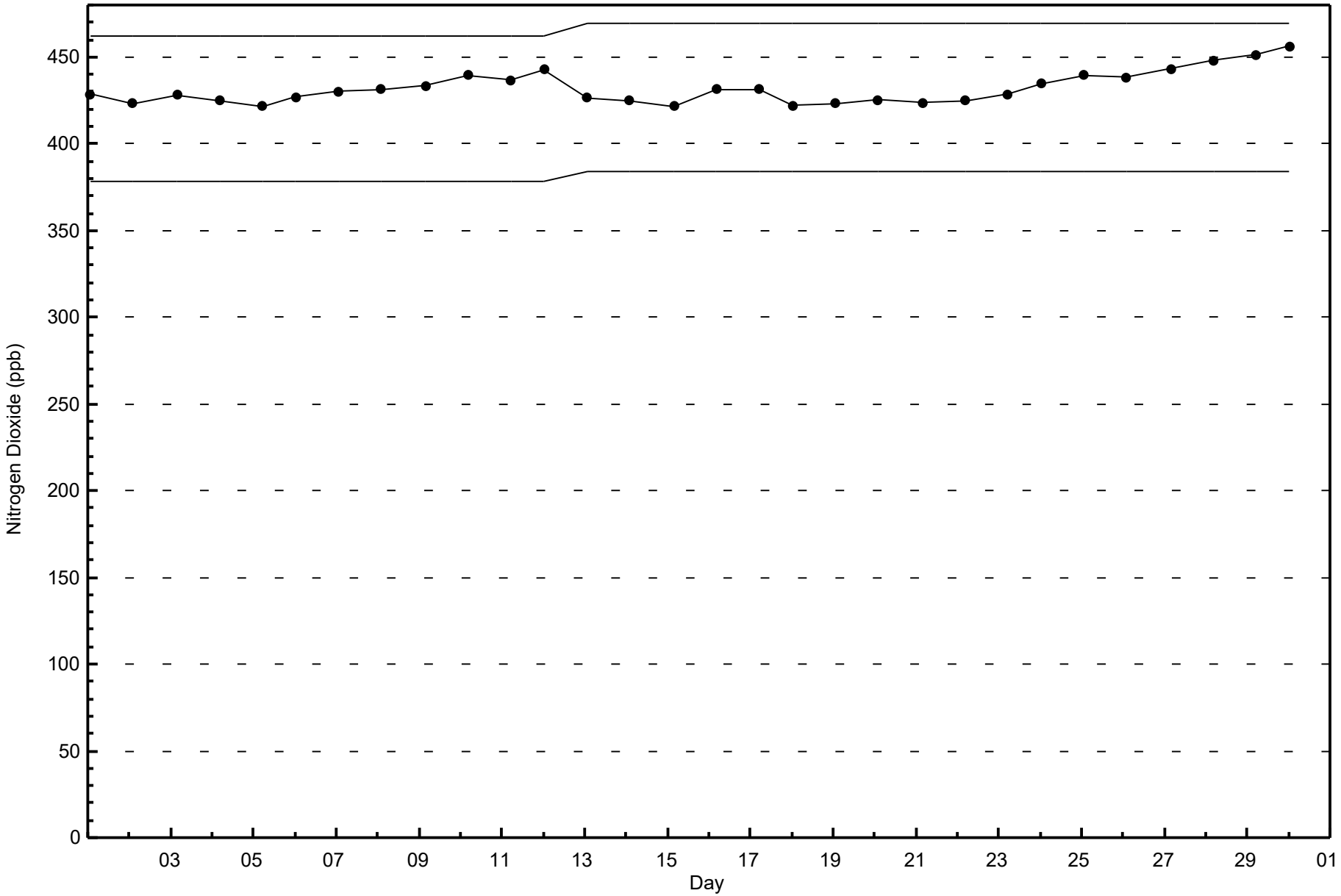


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - September 2025

Maximum Value: 5.2 ppb on Sep 1 10:00

Maximum Daily Average: 2.2 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 22 17:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 16

Monthly Average: 0.98 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.4 Median = 0.8 Q_3 = 1.4 P_{90} = 1.9 P_{99} = 3.0

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.6	Z	2.3	2.7	2.5	2.2	1.8	1.9	2.6	5.2	4.8	3.1	2.3	2.1	2.2	1.0	1.1	1.1	1.1	1.5	1.7	2.3	2.0	2.2	2.2	5.2
2-Sep	1.9	1.2	Z	1.3	1.4	1.5	1.8	1.4	1.7	4.3	2.8	1.8	1.7	1.4	1.6	1.8	1.8	1.8	2.2	1.9	2.2	0.9	1.5	1.2	1.8	4.3
3-Sep	1.0	1.0	1.1	Z	1.4	1.5	1.8	2.7	1.8	1.9	1.9	1.7	1.7	1.5	1.4	1.4	1.3	1.1	2.0	2.9	1.2	1.9	2.3	1.7	1.7	2.9
4-Sep	1.4	1.3	0.5	0.4	Z	0.9	0.8	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.4	1.4
5-Sep	0.9	1.0	1.0	0.8	0.5	Z	0.5	0.6	0.5	0.5	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.5	1.0
6-Sep	Z	1.9	1.9	1.5	1.2	1.2	1.5	1.5	1.4	1.5	1.3	1.0	0.9	0.6	0.5	0.7	1.0	1.0	0.9	0.9	1.0	1.2	1.5	1.5	1.2	1.9
7-Sep	2.5	Z	2.0	1.8	1.7	1.5	1.1	1.1	1.0	1.0	1.0	0.9	0.8	0.8	0.9	0.8	0.7	0.6	0.7	0.7	1.0	1.3	1.7	2.5	1.2	2.5
8-Sep	2.5	2.1	Z	1.8	1.7	1.4	1.6	1.7	1.8	1.5	1.0	0.9	0.8	0.6	0.5	0.5	0.5	0.6	0.7	0.9	0.9	1.1	0.8	0.8	1.2	2.5
9-Sep	0.8	0.8	2.7	Z	2.6	2.3	2.0	2.0	1.8	1.5	1.2	1.1	1.1	1.2	1.0	1.0	1.2	1.3	1.3	1.6	1.9	2.2	2.3	2.4	1.6	2.7
10-Sep	2.1	1.8	1.4	1.4	Z	0.9	0.7	0.6	0.7	0.8	0.9	0.9	0.9	0.7	0.5	0.4	0.3	0.3	0.4	0.5	0.3	0.3	0.4	0.5	0.8	2.1
11-Sep	0.6	0.7	0.4	0.4	0.5	Z	1.0	0.6	2.0	3.9	3.8	2.8	1.4	1.5	0.8	1.0	1.1	1.2	1.3	2.4	3.1	1.4	1.0	0.8	1.5	3.9
12-Sep	Z	1.4	2.3	2.5	1.7	1.4	2.3	2.9	2.7	2.0	1.7	0.9	0.6	0.9	0.9	0.9	0.8	0.7	0.6	0.6	0.7	0.7	0.7	1.2	1.3	2.9
13-Sep	1.2	Z	2.0	2.2	2.1	1.9	2.0	1.9	2.9	2.1	1.4	0.7	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.9	1.1	1.3	1.3	2.9
14-Sep	1.9	1.6	Z	1.4	1.3	2.1	1.7	2.2	2.2	0.8	0.5	0.6	0.5	0.9	1.4	0.6	0.6	0.4	0.5	0.5	0.8	0.6	0.5	0.5	1.0	2.2
15-Sep	0.4	0.4	0.4	Z	0.4	0.3	0.3	0.2	0.4	0.6	0.6	0.6	0.4	0.5	0.5	0.5	0.5	0.3	0.4	0.5	0.5	0.3	0.3	0.6	0.4	0.6
16-Sep	0.8	0.6	0.4	0.4	Z	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.9	1.0	0.8	0.8	0.7	0.5	1.0
17-Sep	0.9	1.0	1.4	2.2	2.5	Z	1.7	1.5	1.5	1.1	1.0	0.7	0.6	0.8	0.9	1.2	1.1	1.2	1.3	0.8	0.8	1.2	2.3	1.4	1.3	2.5
18-Sep	Z	1.2	1.7	1.5	1.2	1.2	1.6	1.6	1.3	0.9	0.8	0.8	0.8	0.9	0.8	0.6	0.6	0.6	0.7	0.7	0.7	1.5	1.5	1.1	1.1	1.7
19-Sep	1.1	Z	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.6	0.4	1.1
20-Sep	0.5	0.3	Z	1.3	1.4	1.6	1.7	1.9	1.6	1.2	1.0	1.1	1.0	0.8	0.8	0.9	1.1	1.3	1.3	1.2	1.2	1.3	1.7	1.6	1.2	1.9
21-Sep	1.5	1.5	1.5	Z	1.5	1.3	1.3	1.1	1.1	0.8	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.8	0.5	0.5	0.3	0.7	1.5
22-Sep	0.2	0.4	0.4	0.4	Z	0.6	0.4	0.4	0.4	0.3	C	C	C	C	C	0.1	0.0	0.0	0.0	0.1	0.4	0.6	0.7	0.8	0.4	0.8
23-Sep	1.1	1.0	0.9	0.9	1.0	Z	1.3	0.9	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.5	1.3
24-Sep	Z	0.6	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.6	1.1	1.5	0.8	0.3	0.4	1.5
25-Sep	0.3	Z	0.4	0.3	0.3	0.5	0.6	0.4	0.5	2.0	0.6	0.5	0.5	1.0	1.1	0.8	1.0	0.8	0.8	1.0	1.1	0.9	0.6	0.4	0.7	2.0
26-Sep	0.4	0.5	Z	0.8	0.8	0.9	0.8	0.6	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.4	0.9
27-Sep	0.7	0.5	0.4	Z	0.6	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	0.2	0.2	0.2	0.3	0.7
28-Sep	0.3	0.2	0.2	0.2	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.6	0.8	0.8	0.6	0.9	1.1	0.4	1.1
29-Sep	2.1	2.1	1.4	0.8	0.8	Z	1.2	0.8	0.9	0.9	1.0	0.9	0.9	1.0	0.9	0.9	1.0	1.5	1.0	1.5	1.6	1.1	1.0	1.9	1.2	2.1
30-Sep	Z	1.4	1.4	1.4	1.5	1.5	1.7	2.1	2.0	2.2	1.7	1.2	1.0	1.0	1.0	1.2	1.0	1.1	1.8	1.9	2.0	1.7	2.4	3.0	1.6	3.0
	1.2	1.1	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.3	1.1	0.9	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.9	1.0	1.0	1.0	1.1	Diurnal Average	
	2.5	2.1	2.7	2.7	2.6	2.3	2.3	2.9	2.9	5.2	4.8	3.1	2.3	2.1	2.2	1.8	1.8	1.8	2.2	2.9	3.1	2.3	2.4	3.0	Diurnal Maximum	

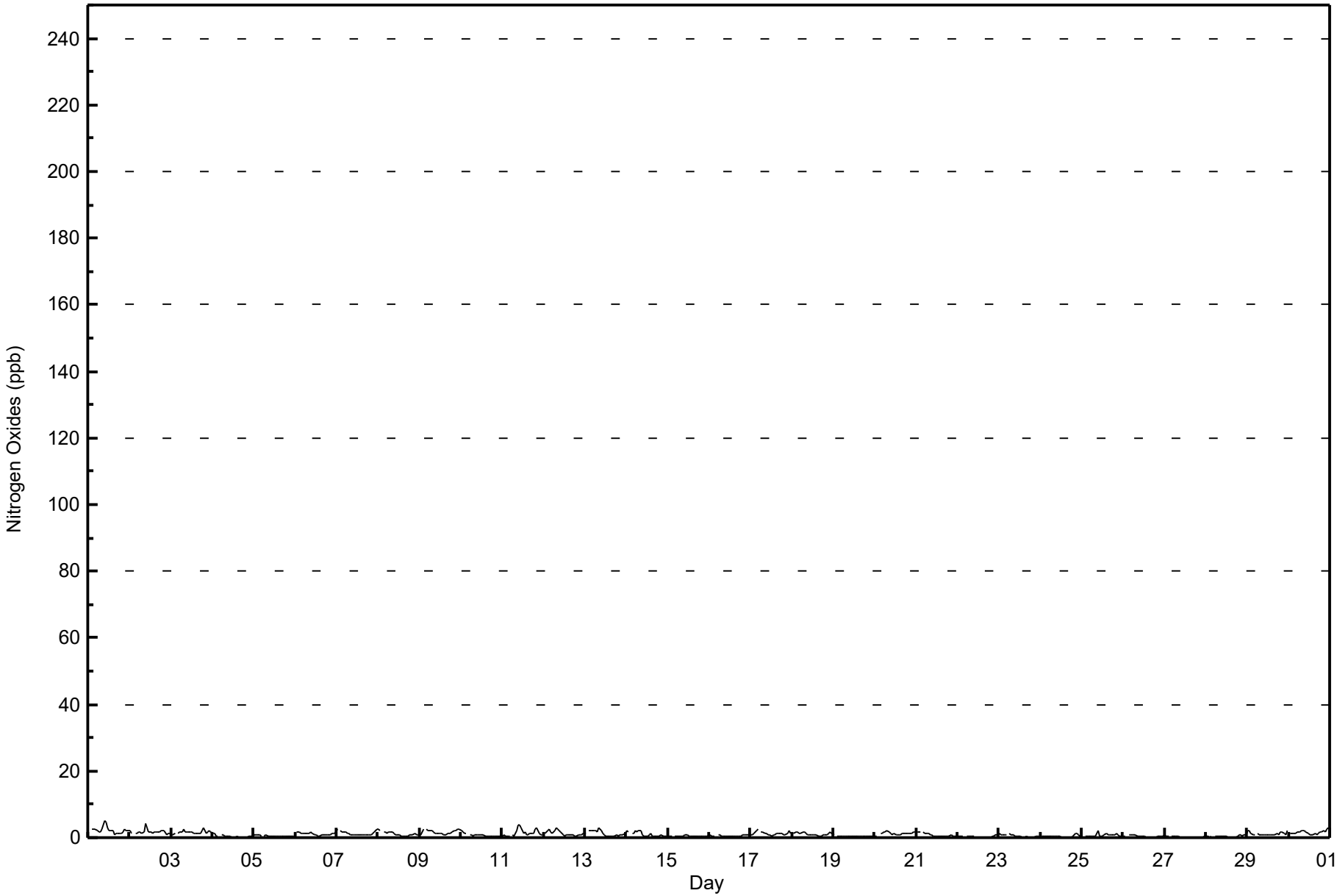
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - September 2025



Nitrogen Oxides (NO_X) - ppb
Stony Mountain - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684
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	20	16	13	10	19	16	17	60	93	129	42	47	71	51	38	42	684

Total Number of Valid Hours: 684

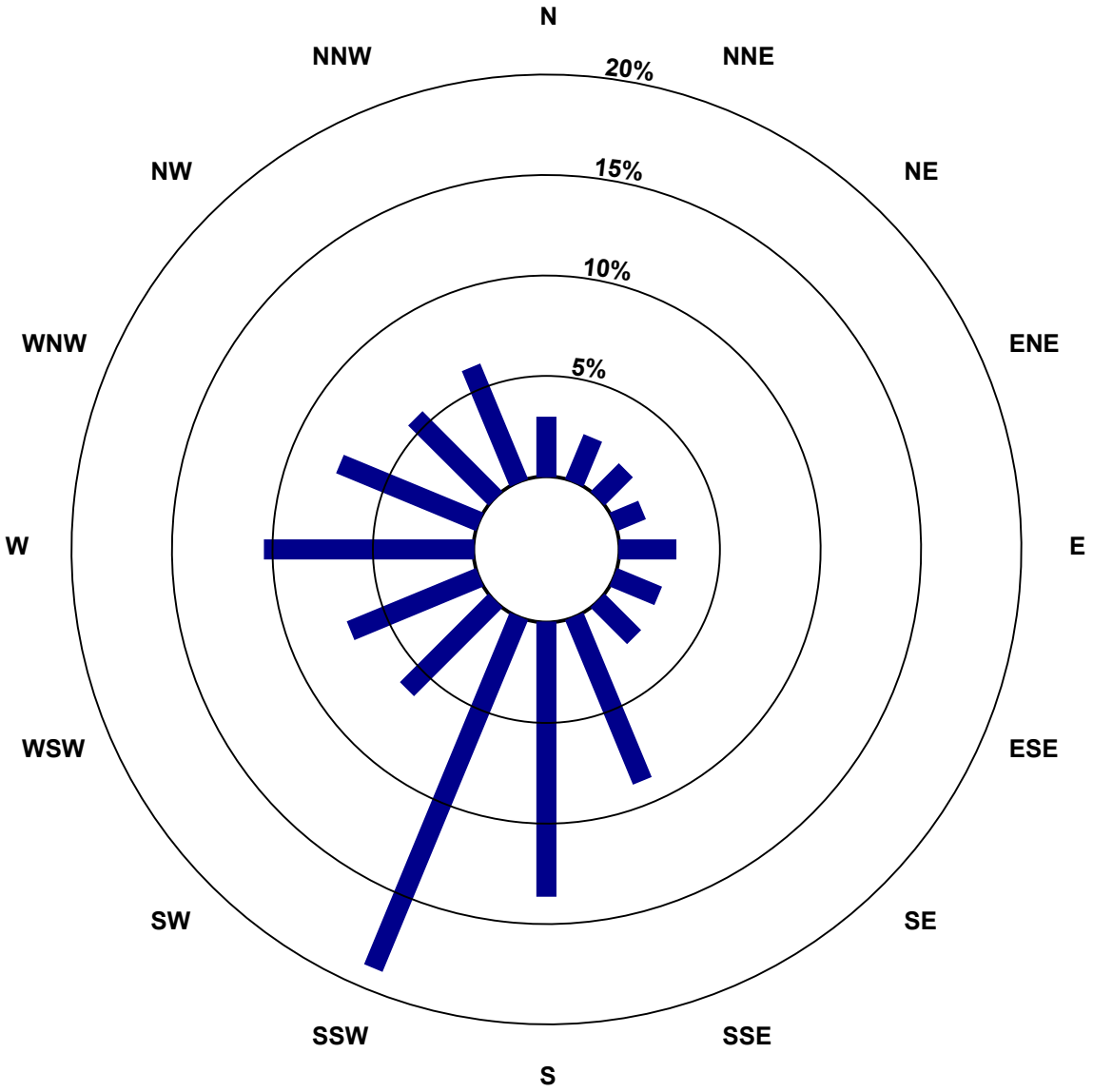
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Stony Mountain



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

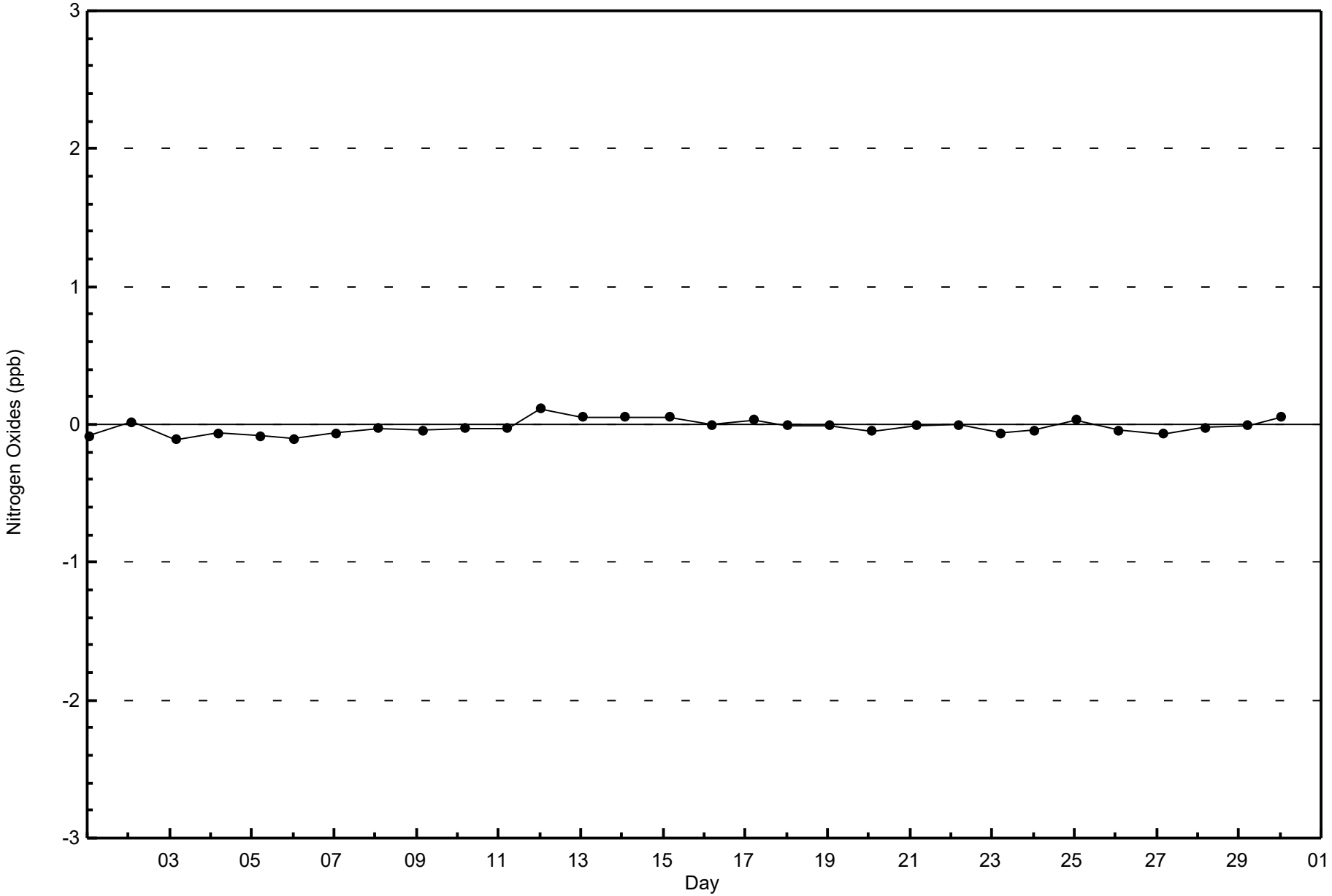
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - September 2025

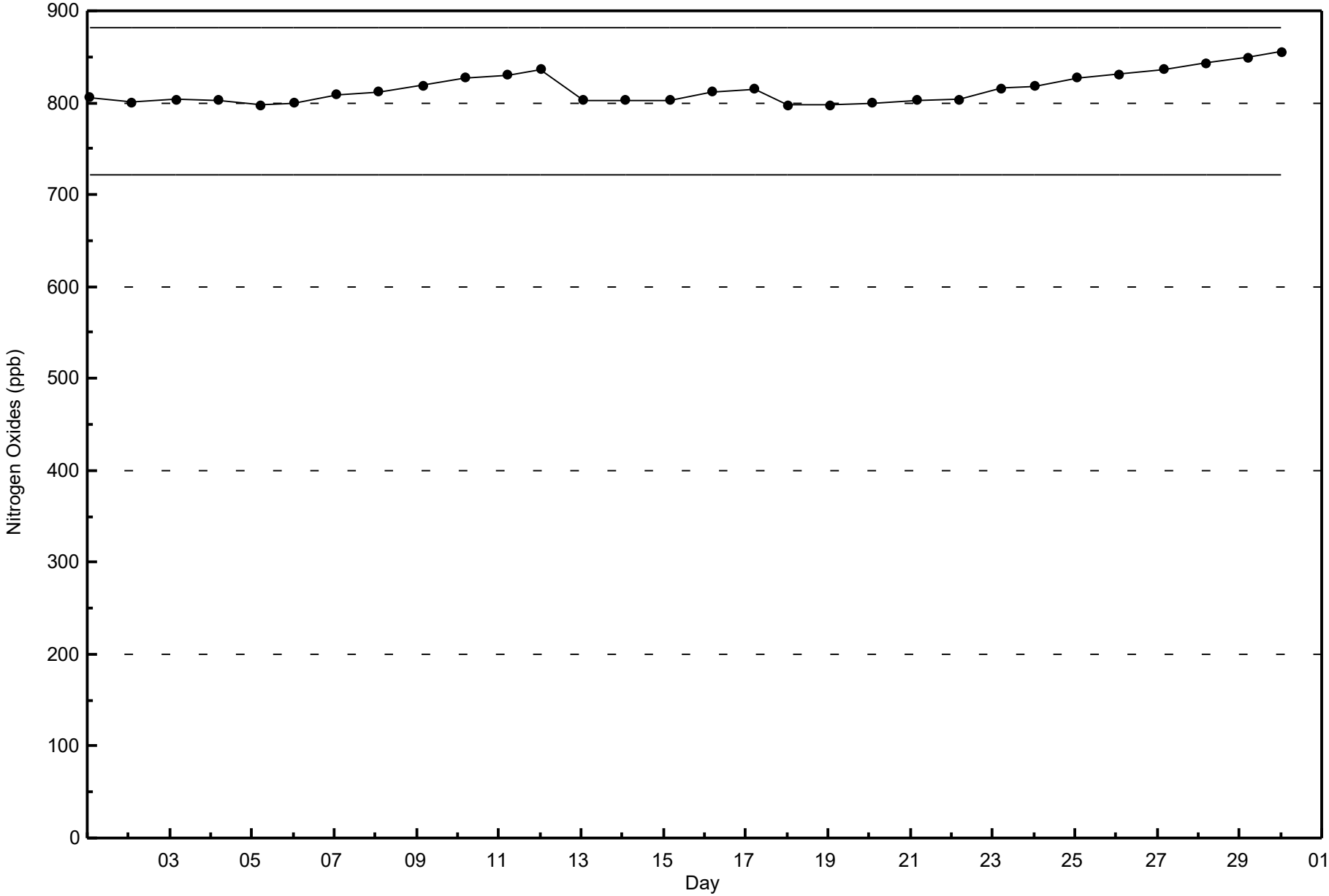


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Stony Mountain - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.2 ppb on Sep 9 17:00 Maximum Daily Average: 40.2 ppb on Sep 13

Minimum Value: 7.5 ppb on Sep 1 12:00 Minimum Daily Average: 14.6 ppb on Sep 1
Maximum Diurnal Average: 34.6 ppb at hour 16 Minimum Diurnal Average: 21.9 ppb at hour 8
Monthly Average: 28.42 ppb Percentiles: P_1 = 9.9 P_{10} = 17.8 Q_1 = 23.2 Median = 28.5 Q_3 = 33.1 P_{90} = 38.6 P_{99} = 49.2

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	10.0	8.6	10.3	9.4	8.1	7.9	8.7	11.1	11.8	8.4	7.5	12.1	17.3	18.8	20.5	24.3	19.3	15.6	18.5	21.7	23.9	21.4	21.0	14.6	24.3
2-Sep	17.6	Z	17.3	15.5	16.5	18.5	19.2	17.3	19.3	20.1	25.9	31.0	33.5	33.1	36.3	37.1	35.0	30.8	30.7	25.9	23.1	23.0	19.6	20.9	24.7	37.1
3-Sep	24.4	23.9	Z	22.6	21.4	21.6	21.3	20.9	22.9	25.2	26.8	29.2	34.7	34.1	33.0	30.8	29.3	29.1	29.0	28.3	28.9	26.0	24.4	23.2	26.6	34.7
4-Sep	21.8	20.7	21.5	Z	22.0	20.6	20.7	21.1	23.2	24.9	25.2	25.1	25.1	25.5	25.8	26.0	25.7	24.9	22.2	19.9	21.2	21.8	21.6	22.3	23.0	26.0
5-Sep	23.8	23.3	22.5	22.8	Z	22.6	22.6	22.2	22.6	25.1	25.9	27.1	27.7	28.8	30.5	31.2	31.9	31.3	28.4	29.9	29.1	28.2	26.2	30.1	26.7	31.9
6-Sep	26.9	24.0	23.3	22.8	23.8	Z	22.6	22.9	22.9	23.7	30.5	36.5	42.0	44.8	45.8	48.0	48.5	46.6	42.1	40.4	38.6	37.3	36.5	35.5	34.2	48.5
7-Sep	Z	31.7	31.4	30.2	29.1	27.3	22.2	22.4	21.9	23.9	30.6	27.0	19.4	21.0	31.5	31.4	25.2	23.0	24.3	22.4	20.6	22.8	25.7	23.3	25.6	31.7
8-Sep	21.0	Z	17.2	15.2	12.1	10.7	10.4	11.7	14.0	15.3	20.2	24.4	25.2	26.1	26.4	26.2	26.2	22.6	23.8	23.0	23.0	22.2	21.8	18.7	19.9	26.4
9-Sep	19.5	20.4	Z	19.1	19.3	17.8	16.1	13.7	16.2	21.1	31.5	39.6	43.8	46.3	46.1	48.8	52.2	49.2	45.0	43.1	44.7	41.6	38.9	37.6	33.6	52.2
10-Sep	36.5	36.0	34.3	Z	31.2	28.2	24.6	23.0	23.3	23.1	22.6	22.5	23.7	25.6	27.7	28.4	27.2	25.7	24.2	24.9	25.6	25.9	25.2	29.7	26.9	36.5
11-Sep	28.2	27.8	28.3	27.7	Z	30.4	27.5	23.5	27.2	29.6	35.1	C	C	C	C	34.5	32.1	29.7	29.6	32.4	31.3	30.0	29.5	34.2	29.9	35.1
12-Sep	33.3	33.1	30.4	27.8	23.9	Z	21.4	21.0	21.7	24.2	36.1	40.3	41.5	47.4	48.6	49.5	48.6	44.8	41.6	42.0	42.2	43.4	41.9	37.2	36.6	49.5
13-Sep	Z	31.3	29.4	29.9	29.5	31.0	29.3	27.5	27.6	30.9	38.7	42.5	47.8	51.2	51.2	51.4	51.6	48.4	47.0	46.9	45.8	46.6	46.2	43.8	40.2	51.6
14-Sep	39.8	Z	37.3	37.0	33.3	30.6	22.7	15.7	14.2	24.9	27.0	34.7	35.3	35.0	31.9	31.9	27.6	26.5	28.1	25.1	22.2	19.3	15.3	12.2	27.3	39.8
15-Sep	14.7	15.9	Z	11.2	11.8	11.4	16.3	11.4	15.2	22.4	22.2	27.9	27.3	28.1	28.9	29.3	25.1	24.1	28.9	29.7	24.6	19.4	17.8	16.1	20.9	29.7
16-Sep	13.8	13.6	13.0	Z	13.1	12.6	12.3	12.2	13.0	14.9	18.9	22.0	22.2	22.9	23.2	24.3	23.7	22.3	21.7	21.4	23.2	22.4	22.9	21.8	18.8	24.3
17-Sep	19.6	17.4	15.6	15.8	Z	12.9	12.1	13.4	16.4	24.0	28.7	31.3	32.3	35.7	39.3	44.2	43.3	39.7	33.5	29.6	28.6	28.7	29.2	28.6	27.0	44.2
18-Sep	27.5	26.7	25.1	24.3	23.9	Z	21.9	20.7	21.9	24.7	25.9	28.7	29.9	34.5	36.7	35.7	34.7	31.8	30.3	28.4	28.1	25.2	23.4	22.9	27.5	36.7
19-Sep	Z	27.6	30.3	29.9	30.0	30.9	30.6	30.8	30.5	31.6	34.9	35.9	38.5	38.8	38.1	38.7	39.7	37.6	36.4	35.1	35.9	34.2	34.1	33.7	34.1	39.7
20-Sep	34.4	Z	30.3	29.9	30.4	28.9	27.3	26.4	28.3	32.5	39.5	43.4	44.4	45.1	48.0	49.8	48.7	46.8	43.8	41.9	39.4	39.7	38.6	38.6	38.1	49.8
21-Sep	37.9	37.0	Z	34.9	34.6	36.7	33.9	31.6	33.4	33.6	33.4	34.9	35.7	37.1	38.6	38.0	36.4	36.7	37.3	36.7	33.6	27.7	24.7	26.4	34.4	38.6
22-Sep	27.0	25.9	26.1	Z	23.7	23.7	24.4	25.1	25.4	24.9	25.5	28.1	29.4	30.6	31.6	33.2	33.6	32.0	29.9	28.4	27.4	27.2	28.9	28.9	27.9	33.6
23-Sep	29.7	30.3	30.5	30.4	Z	30.3	29.8	30.3	27.2	30.5	33.0	32.7	34.5	35.4	36.5	36.4	35.9	36.8	35.1	36.4	38.1	36.2	37.9	35.5	33.4	38.1
24-Sep	32.7	31.8	27.6	24.2	25.8	Z	30.3	27.2	23.1	22.5	23.6	25.8	28.5	28.6	30.5	30.8	31.0	30.7	29.1	30.4	32.4	33.1	30.6	29.5	28.7	33.1
25-Sep	Z	24.4	25.2	22.5	23.7	22.9	24.3	24.0	24.0	25.4	31.5	32.9	33.2	33.3	33.4	33.5	35.0	34.9	32.2	31.3	32.4	34.6	36.1	35.1	29.8	36.1
26-Sep	33.3	Z	27.5	26.5	24.7	22.5	21.7	22.1	24.4	27.5	29.0	30.6	31.5	32.1	32.9	33.5	33.9	33.9	33.5	31.8	32.9	32.9	31.1	30.0	29.6	33.9
27-Sep	28.8	28.7	Z	30.1	30.0	30.5	29.0	29.9	30.6	32.4	33.1	33.6	33.3	32.8	33.0	33.6	33.3	32.2	31.8	30.6	30.3	32.7	35.5	33.8	31.7	35.5
28-Sep	33.1	32.5	32.0	Z	30.7	29.1	27.9	26.7	25.7	25.9	27.2	27.9	28.8	30.6	31.1	31.2	32.0	28.5	26.8	27.0	26.1	26.7	26.9	27.7	28.8	33.1
29-Sep	26.1	25.1	26.1	27.9	Z	27.6	26.9	29.0	29.8	30.3	31.4	32.4	32.6	33.2	33.7	33.9	33.3	31.9	31.7	30.5	29.3	30.3	32.0	32.0	30.3	33.9
30-Sep	32.1	31.7	31.0	30.5	29.6	Z	27.0	25.3	25.2	25.0	26.9	26.2	26.6	26.1	23.4	16.5	13.7	12.9	17.2	14.3	14.4	14.6	13.2	11.9	22.4	32.1
	27.3	26.0	25.7	24.8	24.1	23.5	22.8	21.9	22.7	25.1	28.3	30.4	31.7	33.1	34.2	34.6	34.0	32.2	31.0	30.2	29.8	29.3	28.6	28.1	Diurnal Average	
	39.8	37.0	37.3	37.0	34.6	36.7	33.9	31.6	33.4	33.6	39.5	43.4	47.8	51.2	51.2	51.4	52.2	49.2	47.0	46.9	45.8	46.6	46.2	43.8	Diurnal Maximum	

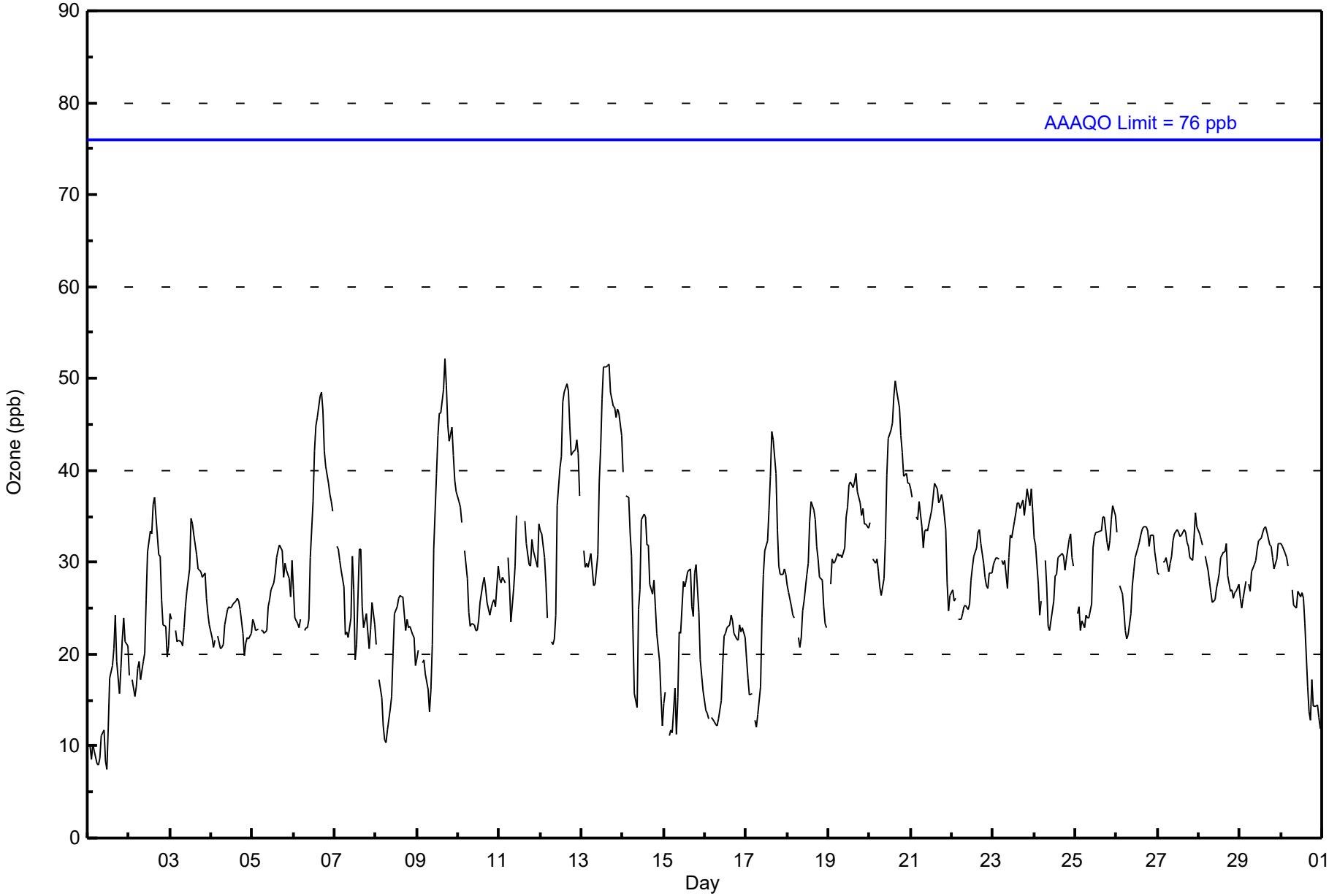
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Stony Mountain - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	90	13.12	13.12
21 - 50	591	86.15	99.27
51 - 82	5	0.73	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Stony Mountain - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	6	4	5	4	2	1	1	3	12	7	2	5	4	6	10	18	90
21 - 50	13	11	8	6	15	14	16	56	81	116	41	46	67	45	30	25	590
51 - 82	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	5
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	15	13	10	17	15	17	59	94	127	43	51	71	51	40	43	685

Total Number of Valid Hours: 685

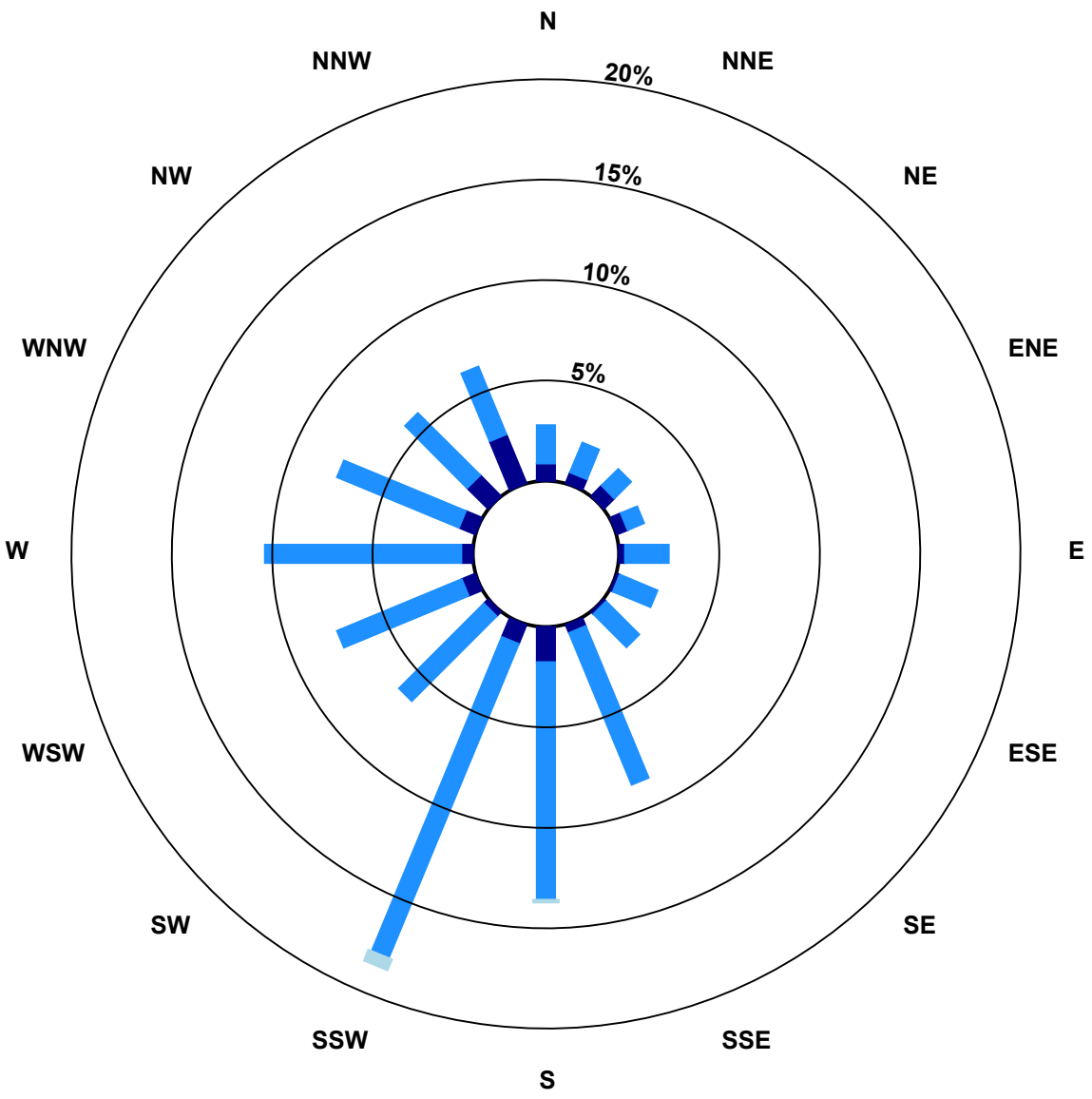
Total Number of Hours: 720

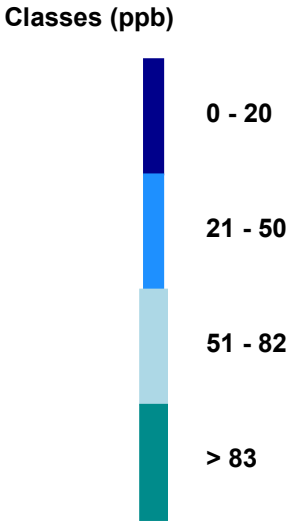
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Stony Mountain





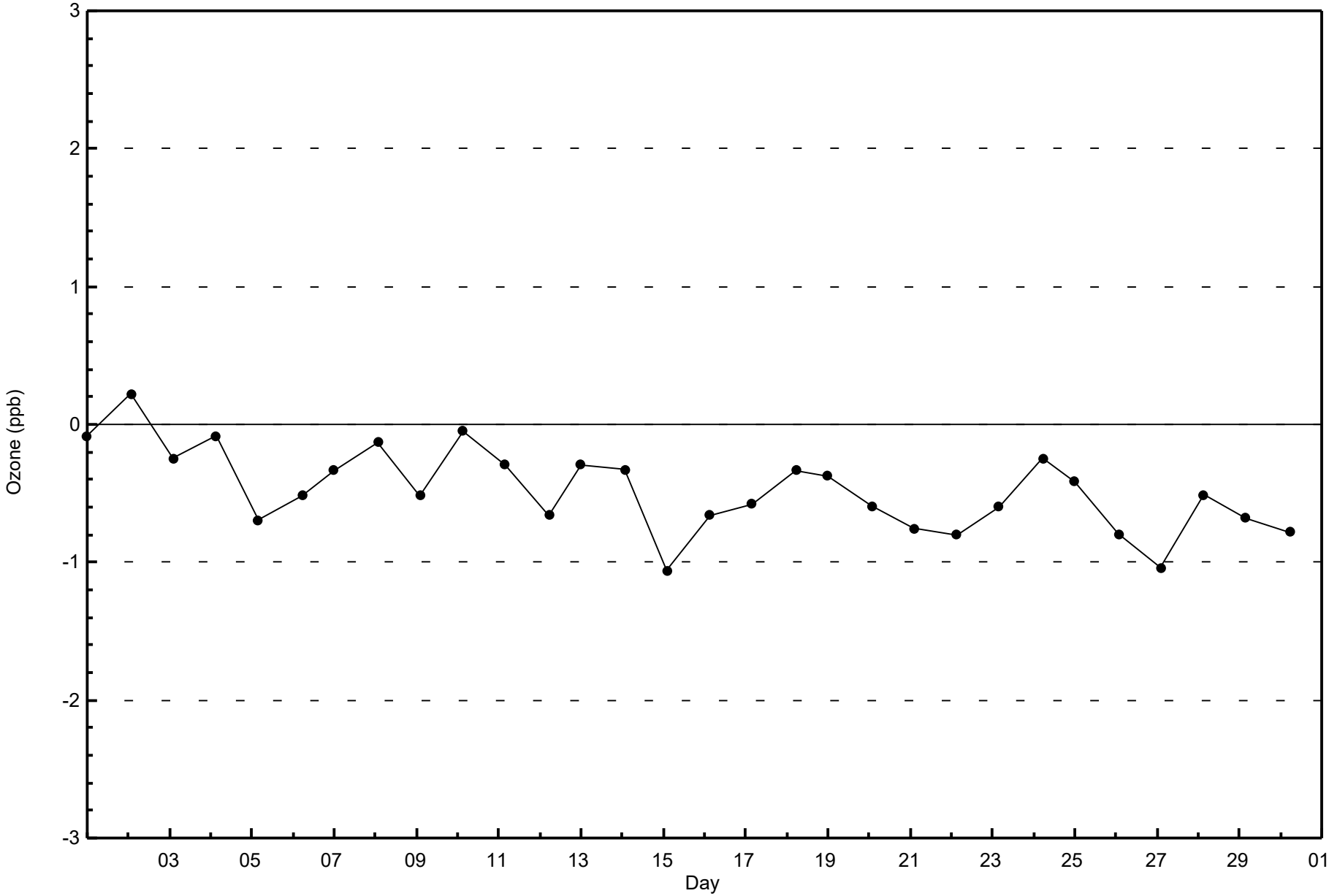
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Stony Mountain - September 2025

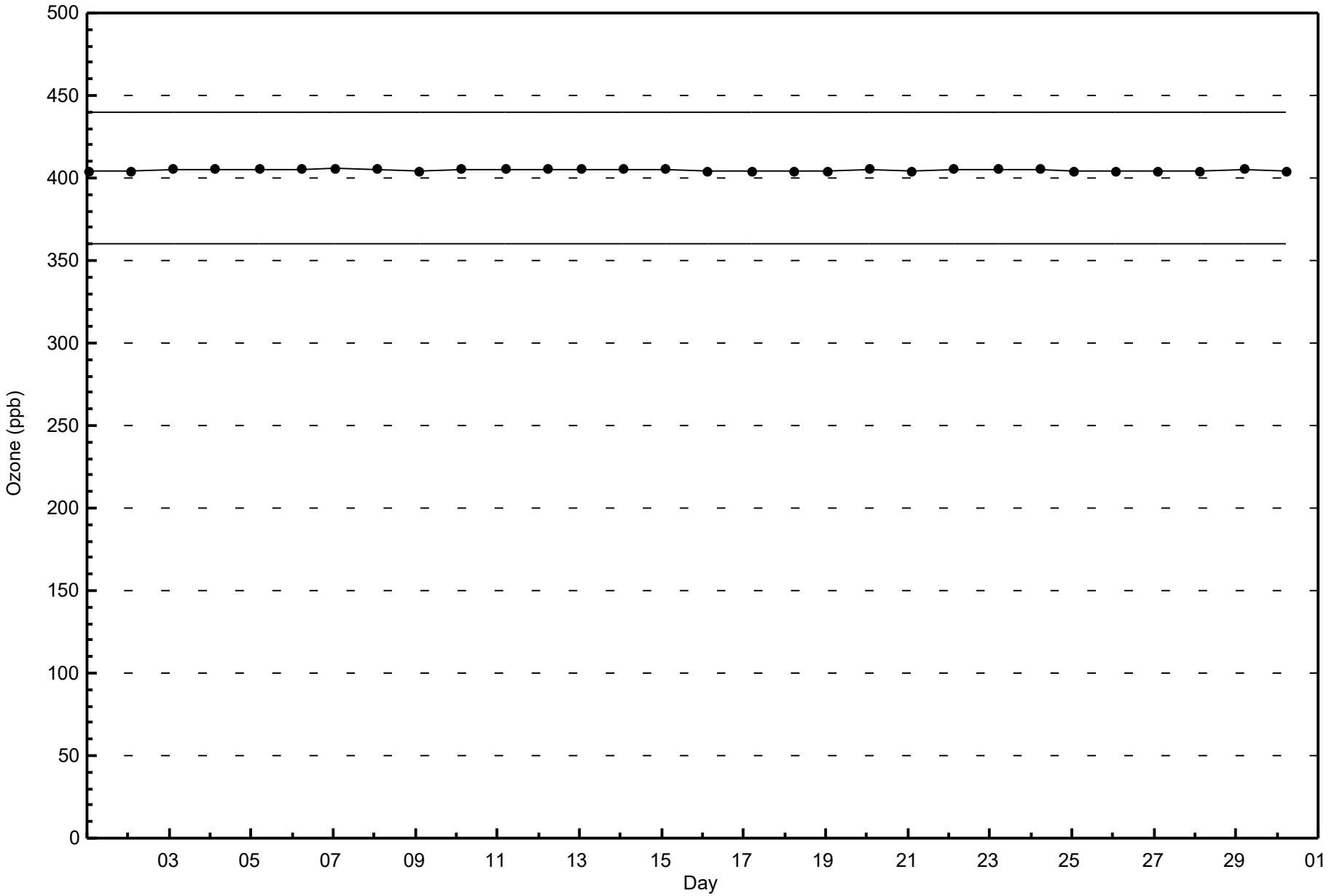


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Stony Mountain - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Stony Mountain - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 4

Maximum Value: 225.6 $\mu g/m^3$ on Sep 11 21:00

Maximum Daily Average: 68.1 $\mu g/m^3$ on Sep 2

Minimum Value: 0.6 $\mu g/m^3$ on Sep 27 23:00

Minimum Daily Average: 0.9 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 25.2 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 14.4 $\mu g/m^3$ at hour 9

Monthly Average: 17.38 $\mu g/m^3$

Percentiles: P_1 = 0.7 P_{10} = 1.4 Q_1 = 4.6 Median = 11.6 Q_3 = 20.7 P_{90} = 39.8 P_{99} = 104.3

Hours in Service:	720
Hours of Data:	691
Hours of Missing Data:	29
Hours of Calibration:	6
Percent Operational Time:	96.8

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	67.8	74.1	75.8	75.2	66.9	59.7	51.8	41.5	39.8	29.3	25.1	28.2	28.8	18.4	27.5	34.0	37.0	29.8	29.1	42.3	54.2	61.2	65.3	81.0	47.7	81.0
2-Sep	94.7	103.9	110.0	110.4	107.6	101.0	90.8	81.7	79.8	79.6	61.7	49.7	50.2	49.1	46.4	43.5	43.2	44.5	49.0	49.7	46.8	49.5	45.9	45.5	68.1	110.4
3-Sep	46.1	42.6	40.2	38.9	35.8	33.9	33.2	31.6	29.8	30.6	31.9	33.3	41.8	45.8	46.8	43.7	44.6	59.3	62.1	54.8	30.8	36.2	45.5	46.8	41.1	62.1
4-Sep	44.0	38.6	33.1	36.9	23.8	35.5	27.0	18.3	9.7	6.2	5.7	5.2	6.1	7.2	6.9	6.7	5.5	4.9	5.3	6.7	6.3	4.6	4.5	4.8	14.7	44.0
5-Sep	5.0	4.9	4.8	4.3	4.0	4.6	4.5	5.0	4.7	4.9	5.2	6.1	7.2	7.8	8.5	8.4	7.8	7.3	7.8	7.5	7.5	7.8	8.0	7.1	6.3	8.5
6-Sep	6.9	6.0	5.3	5.2	5.0	5.1	5.2	5.5	5.1	4.9	5.3	7.3	10.5	13.1	13.3	14.2	12.6	10.9	9.4	9.5	10.3	9.9	9.4	8.2	8.3	14.2
7-Sep	8.3	8.3	8.4	8.7	9.6	10.3	10.8	11.1	11.7	12.7	16.7	17.8	17.4	17.1	19.1	18.3	18.1	17.3	18.6	20.5	21.3	22.8	23.5	22.2	15.4	23.5
8-Sep	20.8	20.9	20.7	21.0	21.2	21.1	21.5	21.3	24.2	23.4	18.7	18.5	18.5	16.6	17.0	17.9	18.3	17.3	16.5	17.2	18.6	19.8	19.2	19.3	19.6	24.2
9-Sep	27.8	34.9	37.7	44.5	42.4	33.3	27.7	24.4	21.9	21.2	23.0	23.8	25.7	26.5	27.1	27.4	29.7	29.4	28.1	27.4	26.3	26.8	27.1	26.9	28.8	44.5
10-Sep	26.3	25.9	25.4	25.6	25.7	26.5	25.8	26.2	27.0	27.7	36.6	40.0	37.2	26.1	20.0	16.3	14.7	12.8	13.0	10.8	10.1	10.7	10.8	8.4	22.0	40.0
11-Sep	9.3	11.9	8.9	8.3	7.9	11.2	12.0	8.1	15.5	100.8	127.9	29.3	26.3	39.8	25.1	42.0	52.3	56.0	75.4	181.5	225.6	147.4	95.6	48.5	56.9	225.6
12-Sep	30.7	24.2	20.7	20.0	21.0	18.9	16.9	16.3	16.0	17.0	18.6	18.7	18.3	17.8	18.5	18.5	19.2	19.5	19.8	19.9	18.6	18.0	17.6	17.9	19.3	30.7
13-Sep	18.5	19.0	18.4	18.5	18.1	18.9	19.2	19.1	19.3	20.3	19.1	16.2	16.2	16.2	15.7	15.0	15.6	15.4	16.3	17.0	17.2	18.4	19.0	18.8	17.7	20.3
14-Sep	17.6	15.2	11.8	10.0	10.7	10.1	9.2	11.1	11.3	6.8	6.2	5.5	4.2	6.5	12.9	15.1	13.3	15.0	28.6	23.4	22.0	27.7	26.8	32.4	14.7	32.4
15-Sep	29.9	33.8	12.7	9.8	9.0	6.0	6.3	4.8	4.6	9.0	12.3	13.8	15.6	28.2	35.3	40.6	35.0	21.5	19.7	20.7	18.6	14.2	11.6	10.6	17.7	40.6
16-Sep	11.2	13.2	14.4	15.5	15.8	15.5	15.4	15.6	15.9	16.9	16.8	14.8	12.7	10.7	10.7	10.4	10.6	10.2	10.4	11.8	12.4	13.1	13.4	12.7	13.3	16.9
17-Sep	13.2	13.2	13.2	14.0	14.2	13.7	12.2	11.8	12.5	13.8	13.3	11.7	11.0	10.4	9.9	9.5	8.8	10.1	11.6	11.3	11.1	11.2	11.4	11.8	11.9	14.2
18-Sep	12.4	12.2	12.3	12.3	12.1	12.4	12.6	13.0	13.2	13.0	13.1	13.4	12.7	12.1	11.2	11.2	11.7	12.7	13.8	14.0	14.4	12.7	10.8	10.1	12.5	14.4
19-Sep	9.7	6.0	3.3	2.9	2.6	2.3	2.3	2.1	2.3	2.3	2.2	2.2	2.3	2.6	2.6	2.5	2.7	3.1	3.5	3.8	3.9	3.6	3.8	4.5	3.3	9.7
20-Sep	4.6	3.8	3.5	4.2	5.8	7.3	8.6	10.9	11.7	12.8	14.9	14.7	13.9	14.5	13.0	12.1	12.3	12.5	11.2	10.7	10.9	10.5	10.6	10.7	10.2	14.9
21-Sep	11.0	11.0	11.3	11.4	11.6	13.5	14.8	15.4	16.8	16.5	13.9	9.6	8.4	8.9	9.6	7.8	5.9	12.4	10.4	13.1	50.0	25.1	22.0	8.7	14.1	50.0
22-Sep	3.1	2.0	1.8	1.7	1.5	1.5	1.4	1.4	1.3	1.4	C	C	C	C	C	C	UO	UO	UO	UO	UO	UO	UO	UO	--	3.1
23-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	0.9	0.8	0.8	0.8	0.8	0.9	1.0	0.9	1.1	--	1.1
24-Sep	1.1	1.2	1.4	1.4	1.3	1.2	1.4	1.5	1.7	1.8	1.9	2.1	2.1	2.0	1.7	1.5	1.6	2.2	3.4	20.3	45.5	71.3	35.3	2.4	8.6	71.3
25-Sep	1.9	2.2	2.3	2.1	2.1	2.2	2.4	2.1	2.1	2.2	1.9	1.8	2.0	2.0	1.9	2.1	2.2	2.5	2.8	3.5	3.7	3.1	2.6	2.3	2.3	3.7
26-Sep	1.8	1.8	2.1	2.2	2.4	2.2	1.9	1.3	1.2	1.4	0.8	0.7	0.6	0.6	0.7	0.9	0.9	0.8	0.8	0.9	1.1	1.1	1.0	1.0	1.3	2.4
27-Sep	1.1	1.2	1.2	1.5	1.5	1.3	1.3	0.9	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.9	1.5
28-Sep	0.7	0.7	0.7	0.7	0.9	1.1	1.2	1.3	3.1	9.6	9.5	6.8	4.9	3.0	1.8	1.1	0.9	0.8	1.8	4.6	4.1	1.7	1.4	1.4	2.7	9.6
29-Sep	1.5	1.5	1.4	1.5	1.8	2.2	2.4	2.7	3.0	3.5	4.2	5.0	5.5	6.2	7.3	8.3	7.7	8.1	8.2	9.0	9.1	8.9	9.4	10.1	5.4	10.1
30-Sep	10.5	10.4	11.1	10.9	10.9	10.7	11.0	11.0	10.5	9.9	10.1	10.2	9.9	9.9	10.3	12.6	11.5	11.3	23.3	28.1	28.9	24.7	25.6	27.7	14.6	28.9
	18.5	18.8	17.7	17.9	17.0	16.7	15.5	14.4	14.4	17.2	18.5	14.5	14.7	15.0	15.1	15.3	15.3	15.5	17.3	22.1	25.2	22.9	19.9	17.4	Diurnal Average	
	94.7	103.9	110.0	110.4	107.6	101.0	90.8	81.7	79.8	100.8	127.9	49.7	50.2	49.1	46.8	43.7	52.3	59.3	75.4	181.5	225.6	147.4	95.6	81.0	Diurnal Maximum	

C - Calibration M - Maintenance UO - Unstable Operation

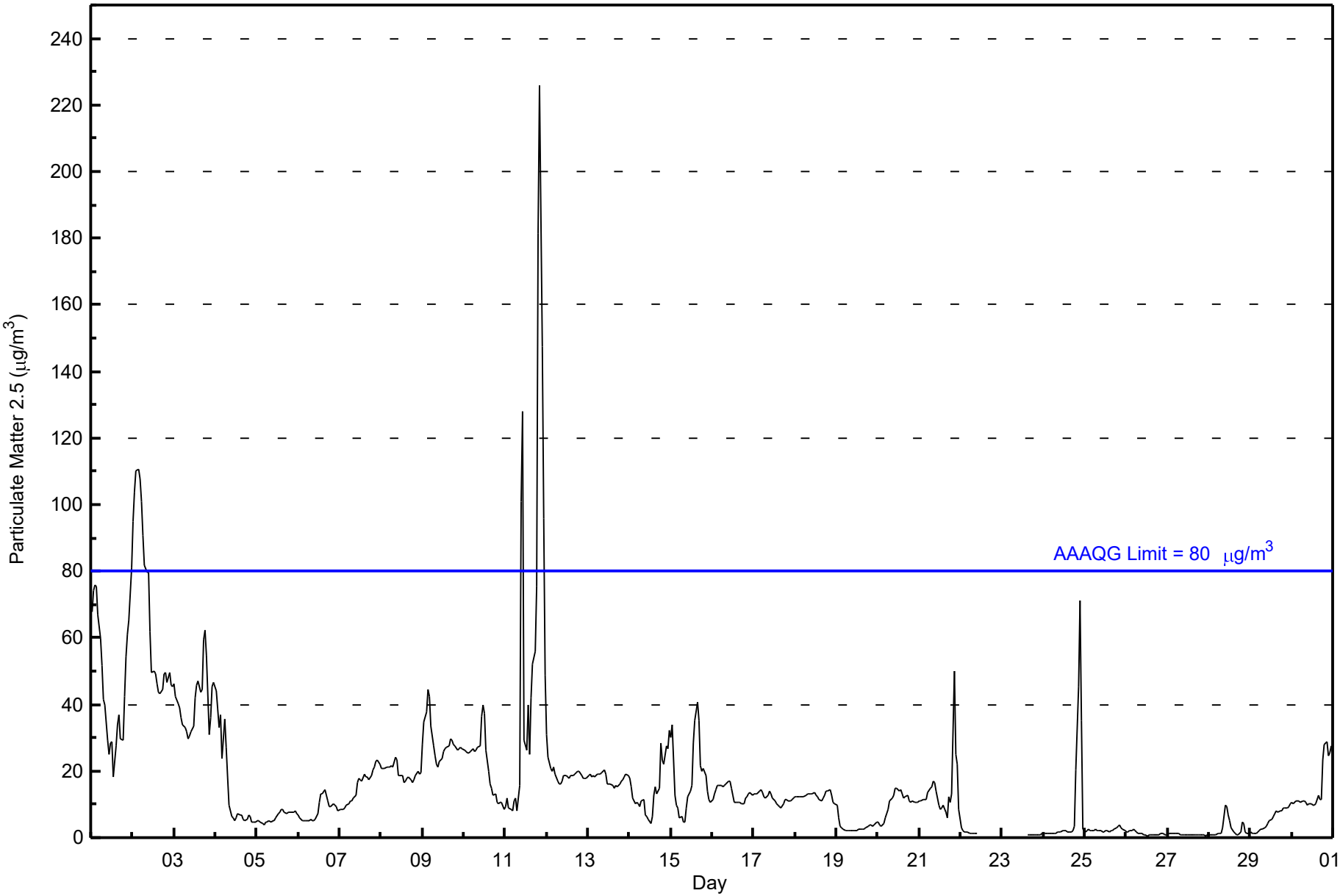
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Stony Mountain - September 2025



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

Stony Mountain - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	198	28.65	28.65
6 - 15	233	33.72	62.37
16 - 25	119	17.22	79.59
26 - 80	126	18.23	97.83
> 81.0	15	2.17	100.00

Total Number of Valid Hours: 691

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Stony Mountain - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	0	1	0	0	2	7	21	6	29	22	31	51	21	2	3	197
6 - 15	7	6	5	2	5	5	3	25	57	52	11	9	8	8	17	13	233
16 - 25	4	4	5	5	2	2	4	8	12	32	2	0	8	11	11	9	119
26 - 80	5	3	3	2	10	7	2	6	20	14	8	7	2	10	10	17	126
> 81.0	3	3	0	1	2	0	2	0	1	1	0	0	0	0	0	2	15
Totals	20	16	14	10	19	16	18	60	96	128	43	47	69	50	40	44	690

Total Number of Valid Hours: 690

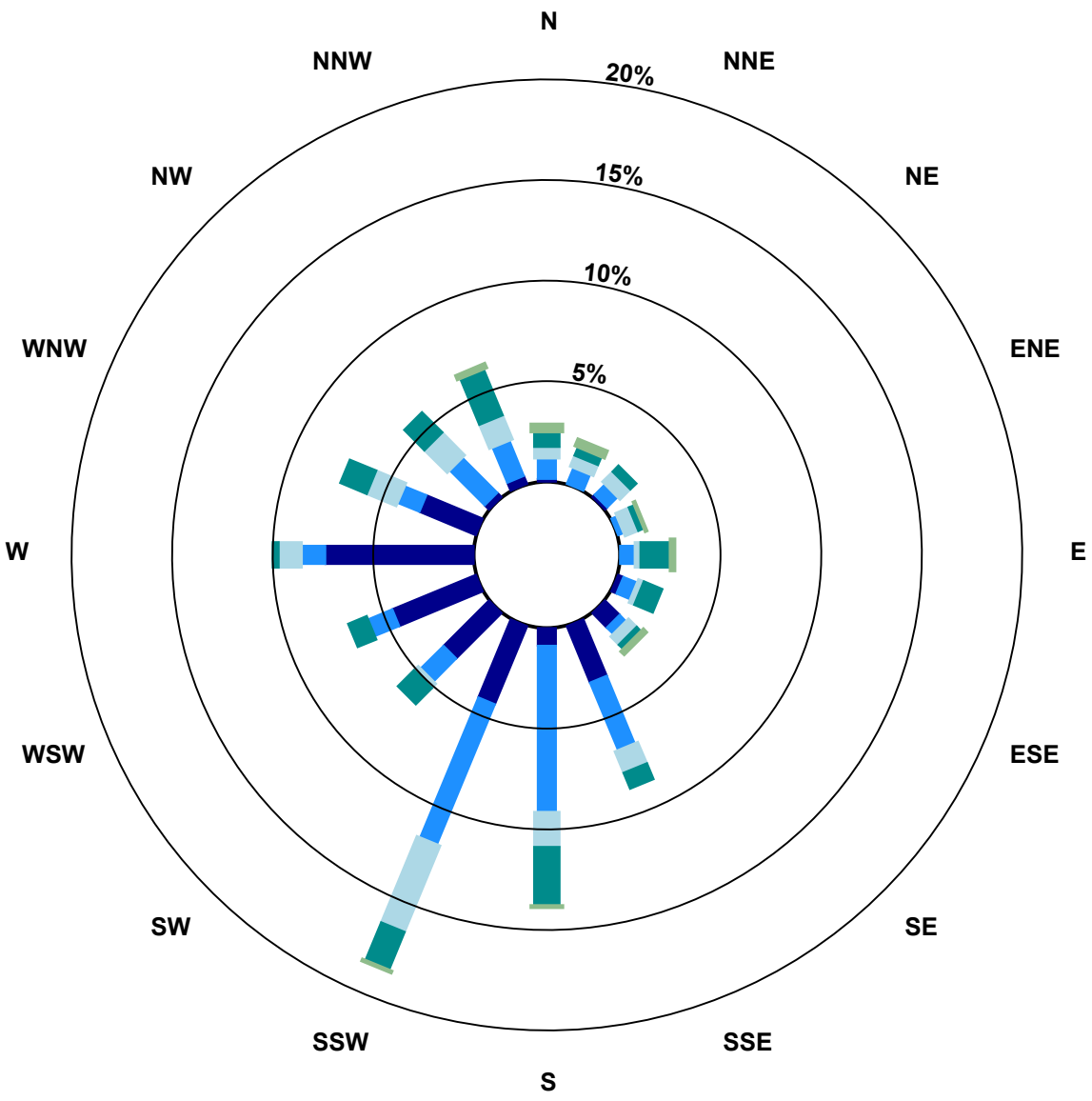
Total Number of Hours: 720

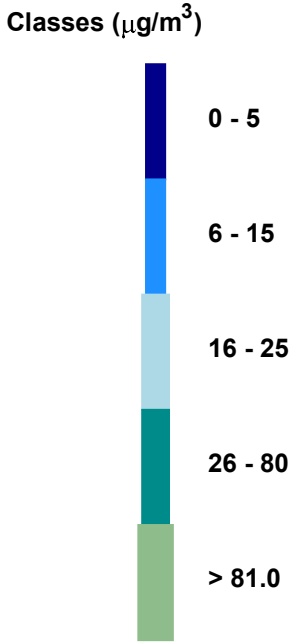
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Stony Mountain





Total Number of Valid Hours: 690

Maximum Value: 27.9 C on Sep 13 15:00

Maximum Daily Average: 20.0 C on Sep 13

Minimum Value: 3.9 C on Sep 25 04:00

Minimum Daily Average: 10.2 C on Sep 25

Maximum Diurnal Average: 20.5 C at hour 15

Minimum Diurnal Average: 9.6 C at hour 6

Monthly Average: 14.28 C

Percentiles: P_1 = 5.8 P_{10} = 8.2 Q_1 = 10.6 Median = 13.9 Q_3 = 17.3 P_{90} = 21.5 P_{99} = 26.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

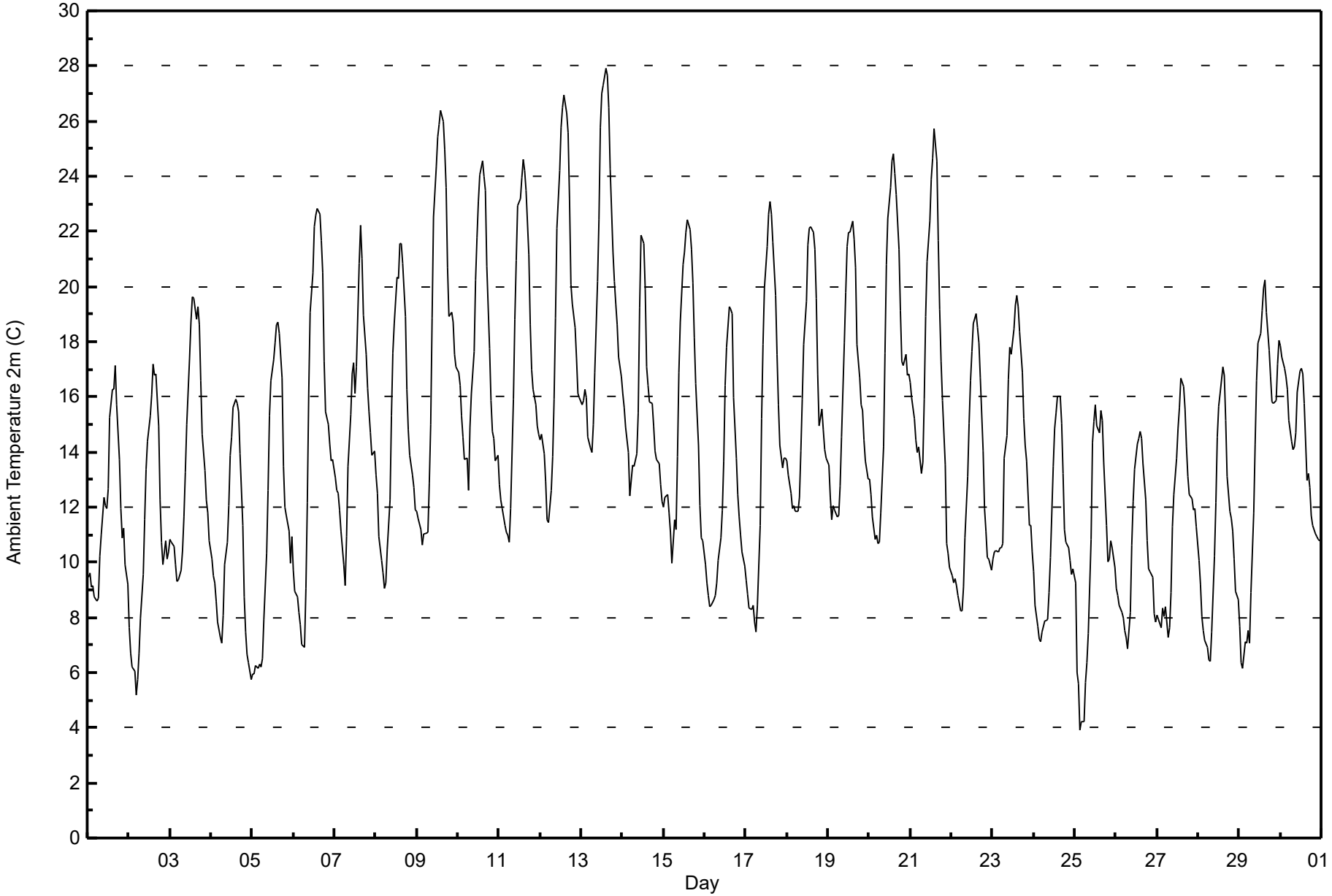
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.5	9.6	9.1	9.2	8.7	8.6	8.7	10.2	11.0	12.3	12.1	12.0	12.6	15.3	16.3	16.3	17.1	15.7	13.7	12.0	10.9	11.2	9.9	9.2	11.7	17.1
2-Sep	7.6	6.7	6.2	6.0	5.2	5.7	6.7	8.0	9.6	11.5	13.4	14.4	15.3	16.1	17.2	16.8	16.8	14.9	12.2	10.7	9.9	10.8	10.1	10.4	10.9	17.2
3-Sep	10.8	10.8	10.6	9.9	9.3	9.4	9.7	10.4	11.6	13.3	15.0	17.4	18.7	19.6	19.6	18.8	19.3	18.6	16.6	14.6	13.3	12.2	11.8	10.8	13.8	19.6
4-Sep	10.1	9.5	9.2	8.6	7.8	7.2	7.1	8.1	9.9	10.7	12.0	13.9	14.6	15.6	15.9	15.7	15.4	13.9	11.4	8.8	7.5	6.7	6.4	5.8	10.5	15.9
5-Sep	6.0	6.0	6.2	6.2	6.3	6.2	6.5	7.9	10.3	12.6	15.3	16.6	17.3	17.9	18.6	18.7	18.3	16.7	13.5	12.0	11.7	11.2	10.0	10.9	11.8	18.7
6-Sep	9.7	8.9	8.8	8.2	7.8	7.0	6.9	9.0	12.2	16.1	19.1	20.5	22.2	22.6	22.8	22.6	21.7	20.5	17.3	15.4	15.0	14.3	13.7	13.7	14.8	22.8
7-Sep	13.1	12.6	12.5	11.9	11.1	9.9	9.1	10.9	13.5	15.3	16.8	17.3	16.1	17.1	20.9	22.2	21.0	19.0	17.5	16.3	15.4	14.7	13.9	14.0	15.1	22.2
8-Sep	13.2	12.5	11.0	10.1	9.6	9.1	9.3	10.5	12.3	15.3	17.6	18.7	20.4	20.3	21.5	21.5	20.8	18.9	16.3	14.8	13.9	13.2	12.7	11.9	14.8	21.5
9-Sep	11.8	11.6	11.2	10.6	11.0	11.0	11.1	12.9	15.0	18.9	22.5	24.4	25.4	25.9	26.4	26.0	25.0	23.6	20.7	18.9	19.0	18.7	17.5	17.1	18.2	26.4
10-Sep	16.9	16.4	15.3	14.5	13.8	13.8	12.6	14.9	16.1	17.6	20.2	21.8	23.1	24.1	24.6	24.0	23.5	20.7	17.8	15.9	14.7	14.5	13.7	13.9	17.7	24.6
11-Sep	12.8	12.2	12.0	11.4	11.1	11.0	10.7	11.9	15.9	18.8	21.0	22.9	23.2	23.9	24.6	24.2	23.5	21.2	18.6	17.0	16.3	15.7	15.0	14.6	17.1	24.6
12-Sep	14.4	14.6	14.0	12.9	11.5	11.5	12.6	13.8	15.9	18.9	22.1	24.2	25.8	26.5	27.0	26.3	25.6	23.2	20.1	19.4	18.5	17.4	16.1	15.9	18.7	27.0
13-Sep	15.7	15.9	16.3	16.0	14.5	14.1	14.0	15.0	16.9	20.2	22.4	25.8	27.0	27.3	27.9	27.6	26.5	24.2	21.3	20.2	19.4	18.6	17.5	16.7	20.0	27.9
14-Sep	16.1	15.6	14.9	14.0	12.4	12.9	13.6	13.5	14.0	15.4	19.2	21.9	21.5	19.9	17.1	16.4	15.8	15.8	15.0	14.1	13.7	13.6	12.8	12.2	15.5	21.9
15-Sep	12.0	12.4	12.4	11.8	11.1	9.9	11.5	11.2	13.8	16.9	18.7	20.8	21.2	22.0	22.4	22.1	21.4	20.2	18.1	16.5	14.3	12.0	10.9	10.8	15.6	22.4
16-Sep	9.9	9.3	8.8	8.4	8.5	8.6	8.8	9.2	10.1	10.9	11.9	13.7	16.4	17.8	19.3	19.2	19.0	16.0	13.8	12.4	11.6	11.0	10.4	9.9	12.3	19.3
17-Sep	9.3	8.8	8.3	8.3	8.4	7.8	7.5	8.5	11.3	15.2	17.9	19.9	21.5	22.6	23.1	22.6	21.6	19.7	17.5	15.7	14.2	13.4	13.8	13.8	14.6	23.1
18-Sep	13.7	13.2	12.5	12.0	12.1	11.8	11.8	12.3	14.1	15.9	17.9	19.5	21.5	22.1	22.2	22.0	21.4	19.6	16.8	14.9	15.6	14.8	14.1	13.8	16.1	22.2
19-Sep	13.5	12.3	11.6	12.0	11.9	11.6	11.7	12.8	14.5	18.0	19.8	21.5	21.9	22.0	22.4	21.7	20.7	17.9	16.7	15.7	15.5	14.4	13.7	13.0	16.1	22.4
20-Sep	13.0	12.4	11.6	10.8	11.0	10.7	10.7	11.8	14.2	17.6	20.8	22.5	23.6	24.6	24.8	24.1	23.3	21.3	19.1	17.3	17.1	17.5	16.8	16.8	17.2	24.8
21-Sep	16.6	16.0	15.2	14.4	14.0	14.2	13.2	13.6	15.9	18.9	20.9	22.4	23.9	24.6	25.7	24.6	21.7	19.2	17.3	15.9	13.5	10.7	10.3	9.8	17.2	25.7
22-Sep	9.5	9.3	9.4	9.1	8.8	8.3	8.2	9.1	10.9	13.1	15.0	16.6	17.7	18.6	19.0	18.5	17.9	16.7	14.0	12.0	11.1	10.2	10.1	9.7	12.6	19.0
23-Sep	10.1	10.4	10.4	10.4	10.5	10.5	10.7	13.8	14.6	16.6	17.8	17.5	18.5	19.3	19.7	19.3	18.4	16.9	15.2	14.2	13.7	11.4	11.3	10.4	14.2	19.7
24-Sep	9.7	8.4	7.7	7.2	7.1	7.5	7.9	7.9	7.9	8.9	10.2	13.5	14.8	15.4	16.0	16.0	15.0	13.2	11.2	10.7	10.5	10.1	9.6	9.8	10.7	16.0
25-Sep	9.2	6.0	5.6	3.9	4.2	4.2	5.6	6.3	7.4	10.9	14.3	15.1	15.7	15.0	14.7	15.5	15.2	13.6	11.4	10.0	10.1	10.8	10.5	9.8	10.2	15.7
26-Sep	9.1	8.8	8.5	8.2	8.0	7.5	7.3	6.9	8.2	10.6	12.2	13.4	14.3	14.5	14.7	14.5	13.6	12.2	10.8	9.8	9.7	9.5	8.1	7.8	10.3	14.7
27-Sep	8.1	7.9	7.6	8.3	8.1	8.4	7.3	7.6	8.9	11.3	12.4	13.8	14.9	15.6	16.7	16.4	15.5	14.2	13.1	12.4	12.3	11.9	12.0	11.3	11.5	16.7
28-Sep	10.1	9.2	8.0	7.5	7.1	6.9	6.4	6.4	7.5	10.2	12.2	14.6	15.7	16.1	17.1	16.8	15.2	13.1	11.8	11.6	11.1	10.1	9.0	8.7	10.9	17.1
29-Sep	7.7	6.4	6.2	7.1	7.1	7.5	7.0	8.9	11.8	14.3	16.6	18.0	18.3	19.1	19.9	20.3	19.1	17.7	16.7	15.8	15.8	15.9	17.2	18.1	13.8	20.3
30-Sep	17.8	17.5	17.0	16.7	16.3	15.1	14.4	14.1	14.2	14.7	16.2	16.9	17.0	16.8	15.8	13.0	13.2	12.7	11.7	11.3	11.0	11.0	10.8	10.8	14.4	17.8
	11.6	11.0	10.6	10.2	9.8	9.6	9.6	10.6	12.3	14.7	16.8	18.4	19.3	19.9	20.5	20.1	19.4	17.7	15.6	14.2	13.5	12.9	12.3	12.0	Diurnal Average	
	17.8	17.5	17.0	16.7	16.3	15.1	14.4	15.0	16.9	20.2	22.5	25.8	27.0	27.3	27.9	27.6	26.5	24.2	21.3	20.2	19.4	18.7	17.5	18.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Stony Mountain - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	149	20.69	20.69
10 - 20	470	65.28	85.97
> 20	101	14.03	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - September 2025

Maximum Value: 99.4 % on Sep 15 02:00

Maximum Daily Average: 90.2 % on Sep 1

Minimum Value: 20.9 % on Sep 23 15:00

Minimum Daily Average: 44.6 % on Sep 23

Maximum Diurnal Average: 80.8 % at hour 7

Minimum Diurnal Average: 42.3 % at hour 15

Monthly Average: 64.28 %

Percentiles: P_1 = 26.7 P_{10} = 37.6 Q_1 = 48.9 Median = 64.3 Q_3 = 80.1 P_{90} = 91.9 P_{99} = 99.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

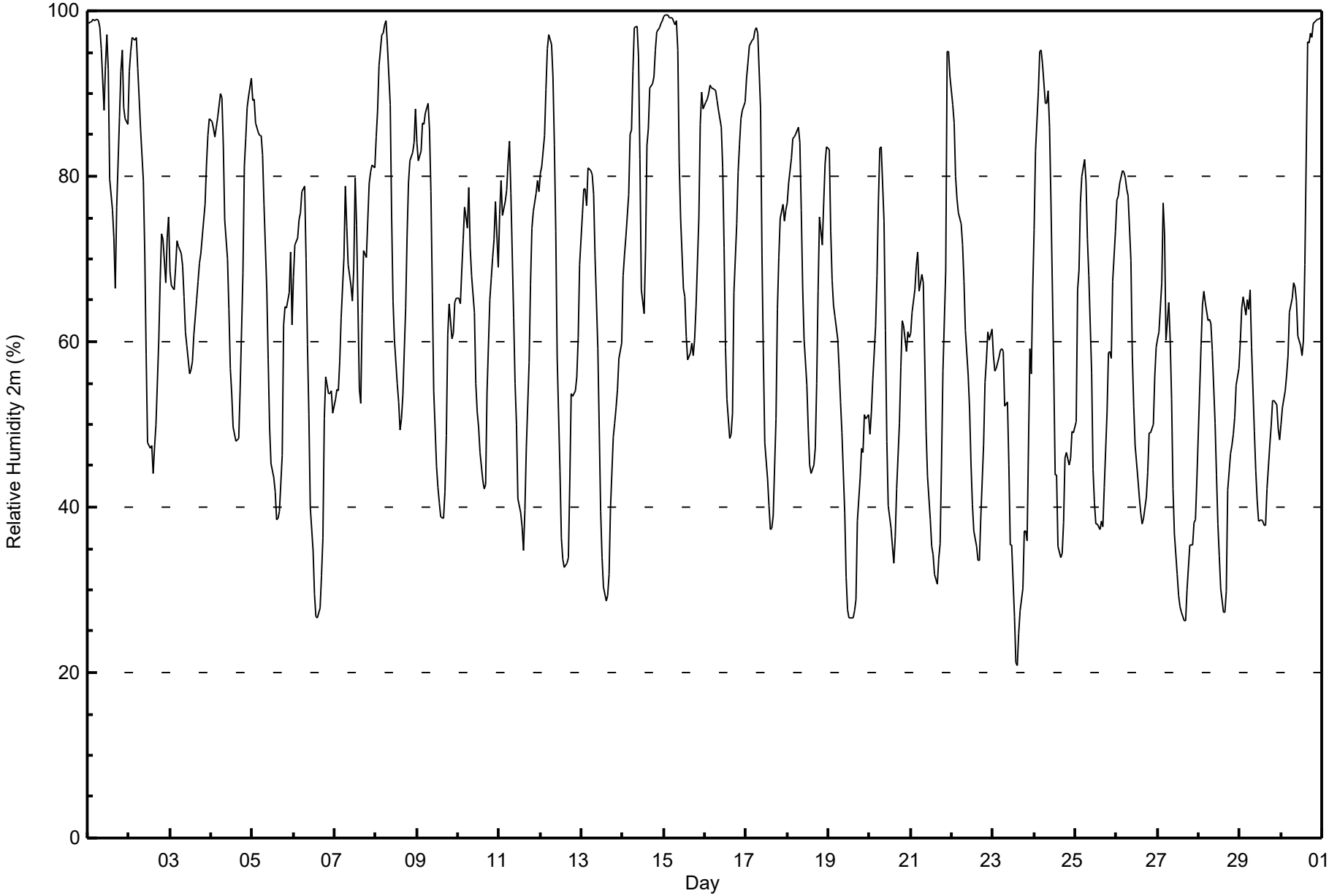
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	98.5	98.7	98.6	99.0	98.9	98.9	98.8	97.9	95.4	87.9	93.4	97.2	92.9	79.7	76.0	72.5	66.5	76.3	87.2	92.8	95.3	88.2	87.0	86.2	90.2	99.0
2-Sep	92.8	95.1	96.9	96.4	96.9	93.0	89.4	85.8	79.5	70.8	58.5	47.8	47.0	47.5	44.0	47.4	50.0	60.2	67.4	73.0	72.4	67.1	72.5	75.0	71.9	96.9
3-Sep	68.5	66.8	66.2	69.0	72.1	71.5	70.7	69.1	65.5	61.2	59.5	56.2	56.5	57.5	60.8	65.1	67.3	69.5	70.7	72.7	76.6	81.4	85.0	86.9	68.6	86.9
4-Sep	86.6	85.7	84.8	85.9	87.2	90.1	89.4	83.8	74.7	70.0	63.9	56.8	53.7	49.7	47.9	48.2	48.3	54.3	68.3	81.2	84.6	88.4	89.6	91.9	73.5	91.9
5-Sep	89.2	89.3	86.5	85.3	84.9	84.9	82.6	76.7	66.3	57.9	49.6	45.3	43.6	41.9	38.6	38.6	39.6	46.2	62.0	64.2	64.1	65.9	70.8	62.1	64.0	89.3
6-Sep	67.8	71.8	72.5	74.7	75.6	78.1	78.8	70.0	59.7	51.2	40.1	34.7	29.4	26.8	26.5	27.7	31.6	36.3	50.7	55.7	53.7	53.8	54.1	51.3	53.0	78.8
7-Sep	53.0	54.3	54.1	57.7	62.8	70.2	78.7	73.8	69.3	66.8	65.0	68.9	79.8	74.0	54.3	52.6	63.4	70.9	70.1	74.7	79.2	80.6	81.4	80.9	68.2	81.4
8-Sep	84.8	88.0	93.4	97.1	97.4	98.4	98.7	95.8	88.6	75.0	64.9	60.2	54.9	52.8	49.3	50.6	53.5	64.1	72.7	79.1	81.9	82.8	84.0	88.2	77.3	98.7
9-Sep	84.0	81.8	83.1	86.5	86.2	87.7	88.9	85.7	78.1	66.1	54.1	45.0	42.3	40.5	38.8	38.6	41.8	48.7	60.8	64.6	60.3	61.1	64.7	65.2	64.8	88.9
10-Sep	65.2	64.5	68.6	72.4	76.2	73.6	78.6	71.3	68.0	63.6	55.0	51.5	49.7	46.6	43.2	42.3	42.7	53.9	65.1	67.6	70.1	72.3	77.0	68.9	62.8	78.6
11-Sep	75.4	79.4	75.2	76.9	78.3	81.8	84.2	78.0	62.9	55.0	49.9	41.0	39.4	37.6	34.8	39.7	47.1	57.4	66.9	73.7	75.7	78.0	79.5	78.1	64.4	84.2
12-Sep	80.4	81.1	85.0	90.6	95.3	97.2	96.0	92.0	84.0	73.4	58.1	44.4	36.3	33.7	32.7	33.2	34.0	43.0	53.8	53.4	54.1	55.7	60.5	69.3	64.0	97.2
13-Sep	75.4	78.4	78.4	76.4	81.0	80.7	80.2	77.7	70.4	59.2	49.3	39.5	33.9	30.3	28.7	29.3	31.9	39.8	48.6	50.2	52.1	54.2	57.9	59.8	56.8	81.0
14-Sep	68.0	70.5	72.8	77.9	85.1	85.6	92.7	98.0	98.1	94.4	82.0	66.3	63.4	71.1	83.7	85.8	90.7	91.1	92.0	95.3	97.5	97.9	98.5	98.8	85.7	98.8
15-Sep	99.3	99.4	99.4	99.2	99.1	99.1	98.3	98.8	95.2	81.7	74.9	66.5	65.4	60.8	57.8	58.6	59.8	58.4	60.3	64.2	74.9	86.3	90.2	88.2	80.7	99.4
16-Sep	89.0	89.4	90.0	91.1	90.7	90.6	90.4	89.1	88.0	85.9	81.0	71.4	59.3	53.0	48.3	48.8	51.3	65.9	74.2	80.5	83.9	87.0	88.0	88.9	78.1	91.1
17-Sep	91.9	93.7	95.8	96.5	96.6	97.7	97.9	97.3	88.2	70.6	58.1	47.9	43.4	40.1	37.3	37.4	39.1	50.7	63.9	70.2	75.0	76.7	74.5	75.9	71.5	97.9
18-Sep	76.9	79.2	82.1	84.5	84.8	85.1	85.9	84.1	76.0	66.6	60.3	54.8	49.2	45.0	44.0	45.0	47.2	55.0	66.1	75.1	71.7	76.7	81.6	83.5	69.2	85.9
19-Sep	83.2	73.4	67.5	64.5	63.0	60.3	56.9	52.8	48.9	39.2	31.5	27.7	26.7	26.7	26.6	27.4	28.7	38.2	43.6	47.2	46.6	51.2	50.8	51.1	47.2	83.2
20-Sep	48.8	51.5	55.5	61.9	68.0	76.9	83.3	83.6	74.6	61.3	48.0	40.2	37.5	35.3	33.3	36.5	42.1	50.2	56.9	62.5	61.9	58.8	61.2	60.5	56.3	83.6
21-Sep	61.0	63.6	66.2	69.1	70.8	66.1	68.1	67.0	58.1	49.2	43.7	38.4	35.3	34.2	31.9	30.7	33.8	35.7	45.4	56.4	68.7	95.0	95.1	92.0	57.3	95.1
22-Sep	88.7	86.4	80.0	77.3	75.7	74.3	71.7	67.3	61.4	55.9	51.8	45.2	40.4	37.1	35.2	33.6	33.5	38.9	47.7	55.1	57.8	61.1	60.2	61.5	58.2	88.7
23-Sep	58.2	56.5	56.7	58.2	58.9	59.2	58.8	52.2	52.7	45.1	35.4	35.5	26.9	21.2	20.9	24.8	27.5	30.2	37.1	37.1	36.0	59.2	56.1	66.3	44.6	66.3
24-Sep	73.6	83.0	90.1	95.1	95.2	93.6	88.8	88.8	90.3	86.0	76.9	56.5	43.9	43.9	35.3	33.9	34.4	38.2	46.0	46.5	45.2	46.0	49.2	48.9	63.7	95.2
25-Sep	50.3	66.2	68.7	76.8	80.1	82.0	79.2	72.5	68.0	56.3	44.6	40.5	38.0	38.0	37.3	38.3	37.6	42.3	51.5	58.6	58.8	58.1	67.2	73.4	57.7	82.0
26-Sep	77.1	77.6	79.1	80.7	80.4	79.9	78.5	77.6	69.8	58.3	52.2	47.4	43.4	41.1	39.3	38.0	38.7	41.1	44.3	49.1	48.9	49.9	55.8	59.3	58.6	80.7
27-Sep	60.3	61.1	67.1	76.8	72.8	60.1	64.8	60.1	53.1	42.2	36.8	31.9	29.4	27.9	27.3	26.2	26.3	29.9	32.7	35.4	35.4	38.1	38.5	43.3	44.9	76.8
28-Sep	54.0	59.4	64.3	66.1	64.8	62.5	62.7	62.3	59.0	50.1	44.0	37.9	34.1	30.2	27.3	27.4	29.9	42.0	46.4	47.4	48.9	50.8	54.7	56.7	49.3	66.1
29-Sep	60.0	64.1	65.5	63.2	65.0	63.9	66.3	59.3	49.2	44.3	40.9	38.4	38.5	38.3	37.8	37.9	42.2	47.5	49.8	52.9	52.9	52.4	49.5	48.2	51.2	66.3
30-Sep	50.0	52.0	54.1	56.0	58.3	63.5	65.3	67.2	66.7	64.8	60.6	59.5	58.3	60.1	69.3	96.3	96.0	97.3	96.8	98.4	98.8	98.9	98.9	99.2	74.4	99.2
	73.7	75.4	76.6	78.8	80.1	80.2	80.8	77.8	72.0	63.7	56.1	49.8	46.4	44.1	42.3	43.7	45.9	52.4	60.0	64.5	66.1	69.1	71.1	72.0	Diurnal Average	
	99.3	99.4	99.4	99.2	99.1	99.1	98.8	98.8	98.1	94.4	93.4	97.2	92.9	79.7	83.7	96.3	96.0	97.3	96.8	98.4	98.8	98.9	98.9	99.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - September 2025



Maximum Value: 2.3 mm on Sep 30 16:00

Maximum Daily Total: 5.9 mm on Sep 30

Minimum Value: 0.0 mm on Sep 1 01:00

Minimum Daily Total: 0.0 mm on Sep 2

Maximum Diurnal Total: 2.3 mm at hour 16

Minimum Diurnal Total: 0.0 mm at hour 10

Monthly Total: 14.37 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} = 0.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

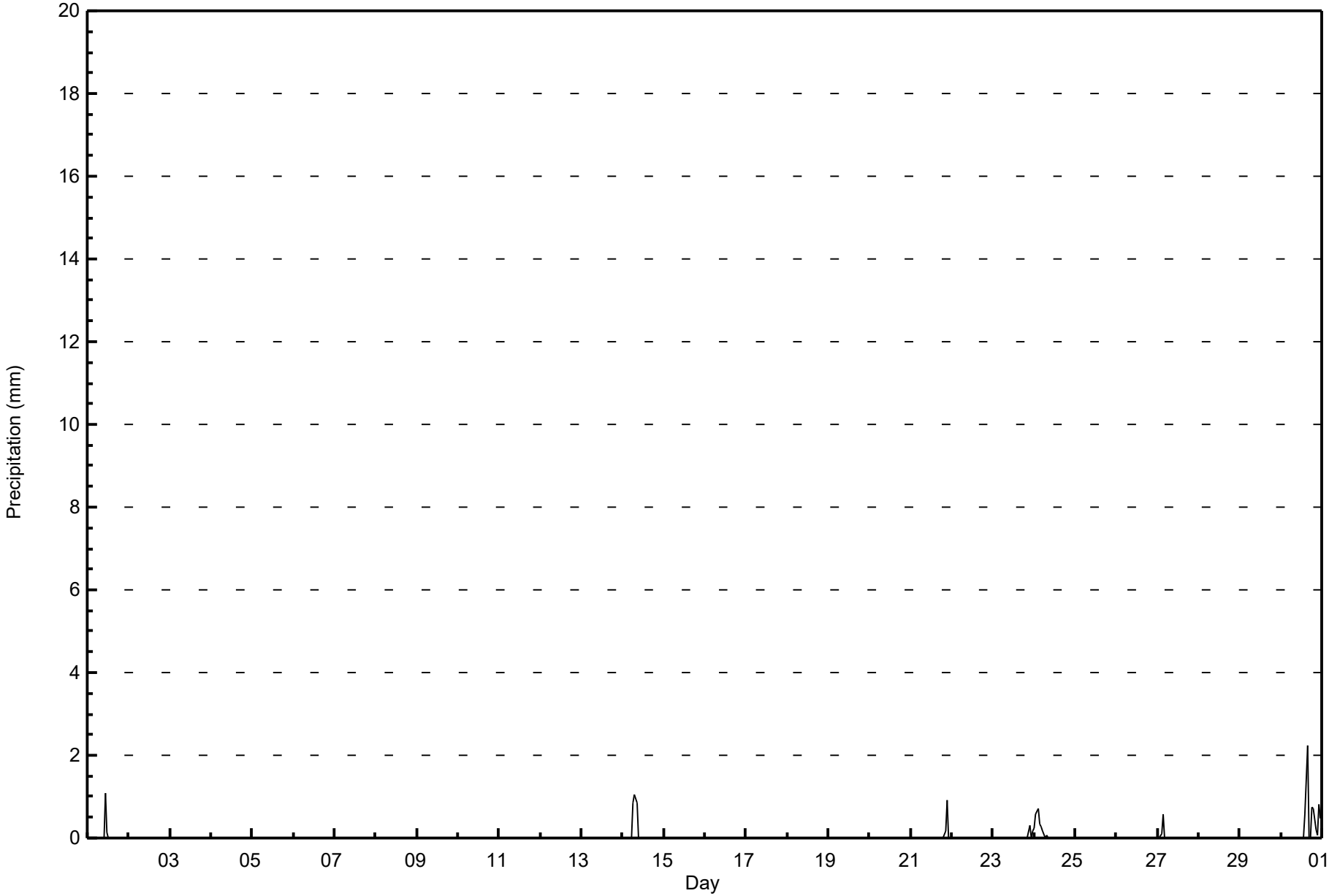
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.1
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.9	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	2.8	1.1
15-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.0	0.0	1.1	0.9
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2	0.5	0.3
24-Sep	0.2	0.6	0.7	0.4	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	0.0	0.0	0.0	0.0	2.4	0.7
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.3	0.0	0.0	0.8	0.7	0.2	0.1	0.8	0.5	5.9	2.3
	0.2	0.6	0.8	0.9	0.3	0.2	0.9	1.1	0.9	0.0	1.1	0.1	0.0	0.0	0.6	2.3	0.0	0.0	0.8	0.7	0.4	1.3	0.8	0.7	Diurnal Average	
	0.2	0.6	0.7	0.6	0.3	0.2	0.9	1.1	0.9	0.0	1.1	0.1	0.0	0.0	0.6	2.3	0.0	0.0	0.8	0.7	0.2	0.9	0.8	0.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Stony Mountain - September 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	706	98.06	98.06
0.4 - 0.5	1	0.14	98.19
0.6 - 0.7	5	0.69	98.89
0.8 - 1.4	7	0.97	99.86
1.5 - 10	1	0.14	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 38.7 % on Sep 14 09:00

Maximum Daily Average: 16.7 % on Sep 1

Minimum Value: 0.0 % on Sep 11 15:00

Minimum Daily Average: 0.9 % on Sep 28

Maximum Diurnal Average: 11.5 % at hour 4

Minimum Diurnal Average: 0.5 % at hour 14

Monthly Average: 5.70 %

Percentiles: P_1 = 0.0 P_{10} = 0.4 Q_1 = 1.0 Median = 1.3 Q_3 = 2.5 P_{90} = 25.6 P_{99} = 35.5

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

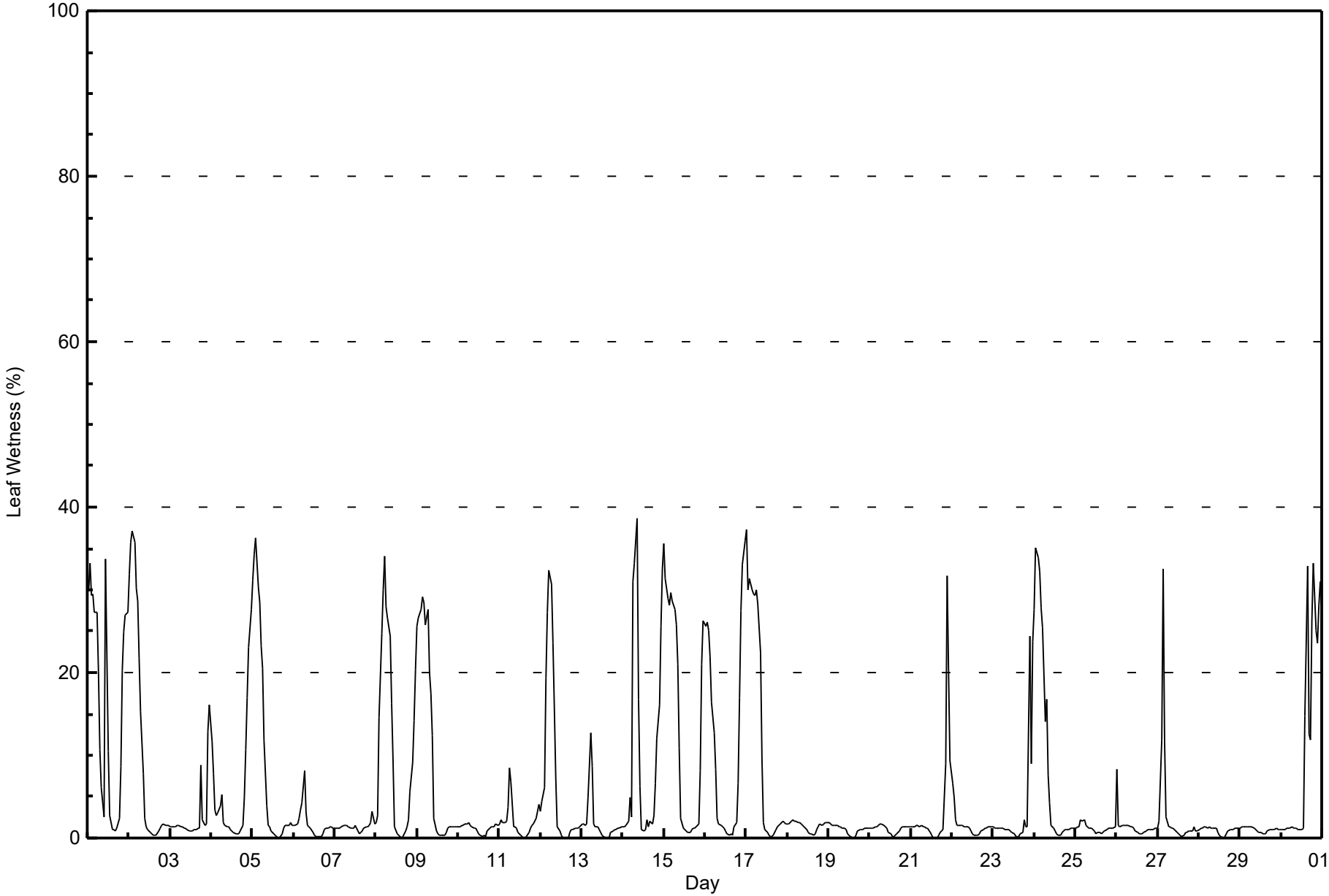
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	29.9	33.3	29.3	29.5	27.2	27.2	20.2	10.7	6.0	2.6	33.8	22.2	10.4	2.7	1.0	1.0	0.9	1.2	2.4	8.7	20.4	24.9	26.9	27.3	16.7	33.8
2-Sep	31.8	35.8	37.2	35.8	30.2	28.6	21.8	15.2	7.7	2.3	1.3	1.0	0.7	0.5	0.4	0.4	0.4	0.8	1.3	1.6	1.7	1.5	1.5	1.5	10.9	37.2
3-Sep	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.3	1.2	1.1	0.9	0.8	0.8	1.0	1.1	1.1	1.3	8.9	2.2	1.5	1.6	12.9	16.0	2.7	16.0
4-Sep	11.8	7.7	3.5	2.6	3.0	3.9	5.2	1.8	1.6	1.4	1.3	1.1	0.9	0.6	0.6	0.5	0.5	0.9	1.4	4.8	10.6	17.0	23.0	27.6	5.6	27.6
5-Sep	31.1	34.3	36.2	30.3	28.5	23.2	20.5	11.9	4.0	1.4	1.3	0.9	0.5	0.3	0.2	0.1	0.0	0.6	1.3	1.5	1.5	1.6	1.8	1.5	9.8	36.2
6-Sep	1.5	1.6	1.6	2.3	3.4	4.2	8.1	3.0	1.5	1.4	1.1	0.7	0.4	0.2	0.1	0.1	0.1	0.5	1.0	1.2	1.2	1.3	1.3	1.2	1.6	8.1
7-Sep	1.3	1.2	1.2	1.2	1.4	1.5	1.6	1.5	1.3	1.2	1.1	1.2	1.6	1.3	0.6	0.7	0.9	1.2	1.3	1.4	1.5	1.8	3.3	1.7	1.4	3.3
8-Sep	1.9	2.7	14.6	24.7	30.1	34.1	28.0	26.6	24.3	16.3	9.3	1.4	0.6	0.4	0.1	0.1	0.1	0.8	1.4	2.3	5.5	9.1	14.3	20.4	11.2	34.1
9-Sep	25.5	26.6	27.5	29.1	28.5	25.8	27.7	20.0	17.5	12.3	2.3	0.8	0.5	0.4	0.3	0.3	0.4	0.8	1.2	1.3	1.3	1.3	1.4	1.4	10.6	29.1
10-Sep	1.3	1.3	1.5	1.5	1.6	1.7	1.9	1.5	1.3	1.2	1.1	0.8	0.5	0.3	0.2	0.3	0.2	0.8	1.2	1.3	1.4	1.4	1.6	1.5	1.1	1.9
11-Sep	1.7	2.2	1.8	1.9	2.1	3.6	8.6	6.8	1.4	1.3	1.1	0.6	0.4	0.1	0.0	0.1	0.1	0.7	1.2	1.6	1.8	2.4	3.3	4.1	2.0	8.6
12-Sep	3.3	4.3	6.1	19.4	27.3	32.3	30.7	23.6	15.7	7.3	1.4	0.8	0.3	0.1	0.0	0.0	0.0	0.7	1.0	1.1	1.1	1.2	1.2	1.3	7.5	32.3
13-Sep	1.6	1.7	1.6	1.6	4.9	12.7	8.7	1.7	1.4	1.3	1.1	0.7	0.4	0.2	0.0	0.0	0.1	0.6	0.9	1.0	1.1	1.1	1.2	1.3	2.0	12.7
14-Sep	1.4	1.4	1.4	2.1	4.9	2.5	31.1	33.2	38.7	16.8	6.3	1.0	0.9	1.0	2.2	1.4	2.1	1.7	2.7	6.6	12.0	16.1	25.6	32.5	10.2	38.7
15-Sep	35.6	31.4	28.9	28.1	29.7	28.6	27.7	25.8	21.0	10.8	2.4	1.2	1.1	0.8	0.7	0.7	1.0	1.1	1.2	1.3	1.6	8.1	21.0	26.3	14.0	35.6
16-Sep	25.6	26.2	25.1	21.9	16.5	12.7	8.3	2.5	1.6	1.5	1.4	1.2	0.8	0.5	0.4	0.5	0.4	1.3	1.9	6.7	17.0	27.4	33.1	36.0	11.3	36.0
17-Sep	37.2	30.0	31.4	29.9	29.5	29.3	29.9	28.4	22.3	9.4	1.8	1.0	0.6	0.3	0.2	0.1	0.3	1.0	1.3	1.5	1.7	2.0	1.8	1.7	12.2	37.2
18-Sep	1.7	1.7	2.0	2.3	2.0	2.1	1.9	1.8	1.7	1.5	1.4	1.0	0.7	0.5	0.5	0.4	0.6	1.0	1.3	1.6	1.5	1.7	1.8	1.8	1.4	2.3
19-Sep	1.8	1.7	1.6	1.5	1.5	1.5	1.4	1.3	1.3	1.2	1.0	0.6	0.3	0.1	0.0	0.1	0.3	0.8	0.9	1.0	1.1	1.2	1.2	1.2	1.0	1.8
20-Sep	1.2	1.2	1.2	1.3	1.3	1.5	1.7	1.7	1.5	1.4	1.2	0.7	0.5	0.2	0.1	0.4	0.5	0.9	1.2	1.3	1.4	1.3	1.4	1.4	1.1	1.7
21-Sep	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.3	1.2	1.1	0.6	0.3	0.0	0.0	0.0	0.4	0.7	0.8	0.9	9.0	31.8	20.2	9.3	3.7	31.8
22-Sep	6.6	4.9	2.2	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.3	0.9	0.6	0.4	0.3	0.3	0.5	0.8	1.0	1.2	1.2	1.3	1.3	1.4	1.5	6.6
23-Sep	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.0	0.8	0.7	0.5	0.2	0.1	0.1	0.5	0.6	2.2	1.4	1.3	24.3	9.1	23.8	3.2	24.3
24-Sep	27.6	35.0	33.9	32.3	27.8	25.4	14.1	16.8	7.7	4.2	1.6	1.1	0.8	0.5	0.4	0.3	0.6	0.9	1.0	1.1	1.1	1.1	1.1	1.1	9.9	35.0
25-Sep	1.1	1.3	1.4	2.1	2.1	2.1	1.5	1.3	1.2	1.2	1.1	0.8	0.6	0.6	0.7	0.6	0.7	0.9	1.1	1.2	1.2	1.1	1.2	1.4	1.2	2.1
26-Sep	8.4	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.3	1.2	0.9	0.7	0.6	0.5	0.5	0.7	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.4	8.4
27-Sep	1.2	2.0	11.8	32.5	11.7	2.5	1.4	1.3	1.2	1.1	1.1	0.7	0.5	0.3	0.2	0.4	0.6	0.7	0.8	0.8	0.8	1.3	0.9	0.9	3.2	32.5
28-Sep	1.0	1.1	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	0.7	0.4	0.2	0.0	0.1	0.6	0.8	1.0	1.0	1.0	1.1	1.2	1.2	0.9	1.3
29-Sep	1.3	1.3	1.4	1.3	1.4	1.3	1.4	1.3	1.1	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.4
30-Sep	1.0	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.2	1.0	1.0	1.0	1.2	14.7	32.9	12.5	11.8	26.3	33.3	25.1	23.6	28.2	30.9	10.6	33.3
	10.0	10.0	10.4	11.5	10.9	10.6	10.4	8.3	6.4	3.6	2.8	1.6	1.0	0.5	0.9	1.5	0.9	1.3	2.4	3.1	4.3	7.1	8.2	9.3	Diurnal Average	
	37.2	35.8	37.2	35.8	30.2	34.1	31.1	33.2	38.7	16.8	33.8	22.2	10.4	2.7	14.7	32.9	12.5	11.8	26.3	33.3	25.1	31.8	33.1	36.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Stony Mountain - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	56	7.78	7.78
0.4 - 0.5	41	5.69	13.47
0.6 - 0.7	41	5.69	19.17
0.8 - 1.4	286	39.72	58.89
1.5 - 10	144	20.00	78.89
> 10	129	17.92	96.81

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Stony Mountain - September 2025

Maximum Value: 706.5 W/m2 on Sep 5 12:00

Maximum Daily Average: 215.0 W/m2 on Sep 5

Minimum Value: 0.0 W/m2 on Sep 2 00:00

Minimum Daily Average: 44.1 W/m2 on Sep 30

Maximum Diurnal Average: 545.7 W/m2 at hour 13

Minimum Diurnal Average: 0.1 W/m2 at hour 21

Monthly Average: 155.40 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 14.6 Q_3 = 316.2 P_{90} = 521.4 P_{99} = 659.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

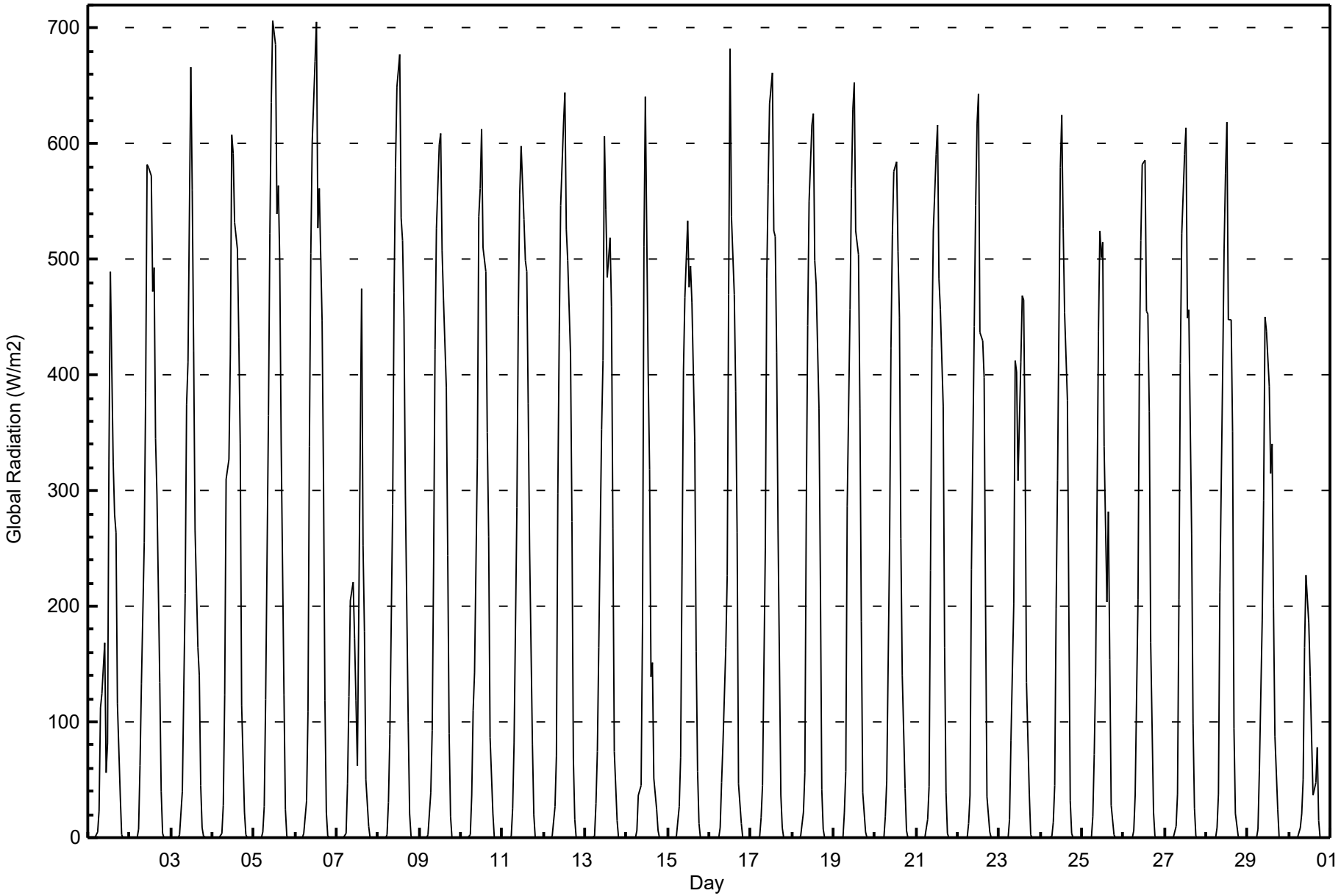
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	5.4	23.0	111.7	124.5	168.7	55.7	81.5	327.0	489.4	324.5	279.7	263.3	116.1	37.2	2.1	0.0	0.0	0.0	0.0	100.4	489.4
2-Sep	0.0	0.0	0.0	0.0	0.0	6.8	62.0	132.5	255.3	384.3	582.1	579.8	572.8	472.3	493.6	345.1	296.6	134.8	40.2	4.0	0.0	0.0	0.0	0.0	181.8	582.1
3-Sep	0.0	0.0	0.0	0.0	0.0	2.8	39.9	127.3	210.9	374.2	411.0	666.2	559.8	421.1	265.9	164.9	139.8	45.4	8.6	1.8	0.0	0.0	0.0	0.0	143.3	666.2
4-Sep	0.0	0.0	0.1	0.0	0.0	3.9	27.9	122.8	309.8	326.7	417.2	607.5	592.3	532.0	508.4	431.7	340.4	114.7	22.0	2.1	0.0	0.0	0.0	0.0	181.7	607.5
5-Sep	0.3	0.5	0.3	0.3	0.4	4.4	26.4	119.9	365.2	522.1	635.7	706.5	685.3	539.9	563.5	497.4	341.8	123.5	23.9	1.7	0.1	0.1	0.1	0.1	215.0	706.5
6-Sep	0.1	0.1	0.1	0.1	0.1	3.9	31.5	108.6	338.5	505.0	602.0	671.6	705.7	526.7	561.4	446.7	310.0	118.4	22.0	1.0	0.1	0.0	0.0	0.1	206.4	705.7
7-Sep	0.1	0.1	0.1	0.0	0.1	3.8	46.4	122.1	204.5	221.3	172.5	118.2	62.4	197.3	475.2	252.5	177.8	49.7	9.2	0.4	0.0	0.0	0.0	0.0	88.1	475.2
8-Sep	0.0	0.0	0.0	0.0	0.0	2.7	30.6	89.2	288.0	471.5	580.1	649.7	677.7	535.4	516.2	448.5	296.2	100.0	21.3	0.8	0.0	0.1	0.0	0.1	196.2	677.7
9-Sep	0.1	0.1	0.1	0.1	0.0	2.5	39.3	92.5	235.0	422.2	527.7	599.3	609.6	507.2	465.1	389.6	243.5	90.3	18.8	0.4	0.0	0.0	0.0	0.0	176.8	609.6
10-Sep	0.0	0.1	0.0	0.0	0.0	2.1	36.6	110.3	143.1	327.8	536.6	561.9	612.6	510.1	489.5	350.2	260.5	86.7	20.3	0.3	0.0	0.0	0.0	0.1	168.7	612.6
11-Sep	0.0	0.0	0.0	0.0	0.0	1.5	25.3	81.6	285.8	451.5	556.9	597.5	534.5	499.3	489.8	375.5	250.3	81.0	19.4	0.2	0.0	0.0	0.1	0.0	177.1	597.5
12-Sep	0.1	0.1	0.2	0.0	0.0	1.7	26.3	70.2	297.2	436.2	546.2	616.2	643.9	526.4	499.0	417.6	273.6	68.3	15.4	0.3	0.2	0.1	0.0	0.1	185.0	643.9
13-Sep	0.0	0.1	0.0	0.1	0.0	1.5	29.8	74.1	165.2	352.7	411.9	606.1	542.6	484.0	518.3	458.3	267.5	73.9	14.6	0.3	0.2	0.1	0.1	0.0	166.7	606.1
14-Sep	0.0	0.0	0.1	0.0	0.0	0.4	6.4	36.4	44.9	185.2	510.8	640.7	402.5	319.1	138.6	151.7	51.1	24.4	6.7	0.0	0.0	0.0	0.0	0.0	105.0	640.7
15-Sep	0.1	0.0	0.0	0.1	0.1	1.4	26.7	69.7	235.9	404.2	467.3	533.8	475.3	494.1	462.8	343.3	161.2	57.1	12.1	0.0	0.0	0.0	0.2	0.1	156.1	533.8
16-Sep	0.1	0.1	0.0	0.0	0.0	0.3	8.9	47.8	81.6	164.3	227.5	469.7	681.7	536.8	469.3	385.9	263.0	46.5	12.5	0.5	0.3	0.4	0.3	0.2	141.6	681.7
17-Sep	0.2	0.1	0.1	0.3	0.1	0.8	17.6	44.6	251.1	483.5	565.1	634.9	661.0	524.3	520.4	420.2	266.5	36.6	8.5	0.0	0.0	0.0	0.1	0.1	184.8	661.0
18-Sep	0.1	0.1	0.1	0.1	0.1	0.7	21.4	56.5	282.1	443.3	550.2	616.1	626.3	499.5	478.4	371.5	222.1	41.7	7.1	0.1	0.0	0.0	0.1	0.1	175.7	626.3
19-Sep	0.0	0.0	0.0	0.0	0.0	0.3	21.9	57.5	286.9	456.3	561.3	629.7	653.3	524.6	503.7	370.9	186.2	39.5	5.2	0.0	0.1	0.2	0.3	0.2	179.1	653.3
20-Sep	0.1	0.1	0.1	0.1	0.1	0.4	18.2	49.4	249.9	423.9	521.4	576.4	584.3	506.8	450.1	258.7	140.8	43.0	6.5	0.0	0.0	0.0	0.0	0.1	159.6	584.3
21-Sep	0.0	0.1	0.1	0.1	0.1	0.3	15.3	44.1	230.4	423.5	524.4	590.4	616.5	483.6	456.8	373.5	165.2	39.2	3.3	0.0	0.0	0.0	0.0	0.0	165.3	616.5
22-Sep	0.0	0.0	0.0	0.0	0.0	0.2	11.7	36.2	232.4	441.4	546.7	617.0	642.8	436.4	430.1	397.3	202.3	35.8	4.5	0.1	0.1	0.0	0.0	0.1	168.1	642.8
23-Sep	0.1	0.0	0.0	0.0	0.1	0.2	15.7	84.6	202.3	412.9	402.5	308.5	411.8	469.1	465.0	342.1	134.5	37.6	2.5	0.0	0.0	0.0	0.1	0.0	137.1	469.1
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.9	12.8	45.1	197.9	309.0	579.7	625.3	527.4	454.4	378.8	200.4	31.7	3.4	0.1	0.1	0.1	0.1	0.1	140.3	625.3
25-Sep	0.1	0.1	0.1	0.1	0.2	0.3	17.7	71.9	143.1	437.8	524.5	501.5	515.3	338.2	203.7	282.5	153.2	28.2	2.1	0.1	0.1	0.0	0.0	0.0	134.2	524.5
26-Sep	0.0	0.1	0.0	0.1	0.0	0.1	6.7	36.5	206.0	411.2	516.7	582.3	585.3	454.8	452.6	369.1	168.1	21.9	1.6	0.1	0.1	0.1	0.1	0.1	158.9	585.3
27-Sep	0.1	0.1	0.1	0.0	0.2	0.1	9.5	38.0	206.3	410.2	521.8	590.4	614.1	449.4	456.3	261.9	99.1	25.9	0.7	0.1	0.1	0.0	0.0	0.0	153.5	614.1
28-Sep	0.1	0.2	0.3	0.2	0.2	0.2	9.0	38.1	212.2	404.4	509.1	575.4	618.4	448.1	448.4	350.9	94.3	20.3	0.7	0.0	0.0	0.1	0.1	0.1	155.4	618.4
29-Sep	0.1	0.1	0.0	0.1	0.0	0.0	7.4	58.3	188.0	291.7	450.5	438.2	390.5	315.3	340.8	197.6	87.8	24.1	0.5	0.0	0.0	0.0	0.1	0.1	116.3	450.5
30-Sep	0.1	0.1	0.2	0.2	0.1	0.0	8.0	20.9	50.0	164.6	226.6	185.4	139.4	85.1	36.5	47.0	78.4	14.7	0.1	0.0	0.0	0.0	0.0	0.0	44.1	226.6
	0.1	0.1	0.1	0.1	0.1	1.6	22.3	72.2	212.4	370.7	465.7	537.7	545.7	455.1	431.3	338.7	204.5	59.0	11.7	0.6	0.1	0.1	0.1	0.1	Diurnal Average	
	0.3	0.5	0.3	0.3	0.4	6.8	62.0	132.5	365.2	522.1	635.7	706.5	705.7	539.9	563.5	497.4	341.8	134.8	40.2	4.0	0.3	0.4	0.3	0.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Stony Mountain - September 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	371	51.53	51.53
21 - 100	81	11.25	62.78
101 - 300	83	11.53	74.31
301 - 600	156	21.67	95.97
601 - 900	29	4.03	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - September 2025

Maximum Speed: 23 km/h on Sep 29 09:00

Maximum Daily Speed Average: 15.5 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 7 13:00

Minimum Daily Speed Average: 3.2 km/h on Sep 30

Maximum Diurnal Speed Average: 7.9 km/h at hour 3

Minimum Diurnal Speed Average: 2.2 km/h at hour 19

Monthly Average Velocity: 5.2 km/h 222.4 deg

Percentiles: $P_1 = 3$ $P_{10} = 5$ $Q_1 = 7$ Median = 10 $Q_3 = 13$ $P_{90} = 16$ $P_{99} = 20$

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WNW6	WNW7	NW6	WNW8	NW6	N6	NNW6	ENE4	NE6	NE3	W3	NNW6	NNW7	NNW7	NNW7	NNW6	NW5	NE5	NNE5	NNE6	N6	N8	NNE8	NNE8	NNW4.9	N8
2-Sep	N7	N7	NNW6	NNW6	N6	NNE7	ENE8	E5	ENE5	E6	ESE6	ESE5	E4	E6	ESE5	E6	E5	E6	ESE7	SE8	SSE8	S11	S12	S13	ESE3.4	S13
3-Sep	S16	S18	S18	S16	S16	S17	S17	S17	S18	SSW19	SSW12	SSW13	SSW14	SW10	WSW9	WSW9	WNW11	NNW15	N18	N16	N12	NNW12	NNW14	NNW12	SW6.2	SSW19
4-Sep	NNW13	NNW11	NNW11	NNW14	NW13	NW15	NW14	NW15	NNW17	NNW16	NNW15	NNW15	NNW15	NNW15	NNW14	NNW13	NNW13	NNW10	NW7	NNW7	N6	NNW6	N6	NE5	NNW11.7	NNW17
5-Sep	ESE5	SSE6	S8	SSW9	SW10	SW11	SSW10	SSW9	SSW9	SW10	S5	SSW5	S6	SSW5	SW5	SW5	S5	SSW5	S6	S7	SSW8	SSW9	SSW10	SW10	SSW7.1	SW11
6-Sep	SSW12	SSW13	SSW12	SSW11	SSW11	SSW10	S10	S9	SSE8	SE6	SSE8	SSE11	S12	SSW15	S16	SSW14	SSW13	SSW9	SSW7	S8	SSW10	SSW12	SSW12	SSW13	SSW10.6	S16
7-Sep	SSW13	SSW13	SW14	SW13	SW10	SW9	W7	SW8	SW7	WSW6	W5	W4	SSW1	W2	W2	WNW3	WNW4	WNW7	NW10	NW10	NW8	N7	N8	NNE10	WSW4.7	SW14
8-Sep	NNE8	NNE6	NNW6	NNW6	NNW6	NNW5	NW6	N5	NE7	NE5	ENE6	NE6	E5	NE4	SE4	ENE5	NE5	ENE5	E8	ESE9	SE9	SE8	ESE8	SE8	ENE3.7	ESE9
9-Sep	SSE10	S10	SSW11	SSW10	SSW10	S10	S9	S9	SSE8	SSE9	SSE10	SSE14	S14	S14	SSW12	SSW14	SSW14	S9	SSE8	SSE9	S9	S11	SSW12	SW10	S10.3	SSE14
10-Sep	SW12	SW11	SW10	SW11	SW9	WSW9	SW10	WSW8	WSW10	WNW10	WNW9	NW9	NW7	NW7	NW8	NW6	NW6	NW5	NW4	NW6	NNW6	NNE6	NNE6	E6	W4.7	SW12
11-Sep	ENE3	ESE3	N2	NNE5	NE5	NE5	NE3	N4	NNE4	NNE4	E6	E9	E8	ESE8	SSE6	ESE4	E6	E6	SE7	SE7	SE8	S8	SSW10	SSW11	ESE3.4	SSW11
12-Sep	SSW11	SSW11	SSW10	S9	S9	SSW10	SSW10	SSW9	S9	S9	S8	SSE10	SSE9	SSE8	S7	SSW5	SW7	SSW5	SSW7	SSW8	SSW9	SSW9	SSW10	SSW11	SSW8.5	SSW11
13-Sep	SSW11	SSW12	SSW12	SSW11	SSW10	SSW10	SSW7	SSW8	SSW7	S8	S9	S9	S11	SSW11	S10	SSW9	SSW9	SSW7	SSW7	SSW8	SSW9	SSW9	SSW9	SSW9	SSW9.1	SSW12
14-Sep	SSW10	SSW12	SSW11	SSW6	S8	S11	S8	ESE4	S8	SSW7	SSE7	ESE10	ESE9	E13	ESE13	ESE13	E8	E7	E6	ENE5	ENE6	SSE4	S5	W2	SE5.6	E13
15-Sep	SSW4	SW6	WSW7	WSW6	WSW7	WSW9	WSW8	SW9	WSW9	W11	W11	WNW11	WNW12	WNW13	WNW14	NW13	WNW13	WNW12	WNW11	WNW12	NNW10	NNW8	NW6	NW8	WNW8.1	WNW14
16-Sep	NW9	NW9	WNW10	WNW11	NW10	NW8	WNW7	W8	W9	WNW8	WNW6	NW5	NW7	NW5	WNW6	N3	ENE4	E4	SE6	SSE7	S8	SSW8	S9	S9	W3.8	WNW11
17-Sep	S10	SSW10	SSW11	SSW12	SSW13	S12	S11	S13	S14	S13	SSE12	S14	SSE14	SSE13	SSE13	SSE14	SSE13	SSE13	SSE13	SSE13	SSE13	S12	S15	S16	S12.3	S16
18-Sep	S17	S18	S18	S19	S20	S20	S20	S16	S16	SSW16	SSW13	SSW13	S13	SSW17	SSW16	SSW14	SSW11	W7	WSW6	SSW7	SSW8	S10	SSW11	SSW11	SSW13.6	S20
19-Sep	WSW9	WNW8	WNW8	WNW8	WNW9	WNW10	WNW10	WNW10	WNW8	NW6	W3	W5	WNW8	W8	SW8	SW9	SW8	WSW8	SW7	SW8	SW8	SSW9	SW10	SSW11	WSW6.7	SSW11
20-Sep	SSW11	SSW11	SSW12	SSW13	SSW13	SSW13	SSW13	SSW12	SSW12	SSW11	SSW11	S14	S13	S14	S15	S11	SSE10	SSE9	SSE9	SSE9	SSE12	S12	S12	S13	S11.3	S15
21-Sep	S14	S15	SSW14	SSW12	SW11	WNW11	NW12	NW10	NNW9	NNW10	NNW8	NNE8	NE7	NE7	NNE4	NW12	NW15	NW17	NW14	WNW17	WNW19	NW13	WNW13	W14	WNW7.1	WNW19
22-Sep	W13	W14	W15	W14	W15	W15	W15	W14	W13	W12	WSW12	WSW13	WSW15	WSW15	WSW15	WSW16	WSW13	SW10	SSW9	SSW10	SSW11	S13	SSW13	SSW13	WSW11.7	WSW16
23-Sep	SSW15	SSW16	SSW17	SSW17	SW17	SW15	WSW11	W11	WSW9	WNW13	WNW13	W11	W13	W13	WNW14	WNW12	W9	WSW9	W8	W10	WSW10	WSW13	W12	W13	WSW10.8	SW17
24-Sep	W12	W12	SW7	SSW9	SW10	WSW12	WSW13	WSW13	SW13	WSW13	W14	C	WNW17	WNW14	W15	WNW13	WNW13	W10	W9	W11	W10	WSW10	WSW12	W11	W10.9	WNW17
25-Sep	W10	SW10	WSW10	WSW9	SW13	SW11	SSW12	SSW13	SSW11	SSW11	SSW15	SSW16	S16	S17	SSE14	SSE12	SSE13	S12	SSW8	S9	SSW10	W12	W12	WNW11	SSW9.7	S17
26-Sep	W10	WSW9	WSW8	WSW10	W12	W13	W15	W16	W17	WNW18	WNW17	W18	WNW19	WNW21	WNW20	WNW20	W17	W13	W11	WSW12	WSW13	WSW12	SW11	SSW12	W13.5	WNW21
27-Sep	SSW13	SSW12	SSW15	WSW15	WSW16	WSW17	WSW16	W16	W19	W18	W18	W17	W16	W15	W11	WSW13	WSW14	WSW12	WSW9	WSW10	W12	W15	WSW16	W14	WSW13.6	W19
28-Sep	SW10	SW9	SW13	SW14	WSW13	WSW13	W15	W17	WNW16	WNW9	W8	W7	W7	SSW4	SW4	SE6	S6	SSE4	SE6	SE8	SSE9	SSE9	SSE11	SSE14	SW6.3	W17
29-Sep	SSE13	SSE10	SSE13	SE13	SE16	SE19	SSE17	SSE21	SSE23	SSE21	SSE23	SSE22	S19	SSE17	SSE17	SSE14	SSE13	SSE12	SSE11	SE10	SE12	SSE11	S14	S17	SSE15.5	SSE23
30-Sep	S17	S17	S17	S16	S13	S10	S10	S7	SSW9	SSW10	SW7	W6	WSW2	N3	N4	NNE3	NNW6	N8	N9	NNW6	NNW8	NNW8	NNW10	NW9	SW3.2	S17
	SSW6.8	SSW7.5	SW7.9	SW7.7	SW7.6	SW7.0	SW6.7	SW6.3	SW5.9	SW5.2	SW4.7	SW4.4	SW4.4	SW4.4	SW4.8	SW4.1	WSW3.9	WSW2.5	SW2.2	SW3.1	SW3.8	SW4.5	SW5.5	SW5.7	Diurnal Average	
	S17	S18	S18	S19	S20	S20	S20	SSE21	SSE23	SSE21	SSE23	SSE22	S19	WNW21	WNW20	WNW20	W17	NW17	N18	WNW17	WNW19	W15	WSW16	S17	Diurnal Maximum	

C - Calibration

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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 26 14:00

Minimum Value: 1 km/h on Sep 28 18:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
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-Sep	1	2	2	1	1	1	1	1	2	2	1	3	2	2	3	2	2	2	1	1	1	2	2	2	3
2-Sep	1	1	1	1	1	1	2	2	1	2	3	2	2	3	2	2	2	1	1	1	2	2	3	3	3
3-Sep	4	5	4	4	3	4	4	5	5	6	4	4	4	3	3	3	5	6	7	6	4	4	6	5	7
4-Sep	5	4	4	5	4	4	4	4	6	6	6	6	6	6	6	5	5	4	2	1	1	1	1	1	6
5-Sep	1	1	1	1	2	2	2	2	2	3	2	3	3	3	3	3	2	2	1	1	1	2	2	2	3
6-Sep	2	3	2	2	2	2	2	2	3	2	3	4	4	5	5	5	4	3	1	1	2	2	2	3	5
7-Sep	2	3	3	3	2	2	1	1	2	2	2	1	2	1	1	1	2	2	2	2	2	2	2	2	3
8-Sep	2	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	2	1	1	1	1	1	2	1	3
9-Sep	2	2	2	2	2	2	2	2	2	2	4	5	5	5	4	5	4	3	2	2	2	2	2	2	5
10-Sep	3	2	2	3	1	2	2	3	3	4	3	3	3	3	3	2	2	1	1	1	1	1	1	1	4
11-Sep	1	2	2	2	1	1	1	1	1	1	2	3	3	3	3	3	2	1	1	1	2	1	2	2	3
12-Sep	2	2	2	2	1	1	2	2	3	3	3	3	3	3	3	3	2	2	1	1	2	1	2	2	3
13-Sep	2	2	2	2	2	2	2	1	2	3	3	4	4	4	4	4	3	1	1	1	2	2	1	2	4
14-Sep	2	3	2	2	1	3	3	3	2	2	3	3	3	5	3	4	3	2	2	1	1	1	1	1	5
15-Sep	2	2	2	1	2	2	2	2	2	4	4	4	4	4	5	5	4	4	3	3	3	2	2	2	5
16-Sep	2	2	3	3	3	2	2	2	3	3	2	2	3	2	3	2	1	1	1	1	1	1	2	2	3
17-Sep	2	2	2	2	3	2	2	3	4	4	4	5	4	5	4	5	5	5	4	4	3	3	4	4	5
18-Sep	5	5	5	5	6	6	6	5	6	5	4	5	5	6	6	5	4	2	2	1	1	2	2	2	6
19-Sep	3	2	1	2	2	3	3	3	2	2	2	3	3	4	4	3	2	2	1	1	1	1	2	2	4
20-Sep	2	2	3	3	3	3	3	3	3	3	3	5	4	5	5	4	4	2	2	2	3	3	3	3	5
21-Sep	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	6	5	6	4	6	6	4	4	5	6
22-Sep	4	5	5	4	5	5	5	5	5	4	5	5	5	5	6	6	5	3	2	2	2	3	2	2	6
23-Sep	3	3	4	4	4	4	3	4	3	4	5	4	5	5	5	4	3	3	2	3	3	4	4	4	5
24-Sep	4	4	2	2	3	4	4	4	4	5	5	C	6	5	6	4	5	3	3	3	3	3	3	3	6
25-Sep	3	2	2	2	3	2	3	4	3	3	5	6	6	6	5	5	5	4	2	2	2	4	4	3	6
26-Sep	3	3	2	3	4	4	5	5	6	6	6	7	7	8	7	8	7	4	3	3	4	4	2	3	8
27-Sep	4	3	4	6	5	6	5	6	6	6	7	6	6	6	5	5	5	4	3	3	4	6	6	5	7
28-Sep	4	2	4	4	4	4	5	6	5	4	3	3	3	3	3	3	2	1	1	2	2	2	3	4	6
29-Sep	4	3	4	4	5	5	5	7	8	7	7	7	8	6	5	5	4	4	3	2	3	3	4	5	8
30-Sep	5	4	4	4	3	2	3	2	3	3	2	3	2	2	2	2	1	2	2	1	2	2	2	2	5
	5	5	5	6	6	6	6	7	8	7	7	7	8	8	7	8	7	6	7	6	6	6	6	5	
	Diurnal Maximum																								

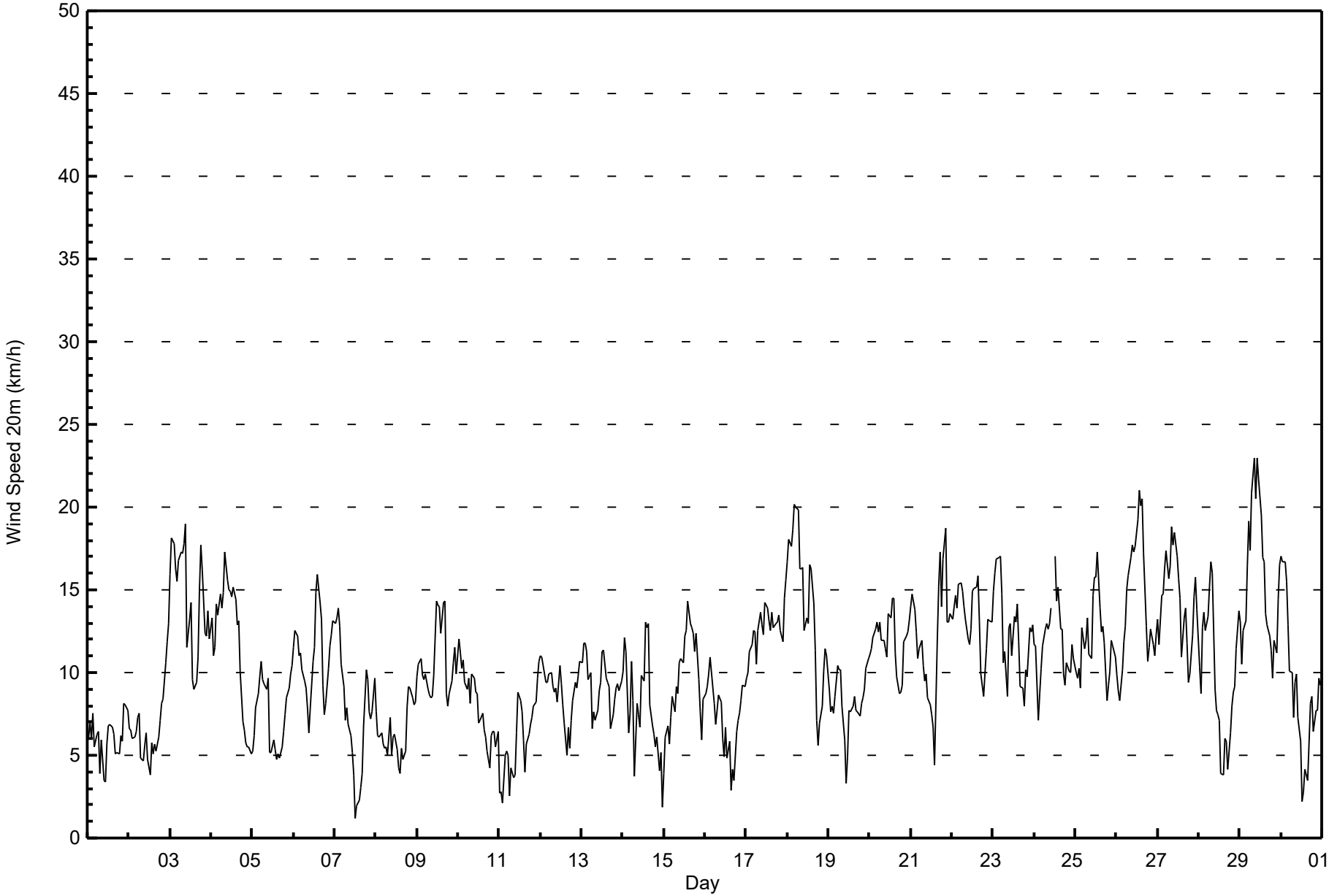
C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	73	10.15	10.15
6 - 11	374	52.02	62.17
12 - 19	261	36.30	98.47
20 - 28	11	1.53	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Stony Mountain - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	6	6	9	7	5	6	1	2	2	9	3	1	8	2	5	1	73
6 - 11	12	10	5	3	13	8	13	28	42	75	35	28	24	27	24	27	374
12 - 19	2	0	0	0	1	2	4	25	50	53	8	27	41	21	11	16	261
20 - 28	0	0	0	0	0	0	0	5	3	0	0	0	0	3	0	0	11
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	20	16	14	10	19	16	18	60	97	137	46	56	73	53	40	44	719

Total Number of Valid Hours: 719

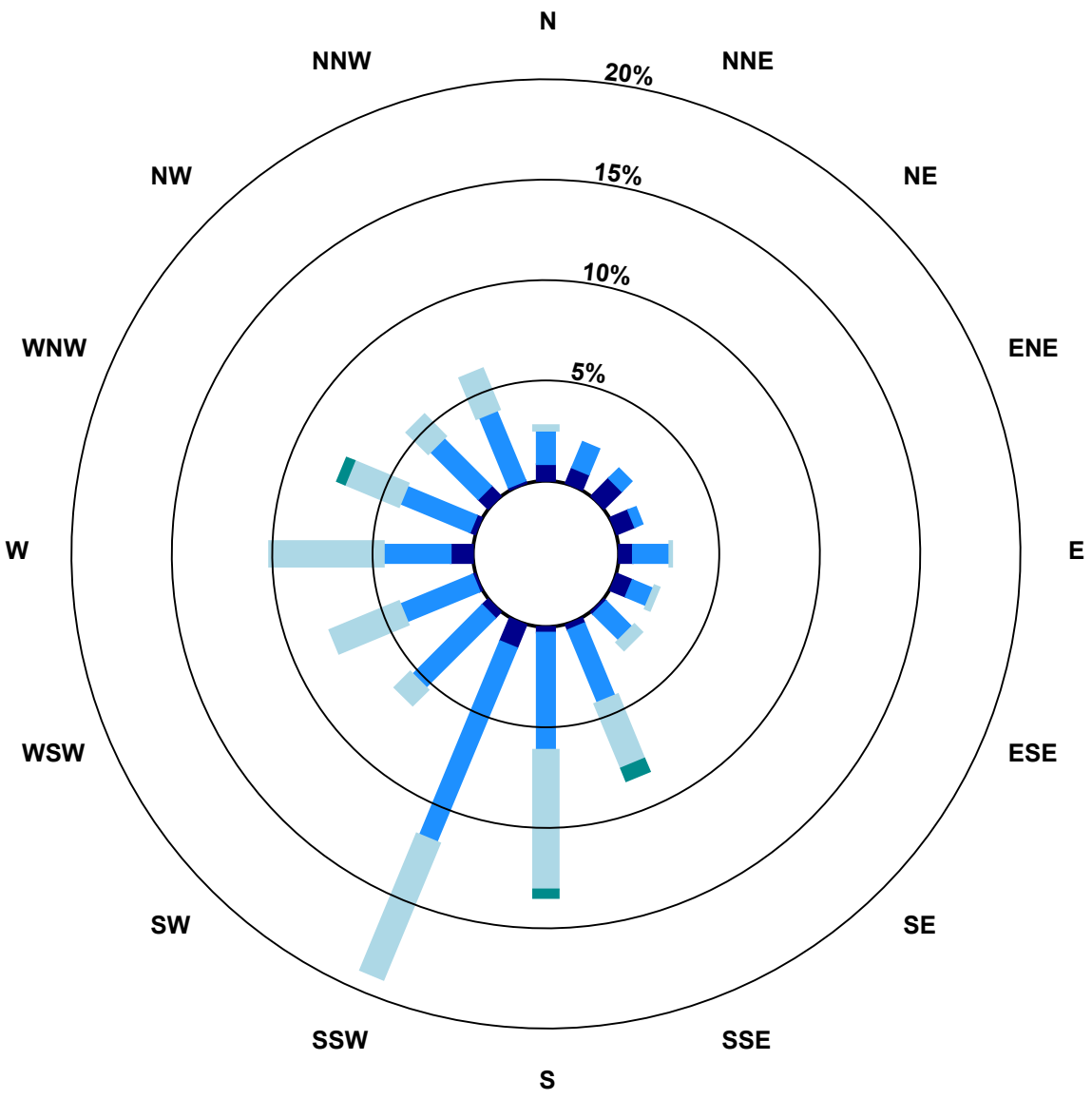
Total Number of Hours: 720

Wood Buffalo Environmental Association

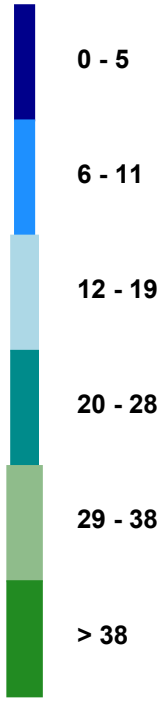
Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Stony Mountain



Classes (km/h)



Total Number of Valid Hours: 719

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - September 2025

Direction of Maximum Speed: 157 deg on Sep 29 09:00
Direction of Maximum Daily Speed Average: 155.8 deg on Sep 29

Direction of Minimum Speed: 204 deg on Sep 7 13:00
Direction of Minimum Daily Speed Average: 3.2 deg on Sep 30

Monthly Average Direction: 222.4 deg

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
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	Average
1-Sep	301	299	309	299	323	2	345	59	55	44	270	334	331	331	338	348	325	46	18	18	357	3	12	22	348.2
2-Sep	3	0	345	336	360	32	63	96	77	95	103	116	95	88	105	101	90	92	113	142	156	169	179	184	102.4
3-Sep	188	186	186	184	180	183	185	189	189	194	201	201	207	228	243	242	303	341	355	352	349	342	347	341	217.1
4-Sep	331	337	334	329	325	323	321	319	332	344	340	336	332	327	330	332	328	340	325	327	350	348	351	37	332.8
5-Sep	113	162	190	207	214	215	211	211	210	215	191	201	187	208	234	214	189	209	179	190	203	210	210	216	203.0
6-Sep	207	206	205	202	203	199	189	177	168	139	168	163	187	200	187	192	195	201	204	186	196	196	198	205	192.7
7-Sep	206	212	215	218	223	234	262	227	222	254	260	281	204	271	271	290	283	295	305	313	323	351	9	20	257.1
8-Sep	17	13	347	327	330	330	322	351	48	52	57	44	91	54	127	78	49	64	83	109	129	136	113	124	60.1
9-Sep	166	186	194	195	193	183	180	171	165	159	157	168	174	183	198	201	198	181	162	168	171	183	194	214	182.1
10-Sep	219	224	220	217	227	242	231	240	249	291	301	322	326	321	313	316	323	323	314	323	342	25	22	82	276.6
11-Sep	68	121	5	13	52	48	56	354	33	28	86	96	101	106	154	123	95	97	145	135	143	180	201	195	113.3
12-Sep	193	207	203	190	184	195	207	203	188	179	184	166	157	162	175	204	219	209	193	201	205	201	197	202	192.4
13-Sep	200	201	204	204	198	203	211	195	197	190	176	175	174	198	184	198	206	210	209	206	205	207	199	200	197.6
14-Sep	200	198	203	210	176	181	185	111	171	197	148	118	105	97	108	108	95	81	97	77	78	159	188	273	144.7
15-Sep	196	231	250	254	240	241	248	219	238	267	275	294	299	291	292	304	303	299	302	297	328	329	316	310	282.6
16-Sep	306	307	303	298	306	314	297	279	274	282	291	305	306	320	289	349	73	90	142	164	176	192	178	185	277.5
17-Sep	191	194	192	199	196	189	180	177	178	170	168	170	162	154	161	161	164	161	157	157	161	170	177	183	173.1
18-Sep	184	180	179	183	186	182	190	188	191	197	194	193	171	195	203	203	207	259	257	197	198	189	196	210	192.6
19-Sep	246	290	291	295	290	287	291	296	301	305	263	275	284	265	225	219	232	248	231	222	216	212	215	208	257.4
20-Sep	210	212	207	207	210	213	209	206	207	192	196	184	175	170	174	174	166	154	164	162	168	174	185	183	188.4
21-Sep	184	190	195	203	230	293	318	320	335	336	342	16	43	48	19	316	319	319	315	300	302	314	290	280	300.2
22-Sep	277	267	266	265	267	269	268	261	263	266	258	247	242	242	246	240	241	223	210	195	194	189	192	194	244.0
23-Sep	196	201	205	211	220	225	252	274	249	282	290	267	267	279	283	290	272	256	273	269	247	250	265	277	251.5
24-Sep	271	275	232	213	219	239	246	242	224	245	267	C	284	282	281	292	286	281	270	271	269	256	243	259	260.6
25-Sep	268	225	239	241	215	214	213	211	204	201	195	204	175	174	167	161	162	169	196	181	196	281	275	284	205.8
26-Sep	269	247	245	250	265	265	272	272	278	284	285	270	285	283	282	282	281	279	271	244	253	240	219	208	268.1
27-Sep	208	203	208	242	237	245	245	259	263	276	277	276	277	265	271	254	241	244	250	244	259	274	254	266	253.3
28-Sep	234	218	221	236	248	257	268	277	286	289	266	263	259	208	216	143	182	161	139	133	157	166	160	160	226.8
29-Sep	149	147	147	144	140	143	148	153	157	155	160	160	170	167	168	160	162	153	149	132	144	156	170	176	155.8
30-Sep	179	179	184	184	185	171	191	189	201	208	224	267	246	352	6	15	348	352	1	329	338	333	334	317	217.0
	213.3	212.7	215.2	221.8	221.2	225.5	231.2	228.6	224.7	232.1	229.0	216.5	219.4	222.9	226.4	228.9	237.2	245.9	227.0	215.6	214.0	218.7	215.6	216.5	
	Diurnal Average																								

C - Calibration
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 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 87 deg on Sep 30 13:00

Minimum Value: 11 deg on Sep 16 20:00

Percentiles: P_1 = 12 P_{10} = 15 Q_1 = 18 Median = 23 Q_3 = 29 P_{90} = 38 P_{99} = 69

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
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-Sep	16	13	14	13	26	17	22	42	21	43	41	46	25	32	36	35	31	24	19	16	17	21	20	18	46
2-Sep	17	15	16	11	22	22	14	24	26	27	41	50	58	45	40	31	26	15	14	15	14	20	18	17	58
3-Sep	19	20	20	19	18	19	19	19	23	23	30	27	23	33	32	27	39	31	31	30	30	29	29	30	39
4-Sep	27	27	26	26	25	23	23	25	26	31	32	33	33	33	30	33	30	31	20	16	19	19	17	29	33
5-Sep	22	11	15	12	12	14	16	18	23	26	52	69	56	66	62	59	50	21	12	13	15	12	13	15	69
6-Sep	16	16	16	15	14	12	13	18	27	36	39	31	34	34	27	27	28	20	14	13	16	15	14	17	39
7-Sep	16	16	17	17	15	18	23	15	22	30	30	33	76	65	69	41	28	22	19	17	21	23	18	19	76
8-Sep	19	20	23	13	12	14	14	25	27	45	44	47	60	69	58	39	50	15	12	13	12	11	12	13	69
9-Sep	18	16	15	14	14	15	16	17	21	24	30	30	31	32	30	27	24	24	15	17	20	18	15	32	32
10-Sep	18	16	13	16	15	17	19	31	27	38	28	31	49	41	38	33	25	21	14	19	16	22	23	21	49
11-Sep	45	54	63	30	17	23	58	28	36	38	31	27	31	46	56	72	28	12	18	13	22	18	15	17	72
12-Sep	16	16	16	16	14	13	15	16	23	29	36	31	36	40	50	55	29	23	17	14	14	15	16	15	55
13-Sep	15	16	16	17	15	15	45	17	19	25	29	37	32	32	37	36	25	15	13	15	14	14	15	16	45
14-Sep	15	18	19	20	12	24	26	84	25	23	36	30	25	24	18	21	19	24	18	16	18	20	15	65	84
15-Sep	68	20	22	19	18	16	22	15	25	31	32	30	32	29	27	28	26	23	21	21	23	19	19	19	68
16-Sep	22	21	21	21	24	21	24	22	24	28	34	54	51	63	52	62	37	22	11	11	15	14	15	14	63
17-Sep	15	15	16	17	16	17	16	20	23	26	31	29	29	33	33	32	30	26	23	22	21	21	22	20	33
18-Sep	22	21	22	20	22	22	22	25	28	27	32	30	35	29	30	30	28	29	38	17	17	18	19	18	38
19-Sep	28	15	15	16	16	17	19	19	18	28	68	66	52	49	48	36	27	16	18	13	13	12	14	15	68
20-Sep	16	16	17	18	19	18	18	18	22	24	29	29	28	32	30	31	31	22	18	16	22	22	18	19	32
21-Sep	18	17	17	19	22	26	19	19	24	23	34	35	41	39	68	31	25	24	22	24	23	21	24	27	68
22-Sep	25	28	27	26	26	25	25	30	27	31	36	34	32	32	32	31	30	22	16	18	16	16	16	15	36
23-Sep	17	18	18	18	20	20	26	26	34	29	30	30	28	35	30	30	29	25	23	25	29	26	27	25	35
24-Sep	28	25	30	19	24	26	24	28	23	30	31	C	27	32	32	29	28	22	21	20	22	21	19	22	32
25-Sep	21	18	19	18	15	15	19	20	21	23	27	29	30	28	31	32	27	24	18	17	17	26	23	22	32
26-Sep	27	23	22	24	26	25	24	24	24	26	27	29	27	28	27	29	27	25	21	21	25	21	16	19	29
27-Sep	20	20	19	30	23	26	24	26	24	26	27	28	30	34	40	32	27	26	24	22	27	26	28	28	40
28-Sep	24	21	19	23	25	25	25	22	22	33	36	46	47	82	78	61	23	12	19	16	23	20	20	20	82
29-Sep	20	21	21	21	20	20	22	22	23	24	23	26	26	25	24	24	22	20	18	17	18	20	21	22	26
30-Sep	22	19	19	19	20	18	25	21	19	25	28	42	87	59	48	75	22	21	24	18	16	16	16	15	87
	68	54	63	30	26	26	58	84	36	45	68	69	87	82	78	75	50	31	38	30	30	29	29	65	
	Diurnal Maximum																								

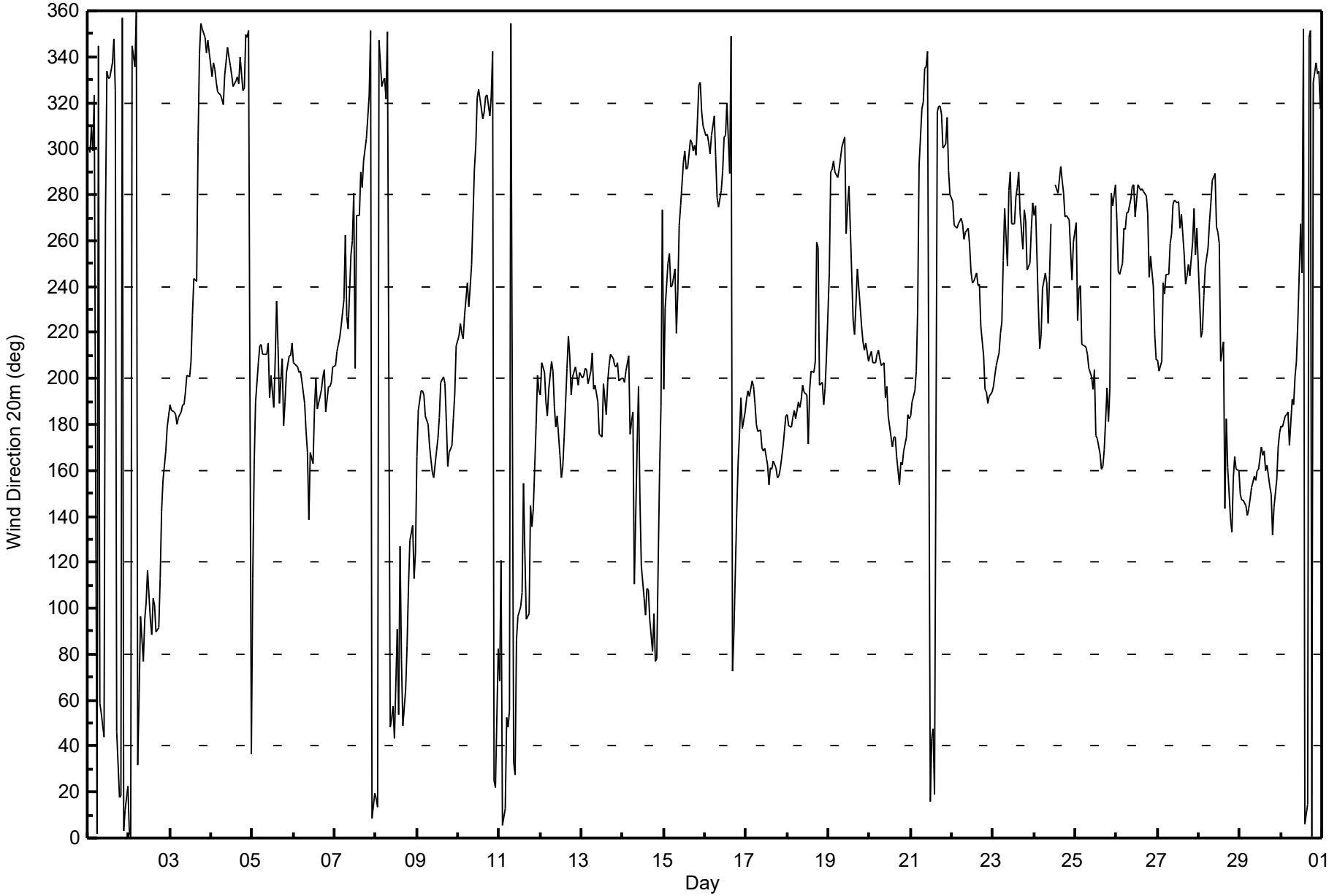
C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS19
FIREBAG
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
SEPTEMBER 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	686	34	34	100	10.1	0	2	0
H2S (ppb) Average	683	37	37	100	1.4	0	0.4	0
THC (ppm) Average	686	34	34	100	3.3	-	2.5	-
NO2 (ppb) Average	685	35	35	100	17.2	0	5.1	-
NO (ppb) Average	685	35	35	100	8.3	-	1.3	-
NOX (ppb) Average	685	35	35	100	21.5	-	6	-
Temperature 2 m (C) Average	720	0	0	100	26.5	-	20.7	-
Relative Humidity (%) Average	720	0	0	100	98	-	83.8	-
Wind Speed 10 m (km/h) Average	719	0	1	99.86	38	-	24	-
Wind Direction 10 m (deg) Average	719	0	1	99.86	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.54	0.9	-	0	0	0.1	0.3	0.5	1.2	10.1
H2S (ppb) Average	683	0.2	0.2	-	0	0.1	0.1	0.2	0.2	0.4	1.4
THC (ppm) Average	686	2.33	0.2	-	2.1	2.2	2.2	2.3	2.4	2.5	3.3
NO2 (ppb) Average	685	2.44	2.4	-	0.2	0.6	1	1.6	3	5.5	17.2
NO (ppb) Average	685	0.35	0.8	-	0	0	0	0.1	0.3	0.8	8.3
NOX (ppb) Average	685	2.78	2.9	-	0.3	0.6	1.1	1.8	3.3	6	21.5
Temperature 2 m (C) Average	720	13.88	4.8	-	3	7.9	10.5	13.8	16.8	20.7	26.5
Relative Humidity (%) Average	720	62.7	17.8	-	27.7	39	48.4	62.1	77.2	88.8	98
Wind Speed 10 m (km/h) Average	719	13.2	6	-	1	6	9	12	17	23	38
Wind Direction 10 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	02 Sep 2025 07:00	02 Sep 2025 07:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 10.1 ppb on Sep 19 09:00

Maximum Daily Average: 2.0 ppb on Sep 19

Minimum Value: 0.0 ppb on Sep 1 02:00

Minimum Daily Average: 0.0 ppb on Sep 8

Maximum Diurnal Average: 1.2 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 21

Monthly Average: 0.54 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.5 P_{90} = 1.2 P_{99} = 4.8

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	2.5	3.4	0.8	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	3.4
2-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.4	0.7	1.1	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.2	1.1
3-Sep	Z	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	1.2	4.0	4.2	1.9	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.7	4.2
4-Sep	0.0	Z	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
5-Sep	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.6	0.6	0.3	0.2	0.2	0.2	0.1	0.3	0.8	0.9	0.2	0.5	0.3	0.3	0.3	0.3	0.9
6-Sep	0.3	0.2	0.1	Z	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.4
7-Sep	0.2	0.4	0.5	0.2	Z	2.6	3.3	5.3	1.5	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.7	5.3
8-Sep	0.1	0.1	0.0	0.1	0.1	Z	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	0.0	0.2
9-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.4	0.1	0.4
10-Sep	0.4	Z	0.3	0.5	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.2	1.2	1.8	1.2	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.8
11-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3
12-Sep	0.2	0.3	0.2	Z	0.3	0.3	0.3	0.5	0.8	0.4	0.3	0.4	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.1	0.3	0.4	0.3	0.3	0.3	0.8
13-Sep	0.4	0.4	0.5	0.3	Z	0.6	1.2	0.5	0.6	0.5	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.4	1.2
14-Sep	0.3	0.4	0.4	0.4	0.4	Z	0.2	0.1	0.1	0.2	0.4	0.5	0.2	2.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.2
15-Sep	Z	0.0	0.8	4.1	5.1	2.8	1.6	2.7	3.8	3.3	C	C	C	C	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.1
16-Sep	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	1.0	0.9	1.4	1.8	1.4	0.5	0.1	0.1	0.1	0.1	0.2	0.3	1.8
17-Sep	0.4	0.4	Z	0.2	0.1	0.2	0.2	0.3	0.4	0.5	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.5
18-Sep	0.1	0.1	0.3	Z	0.5	0.4	0.6	0.9	1.1	0.8	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.4	0.7	0.4	1.1
19-Sep	0.6	0.8	0.7	1.5	Z	0.8	1.2	4.0	10.1	3.9	3.4	1.8	5.6	3.0	2.6	1.5	1.4	1.2	0.3	0.2	0.2	0.2	0.2	0.3	2.0	10.1
20-Sep	0.3	0.1	0.2	0.3	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.5	0.8	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.8
21-Sep	Z	0.6	0.5	0.5	0.6	0.7	0.7	2.1	3.5	2.8	1.5	1.2	2.1	0.6	0.5	0.4	0.5	0.4	0.2	0.4	0.1	0.1	0.0	0.6	0.9	3.5
22-Sep	0.3	Z	0.7	0.9	1.6	1.6	3.3	5.9	3.1	3.4	4.8	3.6	1.1	1.3	1.4	1.3	0.5	0.5	0.2	0.1	0.2	0.5	0.2	0.1	1.6	5.9
23-Sep	0.4	0.5	Z	0.6	0.7	0.7	0.5	1.7	2.4	0.7	1.8	2.0	3.7	1.5	0.4	0.4	0.2	0.1	0.1	0.2	0.3	0.7	1.2	2.0	1.0	3.7
24-Sep	2.1	2.5	1.7	Z	0.4	0.3	0.5	0.7	2.1	4.3	4.9	1.9	0.4	0.1	0.4	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.2	1.0	4.9
25-Sep	0.2	0.3	0.4	0.7	Z	0.3	0.2	0.3	0.5	0.9	0.6	0.4	0.3	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.1	0.3	0.9
26-Sep	0.0	0.0	0.1	0.2	0.3	Z	0.3	0.4	1.3	1.1	1.1	0.9	0.4	0.5	0.4	0.5	0.3	0.3	0.3	0.9	0.7	0.9	0.9	0.4	0.5	1.3
27-Sep	Z	0.3	0.2	0.2	0.3	1.1	1.0	0.5	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.6	0.4	0.1	0.2	0.1	0.2	0.2	0.2	1.0	0.3	1.1
28-Sep	3.8	Z	2.5	1.4	0.6	0.4	0.3	0.4	0.5	0.6	0.7	0.7	0.4	0.9	2.9	6.5	0.9	0.4	0.3	0.3	0.2	0.4	0.6	0.5	1.1	6.5
29-Sep	0.3	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.5
30-Sep	0.2	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.4	0.6	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.3	0.7
	0.4	0.3	0.4	0.5	0.5	0.6	0.6	1.0	1.2	1.0	1.0	0.7	0.7	0.7	0.7	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	Diurnal Average	
	3.8	2.5	2.5	4.1	5.1	2.8	3.3	5.9	10.1	4.3	4.9	3.6	5.6	4.0	4.2	6.5	1.8	1.4	0.9	0.9	0.7	0.9	1.2	2.0	Diurnal Maximum	

Z - zerospan C - Calibration

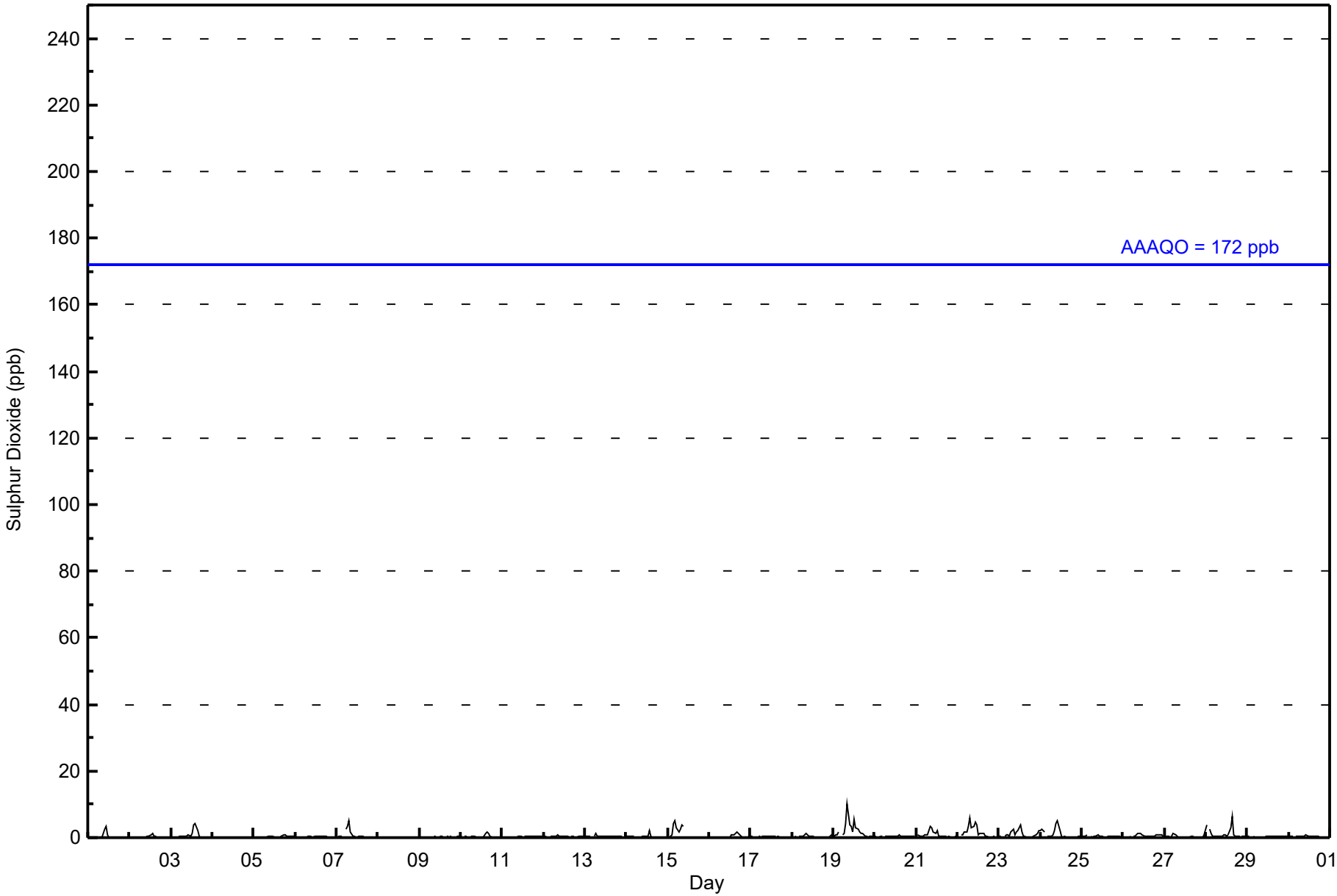
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - September 2025



Sulphur Dioxide (SO_2) - ppb
Firebag - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Firebag - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	59	37	4	2	1	4	26	70	124	87	92	62	37	24	35	21	685
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	59	37	4	2	1	4	26	70	124	87	92	62	37	24	35	21	685

Total Number of Valid Hours: 685

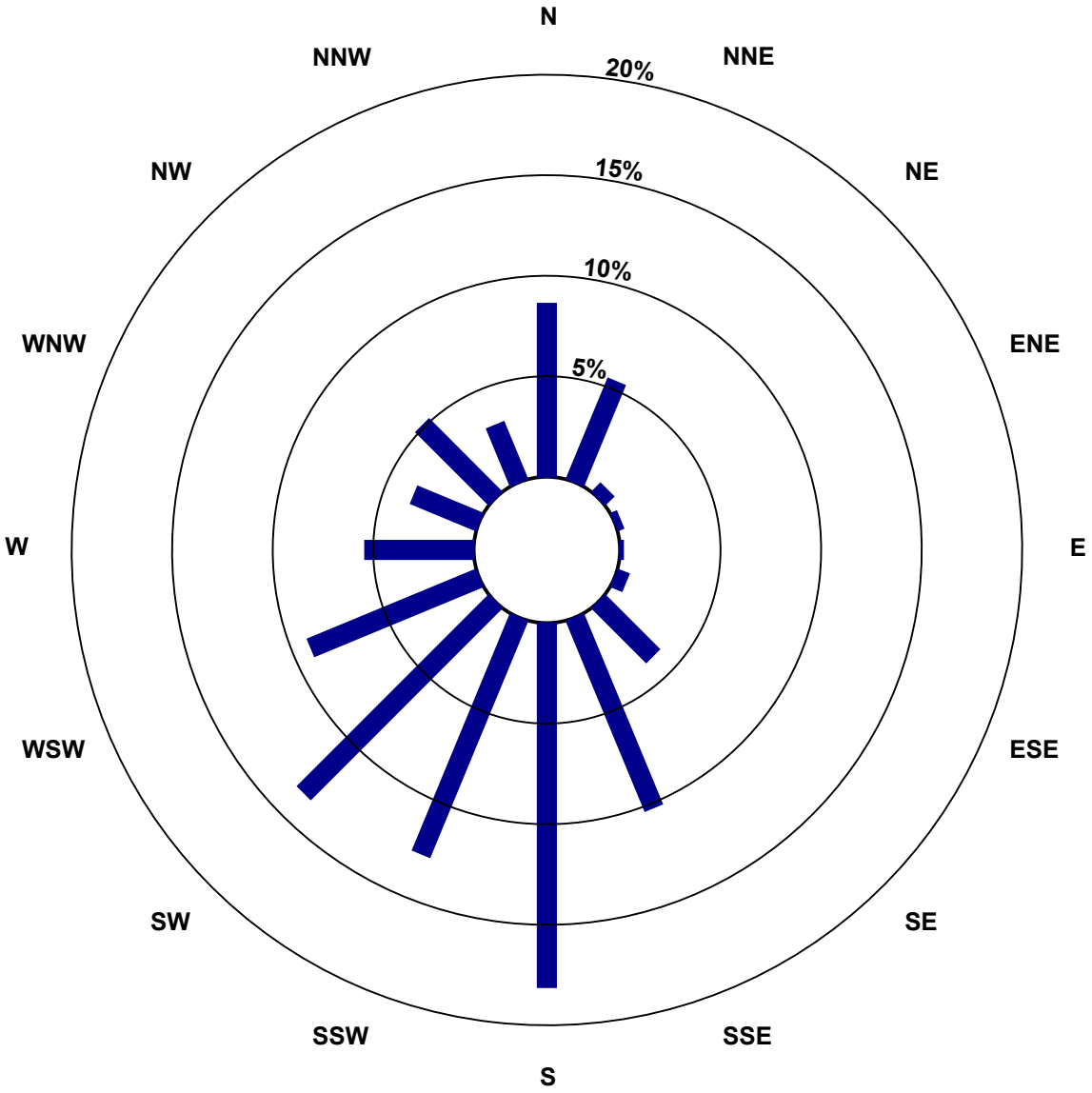
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Firebag



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

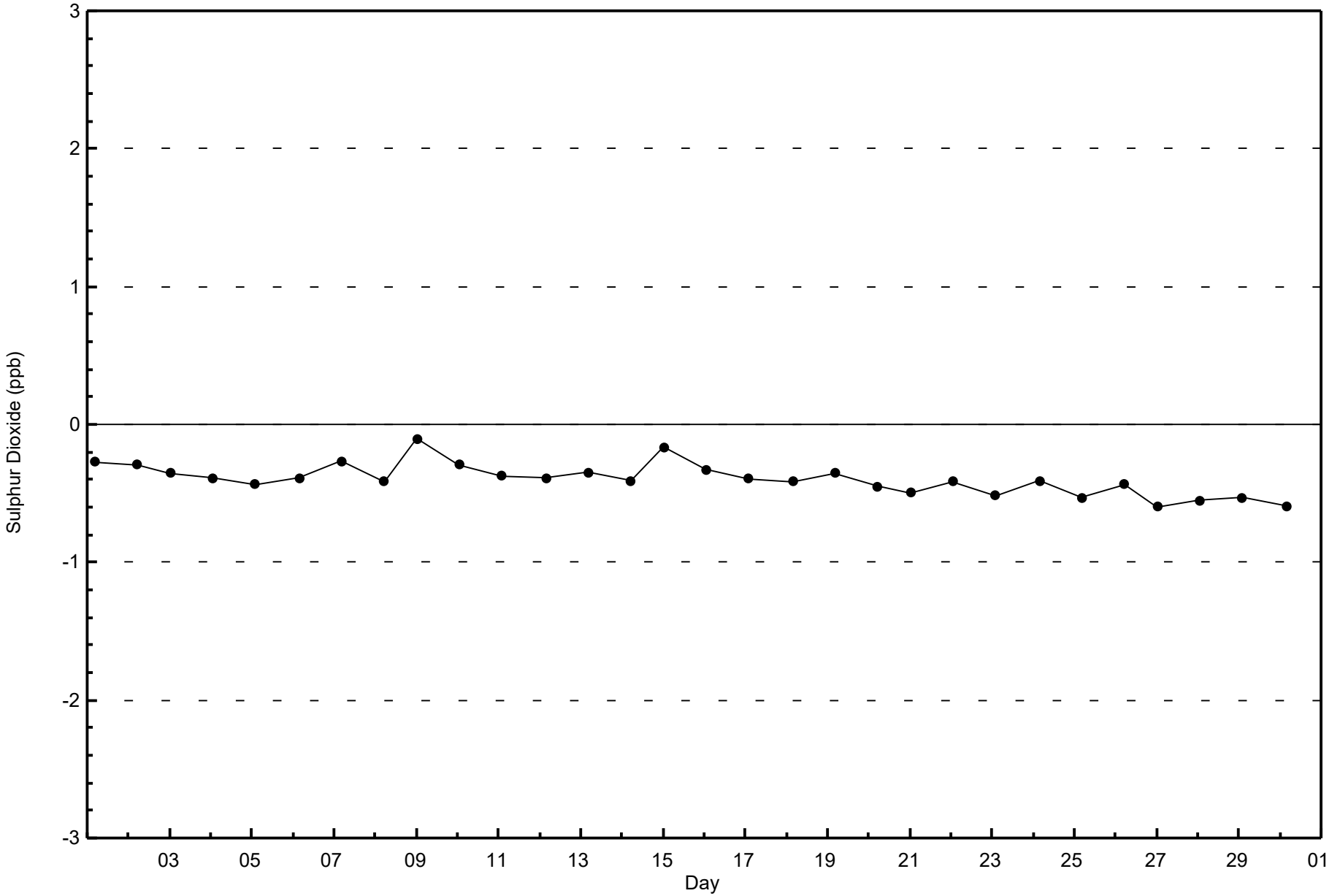
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - September 2025

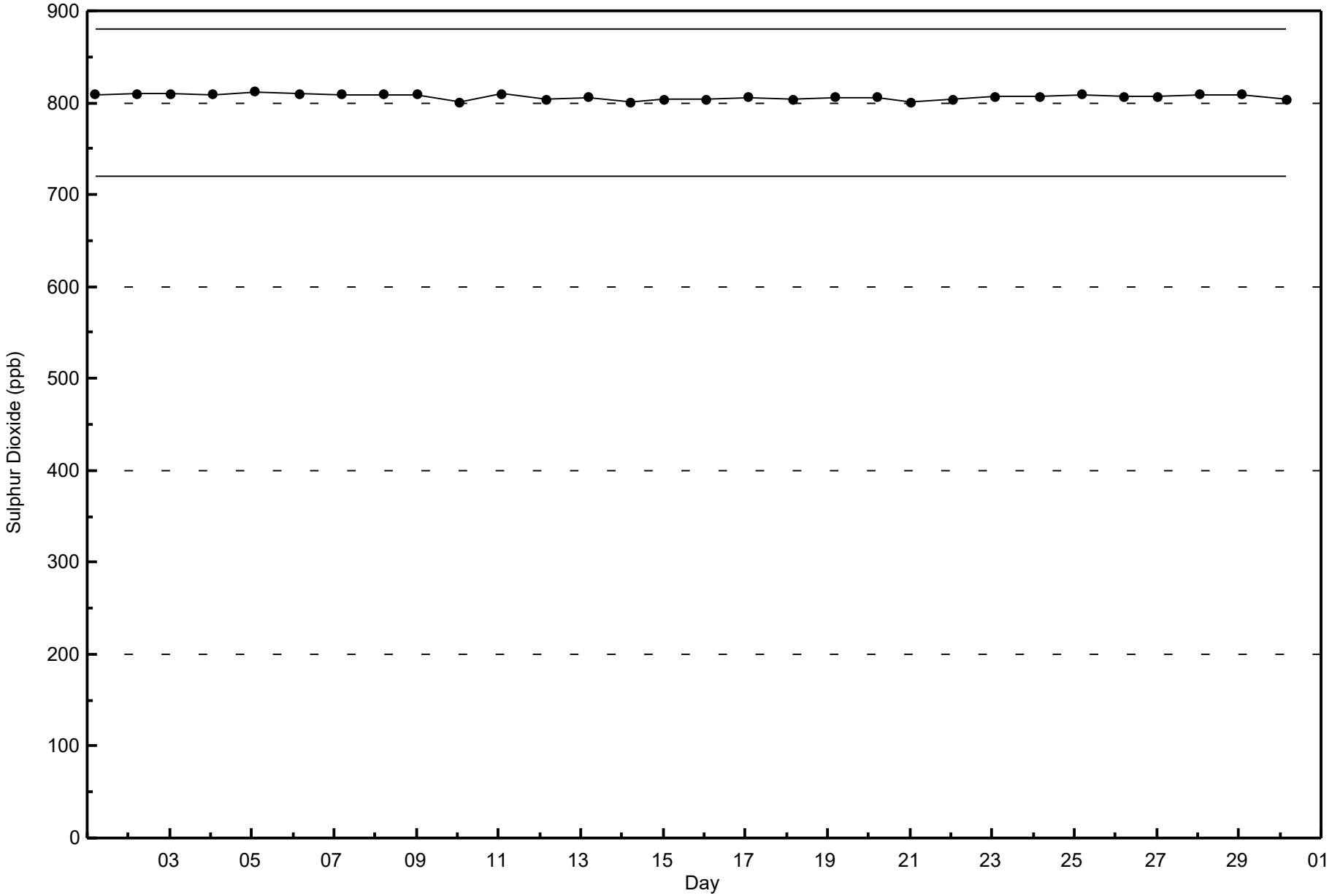


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.4 ppb on Sep 25 02:00 Maximum Daily Average: 0.4 ppb on Sep 22

Minimum Value: 0.0 ppb on Sep 12 17:00 Minimum Daily Average: 0.1 ppb on Sep 27

Maximum Diurnal Average: 0.4 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 17

Monthly Average: 0.20 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 0.9

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.2	0.1	0.1	0.2	Z	0.6	0.1	0.1	0.1	0.3	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	0.6
2-Sep	Z	0.3	0.2	0.4	0.5	0.5	0.4	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	0.2	0.5
3-Sep	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.5
4-Sep	0.1	0.1	Z	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	0.2
5-Sep	0.7	1.4	0.6	Z	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	1.4
6-Sep	0.1	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Sep	0.1	0.2	0.2	0.2	0.2	Z	0.3	0.6	0.4	0.3	0.3	0.3	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	0.6
8-Sep	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	0.5	0.2	0.1	0.1	0.1	0.5
9-Sep	0.1	Z	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2
10-Sep	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.4	0.6	0.3	C	C	C	C	C	C	C	0.3	0.1	0.1	0.2	0.2	0.2	0.1	--	0.6
11-Sep	0.2	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.3
12-Sep	0.2	0.2	0.2	0.2	Z	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	0.1	0.1	0.0	0.1	0.3
13-Sep	0.0	0.3	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.4	0.1	0.1	0.2	0.1	0.4
14-Sep	Z	0.8	1.0	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.6	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.4	1.0
15-Sep	0.0	Z	0.2	0.5	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.5
16-Sep	0.4	0.4	Z	0.4	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
17-Sep	0.3	0.2	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
18-Sep	0.1	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	0.0	0.0	0.2	0.2	0.5	0.2	0.5
19-Sep	0.5	0.6	1.0	0.8	0.6	Z	0.2	0.2	0.4	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	1.0
20-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
21-Sep	0.1	Z	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.3	0.5	0.2	0.5
22-Sep	0.8	0.4	Z	0.4	0.6	0.6	0.5	0.6	0.7	0.5	0.6	0.6	0.5	0.7	0.4	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.4	0.8
23-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.2	0.3	0.1	0.1	0.3	0.8	0.9	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.9
24-Sep	0.3	0.2	0.2	0.1	Z	0.1	0.1	0.1	0.3	0.5	0.7	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.7
25-Sep	0.3	1.4	0.6	0.3	0.2	Z	0.2	0.4	0.3	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	0.2	0.2	1.4
26-Sep	Z	0.3	0.2	0.2	0.5	0.6	0.9	0.9	0.7	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.4	0.2	0.1	0.3	0.9
27-Sep	0.1	Z	0.1	0.0	0.0	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	0.2	0.1	0.2
28-Sep	0.7	0.6	Z	0.5	0.4	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.7
29-Sep	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	0.2	0.2	0.2	0.2	0.1	0.2
30-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.7	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	0.7
	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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	0.2	0.2	Diurnal Average	
	0.8	1.4	1.0	0.9	0.9	0.8	0.9	0.9	0.7	0.5	0.7	0.6	0.5	0.7	0.8	0.9	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.5	Diurnal Maximum	

Z - zerospan C - Calibration

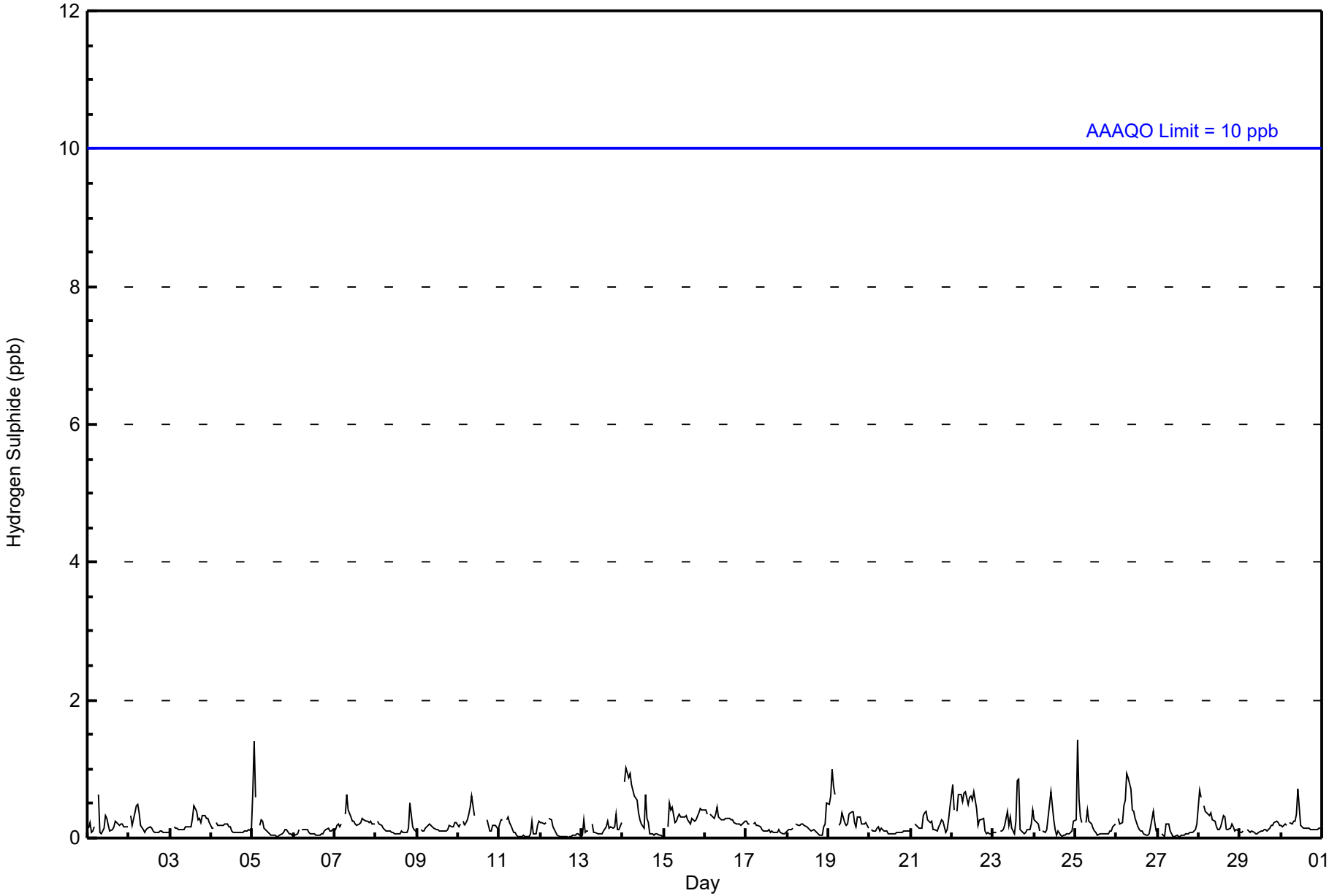
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	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: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Firebag - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	58	36	4	2	1	3	26	71	126	87	89	62	37	24	33	23	682
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	36	4	2	1	3	26	71	126	87	89	62	37	24	33	23	682

Total Number of Valid Hours: 682

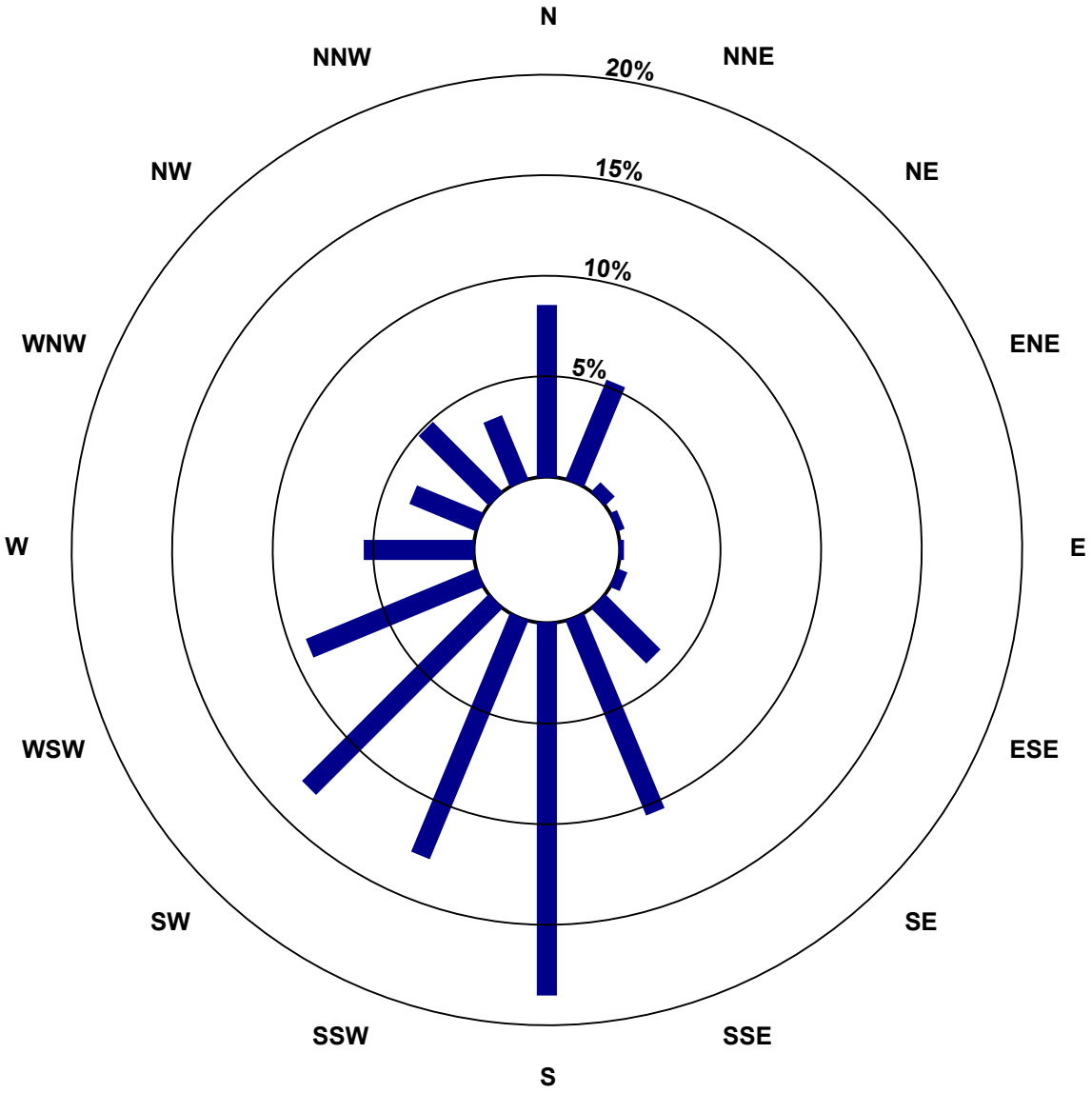
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Firebag



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

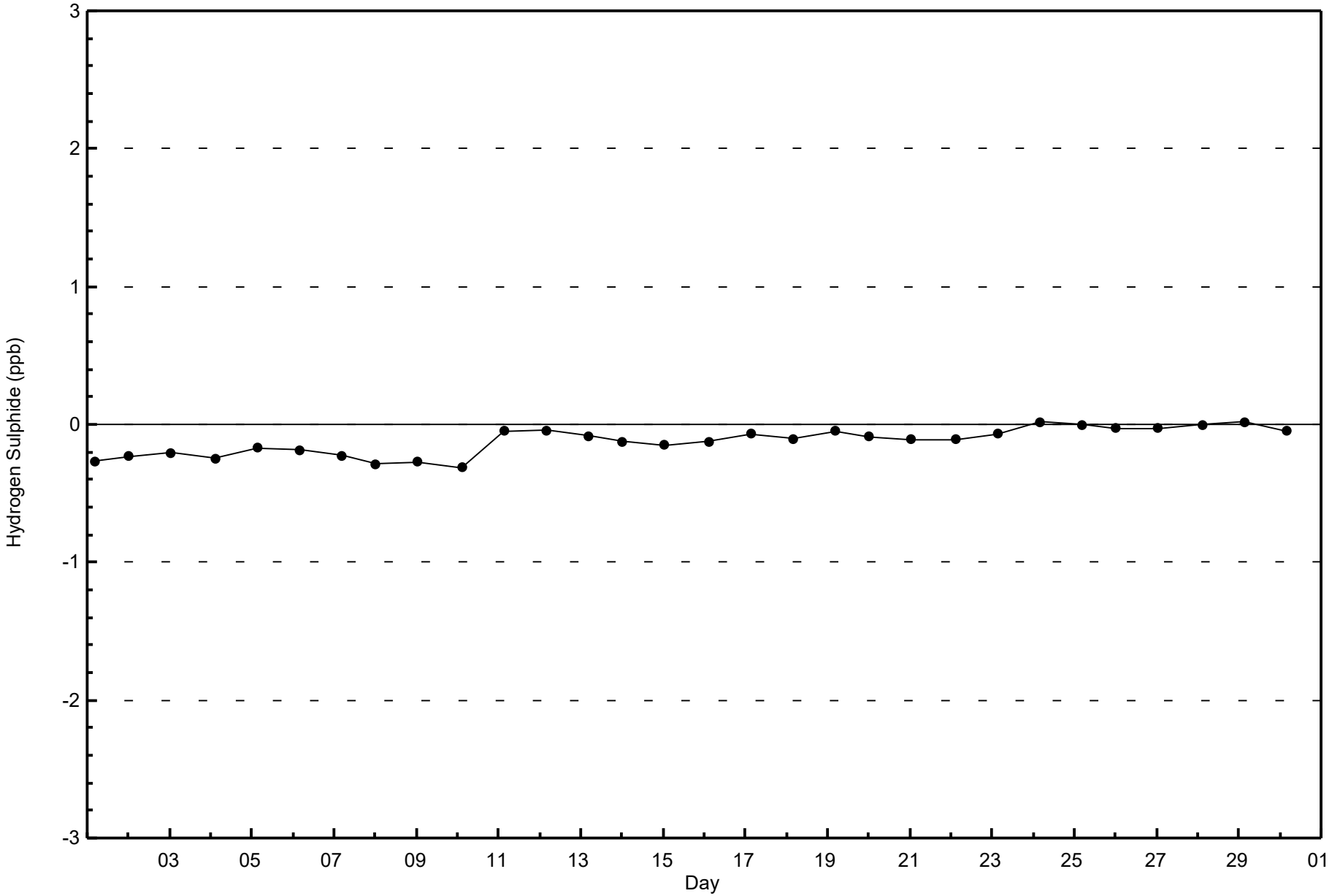
Total Number of Valid Hours: 682

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - September 2025

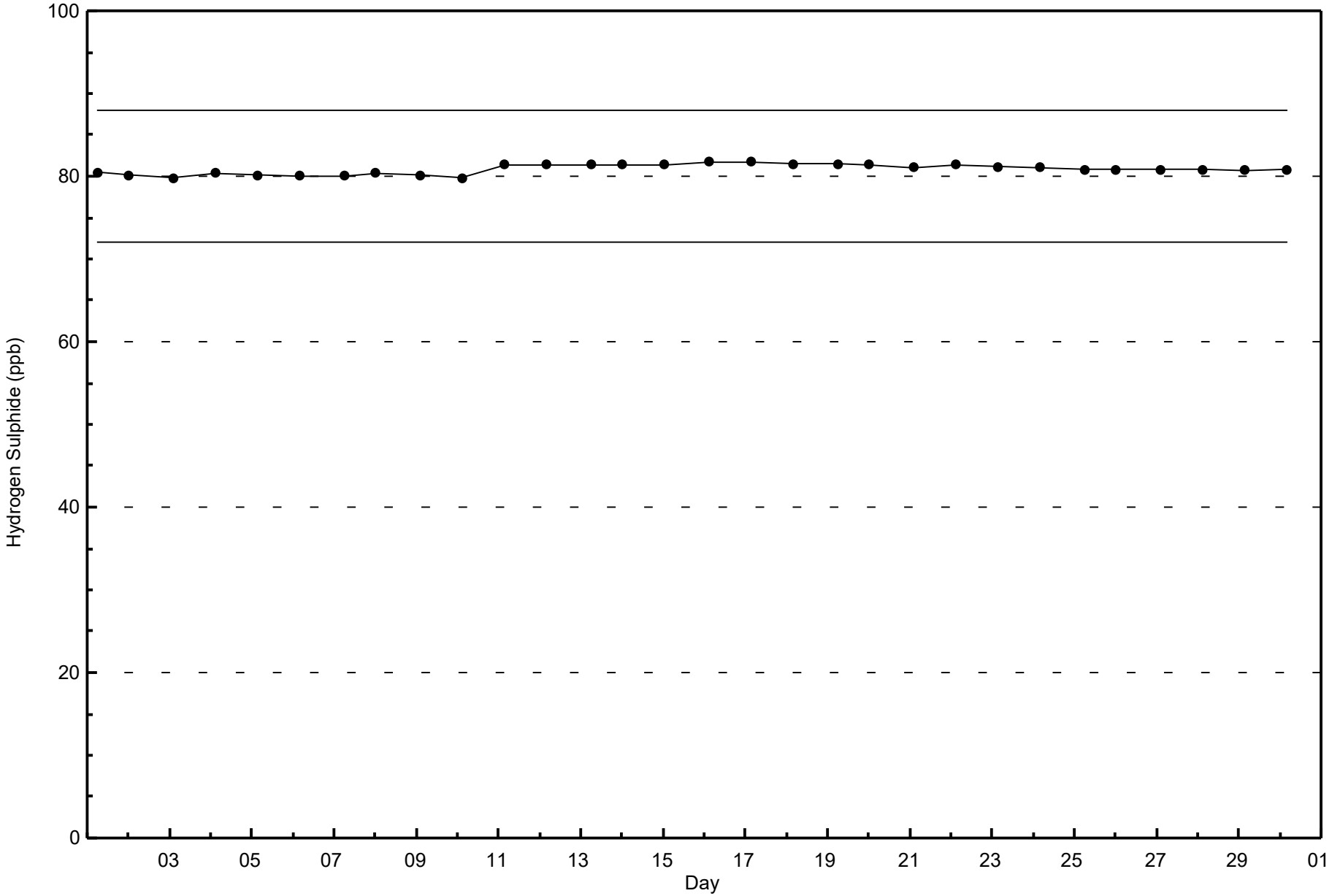


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Firebag - September 2025

Maximum Value: 3.3 ppm on Sep 11 04:00

Maximum Daily Average: 2.5 ppm on Sep 10

Minimum Value: 2.1 ppm on Sep 15 08:00

Minimum Daily Average: 2.2 ppm on Sep 4

Maximum Diurnal Average: 2.4 ppm at hour 2

Minimum Diurnal Average: 2.3 ppm at hour 10

Monthly Average: 2.33 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.2 Q_1 = 2.2 Median = 2.3 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 3.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.3	2.4	2.3	2.4	Z	2.5	2.5	2.4	2.3	2.2	2.3	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.5
2-Sep	2.5	2.7	2.3	2.7	3.1	Z	3.2	2.5	2.3	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	2.4	3.2
3-Sep	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.4	2.5	2.5	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5
4-Sep	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	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.3
5-Sep	2.5	2.9	Z	2.8	2.7	2.7	2.6	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.3	2.3	2.2	2.4	2.9
6-Sep	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.6	2.4	2.3	2.3	2.3	2.6
7-Sep	2.3	2.3	2.4	2.4	Z	2.6	2.7	2.7	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.4	2.7
8-Sep	2.3	2.3	2.3	2.3	2.3	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	2.4	2.4	2.4	2.4	2.3	2.2	2.3	2.4
9-Sep	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3
10-Sep	2.3	Z	2.4	2.4	2.5	2.5	2.5	2.9	2.7	2.3	2.3	2.3	2.3	2.7	2.6	2.4	2.3	2.4	2.4	2.5	2.7	3.0	3.1	2.8	2.5	3.1
11-Sep	3.3	3.1	Z	3.3	3.0	3.1	3.0	2.6	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.3	2.3	2.4	2.4	2.5	3.3
12-Sep	2.4	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	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	2.4
13-Sep	2.3	2.3	2.3	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.5	2.3	2.4	2.3	2.5
14-Sep	2.7	3.0	3.1	2.9	3.1	Z	2.9	2.7	2.6	2.6	2.4	2.3	2.2	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.5	3.1
15-Sep	Z	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	C	C	C	C	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.2	2.4
16-Sep	2.4	Z	2.3	2.3	2.3	2.2	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.5
17-Sep	2.3	2.3	Z	2.3	2.3	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	2.4	2.3	2.3	2.3	2.3	2.3	2.4
18-Sep	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	2.3	2.4	2.4	2.4	2.5	2.3	2.5
19-Sep	2.5	2.5	2.6	2.5	Z	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.6
20-Sep	2.3	2.5	2.4	2.4	2.3	Z	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	2.3	2.3	2.3	2.3	2.3	2.5
21-Sep	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.3	2.2	2.4	2.2	2.3	2.5
22-Sep	2.3	Z	2.3	2.3	2.3	2.3	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	2.2	2.2	2.2	2.2	2.2	2.3	2.4
23-Sep	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	2.2	2.2	2.2	2.3	2.3	2.4	2.2	2.4
24-Sep	2.3	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.4	2.6	2.3	2.6
25-Sep	2.5	2.8	2.5	2.4	Z	2.3	2.4	2.4	2.3	2.3	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	2.3	2.3	2.8
26-Sep	2.3	2.4	2.3	2.3	2.4	Z	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.5
27-Sep	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	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.2	2.4
28-Sep	2.4	Z	2.4	2.4	2.4	2.4	2.5	2.6	2.4	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.6
29-Sep	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	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3
30-Sep	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
	2.4	2.4	2.3	2.4	2.4	2.4	2.4	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	Diurnal Average	
	3.3	3.1	3.1	3.3	3.1	3.1	3.2	2.9	2.7	2.6	2.4	2.4	2.5	2.7	2.6	2.5	2.5	2.5	2.5	2.6	2.7	3.0	3.1	2.8	Diurnal Maximum	

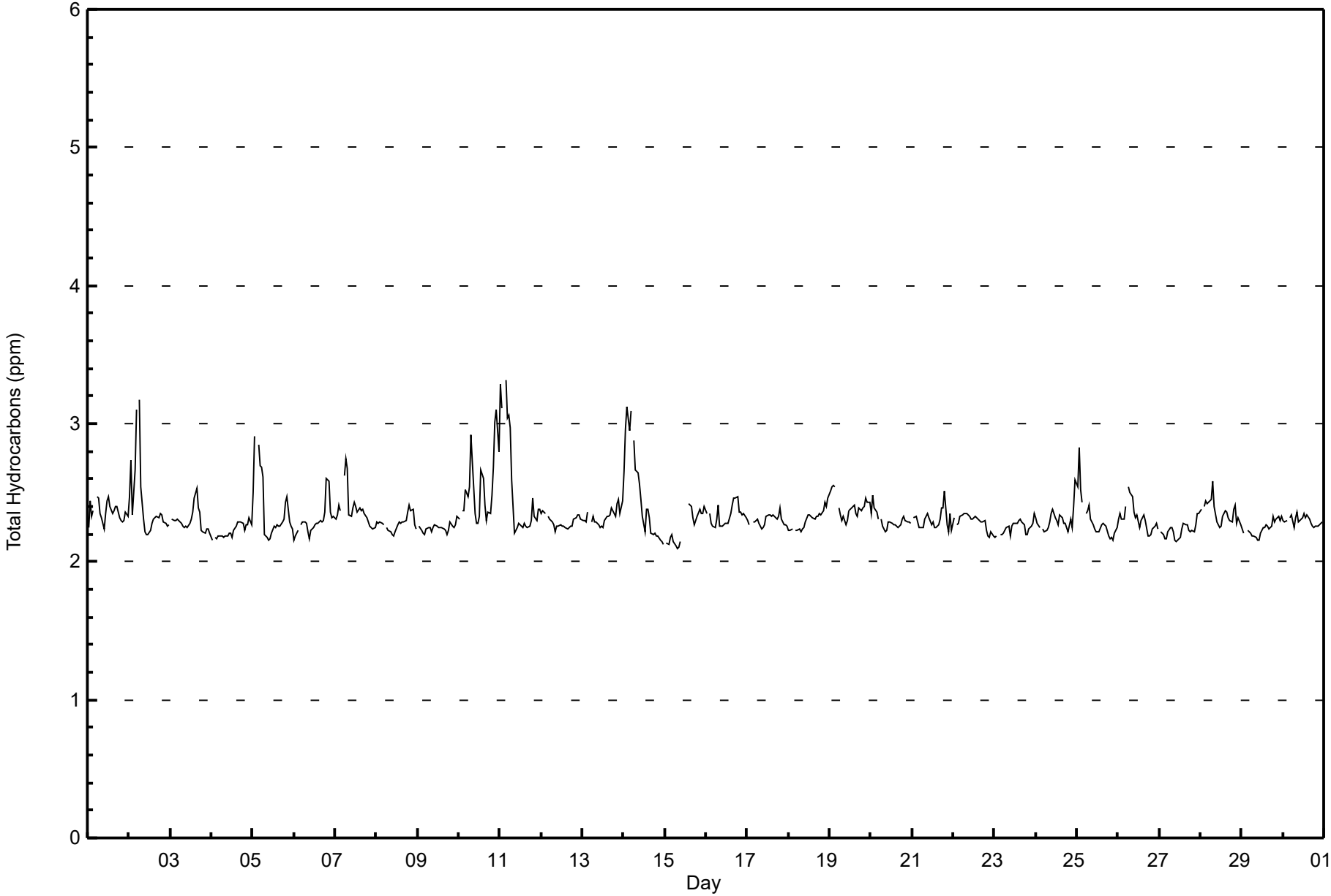
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Firebag - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	677	98.69	98.69
3.1 - 10.0	9	1.31	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Firebag - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	59	37	4	2	1	4	26	67	122	86	92	61	37	24	35	20	677
3.1 - 10.0	0	0	0	0	0	0	0	3	2	1	0	1	0	0	0	1	8
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	37	4	2	1	4	26	70	124	87	92	62	37	24	35	21	685

Total Number of Valid Hours: 685

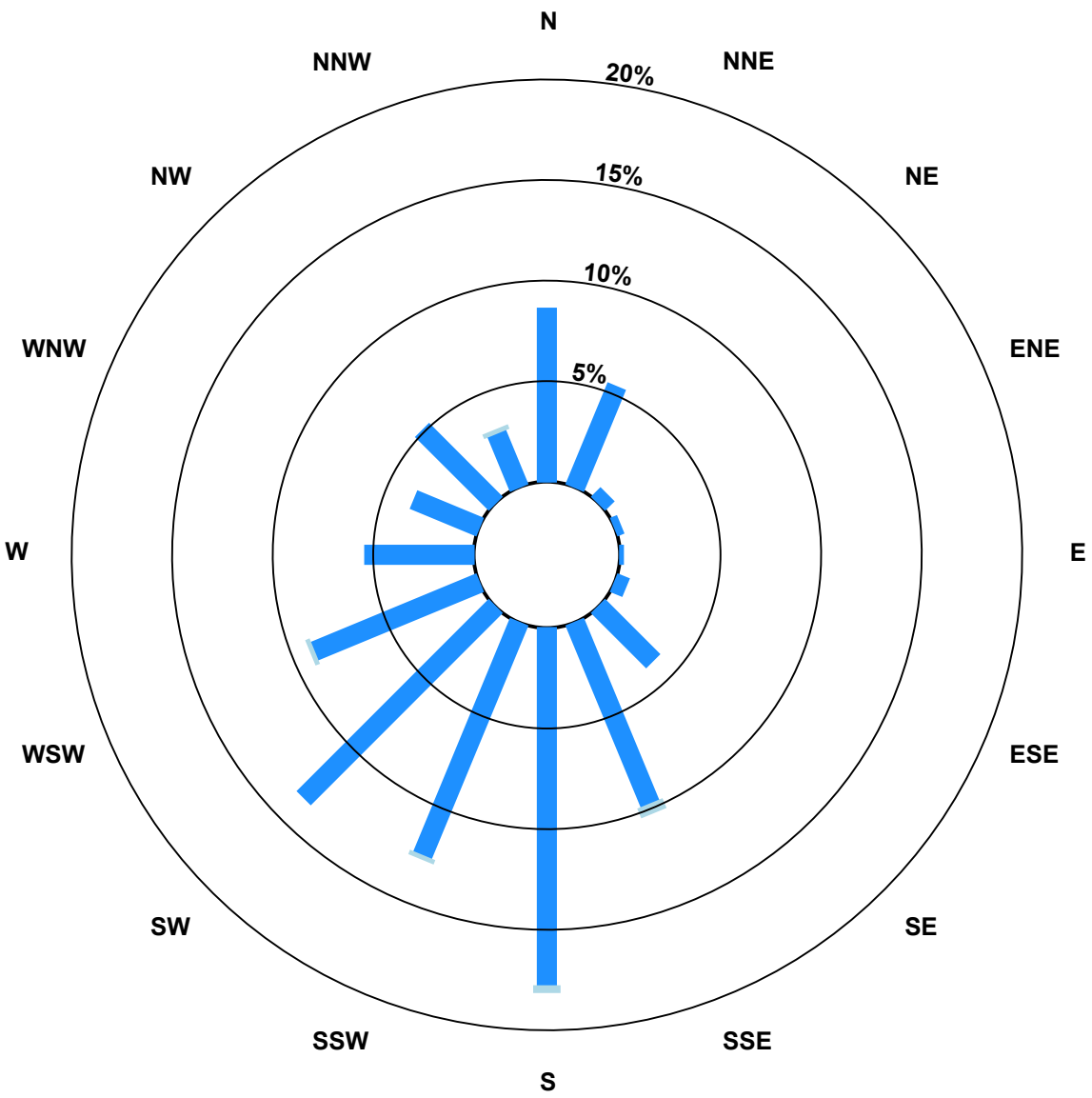
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Firebag



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

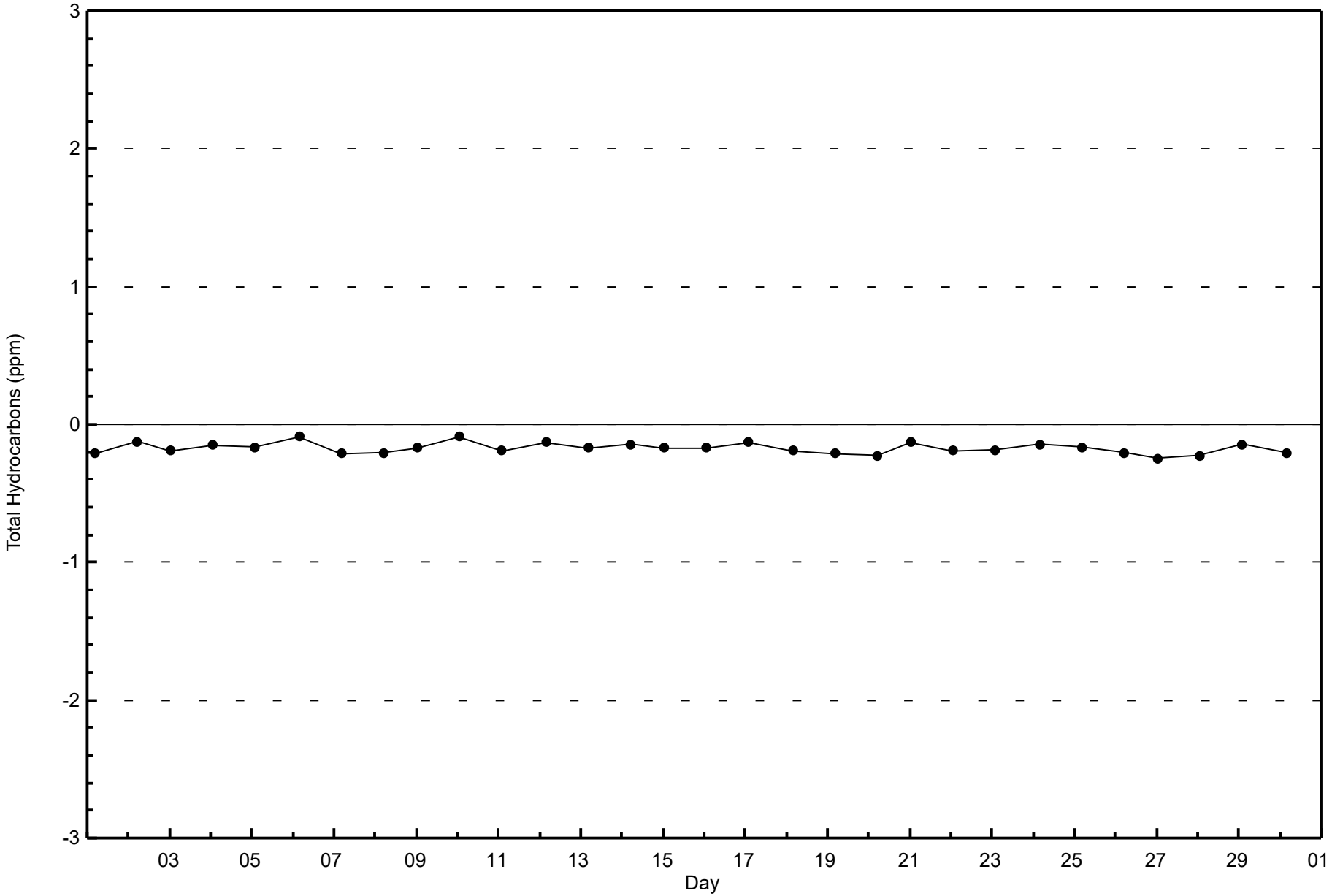
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Firebag - September 2025

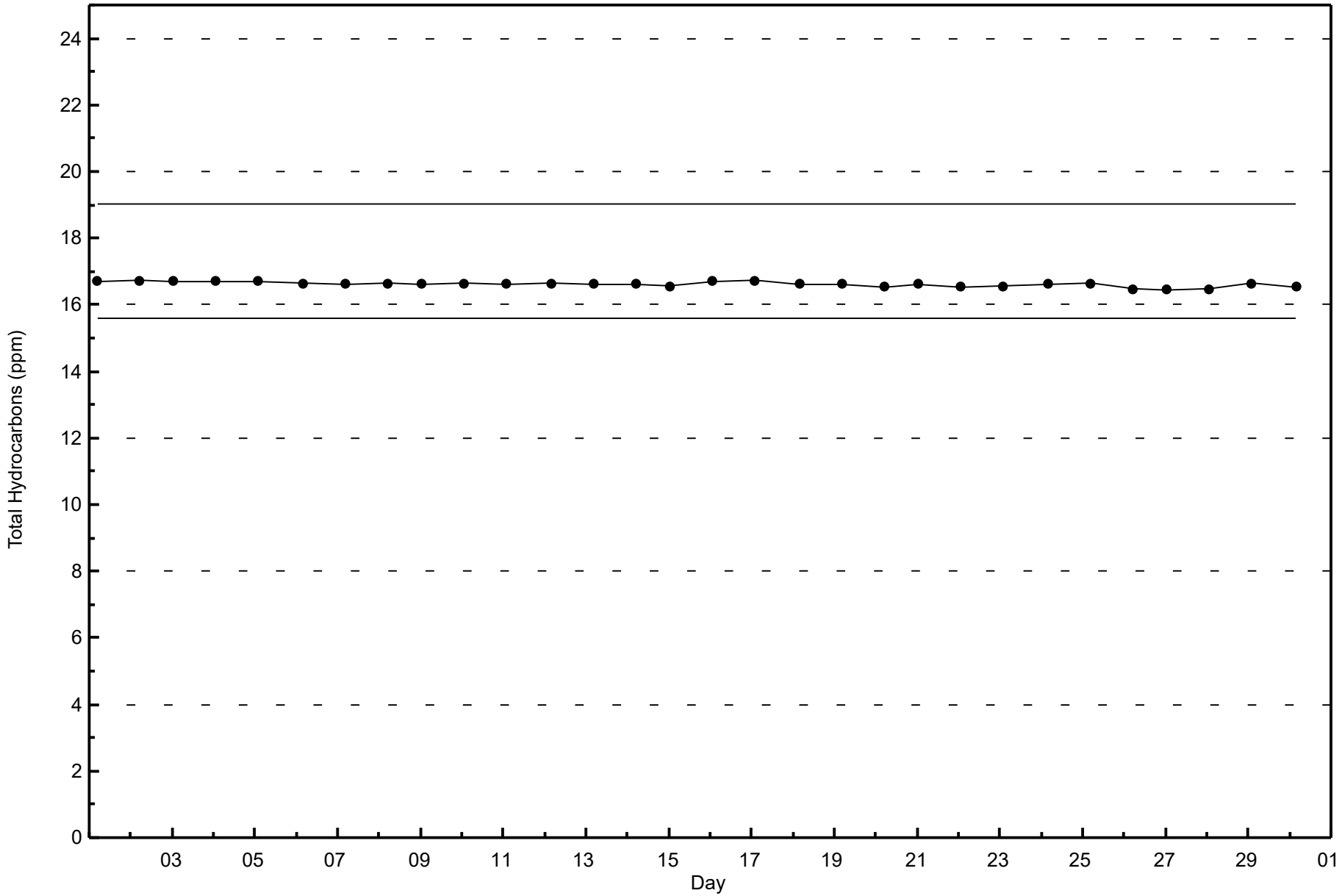


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Firebag - September 2025

Maximum Value: 8.3 ppb on Sep 11 07:00

Maximum Daily Average: 1.3 ppb on Sep 11

Minimum Value: 0.0 ppb on Sep 13 21:00

Minimum Daily Average: 0.1 ppb on Sep 27

Maximum Diurnal Average: 1.6 ppb at hour 6

Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.35 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} = 3.9

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	Z	0.1	0.2	0.4	0.3	0.2	0.3	1.0	3.0	2.8	2.2	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	3.0
2-Sep	0.0	0.1	0.0	Z	0.1	0.3	1.7	0.4	0.3	0.1	0.5	0.9	1.0	0.7	0.2	0.1	0.1	0.2	1.5	0.3	0.1	0.1	0.0	0.0	0.4	1.7
3-Sep	0.0	0.0	0.0	0.1	Z	1.1	0.1	0.3	0.3	0.3	0.2	0.3	0.2	0.6	0.8	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.1
4-Sep	0.1	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.3	0.4	0.5	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
5-Sep	Z	0.3	0.1	0.2	2.0	7.9	3.0	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.7	7.9
6-Sep	0.1	Z	0.1	0.1	0.3	0.6	0.3	0.5	0.6	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.6
7-Sep	0.0	0.3	Z	0.1	0.1	1.1	0.8	1.4	0.7	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	1.4
8-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.2	0.9	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
9-Sep	0.1	0.1	0.1	0.1	Z	0.9	0.2	0.3	0.8	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.9
10-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.3	1.1	4.5	2.4	0.9	0.7	0.5	3.6	2.2	0.8	0.3	0.3	0.1	0.0	0.5	1.7	0.4	0.0	0.9	4.5
11-Sep	Z	1.0	0.1	0.4	2.9	6.3	8.3	2.8	0.5	0.1	C	C	C	C	C	0.0	0.0	0.1	0.7	0.0	0.1	0.1	0.2	0.0	1.3	8.3
12-Sep	0.3	Z	0.1	0.0	2.2	3.8	5.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.0	0.2	0.0	0.6	5.2
13-Sep	0.0	0.4	Z	0.0	0.6	3.6	5.8	0.2	0.2	0.2	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	0.5	5.8
14-Sep	0.0	0.0	0.0	Z	0.2	0.5	0.1	0.2	0.4	0.1	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
15-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.6	1.0	0.9	0.3	0.2	0.1	0.6	0.6	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	1.0
16-Sep	0.0	0.0	0.1	0.0	0.0	Z	0.3	1.7	0.2	0.1	0.6	1.2	1.0	0.7	1.3	1.2	0.8	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.5	1.7
17-Sep	Z	0.1	0.1	0.1	0.3	2.4	0.4	0.5	0.5	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.3	2.4
18-Sep	0.1	Z	0.0	0.1	0.2	0.5	0.5	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.5
19-Sep	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.7	0.8	0.4	0.4	0.6	0.9	0.4	0.4	0.1	0.1	0.7	0.5	0.0	0.0	0.1	0.0	0.0	0.3	0.9
20-Sep	0.7	0.4	0.1	Z	1.2	6.3	0.1	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.5	6.3
21-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.1	0.8	1.2	1.1	0.5	0.5	1.0	0.1	0.1	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.2
22-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.4	1.9	1.8	1.4	1.9	1.3	0.5	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
23-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	0.3	0.6	0.3	0.4	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
24-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.8	1.3	0.3	0.2	0.1	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3
25-Sep	0.0	0.1	Z	0.0	0.4	2.0	0.5	0.8	0.2	0.3	0.3	0.3	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	2.0
26-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.8	1.1	1.0	1.4	1.1	0.5	1.2	0.6	0.7	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.4
27-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	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	0.2
28-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.9	1.1	0.8	0.9	0.5	0.3	0.4	0.5	0.7	0.1	0.3	0.5	0.2	0.1	0.2	0.1	0.1	0.3	1.1
29-Sep	Z	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.8	0.2	0.0	0.0	0.0	0.0	0.2	0.8
30-Sep	0.0	Z	0.0	0.1	0.2	0.7	0.2	0.5	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	0.1	0.7
	0.1	0.1	0.1	0.1	0.5	1.6	1.0	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.7	1.0	0.1	0.4	2.9	7.9	8.3	2.8	4.5	2.4	3.0	2.8	2.2	3.6	2.2	1.2	0.8	0.7	1.5	0.3	0.5	1.7	0.4	0.5	Diurnal Maximum	

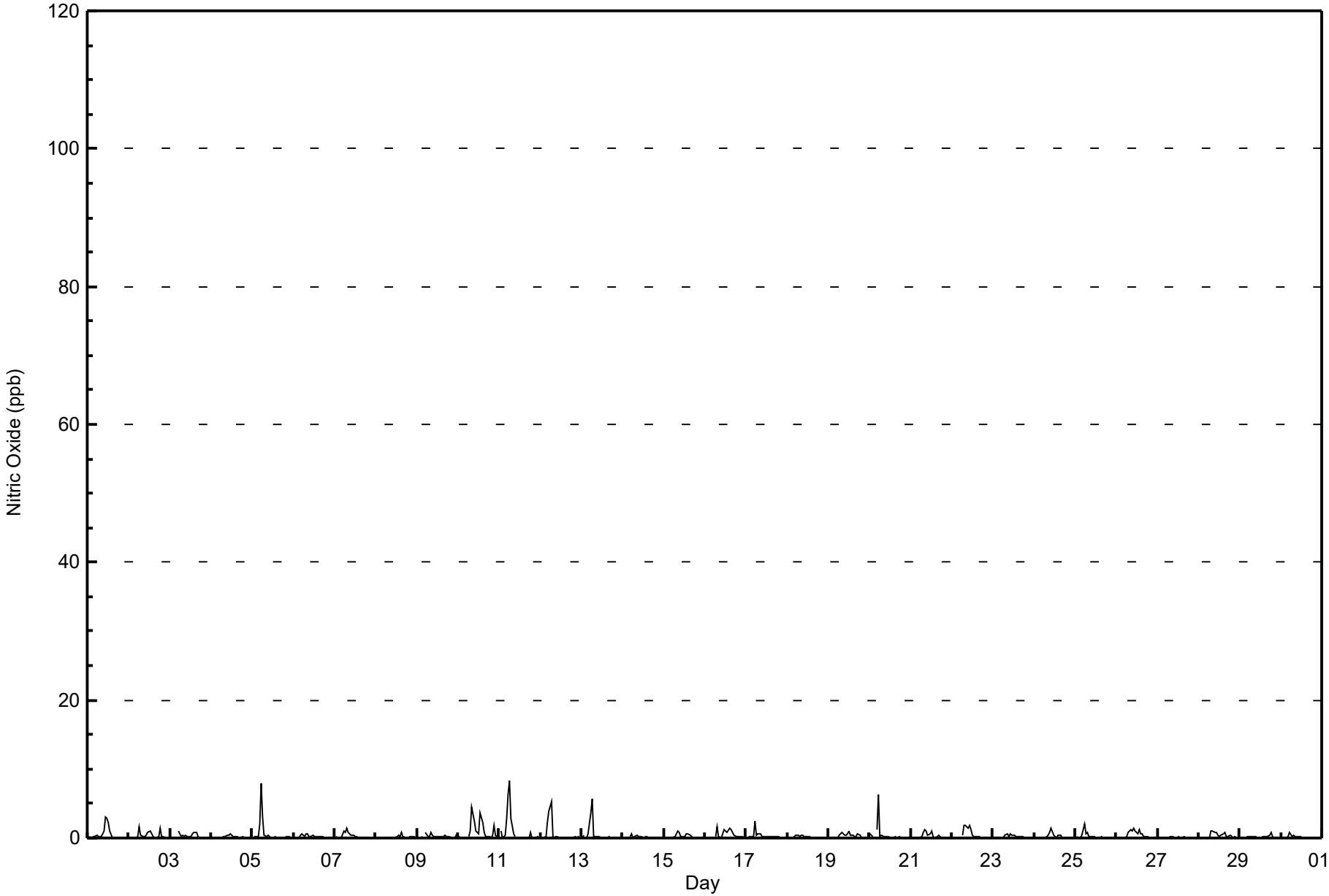
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Firebag - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Firebag - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	58	37	4	2	1	3	27	72	124	86	87	61	35	26	37	24	684
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	58	37	4	2	1	3	27	72	124	86	87	61	35	26	37	24	684

Total Number of Valid Hours: 684

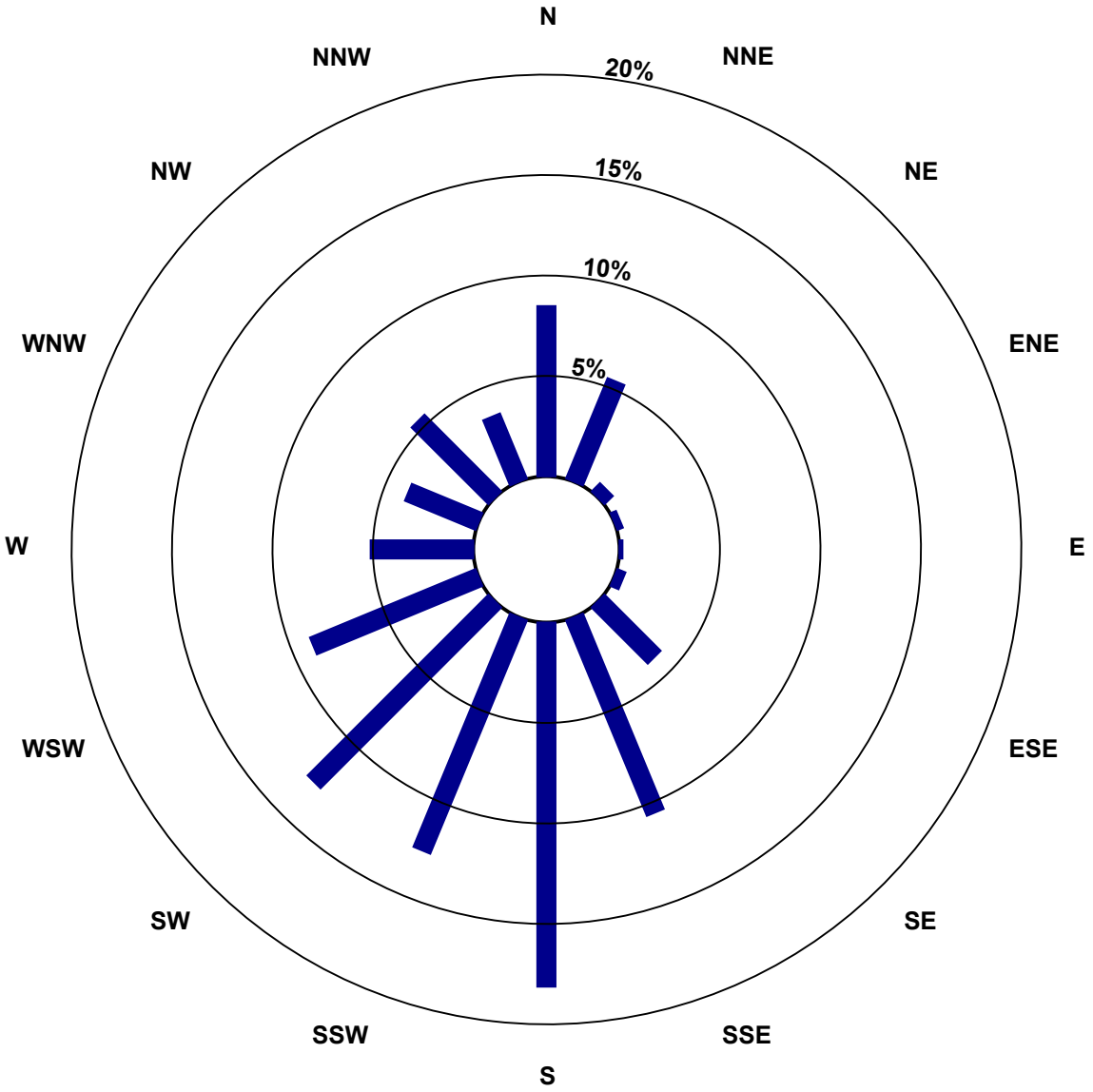
Total Number of Hours: 720

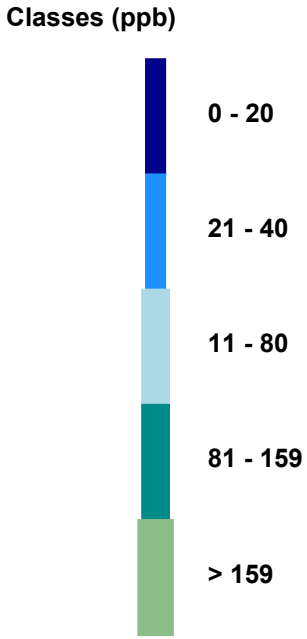
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Firebag





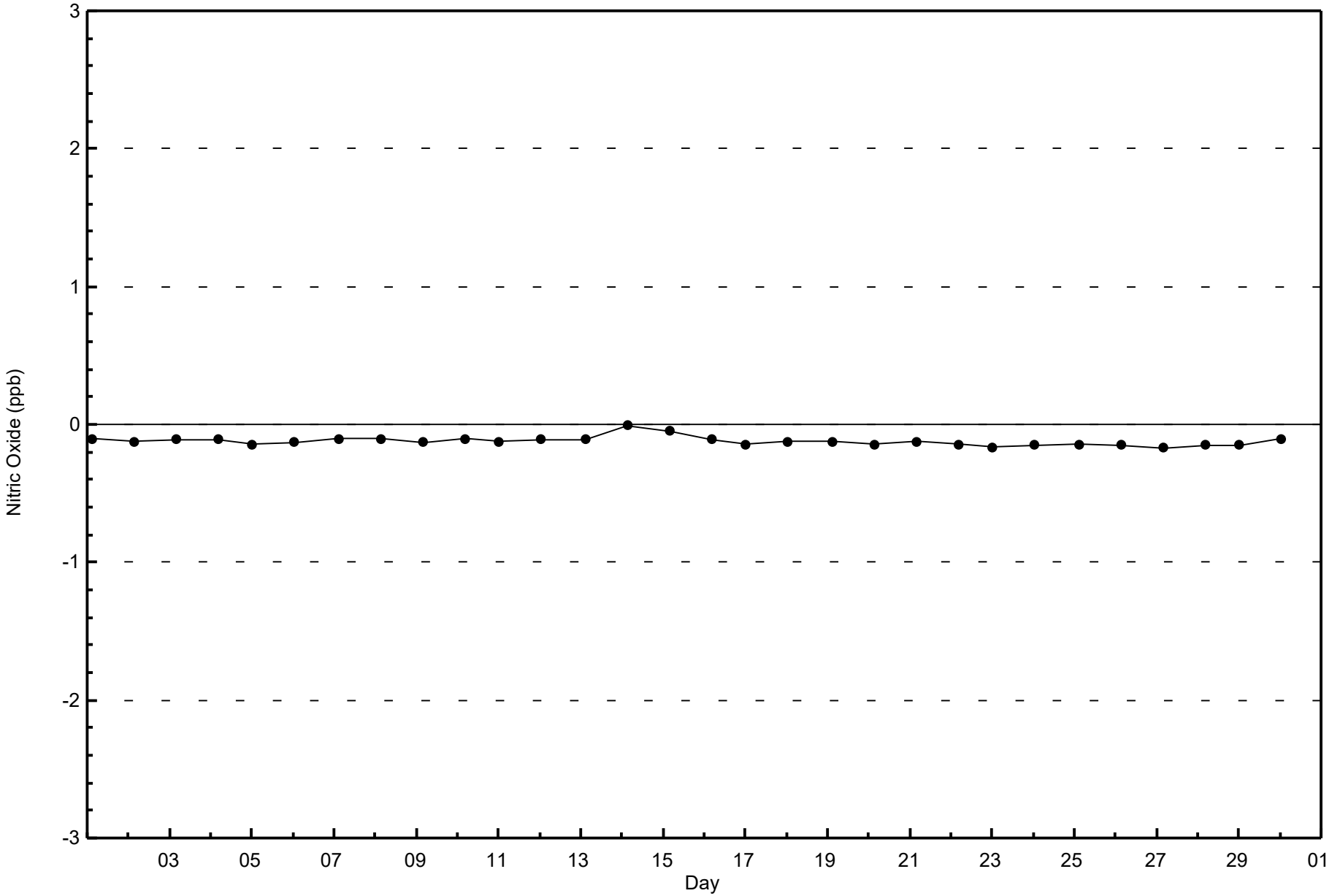
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Firebag - September 2025

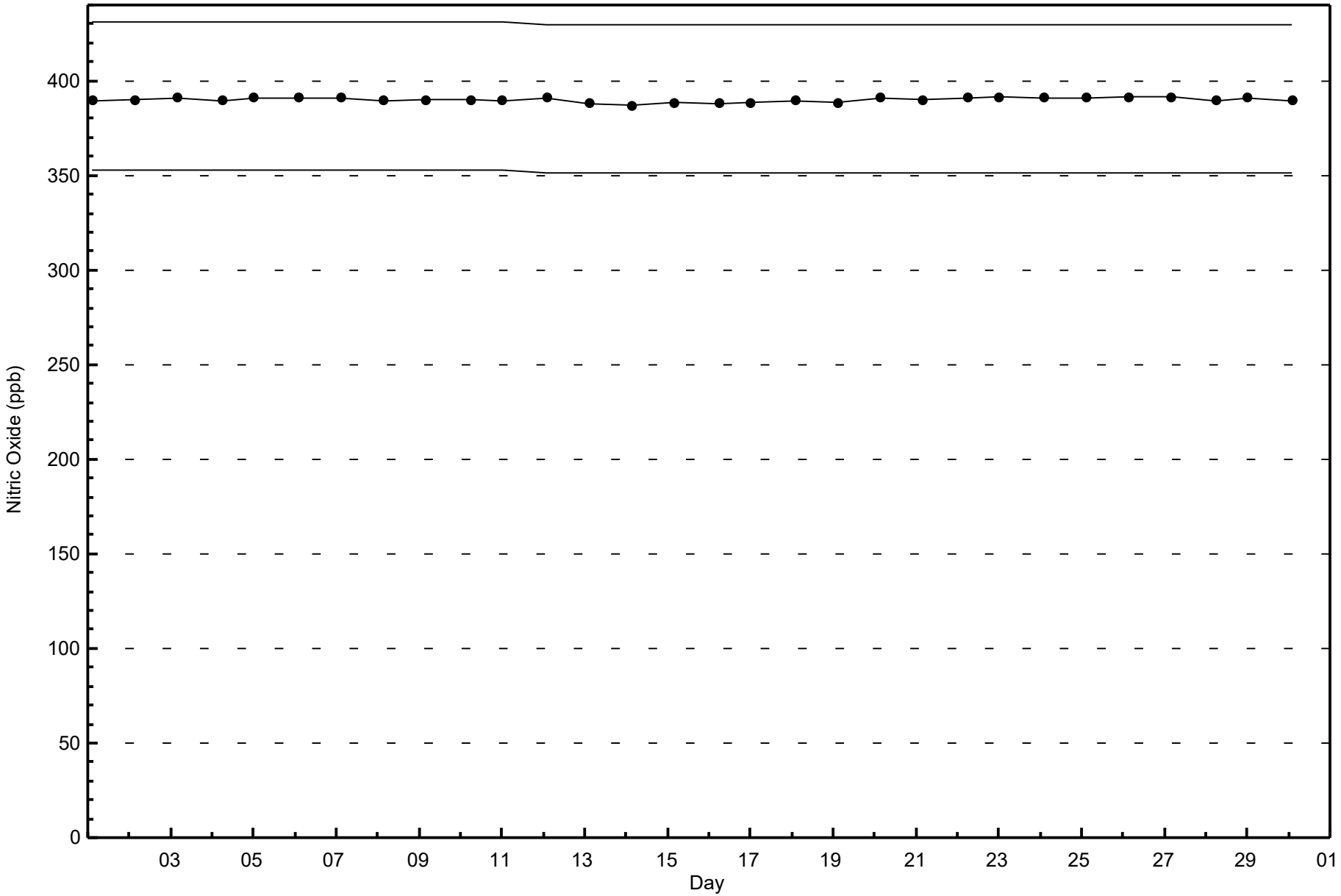


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 17.2 ppb on Sep 25 02:00

Maximum Daily Average: 5.1 ppb on Sep 10

Minimum Value: 0.2 ppb on Sep 4 20:00

Minimum Daily Average: 0.6 ppb on Sep 4

Maximum Diurnal Average: 5.3 ppb at hour 6

Minimum Diurnal Average: 1.5 ppb at hour 17

Monthly Average: 2.44 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.6 Q_1 = 1.0 Median = 1.6 Q_3 = 3.0 P_{90} = 5.5 P_{99} = 12.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.1	0.6	Z	0.8	1.2	2.2	1.2	1.2	0.8	1.9	5.2	5.0	4.9	3.0	0.9	1.1	1.6	1.6	1.5	1.0	1.0	0.7	0.6	0.6	1.7	5.2
2-Sep	0.6	0.5	0.6	Z	1.0	2.2	2.5	2.2	1.6	0.8	1.9	3.2	3.2	2.9	1.6	1.0	0.7	1.0	3.4	1.9	0.9	0.6	0.7	0.8	1.6	3.4
3-Sep	1.0	1.1	1.1	1.2	Z	2.4	1.4	1.7	1.8	1.8	1.9	2.1	2.1	3.7	6.0	6.2	2.1	2.2	1.3	1.1	0.9	0.8	1.2	0.6	2.0	6.2
4-Sep	0.5	0.4	0.4	0.4	0.5	Z	0.5	0.8	1.2	1.2	1.3	1.4	0.9	0.7	0.5	0.4	0.4	0.5	0.6	0.2	0.3	0.3	0.4	0.5	0.6	1.4
5-Sep	Z	3.7	1.4	2.2	7.4	13.6	6.5	1.1	0.7	0.8	0.6	0.5	0.5	0.7	0.8	0.6	0.8	1.4	1.5	2.7	2.7	1.3	0.9	0.9	2.3	13.6
6-Sep	0.5	Z	1.3	1.7	2.0	2.7	1.6	2.0	2.0	0.9	0.9	1.1	1.0	1.1	1.2	1.2	1.6	1.6	2.0	2.2	1.8	1.5	2.5	2.9	1.6	2.9
7-Sep	2.0	12.6	Z	9.7	10.4	12.9	8.6	7.6	3.5	2.1	2.2	2.2	1.6	1.1	0.7	0.8	1.0	0.6	0.5	0.4	0.4	0.4	0.4	0.4	3.6	12.9
8-Sep	0.5	0.5	0.4	Z	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.4	1.0	0.7	2.3	1.1	0.7	1.0	0.9	1.2	0.7	0.5	0.4	0.6	2.3
9-Sep	0.3	0.5	0.3	0.5	Z	1.9	1.1	1.3	1.9	1.3	1.0	1.1	1.1	1.0	1.0	1.1	1.6	1.2	1.4	1.5	1.3	3.1	3.9	7.6	1.6	7.6
10-Sep	2.6	3.7	2.5	9.3	2.9	Z	4.6	4.9	10.4	5.7	2.9	2.4	2.3	9.5	7.6	4.3	2.2	3.3	3.8	6.5	7.0	9.1	7.1	3.0	5.1	10.4
11-Sep	Z	7.6	4.0	6.0	10.6	13.1	9.5	6.2	1.7	0.9	C	C	C	C	C	0.4	0.5	0.7	3.9	1.0	0.8	1.0	2.1	1.9	4.0	13.1
12-Sep	2.2	Z	2.3	1.5	5.6	7.2	9.1	1.7	1.1	1.4	1.0	0.9	0.9	1.0	1.1	1.2	1.5	1.4	2.4	3.7	2.3	1.7	4.5	1.2	2.5	9.1
13-Sep	1.5	6.4	Z	3.8	5.6	12.6	12.2	2.5	1.8	1.5	1.3	0.9	0.6	0.8	1.0	1.7	2.6	2.1	3.1	1.4	1.0	0.7	1.6	1.2	3.0	12.6
14-Sep	1.9	3.2	3.8	Z	5.6	5.5	3.0	2.7	2.7	2.0	1.9	1.4	1.0	1.7	1.2	0.8	0.5	0.3	0.6	0.4	0.8	0.7	1.1	1.9	1.9	5.6
15-Sep	0.7	0.4	2.0	8.9	Z	5.9	3.9	3.3	3.4	3.3	2.2	2.2	2.0	4.4	5.6	5.1	2.4	1.0	2.7	2.7	3.5	2.4	3.4	4.9	3.3	8.9
16-Sep	2.8	1.5	4.6	0.9	0.5	Z	2.7	6.2	1.2	0.5	1.7	3.4	3.5	2.9	3.3	4.0	4.2	4.3	4.4	2.2	1.9	1.5	1.7	1.9	2.7	6.2
17-Sep	Z	1.6	1.7	1.5	1.4	3.0	1.7	1.6	1.6	1.4	0.9	0.9	1.0	1.0	0.9	0.9	0.8	1.0	1.3	1.3	0.7	0.5	0.6	0.5	1.2	3.0
18-Sep	0.6	Z	1.0	1.0	1.2	1.6	1.4	1.2	1.2	1.3	1.3	1.4	1.3	1.2	1.2	1.1	1.4	1.7	2.1	2.2	5.8	4.6	6.3	7.1	2.1	7.1
19-Sep	5.4	7.9	Z	6.3	8.1	9.8	7.4	3.6	4.0	2.5	2.5	2.6	3.3	2.3	2.9	1.5	1.4	5.1	4.1	3.8	4.6	8.9	8.5	8.2	5.0	9.8
20-Sep	10.1	5.5	2.6	Z	6.6	11.4	2.2	2.3	1.4	1.6	1.5	1.3	1.3	1.3	1.3	1.5	1.4	2.1	1.8	1.6	1.1	1.5	1.2	1.0	2.8	11.4
21-Sep	1.4	1.4	1.4	1.4	Z	1.8	3.0	5.8	5.3	4.2	2.4	2.7	4.4	1.3	1.0	1.4	3.2	4.7	5.6	8.5	2.5	3.4	7.0	2.8	3.3	8.5
22-Sep	2.3	1.9	2.5	2.6	3.4	Z	5.2	5.5	3.5	3.0	3.9	3.3	1.9	1.4	1.3	1.2	1.1	1.1	1.6	0.9	0.6	0.7	0.7	0.6	2.2	5.5
23-Sep	Z	1.1	1.3	1.7	2.3	3.0	3.1	3.7	3.2	1.2	2.4	1.4	1.7	1.5	1.4	1.5	2.7	2.8	1.7	1.8	2.8	3.3	5.1	6.0	2.5	6.0
24-Sep	5.8	Z	4.8	2.8	2.4	2.7	3.1	3.5	4.5	4.9	4.8	2.9	2.0	0.8	2.3	1.9	0.7	0.5	0.5	0.7	1.1	2.0	7.1	16.1	3.4	16.1
25-Sep	10.0	17.2	Z	3.2	3.7	6.1	3.0	5.0	2.2	1.7	1.6	1.2	0.7	0.6	0.8	1.4	0.8	1.0	1.5	1.4	1.1	1.2	2.0	1.8	3.0	17.2
26-Sep	2.0	1.9	1.8	Z	3.2	3.4	4.1	3.3	3.9	2.9	2.9	2.6	1.8	2.8	1.9	2.6	1.8	2.1	1.7	1.3	1.9	3.7	5.9	3.8	2.8	5.9
27-Sep	2.2	1.3	1.4	0.7	Z	2.7	2.5	1.6	0.9	0.5	0.4	0.4	0.5	0.4	0.5	0.8	0.8	0.7	1.0	1.1	0.8	1.9	3.6	3.4	1.3	3.6
28-Sep	6.2	5.2	5.3	4.3	3.2	Z	2.8	4.4	3.0	2.2	2.2	1.4	0.9	1.4	2.4	3.5	1.6	3.6	4.8	3.0	1.2	3.3	1.2	1.3	3.0	6.2
29-Sep	Z	0.6	0.9	0.8	1.2	1.2	1.2	1.2	0.8	0.6	0.5	0.5	0.7	1.2	2.0	1.2	1.1	1.9	4.3	2.3	2.1	2.1	1.4	0.9	1.3	4.3
30-Sep	0.7	Z	0.9	1.1	2.4	4.3	2.6	6.3	2.2	1.6	1.9	1.3	1.3	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.7	0.6	1.5	6.3
	2.6	3.5	2.0	3.0	3.7	5.3	3.7	3.2	2.5	1.9	1.9	1.8	1.7	1.8	1.9	1.8	1.5	1.8	2.2	2.0	1.8	2.1	2.8	2.8	Diurnal Average	
	10.1	17.2	5.3	9.7	10.6	13.6	12.2	7.6	10.4	5.7	5.2	5.0	4.9	9.5	7.6	6.2	4.2	5.1	5.6	8.5	7.0	9.1	8.5	16.1	Diurnal Maximum	

Z - zerospan C - Calibration

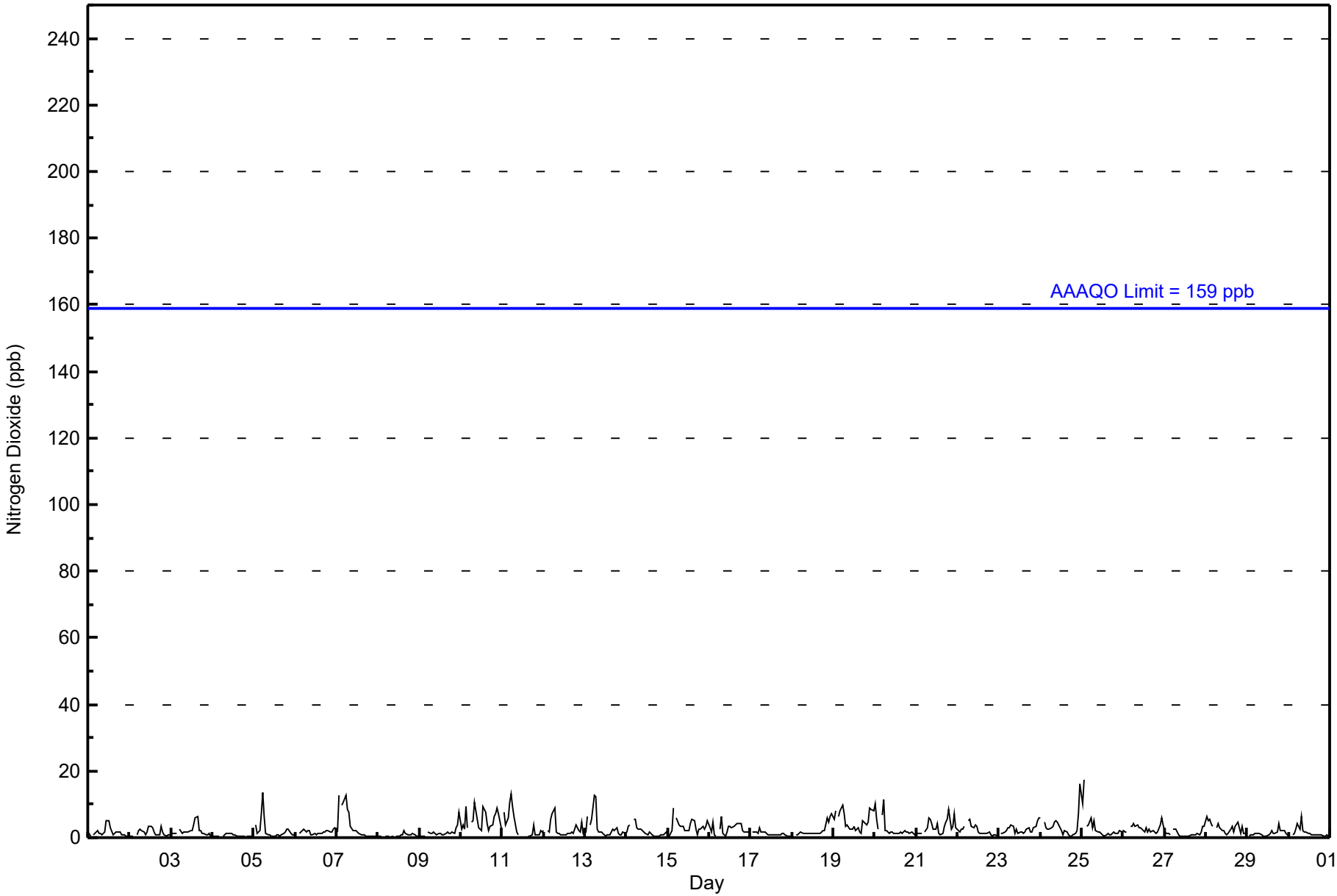
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - September 2025



Nitrogen Dioxide (NO_2) - ppb
Firebag - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Nitrogen Dioxide (NO_2) - ppb
Firebag - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	58	37	4	2	1	3	27	72	124	86	87	61	35	26	37	24	684
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	58	37	4	2	1	3	27	72	124	86	87	61	35	26	37	24	684

Total Number of Valid Hours: 684

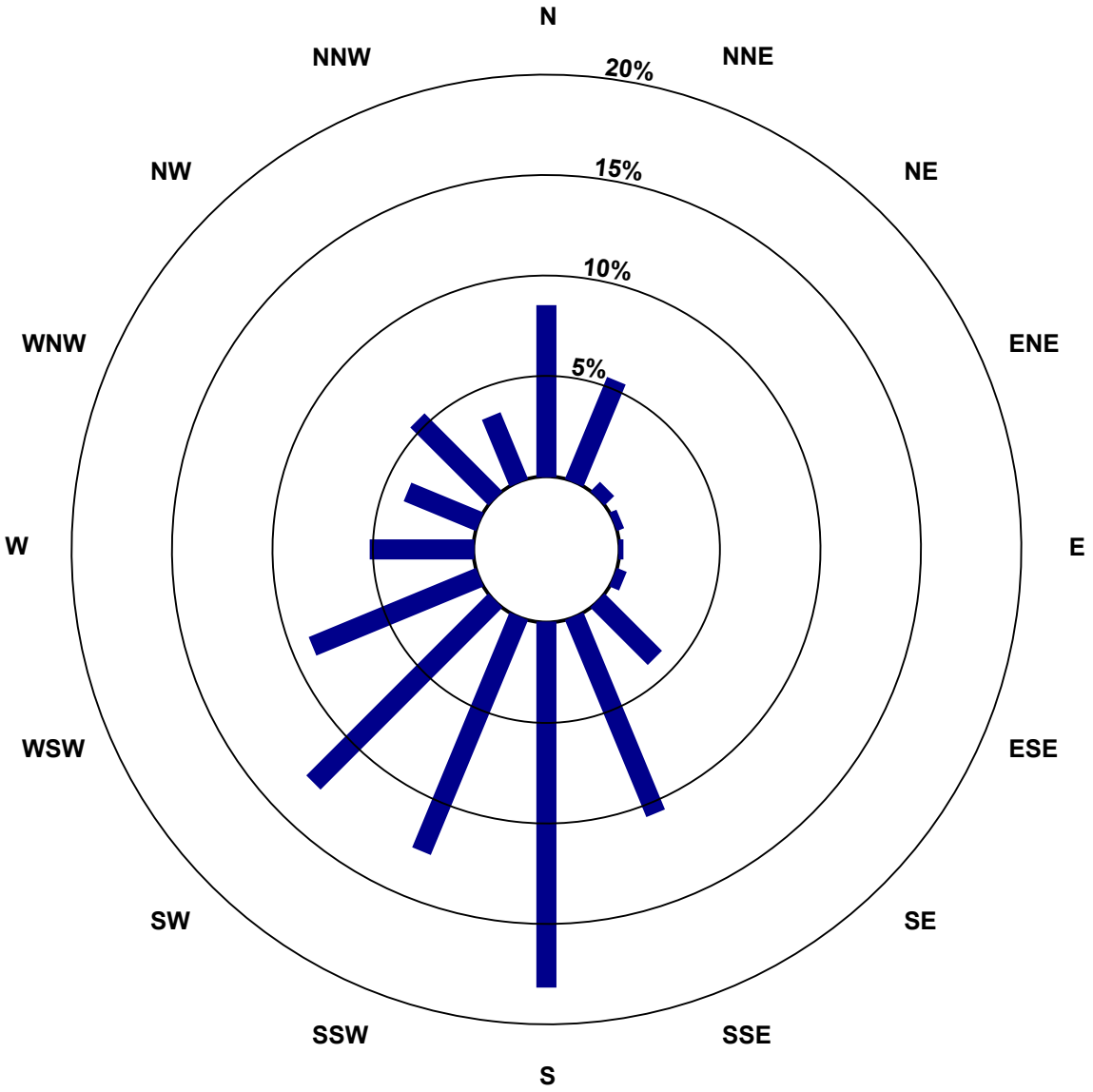
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Firebag



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

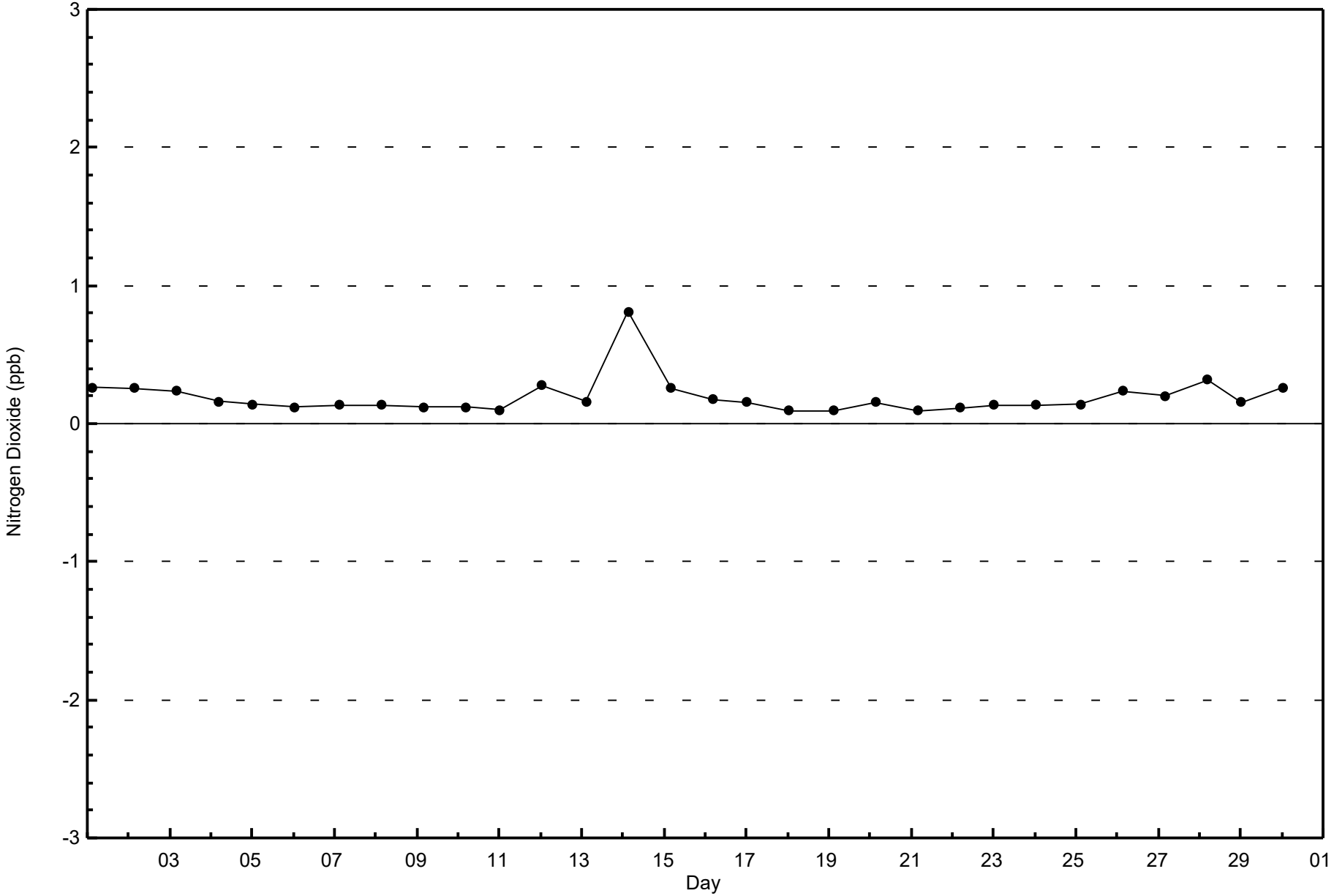
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - September 2025

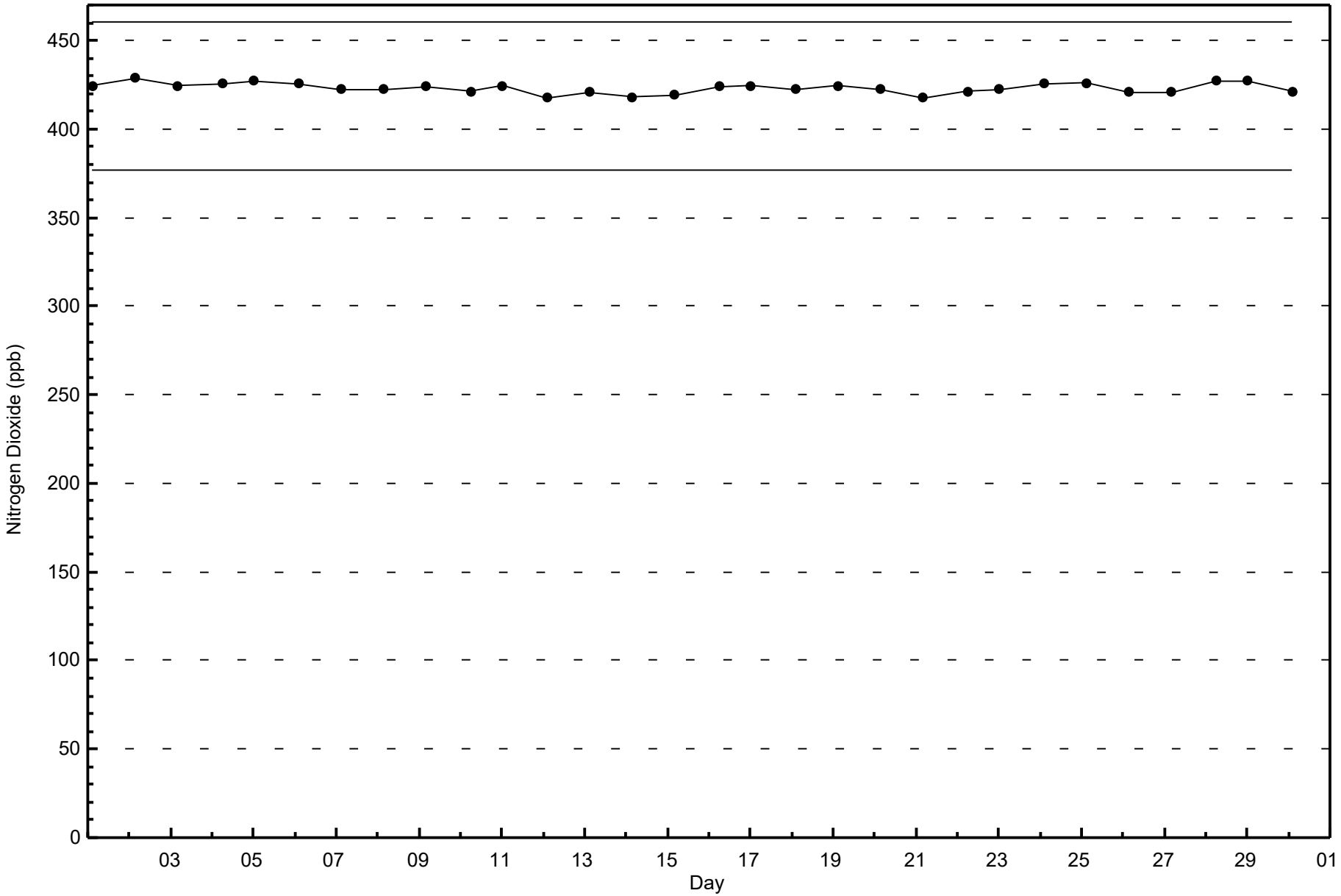


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - September 2025

Maximum Value: 21.5 ppb on Sep 5 06:00

Maximum Daily Average: 6.0 ppb on Sep 10

Minimum Value: 0.3 ppb on Sep 14 18:00

Minimum Daily Average: 0.8 ppb on Sep 8

Maximum Diurnal Average: 6.9 ppb at hour 6

Minimum Diurnal Average: 1.6 ppb at hour 17

Monthly Average: 2.78 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.6 Q_1 = 1.1 Median = 1.8 Q_3 = 3.3 P_{90} = 6.0 P_{99} = 16.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.2	0.7	Z	0.9	1.4	2.6	1.5	1.4	1.1	2.9	8.2	7.8	7.1	4.0	1.0	1.2	1.7	1.7	1.6	1.1	1.1	0.7	0.6	0.6	2.3	8.2
2-Sep	0.6	0.6	0.6	Z	1.1	2.5	4.2	2.6	1.9	0.9	2.4	4.1	4.2	3.6	1.8	1.1	0.8	1.2	4.9	2.2	1.0	0.7	0.7	0.8	1.9	4.9
3-Sep	1.0	1.1	1.1	1.3	Z	3.5	1.5	2.0	2.1	2.1	2.1	2.4	2.3	4.3	6.8	6.9	2.3	2.3	1.4	1.2	1.0	0.9	1.3	0.7	2.2	6.9
4-Sep	0.6	0.5	0.5	0.5	0.5	Z	0.6	0.9	1.5	1.6	1.8	2.0	1.3	0.9	0.6	0.5	0.5	0.6	0.7	0.3	0.4	0.4	0.5	0.6	0.8	2.0
5-Sep	Z	4.0	1.5	2.4	9.4	21.5	9.5	1.6	1.0	1.1	0.8	0.6	0.6	0.8	0.9	0.7	0.9	1.5	1.6	2.8	2.9	1.4	1.0	1.0	3.0	21.5
6-Sep	0.6	Z	1.4	1.8	2.3	3.3	1.9	2.5	2.6	1.1	1.1	1.4	1.1	1.2	1.3	1.3	1.8	1.8	2.1	2.3	1.9	1.6	2.6	2.9	1.8	3.3
7-Sep	2.0	12.9	Z	9.8	10.5	14.0	9.4	9.0	4.2	2.5	2.6	2.6	1.8	1.2	0.8	0.9	1.1	0.7	0.6	0.5	0.4	0.4	0.4	0.4	3.9	14.0
8-Sep	0.5	0.5	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	1.3	0.9	3.2	1.3	0.8	1.1	1.0	1.3	0.8	0.6	0.5	0.8	3.2
9-Sep	0.4	0.6	0.4	0.6	Z	2.8	1.3	1.6	2.7	1.6	1.2	1.2	1.3	1.2	1.1	1.3	1.9	1.3	1.5	1.6	1.4	3.2	4.0	8.1	1.8	8.1
10-Sep	2.7	3.8	2.6	9.4	3.0	Z	4.9	6.0	14.9	8.1	3.8	3.1	2.8	13.1	9.8	5.1	2.5	3.6	3.9	6.5	7.5	10.8	7.5	3.0	6.0	14.9
11-Sep	Z	8.6	4.1	6.4	13.5	19.4	17.8	9.0	2.2	1.0	C	C	C	C	C	0.4	0.5	0.8	4.6	1.0	0.9	1.1	2.3	1.9	5.3	19.4
12-Sep	2.5	Z	2.4	1.5	7.8	11.0	14.3	1.9	1.2	1.6	1.1	1.0	1.0	1.1	1.2	1.3	1.6	1.5	2.5	3.7	2.5	1.7	4.7	1.2	3.1	14.3
13-Sep	1.5	6.8	Z	3.8	6.2	16.2	18.0	2.7	2.0	1.7	1.4	0.9	0.6	0.8	1.0	1.8	2.7	2.1	3.1	1.4	1.0	0.7	1.6	1.2	3.4	18.0
14-Sep	1.9	3.2	3.8	Z	5.8	6.0	3.1	2.9	3.1	2.1	2.1	1.5	1.0	1.9	1.4	0.9	0.6	0.3	0.6	0.4	0.8	0.7	1.1	1.9	2.0	6.0
15-Sep	0.7	0.4	2.0	8.9	Z	5.9	4.1	3.9	4.4	4.2	2.5	2.4	2.1	5.0	6.2	5.5	2.6	1.1	2.8	2.7	3.6	2.4	3.4	5.0	3.6	8.9
16-Sep	2.8	1.5	4.7	0.9	0.5	Z	3.0	7.9	1.4	0.6	2.3	4.6	4.5	3.6	4.6	5.2	5.0	4.6	4.7	2.4	2.1	1.7	1.9	2.0	3.2	7.9
17-Sep	Z	1.7	1.8	1.6	1.7	5.4	2.1	2.1	2.1	1.7	1.1	1.0	1.1	1.2	1.0	1.1	0.9	1.3	1.4	1.4	0.8	0.6	0.6	0.6	1.5	5.4
18-Sep	0.7	Z	1.0	1.1	1.4	2.1	1.9	1.4	1.6	1.6	1.5	1.6	1.4	1.3	1.3	1.2	1.5	1.8	2.2	2.2	5.9	4.6	6.3	7.1	2.3	7.1
19-Sep	5.4	7.9	Z	6.3	8.1	9.9	7.7	4.3	4.8	2.9	2.9	3.2	4.2	2.7	3.3	1.6	1.5	5.8	4.6	3.8	4.6	9.0	8.5	8.2	5.3	9.9
20-Sep	10.8	5.9	2.7	Z	7.8	17.7	2.3	2.6	1.6	1.9	1.7	1.4	1.4	1.4	1.4	1.6	1.5	2.2	1.9	1.6	1.1	1.5	1.3	1.0	3.2	17.7
21-Sep	1.5	1.4	1.4	1.4	Z	1.8	3.1	6.6	6.5	5.3	2.9	3.2	5.4	1.4	1.1	1.6	3.5	4.9	5.7	8.5	2.5	3.4	7.0	2.8	3.6	8.5
22-Sep	2.3	1.9	2.5	2.6	3.4	Z	5.6	7.4	5.3	4.4	5.8	4.6	2.4	1.6	1.6	1.4	1.2	1.2	1.6	0.9	0.6	0.7	0.7	0.6	2.6	7.4
23-Sep	Z	1.1	1.3	1.7	2.3	3.0	3.2	4.0	3.9	1.5	3.0	1.7	2.1	1.6	1.5	1.6	2.9	2.9	1.7	1.8	2.8	3.3	5.1	6.0	2.6	6.0
24-Sep	5.8	Z	4.8	2.8	2.4	2.7	3.1	3.6	5.0	5.7	6.1	3.2	2.2	0.9	2.8	2.3	0.8	0.5	0.5	0.7	1.1	2.0	7.1	16.2	3.6	16.2
25-Sep	10.0	17.3	Z	3.2	4.1	8.1	3.5	5.8	2.4	2.0	1.9	1.5	0.8	0.7	0.9	1.7	0.9	1.1	1.6	1.4	1.1	1.2	2.0	1.8	3.3	17.3
26-Sep	2.0	1.9	1.8	Z	3.2	3.4	4.3	4.1	5.0	3.9	4.3	3.7	2.3	4.0	2.5	3.3	1.9	2.3	1.8	1.3	1.9	3.7	5.9	3.8	3.1	5.9
27-Sep	2.2	1.3	1.4	0.7	Z	2.7	2.6	1.8	1.1	0.6	0.4	0.5	0.6	0.5	0.6	0.9	0.9	0.7	1.0	1.1	0.8	1.9	3.6	3.4	1.4	3.6
28-Sep	6.2	5.2	5.3	4.3	3.2	Z	2.9	5.3	4.1	3.0	3.1	1.9	1.2	1.8	2.9	4.2	1.7	3.9	5.3	3.2	1.3	3.5	1.3	1.4	3.3	6.2
29-Sep	Z	0.6	0.9	0.8	1.5	1.5	1.3	1.3	0.9	0.7	0.6	0.6	0.8	1.3	2.2	1.4	1.3	2.4	5.1	2.5	2.1	2.1	1.4	0.9	1.5	5.1
30-Sep	0.7	Z	0.9	1.2	2.6	5.0	2.8	6.8	2.3	1.8	2.2	1.4	1.4	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.7	0.6	1.6	6.8
	2.7	3.7	2.1	3.0	4.2	6.9	4.7	3.8	3.1	2.4	2.5	2.3	2.0	2.2	2.2	2.1	1.6	1.9	2.4	2.1	1.9	2.2	2.8	2.9	Diurnal Average	
	10.8	17.3	5.3	9.8	13.5	21.5	18.0	9.0	14.9	8.1	8.2	7.8	7.1	13.1	9.8	6.9	5.0	5.8	5.7	8.5	7.5	10.8	8.5	16.2	Diurnal Maximum	

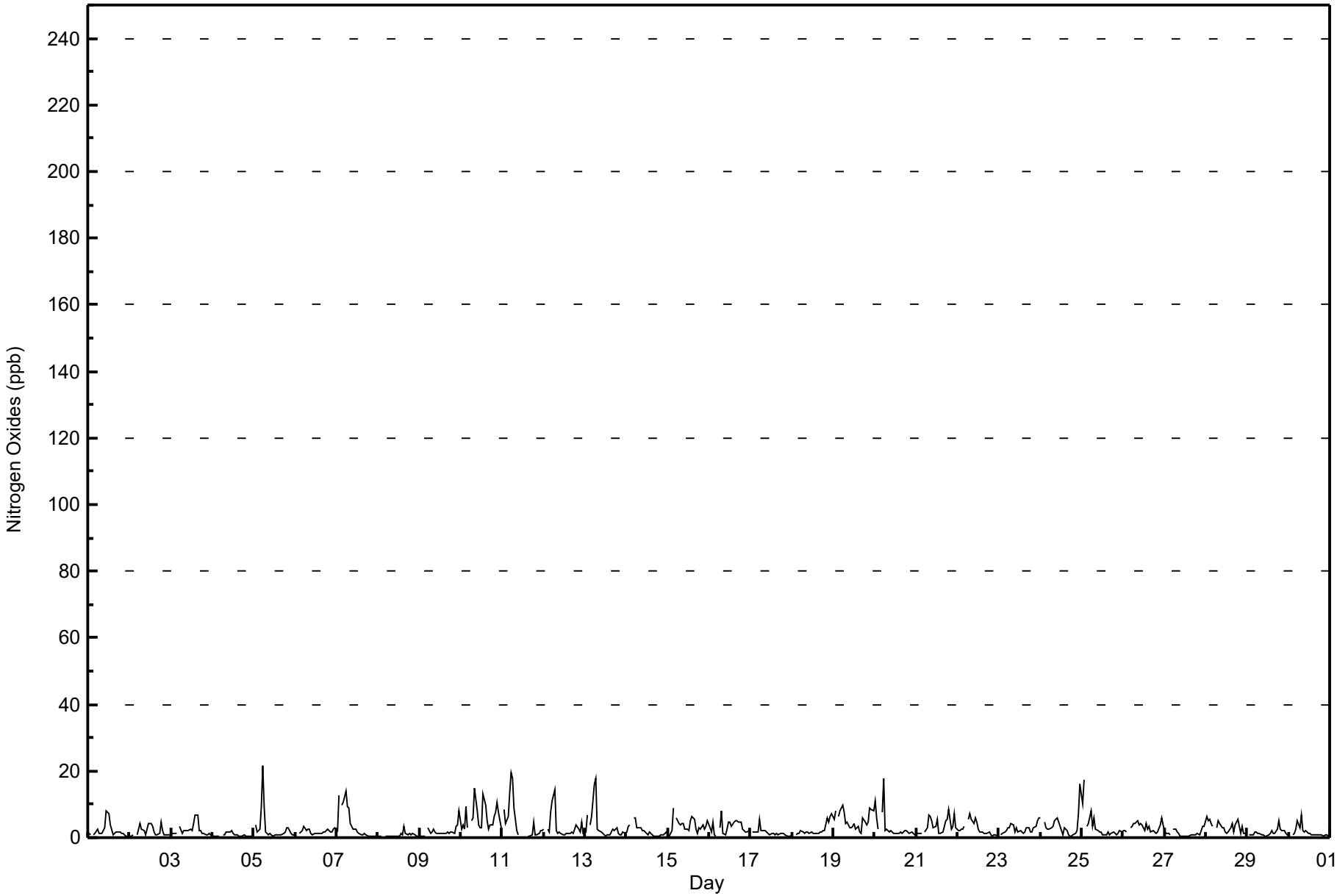
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - September 2025



Nitrogen Oxides (NO_X) - ppb
Firebag - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Nitrogen Oxides (NO_X) - ppb

Firebag - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	58	37	4	2	1	3	27	72	123	86	87	61	35	26	37	24	683
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	58	37	4	2	1	3	27	72	124	86	87	61	35	26	37	24	684

Total Number of Valid Hours: 684

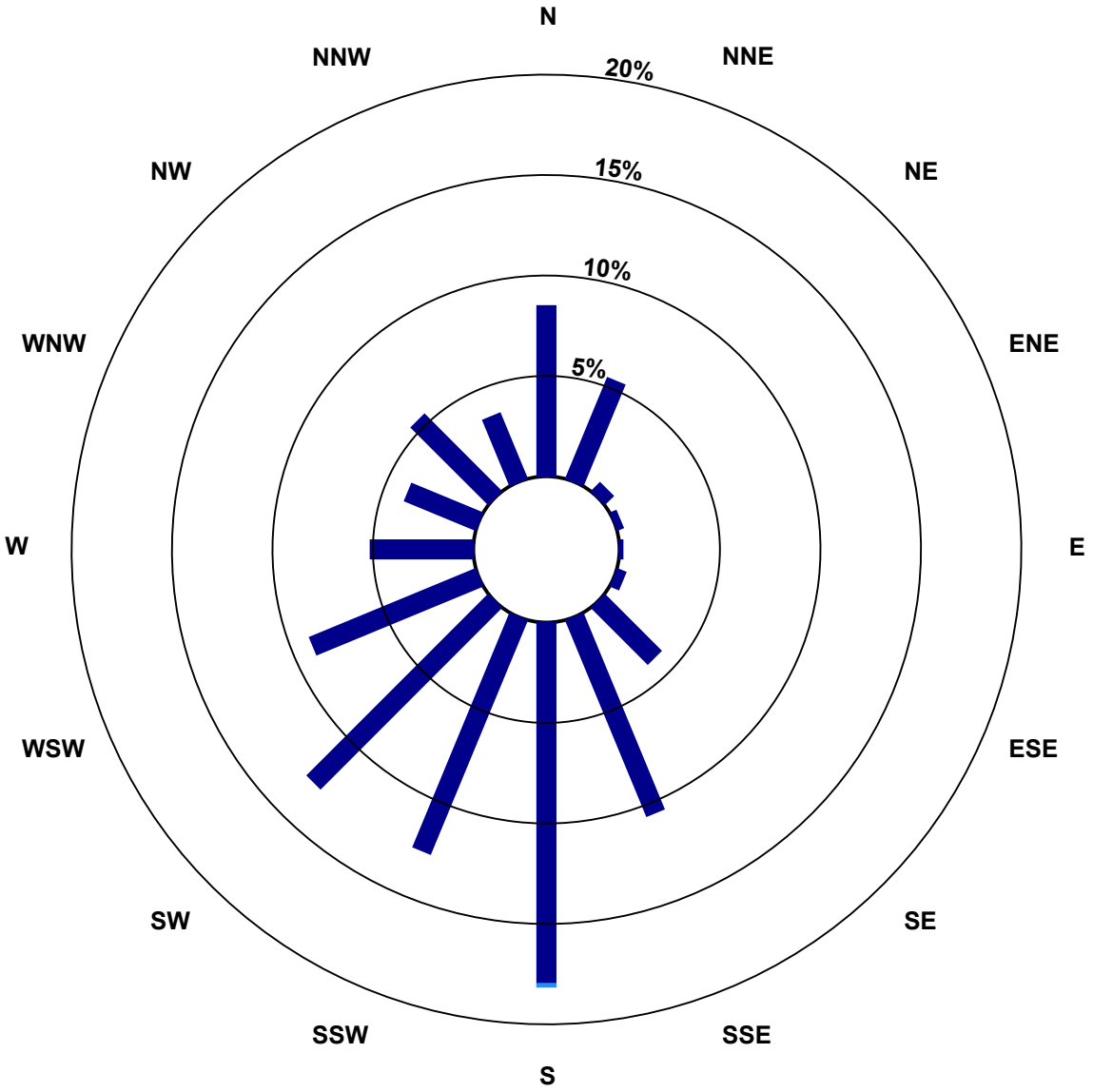
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Firebag



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

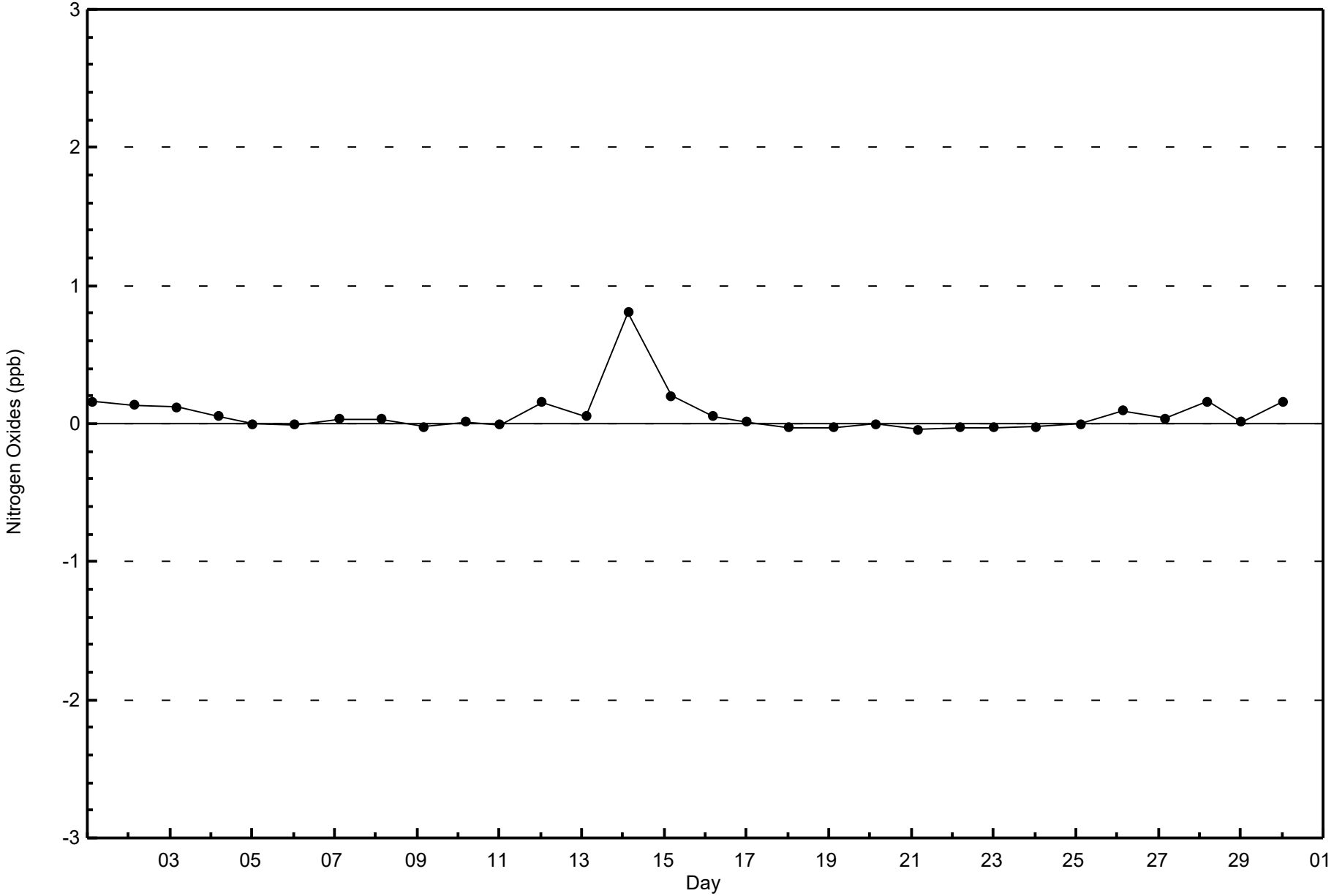
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - September 2025

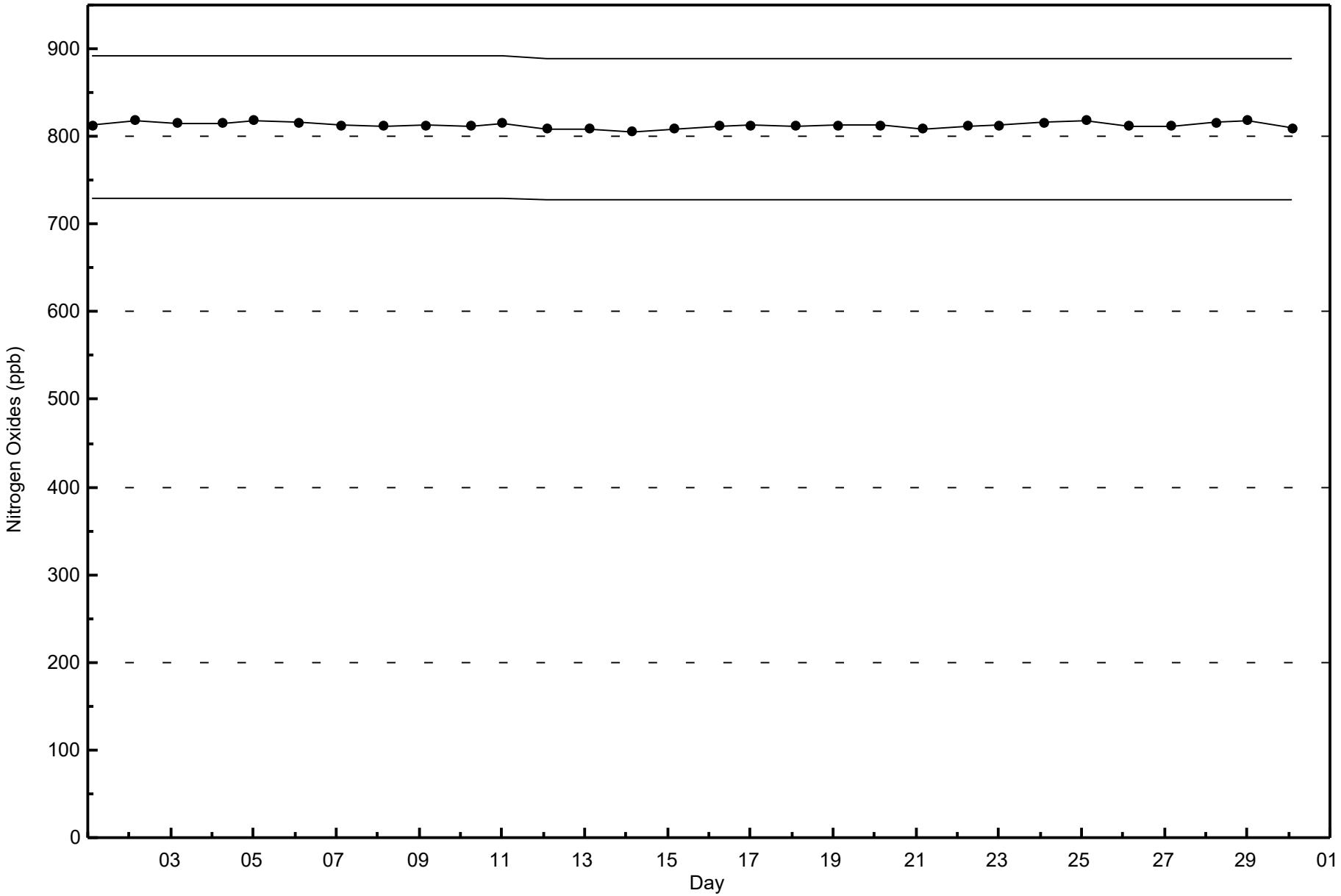


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - September 2025



Maximum Value: 26.5 C on Sep 12 16:00

Maximum Daily Average: 20.7 C on Sep 13

Minimum Value: 3.0 C on Sep 2 02:00

Minimum Daily Average: 8.7 C on Sep 26

Maximum Diurnal Average: 18.8 C at hour 16

Minimum Diurnal Average: 9.7 C at hour 6

Monthly Average: 13.88 C

Percentiles: P_1 = 4.2 P_{10} = 7.9 Q_1 = 10.5 Median = 13.8 Q_3 = 16.8 P_{90} = 20.7 P_{99} = 25.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

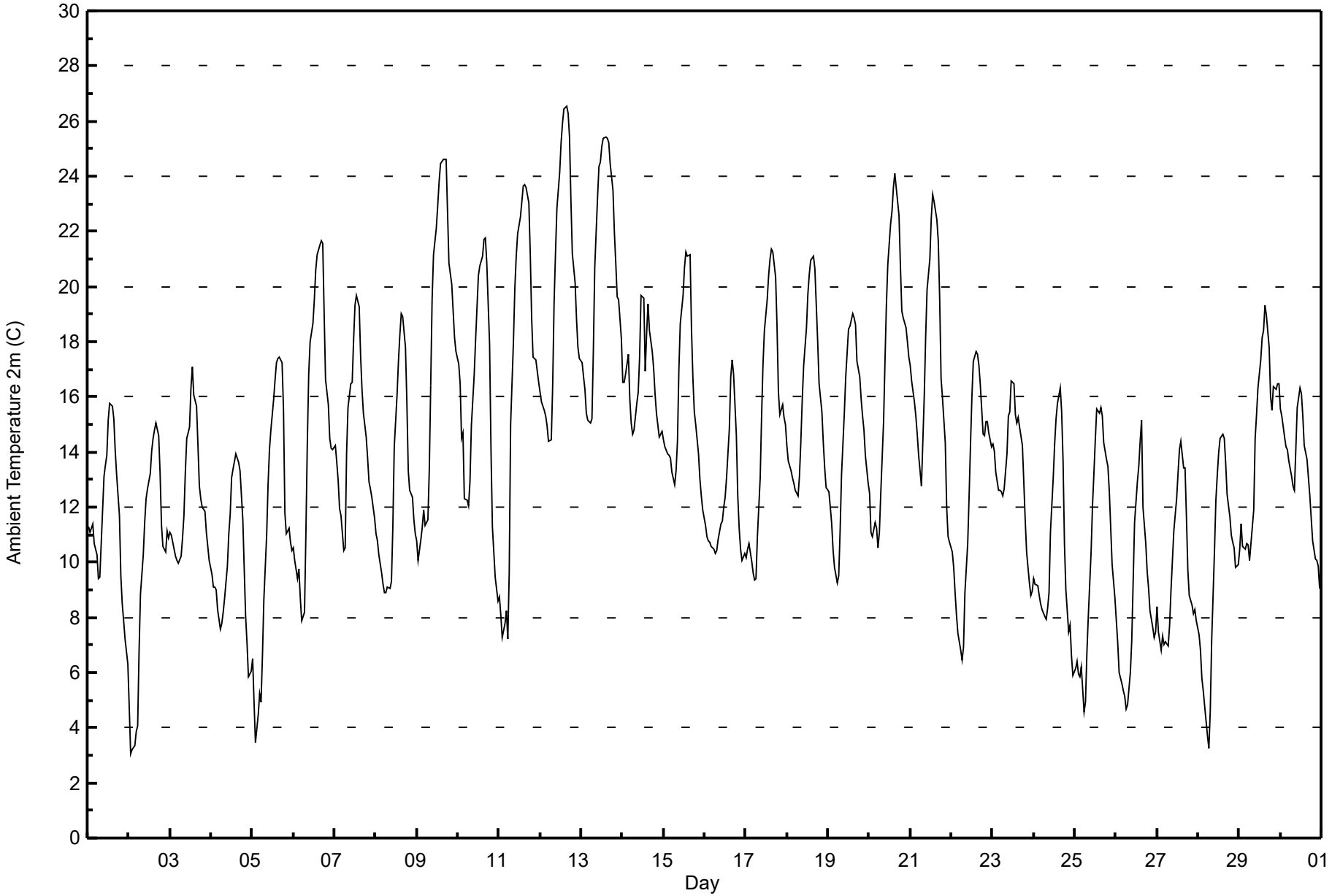
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.3	11.1	11.3	11.4	10.7	10.3	9.4	9.5	10.7	13.1	13.5	13.9	15.2	15.8	15.7	15.2	14.0	13.2	11.7	9.5	8.5	7.9	7.2	6.3	11.5	15.8
2-Sep	4.7	3.0	3.2	3.4	3.9	4.1	6.8	8.9	10.3	11.4	12.3	12.7	13.2	14.0	14.5	14.8	15.1	14.6	13.2	11.3	10.6	10.4	11.1	10.9	9.9	15.1
3-Sep	11.1	11.0	10.5	10.2	10.0	10.0	10.2	10.9	11.7	13.3	14.5	14.9	16.3	17.1	16.0	15.7	14.2	12.8	12.3	12.0	11.9	11.1	10.6	10.1	12.4	17.1
4-Sep	9.6	9.1	9.1	9.0	8.3	7.6	7.8	8.2	8.7	9.9	11.0	11.8	13.1	13.4	13.9	13.8	13.6	13.3	11.5	9.7	8.0	7.1	5.8	6.1	10.0	13.9
5-Sep	6.5	4.9	3.5	4.5	5.2	4.9	6.6	8.6	11.0	12.8	14.1	14.8	15.9	16.6	17.2	17.4	17.4	17.3	15.6	11.8	11.0	11.2	10.7	10.4	11.3	17.4
6-Sep	10.5	10.1	9.4	9.8	8.7	7.9	8.2	11.1	14.3	16.9	18.0	18.6	19.5	20.6	21.2	21.5	21.7	21.6	19.0	16.6	15.7	14.5	14.1	14.1	15.1	21.7
7-Sep	14.2	13.6	13.0	12.0	11.7	10.4	10.5	14.0	15.6	16.5	16.5	18.0	19.3	19.7	19.3	17.5	16.3	15.4	14.5	13.8	12.9	12.6	12.4	11.6	14.6	19.7
8-Sep	11.0	10.8	10.3	9.6	9.2	8.9	8.9	9.1	9.1	9.3	11.3	14.2	16.1	17.3	18.2	19.0	18.9	17.8	15.8	13.3	12.6	12.4	11.6	11.0	12.7	19.0
9-Sep	10.8	10.1	10.8	11.3	11.9	11.3	11.6	13.4	16.4	19.5	21.2	22.1	22.9	23.8	24.5	24.6	24.6	24.6	22.7	20.9	20.1	19.1	18.2	17.6	18.1	24.6
10-Sep	17.2	16.5	14.5	14.7	12.3	12.2	12.0	12.9	15.0	16.8	18.1	19.2	20.4	20.8	21.1	21.7	21.8	20.9	17.9	14.1	11.3	10.4	9.5	8.6	15.8	21.8
11-Sep	8.7	8.1	7.3	7.8	8.3	7.2	9.6	15.0	18.0	19.9	21.1	21.9	22.5	23.1	23.6	23.7	23.6	23.0	21.2	18.9	17.4	17.3	16.9	16.5	16.7	23.7
12-Sep	16.2	15.8	15.5	15.3	15.0	14.4	14.4	16.4	19.4	21.2	22.9	24.2	25.2	25.9	26.5	26.5	26.3	25.4	23.1	21.2	20.1	18.8	17.8	17.4	20.2	26.5
13-Sep	17.2	16.7	16.3	15.4	15.2	15.0	15.2	17.7	20.7	23.2	24.3	24.5	25.1	25.4	25.4	25.4	25.2	24.4	23.5	22.0	20.9	19.6	19.5	18.1	20.7	25.4
14-Sep	16.5	16.5	16.8	17.6	15.9	15.0	14.7	14.8	15.8	16.2	17.4	19.7	19.6	16.9	18.3	19.4	18.4	17.6	17.0	16.1	15.4	14.6	14.6	14.7	16.6	19.7
15-Sep	14.5	14.2	13.9	13.9	13.8	13.3	12.8	13.3	14.4	17.0	18.7	19.7	20.7	21.3	21.1	21.2	18.5	16.7	15.5	15.0	13.9	13.0	12.4	11.9	15.9	21.3
16-Sep	11.3	10.9	10.8	10.7	10.6	10.5	10.3	10.4	10.8	11.4	11.5	12.0	12.3	13.1	14.8	16.7	17.3	16.8	14.6	12.4	11.2	10.5	10.1	10.3	12.1	17.3
17-Sep	10.2	10.5	10.7	10.0	9.6	9.4	9.4	11.0	13.1	15.3	17.2	18.4	19.6	20.4	21.0	21.3	21.3	20.4	18.5	16.2	15.3	15.7	15.2	15.0	15.2	21.3
18-Sep	14.3	13.7	13.3	13.1	12.9	12.6	12.4	13.1	14.4	15.9	17.2	18.5	19.7	20.4	20.9	21.1	20.7	19.3	18.0	16.5	15.5	14.3	13.4	12.7	16.0	21.1
19-Sep	12.5	12.0	11.4	10.4	9.8	9.2	9.5	11.1	13.2	15.4	16.7	17.6	18.5	18.6	19.0	18.9	18.6	17.3	16.7	15.9	15.3	14.8	13.9	12.9	14.6	19.0
20-Sep	12.5	11.1	10.9	11.5	11.2	10.5	11.1	12.5	15.1	17.3	19.3	20.8	22.3	22.7	23.6	24.1	23.6	22.6	20.7	19.1	18.9	18.5	18.0	17.4	17.3	24.1
21-Sep	17.1	16.6	15.8	15.3	14.7	13.9	12.8	14.4	16.0	18.2	19.9	21.0	22.5	23.3	23.1	22.4	21.6	19.6	16.7	16.0	14.3	12.0	10.9	10.7	17.0	23.3
22-Sep	10.4	9.8	8.9	8.1	7.4	6.8	6.5	6.9	8.9	10.7	12.4	14.3	16.0	17.3	17.6	17.6	17.1	16.4	14.6	14.6	15.1	15.1	14.7	14.2	12.6	17.6
23-Sep	14.3	14.0	13.3	12.6	12.6	12.5	12.4	12.7	13.9	15.3	15.5	16.6	16.5	15.3	15.1	15.3	14.9	14.3	12.9	11.5	10.4	9.2	8.8	9.0	13.3	16.6
24-Sep	9.4	9.2	9.2	8.8	8.5	8.3	8.0	7.9	8.4	8.9	11.1	13.1	14.3	15.2	15.7	16.3	15.4	13.7	10.7	9.0	7.5	7.7	6.6	5.9	10.4	16.3
25-Sep	6.1	6.4	5.9	5.8	6.2	4.6	4.9	6.7	8.0	10.4	12.1	13.2	14.4	15.5	15.4	15.6	15.3	14.4	13.7	13.5	12.6	11.3	9.9	8.7	10.4	15.6
26-Sep	7.9	7.1	6.0	5.6	5.3	5.1	4.7	4.8	6.0	7.2	9.3	11.4	12.9	13.5	14.4	15.1	12.0	10.7	9.7	9.1	8.3	7.6	7.3	7.5	8.7	15.1
27-Sep	8.4	7.5	6.8	7.3	7.0	7.1	7.0	7.7	9.0	10.1	11.1	12.3	13.2	14.1	14.4	13.4	13.4	11.6	9.7	8.8	8.5	8.2	8.3	7.9	9.7	14.4
28-Sep	7.4	6.8	5.8	5.3	4.8	3.7	3.3	4.6	7.2	10.4	12.3	13.2	14.0	14.5	14.6	14.5	13.6	12.5	11.6	11.0	10.7	10.5	9.8	9.9	9.7	14.6
29-Sep	10.5	11.4	10.6	10.5	10.7	10.6	10.1	10.7	11.9	14.5	15.4	16.3	17.4	18.2	18.4	19.3	19.0	17.8	16.0	15.5	16.4	16.3	16.5	16.5	14.6	19.3
30-Sep	15.5	15.3	14.5	14.2	14.1	13.7	13.1	12.8	12.6	14.1	15.6	16.3	16.1	15.3	14.2	13.7	13.1	12.4	11.6	10.8	10.1	10.1	9.9	9.1	13.3	16.3
	11.6	11.1	10.6	10.5	10.2	9.7	9.8	11.0	12.6	14.4	15.7	16.8	17.8	18.3	18.6	18.8	18.2	17.3	15.7	14.2	13.3	12.7	12.2	11.8	Diurnal Average	
	17.2	16.7	16.8	17.6	15.9	15.0	15.2	17.7	20.7	23.2	24.3	24.5	25.2	25.9	26.5	26.5	26.3	25.4	23.5	22.0	20.9	19.6	19.5	18.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Firebag - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	148	20.56	20.56
10 - 20	489	67.92	88.47
> 20	83	11.53	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Firebag - September 2025

Maximum Value: 98.0 % on Sep 8 08:00

Maximum Daily Average: 83.8 % on Sep 16

Minimum Value: 27.7 % on Sep 24 17:00

Minimum Daily Average: 45.9 % on Sep 29

Maximum Diurnal Average: 78.8 % at hour 7

Minimum Diurnal Average: 44.5 % at hour 16

Monthly Average: 62.70 %

Percentiles: P_1 = 30.7 P_{10} = 39.0 Q_1 = 48.4 Median = 62.1 Q_3 = 77.2 P_{90} = 88.8 P_{99} = 95.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

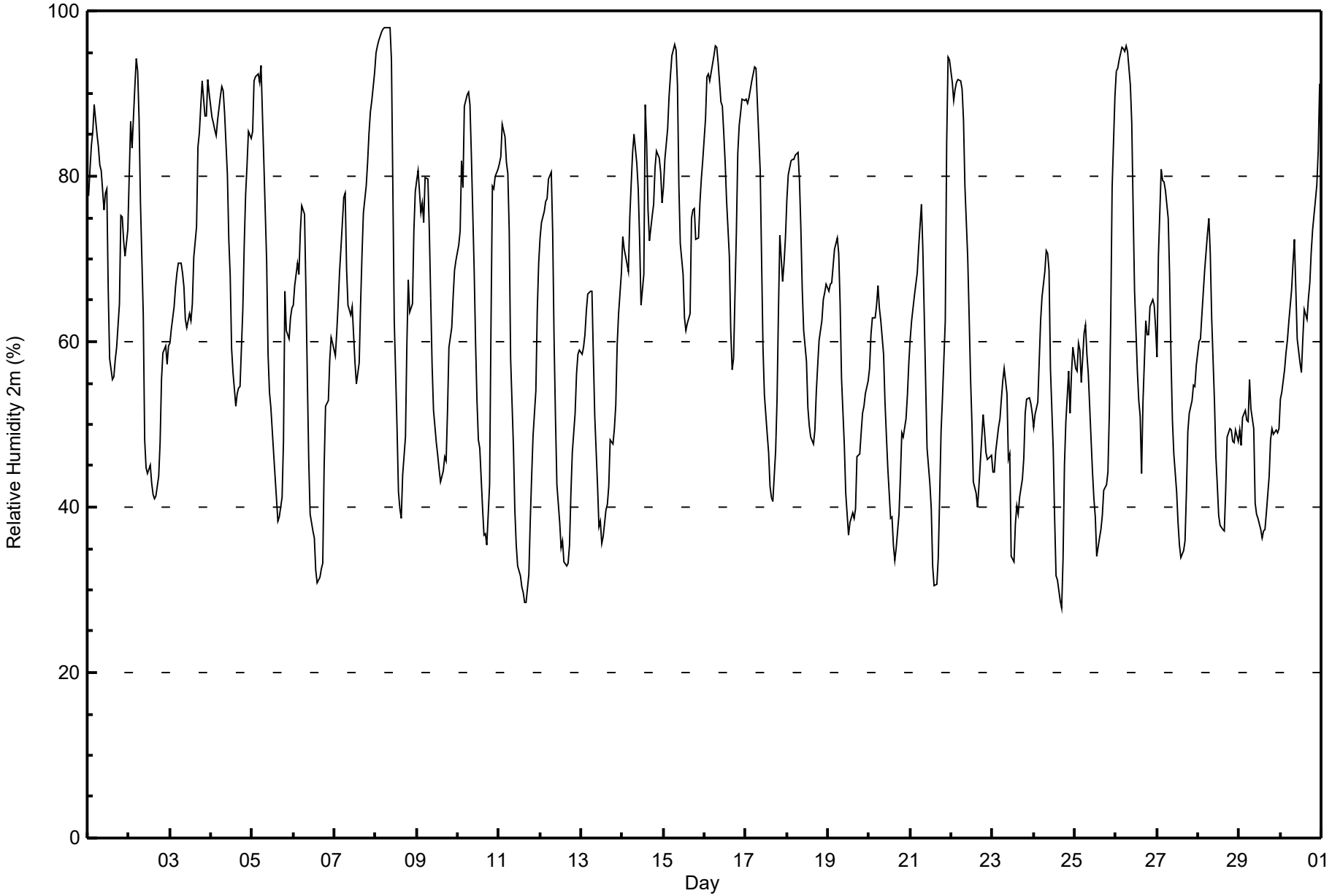
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	77.7	80.9	83.7	85.5	88.7	85.1	83.5	81.3	80.7	75.9	77.9	78.4	66.2	57.9	55.4	55.8	57.9	59.4	64.6	75.2	75.0	72.2	70.4	73.5	73.5	88.7
2-Sep	80.1	86.5	83.4	90.9	94.2	92.8	87.0	76.8	63.2	48.1	44.7	44.1	45.0	42.9	41.4	41.0	41.4	43.7	47.8	55.4	58.6	59.6	57.3	59.6	61.9	94.2
3-Sep	59.8	61.5	64.3	66.6	68.3	69.5	69.5	68.3	66.6	62.7	61.8	63.4	62.5	64.6	70.1	73.8	83.5	85.3	88.5	91.6	87.3	87.3	91.6	90.1	73.3	91.6
4-Sep	87.1	86.4	85.6	84.8	86.7	89.7	90.9	90.3	87.7	80.1	72.4	68.0	59.1	56.2	52.3	53.7	54.4	54.6	63.9	71.7	77.9	81.4	85.4	84.6	75.2	90.9
5-Sep	85.4	91.6	92.0	92.3	91.4	93.4	87.5	81.7	69.7	58.5	53.8	52.1	46.4	43.7	41.1	38.4	38.7	41.2	48.0	66.1	61.4	60.3	62.8	64.0	65.1	93.4
6-Sep	64.4	66.8	69.6	68.1	73.3	76.5	75.3	66.3	55.8	45.7	39.1	37.1	36.3	32.5	30.8	31.5	32.5	33.1	45.0	52.1	52.9	57.8	60.5	59.8	52.6	76.5
7-Sep	58.3	61.2	64.5	68.4	71.4	77.5	78.0	68.9	64.4	63.2	64.2	60.9	57.5	54.9	57.4	64.6	70.6	75.5	78.8	81.7	85.2	87.8	89.1	92.6	70.7	92.6
8-Sep	95.0	95.7	96.5	97.4	97.7	97.9	98.0	98.0	98.0	94.1	78.7	62.5	49.5	41.8	39.8	38.6	43.9	48.6	59.6	67.5	63.5	64.7	73.4	78.1	74.1	98.0
9-Sep	79.5	80.7	75.6	76.7	74.4	79.8	79.7	73.6	65.2	57.0	51.7	47.9	46.3	44.6	43.0	44.5	46.1	45.6	51.7	59.4	61.8	65.5	68.7	69.8	62.0	80.7
10-Sep	71.7	73.4	81.9	78.7	88.5	89.8	90.2	88.6	82.5	68.6	59.9	52.9	48.1	47.1	39.9	36.6	36.9	35.4	42.7	62.0	78.8	78.6	80.1	80.9	66.4	90.2
11-Sep	81.5	82.4	86.3	84.7	81.6	80.3	73.5	58.0	47.3	39.7	35.4	32.9	31.6	30.3	29.7	28.6	28.5	31.9	38.3	43.8	48.6	54.0	63.7	69.5	53.4	86.3
12-Sep	72.5	74.5	75.8	77.0	77.3	79.6	80.5	73.3	60.2	50.6	42.8	38.2	35.0	35.9	33.3	32.9	33.3	35.4	41.7	46.6	51.3	56.2	58.5	59.0	55.1	80.5
13-Sep	58.4	59.2	60.8	63.8	65.7	66.0	66.2	58.3	51.1	42.6	37.6	38.4	35.6	36.5	39.7	40.3	42.5	48.1	47.7	49.6	52.3	59.7	63.3	68.3	52.2	68.3
14-Sep	72.8	71.1	70.3	68.5	75.2	79.2	82.9	85.0	81.6	78.5	72.4	64.5	68.1	88.7	84.1	75.9	72.2	75.3	76.6	81.1	83.0	82.2	80.4	76.8	76.9	88.7
15-Sep	78.7	82.1	85.8	89.7	92.2	94.5	95.9	95.3	91.0	78.8	71.9	68.2	62.9	61.4	62.2	63.5	74.9	75.9	76.0	72.4	72.5	76.7	79.7	81.8	78.5	95.9
16-Sep	87.0	92.0	92.4	91.5	92.5	94.5	95.8	95.7	93.7	88.9	88.4	85.2	81.6	77.2	70.4	61.4	56.5	57.9	73.3	82.7	86.1	87.7	89.2	89.2	83.8	95.8
17-Sep	89.3	88.8	89.5	91.6	92.4	93.2	93.0	88.8	80.6	69.8	59.1	53.6	48.9	46.6	42.5	41.2	40.7	46.8	52.9	63.6	72.8	67.4	69.5	72.6	69.0	93.2
18-Sep	77.2	80.2	81.8	82.0	82.0	82.5	82.8	79.5	73.8	66.3	61.4	57.7	52.0	49.8	48.5	47.6	49.4	53.9	57.2	60.2	62.5	65.1	65.9	66.9	66.1	82.8
19-Sep	66.0	67.0	67.1	69.2	71.2	72.5	70.7	64.6	55.6	47.4	41.8	39.2	36.6	38.1	39.3	38.6	39.8	46.0	46.4	48.9	51.4	52.2	53.7	55.2	53.3	72.5
20-Sep	56.8	60.8	62.9	62.8	64.4	66.8	64.1	62.6	58.4	52.8	48.6	44.8	38.6	38.8	35.4	33.6	35.1	39.1	43.8	49.0	48.4	50.8	53.6	57.4	51.2	66.8
21-Sep	60.4	62.5	65.6	67.0	68.2	71.3	76.6	71.2	63.2	55.0	47.2	42.9	39.7	32.9	30.5	30.6	34.0	41.4	49.2	53.2	62.6	84.0	94.5	94.1	58.2	94.5
22-Sep	91.3	89.2	90.5	91.4	91.8	91.5	90.5	86.8	78.8	70.2	63.3	55.7	50.2	43.1	41.7	40.0	42.6	45.5	51.3	49.2	46.7	45.7	45.9	46.2	64.1	91.8
23-Sep	44.2	44.2	46.8	49.6	50.8	53.1	55.3	56.8	53.7	45.7	46.4	34.2	33.4	37.9	40.1	39.1	41.2	43.5	45.9	51.4	53.1	53.2	52.5	51.3	46.8	56.8
24-Sep	49.7	51.2	52.7	57.6	62.5	65.4	68.5	71.0	70.7	68.6	56.8	46.9	38.7	31.7	31.2	28.7	27.7	33.7	45.1	50.3	56.5	51.3	56.2	59.4	51.3	71.0
25-Sep	56.8	56.4	59.9	58.9	55.1	61.0	62.1	58.4	56.0	48.1	44.2	41.1	38.8	34.0	36.3	37.2	39.0	42.1	42.7	44.3	51.3	62.7	78.7	89.6	52.3	89.6
26-Sep	92.7	93.1	94.1	95.5	95.4	95.2	95.7	95.1	91.1	86.5	76.0	66.0	56.5	53.0	51.0	44.1	52.8	62.5	60.8	60.8	64.2	65.1	64.3	61.6	73.9	95.7
27-Sep	58.2	70.4	80.8	79.4	79.3	78.3	75.0	68.0	57.9	50.5	46.4	41.8	38.1	35.4	33.9	34.7	36.0	41.8	49.2	51.4	52.8	54.7	54.6	57.1	55.2	80.8
28-Sep	60.0	60.4	63.2	66.0	68.7	73.1	75.0	70.8	62.8	52.7	46.1	42.6	39.0	37.8	37.3	37.1	42.0	48.6	49.5	49.4	48.0	47.9	49.3	47.9	53.1	75.0
29-Sep	49.3	47.5	50.9	51.7	50.5	50.4	55.3	51.9	49.6	40.6	39.2	38.7	37.2	36.3	37.2	37.2	39.3	43.8	48.1	49.5	48.9	49.4	48.9	49.6	45.9	55.3
30-Sep	53.0	53.9	56.6	58.6	60.1	62.4	66.2	69.5	72.3	66.4	60.4	57.4	56.2	60.3	63.9	62.7	65.3	67.1	70.8	73.6	77.2	79.0	83.0	91.2	66.1	91.2
	70.5	72.4	74.4	75.5	77.0	78.8	78.8	75.1	69.4	61.8	56.3	51.9	47.9	46.4	45.3	44.5	46.6	50.1	55.2	60.5	63.1	65.3	68.2	69.9	Diurnal Average	
	95.0	95.7	96.5	97.4	97.7	97.9	98.0	98.0	98.0	94.1	88.4	85.2	81.6	88.7	84.1	75.9	83.5	85.3	88.5	91.6	87.3	87.8	94.5	94.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Firebag - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	86	11.94	11.94
40 - 60	248	34.44	46.39
60 - 80	235	32.64	79.03
80 - 100	151	20.97	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Firebag - September 2025

Maximum Speed: 38 km/h on Sep 29 11:00

Maximum Daily Speed Average: 23.6 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 8 14:00

Minimum Daily Speed Average: 2.4 km/h on Sep 16

Maximum Diurnal Speed Average: 8.5 km/h at hour 12

Minimum Diurnal Speed Average: 3.4 km/h at hour 19

Monthly Average Velocity: 6.3 km/h 211.0 deg

Percentiles: P_1 = 2 P_{10} = 6 Q_1 = 9 Median = 12 Q_3 = 17 P_{90} = 23 P_{99} = 29

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	SE7	SSE6	S5	SSE8	S3	ESE6	SE9	SSE9	SW6	NW8	NNW14	N11	N12	N15	N18	NNE18	NNE17	N14	NNE10	N9	N9	NNE8	NNE8	NNE5	NNE5.3	NNE18
2-Sep	NNE5	NNE4	NNE3	W1	WSW2	WNW2	UO	WNW4	NW3	NNE3	NNW2	W2	WNW2	SW4	SW7	SSW9	SSW12	S14	SSE10	SSE12	SSE15	S17	S21	S20	S5.0	S21
3-Sep	S23	S22	S21	S22	S21	S21	S23	S19	SSW20	SSW21	SW17	SW15	SW12	WNW12	N14	N17	N23	N24	N22	N23	N25	N21	N25	N22	WSW2.4	N25
4-Sep	N25	N24	N26	N26	N24	N26	N25	N24	N20	NNW22	NNW22	NNW24	NNW25	N24	N21	N19	N17	N16	N9	NNE8	NNE6	NNE6	NE6	ENE6	N18.3	N26
5-Sep	SE4	SE4	SE4	SSE5	SSE5	S4	SSW6	S8	SSW11	SW11	SW9	SW8	WSW6	W7	WSW6	SW6	WSW6	W4	WSW3	ESE4	SE8	SSE11	S12	S12	SSW5.0	S12
6-Sep	S16	S15	S13	S13	S12	SSE12	S12	SSE12	SSE11	S14	S20	S20	S18	SSW16	SSW15	SSW15	SSW13	SSW11	S5	SE7	SSE9	S8	SSW8	SSW10	S12.2	S20
7-Sep	SSW12	SW10	SW7	SW7	SSW6	SW3	NW4	NNW7	NNE11	N9	N11	NNW10	N14	N17	N16	N16	N15	N12	N9	N11	N9	N10	N9	N11	N6.9	N17
8-Sep	NNE12	NNE12	NNE10	NNE10	NNE9	NNE7	NNE6	NNE7	NNE10	NNE9	NE5	NNE5	NE3	WSW1	WNW3	NW3	N5	NNE6	N5	ENE5	ESE7	SSE11	SSE14	SSE14	NNE4.0	SSE14
9-Sep	SSE14	SSE12	S15	S14	S16	S15	S15	S14	S12	S15	S21	S24	S25	S26	S27	S26	S22	S20	SSE16	S14	SSW14	SSW10	SSW9	SSW9	S16.6	S27
10-Sep	S7	S8	SSW5	SW7	WSW5	WSW5	WNW3	NNW6	NNW6	N13	N12	NW11	NW10	NW11	NW10	WNW10	WNW10	NW10	NNW7	N5	WNW1	SSW2	S3	SE4	NW4.2	N13
11-Sep	S5	NNW2	WNW2	SSW4	SSE6	SSE5	SSE5	SSW5	SSW7	SSW8	SW8	SW8	SSW9	SW10	SW11	SSW12	SSW14	SSW12	SSE10	SE10	SSE14	S16	S17	S15	S8.1	S17
12-Sep	S15	S16	S15	S14	S12	SSW12	S12	S14	SSW19	SSW21	SSW23	SSW26	SW25	SW23	SW22	SW20	SW17	SW12	SSW10	S10	S12	S10	S11	S11	SSW15.2	SSW26
13-Sep	SSW9	SSW9	SSW10	S9	S10	SSW8	S8	SSE8	SSE10	S15	S17	S15	SSW13	S13	S13	S12	S8	SSE5	SE9	SE10	SE10	SSE11	SSE13	SSE11	S10.0	S17
14-Sep	SE8	SSE10	SSE11	SSE10	SSE6	SSE9	SSE10	SE10	SSE14	SSE14	SSE13	SSE15	SSE18	SE9	SSE9	S16	S16	S16	SSW11	SSW9	SSW9	SW7	SSW10	SW10	SSE10.3	SSE18
15-Sep	SW9	SW9	WSW10	WSW11	WSW11	SW13	SW13	WSW10	W11	NW7	NNW9	NW9	NW12	NNW14	NNW14	NNW11	NW16	NW15	NW12	NW13	NW14	NW14	NW11	NW10	WNW8.9	NW16
16-Sep	NNW10	N12	NNW11	N10	N13	N13	NNW10	N7	N7	N7	NNW7	NW4	SW3	W3	NW4	NNE2	NNW3	NNW1	SE6	SE12	SSE11	SSE13	S12	S13	N2.4	N13
17-Sep	S14	S16	S17	S14	S14	S14	S13	S15	S17	S19	S23	S24	S23	S23	S25	S24	S26	SSE24	SSE18	SSE15	SSE19	S25	S24	S27	S19.5	S27
18-Sep	S26	S23	S23	S25	S26	S27	S28	S27	S29	SSW30	SSW29	SSW27	SW25	SW23	SW19	SW19	WSW15	SW9	SW9	SW10	WSW9	SW9	WSW9	WSW7	SSW18.4	SSW30
19-Sep	SW7	SW9	SW9	SW11	SW12	SW11	SW11	SW12	SW12	WSW9	W13	W15	W17	W17	W14	W12	WSW10	SSW7	SSW9	SW7	SW8	SSW9	SSW10	SSW10	SW10.1	W17
20-Sep	SSW8	SSE8	S10	S10	S13	S13	S14	SSW14	SSW16	SSW20	SSW22	SSW25	SSW23	SSW23	SSW23	SSW22	SSW19	S18	S15	SSE16	S17	SSE18	SSE17	S19	S16.0	SSW25
21-Sep	S18	S16	S13	SSW13	SSW11	SW11	SW7	SW7	WSW11	WNW7	NW6	W3	WSW2	W7	NW10	NW12	NW11	WNW9	WNW10	NW13	NW13	WNW9	WSW9	SW9	WSW6.1	S18
22-Sep	WSW13	WSW13	WSW12	SW12	WSW13	WSW13	SW12	SW16	WSW16	WSW18	WSW21	WSW23	WSW23	WSW22	WSW20	WSW20	WSW14	SW12	SSW13	SSW18	SSW20	SW23	SSW21	SSW22	SW16.3	SW23
23-Sep	SSW24	SSW22	SSW20	SW18	SW18	SW17	SW16	WSW13	WSW15	W22	WSW20	W24	WSW24	WSW21	SW19	SW20	SW21	SW19	WSW15	SW14	SW11	SW12	SW12	SW14	SW17.1	WSW24
24-Sep	SW14	SW14	SW14	SW16	SW15	SW14	SW14	SW14	WSW16	WSW16	W16	W13	NW10	NW11	WNW12	WNW15	NW15	NNW11	NW7	NW7	NW6	WNW7	WSW7	SW8	W9.5	W16
25-Sep	SW10	SSW11	SSW8	SSW9	SSW10	S11	S11	SSW13	S16	S17	S17	SSW19	SSW18	SSW19	SSW18	S19	S17	S16	SSW17	SSW19	SSW19	SSW18	WSW14	WSW13	SSW14.3	S19
26-Sep	WSW9	WSW10	WSW9	WSW11	WSW12	WSW10	SW9	WSW12	WSW13	WSW12	W12	W11	WNW14	NW14	WNW13	WNW12	WNW13	SW12	SSW9	SW12	SW11	SW11	SW13	SW14	WSW10.0	NW14
27-Sep	SSW14	SW14	SSW13	SSW17	SW18	WSW16	W15	W16	WNW19	W23	W26	WNW25	WNW21	W21	W19	W17	W12	WSW9	WSW7	WSW8	WSW8	WSW10	WSW10	SW11	WSW13.7	W26
28-Sep	SW11	WSW14	WSW12	W10	W10	W11	W10	W9	W10	WNW8	WNW10	NW9	NW11	W11	W13	WSW12	SW10	S7	SSE8	SE9	SE10	SE10	SE12	SE14	WSW6.0	SE14
29-Sep	SE15	SSE16	SE16	SE17	SSE20	SSE22	SE22	SE24	SE26	SSE35	SSE38	SSE36	S37	S37	S29	S28	S27	SSE22	SSE19	SSE20	SSE19	SSE18	SSE21	SSE19	SSE23.6	SSE38
30-Sep	SSE18	SSE19	SSE16	SSE13	SSE9	SSE8	W5	SE2	NE4	E5	NE5	N10	N13	N12	NNE15	NNE11	NNE12	NNE12	NNE15	NNE12	NNE10	NNE12	NNE13	NNE11	NE5.5	SSE19
	S7.8	SSW7.5	SSW7.3	SSW7.7	SSW7.4	SSW7.1	SSW7.1	SSW6.6	SW7.0	SW7.0	SW8.0	SW8.5	SW8.2	WSW7.7	WSW7.0	SW6.8	WSW5.6	SW4.1	SSW3.4	S3.5	S4.6	SSW5.8	SSW6.6	SSW7.1	Diurnal Average	
	S26	N24	N26	N26	S26	S27	S28	S27	SSW29	SSE35	SSE38	SSE36	S37	S37	S29	S28	S27	N24	N22	N23	N25	S25	N25	S27	Diurnal Maximum	

UO - Unstable Operation

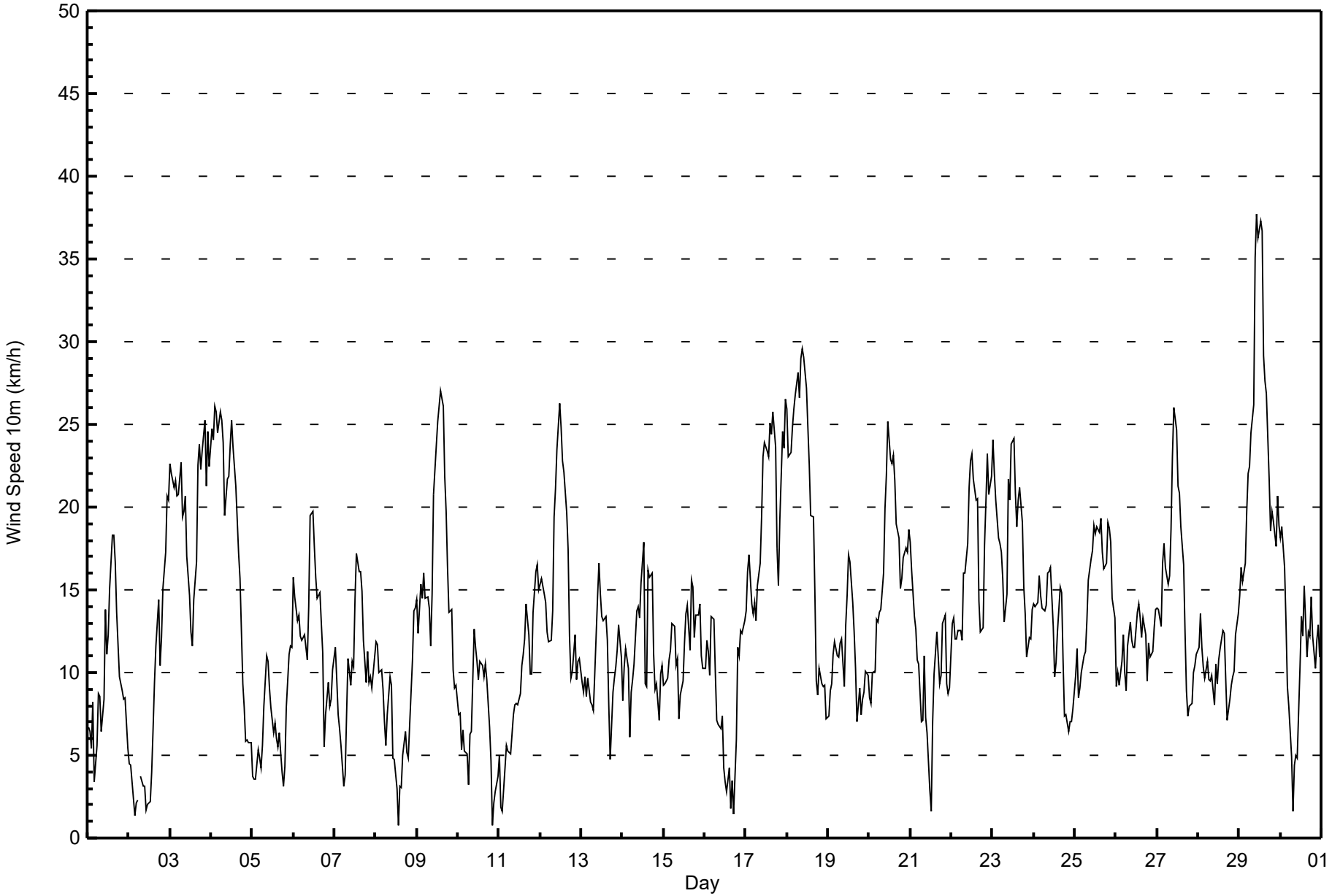
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Firebag - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	68	9.46	9.46
6 - 11	253	35.19	44.65
12 - 19	274	38.11	82.75
20 - 28	115	15.99	98.75
29 - 38	9	1.25	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Firebag - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	3	8	3	1	1	2	4	6	5	4	3	6	6	7	5	4	68
6 - 11	17	19	1	1	0	2	15	26	17	34	43	26	11	9	20	12	253
12 - 19	21	11	0	0	0	0	6	33	69	31	40	24	15	8	12	4	274
20 - 28	19	0	0	0	0	0	3	6	39	19	9	9	5	2	0	4	115
29 - 38	0	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0	9
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	60	38	4	2	1	4	28	74	133	91	95	65	37	26	37	24	719

Total Number of Valid Hours: 719

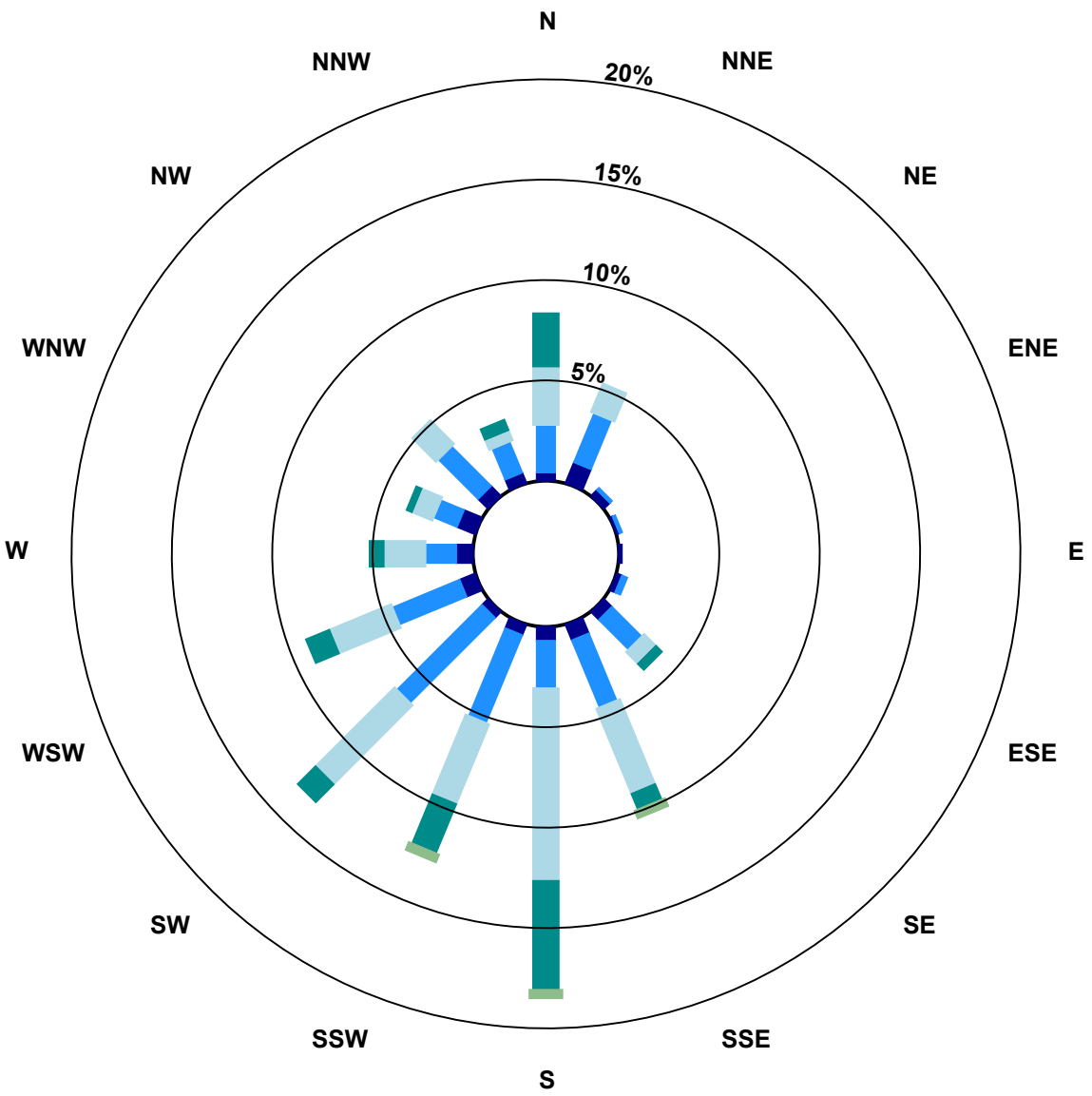
Total Number of Hours: 720

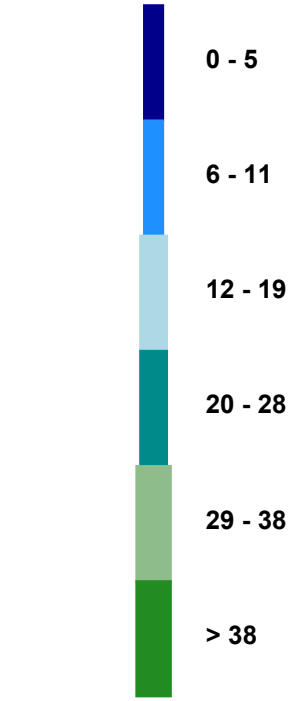
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Firebag





Total Number of Valid Hours: 719

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Firebag - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 29 11:00

Minimum Value: 0 km/h on Sep 11 06:00

Percentiles: $P_1 = 1$ $P_{10} = 1$ $Q_1 = 2$ Median = 2 $Q_3 = 4$ $P_{90} = 5$ $P_{99} = 7$

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Sep	2	1	1	2	2	2	5	3	1	4	4	4	4	4	4	5	4	3	2	1	1	1	1	1	5
2-Sep	0	1	1	1	1	1	UO	1	1	2	2	2	2	3	3	3	3	2	2	2	2	2	3	3	3
3-Sep	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	6	6	5	6	7	5	6	5	7
4-Sep	6	5	6	6	5	6	6	6	5	6	5	5	6	6	6	5	5	4	2	1	1	1	1	1	6
5-Sep	1	0	1	1	1	1	2	2	2	2	3	3	3	4	3	2	3	2	1	1	2	2	2	2	4
6-Sep	2	3	2	3	1	2	2	2	2	3	4	4	4	4	4	3	3	2	1	1	1	1	1	2	4
7-Sep	1	1	3	2	1	1	1	2	3	2	3	4	3	4	4	4	4	3	2	2	2	2	2	2	4
8-Sep	2	2	2	2	2	2	2	2	3	2	2	2	3	2	2	2	2	1	1	1	2	2	2	3	3
9-Sep	2	2	2	2	2	2	2	2	2	4	3	5	4	5	4	4	4	3	2	2	2	1	1	1	5
10-Sep	1	1	2	2	1	2	2	1	2	3	3	3	3	3	4	4	3	3	1	1	1	1	1	1	4
11-Sep	1	2	1	0	1	0	1	1	2	2	2	3	4	4	3	4	3	2	1	1	2	2	2	2	4
12-Sep	2	2	2	2	2	2	2	2	3	4	4	5	5	5	4	4	4	2	1	1	1	1	1	1	5
13-Sep	2	1	1	1	1	1	1	1	1	3	3	3	3	3	3	2	3	1	2	2	2	1	2	1	3
14-Sep	1	2	2	1	2	2	2	2	3	2	2	3	3	4	2	4	3	3	2	1	1	1	2	2	4
15-Sep	1	1	1	2	2	2	2	2	2	2	2	3	4	3	4	3	5	5	3	4	4	4	3	2	5
16-Sep	4	3	3	2	3	3	2	2	1	2	2	2	2	2	2	1	1	1	4	2	2	2	2	2	4
17-Sep	2	2	3	2	2	2	2	2	2	3	4	4	4	4	4	4	4	4	3	3	3	4	3	4	4
18-Sep	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	3	2	1	1	2	1	1	1	5
19-Sep	1	1	1	2	2	2	1	2	2	2	3	4	4	4	4	4	3	1	1	1	1	1	1	1	4
20-Sep	1	1	1	1	2	2	2	2	3	4	3	4	5	4	4	4	4	3	2	2	2	2	2	3	5
21-Sep	3	3	2	2	1	1	1	3	2	2	2	2	2	3	3	3	3	2	3	4	4	3	2	2	4
22-Sep	3	3	2	2	3	2	2	3	3	4	4	5	4	5	5	5	3	3	2	3	3	4	4	3	5
23-Sep	3	3	3	3	3	3	3	3	4	6	5	6	5	5	4	4	4	4	3	3	2	2	2	3	6
24-Sep	2	2	2	2	2	2	3	2	3	3	4	4	3	3	4	5	4	3	1	1	1	1	1	1	5
25-Sep	1	1	2	2	1	1	2	2	2	3	3	3	4	5	4	5	4	3	2	2	4	3	3	4	5
26-Sep	2	2	1	1	2	2	2	2	3	3	3	3	4	4	4	4	7	3	1	1	2	2	2	2	7
27-Sep	3	4	2	3	3	3	3	5	6	7	7	7	6	6	6	5	3	3	1	1	1	2	1	1	7
28-Sep	1	2	2	2	2	2	2	2	2	2	3	3	3	3	4	3	2	1	1	2	2	2	2	2	4
29-Sep	3	3	3	3	4	4	4	5	5	7	8	7	7	7	6	6	6	5	3	3	3	3	4	4	8
30-Sep	3	3	3	2	2	2	2	3	2	2	2	3	3	3	4	3	3	2	3	3	2	3	3	2	4
	6	5	6	6	5	6	6	6	6	7	8	7	7	7	6	6	7	6	5	6	7	5	6	5	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Firebag - September 2025

Direction of Maximum Speed: 161 deg on Sep 29 11:00
Direction of Maximum Daily Speed Average: 159.2 deg on Sep 29

Direction of Minimum Speed: 248 deg on Sep 8 14:00
Direction of Minimum Daily Speed Average: 2.4 deg on Sep 16

Monthly Average Direction: 211.0 deg

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	99.9

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	Average
1-Sep	133	158	178	160	169	115	139	168	232	322	346	352	1	1	7	16	13	10	13	4	1	12	16	24	14.2
2-Sep	33	15	24	277	245	284	UO	292	314	18	343	279	290	215	225	197	195	176	164	152	160	170	175	177	180.9
3-Sep	179	177	172	174	178	179	182	188	193	209	219	221	235	298	357	359	352	1	359	359	3	5	355	356	252.4
4-Sep	356	359	359	358	359	359	1	0	351	344	345	341	348	349	357	3	6	6	6	12	15	28	50	72	358.0
5-Sep	124	144	145	151	160	177	192	191	199	218	220	235	254	271	258	231	256	266	240	113	134	162	169	170	195.7
6-Sep	187	183	177	175	172	166	171	167	167	175	182	187	188	206	209	210	203	204	176	145	151	177	193	203	184.1
7-Sep	209	214	220	216	211	220	325	327	16	7	1	343	349	351	360	4	4	7	360	3	9	8	9	8	351.1
8-Sep	15	16	18	20	18	29	20	13	12	30	34	18	36	248	292	305	351	16	352	69	109	147	168	167	33.1
9-Sep	163	160	170	175	182	177	176	179	173	175	185	182	175	181	181	180	180	175	168	187	198	212	207	192	179.7
10-Sep	183	190	206	228	247	245	300	330	335	358	353	325	321	315	308	283	301	320	336	354	296	201	186	135	304.4
11-Sep	174	338	302	195	167	157	167	192	198	201	231	222	209	217	221	199	200	199	163	145	164	174	182	183	190.1
12-Sep	179	177	178	185	190	192	189	185	200	211	211	213	216	216	230	236	225	225	203	190	187	189	183	185	203.2
13-Sep	193	196	196	190	186	192	186	167	164	172	182	185	203	185	183	176	179	155	127	133	138	158	168	154	174.9
14-Sep	142	147	155	168	157	147	147	142	149	151	149	154	160	124	164	179	169	183	195	201	199	225	205	229	166.9
15-Sep	232	234	239	256	241	226	229	241	269	323	328	322	323	337	337	330	322	324	315	308	317	324	322	324	297.4
16-Sep	343	349	343	358	355	353	343	353	1	356	343	319	235	270	320	13	333	347	129	137	150	161	169	170	355.9
17-Sep	175	178	182	176	176	173	174	175	179	179	180	182	185	179	175	174	171	168	159	147	159	176	177	175	174.4
18-Sep	174	172	173	173	171	178	178	186	191	204	207	212	217	224	230	229	238	230	217	232	243	232	239	237	200.3
19-Sep	222	214	222	224	223	218	216	228	231	244	259	262	259	265	266	266	248	207	202	217	218	210	213	207	234.8
20-Sep	194	167	176	180	177	177	191	194	198	211	212	207	213	205	203	201	195	178	170	168	170	168	166	169	189.9
21-Sep	174	178	183	196	213	222	218	226	257	288	323	274	255	270	304	320	311	303	290	307	319	298	256	235	255.7
22-Sep	257	256	244	232	244	242	226	236	248	249	243	239	243	252	245	255	240	234	205	207	208	214	211	206	234.2
23-Sep	205	208	212	219	225	224	227	238	256	275	255	260	246	243	236	236	230	232	237	229	219	221	221	221	233.0
24-Sep	220	219	222	224	225	225	228	228	237	243	259	275	313	313	301	293	320	329	317	314	324	289	249	228	259.0
25-Sep	224	213	209	209	196	181	184	197	190	186	190	204	210	213	202	176	176	184	198	195	206	204	247	257	200.7
26-Sep	254	254	257	244	241	246	229	240	249	255	262	278	289	312	303	303	298	222	212	230	220	222	223	220	253.5
27-Sep	209	221	193	198	226	245	267	278	282	280	275	283	282	270	266	261	263	256	247	247	256	250	245	229	256.1
28-Sep	236	245	249	259	272	263	259	263	263	296	291	321	306	281	273	247	224	178	164	142	143	133	139	138	241.7
29-Sep	140	150	141	145	149	149	140	140	145	157	161	165	173	175	177	183	176	166	157	161	159	153	155	151	159.2
30-Sep	153	148	148	153	149	155	266	125	38	83	53	10	9	11	16	22	16	20	15	28	33	27	27	27	51.3
	191.0	192.8	193.0	195.7	200.4	198.8	199.8	206.2	215.0	222.5	226.8	230.9	234.5	242.7	245.2	236.1	236.9	218.9	198.8	188.1	185.6	191.9	194.9	191.3	
	Diurnal Average																								

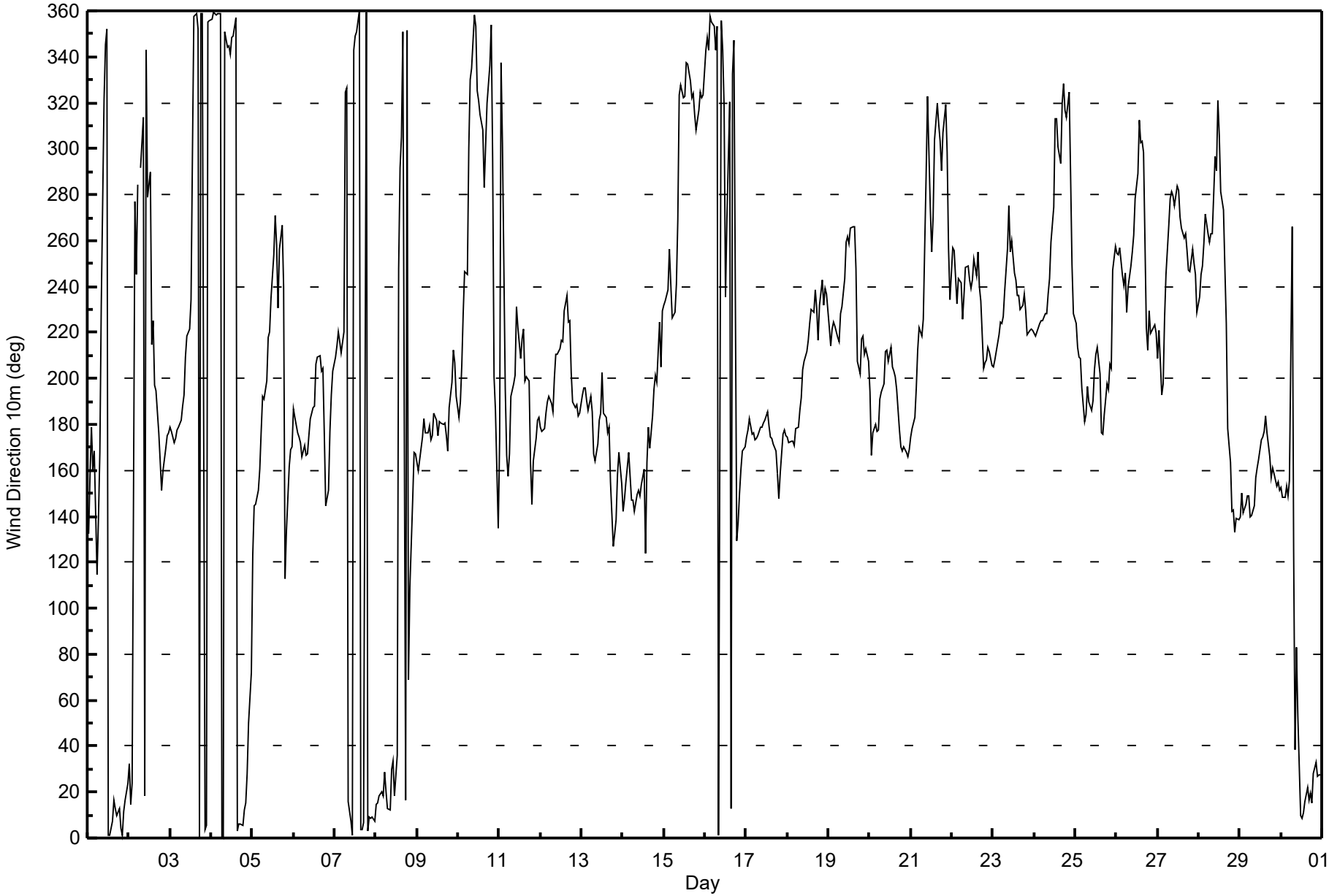
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Firebag - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Firebag - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 102 deg on Sep 8 14:00

Minimum Value: 4 deg on Sep 2 01:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 10 Median = 13 Q_3 = 17 P_{90} = 28 P_{99} = 82

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Sep	15	13	19	15	40	27	44	16	27	38	16	22	24	21	15	16	15	13	9	9	10	11	7	6	44
2-Sep	4	14	5	56	38	23	UO	16	27	55	87	77	83	91	40	29	21	12	13	11	11	11	9	10	91
3-Sep	10	10	9	9	9	9	9	10	10	12	13	13	17	28	21	14	15	15	14	16	16	16	15	13	28
4-Sep	14	14	16	15	15	14	15	16	16	15	16	16	16	17	17	19	17	17	11	6	10	13	15	21	21
5-Sep	35	13	16	8	19	13	13	8	12	19	31	39	62	55	47	49	50	30	44	14	14	10	11	10	62
6-Sep	10	12	9	11	8	10	10	10	12	15	14	13	17	19	20	17	18	10	20	8	11	16	9	6	20
7-Sep	6	8	12	15	12	28	36	18	15	17	15	24	16	17	16	14	16	14	13	12	11	12	11	12	36
8-Sep	12	12	13	14	14	15	19	17	18	20	48	55	90	102	68	63	41	11	12	27	15	12	10	12	102
9-Sep	12	11	9	9	9	8	9	9	11	12	12	13	14	13	13	12	12	10	9	15	10	8	5	12	15
10-Sep	11	8	17	21	23	13	65	8	14	16	18	23	32	25	28	30	21	23	7	6	52	41	28	24	65
11-Sep	5	80	48	14	10	5	6	13	13	26	28	37	47	32	25	34	19	12	10	8	9	10	9	9	80
12-Sep	9	8	9	9	10	11	11	9	11	11	13	13	15	15	22	18	14	10	10	10	9	8	8	9	22
13-Sep	9	7	7	6	9	6	12	9	10	12	12	16	15	19	15	13	11	25	9	10	12	10	9	11	25
14-Sep	14	10	9	9	26	13	13	12	12	11	12	13	16	30	16	12	16	10	10	14	11	24	10	11	30
15-Sep	10	9	12	11	13	9	10	13	18	31	28	24	23	20	17	19	17	16	18	21	18	16	15	16	31
16-Sep	18	13	14	13	12	14	14	14	17	18	17	38	50	73	45	92	31	47	26	12	13	11	10	9	92
17-Sep	9	9	9	9	8	9	9	9	9	11	12	13	13	15	14	12	11	11	10	11	12	10	9	9	15
18-Sep	10	10	10	10	10	10	9	10	11	11	12	13	16	17	16	14	13	12	10	14	22	14	14	12	22
19-Sep	10	11	10	8	9	8	9	11	12	21	20	19	18	18	21	18	16	10	6	10	9	8	8	5	21
20-Sep	10	11	8	10	9	10	11	9	11	13	13	14	16	13	13	13	11	10	9	9	10	10	10	12	16
21-Sep	10	13	10	11	8	9	12	23	13	27	34	68	99	44	29	21	18	18	21	21	18	23	15	15	99
22-Sep	15	13	12	11	13	13	13	12	13	14	15	15	15	16	17	15	16	13	10	9	10	11	10	9	17
23-Sep	9	9	11	11	13	11	12	14	16	20	17	17	15	13	13	13	12	12	12	10	10	9	9	9	20
24-Sep	9	10	10	9	10	10	12	11	12	14	19	26	30	25	26	30	19	12	10	10	9	18	19	8	30
25-Sep	11	6	9	11	9	8	9	10	13	11	10	11	15	16	15	17	11	14	9	9	11	11	15	12	17
26-Sep	12	12	11	10	11	12	11	11	12	14	16	26	27	24	27	27	37	16	14	8	11	10	10	11	37
27-Sep	10	14	14	17	11	14	15	17	21	20	18	21	21	20	20	17	14	13	17	12	10	10	13	8	21
28-Sep	9	11	10	16	14	12	12	13	15	28	25	37	31	30	24	20	16	13	12	10	12	13	12	11	37
29-Sep	12	11	11	12	13	13	11	12	13	13	13	12	13	13	12	14	12	14	10	11	11	12	11	12	14
30-Sep	12	12	12	11	16	27	50	83	28	36	41	15	14	15	14	14	13	12	12	13	13	13	12	12	83
	35	80	48	56	40	28	65	83	28	55	87	77	99	102	68	92	50	47	44	27	52	41	28	24	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS20
MACKAY RIVER
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
SEPTEMBER 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	687	33	33	100	23.1	0	4.5	0
H2S (ppb) Average	685	35	35	100	1.5	0	0.4	0
THC (ppm) Average	687	33	33	100	3.1	-	2.6	-
NO2 (ppb) Average	683	37	37	100	14.1	0	5.6	-
NO (ppb) Average	683	37	37	100	4.9	-	1.2	-
NOX (ppb) Average	683	37	37	100	19	-	6.2	-
Temperature 2 m (C) Average	720	0	0	100	28.2	-	18.9	-
Relative Humidity (%) Average	720	0	0	100	99.2	-	85.5	-
Wind Speed 10 m (km/h) Average	717	0	3	99.58	14	-	9	-
Wind Direction 10 m (deg) Average	717	0	3	99.58	-	-	-	-
Precipitation (mm) Total	720	0	0	100	0.9	-	1.9	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.57	2	-	0	0	0	0.1	0.3	0.7	23.1
H2S (ppb) Average	685	0.18	0.2	-	0	0.1	0.1	0.1	0.2	0.3	1.5
THC (ppm) Average	687	2.31	0.2	-	2.1	2.2	2.2	2.3	2.4	2.5	3.1
NO2 (ppb) Average	683	1.09	1.7	-	0.1	0.2	0.3	0.6	1	2.2	14.1
NO (ppb) Average	683	0.11	0.4	-	0	0	0	0	0	0.1	4.9
NOX (ppb) Average	683	1.2	2	-	0.1	0.2	0.3	0.6	1	2.5	19
Temperature 2 m (C) Average	720	13.32	5.9	-	-2.5	6.6	9.1	13	17	21.8	28.2
Relative Humidity (%) Average	720	64.28	19.9	-	25.2	36.1	47.7	64.7	81.5	89.4	99.2
Wind Speed 10 m (km/h) Average	717	6.5	3	-	0	3	4	6	9	11	14
Wind Direction 10 m (deg) Average	717	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	5.26	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION -MACKAY RIVER (AMS20)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	01 Sep 2025 05:00	01 Sep 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Sep 2025 01:00	08 Sep 2025 01:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 23.1 ppb on Sep 7 13:00 Maximum Daily Average: 4.5 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 2 04:00 Minimum Daily Average: 0.0 ppb on Sep 22

Maximum Diurnal Average: 1.6 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 7

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} = 0.7 P_{99} = 11.6

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4
2-Sep	0.1	0.1	0.1	0.0	0.1	Z	0.1	0.4	1.7	0.9	0.4	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.3	1.7
3-Sep	Z	0.4	0.2	0.1	0.0	0.1	0.2	0.2	0.4	0.3	0.3	0.1	0.1	0.4	3.6	1.4	0.4	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.4	3.6
4-Sep	0.0	Z	6.4	15.6	1.3	0.1	0.0	4.6	1.8	0.7	3.2	3.8	2.9	1.2	2.9	1.9	0.9	0.1	0.1	0.2	0.2	0.1	0.1	0.1	2.1	15.6
5-Sep	0.1	0.1	Z	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
6-Sep	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.3	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5
7-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	2.2	1.8	23.1	15.7	0.8	0.5	0.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	2.0	23.1
8-Sep	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.0	7.1	15.4	15.5	13.8	11.4	10.1	7.2	6.5	6.2	5.2	1.9	0.8	0.3	0.2	0.2	4.5	15.5
9-Sep	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.5	0.4	0.1	0.2	0.1	0.1	0.1	0.3	0.5
10-Sep	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.3	5.4	2.2	1.5	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4
11-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	2.0	1.1	0.6	0.0	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	2.0
12-Sep	0.4	0.3	0.2	Z	0.1	0.1	0.0	0.1	0.0	0.3	0.6	0.8	1.0	0.8	0.7	0.8	0.6	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.4	1.0
13-Sep	0.1	0.1	0.2	0.2	Z	0.2	0.1	0.2	0.4	0.7	0.5	0.5	0.8	0.9	0.8	0.9	0.8	0.6	0.5	0.6	1.3	1.0	0.5	0.4	0.5	1.3
14-Sep	0.4	0.3	0.1	0.1	0.1	Z	0.1	0.2	0.4	0.3	0.2	0.3	0.1	0.1	0.3	0.4	0.0	0.2	1.5	0.6	0.3	0.1	0.1	0.1	0.3	1.5
15-Sep	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	2.9	1.6	0.2	0.1	0.2	2.7	11.4	7.4	4.3	4.3	10.5	0.3	0.1	1.7	2.1	11.4
16-Sep	0.1	Z	0.0	0.1	0.8	0.4	0.0	0.0	0.0	0.9	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.9
17-Sep	0.5	0.2	Z	0.2	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.3	0.5	0.6	0.5	0.3	0.6
18-Sep	0.5	0.4	0.3	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	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.5
19-Sep	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	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
20-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.5	0.7	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.6	0.5	0.3	0.7
21-Sep	Z	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
22-Sep	0.0	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	0.1
23-Sep	0.2	0.2	Z	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	0.2	0.3	0.2	0.1	0.2	0.0	0.1	0.1	0.3
24-Sep	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
25-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.5
26-Sep	0.1	0.1	0.1	0.1	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	0.0	0.0	0.0	0.1
27-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
28-Sep	0.2	Z	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	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.3
29-Sep	0.1	0.3	Z	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.1	0.4
30-Sep	0.0	0.0	0.1	Z	0.1	0.0	0.1	0.5	0.4	1.7	8.3	12.6	2.4	1.8	0.6	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.0	0.1	1.3	12.6
	0.1	0.1	0.4	0.7	0.2	0.1	0.1	0.3	0.3	0.6	1.4	1.4	1.6	1.2	0.8	0.6	0.8	0.6	0.5	0.3	0.5	0.2	0.1	0.2	Diurnal Average	
	0.5	0.4	6.4	15.6	1.3	0.4	0.3	4.6	1.8	7.1	15.4	15.5	23.1	15.7	10.1	7.2	11.4	7.4	5.2	4.3	10.5	1.0	0.6	1.7	Diurnal Maximum	

Z - zerospan C - Calibration

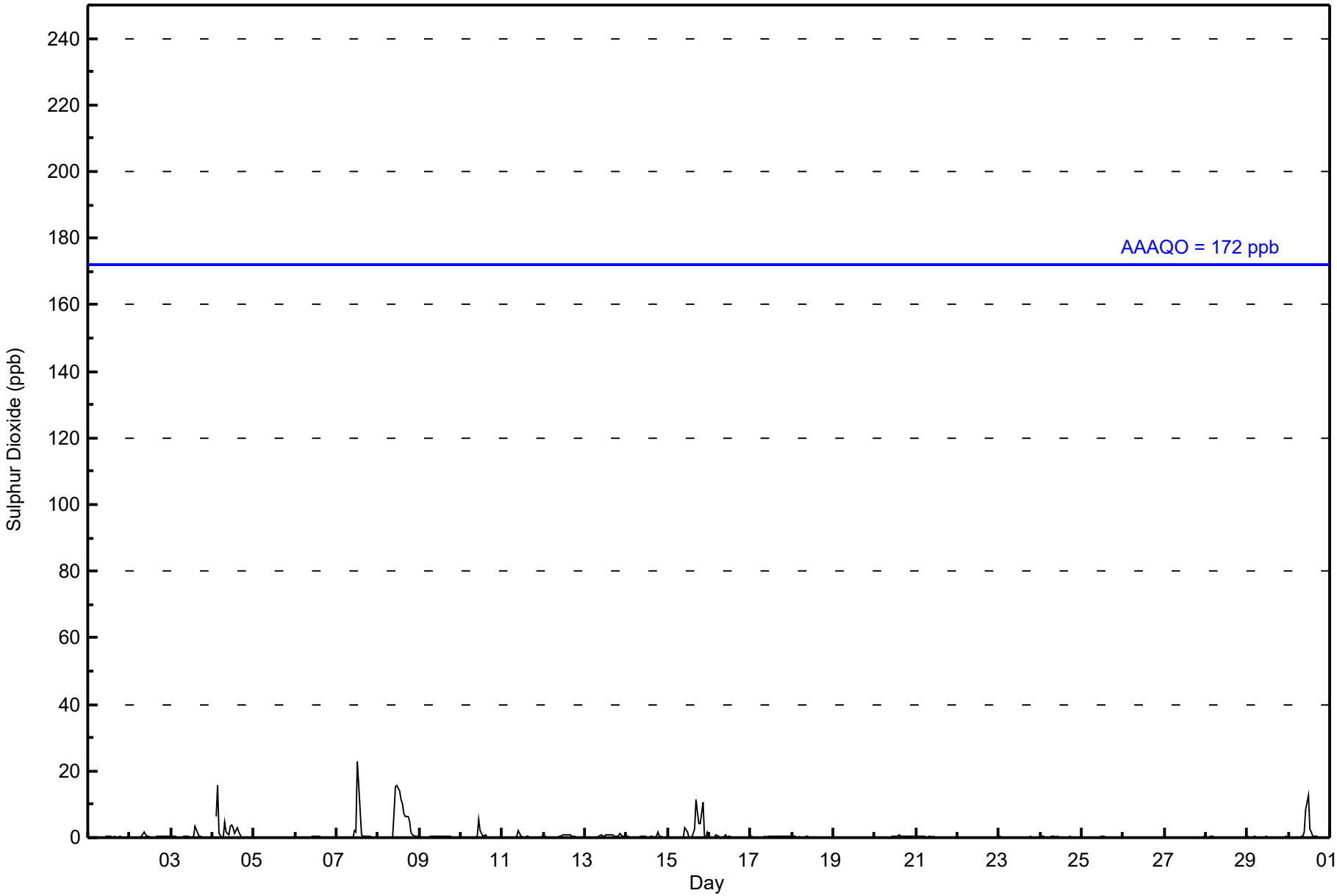
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - September 2025



Sulphur Dioxide (SO_2) - ppb
Mackay River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	678	98.69	98.69
11 - 20	8	1.16	99.85
21 - 60	1	0.15	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: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mackay River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	8	33	11	1	4	40	116	88	101	64	63	52	45	25	21	4	676
11 - 20	1	1	1	0	0	2	0	0	0	0	0	0	0	0	3	0	8
21 - 60	1	0	0	0	0	0	0	0	0	0	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	10	34	12	1	4	42	116	88	101	64	63	52	45	25	24	4	685

Total Number of Valid Hours: 685

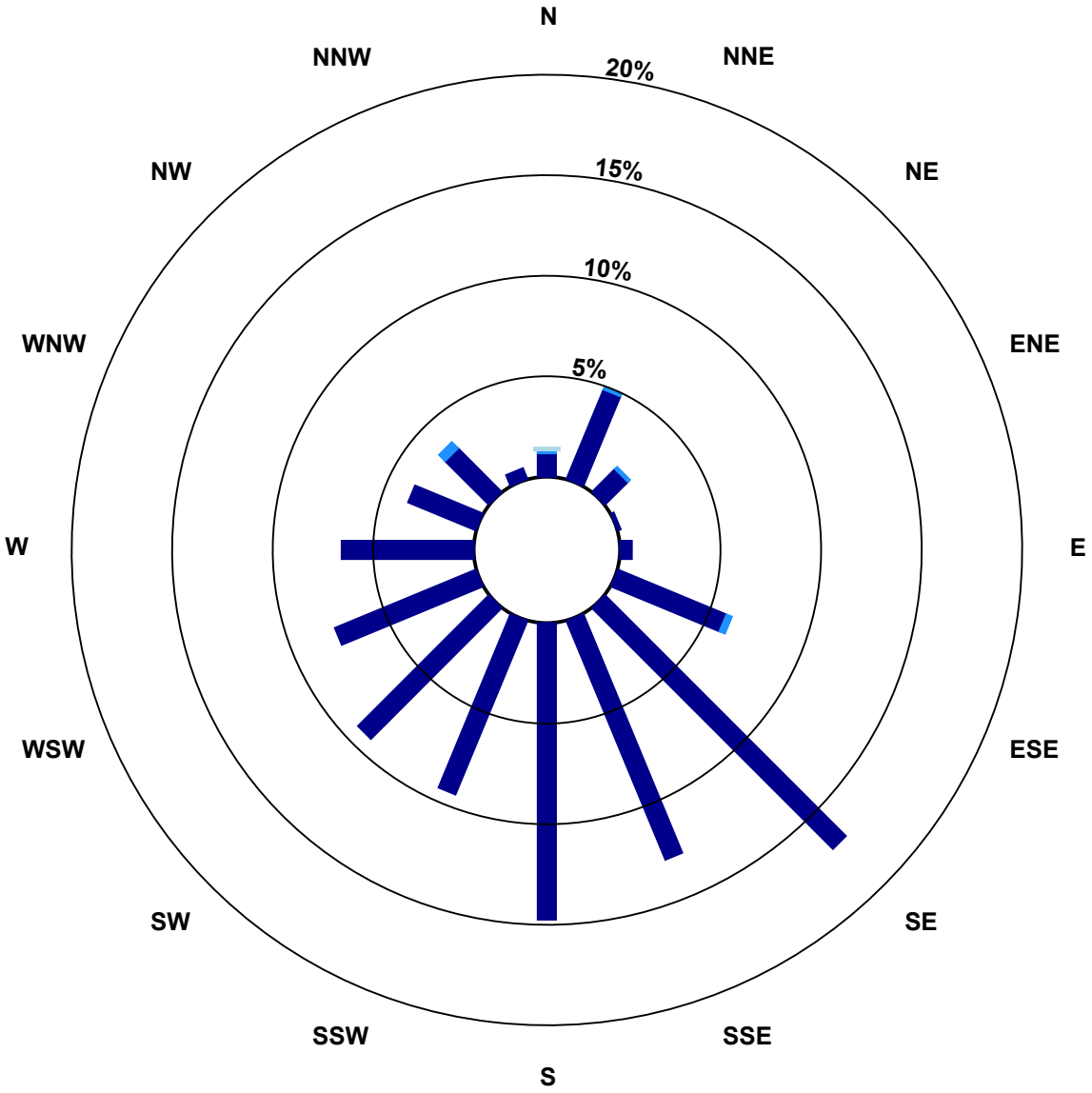
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Mackay River



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

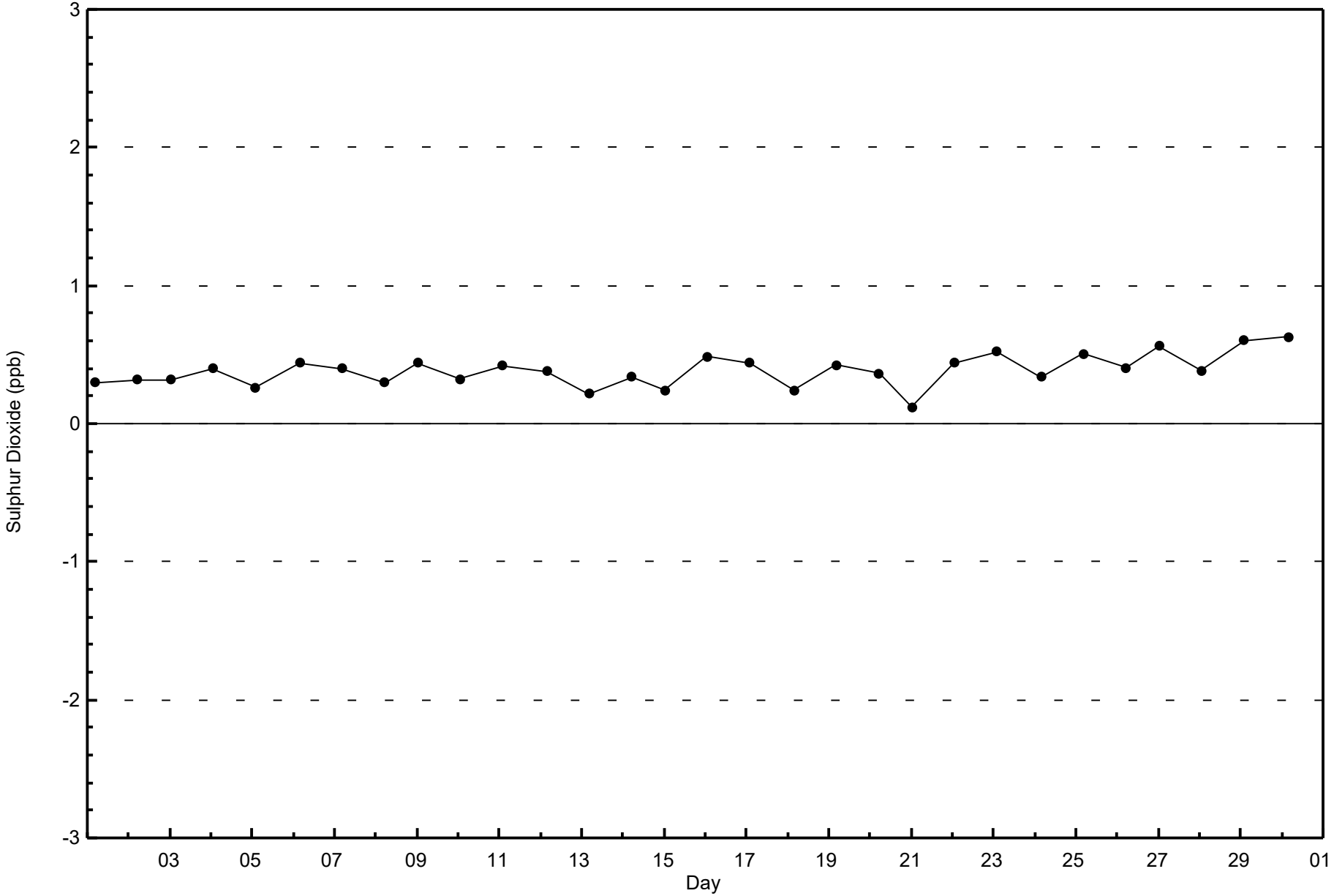
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - September 2025

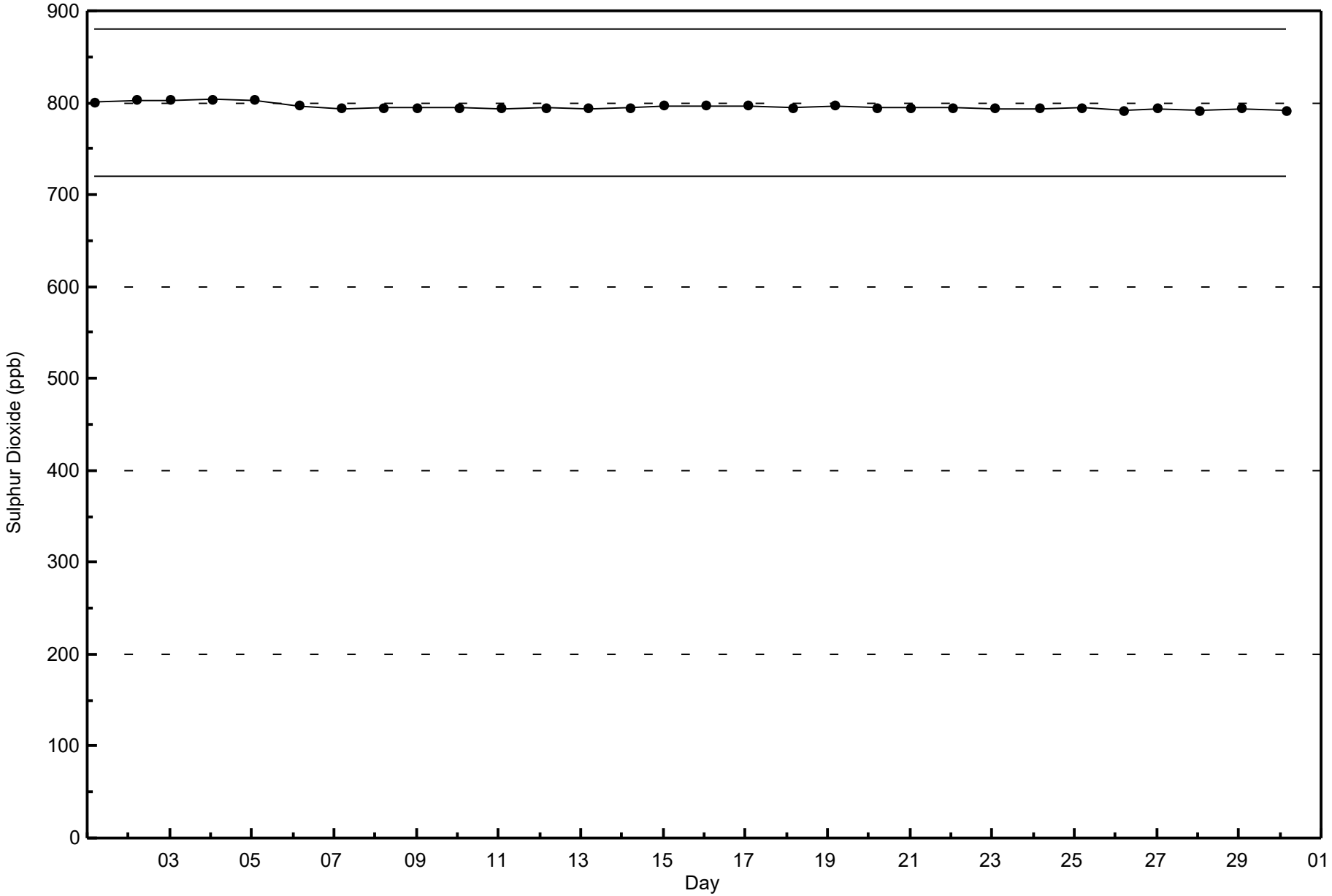


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.5 ppb on Sep 7 19:00 Maximum Daily Average: 0.4 ppb on Sep 7

Minimum Value: 0.0 ppb on Sep 18 18:00 Minimum Daily Average: 0.1 ppb on Sep 25

Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 16

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} = 0.8

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.1	0.2	0.2	Z	0.2	0.3	0.4	0.6	0.4	0.2	0.3	0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.6
2-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.5	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	0.2	0.5
3-Sep	0.1	Z	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	0.3	0.2	0.2	0.1	0.2	0.3	0.5	0.8	0.8	0.3	0.8
4-Sep	0.3	0.7	Z	0.5	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.7
5-Sep	0.2	0.2	0.2	Z	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	0.2	0.1	0.3
6-Sep	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	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.4
7-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.5	1.5	1.3	0.6	0.5	0.4	0.3	0.4	1.5
8-Sep	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.5	0.7	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.7
9-Sep	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	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2
10-Sep	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	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2
11-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	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	0.2	0.1	0.3
12-Sep	0.2	0.2	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	0.2	0.1	0.1	0.1	0.1	0.1	0.2
13-Sep	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	0.2	0.4	1.0	1.3	0.8	0.4	0.3	1.3
14-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
15-Sep	0.1	Z	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	0.4	0.3	0.5	0.4	0.6	0.3	0.3	0.5	0.2	0.6
16-Sep	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
17-Sep	0.2	0.2	0.2	Z	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	0.1	0.0	0.1	0.1	0.1	0.1	0.2
18-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2
19-Sep	0.1	0.0	0.1	0.0	0.1	Z	0.1	0.1	0.3	0.4	0.3	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	0.4
20-Sep	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
21-Sep	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	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2
22-Sep	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	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	0.1	0.1	0.2	0.3
23-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2
24-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.4	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
25-Sep	0.1	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26-Sep	Z	0.2	0.3	0.4	0.5	0.5	0.4	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	0.1	0.1	0.1	0.1	0.2	0.5
27-Sep	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	0.2	0.1	0.2	0.1	0.2
28-Sep	0.1	0.3	Z	0.5	0.5	0.6	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
29-Sep	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	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
30-Sep	0.1	0.2	0.3	0.3	Z	0.2	0.8	0.9	1.3	0.7	0.8	0.5	0.4	0.4	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.3
	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.7	0.3	0.5	0.5	0.6	0.8	0.9	1.3	0.7	0.8	0.5	0.7	0.6	0.6	0.5	0.4	0.5	1.5	1.3	1.0	1.3	0.8	0.8	Diurnal Maximum	

Z - zerospan C - Calibration

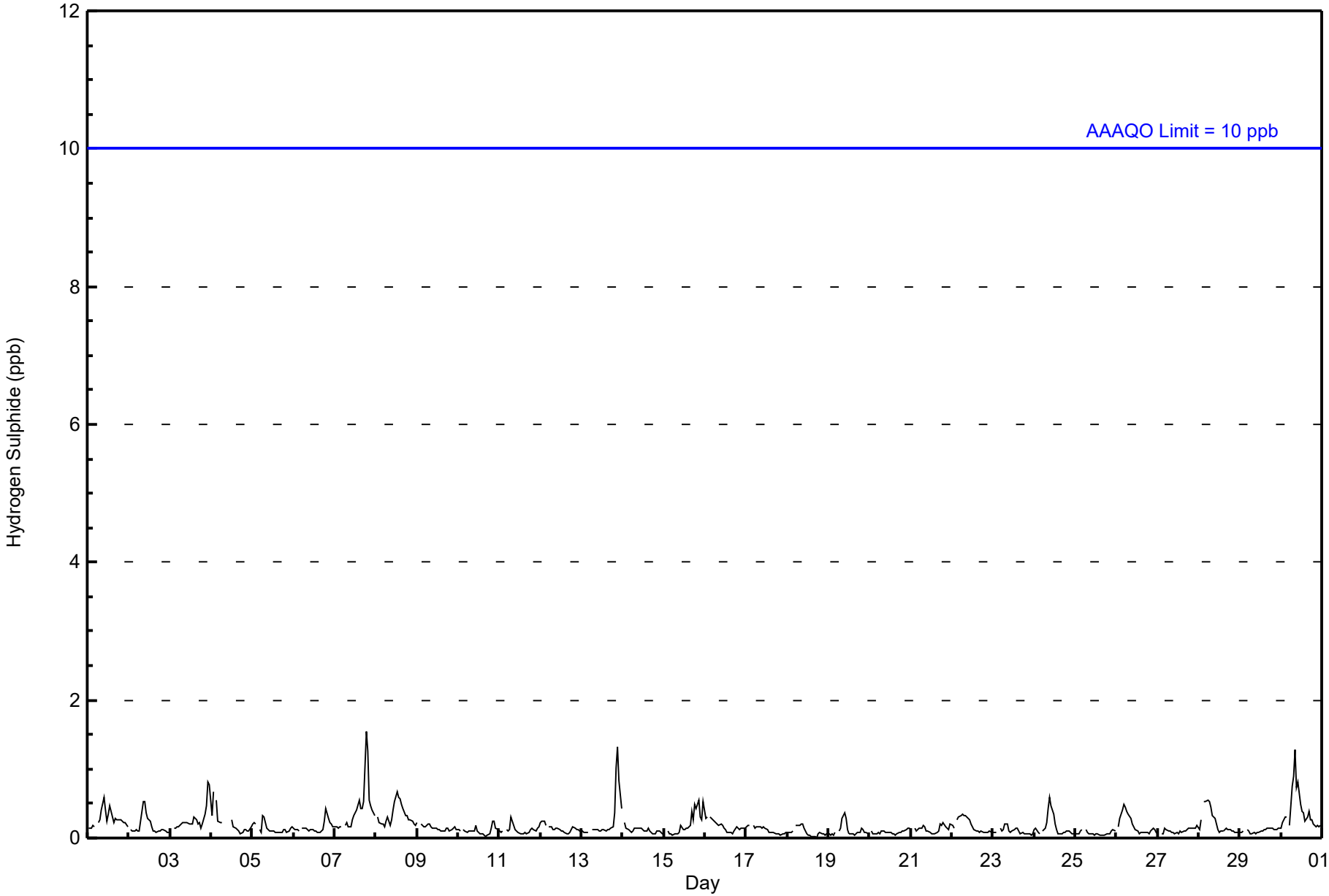
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - September 2025



Hydrogen Sulphide (H_2S) - ppb
Mackay River - September 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: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mackay River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	10	34	12	1	4	43	117	87	105	64	62	51	45	25	20	4	684
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	10	34	12	1	4	43	117	87	105	64	62	51	45	25	20	4	684

Total Number of Valid Hours: 684

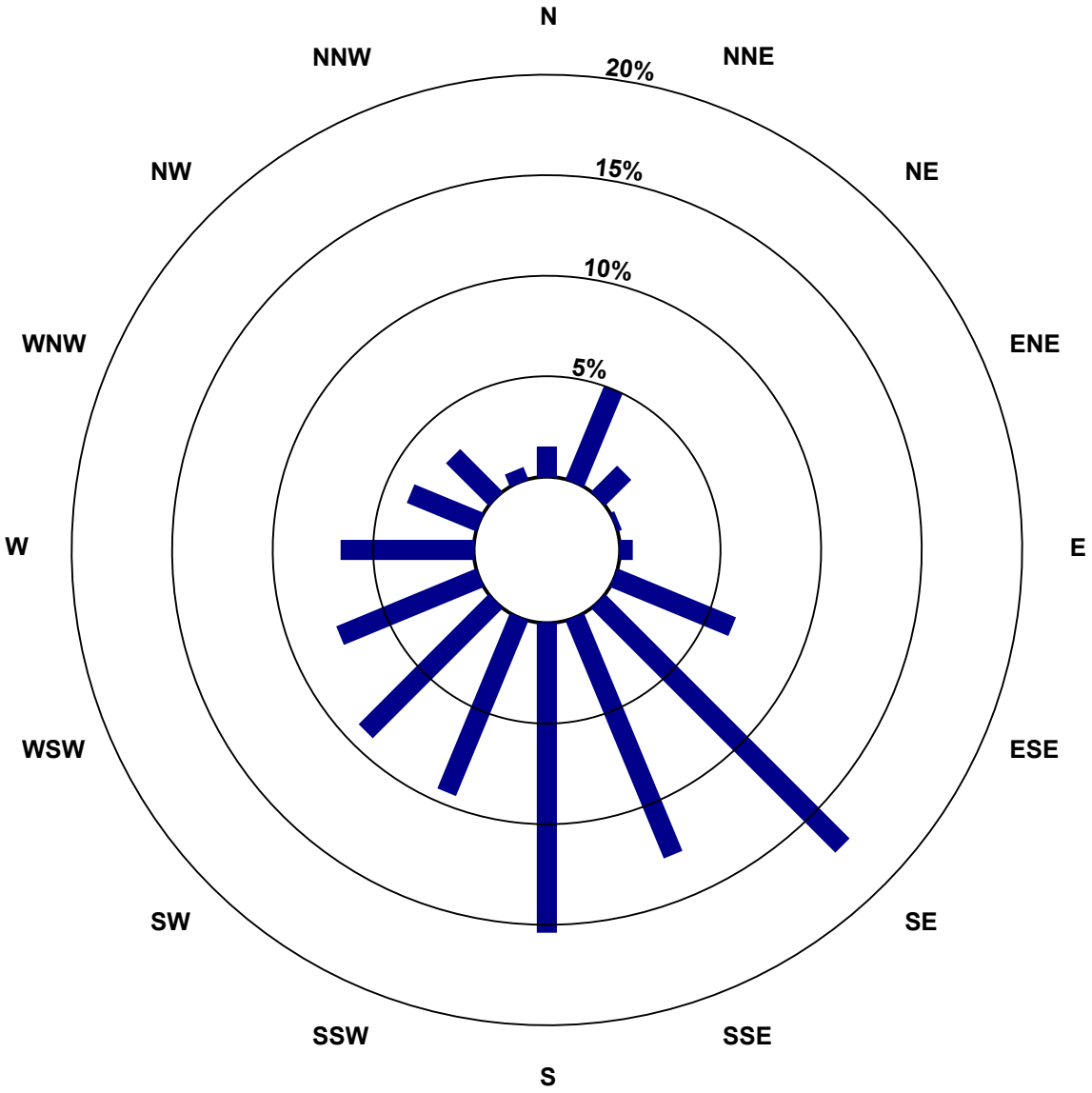
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Mackay River



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

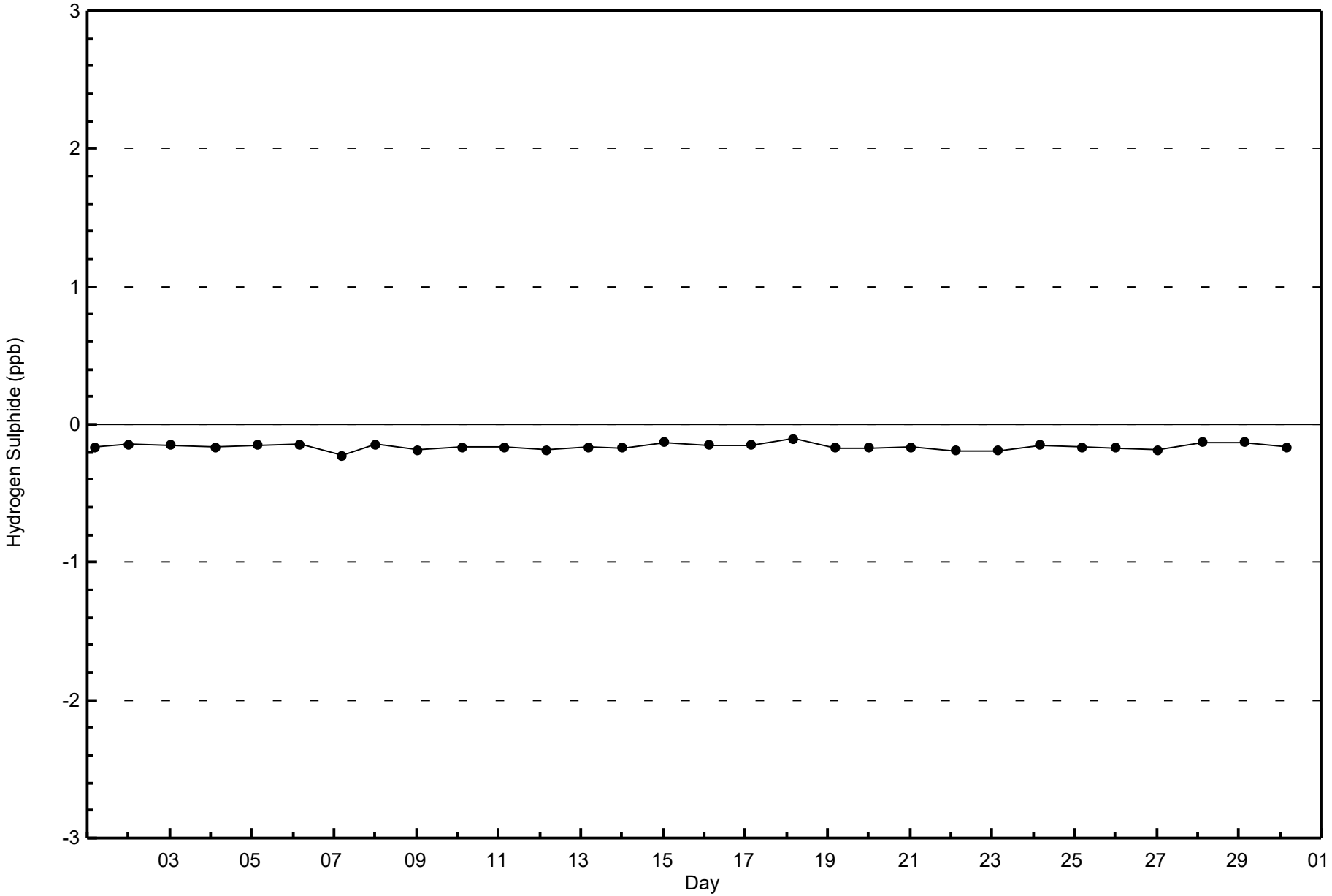
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - September 2025

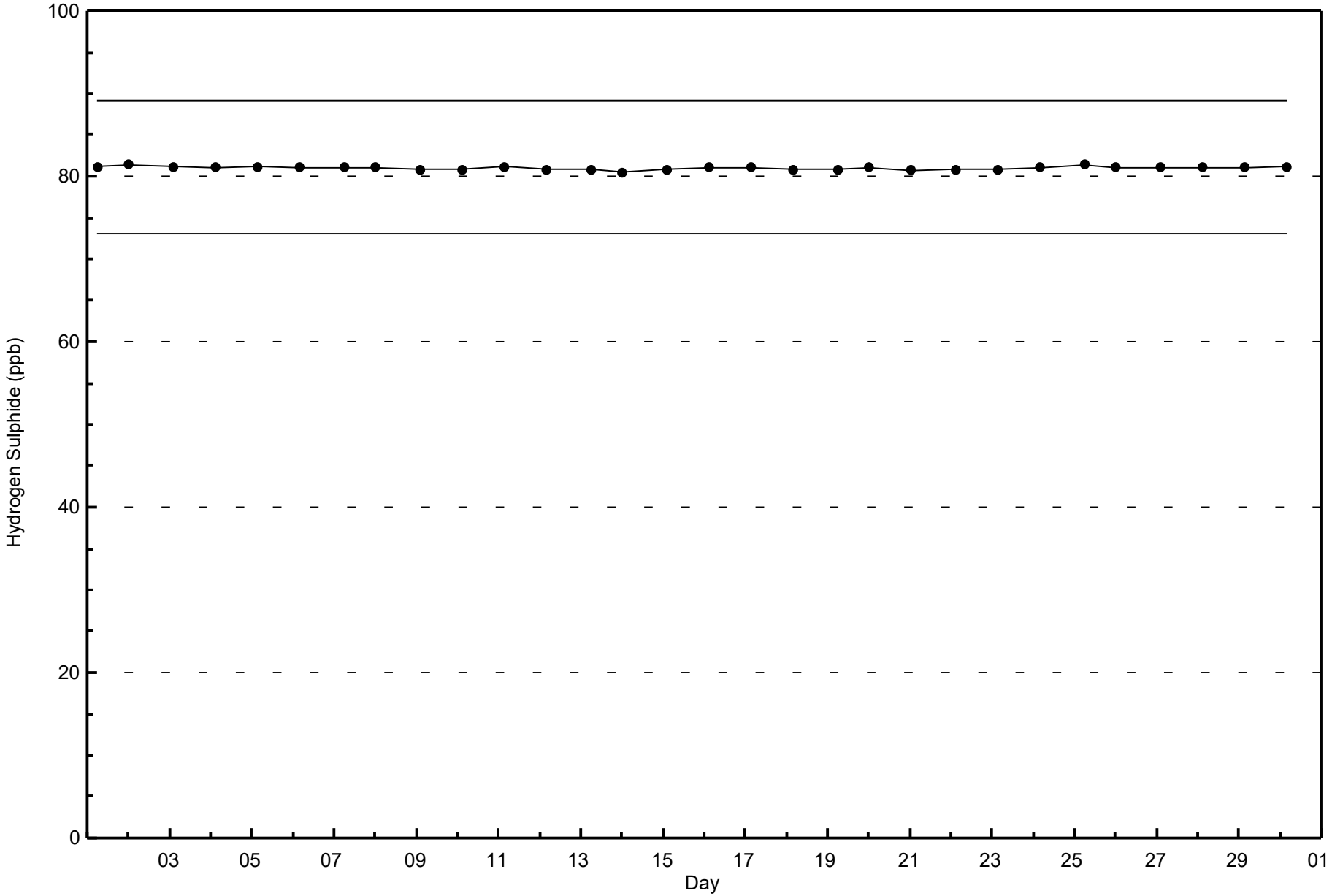


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mackay River - September 2025

Maximum Value: 3.1 ppm on Sep 13 22:00

Maximum Daily Average: 2.6 ppm on Sep 7

Minimum Value: 2.1 ppm on Sep 25 16:00

Minimum Daily Average: 2.2 ppm on Sep 27

Maximum Diurnal Average: 2.4 ppm at hour 7

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.31 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.2 Q_1 = 2.2 Median = 2.3 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 2.8

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.6	2.6	2.6	2.6	Z	2.7	2.7	2.6	2.8	2.7	2.7	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.8
2-Sep	2.6	2.6	2.7	2.9	3.1	Z	2.8	2.7	2.8	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.5	3.1
3-Sep	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	2.4	2.4	2.3	2.4	2.2	2.2	2.4	2.3	2.4	2.4	2.3	2.4
4-Sep	2.3	Z	2.8	2.5	2.3	2.3	2.3	2.4	2.3	2.2	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	2.4	2.3	2.8
5-Sep	2.4	2.5	Z	2.6	2.7	2.8	C	C	C	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	2.8
6-Sep	2.3	2.3	2.4	Z	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.5
7-Sep	2.5	2.6	2.7	2.7	Z	2.7	2.8	2.7	2.6	2.7	2.7	2.6	2.4	2.5	2.5	2.5	2.6	2.4	2.5	2.5	2.5	2.5	2.4	2.4	2.6	2.8
8-Sep	2.5	2.5	2.5	2.5	2.5	Z	2.7	2.8	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.8
9-Sep	Z	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	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	2.5
10-Sep	2.4	Z	2.5	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.5
11-Sep	2.4	2.5	Z	2.5	2.6	2.7	2.8	2.9	2.6	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	2.4	2.9
12-Sep	2.4	2.4	2.4	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	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
13-Sep	2.4	2.4	2.5	2.5	Z	2.5	2.4	2.5	2.6	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.9	3.1	2.9	2.6	2.4	3.1
14-Sep	2.5	2.4	2.5	2.6	2.7	Z	2.7	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.7
15-Sep	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.5	2.4	2.4	2.3	2.3	2.5	2.3	2.5
16-Sep	2.3	Z	2.2	2.2	2.3	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	2.3	2.3	2.3	2.3	2.3	2.4
17-Sep	2.3	2.3	Z	2.3	2.4	2.4	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	2.2	2.2	2.2	2.2	2.2	2.3	2.4
18-Sep	2.2	2.3	2.3	Z	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
19-Sep	2.2	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.4
20-Sep	2.3	2.5	2.6	2.4	2.4	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	2.3	2.3	2.3	2.3	2.3	2.3	2.6
21-Sep	Z	2.3	2.3	2.4	2.4	2.4	2.4	2.4	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	2.2	2.2	2.2	2.2	2.4
22-Sep	2.2	Z	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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
23-Sep	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
24-Sep	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.4
25-Sep	2.3	2.4	2.6	2.6	Z	2.3	2.2	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	2.2	2.6
26-Sep	2.1	2.2	2.3	2.3	2.4	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	2.2	2.2	2.4
27-Sep	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
28-Sep	2.2	Z	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.4
29-Sep	2.2	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	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
30-Sep	2.2	2.3	2.3	Z	2.3	2.3	2.7	2.8	3.0	2.7	2.7	2.7	2.5	2.5	2.4	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.4	2.4	2.5	3.0
	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	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	2.3	2.3	Diurnal Average	
	2.6	2.6	2.8	2.9	3.1	2.8	2.8	2.9	3.0	2.7	2.7	2.7	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.9	3.1	2.9	2.6	Diurnal Maximum	

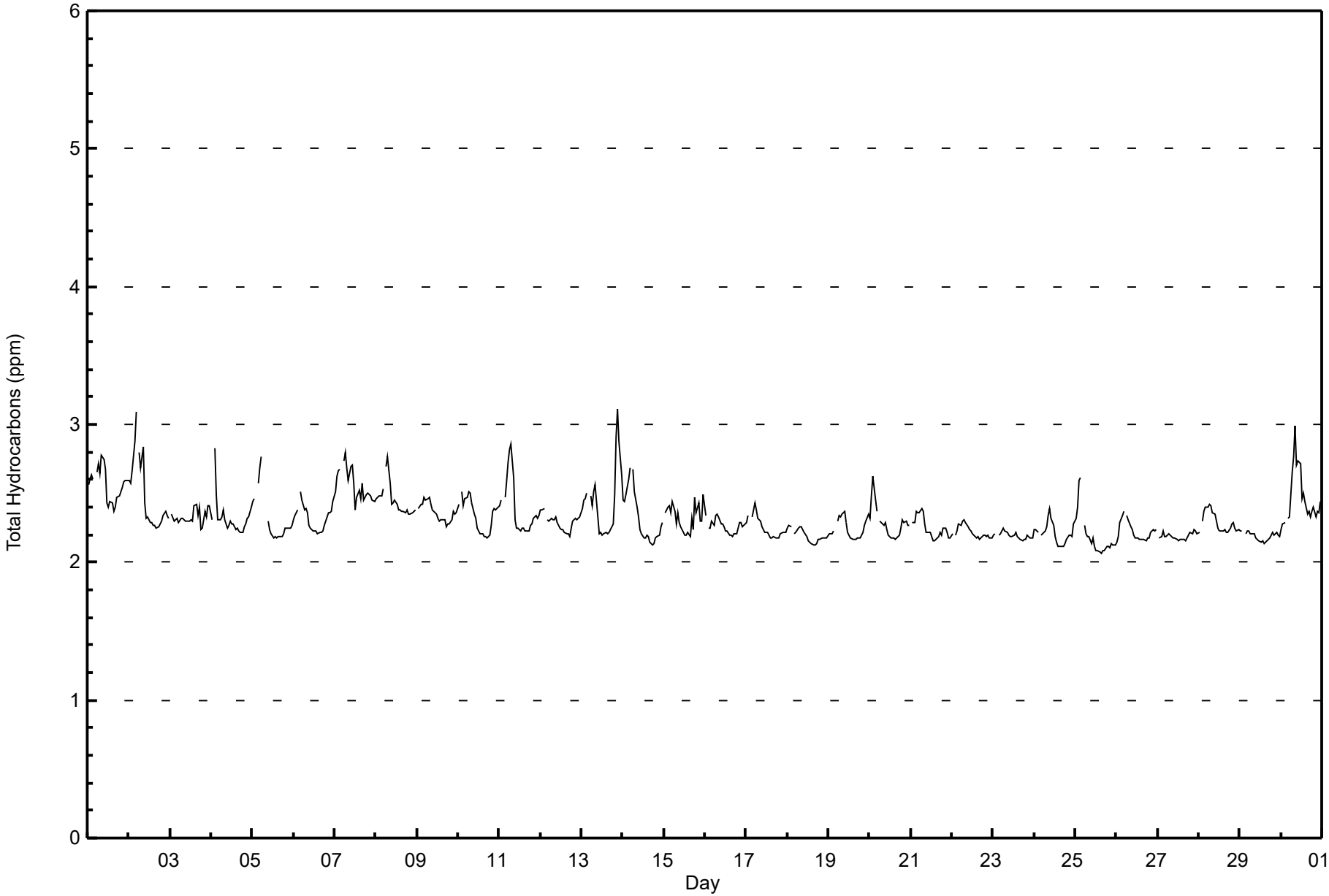
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mackay River - September 2025



Total Hydrocarbons (THC) - ppm
Mackay River - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	685	99.71	99.71
3.1 - 10.0	2	0.29	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mackay River - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	10	34	12	1	4	42	114	88	101	64	63	52	45	25	24	4	683
3.1 - 10.0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	10	34	12	1	4	42	116	88	101	64	63	52	45	25	24	4	685

Total Number of Valid Hours: 685

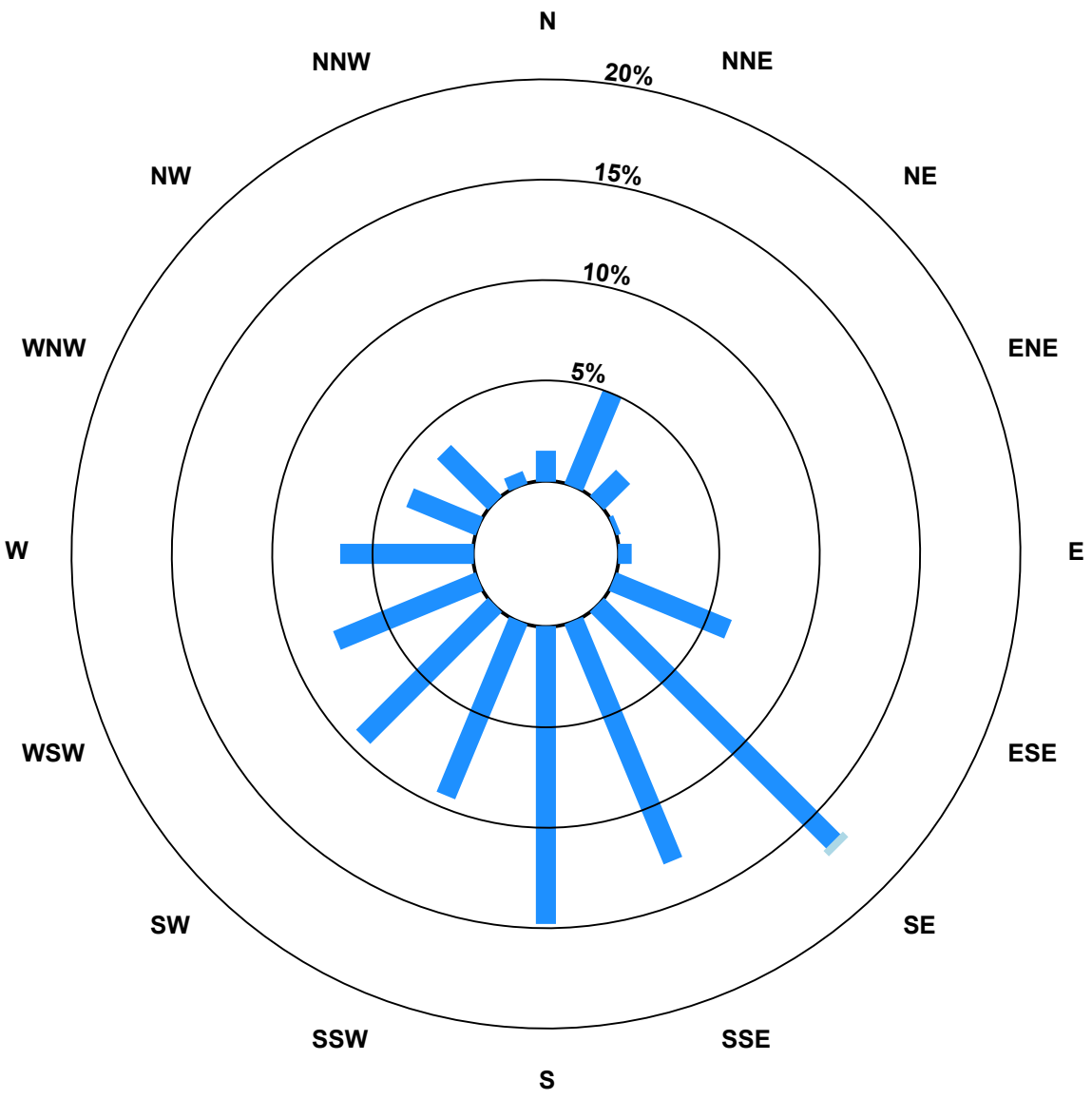
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Mackay River



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

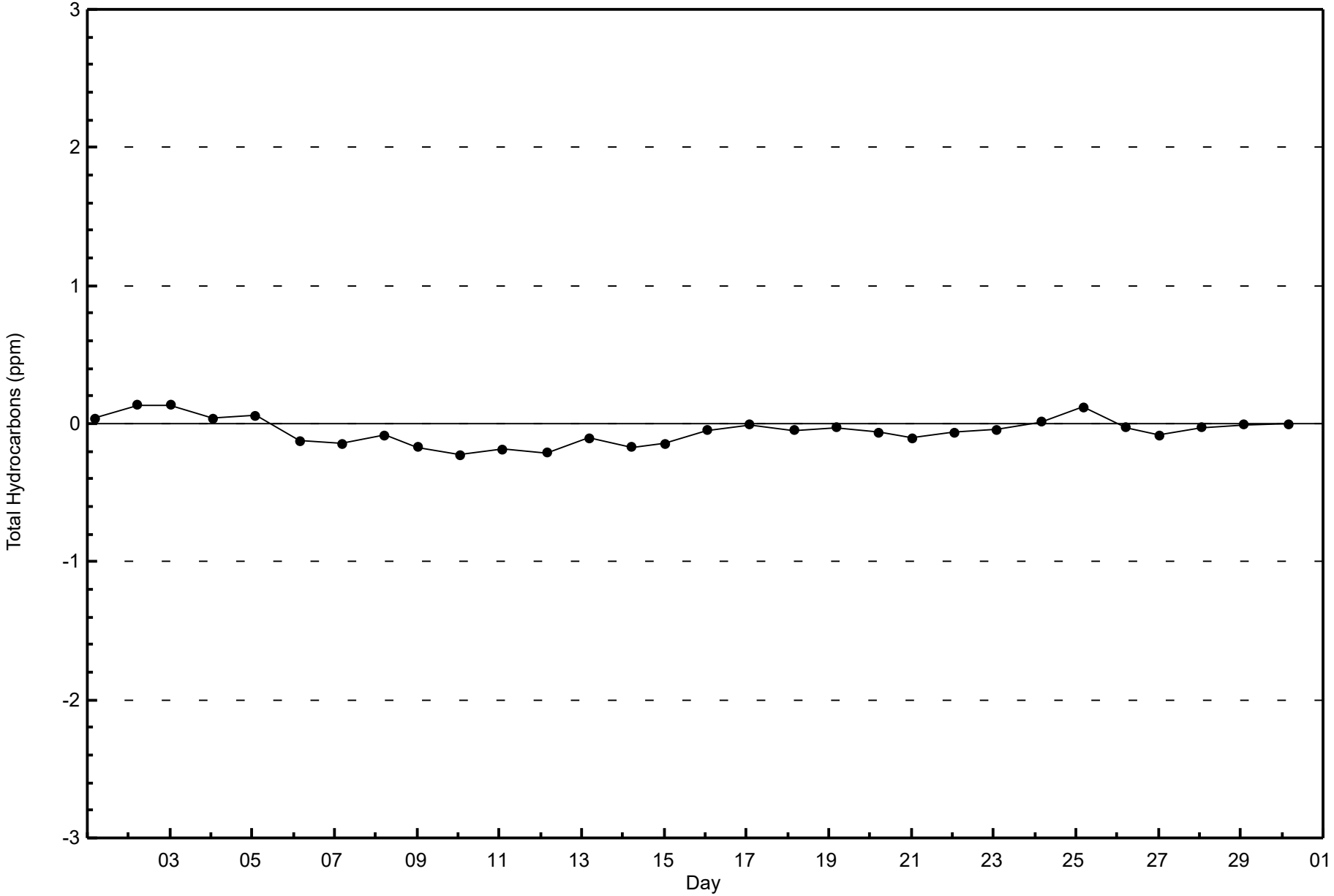
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mackay River - September 2025

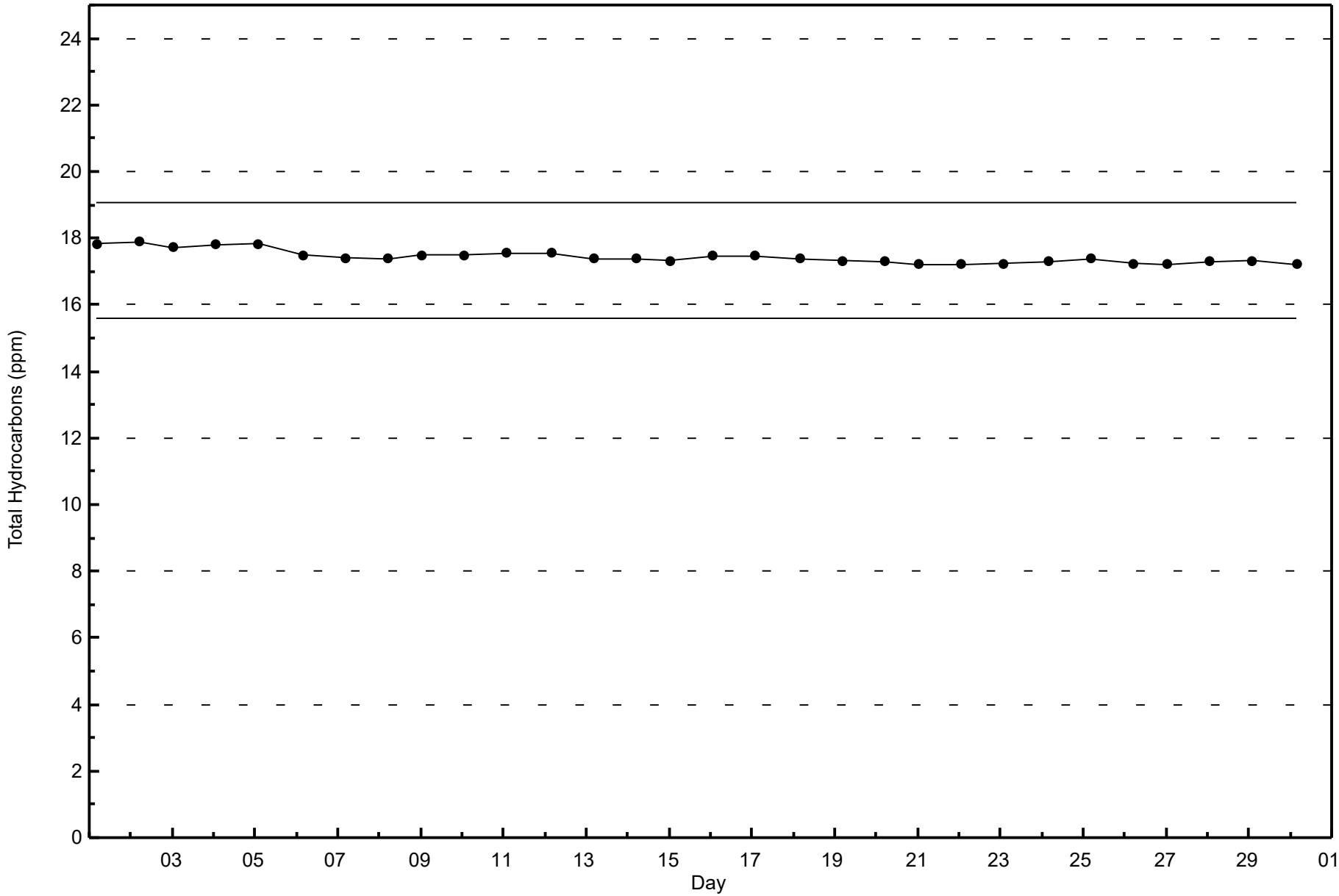


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Mackay River - September 2025

Maximum Value: 4.9 ppb on Sep 30 12:00

Maximum Daily Average: 1.2 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 2 21:00

Minimum Daily Average: 0.0 ppb on Sep 21

Maximum Diurnal Average: 0.3 ppb at hour 12

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.11 ppb

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} = 2.4

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	1.1	2.1	1.1	0.1	0.3	1.0	1.0	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.4	2.1
2-Sep	0.1	0.1	0.1	Z	0.2	0.2	0.3	C	C	C	C	C	C	C	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.3
3-Sep	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	0.1	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
4-Sep	0.0	0.0	0.2	0.8	0.0	Z	0.0	0.8	0.2	0.0	0.4	0.5	0.5	0.1	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.8
5-Sep	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	0.0	0.0	0.1
6-Sep	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	0.0	0.1
7-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	1.6	1.1	0.5	0.5	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.6
8-Sep	0.0	0.1	0.0	Z	0.3	0.7	0.8	2.0	2.3	2.0	2.8	3.1	4.7	3.3	2.4	1.3	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.2	4.7
9-Sep	0.0	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	0.0	0.1
10-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	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	0.1	0.6
11-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	1.0	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	0.1	1.0
12-Sep	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
13-Sep	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
14-Sep	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
15-Sep	0.1	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.4	1.4	0.6	0.1	0.1	0.9	0.0	0.0	0.1	0.2	1.4
16-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	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	0.0	0.0	0.0	0.0	0.0	0.2
17-Sep	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
18-Sep	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	0.0	0.0	0.0	0.1
19-Sep	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
20-Sep	0.0	0.0	0.0	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	0.1
21-Sep	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
22-Sep	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
23-Sep	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	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
28-Sep	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
29-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.3	2.4	4.9	1.4	1.6	0.8	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.9
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.2	0.8	0.3	0.7	0.8	2.0	2.3	2.1	2.8	4.9	4.7	3.3	2.4	1.3	1.4	0.6	0.1	0.1	0.9	0.0	0.1	0.1	Diurnal Maximum	

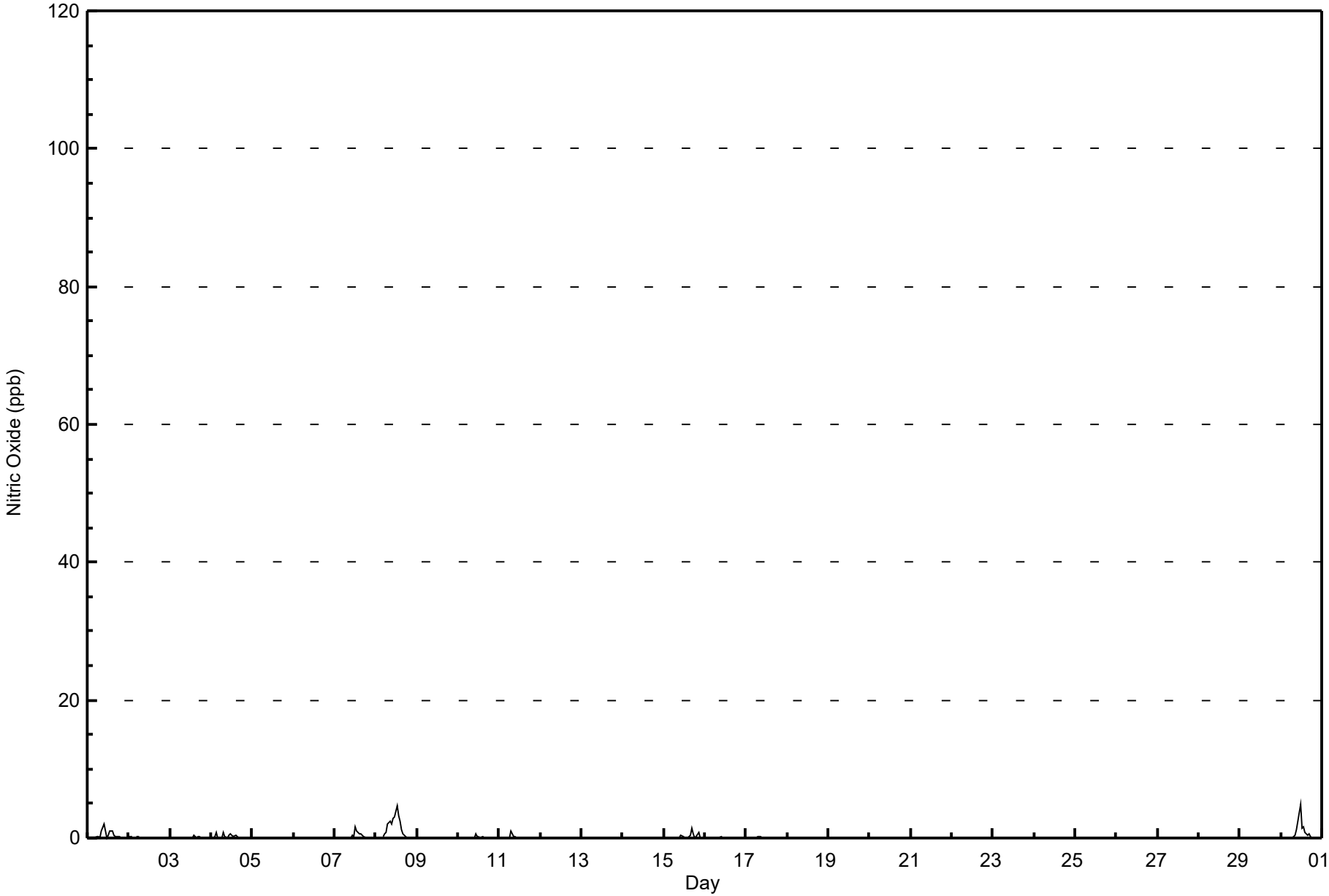
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Mackay River - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Mackay River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680
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	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680

Total Number of Valid Hours: 680

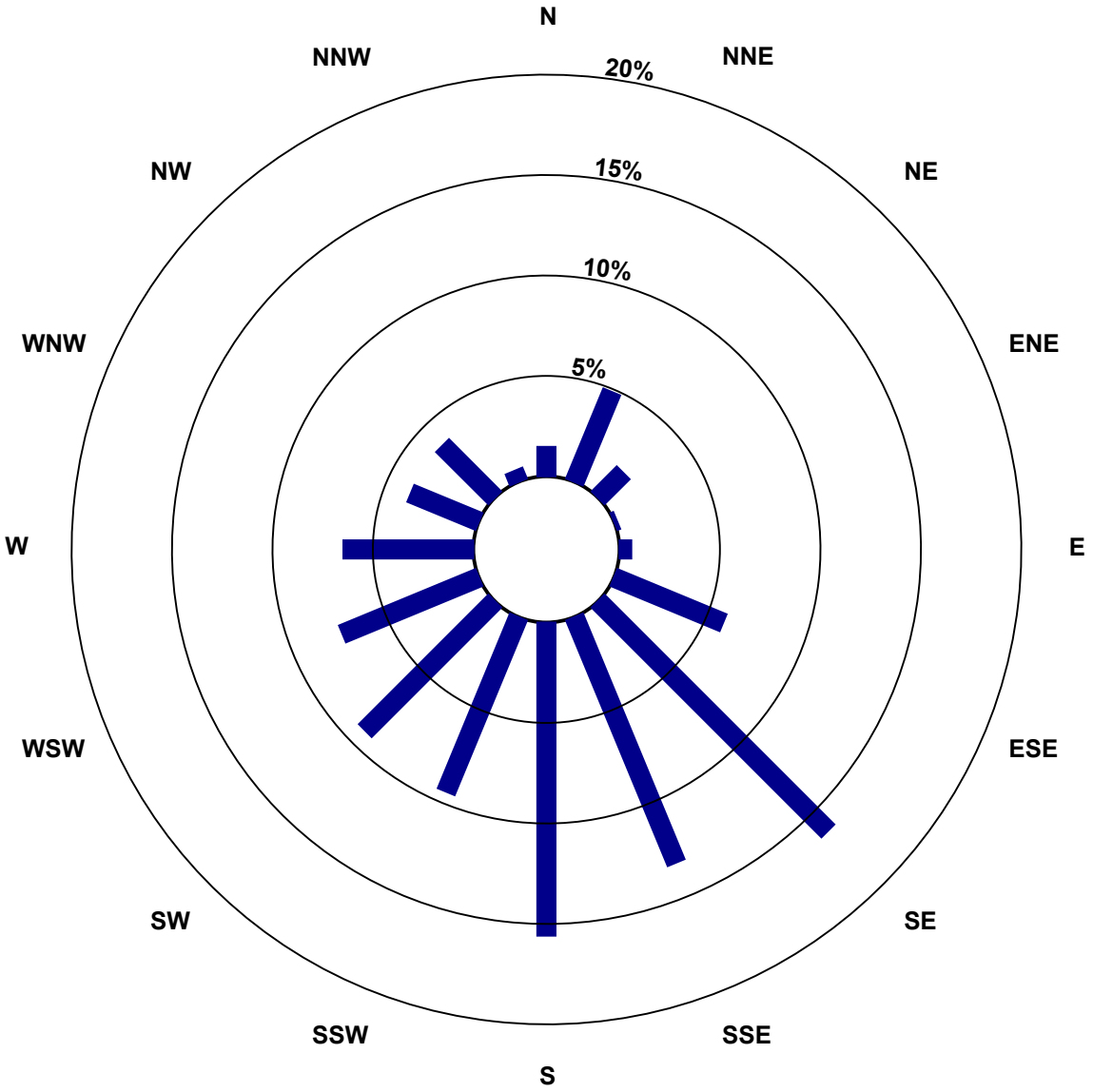
Total Number of Hours: 720

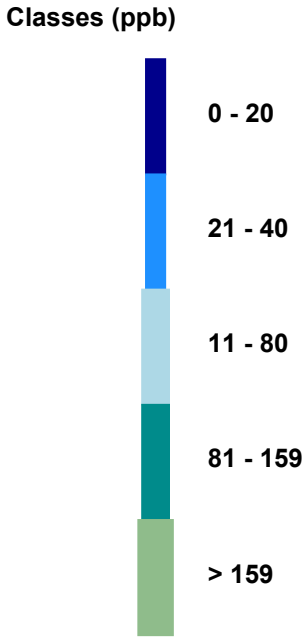
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Mackay River





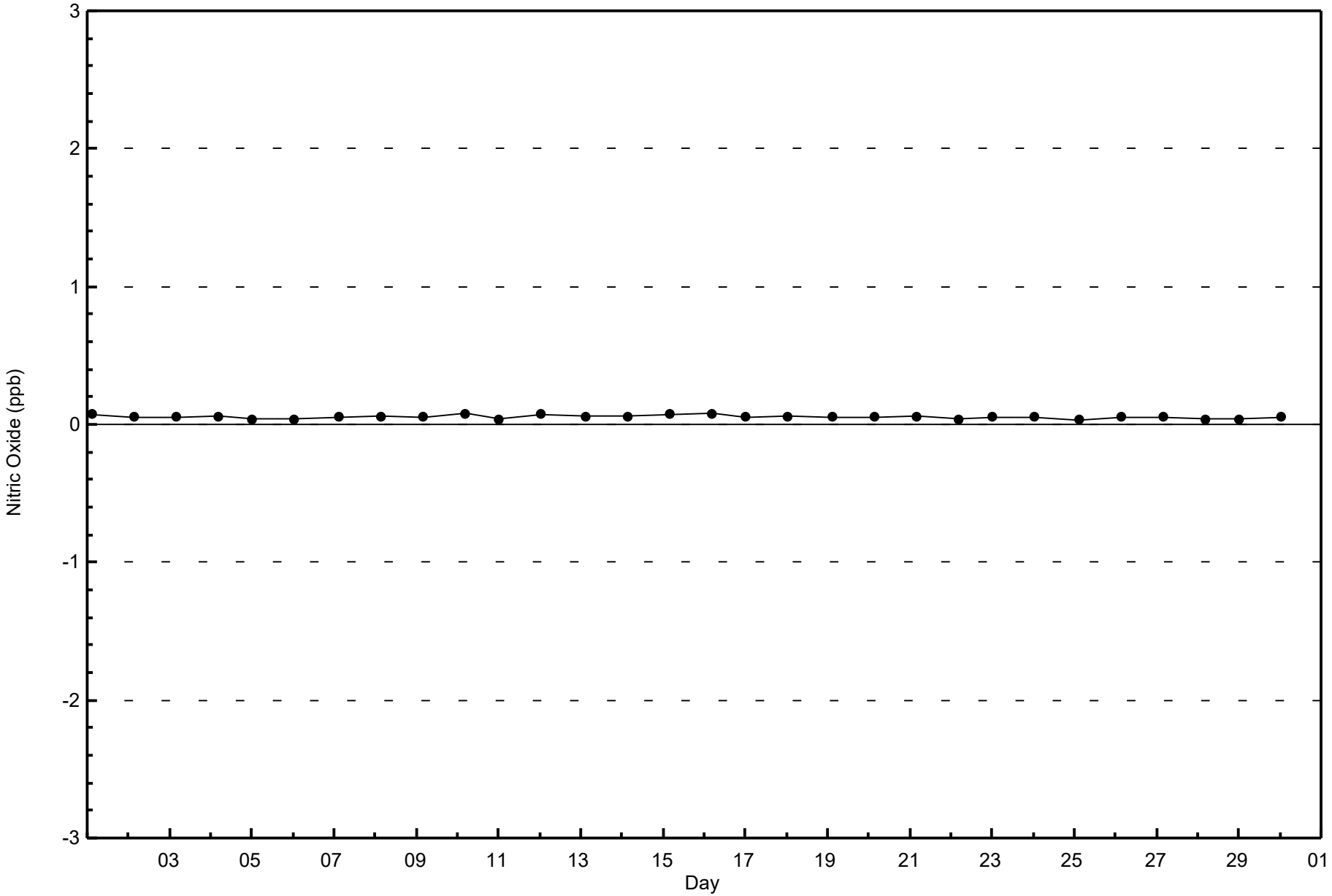
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Mackay River - September 2025

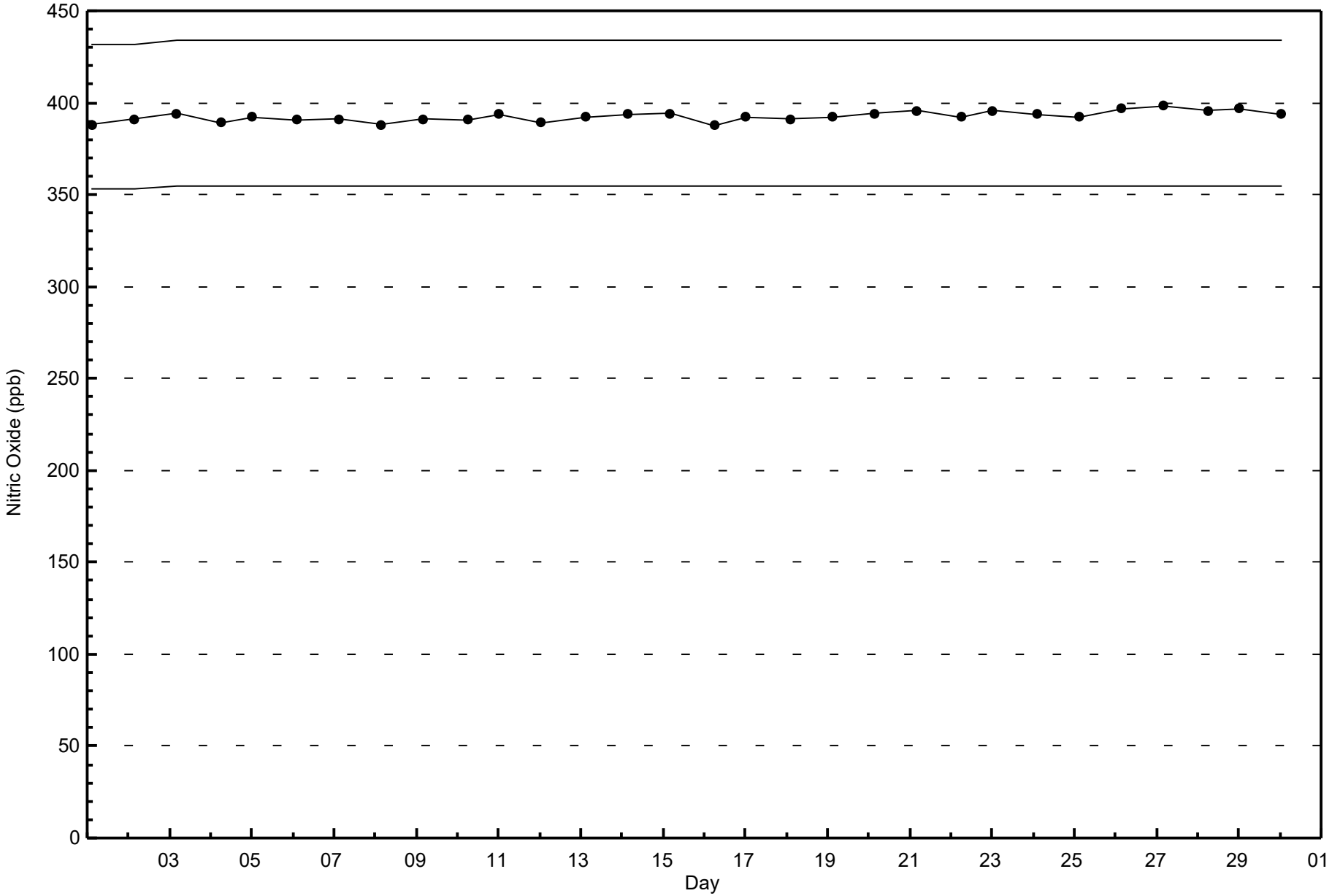


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 14.1 ppb on Sep 30 12:00

Maximum Daily Average: 5.6 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 4 01:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 1.4 ppb at hour 22

Minimum Diurnal Average: 0.6 ppb at hour 7

Monthly Average: 1.09 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.6 Q_3 = 1.0 P_{90} = 2.2 P_{99} = 8.6

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	0.4	Z	0.9	0.6	0.4	0.4	0.6	2.7	3.8	2.1	0.8	1.3	3.3	3.6	2.7	2.8	4.1	5.3	5.6	5.1	3.7	3.1	2.2	2.4	5.6
2-Sep	1.6	1.0	0.9	Z	0.6	0.5	0.2	C	C	C	C	C	C	C	0.8	0.6	0.6	0.8	1.0	1.1	1.0	0.9	0.8	0.8	--	1.6
3-Sep	0.8	0.8	0.8	0.9	Z	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.1	1.3	1.5	3.4	0.5	0.4	0.6	0.6	0.7	0.5	1.1	3.4
4-Sep	0.1	1.0	2.3	6.3	0.6	Z	0.2	1.7	0.7	0.4	1.1	1.1	0.9	0.5	1.0	0.6	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.9	6.3
5-Sep	Z	0.5	0.5	0.4	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.4	0.5	0.6	0.4	0.6
6-Sep	0.6	Z	0.6	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.6	0.8
7-Sep	0.2	0.2	Z	0.3	0.2	0.1	0.2	0.4	0.7	0.5	2.0	2.0	6.3	6.8	6.3	5.8	8.8	4.6	5.6	6.2	7.0	7.4	6.2	4.9	3.6	8.8
8-Sep	4.9	5.1	7.6	Z	8.5	5.4	3.8	4.1	5.4	5.1	5.8	6.2	5.1	4.7	4.8	4.2	3.7	3.5	3.4	2.0	1.4	1.1	1.0	1.0	4.3	8.5
9-Sep	1.6	1.7	1.3	0.7	Z	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.1	0.7	0.6	0.5	0.4	0.4	0.9	1.7
10-Sep	0.3	0.3	0.3	0.4	0.4	Z	0.5	0.4	0.5	0.6	1.8	0.8	0.6	0.4	0.5	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.4	1.8
11-Sep	Z	0.2	0.2	0.2	0.3	0.2	0.4	1.6	1.1	1.3	0.7	0.4	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.5	1.6
12-Sep	1.0	Z	1.1	0.9	0.8	0.8	0.7	0.7	0.8	0.8	1.0	1.2	1.2	1.0	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.8	1.2
13-Sep	0.3	0.2	Z	0.3	0.4	0.4	0.5	0.5	0.7	0.9	1.0	1.0	1.2	1.1	1.1	1.2	1.3	1.5	1.7	3.6	7.4	9.8	6.6	3.7	2.0	9.8
14-Sep	1.9	1.3	0.8	Z	0.7	0.6	0.5	0.8	1.0	1.0	1.0	0.8	0.7	0.6	0.7	1.1	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.7	1.9
15-Sep	0.2	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.4	1.2	0.9	0.5	0.6	0.5	1.2	2.7	2.4	1.6	1.9	3.5	0.5	0.4	1.0	0.9	3.5
16-Sep	0.4	0.4	0.4	0.5	0.9	Z	0.5	0.3	0.4	0.7	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.6	0.5	0.5	0.4	0.4	0.9
17-Sep	Z	0.7	0.7	0.7	0.5	0.4	0.5	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.8	1.0	1.0	0.7	1.0
18-Sep	0.9	Z	0.9	0.9	0.8	0.8	0.9	0.8	0.7	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.9
19-Sep	0.3	0.3	Z	0.3	0.2	0.1	0.1	0.3	0.7	0.9	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.9
20-Sep	0.1	0.2	0.2	Z	0.5	0.6	0.6	0.7	0.9	1.0	1.2	1.2	1.0	1.1	1.2	1.1	0.9	0.9	0.8	0.8	0.9	1.0	1.0	0.9	0.8	1.2
21-Sep	0.7	0.7	0.8	0.7	Z	0.6	0.4	0.5	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.4	0.4	0.8
22-Sep	0.3	0.3	0.3	0.4	0.5	Z	0.7	0.5	0.6	0.6	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	0.5	0.3	0.7
23-Sep	Z	1.1	1.0	0.9	0.8	0.6	0.6	0.6	0.5	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.1
24-Sep	0.4	Z	0.6	0.4	0.5	0.5	0.6	0.7	1.0	1.2	1.2	1.0	0.7	0.5	0.4	0.4	0.7	1.5	1.2	0.8	0.6	0.4	0.3	0.2	0.7	1.5
25-Sep	0.2	0.1	Z	0.2	0.3	0.3	0.4	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.4	0.3	0.5	0.7	0.6	0.6	0.6	0.4	0.4	0.7
26-Sep	0.4	0.5	0.7	Z	1.1	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.6	0.4	0.2	0.5	1.1
27-Sep	0.2	0.2	0.2	0.3	Z	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.5
28-Sep	0.4	0.7	0.9	1.1	1.0	Z	1.0	0.8	0.7	0.6	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.4	0.4	1.1
29-Sep	Z	0.7	0.9	1.2	0.9	0.6	0.5	0.7	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.8	1.0	0.9	0.7	1.2
30-Sep	0.7	Z	1.7	1.5	1.1	0.7	1.0	1.9	2.2	4.3	7.6	14.1	9.2	11.6	8.5	5.1	6.0	6.2	6.9	7.0	6.3	9.0	6.6	9.2	5.6	14.1
	0.8	0.8	1.0	0.8	0.9	0.7	0.6	0.8	1.0	1.1	1.2	1.4	1.3	1.4	1.3	1.1	1.2	1.2	1.2	1.2	1.4	1.4	1.2	1.1	Diurnal Average	
	4.9	5.1	7.6	6.3	8.5	5.4	3.8	4.1	5.4	5.1	7.6	14.1	9.2	11.6	8.5	5.8	8.8	6.2	6.9	7.0	7.4	9.8	6.6	9.2	Diurnal Maximum	

Z - zerospan C - Calibration

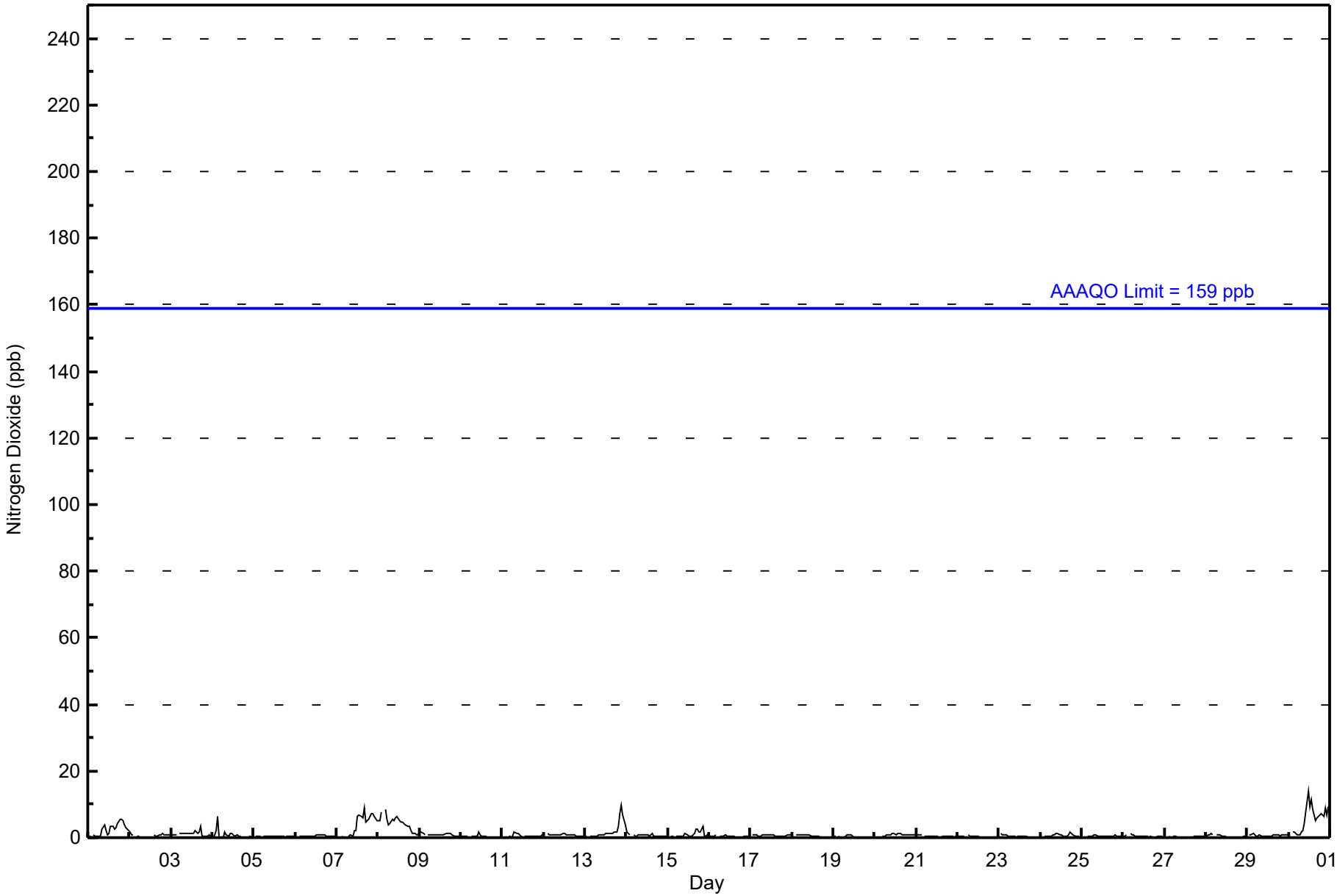
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - September 2025



Nitrogen Dioxide (NO_2) - ppb
Mackay River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Mackay River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680
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	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680

Total Number of Valid Hours: 680

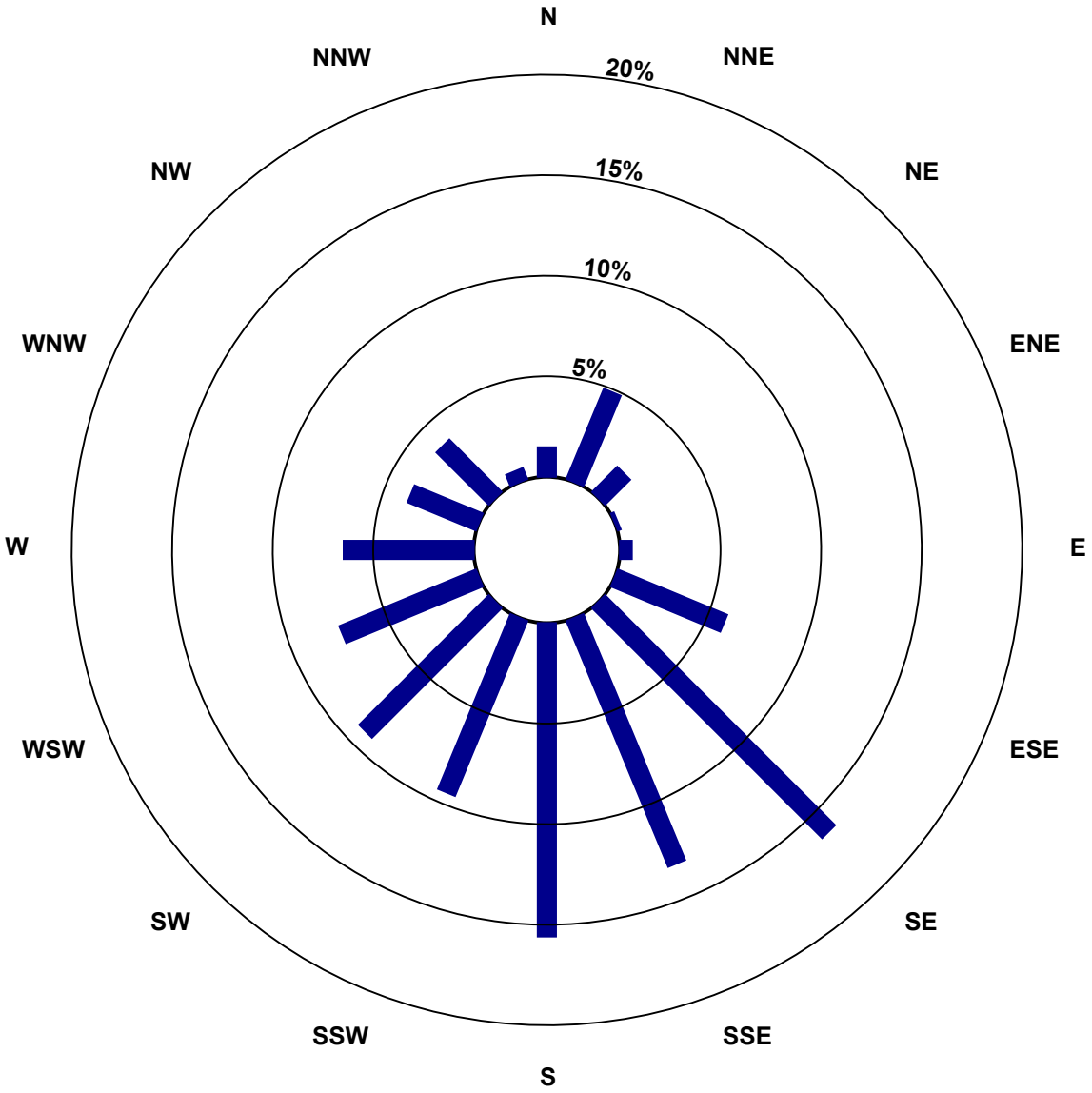
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Mackay River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

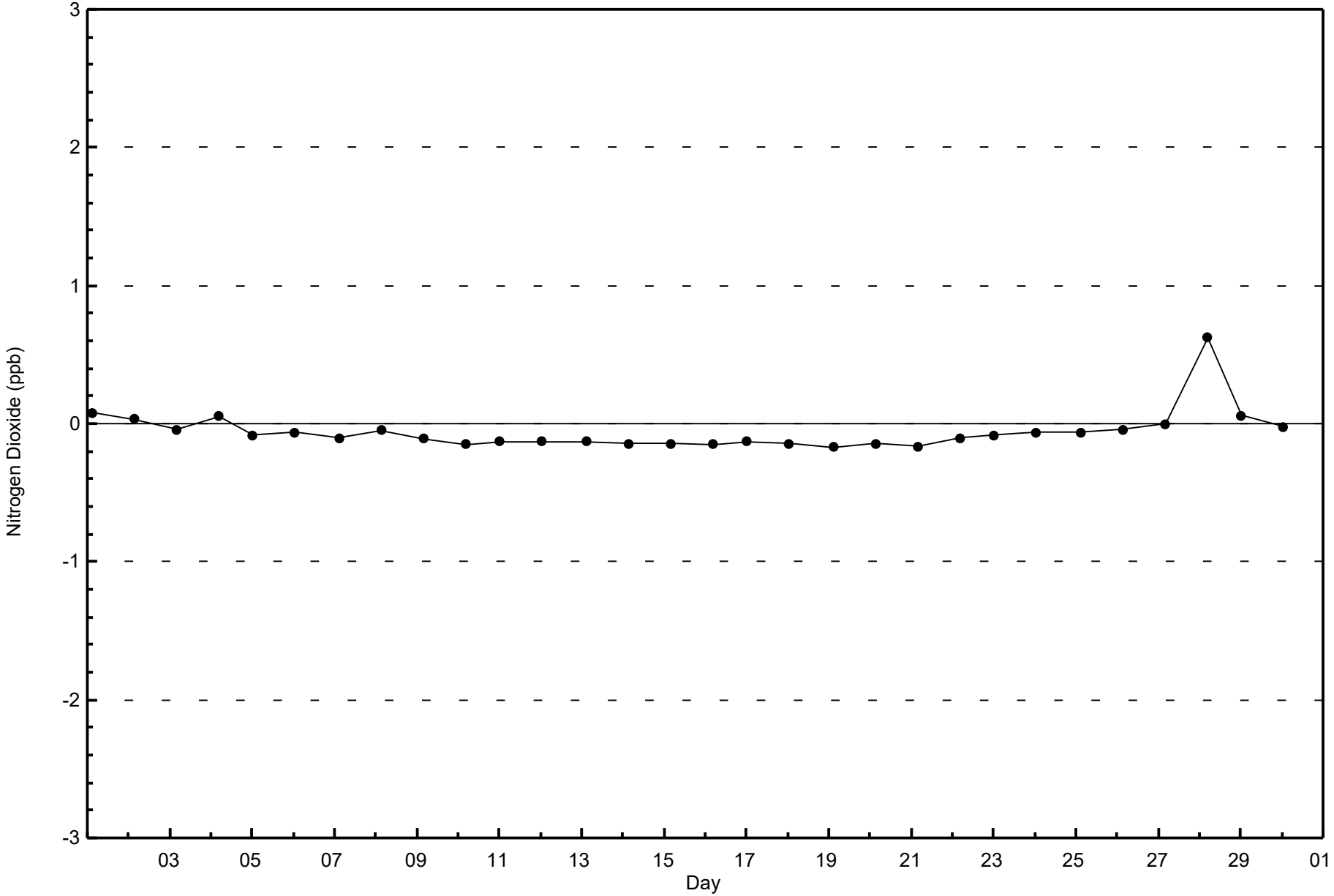
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - September 2025

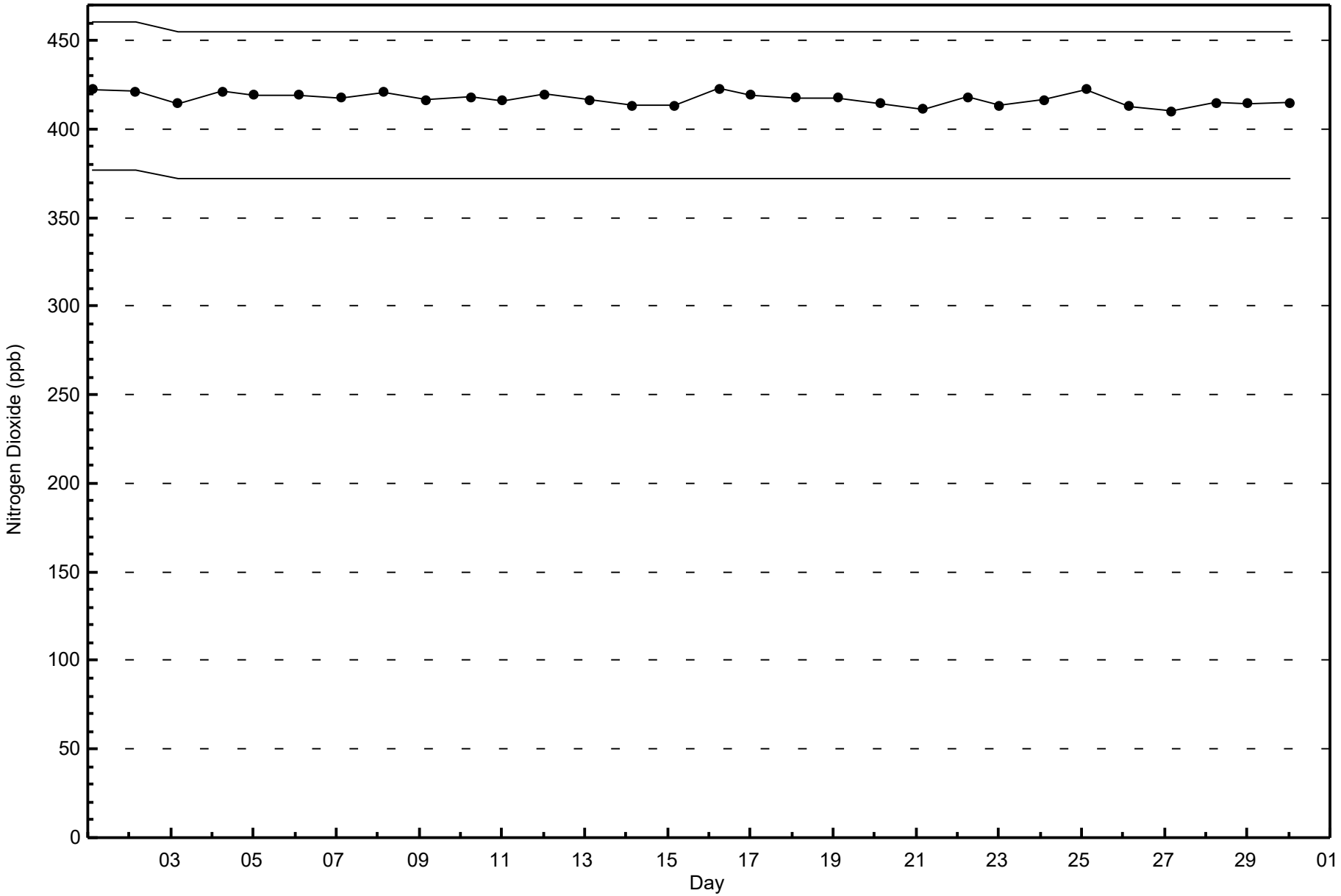


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - September 2025

Maximum Value: 19.0 ppb on Sep 30 12:00

Maximum Daily Average: 6.2 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 4 18:00

Minimum Daily Average: 0.3 ppb on Sep 27

Maximum Diurnal Average: 1.7 ppb at hour 12

Minimum Diurnal Average: 0.7 ppb at hour 7

Monthly Average: 1.20 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.6 Q_3 = 1.0 P_{90} = 2.5 P_{99} = 9.3

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.5	Z	1.0	0.7	0.5	0.5	0.6	3.8	5.9	3.2	0.9	1.6	4.3	4.6	3.1	3.0	4.3	5.4	5.6	5.1	3.7	3.2	2.3	2.8	5.9
2-Sep	1.7	1.1	1.0	Z	0.8	0.7	0.5	C	C	C	C	C	C	C	0.9	0.6	0.7	0.8	1.0	1.1	1.0	0.9	0.8	0.8	--	1.7
3-Sep	0.8	0.8	0.8	0.9	Z	1.1	1.1	1.2	1.3	1.3	1.3	1.2	1.2	1.3	2.4	1.4	1.6	3.6	0.5	0.4	0.6	0.6	0.7	0.5	1.2	3.6
4-Sep	0.1	1.0	2.5	7.1	0.6	Z	0.2	2.5	0.9	0.4	1.5	1.6	1.4	0.6	1.4	0.8	0.4	0.1	0.1	0.1	0.1	0.2	0.3	0.3	1.0	7.1
5-Sep	Z	0.6	0.6	0.5	0.3	0.3	0.4	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.4	0.5	0.6	0.4	0.6
6-Sep	0.6	Z	0.6	0.4	0.4	0.4	0.5	0.7	0.7	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.6	0.8
7-Sep	0.2	0.2	Z	0.3	0.2	0.1	0.2	0.4	0.7	0.5	2.5	2.3	7.9	7.9	6.8	6.3	9.3	4.7	5.7	6.2	7.0	7.4	6.2	4.9	3.8	9.3
8-Sep	4.9	5.2	7.6	Z	8.8	6.1	4.6	6.1	7.7	7.1	8.6	9.3	9.8	8.0	7.2	5.5	4.3	3.7	3.5	2.0	1.4	1.1	1.0	1.0	5.4	9.8
9-Sep	1.6	1.7	1.3	0.7	Z	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.1	0.7	0.6	0.5	0.4	0.4	0.9	1.7
10-Sep	0.3	0.3	0.3	0.4	0.4	Z	0.5	0.4	0.5	0.7	2.4	1.0	0.7	0.4	0.6	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.4	2.4
11-Sep	Z	0.2	0.2	0.2	0.3	0.2	0.5	2.6	1.4	1.5	0.8	0.4	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.5	2.6
12-Sep	1.0	Z	1.1	0.9	0.8	0.8	0.7	0.7	0.8	0.8	1.0	1.2	1.2	1.0	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.8	1.2
13-Sep	0.3	0.2	Z	0.3	0.4	0.4	0.5	0.5	0.7	0.9	1.0	1.0	1.2	1.1	1.1	1.2	1.3	1.5	1.7	3.6	7.4	9.8	6.6	3.7	2.0	9.8
14-Sep	1.9	1.3	0.8	Z	0.7	0.6	0.5	0.8	1.0	1.0	1.0	0.8	0.7	0.6	0.7	1.1	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.7	1.9
15-Sep	0.3	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.4	1.6	1.0	0.5	0.6	0.5	1.6	4.1	3.0	1.7	2.0	4.4	0.5	0.4	1.1	1.1	4.4
16-Sep	0.4	0.4	0.4	0.5	0.9	Z	0.5	0.3	0.4	0.9	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.6	0.5	0.5	0.4	0.4	0.9
17-Sep	Z	0.7	0.7	0.7	0.5	0.4	0.5	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.8	1.0	1.0	0.7	1.0
18-Sep	0.9	Z	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.9
19-Sep	0.3	0.3	Z	0.3	0.2	0.1	0.1	0.3	0.7	0.9	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.9
20-Sep	0.1	0.2	0.2	Z	0.5	0.6	0.6	0.7	0.9	1.0	1.3	1.3	1.0	1.1	1.2	1.1	0.9	0.9	0.8	0.8	0.9	1.0	1.0	0.9	0.8	1.3
21-Sep	0.7	0.7	0.8	0.7	Z	0.6	0.4	0.5	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.4	0.4	0.8
22-Sep	0.3	0.3	0.3	0.4	0.5	Z	0.7	0.5	0.6	0.6	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	0.5	0.3	0.7
23-Sep	Z	1.1	1.0	0.9	0.8	0.6	0.6	0.6	0.5	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.1
24-Sep	0.4	Z	0.6	0.4	0.5	0.5	0.6	0.7	1.0	1.2	1.2	1.0	0.7	0.5	0.4	0.4	0.7	1.5	1.2	0.8	0.6	0.4	0.3	0.2	0.7	1.5
25-Sep	0.2	0.1	Z	0.2	0.3	0.3	0.4	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.4	0.3	0.5	0.7	0.6	0.6	0.6	0.4	0.4	0.7
26-Sep	0.4	0.5	0.7	Z	1.1	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.6	0.4	0.2	0.5	1.1
27-Sep	0.2	0.2	0.2	0.3	Z	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.5
28-Sep	0.4	0.7	0.9	1.1	1.0	Z	1.0	0.8	0.7	0.6	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.4	0.5	1.1
29-Sep	Z	0.7	0.9	1.2	0.9	0.6	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.7	0.8	0.8	0.7	0.6	0.7	0.8	1.0	0.9	0.7	1.2
30-Sep	0.7	Z	1.7	1.5	1.1	0.7	1.0	2.0	2.5	5.6	10.0	19.0	10.6	13.2	9.3	5.6	6.5	6.4	6.9	7.0	6.3	9.0	6.6	9.2	6.2	19.0
	0.8	0.8	1.1	0.9	0.9	0.8	0.7	1.0	1.1	1.3	1.5	1.7	1.5	1.6	1.5	1.2	1.4	1.3	1.2	1.2	1.4	1.4	1.2	1.1	Diurnal Average	
	4.9	5.2	7.6	7.1	8.8	6.1	4.6	6.1	7.7	7.1	10.0	19.0	10.6	13.2	9.3	6.3	9.3	6.4	6.9	7.0	7.4	9.8	6.6	9.2	Diurnal Maximum	

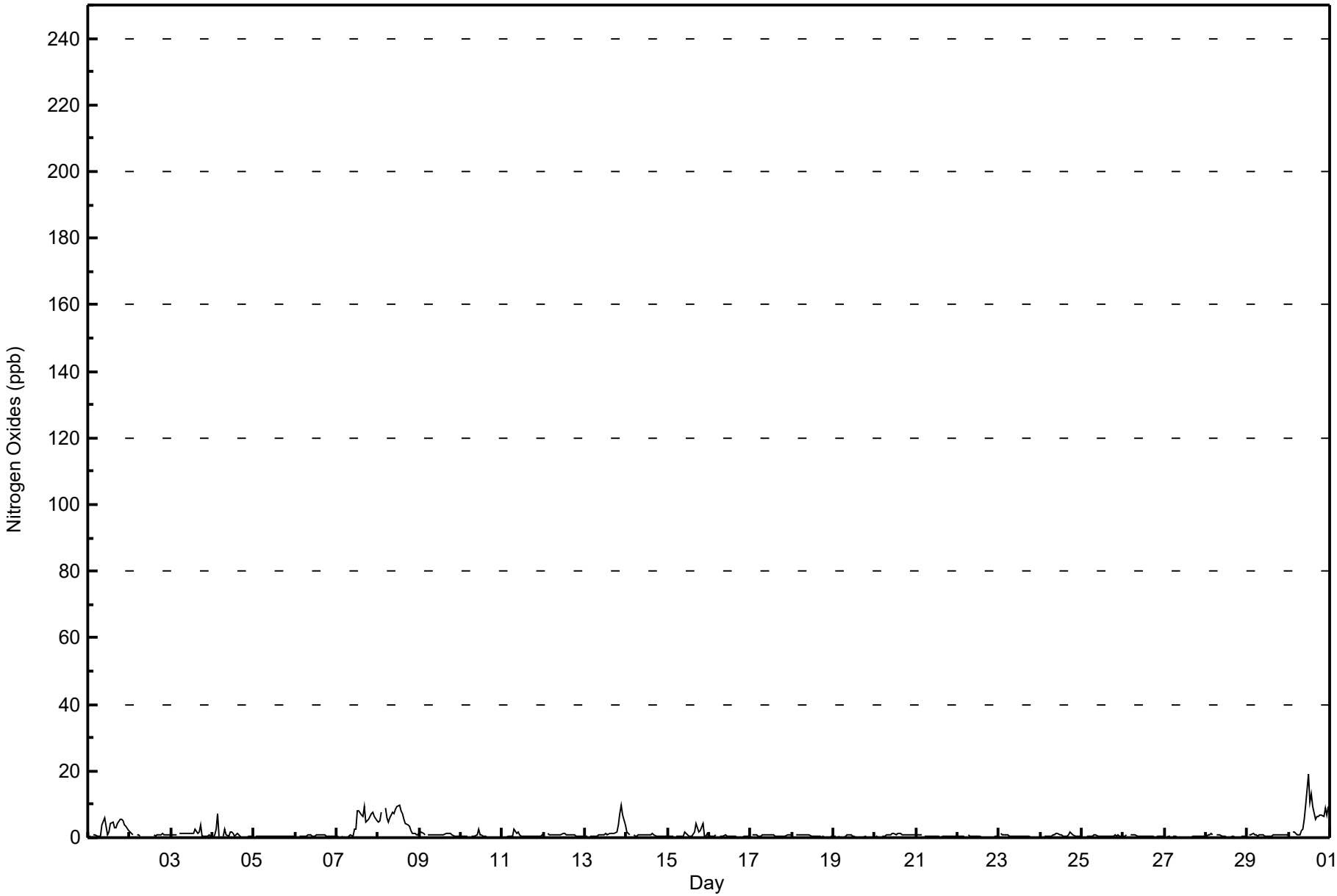
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - September 2025



Nitrogen Oxides (NO_X) - ppb
Mackay River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Mackay River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680
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	10	33	12	1	4	40	110	90	106	64	62	50	44	25	25	4	680

Total Number of Valid Hours: 680

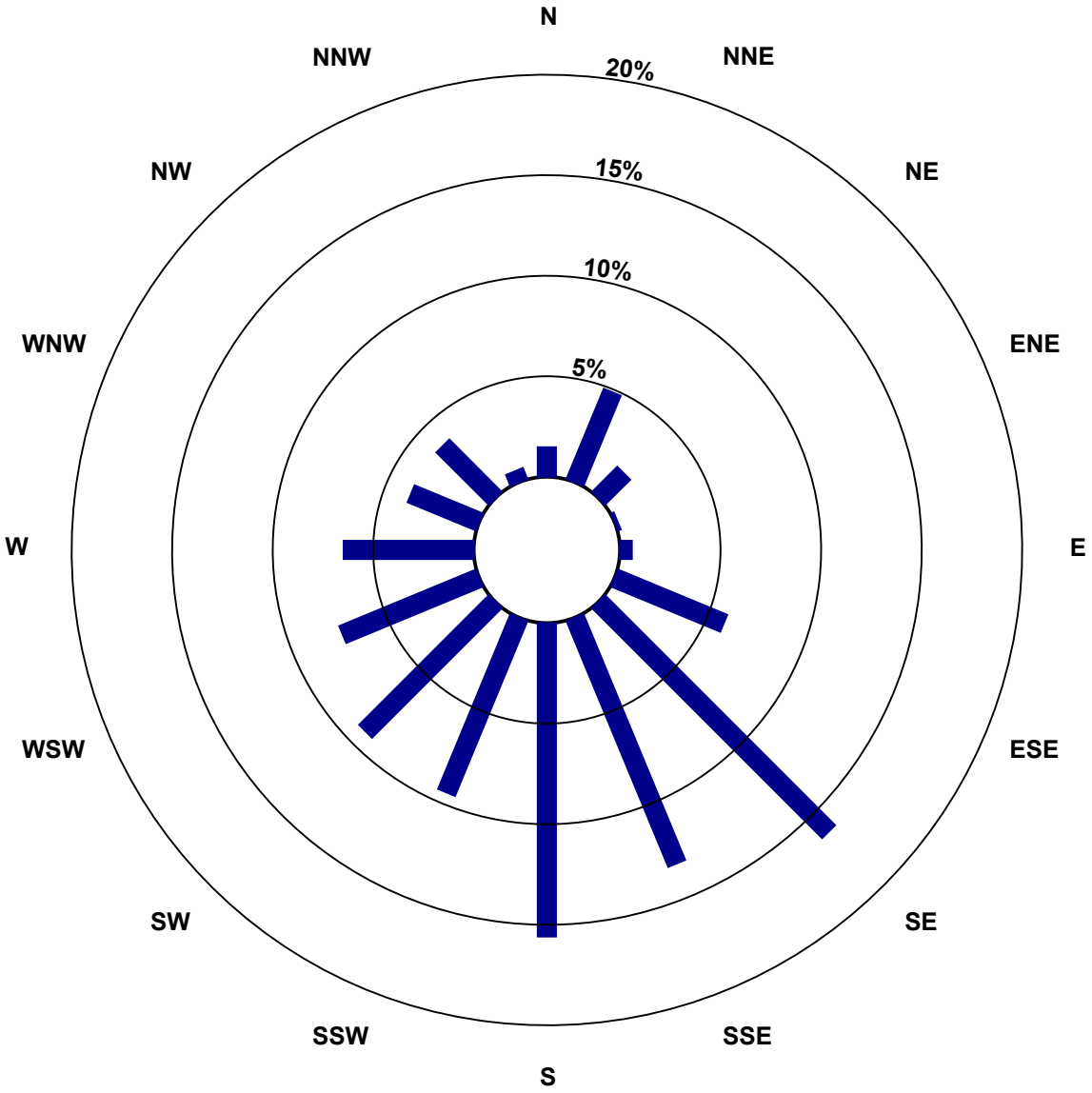
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Mackay River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

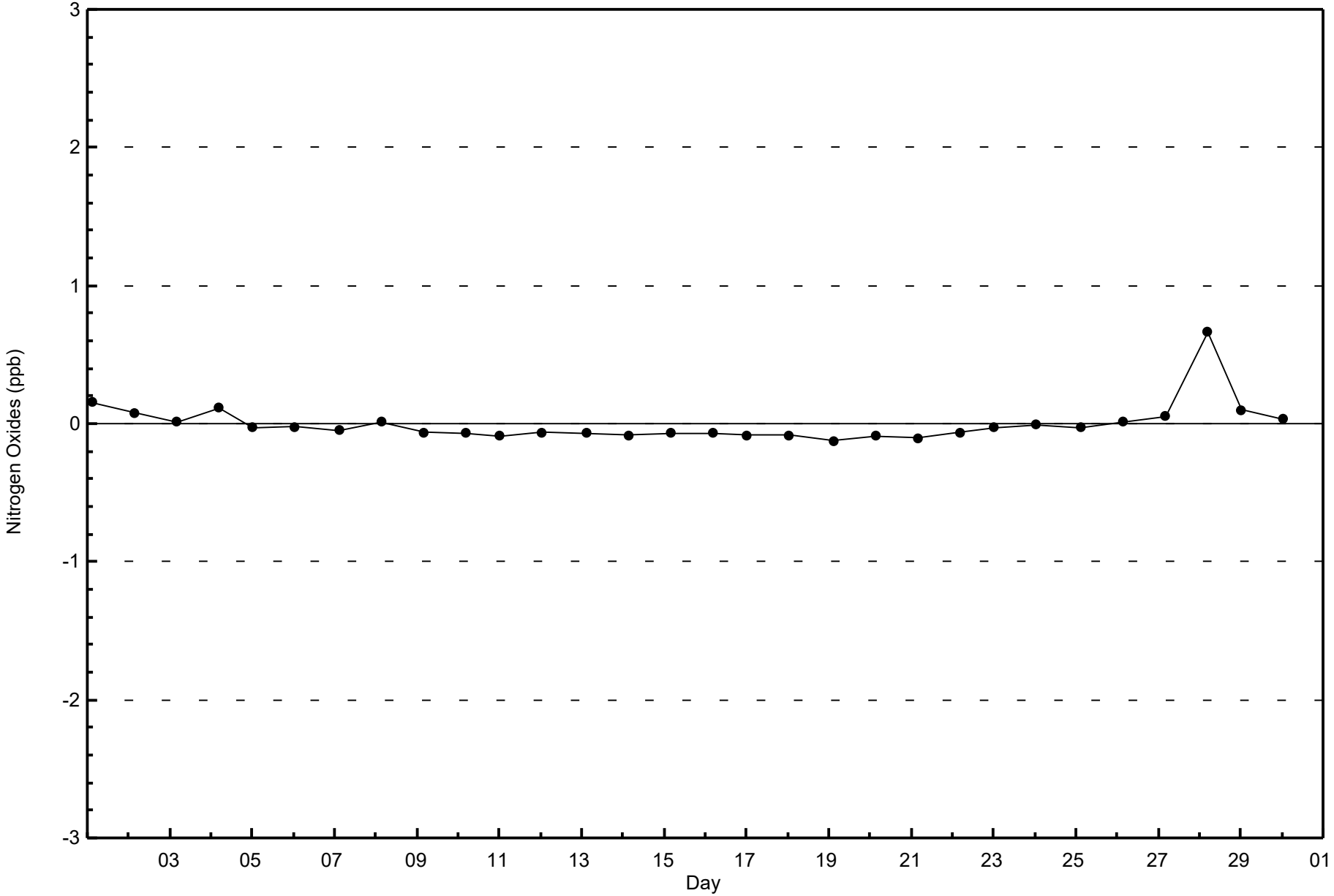
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - September 2025

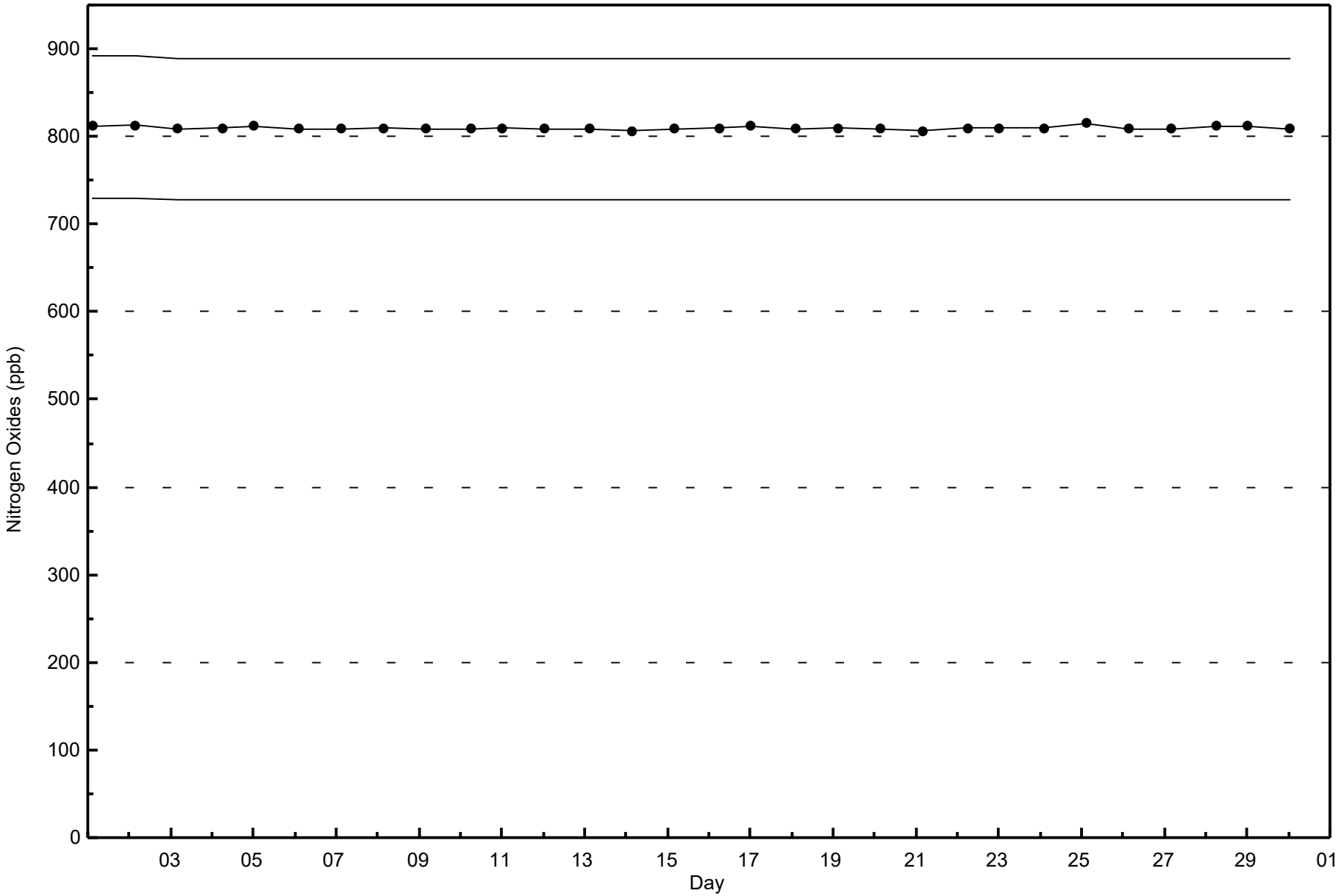


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - September 2025



Maximum Value: 28.2 C on Sep 12 16:00

Maximum Daily Average: 18.9 C on Sep 12

Minimum Value: -2.5 C on Sep 25 03:00

Minimum Daily Average: 8.5 C on Sep 25

Maximum Diurnal Average: 20.6 C at hour 16

Minimum Diurnal Average: 7.3 C at hour 6

Monthly Average: 13.32 C

Percentiles: P_1 = 0.1 P_{10} = 6.6 Q_1 = 9.1 Median = 13.0 Q_3 = 17.0 P_{90} = 21.8 P_{99} = 26.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

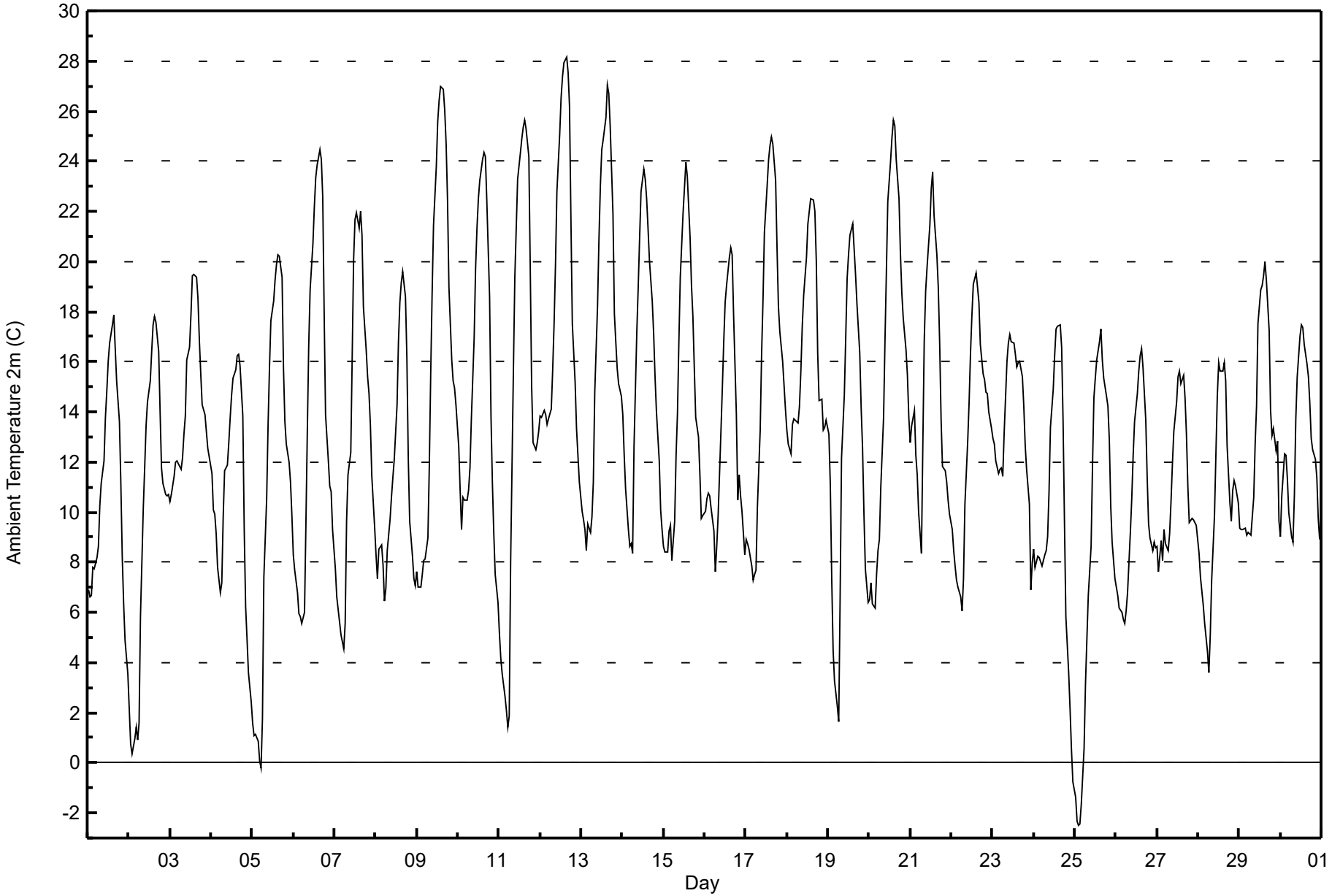
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	6.9	6.6	6.7	7.8	7.8	8.2	8.6	10.2	11.1	12.0	13.8	14.8	16.0	16.8	17.5	17.8	16.5	15.3	13.6	11.1	8.3	6.3	4.9	3.6	10.9	17.8
2-Sep	2.2	0.8	0.3	1.0	1.4	0.9	1.6	5.8	10.1	11.8	13.5	14.4	15.2	16.4	17.5	17.8	17.6	16.4	14.0	11.8	11.1	10.7	10.6	10.7	9.7	17.8
3-Sep	10.4	10.7	11.5	12.0	12.0	11.9	11.7	12.2	13.1	13.8	16.1	16.6	17.8	19.4	19.5	19.4	18.5	16.9	15.5	14.3	13.9	13.2	12.5	12.2	14.4	19.5
4-Sep	11.5	10.1	9.9	9.1	7.8	6.8	7.2	9.8	11.6	11.9	12.8	13.8	14.6	15.3	15.7	16.3	16.3	15.9	13.9	9.3	6.2	5.0	3.6	2.4	10.7	16.3
5-Sep	1.6	1.1	1.1	0.8	0.1	-0.2	1.7	7.4	10.5	13.4	15.8	17.6	18.4	19.2	19.9	20.3	20.2	19.3	15.8	13.6	12.7	12.0	11.2	9.9	11.0	20.3
6-Sep	8.3	7.7	6.8	5.9	5.8	5.5	6.0	9.5	13.2	16.6	18.9	20.7	22.2	23.3	23.9	24.5	24.1	22.6	18.0	13.9	12.0	11.1	10.8	9.3	14.2	24.5
7-Sep	7.7	6.6	6.1	5.6	5.1	4.6	5.6	9.7	11.5	12.4	16.2	20.0	21.7	21.9	21.3	22.0	21.0	18.2	16.5	15.4	14.7	13.4	11.4	9.4	13.3	22.0
8-Sep	8.3	7.4	8.5	8.7	7.9	6.4	6.9	8.4	9.7	10.6	11.4	12.1	14.3	16.8	18.4	19.2	19.6	18.6	16.2	12.2	9.6	8.2	7.3	7.1	11.4	19.6
9-Sep	7.6	7.0	7.0	7.5	8.1	8.1	9.0	11.8	15.5	18.7	21.5	23.8	25.6	26.4	27.0	26.9	26.0	24.7	22.5	19.0	16.1	15.3	14.9	14.3	16.8	27.0
10-Sep	12.6	10.9	9.3	10.6	10.5	10.5	10.9	11.8	13.7	17.0	19.7	21.4	22.5	23.3	24.1	24.3	24.2	22.5	18.6	13.9	11.2	9.2	7.5	6.4	15.3	24.3
11-Sep	5.2	4.2	3.6	2.7	2.1	1.4	1.9	8.0	15.7	19.4	21.3	23.3	24.4	24.9	25.4	25.6	25.3	24.2	19.7	15.0	12.8	12.5	12.8	13.2	14.3	25.6
12-Sep	13.8	13.8	14.1	13.9	13.5	13.7	14.1	15.7	17.5	19.9	22.8	25.1	26.5	27.4	27.9	28.2	27.6	26.2	21.7	17.6	15.2	13.3	12.3	11.2	18.9	28.2
13-Sep	10.0	9.7	9.3	8.4	9.5	9.2	9.8	11.2	14.8	18.2	20.9	23.0	24.4	24.9	25.8	27.0	26.7	25.4	21.9	17.9	16.8	15.8	15.1	14.6	17.1	27.0
14-Sep	13.9	12.3	10.9	9.3	8.6	8.8	8.4	12.6	17.2	19.0	20.9	22.8	23.7	23.3	22.5	21.4	20.1	18.4	17.1	15.4	14.0	12.0	10.1	9.3	15.5	23.7
15-Sep	8.6	8.4	8.4	9.2	9.5	8.1	9.7	12.3	14.0	16.8	19.4	21.9	23.0	24.0	23.4	21.0	19.1	17.8	15.8	13.8	13.0	11.5	9.7	9.9	14.5	24.0
16-Sep	10.0	10.5	10.8	10.6	10.1	9.3	7.6	8.6	9.9	13.2	15.0	16.8	18.4	19.1	20.1	20.6	20.2	17.9	13.9	10.5	11.5	10.7	10.1	8.3	13.1	20.6
17-Sep	8.9	8.8	8.5	7.9	7.3	7.5	7.7	10.2	13.3	16.3	18.5	21.2	23.1	24.1	24.7	25.0	24.7	23.2	20.6	18.2	17.2	16.0	15.0	14.1	15.9	25.0
18-Sep	13.3	12.7	12.3	13.5	13.7	13.7	13.5	14.2	15.6	17.4	18.7	20.1	21.5	22.0	22.5	22.4	22.0	20.1	16.3	14.5	14.5	13.3	13.4	13.7	16.5	22.5
19-Sep	13.1	11.1	7.4	4.5	3.3	2.3	1.7	6.6	12.2	14.7	17.0	19.3	20.3	21.1	21.5	20.5	19.5	18.3	16.4	14.2	12.6	9.9	7.7	6.4	12.6	21.5
20-Sep	6.5	7.2	6.4	6.2	7.5	8.5	8.9	11.0	13.8	16.9	19.6	22.4	24.0	25.0	25.6	25.4	24.1	22.5	20.3	18.7	17.7	16.5	15.5	13.8	16.0	25.6
21-Sep	12.8	13.4	14.1	12.3	11.5	10.0	8.4	12.7	16.9	18.8	19.8	21.5	22.9	23.6	21.8	20.3	19.0	16.7	13.7	11.8	11.6	11.2	10.5	9.9	15.2	23.6
22-Sep	9.3	8.5	7.9	7.3	7.0	6.6	6.0	7.4	10.3	12.8	14.4	16.4	17.8	19.1	19.6	19.0	18.4	16.7	15.5	15.3	14.8	14.7	14.0	13.3	13.0	19.6
23-Sep	12.9	12.7	12.0	11.5	11.7	11.8	11.4	13.2	16.0	16.8	17.1	16.8	16.7	16.3	15.8	16.0	16.0	15.4	14.2	12.7	11.7	10.3	6.9	8.0	13.5	17.1
24-Sep	8.5	7.8	8.3	8.2	8.0	7.9	8.3	8.5	9.0	10.8	13.4	14.9	16.3	17.3	17.4	17.5	16.6	13.7	9.6	5.8	3.6	2.1	0.5	-0.8	9.7	17.5
25-Sep	-1.4	-2.3	-2.5	-2.4	-1.7	0.6	3.2	4.9	6.7	8.6	11.8	14.6	15.4	16.1	16.8	17.3	16.1	15.3	14.6	14.2	12.9	10.3	8.8	7.4	8.5	17.3
26-Sep	7.0	6.7	6.2	6.0	5.7	5.5	6.1	6.8	9.2	10.6	12.2	13.6	14.8	15.6	16.2	16.5	15.8	13.7	11.4	9.5	9.0	8.4	8.8	8.6	10.2	16.5
27-Sep	8.6	7.6	8.9	8.1	9.3	8.7	8.5	9.1	10.4	11.9	13.2	14.4	15.4	15.6	15.2	15.5	14.5	13.1	11.0	9.6	9.7	9.7	9.6	9.5	11.1	15.6
28-Sep	8.4	7.4	6.8	6.3	5.6	4.4	3.6	5.1	7.3	9.9	12.3	14.6	16.0	15.6	15.6	15.9	15.2	12.7	10.4	9.6	10.9	11.2	11.0	10.4	10.3	16.0
29-Sep	9.3	9.3	9.3	9.4	9.1	9.2	9.1	9.1	10.6	12.7	14.2	17.5	18.8	19.0	19.4	20.0	19.3	17.2	14.0	13.0	13.4	12.4	12.8	9.6	13.2	20.0
30-Sep	9.0	10.7	12.3	12.3	11.3	9.9	9.0	8.8	10.7	13.7	15.4	17.0	17.5	17.4	16.7	15.9	15.4	14.3	13.0	12.5	12.1	11.4	9.8	8.9	12.7	17.5
	8.8	8.3	8.1	7.8	7.6	7.3	7.5	9.8	12.4	14.6	16.6	18.4	19.6	20.3	20.6	20.6	20.0	18.4	15.9	13.5	12.4	11.3	10.3	9.5	Diurnal Average	
	13.9	13.8	14.1	13.9	13.7	13.7	14.1	15.7	17.5	19.9	22.8	25.1	26.5	27.4	27.9	28.2	27.6	26.2	22.5	19.0	17.7	16.5	15.5	14.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mackay River - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	7	0.97	0.97
0 - 10	223	30.97	31.94
10 - 20	386	53.61	85.56
> 20	104	14.44	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 99.2 % on Sep 8 08:00

Maximum Daily Average: 85.5 % on Sep 8

Minimum Value: 25.2 % on Sep 24 16:00

Minimum Daily Average: 45.3 % on Sep 23

Maximum Diurnal Average: 83.5 % at hour 7

Minimum Diurnal Average: 39.8 % at hour 16

Monthly Average: 64.28 %

Percentiles: P_1 = 28.5 P_{10} = 36.1 Q_1 = 47.7 Median = 64.7 Q_3 = 81.5 P_{90} = 89.4 P_{99} = 98.6

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

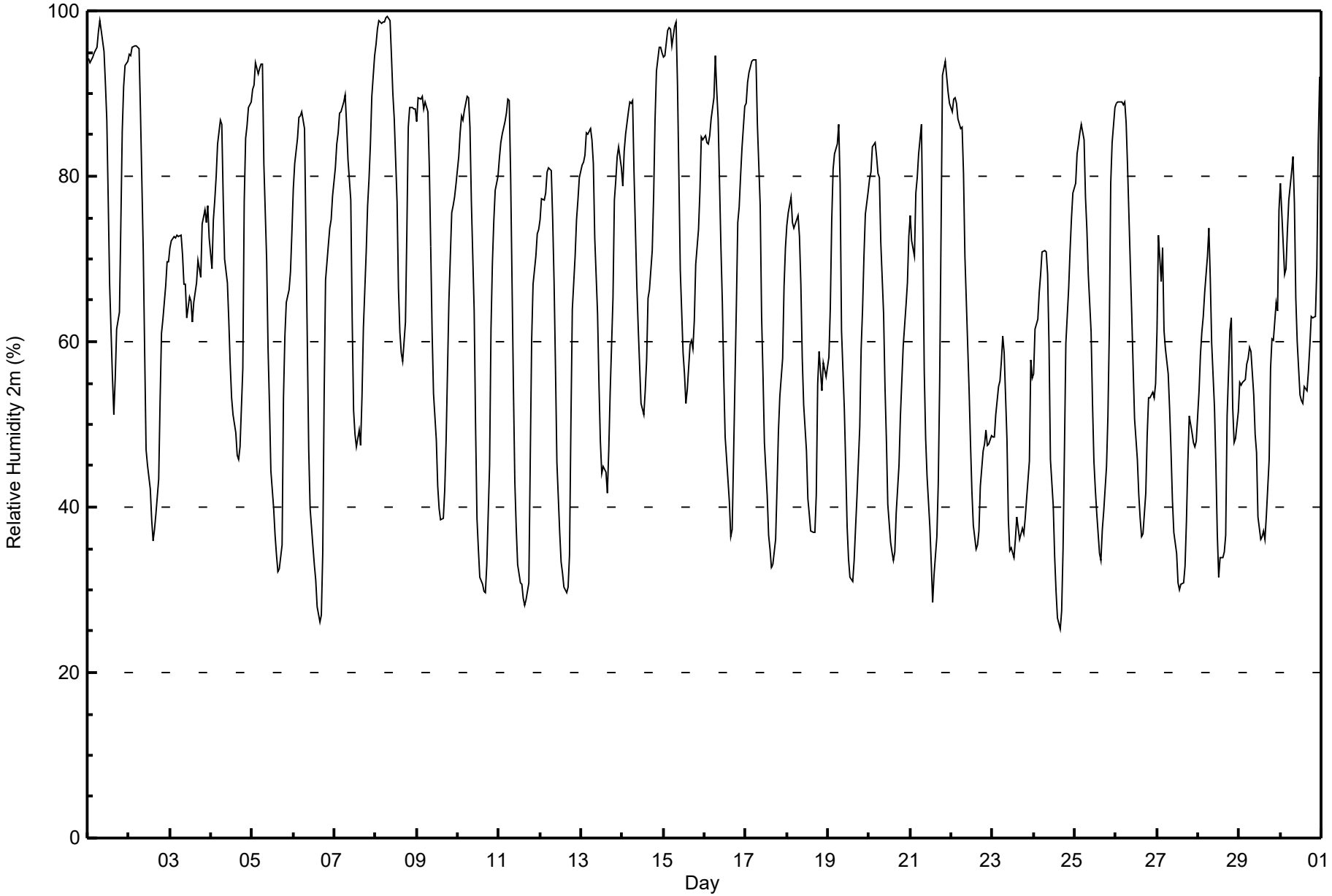
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	94.2	93.7	94.1	94.4	95.0	95.6	97.4	98.8	97.6	95.1	91.1	86.8	77.2	66.9	55.7	51.1	55.6	61.5	63.5	74.2	85.4	90.9	93.4	93.9	83.5	98.8
2-Sep	94.7	94.6	95.5	95.8	95.7	95.6	95.5	87.8	70.9	58.6	46.9	45.1	42.3	38.4	36.0	37.3	39.2	43.3	52.8	61.0	62.7	66.9	69.6	69.7	66.5	95.8
3-Sep	71.3	72.2	72.7	72.6	72.9	72.7	72.8	70.4	67.0	66.9	62.8	65.3	64.8	62.4	64.8	67.1	69.9	68.9	67.8	74.3	75.9	74.4	76.4	72.6	70.0	76.4
4-Sep	68.7	74.7	77.1	79.9	84.0	86.7	86.3	77.4	70.0	67.1	62.5	57.3	53.2	51.1	49.1	46.3	45.7	47.3	56.7	76.9	84.6	86.0	88.2	89.1	69.4	89.1
5-Sep	90.5	91.1	93.7	92.3	93.0	93.6	93.6	81.5	69.8	59.2	52.3	44.3	39.9	36.6	34.3	32.2	32.6	35.5	53.1	60.7	64.7	66.3	68.4	73.2	64.7	93.7
6-Sep	78.5	81.5	84.6	87.1	87.2	87.9	85.8	73.2	59.8	46.9	39.9	35.3	33.1	31.1	27.9	26.1	27.0	34.5	53.4	67.4	71.7	73.7	74.7	77.6	60.2	87.9
7-Sep	81.1	83.9	85.3	87.6	87.8	89.0	89.9	86.3	82.0	77.1	62.6	51.7	48.8	47.3	49.3	47.4	53.4	61.6	70.9	76.5	79.6	83.9	89.7	94.6	73.6	94.6
8-Sep	95.9	97.8	98.9	98.5	98.6	98.7	99.1	99.2	98.8	94.7	90.0	87.0	77.0	66.5	61.2	58.6	57.7	62.3	73.3	85.9	88.4	88.3	88.2	88.2	85.5	99.2
9-Sep	86.7	89.4	89.4	89.7	88.2	88.9	87.8	81.3	71.6	61.3	53.8	48.2	42.5	39.9	38.5	38.7	42.0	48.1	56.6	65.1	75.6	76.5	77.4	79.0	67.3	89.7
10-Sep	82.3	85.2	87.3	86.8	87.9	89.7	89.6	85.9	77.0	63.8	49.8	38.6	34.9	31.6	30.7	29.9	29.7	33.1	45.2	61.5	69.4	74.6	78.2	79.9	63.4	89.7
11-Sep	82.2	84.1	85.0	86.6	87.7	89.4	89.1	80.1	54.5	43.1	37.4	33.1	30.8	30.7	29.1	28.2	28.8	30.9	45.8	60.1	67.0	70.3	73.0	73.5	59.2	89.4
12-Sep	74.8	77.2	77.1	77.9	80.5	81.1	80.7	74.8	67.1	56.8	45.4	36.9	33.4	32.1	30.4	29.6	30.3	34.2	50.3	63.9	70.3	74.8	77.1	79.8	59.9	81.1
13-Sep	81.4	81.7	82.5	85.3	85.1	85.8	84.3	81.5	72.6	63.4	54.8	47.9	44.0	45.0	44.2	41.7	46.9	54.0	65.2	77.2	79.4	82.4	83.6	81.0	68.8	85.8
14-Sep	78.8	83.0	85.1	87.8	89.0	88.8	89.1	80.6	66.8	61.7	57.1	52.5	51.1	54.0	57.8	65.2	66.2	71.1	77.7	86.7	92.7	95.7	95.5	94.9	76.2	95.7
15-Sep	94.4	94.5	97.6	98.1	97.8	95.7	98.1	98.7	91.1	80.2	68.7	58.7	56.1	52.6	54.2	59.7	60.1	59.1	62.5	69.2	73.6	78.1	84.8	84.4	77.8	98.7
16-Sep	84.9	84.1	83.9	84.9	86.9	89.5	94.6	90.4	87.0	71.4	64.7	55.8	48.4	45.9	40.7	36.5	37.4	46.2	64.4	74.5	76.3	79.9	83.4	88.5	70.8	94.6
17-Sep	88.8	91.4	92.5	93.9	94.1	94.1	94.1	86.3	76.5	63.0	55.9	47.9	41.4	36.6	34.9	32.8	33.1	36.1	42.3	49.2	53.3	58.0	66.6	71.4	63.9	94.1
18-Sep	74.1	75.7	77.5	74.4	73.8	74.2	75.2	72.8	67.0	58.0	52.4	46.9	41.1	39.1	37.1	37.0	37.0	41.6	55.0	58.7	54.1	57.4	56.6	55.8	58.0	77.5
19-Sep	58.2	64.1	74.6	80.9	82.7	83.9	86.2	79.1	61.4	51.9	44.8	37.6	33.7	31.6	30.9	33.6	37.5	41.1	49.7	59.1	63.9	70.4	75.4	78.1	58.8	86.2
20-Sep	79.6	80.4	83.5	84.1	82.4	80.3	79.8	72.0	63.4	54.6	48.1	40.4	35.8	34.5	33.6	34.5	39.3	45.1	50.9	55.2	59.5	64.5	67.2	72.6	60.1	84.1
21-Sep	75.2	72.3	70.4	78.0	79.8	82.7	86.2	73.4	56.4	48.3	43.7	37.6	33.3	28.5	31.8	36.4	43.0	55.0	73.4	92.2	93.9	92.1	90.2	88.9	65.1	93.9
22-Sep	87.8	89.2	89.4	88.9	87.0	85.7	86.0	80.3	70.3	59.5	54.0	47.7	41.9	37.8	34.9	35.4	37.2	42.5	46.9	47.7	49.3	47.4	47.7	48.6	60.1	89.4
23-Sep	48.5	48.4	51.2	54.5	55.3	57.6	60.7	58.6	48.1	38.5	34.7	35.1	33.9	36.1	38.9	37.5	36.1	37.5	36.9	38.6	41.0	45.5	57.8	55.6	45.3	60.7
24-Sep	56.1	61.5	62.7	65.9	68.2	70.9	71.0	70.8	68.1	59.4	45.8	40.1	34.0	29.8	26.7	25.2	27.4	34.9	46.9	59.8	66.4	71.0	75.0	78.0	54.8	78.0
25-Sep	79.2	82.6	83.8	85.2	86.3	84.4	77.4	73.6	68.1	61.2	52.5	45.6	42.3	39.3	34.4	33.5	37.2	39.5	44.9	50.9	61.4	79.2	84.1	88.2	63.1	88.2
26-Sep	88.8	89.0	89.1	89.0	88.7	89.0	86.4	81.1	69.1	63.2	56.8	50.7	45.8	41.5	38.6	36.4	36.8	41.8	48.7	53.2	53.1	54.0	53.2	54.9	62.5	89.1
27-Sep	61.4	72.9	67.3	71.3	61.3	59.2	56.2	51.9	46.7	40.9	36.9	34.4	30.9	30.0	30.7	30.8	32.9	38.3	45.5	51.0	48.9	47.8	47.3	48.0	47.6	72.9
28-Sep	54.1	58.5	61.2	63.0	65.9	70.3	73.7	67.7	59.9	52.0	45.0	36.8	31.5	33.8	33.9	34.5	36.7	51.1	61.4	62.9	52.0	47.7	48.4	51.6	52.2	73.7
29-Sep	55.1	54.7	55.2	55.5	57.3	58.0	59.3	58.9	53.6	48.8	46.5	38.8	36.1	36.4	37.1	36.1	39.0	45.7	56.8	60.3	60.2	64.7	63.7	76.0	52.2	76.0
30-Sep	79.1	75.6	68.1	68.8	73.3	77.2	80.5	82.4	76.8	65.2	60.1	53.6	52.8	52.6	54.5	54.1	56.4	59.4	63.1	62.8	63.1	69.0	83.9	92.0	67.7	92.0
	77.5	79.5	80.5	82.0	82.4	83.2	83.5	78.6	69.6	61.1	53.9	47.9	43.7	41.3	40.1	39.8	41.7	46.7	56.1	64.6	67.9	71.0	74.0	76.0	Diurnal Average	
	95.9	97.8	98.9	98.5	98.6	98.7	99.1	99.2	98.8	95.1	91.1	87.0	77.2	66.9	64.8	67.1	69.9	71.1	77.7	92.2	93.9	95.7	95.5	94.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mackay River - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	119	16.53	16.53
40 - 60	192	26.67	43.19
60 - 80	211	29.31	72.50
80 - 100	198	27.50	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Mackay River - September 2025

Maximum Value: 0.9 mm on Sep 1 07:00

Maximum Daily Total: 1.9 mm on Sep 21

Minimum Value: 0.0 mm on Sep 1 01:00

Minimum Daily Total: 0.0 mm on Sep 2

Maximum Diurnal Total: 0.9 mm at hour 7

Minimum Diurnal Total: 0.0 mm at hour 3

Monthly Total: 5.26 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} = 0.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

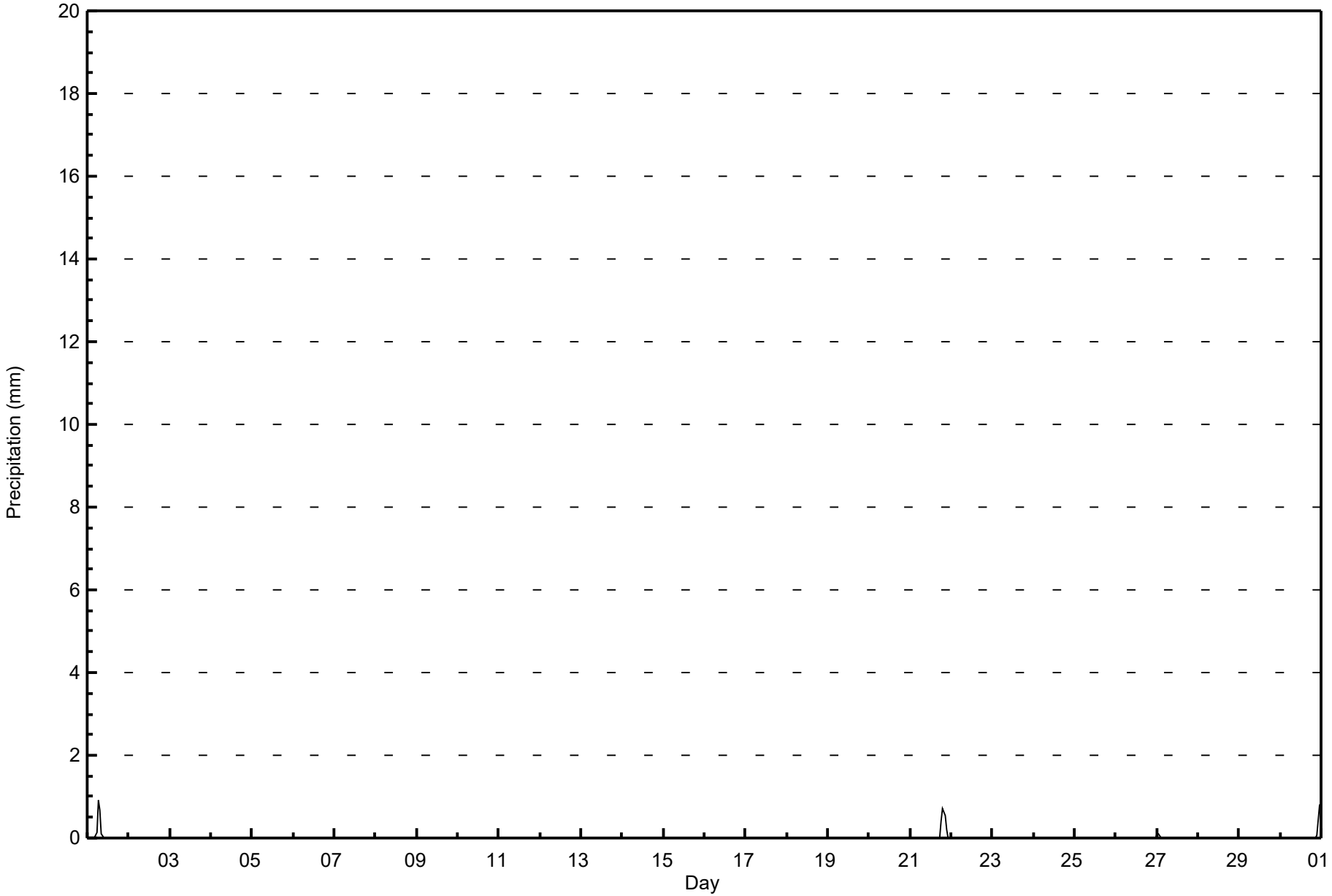
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.9
2-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.6	0.2	0.0	0.0	1.9	0.7
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	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	0.0	0.0	0.2	0.1
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.8	1.3	0.8
	0.1	0.1	0.0	0.0	0.0	0.1	0.9	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.6	0.3	0.5	0.8	Diurnal Average	
	0.1	0.1	0.0	0.0	0.0	0.1	0.9	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.7	0.6	0.2	0.5	0.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Mackay River - September 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	713	99.03	99.03
0.4 - 0.5	2	0.28	99.31
0.6 - 0.7	3	0.42	99.72
0.8 - 1.4	2	0.28	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mackay River - September 2025

Maximum Speed: 14 km/h on Sep 15 17:00

Maximum Daily Speed Average: 8.7 km/h on Sep 23

Minimum Speed Value: 0 km/h on Sep 10 20:00

Minimum Daily Speed Average: 1.4 km/h on Sep 3

Maximum Diurnal Speed Average: 4.9 km/h at hour 13

Minimum Diurnal Speed Average: 1.1 km/h at hour 19

Monthly Average Velocity: 3.1 km/h 193.2 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 4 Median = 6 Q_3 = 9 P_{90} = 11 P_{99} = 14

Hours in Service: 720

Hours of Data: 717

Hours of Missing Data: 3

Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	SSE2	SE1	SE2	S1	UO	UO	SE3	SE1	E2	S3	WSW4	WSW4	N7	NNE10	NNE9	NNE8	NE9	NE10	NNE8	NNE5	NNE2	ESE1	S0	S1	NE2.4	NNE10
2-Sep	SSE1	SE2	SE2	SSE1	SE1	SE2	SE2	SE3	SE4	SSE5	SE8	SE7	ESE9	SE8	SE8	SSE8	ESE9	ESE9	ESE6	ESE6	ESE8	SE7	SE6	SE6	SE5.3	ESE9
3-Sep	SE6	SE7	SSE7	SSE9	SSE9	S9	S7	S9	S10	S8	SSW6	SSW6	SW5	WNW7	NW8	NNW7	NNE12	N14	NNW12	NW10	NW11	NNW12	NW8	NNW11	W1.4	N14
4-Sep	NW10	NW9	NW11	NW9	WNW8	WNW8	WNW8	NW11	NW14	NW14	NW12	NW12	NW12	NW12	WNW12	NW12	NW10	N7	NNE4	ESE2	ESE2	SE2	SE3	SSE3	NW7.3	NW14
5-Sep	SSE3	SSE3	S4	SSE4	SSE3	SE4	SSE5	SSE6	SSE7	SSW8	SSW7	SSW6	S6	S5	S4	S5	S5	SSE4	ESE3	ESE6	ESE7	ESE8	ESE7	ESE6	SSE4.6	SSW8
6-Sep	SE5	SE6	SE6	SE6	SE6	SE5	SE6	SE6	SE7	SSE6	SSE7	SE8	SSE9	S9	S8	SSW8	SSW9	SW4	SE2	SSE4	SE4	SSE4	S6	SSE3	SSE5.6	SSE9
7-Sep	SE3	SE3	SE3	SSE4	SE3	SE3	S2	WNW3	W3	WSW4	SSE1	NNE5	N8	NNE6	NNE3	NNE4	NE8	NE9	NE6	NE4	NNE5	NNE6	NNE3	NE2	NE2.3	NE9
8-Sep	UO	NNE2	NNE5	NNE4	NNE3	WNW2	WSW2	N2	NNE4	NE5	NE4	NW1	ESE4	ESE1	NNE5	N4	N4	NNE4	ENE3	ESE3	SE3	SE4	SE4	SE5	NE2.0	NNE5
9-Sep	SE6	SSE3	SE4	SE5	SE6	SE5	SE6	SE6	SSE7	S8	S9	SSE11	S11	S11	S9	SSW9	S9	SSW6	SW4	SSW3	SSW2	S3	S5	S4	SSE5.9	S11
10-Sep	S4	S3	SW3	W4	WSW3	W3	W4	W3	W4	W4	NW8	NW9	NW7	WNW7	W7	W6	WSW5	WSW4	SW2	SE0	SSE2	SE3	SE3	SE3	W2.9	NW9
11-Sep	SE2	SSE2	SSE2	SE3	SE2	SE2	SSE3	SSE3	SSE4	S6	S6	S8	S8	S9	SSE8	SSE9	SSE8	S6	SSE3	SE3	SE4	SSE4	SSE4	SSE4	SSE4.7	SSE9
12-Sep	SSE5	SSE5	S6	S6	S7	S8	S8	S10	S10	S11	S10	S12	SSW11	SSW11	SSW11	SSW9	SSW10	S6	S3	SE3	SSE2	SE3	SSE3	SSE3	S6.9	S12
13-Sep	SSE4	SE4	SE3	SE4	SE6	SE7	SSE6	SE4	SE5	SSE6	SSE6	SSE5	SSE5	SSE5	ESE4	NE5	NNE6	NNE5	NE3	E2	ESE4	SE3	SE4	SE5	SE3.7	SE7
14-Sep	SSE6	SE6	SE3	ESE2	SE4	SE4	SE4	SE4	SSE4	SSE8	S8	S8	S9	SSE8	SE7	E10	SSE14	SSE9	SSE7	SE5	SSE2	S1	SE2	SSE3	SSE5.3	SSE14
15-Sep	SSE2	SE4	SSE2	S4	S3	SSW3	SW5	W6	W6	W7	WNW8	WNW8	W8	W9	W11	WNW14	NW14	WNW12	NW8	WNW6	NW8	WNW6	WNW5	WNW5	WNW5.5	NW14
16-Sep	W3	WNW6	WNW7	WNW6	W2	WNW2	W3	WSW5	W5	WNW6	W6	WNW5	W4	WSW5	W4	SSW2	S3	SSE3	SE3	SE4	SE6	SE5	SE5	SE5	WSW2.1	WNW7
17-Sep	SE5	SE5	SE5	SE5	SE5	SE5	SE5	SE7	SE8	SSE9	SSE10	SSE10	SSE10	SSE12	SE12	SSE11	SE11	SE9	SE7	SE7	SE8	SE8	SE9	SE8	SE8.0	SE12
18-Sep	SE7	SE7	SE7	SSE10	SSE11	S11	S11	S12	SSW12	SSW11	SW11	SW9	SW8	SSW10	SSW10	SW9	SW7	SW5	SSW4	SSW5	SW5	SW5	SW4	SW5	SSW7.0	S12
19-Sep	WSW4	SW4	SSW4	SSE3	SSE4	SSE4	SSE4	S5	SW5	WSW6	SW7	WSW7	SW10	SW10	SW9	SW7	SW5	SW4	S2	SSE3	S5	SSE3	SSE4	SE4	SSW4.3	SW10
20-Sep	SSE5	SSE6	SSE5	SSE5	S8	S8	S8	S10	S11	S10	S10	S12	SSW13	S14	S12	S13	S8	SE5	SE6	SE6	SE6	SE5	SE5	SSE5	S7.6	S14
21-Sep	S5	S6	SSW5	WSW5	SW3	SW3	SW3	SW4	WSW5	WNW7	W4	W5	WSW6	W8	W8	W7	W7	W8	W5	SW3	SW5	WSW5	SW6	SW7	WSW4.7	W8
22-Sep	SW7	SSW7	SW7	SW7	SW7	SW7	SSW6	SSW6	SW6	WSW9	SW10	SW9	SW12	SW11	SW12	SW10	SSW9	S7	S6	S8	S8	S10	S9	S10	SSW7.8	SW12
23-Sep	S11	SSW10	S9	S10	S10	SSW9	SSW7	WSW6	WSW12	WSW12	WSW11	WSW11	WSW12	SW10	SSW10	SSW11	SW10	SSW10	SSW10	SSW8	SW8	SSW6	S5	SSW6	SW8.7	WSW12
24-Sep	SSW5	S6	S6	S7	S6	SSW6	SSW7	SW6	SW6	SW8	W11	WSW10	W10	W10	W10	W10	W9	WSW5	SSW3	S3	SSW3	SSW3	S3	SE2	SW5.1	W11
25-Sep	SE4	SE4	SE4	SE4	SSE6	SSE7	S8	S6	S10	S9	S10	S10	SSW11	S9	S10	SSE12	SSE9	S8	S8	SSW8	SW9	W9	SW5	SSW5	S6.9	SSE12
26-Sep	SSW6	SSW5	SW5	SW5	SW4	SW5	SW5	WSW7	WSW9	W10	W9	W12	W11	W11	W11	W10	WSW10	WSW6	SSW6	SSW6	SSW7	S8	S8	S8	WSW6.6	WSW12
27-Sep	S8	S6	SSW10	SSW10	WSW12	WSW10	WSW12	WSW13	WSW13	WSW14	WSW13	WSW13	WSW12	WSW12	WSW10	WSW9	WSW8	SW5	SW3	WSW3	SW5	SW6	SSW7	SSW7	SW8.6	WSW14
28-Sep	SW7	SW7	SW7	WSW7	WSW7	WSW5	WSW6	W7	W7	WSW6	WSW5	SSW3	SSW6	SSW7	SSW6	SSW5	S4	SE2	SE2	ESE5	ESE6	ESE6	ESE6	ESE7	SSW3.5	W7
29-Sep	ESE7	ESE7	ESE9	ESE10	ESE10	ESE12	ESE12	ESE11	ESE10	ESE11	ESE9	SSE11	S13	S12	SSE11	SSE11	SSE8	SSE4	SE4	ESE5	ESE4	ESE4	ESE4	E2	SE7.5	S13
30-Sep	NE1	ESE6	SE6	ESE4	WSW4	WNW4	WNW3	NW4	W1	WNW4	NW6	N8	N7	NNE8	NE8	NNE9	NNE9	NNE8	NNE7	NNE6	NNE6	NNE5	NNE6	N6	NNE3.8	NNE9
	SSE3.4	SSE3.4	S3.3	S3.3	S3.8	S3.7	S3.8	SSW3.7	SSW3.9	SW4.6	SW4.2	SW4.5	SW4.9	SW4.7	SW3.9	SW3.5	SSW2.5	SSW1.3	SSE1.1	SSE2.1	SSE2.2	SSE2.2	SSE2.9	SSE2.8	Diurnal Average	
	S11	SSW10	NW11	SSW10	WSW12	ESE12	WSW12	WSW13	NW14	NW14	WSW13	WSW13	SSW13	S14	SW12	WNW14	NW14	N14	NNW12	NW10	NW11	NNW12	S9	NNW11	Diurnal Maximum	

UO - Unstable Operation

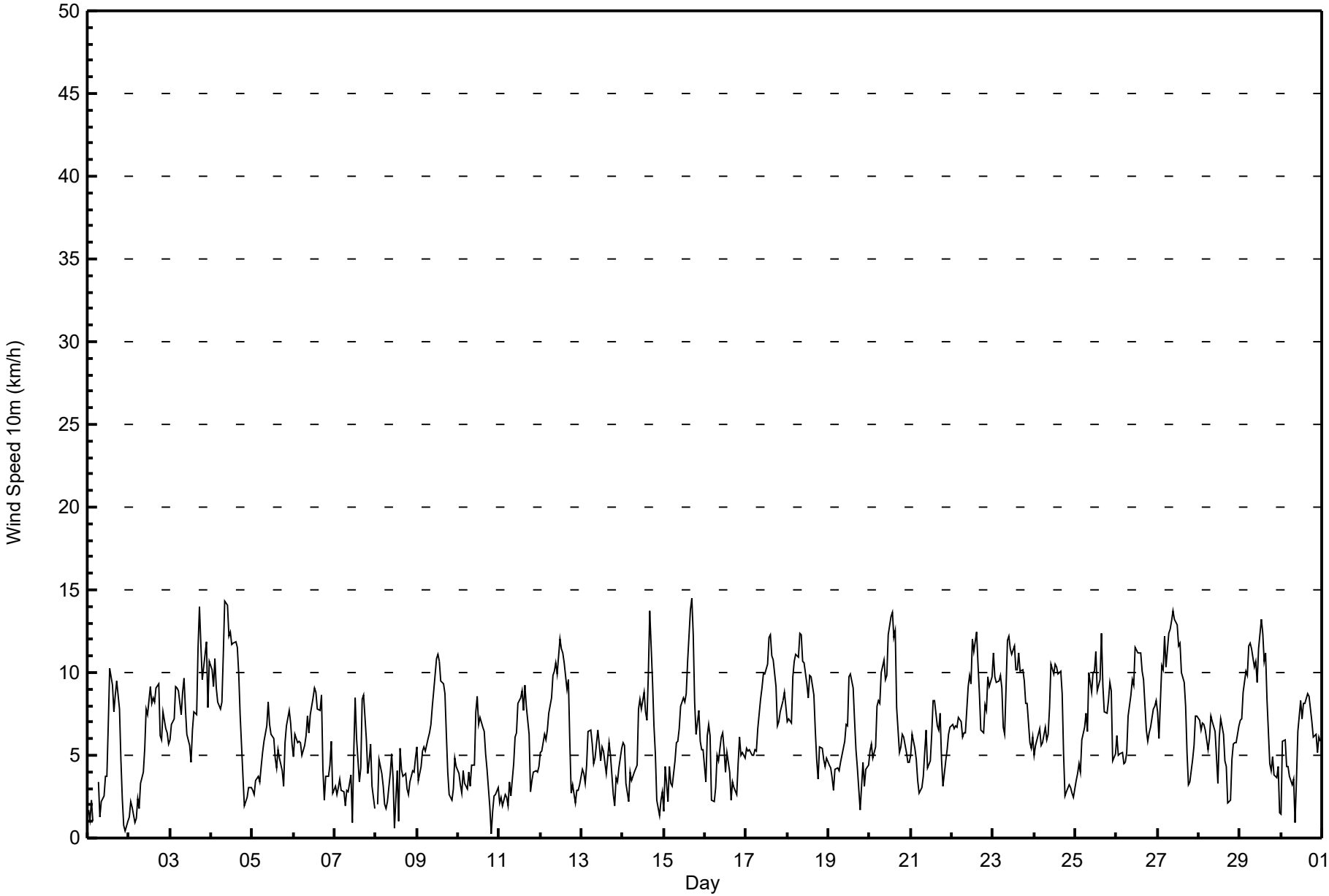
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mackay River - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	303	42.26	42.26
6 - 11	368	51.32	93.58
12 - 19	46	6.42	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: 717

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Mackay River - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	3	17	7	1	3	17	81	54	28	16	30	19	16	9	2	0	303
6 - 11	6	16	5	0	1	25	42	39	73	47	33	20	29	15	15	2	368
12 - 19	1	1	0	0	0	2	1	3	8	2	2	13	0	3	8	2	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	10	34	12	1	4	44	124	96	109	65	65	52	45	27	25	4	717

Total Number of Valid Hours: 717

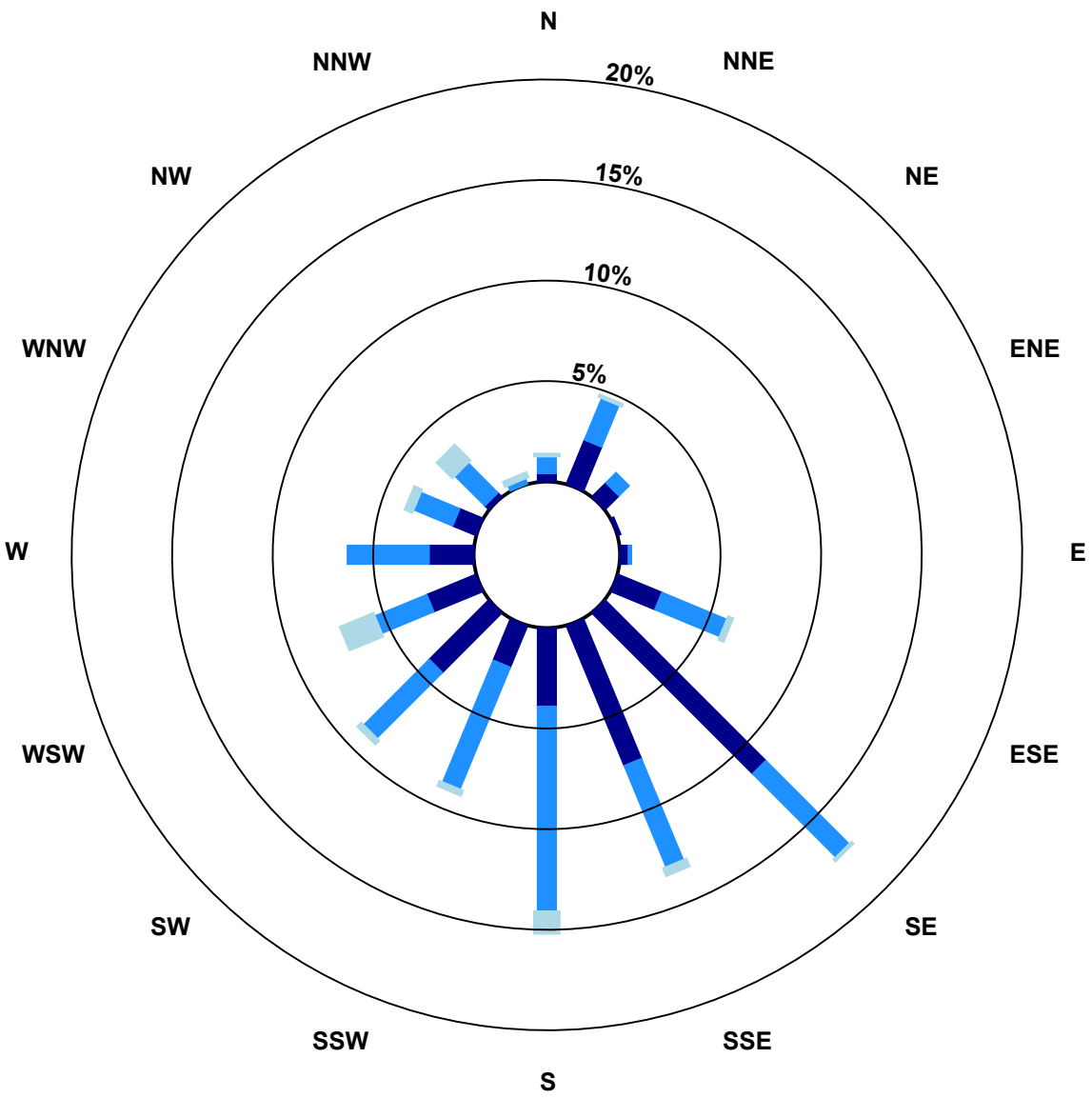
Total Number of Hours: 720

Wood Buffalo Environmental Association

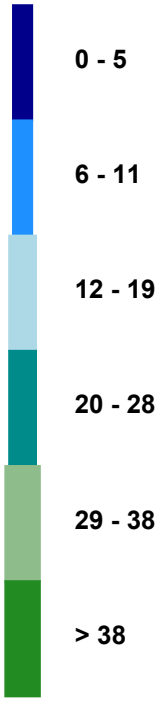
Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Mackay River



Classes (km/h)



Total Number of Valid Hours: 717

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Mackay River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Sep 27 10:00

Minimum Value: 0 km/h on Sep 2 02:00

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 1$ Median = 2 $Q_3 = 3$ $P_{90} = 4$ $P_{99} = 5$

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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-Sep	1	1	1	2	UO	UO	2	2	1	1	2	2	3	3	3	3	3	3	3	1	1	1	1	1	3
2-Sep	1	0	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2	3	2	2	2	2	2	2	3
3-Sep	2	2	2	3	3	3	2	3	3	2	3	2	2	3	2	2	4	5	3	3	4	4	2	4	5
4-Sep	3	3	3	3	2	3	3	4	4	5	4	4	4	4	4	4	3	2	2	0	1	0	1	1	5
5-Sep	0	1	1	1	1	1	1	2	2	3	3	3	3	3	3	3	2	2	1	1	2	2	2	2	3
6-Sep	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	2	1	1	1	1	1	1	3
7-Sep	1	1	1	1	1	1	1	2	1	2	1	2	3	2	2	2	3	3	2	1	2	2	1	1	3
8-Sep	UO	1	1	1	1	1	1	2	1	2	2	1	2	2	2	2	2	2	1	1	1	1	1	1	2
9-Sep	1	1	1	1	1	1	2	2	2	3	3	3	4	3	3	4	3	2	2	1	1	1	1	1	4
10-Sep	1	1	1	2	1	1	2	1	2	2	3	3	3	3	3	3	3	2	1	1	1	0	0	1	3
11-Sep	1	1	1	0	1	1	1	1	2	2	2	3	4	4	3	3	3	2	1	1	1	1	1	1	4
12-Sep	1	2	2	2	2	2	2	3	3	4	4	4	4	4	4	3	3	2	1	1	2	1	2	1	4
13-Sep	1	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2
14-Sep	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	4	5	3	3	2	2	1	1	1	5
15-Sep	2	1	2	2	1	1	2	2	2	2	3	3	3	3	5	5	5	4	3	2	2	2	1	2	5
16-Sep	1	2	2	2	1	1	1	2	2	2	2	3	2	2	2	2	2	1	1	2	1	1	1	1	3
17-Sep	1	2	2	1	1	1	1	2	2	2	3	3	4	4	4	4	4	3	2	2	2	2	2	2	4
18-Sep	2	2	2	3	4	4	3	4	5	4	4	4	3	4	4	4	3	2	1	1	2	1	2	2	5
19-Sep	2	1	1	1	1	1	1	1	2	2	3	3	4	4	3	3	2	2	1	1	1	1	1	1	4
20-Sep	1	1	1	1	2	2	2	3	3	3	3	4	5	5	4	4	3	1	1	2	2	1	1	1	5
21-Sep	1	2	2	2	1	1	1	1	3	3	2	2	3	4	4	3	3	3	3	2	1	2	2	2	4
22-Sep	2	2	2	2	2	2	2	2	2	4	4	4	5	5	5	4	3	2	2	2	2	3	3	3	5
23-Sep	3	3	3	2	3	2	3	4	5	5	5	4	5	4	4	4	4	4	3	3	2	2	2	2	5
24-Sep	1	2	2	2	1	2	2	2	2	3	4	4	4	4	4	5	4	3	1	1	1	1	1	1	5
25-Sep	1	1	1	1	1	1	2	2	3	2	3	4	4	3	3	4	3	3	3	4	4	5	2	1	5
26-Sep	2	1	1	2	2	2	2	3	4	4	4	5	5	5	4	4	4	3	2	2	2	2	2	2	5
27-Sep	3	2	4	4	5	5	5	5	6	6	6	6	5	5	4	4	3	2	1	1	1	2	2	2	6
28-Sep	2	2	3	3	3	2	2	3	3	3	2	2	3	3	3	2	2	1	1	1	1	2	1	2	3
29-Sep	2	2	2	3	3	3	3	3	3	3	3	4	5	4	3	4	3	1	1	1	2	2	2	1	5
30-Sep	1	2	2	2	2	2	2	1	2	1	2	2	3	3	3	3	3	2	2	2	2	1	2	2	3
	3	3	4	4	5	5	5	5	6	6	6	6	5	5	5	5	5	5	3	4	4	5	3	4	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mackay River - September 2025

Direction of Maximum Speed: 310 deg on Sep 15 17:00
Direction of Maximum Daily Speed Average: 215.0 deg on Sep 23

Direction of Minimum Speed: 144 deg on Sep 10 20:00

Direction of Minimum Daily Speed Average: 1.4 deg on Sep 3

Monthly Average Direction: 193.2 deg

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Percent Operational Time:	99.6

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	Average
1-Sep	148	146	142	179	UO	UO	144	125	97	185	248	248	351	29	15	28	42	34	32	29	28	104	183	174	35.1
2-Sep	163	145	145	166	144	134	141	144	143	156	133	128	109	124	143	152	115	116	118	122	121	130	138	146	131.2
3-Sep	136	142	149	163	168	170	176	180	191	189	194	213	225	282	315	335	19	1	342	325	321	337	326	334	275.5
4-Sep	317	312	314	308	287	285	291	304	321	318	318	319	310	305	303	323	323	352	12	118	123	134	129	148	313.4
5-Sep	154	154	171	162	159	143	157	158	168	200	205	193	188	180	176	182	184	154	122	122	121	116	120	123	159.7
6-Sep	144	142	146	141	144	144	146	142	143	152	155	143	157	172	176	192	202	219	142	149	145	167	182	156	159.3
7-Sep	134	129	143	150	143	146	169	285	271	239	161	14	7	26	19	16	35	36	42	34	24	26	29	39	37.8
8-Sep	UO	16	16	24	26	296	255	2	19	51	43	325	123	111	16	351	6	21	64	114	128	127	129	125	48.4
9-Sep	125	148	126	146	139	138	135	143	154	172	171	163	171	184	181	195	187	193	219	200	199	175	169	174	167.7
10-Sep	170	179	214	260	241	261	268	267	274	270	306	316	306	291	271	262	251	240	215	144	159	142	143	145	262.3
11-Sep	141	147	150	135	131	135	147	160	157	171	177	172	188	183	153	167	163	174	148	141	139	157	160	160	162.7
12-Sep	160	164	175	169	170	171	177	181	186	185	187	186	200	203	202	203	197	191	184	145	154	141	164	147	183.4
13-Sep	147	145	143	139	143	144	148	140	146	152	156	151	159	164	103	51	33	31	42	89	118	133	137	144	131.8
14-Sep	147	143	136	119	139	142	138	143	155	166	171	170	177	164	130	94	151	165	163	135	168	189	129	156	150.9
15-Sep	148	138	147	190	190	195	225	260	271	276	303	297	274	270	279	298	310	303	304	302	308	288	284	292	283.2
16-Sep	278	285	287	290	273	285	265	258	276	282	275	282	270	255	274	208	185	161	144	124	124	129	125	125	250.0
17-Sep	137	140	138	144	140	143	140	136	145	150	153	148	148	148	142	155	145	143	137	139	137	135	134	132	142.9
18-Sep	131	132	137	151	158	171	178	182	192	213	218	221	230	203	209	227	228	223	195	203	228	226	226	228	194.6
19-Sep	242	220	204	162	158	155	154	189	232	246	235	245	231	222	221	229	228	223	187	162	175	163	156	142	208.7
20-Sep	155	148	159	161	175	176	177	187	186	191	181	187	198	185	186	182	179	134	127	130	133	132	142	149	172.4
21-Sep	173	176	212	250	235	229	233	232	258	283	280	259	256	266	267	278	275	275	274	229	232	238	228	221	248.0
22-Sep	216	206	216	220	227	216	208	211	219	240	236	219	224	235	222	224	211	185	175	176	173	179	179	182	209.8
23-Sep	189	196	190	184	189	201	194	239	255	252	248	239	239	221	210	213	218	212	209	209	216	213	173	202	215.0
24-Sep	192	177	179	189	188	192	209	215	228	236	267	255	273	276	268	265	262	255	211	176	198	206	181	135	232.7
25-Sep	140	135	142	142	154	163	178	175	185	178	175	187	196	185	177	165	167	180	186	212	222	264	225	206	183.2
26-Sep	199	199	217	228	231	234	229	238	247	266	259	259	272	265	275	267	256	244	210	199	195	187	189	184	237.4
27-Sep	191	169	196	207	239	242	245	247	258	258	258	244	247	250	249	239	241	236	232	244	219	217	202	207	235.6
28-Sep	219	226	235	241	250	255	256	259	276	253	256	200	194	210	195	201	179	124	130	118	112	116	116	112	211.2
29-Sep	109	112	113	108	109	106	106	112	112	112	109	163	173	169	168	165	160	159	124	119	110	107	103	88	129.3
30-Sep	53	119	130	115	248	285	303	304	280	294	326	1	355	19	34	22	33	25	14	28	24	22	16	359	14.0
	168.6	164.4	173.2	176.8	181.7	182.4	187.6	199.0	208.9	216.7	219.7	214.5	217.7	215.8	215.0	216.4	202.8	195.0	160.0	155.3	163.1	164.1	160.9	163.9	
	Diurnal Average																								

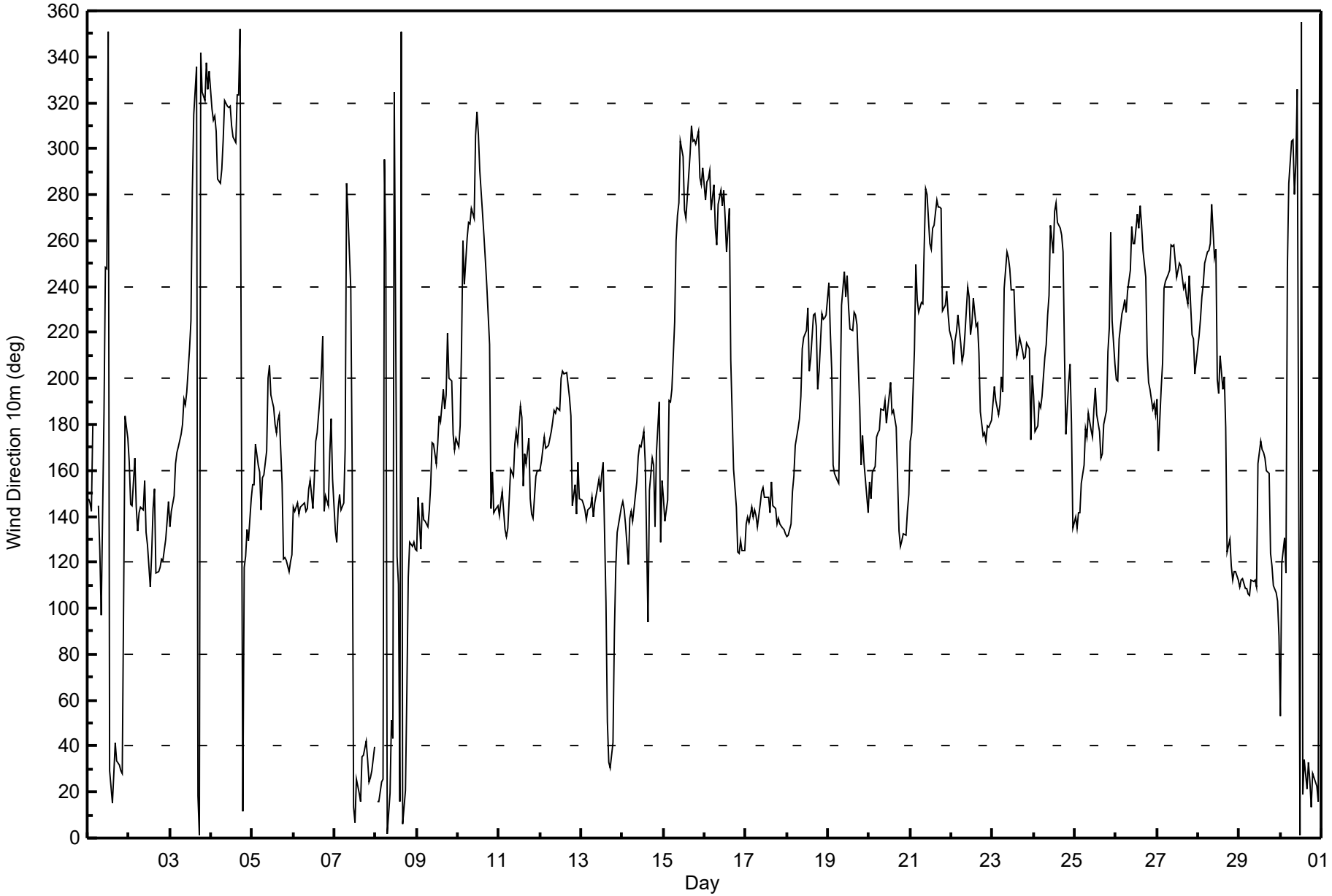
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mackay River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Mackay River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Sep 8 14:00

Minimum Value: 5 deg on Sep 11 00:00

Percentiles: P_1 = 8 P_{10} = 15 Q_1 = 21 Median = 27 Q_3 = 38 P_{90} = 46 P_{99} = 83

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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-Sep	35	44	42	92	UO	UO	24	88	54	30	47	53	46	29	32	41	28	27	24	18	21	58	32	65	92
2-Sep	46	12	22	42	35	17	37	19	28	31	34	36	30	36	41	31	28	20	16	15	17	20	23	24	46
3-Sep	21	23	25	26	25	26	25	24	24	26	40	30	44	43	26	32	26	28	23	20	21	23	18	21	44
4-Sep	21	18	19	20	24	24	25	26	24	24	28	30	29	32	28	32	29	29	39	34	15	13	14	15	39
5-Sep	16	13	15	15	19	14	12	23	25	31	45	56	57	61	86	60	50	27	18	14	15	17	16	16	86
6-Sep	17	10	10	11	15	14	17	20	22	33	34	36	33	38	43	36	31	26	19	8	9	13	18	37	43
7-Sep	15	23	17	20	23	15	57	55	42	40	98	48	33	42	51	42	25	24	26	26	22	21	19	41	98
8-Sep	UO	33	19	19	23	33	33	35	36	36	67	103	59	104	55	58	59	47	43	15	12	11	8	11	104
9-Sep	12	18	12	18	17	18	20	25	27	28	31	27	33	27	30	31	24	24	41	30	42	24	13	20	42
10-Sep	16	27	30	39	46	41	52	51	38	44	30	32	40	43	49	48	55	44	27	98	11	7	13	5	98
11-Sep	13	8	15	10	18	26	13	23	25	29	33	37	40	33	39	31	31	26	17	14	17	21	22	21	40
12-Sep	23	23	21	22	22	23	22	22	24	29	30	30	35	31	35	34	26	20	36	22	37	16	55	44	55
13-Sep	16	10	12	8	7	6	9	15	21	24	53	50	39	34	47	45	31	24	27	35	16	18	13	12	53
14-Sep	9	8	14	41	22	18	13	15	22	28	30	36	30	40	30	34	27	26	26	24	30	34	21	37	41
15-Sep	72	16	47	29	24	24	31	44	44	35	37	45	50	42	40	26	23	24	24	22	20	23	23	28	72
16-Sep	33	25	23	27	50	39	60	43	42	40	45	55	74	55	73	85	54	24	12	18	14	15	15	12	85
17-Sep	18	23	20	22	17	20	20	22	24	29	27	29	32	31	27	28	26	25	22	21	22	21	20	21	32
18-Sep	21	20	23	24	27	28	29	27	28	32	34	42	42	36	37	36	41	29	17	17	36	29	36	37	42
19-Sep	49	25	19	32	14	18	22	27	35	39	38	51	37	40	39	35	34	31	45	13	9	22	14	7	51
20-Sep	9	12	15	14	16	16	19	22	23	27	27	27	30	29	32	27	26	22	18	18	19	20	22	21	32
21-Sep	16	16	38	41	32	24	22	33	48	40	42	52	47	43	46	44	36	36	35	34	30	39	34	27	52
22-Sep	23	21	23	24	28	22	21	25	31	40	40	39	36	41	36	35	32	25	25	23	27	24	24	23	41
23-Sep	21	27	19	18	20	22	26	43	44	43	45	38	38	31	29	29	31	29	25	23	24	29	20	19	45
24-Sep	19	16	20	20	21	23	24	26	32	38	43	48	45	39	46	43	44	38	29	22	27	19	29	37	48
25-Sep	13	11	18	22	18	14	17	22	21	22	24	32	33	31	30	30	27	25	23	28	31	46	34	21	46
26-Sep	19	19	27	29	37	37	30	35	45	44	50	44	39	46	41	47	44	47	22	18	21	16	18	19	50
27-Sep	27	25	24	30	42	48	42	43	46	43	45	44	45	46	45	44	43	38	34	33	25	28	20	22	48
28-Sep	24	29	38	42	46	44	46	41	38	42	47	70	53	38	37	40	28	24	18	15	16	18	17	17	70
29-Sep	16	17	19	18	18	18	21	20	23	22	22	30	32	33	29	27	29	29	21	17	31	30	48	51	51
30-Sep	65	15	22	49	45	42	37	32	74	49	32	31	33	30	27	27	27	24	24	23	27	20	24	25	74
	72	44	47	92	50	48	60	88	74	49	98	103	74	104	86	85	59	47	45	98	42	58	55	65	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS21
CONKLIN
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
AUGUST 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	704	35	40	99.33	-	-	2	0	0.6	0
TRS(ppb) Average	698	36	46	98.66	1.3	0	1.3	0	0.5	0
THC(ppm) Average	705	34	39	99.33	-	-	2.9	-	2.4	-
NMHC(ppm) Average	705	34	39	99.33	-	-	0.141	-	0.028	-
CH4(ppm) Average	705	34	39	99.33	-	-	2.9	-	2.3	-
O3 (ppb) Average	698	38	46	98.92	-	-	59.1	0	36.5	-
NO2 (ppb) Average	700	35	44	98.79	-	-	9	0	1.9	-
NO (ppb) Average	700	35	44	98.79	-	-	27.2	-	3.2	-
NOX (ppb) Average	700	35	44	98.79	-	-	29.1	-	4.2	-
PM2.5 (ug/m3) Average	737	2	7	99.33	-	-	139.7	0	79	5
Temperature 2 m (C) Average	744	0	0	100	-	-	32.4	-	22.9	-
Relative Humidity (%) Average	737	0	7	99.06	-	-	100	-	98.6	-
Wind Speed 10 m (km/h) Average	719	0	25	96.64	-	-	18	-	12	-
Wind Direction 10 m (deg) Average	719	0	25	96.64	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.26	0.4	-	0	0	0	0.1	0.3	0.6	3.4
TRS (ppb) Average	686	0.25	0.1	-	0.1	0.2	0.2	0.2	0.3	0.4	0.6
THC (ppm) Average	687	2.19	0.2	-	2	2	2	2.1	2.3	2.5	3.3
NMHC(ppm) Average	687	0	0.002	-	0	0	0	0	0	0	0.031
CH4(ppm) Average	687	2.19	0.2	-	2	2	2	2.1	2.3	2.5	3.3
O3 (ppb) Average	687	22.73	13.7	-	0.9	2.5	10.6	25	32.6	38	56.5
NO2 (ppb) Average	685	1.28	1.1	-	0.1	0.4	0.6	1	1.6	2.4	10.4
NO (ppb) Average	685	0.59	2.6	-	0	0	0	0	0.2	1.1	44.3
NOX (ppb) Average	685	1.87	3.2	-	0.1	0.4	0.6	1.1	2	3.5	48.8
PM2.5 (ug/m3) Average	718	16.51	17.5	-	0.5	1.5	4.8	11.6	20.3	41.1	112
Temperature 2 m (C) Average	720	12.82	6.6	-	-2.2	4.6	8	12.4	17.3	22.1	28.4
Relative Humidity (%) Average	708	69.4	23.3	-	19.4	36.6	49	70.7	92.2	99	100
Wind Speed 10 m (km/h) Average	644	6	4	-	0	1	3	5	8	12	20
Wind Direction 10 m (deg) Average	644	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS 21)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Relative Humidity	01 Sep 2025 07:00	01 Sep 2025 07:00	1	Sensor operated out of range
Relative Humidity	02 Sep 2025 03:00	02 Sep 2025 08:00	6	Sensor operated out of range
Relative Humidity	15 Sep 2025 04:00	15 Sep 2025 08:00	5	Sensor operated out of range
Wind Speed, Wind Direction	02 Sep 2025 01:00	02 Sep 2025 05:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction	04 Sep 2025 22:00	04 Sep 2025 23:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	07 Sep 2025 01:00	08 Sep 2025 08:00	32	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Sep 2025 20:00	09 Sep 2025 08:00	13	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 03:00	11 Sep 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 20:00	12 Sep 2025 08:00	13	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Sep 2025 02:00	15 Sep 2025 07:00	6	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Sep 2025 23:00	16 Sep 2025 00:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.4 ppb on Sep 29 18:00

Maximum Daily Average: 1.0 ppb on Sep 29

Minimum Value: 0.0 ppb on Sep 2 21:00

Minimum Daily Average: 0.0 ppb on Sep 26

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 5

Monthly Average: 0.26 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} = 2.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.0	0.1	0.1	0.1	Z	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.4	0.3	0.4	0.5	0.7	0.4	0.2	0.2	0.2	0.4	0.2	0.7
2-Sep	Z	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.2	1.1	0.6	0.5	0.5	0.8	1.1	1.1	1.4	1.7	0.8	0.2	0.0	0.1	0.3	0.4	0.5	1.7
3-Sep	0.2	Z	0.1	0.0	0.4	0.4	0.3	0.4	0.3	0.4	1.1	1.0	0.6	0.5	0.5	0.4	0.2	0.1	0.5	0.3	0.0	0.2	0.2	0.1	0.3	1.1
4-Sep	0.2	0.9	Z	0.0	0.1	0.0	0.1	0.2	0.4	0.3	0.1	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	0.1	0.9
5-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	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	0.1	0.1	0.0	0.1	0.2
6-Sep	0.1	0.1	0.2	0.1	Z	0.1	0.1	0.1	0.8	2.8	2.0	1.1	0.4	0.4	0.3	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.4	2.8
7-Sep	0.1	0.1	0.1	0.0	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4
8-Sep	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
9-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.3	1.0	1.1	0.6	0.6	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.7	0.8	0.9	0.4	1.1
10-Sep	0.5	0.3	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.3	0.4	0.5	0.5	0.2	0.2	0.1	0.2	0.2	0.1	0.3	0.5
11-Sep	0.2	0.2	0.3	Z	0.1	0.1	0.1	0.2	0.2	0.6	1.3	1.5	1.6	0.9	0.6	0.6	0.7	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.5	1.6
12-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.3	1.0	0.7	0.8	0.6	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
13-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.8	0.6	0.2	0.1	0.0	1.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	1.4
14-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.5	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.5
15-Sep	0.1	Z	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	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2
16-Sep	0.1	0.2	Z	0.1	0.0	0.0	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	0.0	0.0	0.1	0.1	0.1	0.2
17-Sep	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.6	0.7	0.6	0.7	1.4	0.7	1.2	2.5	1.7	0.5	0.7	0.8	0.4	0.6	2.5
18-Sep	0.6	1.1	1.4	1.0	Z	1.0	0.7	0.6	0.4	0.3	0.5	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	0.5	1.4
19-Sep	0.2	0.3	0.2	0.2	0.2	Z	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.3
20-Sep	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.4	0.6	0.3	0.3	0.3	0.3	0.3	0.5	0.8	1.2	0.4	0.2	0.6	0.5	0.4	0.4	1.4
21-Sep	0.2	Z	0.2	0.0	0.1	0.1	0.2	0.1	0.4	0.5	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.8	0.3	0.2	0.3	0.3	0.3	0.3	0.8
22-Sep	0.4	0.4	Z	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.4
23-Sep	0.2	0.3	0.3	Z	0.2	0.0	0.1	0.1	0.2	0.2	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	0.3
24-Sep	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	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
25-Sep	0.0	0.1	0.2	0.2	0.2	Z	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.6
26-Sep	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
27-Sep	0.2	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2
28-Sep	0.2	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.4	0.1	2.0	0.2	2.0
29-Sep	2.3	1.3	2.2	Z	0.2	0.0	0.1	0.8	1.9	1.6	1.1	0.7	0.3	0.7	0.7	0.3	0.3	3.4	2.4	0.7	0.4	0.4	1.1	0.5	1.0	3.4
30-Sep	0.5	0.7	1.2	1.7	Z	1.1	0.4	0.3	0.1	0.4	0.8	0.4	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4	1.7
	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.1	0.2	0.2	0.2	Diurnal Average	
	2.3	1.3	2.2	1.7	0.4	1.1	0.7	0.8	1.9	2.8	2.0	1.5	1.6	0.9	1.1	1.4	1.4	3.4	2.5	1.7	0.5	0.7	1.1	2.0	Diurnal Maximum	

Z - zerospan C - Calibration

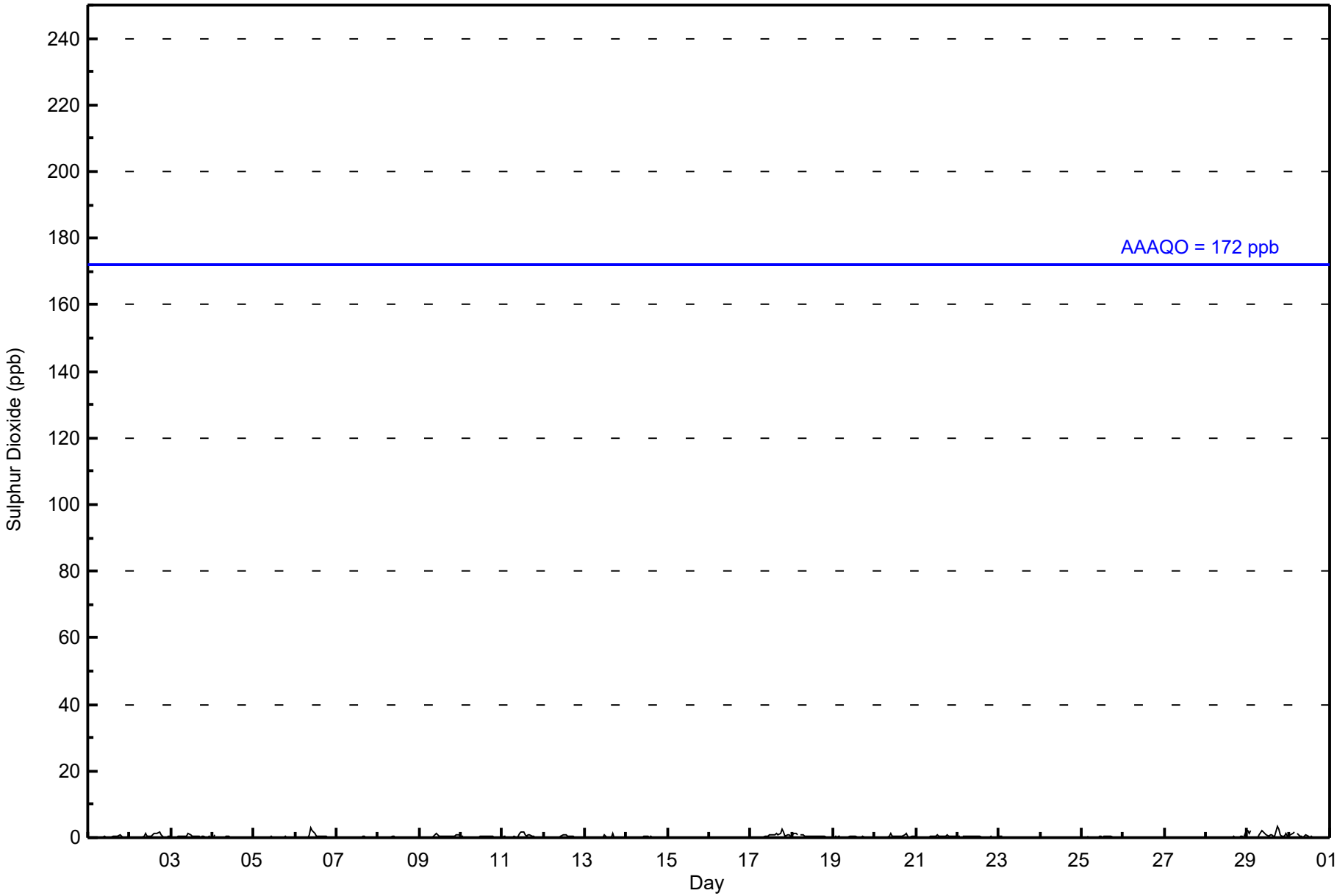
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Conklin - September 2025



Sulphur Dioxide (SO_2) - ppb
Conklin - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	687	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: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Conklin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	13	6	6	6	6	28	63	114	97	49	48	30	35	31	35	50	617
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	13	6	6	6	6	28	63	114	97	49	48	30	35	31	35	50	617

Total Number of Valid Hours: 617

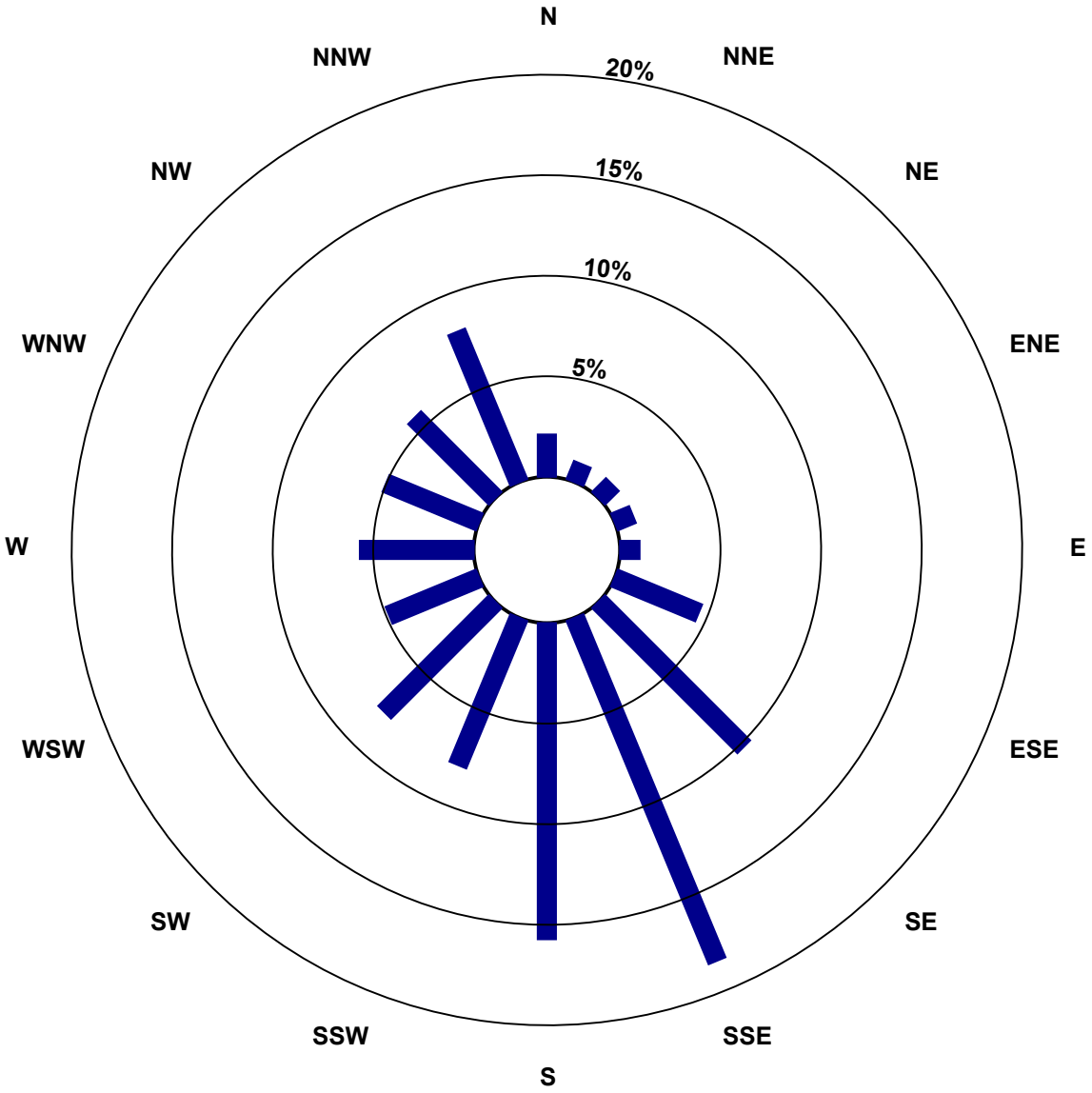
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Conklin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

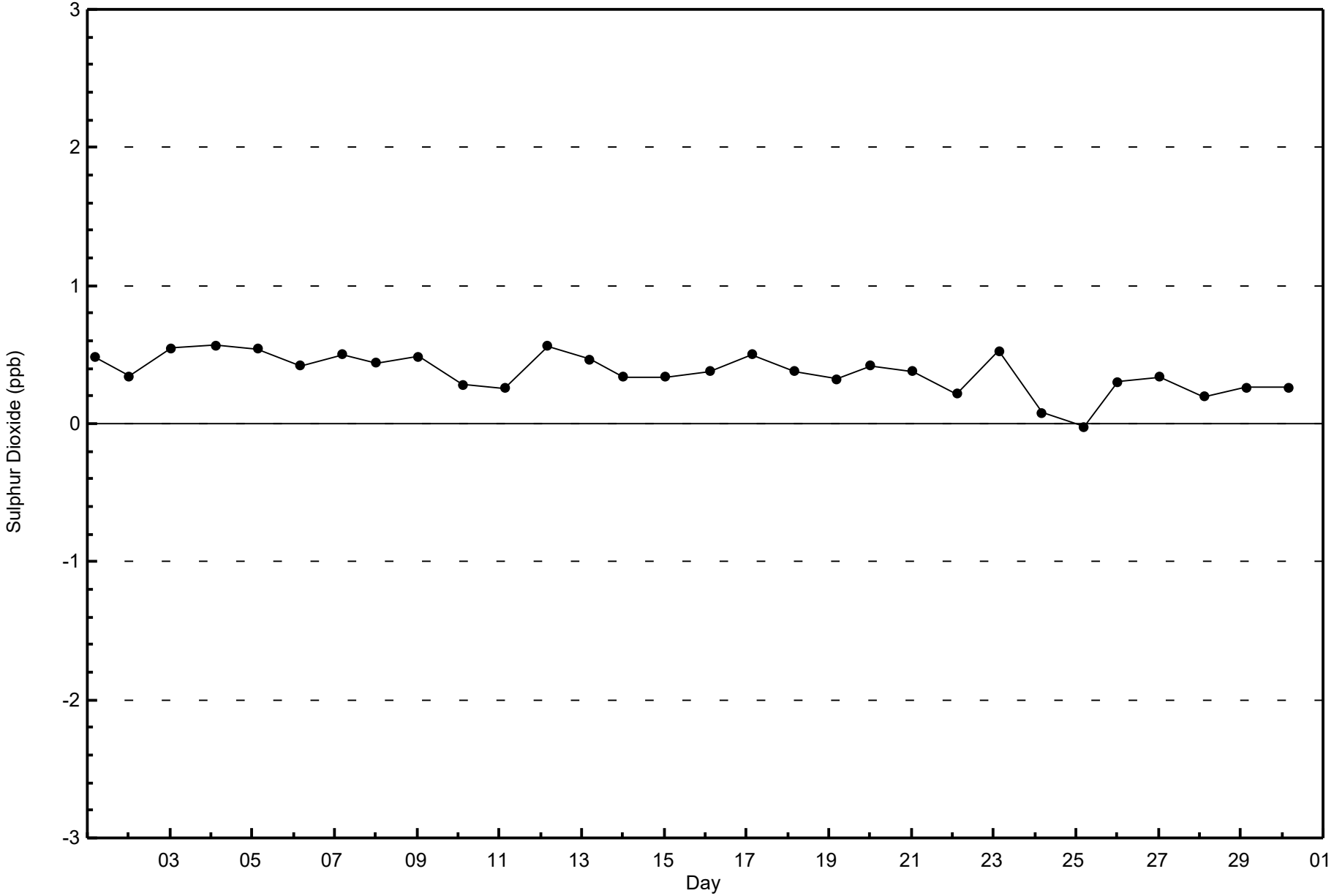
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - September 2025

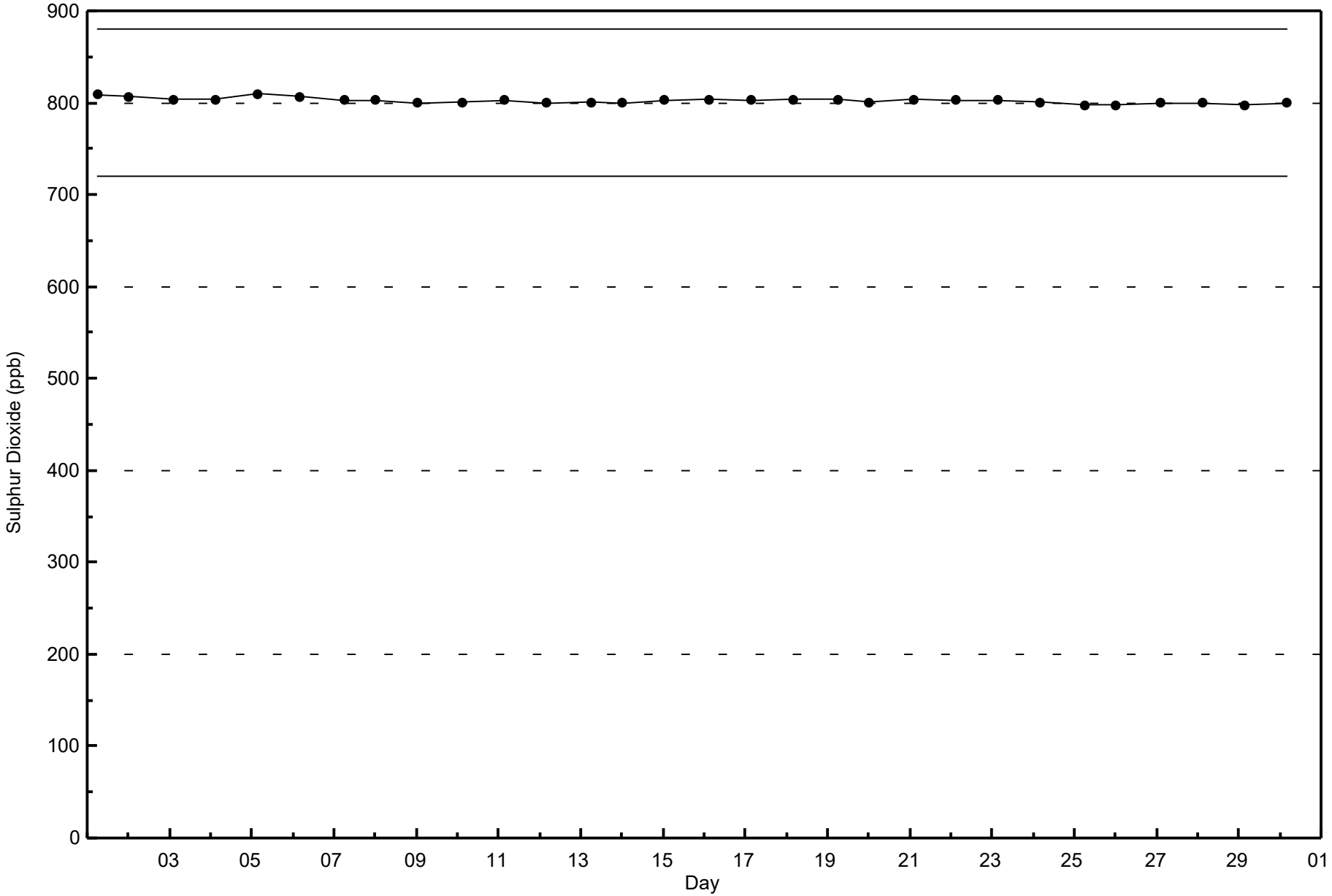


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.7 ppb on Sep 1 23:30

Maximum Daily Average: 0.4 ppb on Sep 18

Minimum Value: 0.1 ppb on Sep 17 07:30

Minimum Daily Average: 0.2 ppb on Sep 25

Maximum Diurnal Average: 0.3 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 4

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 0.5

Periods in Service:	1440
Periods of Valid Data:	1372
Periods of Invalid Data:	68
Periods of Calibration:	68
Percent Operational Time:	100.0

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
1-Sep	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.7	0.3	0.7
	SP	0.3	0.2	0.2	0.2	0.2	0.3	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	0.2	0.3	0.2	0.3		
2-Sep	0.3	Z	0.1	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	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.4
	0.2	SP	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3		
3-Sep	0.3	0.2	Z	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.2	0.4	0.4	0.4	0.4	0.5
	0.2	0.2	SP	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.5	0.5	0.5		
4-Sep	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.6
	0.5	0.6	0.5	SP	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2		
5-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.1	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	0.1	0.2	0.3
	0.2	0.1	0.1	0.2	SP	0.1	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	0.1		
6-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.3	0.3	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	0.3
	0.1	0.1	0.1	0.1	0.1	SP	0.1	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	0.2	0.2	0.2		
7-Sep	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	SP	0.2	0.1	0.1	0.2	0.2	0.1	0.2	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		
8-Sep	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	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
	0.2	SP	0.2	0.1	0.1	0.1	0.1	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	0.1		
9-Sep	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	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	0.2	0.4
	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.2	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	0.3	0.4	0.3		
10-Sep	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.4
	0.3	0.3	0.3	SP	0.3	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2		
11-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4
	0.2	0.2	0.2	0.2	SP	0.2	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4		
12-Sep	0.4	0.3	0.3	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4
	0.4	0.3	0.3	0.2	0.2	SP	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	0.2	0.2	0.2	0.2		
13-Sep	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3
	SP	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2		
14-Sep	0.2	Z	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3
	0.2	SP	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2		
15-Sep	0.3	0.2	Z	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	0.2	0.2	0.3	0.4
	0.3	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.2	0.1	0.3	Z	0.4	0.4	0.5	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	0.2	0.2	0.2	0.2	0.3	0.5
	0.1	0.2	0.3	SP	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	0.2	0.2	0.2	0.2	0.1		
17-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	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	0.2	0.3
	0.1	0.1	0.1	0.1	SP	0.1	0.1	0.2	0.2	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		
18-Sep	0.3	0.4	0.4	0.4	0.5	Z	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	0.3	0.3	0.3	0.4	0.4	0.4	0.6
	0.4	0.4	0.4	0.4	0.5	SP	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	0.3	0.3	0.4	0.4	0.4		
19-Sep	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	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4
	SP	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	0.3	0.3	0.2	0.3	0.3	0.3		
20-Sep	0.2	Z	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
	0.2	SP	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2		
21-Sep	0.2	0.2	Z	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	0.3	0.2	0.6	0.4	0.4	0.3	0.3	0.6
	0.2	0.2	SP	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	0.3	0.3	0.3	0.5	0.4	0.4	0.3		
22-Sep	0.3	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3
	0.3	0.2	0.3	SP	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2		
23-Sep	0.3	0.2	0.2	0.2	Z	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	0.3
	0.2	0.2	0.2	0.2	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	0.3		
24-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1		
25-Sep	Z	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	SP	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	0.3	0.2	0.2	0.2	0.2	0.2		
26-Sep	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	SP	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	0.3	0.2	0.2		
27-Sep	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	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	SP	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	0.2	0.2	0.2	0.2	0.2	0.2		
28-Sep	0.2	0.2	0.2	Z	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	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	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	0.3	0.3	0.3	0.3	0.2	0.3		
29-Sep	0.3	0.2	0.2	0.2	Z	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	0.4	0.3	0.3	0.3	0.3	0.4
	0.3	0.2	0.2	0.2	SP	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	0.3	0.4	0.3	0.3	0.3		
30-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4
	0.3	0.3	0.3	0.3	0.3	SP	0.3	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	0.2	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	Diurnal Average	
	0.5	0.6	0.5	0.4	0.5	0.5	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	0.6	0.5	0.5	0.7	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

Conklin - September 2025

Maximum Value: 0.6 ppb on Sep 18 07:00

Maximum Daily Average: 0.4 ppb on Sep 18

Minimum Value: 0.1 ppb on Sep 6 05:00

Minimum Daily Average: 0.2 ppb on Sep 25

Maximum Diurnal Average: 0.3 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 4

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.4 P_{99} = 0.5

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	Z	0.3	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.3	0.5	0.3	0.5
2-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4
3-Sep	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.5
4-Sep	0.5	0.6	0.5	Z	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.6
5-Sep	0.2	0.1	0.1	0.1	Z	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	0.1	0.2	0.2
6-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.3	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	0.3
7-Sep	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
8-Sep	0.2	Z	0.2	0.2	0.1	0.1	0.1	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
9-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	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	0.3	0.4	0.3	0.2	0.4
10-Sep	0.3	0.3	0.3	Z	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	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	0.3
11-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4
12-Sep	0.4	0.3	0.3	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4
13-Sep	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	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	0.3
14-Sep	0.2	Z	0.2	0.2	0.2	0.2	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	0.3	0.3	0.2	0.2	0.2	0.3
15-Sep	0.3	0.2	Z	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	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4
16-Sep	0.1	0.2	0.3	Z	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	0.2	0.2	0.2	0.2	0.1	0.3	0.5
17-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	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	0.2	0.3
18-Sep	0.3	0.4	0.4	0.4	0.5	Z	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	0.3	0.3	0.4	0.4	0.4	0.4	0.6
19-Sep	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	0.3	0.2	0.3	0.2	0.3	0.2	0.4
20-Sep	0.2	Z	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
21-Sep	0.2	0.2	Z	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	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.5
22-Sep	0.3	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3
23-Sep	0.3	0.2	0.2	0.2	Z	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	0.2	0.3
24-Sep	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2
25-Sep	Z	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
26-Sep	0.2	Z	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
27-Sep	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	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
28-Sep	0.2	0.2	0.2	Z	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	0.3	0.3	0.3	0.2	0.2	0.2	0.3
29-Sep	0.3	0.2	0.2	0.2	Z	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	0.4	0.3	0.3	0.3	0.3	0.4
30-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.3	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	0.3	0.4
	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	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	Diurnal Average	
	0.5	0.6	0.5	0.4	0.5	0.5	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	0.5	0.5	0.5	0.5	Diurnal Maximum	

Z - zerospan C - Calibration

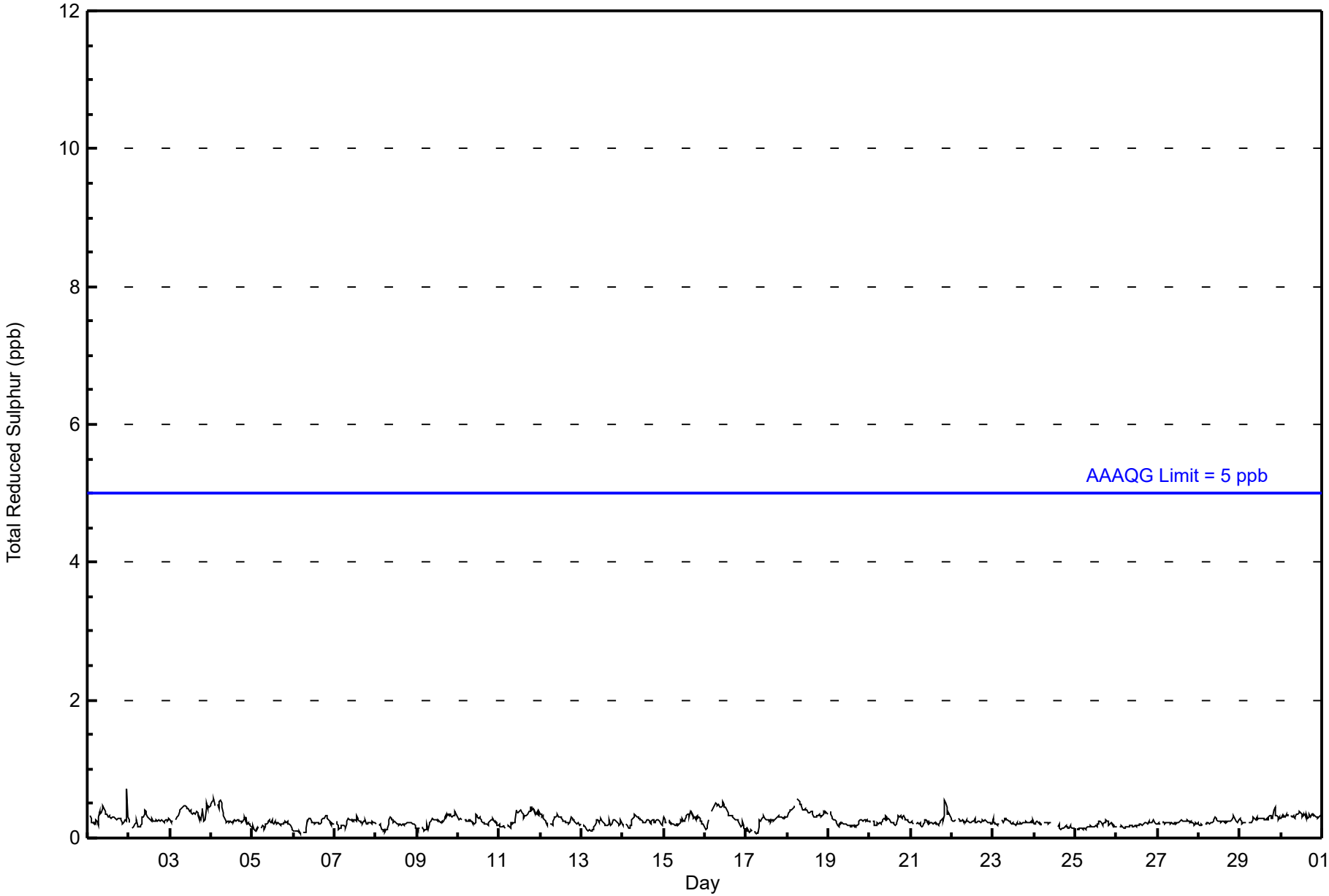
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	13	6	6	6	6	29	67	111	98	48	46	30	34	31	35	50	616
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	13	6	6	6	6	29	67	111	98	48	46	30	34	31	35	50	616

Total Number of Valid Hours: 616

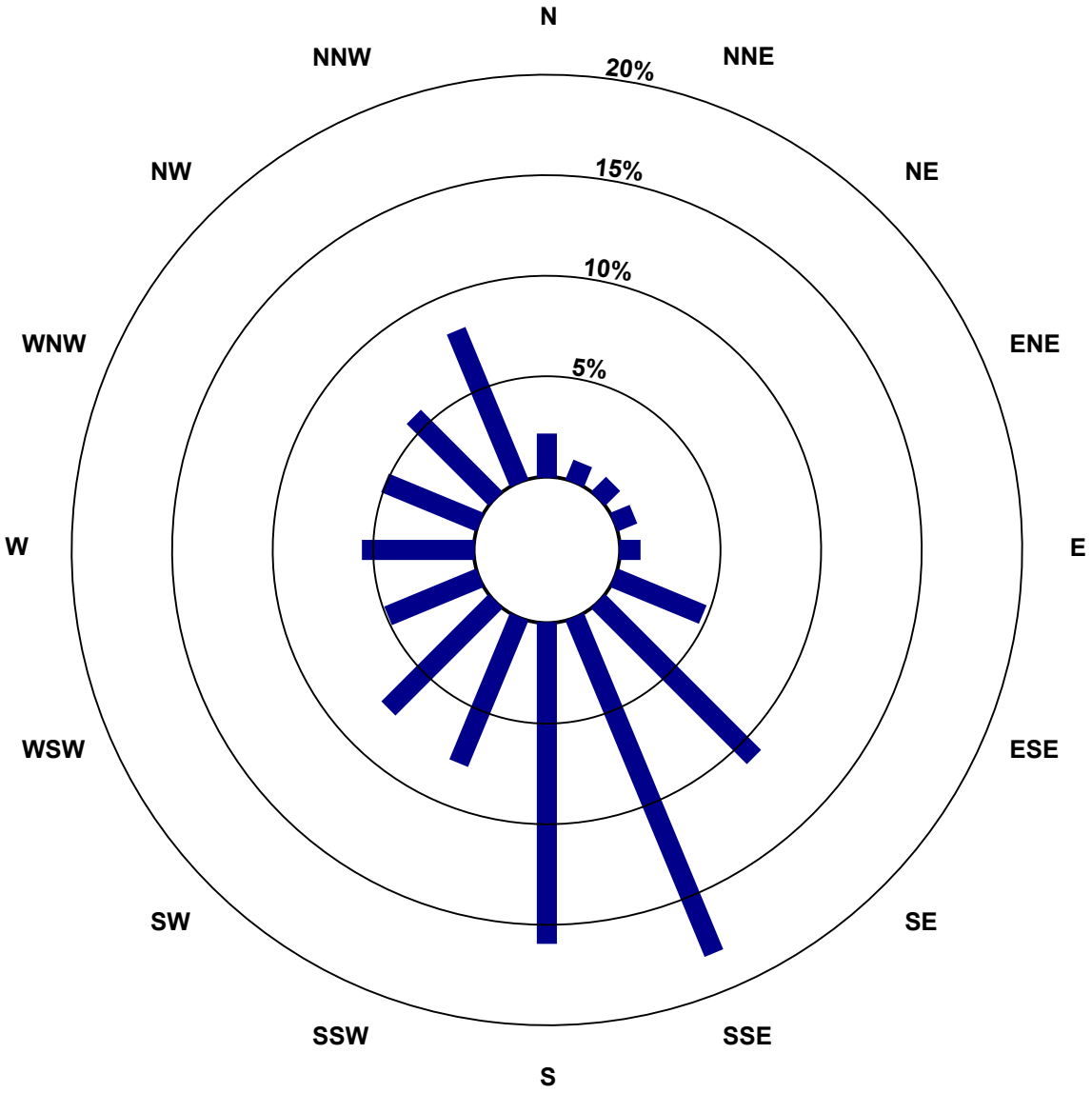
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Conklin



Classes (ppb)

- 0 - 2
- 3 - 4
- 5 - 7
- 8 - 11
- > 11

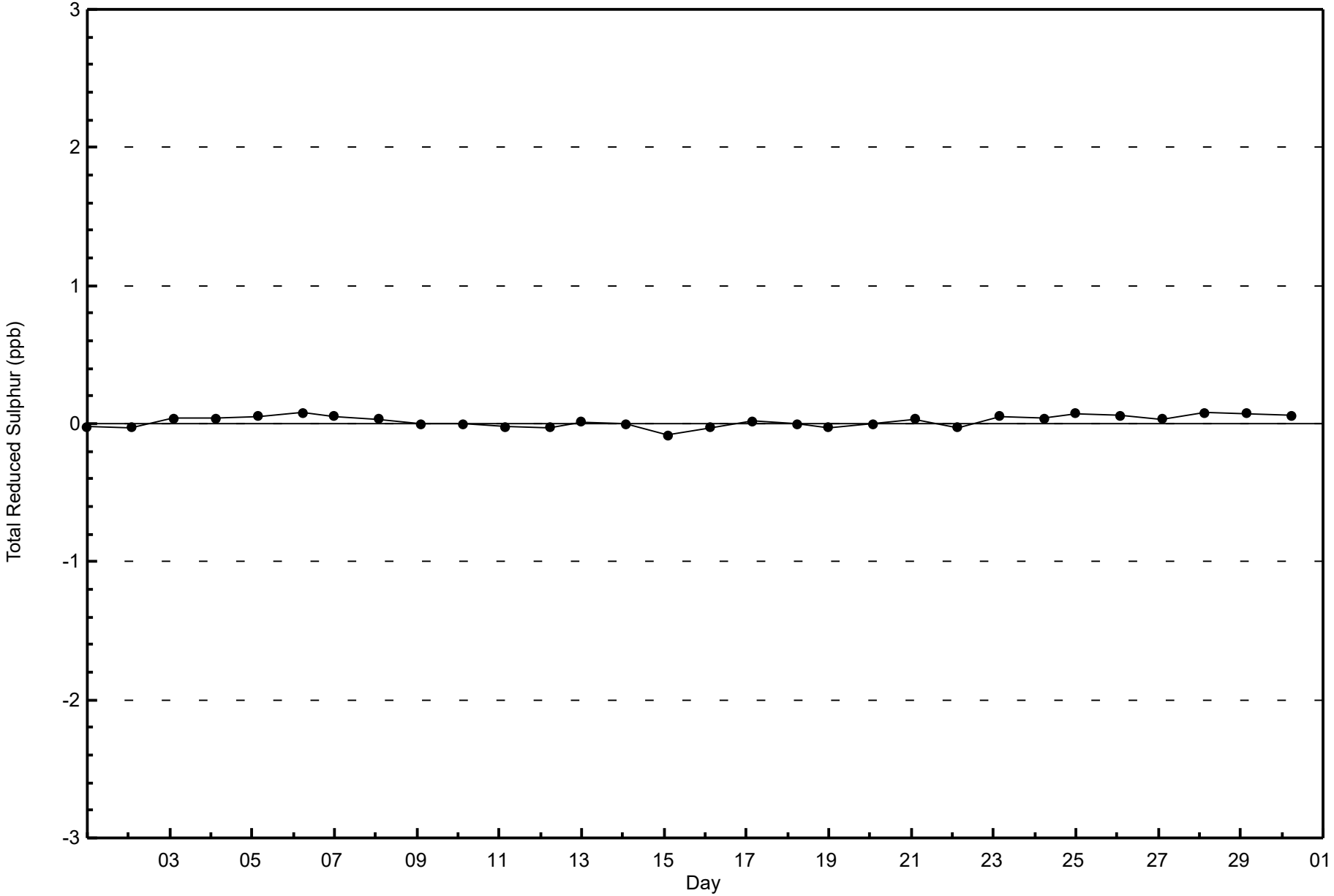
Total Number of Valid Hours: 616

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025

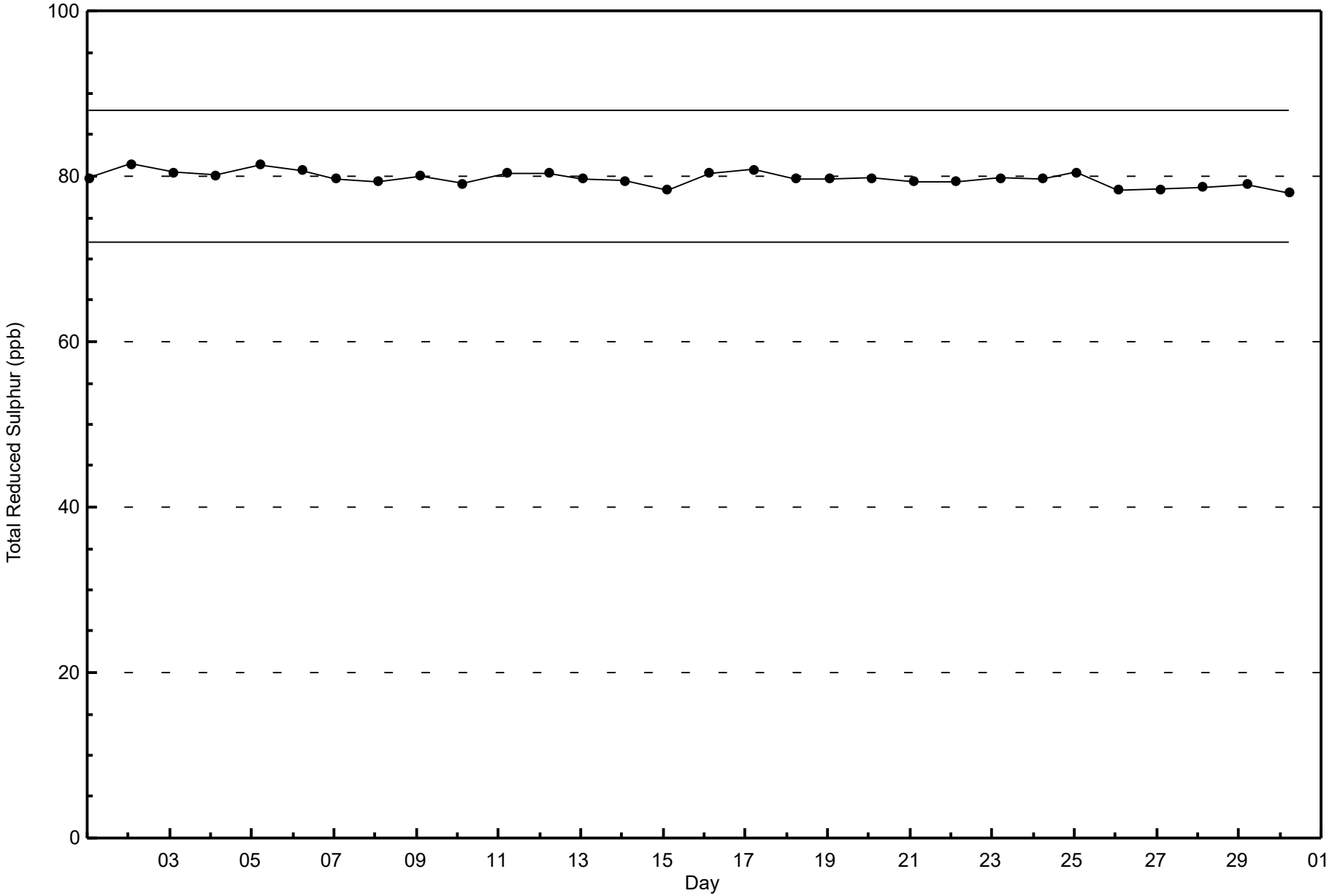


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Conklin - September 2025

Maximum Value: 3.3 ppm on Sep 21 03:00

Maximum Daily Average: 2.4 ppm on Sep 12

Minimum Value: 2.0 ppm on Sep 14 13:00

Minimum Daily Average: 2.0 ppm on Sep 27

Maximum Diurnal Average: 2.4 ppm at hour 3

Minimum Diurnal Average: 2.0 ppm at hour 15

Monthly Average: 2.19 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.4	2.4	2.5	2.4	2.4	Z	2.4	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.5	2.4	2.2	2.5
2-Sep	Z	2.4	2.5	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	2.3	2.4	2.7	2.3	2.1	2.2	2.7
3-Sep	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	2.1
4-Sep	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	2.1	2.1	2.3	2.4	2.4	2.1	2.4
5-Sep	2.3	2.2	2.3	Z	2.3	2.2	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.8	2.6	2.4	2.3	2.2	2.8
6-Sep	2.6	2.5	2.5	2.4	Z	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.8	2.9	2.8	2.7	2.3	2.9
7-Sep	2.4	2.3	2.7	2.6	2.7	Z	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.3	2.7
8-Sep	Z	2.3	2.4	2.4	2.6	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.5	2.2	2.6
9-Sep	2.5	Z	2.8	2.8	2.7	2.7	2.6	2.5	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.3	2.8
10-Sep	2.3	2.5	Z	2.3	2.3	2.3	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	2.1	2.1	2.3	2.3	2.5	2.2	2.5
11-Sep	2.3	2.4	2.3	Z	2.4	2.3	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.6	3.1	2.9	3.0	2.3	3.1
12-Sep	3.0	3.0	3.0	3.0	Z	2.7	2.7	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.8	2.7	2.7	2.7	2.4	3.0
13-Sep	2.5	2.6	2.4	2.5	2.7	Z	2.7	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	3.1	3.0	3.0	2.7	2.4	3.1
14-Sep	Z	2.7	2.6	2.7	2.6	2.5	2.4	2.3	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	2.2	2.2	2.2	2.7
15-Sep	2.3	Z	2.5	2.3	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.5
16-Sep	2.2	2.3	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	2.5	2.7	2.7	2.6	2.7	2.2	2.7
17-Sep	2.6	2.5	2.5	Z	2.4	2.4	2.4	2.3	2.2	2.1	2.1	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	2.6
18-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.5	2.8	2.5	2.1	2.1	2.1	2.8
19-Sep	2.1	2.2	2.7	2.8	2.5	Z	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5	2.7	2.6	2.6	2.5	2.3	2.3	2.8
20-Sep	Z	2.3	2.4	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.4	2.2	2.1	2.1	2.2	2.5
21-Sep	2.1	Z	3.3	3.2	3.1	3.3	3.2	2.9	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	2.3	3.3
22-Sep	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	2.0	2.0	2.1	2.0	2.1
23-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1
24-Sep	2.0	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	2.2	2.5	2.3	2.1	2.1	2.1	2.5
25-Sep	2.2	2.1	2.1	2.2	2.2	Z	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	2.6	2.6	2.1	2.1	2.0	2.1	2.6
26-Sep	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
27-Sep	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	2.0	2.0	2.0	2.0	2.1
28-Sep	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	2.3	2.4	2.2	2.3	2.2	2.1	2.4
29-Sep	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	2.1	2.1	2.2	2.3	2.2	2.0	2.1	2.3
30-Sep	2.0	2.0	2.0	2.1	Z	2.1	2.4	2.5	2.7	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	2.1	2.1	2.2	2.7
	2.3	2.3	2.4	2.4	2.3	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	2.2	2.3	2.3	2.3	2.3	Diurnal Average	
	3.0	3.0	3.3	3.2	3.1	3.3	3.2	2.9	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.5	2.7	3.1	3.1	3.0	3.0	Diurnal Maximum	

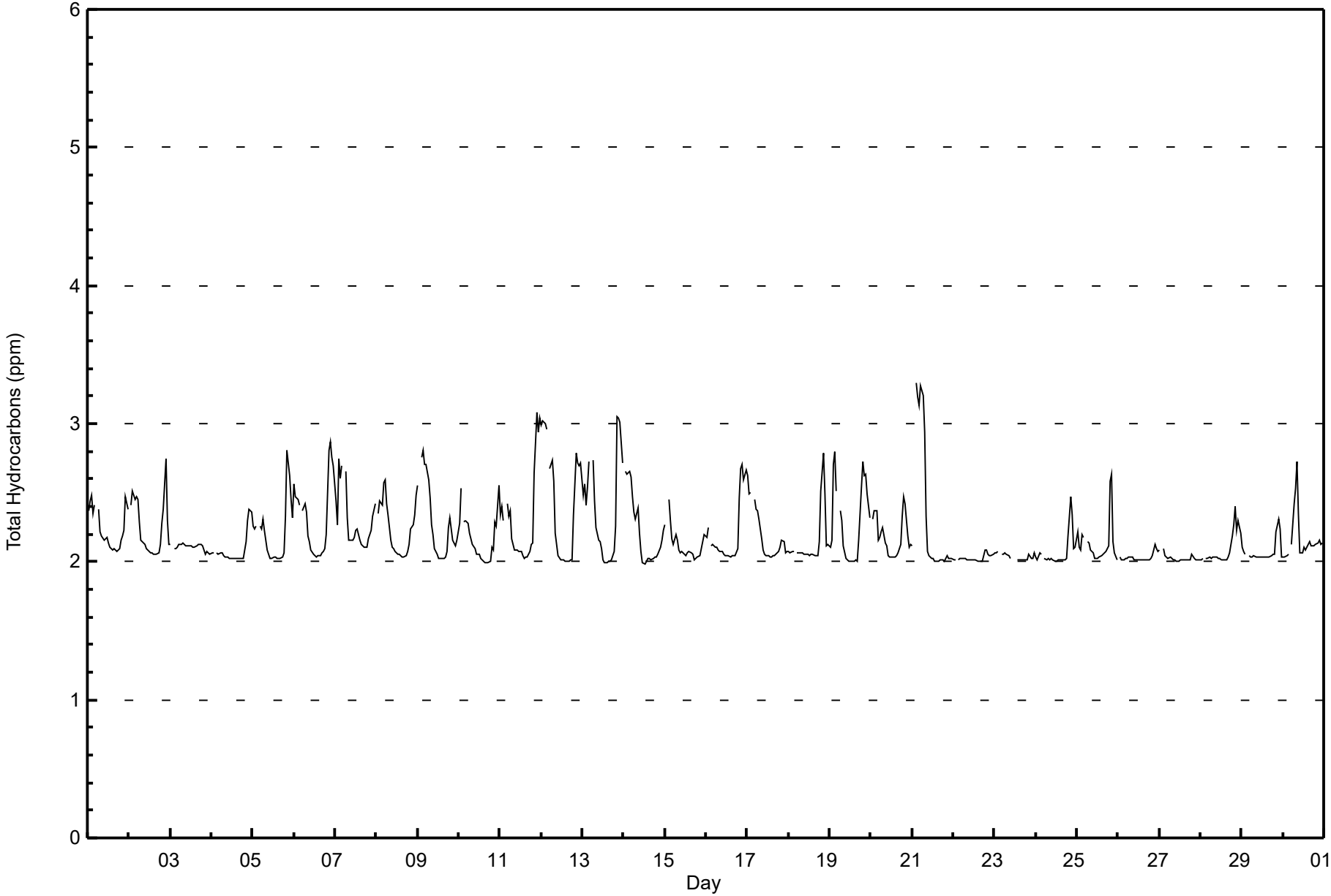
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Conklin - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	246	35.81	35.81
2.1 - 3.0	434	63.17	98.98
3.1 - 10.0	7	1.02	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Conklin - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	2	1	2	3	2	12	10	21	28	21	32	26	31	21	14	18	244
2.1 - 3.0	11	5	4	3	3	15	51	91	69	28	16	4	4	10	21	32	367
3.1 - 10.0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	6
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	13	6	6	6	6	28	63	114	97	49	48	30	35	31	35	50	617

Total Number of Valid Hours: 617

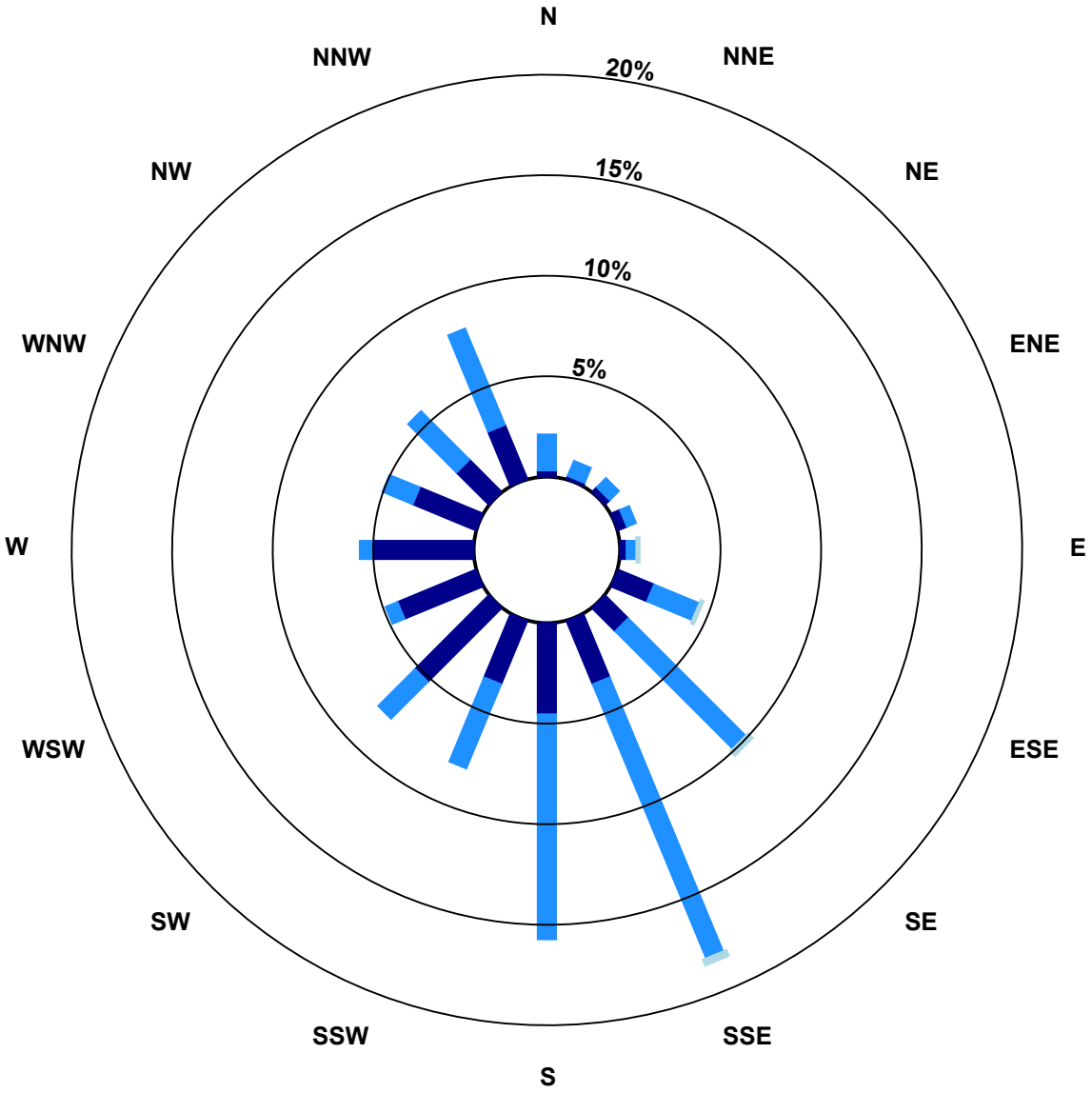
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Conklin



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

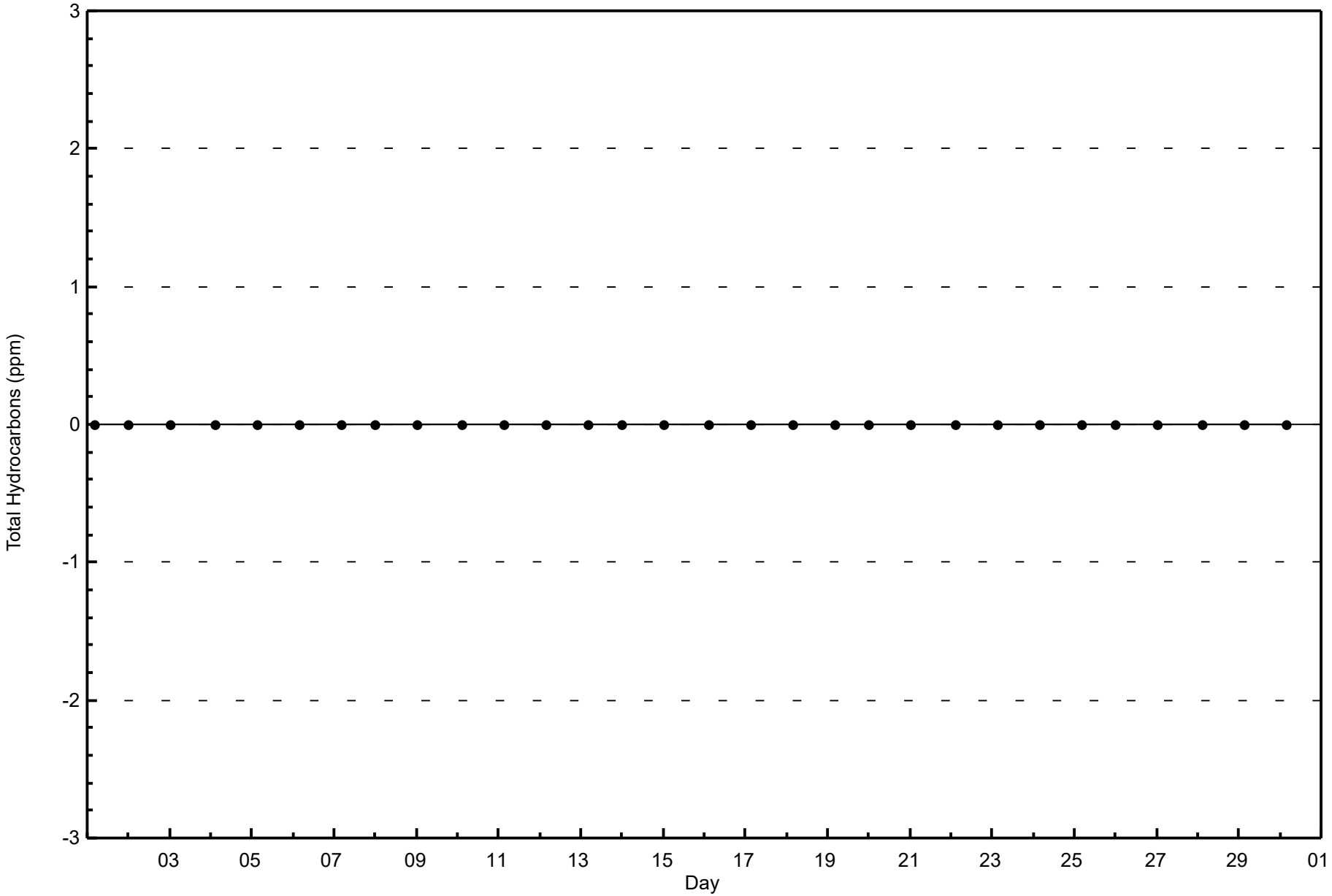
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Conklin - September 2025

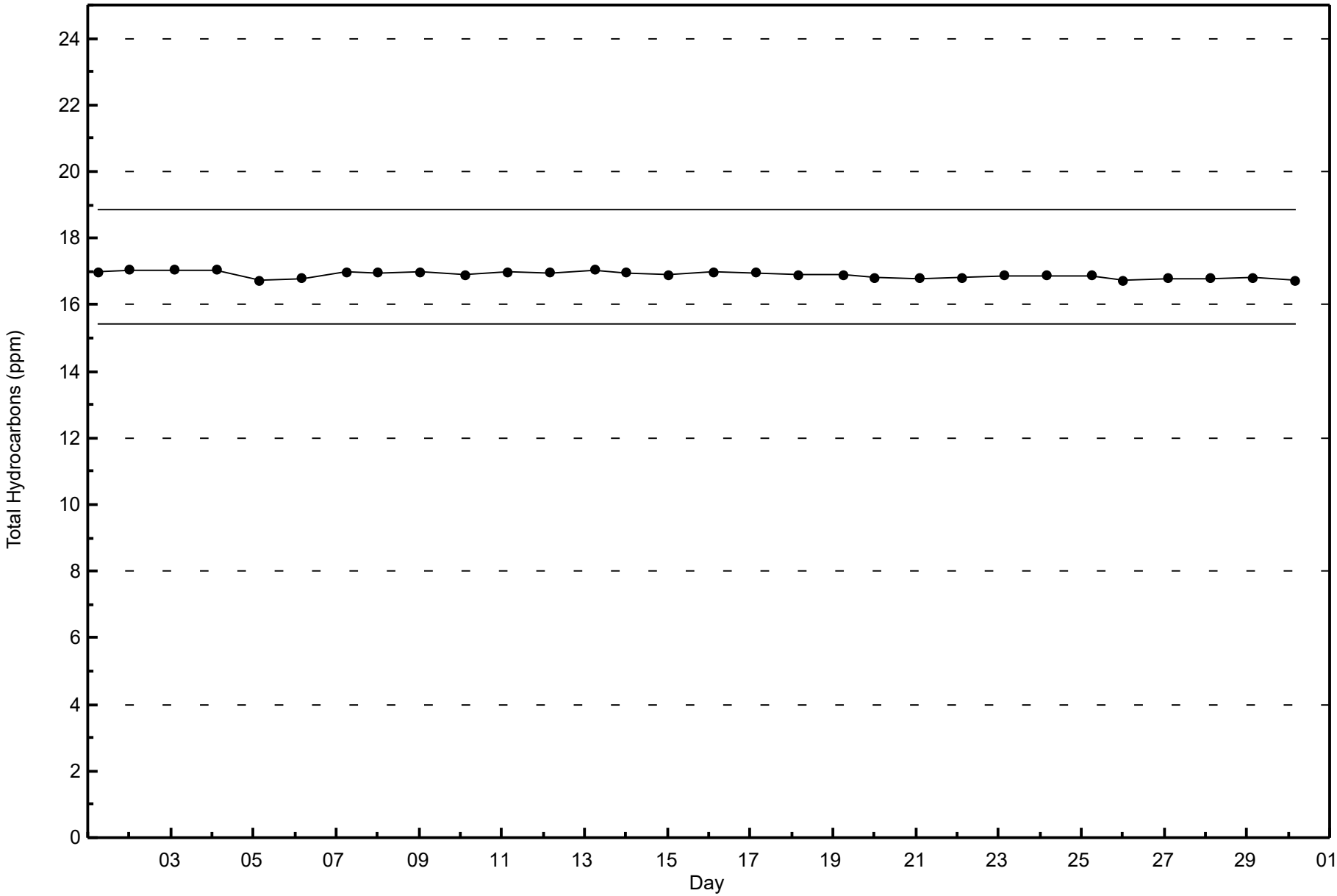


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025

Maximum Value: 0.031 ppm on Sep 2 04:00

Maximum Daily Average: 0.006 ppm on Sep 2

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.000 ppm on Sep 3

Maximum Diurnal Average: 0.002 ppm at hour 3

Minimum Diurnal Average: 0.000 ppm at hour 1

Monthly Average: 0.000 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 in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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
2-Sep	Z	0.019	0.030	0.031	0.025	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	0.023	0.000	0.000	0.000	0.000	0.006	0.031
3-Sep	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-Sep	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-Sep	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-Sep	0.000	0.000	0.016	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	0.001	0.000	0.000	0.000	0.000	0.001	0.016
7-Sep	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
8-Sep	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-Sep	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	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
10-Sep	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	0.000	0.001
11-Sep	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	0.001	0.002	0.004	0.001	0.007	0.000	0.001	0.007
12-Sep	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	0.007	0.000	0.000	0.000	0.000	0.002	0.004	0.000	0.000	0.000	0.000	0.001	0.007
13-Sep	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	0.001	0.002	0.001	0.000	0.000	0.000	0.000	0.002
14-Sep	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-Sep	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-Sep	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
17-Sep	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-Sep	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	0.001	0.000	0.000	0.000	0.000	0.000	0.001
19-Sep	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
20-Sep	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-Sep	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	0.000	0.000	0.000	0.000	0.000	0.000	0.001
22-Sep	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-Sep	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	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	0.000
24-Sep	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-Sep	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	0.010	0.000	0.000	0.000	0.000	0.000	0.010
26-Sep	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-Sep	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-Sep	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	0.003	0.000	0.000	0.000	0.000	0.003
29-Sep	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
30-Sep	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	0.000	0.000	0.000	0.000	0.001
	0.000	0.001	0.002	0.001	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	0.000	0.000	0.000	0.000	Diurnal Average	
	0.000	0.019	0.030	0.031	0.025	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007	0.000	0.000	0.000	0.002	0.002	0.023	0.004	0.001	0.007	0.000	Diurnal Maximum	

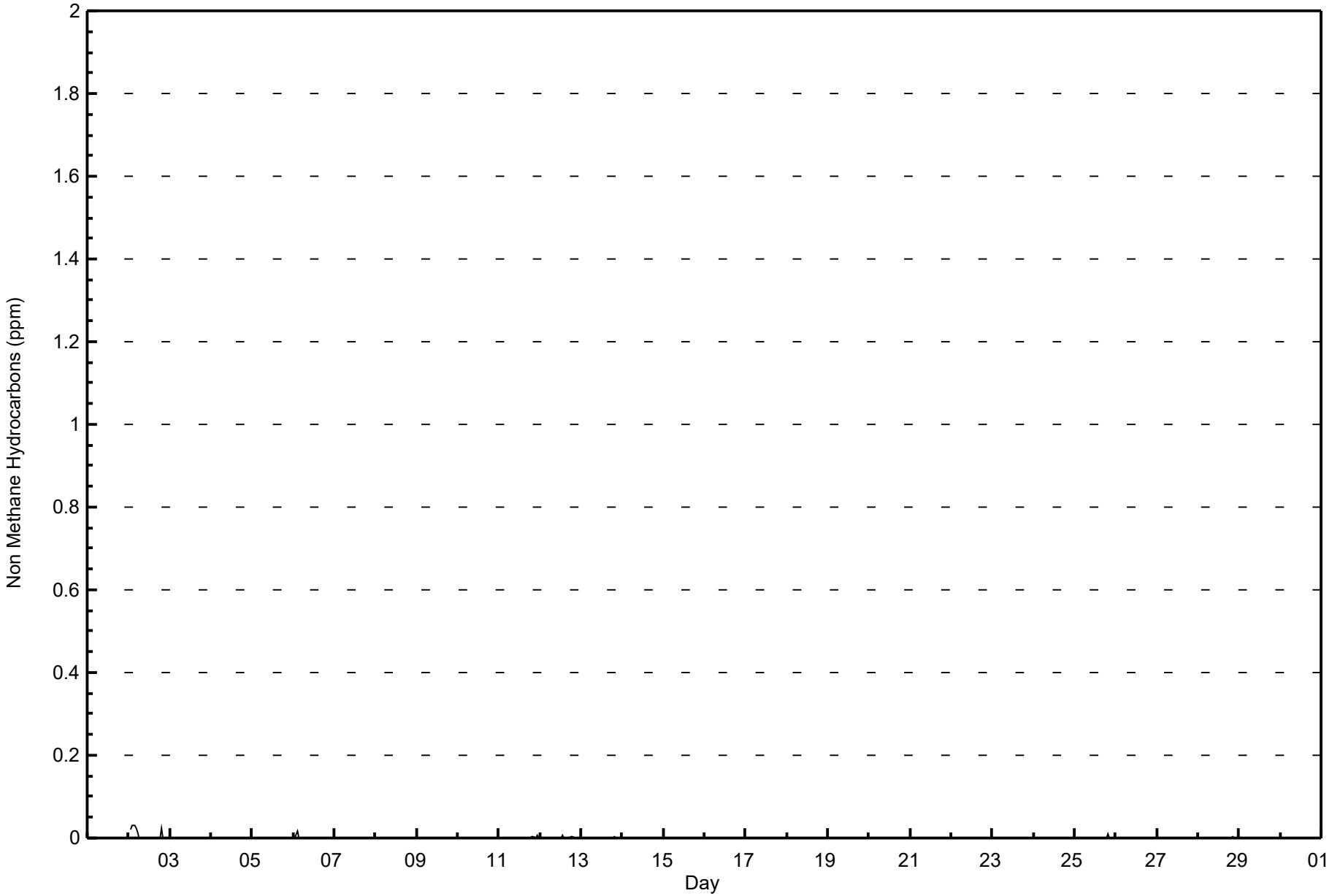
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025



Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	677	98.54	98.54
0.006 - 0.05	10	1.46	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	13	6	6	6	6	28	63	111	95	49	48	30	35	31	35	50	612
0.006 - 0.05	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	5
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	0	0	0	0
Totals	13	6	6	6	6	28	63	114	97	49	48	30	35	31	35	50	617

Total Number of Valid Hours: 617

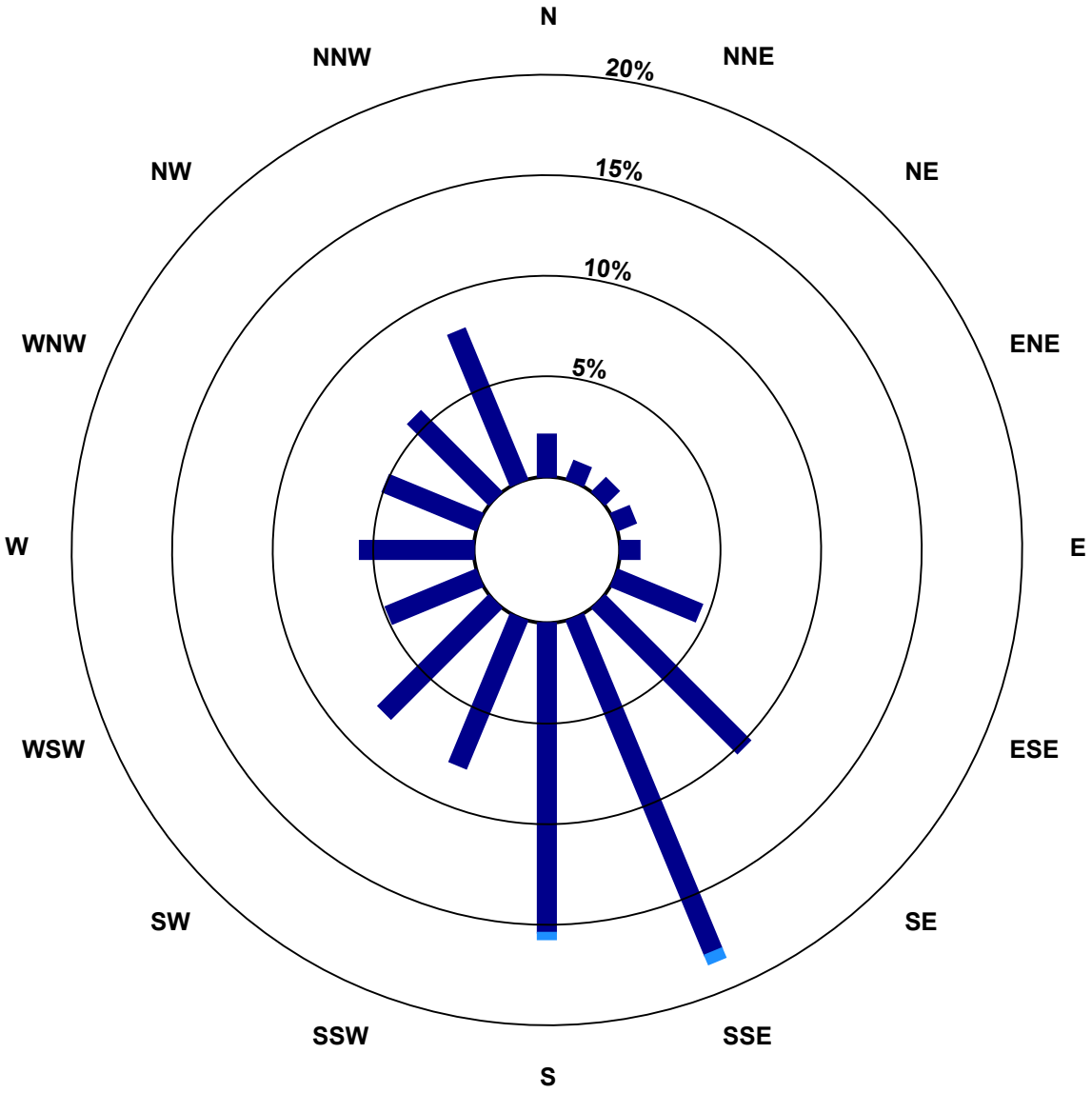
Total Number of Hours: 720

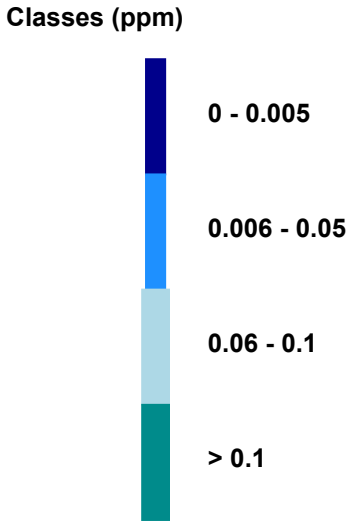
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Conklin





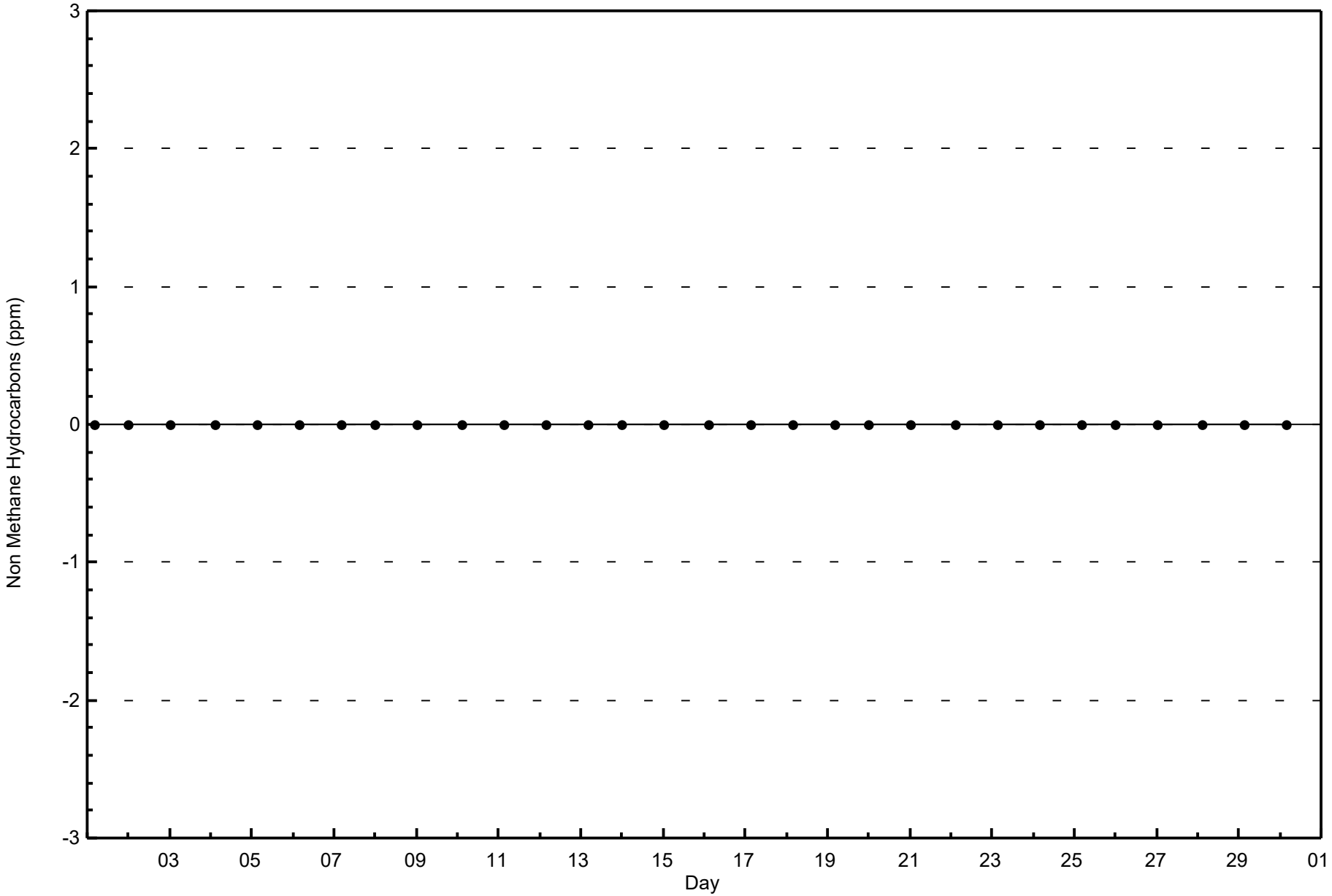
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025

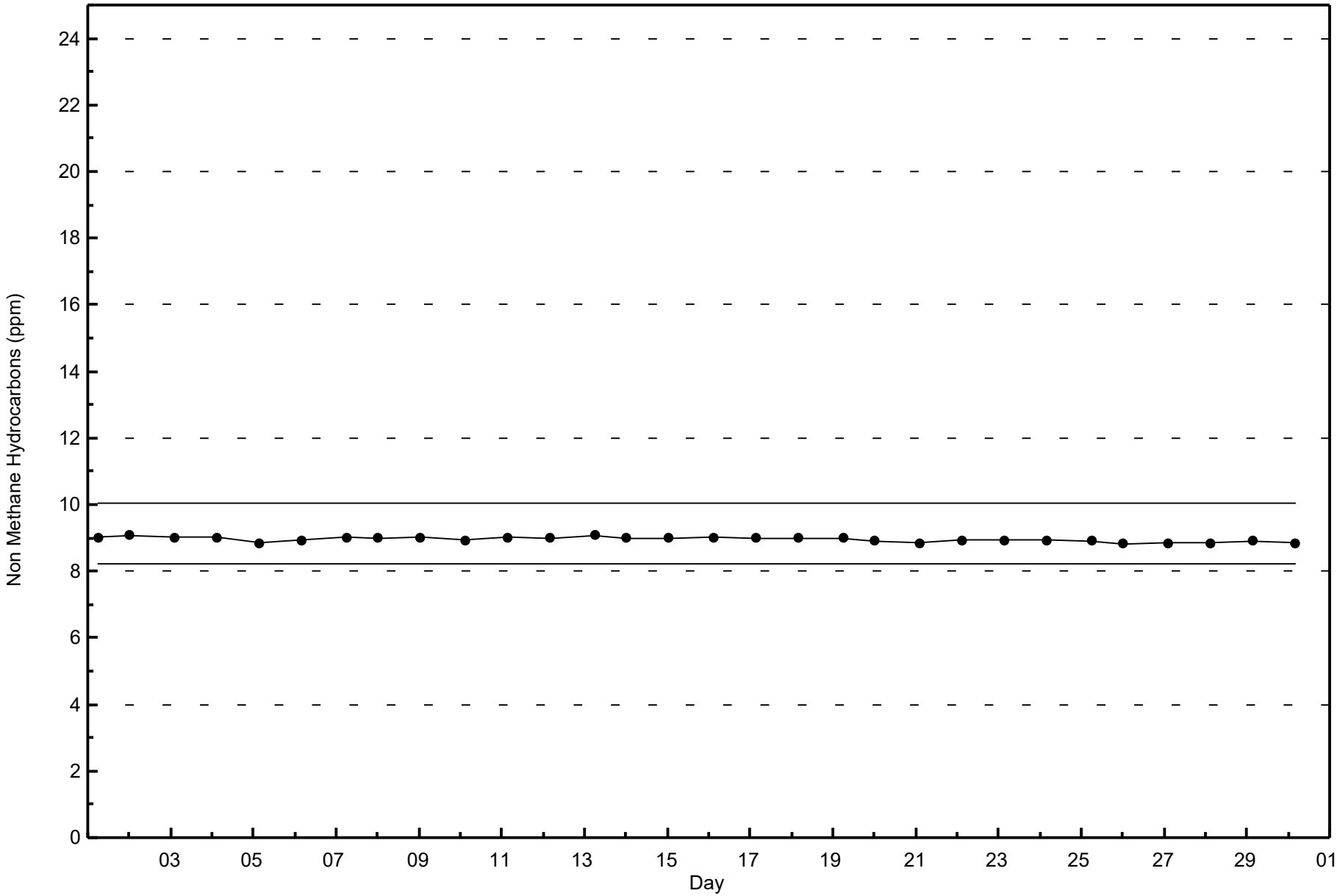


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 3.3 ppm on Sep 21 03:00

Maximum Daily Average: 2.4 ppm on Sep 12

Minimum Value: 2.0 ppm on Sep 14 13:00

Minimum Daily Average: 2.0 ppm on Sep 27

Maximum Diurnal Average: 2.4 ppm at hour 3

Minimum Diurnal Average: 2.0 ppm at hour 15

Monthly Average: 2.19 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.0

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.4	2.4	2.5	2.4	2.4	Z	2.4	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.5	2.4	2.2	2.5
2-Sep	Z	2.4	2.5	2.4	2.4	2.4	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	2.3	2.4	2.7	2.3	2.1	2.2	2.7
3-Sep	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	2.1
4-Sep	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	2.1	2.1	2.3	2.4	2.4	2.1	2.4
5-Sep	2.3	2.2	2.3	Z	2.3	2.2	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.8	2.6	2.4	2.3	2.2	2.8
6-Sep	2.6	2.5	2.4	2.4	Z	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.8	2.9	2.8	2.7	2.3	2.9
7-Sep	2.4	2.3	2.7	2.6	2.7	Z	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.3	2.7
8-Sep	Z	2.3	2.4	2.4	2.6	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.5	2.2	2.6
9-Sep	2.5	Z	2.8	2.8	2.7	2.7	2.6	2.5	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.3	2.8
10-Sep	2.3	2.5	Z	2.3	2.3	2.3	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	2.1	2.1	2.3	2.3	2.5	2.2	2.5
11-Sep	2.3	2.4	2.3	Z	2.4	2.3	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.6	3.1	2.9	3.0	2.3	3.1
12-Sep	3.0	3.0	3.0	3.0	Z	2.7	2.7	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.8	2.7	2.7	2.7	2.4	3.0
13-Sep	2.5	2.6	2.4	2.5	2.7	Z	2.7	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	3.1	3.0	3.0	2.7	2.4	3.1
14-Sep	Z	2.7	2.6	2.7	2.6	2.5	2.4	2.3	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	2.2	2.2	2.2	2.7
15-Sep	2.3	Z	2.5	2.3	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.5
16-Sep	2.2	2.3	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	2.5	2.7	2.7	2.6	2.7	2.2	2.7
17-Sep	2.6	2.5	2.5	Z	2.4	2.4	2.4	2.3	2.2	2.1	2.1	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	2.6
18-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.5	2.8	2.5	2.1	2.1	2.1	2.8
19-Sep	2.1	2.2	2.7	2.8	2.5	Z	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5	2.7	2.6	2.6	2.5	2.3	2.3	2.8
20-Sep	Z	2.3	2.4	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.4	2.2	2.1	2.1	2.2	2.5
21-Sep	2.1	Z	3.3	3.2	3.1	3.3	3.2	2.9	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	2.3	3.3
22-Sep	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	2.0	2.0	2.1	2.0	2.1
23-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1
24-Sep	2.0	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	2.2	2.5	2.3	2.1	2.1	2.1	2.5
25-Sep	2.2	2.1	2.1	2.2	2.2	Z	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	2.6	2.6	2.1	2.1	2.0	2.1	2.6
26-Sep	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
27-Sep	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	2.0	2.0	2.0	2.0	2.1
28-Sep	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	2.3	2.4	2.2	2.3	2.2	2.1	2.4
29-Sep	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	2.1	2.1	2.2	2.3	2.2	2.0	2.1	2.3
30-Sep	2.0	2.0	2.0	2.1	Z	2.1	2.4	2.5	2.7	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	2.1	2.1	2.2	2.7
	2.3	2.3	2.4	2.4	2.3	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	2.2	2.3	2.3	2.3	2.3	Diurnal Average	
	3.0	3.0	3.3	3.2	3.1	3.3	3.2	2.9	2.7	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.5	2.7	3.1	3.1	3.0	3.0	Diurnal Maximum	

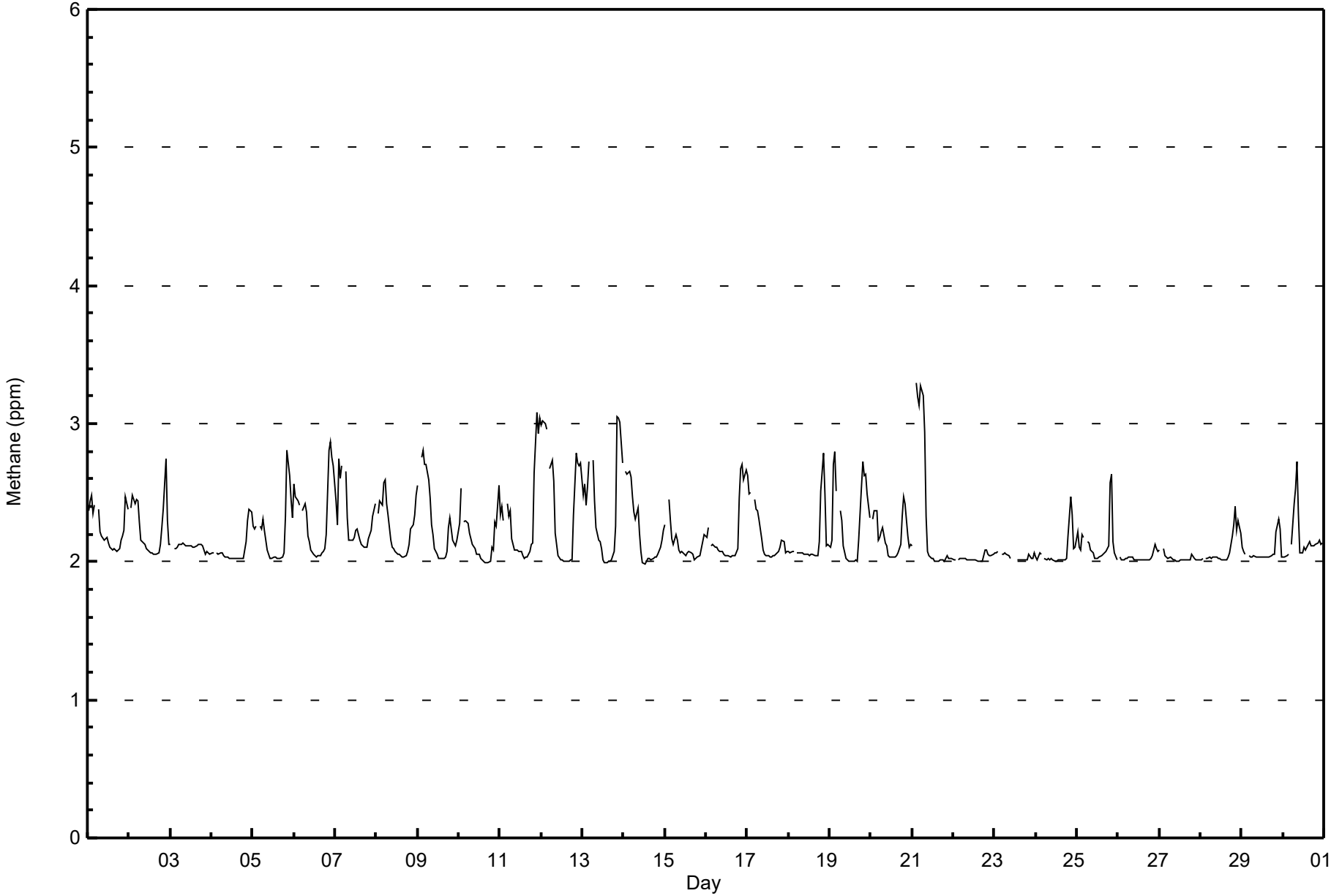
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Conklin - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	246	35.81	35.81
2.1 - 3.0	434	63.17	98.98
3.1 - 10.0	7	1.02	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Methane (CH_4) - ppm
Conklin - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	2	1	2	3	2	12	10	21	28	21	32	26	31	21	14	18	244
2.1 - 3.0	11	5	4	3	3	15	51	91	69	28	16	4	4	10	21	32	367
3.1 - 10.0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	6
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	13	6	6	6	6	28	63	114	97	49	48	30	35	31	35	50	617

Total Number of Valid Hours: 617

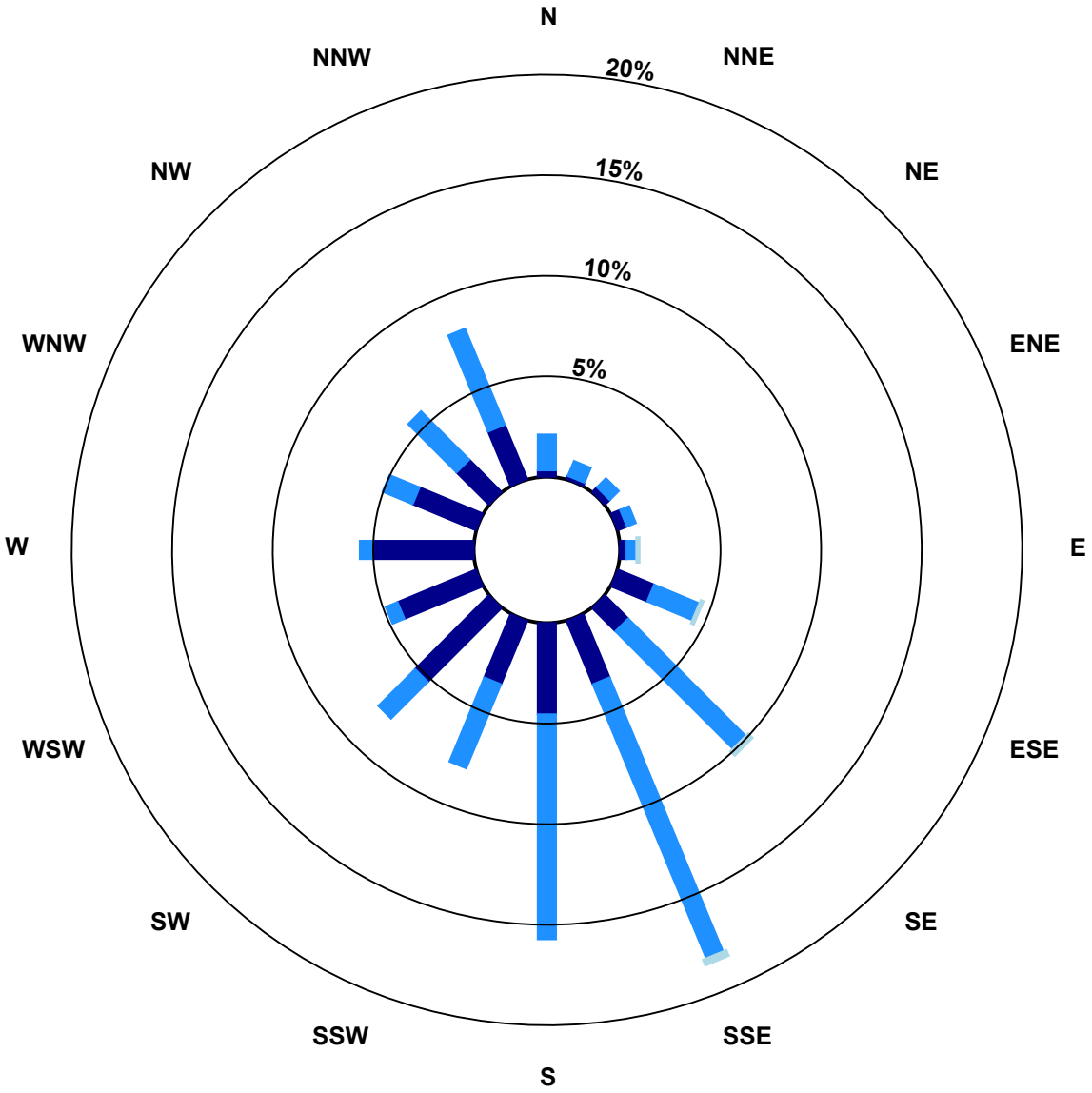
Total Number of Hours: 720

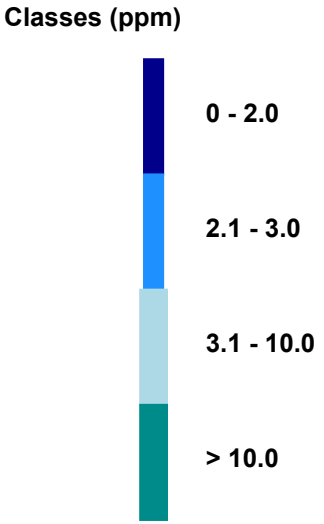
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Conklin





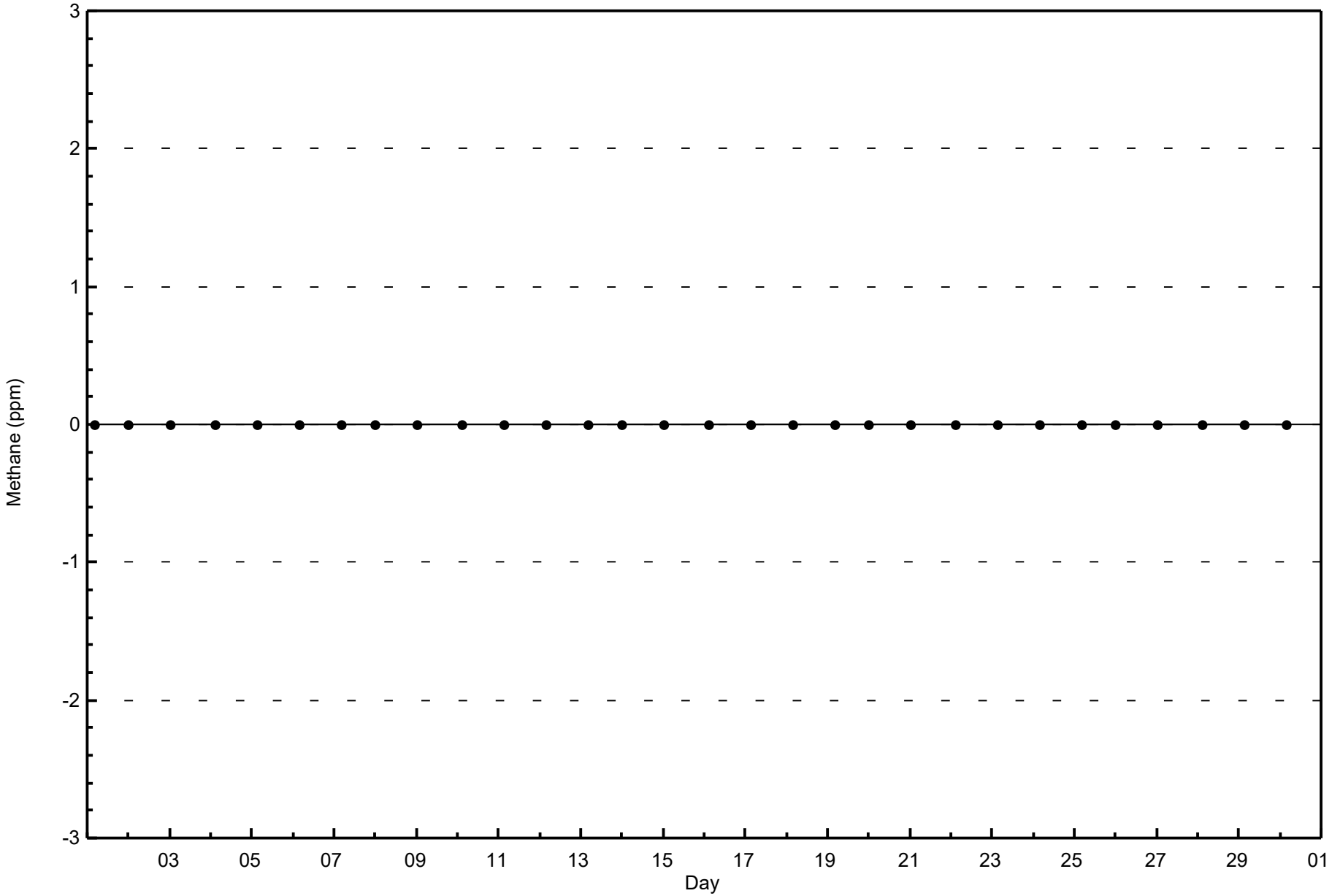
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Conklin - September 2025

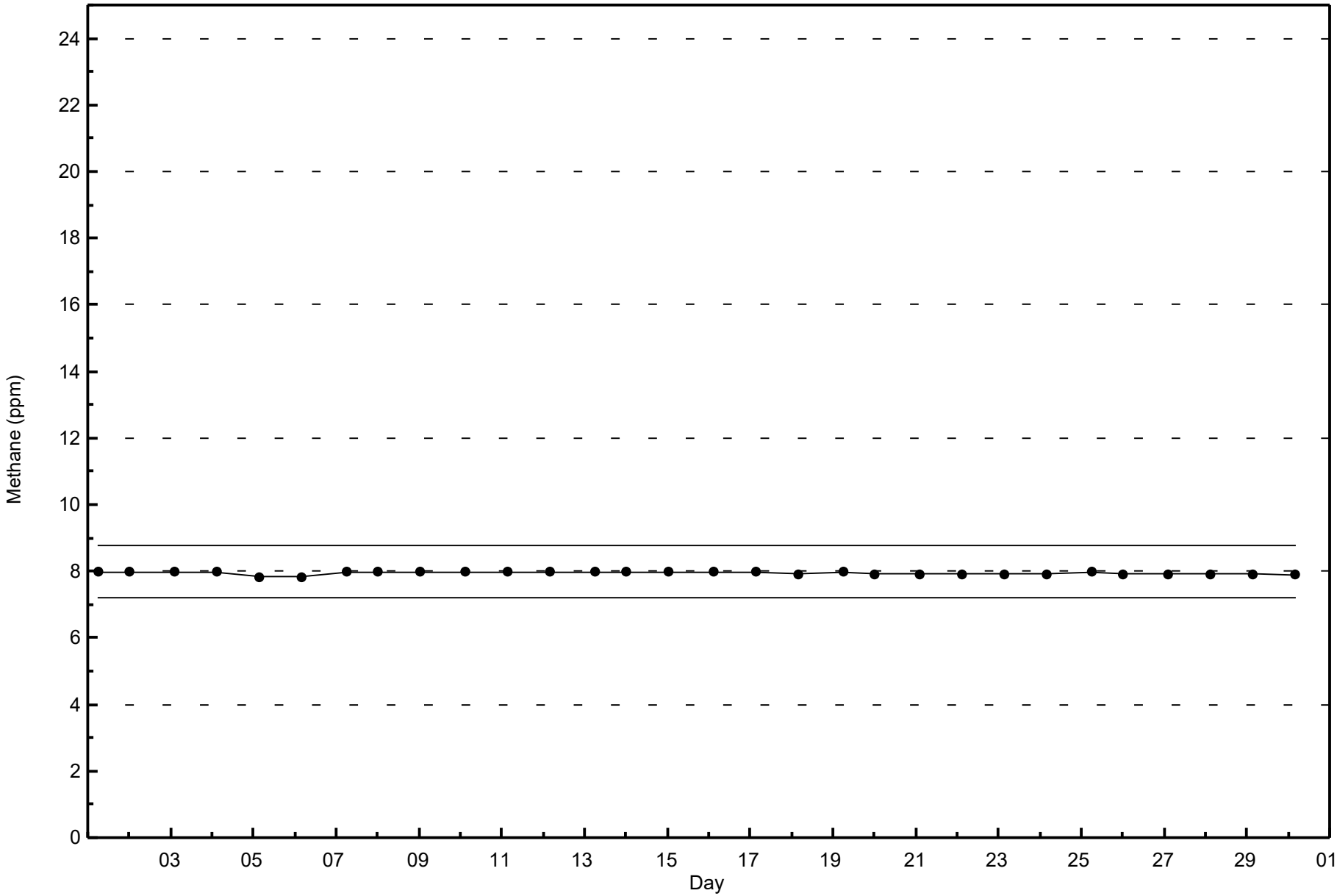


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Conklin - September 2025

Maximum Value: 44.3 ppb on Sep 2 00:00

Maximum Daily Average: 4.8 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 1 16:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 2.3 ppb at hour 8

Minimum Diurnal Average: 0.0 ppb at hour 17

Monthly Average: 0.59 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 1.1 P_{99} = 8.8

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	5.7	2.7	1.4	Z	0.5	8.8	11.6	28.8	5.5	0.6	0.3	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	44.3	4.8	44.3
2-Sep	6.0	2.4	1.1	3.4	Z	8.4	4.2	1.8	0.5	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.4	0.0	0.0	1.3	8.4
3-Sep	0.0	0.0	0.1	0.1	0.1	Z	0.2	0.2	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	0.2	0.0	0.0	0.1	0.2
4-Sep	Z	0.0	0.0	0.0	0.0	0.0	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	7.9	2.3	2.4	1.1	0.7	7.9
5-Sep	0.3	Z	0.0	0.1	0.0	1.4	0.5	0.3	0.2	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.1	0.2	0.0	0.2	1.4
6-Sep	0.2	0.0	Z	0.0	0.0	0.3	0.3	0.6	0.8	1.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2	1.2
7-Sep	0.0	0.3	0.0	Z	0.0	0.0	0.0	0.2	1.5	0.3	0.4	0.0	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.2	1.5
8-Sep	0.0	0.0	0.0	0.1	Z	1.7	1.3	2.5	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.1	0.3	2.5
9-Sep	0.2	0.3	0.2	0.2	0.2	Z	7.6	4.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.6
10-Sep	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
11-Sep	0.0	Z	6.8	2.3	1.4	4.2	4.4	19.4	5.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.9	19.4
12-Sep	3.8	6.6	Z	0.8	0.3	3.3	3.1	7.4	3.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.1	0.5	0.2	0.0	1.5	1.4	7.4
13-Sep	0.0	0.0	0.0	Z	0.0	0.3	0.3	1.2	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.7	0.4	0.0	2.1	0.3	2.1
14-Sep	0.6	0.4	0.1	0.1	Z	5.6	1.0	0.0	0.1	0.2	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	0.2	0.4	5.6
15-Sep	20.6	3.4	1.6	0.2	0.6	Z	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	20.6
16-Sep	Z	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.5	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.3	12.1	4.7	1.1	12.1
17-Sep	3.6	Z	0.3	0.2	0.2	1.0	0.3	0.8	1.2	0.3	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	0.4	3.6
18-Sep	0.0	0.0	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	0.0	0.9	0.4	6.2	0.0	0.0	0.3	6.2
19-Sep	0.0	0.0	0.0	Z	0.0	0.3	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	1.8	0.1	0.0	0.2	1.8
20-Sep	0.0	0.2	0.2	0.0	Z	0.0	0.0	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	0.0	0.0	0.0	0.3
21-Sep	0.0	0.0	0.1	3.5	8.4	Z	2.4	0.9	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	2.4	0.0	0.0	0.8	8.4
22-Sep	Z	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8
23-Sep	8.8	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.7	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	0.5	8.8
24-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.4	4.9
25-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	0.1	0.6
26-Sep	0.0	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	5.3	0.1	0.0	0.2	5.3
27-Sep	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
28-Sep	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
29-Sep	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	0.1	0.0	0.0	0.0	0.0	0.1
30-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	1.2	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	0.1	1.2
	2.0	0.7	0.5	0.4	0.5	1.4	1.3	2.3	0.8	0.4	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.4	0.7	0.5	1.8	Diurnal Average	
	20.6	6.6	6.8	3.5	8.4	8.8	11.6	28.8	5.5	3.0	1.7	1.1	0.2	1.8	4.9	0.1	0.1	0.2	1.2	0.9	7.9	6.2	12.1	44.3	Diurnal Maximum	

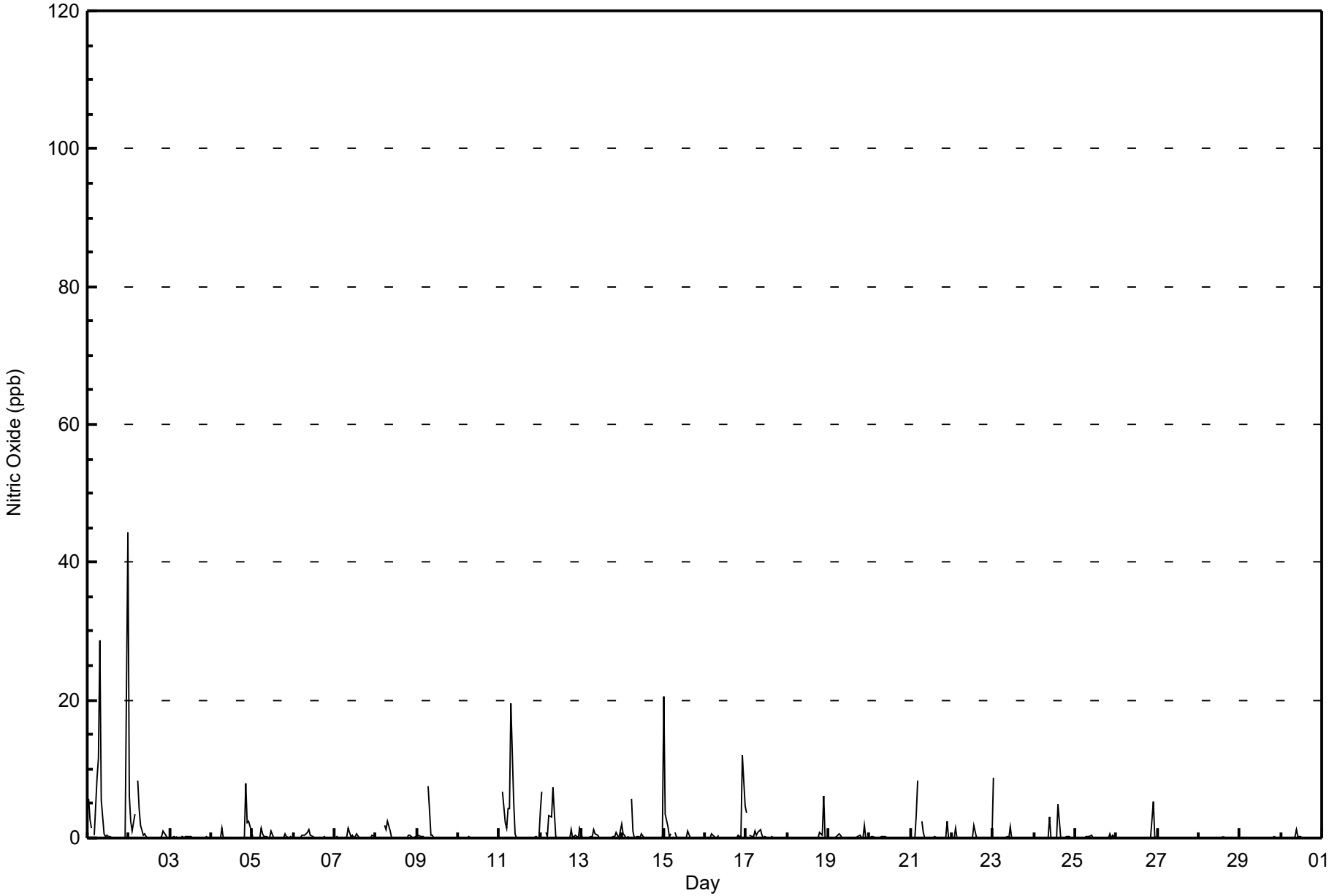
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Conklin - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.56	99.56
21 - 40	2	0.29	99.85
11 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

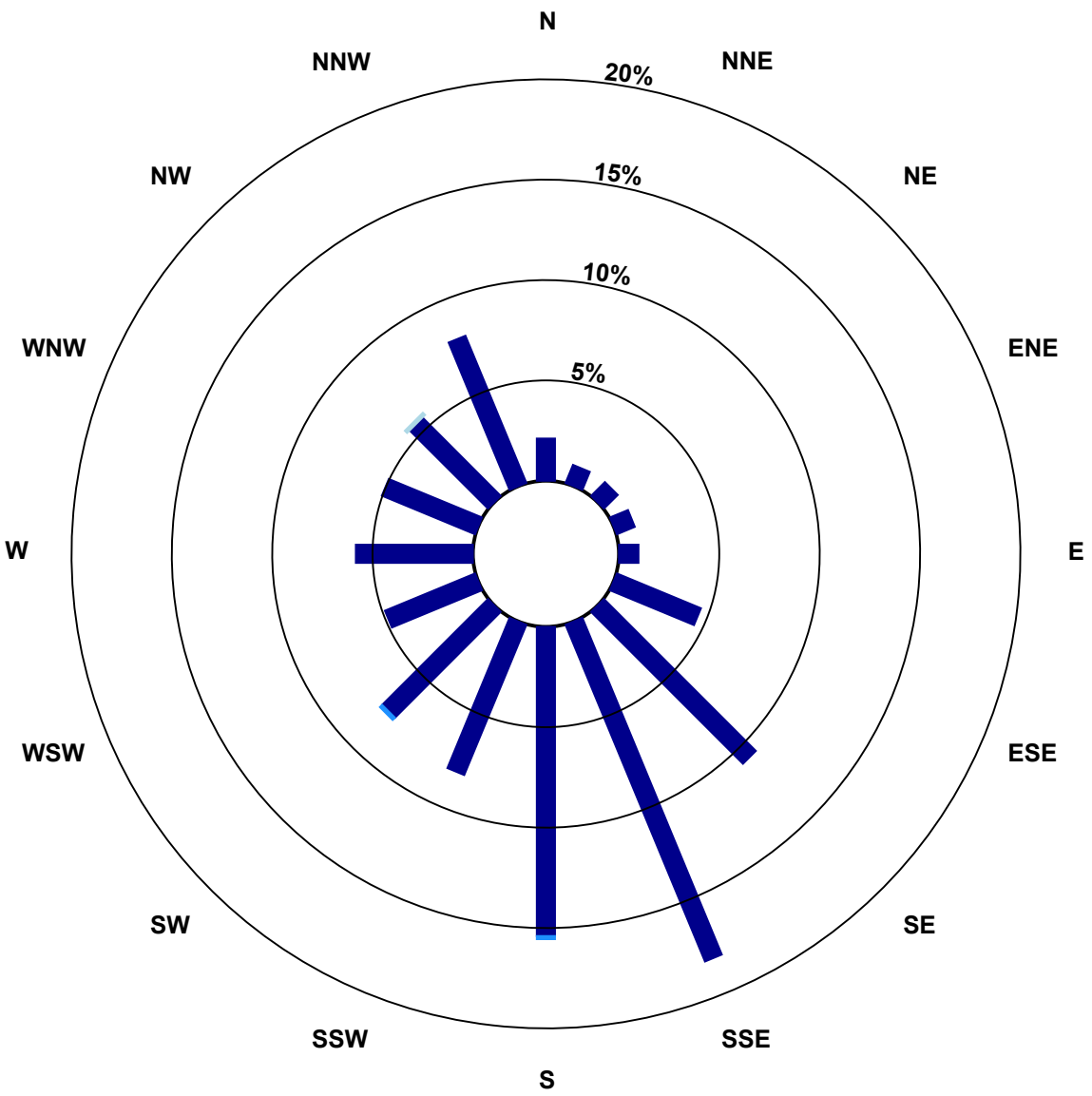
Nitric Oxide (NO) - ppb

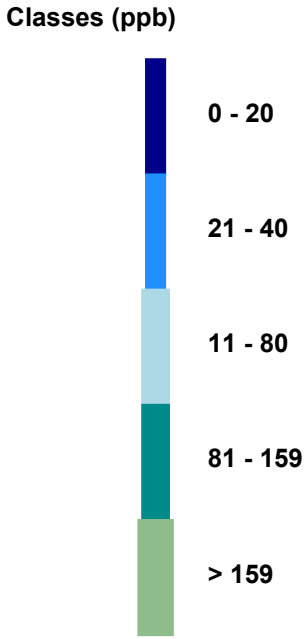
Conklin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	13	6	6	6	6	28	66	112	95	50	46	30	36	31	34	49	614
21 - 40	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	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	13	6	6	6	6	28	66	112	96	50	47	30	36	31	35	49	617

Total Number of Valid Hours: 617

Total Number of Hours: 720





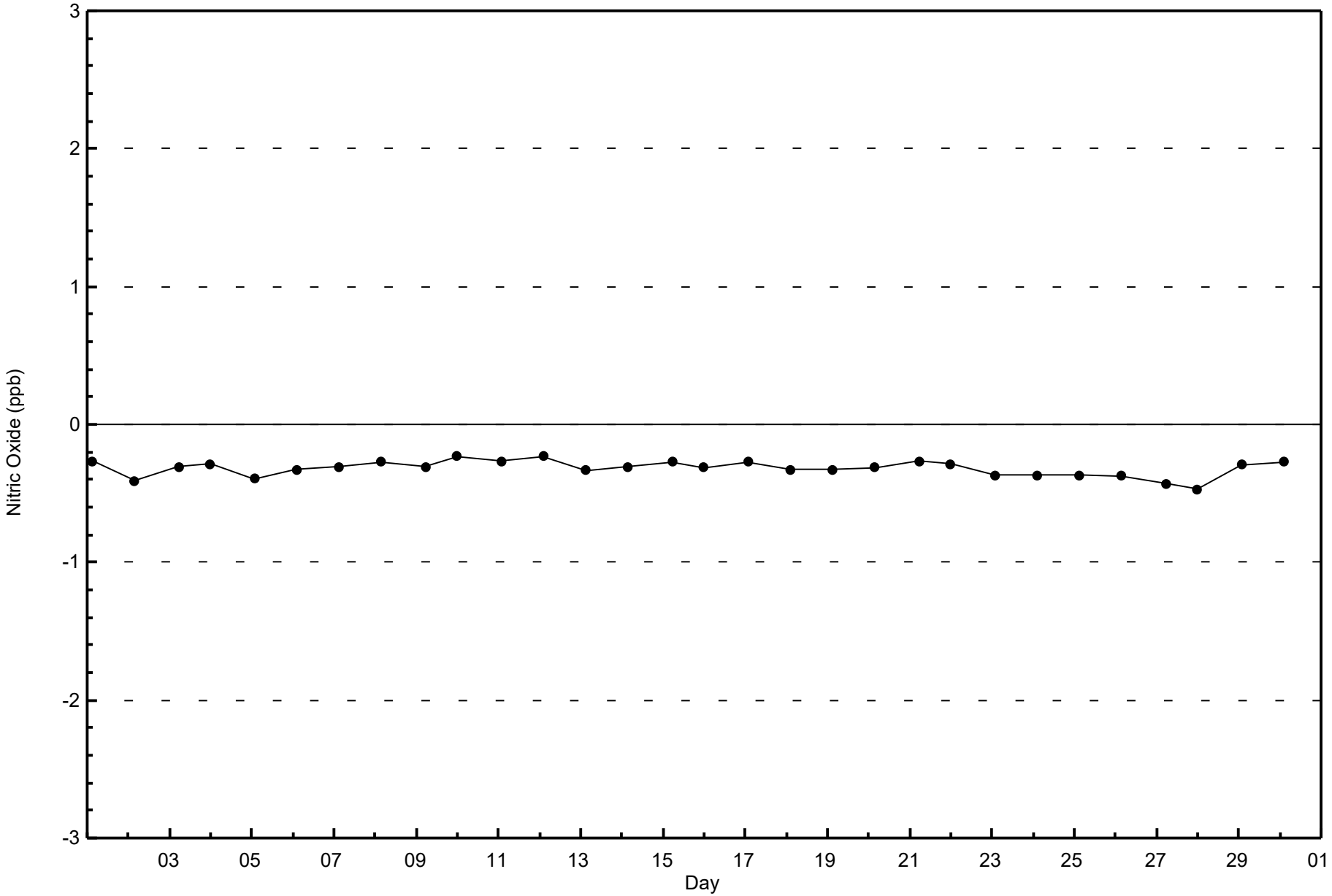
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Conklin - September 2025

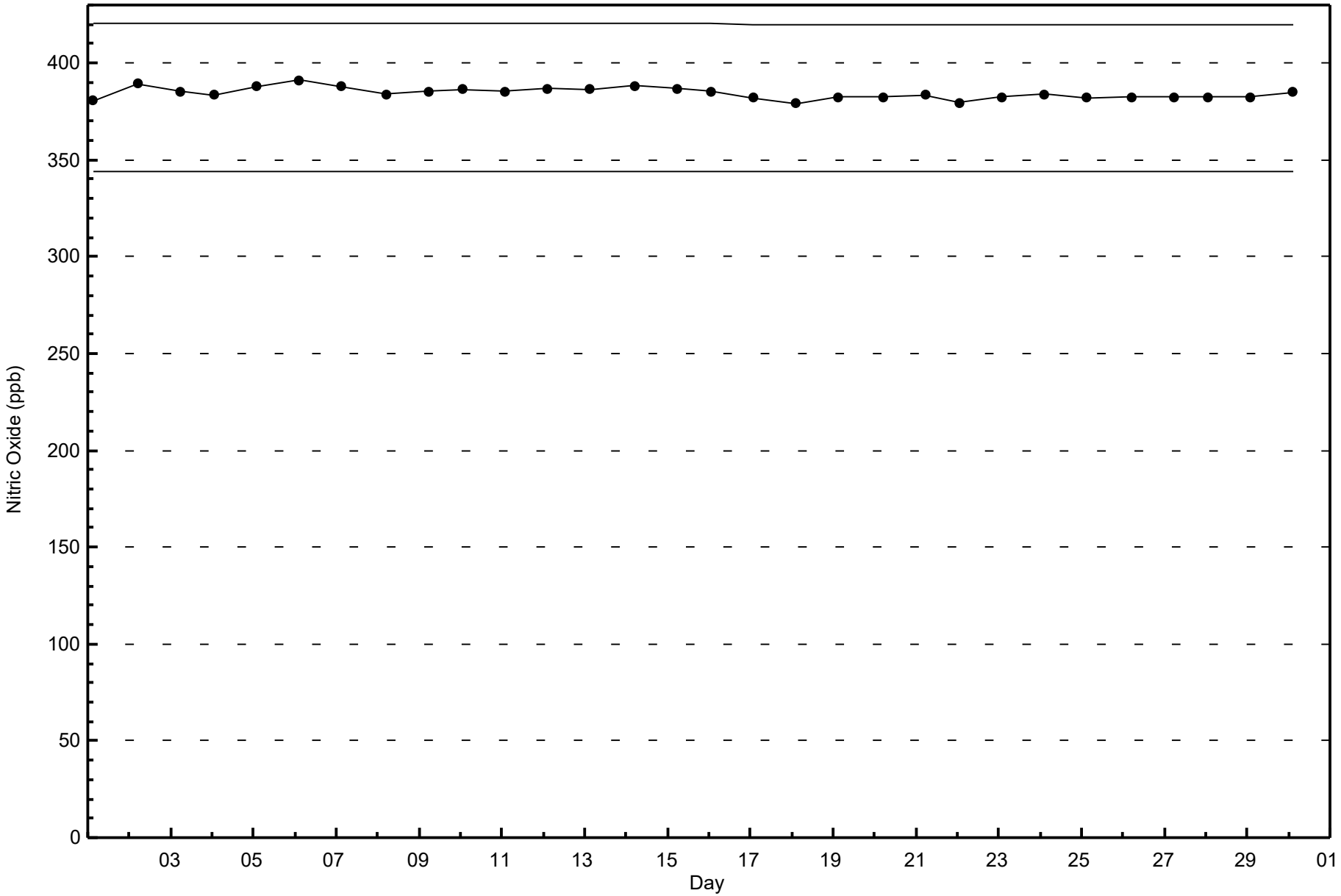


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 10.4 ppb on Sep 23 01:00

Maximum Daily Average: 2.0 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 22 16:00

Minimum Daily Average: 0.5 ppb on Sep 27

Maximum Diurnal Average: 2.1 ppb at hour 20

Minimum Diurnal Average: 0.7 ppb at hour 16

Monthly Average: 1.28 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 1.0 $Q_3 = 1.6$ $P_{90} = 2.4$ $P_{99} = 5.3$

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	1.7	0.8	Z	0.8	2.0	1.6	3.2	3.8	2.4	2.3	1.8	1.2	1.0	1.1	0.7	0.9	1.0	1.2	1.3	0.7	1.1	1.8	4.5	1.7	4.5
2-Sep	2.9	1.7	0.9	0.8	Z	0.9	0.9	1.5	1.8	2.6	1.9	1.6	1.2	1.6	1.8	1.7	1.8	2.3	2.2	2.6	4.9	3.7	1.6	1.8	1.9	4.9
3-Sep	1.3	1.2	1.4	1.4	1.7	Z	2.1	1.9	1.6	1.6	2.0	1.9	2.0	1.6	1.4	1.4	1.4	1.5	2.3	2.7	1.5	2.9	2.1	2.0	1.8	2.9
4-Sep	Z	1.7	0.8	0.5	0.3	0.5	1.3	0.4	0.5	0.9	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	3.6	2.9	2.4	1.4	0.9	3.6
5-Sep	0.6	Z	0.6	0.4	0.5	0.8	0.5	0.3	0.8	0.5	0.4	0.5	0.3	0.3	0.4	0.4	0.4	0.8	1.3	3.1	1.4	0.8	0.7	0.6	0.7	3.1
6-Sep	0.4	0.4	Z	0.8	0.5	0.6	0.3	0.6	1.7	2.7	2.0	1.7	0.9	0.8	1.0	0.9	1.3	1.4	3.5	5.5	2.4	1.0	1.8	1.5	1.5	5.5
7-Sep	0.9	2.0	1.0	Z	0.9	1.1	0.6	1.5	2.2	2.1	2.1	1.5	2.4	3.5	1.8	1.2	1.1	1.7	1.0	0.8	1.0	0.9	2.7	2.3	1.6	3.5
8-Sep	1.9	1.6	1.0	0.8	Z	0.7	0.6	1.0	1.9	0.9	0.9	0.8	0.5	0.7	0.6	0.5	0.5	0.5	0.9	2.1	3.4	1.3	0.8	0.8	1.1	3.4
9-Sep	0.7	0.8	0.7	0.5	0.4	Z	0.8	2.1	1.5	1.9	1.6	1.2	1.2	1.0	1.0	0.9	1.2	1.6	2.8	2.7	1.4	1.8	2.1	2.8	1.4	2.8
10-Sep	Z	1.5	1.1	1.1	1.2	1.1	1.7	1.4	1.4	1.1	1.0	0.9	0.8	0.7	0.4	0.4	0.4	0.3	0.9	1.2	2.0	1.6	1.2	1.0	1.1	2.0
11-Sep	0.9	Z	1.1	1.0	0.9	0.9	0.6	2.8	3.9	2.4	2.5	2.4	2.3	1.4	0.9	1.2	1.5	2.0	2.6	2.1	2.9	1.4	1.5	1.0	1.7	3.9
12-Sep	1.5	2.7	Z	1.4	0.7	0.8	0.6	1.4	3.0	1.6	1.4	1.5	1.0	1.1	1.0	0.9	0.8	1.5	7.9	4.0	1.9	1.3	0.7	1.0	1.7	7.9
13-Sep	0.5	0.5	0.4	Z	0.7	0.6	0.4	1.3	1.7	1.8	1.5	1.4	0.9	0.7	0.6	0.6	1.1	1.0	4.0	5.3	2.9	1.1	0.7	1.6	1.4	5.3
14-Sep	4.6	5.0	3.4	2.6	Z	6.2	7.0	2.2	1.6	1.2	0.9	1.8	1.2	0.5	1.0	0.4	0.3	0.4	0.5	0.4	0.6	0.5	0.6	0.4	1.9	7.0
15-Sep	3.5	1.9	1.9	1.1	2.2	Z	1.5	0.8	0.4	0.6	0.7	0.7	0.6	0.6	1.2	0.7	0.7	0.6	0.6	0.9	0.4	0.5	0.6	0.3	1.0	3.5
16-Sep	Z	0.7	0.4	0.4	0.9	1.4	1.0	0.9	1.4	C	C	C	C	C	0.4	0.3	0.4	0.9	2.0	1.7	0.8	0.9	2.2	1.1	1.0	2.2
17-Sep	0.8	Z	0.6	0.3	0.2	0.3	0.3	0.5	1.3	1.3	1.0	1.2	1.2	0.9	1.0	1.6	1.3	1.5	1.9	1.7	1.7	1.1	1.2	1.1	1.0	1.9
18-Sep	1.6	2.2	Z	1.8	1.4	1.4	1.4	1.3	1.0	1.0	1.0	0.9	0.7	0.8	1.0	0.8	0.8	0.8	1.4	4.9	2.6	4.8	1.3	1.2	1.6	4.9
19-Sep	1.1	1.0	0.7	Z	0.7	0.8	0.8	0.9	0.7	0.7	0.5	0.3	0.3	0.3	0.3	0.4	0.4	2.6	3.9	1.5	1.0	2.2	2.4	0.8	1.1	3.9
20-Sep	0.7	3.4	4.9	2.4	Z	1.3	1.3	1.2	1.6	1.8	1.1	1.0	0.9	0.7	0.7	1.0	1.3	2.0	2.7	3.2	2.0	1.2	0.9	1.0	1.7	4.9
21-Sep	0.8	1.1	1.3	3.0	6.7	Z	3.6	1.6	1.1	1.5	0.5	0.3	0.2	0.4	0.9	0.5	0.3	0.3	0.6	0.5	0.8	2.8	0.6	0.3	1.3	6.7
22-Sep	Z	0.4	1.1	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.9	1.0	0.7	0.9	0.6	0.8	0.5	1.1
23-Sep	10.4	Z	1.7	1.6	1.1	1.1	1.0	1.1	1.1	0.7	1.7	0.5	0.5	0.4	0.4	0.4	0.3	0.7	0.6	0.5	1.2	0.4	0.4	0.4	1.2	10.4
24-Sep	0.4	0.5	Z	0.6	0.5	0.4	0.7	0.5	0.6	0.3	0.5	0.5	0.3	0.3	1.5	0.3	0.4	0.4	0.7	2.1	2.3	0.7	0.5	0.3	0.7	2.3
25-Sep	0.5	0.3	0.3	Z	0.6	0.7	0.9	0.9	0.8	0.9	0.5	0.5	0.5	0.8	1.2	0.8	0.9	1.2	1.6	2.4	2.5	1.3	1.6	0.7	1.0	2.5
26-Sep	0.5	0.6	0.4	0.5	Z	1.1	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	4.7	10.0	2.2	1.2	10.0
27-Sep	1.1	0.8	0.7	0.5	0.6	Z	0.7	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	1.3	0.4	0.4	0.3	0.3	0.5	1.3
28-Sep	Z	0.7	0.5	0.3	0.5	0.7	0.7	0.6	0.7	0.7	0.7	0.4	0.3	0.3	0.5	0.2	0.4	0.8	2.0	2.2	2.2	1.5	1.0	1.7	0.9	2.2
29-Sep	3.0	Z	2.3	0.9	0.6	0.4	0.5	1.0	1.1	1.1	0.8	0.8	0.8	1.3	1.3	1.0	1.1	2.3	2.2	1.7	4.7	2.3	1.4	1.2	1.5	4.7
30-Sep	1.1	1.3	Z	3.3	2.8	3.2	3.3	2.5	2.1	3.9	2.2	1.8	1.1	1.3	1.2	1.1	1.0	1.4	2.2	1.8	1.4	1.3	1.5	2.3	2.0	3.9
	1.8	1.4	1.2	1.1	1.1	1.2	1.3	1.2	1.4	1.4	1.1	1.0	0.8	0.8	0.9	0.7	0.8	1.1	1.8	2.1	1.9	1.6	1.6	1.3	Diurnal Average	
	10.4	5.0	4.9	3.3	6.7	6.2	7.0	3.2	3.9	3.9	2.5	2.4	2.4	3.5	1.8	1.7	1.8	2.6	7.9	5.5	4.9	4.8	10.0	4.5	Diurnal Maximum	

Z - zerospan C - Calibration

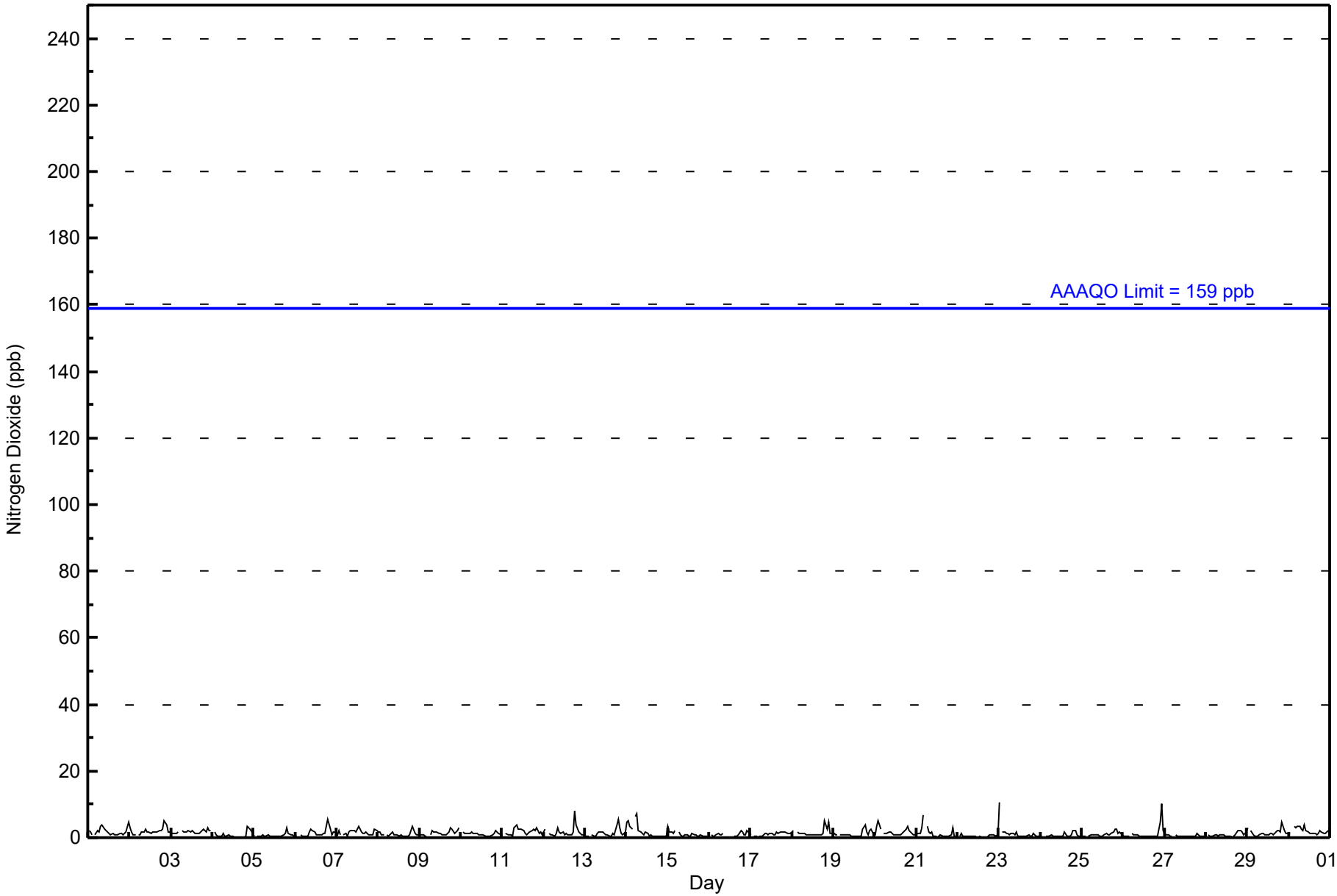
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - September 2025



Nitrogen Dioxide (NO_2) - ppb
Conklin - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Conklin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	13	6	6	6	6	28	66	112	96	50	47	30	36	31	35	49	617
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	13	6	6	6	6	28	66	112	96	50	47	30	36	31	35	49	617

Total Number of Valid Hours: 617

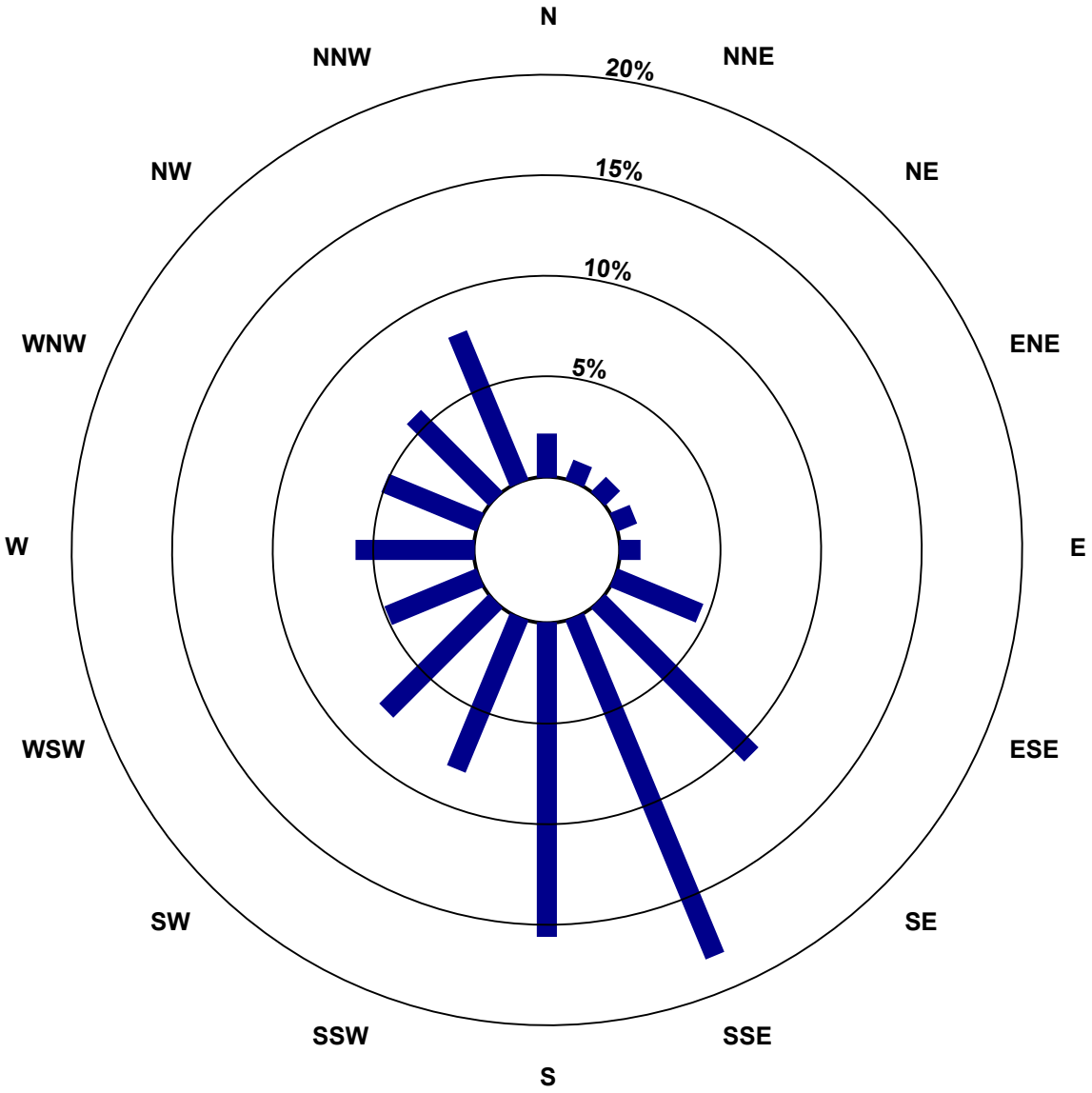
Total Number of Hours: 720

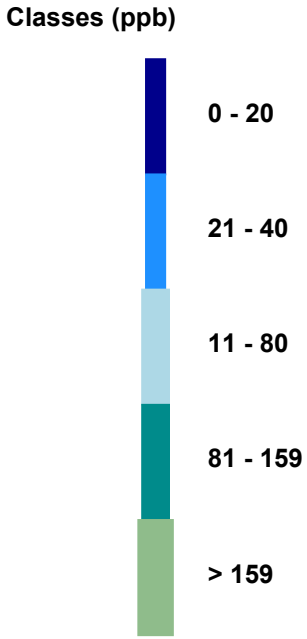
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Conklin





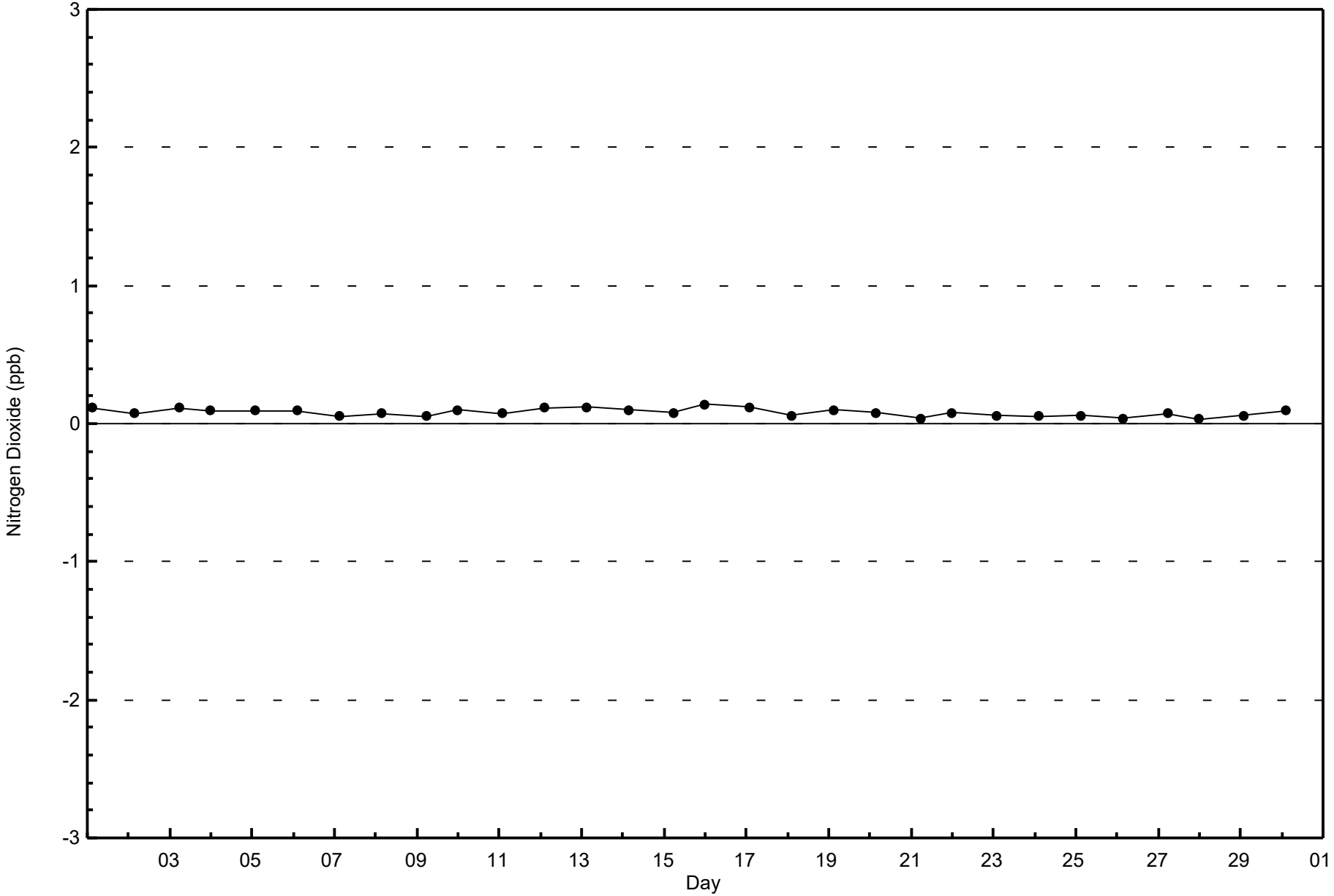
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - September 2025

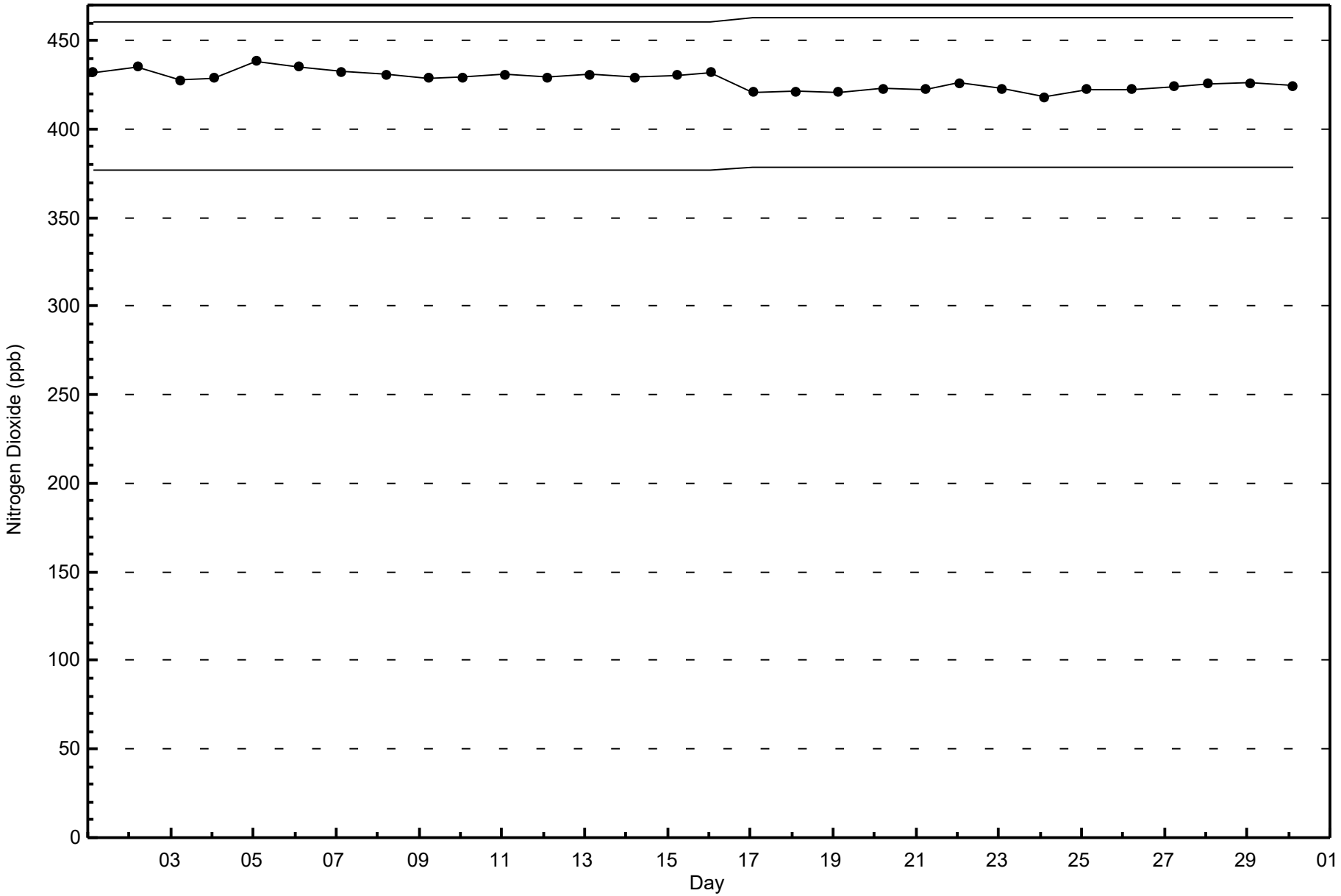


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025

Maximum Value: 48.8 ppb on Sep 2 00:00

Maximum Daily Average: 6.5 ppb on Sep 1

Minimum Value: 0.1 ppb on Sep 22 17:00

Minimum Daily Average: 0.5 ppb on Sep 27

Maximum Diurnal Average: 3.7 ppb at hour 1

Minimum Diurnal Average: 0.7 ppb at hour 16

Monthly Average: 1.87 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.6 Median = 1.1 Q_3 = 2.0 P_{90} = 3.5 P_{99} = 13.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	7.9	4.4	2.2	Z	1.3	10.8	13.2	32.0	9.3	3.0	2.6	2.3	1.4	1.1	1.1	0.7	0.9	1.0	1.2	1.3	0.7	1.2	1.9	48.8	6.5	48.8
2-Sep	8.9	4.1	2.0	4.2	Z	9.3	5.1	3.3	2.3	3.3	2.2	1.7	1.2	1.6	1.8	1.7	1.8	2.3	2.2	2.8	5.9	4.1	1.6	1.8	3.3	9.3
3-Sep	1.3	1.2	1.5	1.5	1.8	Z	2.3	2.1	1.7	1.7	2.2	2.0	2.2	1.6	1.4	1.4	1.4	1.5	2.3	2.7	1.5	3.1	2.1	2.0	1.9	3.1
4-Sep	Z	1.7	0.8	0.5	0.3	0.5	2.7	0.4	0.5	0.9	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	11.5	5.2	4.8	2.5	1.5	11.5
5-Sep	0.9	Z	0.6	0.5	0.5	2.2	1.0	0.6	1.0	0.5	0.4	1.6	0.3	0.3	0.4	0.4	0.4	0.8	1.3	3.8	1.6	0.9	0.9	0.6	0.9	3.8
6-Sep	0.6	0.4	Z	0.8	0.5	0.9	0.6	1.2	2.5	3.9	2.4	1.9	0.9	0.8	1.0	0.9	1.3	1.4	3.7	5.5	2.5	1.0	1.9	1.5	1.7	5.5
7-Sep	0.9	2.3	1.0	Z	0.9	1.1	0.6	1.7	3.7	2.4	2.5	1.5	2.6	4.0	1.9	1.2	1.1	1.7	1.0	0.8	1.0	0.9	3.1	2.4	1.7	4.0
8-Sep	1.9	1.6	1.0	0.9	Z	2.4	1.9	3.5	3.0	1.0	0.9	0.8	0.5	0.7	0.6	0.5	0.5	0.5	0.9	2.6	3.9	1.3	0.8	0.9	1.4	3.9
9-Sep	0.9	1.1	0.9	0.7	0.6	Z	8.4	6.2	1.9	2.2	1.6	1.2	1.2	1.0	1.0	0.9	1.2	1.6	2.8	2.7	1.4	1.8	2.1	2.8	2.0	8.4
10-Sep	Z	1.5	1.1	1.1	1.2	1.1	1.9	1.4	1.4	1.1	1.0	0.9	0.8	0.7	0.4	0.4	0.4	0.3	0.9	1.2	2.0	1.6	1.2	1.0	1.1	2.0
11-Sep	0.9	Z	7.9	3.3	2.3	5.1	5.0	22.2	9.1	3.0	2.5	2.4	2.3	1.4	0.9	1.2	1.5	2.0	2.6	2.1	2.9	1.6	1.5	1.0	3.7	22.2
12-Sep	5.3	9.3	Z	2.2	1.0	4.1	3.7	8.8	6.6	1.9	1.4	1.5	1.0	1.1	1.0	0.9	0.8	1.5	9.1	4.1	2.4	1.5	0.7	2.5	3.2	9.3
13-Sep	0.5	0.5	0.4	Z	0.7	0.9	0.7	2.5	2.3	2.1	1.6	1.4	0.9	0.7	0.6	0.6	1.1	1.0	4.2	5.4	3.6	1.5	0.7	3.7	1.6	5.4
14-Sep	5.2	5.4	3.5	2.7	Z	11.8	8.0	2.2	1.7	1.4	0.9	2.3	1.2	0.5	1.0	0.4	0.3	0.4	0.5	0.4	0.6	0.5	0.6	0.6	2.3	11.8
15-Sep	24.1	5.3	3.5	1.3	2.8	Z	2.3	1.1	0.4	0.6	0.7	0.7	0.6	0.6	2.1	0.7	0.7	0.6	0.6	0.9	0.4	0.5	0.6	0.3	2.2	24.1
16-Sep	Z	0.7	0.4	0.4	1.5	1.6	1.0	0.9	1.9	C	C	C	C	C	0.4	0.3	0.4	0.9	2.0	2.2	1.0	1.2	14.3	5.8	2.0	14.3
17-Sep	4.4	Z	0.9	0.5	0.4	1.3	0.6	1.3	2.5	1.6	1.1	1.3	1.3	0.9	1.0	1.7	1.4	1.5	1.9	1.7	1.7	1.1	1.2	1.1	1.4	4.4
18-Sep	1.6	2.2	Z	1.8	1.4	1.4	1.4	1.4	1.1	1.0	1.0	0.9	0.7	0.8	1.0	0.8	0.8	0.8	1.4	5.8	3.0	11.0	1.3	1.2	1.9	11.0
19-Sep	1.1	1.0	0.7	Z	0.7	1.1	1.4	1.2	0.8	0.7	0.5	0.3	0.3	0.3	0.3	0.4	0.4	2.8	4.3	1.5	1.0	4.0	2.5	0.8	1.2	4.3
20-Sep	0.7	3.6	5.1	2.4	Z	1.3	1.3	1.4	1.9	2.0	1.1	1.0	0.9	0.7	0.7	1.0	1.3	2.0	2.7	3.2	2.0	1.2	0.9	1.0	1.7	5.1
21-Sep	0.8	1.1	1.4	6.5	15.1	Z	6.0	2.5	1.1	1.5	0.5	0.3	0.2	0.4	1.0	0.5	0.3	0.3	0.6	0.5	0.8	5.2	0.6	0.3	2.1	15.1
22-Sep	Z	0.4	2.6	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.2	0.2	2.1	0.2	0.1	0.1	0.2	0.9	1.0	0.7	0.9	0.6	0.8	0.7	2.6
23-Sep	19.2	Z	1.7	1.6	1.1	1.1	1.0	1.1	1.3	0.8	3.4	0.5	0.5	0.4	0.4	0.4	0.3	0.7	0.6	0.5	1.3	0.4	0.4	0.4	1.7	19.2
24-Sep	0.4	0.5	Z	0.6	0.5	0.4	0.7	0.5	0.6	3.3	0.5	0.5	0.3	0.3	6.4	0.3	0.4	0.4	0.7	2.3	2.5	0.7	0.5	0.3	1.0	6.4
25-Sep	0.5	0.3	0.3	Z	0.6	0.7	1.0	1.1	0.9	1.2	0.5	0.5	0.5	0.9	1.2	0.8	0.9	1.2	1.6	2.4	3.1	1.3	2.0	0.7	1.0	3.1
26-Sep	0.5	0.6	0.4	0.5	Z	1.1	1.0	0.8	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	10.0	10.1	2.2	1.4	10.1
27-Sep	1.1	0.8	0.7	0.5	0.6	Z	0.7	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	1.3	0.4	0.4	0.3	0.3	0.5	1.3
28-Sep	Z	0.7	0.5	0.3	0.5	0.7	0.7	0.6	0.8	0.7	0.7	0.4	0.3	0.3	0.7	0.2	0.4	0.8	2.0	2.2	2.2	1.5	1.0	1.7	0.9	2.2
29-Sep	3.0	Z	2.3	0.9	0.6	0.4	0.5	1.0	1.2	1.1	0.8	0.8	0.8	1.3	1.3	1.0	1.1	2.3	2.2	1.7	4.8	2.3	1.4	1.2	1.5	4.8
30-Sep	1.1	1.3	Z	3.3	2.8	3.2	3.3	2.5	2.3	5.1	2.5	1.9	1.1	1.3	1.2	1.1	1.0	1.4	2.2	1.8	1.4	1.3	1.5	2.3	2.0	5.1
	3.7	2.1	1.7	1.6	1.6	2.6	2.6	3.5	2.2	1.7	1.3	1.1	0.9	0.9	1.1	0.7	0.8	1.1	1.9	2.2	2.3	2.3	2.1	3.1	Diurnal Average	
	24.1	9.3	7.9	6.5	15.1	11.8	13.2	32.0	9.3	5.1	3.4	2.4	2.6	4.0	6.4	1.7	1.8	2.8	9.1	5.8	11.5	11.0	14.3	48.8	Diurnal Maximum	

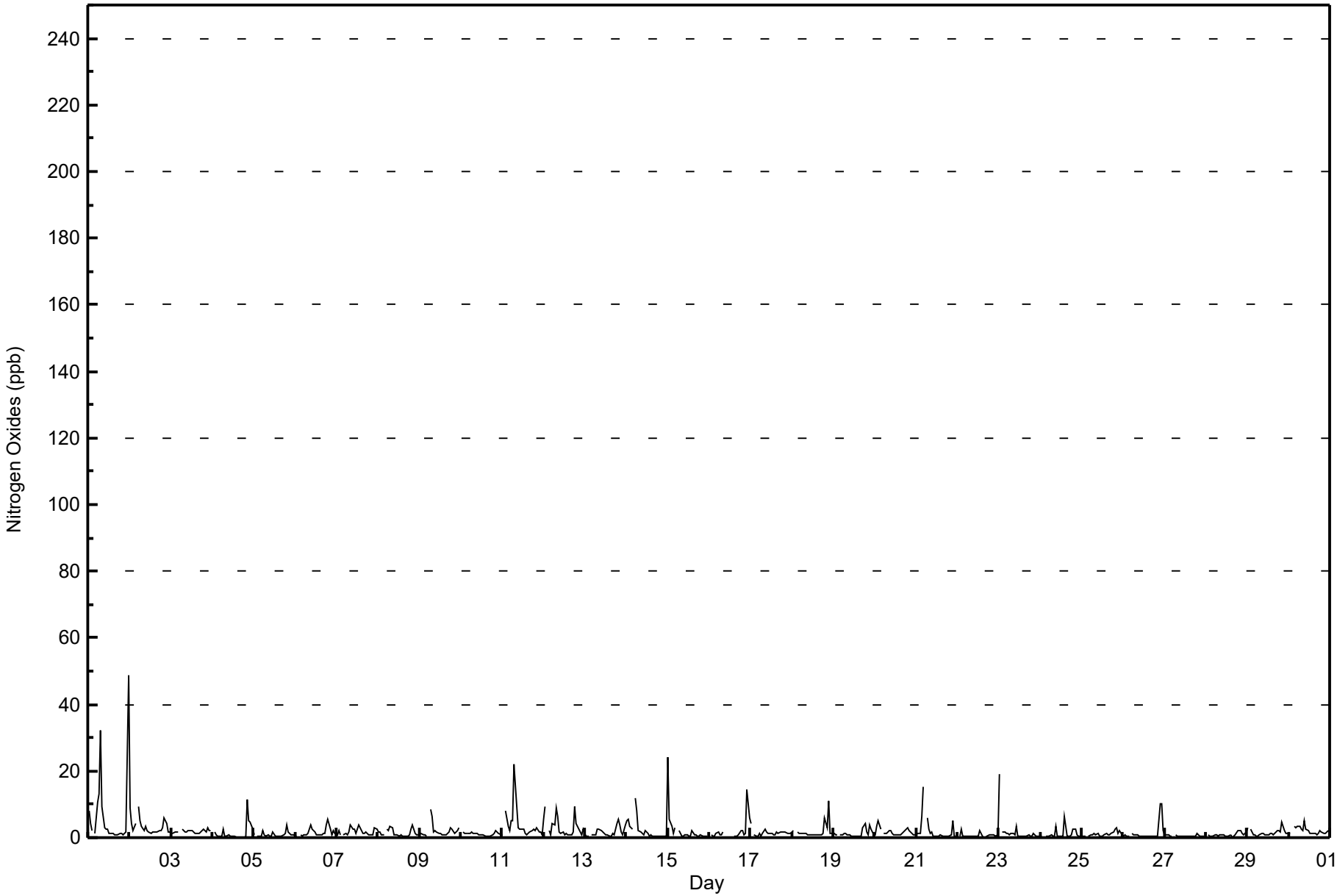
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025



Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	99.42	99.42
21 - 40	3	0.44	99.85
11 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	13	6	6	6	6	28	66	111	95	50	46	30	36	31	34	49	613
21 - 40	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	3
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	13	6	6	6	6	28	66	112	96	50	47	30	36	31	35	49	617

Total Number of Valid Hours: 617

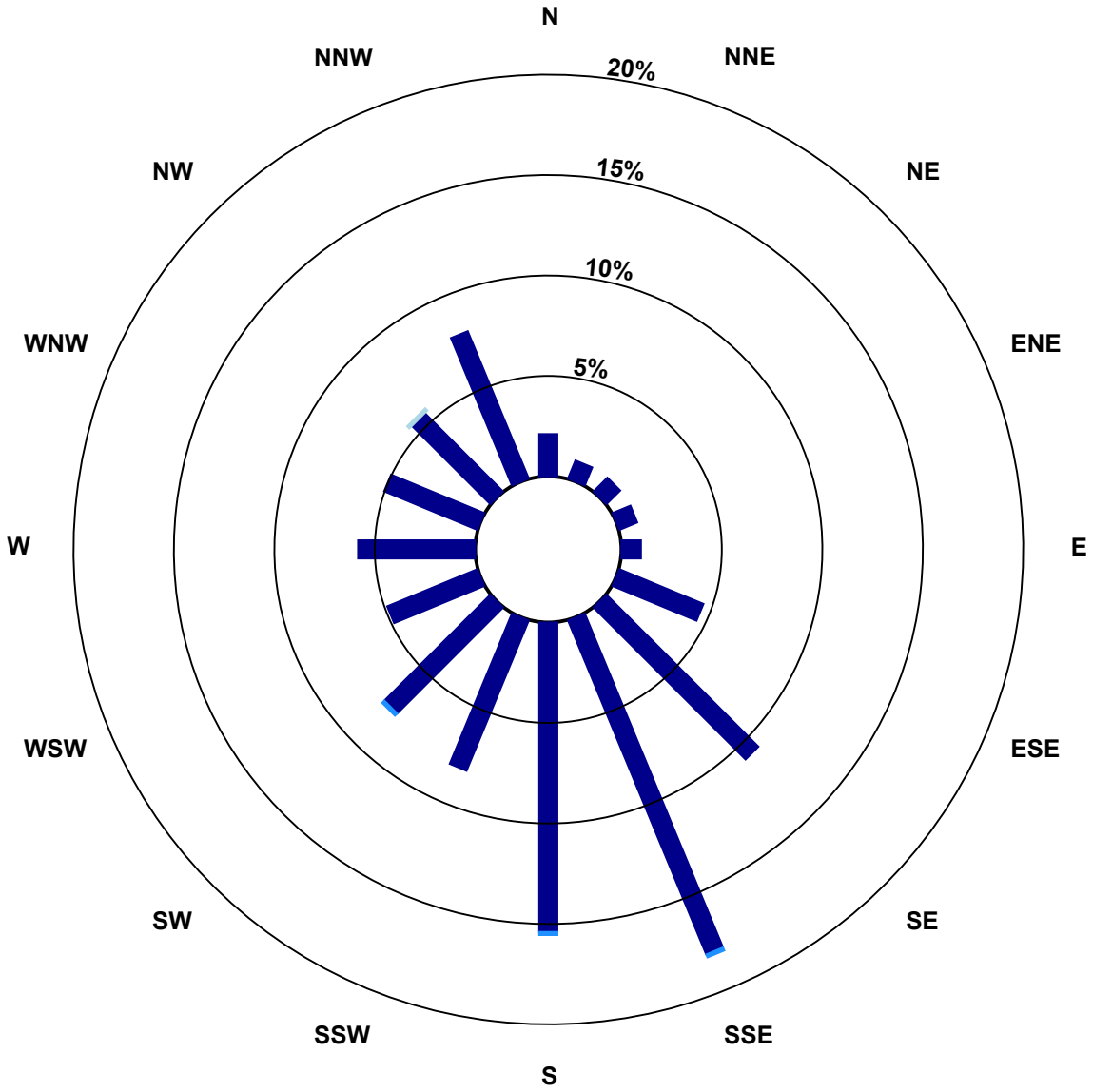
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

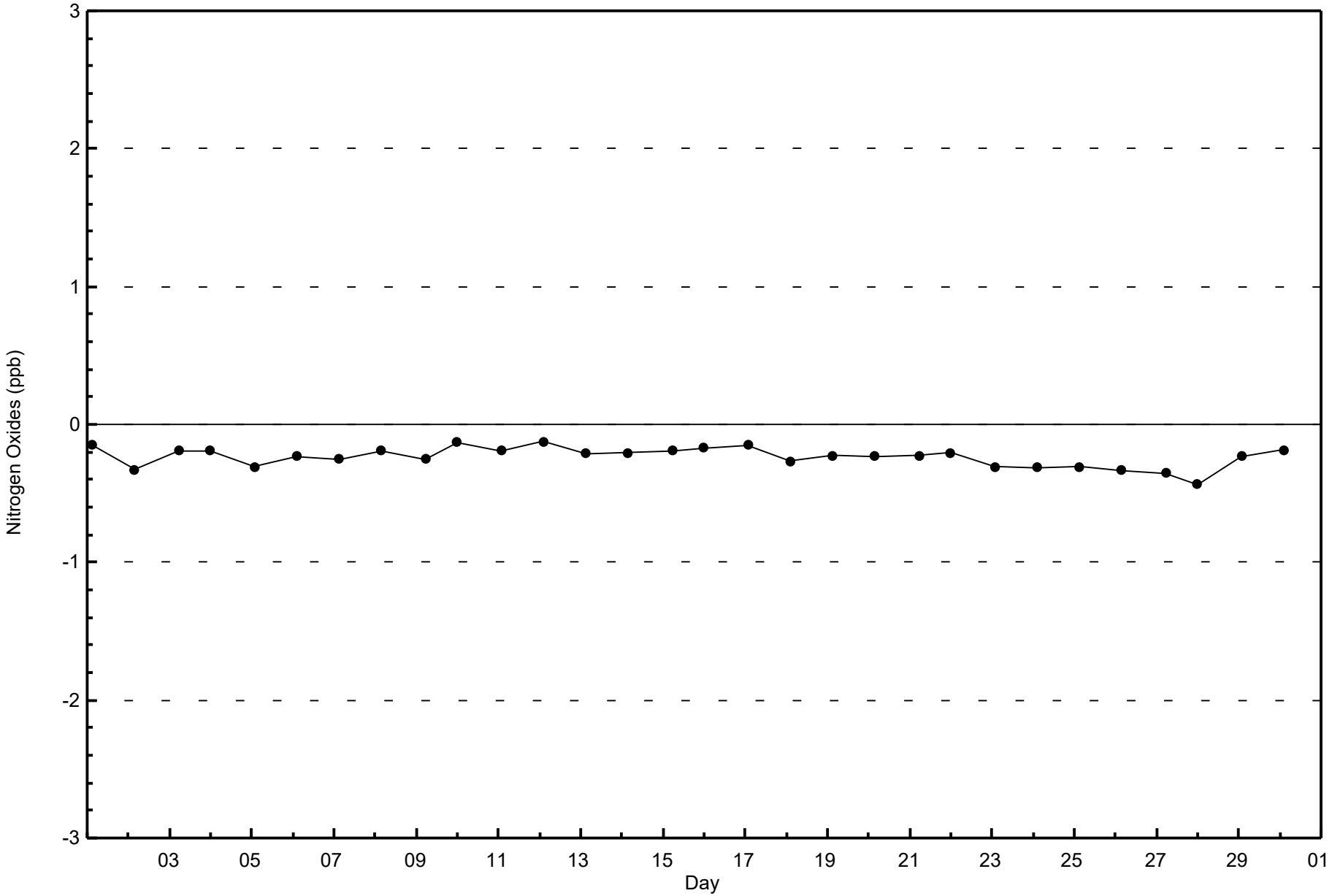
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025

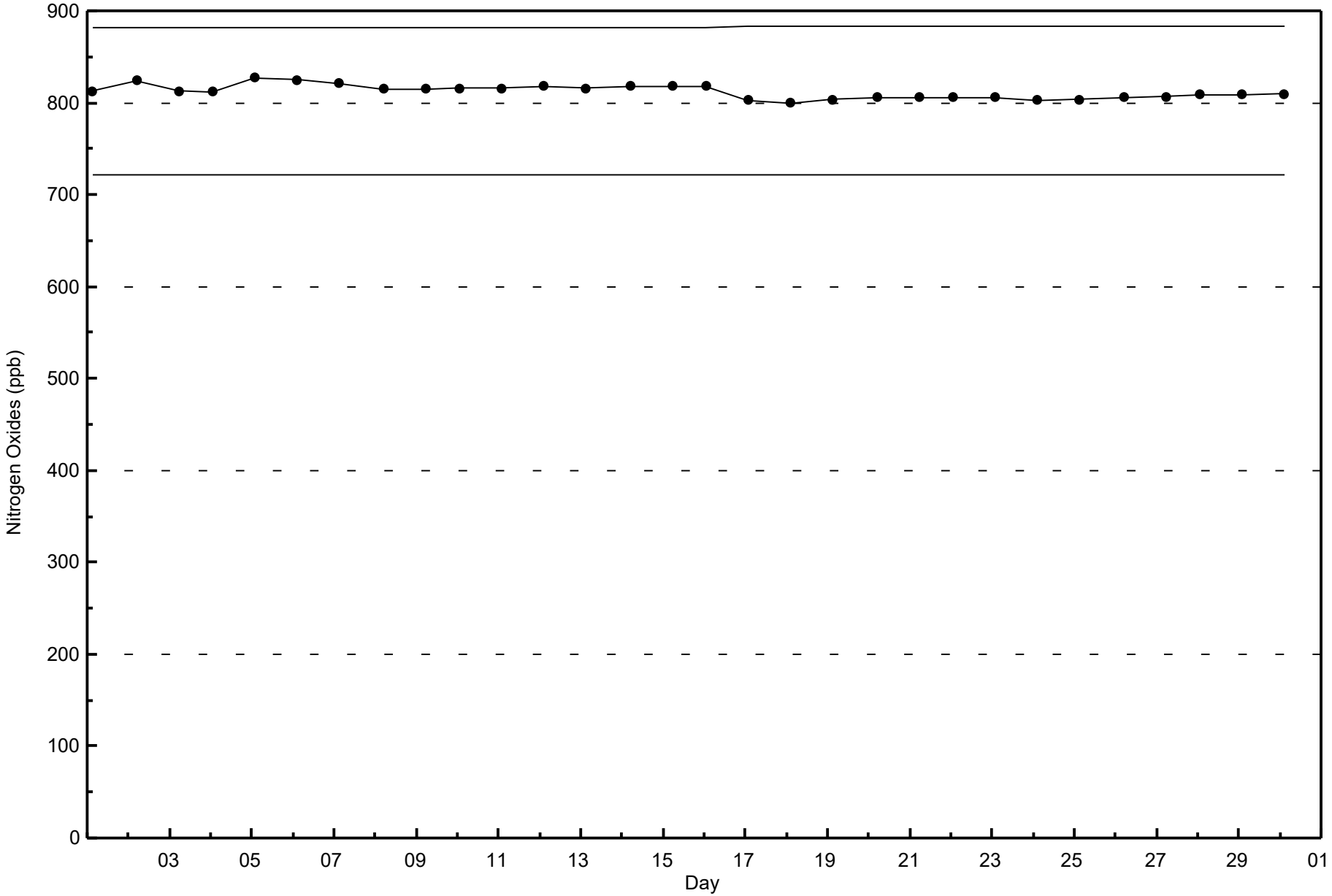


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 56.5 ppb on Sep 9 17:00

Maximum Daily Average: 32.8 ppb on Sep 23

Minimum Value: 0.9 ppb on Sep 5 04:00

Minimum Daily Average: 9.2 ppb on Sep 1

Maximum Diurnal Average: 36.9 ppb at hour 16

Minimum Diurnal Average: 11.3 ppb at hour 5

Monthly Average: 22.73 ppb

Percentiles: P_1 = 1.0 P_{10} = 2.5 Q_1 = 10.6 Median = 25.0 Q_3 = 32.6 P_{90} = 38.0 P_{99} = 53.9

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.4	Z	2.1	1.7	1.5	1.6	1.4	1.7	5.6	10.6	8.2	7.1	11.9	17.0	20.1	20.7	23.3	25.1	22.3	12.7	3.8	4.7	6.3	1.4	9.2	25.1
2-Sep	1.0	1.0	Z	1.7	1.0	1.0	1.4	3.6	14.2	19.8	27.4	32.9	35.2	38.1	42.0	42.1	41.5	39.0	28.0	14.5	5.3	5.3	14.8	20.7	18.7	42.1
3-Sep	23.0	23.6	24.7	Z	23.9	22.7	22.5	22.9	24.2	26.6	C	C	C	39.0	36.6	34.8	30.3	31.6	31.1	31.1	30.7	27.5	26.0	26.0	27.9	39.0
4-Sep	23.0	21.8	21.4	20.1	Z	21.0	19.5	22.1	24.6	26.2	26.7	27.2	27.2	27.4	27.6	27.2	26.5	25.8	22.9	16.1	5.9	1.6	1.1	1.3	20.2	27.6
5-Sep	2.7	2.6	2.0	0.9	1.3	Z	2.0	4.6	14.6	22.9	27.2	28.4	30.0	30.9	31.7	33.1	34.5	34.5	27.5	10.4	7.0	7.4	6.4	5.1	16.0	34.5
6-Sep	Z	3.8	3.1	3.0	2.5	1.7	1.5	5.5	15.4	22.2	30.8	39.6	45.7	47.4	48.4	50.9	52.3	49.9	36.7	16.2	9.1	9.7	8.0	9.9	22.3	52.3
7-Sep	13.4	Z	5.4	5.2	3.8	4.5	2.7	13.5	24.1	23.4	20.5	18.1	14.0	14.7	26.6	30.1	28.0	21.1	21.3	20.8	18.4	12.6	5.2	3.0	15.2	30.1
8-Sep	2.9	2.7	Z	2.1	1.2	1.2	1.3	3.3	12.3	17.2	20.6	25.2	28.1	29.1	30.1	29.9	30.0	29.7	24.7	15.5	5.5	3.7	2.2	1.7	13.9	30.1
9-Sep	1.3	1.3	1.3	Z	2.0	1.5	1.3	4.5	11.7	19.3	32.8	42.2	48.9	51.6	49.8	51.1	56.5	54.9	37.7	19.9	18.6	43.1	38.2	36.2	27.2	56.5
10-Sep	26.4	18.4	17.3	20.3	Z	20.2	21.8	23.1	24.6	21.1	24.6	24.5	26.0	27.1	28.7	30.2	30.6	29.1	23.1	11.1	7.4	4.6	3.2	2.4	20.3	30.6
11-Sep	2.0	1.8	1.6	1.4	1.3	Z	2.0	2.1	8.7	22.0	32.6	37.7	41.6	38.0	37.2	37.9	37.1	32.7	25.3	15.7	5.4	3.1	2.8	4.2	17.1	41.6
12-Sep	Z	2.4	1.4	1.6	1.8	1.5	1.4	1.9	9.4	21.0	36.6	45.9	47.7	52.6	53.0	52.3	51.7	45.9	24.7	10.7	10.1	8.3	8.7	11.6	21.8	53.0
13-Sep	10.6	Z	8.0	3.8	2.1	1.9	1.4	3.1	10.0	20.9	27.9	39.8	51.1	55.7	55.4	55.5	55.5	53.7	34.1	15.2	7.8	10.1	8.2	6.9	23.4	55.7
14-Sep	3.6	2.3	Z	2.8	3.2	2.5	6.1	10.5	7.3	15.3	26.5	38.6	41.1	40.8	33.9	33.2	31.0	29.8	30.0	27.8	24.3	13.0	3.5	1.2	18.6	41.1
15-Sep	1.2	1.0	1.0	Z	4.7	6.4	4.4	8.6	14.4	17.4	24.8	29.3	30.1	29.7	29.1	31.3	27.8	24.5	28.3	28.6	23.3	13.7	6.3	2.9	16.9	31.3
16-Sep	4.5	4.3	8.2	10.0	Z	8.8	10.1	11.8	12.8	15.0	19.8	22.0	23.4	24.7	24.8	24.7	25.8	21.6	10.4	4.2	2.8	1.9	1.2	1.0	12.8	25.8
17-Sep	1.0	1.3	1.4	1.3	1.2	Z	1.8	3.1	9.5	22.1	32.4	36.6	37.9	39.9	43.4	47.5	47.8	42.8	34.5	30.1	21.8	26.7	31.9	26.4	23.6	47.8
18-Sep	Z	29.0	26.2	26.7	26.0	25.5	24.6	23.5	25.5	28.2	29.8	31.1	34.4	37.7	41.0	40.0	39.3	36.9	27.5	10.8	8.8	12.9	25.4	23.1	27.6	41.0
19-Sep	22.3	Z	7.5	4.2	3.1	2.6	2.8	9.9	20.2	32.4	35.1	37.0	40.1	41.7	42.0	41.2	42.3	28.5	15.4	12.3	14.6	11.5	11.1	11.2	21.3	42.3
20-Sep	13.5	7.6	Z	11.1	19.0	18.9	13.1	13.0	22.2	32.7	44.3	47.4	49.5	49.6	52.2	53.8	54.5	49.2	34.4	20.1	17.1	38.1	41.6	30.8	31.9	54.5
21-Sep	20.5	14.4	7.4	Z	2.4	1.9	3.2	7.2	22.3	34.4	34.6	36.2	37.1	39.8	40.4	40.0	37.8	36.1	35.1	38.0	34.5	26.4	25.5	27.0	26.2	40.4
22-Sep	28.1	27.2	26.2	26.0	Z	25.3	25.6	24.2	25.2	26.6	27.3	29.7	31.5	32.3	33.9	35.2	35.4	34.0	25.8	25.2	21.6	24.7	28.8	29.1	28.2	35.4
23-Sep	21.1	28.1	27.7	28.4	29.6	Z	29.7	28.1	28.3	31.5	33.9	35.1	36.4	37.2	38.5	38.2	37.3	37.1	37.0	37.8	35.4	35.1	33.0	30.9	32.8	38.5
24-Sep	Z	33.4	24.0	20.9	22.8	25.5	25.5	24.6	24.4	21.9	25.7	27.5	30.1	30.7	31.0	32.4	32.1	32.0	30.2	16.7	8.4	14.3	20.7	18.7	24.9	33.4
25-Sep	14.0	Z	20.1	12.5	14.2	10.7	10.7	12.6	16.6	20.9	33.8	35.2	35.8	36.4	35.8	36.1	37.0	36.2	31.1	17.4	14.3	29.3	32.6	37.2	25.2	37.2
26-Sep	35.3	31.8	Z	27.8	25.8	24.4	23.4	23.7	25.9	29.0	30.3	32.3	33.2	33.6	34.0	34.7	35.2	34.9	34.7	32.3	29.0	22.1	17.0	25.8	29.4	35.3
27-Sep	27.6	27.1	27.6	Z	30.7	31.9	30.1	31.1	32.2	33.8	34.3	34.7	34.6	34.3	34.5	35.0	34.4	33.6	32.8	28.3	31.2	35.6	37.4	36.2	32.6	37.4
28-Sep	35.2	34.5	33.2	33.1	Z	30.1	28.9	28.6	26.9	27.2	28.3	29.6	30.9	32.4	32.9	33.4	32.0	25.0	18.0	15.6	16.3	21.9	14.6	13.3	27.0	35.2
29-Sep	25.0	26.9	27.7	29.9	30.0	Z	30.6	30.6	31.2	32.3	33.8	34.7	35.3	35.9	36.7	37.1	36.0	33.9	32.3	25.1	18.6	23.1	30.1	35.6	31.0	37.1
30-Sep	Z	35.5	32.8	30.7	26.5	25.2	14.4	14.0	11.8	16.3	25.6	28.2	27.1	26.5	24.5	17.2	12.2	11.3	13.9	12.1	8.9	8.1	9.5	8.6	19.2	35.5
	14.4	15.4	14.4	13.1	11.3	12.7	12.2	13.9	18.5	23.7	28.8	32.2	34.3	35.7	36.5	36.9	36.5	34.0	27.7	19.7	15.5	16.7	16.7	16.3	Diurnal Average	
	35.3	35.5	33.2	33.1	30.7	31.9	30.6	31.1	32.2	34.4	44.3	47.4	51.1	55.7	55.4	55.5	56.5	54.9	37.7	38.0	35.4	43.1	41.6	37.2	Diurnal Maximum	

Z - zerospan C - Calibration

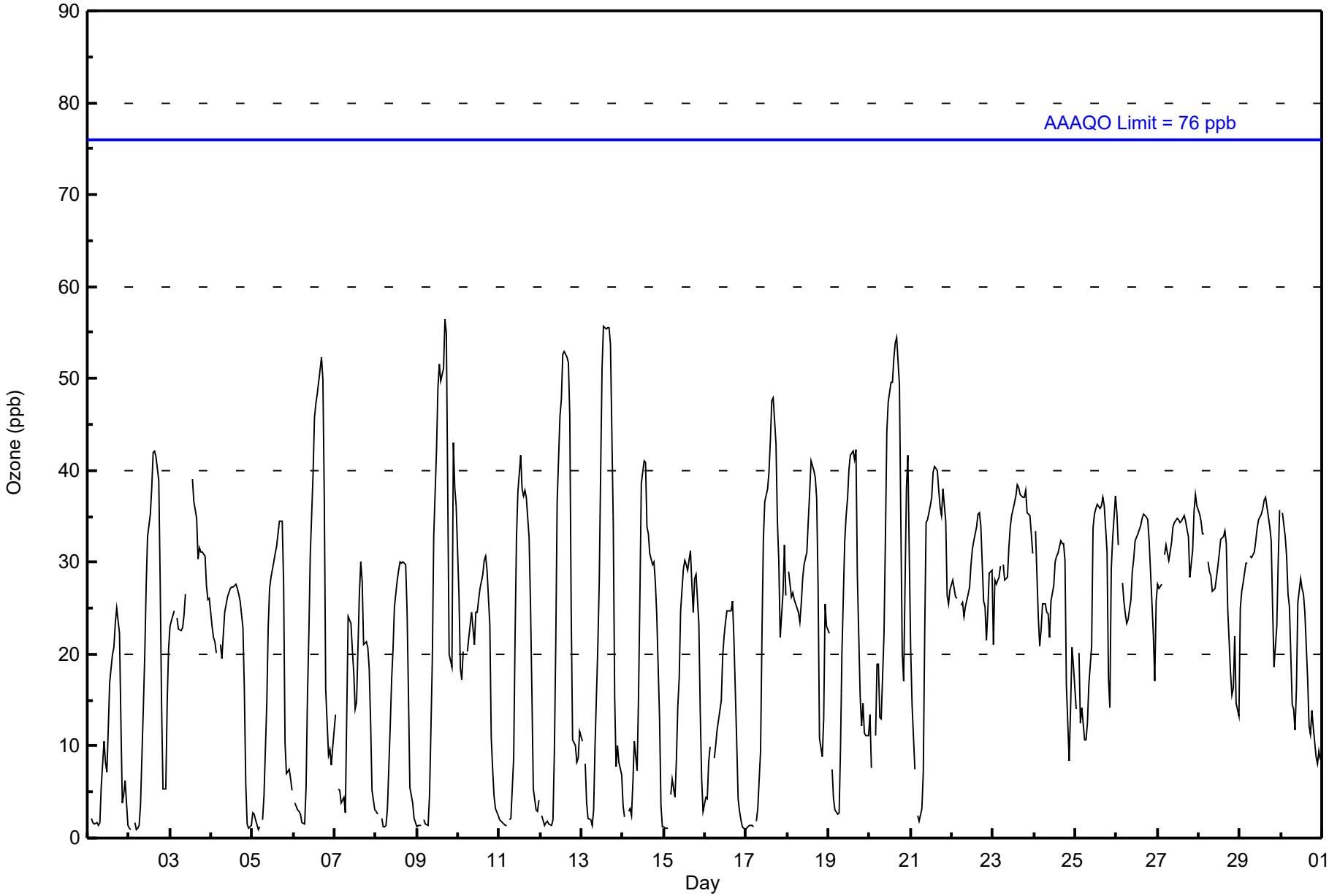
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Conklin - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	266	38.72	38.72
21 - 50	402	58.52	97.23
51 - 82	19	2.77	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

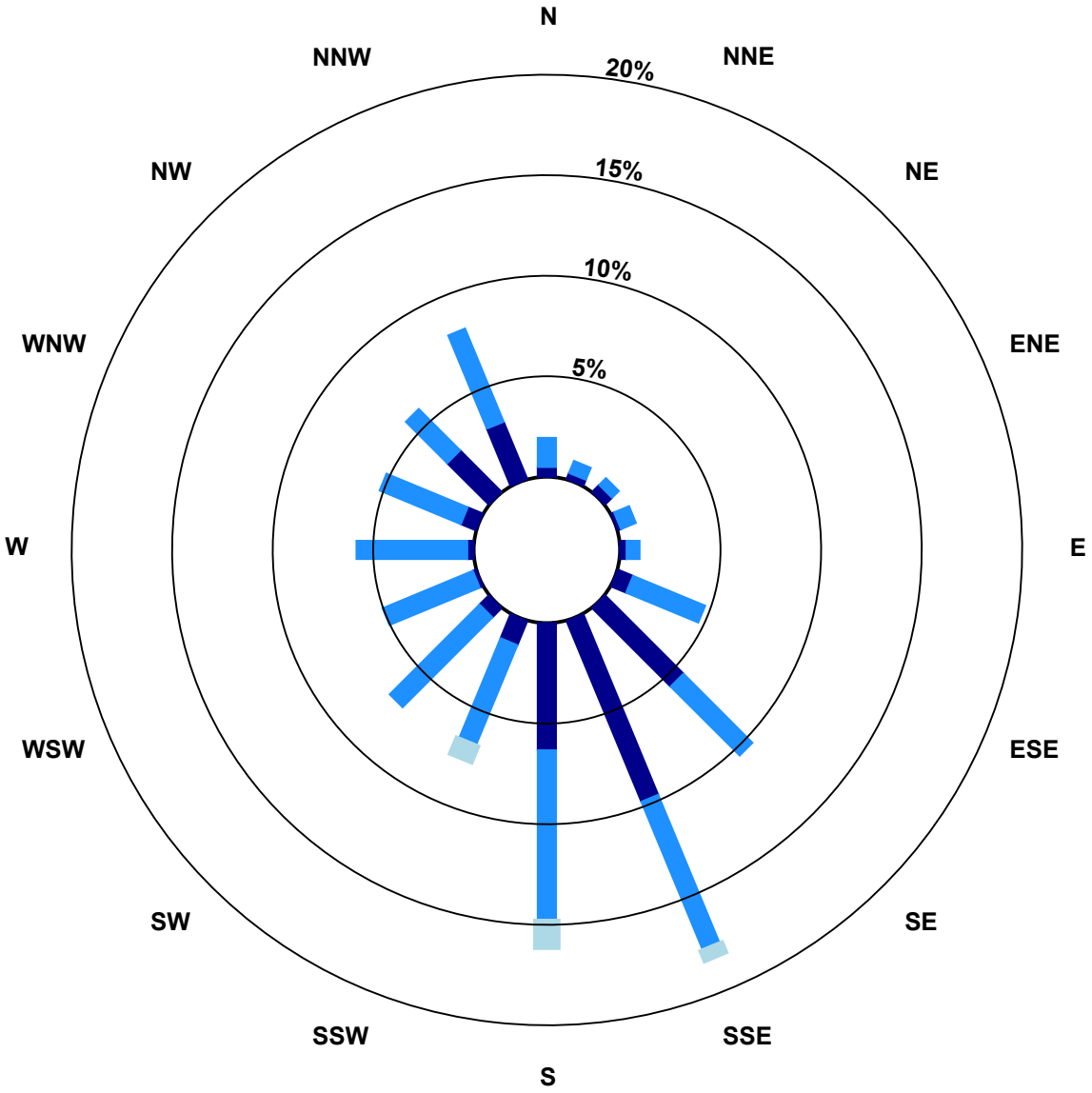
Conklin - September 2025

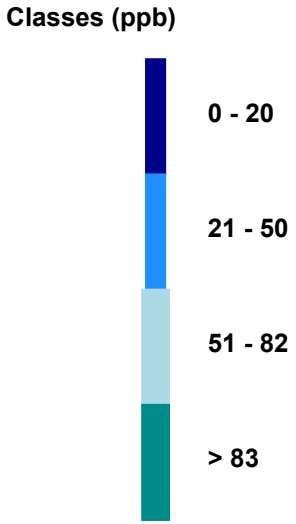
Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	3	2	3	1	2	5	34	60	39	8	4	1	2	5	18	19	206
21 - 50	9	4	3	5	4	24	30	49	52	33	39	30	34	27	18	31	392
51 - 82	0	0	0	0	0	0	0	4	9	6	0	0	0	0	0	0	19
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	12	6	6	6	6	29	64	113	100	47	43	31	36	32	36	50	617

Total Number of Valid Hours: 617

Total Number of Hours: 720

Ozone (O_3) - ppb
Conklin





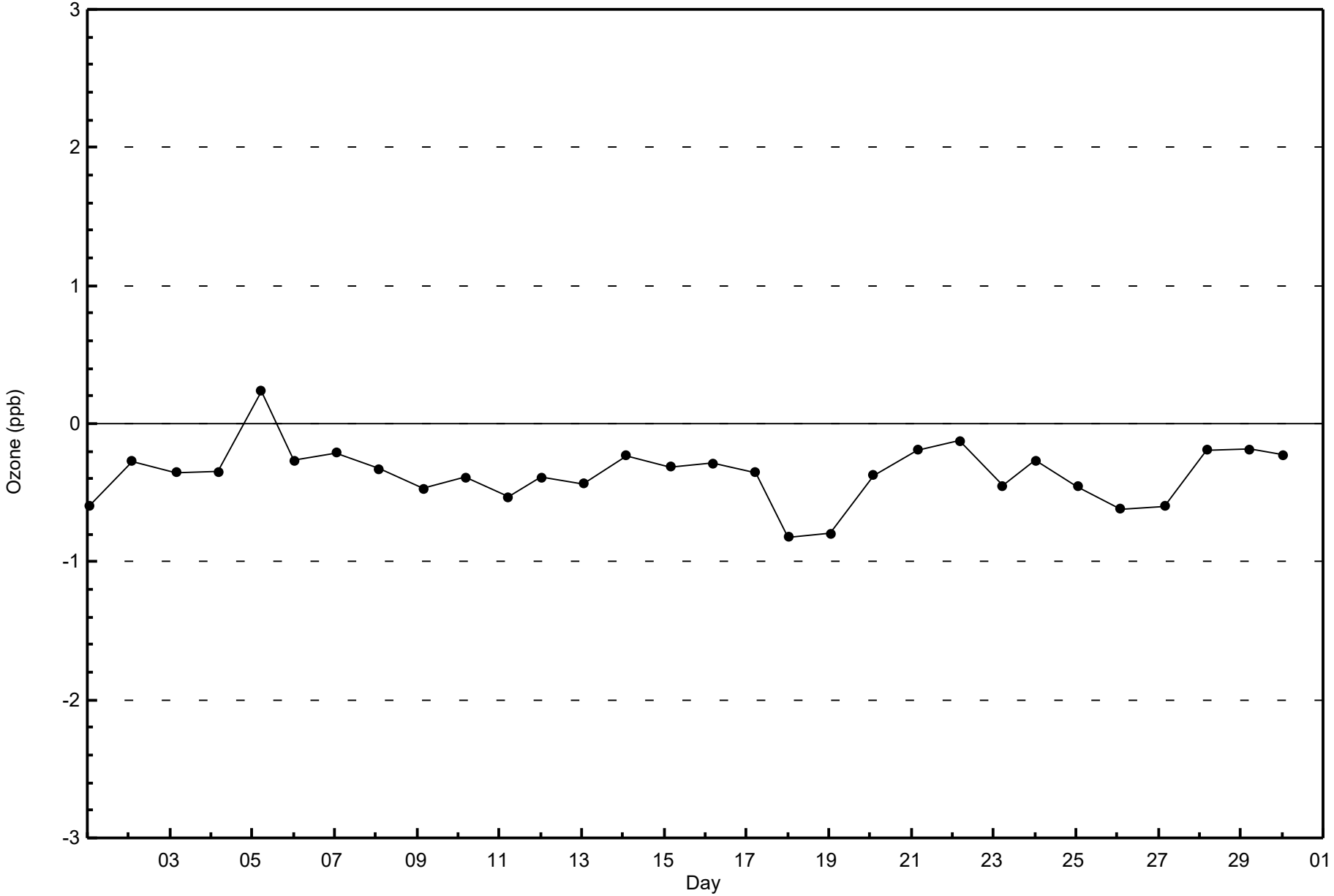
Total Number of Valid Hours: 617

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Conklin - September 2025

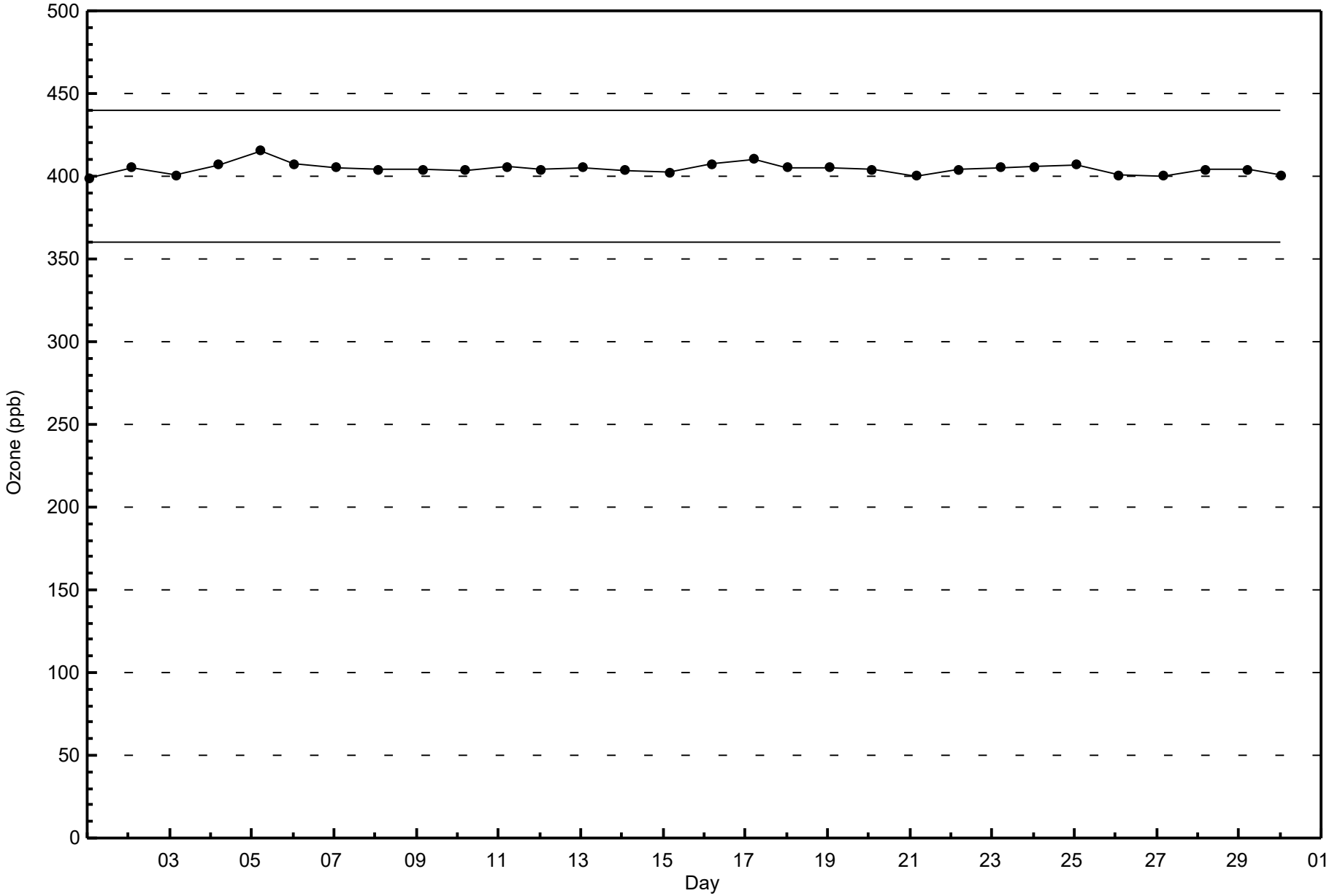


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 5

Maximum Value: 112.0 $\mu g/m^3$ on Sep 12 00:00

Maximum Daily Average: 54.2 $\mu g/m^3$ on Sep 2

Minimum Value: 0.5 $\mu g/m^3$ on Sep 22 17:00

Minimum Daily Average: 1.3 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 24.0 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 13.9 $\mu g/m^3$ at hour 14

Monthly Average: 16.51 $\mu g/m^3$

Percentiles: P_1 = 0.7 P_{10} = 1.5 Q_1 = 4.8 Median = 11.6 Q_3 = 20.3 P_{90} = 41.1 P_{99} = 83.5

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	59.2	57.5	54.3	55.9	53.8	62.3	53.3	52.9	44.0	39.1	32.0	36.4	25.9	17.5	22.6	28.5	27.6	25.1	31.2	34.7	33.8	37.6	45.8	48.5	40.8	62.3
2-Sep	47.8	46.2	45.3	50.6	50.0	55.8	67.7	79.1	78.5	80.7	74.7	61.8	48.4	46.3	44.1	42.0	42.8	44.9	43.4	53.2	55.7	48.1	47.3	47.4	54.2	80.7
3-Sep	46.1	42.3	40.9	38.3	34.9	33.6	33.5	30.6	30.0	29.8	31.7	33.7	38.0	43.2	43.9	42.3	39.8	55.0	58.9	47.2	26.8	44.5	50.5	42.4	39.9	58.9
4-Sep	45.2	40.4	30.4	33.6	24.8	30.7	27.7	15.6	7.5	7.3	6.8	6.2	5.2	6.2	6.5	5.9	4.8	5.2	4.9	12.2	28.7	6.8	7.3	7.2	15.7	45.2
5-Sep	6.5	6.3	4.9	4.2	6.2	5.0	4.4	4.2	4.8	4.8	5.2	5.7	6.8	7.3	7.6	8.3	7.8	8.2	11.2	11.3	15.1	10.4	8.4	8.6	7.2	15.1
6-Sep	7.7	12.1	27.8	7.0	6.5	6.7	6.7	6.6	9.2	10.3	6.6	7.4	11.5	13.2	14.2	15.0	13.8	13.4	13.9	15.6	23.8	15.8	10.8	10.2	11.9	27.8
7-Sep	9.5	9.2	9.3	9.0	7.8	7.3	6.9	8.5	11.7	12.3	13.2	13.9	15.5	17.1	18.2	17.7	22.7	19.3	18.4	17.7	19.8	20.6	21.2	24.9	14.7	24.9
8-Sep	25.4	18.8	18.5	18.0	16.9	17.1	18.9	18.1	20.7	19.6	18.5	17.5	14.6	15.5	16.3	16.5	17.4	16.9	15.2	17.2	19.7	16.8	15.8	16.0	17.7	25.4
9-Sep	15.5	16.0	15.5	15.3	19.0	19.5	20.1	23.1	23.8	25.6	23.6	22.9	24.4	25.6	26.0	25.5	29.0	28.5	32.8	39.9	28.6	31.0	26.5	30.9	24.5	39.9
10-Sep	29.2	24.7	24.4	24.8	24.8	25.0	24.9	24.8	24.7	24.3	32.7	42.1	33.2	25.8	17.5	15.5	15.0	12.4	11.4	13.9	14.3	15.8	13.6	12.1	21.9	42.1
11-Sep	11.1	10.5	10.5	10.6	9.8	10.7	10.5	10.7	8.6	11.3	54.9	42.8	42.6	47.2	43.2	41.7	49.6	52.1	64.7	72.1	83.9	99.5	105.0	112.0	42.3	112.0
12-Sep	110.9	111.2	98.4	96.2	81.3	73.5	61.6	53.4	28.5	22.3	16.9	18.3	17.9	17.8	18.1	18.5	18.9	21.0	24.8	24.6	27.7	21.9	20.0	19.4	42.6	111.2
13-Sep	18.1	17.7	17.3	16.4	16.6	19.0	15.9	16.4	17.9	21.5	21.9	21.4	18.1	16.4	15.4	15.7	16.4	17.4	20.2	29.8	37.7	25.7	20.4	17.3	19.6	37.7
14-Sep	16.8	16.2	16.1	15.7	15.6	16.7	13.3	12.4	12.3	8.0	5.5	4.3	3.8	6.0	12.7	12.2	10.0	14.6	19.8	14.4	19.4	21.6	23.2	24.3	13.9	24.3
15-Sep	20.2	20.4	21.5	19.6	14.2	10.9	9.9	6.9	3.7	4.6	10.6	11.7	12.7	21.4	28.2	31.1	32.5	23.9	19.0	21.2	20.8	17.8	16.5	16.4	17.3	32.5
16-Sep	13.5	12.0	12.6	14.5	14.8	14.6	14.8	14.6	14.8	16.3	15.2	16.1	15.2	13.3	13.0	12.0	11.3	11.0	11.7	16.6	13.4	11.1	11.8	10.3	13.5	16.6
17-Sep	9.8	9.5	9.4	9.2	9.2	10.5	11.5	11.2	10.6	12.5	13.6	11.9	10.6	10.2	10.0	10.8	10.0	11.2	11.4	12.3	12.0	11.6	11.2	11.1	10.9	13.6
18-Sep	11.8	11.9	11.7	11.6	11.7	11.6	11.9	12.4	12.6	12.2	12.5	12.3	11.6	11.2	10.7	11.0	11.5	12.6	13.3	16.8	17.9	17.1	10.7	9.3	12.4	17.9
19-Sep	9.5	9.1	9.2	8.8	8.3	8.3	8.2	6.5	4.8	2.7	2.5	2.7	2.2	2.5	2.7	2.7	2.8	5.4	10.3	9.0	5.8	4.9	4.3	4.2	5.7	10.3
20-Sep	4.3	4.7	5.8	4.1	4.3	5.1	5.5	6.1	8.5	11.7	14.8	14.3	13.7	14.7	13.5	13.2	12.8	15.5	20.5	20.6	18.0	12.1	10.5	10.2	11.0	20.6
21-Sep	9.8	10.0	9.8	10.0	10.1	9.7	10.4	10.3	12.2	14.1	11.1	7.7	8.2	8.3	8.8	8.5	5.9	10.8	15.0	13.7	49.2	23.0	18.6	10.6	12.7	49.2
22-Sep	3.7	2.2	1.8	1.7	1.6	1.5	1.3	1.4	1.4	1.3	1.3	1.2	1.0	0.9	0.8	0.7	0.5	0.7	1.8	1.6	1.9	2.2	2.4	2.4	1.6	3.7
23-Sep	4.2	3.6	3.9	4.3	3.5	3.5	3.6	3.7	3.5	2.6	1.8	C	C	0.8	0.7	0.9	0.9	0.8	0.9	1.0	1.3	1.2	1.1	1.1	2.2	4.3
24-Sep	1.2	1.3	1.4	1.5	1.3	1.3	1.4	1.5	1.5	1.8	1.8	2.2	2.1	1.9	1.8	1.6	1.5	2.1	3.5	6.2	9.3	11.9	9.4	5.3	3.1	11.9
25-Sep	5.0	3.4	2.3	5.1	2.2	3.0	3.1	2.3	2.2	2.2	2.0	2.1	2.0	2.4	2.1	2.4	2.7	3.2	3.7	12.9	5.8	4.0	3.0	2.4	3.4	12.9
26-Sep	2.1	1.7	1.8	2.2	2.4	2.2	1.8	1.4	1.4	2.0	1.0	0.8	0.7	0.7	0.8	1.0	1.0	0.9	0.9	1.2	1.2	2.1	1.3	1.3	1.4	2.4
27-Sep	2.0	2.6	4.4	2.1	2.0	1.3	1.5	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.7	0.9	1.0	1.4	0.9	0.9	0.6	0.8	1.3	4.4
28-Sep	1.0	0.8	0.7	0.7	1.0	1.6	1.6	1.7	3.1	9.3	10.1	6.6	4.8	3.3	2.9	2.3	2.7	5.3	8.3	20.8	26.5	5.3	7.1	5.1	5.5	26.5
29-Sep	2.0	1.4	1.6	1.6	3.0	3.1	3.1	3.1	3.3	4.1	4.9	5.7	6.2	6.5	8.2	9.6	10.2	9.7	10.1	10.0	72.3	29.4	13.0	12.3	9.8	72.3
30-Sep	11.3	12.2	11.4	11.2	11.4	13.1	13.0	11.3	11.4	12.4	10.8	11.0	10.6	12.2	10.8	11.1	10.6	10.7	21.9	29.5	29.6	24.9	25.7	24.5	15.1	29.6
	18.7	17.9	17.4	16.8	15.6	16.1	15.6	15.0	13.9	14.3	15.3	15.2	14.1	13.9	14.1	14.2	14.4	15.3	17.5	20.0	24.0	19.9	18.8	18.3	Diurnal Average	
	110.9	111.2	98.4	96.2	81.3	73.5	67.7	79.1	78.5	80.7	74.7	61.8	48.4	47.2	44.1	42.3	49.6	55.0	64.7	72.1	83.9	99.5	105.0	112.0	Diurnal Maximum	

C - Calibration

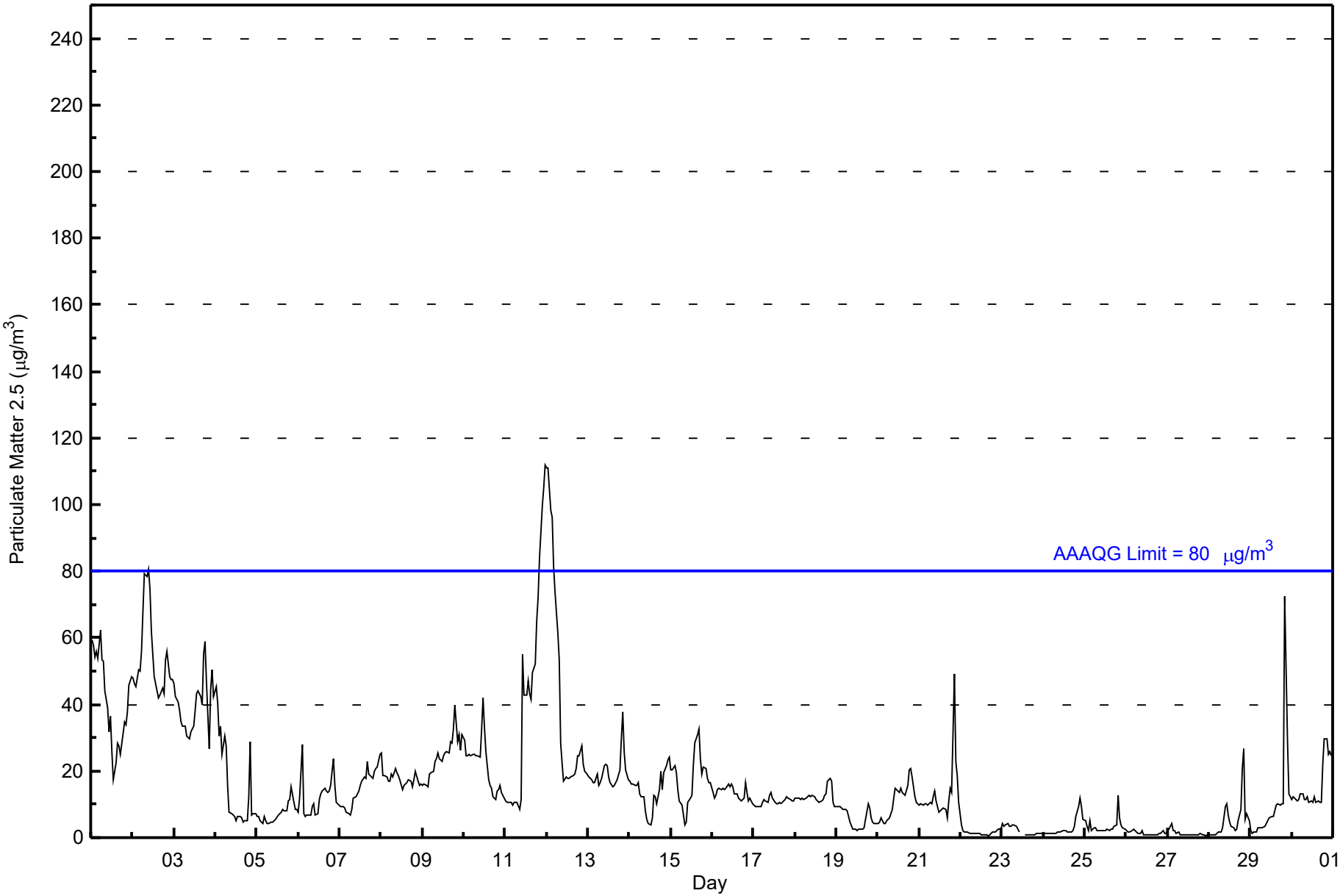
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Conklin - September 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	199	27.72	27.72
6 - 15	253	35.24	62.95
16 - 25	135	18.80	81.75
26 - 80	121	16.85	98.61
> 81.0	10	1.39	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

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

Conklin - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	1	0	0	4	18	20	26	18	34	26	28	19	0	5	199
6 - 15	5	4	4	3	4	9	25	67	40	20	8	1	4	5	16	17	232
16 - 25	4	2	1	3	0	5	14	20	16	7	2	0	3	4	8	9	98
26 - 80	4	0	0	0	2	11	11	12	20	6	5	3	1	4	13	20	112
> 81.0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	13	6	6	6	6	29	69	119	102	51	49	30	36	32	37	51	642

Total Number of Valid Hours: 642

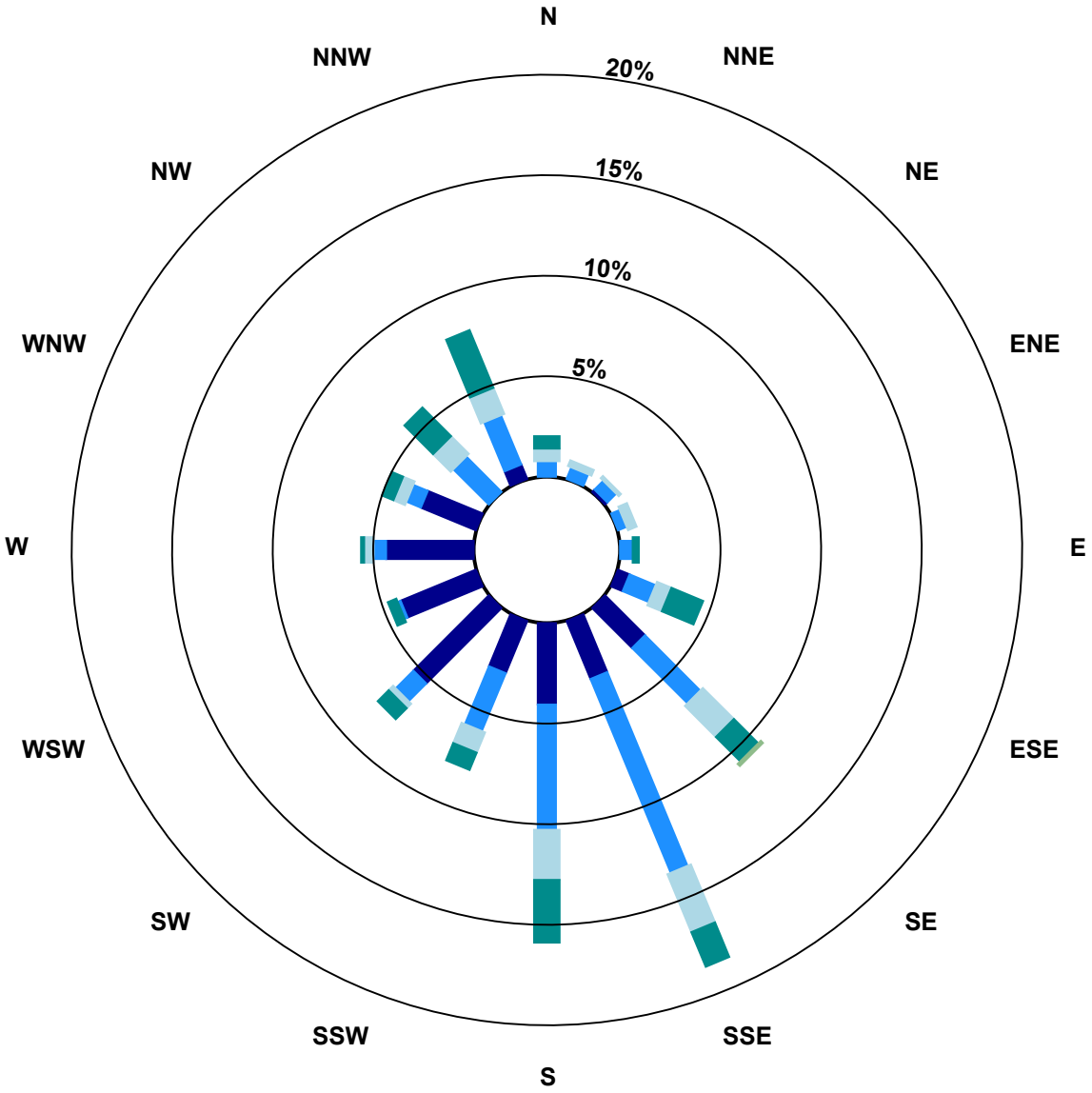
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Conklin



Classes ($\mu g/m^3$)

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 81.0

Total Number of Valid Hours: 642

Maximum Value: 28.4 C on Sep 13 15:00

Maximum Daily Average: 16.4 C on Sep 18

Minimum Value: -2.2 C on Sep 5 04:00

Minimum Daily Average: 8.5 C on Sep 25

Maximum Diurnal Average: 21.0 C at hour 15

Minimum Diurnal Average: 5.9 C at hour 6

Monthly Average: 12.82 C

Percentiles: P_1 = -0.2 P_{10} = 4.6 Q_1 = 8.0 Median = 12.4 Q_3 = 17.3 P_{90} = 22.1 P_{99} = 27.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

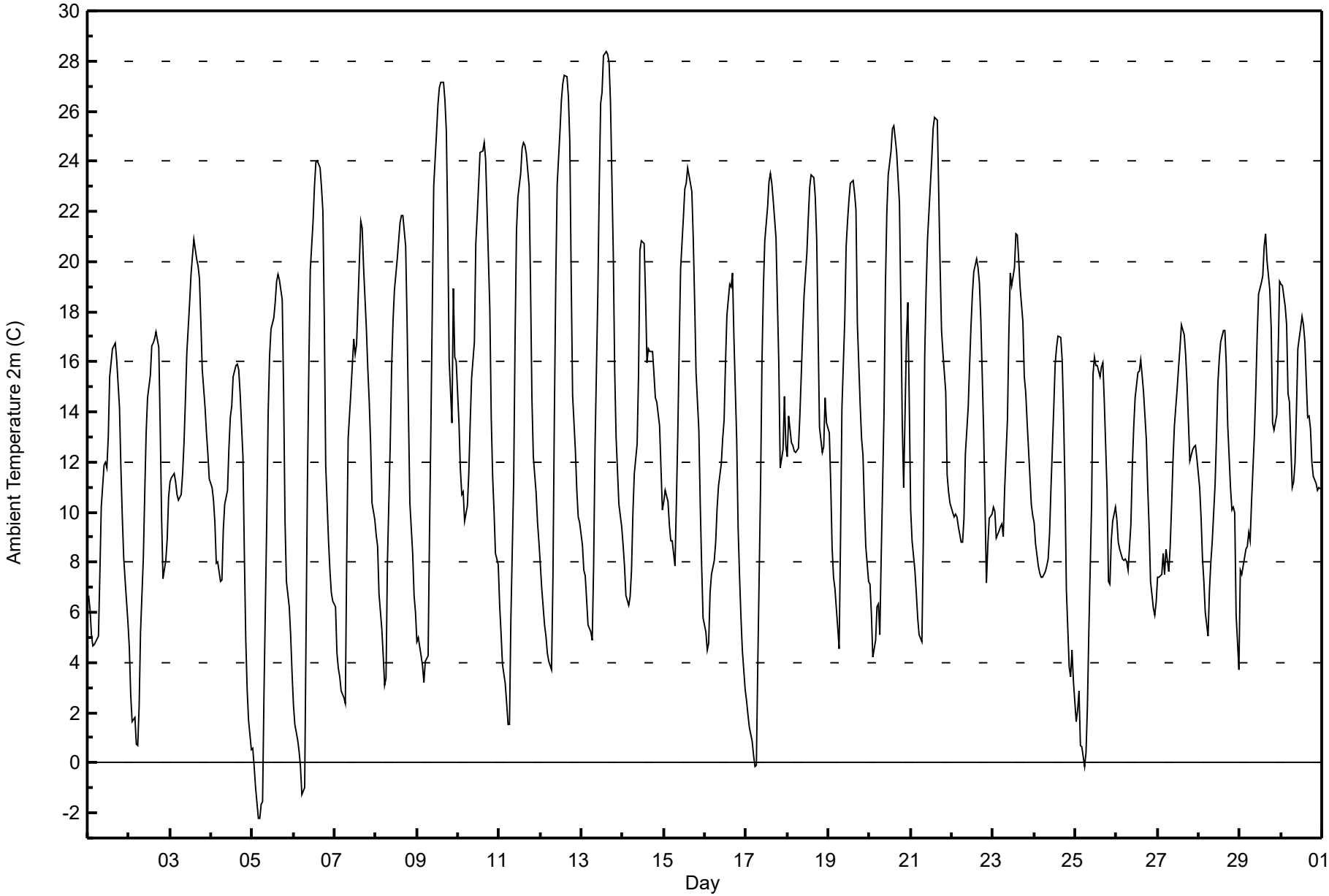
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	6.7	6.1	5.1	4.7	4.7	5.0	5.0	7.5	10.2	11.9	12.0	11.8	13.0	15.4	16.5	16.6	16.7	16.1	14.2	11.8	9.8	8.2	7.3	5.6	10.1	16.7
2-Sep	4.6	2.7	1.6	1.8	0.7	0.7	2.3	5.2	8.2	10.7	13.2	14.6	15.5	16.6	16.7	16.9	17.2	16.6	13.5	9.8	7.3	8.1	8.9	10.6	9.3	17.2
3-Sep	11.2	11.4	11.6	11.2	10.7	10.5	10.7	11.5	12.8	14.5	16.4	18.4	19.5	20.2	20.9	20.1	19.8	19.3	17.6	15.7	14.2	13.2	12.3	11.3	14.8	20.9
4-Sep	11.0	10.5	9.6	7.9	8.0	7.2	7.3	9.3	10.3	10.9	12.6	13.8	14.2	15.4	15.8	15.9	15.7	14.7	12.2	8.4	5.0	2.9	1.7	0.5	10.0	15.9
5-Sep	0.6	-0.2	-1.0	-2.2	-2.2	-1.6	-1.5	2.8	9.7	14.0	16.2	17.3	17.8	18.4	19.2	19.5	19.3	18.5	14.8	9.6	7.2	6.2	5.1	3.6	8.8	19.5
6-Sep	2.3	1.5	0.9	0.5	-0.1	-1.3	-1.0	5.2	11.3	15.9	19.6	21.6	23.0	24.0	24.0	23.8	23.0	22.0	17.7	11.9	8.9	7.7	6.8	6.5	11.5	24.0
7-Sep	6.2	4.4	3.8	3.4	2.8	2.6	2.4	8.3	12.9	14.9	15.9	16.9	16.3	16.7	20.0	21.6	21.4	19.7	17.3	15.7	14.5	12.8	10.4	9.7	12.1	21.6
8-Sep	9.1	8.6	6.8	5.3	4.3	3.1	3.4	8.0	12.7	15.8	17.6	18.9	20.1	20.8	21.5	21.8	21.8	20.6	17.6	13.9	10.4	8.3	6.7	6.0	12.6	21.8
9-Sep	4.8	5.0	4.3	3.9	3.2	4.1	4.3	9.2	13.5	18.3	23.0	25.1	26.2	26.9	27.1	27.2	26.4	25.2	21.4	16.0	13.5	18.9	16.2	16.0	15.8	27.2
10-Sep	13.6	11.7	10.7	10.8	9.6	10.3	11.5	13.6	15.4	16.8	20.7	21.8	23.0	24.4	24.4	24.8	24.1	22.1	18.1	13.8	11.4	10.0	8.4	7.9	15.8	24.8
11-Sep	6.3	5.2	3.9	3.2	2.4	1.5	1.5	5.7	11.2	17.0	21.2	22.6	23.5	24.5	24.8	24.6	24.3	23.0	19.1	14.6	12.2	10.8	9.6	8.8	13.4	24.8
12-Sep	7.9	6.9	5.5	5.1	4.4	4.0	3.7	7.4	13.9	19.2	23.1	25.2	26.4	27.1	27.4	27.4	26.6	24.8	19.4	14.7	12.5	10.9	9.8	9.6	15.1	27.4
13-Sep	8.7	7.7	7.4	6.5	5.5	5.2	4.9	7.9	12.6	18.7	22.9	26.3	26.8	28.2	28.4	28.3	27.9	26.4	20.3	15.7	13.0	11.7	10.3	9.4	15.9	28.4
14-Sep	8.7	7.8	6.7	6.3	6.6	7.7	10.0	11.5	12.7	15.5	20.4	20.8	20.7	18.7	16.0	16.5	16.4	16.4	15.5	14.6	14.4	13.5	11.8	10.1	13.3	20.8
15-Sep	10.4	10.9	10.4	9.5	8.9	8.9	7.8	10.4	13.2	16.7	19.7	21.8	22.9	23.1	23.7	23.1	22.8	20.9	18.4	15.6	13.3	10.3	7.8	5.8	14.8	23.7
16-Sep	5.2	4.5	4.8	6.8	7.5	8.1	8.8	10.1	11.1	11.9	12.9	13.7	16.0	17.9	19.1	19.0	19.5	17.0	12.8	9.4	7.5	5.9	4.5	2.9	10.7	19.5
17-Sep	2.5	1.9	1.4	0.9	0.3	-0.2	-0.1	3.9	11.0	16.0	18.9	20.8	22.2	23.2	23.5	23.1	22.5	20.9	18.4	15.9	11.8	12.5	14.6	12.7	12.4	23.5
18-Sep	12.2	13.8	12.8	12.7	12.5	12.4	12.6	13.8	15.4	17.1	18.7	20.3	21.7	23.0	23.5	23.3	22.6	20.9	17.2	13.4	12.4	12.6	14.6	13.6	16.4	23.5
19-Sep	13.2	11.2	8.6	7.4	6.9	5.4	4.6	8.9	14.2	17.6	20.6	21.6	22.5	23.1	23.2	22.7	22.1	17.5	14.3	12.9	12.2	10.3	8.7	7.2	14.0	23.2
20-Sep	7.1	5.9	4.2	4.9	6.2	6.3	5.1	8.2	13.9	19.0	22.0	23.4	24.4	25.3	25.4	24.9	24.3	22.4	18.3	13.6	11.0	16.9	18.4	14.3	15.2	25.4
21-Sep	10.1	8.8	7.7	6.8	5.8	5.1	4.8	8.8	16.2	18.9	20.9	23.0	24.1	25.3	25.7	25.6	22.7	19.7	17.2	16.3	14.8	11.5	10.8	10.4	15.0	25.7
22-Sep	10.0	9.8	9.9	9.8	9.4	8.8	8.8	9.8	12.3	14.2	15.8	17.4	18.7	19.6	20.1	19.8	19.1	17.7	13.3	10.3	7.2	8.7	9.7	9.9	12.9	20.1
23-Sep	10.2	10.0	9.0	9.3	9.4	9.5	9.0	10.9	13.7	17.2	19.5	19.0	19.8	21.1	21.0	20.1	19.0	17.6	15.4	14.8	13.6	11.4	10.3	9.9	14.2	21.1
24-Sep	9.6	8.8	7.9	7.6	7.4	7.4	7.6	7.8	8.1	9.2	10.9	14.2	15.9	16.5	17.1	17.0	16.1	13.9	11.0	6.9	3.8	3.4	4.5	3.3	9.8	17.1
25-Sep	1.6	2.1	2.9	0.7	0.6	-0.1	0.4	2.2	5.2	10.4	15.5	16.2	15.9	15.9	15.4	15.8	16.0	14.5	10.9	7.2	7.1	8.8	9.6	10.2	8.5	16.2
26-Sep	9.7	8.8	8.5	8.1	8.1	8.2	8.0	7.7	9.5	11.8	13.4	14.6	15.6	15.6	16.1	15.4	14.8	12.9	11.0	9.4	7.3	6.2	5.9	6.4	10.5	16.1
27-Sep	7.4	7.4	7.5	8.3	7.5	8.5	7.6	8.6	10.3	12.0	13.5	15.0	15.8	16.6	17.5	17.1	16.3	15.1	13.6	12.0	12.5	12.6	12.7	12.2	12.0	17.5
28-Sep	11.0	9.8	8.2	7.2	6.0	5.1	6.9	8.0	8.9	11.1	13.0	15.1	16.1	16.8	17.2	17.2	15.9	13.5	11.0	10.1	10.2	10.0	5.9	3.7	10.7	17.2
29-Sep	7.7	7.5	7.9	8.5	8.6	9.2	8.8	10.4	13.0	14.8	17.0	18.7	19.1	19.4	20.6	21.1	20.1	18.9	17.4	13.6	13.3	13.9	16.5	19.2	14.4	21.1
30-Sep	19.1	19.0	18.2	17.5	14.8	14.4	11.0	11.2	12.0	14.0	16.5	17.4	17.8	17.5	16.8	13.8	13.9	13.3	12.0	11.4	11.1	10.9	11.0	10.9	14.4	19.1
	8.3	7.7	6.9	6.5	6.0	5.9	5.9	8.5	11.9	14.9	17.5	18.9	19.8	20.6	21.0	20.8	20.3	18.7	15.7	12.6	10.8	10.3	9.7	8.9	Diurnal Average	
	19.1	19.0	18.2	17.5	14.8	14.4	12.6	13.8	16.2	19.2	23.1	26.3	26.8	28.2	28.4	28.3	27.9	26.4	21.4	16.3	14.8	18.9	18.4	19.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Conklin - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	12	1.67	1.67
0 - 10	251	34.86	36.53
10 - 20	344	47.78	84.31
> 20	113	15.69	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Conklin - September 2025

Maximum Value: 100.0 % on Sep 1 02:00

Maximum Daily Average: 92.1 % on Sep 1

Minimum Value: 19.4 % on Sep 23 14:00

Minimum Daily Average: 45.2 % on Sep 27

Maximum Diurnal Average: 88.5 % at hour 5

Minimum Diurnal Average: 42.2 % at hour 15

Monthly Average: 69.40 %

Percentiles: P_1 = 25.7 P_{10} = 36.6 Q_1 = 49.0 Median = 70.7 Q_3 = 92.2 P_{90} = 99.0 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	708
Hours of Missing Data:	12
Hours of Calibration:	0
Percent Operational Time:	98.3

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	99.4	100.0	100.0	100.0	100.0	100.0	OR	99.9	96.6	89.6	95.0	98.7	93.6	81.9	76.4	72.8	69.5	72.6	82.4	94.3	98.0	99.3	99.4	99.9	92.1	100.0
2-Sep	100.0	100.0	OR	OR	OR	OR	OR	OR	89.5	75.4	60.9	52.3	44.7	42.2	41.3	41.0	40.9	43.7	64.0	83.5	93.3	90.3	82.6	74.5	67.8	100.0
3-Sep	68.9	64.7	61.1	62.2	63.9	65.5	65.5	63.7	60.5	57.0	55.0	52.9	54.2	56.7	57.0	60.9	66.8	67.2	67.0	66.7	72.9	75.4	81.2	81.0	64.5	81.2
4-Sep	82.7	81.5	83.3	89.1	87.9	89.9	89.4	79.1	73.9	69.5	63.3	57.9	55.0	51.8	48.9	48.8	50.0	53.3	65.0	83.6	95.0	97.3	98.8	99.6	74.8	99.6
5-Sep	99.6	99.3	99.3	100.0	100.0	100.0	100.0	96.3	72.4	56.6	47.6	43.4	40.7	39.2	37.6	36.2	35.1	37.1	54.9	80.7	89.5	91.0	93.3	95.4	72.7	100.0
6-Sep	98.1	98.1	97.9	98.3	98.0	99.4	100.0	91.0	68.8	52.0	39.7	31.5	27.1	25.3	25.2	25.7	28.5	33.2	51.6	76.0	87.1	89.1	89.0	87.2	67.4	100.0
7-Sep	87.1	94.4	96.4	96.2	97.6	98.6	97.1	83.2	65.3	64.1	66.5	70.9	78.4	77.2	61.2	59.2	62.5	73.9	78.8	80.7	85.9	92.2	97.5	98.3	81.8	98.6
8-Sep	98.6	98.6	99.0	99.9	100.0	100.0	100.0	98.4	85.8	73.0	65.7	59.7	52.7	50.9	49.0	48.7	48.7	52.9	66.7	82.7	94.9	97.6	98.5	99.5	80.1	100.0
9-Sep	99.2	99.2	99.4	99.9	99.5	100.0	99.9	94.7	82.1	66.9	52.9	44.1	40.5	38.0	37.6	37.2	38.8	43.6	59.6	83.4	88.3	61.7	71.9	71.1	71.2	100.0
10-Sep	81.3	87.6	91.2	89.4	93.8	91.6	87.1	79.3	73.8	72.4	56.1	53.6	51.4	48.1	46.2	42.6	43.3	48.6	65.3	84.4	90.6	94.3	97.4	97.1	73.6	97.4
11-Sep	98.1	98.6	99.5	99.5	99.5	100.0	100.0	96.8	80.3	59.4	47.9	43.2	38.3	35.6	35.2	39.6	42.6	49.8	68.7	86.4	93.4	94.3	95.9	96.6	75.0	100.0
12-Sep	97.9	97.8	99.2	99.1	99.2	99.6	99.7	96.7	85.5	71.5	57.6	44.5	38.7	34.1	31.9	32.3	33.0	40.3	63.1	81.6	88.9	90.9	91.9	90.6	73.6	99.7
13-Sep	92.8	94.6	96.0	97.0	98.5	98.6	99.1	96.7	85.8	67.0	54.7	44.7	36.6	30.0	28.3	29.2	30.3	34.4	58.9	77.2	87.0	89.4	92.1	93.0	71.3	99.1
14-Sep	93.7	95.3	96.9	98.1	96.9	96.6	97.7	100.0	100.0	97.4	78.8	68.1	65.1	75.8	92.4	88.4	89.5	88.8	90.1	93.4	95.5	97.8	99.0	99.7	91.5	100.0
15-Sep	100.0	100.0	100.0	OR	OR	OR	OR	OR	97.2	84.7	71.8	65.3	61.5	59.3	57.0	57.3	56.8	58.1	61.6	70.4	81.3	93.6	97.9	98.8	77.5	100.0
16-Sep	99.4	99.7	100.0	99.6	98.2	96.9	93.9	89.6	85.1	82.9	77.2	73.7	63.5	55.0	50.4	52.6	49.7	62.4	83.7	93.5	96.6	97.3	98.3	99.4	83.3	100.0
17-Sep	99.9	99.5	99.6	99.5	100.0	99.9	100.0	97.7	84.7	69.1	55.0	45.3	41.7	38.6	36.7	38.6	39.1	48.8	60.8	68.7	85.1	81.7	73.0	81.1	72.7	100.0
18-Sep	83.0	76.0	80.3	81.3	83.0	83.1	83.2	78.3	70.4	62.1	57.8	53.7	48.1	44.7	43.4	42.7	44.1	50.2	65.5	82.3	86.0	86.1	80.0	84.2	68.7	86.1
19-Sep	86.5	92.8	97.2	98.4	99.1	98.3	99.9	88.7	63.7	44.0	34.5	30.1	26.7	25.3	24.9	26.3	26.3	45.9	65.6	72.8	72.6	78.7	82.3	87.1	65.3	99.9
20-Sep	84.7	88.0	93.6	88.1	82.2	85.0	90.9	85.2	72.9	57.9	44.2	37.6	35.1	32.9	31.1	34.8	39.5	47.2	63.7	83.9	90.5	63.2	56.1	71.6	65.0	93.6
21-Sep	87.0	90.6	92.6	93.9	96.7	97.4	98.1	89.0	66.1	52.0	46.1	39.0	36.7	33.4	33.1	33.6	33.7	37.6	44.4	54.3	61.2	91.3	95.2	92.0	66.5	98.1
22-Sep	88.0	85.2	79.9	74.8	73.0	72.3	69.6	66.2	58.4	53.1	50.1	44.2	38.8	35.7	33.3	31.9	31.9	36.1	52.9	63.6	76.9	67.7	61.7	60.0	58.6	88.0
23-Sep	57.9	58.2	62.5	62.6	62.6	64.0	66.4	61.1	54.2	46.2	34.4	32.4	27.6	19.4	19.8	24.3	28.0	30.2	37.1	37.4	39.3	58.9	70.6	76.2	47.1	76.2
24-Sep	78.1	84.3	94.0	96.6	96.7	96.5	95.0	93.2	92.1	89.3	75.5	58.1	43.5	42.5	35.5	32.6	33.3	36.8	46.0	68.2	84.5	81.9	73.4	78.4	71.1	96.7
25-Sep	86.4	86.5	86.4	93.6	93.9	95.6	96.3	92.3	82.0	64.4	41.2	36.8	36.1	35.4	36.3	37.3	36.2	39.1	52.9	73.3	76.2	66.9	69.2	71.3	66.1	96.3
26-Sep	74.8	80.5	81.0	82.8	80.7	76.5	75.0	74.2	65.0	55.8	50.3	45.2	41.3	40.1	37.9	37.2	37.0	40.6	43.9	49.7	58.6	64.2	65.7	64.6	59.3	82.8
27-Sep	62.6	65.9	69.5	77.3	79.6	62.0	64.8	58.1	50.1	41.3	36.0	31.6	29.2	27.1	27.0	26.8	25.8	28.3	32.5	39.8	35.9	37.2	37.3	39.9	45.2	79.6
28-Sep	49.6	57.2	63.2	68.0	72.1	73.9	61.4	56.2	54.9	48.3	42.6	37.0	33.1	29.2	27.6	27.4	31.9	45.7	60.4	67.8	64.0	56.0	75.8	84.0	53.6	84.0
29-Sep	60.7	60.0	59.4	58.2	58.8	57.3	58.5	53.5	45.6	42.9	40.0	37.6	37.6	38.1	37.2	36.6	40.2	44.3	48.2	63.9	66.3	63.6	53.8	45.4	50.3	66.3
30-Sep	46.4	47.4	50.5	53.8	65.3	66.4	80.9	81.3	80.0	72.9	61.5	59.3	58.7	62.0	67.2	93.5	96.3	97.2	97.4	99.0	99.9	100.0	100.0	100.0	76.5	100.0
	84.7	86.0	87.2	87.8	88.5	88.0	87.8	83.6	74.8	64.6	55.3	49.7	45.9	43.5	42.2	43.2	44.3	49.6	61.8	74.8	81.2	81.6	82.6	83.9	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	95.0	98.7	93.6	81.9	92.4	93.5	96.3	97.2	97.4	99.0	99.9	100.0	100.0	100.0	Diurnal Maximum	

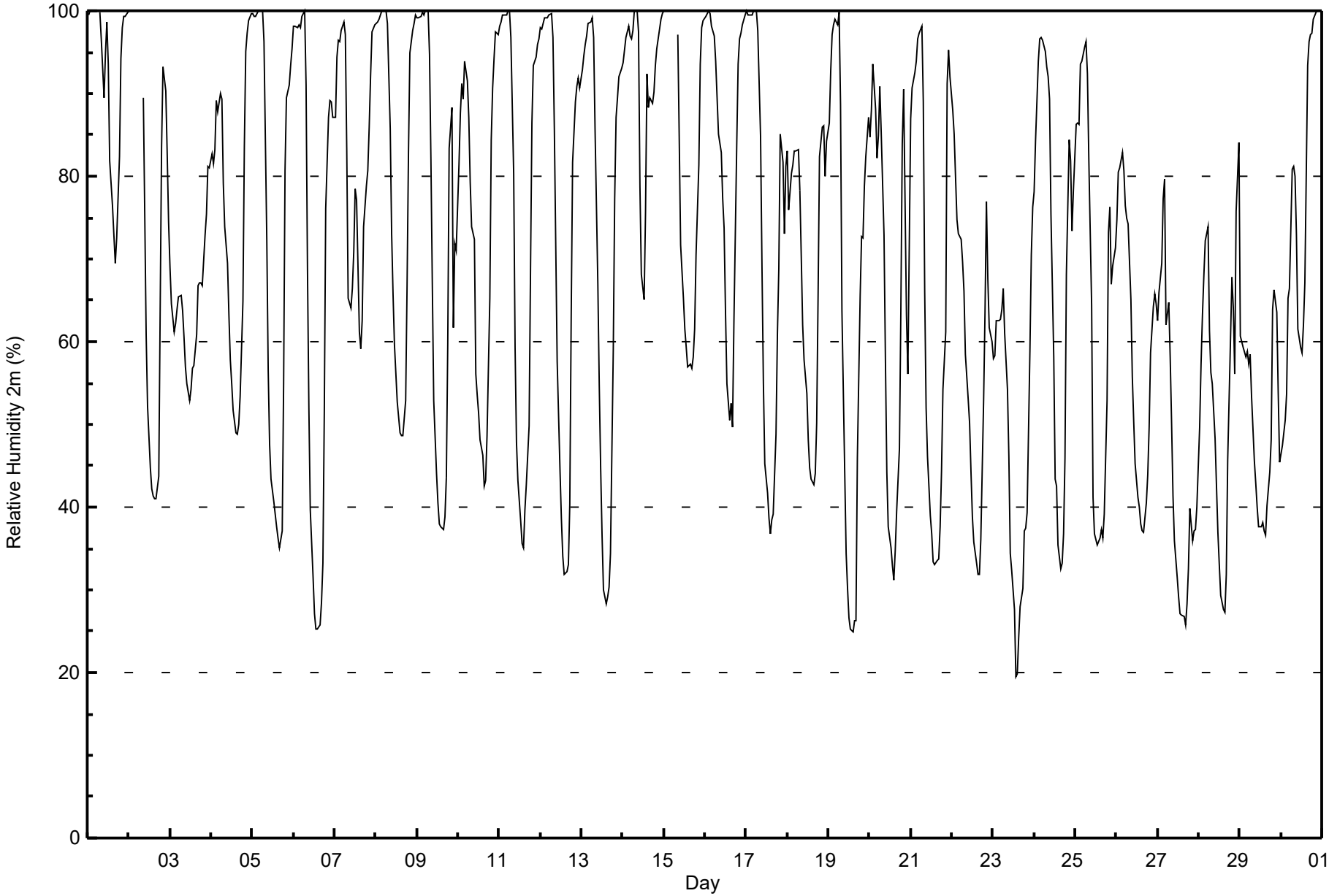
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Conklin - September 2025

Maximum Speed: 20 km/h on Sep 29 11:00

Maximum Daily Speed Average: 11.4 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 20 20:00

Minimum Daily Speed Average: 0.9 km/h on Sep 30

Maximum Diurnal Speed Average: 4.0 km/h at hour 13

Minimum Diurnal Speed Average: 0.7 km/h at hour 19

Monthly Average Velocity: 2.6 km/h 202.4 deg

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 3$ Median = 5 $Q_3 = 8$ $P_{90} = 12$ $P_{99} = 17$

Hours in Service: 720

Hours of Data: 644

Hours of Missing Data: 76

Percent Operational Time: 89.7

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-Sep	NNW2	SW0	NW1	S1	S2	SSW2	W1	S1	NNW1	WNW1	NNW1	NNW6	NNW4	NNW5	NNW6	NNW7	N6	N4	N3	NNW1	NNW2	NNW3	WSW1	NW2	NNW2.0	NNW7
2-Sep	UO	UO	UO	UO	UO	SSE1	S1	SE1	N2	SE3	SE5	SSE6	E5	ESE4	ESE3	E4	ESE6	ESE5	SE2	S0	S1	SSE3	S3	SSW4	SE2.5	ESE6
3-Sep	SSE5	SSE5	S10	S7	S8	S9	S9	S9	S12	S14	SSW10	SW12	SSW10	WSW9	SW9	WSW8	WNW5	NNW15	NNW19	N19	NNW13	NNW15	NNW12	NNW11	WSW3.1	N19
4-Sep	NNW8	NNW9	NNW8	NW7	NW7	NW7	NW6	NW11	NNW14	NNW17	NNW15	NNW15	NNW15	NNW13	NNW14	NNW12	NNW10	NNW9	NNW5	NNW1	NW1	UO	UO	S1	NNW9.1	NNW17
5-Sep	S2	S3	S1	S1	SSE2	SE3	SE2	ESE1	SSE4	SW5	SW3	SW3	SW3	SW1	SSW3	SW4	S3	SSW4	S2	SSE2	SSE4	SSE4	SE4	SE3	S2.4	SW5
6-Sep	SSE2	SSE4	SSE3	SSE3	SE3	S1	SSE1	SE2	E2	SE4	SE5	S9	S12	SSW12	SSW12	SSW13	SSW11	SSW7	SSW1	SSE1	SSE3	S4	S5	S5	S4.6	SSW13
7-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	N5	NE2	SE6	ESE7	SE7	SSE7	ESE5	SSW3	ESE3	ENE4	ENE3	UO	UO	UO	UO	UO	----	SE7
9-Sep	UO	UO	UO	UO	UO	UO	UO	UO	SE4	SE3	SE9	SSE13	S14	S13	S12	S12	SSW12	SSE7	SSE4	S0	SSW1	S6	SW5	SW3	----	S14
10-Sep	SSE3	SSE5	SE4	SSE3	SE3	SSE3	S5	SSW6	SW6	W3	WNW4	NNW7	NW6	NNW5	NNW7	NNW4	NW5	NNW4	NW1	NW1	WNW1	SSE1	SSE0	S1	W1.0	NNW7
11-Sep	SW0	S0	UO	SSE1	SSE1	SSE0	SSW1	SSE2	NNE3	NE1	SE3	ESE6	SE7	ESE7	ESE6	ESE5	ESE4	ESE5	ESE1	UO	UO	UO	UO	UO	ESE2.6	SE7
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	SE4	SSE4	SSE6	S7	S7	S8	S8	SSW5	SSW6	SSW4	SSW1	S2	SE5	SSE4	SE4	SE5	----	S8
13-Sep	SE4	SSE4	SSE4	SSE1	SSE2	SE2	NNW0	N0	NNE1	NNE2	ESE3	ESE4	S7	SSW10	S8	S7	SSE7	S4	SSE1	SSE1	SE3	SSE3	SE4	SSE2	SSE3.1	SSW10
14-Sep	SE4	SSE2	N1	SSE2	SSE3	S4	ENE1	SSW0	SE0	SSE2	ESE5	SE9	ESE7	ESE14	ESE9	ESE8	E5	ENE4	ENE3	NE3	ENE2	W0	NNW1	NNW2	ESE3.0	ESE14
15-Sep	SW0	UO	UO	UO	UO	UO	UO	SSW5	SW7	SW6	W8	WNW6	NW8	WNW7	NW8	NW8	WNW8	NW6	WNW4	NW3	NW4	WNW0	UO	UO	----	NW8
16-Sep	NW1	NW1	NW3	NW4	NNW3	NNW4	NW2	NW3	NW5	WNW6	NW4	C	C	NNW4	WNW3	ESE3	SE4	S1	S1	SE3	SSE3	SSE3	SSE2	SSE1	NW1.0	WNW6
17-Sep	SSE2	SE3	SSE3	SSE2	SSE3	SSE2	SSE3	SSE3	ESE4	SE8	SSE11	SSE13	SSE12	SSE12	SSE12	SE14	SSE14	SSE11	SE10	SE6	SE3	SE7	SSE9	SE3	SSE6.9	SE14
18-Sep	SSE5	SSE8	SSE8	SSE10	SSE9	SSE10	S8	SSE5	S12	S13	SSW12	S12	S14	S13	S11	SSW11	SW11	WSW5	SSW2	S3	S4	S4	S6	S5	S8.1	S14
19-Sep	SW5	SSW1	SE3	SSE1	SSE2	ESE1	SSE2	SSE3	NE1	NNW2	ESE3	SSE5	SSE1	SW6	SW7	SW7	SW6	SSW3	SSW4	S4	SSW5	S5	S5	SE5	S2.8	SW7
20-Sep	S6	SSE3	SE3	S6	S6	S6	SE3	ESE3	SSE4	S6	SSW11	S13	S13	S13	S15	SSE11	SSE11	SE7	SE2	NW0	SE1	SSE8	SSE7	S1	S6.3	S15
21-Sep	NNW3	SSE4	SSE3	SE3	E0	ESE2	SSE2	S2	NNE2	NNW8	NNW8	N7	N6	NE4	E2	N3	NW11	NW10	NW7	NW8	NW8	NW6	W4	W7	NW2.9	NW11
22-Sep	W6	W6	W7	W7	W7	WNW7	W7	SW10	WSW7	W9	WSW10	WSW11	SW13	WSW13	WSW14	WSW13	WSW11	SW7	S4	SSW3	SW3	SSW5	SW6	SSW6	WSW7.4	WSW14
23-Sep	S7	SSW8	S8	S8	SSW9	SSW10	SW6	SSW6	SW8	W7	WNW7	W7	WSW9	W9	WNW8	WNW7	WNW5	WSW6	W4	WSW6	SSW6	SW6	SSW5	SSW3	SW5.4	SSW10
24-Sep	SW3	W4	S3	S4	S3	SW6	SW6	SW8	SW9	SW9	WSW9	W9	W10	WNW9	WNW9	WNW8	WNW6	W6	WSW5	SSW4	S2	S6	S6	SSE4	WSW4.7	W10
25-Sep	S4	SSE5	SSE5	SE4	SSE5	SE5	SSE4	SSE6	SSE5	S5	S13	S15	S15	S14	S13	SSE12	SSE11	SSE8	SSE2	SSE3	S4	WNW4	WSW3	W5	S6.3	S15
26-Sep	SW4	SSW4	SW6	SW7	WSW7	WSW8	W8	W8	W9	WNW9	WNW10	WNW10	W12	W12	WNW10	WNW11	W11	W7	W6	SW7	SSW7	S7	S6	S7	W6.7	W12
27-Sep	S7	S5	SSW7	SW9	SW9	SW14	SW13	WSW12	WSW13	W14	W12	W10	W11	WSW11	W8	WSW9	WSW9	WSW10	WSW6	SW5	WSW7	WNW8	WSW12	WSW10	WSW8.8	W14
28-Sep	SW9	SSW6	SSW6	SW9	SW7	SW7	WSW10	W9	WNW7	WNW6	W5	W6	WNW4	WNW3	SSW4	SSE5	SSE5	ESE2	SE1	S1	SSE4	SSE5	S2	SE3	SW3.6	WSW10
29-Sep	SE8	SE7	SE9	SE11	SE14	SE17	SE14	SE15	SE18	SE19	SSE20	SSE18	SSE17	SSE15	SSE14	SSE13	SSE9	SE9	SSE4	N1	SE3	SE4	SSE7	SSE11	SSE11.4	SSE20
30-Sep	S12	S11	S9	SSE7	NW1	S5	SSE1	SE2	SE3	SE2	SSW5	SW4	N0	NNE2	N3	NE2	NNW4	NNW6	NNW6	NW4	NW4	NNW3	NW5	NW4	SSW0.9	S12
	S2.8	S3.1	S3.3	S3.3	S3.0	SSW3.3	SSW2.8	SSW2.9	SSW2.2	SW2.4	SSW3.3	SSW3.6	SSW4.0	SSW3.7	SSW3.6	SSW3.4	SSW2.8	SW1.4	W0.7	WSW1.0	SSW1.2	SSW2.0	SSW2.9	SSW2.0	Diurnal Average	
	S12	S11	S10	SE11	SE14	SE17	SE14	SE15	SE18	SE19	SSE20	SSE18	SSE17	SSE15	S15	SE14	SSE14	NNW15	NNW19	N19	NNW13	NNW15	NNW12	SSE11	Diurnal Maximum	

C - Calibration UO - Unstable Operation

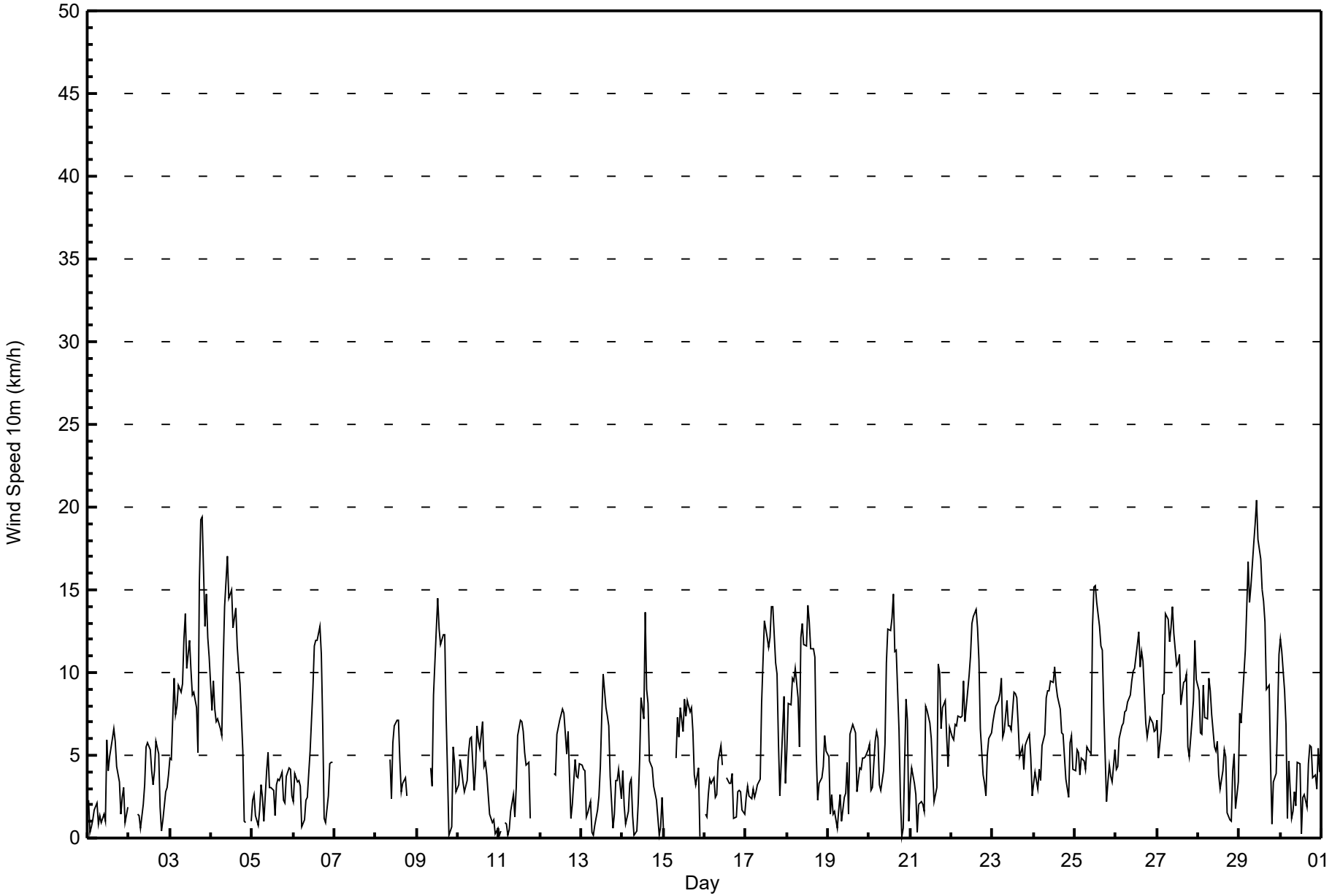
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Conklin - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	339	52.64	52.64
6 - 11	229	35.56	88.20
12 - 19	75	11.65	99.84
20 - 28	1	0.16	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 644

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Conklin - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	10	5	6	6	6	20	48	81	46	26	17	4	8	12	21	23	339
6 - 11	2	1	0	0	0	8	14	25	34	20	28	21	25	20	16	15	229
12 - 19	1	0	0	0	0	1	7	12	22	5	4	6	4	0	0	13	75
20 - 28	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
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	13	6	6	6	6	29	69	119	102	51	49	31	37	32	37	51	644

Total Number of Valid Hours: 644

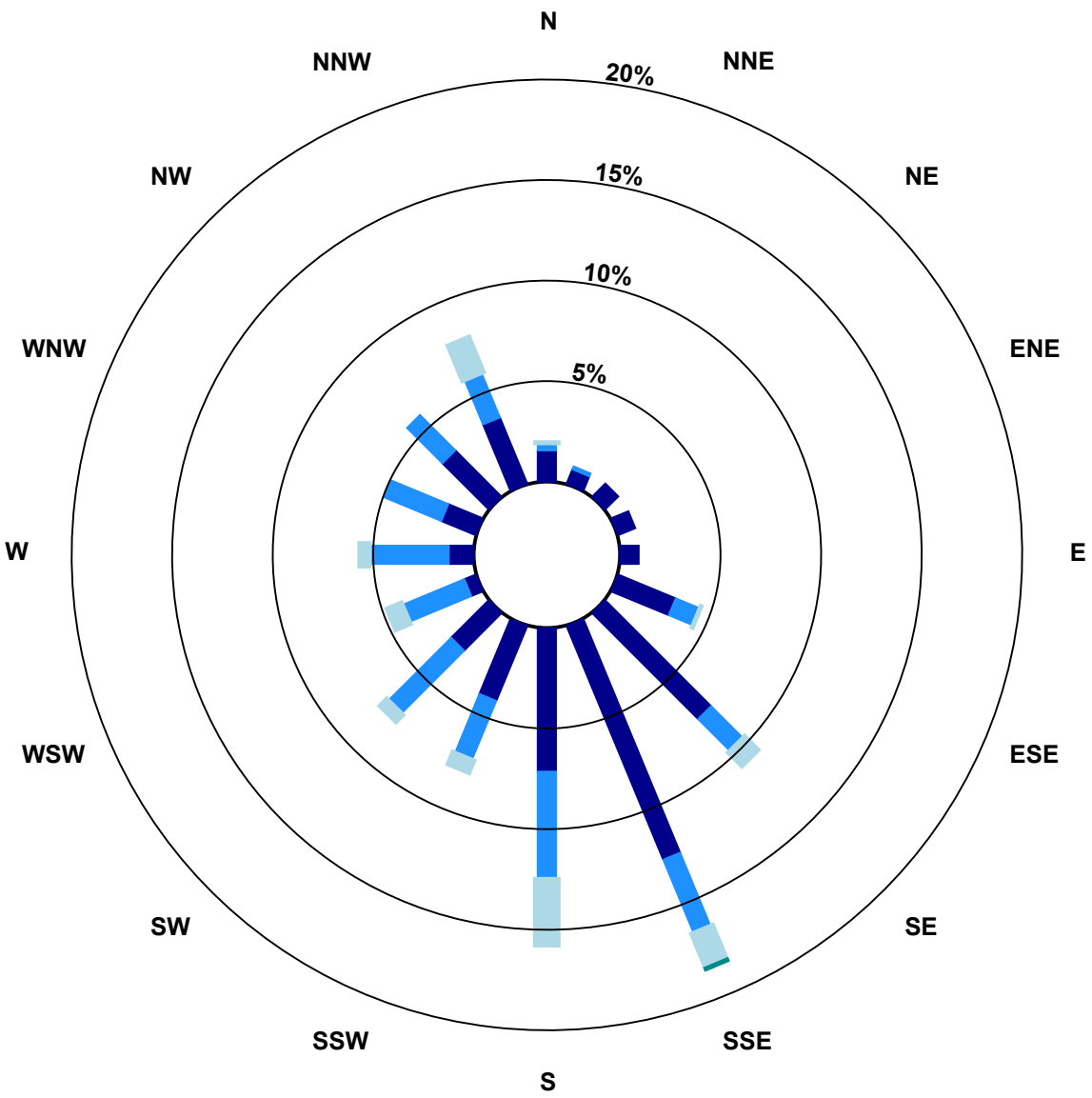
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Conklin



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 644

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 3 19:00

Minimum Value: 0 km/h on Sep 6 03:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	644
Hours of Missing Data:	76
Hours of Calibration:	2
Percent Operational Time:	89.7

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-Sep	2	1	1	1	1	1	2	1	1	1	2	3	2	2	2	2	2	1	2	1	1	1	1	1	3
2-Sep	UO	UO	UO	UO	UO	1	1	1	1	2	2	3	2	2	2	2	2	2	1	1	1	1	1	1	3
3-Sep	2	1	3	3	2	2	2	3	4	4	3	3	3	3	3	3	4	5	7	6	5	6	6	4	7
4-Sep	3	4	3	3	3	3	3	4	6	6	6	5	5	5	5	5	4	4	3	1	1	UO	UO	1	6
5-Sep	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	2	1	1	1	1	1	1	2	3
6-Sep	1	1	0	1	1	1	1	1	1	1	2	3	3	4	4	4	4	2	2	1	1	1	1	1	4
7-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	2	2	2	2	3	2	2	2	2	1	1	UO	UO	UO	UO	UO	3
9-Sep	UO	UO	UO	UO	UO	UO	UO	UO	1	2	3	4	4	4	4	4	4	2	1	1	2	2	2	2	4
10-Sep	2	1	1	1	1	1	2	2	2	2	2	3	3	3	4	3	2	2	1	1	1	1	1	1	4
11-Sep	1	1	UO	1	1	1	1	1	1	1	2	2	2	3	2	2	2	1	1	UO	UO	UO	UO	UO	3
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	1	2	2	2	3	3	4	3	2	1	1	1	1	1	1	1	4
13-Sep	1	1	1	1	1	2	1	1	1	1	2	2	4	3	3	3	3	2	1	1	1	1	1	1	4
14-Sep	1	2	2	1	2	2	3	2	1	1	3	3	2	5	3	3	2	2	1	1	1	1	1	1	5
15-Sep	1	UO	UO	UO	UO	UO	UO	3	2	2	3	3	4	4	4	4	4	3	2	2	3	1	UO	UO	4
16-Sep	1	1	1	1	1	1	1	2	2	2	2	C	C	2	2	2	1	1	1	1	1	1	1	1	2
17-Sep	1	1	1	1	1	1	1	1	1	3	3	4	4	3	4	4	4	3	3	1	1	2	3	2	4
18-Sep	4	3	2	3	3	3	3	3	5	4	3	4	4	4	4	4	3	3	1	1	1	1	2	1	5
19-Sep	2	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	1	1	1	1	1	1	1	3
20-Sep	1	2	1	1	1	1	2	1	1	4	3	4	3	4	4	3	3	2	2	1	1	2	2	2	4
21-Sep	1	2	1	1	1	1	1	1	2	3	3	3	3	3	2	3	4	4	3	4	4	3	2	3	4
22-Sep	3	3	3	3	3	3	4	3	3	4	4	5	5	5	5	5	5	3	1	1	1	1	1	1	5
23-Sep	2	2	2	2	3	3	3	2	2	3	3	3	4	4	4	4	2	2	2	2	2	2	2	2	4
24-Sep	2	2	2	1	2	3	2	3	3	3	4	4	5	4	4	4	3	3	1	1	1	1	1	1	5
25-Sep	1	1	2	1	1	1	1	1	1	2	5	5	4	4	4	3	3	2	2	1	1	2	2	2	5
26-Sep	2	1	2	2	3	3	3	4	4	4	4	5	6	6	5	5	5	3	2	2	2	2	1	1	6
27-Sep	2	1	2	5	3	4	4	5	6	6	6	5	5	5	4	5	4	4	2	2	3	5	5	4	6
28-Sep	3	2	2	3	2	2	4	4	3	2	2	3	2	2	3	2	2	1	1	1	2	1	2	2	4
29-Sep	1	2	2	3	4	4	4	4	5	5	6	5	5	5	4	4	4	3	2	1	1	1	3	4	6
30-Sep	4	3	3	2	1	2	1	1	2	1	2	2	1	1	1	2	1	2	1	1	1	1	2	2	4
	4	4	3	5	4	4	4	5	6	6	6	5	6	6	5	5	5	5	7	6	5	6	6	4	
	Diurnal Maximum																								

C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Conklin - September 2025

Direction of Maximum Speed: 152 deg on Sep 29 11:00
Direction of Maximum Daily Speed Average: 147.1 deg on Sep 29

Direction of Minimum Speed: 307 deg on Sep 20 20:00
Direction of Minimum Daily Speed Average: 0.9 deg on Sep 30

Monthly Average Direction: 202.4 deg

Hours in Service:	720
Hours of Data:	644
Hours of Missing Data:	76
Percent Operational Time:	89.7

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	Average
1-Sep	345	229	313	178	170	204	269	190	330	300	331	347	328	333	327	337	5	6	357	337	342	330	256	322	335.1
2-Sep	UO	UO	UO	UO	UO	163	188	139	4	135	135	154	92	118	110	91	104	108	132	190	185	159	185	195	129.7
3-Sep	161	160	188	182	173	178	177	173	184	189	200	217	205	240	232	241	299	342	348	349	343	342	338	339	249.5
4-Sep	328	330	327	322	324	322	316	325	335	343	338	340	335	332	331	329	330	331	328	339	324	UO	UO	173	331.6
5-Sep	171	178	186	183	168	138	136	112	164	219	228	231	235	228	210	223	190	195	187	164	158	162	141	131	182.8
6-Sep	153	150	161	149	142	186	160	128	82	127	129	180	185	198	199	201	209	212	209	159	165	170	188	177	180.9
7-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	0	40	146	121	125	147	115	195	116	64	73	UO	UO	UO	UO	UO	--
9-Sep	UO	UO	UO	UO	UO	UO	UO	UO	125	124	130	159	181	185	180	180	194	168	148	177	211	184	215	221	--
10-Sep	168	154	139	156	145	155	174	196	218	271	302	327	325	327	339	333	318	330	323	319	303	162	167	183	271.0
11-Sep	234	171	UO	168	162	156	193	165	15	45	126	117	125	111	109	105	105	114	123	UO	UO	UO	UO	UO	114.1
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	134	147	164	182	171	176	178	200	207	205	212	175	140	168	146	142	--
13-Sep	138	147	149	151	168	144	348	4	12	23	114	105	178	193	183	185	150	176	158	164	143	152	145	148	159.9
14-Sep	142	153	350	168	156	177	70	195	142	158	116	125	117	105	105	112	95	75	67	36	62	281	331	344	110.0
15-Sep	229	UO	UO	UO	UO	UO	UO	193	230	225	265	300	311	300	304	304	294	307	297	305	319	291	UO	UO	--
16-Sep	317	319	318	318	328	328	309	323	304	298	312	C	C	337	287	106	136	170	179	142	148	162	153	148	304.5
17-Sep	150	143	156	147	156	161	157	154	116	143	167	165	147	153	159	139	148	148	144	144	134	146	153	136	149.9
18-Sep	162	163	161	163	165	159	173	162	186	190	195	172	177	178	182	206	215	242	198	185	181	176	190	189	181.3
19-Sep	223	192	138	163	152	115	165	160	55	335	110	150	157	215	226	215	232	208	194	187	193	187	185	143	190.9
20-Sep	175	157	140	185	190	181	131	121	152	175	192	174	180	185	171	165	157	142	142	307	130	165	163	184	169.7
21-Sep	332	155	155	145	93	122	158	177	13	337	336	2	11	46	80	2	316	316	318	306	307	315	272	273	325.2
22-Sep	271	262	268	271	275	286	259	235	250	264	247	241	236	238	242	242	238	227	178	213	224	206	214	204	243.9
23-Sep	191	192	187	188	206	211	215	199	221	270	290	277	253	279	287	291	288	254	271	255	210	217	200	192	234.1
24-Sep	229	260	169	174	186	220	215	219	224	231	257	275	278	299	293	287	294	267	252	205	171	176	181	161	242.5
25-Sep	169	166	166	134	157	135	150	158	154	177	190	178	174	170	170	162	147	157	158	166	189	300	258	271	170.6
26-Sep	235	205	221	225	245	253	274	278	281	287	290	285	279	279	287	285	279	273	260	223	199	191	184	185	259.4
27-Sep	190	173	194	231	219	236	233	249	255	273	265	278	263	258	265	244	245	237	240	216	249	283	241	258	246.1
28-Sep	235	211	202	226	219	216	252	271	297	290	274	265	298	300	200	157	153	107	138	191	155	152	169	142	228.3
29-Sep	143	143	142	138	133	132	137	144	145	146	152	153	164	151	152	156	155	144	149	352	146	135	152	162	147.1
30-Sep	170	172	173	157	317	178	163	126	139	134	202	236	8	13	9	51	330	333	336	315	323	332	324	323	209.5
	191.1	179.1	181.0	187.1	189.4	191.8	202.2	204.2	213.5	225.8	209.8	199.3	201.0	205.5	207.6	205.3	211.8	231.2	264.6	253.5	210.5	194.6	196.4	199.3	
	Diurnal Average																								

C - Calibration UO - Unstable Operation

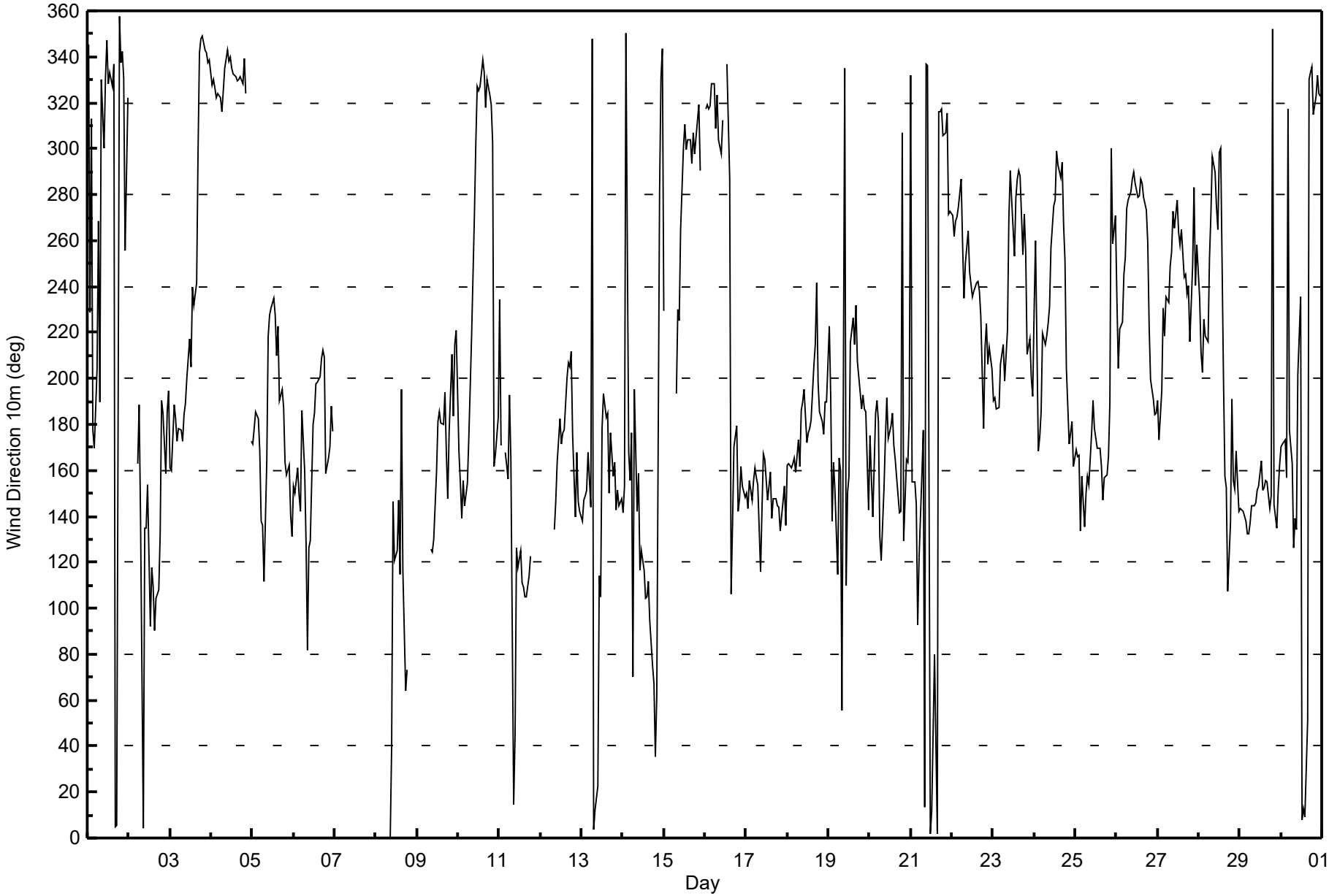
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Conklin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Conklin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 105 deg on Sep 14 08:00

Minimum Value: 9 deg on Sep 9 19:00

Percentiles: P_1 = 11 P_{10} = 18 Q_1 = 22 Median = 32 Q_3 = 50 P_{90} = 73 P_{99} = 93

Hours in Service:	720
Hours of Data:	644
Hours of Missing Data:	76
Hours of Calibration:	2
Percent Operational Time:	89.7

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-Sep	49	83	86	77	52	47	74	88	80	62	86	27	46	41	32	25	28	26	21	49	16	19	74	61	88
2-Sep	UO	UO	UO	UO	UO	22	40	66	40	54	46	54	54	69	67	48	27	20	25	71	81	27	31	30	81
3-Sep	26	27	22	28	19	18	19	21	21	21	26	25	26	33	26	27	49	23	19	20	20	21	24	23	49
4-Sep	26	22	23	27	28	31	38	26	26	23	25	26	27	30	27	30	32	28	22	42	77	UO	UO	43	77
5-Sep	24	22	53	60	48	16	19	25	28	46	84	90	89	103	79	81	65	24	18	51	32	29	17	38	103
6-Sep	25	13	12	11	19	69	56	18	42	49	50	29	28	25	32	25	25	20	84	70	15	11	16	20	84
7-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	38	87	47	38	35	36	60	82	63	37	40	UO	UO	UO	UO	UO	87
9-Sep	UO	UO	UO	UO	UO	UO	UO	UO	20	34	28	25	26	26	27	26	23	20	9	76	72	27	24	74	76
10-Sep	58	16	23	31	45	29	26	33	30	63	68	43	46	64	37	65	38	22	35	76	76	63	88	93	93
11-Sep	88	76	UO	75	81	95	76	44	27	86	55	37	28	41	33	37	34	16	64	UO	UO	UO	UO	UO	95
12-Sep	UO	UO	UO	UO	UO	UO	UO	UO	19	43	35	40	36	41	45	62	27	17	64	20	13	21	14	13	64
13-Sep	10	12	11	59	33	65	81	87	86	53	60	33	35	27	34	36	37	35	88	39	13	27	25	30	88
14-Sep	11	57	78	29	25	39	86	105	70	65	41	21	19	22	21	26	34	34	34	35	50	94	68	26	105
15-Sep	65	UO	UO	UO	UO	UO	UO	38	25	44	37	51	48	48	49	53	50	47	51	41	30	79	UO	UO	79
16-Sep	77	63	31	45	31	30	50	66	55	46	46	C	C	71	78	75	39	68	36	21	20	26	31	37	78
17-Sep	20	17	25	23	19	17	14	19	30	30	25	25	26	27	25	23	20	20	14	13	23	17	20	73	73
18-Sep	81	25	20	21	21	22	32	74	26	22	28	30	28	27	32	27	24	47	57	27	19	30	24	19	81
19-Sep	36	69	24	53	47	92	55	30	80	77	84	51	105	60	46	42	38	29	10	14	10	11	14	14	105
20-Sep	15	60	24	10	13	13	41	19	33	57	24	26	26	23	23	22	19	11	25	68	61	17	19	92	92
21-Sep	29	20	25	25	85	39	38	37	71	24	28	35	58	70	87	76	32	29	29	47	49	34	52	45	87
22-Sep	46	46	45	47	49	49	48	31	47	45	43	37	32	34	32	32	29	25	20	33	36	19	19	18	49
23-Sep	19	19	16	19	26	20	31	24	21	51	56	53	48	55	51	53	53	31	42	39	26	26	33	79	79
24-Sep	62	57	30	26	44	50	23	27	26	23	43	51	51	46	52	53	49	38	24	28	24	16	14	23	62
25-Sep	20	20	39	27	19	17	22	22	17	30	26	24	24	26	24	23	18	16	62	36	15	50	56	50	62
26-Sep	35	21	23	22	30	33	47	48	50	49	46	51	51	47	52	47	46	46	33	23	16	15	14	17	52
27-Sep	20	22	22	47	22	24	20	33	40	42	44	49	48	48	49	42	33	22	29	20	37	47	31	43	49
28-Sep	26	22	19	20	18	21	42	52	49	56	52	50	83	78	69	41	25	36	57	86	23	15	79	34	86
29-Sep	12	16	15	15	16	16	16	18	21	20	20	22	24	20	20	19	20	23	60	90	20	20	20	21	90
30-Sep	21	20	21	22	81	30	81	58	51	52	39	50	97	49	61	74	22	17	22	29	22	22	22	32	97
	88	83	86	77	85	95	86	105	86	87	86	90	105	103	87	82	65	68	88	90	81	94	88	93	
	Diurnal Maximum																								

C - Calibration UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS22
JANVIER
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
SEPTEMBER 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	685	35	35	100	-	-	2	0	0.9	0
TRS(ppb) Average	682	36	38	99.72	0.6	0	0.6	-	0.4	-
THC(ppm) Average	685	35	35	100	-	-	2.2	-	2.1	-
NMHC(ppm) Average	685	35	35	100	-	-	0.007	-	0	-
CH4(ppm) Average	685	35	35	100	-	-	2.2	-	2.1	-
O3 (ppb) Average	684	34	36	99.72	-	-	55.2	0	33.2	-
NO2 (ppb) Average	683	35	37	99.72	-	-	6.5	0	2	-
NO (ppb) Average	683	35	37	99.72	-	-	3.9	-	0.5	-
NOX (ppb) Average	683	35	37	99.72	-	-	9.5	-	2.4	-
PM2.5 (ug/m3) Average	718	2	2	100	-	-	179.3	0	64.4	6
Temperature 2 m (C) Average	720	0	0	100	-	-	28.5	-	17.5	-
Relative Humidity (%) Average	717	0	3	99.58	-	-	100	-	93.1	-
Wind Speed 20 m (km/h) Average	705	1	15	98.06	-	-	20	-	12	-
Wind Direction 20 m (deg) Average	705	1	15	98.06	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	0.24	0.3	-	0	0	0	0.2	0.3	0.5	2
TRS (ppb) Average	682	0.24	0.1	-	0.1	0.2	0.2	0.2	0.3	0.3	0.6
THC (ppm) Average	685	2.03	0.1	-	1.9	2	2	2	2.1	2.1	2.2
NMHC(ppm) Average	685	0	0	-	0	0	0	0	0	0	0.007
CH4(ppm) Average	685	2.03	0.1	-	1.9	2	2	2	2.1	2.1	2.2
O3 (ppb) Average	684	23.79	11.6	-	1	7.4	15.1	25.1	31.8	37.3	55.2
NO2 (ppb) Average	683	1.1	0.8	-	0.1	0.4	0.5	0.9	1.4	2.1	6.5
NO (ppb) Average	683	0.27	0.4	-	0	0	0.1	0.1	0.3	0.7	3.9
NOX (ppb) Average	683	1.37	1	-	0.1	0.5	0.7	1.2	1.8	2.5	9.5
PM2.5 (ug/m3) Average	718	17.46	22.4	-	0.7	1.7	4.8	11	18.2	40.6	179.3
Temperature 2 m (C) Average	720	13.97	5.6	-	1.6	7.7	9.8	13.2	17.6	22.1	28.5
Relative Humidity (%) Average	717	68.54	22.7	-	23.7	35.6	49.7	70.6	89.4	97.9	100
Wind Speed 10 m (km/h) Average	705	7.2	4	-	0	2	4	7	10	13	20
Wind Speed 20 m (km/h) Average	705	219.9	0	-	0						0
Wind Direction 10 m (deg) Average	0	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	739	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2/NO/NOx, O3, TRS	22 Sep 2025 15:00	22 Sep 2025 16:00	2	Maintenance - sample manifold cleaned
Relative Humidity	01 Sep 2025 07:00	01 Sep 2025 07:00	1	Sensor operated out of range
Relative Humidity	08 Sep 2025 09:00	08 Sep 2025 10:00	2	Sensor operated out of range
Wind Speed, Wind Direction 20m	02 Sep 2025 06:00	02 Sep 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	06 Sep 2025 07:00	06 Sep 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	08 Sep 2025 06:00	08 Sep 2025 08:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	09 Sep 2025 02:00	09 Sep 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	10 Sep 2025 21:00	10 Sep 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	11 Sep 2025 00:00	11 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	11 Sep 2025 06:00	11 Sep 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	13 Sep 2025 07:00	13 Sep 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	14 Sep 2025 11:00	14 Sep 2025 11:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	15 Sep 2025 00:00	15 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	17 Sep 2025 03:00	17 Sep 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 20m	17 Sep 2025 07:00	17 Sep 2025 07:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.0 ppb on Sep 1 19:00 Maximum Daily Average: 0.9 ppb on Sep 4

Minimum Value: 0.0 ppb on Sep 1 03:00 Minimum Daily Average: 0.0 ppb on Sep 8

Maximum Diurnal Average: 0.4 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 1

Monthly Average: 0.24 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.6

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.2	0.6	0.5	1.7	1.5	2.0	0.6	0.5	0.4	0.3	0.3	0.4	2.0
2-Sep	0.3	0.3	0.3	0.4	Z	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.5
3-Sep	0.2	0.3	0.3	0.3	0.4	Z	0.9	1.3	1.7	1.6	1.4	0.9	0.7	0.3	0.4	0.4	0.4	0.9	1.7	0.2	0.1	0.1	0.0	0.0	0.6	1.7
4-Sep	Z	0.4	1.4	1.4	1.3	1.2	1.2	1.4	0.8	0.3	0.5	0.6	0.5	0.7	1.1	1.4	1.4	1.4	1.4	0.6	0.3	0.2	0.1	0.1	0.9	1.4
5-Sep	0.1	Z	0.0	0.1	0.0	0.0	0.0	0.0	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	0.2
6-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.5	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
7-Sep	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.3
8-Sep	0.1	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.0	0.1	0.3	0.4	0.4	0.5	0.5	0.7	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.2	0.7
10-Sep	Z	0.6	0.3	0.3	0.4	0.3	0.2	0.3	0.4	0.6	0.4	0.3	0.5	1.1	1.2	0.6	0.3	0.3	0.2	0.1	0.0	0.2	0.0	0.0	0.4	1.2
11-Sep	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.9	1.8	0.7	0.6	0.6	0.5	0.4	0.3	0.1	0.2	0.1	0.2	0.2	0.1	0.4	1.8
12-Sep	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.3	0.4	0.6	1.0	0.5	0.4	0.5	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	1.0
13-Sep	0.2	0.2	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.4	1.8	1.4	0.7	0.5	0.4	0.5	0.4	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.4	1.8
14-Sep	0.1	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.4	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.6
15-Sep	0.2	0.1	0.2	0.1	0.1	Z	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	0.0	0.1	0.1	0.0	0.0	0.2	0.3
16-Sep	Z	0.0	0.1	0.0	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	0.0	0.0	0.0	0.1
17-Sep	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
18-Sep	0.0	0.1	Z	0.0	0.6	0.1	0.2	0.4	0.6	0.6	0.6	0.5	0.7	0.2	0.4	0.3	0.3	0.0	0.0	0.1	0.1	0.3	0.3	0.2	0.3	0.7
19-Sep	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.3
20-Sep	0.0	0.1	0.0	0.0	Z	0.1	0.0	0.1	0.5	0.8	0.7	0.9	1.0	0.3	0.3	0.4	0.4	0.1	0.3	0.2	0.1	0.2	0.0	0.0	0.3	1.0
21-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.3	0.6	0.5	0.3	0.2	0.3	0.3	0.3	0.1	0.2	0.8	0.2	0.1	0.1	0.1	0.2	0.8
22-Sep	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.3	0.2	0.4	C	C	C	C	C	0.2	0.2	0.2	0.2	0.8	1.9	1.1	0.9	0.4	1.9
23-Sep	0.6	Z	0.4	0.5	0.3	0.3	0.3	0.2	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.2	0.6
24-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3	0.3	0.1	0.3
25-Sep	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.4	1.5	1.3	0.6	0.4	0.4	0.5	0.4	0.2	0.1	0.3	0.4	0.3	0.2	0.2	0.4	1.5
26-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.4	0.2	0.2	0.1	0.2	0.6
27-Sep	0.2	0.4	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.3	0.2	0.1	0.2	0.3	0.4	0.4	0.3	0.5	0.2	0.5
28-Sep	Z	0.3	0.3	0.3	0.1	0.2	0.3	0.2	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	0.1	0.3
29-Sep	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	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.3
30-Sep	0.1	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.3	0.6	0.9	0.8	0.4	0.3	0.2	0.2	0.4	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.9
	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	Diurnal Average	
	0.6	0.6	1.4	1.4	1.3	1.2	1.2	1.4	1.7	1.6	1.8	1.8	1.0	1.1	1.2	1.4	1.7	1.5	2.0	0.8	0.8	1.9	1.1	0.9	Diurnal Maximum	

Z - zerospan C - Calibration

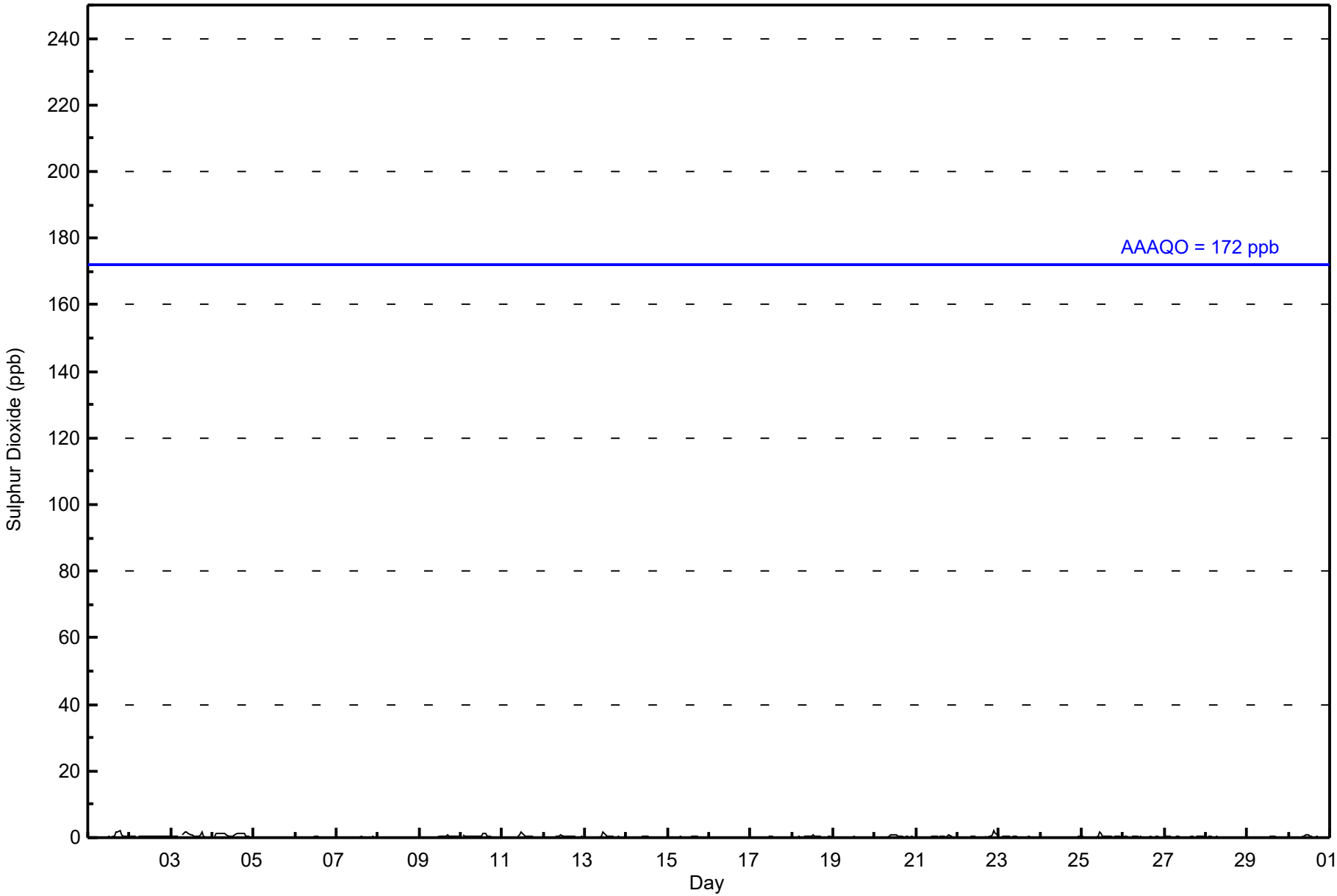
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025



Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	685	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: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	45	28	15	18	16	19	21	68	83	127	96	38	33	30	16	17	670
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	45	28	15	18	16	19	21	68	83	127	96	38	33	30	16	17	670

Total Number of Valid Hours: 670

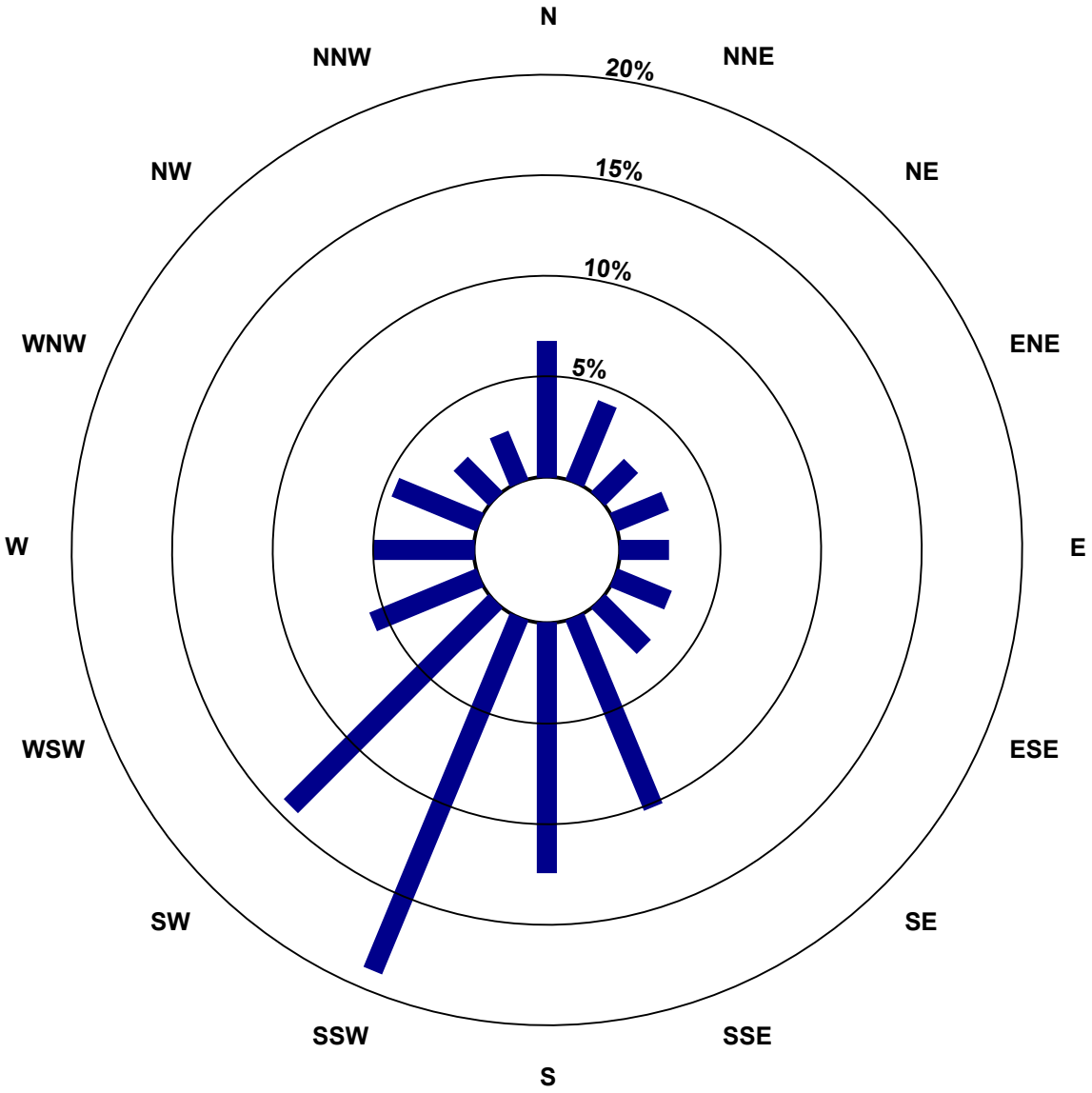
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Janvier



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

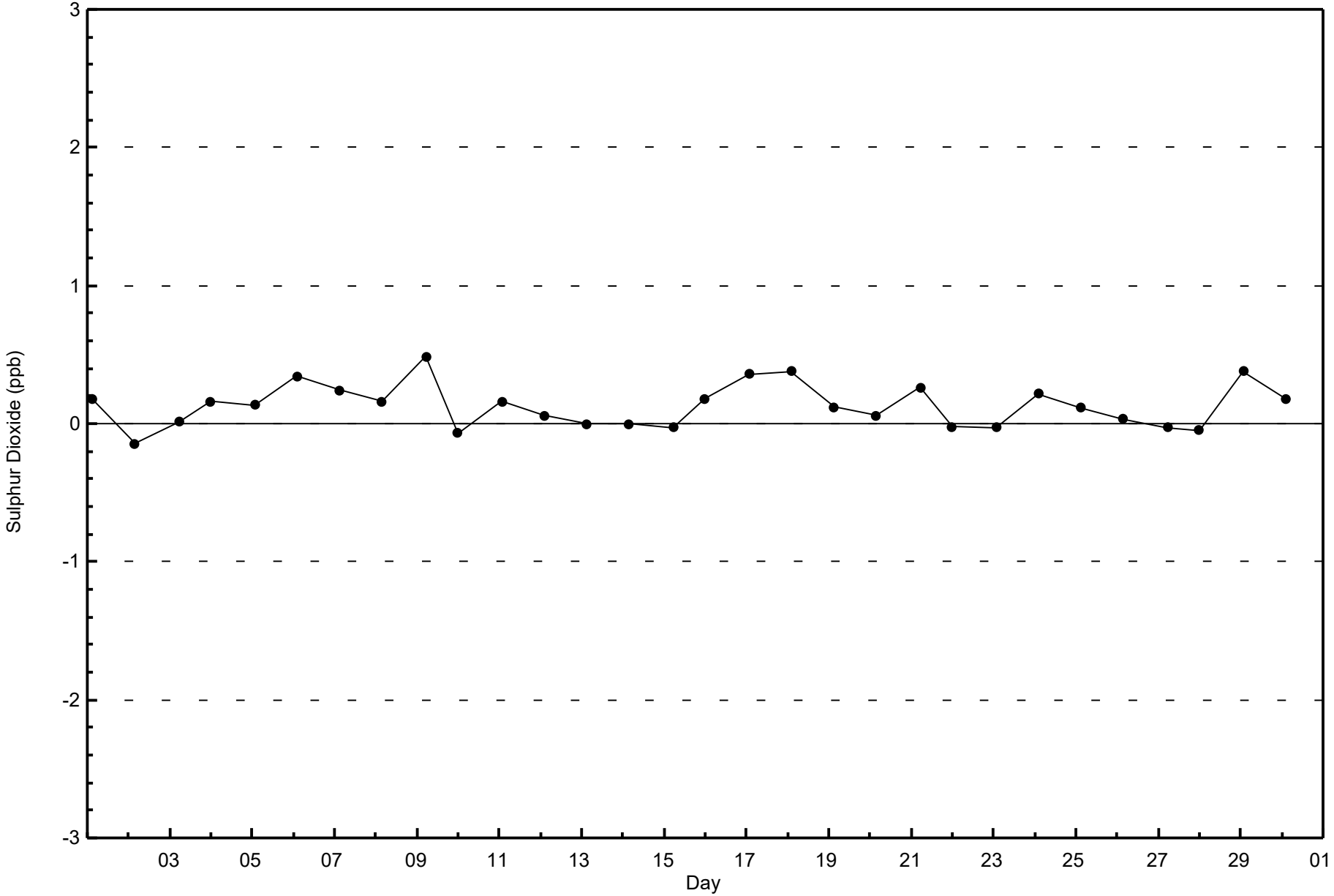
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025

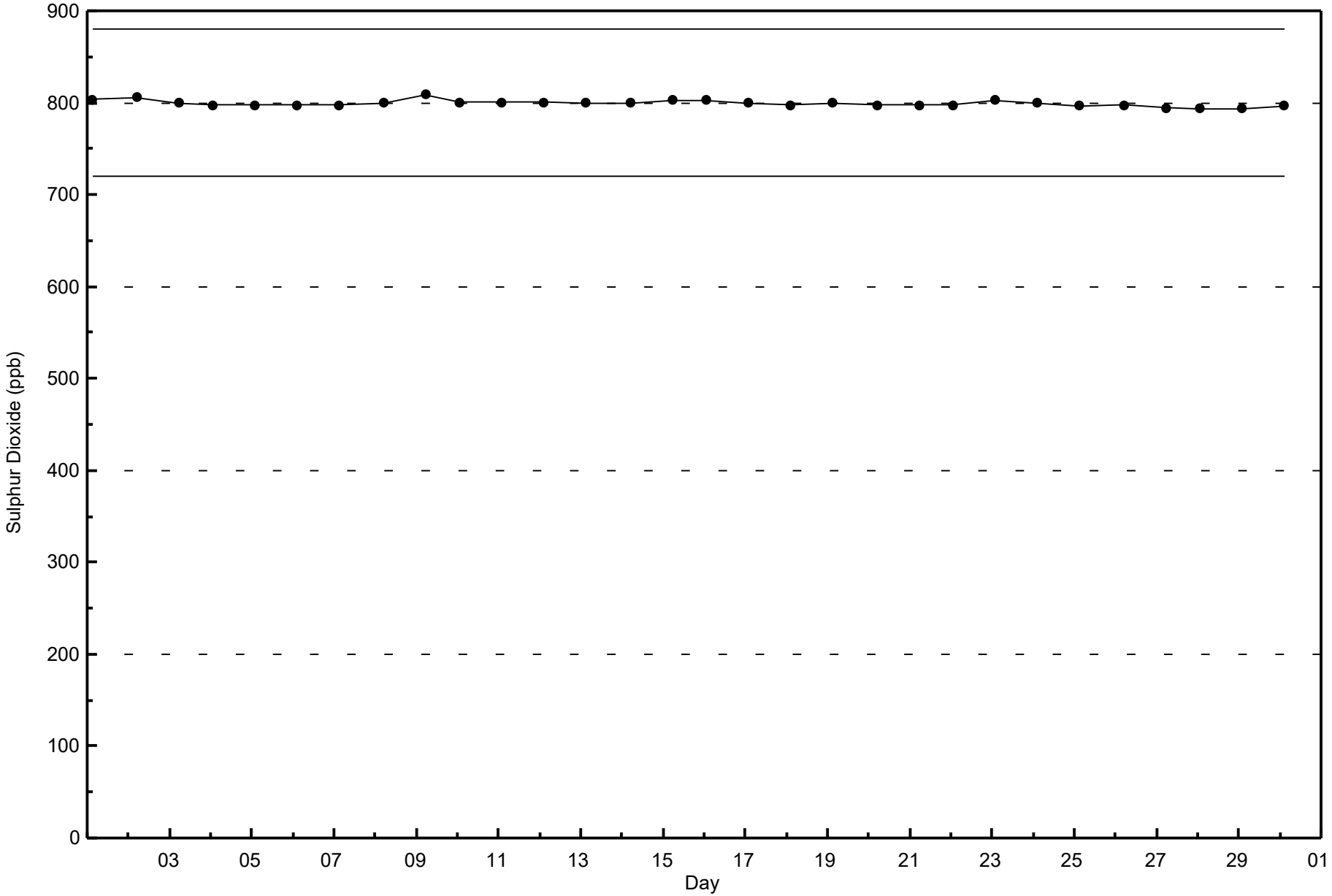


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Span Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - September 2025



Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.6 ppb on Sep 3 23:00 Maximum Daily Average: 0.4 ppb on Sep 3

Minimum Value: 0.1 ppb on Sep 17 06:30 Minimum Daily Average: 0.2 ppb on Sep 17

Maximum Diurnal Average: 0.3 ppb at hour 19 Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.24 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.3 P_{99} = 0.5

Periods in Service:	1440
Periods of Valid Data:	1365
Periods of Invalid Data:	75
Periods of Calibration:	72
Percent Operational Time:	99.8

Period Ending At (MST)

Day	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	Daily Average	Daily Maximum
1-Sep	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.3	0.3	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	0.3	0.4
	0.3	0.3	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	PF	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
2-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.4
	0.3	0.3	0.2	0.3	0.3	SP	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.2		
3-Sep	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.6
	SP	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.4	0.6	0.5		
4-Sep	0.6	Z	0.6	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	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6
	0.6	SP	0.6	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2		
5-Sep	0.2	0.2	Z	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	SP	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		
6-Sep	0.2	0.2	0.2	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	0.3	0.3	0.2	0.2	0.3
	0.2	0.2	0.2	SP	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	0.3	0.2	0.3	0.3		
7-Sep	0.3	0.2	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	0.1	0.2	0.2	0.4	0.4	0.4	0.2	0.4
	0.2	0.2	0.2	0.2	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	0.3	0.4	0.4	0.4		
8-Sep	0.4	0.4	0.3	0.3	0.2	Z	0.2	0.2	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	0.4
	0.4	0.3	0.4	0.3	0.2	SP	0.2	0.2	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		
9-Sep	Z	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	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3
	SP	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	0.3	0.3	0.3	0.3	0.2	0.3		
10-Sep	0.3	Z	0.4	0.3	0.3	0.3	0.3	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	0.3	0.2	0.4
	0.3	SP	0.3	0.3	0.3	0.3	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	0.2		
11-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.4	0.6	0.6	0.5	0.5	0.4	0.3	0.6
	0.2	0.2	SP	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	0.3	0.3	0.5	0.6	0.5	0.5	0.4	0.4		
12-Sep	0.3	0.3	0.3	Z	0.3	0.3	0.2	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	0.3
	0.3	0.3	0.3	SP	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
13-Sep	0.3	0.3	0.3	0.2	Z	0.3	0.2	0.1	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	0.3	0.3	0.4	0.2	0.4
	0.3	0.3	0.3	0.2	SP	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	0.3	0.3	0.4	0.4		
14-Sep	0.4	0.3	0.3	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.3	0.3	0.2	0.2	0.2	SP	0.2	0.3	0.2	0.3	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2		
15-Sep	Z	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	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3
	SP	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	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - September 2025

Day	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	Daily Average	Daily Maximum
Period Ending At (MST)																										
16-Sep	0.2	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	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4
	0.3	SP	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	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2		
17-Sep	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	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	0.3
	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2		
18-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.5	0.5	0.5	C	C	C	C	C	C	0.4	0.3	0.3	0.3	0.3	0.3	0.3	--	0.5
	0.2	0.2	0.2	SP	0.3	0.3	0.4	0.4	0.5	0.5	0.5	C	C	C	C	C	C	0.4	0.3	0.3	0.3	0.3	0.3	0.3		
19-Sep	0.3	0.3	0.3	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.3	0.3	0.3	0.2	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
20-Sep	0.2	0.2	0.2	0.2	0.2	Z	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	0.3
	0.2	0.2	0.2	0.2	0.2	SP	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		
21-Sep	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	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.4
	SP	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.2		
22-Sep	0.3	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	M	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3
	0.2	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	M	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
23-Sep	0.2	0.2	Z	0.3	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	0.3
	0.2	0.2	SP	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		
24-Sep	0.2	0.2	0.2	Z	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	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
	0.2	0.2	0.2	SP	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2		
25-Sep	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	0.2
	0.2	0.2	0.2	0.2	SP	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		
26-Sep	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	0.1	0.2	0.2	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	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	0.1	0.1	0.2		
27-Sep	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1		
28-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.1	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	0.3
	0.1	SP	0.2	0.2	0.2	0.1	0.1	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		
29-Sep	0.2	0.2	Z	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
	0.2	0.2	SP	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	0.2	0.3	0.3	0.2		
30-Sep	0.3	0.3	0.2	Z	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	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.5
	0.3	0.3	0.2	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	0.5	0.5	0.4	0.4	0.4	0.3		
	0.3	0.2	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.6	0.4	0.6	0.5	0.4	0.4	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	0.6	0.6	0.5	0.6	0.5	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

Janvier - September 2025

Maximum Value: 0.6 ppb on Sep 11 20:00

Maximum Daily Average: 0.4 ppb on Sep 3

Minimum Value: 0.1 ppb on Sep 17 07:00

Minimum Daily Average: 0.2 ppb on Sep 17

Maximum Diurnal Average: 0.3 ppb at hour 19

Minimum Diurnal Average: 0.2 ppb at hour 16

Monthly Average: 0.24 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.3 P_{99} = 0.5

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	36
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
2-Sep	0.3	0.3	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.4
3-Sep	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.4	0.6	0.5	0.4	0.6
4-Sep	0.6	Z	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.4	0.6
5-Sep	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
6-Sep	0.2	0.2	0.2	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	0.3	0.3	0.2	0.3
7-Sep	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	0.4	0.4	0.4	0.2	0.4
8-Sep	0.4	0.4	0.3	0.3	0.2	Z	0.2	0.2	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	0.4
9-Sep	Z	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3
10-Sep	0.3	Z	0.4	0.3	0.3	0.3	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	0.2	0.4
11-Sep	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.6
12-Sep	0.3	0.3	0.3	Z	0.3	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	0.3	0.2	0.3
13-Sep	0.3	0.3	0.3	0.2	Z	0.3	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.2	0.4
14-Sep	0.3	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
15-Sep	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	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3
16-Sep	0.3	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	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4
17-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
18-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.5	0.5	0.5	C	C	C	C	C	C	0.4	0.3	0.3	0.3	0.3	0.3	0.3	--	0.5
19-Sep	0.3	0.3	0.3	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
20-Sep	0.2	0.2	0.2	0.2	0.2	Z	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	0.3
21-Sep	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.4
22-Sep	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	M	M	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3
23-Sep	0.2	0.2	Z	0.3	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	0.3
24-Sep	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	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
25-Sep	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	0.2
26-Sep	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	0.1	0.2	0.2	0.2	0.2
27-Sep	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
28-Sep	0.1	Z	0.2	0.2	0.2	0.1	0.1	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	0.3
29-Sep	0.2	0.2	Z	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	0.2	0.3	0.3	0.2	0.2	0.3
30-Sep	0.3	0.3	0.2	Z	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	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.5
	0.3	0.2	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	0.6	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.6	0.6	0.5	0.6	0.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

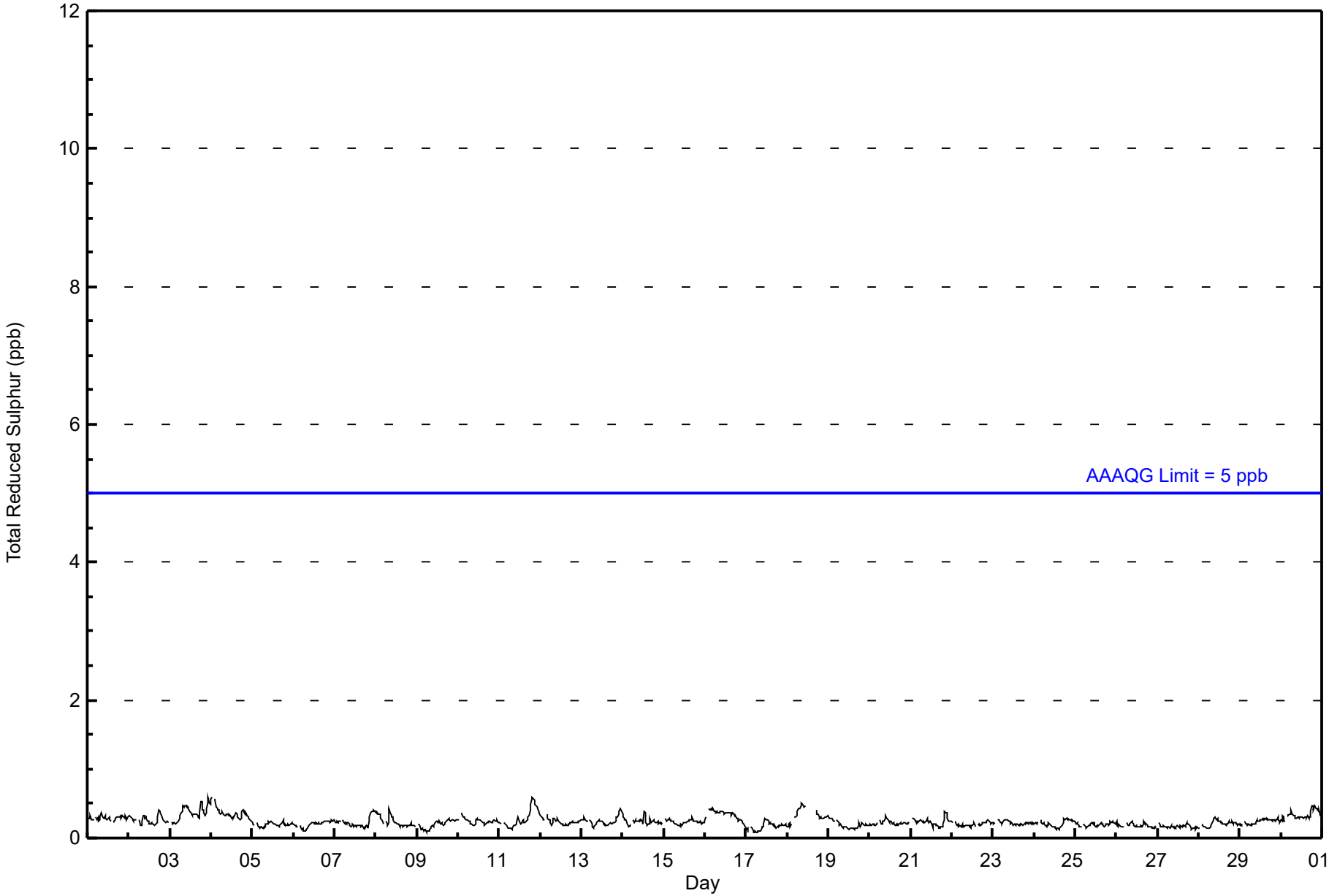
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	682	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: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	45	28	13	18	16	19	22	67	83	123	96	40	34	31	18	17	670
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	28	13	18	16	19	22	67	83	123	96	40	34	31	18	17	670

Total Number of Valid Hours: 670

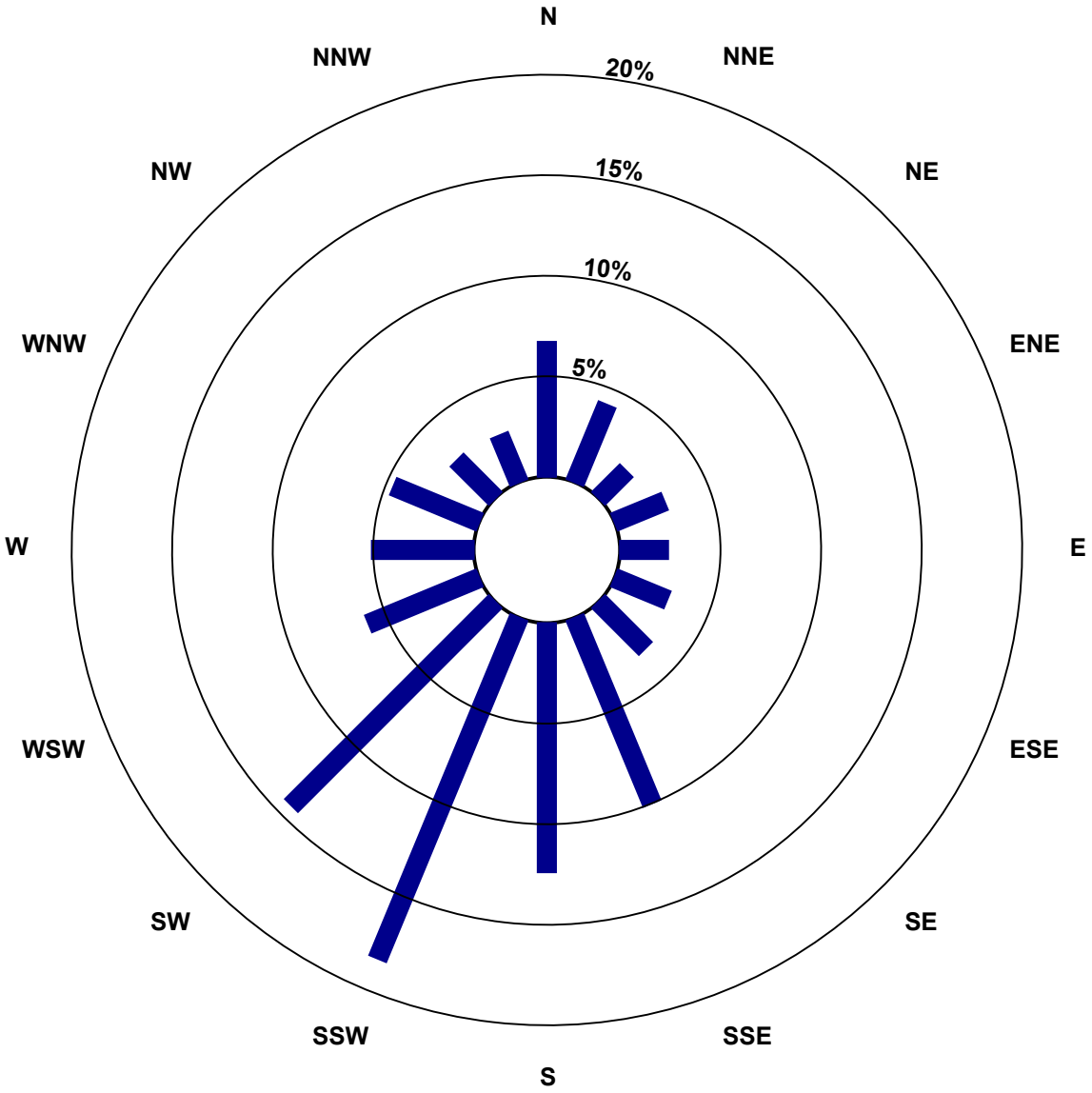
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Janvier



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

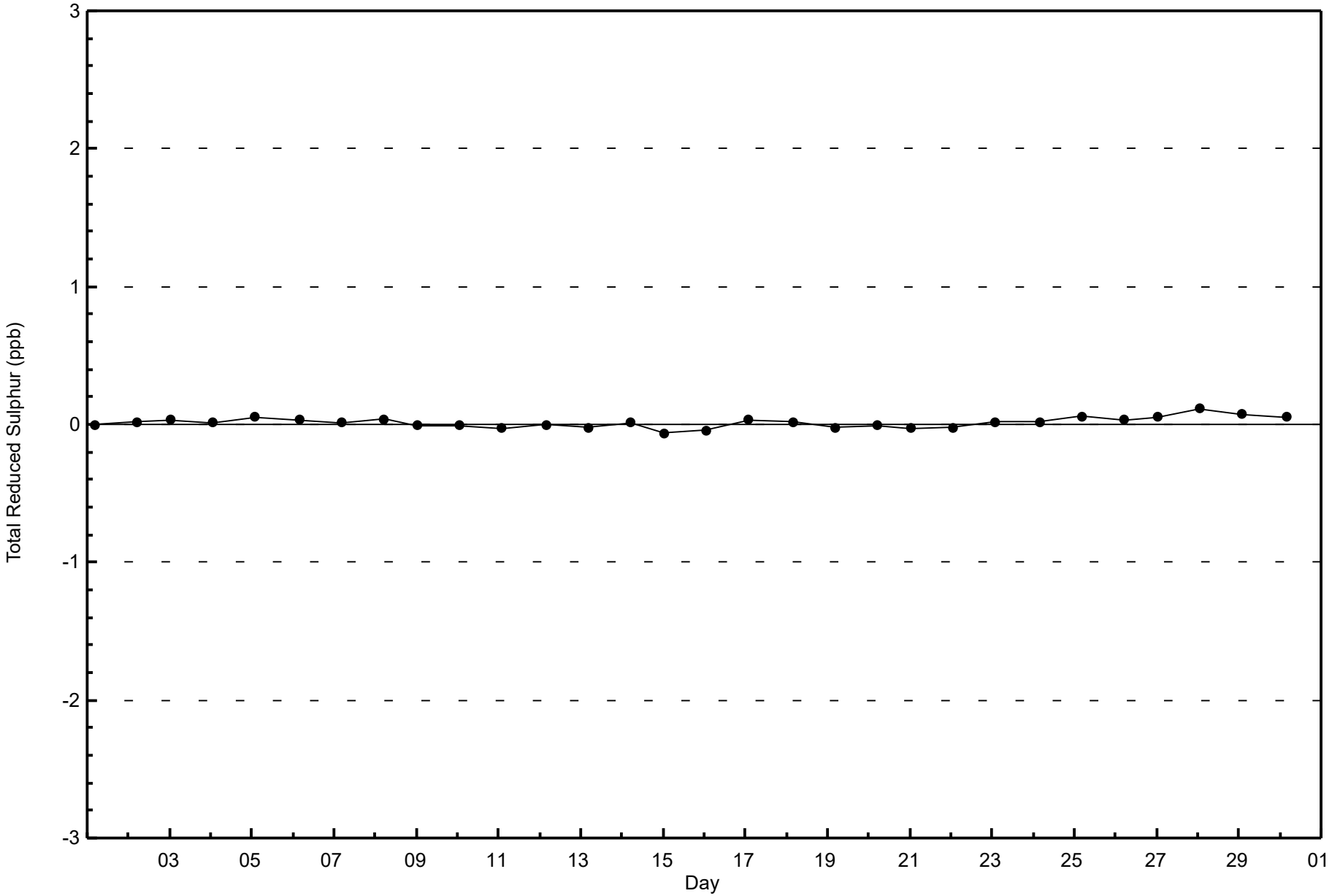
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - September 2025

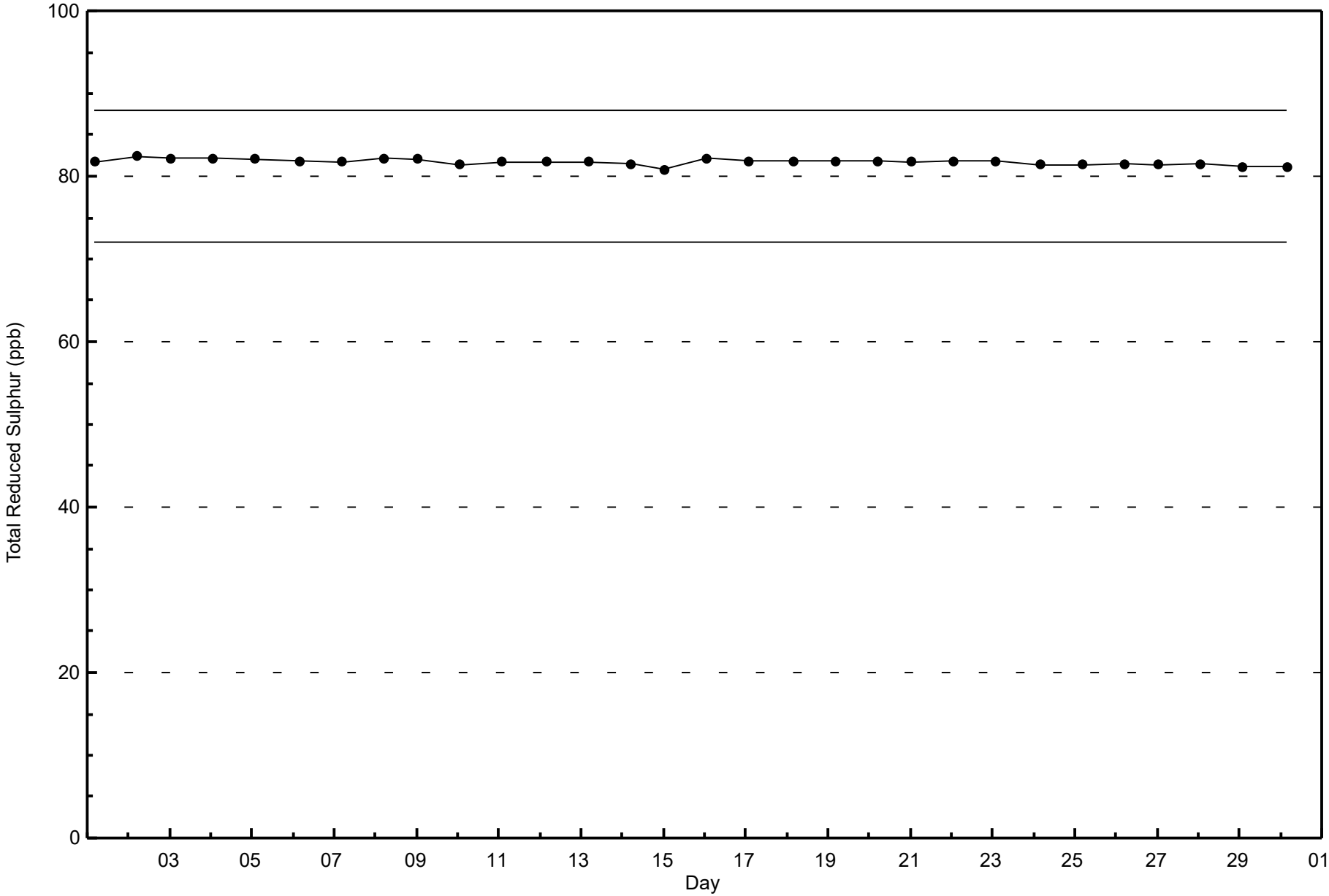


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Janvier - September 2025

Maximum Value: 2.2 ppm on Sep 1 08:00

Maximum Daily Average: 2.1 ppm on Sep 7

Minimum Value: 1.9 ppm on Sep 22 19:00

Minimum Daily Average: 2.0 ppm on Sep 24

Maximum Diurnal Average: 2.1 ppm at hour 9

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.03 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} = 2.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Sep	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	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1
3-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1
4-Sep	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
5-Sep	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	2.1	2.0	2.1
6-Sep	2.0	2.0	Z	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	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2
7-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	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
8-Sep	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-Sep	2.1	2.1	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	2.1
10-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
11-Sep	2.0	Z	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	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
12-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
13-Sep	2.0	2.0	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	2.1	2.1	2.0	2.1	2.1	2.0	2.1
14-Sep	2.1	2.1	2.1	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.1
16-Sep	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	2.0	2.0	2.0	2.1	2.0	2.1
17-Sep	2.1	Z	2.1	2.1	2.1	2.1	2.1	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
18-Sep	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	2.1	2.1	2.1	2.1	2.1	2.0	2.1
19-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	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	2.1	2.1	2.2
21-Sep	2.1	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	2.0	2.0	2.0	2.0	2.2
22-Sep	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
23-Sep	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	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0
24-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
25-Sep	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	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-Sep	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-Sep	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-Sep	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
29-Sep	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
30-Sep	2.0	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	2.0	2.0	2.1
	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

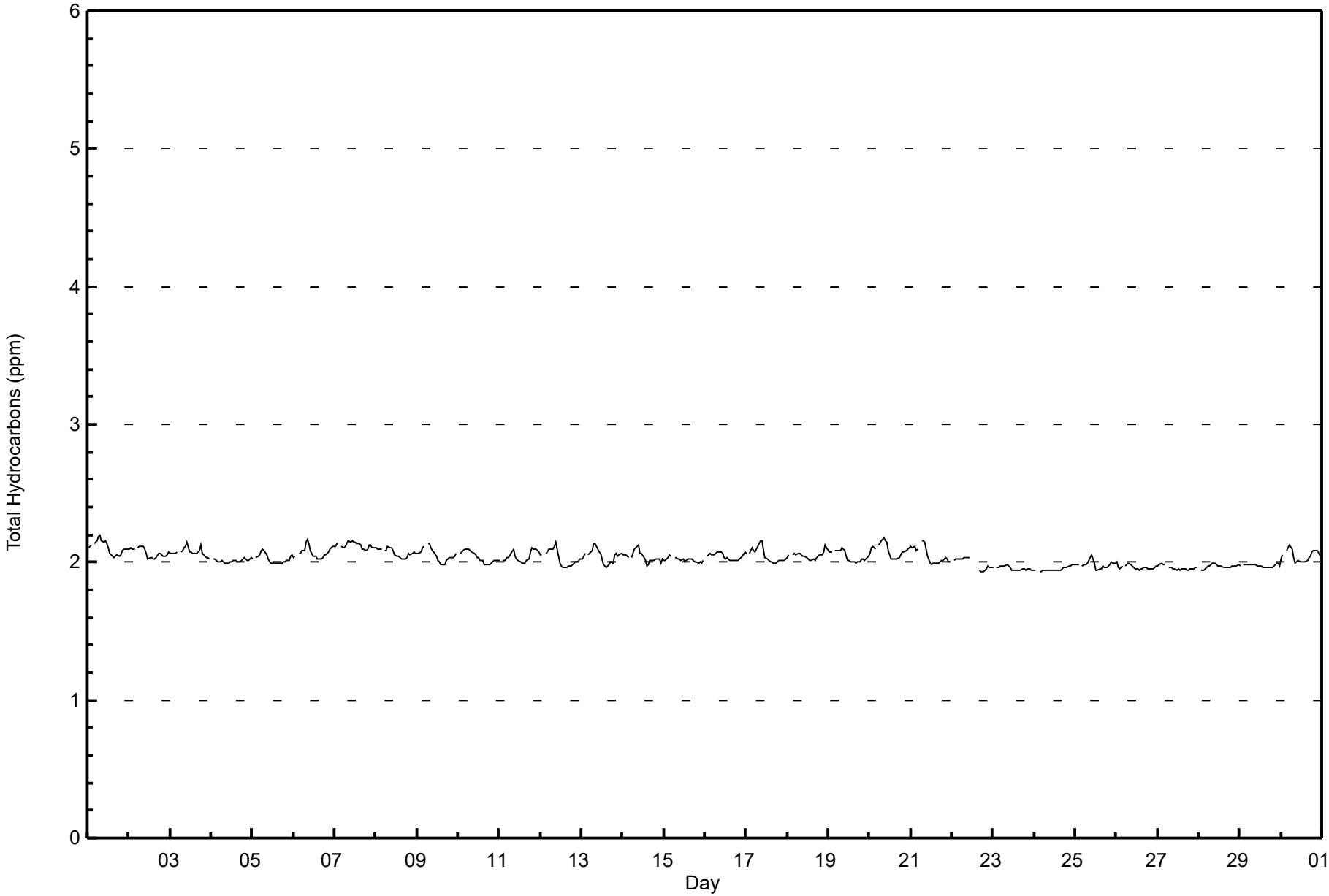
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Janvier - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Janvier - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	435	63.50	63.50
2.1 - 3.0	250	36.50	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Janvier - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	22	16	5	14	12	16	12	45	50	66	73	26	29	23	10	11	430
2.1 - 3.0	23	12	10	4	4	3	9	23	33	61	23	12	4	7	6	6	240
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	45	28	15	18	16	19	21	68	83	127	96	38	33	30	16	17	670

Total Number of Valid Hours: 670

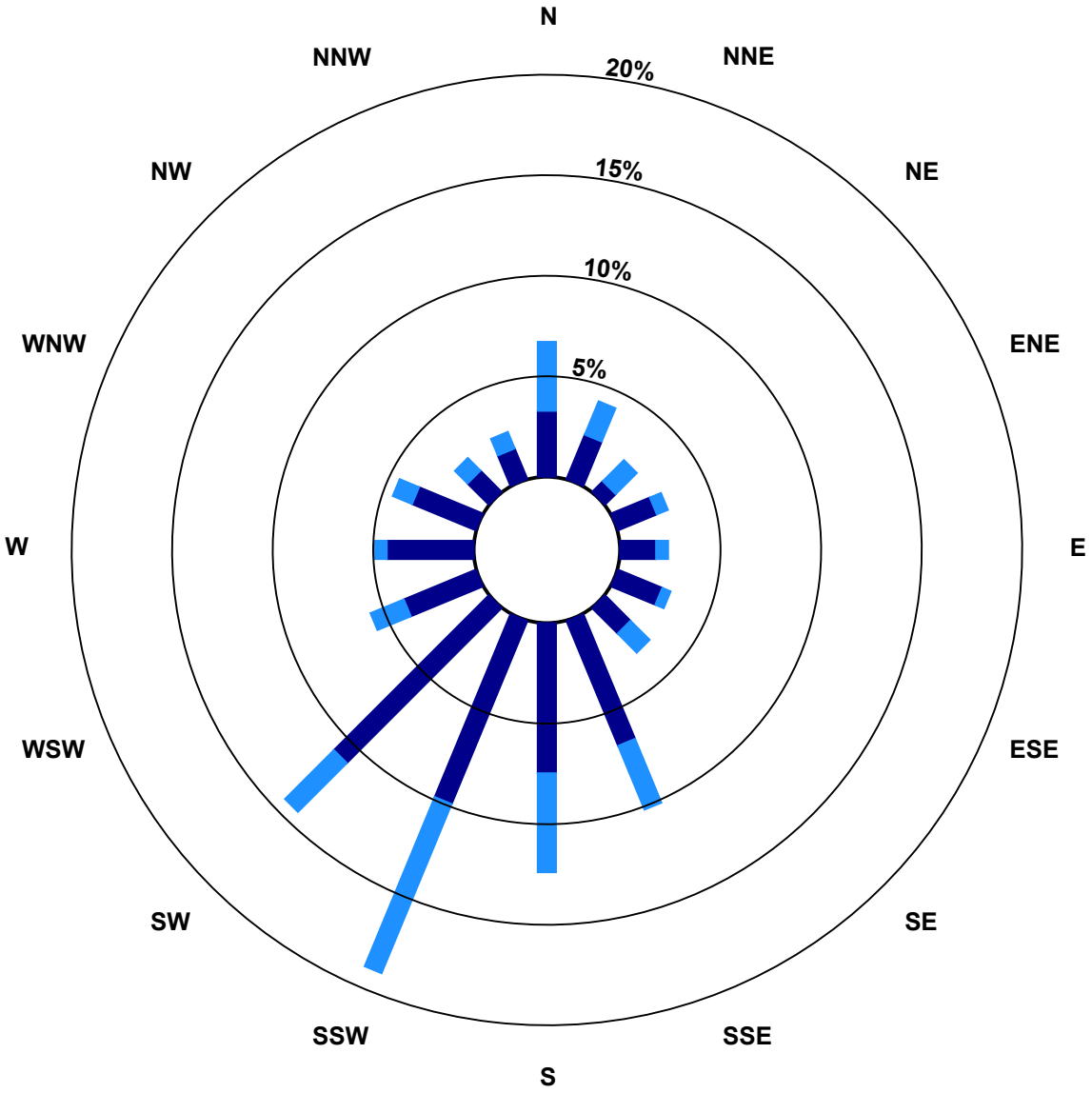
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Janvier



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

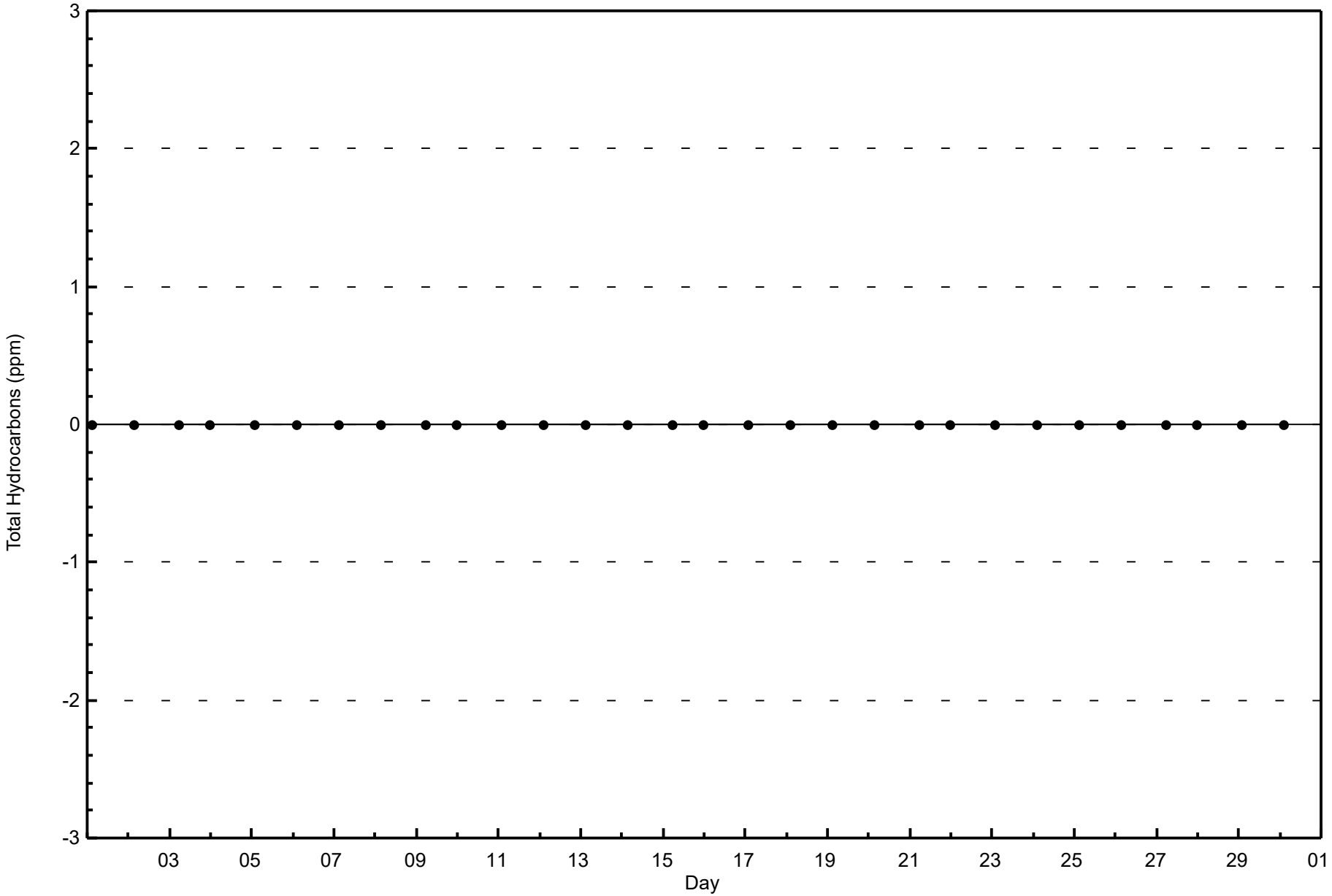
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Janvier - September 2025

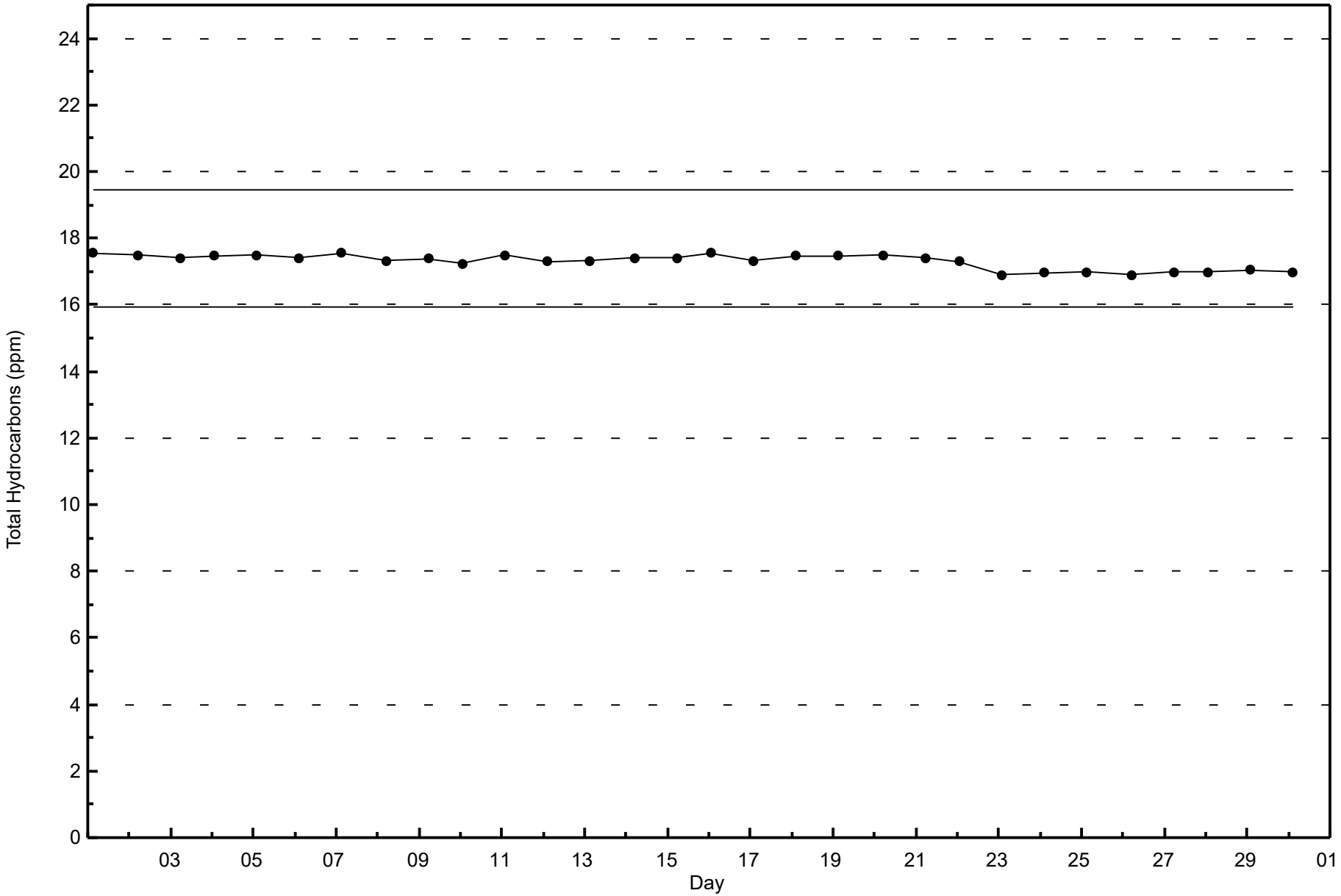


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025

Maximum Value: 0.007 ppm on Sep 30 02:00

Maximum Daily Average: 0.000 ppm on Sep 30

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.000 ppm on Sep 1

Maximum Diurnal Average: 0.000 ppm at hour 2

Minimum Diurnal Average: 0.000 ppm at hour 1

Monthly Average: 0.000 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 in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	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
2-Sep	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
3-Sep	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
4-Sep	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
5-Sep	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
6-Sep	0.000	0.002	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	0.002
7-Sep	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
8-Sep	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
9-Sep	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
10-Sep	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	0.000	0.000	0.000	0.001
11-Sep	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	0.002	0.000	0.000	0.000	0.002
12-Sep	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
13-Sep	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
14-Sep	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
15-Sep	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-Sep	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
17-Sep	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
18-Sep	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
19-Sep	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
20-Sep	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
21-Sep	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
22-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-Sep	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
24-Sep	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
25-Sep	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
26-Sep	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
27-Sep	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	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	0.001
28-Sep	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
29-Sep	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
30-Sep	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	0.000	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Average	
	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.002	0.000	0.000	Diurnal Maximum	

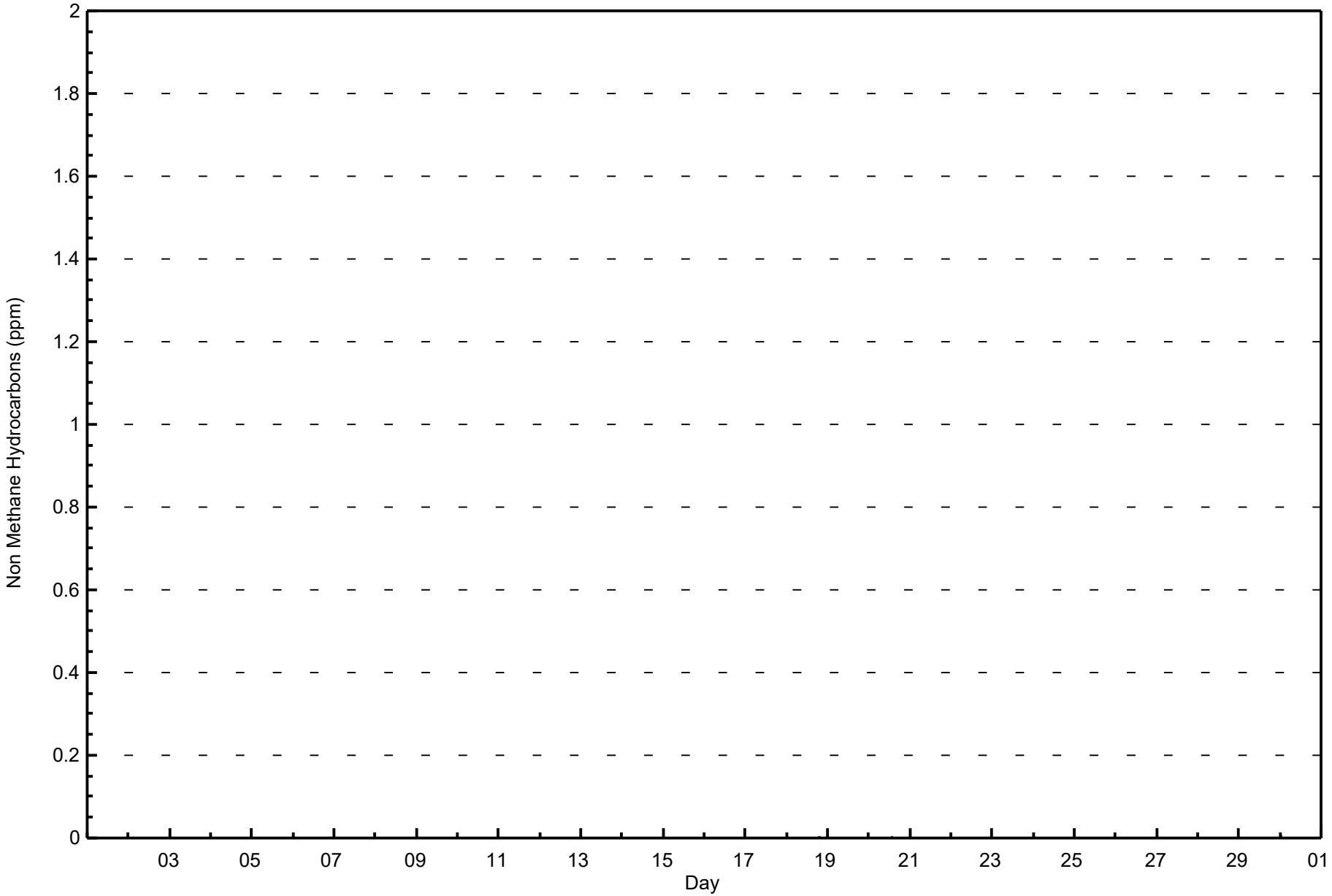
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	684	99.85	99.85
0.006 - 0.05	1	0.15	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	45	28	15	18	16	19	21	68	82	127	96	38	33	30	16	17	669
0.006 - 0.05	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
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	0	0	0	0
Totals	45	28	15	18	16	19	21	68	83	127	96	38	33	30	16	17	670

Total Number of Valid Hours: 670

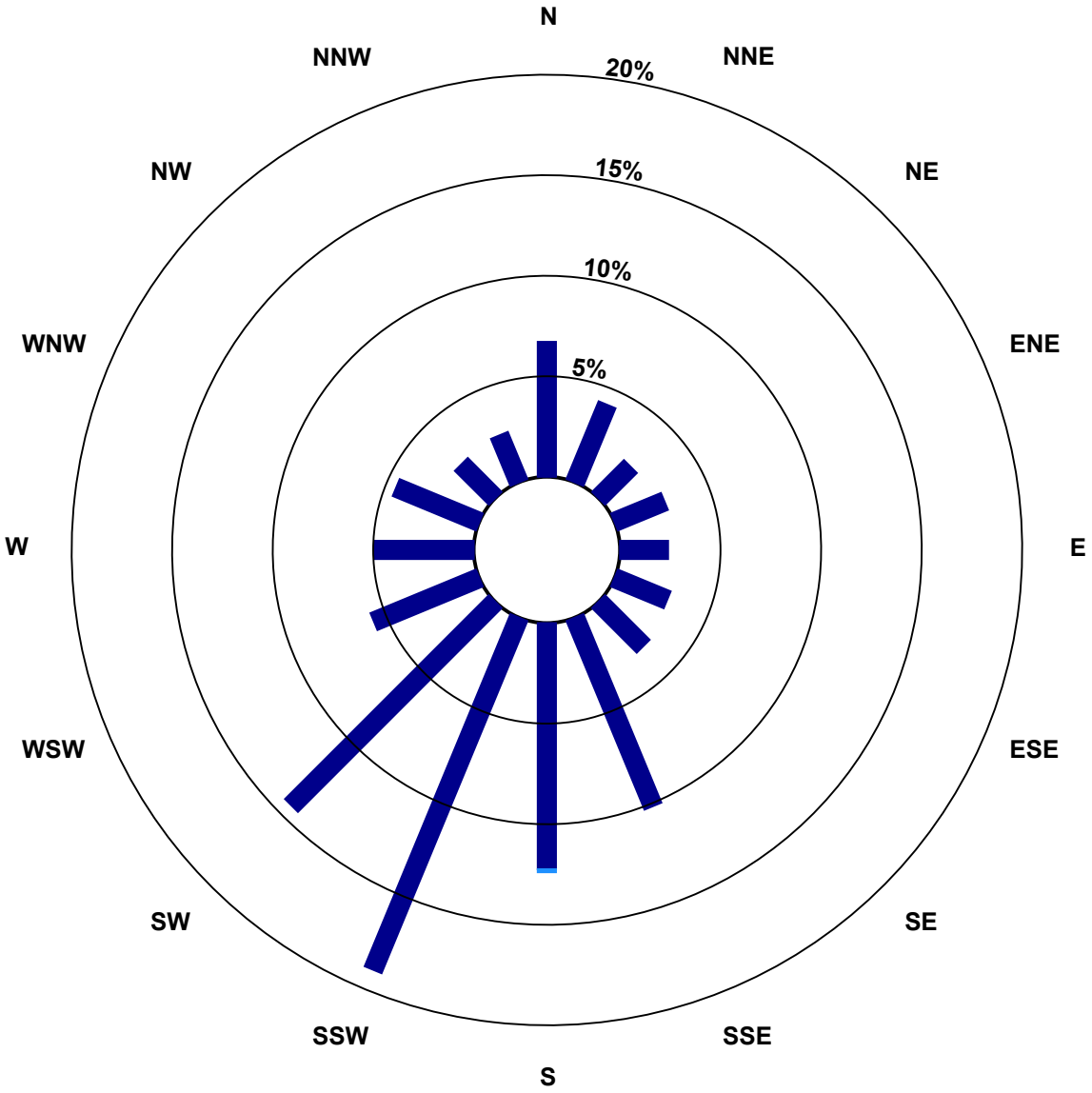
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Janvier



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

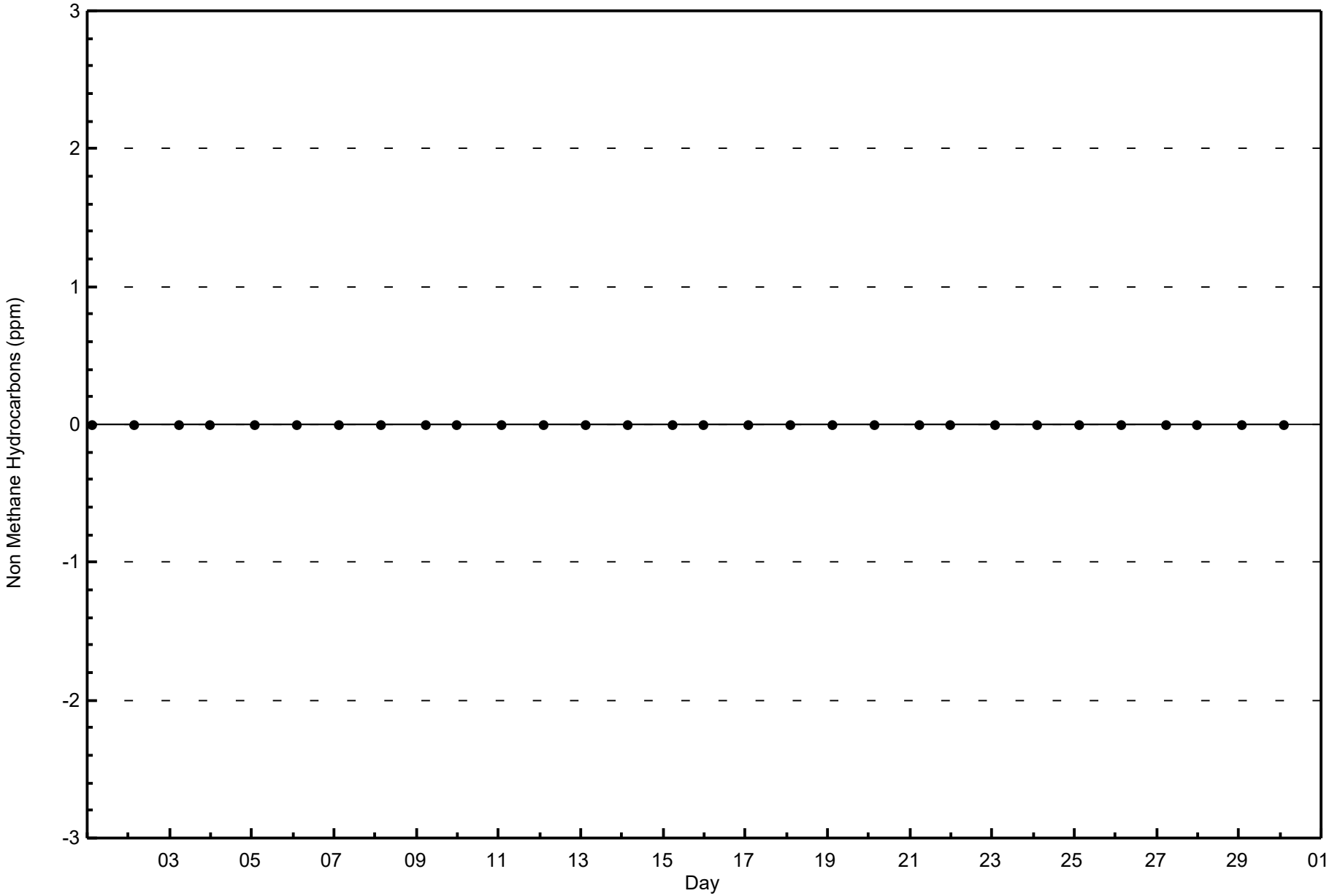
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025

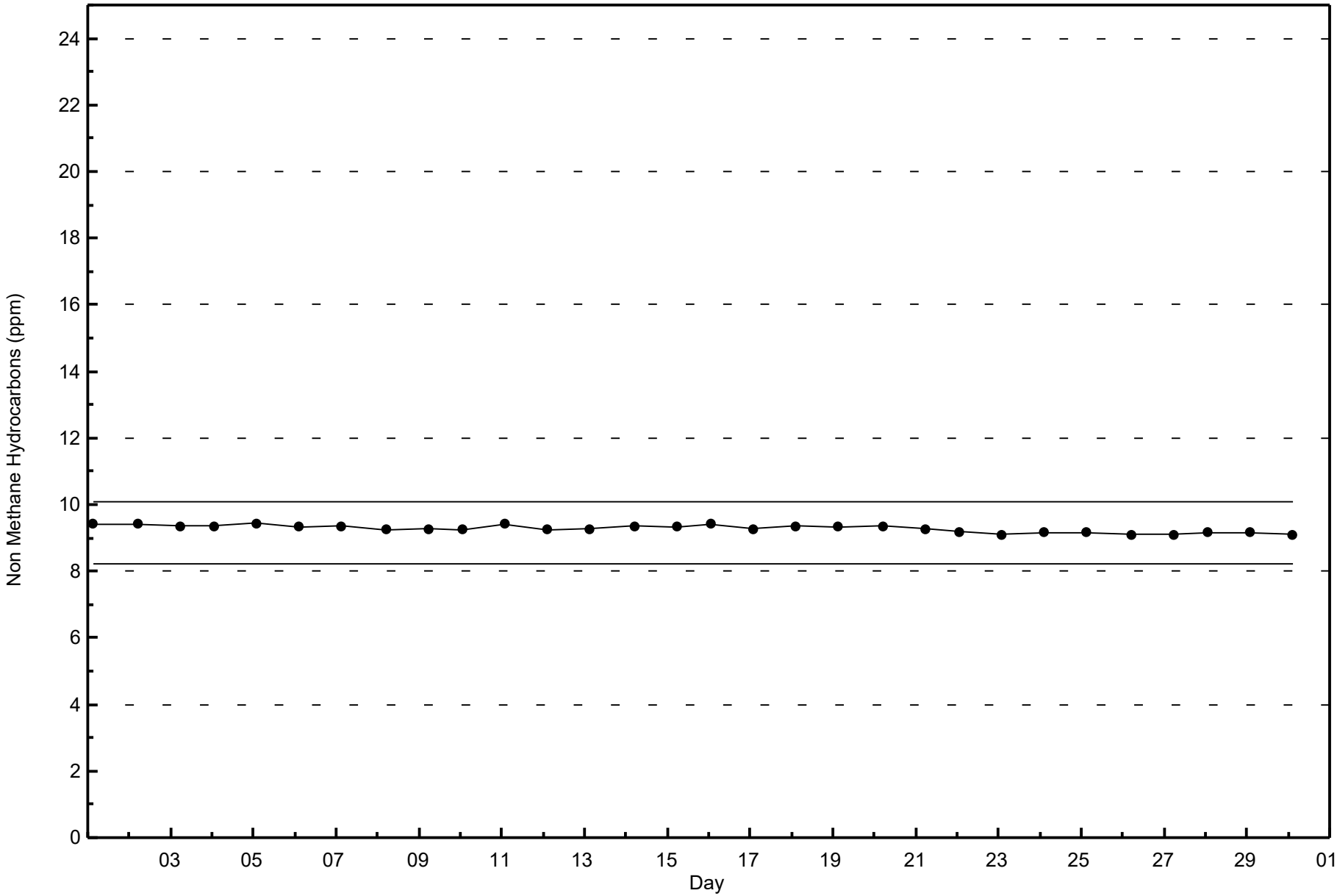


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.2 ppm on Sep 1 08:00

Maximum Daily Average: 2.1 ppm on Sep 7

Minimum Value: 1.9 ppm on Sep 22 19:00

Minimum Daily Average: 2.0 ppm on Sep 24

Maximum Diurnal Average: 2.1 ppm at hour 9

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.03 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} = 2.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Sep	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	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1
3-Sep	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	2.0	2.0	2.0	2.0	2.1	2.1
4-Sep	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
5-Sep	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	2.1	2.0	2.1
6-Sep	2.0	2.0	Z	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	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2
7-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	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
8-Sep	2.1	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-Sep	2.1	2.1	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	2.1
10-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
11-Sep	2.0	Z	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	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
12-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
13-Sep	2.0	2.0	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	2.1	2.1	2.0	2.1	2.1	2.0	2.1
14-Sep	2.1	2.1	2.1	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-Sep	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.1
16-Sep	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	2.0	2.0	2.0	2.1	2.0	2.1
17-Sep	2.1	Z	2.1	2.1	2.1	2.1	2.1	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
18-Sep	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	2.1	2.1	2.1	2.1	2.0	2.1
19-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Sep	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	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	2.1	2.1	2.2
21-Sep	2.1	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	2.0	2.0	2.0	2.0	2.2
22-Sep	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
23-Sep	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	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0
24-Sep	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
25-Sep	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	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-Sep	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-Sep	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-Sep	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
29-Sep	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
30-Sep	2.0	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	2.0	2.0	2.1
	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

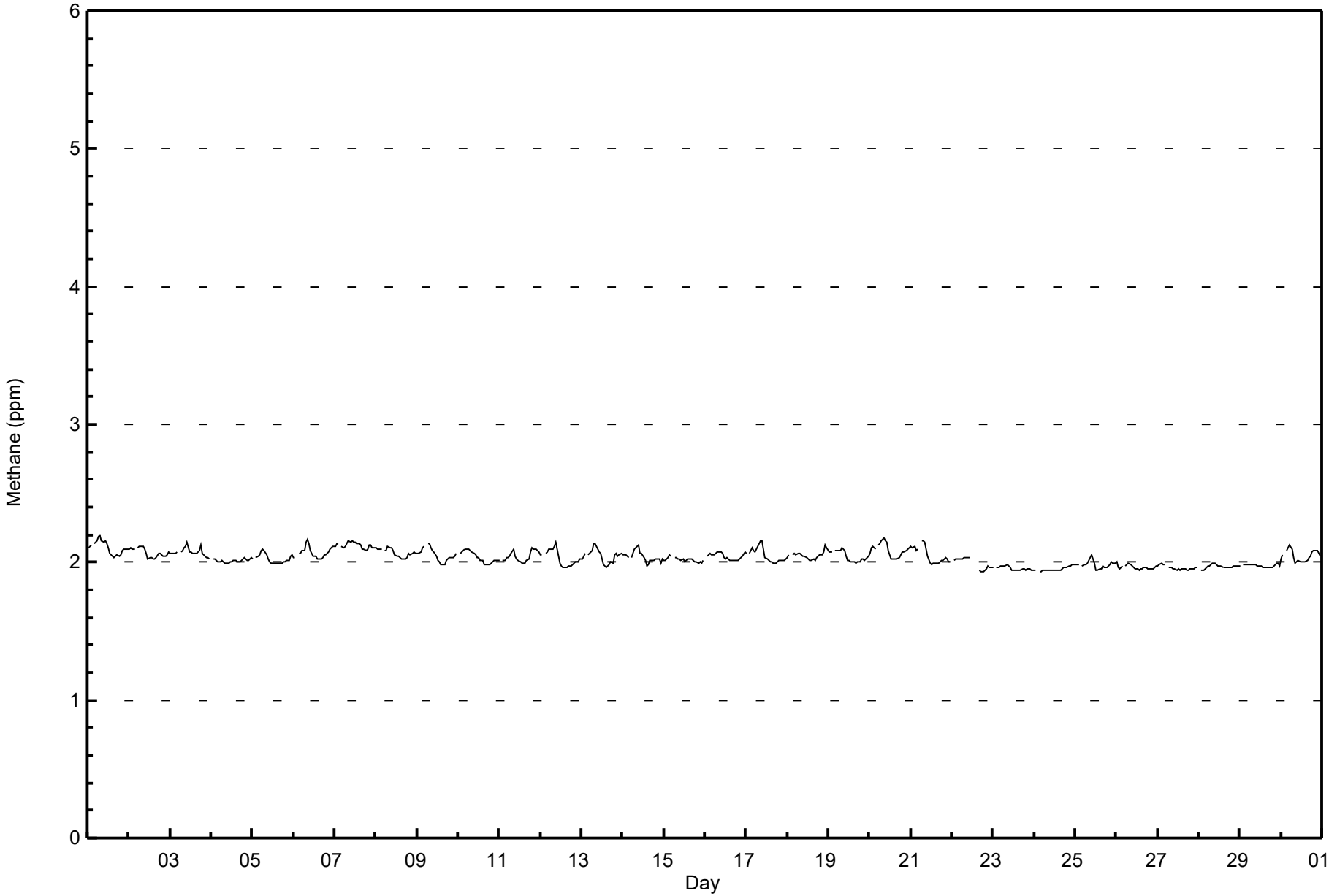
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Janvier - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	436	63.65	63.65
2.1 - 3.0	249	36.35	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Janvier - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	22	16	5	14	12	16	12	45	51	66	73	26	29	23	10	11	431
2.1 - 3.0	23	12	10	4	4	3	9	23	32	61	23	12	4	7	6	6	239
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	45	28	15	18	16	19	21	68	83	127	96	38	33	30	16	17	670

Total Number of Valid Hours: 670

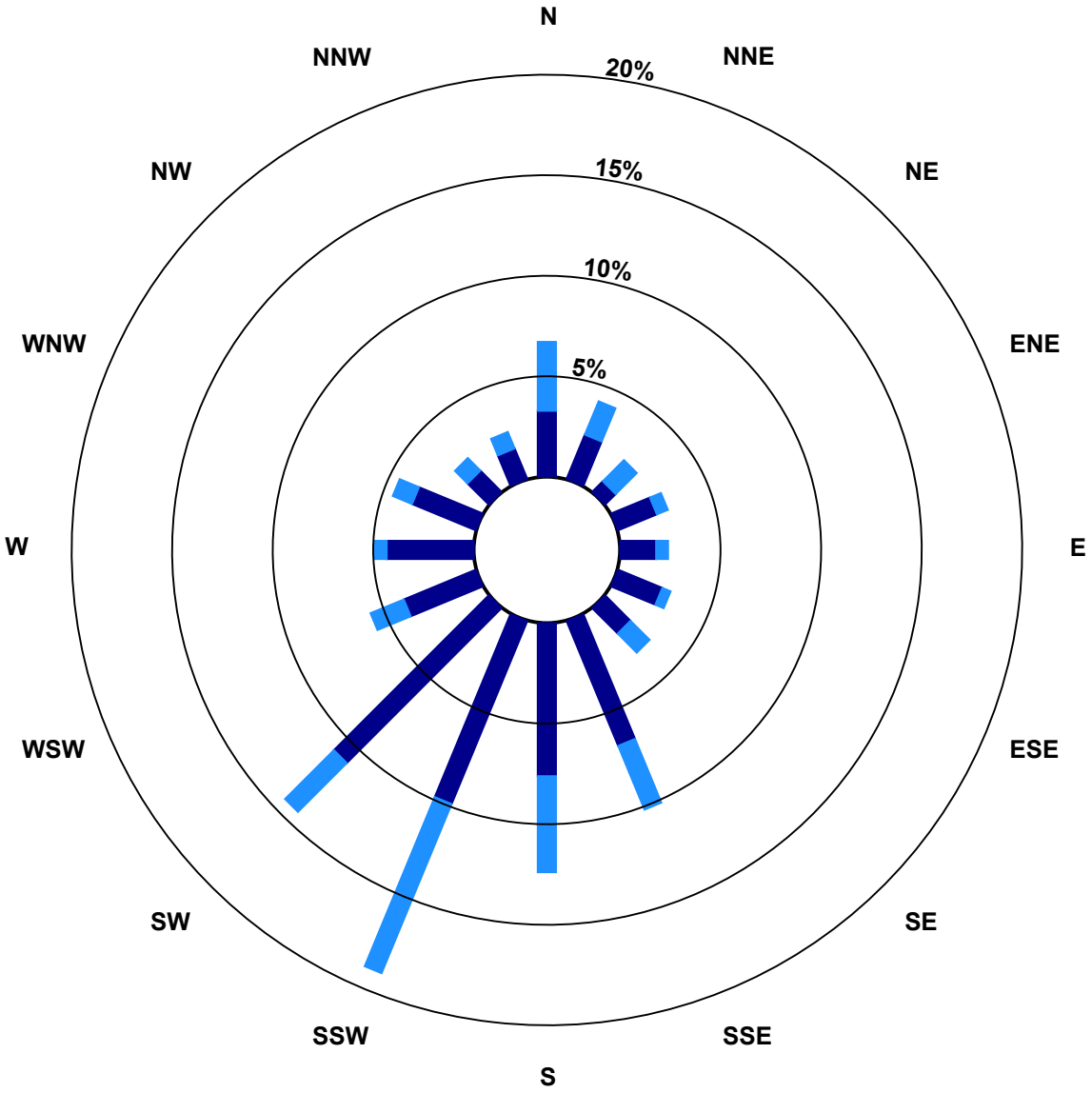
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Janvier



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

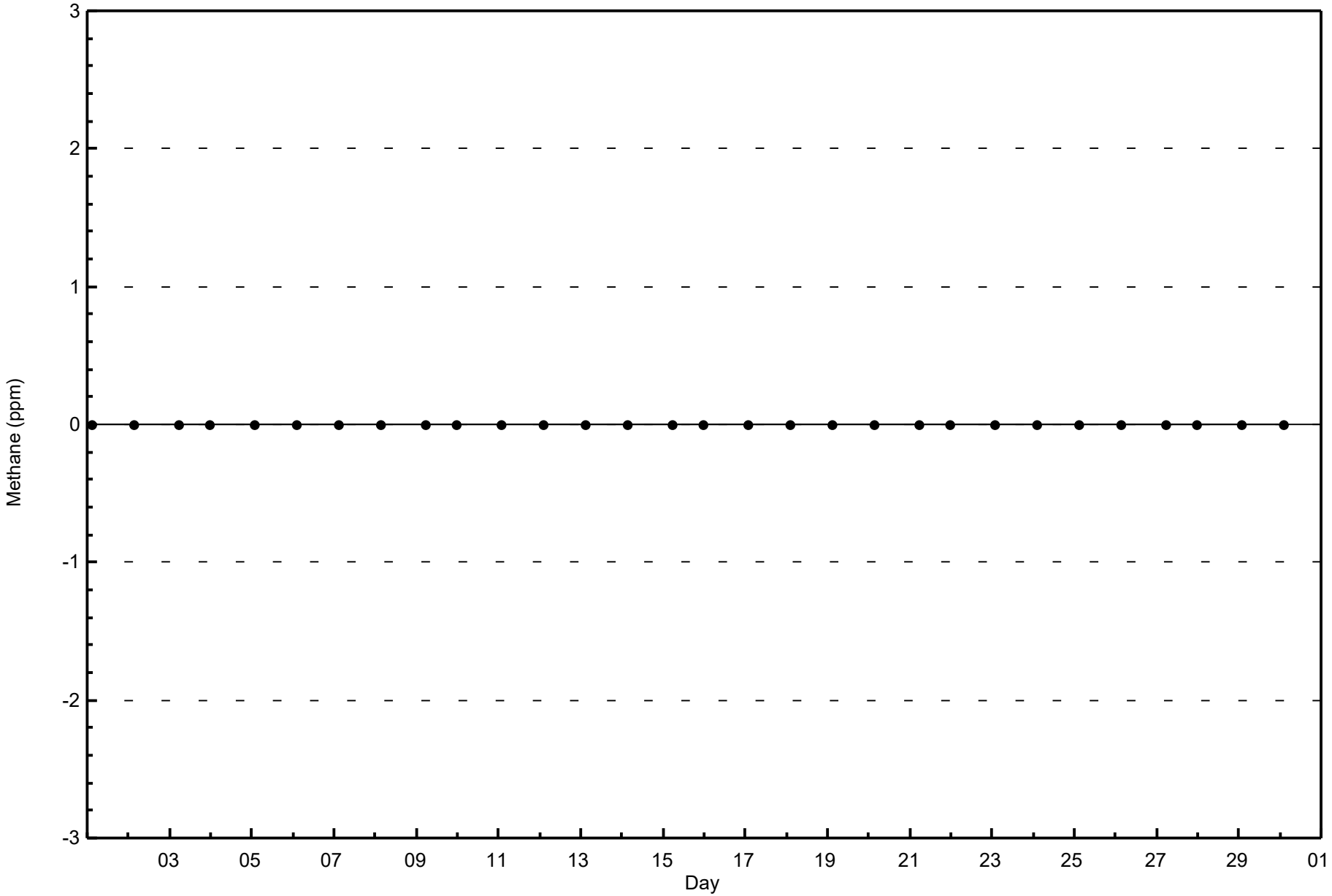
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Janvier - September 2025

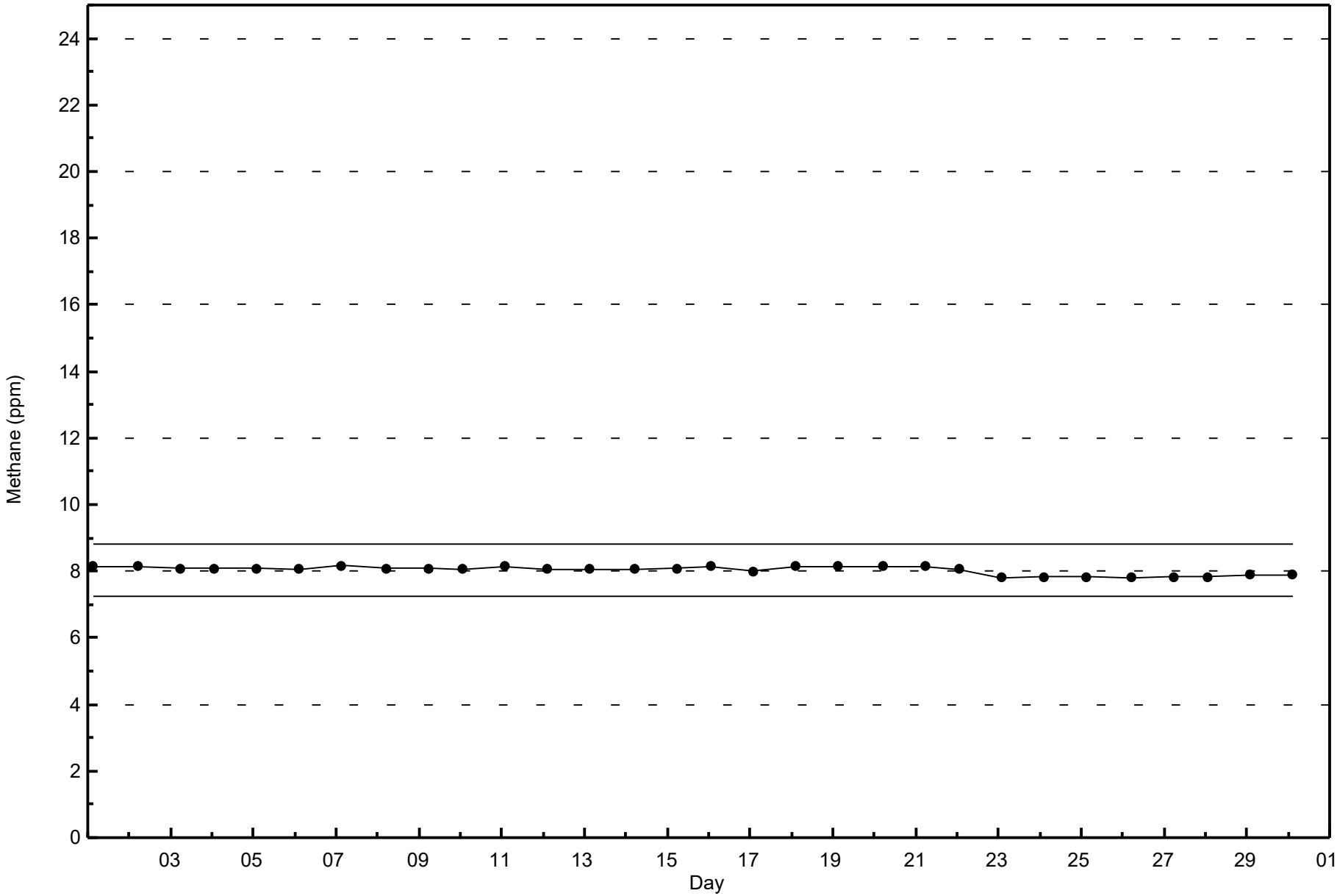


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Janvier - September 2025

Maximum Value: 3.9 ppb on Sep 30 07:00

Maximum Daily Average: 0.5 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 19 17:00

Minimum Daily Average: 0.1 ppb on Sep 26

Maximum Diurnal Average: 0.6 ppb at hour 8

Minimum Diurnal Average: 0.1 ppb at hour 3

Monthly Average: 0.27 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 1.7

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.1	0.1	0.2	0.3	0.3	0.6	0.4	0.3	0.2	0.3	0.6	0.4	0.3	0.1	0.1	0.1	0.1	0.8	0.6	0.0	0.0	0.1	0.3	0.8
2-Sep	0.0	0.0	Z	0.0	0.2	0.1	1.4	0.5	0.8	1.0	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.1	1.1	0.5	0.2	0.3	0.1	0.0	0.3	1.4
3-Sep	0.4	0.5	0.1	Z	0.2	0.1	0.2	1.1	0.7	1.1	0.7	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.1
4-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.3	0.5	0.5	0.5	0.3	0.7	0.4	0.2	0.1	0.1	0.5	0.1	0.2	0.1	0.0	0.2	0.7
5-Sep	0.0	0.0	0.0	0.0	0.4	Z	0.2	1.6	0.8	0.7	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.4	1.3	0.7	0.8	0.7	0.3	0.4	1.6
6-Sep	Z	0.1	0.0	0.1	0.5	0.1	0.4	0.4	0.8	1.2	0.5	0.8	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.3	0.2	0.1	0.1	0.3	1.2
7-Sep	3.0	Z	0.2	0.2	0.3	0.0	0.1	1.0	0.4	0.1	0.2	0.1	0.6	0.5	0.1	0.2	0.1	0.9	0.7	1.0	0.4	0.0	0.1	0.0	0.5	3.0
8-Sep	0.2	0.2	Z	0.1	0.7	0.3	0.8	1.2	1.8	1.1	0.6	0.5	0.2	0.1	0.3	0.0	0.0	0.3	0.5	1.7	0.3	0.1	0.2	0.1	0.5	1.8
9-Sep	0.1	0.2	0.1	Z	0.7	0.6	1.4	1.1	1.2	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.1	0.2	0.0	0.3	1.4
10-Sep	0.1	0.4	0.0	0.0	Z	0.0	0.1	0.4	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.4	0.9	0.8	0.4	0.2	0.0	0.0	0.2	0.9
11-Sep	0.0	0.1	0.0	1.7	0.1	Z	0.2	0.3	0.6	0.4	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.4	0.6	0.3	0.2	1.0	0.5	0.3	0.3	1.7
12-Sep	Z	0.2	0.1	0.1	0.2	0.1	2.6	1.1	1.0	1.0	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.5	0.3	0.2	0.3	0.2	0.1	0.0	0.4	2.6
13-Sep	0.0	Z	0.0	0.0	0.1	0.1	0.2	1.1	0.4	0.3	0.6	0.4	0.1	0.2	0.2	0.1	0.2	0.7	0.9	0.3	0.3	1.0	0.1	0.8	0.4	1.1
14-Sep	0.1	0.1	Z	0.1	0.1	0.3	0.3	1.1	0.2	0.5	0.5	0.4	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.2	0.1	0.4	0.3	1.1
15-Sep	0.2	0.5	0.2	Z	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.6	0.2	0.6
16-Sep	0.1	0.0	0.2	0.1	Z	0.0	0.2	0.1	0.3	0.2	0.4	0.1	0.3	0.1	0.1	0.2	0.4	0.6	0.6	1.1	1.4	2.2	1.0	0.2	0.4	2.2
17-Sep	0.8	0.3	0.5	1.9	0.7	Z	0.5	0.7	1.1	1.0	0.8	0.4	0.3	0.5	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.5	1.9
18-Sep	Z	0.1	0.1	0.4	0.1	0.1	0.4	0.3	0.8	0.4	0.8	0.3	0.4	0.3	0.2	0.2	0.4	0.6	1.2	0.8	0.2	0.3	0.1	0.1	0.4	1.2
19-Sep	0.1	Z	0.1	0.2	0.2	0.6	0.3	0.5	0.4	0.4	0.1	C	C	C	C	C	0.0	0.3	1.0	0.4	1.7	0.1	0.3	0.1	0.4	1.7
20-Sep	0.0	0.1	Z	0.0	0.2	0.1	0.4	1.0	0.6	0.6	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.2	1.0
21-Sep	0.0	0.0	0.1	Z	0.2	0.0	0.3	0.2	0.7	0.8	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.8
22-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.4	0.6	0.3	0.3	0.1	0.1	0.0	M	M	0.1	0.1	0.4	0.2	0.1	0.1	0.0	0.0	0.1	0.6
23-Sep	0.1	0.2	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4	0.0	0.2	0.0	0.0	0.1	0.4
24-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.3	0.1	0.0	0.1	0.4
25-Sep	0.0	Z	0.0	0.0	0.1	0.1	0.5	0.2	0.2	0.4	1.1	0.6	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.4	0.0	0.2	1.1
26-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0	0.3	0.0	0.0	0.1	0.3
27-Sep	0.0	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	0.1	0.6	0.4	0.0	0.1	0.0	0.0	0.0	0.1	0.6
28-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.0	0.1	0.0	0.5	0.9	0.5	0.2	0.1	0.0	0.1	0.1	0.1	0.9
29-Sep	0.1	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.2	0.2	0.1	0.1	0.4
30-Sep	Z	0.9	0.1	0.1	0.0	0.0	3.9	1.8	0.2	0.2	0.3	0.4	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.4	3.9
	0.2	0.2	0.1	0.2	0.2	0.1	0.5	0.6	0.5	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.4	0.3	0.3	0.2	0.1	Diurnal Average	
	3.0	0.9	0.5	1.9	0.7	0.6	3.9	1.8	1.8	1.2	1.1	0.8	0.6	0.5	0.7	0.4	0.5	0.9	1.2	1.7	1.7	2.2	1.0	0.8	Diurnal Maximum	

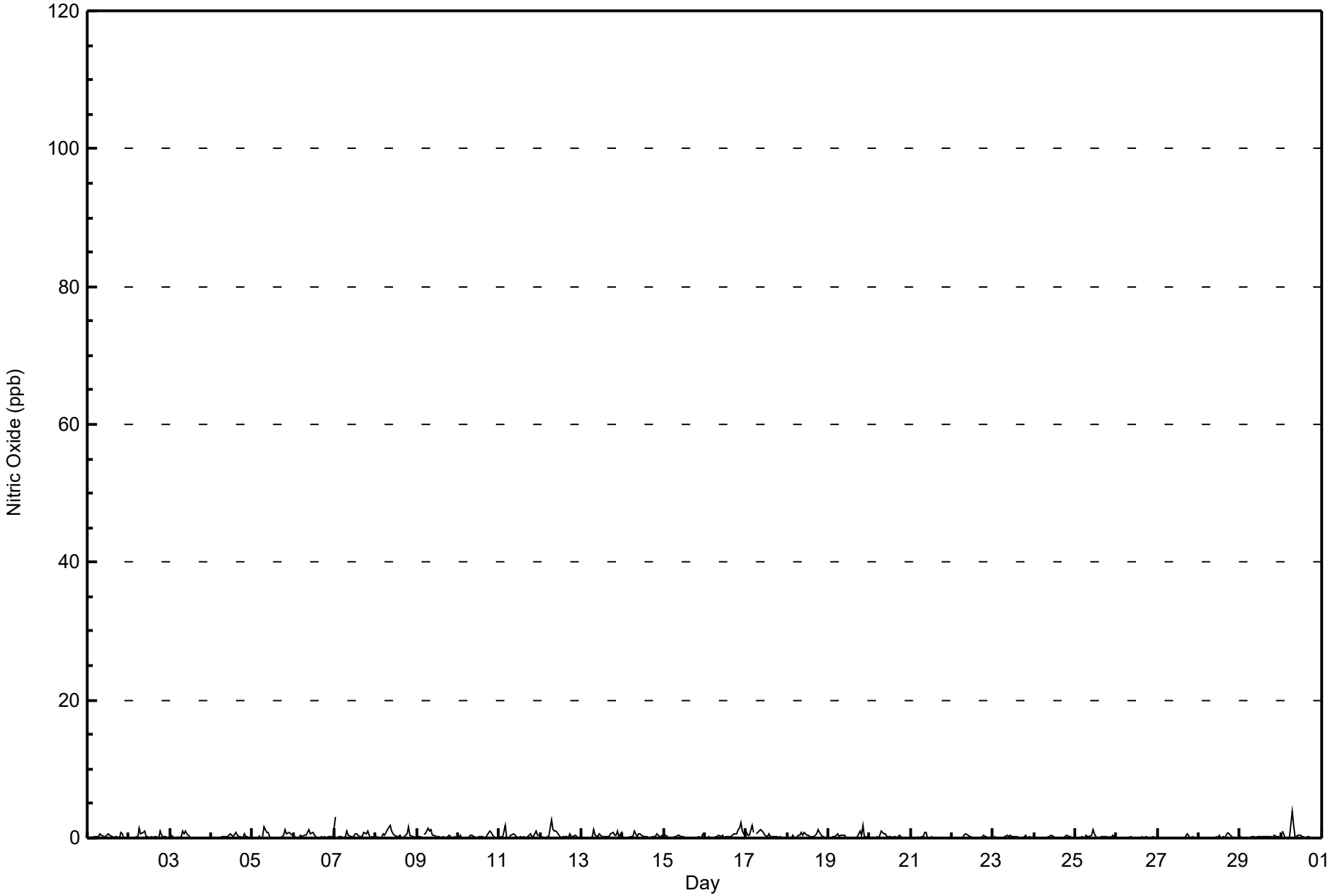
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Janvier - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669
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	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669

Total Number of Valid Hours: 669

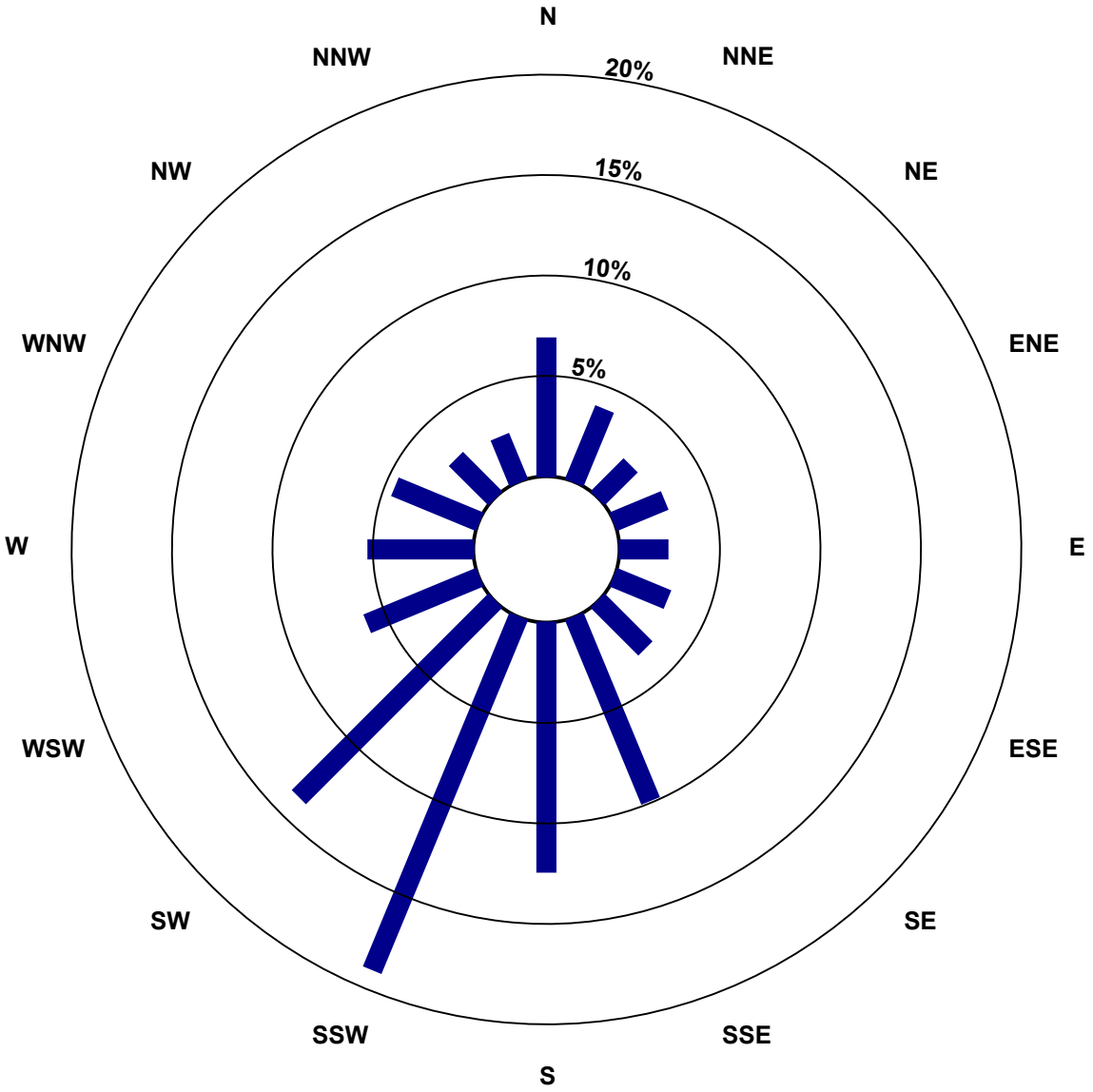
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

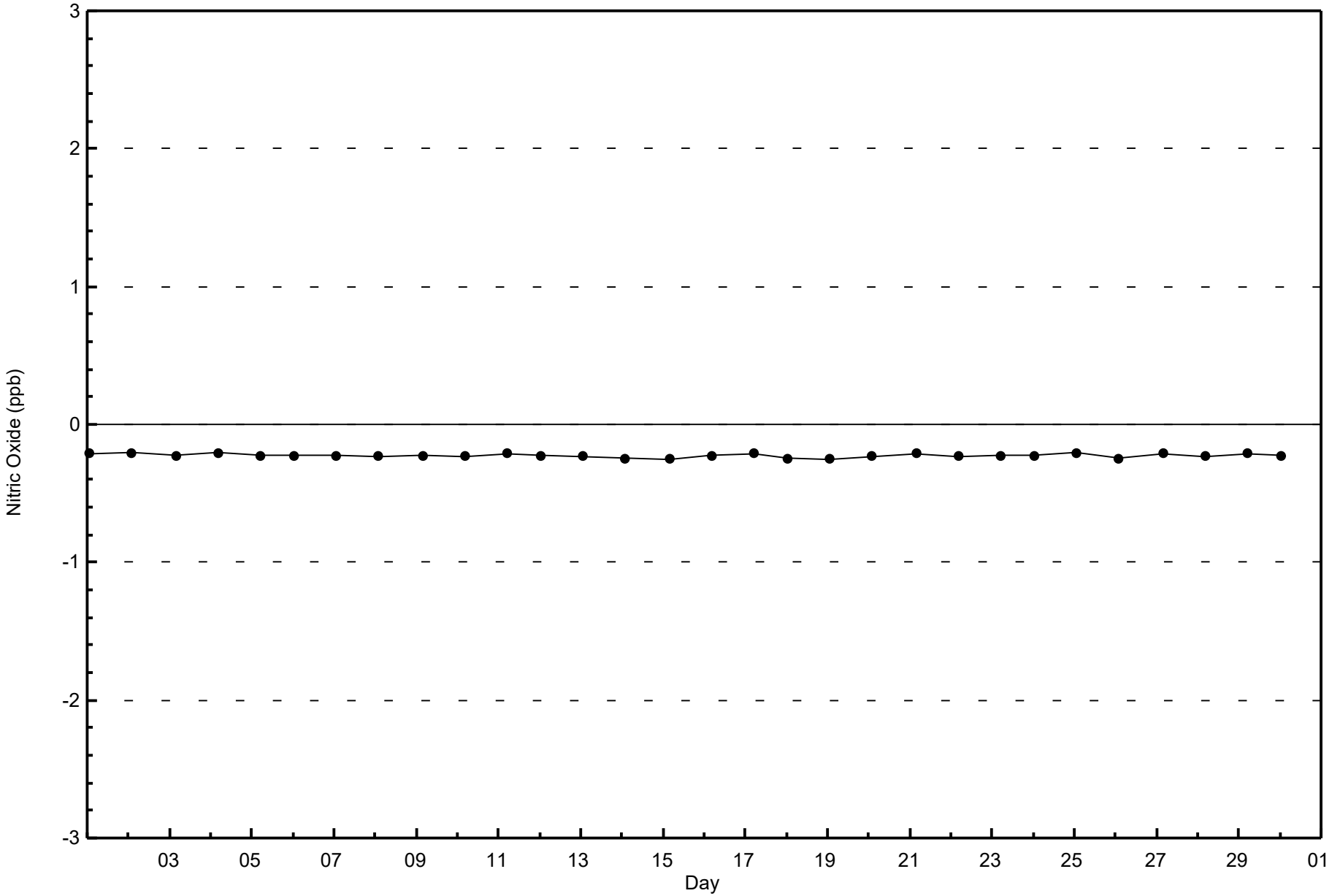
Total Number of Valid Hours: 669

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Janvier - September 2025

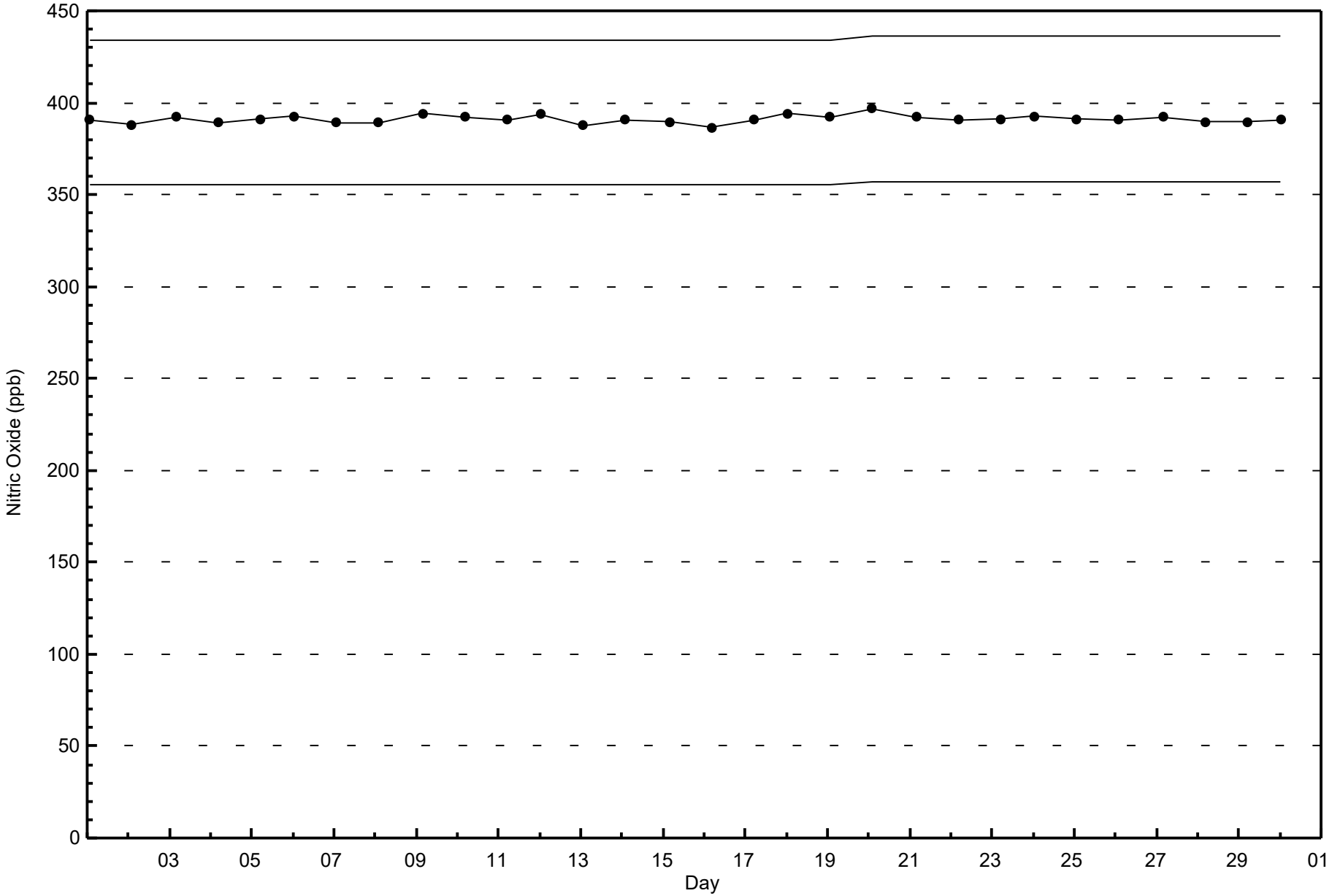


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 6.5 ppb on Sep 7 01:00

Maximum Daily Average: 2.0 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 6 08:00

Minimum Daily Average: 0.5 ppb on Sep 27

Maximum Diurnal Average: 1.7 ppb at hour 22

Minimum Diurnal Average: 0.8 ppb at hour 14

Monthly Average: 1.10 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.5 Median = 0.9 Q_3 = 1.4 P_{90} = 2.1 P_{99} = 3.8

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.8	Z	1.3	1.8	1.4	0.9	0.8	0.8	1.0	0.7	1.0	0.8	1.2	0.9	1.4	0.9	2.0	3.1	2.4	2.9	3.5	1.8	1.3	1.3	1.5	3.5
2-Sep	1.0	1.0	Z	1.1	1.0	0.6	0.9	0.5	1.6	2.4	1.3	0.7	0.5	0.6	0.4	0.5	0.6	0.9	1.0	1.2	0.8	1.1	0.7	0.5	0.9	2.4
3-Sep	0.7	0.8	0.7	Z	2.0	1.6	2.1	3.5	3.1	2.9	2.2	1.6	1.5	1.4	1.4	1.3	1.2	1.7	3.8	1.7	1.3	1.3	1.5	1.2	1.8	3.8
4-Sep	1.8	1.8	2.7	2.2	Z	1.4	1.5	1.6	1.5	1.0	1.2	1.5	1.4	1.1	2.1	1.6	1.3	1.4	2.1	2.5	2.1	2.2	1.6	1.4	1.7	2.7
5-Sep	1.1	0.8	0.7	0.5	0.6	Z	0.5	1.2	1.0	0.9	0.6	0.2	0.2	0.3	0.3	0.3	0.3	0.6	0.5	1.0	1.2	3.2	2.2	1.1	0.8	3.2
6-Sep	Z	0.9	0.5	0.4	0.8	0.4	0.2	0.1	0.4	1.4	1.4	1.3	1.5	1.3	0.8	0.7	0.9	0.9	1.4	1.0	2.0	1.6	1.3	1.3	1.0	2.0
7-Sep	6.5	Z	1.7	1.8	1.8	1.3	1.3	1.6	1.9	1.1	1.2	0.9	1.2	1.5	1.1	1.0	1.0	1.2	1.4	1.7	2.6	2.9	3.0	2.1	1.8	6.5
8-Sep	2.3	2.0	Z	2.0	1.9	1.8	0.9	0.7	2.2	1.6	1.0	0.9	0.8	0.8	0.6	0.4	0.4	0.7	0.8	2.3	0.7	0.5	0.3	0.3	1.1	2.3
9-Sep	0.5	0.6	0.6	Z	0.7	0.5	0.4	0.4	0.8	0.7	1.0	1.2	1.2	1.2	1.2	1.2	1.1	1.6	2.0	1.9	1.1	1.2	1.1	1.4	1.0	2.0
10-Sep	1.9	2.5	1.7	1.4	Z	1.2	1.0	1.6	1.4	1.1	0.8	0.7	0.9	1.1	0.9	0.5	0.4	0.8	2.6	2.2	1.7	1.5	0.6	0.4	1.3	2.6
11-Sep	0.5	0.5	0.4	0.7	0.5	Z	0.6	0.5	0.6	1.1	0.9	1.2	0.8	0.7	0.8	0.6	0.8	1.3	2.2	2.6	2.4	2.9	3.0	1.5	1.2	3.0
12-Sep	Z	1.4	1.0	0.8	0.9	1.2	0.9	1.8	1.9	2.2	2.6	1.3	0.9	1.1	0.9	1.0	1.2	1.4	0.9	1.6	1.6	2.5	1.3	1.2	1.4	2.6
13-Sep	1.1	Z	1.3	1.2	1.5	1.0	0.6	0.4	0.8	1.2	2.4	2.4	1.5	1.3	1.2	1.4	1.2	1.3	2.3	2.3	1.9	3.7	2.3	2.4	1.6	3.7
14-Sep	1.2	1.0	Z	0.9	1.2	1.1	1.3	1.8	1.7	1.6	1.9	1.8	1.0	0.8	0.5	0.4	0.6	1.0	1.2	1.0	0.7	0.4	0.4	0.3	1.0	1.9
15-Sep	0.2	0.3	0.5	Z	0.8	0.9	0.6	0.5	0.3	0.4	0.4	0.6	0.3	0.5	0.6	0.6	0.5	0.4	0.4	0.3	0.4	0.4	0.4	1.6	0.5	1.6
16-Sep	0.5	0.5	0.5	0.5	Z	0.7	0.9	0.6	0.9	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	1.3	1.8	2.7	1.2	0.5	0.8	2.7
17-Sep	0.5	0.3	0.2	0.3	0.3	Z	0.5	0.3	0.3	0.3	0.9	1.6	1.4	1.4	0.9	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.3	0.3	0.6	1.6
18-Sep	Z	1.2	0.8	1.1	1.1	0.9	1.5	1.5	1.9	1.2	1.3	1.1	1.3	0.9	1.1	1.1	1.0	1.3	2.6	1.7	1.3	1.4	1.9	2.1	1.4	2.6
19-Sep	1.3	Z	1.0	0.8	0.9	1.1	1.1	1.0	0.8	0.8	0.4	C	C	C	C	C	0.2	0.9	2.2	2.3	2.9	1.0	1.0	0.8	1.1	2.9
20-Sep	0.7	0.8	Z	1.5	1.7	1.1	1.1	1.6	1.9	2.0	1.6	1.4	1.7	1.0	1.2	1.3	1.0	1.2	1.5	1.2	0.9	0.8	0.8	1.2	1.3	2.0
21-Sep	4.6	2.1	1.7	Z	1.5	1.9	2.1	1.2	1.9	1.7	0.6	0.6	0.5	0.4	0.7	0.9	0.7	0.4	0.5	0.6	0.7	0.5	0.4	0.5	1.2	4.6
22-Sep	0.5	0.4	0.4	0.4	Z	0.7	0.6	1.0	0.7	0.6	0.5	0.4	0.3	0.2	M	M	0.3	0.5	0.7	0.8	1.5	4.2	2.4	2.2	0.9	4.2
23-Sep	2.3	2.3	1.2	1.3	1.1	Z	1.4	1.2	1.4	1.0	1.0	0.7	0.4	0.4	0.4	0.2	0.4	0.5	0.6	1.1	0.6	1.7	0.5	0.6	1.0	2.3
24-Sep	Z	0.7	0.5	0.4	0.4	0.5	0.6	0.4	1.0	0.7	0.5	0.3	0.2	0.2	0.3	0.2	0.3	0.4	1.4	1.5	1.3	1.9	1.2	1.3	0.7	1.9
25-Sep	1.0	Z	0.7	0.5	0.6	0.5	1.0	0.6	0.7	1.1	1.8	1.5	0.8	0.6	0.6	0.9	1.0	0.6	0.8	0.7	1.3	1.7	1.8	0.9	0.9	1.8
26-Sep	0.7	0.8	Z	0.9	0.8	1.0	1.1	0.8	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.4	0.4	0.7	0.6	0.7	0.5	0.8	1.0	0.8	0.6	1.1
27-Sep	0.6	0.7	0.6	Z	0.6	0.6	0.6	0.4	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.5	1.1	1.1	0.4	0.7	0.5	0.5	0.6	0.5	1.1
28-Sep	0.3	0.4	0.4	0.3	Z	0.6	0.7	0.6	0.5	0.4	0.5	0.3	0.8	0.3	0.3	0.3	1.0	2.2	0.9	0.7	0.5	0.5	0.4	0.2	0.6	2.2
29-Sep	0.6	0.2	0.2	0.2	0.2	Z	0.5	0.4	0.4	0.3	0.4	0.4	0.5	0.7	0.8	0.8	0.8	0.9	1.1	1.3	4.0	4.8	2.1	0.7	1.0	4.8
30-Sep	Z	5.1	1.8	0.9	1.1	0.8	4.8	1.7	1.5	2.0	2.1	1.9	1.5	1.4	1.6	2.4	2.8	2.1	2.4	2.1	2.0	2.1	1.5	0.8	2.0	5.1
	1.3	1.2	0.9	1.0	1.0	1.0	1.1	1.0	1.2	1.1	1.1	1.0	0.9	0.8	0.8	0.8	0.8	1.1	1.4	1.4	1.5	1.7	1.3	1.1	Diurnal Average	
	6.5	5.1	2.7	2.2	2.0	1.9	4.8	3.5	3.1	2.9	2.6	2.4	1.7	1.5	2.1	2.4	2.8	3.1	3.8	2.9	4.0	4.8	3.0	2.4	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

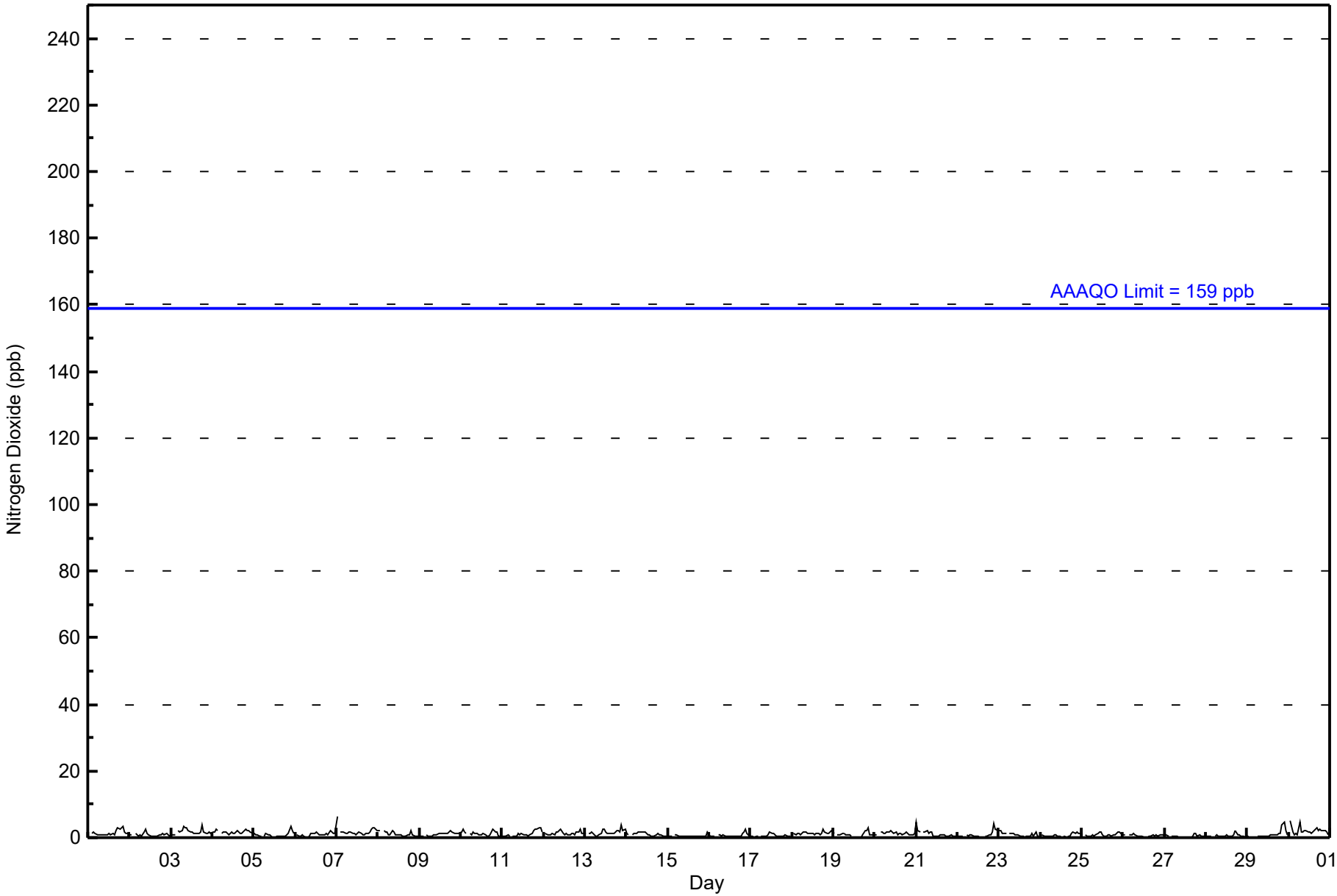
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025



Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669
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	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669

Total Number of Valid Hours: 669

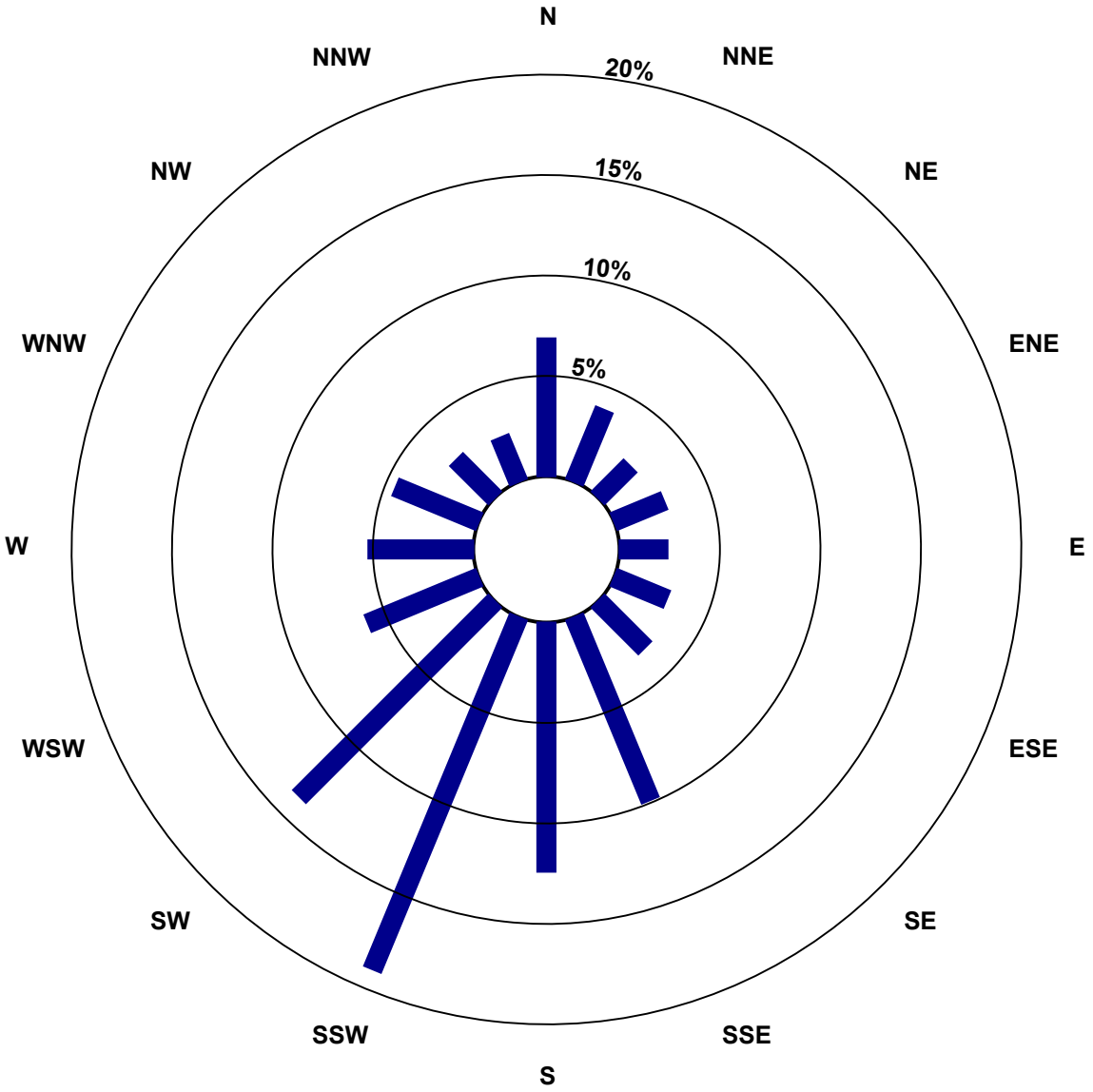
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

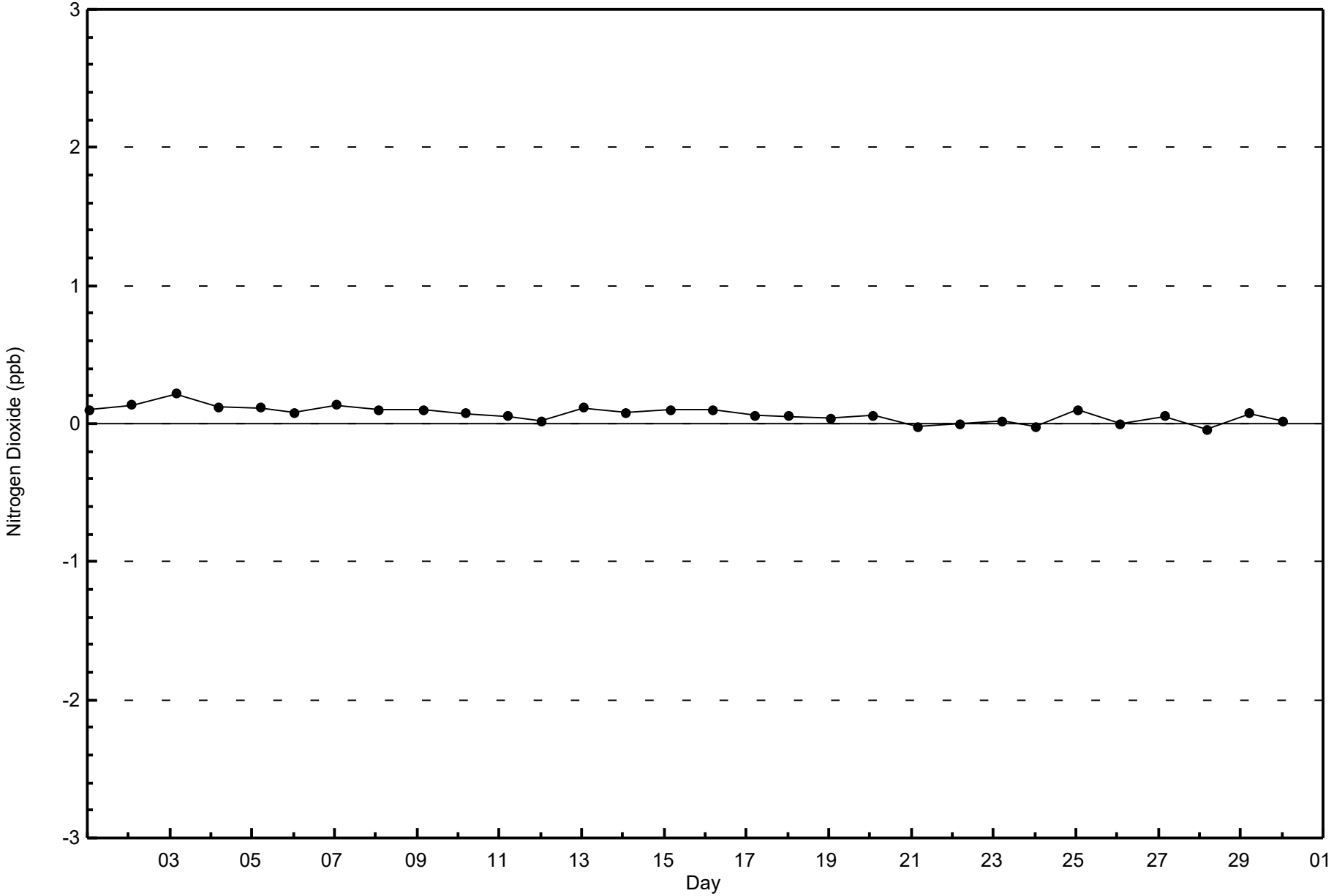
Total Number of Valid Hours: 669

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025

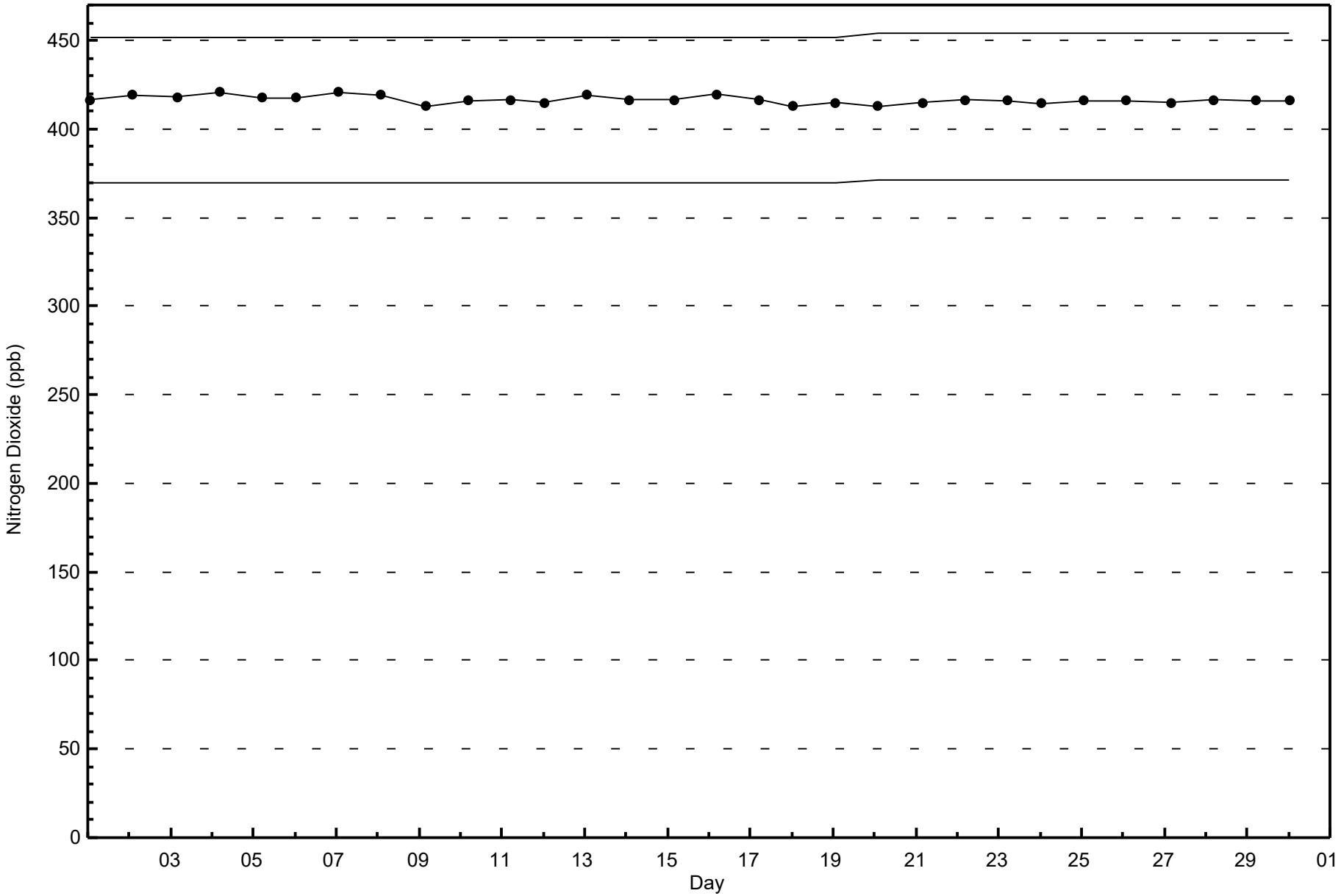


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025

Maximum Value: 9.5 ppb on Sep 7 01:00

Maximum Daily Average: 2.4 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 27 14:00

Minimum Daily Average: 0.5 ppb on Sep 27

Maximum Diurnal Average: 2.0 ppb at hour 22

Minimum Diurnal Average: 0.9 ppb at hour 16

Monthly Average: 1.37 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.7 Median = 1.2 Q_3 = 1.8 P_{90} = 2.5 P_{99} = 4.6

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.0	Z	1.4	1.9	1.6	1.2	1.1	1.4	1.4	1.0	1.2	1.1	1.8	1.3	1.7	1.0	2.1	3.2	2.5	3.7	4.1	1.8	1.3	1.4	1.7	4.1
2-Sep	1.0	1.0	Z	1.1	1.2	0.7	2.3	1.0	2.4	3.4	1.5	0.8	0.5	0.7	0.5	0.7	0.7	1.0	2.1	1.7	1.0	1.4	0.8	0.5	1.2	3.4
3-Sep	1.1	1.3	0.8	Z	2.2	1.7	2.3	4.6	3.8	4.0	2.9	1.8	1.6	1.5	1.5	1.4	1.2	1.7	3.9	1.7	1.3	1.3	1.5	1.2	2.0	4.6
4-Sep	1.8	1.8	2.7	2.2	Z	1.4	1.6	1.8	1.7	1.3	1.7	2.0	1.9	1.4	2.8	2.0	1.5	1.5	2.2	3.0	2.2	2.4	1.7	1.4	1.9	3.0
5-Sep	1.1	0.8	0.7	0.5	1.0	Z	0.7	2.8	1.8	1.6	0.8	0.3	0.2	0.3	0.3	0.4	0.3	0.7	0.9	2.3	1.9	4.0	2.9	1.4	1.2	4.0
6-Sep	Z	1.0	0.5	0.5	1.3	0.5	0.6	0.5	1.2	2.6	1.9	2.1	1.9	1.5	0.9	0.8	1.0	0.9	1.5	1.1	2.3	1.8	1.4	1.4	1.3	2.6
7-Sep	9.5	Z	1.9	2.0	2.1	1.3	1.4	2.6	2.3	1.2	1.4	1.0	1.8	2.0	1.2	1.2	1.1	2.1	2.1	2.7	3.0	2.9	3.1	2.1	2.3	9.5
8-Sep	2.5	2.2	Z	2.1	2.6	2.1	1.7	1.9	4.0	2.7	1.6	1.4	1.0	0.9	0.9	0.4	0.4	1.0	1.3	4.0	1.0	0.6	0.5	0.4	1.6	4.0
9-Sep	0.6	0.8	0.7	Z	1.4	1.1	1.8	1.5	2.0	1.1	1.4	1.5	1.4	1.4	1.3	1.3	1.2	1.7	2.1	2.2	1.1	1.3	1.3	1.4	1.4	2.2
10-Sep	2.0	2.9	1.7	1.4	Z	1.2	1.1	2.0	1.7	1.2	0.9	0.8	1.1	1.3	1.0	0.5	0.4	1.2	3.5	3.0	2.1	1.7	0.6	0.4	1.5	3.5
11-Sep	0.5	0.6	0.4	2.4	0.6	Z	0.8	0.8	1.2	1.5	1.0	1.3	1.0	0.8	0.9	0.7	0.8	1.7	2.8	2.9	2.6	3.9	3.5	1.8	1.5	3.9
12-Sep	Z	1.6	1.1	0.9	1.1	1.3	3.5	2.9	2.9	3.2	3.3	1.5	1.0	1.2	1.0	1.1	1.3	1.9	1.2	1.8	1.9	2.7	1.4	1.2	1.8	3.5
13-Sep	1.1	Z	1.3	1.2	1.6	1.1	0.8	1.5	1.2	1.5	3.0	2.8	1.6	1.5	1.4	1.5	1.4	2.0	3.2	2.6	2.2	4.7	2.4	3.2	2.0	4.7
14-Sep	1.3	1.1	Z	1.0	1.3	1.4	1.6	2.9	1.9	2.1	2.4	2.2	1.1	1.0	0.6	0.5	0.7	1.2	1.4	1.2	1.2	0.6	0.5	0.7	1.3	2.9
15-Sep	0.4	0.8	0.7	Z	0.9	1.0	0.7	0.7	0.7	0.7	0.7	0.8	0.4	0.5	0.7	0.7	0.6	0.4	0.5	0.3	0.5	0.5	0.6	2.2	0.7	2.2
16-Sep	0.6	0.5	0.7	0.6	Z	0.7	1.1	0.7	1.2	0.8	0.9	0.6	0.8	0.5	0.5	0.6	0.8	1.1	1.1	2.4	3.2	4.9	2.2	0.7	1.2	4.9
17-Sep	1.3	0.6	0.7	2.2	1.0	Z	1.0	1.0	1.4	1.3	1.7	2.0	1.7	1.9	1.1	0.9	0.7	0.8	0.7	0.6	0.9	0.7	0.4	0.4	1.1	2.2
18-Sep	Z	1.3	0.9	1.5	1.2	1.0	1.9	1.8	2.7	1.6	2.1	1.4	1.7	1.2	1.3	1.3	1.4	1.9	3.8	2.5	1.5	1.7	2.0	2.2	1.7	3.8
19-Sep	1.4	Z	1.1	1.0	1.1	1.7	1.4	1.5	1.2	1.2	0.5	C	C	C	C	C	0.2	1.2	3.2	2.7	4.6	1.1	1.3	0.9	1.5	4.6
20-Sep	0.7	0.9	Z	1.5	1.9	1.2	1.5	2.6	2.5	2.6	1.9	1.6	1.9	1.1	1.3	1.5	1.1	1.5	1.7	1.2	1.0	0.8	0.8	1.2	1.5	2.6
21-Sep	4.6	2.1	1.8	Z	1.7	1.9	2.4	1.4	2.6	2.5	0.7	0.7	0.7	0.4	0.7	1.0	0.7	0.4	0.5	0.7	0.7	0.5	0.4	0.5	1.3	4.6
22-Sep	0.5	0.4	0.4	0.4	Z	0.7	0.6	1.4	1.3	0.9	0.8	0.5	0.4	0.2	M	M	0.4	0.6	1.1	1.0	1.6	4.3	2.4	2.2	1.1	4.3
23-Sep	2.4	2.5	1.2	1.3	1.1	Z	1.5	1.4	1.7	1.2	1.3	0.9	0.5	0.5	0.5	0.2	0.4	0.5	0.7	1.5	0.6	1.9	0.5	0.6	1.1	2.5
24-Sep	Z	0.7	0.5	0.4	0.4	0.5	0.7	0.5	1.3	1.0	0.9	0.4	0.2	0.2	0.3	0.2	0.3	0.4	1.7	1.8	1.4	2.2	1.3	1.3	0.8	2.2
25-Sep	1.0	Z	0.7	0.5	0.7	0.6	1.5	0.8	0.9	1.5	2.9	2.1	1.0	0.7	0.7	1.1	1.1	0.7	1.0	0.8	1.6	1.8	2.2	0.9	1.2	2.9
26-Sep	0.7	0.8	Z	0.9	0.8	1.0	1.1	0.9	0.7	0.5	0.5	0.4	0.3	0.2	0.2	0.6	0.4	0.8	0.7	0.8	0.5	1.1	1.0	0.8	0.7	1.1
27-Sep	0.6	0.7	0.6	Z	0.6	0.6	0.6	0.4	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.6	1.7	1.5	0.4	0.8	0.5	0.5	0.6	0.5	1.7
28-Sep	0.3	0.4	0.4	0.3	Z	0.6	0.7	0.7	0.6	0.5	0.6	0.4	1.1	0.3	0.4	0.3	1.5	3.1	1.4	0.9	0.6	0.5	0.5	0.3	0.7	3.1
29-Sep	0.7	0.2	0.2	0.2	0.2	Z	0.5	0.5	0.5	0.4	0.5	0.5	0.7	0.8	0.9	0.9	0.9	1.0	1.3	1.4	4.4	5.0	2.3	0.8	1.1	5.0
30-Sep	Z	6.0	1.9	1.0	1.1	0.8	8.7	3.5	1.7	2.2	2.4	2.3	1.7	1.6	1.7	2.6	2.9	2.2	2.5	2.2	2.1	2.1	1.6	0.8	2.4	8.7
	1.5	1.3	1.0	1.2	1.2	1.1	1.6	1.6	1.7	1.6	1.5	1.2	1.1	0.9	0.9	0.9	0.9	1.3	1.8	1.8	1.8	2.0	1.4	1.2	Diurnal Average	
	9.5	6.0	2.7	2.4	2.6	2.1	8.7	4.6	4.0	4.0	3.3	2.8	1.9	2.0	2.8	2.6	2.9	3.2	3.9	4.0	4.6	5.0	3.5	3.2	Diurnal Maximum	

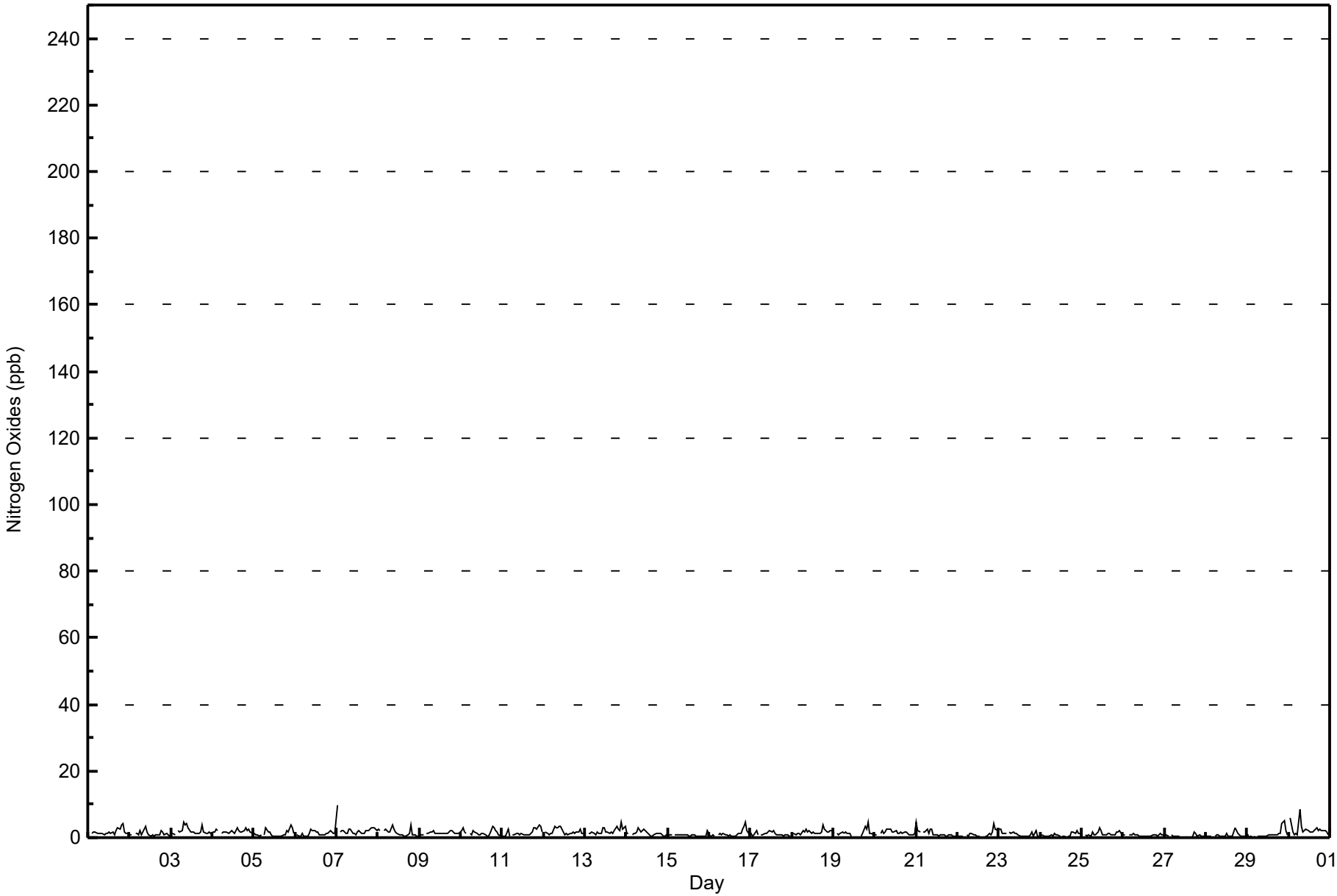
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Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025



Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669
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	46	26	15	18	16	19	22	66	83	127	92	40	35	30	18	16	669

Total Number of Valid Hours: 669

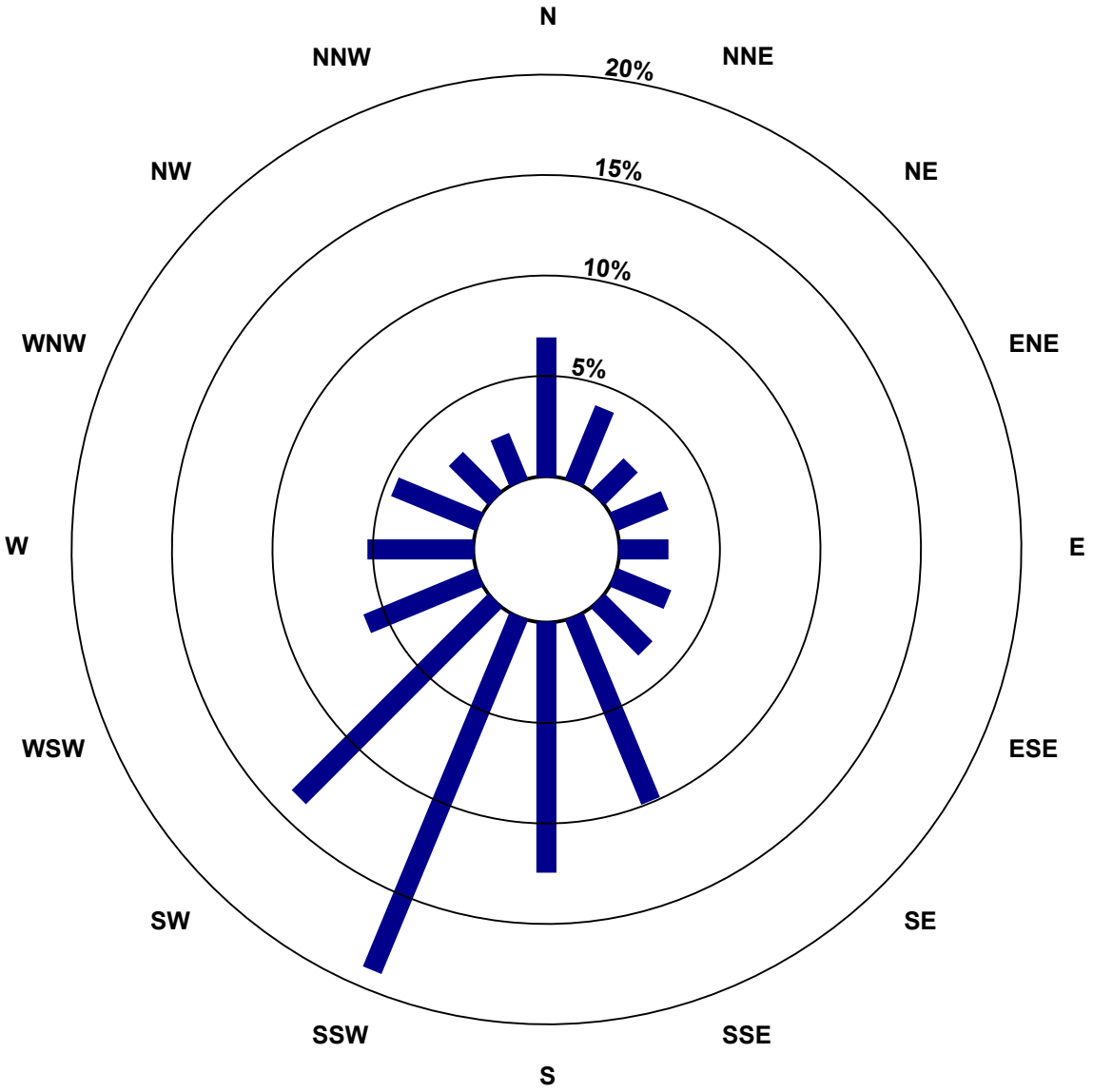
Total Number of Hours: 720

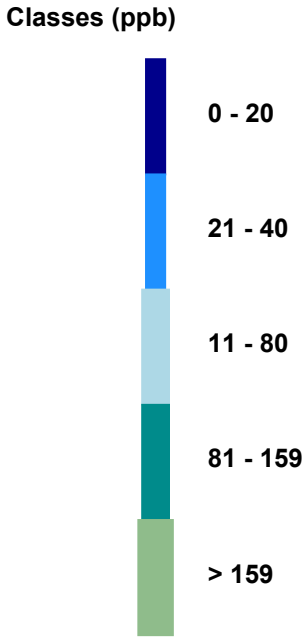
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Janvier





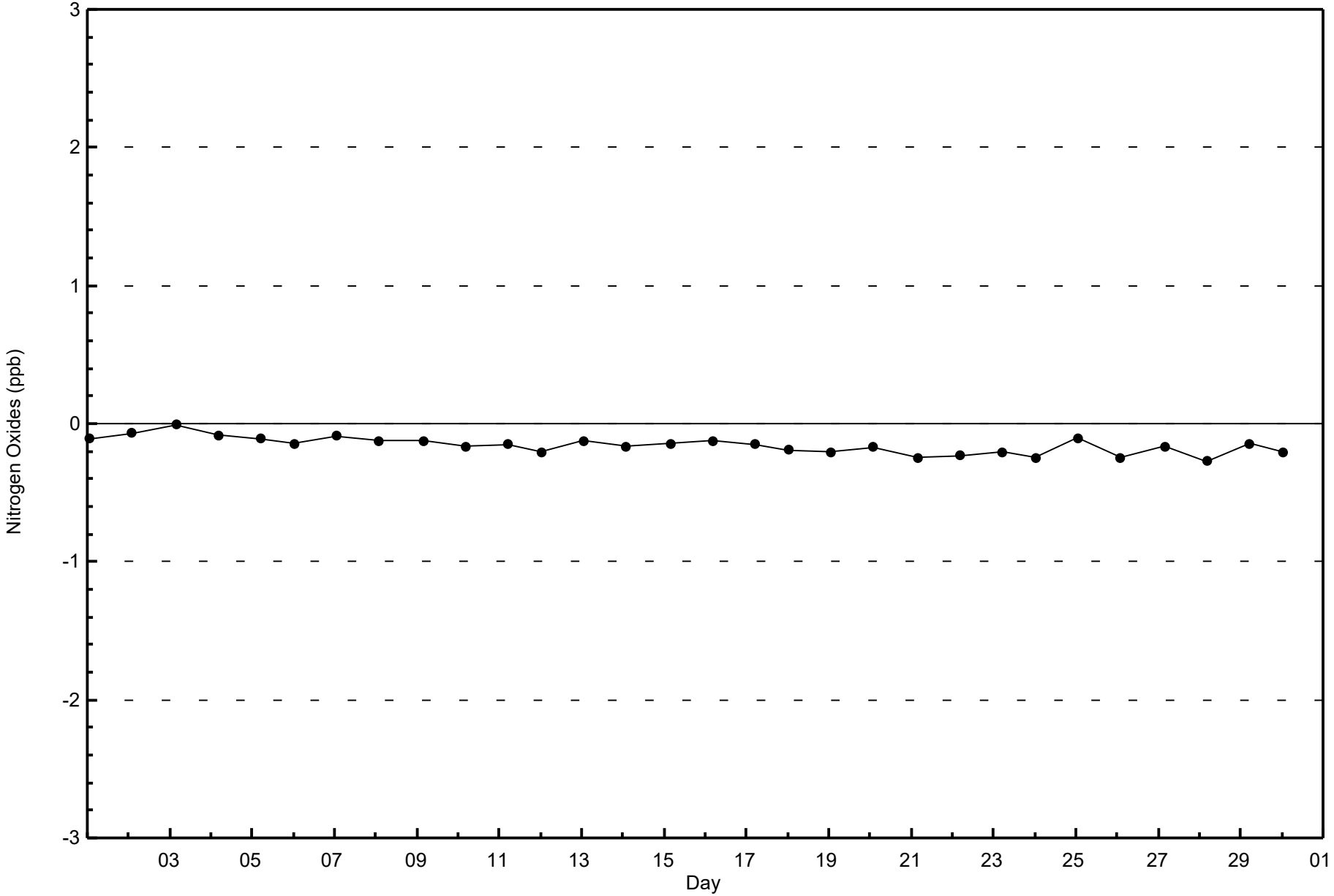
Total Number of Valid Hours: 669

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025

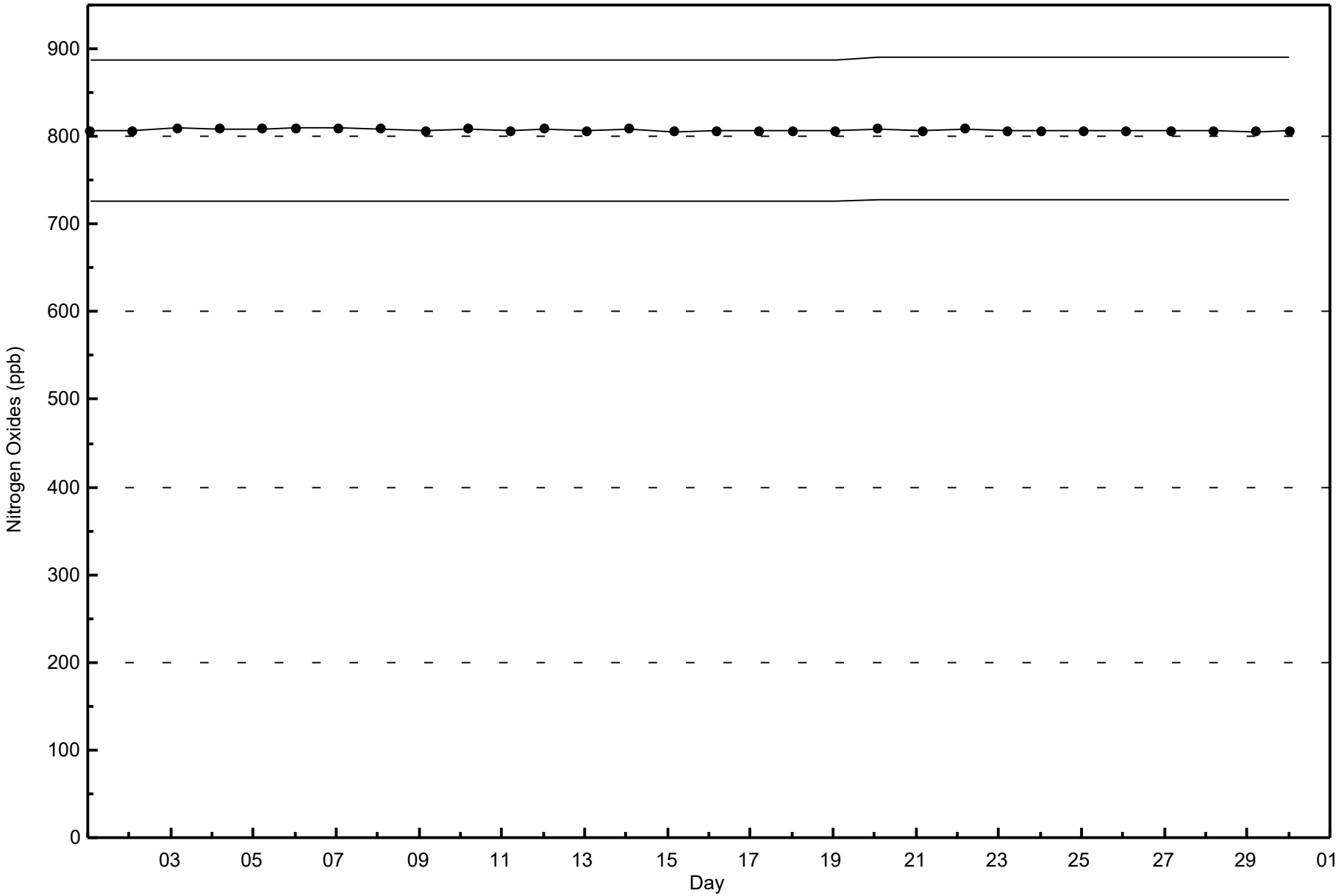


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 55.2 ppb on Sep 13 15:00
Maximum Daily Average: 33.2 ppb on Sep 20

Minimum Value: 1.0 ppb on Sep 17 07:00
Minimum Daily Average: 12.5 ppb on Sep 16
Maximum Diurnal Average: 36.6 ppb at hour 16
Minimum Diurnal Average: 14.3 ppb at hour 7
Monthly Average: 23.79 ppb
Percentiles: P_1 = 1.1 P_{10} = 7.4 Q_1 = 15.1 Median = 25.1 Q_3 = 31.8 P_{90} = 37.3 P_{99} = 52.0

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	3.5	3.4	2.3	1.8	1.6	Z	2.0	2.6	8.7	9.4	6.6	8.3	13.7	18.9	24.6	30.2	34.6	30.8	28.6	18.2	20.4	20.7	17.2	13.8	14.0	34.6
2-Sep	Z	11.5	10.0	8.0	6.2	4.0	2.6	2.7	11.7	17.1	23.6	29.7	30.1	30.7	32.3	32.6	31.4	27.8	22.7	17.4	19.9	17.2	16.7	18.9	18.5	32.6
3-Sep	12.5	Z	12.6	10.8	12.1	17.0	21.4	20.5	21.5	24.2	27.6	32.8	35.5	34.5	33.9	32.8	32.9	31.4	30.3	28.7	29.0	27.6	26.5	27.1	25.4	35.5
4-Sep	23.9	23.1	Z	22.2	22.5	23.4	23.6	24.4	25.1	25.7	26.4	28.1	30.2	32.8	32.8	33.4	32.8	30.7	27.6	19.1	17.7	15.1	13.6	10.1	24.5	33.4
5-Sep	8.3	7.4	7.0	Z	4.4	5.1	7.4	9.8	15.8	19.7	25.1	26.7	28.6	30.7	30.7	31.8	32.3	29.2	21.2	21.2	13.9	12.2	10.8	12.2	17.9	32.3
6-Sep	10.0	8.0	6.2	4.4	Z	3.3	1.2	1.6	4.8	13.3	24.2	32.4	41.6	48.3	49.2	48.7	48.9	49.4	39.0	32.7	25.3	26.0	23.6	25.2	24.7	49.4
7-Sep	20.1	18.5	18.2	19.2	20.1	Z	23.7	21.4	20.4	20.3	18.8	15.7	12.5	13.4	19.1	22.4	26.7	16.3	15.2	11.9	19.5	21.6	20.0	18.0	18.8	26.7
8-Sep	Z	13.6	11.9	7.2	3.8	2.4	2.1	2.4	8.3	9.6	13.0	17.9	22.6	25.4	25.6	27.4	28.4	23.5	18.4	12.4	11.6	10.4	10.3	9.8	13.8	28.4
9-Sep	5.4	Z	2.8	1.0	1.1	1.0	1.0	2.5	5.6	9.3	16.3	C	C	C	C	52.0	51.8	53.0	45.3	41.5	42.6	42.8	39.3	33.1	23.5	53.0
10-Sep	32.4	26.9	Z	26.6	28.6	27.8	27.6	23.5	21.8	21.0	22.1	25.2	26.8	30.9	32.1	32.4	31.5	28.2	19.5	17.7	17.1	16.6	13.6	10.4	24.4	32.4
11-Sep	6.8	4.5	3.6	Z	4.7	3.9	3.4	4.0	6.4	17.9	26.2	37.1	33.7	35.4	36.3	36.0	34.1	26.1	26.0	26.8	23.3	15.7	11.3	11.5	18.9	37.1
12-Sep	10.2	7.9	5.2	5.6	Z	2.8	2.0	11.4	15.5	15.6	26.5	42.2	44.8	49.9	50.4	51.4	52.8	44.9	41.4	34.9	27.9	28.7	29.8	26.6	27.3	52.8
13-Sep	21.7	20.8	18.5	13.1	8.4	Z	4.6	1.9	10.5	19.9	30.8	39.7	43.1	51.0	55.2	52.1	43.5	37.8	31.3	30.5	29.7	19.6	20.1	16.3	27.0	55.2
14-Sep	Z	7.8	6.1	6.8	6.5	6.3	10.7	13.4	10.9	15.7	23.3	28.0	34.7	29.4	27.4	30.2	36.8	30.5	15.0	9.3	5.1	7.6	9.8	5.6	16.4	36.8
15-Sep	4.7	Z	9.0	13.0	12.9	10.2	9.7	9.1	10.5	12.9	13.8	23.6	33.5	39.9	40.3	40.8	32.9	26.3	21.0	21.3	22.5	17.7	14.0	11.4	19.6	40.8
16-Sep	11.5	10.9	Z	10.4	9.7	9.9	8.7	8.9	9.0	10.4	12.4	22.9	22.6	21.9	22.3	21.4	21.8	16.9	12.9	8.5	6.2	3.2	2.4	3.0	12.5	22.9
17-Sep	1.4	1.3	1.1	Z	1.1	1.1	1.0	1.5	1.3	2.8	11.6	32.1	36.2	37.0	39.2	38.0	38.6	37.4	35.0	30.4	26.0	27.7	25.6	15.8	19.3	39.2
18-Sep	10.1	14.5	12.3	12.1	Z	15.7	14.5	18.0	22.1	27.2	30.3	32.6	36.1	37.3	40.9	42.6	41.2	36.2	25.4	23.7	21.4	25.9	22.4	15.5	25.1	42.6
19-Sep	18.0	18.6	17.0	14.2	15.3	Z	13.2	15.6	20.6	24.3	28.5	35.4	38.3	39.9	41.4	41.0	40.2	36.7	26.4	23.3	22.0	26.8	22.4	20.8	26.1	41.4
20-Sep	Z	17.6	15.1	13.9	13.2	13.4	14.1	18.6	21.8	25.7	30.3	42.1	49.2	51.9	52.6	52.6	54.3	48.3	46.5	42.6	37.6	37.9	34.4	30.5	33.2	54.3
21-Sep	23.0	Z	16.6	14.1	15.7	25.7	22.1	22.9	24.2	28.7	35.0	39.3	39.7	40.6	44.4	45.1	43.7	39.1	38.9	37.2	35.1	35.5	31.6	25.6	31.5	45.1
22-Sep	23.9	25.1	Z	23.2	21.8	21.2	21.0	18.5	19.7	23.3	26.1	29.4	31.8	33.6	M	M	35.0	33.7	27.6	25.8	26.4	23.9	26.3	25.2	25.8	35.0
23-Sep	20.1	23.8	28.4	Z	29.0	28.0	28.7	27.9	26.8	28.6	32.5	34.5	33.9	34.8	35.7	36.6	37.2	38.2	36.4	35.2	35.3	32.2	35.4	35.8	32.0	38.2
24-Sep	32.3	29.8	27.9	28.8	Z	25.1	24.1	23.2	22.0	20.4	20.6	25.4	30.6	31.5	32.5	32.6	32.4	32.2	28.0	26.1	29.9	26.4	27.2	27.1	27.6	32.6
25-Sep	25.6	23.1	22.4	21.8	21.1	Z	15.8	17.2	16.7	15.8	20.6	29.5	37.4	36.9	37.7	37.8	36.3	33.7	31.8	28.4	25.2	23.2	23.4	29.2	26.5	37.8
26-Sep	Z	30.6	31.8	28.0	26.7	23.4	20.4	19.2	21.9	25.8	28.5	30.0	31.6	32.5	33.1	33.9	34.8	33.7	31.7	31.6	30.6	27.7	29.1	28.6	28.9	34.8
27-Sep	28.1	Z	29.5	30.1	30.0	29.5	29.2	31.8	32.8	33.5	34.0	34.5	35.0	34.7	34.1	34.5	32.9	26.5	27.1	31.9	31.5	30.7	30.3	30.4	31.4	35.0
28-Sep	33.5	35.1	Z	33.1	31.7	30.6	27.5	25.7	25.5	26.5	27.4	28.4	29.5	30.7	31.7	33.2	30.8	25.8	23.7	26.3	27.5	28.2	25.3	23.4	28.8	35.1
29-Sep	23.9	27.9	28.7	Z	30.1	30.3	31.0	31.4	31.6	32.2	33.6	34.0	34.7	34.9	34.9	35.5	35.9	34.4	32.0	30.2	25.4	21.5	25.3	29.5	30.8	35.9
30-Sep	23.5	12.0	13.6	21.1	Z	16.7	14.7	16.2	23.0	25.0	24.9	26.4	28.1	28.5	26.6	22.1	23.9	21.4	18.7	14.7	12.9	11.8	11.9	13.0	19.6	28.5
	17.4	17.0	14.3	15.6	15.1	15.1	14.3	14.9	17.2	20.1	24.0	29.8	32.6	34.4	35.6	36.6	36.3	32.7	28.1	25.3	24.0	22.7	21.7	20.1	Diurnal Average	
	33.5	35.1	31.8	33.1	31.7	30.6	31.0	31.8	32.8	33.5	35.0	42.2	49.2	51.9	55.2	52.6	54.3	53.0	46.5	42.6	42.6	42.8	39.3	35.8	Diurnal Maximum	

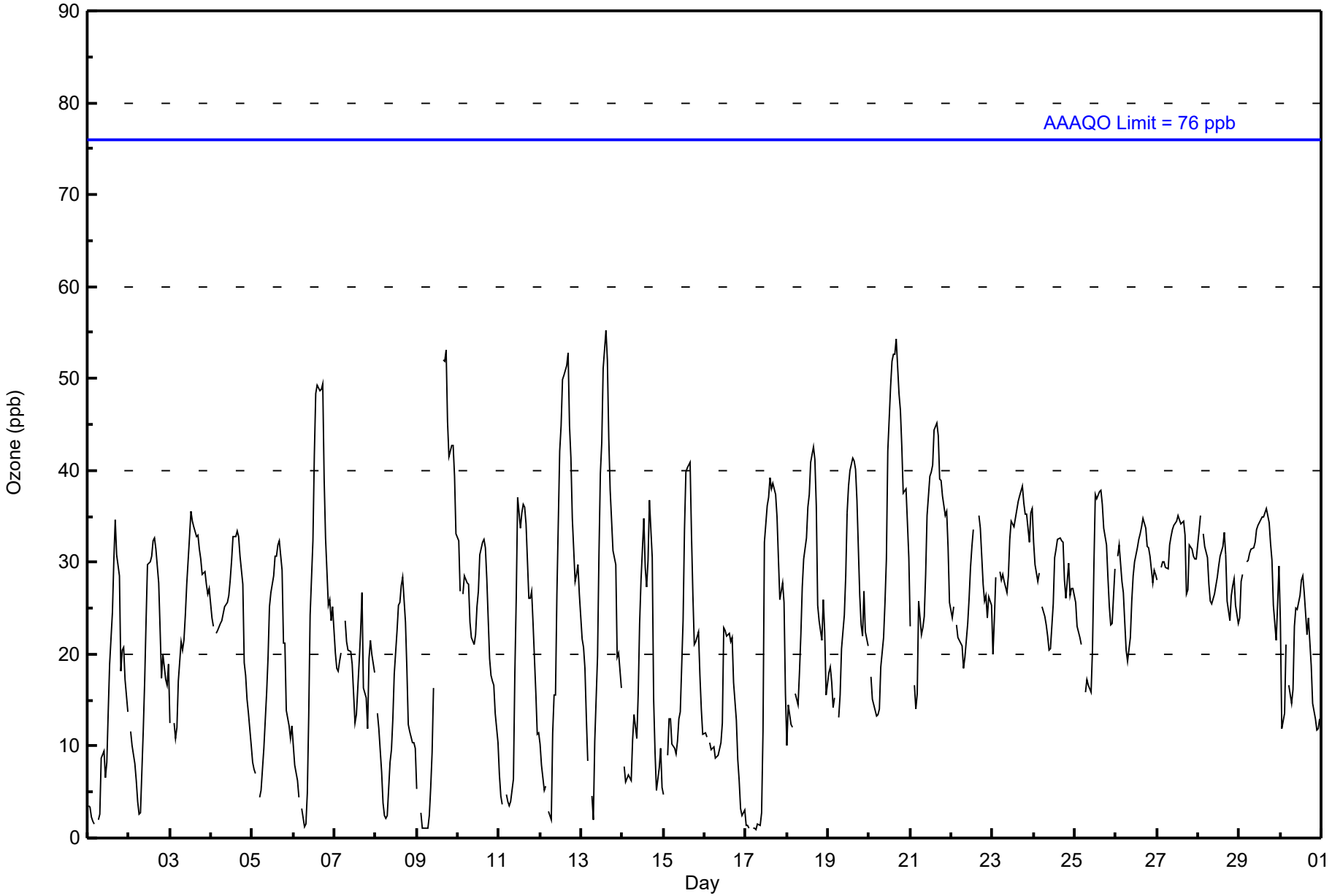
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Janvier - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	247	36.11	36.11
21 - 50	425	62.13	98.25
51 - 82	12	1.75	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Janvier - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	19	15	8	8	2	4	9	16	36	52	30	5	7	9	10	5	235
21 - 50	26	12	6	10	14	15	13	45	43	70	64	38	26	22	8	11	423
51 - 82	0	0	0	0	0	0	0	2	5	5	0	0	0	0	0	0	12
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	27	14	18	16	19	22	63	84	127	94	43	33	31	18	16	670

Total Number of Valid Hours: 670

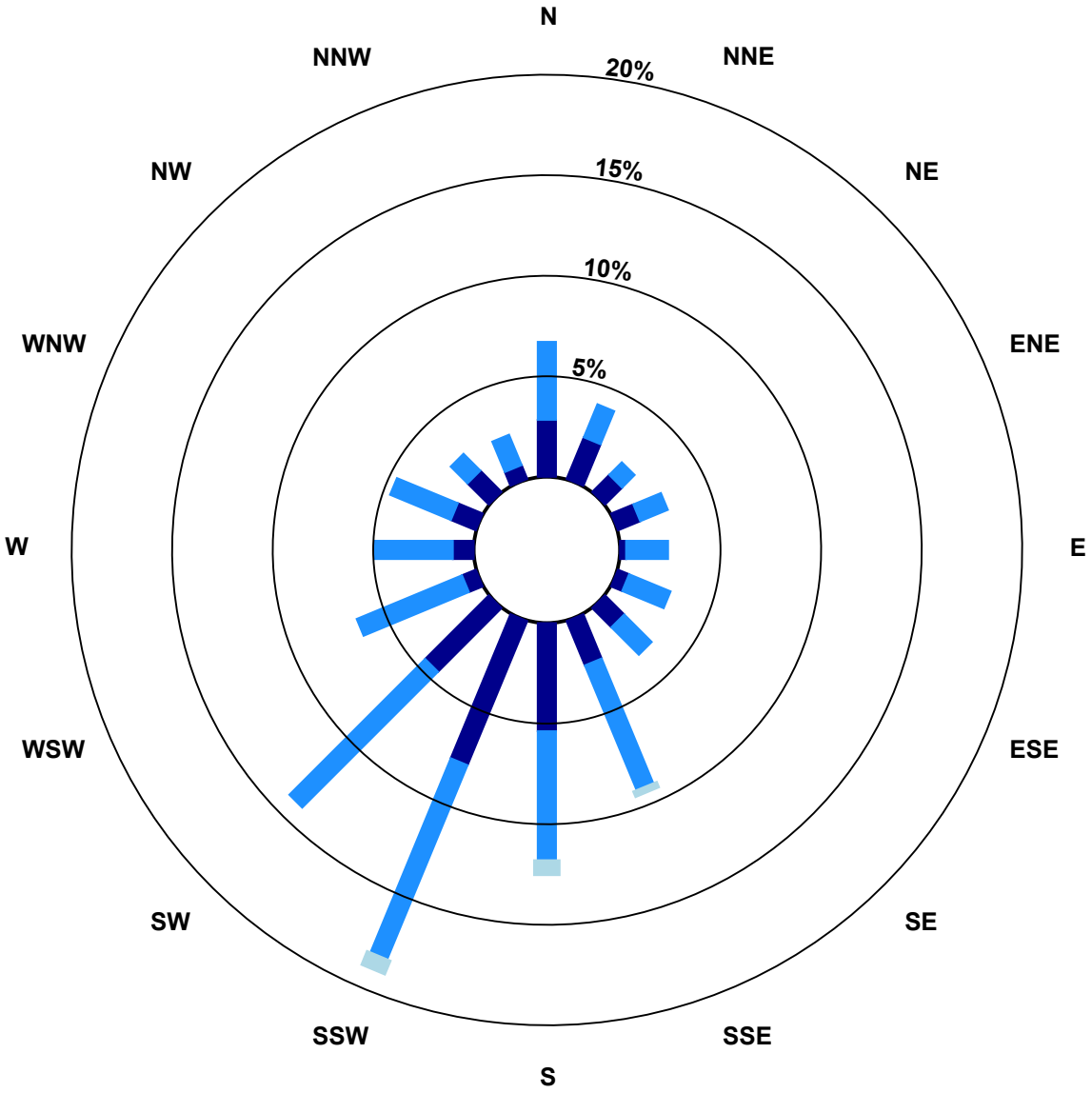
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Ozone (O_3) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

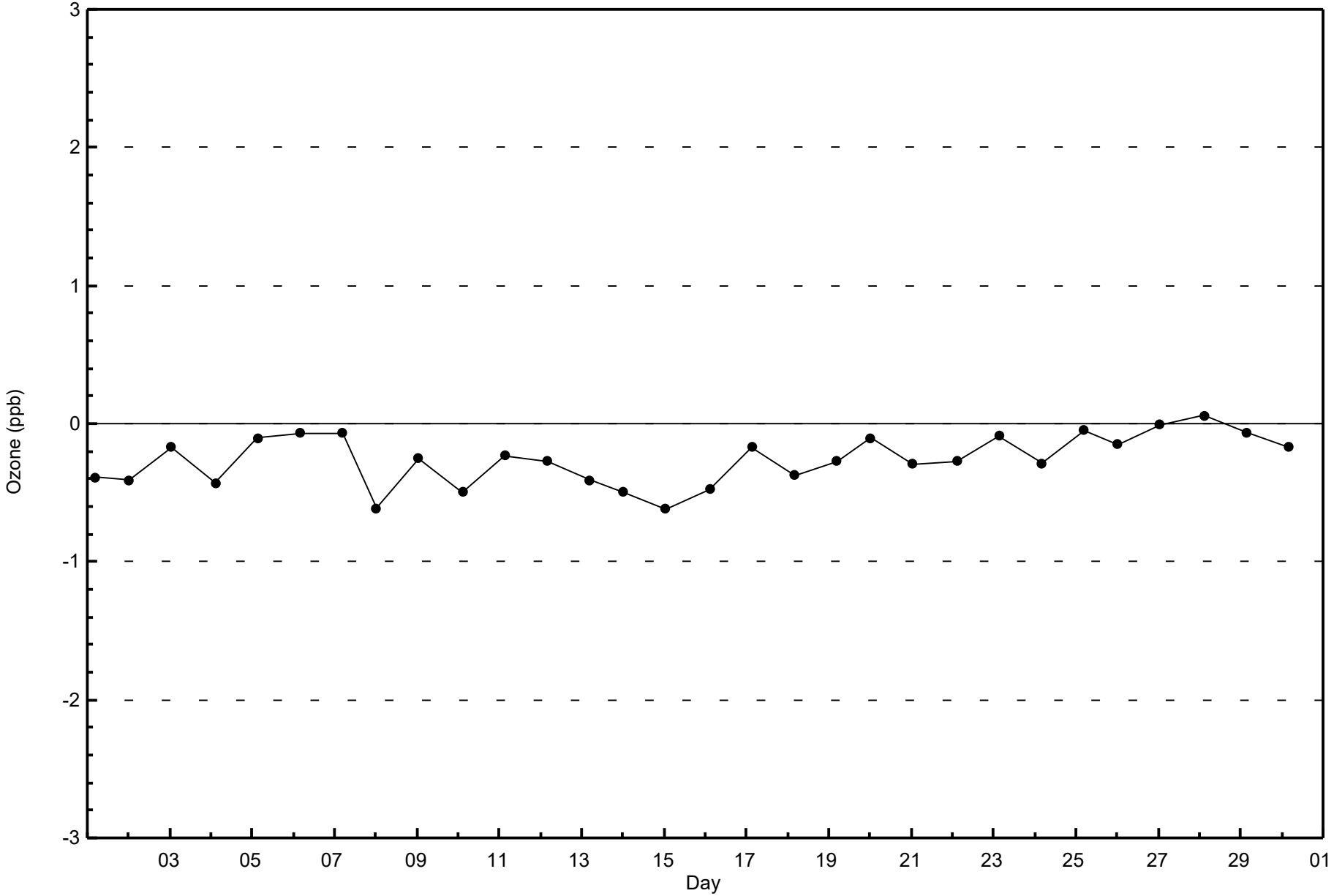
Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Janvier - September 2025

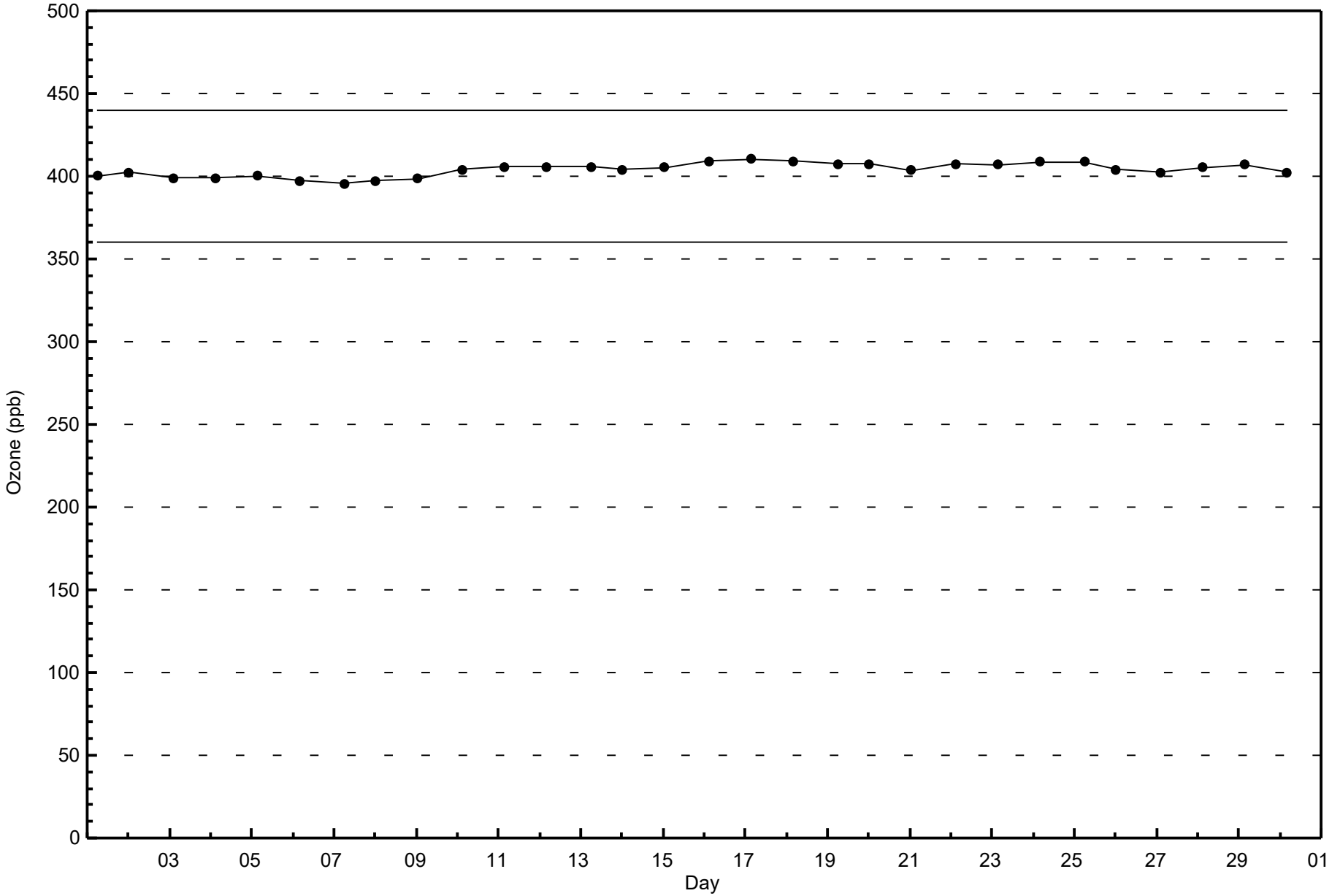


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 6

Maximum Value: 179.3 $\mu g/m^3$ on Sep 11 21:00

Maximum Daily Average: 64.4 $\mu g/m^3$ on Sep 2

Minimum Value: 0.7 $\mu g/m^3$ on Sep 27 12:00

Minimum Daily Average: 1.0 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 24.5 $\mu g/m^3$ at hour 1

Minimum Diurnal Average: 11.6 $\mu g/m^3$ at hour 13

Monthly Average: 17.46 $\mu g/m^3$

Percentiles: P_1 = 0.8 P_{10} = 1.7 Q_1 = 4.8 Median = 11.0 Q_3 = 18.2 P_{90} = 40.6 P_{99} = 105.9

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	49.5	51.0	51.8	50.8	49.0	46.6	46.5	42.3	31.2	25.5	30.2	24.1	18.8	14.8	15.5	22.2	35.6	45.1	48.9	50.9	49.1	51.3	63.4	72.7	41.1	72.7
2-Sep	87.5	94.2	98.5	101.5	99.3	93.6	91.9	83.4	65.7	58.9	57.5	43.6	33.7	33.7	26.9	26.8	34.7	74.8	76.8	63.6	49.2	50.9	52.7	47.1	64.4	101.5
3-Sep	45.0	40.4	39.9	39.8	35.7	31.5	30.2	28.7	27.3	27.6	28.1	30.9	33.9	35.0	37.9	40.9	46.4	54.4	55.6	44.3	29.3	41.9	59.5	44.5	38.7	59.5
4-Sep	38.5	27.3	20.3	14.5	11.1	10.9	8.9	6.5	7.1	6.8	6.6	5.8	5.5	6.1	7.5	7.0	6.9	6.4	6.5	7.1	6.9	6.6	7.0	6.6	10.2	38.5
5-Sep	6.0	5.6	5.1	4.6	4.5	4.8	4.5	4.6	4.6	4.6	4.3	4.6	5.0	4.8	5.0	5.7	7.0	7.3	7.8	6.2	6.6	7.5	8.0	16.6	6.1	16.6
6-Sep	41.3	40.9	34.6	24.0	18.1	13.0	12.0	9.6	8.0	7.2	5.1	4.9	7.4	11.6	14.4	14.0	14.4	14.7	12.8	11.8	11.9	11.8	9.8	9.3	15.1	41.3
7-Sep	10.1	9.5	9.1	9.2	8.4	8.5	8.1	8.8	9.0	9.5	10.0	10.8	11.0	13.4	13.5	14.6	14.8	13.4	13.5	13.9	19.1	19.9	18.3	17.8	12.3	19.9
8-Sep	18.1	17.9	18.2	18.1	17.7	17.1	17.6	16.5	16.5	19.3	19.9	18.3	16.8	17.0	15.3	15.3	15.1	14.7	14.2	16.2	15.0	15.2	16.5	16.9	16.8	19.9
9-Sep	16.1	15.8	16.0	13.6	13.5	13.8	13.7	15.7	18.9	18.6	18.1	19.3	20.5	21.4	23.6	24.6	24.0	25.4	24.9	25.4	24.9	23.5	24.3	25.4	20.0	25.4
10-Sep	24.8	24.9	24.4	24.6	24.4	24.1	24.1	23.8	24.1	24.4	29.3	30.6	27.4	22.7	20.3	14.3	11.8	11.4	11.0	10.6	9.6	10.5	10.1	9.6	19.7	30.6
11-Sep	10.7	12.1	10.7	9.7	9.6	8.7	7.9	8.0	7.0	6.5	8.5	16.9	8.2	13.2	17.7	17.6	28.9	43.4	96.0	163.4	179.3	158.1	141.5	119.0	45.9	179.3
12-Sep	106.3	99.2	99.3	97.5	101.5	104.3	95.2	53.1	37.4	40.1	27.8	18.0	16.8	16.5	17.5	18.4	18.5	17.7	15.4	14.5	14.7	15.1	15.5	16.7	44.9	106.3
13-Sep	17.4	16.2	16.4	16.7	16.9	16.7	16.3	14.4	15.1	16.7	18.2	18.1	17.0	17.0	16.5	16.4	16.4	16.4	16.2	21.0	55.1	67.8	108.5	115.9	28.5	115.9
14-Sep	98.1	87.5	80.4	51.0	39.6	28.1	21.1	15.9	14.3	13.5	9.9	8.7	26.5	35.8	9.8	14.8	28.3	19.1	21.5	21.9	21.6	20.7	20.2	20.4	30.4	98.1
15-Sep	21.5	22.1	21.1	20.6	17.4	15.5	12.5	9.9	7.6	6.0	6.1	8.2	8.8	15.4	17.8	20.1	25.2	22.5	17.2	14.9	12.9	11.4	10.4	11.3	14.8	25.2
16-Sep	14.0	16.5	15.6	14.3	13.1	12.5	12.3	12.7	13.0	13.9	13.3	13.3	13.3	12.6	12.0	11.7	11.6	11.4	11.4	11.9	14.8	12.6	12.7	12.9	13.1	16.5
17-Sep	14.2	17.7	17.5	12.6	12.7	13.4	13.4	11.7	10.8	10.9	11.6	14.0	13.6	11.9	11.1	9.3	8.1	8.0	7.5	8.0	8.5	8.6	8.8	8.9	11.4	17.7
18-Sep	9.4	9.7	9.4	10.4	10.3	11.0	11.0	10.2	10.9	11.3	11.4	12.2	11.1	9.7	9.3	9.2	9.0	9.8	9.7	11.0	11.2	10.6	9.4	14.9	10.5	14.9
19-Sep	14.0	11.8	12.3	11.4	10.3	8.9	7.6	6.5	4.6	3.7	3.1	2.7	2.4	C	C	2.7	2.9	3.1	3.3	3.9	4.2	4.5	4.5	4.1	6.0	14.0
20-Sep	4.1	4.5	4.6	4.7	4.8	4.6	4.7	5.7	6.9	9.1	11.0	12.8	13.1	13.3	13.4	14.0	12.1	11.0	11.7	10.6	9.6	9.7	9.6	9.7	9.0	14.0
21-Sep	10.2	9.8	9.8	10.8	10.6	10.7	10.5	11.1	11.0	10.6	8.6	6.7	6.1	7.2	8.4	9.0	7.5	5.4	6.2	11.8	34.3	27.0	11.2	10.3	11.0	34.3
22-Sep	12.3	7.3	4.2	2.6	1.8	1.5	1.4	1.5	1.5	1.7	1.5	1.5	1.3	0.8	0.9	0.9	1.2	1.3	1.1	1.5	2.1	2.5	2.8	2.7	2.4	12.3
23-Sep	2.5	2.5	3.0	2.8	2.9	3.0	3.3	3.6	3.9	4.0	2.7	1.4	0.9	0.9	0.9	1.0	1.7	1.4	1.6	2.2	1.8	1.7	1.4	1.2	2.2	4.0
24-Sep	1.2	1.2	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.4	1.7	1.8	1.9	1.6	1.6	2.7	6.2	17.7	24.9	27.2	40.5	50.2	54.5	57.1	12.6	57.1
25-Sep	44.9	32.6	11.8	5.3	4.7	3.7	3.6	3.3	3.2	3.9	2.6	2.4	2.0	2.2	2.3	2.3	2.5	2.3	2.2	2.4	2.8	3.8	3.4	3.1	6.4	44.9
26-Sep	3.1	2.3	2.2	2.6	2.3	2.4	2.7	2.6	5.3	6.1	5.0	1.8	0.9	1.4	3.1	7.9	12.6	8.1	2.6	1.8	1.7	1.8	1.5	1.9	3.5	12.6
27-Sep	1.4	1.3	1.3	1.3	1.3	1.4	1.1	0.7	0.8	1.1	0.8	0.7	0.7	0.7	0.8	0.7	0.8	1.2	1.2	0.9	0.9	0.9	0.8	0.9	1.0	1.4
28-Sep	0.9	0.8	0.8	0.8	0.8	0.8	1.2	2.4	8.8	14.4	11.4	8.5	6.6	5.3	4.8	4.0	3.5	3.7	3.8	3.5	5.3	7.6	5.6	4.0	4.6	14.4
29-Sep	2.6	1.5	1.3	1.7	2.0	1.9	2.4	2.7	2.8	3.0	3.7	4.0	5.1	6.3	6.7	7.7	8.8	8.2	8.1	8.1	9.1	16.4	16.7	8.4	5.8	16.7
30-Sep	9.8	12.9	9.9	9.4	8.9	8.8	9.8	9.6	9.6	9.6	9.6	9.9	10.5	11.1	11.1	11.1	14.3	21.8	32.4	32.6	30.2	25.8	20.6	13.4	14.7	32.6
	24.5	23.2	21.7	19.6	18.5	17.4	16.6	14.2	12.9	13.0	12.6	11.9	11.6	12.5	11.9	12.2	14.4	16.7	18.9	20.8	22.7	23.2	24.3	23.4	Diurnal Average	
	106.3	99.2	99.3	101.5	101.5	104.3	95.2	83.4	65.7	58.9	57.5	43.6	33.9	35.8	37.9	40.9	46.4	74.8	96.0	163.4	179.3	158.1	141.5	119.0	Diurnal Maximum	

C - Calibration

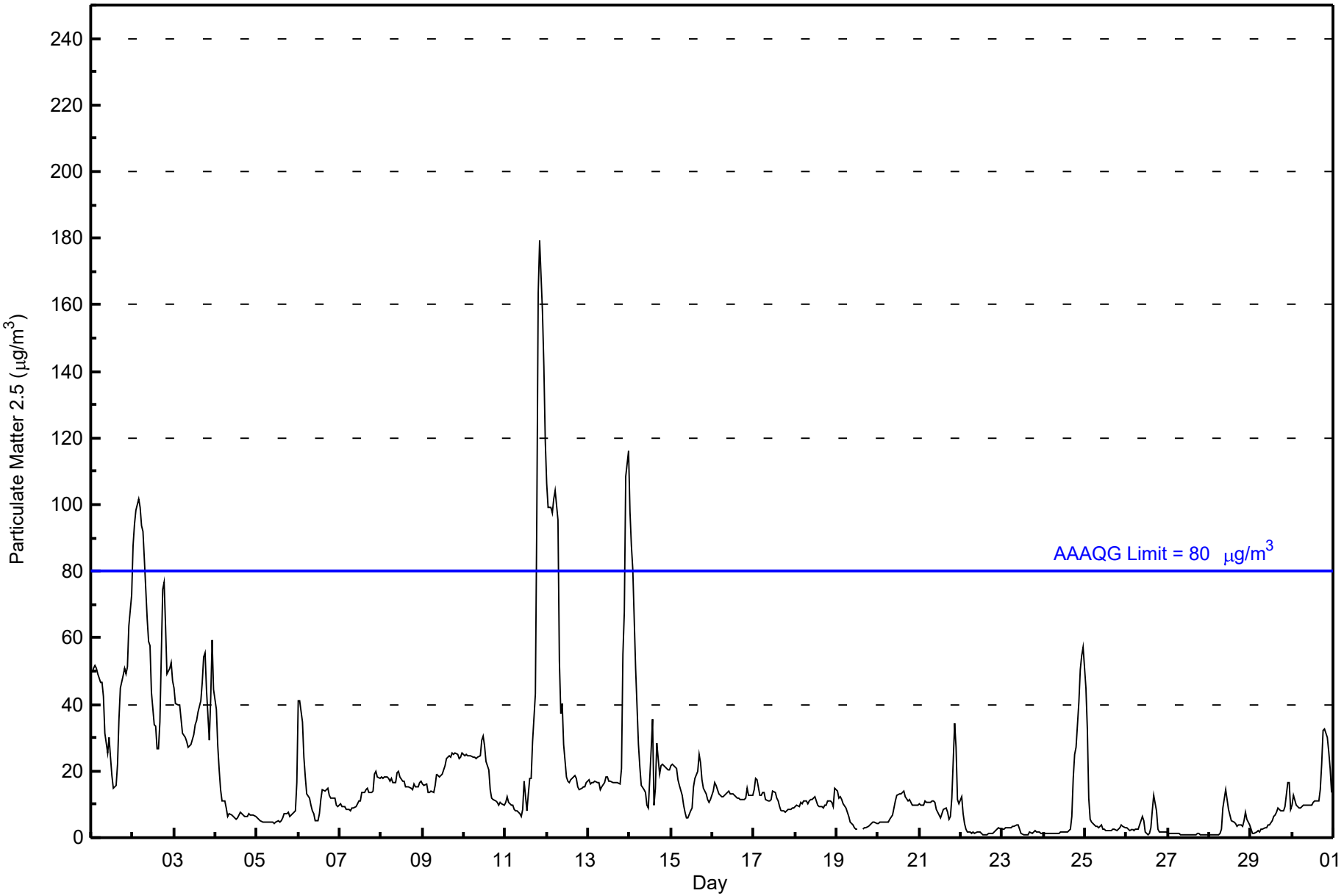
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Janvier - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Janvier - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	195	27.16	27.16
6 - 15	284	39.55	66.71
16 - 25	120	16.71	83.43
26 - 80	94	13.09	96.52
> 81.0	25	3.48	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Janvier - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	0	0	1	0	2	4	11	24	39	54	26	23	7	1	1	194
6 - 15	20	15	5	5	12	6	5	32	36	59	31	11	5	16	11	9	278
16 - 25	6	8	10	6	1	5	3	17	17	16	7	2	3	6	4	2	113
26 - 80	18	3	0	6	3	6	5	6	5	19	6	5	4	2	2	4	94
> 81.0	1	2	0	0	0	0	5	4	5	5	1	0	0	0	0	1	24
Totals	46	28	15	18	16	19	22	70	87	138	99	44	35	31	18	17	703

Total Number of Valid Hours: 703

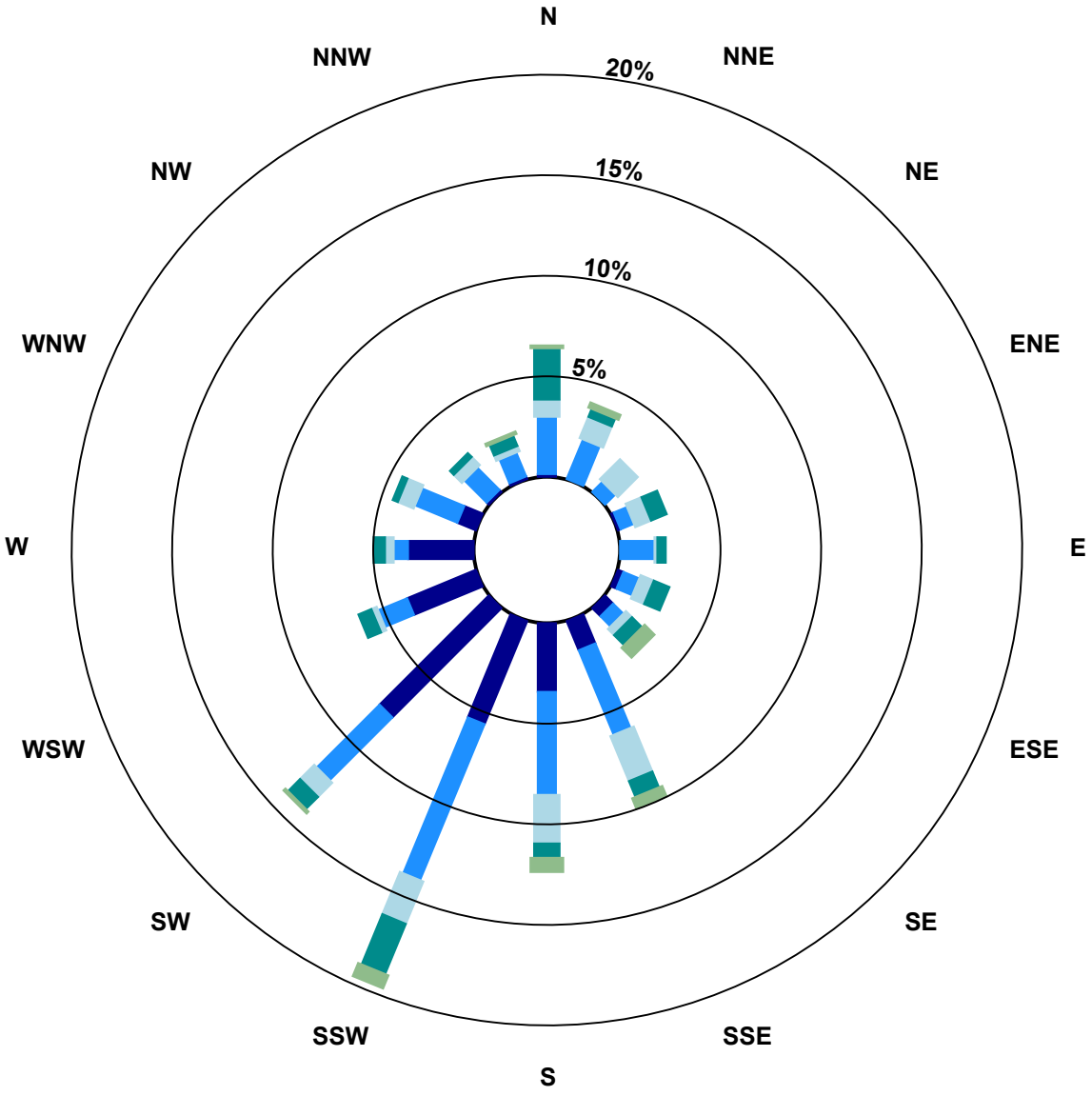
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Janvier



Classes ($\mu g/m^3$)

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 703

Maximum Value: 28.5 C on Sep 13 15:00

Maximum Daily Average: 17.5 C on Sep 12

Minimum Value: 1.6 C on Sep 6 07:00

Minimum Daily Average: 10.1 C on Sep 25

Maximum Diurnal Average: 21.3 C at hour 16

Minimum Diurnal Average: 8.0 C at hour 7

Monthly Average: 13.97 C

Percentiles: P_1 = 2.5 P_{10} = 7.7 Q_1 = 9.8 Median = 13.2 Q_3 = 17.6 P_{90} = 22.1 P_{99} = 27.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

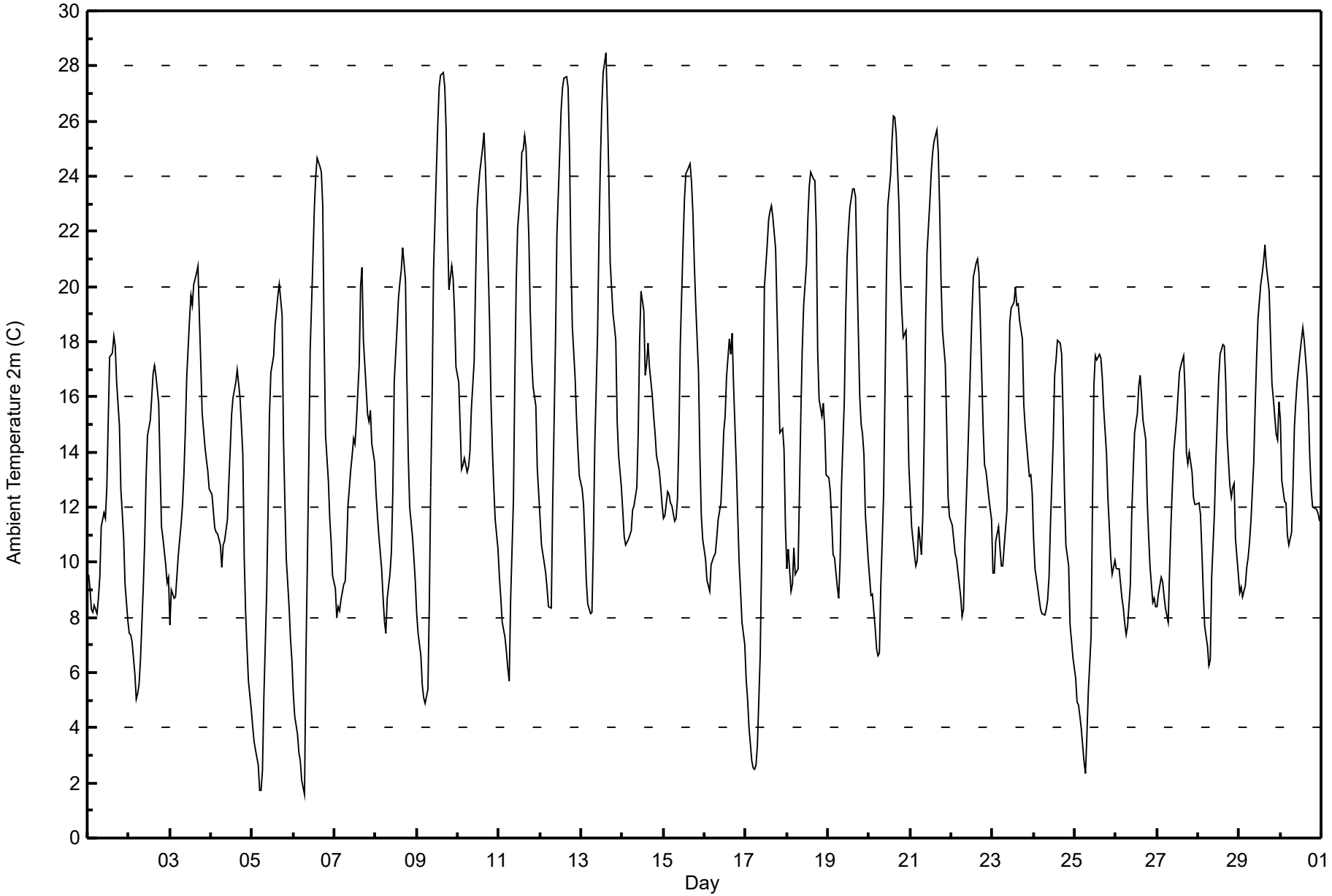
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.6	9.1	8.3	8.2	8.4	8.1	8.7	9.4	11.3	11.8	11.6	12.7	15.1	17.4	17.6	18.2	17.8	16.5	15.0	12.7	11.8	10.9	9.2	7.9	12.0	18.2
2-Sep	7.4	7.4	7.1	5.9	5.0	5.2	5.6	6.5	9.1	10.7	13.1	14.6	15.1	15.9	16.8	17.1	16.8	15.8	13.4	11.3	10.9	9.9	9.3	9.5	10.8	17.1
3-Sep	7.7	9.0	8.7	8.7	9.5	10.2	11.4	12.1	13.2	14.8	16.7	18.8	19.7	19.3	20.1	20.5	20.7	18.9	17.2	15.4	14.2	13.7	13.3	12.6	14.4	20.7
4-Sep	12.5	11.8	11.2	11.1	11.0	10.6	9.8	10.6	10.8	11.5	12.9	14.1	15.4	16.0	16.5	17.0	16.5	16.0	13.9	10.2	8.2	6.8	5.7	4.7	11.9	17.0
5-Sep	4.1	3.5	3.2	2.6	1.7	1.7	2.4	5.1	8.9	11.9	15.3	16.9	17.5	18.6	19.1	19.7	20.1	19.0	14.5	12.2	10.1	8.4	7.2	6.4	10.4	20.1
6-Sep	5.2	4.4	3.8	3.1	2.8	2.1	1.6	6.5	9.9	13.5	17.7	21.0	22.8	24.0	24.7	24.4	24.1	22.9	18.1	14.6	13.0	11.6	10.7	9.5	13.0	24.7
7-Sep	9.0	8.0	8.4	8.2	8.6	9.2	9.3	10.5	12.1	13.4	13.9	14.5	14.3	15.1	17.2	20.0	20.7	18.1	16.3	15.3	15.1	15.5	14.3	13.6	13.4	20.7
8-Sep	12.5	11.7	11.0	9.8	8.7	7.9	7.4	8.7	9.6	10.4	12.6	16.6	18.5	19.6	20.1	20.6	21.4	20.2	16.6	13.8	12.0	10.9	10.2	9.3	13.3	21.4
9-Sep	8.2	7.4	6.6	5.6	5.1	4.9	5.4	8.4	12.7	16.0	20.6	24.1	25.8	27.2	27.6	27.8	27.3	25.7	22.1	19.9	20.7	20.3	19.1	17.1	16.9	27.8
10-Sep	16.5	14.9	13.4	13.5	13.8	13.3	13.5	14.0	15.6	17.3	20.1	22.8	23.5	24.2	25.0	25.6	24.3	22.8	18.7	15.9	14.1	12.7	11.5	10.5	17.4	25.6
11-Sep	9.5	8.7	7.8	7.3	6.8	6.2	5.7	8.6	12.3	16.7	20.2	22.1	23.4	24.9	25.0	25.5	25.0	21.8	19.1	17.4	16.4	15.7	13.4	12.5	15.5	25.5
12-Sep	11.6	10.6	10.0	9.6	9.1	8.4	8.3	12.1	15.1	18.1	21.9	24.8	26.4	27.2	27.6	27.6	27.2	24.9	21.0	18.6	16.7	15.2	14.1	13.1	17.5	27.6
13-Sep	12.6	12.1	10.8	9.3	8.5	8.1	8.2	10.7	14.2	18.3	21.8	24.4	26.5	27.8	28.5	26.6	24.1	20.9	19.0	18.6	18.1	15.1	13.9	12.7	17.1	28.5
14-Sep	11.8	10.9	10.6	10.8	11.0	11.1	11.9	12.1	12.7	14.7	18.0	19.8	19.1	16.8	17.2	17.9	17.1	16.1	15.3	14.7	13.9	13.3	12.7	12.1	14.2	19.8
15-Sep	11.6	11.7	12.5	12.5	12.1	12.1	11.5	11.6	12.3	14.5	17.9	21.6	23.2	24.1	24.2	24.5	23.8	22.7	20.9	19.4	16.9	13.8	11.7	10.8	16.6	24.5
16-Sep	10.1	9.4	9.2	9.0	9.9	10.2	10.3	10.9	11.6	12.1	13.4	14.8	15.3	16.7	18.1	17.6	18.3	16.4	13.4	11.6	10.0	8.9	7.8	7.0	12.2	18.3
17-Sep	5.7	5.0	4.0	2.8	2.5	2.5	2.6	3.4	6.6	10.0	15.2	20.0	21.5	22.4	22.7	22.9	22.5	21.4	19.1	16.9	14.7	14.9	14.1	11.3	12.7	22.9
18-Sep	9.8	10.5	9.0	9.2	10.6	9.6	9.8	12.5	15.4	17.8	19.3	20.8	22.5	23.7	24.2	23.9	23.9	22.1	17.6	15.9	15.3	15.8	14.9	13.2	16.1	24.2
19-Sep	13.0	12.6	11.5	10.3	10.2	9.1	8.7	10.1	12.8	15.9	19.1	21.1	22.1	22.9	23.5	23.6	23.3	20.7	16.0	15.0	14.6	13.9	11.7	10.1	15.5	23.6
20-Sep	9.5	8.8	8.8	7.6	6.8	6.6	6.7	9.1	12.4	16.2	20.3	22.9	24.0	25.3	26.2	26.2	25.5	22.9	20.5	19.1	18.1	18.4	16.4	13.5	16.3	26.2
21-Sep	12.4	11.3	10.2	9.8	10.1	11.3	10.3	11.7	14.7	18.7	21.3	23.1	24.2	24.9	25.3	25.7	24.9	22.8	20.2	18.4	17.2	15.0	12.3	11.6	17.0	25.7
22-Sep	11.3	10.8	10.3	10.1	9.6	8.8	8.1	8.3	10.7	13.8	15.4	17.2	18.9	20.4	20.9	21.0	20.5	18.7	14.9	13.5	13.3	12.9	12.4	11.5	13.9	21.0
23-Sep	9.6	9.6	10.8	11.3	10.5	9.8	9.9	10.6	11.9	15.2	18.7	19.2	19.4	20.0	19.3	19.4	18.8	18.1	15.7	14.9	14.3	13.1	13.2	12.5	14.4	20.0
24-Sep	10.9	9.8	9.1	8.6	8.3	8.1	8.1	8.3	8.6	9.5	11.3	14.5	16.8	17.4	18.0	17.9	17.6	15.4	12.6	10.6	9.9	7.7	7.2	6.6	11.4	18.0
25-Sep	5.8	4.9	4.8	4.4	4.0	2.8	2.3	3.7	5.3	7.3	12.1	16.4	17.5	17.3	17.5	17.4	16.7	15.5	13.9	12.3	11.3	10.2	9.5	10.1	10.1	17.5
26-Sep	9.8	9.8	9.7	8.7	8.3	7.8	7.4	7.7	9.2	11.8	13.3	14.7	15.4	16.4	16.8	16.0	15.1	14.4	12.3	11.0	9.9	8.6	8.7	8.4	11.3	16.8
27-Sep	8.4	8.8	9.5	9.3	8.8	8.3	7.9	9.8	11.4	12.8	14.0	15.2	16.1	16.9	17.1	17.5	16.2	14.0	13.6	14.0	13.3	12.4	12.1	12.1	12.5	17.5
28-Sep	12.1	11.7	10.4	8.9	7.7	7.0	6.3	6.4	9.4	11.9	13.7	15.2	16.7	17.5	17.9	17.8	16.6	14.5	12.7	12.3	12.7	12.9	10.8	9.6	12.2	17.9
29-Sep	8.9	9.1	8.7	9.2	9.8	10.1	10.7	11.5	13.6	15.6	17.3	18.8	20.1	20.4	20.9	21.5	20.7	19.8	18.1	16.5	15.9	14.6	14.5	15.8	15.1	21.5
30-Sep	15.1	13.0	12.2	12.2	11.0	10.6	11.1	12.8	14.9	15.8	16.6	17.6	18.1	18.5	18.0	16.7	15.6	13.8	12.6	12.0	11.9	11.9	11.7	11.5	14.0	18.5
	10.1	9.5	9.1	8.6	8.3	8.1	8.0	9.5	11.6	13.9	16.5	18.7	19.8	20.6	21.1	21.3	20.8	19.1	16.5	14.8	13.8	12.8	11.8	10.9	Diurnal Average	
	16.5	14.9	13.4	13.5	13.8	13.3	13.5	14.0	15.6	18.7	21.9	24.8	26.5	27.8	28.5	27.8	27.3	25.7	22.1	19.9	20.7	20.3	19.1	17.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Janvier - September 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	26.53	26.53
10 - 20	413	57.36	83.89
> 20	116	16.11	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Janvier - September 2025

Maximum Value: 100.0 % on Sep 1 01:00

Maximum Daily Average: 93.1 % on Sep 14

Minimum Value: 23.7 % on Sep 23 14:00

Minimum Daily Average: 44.7 % on Sep 27

Maximum Diurnal Average: 87.9 % at hour 6

Minimum Diurnal Average: 41.2 % at hour 16

Monthly Average: 68.54 %

Percentiles: P_1 = 26.1 P_{10} = 35.6 Q_1 = 49.7 Median = 70.6 Q_3 = 89.4 P_{90} = 97.9 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	717
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	100.0	100.0	100.0	100.0	100.0	100.0	OR	100.0	97.2	94.8	99.0	94.8	81.7	70.3	64.9	58.0	60.3	70.6	78.8	91.0	89.4	87.2	91.2	97.0	88.1	100.0
2-Sep	97.6	98.3	98.4	99.3	100.0	100.0	100.0	99.3	84.0	76.1	64.0	46.4	44.3	42.9	38.6	37.7	41.0	51.0	64.4	75.4	71.1	74.2	77.5	76.7	73.3	100.0
3-Sep	89.7	87.2	89.3	89.8	83.7	75.8	67.5	66.0	63.5	59.2	56.6	54.0	55.7	60.1	61.1	62.6	64.6	68.2	70.7	74.3	78.4	78.2	79.0	77.2	71.3	89.8
4-Sep	77.2	76.5	77.6	77.1	76.5	76.9	78.8	74.6	72.8	69.6	63.9	57.4	51.7	48.0	46.9	45.5	46.2	49.1	57.6	78.0	86.5	91.6	96.0	98.1	69.8	98.1
5-Sep	99.0	99.3	99.3	98.6	99.4	99.5	97.7	88.5	77.2	66.7	53.9	48.1	44.1	39.9	39.7	38.2	37.3	44.2	69.7	74.7	87.0	93.0	97.0	97.2	74.5	99.5
6-Sep	98.0	99.2	99.3	99.5	99.8	99.5	99.6	87.2	78.2	69.6	55.2	41.7	32.7	29.0	27.5	27.9	29.2	32.6	54.0	68.7	76.8	78.5	79.9	83.2	68.6	99.8
7-Sep	84.6	90.0	86.3	84.1	79.1	75.1	75.8	73.4	70.9	71.2	73.0	78.2	87.6	86.5	74.4	64.6	62.3	82.1	88.6	92.0	88.8	81.8	85.9	89.3	80.2	92.0
8-Sep	95.1	97.3	99.5	100.0	100.0	100.0	100.0	100.0	OR	OR	89.3	72.4	63.7	60.8	56.9	53.2	49.3	58.4	75.4	87.9	94.8	97.3	98.9	99.6	84.1	100.0
9-Sep	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.3	84.1	75.8	64.8	53.2	46.0	41.7	35.1	34.3	35.5	40.2	55.1	63.2	57.6	57.1	62.7	70.5	69.7	100.0
10-Sep	72.9	80.8	87.7	84.5	81.0	83.4	82.1	77.7	71.1	67.9	58.9	49.2	50.0	48.7	45.3	37.4	40.1	48.4	66.4	76.3	81.9	89.0	93.3	95.6	69.6	95.6
11-Sep	97.1	97.3	97.8	97.9	97.8	98.0	98.1	90.3	77.3	58.5	49.7	40.6	36.8	33.1	33.7	33.2	38.8	56.2	67.5	77.1	83.0	83.2	93.1	94.4	72.1	98.1
12-Sep	95.9	97.3	97.5	97.8	97.9	97.5	98.0	94.3	86.0	74.7	63.6	46.3	35.9	32.9	32.0	31.0	33.4	45.6	59.6	68.6	75.4	77.8	79.6	83.3	70.9	98.0
13-Sep	86.7	89.5	92.8	96.3	97.0	97.5	97.0	87.1	77.8	67.7	56.2	48.9	43.9	35.5	31.5	37.9	50.0	63.9	70.6	71.1	71.5	85.1	90.4	94.7	72.5	97.5
14-Sep	96.4	97.0	97.3	97.4	97.1	96.7	94.0	97.4	97.7	93.5	82.9	77.2	77.7	92.2	91.0	85.0	84.4	90.3	96.3	97.9	98.7	99.1	99.2	99.3	93.1	99.3
15-Sep	99.5	99.6	99.8	99.9	100.0	100.0	100.0	100.0	99.9	95.4	82.4	69.3	59.8	50.9	50.3	49.0	52.9	57.9	63.9	63.4	67.4	80.5	90.5	90.6	80.1	100.0
16-Sep	90.5	91.9	91.1	91.5	88.2	87.5	87.9	86.8	85.1	82.3	77.3	69.7	67.5	61.7	57.7	61.9	59.4	71.3	85.6	92.3	96.7	97.3	97.9	98.4	82.4	98.4
17-Sep	98.3	98.2	98.3	98.6	99.1	99.3	99.5	99.5	96.5	89.8	77.4	56.5	50.3	47.0	43.6	40.8	38.8	43.3	51.7	63.9	74.6	74.9	81.0	92.8	75.6	99.5
18-Sep	96.2	90.4	96.6	96.4	90.9	97.0	97.0	86.6	74.7	62.1	55.6	51.3	46.0	41.3	40.1	40.6	41.8	47.7	68.7	75.3	77.6	73.2	78.8	88.1	71.4	97.0
19-Sep	88.4	89.5	92.5	94.8	93.0	94.1	92.7	82.3	67.1	54.6	43.0	31.4	29.1	27.6	26.0	26.2	27.3	36.4	57.1	61.8	62.2	62.4	72.3	78.0	62.1	94.8
20-Sep	81.5	84.5	84.6	88.4	90.3	89.9	88.8	79.1	71.9	65.7	54.8	43.2	36.3	31.2	28.8	28.9	31.3	41.7	52.2	59.8	62.9	60.2	67.8	80.8	62.7	90.3
21-Sep	85.8	89.3	92.4	94.9	92.7	86.5	90.0	81.8	69.0	54.1	44.5	37.4	34.1	32.3	31.9	30.8	30.6	32.6	31.9	41.1	50.1	63.2	87.6	92.3	61.5	94.9
22-Sep	89.1	86.3	87.3	84.6	83.0	83.1	82.3	80.5	69.6	58.2	51.5	44.7	38.2	33.0	31.4	30.7	31.4	35.5	50.2	54.2	53.1	54.2	55.5	58.9	59.4	89.1
23-Sep	69.7	67.0	59.3	56.7	60.1	63.2	63.7	62.4	59.7	51.0	36.1	28.6	26.2	23.7	24.4	25.8	27.7	27.0	33.6	35.7	37.8	43.5	46.5	51.7	45.0	69.7
24-Sep	72.7	84.8	91.6	93.2	94.1	95.6	95.8	94.7	92.8	89.8	79.8	58.4	37.8	36.3	31.0	29.1	29.1	32.6	42.4	49.9	47.7	57.3	59.3	62.0	64.9	95.8
25-Sep	66.4	71.3	71.5	73.1	75.7	82.5	87.6	83.2	78.3	73.6	56.6	40.1	30.8	32.9	32.8	32.7	36.1	41.4	45.6	53.8	60.1	65.3	68.9	66.6	59.5	87.6
26-Sep	69.7	72.9	74.4	80.0	81.7	84.3	84.6	80.6	70.6	57.5	51.1	45.8	42.3	38.2	35.9	36.5	37.5	39.1	46.2	48.4	51.5	57.7	55.5	57.2	58.3	84.6
27-Sep	58.5	58.5	59.3	67.1	72.3	71.3	68.1	53.0	45.8	39.4	34.5	30.8	27.8	25.7	25.8	24.7	30.4	44.2	42.0	34.1	35.8	39.2	41.5	41.8	44.7	72.3
28-Sep	42.5	48.1	53.5	60.1	65.8	67.5	67.6	66.6	55.1	46.4	41.2	37.3	33.2	30.2	28.0	26.0	30.5	42.1	50.7	49.1	47.2	44.5	54.1	58.9	47.8	67.6
29-Sep	61.2	57.9	60.1	58.6	55.4	53.8	52.7	50.7	44.6	40.5	37.6	35.5	34.4	35.1	36.0	36.4	38.2	41.4	47.7	53.6	56.2	62.8	63.4	57.7	48.8	63.4
30-Sep	61.9	73.2	75.7	73.7	80.2	81.4	79.9	78.1	67.3	63.8	61.7	58.2	57.1	56.6	59.8	70.0	71.6	83.2	92.1	96.4	96.9	97.0	97.5	97.5	76.3	97.5
	84.1	85.8	87.0	87.8	87.7	87.9	87.1	83.3	75.4	67.9	60.5	51.5	46.8	44.2	42.1	41.2	42.9	50.6	61.2	67.6	70.6	73.5	78.1	81.0	Diurnal Average	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	95.4	99.0	94.8	87.6	92.2	91.0	85.0	84.4	90.3	96.3	97.9	98.7	99.1	99.2	99.6	Diurnal Maximum	

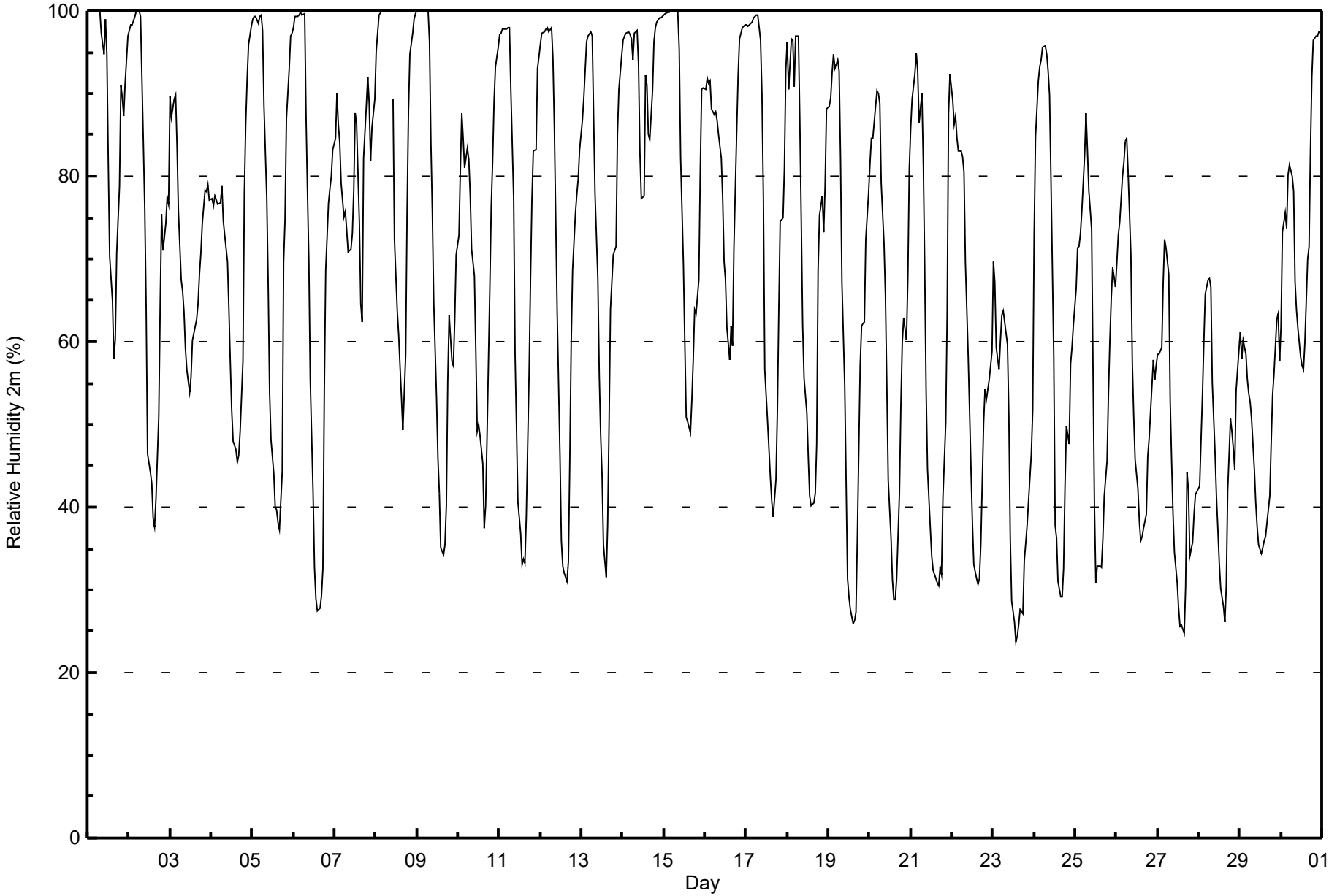
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Janvier - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Janvier - September 2025

Maximum Speed: 20 km/h on Sep 29 13:00

Maximum Daily Speed Average: 11.1 km/h on Sep 27

Minimum Speed Value: 0 km/h on Sep 8 05:00

Minimum Daily Speed Average: 0.8 km/h on Sep 30

Maximum Diurnal Speed Average: 5.9 km/h at hour 7

Minimum Diurnal Speed Average: 1.3 km/h at hour 18

Monthly Average Velocity: 3.5 km/h 217.1 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 4$ Median = 7 $Q_3 = 10$ $P_{90} = 13$ $P_{99} = 18$

Hours in Service: 720

Hours of Data: 705

Hours of Missing Data: 15

Percent Operational Time: 98.1

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	SSW2	SSW4	SW3	SSW4	SSE2	W1	SSW2	N3	ENE5	SSE3	W5	NW4	NNW3	N3	NNE8	NNE9	NNE9	N5	NNW3	N3	N6	N7	N4	NNE3	N2.1	NNE9
2-Sep	NNE2	N2	NNE2	S2	SE4	UO	S0	SW0	NNW3	NW2	ESE0	ESE5	ENE5	ENE6	NE6	ENE6	ENE7	E6	ESE7	SE8	SE8	SE6	SSE7	S6	ESE3.0	SE8
3-Sep	SSE3	SSE5	SE5	SSE6	S6	SSW8	SSW10	SSW9	SSW11	SSW12	SSW11	SSW12	WSW9	SW8	WSW9	WSW9	NNW10	N15	N17	N16	N13	N13	N15	N15	W2.6	N17
4-Sep	N16	N14	NNW12	NNW9	NNW9	NNW11	NNW10	NNW13	N14	N15	N15	N15	N15	N14	N15	N13	N12	N9	N6	NNE2	N1	NW1	S2	SSW4	N9.6	N16
5-Sep	SSW6	SSW6	SSW7	SSW5	SSW5	SSW8	SSW9	SSW6	S5	S7	SW5	SW4	SW4	SW3	S0	SSW2	SW5	SSW4	SSE6	ESE7	SE4	NNE2	N2	ENE2	SSW3.8	SSW9
6-Sep	SSW3	S3	S3	S4	SSE3	SE2	UO	WNW1	NW2	N3	ENE2	S5	S10	SSW12	SW11	SW13	WSW10	SW9	SSW6	SSE7	S4	S5	SSE4	S3	SSW4.3	SW13
7-Sep	SSW6	S5	SSW8	SSW9	SSW11	SSW11	SSW9	SW8	SW8	SW7	SW7	S3	S4	SW5	SW5	SW3	SSW3	SSE3	SE0	NNE4	N6	N7	NNE7	N6	SSW3.6	SSW11
8-Sep	N5	N5	NNE5	NNE3	NW0	UO	UO	UO	NNE5	NE6	NE5	NE4	NNE4	NE4	NE6	ESE5	E2	E5	ENE6	NE4	NNE2	N2	NE2	NE3	NE3.5	NE6
9-Sep	NE1	UO	NE2	WNW0	NNE1	SSW3	SSW1	SW1	WSW0	NW2	ENE2	SSE7	SSE12	SSE12	SSW14	SSW12	SSW12	S12	SSE7	SE9	SSE9	S10	SSW9	WSW7	S5.4	SSW14
10-Sep	SSW8	SSW5	SSW7	SSW9	SW9	SSW11	SSW12	SW12	SW10	SW8	WNW6	NNW3	E6	ESE5	ENE3	N5	NNE6	ENE6	ENE5	ENE2	UO	S2	S2	UO	SSW3.0	SSW12
11-Sep	S2	S2	S3	SSW4	SSW3	UO	SSW3	SSW3	WNW1	ENE1	E3	ENE5	E5	E6	ESE6	ENE4	ESE4	ESE5	SE5	SE6	SE6	SE4	NNW0	SSE1	SE2.6	SE6
12-Sep	SSE1	SSE2	S3	S4	SSW4	S3	SSW5	SSW7	SW3	W4	WSW4	S9	SSW10	S8	S8	S8	S6	SSE5	SSE7	SSE6	S5	S3	SSW4	SSW4	S4.8	SSW10
13-Sep	S5	S4	SSE2	S1	S1	S0	UO	SW2	WNW2	S2	SSE3	SSE3	SE4	SSE7	SSW4	SSE6	SSE6	SSE6	SE5	ESE6	SE6	SW2	SSW1	SSW1	SSE3.1	SSE7
14-Sep	SSE2	SSW1	SSW4	S3	SSW4	SSW4	S3	S6	WNW1	N2	UO	E2	ESE10	SSE5	S5	E5	E8	ESE4	ESE1	WNW1	S1	SSE4	ENE1	UO	SE2.4	ESE10
15-Sep	SW4	SSW4	SW6	SSW7	SSW7	SW7	SW7	SSW7	SW10	SW10	SW10	WSW7	WNW11	WNW15	WNW13	WNW14	WNW13	WNW11	NW10	NW10	NNW8	WNW3	W4	NW6	W6.3	WNW15
16-Sep	WNW6	W7	W6	WSW8	WSW5	SW7	SW6	SSW6	SW6	WSW6	SW5	NNW3	WNW6	E3	SSE4	E6	ESE6	ESE5	ESE7	ESE5	NW1	NNE1	NNE1	E2	SW1.7	WSW8
17-Sep	S1	S1	UO	SW1	S2	SSE1	UO	WNW1	NNW2	NNW4	NW1	S8	SSE9	SSE11	SSE13	SSE12	SSE12	SSE11	SSE10	SSE8	SSE7	SSE7	SSE6	S3	SSE5.3	SSE13
18-Sep	SW2	S8	W2	SSW7	S7	SSE6	SSE6	S9	SSW14	SSW15	SSW16	SSW16	SSW15	SSW16	SSW15	SSW14	SSW10	SW7	SW5	S5	SSE6	S9	SSW7	SSW7	SSW9.1	SSW16
19-Sep	SW7	SSW7	SW6	SSW7	SSW8	SSW6	SSW7	SSW8	SSW7	S5	S5	SSW7	SW9	SSW9	WSW9	WSW7	SW8	WSW6	S5	SSW6	SSW7	SSW7	SSW5	S5	SSW6.5	SSW9
20-Sep	S4	S5	S6	SSW4	SSW6	SSW6	SSW7	SSW7	SSW5	SSW7	WSW4	SSW9	SSW13	SSW16	SSW14	S14	S13	SSE7	SSE9	SSE8	SSE8	S9	S7	NW1	S7.3	SSW16
21-Sep	WSW2	SSW2	SSW1	SSW5	SSW7	SSW8	SSW8	SSW8	SSW7	WSW1	N6	NNE7	NNE7	NNE7	NE8	NNE7	N9	NNW9	NW10	NW10	WNW14	NW13	W6	WSW6	NW2.9	WNW14
22-Sep	WSW7	SW7	SW9	SW9	SW9	WSW10	SW9	SW9	SW9	SW9	SW13	WSW14	WSW14	W15	WSW15	WSW13	WSW12	SW8	S8	S8	S10	S10	SSW11	SSW10	SW9.6	WSW15
23-Sep	SW7	SSW8	SSW11	SSW10	SW9	SSW11	SSW11	SW10	SW10	SW11	W10	W12	W12	W15	W14	W14	WSW9	W10	W9	SW9	SW8	SW8	SW7	SW7	WSW9.0	W15
24-Sep	SSW8	SW9	SSW12	SSW9	SSW9	SW10	SW11	SW11	SW11	SW7	SW8	WSW10	WNW17	C	WNW14	NW15	NW11	WNW10	W8	W7	WSW8	SW9	SW11	SSW11	WSW8.3	WNW17
25-Sep	SW10	SSW11	SW12	SW11	SSW11	SSW8	SSW8	SW7	SW7	WSW3	SW6	SW10	SSW17	SSW13	SSW14	S13	S10	SSE9	S8	S8	SSW5	WSW5	SW6	SW6	SSW8.8	SSW17
26-Sep	SW6	SW7	SW8	WSW8	WSW8	WSW7	W9	W10	W11	WNW15	WNW16	W17	WNW19	WNW20	WNW18	WNW18	WNW16	WNW10	WSW8	WSW9	SW9	SSW9	SW10	SW9	W10.0	WNW20
27-Sep	SW9	SW9	SW11	SW12	SW13	SW12	WSW11	W14	W16	W18	WNW16	W17	W17	W18	W16	W15	WSW6	S5	SW7	W9	W8	WSW8	WSW10	WSW11	WSW11.1	W18
28-Sep	WSW14	WSW13	SW10	SW10	SW11	SW10	SW10	WSW9	W8	WSW7	WNW4	SW3	SSE3	SW3	S2	S5	SSE5	ESE5	SE6	ESE6	SE8	SSE9	SE9	SE8	SSW4.9	WSW14
29-Sep	SE6	SSE8	SSE9	SSE10	SSE14	SSE14	SSE16	SSE12	SSE14	SSE16	S18	S19	S20	S20	S15	S10	S13	S8	SSE7	SE4	E5	NE5	E3	SSE6	SSE10.6	S20
30-Sep	S5	S4	NW2	NE4	NE1	NNE3	E3	SSE6	S8	SSW7	SSW6	SW7	SW5	W3	NNE3	NNE3	NE10	NNE7	NNE7	N5	N5	N6	N8	N7	NNE0.8	NE10
	SW3.3	SSW4.0	SSW4.2	SSW4.7	SSW5.2	SSW5.5	SSW5.9	SW5.3	SW4.5	SW4.2	WSW4.1	SW4.1	SW4.4	SW4.4	SW3.9	SW3.5	SW2.1	SSW1.3	S1.5	S1.7	S1.8	SSW2.1	SSW2.3	SW2.5	Diurnal Average	
	N16	N14	NNW12	SW12	SSE14	SSE14	SSE16	W14	W16	W18	S18	S19	S20	WNW20	WNW18	WNW18	WNW16	N15	N17	N16	WNW14	N13	N15	N15	Diurnal Maximum	

C - Calibration UO - Unstable Operation

All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 8 km/h on Sep 25 12:00

Minimum Value: 1 km/h on Sep 20 04:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	705
Hours of Missing Data:	15
Hours of Calibration:	1
Percent Operational Time:	98.1

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-Sep	1	1	1	1	1	1	1	1	1	2	2	1	2	2	3	3	3	2	2	2	2	2	2	2	3
2-Sep	2	1	2	1	1	UO	1	1	1	1	2	2	3	2	2	2	2	1	1	2	2	2	2	3	3
3-Sep	2	1	1	1	2	2	3	3	3	4	4	4	3	2	3	3	7	6	6	6	5	6	6	6	7
4-Sep	6	5	5	3	4	4	4	6	6	6	6	6	5	5	6	4	4	3	3	1	1	1	1	1	6
5-Sep	1	1	1	2	1	1	1	1	1	2	2	3	2	3	2	2	2	2	1	1	2	1	1	1	3
6-Sep	1	1	2	1	1	1	UO	1	1	1	1	3	3	4	4	5	3	3	1	1	1	1	1	2	5
7-Sep	2	3	1	1	2	2	2	2	2	2	2	2	2	2	1	2	1	1	1	1	2	2	2	2	3
8-Sep	1	1	1	1	2	UO	UO	UO	2	2	2	2	2	2	2	3	1	1	1	1	1	1	1	2	3
9-Sep	1	UO	1	1	1	1	1	1	1	1	2	3	4	4	4	4	5	4	2	2	3	3	3	2	5
10-Sep	2	2	1	2	2	2	3	3	3	2	2	2	2	2	2	2	3	2	1	1	UO	2	2	UO	3
11-Sep	2	2	2	1	2	UO	2	3	1	1	1	2	2	2	2	2	2	1	1	1	1	3	1	2	3
12-Sep	1	2	2	1	1	1	1	1	1	1	2	4	3	3	3	3	2	1	1	2	1	1	1	1	4
13-Sep	1	1	2	1	1	1	UO	1	1	1	1	2	3	3	3	2	1	1	2	4	2	1	1	2	4
14-Sep	2	2	1	2	1	1	2	2	1	1	UO	2	6	2	1	3	3	2	2	1	1	1	1	UO	6
15-Sep	1	1	2	2	2	2	2	2	3	3	3	3	4	5	5	5	4	3	4	4	4	1	1	1	5
16-Sep	1	2	1	2	1	1	1	1	2	2	2	2	2	2	3	2	2	1	1	1	1	1	1	2	3
17-Sep	1	1	UO	1	1	1	UO	1	1	1	3	3	4	4	4	4	4	4	3	2	2	3	2	2	4
18-Sep	2	3	2	2	3	2	2	3	4	5	5	5	5	5	6	5	3	3	1	1	2	3	2	1	6
19-Sep	1	1	1	1	1	1	1	2	2	1	2	3	3	4	4	3	3	2	1	1	1	1	1	1	4
20-Sep	1	1	1	1	1	1	1	2	1	1	2	4	4	5	4	4	4	2	2	2	2	3	2	1	5
21-Sep	2	2	1	1	2	2	1	2	2	2	3	3	3	3	3	3	3	4	4	4	5	5	3	2	5
22-Sep	1	2	2	2	2	2	2	2	3	3	4	5	5	5	5	5	5	4	2	2	2	2	2	2	5
23-Sep	1	1	2	2	2	2	2	3	3	3	5	4	4	5	5	5	4	3	2	2	3	2	2	2	5
24-Sep	2	3	3	2	2	3	3	4	3	3	2	5	6	C	5	6	5	3	2	2	2	2	2	2	6
25-Sep	2	2	2	2	2	2	2	2	2	1	2	8	5	5	6	4	5	3	2	2	2	3	1	1	8
26-Sep	1	1	2	2	2	2	2	3	4	4	6	6	7	7	6	6	5	3	2	2	2	2	2	2	7
27-Sep	2	2	3	4	3	4	4	5	6	8	6	6	6	6	6	7	3	1	2	3	2	2	3	3	8
28-Sep	4	4	3	2	2	2	3	2	3	3	2	3	2	2	3	3	2	1	1	1	3	2	2	2	4
29-Sep	2	2	3	4	5	5	5	5	6	6	7	7	7	6	5	4	4	3	2	1	2	1	1	2	7
30-Sep	2	2	2	1	1	2	1	1	2	2	3	2	2	2	1	2	3	2	2	1	2	2	2	2	3
	6	5	5	4	5	5	5	6	6	8	7	8	7	7	6	7	7	6	6	6	5	6	6	6	
	Diurnal Maximum																								

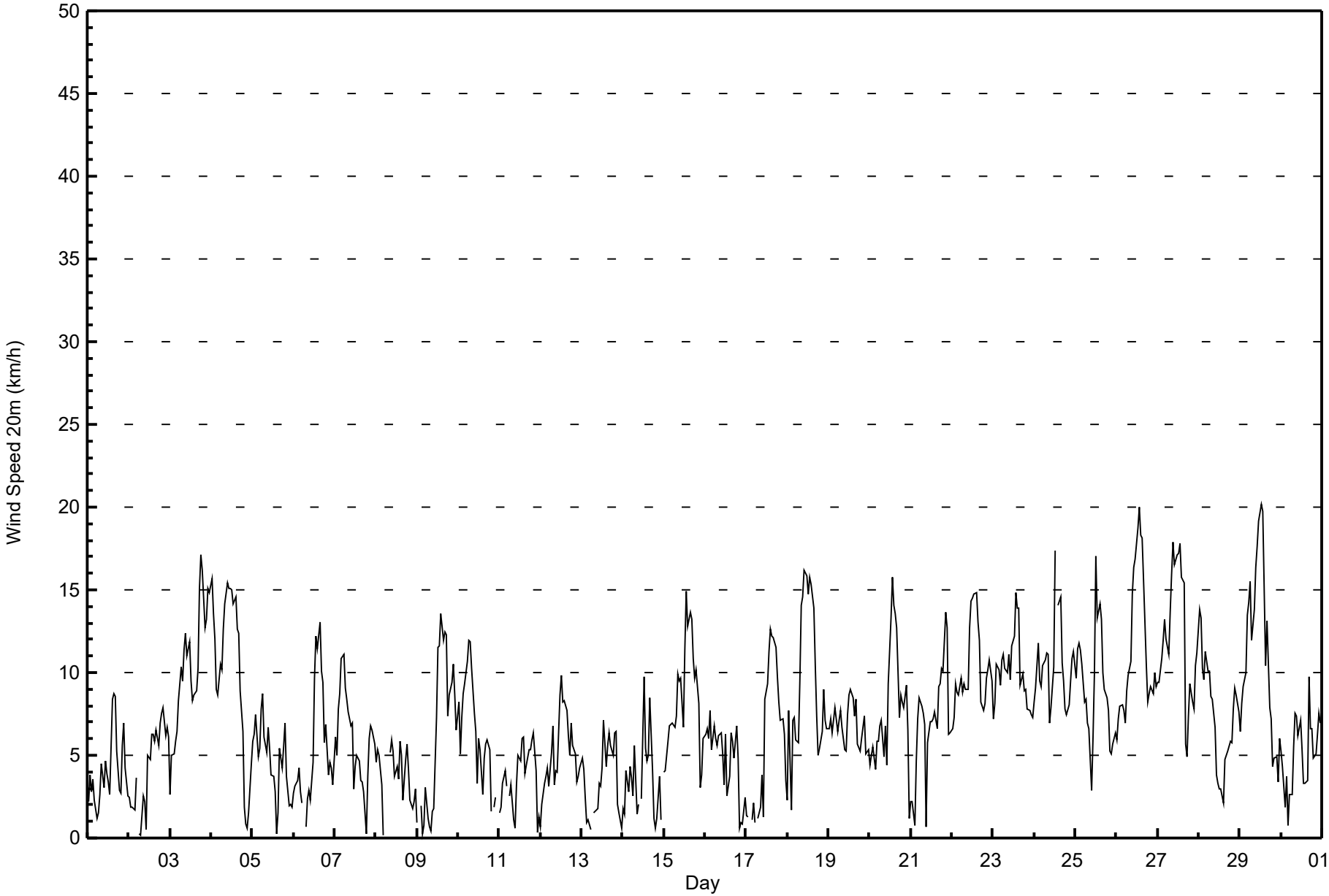
C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Janvier - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	260	36.88	36.88
6 - 11	336	47.66	84.54
12 - 19	106	15.04	99.57
20 - 28	3	0.43	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Janvier - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	16	17	11	12	11	11	10	23	49	38	21	8	6	9	10	8	260
6 - 11	12	11	4	6	5	8	12	36	28	79	71	30	14	7	6	7	336
12 - 19	18	0	0	0	0	0	0	11	8	22	7	7	15	14	2	2	106
20 - 28	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
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	46	28	15	18	16	19	22	70	87	139	99	45	35	31	18	17	705

Total Number of Valid Hours: 705

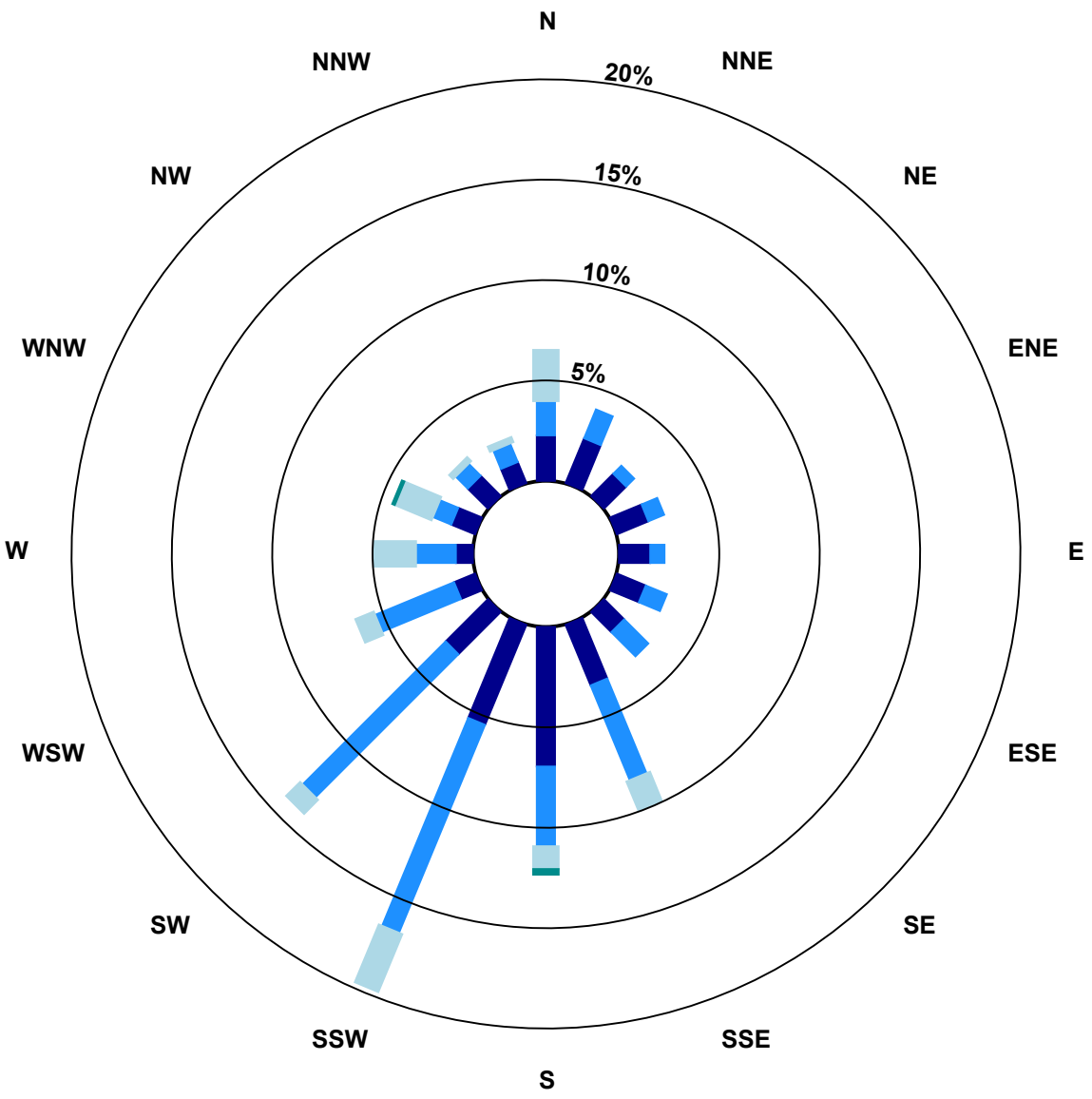
Total Number of Hours: 720

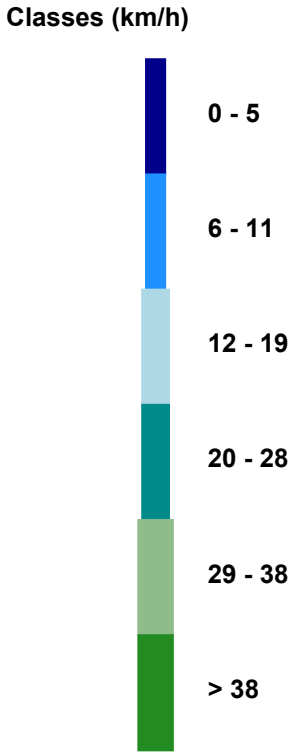
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 20m (WS20) - km/h

Janvier





Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Janvier - September 2025

Direction of Maximum Speed: 175 deg on Sep 29 13:00
Direction of Maximum Daily Speed Average: 255.0 deg on Sep 27

Direction of Minimum Speed: 325 deg on Sep 8 05:00

Direction of Minimum Daily Speed Average: 0.8 deg on Sep 30

Monthly Average Direction: 217.1 deg

Hours in Service:	720
Hours of Data:	705
Hours of Missing Data:	15
Percent Operational Time:	98.1

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	Average
1-Sep	211	201	217	204	155	281	193	4	61	166	273	325	336	354	25	15	14	2	337	359	7	6	0	26	359.4
2-Sep	28	2	33	189	133	UO	178	221	345	326	109	105	66	76	56	77	77	101	114	126	136	145	161	171	105.3
3-Sep	162	149	144	162	181	203	203	203	201	201	200	213	245	236	238	237	335	0	1	1	355	350	356	354	273.7
4-Sep	350	349	342	337	336	339	336	347	351	357	351	360	358	356	355	357	356	354	11	12	7	323	186	196	350.8
5-Sep	196	198	204	194	203	206	205	199	188	190	214	235	221	235	185	208	231	205	152	121	128	33	3	64	195.6
6-Sep	204	185	169	175	154	129	UO	297	325	356	65	169	191	204	230	220	240	229	199	164	176	171	167	189	200.8
7-Sep	197	188	206	201	206	210	213	215	219	222	222	190	184	214	219	235	207	161	135	15	7	9	18	9	213.6
8-Sep	3	10	14	13	325	UO	UO	UO	29	38	42	37	33	47	53	121	84	86	76	55	28	10	46	43	43.3
9-Sep	35	UO	46	296	17	197	205	222	247	305	72	168	159	165	192	202	196	189	164	145	161	175	195	237	180.3
10-Sep	204	200	205	210	217	209	208	216	224	227	289	345	87	122	59	358	29	60	61	70	UO	189	189	UO	206.3
11-Sep	171	182	182	195	197	UO	203	199	282	70	91	64	80	84	103	74	104	121	132	128	130	134	330	165	125.1
12-Sep	155	155	177	190	213	184	193	199	225	260	238	186	202	175	184	191	187	166	149	168	176	186	193	200	189.0
13-Sep	185	180	157	169	184	186	UO	232	283	182	164	163	134	154	194	160	151	149	139	123	135	224	211	203	160.7
14-Sep	164	195	194	180	206	197	171	178	292	11	UO	82	119	161	169	96	95	110	111	288	181	156	73	UO	146.2
15-Sep	218	194	220	213	211	228	227	209	223	222	225	257	288	295	299	302	298	298	313	322	327	298	275	307	270.0
16-Sep	291	276	261	248	245	235	217	213	234	252	227	330	282	91	147	90	103	104	107	111	313	12	26	91	226.3
17-Sep	183	191	UO	217	189	160	UO	301	336	327	305	172	159	150	157	165	164	155	154	152	150	155	160	172	161.1
18-Sep	231	189	271	195	186	167	165	186	195	201	203	201	193	197	195	209	202	230	221	188	167	177	199	211	196.6
19-Sep	220	198	214	197	211	193	203	201	196	186	188	199	216	208	246	238	235	237	191	201	210	202	192	173	207.9
20-Sep	182	183	189	201	193	198	200	207	205	195	255	205	195	196	195	188	190	167	151	147	156	173	173	323	187.9
21-Sep	239	209	194	192	209	211	212	210	209	240	4	31	25	24	42	22	11	334	320	310	302	304	280	244	304.6
22-Sep	244	232	234	233	234	240	226	226	220	236	225	240	247	260	245	252	238	228	183	187	191	190	199	205	228.3
23-Sep	216	210	204	212	223	211	211	214	218	232	260	266	270	278	269	265	250	275	280	214	216	219	216	221	238.1
24-Sep	208	214	200	208	213	216	222	220	222	230	229	254	285	C	299	308	304	301	265	259	258	217	214	211	243.0
25-Sep	214	211	216	216	211	210	208	214	220	253	218	218	200	200	200	187	187	168	184	185	197	241	214	223	205.3
26-Sep	234	222	229	242	243	251	263	269	275	284	286	277	284	292	300	293	298	288	243	237	220	204	218	214	266.7
27-Sep	215	215	218	233	225	233	248	266	274	281	285	275	269	272	270	271	253	186	227	265	260	241	244	244	255.0
28-Sep	242	241	232	230	218	230	232	243	268	252	297	222	161	230	178	182	151	121	125	116	135	150	138	146	207.5
29-Sep	145	147	154	147	150	156	153	153	165	168	172	170	175	182	183	170	172	171	155	127	96	53	90	160	161.5
30-Sep	177	184	309	56	40	22	84	158	178	200	213	220	216	266	17	25	47	15	24	357	7	11	10	358	22.6
	218.8	208.8	211.9	209.9	208.7	212.8	212.5	216.6	227.1	234.6	239.4	226.3	224.0	220.6	233.1	235.7	226.0	211.5	169.0	169.3	188.2	198.6	206.2	217.4	
	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 20m (WD20) - deg

Janvier - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 113 deg on Sep 5 15:00

Minimum Value: 6 deg on Sep 5 02:00

Percentiles: P_1 = 9 P_{10} = 14 Q_1 = 19 Median = 25 Q_3 = 35 P_{90} = 63 P_{99} = 92

Hours in Service:	720
Hours of Data:	705
Hours of Missing Data:	15
Hours of Calibration:	1
Percent Operational Time:	98.1

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-Sep	46	23	22	21	18	61	72	51	31	67	31	38	57	68	30	28	23	25	57	35	20	17	58	25	72
2-Sep	31	13	15	38	8	UO	88	87	56	65	104	57	71	44	34	31	22	20	12	13	18	20	24	24	104
3-Sep	46	18	15	14	18	17	18	21	19	22	23	27	30	24	25	26	52	29	26	28	33	35	29	30	52
4-Sep	32	30	32	34	39	32	32	32	33	34	36	33	33	34	34	34	31	35	23	31	86	46	72	16	86
5-Sep	8	6	9	19	12	12	12	14	18	26	54	72	71	87	113	95	51	38	15	13	64	37	36	48	113
6-Sep	39	28	22	14	29	14	UO	47	37	67	69	66	34	31	34	26	27	24	23	13	13	12	15	20	69
7-Sep	9	20	9	10	10	13	15	17	21	26	30	56	46	50	28	44	32	26	95	21	19	19	16	17	95
8-Sep	21	16	15	16	78	UO	UO	UO	27	25	39	77	62	70	48	59	72	19	11	19	26	23	20	19	78
9-Sep	79	UO	18	65	72	13	62	50	74	92	65	35	29	31	25	26	23	17	21	13	21	18	21	34	92
10-Sep	15	21	11	13	18	14	16	19	23	22	28	69	37	49	81	50	45	18	13	41	UO	67	40	UO	81
11-Sep	85	80	22	14	34	UO	28	49	44	88	45	26	43	39	38	55	24	11	13	12	13	18	88	84	88
12-Sep	78	56	42	24	23	12	10	13	32	30	49	37	25	35	31	35	34	20	13	22	10	17	32	36	78
13-Sep	13	11	46	71	56	92	UO	33	48	56	44	50	54	32	63	25	12	9	16	22	24	49	63	95	95
14-Sep	54	84	35	42	18	19	77	47	56	49	UO	63	29	30	22	44	24	22	53	52	80	26	82	UO	84
15-Sep	28	14	19	22	18	23	25	22	22	26	26	40	26	23	30	28	22	21	26	31	34	32	19	18	40
16-Sep	16	17	18	17	19	16	17	20	20	28	37	67	38	82	69	24	22	15	11	21	66	48	53	66	82
17-Sep	46	47	UO	76	50	51	UO	41	41	21	76	36	32	32	29	26	25	25	23	20	19	25	24	30	76
18-Sep	67	25	79	18	18	24	33	24	19	21	23	22	25	24	27	26	29	27	23	29	15	17	22	13	79
19-Sep	15	12	16	10	13	12	11	17	15	18	35	42	39	40	35	36	29	25	8	13	10	9	13	13	42
20-Sep	13	14	9	18	15	12	13	16	24	21	47	31	23	23	26	24	21	24	17	17	21	21	20	82	82
21-Sep	65	63	85	18	25	13	14	14	24	97	49	38	35	37	30	35	23	37	32	24	23	21	36	19	97
22-Sep	22	20	21	21	21	20	21	20	23	26	23	28	31	30	28	30	27	29	15	15	15	14	14	14	31
23-Sep	12	14	11	14	20	15	16	19	20	24	35	25	27	24	28	26	26	21	21	21	33	17	17	18	35
24-Sep	18	25	19	25	24	21	20	21	23	36	24	37	25	C	29	30	30	22	17	18	20	12	11	11	37
25-Sep	11	10	14	14	11	14	13	17	19	38	33	59	22	31	26	25	27	23	21	17	30	31	20	21	59
26-Sep	22	15	19	19	19	20	19	20	25	22	24	27	25	24	26	23	23	22	18	17	18	15	17	15	27
27-Sep	15	18	19	26	19	20	27	25	23	25	26	26	29	27	30	26	32	14	23	21	21	21	20	21	32
28-Sep	21	22	20	18	16	18	17	23	27	44	71	83	85	84	92	63	32	15	10	15	26	18	13	16	92
29-Sep	18	22	26	25	26	25	25	25	30	28	28	25	25	22	24	27	24	23	19	28	28	21	45	22	45
30-Sep	20	35	66	39	85	25	48	15	20	24	37	33	44	54	25	63	22	25	23	33	33	22	23	25	85
	85	84	85	76	85	92	88	87	74	97	104	83	85	87	113	95	72	38	95	52	86	67	88	95	
	Diurnal Maximum																								

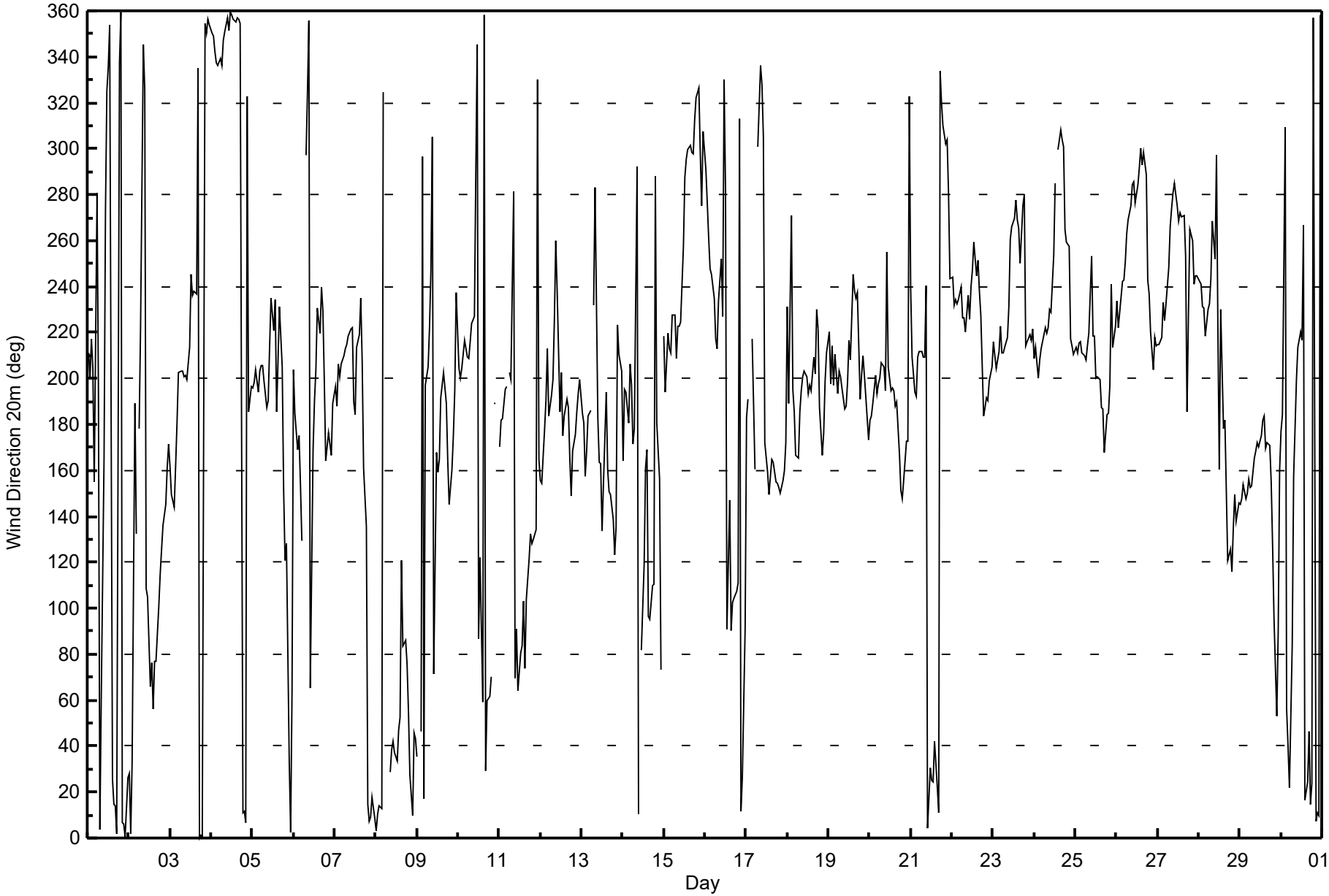
C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Janvier - September 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS23
FORT HILLS
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
SEPTEMBER 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	687	33	33	100	-	-	61.5	0	7.2	0
TRS(ppb) Average	685	35	35	100	5.8	1	4.8	0	1.4	0
THC(ppm) Average	687	33	33	100	-	-	7.9	-	3.1	-
NMHC(ppm) Average	687	33	33	100	-	-	3.068	-	0.492	-
CH4(ppm) Average	687	33	33	100	-	-	7.1	-	2.6	-
NO2 (ppb) Average	685	35	35	100	-	-	44.6	0	20.4	-
NO (ppb) Average	685	35	35	100	-	-	219.5	-	54	-
NOX (ppb) Average	685	35	35	100	-	-	249	-	71.9	-
PM2.5 (ug/m3) Average	719	1	1	100	-	-	167.8	0	63.6	13
Temperature 2 m (C) Average	720	0	0	100	-	-	28.3	-	19.5	-
Relative Humidity (%) Average	720	0	0	100	-	-	97.4	-	76.8	-
Wind Speed 10 m (km/h) Average	719	0	1	99.86	-	-	29	-	17	-
Wind Direction 10 m (deg) Average	719	0	1	99.86	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	1.11	3.6	-	0	0	0	0.2	0.6	2.4	61.5
TRS (ppb) Average	685	0.73	0.6	-	0.1	0.3	0.4	0.5	0.9	1.4	4.8
THC (ppm) Average	687	2.54	0.7	-	2	2.1	2.1	2.3	2.7	3.2	7.9
NMHC(ppm) Average	687	0.212	0.328	-	0	0	0	0.1	0.3	0.6	3.068
CH4(ppm) Average	687	2.33	0.4	-	2	2	2.1	2.2	2.4	2.7	7.1
NO2 (ppb) Average	685	9.58	8	-	0	1.2	3.2	7.4	14.2	21.7	44.6
NO (ppb) Average	685	9.46	24.1	-	0	0	0.2	1.5	7.2	23.2	219.5
NOX (ppb) Average	685	19.04	29.6	-	0	1.3	3.4	10.3	21.2	41.9	249
PM2.5 (ug/m3) Average	719	28.92	23.9	-	1.3	7	13.1	22.4	37.4	56.6	167.8
Temperature 2 m (C) Average	720	15.02	4.8	-	3.4	8.9	11.9	14.6	18.2	21.7	28.3
Relative Humidity (%) Average	720	63.65	19	-	22.2	37.1	48.5	63.8	80.1	89.3	97.4
Wind Speed 10 m (km/h) Average	719	10.1	6	-	0	3	6	9	14	18	29
Wind Direction 10 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	08 Sep 2025 21:00	08 Sep 2025 21:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 61.5 ppb on Sep 17 14:00 Maximum Daily Average: 7.2 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 1 02:00 Minimum Daily Average: 0.0 ppb on Sep 19
Maximum Diurnal Average: 4.7 ppb at hour 14 Minimum Diurnal Average: 0.1 ppb at hour 3
Monthly Average: 1.11 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 2.4 P_{99} = 15.4

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.0	0.0	Z	0.1	0.2	0.6	0.3	0.1	0.5	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.0	0.1	0.1	0.2	0.6
2-Sep	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.5	0.3	5.0	19.9	31.4	11.0	11.1	9.3	6.3	0.7	0.4	0.3	0.2	0.2	0.6	4.3	31.4
3-Sep	1.8	0.5	0.3	0.3	0.3	Z	0.4	0.7	7.3	5.9	1.1	0.6	0.5	2.9	1.3	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.1	7.3
4-Sep	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
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.1	1.6	1.1	0.7	0.3	0.3	0.9	1.9	2.9	3.3	2.9	1.8	0.6	0.5	0.5	1.0	3.3
6-Sep	0.5	0.4	Z	0.4	0.6	0.3	0.1	0.1	3.3	5.2	8.4	7.6	4.0	6.6	4.9	7.6	4.6	4.7	2.2	1.4	0.7	0.8	0.3	0.2	2.8	8.4
7-Sep	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.8	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.8
8-Sep	0.2	0.1	0.2	0.2	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.8	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8
9-Sep	0.1	0.0	0.0	0.0	0.0	Z	0.7	0.3	0.5	3.9	12.9	11.0	9.7	4.2	5.7	3.1	1.9	1.8	1.0	0.6	0.3	0.1	0.2	0.1	2.5	12.9
10-Sep	Z	0.1	0.0	0.0	0.1	0.0	0.2	0.5	0.6	0.3	0.1	0.0	1.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
11-Sep	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.0	C	C	C	4.4	4.0	8.3	7.2	4.3	3.8	1.2	0.7	0.5	0.2	0.8	0.6	0.3	1.8	8.3
12-Sep	0.5	0.4	Z	0.6	0.4	0.4	0.4	0.4	1.5	1.7	1.6	0.8	0.4	0.5	0.4	0.3	0.2	0.2	0.4	0.3	0.2	0.4	0.2	0.2	0.5	1.7
13-Sep	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.3	0.7	2.5	7.0	7.6	9.6	6.2	4.3	2.8	2.2	2.1	2.2	2.4	1.6	1.3	2.3	9.6
14-Sep	1.0	0.6	0.2	0.0	Z	0.1	0.1	0.0	0.2	0.2	15.8	7.3	15.4	5.4	2.1	0.6	0.4	0.2	0.5	0.9	0.6	0.6	0.3	0.2	2.3	15.8
15-Sep	0.2	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	2.1	2.8	0.6	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	2.8
16-Sep	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.3	0.5	0.4	0.2	0.4	0.9	0.8	0.8	2.6	1.6	0.8	0.4	0.5	2.6
17-Sep	0.4	Z	0.2	0.1	0.1	0.0	0.0	0.1	0.3	4.3	15.0	25.6	15.5	61.5	24.7	8.3	7.0	0.5	0.3	0.4	0.2	0.1	0.2	0.2	7.2	61.5
18-Sep	0.1	0.1	Z	0.3	0.1	0.0	0.6	9.8	4.1	1.5	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	0.8	9.8
19-Sep	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
20-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.3	0.4	1.1	2.2	0.2	0.3	0.7	0.2	0.1	0.5	1.3	0.9	0.8	0.2	0.4	2.2
21-Sep	0.4	0.6	0.5	0.4	0.3	Z	0.1	0.1	0.2	0.7	0.9	0.9	0.9	1.3	0.6	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.3
22-Sep	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	0.0	0.0	0.0	0.1
23-Sep	0.4	Z	0.1	0.1	0.2	0.1	0.0	0.1	0.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.9
24-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	1.1	0.7	3.1	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.3	0.1	0.1	0.3	3.1
25-Sep	0.2	0.1	0.1	Z	0.1	0.2	0.6	0.5	0.6	1.5	2.8	3.5	2.8	4.1	3.2	1.6	3.8	1.7	1.4	0.9	0.7	0.5	0.3	0.2	1.4	4.1
26-Sep	0.2	0.2	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.5	1.9	2.2	1.2	0.8	1.2	0.4	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.4	2.2
27-Sep	0.0	0.0	0.0	0.2	0.0	Z	0.1	0.1	0.3	1.9	1.1	1.0	0.7	0.2	0.0	0.1	0.1	0.1	0.1	0.4	0.2	0.5	0.4	0.2	0.3	1.9
28-Sep	Z	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.3	0.8	1.3	1.1	1.3	0.6	0.2	0.1	0.2	0.2	0.1	0.4	0.7	0.6	0.4	0.4	0.4	1.3
29-Sep	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4	1.4	4.4	2.7	1.1	0.9	0.6	1.0	0.5	0.3	0.5	0.5	0.8	4.4
30-Sep	0.5	0.6	Z	1.1	1.5	1.1	1.2	1.5	1.9	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.6	1.9
	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.5	0.8	1.2	2.4	2.7	3.2	4.7	2.7	1.7	1.4	0.9	0.5	0.5	0.5	0.4	0.3	0.2	Diurnal Average	
	1.8	0.6	0.5	1.1	1.5	1.1	1.2	9.8	7.3	5.9	15.8	25.6	19.9	61.5	24.7	11.1	9.3	6.3	3.3	2.9	2.6	2.4	1.6	1.3	Diurnal Maximum	

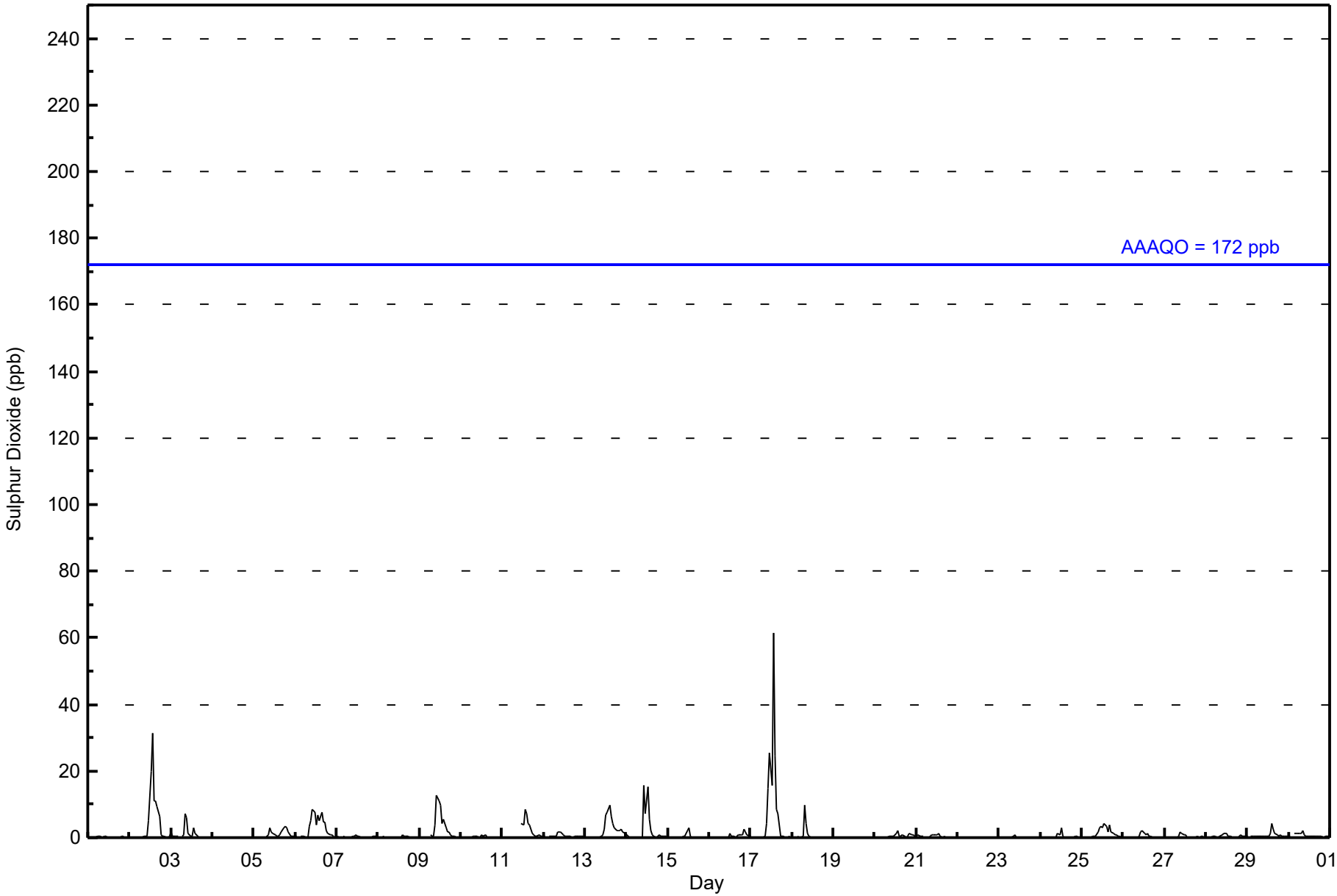
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - September 2025



Sulphur Dioxide (SO_2) - ppb
Fort Hills - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	674	98.11	98.11
11 - 20	9	1.31	99.42
21 - 60	3	0.44	99.85
61 - 110	1	0.15	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Hills - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	43	23	4	2	1	14	58	154	104	98	48	26	21	25	28	24	673
11 - 20	0	0	0	0	0	0	1	1	5	2	0	0	0	0	0	0	9
21 - 60	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
61 - 110	0	0	0	0	0	0	0	1	0	0	0	0	0	0	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	43	23	4	2	1	14	59	158	110	100	48	26	21	25	28	24	686

Total Number of Valid Hours: 686

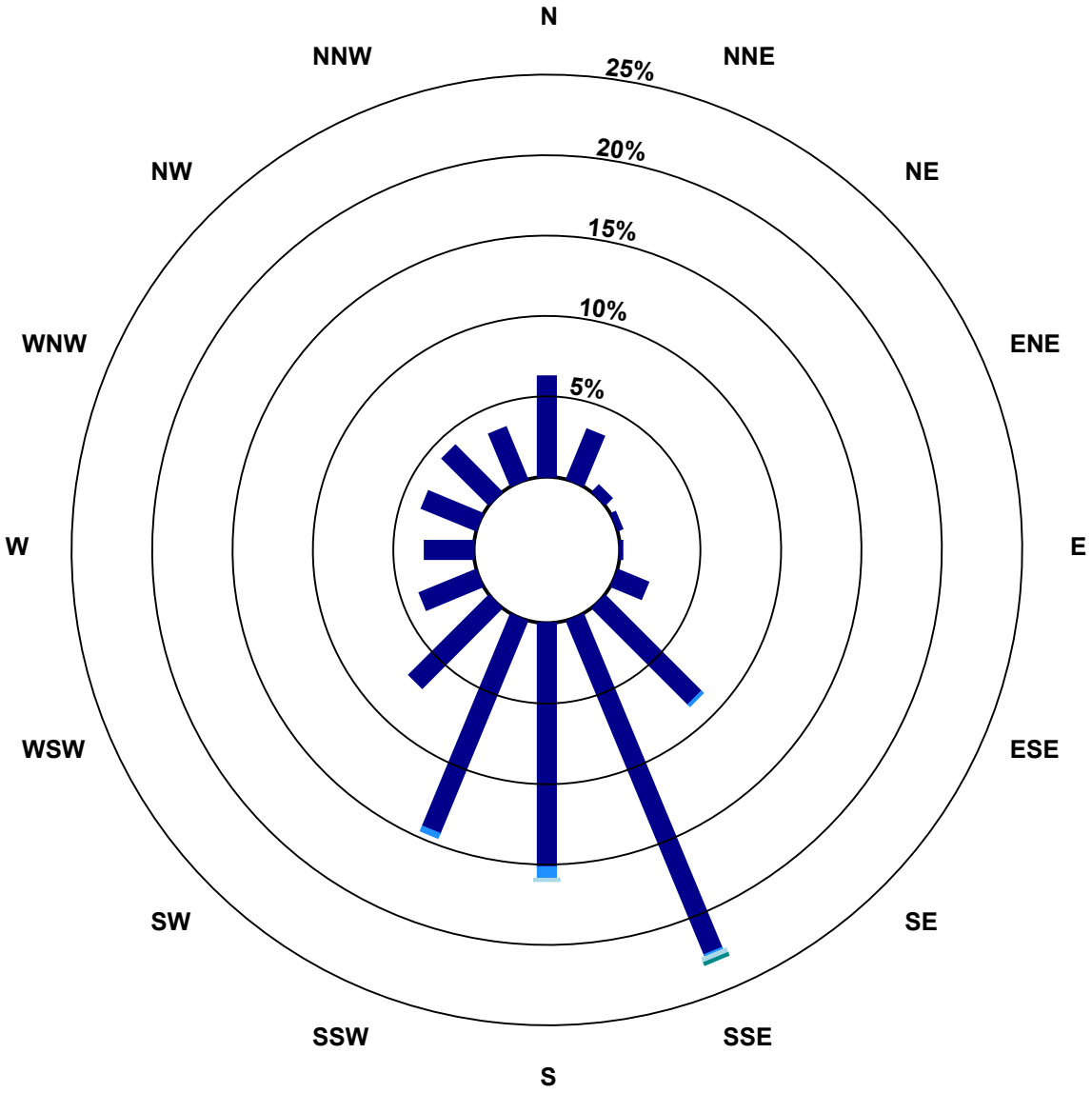
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Fort Hills



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

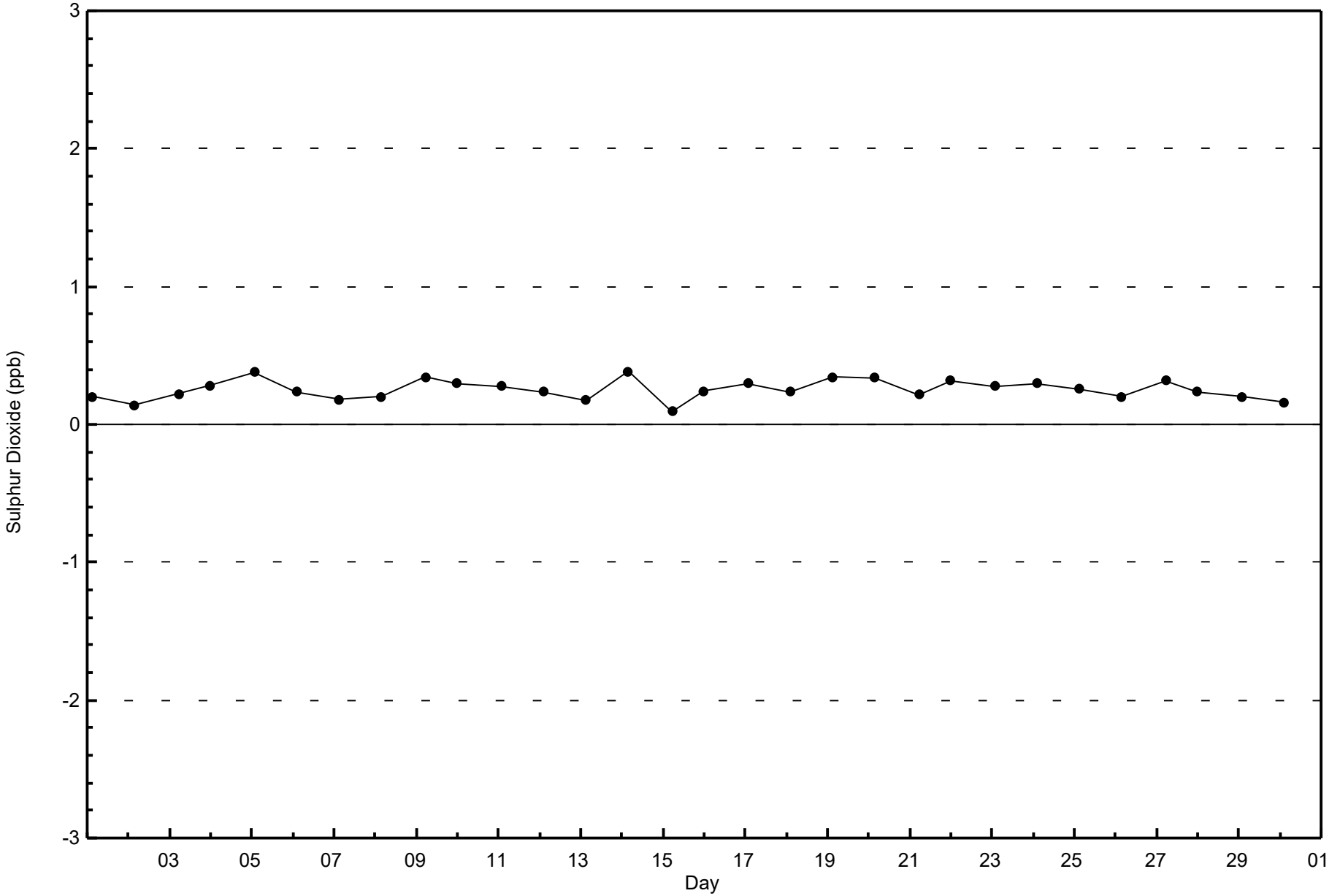
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - September 2025

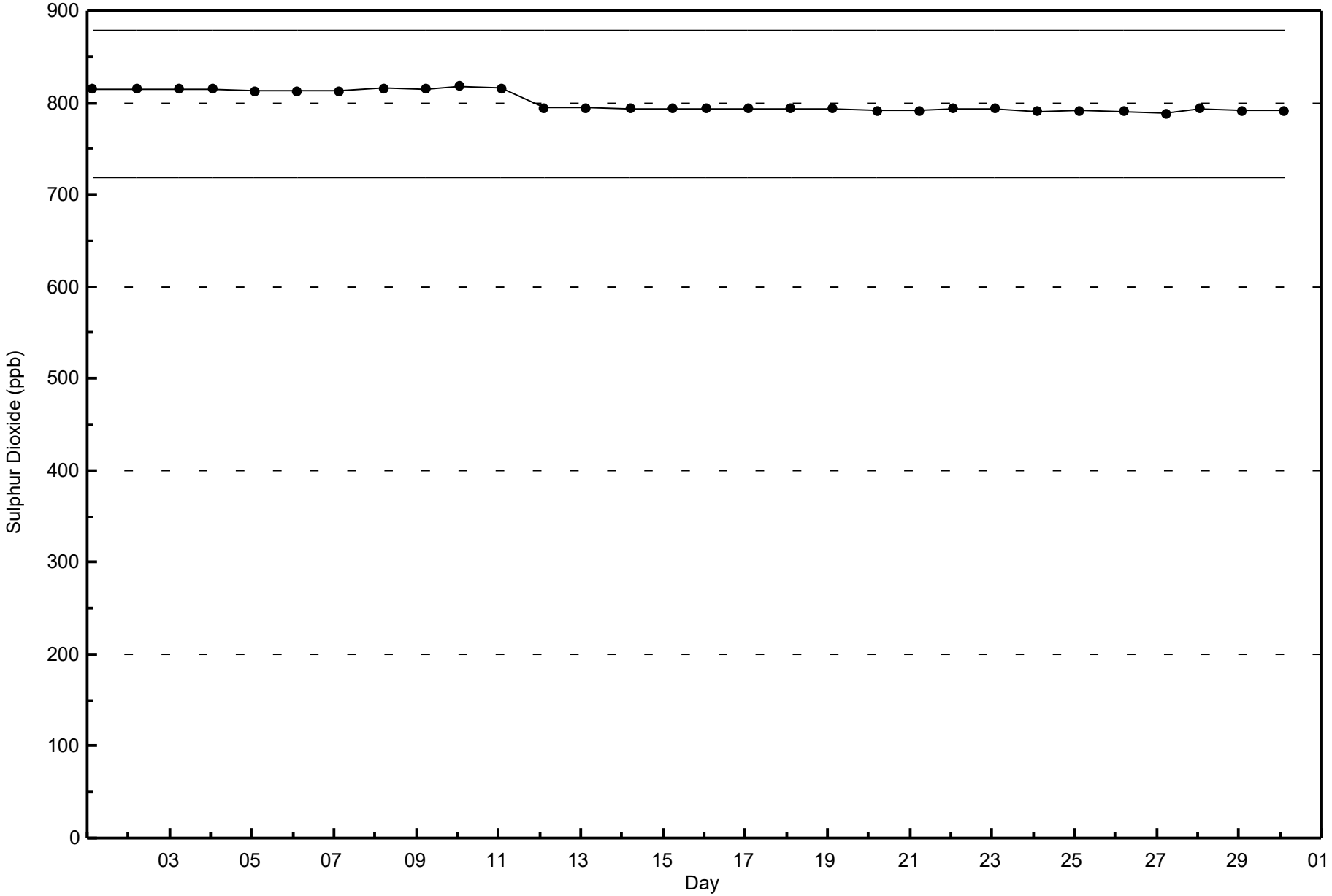


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025

Number of Exceedences (AAAQG): 30-Min: 1

Maximum Value: 5.8 ppb on Sep 14 09:00

Maximum Daily Average: 1.4 ppb on Sep 20

Minimum Value: 0.1 ppb on Sep 29 12:30

Minimum Daily Average: 0.3 ppb on Sep 23

Maximum Diurnal Average: 1.1 ppb at hour 9

Minimum Diurnal Average: 0.4 ppb at hour 16

Monthly Average: 0.73 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.9$ $P_{90} = 1.4$ $P_{99} = 3.4$

Periods in Service:	1440
Periods of Valid Data:	1368
Periods of Invalid Data:	72
Periods of Calibration:	70
Percent Operational Time:	99.9

Period Ending At (MST)

Day	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	Daily Average	Daily Maximum
1-Sep	0.4	0.4	0.4	0.4	Z	0.6	2.6	2.3	1.1	1.3	0.7	0.5	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.6	0.4	0.3	0.3	0.7	2.6
	0.4	0.3	0.4	0.5	SP	1.2	1.7	2.5	1.0	1.0	0.6	0.4	0.3	0.5	0.5	0.5	0.5	0.4	0.3	0.6	0.4	0.4	0.3	0.3		
2-Sep	0.3	0.3	0.4	0.4	1.1	Z	0.4	0.5	0.5	2.1	1.2	0.8	0.8	1.5	0.9	1.0	1.0	0.7	0.8	0.4	0.8	0.3	0.3	0.5	0.7	2.2
	0.3	0.5	0.4	0.4	0.7	SP	0.4	0.5	0.8	2.2	0.8	0.9	1.3	1.3	0.9	0.9	0.9	0.9	0.5	0.7	0.4	0.3	0.3	1.1		
3-Sep	Z	1.5	0.6	0.5	0.6	0.7	1.7	1.2	0.8	1.4	1.3	0.6	0.5	0.8	1.2	0.6	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.8	1.7
	SP	0.8	0.5	0.5	0.8	1.1	1.6	0.8	1.3	1.1	1.1	0.5	0.5	0.9	0.5	0.5	0.5	0.4	0.6	0.6	0.6	0.7	0.5	0.5		
4-Sep	0.4	Z	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	0.3	0.4	0.4	0.5	0.7	0.4	0.3	0.4	0.7
	0.3	SP	0.4	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	0.4	0.4	0.5	0.4	0.4	0.3		
5-Sep	0.4	0.5	Z	0.3	0.3	0.4	0.7	0.9	1.1	0.6	0.8	0.9	0.9	0.4	0.3	0.3	0.2	0.2	0.4	0.5	0.9	0.6	2.1	0.8	0.7	3.5
	0.4	0.4	SP	0.5	0.3	0.5	0.8	0.7	1.6	0.8	0.8	1.0	0.6	0.3	0.2	0.2	0.2	0.3	0.5	0.8	0.5	3.5	0.9	0.8		
6-Sep	0.7	1.4	1.2	Z	1.9	1.6	1.2	0.9	1.8	2.2	1.0	0.9	0.9	1.1	0.4	0.3	0.3	0.3	0.4	0.7	0.7	0.8	1.8	3.9	1.0	3.9
	0.9	0.8	0.6	SP	1.3	0.9	1.2	0.7	3.0	1.2	0.9	0.9	1.0	1.0	0.3	0.3	0.3	0.3	0.5	0.6	1.3	1.1	1.0	0.6		
7-Sep	0.6	0.6	0.4	0.4	Z	1.9	2.4	1.5	0.5	1.3	1.3	1.5	1.1	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.7	0.6	0.8	2.4
	0.6	0.5	0.4	0.5	SP	1.9	1.8	1.0	0.8	1.0	1.6	1.6	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6		
8-Sep	0.6	0.6	0.6	0.6	0.6	Z	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.9	2.5	2.9	2.1	0.4	0.7	2.9
	0.6	0.6	0.7	0.6	0.5	SP	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.4	1.1	2.5	0.6	0.5	0.4		
9-Sep	Z	0.5	0.3	0.3	0.3	0.6	2.0	2.7	1.3	1.8	1.7	1.2	1.0	1.3	1.0	0.5	0.6	0.8	0.8	0.7	0.4	0.5	0.6	0.5	0.9	2.7
	SP	0.4	0.4	0.3	0.4	1.3	1.4	2.5	1.3	1.6	1.4	1.1	1.2	1.2	0.6	0.5	0.9	1.0	0.8	0.5	0.5	0.5	0.5	0.4		
10-Sep	0.3	Z	0.4	0.8	1.1	1.3	1.3	2.2	2.4	1.2	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	1.2	0.7	2.5
	0.4	SP	0.4	1.2	1.3	1.2	1.3	2.5	1.6	1.0	0.4	0.3	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	1.9		
11-Sep	1.5	0.6	Z	1.2	1.0	1.6	0.6	M	0.8	0.6	0.4	0.8	1.2	0.5	0.5	0.4	0.3	0.3	0.7	1.4	1.2	1.1	1.4	1.2	0.8	1.7
	0.7	0.5	SP	0.7	1.0	0.6	M	0.6	1.3	0.6	0.4	1.3	0.8	0.5	0.4	0.3	0.4	0.5	0.7	1.5	0.7	1.7	1.3	1.2		
12-Sep	1.1	0.9	1.0	Z	3.3	3.6	C	C	C	C	C	1.6	0.6	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.8	1.0	1.0	1.0	3.9
	1.0	0.9	1.2	SP	3.9	C	C	C	C	C	2.1	1.0	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.8	1.0	1.1	0.9		
13-Sep	0.8	0.7	0.6	0.8	Z	0.8	1.6	2.7	2.4	3.2	1.7	0.6	0.5	0.5	1.0	0.9	0.7	0.8	0.8	1.3	1.4	1.7	1.6	1.9	1.3	4.1
	0.7	0.6	0.7	1.0	SP	1.5	1.9	3.6	2.2	4.1	0.8	0.5	0.7	0.6	1.0	0.8	0.7	0.7	0.9	1.3	1.6	1.7	1.7	2.6		
14-Sep	2.3	2.4	1.7	1.2	1.0	Z	1.2	1.1	3.7	2.1	1.8	1.6	1.0	0.9	0.8	0.3	0.4	0.8	0.3	0.6	0.6	0.9	1.0	1.1	1.3	5.8
	3.7	2.0	1.3	1.1	1.2	SP	1.2	1.2	5.8	1.4	2.2	1.4	0.9	0.7	0.4	0.4	0.4	0.3	0.3	0.8	0.7	1.1	1.0	1.6		
15-Sep	Z	1.8	3.2	2.1	0.6	0.5	0.5	0.5	0.6	0.6	0.6	1.0	0.7	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.8	3.2
	SP	2.9	3.1	0.9	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.6		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025

Day	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	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Sep	0.6	Z	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.7	0.7	0.9	0.9	0.5	0.6	0.6	1.0	0.9	1.1	0.9	0.8	0.7	1.3
	0.5	SP	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.7	0.9	0.6	0.6	0.6	0.7	1.1	1.3	0.9	0.9	0.7		
17-Sep	0.7	0.8	Z	0.7	0.7	0.8	1.1	0.7	0.7	2.1	1.6	1.7	1.5	1.3	1.1	0.6	0.5	0.4	0.5	0.8	0.6	0.5	0.4	0.4	0.9	2.1
	0.8	0.6	SP	0.8	0.7	1.0	0.9	0.6	1.4	1.7	1.8	1.4	1.5	1.4	0.8	0.6	0.4	0.4	0.7	0.9	0.6	0.4	0.4	0.5		
18-Sep	0.7	0.4	0.4	Z	0.8	0.7	0.7	1.4	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.8	0.7	1.0	0.5	0.6	2.2
	0.6	0.4	0.4	SP	0.7	0.7	0.7	2.2	0.6	0.9	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	1.0	0.6	0.6	0.7		
19-Sep	0.7	0.4	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.7
	0.5	0.5	0.5	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3		
20-Sep	0.5	0.5	0.8	1.3	2.5	Z	1.0	2.9	2.2	1.0	0.9	0.9	0.6	0.6	0.3	0.3	0.4	0.3	0.3	0.6	2.7	3.5	4.1	3.1	1.4	4.1
	0.9	0.5	1.1	1.5	2.8	SP	0.9	3.1	1.8	0.8	1.2	0.7	0.5	0.5	0.3	0.3	0.4	0.3	0.7	0.8	3.3	3.5	3.5	3.2		
21-Sep	Z	1.9	1.7	1.0	1.5	1.5	0.7	0.5	0.4	0.6	1.2	0.7	0.7	0.8	0.3	0.3	0.5	0.3	0.3	0.3	2.6	0.4	0.4	0.4	0.8	2.7
	SP	2.7	1.1	1.1	1.6	0.9	0.5	0.4	0.4	1.2	1.0	0.6	0.6	0.8	0.3	0.4	0.3	0.3	0.3	0.4	1.0	0.4	0.4	0.4		
22-Sep	0.4	Z	0.3	0.4	0.4	0.5	0.4	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	0.9	0.4	0.8	0.7	0.4	0.9
	0.4	SP	0.4	0.4	0.5	0.5	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	0.7	0.7	0.5	0.7	0.7		
23-Sep	0.5	0.4	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.8	0.3	0.3	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	0.8
	0.5	0.3	SP	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.3	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		
24-Sep	0.4	0.4	0.4	Z	0.5	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.6	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.5	0.6	0.4	0.5	0.8
	0.4	0.4	0.5	SP	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.6	0.6	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.6	0.4	0.4		
25-Sep	0.5	0.3	0.6	0.6	Z	1.4	1.6	1.4	1.5	1.0	0.7	0.6	0.6	0.5	0.5	0.4	0.7	0.5	0.4	0.4	0.6	0.5	0.4	0.4	0.7	1.9
	0.4	0.7	0.6	0.5	SP	1.5	1.9	1.3	1.4	0.9	0.7	0.6	0.6	0.5	0.5	0.3	0.8	0.4	0.4	0.4	0.5	0.5	0.4	0.4		
26-Sep	0.4	0.4	0.4	0.3	0.3	Z	0.2	0.3	0.4	0.4	0.9	0.5	0.4	0.2	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.9
	0.4	0.4	0.3	0.3	0.3	SP	0.3	0.4	0.4	0.8	0.6	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4		
27-Sep	Z	0.5	0.4	0.7	0.4	0.4	0.4	0.4	0.3	0.8	0.5	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.7	0.3	0.4	0.6	0.4	0.4	0.8
	SP	0.4	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.3	0.8	0.5	0.4		
28-Sep	0.4	Z	0.4	0.5	0.6	0.6	0.4	0.4	0.6	0.9	0.8	0.5	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.3	1.7	1.7	1.2	1.2	0.6	2.1
	0.4	SP	0.6	0.5	0.6	0.6	0.4	0.6	0.5	0.9	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.9	1.6	2.1	0.8	1.7		
29-Sep	0.8	0.9	Z	0.9	0.9	0.7	0.4	0.6	0.3	0.2	0.1	0.2	0.1	0.5	0.1	0.2	0.4	0.2	0.2	1.0	2.7	0.3	0.6	0.7	0.6	3.7
	1.6	0.9	SP	0.9	1.0	0.4	0.5	0.5	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	3.7	0.6	0.5	0.7	0.9		
30-Sep	1.1	0.7	1.4	Z	1.2	1.4	1.3	1.4	1.7	1.3	0.6	0.4	0.3	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.5	0.7	1.7
	0.8	0.9	1.1	SP	1.3	1.4	1.2	1.5	1.3	0.8	0.5	0.4	0.2	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.5		
	0.7	0.8	0.7	0.7	0.9	0.9	0.9	1.1	1.1	1.0	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.7	0.9	0.8	0.8	0.8	Diurnal Average	
	3.7	2.9	3.2	2.1	3.9	3.6	2.6	3.6	5.8	4.1	2.2	1.7	1.5	1.5	1.2	1.0	1.0	1.0	0.9	3.7	3.3	3.5	4.1	3.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance 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 - September 2025

Maximum Value: 4.8 ppb on Sep 14 09:00

Maximum Daily Average: 1.4 ppb on Sep 20

Minimum Value: 0.1 ppb on Sep 29 11:00

Minimum Daily Average: 0.3 ppb on Sep 23

Maximum Diurnal Average: 1.1 ppb at hour 9

Minimum Diurnal Average: 0.4 ppb at hour 16

Monthly Average: 0.73 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.4 Median = 0.5 Q_3 = 0.9 P_{90} = 1.4 P_{99} = 3.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.4	0.4	0.5	Z	0.9	2.1	2.4	1.0	1.1	0.6	0.4	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.3	0.3	0.7	2.4
2-Sep	0.3	0.4	0.4	0.4	0.9	Z	0.4	0.5	0.6	2.2	1.0	0.8	1.0	1.4	0.9	0.9	0.9	0.8	0.6	0.6	0.6	0.3	0.3	0.8	0.7	2.2
3-Sep	Z	1.1	0.6	0.5	0.7	0.9	1.7	1.0	1.1	1.2	1.2	0.6	0.5	0.9	0.8	0.5	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.8	1.7
4-Sep	0.3	Z	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.4	0.3	0.4	0.6
5-Sep	0.4	0.5	Z	0.4	0.3	0.5	0.8	0.8	1.3	0.7	0.8	0.9	0.8	0.4	0.3	0.2	0.2	0.3	0.4	0.7	0.7	2.1	1.5	0.8	0.7	2.1
6-Sep	0.8	1.1	0.9	Z	1.6	1.3	1.2	0.8	2.4	1.7	1.0	0.9	0.9	1.1	0.3	0.3	0.3	0.3	0.5	0.6	1.0	1.0	1.4	2.2	1.0	2.4
7-Sep	0.6	0.5	0.4	0.4	Z	1.9	2.1	1.2	0.7	1.1	1.4	1.5	0.9	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.8	2.1
8-Sep	0.6	0.6	0.6	0.6	0.5	Z	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.4	1.0	2.5	1.7	1.3	0.4	0.7	2.5
9-Sep	Z	0.4	0.3	0.3	0.3	0.9	1.7	2.6	1.3	1.7	1.5	1.1	1.1	1.3	0.8	0.5	0.7	0.9	0.8	0.6	0.5	0.5	0.5	0.5	0.9	2.6
10-Sep	0.4	Z	0.4	1.0	1.2	1.2	1.3	2.4	2.0	1.1	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	1.6	0.7	2.4
11-Sep	1.1	0.6	Z	0.9	1.0	1.1	0.6	0.6	1.0	0.6	0.4	1.0	1.0	0.5	0.5	0.3	0.3	0.4	0.7	1.4	0.9	1.4	1.3	1.2	0.8	1.4
12-Sep	1.0	0.9	1.1	Z	3.6	3.6	C	C	C	C	C	1.3	0.6	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.9	1.0	0.9	1.1	3.6
13-Sep	0.7	0.6	0.6	0.9	Z	1.2	1.7	3.2	2.3	3.7	1.2	0.5	0.6	0.6	1.0	0.8	0.7	0.7	0.9	1.3	1.5	1.7	1.6	2.2	1.3	3.7
14-Sep	3.0	2.2	1.5	1.1	1.1	Z	1.2	1.1	4.8	1.8	2.0	1.5	0.9	0.8	0.6	0.3	0.4	0.5	0.3	0.7	0.6	1.0	1.0	1.3	1.3	4.8
15-Sep	Z	2.3	3.1	1.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.8	3.1
16-Sep	0.5	Z	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.7	0.7	0.9	0.7	0.5	0.6	0.6	1.0	1.1	1.0	0.9	0.7	0.7	1.1
17-Sep	0.7	0.7	Z	0.7	0.7	0.9	1.0	0.7	1.0	1.9	1.7	1.5	1.5	1.3	1.0	0.6	0.5	0.4	0.6	0.9	0.6	0.4	0.4	0.4	0.9	1.9
18-Sep	0.6	0.4	0.4	Z	0.7	0.7	0.7	1.8	0.7	0.8	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.9	0.6	0.8	0.6	0.6	1.8
19-Sep	0.6	0.5	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.6
20-Sep	0.7	0.5	0.9	1.4	2.6	Z	1.0	3.0	2.0	0.9	1.0	0.8	0.6	0.5	0.3	0.3	0.4	0.3	0.5	0.7	3.0	3.5	3.8	3.1	1.4	3.8
21-Sep	Z	2.3	1.4	1.0	1.5	1.2	0.6	0.5	0.4	0.9	1.1	0.6	0.6	0.8	0.3	0.3	0.4	0.3	0.3	0.4	1.8	0.4	0.4	0.4	0.8	2.3
22-Sep	0.4	Z	0.3	0.4	0.5	0.5	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	0.5	0.8	0.4	0.7	0.7	0.4	0.8
23-Sep	0.5	0.3	Z	0.3	0.3	0.3	0.3	0.5	0.4	0.6	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	0.3	0.6
24-Sep	0.4	0.4	0.4	Z	0.5	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.6	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.5	0.5	0.4	0.5	0.8
25-Sep	0.4	0.5	0.6	0.6	Z	1.5	1.7	1.3	1.4	0.9	0.7	0.6	0.6	0.5	0.5	0.4	0.8	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.7	1.7
26-Sep	0.4	0.4	0.3	0.3	0.3	Z	0.3	0.3	0.4	0.6	0.7	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.7
27-Sep	Z	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.7	0.5	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.4	0.6	0.3	0.6	0.5	0.4	0.4	0.7
28-Sep	0.4	Z	0.5	0.5	0.6	0.6	0.4	0.5	0.6	0.9	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.6	1.7	1.9	1.0	1.5	0.6	1.9
29-Sep	1.2	0.9	Z	0.9	1.0	0.6	0.5	0.5	0.3	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	2.4	1.6	0.4	0.7	0.8	0.6	2.4
30-Sep	0.9	0.8	1.3	Z	1.2	1.4	1.3	1.5	1.5	1.0	0.5	0.4	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.4	0.5	0.7	1.5
	0.7	0.8	0.7	0.7	0.9	1.0	0.9	1.1	1.1	1.0	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.7	0.9	0.8	0.8	0.8	Diurnal Average	
	3.0	2.3	3.1	1.5	3.6	3.6	2.1	3.2	4.8	3.7	2.0	1.5	1.5	1.4	1.0	0.9	0.9	0.9	0.9	2.4	3.0	3.5	3.8	3.1	Diurnal Maximum	

Z - zerospan C - Calibration

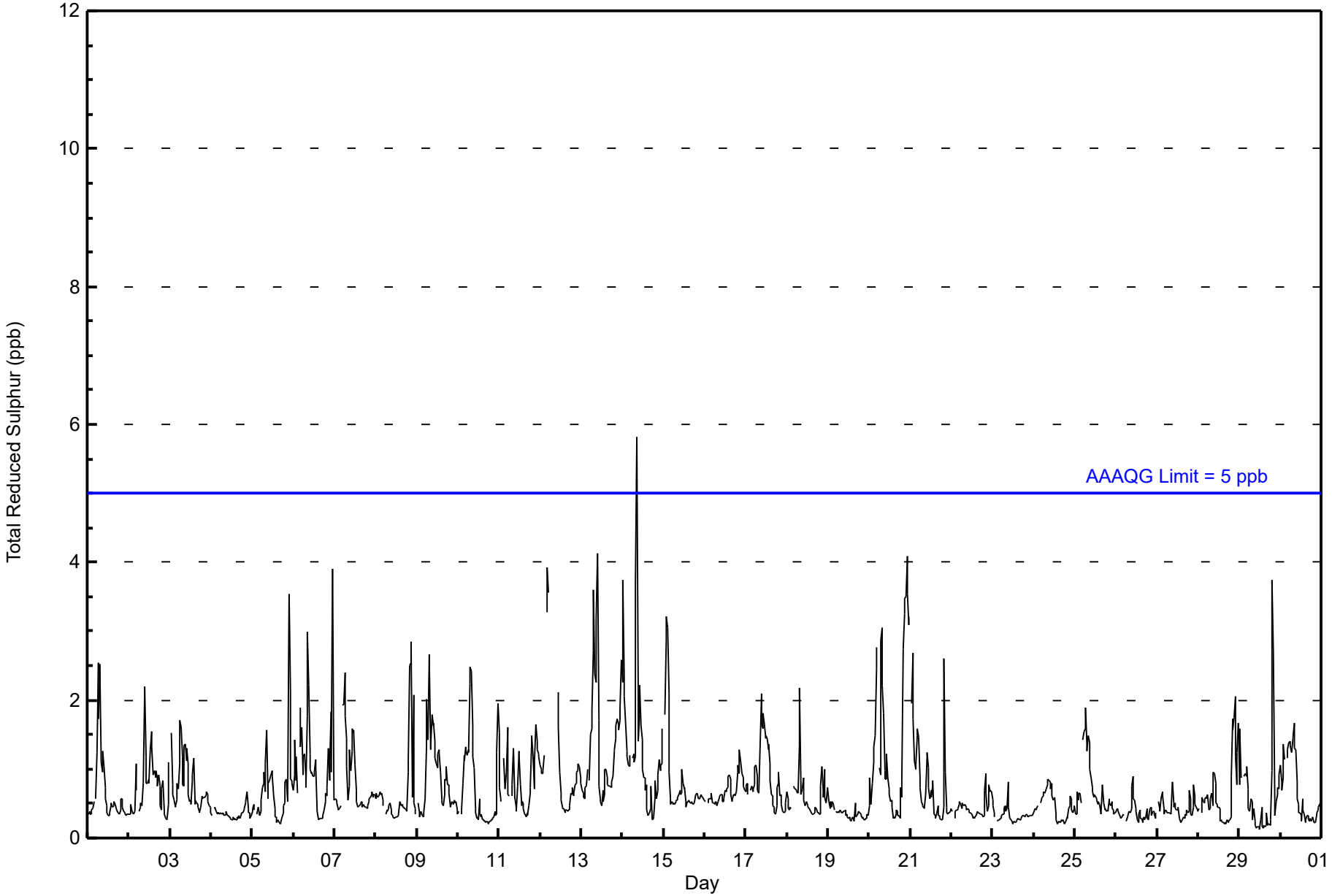
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	670	97.81	97.81
3 - 4	14	2.04	99.85
5 - 7	1	0.15	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: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	43	23	3	1	1	14	56	153	106	100	46	26	21	25	27	25	670
3 - 4	0	0	0	1	0	0	1	7	2	2	0	0	0	0	0	0	13
5 - 7	0	0	0	0	0	0	0	1	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	43	23	3	2	1	14	57	161	108	102	46	26	21	25	27	25	684

Total Number of Valid Hours: 684

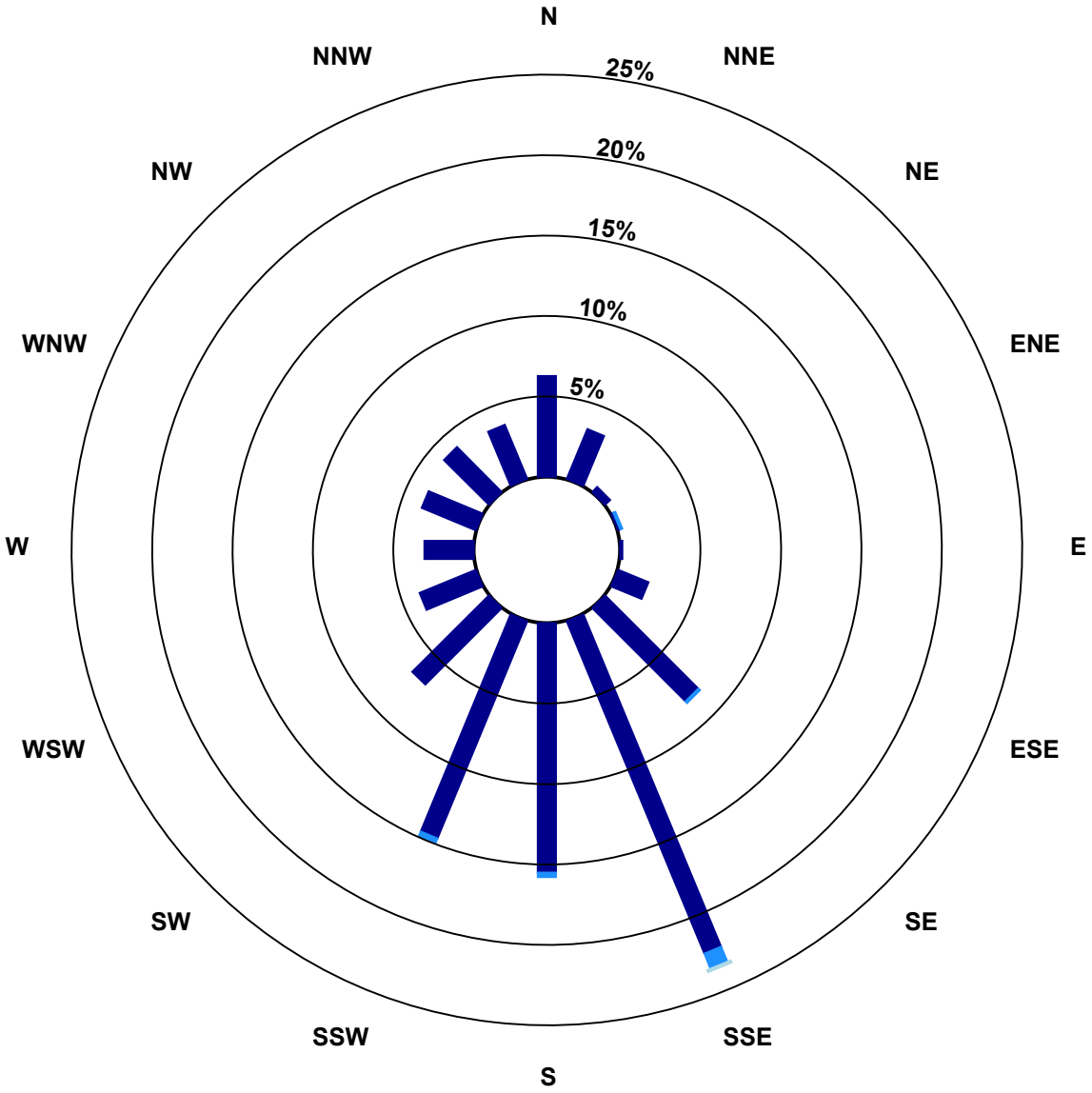
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Fort Hills



Classes (ppb)

- 0 - 2
- 3 - 4
- 5 - 7
- 8 - 11
- > 11

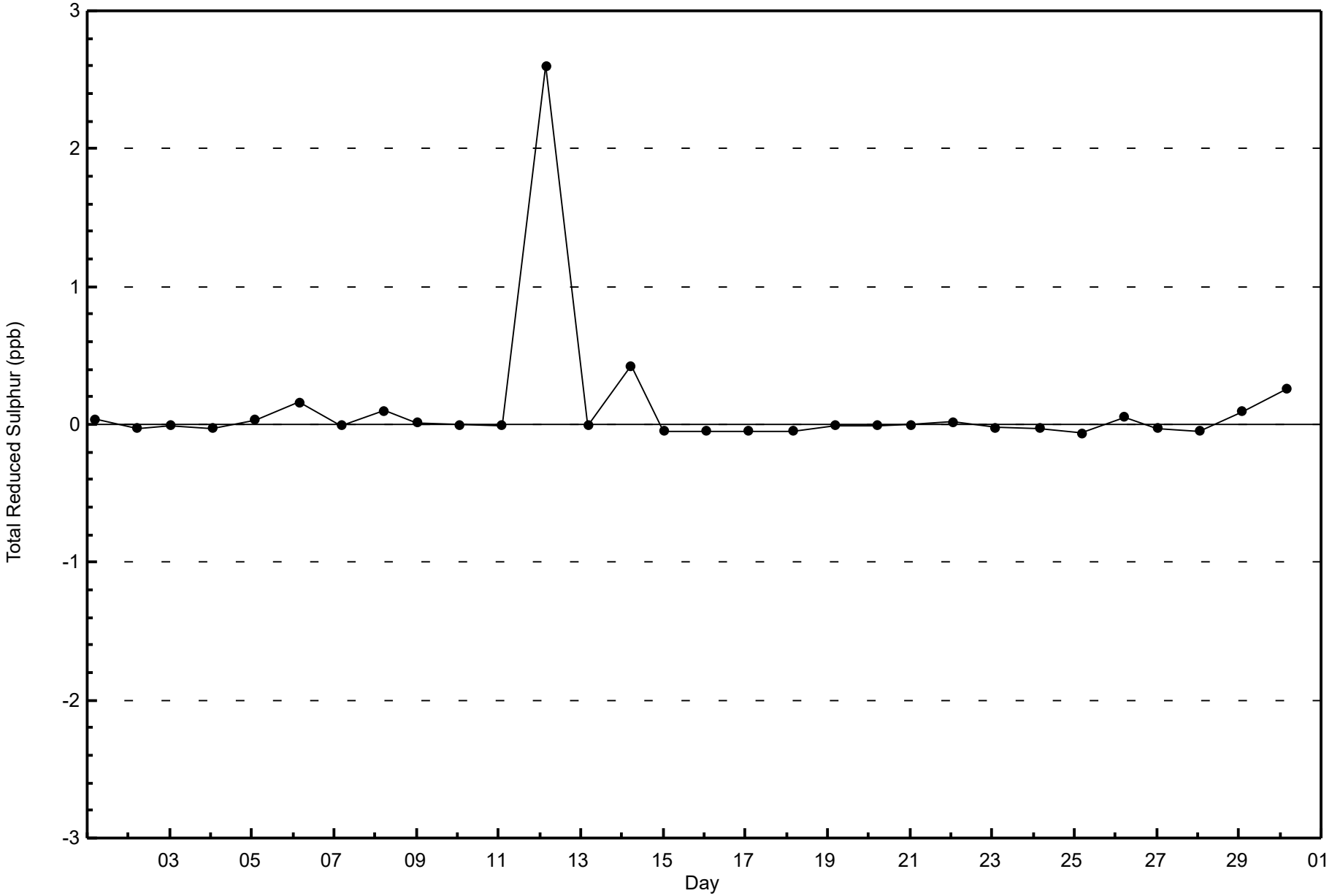
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025

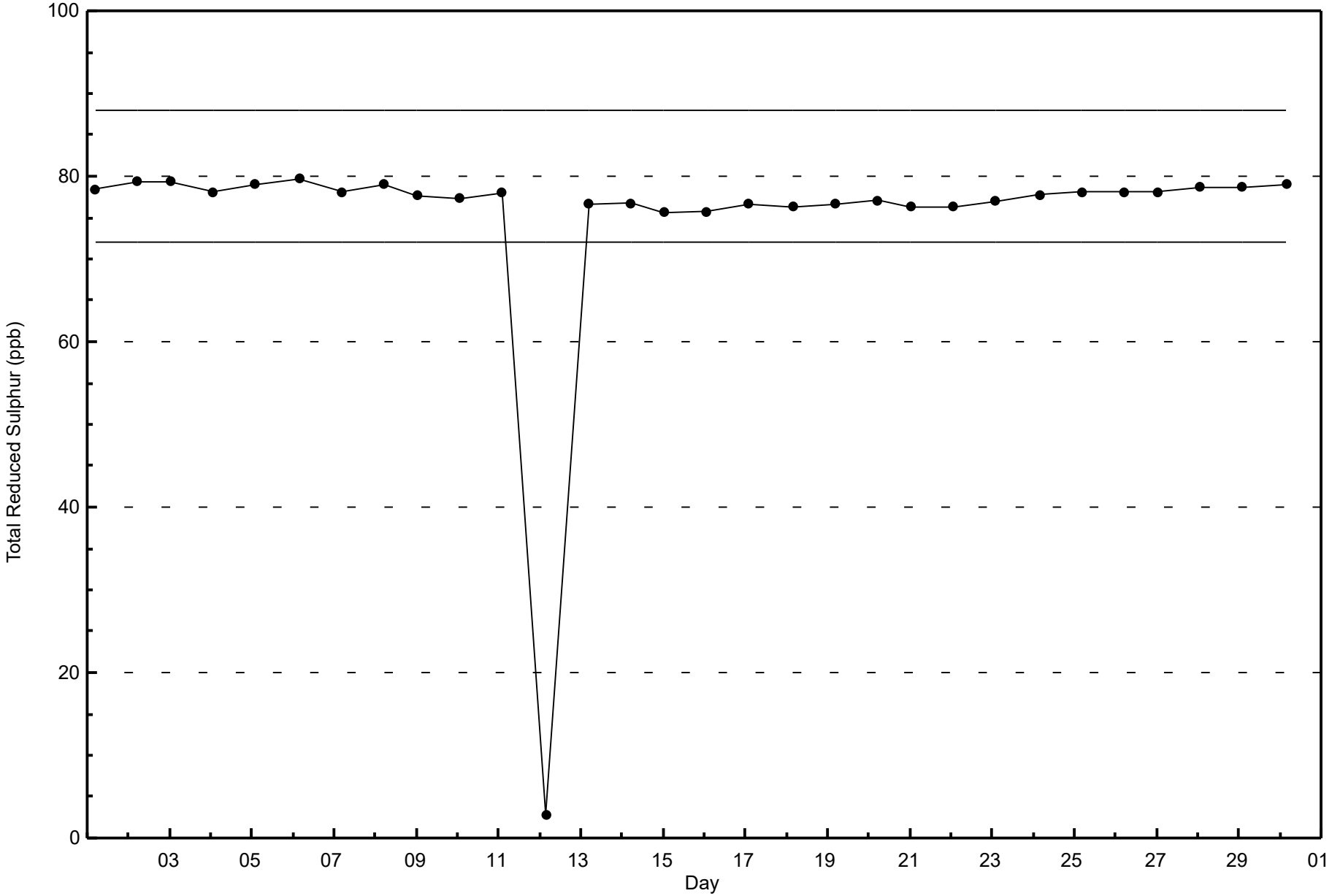


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 7.9 ppm on Sep 9 07:00

Maximum Daily Average: 3.1 ppm on Sep 13

Minimum Value: 2.0 ppm on Sep 11 16:00

Minimum Daily Average: 2.1 ppm on Sep 23

Maximum Diurnal Average: 2.9 ppm at hour 5

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.54 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.3 Q_3 = 2.7 P_{90} = 3.2 P_{99} = 5.5

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.3	Z	2.9	3.3	5.7	3.9	2.4	2.4	2.5	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.8	2.8	2.2	2.2	2.2	2.6	5.7
2-Sep	2.2	2.2	2.2	2.3	Z	2.2	2.2	2.3	2.8	3.8	3.0	2.5	2.3	2.5	2.2	2.1	2.1	2.1	2.4	3.0	2.9	2.2	2.2	2.1	2.4	3.8
3-Sep	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.3	2.6	2.5	2.3	2.3	2.4	2.8	2.7	2.7	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.8
4-Sep	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	2.2	2.4	2.6	2.8	2.5	2.2	2.2	2.2	2.8
5-Sep	2.3	Z	2.4	2.9	2.2	2.2	2.2	2.3	2.5	2.6	2.9	2.8	2.3	2.1	2.1	2.1	2.1	2.2	2.4	3.1	3.1	3.3	3.6	3.4	2.6	3.6
6-Sep	3.6	3.4	Z	4.5	6.6	4.1	2.4	2.2	2.6	2.6	2.7	2.5	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.4	3.4	2.9	2.8	2.7	2.9	6.6
7-Sep	2.4	2.3	2.3	Z	3.1	3.4	3.3	3.1	2.7	3.0	3.2	3.8	3.6	2.5	2.3	2.5	2.5	2.5	2.7	2.5	2.7	3.3	2.9	2.6	2.8	3.8
8-Sep	2.5	2.8	2.8	2.9	Z	2.2	2.2	2.2	2.5	2.3	2.4	2.4	2.4	2.4	2.8	2.8	2.7	2.5	2.2	2.3	2.6	2.5	2.8	2.5	2.5	2.9
9-Sep	3.0	2.6	2.2	2.2	2.2	Z	7.9	2.8	2.5	2.6	2.6	2.6	2.5	2.5	2.2	2.1	2.2	2.3	2.6	2.7	2.9	3.8	3.6	2.9	2.8	7.9
10-Sep	Z	2.1	2.1	2.4	2.9	3.0	3.0	5.6	6.9	2.9	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.4	2.6	6.9
11-Sep	2.3	Z	2.8	2.9	3.4	3.0	2.5	2.2	C	C	C	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.7	6.0	3.4	2.5	2.2	2.3	2.7	6.0
12-Sep	2.4	2.4	Z	3.5	3.4	2.9	2.7	3.2	3.6	3.0	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.7	2.9	4.0	4.2	3.2	2.8	4.2
13-Sep	2.1	2.2	2.1	Z	2.5	2.4	2.6	2.9	2.7	2.9	3.2	2.6	2.6	2.5	2.6	2.6	2.5	2.5	3.0	4.9	5.7	4.9	4.2	5.2	3.1	5.7
14-Sep	5.1	4.0	3.3	3.1	Z	3.7	3.9	3.4	3.6	2.7	2.7	2.7	2.8	2.9	2.6	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.8	5.1
15-Sep	2.1	2.4	2.8	2.5	2.1	Z	2.1	2.1	2.5	2.9	2.7	2.7	2.8	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.3	2.9
16-Sep	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.4	2.7	2.6	2.3	2.4	2.7	3.0	2.7	2.2	2.5	2.8	2.7	3.6	3.0	2.7	2.2	2.5	3.6
17-Sep	2.8	Z	2.1	2.2	2.1	2.2	2.1	2.1	2.3	2.5	2.4	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.9	3.1	2.6	2.5	2.1	2.4	2.3	3.1
18-Sep	2.8	2.4	Z	3.1	3.4	2.7	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.2	2.1	2.0	2.0	3.5	3.3	3.2	2.9	2.5	3.5
19-Sep	3.3	2.9	2.8	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.0	2.1	2.3	2.4	2.1	2.0	2.1	2.1	2.1	2.2	3.3
20-Sep	2.2	2.2	2.4	2.7	Z	2.9	2.4	3.1	2.9	2.4	2.6	2.6	2.5	2.2	2.0	2.0	2.1	2.0	2.1	2.3	2.7	2.7	2.7	2.9	2.5	3.1
21-Sep	2.7	3.8	3.6	2.8	2.9	Z	2.3	2.4	3.0	3.1	3.1	2.6	3.0	2.9	2.1	2.1	2.1	2.1	2.0	2.0	2.7	2.2	2.1	2.5	2.6	3.8
22-Sep	Z	2.5	2.3	2.1	2.3	2.9	2.4	2.3	2.5	2.5	2.6	2.2	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.9
23-Sep	2.3	Z	2.1	2.1	2.1	2.1	2.1	2.4	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.4
24-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.6	2.9	2.4	2.1	2.4	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.5	3.1	2.9	2.3	3.1
25-Sep	3.0	2.1	2.2	Z	2.5	2.6	2.5	2.8	3.1	2.4	2.2	2.3	2.3	2.1	2.1	2.1	3.6	2.3	2.1	2.3	2.9	2.5	2.2	2.1	2.4	3.6
26-Sep	2.5	3.4	2.3	2.2	Z	2.4	2.1	2.4	2.8	3.1	3.0	2.5	2.2	2.0	2.0	2.0	2.3	2.5	3.1	2.2	3.8	3.0	3.0	2.1	2.6	3.8
27-Sep	2.2	2.2	2.9	3.1	2.8	Z	2.2	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.6	2.6	2.4	2.1	2.4	2.5	2.5	2.3	3.1
28-Sep	Z	2.3	2.5	2.4	3.1	3.7	2.5	2.9	3.2	3.1	2.8	2.6	2.4	2.1	2.0	2.1	2.0	2.0	2.0	3.2	4.5	3.2	2.7	2.9	2.7	4.5
29-Sep	2.9	Z	3.0	2.6	2.7	2.5	2.5	2.5	2.5	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	4.8	3.1	2.7	3.6	3.7	2.6	4.8
30-Sep	3.3	3.3	Z	4.5	5.5	5.1	3.5	4.0	3.9	2.4	2.4	2.4	2.3	2.2	2.2	2.4	2.3	2.3	2.6	2.2	2.1	2.6	2.7	2.8	3.0	5.5
	2.7	2.6	2.5	2.7	2.9	2.8	2.7	2.7	2.8	2.6	2.5	2.4	2.4	2.2	2.2	2.2	2.2	2.2	2.4	2.7	2.8	2.7	2.7	2.6	Diurnal Average	
	5.1	4.0	3.6	4.5	6.6	5.1	7.9	5.6	6.9	3.8	3.2	3.8	3.6	2.9	3.0	2.8	3.6	2.6	3.1	6.0	5.7	4.9	4.2	5.2	Diurnal Maximum	

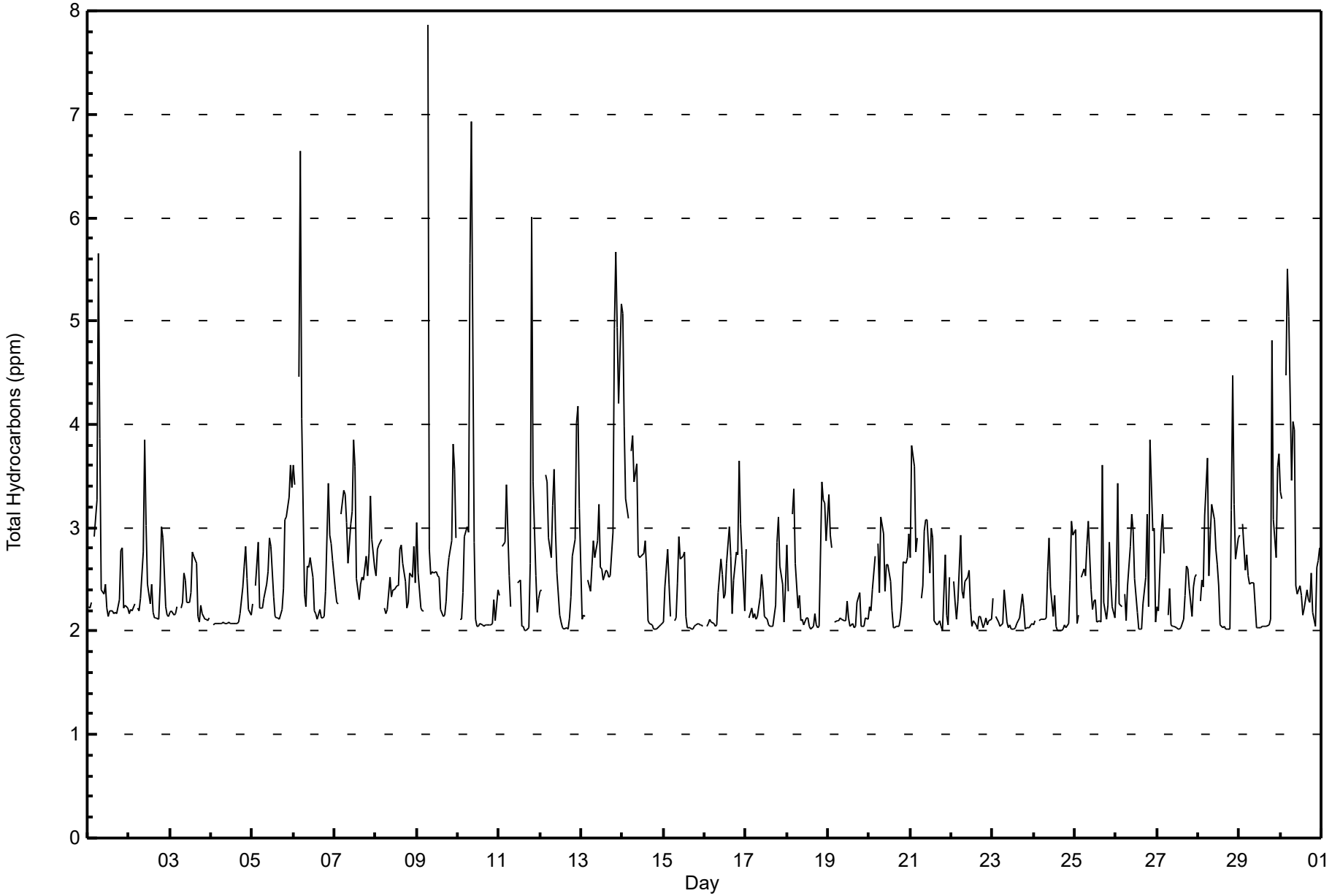
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Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	68	9.90	9.90
2.1 - 3.0	527	76.71	86.61
3.1 - 10.0	92	13.39	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	15	12	11	5	7	4	11	3	0	68
2.1 - 3.0	34	20	4	0	1	6	41	129	90	73	38	16	17	13	23	21	526
3.1 - 10.0	9	3	0	2	0	8	18	14	8	16	5	3	0	1	2	3	92
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	23	4	2	1	14	59	158	110	100	48	26	21	25	28	24	686

Total Number of Valid Hours: 686

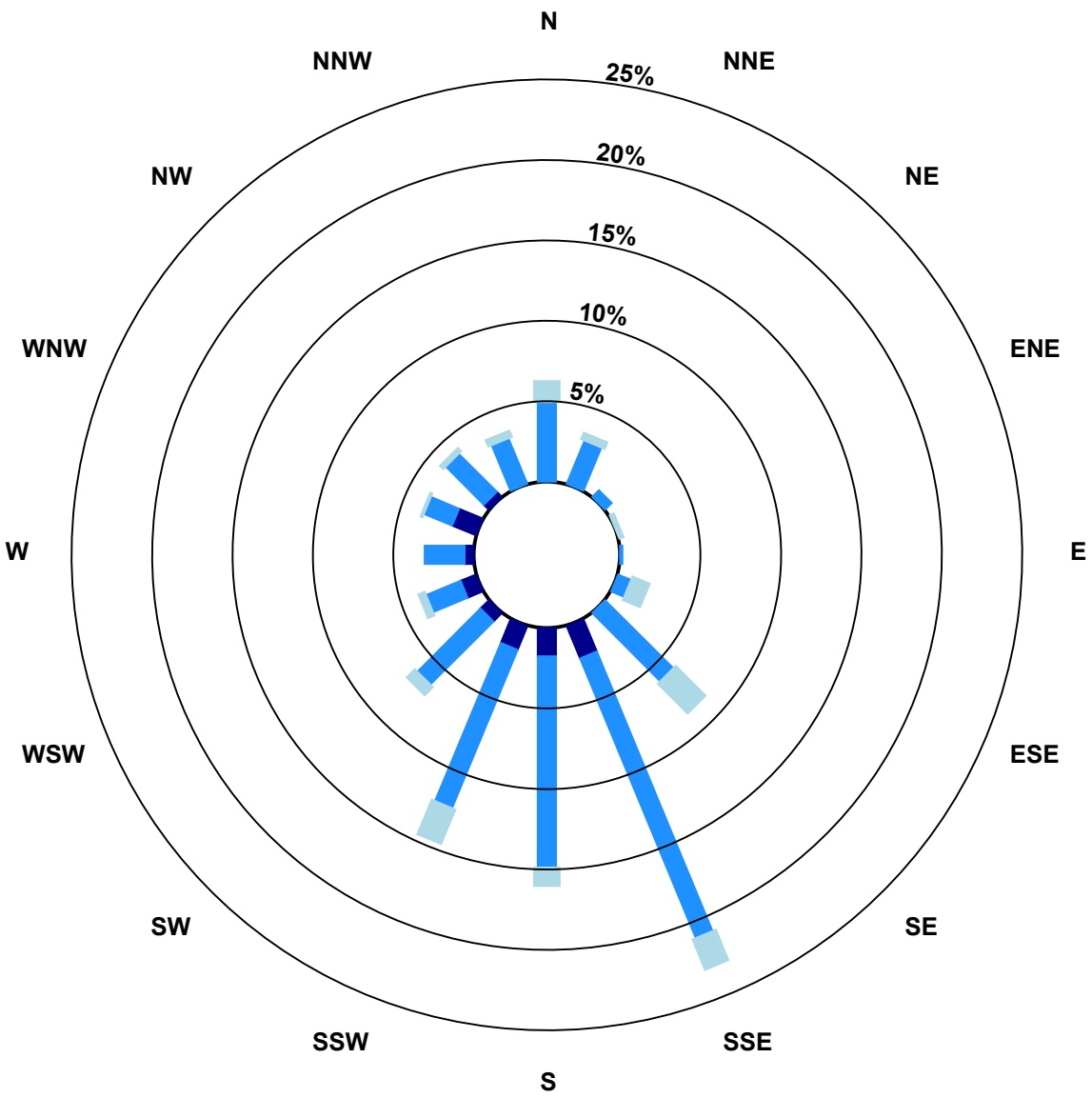
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Fort Hills



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

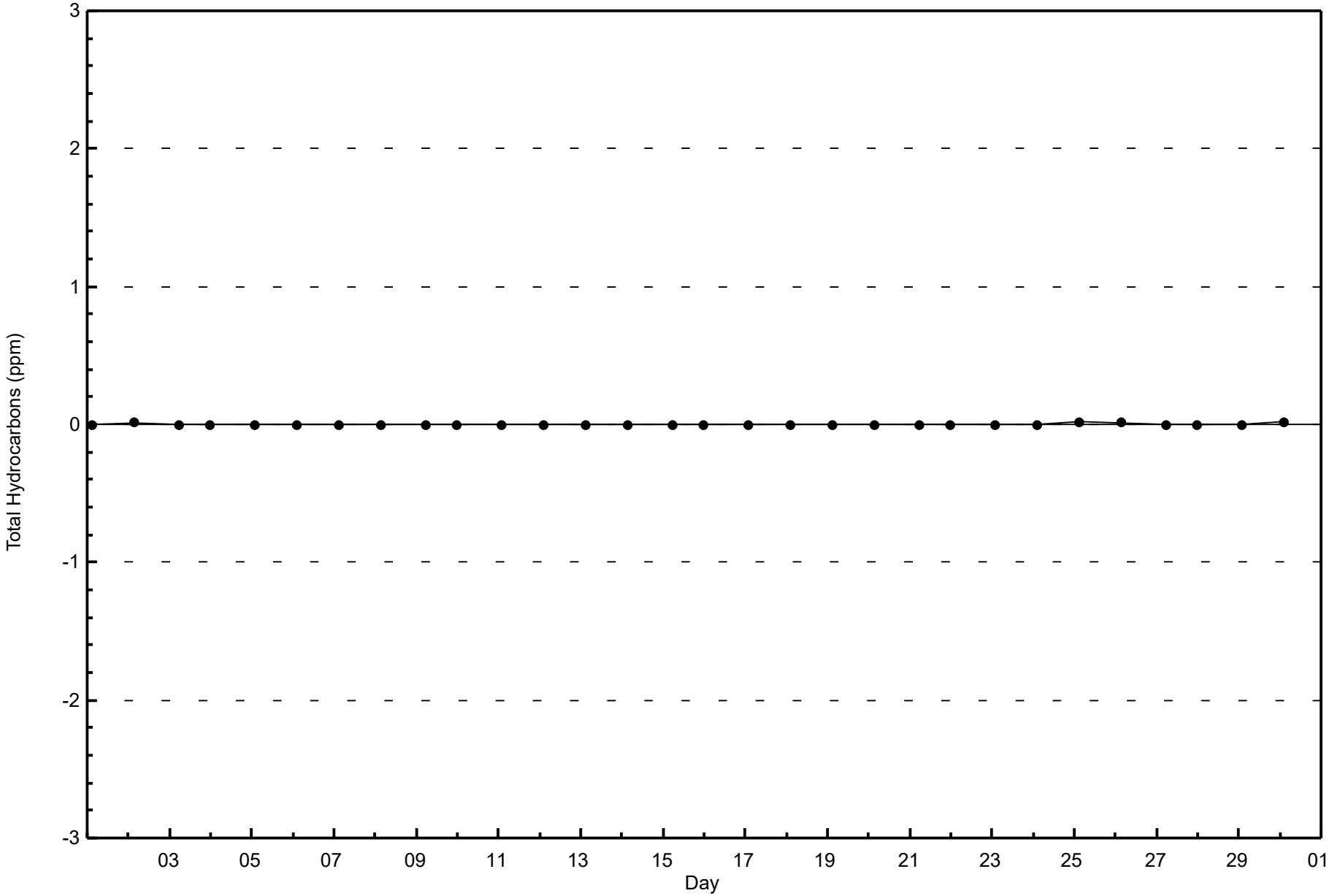
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025

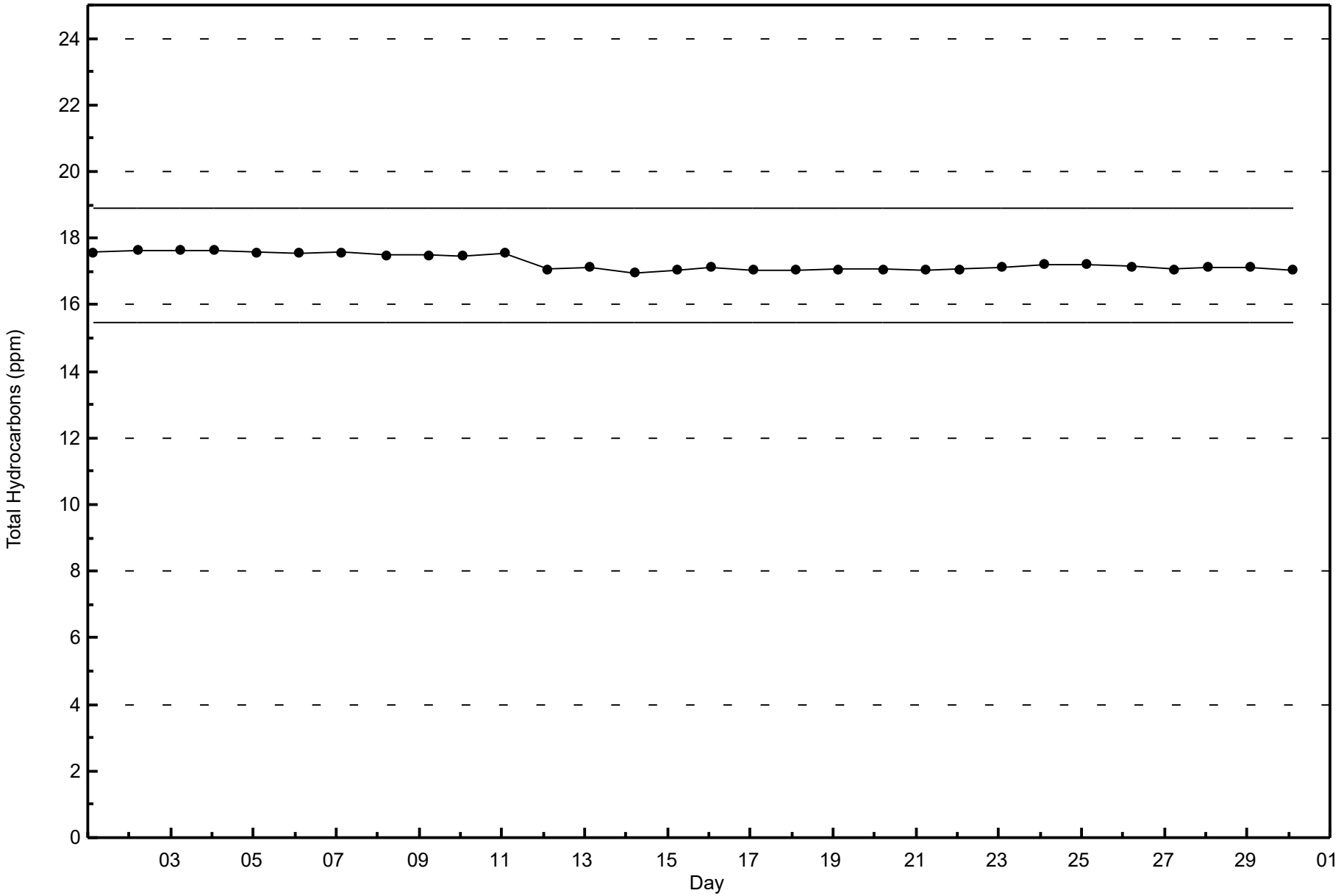


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - September 2025

Maximum Value: 3.068 ppm on Sep 11 20:00

Maximum Daily Average: 0.492 ppm on Sep 13

Minimum Value: 0.000 ppm on Sep 1 01:00

Minimum Daily Average: 0.007 ppm on Sep 23

Maximum Diurnal Average: 0.394 ppm at hour 20

Minimum Diurnal Average: 0.068 ppm at hour 16

Monthly Average: 0.212 ppm

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} = 1.5

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.000	0.000	0.000	Z	0.293	0.564	1.960	1.016	0.080	0.080	0.145	0.018	0.000	0.000	0.004	0.000	0.000	0.007	0.071	0.311	0.272	0.000	0.000	0.000	0.210	1.960
2-Sep	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.003	0.201	1.012	0.534	0.170	0.048	0.190	0.000	0.000	0.000	0.000	0.262	0.638	0.415	0.090	0.000	0.000	0.155	1.012
3-Sep	0.000	0.024	0.000	0.000	0.020	Z	0.000	0.000	0.256	0.218	0.000	0.000	0.000	0.245	0.317	0.277	0.000	0.000	0.096	0.036	0.000	0.000	0.000	0.000	0.065	0.317
4-Sep	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	0.003	0.026	0.208	0.264	0.349	0.186	0.000	0.000	0.045	0.349
5-Sep	0.025	Z	0.126	0.225	0.000	0.000	0.002	0.051	0.102	0.288	0.538	0.480	0.124	0.000	0.000	0.000	0.000	0.061	0.205	0.741	0.818	0.810	0.953	0.864	0.279	0.953
6-Sep	1.071	0.783	Z	1.115	2.618	1.132	0.074	0.007	0.286	0.265	0.291	0.157	0.000	0.000	0.000	0.077	0.005	0.000	0.000	0.184	0.871	0.520	0.388	0.235	0.438	2.618
7-Sep	0.103	0.010	0.000	Z	0.299	0.387	0.412	0.361	0.102	0.415	0.531	0.914	0.808	0.278	0.104	0.229	0.269	0.273	0.316	0.260	0.305	0.368	0.303	0.291	0.319	0.914
8-Sep	0.272	0.372	0.343	0.326	Z	0.000	0.000	0.000	0.248	0.197	0.209	0.233	0.277	0.300	0.291	0.311	0.283	0.253	0.038	0.000	0.000	0.016	0.261	0.161	0.191	0.372
9-Sep	0.452	0.182	0.000	0.000	0.000	Z	0.819	0.235	0.162	0.250	0.224	0.226	0.226	0.235	0.037	0.000	0.015	0.088	0.249	0.279	0.180	0.391	0.387	0.213	0.211	0.819
10-Sep	Z	0.000	0.000	0.000	0.270	0.335	0.327	0.895	1.040	0.201	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.003	0.000	0.137	1.040
11-Sep	0.007	Z	0.236	0.262	0.351	0.305	0.163	0.014	C	C	C	0.320	0.327	0.000	0.000	0.000	0.000	0.000	0.499	3.068	0.971	0.386	0.087	0.185	0.359	3.068
12-Sep	0.241	0.246	Z	0.584	0.655	0.481	0.409	0.634	0.827	0.529	0.301	0.002	0.000	0.000	0.000	0.000	0.000	0.074	0.228	0.448	0.471	0.992	0.873	0.453	0.367	0.992
13-Sep	0.000	0.000	0.000	Z	0.202	0.121	0.263	0.365	0.263	0.331	0.364	0.310	0.349	0.271	0.259	0.270	0.241	0.281	0.500	1.381	1.713	1.323	1.058	1.447	0.492	1.713
14-Sep	1.565	1.072	0.632	0.481	Z	0.812	0.877	0.692	0.736	0.384	0.382	0.354	0.485	0.649	0.432	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	1.565
15-Sep	0.010	0.200	0.289	0.117	0.000	Z	0.000	0.000	0.114	0.326	0.292	0.340	0.383	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092	0.383
16-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.172	0.399	0.363	0.184	0.264	0.463	0.749	0.576	0.100	0.381	0.599	0.549	1.087	0.724	0.462	0.070	0.311	1.087
17-Sep	0.536	Z	0.000	0.072	0.000	0.013	0.000	0.000	0.135	0.313	0.220	0.004	0.000	0.010	0.004	0.000	0.000	0.167	0.679	0.791	0.475	0.342	0.000	0.259	0.175	0.791
18-Sep	0.529	0.193	Z	0.522	0.732	0.351	0.094	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.002	0.000	0.000	0.288	0.545	0.370	0.165	0.173	0.732
19-Sep	0.309	0.254	0.248	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.000	0.000	0.000	0.000	0.000	0.118	0.070	0.000	0.000	0.000	0.000	0.000	0.046	0.309
20-Sep	0.000	0.000	0.053	0.252	Z	0.288	0.044	0.391	0.251	0.013	0.185	0.280	0.223	0.044	0.000	0.000	0.000	0.000	0.031	0.095	0.352	0.363	0.370	0.466	0.161	0.466
21-Sep	0.328	0.750	0.705	0.323	0.319	Z	0.000	0.004	0.189	0.324	0.531	0.348	0.741	0.661	0.000	0.000	0.000	0.000	0.000	0.000	0.306	0.021	0.000	0.100	0.246	0.750
22-Sep	Z	0.072	0.154	0.000	0.000	0.145	0.000	0.000	0.017	0.056	0.110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.154
23-Sep	0.145	Z	0.014	0.000	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	0.000	0.007	0.145
24-Sep	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.087	0.262	0.207	0.000	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.135	0.307	0.122	0.051	0.307
25-Sep	0.135	0.000	0.000	Z	0.214	0.322	0.270	0.417	0.537	0.141	0.000	0.101	0.117	0.000	0.000	0.000	1.212	0.125	0.000	0.048	0.237	0.083	0.059	0.004	0.175	1.212
26-Sep	0.076	0.305	0.020	0.000	Z	0.000	0.000	0.010	0.073	0.172	0.235	0.158	0.045	0.000	0.000	0.000	0.064	0.194	0.198	0.022	0.287	0.065	0.102	0.000	0.088	0.305
27-Sep	0.000	0.000	0.513	0.719	0.075	Z	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.073	0.217	0.000	0.249	0.293	0.157	0.101	0.719
28-Sep	Z	0.096	0.042	0.084	0.214	0.278	0.018	0.083	0.259	0.298	0.324	0.337	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.802	1.350	0.617	0.317	0.513	0.256	1.350
29-Sep	0.575	Z	0.735	0.359	0.512	0.329	0.284	0.252	0.309	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	1.616	0.564	0.349	0.905	0.849	0.340	1.616
30-Sep	0.586	0.553	Z	1.006	1.544	1.297	0.589	0.872	0.831	0.284	0.183	0.232	0.171	0.081	0.086	0.247	0.164	0.124	0.265	0.067	0.000	0.243	0.280	0.294	0.435	1.544
	0.279	0.205	0.164	0.258	0.333	0.286	0.221	0.216	0.251	0.239	0.213	0.174	0.164	0.116	0.076	0.068	0.079	0.073	0.153	0.394	0.377	0.296	0.259	0.228	Diurnal Average	
	1.565	1.072	0.735	1.115	2.618	1.297	1.960	1.016	1.040	1.012	0.538	0.914	0.808	0.661	0.749	0.576	1.212	0.381	0.679	3.068	1.713	1.323	1.058	1.447	Diurnal Maximum	

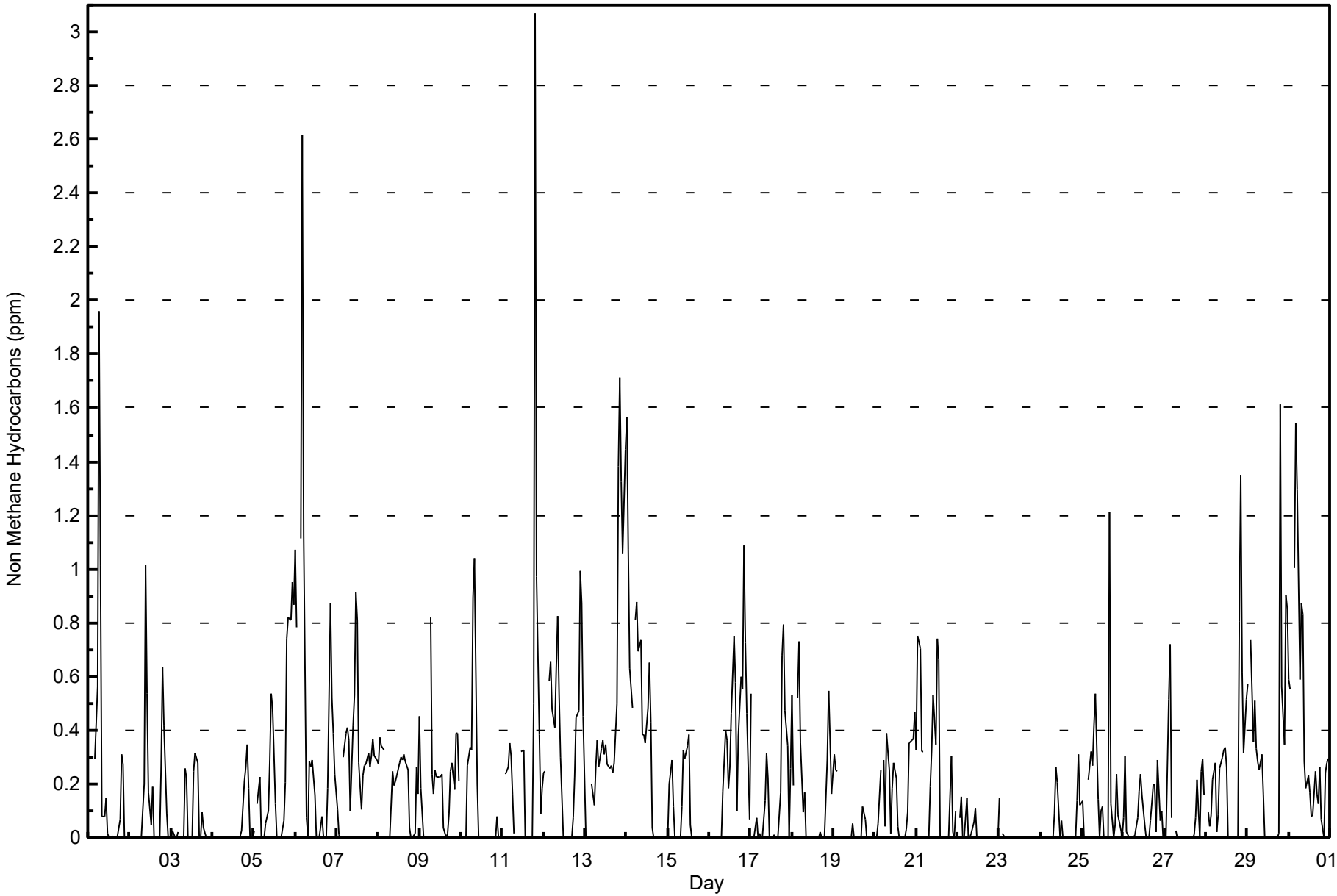
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - September 2025



Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	286	41.63	41.63
0.006 - 0.05	43	6.26	47.89
0.06 - 0.1	61	8.88	56.77
> 0.1	297	43.23	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	11	1	0	0	0	0	9	67	57	35	19	13	16	21	24	12	285
0.006 - 0.05	1	2	0	0	0	0	1	13	8	10	2	2	2	0	0	2	43
0.06 - 0.1	4	4	1	0	0	0	1	17	13	12	5	1	2	0	0	1	61
> 0.1	27	16	3	2	1	14	48	61	32	43	22	10	1	4	4	9	297
Totals	43	23	4	2	1	14	59	158	110	100	48	26	21	25	28	24	686

Total Number of Valid Hours: 686

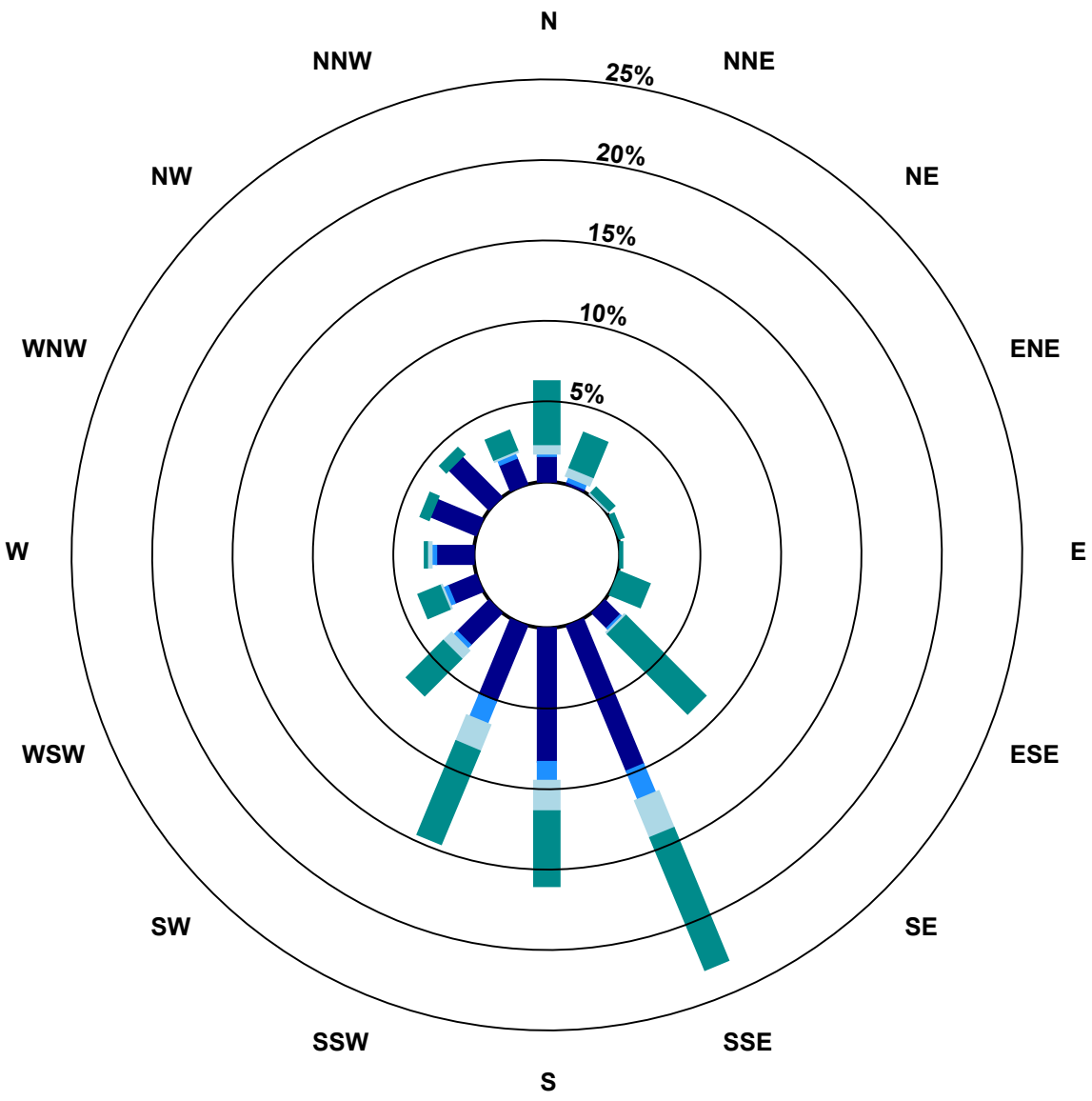
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

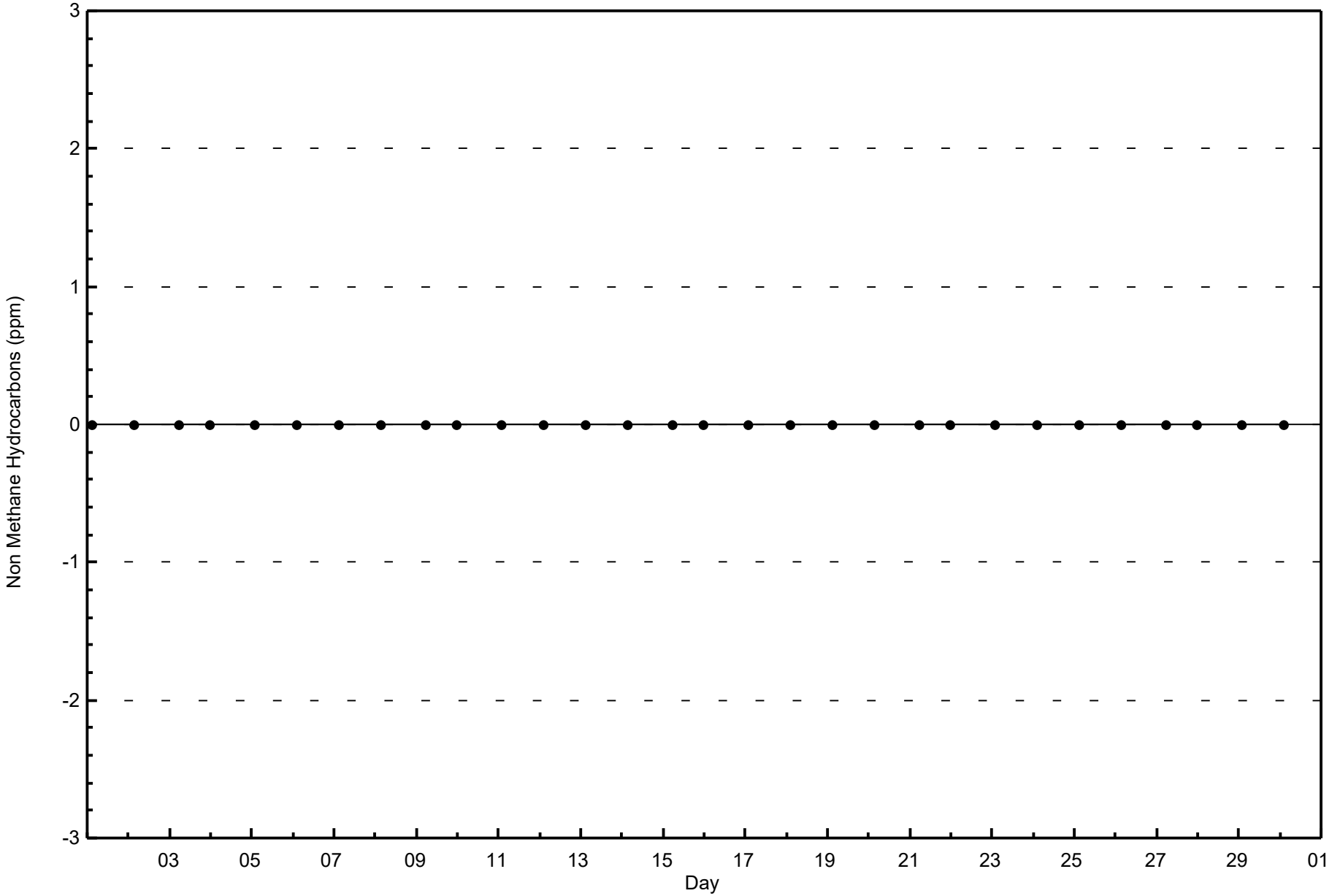
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - September 2025

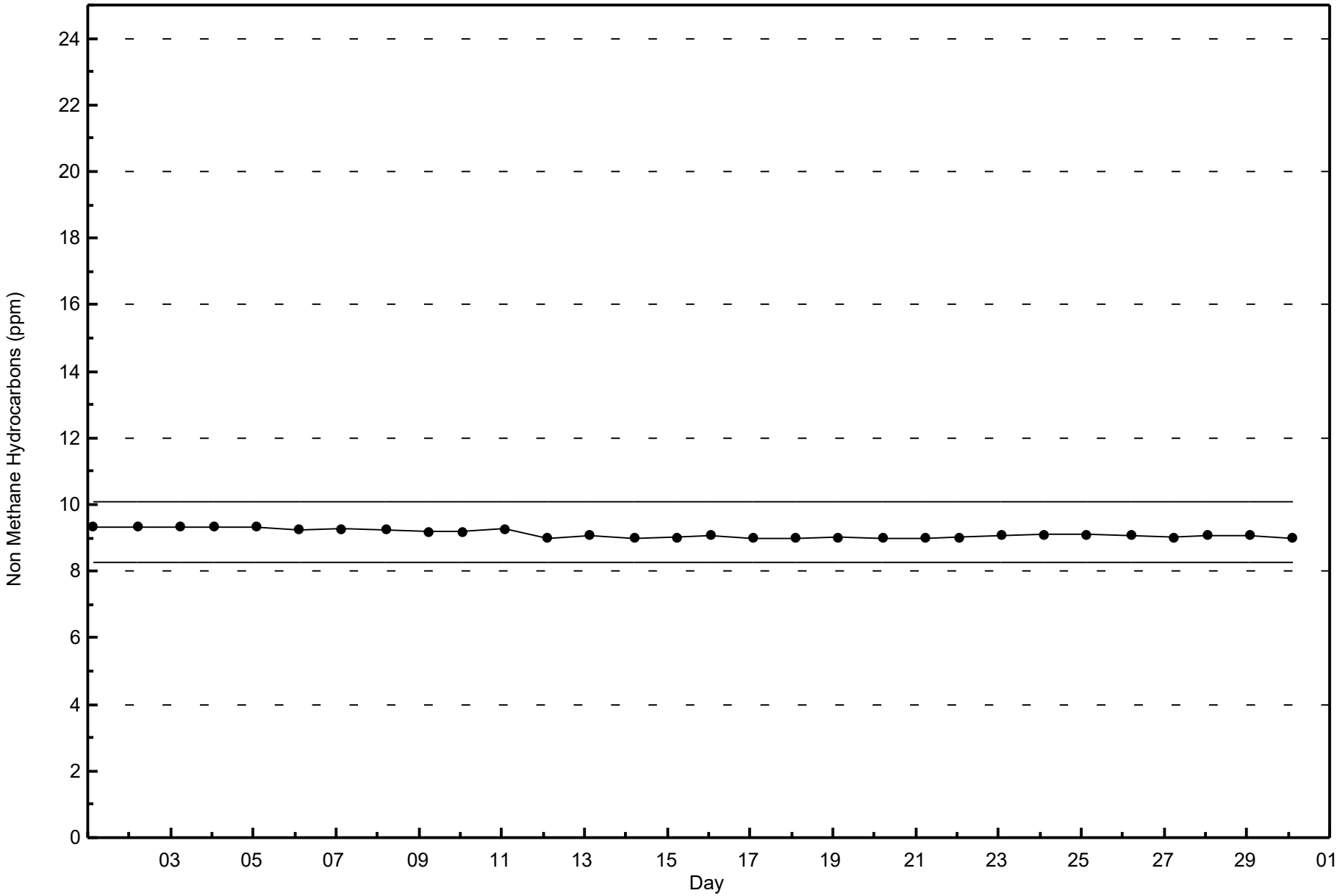


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 7.1 ppm on Sep 9 07:00

Maximum Daily Average: 2.6 ppm on Sep 9

Minimum Value: 2.0 ppm on Sep 11 16:00

Minimum Daily Average: 2.1 ppm on Sep 23

Maximum Diurnal Average: 2.6 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.33 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 2.7 P_{99} = 3.7

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.3	Z	2.6	2.7	3.7	2.9	2.3	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.5	2.2	2.2	2.2	2.4	3.7
2-Sep	2.2	2.2	2.2	2.3	Z	2.2	2.2	2.3	2.6	2.8	2.5	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.4	2.5	2.1	2.2	2.1	2.3	2.8
3-Sep	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
4-Sep	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	2.2	2.4	2.5	2.3	2.2	2.2	2.1	2.5
5-Sep	2.2	Z	2.3	2.6	2.2	2.2	2.2	2.3	2.4	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.5	2.7	2.5	2.3	2.7
6-Sep	2.5	2.6	Z	3.4	4.0	2.9	2.3	2.2	2.3	2.4	2.4	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.6	2.4	2.5	2.4	2.5	4.0
7-Sep	2.3	2.3	2.3	Z	2.8	3.0	2.9	2.7	2.6	2.6	2.6	2.9	2.8	2.2	2.2	2.2	2.3	2.2	2.4	2.3	2.4	2.9	2.6	2.3	2.5	3.0
8-Sep	2.3	2.4	2.5	2.6	Z	2.2	2.2	2.2	2.3	2.1	2.2	2.2	2.2	2.1	2.5	2.5	2.4	2.2	2.2	2.3	2.6	2.5	2.6	2.3	2.3	2.6
9-Sep	2.6	2.4	2.2	2.2	2.2	Z	7.1	2.6	2.4	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.4	2.7	3.4	3.2	2.7	2.6	7.1
10-Sep	Z	2.1	2.1	2.4	2.6	2.7	2.6	4.7	5.9	2.7	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.4	2.5	5.9
11-Sep	2.3	Z	2.6	2.6	3.1	2.7	2.4	2.2	C	C	C	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.2	2.9	2.5	2.2	2.1	2.1	2.3	3.1
12-Sep	2.2	2.1	Z	2.9	2.8	2.4	2.3	2.6	2.7	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.4	3.0	3.3	2.7	2.4	3.3
13-Sep	2.1	2.2	2.1	Z	2.3	2.3	2.4	2.5	2.5	2.5	2.9	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.5	3.5	4.0	3.6	3.1	3.7	2.6	4.0
14-Sep	3.5	2.9	2.6	2.6	Z	2.9	3.0	2.8	2.9	2.4	2.3	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.4	3.5
15-Sep	2.1	2.2	2.5	2.3	2.1	Z	2.1	2.1	2.3	2.6	2.4	2.4	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.2	2.6
16-Sep	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.2	2.6	2.3	2.3	2.1	2.2	2.6
17-Sep	2.3	Z	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.1	2.3
18-Sep	2.3	2.2	Z	2.6	2.6	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	3.2	2.7	2.9	2.7	2.3	3.2
19-Sep	3.0	2.7	2.6	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.0	2.1	2.1	2.1	2.2	3.0
20-Sep	2.2	2.2	2.3	2.5	Z	2.6	2.3	2.7	2.7	2.4	2.5	2.4	2.3	2.2	2.0	2.0	2.1	2.0	2.1	2.2	2.3	2.3	2.3	2.5	2.3	2.7
21-Sep	2.4	3.0	2.9	2.4	2.6	Z	2.3	2.4	2.8	2.8	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.4	2.1	2.1	2.4	2.4	3.0
22-Sep	Z	2.4	2.1	2.1	2.3	2.8	2.4	2.3	2.5	2.5	2.5	2.2	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.8
23-Sep	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.4	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.4
24-Sep	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.5	2.6	2.2	2.1	2.3	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.4	2.8	2.8	2.2	2.8
25-Sep	2.8	2.1	2.2	Z	2.3	2.3	2.3	2.4	2.5	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.4	2.2	2.1	2.2	2.6	2.4	2.2	2.1	2.3	2.8
26-Sep	2.4	3.1	2.3	2.2	Z	2.4	2.1	2.4	2.7	3.0	2.7	2.3	2.1	2.0	2.0	2.0	2.2	2.3	2.9	2.2	3.6	2.9	2.9	2.1	2.5	3.6
27-Sep	2.2	2.2	2.4	2.4	2.7	Z	2.1	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.6	2.5	2.2	2.1	2.2	2.2	2.4	2.2	2.7
28-Sep	Z	2.2	2.5	2.3	2.9	3.4	2.5	2.8	3.0	2.8	2.5	2.3	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.4	3.1	2.6	2.4	2.4	2.5	3.4
29-Sep	2.4	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	3.2	2.5	2.4	2.7	2.9	2.3	3.2
30-Sep	2.8	2.7	Z	3.5	4.0	3.8	2.9	3.2	3.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.3	2.1	2.1	2.4	2.4	2.5	2.6	4.0
	2.4	2.4	2.3	2.4	2.5	2.5	2.5	2.5	2.6	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.5	2.4	2.4	2.4	Diurnal Average	
	3.5	3.1	2.9	3.5	4.0	3.8	7.1	4.7	5.9	3.0	2.9	2.9	2.8	2.5	2.5	2.5	2.4	2.6	2.9	3.5	4.0	3.6	3.3	3.7	Diurnal Maximum	

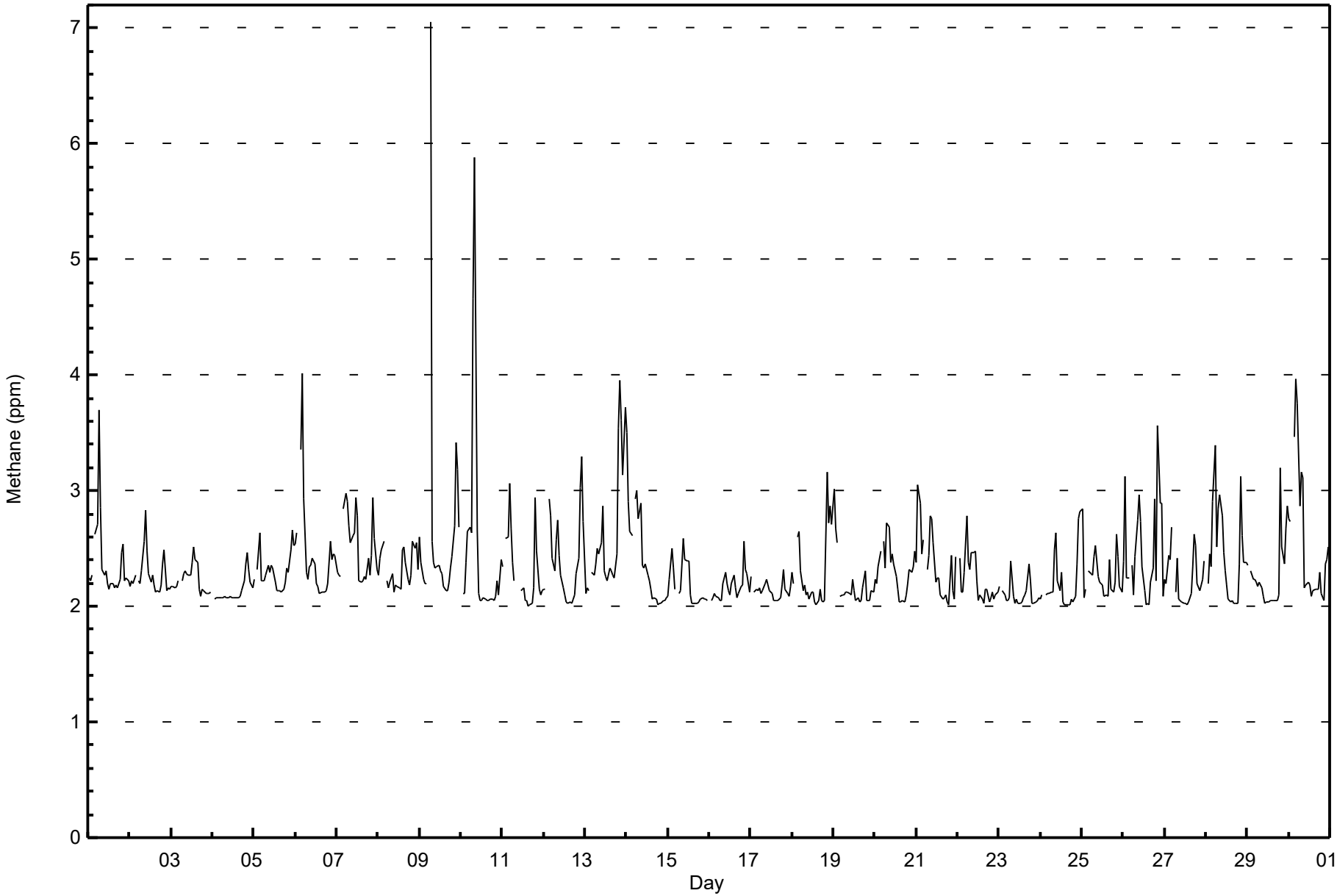
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort Hills - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	69	10.04	10.04
2.1 - 3.0	591	86.03	96.07
3.1 - 10.0	27	3.93	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort Hills - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	16	12	11	5	7	4	11	3	0	69
2.1 - 3.0	38	21	4	1	1	13	56	140	97	82	42	18	17	13	25	22	590
3.1 - 10.0	5	2	0	1	0	1	3	2	1	7	1	1	0	1	0	2	27
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	23	4	2	1	14	59	158	110	100	48	26	21	25	28	24	686

Total Number of Valid Hours: 686

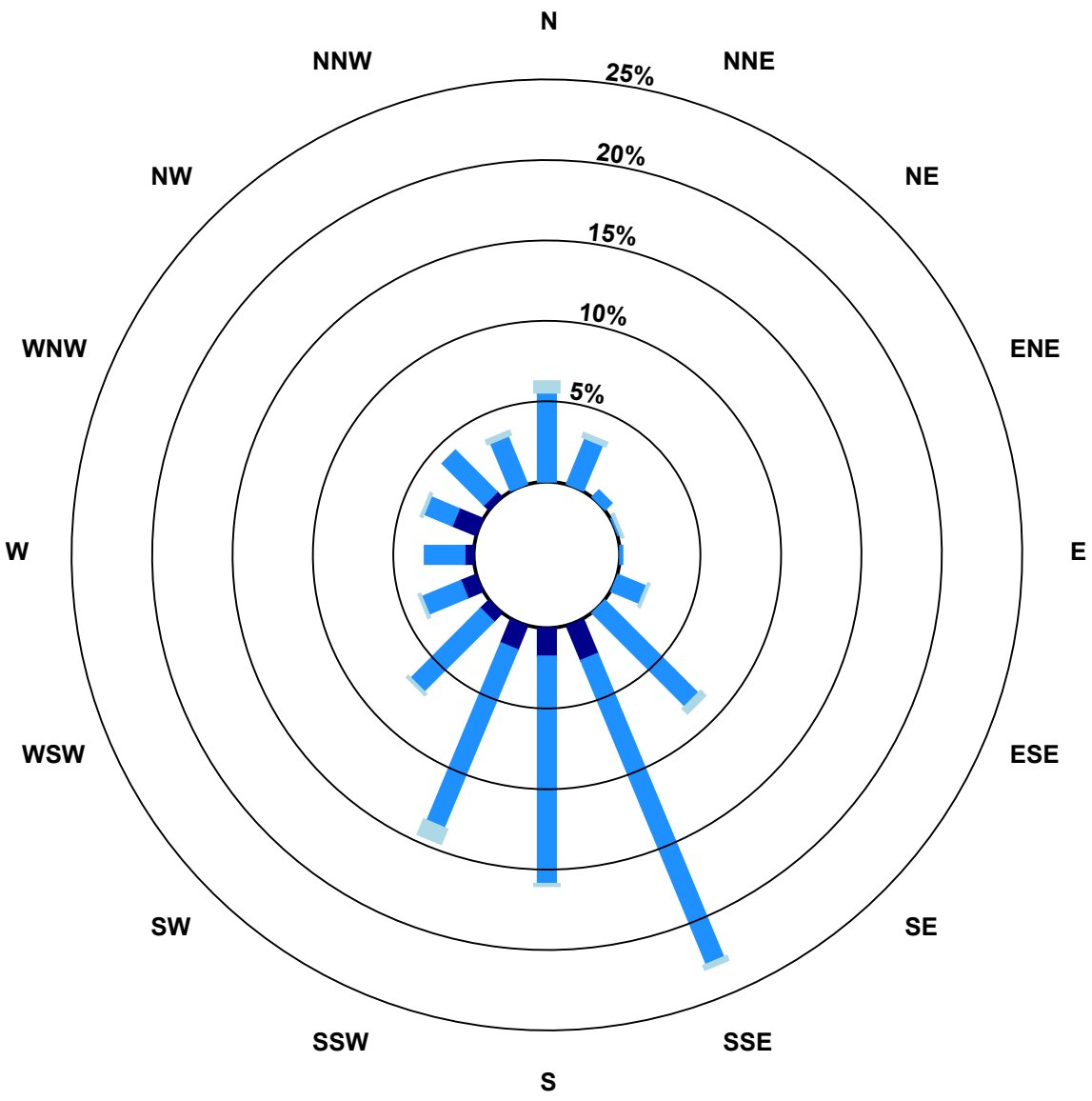
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Fort Hills



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

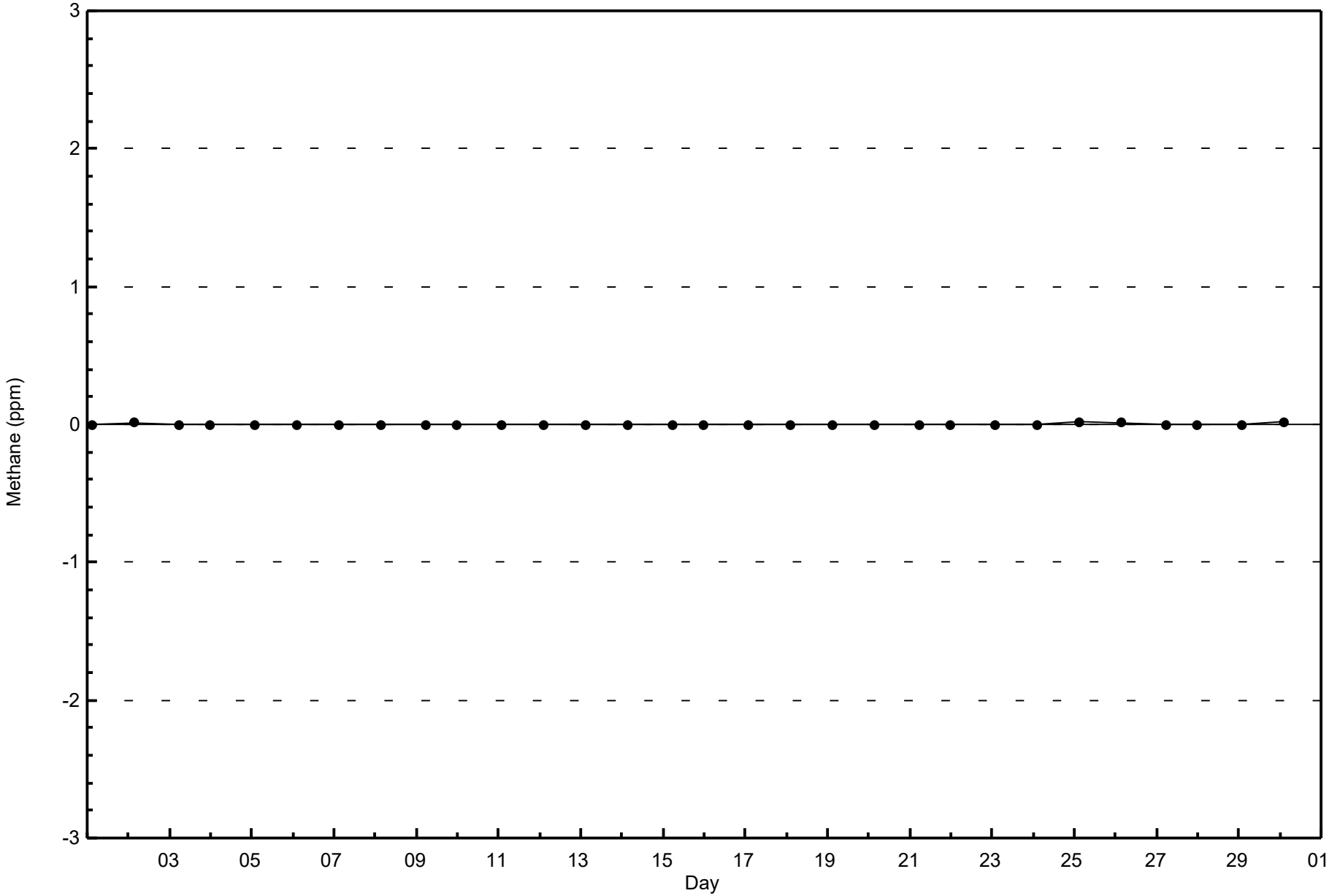
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort Hills - September 2025

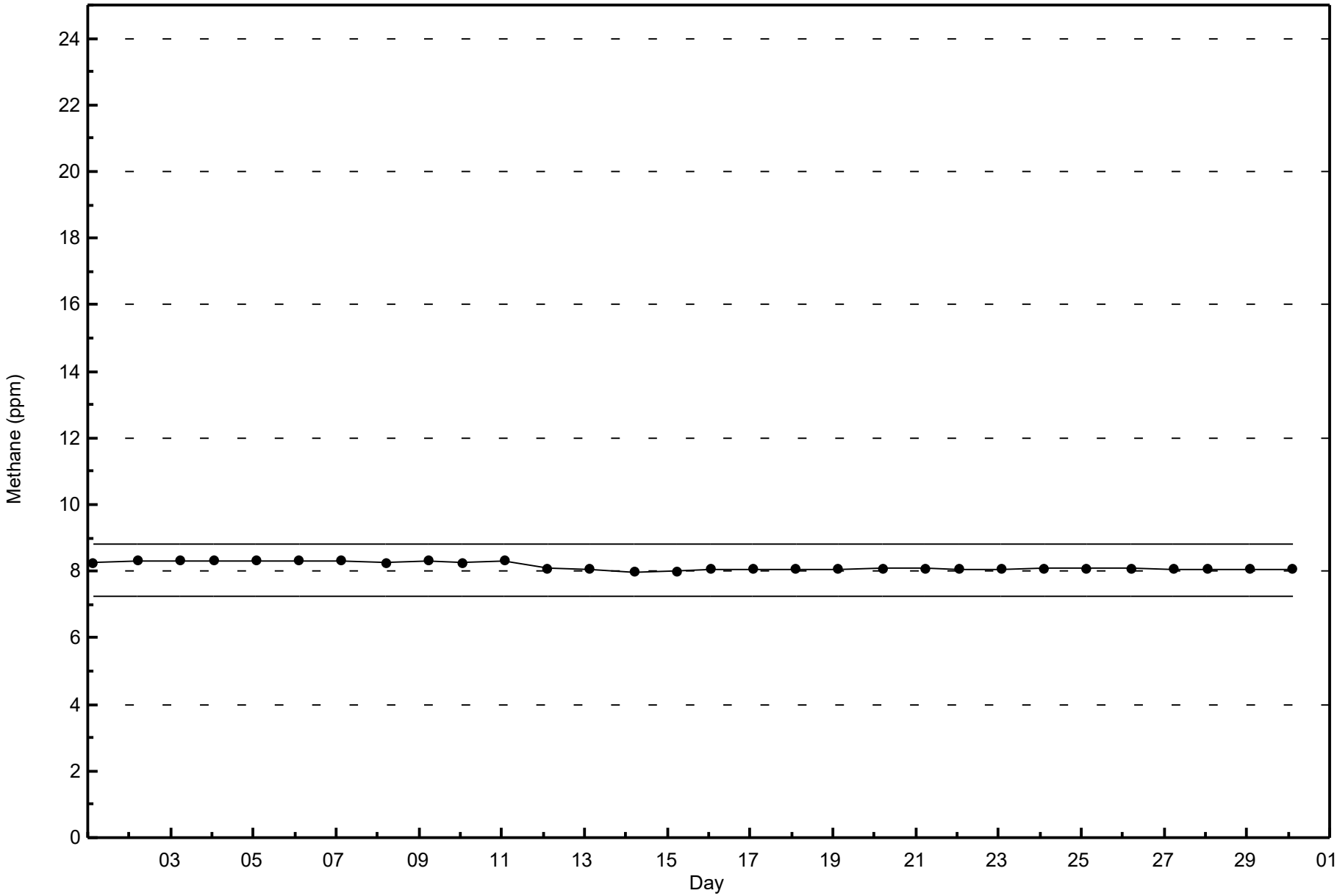


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 219.5 ppb on Sep 30 03:00

Maximum Daily Average: 54.0 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 3 01:00

Minimum Daily Average: 0.5 ppb on Sep 23

Maximum Diurnal Average: 21.0 ppb at hour 5

Minimum Diurnal Average: 0.8 ppb at hour 18

Monthly Average: 9.46 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 1.5 Q_3 = 7.2 P_{90} = 23.2 P_{99} = 142.5

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.8	Z	1.1	17.5	17.4	40.9	112.4	47.0	5.7	5.1	9.2	3.8	1.1	0.7	1.0	0.7	0.4	1.2	3.3	26.8	33.2	0.9	0.0	0.1	14.4	112.4
2-Sep	0.1	0.2	Z	0.8	1.1	0.5	0.3	3.4	26.7	63.3	23.1	7.4	5.0	7.6	2.4	1.8	1.9	0.7	2.2	17.7	19.7	0.8	0.3	0.0	8.1	63.3
3-Sep	0.0	0.1	0.9	Z	0.8	0.5	0.9	1.6	3.0	1.8	1.1	1.4	2.2	5.8	6.1	5.4	0.1	0.1	0.6	0.2	0.0	0.0	0.0	0.0	1.4	6.1
4-Sep	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.2	0.8	0.8	0.1	0.0	0.0	0.3	0.2	0.7	1.2	1.1	5.3	19.0	6.2	0.2	0.1	1.6	19.0
5-Sep	2.3	13.9	5.0	21.8	1.0	Z	3.1	6.3	8.6	6.8	4.7	4.9	2.3	0.4	0.1	0.1	0.2	0.5	0.5	6.5	4.3	15.0	18.8	38.6	7.2	38.6
6-Sep	Z	48.4	29.1	54.7	94.3	44.1	2.6	2.6	6.6	10.2	8.4	5.6	2.0	1.7	0.5	0.3	0.2	0.1	0.1	0.0	2.0	0.2	0.3	1.0	13.7	94.3
7-Sep	2.8	Z	0.5	0.6	9.8	8.1	9.2	8.4	4.7	8.5	8.5	42.3	29.9	5.4	2.4	4.0	3.6	5.8	9.4	9.9	30.1	54.1	32.3	27.5	13.8	54.1
8-Sep	24.3	25.9	Z	35.3	5.6	6.7	2.7	6.6	15.6	4.1	6.2	5.3	4.7	3.9	8.1	6.5	3.5	1.4	0.2	0.0	1.2	0.6	1.7	0.0	7.4	35.3
9-Sep	23.3	9.1	0.0	Z	0.0	87.4	150.9	C	C	C	C	C	3.7	1.7	0.6	0.1	0.3	0.1	0.0	0.0	0.0	3.9	6.6	2.5	16.1	150.9
10-Sep	0.0	0.0	0.0	0.6	Z	11.4	24.9	91.1	87.0	8.7	0.4	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.2	0.7	0.0	10.9	0.1	0.0	10.3	91.1
11-Sep	0.5	0.5	9.3	9.9	22.5	Z	5.5	3.8	6.1	2.6	1.7	4.0	3.4	1.2	0.6	0.7	0.7	0.9	6.1	47.5	15.2	2.4	0.2	0.0	6.3	47.5
12-Sep	Z	0.1	1.0	20.1	36.2	4.5	0.5	5.4	6.5	3.6	1.5	0.6	0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.7	5.3	54.9	42.4	17.8	8.8	54.9
13-Sep	1.0	Z	0.0	1.6	1.2	0.2	1.5	9.2	10.5	11.5	19.6	10.3	5.9	3.8	3.2	2.0	0.9	0.5	11.5	123.3	161.1	104.9	93.5	143.6	31.3	161.1
14-Sep	161.3	48.0	Z	30.9	32.4	41.1	37.7	10.8	9.9	1.5	2.3	2.1	2.3	2.6	1.7	0.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	16.8	161.3
15-Sep	0.0	0.4	6.5	Z	0.1	0.2	0.3	1.5	9.1	14.5	7.3	7.0	3.9	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	14.5
16-Sep	0.0	0.0	0.1	0.1	Z	0.1	0.0	1.5	16.0	22.1	7.0	5.5	4.8	12.2	10.2	4.2	0.6	0.7	0.3	0.3	42.2	12.5	4.5	0.3	6.3	42.2
17-Sep	8.6	3.6	0.2	5.0	9.6	Z	3.3	15.5	8.7	8.5	7.3	5.2	2.3	0.9	0.8	0.5	0.5	0.8	1.0	7.0	2.1	3.4	0.7	3.5	4.3	15.5
18-Sep	Z	0.5	1.1	51.7	30.3	12.0	1.1	3.2	1.6	0.8	0.1	0.5	0.5	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.4	12.8	13.5	2.7	5.9	51.7
19-Sep	3.3	Z	3.3	2.7	0.2	0.3	0.4	0.6	1.2	0.4	0.2	2.9	0.8	0.4	0.3	0.3	0.3	1.7	0.5	0.0	0.0	0.0	0.0	0.0	0.9	3.3
20-Sep	2.3	0.8	Z	9.3	32.5	6.5	1.2	9.2	15.2	5.1	4.7	1.5	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.3	0.0	0.6	4.0	32.5
21-Sep	0.1	54.1	21.1	Z	0.1	0.1	0.0	1.7	9.9	17.5	29.2	9.3	8.0	4.3	0.5	0.3	0.0	0.0	0.0	0.0	4.9	0.0	0.0	1.4	7.1	54.1
22-Sep	2.9	2.2	0.2	0.2	Z	3.9	1.6	9.1	11.7	8.7	4.0	0.9	0.0	0.6	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.0	11.7
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	4.1	2.6	1.0	1.3	0.5	0.3	0.4	0.5	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.5	4.1
24-Sep	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	3.6	14.3	12.3	4.8	5.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	9.8	8.3	2.8	14.3
25-Sep	10.0	Z	1.5	0.1	2.0	0.6	1.5	2.6	6.4	5.6	3.5	3.3	3.4	3.6	3.3	1.2	7.8	0.9	0.4	3.4	0.2	0.0	0.0	0.0	2.7	10.0
26-Sep	1.1	10.4	Z	0.4	6.3	4.6	0.3	9.2	12.5	15.4	13.3	8.5	2.9	0.2	0.3	0.0	2.2	3.1	2.5	0.0	9.6	0.7	1.6	0.0	4.6	15.4
27-Sep	0.0	0.1	3.3	Z	3.4	3.9	0.8	4.9	1.9	0.8	0.7	0.8	0.4	0.0	0.3	0.5	0.6	0.5	0.1	0.4	0.0	2.0	4.3	4.2	1.5	4.9
28-Sep	2.2	3.4	9.4	4.7	Z	28.7	1.7	14.6	22.9	19.4	13.9	7.9	7.7	0.4	0.2	0.2	0.1	0.0	0.0	18.5	73.9	50.6	27.3	19.9	14.2	73.9
29-Sep	30.0	24.9	19.1	14.2	8.7	Z	3.7	6.9	7.4	6.1	3.0	3.0	1.7	1.4	0.3	0.4	0.0	0.0	0.7	80.6	33.8	13.0	40.4	50.1	15.2	80.6
30-Sep	Z	58.9	219.5	142.3	209.8	164.5	49.9	134.8	125.6	13.4	7.2	6.1	4.1	1.7	1.0	1.4	3.0	3.6	12.3	2.9	0.0	17.5	24.5	37.4	54.0	219.5
	11.1	12.2	13.3	17.0	21.0	18.8	13.9	14.3	15.4	9.7	7.0	5.4	3.7	2.1	1.5	1.1	1.0	0.8	1.8	11.7	15.4	12.4	10.8	12.0	Diurnal Average	
	161.3	58.9	219.5	142.3	209.8	164.5	150.9	134.8	125.6	63.3	29.2	42.3	29.9	12.2	10.2	6.5	7.8	5.8	12.3	123.3	161.1	104.9	93.5	143.6	Diurnal Maximum	

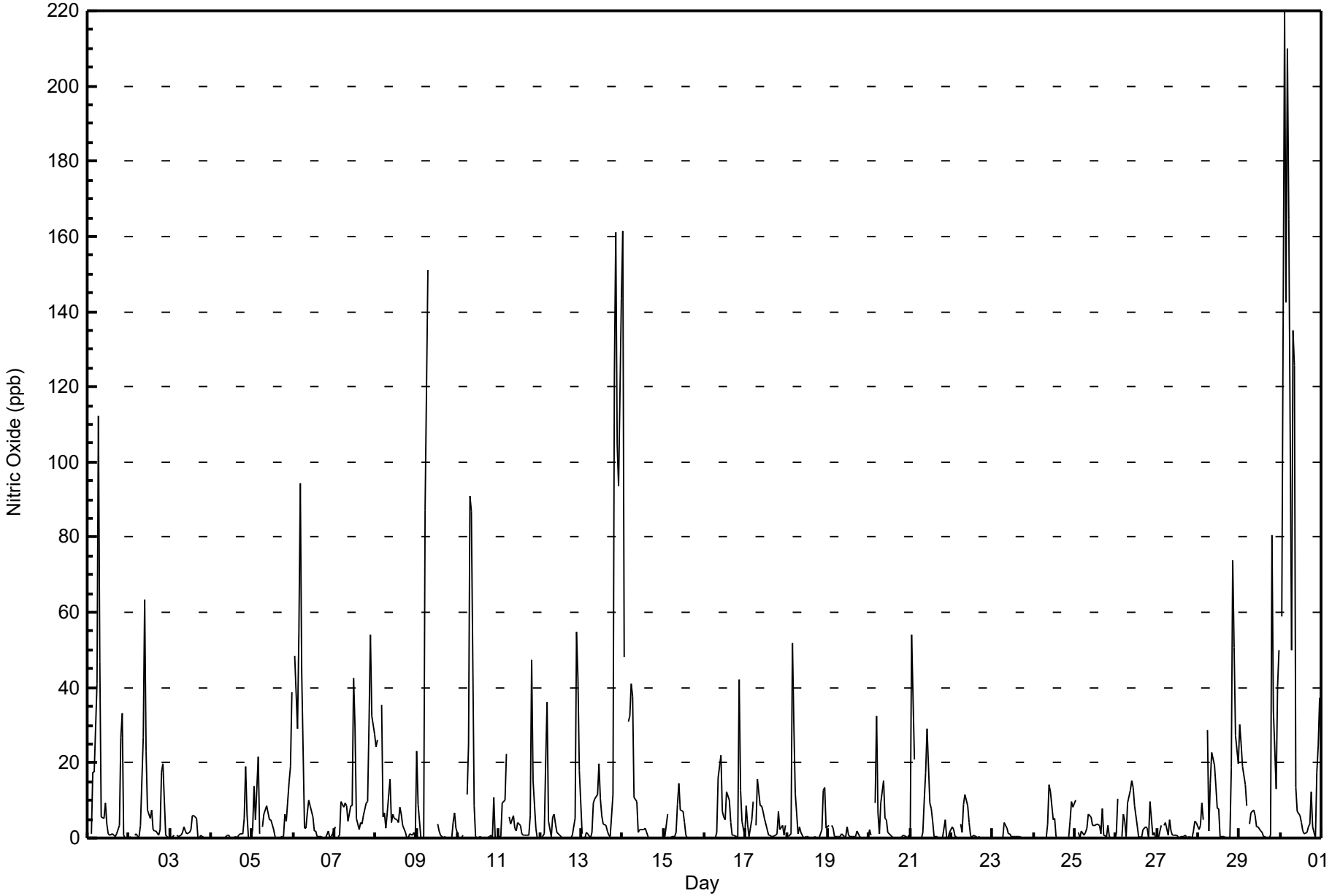
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Hills - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	610	89.05	89.05
21 - 40	35	5.11	94.16
11 - 80	21	3.07	97.23
81 - 159	13	1.90	99.12
> 159	5	0.73	99.85

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Hills - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	27	17	4	0	1	10	41	148	112	88	46	23	19	23	30	20	609
21 - 40	7	4	0	0	0	1	9	4	3	3	1	2	0	0	0	1	35
11 - 80	3	0	0	1	0	2	8	2	0	4	0	0	0	0	0	1	21
81 - 159	4	1	0	0	0	0	1	2	1	1	0	1	0	0	0	2	13
> 159	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	5
Totals	42	23	4	2	1	13	59	156	116	96	47	26	19	24	30	25	683

Total Number of Valid Hours: 684

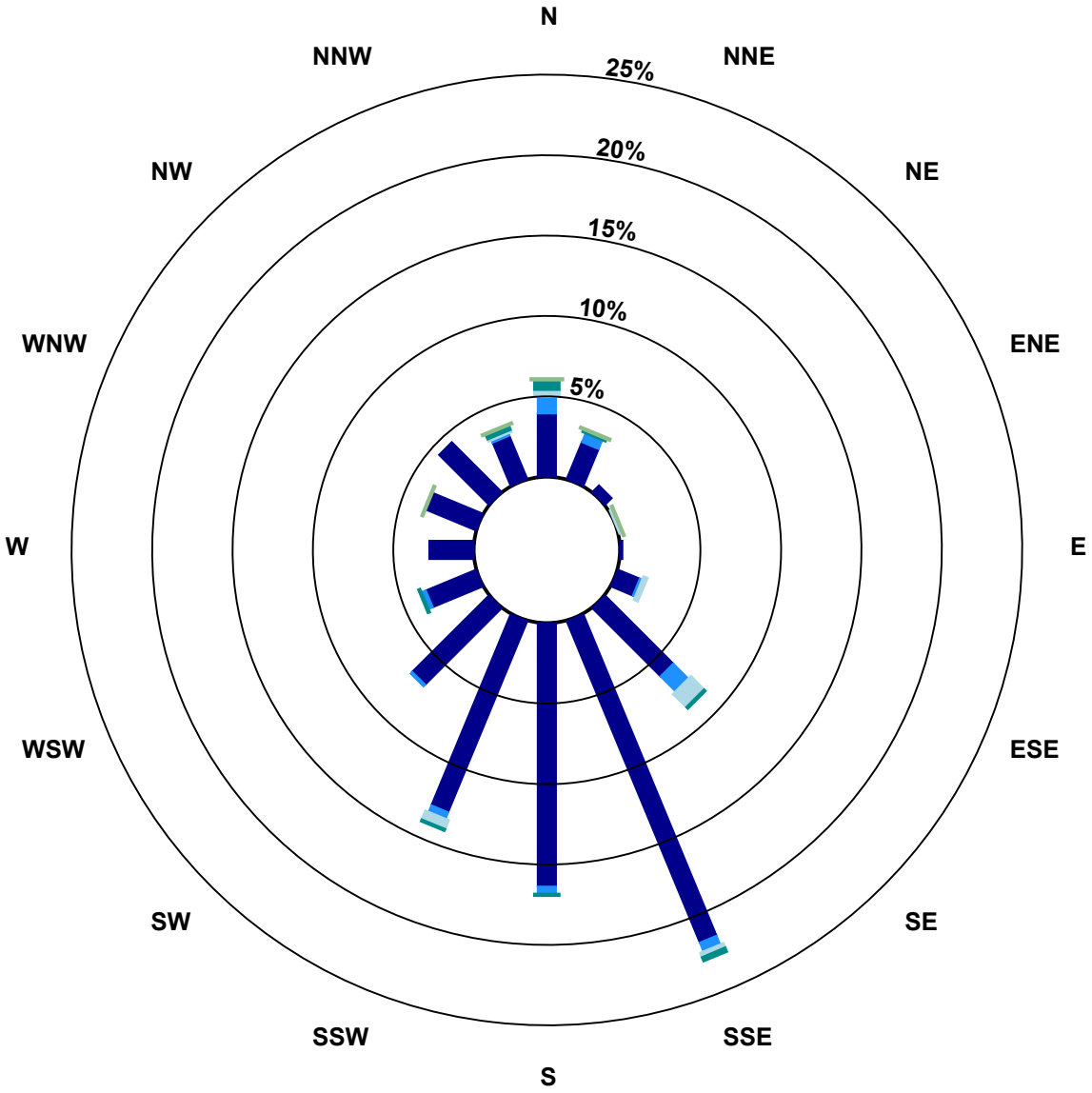
Total Number of Hours: 720

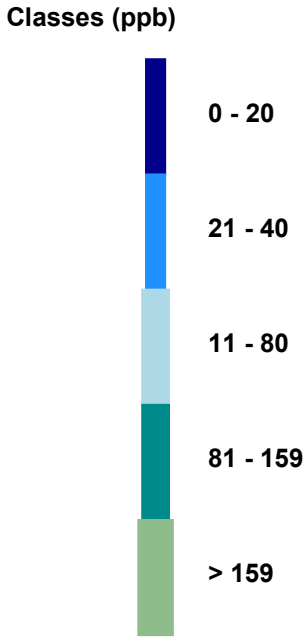
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Fort Hills





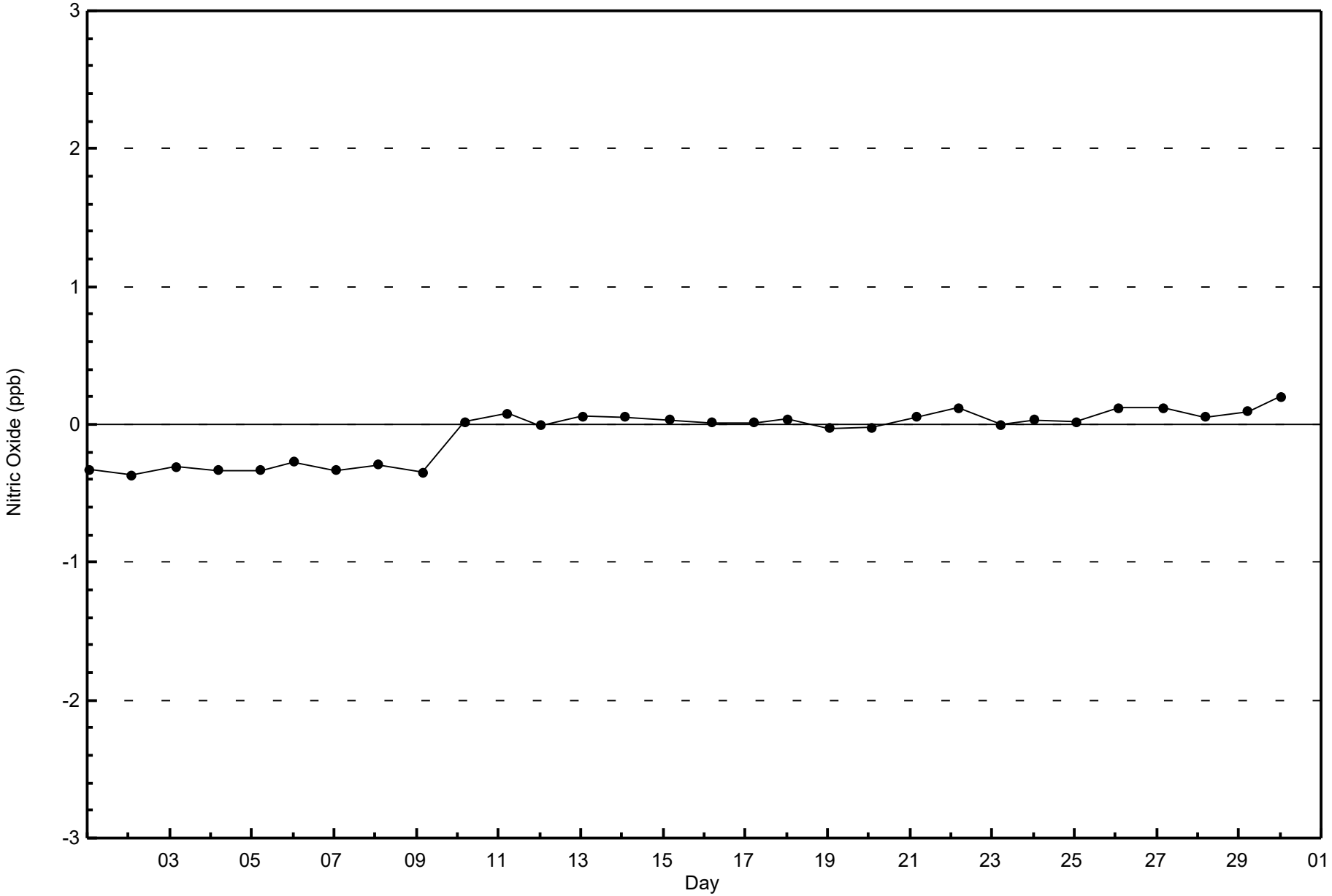
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Hills - September 2025

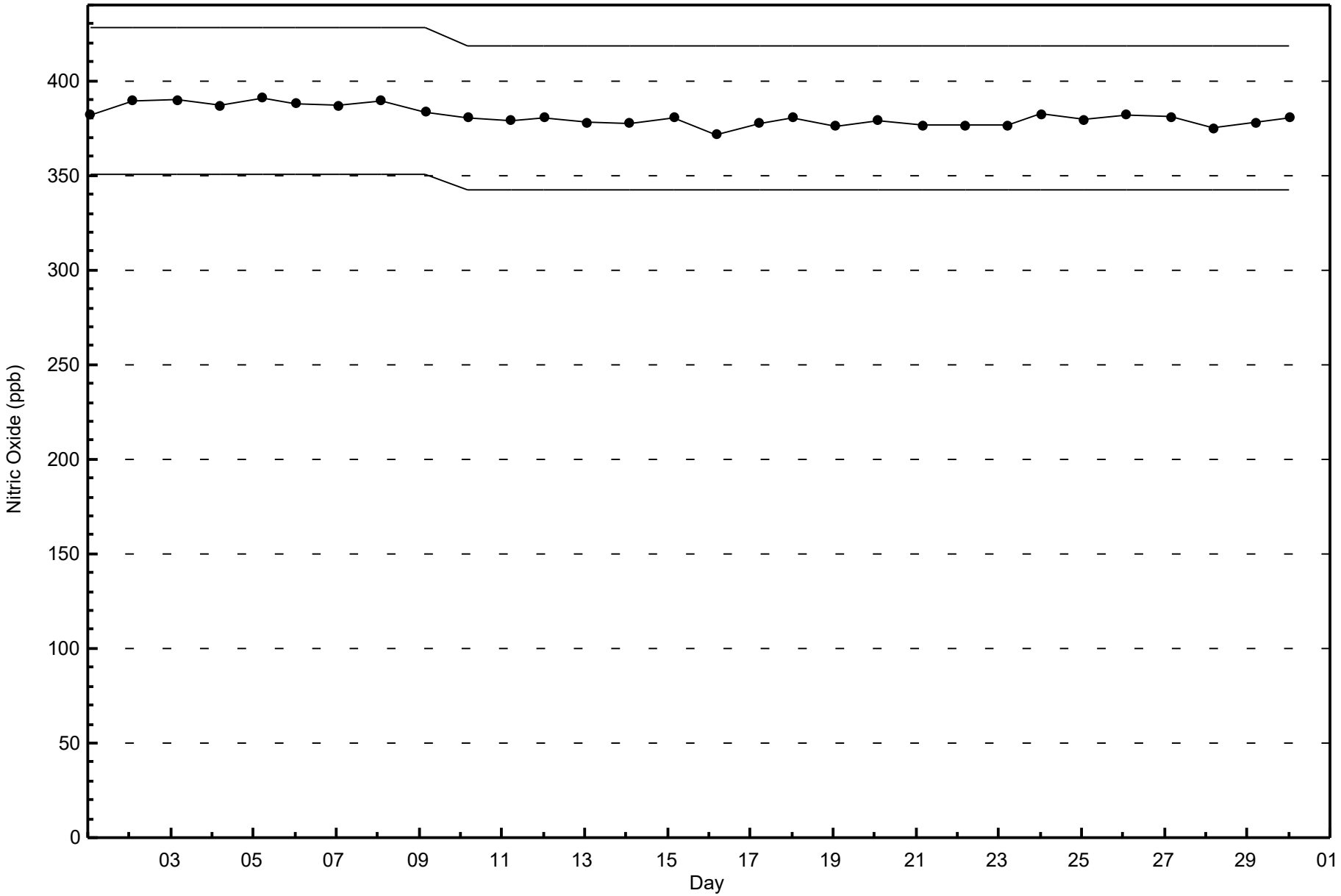


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 44.6 ppb on Sep 13 20:00 Maximum Daily Average: 20.4 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 4 02:00 Minimum Daily Average: 3.2 ppb on Sep 4
Maximum Diurnal Average: 15.3 ppb at hour 21 Minimum Diurnal Average: 4.4 ppb at hour 16
Monthly Average: 9.58 ppb Percentiles: P_1 = 0.1 P_{10} = 1.2 Q_1 = 3.2 Median = 7.4 Q_3 = 14.2 P_{90} = 21.7 P_{99} = 32.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.0	Z	5.5	6.6	5.9	8.3	14.7	8.3	5.3	5.5	6.4	3.6	1.7	1.7	3.3	3.4	4.2	7.8	15.7	25.0	21.0	3.9	0.5	0.8	7.0	25.0
2-Sep	1.7	2.7	Z	3.7	8.4	2.9	1.7	4.6	9.8	22.6	19.4	12.4	10.7	14.8	7.2	6.1	7.1	5.8	15.2	20.3	22.0	8.9	2.7	4.1	9.3	22.6
3-Sep	7.3	6.8	7.1	Z	8.3	7.0	8.9	7.4	9.3	5.5	4.4	4.7	5.2	10.8	13.5	11.7	1.6	1.4	11.5	5.8	1.6	0.6	0.2	0.4	6.1	13.5
4-Sep	0.3	0.0	0.1	0.3	Z	0.6	0.9	0.6	0.3	1.4	1.3	0.5	0.2	0.1	0.7	0.5	1.7	4.5	7.5	17.8	19.7	10.5	2.1	1.4	3.2	19.7
5-Sep	6.3	10.9	7.6	7.9	4.2	Z	3.3	3.6	5.1	6.6	6.1	7.0	4.3	1.9	1.6	2.1	2.3	5.2	11.7	29.6	26.1	22.9	22.0	23.9	9.7	29.6
6-Sep	Z	16.9	19.2	19.5	19.8	15.7	6.9	4.2	8.0	11.2	12.6	11.3	6.7	7.0	3.7	3.3	3.2	4.0	5.2	6.9	15.6	12.2	7.3	7.4	9.9	19.8
7-Sep	12.4	Z	6.1	10.4	18.1	18.3	13.4	11.6	7.7	10.8	13.2	30.8	27.8	9.0	9.4	13.8	11.8	16.5	18.3	18.0	20.1	20.6	18.4	16.3	15.3	30.8
8-Sep	15.9	16.5	Z	13.7	6.9	7.8	5.0	5.1	9.5	6.7	8.2	6.0	6.4	7.0	12.3	12.6	11.4	10.2	6.2	7.1	8.9	9.1	9.9	4.0	9.0	16.5
9-Sep	12.1	8.0	2.8	Z	3.6	16.8	20.3	C	C	C	C	C	10.6	8.7	5.2	2.8	4.3	4.9	4.5	9.8	13.9	25.4	23.0	14.3	10.6	25.4
10-Sep	4.7	2.6	1.5	4.8	Z	9.9	12.8	18.1	17.5	8.5	1.2	0.3	0.8	1.5	0.4	0.0	0.2	0.5	1.7	2.8	2.5	8.7	3.2	6.4	4.8	18.1
11-Sep	8.4	7.6	8.9	8.4	13.4	Z	7.4	4.4	5.7	4.8	4.0	8.9	9.4	5.0	3.9	3.2	3.2	4.9	18.6	34.0	21.0	12.3	7.5	7.2	9.2	34.0
12-Sep	Z	6.0	8.4	22.0	22.5	12.8	6.3	10.4	12.7	9.1	5.6	3.7	3.4	1.8	1.2	1.7	1.9	5.1	3.3	13.8	22.6	30.1	26.1	20.6	10.9	30.1
13-Sep	11.5	Z	4.6	11.6	15.5	10.5	11.3	13.5	16.5	17.2	21.2	18.5	18.4	15.7	16.9	16.1	14.6	14.7	28.9	44.6	43.0	39.2	33.8	31.7	20.4	44.6
14-Sep	29.3	31.4	Z	9.3	12.4	14.8	16.5	13.4	18.6	7.8	11.1	13.3	14.2	14.3	9.3	3.1	1.7	1.9	2.3	3.4	2.1	3.5	3.6	3.8	10.5	31.4
15-Sep	2.2	7.0	19.6	Z	4.7	5.2	5.0	5.8	10.4	13.8	11.0	13.8	13.2	3.0	0.8	0.5	0.4	0.4	0.4	0.6	0.4	0.4	0.7	0.8	5.2	19.6
16-Sep	0.5	0.4	0.7	1.3	Z	1.5	1.5	3.4	9.0	9.7	6.1	6.5	6.2	13.2	16.3	10.7	3.9	8.5	10.3	10.4	27.5	23.0	18.7	7.7	8.6	27.5
17-Sep	15.8	12.5	6.0	10.3	12.4	Z	7.4	7.2	6.1	7.3	8.8	9.7	6.9	3.9	3.9	3.4	3.5	6.7	17.7	26.4	19.1	17.1	8.6	17.6	10.4	26.4
18-Sep	Z	14.1	15.1	23.2	20.2	17.0	8.1	8.4	4.4	2.5	1.2	2.2	2.5	0.9	0.9	1.3	5.1	2.4	0.3	2.3	24.0	33.0	22.8	16.2	9.9	33.0
19-Sep	23.7	Z	22.5	10.0	1.5	1.1	1.4	2.2	2.7	1.3	1.0	4.9	1.9	1.3	1.4	1.4	3.9	14.1	6.1	0.7	0.4	0.3	2.3	5.7	4.9	23.7
20-Sep	15.2	10.9	Z	17.8	18.0	13.7	7.0	11.9	13.6	7.5	7.3	4.6	4.8	3.7	1.0	1.1	1.4	1.1	3.1	8.6	19.3	13.5	13.9	16.7	9.4	19.3
21-Sep	14.2	26.6	18.6	Z	12.6	8.2	3.4	4.8	12.8	17.1	23.2	16.3	17.9	16.7	3.4	3.1	0.8	0.7	0.1	0.2	21.6	2.2	1.7	11.5	10.3	26.6
22-Sep	20.5	18.9	15.6	14.2	Z	14.5	6.0	11.3	10.0	7.9	4.4	1.8	0.5	1.6	1.5	0.3	2.8	3.3	2.0	4.1	3.1	4.3	2.4	3.3	6.7	20.5
23-Sep	3.2	4.9	3.4	3.2	4.0	Z	3.6	15.0	7.4	3.4	3.7	1.5	1.3	3.5	2.9	2.5	3.4	5.6	4.7	1.6	0.8	0.8	2.0	2.8	3.7	15.0
24-Sep	Z	3.2	2.4	4.6	6.3	5.1	3.0	2.0	7.9	14.7	12.3	8.0	8.9	1.2	0.1	0.1	0.3	0.1	1.5	2.1	1.4	9.1	21.8	19.9	5.9	21.8
25-Sep	15.8	Z	11.8	7.9	13.9	13.1	12.8	10.3	10.5	9.6	5.7	5.7	6.5	6.7	12.7	8.4	26.4	12.3	8.2	11.3	17.8	9.6	2.4	2.9	10.5	26.4
26-Sep	12.1	24.5	Z	7.0	13.6	11.7	2.5	6.9	7.5	9.0	9.8	8.2	4.3	0.6	1.0	0.5	7.0	18.1	15.5	5.9	27.4	18.4	18.9	4.2	10.2	27.4
27-Sep	8.3	5.3	11.3	Z	15.1	16.3	12.9	14.8	5.4	2.3	1.7	1.9	1.2	0.4	1.1	3.6	5.7	8.9	13.7	17.8	0.4	12.5	20.9	19.3	8.7	20.9
28-Sep	17.2	22.1	23.1	22.4	Z	23.3	10.3	14.4	15.8	14.3	13.1	10.8	10.5	1.6	1.0	1.7	1.6	0.2	2.3	11.5	25.1	24.7	26.1	26.4	13.9	26.4
29-Sep	27.5	27.5	26.6	25.7	22.2	Z	21.0	20.5	15.7	10.4	3.6	4.6	3.1	2.6	2.8	2.4	2.2	3.4	5.6	32.2	27.4	20.6	27.2	22.5	15.5	32.2
30-Sep	Z	23.3	29.5	26.4	32.1	27.1	18.7	23.1	25.5	13.5	10.7	10.7	9.3	6.8	6.4	9.8	13.5	18.2	25.3	7.4	3.4	24.1	23.6	23.4	17.9	32.1
	11.5	12.4	11.1	11.7	12.6	11.3	8.5	9.2	10.0	9.0	8.2	8.0	7.3	5.6	4.9	4.4	5.0	6.4	8.9	12.7	15.3	14.1	12.5	11.4	Diurnal Average	
	29.3	31.4	29.5	26.4	32.1	27.1	21.0	23.1	25.5	22.6	23.2	30.8	27.8	16.7	16.9	16.1	26.4	18.2	28.9	44.6	43.0	39.2	33.8	31.7	Diurnal Maximum	

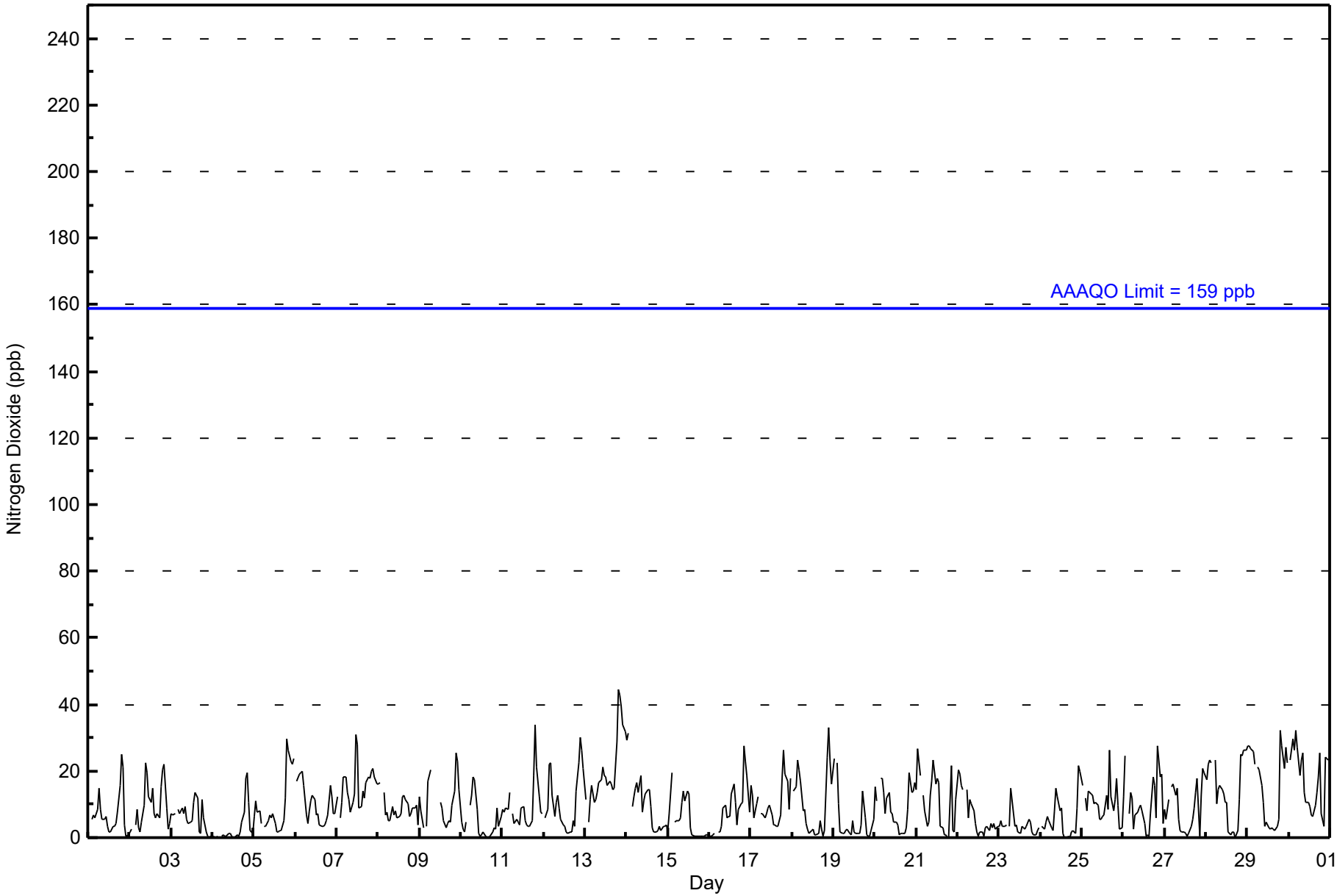
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - September 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Hills - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	605	88.32	88.32
21 - 40	78	11.39	99.71
11 - 80	2	0.29	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	31	17	4	1	1	7	39	149	115	81	41	26	19	23	29	21	604
21 - 40	9	6	0	1	0	6	21	7	1	15	6	0	0	1	1	4	78
11 - 80	2	0	0	0	0	0	0	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	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	23	4	2	1	13	60	156	116	96	47	26	19	24	30	25	684

Total Number of Valid Hours: 684

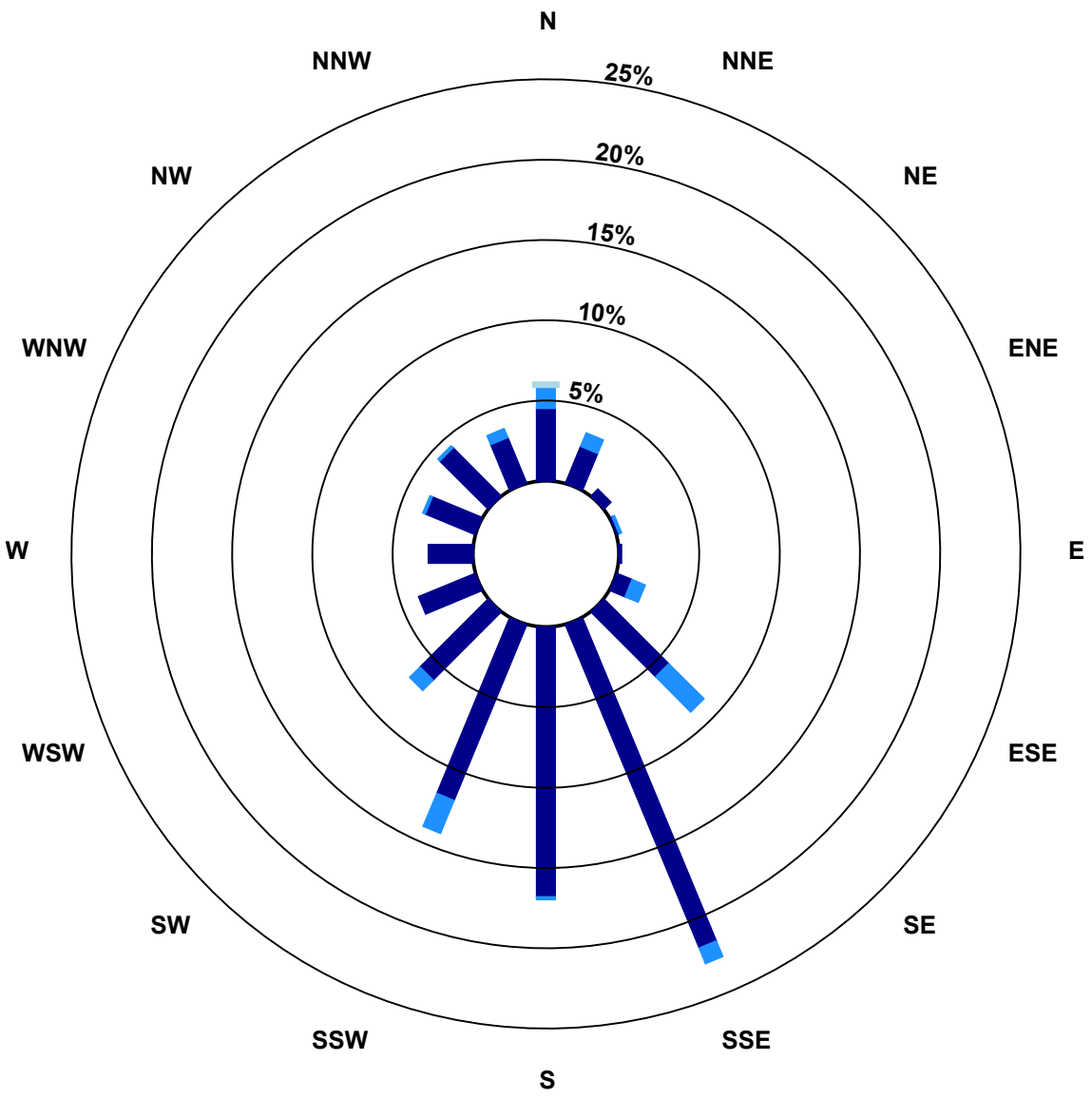
Total Number of Hours: 720

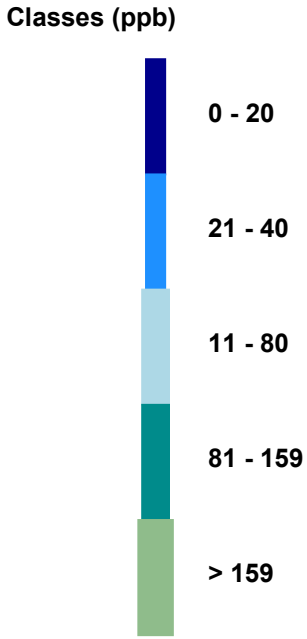
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Hills





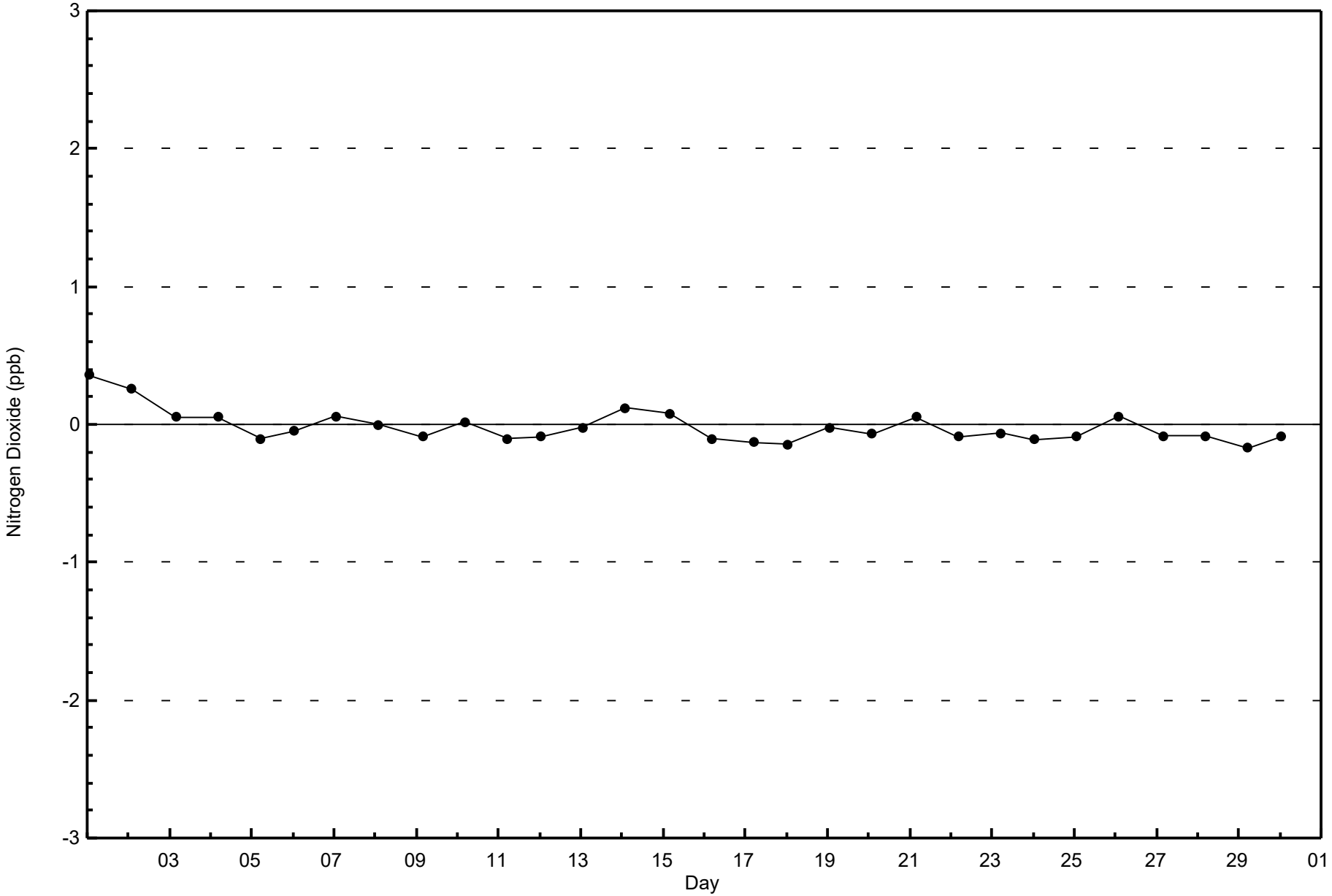
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - September 2025

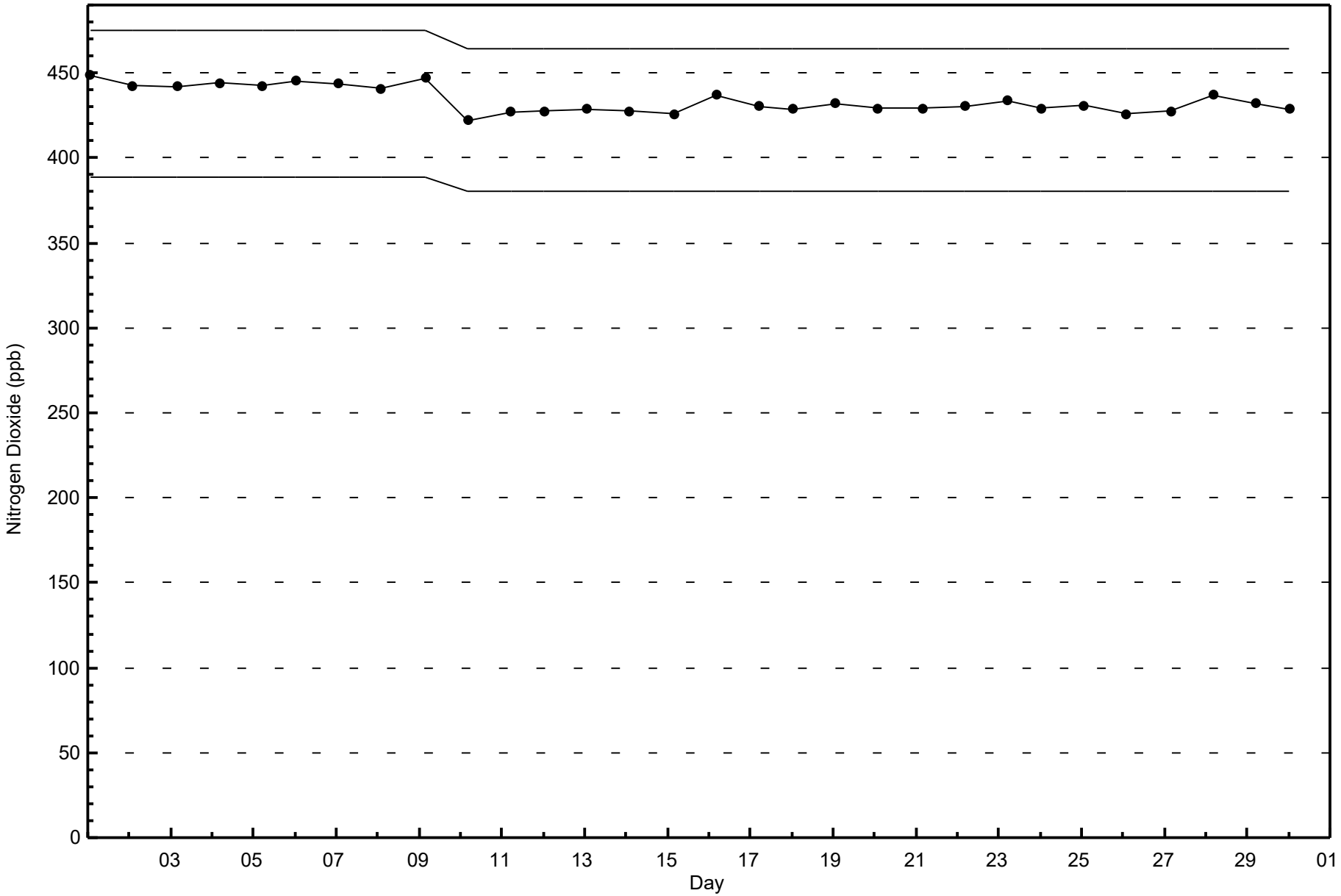


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 249.0 ppb on Sep 30 03:00

Maximum Daily Average: 71.9 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 10 16:00

Minimum Daily Average: 4.2 ppb on Sep 23

Maximum Diurnal Average: 33.6 ppb at hour 5

Minimum Diurnal Average: 5.4 ppb at hour 16

Monthly Average: 19.04 ppb

Percentiles: P_1 = 0.1 P_{10} = 1.3 Q_1 = 3.4 Median = 10.3 Q_3 = 21.2 P_{90} = 41.9 P_{99} = 169.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.8	Z	6.6	24.1	23.3	49.2	127.1	55.3	11.0	10.6	15.6	7.4	2.8	2.4	4.3	4.1	4.6	9.0	19.0	51.8	54.2	4.8	0.5	0.9	21.4	127.1
2-Sep	1.8	2.9	Z	4.5	9.5	3.4	2.0	8.0	36.5	85.9	42.5	19.8	15.7	22.4	9.6	7.9	9.0	6.5	17.4	38.0	41.7	9.7	3.0	4.1	17.5	85.9
3-Sep	7.3	6.9	8.0	Z	9.1	7.5	9.8	9.0	12.3	7.3	5.5	6.1	7.4	16.6	19.6	17.1	1.7	1.5	12.1	6.0	1.6	0.6	0.2	0.4	7.6	19.6
4-Sep	0.3	0.0	0.1	0.4	Z	0.6	0.9	0.7	0.5	2.2	2.1	0.6	0.2	0.1	1.0	0.7	2.4	5.7	8.6	23.1	38.7	16.7	2.3	1.5	4.8	38.7
5-Sep	8.6	24.8	12.6	29.7	5.2	Z	6.4	9.9	13.7	13.4	10.8	11.9	6.6	2.3	1.7	2.2	2.5	5.7	12.2	36.1	30.4	37.9	40.8	62.5	16.9	62.5
6-Sep	Z	65.3	48.3	74.2	114.1	59.8	9.5	6.8	14.6	21.4	21.0	16.9	8.7	8.7	4.2	3.6	3.4	4.1	5.3	6.9	17.6	12.4	7.6	8.4	23.6	114.1
7-Sep	15.2	Z	6.6	11.0	27.9	26.4	22.6	20.0	12.4	19.3	21.7	73.1	57.7	14.4	11.8	17.8	15.4	22.3	27.7	27.9	50.2	74.7	50.7	43.8	29.2	74.7
8-Sep	40.2	42.4	Z	49.0	12.5	14.5	7.7	11.7	25.1	10.8	14.4	11.3	11.1	10.9	20.4	19.1	14.9	11.6	6.4	7.1	10.1	9.7	11.6	4.0	16.4	49.0
9-Sep	35.4	17.1	2.8	Z	3.6	104.2	171.2	C	C	C	C	C	14.3	10.4	5.8	2.9	4.6	5.0	4.5	9.8	13.9	29.3	29.6	16.8	26.7	171.2
10-Sep	4.7	2.6	1.5	5.4	Z	21.3	37.7	109.2	104.5	17.2	1.6	0.3	0.9	2.0	0.4	0.0	0.2	0.5	1.9	3.5	2.5	19.6	3.3	6.4	15.1	109.2
11-Sep	8.9	8.1	18.2	18.3	35.9	Z	12.9	8.2	11.8	7.4	5.7	12.9	12.8	6.2	4.5	3.9	3.9	5.8	24.7	81.5	36.2	14.7	7.7	7.2	15.5	81.5
12-Sep	Z	6.1	9.4	42.1	58.7	17.3	6.8	15.8	19.2	12.7	7.1	4.3	3.8	1.9	1.2	1.7	1.9	5.2	3.3	14.5	27.9	85.0	68.5	38.4	19.7	85.0
13-Sep	12.5	Z	4.6	13.2	16.7	10.7	12.8	22.7	27.0	28.7	40.8	28.8	24.3	19.5	20.1	18.1	15.5	15.2	40.4	167.9	204.1	144.1	127.3	175.3	51.7	204.1
14-Sep	190.6	79.4	Z	40.2	44.8	55.9	54.2	24.2	28.5	9.3	13.4	15.4	16.5	16.9	11.0	3.6	1.7	2.1	2.3	3.4	2.1	3.5	3.6	3.9	27.2	190.6
15-Sep	2.2	7.4	26.1	Z	4.8	5.4	5.3	7.3	19.5	28.3	18.3	20.8	17.1	3.6	0.9	0.5	0.4	0.4	0.4	0.6	0.4	0.4	0.7	0.8	7.5	28.3
16-Sep	0.5	0.4	0.8	1.4	Z	1.6	1.5	4.9	25.0	31.8	13.1	12.0	11.0	25.4	26.5	14.9	4.5	9.2	10.6	10.7	69.7	35.5	23.2	8.0	14.9	69.7
17-Sep	24.4	16.1	6.2	15.3	22.0	Z	10.7	22.7	14.8	15.8	16.1	14.9	9.2	4.8	4.7	3.9	4.0	7.5	18.7	33.4	21.2	20.5	9.3	21.1	14.7	33.4
18-Sep	Z	14.6	16.2	74.9	50.5	29.0	9.2	11.6	6.0	3.3	1.3	2.7	3.0	0.9	0.9	1.3	5.5	2.4	0.3	2.3	26.4	45.8	36.3	18.9	15.8	74.9
19-Sep	27.0	Z	25.8	12.7	1.7	1.4	1.8	2.8	3.9	1.7	1.2	7.8	2.7	1.7	1.7	1.7	4.2	15.8	6.6	0.7	0.4	0.3	2.3	5.7	5.7	27.0
20-Sep	17.5	11.7	Z	27.1	50.5	20.2	8.2	21.1	28.8	12.6	12.0	6.1	5.7	4.2	1.0	1.1	1.4	1.1	3.1	9.0	20.1	13.8	13.9	17.3	13.4	50.5
21-Sep	14.3	80.7	39.7	Z	12.7	8.3	3.4	6.5	22.7	34.6	52.4	25.6	25.9	21.0	3.9	3.4	0.8	0.7	0.1	0.2	26.5	2.2	1.7	12.9	17.4	80.7
22-Sep	23.4	21.1	15.8	14.4	Z	18.4	7.6	20.4	21.7	16.6	8.4	2.7	0.5	2.2	1.8	0.3	3.0	3.4	2.0	4.1	3.1	4.3	2.4	3.3	8.7	23.4
23-Sep	3.2	4.9	3.4	3.2	4.0	Z	3.6	19.1	10.0	4.4	5.0	2.0	1.6	3.9	3.4	3.0	3.7	5.8	4.7	1.6	0.8	0.8	2.0	2.9	4.2	19.1
24-Sep	Z	3.2	2.4	4.6	6.4	5.1	3.0	2.1	11.5	29.0	24.6	12.8	14.1	1.7	0.1	0.1	0.3	0.1	1.5	2.1	1.4	13.7	31.6	28.2	8.7	31.6
25-Sep	25.8	Z	13.3	8.0	15.9	13.7	14.3	12.9	16.9	15.2	9.2	9.0	9.9	10.3	16.0	9.6	34.2	13.2	8.6	14.7	18.0	9.6	2.4	2.9	13.2	34.2
26-Sep	13.2	34.9	Z	7.4	19.9	16.3	2.8	16.1	20.0	24.4	23.1	16.7	7.2	0.8	1.3	0.5	9.2	21.2	18.0	5.9	37.0	19.1	20.5	4.2	14.8	37.0
27-Sep	8.3	5.4	14.6	Z	18.5	20.2	13.7	19.7	7.3	3.1	2.4	2.7	1.6	0.4	1.4	4.1	6.3	9.4	13.8	18.2	0.4	14.5	25.2	23.5	10.2	25.2
28-Sep	19.4	25.5	32.5	27.1	Z	52.0	12.0	29.0	38.7	33.7	27.0	18.7	18.2	2.0	1.2	1.9	1.7	0.2	2.3	30.0	99.0	75.3	53.4	46.3	28.1	99.0
29-Sep	57.5	52.4	45.7	39.9	30.9	Z	24.7	27.4	23.1	16.5	6.6	7.6	4.8	4.0	3.1	2.8	2.2	3.4	6.3	112.8	61.2	33.6	67.6	72.6	30.7	112.8
30-Sep	Z	82.2	249.0	168.7	241.9	191.6	68.6	157.9	151.1	26.9	17.9	16.8	13.4	8.5	7.4	11.2	16.5	21.8	37.6	10.3	3.4	41.6	48.1	60.8	71.9	249.0
	22.6	24.6	24.4	28.7	33.6	30.2	22.4	23.6	25.4	18.8	15.2	13.4	11.0	7.7	6.4	5.4	6.0	7.2	10.7	24.5	30.7	26.5	23.2	23.4	Diurnal Average	
	190.6	82.2	249.0	168.7	241.9	191.6	171.2	157.9	151.1	85.9	52.4	73.1	57.7	25.4	26.5	19.1	34.2	22.3	40.4	167.9	204.1	144.1	127.3	175.3	Diurnal Maximum	

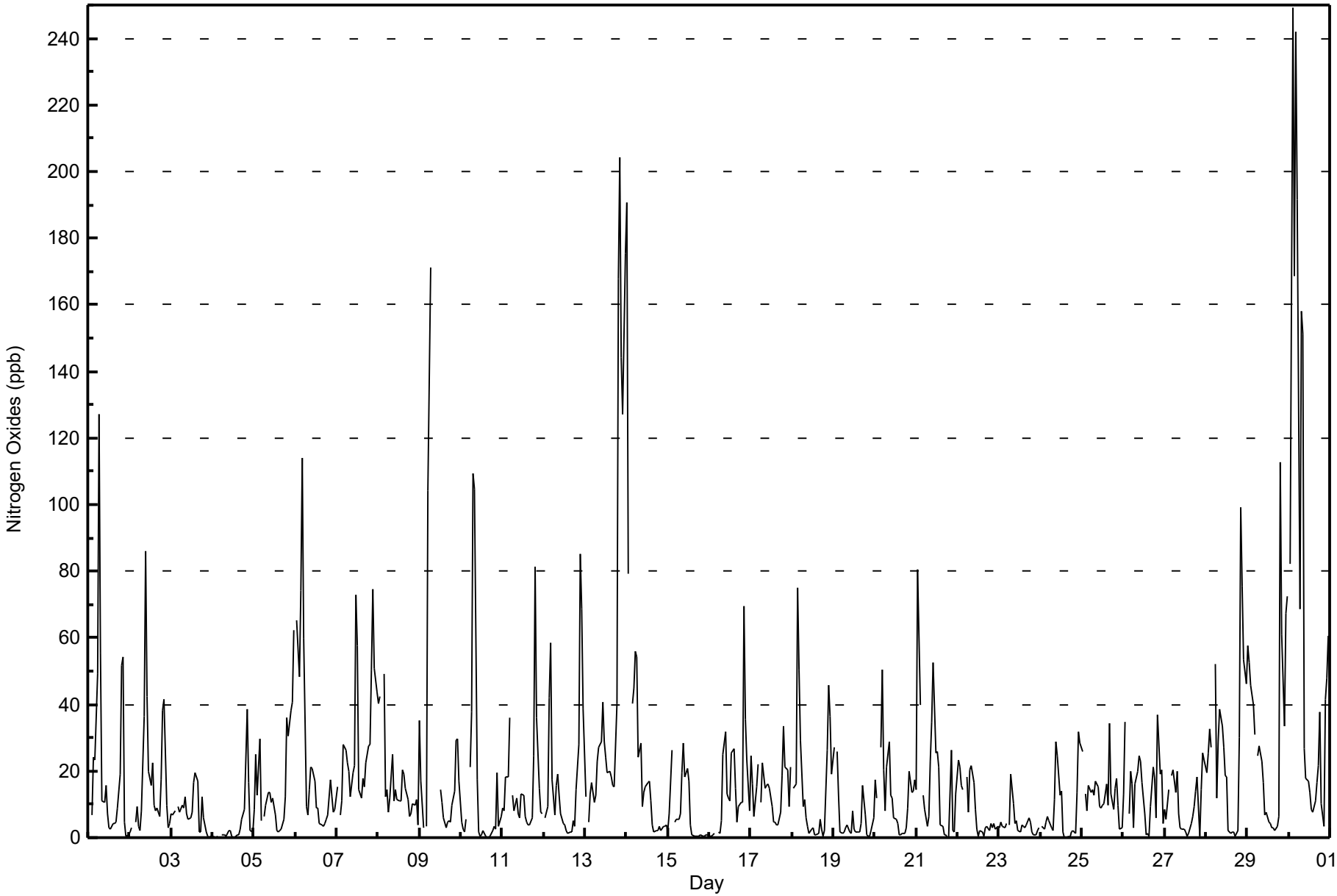
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - September 2025



Nitrogen Oxides (NO_X) - ppb
Fort Hills - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	505	73.72	73.72
21 - 40	107	15.62	89.34
11 - 80	48	7.01	96.35
81 - 159	15	2.19	98.54
> 159	9	1.31	99.85

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort Hills - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	13	2	0	1	4	21	127	102	69	32	22	19	23	28	19	504
21 - 40	6	4	2	0	0	5	19	20	12	21	12	3	0	0	2	1	107
11 - 80	8	4	0	1	0	3	16	7	1	3	3	0	0	0	0	2	48
81 - 159	3	1	0	0	0	1	3	2	1	2	0	1	0	0	0	1	15
> 159	3	1	0	1	0	0	0	0	0	1	0	0	0	1	0	2	9
Totals	42	23	4	2	1	13	59	156	116	96	47	26	19	24	30	25	683

Total Number of Valid Hours: 684

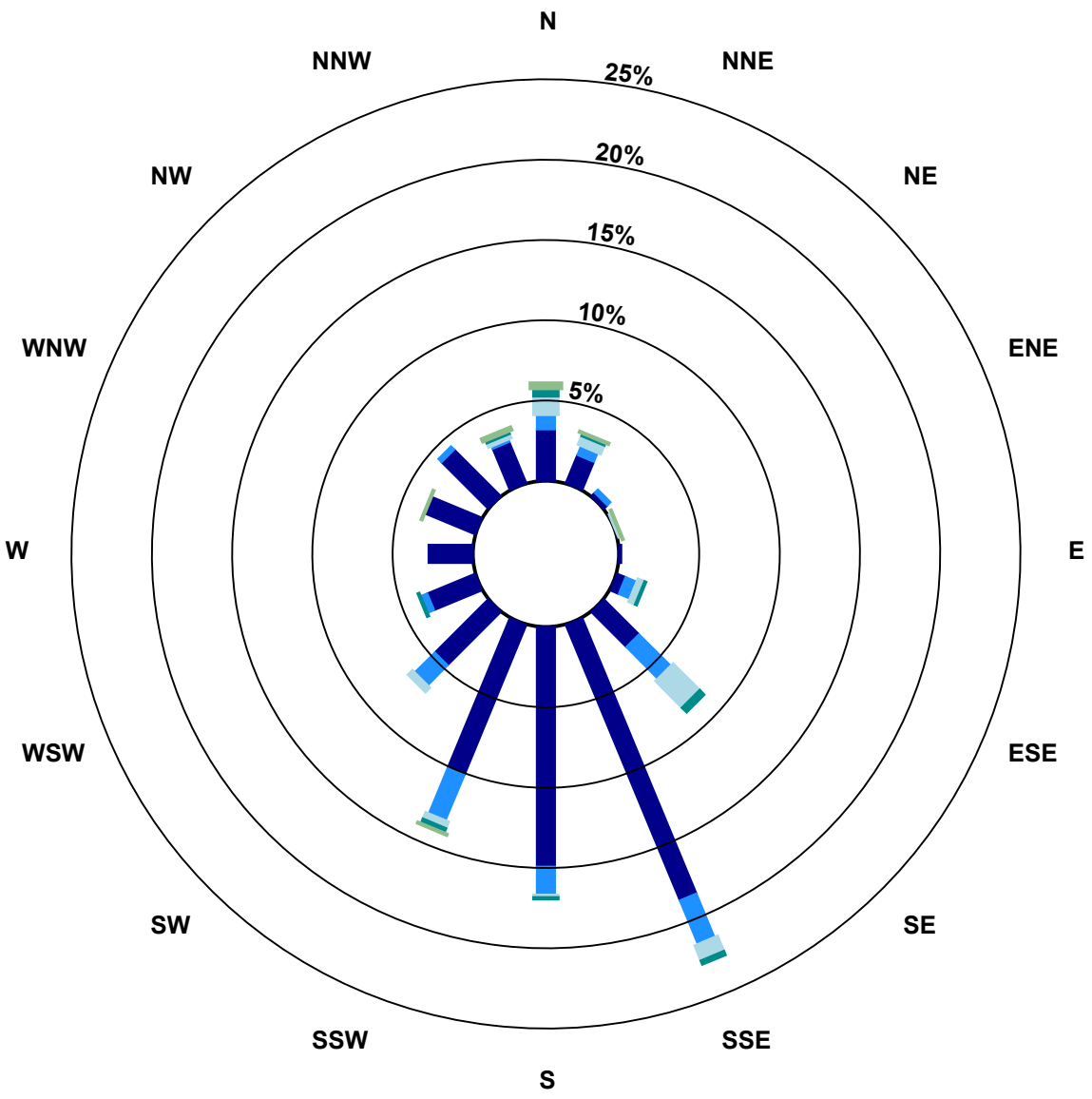
Total Number of Hours: 720

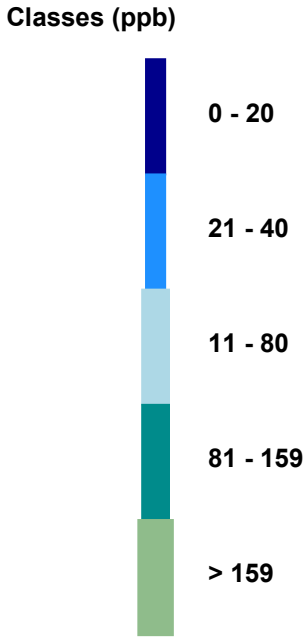
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Fort Hills





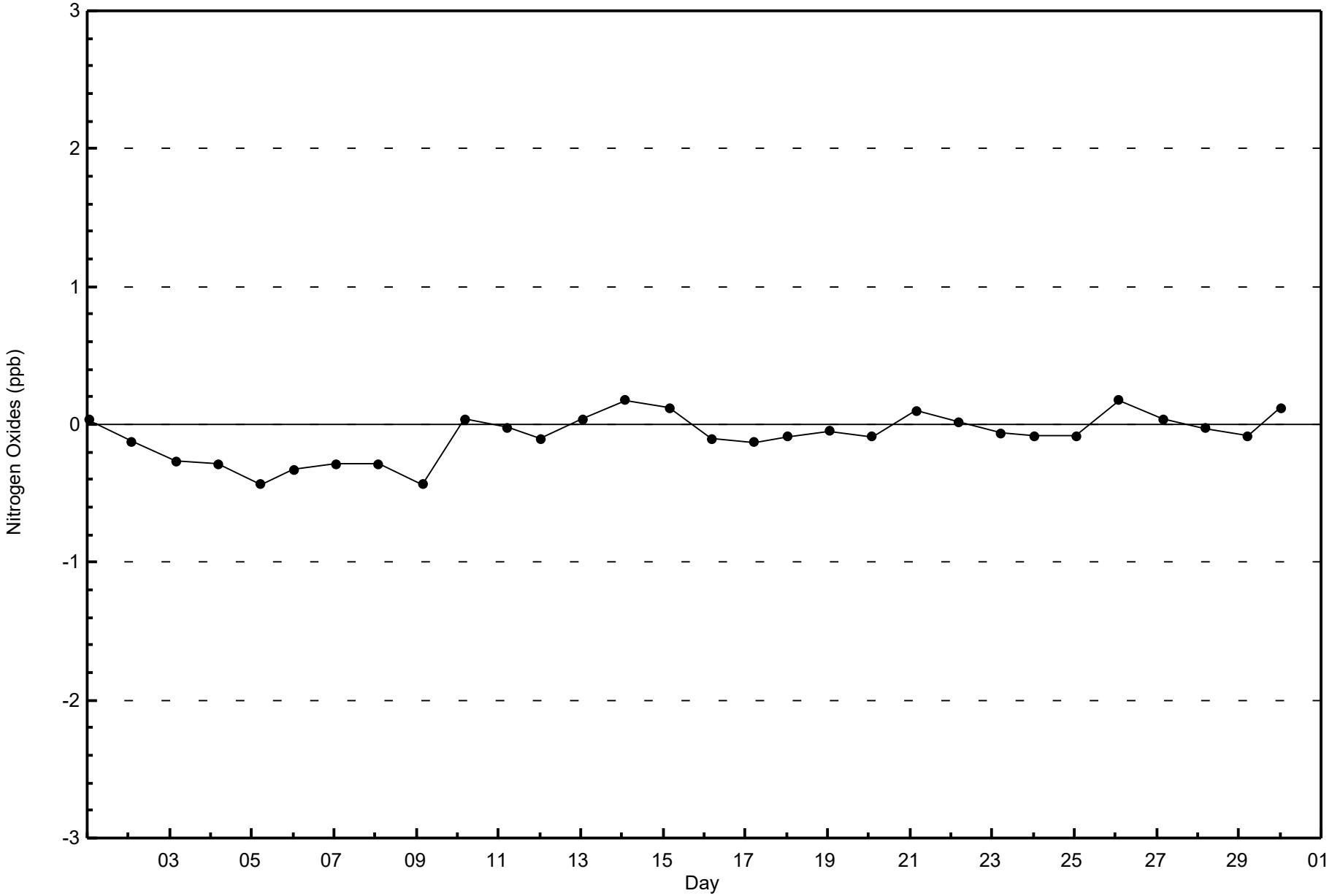
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - September 2025

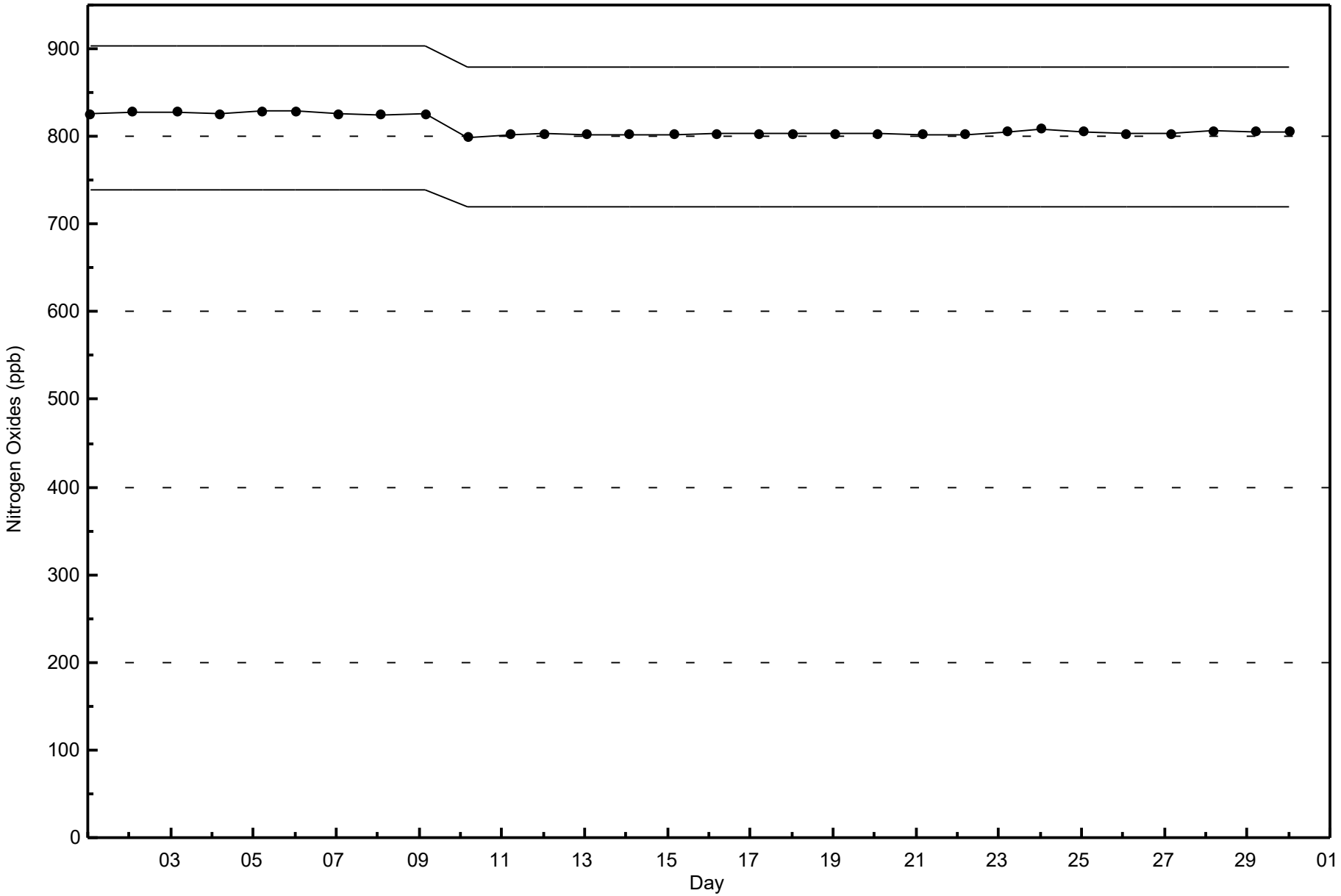


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 13

Maximum Value: 167.8 $\mu g/m^3$ on Sep 14 11:00

Maximum Daily Average: 63.6 $\mu g/m^3$ on Sep 12

Minimum Value: 1.3 $\mu g/m^3$ on Sep 27 14:00

Minimum Daily Average: 7.9 $\mu g/m^3$ on Sep 4

Maximum Diurnal Average: 37.4 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 21.5 $\mu g/m^3$ at hour 14

Monthly Average: 28.92 $\mu g/m^3$

Percentiles: P_1 = 2.6 P_{10} = 7.0 Q_1 = 13.1 Median = 22.4 Q_3 = 37.4 P_{90} = 56.6 P_{99} = 128.4

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Sep	24.8	24.4	29.4	26.7	26.7	27.4	30.4	27.5	20.3	17.9	20.6	13.3	10.8	46.5	97.2	117.4	128.9	103.9	57.0	58.1	52.6	45.6	48.7	54.2	46.3	128.9
2-Sep	51.4	50.5	48.5	45.3	44.3	39.2	38.0	41.5	47.6	54.3	58.8	57.8	56.1	50.6	33.0	24.0	24.7	20.2	24.5	53.6	55.8	32.5	27.6	32.4	42.2	58.8
3-Sep	36.4	51.8	69.2	70.2	69.6	65.4	64.6	59.5	59.5	52.0	47.3	45.9	46.4	47.7	54.4	62.1	60.7	31.7	45.5	63.0	66.9	53.4	34.8	22.5	53.4	70.2
4-Sep	9.9	8.8	13.5	7.9	5.5	4.8	4.8	5.1	5.9	6.2	4.6	4.1	4.7	5.2	6.8	7.3	8.9	10.9	11.2	13.5	13.3	14.3	5.9	6.1	7.9	14.3
5-Sep	29.3	13.4	9.3	7.0	5.6	17.8	10.8	10.7	7.3	14.4	11.2	16.0	13.7	13.2	14.4	16.4	15.7	17.8	18.0	21.3	20.6	42.5	76.0	23.9	18.6	76.0
6-Sep	27.0	35.4	22.9	32.4	39.8	50.4	48.2	52.8	70.9	69.6	72.8	59.6	36.2	27.9	19.2	19.0	16.4	16.4	51.7	135.3	46.3	48.0	55.7	44.4	45.8	135.3
7-Sep	56.8	40.0	27.2	24.6	22.2	30.3	91.7	19.4	15.5	17.9	21.5	36.8	37.6	27.0	21.8	28.9	26.1	22.9	23.9	21.8	26.0	25.2	27.3	33.3	30.2	91.7
8-Sep	35.3	32.2	29.9	31.3	29.3	28.9	28.8	30.6	28.6	18.6	17.7	17.7	19.2	22.3	23.8	25.4	24.9	24.7	22.1	112.3	132.7	137.8	40.4	20.9	39.0	137.8
9-Sep	25.0	17.5	16.5	17.8	16.4	27.3	26.9	21.8	30.0	42.5	47.3	52.2	50.9	47.3	42.4	33.7	32.3	32.8	67.3	37.3	30.4	27.8	28.0	23.9	33.1	67.3
10-Sep	21.2	19.2	31.0	25.0	27.8	36.0	46.5	42.9	31.3	18.7	10.9	7.9	7.6	7.6	3.9	2.9	5.9	11.7	20.1	12.7	13.3	10.2	9.0	17.0	18.4	46.5
11-Sep	18.1	10.9	29.8	43.0	23.9	17.2	7.9	C	12.4	9.6	11.2	16.3	19.0	12.8	14.6	12.2	11.8	11.3	21.1	55.8	25.0	18.4	17.6	24.3	19.3	55.8
12-Sep	24.0	52.8	63.9	75.8	80.1	113.2	125.9	129.8	118.7	88.0	70.6	45.7	36.5	27.0	23.4	25.1	27.0	31.6	45.6	68.8	67.7	61.6	73.2	50.3	63.6	129.8
13-Sep	52.8	51.4	50.0	56.7	60.2	48.4	44.4	38.6	44.6	40.6	37.1	32.9	34.0	31.2	28.9	30.1	33.8	44.5	82.1	83.4	60.1	36.5	34.1	35.4	45.5	83.4
14-Sep	41.4	71.4	35.7	25.4	30.3	35.5	36.9	33.4	101.9	163.8	167.8	153.9	115.7	76.4	54.8	34.1	49.8	28.5	11.5	9.4	9.8	11.0	10.4	10.3	55.0	167.8
15-Sep	8.7	9.5	13.8	14.7	14.5	13.9	18.7	16.0	15.1	14.8	18.1	30.7	37.5	26.7	38.2	43.4	42.1	37.2	45.0	48.9	41.8	25.9	21.6	16.9	25.6	48.9
16-Sep	14.4	13.2	13.0	13.6	14.2	17.4	14.1	15.8	18.7	13.2	13.1	14.7	17.4	21.6	26.0	24.0	21.1	27.3	27.5	25.9	35.7	40.1	34.1	28.2	21.0	40.1
17-Sep	36.5	28.3	24.0	40.9	30.5	37.7	47.0	32.8	28.7	31.3	25.6	23.2	22.7	20.5	18.2	15.8	17.8	18.9	16.9	22.4	19.2	36.9	36.6	52.8	28.6	52.8
18-Sep	59.7	47.2	46.6	90.3	32.2	40.0	35.3	21.4	18.2	18.3	19.9	25.7	25.6	24.8	21.1	19.4	23.5	27.2	23.7	21.5	29.5	33.4	31.4	26.8	31.8	90.3
19-Sep	23.7	23.0	29.5	32.1	42.0	37.5	34.8	28.8	29.7	29.4	26.5	16.6	13.0	11.7	14.4	14.4	18.5	20.5	15.8	10.9	8.6	7.2	7.2	22.4	21.6	42.0
20-Sep	25.1	10.9	22.1	22.4	19.7	13.6	13.3	17.7	9.7	7.8	10.2	12.9	15.3	16.7	12.9	14.1	15.5	13.9	22.4	25.2	27.0	27.2	26.3	52.9	18.9	52.9
21-Sep	42.9	41.0	29.3	19.2	20.1	19.4	21.0	16.7	13.5	14.2	20.5	13.3	12.9	13.1	7.0	8.1	11.3	10.7	9.1	6.4	7.7	11.5	11.2	10.7	16.3	42.9
22-Sep	6.5	6.6	10.7	17.2	19.9	21.5	22.2	19.9	16.4	13.2	10.7	13.0	11.8	8.4	12.0	16.9	16.8	13.1	11.5	5.6	3.3	4.3	3.2	3.9	12.0	22.2
23-Sep	5.2	5.0	3.7	3.8	4.8	6.9	10.6	15.7	8.1	5.6	4.7	3.8	4.4	5.9	8.9	10.0	12.0	16.0	18.3	25.8	32.7	36.2	40.5	44.0	13.8	44.0
24-Sep	48.7	48.0	49.2	49.1	51.8	61.8	76.4	84.7	92.1	81.0	49.0	23.1	12.2	4.8	2.3	2.1	3.2	4.1	15.4	50.0	18.4	15.8	6.9	4.9	35.6	92.1
25-Sep	5.9	10.7	26.9	24.8	40.2	44.3	50.0	57.4	72.0	52.8	30.7	22.8	19.2	14.5	10.9	8.1	16.2	14.3	14.7	11.6	8.8	7.1	10.5	21.0	24.8	72.0
26-Sep	34.2	32.2	24.0	19.9	18.0	20.0	20.3	24.0	24.5	20.4	11.6	7.4	4.3	2.5	2.6	2.1	3.8	5.5	5.1	4.1	11.4	9.2	9.0	8.8	13.5	34.2
27-Sep	18.6	14.6	12.1	9.3	4.8	5.5	5.9	4.3	4.9	3.2	2.4	2.7	2.2	1.3	3.5	6.2	7.0	9.3	10.1	14.5	9.7	13.0	15.9	10.3	8.0	18.6
28-Sep	7.4	10.9	17.7	24.4	23.4	19.4	18.8	21.2	13.5	10.8	6.1	7.5	6.0	4.9	3.6	2.2	4.2	4.5	30.4	38.2	28.8	21.2	13.7	12.3	14.6	38.2
29-Sep	13.4	24.5	21.2	26.5	26.5	29.9	30.9	32.0	18.8	13.9	10.8	13.3	13.2	10.0	9.0	9.7	8.3	10.7	26.6	43.1	51.5	66.2	72.8	85.4	27.8	85.4
30-Sep	77.2	74.4	44.1	40.2	56.5	44.0	56.2	63.5	63.8	35.3	20.3	18.8	17.7	14.7	19.9	22.2	20.8	25.9	29.2	21.3	20.3	21.1	19.6	16.8	35.2	77.2
	29.4	29.3	28.8	31.3	30.0	32.5	36.0	34.0	34.7	32.6	29.3	27.0	24.1	21.5	21.6	21.9	23.6	22.3	27.4	37.4	32.5	31.4	28.3	27.2	Diurnal Average	
	77.2	74.4	69.2	90.3	80.1	113.2	125.9	129.8	118.7	163.8	167.8	153.9	115.7	76.4	97.2	117.4	128.9	103.9	82.1	135.3	132.7	137.8	76.0	85.4	Diurnal Maximum	

C - Calibration

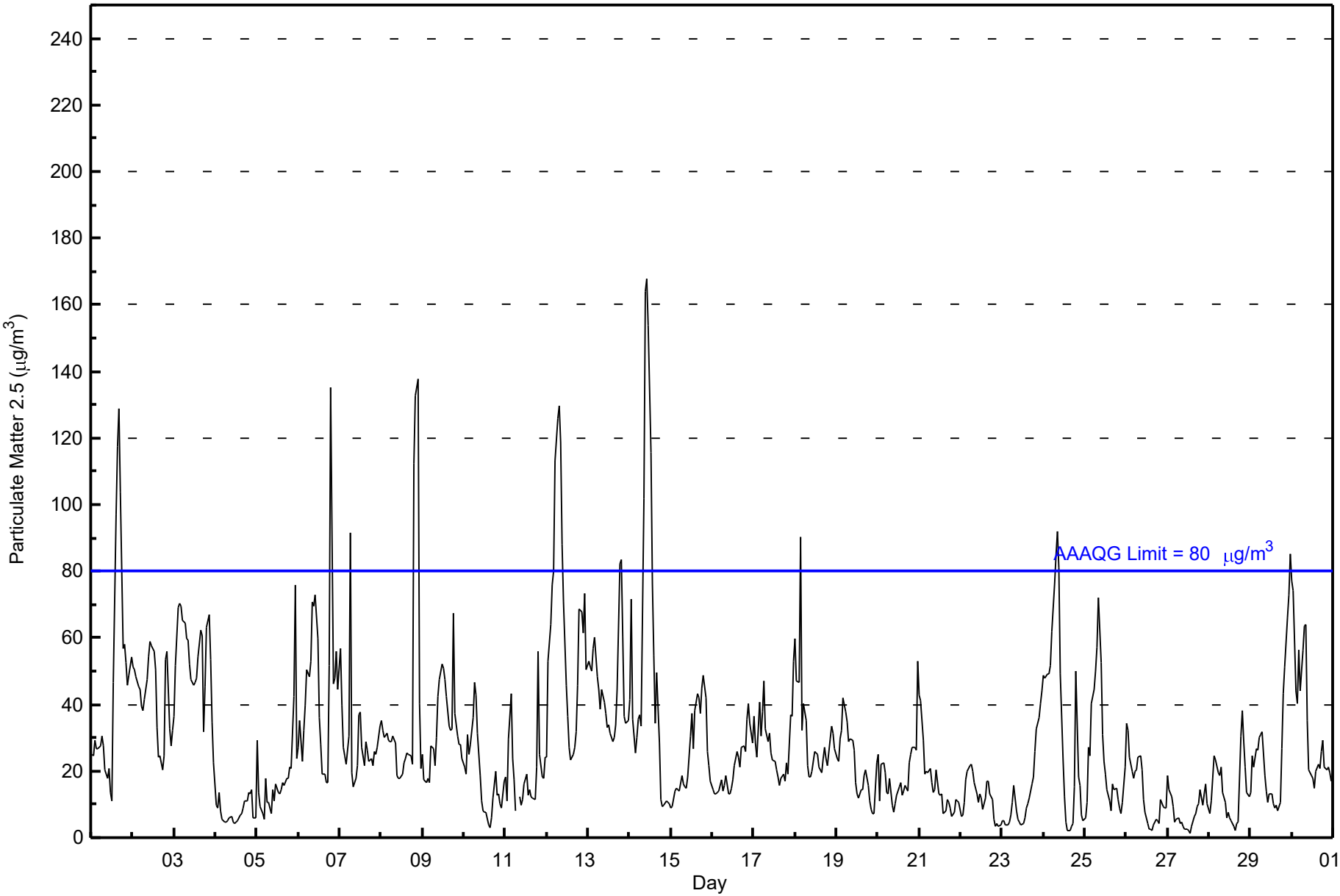
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Hills - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Hills - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	50	6.95	6.95
6 - 15	182	25.31	32.27
16 - 25	176	24.48	56.75
26 - 80	285	39.64	96.38
> 81.0	26	3.62	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Hills - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	0	0	0	0	0	1	12	5	8	10	3	5	2	4	50
6 - 15	5	7	1	0	0	1	6	46	38	23	18	6	9	6	13	3	182
16 - 25	9	8	1	0	0	4	25	45	21	33	11	4	3	3	4	5	176
26 - 80	23	8	2	2	0	8	31	71	39	41	11	7	5	11	12	14	285
> 81.0	6	0	0	0	1	1	2	4	7	2	1	0	1	0	0	0	25
Totals	43	23	4	2	1	14	64	167	117	104	49	27	21	25	31	26	718

Total Number of Valid Hours: 718

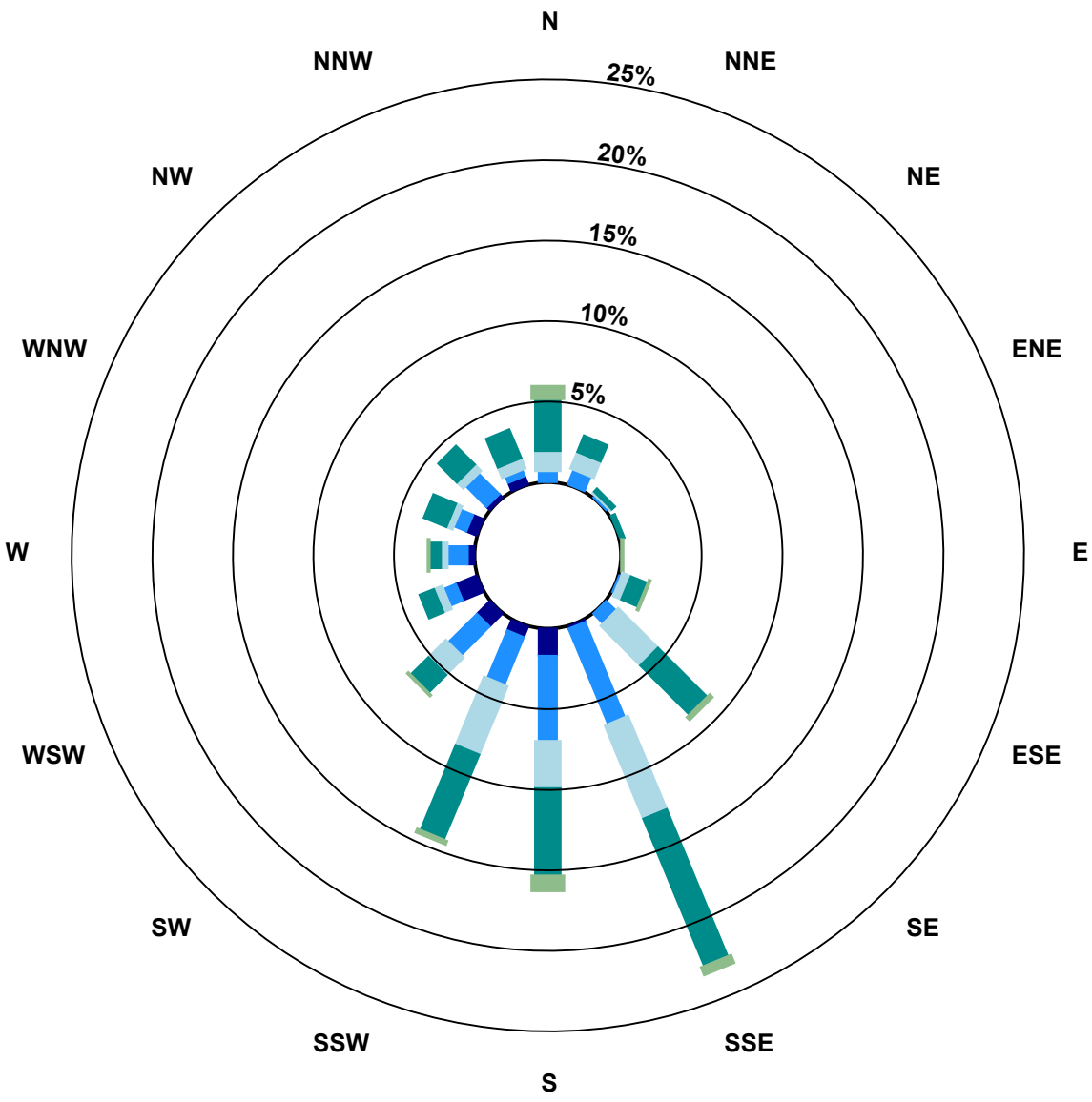
Total Number of Hours: 720

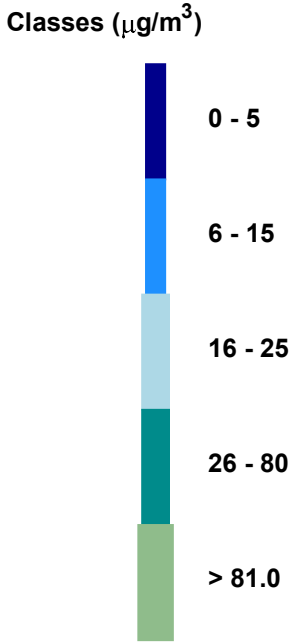
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Fort Hills





Total Number of Valid Hours: 718

Maximum Value: 28.3 C on Sep 12 16:00
Maximum Daily Average: 19.5 C on Sep 12

Minimum Value: 3.4 C on Sep 25 06:00
Minimum Daily Average: 10.2 C on Sep 25
Maximum Diurnal Average: 20.9 C at hour 16
Minimum Diurnal Average: 9.9 C at hour 7
Monthly Average: 15.02 C
Percentiles: P_1 = 5.3 P_{10} = 8.9 Q_1 = 11.9 Median = 14.6 Q_3 = 18.2 P_{90} = 21.7 P_{99} = 25.9

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

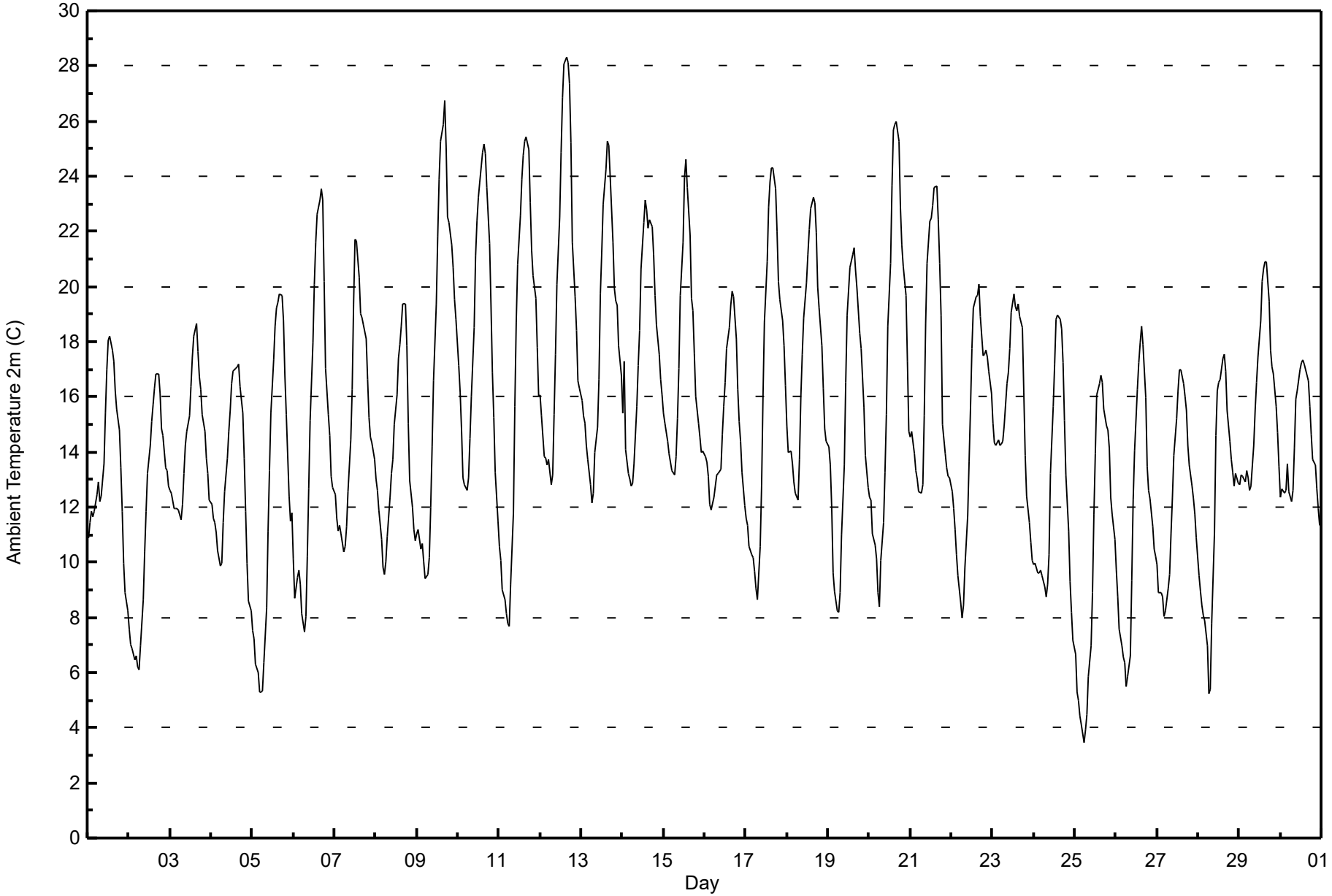
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10.9	11.5	11.8	11.7	11.8	12.5	12.9	12.2	12.4	13.6	15.4	17.0	18.0	18.2	17.7	17.3	16.2	15.5	14.8	13.4	11.9	10.0	8.9	8.2	13.5	18.2
2-Sep	7.6	7.0	6.9	6.5	6.6	6.2	6.1	7.0	8.6	10.4	11.9	13.2	14.2	15.1	15.7	16.3	16.9	16.8	16.1	14.9	14.6	13.4	13.3	12.8	11.6	16.9
3-Sep	12.6	12.5	11.9	11.9	12.0	11.9	11.5	12.1	13.2	14.2	14.7	15.3	16.4	17.4	18.2	18.7	17.6	16.7	16.3	15.4	14.7	13.8	13.2	12.3	14.4	18.7
4-Sep	12.1	11.6	11.4	11.1	10.4	9.9	10.0	11.4	12.6	13.8	14.7	15.5	16.5	17.0	17.0	17.1	17.2	16.4	15.4	13.8	11.8	9.9	8.6	8.2	13.1	17.2
5-Sep	7.5	7.2	6.3	6.0	5.3	5.3	5.3	6.4	8.3	11.1	13.3	15.4	17.4	18.6	19.2	19.4	19.7	19.7	18.7	16.8	15.4	12.4	11.5	11.8	12.4	19.7
6-Sep	10.1	8.7	9.4	9.7	9.2	8.2	7.5	8.1	10.2	12.7	15.1	17.9	20.1	21.6	22.6	23.1	23.6	23.1	20.2	17.0	15.3	14.6	13.1	12.7	14.7	23.6
7-Sep	12.5	11.6	11.1	11.4	11.0	10.4	10.6	11.3	12.6	14.4	16.3	19.4	21.7	21.7	20.3	19.0	18.9	18.6	18.1	16.6	15.3	14.6	14.3	13.7	15.2	21.7
8-Sep	13.0	12.6	11.9	10.8	9.8	9.6	10.0	10.9	12.3	13.2	13.7	15.0	16.1	17.4	17.9	18.6	19.4	19.4	17.9	15.1	12.9	12.0	11.2	10.8	13.8	19.4
9-Sep	11.0	11.2	10.5	10.7	10.0	9.4	9.6	10.2	12.0	14.2	16.6	19.4	21.8	23.9	25.3	25.9	26.8	25.1	22.5	22.3	21.5	20.7	19.5	18.8	17.4	26.8
10-Sep	17.1	16.2	14.8	13.1	12.8	12.6	13.1	14.5	16.0	18.5	21.1	22.4	23.2	23.8	24.8	25.2	24.8	23.6	21.5	19.3	16.9	15.3	13.3	11.5	18.1	25.2
11-Sep	10.6	10.1	9.0	8.6	8.1	7.8	7.7	9.2	11.8	15.7	18.7	20.8	22.6	23.9	24.8	25.3	25.4	25.0	23.0	21.3	20.4	19.6	17.8	16.0	16.8	25.4
12-Sep	16.1	15.3	13.8	13.8	13.5	13.7	12.8	13.2	15.4	17.5	20.1	22.5	24.8	26.8	28.1	28.3	28.1	27.4	25.2	21.6	19.6	18.4	16.6	16.3	19.5	28.3
13-Sep	15.8	15.3	15.1	14.3	13.7	12.8	12.1	12.5	14.0	14.9	16.6	19.8	21.2	23.0	24.3	25.3	25.1	24.0	21.6	20.0	19.5	19.3	17.8	16.8	18.1	25.3
14-Sep	15.4	17.3	14.1	13.2	13.0	12.7	12.8	13.6	15.7	17.2	18.4	20.6	22.3	23.2	22.8	22.1	22.4	22.2	21.1	19.7	18.6	17.5	16.6	16.1	17.9	23.2
15-Sep	15.4	15.1	14.4	13.9	13.6	13.3	13.2	13.8	15.2	17.0	19.7	21.6	24.0	24.6	23.6	21.9	19.6	19.1	17.6	16.0	15.0	14.6	14.0	14.1	17.1	24.6
16-Sep	13.8	13.6	13.1	12.1	11.9	12.3	12.7	13.2	13.2	13.4	14.6	15.7	16.5	17.7	18.5	19.3	19.8	19.6	18.1	16.3	15.1	14.4	13.3	12.0	15.0	19.8
17-Sep	11.6	11.4	10.6	10.3	10.2	9.6	9.1	8.6	10.6	12.8	16.0	18.7	20.9	22.9	23.8	24.3	24.3	23.5	22.0	20.2	19.5	18.8	17.8	16.4	16.4	24.3
18-Sep	15.0	14.0	14.0	13.6	12.9	12.5	12.3	13.7	16.0	17.6	18.9	20.1	21.1	22.1	22.8	23.2	23.0	22.0	20.0	19.2	17.8	16.3	14.8	14.4	17.4	23.2
19-Sep	14.2	13.5	12.0	9.6	9.0	8.2	8.2	8.9	11.0	13.5	16.5	18.9	19.8	20.7	21.1	21.4	20.6	19.9	18.3	17.7	16.7	15.6	13.9	12.7	15.1	21.4
20-Sep	12.3	12.2	11.1	10.7	10.1	8.9	8.4	10.1	11.4	13.2	15.3	18.6	20.9	23.7	25.7	25.9	26.0	25.3	22.9	21.5	20.7	19.7	17.3	14.8	16.9	26.0
21-Sep	14.6	14.8	13.9	13.3	13.0	12.6	12.5	12.8	15.3	18.7	20.9	22.4	22.5	22.9	23.6	23.6	22.4	20.9	18.9	15.0	13.9	13.4	13.1	13.1	17.0	23.6
22-Sep	12.5	11.9	11.2	10.3	9.5	8.5	8.0	8.4	9.8	11.7	13.7	15.6	17.8	19.2	19.6	19.7	20.1	18.9	17.5	17.5	17.7	17.4	16.9	16.1	14.6	20.1
23-Sep	15.0	14.4	14.2	14.4	14.2	14.3	14.4	14.9	16.5	16.9	17.7	19.1	19.7	19.3	19.1	19.4	18.9	18.5	16.2	13.9	12.4	11.5	10.7	10.1	15.7	19.7
24-Sep	9.9	9.9	9.6	9.6	9.7	9.5	9.1	8.7	9.2	10.3	13.2	15.7	17.2	18.8	19.0	18.8	18.4	17.2	15.2	13.2	11.2	9.3	8.2	7.2	12.4	19.0
25-Sep	6.7	5.3	5.0	4.4	4.1	3.4	3.9	4.5	5.9	7.0	8.9	11.7	13.9	16.1	16.5	16.8	16.5	15.6	15.0	14.8	14.1	12.3	11.8	10.8	10.2	16.8
26-Sep	9.7	8.7	7.6	7.0	6.5	6.3	5.5	5.9	6.6	9.4	12.2	14.0	16.3	17.2	18.0	18.5	17.9	16.0	13.5	12.6	12.3	11.3	10.5	10.2	11.4	18.5
27-Sep	9.9	8.9	8.9	8.7	8.0	8.2	9.0	9.6	11.0	12.4	13.9	15.2	16.2	17.0	17.0	16.5	16.0	15.5	14.2	13.5	12.8	12.3	11.8	10.9	12.4	17.0
28-Sep	9.5	9.0	8.4	8.1	7.9	7.0	5.2	5.4	7.8	11.1	14.6	16.2	16.5	16.6	17.4	17.5	16.9	15.5	14.4	13.7	13.3	12.8	13.2	12.9	12.1	17.5
29-Sep	12.8	13.2	13.1	12.9	13.3	13.0	12.6	12.8	14.3	15.5	16.5	17.5	18.8	20.2	20.7	20.9	20.9	19.5	17.7	17.1	16.8	15.7	14.7	13.5	16.0	20.9
30-Sep	12.3	12.6	12.5	12.6	13.6	12.6	12.2	12.6	14.2	15.9	16.2	17.0	17.2	17.3	17.2	16.8	16.6	15.7	14.6	13.8	13.5	12.6	12.0	11.4	14.3	17.3
	12.3	11.9	11.3	10.8	10.5	10.1	9.9	10.5	12.1	13.9	15.9	17.7	19.2	20.3	20.7	20.9	20.7	19.9	18.3	16.8	15.7	14.6	13.7	12.9	Diurnal Average	
	17.1	17.3	15.1	14.4	14.2	14.3	14.4	14.9	16.5	18.7	21.1	22.5	24.8	26.8	28.1	28.3	28.1	27.4	25.2	22.3	21.5	20.7	19.5	18.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Hills - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	109	15.14	15.14
10 - 20	501	69.58	84.72
> 20	110	15.28	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Hills - September 2025

Maximum Value: 97.4 % on Sep 14 05:00

Maximum Daily Average: 76.8 % on Sep 8

Minimum Value: 22.2 % on Sep 24 16:00

Minimum Daily Average: 43.8 % on Sep 23

Maximum Diurnal Average: 83.9 % at hour 7

Minimum Diurnal Average: 41.1 % at hour 16

Monthly Average: 63.65 %

Percentiles: P_1 = 25.8 P_{10} = 37.1 Q_1 = 48.5 Median = 63.8 Q_3 = 80.1 P_{90} = 89.3 P_{99} = 96.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

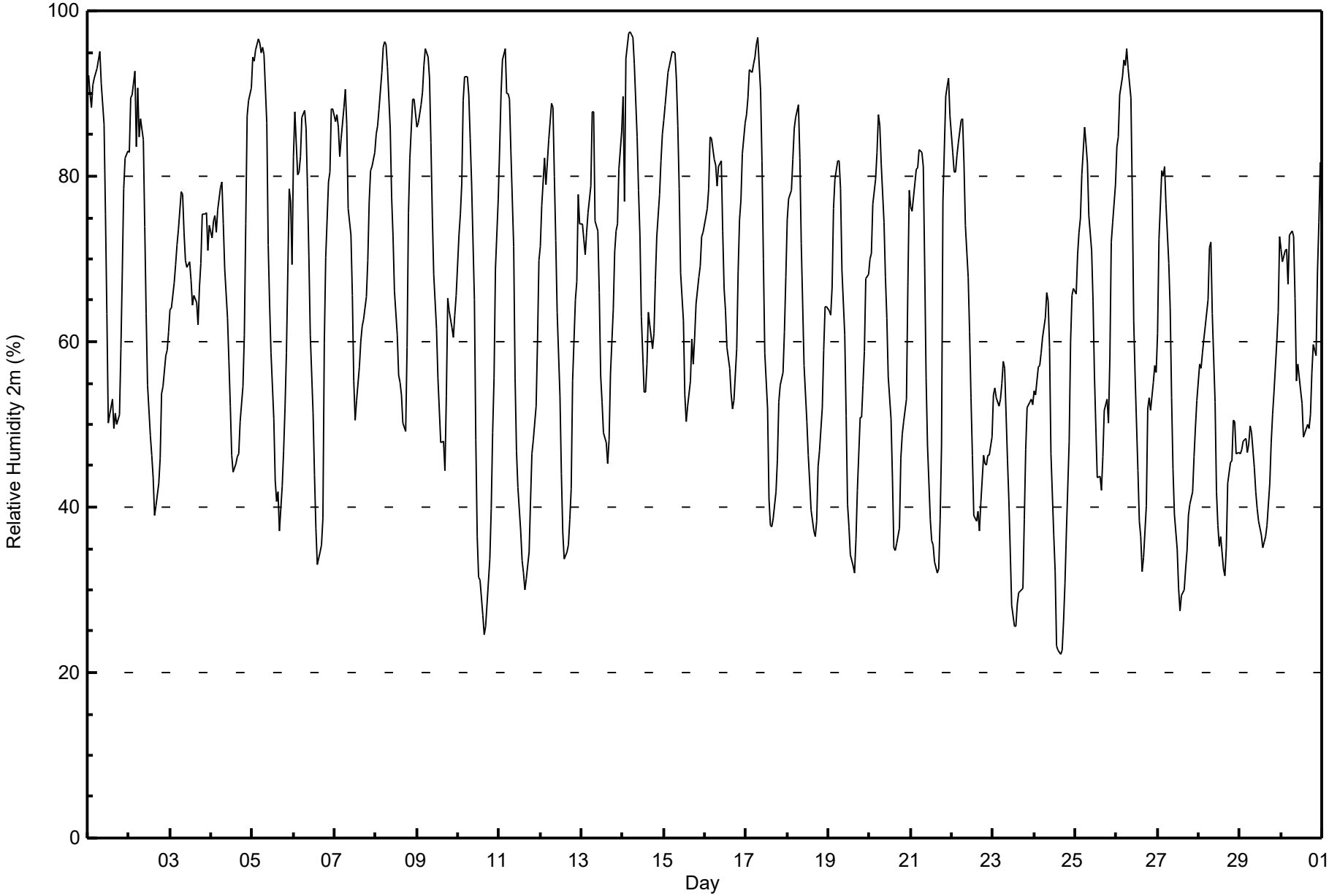
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	92.2	90.0	88.4	90.9	91.8	93.0	94.0	95.1	91.3	86.2	75.4	63.4	50.3	51.2	53.1	49.4	51.3	50.0	51.1	59.2	68.4	78.4	82.2	83.1	74.1	95.1
2-Sep	82.9	89.5	89.8	92.6	83.6	90.8	84.7	87.0	84.5	73.8	63.3	54.7	48.6	46.3	43.5	39.0	40.2	42.9	46.0	53.7	54.7	58.3	59.1	61.1	65.4	92.6
3-Sep	63.9	64.0	67.2	69.3	71.7	73.6	78.1	77.8	73.3	69.8	69.0	69.7	67.4	64.5	65.6	64.7	62.1	66.6	69.5	75.4	75.3	75.6	71.1	74.0	70.0	78.1
4-Sep	72.5	74.5	75.3	73.3	75.9	78.6	79.3	74.2	68.9	62.8	57.6	52.2	46.3	44.3	45.2	46.0	46.5	50.3	54.5	60.9	74.2	87.2	89.2	90.6	65.9	90.6
5-Sep	94.3	93.8	95.3	96.6	96.1	94.9	95.7	94.8	86.5	71.7	64.6	58.6	50.6	43.2	40.6	41.9	37.1	42.6	46.9	52.1	58.6	78.5	76.9	69.3	70.0	96.6
6-Sep	82.3	87.8	80.2	80.5	82.5	87.1	88.0	85.7	78.6	70.4	60.8	51.4	44.0	37.5	33.0	34.6	35.4	38.7	59.9	70.2	79.3	80.5	88.1	88.1	67.7	88.1
7-Sep	86.6	87.4	85.9	82.3	84.5	88.4	90.4	86.2	76.0	72.8	65.6	55.3	50.5	52.8	56.9	60.0	61.9	62.7	65.4	69.8	76.9	80.7	81.2	82.9	73.5	90.4
8-Sep	85.1	86.0	88.1	92.6	95.7	96.3	96.0	93.2	85.7	77.4	72.7	66.1	60.9	55.9	55.1	53.6	50.2	49.1	59.4	75.6	82.2	89.3	89.2	87.7	76.8	96.3
9-Sep	86.0	86.4	88.7	90.2	93.4	95.4	94.5	91.9	84.1	75.2	68.1	61.5	55.6	51.6	47.9	48.0	44.4	53.4	65.3	63.8	61.8	60.5	63.3	65.6	70.7	95.4
10-Sep	72.9	75.5	79.1	89.2	92.0	92.1	89.8	84.7	79.2	65.1	48.2	36.5	31.6	31.2	26.9	24.6	25.6	28.3	33.7	39.9	49.0	55.7	68.8	77.2	58.2	92.1
11-Sep	83.4	90.0	94.0	95.4	90.0	89.9	89.3	83.1	71.6	55.6	46.8	42.3	37.1	33.5	32.0	30.0	31.3	34.6	40.6	46.5	48.1	52.2	60.1	69.8	60.3	95.4
12-Sep	71.5	76.4	82.1	79.0	81.7	84.5	88.9	88.3	80.0	72.1	63.6	53.3	44.1	36.9	33.7	34.6	35.4	38.5	42.2	55.3	65.0	67.3	77.8	74.2	63.6	88.9
13-Sep	74.2	72.4	70.5	73.3	75.6	78.8	87.7	87.8	74.7	73.5	65.9	56.0	52.7	49.0	47.7	45.3	48.2	56.1	63.9	70.9	73.3	74.3	80.8	85.4	68.2	87.8
14-Sep	89.7	77.0	94.2	97.3	97.4	97.2	96.8	93.6	84.8	78.3	72.8	63.1	53.9	54.0	57.4	63.6	62.0	59.1	61.1	67.4	72.7	77.9	81.8	85.0	76.6	97.4
15-Sep	86.9	88.6	92.5	93.4	94.3	95.1	94.8	91.7	86.2	78.4	68.3	62.5	53.6	50.4	52.1	55.3	60.3	57.3	60.4	64.6	67.8	69.2	72.7	73.2	73.7	95.1
16-Sep	75.2	76.2	78.6	84.7	84.6	82.1	81.3	78.8	81.2	81.9	73.4	66.5	63.7	59.3	56.7	53.8	51.9	53.0	59.2	68.5	74.8	77.1	82.7	86.5	72.1	86.5
17-Sep	87.4	89.5	93.0	92.5	93.6	94.5	95.9	96.7	90.3	81.9	70.1	58.7	51.9	41.1	37.8	37.6	38.7	41.8	45.8	52.8	54.8	56.2	61.2	67.8	68.0	96.7
18-Sep	74.8	77.3	78.2	82.0	85.7	87.1	88.6	82.2	71.9	64.5	57.2	50.3	46.3	43.0	39.6	37.1	36.5	38.3	44.9	46.7	52.0	58.9	64.2	64.2	61.3	88.6
19-Sep	63.7	63.3	66.7	76.2	79.7	81.8	81.9	78.5	68.7	60.9	51.1	40.4	37.6	34.3	33.0	32.0	36.1	42.0	50.8	50.9	54.7	58.9	67.5	68.2	57.4	81.9
20-Sep	70.0	70.7	76.5	79.7	82.8	87.5	86.2	81.5	74.4	67.8	62.9	55.8	50.7	43.5	35.0	34.7	35.6	37.5	45.9	48.8	50.4	53.0	66.9	78.3	61.5	87.5
21-Sep	76.3	75.7	79.1	80.9	81.1	83.2	82.9	81.2	69.1	55.5	47.5	38.4	35.9	35.5	33.5	32.0	32.6	38.4	47.4	77.0	89.6	90.9	91.9	87.3	64.3	91.9
22-Sep	82.9	80.5	80.6	82.6	84.2	86.8	86.9	81.5	74.0	67.8	61.1	53.3	46.3	38.9	38.3	39.5	37.1	40.4	46.3	45.2	45.1	46.2	46.3	48.6	60.0	86.9
23-Sep	53.6	54.4	53.3	52.2	53.1	55.0	57.6	56.8	45.7	40.9	34.5	28.1	25.6	25.6	28.3	29.7	29.9	30.2	38.5	46.9	52.1	52.7	53.0	52.3	43.8	57.6
24-Sep	54.1	53.6	56.9	57.1	58.7	60.5	62.9	65.9	65.0	59.3	46.5	36.6	32.2	23.3	22.7	22.2	22.7	26.3	30.9	36.9	48.0	60.0	65.6	66.4	47.3	66.4
25-Sep	65.7	70.6	73.2	74.9	80.2	85.9	83.9	81.5	75.3	71.0	64.9	55.9	49.6	43.5	43.8	42.0	46.0	51.8	53.0	50.1	58.0	72.1	74.4	78.9	64.4	85.9
26-Sep	83.6	84.7	89.9	92.1	94.0	93.3	95.5	93.1	89.5	77.4	62.6	55.7	44.4	38.4	36.5	32.2	34.0	40.1	51.9	53.2	51.7	55.0	57.2	56.3	65.1	95.5
27-Sep	61.1	72.4	80.7	80.0	81.1	76.6	69.5	64.1	53.3	44.6	39.2	34.9	30.2	27.4	29.4	30.1	32.5	34.7	38.9	40.4	41.8	46.1	49.7	52.8	50.5	81.1
28-Sep	57.3	56.7	58.7	60.3	61.9	65.0	71.4	72.0	63.4	52.8	41.9	37.9	35.2	36.5	32.5	31.6	35.2	42.8	45.4	45.6	50.4	50.4	46.5	46.7	49.9	72.0
29-Sep	46.4	47.0	48.0	48.3	46.7	47.7	49.9	49.0	44.7	41.9	39.8	38.3	36.5	35.1	35.8	36.4	37.7	42.9	47.7	51.3	54.0	59.9	63.5	72.7	46.7	72.7
30-Sep	71.2	69.6	71.0	71.2	67.0	72.9	73.5	72.7	65.3	55.3	57.4	54.1	52.6	48.5	48.9	50.0	49.5	51.2	56.2	59.7	58.3	68.4	74.4	81.6	62.5	81.6
	74.9	76.1	78.5	80.4	81.3	83.2	83.9	81.7	74.6	66.9	59.1	51.7	46.2	42.5	41.4	41.1	41.6	44.7	50.8	56.6	61.4	66.4	70.2	72.5	Diurnal Average	
	94.3	93.8	95.3	97.3	97.4	97.2	96.8	96.7	91.3	86.2	75.4	69.7	67.4	64.5	65.6	64.7	62.1	66.6	69.5	77.0	89.6	90.9	91.9	90.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Hills - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	98	13.61	13.61
40 - 60	222	30.83	44.44
60 - 80	218	30.28	74.72
80 - 100	182	25.28	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - September 2025

Maximum Speed: 29 km/h on Sep 29 11:00

Maximum Daily Speed Average: 16.2 km/h on Sep 22

Minimum Speed Value: 0 km/h on Sep 11 04:00

Minimum Daily Speed Average: 1.0 km/h on Sep 3

Maximum Diurnal Speed Average: 7.2 km/h at hour 10

Minimum Diurnal Speed Average: 2.1 km/h at hour 19

Monthly Average Velocity: 4.9 km/h 186.6 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 9 Q_3 = 14 P_{90} = 18 P_{99} = 25

Hours in Service: 720

Hours of Data: 719

Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WNW3	W3	S1	SSW4	NE1	SE7	SSE9	SSW7	S3	NNE3	N14	NNE15	NNE16	N19	N22	N22	N21	N22	NNE17	NNE9	N7	WNW6	NW5	NNW5	N7.1	N22
2-Sep	NW4	NNW3	W4	W4	NNW2	NW4	NW4	W3	SSW3	SSW5	S5	S8	S10	SSE12	S12	S13	SSE14	SSE11	SSE9	SSE7	SSE14	SSE12	SSE17	S8	S5.8	SSE17
3-Sep	S8	SSE10	SSE11	SSE13	SSE12	SSE11	SSE10	S9	S13	S16	SSW14	S14	SSW8	WSW5	N10	N19	N25	N22	N18	NNW15	N18	NNW12	NNW13	NW10	WNW1.0	N25
4-Sep	NW13	NW12	NW15	NW15	WNW11	W9	WNW9	NW9	NNW15	NNW13	NNW14	NNW14	NNW16	NNW16	N13	N11	N13	NNE16	NNE12	NNE9	NW2	WNW5	NW4	W3	NNW10.0	NNW16
5-Sep	SSE3	S3	SW3	SSE5	SSE6	SE7	SSE7	S9	S10	S11	S6	SSE8	SSE9	S7	S7	SSE10	SSE9	SSE9	SE9	ESE7	ESE5	NW2	ESE3	ESE5	SSE6.0	S11
6-Sep	ESE2	ENE1	SE5	SE7	SE8	SSE7	S7	S9	SSW8	SW7	SW7	SSW6	SSE12	SSE16	S16	S15	S11	SSE8	SE3	E3	NW2	WNW1	SW1	SSE3	S5.8	S16
7-Sep	SSE5	SE6	SE8	SSE8	SE7	SE2	S4	SSW6	SSW4	SW3	SW4	NNW3	NNE9	NNE15	N18	N20	N18	N17	N15	N18	N7	N6	N11	N15	NNE5.4	N20
8-Sep	N15	N15	NNW7	NNW5	NW3	NW4	WNW4	NW5	NNE8	NE7	NNW2	SSW2	SW4	SW3	W7	SSW5	SSW4	SSW3	WSW4	SSW2	UO	W3	NW4	WSW1	NW2.6	N15
9-Sep	SE6	S9	SSE5	SSE6	S4	S3	S6	SSW8	SSW7	SSW9	SSW9	SSW7	SSW5	SSW9	S14	S8	SSE15	SSW7	S3	SSW11	SSW8	SSW10	SSW6	SSE6	S7.1	SSE15
10-Sep	SSE5	S7	SSE2	NW3	SSW0	SW1	WSW2	SSE1	WSW3	SSE2	W4	WNW9	W9	WSW12	W11	WSW15	WNW11	NW12	NW9	NNW9	NW8	N6	SSW5	SW1	W3.9	WSW15
11-Sep	NNW2	WSW2	WSW1	SSW0	S3	SSE4	SSE6	SSE8	SE10	S8	S5	SE10	SSE12	S12	SSE15	SSE16	SSE18	SSE16	SE12	SE11	SE15	SSE14	S5	SSE5	SSE8.1	SSE18
12-Sep	SSE9	SSE8	S3	SE6	SSE9	SSE10	S9	S12	S13	S14	S14	SSW15	S19	SSW18	SSW18	SSW18	SSW14	SW8	SW5	SE4	SW4	SSW3	SSW3	SSE5	S9.4	S19
13-Sep	SSE7	SSE7	SSE6	SSE8	SSE8	SSE6	S6	S6	S7	SSW8	SW7	SW4	WSW4	WSW4	SSW2	NNW2	WNW2	NNW4	N5	N5	N7	N7	N7	N5	S1.4	SSE8
14-Sep	ENE2	SE7	WSW2	WSW3	SSE2	SSE3	SSW3	S3	SSE8	SSE11	S11	S7	SE9	ESE15	SE18	SSE22	SSE18	SSE20	SSE14	S9	SSE11	SSE9	S8	SSE9	SSE8.6	SSE22
15-Sep	S11	S11	SSE10	SSE10	SSE10	SSE10	SE9	SE7	S5	S5	SE5	SSE7	SE1	W9	WNW19	WNW17	WNW18	W15	WNW15	WNW11	NW12	WNW12	WNW9	WNW9	WSW4.5	WNW19
16-Sep	NW6	NW6	NW5	WNW5	NW7	NW5	W4	NNW6	NNW8	NNE6	NNE4	N4	SSE5	ESE8	ESE11	SE11	SSE10	SE9	ESE7	ESE8	SE4	SSE9	SSE7	SSE6	ESE1.6	SE11
17-Sep	SE6	SSE6	SSE5	SE8	SSE8	SSE8	SSE7	SSW7	S9	S12	S12	S16	SSE14	SSE20	SSE21	SSE21	SSE22	SSE22	SE17	SE15	SE20	SE19	SSE14	SSE8	SSE12.9	SSE22
18-Sep	SSE5	SSE6	SSE8	SE9	SE6	SSE7	SSE9	SSE15	S21	S22	SSW20	SW19	SSW17	SSW17	SSW20	SSW20	SW17	SSW13	S10	SSW11	SSW9	SW7	SSW7	SSW7	S11.5	S22
19-Sep	SSW9	SW11	SSW6	SSE8	SSE9	SSE9	SSE10	SSE11	SSE12	S12	S12	SSW19	SSW22	SW18	SW16	SW16	SW6	SSW6	S8	S10	S9	SSW6	S6	SSE6	SSW9.7	SSW22
20-Sep	SE9	SSE7	SSE5	SE8	SE7	SSE8	SSE10	SSE13	S12	S11	S11	SSW9	SSE11	S13	S23	S21	SSE19	S17	SSE12	SSE15	SSE13	SSE11	SSE4	S3	SSE10.8	S23
21-Sep	SE4	SE9	SSW8	SSE10	SSE7	SE11	SE9	SSE7	SSE6	SSE4	SE3	SE4	SE8	SE7	SSW7	WSW9	WSW12	W15	W13	W7	SSW8	SSW13	S9	SSW12	S5.7	W15
22-Sep	SSW13	SW15	SW13	SSW14	SSW13	S11	SSW14	SSW16	SSW18	SSW21	SSW21	SSW22	SSW21	SW23	SSW22	SSW20	SSW18	S14	S15	S18	S20	S20	S12	S10	SSW16.2	SW23
23-Sep	SSE16	S11	SSW10	S15	S15	S12	S11	SSW9	SW21	WSW21	SW19	SW23	SW24	SW24	SW26	SW25	SSW23	SSW17	S10	SSE10	S11	S10	S7	SE8	SSW14.2	SW26
24-Sep	SE10	SSE9	S12	S14	S13	S12	S9	SSE9	SSW13	SW12	SSW5	S4	S8	WNW14	WNW14	WNW17	WNW17	NW14	NW9	NW7	W6	SSE3	S5	S6	SW5.3	WNW17
25-Sep	SSE7	SSE9	SSE9	SSE10	SSE11	SSE10	SSE13	SSE12	SSE14	SSE12	S12	S12	SSE11	SSE13	SSE14	SSE10	SSE5	SW3	SSE7	S6	S5	W7	W8	W1	SSE8.1	SSE14
26-Sep	SSW6	SSW7	SSW9	S7	SSW10	SSW10	S10	SSW9	SSE7	SSW9	SW7	SSW9	WSW10	WSW16	WSW15	W16	WSW13	SW8	S9	SSW10	SSW9	SSW8	S9	SSE8	SSW8.6	WSW16
27-Sep	SSE9	SSE11	SSE9	SSE12	SSW10	SW16	SW19	SW17	SW22	WSW24	WSW20	WSW18	WSW19	W17	SW21	SW23	SW17	SSW14	SW11	WSW8	W7	SW9	SW9	SSW11	SW13.0	WSW24
28-Sep	SSW10	SW11	SSW10	SSW9	SW10	SW8	SSE6	SSE5	S8	SSE5	SSE5	ESE7	SSE7	S15	SSW14	SSW12	S11	S8	SSE8	ESE6	ESE9	SE7	SE10	SSE8	S7.4	S15
29-Sep	SE8	SE12	SE13	SE15	SE21	SE20	SE18	SE19	SE20	SSE25	SSE29	SSE27	SSE29	SSE26	S21	SSE20	S12	SSE8	SSE10	SE11	SSE11	SE5	SE3	ESE2	SSE15.5	SSE29
30-Sep	N4	N4	NNW7	NNW5	NNE7	WNW4	N3	NNW7	NNE9	NE12	N13	NNE16	NNE14	NE15	NNE16	NNE14	NNE17	NNE17	N13	NNW15	N13	NNE10	NNE11	N11	NNE10.2	NNE17
	SSE3.6	S4.4	S4.1	SSE5.4	SSE5.6	S5.7	S6.2	S6.4	S6.9	SSW7.2	SSW6.5	SSW6.3	S6.7	SSW6.8	SSW7.1	SSW6.7	SSW4.8	SSW3.0	SSE2.1	SSE2.1	S3.0	S3.5	S3.0	S2.7	Diurnal Average	
	SSE16	SW15	NW15	S15	SE21	SE20	SW19	SE19	SW22	SSE25	SSE29	SSE27	SSE29	SSE26	SW26	SW25	N25	N22	N18	S18	S20	S20	SSE17	N15	Diurnal Maximum	

UO - Unstable Operation

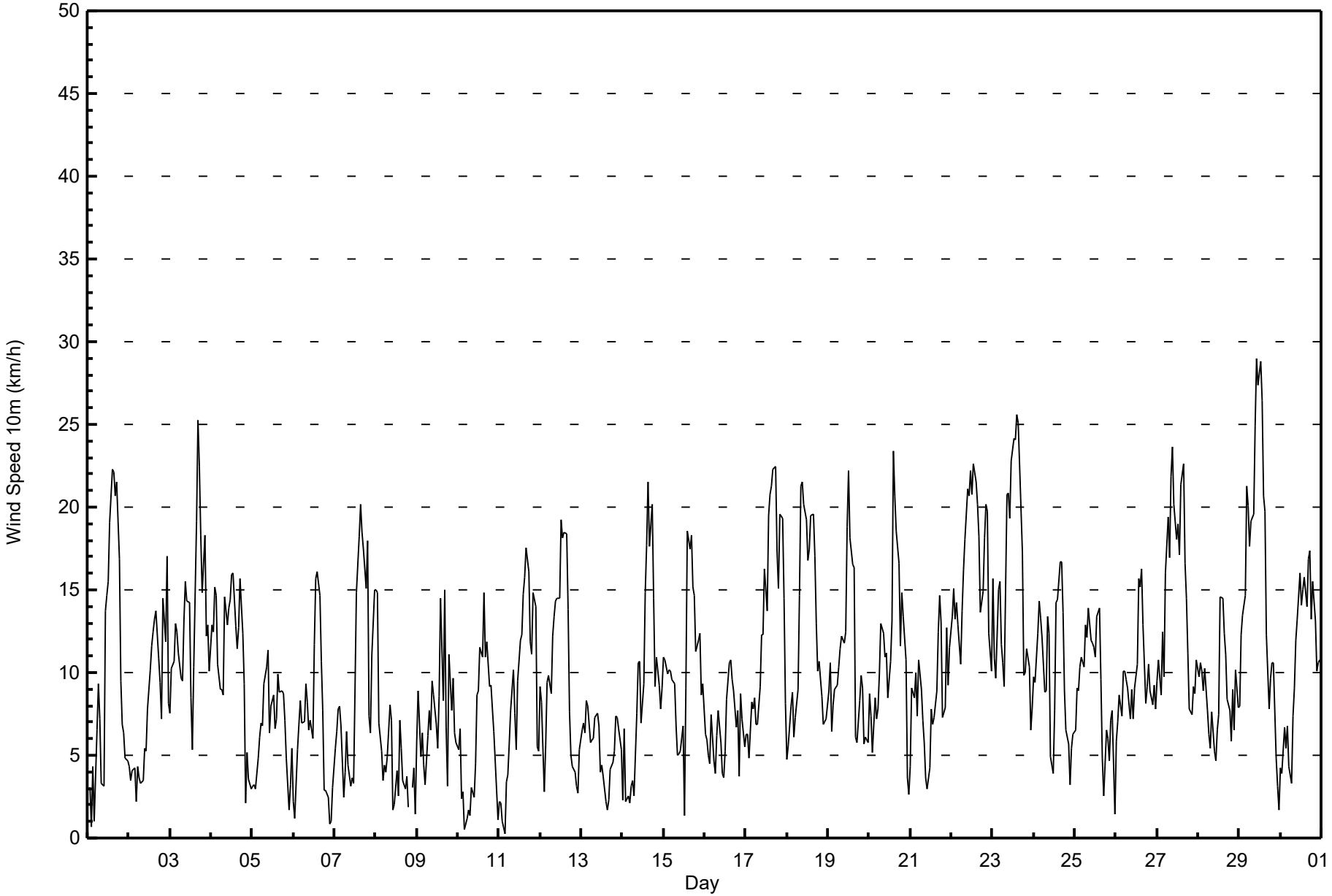
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - September 2025



Wind Speed 10m (WS10) - km/h
Fort Hills - September 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	156	21.70	21.70
6 - 11	316	43.95	65.65
12 - 19	192	26.70	92.35
20 - 28	53	7.37	99.72
29 - 38	2	0.28	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Hills - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	2	1	2	1	5	12	25	19	18	12	12	8	7	15	10	156
6 - 11	11	9	1	0	0	8	37	94	55	51	14	3	9	9	9	6	316
12 - 19	18	12	2	0	0	1	11	36	36	24	13	9	4	9	7	10	192
20 - 28	7	0	0	0	0	0	4	11	7	11	10	3	0	0	0	0	53
29 - 38	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	23	4	2	1	14	64	168	117	104	49	27	21	25	31	26	719

Total Number of Valid Hours: 719

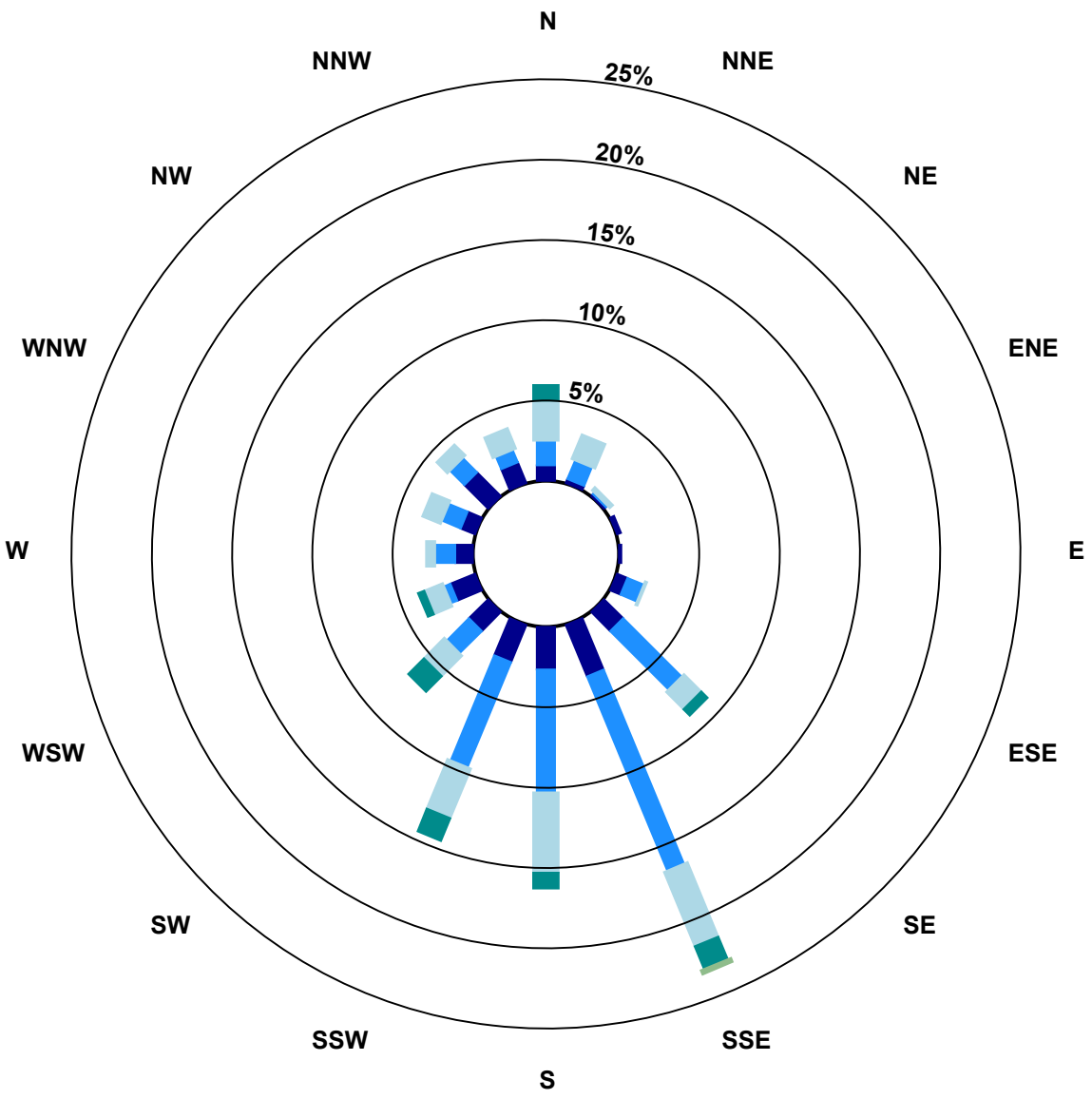
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Fort Hills



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 719

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort Hills - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Sep 3 16:00

Minimum Value: 1 km/h on Sep 8 20:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 5

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Sep	1	1	2	2	1	6	2	1	2	2	4	3	4	5	5	4	4	4	4	2	2	1	1	1	6
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	2	2	1	1	3	5	2	3	5
3-Sep	1	2	2	1	1	2	1	1	3	2	2	2	2	2	4	8	5	6	4	5	5	3	3	2	8
4-Sep	3	2	3	3	2	1	2	2	4	3	3	4	4	4	4	3	4	3	3	2	2	1	1	2	4
5-Sep	2	2	1	1	1	1	1	1	3	3	3	3	3	3	4	3	2	1	1	2	2	1	2	3	4
6-Sep	1	1	2	1	1	1	1	2	2	2	2	2	4	3	3	3	2	2	1	1	1	2	1	2	4
7-Sep	1	1	2	2	2	3	2	2	1	1	1	2	4	3	5	4	4	4	4	4	3	2	3	3	5
8-Sep	3	3	2	1	1	1	1	1	2	2	2	1	2	2	2	2	2	1	1	1	UO	2	1	1	3
9-Sep	2	2	1	1	1	1	1	1	1	2	2	2	2	3	2	3	3	2	3	2	1	1	1	2	3
10-Sep	2	3	1	2	1	1	1	1	1	1	2	3	3	3	3	4	3	2	3	2	3	2	2	2	4
11-Sep	2	1	1	1	1	2	1	2	2	2	1	3	3	3	4	4	3	3	1	2	3	2	4	2	4
12-Sep	1	2	2	1	1	3	2	1	2	2	2	3	4	4	4	3	3	2	1	1	2	1	1	1	4
13-Sep	1	1	2	2	1	2	1	1	1	2	1	2	2	1	1	1	1	1	1	2	2	2	1	1	2
14-Sep	2	4	1	1	1	1	1	2	2	3	2	3	3	3	5	3	3	4	3	1	1	1	1	1	5
15-Sep	2	2	1	2	2	1	1	1	2	2	2	2	2	4	5	5	6	4	4	3	4	3	3	2	6
16-Sep	2	1	1	2	2	1	1	2	2	1	1	2	3	3	3	3	2	2	1	2	2	3	2	2	3
17-Sep	2	2	1	1	1	1	1	1	2	2	3	3	3	4	4	3	3	3	4	3	2	2	2	3	4
18-Sep	1	1	2	1	1	2	2	4	3	3	3	3	3	3	4	4	3	2	1	1	2	1	1	1	4
19-Sep	1	1	2	2	1	1	1	2	1	2	2	3	4	4	4	4	2	1	1	1	2	1	1	2	4
20-Sep	1	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	3	4	1	2	2	4	1	1	4
21-Sep	2	2	1	1	1	2	1	1	1	1	2	2	2	2	3	2	2	3	4	2	2	2	1	2	4
22-Sep	2	2	2	2	2	3	2	2	3	3	3	4	4	5	4	3	4	3	2	3	3	3	4	3	5
23-Sep	1	2	2	4	2	2	2	4	5	5	4	4	5	6	6	5	4	3	2	3	2	3	1	2	6
24-Sep	2	1	1	2	2	2	2	2	2	3	3	3	3	5	5	4	4	4	2	1	1	2	1	1	5
25-Sep	2	1	2	1	1	2	2	2	2	2	2	2	2	3	2	3	2	2	2	4	1	2	2	1	4
26-Sep	2	2	2	3	1	1	1	2	1	2	3	2	3	4	4	4	3	4	1	2	1	1	2	1	4
27-Sep	2	2	2	3	2	4	4	3	5	6	5	4	5	5	5	4	3	3	2	2	2	2	2	2	6
28-Sep	2	2	2	1	1	2	2	2	1	1	2	2	4	3	4	3	2	1	1	1	1	2	3	2	4
29-Sep	2	2	2	2	4	3	3	3	3	4	5	4	5	5	5	4	3	2	1	1	1	1	2	1	5
30-Sep	1	2	1	2	3	2	2	2	3	2	3	3	3	3	3	3	3	4	2	3	3	2	1	3	4
	3	4	3	4	4	6	4	4	5	6	5	4	5	6	6	8	6	6	4	5	5	5	4	3	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort Hills - September 2025

Direction of Maximum Speed: 153 deg on Sep 29 11:00
Direction of Maximum Daily Speed Average: 200.4 deg on Sep 22

Direction of Minimum Speed: 213 deg on Sep 11 04:00

Direction of Minimum Daily Speed Average: 1.0 deg on Sep 3

Monthly Average Direction: 186.6 deg

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Percent Operational Time:	99.9

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	Average
1-Sep	303	264	174	210	36	125	152	192	190	22	1	19	12	5	6	4	1	10	16	16	350	303	315	330	5.1
2-Sep	326	332	269	268	339	307	311	266	201	204	183	184	177	159	169	169	158	168	153	153	147	154	157	173	172.4
3-Sep	176	164	152	147	152	158	167	172	183	185	199	185	206	240	359	359	352	352	0	347	349	334	328	315	300.2
4-Sep	323	323	320	322	302	279	289	307	335	333	334	335	340	328	351	357	356	17	22	28	325	289	306	261	333.4
5-Sep	165	183	218	162	154	138	150	181	186	186	179	147	154	186	178	165	150	150	136	111	113	309	119	118	159.0
6-Sep	112	62	129	141	135	160	173	182	194	222	233	209	158	168	172	178	171	159	131	89	321	294	227	159	170.4
7-Sep	150	143	144	147	134	127	180	198	210	221	228	329	16	21	8	11	7	9	4	10	354	3	7	10	17.4
8-Sep	7	0	341	335	316	313	301	321	23	49	332	212	222	222	276	199	203	209	242	210	UO	263	321	246	323.7
9-Sep	140	173	161	167	188	182	191	195	198	200	204	212	211	204	184	181	158	208	188	201	201	196	207	147	187.8
10-Sep	150	170	163	321	201	222	240	151	238	162	265	294	264	241	261	254	294	319	324	331	319	349	213	215	275.2
11-Sep	342	249	255	213	177	160	168	161	146	181	187	143	151	186	163	154	155	153	142	133	136	150	177	166	156.9
12-Sep	160	158	179	145	148	158	179	176	175	171	189	205	191	195	208	207	205	215	234	138	229	196	196	147	186.3
13-Sep	152	159	161	147	151	166	178	172	170	192	225	229	249	242	196	346	295	341	359	1	351	357	355	355	186.6
14-Sep	69	127	241	258	152	159	199	186	153	163	177	186	139	118	137	154	164	158	159	171	162	164	177	164	157.5
15-Sep	175	183	163	165	161	152	136	132	183	170	145	157	124	265	294	299	300	280	298	290	308	290	282	282	249.4
16-Sep	312	322	316	293	307	324	260	330	345	22	32	10	148	122	122	130	147	130	119	118	145	148	160	158	116.9
17-Sep	131	155	161	141	156	158	162	194	186	190	181	172	163	152	156	154	156	151	143	134	140	143	147	148	155.5
18-Sep	156	152	148	142	141	152	155	161	175	184	192	215	211	209	196	209	218	195	182	202	209	216	192	192	189.7
19-Sep	197	216	200	147	154	157	156	166	158	179	189	212	205	223	223	224	233	203	177	176	179	192	185	151	191.9
20-Sep	140	159	153	137	141	166	153	154	169	187	173	196	166	176	186	187	167	179	158	151	152	157	164	188	167.0
21-Sep	144	142	196	162	153	142	140	166	161	147	140	133	132	140	213	251	258	260	268	281	201	196	174	206	190.3
22-Sep	209	221	226	213	197	189	205	212	213	207	204	211	202	222	213	196	204	188	169	171	179	173	185	181	200.4
23-Sep	166	179	197	174	178	177	184	208	235	237	229	230	232	227	216	218	208	210	187	162	178	177	172	144	205.4
24-Sep	142	159	177	171	186	188	176	168	207	220	197	185	178	300	299	285	290	308	313	315	276	156	177	189	222.8
25-Sep	157	147	154	159	154	153	149	156	155	164	171	181	165	164	155	156	159	231	154	186	179	265	269	259	165.4
26-Sep	194	206	194	191	200	201	175	198	164	198	214	208	238	244	251	259	240	225	188	196	209	195	190	164	210.8
27-Sep	165	164	147	162	202	229	225	221	232	255	252	247	248	262	223	218	215	210	214	246	262	231	219	202	224.6
28-Sep	208	216	205	211	223	216	147	162	183	168	166	122	154	172	197	212	189	172	153	121	118	130	136	161	178.0
29-Sep	143	141	138	135	135	133	134	134	136	148	153	154	158	168	173	167	170	164	156	137	156	137	137	111	149.3
30-Sep	353	3	346	346	28	293	354	344	24	45	11	12	16	39	24	27	17	14	8	348	356	19	16	1	11.9
	167.4	175.6	180.6	168.0	167.1	172.4	173.7	181.4	185.9	191.5	198.8	200.0	191.1	201.6	203.5	205.5	206.3	200.6	164.1	155.1	176.6	186.1	188.2	178.5	
	Diurnal Average																								

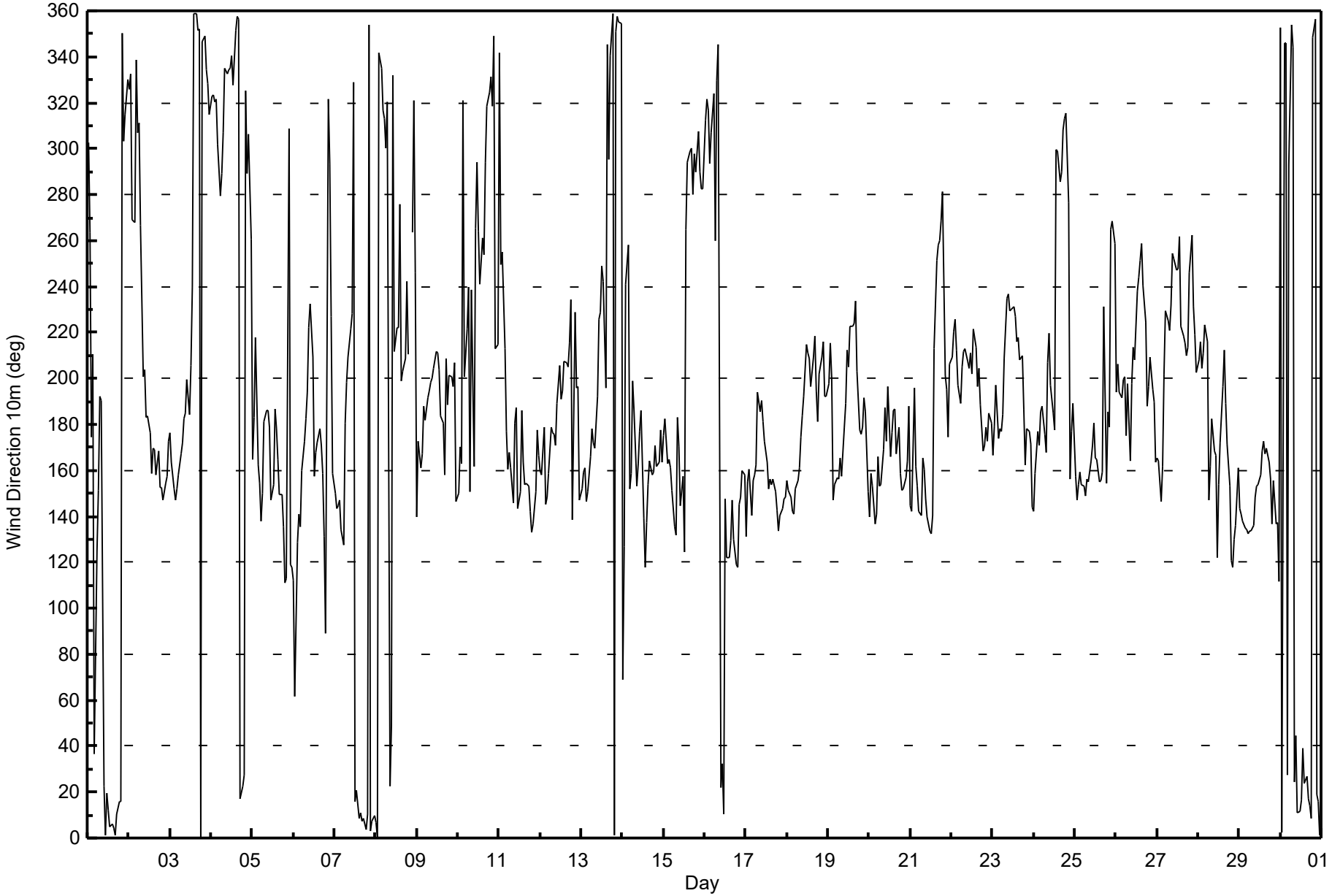
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Hills - September 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Sep 1 03:00

Minimum Value: 5 deg on Sep 23 01:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 11 Median = 15 Q_3 = 23 P_{90} = 40 P_{99} = 79

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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-Sep	29	29	101	39	69	60	17	17	71	60	20	19	21	17	16	17	17	14	11	10	17	16	11	13	101
2-Sep	24	14	30	33	64	15	20	29	37	22	24	21	17	21	22	20	14	10	8	8	8	9	7	17	64
3-Sep	16	9	7	7	7	7	7	11	9	9	12	11	20	32	24	20	18	17	16	18	16	14	12	12	32
4-Sep	12	11	12	12	13	10	9	19	22	29	20	20	23	20	22	22	21	12	11	8	63	16	22	42	63
5-Sep	50	44	26	15	23	14	19	18	14	17	40	33	34	43	39	20	17	15	13	19	50	65	56	25	65
6-Sep	41	78	18	9	7	13	12	12	23	23	22	43	19	16	13	17	21	8	19	21	83	72	71	72	83
7-Sep	10	17	13	14	30	71	56	17	22	48	26	61	31	18	18	15	15	15	16	13	14	13	13	12	71
8-Sep	12	15	23	19	27	24	16	18	27	27	91	79	56	69	30	36	47	23	22	40	UO	37	24	63	91
9-Sep	12	15	14	14	17	27	11	8	18	20	20	22	44	24	14	17	8	50	66	10	7	8	14	27	66
10-Sep	28	19	62	29	94	74	58	81	54	35	55	32	34	22	21	14	35	12	13	8	18	24	41	71	94
11-Sep	74	52	41	93	24	29	16	14	10	18	26	20	15	20	16	15	10	6	7	6	7	9	36	27	93
12-Sep	9	10	47	10	7	13	14	7	9	11	17	15	13	15	14	16	9	19	18	32	41	30	26	23	47
13-Sep	13	14	12	10	12	22	16	24	10	21	19	38	34	29	64	63	38	18	10	15	13	15	11	17	64
14-Sep	54	38	40	25	40	23	20	31	15	12	16	28	35	20	19	8	9	9	10	10	9	9	10	15	54
15-Sep	8	7	10	8	12	12	13	13	25	33	26	31	89	36	14	16	19	15	13	14	16	17	16	12	89
16-Sep	14	14	11	29	16	21	29	20	22	20	63	47	53	28	24	19	21	17	21	11	78	16	13	36	78
17-Sep	15	15	21	9	8	9	14	11	12	12	17	15	15	13	14	10	9	8	8	9	7	7	8	11	21
18-Sep	13	10	9	6	11	13	8	9	9	11	13	16	18	17	12	14	11	10	7	8	11	11	9	8	18
19-Sep	8	8	38	14	11	11	8	10	11	15	16	13	13	15	18	17	16	13	9	9	5	8	10	23	38
20-Sep	10	14	17	12	12	16	13	12	10	16	20	24	18	18	14	13	10	8	9	6	6	9	20	19	24
21-Sep	23	7	27	9	14	12	9	18	20	27	51	65	31	38	27	19	13	13	15	26	20	11	13	10	65
22-Sep	9	9	10	11	9	22	15	9	9	8	10	12	13	14	14	11	15	18	7	9	10	8	14	12	22
23-Sep	5	11	14	12	7	9	11	17	12	17	13	14	16	12	12	13	11	10	19	16	8	8	15	17	19
24-Sep	12	15	9	9	12	11	18	14	13	11	41	56	30	33	25	21	16	14	8	9	16	56	13	16	56
25-Sep	18	12	11	9	12	15	12	12	9	16	15	16	17	18	11	10	37	60	18	59	29	17	18	70	70
26-Sep	22	19	13	29	12	11	11	12	27	24	26	23	31	19	17	18	21	18	10	10	13	11	10	17	31
27-Sep	15	20	14	16	15	10	9	10	12	15	15	17	19	20	14	12	11	9	14	20	18	15	19	12	20
28-Sep	11	11	16	11	12	30	25	26	12	18	34	39	49	22	32	19	8	9	12	27	9	15	10	20	49
29-Sep	20	7	9	8	9	9	9	9	12	9	10	9	10	14	12	12	9	8	17	9	5	20	47	65	65
30-Sep	37	44	9	60	49	30	66	20	12	17	15	14	17	11	12	12	12	10	16	13	13	10	8	12	66
	74	78	101	93	94	74	66	81	71	60	91	79	89	69	64	63	47	60	66	59	83	72	71	72	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS25
WASKŌW OHCI PIMÂTISIWIN
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
SEPTEMBER 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	685	34	35	99.86	181.7	1	16.7	0
H2S(ppb) Average	683	36	37	99.86	6.6	0	1.9	0
Temperature 2 m (C) Average	720	0	0	100	29.4	0	18.6	0
Relative Humidity (%) Average	720	0	0	100	99.3	-	82.8	-
Wind Speed 10 m (km/h) Average	716	0	4	99.44	15	0	8	0
Wind Direction 10 m (deg) Average	716	0	4	99.44	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	1.14	8.3	-	0	0	0	0	0.4	2.1	181.7
H2S (ppb) Average	683	0.58	0.8	-	0	0.1	0.2	0.3	0.6	1.4	6.6
Temperature 2 m (C) Average	720	14.04	5.8	-	-0.6	6.9	10	13.8	17.9	22	29.4
Relative Humidity (%) Average	720	67.83	21.3	-	22	37.2	50.7	67.6	88.7	96.2	99.3
Wind Speed 10 m (km/h) Average	716	4.3	3	-	0	1	2	4	6	9	15
Wind Direction 10 m (deg) Average	716	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)

SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	23 Sep 2025 07:00	23 Sep 2025 07:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	05 Sep 2025 19:00	05 Sep 2025 20:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	06 Sep 2025 06:00	06 Sep 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	10 Sep 2025 20:00	10 Sep 2025 20:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - September 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0
Maximum Value: 181.7 ppb on Sep 17 13:00 Maximum Daily Average: 16.7 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 1 01:00
Maximum Diurnal Average: 8.0 ppb at hour 13
Monthly Average: 1.14 ppb

Minimum Daily Average: 0.0 ppb on Sep 10
Minimum Diurnal Average: 0.0 ppb at hour 7
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.4 P_{90} = 2.1 P_{99} = 9.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.5	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	0.1	1.5
2-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	1.4	6.5	9.5	8.1	3.8	1.8	4.8	4.3	1.8	0.4	0.1	0.0	0.1	0.5	1.9	9.5
3-Sep	0.5	0.2	0.3	0.3	0.2	Z	0.2	0.5	2.6	6.3	9.0	1.8	0.8	0.4	0.5	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.7	0.8	1.1	9.0
4-Sep	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.7	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	1.5	2.4	4.2	7.3	4.3	4.7	5.6	2.0	0.3	0.0	0.0	0.0	0.0	1.5	7.3
6-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.9	1.7	16.2	6.7	2.3	5.5	3.4	3.4	1.6	0.9	0.2	0.0	0.0	0.0	0.0	1.9	16.2
7-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
8-Sep	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	2.1	1.5	0.3	0.0	0.0	0.0	0.0	0.2	2.1
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.8	6.3	3.8	5.6	1.5	0.7	1.1	1.5	0.4	0.2	0.2	0.0	0.0	0.0	0.0	1.0	6.3
10-Sep	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-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.8	7.5	2.9	13.7	6.3	1.7	0.6	0.6	0.6	0.4	0.2	0.3	0.1	0.1	1.6	13.7
12-Sep	0.0	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.4	3.0	4.2	2.2	1.2	0.5	0.5	0.5	0.2	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.6	4.2
13-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.4	6.7	7.9	4.3	4.8	4.9	4.1	2.9	1.8	1.0	0.7	0.4	0.2	0.1	1.8	7.9
14-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.4	6.6	4.2	6.7	2.1	1.5	1.5	0.8	0.5	0.2	0.5	0.2	0.2	0.0	1.1	6.7
15-Sep	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	0.0	0.0	0.0	0.0	0.0	0.1
16-Sep	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	0.5	0.8	1.4	3.3	3.0	1.7	0.4	0.2	0.0	0.0	0.5	3.3
17-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.9	8.9	7.2	181.7	107.9	27.2	19.8	8.1	2.7	1.3	1.2	3.1	3.0	5.1	2.8	16.7	181.7
18-Sep	1.7	1.0	Z	0.2	0.1	0.1	0.2	0.4	3.2	1.9	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.4	3.2
19-Sep	0.1	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	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1
20-Sep	0.0	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.2	0.7	1.6	1.6	4.0	1.3	0.4	0.6	0.5	0.2	0.5	0.2	0.4	0.5	0.2	0.2	0.6	4.0
21-Sep	0.2	0.2	0.0	0.1	0.0	Z	0.0	0.1	0.2	0.5	0.6	1.5	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	1.5
22-Sep	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.2
23-Sep	0.7	Z	0.3	0.3	0.1	0.1	M	C	C	C	C	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
24-Sep	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
25-Sep	0.0	0.0	0.2	Z	0.1	0.0	0.0	0.1	0.0	0.2	1.0	4.2	5.2	3.3	2.1	0.8	0.8	0.4	0.3	0.6	0.1	0.0	0.0	0.0	0.8	5.2
26-Sep	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
27-Sep	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
28-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.4
29-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.3	2.6	2.9	4.1	2.6	1.6	2.1	1.1	1.2	0.5	0.2	0.1	0.1	0.0	1.0	4.1
30-Sep	0.0	0.0	Z	0.2	0.4	0.6	0.6	0.5	0.9	0.8	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	0.1	0.3	0.9
	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	1.5	2.4	8.0	5.4	2.2	1.5	1.1	0.9	0.5	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	1.7	1.0	0.3	0.3	0.4	0.6	0.6	0.5	3.2	6.3	9.0	16.2	181.7	107.9	27.2	19.8	8.1	5.6	3.0	1.7	3.1	3.0	5.1	2.8	Diurnal Maximum	

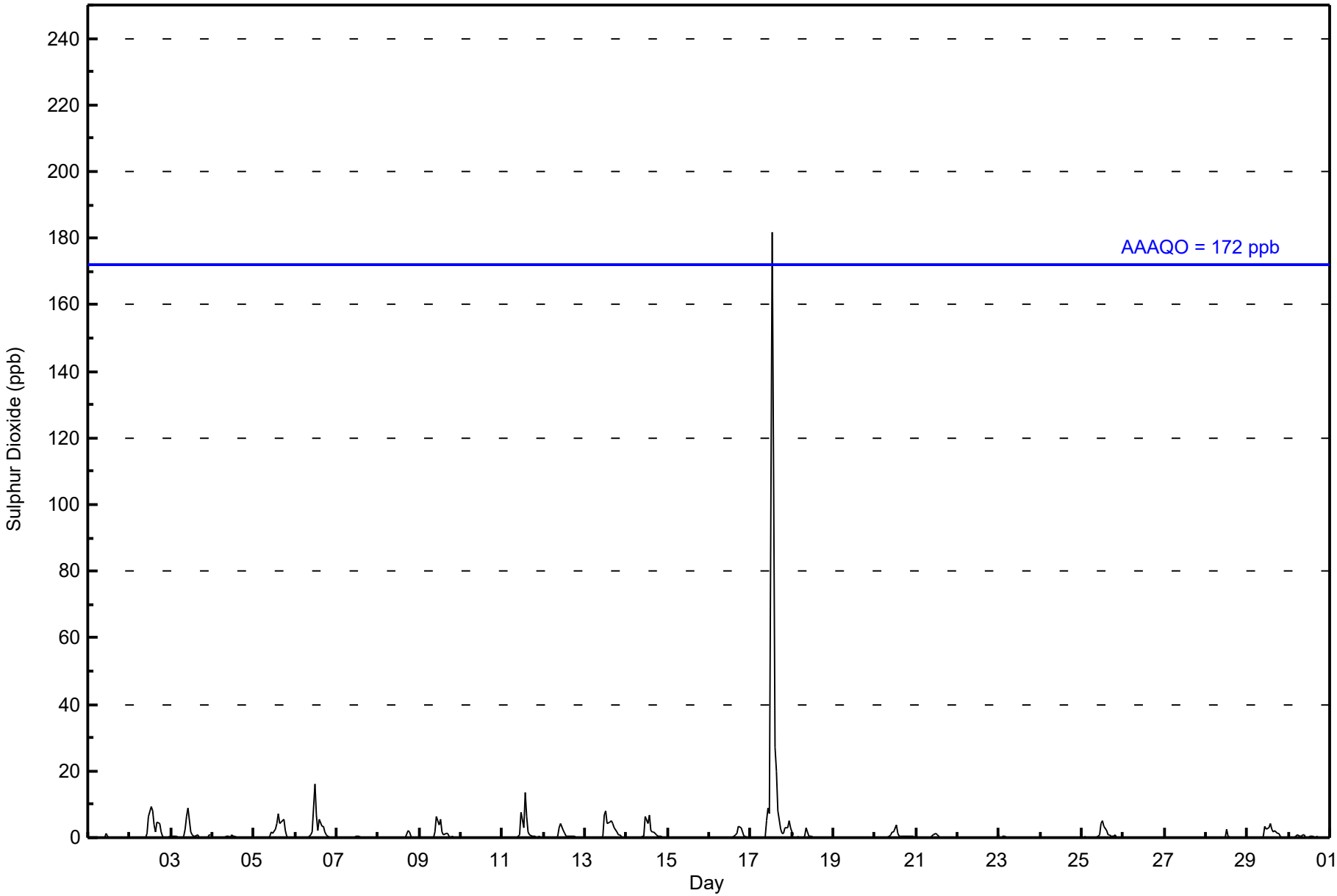
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - September 2025



Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	679	99.12	99.12
11 - 20	3	0.44	99.56
21 - 60	1	0.15	99.71
61 - 110	1	0.15	99.85
111 - 172	0	0.00	99.85
> 172	1	0.15	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Sulphur Dioxide (SO_2) - ppb
Waskow ohci Pimatisiwin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	31	16	9	2	7	17	86	139	55	52	41	53	54	43	45	25	675
11 - 20	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
21 - 60	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	1	0	0	0	0	0	0	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	1	0	0	0	0	0	0	0	0	1
Totals	31	16	9	2	7	17	87	144	55	52	41	53	54	43	45	25	681

Total Number of Valid Hours: 681

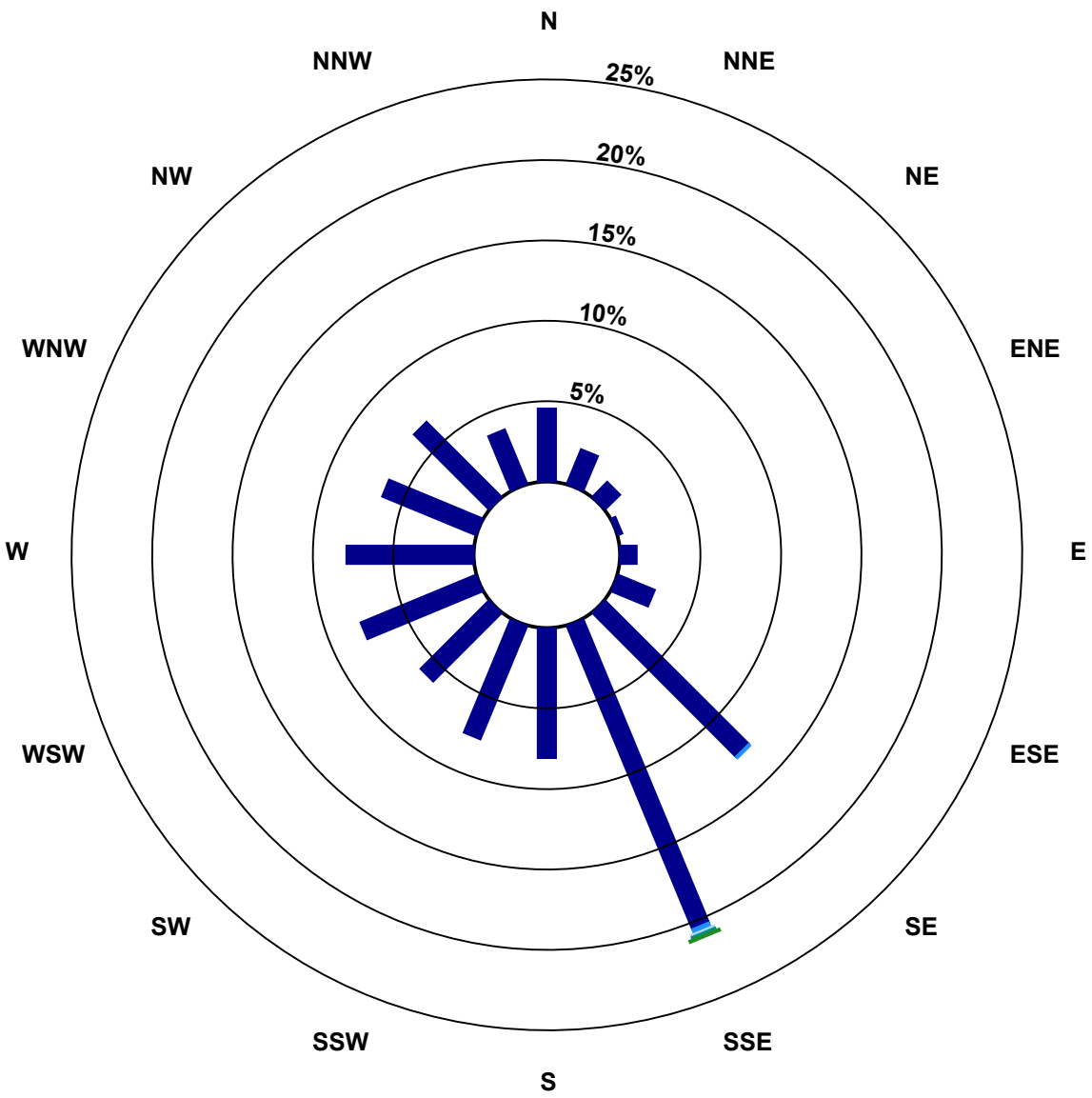
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

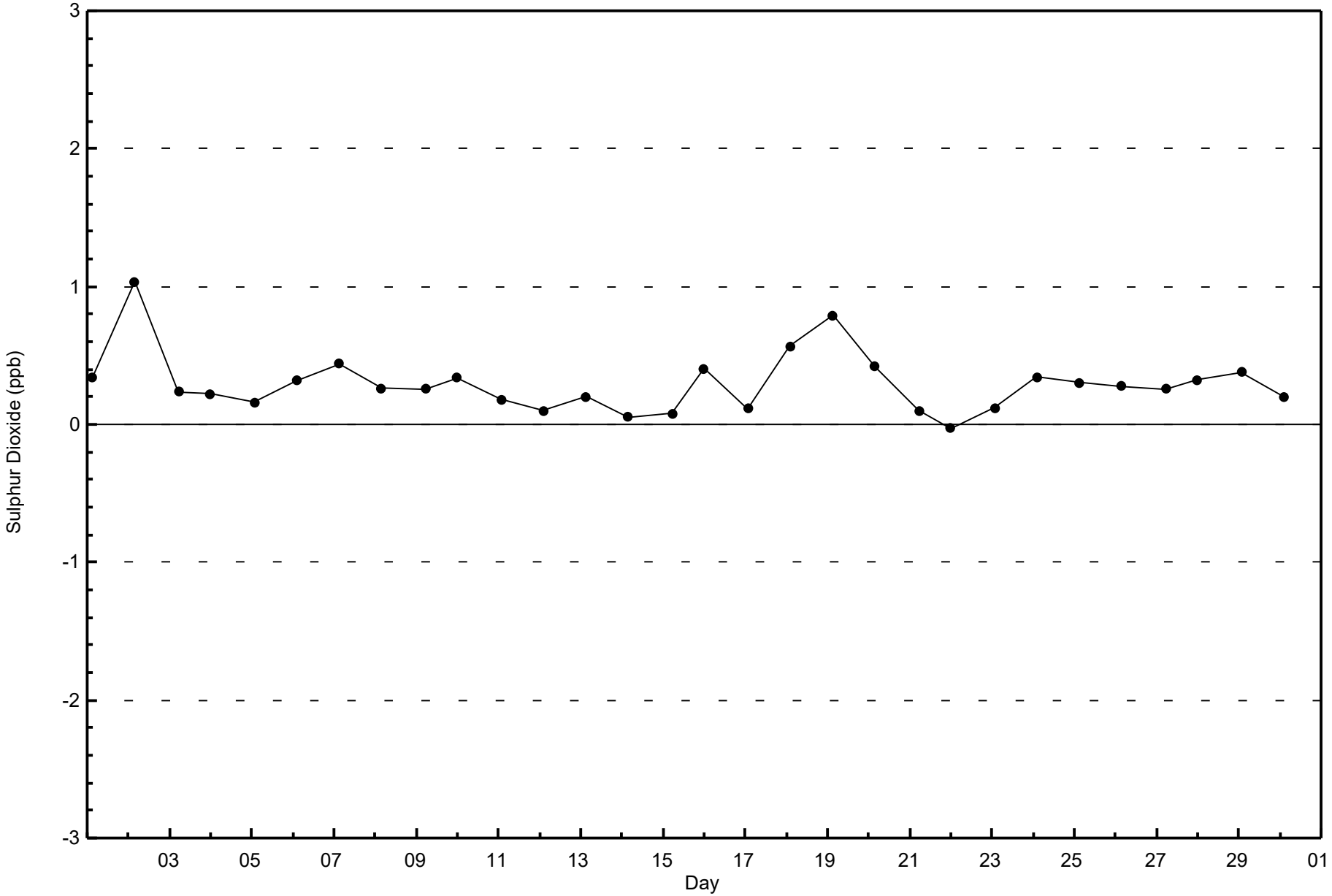
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - September 2025

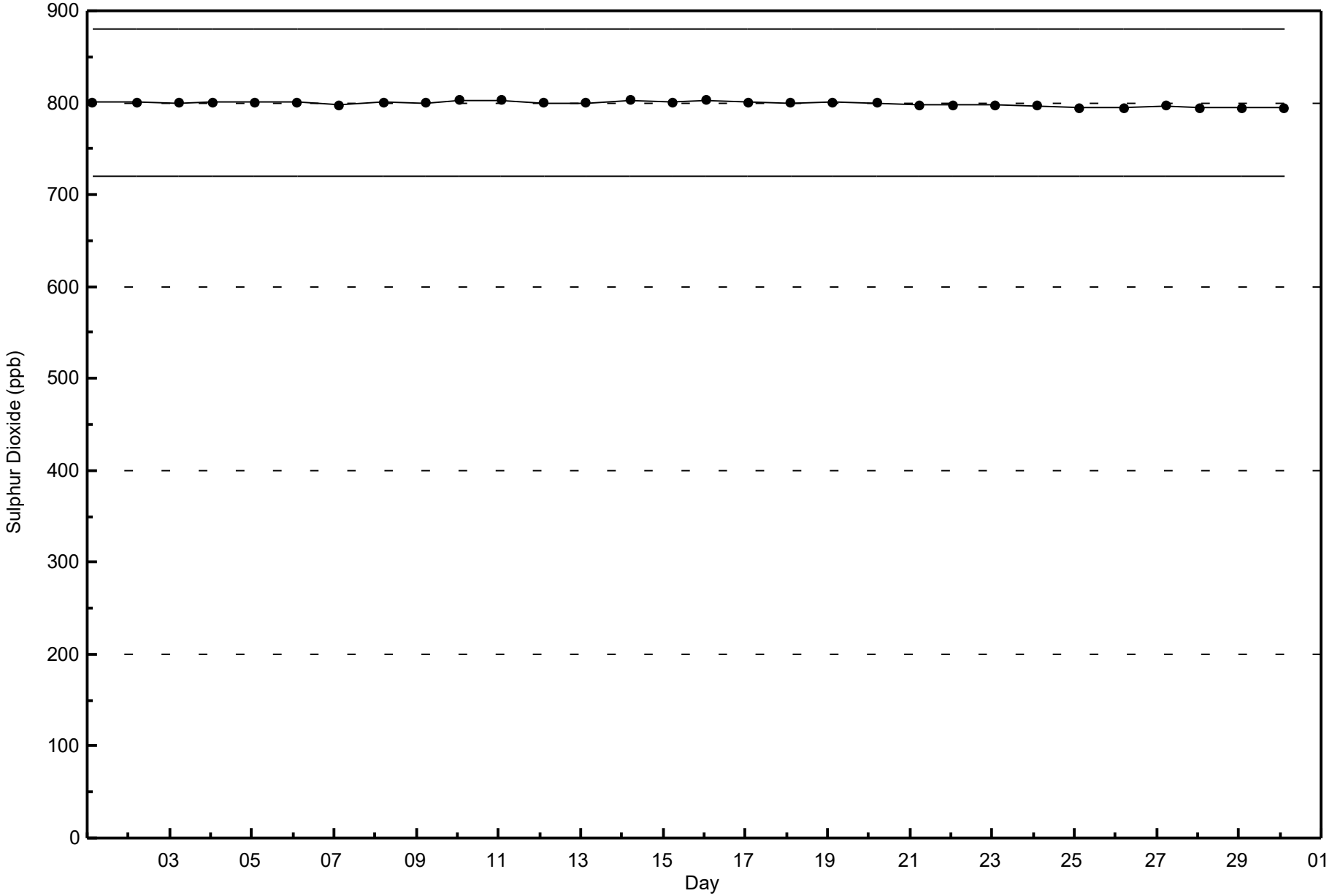


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.6 ppb on Sep 15 07:00 Maximum Daily Average: 1.9 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 10 16:00
Maximum Diurnal Average: 1.0 ppb at hour 10
Monthly Average: 0.58 ppb

Minimum Daily Average: 0.1 ppb on Sep 27
Minimum Diurnal Average: 0.2 ppb at hour 16
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.3 Q_3 = 0.6 P_{90} = 1.4 P_{99} = 4.3

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.3	2.2	2.4	2.2	1.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.5	2.4
2-Sep	0.2	0.2	0.1	0.2	0.2	Z	0.2	0.2	0.3	0.6	1.7	2.3	1.0	0.6	0.3	0.1	0.4	0.6	0.6	0.7	0.3	0.2	0.3	0.3	0.5	2.3
3-Sep	Z	0.7	2.6	2.5	0.7	0.3	0.3	0.3	0.3	0.5	1.0	1.2	0.9	0.3	0.3	0.5	0.3	0.2	0.2	0.3	0.5	0.5	0.6	0.4	0.7	2.6
4-Sep	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
5-Sep	0.2	0.1	Z	0.1	0.1	0.2	0.3	0.7	1.0	1.1	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.4	1.1
6-Sep	0.2	0.2	0.2	Z	0.4	0.4	0.5	0.8	1.4	1.6	1.6	1.8	1.1	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.6	1.8
7-Sep	0.3	0.3	0.2	0.3	Z	1.4	0.9	1.5	1.2	1.0	0.7	1.1	1.0	0.8	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.6	1.5
8-Sep	0.3	0.3	0.2	0.2	0.2	Z	0.3	0.4	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4
9-Sep	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.9	2.3	1.6	1.0	1.0	0.6	0.3	0.4	0.3	0.8	3.8	0.5	0.1	0.1	1.1	2.4	0.8	3.8
10-Sep	2.3	Z	0.8	0.4	0.3	0.3	C	C	C	C	C	C	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	--	2.3
11-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.8	2.5	5.0	3.9	1.3	0.7	0.4	0.1	0.1	0.1	0.1	0.2	0.4	0.6	1.7	1.1	0.4	0.9	5.0
12-Sep	0.4	0.9	0.7	Z	2.1	1.8	2.0	3.5	4.4	1.1	0.8	0.6	0.4	0.5	0.2	0.0	0.0	2.3	1.7	0.4	0.2	0.2	0.9	0.7	1.1	4.4
13-Sep	0.5	0.4	1.2	1.3	Z	0.4	1.0	1.8	2.1	2.2	1.1	2.1	1.7	1.0	0.9	0.7	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.5	1.0	2.2
14-Sep	0.5	0.5	0.5	0.4	0.3	Z	0.2	0.3	1.1	1.3	0.9	0.9	0.7	1.4	0.4	0.7	1.9	2.6	2.2	0.3	1.0	1.6	2.7	2.2	1.1	2.7
15-Sep	Z	2.0	4.8	3.8	1.5	2.8	6.6	2.8	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.3	1.2	6.6
16-Sep	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	0.4	0.3	0.2	0.3	0.9	1.0	0.9	0.7	0.6	1.0	0.4	1.0
17-Sep	0.9	0.8	Z	0.5	0.3	0.3	0.3	0.7	1.6	3.4	2.2	1.1	4.3	2.0	0.8	1.0	1.7	2.0	1.4	1.8	4.2	5.7	2.7	3.6	1.9	5.7
18-Sep	3.8	5.3	5.2	Z	2.7	2.6	0.6	0.2	0.3	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	1.0	5.3
19-Sep	0.2	0.1	0.2	0.1	Z	0.2	0.3	0.2	0.3	0.6	1.0	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.3	0.7	0.3	1.3
20-Sep	0.6	0.8	0.6	0.5	0.4	Z	0.3	1.2	1.5	0.7	0.6	0.4	0.4	0.3	0.3	0.3	0.5	2.1	0.7	0.2	0.4	0.3	0.3	0.3	0.6	2.1
21-Sep	Z	0.8	0.9	1.0	1.6	2.8	1.8	1.4	0.5	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.7	0.3	0.1	0.6	2.8
22-Sep	0.1	Z	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	0.1	0.1	1.2	0.3	0.1	0.1	0.1	0.2	0.2	1.2
23-Sep	0.2	0.1	Z	0.1	0.1	0.1	M	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	0.1	0.1	0.1	0.1	0.2
24-Sep	0.3	0.4	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.3	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	0.3	0.2	0.4
25-Sep	0.3	0.3	0.4	0.4	Z	0.7	0.6	0.8	0.5	0.4	0.5	0.4	0.6	0.4	0.2	0.1	0.2	0.1	0.1	0.3	0.4	0.1	0.2	0.2	0.4	0.8
26-Sep	0.2	0.1	0.2	0.1	0.2	Z	0.6	1.1	0.6	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.5	0.2	1.1
27-Sep	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4
28-Sep	0.4	Z	0.3	0.3	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	0.1	0.2	0.3	0.4	0.2	0.1	0.2	0.4
29-Sep	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.5	1.0	1.0	0.5	0.1	0.1	0.1	0.2	0.2	0.5	0.4	0.4	0.4	0.4	0.3	0.3	1.0
30-Sep	0.3	0.3	0.3	Z	0.9	1.4	1.3	1.4	1.6	1.4	0.8	0.4	0.3	0.2	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	1.6
	0.5	0.6	0.8	0.6	0.6	0.7	0.7	0.8	0.9	1.0	0.8	0.7	0.6	0.4	0.2	0.2	0.3	0.5	0.6	0.3	0.4	0.5	0.5	0.6	Diurnal Average	
	3.8	5.3	5.2	3.8	2.7	2.8	6.6	3.5	4.4	5.0	3.9	2.3	4.3	2.0	0.9	1.0	1.9	2.6	3.8	1.8	4.2	5.7	2.7	3.6	Diurnal Maximum	

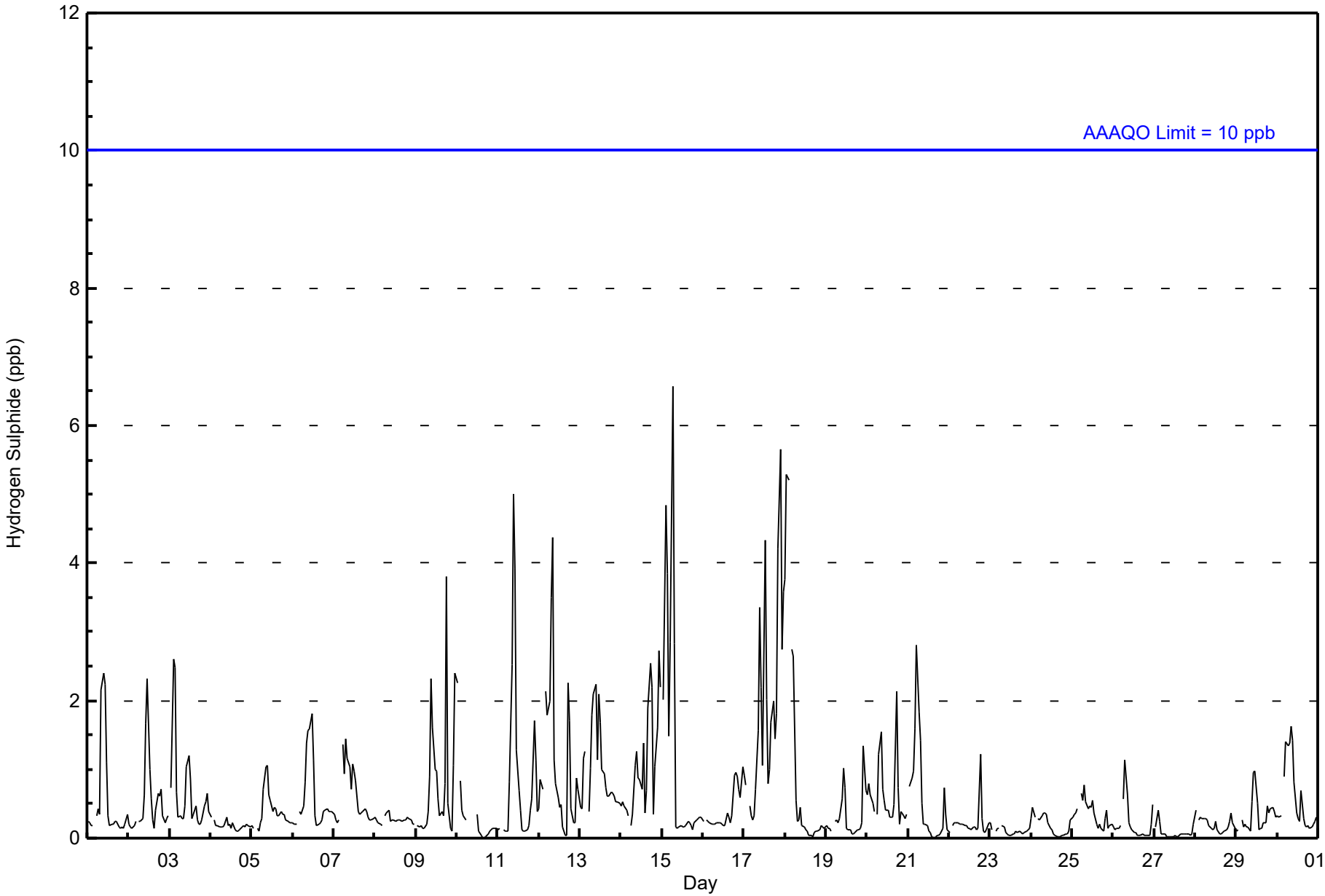
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025



Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	657	96.19	96.19
3 - 4	20	2.93	99.12
5 - 7	6	0.88	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	30	15	9	1	4	18	80	129	55	52	42	52	56	42	44	24	653
3 - 4	0	0	0	0	1	0	5	12	0	2	0	0	0	0	0	0	20
5 - 7	0	0	0	0	1	0	2	2	1	0	0	0	0	0	0	0	6
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	30	15	9	1	6	18	87	143	56	54	42	52	56	42	44	24	679

Total Number of Valid Hours: 679

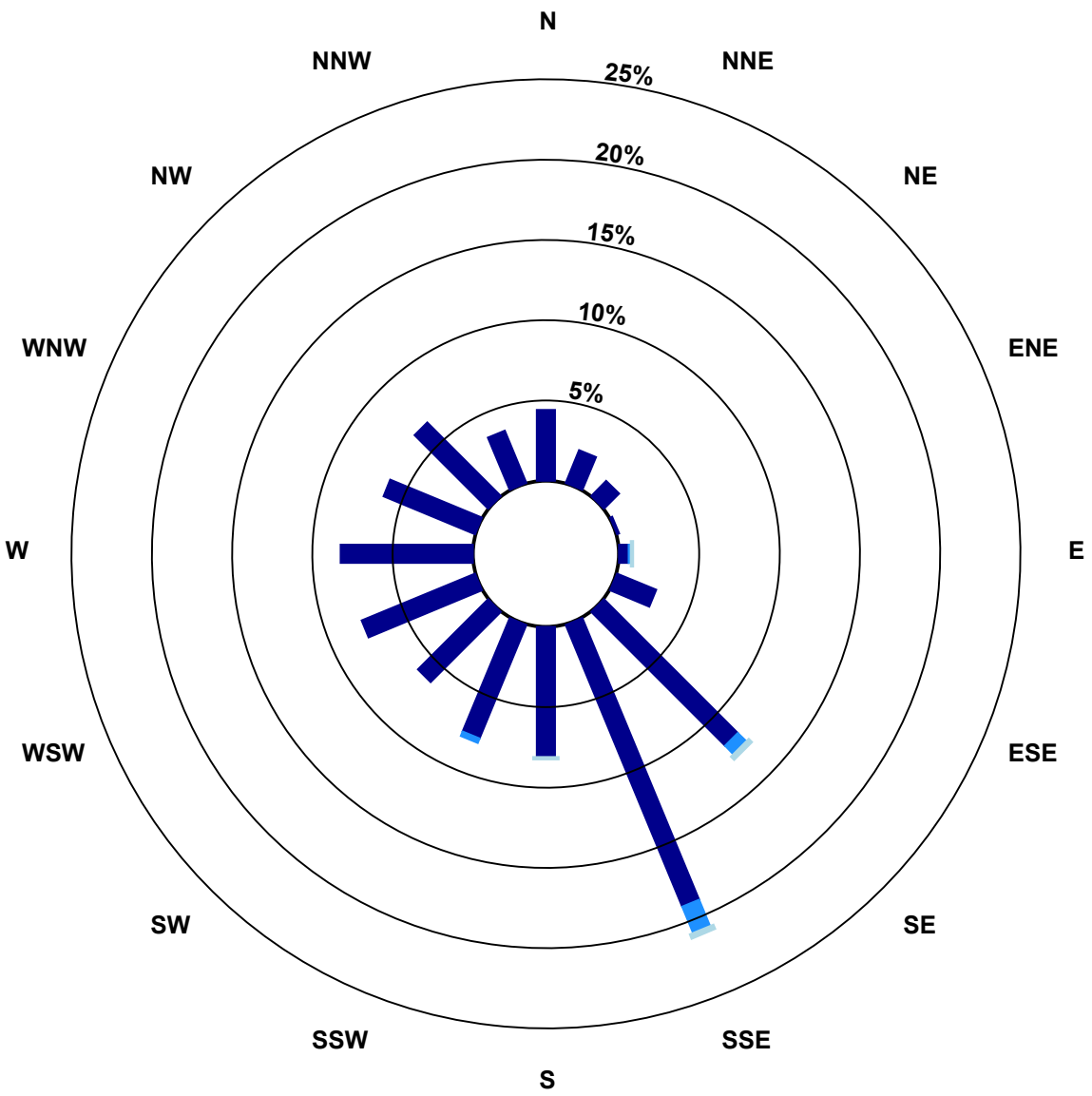
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

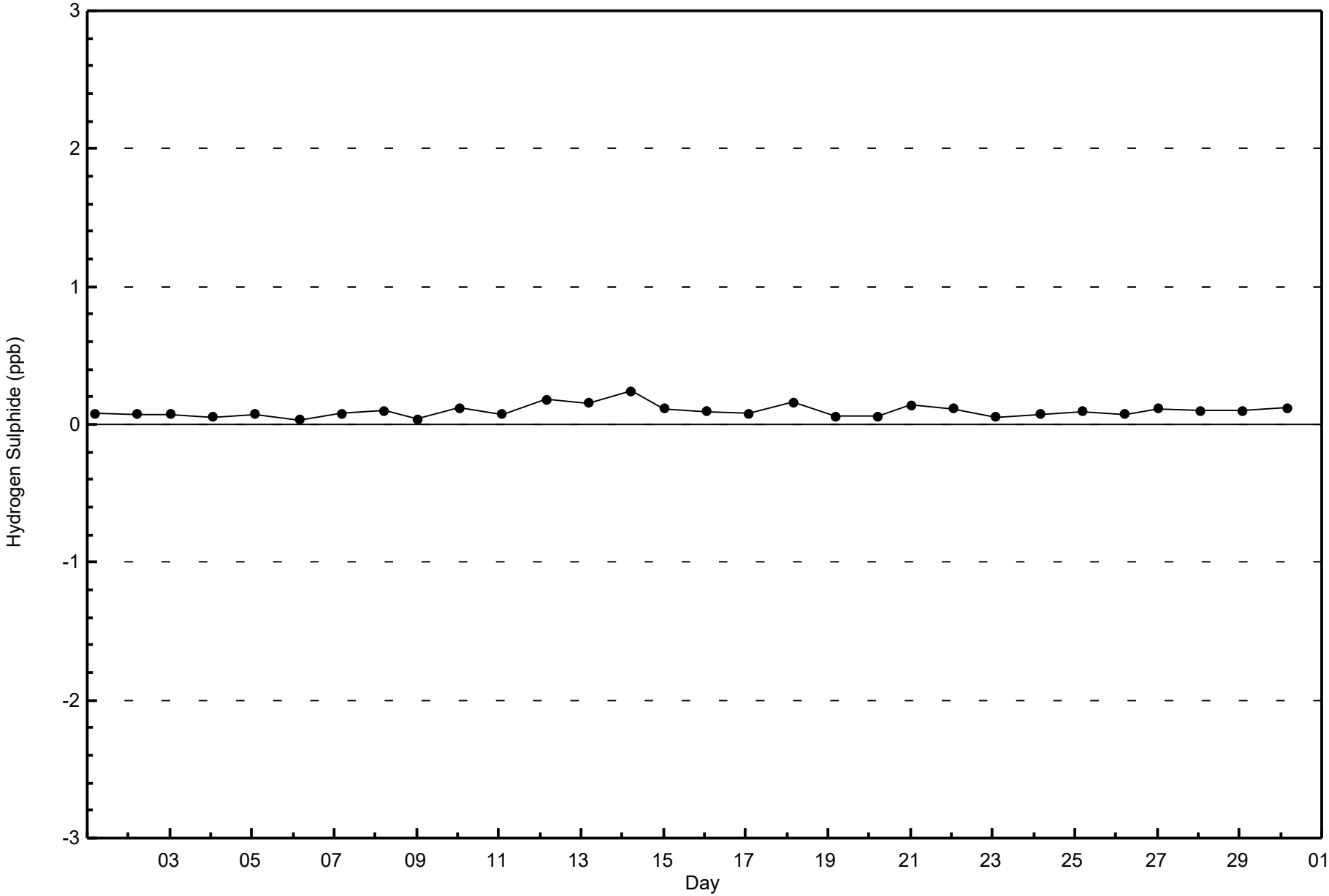
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025

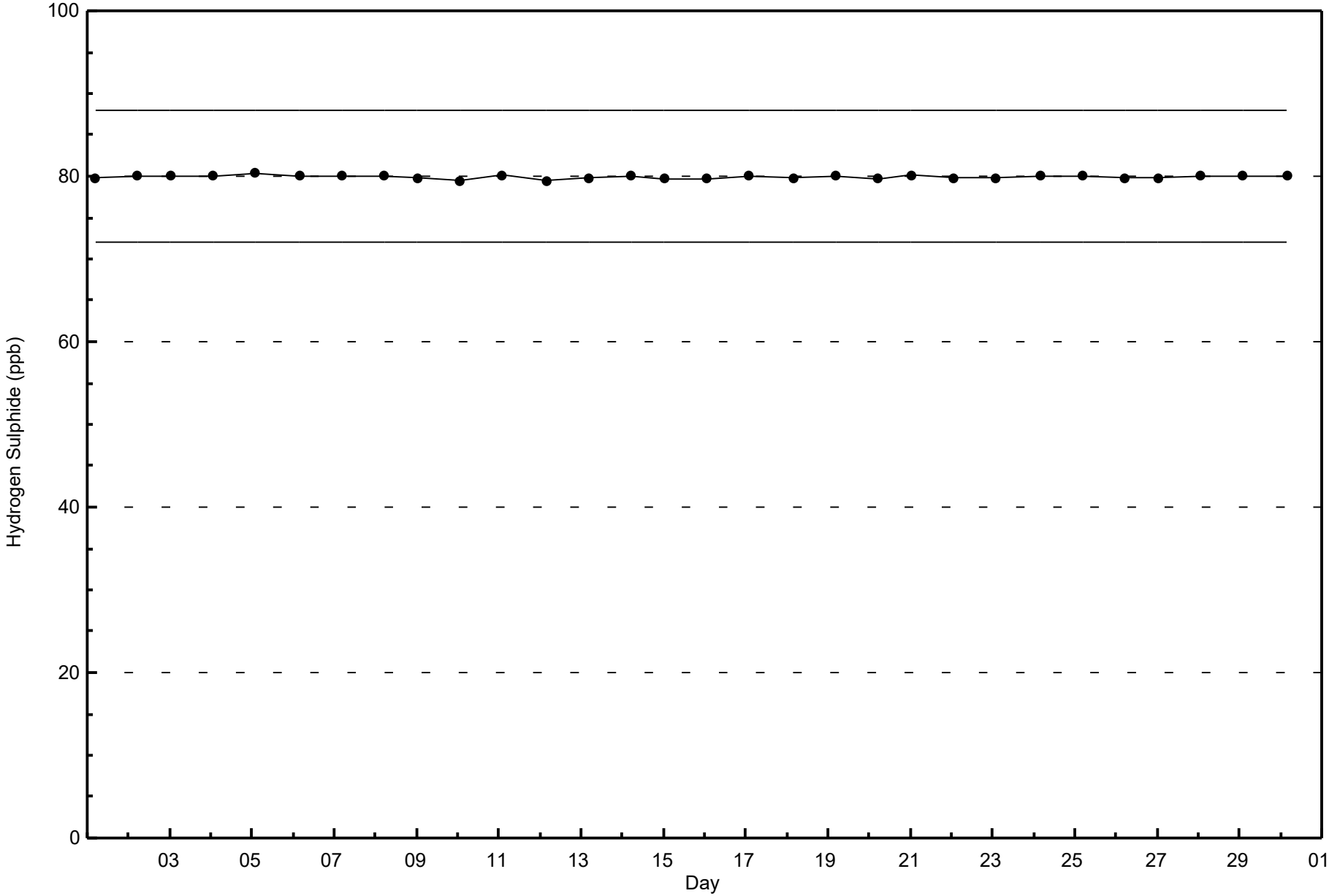


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - September 2025



Maximum Value: 29.4 C on Sep 12 15:00

Maximum Daily Average: 18.6 C on Sep 12

Minimum Value: -0.6 C on Sep 25 07:00

Minimum Daily Average: 9.1 C on Sep 25

Maximum Diurnal Average: 21.5 C at hour 15

Minimum Diurnal Average: 7.9 C at hour 6

Monthly Average: 14.04 C

Percentiles: P_1 = 2.0 P_{10} = 6.9 Q_1 = 10.0 Median = 13.8 Q_3 = 17.9 P_{90} = 22.0 P_{99} = 27.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

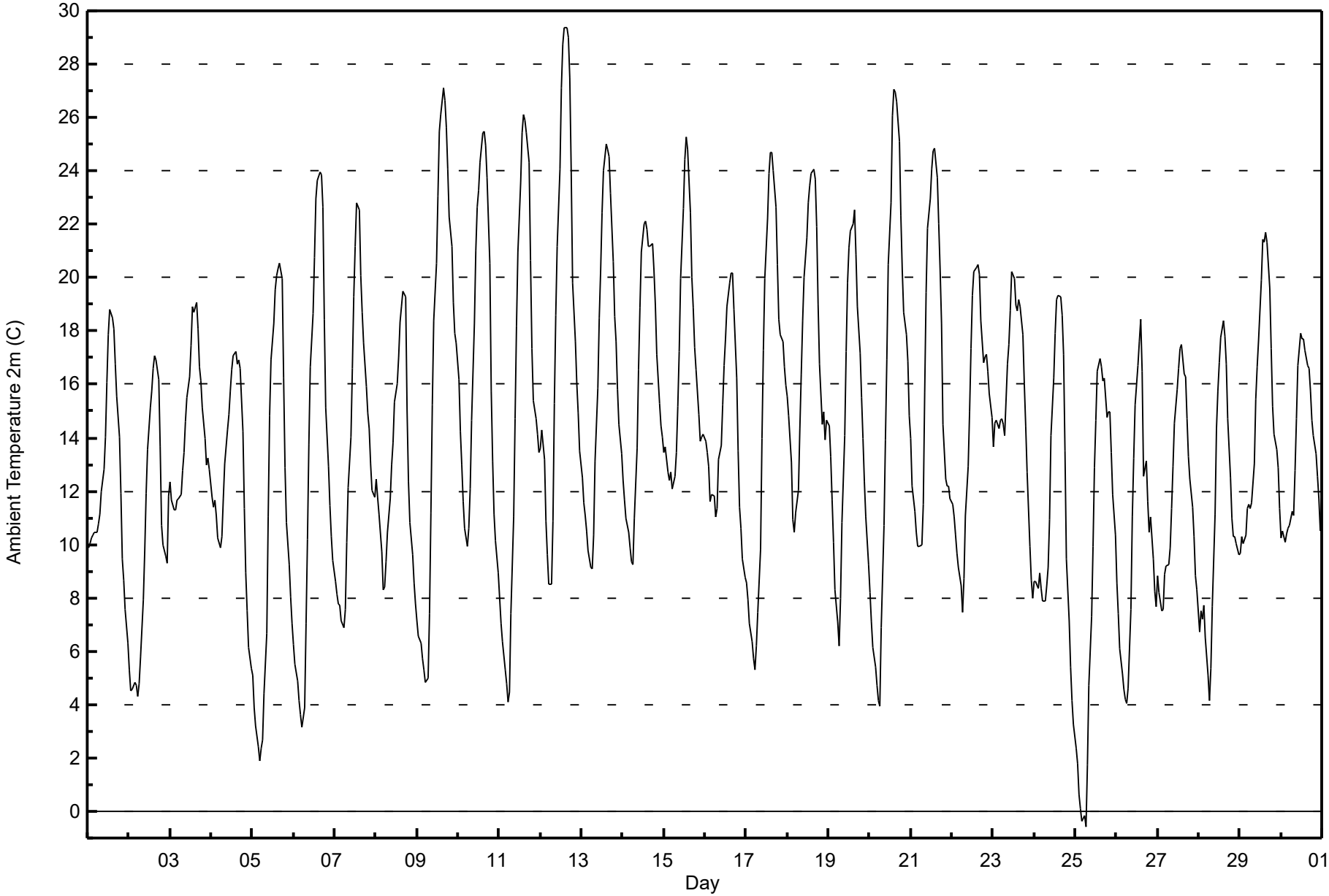
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.9	10.0	10.3	10.3	10.5	10.5	10.7	11.1	12.0	12.8	14.0	16.1	17.8	18.8	18.5	18.1	16.7	15.6	14.0	11.9	9.5	8.7	7.6	6.3	12.6	18.8
2-Sep	5.3	4.5	4.6	4.9	4.7	4.3	4.8	5.8	7.9	9.8	11.9	13.6	15.1	15.8	16.6	17.1	16.9	16.2	13.7	10.7	10.0	9.6	9.3	11.8	10.2	17.1
3-Sep	12.4	11.7	11.3	11.3	11.7	11.7	11.9	12.8	13.5	14.6	15.5	16.3	17.5	18.9	18.7	19.1	18.1	16.6	16.1	15.1	14.0	13.0	13.2	12.8	14.5	19.1
4-Sep	11.8	11.4	11.7	11.1	10.2	9.9	10.3	11.7	13.0	14.3	14.9	15.8	16.6	17.1	17.3	16.8	16.9	16.6	14.2	11.4	9.0	7.5	6.2	5.3	12.5	17.3
5-Sep	5.1	3.9	3.2	2.4	1.9	2.3	2.7	4.4	6.7	11.0	14.8	16.9	18.3	19.6	20.1	20.3	20.5	20.0	16.2	12.9	10.8	9.2	8.0	7.0	10.8	20.5
6-Sep	6.3	5.5	4.9	4.2	3.6	3.2	3.9	7.1	10.2	13.8	16.7	18.6	20.7	23.0	23.6	23.9	23.9	22.6	18.4	15.1	12.9	11.4	10.3	9.4	13.0	23.9
7-Sep	8.6	8.2	7.8	7.7	7.2	6.9	7.6	10.1	12.1	14.0	16.6	19.3	21.2	22.8	22.5	20.1	18.7	17.5	15.9	14.9	14.4	13.0	12.0	11.8	13.8	22.8
8-Sep	12.4	11.8	11.2	9.7	8.3	8.4	9.4	10.4	11.7	13.0	13.8	15.3	16.0	17.0	18.4	18.9	19.5	19.3	15.0	12.3	10.8	9.6	8.6	7.8	12.9	19.5
9-Sep	7.2	6.6	6.3	5.7	5.3	4.8	5.0	7.4	11.2	15.2	18.4	20.6	23.1	25.5	26.1	27.1	26.7	25.6	24.1	22.3	21.2	19.1	17.9	17.5	16.2	27.1
10-Sep	16.2	14.2	13.0	11.6	10.6	9.9	10.6	12.1	14.6	18.3	21.0	22.6	23.3	24.3	25.4	25.5	24.9	23.7	20.6	15.7	13.2	11.1	10.1	8.9	16.7	25.5
11-Sep	8.0	7.0	6.4	5.3	4.8	4.1	4.5	7.4	11.0	14.7	18.2	20.9	23.6	25.4	26.1	25.9	25.4	24.3	20.7	17.4	15.4	14.7	14.1	13.4	14.9	26.1
12-Sep	13.6	14.3	13.2	10.9	9.6	8.5	8.5	10.9	15.3	18.6	21.2	24.1	27.1	28.7	29.4	29.4	29.0	27.5	24.0	19.8	17.6	16.0	14.9	13.5	18.6	29.4
13-Sep	12.5	11.6	11.1	10.5	9.8	9.1	9.1	10.3	13.1	15.8	18.5	20.3	22.4	24.0	25.0	24.8	24.5	23.2	20.6	18.5	17.6	15.8	14.5	13.4	16.5	25.0
14-Sep	12.4	11.7	11.0	10.5	9.9	9.4	9.3	11.0	13.6	16.5	18.9	21.0	22.0	22.1	21.8	21.1	21.2	21.3	20.3	18.9	17.1	15.3	14.4	14.1	16.0	22.1
15-Sep	13.4	13.7	12.7	12.4	12.7	12.1	12.5	13.4	15.2	17.2	20.0	22.6	24.4	25.3	24.8	22.4	20.0	18.9	17.4	16.6	14.9	13.9	14.0	14.1	16.9	25.3
16-Sep	13.9	13.4	12.9	11.6	11.9	11.8	11.0	11.4	13.2	13.7	15.3	16.7	17.7	18.9	19.8	20.2	20.2	18.8	16.3	13.5	11.4	10.6	9.5	8.8	14.3	20.2
17-Sep	8.6	7.9	7.0	6.4	5.7	5.3	6.2	7.5	9.8	14.0	17.3	20.0	22.2	23.9	24.7	24.7	24.0	22.6	20.5	18.5	17.9	17.6	16.7	16.0	15.2	24.7
18-Sep	15.6	14.8	13.1	10.9	10.4	11.2	12.0	14.4	16.4	18.4	20.0	21.5	22.8	23.4	23.9	24.0	23.7	21.9	19.0	16.7	14.5	15.0	13.9	14.7	17.2	24.0
19-Sep	14.5	13.3	11.7	10.1	8.3	7.1	6.2	8.0	10.8	14.1	17.2	19.8	21.1	21.8	22.0	22.6	20.9	18.9	17.2	15.5	14.0	12.4	11.0	9.3	14.5	22.6
20-Sep	8.2	7.1	6.2	5.4	4.7	4.2	4.0	6.9	10.7	13.9	16.9	20.5	22.8	26.1	27.1	26.9	26.6	25.1	22.3	20.3	18.7	17.9	16.9	14.8	15.6	27.1
21-Sep	14.0	12.2	11.2	10.5	9.9	9.9	10.0	11.5	15.7	19.5	21.8	23.0	24.1	24.8	24.9	23.7	22.0	20.3	18.3	14.5	12.4	12.2	12.2	11.7	16.3	24.9
22-Sep	11.5	11.0	10.4	9.7	9.2	8.5	7.5	8.7	11.1	12.9	15.0	17.3	19.4	20.2	20.4	20.5	20.1	18.4	16.8	17.0	17.1	16.5	15.7	14.8	14.6	20.5
23-Sep	13.7	14.6	14.7	14.4	14.6	14.7	14.5	14.1	16.7	17.5	18.7	20.3	20.0	19.0	18.7	19.2	18.9	17.8	16.0	14.5	12.7	9.9	8.6	8.0	15.5	20.3
24-Sep	8.6	8.6	8.4	8.9	8.3	7.9	7.9	8.5	9.1	10.9	14.1	16.2	17.9	19.2	19.3	19.3	18.6	17.1	13.5	9.4	7.2	5.4	4.1	3.3	11.3	19.3
25-Sep	2.4	1.8	0.6	0.1	-0.4	-0.2	-0.6	1.7	4.7	7.3	9.9	12.9	14.6	16.5	17.0	16.7	16.1	16.2	14.8	15.0	15.0	13.4	11.9	10.3	9.1	17.0
26-Sep	8.6	7.4	6.1	5.1	4.5	4.2	4.1	4.6	7.5	11.0	13.2	15.3	16.7	17.6	18.5	16.5	12.5	13.1	11.6	10.5	11.0	9.4	8.2	7.7	10.2	18.5
27-Sep	8.8	8.2	7.5	7.6	8.9	9.2	9.3	9.9	11.3	12.9	14.5	15.8	16.6	17.3	17.5	16.4	16.3	14.7	13.3	12.4	11.4	10.3	8.8	8.3	12.0	17.5
28-Sep	6.7	7.5	7.2	7.7	6.5	5.1	4.1	5.3	7.7	11.1	14.4	15.7	16.8	17.8	18.4	17.8	16.7	14.7	12.5	11.0	10.3	10.3	10.0	9.6	11.0	18.4
29-Sep	9.7	10.3	10.0	10.3	11.4	11.5	11.3	11.6	13.0	15.4	16.7	17.7	19.9	21.5	21.3	21.7	21.3	19.6	17.4	15.2	14.1	13.5	12.9	11.4	14.9	21.7
30-Sep	10.3	10.5	10.1	10.4	10.6	10.7	11.2	11.1	12.8	14.7	16.7	17.9	17.7	17.7	17.3	16.7	16.6	15.8	14.6	14.1	13.4	12.5	11.7	10.5	13.6	17.9
	10.3	9.8	9.2	8.6	8.2	7.9	8.0	9.4	11.7	14.2	16.5	18.5	20.0	21.1	21.5	21.2	20.6	19.5	17.2	15.1	13.6	12.5	11.6	10.9	Diurnal Average	
	16.2	14.8	14.7	14.4	14.6	14.7	14.5	14.4	16.7	19.5	21.8	24.1	27.1	28.7	29.4	29.4	29.0	27.5	24.1	22.3	21.2	19.1	17.9	17.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Waskow ohci Pimatisiwin - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.42	0.42
0 - 10	175	24.31	24.72
10 - 20	423	58.75	83.47
> 20	119	16.53	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - September 2025

Maximum Value: 99.3 % on Sep 17 08:00

Maximum Daily Average: 82.8 % on Sep 14

Minimum Value: 22.0 % on Sep 24 16:00

Minimum Daily Average: 42.9 % on Sep 23

Maximum Diurnal Average: 88.2 % at hour 7

Minimum Diurnal Average: 41.2 % at hour 15

Monthly Average: 67.83 %

Percentiles: P_1 = 26.3 P_{10} = 37.2 Q_1 = 50.7 Median = 67.6 Q_3 = 88.7 P_{90} = 96.2 P_{99} = 98.7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

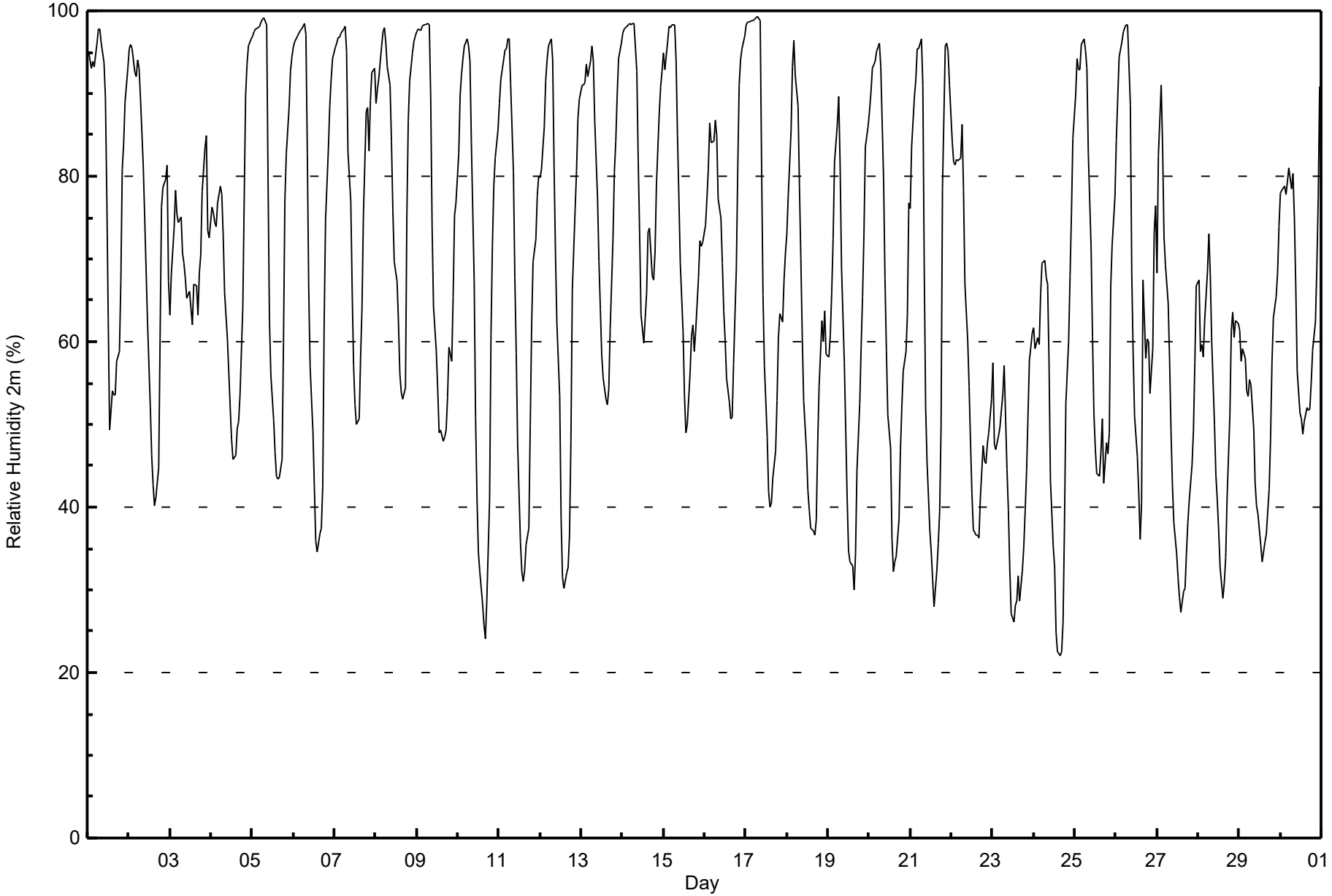
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95.1	94.1	93.1	93.8	93.3	96.1	97.8	97.8	96.2	93.7	89.4	77.4	62.8	49.3	54.1	53.6	53.6	57.6	58.8	67.3	80.8	83.9	89.1	93.1	80.1	97.8
2-Sep	95.5	95.9	95.4	92.6	92.1	94.1	93.1	89.5	81.2	75.0	68.8	62.6	52.3	46.3	42.8	40.2	41.3	44.7	60.5	76.2	78.7	79.7	81.4	67.2	72.8	95.9
3-Sep	63.3	68.1	73.7	78.3	75.5	74.3	75.1	70.7	69.5	67.7	65.2	66.0	64.1	62.1	66.9	66.8	63.2	68.3	70.5	78.1	83.4	85.0	73.4	72.6	70.9	85.0
4-Sep	76.2	75.6	74.4	73.9	76.8	78.7	77.7	72.8	66.0	60.4	56.4	52.0	48.2	45.8	46.3	49.4	50.3	53.6	64.3	77.5	89.8	93.6	95.7	96.7	68.8	96.7
5-Sep	96.9	97.4	97.9	98.0	98.2	98.7	98.9	99.1	98.3	79.6	62.5	56.0	50.5	46.6	43.7	43.4	43.5	45.8	59.8	77.2	82.6	88.3	92.7	94.4	77.1	99.1
6-Sep	95.6	96.2	97.0	97.3	97.6	97.8	98.5	97.1	82.9	66.5	57.0	49.1	42.5	35.9	34.6	36.8	37.4	42.6	62.1	74.8	83.2	88.5	91.6	94.3	73.2	98.5
7-Sep	95.5	96.1	96.9	96.7	97.4	97.7	98.1	95.0	82.8	76.9	66.1	57.1	52.4	50.1	50.6	58.2	64.0	75.2	87.8	88.2	83.1	89.1	92.6	93.1	80.9	98.1
8-Sep	88.8	90.6	91.9	95.7	97.5	98.0	96.2	93.2	91.1	84.2	75.9	69.7	67.4	62.4	56.1	53.9	53.1	54.5	75.2	86.9	91.6	94.8	96.3	97.0	81.7	98.0
9-Sep	97.5	97.7	97.7	98.1	98.3	98.3	98.5	98.3	89.5	73.9	64.2	58.9	54.2	49.0	49.3	48.0	48.5	49.3	53.3	59.3	57.7	65.5	75.2	76.7	73.2	98.5
10-Sep	82.7	89.8	92.4	94.2	95.8	96.6	95.8	93.8	84.1	67.5	50.8	41.2	34.6	32.2	28.3	25.8	24.1	28.7	40.8	60.8	71.5	78.8	82.1	85.7	65.8	96.6
11-Sep	88.7	91.7	92.8	95.3	95.4	96.6	96.6	91.2	80.5	67.7	58.7	47.7	35.7	32.2	30.9	32.4	35.4	37.5	50.1	62.1	69.6	72.4	77.6	80.0	67.4	96.6
12-Sep	79.8	80.8	85.9	91.4	94.1	95.7	96.6	94.1	81.1	70.6	62.2	53.4	38.7	31.5	30.1	32.0	32.7	36.6	48.0	66.3	75.9	80.6	86.9	89.4	68.1	96.6
13-Sep	90.9	91.0	91.3	93.6	92.1	93.9	95.7	93.8	86.6	77.3	69.6	63.9	58.4	55.5	53.0	52.4	54.2	61.5	72.3	80.5	84.3	89.8	94.3	96.1	78.8	96.1
14-Sep	97.2	97.8	97.9	98.2	98.4	98.4	98.6	98.4	92.7	81.9	73.0	63.2	59.8	62.9	66.0	73.3	73.7	68.0	67.5	70.8	78.9	87.6	90.9	92.7	82.8	98.6
15-Sep	94.9	92.9	96.2	98.2	98.0	98.3	98.3	94.1	85.0	77.4	69.5	61.1	53.3	48.9	50.0	56.2	60.7	62.1	58.8	61.4	67.8	72.1	71.6	72.0	75.0	98.3
16-Sep	74.1	77.3	80.8	86.4	84.0	84.2	86.7	84.9	77.2	74.9	69.4	63.8	60.1	55.7	52.6	50.7	50.9	57.2	68.9	81.0	91.1	94.0	95.4	97.0	74.9	97.0
17-Sep	98.4	98.6	98.7	98.7	98.8	98.9	99.2	99.3	98.8	81.1	65.7	57.1	48.5	41.9	40.0	40.5	43.6	46.8	52.9	60.6	63.4	62.4	67.4	70.7	72.2	99.3
18-Sep	73.1	77.6	85.4	93.2	96.4	92.2	88.4	78.6	69.9	60.5	52.9	46.7	42.1	39.7	37.4	37.2	36.5	38.4	47.5	54.6	62.6	60.1	63.7	58.5	62.2	96.4
19-Sep	58.1	60.8	66.0	72.4	81.6	86.2	89.6	81.3	69.0	57.5	49.3	41.2	34.7	33.3	32.9	30.0	34.5	44.4	52.6	59.5	65.4	73.1	83.6	86.2	60.1	89.6
20-Sep	88.0	90.2	93.0	94.0	95.2	95.6	96.1	93.2	79.6	67.7	59.0	51.3	47.2	36.1	32.2	33.4	34.1	38.5	46.8	52.0	56.5	58.8	63.4	76.7	65.8	96.1
21-Sep	76.2	83.5	89.6	91.6	95.4	95.4	96.7	91.0	68.9	52.1	45.3	37.0	34.6	31.3	28.0	32.3	35.6	39.5	49.7	78.5	95.8	96.2	95.0	91.0	67.9	96.7
22-Sep	84.0	81.7	81.4	82.0	81.9	82.2	86.3	78.3	67.0	60.2	54.5	47.8	41.7	37.3	36.6	36.5	36.3	41.1	47.4	45.6	45.3	47.6	49.0	53.0	58.5	86.3
23-Sep	57.5	47.6	47.0	48.7	49.7	51.7	53.5	57.1	44.7	39.6	32.5	27.1	26.1	28.1	28.6	31.7	28.7	32.4	35.2	39.6	44.3	57.8	59.3	61.1	42.9	61.1
24-Sep	61.7	59.1	60.4	59.7	65.7	69.4	69.8	67.8	66.9	57.4	43.2	35.3	32.8	24.9	22.5	22.0	22.5	26.0	37.7	52.5	60.2	68.0	75.7	84.6	51.9	84.6
25-Sep	89.9	94.2	92.9	93.0	95.9	96.7	95.2	93.1	82.9	71.3	60.6	51.3	47.1	44.1	43.6	46.6	50.8	42.9	47.8	46.5	49.0	66.6	71.7	77.5	68.8	96.7
26-Sep	84.4	89.5	94.4	96.3	97.5	97.9	98.2	98.4	88.7	68.3	58.5	51.0	46.0	41.7	36.0	40.5	67.4	58.0	60.4	59.9	53.8	59.1	73.2	76.5	70.7	98.4
27-Sep	68.3	82.6	91.0	83.5	72.7	69.4	64.5	57.6	49.2	42.8	38.2	34.4	31.5	29.2	27.2	29.8	30.1	34.4	38.2	40.8	45.0	49.3	57.5	66.9	51.4	91.0
28-Sep	67.5	58.7	59.7	58.2	62.6	68.4	73.1	68.1	60.3	50.0	43.9	40.8	37.1	32.8	28.9	30.8	33.9	41.2	51.2	61.4	63.5	60.5	62.6	62.2	53.2	73.1
29-Sep	61.4	57.6	59.1	58.0	54.1	53.4	55.3	54.7	49.4	42.9	40.3	39.1	35.4	33.3	34.7	35.8	36.8	42.2	48.3	57.5	62.9	65.5	68.4	73.9	50.8	73.9
30-Sep	78.0	78.2	78.8	77.9	79.2	81.1	78.4	80.3	75.0	66.5	56.4	51.4	50.7	48.9	50.3	52.1	51.6	51.8	55.1	58.9	62.4	69.0	77.3	90.8	66.7	90.8
	82.0	83.1	85.1	86.3	87.0	87.9	88.2	85.4	77.2	67.1	58.6	51.8	46.3	42.3	41.2	42.4	44.3	47.4	55.6	64.5	70.0	74.6	78.5	80.9	Diurnal Average	
	98.4	98.6	98.7	98.7	98.8	98.9	99.2	99.3	98.8	93.7	89.4	77.4	67.4	62.9	66.9	73.3	73.7	75.2	87.8	88.2	95.8	96.2	96.3	97.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	89	12.36	12.36
40 - 60	189	26.25	38.61
60 - 80	196	27.22	65.83
80 - 100	246	34.17	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - September 2025

Maximum Speed: 15 km/h on Sep 3 17:00

Maximum Daily Speed Average: 7.0 km/h on Sep 4

Minimum Speed Value: 0 km/h on Sep 13 05:00

Minimum Daily Speed Average: 0.2 km/h on Sep 16

Maximum Diurnal Speed Average: 2.7 km/h at hour 13

Minimum Diurnal Speed Average: 0.7 km/h at hour 18

Monthly Average Velocity: 1.3 km/h 202.5 deg

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 2$ Median = 4 $Q_3 = 6$ $P_{90} = 9$ $P_{99} = 12$

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WNW3	W2	SW1	WNW1	N0	WNW0	SSE3	SSW2	SE3	NNE3	N2	N5	NNE7	N9	N10	NNE9	N9	N9	N6	NNW5	WNW4	WNW4	WNW4	WNW2	N3.1	NNE10
2-Sep	W3	W3	W3	WNW3	WNW3	W3	WNW1	W2	SE1	NE0	ESE2	SE4	SE6	SSE6	SE6	SSE7	SSE7	SE4	SE2	SE1	SE2	SE2	SE2	SSE7	SSE1.9	SSE7
3-Sep	SSE8	SE3	SE3	SE4	SSE5	SSE6	SSE7	SSE8	SSE7	SSE6	S6	S5	SSE4	W3	N5	N9	N15	N12	NNW11	NNW7	NNW9	NW6	NNW12	NW10	NNW1.1	N15
4-Sep	NW7	NW9	NW13	NW11	NW8	NW8	NW8	NW8	NNW11	NNW12	NNW12	NNW11	NNW11	NNW12	N9	N7	N6	NNE4	N3	NW1	W3	WSW2	W2	WSW2	NNW7.0	NW13
5-Sep	SW1	W2	WSW2	SW1	WSW0	WSW2	SSW2	S3	SSE5	SSE5	SE5	SE5	SE6	SE5	SE5	ESE3	SE3	ESE2	UO	UO	SSE0	NE0	WNW2	WNW3	SSE1.7	SE6
6-Sep	WNW2	W3	W3	WSW2	WSW1	UO	SSE2	SSE4	SE5	SE5	SE5	SSE7	SSE8	SE7	SSE8	SE6	SE5	SSE2	W2	W1	WSW1	WSW1	WSW1	WSW1	SSE2.5	SSE8
7-Sep	WSW2	SW1	SW1	SSW1	SE1	W1	SSW1	E1	SSE3	NE1	NNW1	NE3	NE3	NNE4	N10	NNE9	NNE6	NNW5	NW2	NNW5	N5	NW5	NW3	N4	N2.2	N10
8-Sep	N6	NNW5	NNW5	NW3	W4	WNW3	NW4	WNW3	NNW3	ENE2	N2	NW1	NNW4	WNW3	SSW2	NW1	E2	SE1	W2	WSW2	W2	WSW1	W1	W2	NW1.9	N6
9-Sep	W2	WNW2	W2	W2	W3	W2	W2	NW1	SSE3	SSE4	SE4	SSE6	SSE7	SSE7	SE5	SE5	SSE5	S4	SSW5	SW4	SSW3	S2	SSE3	S1	S2.5	SSE7
10-Sep	S1	SW1	SE1	W1	WSW1	W2	ENE1	E1	E1	WNW3	WNW4	NW5	NW7	W2	WNW5	NW8	NW11	NW7	NW4	UO	WSW1	WSW1	SSW1	WNW1	NW2.4	NW11
11-Sep	SE1	W2	SW2	W2	SW1	SSW1	WSW1	SSE3	SE2	SE4	E3	SSE5	SSE7	SE5	SE6	SE6	SSE7	SSE4	SSE1	SE1	SE2	SSE2	SSE3	SSE3	SSE2.6	SSE7
12-Sep	SSE4	SSE5	WSW2	W2	SSW1	W2	W1	SE1	SE3	SE5	SSE7	SE6	S7	S10	S9	S8	S6	S3	SW2	SSW1	W1	NNW0	SSE1	S1	S3.1	S10
13-Sep	S1	WSW1	SE1	SSE1	SSW0	SW0	SSE1	SW1	SSE2	SE3	SSE2	NW4	NNE1	NE2	NNE4	N6	N4	NNW3	NW3	NW2	NW2	WNW2	W2	W1	NNW0.8	N6
14-Sep	W2	WSW2	W2	WSW1	WSW1	WSW1	WSW1	NNW0	SSE1	SE3	SE5	ESE3	SSE6	SE4	SE7	SSE7	SSE6	SSE8	SSE7	SSE5	SSE2	S1	SSE1	SSE3	SSE2.7	SSE8
15-Sep	SSE3	S2	S2	SSE2	SSE3	SSW2	SSE4	SSE4	ESE1	SE3	SE3	SSE2	WSW3	NW8	NW12	NW13	WNW13	NW9	WNW7	NW8	WNW5	NW5	NW6	NW8	WNW3.0	NW13
16-Sep	NW6	WNW4	WNW2	WNW3	NW4	NW3	WNW2	W1	WNW4	NW4	NNE3	ESE2	E3	ESE4	SE5	SE5	SE4	SSE4	SE2	SE1	SE1	SSE2	SW2	S0	SW0.2	NW6
17-Sep	SSE1	SE0	W2	WNW1	W2	WSW2	NNW2	WNW2	SSE3	SSE7	SE8	SSE8	SSE9	SSE9	SSE10	SSE9	SE9	SE8	SE4	SE4	SSE6	SSE8	SSE7	SSE7	SSE4.5	SSE10
18-Sep	SSE7	SE5	E2	NNE1	SSE1	SE4	SSE5	SSE11	SSE9	S10	S10	S9	SSW7	S8	S8	SSW8	SW6	WSW4	SSW3	SSW3	SSW3	SW4	WSW3	SW3	S4.7	SSE11
19-Sep	W5	W5	WSW3	S3	S3	SSW2	SSW1	SSW3	S5	S6	SSE5	SSW4	WSW7	SW7	SW6	SW6	SW3	SSE2	S2	SSE1	SSE2	S2	S3	SSW1	SSW3.1	WSW7
20-Sep	W2	W2	W3	WSW2	W2	WSW2	SSW1	SSE3	SE4	SE5	SE6	SE6	SSE6	SSE10	S11	SSE9	S8	S7	SSE5	SSE5	SSE4	SSE4	SSE4	ESE2	SSE3.9	S11
21-Sep	NW1	SSE1	SW1	SE2	SSE2	SSE3	SSE3	ESE3	SE2	W1	E3	ESE3	SSE4	SE1	W5	WSW6	W6	W6	WNW9	WNW6	SSW3	SSW3	S3	SSW4	SW1.5	WNW9
22-Sep	SW4	WSW5	SW6	SW6	WSW5	SW1	SSE3	S4	SW7	SW9	SW8	SSW10	SSW9	SW9	SSW9	SSW8	SSW8	S5	SSE6	SSE8	SSE8	SSE9	SSE8	SSE6	SSW5.9	SSW10
23-Sep	SE2	S5	S7	SSE8	S6	SSE6	S5	SSW2	W7	WSW8	WSW9	SW10	SW12	SSW9	SW9	SSW9	SSW11	SSW10	SSW8	SSW5	SSE3	SE3	S3	SSE3	SSW5.9	SW12
24-Sep	SSE2	SSE3	SSE3	SSE4	SSW2	SW2	S2	S3	SSW5	WSW6	WNW7	WSW4	SSW3	WNW8	WNW10	NW11	NW10	NW9	WNW4	SW1	SSE0	S1	SSE1	ESE1	W2.4	NW11
25-Sep	S1	SSE2	SSE0	ESE1	SSE1	S2	SSW1	SSE2	SSE4	SSE5	SE5	SE6	SSE5	SSE3	SSE4	ESE2	WSW1	S5	SSE4	SSE6	S7	SW9	WSW5	SSW3	S3.0	SW9
26-Sep	SW4	SSW3	SSE2	S2	S2	S3	SSE3	SSE3	S4	WSW5	W6	WSW6	WSW7	WSW6	WNW8	WNW4	WSW7	SSW3	S3	SSW4	SSW4	SSE3	SE3	SSE3	SW2.9	WNW8
27-Sep	SSE4	S2	SSE5	S5	S6	SW7	SW7	SW7	WSW9	W8	WSW8	WSW8	WSW8	WSW9	SW9	SW7	WSW6	SW5	W4	SW4	SW3	SSW2	SSE3	S3	SW5.1	WSW9
28-Sep	SW3	W4	W5	W5	SSW1	S3	S1	WSW3	W3	WSW2	SE3	SE7	SE8	SSE7	SSW6	S5	SSW4	SSE1	SE0	W0	SE1	ESE1	ESE2	NE1	SSW2.0	SE8
29-Sep	SSE2	SE2	SE2	SE3	SE4	SE5	ESE5	ESE7	SE8	SSE10	SE11	SE10	SSE11	SSE12	S11	SSE8	SSE6	SSE5	SE1	SSW1	WNW2	WNW2	NW1	NW2	SSE4.6	SSE12
30-Sep	WNW3	WSW1	WNW3	NNW2	NW1	W3	NNW2	W2	N1	NNE3	N7	NNE8	N9	NE6	NE5	NNE6	NNE6	N7	N8	N9	N5	N6	N6	NW4	N4.1	N9
	SW1.2	WSW1.4	WSW1.4	WSW1.2	SW1.3	SW1.5	SSW1.3	S1.8	S2.1	S2.1	S1.9	S2.3	S2.7	S2.5	SSW1.8	SSW1.2	SW1.2	SW0.7	WSW1.0	SW1.0	SW1.0	SW1.2	SW0.9	SW0.9	Diurnal Average	
	SSE8	NW9	NW13	NW11	NW8	NW8	NW8	SSE11	NNW11	NNW12	NNW12	NNW11	SW12	SSE12	NW12	NW13	N15	N12	NNW11	N9	NNW9	SW9	NNW12	NW10	Diurnal Maximum	

UO - Unstable Operation

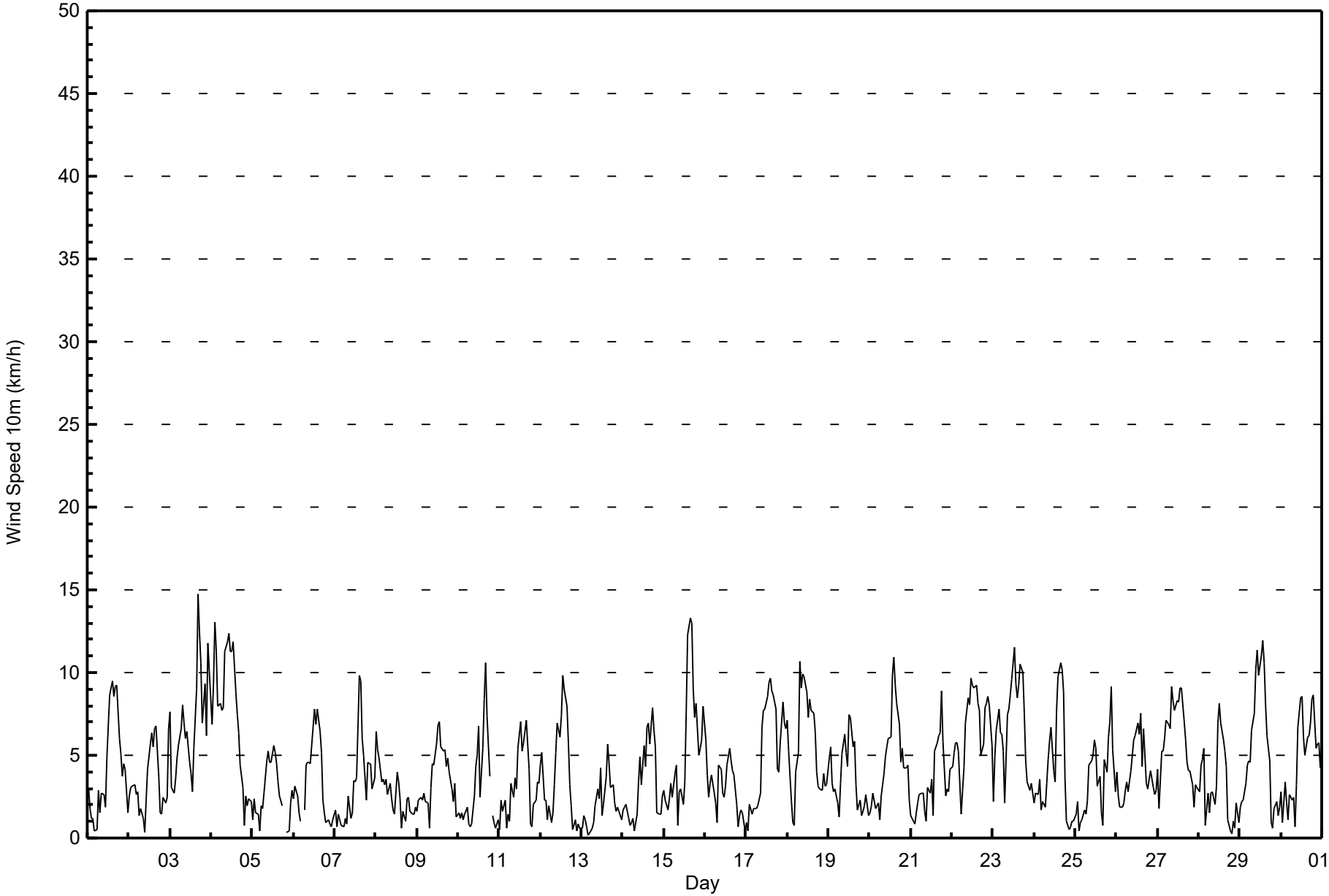
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	496	69.27	69.27
6 - 11	208	29.05	98.32
12 - 19	12	1.68	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: 716

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	11	8	8	2	8	17	71	91	40	42	25	42	56	38	22	15	496
6 - 11	18	8	1	0	0	1	18	56	20	13	18	15	5	7	22	6	208
12 - 19	2	0	0	0	0	0	0	1	0	0	1	0	0	1	3	4	12
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	31	16	9	2	8	18	89	148	60	55	44	57	61	46	47	25	716

Total Number of Valid Hours: 716

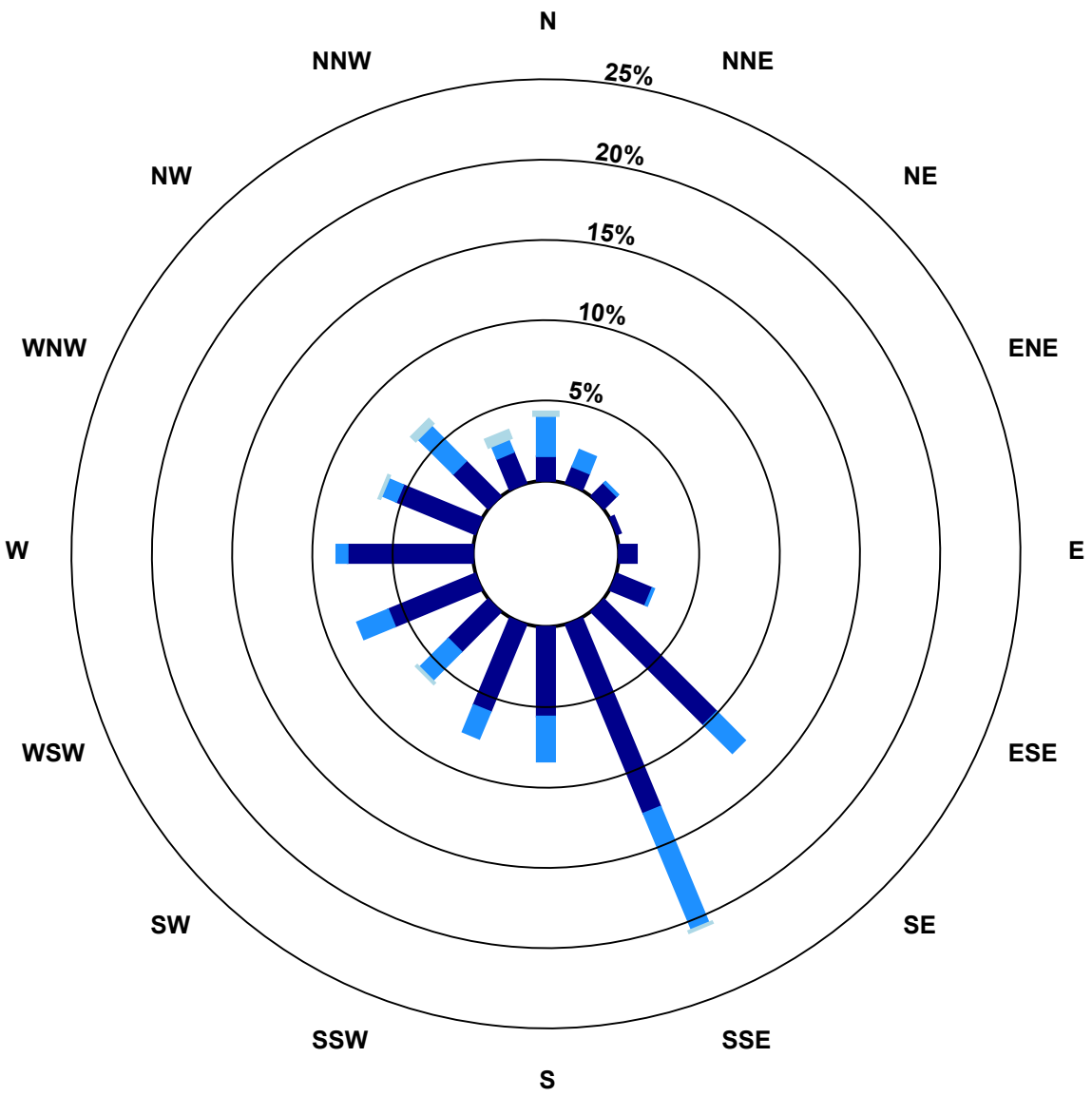
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 716

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5 km/h on Sep 3 18:00

Minimum Value: 0 km/h on Sep 19 18:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 2 P_{90} = 3 P_{99} = 5

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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-Sep	1	1	1	1	1	1	2	1	1	1	2	3	3	4	4	3	3	3	2	1	1	1	1	1	4
2-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	1	1	1	1	2	3	3
3-Sep	2	2	1	1	2	2	2	3	2	2	2	2	2	2	2	4	5	5	4	3	3	3	3	3	5
4-Sep	2	4	4	3	2	2	2	2	4	4	4	4	3	3	3	3	2	2	1	1	1	1	1	1	4
5-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	UO	UO	1	1	1	1	2
6-Sep	1	1	1	1	1	UO	1	2	2	2	2	3	3	3	3	2	2	1	1	1	1	1	1	1	3
7-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	2	4	4	3	2	1	3	1	1	1	2	4
8-Sep	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	1	1	1	1	2
9-Sep	1	1	1	1	1	1	1	1	1	2	2	2	3	2	2	3	2	1	2	1	1	1	1	1	3
10-Sep	1	1	1	1	1	1	1	1	1	2	2	3	2	2	3	3	3	2	2	UO	1	1	1	1	3
11-Sep	1	1	1	1	1	1	1	1	1	1	1	2	3	2	2	3	3	2	1	1	1	1	1	1	3
12-Sep	1	2	1	2	1	1	1	1	1	2	2	2	3	4	4	3	2	1	2	1	1	1	1	1	4
13-Sep	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	1	1	1	1	1	1	1	1	2
14-Sep	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	2	2	3	2	3	1	1	1	1	3
15-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	4	4	5	5	4	3	3	2	2	2	3	5
16-Sep	2	1	1	1	1	1	1	2	2	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	2
17-Sep	1	1	1	1	1	1	1	1	2	3	2	3	3	4	4	3	3	3	2	1	2	2	2	2	4
18-Sep	3	2	1	1	1	2	2	4	4	4	4	4	3	3	3	3	3	2	1	1	1	1	1	1	4
19-Sep	2	2	2	1	1	1	1	1	2	2	3	2	3	3	3	3	2	0	1	1	1	0	1	1	3
20-Sep	1	1	1	0	1	1	1	1	1	2	2	2	3	4	4	4	3	3	2	2	1	1	2	1	4
21-Sep	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	4	3	1	1	1	1	4
22-Sep	2	2	2	3	3	2	1	2	3	4	3	4	4	4	4	3	3	2	2	3	3	3	3	2	4
23-Sep	1	2	2	3	2	2	2	1	4	4	4	4	5	4	4	4	4	4	3	2	1	1	1	1	5
24-Sep	1	1	1	1	1	1	1	1	2	2	3	2	2	4	4	4	4	3	1	1	1	1	1	1	4
25-Sep	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	2	2	2	3	4	3	1	4
26-Sep	2	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	1	1	1	1	1	1	2	3
27-Sep	2	2	2	2	2	3	3	3	4	4	4	4	3	4	4	3	3	2	2	1	1	1	1	1	4
28-Sep	2	2	2	2	1	2	1	1	2	2	2	2	3	3	3	2	2	1	1	1	1	1	1	1	3
29-Sep	1	1	1	1	2	2	2	3	3	4	5	4	5	5	4	3	2	2	1	1	1	1	1	1	5
30-Sep	1	1	1	2	1	2	1	2	2	2	3	4	3	3	2	2	2	3	3	3	2	2	1	1	4
	3	4	4	3	3	3	3	4	4	4	5	4	5	5	4	5	5	5	4	3	3	4	3	3	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - September 2025

Direction of Maximum Speed: 353 deg on Sep 3 17:00
Direction of Maximum Daily Speed Average: 330.6 deg on Sep 4

Direction of Minimum Speed: 199 deg on Sep 13 05:00
Direction of Minimum Daily Speed Average: 0.2 deg on Sep 16

Monthly Average Direction: 202.5 deg

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Percent Operational Time:	99.4

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	Average
1-Sep	295	272	218	286	2	299	152	209	144	13	353	9	18	8	11	14	8	354	352	346	302	295	300	291	352.0
2-Sep	275	276	278	295	291	276	282	276	125	42	116	141	133	150	139	150	152	134	140	130	139	140	145	151	159.4
3-Sep	154	137	143	144	158	161	161	159	166	166	173	178	163	280	358	358	353	350	347	341	335	322	328	321	340.0
4-Sep	307	316	318	318	313	312	313	316	337	346	344	345	339	338	352	5	359	13	4	320	266	258	263	257	330.6
5-Sep	231	264	253	231	254	252	206	177	161	148	129	130	145	129	124	117	133	110	UO	UO	156	37	284	288	155.5
6-Sep	286	280	270	246	246	UO	167	155	144	136	142	158	152	141	150	143	143	158	278	266	251	237	239	238	162.6
7-Sep	243	227	218	210	143	266	207	97	147	45	330	38	36	30	8	12	24	344	318	343	352	311	326	354	359.4
8-Sep	353	341	337	323	267	292	326	301	344	60	10	317	343	282	198	325	85	128	265	256	279	239	273	266	316.1
9-Sep	263	284	277	280	270	275	270	317	147	160	145	148	152	147	145	140	156	191	202	234	203	188	165	183	178.0
10-Sep	182	227	146	259	253	260	76	99	96	290	290	320	320	264	289	320	320	323	319	UO	254	251	204	297	303.8
11-Sep	138	280	234	263	223	213	247	166	143	140	95	154	152	137	133	141	149	148	151	131	139	167	156	155	152.6
12-Sep	161	161	245	279	208	260	268	136	142	142	147	143	170	169	182	188	190	188	222	212	265	331	168	175	175.0
13-Sep	173	248	140	152	199	217	162	231	159	141	147	323	19	38	17	3	355	334	318	304	307	302	270	260	336.4
14-Sep	272	258	266	243	249	248	254	332	168	138	143	120	150	138	142	159	166	155	153	162	156	169	160	165	159.8
15-Sep	166	170	178	161	166	198	167	163	122	131	144	148	239	316	316	311	302	316	289	310	303	311	313	313	293.8
16-Sep	312	302	299	289	304	305	298	264	293	306	13	103	100	113	130	138	146	149	143	133	137	147	220	170	233.3
17-Sep	150	144	281	288	267	250	327	285	151	154	146	151	148	152	151	150	146	146	140	143	147	155	153	152	153.4
18-Sep	150	136	89	13	153	145	154	156	160	175	180	188	207	190	190	210	219	241	209	211	205	216	257	234	184.0
19-Sep	264	272	255	174	176	192	206	201	180	169	165	197	245	230	214	215	232	165	185	166	158	173	170	208	207.6
20-Sep	270	277	268	252	273	252	195	154	145	138	136	143	151	168	174	167	170	174	150	155	164	168	160	102	166.0
21-Sep	310	153	227	146	155	149	147	111	124	280	97	109	151	137	281	258	272	279	282	284	202	200	187	211	230.4
22-Sep	219	237	231	230	247	231	164	180	217	225	216	198	192	219	209	196	198	174	163	165	163	159	157	147	196.3
23-Sep	137	183	178	168	177	168	178	202	260	237	241	230	215	212	215	196	202	198	197	198	166	143	177	159	201.0
24-Sep	162	168	165	163	201	217	177	175	204	237	293	242	196	288	303	306	309	318	291	236	154	190	153	118	265.8
25-Sep	179	150	166	107	164	178	197	156	160	155	142	141	151	153	155	102	238	170	148	166	182	227	254	192	170.6
26-Sep	236	198	164	171	175	172	162	152	185	249	264	241	241	241	300	288	241	199	184	202	202	168	124	147	220.1
27-Sep	164	175	163	172	191	220	222	230	251	267	248	248	249	238	222	230	245	220	261	214	235	210	160	187	226.1
28-Sep	217	269	263	278	202	191	171	238	275	242	146	142	140	165	211	187	195	149	124	276	144	122	104	45	193.3
29-Sep	147	126	126	126	129	124	107	117	143	150	146	145	148	157	171	152	159	155	125	196	290	303	323	313	146.6
30-Sep	295	258	291	347	306	275	328	265	356	17	360	13	9	35	36	16	26	5	353	353	355	358	353	318	357.1
	227.3	242.2	248.1	237.9	219.8	220.0	193.8	180.4	182.9	180.9	171.3	168.8	173.5	184.2	196.7	199.3	226.4	226.4	255.1	235.2	214.2	215.3	217.7	220.1	
	Diurnal Average																								

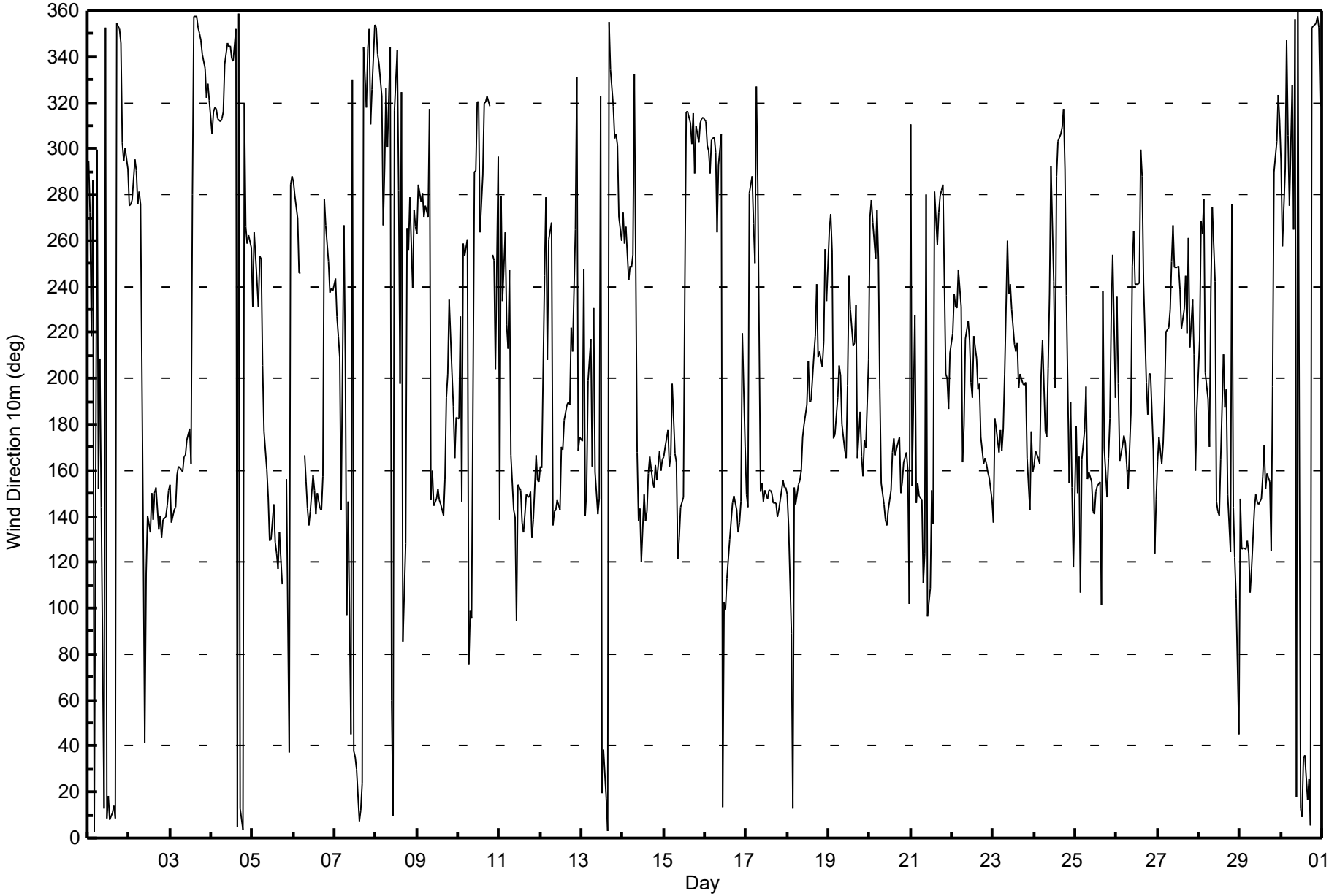
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 107 deg on Sep 8 16:00

Minimum Value: 12 deg on Sep 8 05:00

Percentiles: P_1 = 15 P_{10} = 23 Q_1 = 29 Median = 37 Q_3 = 55 P_{90} = 74 P_{99} = 98

Hours in Service:	720
Hours of Data:	716
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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-Sep	21	50	77	67	96	84	81	62	49	37	83	59	44	38	33	34	31	23	24	17	16	18	13	65	96
2-Sep	23	16	32	33	26	24	70	55	63	98	59	50	34	30	41	35	31	46	25	29	23	24	28	32	98
3-Sep	23	57	34	27	30	26	22	26	27	32	34	40	51	66	32	28	24	23	21	26	22	26	21	21	66
4-Sep	26	22	20	20	22	22	22	27	23	28	29	31	28	28	37	28	26	30	43	81	23	50	29	29	81
5-Sep	80	31	81	72	94	19	26	34	26	37	44	46	41	46	44	46	55	40	UO	UO	78	61	25	29	94
6-Sep	38	23	35	28	23	UO	22	25	35	37	37	32	30	35	32	35	35	38	46	74	68	73	96	91	96
7-Sep	60	86	57	29	79	87	71	49	43	68	82	56	62	66	31	33	34	27	52	36	29	16	21	29	87
8-Sep	20	26	20	22	12	17	20	40	39	46	84	101	58	67	79	107	69	36	65	31	29	28	23	55	107
9-Sep	73	37	37	28	13	14	25	68	31	41	40	35	35	33	37	39	31	33	36	39	47	41	25	62	73
10-Sep	49	88	58	92	70	52	66	64	74	83	49	61	37	82	71	31	22	18	24	UO	55	80	84	91	92
11-Sep	63	40	37	24	81	40	65	21	34	37	46	33	33	41	39	38	31	30	49	21	30	30	29	26	81
12-Sep	22	24	46	25	56	40	79	37	36	36	30	33	44	36	38	39	39	41	67	65	37	81	58	91	91
13-Sep	85	58	57	99	99	85	65	53	54	33	69	39	89	55	42	28	25	20	13	16	80	68	61	43	99
14-Sep	55	46	20	32	71	73	50	90	82	34	35	56	34	34	30	25	23	26	28	29	42	31	50	25	90
15-Sep	22	35	30	34	23	32	26	23	91	43	38	82	68	53	28	30	35	28	40	28	36	25	25	26	91
16-Sep	26	30	36	32	30	48	90	98	62	47	63	73	58	51	42	38	36	25	23	51	33	29	23	86	98
17-Sep	39	49	20	29	16	24	29	41	70	31	30	31	33	30	33	31	30	31	33	29	30	24	23	24	70
18-Sep	27	34	31	53	91	43	27	24	28	35	38	45	51	40	45	43	48	41	27	31	23	35	43	58	91
19-Sep	58	43	76	37	22	29	49	37	36	30	50	69	58	55	61	53	67	38	28	49	22	14	17	55	76
20-Sep	18	19	15	43	29	33	63	24	28	36	33	36	36	37	36	36	33	34	27	23	24	23	24	36	63
21-Sep	77	55	82	43	45	30	29	28	73	100	48	66	67	97	54	59	48	44	43	39	34	42	45	47	100
22-Sep	56	49	50	58	70	98	45	51	47	46	50	45	43	55	44	40	41	28	24	26	25	25	25	28	98
23-Sep	46	34	31	28	37	31	32	74	61	53	57	50	48	44	48	43	38	37	37	49	38	27	28	27	74
24-Sep	53	30	35	29	58	54	87	25	39	55	58	72	77	59	40	36	28	21	23	61	78	76	80	57	87
25-Sep	53	34	96	37	61	55	56	59	31	41	37	33	33	69	43	51	88	32	27	27	36	48	54	29	96
26-Sep	41	41	49	36	25	28	22	26	42	60	56	64	55	58	55	48	48	26	23	31	36	32	25	39	64
27-Sep	33	76	30	33	34	45	41	59	55	64	58	55	57	53	54	51	51	45	48	39	55	55	15	25	76
28-Sep	65	57	57	57	106	68	88	77	82	92	74	31	31	45	57	51	31	34	73	76	45	64	37	22	106
29-Sep	28	27	34	38	44	41	37	37	35	32	30	32	30	30	32	33	31	27	55	77	41	54	72	35	77
30-Sep	59	84	25	67	92	69	65	61	96	49	34	34	34	37	36	29	34	27	20	20	20	20	20	23	96
	85	88	96	99	106	98	90	98	96	100	84	101	89	97	79	107	88	46	73	81	80	81	96	91	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS27
JACKFISH 2/3
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
SEPTEMBER 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	682	34	38	99.44	19.1	0	2	0
H2S (ppb) Average	681	36	39	99.58	1.1	0	0.4	0
NO2 (ppb) Average	681	35	39	99.44	6.7	0	2	-
NO (ppb) Average	681	35	39	99.44	6.6	-	0.7	-
NOX (ppb) Average	681	35	39	99.44	9.3	-	2.6	-
Temperature 2 m (C) Average	720	0	0	100	26.9	-	19.1	-
Relative Humidity (%) Average	720	0	0	100	98.8	-	89.5	-
Wind Speed 10 m (km/h) Average	718	0	2	99.72	16	-	11	-
Wind Direction 10 m (deg) Average	718	0	2	99.72	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	682	0.6	1.3	-	0	0	0.1	0.3	0.6	1.2	19.1
H2S (ppb) Average	681	0.15	0.1	-	0	0.1	0.1	0.1	0.2	0.3	1.1
NO2 (ppb) Average	681	1.21	0.9	-	0	0.3	0.6	1	1.7	2.4	6.7
NO (ppb) Average	681	0.14	0.4	-	0	0	0	0	0.1	0.4	6.6
NOX (ppb) Average	681	1.35	1.1	-	0	0.3	0.6	1.1	1.8	2.7	9.3
Temperature 2 m (C) Average	720	13.96	4.9	-	3.8	7.9	10.1	13.6	17.2	21.2	26.9
Relative Humidity (%) Average	720	64.73	19.7	-	18.3	37.7	48.6	65.1	81.4	91.8	98.8
Wind Speed 10 m (km/h) Average	718	6	3	-	0	3	4	6	8	10	16
Wind Direction 10 m (deg) Average	718	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2, SO2	18 Sep 2025 15:00	18 Sep 2025 16:00	2	Maintenance - sample manifold cleaned
H2S	11 Sep 2025 14:00	11 Sep 2025 15:00	2	Maintenance - WBEA internal audit
NO2	11 Sep 2025 12:00	11 Sep 2025 13:00	2	Maintenance - WBEA internal audit
SO2	11 Sep 2025 15:00	11 Sep 2025 16:00	2	Maintenance - WBEA internal audit
H2S	07 Sep 2025 10:00	07 Sep 2025 10:00	1	Unstable Operation - excessive baseline drift
Wind Speed, Wind Direction	11 Sep 2025 06:00	11 Sep 2025 07:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 19.1 ppb on Sep 21 21:00

Maximum Daily Average: 2.0 ppb on Sep 21

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.0 ppb on Sep 5

Maximum Diurnal Average: 1.2 ppb at hour 15

Minimum Diurnal Average: 0.2 ppb at hour 7

Monthly Average: 0.60 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.6$ $P_{90} = 1.2$ $P_{99} = 5.5$

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.5	1.1	0.9	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1
2-Sep	0.3	0.3	0.2	0.2	Z	0.0	0.0	0.1	0.4	1.1	1.6	1.4	2.6	3.5	1.4	2.2	1.7	0.5	0.3	0.2	0.2	0.2	0.4	0.6	0.8	3.5
3-Sep	1.1	1.3	1.1	0.6	0.6	Z	0.4	1.1	1.2	1.1	0.6	0.3	0.4	0.3	0.4	0.7	0.5	1.0	0.3	0.3	0.1	0.0	0.1	0.0	0.6	1.3
4-Sep	Z	0.1	0.5	0.1	0.0	0.0	0.0	0.2	0.2	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.5
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
6-Sep	1.2	0.8	Z	0.2	0.4	0.4	0.6	0.9	0.8	0.6	0.6	0.6	0.7	0.4	0.4	0.5	0.5	0.8	0.6	0.2	0.3	0.5	0.7	1.0	0.6	1.2
7-Sep	1.3	1.0	0.7	Z	0.3	0.3	0.4	0.5	0.7	1.1	0.5	1.4	0.5	0.5	1.5	2.5	0.3	0.3	0.3	0.6	0.4	0.3	0.3	0.3	0.7	2.5
8-Sep	0.3	0.2	0.1	0.1	Z	0.0	0.0	0.0	0.9	2.3	1.7	0.4	0.6	1.4	1.6	3.6	3.1	2.1	1.2	0.6	0.2	0.2	0.1	0.1	0.9	3.6
9-Sep	0.1	0.1	0.1	0.3	0.6	Z	0.4	0.6	0.6	0.5	0.5	C	C	C	C	0.2	0.4	0.1	0.1	0.1	0.2	0.3	0.6	0.8	0.4	0.8
10-Sep	Z	0.5	0.3	0.1	0.3	0.1	0.1	0.2	0.5	0.4	2.6	1.4	0.4	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.5	2.6
11-Sep	0.5	Z	0.2	0.2	0.1	0.3	0.3	0.7	1.4	3.2	2.4	1.7	1.0	1.0	M	M	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.7	3.2
12-Sep	0.3	0.3	Z	0.2	0.2	0.3	0.3	0.5	0.6	0.6	0.5	0.3	0.3	0.4	0.3	0.5	0.6	0.8	0.4	0.3	0.2	0.4	0.2	0.3	0.4	0.8
13-Sep	0.5	0.4	0.3	Z	0.2	0.3	0.4	0.4	1.0	2.5	0.3	0.3	0.3	0.5	0.4	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	2.5
14-Sep	0.4	0.4	0.7	0.6	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.2	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.7
15-Sep	0.2	0.1	0.2	0.3	0.3	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.1	3.0	2.7	5.6	3.1	1.2	0.3	0.1	3.3	0.2	0.1	0.1	0.9	5.6
16-Sep	Z	0.9	2.0	2.1	3.1	0.8	0.4	1.9	0.6	0.4	1.0	0.4	2.6	3.5	0.4	0.4	1.3	0.9	0.6	0.4	0.4	0.3	0.3	0.3	1.1	3.5
17-Sep	0.3	Z	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.3	0.4	0.5	0.4	0.3	0.2	0.2	0.3	0.5	0.7	0.2	0.7
18-Sep	0.5	0.7	Z	2.2	2.7	1.4	0.8	0.7	0.5	0.5	0.8	0.7	0.6	0.6	M	M	0.5	0.4	0.4	0.4	0.5	0.5	1.3	1.0	0.8	2.7
19-Sep	0.4	0.3	0.3	Z	0.1	0.1	0.2	0.4	3.5	4.7	2.1	1.1	0.2	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.6	4.7
20-Sep	0.1	0.1	0.2	0.6	Z	0.1	0.0	0.2	0.2	0.2	0.3	1.3	0.5	0.3	0.4	0.4	0.3	0.2	0.2	0.3	0.5	0.6	0.4	0.4	0.3	1.3
21-Sep	0.6	0.7	0.8	1.0	1.4	Z	0.7	0.5	0.5	0.5	0.5	0.6	1.7	2.2	1.0	0.3	0.4	0.3	0.3	9.6	19.1	2.4	1.1	0.3	2.0	19.1
22-Sep	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	1.2	1.2	0.6	1.5	0.3	1.5
23-Sep	2.6	Z	0.5	0.4	0.3	0.2	0.3	0.5	0.5	0.6	7.7	2.3	0.1	0.2	0.5	0.2	1.4	1.2	0.1	0.1	0.1	0.2	0.1	0.1	0.9	7.7
24-Sep	0.1	5.4	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.6	1.7	1.5	5.5	1.4	1.2	0.2	0.1	0.1	0.1	0.3	0.5	0.6	0.8	5.5
25-Sep	0.6	0.5	0.3	Z	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.2	0.2	0.3	0.6
26-Sep	0.1	0.1	0.4	0.2	Z	0.0	0.0	0.1	0.1	0.1	0.9	1.0	0.1	1.1	11.0	7.4	9.4	0.7	0.2	0.4	0.2	0.6	0.2	0.2	1.5	11.0
27-Sep	0.2	0.2	0.2	0.4	0.3	Z	0.1	0.1	0.1	0.0	0.0	0.0	1.0	0.1	0.0	0.1	0.2	0.1	0.2	0.0	0.1	0.1	5.2	0.2	0.4	5.2
28-Sep	Z	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	2.6	0.8	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.5	0.6	0.3	2.6
29-Sep	0.4	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.3	0.5	0.5	0.5	0.3	0.6
30-Sep	0.6	0.6	Z	0.6	0.7	0.8	0.6	0.6	0.7	0.5	0.7	0.6	0.8	1.2	0.8	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.5	1.2
	0.5	0.6	0.4	0.4	0.5	0.2	0.2	0.4	0.5	0.8	0.9	0.6	0.7	0.9	1.2	1.0	1.0	0.5	0.3	0.6	1.0	0.4	0.5	0.4	Diurnal Average	
	2.6	5.4	2.0	2.2	3.1	1.4	0.8	1.9	3.5	4.7	7.7	2.3	2.6	3.5	11.0	7.4	9.4	2.1	1.2	9.6	19.1	2.4	5.2	1.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

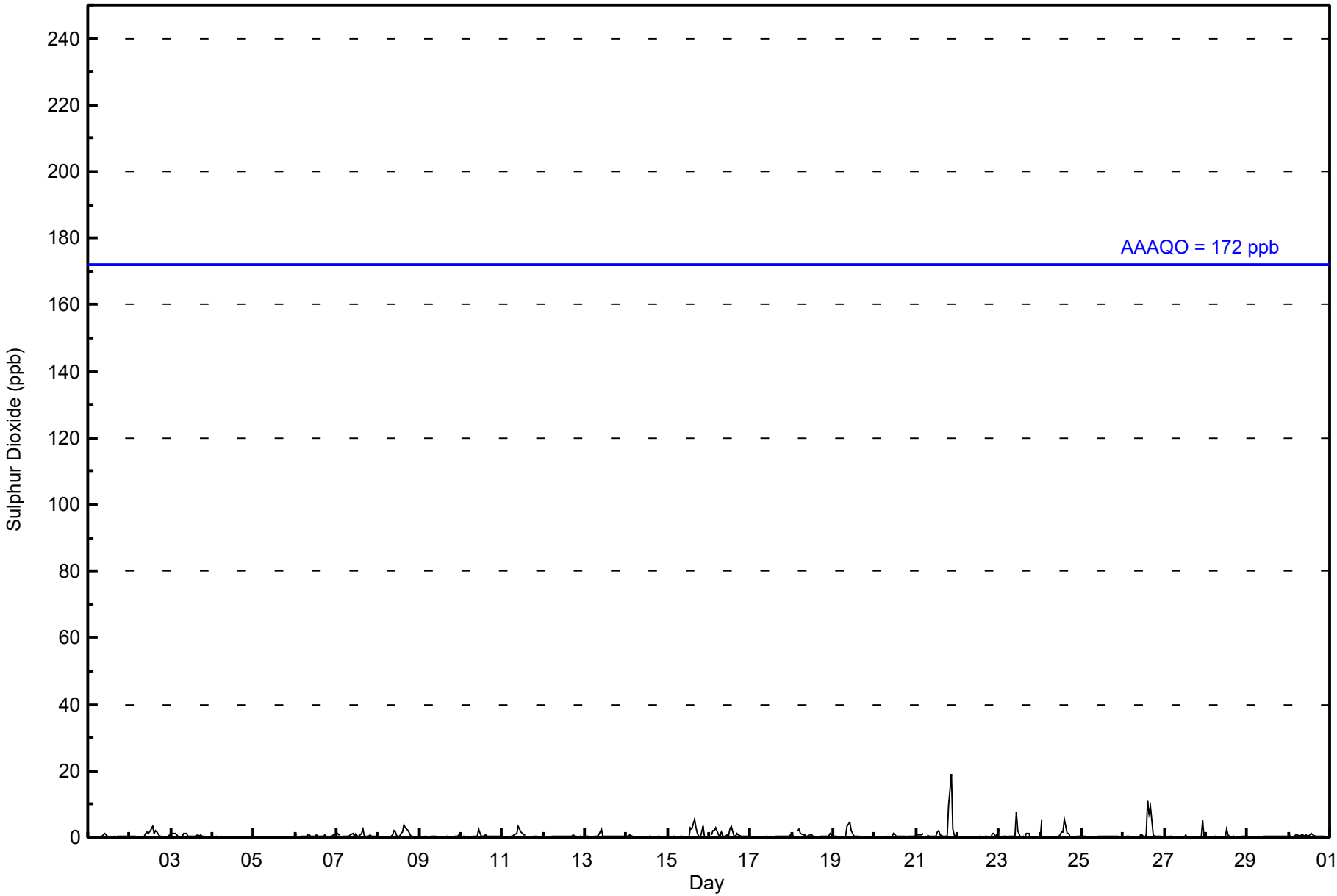
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	99.71	99.71
11 - 20	2	0.29	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: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	17	16	32	27	13	16	27	29	132	116	67	77	52	20	18	19	678
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	17	16	32	27	13	16	27	29	132	116	67	77	52	22	18	19	680

Total Number of Valid Hours: 680

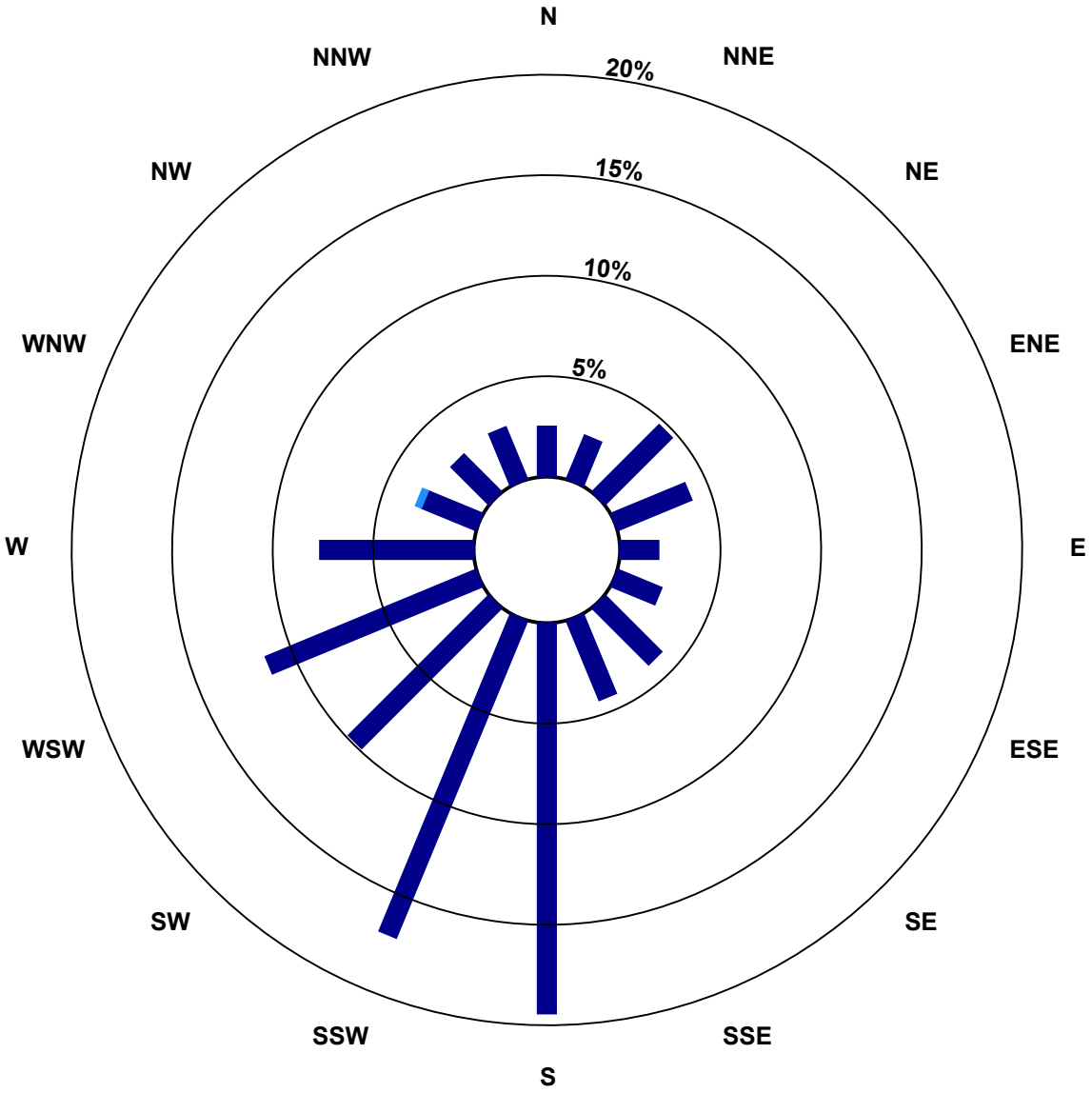
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

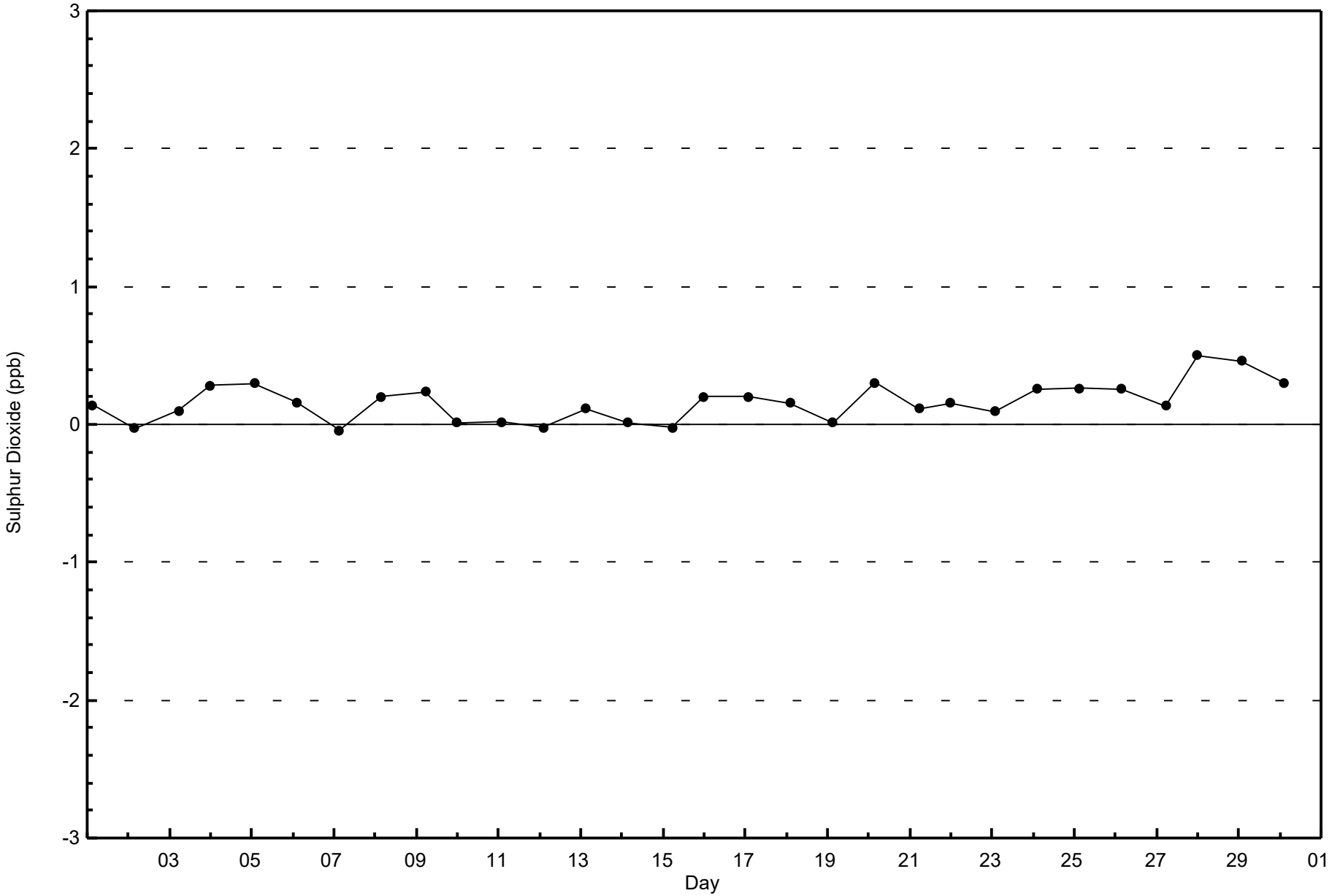
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - September 2025

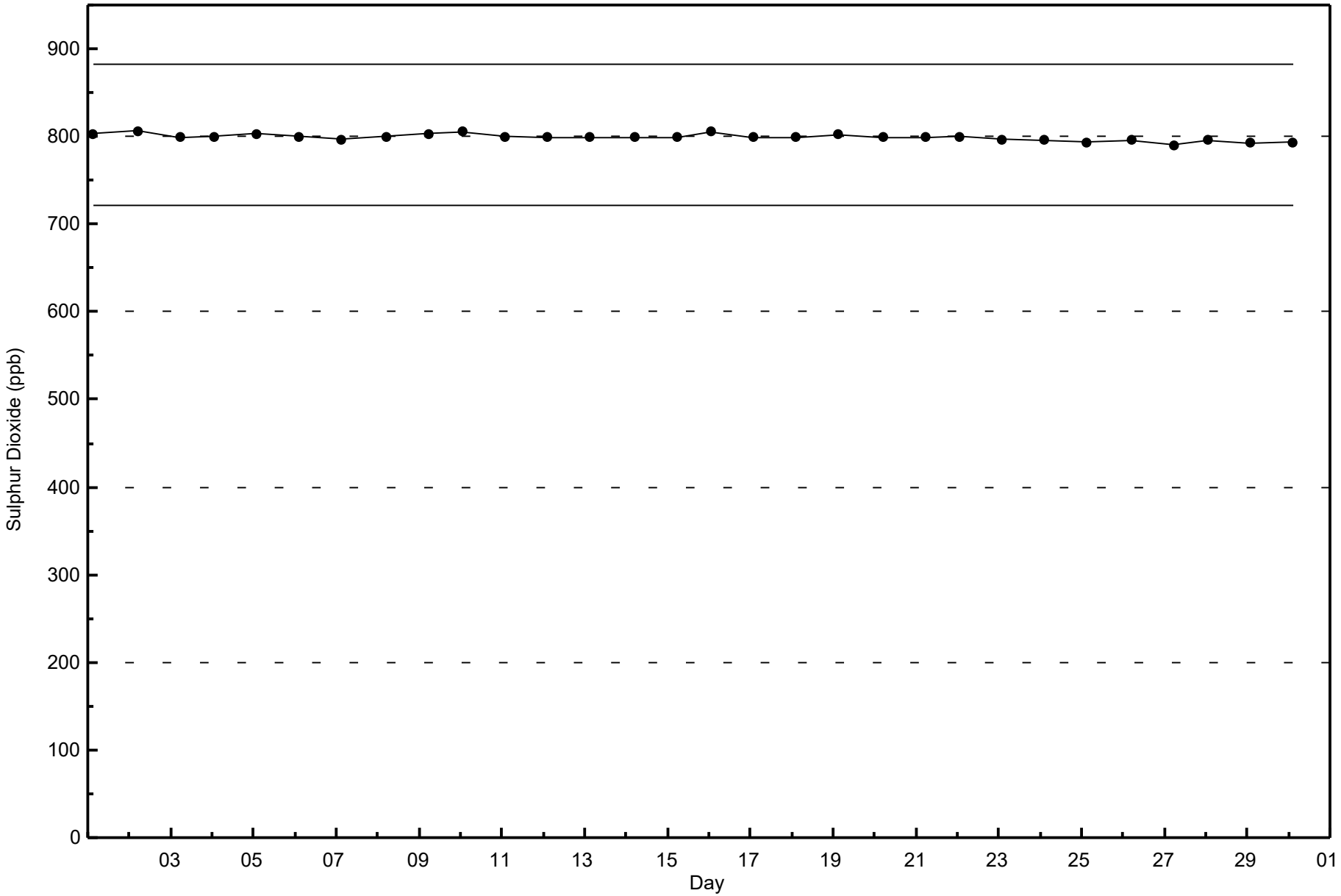


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.1 ppb on Sep 11 04:00 Maximum Daily Average: 0.4 ppb on Sep 11

Minimum Value: 0.0 ppb on Sep 19 15:00 Minimum Daily Average: 0.1 ppb on Sep 26

Maximum Diurnal Average: 0.2 ppb at hour 4 Minimum Diurnal Average: 0.1 ppb at hour 24

Monthly Average: 0.15 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} = 0.5

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	36
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.3	0.3	0.7	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	0.1	0.1	0.1	0.2	0.7
2-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.4	0.5	0.4	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	0.2	0.5
3-Sep	Z	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.4
4-Sep	0.3	Z	0.4	0.3	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
5-Sep	0.1	0.3	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	0.3
6-Sep	0.1	0.1	0.1	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	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
7-Sep	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	UO	0.2	0.6	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.6
8-Sep	0.2	0.2	0.2	0.2	0.1	Z	0.3	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.4
9-Sep	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	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2
10-Sep	0.1	Z	0.2	0.2	0.2	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	0.1	0.0	0.0	0.0	0.1	0.1	0.2
11-Sep	0.6	0.5	Z	1.1	0.2	0.3	0.5	0.2	0.3	0.2	0.2	0.2	0.1	M	M	0.3	0.3	0.3	0.7	0.6	0.3	0.2	0.2	0.1	0.4	1.1
12-Sep	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	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-Sep	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	0.1	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-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.3
15-Sep	Z	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3
16-Sep	0.1	Z	0.4	0.3	0.4	0.3	0.3	0.4	0.4	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	0.1	0.1	0.2	0.4
17-Sep	0.1	0.1	Z	0.2	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	0.2
18-Sep	0.1	0.2	0.2	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	C	C	C	C	C	C	0.3	0.4	0.3	0.2	0.2	0.2	--	0.4
19-Sep	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.5	0.4	0.2	0.2	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	0.5
20-Sep	0.1	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	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
21-Sep	Z	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6	0.3	0.2	0.2	0.1	0.6
22-Sep	0.1	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
23-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3
24-Sep	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.2
25-Sep	0.1	0.1	0.1	0.0	Z	0.2	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	0.2	0.2	0.1	0.2
26-Sep	0.1	0.0	0.0	0.1	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.1	0.0	0.1	0.3
27-Sep	Z	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	0.1
28-Sep	0.0	Z	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	0.2
29-Sep	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3
30-Sep	0.1	0.1	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	0.1	0.1	0.1	0.2	0.2
	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	Diurnal Average	
	0.6	0.5	0.4	1.1	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.7	0.6	0.6	0.3	0.3	0.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

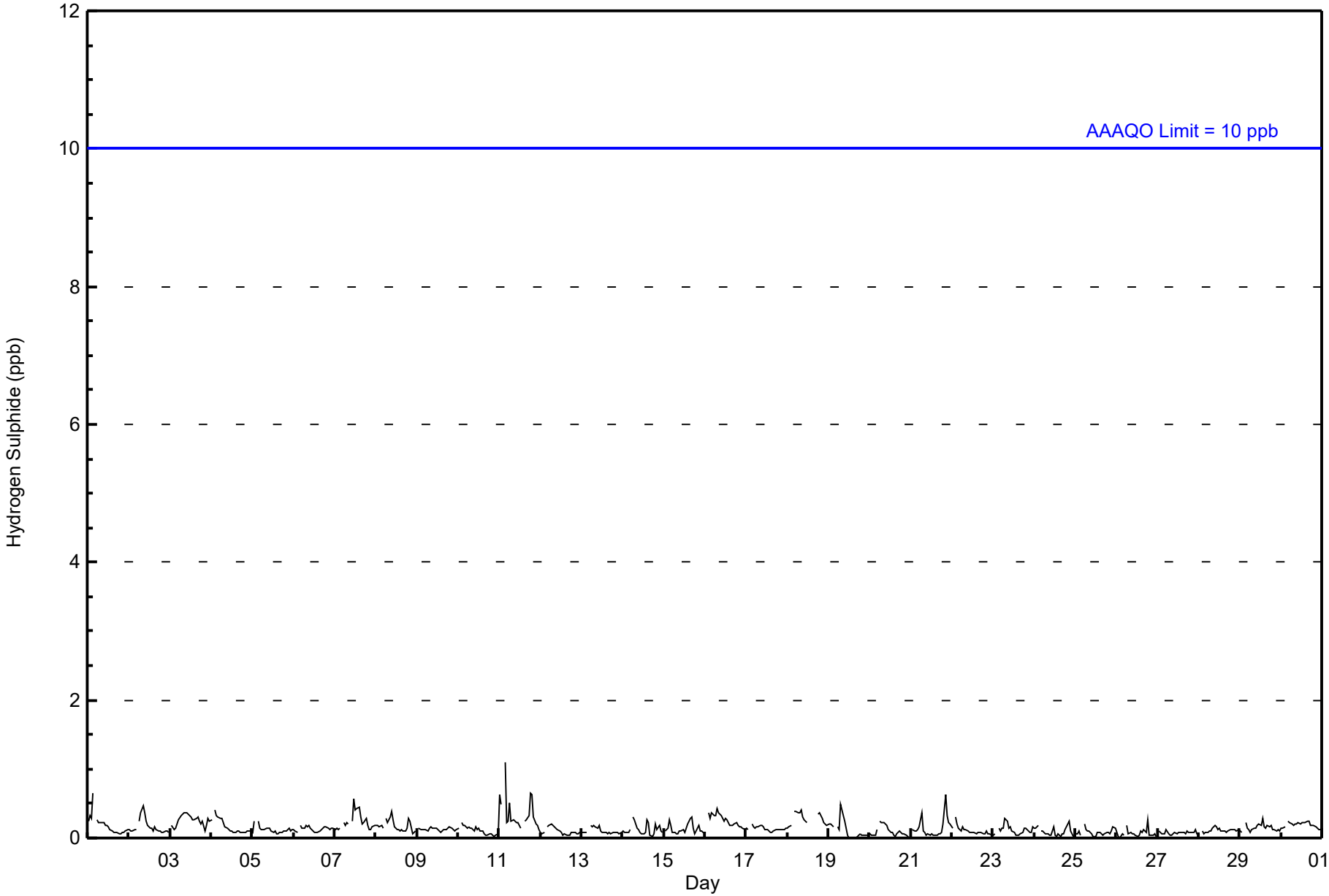
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	681	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: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	17	16	32	27	13	16	27	30	130	114	66	79	53	22	18	19	679
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	17	16	32	27	13	16	27	30	130	114	66	79	53	22	18	19	679

Total Number of Valid Hours: 679

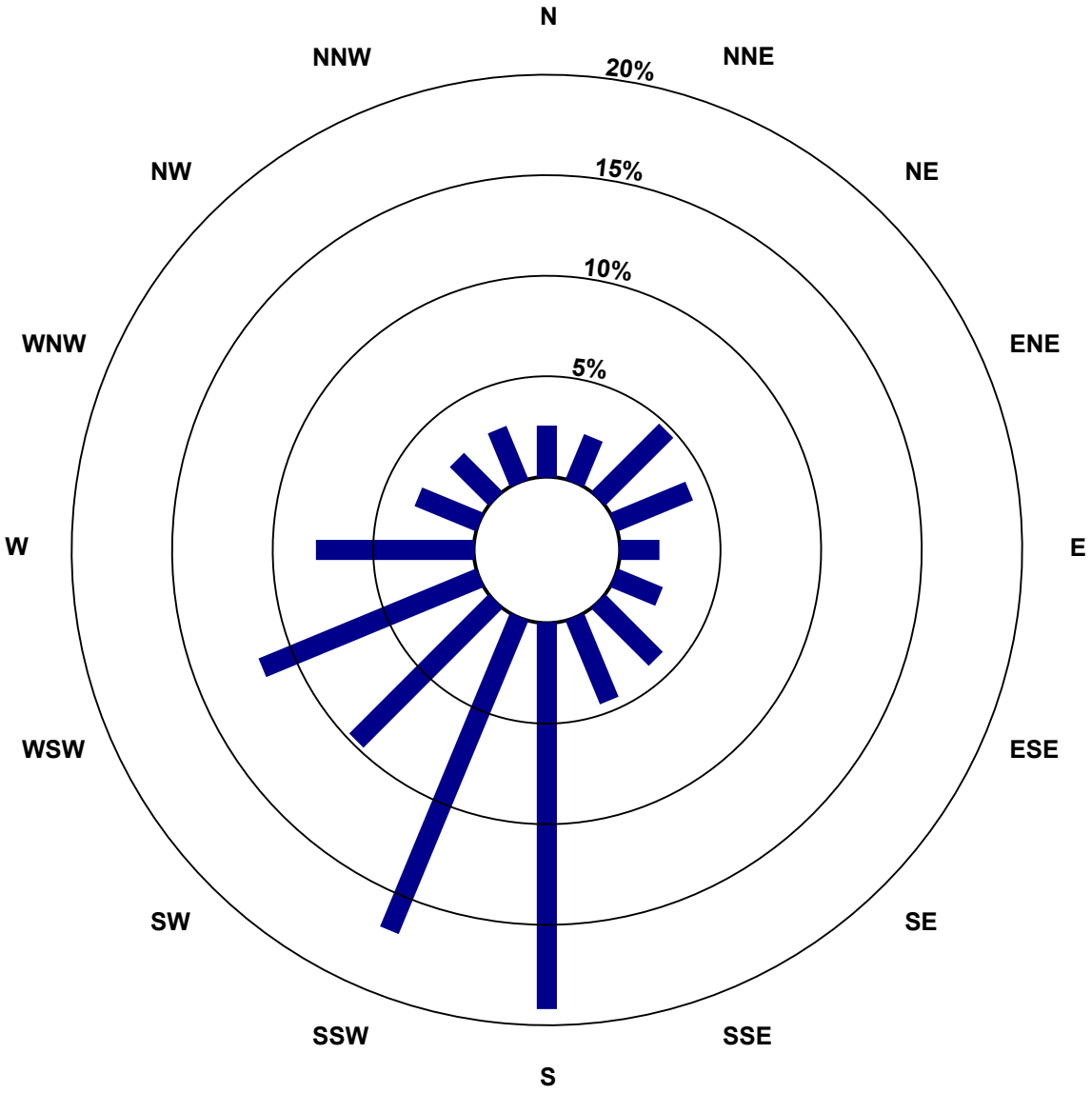
Total Number of Hours: 720

Wood Buffalo Environmental Association

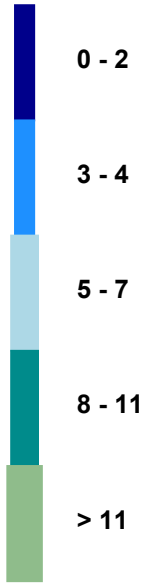
Wind Rose Sep 2025

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3



Classes (ppb)



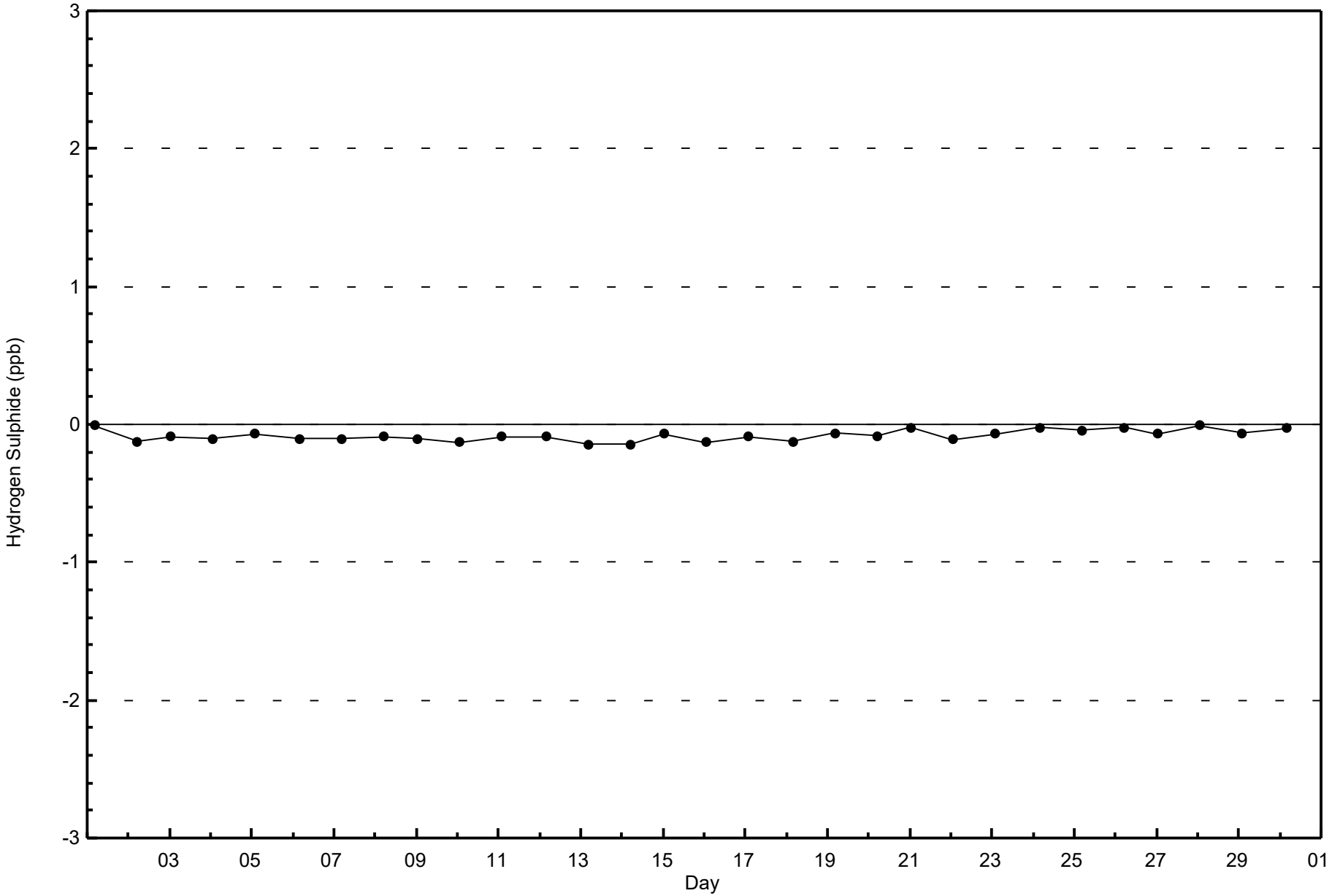
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - September 2025

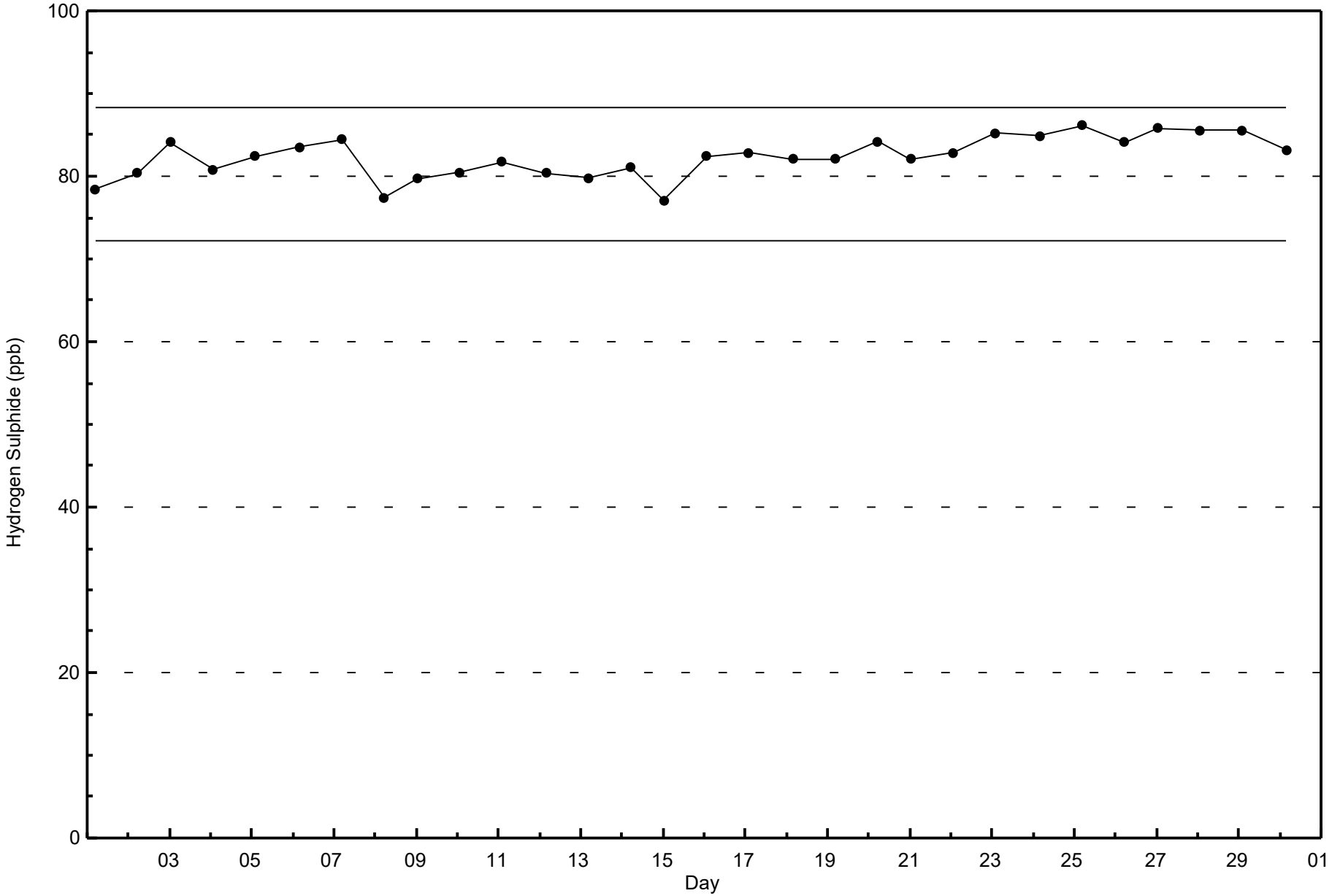


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - September 2025

Maximum Value: 6.6 ppb on Sep 1 03:00

Maximum Daily Average: 0.7 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 2 00:00

Minimum Daily Average: 0.0 ppb on Sep 27

Maximum Diurnal Average: 0.5 ppb at hour 10

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.14 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} = 1.4

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	35
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	Z	6.6	2.0	0.1	0.0	0.1	0.9	1.5	2.0	0.8	0.3	0.8	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.7	6.6
2-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.7	0.4	0.6	0.6	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.5	0.6	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	0.6
4-Sep	0.0	0.0	0.0	0.0	Z	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	0.3	0.0	0.2	0.3	0.1	0.3
5-Sep	0.2	0.7	0.7	0.0	1.3	Z	0.6	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.4	0.4	0.6	0.0	0.1	0.2	0.3	1.3
6-Sep	Z	0.0	0.0	0.0	0.7	0.5	0.2	0.5	0.8	0.5	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	0.8
7-Sep	0.0	Z	0.0	0.0	0.2	0.4	0.1	0.3	0.3	0.7	0.2	0.1	0.2	0.1	0.2	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
8-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	4.0	4.7	2.0	0.3	0.3	0.5	0.3	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.6	4.7
9-Sep	0.0	0.0	0.2	Z	0.0	0.1	0.2	0.2	0.4	0.2	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	0.1	0.4
10-Sep	0.0	1.1	0.4	0.0	Z	1.0	0.9	0.4	0.1	0.2	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	0.2	1.1
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.6	0.2	0.5	1.0	1.1	M	M	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
12-Sep	Z	0.0	0.0	0.0	0.0	0.1	0.5	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5
13-Sep	0.0	Z	0.0	0.0	0.0	0.7	0.1	0.0	0.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
14-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.4	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	0.0	0.5
15-Sep	0.0	0.0	0.0	Z	0.0	0.4	0.4	0.2	0.5	0.1	0.1	0.0	0.0	0.3	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
16-Sep	0.0	0.0	0.2	0.2	Z	0.0	0.0	1.3	0.1	0.1	0.1	0.0	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.6	0.9	0.6	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	0.9
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
19-Sep	0.0	Z	0.0	0.0	0.2	0.7	0.1	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	0.0	0.1	0.7
20-Sep	0.0	0.0	Z	0.0	0.0	0.4	0.5	0.2	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	0.0	0.0	0.0	0.1	0.5
21-Sep	0.0	0.0	0.0	Z	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.2	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.1	0.6
22-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.0	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	0.0	0.0	0.0	0.0	0.0	0.2
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.7	0.2	0.7	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
24-Sep	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
25-Sep	0.0	Z	0.0	0.0	0.0	0.5	0.7	0.7	0.5	0.4	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	0.7
26-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	1.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1
27-Sep	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	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
28-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	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	0.0	0.0	0.2
29-Sep	0.0	0.0	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	0.0	0.1	0.3	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.3	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	Diurnal Average	
	0.2	1.1	6.6	2.0	1.3	1.0	0.9	1.3	4.0	4.7	2.0	0.4	0.8	0.8	1.1	0.5	0.5	0.2	0.4	0.4	0.6	0.0	0.2	0.3	Diurnal Maximum	

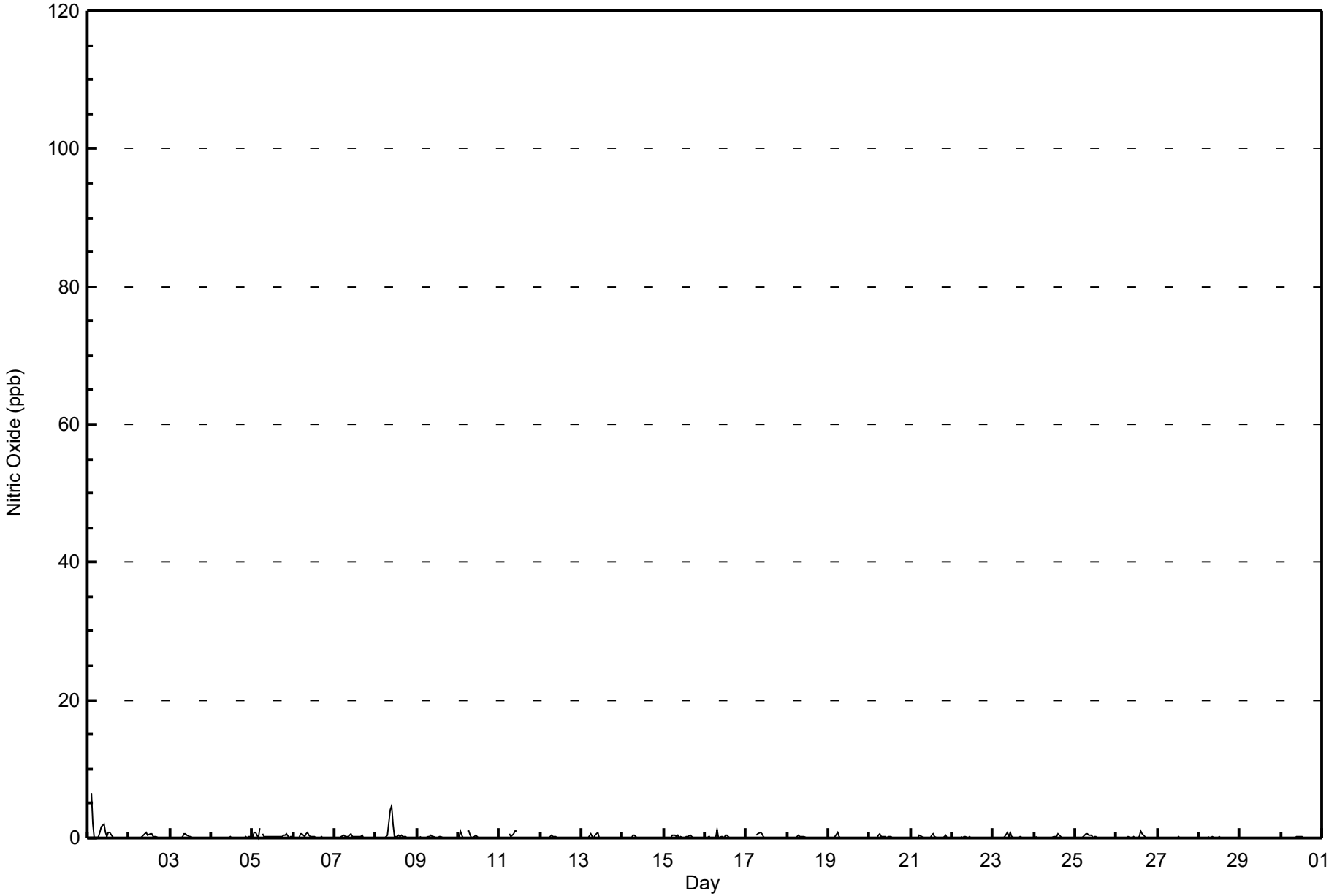
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680
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	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680

Total Number of Valid Hours: 680

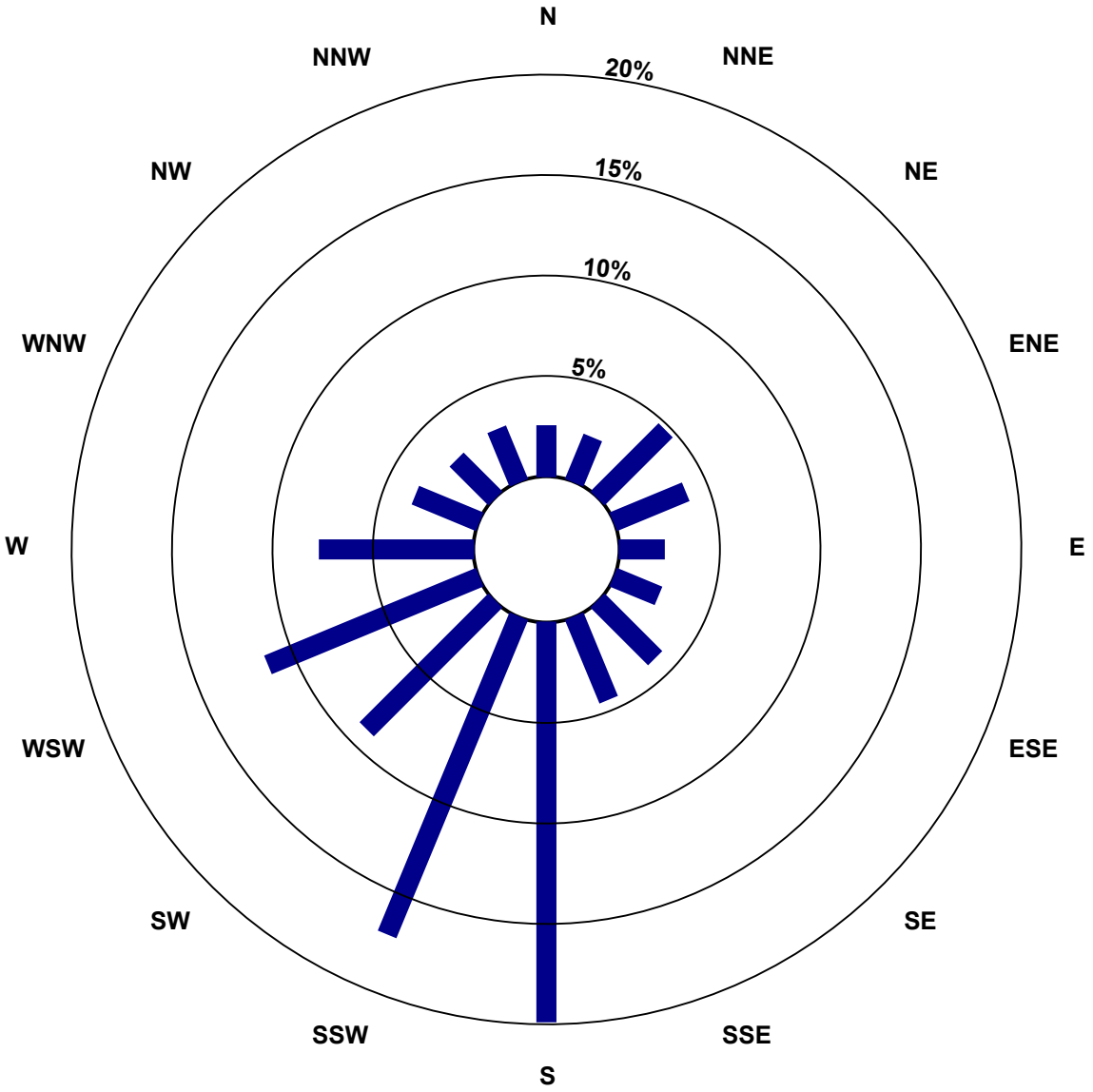
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

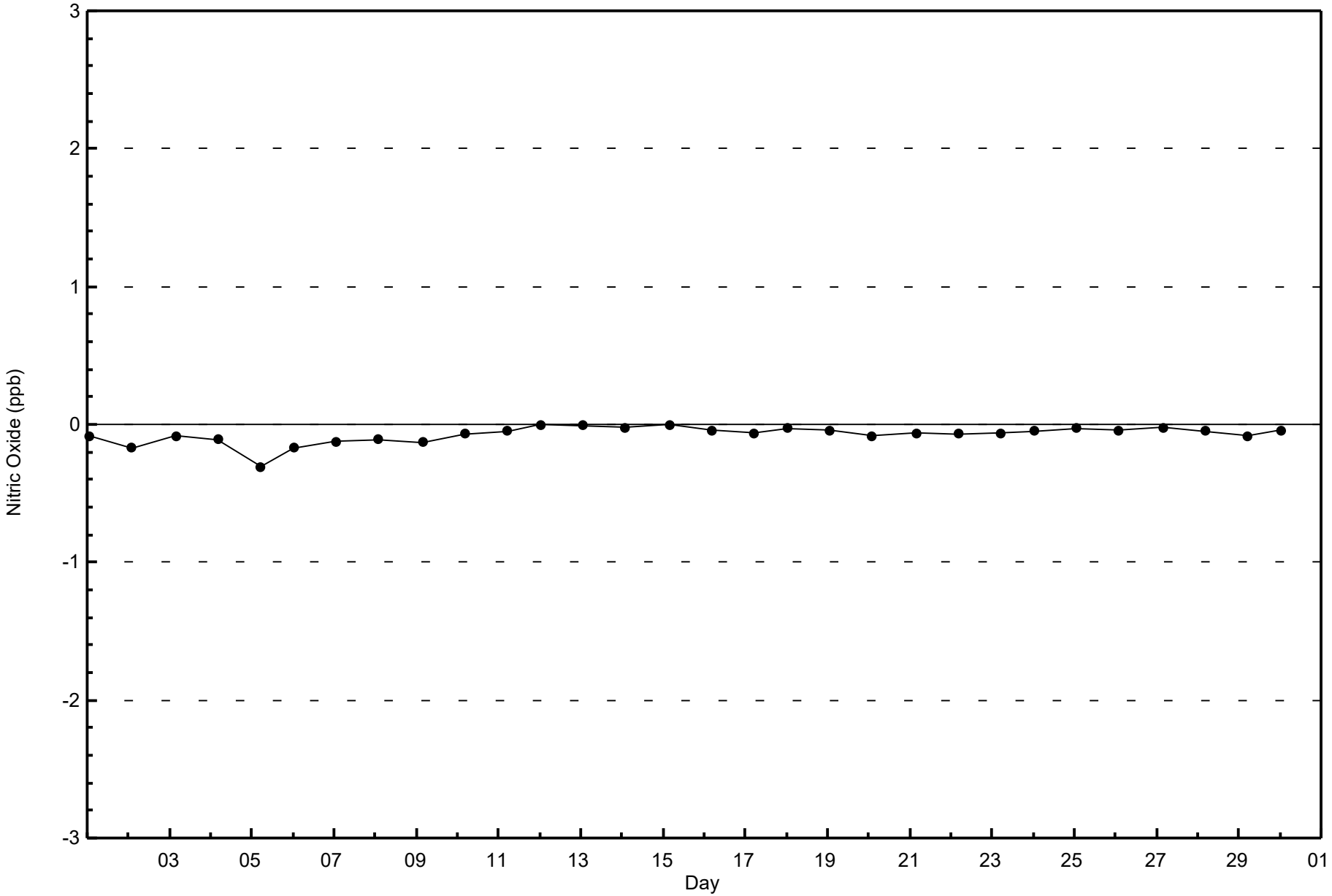
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - September 2025

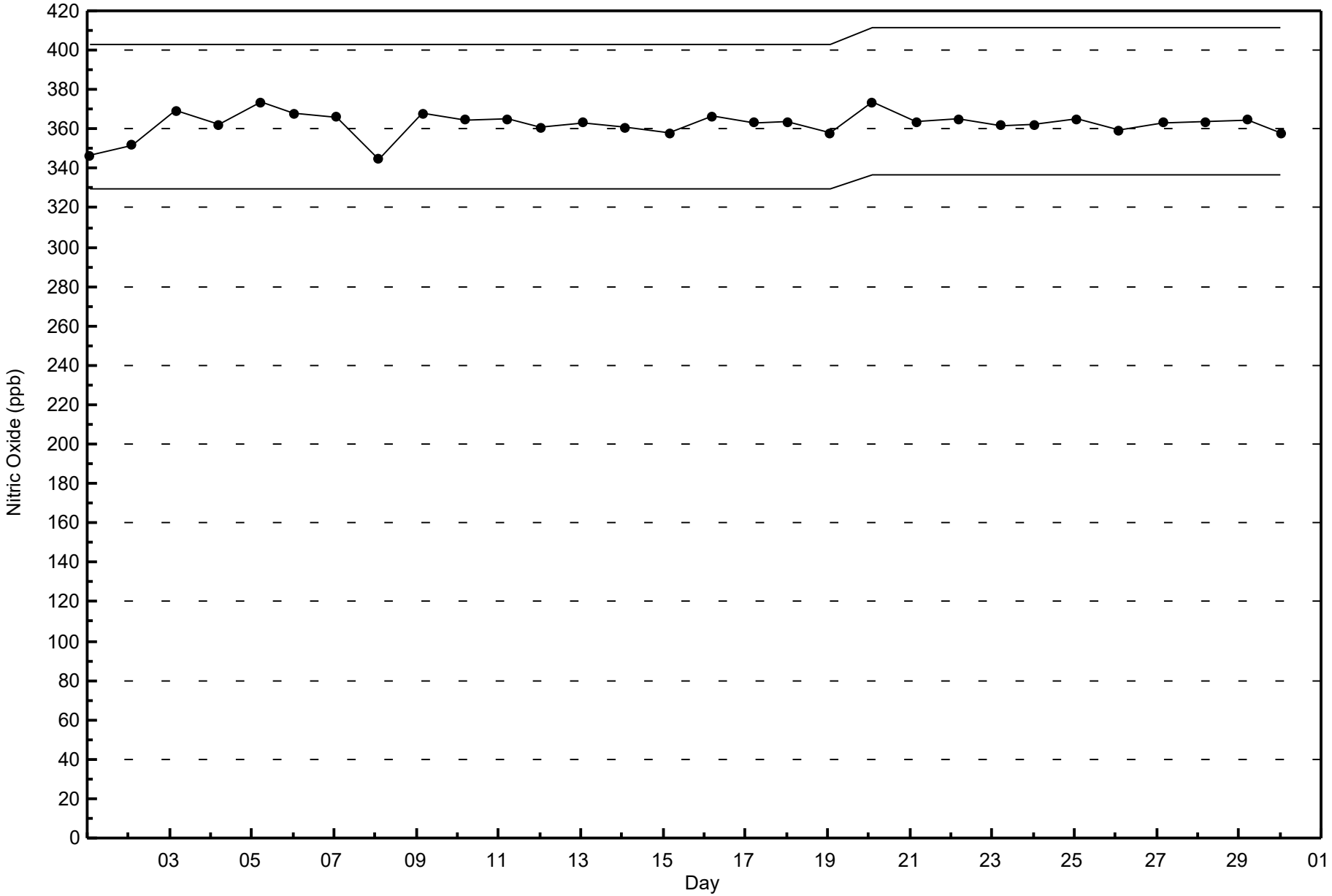


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.7 ppb on Sep 21 21:00 Maximum Daily Average: 2.0 ppb on Sep 3

Minimum Value: 0.0 ppb on Sep 19 16:00
Maximum Diurnal Average: 1.8 ppb at hour 6
Monthly Average: 1.21 ppb

Minimum Daily Average: 0.4 ppb on Sep 27
Minimum Diurnal Average: 0.9 ppb at hour 22
Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 0.6 Median = 1.0 Q_3 = 1.7 P_{90} = 2.4 P_{99} = 4.1

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	35
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.2	Z	2.5	2.2	1.1	1.5	1.8	2.6	3.3	3.4	3.3	1.3	2.5	1.7	0.9	0.8	0.7	0.9	1.0	1.3	2.1	1.9	1.5	1.2	1.8	3.4
2-Sep	1.1	0.9	Z	0.7	0.6	1.0	1.4	1.7	2.1	2.6	2.7	2.1	2.6	2.4	1.4	2.0	1.9	1.3	1.3	1.0	1.3	0.9	1.4	2.3	1.6	2.7
3-Sep	3.3	3.5	2.9	Z	1.7	1.8	1.9	2.7	2.9	2.5	2.1	1.7	1.8	1.9	2.0	1.9	1.9	1.7	1.5	2.7	0.8	1.1	1.5	1.0	2.0	3.5
4-Sep	1.2	1.7	1.4	0.6	Z	0.4	0.5	0.4	0.3	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	2.1	1.0	1.9	2.7	0.8	2.7
5-Sep	2.7	1.7	2.9	1.1	1.5	Z	1.2	0.9	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	2.0	2.6	3.8	0.7	1.2	1.0	1.3	3.8
6-Sep	Z	2.0	1.2	2.0	3.4	3.8	2.5	2.9	2.3	1.7	1.3	1.3	1.2	0.8	0.9	1.1	1.5	1.7	2.9	1.1	1.9	1.4	1.9	2.6	1.9	3.8
7-Sep	2.9	Z	2.3	2.2	2.4	2.8	2.2	2.2	2.1	3.0	2.5	2.0	2.2	1.7	1.7	2.1	1.9	1.4	0.9	1.1	0.9	1.2	1.8	2.4	2.0	3.0
8-Sep	2.3	1.8	Z	1.4	1.4	1.3	1.5	1.5	5.3	4.6	3.1	1.1	1.2	2.2	2.1	2.5	2.6	2.6	2.4	2.1	0.6	0.4	0.6	0.8	2.0	5.3
9-Sep	0.5	0.4	1.1	Z	2.0	2.0	2.2	2.0	1.7	1.4	1.3	1.2	1.1	1.4	1.3	1.3	1.6	1.4	1.3	1.3	1.3	1.3	1.7	2.1	1.4	2.2
10-Sep	2.7	3.6	3.0	2.6	Z	3.1	2.3	1.5	1.4	1.6	1.7	1.1	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.6	0.8	1.1	0.7	1.4	3.6
11-Sep	2.3	0.6	0.6	0.9	0.9	Z	4.1	2.0	2.6	4.8	5.1	M	M	1.4	1.3	1.2	1.1	1.7	2.4	2.2	1.3	0.9	1.2	0.8	1.9	5.1
12-Sep	Z	1.3	1.6	1.7	1.9	2.6	2.7	2.3	1.5	1.2	1.0	0.7	0.6	0.6	0.6	0.8	0.8	0.9	0.7	2.3	0.8	0.6	0.7	0.7	1.2	2.7
13-Sep	1.0	Z	1.3	1.2	1.7	3.1	2.2	1.7	2.1	3.1	1.0	1.0	0.9	0.8	0.8	0.9	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.8	1.2	3.1
14-Sep	1.2	1.2	Z	1.7	2.1	2.8	3.6	2.9	0.9	0.6	0.3	0.2	0.3	0.6	0.7	0.5	0.2	1.0	1.0	0.5	0.5	0.5	0.4	0.3	1.0	3.6
15-Sep	0.2	0.1	0.6	Z	0.7	0.7	1.4	1.1	0.8	0.6	0.8	0.6	0.6	1.4	1.3	2.1	1.6	0.6	0.3	0.3	1.8	0.3	0.2	0.2	0.8	2.1
16-Sep	0.3	1.3	2.0	1.0	Z	0.8	0.8	2.7	0.6	0.6	0.8	0.5	0.9	1.0	0.4	0.5	0.7	0.7	1.0	0.8	0.7	0.7	0.8	0.7	0.9	2.7
17-Sep	1.1	0.9	1.1	1.4	1.6	Z	2.8	1.8	1.3	1.2	1.0	0.8	0.7	0.6	1.1	0.9	1.1	1.0	0.8	0.6	0.8	1.1	1.2	1.1	1.1	2.8
18-Sep	Z	1.7	1.7	1.9	2.0	1.7	1.9	1.5	1.1	1.0	1.2	1.0	1.0	1.1	M	M	0.9	0.8	0.8	0.9	0.9	0.9	2.1	1.8	1.3	2.1
19-Sep	1.0	Z	1.0	0.9	1.1	2.6	1.3	1.0	C	C	C	C	C	0.4	0.2	0.0	0.3	0.8	0.0	0.1	0.0	0.0	0.0	0.0	0.6	2.6
20-Sep	0.0	0.0	Z	1.6	1.6	2.7	2.5	1.8	1.4	1.1	0.9	1.6	1.1	0.8	0.9	1.1	1.1	1.0	0.7	1.0	1.1	1.2	0.9	0.9	1.2	2.7
21-Sep	1.3	1.6	1.9	Z	2.6	2.7	4.3	0.9	0.6	0.5	0.4	0.3	1.9	2.7	1.3	0.5	0.6	0.6	0.5	3.4	6.7	1.4	1.1	0.3	1.7	6.7
22-Sep	0.1	0.2	0.2	0.2	Z	0.7	0.5	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	1.7	1.4	0.7	2.3	0.5	2.3
23-Sep	4.2	2.5	2.0	1.8	1.6	Z	1.5	1.8	1.9	1.0	2.3	0.8	0.2	0.2	0.3	0.3	0.9	0.6	0.2	0.3	0.2	0.6	0.3	0.2	1.1	4.2
24-Sep	Z	3.2	0.3	0.3	0.5	0.6	0.7	0.9	0.6	0.3	0.3	0.5	0.7	0.5	1.5	0.5	0.5	0.1	0.1	0.1	0.1	0.5	0.7	0.8	0.6	3.2
25-Sep	0.7	Z	0.4	0.5	0.3	1.2	1.0	0.9	0.9	1.0	0.5	0.7	0.7	0.8	0.7	0.6	0.7	1.0	1.2	1.1	1.1	1.1	0.8	0.5	0.8	1.2
26-Sep	0.3	0.4	Z	0.6	0.4	0.7	0.9	0.7	0.4	0.4	0.6	0.4	0.2	0.5	2.6	2.0	2.4	0.3	0.1	0.6	0.4	0.7	0.3	0.2	0.7	2.6
27-Sep	0.2	0.2	0.2	Z	0.6	0.9	0.4	0.5	0.3	0.3	0.2	0.1	0.5	0.1	0.1	0.4	0.3	0.3	0.4	0.2	0.3	0.1	1.7	0.2	0.4	1.7
28-Sep	0.6	0.2	0.2	0.2	Z	1.2	0.9	0.7	0.6	0.5	0.4	0.3	0.8	0.4	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.8	1.4	1.8	0.6	1.8
29-Sep	1.1	0.4	0.3	0.4	0.2	Z	0.5	0.5	0.6	0.8	0.6	0.7	0.7	0.9	0.9	1.0	1.2	0.9	1.0	0.6	0.6	0.9	0.8	0.8	0.7	1.2
30-Sep	Z	1.2	1.4	1.3	1.3	1.9	2.0	1.7	1.8	1.8	1.9	1.8	2.0	1.8	1.8	1.6	2.2	1.9	2.2	1.5	1.6	1.4	1.4	1.3	1.7	2.2
	1.3	1.3	1.4	1.2	1.4	1.8	1.8	1.5	1.5	1.5	1.3	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9	1.1	1.2	0.9	1.1	1.1	Diurnal Average	
	4.2	3.6	3.0	2.6	3.4	3.8	4.3	2.9	5.3	4.8	5.1	2.1	2.6	2.7	2.6	2.5	2.6	2.6	2.9	3.4	6.7	1.9	2.1	2.7	Diurnal Maximum	

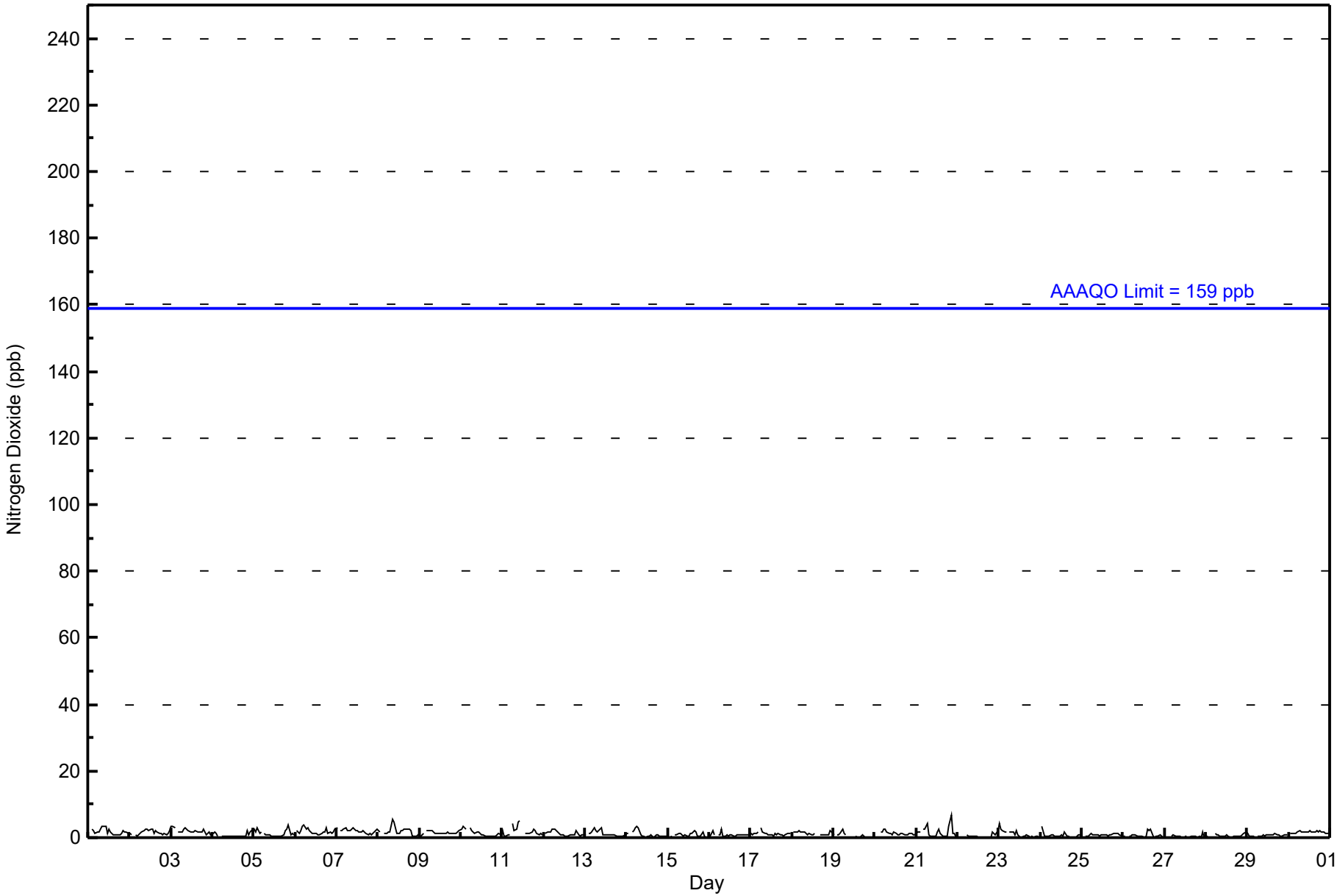
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - September 2025



Nitrogen Dioxide (NO_2) - ppb
Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680
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	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680

Total Number of Valid Hours: 680

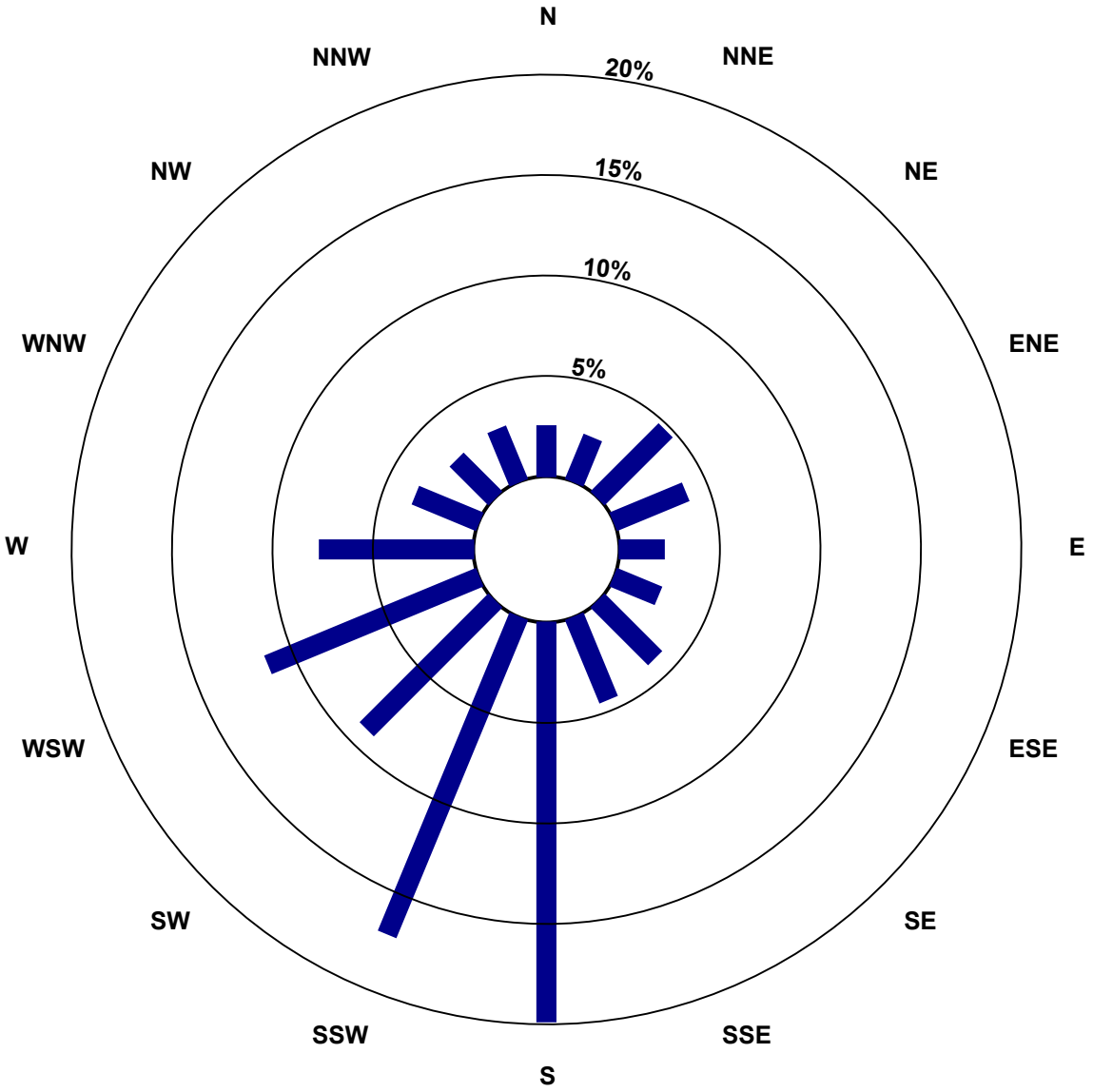
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

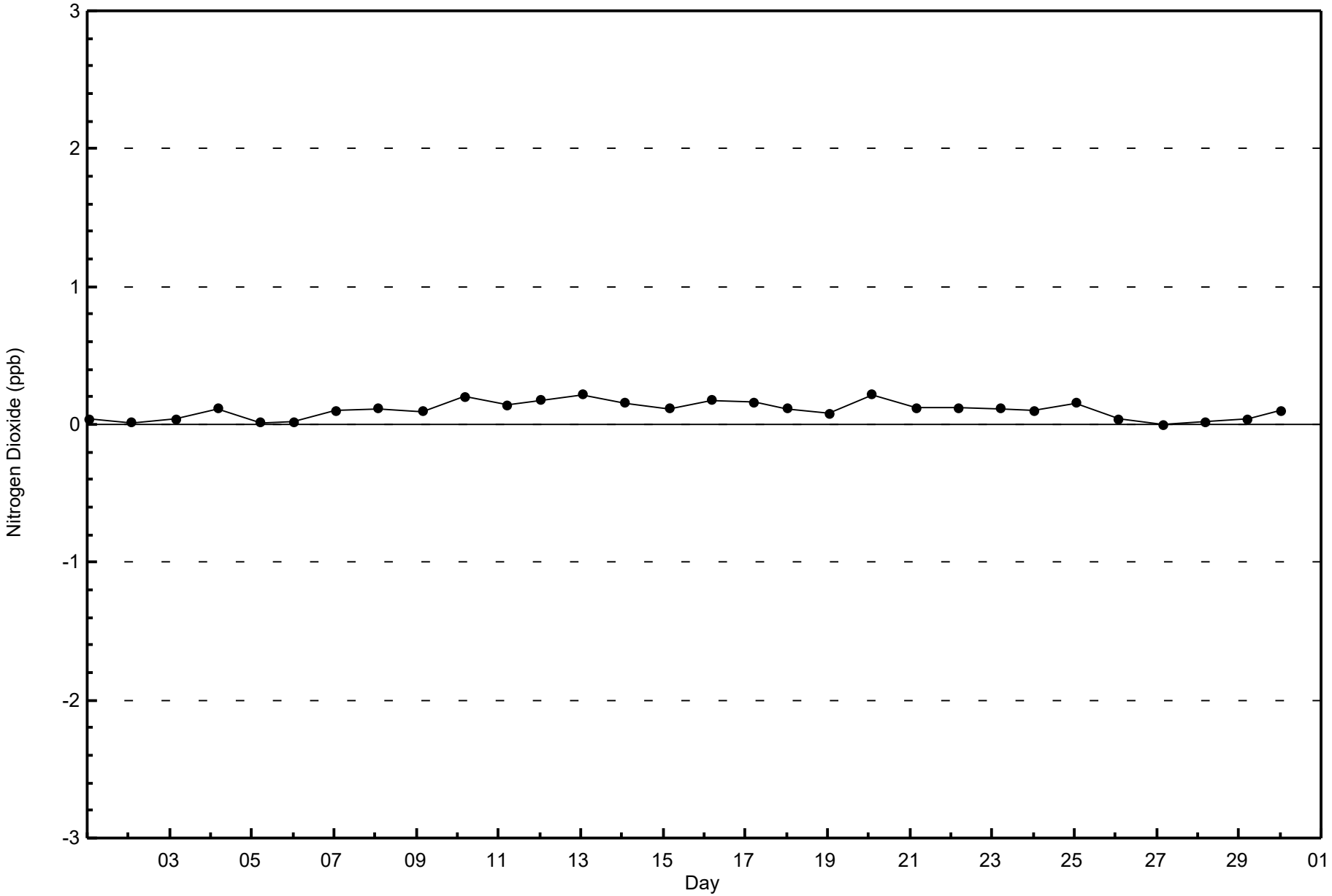
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - September 2025

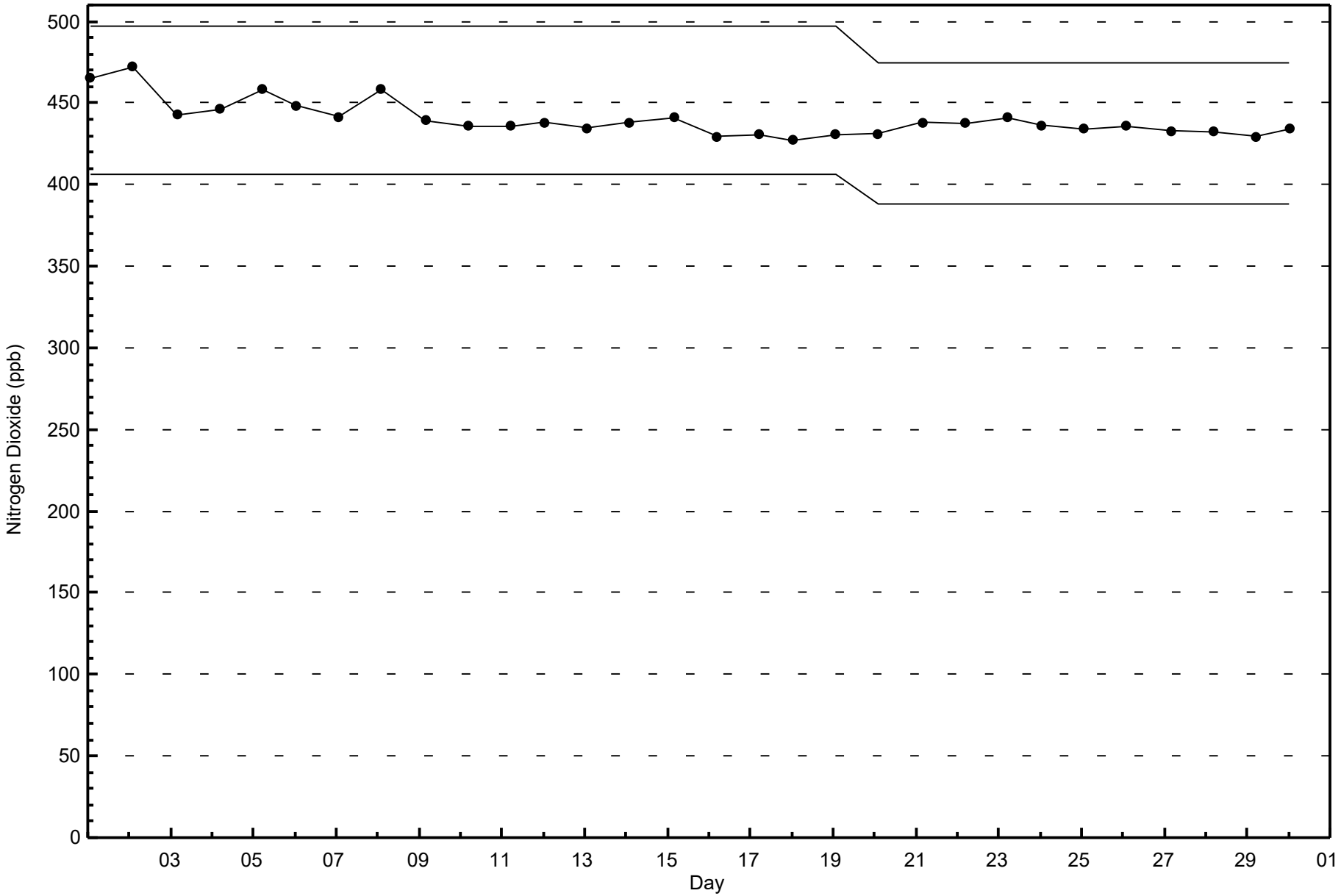


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - September 2025

Maximum Value: 9.3 ppb on Sep 8 10:00

Maximum Daily Average: 2.6 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 19 16:00

Minimum Daily Average: 0.4 ppb on Sep 27

Maximum Diurnal Average: 2.0 ppb at hour 6

Minimum Diurnal Average: 0.9 ppb at hour 22

Monthly Average: 1.35 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 0.6 Median = 1.1 Q_3 = 1.8 P_{90} = 2.7 P_{99} = 5.1

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	35
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.2	Z	9.1	4.2	1.2	1.5	1.9	3.5	4.8	5.4	4.1	1.6	3.3	2.5	1.0	0.9	0.8	1.0	1.1	1.4	2.1	1.9	1.5	1.2	2.5	9.1
2-Sep	1.1	0.9	Z	0.7	0.6	1.0	1.4	1.8	2.5	3.2	3.4	2.5	3.2	3.0	1.5	2.2	2.0	1.4	1.3	1.0	1.3	0.9	1.4	2.3	1.8	3.4
3-Sep	3.3	3.5	2.9	Z	1.7	1.8	1.9	2.9	3.4	3.1	2.4	1.9	1.9	2.0	2.1	2.0	2.0	1.7	1.5	2.7	0.8	1.1	1.5	1.0	2.1	3.5
4-Sep	1.2	1.7	1.4	0.6	Z	0.4	0.5	0.4	0.3	0.6	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	2.4	1.0	2.1	3.0	0.9	3.0
5-Sep	2.9	2.4	3.6	1.1	2.8	Z	1.8	1.0	0.9	0.9	0.6	0.6	0.6	0.7	0.6	0.8	0.7	1.0	2.4	3.0	4.4	0.7	1.3	1.2	1.6	4.4
6-Sep	Z	2.0	1.2	2.0	4.1	4.3	2.7	3.4	3.1	2.2	1.6	1.5	1.3	0.9	1.0	1.2	1.6	1.8	3.0	1.1	1.9	1.4	1.9	2.6	2.1	4.3
7-Sep	2.9	Z	2.3	2.2	2.6	3.2	2.3	2.5	2.4	3.7	2.7	2.1	2.4	1.8	1.9	2.4	2.3	1.5	0.9	1.1	0.9	1.2	1.8	2.4	2.1	3.7
8-Sep	2.3	1.8	Z	1.4	1.4	1.3	1.6	1.8	9.3	9.3	5.1	1.4	1.5	2.7	2.4	2.8	2.8	2.7	2.4	2.2	0.6	0.4	0.6	0.9	2.6	9.3
9-Sep	0.5	0.4	1.3	Z	2.0	2.1	2.4	2.2	2.1	1.6	1.4	1.3	1.2	1.5	1.4	1.3	1.7	1.4	1.3	1.3	1.3	1.3	1.7	2.1	1.5	2.4
10-Sep	2.7	4.7	3.4	2.6	Z	4.1	3.2	1.9	1.5	1.8	2.1	1.2	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.6	0.8	1.1	0.7	1.6	4.7
11-Sep	2.3	0.6	0.6	0.9	0.9	Z	4.7	2.2	3.1	5.8	6.2	M	M	1.5	1.3	1.2	1.1	1.7	2.4	2.2	1.3	0.9	1.2	0.8	2.0	6.2
12-Sep	Z	1.3	1.6	1.7	1.9	2.7	3.2	2.5	1.7	1.4	1.1	0.7	0.6	0.6	0.6	0.8	0.8	0.9	0.7	2.4	0.8	0.6	0.7	0.7	1.3	3.2
13-Sep	1.0	Z	1.3	1.2	1.7	3.8	2.3	1.7	2.4	3.8	1.0	1.0	0.9	0.8	0.8	0.9	0.7	0.7	0.5	0.6	0.5	0.5	0.6	0.8	1.3	3.8
14-Sep	1.2	1.2	Z	1.7	2.1	2.8	4.0	3.4	0.9	0.6	0.3	0.2	0.3	0.6	0.7	0.5	0.2	1.0	1.0	0.5	0.5	0.5	0.4	0.3	1.1	4.0
15-Sep	0.2	0.1	0.6	Z	0.7	1.1	1.8	1.3	1.3	0.7	0.9	0.6	0.6	1.7	1.5	2.5	1.8	0.6	0.3	0.3	1.8	0.3	0.2	0.2	0.9	2.5
16-Sep	0.3	1.3	2.2	1.2	Z	0.8	0.8	4.0	0.7	0.7	0.9	0.5	1.2	1.3	0.4	0.5	0.8	0.7	1.0	0.8	0.7	0.7	0.8	0.7	1.0	4.0
17-Sep	1.1	0.9	1.1	1.4	1.6	Z	3.2	2.4	2.2	1.8	1.1	0.8	0.7	0.6	1.2	0.9	1.1	1.0	0.8	0.6	0.8	1.1	1.2	1.1	1.2	3.2
18-Sep	Z	1.7	1.7	1.9	2.0	1.7	2.2	1.7	1.4	1.2	1.4	1.1	1.1	1.2	M	M	0.9	0.8	0.8	0.9	0.9	0.9	2.1	1.8	1.4	2.2
19-Sep	1.0	Z	1.0	0.9	1.3	3.3	1.4	1.1	C	C	C	C	C	0.4	0.2	0.0	0.3	0.8	0.0	0.1	0.0	0.0	0.0	0.0	0.7	3.3
20-Sep	0.0	0.0	Z	1.6	1.6	3.1	3.0	2.0	1.7	1.2	1.0	1.8	1.2	0.8	0.9	1.1	1.1	1.0	0.7	1.0	1.1	1.2	0.9	0.9	1.3	3.1
21-Sep	1.3	1.6	1.9	Z	2.6	3.1	4.5	0.9	0.6	0.5	0.4	0.3	2.4	3.3	1.5	0.5	0.6	0.6	0.5	3.5	7.1	1.4	1.1	0.3	1.8	7.1
22-Sep	0.1	0.2	0.2	0.2	Z	0.8	0.5	0.7	0.7	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	1.7	1.4	0.7	2.3	0.5	2.3
23-Sep	4.2	2.5	2.0	1.8	1.6	Z	1.5	1.9	2.6	1.2	3.0	1.0	0.2	0.2	0.3	0.3	1.1	0.6	0.2	0.3	0.2	0.6	0.3	0.2	1.2	4.2
24-Sep	Z	3.4	0.3	0.3	0.5	0.6	0.7	1.0	0.6	0.4	0.4	0.7	1.0	0.7	2.1	0.6	0.5	0.1	0.1	0.1	0.1	0.5	0.7	0.8	0.7	3.4
25-Sep	0.7	Z	0.4	0.5	0.3	1.7	1.7	1.6	1.4	1.4	0.6	0.9	0.8	0.9	0.7	0.6	0.7	1.0	1.2	1.1	1.1	1.1	0.8	0.5	0.9	1.7
26-Sep	0.3	0.4	Z	0.6	0.4	0.7	0.9	0.8	0.5	0.4	0.7	0.5	0.2	0.6	3.7	2.5	2.9	0.3	0.1	0.6	0.4	0.7	0.3	0.2	0.8	3.7
27-Sep	0.2	0.2	0.2	Z	0.6	0.9	0.4	0.5	0.3	0.3	0.2	0.1	0.6	0.1	0.1	0.5	0.3	0.3	0.4	0.2	0.3	0.1	1.8	0.2	0.4	1.8
28-Sep	0.6	0.2	0.2	0.2	Z	1.3	0.9	0.8	0.7	0.5	0.4	0.3	1.0	0.5	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.8	1.4	1.8	0.6	1.8
29-Sep	1.1	0.4	0.3	0.4	0.2	Z	0.5	0.5	0.7	0.9	0.6	0.7	0.7	0.9	0.9	1.1	1.2	0.9	1.0	0.6	0.6	0.9	0.8	0.8	0.7	1.2
30-Sep	Z	1.2	1.4	1.3	1.3	1.9	2.0	1.7	1.9	2.0	2.1	2.0	2.2	1.9	1.8	1.6	2.3	1.9	2.2	1.5	1.6	1.4	1.4	1.3	1.7	2.3
	1.4	1.4	1.7	1.3	1.5	2.0	2.0	1.8	1.9	2.0	1.6	1.0	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.3	0.9	1.1	1.1	Diurnal Average	
	4.2	4.7	9.1	4.2	4.1	4.3	4.7	4.0	9.3	9.3	6.2	2.5	3.3	3.3	3.7	2.8	2.9	2.7	3.0	3.5	7.1	1.9	2.1	3.0	Diurnal Maximum	

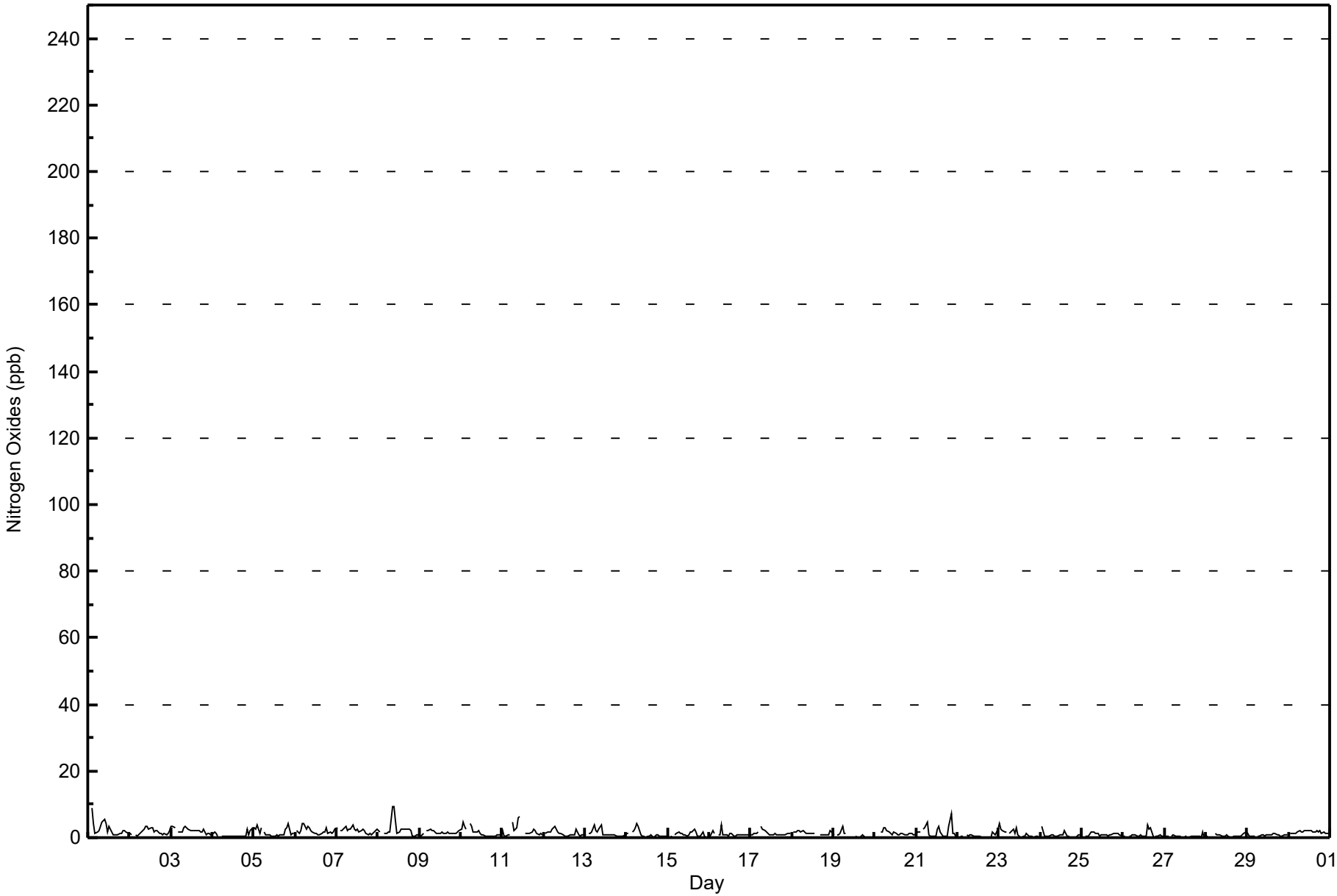
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - September 2025



Nitrogen Oxides (NO_X) - ppb
Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680
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	16	32	26	15	16	27	30	135	116	61	77	52	23	18	19	680

Total Number of Valid Hours: 680

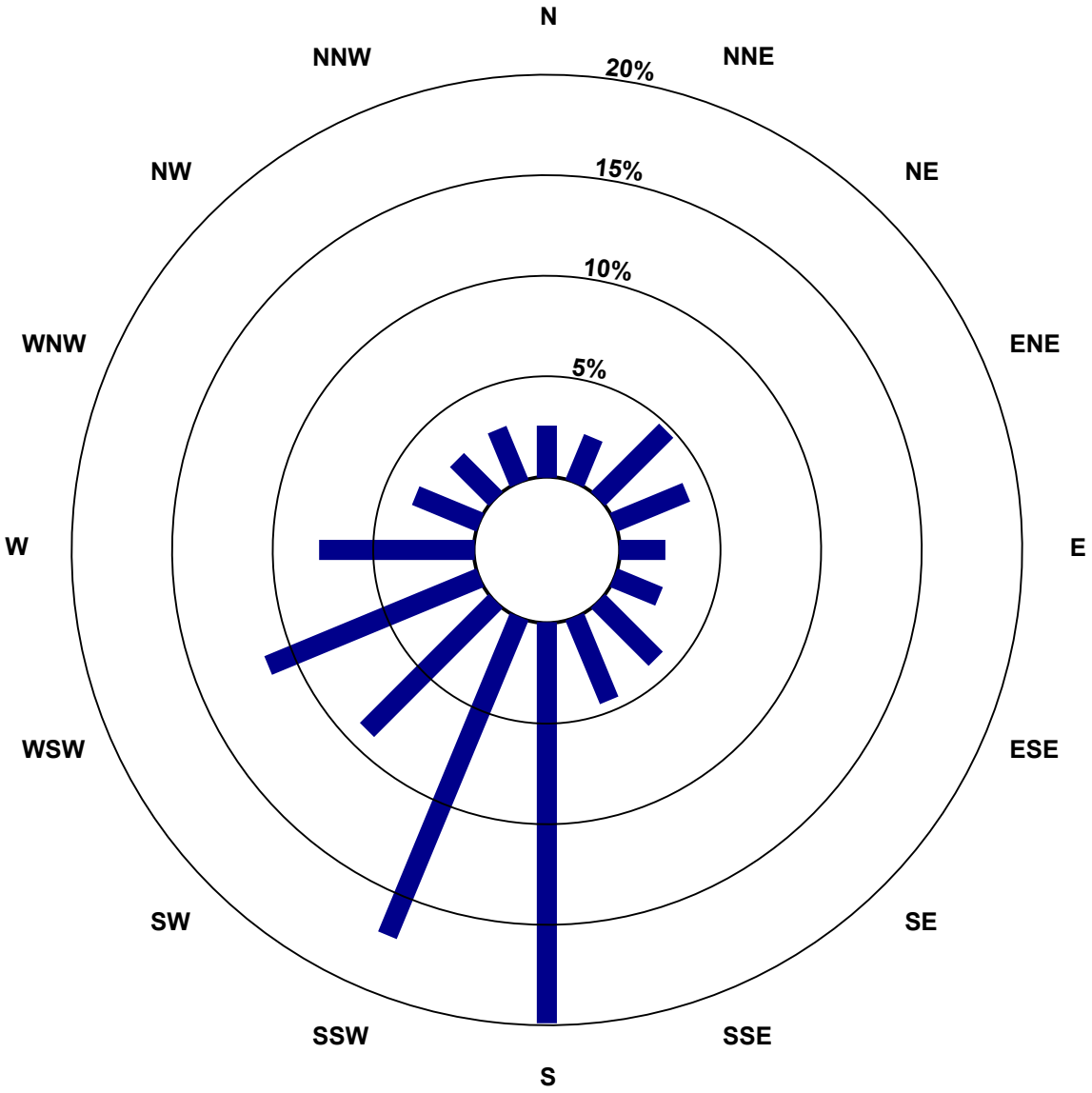
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

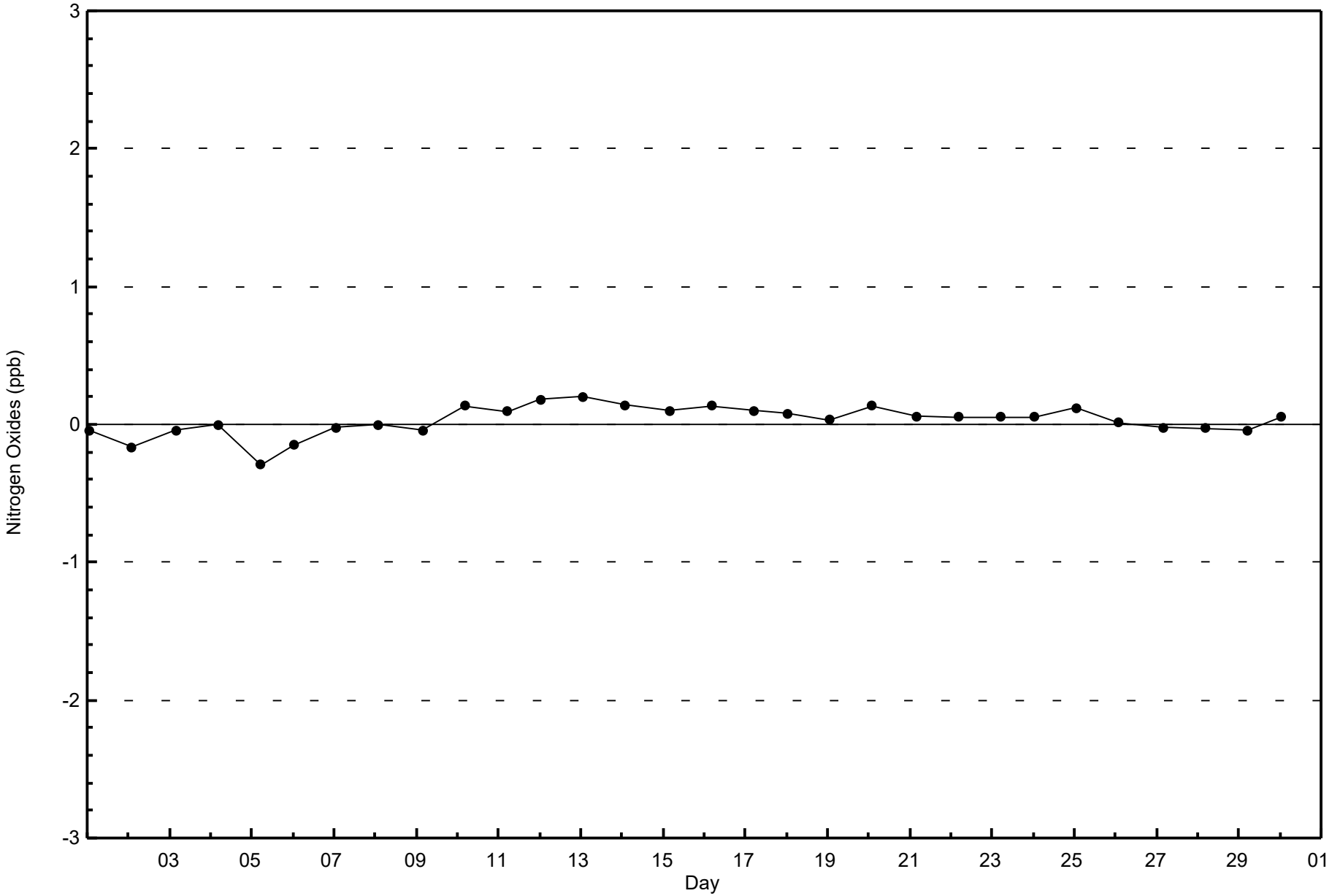
Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - September 2025

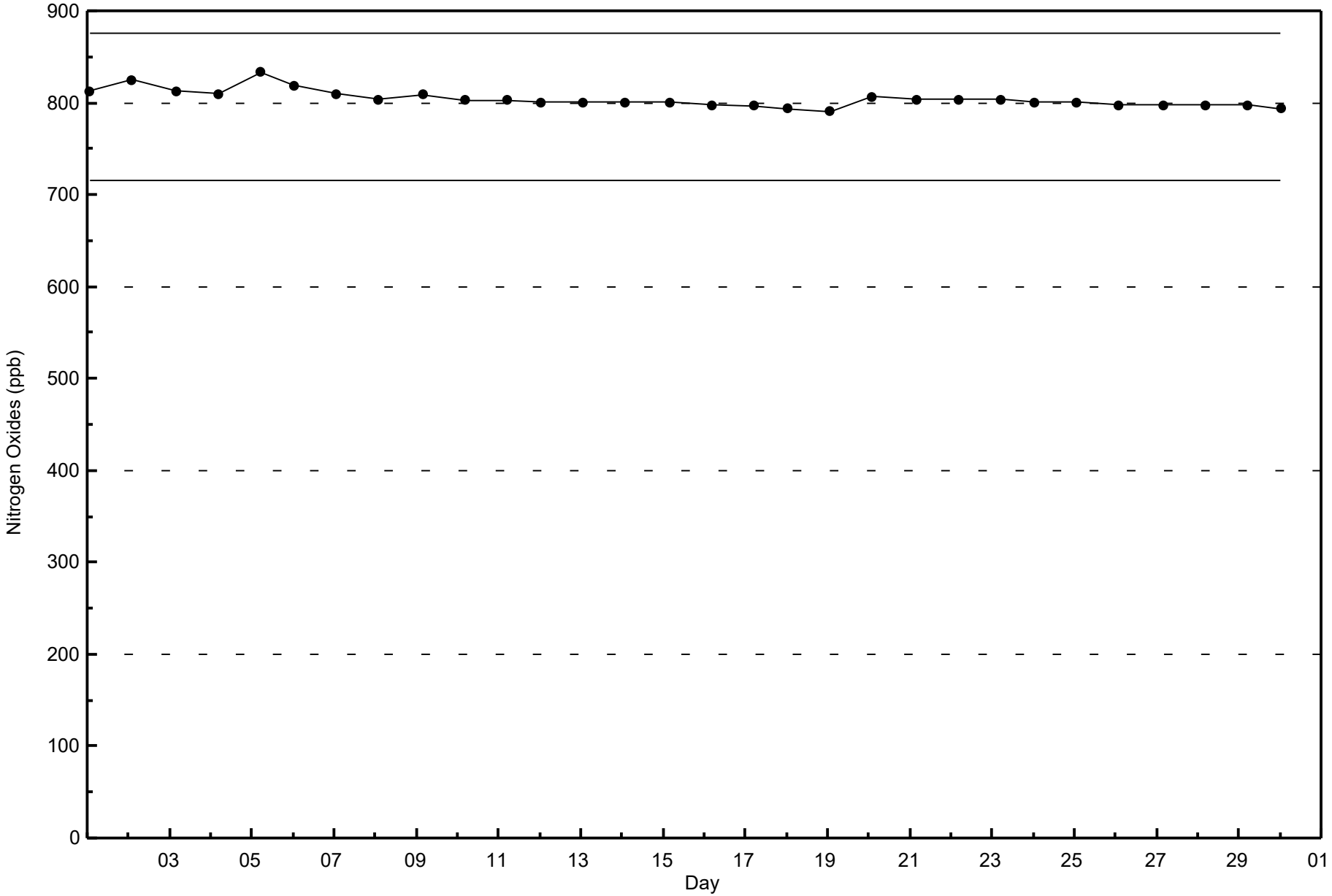


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - September 2025



Maximum Value: 26.9 C on Sep 13 14:00

Maximum Daily Average: 19.1 C on Sep 13

Minimum Value: 3.8 C on Sep 25 08:00

Minimum Daily Average: 9.7 C on Sep 25

Maximum Diurnal Average: 19.9 C at hour 15

Minimum Diurnal Average: 9.1 C at hour 6

Monthly Average: 13.96 C

Percentiles: P_1 = 4.5 P_{10} = 7.9 Q_1 = 10.1 Median = 13.6 Q_3 = 17.2 P_{90} = 21.2 P_{99} = 25.8

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

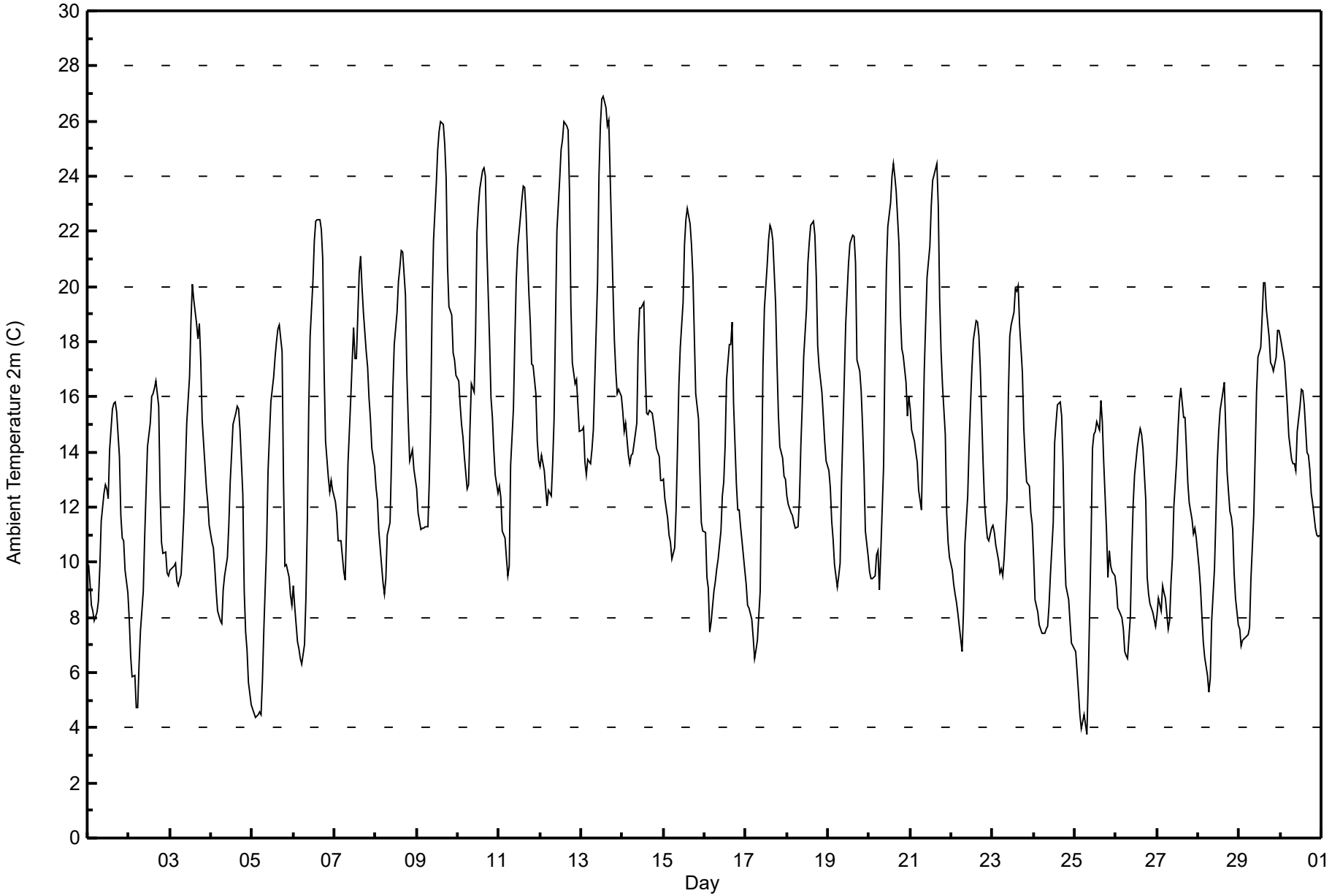
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.9	9.3	8.4	8.2	7.9	8.2	8.6	9.8	11.5	12.5	12.8	12.7	12.3	14.1	15.6	15.7	15.8	15.4	13.8	11.7	10.9	10.8	9.7	8.9	11.4	15.8
2-Sep	7.9	6.6	5.8	5.9	4.7	4.7	6.3	7.6	8.9	10.9	12.5	14.2	15.1	16.0	16.1	16.3	16.6	15.7	12.6	10.7	10.3	10.4	9.6	9.5	10.6	16.6
3-Sep	9.7	9.7	9.9	9.9	9.3	9.2	9.6	10.6	11.8	13.4	15.1	16.7	18.7	20.1	19.5	18.6	18.1	18.6	17.3	15.2	13.5	12.7	12.2	11.3	13.8	20.1
4-Sep	10.7	10.5	9.8	8.9	8.2	7.9	7.8	9.0	9.5	10.2	11.3	12.9	13.9	15.0	15.4	15.7	15.6	14.8	12.4	9.0	7.5	6.8	5.6	4.8	10.6	15.7
5-Sep	4.7	4.5	4.4	4.5	4.6	4.5	5.7	7.6	10.7	13.3	14.6	15.8	16.7	17.4	18.0	18.5	18.6	17.6	13.0	9.9	9.9	9.4	8.8	8.5	10.9	18.6
6-Sep	9.2	8.4	7.1	6.9	6.5	6.3	7.0	8.7	11.4	15.5	18.2	20.2	21.6	22.4	22.4	22.4	22.1	21.0	16.9	14.4	13.1	12.6	13.0	12.6	14.2	22.4
7-Sep	12.2	11.7	10.8	10.8	10.8	9.7	9.4	11.3	13.6	16.0	17.3	18.5	17.4	17.4	20.5	21.1	20.0	19.1	17.7	17.1	16.0	15.2	14.1	13.5	15.0	21.1
8-Sep	12.7	12.3	11.1	9.9	9.2	8.9	9.4	11.0	11.4	13.6	16.3	17.9	19.0	20.2	20.7	21.3	21.2	19.7	16.8	15.1	13.7	14.1	13.3	13.0	14.7	21.3
9-Sep	12.6	11.8	11.2	11.2	11.2	11.3	11.3	13.0	15.4	19.3	21.6	23.8	25.0	25.6	26.0	25.9	25.2	23.9	20.7	19.3	19.0	17.6	17.3	16.8	18.2	26.0
10-Sep	16.6	15.7	15.0	14.5	13.8	12.7	12.8	14.9	16.5	16.2	18.3	22.0	22.9	23.6	24.2	24.3	24.0	21.5	18.0	16.0	15.3	14.1	13.2	12.5	17.4	24.3
11-Sep	12.8	12.4	11.1	10.9	10.2	9.5	9.9	13.5	15.6	18.1	20.3	21.4	22.5	23.1	23.7	23.6	22.7	19.8	18.7	17.2	17.1	16.1	14.4	13.7	16.6	23.7
12-Sep	13.5	13.9	13.3	12.7	12.0	12.6	12.4	13.6	15.2	18.7	22.0	23.9	25.0	25.3	26.0	25.8	25.7	23.4	19.3	17.2	16.4	16.6	15.7	14.7	18.1	26.0
13-Sep	14.8	14.9	13.6	13.2	13.7	13.6	14.1	14.8	16.6	20.2	24.0	25.8	26.8	26.9	26.5	25.8	26.1	24.0	19.9	18.1	16.9	16.1	16.3	16.0	19.1	26.9
14-Sep	15.5	14.7	15.1	13.9	13.6	13.9	13.9	14.3	15.0	17.9	19.2	19.2	19.4	17.0	15.4	15.4	15.5	15.4	15.1	14.6	14.1	13.8	13.0	13.0	15.3	19.4
15-Sep	13.0	12.3	11.6	11.0	10.7	10.1	10.5	11.9	14.1	16.4	17.8	19.4	21.5	22.4	22.8	22.3	21.5	20.4	18.3	16.1	15.2	13.2	11.5	11.1	15.6	22.8
16-Sep	11.1	9.5	9.0	7.5	7.8	9.0	9.3	9.8	10.1	11.1	12.4	12.9	14.2	16.6	17.9	17.9	18.7	15.8	12.9	11.9	11.9	11.3	10.8	9.7	12.0	18.7
17-Sep	9.2	8.4	8.3	7.9	7.3	6.5	6.8	7.2	8.9	13.1	17.1	19.2	20.8	21.7	22.2	22.1	21.6	19.4	17.2	15.3	14.2	13.8	13.1	13.0	13.9	22.2
18-Sep	12.4	12.1	11.8	11.7	11.5	11.2	11.3	12.3	14.2	15.7	17.5	19.2	20.9	21.6	22.2	22.4	21.9	20.3	17.9	17.1	16.2	15.3	14.4	13.7	16.0	22.4
19-Sep	13.3	12.7	11.5	10.8	9.9	9.1	9.5	10.0	12.9	16.7	18.6	19.8	20.8	21.6	21.9	21.8	20.9	17.3	16.9	16.2	15.0	13.4	11.1	10.2	15.1	21.9
20-Sep	9.7	9.4	9.4	9.5	10.3	10.4	9.0	10.4	13.5	17.6	20.6	22.2	23.0	24.0	24.4	24.0	23.5	21.5	19.0	17.8	17.5	16.5	15.3	16.0	16.4	24.4
21-Sep	15.5	14.8	14.4	14.0	13.6	12.6	11.9	14.4	16.9	18.7	20.3	21.5	22.9	23.8	24.1	24.5	22.9	19.5	17.6	16.4	14.6	11.8	10.7	10.2	17.0	24.5
22-Sep	9.7	9.2	8.9	8.5	8.1	7.2	6.7	8.2	10.7	12.4	14.2	15.7	17.0	18.0	18.8	18.7	18.2	17.0	13.6	12.2	11.5	10.9	10.8	11.2	12.4	18.8
23-Sep	11.3	11.1	10.6	10.0	9.6	9.8	9.5	10.2	12.3	16.1	18.2	18.6	19.1	19.9	19.8	20.0	18.6	16.9	14.8	13.8	12.9	12.7	11.8	11.4	14.1	20.0
24-Sep	10.2	8.6	8.2	7.7	7.6	7.4	7.4	7.6	7.7	8.4	9.5	11.5	14.3	15.1	15.7	15.8	15.3	13.6	10.6	9.1	8.6	7.8	7.1	7.0	10.1	15.8
25-Sep	6.7	6.1	5.3	4.5	4.0	4.5	4.1	3.8	5.7	10.9	14.1	14.7	14.8	15.1	14.8	15.8	15.1	13.6	11.1	9.5	10.4	9.9	9.7	9.5	9.7	15.8
26-Sep	9.1	8.3	8.2	8.0	7.6	6.8	6.6	6.5	8.0	10.4	12.1	13.2	14.2	14.6	14.9	14.6	14.1	12.2	9.4	8.9	8.5	8.2	8.0	7.7	10.0	14.9
27-Sep	8.1	8.7	8.2	9.2	8.9	8.7	7.6	7.9	9.3	10.2	12.0	13.7	14.9	15.8	16.3	15.2	15.2	14.1	12.9	12.2	11.6	11.1	11.2	10.9	11.4	16.3
28-Sep	9.8	9.1	8.1	7.1	6.5	5.9	5.3	5.8	7.9	9.8	11.7	13.6	14.8	15.5	16.1	16.5	14.9	13.3	11.8	11.6	11.2	9.6	8.7	7.8	10.5	16.5
29-Sep	7.6	7.0	7.2	7.3	7.3	7.4	7.6	9.4	11.7	13.8	16.2	17.4	17.8	18.9	20.1	20.1	19.2	18.1	17.2	17.1	16.9	17.5	18.4	18.4	14.2	20.1
30-Sep	18.1	17.9	17.2	16.5	15.6	14.6	13.7	13.6	13.6	13.3	14.7	15.7	16.3	16.2	15.7	14.0	13.9	13.4	12.5	12.1	11.3	11.0	10.9	11.0	14.3	18.1
	11.3	10.7	10.2	9.8	9.4	9.1	9.2	10.3	12.0	14.3	16.4	17.8	18.8	19.5	19.9	19.9	19.4	17.9	15.5	14.1	13.4	12.7	12.0	11.6	Diurnal Average	
	18.1	17.9	17.2	16.5	15.6	14.6	14.1	14.9	16.9	20.2	24.0	25.8	26.8	26.9	26.5	25.9	26.1	24.0	20.7	19.3	19.0	17.6	18.4	18.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Jackfish 2/3 - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	179	24.86	24.86
10 - 20	446	61.94	86.81
> 20	95	13.19	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Maximum Value: 98.8 % on Sep 15 07:00

Maximum Daily Average: 89.5 % on Sep 1

Minimum Value: 18.3 % on Sep 23 14:00

Minimum Daily Average: 43.3 % on Sep 23

Maximum Diurnal Average: 82.4 % at hour 6

Minimum Diurnal Average: 43.0 % at hour 15

Monthly Average: 64.73 %

Percentiles: P_1 = 26.5 P_{10} = 37.7 Q_1 = 48.6 Median = 65.1 Q_3 = 81.4 P_{90} = 91.8 P_{99} = 98.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

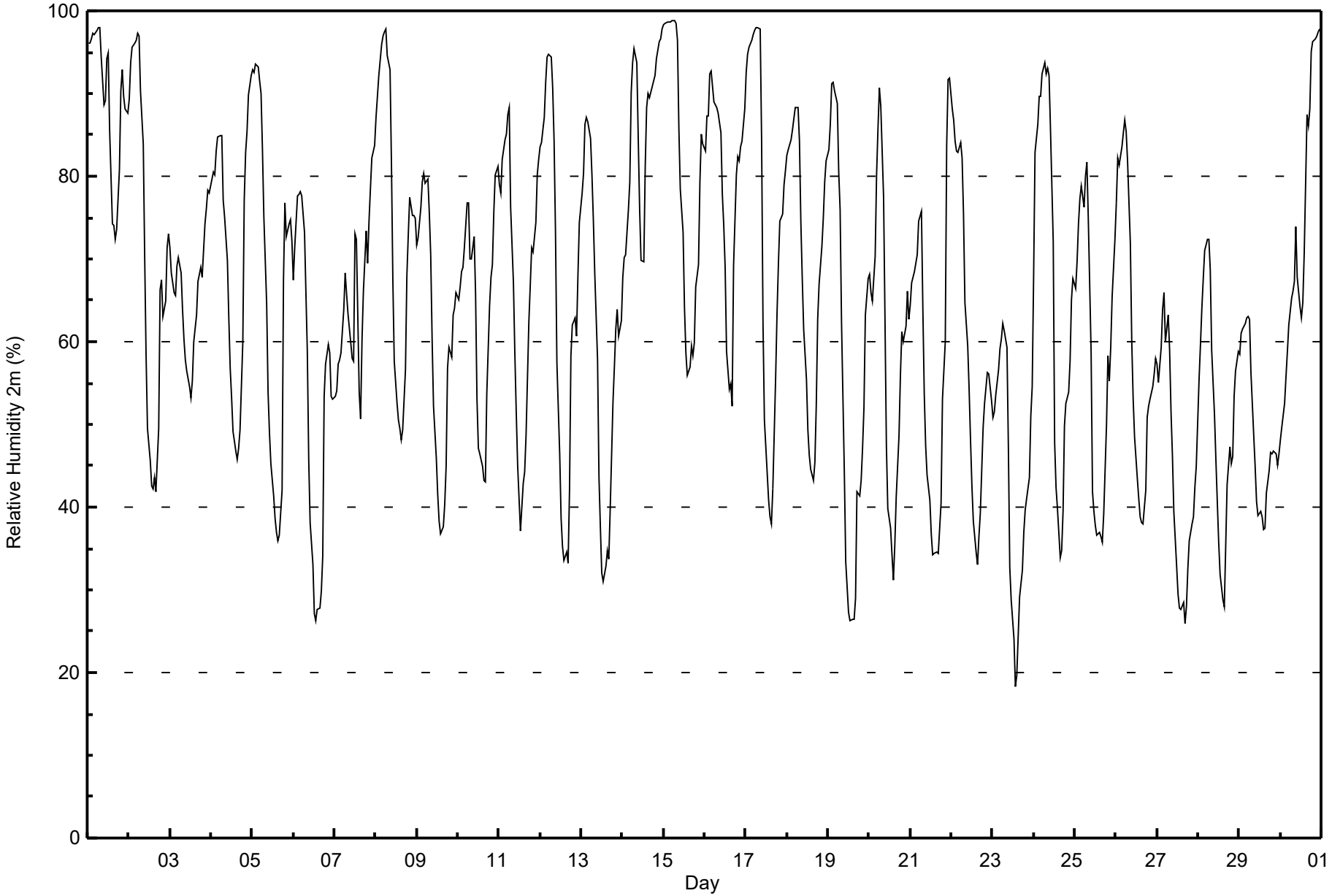
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	96.1	96.1	96.5	97.2	97.2	97.7	98.0	98.0	94.4	88.6	89.2	94.3	94.9	85.6	74.3	74.0	72.4	73.5	80.8	90.3	92.8	89.7	88.1	87.6	89.5	98.0
2-Sep	89.3	93.7	95.6	96.2	96.5	97.3	96.9	90.4	83.9	70.3	58.3	49.4	45.6	42.5	42.2	43.5	41.9	49.4	66.3	67.5	63.1	65.0	71.4	73.0	70.4	97.3
3-Sep	71.3	68.3	65.9	65.6	69.2	70.1	68.3	63.8	60.4	57.8	56.4	54.6	53.2	55.2	60.0	63.2	67.3	68.2	69.0	67.9	74.3	76.1	78.3	78.0	65.9	78.3
4-Sep	79.7	80.5	80.2	83.1	84.7	85.0	85.0	77.2	75.1	69.8	62.9	56.8	53.1	49.2	46.9	45.8	47.1	49.3	60.0	77.1	82.9	85.4	89.8	92.2	70.8	92.2
5-Sep	92.9	92.5	93.6	93.2	91.6	90.1	83.2	75.1	64.6	53.8	48.9	45.2	41.4	38.7	37.0	35.9	36.6	42.0	67.4	76.8	72.7	74.3	74.7	72.2	66.4	93.6
6-Sep	67.4	71.3	77.7	77.8	78.2	77.7	73.2	66.0	58.9	45.8	38.1	33.0	27.1	26.3	27.6	27.8	29.9	34.0	53.4	57.2	59.6	58.7	53.4	53.0	53.0	78.2
7-Sep	53.4	54.0	57.3	57.8	58.7	63.9	68.3	65.8	63.4	59.8	57.9	57.7	73.0	72.3	53.9	50.7	60.1	66.1	73.3	69.5	74.5	78.4	82.1	83.8	64.8	83.8
8-Sep	87.1	89.7	92.1	96.0	97.0	97.5	97.8	94.5	92.8	81.5	67.5	57.5	52.5	50.5	49.5	48.2	49.3	56.6	68.0	72.8	77.5	75.2	75.2	75.0	75.1	97.8
9-Sep	71.7	72.6	76.3	79.4	80.3	79.1	79.6	75.5	70.5	60.3	52.2	45.9	41.6	38.3	36.8	37.7	40.3	44.9	56.7	59.3	58.1	63.2	64.1	65.9	60.4	80.3
10-Sep	65.0	66.7	68.4	69.1	71.3	76.8	76.8	70.0	70.0	72.7	65.7	53.0	47.0	46.4	44.8	43.3	43.1	53.7	64.3	67.7	69.4	75.6	80.2	81.2	64.3	81.2
11-Sep	79.0	77.9	82.1	84.5	85.1	87.4	88.3	76.2	67.1	58.7	51.5	45.1	37.0	40.1	42.8	44.2	48.6	62.4	66.8	71.4	70.8	74.4	80.2	82.1	66.8	88.3
12-Sep	83.5	84.0	87.2	91.4	94.4	94.8	94.4	90.6	84.2	73.2	57.5	46.5	38.7	35.3	33.6	34.5	33.2	42.0	58.3	62.0	62.9	60.7	67.9	74.4	66.1	94.8
13-Sep	77.9	80.3	86.3	87.1	86.6	84.5	80.1	74.8	68.3	57.9	43.7	37.7	32.0	31.1	33.0	34.7	33.7	39.7	52.7	56.9	61.5	63.9	60.8	62.5	59.5	87.1
14-Sep	67.8	70.1	70.6	75.9	79.3	90.2	93.8	95.4	93.8	84.7	76.1	69.9	69.6	81.1	88.4	90.1	89.5	90.9	91.5	92.1	94.3	96.2	96.7	97.7	85.2	97.7
15-Sep	98.2	98.4	98.6	98.6	98.7	98.8	98.8	98.5	96.5	85.8	78.5	73.2	64.1	58.7	55.9	57.0	59.5	58.2	59.8	66.7	69.4	79.4	85.1	83.9	80.0	98.8
16-Sep	83.0	87.3	87.2	92.4	92.7	88.9	88.7	88.4	87.6	85.2	77.7	74.1	68.9	58.8	54.2	54.9	52.1	69.2	80.1	82.3	81.8	83.6	84.3	88.1	78.8	92.7
17-Sep	92.5	94.8	95.6	96.5	97.1	97.6	98.0	98.0	97.8	84.4	62.3	50.5	44.1	40.9	38.8	38.0	42.2	55.6	63.3	69.5	74.5	75.4	79.0	80.6	73.6	98.0
18-Sep	82.5	83.3	84.5	85.6	87.0	88.2	88.4	84.3	74.4	67.7	61.5	55.4	49.3	46.3	44.6	43.1	45.4	52.3	62.6	67.0	71.6	74.9	79.3	81.8	69.2	88.4
19-Sep	83.2	86.2	91.2	91.4	90.4	88.9	80.5	75.9	62.3	44.2	33.4	30.3	27.2	26.2	26.5	26.5	28.9	41.8	41.4	43.2	47.1	52.0	63.3	67.6	56.2	91.4
20-Sep	68.2	65.9	64.9	70.3	80.1	85.7	90.7	88.4	77.5	62.7	47.4	39.9	37.4	34.2	31.2	35.5	41.2	48.6	56.0	61.2	60.0	61.9	66.1	62.6	59.9	90.7
21-Sep	64.4	67.2	68.5	69.5	70.5	74.6	75.7	64.0	53.8	47.5	44.0	40.9	36.8	34.3	34.4	34.6	34.4	37.4	40.5	53.0	60.0	83.7	91.6	91.8	57.2	91.8
22-Sep	88.1	86.8	84.2	83.1	83.0	84.1	82.2	75.4	64.8	59.5	54.2	48.2	42.6	38.4	34.6	33.0	36.5	39.4	49.7	52.6	54.5	56.3	56.1	52.9	60.0	88.1
23-Sep	50.9	51.5	53.5	56.6	59.2	60.3	62.2	61.4	59.3	47.2	32.7	28.8	24.0	18.3	19.7	24.5	29.2	32.4	36.9	39.7	41.0	43.6	51.0	54.6	43.3	62.2
24-Sep	67.8	83.0	86.3	89.6	89.7	92.3	93.8	92.4	93.1	92.3	85.9	72.0	47.8	42.4	39.9	34.0	34.7	39.5	49.8	52.6	53.9	57.7	65.1	67.6	67.6	93.8
25-Sep	66.4	69.7	74.3	77.4	78.8	76.2	80.0	81.7	75.0	58.9	41.9	39.5	37.9	36.7	37.0	36.5	35.7	39.1	50.1	58.3	55.3	59.3	65.4	72.4	58.5	81.7
26-Sep	76.8	82.3	81.4	83.5	85.2	86.7	85.4	81.9	71.9	60.0	53.0	48.4	43.4	41.0	38.8	38.1	38.0	42.1	50.8	52.2	53.0	54.6	56.1	57.9	60.9	86.7
27-Sep	57.3	55.0	59.3	63.9	66.0	59.9	63.3	58.9	51.5	46.2	39.4	32.9	29.5	27.8	27.7	28.5	25.9	28.0	32.5	35.9	38.0	38.8	42.4	45.0	43.9	66.0
28-Sep	55.4	59.7	64.0	67.7	71.0	72.4	72.3	68.6	59.0	51.2	45.8	40.6	35.7	31.9	28.8	27.9	35.2	42.7	47.3	45.3	46.1	53.5	56.4	58.8	51.6	72.4
29-Sep	58.4	61.0	61.6	62.3	62.9	63.1	62.7	56.3	48.6	44.9	40.6	39.1	39.5	38.9	37.2	37.5	41.6	44.4	46.6	46.5	46.8	46.4	45.2	46.5	49.1	63.1
30-Sep	48.2	49.6	52.5	55.7	58.9	62.1	65.2	66.1	67.4	73.9	67.7	64.2	62.9	64.7	70.7	87.5	86.2	88.2	95.1	96.2	96.5	97.0	97.4	97.8	73.8	97.8
	74.1	76.0	77.9	79.9	81.4	82.4	82.4	78.5	72.9	64.9	56.4	50.8	46.6	44.4	43.0	43.7	45.3	51.1	59.7	63.7	65.5	68.5	71.6	72.9	Diurnal Average	
	98.2	98.4	98.6	98.6	98.7	98.8	98.8	98.5	97.8	92.3	89.2	94.3	94.9	85.6	88.4	90.1	89.5	90.9	95.1	96.2	96.5	97.0	97.4	97.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Jackfish 2/3 - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	2	0.28	0.28
20 - 40	97	13.47	13.75
40 - 60	204	28.33	42.08
60 - 80	221	30.69	72.78
80 - 100	196	27.22	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - September 2025

Maximum Speed: 16 km/h on Sep 27 08:00

Maximum Daily Speed Average: 10.5 km/h on Sep 27

Minimum Speed Value: 0 km/h on Sep 7 13:00

Minimum Daily Speed Average: 1.6 km/h on Sep 1

Maximum Diurnal Speed Average: 5.0 km/h at hour 6

Minimum Diurnal Speed Average: 1.1 km/h at hour 19

Monthly Average Velocity: 3.3 km/h 218.8 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 4 Median = 6 Q_3 = 8 P_{90} = 10 P_{99} = 13

Hours in Service: 720

Hours of Data: 718

Hours of Missing Data: 2

Percent Operational Time: 99.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WSW3	SW2	SW2	SW3	SW1	NE3	NNE2	ENE1	NE3	NE3	NNW1	WNW2	N3	N5	N5	NNW4	NNE4	N2	NNE2	ESE1	N1	NNE3	NE4	NE4	N1.6	N5
2-Sep	NE3	NE3	ENE2	E1	ENE1	ENE2	ENE4	ENE4	NE4	ENE5	ENE3	NE4	NE3	NE2	NE3	NE2	ENE4	ESE4	SE3	SE3	SE4	S5	S5	S5	E2.2	S5
3-Sep	S6	S6	S7	SSW7	S7	SSW8	SSW9	SSW11	SSW11	SSW10	SSW9	SW10	SW10	SW9	WSW10	WSW10	WSW8	NNW8	N10	N11	N8	N9	N9	N9	SW4.0	SSW11
4-Sep	NNW7	NNW8	NNW7	NNW7	NNW7	NW8	NW7	NW9	NNW8	NNW9	NNW10	NNW10	NW9	NW9	NNW9	NW8	NNW6	NNW6	NW3	S1	NE0	SSW1	SSW3	S3	NNW5.7	NNW10
5-Sep	SSE2	SSE3	S3	SSW5	S5	SSW5	SSW6	SSW6	SW7	SW6	SSW3	W3	WSW5	WSW5	WSW4	WSW4	W4	WSW4	S3	S3	SSE3	S4	SSW4	S6	SSW3.7	SW7
6-Sep	SSW6	SSW5	SSW5	SSW5	S5	S5	S6	S6	S7	S6	S6	SSW7	SSW9	SSW9	SSW9	SSW10	SSW8	SSW5	S2	SSW1	SSW2	SSW3	S5	S6	SSW5.6	SSW10
7-Sep	SSW6	SSW7	SSW9	SSW9	SSW9	SSW8	SSW6	SW6	SW7	WSW7	WSW6	W3	NNE0	SSE1	WNW1	WSW4	WSW6	SW5	W3	WNW4	NW2	NNE3	NE4	NNE5	SW3.4	SSW9
8-Sep	NE4	NNE4	NE2	ENE1	NE2	NE2	NE3	NE5	NE6	ENE5	ENE5	ENE5	ENE5	NE3	NE3	NE4	ENE4	NE4	E5	E5	ESE4	SE4	SSE4	S5	ENE3.1	NE6
9-Sep	S6	S6	S6	S5	S6	S6	S6	S5	S6	S6	SSE6	S7	SSW9	SSW10	SSW10	SSW9	SSW8	SSW4	SE3	ESE3	SE4	S3	S5	S5	S5.7	SSW10
10-Sep	SSW6	SSW6	SSW8	SSW8	SSW8	SW7	SW7	SW8	WSW7	SW7	W5	NNW5	NW5	NW4	NNW4	N4	N3	NNE1	SW2	E1	ENE1	ENE1	ENE2	ENE2	SW2.5	SSW8
11-Sep	ESE4	ESE3	E1	ENE1	SE1	UO	UO	ENE2	NNE3	NE4	ENE6	ENE6	ESE7	ESE5	E3	E4	E4	ESE4	ESE4	ESE4	SE4	SSE4	S3	SSW3	E2.9	ESE7
12-Sep	SSW4	SSW5	S5	S6	S6	S7	S7	S7	S7	SSW6	S6	S5	SSE5	S3	SSE3	SSE4	S4	SSW3	SSE1	S3	S3	S4	S4	SSW3	S4.5	S7
13-Sep	SSW4	SSW4	SSW4	S4	S5	S6	S5	S5	SSW5	SSW6	S6	S6	S7	SW8	SSE5	SSE4	SSE3	S2	S2	S2	S3	S3	S4	S4	S4.2	SW8
14-Sep	S5	S5	SSW6	S5	S6	SSW8	SSW4	SE6	S5	S5	SE6	SE4	E4	E10	E9	E8	E6	ENE5	E4	E3	NE3	ESE2	SSW2	SSW2	SE3.3	E10
15-Sep	SW3	SW5	SW5	SW5	SSW6	SW7	SW8	SW7	SW8	WSW9	WSW9	WSW8	W8	WNW8	WNW8	WNW8	WNW6	W8	W6	W5	NW6	WNW3	SW2	W3	WSW5.5	WSW9
16-Sep	WNW4	WNW5	WNW5	W5	W5	NW4	WNW4	W4	W6	W6	WNW3	NNW3	NW3	NW2	NNE4	NNE3	ENE2	ESE2	SE3	SSE4	S5	S5	S5	S5	W1.9	W6
17-Sep	S6	S6	S6	SSW5	S4	S6	S8	S8	S6	S7	S8	S9	SSE7	SSE7	SSE7	SSE7	SSE7	SSE7	SSE5	SSE5	SSE5	S6	S6	S7	S6.2	S9
18-Sep	S6	S6	S7	S8	S8	SSW8	SSW8	SSW9	SSW11	SSW11	SW10	SSW10	SSW9	SSW11	SSW10	SSW9	SSW6	S3	SW4	SW5	SSW5	SSW6	SSW5	SSW5	SSW7.4	SSW11
19-Sep	SW6	SW6	SSW5	SW4	SW3	SW4	WSW5	WSW4	SW4	SW2	SW3	WSW2	WSW5	SW5	WSW6	WSW7	WSW6	SW5	SW6	SW5	SSW5	SSW5	S4	S3	SW4.4	WSW7
20-Sep	S4	S5	SSW5	SSW6	SSW6	SSW7	S6	S6	SSW5	SSW6	SSW7	SSW8	SSW9	S9	S9	S7	S5	SE4	ESE3	SE4	SSE5	S4	S4	SSE6	S5.5	S9
21-Sep	S6	S6	S6	S7	SSW8	WSW8	W4	WNW4	N5	NNE7	N6	NE7	NE7	NNE7	NE5	NNE3	NW5	NW8	NW7	WNW9	WNW10	NW7	W7	W7	WNW2.5	WNW10
22-Sep	W8	WSW10	WSW10	WSW10	WSW10	WSW10	WSW10	WSW10	WSW10	WSW11	WSW11	WSW12	WSW13	WSW13	WSW13	WSW14	WSW11	SW8	SSW4	SSW5	SSW5	SSW5	SSW5	SSW6	WSW8.8	WSW14
23-Sep	SSW7	SSW7	SSW7	SSW7	SSW8	SW9	SW8	SW8	SSW6	W7	W9	WNW9	W11	W11	W10	W9	W6	W5	WSW6	WSW5	SW5	SW7	WSW8	WSW8	WSW6.7	W11
24-Sep	WSW6	W6	WSW3	SW6	SSW6	WSW7	WSW8	WSW11	SW8	WSW9	W10	W10	W11	W11	WNW10	WNW10	W8	W6	WSW5	WSW5	WSW6	SW7	SW7	SW7	WSW7.2	W11
25-Sep	SW8	SW8	SW8	SW7	SSW8	SSW8	SSW7	S6	SSW5	SSW6	SSW11	SSW12	SSW10	S9	S8	S8	S6	SSW6	SW4	SSW4	S5	SW5	WSW5	W5	SSW6.6	SSW12
26-Sep	WSW6	SW6	SW6	WSW7	WSW8	WSW7	W7	W8	W10	W11	W12	W12	W14	W14	WNW12	WNW12	WNW11	W7	WSW4	WSW9	WSW8	SW7	SSW7	SSW6	W8.2	W14
27-Sep	SSW7	SSW7	SSW7	WSW14	WSW13	WSW15	WSW15	WSW16	WSW15	W13	W13	W12	W11	W10	WSW12	WSW11	WSW12	WSW11	SW7	SW7	WSW8	WSW8	W10	W10	WSW10.5	WSW16
28-Sep	WSW9	SW7	SW7	SW9	SW10	WSW10	WSW9	WSW10	W8	WSW7	WSW8	WSW8	W6	SSW4	WSW3	SW4	SE2	ESE4	ESE3	ESE4	S3	SE3	SE4	SE4	SW4.5	WSW10
29-Sep	SE6	SE6	SE7	SE8	SE9	SE9	SE9	SSE10	S12	S12	S13	SSE11	S11	S10	S10	S10	S7	SSE7	SE5	SE6	SE6	SSE6	S8	S9	SSE8.2	S13
30-Sep	S8	S8	S7	S7	S7	S6	S5	S5	SSW6	SSW6	SSW7	SW4	SW4	NE1	ENE2	ENE4	ENE8	NE7	NE4	NW2	N3	N2	NNW5	NNW4	S1.9	ENE8
	SSW3.7	SSW4.0	SSW4.2	SSW4.8	SSW5.0	SW5.0	SW4.8	SW4.7	SW4.4	SW4.1	SW3.9	SW3.5	SW3.8	WSW3.6	WSW3.1	WSW3.1	SW2.2	SW1.5	SSW1.1	SSW1.4	SSW1.8	SSW2.4	SSW2.7	SSW2.9	Diurnal Average	
	WSW9	WSW10	WSW10	WSW14	WSW13	WSW15	WSW15	WSW16	WSW15	W13	S13	W12	W14	W14	WSW13	WSW14	WSW12	WSW11	N10	N11	WNW10	N9	W10	W10	Diurnal Maximum	

UO - Unstable Operation

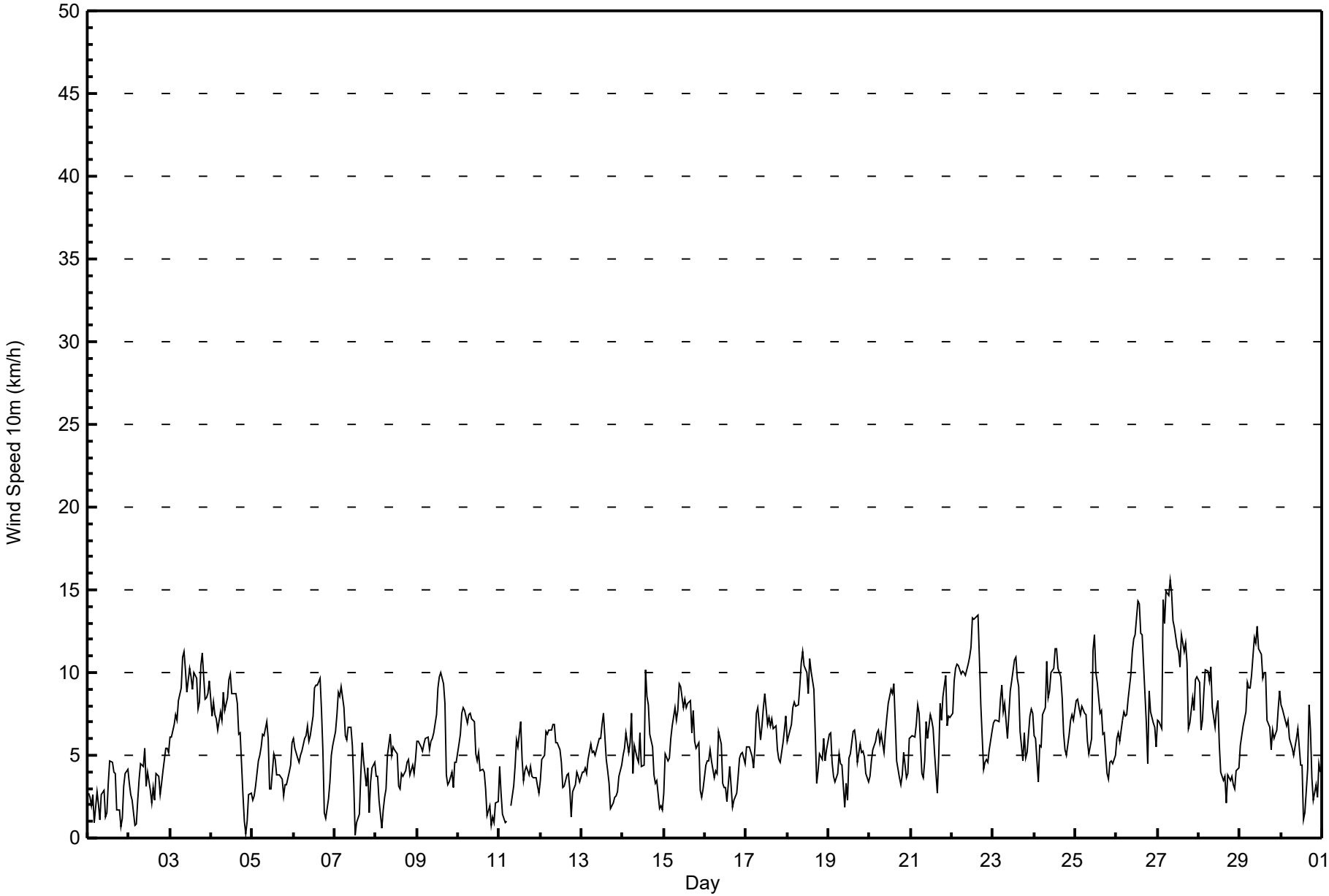
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	330	45.96	45.96
6 - 11	362	50.42	96.38
12 - 19	26	3.62	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: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	10	14	29	25	11	16	17	18	60	45	28	18	13	11	8	7	330
6 - 11	7	2	4	3	4	1	11	12	77	81	43	51	33	10	10	13	362
12 - 19	0	0	0	0	0	0	0	0	3	1	0	13	7	2	0	0	26
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	16	33	28	15	17	28	30	140	127	71	82	53	23	18	20	718

Total Number of Valid Hours: 718

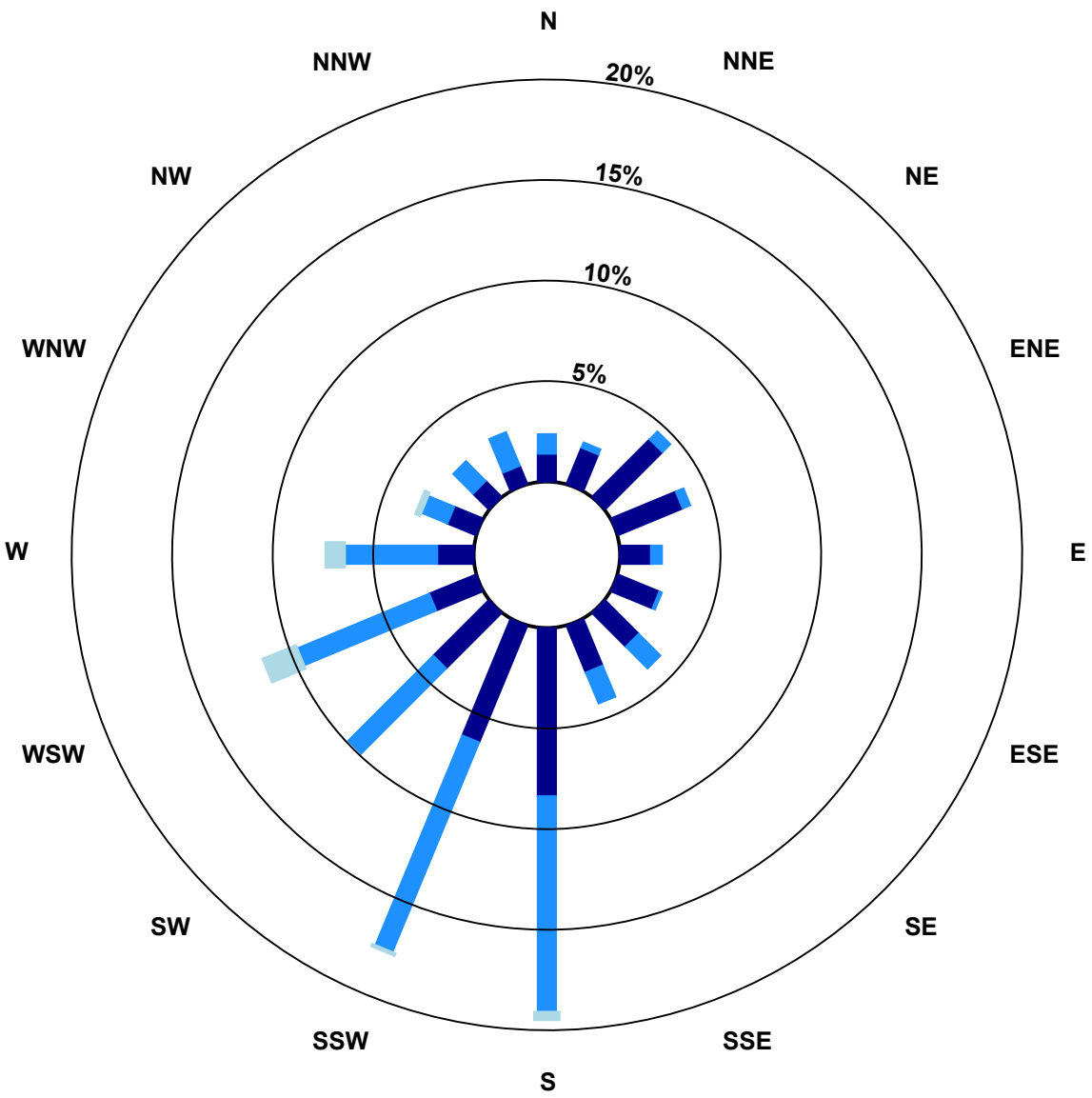
Total Number of Hours: 720

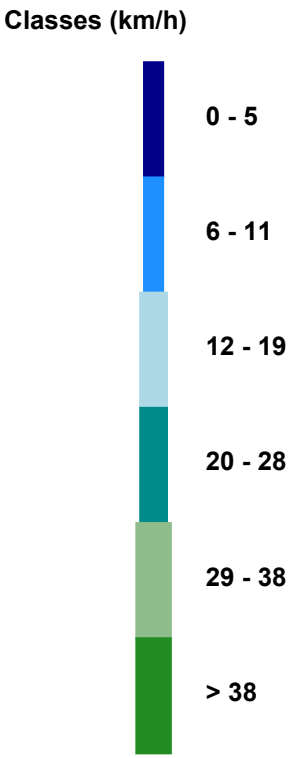
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Jackfish 2/3





Total Number of Valid Hours: 718

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Sep 27 04:00

Minimum Value: 0 km/h on Sep 5 20:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 5

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

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-Sep	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	1	1	1	1	1	1	1	2
2-Sep	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	1	1	1	1	2	2	2	2	2
3-Sep	2	2	3	3	3	3	3	4	4	4	3	3	3	3	3	3	3	4	5	5	4	4	4	4	5
4-Sep	4	4	4	4	3	3	3	4	4	4	4	4	4	4	4	4	3	3	2	1	1	1	1	0	4
5-Sep	1	0	1	1	1	1	1	1	2	2	2	2	3	3	3	2	2	2	0	0	1	1	1	1	3
6-Sep	2	1	1	1	1	1	2	2	2	2	2	3	4	4	4	4	3	3	1	1	1	1	2	2	4
7-Sep	2	2	1	1	2	2	2	2	1	2	2	1	1	1	1	2	2	1	1	2	1	1	1	2	2
8-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	2	2	2	2
9-Sep	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	3	2	1	1	2	2	2	2	4
10-Sep	1	1	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	2
11-Sep	1	1	1	1	1	UO	UO	1	1	1	2	2	3	2	2	2	2	1	1	1	2	1	1	1	3
12-Sep	1	1	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2
13-Sep	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	2	1	1	1	1	1	1	2	3
14-Sep	2	2	2	2	2	3	1	3	2	2	2	2	2	4	3	3	2	2	1	1	1	1	1	1	4
15-Sep	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	3	3	2	2	3	2	1	1	4
16-Sep	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2
17-Sep	2	2	2	2	2	2	3	3	2	2	3	4	3	3	3	3	3	3	2	2	2	3	3	3	4
18-Sep	2	3	3	3	3	3	3	4	4	4	4	4	4	4	4	3	3	2	2	1	2	2	2	2	4
19-Sep	2	1	1	1	1	1	1	1	1	1	2	2	2	3	3	2	2	1	2	1	1	1	1	1	3
20-Sep	1	1	1	1	2	2	1	1	1	2	3	3	3	4	4	3	2	1	1	2	2	2	2	3	4
21-Sep	2	2	2	2	2	2	2	2	2	3	2	3	2	3	2	2	3	4	3	4	4	3	3	3	4
22-Sep	3	3	3	3	3	3	2	2	3	4	4	4	5	4	5	5	4	3	1	2	2	2	2	2	5
23-Sep	2	2	2	2	2	2	2	2	1	3	4	4	4	4	4	4	2	2	2	1	1	2	2	2	4
24-Sep	2	2	1	1	2	2	2	4	2	3	3	4	5	5	4	4	4	3	1	1	2	2	2	1	5
25-Sep	2	2	2	2	2	2	2	1	1	2	5	5	4	4	3	3	3	3	1	2	2	3	1	2	5
26-Sep	2	1	1	2	2	2	2	3	4	5	5	5	5	6	5	5	5	4	2	2	2	2	2	2	6
27-Sep	3	2	2	6	4	5	5	5	5	5	5	5	4	4	5	4	4	4	2	2	2	2	4	4	6
28-Sep	3	2	2	3	2	3	2	3	3	2	3	3	3	2	2	2	2	2	1	1	2	2	2	2	3
29-Sep	2	3	3	3	4	4	4	4	5	5	5	5	5	4	4	4	3	3	2	3	3	3	4	4	5
30-Sep	3	3	3	3	3	2	2	2	1	2	2	2	2	1	1	2	2	2	2	1	1	1	2	2	3
	4	4	4	6	4	5	5	5	5	5	5	5	5	6	5	5	5	4	5	5	4	4	4	4	
	Diurnal Maximum																								

UO - Unstable Operation

Direction of Maximum Speed: 254 deg on Sep 27 08:00
Direction of Maximum Daily Speed Average: 249.9 deg on Sep 27

Direction of Minimum Speed: 32 deg on Sep 7 13:00
Direction of Minimum Daily Speed Average: 1.6 deg on Sep 1

Monthly Average Direction: 218.8 deg

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Percent Operational Time:	99.7

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	Average
1-Sep	253	227	223	236	228	55	29	76	56	36	330	300	349	8	358	345	14	3	19	108	10	26	34	37	7.7
2-Sep	42	56	65	82	72	68	59	60	47	66	74	47	47	48	44	38	71	109	138	136	135	170	178	183	86.7
3-Sep	187	185	190	193	189	193	195	199	200	207	210	221	220	232	251	247	253	336	355	9	1	349	350	351	235.4
4-Sep	331	331	327	327	329	312	311	310	327	342	343	348	324	318	334	322	340	337	304	171	43	195	205	189	326.3
5-Sep	166	166	188	196	191	194	204	212	232	234	198	263	250	249	254	254	273	254	175	175	164	187	193	187	212.8
6-Sep	197	197	198	193	180	180	178	176	179	175	169	193	205	209	203	209	213	204	175	197	204	195	185	182	193.1
7-Sep	192	192	195	200	202	207	210	228	232	241	241	268	32	167	296	246	246	235	266	296	318	22	39	27	224.3
8-Sep	39	33	40	59	47	39	34	36	40	72	58	64	65	47	45	34	65	45	79	96	112	133	148	171	65.5
9-Sep	173	178	183	178	174	177	176	178	177	179	168	172	193	202	207	203	198	197	126	120	132	174	184	185	181.7
10-Sep	210	207	194	204	210	214	220	226	243	222	263	329	324	324	333	351	356	17	219	90	59	77	70	76	235.7
11-Sep	106	116	79	70	124	UO	UO	65	28	38	62	69	115	108	88	96	95	104	102	113	138	167	190	195	100.1
12-Sep	199	192	188	178	179	181	188	186	186	194	187	184	167	180	152	163	184	206	162	187	169	182	186	195	183.1
13-Sep	198	200	200	189	181	179	181	189	204	211	170	177	175	214	158	158	149	181	172	184	175	175	179	188	184.4
14-Sep	186	186	199	184	176	204	198	128	179	174	127	140	93	84	99	96	79	70	82	85	52	103	212	213	134.7
15-Sep	220	228	233	224	201	220	236	222	232	254	257	257	275	289	286	294	296	276	276	278	305	286	234	270	258.3
16-Sep	290	285	290	271	277	309	300	276	266	271	302	348	318	307	13	23	76	112	140	168	180	182	181	185	268.8
17-Sep	179	180	182	192	178	174	182	182	180	185	184	184	168	165	166	165	165	155	165	147	168	178	187	188	175.3
18-Sep	179	176	191	191	188	197	198	209	205	205	214	205	202	208	211	204	196	186	223	231	207	203	195	210	202.0
19-Sep	231	224	206	230	223	227	244	248	231	231	235	248	237	232	256	252	239	221	228	215	208	196	187	182	227.4
20-Sep	184	191	192	200	209	193	182	188	196	211	201	202	200	191	189	190	175	138	120	127	152	170	191	161	186.5
21-Sep	175	173	180	190	213	238	266	300	350	15	2	36	41	30	50	20	320	309	314	292	295	307	278	270	302.8
22-Sep	261	251	250	250	252	252	247	246	254	255	258	250	251	250	252	253	238	230	204	197	194	194	193	195	243.6
23-Sep	196	195	192	199	213	234	223	222	212	267	279	283	268	268	271	270	274	269	243	257	234	231	251	249	244.2
24-Sep	255	279	252	221	211	243	239	245	221	237	259	271	277	275	283	282	279	271	251	254	248	226	233	233	254.4
25-Sep	226	228	227	220	197	193	192	187	194	197	206	206	200	190	176	177	174	196	225	197	184	228	255	262	204.1
26-Sep	252	231	232	252	251	253	263	260	269	278	278	271	271	279	287	284	282	275	247	244	242	216	203	195	261.2
27-Sep	203	209	208	244	237	250	251	254	257	261	262	269	271	269	254	247	247	246	233	225	246	256	272	259	249.9
28-Sep	242	222	220	230	235	238	244	248	273	254	254	257	263	208	252	214	145	113	106	117	169	145	140	127	229.3
29-Sep	131	138	138	140	135	134	142	161	171	171	169	162	177	188	184	178	177	164	136	127	135	150	172	177	159.6
30-Sep	181	178	181	181	183	191	191	175	194	210	211	236	224	45	63	69	63	46	39	316	352	352	345	343	181.6
	207.0	205.4	204.5	210.8	206.6	214.3	216.9	218.1	223.3	228.3	228.5	233.7	234.4	236.9	241.3	237.0	232.8	234.8	209.9	201.4	203.1	201.6	208.4	206.9	
	Diurnal Average																								

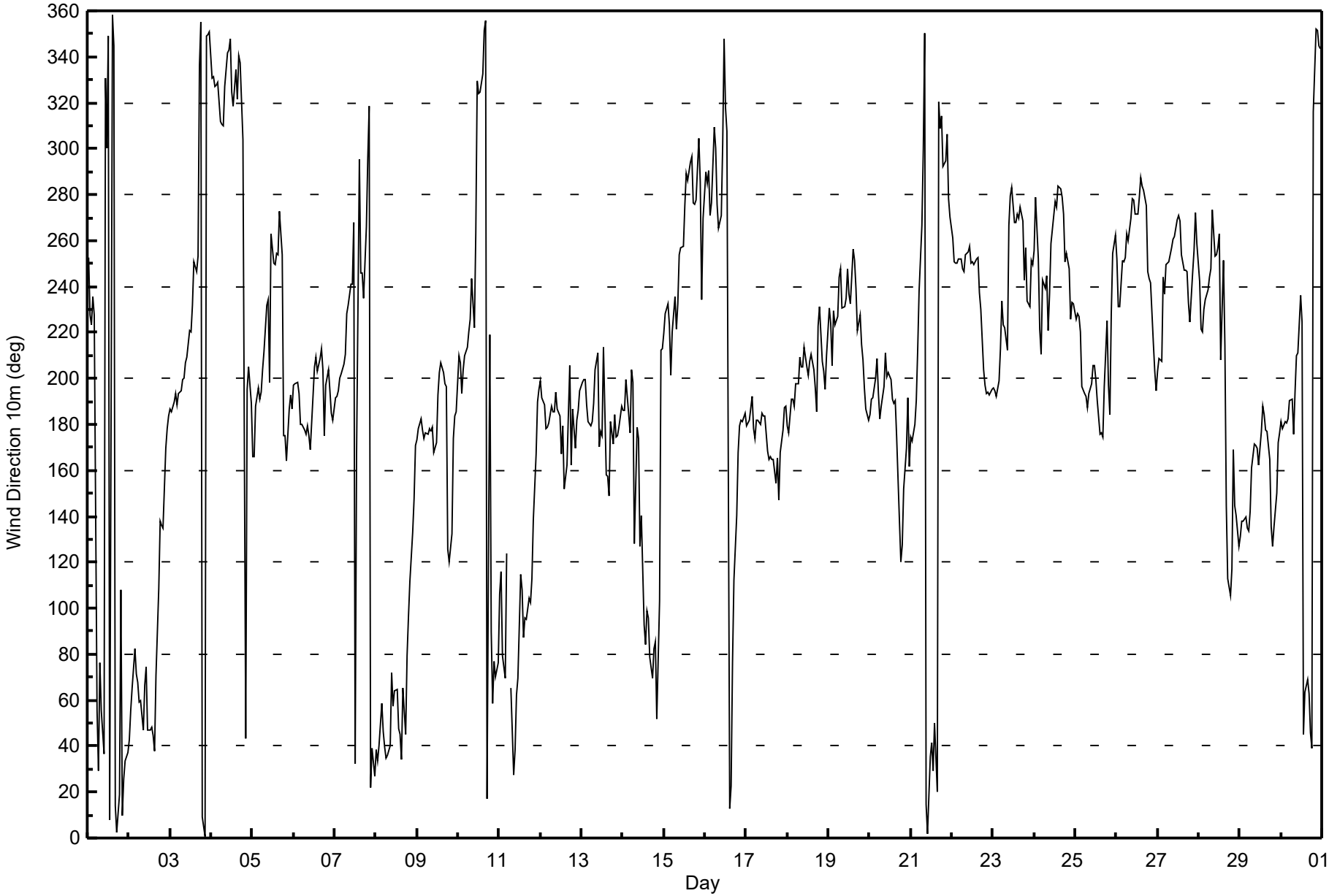
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 118 deg on Sep 4 21:00

Minimum Value: 4 deg on Sep 5 20:00

Percentiles: P_1 = 13 P_{10} = 19 Q_1 = 25 Median = 40 Q_3 = 56 P_{90} = 70 P_{99} = 96

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

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-Sep	23	25	38	16	86	21	66	74	52	69	75	79	59	64	61	60	51	65	62	62	79	47	32	31	86
2-Sep	46	34	40	61	39	19	15	18	34	37	81	72	89	101	65	76	41	34	56	52	53	61	55	49	101
3-Sep	41	40	44	39	41	37	36	30	34	32	36	35	31	36	30	25	32	61	62	52	62	63	63	63	63
4-Sep	59	60	64	65	68	57	55	50	61	67	63	60	61	61	57	60	68	62	88	80	118	94	25	10	118
5-Sep	40	34	17	13	12	12	17	21	23	40	82	96	71	70	76	73	68	51	20	4	24	13	13	15	96
6-Sep	23	20	19	22	26	24	28	35	34	48	53	47	44	41	42	37	39	49	63	103	63	60	50	36	103
7-Sep	21	16	13	15	16	15	19	19	19	26	27	49	92	92	85	54	21	22	35	66	107	44	28	41	107
8-Sep	33	41	35	98	47	26	32	25	30	41	50	59	60	78	80	57	58	27	17	22	36	54	59	53	98
9-Sep	45	30	26	38	39	48	46	39	42	50	54	54	46	42	36	41	41	60	54	61	68	85	67	46	85
10-Sep	27	20	16	17	17	16	16	19	24	29	46	62	57	72	77	75	72	80	41	90	73	44	21	19	90
11-Sep	14	25	53	71	71	UO	UO	37	60	38	35	42	41	72	90	71	34	27	18	37	59	57	35	55	90
12-Sep	32	25	23	30	26	25	19	18	24	35	47	57	59	71	75	68	51	42	58	22	26	34	36	24	75
13-Sep	38	24	17	22	30	19	21	24	25	27	44	54	56	48	68	50	70	43	18	27	31	27	31	34	70
14-Sep	29	27	22	27	32	34	26	40	38	46	44	58	43	31	31	33	30	26	26	25	24	73	44	82	82
15-Sep	25	18	14	18	18	21	18	19	21	33	40	42	46	48	50	52	51	41	41	35	59	84	57	57	84
16-Sep	50	38	41	33	34	65	54	40	37	48	80	73	86	101	70	70	79	36	25	33	21	19	22	20	101
17-Sep	37	38	42	33	48	46	44	38	46	45	46	50	58	58	64	52	61	62	65	71	80	66	56	45	80
18-Sep	50	54	43	41	42	41	42	37	39	35	37	45	46	39	38	43	46	81	45	21	32	36	39	34	81
19-Sep	23	22	20	25	24	18	20	15	17	76	61	89	58	65	46	39	30	18	18	22	17	16	15	19	89
20-Sep	21	20	19	17	22	20	16	15	23	28	41	46	40	48	48	46	68	65	58	60	60	84	64	73	84
21-Sep	62	48	33	21	24	19	49	62	66	50	56	45	45	46	58	86	68	59	51	47	45	60	43	40	86
22-Sep	34	23	21	20	22	20	18	22	30	34	38	38	31	31	32	31	28	25	27	32	33	40	41	39	41
23-Sep	33	27	23	19	23	18	17	21	23	45	49	47	41	41	43	45	40	38	18	22	24	23	26	19	49
24-Sep	32	38	35	20	25	22	23	22	25	28	34	44	47	47	47	48	47	37	19	16	17	17	17	17	48
25-Sep	18	17	16	19	16	15	14	16	21	37	39	39	44	50	57	54	59	45	34	45	43	50	25	37	59
26-Sep	25	19	18	24	24	23	33	35	40	44	45	45	41	42	47	47	41	38	23	20	20	22	20	24	47
27-Sep	27	28	32	28	22	26	26	26	31	35	38	43	43	43	33	25	27	24	25	23	21	30	43	34	43
28-Sep	24	26	23	24	21	21	18	26	45	45	38	40	57	71	75	72	72	35	33	41	78	88	74	74	88
29-Sep	54	58	59	61	48	49	51	56	49	48	49	50	47	49	44	44	57	58	53	51	57	63	61	60	63
30-Sep	57	47	45	46	42	43	38	45	29	24	28	45	58	99	75	56	24	25	62	66	51	72	61	62	99
	62	60	64	98	86	65	66	74	66	76	82	96	92	101	90	86	79	81	88	103	118	94	74	82	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS29
SURMONT 2
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT2 (AMS29)
SEPTEMBER 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	686	34	34	100	8.1	0	1.4	0
H2S (ppb) Average	682	37	38	99.86	0.7	0	0.3	0
THC(ppm) Average	686	34	34	100	2.8	-	2.5	-
NO2 (ppb) Average	683	36	37	99.86	8.8	0	2	-
NO (ppb) Average	683	36	37	99.86	2.3	-	0.4	-
NOX (ppb) Average	683	36	37	99.86	8.9	-	2.3	-
PM2.5 (ug/m3) Average	719	1	1	100	132	0	44.1	4
Temperature 2 m (C) Average	720	0	0	100	27.6	-	17.8	-
Relative Humidity (%) Average	710	0	10	98.61	100.8	-	87.5	-
Wind Speed 10 m (km/h) Average	710	0	10	98.61	18	-	9	-
Wind Direction 10 m (deg) Average	710	0	10	98.61	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.44	0.8	-	0	0	0.1	0.2	0.5	0.9	8.1
H2S (ppb) Average	682	0.14	0.1	-	0	0	0.1	0.1	0.2	0.2	0.7
THC (ppm) Average	686	2.35	0.1	-	2.2	2.3	2.3	2.3	2.4	2.5	2.8
NO2 (ppb) Average	683	1.22	1	-	0.2	0.4	0.6	0.9	1.5	2.3	8.8
NO (ppb) Average	683	0.11	0.2	-	0	0	0	0	0.1	0.2	2.3
NOX (ppb) Average	683	1.33	1.1	-	0.2	0.4	0.6	1	1.6	2.7	8.9
PM2.5 (ug/m3) Average	719	17.36	17.4	-	0.7	3	6	12.2	21.3	38.2	132
Temperature 2 m (C) Average	720	13.76	5.5	-	-0.6	7.3	10	13.3	17.3	21.9	27.6
Relative Humidity (%) Average	710	66.95	21.4	-	27.1	37.2	49.4	66.6	85.4	97.2	100.8
Wind Speed 10 m (km/h) Average	710	4.9	3	-	0	1	2	4	7	9	18
Wind Direction 10 m (deg) Average	710	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, NOX	05 Sep 2025 11:00	05 Sep 2025 11:00	1	Maintenance - sample manifold cleaned
Relative Humidity	08 Sep 2025 06:00	08 Sep 2025 10:00	5	Sensor operated out of range
Relative Humidity	15 Sep 2025 05:00	15 Sep 2025 07:00	3	Sensor operated out of range
Relative Humidity	17 Sep 2025 01:00	17 Sep 2025 01:00	1	Sensor operated out of range
Relative Humidity	17 Sep 2025 07:00	17 Sep 2025 07:00	1	Sensor operated out of range
Wind Speed, Wind Direction	02 Sep 2025 02:00	02 Sep 2025 06:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction	05 Sep 2025 02:00	05 Sep 2025 03:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 00:00	11 Sep 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 02:00	11 Sep 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Sep 2025 07:00	11 Sep 2025 07:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 8.1 ppb on Sep 23 03:00 Maximum Daily Average: 1.4 ppb on Sep 4

Minimum Value: 0.0 ppb on Sep 4 23:00 Minimum Daily Average: 0.1 ppb on Sep 8

Maximum Diurnal Average: 0.8 ppb at hour 3 Minimum Diurnal Average: 0.3 ppb at hour 21

Monthly Average: 0.44 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 4.4

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.6	0.5	0.4	1.2	4.3	4.2	5.6	1.4	0.7	0.4	0.3	0.2	0.2	0.2	0.9	5.6
2-Sep	0.2	0.1	0.2	0.2	Z	0.1	0.1	0.2	0.4	0.5	0.3	0.5	0.6	1.0	0.8	0.3	0.2	0.4	0.3	0.2	0.3	0.1	0.2	0.2	0.3	1.0
3-Sep	0.1	0.3	0.5	0.7	0.7	Z	0.4	0.3	0.2	0.3	0.3	0.5	0.4	0.2	0.3	0.6	0.7	2.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4	2.4
4-Sep	Z	2.1	2.1	2.2	2.5	2.1	3.1	1.7	1.1	1.2	1.2	0.6	1.0	1.6	1.8	1.9	1.8	2.1	1.3	0.5	0.2	0.1	0.0	0.0	1.4	3.1
5-Sep	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.4	C	C	C	C	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
6-Sep	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.2	0.4	0.7	1.1	0.9	0.7	0.7	0.7	0.8	0.8	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.4	1.1
7-Sep	0.9	0.3	0.2	Z	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.8	0.9	1.1	0.8	1.0	0.5	0.5	1.0	1.1	0.5	0.3	0.2	0.3	0.5	1.1
8-Sep	0.2	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.3	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.6	0.5	0.4	0.9	1.0	0.7	0.5	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.6	0.4	1.0
10-Sep	Z	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.9	2.7	3.4	1.4	0.4	0.2	0.4	0.3	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.6	3.4
11-Sep	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.8	1.3	0.7	0.4	0.4	0.3	0.3	0.4	0.5	0.3	0.2	0.1	0.1	0.2	0.1	0.3	1.3
12-Sep	0.0	0.1	Z	0.2	0.1	0.0	0.1	0.2	0.7	0.3	0.3	0.3	0.3	0.6	0.7	0.8	0.7	0.6	0.6	0.4	0.5	0.4	0.3	0.3	0.4	0.8
13-Sep	0.5	0.5	0.3	Z	0.4	0.2	0.1	0.2	1.0	1.1	0.8	0.8	0.5	1.3	1.2	0.8	0.8	0.7	0.4	0.5	0.6	0.7	0.4	0.4	0.6	1.3
14-Sep	0.4	0.4	0.4	0.4	Z	0.3	0.3	0.5	0.5	0.7	0.6	0.7	0.6	0.3	0.1	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.1	0.1	0.4	0.7
15-Sep	0.1	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
16-Sep	Z	0.1	0.1	0.3	2.1	1.5	1.7	3.1	5.5	4.4	0.4	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.9	5.5
17-Sep	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.3	0.8	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.8
18-Sep	0.3	0.4	Z	0.6	0.6	0.6	0.6	0.6	0.9	0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.7	1.9	0.5	0.4	0.4	0.4	0.3	0.3	0.6	1.9
19-Sep	0.2	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.3	1.1	0.4	0.5	0.3	0.4	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	1.1
20-Sep	0.3	0.1	0.2	0.3	Z	0.4	1.9	0.9	0.8	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.2	0.5	1.9
21-Sep	0.2	0.8	1.3	0.8	0.5	Z	0.6	0.7	0.6	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.3
22-Sep	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5	0.7	1.2	2.1	2.5	5.6	5.1	0.8	5.6
23-Sep	5.1	Z	8.1	1.1	0.5	0.3	0.3	0.5	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.7	8.1
24-Sep	0.0	0.3	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.3	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	0.4	0.1	0.4
25-Sep	0.3	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.6	0.1	0.1	0.2	0.2	0.6
26-Sep	0.2	0.2	0.3	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.0	0.2	0.1	0.2	0.4
27-Sep	1.5	3.2	4.6	0.6	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.3	0.3	0.5	0.3	0.1	0.5	4.6
28-Sep	Z	0.1	0.0	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.3	0.3	0.8	1.1	0.3	0.1	0.6	0.2	0.0	0.1	0.9	0.0	0.0	0.3	1.1
29-Sep	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	0.1	0.4	0.5	0.6	0.6	0.4	0.2	0.1	0.4	0.1	0.7	0.2	0.7
30-Sep	1.2	0.2	Z	0.1	0.1	0.2	0.0	0.0	0.1	0.4	0.6	0.9	1.0	1.2	0.7	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.4	1.2
	0.5	0.4	0.8	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.4	Diurnal Average	
	5.1	3.2	8.1	2.2	2.5	2.1	3.1	3.1	5.5	4.4	2.7	3.4	1.4	1.6	4.3	4.2	5.6	2.4	1.3	1.2	2.1	2.5	5.6	5.1	Diurnal Maximum	

Z - zerospan C - Calibration

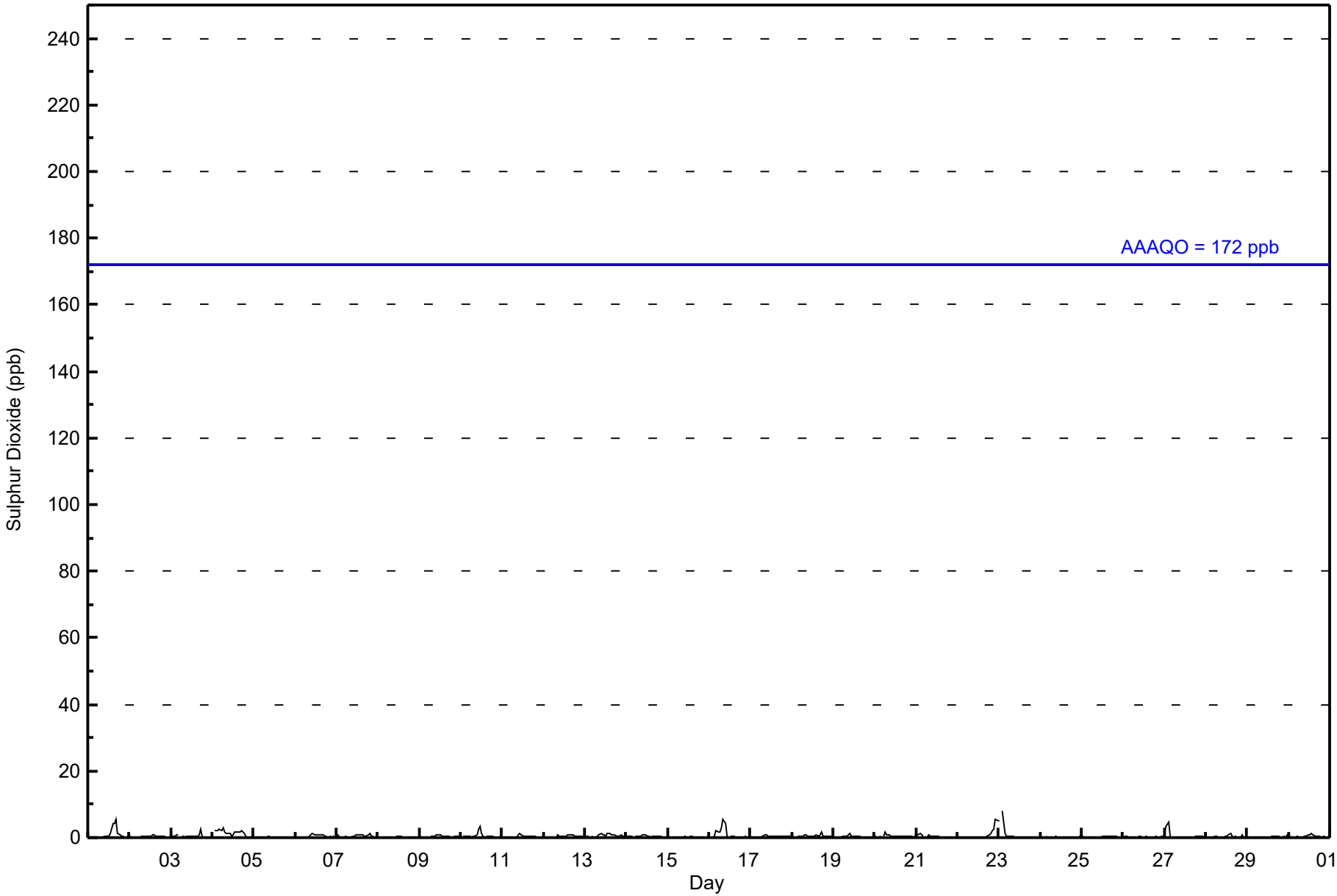
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	10	5	13	3	9	53	107	41	28	26	54	122	101	49	27	31	679
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	10	5	13	3	9	53	107	41	28	26	54	122	101	49	27	31	679

Total Number of Valid Hours: 679

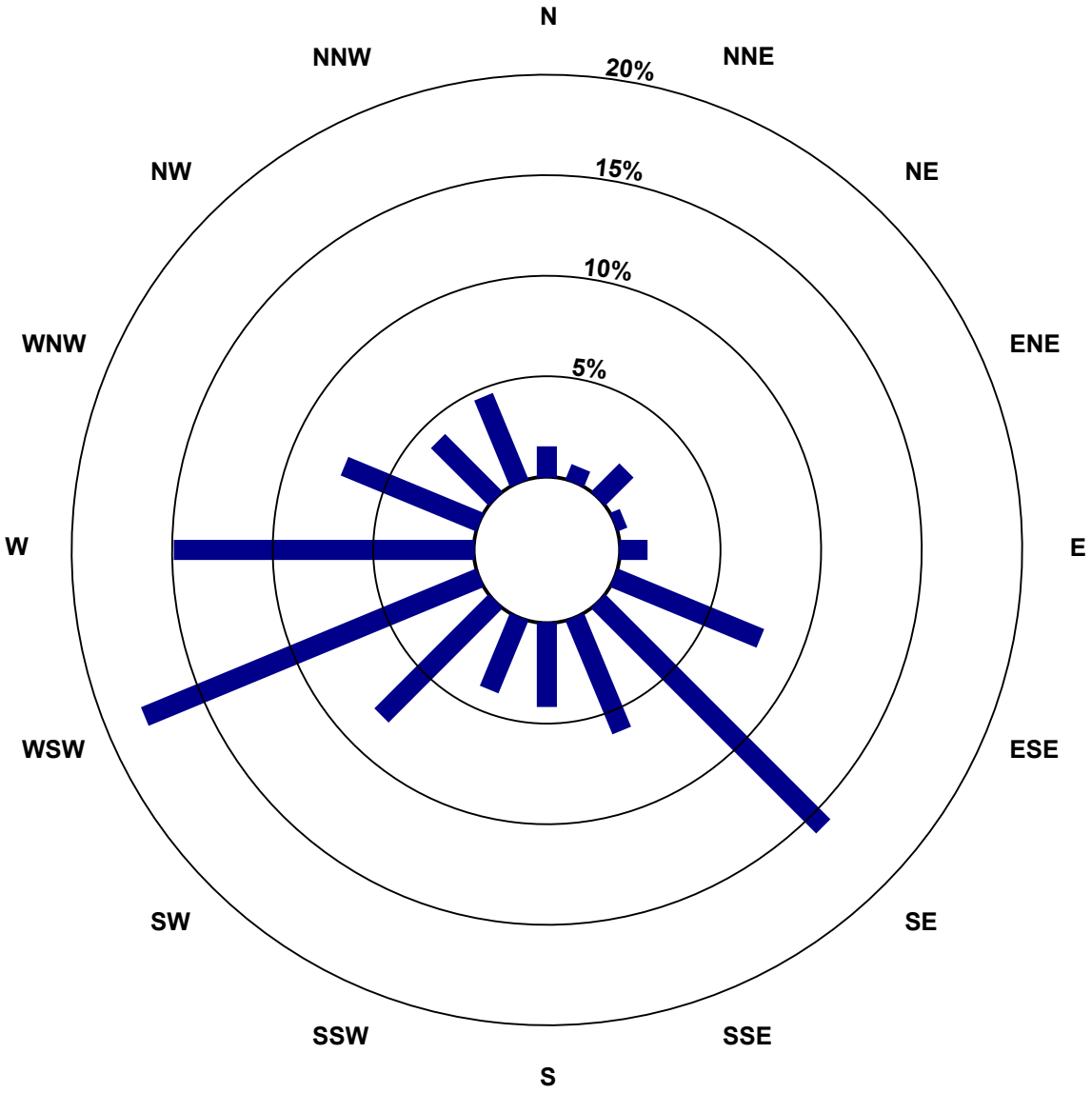
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Surmont 2



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

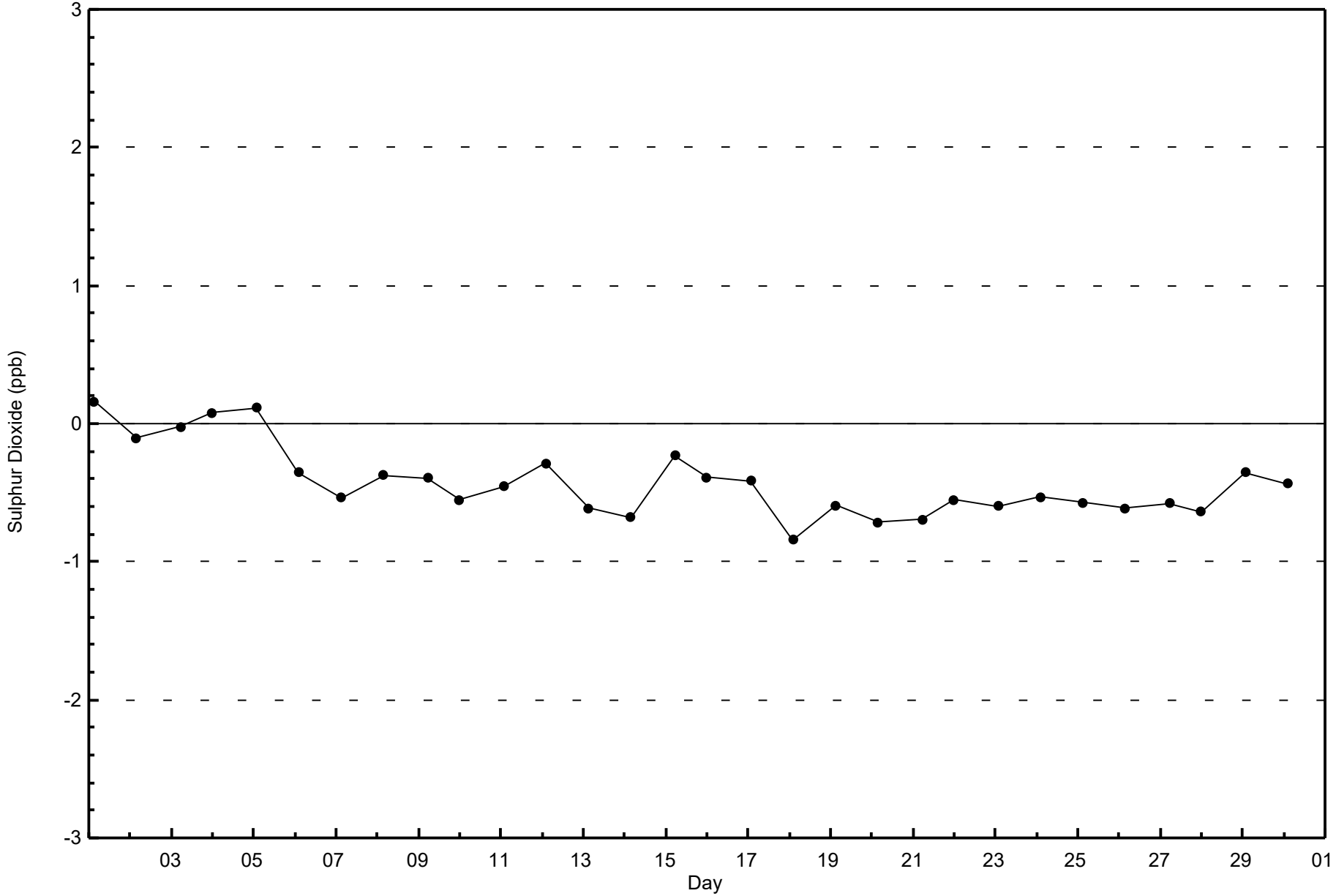
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - September 2025

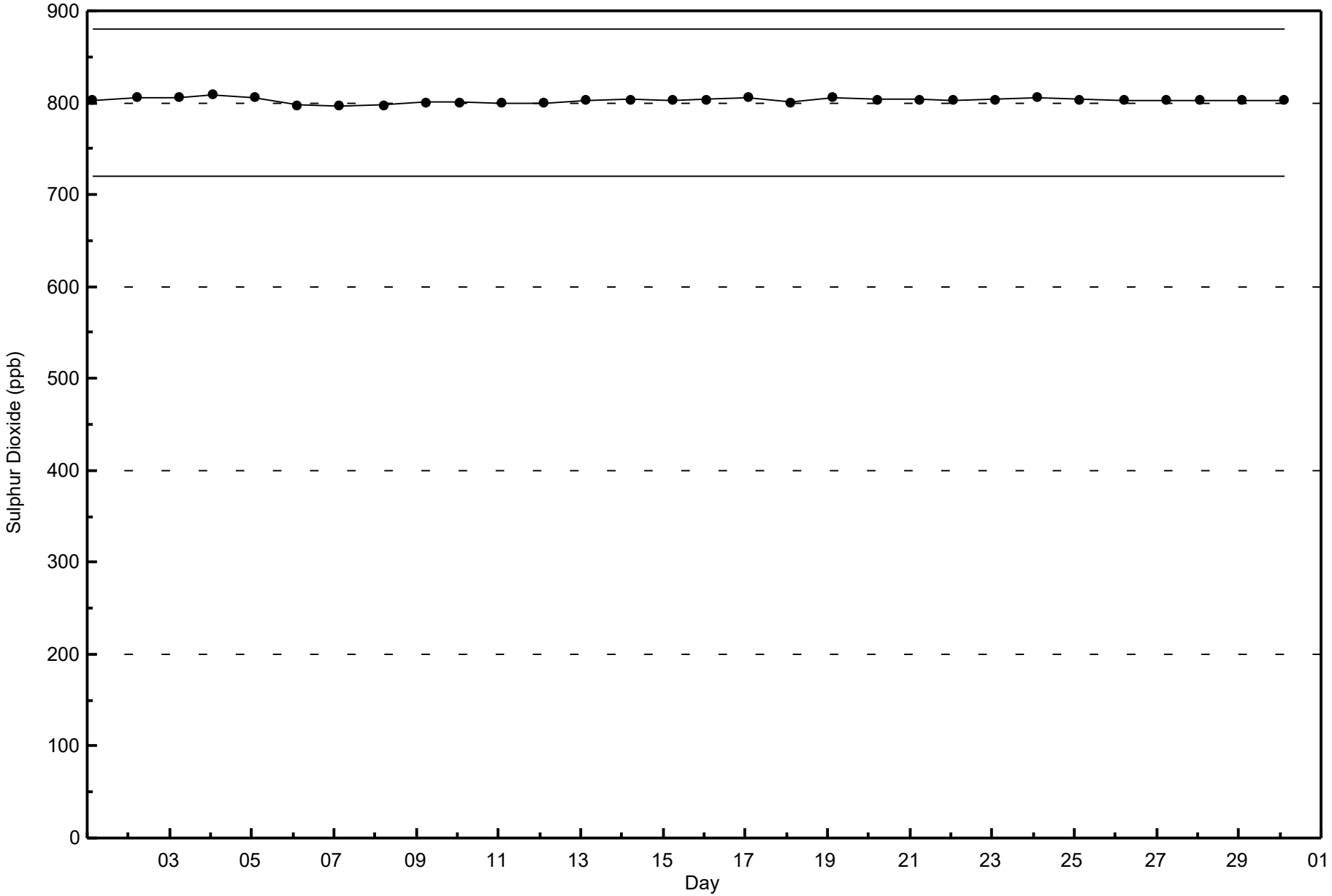


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 0.7 ppb on Sep 1 09:00

Maximum Daily Average: 0.3 ppb on Sep 1

Minimum Value: 0.0 ppb on Sep 25 13:00

Minimum Daily Average: 0.1 ppb on Sep 23

Maximum Diurnal Average: 0.2 ppb at hour 1

Minimum Diurnal Average: 0.1 ppb at hour 17

Monthly Average: 0.14 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.2 P_{99} = 0.4

Hours in Service:	720
Hours of Data:	682
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.4	0.4	0.5	Z	0.3	0.3	0.4	0.7	0.5	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7
2-Sep	0.2	0.2	0.2	0.2	0.1	Z	0.3	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	0.3
3-Sep	Z	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	0.3	0.2	0.4	0.2	0.2	0.2	0.4	0.4	0.4	0.2	0.4
4-Sep	0.4	Z	0.4	0.3	0.3	0.3	0.3	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	0.4
5-Sep	0.2	0.2	Z	0.3	0.3	0.4	0.3	0.2	0.2	0.1	M	0.1	0.1	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
6-Sep	0.1	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	0.1	0.2	0.2	0.2	0.1	0.1	0.2
7-Sep	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.4
8-Sep	0.2	0.2	0.2	0.1	0.1	Z	0.3	0.2	0.2	0.2	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	0.3
9-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	--	0.3
10-Sep	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
11-Sep	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	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3
12-Sep	0.3	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
13-Sep	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
14-Sep	0.2	0.2	0.1	0.1	0.1	Z	0.2	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	0.1	0.1	0.1	0.2
15-Sep	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	0.2	0.1	0.2
16-Sep	0.2	Z	0.3	0.3	0.4	0.4	0.3	0.4	0.6	0.5	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	0.6
17-Sep	0.2	0.2	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
18-Sep	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
19-Sep	0.2	0.2	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
20-Sep	0.1	0.2	0.3	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	0.1	0.3
21-Sep	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	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
22-Sep	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
23-Sep	0.1	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	0.0	0.0	0.0	0.1	0.1
24-Sep	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
25-Sep	0.2	0.2	0.2	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	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2
26-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2
27-Sep	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.1	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	0.1	0.1	0.0	0.1	0.1
28-Sep	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
29-Sep	0.1	0.1	Z	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	0.1	0.1	0.1	0.2	0.2	0.1	0.2
30-Sep	0.2	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	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.4
	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	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	0.4	0.4	0.5	0.4	0.4	0.3	0.4	0.7	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

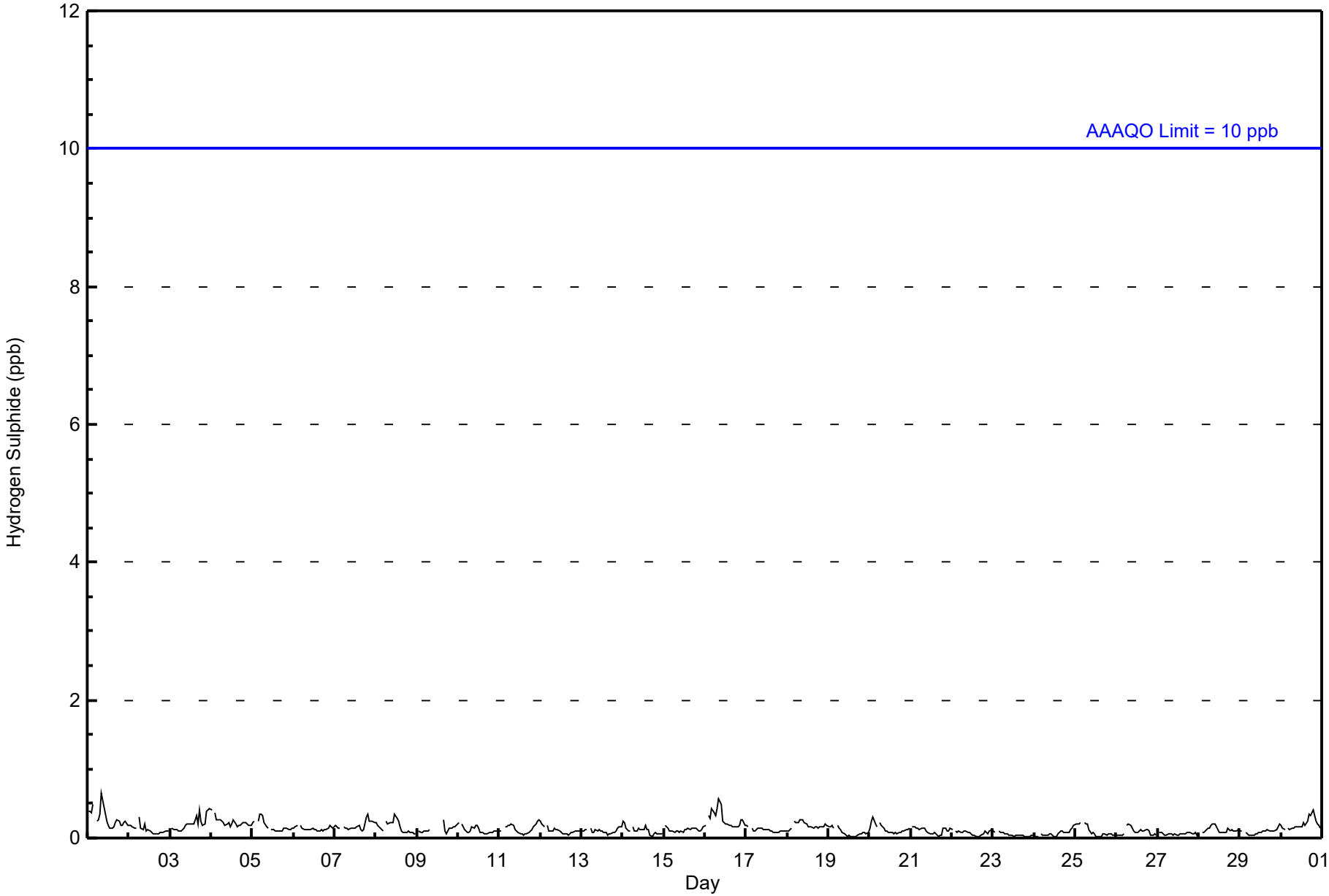
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	682	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: 682

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	10	5	13	3	8	56	103	39	26	29	56	121	100	47	26	32	674
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	10	5	13	3	8	56	103	39	26	29	56	121	100	47	26	32	674

Total Number of Valid Hours: 674

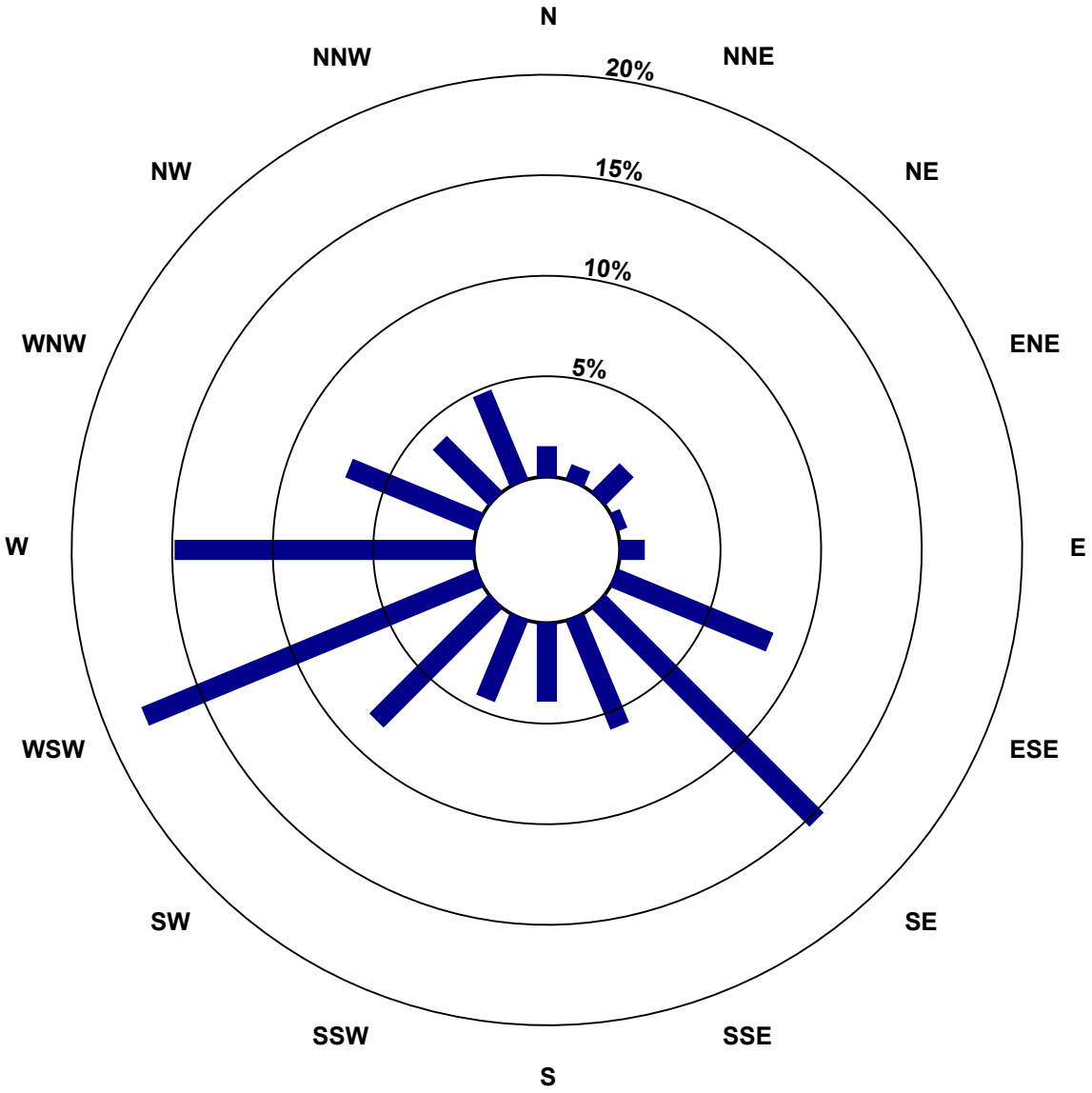
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Surmont 2



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

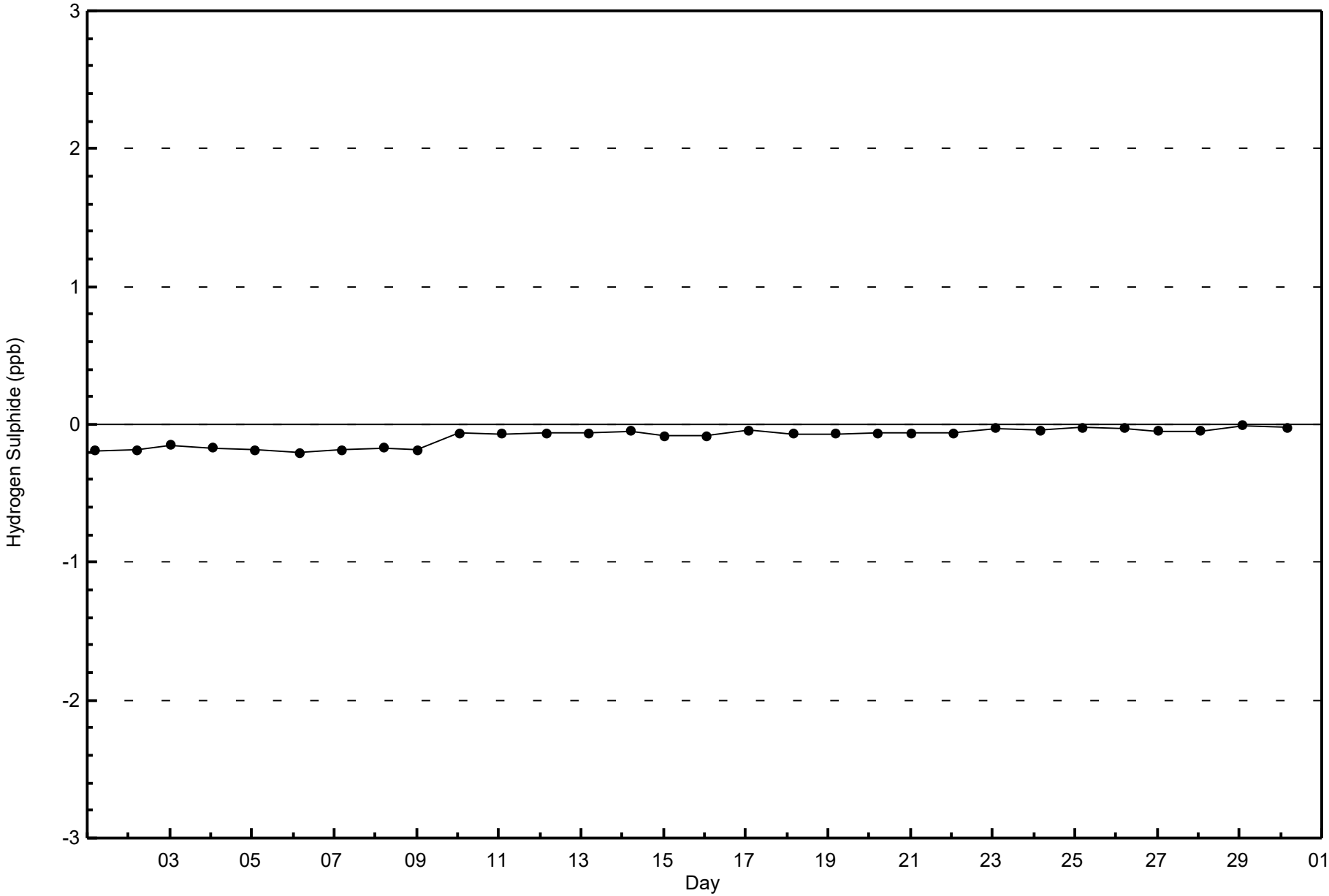
Total Number of Valid Hours: 674

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - September 2025

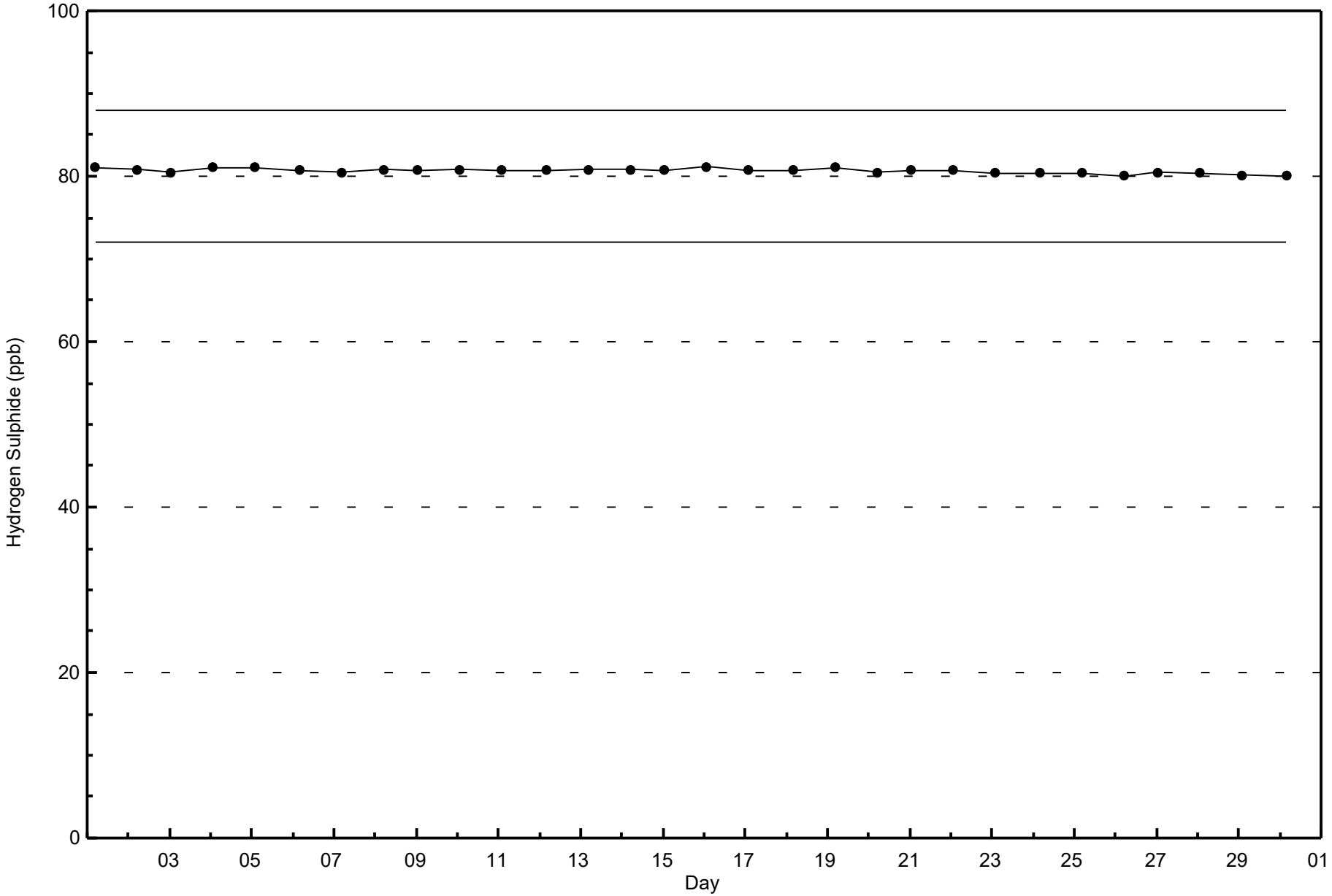


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.8 ppm on Sep 2 07:00 Maximum Daily Average: 2.5 ppm on Sep 1

Minimum Value: 2.2 ppm on Sep 14 21:00 Minimum Daily Average: 2.3 ppm on Sep 29

Maximum Diurnal Average: 2.4 ppm at hour 3 Minimum Diurnal Average: 2.3 ppm at hour 21

Monthly Average: 2.35 ppm Percentiles: P_1 = 2.2 P_{10} = 2.3 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 2.7

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.7	2.7	2.7	Z	2.8	2.7	2.7	2.6	2.6	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.6	2.5	2.8
2-Sep	2.5	2.5	2.5	2.5	Z	2.7	2.8	2.7	2.5	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.8
3-Sep	2.4	2.4	2.4	2.4	2.4	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.5
4-Sep	Z	2.3	2.3	2.3	2.3	2.3	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	2.4	2.4	2.4	2.5	2.3	2.5
5-Sep	2.5	Z	2.6	2.5	2.6	2.7	2.7	2.5	2.3	2.2	C	C	C	C	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.7
6-Sep	2.4	2.4	Z	2.4	2.5	2.5	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.5
7-Sep	2.5	2.6	2.6	Z	2.6	2.6	2.6	2.5	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.6
8-Sep	2.4	2.3	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4
9-Sep	2.4	2.3	2.3	2.3	2.3	Z	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4
10-Sep	Z	2.4	2.5	2.5	2.4	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	2.3	2.3	2.5
11-Sep	2.3	Z	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.6
12-Sep	2.5	2.4	Z	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5
13-Sep	2.4	2.5	2.6	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.6
14-Sep	2.5	2.5	2.5	2.4	Z	2.4	2.5	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.5
15-Sep	2.3	2.3	2.4	2.4	2.4	Z	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
16-Sep	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4
17-Sep	2.4	Z	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
18-Sep	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.5	2.3	2.5
19-Sep	2.4	2.6	2.7	Z	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.7
20-Sep	2.4	2.6	2.8	2.6	Z	2.5	2.4	2.5	2.5	2.4	2.4	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.4	2.8
21-Sep	2.6	2.4	2.3	2.3	2.3	Z	2.3	2.2	2.2	2.3	2.3	2.3	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	2.6
22-Sep	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	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3
23-Sep	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	2.2	2.3	2.3	2.3	2.3
24-Sep	2.3	2.3	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	2.4	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.3	2.4
25-Sep	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	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	2.2	2.3	2.4
26-Sep	2.3	2.3	2.3	2.3	Z	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
27-Sep	2.3	2.3	2.3	2.2	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
28-Sep	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	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	2.4
29-Sep	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3
30-Sep	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.3	2.4	2.4	2.4	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.5
	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	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	2.4	Diurnal Average	
	2.7	2.7	2.8	2.6	2.8	2.7	2.8	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.5	2.6	Diurnal Maximum	

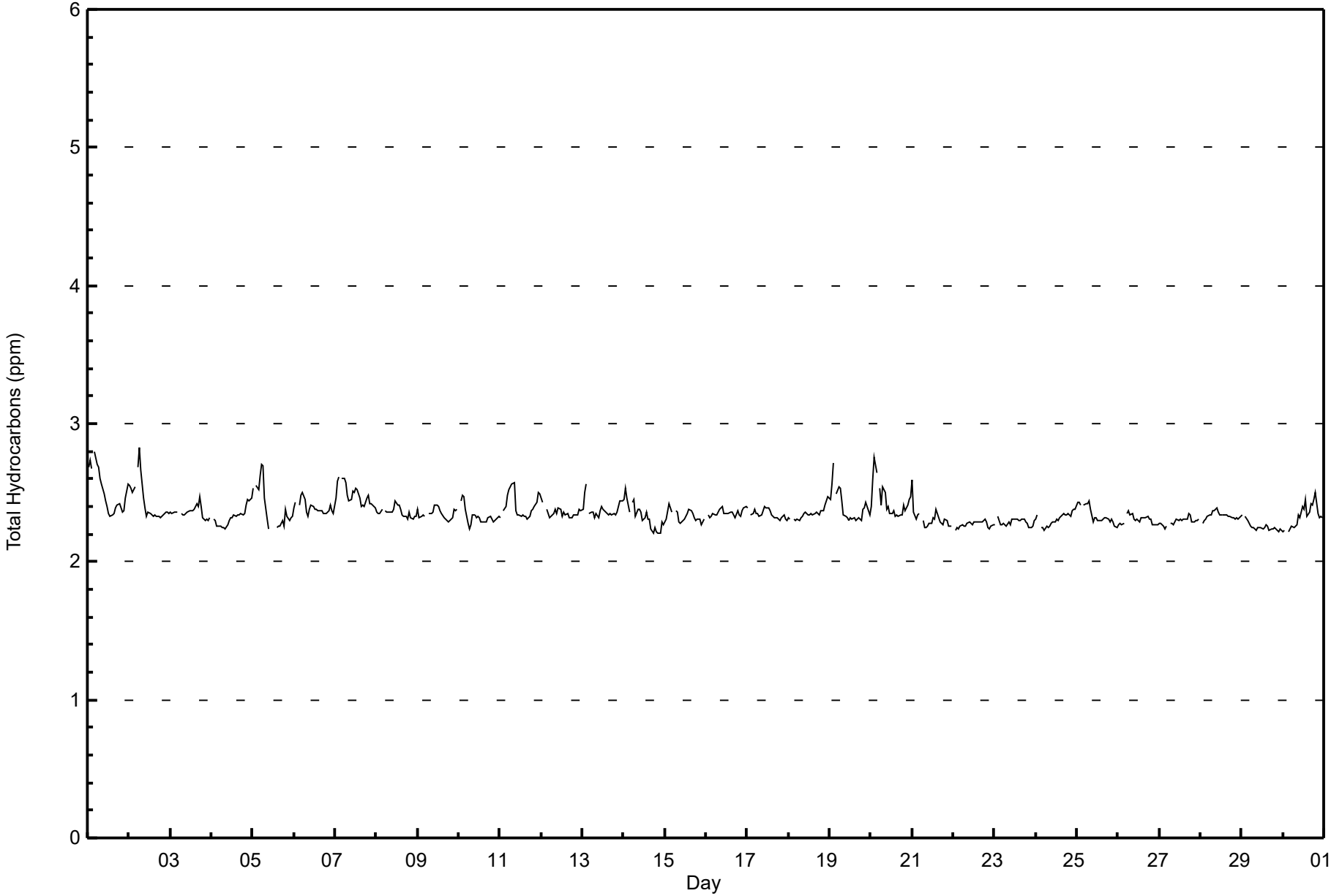
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - September 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Surmont 2 - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	10	5	13	3	9	53	107	41	28	26	54	122	101	49	27	31	679
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	10	5	13	3	9	53	107	41	28	26	54	122	101	49	27	31	679

Total Number of Valid Hours: 679

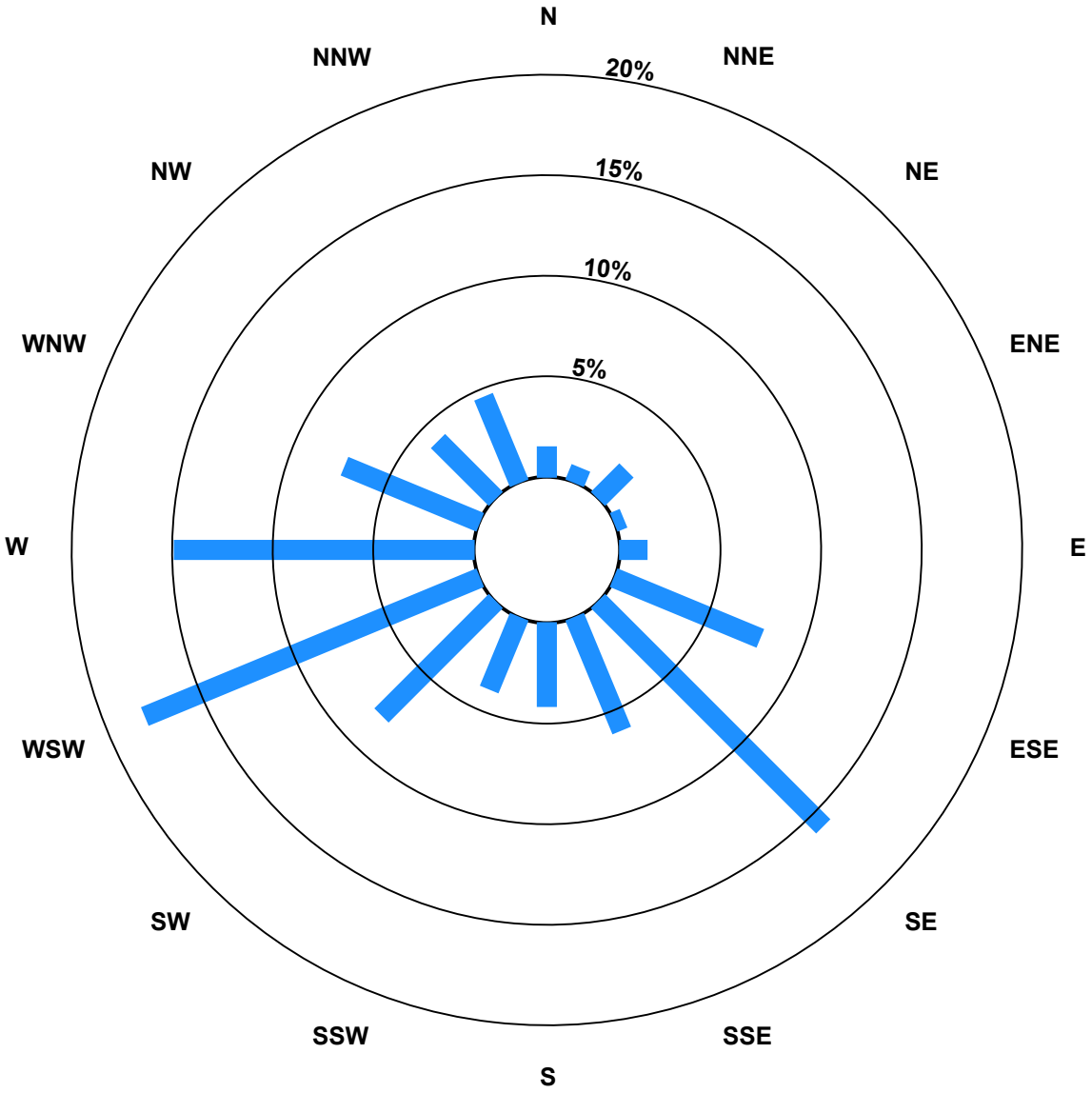
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Surmont 2



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

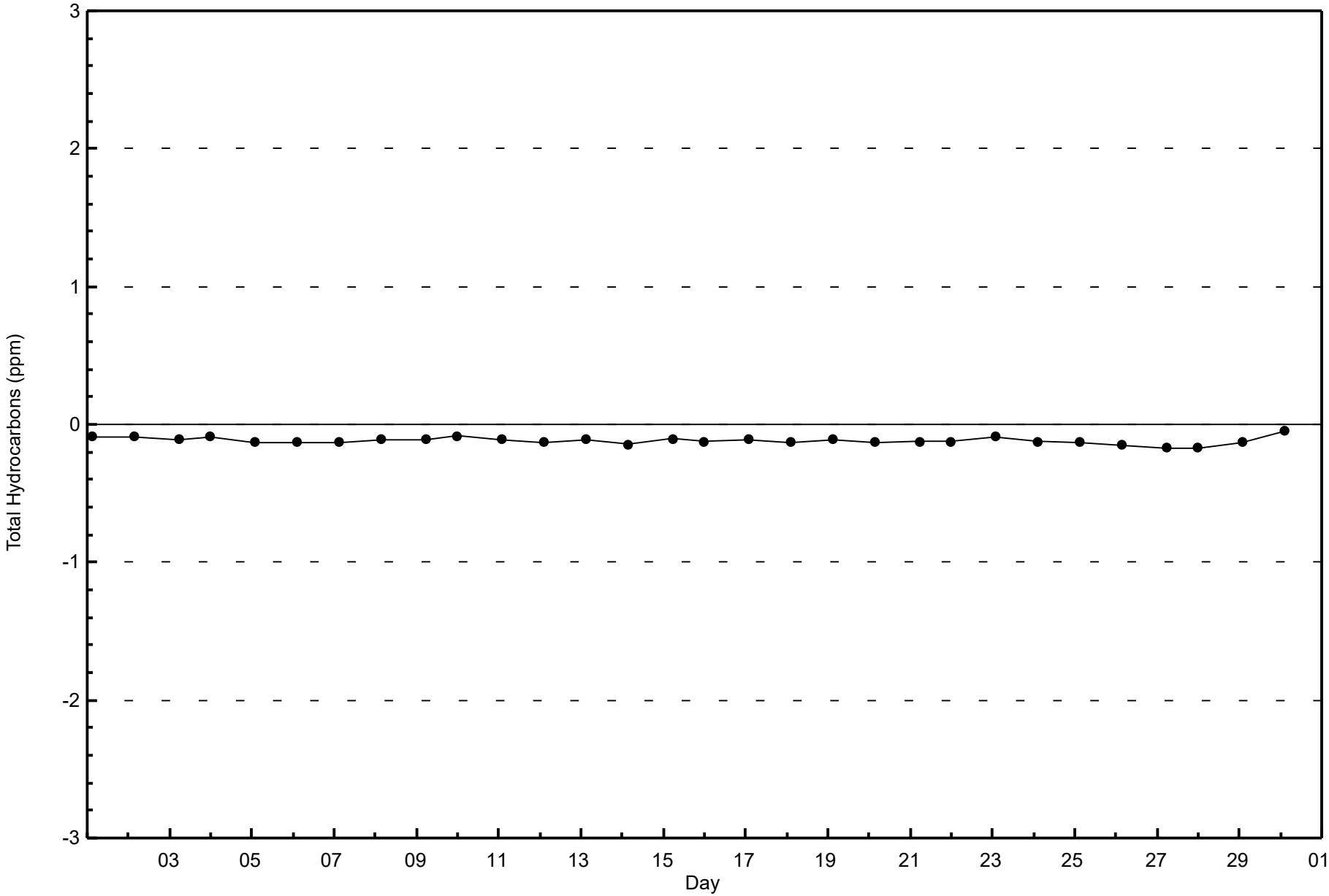
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - September 2025

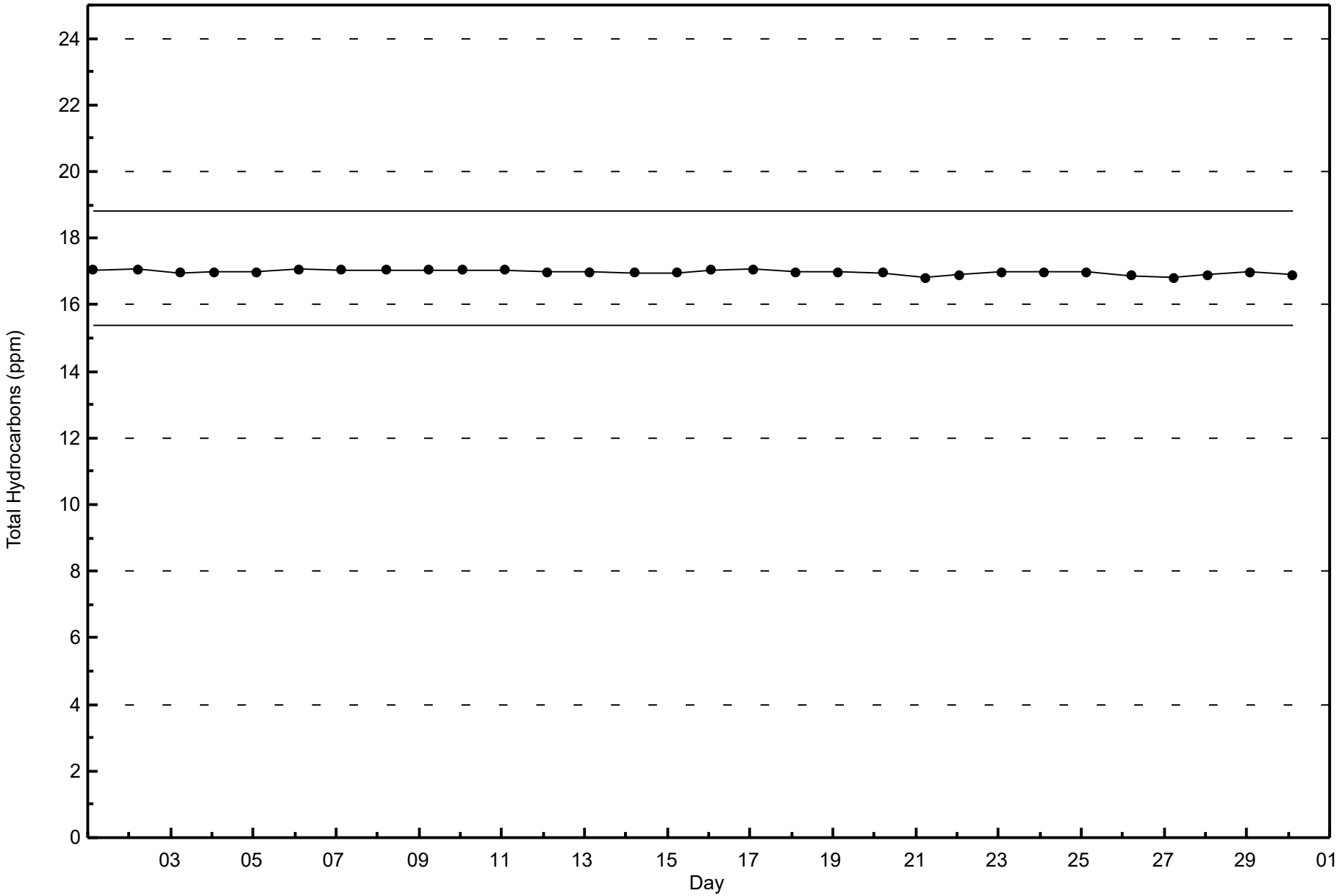


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 2.3 ppb on Sep 2 21:00 Maximum Daily Average: 0.4 ppb on Sep 8

Minimum Value: 0.0 ppb on Sep 4 03:00 Minimum Daily Average: 0.0 ppb on Sep 29

Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 24

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} = 0.2 P_{99} = 1.3

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.3	1.2	2.0	0.9	0.4	0.4	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	2.0
2-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.5	1.0	0.5	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.2	2.3
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.3
4-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.2	0.3	0.5	C	C	C	C	C	C	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	--	0.5
5-Sep	0.0	0.0	0.1	0.1	0.2	Z	0.4	0.6	0.5	0.2	M	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	0.1	0.6
6-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.5	0.5	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	0.1	0.5
7-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
8-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.4	1.1	1.2	1.0	1.2	1.5	1.0	0.6	0.3	0.1	0.1	0.1	0.0	0.6	0.1	0.0	0.0	0.0	0.4	1.5
9-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.4	1.0	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	0.1	0.1	0.2	1.0
10-Sep	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	1.4	2.3	1.3	0.1	0.1	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	0.2	2.3
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
13-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.1	0.2
14-Sep	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.1
15-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
16-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.6	1.4	0.8	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	0.1	1.4
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.5	1.0	0.9	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
19-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	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	0.2	0.0	0.0	0.0	0.2
20-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.3	1.3	0.7	0.3	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	1.3
21-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
22-Sep	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2
23-Sep	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	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	0.1	0.2
25-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	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	0.2
26-Sep	0.0	0.0	Z	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
27-Sep	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	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.0	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	0.0	0.2
29-Sep	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
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.3	0.2	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	Diurnal Average	
	0.1	0.1	0.1	0.1	0.2	0.1	1.4	2.3	1.4	1.0	1.2	2.0	1.0	0.6	0.4	0.3	0.3	0.3	0.1	0.6	2.3	0.2	0.1	0.1	Diurnal Maximum	

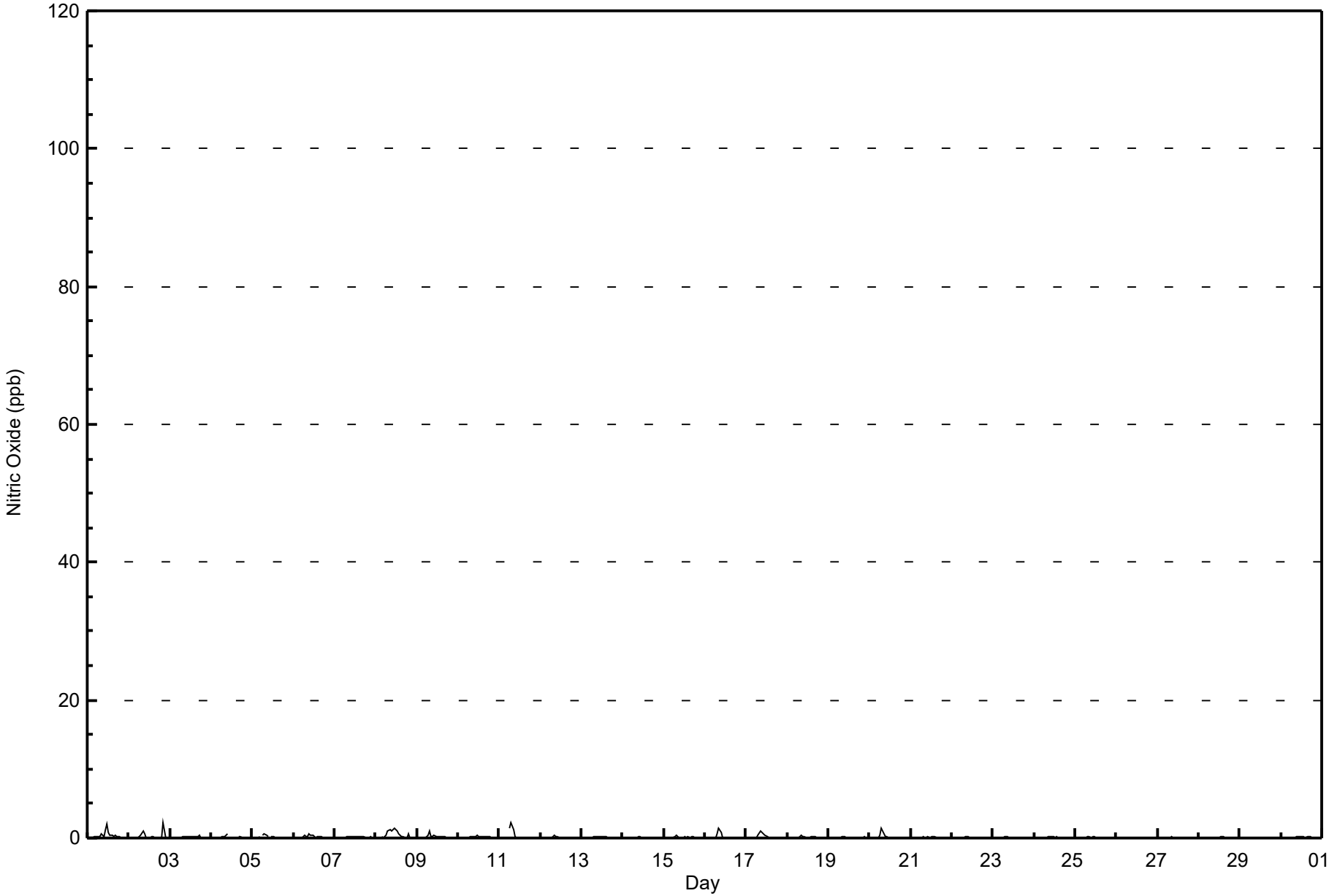
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Surmont 2 - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674
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	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674

Total Number of Valid Hours: 674

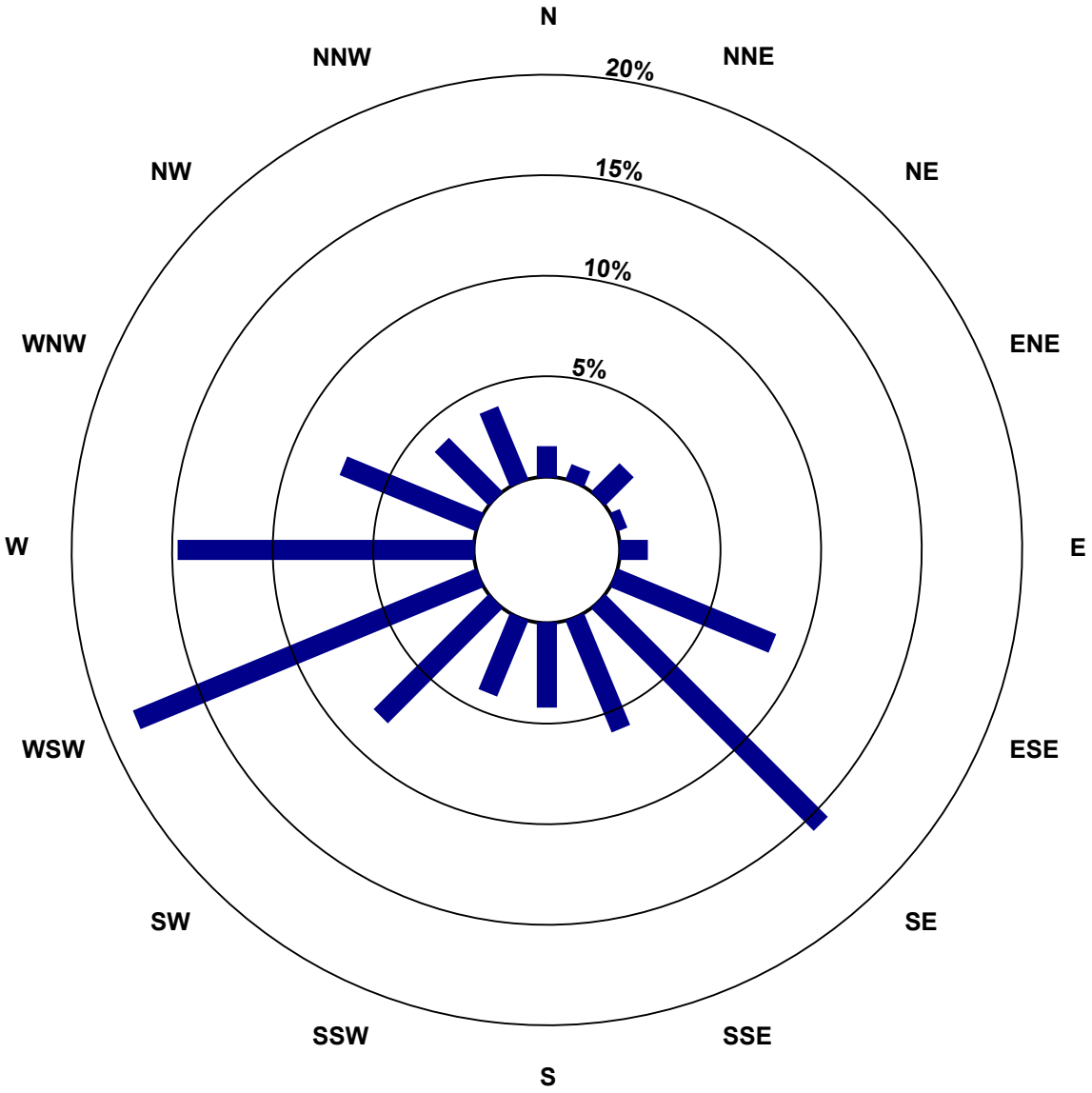
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

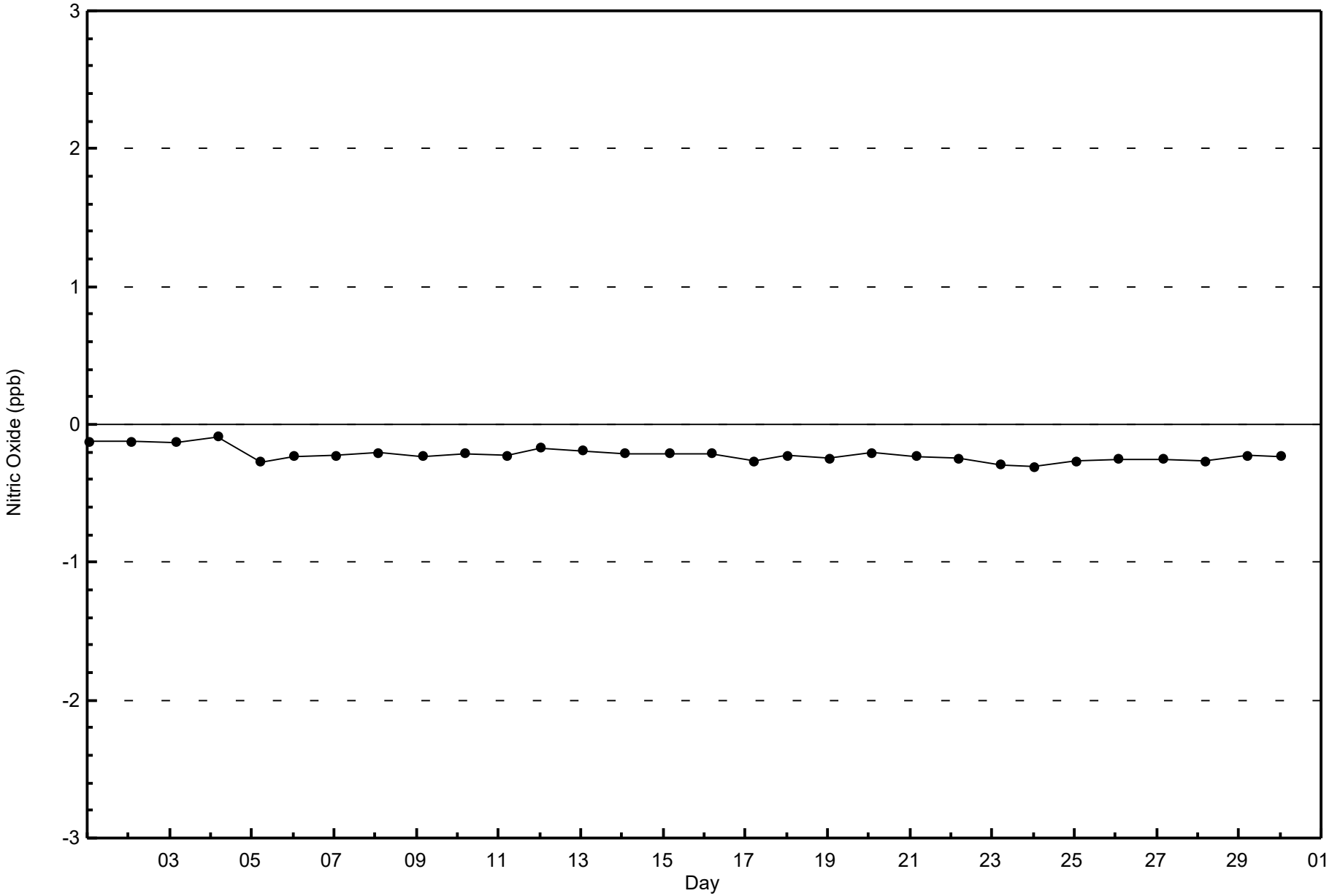
Total Number of Valid Hours: 674

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Surmont 2 - September 2025

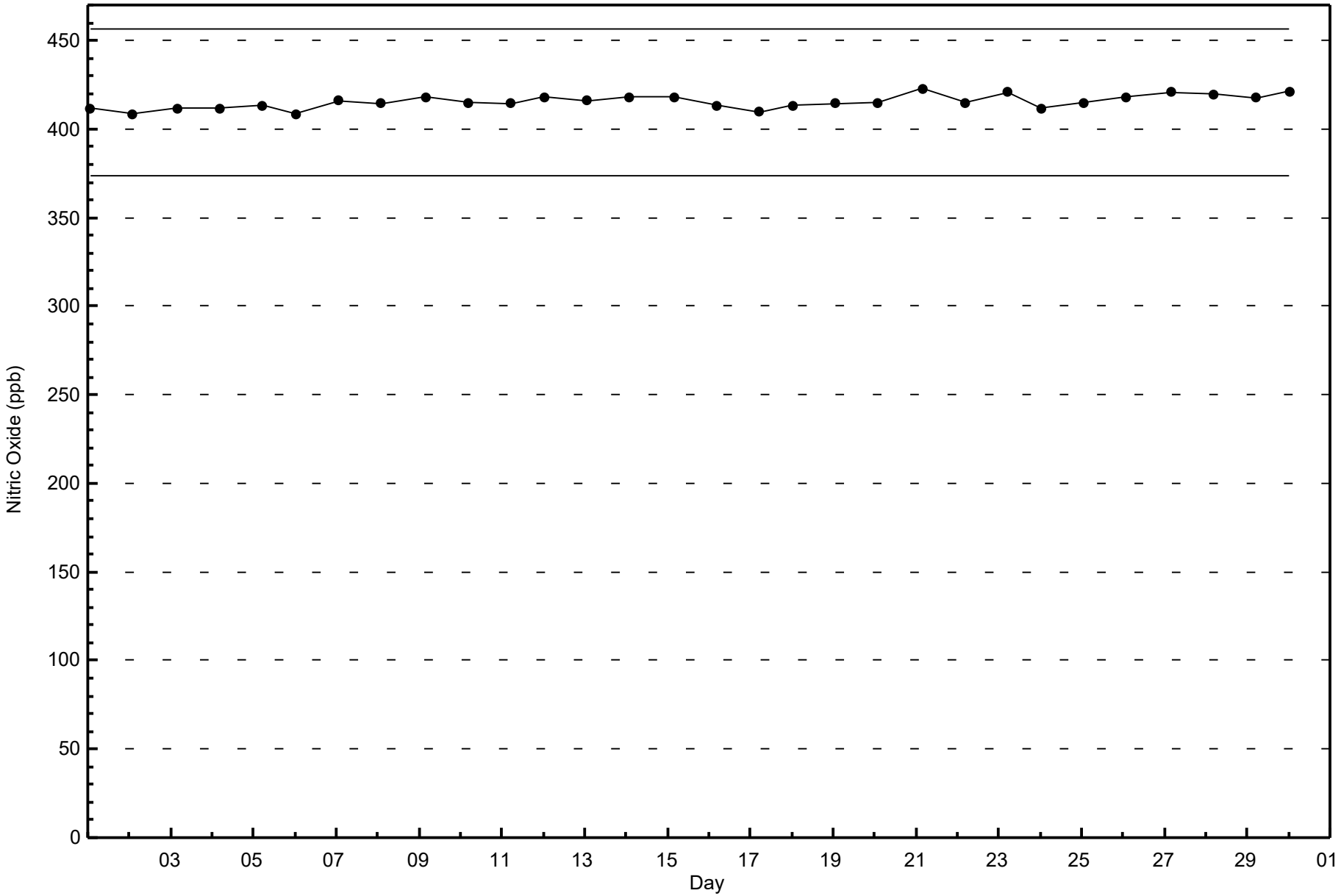


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 8.8 ppb on Sep 22 23:00

Maximum Daily Average: 2.0 ppb on Sep 30

Minimum Value: 0.2 ppb on Sep 5 17:00

Minimum Daily Average: 0.5 ppb on Sep 5

Maximum Diurnal Average: 1.5 ppb at hour 1

Minimum Diurnal Average: 0.9 ppb at hour 13

Monthly Average: 1.22 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.6$ Median = 0.9 $Q_3 = 1.5$ $P_{90} = 2.3$ $P_{99} = 4.8$

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.2	Z	1.3	0.9	0.8	0.8	0.8	1.4	2.3	1.3	2.0	2.8	2.0	1.6	2.3	2.5	4.3	3.8	3.4	2.5	2.3	2.2	2.2	1.4	2.0	4.3
2-Sep	1.1	0.6	Z	0.7	0.7	0.5	0.4	0.4	1.3	2.0	0.9	0.9	0.7	1.2	1.1	0.5	0.6	0.6	0.6	0.5	2.0	0.8	0.6	0.6	0.8	2.0
3-Sep	0.6	1.1	1.4	Z	2.0	1.5	1.3	1.3	1.2	1.2	1.3	1.3	1.4	1.4	1.7	1.9	1.9	4.8	2.0	1.2	2.0	2.3	2.0	2.5	1.7	4.8
4-Sep	3.2	3.2	2.3	1.6	Z	1.9	2.0	1.6	1.4	1.6	C	C	C	C	C	C	1.5	2.0	2.7	3.0	2.1	1.9	1.9	1.1	--	3.2
5-Sep	0.9	0.7	0.4	0.5	0.6	Z	0.3	0.5	0.8	0.7	M	0.6	0.6	0.4	0.3	0.3	0.2	0.2	0.4	0.5	1.2	0.6	0.3	0.5	0.5	1.2
6-Sep	Z	0.5	0.5	0.5	1.0	0.6	0.5	0.6	1.1	1.6	1.6	1.6	1.3	1.2	1.2	1.3	1.6	0.8	0.8	0.9	1.9	2.8	2.2	2.7	1.3	2.8
7-Sep	4.1	Z	1.4	1.1	0.9	0.6	0.5	0.8	1.3	1.6	1.7	1.6	1.6	1.9	1.7	2.4	1.4	2.1	3.0	3.5	2.7	3.6	2.4	2.7	1.9	4.1
8-Sep	2.6	2.6	Z	1.5	0.9	2.4	2.3	2.2	2.3	2.2	2.0	2.6	2.2	2.1	1.6	1.1	1.0	0.5	0.6	2.4	1.5	1.3	0.7	0.4	1.7	2.6
9-Sep	0.3	0.2	0.3	Z	0.6	0.5	1.0	1.6	1.2	1.2	1.7	1.9	1.3	1.3	1.1	1.0	0.9	0.9	1.0	1.0	0.9	0.8	1.1	2.6	1.1	2.6
10-Sep	3.0	1.4	1.2	1.2	Z	1.3	0.8	1.3	1.3	0.9	1.3	1.9	1.1	0.5	0.5	0.6	0.7	1.6	3.0	2.8	2.5	1.5	1.0	1.7	1.4	3.0
11-Sep	2.7	2.6	3.2	3.0	1.9	Z	1.7	1.1	1.3	0.9	0.9	0.6	0.4	0.3	0.4	0.3	0.4	0.6	0.6	0.9	0.7	0.8	1.3	1.5	1.2	3.2
12-Sep	Z	1.4	1.3	1.5	1.0	0.8	0.8	0.6	1.9	1.1	1.0	0.9	0.7	0.8	0.9	1.1	0.9	0.9	1.0	1.1	1.2	1.4	0.9	0.8	1.0	1.9
13-Sep	0.8	Z	1.4	1.1	0.9	0.7	0.7	0.7	1.7	1.8	1.4	1.4	1.1	1.6	1.5	1.1	0.9	0.8	1.1	0.9	1.0	1.3	1.2	1.0	1.1	1.8
14-Sep	1.5	1.0	Z	0.8	0.9	1.7	1.1	1.0	1.1	1.4	1.3	0.9	0.9	0.9	0.7	0.8	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.8	1.7
15-Sep	0.9	1.1	0.8	Z	0.8	1.0	0.8	0.6	0.7	0.7	0.6	0.5	0.8	0.7	0.8	0.7	0.9	0.8	0.5	0.5	0.4	0.5	0.4	0.6	0.7	1.1
16-Sep	0.5	0.5	0.7	0.7	Z	1.9	1.9	2.5	4.5	3.6	0.7	0.7	0.6	0.5	0.5	0.6	0.8	0.9	0.6	1.1	1.1	0.9	1.0	0.8	1.2	4.5
17-Sep	0.9	0.9	0.7	0.4	0.4	Z	0.8	1.4	1.8	1.5	1.3	1.3	1.2	1.0	0.9	0.8	0.6	0.4	0.3	0.3	0.9	1.2	0.7	0.5	0.9	1.8
18-Sep	Z	1.6	1.1	1.3	1.5	1.5	1.4	1.2	1.2	0.8	0.8	0.7	0.7	0.6	1.2	1.1	1.3	2.0	1.3	2.8	2.5	3.2	1.8	1.4	1.4	3.2
19-Sep	1.1	Z	0.7	0.8	0.6	0.5	0.6	0.5	1.1	1.1	0.6	0.7	0.7	0.7	0.7	0.7	0.7	1.2	2.7	4.1	2.1	3.6	3.3	1.4	1.3	4.1
20-Sep	1.5	1.1	Z	2.9	2.6	2.2	7.6	4.2	2.3	1.6	1.1	1.0	0.8	0.8	0.8	0.8	0.7	0.8	0.8	1.0	1.1	1.0	0.8	0.8	1.7	7.6
21-Sep	0.9	2.1	2.1	Z	2.0	1.6	1.7	1.5	0.5	0.5	0.7	0.6	1.0	1.0	0.8	0.7	0.4	0.4	0.4	0.6	0.8	0.6	0.5	0.7	1.0	2.1
22-Sep	0.5	0.6	0.8	0.9	Z	0.7	0.7	0.7	0.8	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.8	1.7	2.8	3.6	4.0	8.8	8.5	1.7	8.8
23-Sep	4.8	3.8	6.3	1.7	1.7	Z	1.2	1.2	1.1	0.7	0.7	0.5	0.5	0.6	0.4	0.4	0.5	0.4	0.3	0.5	0.4	0.5	0.4	3.1	1.4	6.3
24-Sep	Z	1.2	1.6	0.4	0.5	0.6	0.9	0.9	1.1	1.0	0.7	0.4	0.3	0.5	0.4	0.6	0.7	0.8	1.8	1.0	1.3	2.1	1.6	1.4	0.9	2.1
25-Sep	1.7	Z	0.9	0.9	1.0	1.2	1.2	1.0	0.7	0.6	0.8	0.7	0.4	0.4	0.5	0.8	0.9	1.1	1.0	1.1	1.4	1.1	0.7	0.9	0.9	1.7
26-Sep	0.7	1.1	Z	1.2	2.3	2.3	1.2	0.9	0.8	0.6	0.6	0.4	0.5	0.5	0.6	0.5	0.9	1.1	0.8	0.8	0.4	0.4	0.5	0.5	0.9	2.3
27-Sep	1.6	3.2	4.7	Z	0.5	0.4	1.5	0.9	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.7	0.7	0.4	0.5	0.4	0.3	0.8	4.7
28-Sep	0.3	0.3	0.4	0.7	Z	0.8	1.6	1.2	0.6	0.6	0.5	0.4	0.2	0.7	1.1	0.4	0.3	0.5	0.7	0.3	0.3	0.5	0.8	1.2	0.6	1.6
29-Sep	1.0	0.8	0.4	0.3	0.3	Z	0.5	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.9	0.9	1.0	0.9	1.0	0.6	0.6	0.5	0.7	0.7	0.6	1.0
30-Sep	Z	0.7	0.6	0.6	0.6	1.2	1.6	1.4	1.0	1.2	1.0	1.6	1.6	2.6	2.3	3.2	4.1	3.7	4.8	5.5	2.2	1.7	2.4	1.4	2.0	5.5
	1.5	1.4	1.5	1.1	1.1	1.2	1.3	1.2	1.3	1.2	1.0	1.0	0.9	0.9	0.9	1.0	1.0	1.2	1.3	1.5	1.4	1.5	1.4	1.5	Diurnal Average	
	4.8	3.8	6.3	3.0	2.6	2.4	7.6	4.2	4.5	3.6	2.0	2.8	2.2	2.6	2.3	3.2	4.3	4.8	4.8	5.5	3.6	4.0	8.8	8.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

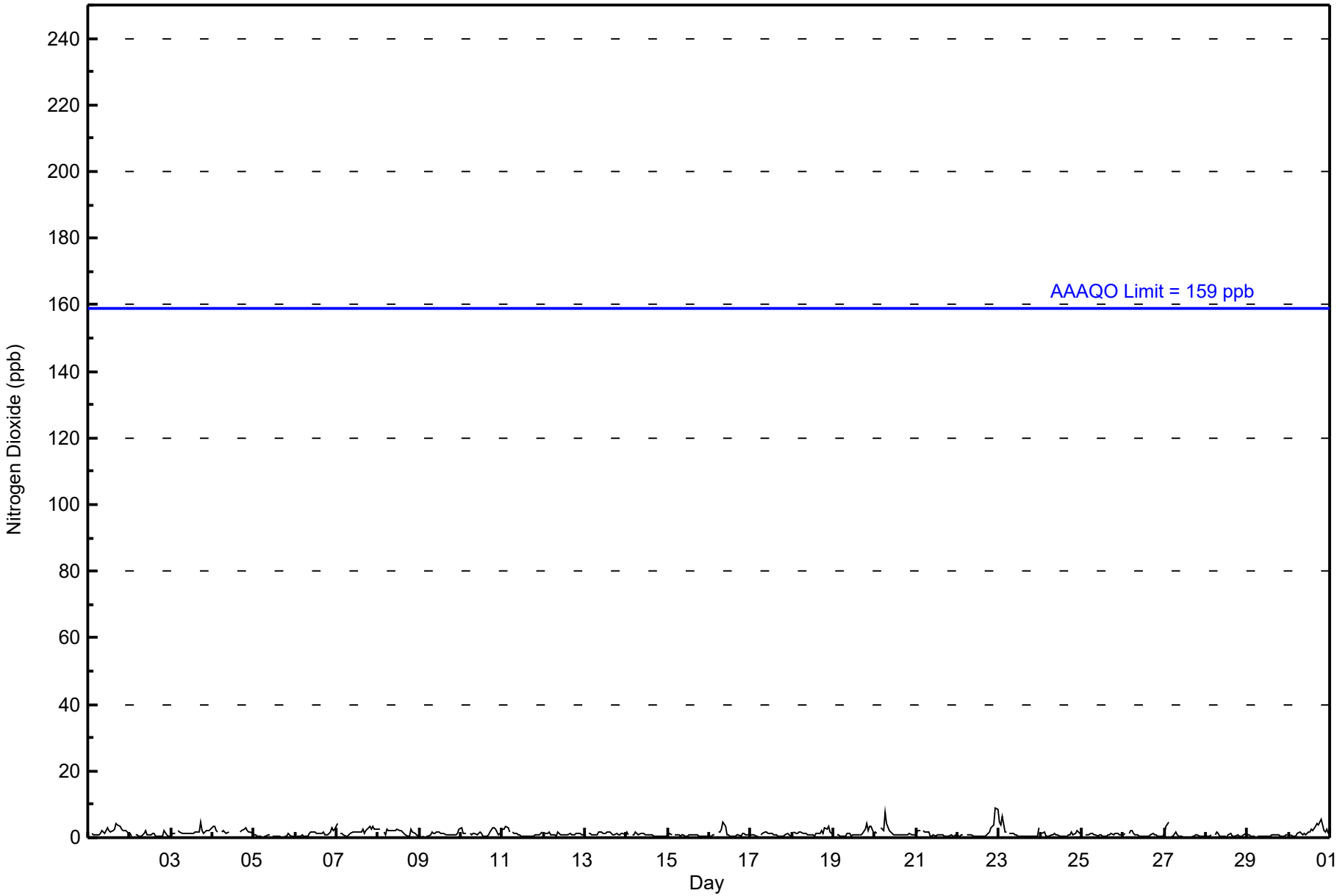
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025



Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674
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	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674

Total Number of Valid Hours: 674

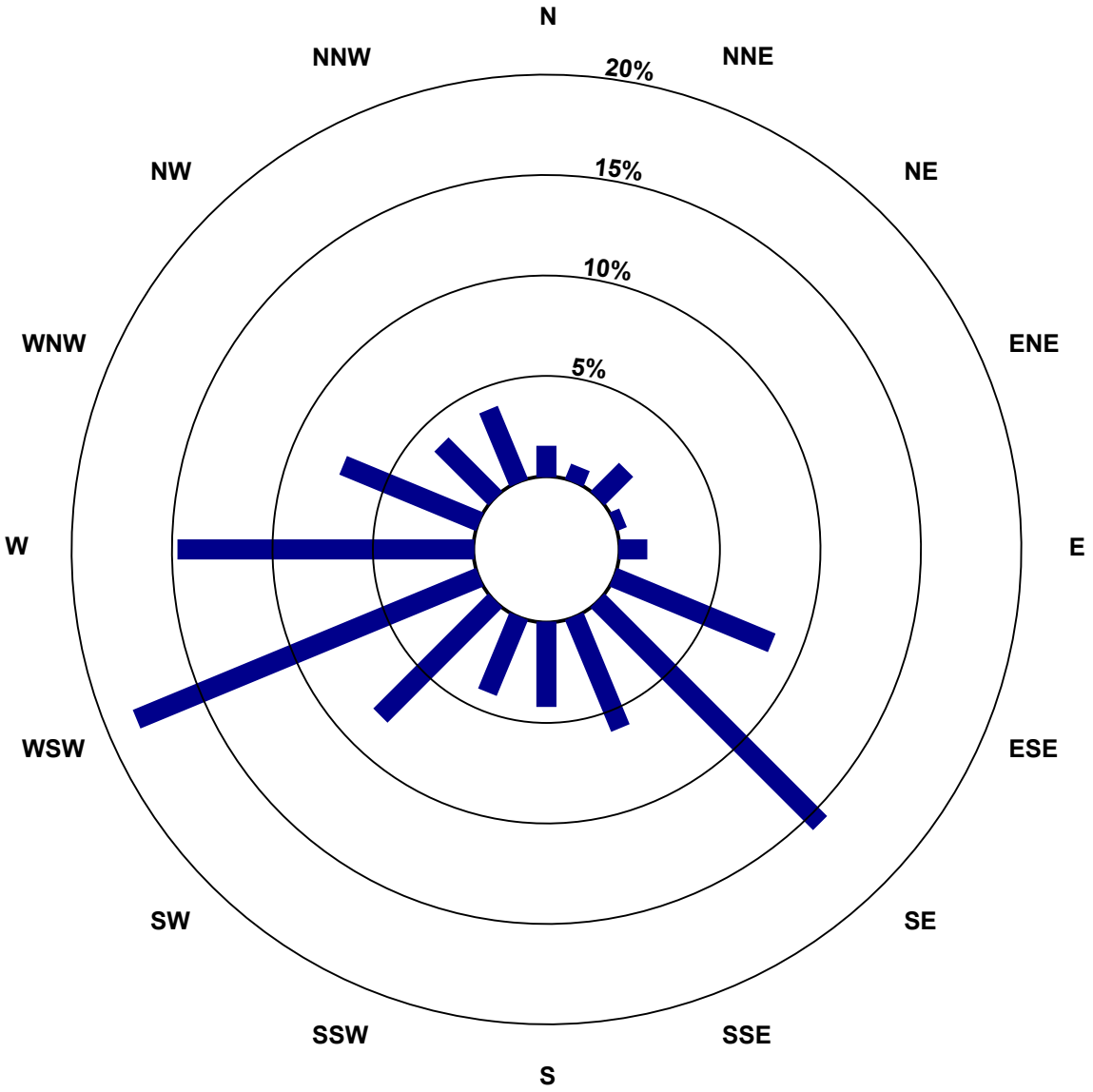
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

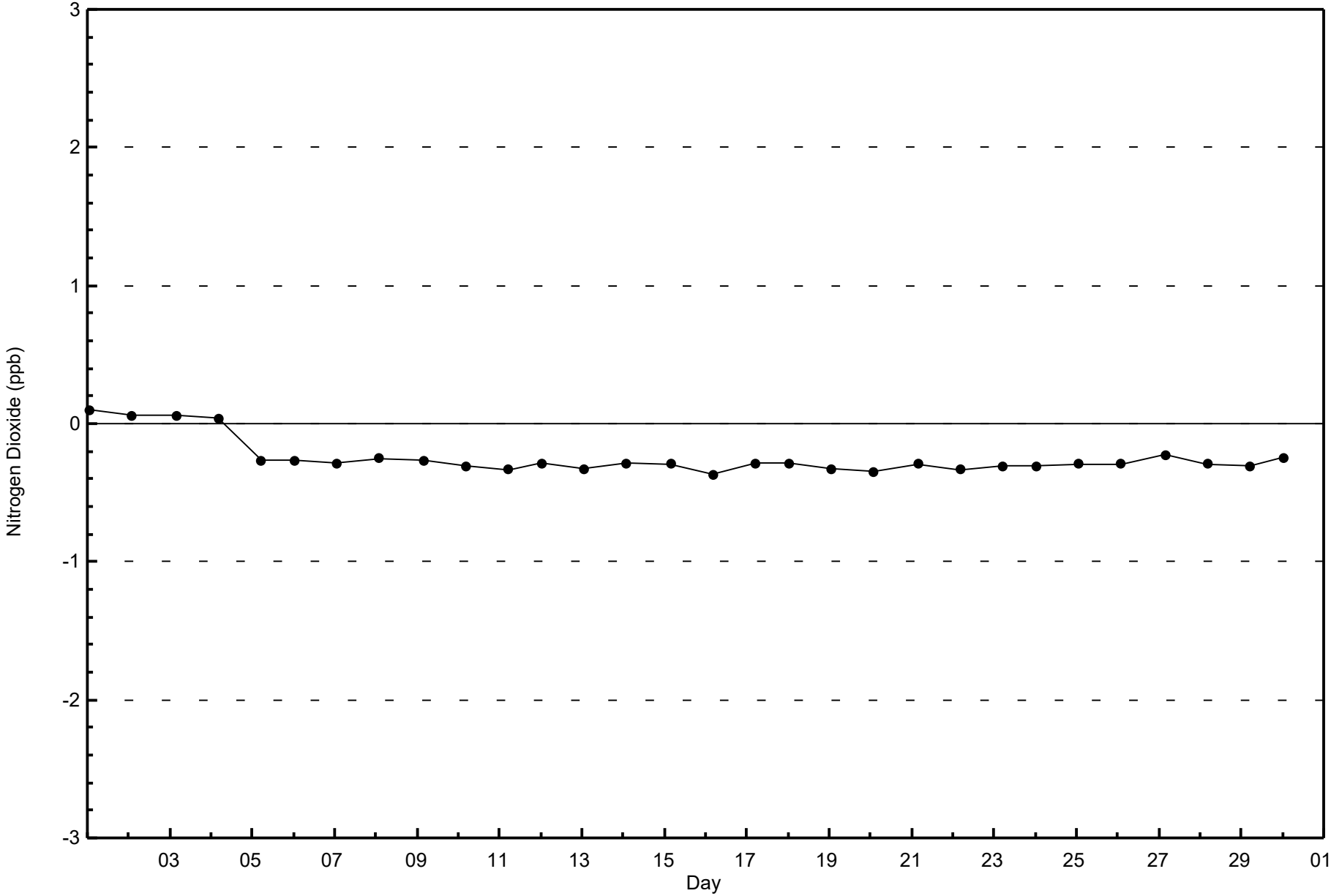
Total Number of Valid Hours: 674

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025

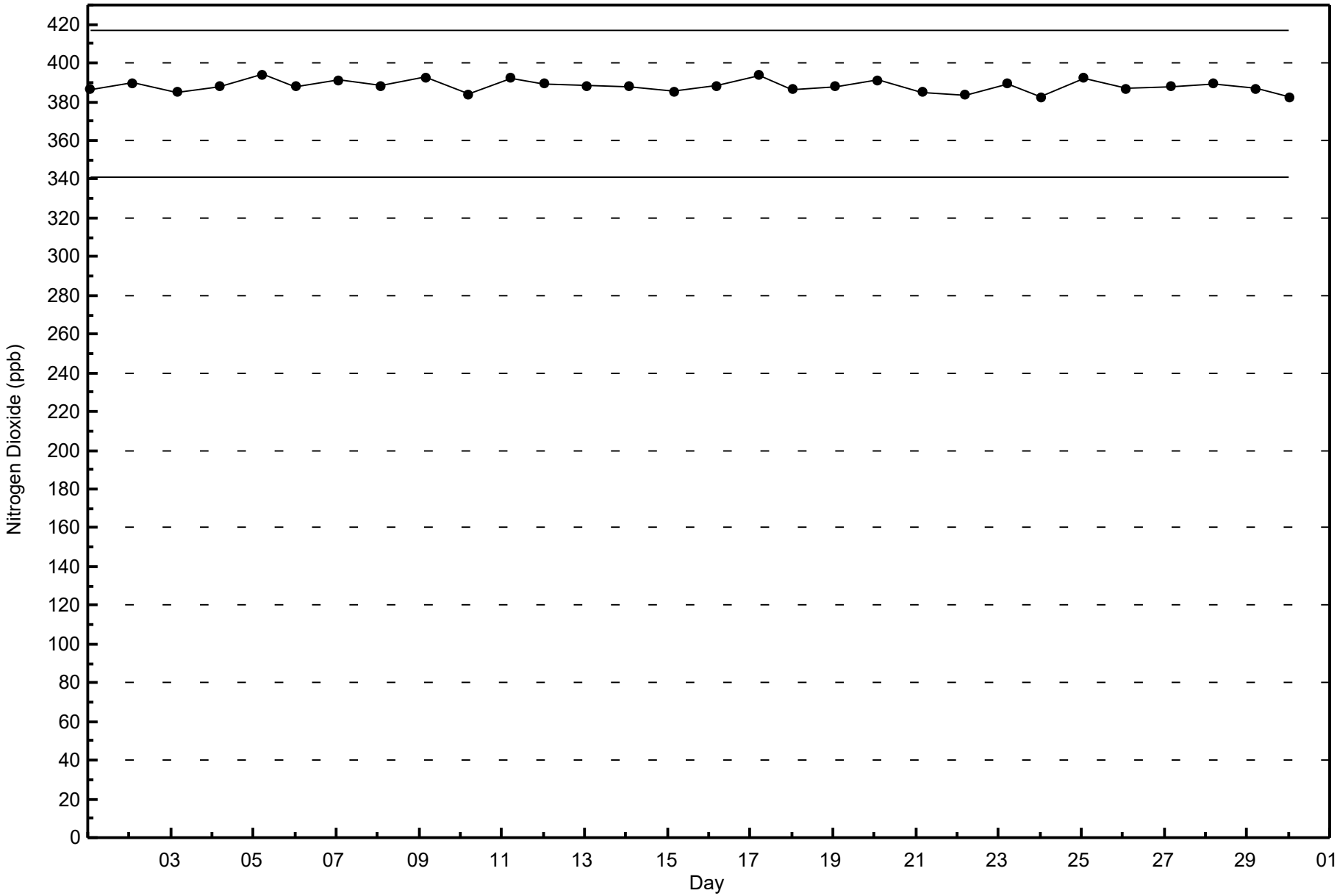


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.9 ppb on Sep 22 23:00 Maximum Daily Average: 2.3 ppb on Sep 1

Minimum Value: 0.2 ppb on Sep 27 16:00 Minimum Daily Average: 0.6 ppb on Sep 29
Maximum Diurnal Average: 1.7 ppb at hour 9 Minimum Diurnal Average: 1.0 ppb at hour 16
Monthly Average: 1.33 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.6 Median = 1.0 Q_3 = 1.6 P_{90} = 2.7 P_{99} = 5.2

Hours in Service:	720
Hours of Data:	683
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	Z	1.4	1.0	0.9	0.9	1.0	1.7	2.9	1.6	3.2	4.8	2.9	2.0	2.7	2.7	4.6	4.0	3.5	2.6	2.3	2.2	2.2	1.4	2.3	4.8
2-Sep	1.1	0.6	Z	0.7	0.7	0.5	0.5	0.9	2.3	2.5	1.0	1.0	0.8	1.4	1.3	0.6	0.6	0.6	0.6	0.5	4.3	0.8	0.6	0.6	1.1	4.3
3-Sep	0.6	1.1	1.4	Z	2.0	1.5	1.4	1.4	1.3	1.4	1.5	1.5	1.5	1.5	1.8	2.1	2.0	5.1	2.1	1.2	2.1	2.3	2.0	2.5	1.8	5.1
4-Sep	3.2	3.2	2.3	1.6	Z	1.9	2.2	1.8	1.7	2.1	C	C	C	C	C	C	1.8	2.2	2.8	3.0	2.1	1.9	1.9	1.1	--	3.2
5-Sep	0.9	0.7	0.5	0.6	0.8	Z	0.7	1.1	1.3	0.9	M	0.8	0.8	0.5	0.4	0.4	0.3	0.3	0.4	0.5	1.2	0.6	0.3	0.5	0.7	1.3
6-Sep	Z	0.5	0.5	0.5	1.0	0.6	0.9	0.8	1.3	2.1	2.1	1.9	1.5	1.3	1.3	1.4	1.7	0.8	0.8	0.9	1.9	2.8	2.2	2.7	1.4	2.8
7-Sep	4.1	Z	1.4	1.1	0.9	0.6	0.6	1.0	1.5	1.8	1.9	1.8	1.8	2.2	1.9	2.7	1.5	2.2	3.1	3.6	2.8	3.7	2.5	2.8	2.1	4.1
8-Sep	2.7	2.7	Z	1.6	1.0	2.5	2.7	3.3	3.5	3.2	3.2	4.1	3.2	2.7	1.9	1.2	1.1	0.6	0.6	3.0	1.6	1.3	0.7	0.4	2.1	4.1
9-Sep	0.3	0.2	0.3	Z	0.6	0.5	1.4	2.6	1.4	1.5	2.0	2.1	1.5	1.4	1.2	1.1	1.0	1.0	1.1	1.1	1.0	0.9	1.2	2.7	1.2	2.7
10-Sep	3.1	1.5	1.2	1.2	Z	1.4	0.9	1.4	1.5	1.1	1.5	2.3	1.3	0.6	0.6	0.7	0.8	1.7	3.1	2.9	2.5	1.5	1.0	1.7	1.5	3.1
11-Sep	2.7	2.6	3.2	3.0	1.9	Z	3.1	3.4	2.6	1.0	1.0	0.6	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.9	0.7	0.8	1.3	1.5	1.5	3.4
12-Sep	Z	1.4	1.3	1.5	1.0	0.8	0.8	0.7	2.3	1.2	1.1	1.0	0.8	0.9	1.0	1.2	1.0	1.0	1.1	1.1	1.2	1.4	0.9	0.8	1.1	2.3
13-Sep	0.8	Z	1.4	1.1	0.9	0.7	0.7	0.8	1.9	2.0	1.6	1.5	1.2	1.7	1.6	1.2	1.0	0.9	1.1	0.9	1.0	1.3	1.2	1.0	1.2	2.0
14-Sep	1.5	1.0	Z	0.8	0.9	1.7	1.1	1.1	1.2	1.5	1.4	1.0	1.0	0.9	0.7	0.8	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.9	1.7
15-Sep	0.9	1.1	0.8	Z	0.8	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.9	0.8	0.9	0.8	1.0	0.9	0.5	0.5	0.4	0.5	0.4	0.6	0.8	1.1
16-Sep	0.5	0.5	0.7	0.7	Z	1.9	1.9	3.1	5.9	4.4	0.8	0.7	0.6	0.6	0.6	0.7	0.9	1.0	0.6	1.1	1.1	0.9	1.0	0.8	1.4	5.9
17-Sep	0.9	0.9	0.7	0.4	0.4	Z	0.9	1.9	2.8	2.4	1.9	1.6	1.3	1.1	1.0	0.9	0.7	0.4	0.3	0.3	0.9	1.2	0.7	0.5	1.1	2.8
18-Sep	Z	1.6	1.1	1.3	1.5	1.5	1.4	1.4	1.5	1.0	0.9	0.8	0.8	0.7	1.4	1.2	1.4	2.1	1.3	2.9	2.5	3.2	1.8	1.4	1.5	3.2
19-Sep	1.1	Z	0.7	0.8	0.6	0.5	0.6	0.6	1.3	1.3	0.6	0.7	0.7	0.7	0.7	0.7	0.7	1.2	2.7	4.1	2.1	3.8	3.3	1.4	1.3	4.1
20-Sep	1.5	1.1	Z	2.9	2.6	2.2	7.9	5.5	3.0	1.9	1.2	1.1	0.8	0.9	0.8	0.8	0.7	0.8	0.8	1.0	1.1	1.0	0.8	0.8	1.8	7.9
21-Sep	0.9	2.1	2.1	Z	2.0	1.6	1.7	1.6	0.5	0.5	0.8	0.7	1.1	1.1	0.9	0.8	0.4	0.4	0.4	0.6	0.9	0.6	0.5	0.7	1.0	2.1
22-Sep	0.5	0.6	0.8	0.9	Z	0.7	0.7	0.8	1.0	0.7	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.8	1.7	2.8	3.6	4.1	8.9	8.5	1.7	8.9
23-Sep	4.8	3.8	6.4	1.7	1.7	Z	1.2	1.3	1.2	0.8	0.7	0.6	0.6	0.7	0.4	0.5	0.6	0.4	0.3	0.5	0.4	0.5	0.4	3.1	1.4	6.4
24-Sep	Z	1.2	1.6	0.4	0.5	0.6	1.0	0.9	1.2	1.2	0.8	0.5	0.3	0.6	0.5	0.7	0.8	0.8	1.8	1.0	1.3	2.1	1.6	1.4	1.0	2.1
25-Sep	1.7	Z	0.9	0.9	1.0	1.2	1.2	1.2	0.8	0.7	1.0	0.8	0.4	0.4	0.5	0.8	0.9	1.1	1.0	1.1	1.4	1.1	0.7	0.9	0.9	1.7
26-Sep	0.7	1.1	Z	1.2	2.3	2.3	1.2	0.9	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.5	1.0	1.1	0.8	0.8	0.4	0.4	0.5	0.5	0.9	2.3
27-Sep	1.6	3.2	4.7	Z	0.5	0.4	1.5	1.0	0.7	0.5	0.4	0.2	0.3	0.2	0.3	0.2	0.3	0.6	0.7	0.7	0.4	0.5	0.4	0.3	0.9	4.7
28-Sep	0.3	0.3	0.4	0.7	Z	0.8	1.6	1.3	0.7	0.6	0.5	0.4	0.2	0.8	1.3	0.4	0.3	0.5	0.7	0.3	0.3	0.5	0.8	1.2	0.7	1.6
29-Sep	1.0	0.8	0.4	0.3	0.3	Z	0.5	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.9	0.9	1.0	0.9	1.0	0.6	0.6	0.5	0.7	0.7	0.6	1.0
30-Sep	Z	0.7	0.6	0.6	0.6	1.2	1.6	1.5	1.1	1.4	1.1	1.8	1.8	2.7	2.4	3.4	4.3	3.8	4.9	5.6	2.2	1.7	2.4	1.4	2.1	5.6
	1.6	1.4	1.5	1.1	1.1	1.2	1.5	1.6	1.7	1.4	1.2	1.3	1.0	1.0	1.1	1.0	1.1	1.3	1.4	1.6	1.5	1.5	1.5	1.5	Diurnal Average	
	4.8	3.8	6.4	3.0	2.6	2.5	7.9	5.5	5.9	4.4	3.2	4.8	3.2	2.7	2.7	3.4	4.6	5.1	4.9	5.6	4.3	4.1	8.9	8.5	Diurnal Maximum	

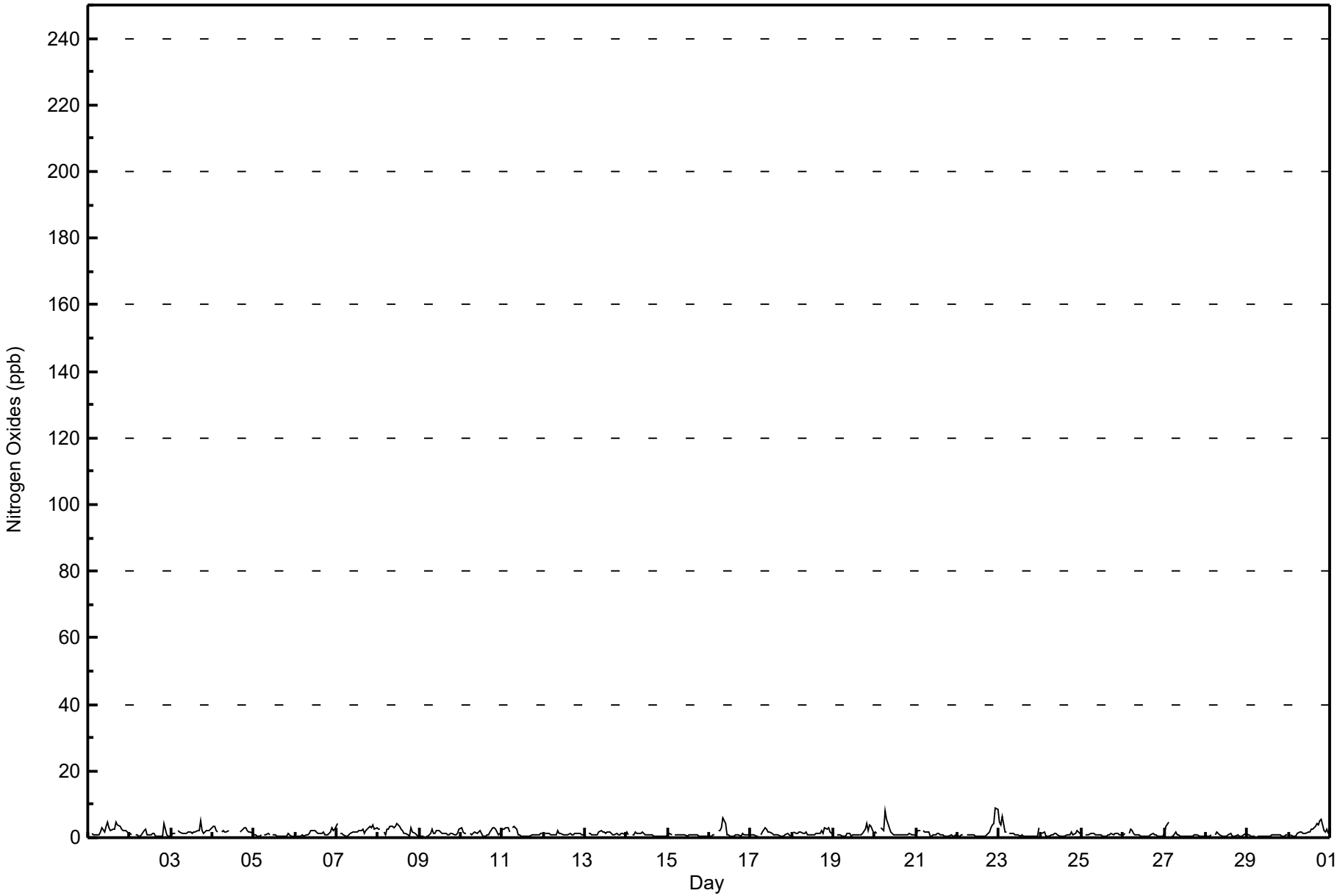
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025



Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674
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	10	5	13	3	9	57	105	40	28	27	54	124	99	49	25	26	674

Total Number of Valid Hours: 674

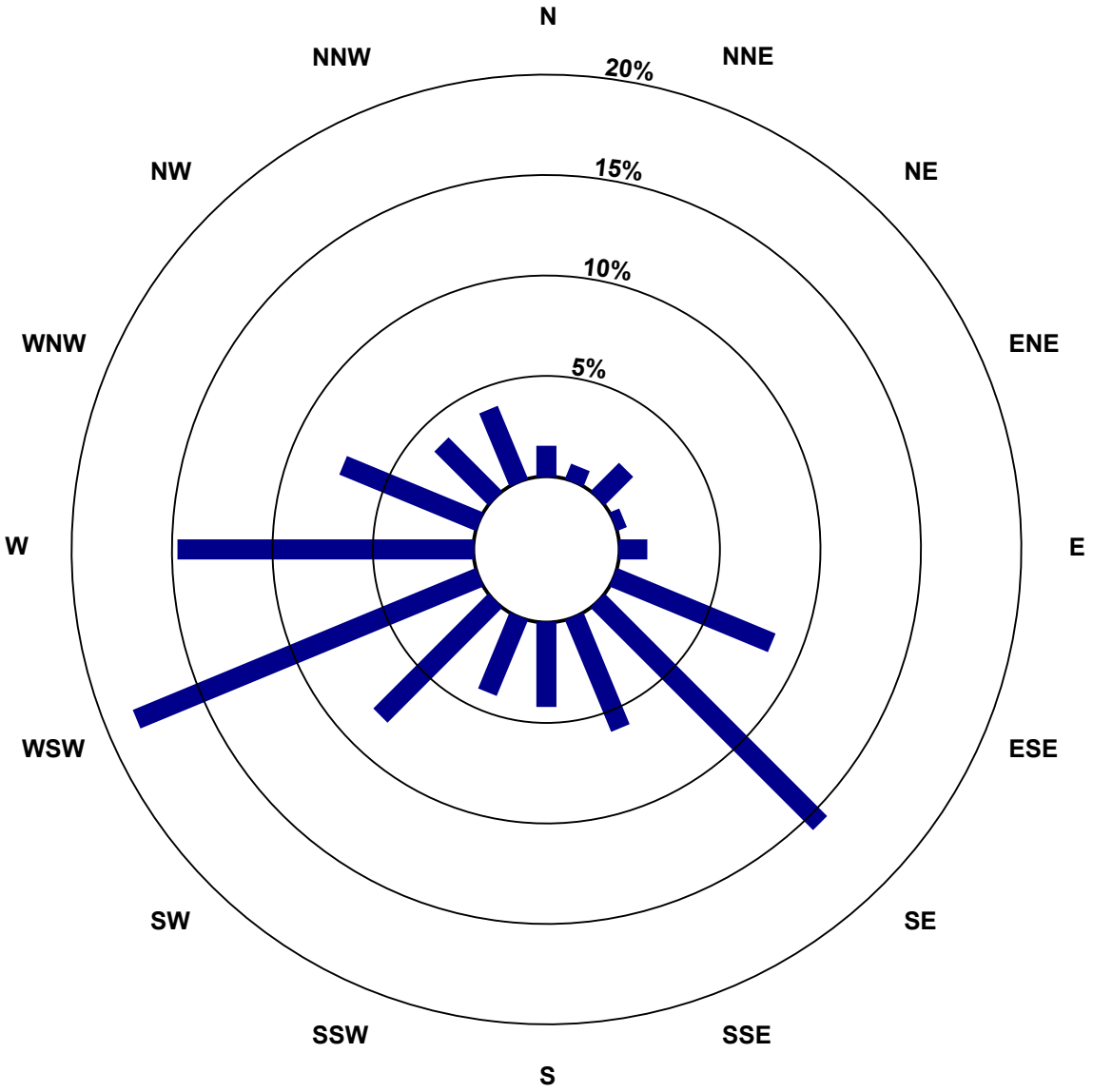
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

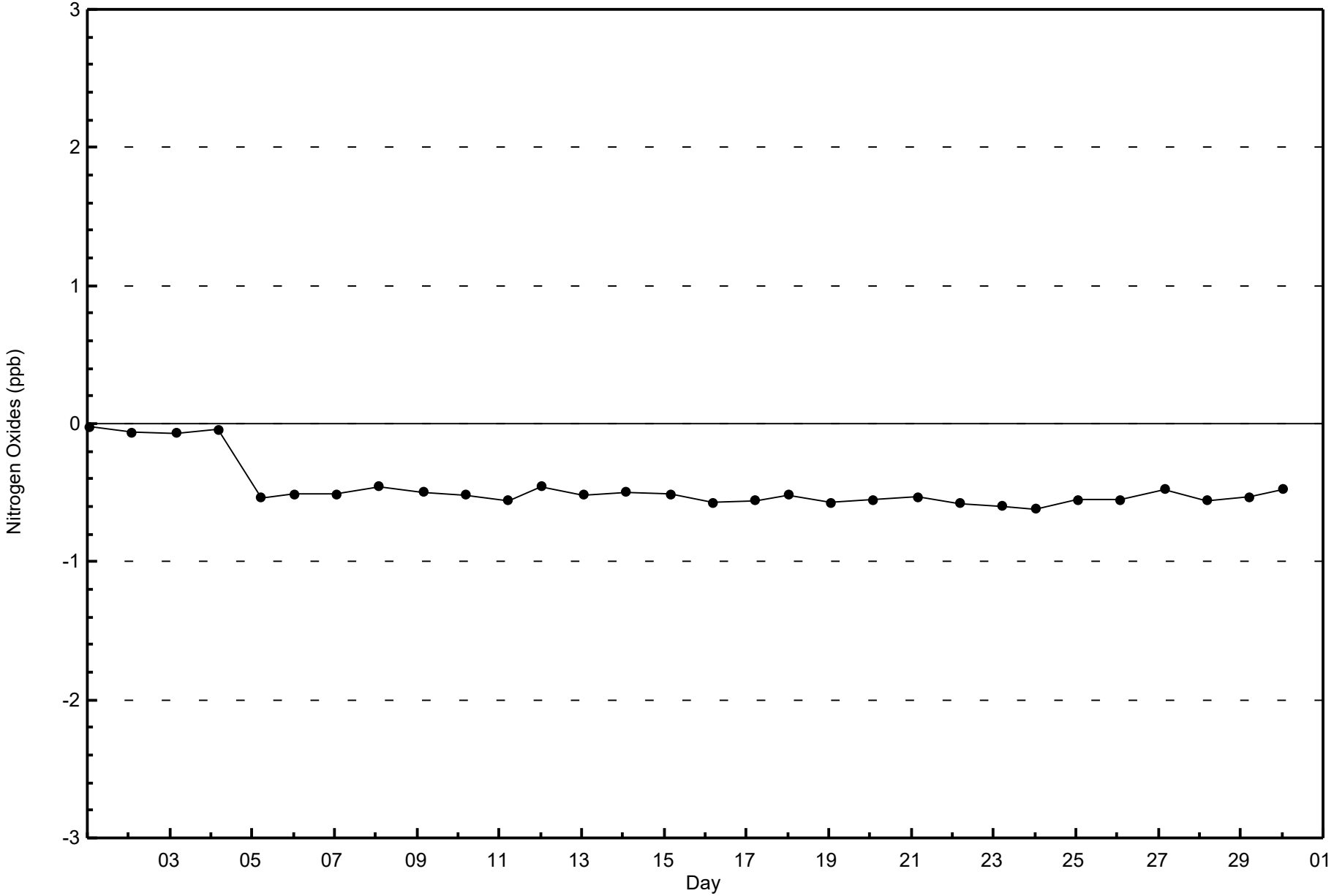
Total Number of Valid Hours: 674

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025

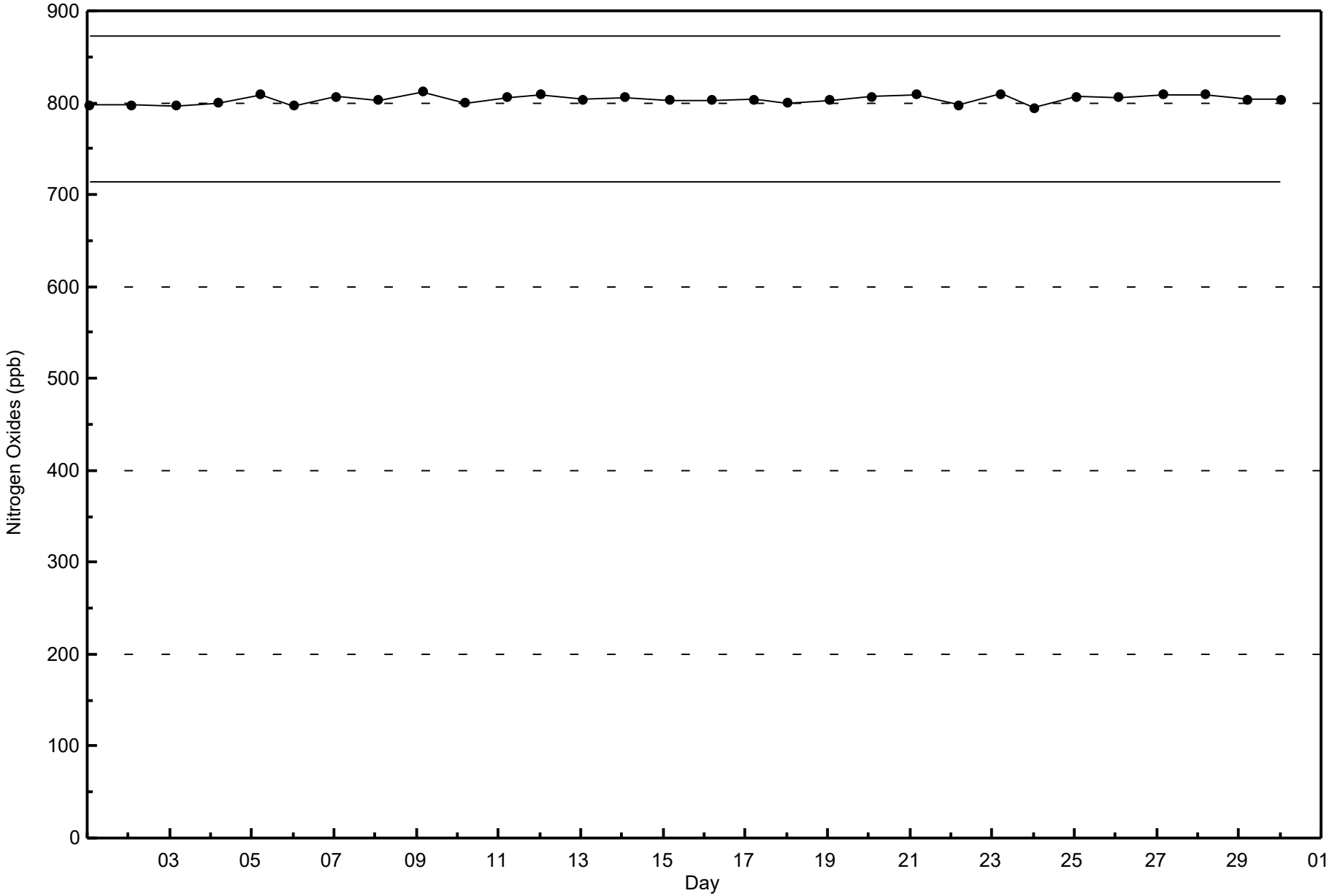


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 4

Maximum Value: 132.0 $\mu g/m^3$ on Sep 12 01:00

Maximum Daily Average: 44.1 $\mu g/m^3$ on Sep 2

Minimum Value: 0.7 $\mu g/m^3$ on Sep 27 05:00

Minimum Daily Average: 2.4 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 26.1 $\mu g/m^3$ at hour 1

Minimum Diurnal Average: 11.5 $\mu g/m^3$ at hour 13

Monthly Average: 17.36 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 3.0 Q_1 = 6.0 Median = 12.2 Q_3 = 21.3 P_{90} = 38.2 P_{99} = 88.4

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	47.4	45.4	43.3	40.6	38.2	32.8	31.0	32.4	32.6	22.4	19.6	22.7	16.1	15.5	24.9	45.6	56.0	51.3	41.1	41.9	57.2	80.9	95.7	94.8	42.9	95.7
2-Sep	89.8	88.4	77.4	65.9	59.7	57.2	53.4	49.4	39.9	42.2	27.3	25.6	22.3	19.2	21.1	24.3	24.7	27.5	30.4	32.3	34.8	46.2	49.1	50.5	44.1	89.8
3-Sep	49.8	47.6	45.6	45.4	41.9	37.8	35.9	33.5	32.2	31.2	31.6	33.1	36.4	39.0	44.1	41.7	48.6	52.0	48.9	31.6	33.5	58.7	52.2	42.2	41.4	58.7
4-Sep	33.6	26.7	19.0	11.6	12.8	10.5	7.1	6.0	6.4	7.2	6.6	6.1	6.5	9.0	8.4	8.9	7.8	8.2	6.0	5.4	6.4	7.0	7.2	6.0	10.0	33.6
5-Sep	5.7	6.0	5.3	4.7	4.2	4.1	3.8	4.1	3.8	4.2	4.5	4.3	4.5	4.6	4.6	5.1	5.4	5.9	5.9	10.2	21.2	7.6	8.9	26.2	6.9	26.2
6-Sep	38.4	53.0	53.1	45.6	29.4	18.9	13.5	7.6	6.7	7.7	6.6	5.6	6.0	7.6	11.0	14.9	15.4	13.6	11.7	11.2	10.3	9.3	8.7	7.9	17.2	53.1
7-Sep	8.2	14.6	9.5	8.2	9.1	8.5	8.7	9.4	11.1	13.5	15.6	19.9	17.4	18.1	17.5	17.7	20.4	24.4	25.9	24.7	17.4	17.9	19.0	18.4	15.6	25.9
8-Sep	17.8	17.9	17.2	16.7	16.2	21.3	20.1	19.1	20.4	20.9	21.3	20.0	20.1	19.1	19.2	18.8	18.4	16.6	16.6	23.7	19.5	14.9	12.0	10.6	18.3	23.7
9-Sep	10.5	11.7	17.6	21.0	33.5	34.6	28.3	26.5	C	21.8	20.4	20.7	20.4	20.6	22.7	23.5	24.1	23.4	25.4	26.2	25.9	25.5	25.0	25.1	23.2	34.6
10-Sep	24.6	23.4	23.6	23.3	24.1	24.8	25.0	28.1	39.0	25.3	21.9	21.5	18.3	13.4	9.5	9.5	8.9	6.5	29.2	31.5	16.0	11.6	6.8	6.2	19.7	39.0
11-Sep	5.9	6.1	5.9	6.0	6.4	5.7	5.6	5.5	5.4	6.1	8.3	6.5	6.4	7.5	7.9	9.5	13.6	17.9	18.0	25.2	43.6	71.0	117.2	129.8	22.5	129.8
12-Sep	132.0	106.6	88.3	66.6	52.1	31.4	25.1	23.1	20.0	24.2	24.3	19.5	18.5	18.1	17.1	17.1	16.4	16.2	16.7	16.9	17.0	17.2	17.0	16.4	34.1	132.0
13-Sep	16.3	15.8	16.1	15.6	16.0	16.2	15.4	14.7	16.4	17.6	16.9	16.8	16.5	17.3	17.2	16.1	15.7	15.5	15.6	15.4	24.0	53.6	70.6	77.0	22.8	77.0
14-Sep	83.1	65.8	47.0	25.2	21.8	31.2	18.1	14.5	15.0	12.0	9.6	7.8	10.9	38.1	27.5	32.0	9.3	5.7	5.7	6.0	5.9	5.6	6.3	6.7	21.3	83.1
15-Sep	11.0	11.0	10.3	9.4	11.5	13.2	13.2	11.7	8.4	6.3	6.7	10.6	16.1	17.4	19.0	19.8	24.1	20.5	18.6	17.8	13.6	12.6	14.2	17.2	13.9	24.1
16-Sep	19.8	17.1	14.3	13.1	15.1	16.5	18.1	15.9	17.6	18.5	14.0	13.7	13.0	12.5	12.0	11.5	11.6	12.1	10.9	13.0	13.8	16.7	17.9	18.9	14.9	19.8
17-Sep	21.7	26.8	26.2	22.0	18.5	15.8	14.2	12.2	11.0	10.8	10.8	10.8	12.1	12.4	11.7	10.1	9.2	7.5	7.0	7.2	8.1	8.4	8.6	8.7	13.0	26.8
18-Sep	8.9	9.3	10.1	10.7	10.8	11.0	10.9	10.8	11.0	11.6	12.0	13.0	12.4	11.5	10.9	11.0	11.6	15.4	19.5	36.1	27.7	22.1	17.2	16.9	14.3	36.1
19-Sep	13.5	11.3	9.4	7.1	5.1	4.4	3.8	3.5	5.3	4.0	5.0	4.9	4.3	5.7	3.8	4.5	6.3	13.4	34.8	72.6	44.1	29.8	20.0	14.6	13.8	72.6
20-Sep	10.3	6.3	5.4	5.1	4.5	4.8	7.4	6.6	6.8	6.1	6.8	10.7	12.8	13.1	12.4	12.1	12.2	11.7	10.5	10.5	10.8	10.5	10.1	9.9	9.1	13.1
21-Sep	9.5	9.8	9.9	10.0	10.0	11.0	12.3	10.0	9.0	9.8	8.6	8.8	9.0	8.4	8.4	7.3	8.5	10.3	10.3	25.9	29.2	15.4	10.9	14.5	11.5	29.2
22-Sep	12.5	3.8	2.4	2.9	3.0	2.7	2.0	1.7	2.8	3.1	3.1	2.9	2.8	3.3	4.4	2.7	3.4	4.3	2.0	1.5	1.1	1.7	2.4	2.7	3.1	12.5
23-Sep	3.1	3.4	3.4	3.6	3.8	3.8	3.3	3.3	3.1	2.7	4.2	3.4	3.5	2.1	2.3	1.9	2.4	2.8	3.1	2.0	2.0	1.8	1.6	4.0	2.9	4.2
24-Sep	7.4	1.9	1.8	1.3	1.3	1.5	1.9	3.6	3.9	5.0	7.5	5.8	4.3	7.5	13.8	27.7	31.0	33.8	44.6	25.1	23.7	43.1	41.6	50.6	16.2	50.6
25-Sep	63.9	58.1	50.7	46.6	44.4	46.3	34.4	31.0	15.3	6.8	7.7	3.1	2.0	1.8	1.8	1.9	2.3	2.3	2.5	2.5	2.6	3.6	2.7	2.4	18.2	63.9
26-Sep	2.5	2.7	2.6	2.9	5.6	10.0	17.5	24.7	19.6	16.4	9.5	7.5	7.8	13.8	18.2	15.5	20.5	24.5	28.5	19.9	5.3	5.6	2.5	2.6	11.9	28.5
27-Sep	1.5	1.0	1.2	1.1	0.7	0.8	0.9	1.7	2.7	3.3	3.3	2.5	3.2	3.4	3.7	3.9	3.3	5.3	2.8	2.5	2.5	2.2	3.1	2.1	2.4	5.3
28-Sep	1.3	2.0	2.7	3.1	6.7	8.5	10.5	17.9	21.3	20.7	17.3	10.9	5.4	5.5	5.0	5.2	5.2	4.8	4.5	4.2	3.5	5.4	17.3	20.4	8.7	21.3
29-Sep	20.9	25.8	12.9	3.6	2.3	2.3	2.2	2.3	2.6	2.8	3.3	3.9	4.4	5.2	6.4	6.5	6.7	7.6	7.7	7.7	7.8	8.1	18.5	22.3	8.1	25.8
30-Sep	13.3	14.6	12.8	11.3	12.2	32.2	16.7	10.1	10.1	20.5	12.4	11.0	11.5	14.9	22.1	31.7	35.7	34.2	33.1	33.0	19.3	12.6	12.0	12.9	18.8	35.7
	26.1	24.5	21.5	18.3	17.4	17.3	15.3	14.7	13.8	13.5	12.2	11.8	11.5	12.9	13.6	15.3	16.0	16.5	17.9	19.5	18.3	20.9	23.2	24.6	Diurnal Average	
	132.0	106.6	88.3	66.6	59.7	57.2	53.4	49.4	39.9	42.2	31.6	33.1	36.4	39.0	44.1	45.6	56.0	52.0	48.9	72.6	57.2	80.9	117.2	129.8	Diurnal Maximum	

C - Calibration

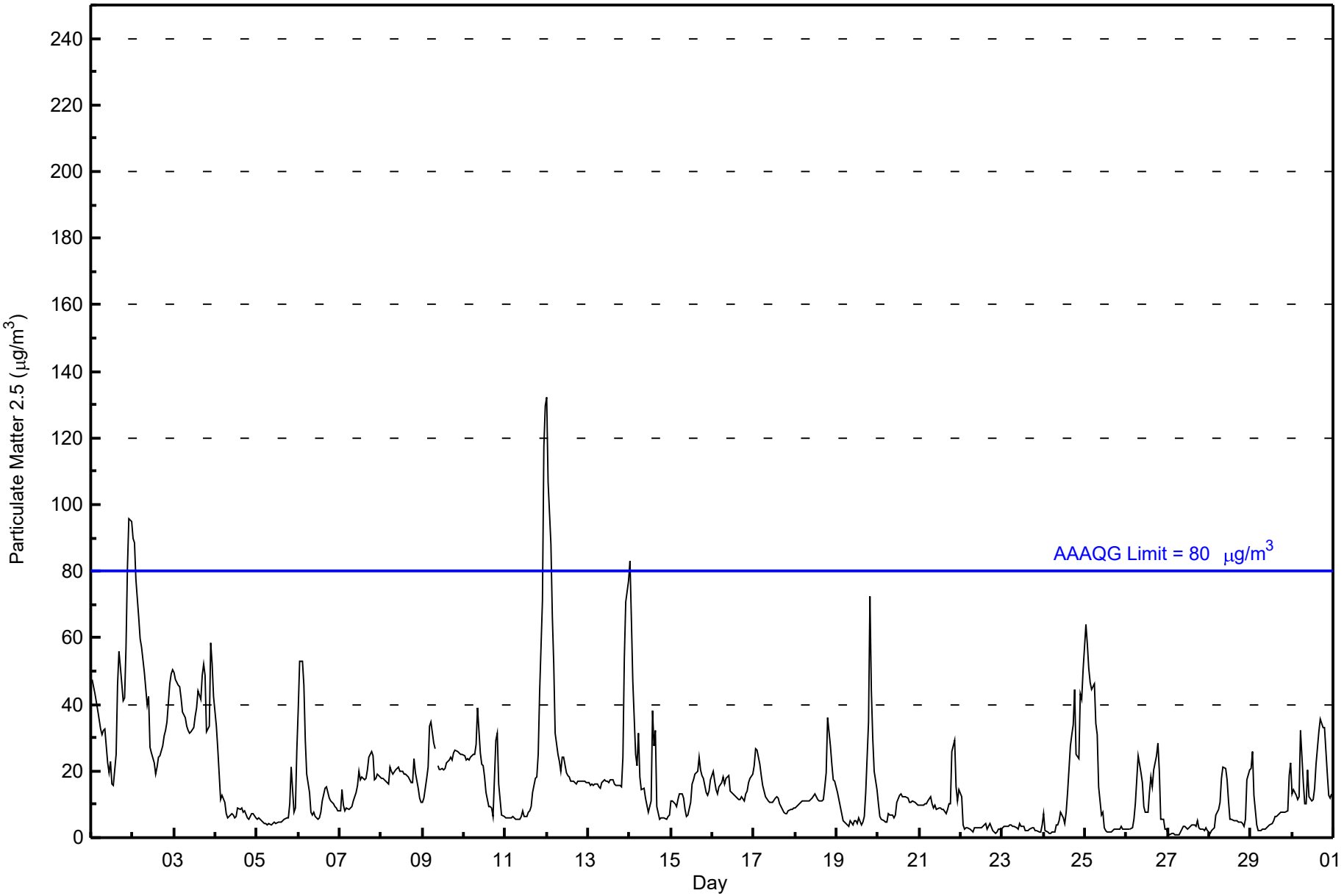
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Surmont 2 - September 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	159	22.11	22.11
6 - 15	260	36.16	58.28
16 - 25	166	23.09	81.36
26 - 80	123	17.11	98.47
> 81.0	11	1.53	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Surmont 2 - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	0	0	0	0	3	14	18	6	11	4	11	48	42	1	0	0	158
6 - 15	6	5	6	0	3	27	52	20	8	7	17	34	29	18	11	13	256
16 - 25	3	0	7	2	2	9	23	12	2	9	14	25	18	20	12	8	166
26 - 80	1	0	0	1	1	8	17	4	8	8	12	23	12	10	3	11	119
> 81.0	0	0	0	0	0	0	0	0	0	2	3	1	2	1	1	0	10
Totals	10	5	13	3	9	58	110	42	29	30	57	131	103	50	27	32	709

Total Number of Valid Hours: 709

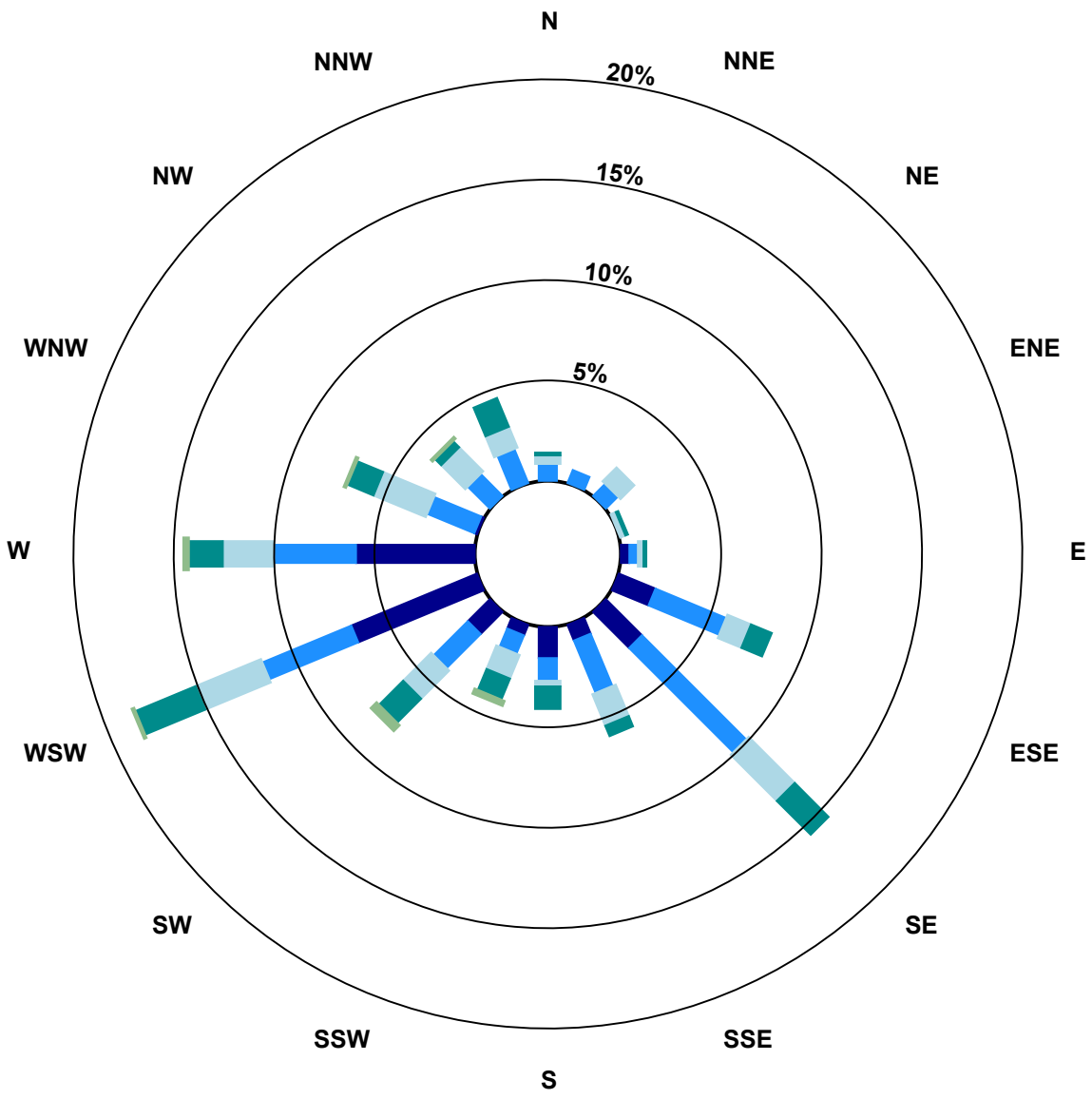
Total Number of Hours: 720

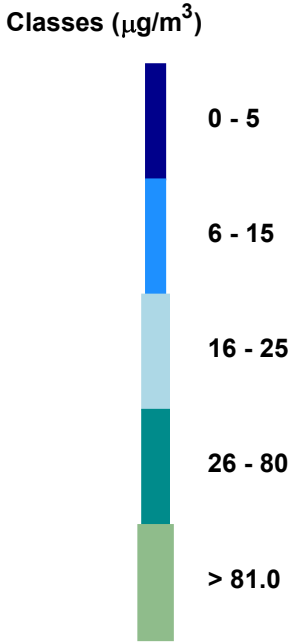
Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Surmont 2





Total Number of Valid Hours: 709

Maximum Value: 27.6 C on Sep 13 15:00
Maximum Daily Average: 17.8 C on Sep 12

Minimum Value: -0.6 C on Sep 5 06:00
Minimum Daily Average: 9.5 C on Sep 25
Maximum Diurnal Average: 20.6 C at hour 15
Minimum Diurnal Average: 8.1 C at hour 6
Monthly Average: 13.76 C
Percentiles: P_1 = 0.8 P_{10} = 7.3 Q_1 = 10.0 Median = 13.3 Q_3 = 17.3 P_{90} = 21.9 P_{99} = 26.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

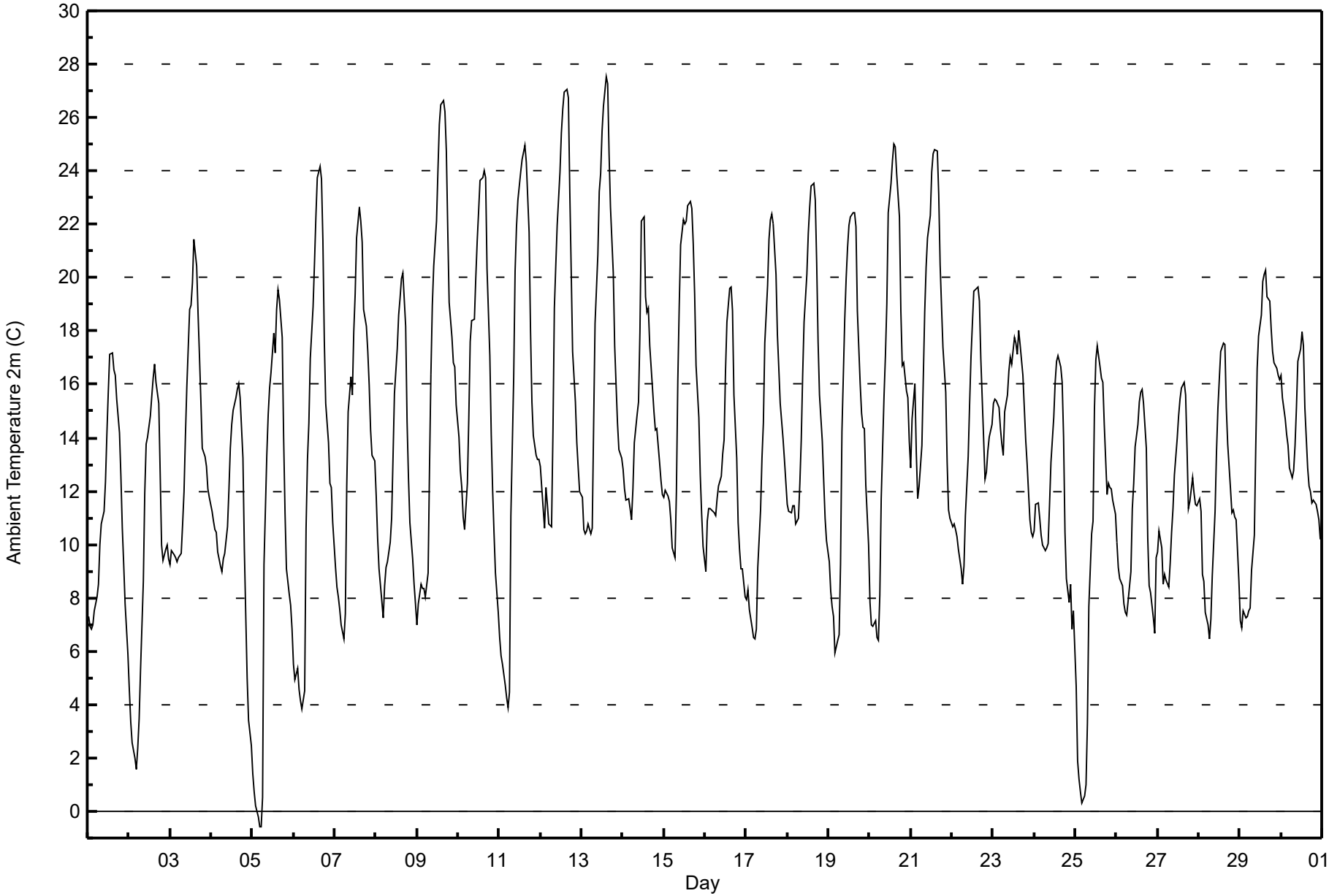
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	7.3	6.9	6.8	7.0	7.5	8.0	8.5	10.0	10.8	11.2	12.4	14.1	15.7	17.1	17.2	16.6	16.3	15.4	14.2	12.6	10.6	9.2	7.8	5.9	11.2	17.2
2-Sep	4.5	3.4	2.6	2.0	1.6	2.3	3.4	5.3	8.6	11.9	13.8	14.1	14.8	15.5	16.3	16.7	16.1	15.3	12.6	10.0	9.4	9.8	10.0	9.5	9.6	16.7
3-Sep	9.2	9.7	9.6	9.5	9.3	9.5	9.7	10.8	12.0	14.1	15.9	18.8	19.0	19.8	21.5	20.4	18.7	17.1	15.4	13.6	13.3	12.9	12.1	11.7	13.9	21.5
4-Sep	11.3	10.9	10.5	10.4	9.7	9.2	9.0	9.5	9.7	10.7	12.1	13.6	14.5	15.0	15.5	15.8	16.0	15.5	13.2	9.8	7.4	5.0	3.4	2.5	10.8	16.0
5-Sep	1.4	0.8	0.2	-0.2	-0.6	-0.6	0.5	9.3	13.3	14.9	15.9	16.4	17.9	17.2	18.8	19.5	19.2	17.7	14.0	11.2	9.1	8.2	7.7	6.8	9.9	19.5
6-Sep	5.5	4.9	5.4	4.6	4.1	3.9	4.5	10.6	13.2	14.6	17.0	18.9	20.6	22.3	23.8	24.2	23.7	21.4	17.6	15.3	13.8	12.3	12.1	10.8	13.5	24.2
7-Sep	9.2	8.4	8.0	7.6	7.0	6.5	7.4	12.2	15.0	16.3	15.6	18.0	19.4	21.5	22.6	22.1	21.3	18.8	18.2	17.2	16.0	14.3	13.3	13.1	14.5	22.6
8-Sep	11.8	10.2	9.1	7.9	7.2	8.5	9.1	9.4	10.1	11.0	13.3	15.6	17.4	18.6	19.2	20.0	20.2	18.2	14.6	12.5	10.8	9.5	8.5	7.8	12.5	20.2
9-Sep	7.0	7.8	8.5	8.3	8.3	8.0	8.9	12.9	16.4	19.0	20.4	22.1	24.0	25.7	26.5	26.6	26.2	24.8	21.8	19.1	17.7	16.8	16.7	15.2	17.0	26.6
10-Sep	14.0	12.8	12.1	11.1	10.6	12.3	14.7	17.6	18.4	18.4	20.0	21.4	22.5	23.6	23.7	24.0	23.8	20.3	17.1	14.2	12.0	10.4	8.9	7.5	16.3	24.0
11-Sep	6.5	5.8	5.5	4.7	4.2	3.9	4.4	11.1	16.2	20.2	21.9	22.9	24.0	24.5	24.7	25.0	24.3	21.7	18.0	15.4	14.1	13.4	13.2	13.2	14.9	25.0
12-Sep	12.9	12.1	10.6	12.2	11.5	10.8	10.6	14.2	18.9	20.5	22.0	24.0	25.5	26.3	26.9	27.0	26.7	23.2	20.3	17.3	15.3	13.8	12.9	12.0	17.8	27.0
13-Sep	11.8	10.5	10.4	10.5	10.8	10.4	10.6	14.5	18.3	20.9	23.2	23.9	25.5	26.4	27.6	27.3	24.7	22.7	20.2	17.5	16.0	14.6	13.5	13.3	17.7	27.6
14-Sep	12.8	12.1	11.7	11.7	11.3	10.9	12.1	13.8	14.9	15.3	18.0	22.1	22.3	19.3	18.7	18.9	17.4	15.8	15.0	14.3	14.3	13.1	12.4	11.9	15.0	22.3
15-Sep	11.8	12.0	11.8	11.6	10.9	9.9	9.5	12.0	16.1	18.9	21.2	22.2	22.0	22.1	22.7	22.9	22.6	21.3	19.4	16.7	14.8	12.6	11.1	9.9	16.1	22.9
16-Sep	9.0	10.9	11.3	11.4	11.3	11.2	11.1	11.7	12.2	12.6	13.4	13.9	16.5	18.3	19.6	19.6	18.8	15.6	13.2	10.8	9.8	9.1	9.1	8.1	12.9	19.6
17-Sep	7.9	8.3	7.5	6.9	6.5	6.5	6.8	9.2	11.3	13.2	14.6	17.5	19.7	21.4	22.2	22.4	22.0	20.1	17.9	16.6	15.3	14.0	13.2	12.3	13.9	22.4
18-Sep	11.5	11.2	11.2	11.5	11.5	10.7	11.0	12.3	13.9	16.3	18.3	20.1	21.6	22.6	23.4	23.5	22.9	20.5	17.6	15.6	13.8	12.4	11.0	10.1	15.6	23.5
19-Sep	9.3	8.2	7.7	7.3	5.9	6.4	6.6	9.3	14.2	18.4	19.9	21.1	22.0	22.3	22.4	22.4	21.9	18.8	16.0	14.9	14.4	14.3	12.3	10.0	14.4	22.4
20-Sep	7.8	7.0	6.9	7.1	6.5	6.4	8.1	11.7	15.5	17.1	19.0	22.4	23.5	24.4	25.0	24.9	23.9	22.3	18.8	16.7	16.8	15.8	15.5	13.9	15.7	25.0
21-Sep	12.9	14.7	16.0	13.4	11.7	12.2	13.7	16.2	18.7	20.4	21.5	22.3	23.9	24.6	24.8	24.7	23.1	20.5	18.9	17.4	15.7	13.1	11.3	11.0	17.6	24.8
22-Sep	10.7	10.8	10.5	10.3	9.8	9.1	8.5	9.2	11.1	13.3	15.2	17.0	18.3	19.5	19.6	19.6	19.1	17.0	14.0	12.4	12.7	13.5	14.0	14.5	13.7	19.6
23-Sep	15.3	15.5	15.4	15.1	14.4	13.8	13.3	15.0	15.6	16.5	17.0	16.8	17.8	17.5	17.1	18.0	17.5	16.3	15.1	13.9	13.0	10.9	10.5	10.3	15.1	18.0
24-Sep	10.5	11.5	11.6	11.0	10.3	10.0	9.8	9.9	10.0	11.5	13.1	14.8	16.1	16.9	17.1	16.7	16.1	14.1	10.5	8.7	7.8	8.5	6.8	7.5	11.7	17.1
25-Sep	4.7	1.9	1.2	0.8	0.3	0.6	1.0	3.3	7.7	10.4	10.9	15.1	16.9	17.4	16.7	16.3	16.1	14.5	11.9	12.3	12.1	12.1	11.7	11.1	9.5	17.4
26-Sep	10.1	9.2	8.7	8.4	7.8	7.5	7.3	7.9	9.0	11.3	12.3	13.6	14.5	15.3	15.7	15.8	15.3	13.6	10.3	8.5	8.2	7.3	6.7	9.5	10.6	15.8
27-Sep	9.7	10.5	9.9	8.5	8.9	8.7	8.4	9.3	10.5	11.4	12.6	14.0	14.8	15.5	15.9	16.1	15.6	13.6	11.4	11.6	12.5	11.9	11.5	11.4	11.8	16.1
28-Sep	11.7	11.3	8.9	8.6	7.5	7.0	6.4	7.2	8.8	11.2	13.5	15.1	16.2	17.3	17.6	17.5	15.1	13.8	12.1	11.2	11.3	11.0	10.9	8.6	11.7	17.6
29-Sep	7.2	6.9	7.5	7.3	7.3	7.5	7.6	9.0	10.4	13.7	16.6	17.8	18.6	19.8	20.1	20.3	19.3	19.1	18.1	17.2	16.8	16.6	16.4	16.2	14.0	20.3
30-Sep	16.3	15.5	14.7	14.1	13.7	12.9	12.5	12.8	13.7	15.2	16.9	17.3	18.0	17.4	15.2	12.9	12.2	12.0	11.5	11.6	11.5	11.3	10.9	10.2	13.8	18.0
	9.7	9.4	9.1	8.7	8.2	8.1	8.5	10.9	13.1	15.0	16.6	18.2	19.4	20.2	20.6	20.6	19.9	18.0	15.6	13.9	12.9	11.9	11.2	10.5	Diurnal Average	
	16.3	15.5	16.0	15.1	14.4	13.8	14.7	17.6	18.9	20.9	23.2	24.0	25.5	26.4	27.6	27.3	26.7	24.8	21.8	19.1	17.7	16.8	16.7	16.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Surmont 2 - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.42	0.42
0 - 10	178	24.72	25.14
10 - 20	434	60.28	85.42
> 20	105	14.58	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - September 2025

Maximum Value: 100.8 % on Sep 17 06:00

Maximum Daily Average: 87.5 % on Sep 1

Minimum Value: 27.1 % on Sep 28 15:00

Minimum Daily Average: 40.2 % on Sep 23

Maximum Diurnal Average: 85.9 % at hour 5

Minimum Diurnal Average: 42.7 % at hour 15

Monthly Average: 66.95 %

Percentiles: P_1 = 28.5 P_{10} = 37.2 Q_1 = 49.4 Median = 66.6 Q_3 = 85.4 P_{90} = 97.2 P_{99} = 100.6

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	100.2	100.5	100.6	100.8	100.7	100.2	100.2	100.0	99.5	98.5	95.9	87.6	72.4	61.8	62.3	66.4	66.9	71.9	75.0	78.1	84.3	88.0	91.9	97.4	87.5	100.8
2-Sep	98.9	99.5	99.9	100.1	100.2	100.5	100.6	99.0	86.6	62.5	47.1	47.6	43.2	39.3	38.8	39.9	41.1	46.5	60.7	75.3	74.1	71.8	70.2	72.8	71.5	100.6
3-Sep	75.1	74.6	76.7	76.6	78.5	76.1	75.5	72.3	70.5	65.5	63.1	57.6	64.0	63.7	58.8	63.0	67.4	71.6	74.6	80.5	81.7	82.7	81.2	82.8	72.2	82.8
4-Sep	79.9	78.8	78.4	77.1	79.5	79.4	79.3	77.3	77.7	73.2	66.1	56.1	52.4	50.4	47.3	46.4	46.0	48.4	56.2	73.9	85.3	93.1	97.2	97.6	70.7	97.6
5-Sep	97.5	98.3	98.4	98.7	98.7	98.7	99.0	75.0	63.6	54.3	49.5	49.6	44.0	49.0	43.0	40.1	41.6	47.8	64.9	78.2	84.8	84.9	86.6	87.5	72.2	99.0
6-Sep	93.6	96.1	94.1	96.9	99.0	99.3	99.0	75.3	62.8	58.5	48.3	43.3	38.9	35.3	31.1	30.0	31.8	41.3	52.3	59.2	64.0	71.9	69.9	77.5	65.4	99.3
7-Sep	82.6	84.7	87.0	89.3	91.9	94.1	93.2	82.6	79.6	81.6	85.5	71.1	66.7	59.0	51.0	51.4	51.0	64.2	66.2	71.9	78.6	84.5	88.2	89.0	76.9	94.1
8-Sep	94.6	99.7	100.5	100.6	100.8	OR	OR	OR	OR	OR	84.8	73.2	66.8	61.6	59.0	57.5	56.4	65.4	79.4	88.3	92.1	93.9	94.7	95.8	82.4	100.8
9-Sep	98.3	95.0	92.2	92.5	95.6	98.5	97.4	82.2	71.4	63.4	59.6	54.6	49.3	44.6	41.7	40.7	42.2	44.4	55.4	67.2	73.5	77.6	76.7	80.6	70.6	98.5
10-Sep	85.2	90.0	91.6	93.1	94.4	82.9	71.1	62.7	58.7	64.7	60.3	56.4	50.4	43.4	39.8	39.6	40.0	50.1	64.7	73.9	77.0	83.4	87.6	94.0	68.9	94.4
11-Sep	96.6	97.8	98.5	98.7	99.1	99.0	98.3	76.2	67.6	49.9	41.9	36.4	32.1	32.7	31.6	33.4	37.2	47.4	65.7	75.0	81.3	86.1	89.7	91.7	69.3	99.1
12-Sep	93.9	95.0	99.2	94.8	98.1	97.6	99.0	89.7	76.0	67.0	62.9	52.8	40.7	36.6	34.9	35.3	36.9	49.4	60.5	72.0	77.3	81.0	83.6	85.8	71.7	99.2
13-Sep	87.0	91.9	94.7	97.8	98.8	99.5	99.3	88.5	74.2	63.9	56.4	52.1	44.5	41.1	37.2	36.1	46.9	54.6	62.6	72.7	76.6	82.0	87.5	88.8	72.3	99.5
14-Sep	91.5	91.6	91.4	89.2	90.6	92.6	91.6	86.3	85.9	82.6	77.1	60.9	61.9	73.2	74.8	74.7	71.9	79.2	86.3	92.4	89.7	94.3	96.2	97.9	84.3	97.9
15-Sep	98.0	97.9	98.0	99.1	OR	OR	OR	95.4	84.4	75.5	64.8	58.9	57.7	58.6	58.9	58.2	57.9	61.5	65.5	69.8	72.6	78.4	83.7	89.0	75.4	99.1
16-Sep	93.5	83.1	81.9	82.7	84.5	85.3	85.8	83.4	82.3	81.3	75.6	72.5	61.4	54.9	51.2	51.7	56.5	71.0	83.3	93.2	95.5	96.9	97.2	99.3	79.3	99.3
17-Sep	OR	100.2	100.5	100.6	100.6	100.8	OR	96.9	89.2	79.8	75.6	65.2	57.1	51.3	47.3	45.0	43.8	47.8	55.6	61.6	69.5	76.6	80.8	85.8	74.2	100.8
18-Sep	91.9	94.4	93.0	90.4	89.8	93.3	92.2	85.9	79.1	69.2	61.8	54.1	49.5	45.9	42.4	41.9	44.7	52.4	63.2	70.8	78.3	84.6	90.8	95.0	73.1	95.0
19-Sep	96.0	97.0	95.7	95.7	97.5	95.5	94.4	84.0	61.3	37.7	31.5	29.4	28.9	28.4	27.8	28.7	31.3	41.7	54.7	60.9	62.0	60.6	68.4	75.4	61.8	97.5
20-Sep	83.9	86.5	88.8	87.9	90.1	90.3	86.3	75.7	63.6	54.1	50.5	41.0	37.2	37.0	33.5	33.8	35.3	41.6	55.7	63.2	63.1	70.6	72.7	79.6	63.4	90.3
21-Sep	83.5	73.3	65.6	77.6	83.7	79.9	69.1	58.4	49.4	43.2	38.6	36.6	33.2	31.5	30.8	27.8	31.6	32.7	37.7	45.7	54.1	74.9	92.0	90.0	55.9	92.0
22-Sep	82.8	78.6	78.2	76.7	75.1	74.7	75.2	71.9	64.9	57.6	50.5	44.0	39.2	35.4	34.7	34.3	35.4	44.6	54.9	58.0	53.4	49.1	47.4	44.6	56.7	82.8
23-Sep	40.8	40.4	40.9	41.5	44.5	47.7	51.8	50.7	48.6	42.2	31.5	33.0	28.2	31.5	34.4	30.6	28.7	27.8	33.4	36.5	40.5	49.4	53.7	57.0	40.2	57.0
24-Sep	59.0	54.8	56.5	63.5	68.5	71.5	74.0	73.4	72.5	65.0	52.7	42.5	37.1	33.5	30.0	28.8	30.5	38.8	49.6	53.6	56.8	51.1	57.1	54.4	53.1	74.0
25-Sep	67.3	79.6	84.7	87.1	88.3	87.5	87.7	87.8	70.4	59.9	57.6	44.0	34.5	32.4	35.9	35.6	36.5	40.2	50.7	49.6	50.3	55.3	66.5	68.9	60.8	88.3
26-Sep	74.6	78.5	79.4	80.1	81.5	80.7	79.4	75.6	69.3	58.0	54.0	49.2	44.7	40.9	39.0	38.5	39.1	42.0	54.1	58.5	58.6	62.1	65.5	54.2	60.7	81.5
27-Sep	54.1	53.2	63.6	77.5	69.9	64.5	60.7	53.7	47.2	43.0	39.3	35.4	31.5	29.5	28.4	29.3	30.3	38.0	47.9	44.8	39.6	41.7	43.3	44.0	46.3	77.5
28-Sep	43.2	45.7	55.2	56.8	60.3	61.6	63.3	60.4	55.5	48.6	41.9	35.1	29.8	28.0	27.1	29.4	38.1	44.3	49.9	55.0	50.1	51.9	49.4	61.1	47.6	63.3
29-Sep	70.0	69.5	65.6	66.9	65.6	63.8	63.9	59.1	55.7	46.5	39.5	38.1	37.8	36.9	37.1	38.0	42.6	43.4	47.0	50.3	51.9	52.0	52.3	53.2	51.9	70.0
30-Sep	53.6	56.6	60.9	63.8	66.3	71.5	75.1	75.8	75.3	70.7	59.8	57.3	55.1	56.5	70.6	91.0	98.9	98.6	99.8	96.6	98.3	99.4	99.5	98.3	77.1	99.8
	81.6	82.8	83.7	85.1	85.9	85.2	83.8	77.8	70.4	62.7	57.4	51.2	46.3	44.1	42.7	43.2	45.3	51.6	60.9	67.6	70.5	74.3	77.4	79.6	Diurnal Average	
	100.2	100.5	100.6	100.8	100.8	100.8	100.6	100.0	99.5	98.5	95.9	87.6	72.4	73.2	74.8	91.0	98.9	98.6	99.8	96.6	98.3	99.4	99.5	99.3	Diurnal Maximum	

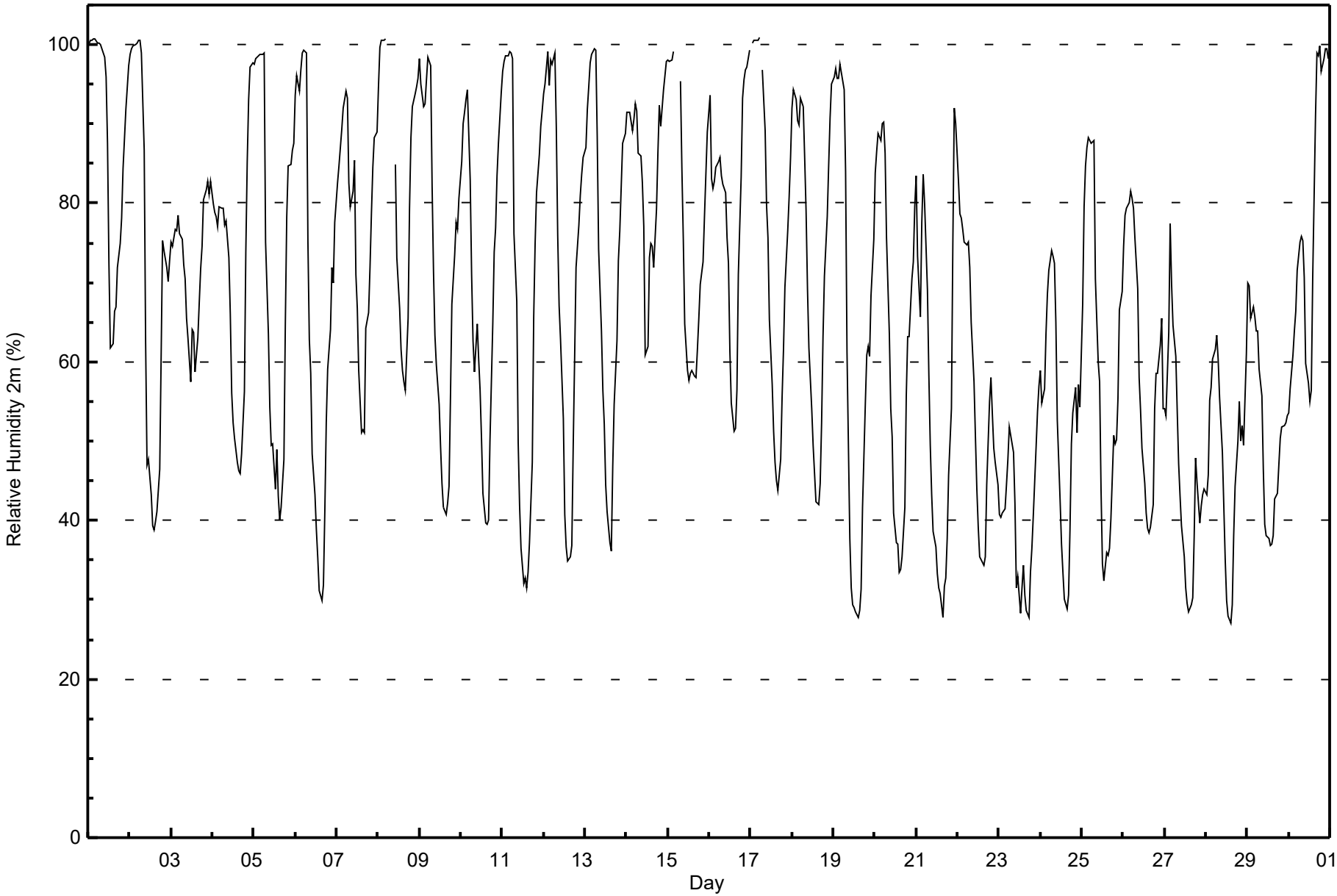
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	94	13.24	13.24
40 - 60	193	27.18	40.42
60 - 80	198	27.89	68.31
80 - 100	205	28.87	97.18

Total Number of Valid Hours: 710

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - September 2025

Maximum Speed: 18 km/h on Sep 29 12:00

Maximum Daily Speed Average: 8.6 km/h on Sep 27

Minimum Speed Value: 0 km/h on Sep 7 08:00

Minimum Daily Speed Average: 0.2 km/h on Sep 30

Maximum Diurnal Speed Average: 2.6 km/h at hour 21

Minimum Diurnal Speed Average: 1.1 km/h at hour 16

Monthly Average Velocity: 1.6 km/h 231.7 deg

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 2$ Median = 4 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 13$

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Percent Operational Time:	98.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	N0	WNW0	WNW1	SSW0	W0	WNW1	WNW1	WNW1	SSE0	SE2	NW3	NNW5	NW5	NNW6	NNW7	NNW6	NW4	WNW4	W4	W4	W3	W4	W3	NW1	NW2.1	NNW7
2-Sep	WNW0	UO	UO	UO	UO	UO	ENE1	E2	SE2	SE2	SE3	SSW3	SSW5	S3	SE6	ESE7	ESE8	ESE6	SE3	S3	S3	SSE4	ESE5	SE5	SE3.0	ESE8
3-Sep	ESE5	SE6	SE6	SE6	ESE5	ESE7	ESE5	ESE5	SE5	SE6	SE5	SSE5	S3	WSW4	WNW5	NNW6	NNW10	NNW10	NNW13	NNW9	NNW9	NNW12	NNW12	NNW11	N1.7	NNW13
4-Sep	NNW11	NW9	NW8	NW9	NW10	NW10	NW9	NNW11	NNW10	NNW12	NNW10	NNW12	NNW11	NNW12	NNW12	NNW9	NNW9	NW6	NNW3	W4	W3	WNW1	SSW0	SW1	NNW7.6	NNW12
5-Sep	SW0	UO	UO	W0	WSW1	SW1	SW1	ESE1	SSE2	ESE1	SSE4	SE5	ESE6	ESE5	SE5	SE6	ESE7	ESE6	WSW1	W4	WSW4	SW3	S2	WSW3	SSE1.9	ESE7
6-Sep	SW2	SSW2	SSW3	WSW1	WSW2	WSW1	S2	ESE3	ESE5	SE7	SSE7	SE8	SSE8	SE8	SSE6	S5	S4	SSW3	SW3	WSW3	SW2	SW2	SW2	SSW1	S2.9	SE8
7-Sep	W1	WSW1	WSW1	WSW1	WSW1	SW1	SW1	SW0	W0	SE0	WSW1	NE1	SE2	E2	NE5	NNW5	NW4	W3	WNW4	NW4	NW5	WNW5	WNW4	WNW3	NW1.4	NNW5
8-Sep	W3	W2	W2	WNW1	SW1	WNW3	NW3	NW4	NNW4	N5	NW3	NE4	ENE4	NE5	NE5	ENE5	ESE4	E2	WSW3	W3	WSW3	WSW2	WSW2	WSW2	NNW1.0	ENE5
9-Sep	WSW1	SW3	WSW3	SW1	SW3	ESE2	SE3	SE4	SE4	SE5	SE7	SE8	SE8	SSE8	SSE7	SSE6	SSE6	SSE5	SSW3	SW2	SSW2	S2	S1	SSW1	SSE3.3	SE8
10-Sep	WSW2	WSW1	WSW2	SSW1	WSW3	W4	WSW7	WSW6	W9	WNW9	NNW7	N6	NW6	N6	NNW6	NNE4	N3	WSW2	WSW3	WSW2	WSW2	SW2	SW1	UO	WNW2.7	WNW9
11-Sep	NW0	UO	WNW1	WSW0	W0	W1	UO	SE1	E2	ESE5	SE6	SSE5	SE6	SSE5	SE6	SE5	SE5	SSE3	SW2	WSW3	SW2	SW3	SW2	SW3	SSE2.2	SE6
12-Sep	SSW2	SW1	SSW1	S3	WSW3	SW2	SW1	NE1	SE3	SE7	SE9	SE8	SE8	SSE8	SSE6	SSE5	SE4	SW3	WSW4	SSW3	SW2	SW2	SW2	SW2	SSE2.7	SE9
13-Sep	SSW2	SSW1	SW1	SW2	WSW2	WSW2	WSW2	E1	ESE4	SE5	SE6	SE8	SE9	SE8	SE7	SE5	S2	SSW2	SW2	SW2	WSW3	WSW3	SW2	SW2	SSE2.4	SE9
14-Sep	WSW2	SW2	SSW2	WSW2	WSW2	S2	ESE2	E1	ESE2	SE3	SE3	ESE9	ESE11	SE10	SSE7	SE6	ESE11	ESE3	SSW1	WSW3	SW3	WNW1	WSW1	SW1	SE2.5	ESE11
15-Sep	WSW1	WSW2	ESE1	W0	W1	WSW1	SW1	SE1	WSW2	W7	WNW7	NW8	WNW8	W9	WNW9	WNW10	WNW8	WNW7	NW7	NW6	WNW4	W3	W3	W2	WNW4.2	WNW10
16-Sep	WNW3	WNW5	WNW5	NW5	NW6	WNW5	W4	NNW4	N4	WNW3	WNW6	W3	NW2	NNE2	NE3	NE3	NNE1	SW2	WSW2	WSW2	WSW3	SW2	SE4	SSW2	WNW2.1	WNW6
17-Sep	SW3	SW3	SSW2	SSE2	SE2	ESE3	E3	ESE5	ESE6	ESE8	SE8	SE9	SE8	SE8	SE10	SE9	SE8	SE7	SE5	SE6	ESE6	ESE5	ESE6	SE6	SE5.4	SE10
18-Sep	ESE5	ESE5	ESE5	SE6	SE5	SE5	SE6	SE7	SE8	SSE8	SSE8	SSE8	SSE8	SSE8	S7	SSW6	S5	W4	W3	WSW3	WSW3	WSW1	WSW1	WSW1	SSE4.1	SSE8
19-Sep	WSW1	SE1	E1	ESE1	E2	ESE2	ESE2	ESE2	SSE2	SW5	WSW7	WSW7	WSW7	WSW7	WSW7	W7	W6	W3	WSW3	WSW2	WSW2	WSW3	WSW2	WSW2	WSW2.6	WSW7
20-Sep	WSW1	SW1	S1	S0	WSW1	S2	SSW1	ESE1	ESE5	SE6	SE8	SE8	SSE8	SE9	SSE8	SSE6	SSE6	SE3	SSE2	SSE3	SE4	SE4	SE4	SE3	SE3.7	SE9
21-Sep	SE2	SSE5	SE5	SSE2	SE0	WSW4	W5	W5	WNW6	NW5	N6	NNW6	N5	N5	NE6	N5	WNW6	WNW7	WNW7	WNW9	W12	WNW8	W7	W6	WNW3.5	W12
22-Sep	W6	W8	W8	W8	W8	W9	WSW10	WSW10	WSW10	WSW8	WSW8	W9	W11	WSW9	W11	WSW9	WSW7	SW3	S2	SSW2	SW3	SSW4	S4	S5	WSW6.7	W11
23-Sep	SW5	SW6	WSW6	WSW9	W8	WSW10	WSW8	WSW7	W8	W8	W9	W8	W11	W9	WSW9	WSW8	WSW8	WSW9	WSW7	WSW4	W5	WSW1	E1	WSW3	WSW6.8	W11
24-Sep	WSW3	WSW5	WSW6	WSW9	WSW10	W9	WSW11	WSW11	W10	W7	W10	W12	WNW13	WNW11	WNW10	W10	W8	W4	WSW4	WSW4	WSW5	WSW6	WSW5	WSW7	W7.6	WNW13
25-Sep	SW3	SE1	SSW0	S0	SW1	WSW1	WSW1	S1	SE3	ESE5	ESE7	SE9	S9	SE9	SE9	SSE7	SSE8	S4	SW2	SSE3	SSW2	W5	W7	W8	S2.9	SE9
26-Sep	W6	WSW4	WSW5	WSW6	WSW5	W6	W7	W8	WNW6	WNW9	W10	W12	W13	W13	W12	WNW11	W11	W7	WSW3	W3	WSW3	WSW1	SE1	WSW5	W6.7	W13
27-Sep	WSW2	SW3	WSW7	WSW9	WSW10	W10	W10	W13	W15	W16	W12	W11	W12	W12	W11	W9	W8	WSW3	SW2	WSW4	W8	W7	WSW8	WSW7	W8.6	W16
28-Sep	WSW9	WSW6	W4	W6	WSW8	WSW10	W8	W7	W7	WNW5	WNW4	NNE2	SW2	ESE4	SW2	ESE6	ESE4	ESE4	S2	S2	S3	ESE3	SE3	SSE2	WSW2.6	WSW10
29-Sep	SE1	SE1	ESE5	ESE5	SE7	SE6	SE7	SE9	SE7	SE14	SE17	SE18	SE13	SE11	SE9	SE9	SE5	SE8	SE6	SSE5	SSE6	SE8	ESE8	ESE8	SE8.0	SE18
30-Sep	SE7	SE6	SE4	SE4	S1	WSW2	SSW3	S1	W0	NE2	NNE1	NE3	NE4	NE5	NNW2	W1	NW1	W3	W3	WNW4	WNW4	WNW4	WNW4	WNW5	WNW0.2	SE7
	WSW1.5	SW1.8	SW1.6	WSW1.9	WSW2.1	WSW2.4	WSW2.3	WSW1.5	WSW1.3	SW1.2	SSW1.4	S1.6	SSW2.0	S1.6	SSW1.3	SSW1.1	SSW1.2	SW1.5	WSW1.9	WSW2.3	WSW2.6	WSW1.8	SW1.4	WSW1.8	Diurnal Average	
	NNW11	NW9	NW8	WSW9	WSW10	WSW10	WSW11	W13	W15	W16	SE17	SE18	SE13	W13	W12	WNW11	ESE11	NNW10	NNW13	WNW9	W12	NNW12	NNW12	NNW11	Diurnal Maximum	

UO - Unstable Operation

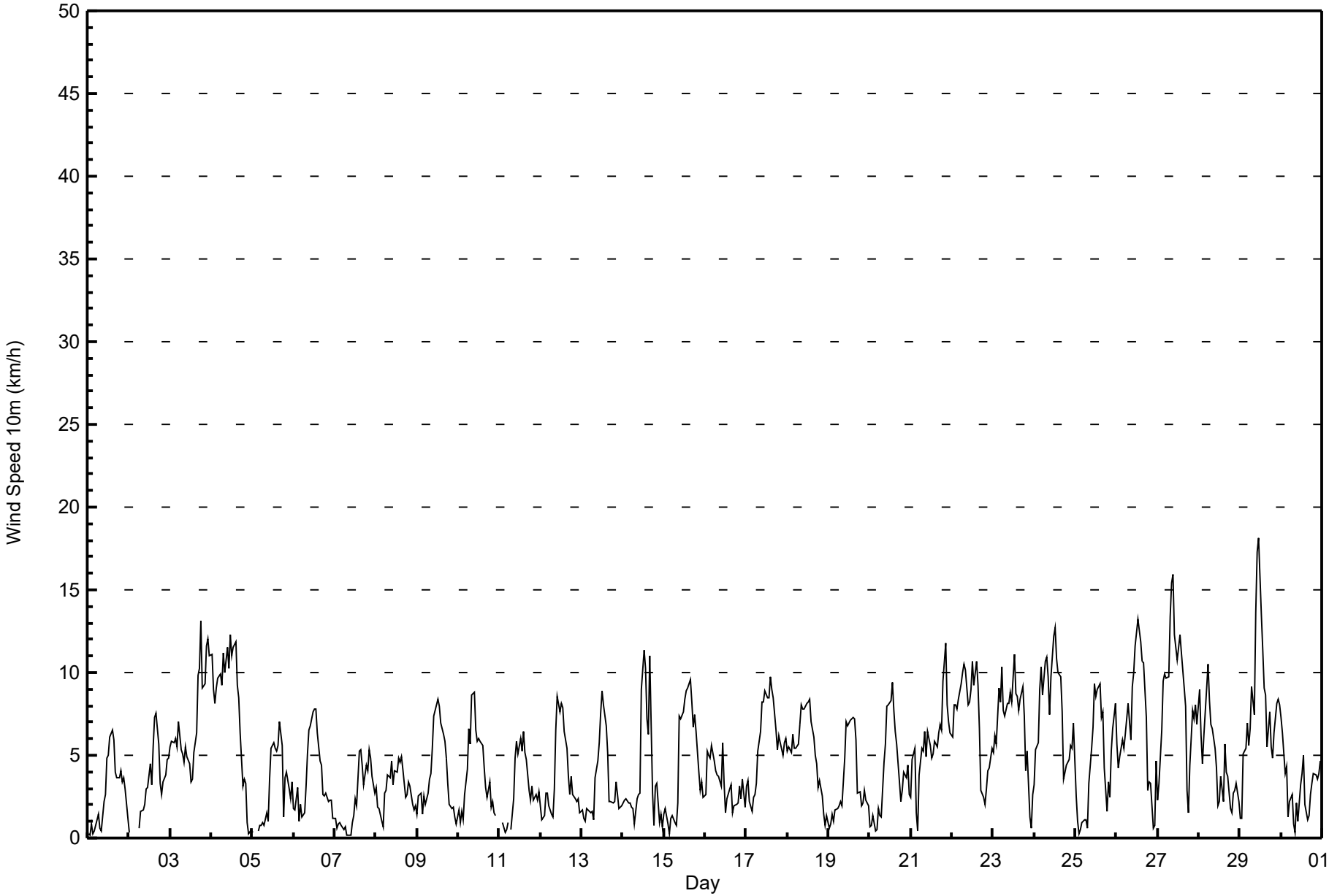
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	436	61.41	61.41
6 - 11	250	35.21	96.62
12 - 19	24	3.38	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: 710

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Surmont 2 - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	5	12	3	9	40	47	20	27	28	57	89	41	30	15	6	436
6 - 11	3	0	1	0	0	19	59	22	2	2	0	42	50	19	12	19	250
12 - 19	0	0	0	0	0	0	4	0	0	0	0	0	12	1	0	7	24
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	10	5	13	3	9	59	110	42	29	30	57	131	103	50	27	32	710

Total Number of Valid Hours: 710

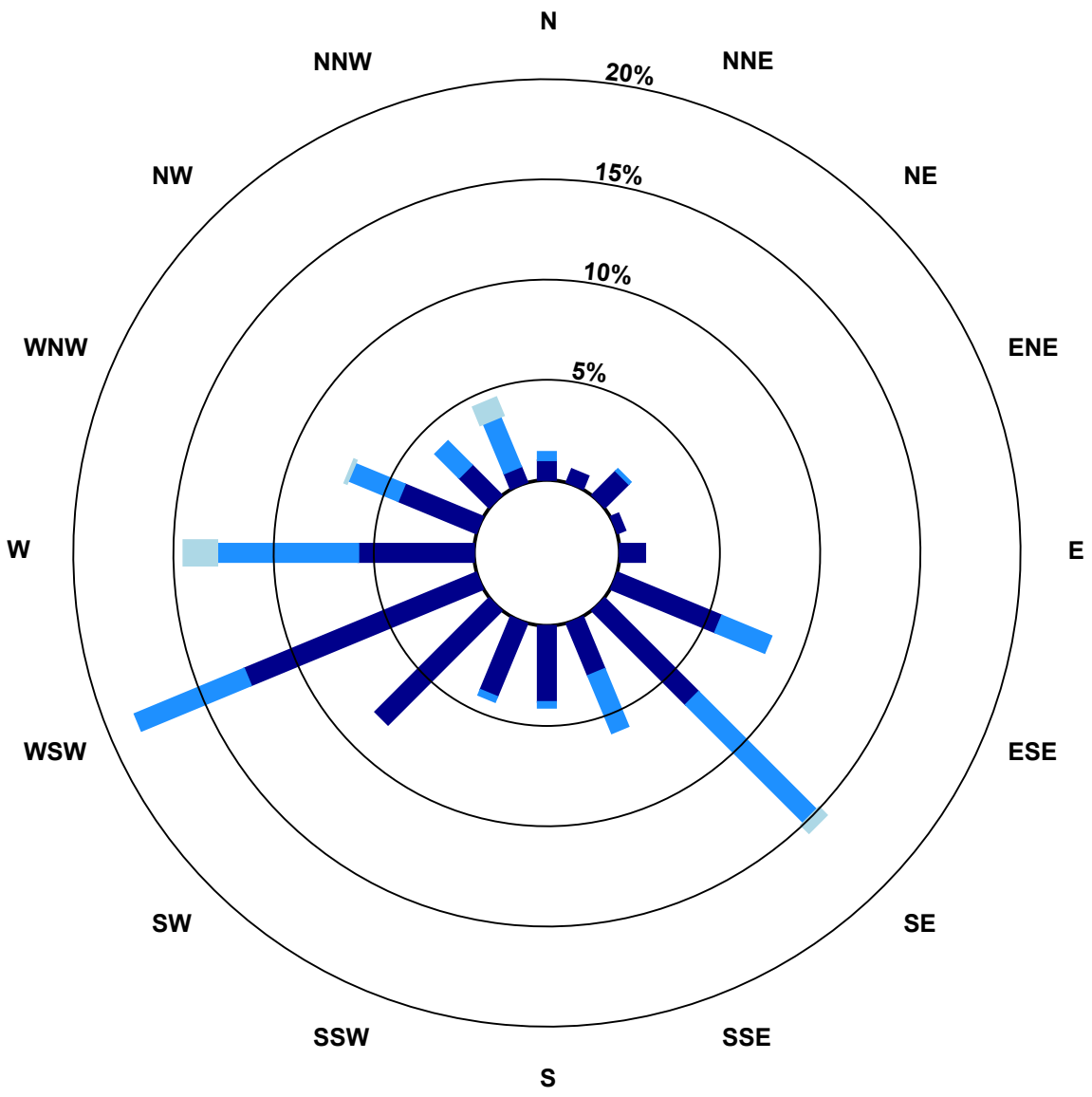
Total Number of Hours: 720

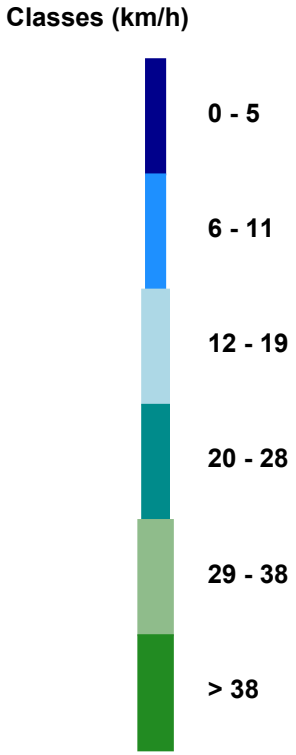
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Surmont 2





Total Number of Valid Hours: 710

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Surmont 2 - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 29 12:00

Minimum Value: 0 km/h on Sep 16 18:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.6

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-Sep	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2	2	1	1	1	1	1	1	1	3
2-Sep	1	UO	UO	UO	UO	UO	1	1	1	1	2	2	2	2	3	3	3	2	1	1	1	2	2	2	3
3-Sep	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	5	5	6	4	4	5	5	5	6
4-Sep	5	4	4	4	4	5	4	5	5	5	5	5	5	5	5	4	4	3	2	1	1	1	1	1	5
5-Sep	1	UO	UO	1	1	1	1	1	1	1	2	2	3	3	2	3	3	2	1	1	1	1	1	1	3
6-Sep	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2	2	1	1	1	1	1	1	1	3
7-Sep	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	2	2	2	2	1	2
8-Sep	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2
9-Sep	1	1	1	1	1	1	1	1	1	2	2	3	3	4	3	3	3	2	2	1	1	1	2	1	4
10-Sep	1	1	1	1	2	2	2	2	3	3	3	2	3	3	2	2	2	1	1	1	1	1	1	UO	3
11-Sep	1	UO	1	1	1	1	UO	1	1	2	2	2	3	2	3	2	2	2	1	1	1	1	1	1	3
12-Sep	1	1	1	2	1	1	1	1	1	2	3	3	3	3	3	2	2	1	1	1	1	1	1	1	3
13-Sep	1	1	1	1	1	1	1	1	1	1	2	3	3	3	2	2	1	1	1	2	1	2	1	1	3
14-Sep	1	1	1	1	1	1	2	2	2	2	1	5	4	5	3	3	4	3	1	1	1	1	1	1	5
15-Sep	2	1	1	1	1	1	1	1	3	3	3	3	3	3	3	4	3	3	3	3	2	1	1	1	4
16-Sep	1	2	2	2	2	2	1	2	2	1	2	2	2	2	2	2	1	0	1	1	1	1	1	1	2
17-Sep	1	1	1	1	1	1	1	2	2	2	3	3	3	4	4	4	4	2	2	2	2	2	2	2	4
18-Sep	2	2	2	2	2	2	2	3	3	4	3	4	3	3	3	3	3	2	1	1	1	1	1	1	4
19-Sep	1	1	1	1	1	0	1	1	2	2	3	3	3	3	3	3	2	1	1	1	1	0	1	1	3
20-Sep	1	1	1	1	1	1	1	1	2	2	2	3	4	4	3	3	3	1	1	1	2	2	2	1	4
21-Sep	1	2	2	1	1	2	1	2	3	3	3	2	2	3	3	3	3	3	2	4	4	3	3	2	4
22-Sep	2	3	2	3	3	3	3	4	3	3	3	4	4	4	4	4	4	2	1	1	1	2	2	3	4
23-Sep	3	3	3	4	3	3	2	3	3	3	4	3	5	4	4	3	4	4	4	2	2	1	1	1	5
24-Sep	2	3	3	4	4	4	4	4	4	4	4	5	5	4	4	3	3	2	1	1	2	1	2	2	5
25-Sep	2	1	1	1	1	1	1	1	1	2	2	3	4	4	4	3	3	2	1	2	2	2	2	3	4
26-Sep	2	1	2	2	2	2	2	3	3	4	4	4	5	5	4	4	4	3	1	1	1	1	1	2	5
27-Sep	2	2	6	4	4	3	4	5	6	6	5	4	4	4	5	3	3	2	1	2	3	2	3	3	6
28-Sep	3	3	2	2	3	3	3	3	3	2	2	2	2	2	2	3	2	1	1	1	1	1	1	1	3
29-Sep	1	1	2	2	2	2	3	3	3	6	6	7	6	5	4	4	2	3	2	2	3	3	3	2	7
30-Sep	3	3	1	2	1	1	1	1	1	2	1	1	1	2	2	1	2	1	2	1	1	1	1	2	3
	5	4	6	4	4	5	4	5	6	6	6	7	6	5	5	4	5	5	6	4	4	5	5	5	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - September 2025

Direction of Maximum Speed: 131 deg on Sep 29 12:00
Direction of Maximum Daily Speed Average: 260.1 deg on Sep 27

Direction of Minimum Speed: 230 deg on Sep 7 08:00

Direction of Minimum Daily Speed Average: 0.2 deg on Sep 30

Monthly Average Direction: 231.7 deg

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Percent Operational Time:	98.6

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	Average
1-Sep	9	297	292	201	275	303	287	294	168	128	305	348	324	343	346	338	323	286	278	279	266	264	269	309	310.8
2-Sep	296	UO	UO	UO	UO	UO	70	86	131	128	130	212	209	169	124	117	120	122	145	186	181	161	122	132	140.7
3-Sep	120	126	130	138	118	116	119	115	136	145	145	163	173	245	286	345	333	338	343	335	330	338	335	331	5.9
4-Sep	331	322	309	313	318	315	322	335	334	338	345	343	329	333	336	331	332	322	335	259	262	292	211	233	326.9
5-Sep	225	UO	UO	262	250	235	230	121	161	114	152	137	112	119	124	130	116	117	242	260	255	218	180	248	149.6
6-Sep	221	208	206	243	256	248	185	122	123	139	147	142	147	142	152	189	180	201	236	239	231	225	234	194	169.5
7-Sep	265	251	247	246	252	227	221	230	266	124	255	49	141	82	46	347	311	275	287	306	318	296	287	290	307.4
8-Sep	271	271	270	283	220	297	308	310	331	359	311	36	59	54	42	72	105	98	252	259	250	237	239	251	335.6
9-Sep	244	218	238	220	236	123	142	138	124	125	126	133	136	155	152	158	150	147	203	230	200	186	172	213	155.1
10-Sep	251	249	241	210	251	264	239	254	275	292	333	355	322	1	345	19	352	258	249	240	240	233	215	UO	292.5
11-Sep	313	UO	284	255	278	259	UO	131	95	121	137	162	135	163	132	142	137	153	222	237	227	227	225	234	160.5
12-Sep	208	216	207	190	243	236	235	44	138	130	130	138	142	148	149	153	136	224	248	209	236	228	222	215	165.4
13-Sep	212	208	221	235	253	256	241	81	114	131	142	141	131	139	138	143	173	193	220	235	238	238	226	234	163.3
14-Sep	252	233	207	250	251	177	116	101	114	124	128	119	115	131	161	136	111	112	203	251	235	299	244	236	143.0
15-Sep	237	254	121	269	262	249	214	127	241	265	292	306	283	281	290	282	291	290	324	323	299	276	261	259	286.4
16-Sep	290	287	296	307	312	290	281	336	349	286	286	268	312	17	53	55	19	236	240	245	242	217	128	193	295.4
17-Sep	217	233	200	156	143	117	97	105	109	118	135	129	137	137	130	127	134	130	131	126	122	115	120	128	130.1
18-Sep	115	114	118	124	125	136	141	143	144	164	158	168	149	159	189	206	186	263	270	255	245	244	242	239	160.0
19-Sep	243	134	97	110	87	107	110	106	168	229	254	246	239	256	256	261	265	264	244	239	251	255	242	252	243.7
20-Sep	258	217	172	186	249	179	196	115	103	141	129	131	158	142	151	151	147	142	155	168	136	140	129	135	143.9
21-Sep	141	156	134	163	140	256	261	278	303	322	353	345	349	0	37	5	294	290	286	284	280	283	274	277	298.7
22-Sep	270	263	264	264	263	259	258	256	256	254	250	259	260	257	266	257	245	232	174	204	216	198	185	170	251.5
23-Sep	221	214	241	255	260	254	254	257	263	276	263	261	266	261	255	258	258	253	250	244	264	257	98	257	255.5
24-Sep	257	245	247	247	253	261	252	256	262	280	275	272	282	284	286	281	281	263	244	250	258	257	254	248	264.9
25-Sep	221	143	212	181	214	249	246	183	124	109	122	132	174	143	145	160	162	184	216	148	198	265	264	268	169.2
26-Sep	262	247	243	250	250	260	270	267	286	286	277	263	279	273	278	286	270	262	248	273	249	242	130	258	268.7
27-Sep	239	225	240	245	250	263	266	261	268	264	273	263	269	261	267	262	261	251	224	256	261	259	257	253	260.1
28-Sep	250	253	259	259	251	255	262	277	272	285	293	15	234	106	236	121	122	116	173	173	177	123	137	150	241.4
29-Sep	138	125	112	116	128	129	132	133	142	129	132	131	144	137	133	138	134	132	140	159	150	126	123	119	132.7
30-Sep	139	146	129	125	177	256	212	178	276	45	30	34	42	45	327	274	316	261	270	284	288	297	302	300	284.7
	238.4	226.6	225.9	237.0	248.6	250.6	246.1	249.7	238.9	215.6	203.0	179.4	198.6	185.2	208.1	210.4	213.7	231.8	255.7	254.2	250.7	246.7	231.1	241.6	
	Diurnal Average																								

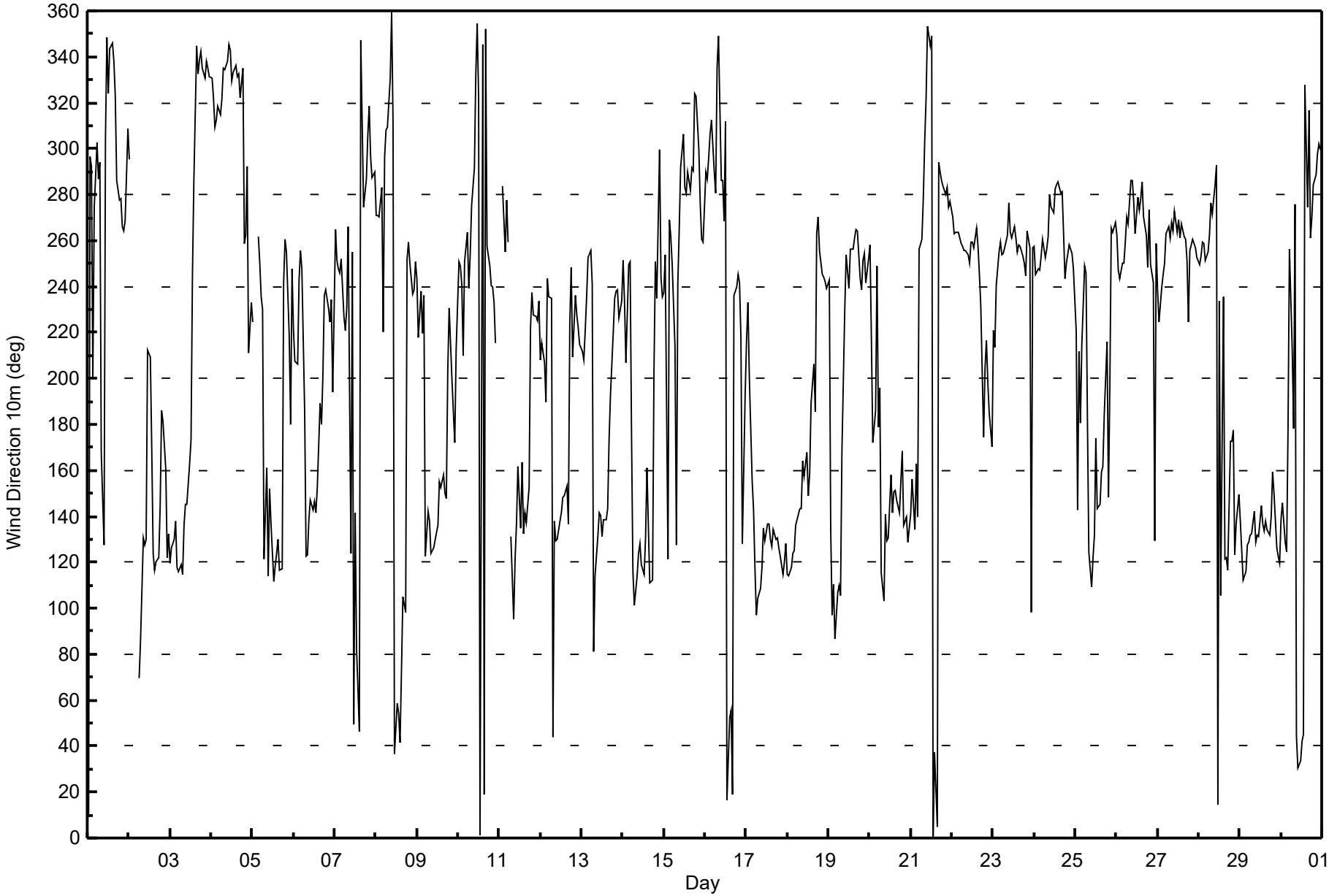
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - September 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 109 deg on Sep 23 23:00

Minimum Value: 8 deg on Sep 8 19:00

Percentiles: P_1 = 14 P_{10} = 29 Q_1 = 37 Median = 47 Q_3 = 59 P_{90} = 74 P_{99} = 96

Hours in Service:	720
Hours of Data:	710
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.6

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-Sep	74	94	79	94	71	81	65	92	96	73	58	43	54	61	58	52	68	44	35	29	23	15	22	62	96
2-Sep	75	UO	UO	UO	UO	UO	60	42	46	74	75	80	61	78	49	38	33	31	46	54	58	55	42	44	80
3-Sep	43	47	46	56	46	40	50	52	49	55	51	64	61	82	48	60	54	61	53	60	57	60	53	56	82
4-Sep	61	61	66	59	58	61	64	57	59	53	61	55	59	54	57	63	61	61	75	22	28	79	84	81	84
5-Sep	80	UO	UO	44	51	65	48	36	76	95	67	45	55	33	36	48	34	27	57	10	17	42	53	21	95
6-Sep	37	49	41	25	13	35	50	48	48	43	48	49	46	49	58	68	62	62	56	42	32	30	33	75	75
7-Sep	52	71	45	41	41	66	67	85	80	96	85	92	54	72	53	57	53	27	34	58	55	48	42	69	96
8-Sep	29	22	20	11	31	46	59	45	57	49	81	67	78	66	59	46	45	82	8	14	13	36	33	30	82
9-Sep	65	59	46	88	50	50	43	36	37	44	38	46	46	56	57	52	52	60	59	54	61	51	85	77	88
10-Sep	60	14	29	61	48	37	32	38	38	40	59	56	59	62	59	60	72	38	14	32	27	17	70	UO	72
11-Sep	15	UO	12	44	42	49	UO	13	54	30	47	52	47	61	49	49	44	46	39	26	36	31	31	39	61
12-Sep	43	65	56	58	31	49	56	68	54	36	37	41	48	52	51	53	48	46	17	39	32	43	51	60	68
13-Sep	32	61	69	29	23	35	60	96	42	42	41	42	44	45	44	53	57	57	35	47	34	55	51	38	96
14-Sep	29	35	48	57	39	67	76	101	73	72	46	41	27	47	56	46	20	91	85	41	41	58	65	81	101
15-Sep	62	27	72	86	63	51	54	71	76	32	49	50	39	36	41	38	38	44	59	61	60	26	17	23	86
16-Sep	28	33	46	51	50	47	40	53	62	45	40	79	99	88	84	70	93	30	42	60	33	55	47	68	99
17-Sep	49	38	47	53	33	34	30	29	35	33	42	42	50	50	41	47	47	42	43	43	41	46	39	38	53
18-Sep	37	33	40	38	46	49	54	56	57	56	57	56	53	53	64	66	72	54	42	26	35	40	80	57	80
19-Sep	51	70	65	56	36	41	22	26	63	51	49	51	48	48	47	44	38	28	15	24	19	16	15	16	70
20-Sep	60	56	45	55	74	69	87	60	28	44	36	42	60	44	59	59	56	52	49	63	47	50	44	41	87
21-Sep	43	61	47	75	98	50	21	35	50	69	57	62	67	66	57	62	49	41	38	34	31	41	32	33	98
22-Sep	31	28	28	32	30	28	28	30	31	40	42	40	40	45	40	40	50	77	52	71	68	78	76	65	78
23-Sep	79	74	75	41	30	25	25	29	34	37	35	41	38	38	40	46	43	36	46	67	48	104	109	54	109
24-Sep	55	57	53	46	32	44	29	32	31	47	42	35	40	43	43	33	35	29	18	15	24	17	22	18	57
25-Sep	72	61	58	74	64	35	63	65	31	19	31	39	70	56	55	55	54	62	68	66	73	34	34	30	74
26-Sep	24	26	29	23	24	27	27	26	45	45	37	33	38	35	35	37	33	30	26	33	47	91	98	47	98
27-Sep	94	90	67	49	37	37	32	33	34	35	40	41	36	37	39	35	34	46	69	54	30	30	31	41	94
28-Sep	35	44	38	31	26	25	30	38	46	42	76	98	88	69	84	47	31	29	45	66	47	54	54	59	98
29-Sep	84	90	46	38	41	44	49	43	56	41	41	40	53	47	52	50	42	44	56	64	51	37	35	32	90
30-Sep	42	50	44	39	88	50	30	84	85	54	88	55	39	43	85	91	91	47	54	30	34	39	45	52	91
	94	94	79	94	98	81	87	101	96	96	88	98	99	88	85	91	93	91	85	71	73	104	109	81	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS30
ELLS RIVER
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
SEPTEMBER 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	656	33	64	95.69	-	-	88.3	0	13.3	0
TRS (ppb) Average	677	40	43	99.58	6.9	4	5.8	0	1.6	0
THC (ppm) Average	685	34	35	99.86	-	-	7.6	-	3.5	-
NMHC (ppm) Average	685	34	35	99.86	-	-	1.766	-	0.544	-
CH4 (ppm) Average	685	34	35	99.86	-	-	5.9	-	2.9	-
NO2 (ppb) Average	685	35	35	100	-	-	45.4	0	15.3	-
NO (ppb) Average	685	35	35	100	-	-	148.3	-	31.1	-
NOX (ppb) Average	685	35	35	100	-	-	172.6	-	44.6	-
PM2.5 (ug/m3) Average	718	1	2	99.86	-	-	134	0	47.6	3
Temperature 2 m (C) Average	719	0	1	99.86	-	-	29.2	-	18.6	-
Relative Humidity (%) Average	719	0	1	99.86	-	-	95.8	-	79	-
Wind Speed 10 m (km/h) Average	704	2	16	98.06	-	-	29	-	13	-
Wind Direction 10 m (deg) Average	704	2	16	98.06	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	719	0	1	99.86	-	-	729.1	-	227.9	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	656	1.77	6.1	-	0	0	0.1	0.1	0.5	3.5	88.3
TRS (ppb) Average	677	0.69	0.6	-	0.2	0.4	0.4	0.5	0.7	1.2	5.8
THC (ppm) Average	685	2.32	0.6	-	2	2	2.1	2.1	2.4	2.8	7.6
NMHC(ppm) Average	685	0.127	0.249	-	0	0	0	0	0.2	0.4	1.766
CH4(ppm) Average	685	2.2	0.3	-	2	2	2	2.1	2.2	2.4	5.9
NO2 (ppb) Average	685	4.21	5.5	-	0	0.3	0.6	2.5	5.6	10.6	45.4
NO (ppb) Average	685	2.46	10.5	-	0	0	0	0.1	0.9	5.1	148.3
NOX (ppb) Average	685	6.67	14	-	0.1	0.4	0.7	2.9	6.6	15.6	172.6
PM2.5 (ug/m3) Average	718	14.47	15	-	0.6	3	5.9	10.2	17.8	28.5	134
Temperature 2 m (C) Average	719	14.24	5.7	-	-0.3	7	10.3	13.9	18.1	22.1	29.2
Relative Humidity (%) Average	719	62.95	19.9	-	21.3	35.8	47.3	62	80.7	90.2	95.8
Wind Speed 10 m (km/h) Average	704	8.5	5	-	0	2	5	8	12	15	29
Wind Direction 10 m (deg) Average	704	220.8	-	-	-	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	719	162.31	215.7	-	0	0	0	19.7	313	552.1	729.1

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS (except NO2)	03 Sep 2025 18:00	03 Sep 2025 18:00	1	DAS Failure - data not recorded
SO2	07 Sep 2025 05:00	08 Sep 2025 10:00	30	Unstable Operation - pump failing
TRS	15 Sep 2025 09:00	15 Sep 2025 10:00	2	Maintenance - reinitiated daily QA check
Wind Speed, Wind Direction	02 Sep 2025 06:00	02 Sep 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	04 Sep 2025 23:00	04 Sep 2025 23:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	06 Sep 2025 19:00	06 Sep 2025 20:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Sep 2025 21:00	08 Sep 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Sep 2025 05:00	09 Sep 2025 07:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Sep 2025 03:00	14 Sep 2025 04:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Sep 2025 04:00	17 Sep 2025 05:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Sep 2025 07:00	17 Sep 2025 07:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 88.3 ppb on Sep 17 14:00
Maximum Daily Average: 13.3 ppb on Sep 17

Minimum Value: 0.0 ppb on Sep 1 01:00
Minimum Daily Average: 0.0 ppb on Sep 10
Maximum Diurnal Average: 6.2 ppb at hour 14
Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 1.77 ppb
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.5 P_{90} = 3.5 P_{99} = 30.7

Hours in Service:	720
Hours of Data:	656
Hours of Missing Data:	64
Hours of Calibration:	33
Percent Operational Time:	95.7

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.5
2-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	2.6	30.5	21.4	26.7	21.8	13.6	7.9	6.0	3.9	2.0	0.7	0.4	0.3	2.3	6.1	30.5
3-Sep	1.6	2.9	6.2	10.7	18.8	Z	20.7	7.9	1.5	0.8	0.6	0.5	0.3	0.1	0.8	0.5	0.3	DF	0.0	0.0	1.4	0.7	0.1	0.0	3.5	20.7
4-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3	0.3	0.3	0.3	0.4	0.3	4.2	3.8	5.0	4.8	1.8	0.6	0.1	0.1	0.1	1.1	5.0
6-Sep	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.4	4.1	10.4	25.6	33.9	32.0	10.9	13.6	9.1	5.7	4.1	2.3	1.7	1.0	0.7	0.5	0.4	6.8	33.9
7-Sep	0.3	0.2	0.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.3
8-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.1	0.0	0.2	1.6	1.1	0.2	0.1	0.0	0.0	0.0	--	1.6
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	2.8	7.6	7.7	18.6	12.7	9.4	28.7	11.9	2.0	1.7	1.0	0.4	0.2	0.1	0.0	0.1	4.6	28.7
10-Sep	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-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4	1.4	28.6	10.2	8.1	4.4	3.9	4.2	0.7	0.6	0.4	0.7	0.4	0.5	2.9	28.6
12-Sep	0.5	0.3	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.4	0.4	0.6	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.6
13-Sep	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.3	0.3	0.3	1.4	5.5	11.9	15.0	11.2	7.6	3.6	1.7	1.0	1.2	1.4	0.3	2.7	15.0
14-Sep	0.2	0.2	0.1	0.1	Z	0.0	0.0	0.0	0.1	1.7	17.1	29.9	10.4	12.9	5.4	2.8	1.3	1.6	2.2	1.6	0.5	0.4	0.3	0.2	3.9	29.9
15-Sep	0.2	0.1	0.1	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2
16-Sep	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.3	0.2	0.2	0.6	0.2	1.2	2.7	3.3	1.7	0.7	0.3	0.2	0.5	3.3
17-Sep	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	3.0	10.9	37.8	45.2	35.1	88.3	30.9	18.6	11.1	11.5	3.5	3.8	1.1	0.9	0.8	3.4	13.3	88.3
18-Sep	9.3	5.2	Z	0.3	0.1	0.1	0.7	2.3	1.2	0.5	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	1.0	9.3
19-Sep	0.2	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	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3
20-Sep	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.3	0.6	1.4	0.7	0.4	0.4	0.6	0.3	0.3	0.8	3.1	1.2	1.6	1.3	0.6	3.1
21-Sep	0.5	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.5	0.8	2.4	1.8	1.0	0.5	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4
22-Sep	Z	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	0.1	0.0	0.0	0.1	0.1	0.1	0.1
23-Sep	0.1	Z	0.2	0.3	0.3	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	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.3
24-Sep	0.1	0.2	Z	0.2	0.1	0.1	0.2	0.1	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	0.1	0.0	0.0	0.1	0.2
25-Sep	0.0	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.2	1.1	5.3	3.3	2.0	3.6	1.6	1.5	2.4	1.4	0.9	0.4	0.2	0.1	0.1	0.1	1.1	5.3
26-Sep	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	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
27-Sep	0.1	0.1	0.1	0.1	0.1	Z	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	0.1	0.1	0.0	0.0	0.1	0.1
28-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
29-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.0	3.5	1.9	2.2	2.2	0.5	0.6	0.4	0.4	0.3	0.2	0.2	0.0	0.0	0.1	0.7	3.5
30-Sep	0.1	0.1	Z	0.8	1.0	0.9	1.0	0.8	1.7	1.4	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.4	1.7
	0.6	0.4	0.3	0.5	0.9	0.1	0.9	0.5	0.6	1.4	3.8	6.1	5.4	6.2	4.3	2.9	1.8	1.7	1.0	0.7	0.5	0.3	0.2	0.3	Diurnal Average	
	9.3	5.2	6.2	10.7	18.8	0.9	20.7	7.9	4.1	10.9	37.8	45.2	35.1	88.3	30.9	18.6	11.2	11.5	4.8	3.8	3.1	1.2	1.6	3.4	Diurnal Maximum	

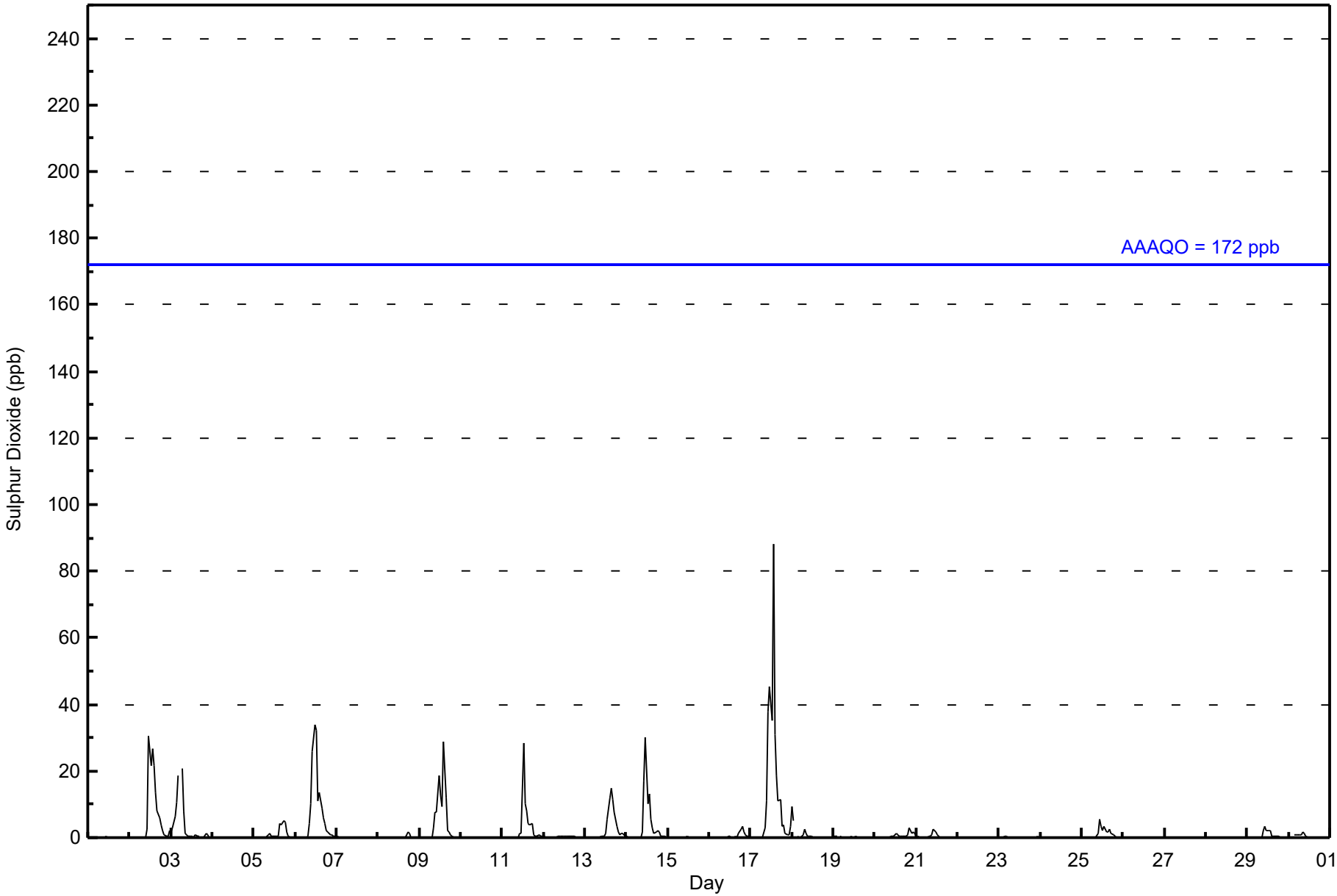
Z - zerospan C - Calibration DF - DAS Failure UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	623	94.97	94.97
11 - 20	17	2.59	97.56
21 - 60	15	2.29	99.85
61 - 110	1	0.15	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 656

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	21	17	3	1	2	5	50	68	115	92	78	45	43	36	22	11	609
11 - 20	3	0	0	0	0	0	8	3	3	0	0	0	0	0	0	0	17
21 - 60	0	0	0	0	0	0	6	8	1	0	0	0	0	0	0	0	15
61 - 110	0	0	0	0	0	0	1	0	0	0	0	0	0	0	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	24	17	3	1	2	5	65	79	119	92	78	45	43	36	22	11	642

Total Number of Valid Hours: 642

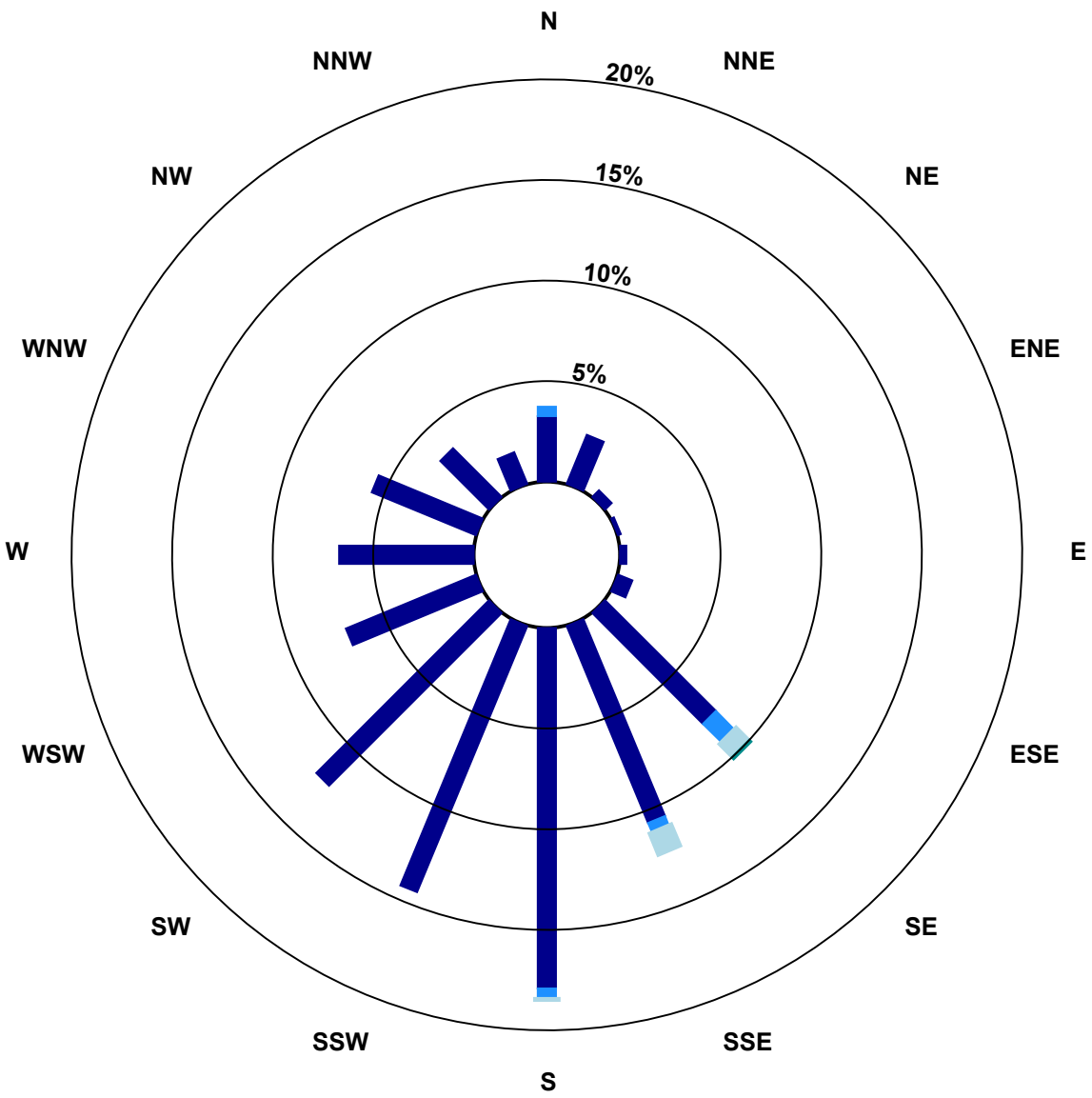
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Ells River



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

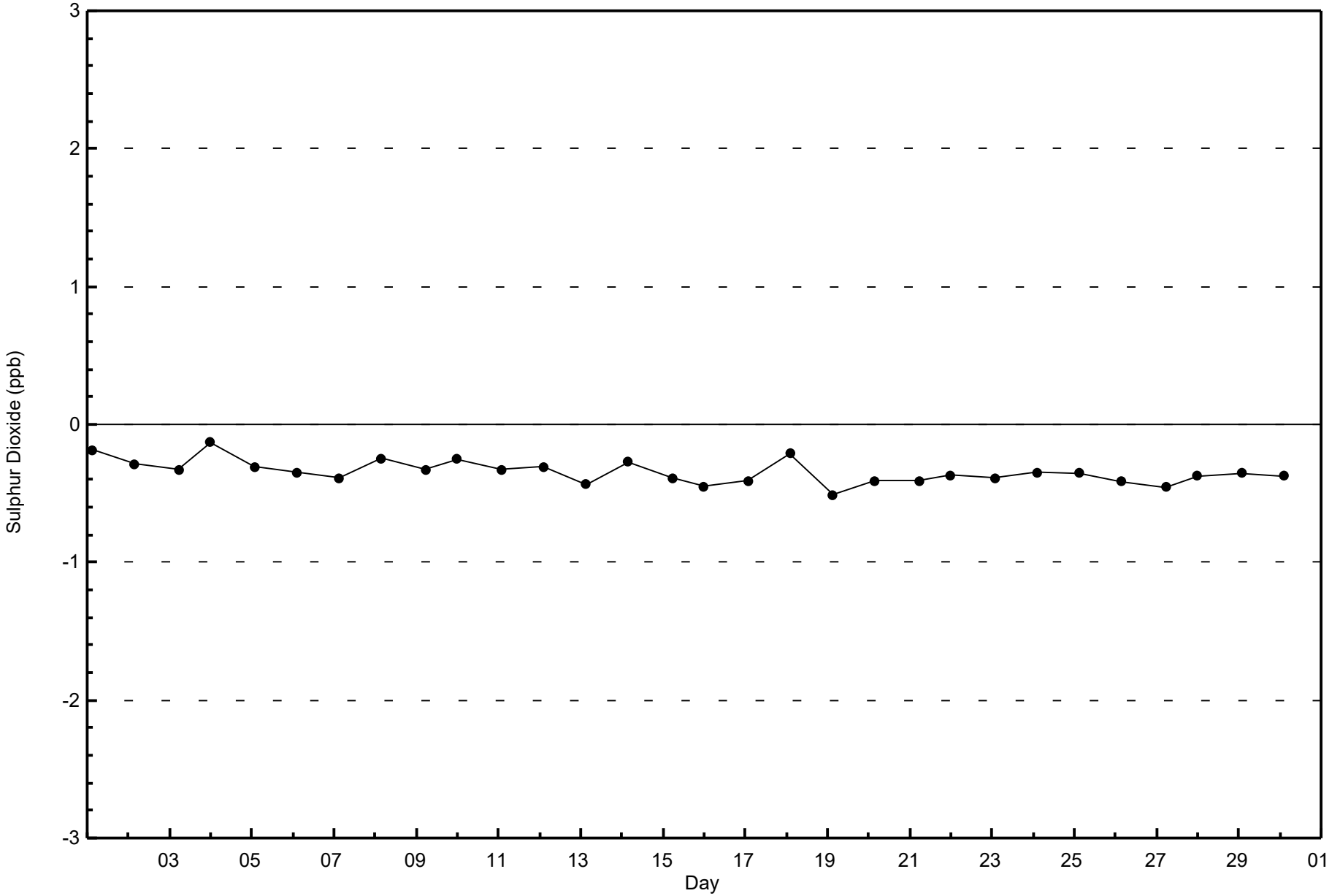
Total Number of Valid Hours: 642

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025

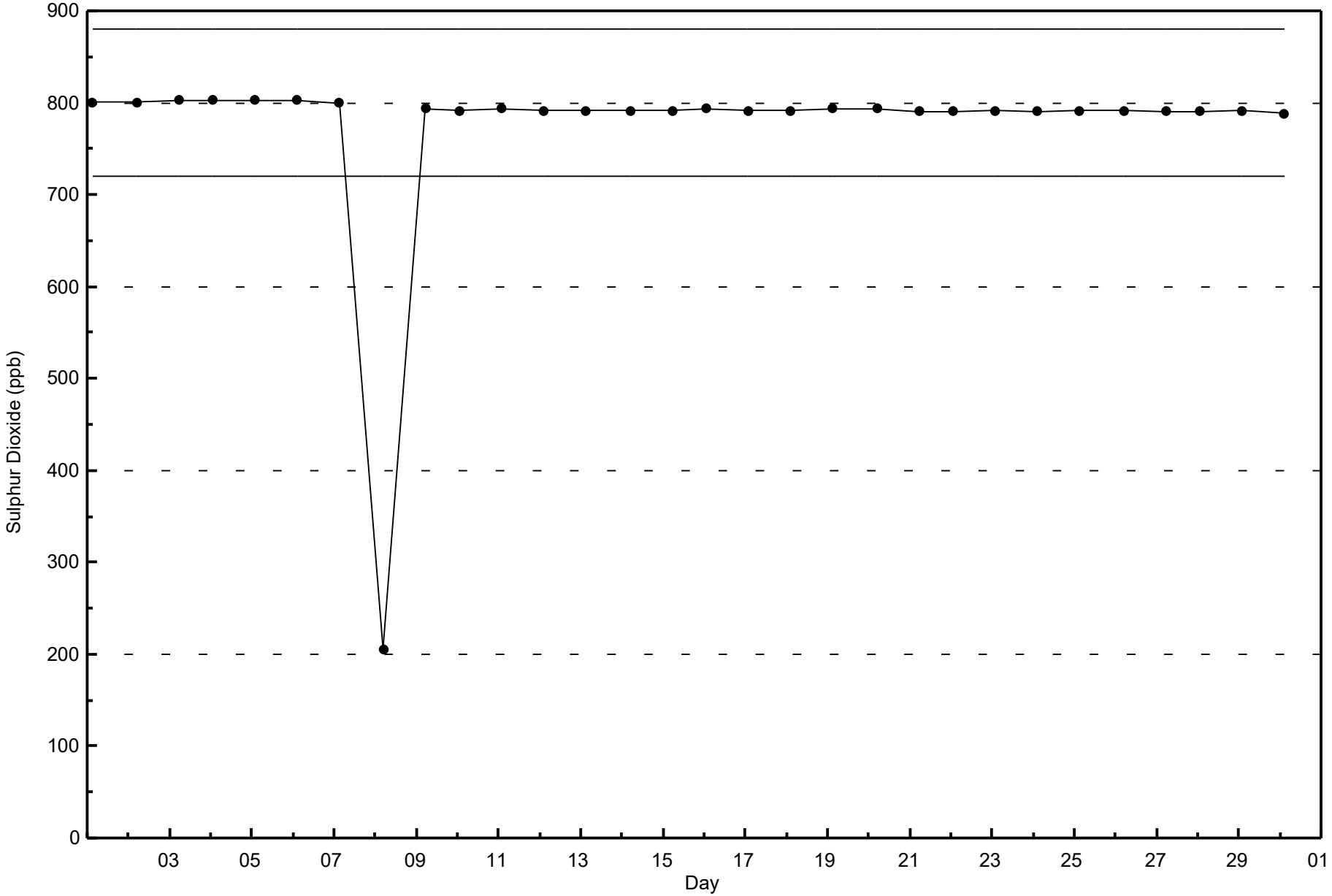


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025

Number of Exceedences (AAAQG): 30-Min: 4

Maximum Value: 6.9 ppb on Sep 12 08:30 Maximum Daily Average: 1.6 ppb on Sep 12

Minimum Value: 0.1 ppb on Sep 14 18:30 Minimum Daily Average: 0.4 ppb on Sep 27

Maximum Diurnal Average: 1.3 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.69 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.2 P_{99} = 3.6

Periods in Service:	1440
Periods of Valid Data:	1355
Periods of Invalid Data:	85
Periods of Calibration:	78
Percent Operational Time:	99.5

Period Ending At (MST)

Day	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	Daily Average	Daily Maximum
1-Sep	0.4	0.7	0.8	0.6	Z	0.7	0.6	0.8	0.7	3.4	5.9	0.7	0.5	0.5	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.7	0.9	0.7	0.9	5.9
	0.5	0.4	0.6	0.8	SP	0.6	0.6	0.6	0.8	4.4	2.5	0.5	0.5	0.5	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.9	0.8	0.6		
2-Sep	0.6	0.7	0.6	1.2	1.2	Z	1.8	1.1	0.7	0.8	C	C	C	C	1.1	0.7	0.5	0.8	0.9	1.0	0.7	0.4	0.6	0.5	0.8	1.8
	0.5	0.8	1.3	0.6	1.0	SP	1.1	0.6	0.7	C	C	C	C	1.2	0.9	0.6	0.5	0.9	1.0	0.9	0.5	0.5	0.6	0.5		
3-Sep	Z	0.5	0.8	1.9	2.8	1.4	2.0	1.9	0.7	3.4	1.3	0.7	0.6	0.5	0.5	0.8	0.7	DF	DF	0.6	0.7	1.1	0.9	0.8	1.1	3.4
	SP	0.7	1.5	2.9	1.6	2.1	2.2	0.9	1.2	2.6	0.7	0.7	0.5	0.5	0.8	0.6	0.6	DF	0.5	0.6	1.3	0.9	0.8	0.7		
4-Sep	0.7	Z	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	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7
	0.6	SP	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	0.5	0.5	0.5	0.5	0.5	0.7	0.6		
5-Sep	0.6	0.5	Z	0.5	0.4	0.4	0.5	0.7	2.5	1.7	2.4	1.5	0.8	0.5	0.4	0.6	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.8	2.5
	0.6	0.6	SP	0.5	0.4	0.5	0.5	1.6	2.0	1.7	2.0	0.9	0.7	0.5	0.4	0.6	0.6	0.6	0.7	0.7	0.5	0.5	0.5	0.5		
6-Sep	0.4	0.5	0.5	Z	0.6	0.8	1.4	1.0	1.6	1.4	1.3	1.2	1.1	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	1.6
	0.5	0.5	0.6	SP	0.5	1.4	1.0	1.2	1.5	1.3	1.1	1.2	1.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6		
7-Sep	0.6	0.5	0.4	0.4	Z	0.3	0.3	0.4	0.4	0.7	1.0	0.9	0.8	1.1	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	1.1
	0.5	0.4	0.4	0.4	SP	0.3	0.5	0.4	0.5	0.8	1.0	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5		
8-Sep	0.5	0.5	0.5	0.4	0.5	Z	0.4	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.7
	0.5	0.5	0.5	0.5	0.6	SP	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
9-Sep	Z	0.4	0.4	0.3	0.3	0.3	0.5	0.4	1.5	1.3	1.3	1.1	1.0	0.7	0.7	0.6	0.5	0.5	0.4	0.2	0.2	0.2	0.2	0.3	0.6	1.5
	SP	0.4	0.4	0.3	0.7	0.5	0.8	0.7	1.5	1.2	1.2	1.0	0.7	0.7	0.7	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.3		
10-Sep	0.3	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	0.5	0.5	0.5	0.5	0.4	0.4	0.6
	0.3	SP	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	0.5	0.5	0.6	0.5	0.5		
11-Sep	0.9	0.5	Z	0.6	0.5	0.7	0.4	0.5	0.5	0.6	0.6	1.5	1.1	1.0	0.6	0.4	0.4	0.5	0.4	0.6	1.0	1.1	2.3	3.5	0.9	3.7
	0.6	0.5	SP	0.6	0.8	0.5	0.4	0.4	0.5	0.6	0.8	1.7	1.1	0.8	0.5	0.4	0.5	0.4	0.5	0.8	1.4	2.0	3.3	3.7		
12-Sep	2.4	3.6	1.7	Z	1.7	1.7	1.6	4.2	6.9	5.7	2.2	0.9	0.7	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	1.6	6.9
	3.1	2.1	1.3	SP	1.8	2.5	2.3	5.7	4.7	3.0	1.5	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4		
13-Sep	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.7	0.8	2.0	1.7	0.5	1.3	0.7	0.8	0.7	0.7	0.8	0.6	0.5	0.4	0.6	0.4	0.5	0.7	2.1
	0.4	0.4	0.4	0.4	SP	0.5	0.6	0.7	2.1	1.9	0.7	0.8	1.0	0.8	0.8	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5		
14-Sep	0.6	0.6	0.7	0.6	0.5	Z	0.3	0.6	0.6	3.8	2.7	2.2	1.2	0.8	1.0	0.2	0.3	0.6	0.1	0.4	0.7	0.9	0.9	0.7	0.9	3.8
	0.7	0.6	0.6	0.6	0.4	SP	0.4	0.6	1.3	3.5	2.4	1.7	0.8	0.9	0.3	0.3	0.4	0.3	0.3	0.5	1.1	1.0	0.6	0.7		
15-Sep	Z	0.7	0.4	0.3	0.3	0.3	0.3	0.3	M	M	C	C	C	C	C	0.4	0.4	0.4	0.3	0.5	0.6	0.6	0.7	0.6	--	0.7
	SP	0.5	0.4	0.3	0.3	0.3	0.3	0.3	M	0.4	C	C	C	C	C	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.6		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025

Day	Period Ending At (MST) 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	Daily Average	Daily Maximum
16-Sep	0.6	Z	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.7	0.5	0.5	0.6	1.2	1.3	1.3	1.0	0.7	0.7	1.3
	0.6	SP	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.6	0.6	0.7	0.5	0.6	0.8	1.2	1.3	1.0	0.8	0.8		
17-Sep	0.7	0.8	Z	1.0	0.6	0.6	0.6	0.6	DF	1.3	1.2	0.8	0.8	2.6	1.2	0.8	1.3	1.4	2.6	4.5	0.7	0.6	0.6	0.5	1.2	4.5
	0.9	0.9	SP	0.8	0.7	0.6	0.6	1.1	1.6	1.0	0.9	0.7	1.0	1.3	0.8	0.9	1.7	1.6	3.7	3.4	0.6	0.6	0.6	1.7		
18-Sep	3.6	3.8	1.2	Z	0.8	0.7	0.9	0.9	0.9	1.5	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	4.0
	4.0	1.9	1.2	SP	0.9	1.0	1.1	0.8	1.5	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	0.5		
19-Sep	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.6	0.6	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	0.5	0.6
	0.5	0.5	0.5	0.5	SP	0.5	0.4	0.5	0.5	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4		
20-Sep	0.3	0.4	0.5	0.4	0.5	Z	0.4	0.7	0.5	1.1	1.5	0.9	0.7	0.5	0.4	0.4	0.4	0.3	0.5	0.8	0.9	1.1	1.2	1.3	0.7	1.9
	0.4	0.4	0.9	0.4	0.4	SP	0.5	0.5	0.4	1.9	1.0	0.7	0.7	0.4	0.4	0.3	0.3	0.3	1.2	0.8	1.2	1.1	1.2	1.4		
21-Sep	Z	1.0	1.0	1.5	2.0	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.4	0.6	2.5
	SP	1.2	1.0	2.5	0.7	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.4		
22-Sep	0.5	Z	0.5	0.6	0.6	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	0.5	0.6
	0.4	SP	0.6	0.6	0.6	0.6	0.5	0.5	0.6	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		
23-Sep	0.4	0.4	Z	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5
	0.3	0.4	SP	0.3	0.4	0.4	0.5	0.5	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	0.5	0.5	0.5		
24-Sep	0.5	0.6	0.6	Z	0.8	0.7	0.8	0.8	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.9
	0.5	0.6	0.6	SP	0.7	0.8	0.9	0.8	0.8	0.8	0.5	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		
25-Sep	0.4	0.4	0.3	0.4	Z	0.5	0.6	0.6	0.7	1.3	1.2	0.8	0.5	0.6	0.6	0.5	0.4	0.5	0.4	0.6	0.5	0.4	0.4	0.5	0.6	1.4
	0.4	0.4	0.4	0.4	SP	0.6	0.6	0.6	1.1	1.4	1.1	0.6	0.6	0.6	0.5	0.4	0.5	0.4	0.5	0.7	0.4	0.4	0.5	0.5		
26-Sep	0.5	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.5	0.4	0.4	0.4	0.5	SP	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	0.4	0.4	0.4	0.4	0.4		
27-Sep	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	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
	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
28-Sep	0.4	Z	0.5	0.5	0.6	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	0.5	0.7	0.5	0.4	0.5	0.7
	0.4	SP	0.5	0.6	0.5	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	0.7	0.6	0.4	0.4		
29-Sep	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.6	1.4	0.4	0.6	0.4	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	1.4
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	1.2	0.7	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5		
30-Sep	0.6	0.6	0.7	Z	2.1	2.0	1.8	1.7	2.2	1.4	1.1	0.8	0.7	0.6	0.5	0.5	0.4	0.5	0.4	0.5	0.6	0.4	0.4	0.4	0.9	2.4
	0.5	0.5	1.2	SP	2.4	1.8	1.7	1.6	1.8	1.3	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.9	0.4	0.4	0.4	0.5		
	0.7	0.7	0.7	0.6	0.8	0.7	0.7	0.8	1.0	1.3	1.0	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	4.0	3.8	1.7	2.9	2.8	2.5	2.3	5.7	6.9	5.7	5.9	2.2	1.3	2.6	1.2	0.9	1.7	1.6	3.7	4.5	1.4	2.0	3.3	3.7	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

Ells River - September 2025

Maximum Value: 5.8 ppb on Sep 12 09:00

Maximum Daily Average: 1.6 ppb on Sep 12

Minimum Value: 0.2 ppb on Sep 14 19:00

Minimum Daily Average: 0.4 ppb on Sep 27

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.69 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.2 P_{99} = 3.7

Hours in Service:	720
Hours of Data:	677
Hours of Missing Data:	43
Hours of Calibration:	40
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.6	0.7	0.7	Z	0.6	0.6	0.7	0.8	3.9	4.2	0.6	0.5	0.5	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.8	0.8	0.7	0.9	4.2
2-Sep	0.6	0.7	0.9	0.9	1.2	Z	1.4	0.8	0.7	C	C	C	C	C	1.0	0.7	0.5	0.9	1.0	1.0	0.6	0.5	0.6	0.5	0.8	1.4
3-Sep	Z	0.6	1.2	2.4	2.2	1.8	2.1	1.4	1.0	3.0	1.0	0.7	0.6	0.5	0.7	0.7	0.6	DF	0.5	0.6	1.0	1.0	0.8	0.7	1.1	3.0
4-Sep	0.6	Z	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	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6
5-Sep	0.6	0.6	Z	0.5	0.4	0.4	0.5	1.1	2.2	1.7	2.2	1.2	0.7	0.5	0.4	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.8	2.2
6-Sep	0.5	0.5	0.6	Z	0.6	1.1	1.2	1.1	1.6	1.4	1.2	1.2	1.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	1.6
7-Sep	0.5	0.5	0.4	0.4	Z	0.3	0.4	0.4	0.4	0.8	1.0	0.8	0.8	0.9	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.0
8-Sep	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.7
9-Sep	Z	0.4	0.4	0.3	0.5	0.4	0.6	0.5	1.5	1.2	1.3	1.1	0.8	0.7	0.7	0.6	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.6	1.5
10-Sep	0.3	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	0.5	0.5	0.6	0.5	0.5	0.4	0.6
11-Sep	0.8	0.5	Z	0.6	0.6	0.6	0.4	0.5	0.5	0.6	0.7	1.6	1.1	0.9	0.6	0.4	0.5	0.5	0.5	0.7	1.2	1.5	2.8	3.6	0.9	3.6
12-Sep	2.7	2.9	1.5	Z	1.7	2.1	2.0	5.0	5.8	4.3	1.9	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	1.6	5.8
13-Sep	0.4	0.4	0.4	0.4	Z	0.5	0.6	0.7	1.4	2.0	1.2	0.7	1.2	0.7	0.8	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.7	2.0
14-Sep	0.6	0.6	0.7	0.6	0.5	Z	0.4	0.6	1.0	3.7	2.6	1.9	1.0	0.9	0.7	0.3	0.3	0.4	0.2	0.4	0.9	1.0	0.7	0.7	0.9	3.7
15-Sep	Z	0.6	0.4	0.3	0.3	0.3	0.3	0.3	M	M	C	C	C	C	C	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.6	--	0.7
16-Sep	0.6	Z	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.7	0.5	0.6	0.7	1.2	1.3	1.2	0.9	0.8	0.7	1.3
17-Sep	0.8	0.9	Z	0.9	0.7	0.6	0.6	0.9	1.6	1.1	1.0	0.8	0.9	2.0	1.0	0.8	1.5	1.5	3.1	3.9	0.6	0.6	0.6	1.1	1.2	3.9
18-Sep	3.8	2.8	1.2	Z	0.8	0.9	1.0	0.8	1.2	1.1	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	3.8
19-Sep	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.6
20-Sep	0.4	0.4	0.7	0.4	0.5	Z	0.5	0.6	0.4	1.5	1.3	0.8	0.7	0.4	0.4	0.4	0.4	0.3	0.8	0.8	1.1	1.1	1.2	1.3	0.7	1.5
21-Sep	Z	1.1	1.0	2.0	1.4	0.5	0.4	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	0.5	0.4	0.6	2.0
22-Sep	0.4	Z	0.5	0.6	0.6	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	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6
23-Sep	0.4	0.4	Z	0.3	0.4	0.4	0.5	0.5	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	0.5	0.5	0.5	0.4	0.5
24-Sep	0.5	0.6	0.6	Z	0.7	0.7	0.8	0.8	0.8	0.8	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	0.8
25-Sep	0.4	0.4	0.4	0.4	Z	0.5	0.6	0.6	0.9	1.3	1.2	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.4	0.4	0.4	0.5	0.6	1.3
26-Sep	0.5	0.4	0.4	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5
27-Sep	Z	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	0.4	0.4	0.4
28-Sep	0.4	Z	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.4	0.4	0.5	0.6
29-Sep	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.9	1.1	0.5	0.5	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1
30-Sep	0.5	0.5	0.9	Z	2.2	1.9	1.7	1.6	2.0	1.3	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.7	0.5	0.4	0.4	0.5	0.9	2.2
	0.7	0.7	0.7	0.6	0.8	0.7	0.7	0.8	1.0	1.3	1.0	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	3.8	2.9	1.5	2.4	2.2	2.1	2.1	5.0	5.8	4.3	4.2	1.9	1.2	2.0	1.0	0.8	1.5	1.5	3.1	3.9	1.3	1.5	2.8	3.6	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance DF - DAS Failure

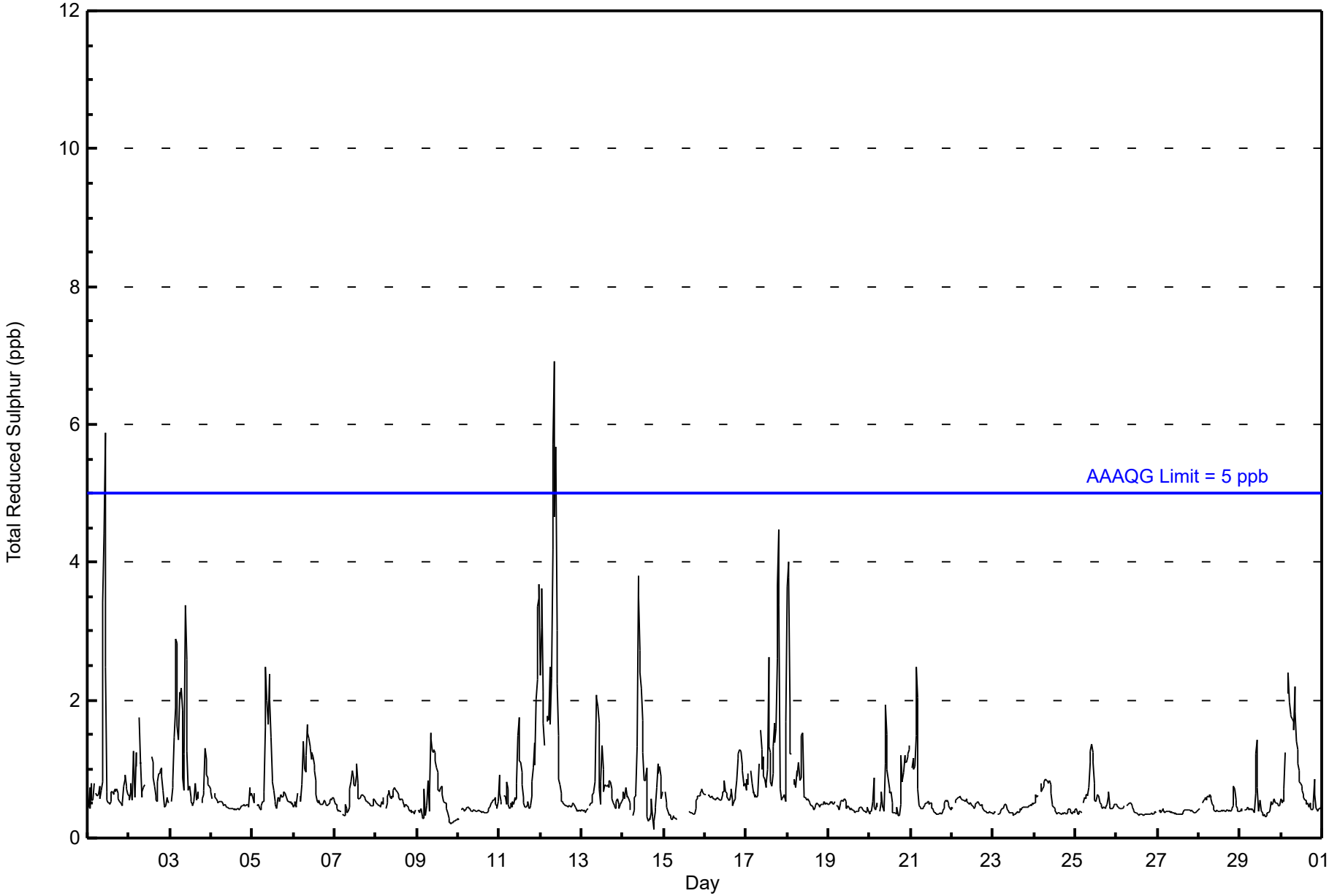
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	661	97.64	97.64
3 - 4	14	2.07	99.70
5 - 7	2	0.30	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 677

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	30	22	5	2	3	5	64	70	108	94	80	46	44	37	21	16	647
3 - 4	0	0	0	0	0	0	0	5	6	1	0	0	0	1	0	1	14
5 - 7	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
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	30	22	5	2	3	5	64	75	115	96	80	46	44	38	21	17	663

Total Number of Valid Hours: 663

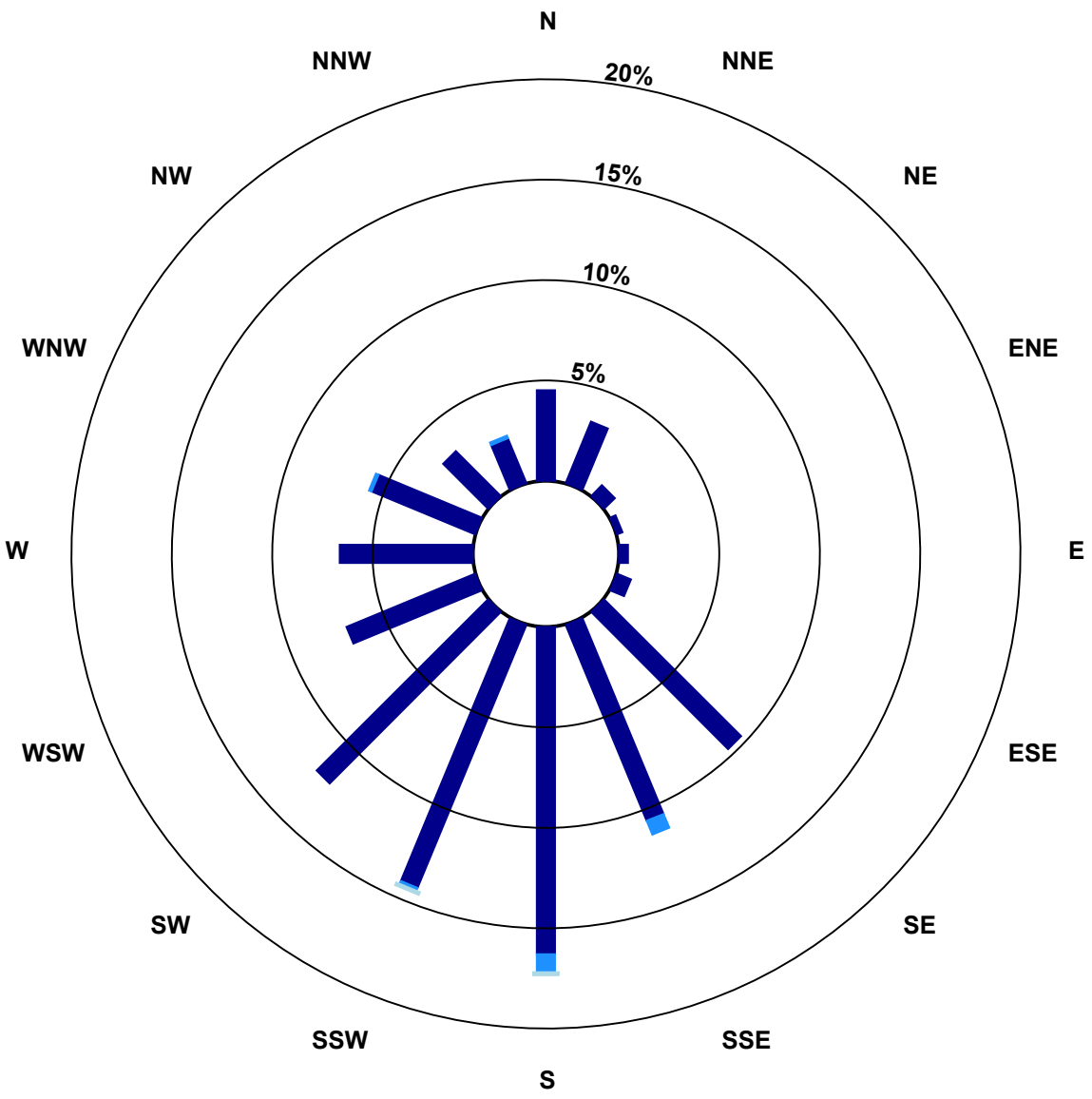
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Reduced Sulphur (TRS) - ppb

Ells River



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

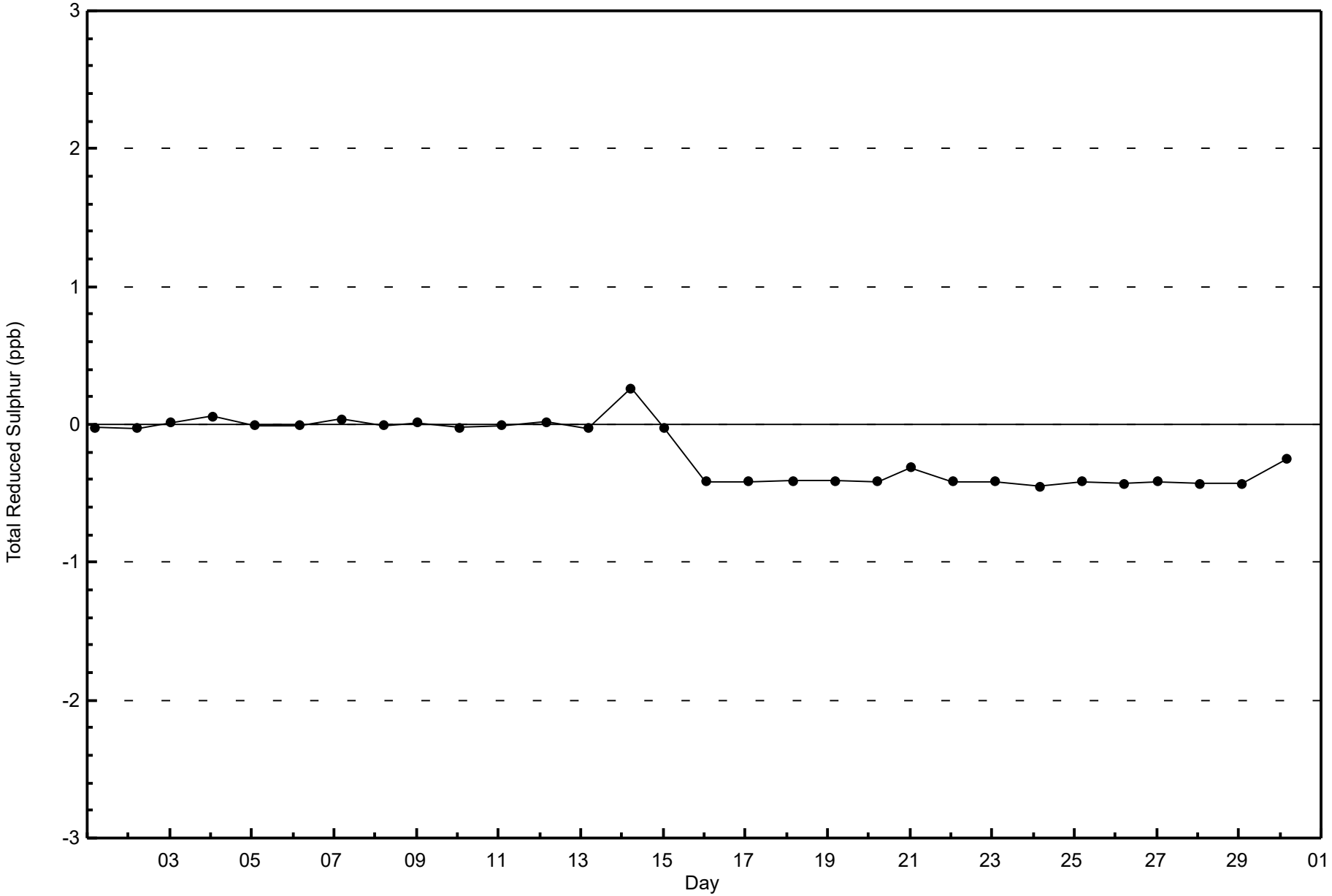
Total Number of Valid Hours: 663

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025

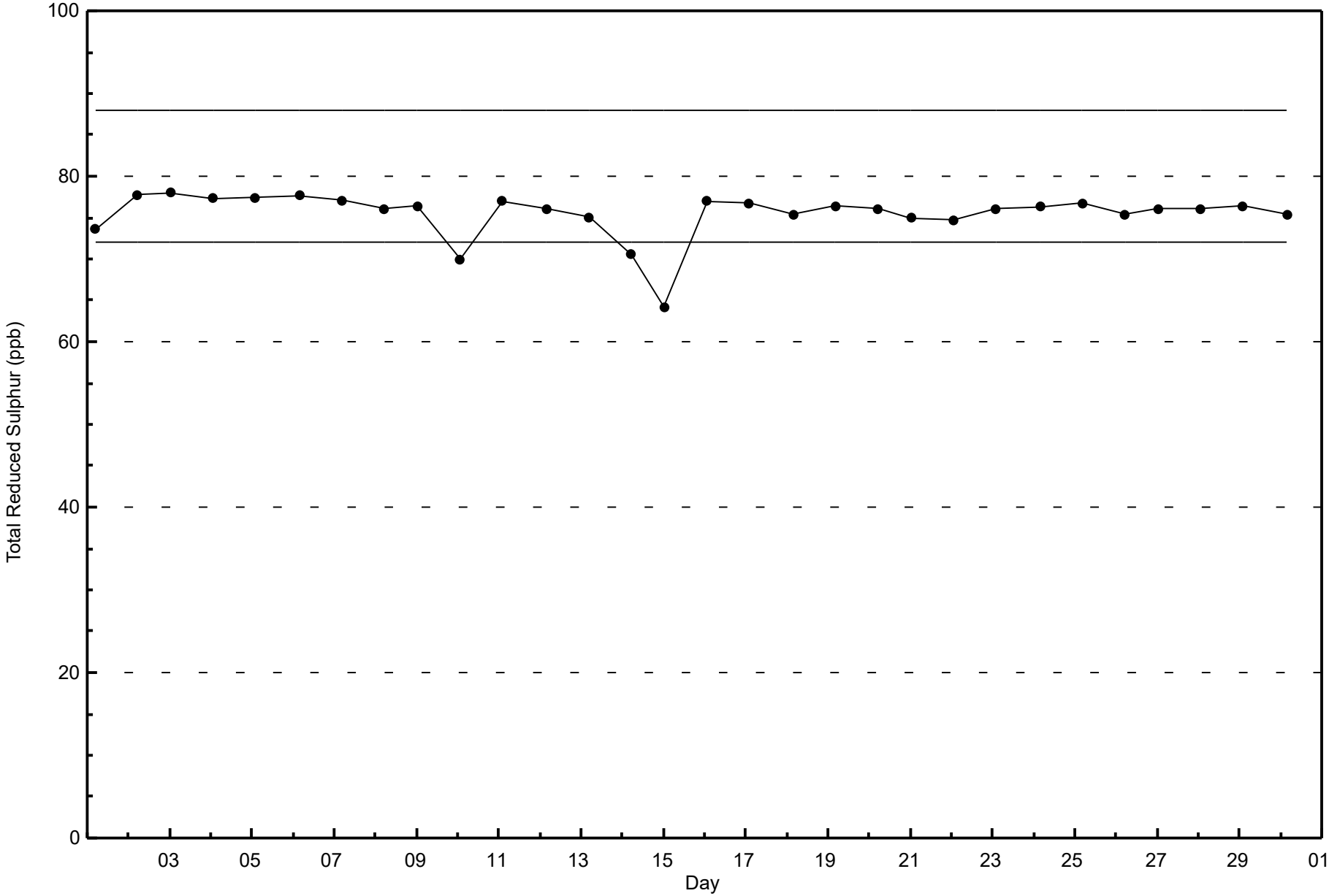


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Ells River - September 2025

Maximum Value: 7.6 ppm on Sep 30 04:00

Maximum Daily Average: 3.5 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 16:00

Minimum Daily Average: 2.0 ppm on Sep 27

Maximum Diurnal Average: 2.6 ppm at hour 4

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.32 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.4 P_{90} = 2.8 P_{99} = 4.9

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.3	2.2	Z	2.3	2.2	2.3	2.2	2.4	2.9	3.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.8	2.9	2.4	2.3	3.3
2-Sep	2.2	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.6	2.7	2.5	3.0	3.0	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	3.0
3-Sep	2.1	2.2	2.8	3.2	3.1	Z	3.2	2.3	2.2	2.5	2.4	2.4	2.2	2.2	2.5	2.5	2.3	DF	2.0	2.3	2.6	2.6	2.5	2.3	2.5	3.2
4-Sep	Z	2.7	2.5	2.8	2.7	2.2	2.3	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.2	2.3	2.2	2.8
5-Sep	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.5	3.9	3.2	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.3	3.9
6-Sep	2.2	2.3	Z	2.7	2.4	2.5	2.5	2.5	2.6	3.0	3.0	2.7	2.4	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.4	3.0
7-Sep	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.6	2.7	2.7	2.5	2.6	3.3	2.4	2.3	2.4	2.2	2.2	2.2	2.2	2.1	2.4	2.7	2.4	3.3
8-Sep	2.3	2.2	2.3	2.7	Z	2.5	2.5	3.0	2.8	2.4	C	C	C	C	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	3.0
9-Sep	2.3	2.4	2.3	2.3	2.4	Z	2.4	2.5	2.6	2.9	3.0	2.8	2.5	2.4	2.5	2.3	2.1	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.4	3.0
10-Sep	Z	2.0	2.1	2.1	2.4	2.5	2.2	2.1	2.1	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.9	2.7	2.6	2.4	2.3	2.2	2.9
11-Sep	2.2	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.3	2.3	3.0	2.9	2.4	2.1	2.0	2.0	2.1	2.0	2.0	2.3	2.5	2.3	2.6	2.3	3.0
12-Sep	2.3	2.5	Z	2.4	2.4	2.5	2.5	2.8	2.8	2.7	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.3	2.8
13-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.3	2.4	2.6	3.0	2.6	2.2	2.4	2.3	2.4	2.6	4.2	3.9	3.7	4.0	4.4	4.3	3.9	4.6	3.0	4.6
14-Sep	4.8	5.0	5.0	4.9	Z	3.5	3.1	3.5	3.2	3.8	3.3	2.9	2.6	2.6	2.2	2.1	2.3	2.3	2.1	2.2	2.1	2.2	2.2	2.3	3.0	5.0
15-Sep	2.2	2.3	2.3	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3
16-Sep	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.7	2.7	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.4	2.5	2.5	2.2	2.7
17-Sep	2.5	Z	2.6	2.5	2.5	2.5	2.4	2.4	2.6	2.8	2.7	2.6	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.1	2.1	2.1	2.2	2.3	2.8
18-Sep	2.5	2.5	Z	2.4	2.5	2.6	2.8	2.7	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	2.1	2.1	2.2	2.8
19-Sep	2.1	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	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1
20-Sep	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.8	2.8	2.6	2.5	2.1	2.0	2.0	2.0	2.0	2.3	2.4	3.4	3.4	3.4	3.5	2.5	3.5
21-Sep	3.0	2.8	2.7	3.0	2.8	Z	2.2	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	2.0	2.0	2.0	2.0	2.2	3.0
22-Sep	Z	2.0	2.0	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	2.2	2.1	2.1	2.1	2.1	2.1	2.2
23-Sep	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	2.0	2.1	2.1	2.0	2.1
24-Sep	2.1	2.1	Z	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	2.1	2.0	2.0	2.1	2.1	2.2
25-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.3	2.7	3.3	3.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.5	2.2	2.1	2.0	2.0	2.3	3.3
26-Sep	2.0	2.0	2.0	2.0	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	2.1	2.0	2.1
27-Sep	2.1	2.1	2.1	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	2.0	2.0	2.0	2.0	2.2
28-Sep	Z	2.0	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	2.2	2.2	2.1	2.1	2.2
29-Sep	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.3	2.3	2.4	2.4	2.5	2.8	2.2	2.8
30-Sep	3.3	4.0	Z	7.6	7.5	6.3	5.5	4.9	4.8	3.6	2.8	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.8	2.3	2.1	2.4	2.5	3.5	7.6
	2.4	2.4	2.3	2.6	2.5	2.5	2.4	2.4	2.5	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	4.8	5.0	5.0	7.6	7.5	6.3	5.5	4.9	4.8	3.8	3.3	3.0	3.0	3.3	2.5	2.6	4.2	3.9	3.7	4.0	4.4	4.3	3.9	4.6	Diurnal Maximum	

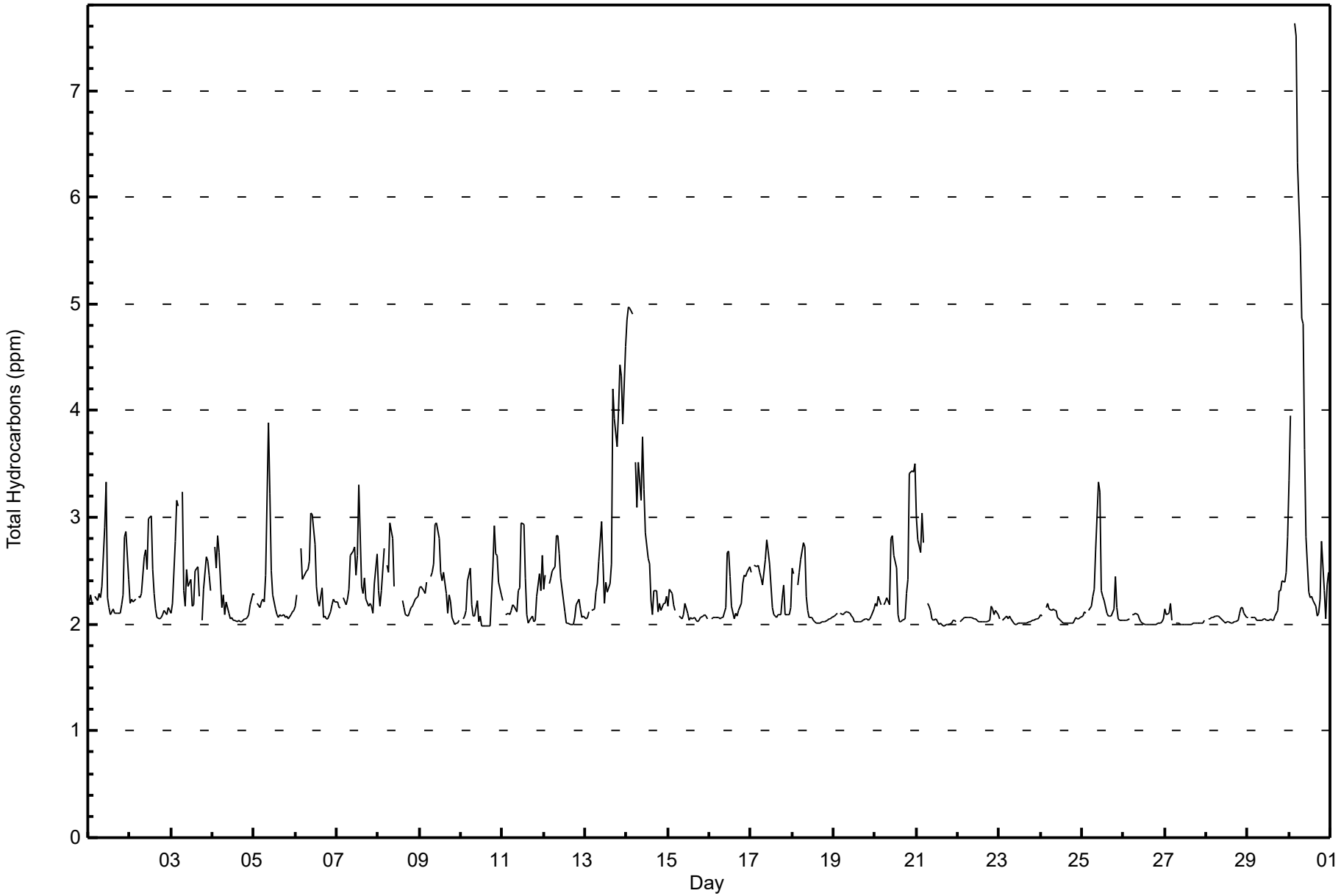
Z - zerospan C - Calibration DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Ells River - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Ells River - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	168	24.53	24.53
2.1 - 3.0	477	69.64	94.16
3.1 - 10.0	40	5.84	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Ells River - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	2	3	0	0	0	0	8	8	17	48	33	20	9	12	4	3	167
2.1 - 3.0	25	17	3	1	3	5	56	66	95	44	44	24	33	23	15	12	466
3.1 - 10.0	3	1	2	0	0	0	1	6	8	1	2	2	3	4	3	2	38
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	30	21	5	1	3	5	65	80	120	93	79	46	45	39	22	17	671

Total Number of Valid Hours: 671

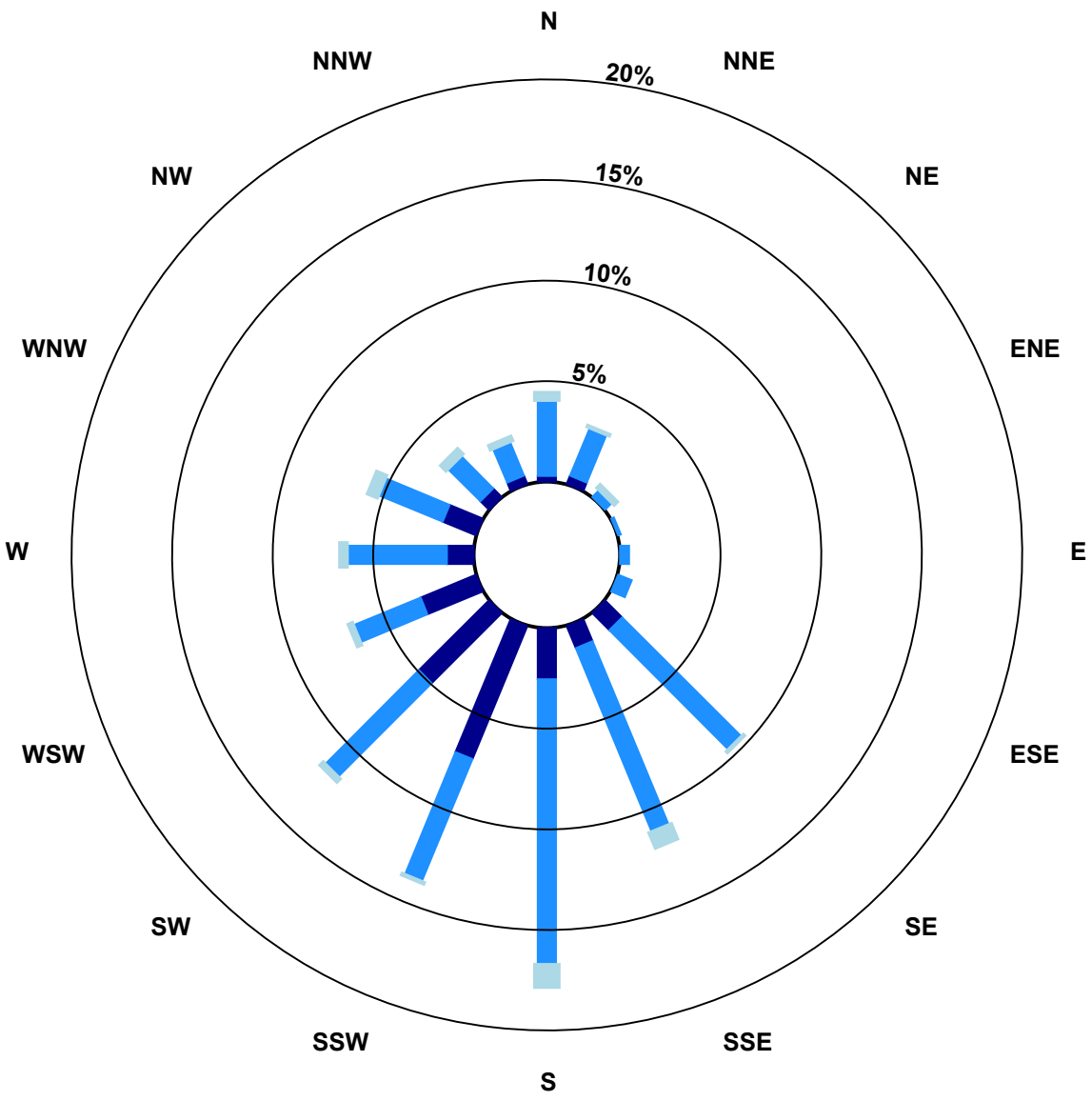
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Ells River



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

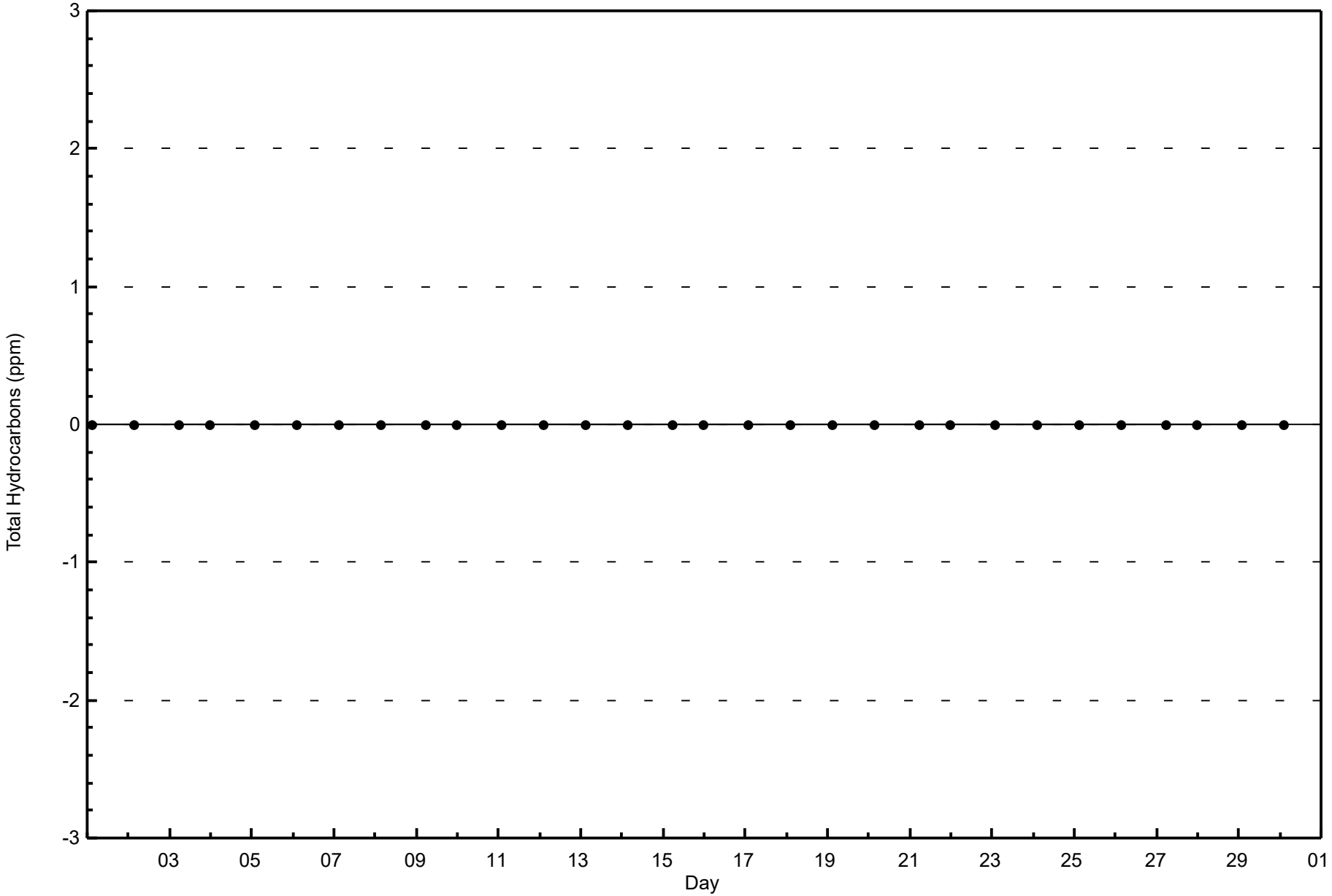
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Ells River - September 2025

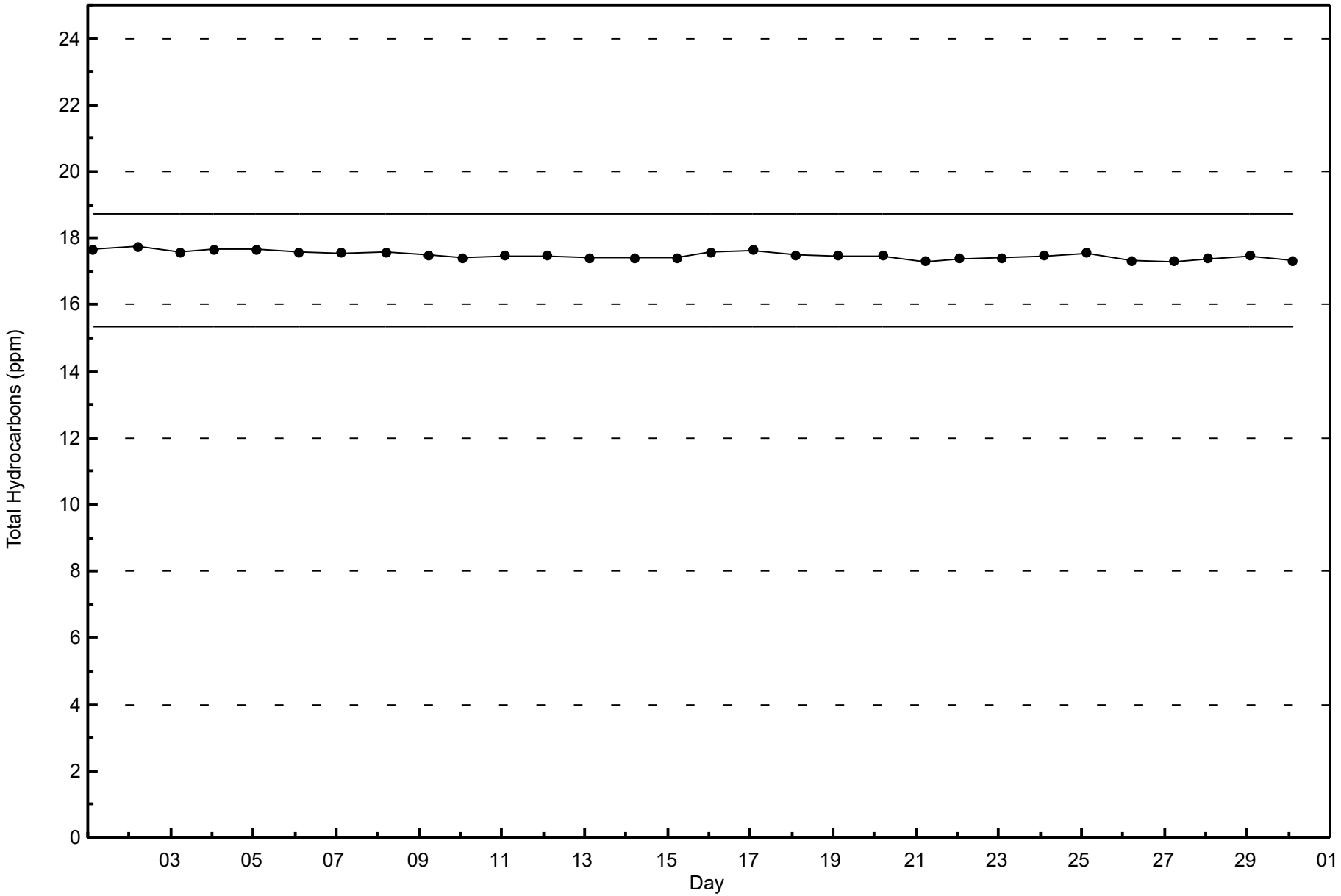


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025

Maximum Value: 1.766 ppm on Sep 30 05:00

Maximum Daily Average: 0.544 ppm on Sep 30

Minimum Value: 0.000 ppm on Sep 1 03:00

Minimum Daily Average: 0.000 ppm on Sep 19

Maximum Diurnal Average: 0.258 ppm at hour 10

Minimum Diurnal Average: 0.048 ppm at hour 16

Monthly Average: 0.127 ppm

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 1.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.023	0.069	0.000	Z	0.000	0.000	0.009	0.002	0.102	0.369	0.494	0.071	0.038	0.000	0.000	0.000	0.000	0.000	0.003	0.064	0.106	0.222	0.433	0.163	0.094	0.494
2-Sep	0.000	0.013	0.000	0.000	Z	0.000	0.000	0.003	0.187	0.284	0.251	0.647	0.569	0.318	0.169	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.109	0.647
3-Sep	0.000	0.051	0.419	0.731	0.749	Z	0.755	0.166	0.014	0.191	0.116	0.147	0.006	0.000	0.173	0.273	0.086	DF	0.000	0.131	0.309	0.294	0.237	0.176	0.228	0.755
4-Sep	Z	0.400	0.315	0.428	0.341	0.088	0.174	0.031	0.076	0.022	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.001	0.020	0.016	0.028	0.031	0.051	0.125	0.094	0.428
5-Sep	0.107	Z	0.000	0.000	0.000	0.000	0.000	0.107	0.953	0.867	0.207	0.074	0.022	0.002	0.000	0.011	0.005	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.103	0.953
6-Sep	0.000	0.039	Z	0.182	0.060	0.110	0.158	0.220	0.376	0.655	0.581	0.393	0.174	0.110	0.089	0.269	0.006	0.000	0.000	0.000	0.005	0.002	0.041	0.035	0.152	0.655
7-Sep	0.007	0.000	0.000	Z	0.000	0.000	0.000	0.064	0.237	0.257	0.291	0.221	0.343	0.752	0.232	0.156	0.267	0.112	0.068	0.086	0.068	0.000	0.050	0.133	0.145	0.752
8-Sep	0.105	0.009	0.032	0.162	Z	0.155	0.166	0.277	0.279	0.237	C	C	C	C	0.077	0.020	0.000	0.000	0.006	0.042	0.026	0.044	0.025	0.043	0.090	0.279
9-Sep	0.128	0.094	0.030	0.011	0.010	Z	0.020	0.085	0.217	0.557	0.549	0.441	0.249	0.231	0.352	0.182	0.040	0.190	0.158	0.043	0.000	0.000	0.000	0.000	0.156	0.557
10-Sep	Z	0.000	0.002	0.032	0.172	0.238	0.046	0.000	0.010	0.118	0.004	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.364	0.631	0.440	0.364	0.199	0.118	0.121	0.631
11-Sep	0.044	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.227	0.228	0.580	0.705	0.306	0.046	0.000	0.007	0.034	0.000	0.004	0.185	0.309	0.202	0.455	0.145	0.705
12-Sep	0.224	0.294	Z	0.158	0.192	0.210	0.211	0.335	0.349	0.293	0.186	0.069	0.034	0.000	0.000	0.000	0.000	0.000	0.055	0.148	0.158	0.063	0.002	0.000	0.130	0.349
13-Sep	0.000	0.000	0.000	Z	0.000	0.000	0.047	0.071	0.171	0.313	0.206	0.026	0.216	0.158	0.230	0.330	0.924	0.777	0.709	0.830	1.002	0.991	0.863	1.081	0.389	1.081
14-Sep	1.066	1.189	1.320	1.353	Z	0.746	0.520	0.711	0.478	0.987	0.731	0.569	0.369	0.362	0.128	0.035	0.206	0.214	0.065	0.141	0.068	0.102	0.072	0.107	0.502	1.353
15-Sep	0.044	0.104	0.013	0.000	0.000	Z	0.000	0.000	0.000	0.028	0.110	0.039	0.005	0.028	0.011	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.110
16-Sep	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.069	0.337	0.319	0.231	0.060	0.000	0.000	0.000	0.028	0.075	0.242	0.286	0.274	0.249	0.228	0.104	0.337
17-Sep	0.231	Z	0.265	0.264	0.271	0.210	0.155	0.084	0.324	0.448	0.429	0.381	0.052	0.002	0.000	0.000	0.001	0.000	0.125	0.214	0.001	0.000	0.000	0.058	0.153	0.448
18-Sep	0.336	0.293	Z	0.172	0.231	0.293	0.398	0.440	0.121	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	0.100	0.440
19-Sep	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
20-Sep	0.000	0.000	0.000	0.002	Z	0.000	0.000	0.000	0.000	0.193	0.280	0.314	0.268	0.027	0.000	0.000	0.000	0.000	0.095	0.193	0.759	0.878	0.830	0.943	0.208	0.943
21-Sep	0.614	0.361	0.238	0.316	0.188	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	0.075	0.614
22-Sep	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	0.017	0.019	0.001	0.007	0.000	0.002	0.019
23-Sep	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
24-Sep	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
25-Sep	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.195	0.714	0.763	0.153	0.119	0.091	0.006	0.000	0.000	0.000	0.008	0.140	0.000	0.000	0.000	0.000	0.095	0.763
26-Sep	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
27-Sep	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
28-Sep	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	0.000	0.000	0.000	0.003
29-Sep	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.015	0.000	0.000	0.000	0.009	0.125	0.110	0.180	0.167	0.164	0.241	0.044	0.241
30-Sep	0.339	0.469	Z	1.746	1.766	1.561	1.509	1.322	1.013	0.898	0.520	0.146	0.111	0.156	0.138	0.088	0.012	0.042	0.124	0.142	0.020	0.000	0.185	0.199	0.544	1.766
	0.131	0.135	0.105	0.222	0.159	0.144	0.139	0.131	0.170	0.258	0.217	0.160	0.121	0.090	0.055	0.048	0.052	0.049	0.067	0.106	0.122	0.125	0.120	0.137	Diurnal Average	
	1.066	1.189	1.320	1.746	1.766	1.561	1.509	1.322	1.013	0.987	0.763	0.647	0.705	0.752	0.352	0.330	0.924	0.777	0.709	0.830	1.002	0.991	0.863	1.081	Diurnal Maximum	

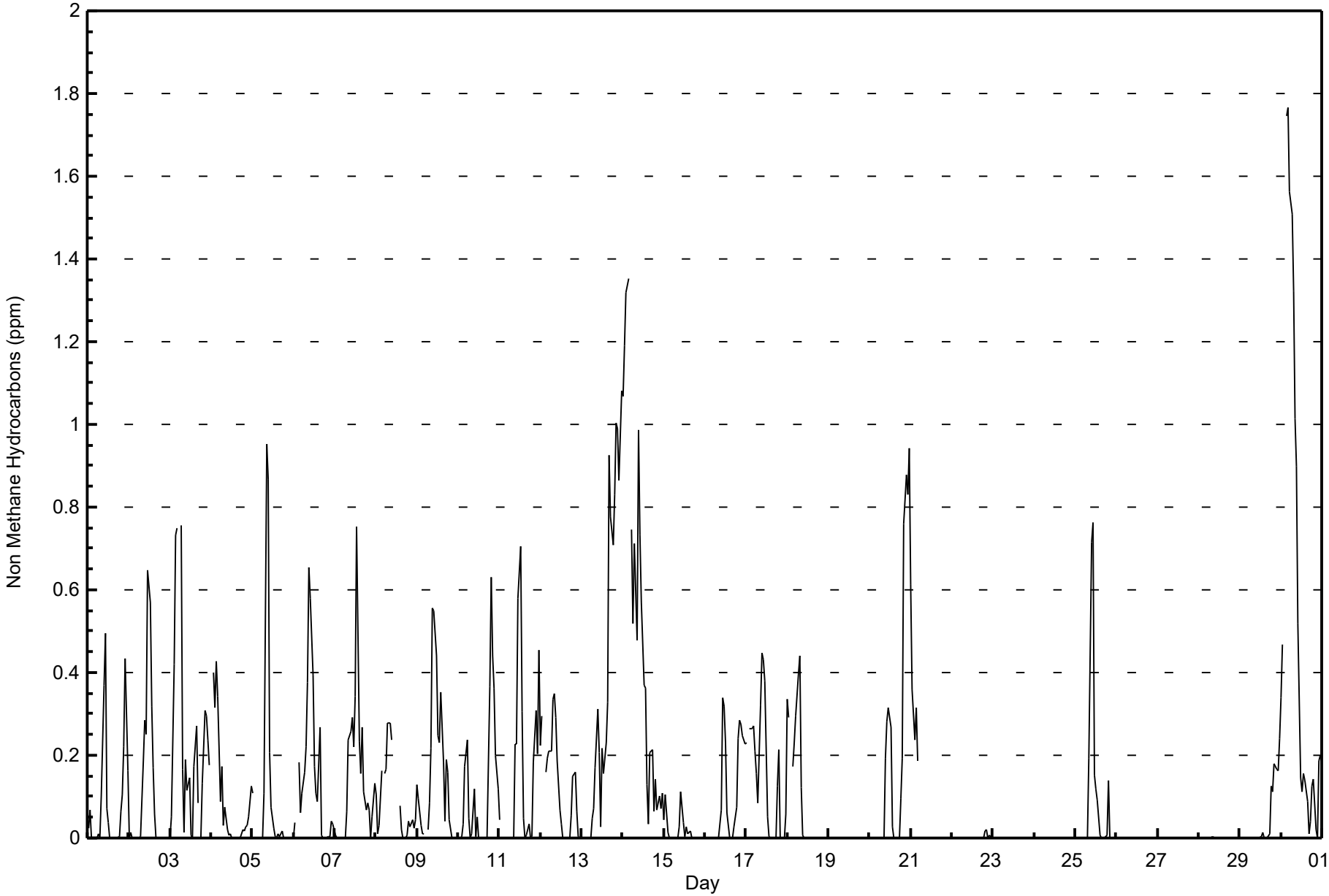
Z - zerospan C - Calibration DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	363	52.99	52.99
0.006 - 0.05	73	10.66	63.65
0.06 - 0.1	65	9.49	73.14
> 0.1	184	26.86	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	5	7	0	0	0	1	33	30	66	73	66	32	19	20	4	4	360
0.006 - 0.05	2	4	1	0	0	1	9	6	11	4	6	4	9	5	3	2	67
0.06 - 0.1	9	3	0	0	0	2	7	8	13	4	2	5	4	1	2	5	65
> 0.1	14	7	4	1	3	1	16	36	30	12	5	5	13	13	13	6	179
Totals	30	21	5	1	3	5	65	80	120	93	79	46	45	39	22	17	671

Total Number of Valid Hours: 671

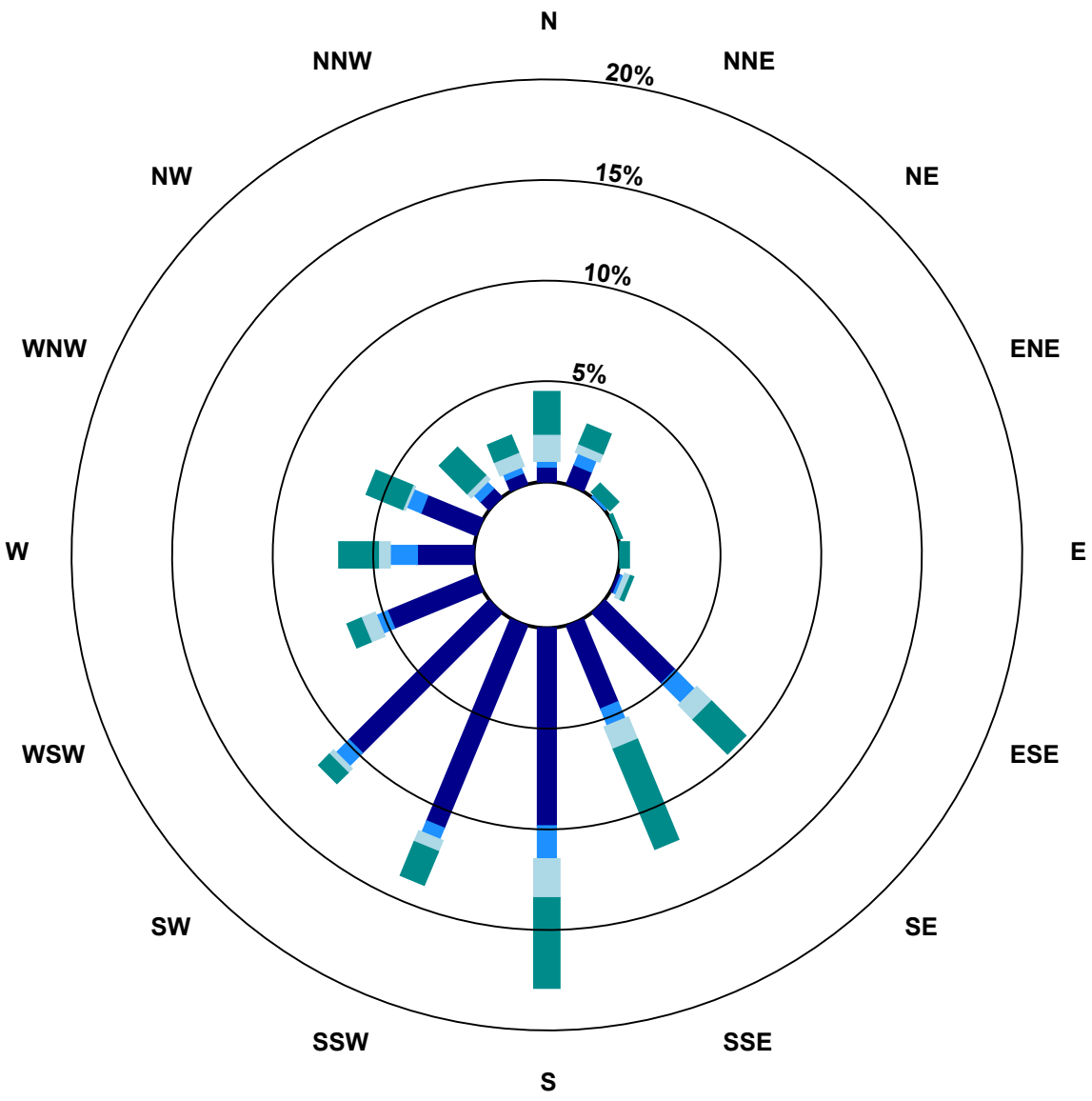
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Non Methane Hydrocarbons (NMHC) - ppm

Ells River



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

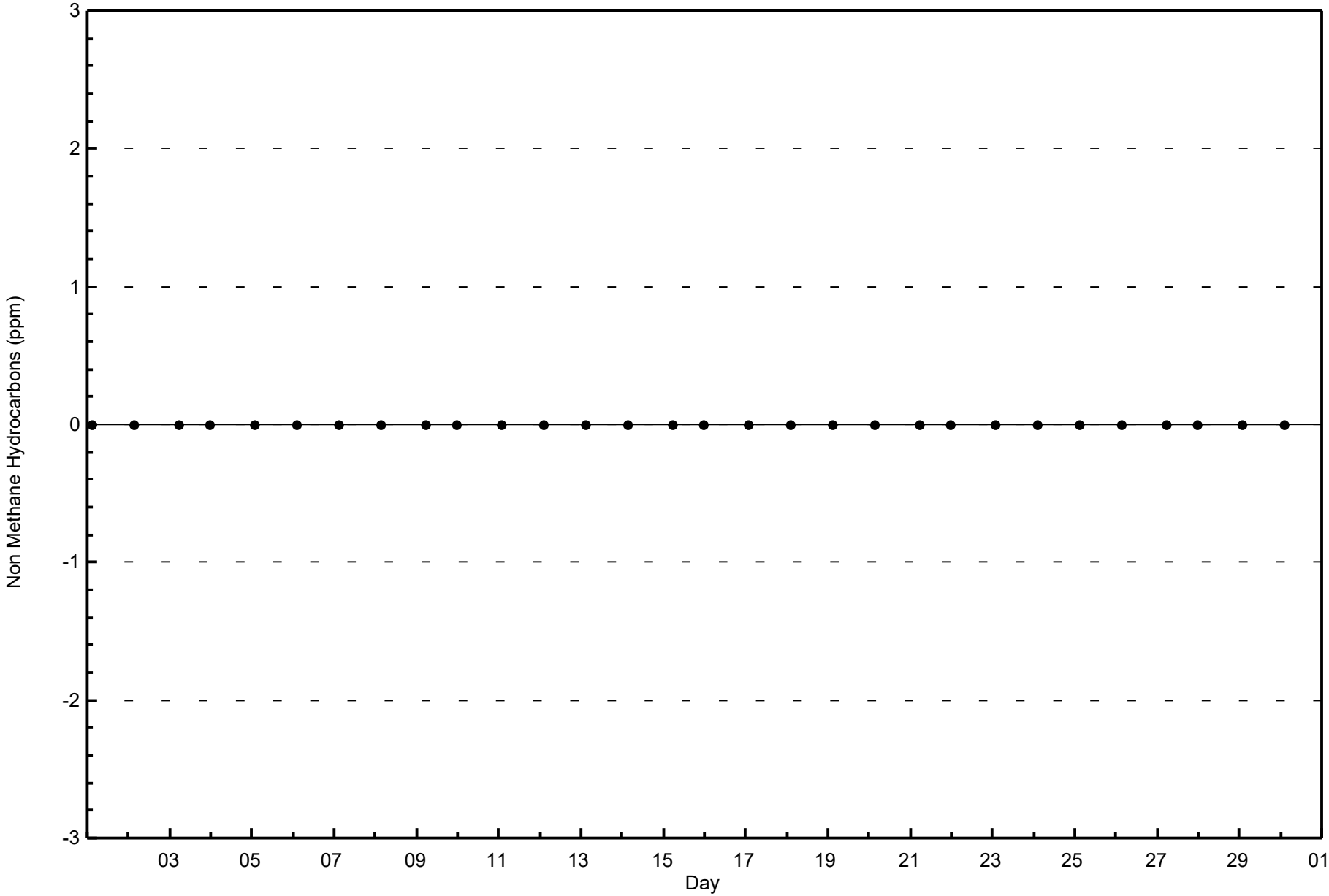
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025

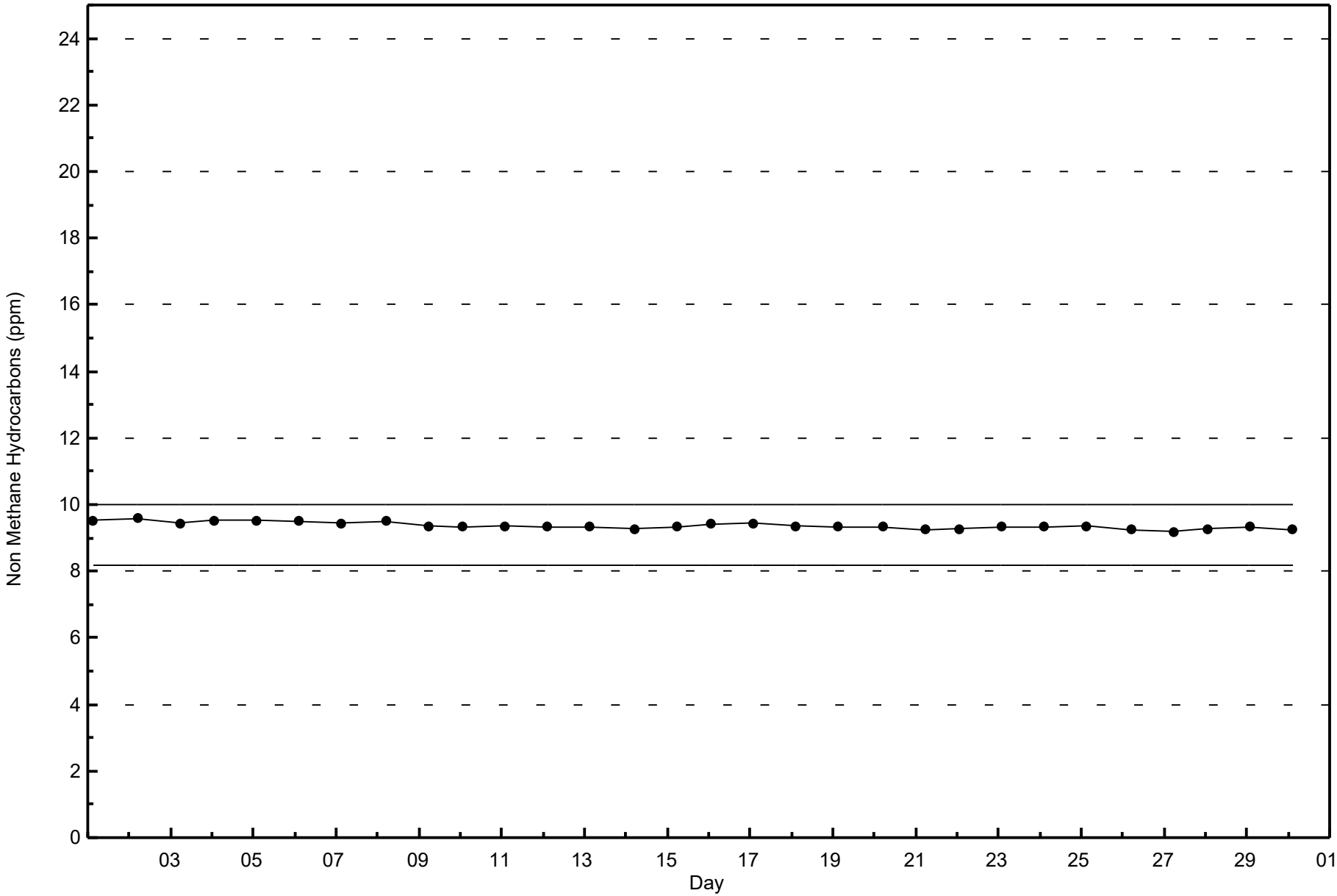


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.9 ppm on Sep 30 04:00 Maximum Daily Average: 2.9 ppm on Sep 30

Minimum Value: 2.0 ppm on Sep 10 16:00 Minimum Daily Average: 2.0 ppm on Sep 27
Maximum Diurnal Average: 2.4 ppm at hour 4 Minimum Diurnal Average: 2.1 ppm at hour 16
Monthly Average: 2.20 ppm Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.7

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.2	2.2	2.2	Z	2.3	2.2	2.3	2.2	2.3	2.5	2.8	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6	2.4	2.3	2.2	2.8
2-Sep	2.2	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4
3-Sep	2.1	2.1	2.4	2.4	2.4	Z	2.5	2.1	2.1	2.3	2.2	2.3	2.2	2.2	2.3	2.3	2.2	DF	2.0	2.2	2.3	2.3	2.2	2.1	2.2	2.5
4-Sep	Z	2.3	2.2	2.4	2.3	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	2.1	2.1	2.2	2.1	2.4
5-Sep	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.4	2.9	2.4	2.3	2.2	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	2.9
6-Sep	2.2	2.2	Z	2.5	2.4	2.3	2.3	2.3	2.2	2.4	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.5
7-Sep	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.2	2.3	2.6	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.5	2.2	2.6
8-Sep	2.2	2.2	2.3	2.5	Z	2.4	2.3	2.7	2.5	2.1	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.7
9-Sep	2.2	2.3	2.3	2.3	2.4	Z	2.4	2.4	2.4	2.4	2.4	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	2.2	2.4
10-Sep	Z	2.0	2.1	2.1	2.2	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	2.2	2.3	2.2	2.3	2.2	2.2	2.1	2.3
11-Sep	2.2	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.4
12-Sep	2.1	2.2	Z	2.2	2.2	2.3	2.3	2.5	2.5	2.4	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	2.2	2.5
13-Sep	2.1	2.1	2.1	Z	2.1	2.1	2.3	2.3	2.4	2.7	2.4	2.2	2.2	2.1	2.2	2.2	3.3	3.2	3.0	3.2	3.4	3.3	3.0	3.5	2.6	3.5
14-Sep	3.8	3.8	3.6	3.6	Z	2.8	2.6	2.8	2.7	2.8	2.5	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.5	3.8
15-Sep	2.1	2.2	2.3	2.2	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	2.1	2.1	2.1	2.1	2.1	2.3
16-Sep	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.1	2.4
17-Sep	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3
18-Sep	2.2	2.2	Z	2.2	2.3	2.3	2.4	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	2.1	2.1	2.1	2.4
19-Sep	2.1	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	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1
20-Sep	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.6	2.6	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.2	2.2	2.7	2.6	2.6	2.6	2.3	2.7
21-Sep	2.4	2.4	2.4	2.7	2.6	Z	2.2	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	2.0	2.0	2.0	2.0	2.1	2.7
22-Sep	Z	2.0	2.0	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	2.2	2.1	2.1	2.1	2.1	2.2
23-Sep	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	2.0	2.1	2.1	2.0	2.1
24-Sep	2.1	2.1	Z	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	2.1	2.0	2.0	2.1	2.1	2.2
25-Sep	2.1	2.1	2.1	Z	2.1	2.2	2.3	2.3	2.5	2.6	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.0	2.0	2.2	2.6
26-Sep	2.0	2.0	2.0	2.0	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	2.1	2.0	2.1
27-Sep	2.1	2.1	2.1	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	2.0	2.0	2.0	2.0	2.2
28-Sep	Z	2.0	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	2.1	2.2	2.2	2.1	2.1	2.1	2.2
29-Sep	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.6	2.1	2.6
30-Sep	3.0	3.5	Z	5.9	5.7	4.8	4.0	3.5	3.8	2.7	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.3	2.1	2.2	2.3	2.9	5.9
	2.2	2.3	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	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	Diurnal Average	
	3.8	3.8	3.6	5.9	5.7	4.8	4.0	3.5	3.8	2.8	2.8	2.4	2.4	2.6	2.3	2.3	3.3	3.2	3.0	3.2	3.4	3.3	3.0	3.5	Diurnal Maximum	

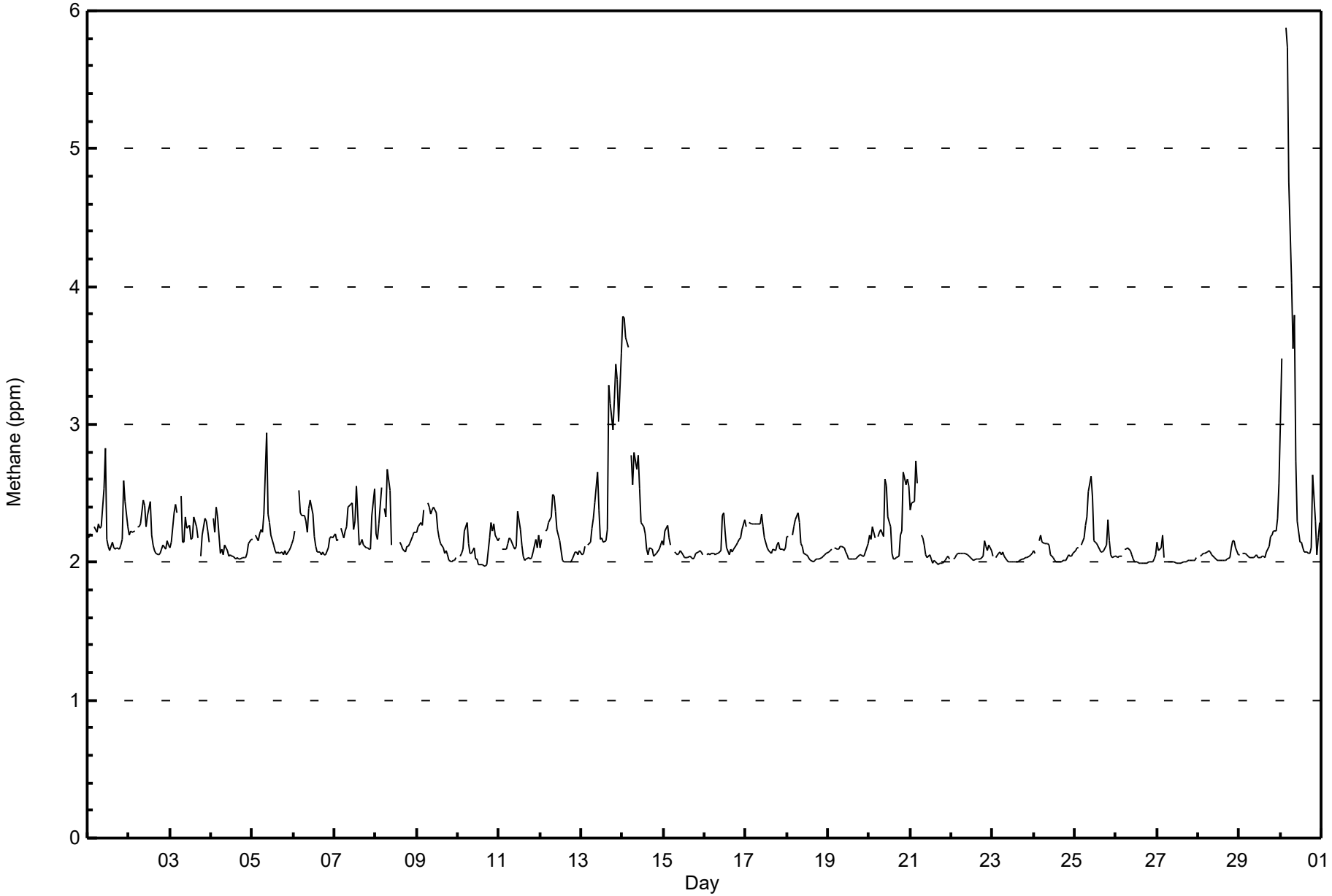
Z - zerospan C - Calibration DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Ells River - September 2025



Methane (CH_4) - ppm
Ells River - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	181	26.42	26.42
2.1 - 3.0	487	71.09	97.52
3.1 - 10.0	17	2.48	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Ells River - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	2	3	1	0	0	0	9	11	18	49	33	21	10	14	5	3	179
2.1 - 3.0	25	17	4	1	3	5	56	69	102	44	45	23	33	21	16	13	477
3.1 - 10.0	3	1	0	0	0	0	0	0	0	0	1	2	2	4	1	1	15
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	30	21	5	1	3	5	65	80	120	93	79	46	45	39	22	17	671

Total Number of Valid Hours: 671

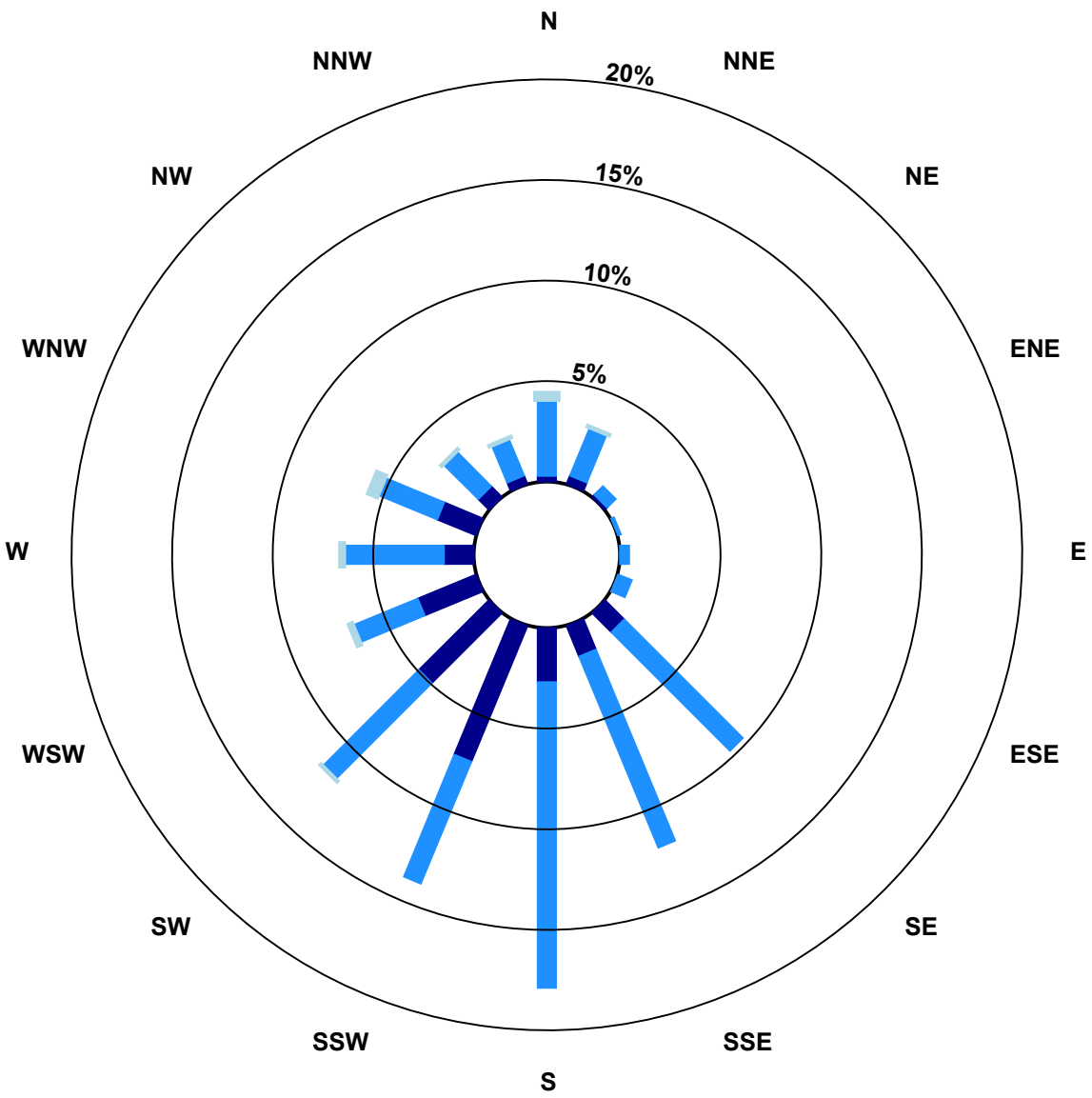
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Methane (CH_4) - ppm

Ells River



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

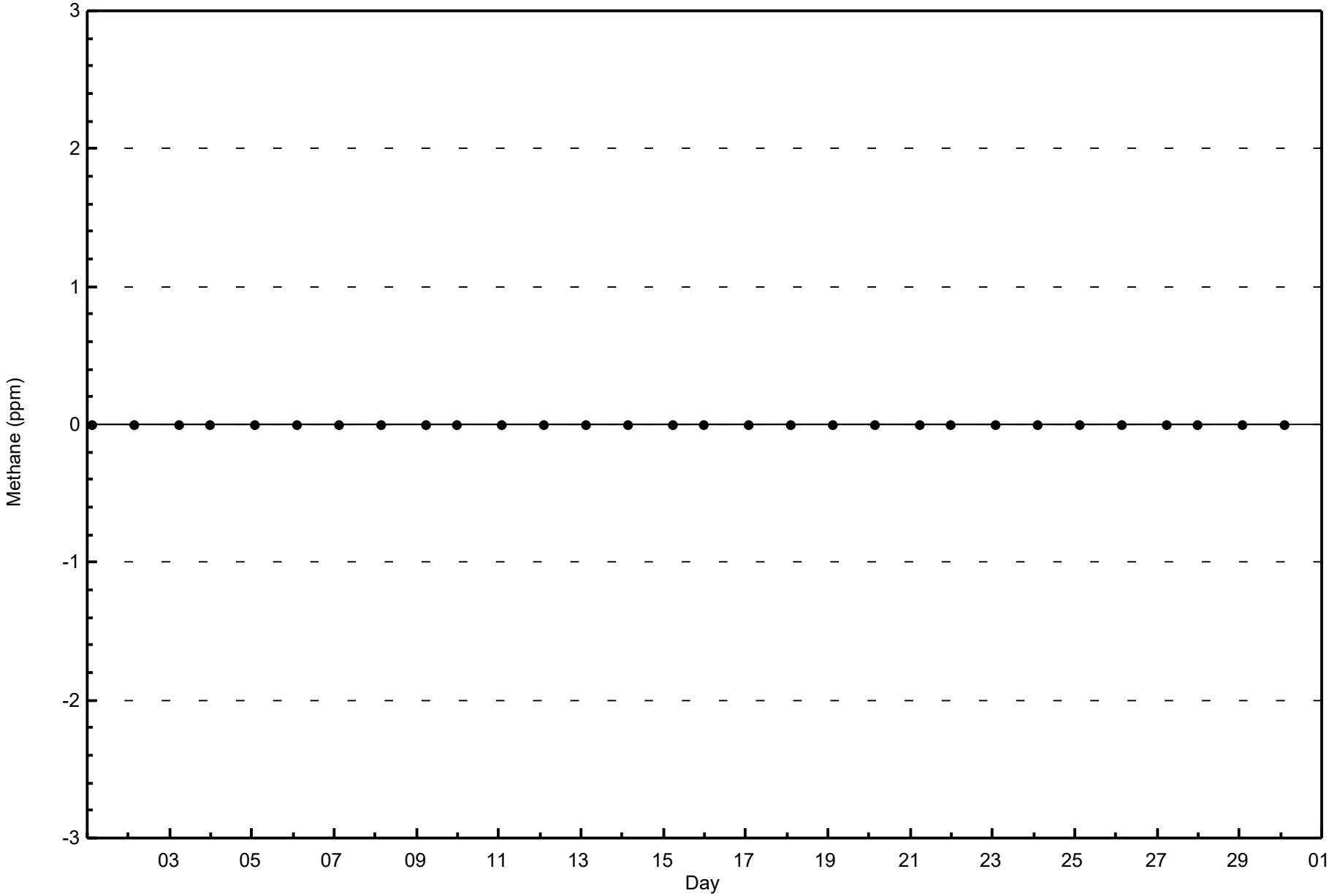
Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Ells River - September 2025

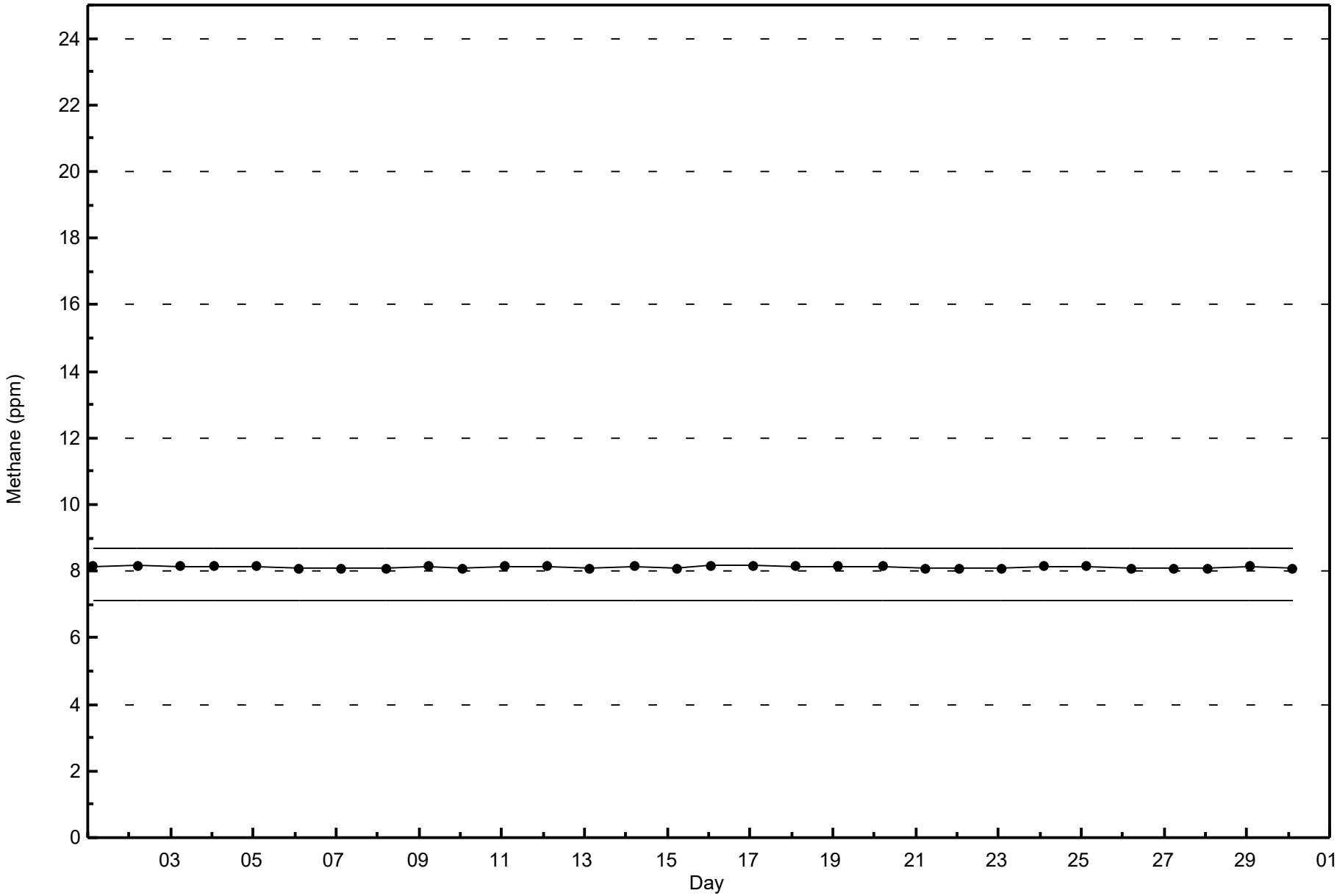


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Ells River - September 2025

Maximum Value: 148.3 ppb on Sep 30 05:00

Maximum Daily Average: 31.1 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 2 21:00

Minimum Daily Average: 0.0 ppb on Sep 23

Maximum Diurnal Average: 7.5 ppb at hour 4

Minimum Diurnal Average: 0.2 ppb at hour 19

Monthly Average: 2.46 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.9 P_{90} = 5.1 P_{99} = 36.0

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	Z	0.1	1.2	0.2	0.2	0.7	0.4	1.0	13.9	20.3	3.3	2.0	0.5	0.3	0.3	0.2	0.3	0.4	0.5	0.3	2.6	8.3	0.3	2.5	20.3
2-Sep	0.1	0.1	Z	0.5	0.1	0.2	0.2	1.8	10.4	11.8	5.0	16.1	11.4	3.9	3.1	1.7	1.0	0.7	0.6	0.1	0.0	0.0	0.0	0.0	3.0	16.1
3-Sep	0.0	0.0	0.0	Z	1.1	0.5	2.5	0.4	0.7	1.7	2.8	3.0	0.3	0.0	2.1	3.2	0.3	0.1	0.0	0.0	0.3	1.0	0.2	0.2	0.9	3.2
4-Sep	0.2	0.8	0.4	0.7	Z	0.1	0.5	1.6	1.8	C	C	C	C	C	0.4	0.6	0.4	0.3	0.3	0.1	0.0	0.0	0.2	0.4	0.5	1.8
5-Sep	0.1	0.0	0.0	0.1	0.0	Z	0.3	5.4	10.9	5.8	5.9	3.5	1.4	0.5	0.4	0.6	0.4	0.4	0.2	1.1	0.0	0.2	0.0	0.9	1.7	10.9
6-Sep	Z	4.5	10.2	5.1	1.1	1.0	2.1	2.0	6.5	12.7	12.7	8.6	9.3	2.5	1.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	3.5	12.7
7-Sep	0.0	Z	0.1	0.0	0.1	0.2	0.5	2.3	9.4	8.1	8.3	2.4	5.6	17.7	1.8	1.3	1.3	0.4	0.2	0.4	0.1	0.0	0.1	1.8	2.7	17.7
8-Sep	0.1	0.0	Z	3.1	5.5	2.6	3.7	12.3	17.6	6.8	3.7	4.4	5.1	3.6	2.6	1.6	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	3.2	17.6
9-Sep	0.0	0.1	0.1	Z	0.1	0.7	2.0	5.0	6.5	6.0	4.9	4.6	2.4	1.2	1.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.5
10-Sep	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.1	0.2	0.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.9	0.1	0.0	0.0	0.0	0.2	2.9
11-Sep	0.1	0.0	0.0	0.3	0.0	Z	0.2	0.9	0.4	0.9	1.9	6.6	4.9	1.4	0.8	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.6
12-Sep	Z	0.0	0.0	0.0	0.0	0.1	0.7	10.1	6.8	4.4	1.3	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	10.1
13-Sep	0.0	Z	0.0	0.0	0.0	0.1	4.2	6.5	14.2	19.5	6.6	0.8	0.8	0.7	1.2	1.5	16.3	9.9	3.0	5.2	20.3	23.2	15.9	23.8	7.6	23.8
14-Sep	29.6	33.9	Z	28.4	8.8	3.6	1.8	4.9	5.4	4.2	5.0	3.0	0.6	1.0	0.6	0.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	5.7	33.9
15-Sep	0.0	1.7	0.2	Z	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	0.0	0.1	1.7
16-Sep	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.1	1.1	9.3	8.6	3.8	1.0	0.2	0.6	0.6	0.3	0.1	0.1	0.3	0.1	0.5	0.3	1.2	9.3
17-Sep	0.9	1.6	3.6	5.4	2.7	Z	1.1	3.6	4.1	8.7	5.8	3.5	2.2	1.3	0.6	0.6	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	8.7
18-Sep	Z	0.1	1.5	0.4	0.1	0.2	1.2	0.9	0.7	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	1.5
19-Sep	0.1	Z	0.1	0.1	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	0.0	0.0	0.0	0.0	0.2	0.1	0.2
20-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.6	0.4	1.1	13.2	7.7	1.5	0.8	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.3	1.2	13.2
21-Sep	0.1	0.2	0.1	Z	1.0	0.0	0.1	0.1	0.1	0.0	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	1.0
22-Sep	0.0	0.1	0.0	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	0.1
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
24-Sep	Z	0.0	0.0	0.1	0.2	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	0.0	0.1	0.1	0.0	0.0	0.2
25-Sep	0.0	Z	0.0	0.1	0.2	0.1	1.6	9.1	12.1	4.7	5.0	2.1	1.6	1.5	0.5	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	12.1
26-Sep	0.0	0.0	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	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2
27-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
28-Sep	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.0	0.0	0.1	0.2	0.1	0.1	0.3
29-Sep	0.0	0.0	0.1	0.1	0.3	Z	0.6	0.3	0.2	0.7	0.9	1.1	0.6	0.3	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.8	4.5	0.5	4.5
30-Sep	Z	21.9	101.1	141.2	148.3	84.8	47.1	31.0	52.5	53.5	7.4	4.1	3.1	2.0	0.8	0.5	0.5	1.1	0.8	0.1	0.2	0.6	3.8	9.2	31.1	148.3
	1.3	2.6	4.7	7.5	6.8	3.8	2.4	3.3	5.4	6.2	4.0	2.7	2.0	1.4	0.6	0.5	0.8	0.5	0.2	0.4	0.7	0.9	1.0	1.4	Diurnal Average	
	29.6	33.9	101.1	141.2	148.3	84.8	47.1	31.0	52.5	53.5	20.3	16.1	11.4	17.7	3.1	3.2	16.3	9.9	3.0	5.2	20.3	23.2	15.9	23.8	Diurnal Maximum	

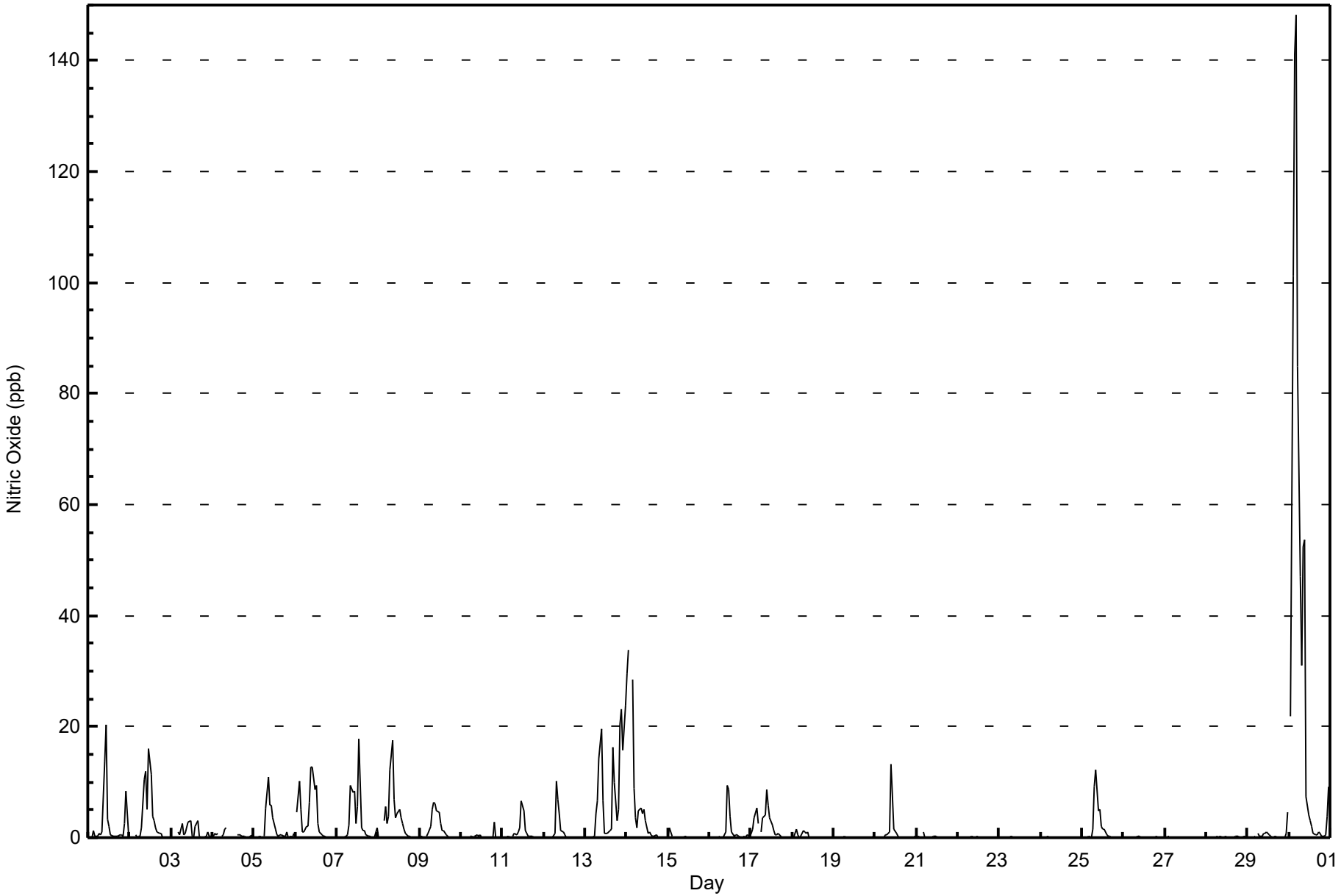
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Ells River - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	671	97.96	97.96
21 - 40	7	1.02	98.98
11 - 80	3	0.44	99.42
81 - 159	4	0.58	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	28	21	4	2	3	5	65	78	117	100	79	45	41	36	21	14	659
21 - 40	1	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	6
11 - 80	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	22	5	2	3	5	65	78	117	100	80	47	43	40	21	15	672

Total Number of Valid Hours: 672

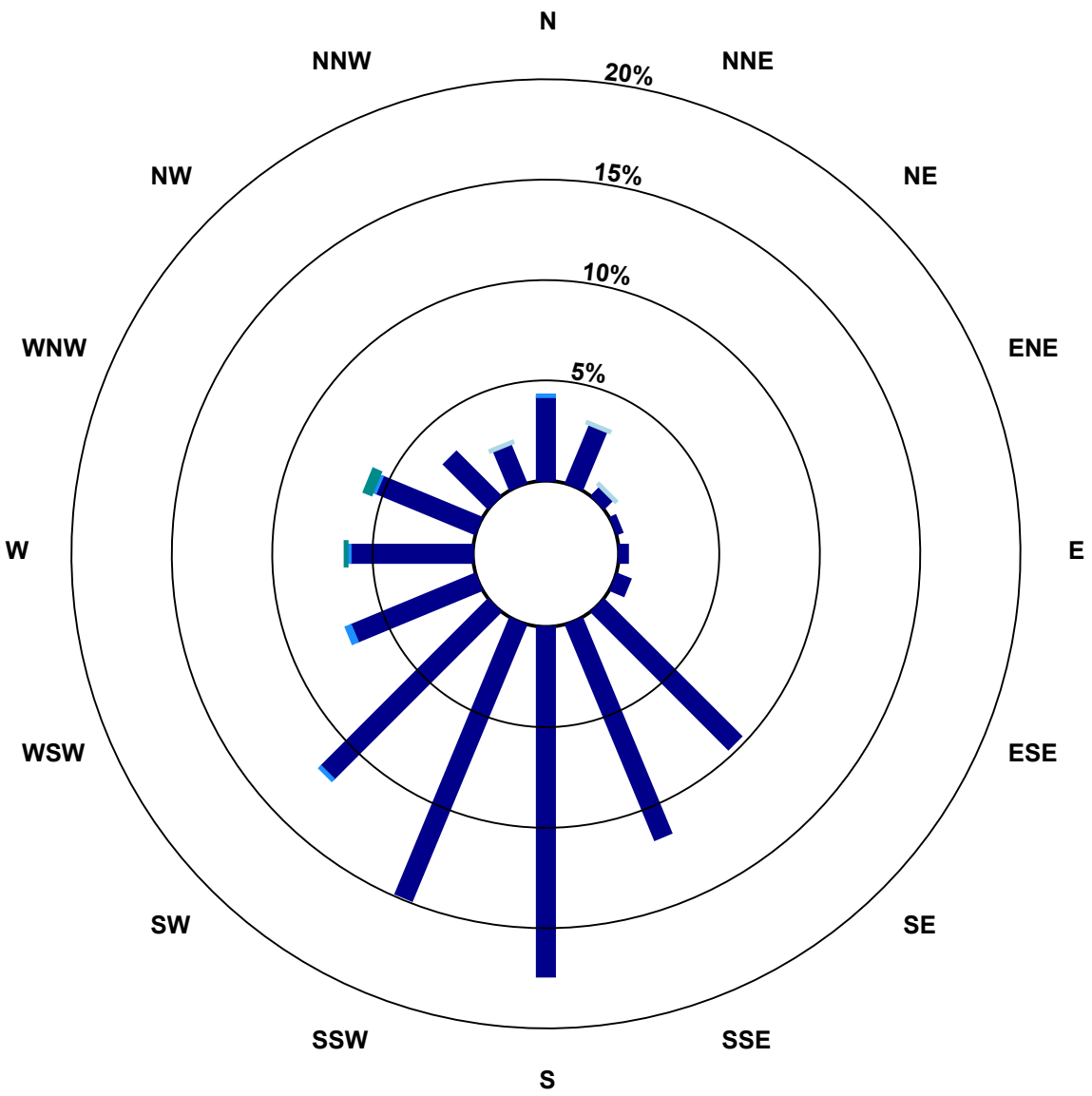
Total Number of Hours: 720

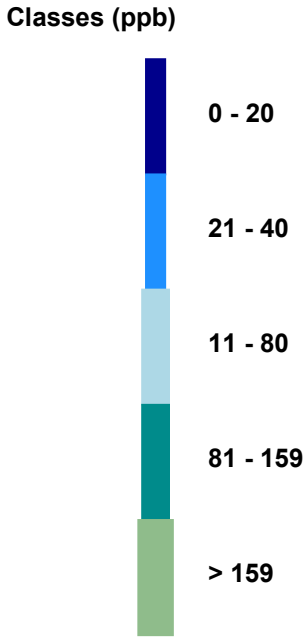
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Ells River





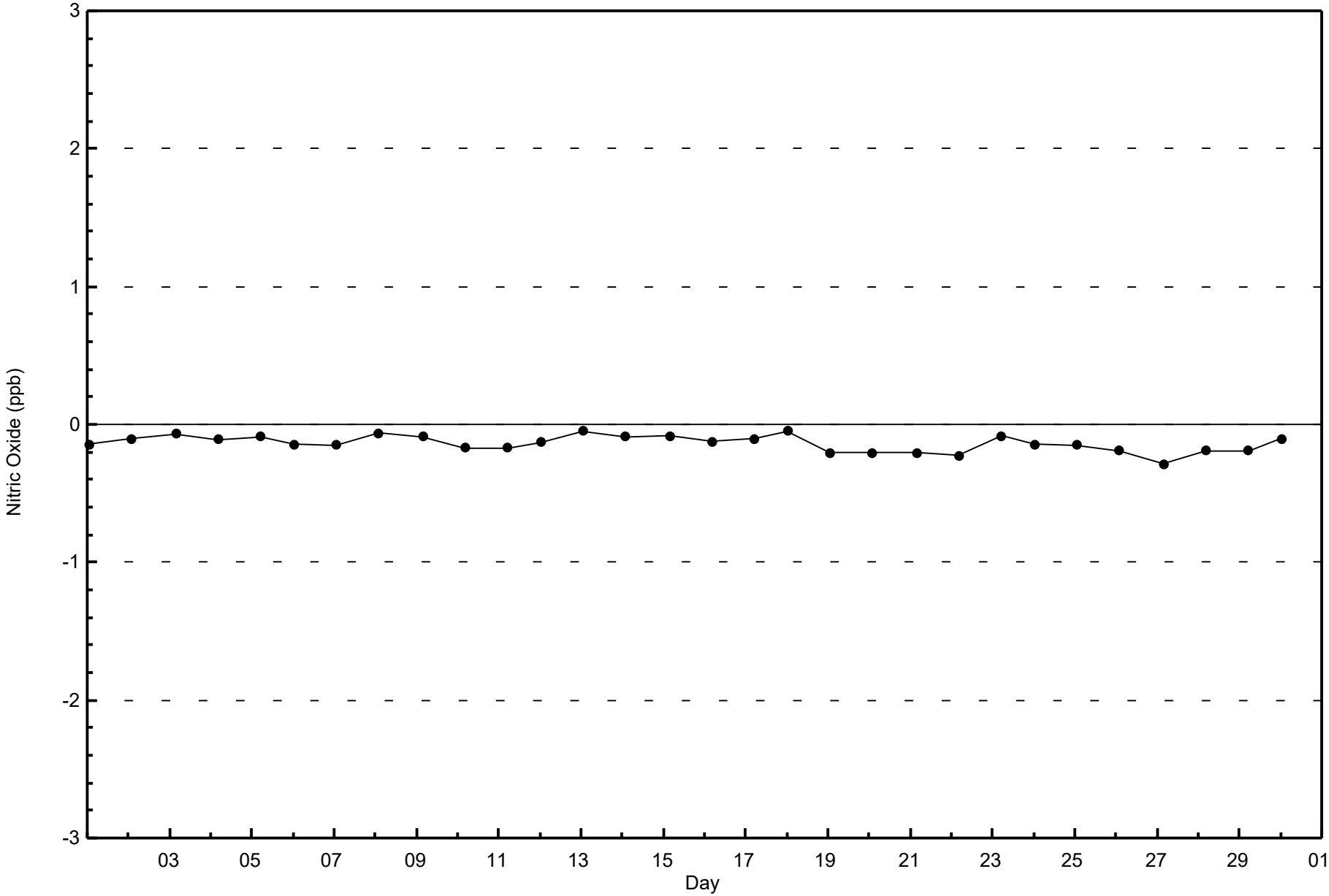
Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Ells River - September 2025

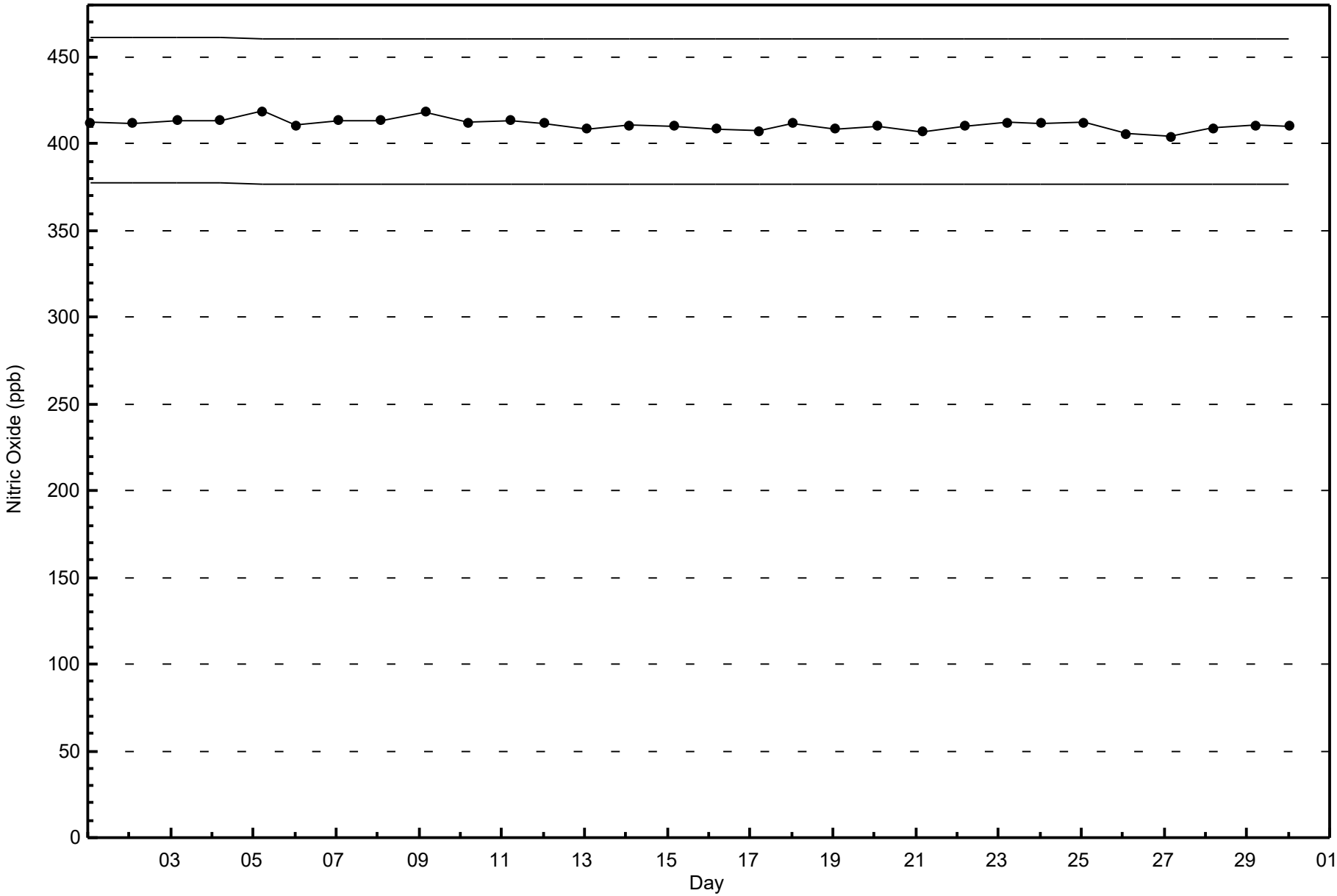


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.4 ppb on Sep 13 17:00 Maximum Daily Average: 15.3 ppb on Sep 13

Minimum Value: 0.0 ppb on Sep 1 04:00 Minimum Daily Average: 0.4 ppb on Sep 26
Maximum Diurnal Average: 6.4 ppb at hour 10 Minimum Diurnal Average: 2.8 ppb at hour 7
Monthly Average: 4.21 ppb Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.6 Median = 2.5 Q_3 = 5.6 P_{90} = 10.6 P_{99} = 25.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	Z	0.1	0.0	0.1	0.4	1.5	0.9	1.3	7.1	10.9	4.0	3.3	1.4	1.8	2.2	2.5	4.1	6.5	8.3	8.7	11.2	11.7	2.5	3.9	11.7
2-Sep	0.9	0.7	Z	1.6	0.4	0.2	0.3	1.3	6.4	10.4	8.9	17.6	17.3	11.1	9.2	6.0	5.1	5.5	6.5	5.5	2.9	1.8	2.9	2.7	5.4	17.6
3-Sep	2.4	3.7	8.8	Z	15.8	13.5	12.2	3.9	3.6	5.5	7.0	7.5	2.0	1.1	7.6	8.5	4.6	5.5	2.0	6.9	16.1	14.7	10.5	11.0	7.6	16.1
4-Sep	10.4	16.1	14.3	17.2	Z	6.5	3.9	4.3	4.5	C	C	C	C	C	1.1	1.5	1.1	1.9	3.2	3.2	2.5	1.5	2.2	4.1	5.5	17.2
5-Sep	3.3	1.2	0.5	0.4	0.4	Z	0.4	2.2	5.8	6.4	6.3	5.2	3.3	2.4	2.2	3.5	2.9	4.2	5.2	9.1	2.8	1.9	1.8	2.6	3.2	9.1
6-Sep	Z	3.5	4.2	3.5	1.9	1.7	1.3	2.7	9.2	16.4	19.3	18.0	18.5	9.2	5.5	4.1	3.6	4.0	3.3	3.0	2.3	2.1	1.7	1.8	6.1	19.3
7-Sep	1.7	Z	0.7	0.6	0.9	1.3	2.8	3.0	8.1	9.4	11.4	7.0	12.7	28.3	7.1	10.3	12.3	5.5	5.2	7.7	7.1	1.5	4.8	7.3	6.8	28.3
8-Sep	9.6	6.0	Z	4.2	3.5	2.0	2.9	4.5	8.3	9.1	8.2	7.4	6.1	5.7	5.4	4.9	4.2	4.3	5.2	3.9	3.6	2.9	2.1	2.5	5.1	9.6
9-Sep	3.4	2.4	1.3	Z	0.8	0.6	0.9	1.6	4.7	7.7	9.3	11.9	9.1	7.2	9.5	5.6	3.1	2.8	2.7	1.2	0.8	0.8	0.7	1.0	3.9	11.9
10-Sep	0.9	0.6	0.8	0.8	Z	3.7	0.9	0.5	0.8	1.7	0.8	1.7	0.5	0.4	0.2	0.4	0.2	0.3	4.6	21.1	8.1	3.8	1.0	0.5	2.4	21.1
11-Sep	0.4	0.4	0.6	0.7	0.7	Z	0.6	0.9	0.8	2.3	4.6	12.5	14.6	6.6	4.1	2.6	2.7	2.9	1.9	3.0	6.0	6.1	3.4	2.9	3.5	14.6
12-Sep	Z	2.8	3.8	2.7	3.1	3.3	2.3	9.7	11.1	9.5	5.1	4.9	3.3	1.6	1.3	1.2	1.1	1.1	1.1	1.1	1.0	0.9	1.0	0.9	3.2	11.1
13-Sep	0.7	Z	0.6	1.6	1.8	2.8	6.9	9.1	11.8	19.8	13.4	4.6	5.0	5.3	9.0	13.5	45.4	41.0	34.1	33.8	27.1	26.5	24.2	14.8	15.3	45.4
14-Sep	13.6	11.3	Z	6.0	4.4	3.0	2.1	2.8	6.8	13.9	19.2	15.3	7.9	10.5	6.6	2.9	3.8	6.5	4.4	2.5	2.2	3.4	4.1	4.4	6.9	19.2
15-Sep	4.1	13.9	11.1	Z	1.0	0.5	0.5	0.6	0.5	0.7	1.3	1.2	0.7	1.1	0.8	0.7	0.5	0.5	0.5	0.9	0.7	0.8	1.1	0.7	1.9	13.9
16-Sep	0.8	0.7	0.7	0.7	Z	0.8	0.4	0.4	0.5	1.8	8.5	9.8	6.3	2.8	1.2	3.1	3.4	3.0	5.2	7.2	7.5	6.0	5.8	4.7	3.5	9.8
17-Sep	4.0	2.7	3.6	3.7	2.0	Z	1.0	1.6	3.2	7.3	9.1	8.3	6.5	5.3	3.7	4.0	5.0	5.6	5.0	7.3	3.4	3.4	3.3	9.8	4.7	9.8
18-Sep	Z	12.5	10.9	6.9	4.2	2.8	4.8	4.8	2.5	3.1	1.1	1.2	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	2.7	12.5
19-Sep	0.5	Z	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.4	0.3	0.4	0.3	0.7	1.0	1.2	0.5	1.2
20-Sep	2.0	4.4	Z	2.6	2.9	1.0	1.2	0.9	2.0	12.9	10.0	5.1	4.7	2.0	1.3	1.7	2.3	3.1	6.5	3.0	7.9	4.3	4.8	5.6	4.0	12.9
21-Sep	3.3	3.6	5.7	Z	13.6	1.0	0.6	0.4	0.3	0.3	1.5	1.8	0.9	0.3	0.1	0.2	0.2	0.2	0.2	0.3	0.4	1.1	0.3	0.3	1.6	13.6
22-Sep	0.3	0.2	0.4	0.5	Z	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.3	0.4	0.5	0.5	0.5	0.8	3.3	9.2	6.4	5.9	11.9	4.5	2.1	11.9
23-Sep	2.7	0.9	0.7	4.9	4.3	Z	3.9	1.6	0.4	0.2	0.2	0.1	0.1	0.1	0.4	0.4	0.5	0.6	1.0	1.0	1.0	1.3	1.6	1.2	1.3	4.9
24-Sep	Z	1.1	2.9	8.5	12.0	3.6	1.1	1.1	1.0	1.0	0.6	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.6	0.6	0.3	1.6	12.0
25-Sep	0.5	Z	2.6	3.0	3.4	6.0	7.5	10.6	9.9	8.0	8.1	4.4	4.0	5.3	4.1	3.8	3.6	3.3	3.3	6.7	6.4	1.3	0.9	0.9	4.7	10.6
26-Sep	0.8	0.7	Z	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.9	0.4	0.9
27-Sep	6.0	0.9	3.3	Z	0.8	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.7	6.0
28-Sep	0.5	0.5	0.6	0.6	Z	0.6	0.6	0.5	0.4	0.2	0.3	0.6	0.3	0.2	0.2	0.1	0.3	0.6	0.9	3.1	3.3	3.4	2.2	1.1	0.9	3.4
29-Sep	0.8	1.1	1.2	0.9	2.7	Z	2.8	2.3	1.5	3.2	3.7	2.7	2.5	1.7	1.1	1.5	3.8	5.7	5.6	7.9	5.8	4.3	8.2	10.8	3.6	10.8
30-Sep	Z	12.7	18.5	21.5	24.3	21.6	18.8	15.8	20.0	25.1	14.0	9.3	8.4	6.7	5.3	4.1	4.0	6.7	11.9	11.7	3.4	2.6	19.0	23.5	13.4	25.1
	3.0	4.2	3.9	3.8	4.2	3.1	2.8	3.0	4.2	6.4	6.4	5.6	4.8	4.1	3.0	3.0	3.9	4.0	4.4	5.7	4.6	3.9	4.5	4.2	Diurnal Average	
	13.6	16.1	18.5	21.5	24.3	21.6	18.8	15.8	20.0	25.1	19.3	18.0	18.5	28.3	9.5	13.5	45.4	41.0	34.1	33.8	27.1	26.5	24.2	23.5	Diurnal Maximum	

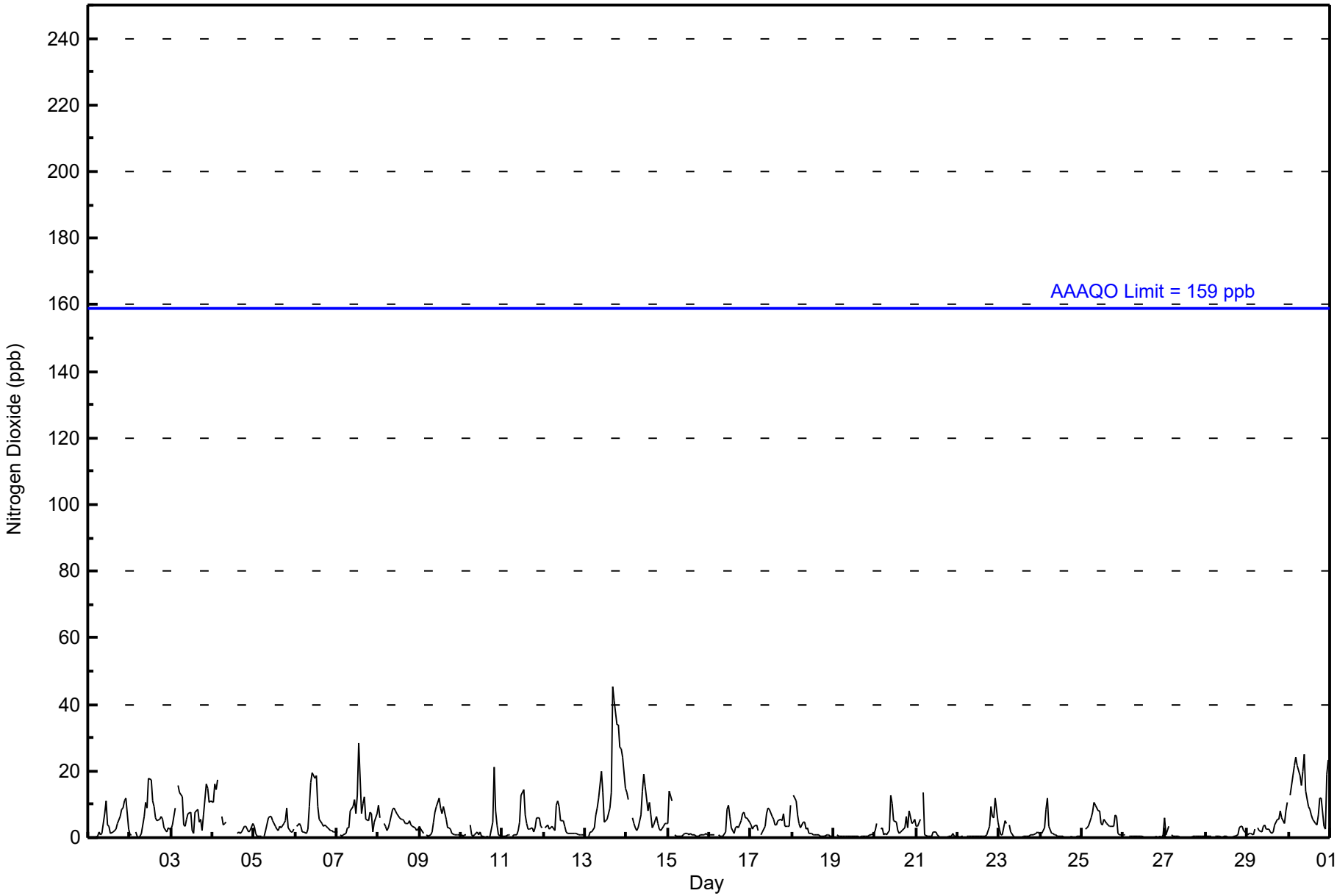
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	671	97.96	97.96
21 - 40	12	1.75	99.71
11 - 80	2	0.29	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	25	22	3	2	3	5	65	78	117	100	80	47	42	36	18	15	658
21 - 40	2	0	2	0	0	0	0	0	0	0	0	0	1	4	3	0	12
11 - 80	2	0	0	0	0	0	0	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	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	22	5	2	3	5	65	78	117	100	80	47	43	40	21	15	672

Total Number of Valid Hours: 672

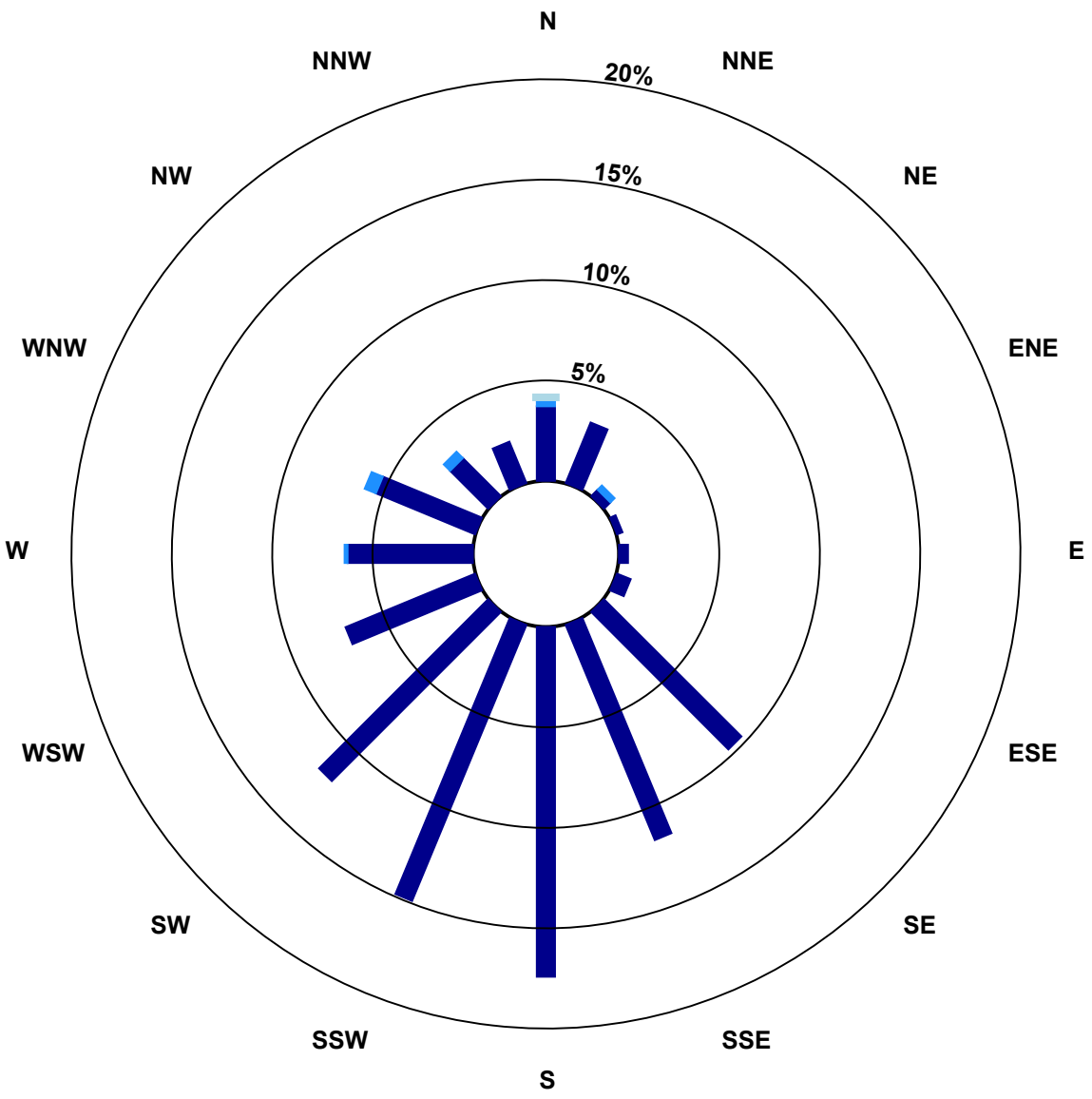
Total Number of Hours: 720

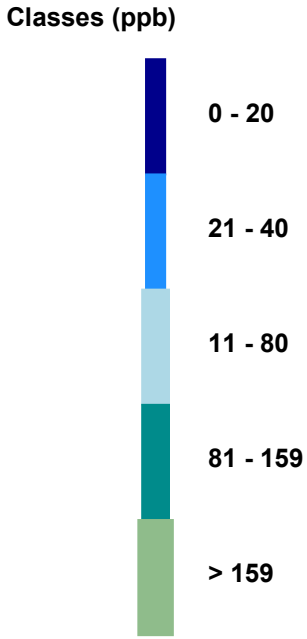
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Ells River





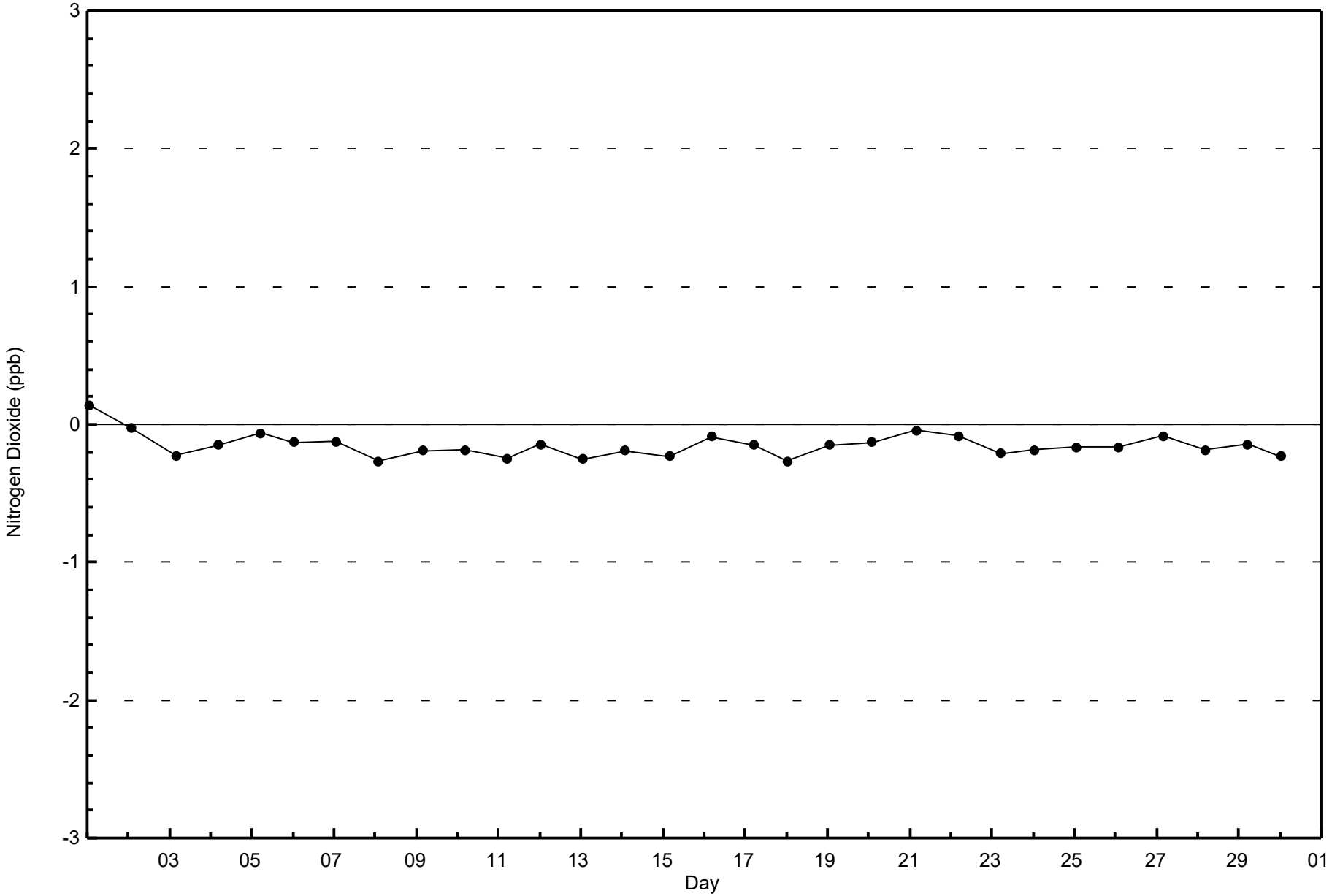
Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025

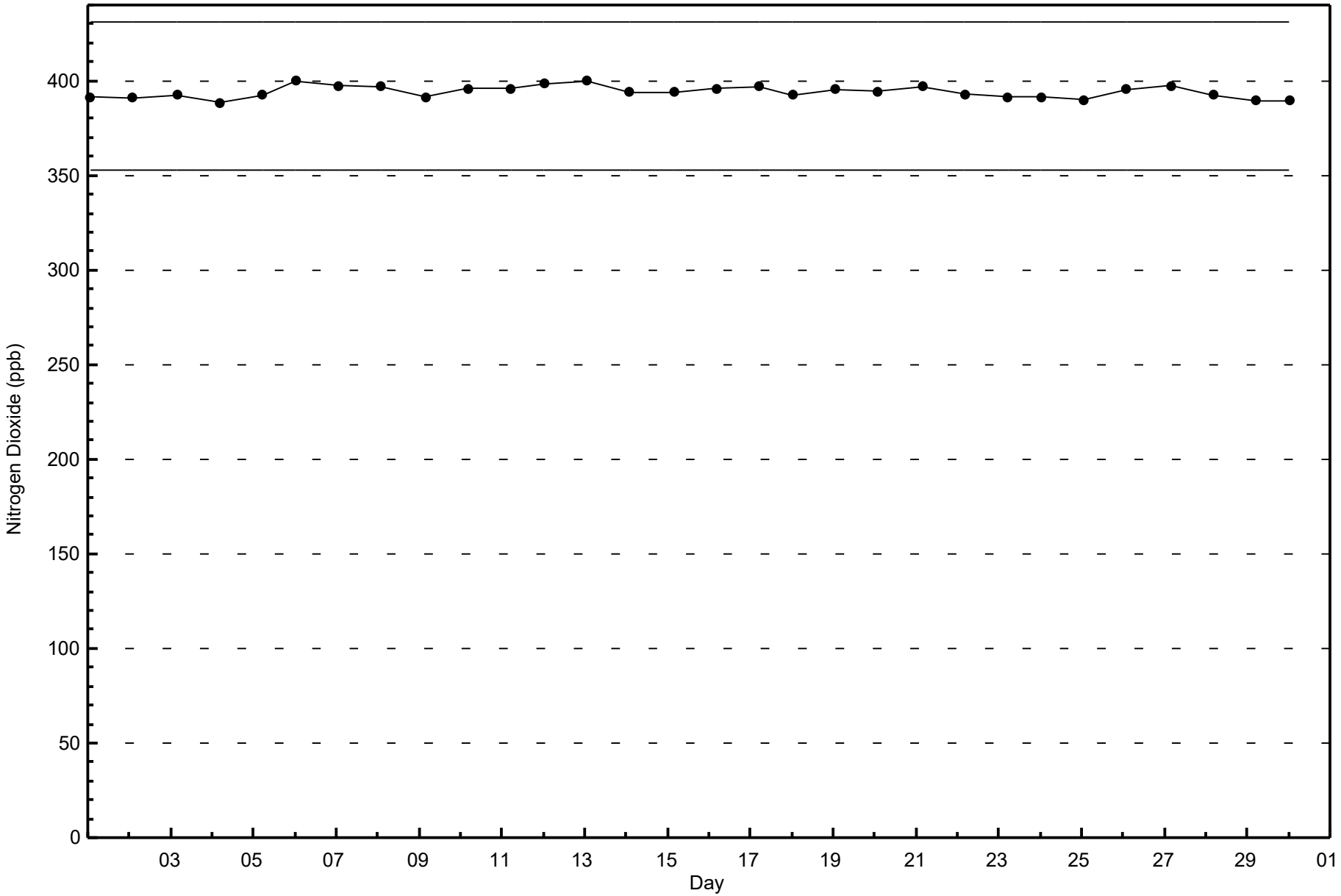


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025

Maximum Value: 172.6 ppb on Sep 30 05:00

Maximum Daily Average: 44.6 ppb on Sep 30

Minimum Value: 0.1 ppb on Sep 23 13:00

Minimum Daily Average: 0.5 ppb on Sep 26

Maximum Diurnal Average: 12.6 ppb at hour 10

Minimum Diurnal Average: 3.5 ppb at hour 16

Monthly Average: 6.67 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 2.9 Q_3 = 6.6 P_{90} = 15.6 P_{99} = 62.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	Z	0.2	1.2	0.3	0.6	2.2	1.3	2.3	21.0	31.2	7.3	5.3	1.9	2.1	2.5	2.7	4.4	6.9	8.8	9.0	13.8	20.0	2.8	6.4	31.2
2-Sep	1.0	0.8	Z	2.1	0.5	0.4	0.5	3.1	16.8	22.2	13.9	33.7	28.7	15.0	12.3	7.7	6.1	6.2	7.1	5.6	2.9	1.8	2.9	2.7	8.4	33.7
3-Sep	2.4	3.7	8.8	Z	16.9	14.0	14.7	4.3	4.3	7.2	9.8	10.5	2.3	1.1	9.7	11.7	4.9	5.6	2.0	6.9	16.4	15.7	10.7	11.2	8.5	16.9
4-Sep	10.6	16.9	14.7	17.9	Z	6.6	4.4	5.9	6.3	C	C	C	C	C	1.5	2.1	1.5	2.2	3.5	3.3	2.5	1.5	2.4	4.5	6.0	17.9
5-Sep	3.4	1.2	0.5	0.5	0.4	Z	0.7	7.6	16.7	12.2	12.2	8.7	4.7	2.9	2.6	4.1	3.3	4.6	5.4	10.2	2.8	2.1	1.8	3.5	4.9	16.7
6-Sep	Z	8.0	14.4	8.6	3.0	2.7	3.4	4.7	15.7	29.1	32.0	26.6	27.8	11.7	6.5	4.6	3.9	4.2	3.4	3.0	2.3	2.1	1.7	1.8	9.6	32.0
7-Sep	1.7	Z	0.8	0.6	1.0	1.5	3.3	5.3	17.5	17.5	19.7	9.4	18.3	46.0	8.9	11.6	13.6	5.9	5.4	8.1	7.2	1.5	4.9	9.1	9.5	46.0
8-Sep	9.7	6.0	Z	7.3	9.0	4.6	6.6	16.8	25.9	15.9	11.9	11.8	11.2	9.3	8.0	6.5	5.0	4.7	5.4	3.9	3.6	2.9	2.1	2.5	8.3	25.9
9-Sep	3.4	2.5	1.4	Z	0.9	1.3	2.9	6.6	11.2	13.7	14.2	16.5	11.5	8.4	10.8	6.1	3.3	2.8	2.7	1.2	0.8	0.8	0.7	1.0	5.4	16.5
10-Sep	0.9	0.6	0.8	0.8	Z	3.9	1.1	0.6	1.0	2.2	1.0	2.2	0.5	0.4	0.2	0.4	0.2	0.3	4.7	24.0	8.2	3.8	1.0	0.5	2.6	24.0
11-Sep	0.5	0.4	0.6	1.0	0.7	Z	0.8	1.8	1.2	3.2	6.5	19.1	19.5	8.0	4.9	2.9	2.9	3.1	1.9	3.0	6.0	6.1	3.4	2.9	4.4	19.5
12-Sep	Z	2.8	3.8	2.7	3.1	3.4	3.0	19.8	17.9	13.9	6.4	5.8	3.7	1.6	1.3	1.2	1.1	1.1	1.1	1.1	1.0	0.9	1.0	0.9	4.3	19.8
13-Sep	0.7	Z	0.6	1.6	1.8	2.9	11.1	15.6	26.0	39.3	20.0	5.4	5.8	6.0	10.2	15.0	61.7	50.9	37.1	39.0	47.4	49.7	40.1	38.6	22.9	61.7
14-Sep	43.2	45.2	Z	34.4	13.2	6.6	3.9	7.7	12.2	18.1	24.2	18.3	8.5	11.5	7.2	3.2	4.0	6.9	4.4	2.5	2.2	3.4	4.1	4.4	12.6	45.2
15-Sep	4.1	15.6	11.3	Z	1.0	0.5	0.5	0.6	0.5	0.7	1.4	1.2	0.7	1.2	0.8	0.7	0.5	0.5	0.5	0.9	0.7	0.8	1.1	0.7	2.0	15.6
16-Sep	0.8	0.7	0.7	0.7	Z	1.0	0.5	0.5	0.6	2.9	17.8	18.4	10.1	3.8	1.4	3.7	4.0	3.3	5.3	7.3	7.8	6.1	6.3	5.0	4.7	18.4
17-Sep	4.9	4.3	7.2	9.1	4.7	Z	2.1	5.2	7.3	16.0	14.9	11.8	8.7	6.6	4.3	4.6	5.7	5.9	5.0	7.3	3.4	3.4	3.3	9.8	6.8	16.0
18-Sep	Z	12.6	12.4	7.3	4.3	3.0	6.0	5.7	3.2	4.1	1.2	1.2	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	3.0	12.6
19-Sep	0.6	Z	0.8	0.7	0.6	0.5	0.6	0.6	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.5	0.4	0.4	0.3	0.7	1.0	1.4	0.6	1.4
20-Sep	2.1	4.5	Z	2.7	3.0	1.1	1.8	1.3	3.1	26.1	17.7	6.6	5.5	2.2	1.4	1.8	2.4	3.2	6.5	3.0	8.0	4.4	4.9	5.9	5.2	26.1
21-Sep	3.4	3.8	5.8	Z	14.6	1.0	0.7	0.5	0.4	0.3	1.9	2.2	1.0	0.3	0.1	0.2	0.2	0.2	0.2	0.3	0.4	1.2	0.4	0.3	1.7	14.6
22-Sep	0.3	0.3	0.4	0.5	Z	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.8	3.3	9.2	6.4	5.9	11.9	4.5	2.2	11.9
23-Sep	2.7	0.9	0.7	4.9	4.3	Z	4.0	1.9	0.4	0.2	0.2	0.1	0.1	0.1	0.4	0.4	0.5	0.6	1.0	1.0	1.0	1.3	1.6	1.2	1.3	4.9
24-Sep	Z	1.1	2.9	8.6	12.2	3.6	1.2	1.2	1.1	1.1	0.6	0.4	0.4	0.4	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.7	0.7	0.3	1.7	12.2
25-Sep	0.5	Z	2.6	3.1	3.6	6.1	9.1	19.7	22.0	12.7	13.1	6.5	5.6	6.8	4.6	4.1	3.9	3.4	3.3	6.7	6.4	1.3	0.9	0.9	6.4	22.0
26-Sep	0.8	0.7	Z	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.5	0.3	0.3	0.3	1.0	0.5	1.0
27-Sep	6.1	1.0	3.4	Z	0.9	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.8	6.1
28-Sep	0.5	0.5	0.6	0.6	Z	0.7	0.8	0.6	0.5	0.3	0.3	0.8	0.3	0.2	0.2	0.2	0.3	0.7	1.2	3.1	3.3	3.5	2.4	1.2	1.0	3.5
29-Sep	0.8	1.1	1.3	1.0	3.0	Z	3.4	2.6	1.7	3.9	4.6	3.8	3.1	2.0	1.2	1.6	4.1	5.8	5.6	7.9	5.8	4.3	9.0	15.3	4.0	15.3
30-Sep	Z	34.6	119.6	162.7	172.6	106.4	65.9	46.8	72.5	78.6	21.4	13.4	11.5	8.7	6.1	4.6	4.5	7.8	12.7	11.8	3.6	3.2	22.8	32.7	44.6	172.6
	4.2	6.8	8.6	11.2	11.0	7.0	5.2	6.3	9.7	12.6	10.3	8.4	6.8	5.5	3.6	3.5	4.8	4.6	4.6	6.0	5.4	4.8	5.5	5.6	Diurnal Average	
	43.2	45.2	119.6	162.7	172.6	106.4	65.9	46.8	72.5	78.6	32.0	33.7	28.7	46.0	12.3	15.0	61.7	50.9	37.1	39.0	47.4	49.7	40.1	38.6	Diurnal Maximum	

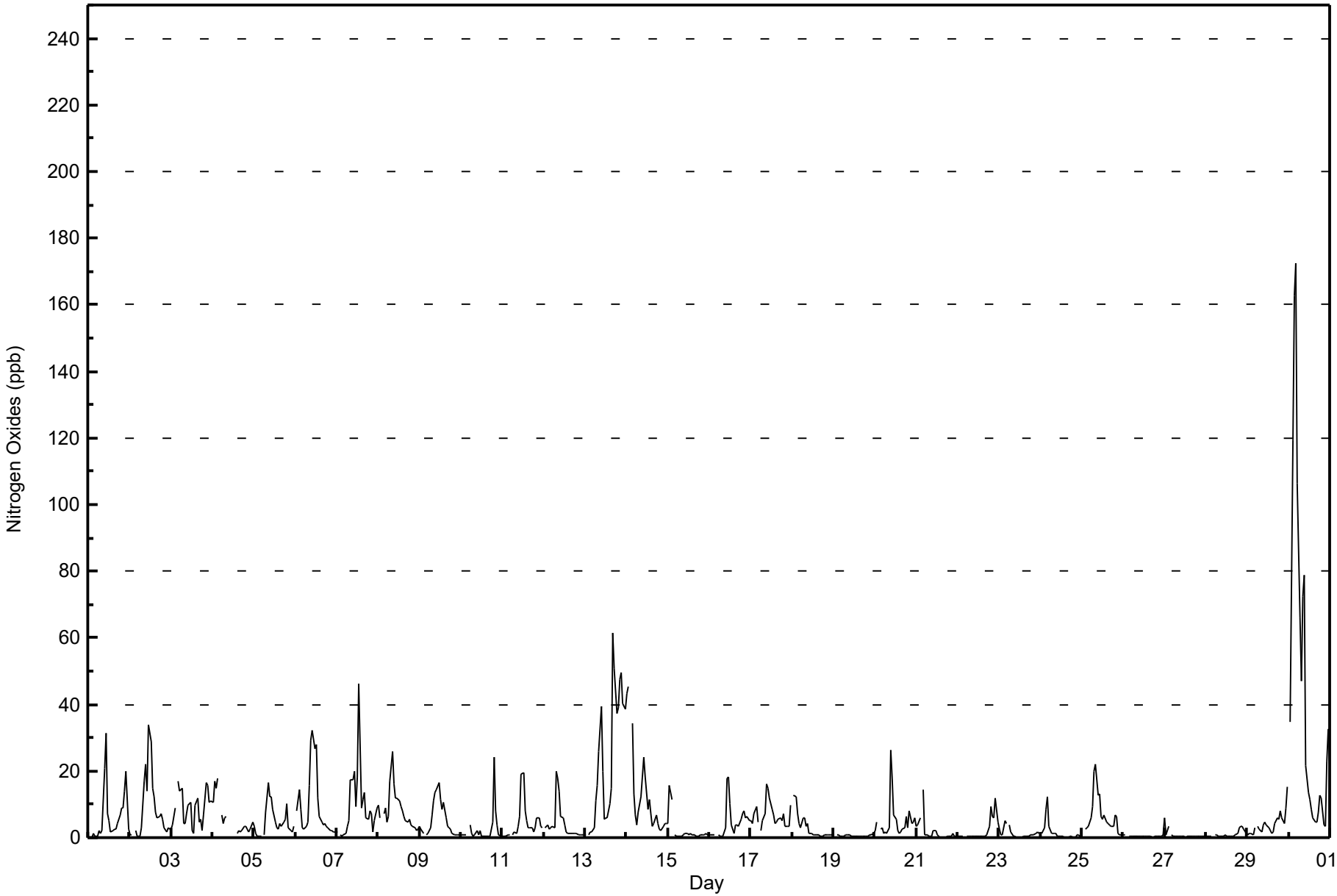
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	645	94.16	94.16
21 - 40	25	3.65	97.81
11 - 80	11	1.61	99.42
81 - 159	2	0.29	99.71
> 159	2	0.29	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	21	3	2	3	5	64	71	114	99	79	45	41	33	18	13	633
21 - 40	4	0	0	0	0	0	1	7	3	1	0	1	1	2	3	1	24
11 - 80	3	1	2	0	0	0	0	0	0	0	1	1	0	2	0	1	11
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Totals	29	22	5	2	3	5	65	78	117	100	80	47	43	40	21	15	672

Total Number of Valid Hours: 672

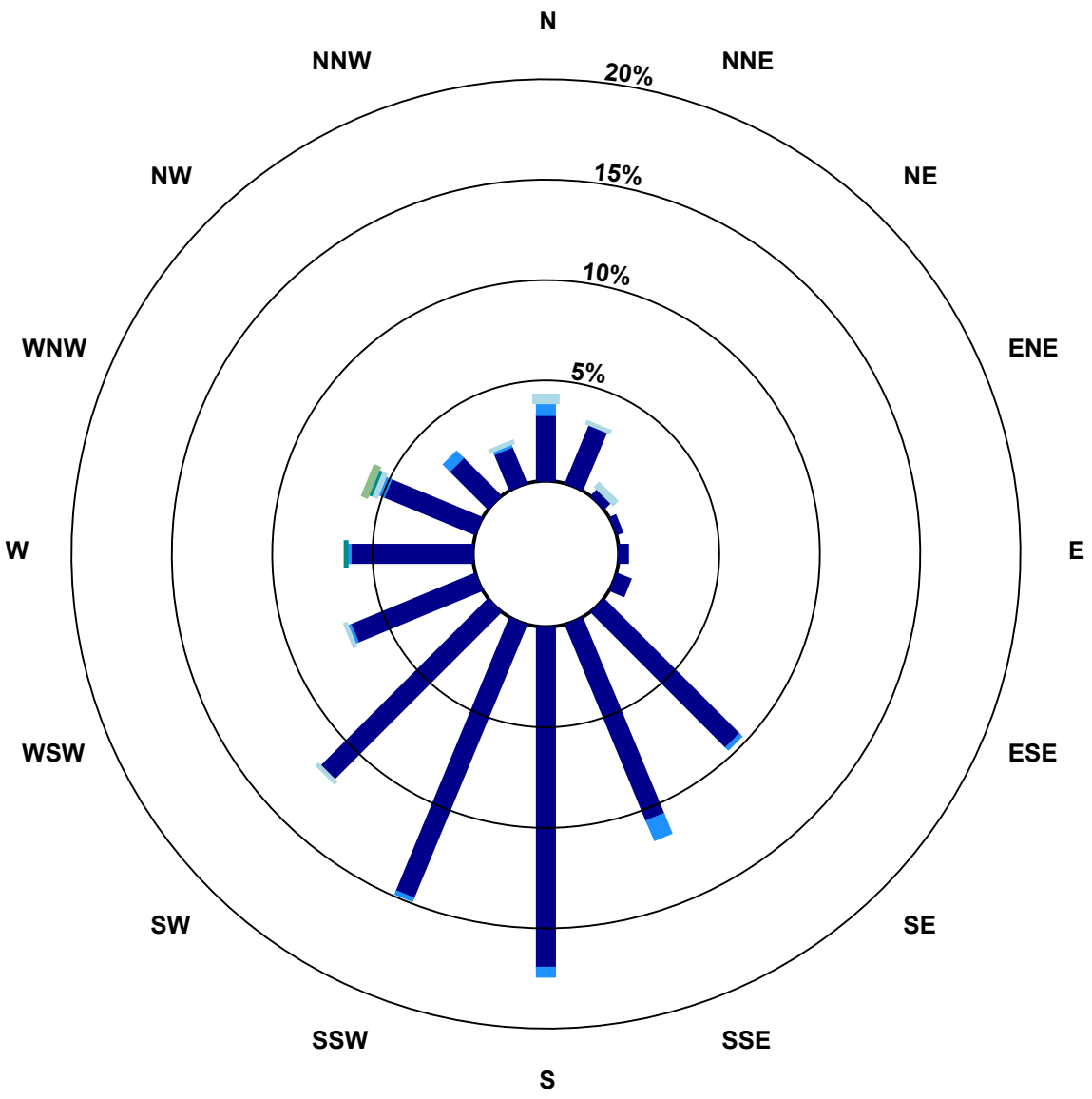
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Ells River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

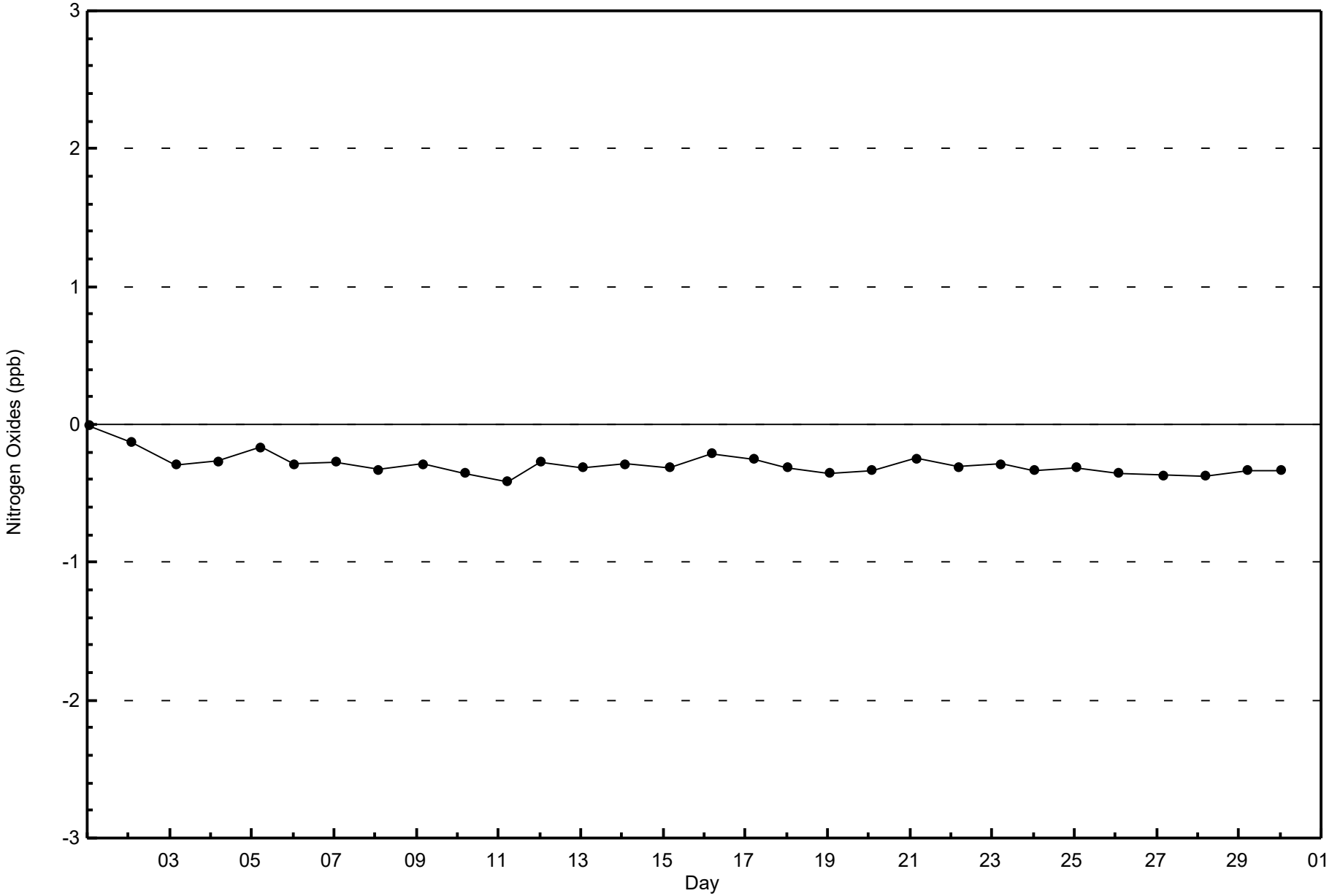
Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025

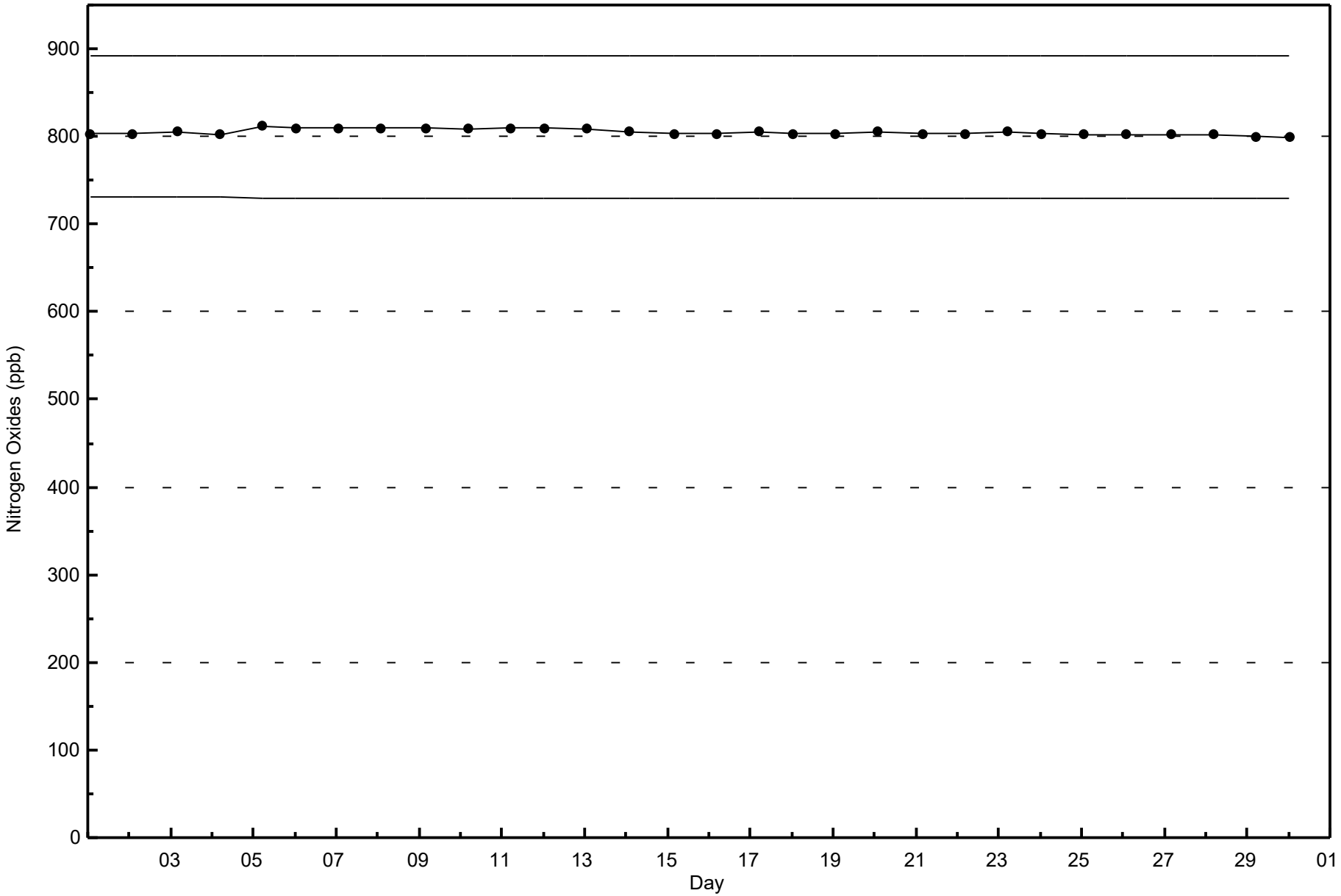


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 3

Maximum Value: 134.0 $\mu g/m^3$ on Sep 1 18:00

Maximum Daily Average: 47.6 $\mu g/m^3$ on Sep 1

Minimum Value: 0.6 $\mu g/m^3$ on Sep 26 18:00

Minimum Daily Average: 3.1 $\mu g/m^3$ on Sep 27

Maximum Diurnal Average: 21.6 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 11.9 $\mu g/m^3$ at hour 22

Monthly Average: 14.47 $\mu g/m^3$

Percentiles: P_1 = 0.8 P_{10} = 3.0 Q_1 = 5.9 Median = 10.2 Q_3 = 17.8 P_{90} = 28.5 P_{99} = 72.7

Hours in Service:	720
Hours of Data:	718
Hours of Missing Data:	2
Hours of Calibration:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	26.7	26.0	24.8	25.4	25.4	25.5	25.6	27.1	28.1	32.6	33.9	18.2	12.3	20.3	80.9	110.4	124.5	134.0	74.4	52.9	52.6	52.1	52.1	55.8	47.6	134.0
2-Sep	59.0	56.5	54.4	53.3	54.8	52.6	51.5	49.5	48.7	51.5	64.0	C	28.5	20.9	15.6	13.7	10.7	6.7	8.4	9.5	9.8	10.1	13.4	17.5	33.1	64.0
3-Sep	19.8	24.2	31.4	35.0	39.7	38.4	37.6	28.1	27.3	26.4	25.1	24.8	23.3	22.7	25.6	29.2	30.4	DF	12.2	22.9	29.0	29.3	20.0	15.3	26.8	39.7
4-Sep	9.8	5.9	6.8	4.3	3.2	2.8	2.9	3.2	3.4	2.8	2.1	2.0	2.0	2.2	2.2	2.5	2.4	3.0	3.6	3.9	3.7	3.8	4.1	4.0	3.6	9.8
5-Sep	3.4	3.0	2.8	2.7	2.9	2.9	2.9	3.8	6.7	5.8	5.1	5.4	5.8	7.0	8.6	8.2	7.8	8.3	8.7	7.9	6.9	6.7	6.8	6.8	5.7	8.7
6-Sep	6.9	6.7	7.1	7.5	8.1	7.8	8.2	20.9	47.9	52.4	51.2	39.7	27.2	19.6	11.8	9.6	9.2	7.6	6.5	6.2	6.3	6.9	6.9	7.4	16.2	52.4
7-Sep	7.2	6.7	6.5	6.6	6.9	7.0	6.9	6.4	6.4	7.1	9.1	12.3	15.2	22.6	14.1	11.4	13.3	11.7	10.6	10.3	11.2	11.5	11.4	12.5	10.2	22.6
8-Sep	17.8	17.6	15.8	14.0	12.5	11.7	12.2	13.7	15.1	14.7	13.7	15.0	15.4	15.2	14.5	13.8	11.5	9.9	11.2	11.2	11.5	12.0	11.3	12.1	13.5	17.8
9-Sep	13.9	12.5	11.4	11.3	10.1	9.7	11.6	10.1	15.5	27.1	30.6	35.3	30.9	27.7	24.9	19.7	20.2	18.4	17.5	14.9	12.5	11.9	11.5	10.1	17.5	35.3
10-Sep	10.3	9.4	10.2	10.5	12.2	12.1	11.4	10.6	8.8	7.7	5.3	4.3	4.3	4.2	2.1	1.3	1.3	1.9	3.1	9.6	5.0	4.7	3.1	3.1	6.5	12.2
11-Sep	4.1	3.2	3.4	3.7	3.7	3.6	6.4	5.3	4.0	4.7	4.8	9.8	18.1	12.8	11.5	8.6	6.2	7.4	5.9	5.9	9.5	9.6	9.7	12.7	7.3	18.1
12-Sep	16.0	23.4	13.7	11.3	13.4	22.7	25.8	41.6	56.3	46.2	29.0	24.1	20.7	14.4	14.1	15.1	15.7	16.8	22.6	19.1	19.1	23.1	29.5	29.1	23.4	56.3
13-Sep	30.0	29.0	28.6	26.2	27.0	27.2	28.3	30.4	28.6	24.6	20.5	18.0	17.5	16.9	21.6	22.3	24.7	25.8	23.6	23.8	24.4	22.9	19.6	19.5	24.2	30.4
14-Sep	18.5	17.6	17.4	16.5	16.1	15.6	17.8	16.5	24.8	100.0	114.8	85.9	64.3	57.7	29.4	19.0	28.0	16.0	6.1	5.5	5.1	5.6	6.1	6.6	29.6	114.8
15-Sep	7.2	8.2	8.4	8.0	7.7	7.1	6.7	6.6	6.7	7.8	16.9	19.3	12.1	14.5	21.7	25.8	20.1	18.5	16.2	23.2	21.6	19.1	12.1	8.7	13.5	25.8
16-Sep	7.9	8.3	8.5	8.7	8.2	7.8	7.9	8.6	9.0	10.2	11.0	10.6	10.1	9.4	9.4	14.9	18.0	11.7	12.9	15.0	25.5	16.2	16.0	13.3	11.6	25.5
17-Sep	17.4	13.1	12.0	11.4	11.3	10.2	9.7	11.9	17.1	21.5	21.7	20.1	14.8	14.9	11.2	13.9	15.9	14.9	18.3	20.4	7.8	7.0	7.8	8.5	13.9	21.7
18-Sep	11.7	11.5	10.3	9.2	9.3	9.8	17.9	12.0	9.6	10.4	13.0	14.3	15.0	13.8	11.1	9.2	8.9	12.8	19.7	10.9	13.3	14.0	15.6	14.6	12.4	19.7
19-Sep	14.3	17.7	19.4	20.1	16.3	10.0	7.2	12.2	18.9	18.5	12.0	9.8	9.0	9.8	8.4	5.6	5.3	6.4	5.9	5.0	4.4	3.6	2.8	5.4	10.3	20.1
20-Sep	3.9	4.6	4.3	3.2	3.6	2.9	12.4	3.8	3.3	6.7	7.9	9.3	10.0	8.6	8.8	9.3	10.9	9.7	17.3	13.7	14.4	13.0	12.0	12.1	8.6	17.3
21-Sep	10.1	14.8	10.8	14.5	10.9	7.6	7.7	7.8	7.5	5.4	4.6	4.4	3.9	3.3	3.4	3.4	4.0	5.2	4.4	3.9	4.6	5.5	6.9	5.4	6.7	14.8
22-Sep	4.9	5.3	8.9	12.7	14.1	13.1	10.2	10.1	10.3	8.5	7.7	8.5	5.0	5.1	8.3	10.1	9.1	7.1	5.9	4.3	3.5	2.6	4.0	2.8	7.6	14.1
23-Sep	2.6	2.2	2.3	3.0	3.5	4.5	5.7	5.8	4.2	1.0	0.8	0.8	0.7	0.7	3.3	3.9	6.0	7.9	14.7	17.7	20.9	27.1	33.0	32.0	8.5	33.0
24-Sep	27.5	27.7	27.1	24.8	24.7	34.1	46.9	49.3	48.1	48.2	21.3	8.2	4.4	1.2	0.7	0.7	0.8	0.9	1.0	0.8	1.7	0.8	1.3	2.6	16.9	49.3
25-Sep	5.9	9.2	10.9	11.4	17.4	22.5	25.5	30.8	34.0	37.1	26.0	10.0	8.7	9.3	6.9	4.6	4.5	4.1	4.9	6.7	5.6	8.9	12.1	17.3	13.9	37.1
26-Sep	16.3	11.4	8.3	8.0	9.4	11.2	14.2	17.8	17.2	12.9	6.7	3.7	2.3	1.1	0.8	0.8	0.7	0.6	1.9	4.1	3.2	2.9	3.5	3.9	6.8	17.8
27-Sep	6.5	4.9	3.4	3.1	1.9	2.9	2.2	1.6	2.3	2.6	2.0	1.5	1.2	1.7	2.3	3.2	4.1	4.6	4.9	4.5	4.0	2.2	2.1	3.6	3.1	6.5
28-Sep	5.9	8.3	12.1	15.2	16.2	18.4	19.8	18.9	9.8	3.9	2.3	1.1	0.9	2.0	1.0	2.0	2.8	3.1	4.6	6.6	6.5	6.3	4.0	3.4	7.3	19.8
29-Sep	3.5	6.2	7.5	8.5	11.7	11.4	12.1	13.1	10.3	13.8	25.7	15.3	9.4	5.9	6.1	6.5	7.7	10.8	10.4	9.1	9.2	8.3	9.4	9.4	10.1	25.7
30-Sep	9.4	12.1	20.4	28.0	35.2	35.2	41.4	41.8	41.5	36.9	20.0	10.8	11.3	11.3	8.8	11.1	10.2	10.7	12.5	9.5	9.5	9.5	11.1	9.9	19.1	41.8
	13.3	13.6	13.6	13.9	14.6	14.9	16.6	17.3	19.0	21.6	20.3	15.3	13.5	12.6	13.0	13.7	14.5	13.7	12.3	12.0	12.1	11.9	12.0	12.2	Diurnal Average	
	59.0	56.5	54.4	53.3	54.8	52.6	51.5	49.5	56.3	100.0	114.8	85.9	64.3	57.7	80.9	110.4	124.5	134.0	74.4	52.9	52.6	52.1	52.1	55.8	Diurnal Maximum	

C - Calibration DF - DAS Failure

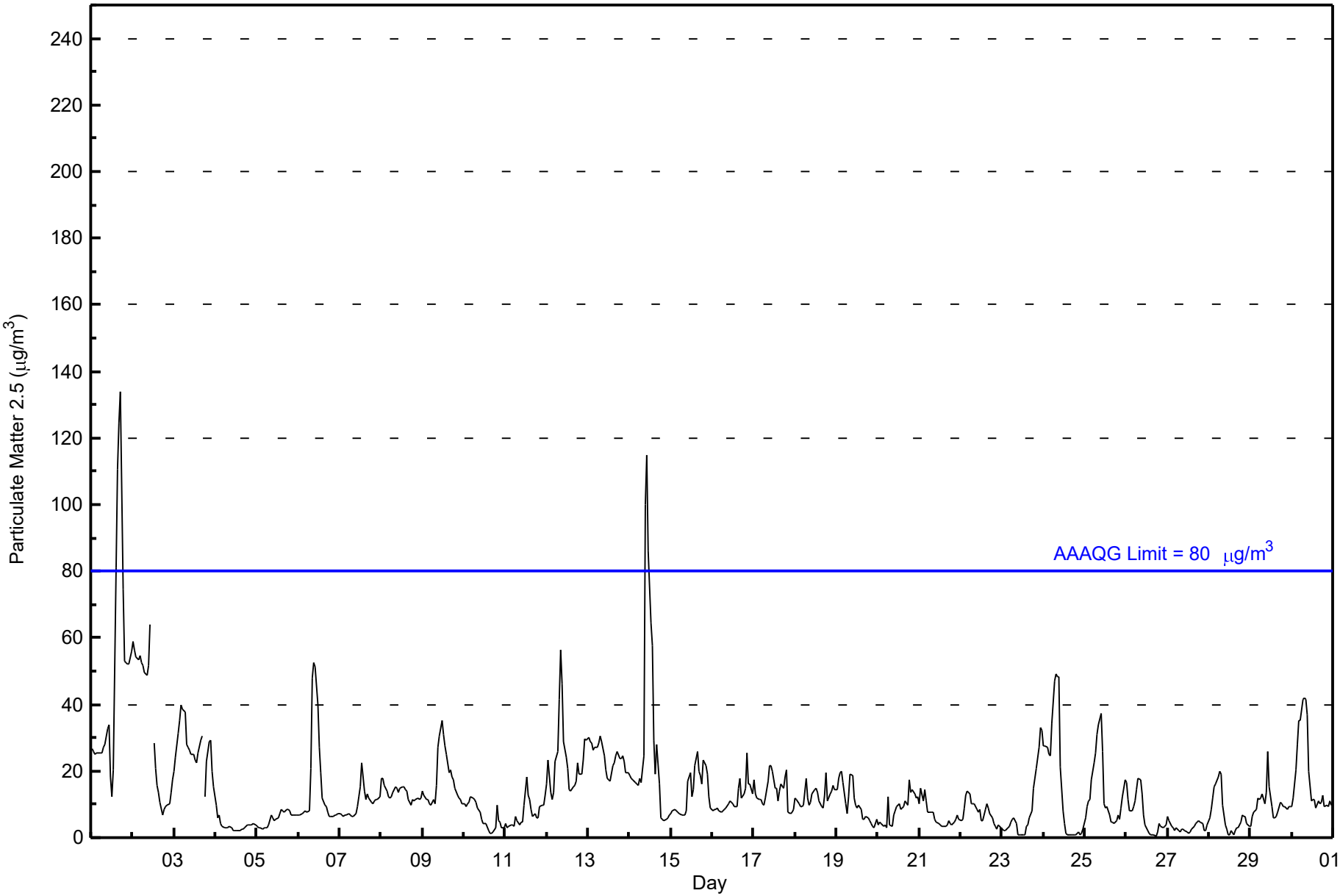
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Ells River - September 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Ells River - September 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	171	23.82	23.82
6 - 15	333	46.38	70.20
16 - 25	112	15.60	85.79
26 - 80	95	13.23	99.03
> 81.0	7	0.97	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

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

Ells River - September 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	1	5	1	0	0	0	6	13	27	24	30	24	12	10	10	5	168
6 - 15	12	13	2	2	1	4	43	38	49	55	35	17	25	15	7	6	324
16 - 25	8	1	1	0	2	0	10	12	20	15	15	4	4	10	5	3	110
26 - 80	6	2	1	0	0	1	6	16	30	8	4	3	6	7	1	3	94
> 81.0	3	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	7
Totals	30	22	5	2	3	5	66	80	127	102	84	48	47	42	23	17	703

Total Number of Valid Hours: 703

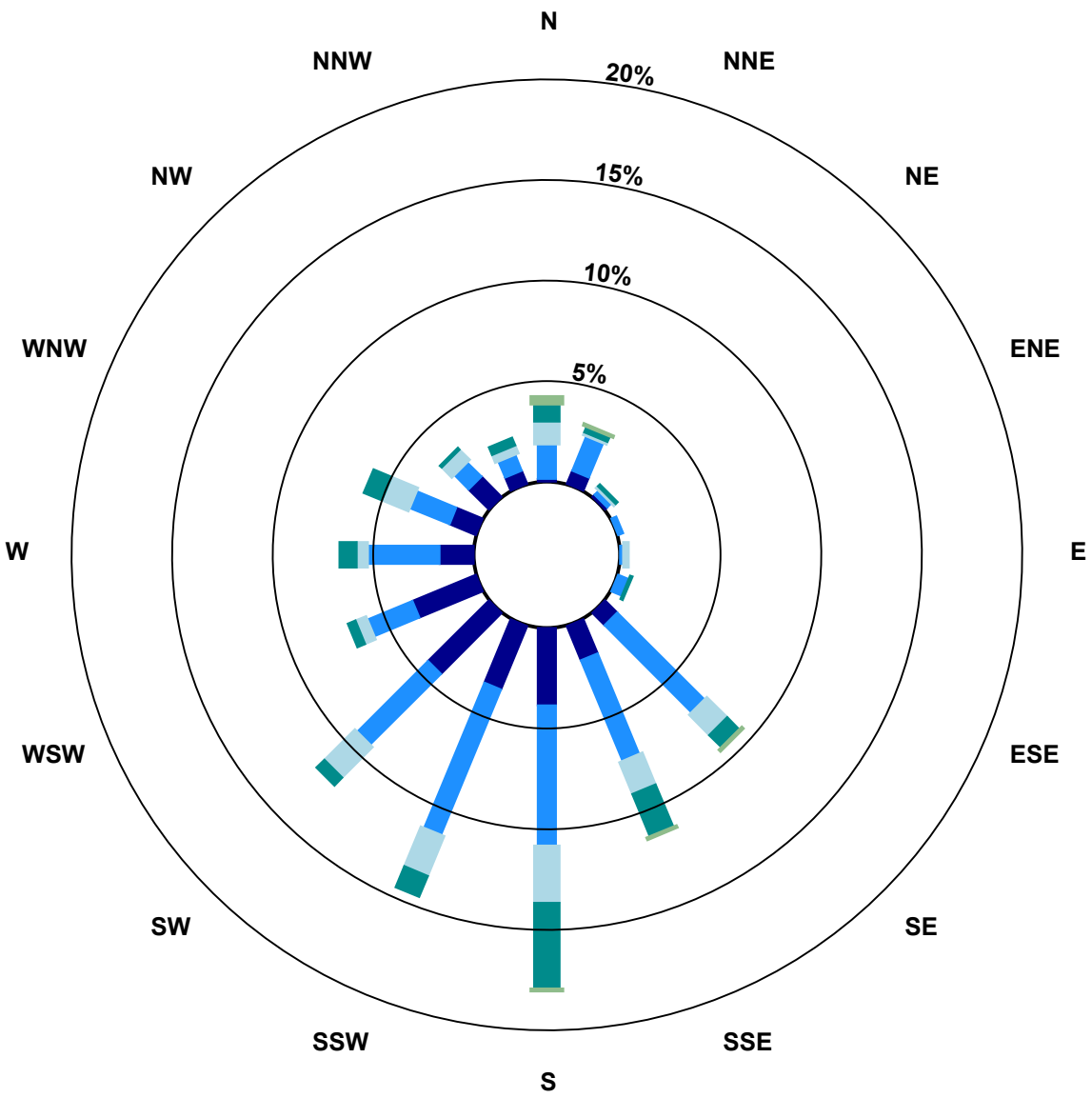
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

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

Ells River



Classes ($\mu g/m^3$)

- 0 - 5
- 6 - 15
- 16 - 25
- 26 - 80
- > 81.0

Total Number of Valid Hours: 703

Maximum Value: 29.2 C on Sep 12 15:00

Maximum Daily Average: 18.6 C on Sep 12

Minimum Value: -0.3 C on Sep 25 06:00

Minimum Daily Average: 9.0 C on Sep 25

Maximum Diurnal Average: 21.2 C at hour 15

Minimum Diurnal Average: 7.8 C at hour 6

Monthly Average: 14.24 C

Percentiles: P_1 = 2.4 P_{10} = 7.0 Q_1 = 10.3 Median = 13.9 Q_3 = 18.1 P_{90} = 22.1 P_{99} = 26.9

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	10.1	10.1	10.1	10.4	10.5	10.7	10.5	10.9	12.0	13.3	14.7	16.0	17.4	17.9	17.5	17.0	16.4	15.5	14.5	12.5	9.4	8.6	7.9	7.0	12.5	17.9
2-Sep	6.0	4.3	4.4	4.8	4.0	3.8	4.1	5.9	8.5	10.6	12.2	13.6	14.8	15.5	16.0	16.6	16.8	16.5	15.1	11.9	11.5	10.9	11.3	12.6	10.5	16.8
3-Sep	12.1	11.5	11.2	11.1	11.2	10.7	10.9	12.2	13.0	13.9	14.8	15.6	17.2	18.9	18.4	18.5	18.1	DF	16.2	15.5	14.5	14.2	13.9	12.9	14.2	18.9
4-Sep	11.9	12.3	12.0	11.6	11.0	10.2	10.7	12.3	13.0	13.8	14.5	15.6	16.2	17.1	17.1	18.0	17.5	16.9	15.7	12.8	9.9	8.0	6.5	5.3	12.9	18.0
5-Sep	4.6	4.0	3.3	2.6	2.3	1.9	2.9	5.4	8.1	11.6	14.6	16.4	18.0	19.2	19.7	20.0	19.8	19.9	18.6	15.1	12.4	9.4	8.0	7.3	11.0	20.0
6-Sep	6.3	5.6	4.8	3.9	3.4	3.2	4.2	8.1	10.7	13.4	16.7	18.8	20.3	22.1	23.4	23.9	24.1	23.4	20.1	16.3	13.3	11.8	10.6	9.9	13.3	24.1
7-Sep	9.7	9.5	9.3	9.0	8.6	7.8	8.2	10.0	12.7	14.6	18.2	20.7	21.9	22.4	21.2	19.1	18.5	17.5	17.0	16.3	15.7	14.4	11.9	11.3	14.4	22.4
8-Sep	12.5	11.9	10.4	8.3	7.1	7.1	8.3	9.6	11.9	13.0	13.4	14.1	15.7	17.0	18.5	19.4	19.2	18.8	16.4	13.0	11.2	9.6	8.7	8.1	12.6	19.4
9-Sep	7.1	6.8	6.0	5.6	4.8	4.4	5.1	9.4	12.4	14.9	17.7	20.1	22.5	24.8	26.1	27.2	27.2	25.6	23.9	23.2	22.5	20.9	20.4	18.5	16.6	27.2
10-Sep	17.4	15.4	13.3	12.5	11.8	10.5	12.4	14.4	16.4	19.1	21.7	22.9	23.6	24.6	25.6	25.6	25.1	24.1	21.2	17.2	14.2	12.0	10.2	9.1	17.5	25.6
11-Sep	8.0	7.8	6.9	5.6	4.9	4.2	4.9	8.2	11.8	16.5	19.6	21.5	23.2	24.7	25.6	25.8	25.8	25.2	22.6	19.6	18.0	17.6	17.2	16.0	15.9	25.8
12-Sep	14.6	12.3	10.2	9.7	8.9	8.2	8.2	11.7	15.6	18.3	21.5	24.1	26.2	28.4	29.2	29.2	28.9	28.0	24.3	20.3	17.6	17.6	18.1	14.6	18.6	29.2
13-Sep	14.5	14.5	12.5	11.1	11.3	10.4	9.9	10.9	12.6	15.6	17.7	19.1	21.6	23.4	24.3	24.6	24.3	23.4	20.5	18.1	16.8	16.4	15.6	13.4	16.8	24.6
14-Sep	12.5	11.7	10.8	10.1	9.3	9.1	9.2	11.7	13.8	16.7	19.2	21.5	22.9	21.9	22.1	22.0	22.0	21.9	21.0	19.4	18.0	16.1	15.0	13.8	16.3	22.9
15-Sep	13.8	13.7	13.1	12.4	12.3	12.4	13.1	14.3	16.4	18.8	21.1	23.4	24.8	24.7	24.1	21.7	19.8	18.9	17.5	16.2	14.6	13.7	13.9	13.9	17.0	24.8
16-Sep	13.5	13.3	12.6	11.8	11.5	11.7	11.8	12.5	12.7	14.1	15.7	16.3	17.7	18.8	19.4	19.8	20.1	19.5	17.1	14.5	12.3	11.0	9.9	8.6	14.4	20.1
17-Sep	8.1	6.3	5.6	5.1	4.6	4.0	4.0	6.5	10.8	13.7	17.1	19.4	21.2	23.2	24.2	24.6	24.4	23.3	21.2	19.6	19.6	18.2	17.4	16.5	14.9	24.6
18-Sep	15.8	13.1	10.4	9.1	8.4	7.5	9.1	13.8	16.0	18.0	19.7	21.1	22.2	22.9	23.7	23.7	23.2	21.9	19.7	18.7	17.7	15.9	15.3	14.9	16.7	23.7
19-Sep	14.0	12.8	11.3	10.0	8.5	7.7	7.6	9.1	11.5	14.0	17.3	19.2	20.5	21.3	21.8	22.3	21.0	19.7	18.0	16.6	15.8	14.8	13.0	9.7	14.9	22.3
20-Sep	8.1	7.4	5.9	5.1	4.7	3.9	4.4	7.2	10.5	13.7	16.9	20.4	22.3	25.5	26.9	26.9	26.8	25.7	23.5	21.6	20.0	18.6	17.5	16.5	15.8	26.9
21-Sep	13.6	11.6	11.5	11.3	11.6	11.9	12.8	14.2	16.7	20.1	22.8	23.8	23.6	24.0	24.4	23.6	22.1	20.5	17.9	13.9	13.0	12.6	12.8	12.3	16.8	24.4
22-Sep	11.6	10.9	10.2	9.4	8.5	7.8	7.4	8.1	9.7	11.9	14.3	16.6	18.9	19.8	20.1	20.2	20.2	18.5	17.1	17.2	17.3	17.1	16.4	16.3	14.4	20.2
23-Sep	15.8	14.9	14.3	13.9	13.6	13.7	13.7	14.5	16.9	17.4	18.7	19.7	19.9	19.2	19.0	19.4	18.8	17.9	15.7	13.6	12.1	10.8	9.7	8.6	15.5	19.9
24-Sep	8.2	9.1	8.6	7.9	7.5	7.9	8.5	8.4	9.1	10.2	14.1	16.4	18.3	19.0	19.2	19.3	18.6	17.2	14.3	9.8	6.7	5.8	4.3	5.8	11.4	19.3
25-Sep	4.1	3.0	1.8	1.0	0.4	-0.3	-0.2	1.7	3.8	6.3	9.3	12.5	15.2	16.3	16.6	16.5	16.2	14.8	13.6	14.6	13.3	13.3	12.0	10.5	9.0	16.6
26-Sep	9.2	8.0	7.3	6.7	6.0	4.9	4.4	5.9	8.4	10.9	13.3	15.3	16.8	17.9	18.1	16.6	15.3	14.7	14.1	12.5	11.6	10.9	10.3	8.5	11.1	18.1
27-Sep	8.3	7.7	7.8	7.2	8.7	8.8	9.0	10.1	11.4	12.7	14.2	15.6	16.5	17.2	17.3	16.2	16.2	15.2	14.0	12.8	11.6	11.8	10.3	9.2	12.1	17.3
28-Sep	8.7	8.0	7.5	7.1	6.4	5.4	4.6	5.6	8.1	11.9	15.2	17.0	17.4	17.5	18.1	17.8	16.7	15.0	13.1	11.5	11.3	11.2	11.6	11.5	11.6	18.1
29-Sep	11.3	11.1	11.2	10.6	11.2	11.9	11.8	11.8	13.4	15.1	16.3	17.4	19.1	20.8	21.0	21.3	21.4	19.7	16.9	14.6	13.7	12.5	11.5	10.3	14.8	21.4
30-Sep	9.1	10.0	10.3	10.8	12.0	12.1	12.1	11.5	13.2	15.1	16.5	16.8	17.0	17.2	16.9	16.5	16.4	15.6	14.5	14.2	13.8	12.5	11.9	11.3	13.6	17.2
	10.7	9.9	9.2	8.5	8.2	7.8	8.1	9.9	12.0	14.3	16.6	18.4	19.8	20.8	21.2	21.1	20.7	19.8	17.8	15.8	14.3	13.3	12.4	11.5	Diurnal Average	
	17.4	15.4	14.3	13.9	13.6	13.7	13.7	14.5	16.9	20.1	22.8	24.1	26.2	28.4	29.2	29.2	28.9	28.0	24.3	23.2	22.5	20.9	20.4	18.5	Diurnal Maximum	

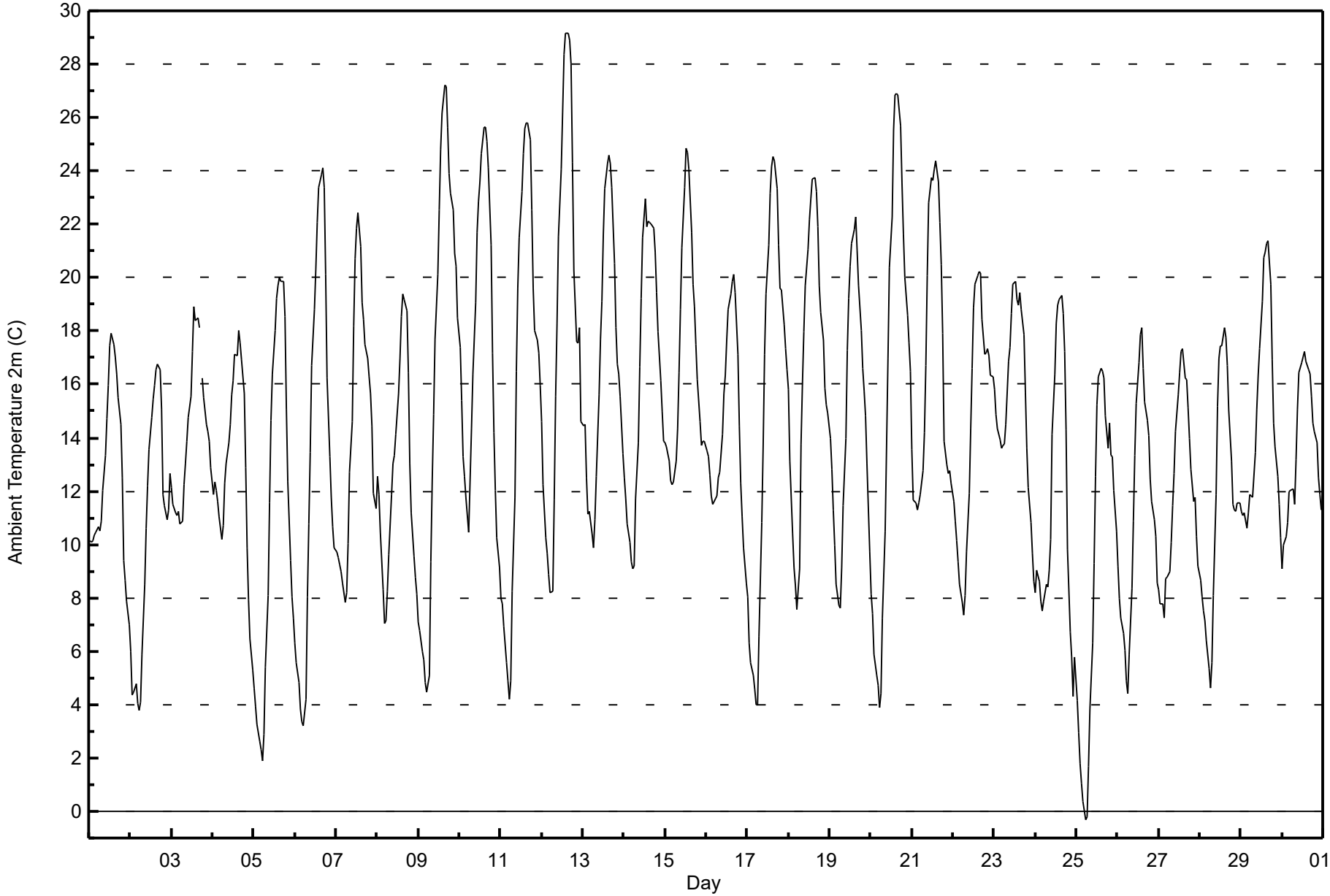
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Ells River - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	2	0.28	0.28
0 - 10	166	23.09	23.37
10 - 20	435	60.50	83.87
> 20	116	16.13	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Ells River - September 2025

Maximum Value: 95.8 % on Sep 8 06:00

Maximum Daily Average: 79.0 % on Sep 8

Minimum Value: 21.3 % on Sep 24 16:00

Minimum Daily Average: 39.7 % on Sep 23

Maximum Diurnal Average: 83.0 % at hour 6

Minimum Diurnal Average: 40.1 % at hour 15

Monthly Average: 62.95 %

Percentiles: P_1 = 24.2 P_{10} = 35.8 Q_1 = 47.3 Median = 62.0 Q_3 = 80.7 P_{90} = 90.2 P_{99} = 95.1

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	90.0	90.3	90.2	89.6	90.1	93.4	95.4	95.2	93.3	91.4	83.5	70.0	56.9	49.5	55.6	53.9	54.8	54.7	57.1	66.1	80.3	84.2	85.5	86.5	77.4	95.4
2-Sep	87.4	89.4	91.3	90.2	90.6	92.4	91.2	88.2	78.9	70.1	61.6	56.3	48.9	42.6	40.1	37.6	36.9	36.9	46.3	60.4	63.2	67.5	65.8	57.9	66.3	92.4
3-Sep	60.1	63.9	68.1	70.3	72.1	76.0	77.3	71.6	69.2	66.9	66.3	66.9	64.5	61.6	65.4	67.5	60.6	DF	69.8	74.5	79.8	75.2	68.7	72.0	69.1	79.8
4-Sep	74.6	71.6	72.4	70.3	72.4	77.0	75.7	69.2	64.2	59.6	56.2	51.0	47.9	45.2	44.3	43.3	45.2	49.7	55.6	68.4	79.6	86.8	89.6	91.6	65.1	91.6
5-Sep	92.5	93.1	93.1	94.4	94.1	94.1	94.1	89.9	83.5	69.5	58.0	52.4	47.3	43.0	40.1	39.7	40.4	40.6	46.9	58.1	66.4	83.8	87.9	89.9	70.5	94.4
6-Sep	90.0	91.8	91.0	91.2	90.4	91.8	89.9	80.8	73.6	64.2	53.3	47.9	42.3	35.9	31.5	33.2	33.0	36.2	47.5	62.2	76.8	82.3	85.4	87.3	67.1	91.8
7-Sep	89.1	88.6	86.7	86.4	86.5	89.9	88.6	82.3	73.3	69.4	57.7	49.7	48.3	49.8	54.9	61.4	63.9	74.0	75.7	75.3	75.6	81.2	89.8	93.2	74.6	93.2
8-Sep	88.4	90.2	91.2	94.3	95.2	95.8	95.8	93.8	88.3	82.2	78.3	74.3	67.9	61.3	56.0	50.9	44.6	46.8	62.3	79.3	86.2	89.5	91.2	92.8	79.0	95.8
9-Sep	93.2	93.3	93.5	94.2	93.5	93.3	92.8	83.6	78.5	72.3	65.0	58.6	53.1	48.7	45.9	43.4	43.6	52.0	55.9	51.6	47.5	54.1	54.0	61.4	67.6	94.2
10-Sep	65.0	70.5	80.3	83.4	85.5	88.1	87.2	79.8	72.6	60.8	45.4	35.8	33.0	31.0	26.1	23.2	24.0	29.6	38.4	52.1	63.6	70.1	72.4	78.3	58.2	88.1
11-Sep	83.2	83.0	83.4	88.2	88.7	90.5	88.1	77.4	67.9	54.3	46.1	41.3	36.9	32.5	29.4	28.2	31.1	33.5	40.1	48.3	53.5	56.3	58.8	62.9	58.5	90.5
12-Sep	68.1	77.2	85.4	86.7	87.8	88.8	90.1	84.5	76.0	67.8	56.4	46.7	40.1	32.4	31.6	32.3	33.0	36.1	47.6	63.0	74.3	68.7	61.9	72.9	62.9	90.1
13-Sep	70.2	65.7	72.6	80.5	80.0	80.9	85.2	81.7	77.2	71.3	66.0	60.3	54.8	50.5	49.6	50.0	50.9	56.1	69.1	80.3	84.9	86.2	86.2	92.1	70.9	92.1
14-Sep	92.6	93.6	94.2	94.4	94.2	94.6	95.2	90.3	85.9	78.9	69.2	57.6	54.1	59.0	60.2	65.0	66.6	61.3	61.1	66.4	71.9	79.8	84.5	88.7	77.5	95.2
15-Sep	91.4	92.5	93.4	94.8	95.5	95.5	93.1	87.3	79.9	72.3	64.8	54.6	50.2	49.4	51.3	56.9	60.0	58.2	57.6	62.0	67.9	72.4	71.9	72.8	72.7	95.5
16-Sep	75.3	76.6	80.1	82.8	84.1	83.7	83.6	79.4	78.6	72.5	66.7	64.2	58.1	53.8	52.4	50.6	47.9	50.5	61.5	71.7	81.6	85.9	86.4	87.9	71.5	87.9
17-Sep	89.2	91.8	92.9	93.6	93.4	93.3	93.0	89.4	82.0	77.4	64.0	55.7	49.8	42.4	39.2	38.4	39.4	42.7	48.3	53.9	53.8	56.4	59.9	64.8	66.9	93.6
18-Sep	68.4	78.4	88.1	90.7	92.3	92.5	92.6	78.9	69.3	60.2	51.9	46.2	42.4	39.4	36.0	36.3	34.5	36.1	42.2	44.1	46.6	52.6	54.2	54.5	59.5	92.6
19-Sep	57.2	60.3	64.8	69.1	73.9	77.3	78.5	72.0	62.5	54.9	45.2	39.1	35.1	32.5	30.9	30.2	33.0	38.6	49.0	52.9	52.8	54.8	60.8	72.0	54.1	78.5
20-Sep	78.6	84.1	86.8	88.6	89.3	90.3	89.8	82.8	71.9	64.4	57.3	50.0	46.7	36.6	31.9	32.4	32.7	35.7	41.6	45.7	50.6	54.9	58.4	62.3	61.0	90.3
21-Sep	73.1	79.8	81.9	82.7	83.0	81.3	77.5	69.5	59.5	47.9	39.1	35.6	34.0	31.1	30.6	29.8	33.3	37.2	51.0	82.4	90.9	91.3	89.1	84.6	62.3	91.3
22-Sep	84.4	83.9	82.1	82.8	84.1	84.1	83.5	78.7	71.1	63.0	55.6	48.7	40.4	36.4	36.3	36.3	35.0	39.6	43.2	43.4	43.3	43.3	44.6	41.8	57.7	84.4
23-Sep	42.4	45.1	46.7	48.8	51.1	53.3	54.9	52.6	42.5	37.7	30.4	25.3	23.4	23.2	26.4	26.8	27.1	30.3	35.8	40.6	44.1	46.3	47.7	50.6	39.7	54.9
24-Sep	54.7	49.9	53.1	59.0	62.9	62.1	60.3	61.7	60.2	56.4	41.2	34.3	28.1	23.0	22.4	21.3	22.9	26.7	33.4	46.7	56.2	59.3	62.7	58.3	46.5	62.9
25-Sep	64.3	67.1	71.2	78.0	76.7	81.0	82.0	77.8	73.2	68.9	61.1	50.7	43.6	41.6	41.5	44.1	46.8	54.6	60.1	47.4	54.3	59.7	65.5	72.6	61.8	82.0
26-Sep	78.2	84.6	87.8	89.1	90.1	92.2	93.5	88.8	78.8	67.1	57.1	50.1	43.6	36.5	33.7	36.7	41.4	40.0	41.5	45.5	47.7	49.0	49.8	58.1	61.7	93.5
27-Sep	62.6	78.4	83.0	81.1	73.4	70.1	64.4	55.6	47.3	41.4	36.5	32.2	29.2	27.6	25.9	28.0	28.3	31.0	34.1	37.6	41.9	42.3	46.7	50.7	47.9	83.0
28-Sep	52.3	53.8	55.4	56.9	59.9	63.6	66.8	64.2	56.6	46.7	38.6	33.7	31.4	30.9	27.8	28.6	32.3	39.5	46.0	52.6	52.9	52.0	49.0	47.1	47.4	66.8
29-Sep	48.7	51.4	51.2	53.1	51.7	49.1	49.5	50.3	45.2	41.2	38.3	36.9	34.5	32.7	33.8	34.2	35.3	40.2	48.6	58.0	61.4	67.3	70.8	74.1	48.2	74.1
30-Sep	79.7	76.3	76.6	77.1	73.0	72.7	74.3	77.1	71.5	63.4	55.8	54.4	54.1	52.2	51.9	52.7	52.7	53.3	56.1	57.4	56.5	66.7	73.1	80.4	65.0	80.4
	74.8	77.2	79.6	81.4	81.9	83.0	82.8	77.8	71.1	63.8	55.5	49.3	44.7	41.1	40.1	40.4	41.0	43.5	50.8	58.3	63.5	67.3	69.1	72.0	Diurnal Average	
	93.2	93.6	94.2	94.8	95.5	95.8	95.8	95.2	93.3	91.4	83.5	74.3	67.9	61.6	65.4	67.5	66.6	74.0	75.7	82.4	90.9	91.3	91.2	93.2	Diurnal Maximum	

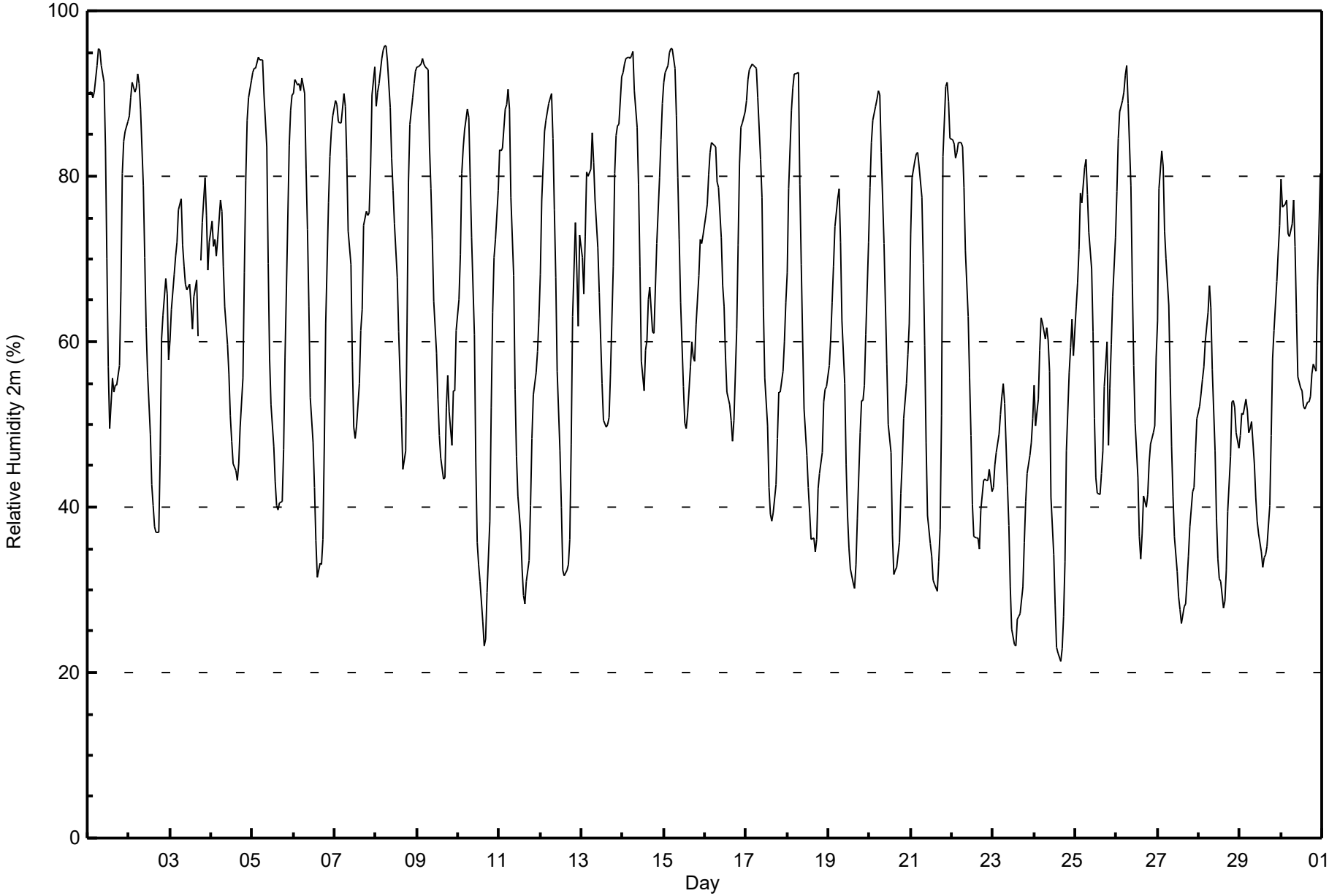
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Ells River - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	108	15.02	15.02
40 - 60	226	31.43	46.45
60 - 80	199	27.68	74.13
80 - 100	186	25.87	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Ells River - September 2025

Maximum Value: 729.1 W/m2 on Sep 5 13:00

Maximum Daily Average: 227.9 W/m2 on Sep 5

Minimum Value: 0.0 W/m2 on Sep 1 01:00

Minimum Daily Average: 81.7 W/m2 on Sep 30

Maximum Diurnal Average: 555.2 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 1

Monthly Average: 162.31 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 19.7 Q_3 = 313.0 P_{90} = 552.1 P_{99} = 664.5

Hours in Service:	720
Hours of Data:	719
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	0.0	0.0	0.4	10.9	67.4	161.3	133.7	414.7	642.3	637.1	643.9	531.1	398.6	225.5	140.8	54.3	2.7	0.0	0.0	0.0	0.0	169.4	643.9
2-Sep	0.0	0.0	0.0	0.0	0.0	7.5	40.7	141.5	197.1	270.8	317.2	421.6	453.5	443.5	479.2	526.1	353.8	168.5	50.1	3.1	0.0	0.0	0.0	0.0	161.4	526.1
3-Sep	0.0	0.0	0.0	0.0	0.0	2.8	33.6	88.8	131.2	223.1	249.4	232.6	338.0	399.2	175.5	326.0	75.1	DF	34.1	0.2	0.0	0.0	0.0	0.0	100.4	399.2
4-Sep	0.0	0.0	0.0	0.0	0.0	5.2	81.0	218.8	247.4	333.6	465.0	579.2	582.3	674.1	589.7	578.0	432.9	271.5	67.9	3.0	0.0	0.0	0.0	0.0	213.7	674.1
5-Sep	0.0	0.0	0.0	0.0	0.0	5.0	74.8	195.9	324.5	381.9	645.6	668.3	729.1	692.0	604.9	497.2	375.8	208.7	62.3	3.0	0.0	0.0	0.0	0.0	227.9	729.1
6-Sep	0.0	0.0	0.0	0.0	0.0	4.1	63.5	203.0	283.6	425.4	590.3	644.1	684.5	664.5	588.6	482.0	347.0	158.9	35.6	1.3	0.0	0.0	0.0	0.0	215.7	684.5
7-Sep	0.0	0.0	0.0	0.0	0.0	3.0	62.5	139.3	270.2	249.8	583.5	645.3	642.6	626.1	384.3	89.5	49.5	46.0	18.7	1.7	0.0	0.0	0.0	0.0	158.8	645.3
8-Sep	0.0	0.0	0.0	0.0	0.0	1.7	21.9	83.5	247.4	189.0	171.0	325.6	640.9	664.2	594.3	479.8	339.2	188.5	44.3	1.3	0.0	0.0	0.0	0.0	166.3	664.2
9-Sep	0.0	0.0	0.0	0.0	0.0	2.4	46.4	172.0	263.2	384.7	498.7	601.1	629.9	591.3	395.2	444.7	218.9	110.7	23.9	0.3	0.0	0.0	0.0	0.0	182.6	629.9
10-Sep	0.0	0.0	0.0	0.0	0.0	1.6	22.2	94.5	197.3	363.5	583.5	555.0	633.9	645.3	622.8	485.5	340.5	182.8	39.7	0.4	0.0	0.0	0.0	0.0	198.7	645.3
11-Sep	0.0	0.0	0.0	0.0	0.0	2.1	53.4	199.3	301.5	408.6	615.7	671.8	684.0	653.1	584.4	468.3	322.6	166.8	29.4	0.4	0.0	0.0	0.0	0.0	215.1	684.0
12-Sep	0.0	0.0	0.0	0.0	0.0	1.4	38.6	156.1	269.8	379.7	562.5	620.6	638.6	621.2	552.5	421.6	263.9	119.2	14.6	0.0	0.0	0.0	0.0	0.0	194.2	638.6
13-Sep	0.0	0.0	0.0	0.0	0.0	0.7	23.2	88.6	160.2	245.8	318.6	384.6	431.9	459.7	410.0	305.7	202.5	82.9	18.0	0.0	0.0	0.0	0.0	0.0	130.5	459.7
14-Sep	0.0	0.0	0.0	0.0	0.0	0.4	33.1	128.8	222.6	317.0	461.9	540.1	468.9	225.9	216.8	412.6	157.8	155.5	27.6	0.0	0.0	0.0	0.0	0.0	140.4	540.1
15-Sep	0.0	0.0	0.0	0.0	0.0	0.4	29.7	133.0	219.2	313.3	429.6	560.2	586.6	552.9	439.5	342.4	277.3	129.0	14.8	0.0	0.0	0.0	0.0	0.0	167.8	586.6
16-Sep	0.0	0.0	0.0	0.0	0.0	0.2	31.3	132.5	114.6	256.0	471.0	400.9	547.3	589.4	525.3	405.0	251.5	113.4	17.0	0.1	0.0	0.0	0.0	0.0	160.6	589.4
17-Sep	0.0	0.0	0.0	0.0	0.0	0.4	24.3	116.1	280.0	360.0	541.1	603.4	625.4	602.7	530.3	412.9	272.9	129.0	12.6	0.0	0.0	0.0	0.0	0.0	188.0	625.4
18-Sep	0.0	0.0	0.0	0.0	0.0	0.4	28.2	143.5	241.1	322.5	505.2	560.1	571.9	544.7	476.8	375.4	239.6	99.2	10.3	0.0	0.0	0.0	0.0	0.0	171.6	571.9
19-Sep	0.0	0.0	0.0	0.0	0.0	0.1	27.9	167.1	247.1	312.6	542.9	599.5	594.3	592.3	440.5	379.8	112.6	49.2	6.5	0.0	0.0	0.0	0.0	0.0	169.7	599.5
20-Sep	0.0	0.0	0.0	0.0	0.0	0.2	30.7	166.5	215.5	302.9	498.2	546.2	433.7	565.0	515.1	349.6	238.1	101.7	7.7	0.0	0.0	0.0	0.0	0.0	165.5	565.0
21-Sep	0.0	0.0	0.0	0.0	0.0	0.0	24.3	145.2	258.7	351.7	520.2	591.4	429.6	436.6	398.9	191.6	68.4	14.1	0.6	0.0	0.0	0.0	0.0	0.0	143.0	591.4
22-Sep	0.0	0.0	0.0	0.0	0.0	0.0	14.5	147.1	276.8	370.8	555.7	617.2	632.8	597.9	432.9	312.3	180.8	45.5	3.4	0.0	0.0	0.0	0.0	0.0	174.5	632.8
23-Sep	0.0	0.0	0.0	0.0	0.0	0.0	7.6	66.8	256.2	305.0	569.2	643.9	491.9	144.2	261.3	372.6	128.8	70.9	3.5	0.0	0.0	0.0	0.0	0.0	138.4	643.9
24-Sep	0.0	0.0	0.0	0.0	0.0	0.0	3.8	30.7	74.2	236.2	543.8	608.4	575.5	606.1	480.5	420.7	248.6	93.2	4.1	0.0	0.0	0.0	0.0	0.0	163.6	608.4
25-Sep	0.0	0.0	0.0	0.0	0.0	0.0	21.2	58.0	166.4	220.6	379.3	430.2	495.0	321.4	147.9	96.3	63.6	19.7	1.5	0.0	0.0	0.0	0.0	0.0	100.9	495.0
26-Sep	0.0	0.0	0.0	0.0	0.0	0.0	7.8	88.8	224.8	319.6	519.1	572.7	577.7	552.0	365.2	58.4	66.9	45.0	1.8	0.0	0.0	0.0	0.0	0.0	141.7	577.7
27-Sep	0.0	0.0	0.0	0.0	0.0	0.0	9.2	120.7	221.9	370.2	531.2	595.1	541.8	560.4	466.8	190.7	160.2	41.5	1.4	0.0	0.0	0.0	0.0	0.0	158.8	595.1
28-Sep	0.0	0.0	0.0	0.0	0.0	0.0	8.6	114.8	211.4	366.2	522.6	584.2	596.6	472.6	443.6	209.4	88.8	20.9	0.7	0.0	0.0	0.0	0.0	0.0	151.7	596.6
29-Sep	0.0	0.0	0.0	0.0	0.0	0.0	4.4	60.6	191.9	261.6	291.0	347.2	460.7	463.7	255.0	235.0	132.4	37.5	0.9	0.0	0.0	0.0	0.0	0.0	114.2	463.7
30-Sep	0.0	0.0	0.0	0.0	0.0	0.0	2.7	44.6	113.3	170.5	346.5	384.9	299.8	228.6	123.3	98.6	111.7	36.8	0.5	0.0	0.0	0.0	0.0	0.0	81.7	384.9
	0.0	0.0	0.0	0.0	0.0	1.3	29.4	123.8	219.7	304.9	474.8	539.3	555.2	527.8	434.4	345.5	211.6	105.1	20.3	0.6	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	7.5	81.0	218.8	324.5	425.4	645.6	671.8	729.1	692.0	622.8	578.0	432.9	271.5	67.9	3.1	0.0	0.0	0.0	0.0	Diurnal Maximum	

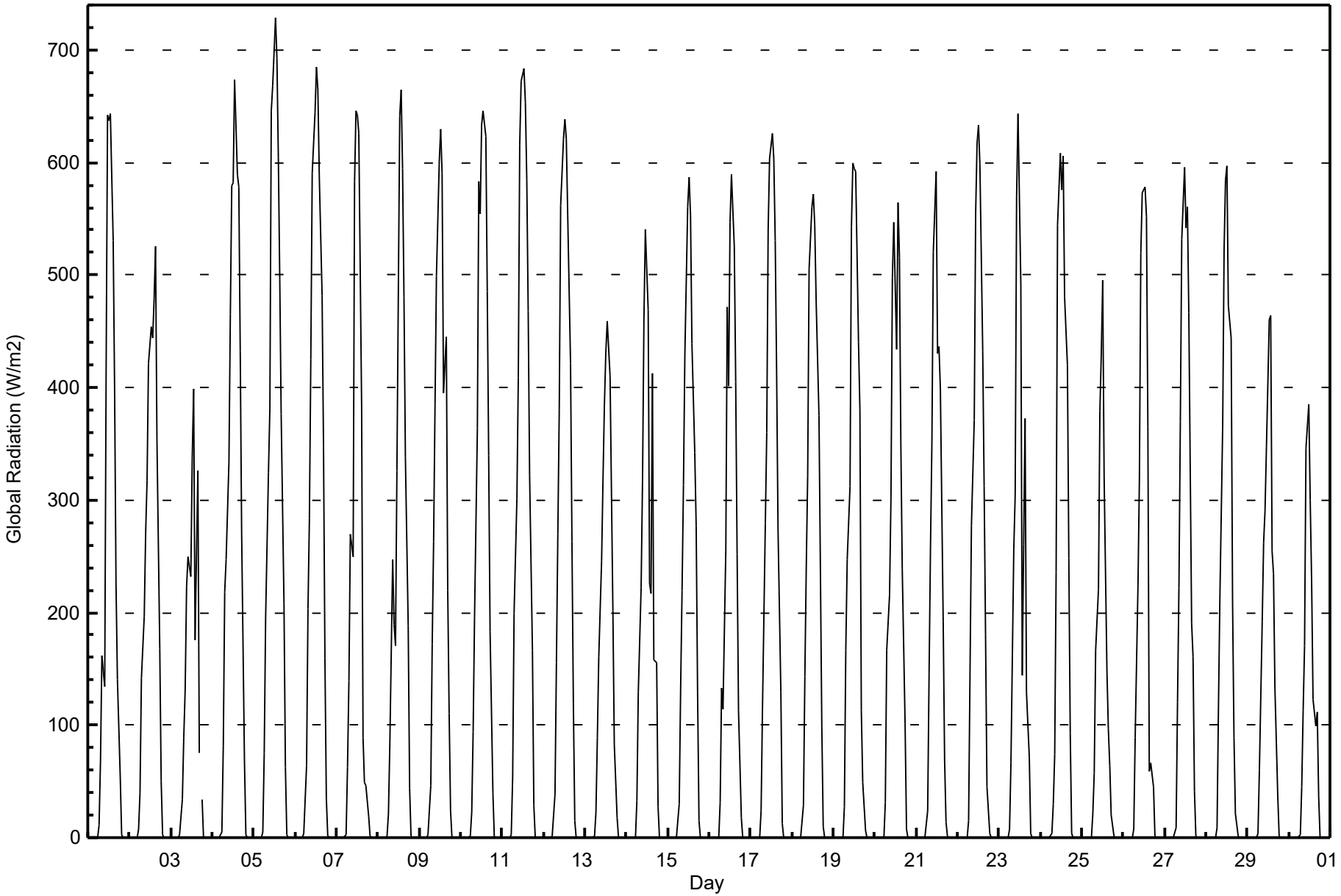
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Ells River - September 2025

Maximum Speed: 29 km/h on Sep 3 17:00

Maximum Daily Speed Average: 11.8 km/h on Sep 22

Minimum Speed Value: 0 km/h on Sep 9 08:00

Minimum Daily Speed Average: 1.6 km/h on Sep 8

Maximum Diurnal Speed Average: 5.0 km/h at hour 6

Minimum Diurnal Speed Average: 2.0 km/h at hour 19

Monthly Average Velocity: 3.9 km/h 200.3 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 5 Median = 8 Q_3 = 12 P_{90} = 15 P_{99} = 22

Hours in Service:	720
Hours of Data:	704
Hours of Missing Data:	16
Percent Operational Time:	98.1

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	W3	SW1	S3	SW2	SSW2	S3	S5	S5	WSW3	WNW4	NNW5	N16	NNE15	NNE18	N22	N23	N20	NNE18	NNE10	N6	WNW4	WNW5	W7	W6	N5.7	N23
2-Sep	W4	SSW3	W3	WSW2	S2	UO	S2	SW2	S2	SSE2	SE5	SSE6	SSE9	SSE11	SE12	SE15	SE15	SE12	SE7	SE5	SE8	SE7	SSE13	SSE12	SSE6.0	SE15
3-Sep	S10	S7	S7	S7	S7	S6	S7	S10	S11	S12	S10	S10	SW6	WNW5	N10	N17	N29	DF	N16	NNW17	NNW16	NW18	NW20	NW16	NW2.8	N29
4-Sep	NW14	NW18	NW17	NW17	NW15	NW12	NW12	NW13	NNW16	NNW20	C	C	NW18	NW18	NNW16	NW15	NNW11	NNE13	NE10	NNE4	W1	WSW3	UO	WSW2	NNW11.6	NNW20
5-Sep	SSW2	SW3	S2	S6	S4	SSE7	S6	S5	SSE9	S8	S4	SE7	SE8	SSE5	SSE5	SE4	SE9	ESE8	ESE6	SE6	SSE4	WNW3	W2	WNW2	SSE4.1	SE9
6-Sep	WNW1	W3	SSW1	S5	S6	S2	SSW1	SSE4	SSE8	SSE7	SSE6	SE6	SSE10	SE13	SSE13	SSE12	SSE10	SE9	UO	UO	WSW2	SSW2	SSW2	S5	SSE5.3	SE13
7-Sep	S8	S7	S7	S9	SSE6	SSW2	S5	WSW3	E1	SW2	NNW3	N5	NNE4	NE9	NNE19	NNE19	NNE13	NNW10	NNW7	N12	N13	NNW5	WNW2	NNW4	N3.1	NNE19
8-Sep	N6	NNW6	N4	WNW5	WSW2	W3	W5	WNW6	N6	NE8	ENE2	NNE3	SW3	SSW3	W4	W3	S3	SSW5	SW3	SW1	UO	WSW2	W2	SW2	WNW1.6	NE8
9-Sep	S3	W1	W1	WNW2	UO	UO	UO	ESE0	NNW1	SSE4	N2	SE7	SSE12	SSE12	SSE11	SE13	SE13	SSW6	SSW7	SSW9	SSW8	SSW8	SW6	SSE6	S5.0	SE13
10-Sep	S6	S5	SW3	W8	W5	SW2	WSW6	W8	W6	W7	W8	WNW10	WNW9	WSW7	W13	WNW16	WNW14	NW10	NW7	WNW6	W4	WSW3	S4	WSW2	W5.9	WNW16
11-Sep	W2	W3	WSW3	SSW3	SW2	S5	SSW3	SSE5	SSE6	NNE0	SE3	SE10	SE10	SSE11	SE14	SE17	SE16	SSE12	SSE7	SSE8	SSE10	SSE11	SSE12	S9	SSE6.8	SE17
12-Sep	S7	SSW5	WSW4	S1	S7	S6	SSW2	SSW6	S9	S11	S13	S15	S12	S15	SSW15	SSW15	SSW12	SW6	WSW4	S7	WSW3	WSW7	WSW8	S6	SSW7.8	S15
13-Sep	SSW9	SSW7	S6	SSE8	S8	S6	S4	SSW3	S5	SSW5	WNW6	NW4	WNW3	NNW4	N4	N5	N7	N4	NW3	NW3	WNW5	N4	NW4	W3	WSW1.8	SSW9
14-Sep	WSW1	SW2	UO	UO	S3	S2	SSW3	SW0	SE5	SSE8	S8	SE6	ESE6	SE12	SE16	SE19	SSE16	SSE17	SSE13	SSE9	S6	S6	S5	S7	SSE7.3	SE19
15-Sep	S9	SSW7	SSW8	S9	S8	SSW8	SSW7	SW4	WSW3	SW4	SSW4	SW4	WNW9	NW16	WNW20	WNW20	WNW23	WNW16	W12	WNW12	W8	WNW7	WNW10	WNW14	W7.2	WNW23
16-Sep	WNW8	W6	W6	W8	W6	WSW7	WSW5	WSW4	WSW6	W6	N4	NNE4	ENE2	ESE6	SE9	SE11	SSE11	SE9	SE6	SSE6	SSE5	S4	SE2	SE1	SSW2.0	SE11
17-Sep	E2	WNW3	W2	UO	UO	WSW2	UO	SW1	E1	SE8	SSE11	SSE15	SE15	SE17	SE20	SE21	SE22	SSE19	SSE11	SSE11	SSE16	SSE14	SSE14	SSE13	SSE10.5	SE22
18-Sep	SSE10	S4	W3	WNW1	W2	SSW1	S6	SSE15	SSE15	S18	SSW14	SSW13	SW12	SSW14	SSW14	SSW13	SW12	SSW8	S8	SSW9	SSW8	SSW8	SW9	SSW8	SSW8.7	S18
19-Sep	SSW8	SW10	SW8	SSW8	SSW8	SSW8	S9	SSW9	SSW8	S10	SSW10	SSW13	SW14	SSW14	SW11	SW10	SW7	SSW5	S6	S7	SSW7	SSW7	SW6	SW3	SSW8.3	SW14
20-Sep	SSE5	S3	S1	S7	SSW5	SSW4	S8	S8	SSE5	S6	S8	SE8	SE10	S15	S19	S18	S17	S13	SSE11	SSE11	SSE11	SSE10	S9	S7	S8.8	S19
21-Sep	SSW3	SSW4	SW7	S10	SSW10	SSW12	SW6	SW9	SW8	WNW4	N2	NNE2	S2	SSW5	WSW8	WSW10	WSW10	W10	W13	WSW7	S6	S9	SSW8	SSW10	SW6.2	W13
22-Sep	SSW11	SW11	SW12	SW12	SW11	SW9	SW10	SW11	SW13	SW13	SSW14	SSW15	SSW16	SW17	SSW15	SSW16	SSW13	S9	S10	SSE13	S14	SSE13	SSE12	S12	SSW11.8	SW17
23-Sep	S13	SSW10	S11	S13	S11	S10	S10	SW8	WSW14	SW15	WSW17	WSW18	SW20	SW16	SW16	SSW20	SSW17	SSW14	SSW9	SSW8	SSW10	S9	S6	S8	SSW11.6	SW20
24-Sep	SSE10	S9	S8	SSE7	S6	S8	SSW7	SSW9	SW10	SW9	W8	SSW5	W6	NW17	WNW17	WNW17	WNW17	WNW12	WNW6	W5	WSW5	SW4	SW5	SW8	WSW5.8	WNW17
25-Sep	SSW5	S6	SSE7	S9	S7	S7	S9	S9	SSE8	SSE7	SSE8	SSE9	SE11	SE12	SE7	SE5	SW1	SW2	SSE5	S8	SW3	SW12	WSW8	SSW6	S6.1	SW12
26-Sep	SW8	SSW8	SSW7	SSW8	SSW6	S6	S7	SSW6	SW8	WSW8	WSW8	SW9	WSW11	W14	W13	WSW7	SW9	SSW8	SSW9	SSW9	SSW10	SSW8	SSW8	SSE5	SW7.2	W14
27-Sep	SSW3	S7	SSE8	S9	SSW12	SW13	SW11	SW13	WSW14	WSW15	WSW14	WSW14	WSW14	SW13	SW16	SW13	SW13	SW10	SW7	SW7	SW6	SW6	SSW5	SSW8	SW9.8	SW16
28-Sep	SW10	SW10	SW11	SW9	SW9	SW11	SW10	SW9	WSW9	WSW6	WSW5	NNE5	SW4	SSW13	SSW12	SSW9	S9	S5	SSE6	SE5	SE7	SE7	SE8	SE8	SSW6.2	SSW13
29-Sep	SE7	SE9	SE8	SE7	SE11	SE15	SE17	SE14	SE16	SE23	SE22	SSE19	SE22	SSE22	SSE18	S14	S10	SSE6	SSE5	NW1	WNW1	NW2	W4	W3	SSE10.4	SE23
30-Sep	W3	WSW2	WNW8	WNW5	WNW0	W6	NNW2	WNW4	NNE6	NE7	N8	N15	NNE14	NE14	NNE14	NNE12	NNE13	NNE14	N12	N18	N14	NNE7	N9	N8	N7.5	N18
	SSW4.2	SSW4.1	SSW3.8	SSW4.6	SSW4.7	SSW5.0	SSW5.0	SSW4.8	SSW4.4	SSW4.8	SSW4.4	S3.6	S4.0	SSW4.6	SSW3.8	SSW3.4	SSW3.0	S2.9	S2.0	SSW2.5	SSW3.1	SSW3.5	SSW3.7	SSW3.7	Diurnal Average	
	NW14	NW18	NW17	NW17	NW15	SE15	SE17	SSE15	NNW16	SE23	SE22	SSE19	SE22	SSE22	N22	N23	N29	SSE19	N16	N18	SSE16	NW18	NW20	NW16	Diurnal Maximum	

C - Calibration DF - DAS Failure UO - Unstable Operation

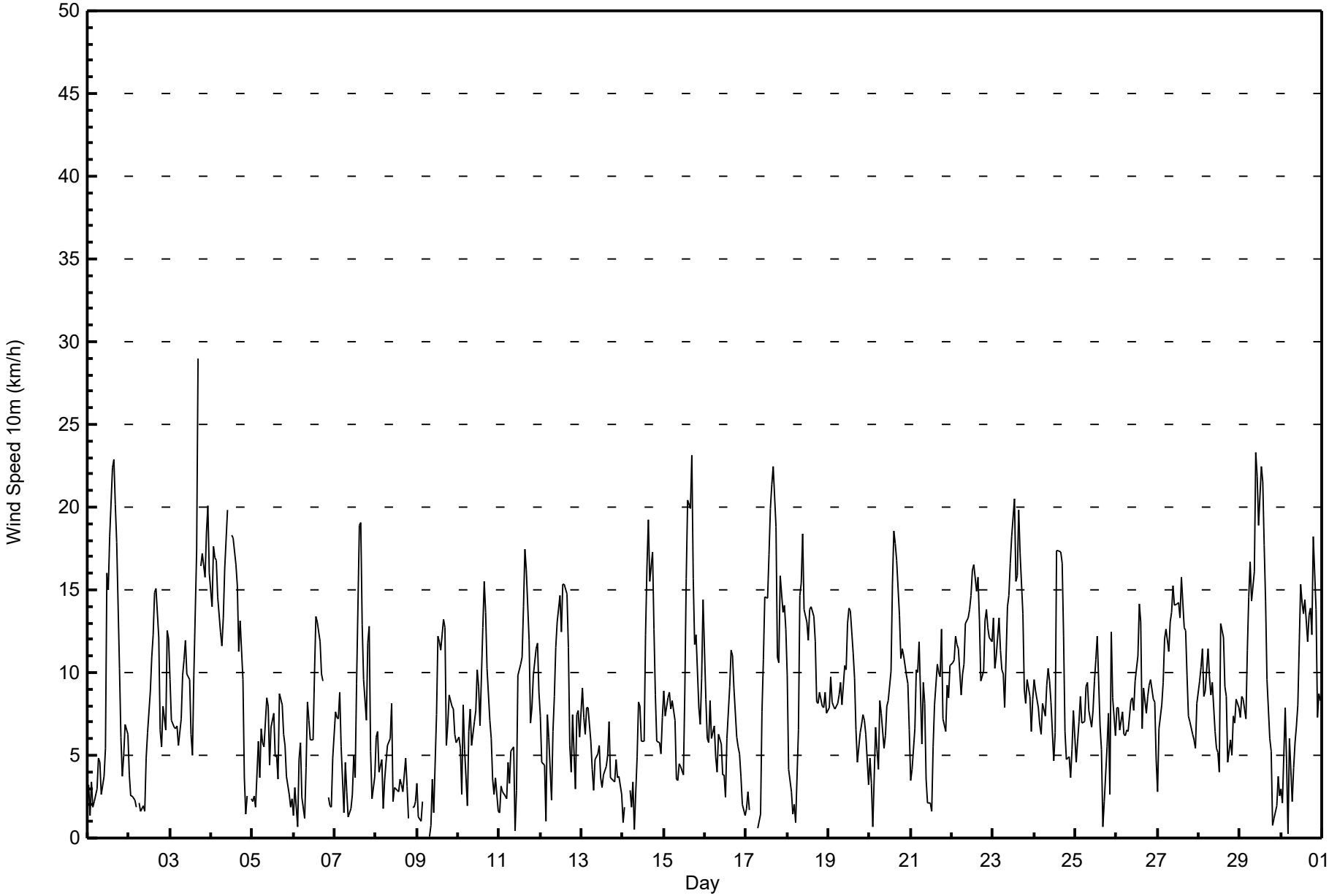
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Ells River - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	209	29.69	29.69
6 - 11	314	44.60	74.29
12 - 19	163	23.15	97.44
20 - 28	17	2.41	99.86
29 - 38	1	0.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Ells River - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	9	7	0	2	3	1	9	14	31	29	25	22	25	19	6	7	209
6 - 11	8	3	4	0	0	4	31	42	80	50	40	18	17	11	2	4	314
12 - 19	9	12	1	0	0	0	20	24	16	22	18	8	5	9	14	5	163
20 - 28	3	0	0	0	0	0	6	1	0	1	1	0	0	3	1	1	17
29 - 38	1	0	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	30	22	5	2	3	5	66	81	127	102	84	48	47	42	23	17	704

Total Number of Valid Hours: 704

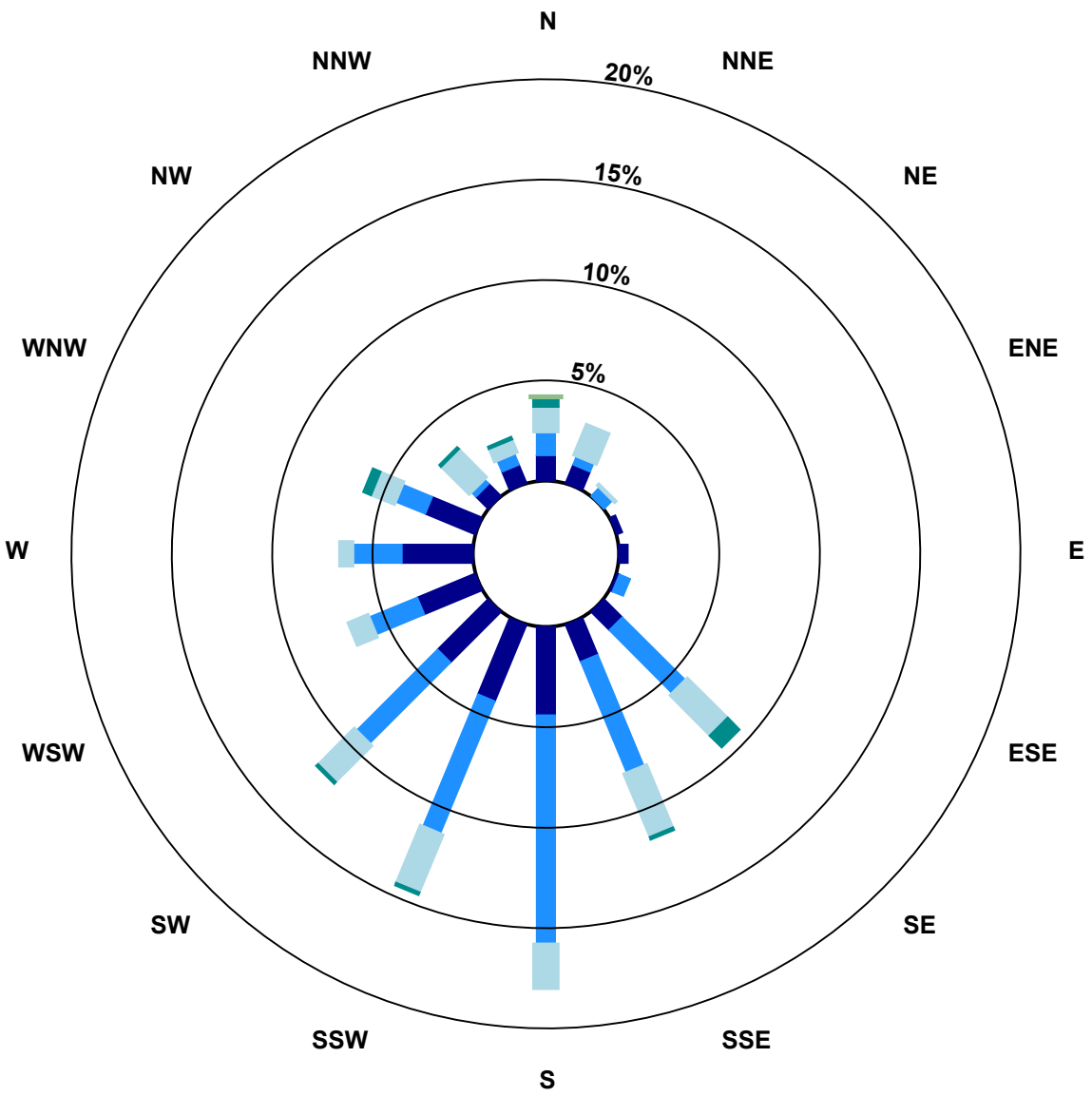
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Ells River



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 3 17:00

Minimum Value: 0 km/h on Sep 8 22:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 1 Median = 2 Q_3 = 3 P_{90} = 4 P_{99} = 6

Hours in Service:	720
Hours of Data:	704
Hours of Missing Data:	16
Hours of Calibration:	2
Percent Operational Time:	98.1

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-Sep	2	2	2	1	1	4	3	1	1	1	3	3	3	3	3	3	3	3	1	3	1	1	2	2	4
2-Sep	2	2	2	2	1	UO	2	1	1	1	2	2	3	3	3	3	3	4	1	1	1	2	5	4	5
3-Sep	2	2	1	1	1	1	1	2	2	3	3	2	2	2	4	6	7	DF	3	4	4	6	4	3	7
4-Sep	2	4	3	3	3	2	2	2	4	4	C	C	5	4	4	4	3	3	2	2	1	1	UO	2	5
5-Sep	2	2	2	2	2	1	1	1	2	2	2	3	3	3	3	3	3	2	1	1	1	1	1	1	3
6-Sep	1	2	1	1	1	1	1	3	1	2	3	3	3	3	3	3	2	2	UO	UO	1	2	2	2	3
7-Sep	1	2	1	1	1	1	3	1	1	1	1	3	3	4	3	5	2	2	2	4	2	1	1	2	5
8-Sep	1	1	1	2	1	2	3	1	2	2	2	2	2	2	2	2	1	1	1	1	UO	0	2	1	3
9-Sep	1	2	1	1	UO	UO	UO	1	1	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	3
10-Sep	1	2	2	3	3	1	2	2	2	2	3	3	3	4	5	4	4	3	1	1	2	1	1	1	5
11-Sep	1	1	2	1	1	2	1	2	2	1	3	3	3	3	4	4	4	3	1	1	1	2	2	2	4
12-Sep	1	1	2	1	2	2	1	2	2	3	3	3	3	4	4	4	3	2	1	1	1	2	2	2	4
13-Sep	2	2	1	2	2	3	2	1	1	2	2	2	1	1	1	1	1	2	1	1	2	2	1	1	3
14-Sep	2	1	UO	UO	2	2	3	1	1	2	3	3	5	3	6	4	3	3	4	2	1	1	1	1	6
15-Sep	1	1	1	1	1	2	2	2	2	2	2	2	6	3	5	4	5	4	4	3	3	2	3	3	6
16-Sep	2	1	1	2	2	1	2	1	2	2	1	3	2	3	3	3	2	2	1	1	1	1	2	1	3
17-Sep	1	1	1	UO	UO	1	UO	1	1	2	4	3	3	3	4	4	4	4	2	2	2	2	2	2	4
18-Sep	3	2	1	1	3	1	4	3	3	4	4	4	3	4	5	4	4	2	1	2	1	2	2	2	5
19-Sep	2	2	2	2	1	2	1	2	2	2	3	4	4	5	4	3	2	1	1	1	1	1	1	1	5
20-Sep	1	1	1	2	3	2	1	1	2	2	3	2	2	5	5	4	4	4	2	1	1	1	1	1	5
21-Sep	2	2	3	2	2	2	3	3	4	2	1	2	2	3	3	3	3	3	4	2	1	2	2	3	4
22-Sep	2	3	3	3	3	3	3	4	4	4	4	5	5	5	5	4	4	2	2	2	3	3	2	3	5
23-Sep	3	2	2	2	2	1	2	3	6	5	5	6	6	5	6	5	5	4	2	2	2	2	1	2	6
24-Sep	2	2	1	1	2	2	2	3	3	3	3	3	6	5	4	4	4	3	1	2	1	2	2	3	6
25-Sep	1	2	2	1	1	1	1	1	2	2	3	2	3	2	2	2	2	1	3	2	3	4	3	2	4
26-Sep	2	2	2	2	2	1	1	2	2	3	2	4	4	4	4	2	3	2	1	2	2	2	2	1	4
27-Sep	2	2	3	2	3	4	4	4	5	6	5	5	5	5	6	4	4	3	2	2	1	2	1	2	6
28-Sep	2	3	3	3	3	3	3	3	3	2	2	3	3	4	4	3	3	1	1	1	1	1	2	1	4
29-Sep	1	1	2	1	2	3	3	3	5	5	5	5	5	5	5	4	2	1	1	1	2	2	2	2	5
30-Sep	2	2	2	3	4	3	2	2	2	1	5	2	2	2	2	2	2	2	2	3	2	3	1	2	5
	3	4	3	3	4	4	4	4	6	6	5	6	6	5	6	6	7	4	4	4	4	6	5	4	
	Diurnal Maximum																								

C - Calibration DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Ells River - September 2025

Direction of Maximum Speed: 357 deg on Sep 3 17:00
Direction of Maximum Daily Speed Average: 201.3 deg on Sep 22

Direction of Minimum Speed: 112 deg on Sep 9 08:00
Direction of Minimum Daily Speed Average: 1.6 deg on Sep 8

Monthly Average Direction: 200.3 deg

Hours in Service:	720
Hours of Data:	704
Hours of Missing Data:	16
Percent Operational Time:	98.1

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	Average
1-Sep	259	220	185	218	203	187	173	170	243	293	345	8	24	13	10	8	8	12	16	360	295	303	279	276	358.2
2-Sep	272	198	259	248	186	UO	181	221	187	166	136	150	157	162	138	130	136	137	132	146	144	146	152	160	150.8
3-Sep	169	183	179	172	173	178	181	174	171	174	182	171	235	287	2	6	357	DF	357	333	333	325	325	312	309.0
4-Sep	309	324	322	323	316	311	311	317	333	328	C	C	326	318	338	315	333	31	36	12	280	246	UO	240	326.5
5-Sep	197	223	187	188	170	168	178	172	164	172	179	128	135	168	156	143	125	119	117	134	148	294	265	300	157.2
6-Sep	295	265	199	175	184	179	204	160	164	161	156	139	152	146	159	155	152	140	UO	UO	253	203	213	181	162.1
7-Sep	186	190	182	181	163	200	184	249	82	235	333	356	14	35	16	14	17	346	348	4	8	343	291	344	6.1
8-Sep	7	340	353	294	244	260	277	289	355	53	73	20	226	195	276	273	172	210	217	215	UO	249	277	230	298.3
9-Sep	179	278	277	283	UO	UO	UO	112	330	163	11	136	147	155	153	137	144	197	203	212	209	198	216	162	170.1
10-Sep	184	184	216	269	279	230	257	259	259	264	280	300	290	244	278	295	293	311	314	287	280	248	183	245	274.2
11-Sep	278	274	248	192	216	184	192	161	158	20	146	141	141	153	143	131	142	147	148	147	164	159	162	178	154.9
12-Sep	182	199	255	177	182	185	211	192	175	179	184	183	176	185	197	200	192	217	238	185	238	237	239	189	194.3
13-Sep	199	209	188	167	184	188	187	196	180	204	285	312	295	328	351	355	11	8	304	306	299	351	308	271	244.4
14-Sep	241	236	UO	UO	177	186	199	232	137	158	173	141	109	129	136	145	155	154	151	167	175	173	177	170	154.2
15-Sep	187	198	194	184	172	193	200	216	256	223	204	236	286	310	300	294	298	293	275	292	280	292	290	292	269.3
16-Sep	288	265	279	274	279	246	256	248	254	280	9	15	63	115	142	133	147	138	137	147	160	173	142	126	195.9
17-Sep	83	290	264	UO	UO	243	UO	235	91	140	160	150	143	138	138	136	141	148	147	151	152	151	153	158	146.5
18-Sep	165	186	280	294	279	213	176	163	163	182	204	206	216	196	206	201	216	193	190	200	206	207	219	213	196.3
19-Sep	211	222	223	205	197	196	190	202	193	182	205	213	220	213	233	226	215	196	179	184	193	197	214	227	206.8
20-Sep	154	188	174	172	194	195	176	175	167	183	169	128	132	188	188	175	172	180	160	159	162	160	172	178	171.0
21-Sep	210	194	216	185	198	204	220	224	232	288	2	15	180	203	237	253	256	264	266	242	189	189	198	213	223.7
22-Sep	208	218	214	219	227	217	215	222	219	218	212	205	203	220	210	192	202	181	171	164	175	166	168	176	201.3
23-Sep	184	195	188	172	177	172	181	216	251	234	242	239	224	227	219	207	203	199	197	204	195	186	186	176	207.1
24-Sep	166	183	170	168	170	176	200	197	216	227	273	213	260	304	296	295	293	302	289	265	245	217	219	230	245.8
25-Sep	212	172	164	173	177	184	173	173	163	168	154	159	139	136	146	129	223	222	152	182	235	224	251	210	173.8
26-Sep	216	206	202	210	192	179	180	213	217	241	247	236	241	279	281	258	218	212	205	200	200	205	199	165	221.1
27-Sep	201	175	153	178	205	222	224	227	244	248	242	250	241	229	224	222	221	214	230	216	215	233	200	201	222.5
28-Sep	220	223	225	236	236	225	223	231	251	247	254	32	224	197	212	206	188	169	166	144	140	137	132	132	206.1
29-Sep	145	137	136	133	131	132	130	128	140	143	144	148	145	165	167	169	174	168	160	321	293	304	276	279	148.1
30-Sep	273	247	289	296	303	265	339	296	23	42	11	9	20	39	32	33	32	18	5	351	358	14	8	352	7.0
	202.5	212.7	212.8	204.1	198.9	200.4	198.7	204.4	203.4	201.1	202.4	184.5	190.3	196.0	205.5	192.2	192.5	181.2	190.4	204.0	199.4	203.6	208.2	205.8	
	Diurnal Average																								

C - Calibration DF - DAS Failure UO - Unstable Operation

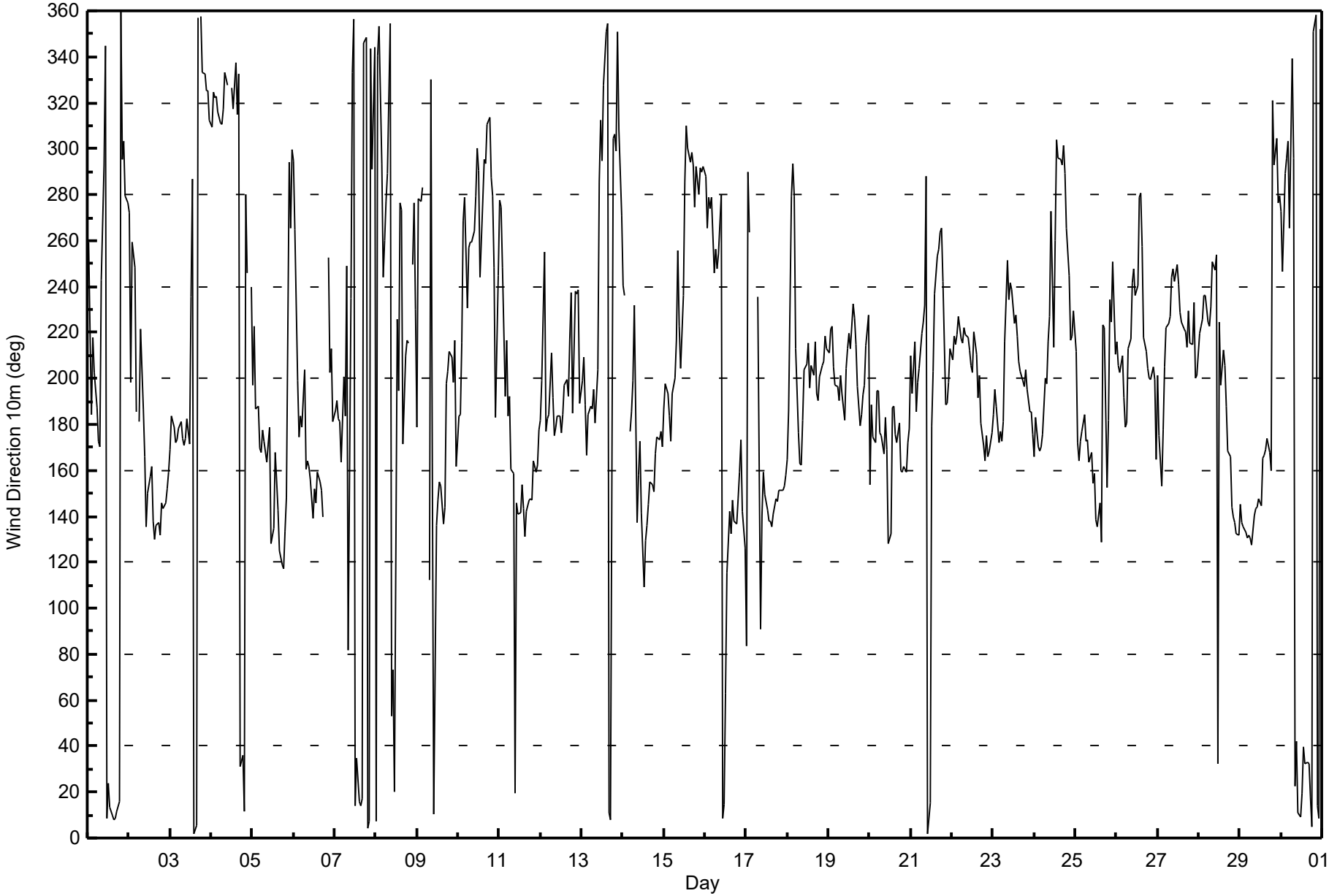
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Ells River - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Ells River - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 103 deg on Sep 30 05:00

Minimum Value: 4 deg on Sep 16 20:00

Percentiles: P_1 = 6 P_{10} = 10 Q_1 = 13 Median = 20 Q_3 = 31 P_{90} = 56 P_{99} = 89

Hours in Service:	720
Hours of Data:	704
Hours of Missing Data:	16
Hours of Calibration:	2
Percent Operational Time:	98.1

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-Sep	30	65	60	55	49	73	40	23	46	32	29	17	20	16	12	13	13	11	10	22	14	25	10	15	73
2-Sep	28	56	55	45	41	UO	61	54	53	65	26	36	27	24	20	12	13	11	11	7	9	7	8	14	65
3-Sep	12	13	6	10	12	11	8	13	13	14	18	17	36	42	22	15	18	DF	15	15	11	12	11	9	42
4-Sep	9	10	10	10	11	9	9	12	15	15	C	C	20	19	18	23	31	18	12	50	44	22	UO	47	50
5-Sep	47	39	89	17	16	18	11	15	13	31	56	32	40	69	76	83	22	14	9	7	52	23	39	33	89
6-Sep	74	54	78	15	9	42	63	24	13	28	36	39	25	17	22	22	19	7	UO	UO	24	62	48	34	78
7-Sep	7	15	13	9	16	89	59	40	86	76	33	40	74	32	14	11	16	20	25	23	14	15	30	31	89
8-Sep	21	11	32	25	38	32	36	13	40	24	70	60	89	84	64	72	59	22	29	60	UO	38	51	61	89
9-Sep	25	95	73	45	UO	UO	UO	82	84	73	81	27	19	17	19	9	10	32	21	16	16	16	19	31	95
10-Sep	16	24	73	14	31	44	21	17	26	23	23	25	27	57	37	16	16	14	10	22	55	64	29	55	73
11-Sep	62	43	55	32	36	34	24	24	39	95	86	18	23	23	22	12	12	9	5	5	8	10	12	18	95
12-Sep	7	23	44	82	30	18	48	13	18	18	20	18	25	22	25	19	16	26	32	11	40	12	16	23	82
13-Sep	10	17	12	12	13	24	41	39	15	33	38	45	60	32	24	14	11	30	17	12	19	44	25	29	60
14-Sep	65	37	UO	UO	31	86	34	86	23	14	29	40	71	12	11	11	11	10	11	12	13	26	21	8	86
15-Sep	7	13	15	14	14	11	24	46	39	35	51	71	52	17	16	19	14	16	22	15	17	16	20	12	71
16-Sep	16	16	14	14	19	13	46	28	22	49	30	59	77	42	34	14	15	9	6	4	11	18	57	67	77
17-Sep	60	26	48	UO	UO	48	UO	59	70	18	27	14	15	15	12	8	9	9	7	8	9	9	8	9	70
18-Sep	12	30	21	29	80	90	42	10	13	16	21	23	27	23	24	25	21	16	10	12	15	15	16	18	90
19-Sep	16	17	18	16	11	14	13	17	20	15	26	23	25	26	31	31	19	21	12	9	10	7	10	29	31
20-Sep	17	29	93	15	23	49	7	11	22	36	38	22	11	29	18	16	15	14	8	8	8	8	14	19	93
21-Sep	30	27	44	7	16	13	30	19	29	66	51	69	96	53	36	24	20	20	19	28	13	14	13	18	96
22-Sep	15	20	19	21	22	27	25	26	21	22	23	22	21	23	24	16	18	11	9	11	15	13	11	13	27
23-Sep	12	13	13	11	13	9	12	32	25	26	29	28	23	23	23	20	18	16	13	12	12	18	11	9	32
24-Sep	13	13	12	15	16	18	39	16	21	24	37	72	61	22	17	19	14	11	17	15	15	36	31	28	72
25-Sep	29	25	11	11	13	10	10	10	13	17	21	19	21	12	18	24	80	57	14	47	70	24	22	12	80
26-Sep	20	16	24	21	23	17	13	23	19	26	34	30	29	27	26	24	25	19	10	13	15	14	16	24	34
27-Sep	44	36	16	20	15	20	23	23	30	26	26	31	26	33	27	22	21	19	22	19	21	24	14	17	44
28-Sep	20	20	21	23	20	16	22	24	21	29	44	50	80	27	29	25	13	8	9	14	6	6	9	8	80
29-Sep	10	5	8	8	6	7	7	8	13	10	13	12	12	17	15	16	15	15	27	81	40	31	29	11	81
30-Sep	60	65	12	48	103	45	55	45	26	18	26	16	19	16	10	12	11	11	15	10	17	21	13	14	103
	74	95	93	82	103	90	63	86	86	95	86	72	96	84	76	83	80	57	32	81	70	64	57	67	
	Diurnal Maximum																								

C - Calibration DF - DAS Failure UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS31
BLACKROD
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
SEPTEMBER 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	686	34	34	100	4.7	0	1	0
H2S (ppb) Average	686	34	34	100	1	0	0.5	0
NO2 (ppb) Average	665	36	55	97.36	15.7	0	7.5	-
NO (ppb) Average	665	36	55	97.36	79.3	-	7.5	-
NOX (ppb) Average	665	36	55	97.36	93.5	-	14.2	-
Temperature 2 m (C) Average	720	0	0	100	27.1	-	21.7	-
Relative Humidity (%) Average	720	0	0	100	97.9	-	90.2	-
Wind Speed 10 m (km/h) Average	720	0	0	100	37	-	25	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.17	0.4	-	0	0	0	0.1	0.2	0.4	4.7
H2S (ppb) Average	686	0.16	0.1	-	0	0.1	0.1	0.1	0.2	0.3	1
NO2 (ppb) Average	665	3.01	2.9	-	0.3	0.8	1.1	1.8	4	7.1	15.7
NO (ppb) Average	665	2.89	5.6	-	0	0	0.1	0.6	3.6	9.1	79.3
NOX (ppb) Average	665	5.9	7.9	-	0.4	0.8	1.3	2.5	7.8	14.8	93.5
Temperature 2 m (C) Average	720	14.77	4.9	-	3.5	8.3	11.2	14.5	18.3	21.4	27.1
Relative Humidity (%) Average	720	62.11	19.3	-	22.8	37.4	45.1	61	78.3	89.2	97.9
Wind Speed 10 m (km/h) Average	720	10.9	6	-	0	3	6	10	15	19	37
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD 2/3 (AMS31)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2	08 Sep 2025 14:00	09 Sep 2025 08:00	19	Maintenance - stabilization post maintenance

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 4.7 ppb on Sep 30 21:00

Maximum Daily Average: 1.0 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 1 02:00

Minimum Daily Average: 0.0 ppb on Sep 17

Maximum Diurnal Average: 0.3 ppb at hour 11

Minimum Diurnal Average: 0.1 ppb at hour 2

Monthly Average: 0.17 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} = 1.5

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.5
2-Sep	0.1	0.2	0.3	0.2	Z	0.2	0.3	0.2	0.3	0.2	0.4	0.5	0.4	0.4	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.5
3-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.0	0.2	0.3	0.6	0.4	0.0	0.0	0.1	0.6
4-Sep	Z	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	0.0	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.4
5-Sep	0.2	Z	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.8	0.8	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.8
6-Sep	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.1	0.1	0.6	1.1	0.7	0.5	0.4	0.5	0.5	0.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.1
7-Sep	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.0	0.1	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.3
8-Sep	0.2	0.1	0.2	0.1	Z	0.2	0.1	0.4	0.5	0.4	0.3	0.6	C	C	C	C	0.2	0.1	0.0	0.0	0.1	0.1	0.3	0.3	0.2	0.6
9-Sep	0.3	0.2	0.2	0.3	0.2	Z	0.4	0.3	0.4	0.4	0.7	1.1	1.8	1.4	0.9	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8
10-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.0	0.1	0.2	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
11-Sep	0.0	Z	0.0	0.1	0.1	0.0	0.4	0.7	0.4	0.4	0.4	0.3	0.2	0.1	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.7
12-Sep	0.3	0.3	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.2	0.3	0.1	0.3
13-Sep	0.4	0.3	0.3	Z	0.2	0.2	0.3	0.2	0.2	0.3	0.5	0.7	0.5	0.8	1.3	1.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3
14-Sep	0.0	0.1	0.2	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2
15-Sep	0.0	0.1	0.2	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.4	0.1	0.4
16-Sep	Z	0.2	0.3	0.2	0.0	0.0	0.1	0.1	0.2	0.0	0.1	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	0.3
17-Sep	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
18-Sep	0.0	0.0	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	0.1
19-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.2
20-Sep	0.0	0.0	0.2	0.2	Z	0.4	0.3	0.5	0.5	2.3	2.3	0.9	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.2	0.4	2.3
21-Sep	0.2	0.2	0.2	0.0	0.1	Z	0.2	0.3	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4
22-Sep	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	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.3	0.3	0.1	0.4
23-Sep	0.3	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
24-Sep	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25-Sep	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.4
26-Sep	0.1	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
27-Sep	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
28-Sep	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
29-Sep	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.1	0.4
30-Sep	0.4	0.2	Z	0.2	0.4	0.1	0.1	0.2	0.1	0.4	0.3	0.4	0.5	0.6	0.6	0.6	1.1	2.2	2.6	4.0	4.7	1.2	0.5	0.4	1.0	4.7
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.1	0.1	0.1	Diurnal Average	
	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.7	0.5	2.3	2.3	1.1	1.8	1.4	1.3	1.0	1.1	2.2	2.6	4.0	4.7	1.2	0.5	0.4	Diurnal Maximum	

Z - zerospan C - Calibration

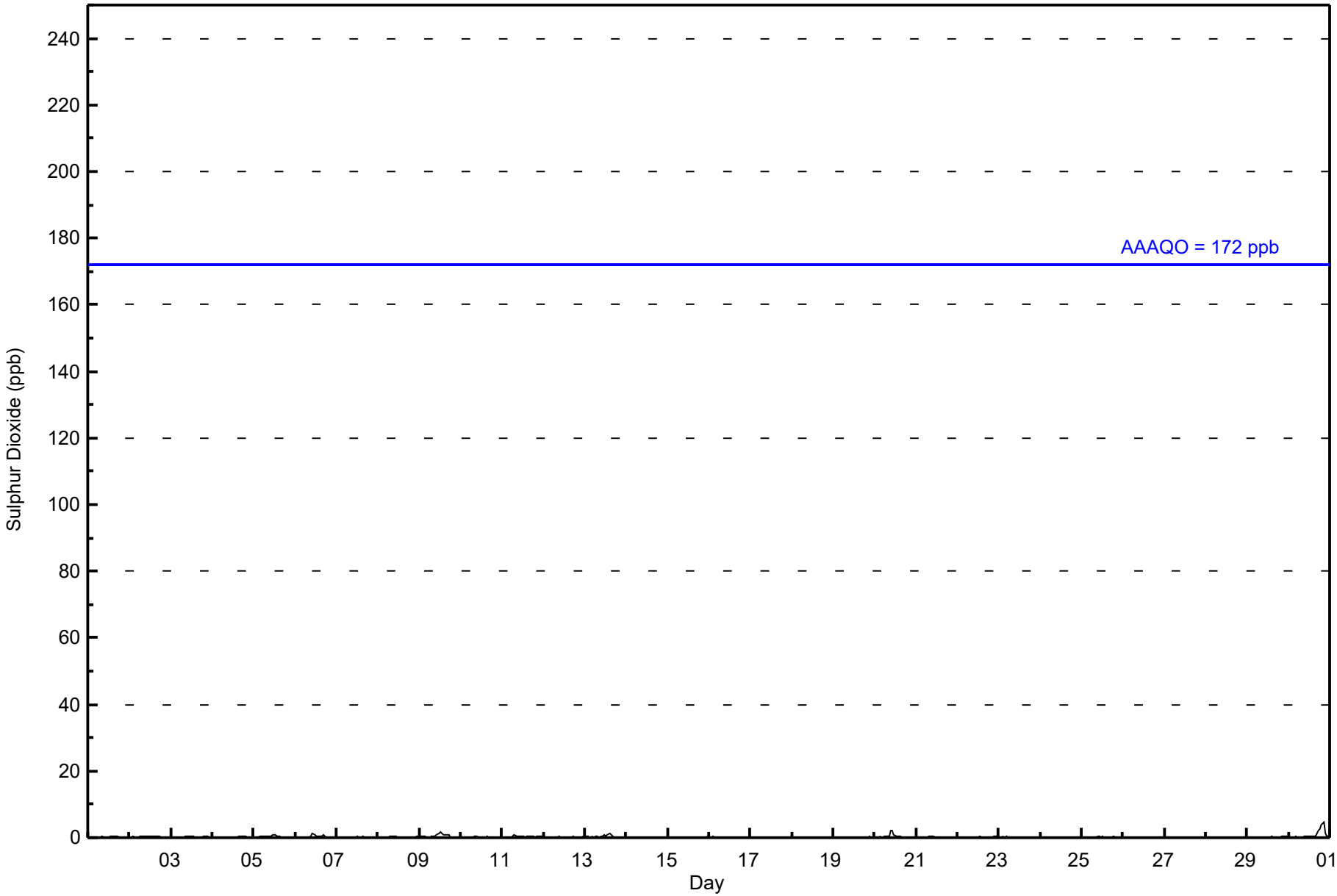
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - September 2025



Sulphur Dioxide (SO_2) - ppb
Blackrod - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	36	21	15	7	9	22	40	182	177	48	31	14	18	24	20	22	686
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	36	21	15	7	9	22	40	182	177	48	31	14	18	24	20	22	686

Total Number of Valid Hours: 686

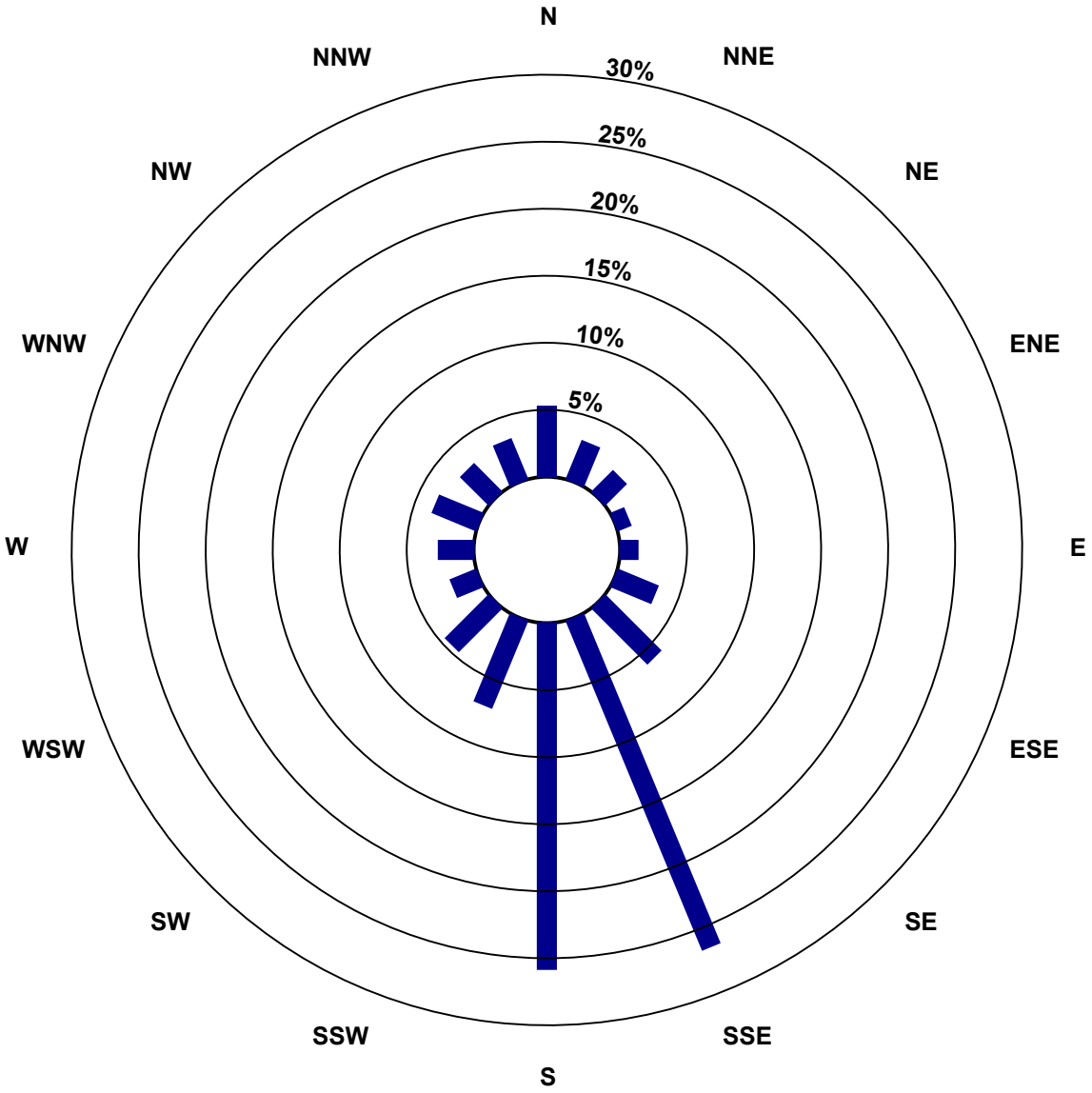
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Blackrod



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

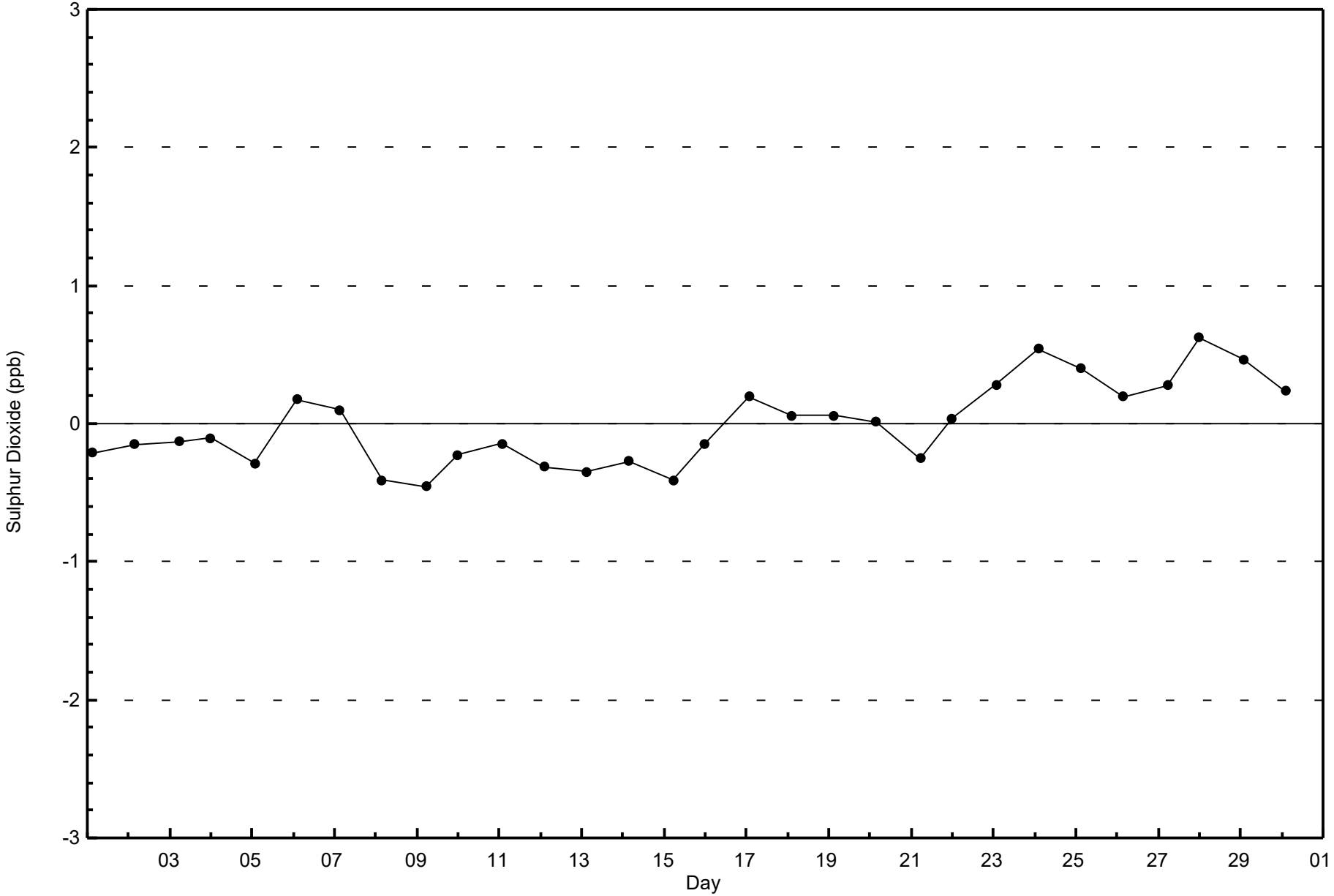
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - September 2025

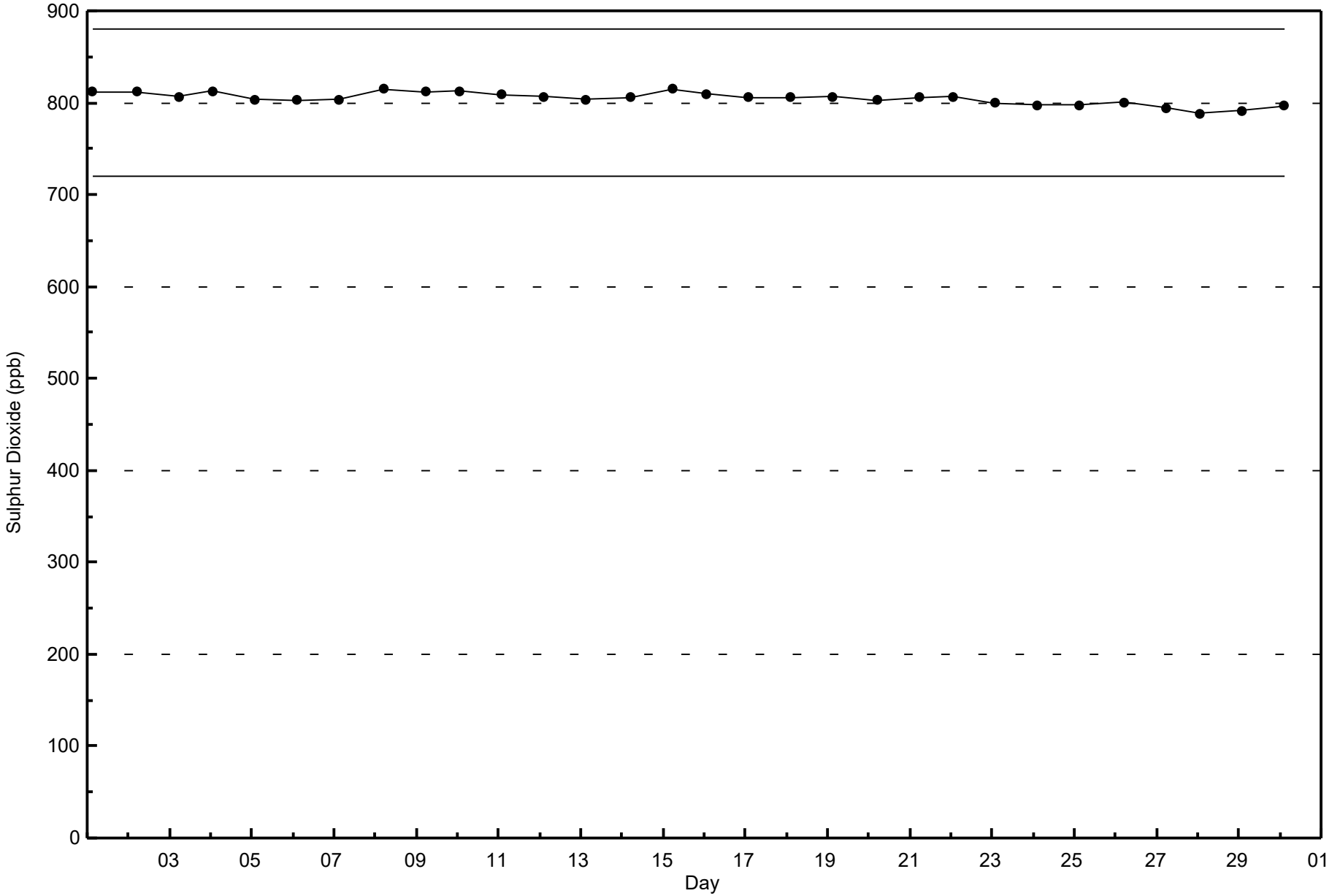


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 1.0 ppb on Sep 11 08:00 Maximum Daily Average: 0.5 ppb on Sep 30

Minimum Value: 0.0 ppb on Sep 14 17:00 Minimum Daily Average: 0.1 ppb on Sep 19

Maximum Diurnal Average: 0.2 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 23

Monthly Average: 0.16 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} = 0.7

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	0.7	0.1	0.1	Z	0.8	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.8
2-Sep	0.3	0.2	0.3	0.2	0.2	Z	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	0.3
3-Sep	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.4	0.3	0.5
4-Sep	0.6	Z	0.7	0.6	0.5	0.5	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	0.1	0.1	0.1	0.1	0.3	0.7
5-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
6-Sep	0.1	0.1	0.1	Z	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	0.2	0.1	0.1	0.1	0.1	0.1	0.2
7-Sep	0.1	0.1	0.1	0.1	Z	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	0.1	0.1	0.0	0.0	0.1	0.1	0.3
8-Sep	0.1	0.1	0.2	0.0	0.1	Z	0.7	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	0.2	0.7
9-Sep	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.3
10-Sep	0.0	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
11-Sep	0.0	0.0	Z	0.3	0.2	0.1	0.4	1.0	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.0
12-Sep	0.1	0.1	0.1	Z	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	0.3
13-Sep	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	0.1	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-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3
15-Sep	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	0.2	0.2	0.2	0.1	0.2	0.1	0.2
16-Sep	0.2	Z	0.4	0.3	0.3	0.2	0.2	0.3	0.6	0.5	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	0.6
17-Sep	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
18-Sep	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
19-Sep	0.1	0.0	0.0	0.0	Z	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	0.1	0.1
20-Sep	0.1	0.1	0.2	0.2	0.3	Z	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.4
21-Sep	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	0.0	0.0	0.1	0.2
22-Sep	0.0	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
23-Sep	0.2	0.2	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
24-Sep	0.0	0.0	0.0	Z	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	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
25-Sep	0.1	0.0	0.0	0.0	Z	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	0.2
26-Sep	0.0	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2
27-Sep	Z	0.1	0.1	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Sep	0.0	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	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2
29-Sep	0.1	0.1	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
30-Sep	0.1	0.1	0.2	Z	0.4	0.5	0.7	0.7	0.7	0.9	0.8	0.9	0.8	0.7	0.5	0.4	0.5	0.5	0.4	0.5	0.3	0.3	0.2	0.3	0.5	0.9
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.6	0.7	0.7	0.6	0.5	0.8	0.7	1.0	0.7	0.9	0.8	0.9	0.8	0.7	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.4	Diurnal Maximum	

Z - zerospan C - Calibration

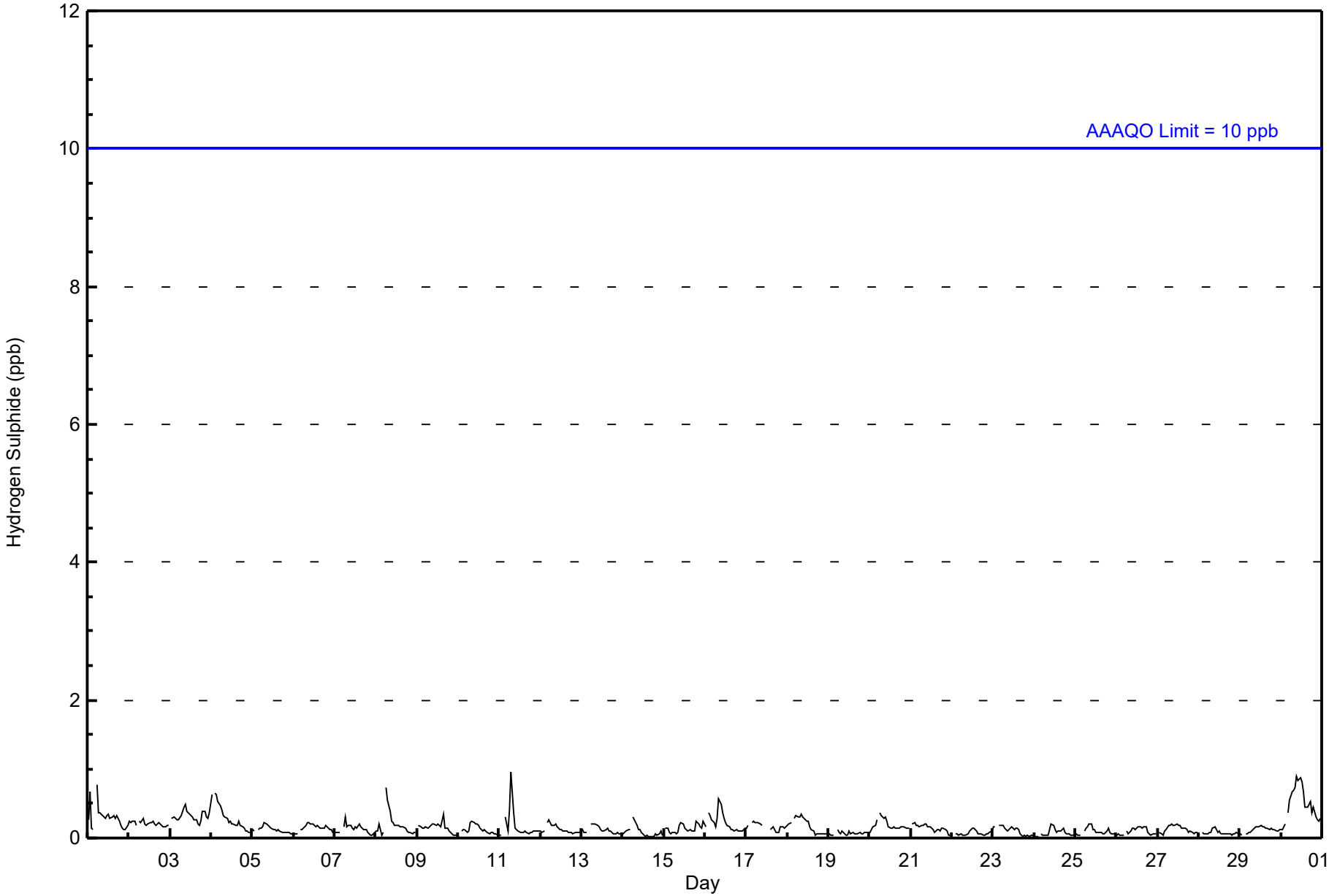
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - September 2025



Hydrogen Sulphide (H_2S) - ppb
Blackrod - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	34	22	16	6	9	24	41	175	177	48	30	15	18	25	20	26	686
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	22	16	6	9	24	41	175	177	48	30	15	18	25	20	26	686

Total Number of Valid Hours: 686

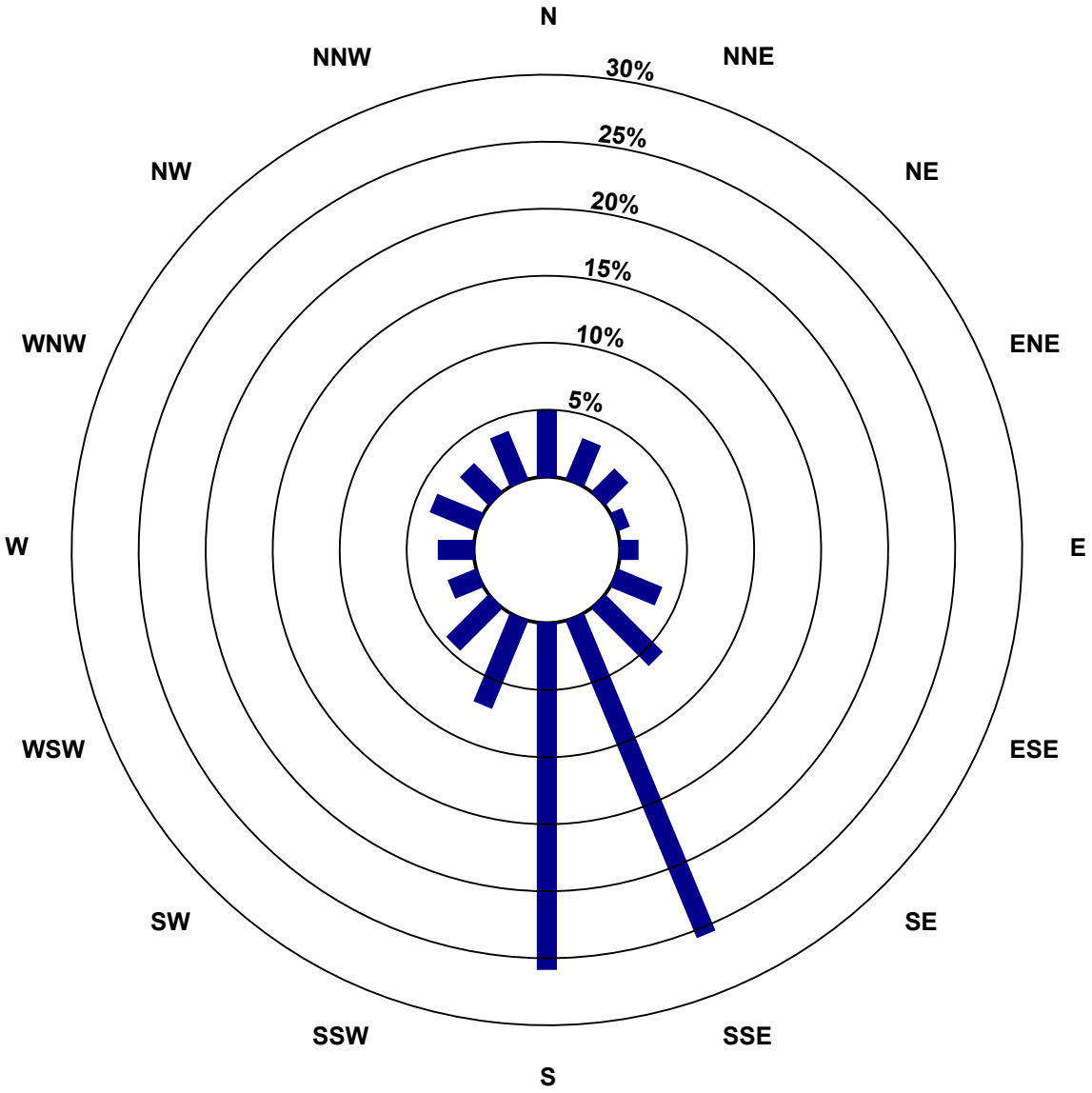
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Blackrod



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

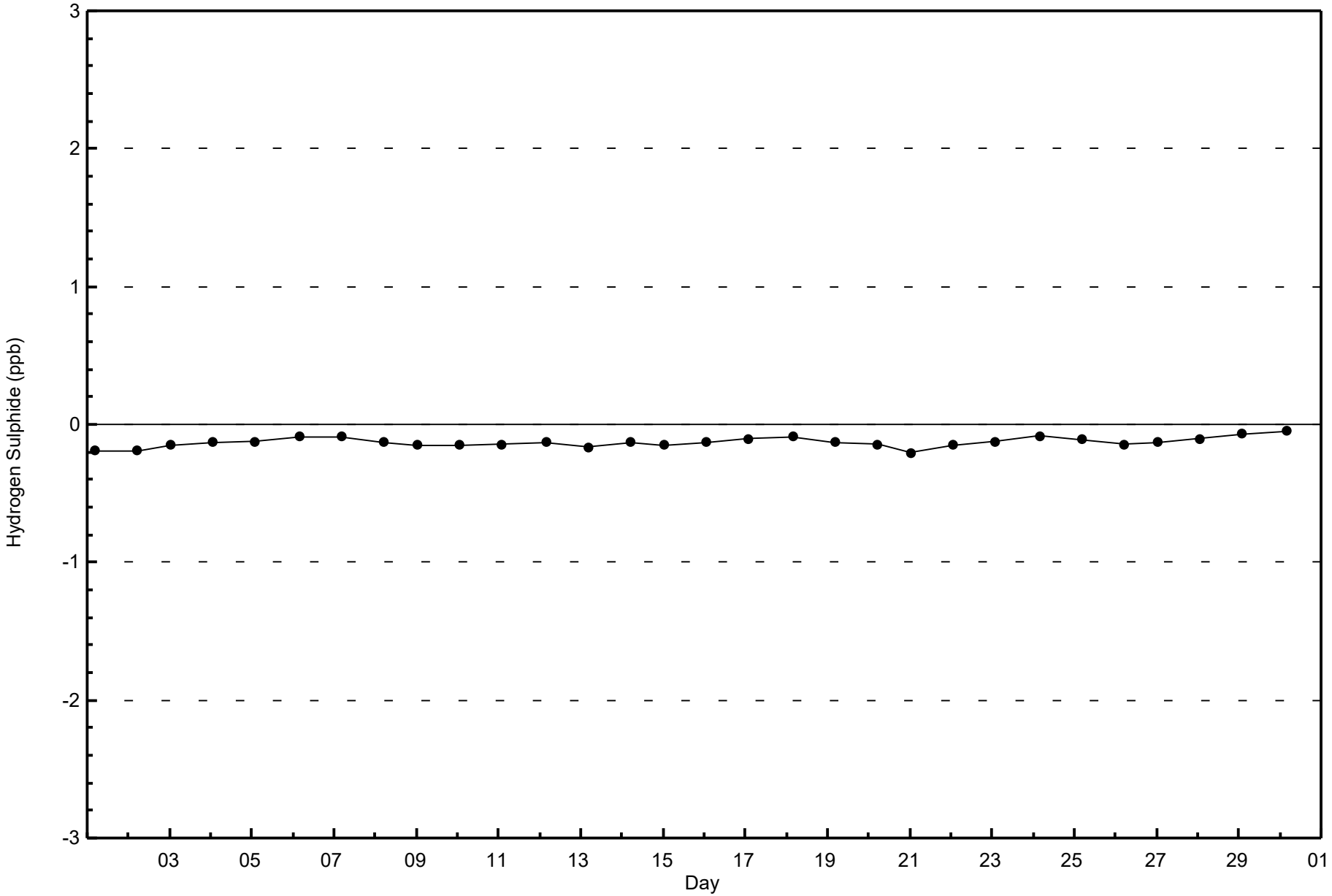
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - September 2025

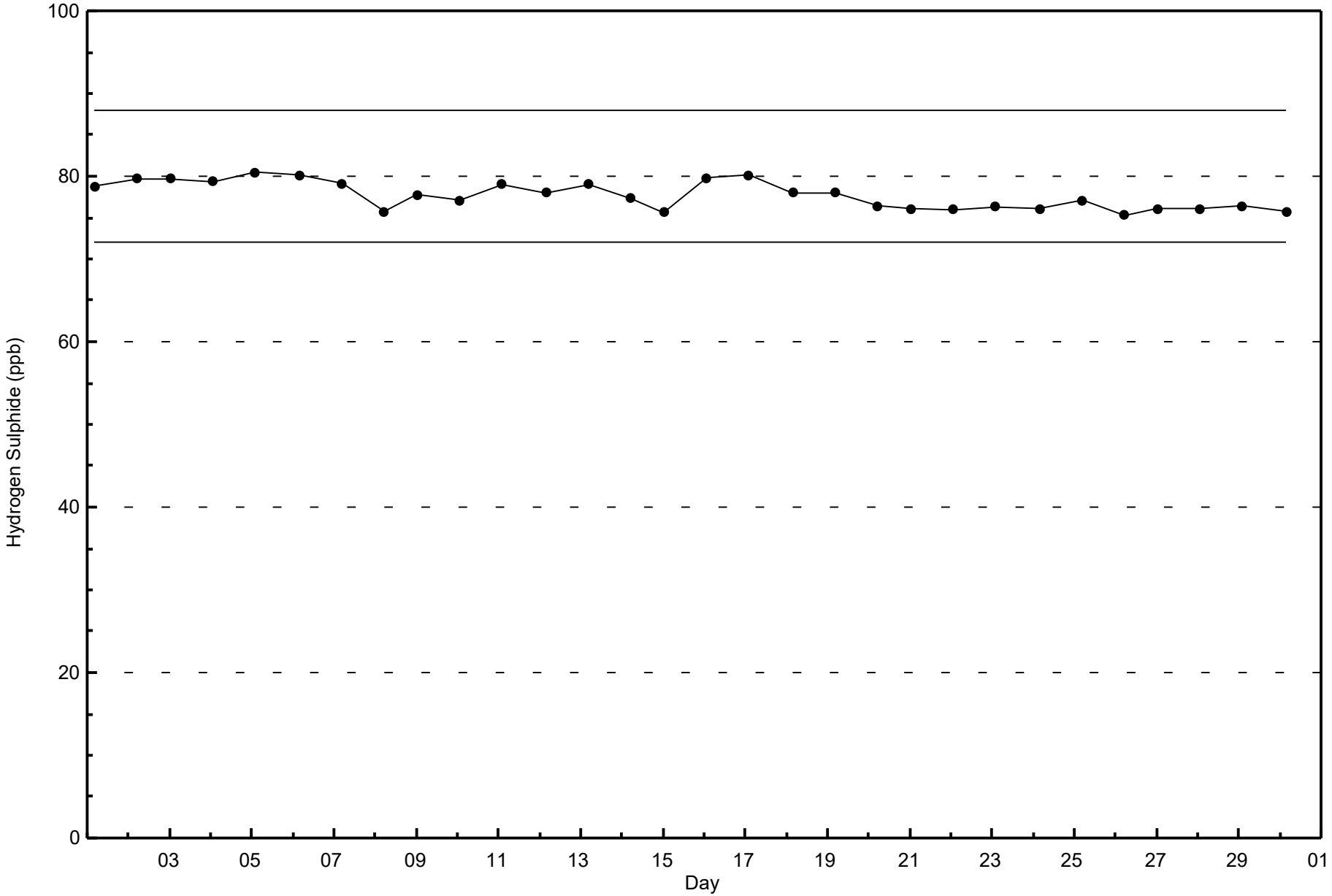


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxide (NO) - ppb

Blackrod - September 2025

Maximum Value: 79.3 ppb on Sep 11 08:00

Maximum Daily Average: 7.5 ppb on Sep 11

Minimum Value: 0.0 ppb on Sep 5 00:00

Minimum Daily Average: 0.1 ppb on Sep 17

Maximum Diurnal Average: 6.6 ppb at hour 8

Minimum Diurnal Average: 0.5 ppb at hour 4

Monthly Average: 2.89 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.6 Q_3 = 3.6 P_{90} = 9.1 P_{99} = 21.2

Hours in Service:	720
Hours of Data:	665
Hours of Missing Data:	55
Hours of Calibration:	36
Percent Operational Time:	97.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	3.5	Z	0.3	0.4	5.2	7.6	1.3	0.5	8.1	10.1	8.2	10.1	9.0	5.2	7.5	9.6	4.1	7.8	1.0	0.2	0.8	0.5	0.2	0.1	4.4	10.1
2-Sep	0.1	0.1	Z	0.3	0.3	2.0	7.4	2.9	8.5	2.2	1.2	2.2	1.4	1.0	6.2	3.6	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.0	1.8	8.5
3-Sep	0.1	0.0	0.0	Z	0.1	0.1	0.3	0.3	0.4	0.7	0.5	0.6	2.1	1.1	1.1	5.1	8.4	2.2	9.2	28.3	19.4	8.8	1.0	0.6	3.9	28.3
4-Sep	0.1	0.7	1.3	0.8	Z	0.9	0.8	0.8	1.4	2.1	2.2	6.2	4.9	4.0	2.5	4.3	8.9	4.8	1.5	1.5	0.1	0.0	0.1	0.0	2.2	8.9
5-Sep	2.6	2.9	0.0	0.0	0.1	Z	0.9	0.5	0.6	1.4	1.2	0.7	0.5	1.1	0.5	0.4	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.6	2.9
6-Sep	Z	0.1	0.0	0.0	0.7	0.2	0.2	0.3	1.5	1.4	1.3	0.9	0.9	0.4	0.4	0.6	0.3	0.2	0.6	1.4	0.2	0.1	0.0	0.0	0.5	1.5
7-Sep	0.0	Z	0.4	0.1	0.2	6.9	26.1	6.4	3.1	6.9	4.8	2.3	6.1	7.1	16.9	5.4	1.8	3.5	2.2	3.0	0.3	0.3	1.1	4.2	4.7	26.1
8-Sep	8.0	9.1	Z	0.3	4.5	9.4	9.5	39.6	10.0	6.9	C	C	C	M	M	M	M	M	M	M	M	M	M	M	--	39.6
9-Sep	M	M	M	M	M	M	M	M	C	C	C	C	0.5	0.5	0.4	0.4	0.9	0.9	2.8	0.0	0.0	0.0	0.4	0.3	--	2.8
10-Sep	0.0	0.0	0.2	0.1	Z	1.5	3.5	20.7	14.2	5.3	6.2	5.1	8.7	5.3	6.2	6.5	8.0	3.0	0.5	1.0	0.1	0.2	0.0	0.0	4.2	20.7
11-Sep	0.0	0.0	0.0	5.7	9.1	Z	46.9	79.3	22.0	0.7	1.2	1.5	2.7	0.8	0.4	0.8	0.5	0.2	0.3	0.0	0.0	0.0	0.4	0.0	7.5	79.3
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.4	0.1	0.3	0.4	0.4	0.7	0.7	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.7
13-Sep	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.7	0.9	0.3	0.3	0.2	0.3	0.4	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.9
14-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.7	0.2	0.4	0.3	0.2	0.7	0.4	0.5	1.3	1.3	0.5	0.1	0.0	0.9	0.4	1.8	9.8	1.2	0.9	9.8
15-Sep	0.0	0.0	0.0	Z	0.0	1.9	3.0	1.7	1.1	8.3	8.2	7.9	8.8	9.0	8.9	11.1	9.2	10.0	11.0	4.2	0.0	0.0	0.6	3.2	4.7	11.1
16-Sep	1.4	3.6	3.2	3.6	Z	4.2	2.6	5.5	5.2	7.0	4.4	4.0	3.6	7.0	2.7	0.5	1.4	0.7	0.4	0.1	0.0	0.0	0.0	0.0	2.7	7.0
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.5
18-Sep	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.4	2.3	0.9	3.2	1.2	2.4	6.0	0.7	3.6	0.9	0.1	0.6	0.0	0.0	0.0	1.0	6.0
19-Sep	0.0	Z	0.0	0.0	2.2	6.2	2.6	2.3	4.9	1.3	1.7	1.7	10.7	4.0	7.9	3.0	1.3	0.9	0.1	0.6	0.1	0.4	0.0	0.1	2.2	10.7
20-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.6	0.7	0.3	0.2	0.2	0.8	1.6	0.9	0.1	0.1	0.0	1.3	0.0	0.0	0.0	0.3	0.3	1.6
21-Sep	0.0	0.0	2.6	Z	1.6	2.3	1.8	3.1	4.5	5.6	3.1	3.9	7.7	10.3	2.6	6.9	11.2	5.7	8.5	6.5	7.9	9.1	1.2	0.0	4.6	11.2
22-Sep	0.0	0.0	0.0	0.1	Z	0.3	0.4	0.8	0.2	5.4	5.3	9.2	14.0	12.9	6.1	0.7	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.5	14.0
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	2.5	1.5	3.0	8.1	11.7	15.2	9.8	10.5	12.6	11.1	4.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	4.0	15.2
24-Sep	Z	0.0	0.0	0.2	0.0	0.4	0.2	1.6	0.5	13.4	24.3	17.8	11.9	7.1	10.2	9.1	11.1	10.0	1.5	1.8	0.0	0.0	0.0	0.0	5.3	24.3
25-Sep	0.5	Z	0.0	0.0	2.2	0.4	0.6	0.3	0.9	1.2	0.6	0.5	0.4	0.3	0.6	1.3	0.2	0.1	5.2	8.8	0.4	0.3	0.0	0.0	1.1	8.8
26-Sep	0.0	0.0	Z	0.0	0.4	0.2	2.6	0.6	7.4	12.6	13.0	10.2	16.0	13.8	14.3	10.6	13.1	10.5	1.4	0.6	0.0	0.0	0.0	0.0	5.5	16.0
27-Sep	0.0	0.0	0.3	Z	5.0	7.8	17.2	14.2	14.7	12.4	9.9	12.5	10.0	10.9	6.4	8.6	6.9	4.6	2.1	3.4	2.1	0.1	1.7	2.4	6.7	17.2
28-Sep	0.1	3.3	1.4	0.0	Z	1.7	1.3	2.0	9.3	10.6	5.6	1.6	5.1	1.6	0.8	1.5	0.7	0.3	0.2	0.2	0.0	0.0	0.0	0.0	2.1	10.6
29-Sep	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.1	0.2	0.3	0.3	0.5	0.5	0.3	0.3	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.5
30-Sep	Z	2.0	3.4	1.3	4.2	3.0	6.9	6.2	2.9	4.8	8.6	3.8	5.3	7.3	5.1	7.6	12.9	12.8	5.4	9.6	0.1	0.1	0.1	3.9	5.1	12.9
	0.7	0.9	0.6	0.5	1.5	2.4	4.9	6.6	4.4	4.5	4.6	4.3	5.0	4.3	4.4	4.1	3.8	2.9	1.9	2.5	1.1	0.8	0.6	0.6	Diurnal Average	
	8.0	9.1	3.4	5.7	9.1	9.4	46.9	79.3	22.0	13.4	24.3	17.8	16.0	13.8	16.9	11.1	13.1	12.8	11.0	28.3	19.4	9.1	9.8	4.2	Diurnal Maximum	

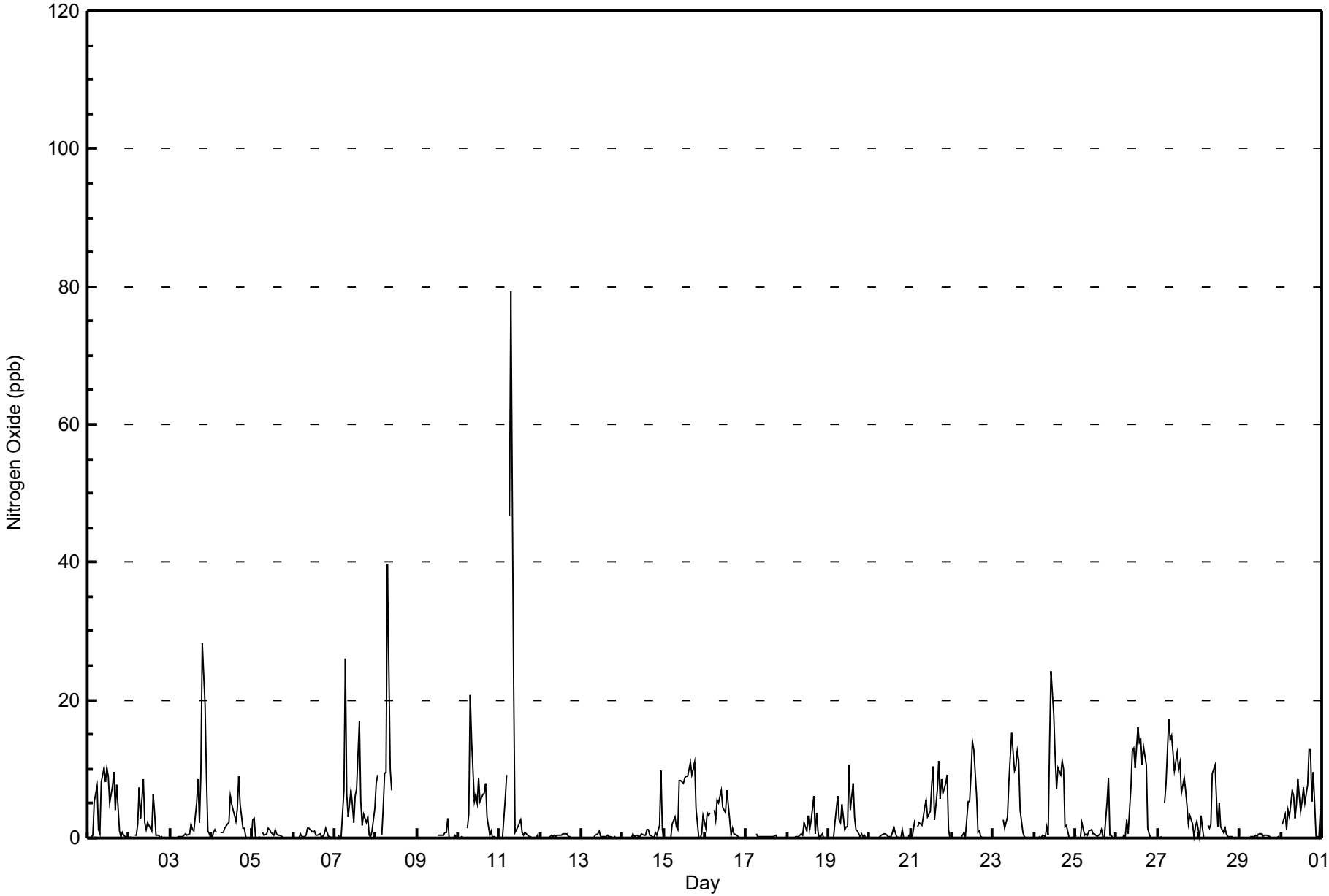
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Blackrod - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	657	98.80	98.80
21 - 40	6	0.90	99.70
11 - 80	2	0.30	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxide (NO) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	31	22	15	7	4	21	40	169	174	47	31	12	18	24	20	22	657
21 - 40	1	0	0	0	0	0	0	0	2	1	0	2	0	0	0	0	6
11 - 80	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	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	32	22	15	7	4	21	40	169	176	48	31	15	18	24	20	23	665

Total Number of Valid Hours: 665

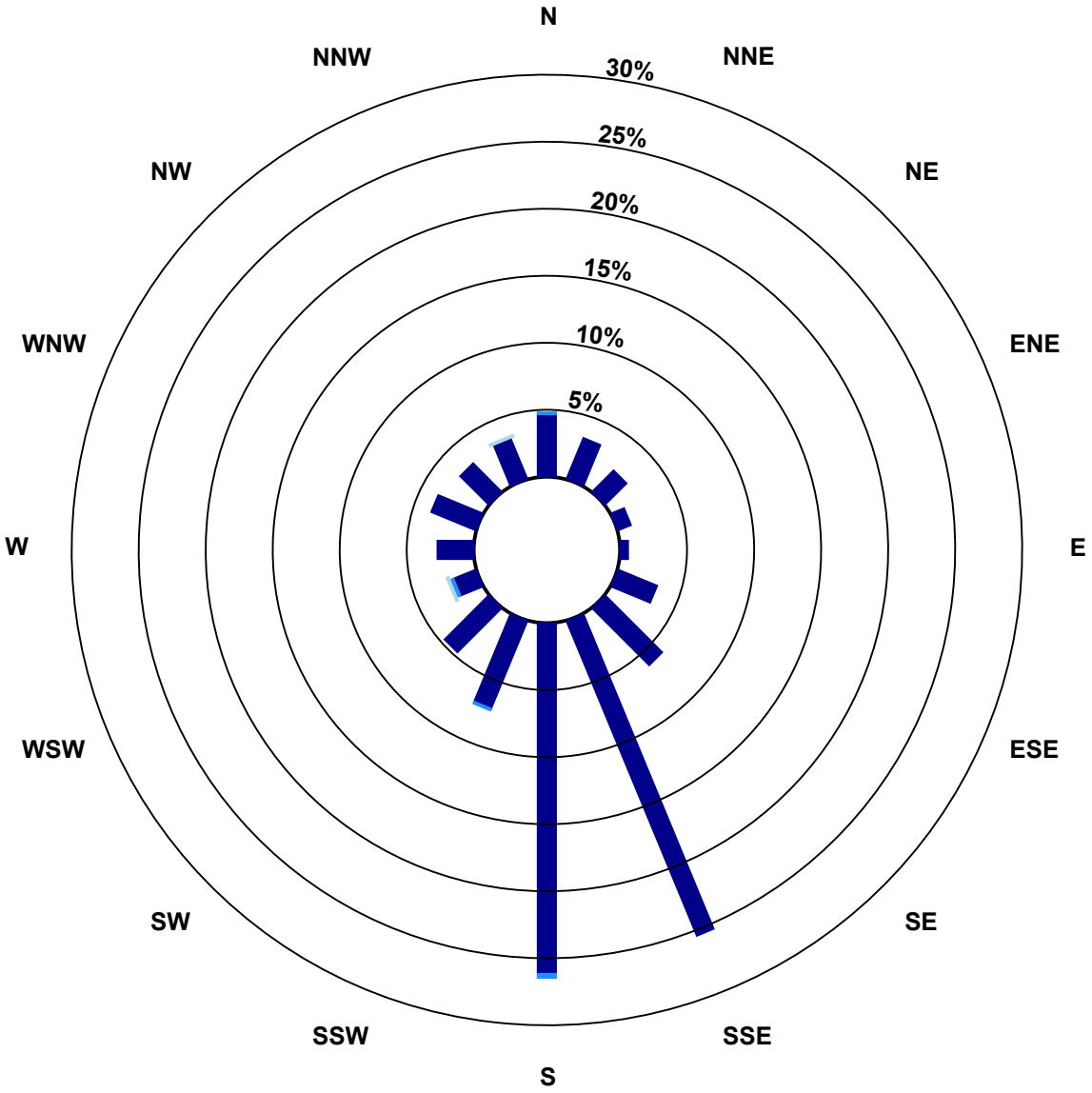
Total Number of Hours: 720

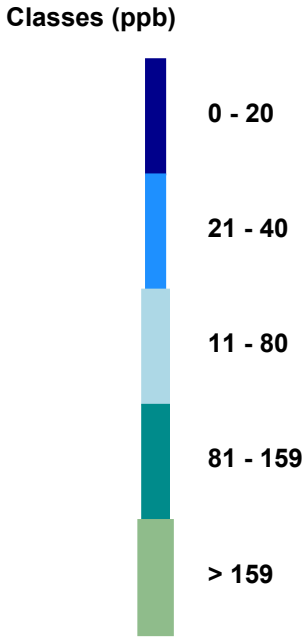
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxide (NO) - ppb

Blackrod





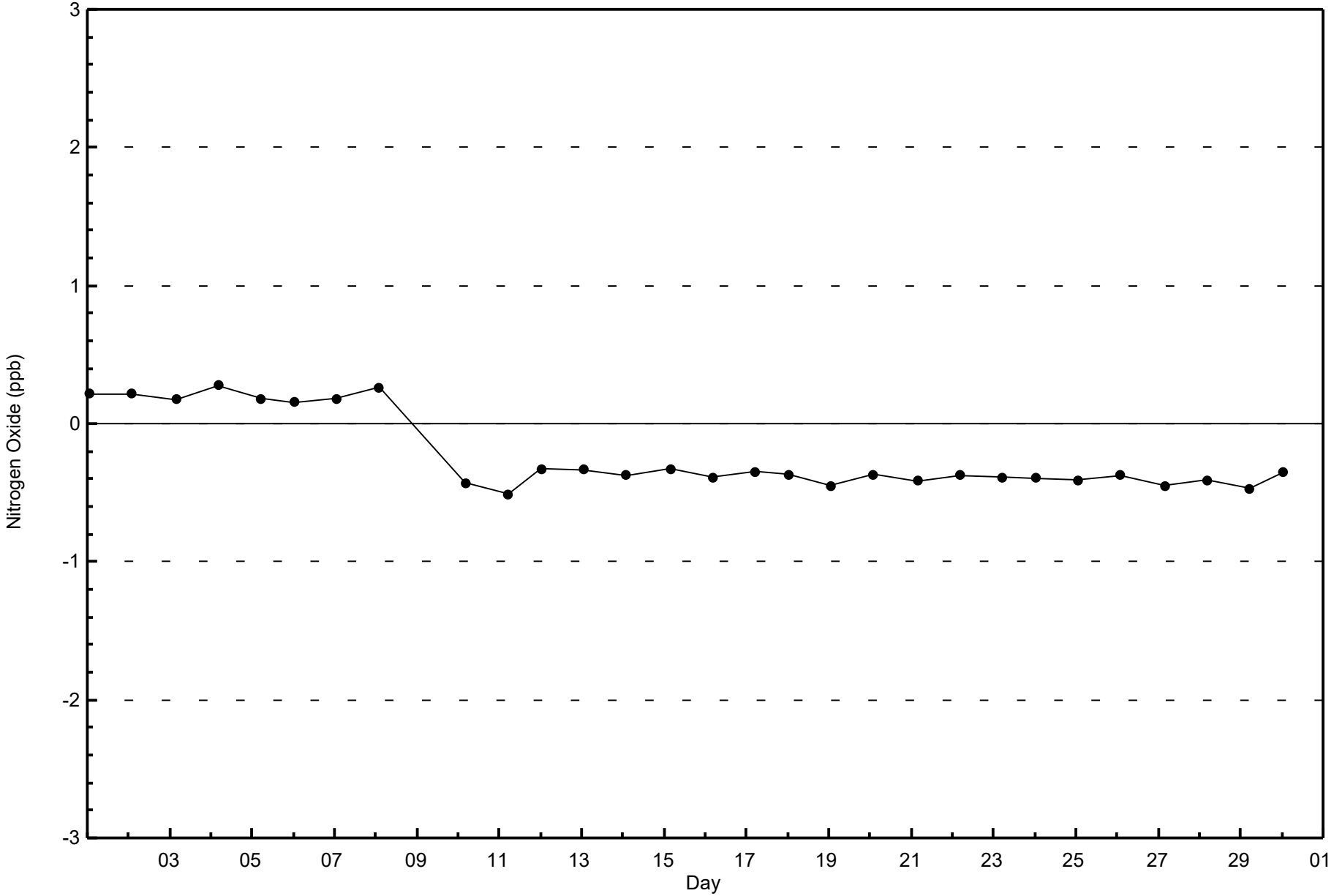
Total Number of Valid Hours: 665

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxide (NO) - ppb

Blackrod - September 2025

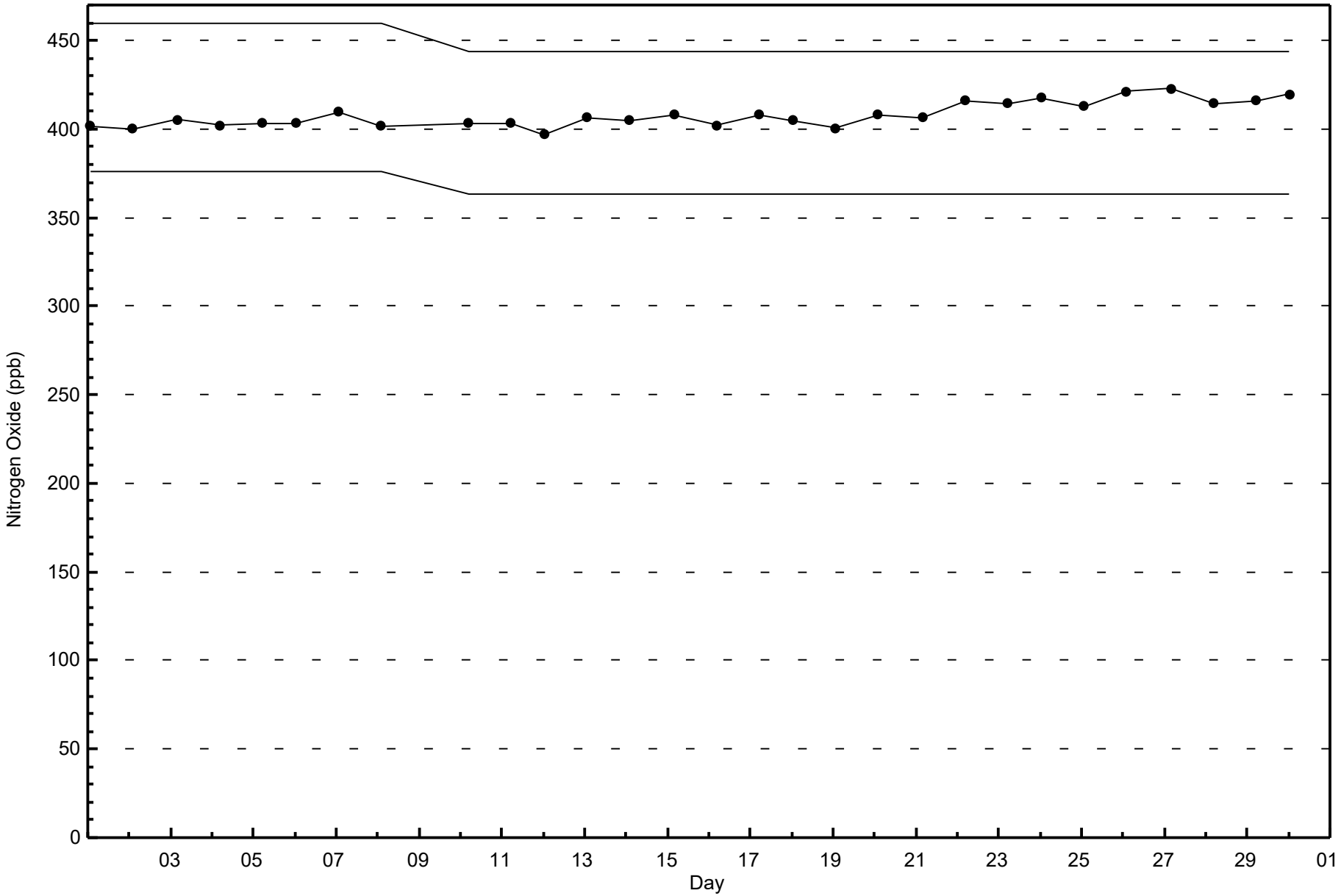


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxide (NO) - ppb

Blackrod - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 15.7 ppb on Sep 27 07:00

Maximum Daily Average: 7.5 ppb on Sep 27

Minimum Value: 0.3 ppb on Sep 5 22:00

Minimum Daily Average: 1.0 ppb on Sep 5

Maximum Diurnal Average: 4.1 ppb at hour 17

Minimum Diurnal Average: 1.2 ppb at hour 1

Monthly Average: 3.01 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.8$ $Q_1 = 1.1$ Median = 1.8 $Q_3 = 4.0$ $P_{90} = 7.1$ $P_{99} = 13.4$

Hours in Service:	720
Hours of Data:	665
Hours of Missing Data:	55
Hours of Calibration:	36
Percent Operational Time:	97.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	Z	0.5	1.1	1.7	3.3	1.6	2.0	5.4	4.2	4.0	2.7	2.9	2.6	3.9	4.5	3.3	4.1	2.2	0.8	0.8	0.6	0.8	1.4	2.4	5.4
2-Sep	1.8	2.6	Z	2.5	2.8	5.5	12.2	5.9	4.0	2.2	1.9	2.6	2.2	2.0	3.9	3.2	1.6	1.8	1.1	1.5	1.2	1.2	1.2	1.4	2.9	12.2
3-Sep	1.3	1.4	1.3	Z	1.2	1.4	1.5	1.5	1.7	2.1	1.9	2.1	3.1	2.8	2.8	4.2	5.8	2.2	5.5	14.7	10.7	5.4	1.7	0.6	3.3	14.7
4-Sep	0.7	1.0	1.3	0.7	Z	1.1	1.0	0.8	0.9	1.6	1.2	2.1	1.8	1.8	1.1	2.1	4.8	4.1	2.2	1.6	1.0	0.7	0.7	0.7	1.5	4.8
5-Sep	0.9	1.9	0.7	0.5	0.9	Z	1.3	0.9	0.9	1.6	1.3	1.2	0.9	1.9	1.1	1.1	1.3	0.7	0.7	0.7	0.4	0.3	0.4	0.4	1.0	1.9
6-Sep	Z	1.0	1.1	1.2	1.8	1.4	1.6	1.7	2.3	2.4	2.7	2.1	2.5	1.7	1.6	2.0	1.9	1.7	2.3	6.8	1.5	1.2	1.2	0.9	1.9	6.8
7-Sep	0.9	Z	1.3	1.3	1.9	4.4	13.0	8.1	6.6	8.0	10.0	5.5	6.0	6.7	10.2	5.1	5.0	6.2	5.3	3.3	1.9	1.8	1.6	2.2	5.1	13.0
8-Sep	2.9	2.8	Z	0.6	4.1	5.2	6.3	10.0	4.5	3.4	C	C	C	M	M	M	M	M	M	M	M	M	M	M	--	10.0
9-Sep	M	M	M	M	M	M	M	M	C	C	C	C	2.5	2.6	2.3	2.6	5.3	9.9	8.5	3.0	2.4	1.6	1.5	1.0	--	9.9
10-Sep	1.2	2.1	1.4	1.0	Z	3.6	3.4	11.1	8.4	3.6	4.2	4.3	3.6	5.4	4.3	4.2	4.9	4.6	1.7	2.6	4.0	2.1	0.5	0.7	3.6	11.1
11-Sep	0.4	0.8	0.9	2.8	4.6	Z	6.9	14.2	9.8	1.9	2.4	2.5	3.6	1.5	1.4	2.1	1.8	1.3	1.5	0.9	1.2	0.9	1.6	0.7	2.9	14.2
12-Sep	Z	1.3	1.2	1.2	1.4	1.5	2.4	2.3	1.9	1.3	1.4	1.1	1.5	1.5	1.6	1.9	1.4	1.6	1.1	0.8	0.8	0.9	1.7	1.1	1.4	2.4
13-Sep	1.1	Z	1.3	2.2	2.0	1.7	2.2	2.0	2.1	2.6	2.7	1.5	1.4	1.3	1.6	1.9	1.8	2.2	0.9	1.8	0.9	0.9	1.1	1.0	1.7	2.7
14-Sep	1.2	1.4	Z	1.6	1.5	1.6	2.9	1.6	1.6	1.2	1.0	1.1	1.0	1.0	2.1	3.0	1.5	1.1	0.9	4.0	3.8	7.1	12.8	4.7	2.6	12.8
15-Sep	1.4	0.8	0.5	Z	0.8	2.2	2.3	1.7	2.3	4.3	3.8	3.7	4.7	3.8	3.8	6.4	4.2	5.4	7.0	3.5	6.2	6.5	6.5	3.0	3.7	7.0
16-Sep	2.7	3.2	2.9	4.0	Z	3.8	2.6	2.2	3.7	3.1	2.5	2.5	2.6	4.5	3.0	1.4	2.1	1.8	2.2	1.2	1.2	0.4	0.4	0.4	2.4	4.5
17-Sep	0.4	0.8	1.2	1.4	1.2	Z	2.1	1.6	1.3	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.3	1.4	1.0	1.0	1.1	1.2	1.3	1.2	1.2	2.1
18-Sep	Z	1.1	1.0	0.9	1.0	1.0	1.2	1.2	1.5	1.3	1.7	1.5	3.9	2.0	3.9	9.0	2.3	4.4	4.3	0.8	1.0	0.9	0.8	0.4	2.0	9.0
19-Sep	0.4	Z	0.4	0.5	2.1	4.5	3.4	2.3	4.3	0.7	2.4	1.9	5.3	3.5	6.4	3.7	4.6	4.2	1.0	1.0	0.9	2.1	0.8	1.7	2.5	6.4
20-Sep	0.9	0.9	Z	1.4	1.9	2.3	2.9	3.3	3.0	3.3	2.4	1.6	1.6	1.6	1.1	1.8	1.1	1.1	1.2	3.6	0.8	0.9	1.0	2.0	1.8	3.6
21-Sep	1.7	1.8	4.5	Z	5.4	4.4	3.6	4.7	3.7	7.2	4.8	4.3	4.5	6.2	2.1	3.5	6.9	3.5	5.9	4.3	6.3	6.9	6.0	0.5	4.5	7.2
22-Sep	0.5	0.8	0.9	1.0	Z	1.3	1.6	1.8	0.8	1.4	4.3	5.3	8.0	8.0	4.9	1.1	1.2	0.9	0.4	0.4	0.7	1.6	1.2	1.3	2.1	8.0
23-Sep	1.4	1.5	1.6	1.7	1.8	Z	6.7	3.0	4.5	9.4	10.9	13.8	8.7	7.5	11.4	11.7	7.5	3.1	1.6	0.6	0.6	0.9	0.7	0.8	4.8	13.8
24-Sep	Z	0.8	0.5	0.9	0.6	0.8	0.8	1.9	1.1	9.5	12.1	9.6	7.2	3.6	6.4	6.8	9.0	7.2	5.2	2.0	0.8	0.5	0.6	0.6	3.8	12.1
25-Sep	1.5	Z	0.7	0.8	2.6	1.1	1.9	1.5	2.1	2.1	1.4	1.4	1.2	1.1	1.3	1.3	1.1	1.0	7.2	10.2	3.9	2.0	1.1	0.7	2.1	10.2
26-Sep	0.8	1.3	Z	1.6	2.1	1.4	3.2	1.5	8.0	8.1	7.3	7.1	7.3	7.3	9.2	8.3	11.3	13.7	3.8	2.0	0.7	0.5	0.5	0.5	4.7	13.7
27-Sep	0.5	0.6	1.1	Z	8.1	12.9	15.7	15.1	13.2	8.9	7.5	8.7	6.9	9.6	6.2	9.0	12.1	10.1	5.2	6.3	4.5	0.9	4.2	5.4	7.5	15.7
28-Sep	1.0	7.2	3.3	0.9	Z	3.7	3.2	3.4	8.1	6.9	4.4	1.4	4.1	0.6	0.9	1.9	1.3	0.7	0.6	0.6	0.4	0.4	0.6	0.8	2.5	8.1
29-Sep	1.0	1.1	1.2	1.0	1.0	Z	1.1	0.9	1.0	1.0	1.0	1.2	1.1	1.0	1.1	1.3	1.3	1.3	1.4	1.3	1.2	1.3	1.6	1.3	1.2	1.6
30-Sep	Z	5.5	4.0	5.0	5.2	3.3	7.2	5.9	5.7	3.4	4.4	3.5	5.0	7.2	4.6	6.6	10.3	10.6	9.9	15.3	8.6	4.4	2.9	4.9	6.2	15.3
	1.2	1.8	1.5	1.5	2.4	3.1	4.0	3.9	3.9	3.7	3.8	3.5	3.7	3.5	3.6	3.9	4.1	3.9	3.2	3.3	2.4	1.9	2.0	1.5	Diurnal Average	
	2.9	7.2	4.5	5.0	8.1	12.9	15.7	15.1	13.2	9.5	12.1	13.8	8.7	9.6	11.4	11.7	12.1	13.7	9.9	15.3	10.7	7.1	12.8	5.4	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

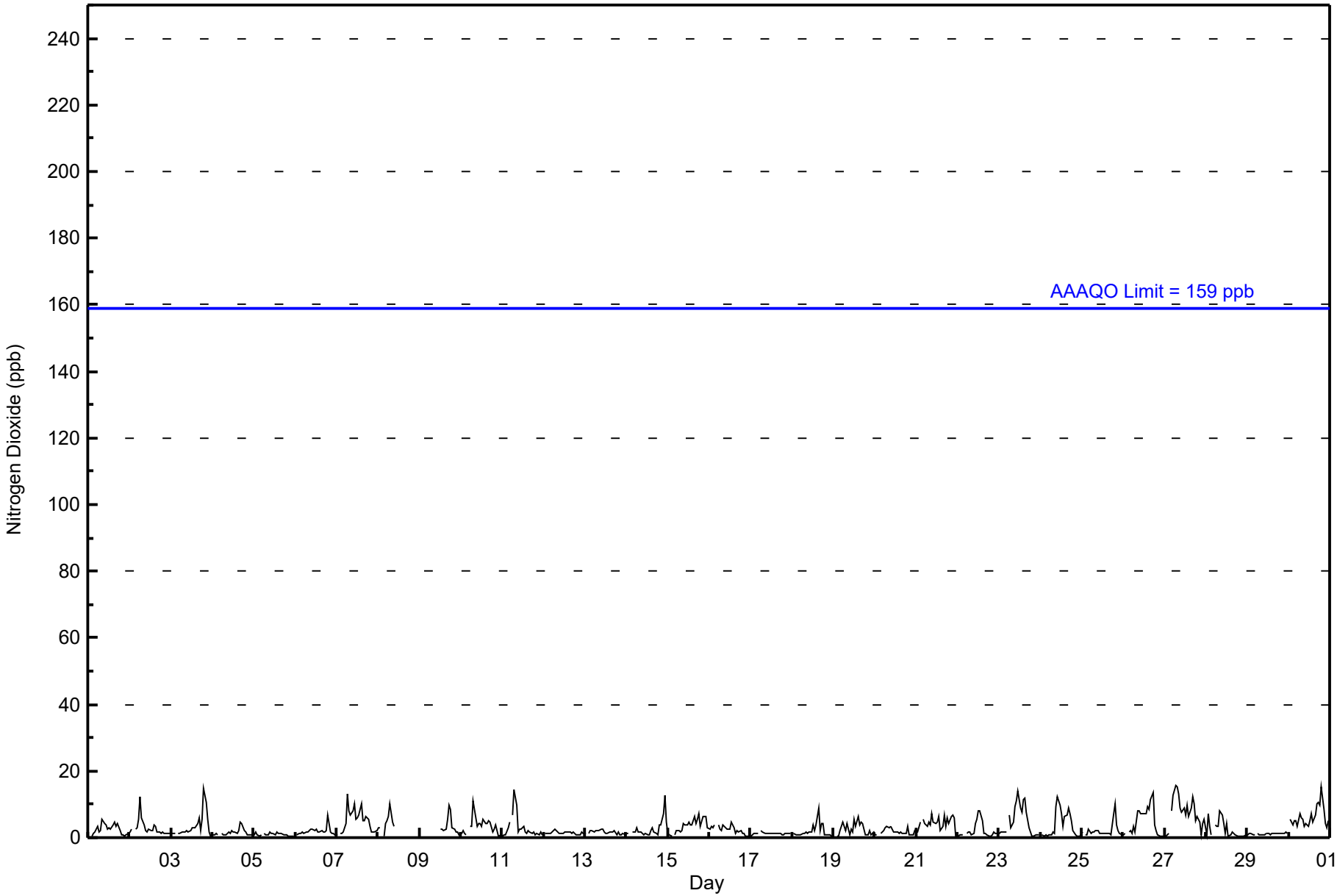
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - September 2025



Nitrogen Dioxide (NO_2) - ppb
Blackrod - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	665	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	32	22	15	7	4	21	40	169	176	48	31	15	18	24	20	23	665
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	22	15	7	4	21	40	169	176	48	31	15	18	24	20	23	665

Total Number of Valid Hours: 665

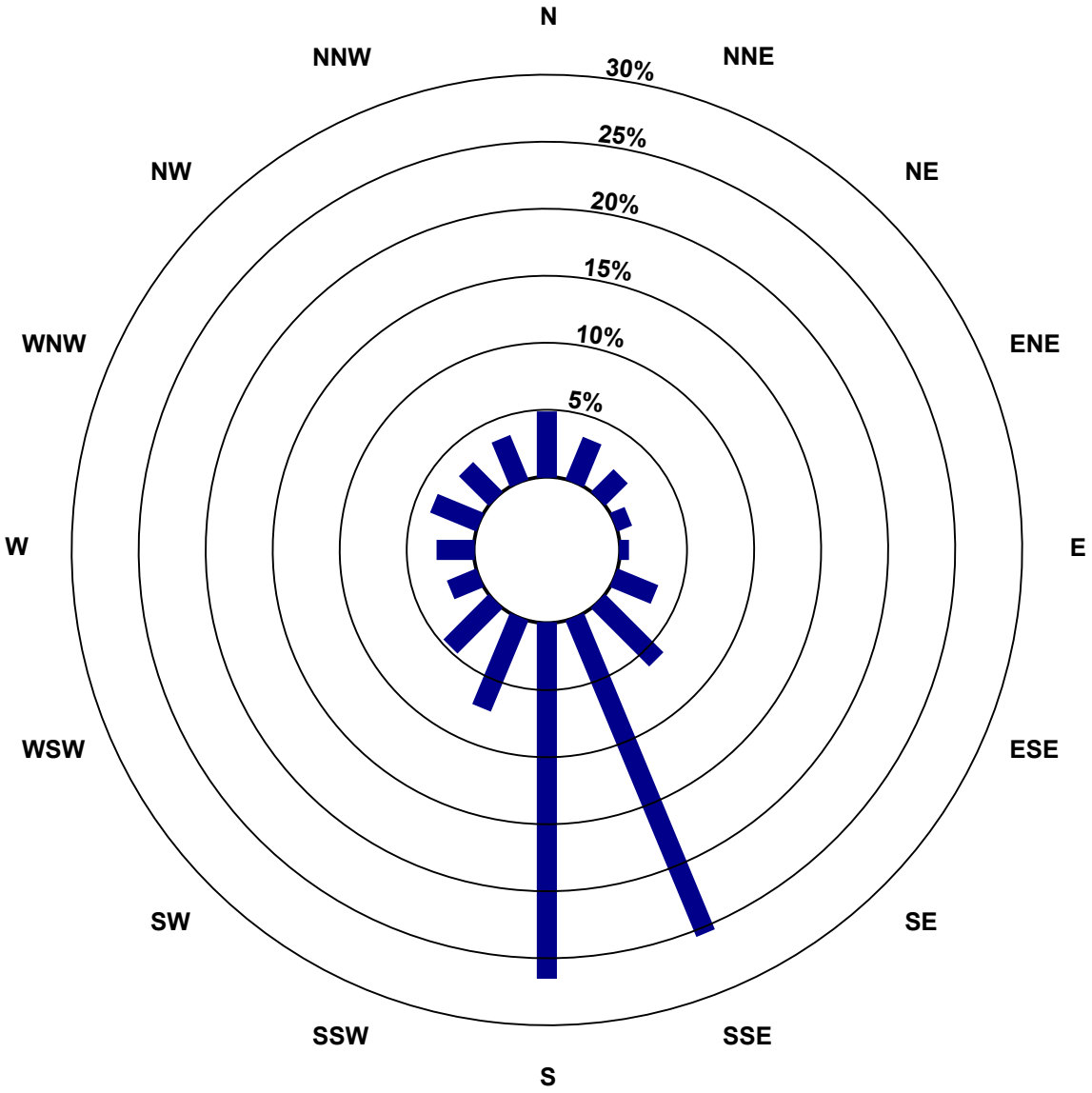
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Blackrod



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

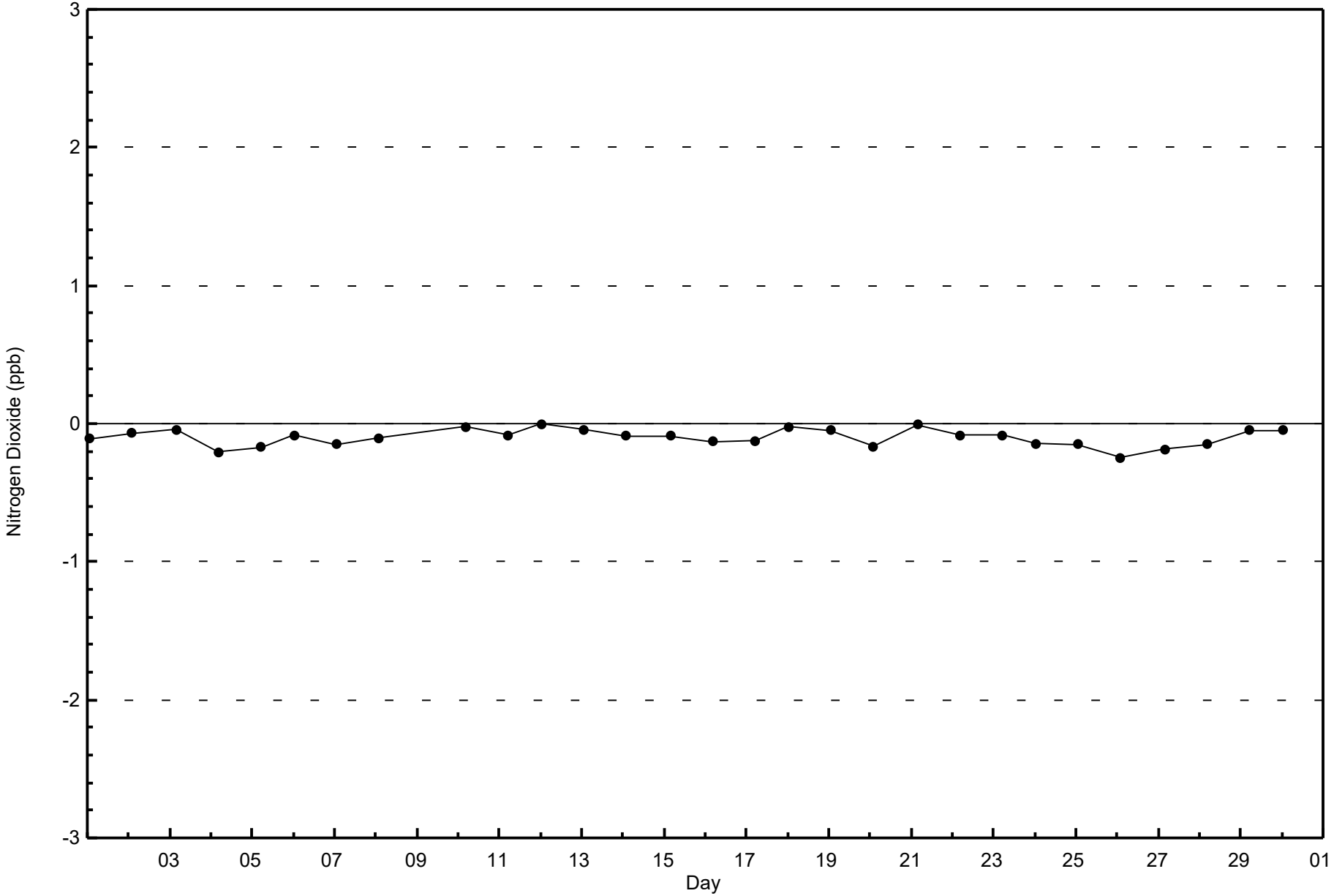
Total Number of Valid Hours: 665

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - September 2025

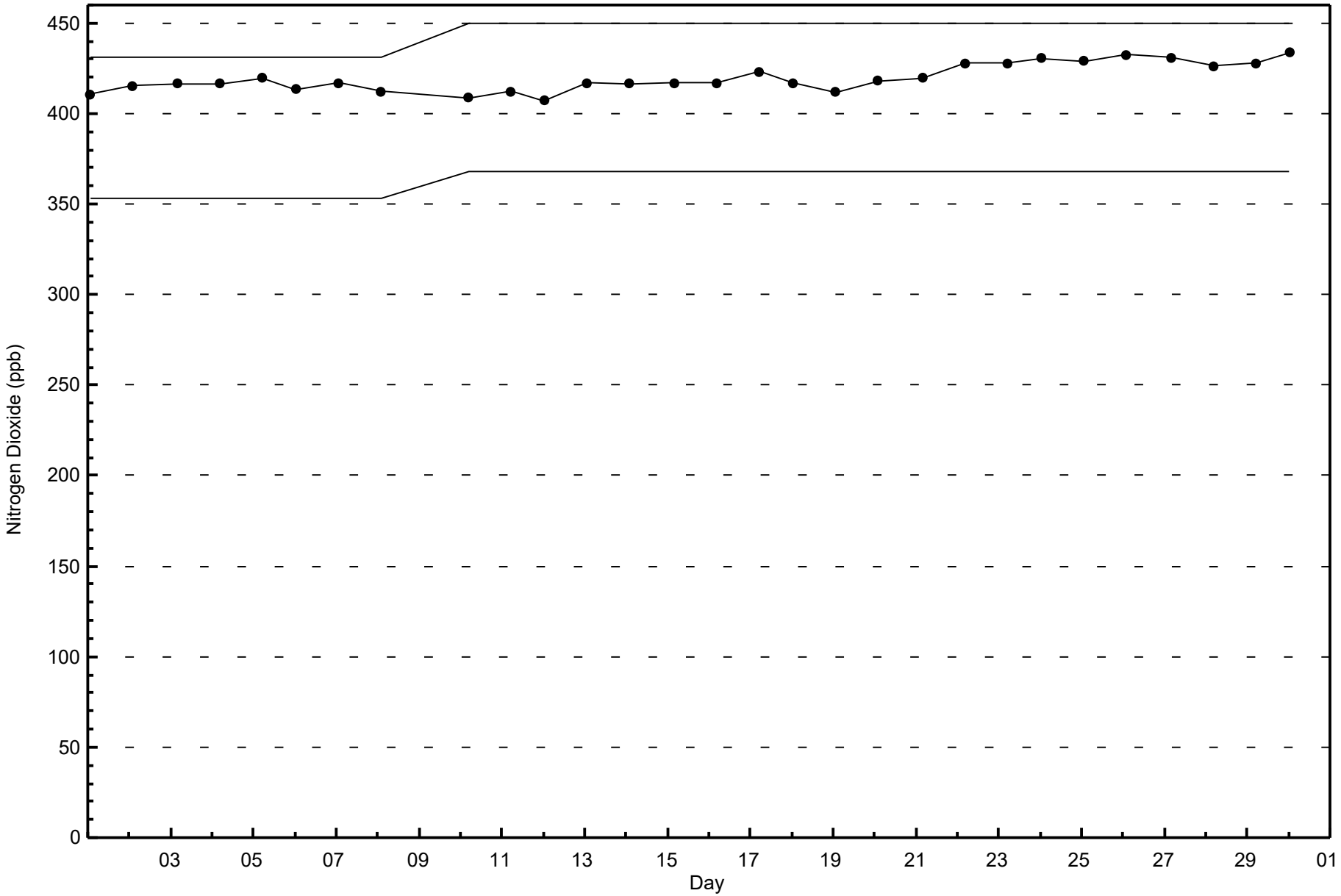


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025

Maximum Value: 93.5 ppb on Sep 11 08:00

Maximum Daily Average: 14.2 ppb on Sep 27

Minimum Value: 0.4 ppb on Sep 16 22:00

Minimum Daily Average: 1.3 ppb on Sep 17

Maximum Diurnal Average: 10.6 ppb at hour 8

Minimum Diurnal Average: 1.8 ppb at hour 1

Monthly Average: 5.90 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.8 Q_1 = 1.3 Median = 2.5 Q_3 = 7.8 P_{90} = 14.8 P_{99} = 32.2

Hours in Service:	720
Hours of Data:	665
Hours of Missing Data:	55
Hours of Calibration:	36
Percent Operational Time:	97.4

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	4.8	Z	0.8	1.5	6.9	10.9	2.9	2.5	13.5	14.3	12.2	12.8	11.9	7.8	11.4	14.1	7.4	11.9	3.2	1.0	1.6	1.1	1.0	1.5	6.8	14.3
2-Sep	1.9	2.7	Z	2.8	3.1	7.5	19.6	8.8	12.5	4.4	3.1	4.8	3.6	3.0	10.1	6.8	2.0	2.2	1.2	1.6	1.3	1.3	1.3	1.4	4.7	19.6
3-Sep	1.4	1.4	1.3	Z	1.3	1.5	1.8	1.8	2.1	2.8	2.4	2.7	5.2	3.9	3.9	9.3	14.2	4.4	14.7	43.0	30.1	14.2	2.7	1.2	7.3	43.0
4-Sep	0.8	1.7	2.6	1.5	Z	2.0	1.8	1.6	2.3	3.7	3.4	8.3	6.7	5.8	3.6	6.4	13.7	8.9	3.7	3.1	1.1	0.7	0.8	0.7	3.7	13.7
5-Sep	3.5	4.8	0.7	0.5	1.0	Z	2.2	1.4	1.5	3.0	2.5	1.9	1.4	3.0	1.6	1.5	1.8	0.9	0.8	0.8	0.5	0.4	0.4	0.4	1.6	4.8
6-Sep	Z	1.1	1.1	1.2	2.5	1.6	1.8	2.0	3.8	3.8	4.0	3.0	3.4	2.1	2.0	2.6	2.2	1.9	2.9	8.2	1.7	1.3	1.2	0.9	2.4	8.2
7-Sep	0.9	Z	1.7	1.4	2.1	11.3	39.1	14.5	9.7	14.9	14.8	7.8	12.1	13.8	27.1	10.5	6.8	9.7	7.5	6.3	2.2	2.1	2.7	6.4	9.8	39.1
8-Sep	10.9	11.9	Z	0.9	8.6	14.6	15.8	49.6	14.5	10.3	C	C	C	M	M	M	M	M	M	M	M	M	M	M	--	49.6
9-Sep	M	M	M	M	M	M	M	M	C	C	C	C	3.0	3.1	2.7	3.0	6.2	10.8	11.3	3.0	2.4	1.6	1.9	1.3	--	11.3
10-Sep	1.2	2.1	1.6	1.1	Z	5.1	6.9	31.8	22.6	8.9	10.4	9.4	12.3	10.7	10.5	10.7	12.9	7.6	2.2	3.6	4.1	2.3	0.5	0.7	7.8	31.8
11-Sep	0.4	0.8	0.9	8.5	13.7	Z	53.8	93.5	31.8	2.6	3.6	4.0	6.3	2.3	1.8	2.9	2.3	1.5	1.8	0.9	1.2	0.9	2.0	0.7	10.4	93.5
12-Sep	Z	1.3	1.2	1.2	1.4	1.5	2.7	2.6	2.3	1.4	1.7	1.5	1.9	2.2	2.3	2.5	1.5	1.7	1.1	0.8	0.8	0.9	1.8	1.1	1.6	2.7
13-Sep	1.1	Z	1.3	2.2	2.1	1.7	2.3	2.1	2.4	3.3	3.6	1.8	1.7	1.5	1.9	2.3	2.0	2.4	0.9	1.9	0.9	0.9	1.1	1.0	1.8	3.6
14-Sep	1.2	1.4	Z	1.6	1.5	1.6	3.6	1.8	2.0	1.5	1.2	1.8	1.4	1.5	3.4	4.3	2.0	1.2	0.9	4.9	4.2	8.9	22.6	5.9	3.5	22.6
15-Sep	1.4	0.8	0.5	Z	0.8	4.1	5.3	3.4	3.4	12.6	12.0	11.6	13.5	12.8	12.7	17.5	13.4	15.4	18.0	7.7	6.2	6.5	7.1	6.2	8.4	18.0
16-Sep	4.1	6.8	6.1	7.6	Z	8.0	5.2	7.7	8.9	10.1	6.9	6.5	6.2	11.5	5.7	1.9	3.5	2.5	2.6	1.3	1.2	0.4	0.4	0.4	5.0	11.5
17-Sep	0.4	0.8	1.2	1.4	1.2	Z	2.6	1.8	1.5	1.4	1.6	1.3	1.3	1.3	1.3	1.2	1.6	1.7	1.0	1.1	1.1	1.2	1.4	1.2	1.3	2.6
18-Sep	Z	1.1	1.0	0.9	1.1	1.1	1.4	1.5	2.0	1.7	4.0	2.4	7.1	3.2	6.3	15.0	3.0	8.0	5.2	0.9	1.6	0.9	0.8	0.4	3.1	15.0
19-Sep	0.4	Z	0.4	0.5	4.3	10.7	6.0	4.6	9.2	2.0	4.1	3.6	16.0	7.5	14.3	6.7	5.9	5.1	1.1	1.6	1.0	2.5	0.8	1.8	4.8	16.0
20-Sep	0.9	0.9	Z	1.4	1.9	2.3	3.1	3.6	3.6	4.0	2.7	1.8	1.8	2.4	2.7	2.7	1.2	1.2	1.2	4.9	0.8	0.9	1.0	2.3	2.1	4.9
21-Sep	1.7	1.8	7.1	Z	7.0	6.7	5.4	7.8	8.2	12.8	7.9	8.2	12.2	16.5	4.7	10.4	18.1	9.2	14.4	10.8	14.2	16.0	7.2	0.5	9.1	18.1
22-Sep	0.5	0.8	0.9	1.1	Z	1.6	2.0	2.6	1.0	6.8	9.6	14.5	22.0	20.9	11.0	1.8	2.3	1.1	0.4	0.4	0.7	1.6	1.2	1.3	4.6	22.0
23-Sep	1.4	1.5	1.6	1.7	1.8	Z	9.2	4.5	7.5	17.5	22.6	29.0	18.5	18.0	24.0	22.8	11.5	3.9	1.8	0.6	0.6	0.9	0.7	0.8	8.8	29.0
24-Sep	Z	0.8	0.5	1.1	0.6	1.2	1.0	3.5	1.6	22.9	36.4	27.4	19.1	10.7	16.6	15.9	20.1	17.2	6.7	3.8	0.8	0.5	0.6	0.6	9.1	36.4
25-Sep	2.0	Z	0.7	0.8	4.8	1.5	2.5	1.8	3.0	3.3	2.0	1.9	1.6	1.4	1.9	2.6	1.3	1.1	12.4	19.0	4.3	2.3	1.1	0.7	3.2	19.0
26-Sep	0.8	1.3	Z	1.6	2.5	1.6	5.8	2.1	15.4	20.7	20.3	17.3	23.3	21.1	23.5	18.9	24.4	24.2	5.2	2.6	0.7	0.5	0.5	0.5	10.2	24.4
27-Sep	0.5	0.6	1.4	Z	13.1	20.7	32.9	29.3	27.9	21.3	17.4	21.2	16.9	20.5	12.6	17.6	19.0	14.7	7.3	9.7	6.6	1.0	5.9	7.8	14.2	32.9
28-Sep	1.1	10.5	4.7	0.9	Z	5.4	4.5	5.4	17.4	17.5	10.0	3.0	9.2	2.2	1.7	3.4	2.0	1.0	0.8	0.8	0.4	0.4	0.6	0.8	4.5	17.5
29-Sep	1.0	1.1	1.2	1.1	1.1	Z	1.3	1.0	1.2	1.3	1.3	1.7	1.6	1.3	1.4	1.7	1.6	1.5	1.5	1.3	1.2	1.3	1.7	1.3	1.3	1.7
30-Sep	Z	7.5	7.4	6.3	9.4	6.3	14.1	12.1	8.6	8.2	13.0	7.3	10.3	14.5	9.7	14.2	23.2	23.4	15.3	24.9	8.7	4.5	3.0	8.8	11.3	24.9
	1.8	2.7	2.0	2.0	3.9	5.4	8.8	10.6	8.3	8.2	8.4	7.8	8.7	7.8	8.0	8.0	7.8	6.8	5.1	5.9	3.5	2.7	2.5	2.0	Diurnal Average	
	10.9	11.9	7.4	8.5	13.7	20.7	53.8	93.5	31.8	22.9	36.4	29.0	23.3	21.1	27.1	22.8	24.4	24.2	18.0	43.0	30.1	16.0	22.6	8.8	Diurnal Maximum	

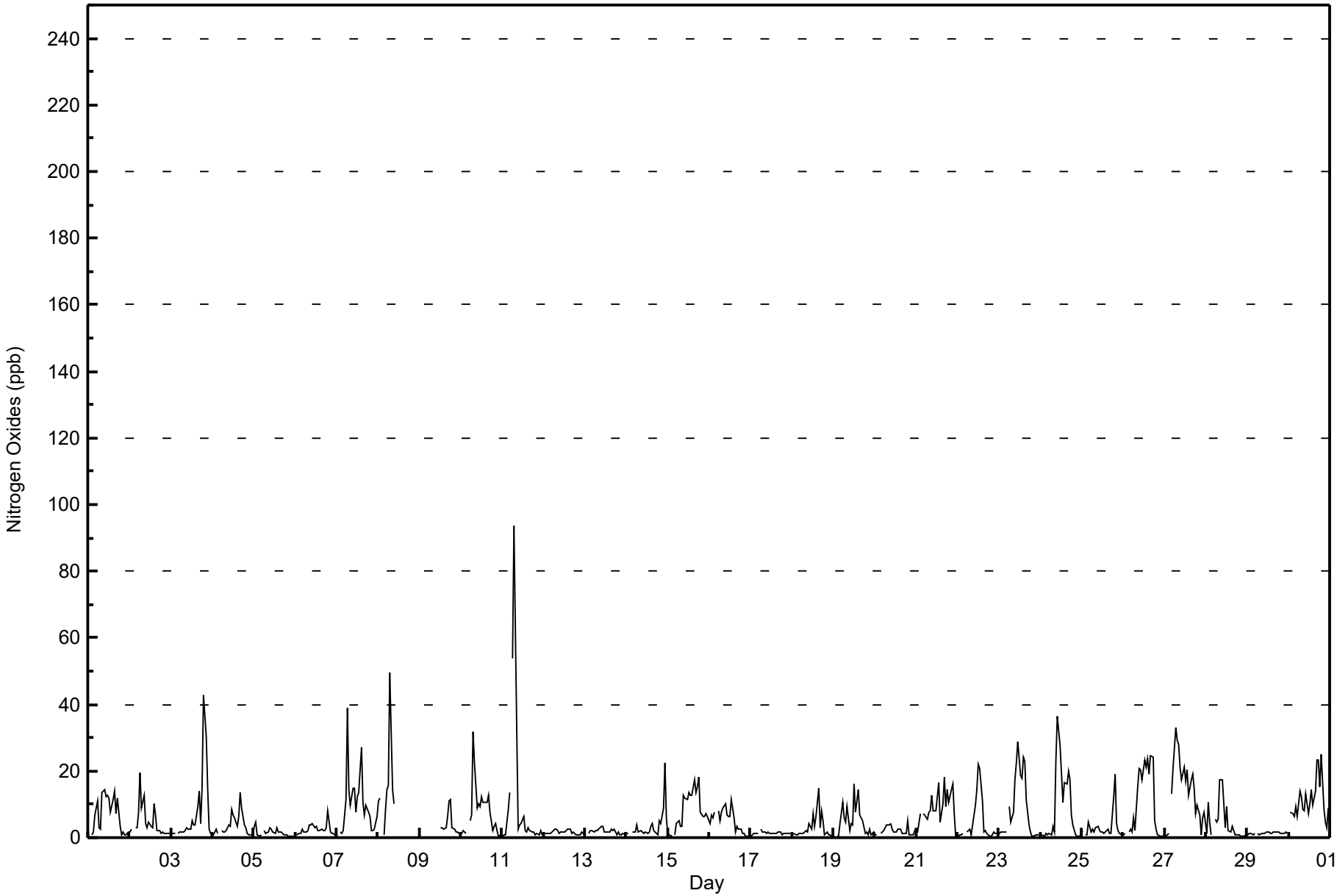
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	629	94.59	94.59
21 - 40	32	4.81	99.40
11 - 80	3	0.45	99.85
81 - 159	1	0.15	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	29	20	15	7	4	21	40	169	174	47	29	7	5	21	19	22	629
21 - 40	2	2	0	0	0	0	0	0	2	0	2	7	13	3	1	0	32
11 - 80	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	3
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	32	22	15	7	4	21	40	169	176	48	31	15	18	24	20	23	665

Total Number of Valid Hours: 665

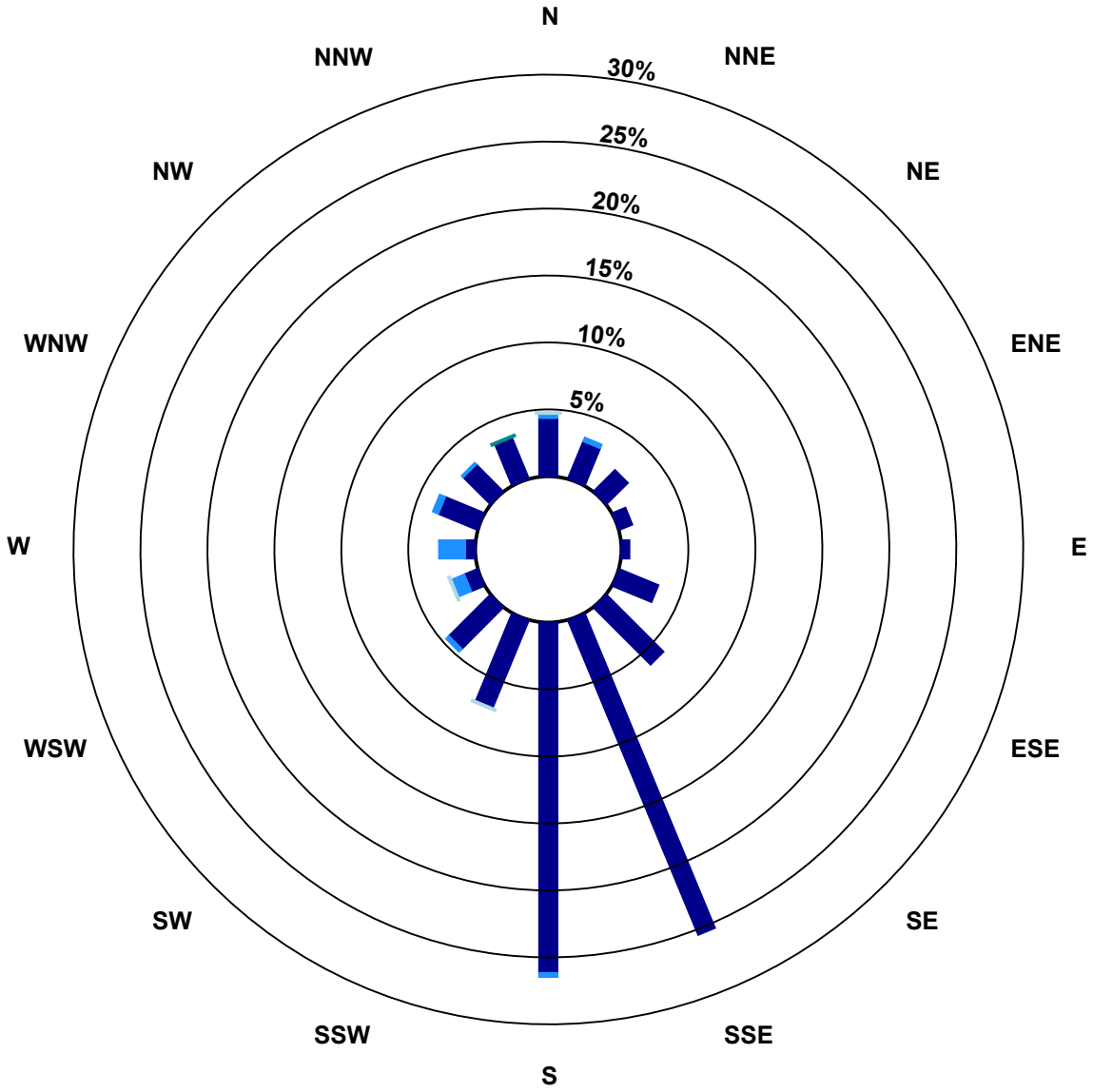
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Blackrod



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

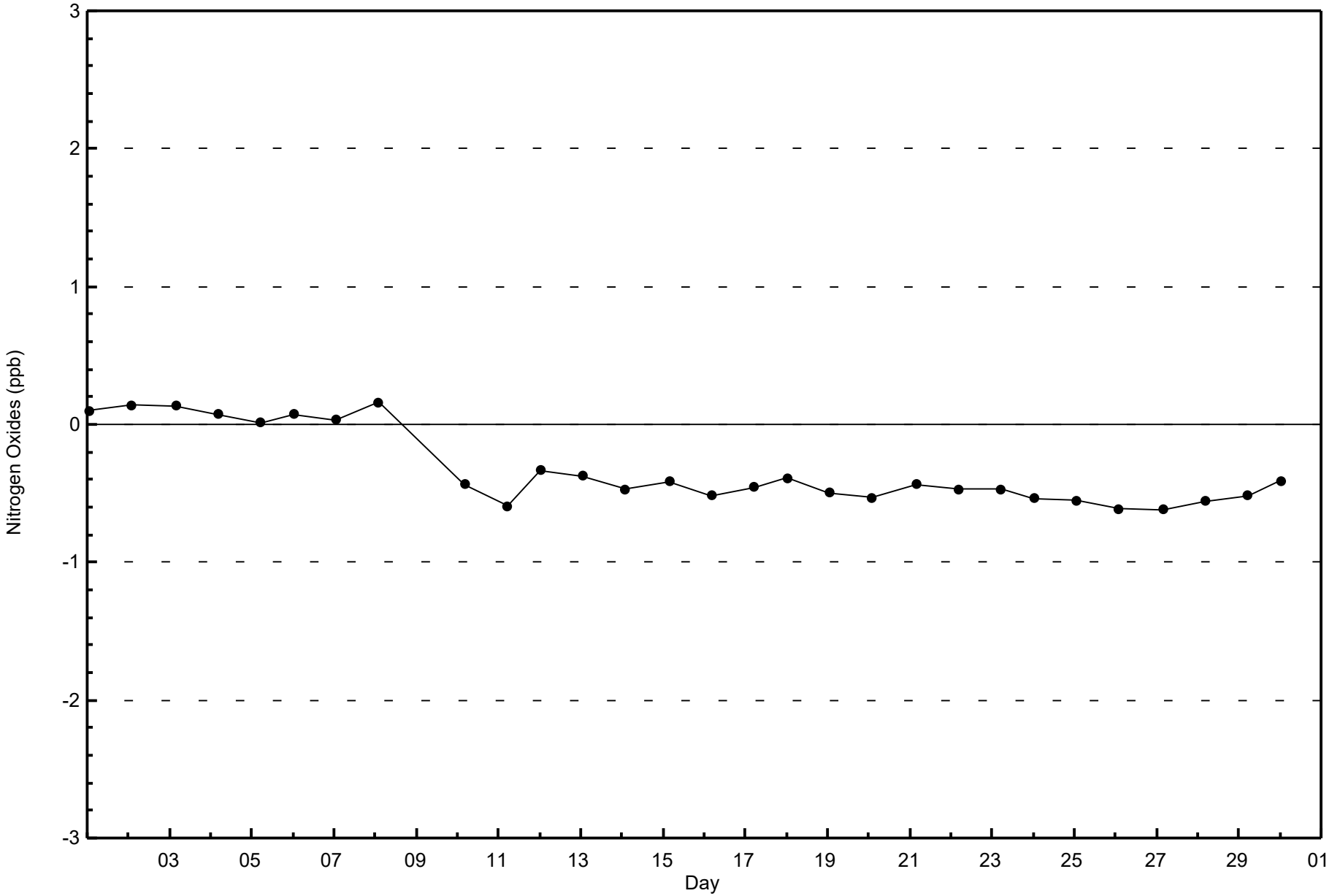
Total Number of Valid Hours: 665

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025

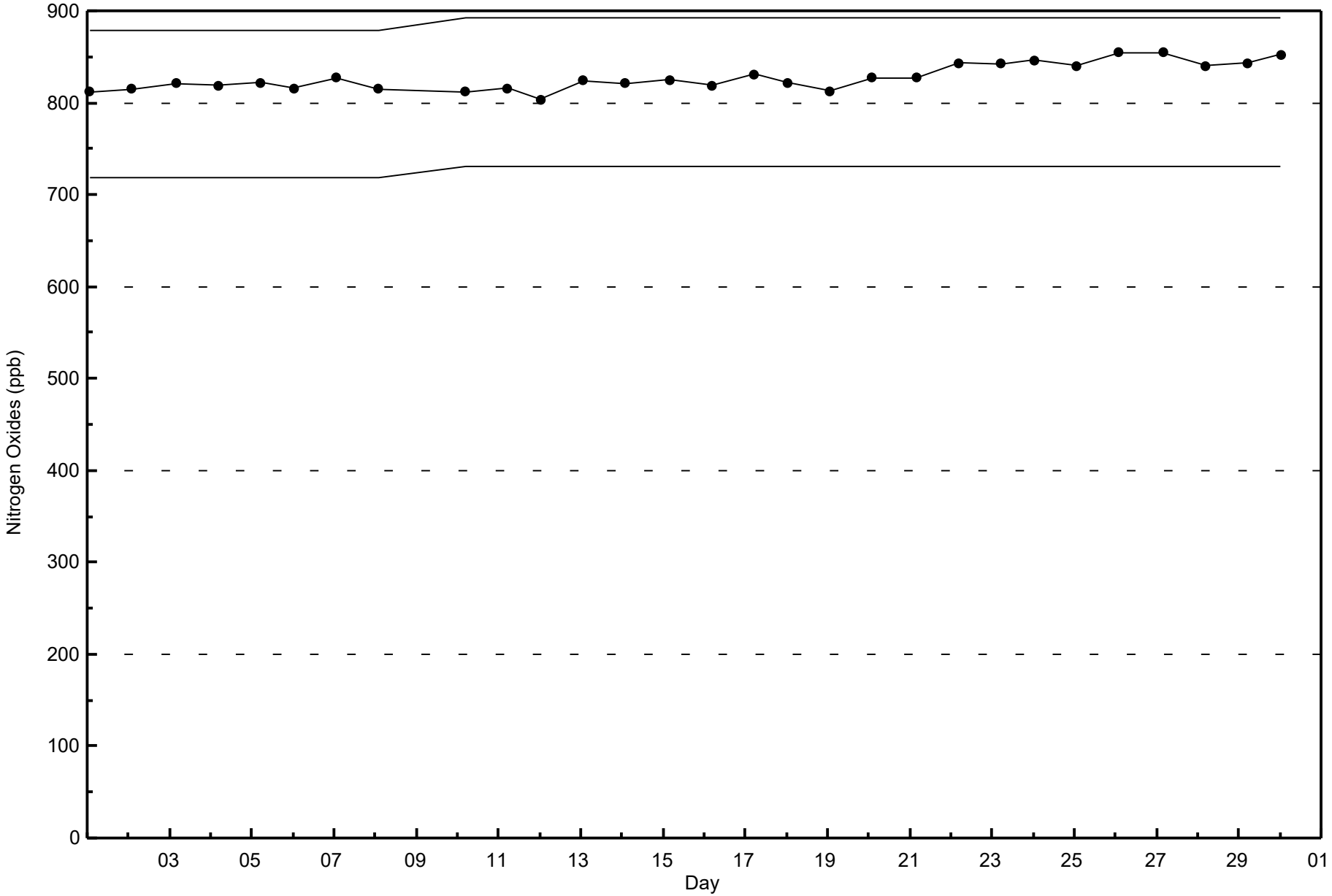


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - September 2025



Maximum Value: 27.1 C on Sep 13 16:00

Maximum Daily Average: 21.7 C on Sep 13

Minimum Value: 3.5 C on Sep 25 00:00

Minimum Daily Average: 9.9 C on Sep 24

Maximum Diurnal Average: 20.4 C at hour 16

Minimum Diurnal Average: 10.0 C at hour 7

Monthly Average: 14.77 C

Percentiles: P_1 = 4.6 P_{10} = 8.3 Q_1 = 11.2 Median = 14.5 Q_3 = 18.3 P_{90} = 21.4 P_{99} = 26.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

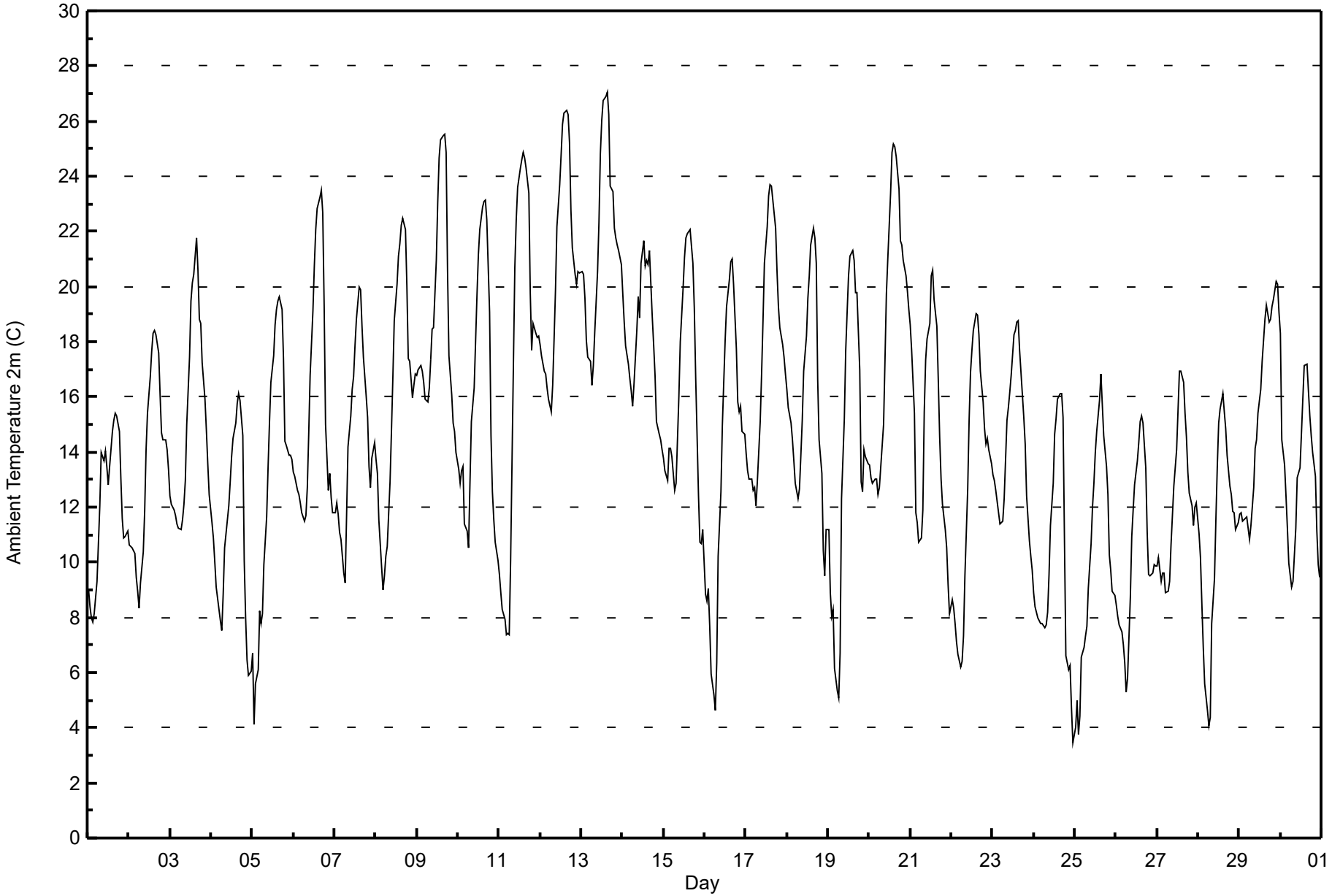
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	9.0	8.4	8.0	7.8	8.1	9.3	10.7	12.0	14.0	13.7	14.0	13.5	12.8	13.5	14.7	15.2	15.4	15.3	14.7	13.1	11.6	10.9	11.0	11.1	12.0	15.4
2-Sep	10.7	10.6	10.5	10.3	9.4	9.0	8.3	9.2	10.4	11.8	14.1	15.4	16.7	17.6	18.3	18.4	18.3	17.6	16.1	14.7	14.5	14.4	14.1	13.4	13.5	18.4
3-Sep	12.4	12.1	11.9	11.7	11.4	11.2	11.2	11.5	12.1	13.0	15.0	17.4	19.5	20.1	20.4	21.8	20.6	18.8	18.7	17.2	15.9	14.8	13.6	12.5	15.2	21.8
4-Sep	11.4	10.9	10.0	9.1	8.7	7.9	7.5	8.9	10.5	11.6	12.0	12.9	13.8	14.5	15.1	15.8	16.1	15.9	14.6	10.1	8.0	6.5	5.9	6.1	11.0	16.1
5-Sep	6.7	4.1	5.6	6.1	8.2	7.8	8.2	9.9	11.6	13.4	15.1	16.5	17.5	18.6	19.2	19.5	19.6	19.2	17.4	14.4	14.2	13.9	13.9	13.7	13.1	19.6
6-Sep	13.3	13.1	12.6	12.4	12.2	11.8	11.5	11.7	12.7	14.6	16.8	19.1	20.8	22.1	22.8	23.2	23.5	22.7	19.3	15.0	12.6	13.2	12.4	11.8	15.9	23.5
7-Sep	11.8	12.2	11.8	11.1	10.8	9.6	9.3	11.7	14.2	15.3	16.3	16.7	17.8	18.8	20.0	19.9	18.5	17.5	16.0	15.3	13.5	12.7	13.8	14.3	14.5	20.0
8-Sep	13.7	13.2	11.6	9.8	9.0	9.5	10.2	10.6	12.9	14.7	16.7	18.8	20.1	21.1	21.5	22.2	22.5	22.1	20.1	17.4	17.3	16.0	16.4	16.9	16.0	22.5
9-Sep	16.8	17.0	17.2	16.9	16.5	15.9	15.8	16.3	17.4	18.5	18.5	21.0	23.0	24.7	25.3	25.5	25.5	24.8	20.6	17.5	16.1	15.1	14.7	14.0	18.9	25.5
10-Sep	13.4	12.8	13.3	13.5	11.4	11.1	10.5	12.8	15.1	16.3	18.0	19.7	21.2	22.0	22.9	23.1	23.1	22.4	19.1	14.6	12.5	11.5	10.7	10.1	15.9	23.1
11-Sep	9.5	8.9	8.3	7.9	7.4	7.4	7.4	10.0	17.2	20.7	22.4	23.6	24.3	24.6	24.8	24.7	24.3	23.4	19.8	17.7	18.7	18.3	18.2	18.2	17.0	24.8
12-Sep	17.9	17.5	16.9	16.8	16.3	15.9	15.5	16.4	18.1	19.9	22.2	23.7	24.8	25.9	26.3	26.4	26.2	25.2	22.8	21.4	20.4	20.1	20.6	20.5	20.7	26.4
13-Sep	20.6	20.4	19.6	18.0	17.4	17.3	16.4	17.2	18.4	20.5	22.3	24.8	26.0	26.8	26.9	27.1	26.2	23.7	23.4	22.1	21.8	21.5	21.3	20.8	21.7	27.1
14-Sep	19.7	18.7	17.9	17.2	16.7	16.2	15.6	16.5	18.4	19.6	18.9	20.9	21.7	20.8	21.0	20.8	21.3	18.9	17.9	16.8	15.1	14.6	14.5	14.1	18.1	21.7
15-Sep	13.8	13.3	13.0	14.1	14.1	13.9	12.6	12.8	14.4	16.0	18.0	19.9	21.1	21.8	21.9	22.1	21.5	20.8	19.2	16.7	12.4	10.7	10.7	11.2	16.1	22.1
16-Sep	8.8	8.6	9.1	7.7	5.9	5.2	4.6	6.3	10.2	12.6	14.9	16.5	18.1	19.2	20.2	20.9	21.0	20.1	17.7	15.8	15.5	15.7	14.8	14.6	13.5	21.0
17-Sep	13.9	13.3	13.0	13.0	12.6	12.7	12.0	13.0	15.1	16.8	18.7	20.8	22.2	23.3	23.7	23.6	23.1	22.1	20.6	19.3	18.5	17.9	17.4	16.8	17.7	23.7
18-Sep	16.3	15.6	15.1	14.4	13.7	12.9	12.3	12.7	13.9	15.1	16.9	18.2	19.6	20.4	21.5	22.1	21.7	20.9	16.6	14.5	13.2	10.4	9.5	11.2	15.8	22.1
19-Sep	11.2	8.9	8.0	8.3	6.2	5.3	5.1	6.7	12.3	15.2	17.7	19.1	20.4	21.1	21.3	20.9	19.8	19.8	17.0	12.9	12.6	14.1	13.8	13.6	13.8	21.3
20-Sep	13.5	13.1	12.9	13.0	13.0	12.4	12.7	13.5	15.0	17.4	19.7	21.0	23.4	24.8	25.2	25.1	24.7	23.5	21.7	21.5	20.9	20.4	19.8	19.1	18.6	25.2
21-Sep	18.6	17.7	15.4	11.8	11.4	10.7	10.9	11.9	15.4	17.3	18.1	18.7	20.4	20.6	19.5	18.6	16.6	14.5	13.0	12.1	11.2	10.5	9.2	8.1	14.7	20.6
22-Sep	8.6	8.4	7.8	7.1	6.7	6.2	6.4	7.3	9.5	12.7	15.1	16.9	17.7	18.4	19.0	19.0	18.3	16.9	15.8	14.8	14.3	14.5	14.1	13.6	12.9	19.0
23-Sep	13.2	13.0	12.6	11.8	11.4	11.4	11.5	12.3	15.2	15.6	16.2	16.8	18.3	18.4	18.7	18.7	17.7	16.1	15.3	14.3	12.4	10.8	10.2	9.7	14.2	18.7
24-Sep	8.9	8.4	8.0	7.9	7.8	7.8	7.6	7.7	8.2	9.6	11.4	12.9	14.6	15.2	15.9	16.1	16.1	15.2	10.8	6.6	6.1	6.2	4.7	3.5	9.9	16.1
25-Sep	4.0	5.0	3.7	4.4	6.5	6.9	7.3	7.7	9.0	10.7	12.0	12.9	14.0	14.7	15.8	16.8	15.7	14.6	13.5	12.5	10.3	9.7	9.0	8.8	10.2	16.8
26-Sep	8.5	8.0	7.7	7.5	7.0	6.3	5.3	5.8	8.7	10.9	11.9	12.8	13.7	14.3	15.1	15.3	15.1	13.4	11.1	9.6	9.5	9.6	9.9	9.9	10.3	15.3
27-Sep	9.9	10.2	9.3	9.6	9.6	8.9	9.0	9.3	10.6	11.7	12.8	14.1	15.5	16.9	16.9	16.5	15.4	14.5	13.3	12.5	12.0	11.3	12.0	12.2	12.3	16.9
28-Sep	11.0	10.2	8.5	6.9	5.6	4.6	4.1	4.4	7.8	9.4	11.6	13.5	15.0	15.6	16.1	15.5	14.8	13.9	12.8	12.4	11.8	11.8	11.2	11.4	10.8	16.1
29-Sep	11.7	11.8	11.5	11.6	11.7	11.2	10.8	11.3	12.7	14.2	14.5	15.4	16.3	17.3	18.1	18.8	19.3	18.7	18.8	19.3	19.5	20.2	20.1	19.1	15.6	20.2
30-Sep	18.3	14.5	13.5	12.4	11.2	10.0	9.1	9.3	10.3	11.2	13.1	13.4	14.6	15.9	17.1	17.2	16.2	15.3	14.6	14.0	13.1	11.1	9.9	9.4	13.1	18.3
	12.6	12.0	11.5	11.0	10.6	10.2	10.0	10.9	13.0	14.7	16.2	17.6	18.8	19.6	20.2	20.4	19.9	18.9	17.1	15.2	14.2	13.6	13.2	13.0	Diurnal Average	
	20.6	20.4	19.6	18.0	17.4	17.3	16.4	17.2	18.4	20.7	22.4	24.8	26.0	26.8	26.9	27.1	26.2	25.2	23.4	22.1	21.8	21.5	21.3	20.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Blackrod - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	128	17.78	17.78
10 - 20	473	65.69	83.47
> 20	119	16.53	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Blackrod - September 2025

Maximum Value: 97.9 % on Sep 8 06:00

Maximum Daily Average: 90.2 % on Sep 1

Minimum Value: 22.8 % on Sep 23 16:00

Minimum Daily Average: 40.7 % on Sep 27

Maximum Diurnal Average: 78.4 % at hour 7

Minimum Diurnal Average: 41.3 % at hour 16

Monthly Average: 62.11 %

Percentiles: P_1 = 27.4 P_{10} = 37.4 Q_1 = 45.1 Median = 61.0 Q_3 = 78.3 P_{90} = 89.2 P_{99} = 96.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

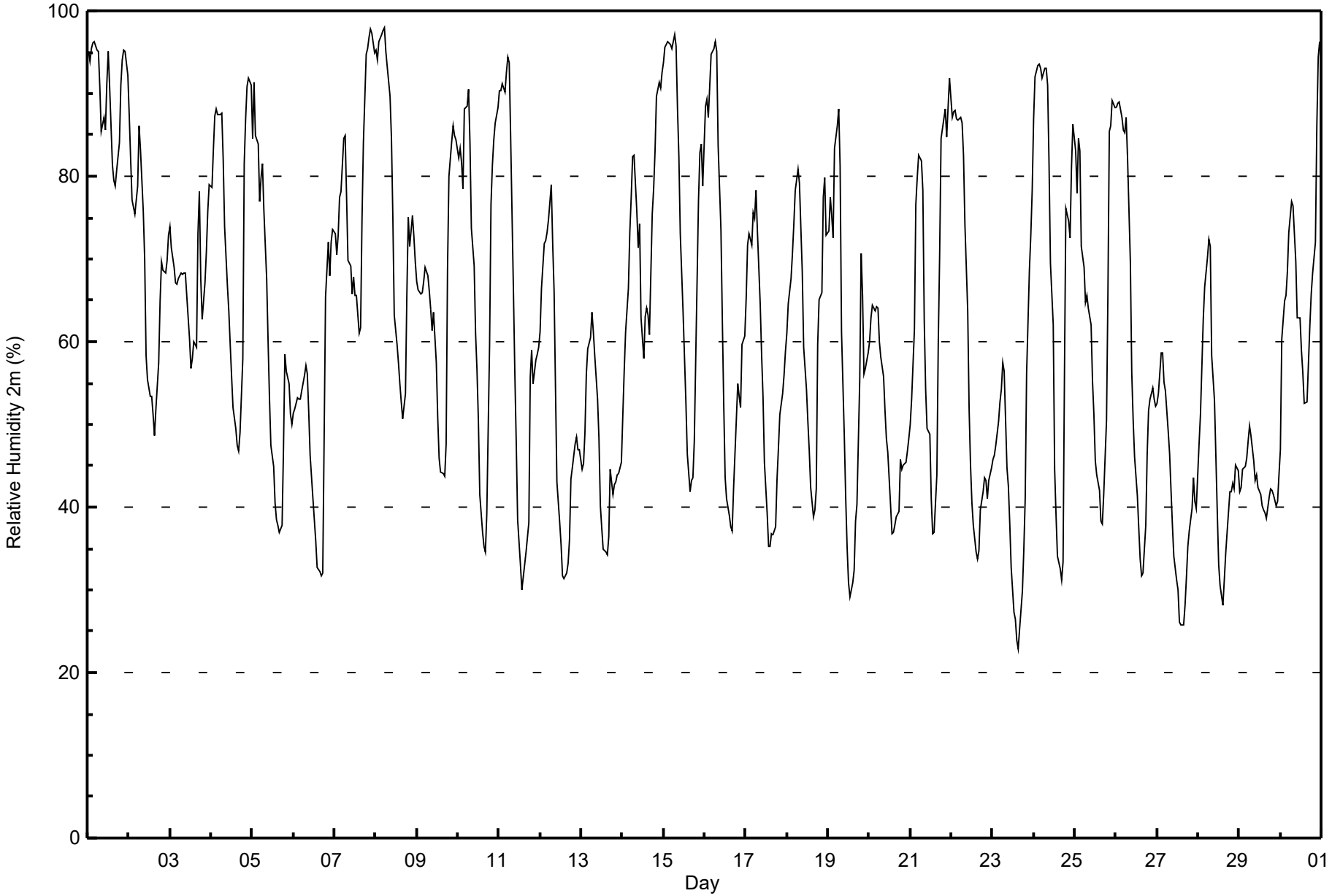
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95.2	93.9	95.5	96.1	96.3	95.2	95.1	90.8	85.4	87.2	85.6	91.3	95.1	90.8	81.4	79.5	78.8	80.6	84.0	91.0	94.1	95.2	95.0	92.2	90.2	96.3
2-Sep	87.3	82.0	77.2	75.5	77.1	78.7	86.1	83.2	75.7	70.1	58.4	55.4	53.4	53.4	51.2	48.6	51.8	57.4	64.9	69.6	68.7	68.4	69.9	72.9	68.2	87.3
3-Sep	74.0	71.4	69.0	67.1	67.0	67.7	68.3	68.2	68.3	68.4	65.6	60.4	56.7	57.9	60.1	59.3	73.0	78.1	67.6	62.7	67.0	70.8	75.8	78.9	67.6	78.9
4-Sep	78.6	83.2	87.4	88.2	87.4	87.4	87.7	82.0	73.8	66.8	63.7	59.7	55.8	52.1	49.5	47.4	46.7	49.1	57.9	81.6	86.9	90.8	91.8	91.0	72.8	91.8
5-Sep	84.6	91.4	85.0	83.9	76.9	79.8	81.5	75.9	67.7	60.2	53.2	47.5	44.9	40.5	38.5	37.9	36.9	37.7	47.0	58.6	56.5	54.9	51.2	50.1	60.1	91.4
6-Sep	51.4	51.8	53.2	53.0	53.1	54.0	55.9	57.2	56.0	51.6	46.2	41.1	38.4	36.0	32.6	32.2	31.6	32.1	48.5	65.4	72.0	67.9	72.0	73.6	51.1	73.6
7-Sep	73.0	70.5	72.9	77.5	78.1	84.6	84.9	77.4	69.9	69.1	65.8	67.8	65.7	65.6	61.1	61.8	74.7	84.0	94.7	95.5	96.8	97.7	97.4	95.0	78.4	97.7
8-Sep	95.2	94.1	96.3	97.2	97.6	97.9	95.1	93.3	89.7	84.6	75.1	63.2	59.6	57.4	55.0	52.7	50.6	53.8	65.8	75.1	71.5	75.2	72.8	69.6	76.6	97.9
9-Sep	67.2	66.3	65.8	65.9	67.3	69.0	68.0	66.1	63.9	61.3	63.6	57.4	50.8	45.9	44.2	44.0	43.7	47.7	68.9	80.0	84.2	86.1	84.9	84.4	64.4	86.1
10-Sep	82.3	83.4	81.6	78.5	88.2	88.4	90.5	84.1	73.7	69.2	61.0	56.6	50.5	41.6	36.9	35.3	34.5	39.2	59.7	76.6	81.4	84.4	86.4	88.3	68.8	90.5
11-Sep	90.3	90.4	91.1	90.2	92.6	94.3	93.8	84.8	66.1	56.3	47.8	38.4	33.1	30.0	31.6	33.1	34.5	38.2	55.7	59.0	54.9	57.9	58.4	59.4	61.7	94.3
12-Sep	61.3	66.4	71.8	72.3	73.2	74.8	79.1	71.9	66.1	54.4	43.1	38.1	35.4	31.7	31.3	32.0	33.1	36.1	43.4	44.8	47.6	48.4	47.0	47.0	52.1	79.1
13-Sep	44.6	45.2	48.9	56.2	59.2	60.5	63.6	61.2	58.2	53.1	48.3	40.1	37.5	34.9	34.6	34.3	36.4	44.6	41.5	42.7	43.1	44.0	44.1	45.5	46.8	63.6
14-Sep	51.1	56.4	61.2	66.4	73.3	77.5	82.3	82.5	75.8	71.4	74.3	62.9	58.0	63.1	64.1	63.1	60.8	75.4	78.5	83.1	89.6	91.4	90.7	92.5	72.7	92.5
15-Sep	93.7	95.7	96.3	96.0	96.0	95.5	97.1	95.8	88.3	82.4	73.1	63.6	58.1	52.7	46.4	41.8	43.1	43.5	48.0	57.7	77.1	82.9	83.9	78.8	74.5	97.1
16-Sep	88.5	89.4	87.1	90.8	94.8	95.5	96.2	95.1	83.7	73.5	62.6	52.4	43.6	41.1	39.0	37.6	37.0	42.1	50.6	54.9	53.4	52.1	59.7	60.8	65.9	96.2
17-Sep	65.2	71.6	73.1	71.7	75.6	74.9	78.4	73.4	64.5	58.5	53.4	45.4	39.2	35.2	35.3	36.8	36.7	37.7	43.4	47.1	51.1	53.8	56.0	58.8	55.7	78.4
18-Sep	61.0	64.6	67.6	70.7	74.3	78.4	80.8	79.2	73.8	68.4	59.3	54.2	50.3	46.7	42.4	38.8	39.7	42.2	59.6	65.1	66.0	77.5	79.8	72.8	63.1	80.8
19-Sep	73.4	77.5	75.2	72.5	83.4	86.1	88.1	81.3	61.2	48.5	41.0	35.1	30.8	29.2	30.9	32.3	38.3	40.3	55.4	70.7	65.6	56.1	56.8	58.7	57.8	88.1
20-Sep	60.0	62.9	64.5	63.8	64.3	64.1	60.1	58.1	55.8	51.6	48.3	46.6	40.1	36.8	36.9	37.8	38.9	39.4	45.7	44.6	45.0	45.4	46.8	48.4	50.2	64.5
21-Sep	50.0	53.0	61.6	76.7	79.8	82.6	81.9	78.3	62.6	54.2	49.5	48.8	41.0	36.8	36.9	43.9	59.9	70.7	84.6	85.8	88.1	84.8	88.2	91.8	66.3	91.8
22-Sep	87.1	87.7	88.0	87.0	86.8	87.1	86.5	82.6	74.3	63.7	51.8	45.0	40.4	37.8	34.6	33.7	34.8	39.7	41.8	43.6	43.2	40.9	43.1	44.8	58.6	88.0
23-Sep	45.7	46.2	47.5	50.4	52.7	54.3	57.4	56.5	44.7	42.6	38.0	32.7	27.2	26.5	23.9	22.8	25.3	29.8	34.7	41.1	56.1	68.6	72.9	78.3	44.8	78.3
24-Sep	87.0	92.0	93.3	93.5	93.1	91.9	93.0	93.1	91.0	81.6	69.5	62.0	44.6	38.9	34.0	32.6	31.2	33.4	56.0	76.1	74.5	72.6	81.0	86.3	70.9	93.5
25-Sep	83.0	78.0	84.6	83.1	71.6	68.9	64.8	65.5	64.0	62.0	55.3	51.2	45.5	43.9	42.0	38.4	37.9	41.6	50.5	65.8	85.5	86.0	89.2	88.2	64.4	89.2
26-Sep	88.3	88.8	89.0	87.1	85.7	85.3	87.1	82.2	69.6	56.2	50.6	46.1	41.3	37.4	33.8	31.6	32.0	37.7	46.5	51.7	53.0	54.5	53.0	52.2	60.0	89.0
27-Sep	52.5	53.8	58.7	58.6	55.1	54.1	49.1	46.4	42.0	37.9	34.1	31.1	30.1	26.2	25.8	25.8	28.2	31.5	35.2	37.2	39.8	43.6	40.7	39.9	40.7	58.7
28-Sep	47.6	51.2	56.9	62.6	66.7	70.2	72.4	71.5	58.3	52.8	46.2	39.3	33.1	30.5	28.2	31.3	34.4	37.0	41.9	41.8	42.9	42.3	45.1	44.4	47.9	72.4
29-Sep	41.9	42.3	44.5	44.8	45.9	48.0	49.9	48.6	45.5	43.1	43.9	42.4	41.5	40.2	39.6	39.3	38.7	41.1	42.1	42.0	41.5	40.1	40.7	44.0	43.0	49.9
30-Sep	47.0	60.3	64.8	65.6	68.4	73.2	77.0	76.5	73.1	69.7	62.9	63.0	59.0	56.2	52.5	52.8	57.2	61.9	65.7	68.3	72.0	86.1	94.3	96.2	67.7	96.2
	70.3	72.1	73.7	74.8	76.0	77.3	78.4	75.4	68.1	62.3	56.4	51.3	46.7	43.9	41.8	41.3	43.4	47.5	56.0	62.6	65.6	67.3	69.0	69.5	Diurnal Average	
	95.2	95.7	96.3	97.2	97.6	97.9	97.1	95.8	91.0	87.2	85.6	91.3	95.1	90.8	81.4	79.5	78.8	84.0	94.7	95.5	96.8	97.7	97.4	96.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Blackrod - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	106	14.72	14.72
40 - 60	244	33.89	48.61
60 - 80	205	28.47	77.08
80 - 100	165	22.92	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Blackrod - September 2025

Maximum Speed: 37 km/h on Sep 29 06:00

Maximum Daily Speed Average: 24.7 km/h on Sep 29

Minimum Speed Value: 0 km/h on Sep 1 09:00

Minimum Daily Speed Average: 1.5 km/h on Sep 10

Maximum Diurnal Speed Average: 9.2 km/h at hour 5

Minimum Diurnal Speed Average: 2.7 km/h at hour 18

Monthly Average Velocity: 6.3 km/h 178.8 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 10 Q_3 = 15 P_{90} = 19 P_{99} = 31

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	SSE2	E2	E2	ESE1	SSE3	NNE2	ENE7	ESE6	SW0	W7	W3	NNW6	NNE8	NNE9	N10	N9	N8	N7	NNE3	ESE1	SE2	ESE2	NE3	NE5	NNE2.7	N10
2-Sep	NE7	ENE7	E6	SE3	ESE3	SSE2	SSE2	S4	SSW4	SSW6	S7	S8	S10	S11	SSW11	SSW12	S11	S10	S9	SSE10	SSE14	SSE17	S18	S19	S7.4	S19
3-Sep	S19	S21	S21	S21	S21	S22	S22	S22	S21	S20	S17	S16	SSW14	S10	S9	SW4	NW12	NNW17	N22	N22	N19	N19	N19	NNW17	S5.5	N22
4-Sep	NNW13	NNW13	NNW11	NNW13	NNW15	NNW10	NNW11	NNW15	NNW20	NNW20	NNW15	NW15	NW16	NW16	NNW16	NNW15	N12	NNE9	ENE4	ESE2	ESE4	SSE2	SE2	SE5	NNW10.0	NNW20
5-Sep	SSE5	S5	S9	S11	SSE14	SSE13	S12	S14	S16	S15	S16	S16	S13	S10	S11	S11	S9	S9	SSE7	SSE8	SSE12	SSE11	SSE12	SSE13	S11.0	S16
6-Sep	SSE14	SSE15	SSE16	SSE17	SSE15	SSE17	SSE18	S17	S17	S13	S12	S13	S14	S16	S18	SSW15	SSW12	S10	SSE5	SSE3	SE3	SE5	SSE4	SSE4	S11.8	SSE18
7-Sep	SSE5	SSE7	SSE6	SSE6	SSE6	S6	S5	S7	SSW7	SSW4	SW3	NE3	NNE6	WSW4	WNW8	NW8	S2	SE1	ESE2	ESE2	SE2	ESE2	NE4	NNE6	S1.8	NW8
8-Sep	NNE7	NNE7	N3	ENE3	S0	ENE4	ENE3	SSW1	N5	N7	N7	N7	NNW5	WNW5	NNW5	NNW4	N5	NE6	E5	E6	ESE5	SE5	SSE8	SSE11	NE2.4	SSE11
9-Sep	SSE13	SSE15	SSE15	SSE17	SSE18	SSE17	SSE18	SSE17	S17	S17	S14	S16	S18	SSW16	S16	S15	SSW12	SSW5	ESE1	ESE2	E1	ESE2	ESE2	SE2	S11.3	SSE18
10-Sep	SSE3	SSE5	SSE8	SSE7	SSE4	SSE4	SE3	WSW1	NW5	N8	N9	N7	NW9	N11	N7	N9	NNW7	NNE4	SE2	SE2	SE2	SE1	SE1	SE1	N1.5	N11
11-Sep	SE1	SE2	SSE4	SSE2	ESE1	ESE1	WSW1	NNW0	S7	S10	S9	S7	SSW7	SSW8	S7	SSW9	S9	SSE7	SE4	SE7	SSE10	SSE12	SSE12	SSE13	SSE6.0	SSE13
12-Sep	SSE15	SSE17	SSE16	SSE16	SSE16	SSE15	S14	SSE13	S14	S16	S16	S18	S19	SSW18	SSW15	S13	S10	SSE9	SSE7	SSE9	SSE9	SSE10	SSE13	SSE13	S13.4	S19
13-Sep	SSE14	SSE14	SSE14	S9	SSE13	S12	SSE11	S13	S13	SSW8	S11	S14	S17	SSE17	S14	S13	SSE8	SE6	SE8	SSE9	SE10	SSE11	SSE13	SSE14	SSE11.6	SSE17
14-Sep	SSE14	SSE14	SSE16	SSE16	SSE15	SSE15	SSE8	S11	SSE9	SSE12	SSE10	SSE12	S14	S10	SSW8	SSW8	SE4	ESE12	SSE8	NE1	SE1	SE1	W1	S3	SSE8.8	SSE16
15-Sep	SSW5	S8	S9	S9	S10	S7	S9	S8	S5	WNW9	NW13	NW15	WNW15	WNW18	NW16	WNW16	NW15	NW12	NW8	NNW5	ESE1	ESE1	N3	N6	W5.0	WNW18
16-Sep	NNE2	N5	N7	NNE3	E2	E2	SSE4	SSE3	SW1	NW4	WSW3	WNW3	NNW5	NW7	N5	NE4	NE5	ENE5	E5	ESE5	SE6	SE10	SSE14	SSE16	ESE1.5	SSE16
17-Sep	SSE16	SSE18	SSE19	S20	SSE22	SSE20	SSE17	SSE18	S19	S19	S19	S20	SSE21	SSE21	SSE21	SSE20	SSE20	SSE19	SSE14	SSE16	SSE21	SSE24	SSE25	SSE23	SSE19.6	SSE25
18-Sep	SSE22	SSE24	SSE26	SSE25	SSE26	S19	S17	S16	S18	S17	SSW11	S9	SW7	SSW8	SSW7	SW8	SSW8	SW6	SSE3	S6	SSE5	SE3	SE2	SSE3	S11.7	SSE26
19-Sep	SSE4	SSE3	SSE7	SSE7	SSE5	SSE3	SE2	S6	SSW6	SSW8	SSW10	SSW13	SSW14	SW13	SW13	SW12	SW5	SSW4	ESE2	ESE3	SSE7	SSE9	SSE10	SSE10	S6.5	SSW14
20-Sep	SSE10	SSE9	SSE10	SSE11	SSE13	SSE14	SSE14	SSE15	S14	S15	S17	S18	S20	S20	S20	S20	S14	S10	SSE10	SSE14	SSE15	SSE15	SSE14	SSE16	SSE14.2	S20
21-Sep	SSE16	S13	S6	ESE3	NE5	NE4	NE6	NE4	N6	NNE9	NNE9	N6	NW10	WNW14	NW13	NW10	NW9	NW11	WNW7	NW8	WNW9	WNW8	SW1	S8	NW3.2	SSE16
22-Sep	S10	S9	S9	S9	S9	S9	S10	S11	S13	SSW10	SW11	SW13	SW12	WSW13	SW15	SSW16	SSW14	S9	SSE11	S12	S15	S17	SSE19	SSE19	S11.4	SSE19
23-Sep	SSE18	SSE19	SSE17	SSE14	S12	SSE8	S8	S8	SSW8	WSW8	W9	W9	WSW12	WNW16	W15	WSW15	WSW14	SW10	SW9	SSW9	SSW9	S10	S8	S7	SSW8.4	SSE19
24-Sep	S7	S10	S14	S11	S11	S11	S12	S10	S11	SW10	WSW14	W13	WNW17	WNW18	WNW16	WNW15	WNW14	WNW12	S3	SSE5	SSE7	SSE8	SSE6	SSE5	SW6.3	WNW18
25-Sep	SSE8	SSE9	SSE7	SSE7	SSE10	SSE13	SSE10	SSE12	S13	S18	S21	S21	SSE24	SSE22	S20	S19	S16	S11	WSW3	WNW9	SSW5	S8	S8	S9	S11.9	SSE24
26-Sep	S9	S7	S7	S5	S6	S7	SSE7	S9	SW7	W18	WNW21	W21	WNW23	WNW22	W19	WNW18	W16	WSW9	SSW8	S9	S10	SSE12	SSE14	S13	WSW7.6	WNW23
27-Sep	S14	S19	SSW13	SSW15	SW15	WSW13	W14	W12	W15	W20	WNW20	W18	W15	WSW16	SW19	SW18	SW11	SW8	SW7	SW9	SSW8	SSW8	SSW11	SW9	SW11.5	WNW20
28-Sep	SSW7	SW8	SSW8	S8	SSE9	SSE8	SSE8	S6	WSW5	W7	SW9	SSW9	SW8	S8	S11	SSW10	S9	SSE6	SE6	SE8	SE10	SE13	SE12	SE18	S7.4	SE18
29-Sep	SSE22	SSE21	SSE24	SSE32	SSE35	SSE37	SSE36	SSE33	SSE34	S34	S31	S28	S21	S19	S18	SSE14	S16	SSE17	SE20	SE21	SE20	SSE24	SSE23	SSE22	SSE24.7	SSE37
30-Sep	SSE15	S3	NNW3	N5	N7	NE6	N3	NE5	NE5	N9	NNW8	NNW10	N11	N11	N13	NNE13	NNE11	N10	NNE8	NNE6	NNE9	NNE10	NNE9	NNE10	N6.6	SSE15
	SSE8.8	SSE8.9	SSE9.1	SSE9.1	SSE9.2	SSE8.7	SSE8.1	S8.5	S7.9	SSW6.8	SSW6.9	SSW7.0	SW6.7	SW6.6	SW6.7	SW6.1	SW4.6	S2.7	SSE3.0	SSE4.0	SSE5.6	SSE6.8	SSE7.1	SSE7.7	Diurnal Average	
	SSE22	SSE24	SSE26	SSE32	SSE35	SSE37	SSE36	SSE33	SSE34	S34	S31	S28	SSE24	SSE22	SSE21	S20	SSE20	SSE19	N22	N22	SSE21	SSE24	SSE25	SSE23	Diurnal Maximum	

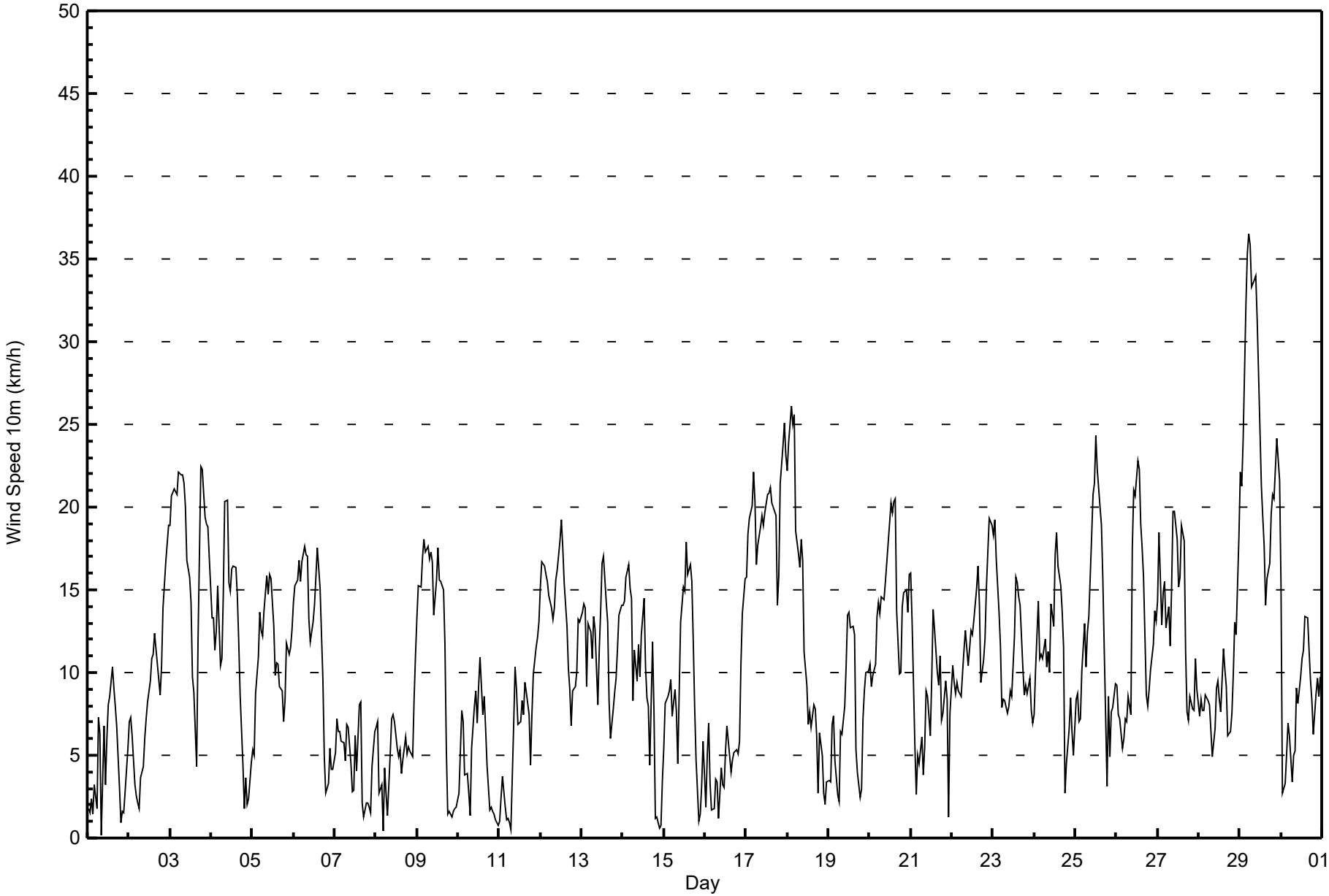
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Blackrod - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	155	21.53	21.53
6 - 11	263	36.53	58.06
12 - 19	237	32.92	90.97
20 - 28	57	7.92	98.89
29 - 38	8	1.11	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Blackrod - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	5	12	5	7	22	26	28	10	7	6	6	2	2	2	7	155
6 - 11	21	16	4	2	2	1	9	54	81	28	16	2	4	6	9	8	263
12 - 19	5	1	0	0	0	1	3	83	72	14	9	7	10	13	9	10	237
20 - 28	2	0	0	0	0	0	3	24	20	0	0	0	2	4	0	2	57
29 - 38	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0	8
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	22	16	7	9	24	41	195	185	49	31	15	18	25	20	27	720

Total Number of Valid Hours: 720

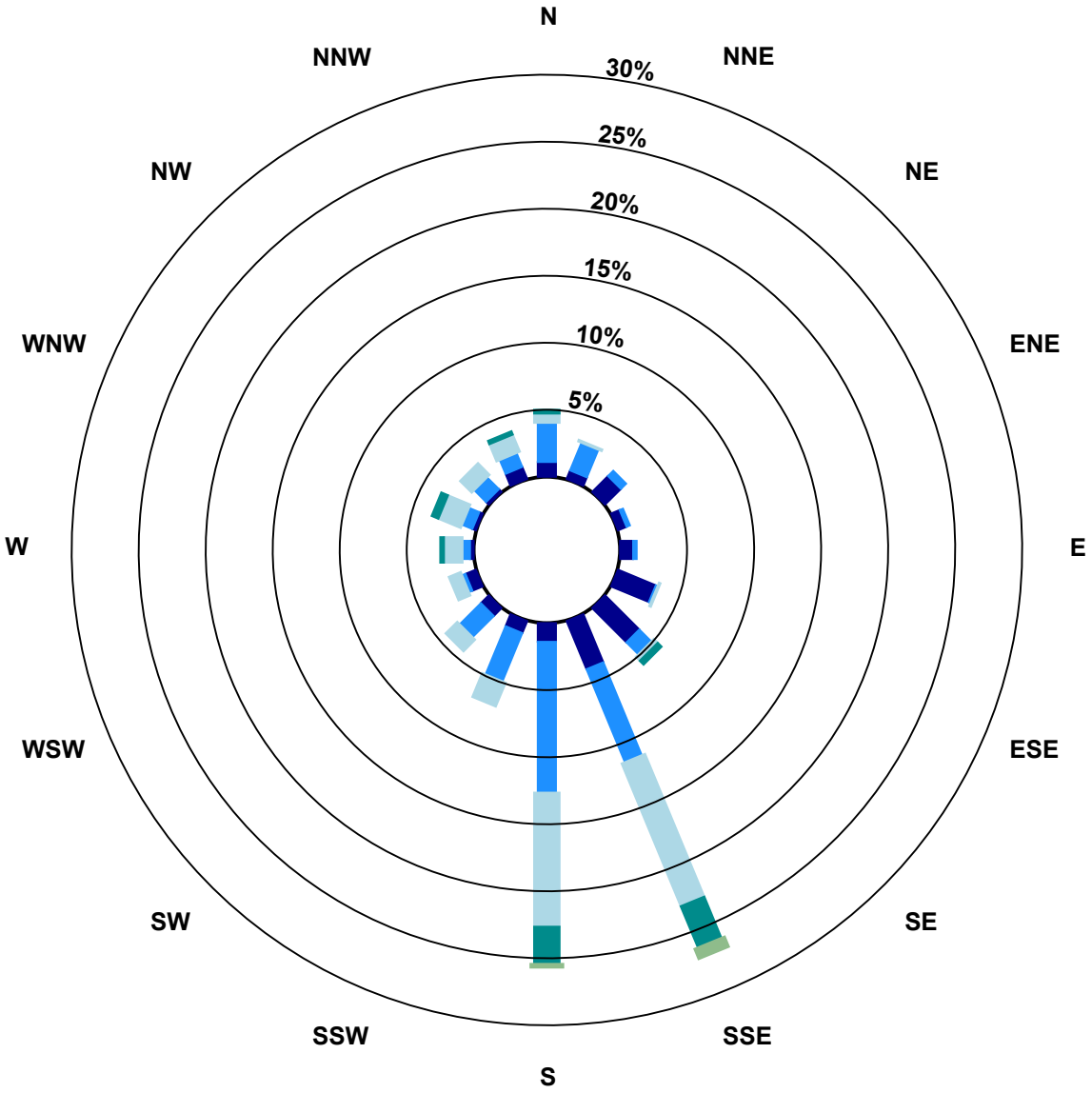
Total Number of Hours: 720

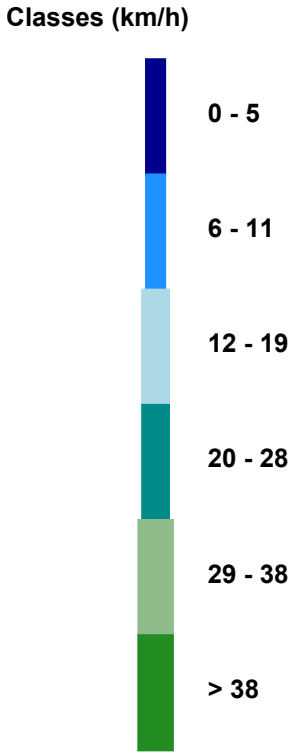
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Blackrod





Total Number of Valid Hours: 720

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 8 km/h on Sep 3 18:00

Minimum Value: 1 km/h on Sep 9 23:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	2	1	1	1	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	1	1	1	2	1	3
2-Sep	1	2	3	2	1	1	1	1	1	2	2	2	3	4	3	3	3	2	1	2	2	3	3	4	4
3-Sep	4	4	4	4	4	4	4	4	4	4	3	4	3	2	1	3	5	8	5	6	5	5	4	4	8
4-Sep	3	3	3	3	3	2	2	4	5	4	3	4	4	5	5	4	4	2	2	2	1	1	1	1	5
5-Sep	1	1	1	2	2	2	2	2	3	3	4	4	4	4	4	4	3	3	2	2	2	2	2	2	4
6-Sep	3	3	3	3	3	3	3	3	4	3	3	3	3	4	4	4	3	3	2	1	2	2	1	1	4
7-Sep	1	2	2	1	1	1	2	1	1	2	2	2	2	1	3	3	1	1	1	1	1	1	2	1	3
8-Sep	1	1	1	2	1	2	2	1	1	2	2	2	3	2	2	2	2	1	1	1	2	1	2	2	3
9-Sep	2	2	3	4	3	3	3	4	4	3	3	4	4	4	3	4	4	2	1	1	1	1	1	1	4
10-Sep	1	1	2	2	1	2	1	1	2	2	2	2	3	3	3	3	2	2	1	1	1	1	1	1	3
11-Sep	1	2	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	2	3
12-Sep	3	3	3	3	3	2	2	2	2	3	3	4	5	4	3	3	3	2	2	2	2	2	2	2	5
13-Sep	3	3	3	3	2	3	2	3	3	2	3	4	4	4	4	4	3	2	2	2	2	2	3	3	4
14-Sep	3	2	3	3	3	3	4	4	3	3	2	3	3	3	2	2	5	4	3	1	1	1	1	2	5
15-Sep	2	2	1	1	1	2	1	2	1	3	4	4	5	5	5	4	4	3	2	2	1	1	3	2	5
16-Sep	1	2	1	2	1	1	2	1	1	2	2	2	2	3	2	2	1	1	1	1	2	2	2	3	3
17-Sep	3	4	4	4	4	5	4	4	4	4	4	5	5	5	5	5	5	5	4	4	5	5	6	5	6
18-Sep	5	5	6	5	6	4	3	3	3	4	3	3	3	3	3	3	2	2	1	1	1	1	1	1	6
19-Sep	1	1	1	1	1	1	1	3	1	2	3	4	4	3	4	3	2	1	1	1	2	2	2	2	4
20-Sep	2	2	2	2	3	2	2	3	2	3	4	4	5	5	5	5	3	2	4	3	3	3	3	3	5
21-Sep	3	3	3	1	1	1	1	2	1	3	2	2	3	4	3	3	4	3	2	4	3	3	1	2	4
22-Sep	1	1	1	1	1	1	1	2	2	2	3	4	4	4	5	4	4	2	2	2	3	3	3	3	5
23-Sep	3	3	3	3	3	2	2	1	2	2	3	3	4	4	5	5	5	3	2	2	2	1	3	2	5
24-Sep	2	2	3	3	2	2	3	3	2	3	5	4	5	6	5	4	4	4	1	1	2	1	1	1	6
25-Sep	2	1	2	2	2	3	2	2	3	4	4	5	6	5	5	5	4	3	4	4	2	2	1	1	6
26-Sep	1	1	1	1	1	1	1	1	2	5	5	5	6	6	7	6	5	3	2	1	1	2	2	2	7
27-Sep	2	4	3	4	4	4	5	4	5	6	5	6	5	6	5	5	4	2	2	2	2	1	3	2	6
28-Sep	2	2	1	1	1	1	1	2	2	2	3	3	3	3	4	3	2	2	2	2	3	4	4	5	5
29-Sep	6	5	6	7	8	7	8	7	7	8	6	6	6	5	5	5	4	4	5	5	5	6	5	5	8
30-Sep	5	2	3	2	2	1	1	2	1	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	5
	6	5	6	7	8	7	8	7	7	8	6	6	6	6	7	6	5	8	5	6	5	6	6	5	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Blackrod - September 2025

Direction of Maximum Speed: 153 deg on Sep 29 06:00
Direction of Maximum Daily Speed Average: 160.3 deg on Sep 29

Direction of Minimum Speed: 230 deg on Sep 1 09:00

Direction of Minimum Daily Speed Average: 1.5 deg on Sep 10

Monthly Average Direction: 178.8 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	164	83	100	105	158	33	70	107	230	269	269	342	12	13	3	8	359	356	33	108	146	103	44	34	21.5
2-Sep	44	69	91	124	116	150	166	178	204	193	178	188	186	183	195	201	178	176	169	166	168	166	171	173	170.8
3-Sep	169	170	170	169	171	170	172	177	181	182	179	179	194	190	189	232	320	342	356	8	359	356	350	347	182.3
4-Sep	344	337	335	336	336	343	342	344	342	341	338	325	325	322	332	339	4	29	57	102	112	149	144	139	341.5
5-Sep	155	177	169	170	160	168	171	173	178	181	187	182	171	181	177	171	184	175	154	149	154	152	150	154	169.5
6-Sep	157	158	158	156	159	160	161	172	179	184	174	185	187	179	185	194	202	185	160	151	140	144	156	153	171.4
7-Sep	161	168	164	163	164	172	184	185	196	206	221	45	16	242	282	324	181	144	107	105	142	104	43	32	174.8
8-Sep	24	27	350	60	190	67	62	200	353	351	359	1	330	284	327	342	356	37	79	89	106	129	152	152	34.3
9-Sep	155	160	163	161	162	160	160	168	174	181	182	185	181	192	183	188	204	211	121	122	97	118	116	137	172.4
10-Sep	153	151	168	165	148	165	135	242	316	0	6	356	325	358	350	355	327	15	138	127	126	125	129	129	6.2
11-Sep	136	144	157	151	117	121	243	335	182	175	184	178	198	194	172	193	184	168	128	141	151	154	157	159	168.4
12-Sep	158	161	165	166	165	164	170	165	185	181	183	185	189	195	192	182	176	164	147	149	150	152	153	153	170.9
13-Sep	153	152	157	179	162	171	164	170	184	194	188	173	178	167	175	183	161	141	143	148	146	150	151	155	165.1
14-Sep	156	156	158	156	157	159	160	169	168	165	162	168	173	183	195	203	144	105	147	54	126	144	276	185	161.7
15-Sep	194	185	183	174	176	177	190	188	188	301	309	307	299	297	304	294	308	304	307	327	105	113	6	7	278.3
16-Sep	13	10	358	20	92	94	166	158	226	315	245	301	339	315	9	56	53	73	87	111	131	146	157	158	101.8
17-Sep	166	166	166	171	168	165	161	167	174	171	170	171	164	164	164	163	162	162	154	151	153	156	156	164	163.7
18-Sep	166	161	157	162	168	178	172	173	180	176	196	189	217	210	201	228	200	219	155	170	166	141	136	150	175.2
19-Sep	148	149	159	158	152	150	127	184	198	193	198	200	206	218	222	215	217	205	121	120	148	156	157	157	184.6
20-Sep	157	155	157	154	159	159	163	165	175	180	183	176	173	183	189	183	171	170	155	152	149	154	163	161	167.9
21-Sep	158	171	190	113	48	52	46	46	349	14	12	3	317	300	323	324	308	317	301	307	289	292	226	178	320.1
22-Sep	178	178	178	170	172	172	173	176	180	196	219	218	236	241	220	206	204	174	163	169	171	170	167	164	187.0
23-Sep	166	165	165	165	170	165	175	181	197	242	260	265	253	293	267	255	240	222	215	200	194	179	182	182	206.6
24-Sep	173	175	174	181	178	182	178	186	182	230	252	265	290	301	290	293	284	291	183	162	158	161	153	150	224.6
25-Sep	162	163	160	154	159	163	151	157	174	180	181	178	166	165	176	176	182	176	253	288	200	190	178	175	173.7
26-Sep	175	178	180	182	176	178	166	173	227	279	282	276	288	285	272	284	278	255	204	171	170	161	163	172	236.9
27-Sep	172	180	194	209	224	241	265	262	264	278	282	268	264	248	224	233	234	235	217	218	211	192	212	214	234.8
28-Sep	198	215	201	189	164	165	166	173	257	273	216	201	230	191	177	197	169	153	145	143	137	141	139	146	176.2
29-Sep	151	152	153	154	154	153	159	160	166	170	176	181	178	169	172	166	175	158	144	145	145	147	156	161	160.3
30-Sep	165	186	335	1	358	43	11	42	39	349	345	346	351	5	353	12	12	359	12	17	25	27	21	13	9.7
	160.9	163.1	165.0	164.7	164.7	164.2	165.6	171.4	187.0	203.7	209.1	208.0	216.8	222.6	218.9	219.6	215.5	187.7	149.4	149.6	152.4	153.5	156.2	157.9	
	Diurnal Average																								

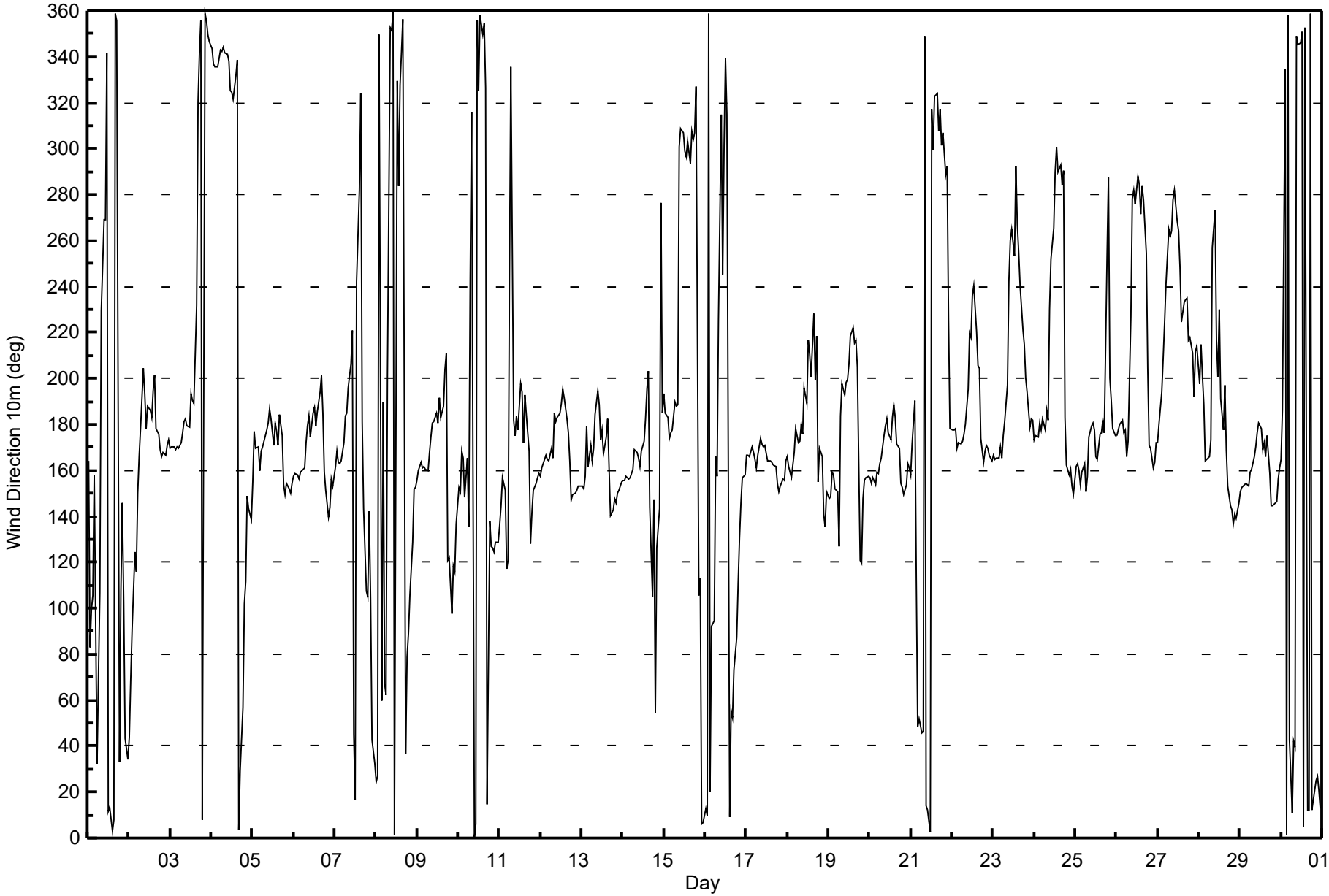
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Blackrod - September 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99 deg on Sep 8 05:00

Minimum Value: 7 deg on Sep 24 22:00

Percentiles: P_1 = 8 P_{10} = 11 Q_1 = 13 Median = 17 Q_3 = 24 P_{90} = 42 P_{99} = 85

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	73	60	47	35	20	87	26	27	95	32	53	34	18	20	18	19	22	26	38	64	51	42	55	15	95
2-Sep	15	28	57	57	55	66	79	31	21	23	29	27	28	24	25	18	18	15	8	9	10	12	12	12	79
3-Sep	12	12	11	11	12	11	12	11	12	12	14	17	16	15	13	60	24	18	17	14	15	14	13	13	60
4-Sep	12	13	15	13	12	13	14	14	17	17	17	22	21	24	22	23	26	21	23	26	26	34	25	16	34
5-Sep	24	24	14	12	10	10	9	13	13	15	19	18	24	37	29	26	30	17	18	14	13	14	14	14	37
6-Sep	12	12	12	12	11	13	11	11	12	15	19	17	17	18	18	22	20	14	18	41	24	18	20	19	41
7-Sep	15	10	13	12	13	11	26	19	21	38	58	68	31	38	24	22	64	70	45	43	24	16	22	17	70
8-Sep	16	18	41	44	99	28	51	60	20	21	26	30	60	57	47	69	44	19	16	15	24	31	14	13	99
9-Sep	12	12	13	12	13	14	12	14	14	15	15	17	17	17	17	19	17	24	21	17	49	24	27	26	49
10-Sep	24	13	8	10	32	49	38	81	31	21	22	35	30	25	44	29	30	40	50	21	17	17	19	41	81
11-Sep	55	60	11	65	43	39	70	81	16	18	25	43	48	36	40	21	19	13	17	13	14	12	10	11	81
12-Sep	11	13	11	11	11	12	11	13	12	13	16	16	18	19	18	21	22	15	15	15	13	12	13	14	22
13-Sep	13	15	14	19	11	12	12	12	15	21	20	18	21	19	24	21	22	17	16	15	15	15	14	13	24
14-Sep	13	11	10	11	11	11	25	20	20	19	20	24	21	16	19	16	78	34	32	80	73	96	99	58	99
15-Sep	23	14	10	11	11	14	8	14	37	24	20	19	25	19	21	18	20	17	17	23	16	18	46	19	46
16-Sep	53	18	13	50	44	22	32	21	80	47	74	88	43	46	57	61	39	20	17	22	24	18	11	10	88
17-Sep	11	13	12	12	13	13	16	15	14	16	17	17	19	19	17	17	18	14	17	17	15	13	14	13	19
18-Sep	13	13	13	13	14	12	12	12	12	14	26	31	50	47	48	35	26	31	64	15	17	24	24	26	64
19-Sep	16	14	8	11	13	19	28	22	14	20	20	23	26	25	31	18	25	29	30	19	14	12	10	9	31
20-Sep	10	12	11	12	9	10	12	11	12	12	14	15	17	19	18	16	17	13	14	14	15	17	15	12	19
21-Sep	14	19	41	33	12	16	9	29	24	17	19	31	25	19	17	15	17	18	24	25	23	17	86	14	86
22-Sep	8	9	9	11	10	8	8	10	10	21	23	29	30	26	22	19	17	13	10	10	10	11	11	11	30
23-Sep	11	11	16	17	17	21	17	10	30	26	32	25	29	18	23	20	20	18	15	14	13	11	16	16	32
24-Sep	22	15	14	23	13	12	10	18	14	25	21	24	23	22	24	21	20	15	45	14	13	7	12	13	45
25-Sep	8	9	11	14	12	16	14	13	13	12	14	15	18	16	18	18	15	12	69	33	38	25	11	11	69
26-Sep	10	9	11	13	13	10	11	12	32	19	17	20	16	18	22	18	17	28	19	9	9	9	10	12	32
27-Sep	11	16	18	15	18	21	19	23	23	18	18	23	26	27	21	21	22	22	21	16	18	16	23	17	27
28-Sep	15	20	19	14	9	9	10	25	46	34	27	32	33	35	33	22	20	18	21	16	19	19	19	16	46
29-Sep	16	15	15	14	14	14	13	14	13	13	14	15	16	18	18	20	15	14	18	17	18	18	15	14	20
30-Sep	53	60	87	30	15	15	34	24	20	13	26	17	22	15	18	17	15	17	15	19	14	15	13	14	87
	73	60	87	65	99	87	79	81	95	47	74	88	60	57	57	69	78	70	69	80	73	96	99	58	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS33
MONDAY CREEK
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
SEPTEMBER 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	687	33	33	100	14.8	0	1.7	0
H2S (ppb) Average	686	34	34	100	0.6	0	0.3	0
NO2 (ppb) Average	686	34	34	100	16.3	0	2.9	-
NO (ppb) Average	686	34	34	100	11.6	-	0.8	-
NOX (ppb) Average	686	34	34	100	25.9	-	3.7	-
Temperature 2 m (C) Average	720	0	0	100	27.4	-	18.8	-
Relative Humidity (%) Average	720	0	0	100	100	-	87.6	-
Wind Speed 10 m (km/h) Average	667	0	53	92.64	29	-	17	-
Wind Direction 10 m (deg) Average	667	0	53	92.64	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.44	1	-	0	0	0	0.2	0.5	1	14.8
H2S (ppb) Average	686	0.15	0.1	-	0	0.1	0.1	0.1	0.2	0.3	0.6
NO2 (ppb) Average	686	1.58	1.5	-	0.2	0.5	0.8	1.2	1.9	2.9	16.3
NO (ppb) Average	686	0.26	0.7	-	0	0	0	0.1	0.2	0.7	11.6
NOX (ppb) Average	686	1.84	1.9	-	0.2	0.5	0.9	1.3	2.1	3.6	25.9
Temperature 2 m (C) Average	720	14.45	5.6	-	-1.4	7.9	10.4	14.2	18.2	22.3	27.4
Relative Humidity (%) Average	720	63.22	21.4	-	17.5	35.3	45.2	61.8	81.7	93.9	100
Wind Speed 10 m (km/h) Average	667	8.8	6	-	0	2	4	8	13	17	29
Wind Direction 10 m (deg) Average	667	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	05 Sep 2025 08:00	05 Sep 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	07 Sep 2025 10:00	09 Sep 2025 11:00	50	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Sep 2025 12:00	09 Sep 2025 12:00	1	Maintenance - replaced sensor
Wind Speed, Wind Direction	10 Sep 2025 12:00	10 Sep 2025 12:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 14.8 ppb on Sep 28 06:00 Maximum Daily Average: 1.7 ppb on Sep 27

Minimum Value: 0.0 ppb on Sep 1 01:00 Minimum Daily Average: 0.1 ppb on Sep 16
Maximum Diurnal Average: 0.8 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 22
Monthly Average: 0.44 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.5 P_{90} = 1.0 P_{99} = 3.8

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.7	1.6	1.4	0.3	0.1	0.0	0.2	1.6
2-Sep	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	0.2	1.0	0.5	0.6	0.2	0.2	0.1	0.1	0.2	0.4	0.5	0.2	1.0
3-Sep	0.6	0.5	0.8	0.8	0.7	Z	1.0	0.8	0.5	0.5	1.5	1.6	1.4	1.5	1.3	1.9	0.5	0.3	0.9	0.7	0.2	0.0	0.0	0.0	0.8	1.9
4-Sep	Z	0.2	0.9	0.8	0.2	0.1	0.2	0.3	0.9	0.6	0.3	0.4	0.7	0.4	0.1	0.0	0.0	0.1	0.4	0.5	0.2	0.0	0.0	0.0	0.3	0.9
5-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	1.9	1.8	2.0	1.3	1.1	1.0	1.2	1.0	0.8	0.2	0.1	0.0	0.0	0.0	0.6	2.0
6-Sep	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.7	0.6	0.6	0.5	0.2	0.5	0.6	0.3	0.3	0.5	0.4	0.2	0.0	0.0	0.1	0.3	0.7	0.3	0.7
7-Sep	0.7	0.6	0.4	Z	0.1	0.2	0.2	0.4	2.0	2.2	1.1	0.3	0.3	0.4	0.4	1.5	0.7	0.5	0.4	0.3	0.4	0.5	0.4	0.2	0.6	2.2
8-Sep	0.3	0.3	0.3	0.2	Z	0.1	0.1	0.1	0.2	1.5	2.1	0.3	1.0	1.3	1.0	0.7	0.8	1.3	0.6	0.1	0.0	0.0	0.0	0.0	0.5	2.1
9-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.4
10-Sep	Z	0.6	0.0	0.2	0.0	0.0	0.0	0.4	0.9	0.7	0.2	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	0.9
11-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	1.6	0.9	0.7	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.2	1.6
12-Sep	0.0	0.0	Z	0.2	0.2	0.1	0.0	0.1	0.4	0.5	0.3	0.2	0.3	0.3	0.4	0.5	0.5	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.5
13-Sep	0.0	0.1	0.0	Z	0.1	0.2	0.3	0.4	0.4	1.6	0.7	0.3	0.2	0.3	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	1.6
14-Sep	0.1	0.0	0.0	0.0	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.1	0.3
15-Sep	0.3	0.3	0.3	0.2	0.3	Z	0.3	0.4	0.8	0.8	0.5	0.3	0.3	0.4	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.3	0.8
16-Sep	Z	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	0.0	0.0	0.1	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.6
17-Sep	0.1	Z	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.3	0.3	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.6	0.2	0.6
18-Sep	0.4	0.8	Z	3.8	3.8	2.1	1.0	0.8	0.6	0.6	0.6	0.3	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.6	0.5	0.1	0.1	0.1	0.7	3.8
19-Sep	0.2	0.3	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.9	0.3	2.3	2.4	1.2	0.6	1.1	0.8	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.5	2.4
20-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.7	3.2	2.4	0.3	0.1	0.1	0.1	0.0	0.2	0.0	0.3	0.3	0.1	0.1	0.3	0.5	0.4	3.2
21-Sep	0.3	0.5	0.4	0.4	0.4	Z	0.1	0.1	0.4	0.5	0.5	0.3	0.5	0.7	0.5	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.3	0.7
22-Sep	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.8	1.3	1.9	0.8	0.9	0.9	0.4	0.1	0.4	0.1	0.0	0.0	0.1	0.1	0.3	1.9
23-Sep	0.0	Z	0.2	1.3	1.5	0.6	0.2	0.7	1.8	0.9	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2	1.1	0.4	0.4	1.8
24-Sep	3.1	0.2	Z	0.2	0.2	0.2	0.3	2.4	1.6	2.1	1.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.3	0.8	0.7	0.6	3.1
25-Sep	0.3	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.4	C	C	C	0.2	0.2	0.5	0.4	0.3	0.1	0.0	0.0	0.3	0.2	0.0	0.2	0.5
26-Sep	0.0	0.3	4.1	0.3	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	0.2	8.8	0.7	1.0	0.4	0.7	8.8
27-Sep	0.7	0.5	1.8	0.9	0.7	Z	12.9	1.2	0.5	0.0	0.1	0.2	0.1	0.0	0.3	1.0	0.8	3.8	6.9	0.8	2.3	0.5	0.3	1.9	1.7	12.9
28-Sep	Z	0.9	2.1	1.0	1.5	14.8	0.7	0.6	0.1	0.1	0.4	0.1	0.1	0.2	0.8	1.2	0.5	0.4	0.3	0.1	0.3	0.3	0.6	0.0	1.2	14.8
29-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.5	0.3	0.5	0.4	0.4	0.6	0.0	0.1	0.0	0.0	0.2	0.4	0.2	0.6
30-Sep	0.6	0.4	Z	0.5	0.5	0.6	0.5	0.6	0.4	0.6	0.8	2.2	2.2	1.7	2.2	0.9	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.6	2.2
	0.3	0.3	0.5	0.4	0.4	0.8	0.6	0.4	0.5	0.7	0.6	0.5	0.6	0.4	0.4	0.5	0.3	0.4	0.5	0.2	0.5	0.2	0.2	0.2	Diurnal Average	
	3.1	0.9	4.1	3.8	3.8	14.8	12.9	2.4	2.0	3.2	2.4	2.3	2.4	1.7	2.2	1.9	1.2	3.8	6.9	1.6	8.8	0.7	1.1	1.9	Diurnal Maximum	

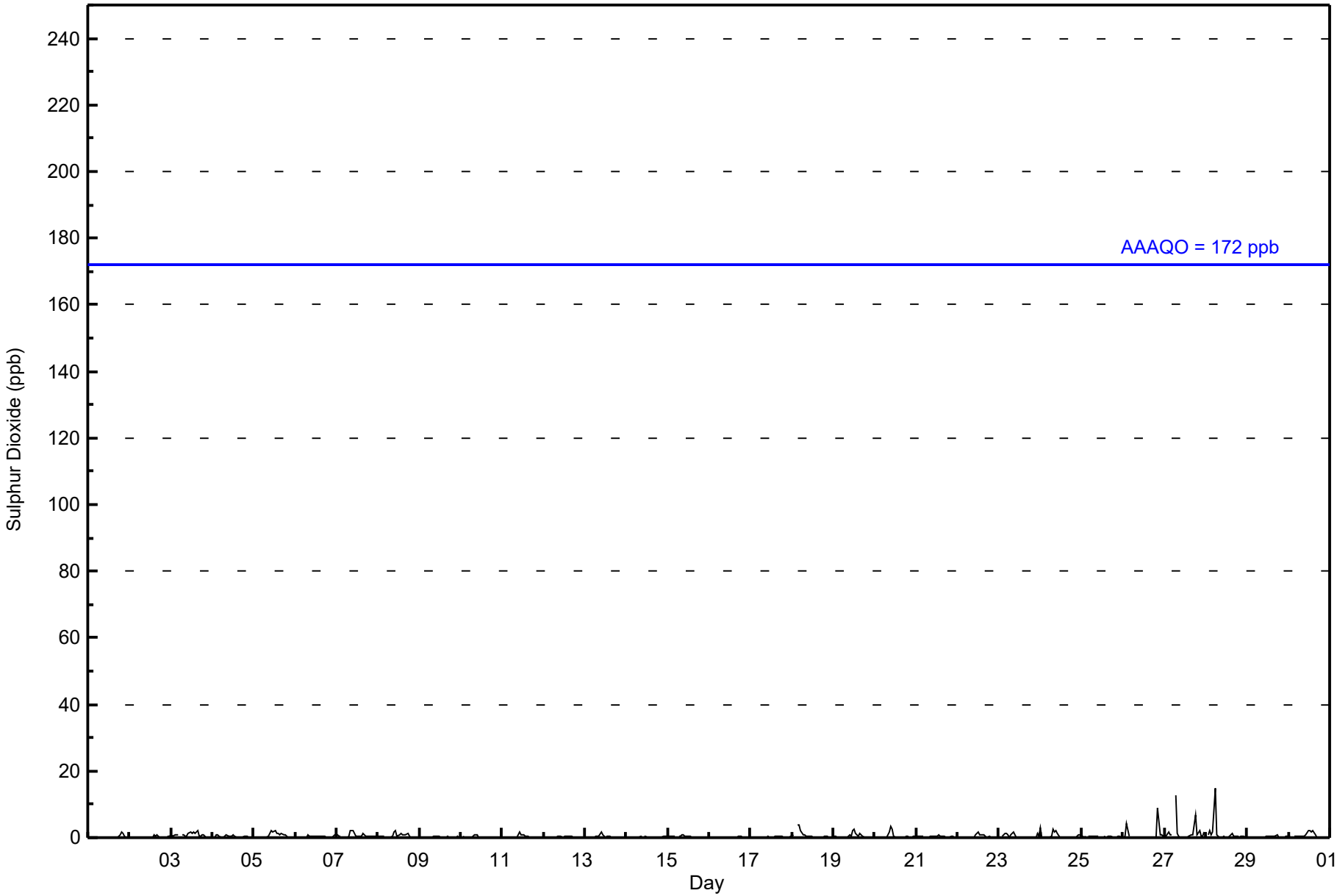
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - September 2025



Sulphur Dioxide (SO_2) - ppb
Monday Creek - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	685	99.71	99.71
11 - 20	2	0.29	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: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	20	7	7	13	6	29	62	65	41	89	37	63	77	61	30	27	634
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	2	0	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	20	7	7	13	6	29	62	65	41	89	37	63	79	61	30	27	636

Total Number of Valid Hours: 636

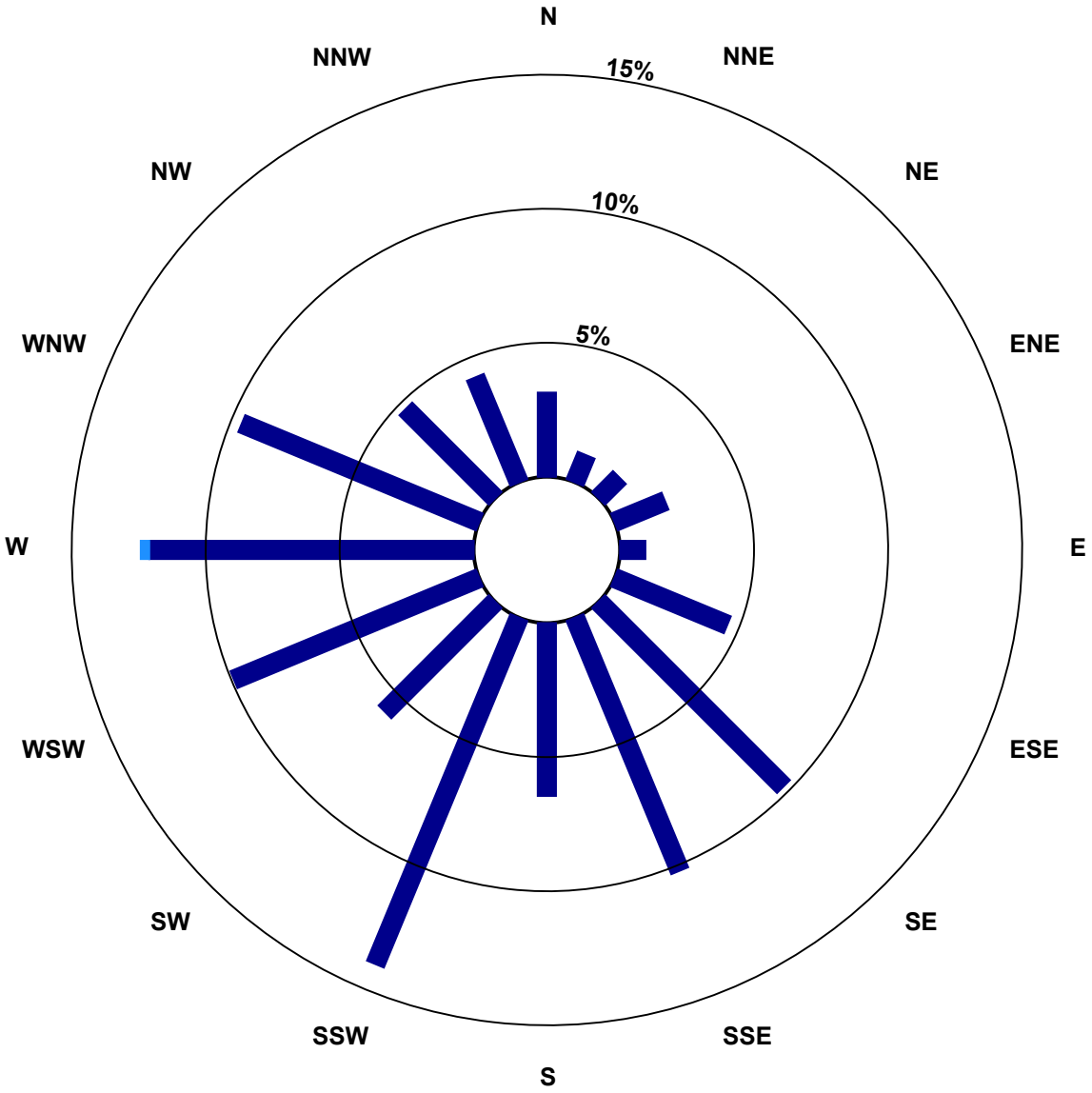
Total Number of Hours: 720

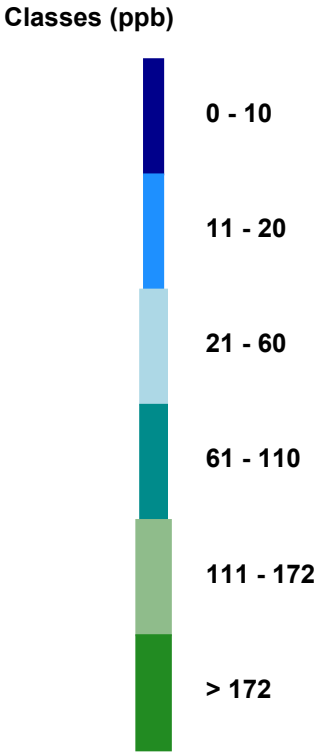
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Monday Creek





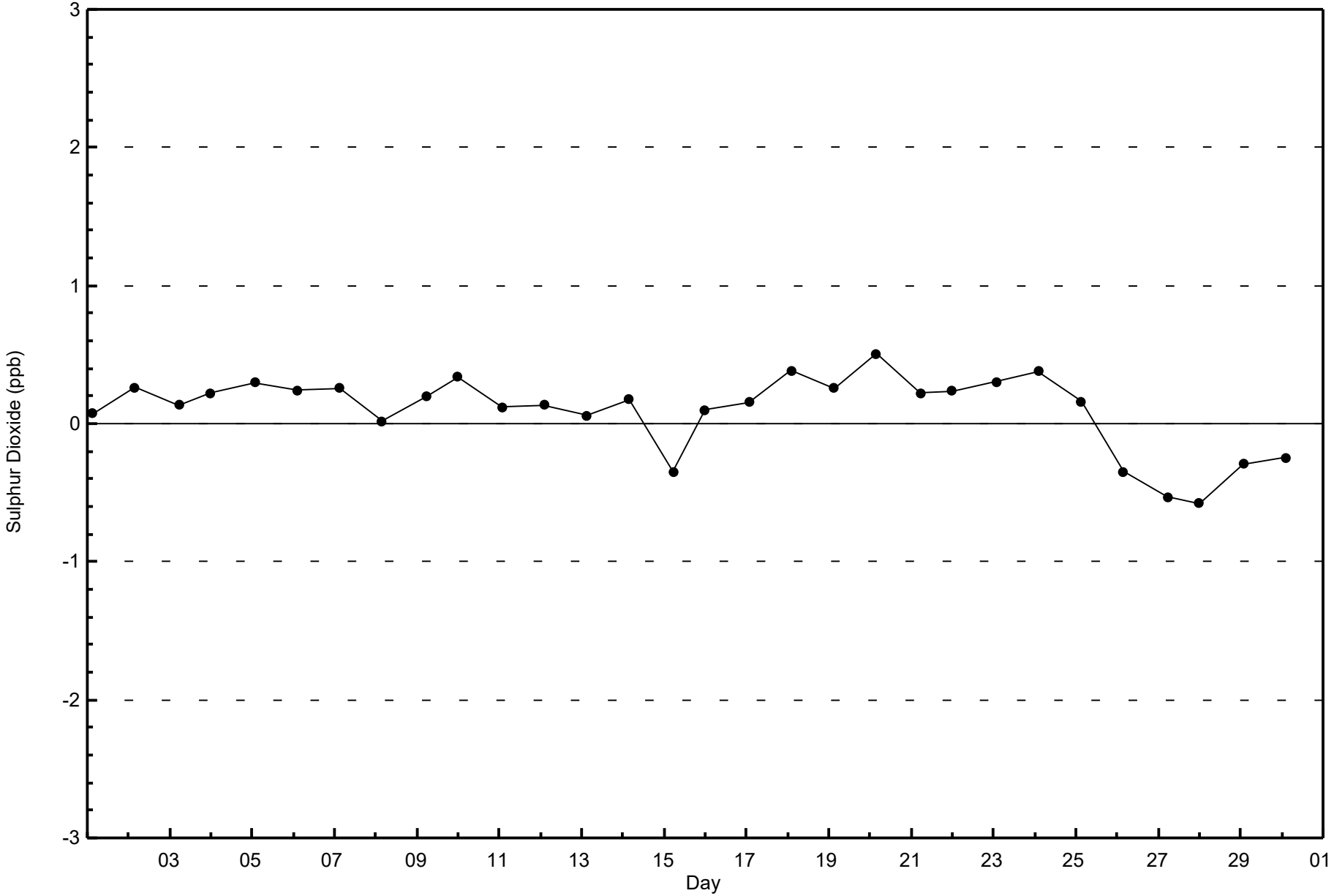
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - September 2025

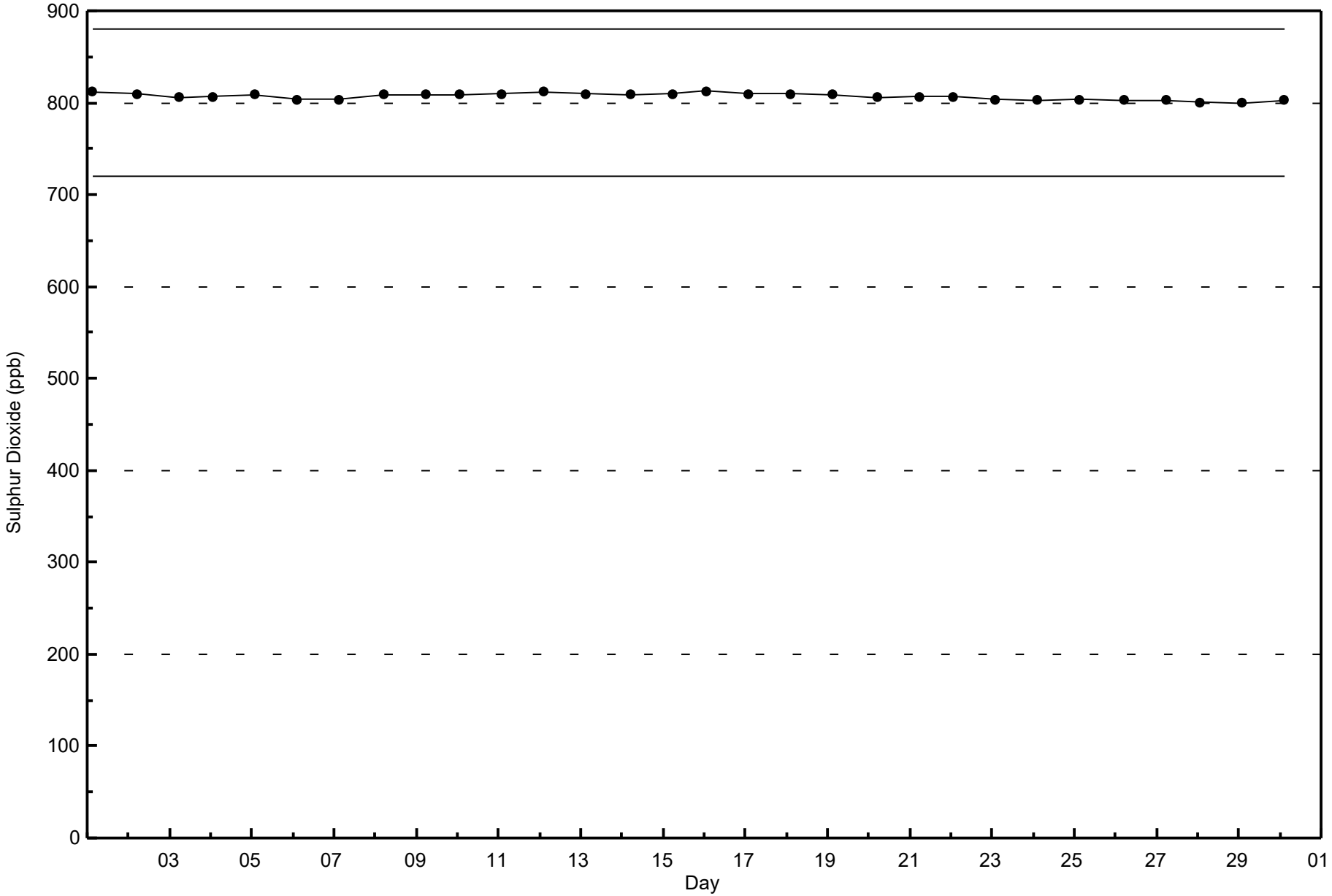


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Sep 11 19:00 Maximum Daily Average: 0.3 ppb on Sep 11

Minimum Value: 0.0 ppb on Sep 24 13:00 Minimum Daily Average: 0.1 ppb on Sep 26
Maximum Diurnal Average: 0.2 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.15 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} = 0.4

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.2	0.2	0.2	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3
2-Sep	0.2	0.2	0.1	0.1	0.1	Z	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4
3-Sep	Z	0.1	0.1	0.1	0.2	0.3	0.3	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	0.1	0.2	0.3	0.3	0.2	0.4
4-Sep	0.3	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
5-Sep	0.3	0.2	Z	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3
6-Sep	0.1	0.1	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
7-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.4	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.4
8-Sep	0.3	0.3	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.4	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	0.2	0.4
9-Sep	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
10-Sep	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	C	C	C	C	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
11-Sep	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.5	0.3	0.2	0.1	0.1	0.2	0.2	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.6
12-Sep	0.1	0.1	0.1	Z	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	0.2
13-Sep	0.1	0.1	0.1	0.1	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	0.1	0.1	0.2
14-Sep	0.1	0.1	0.2	0.1	0.1	Z	0.3	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	0.1	0.1	0.1	0.1	0.1	0.3
15-Sep	Z	0.3	0.2	0.3	0.2	0.3	0.5	0.3	0.3	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	0.2	0.5
16-Sep	0.1	Z	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	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
17-Sep	0.1	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	0.1	0.1	0.1	0.2
18-Sep	0.2	0.1	0.2	Z	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.4
19-Sep	0.2	0.3	0.3	0.3	Z	0.3	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	0.4	0.3	0.2	0.2	0.1	0.2	0.4
20-Sep	0.1	0.4	0.2	0.1	0.1	Z	0.2	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	0.2	0.4
21-Sep	Z	0.2	0.1	0.1	0.2	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	0.2	0.2	0.1	0.1	0.1	0.3
22-Sep	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
23-Sep	0.2	0.2	Z	0.4	0.3	0.2	0.3	0.3	0.3	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	0.4
24-Sep	0.1	0.0	0.0	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	0.2	0.4	0.2	0.2	0.2	0.1	0.4
25-Sep	0.2	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	0.1	0.1	0.2	0.3	0.1	0.3
26-Sep	0.1	0.1	0.1	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	0.2	0.2	0.1	0.1	0.1	0.1	0.2
27-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2
28-Sep	0.1	Z	0.2	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	0.1	0.2
29-Sep	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
30-Sep	0.1	0.1	0.1	Z	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	0.1	0.2	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	Diurnal Average	
	0.3	0.4	0.3	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.6	0.5	0.4	0.3	0.3	0.3	Diurnal Maximum	

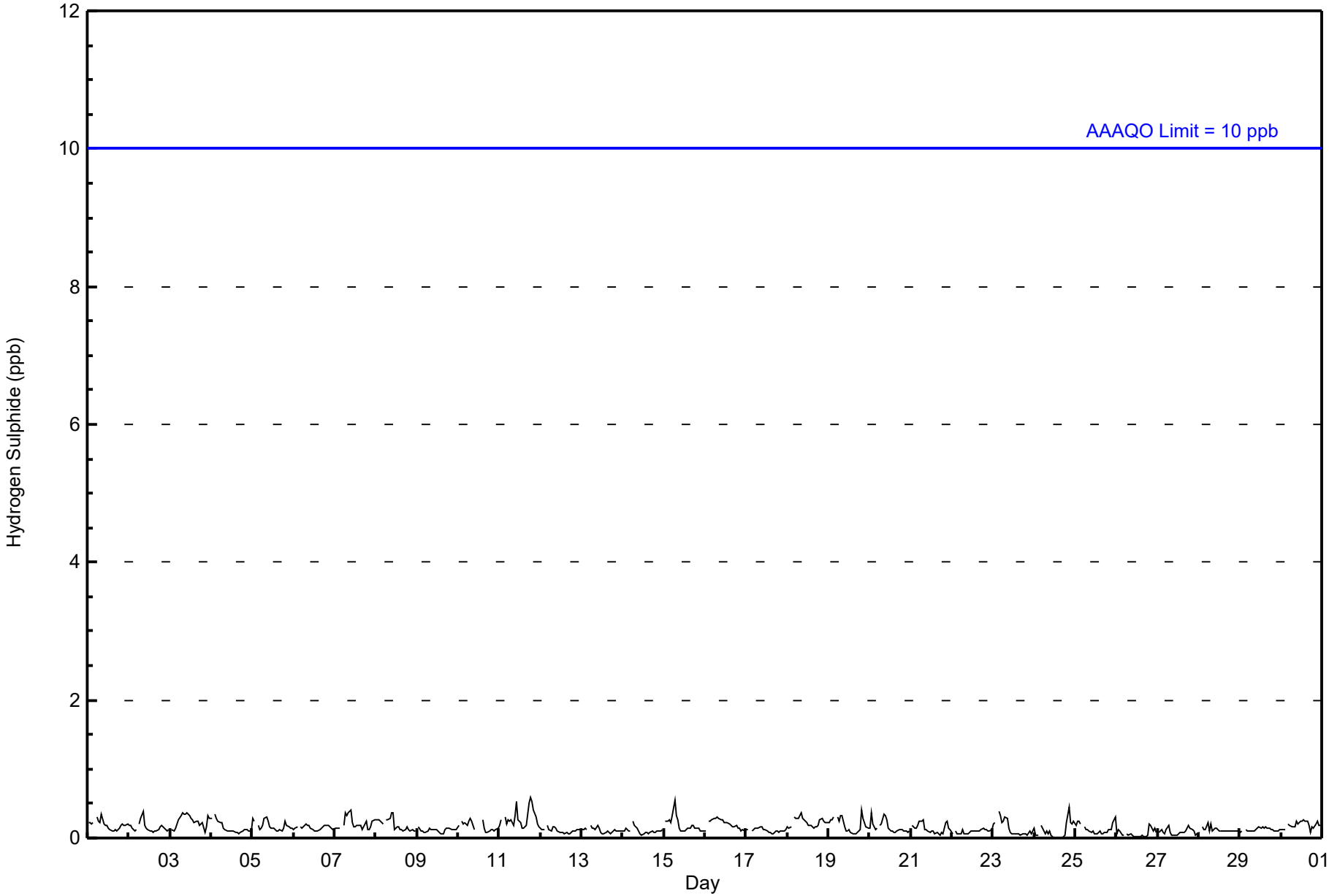
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	686	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	20	7	7	13	7	28	63	60	40	93	36	63	82	61	30	26	636
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	7	7	13	7	28	63	60	40	93	36	63	82	61	30	26	636

Total Number of Valid Hours: 636

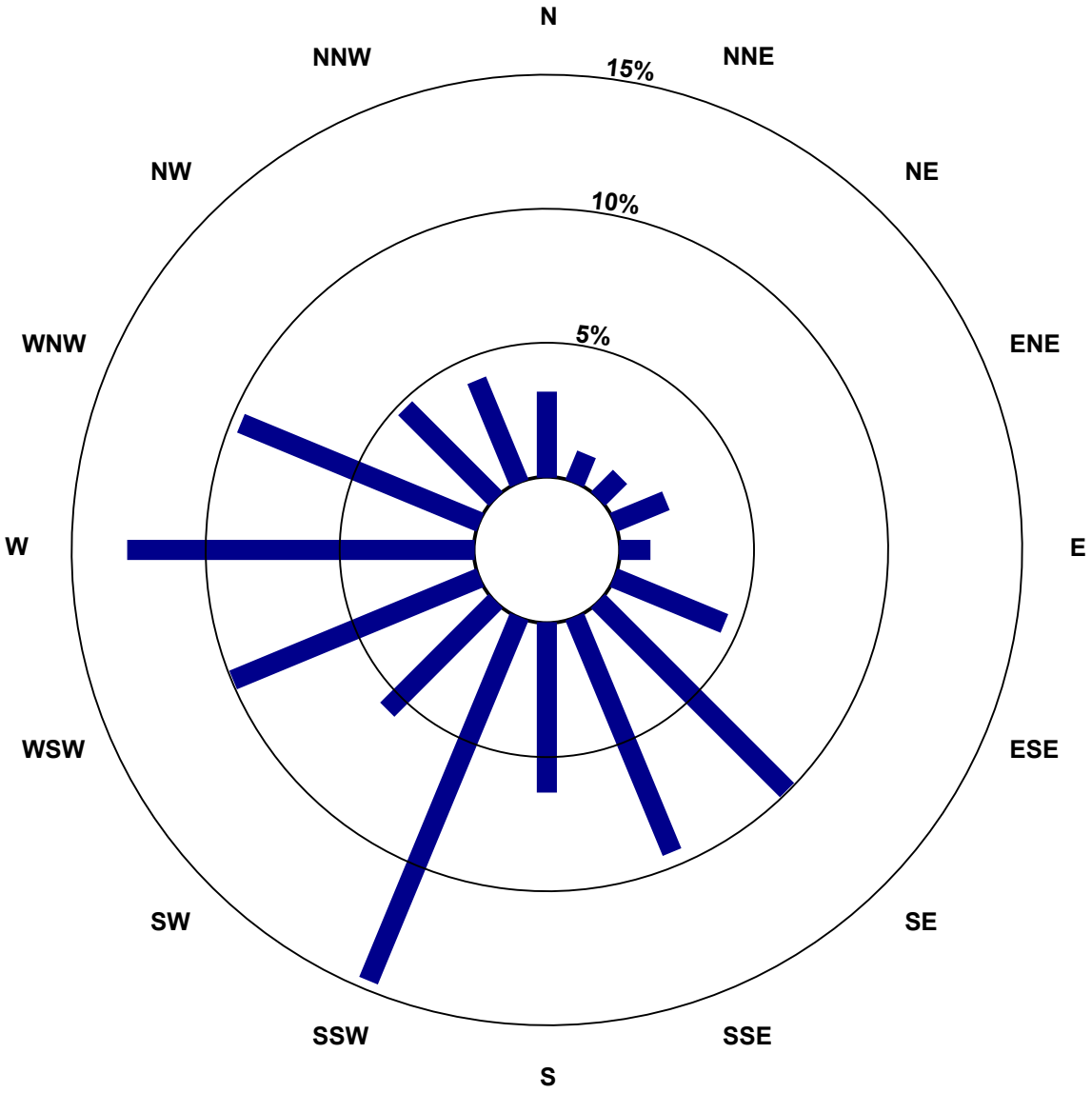
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Monday Creek



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

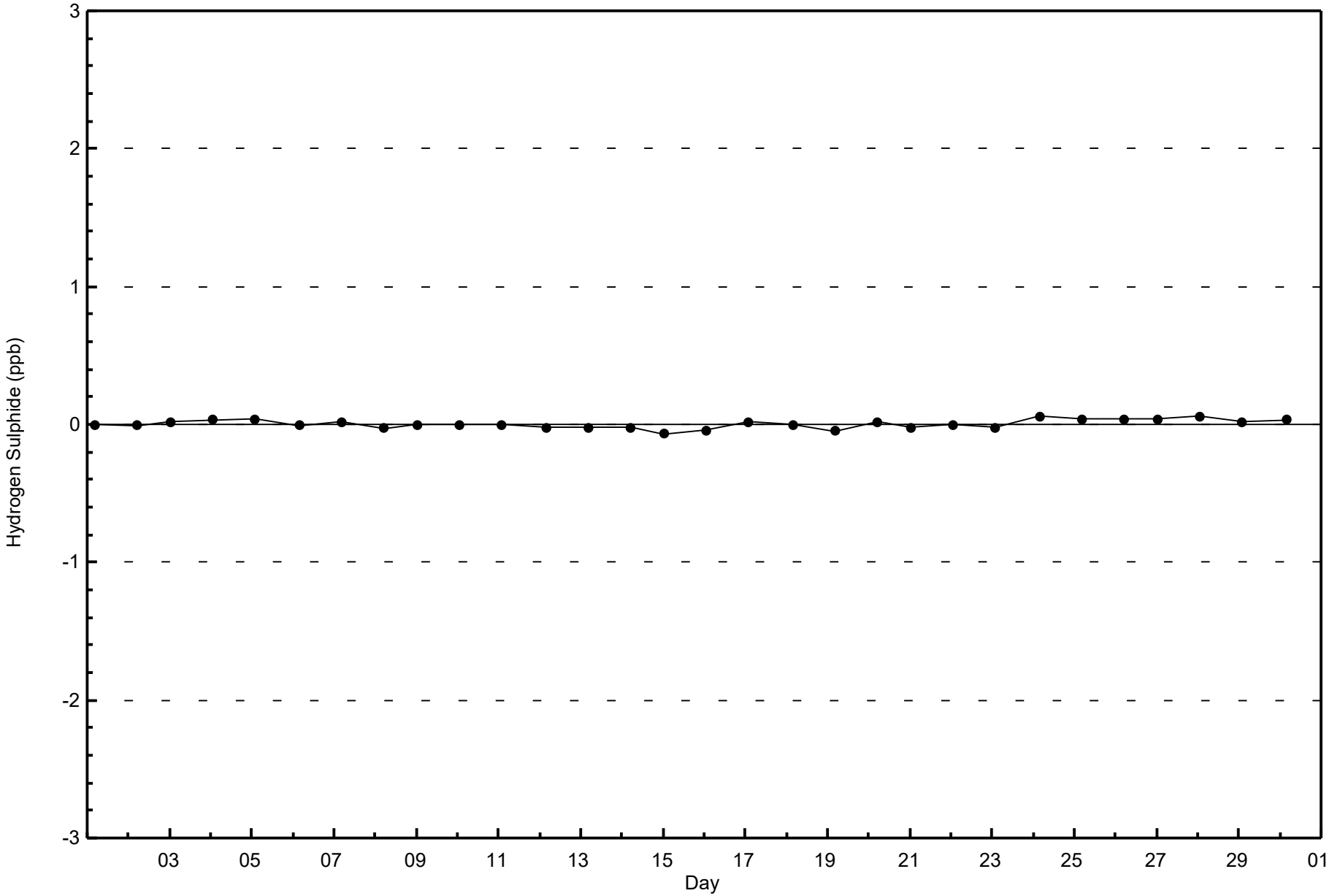
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - September 2025

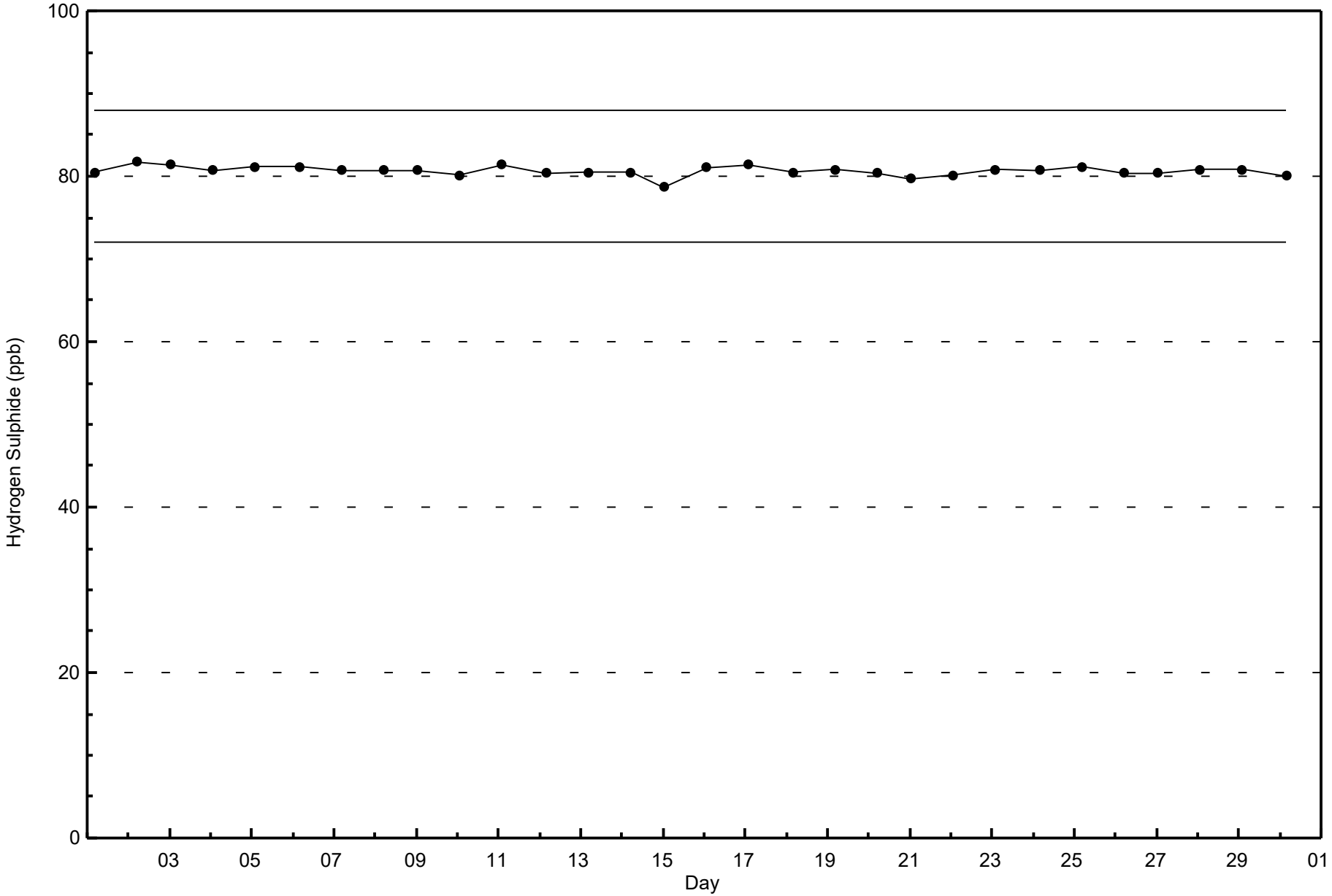


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Monday Creek - September 2025

Maximum Value: 11.6 ppb on Sep 7 07:00

Maximum Daily Average: 0.8 ppb on Sep 7

Minimum Value: 0.0 ppb on Sep 4 20:00

Minimum Daily Average: 0.0 ppb on Sep 29

Maximum Diurnal Average: 1.5 ppb at hour 7

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.7 P_{99} = 3.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	Z	0.0	0.8	0.0	0.1	0.5	0.7	0.7	0.7	0.5	0.3	0.6	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.8
2-Sep	0.2	0.1	Z	0.1	0.1	0.1	1.0	2.3	0.8	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.3	0.6	0.6	0.3	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
4-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	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	0.1	0.2	0.1	0.2
5-Sep	0.1	0.7	2.3	0.5	1.9	Z	0.9	1.9	1.2	0.6	0.8	0.5	0.5	0.3	0.2	0.1	0.1	0.0	0.1	0.6	0.1	0.1	0.0	0.0	0.6	2.3
6-Sep	Z	0.1	0.6	0.9	2.2	0.4	4.5	2.2	0.9	0.5	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.5
7-Sep	0.0	Z	0.0	0.0	0.0	0.0	11.6	1.4	1.6	1.4	0.3	0.1	0.0	0.1	0.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	11.6
8-Sep	0.0	0.0	Z	0.0	0.0	0.1	0.5	0.9	0.9	3.1	2.8	0.2	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.4	3.1
9-Sep	0.0	0.0	0.1	Z	0.1	0.1	1.9	1.1	0.5	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.9
10-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.3	0.8	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
11-Sep	0.0	0.0	0.0	1.1	1.0	Z	1.7	6.1	0.5	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	6.1
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.8	2.5	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	2.5
13-Sep	0.1	Z	0.5	0.7	0.9	0.5	0.5	0.3	0.4	1.1	0.4	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	1.1
14-Sep	0.0	0.0	Z	0.1	0.3	0.2	0.3	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
15-Sep	0.1	0.0	0.0	Z	0.0	0.0	0.3	0.8	1.8	0.6	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	1.8
16-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.7	0.0	0.1	0.7
17-Sep	0.0	0.0	0.0	0.8	0.8	Z	3.0	1.3	0.8	0.4	0.2	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	3.0
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	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	0.3
19-Sep	0.0	Z	0.0	0.0	0.0	0.1	2.3	1.4	1.0	0.5	0.2	1.1	1.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.9	0.8	0.4	2.3
20-Sep	0.0	0.1	Z	0.0	0.2	1.4	3.3	1.0	1.3	1.6	0.9	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	0.5	3.3
21-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.5	0.1	0.1	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	0.1	0.5
22-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.7	1.0	1.2	0.5	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	4.3	0.6	0.8	0.5	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	0.3	4.3
24-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.8	0.5	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
25-Sep	0.0	Z	0.2	0.1	0.0	0.1	4.0	3.6	0.8	0.4	0.4	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	0.5	4.0
26-Sep	0.0	0.0	Z	0.0	0.0	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	0.0	0.6	0.0	0.0	0.0	0.1	0.6
27-Sep	0.0	0.0	0.0	Z	0.1	0.8	2.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.2	2.0
28-Sep	0.1	0.0	0.0	0.0	Z	1.3	0.0	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3
29-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	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	0.0	0.0	0.0	0.0	0.2
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6
	0.0	0.1	0.2	0.2	0.3	0.2	1.5	1.0	0.6	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	Diurnal Average	
	0.2	0.7	2.3	1.1	2.2	1.4	11.6	6.1	1.8	3.1	2.8	1.1	1.2	0.6	0.6	0.5	0.2	0.2	0.1	0.6	0.6	0.1	0.9	0.8	Diurnal Maximum	

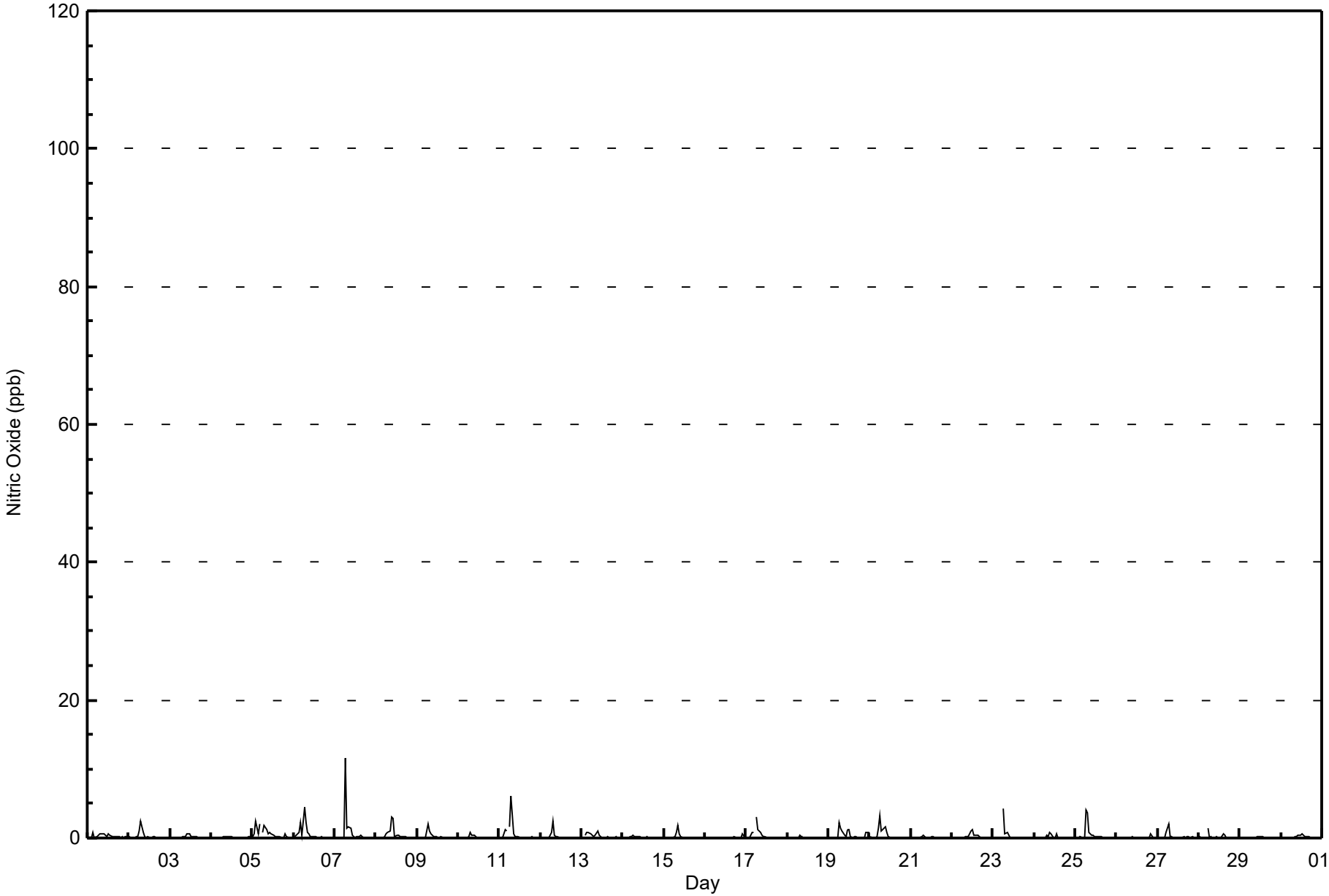
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Monday Creek - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	686	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	7	7	11	7	28	64	64	41	87	38	61	81	60	30	29	635
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	20	7	7	11	7	28	64	64	41	87	38	61	81	60	30	29	635

Total Number of Valid Hours: 635

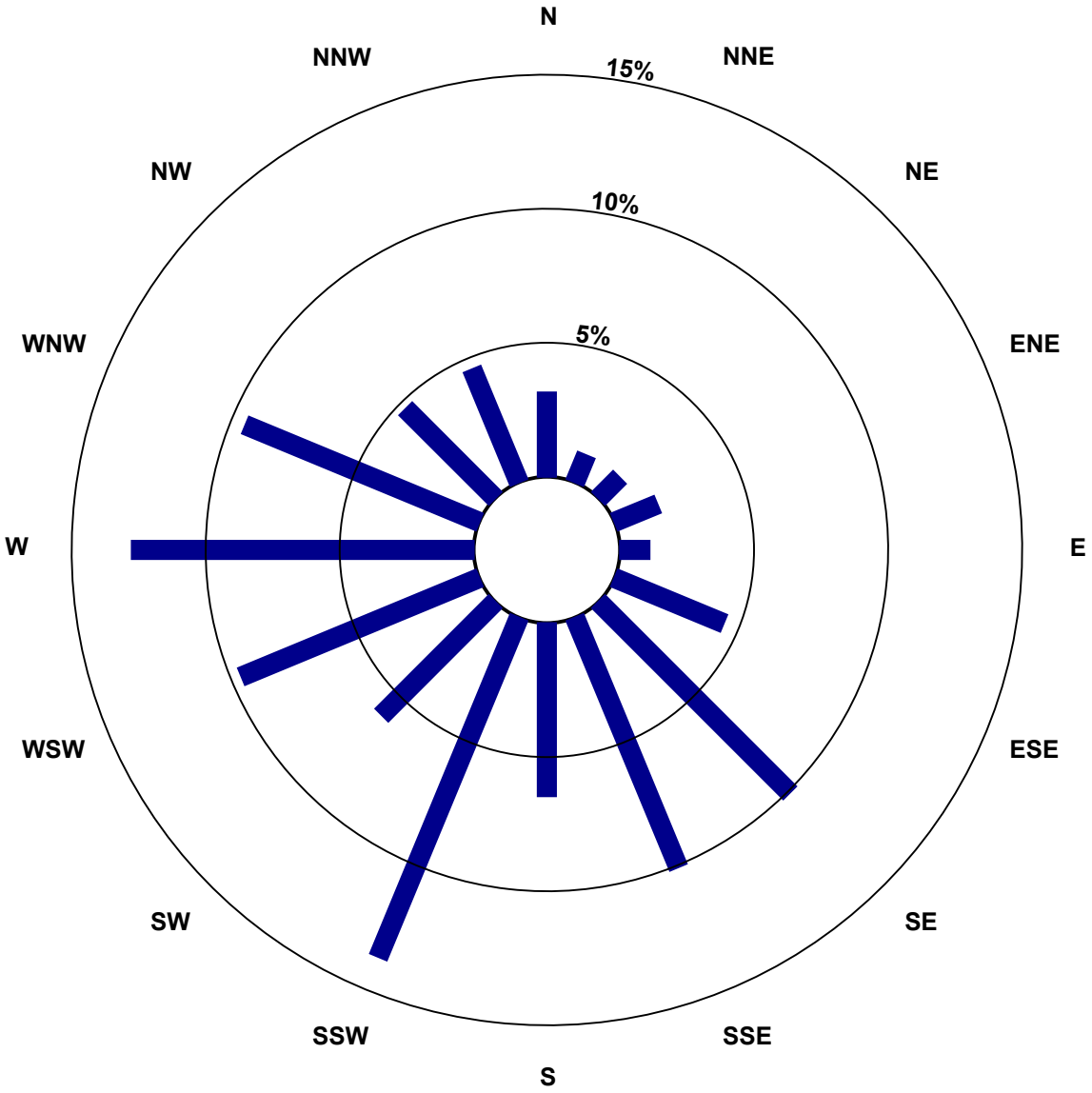
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Monday Creek



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

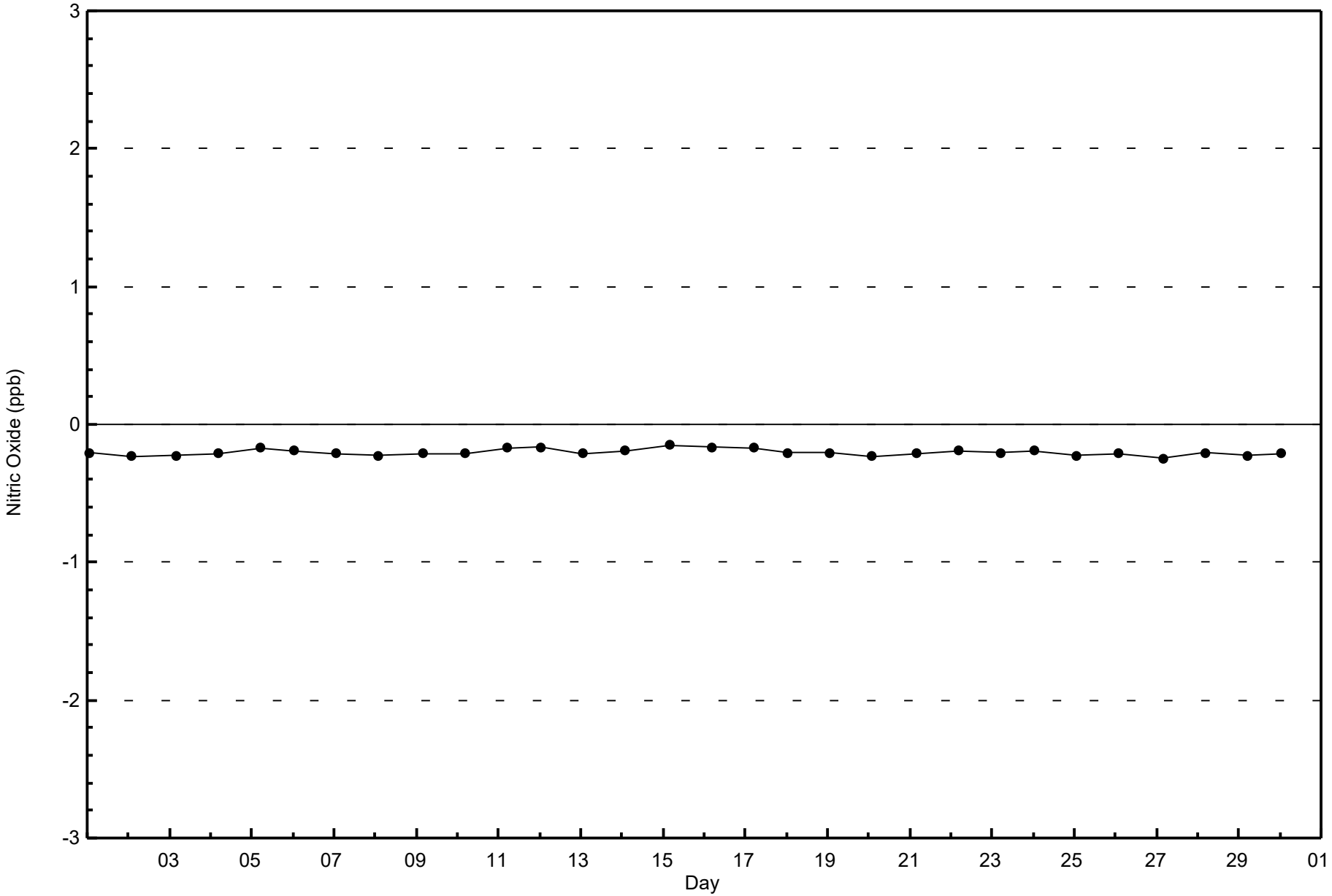
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Monday Creek - September 2025

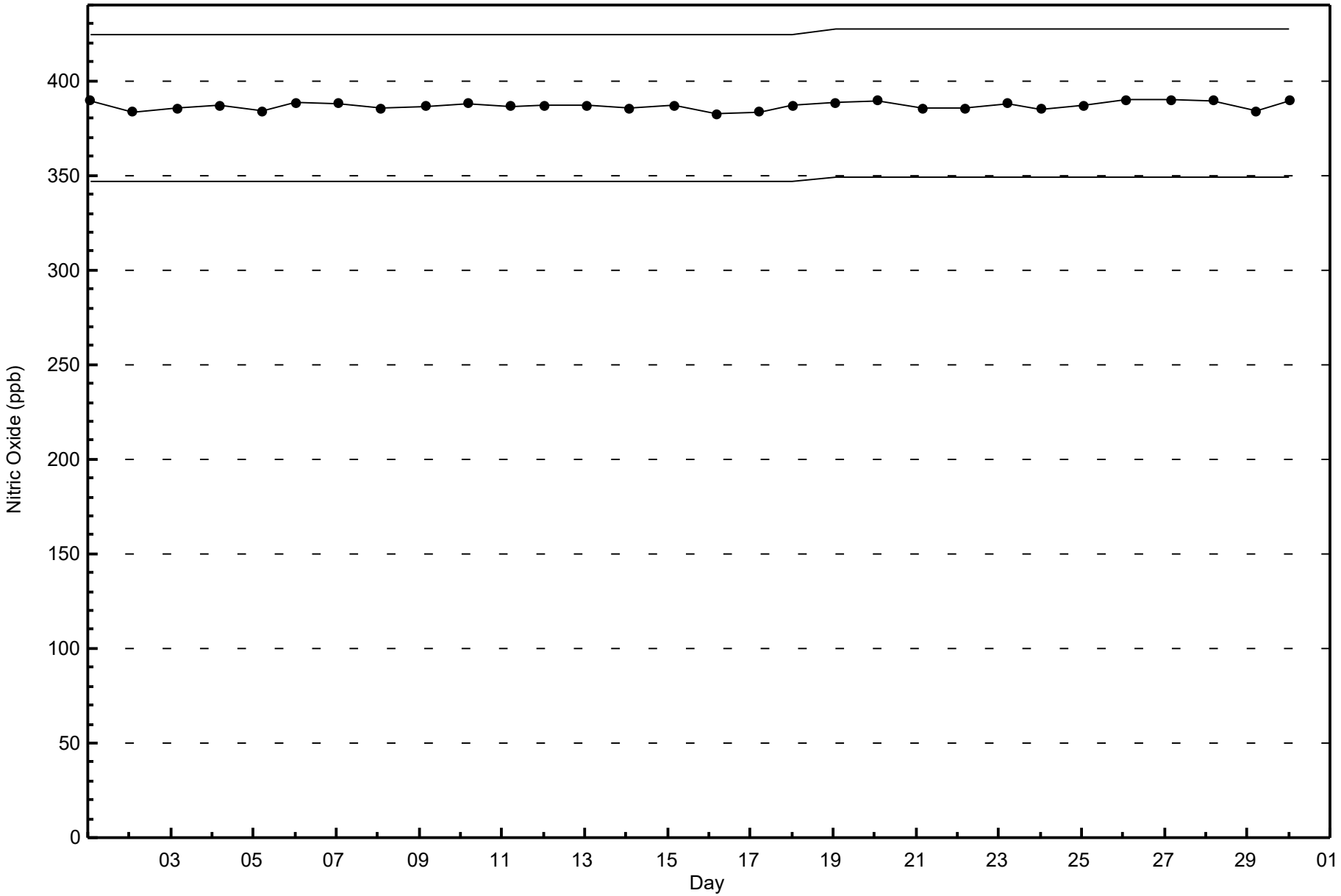


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Monday Creek - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 16.3 ppb on Sep 28 06:00

Maximum Daily Average: 2.9 ppb on Sep 7

Minimum Value: 0.2 ppb on Sep 26 13:00

Minimum Daily Average: 0.8 ppb on Sep 29

Maximum Diurnal Average: 3.1 ppb at hour 7

Minimum Diurnal Average: 1.0 ppb at hour 14

Monthly Average: 1.58 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.2 $Q_3 = 1.9$ $P_{90} = 2.9$ $P_{99} = 7.5$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.3	Z	1.6	2.1	1.9	1.7	1.5	1.2	1.5	1.7	1.9	1.1	1.2	1.0	0.9	1.3	1.2	1.4	2.7	3.7	4.9	2.9	2.7	3.9	2.0	4.9
2-Sep	2.3	1.0	Z	0.8	0.8	0.6	1.0	2.2	2.4	1.4	0.9	1.0	0.8	0.8	1.7	1.3	1.3	0.9	0.9	1.1	0.9	0.8	1.4	1.8	1.2	2.4
3-Sep	2.2	1.9	2.3	Z	1.9	1.8	1.7	1.8	1.6	1.6	2.3	2.5	2.2	2.3	2.3	3.2	1.7	1.3	2.4	2.9	1.1	1.1	1.2	1.1	1.9	3.2
4-Sep	1.2	1.2	1.6	1.2	Z	0.5	0.5	0.6	0.7	0.7	0.6	0.7	1.0	0.7	0.5	0.4	0.3	0.5	0.8	1.5	1.3	1.3	2.4	1.5	0.9	2.4
5-Sep	1.3	1.5	1.5	0.8	0.9	Z	0.7	1.3	1.8	1.3	1.9	1.6	1.7	1.3	1.1	1.1	1.2	1.1	1.5	7.7	3.6	2.3	1.3	1.0	1.7	7.7
6-Sep	Z	2.1	4.0	4.4	6.0	2.6	3.0	3.4	2.5	1.8	1.3	1.1	1.2	1.3	1.0	1.1	1.6	1.6	1.3	1.1	1.4	1.9	1.7	2.0	2.1	6.0
7-Sep	2.2	Z	2.1	1.4	1.9	1.8	14.3	5.2	5.7	6.1	3.4	1.9	1.5	2.2	2.2	3.2	1.5	1.1	1.3	0.9	0.8	2.1	2.5	2.3	2.9	14.3
8-Sep	3.0	2.1	Z	1.4	1.1	0.9	1.1	1.4	2.0	2.9	3.1	0.9	1.6	1.8	1.5	1.2	1.4	2.1	1.9	1.0	0.6	1.3	0.8	0.6	1.6	3.1
9-Sep	0.9	0.7	1.0	Z	1.4	1.4	3.7	2.9	2.4	1.9	1.3	1.4	1.2	1.2	1.2	1.3	1.9	1.6	1.7	1.8	1.4	1.6	1.9	2.0	1.6	3.7
10-Sep	3.9	2.9	2.4	2.9	Z	2.7	4.0	4.4	2.8	2.6	1.5	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.4	0.6	0.6	1.6	1.2	0.8	1.7	4.4
11-Sep	0.5	0.4	0.4	0.8	0.8	Z	1.1	2.6	1.1	1.6	3.2	1.8	1.5	1.0	0.9	1.1	1.2	2.8	3.2	5.5	2.9	2.2	1.5	1.2	1.7	5.5
12-Sep	Z	1.0	1.3	1.1	1.3	1.1	1.3	2.9	2.0	1.6	1.4	0.9	0.8	0.8	0.9	1.1	1.0	0.9	0.8	0.9	0.9	2.6	1.2	1.8	1.3	2.9
13-Sep	2.5	Z	3.0	3.9	4.0	3.8	3.2	2.5	2.4	3.8	2.4	1.2	1.0	1.0	1.1	2.1	1.3	0.8	1.5	4.1	5.3	2.2	1.2	1.7	2.4	5.3
14-Sep	2.0	1.4	Z	2.2	3.2	2.5	4.8	2.8	2.1	1.0	0.5	0.5	0.5	0.6	0.9	0.5	0.9	1.0	0.5	0.5	0.6	0.6	0.7	1.1	1.4	4.8
15-Sep	1.2	1.4	1.2	Z	0.6	1.0	1.9	1.5	2.1	1.3	0.8	0.8	0.8	0.6	0.7	0.7	0.7	0.8	0.6	0.8	0.6	0.3	0.3	0.7	0.9	2.1
16-Sep	0.4	0.9	0.7	0.7	Z	0.8	0.8	1.0	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	1.7	1.9	1.1	1.7	1.3	1.8	1.1	0.9	1.9
17-Sep	0.9	1.5	1.3	1.5	1.8	Z	5.2	2.3	1.6	1.2	1.2	1.1	1.0	1.1	1.1	0.9	1.1	1.2	1.1	0.8	0.8	0.7	1.0	1.2	1.4	5.2
18-Sep	Z	1.5	1.4	1.7	1.9	1.8	1.7	1.9	1.3	1.3	C	C	C	C	1.0	0.9	0.9	0.8	0.9	1.6	1.6	0.9	0.9	1.2	1.3	1.9
19-Sep	1.4	Z	1.4	1.3	1.1	0.6	1.1	1.0	1.9	1.5	0.8	3.0	3.2	0.9	0.6	0.8	0.8	0.7	1.8	1.4	2.0	1.9	5.0	3.4	1.6	5.0
20-Sep	1.4	3.8	Z	1.4	2.4	3.7	5.0	2.6	4.1	4.8	3.1	1.1	1.0	0.9	0.9	0.9	1.0	1.6	1.8	1.5	1.1	0.9	1.2	1.4	2.1	5.0
21-Sep	1.4	1.5	1.8	Z	2.5	2.5	2.8	2.2	1.0	0.8	0.5	0.4	0.8	1.1	0.6	0.6	0.6	0.4	0.4	0.4	0.7	0.9	0.7	0.5	1.1	2.8
22-Sep	0.3	0.4	0.6	0.7	Z	0.9	0.9	0.6	0.6	0.4	1.2	1.8	2.3	1.2	1.3	1.5	1.2	0.6	0.8	0.6	0.3	0.4	0.5	1.0	0.9	2.3
23-Sep	1.6	2.0	2.1	3.7	3.7	Z	9.7	3.4	2.9	1.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.8	0.9	2.5	1.3	1.7	9.7
24-Sep	Z	0.6	0.4	0.7	0.8	1.4	1.5	5.7	2.6	2.7	1.1	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.9	1.8	1.6	1.4	1.7	1.2	5.7
25-Sep	1.5	Z	1.3	1.1	0.9	1.5	4.5	4.0	2.2	1.1	1.2	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.3	1.5	1.1	1.4	1.6	1.1	1.5	4.5
26-Sep	0.6	1.5	Z	0.7	1.0	1.0	0.9	0.7	0.5	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.6	9.5	1.1	1.3	0.8	1.0	9.5
27-Sep	1.6	1.1	3.2	Z	1.7	8.7	12.2	1.3	0.6	0.2	0.2	0.3	0.3	0.2	0.3	1.1	1.3	5.1	7.5	1.0	2.7	0.9	0.3	2.1	2.3	12.2
28-Sep	5.2	0.9	2.0	1.0	Z	16.3	0.8	1.3	0.5	0.5	0.9	0.4	0.4	0.4	1.4	1.3	0.6	0.7	0.9	0.5	1.2	1.3	2.2	0.7	1.8	16.3
29-Sep	0.5	0.5	0.5	0.4	0.4	Z	0.6	0.5	0.4	0.4	0.7	0.9	0.9	1.0	1.1	1.2	1.2	1.9	0.8	0.8	0.7	0.8	0.9	1.2	0.8	1.9
30-Sep	Z	1.3	1.3	1.3	1.5	1.5	2.1	2.1	2.3	2.4	2.4	3.2	3.1	2.8	3.9	3.5	2.8	1.6	1.5	1.3	1.8	1.7	1.5	1.3	2.1	3.9
	1.7	1.4	1.6	1.6	1.8	2.5	3.1	2.2	1.9	1.7	1.4	1.1	1.1	1.0	1.1	1.2	1.1	1.2	1.4	1.6	1.8	1.4	1.5	1.5	Diurnal Average	
	5.2	3.8	4.0	4.4	6.0	16.3	14.3	5.7	5.7	6.1	3.4	3.2	3.2	2.8	3.9	3.5	2.8	5.1	7.5	7.7	9.5	2.9	5.0	3.9	Diurnal Maximum	

Z - zerospan C - Calibration

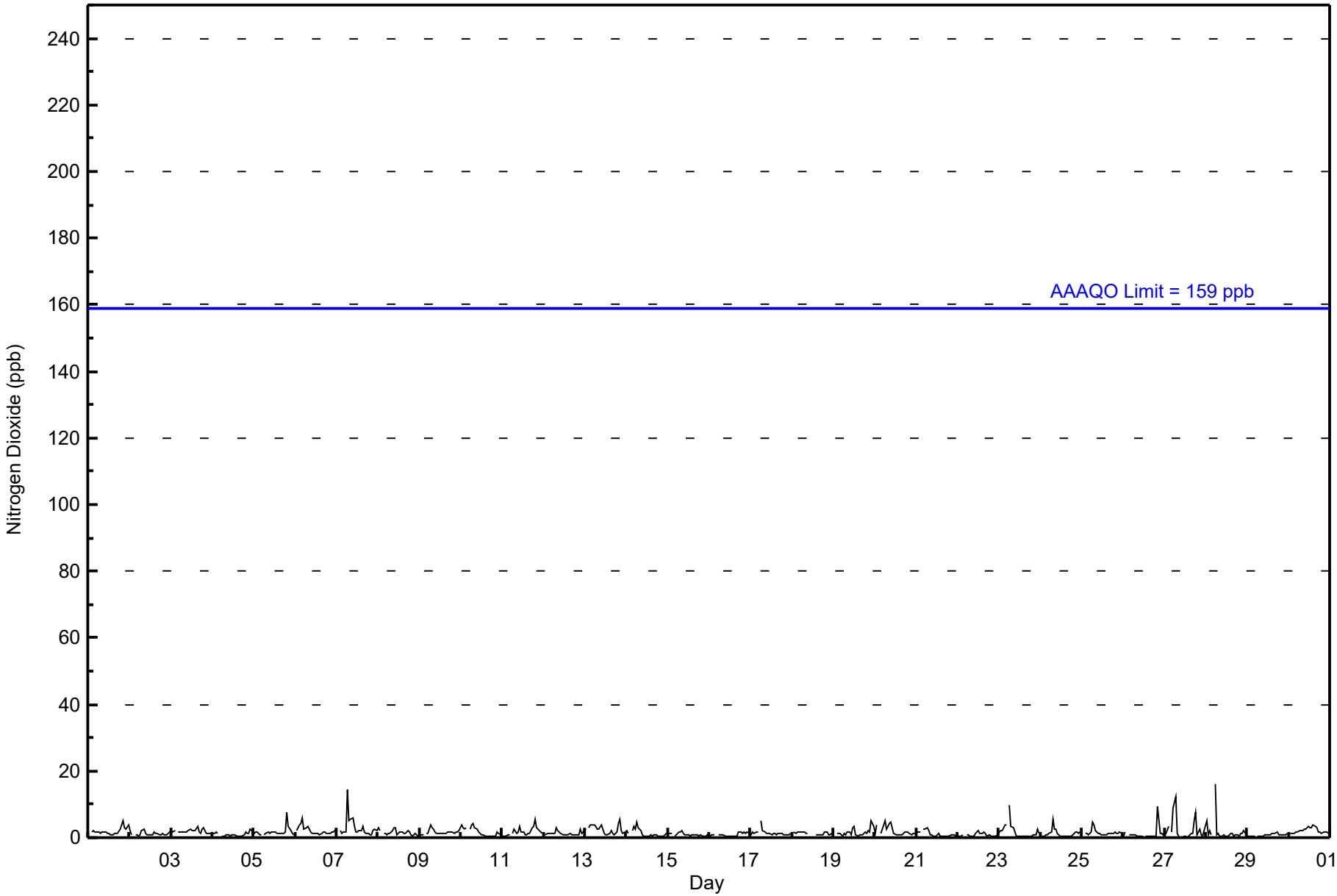
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - September 2025



Nitrogen Dioxide (NO_2) - ppb
Monday Creek - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	686	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	7	7	11	7	28	64	64	41	87	38	61	81	60	30	29	635
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	20	7	7	11	7	28	64	64	41	87	38	61	81	60	30	29	635

Total Number of Valid Hours: 635

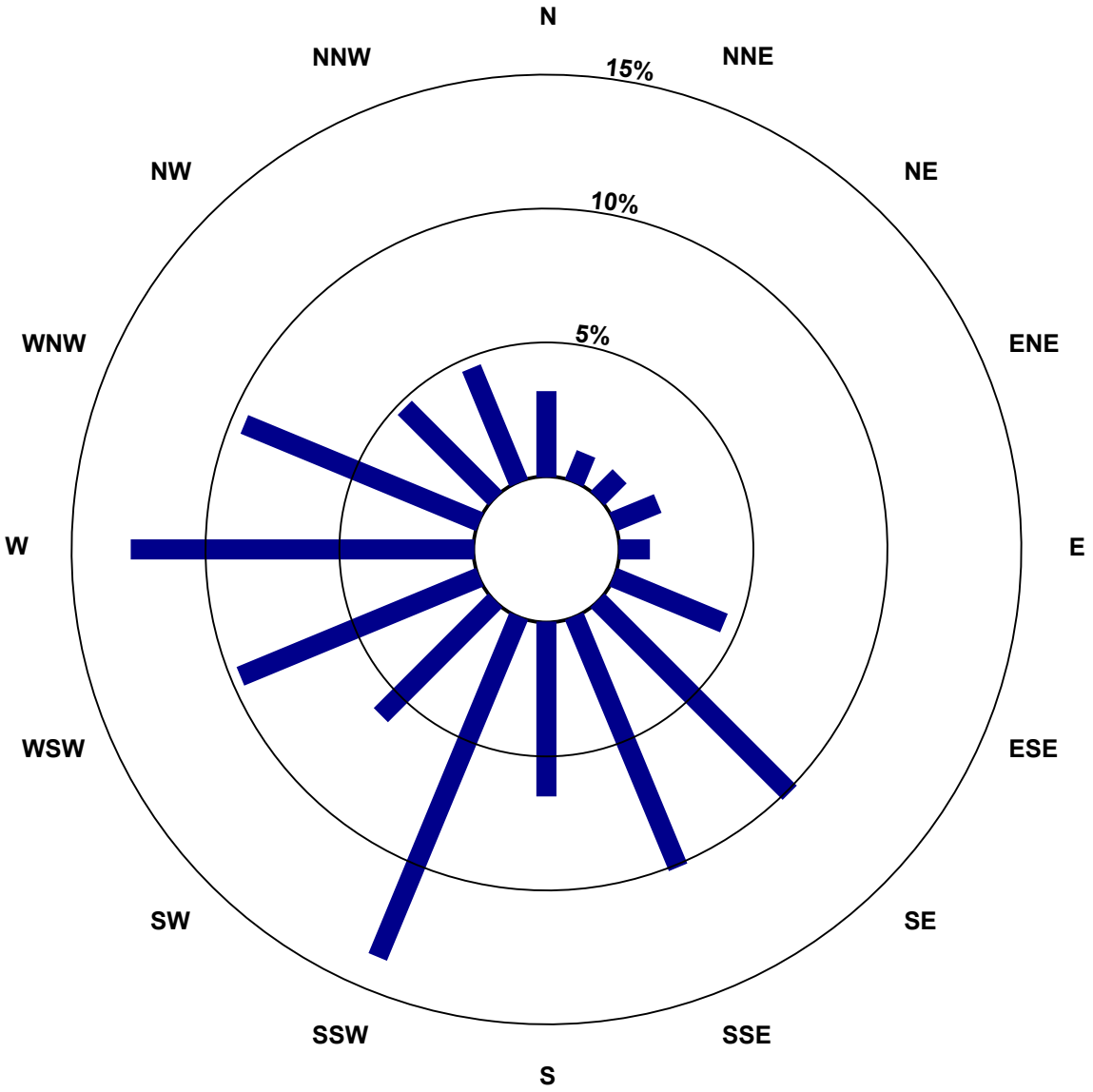
Total Number of Hours: 720

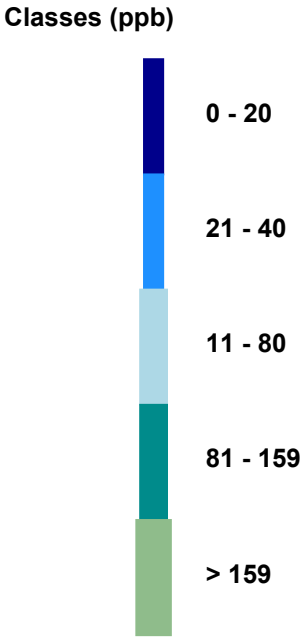
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Monday Creek





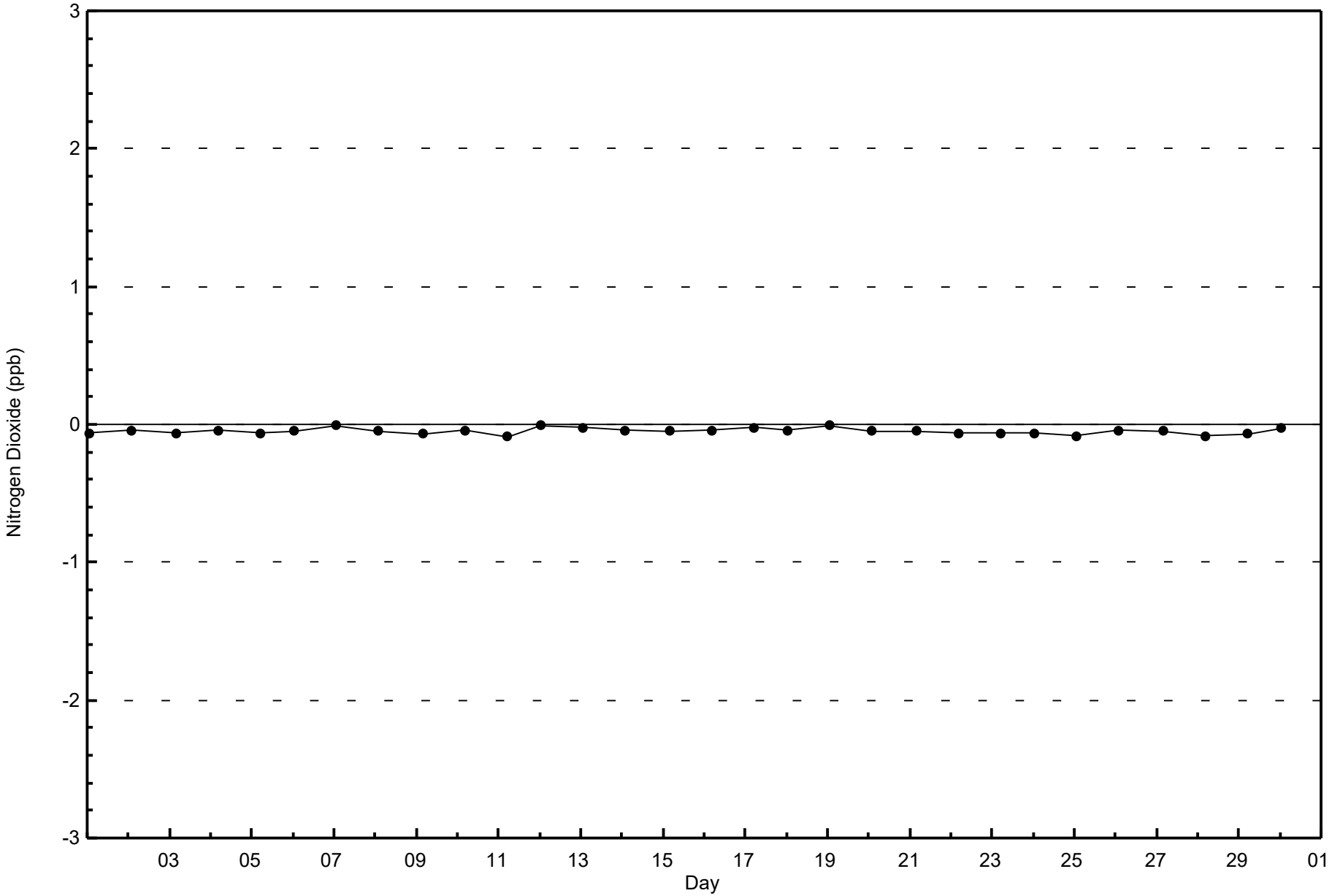
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - September 2025

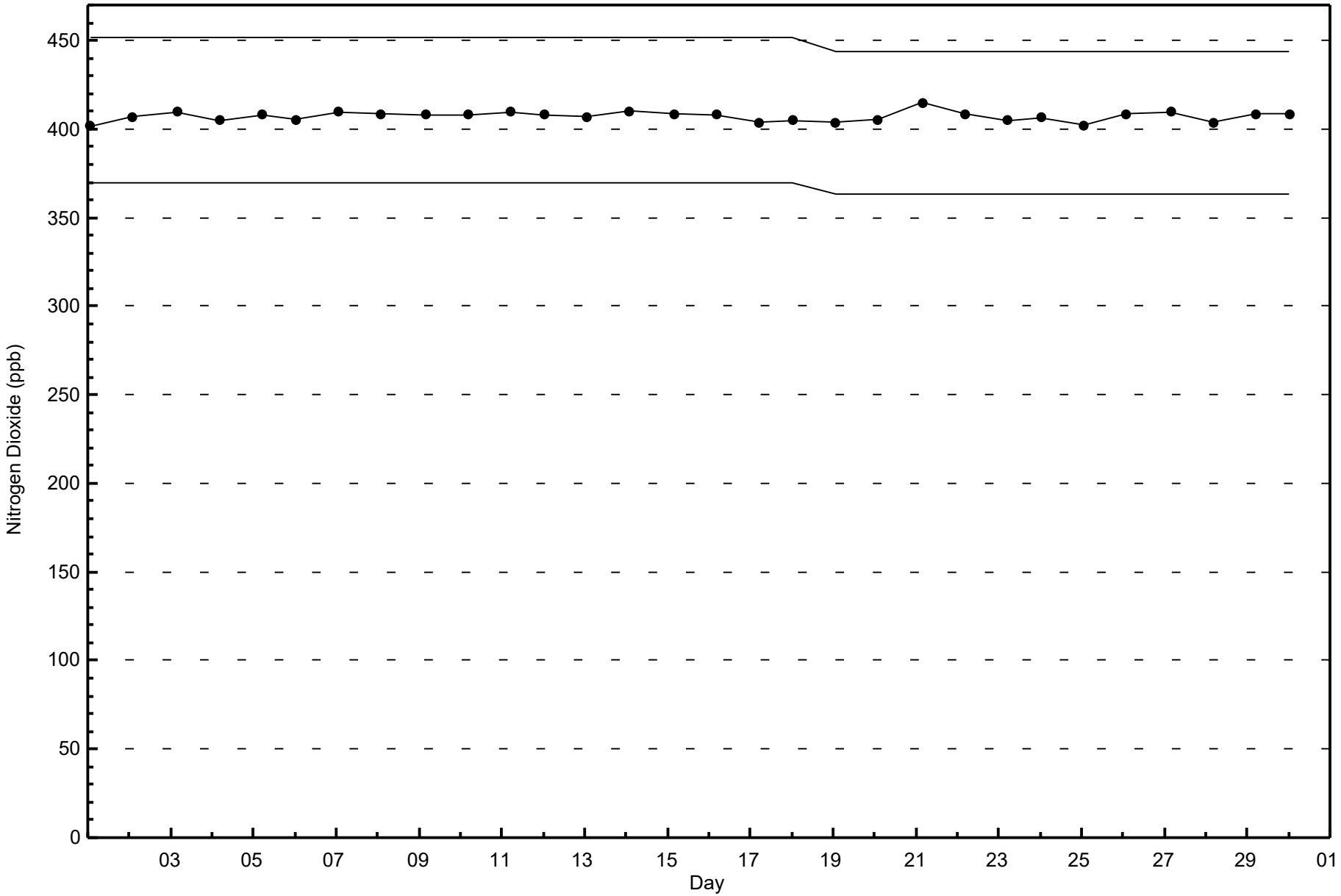


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025

Maximum Value: 25.9 ppb on Sep 7 07:00

Maximum Daily Average: 3.7 ppb on Sep 7

Minimum Value: 0.2 ppb on Sep 27 14:00

Minimum Daily Average: 0.8 ppb on Sep 29

Maximum Diurnal Average: 4.6 ppb at hour 7

Minimum Diurnal Average: 1.1 ppb at hour 17

Monthly Average: 1.84 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.9$ Median = 1.3 $Q_3 = 2.1$ $P_{90} = 3.6$ $P_{99} = 8.5$

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.4	Z	1.6	2.9	1.9	1.8	2.0	1.9	2.2	2.4	2.4	1.4	1.8	1.4	1.0	1.5	1.3	1.5	2.8	3.8	5.0	3.0	2.8	4.1	2.3	5.0
2-Sep	2.5	1.1	Z	0.9	0.9	0.7	2.0	4.5	3.2	1.6	1.0	1.1	0.9	0.9	2.0	1.4	1.4	0.9	0.9	1.1	0.9	0.8	1.4	1.8	1.5	4.5
3-Sep	2.2	1.9	2.3	Z	1.9	1.8	1.8	2.0	1.9	1.9	2.9	3.1	2.5	2.4	2.5	3.5	1.7	1.3	2.4	2.9	1.1	1.1	1.2	1.1	2.1	3.5
4-Sep	1.2	1.2	1.6	1.2	Z	0.5	0.5	0.7	0.8	0.8	0.8	0.9	1.2	0.8	0.5	0.4	0.3	0.5	0.8	1.5	1.3	1.3	2.5	1.7	1.0	2.5
5-Sep	1.4	2.2	3.8	1.3	2.8	Z	1.6	3.2	3.0	1.9	2.7	2.1	2.2	1.6	1.3	1.2	1.3	1.1	1.6	8.3	3.7	2.4	1.3	1.0	2.3	8.3
6-Sep	Z	2.2	4.6	5.3	8.2	3.0	7.5	5.6	3.4	2.3	1.6	1.2	1.4	1.4	1.1	1.2	1.7	1.6	1.3	1.1	1.4	1.9	1.7	2.0	2.7	8.2
7-Sep	2.2	Z	2.1	1.4	1.9	1.8	25.9	6.6	7.3	7.5	3.7	2.0	1.5	2.3	2.5	3.7	1.6	1.1	1.3	0.9	0.8	2.1	2.5	2.3	3.7	25.9
8-Sep	3.0	2.1	Z	1.4	1.1	1.0	1.6	2.3	2.9	6.0	5.9	1.1	2.1	2.2	1.7	1.3	1.5	2.2	2.0	1.0	0.6	1.3	0.9	0.7	2.0	6.0
9-Sep	0.9	0.7	1.1	Z	1.5	1.5	5.6	4.0	2.9	2.2	1.4	1.6	1.3	1.3	1.3	1.4	2.0	1.6	1.7	1.8	1.4	1.6	1.9	2.0	1.9	5.6
10-Sep	3.9	2.9	2.4	2.9	Z	2.7	4.3	5.2	3.2	3.0	1.7	1.2	1.0	0.8	0.6	0.5	0.4	0.4	0.4	0.6	0.6	1.6	1.2	0.8	1.9	5.2
11-Sep	0.5	0.4	0.4	1.9	1.8	Z	2.8	8.7	1.6	1.8	3.3	1.9	1.5	1.0	1.0	1.2	1.2	2.8	3.2	5.8	2.9	2.2	1.5	1.2	2.2	8.7
12-Sep	Z	1.0	1.3	1.1	1.3	1.1	2.1	5.4	2.4	1.8	1.6	1.0	0.9	0.9	1.0	1.2	1.1	0.9	0.8	0.9	0.9	2.7	1.2	1.8	1.5	5.4
13-Sep	2.6	Z	3.5	4.6	4.9	4.3	3.7	2.8	2.8	4.9	2.8	1.3	1.1	1.1	1.1	2.3	1.4	0.8	1.5	4.1	5.6	2.2	1.2	1.7	2.7	5.6
14-Sep	2.0	1.4	Z	2.3	3.5	2.7	5.1	2.9	2.3	1.3	0.6	0.5	0.5	0.6	1.2	0.5	1.0	1.0	0.5	0.5	0.6	0.6	0.7	1.1	1.4	5.1
15-Sep	1.3	1.4	1.2	Z	0.6	1.0	2.2	2.3	3.9	1.9	0.9	0.9	0.9	0.7	0.8	0.7	0.7	0.8	0.6	0.8	0.6	0.3	0.3	0.7	1.1	3.9
16-Sep	0.4	0.9	0.7	0.7	Z	0.8	0.8	1.1	0.8	0.7	0.7	0.6	0.5	0.6	0.5	0.6	0.6	1.8	1.9	1.1	1.7	1.4	2.5	1.1	1.0	2.5
17-Sep	0.9	1.5	1.3	2.3	2.6	Z	8.2	3.6	2.4	1.6	1.4	1.2	1.1	1.1	1.1	1.0	1.2	1.2	1.1	0.8	0.8	0.7	1.0	1.2	1.7	8.2
18-Sep	Z	1.5	1.4	1.7	1.9	1.8	1.7	2.2	1.6	1.6	C	C	C	C	1.0	0.9	0.9	0.8	0.9	1.6	1.6	0.9	0.9	1.2	1.4	2.2
19-Sep	1.4	Z	1.4	1.3	1.1	0.7	3.4	2.4	2.9	2.0	1.0	4.1	4.4	1.1	0.7	0.9	0.9	0.7	1.8	1.4	2.0	2.0	5.9	4.2	2.1	5.9
20-Sep	1.4	3.9	Z	1.4	2.6	5.1	8.3	3.6	5.4	6.4	4.0	1.2	1.1	1.0	1.0	1.0	1.1	1.6	1.9	1.5	1.1	0.9	1.2	1.4	2.5	8.3
21-Sep	1.4	1.5	1.8	Z	2.5	2.5	3.0	2.7	1.1	0.9	0.6	0.5	0.9	1.3	0.7	0.6	0.6	0.4	0.4	0.4	0.7	0.9	0.7	0.5	1.2	3.0
22-Sep	0.3	0.4	0.6	0.7	Z	0.9	0.9	0.7	0.7	0.5	1.9	2.8	3.5	1.7	1.8	2.0	1.4	0.6	0.8	0.6	0.3	0.4	0.5	1.0	1.1	3.5
23-Sep	1.6	2.0	2.1	3.7	3.7	Z	14.0	4.0	3.7	2.1	0.6	0.5	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.5	0.8	0.9	2.5	1.3	2.0	14.0
24-Sep	Z	0.6	0.4	0.7	0.8	1.4	1.5	6.1	2.9	3.5	1.6	0.5	0.4	1.0	0.4	0.3	0.3	0.3	0.3	0.9	1.8	1.6	1.4	1.7	1.3	6.1
25-Sep	1.5	Z	1.5	1.2	0.9	1.6	8.5	7.6	3.0	1.5	1.6	0.9	0.9	1.0	1.1	1.2	1.2	1.1	1.3	1.5	1.1	1.4	1.6	1.1	1.9	8.5
26-Sep	0.6	1.5	Z	0.7	1.0	1.0	0.9	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	10.1	1.1	1.3	0.8	1.0	10.1
27-Sep	1.6	1.1	3.2	Z	1.8	9.5	14.2	1.5	0.8	0.3	0.3	0.3	0.3	0.2	0.4	1.4	1.4	5.3	7.6	1.0	2.8	0.9	0.3	2.1	2.5	14.2
28-Sep	5.3	0.9	2.0	1.0	Z	17.6	0.8	1.5	0.6	0.6	1.1	0.5	0.4	0.5	2.0	1.8	0.6	0.7	0.9	0.5	1.2	1.3	2.2	0.7	1.9	17.6
29-Sep	0.5	0.5	0.5	0.4	0.4	Z	0.6	0.5	0.5	0.5	0.8	1.1	1.0	1.1	1.2	1.3	1.3	1.9	0.8	0.8	0.7	0.8	0.9	1.2	0.8	1.9
30-Sep	Z	1.3	1.3	1.3	1.5	1.5	2.1	2.2	2.4	2.6	2.7	3.7	3.7	3.1	4.2	3.8	3.0	1.7	1.6	1.3	1.8	1.7	1.5	1.3	2.2	4.2
	1.7	1.4	1.8	1.8	2.1	2.7	4.6	3.3	2.4	2.2	1.8	1.4	1.4	1.2	1.2	1.3	1.1	1.2	1.5	1.7	1.9	1.4	1.6	1.5	Diurnal Average	
	5.3	3.9	4.6	5.3	8.2	17.6	25.9	8.7	7.3	7.5	5.9	4.1	4.4	3.1	4.2	3.8	3.0	5.3	7.6	8.3	10.1	3.0	5.9	4.2	Diurnal Maximum	

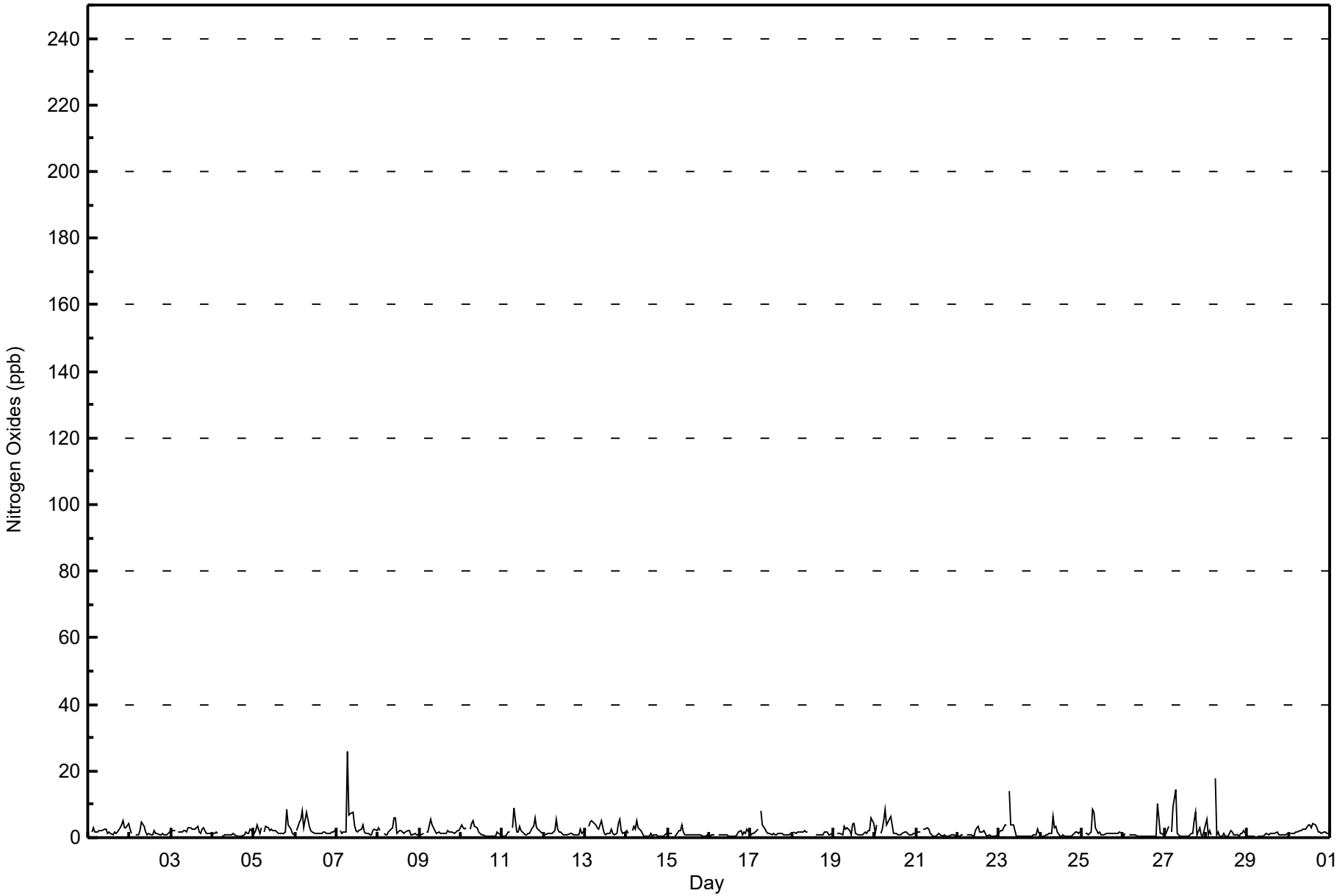
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	99.85	99.85
21 - 40	1	0.15	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	7	7	11	7	28	64	64	41	87	38	60	81	60	30	29	634
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	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	20	7	7	11	7	28	64	64	41	87	38	61	81	60	30	29	635

Total Number of Valid Hours: 635

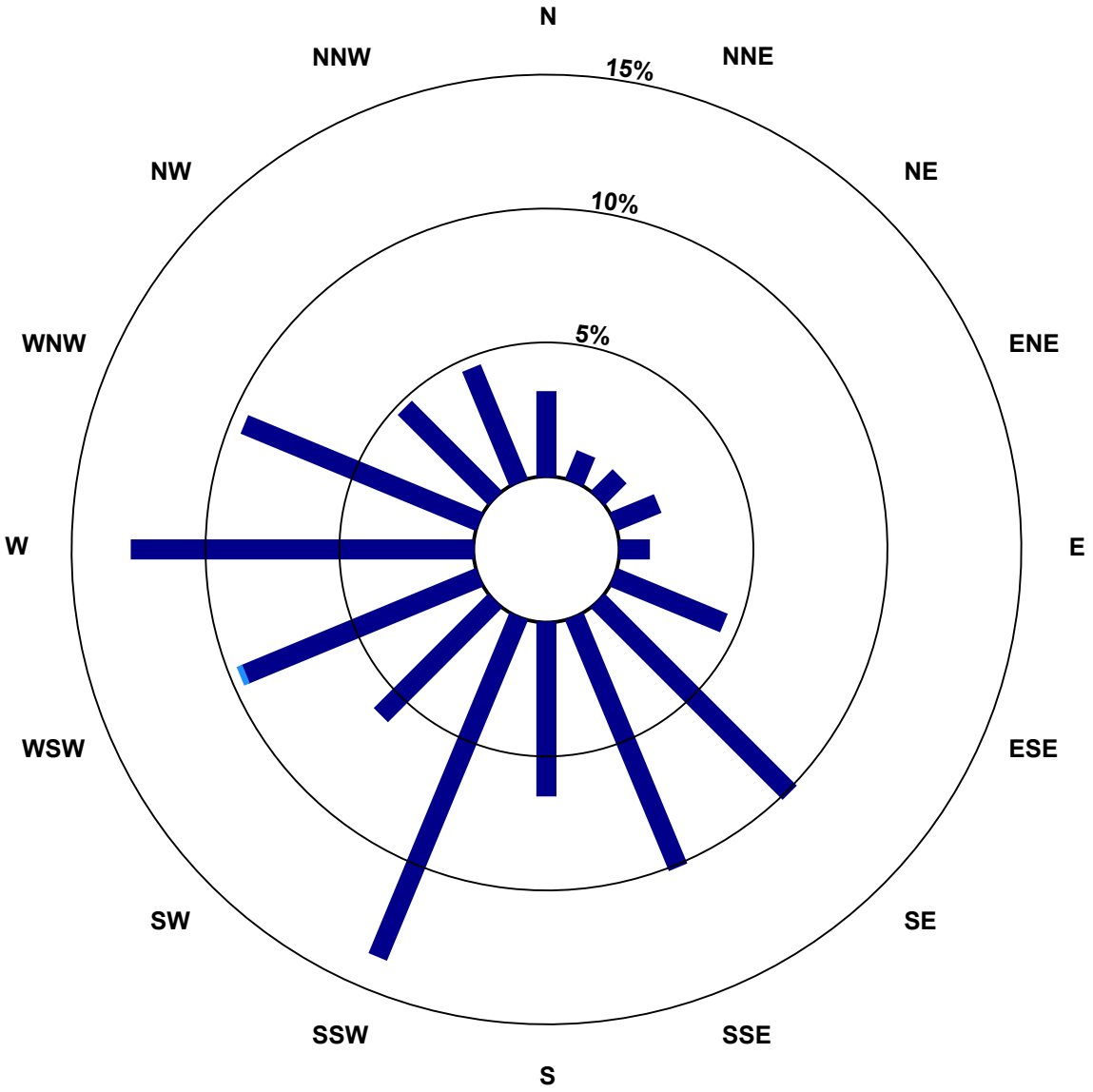
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Monday Creek



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

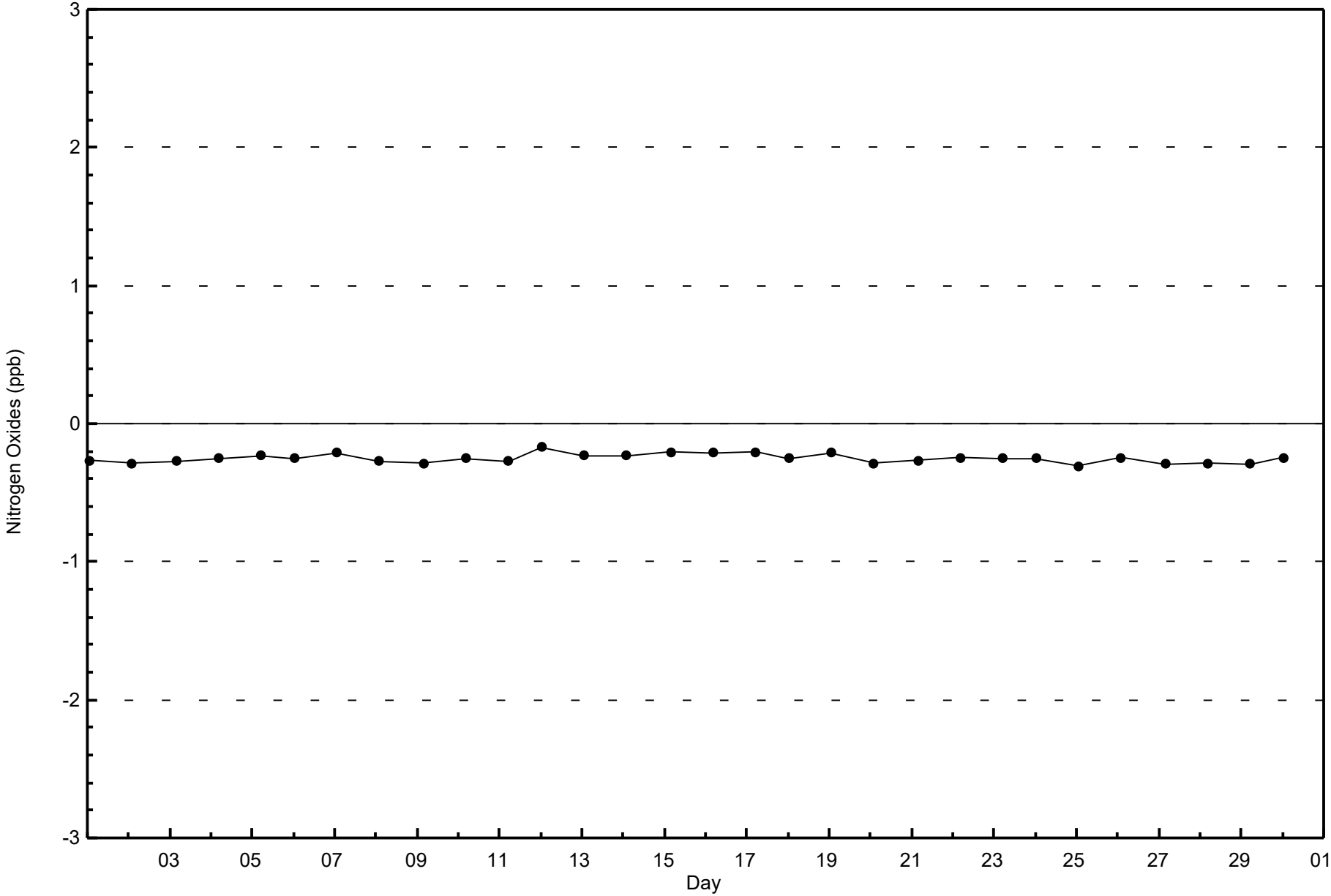
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025

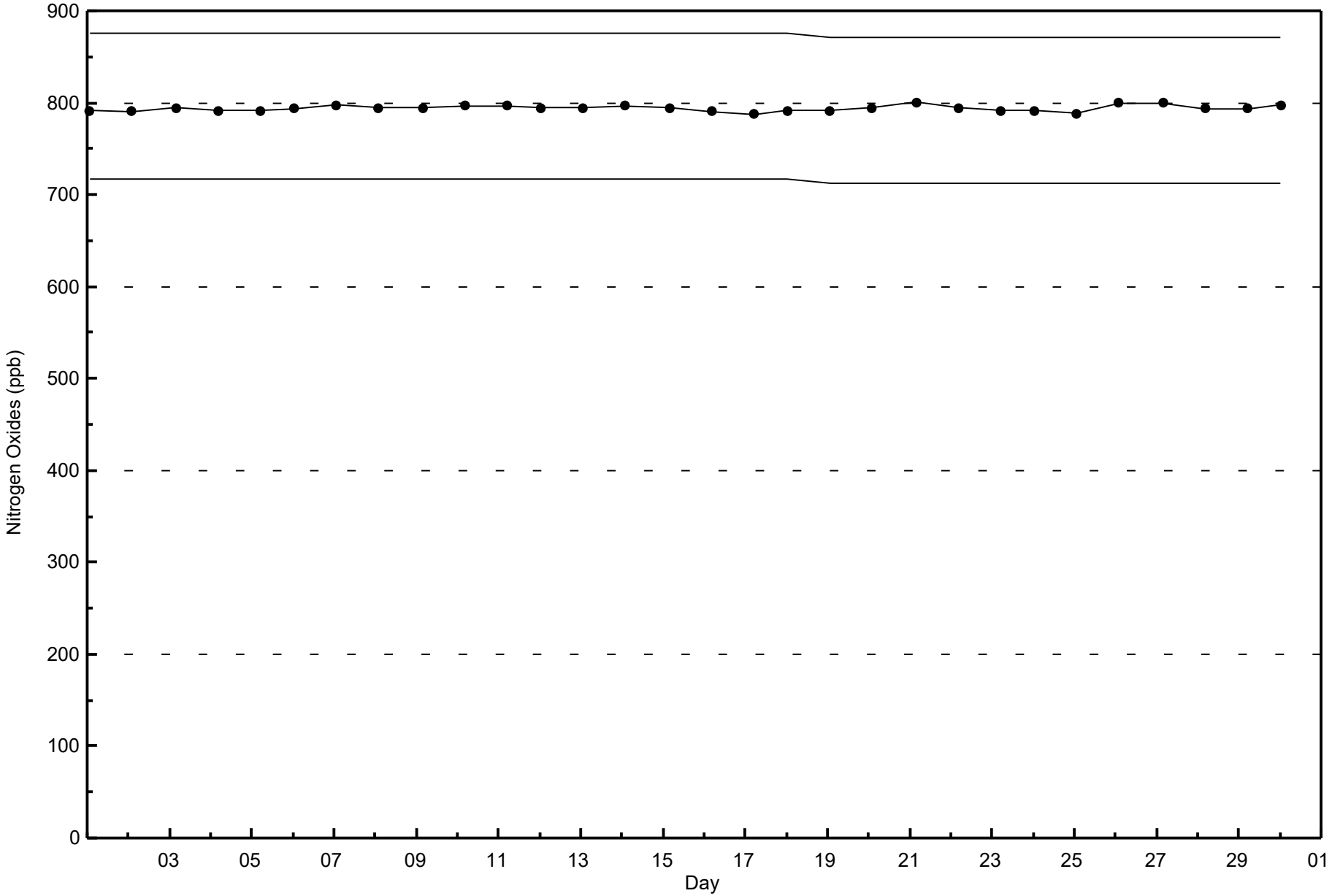


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - September 2025



Maximum Value: 27.4 C on Sep 13 13:00

Maximum Daily Average: 18.8 C on Sep 9

Minimum Value: -1.4 C on Sep 5 06:00

Minimum Daily Average: 9.1 C on Sep 25

Maximum Diurnal Average: 20.9 C at hour 16

Minimum Diurnal Average: 8.2 C at hour 6

Monthly Average: 14.45 C

Percentiles: P_1 = 0.6 P_{10} = 7.9 Q_1 = 10.4 Median = 14.2 Q_3 = 18.2 P_{90} = 22.3 P_{99} = 26.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

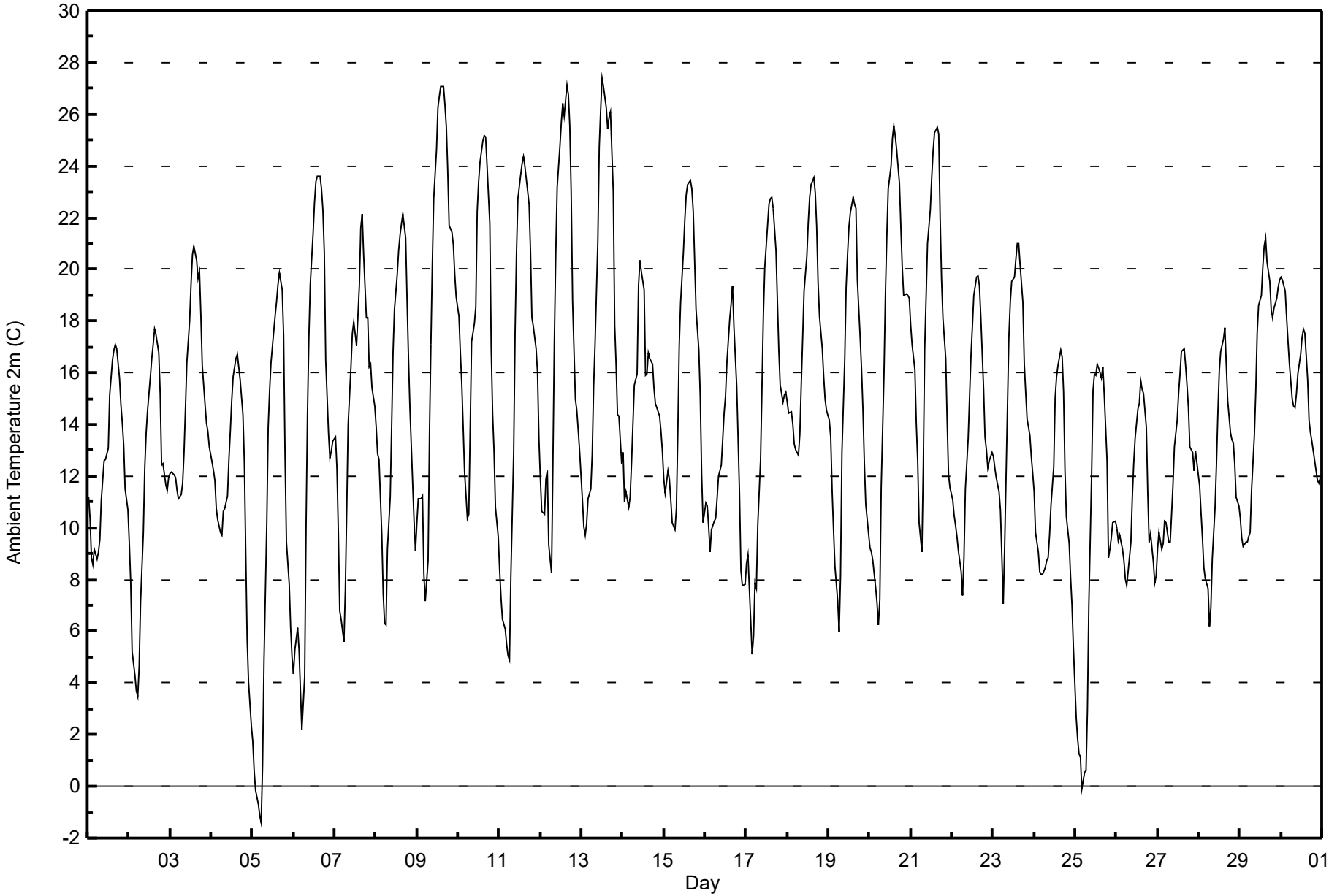
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	11.2	10.4	8.8	8.6	9.2	8.8	9.1	9.5	11.1	12.6	12.7	12.9	13.1	15.1	16.5	16.9	17.1	16.9	15.8	14.8	14.0	13.2	11.5	10.7	12.5	17.1
2-Sep	9.4	7.9	5.2	4.3	3.7	3.5	4.6	7.1	9.8	12.3	13.7	14.5	15.8	16.5	17.1	17.7	17.5	16.8	15.2	12.4	12.5	11.6	11.5	12.0	11.4	17.7
3-Sep	12.1	12.1	12.1	11.9	11.4	11.1	11.3	11.7	12.9	14.6	16.4	18.0	19.4	20.6	20.9	20.3	19.6	19.9	18.2	16.3	14.8	14.0	13.8	13.1	15.3	20.9
4-Sep	12.5	12.2	11.9	10.8	10.3	9.8	9.7	10.6	10.8	11.2	12.7	13.7	14.9	15.8	16.5	16.7	16.2	15.7	14.4	12.5	9.0	5.7	4.0	2.3	11.7	16.7
5-Sep	1.7	0.6	-0.2	-0.7	-1.1	-1.4	0.8	4.8	10.2	13.9	15.3	16.4	17.6	18.2	18.8	19.4	19.9	19.2	17.4	12.9	9.4	7.8	6.1	5.0	9.7	19.9
6-Sep	4.3	5.3	6.1	5.2	3.7	2.2	4.2	10.0	14.4	17.4	19.4	21.4	22.6	23.4	23.6	23.6	23.1	22.3	20.6	16.5	13.7	12.7	13.0	13.3	14.3	23.6
7-Sep	13.5	12.3	9.9	6.8	6.5	5.6	7.6	10.7	14.0	16.2	17.5	18.0	17.5	17.0	19.4	21.6	22.1	20.6	18.1	18.1	16.2	16.3	15.4	14.7	14.8	22.1
8-Sep	13.9	12.8	12.6	9.7	7.4	6.3	6.3	9.2	11.2	13.9	16.8	18.4	19.8	20.7	21.3	21.8	22.1	21.2	18.8	16.6	14.7	11.7	10.2	9.1	14.4	22.1
9-Sep	10.2	11.1	11.1	11.2	8.2	7.2	8.7	13.7	17.1	20.2	22.7	24.7	26.2	26.7	27.1	27.1	26.4	25.5	23.8	21.7	21.4	20.9	19.8	19.0	18.8	27.1
10-Sep	18.2	16.8	15.6	13.9	12.1	10.3	10.5	13.9	17.2	17.9	18.6	22.2	23.4	24.1	25.0	25.1	25.1	24.1	21.8	16.9	14.4	13.0	10.8	9.6	17.5	25.1
11-Sep	8.4	7.3	6.5	6.1	5.5	5.1	4.9	8.2	12.9	17.6	20.6	22.7	23.7	24.1	24.4	24.0	23.5	22.5	20.7	18.1	17.8	16.9	16.0	13.4	15.4	24.4
12-Sep	11.9	10.6	10.5	11.9	12.2	9.3	8.3	12.6	17.2	20.6	23.2	24.8	25.7	26.4	26.0	27.1	26.8	25.5	23.0	18.8	15.0	14.5	13.8	13.0	17.9	27.1
13-Sep	11.1	10.0	9.7	10.1	11.1	11.5	12.9	15.5	17.1	21.1	24.7	26.1	27.4	27.1	26.2	25.4	25.9	26.1	23.0	17.9	16.3	14.4	14.3	12.5	18.2	27.4
14-Sep	12.9	11.0	11.4	10.8	11.2	12.5	14.0	15.5	16.0	19.4	20.3	19.9	19.2	15.9	16.0	16.8	16.5	16.4	15.4	14.8	14.7	14.3	13.7	13.0	15.1	20.3
15-Sep	11.9	11.3	12.2	11.9	11.1	10.2	9.9	10.7	13.6	17.0	18.7	20.7	21.9	22.9	23.3	23.4	23.1	22.2	20.4	18.5	16.9	15.1	12.1	10.2	16.2	23.4
16-Sep	11.0	10.9	10.0	9.0	9.9	10.3	10.4	11.1	12.0	12.4	13.4	14.4	15.1	16.4	18.1	18.7	19.4	17.8	15.5	13.4	11.3	8.4	7.7	7.8	12.7	19.4
17-Sep	8.6	9.0	7.6	5.1	5.8	7.9	7.7	10.1	12.6	15.4	18.2	20.1	21.7	22.5	22.8	22.8	22.4	20.7	18.8	16.9	15.5	14.9	15.1	15.3	14.9	22.8
18-Sep	14.9	14.4	14.5	14.0	13.3	13.0	12.8	13.6	15.5	17.3	19.1	20.5	21.8	22.8	23.3	23.5	23.0	21.7	19.5	18.2	16.9	15.8	15.0	14.5	17.5	23.5
19-Sep	14.2	13.5	11.4	9.9	8.5	7.2	5.9	8.1	12.9	16.5	19.3	20.6	21.6	22.2	22.8	22.5	22.3	19.6	17.4	16.1	14.5	12.5	10.9	9.8	15.0	22.8
20-Sep	9.2	9.1	8.7	7.7	7.1	6.3	7.2	11.6	16.0	19.0	21.3	23.1	24.0	25.1	25.6	25.2	24.7	23.3	21.7	20.1	19.0	19.0	19.0	18.9	17.2	25.6
21-Sep	17.8	17.1	16.1	14.0	12.6	10.2	9.1	12.4	16.9	18.9	21.0	22.3	23.5	24.6	25.3	25.5	25.2	22.0	19.6	18.1	16.5	14.1	12.1	11.6	17.8	25.5
22-Sep	11.1	10.5	10.1	9.7	9.1	8.3	7.4	8.9	11.5	13.5	15.1	16.7	17.8	19.0	19.7	19.8	19.4	18.2	15.4	13.5	13.0	12.3	12.6	12.9	13.6	19.8
23-Sep	12.8	12.3	11.9	11.4	10.7	8.9	7.1	9.3	14.7	17.3	18.7	19.5	19.7	20.4	21.0	21.0	20.2	18.7	16.3	15.2	14.2	13.5	12.8	12.1	15.0	21.0
24-Sep	11.4	9.8	9.1	8.3	8.2	8.2	8.4	8.7	8.9	9.7	10.9	12.4	15.0	15.9	16.3	16.9	16.6	15.3	12.2	10.4	9.4	8.1	7.0	5.4	10.9	16.9
25-Sep	2.7	1.8	1.2	1.2	-0.1	0.6	0.6	2.9	7.0	12.1	15.3	15.9	15.9	16.3	16.0	15.8	16.2	15.1	12.6	8.8	9.2	9.6	10.2	10.3	9.1	16.3
26-Sep	10.0	9.5	9.7	9.2	8.7	8.0	7.8	8.3	9.4	11.2	12.5	13.5	14.6	14.8	15.7	15.4	15.2	13.9	11.4	9.5	9.8	8.7	7.9	8.2	10.9	15.7
27-Sep	9.2	9.8	9.2	9.4	10.3	10.2	9.4	9.5	10.5	11.7	13.1	14.2	15.2	16.0	16.8	16.9	16.3	15.5	14.7	13.2	12.9	12.2	13.0	12.5	12.6	16.9
28-Sep	11.6	10.6	9.6	8.5	8.1	7.7	6.2	6.9	8.8	10.8	12.5	14.5	16.1	16.8	17.3	17.8	16.3	14.9	13.7	13.4	13.3	12.5	11.2	10.9	12.1	17.8
29-Sep	10.4	9.6	9.3	9.4	9.5	9.7	9.8	11.5	13.6	15.3	17.5	18.6	19.0	20.1	20.9	21.2	20.3	19.6	18.4	18.1	18.5	18.9	19.3	19.6	15.7	21.2
30-Sep	19.7	19.6	19.1	18.1	17.2	16.4	15.0	14.7	14.6	15.2	15.9	16.7	17.4	17.7	17.5	15.7	14.2	13.7	13.3	13.0	12.2	11.8	11.7	12.0	15.5	19.7
	11.3	10.6	10.0	9.3	8.7	8.2	8.3	10.4	13.0	15.4	17.2	18.6	19.6	20.2	20.7	20.9	20.5	19.5	17.6	15.5	14.2	13.2	12.4	11.8	Diurnal Average	
	19.7	19.6	19.1	18.1	17.2	16.4	15.0	15.5	17.2	21.1	24.7	26.1	27.4	27.1	27.1	27.1	26.8	26.1	23.8	21.7	21.4	20.9	19.8	19.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Monday Creek - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	5	0.69	0.69
0 - 10	153	21.25	21.94
10 - 20	438	60.83	82.78
> 20	124	17.22	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Monday Creek - September 2025

Maximum Value: 100.0 % on Sep 1 04:00

Maximum Daily Average: 87.6 % on Sep 14

Minimum Value: 17.5 % on Sep 23 15:00

Minimum Daily Average: 40.9 % on Sep 27

Maximum Diurnal Average: 84.5 % at hour 7

Minimum Diurnal Average: 41.2 % at hour 16

Monthly Average: 63.22 %

Percentiles: P_1 = 25.3 P_{10} = 35.3 Q_1 = 45.2 Median = 61.8 Q_3 = 81.7 P_{90} = 93.9 P_{99} = 100.0

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

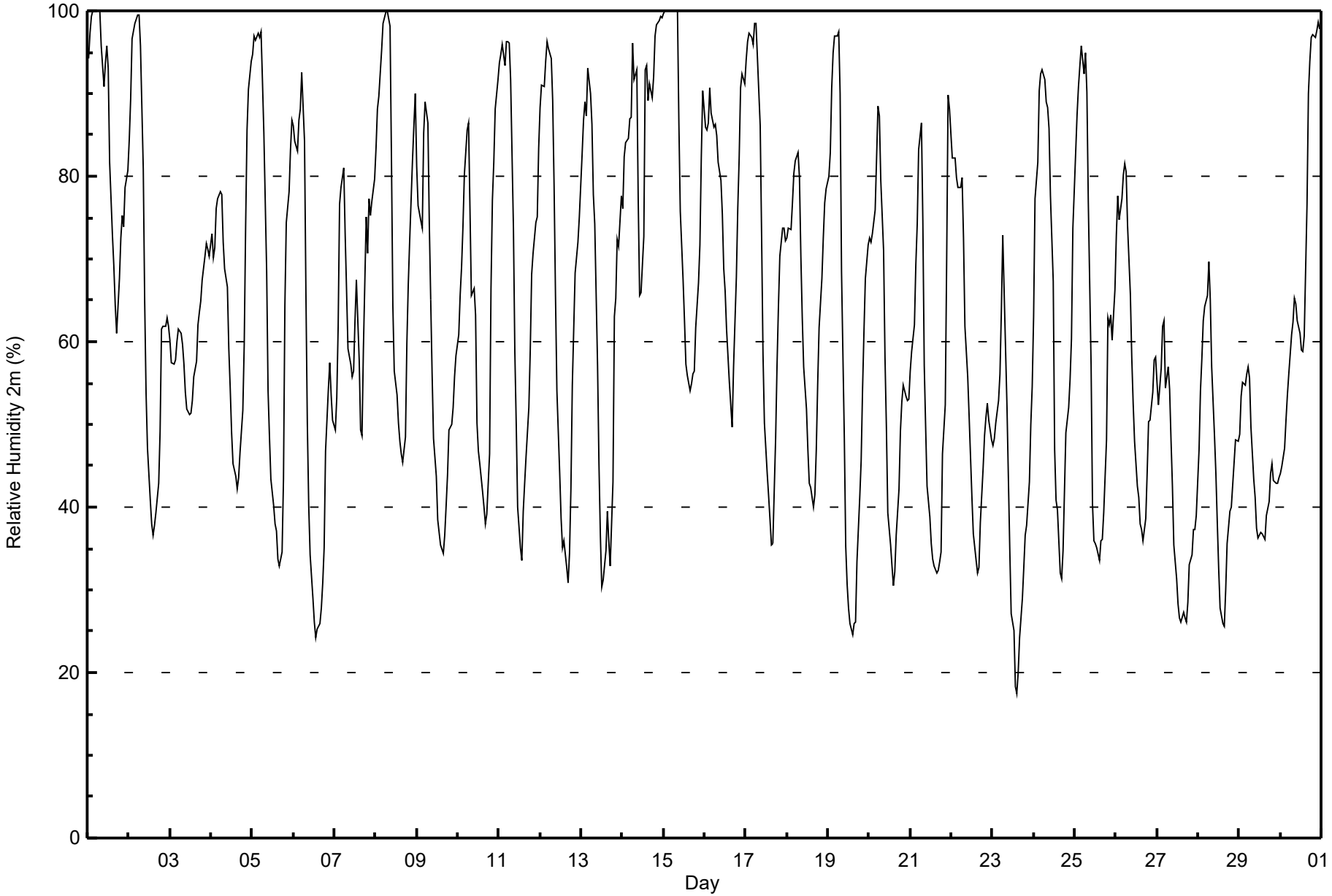
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	94.2	97.2	99.3	100.0	100.0	100.0	100.0	100.0	95.7	90.8	93.7	95.7	93.0	81.6	72.9	69.1	64.4	61.1	67.7	72.6	75.3	73.9	78.7	80.7	85.7	100.0
2-Sep	84.4	89.3	96.7	98.4	99.0	99.5	99.5	95.8	80.8	64.8	53.7	47.1	40.8	37.9	36.6	37.7	39.3	42.9	49.1	61.5	61.9	61.8	62.9	61.9	66.8	99.5
3-Sep	60.2	57.4	57.2	57.8	60.0	61.6	61.0	59.7	57.2	53.9	51.8	51.2	51.3	52.9	55.8	57.6	62.0	63.5	64.9	67.5	70.3	71.8	71.3	70.3	60.3	71.8
4-Sep	73.1	70.1	71.3	76.1	77.3	78.2	77.8	72.0	68.8	66.6	59.1	54.4	49.0	45.2	43.7	42.3	43.6	46.6	51.8	59.7	73.9	85.6	90.5	93.9	65.4	93.9
5-Sep	94.8	97.0	96.5	97.3	96.8	97.4	91.5	85.3	68.4	54.1	48.5	43.4	40.3	37.9	37.1	33.7	32.8	34.5	43.3	64.5	74.5	78.1	83.2	86.7	67.4	97.4
6-Sep	86.1	84.3	83.0	86.8	88.2	92.5	84.2	66.0	50.1	40.1	34.2	29.0	26.1	24.2	25.2	26.0	27.8	30.8	35.1	46.8	54.3	57.5	53.5	50.6	53.4	92.5
7-Sep	49.3	53.2	61.9	76.7	78.6	81.1	72.9	66.2	59.1	57.2	55.8	56.4	62.6	67.5	57.7	49.4	48.6	59.1	75.1	70.7	77.2	75.2	76.9	79.7	65.3	81.1
8-Sep	83.3	88.1	89.7	95.2	98.6	99.1	99.8	100.0	98.1	82.2	64.5	56.5	53.5	50.2	47.9	46.5	45.4	48.5	59.8	66.9	72.2	81.8	86.1	90.0	75.2	100.0
9-Sep	81.1	76.4	74.5	73.8	85.3	89.0	86.5	74.3	65.1	56.1	48.3	43.8	38.5	36.9	35.4	34.5	36.7	40.3	43.9	49.3	50.0	52.1	55.8	58.4	57.7	89.0
10-Sep	60.9	65.7	69.0	73.9	80.2	85.7	86.4	76.2	65.5	66.4	63.2	50.2	46.8	45.2	41.8	40.1	37.9	39.2	46.5	66.4	77.1	81.6	88.1	91.8	64.4	91.8
11-Sep	93.7	94.8	95.9	93.4	96.3	96.3	96.1	91.7	73.7	58.8	49.9	40.0	35.0	33.5	39.5	42.9	46.1	52.0	59.1	68.1	70.8	74.5	75.2	83.4	69.2	96.3
12-Sep	88.2	91.0	90.9	93.9	96.2	95.4	94.3	89.2	78.9	65.5	54.1	44.0	38.6	35.0	35.9	32.7	30.8	34.4	42.2	54.8	68.2	70.1	72.1	75.1	65.5	96.2
13-Sep	82.7	86.7	89.0	87.3	93.1	90.0	86.3	77.9	74.2	57.0	45.3	36.6	30.4	31.2	34.7	39.5	36.0	32.9	43.0	63.1	65.3	72.3	71.4	77.6	62.6	93.1
14-Sep	76.1	82.3	84.1	84.6	86.9	87.1	96.1	91.6	92.9	77.1	65.7	65.9	72.7	92.9	93.3	89.1	91.2	89.5	92.0	96.9	98.3	98.8	99.3	99.1	87.6	99.3
15-Sep	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	86.5	75.8	67.5	62.6	57.2	55.9	54.1	54.9	56.1	56.4	61.7	67.2	71.6	82.4	90.3	79.2	100.0
16-Sep	85.9	85.6	86.5	90.6	87.6	85.9	86.3	85.0	81.6	79.5	75.3	68.9	66.0	61.6	55.1	52.4	49.6	56.9	67.7	76.1	82.2	90.7	92.4	91.2	76.7	92.4
17-Sep	94.0	96.3	97.4	96.8	95.9	98.5	98.6	94.4	86.1	73.0	58.5	50.2	44.1	41.3	38.5	35.4	35.5	48.3	57.1	64.3	70.3	73.7	73.7	72.3	70.6	98.6
18-Sep	72.5	73.8	73.5	76.8	80.3	81.8	82.9	79.8	70.4	63.0	56.9	51.9	46.9	42.9	42.4	40.0	41.5	47.0	54.9	61.7	67.7	72.6	76.7	78.5	64.0	82.9
19-Sep	80.0	82.9	90.7	94.8	96.9	97.0	97.5	90.1	68.5	48.3	35.3	30.6	27.7	26.0	24.6	25.9	26.2	33.4	41.1	45.6	54.2	61.3	67.6	71.7	59.1	97.5
20-Sep	72.5	72.1	73.0	75.9	82.3	88.4	87.2	79.5	71.1	58.2	49.7	39.4	35.3	32.9	30.4	32.2	36.6	42.3	49.1	52.8	54.7	53.3	53.0	53.0	57.3	88.4
21-Sep	56.5	58.8	62.0	69.3	74.3	83.2	86.5	74.6	57.1	49.7	42.6	38.8	35.6	33.7	32.9	32.1	32.4	33.3	34.6	46.4	52.4	70.1	89.8	88.1	55.6	89.8
22-Sep	82.2	82.3	82.2	79.8	78.6	78.7	79.9	72.6	61.9	55.8	51.0	46.1	41.2	36.8	33.5	32.0	32.7	38.1	44.8	48.7	50.9	52.5	50.5	48.1	56.7	82.3
23-Sep	47.4	48.3	50.1	52.9	56.1	63.8	72.9	65.9	52.3	43.6	34.9	27.1	25.1	18.2	17.5	20.1	24.3	29.0	32.7	36.6	37.7	43.1	49.9	54.5	41.8	72.9
24-Sep	63.1	77.3	81.7	90.3	92.4	92.8	91.6	88.9	88.4	85.8	77.6	67.3	47.0	40.9	39.7	32.0	31.3	34.7	41.9	49.0	52.1	55.5	60.4	73.8	64.8	92.8
25-Sep	83.0	87.5	90.8	93.4	95.7	92.3	95.0	90.1	76.9	57.1	40.3	35.8	35.6	35.1	33.6	35.9	36.0	39.4	48.1	63.0	62.1	63.2	60.2	66.2	63.2	95.7
26-Sep	72.8	77.7	74.7	77.3	80.1	81.5	80.5	74.0	65.8	58.2	52.5	48.0	42.5	41.1	37.9	37.2	35.9	38.6	44.2	50.4	50.5	53.8	57.9	58.1	58.0	81.5
27-Sep	55.2	52.3	56.7	61.8	62.5	54.3	56.9	54.3	48.1	42.5	35.5	31.3	28.3	26.6	26.1	27.3	26.7	26.1	28.5	33.1	34.2	37.2	37.3	39.0	40.9	62.5
28-Sep	47.0	54.1	58.0	62.6	64.3	65.6	69.6	65.2	56.9	48.7	44.1	38.1	32.5	27.8	25.9	25.5	30.0	35.7	39.5	40.1	42.8	45.4	48.2	48.0	46.5	69.6
29-Sep	48.8	53.4	55.2	54.7	56.2	57.0	55.6	49.6	43.4	41.2	37.4	36.2	36.9	36.8	36.5	36.1	38.9	40.7	44.1	45.3	43.2	42.9	42.9	43.6	44.9	57.0
30-Sep	44.1	44.9	47.1	50.6	53.5	56.0	60.9	62.4	65.3	64.6	62.5	60.9	59.0	58.8	60.6	76.7	90.0	93.9	96.7	97.1	96.8	97.7	98.7	97.8	70.7	98.7
	73.8	76.0	77.9	80.8	83.1	84.3	84.5	79.1	70.7	61.5	53.9	48.4	44.8	43.0	41.6	41.2	42.2	45.6	51.8	59.3	63.6	67.3	70.2	72.5	Diurnal Average	
	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	90.8	93.7	95.7	93.0	92.9	93.3	89.1	91.2	93.9	96.7	97.1	98.3	98.8	99.3	99.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Monday Creek - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	2	0.28	0.28
20 - 40	124	17.22	17.50
40 - 60	217	30.14	47.64
60 - 80	184	25.56	73.19
80 - 100	179	24.86	98.06

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - September 2025

Maximum Speed: 29 km/h on Sep 26 13:00

Maximum Daily Speed Average: 16.1 km/h on Sep 27

Minimum Speed Value: 0 km/h on Sep 5 03:00

Minimum Daily Speed Average: 1.8 km/h on Sep 2

Maximum Diurnal Speed Average: 6.2 km/h at hour 12

Minimum Diurnal Speed Average: 1.2 km/h at hour 19

Monthly Average Velocity: 3.6 km/h 235.9 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 8 Q_3 = 13 P_{90} = 17 P_{99} = 23

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Percent Operational Time:	92.6

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WNW5	WNW4	W2	WNW5	W4	WSW3	WNW6	WSW4	W4	WSW2	WSW4	NW6	NNW8	NW5	NW6	N9	NE9	NNE7	N7	NNW6	N7	N11	NNE10	N8	NNW4.3	N11
2-Sep	NW5	WNW3	W1	WSW2	WSW1	WSW1	W1	WSW1	SW2	NE1	NNE5	SSE4	W2	NNE3	W1	NE3	S4	SE7	SE7	SE7	ESE9	SE10	SSE7	SSE8	SSE1.8	SE10
3-Sep	SSE8	S9	S8	SSW10	SSW10	SSW10	SSW11	SSW13	SSW12	SSW15	SSW12	SSW14	SW12	SW12	W13	W16	W12	NNW14	N22	N19	N14	NNW19	NNW20	N19	W4.9	N22
4-Sep	NW13	NNW17	NNW16	NW15	NW14	NW13	NW13	NNW17	NNW21	NNW19	NNW17	N17	NNW19	NNW19	NNW18	NNW16	NNW15	NNW13	N9	N6	NW4	WSW2	WSW3	SW2	NNW12.7	NNW21
5-Sep	SW1	WSW1	WSW0	WSW1	WSW1	WSW1	WSW1	UO	WSW3	WSW5	SSW4	WSW6	SW4	W5	N6	WNW5	W4	WNW4	WSW2	WSW3	WSW2	WSW2	W2	WSW2	WSW2.3	N6
6-Sep	WSW3	SW5	SW4	WNW3	NW4	WNW4	SSW3	SSE6	S7	S7	S9	SSW12	SSW15	SW16	SW15	SSW14	SSW14	SSW10	SW6	SSW5	SSW5	SSW5	SSW5	SW4	SSW6.7	SSW16
7-Sep	SSW7	SW5	SW5	SW3	SW5	WSW3	WSW3	WSW3	WSW3	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	SSW7
8-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	S15	SSW16	SSW15	SSW15	SSW15	SSW7	SSW5	SE9	SSE10	SSE10	S10	SSW7	----	SSW16
10-Sep	WSW8	SSW5	SSW6	WSW4	WSW3	SW4	WSW3	SW4	W5	WSW7	W6	UO	NNW7	NNW8	NW11	NNW8	NNW8	NNW6	N5	NE3	W1	WNW2	SSW1	WSW1	WNW3.3	NW11
11-Sep	SSW2	W1	SSE1	ESE2	W2	WSW1	W2	WSW3	WNW3	ENE3	NE5	E6	ESE7	SE7	ESE6	SSE6	SE8	SE8	ESE6	ESE6	SE7	SE7	SE6	SSE4	SE3.2	SE8
12-Sep	ESE4	SE5	SE6	SE7	SE6	SE4	ENE1	ESE3	SSE5	S8	S7	SSW8	SSW7	S5	SW4	SSW6	SSW7	SSW7	SSW6	SSE5	S4	SE5	SSE5	ESE2	S4.5	SSW8
13-Sep	ENE2	E4	ESE5	E4	ESE6	SE6	ESE5	SE4	SW1	W2	ESE3	S6	SSW13	SSE8	ESE8	E6	ESE8	SE6	SE6	SSE2	ESE6	SE4	SE5	ESE3	SE4.1	SSW13
14-Sep	ESE5	E3	ENE3	ESE4	SE1	S2	ENE4	SE5	SSW2	SSW5	SE12	SE7	E14	ESE14	ESE10	ESE12	E8	ENE7	ENE7	ENE6	ENE5	SE4	SSW3	ENE2	ESE5.1	ESE14
15-Sep	S2	WSW3	W3	SSW3	S4	W3	WSW1	SSE3	WSW2	W13	W14	WNW13	WNW16	WNW15	WNW18	NW18	WNW17	WNW16	WNW14	WNW9	NW11	NW6	WNW3	WNW4	WNW8.0	NW18
16-Sep	NW7	NW9	NW8	WNW7	WNW9	NW9	WNW7	WNW8	WNW11	NW12	NW10	NW8	NW9	N4	NNW4	N2	SSW2	SE5	SSE6	SE6	SE5	ESE3	ESE5	SE5	NW3.5	NW12
17-Sep	SE7	SE7	SE4	E3	SE4	SE5	ESE5	SE6	SSE9	SSE10	S13	S13	SSE12	SSE14	SSE15	S15	SSE15	SSE15	SSE11	SE10	SE10	SE11	SSE13	SSE14	SSE9.6	SSE15
18-Sep	SSE12	SSE11	S12	S11	S11	S10	S10	SSW11	SSW17	SSW16	SSW14	SSW15	SSW17	SSW18	SSW16	SSW14	SSW13	SSW10	SSW6	SW8	SSW8	S7	SSW9	SW7	SSW11.3	SSW18
19-Sep	WSW4	SSW5	SSW4	SSW2	SW2	S2	SSW2	SSE2	SSW2	WNW3	WNW2	SW1	S2	WSW7	WSW8	SW9	WSW10	WSW7	SW4	SW3	SSE2	SE2	SE3	ESE3	SW3.0	WSW10
20-Sep	SE4	ESE3	S4	WNW2	NNW1	SE4	SE3	S3	SSW6	SSW9	SSW11	SSW12	S14	S15	S15	SSW12	SSW11	SSE8	SE10	SE10	SE11	SSE11	SSE10	SSE12	S7.3	S15
21-Sep	SSE10	SE8	SSE5	S4	SW5	SW3	WSW3	W3	NW7	N7	N9	NNE10	NE9	NNE9	NNW8	NNW6	N6	NW16	NW14	WNW18	WNW22	NW17	WNW13	WNW13	NW5.4	WNW22
22-Sep	W11	W10	W10	W11	W12	W10	W7	W11	W14	W15	W17	W18	W21	W18	W19	W20	WSW17	SW11	SSW8	S7	S7	S9	SSW11	SSW14	WSW11.2	W21
23-Sep	SSW13	SSW11	SSW8	SSW6	SSW5	SW3	SSE2	SSW6	SW6	WNW12	WNW17	WNW15	W18	WNW20	WNW19	WNW15	NW11	WNW9	W9	W10	W8	WSW10	W11	W9	W8.3	WNW20
24-Sep	W9	W8	W6	SW5	SSW5	W6	WSW9	W14	SW11	WSW10	W16	W18	WNW22	WNW22	WNW19	WNW19	WNW16	WNW13	W9	W10	W9	WSW5	WSW5	SW3	W10.6	WNW22
25-Sep	SSW2	SSW3	SSW2	SSE3	SSE4	SE4	ESE3	SE4	SE4	S7	SSW16	SSW19	SSW16	SSW14	S14	S10	SSE11	SSE10	SSW4	S5	SSW2	WNW6	WSW5	W9	SSW6.1	SSW19
26-Sep	W7	WSW7	W10	W11	W11	W11	W13	W14	WNW19	WNW22	WNW23	WNW25	WNW29	WNW29	WNW26	WNW25	W25	WNW16	W9	WSW9	W12	SW9	SSW8	SSW6	W14.7	WNW29
27-Sep	SW10	SW10	SSW10	W13	WSW18	W23	W23	W22	W23	W23	WNW23	W22	W22	W22	W18	WSW15	WSW13	WSW14	W13	WSW6	W13	W13	W21	W18	W16.1	W23
28-Sep	W16	WSW12	SW12	WSW14	WSW12	W15	W12	W12	W11	WNW11	WNW10	W9	NW8	W1	SW4	WSW3	SSE6	SE8	SE7	ESE8	SSE8	SSE6	SE8	SSE9	WSW5.3	W16
29-Sep	SE10	SE13	SSE13	SE15	SE14	SE14	SE15	SSE18	SSE21	SSE19	SSE21	SSE22	SSE20	SSE14	SSE14	SSE16	SSE13	SSE12	SE9	SE10	SE13	SSE16	SSE16	SSE17	SSE14.9	SSE22
30-Sep	SSE16	S14	S11	SSE9	SSE10	S8	SE6	SSE5	SSW2	SSW5	SSW7	SW7	SW5	SSE2	N5	ENE4	ENE10	NE6	N4	NW8	NNW7	NW4	NNW7	NW6	S2.4	SSE16
	SSW3.4	SSW3.4	SSW3.4	SW3.1	SW3.5	SW3.5	WSW3.0	SW3.9	WSW4.7	WSW5.7	WSW6.0	WSW6.2	WSW6.2	WSW5.7	WSW6.0	WSW5.0	WSW4.3	WSW2.7	WSW1.2	SW1.3	SW1.6	SSW2.2	SSW2.9	SSW2.8	Diurnal Average	
	SSE16	NNW17	NNW16	NW15	WSW18	W23	W23	W22	W23	W23	WNW23	WNW25	WNW29	WNW29	WNW26	WNW25	W25	WNW16	N22	N19	WNW22	NNW19	W21	N19	Diurnal Maximum	

M - Maintenance UO - Unstable Operation

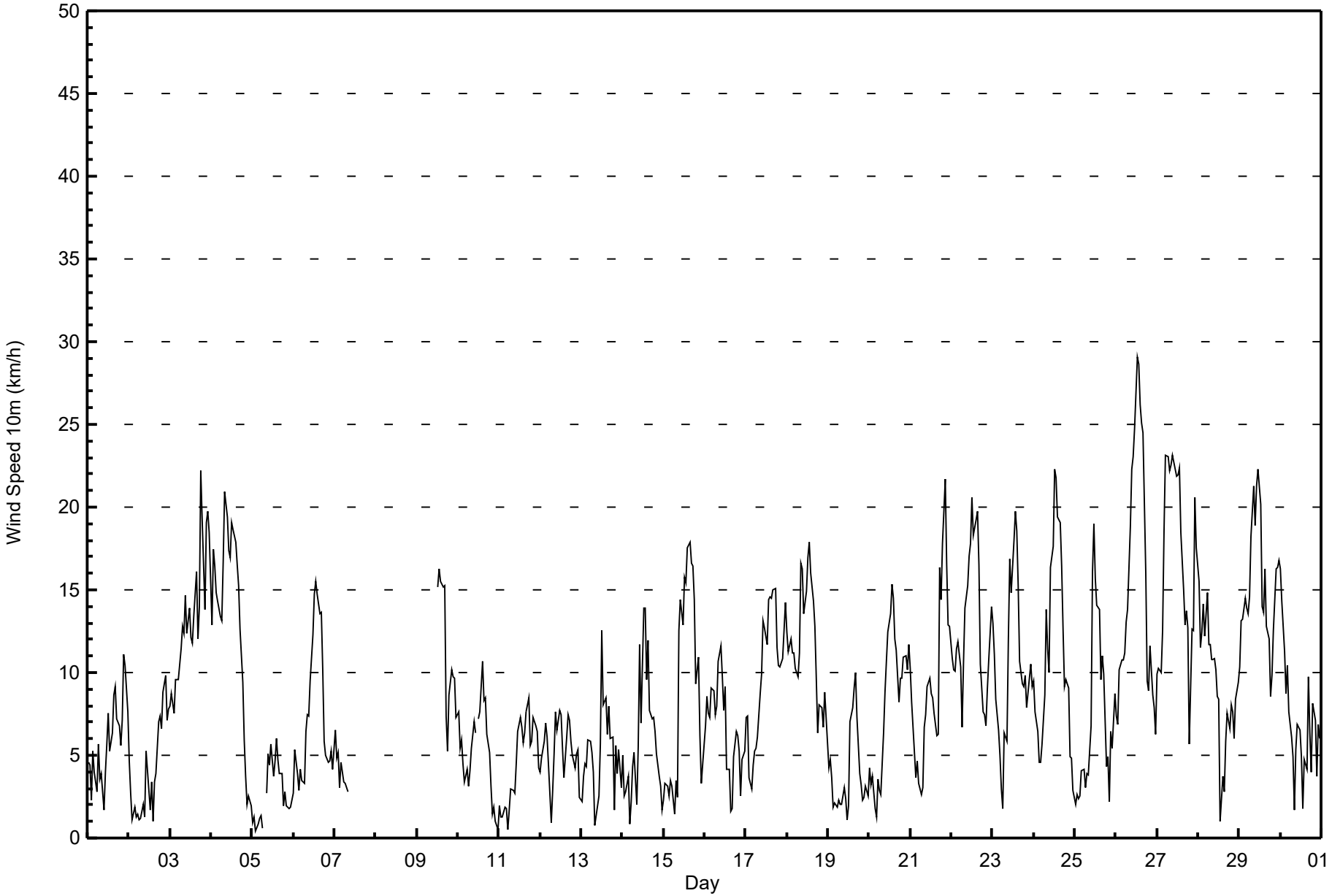
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	230	34.48	34.48
6 - 11	244	36.58	71.06
12 - 19	162	24.29	95.35
20 - 28	29	4.35	99.70
29 - 38	2	0.30	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 667

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Monday Creek - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	3	4	9	3	16	23	16	12	29	26	43	20	15	5	2	230
6 - 11	11	4	3	4	3	11	36	25	21	34	10	15	28	11	17	11	244
12 - 19	4	0	0	0	1	2	7	21	10	32	4	8	26	24	9	14	162
20 - 28	1	0	0	0	0	0	0	4	0	0	0	0	12	10	0	2	29
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	7	7	13	7	29	66	66	43	95	40	66	86	62	31	29	667

Total Number of Valid Hours: 667

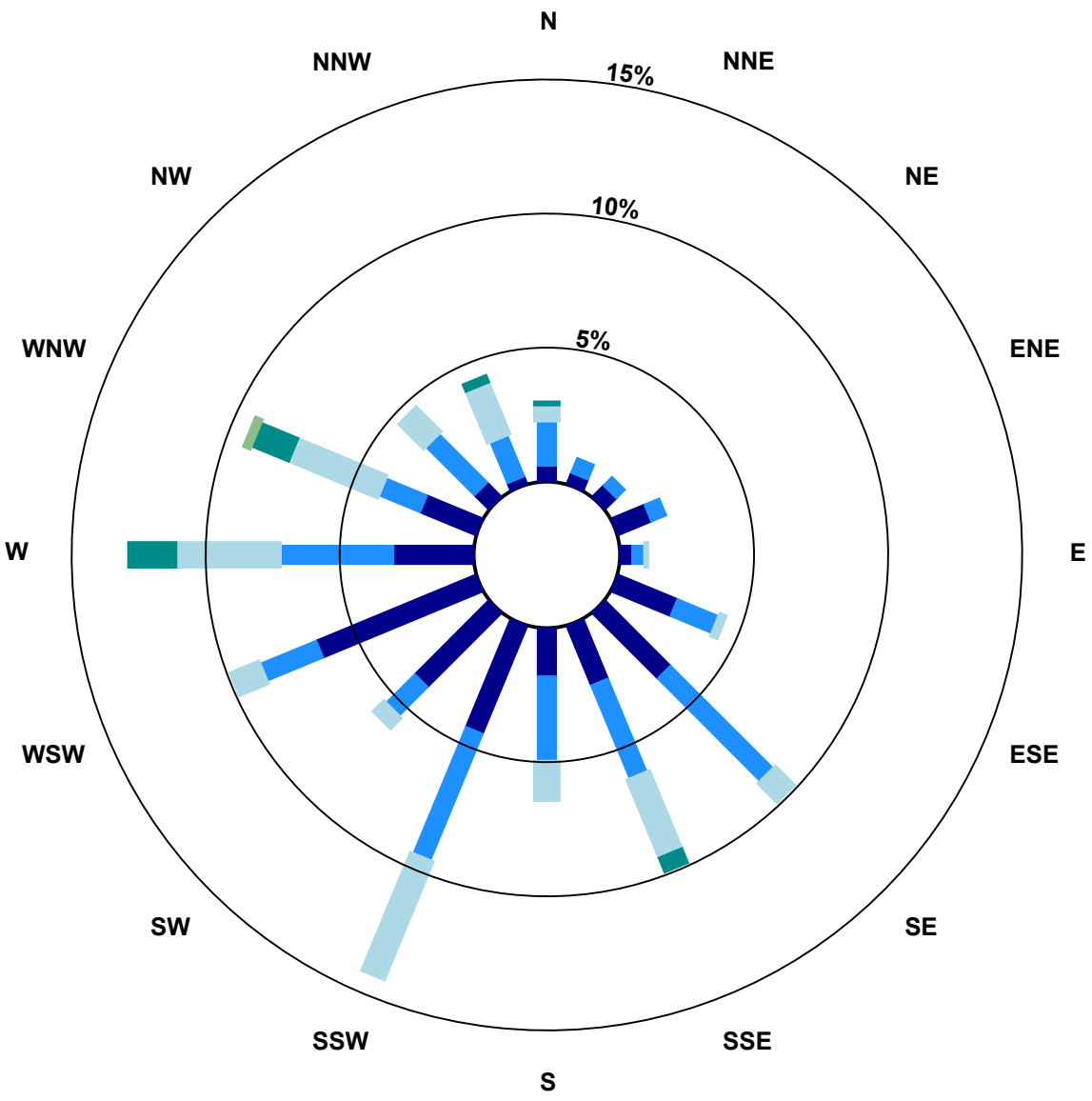
Total Number of Hours: 720

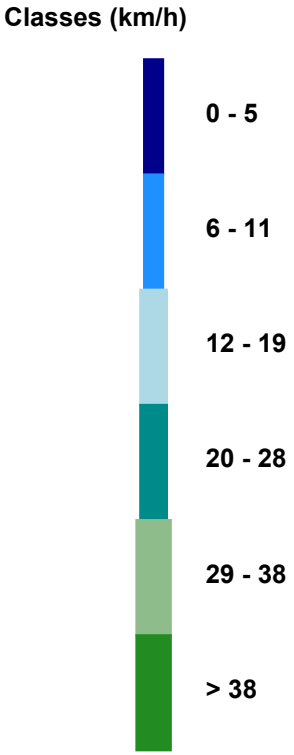
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Monday Creek





Total Number of Valid Hours: 667

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Monday Creek - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 3 19:00

Minimum Value: 1 km/h on Sep 6 05:00

Percentiles: $P_1 = 1$ $P_{10} = 1$ $Q_1 = 1$ Median = 2 $Q_3 = 3$ $P_{90} = 4$ $P_{99} = 6$

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Hours of Calibration:	0
Percent Operational Time:	92.6

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-Sep	1	1	1	2	1	1	1	1	1	1	2	3	2	2	2	2	3	2	1	1	2	3	2	3	3
2-Sep	1	1	1	1	1	2	1	1	2	3	3	3	2	2	2	2	2	2	1	1	2	2	2	2	3
3-Sep	2	3	3	3	3	3	3	4	4	4	3	3	3	3	4	3	2	5	7	6	4	5	5	5	7
4-Sep	4	5	4	4	3	3	3	5	6	5	5	4	5	5	5	4	4	3	3	1	2	2	1	1	6
5-Sep	1	1	1	1	1	1	1	UO	2	2	2	3	3	3	3	3	2	1	2	1	1	1	2	1	3
6-Sep	2	1	1	1	1	1	1	1	2	2	3	4	4	5	4	4	4	3	1	1	1	2	1	1	5
7-Sep	2	1	1	2	1	1	2	2	2	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2
8-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	5	5	4	5	4	2	1	2	2	2	2	2	5
10-Sep	3	1	1	1	1	1	2	2	2	2	2	UO	3	3	3	3	2	2	1	2	1	1	1	1	3
11-Sep	1	1	1	1	1	1	1	1	1	1	2	4	3	3	3	2	2	2	1	1	1	1	1	1	4
12-Sep	2	1	2	1	1	1	1	2	1	2	2	3	3	3	2	3	3	1	1	1	1	1	1	1	3
13-Sep	1	1	1	1	1	1	1	1	1	1	2	3	4	3	2	1	2	2	1	1	2	2	2	1	4
14-Sep	1	1	1	2	1	2	2	3	1	3	3	2	7	3	2	2	2	2	1	1	1	1	1	1	7
15-Sep	1	1	1	1	1	1	1	1	1	3	3	3	4	4	4	4	4	3	3	2	2	2	1	1	4
16-Sep	2	2	2	2	2	2	2	2	3	3	2	3	3	2	3	2	2	1	1	1	1	1	2	1	3
17-Sep	1	1	1	2	1	1	1	1	3	3	4	3	4	4	4	4	4	4	3	2	2	2	3	4	4
18-Sep	2	3	4	3	3	3	3	4	5	4	3	4	5	5	5	4	3	2	2	2	1	2	2	2	5
19-Sep	2	2	1	1	1	1	1	1	1	1	2	1	2	3	3	3	2	2	1	2	1	1	1	1	3
20-Sep	1	1	1	1	1	1	1	2	2	2	3	4	4	4	4	4	4	2	1	1	2	2	2	3	4
21-Sep	2	2	1	1	1	1	1	1	2	3	2	3	3	3	3	3	4	5	5	5	5	6	4	3	6
22-Sep	2	2	2	2	2	2	1	3	4	3	4	4	4	4	5	5	4	2	1	1	2	2	3	3	5
23-Sep	3	3	2	1	2	2	1	1	2	4	3	3	5	5	5	4	3	2	2	2	2	3	3	2	5
24-Sep	2	2	1	1	1	3	3	5	3	4	4	4	5	5	4	4	4	3	1	1	1	1	1	1	5
25-Sep	2	1	1	1	1	1	1	1	1	3	4	5	5	4	4	4	3	3	1	1	1	6	2	3	6
26-Sep	1	2	2	2	2	2	2	3	4	5	4	5	5	6	6	6	5	5	2	1	4	2	2	1	6
27-Sep	4	2	3	4	5	7	6	5	5	5	5	4	5	5	4	4	4	3	4	2	3	3	6	4	7
28-Sep	4	3	3	3	3	3	2	2	2	3	2	3	4	2	2	2	2	1	1	2	3	1	1	2	4
29-Sep	2	3	3	3	3	3	3	5	6	5	6	6	6	5	4	4	4	3	2	3	3	3	4	4	6
30-Sep	5	4	3	2	2	3	2	2	2	2	2	2	2	2	2	4	2	3	2	3	3	1	2	1	5
	5	5	4	4	5	7	6	5	6	5	6	6	7	6	6	6	5	5	7	6	5	6	6	5	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Monday Creek - September 2025

Direction of Maximum Speed: 285 deg on Sep 26 13:00
Direction of Maximum Daily Speed Average: 265.6 deg on Sep 27

Direction of Minimum Speed: 248 deg on Sep 5 03:00

Direction of Minimum Daily Speed Average: 1.8 deg on Sep 2

Monthly Average Direction: 235.9 deg

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Percent Operational Time:	92.6

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	Average
1-Sep	303	283	260	285	274	238	290	258	280	241	257	321	330	317	316	7	35	12	357	341	349	8	27	10	335.1
2-Sep	317	288	270	254	258	243	260	255	231	46	33	156	267	12	266	45	177	139	131	133	123	145	159	166	147.7
3-Sep	167	172	186	197	195	201	201	203	201	197	198	212	216	233	264	264	268	337	2	356	353	343	339	355	259.8
4-Sep	326	348	331	319	315	308	307	327	340	339	340	349	342	331	329	332	344	347	6	356	314	240	248	235	332.8
5-Sep	229	248	248	254	242	245	246	UO	238	244	202	248	217	260	350	298	277	291	258	239	249	250	259	251	258.2
6-Sep	241	229	229	299	316	287	207	152	172	179	183	206	205	214	216	213	204	205	216	212	210	192	197	231	208.2
7-Sep	204	226	217	230	225	248	237	239	257	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
8-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	183	198	203	200	208	209	192	142	155	167	179	201	--
10-Sep	245	208	202	238	251	233	239	235	274	251	276	UO	330	327	311	332	338	341	11	41	278	288	213	250	287.7
11-Sep	212	276	165	108	276	253	268	252	297	65	37	84	119	132	123	166	140	129	119	112	135	140	143	149	131.1
12-Sep	107	129	134	138	139	136	71	116	167	175	191	193	213	188	217	198	208	195	198	158	171	144	152	107	169.2
13-Sep	59	79	110	86	112	124	123	131	219	266	104	172	199	154	122	100	109	145	146	168	106	143	145	112	131.9
14-Sep	122	99	70	112	140	169	75	136	199	192	146	127	98	110	103	104	92	71	70	72	78	137	204	68	109.0
15-Sep	184	244	273	207	183	269	246	168	250	275	274	290	293	302	295	305	297	293	297	303	320	319	296	301	290.5
16-Sep	311	308	315	297	302	309	300	298	301	307	305	307	317	2	343	11	208	146	149	143	140	107	121	139	304.9
17-Sep	135	137	134	80	128	136	107	131	153	166	181	180	162	150	167	171	161	159	152	141	138	142	154	159	153.9
18-Sep	154	165	177	176	181	188	190	201	206	209	212	205	198	205	208	209	210	197	205	228	203	180	193	214	197.1
19-Sep	252	209	203	210	222	191	203	164	211	298	299	217	178	243	243	225	246	238	233	215	158	132	137	106	223.4
20-Sep	133	123	179	295	343	125	140	170	199	210	199	193	191	186	189	192	194	159	136	138	141	148	157	162	173.2
21-Sep	153	142	151	169	235	228	239	272	311	3	356	22	46	26	336	347	1	313	319	299	303	309	300	282	317.7
22-Sep	276	267	270	270	272	268	259	269	273	274	269	259	264	265	262	260	249	227	203	185	174	184	196	197	252.7
23-Sep	198	198	200	195	206	216	148	202	229	284	291	297	281	290	301	302	306	292	274	280	267	244	266	271	268.7
24-Sep	272	279	278	226	207	261	248	264	236	254	270	281	286	294	284	292	284	285	274	269	271	241	239	224	272.6
25-Sep	213	201	195	159	160	127	121	126	140	189	204	202	203	198	187	172	166	168	201	180	192	282	252	278	192.6
26-Sep	264	245	264	273	274	271	278	277	287	287	288	283	285	288	293	290	281	283	266	243	259	220	200	199	276.7
27-Sep	220	218	208	265	247	263	267	267	275	276	283	277	277	279	281	250	242	255	262	254	270	276	281	269	265.6
28-Sep	264	237	229	238	247	268	269	266	274	296	284	281	309	281	226	248	152	126	126	122	157	155	137	147	240.5
29-Sep	145	142	149	146	138	131	137	150	156	160	163	166	164	165	166	158	161	157	126	131	142	149	159	160	152.7
30-Sep	168	178	173	161	163	175	143	148	210	213	207	226	220	154	7	75	78	53	350	309	341	313	344	325	174.0
	212.8	207.6	211.1	224.4	226.7	235.7	237.5	231.5	245.9	251.6	249.5	243.5	245.2	248.7	257.7	251.2	236.3	238.9	247.2	219.0	215.9	199.2	205.3	211.6	
	Diurnal Average																								

M - Maintenance UO - Unstable Operation

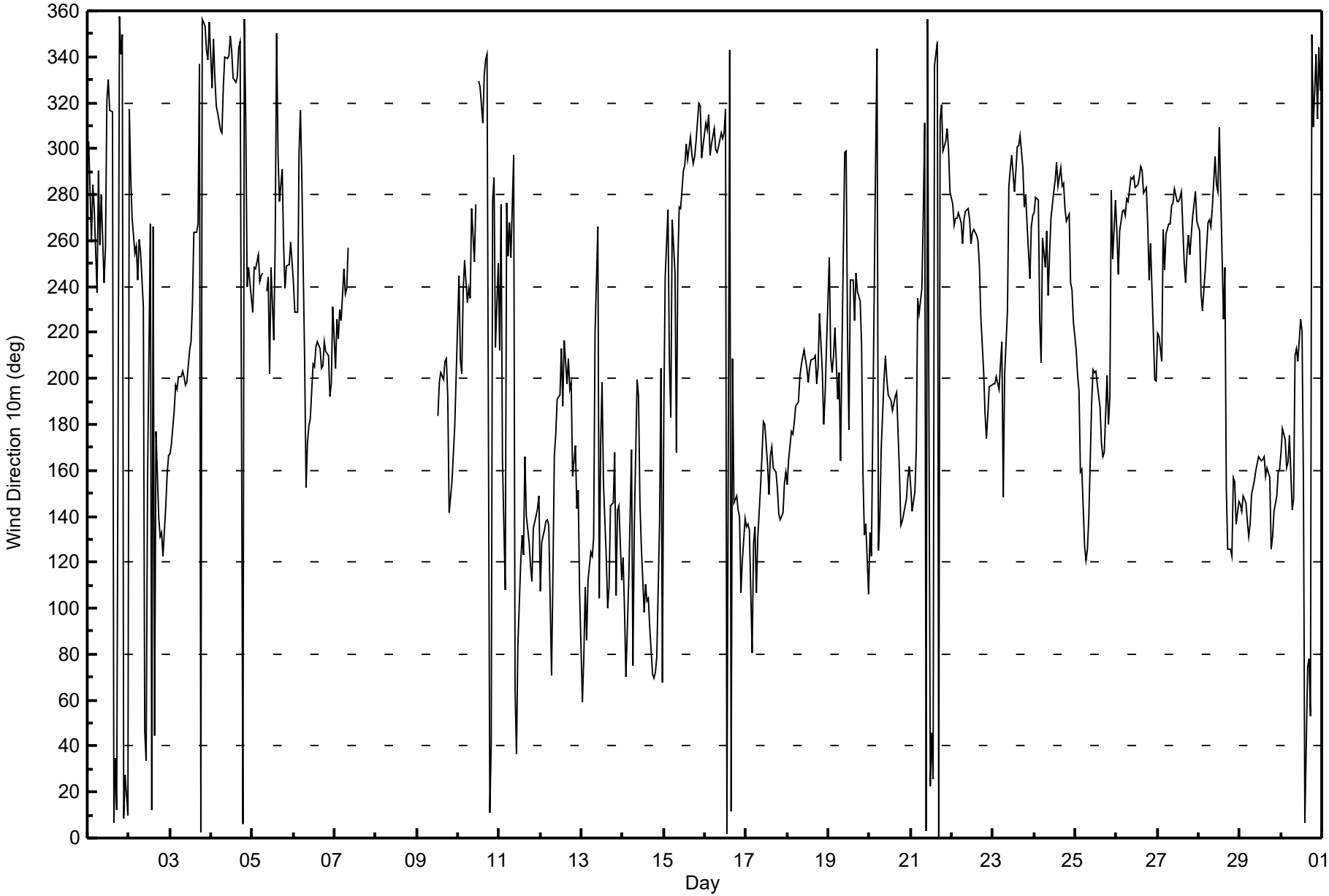
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Monday Creek - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Monday Creek - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 105 deg on Sep 2 10:00

Minimum Value: 5 deg on Sep 2 03:00

Percentiles: P_1 = 7 P_{10} = 12 Q_1 = 15 Median = 20 Q_3 = 30 P_{90} = 49 P_{99} = 89

Hours in Service:	720
Hours of Data:	667
Hours of Missing Data:	53
Hours of Calibration:	0
Percent Operational Time:	92.6

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-Sep	20	17	30	14	16	10	19	17	19	68	19	31	23	44	27	23	26	25	24	27	23	17	13	32	68
2-Sep	28	16	5	33	29	42	5	6	46	105	72	88	84	93	98	83	64	45	12	15	15	14	33	31	105
3-Sep	25	29	38	26	27	23	22	21	22	21	23	20	21	21	16	12	14	26	21	22	21	20	17	23	38
4-Sep	19	21	20	15	16	18	18	20	19	20	24	24	24	22	24	21	22	24	20	22	31	15	15	6	31
5-Sep	12	9	6	48	6	32	35	UO	18	33	69	41	81	72	78	62	51	35	11	17	9	9	7	11	81
6-Sep	12	20	21	51	23	23	63	27	33	45	35	28	23	25	24	24	21	19	19	26	33	39	32	26	63
7-Sep	23	22	19	29	22	13	16	21	10	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	29
8-Sep	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-Sep	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	27	23	21	21	19	22	30	12	19	22	24	24	30
10-Sep	32	23	19	14	10	18	15	30	18	23	16	UO	39	41	28	31	22	13	14	37	60	46	56	65	65
11-Sep	43	43	62	47	55	83	48	34	39	66	41	58	40	46	58	33	15	10	9	10	8	10	10	15	83
12-Sep	16	34	22	10	10	27	74	43	26	25	35	40	40	55	51	57	26	15	12	19	21	9	15	50	74
13-Sep	48	20	20	12	14	11	14	11	79	72	65	62	25	37	13	9	16	20	12	67	26	29	14	24	79
14-Sep	12	62	49	26	94	63	64	32	52	38	18	23	12	13	11	12	13	17	10	11	13	30	37	66	94
15-Sep	40	32	29	27	21	33	70	29	55	14	15	20	19	19	14	17	13	11	9	15	18	21	21	22	70
16-Sep	18	17	17	15	15	18	17	16	16	16	23	36	38	72	70	90	80	21	13	14	14	31	37	14	90
17-Sep	8	10	21	24	20	21	13	14	21	21	25	25	29	22	21	21	19	17	15	11	11	12	17	16	29
18-Sep	14	19	20	21	21	22	23	24	20	20	19	23	22	18	22	22	20	16	34	17	15	19	18	28	34
19-Sep	36	28	39	49	43	40	40	33	45	58	86	92	82	47	37	28	18	9	24	46	43	60	18	25	92
20-Sep	10	23	36	58	85	21	18	32	20	21	22	26	23	21	23	21	20	20	9	9	12	12	19	18	85
21-Sep	14	15	27	57	34	27	25	27	23	30	27	30	33	31	40	50	39	17	17	13	14	17	14	12	57
22-Sep	11	11	11	10	10	11	9	11	14	15	15	18	17	19	20	18	18	13	13	17	17	17	16	16	20
23-Sep	17	17	19	15	39	38	53	13	27	26	15	19	19	16	17	19	19	20	15	10	16	28	13	18	53
24-Sep	20	18	14	23	38	34	17	15	18	24	14	18	15	17	18	16	13	11	7	6	7	18	16	29	38
25-Sep	52	50	32	27	39	25	18	21	18	39	20	21	20	21	23	25	19	20	22	17	31	57	12	15	57
26-Sep	12	16	14	9	10	9	10	11	13	15	15	14	14	13	18	13	12	11	11	19	17	19	12	18	19
27-Sep	19	16	19	28	13	13	12	12	13	14	14	15	15	16	15	22	16	13	14	16	11	13	18	13	28
28-Sep	14	16	12	13	13	12	11	15	19	22	22	31	46	99	80	75	32	9	10	12	22	19	11	14	99
29-Sep	13	13	13	12	13	12	14	16	18	20	20	19	19	23	20	18	18	17	18	14	13	14	17	17	23
30-Sep	18	19	19	19	17	23	20	20	76	36	25	28	48	71	36	83	20	38	46	28	22	43	21	24	83
	52	62	62	58	94	83	74	43	79	105	86	92	84	99	98	90	80	45	46	67	60	60	56	66	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS505
SAWBONES BAY
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
SEPTEMBER 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	686	34	34	100	43.4	0	12	0
H2S (ppb) Average	685	35	35	100	1.3	0	0.6	0
NO2 (ppb) Average	685	35	35	100	19.6	0	7.5	-
NO (ppb) Average	685	35	35	100	30.5	-	4	-
NOX (ppb) Average	685	35	35	100	45.6	-	11.3	-
Temperature 2 m (C) Average	720	0	0	100	28.8	-	19	-
Relative Humidity (%) Average	720	0	0	100	99.7	-	88	-
Wind Speed 10 m (km/h) Average	720	0	0	100	29	-	18	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	1.93	5.6	-	0	0.1	0.1	0.3	0.7	3.5	43.4
H2S (ppb) Average	685	0.23	0.2	-	0	0.1	0.1	0.2	0.3	0.5	1.3
NO2 (ppb) Average	685	3.03	3.1	-	0.2	0.7	1.2	2	3.6	6.4	19.6
NO (ppb) Average	685	1.25	2.7	-	0	0.1	0.1	0.2	1.1	3.2	30.5
NOX (ppb) Average	685	4.28	5.5	-	0.3	0.8	1.3	2.4	4.6	9.5	45.6
Temperature 2 m (C) Average	720	14.25	5.6	-	-0.7	7.8	10.2	13.6	17.8	22	28.8
Relative Humidity (%) Average	720	64.23	21	-	17.9	36.1	47.2	62.9	81.7	94	99.7
Wind Speed 10 m (km/h) Average	720	9.5	5	-	1	4	6	8	13	18	29
Wind Direction 10 m (deg) Average	720	201.8	0	-	0	-	-	-	-	-	0

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
				No operational issues to report

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 43.4 ppb on Sep 24 21:00
Maximum Daily Average: 12.0 ppb on Sep 22

Minimum Value: 0.0 ppb on Sep 11 07:00
Minimum Daily Average: 0.0 ppb on Sep 14
Maximum Diurnal Average: 3.4 ppb at hour 4
Minimum Diurnal Average: 0.7 ppb at hour 18
Monthly Average: 1.93 ppb
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 3.5 P_{99} = 35.1

Hours in Service:	720
Hours of Data:	686
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.5	0.9	1.5	1.3	0.5	0.3	0.2	0.3	1.5
2-Sep	0.2	0.2	0.2	0.2	0.3	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	1.5	1.6	0.3	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.3	1.6
3-Sep	Z	0.3	0.2	0.3	0.5	0.7	0.7	0.4	0.4	0.4	0.4	0.4	0.9	1.9	7.1	11.3	3.5	0.3	1.4	0.7	0.3	0.2	0.2	0.1	1.4	11.3
4-Sep	0.2	Z	0.8	1.0	0.9	0.5	0.6	1.1	1.1	0.6	0.5	0.7	0.7	0.9	0.6	0.6	0.7	1.0	0.9	1.2	1.1	0.8	0.4	0.3	0.7	1.2
5-Sep	0.2	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.7	1.9	1.5	1.6	2.8	1.8	1.7	5.0	3.0	3.0	0.7	0.5	0.4	0.4	0.2	0.1	1.2	5.0
6-Sep	0.1	0.1	0.0	Z	0.2	0.2	0.2	0.5	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.4	0.3	0.7
7-Sep	0.5	0.5	0.5	0.3	Z	0.3	0.2	0.4	0.4	2.0	3.1	9.3	2.9	0.5	0.5	2.9	2.0	0.5	0.9	0.4	0.5	0.5	0.3	0.2	1.3	9.3
8-Sep	0.2	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	1.0	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.2	1.0
9-Sep	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.4	0.2	0.5
10-Sep	1.7	Z	0.6	0.4	0.5	0.5	0.4	0.7	6.8	9.7	5.4	1.1	0.2	0.3	0.3	0.4	0.4	0.4	0.7	0.6	0.3	0.3	0.3	0.2	1.4	9.7
11-Sep	0.2	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.3	1.6	1.4	0.9	0.8	0.6	0.4	0.3	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.4	1.6
12-Sep	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.2	0.5
13-Sep	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3
14-Sep	0.0	0.1	0.0	0.3	0.2	Z	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	0.0	0.0	0.0	0.0	0.3
15-Sep	Z	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	5.5	13.4	2.5	3.0	1.9	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	1.2	13.4
16-Sep	0.0	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.3	0.5	0.6	0.6	0.7	0.4	0.4	0.2	0.1	0.1	0.3	0.7
17-Sep	0.1	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.6	0.2	0.6
18-Sep	0.6	0.9	1.5	Z	2.4	1.6	0.9	0.7	0.5	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.6	0.2	0.2	0.2	0.1	0.5	2.4
19-Sep	0.2	0.3	0.2	0.3	Z	0.7	0.7	1.5	1.6	2.5	1.7	0.6	1.2	1.9	1.3	1.4	1.1	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.8	2.5
20-Sep	0.1	0.1	0.1	0.2	0.3	Z	0.3	0.3	0.4	0.5	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.5
21-Sep	Z	0.2	0.2	0.2	0.3	0.7	0.6	0.6	0.7	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.1	0.2	0.2	0.1	0.1	1.3	0.4	1.3
22-Sep	4.3	Z	34.2	39.6	43.1	36.7	35.2	34.5	15.6	8.1	6.3	2.6	1.1	1.3	2.5	6.7	3.0	0.4	0.4	0.4	0.2	0.2	0.2	0.2	12.0	43.1
23-Sep	0.2	0.2	Z	0.2	0.3	0.4	0.8	0.8	2.7	8.8	0.5	3.8	4.9	6.3	0.5	0.2	0.1	6.1	2.7	0.2	1.5	8.5	9.8	10.9	3.1	10.9
24-Sep	9.7	11.7	1.3	Z	0.3	6.4	0.7	0.9	0.3	0.7	14.7	8.2	2.2	0.8	1.1	1.3	0.1	0.1	1.2	36.0	43.4	18.2	0.7	0.3	7.0	43.4
25-Sep	0.4	0.3	0.3	0.2	Z	0.1	0.2	0.2	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	9.9	14.1	1.5	14.1
26-Sep	35.5	6.6	7.6	35.1	32.8	Z	7.9	1.2	0.8	0.9	1.0	8.1	1.5	1.3	0.6	3.4	1.9	3.2	34.4	23.1	0.6	0.3	0.8	1.5	9.1	35.5
27-Sep	Z	1.2	0.9	4.3	0.5	11.9	16.9	22.7	18.9	6.1	8.4	9.6	9.1	7.5	9.7	1.8	1.3	0.6	7.3	9.1	13.8	16.7	7.3	16.0	8.8	22.7
28-Sep	16.7	Z	1.5	1.7	1.5	2.2	19.9	23.9	16.9	3.4	2.4	1.7	0.6	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.4	0.2	0.1	4.1	23.9
29-Sep	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.4
30-Sep	0.4	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.5	2.1	1.9	1.1	0.7	0.4	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.6	2.1
	2.9	1.0	2.1	3.4	3.4	2.6	3.0	3.1	2.5	2.0	2.2	1.9	1.2	1.1	1.1	1.4	0.7	0.7	1.8	2.6	2.2	1.7	1.1	1.6	Diurnal Average	
	35.5	11.7	34.2	39.6	43.1	36.7	35.2	34.5	18.9	9.7	14.7	9.6	9.1	7.5	9.7	11.3	3.5	6.1	34.4	36.0	43.4	18.2	9.9	16.0	Diurnal Maximum	

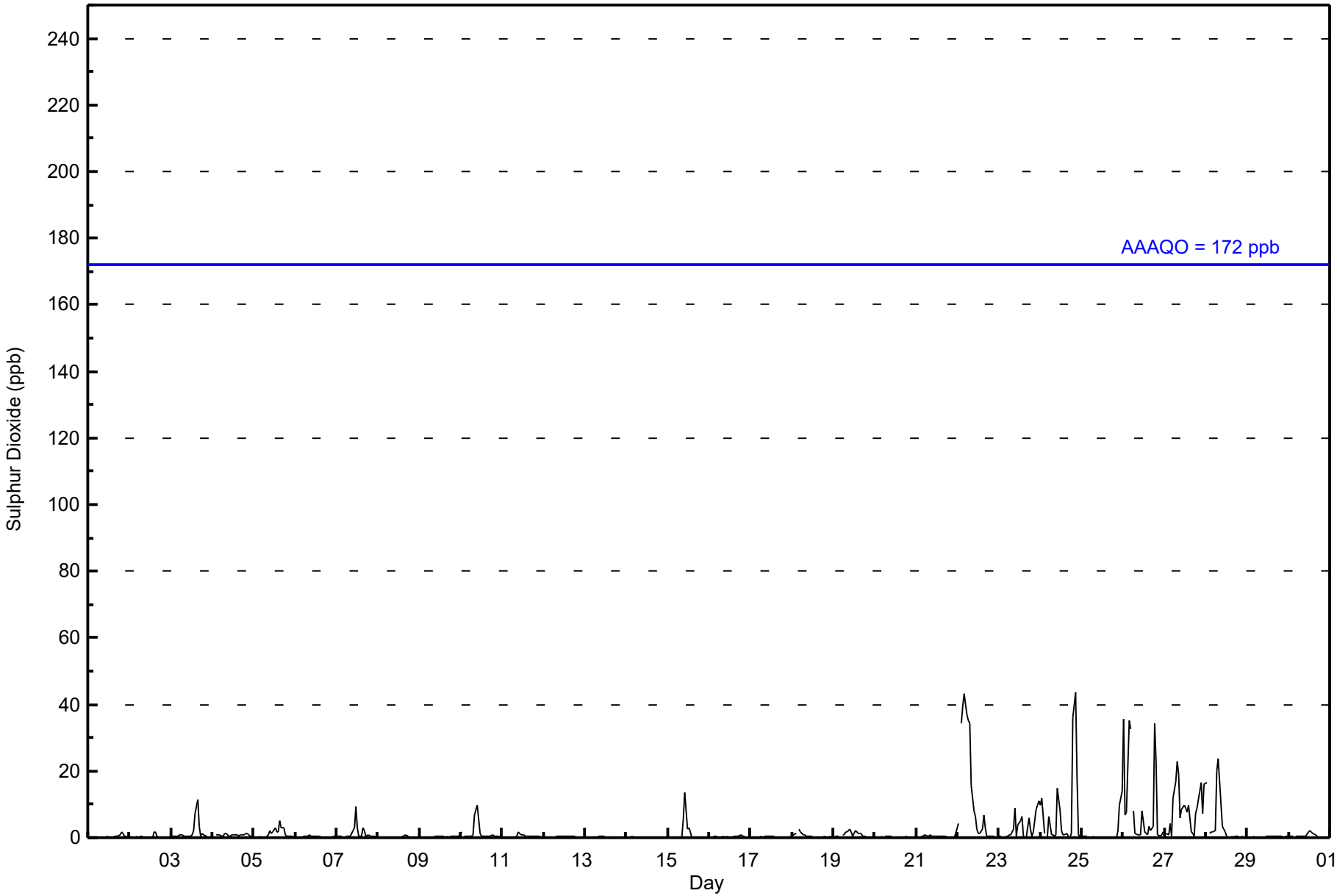
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay - September 2025



Sulphur Dioxide (SO_2) - ppb
Sawbones Bay - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	654	95.34	95.34
11 - 20	17	2.48	97.81
21 - 60	15	2.19	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: 686

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	19	19	9	10	28	44	70	126	93	38	26	17	47	36	29	43	654
11 - 20	0	0	0	0	0	0	0	0	0	0	3	10	4	0	0	0	17
21 - 60	0	0	0	0	0	0	0	0	0	0	1	14	0	0	0	0	15
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	19	9	10	28	44	70	126	93	38	30	41	51	36	29	43	686

Total Number of Valid Hours: 686

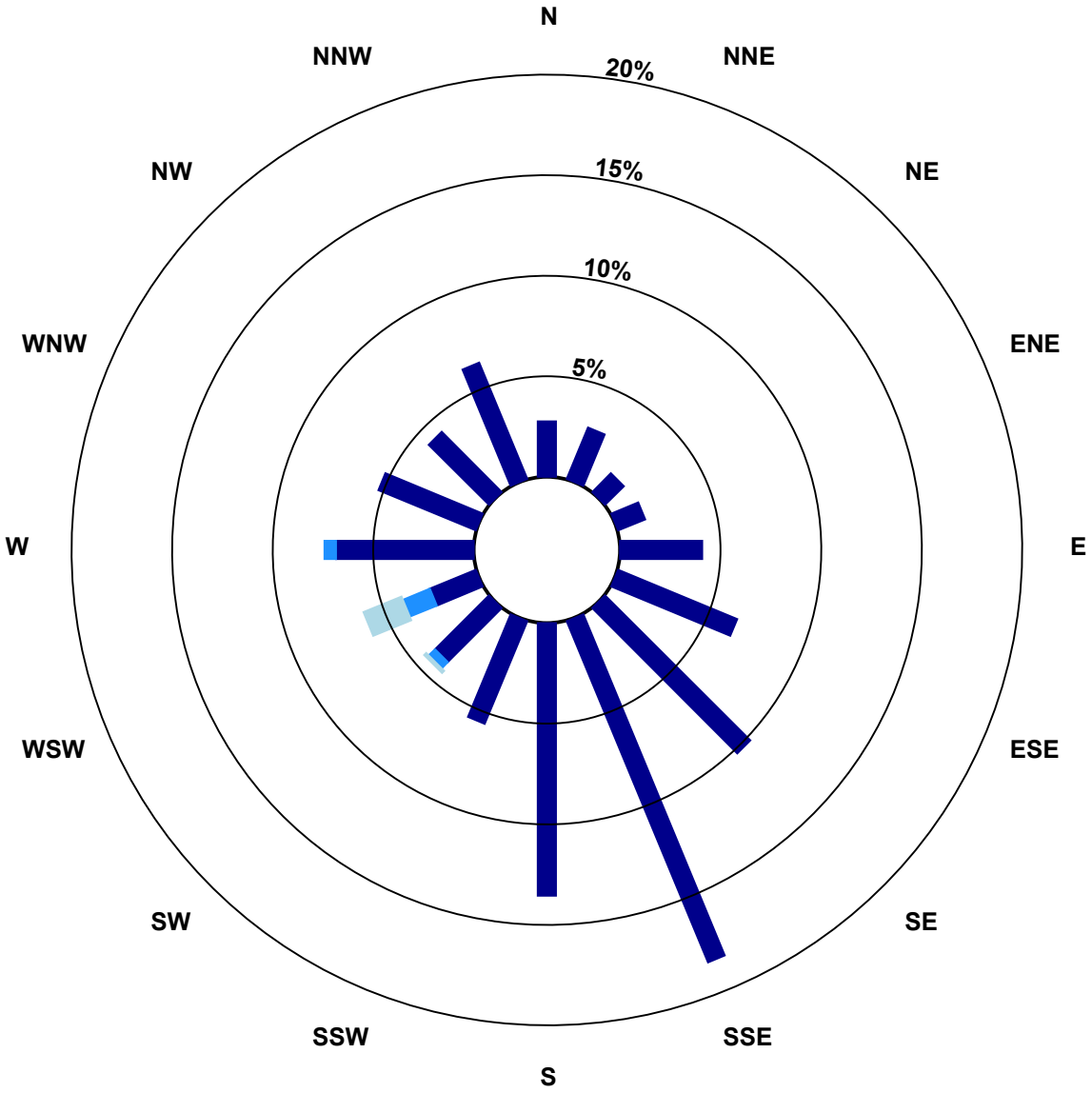
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

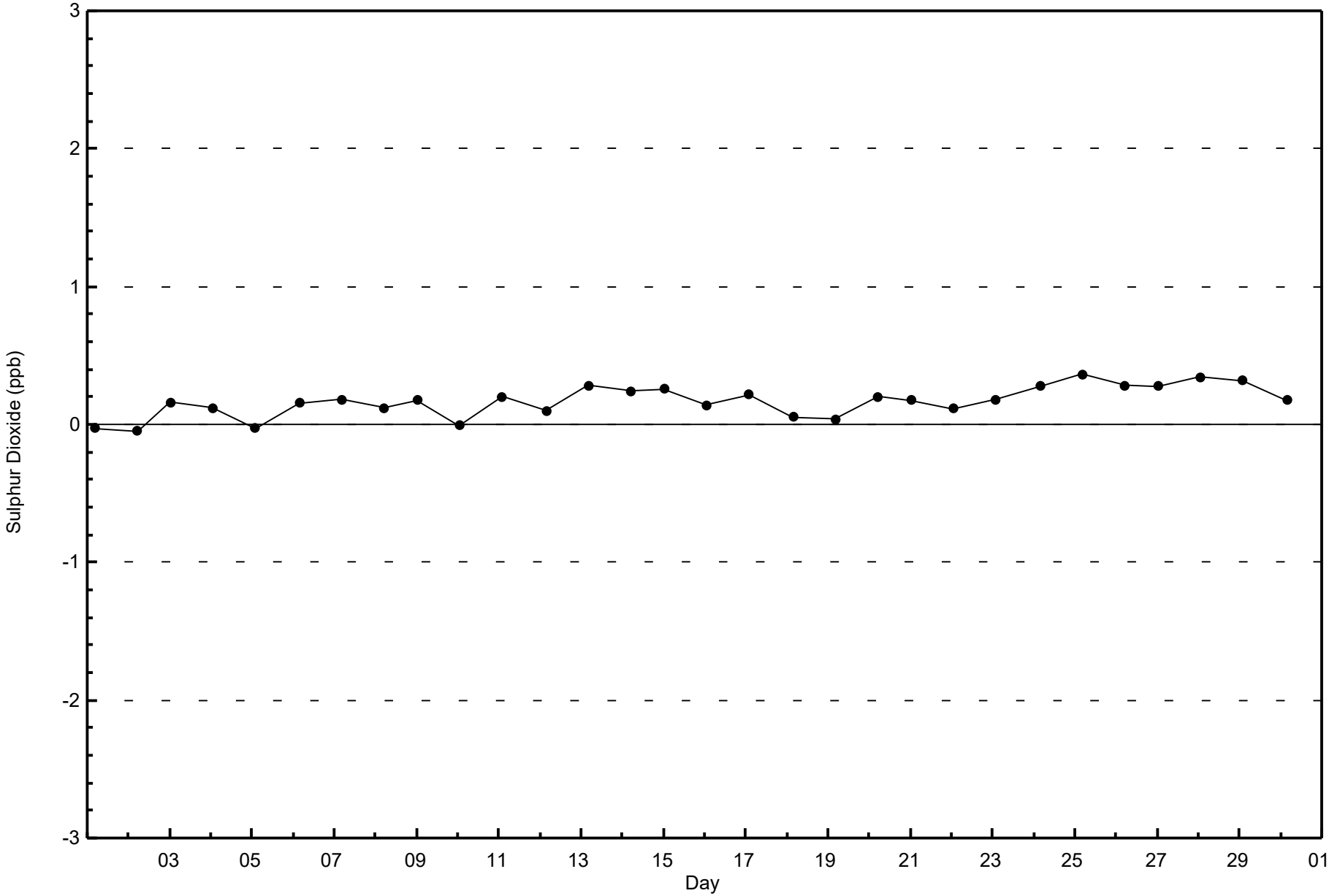
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay - September 2025

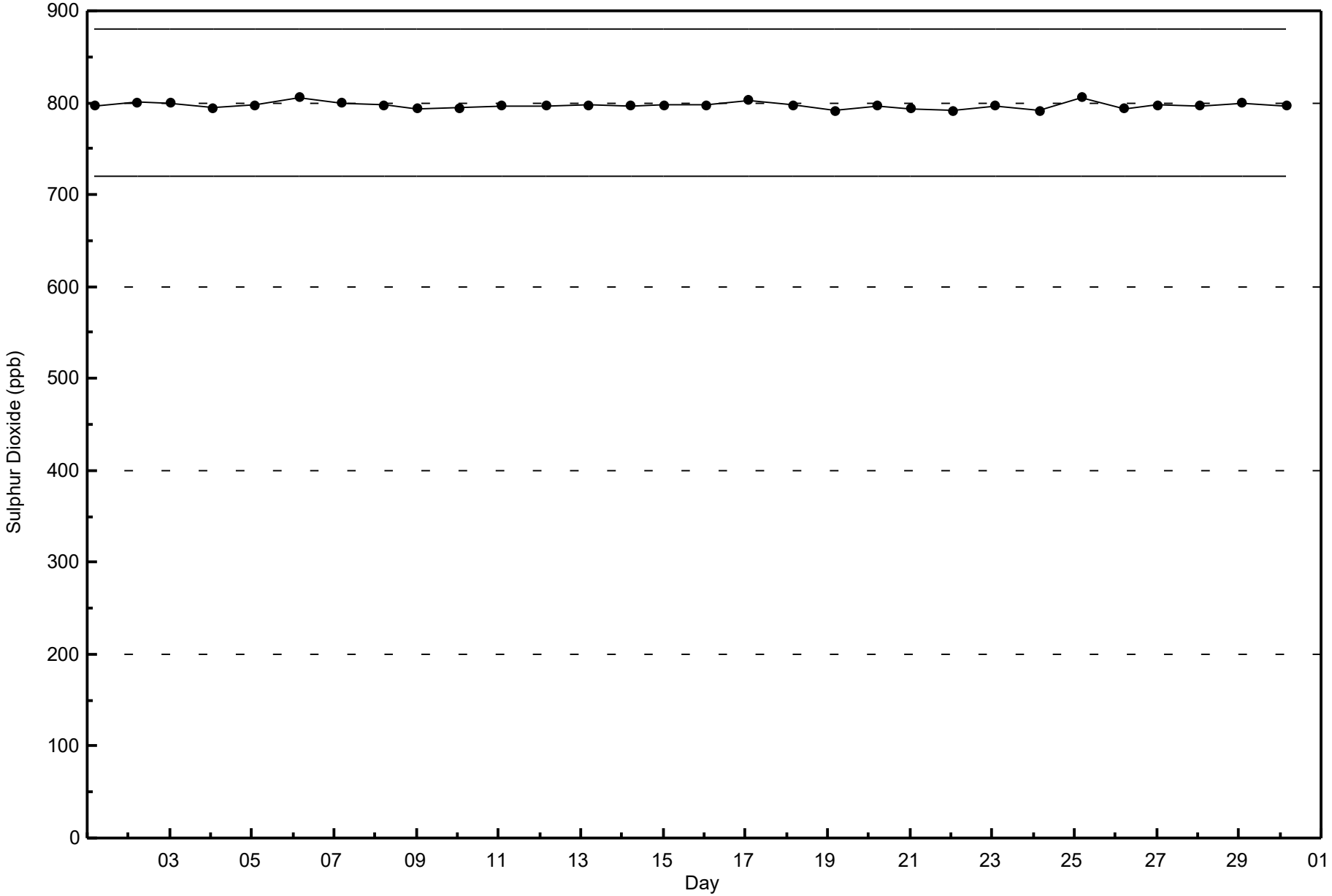


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Sawbones Bay - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.3 ppb on Sep 22 09:00 Maximum Daily Average: 0.6 ppb on Sep 26

Minimum Value: 0.0 ppb on Sep 25 13:00 Minimum Daily Average: 0.1 ppb on Sep 29
Maximum Diurnal Average: 0.3 ppb at hour 7 Minimum Diurnal Average: 0.2 ppb at hour 17
Monthly Average: 0.23 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.1

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.3	0.3	0.5	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.3	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	0.5
2-Sep	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	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
3-Sep	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.8	0.8	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.8
4-Sep	0.4	0.3	Z	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	0.2	0.2	0.2	0.1	0.1	0.2	0.4
5-Sep	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	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
6-Sep	0.1	0.1	0.1	0.1	Z	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-Sep	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.5	0.4	0.6	0.4	0.3	0.2	0.7	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.7
8-Sep	Z	0.4	0.3	0.3	0.3	0.3	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	0.1	0.1	0.1	0.1	0.2	0.4
9-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
10-Sep	0.4	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.4	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
11-Sep	0.1	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.6	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.3	0.6	0.7	0.6	0.4	0.4	0.2	0.2	0.3	0.7
12-Sep	0.2	0.1	0.1	0.1	Z	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
13-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
14-Sep	Z	0.2	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	0.2
15-Sep	0.1	Z	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.4	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	0.1	0.2	0.6
16-Sep	0.1	0.2	Z	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.7
17-Sep	0.1	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	0.2
18-Sep	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3
19-Sep	0.2	0.2	0.2	0.3	0.3	Z	0.3	0.4	0.4	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
20-Sep	Z	0.1	0.1	0.1	0.2	0.2	0.3	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	0.1	0.1	0.1	0.1	0.1	0.3
21-Sep	0.1	Z	0.2	0.1	0.1	0.3	0.2	0.2	0.4	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	0.1	0.5	0.1	0.5
22-Sep	0.4	0.7	Z	0.9	1.0	0.7	1.2	1.0	1.3	0.7	0.5	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.3
23-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.3	0.4	0.2	0.4	0.5	0.5	0.8	0.1	0.0	0.7	0.6	0.2	0.2	0.3	0.4	0.7	0.3	0.8
24-Sep	0.7	0.4	0.5	0.2	Z	1.1	0.2	0.2	0.2	0.1	0.7	1.0	0.8	0.3	0.5	0.5	0.0	0.0	0.3	0.9	1.0	0.5	0.1	0.1	0.5	1.1
25-Sep	0.2	0.1	0.2	0.2	0.2	Z	0.2	0.1	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	0.5	1.1	0.7	0.2	1.1
26-Sep	Z	0.3	0.3	1.2	1.2	1.1	1.2	0.4	0.5	0.5	0.7	0.6	0.5	0.5	0.4	1.1	0.8	0.7	1.0	1.2	0.1	0.1	0.1	0.2	0.6	1.2
27-Sep	0.1	Z	0.1	0.4	0.1	0.6	1.0	0.9	0.9	1.1	0.6	0.8	0.8	0.5	0.6	0.2	0.2	0.1	0.3	0.5	0.6	0.6	0.7	1.0	0.5	1.1
28-Sep	0.8	0.1	Z	0.2	0.1	0.2	1.0	1.0	1.0	0.7	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	0.0	0.3	1.0
29-Sep	0.0	0.0	0.1	Z	0.1	0.1	0.0	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	0.2
30-Sep	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3
	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.8	0.7	0.5	1.2	1.2	1.1	1.2	1.0	1.3	1.1	0.7	1.0	0.8	0.5	0.8	1.1	0.8	0.7	1.0	1.2	1.0	0.6	1.1	1.0	Diurnal Maximum	

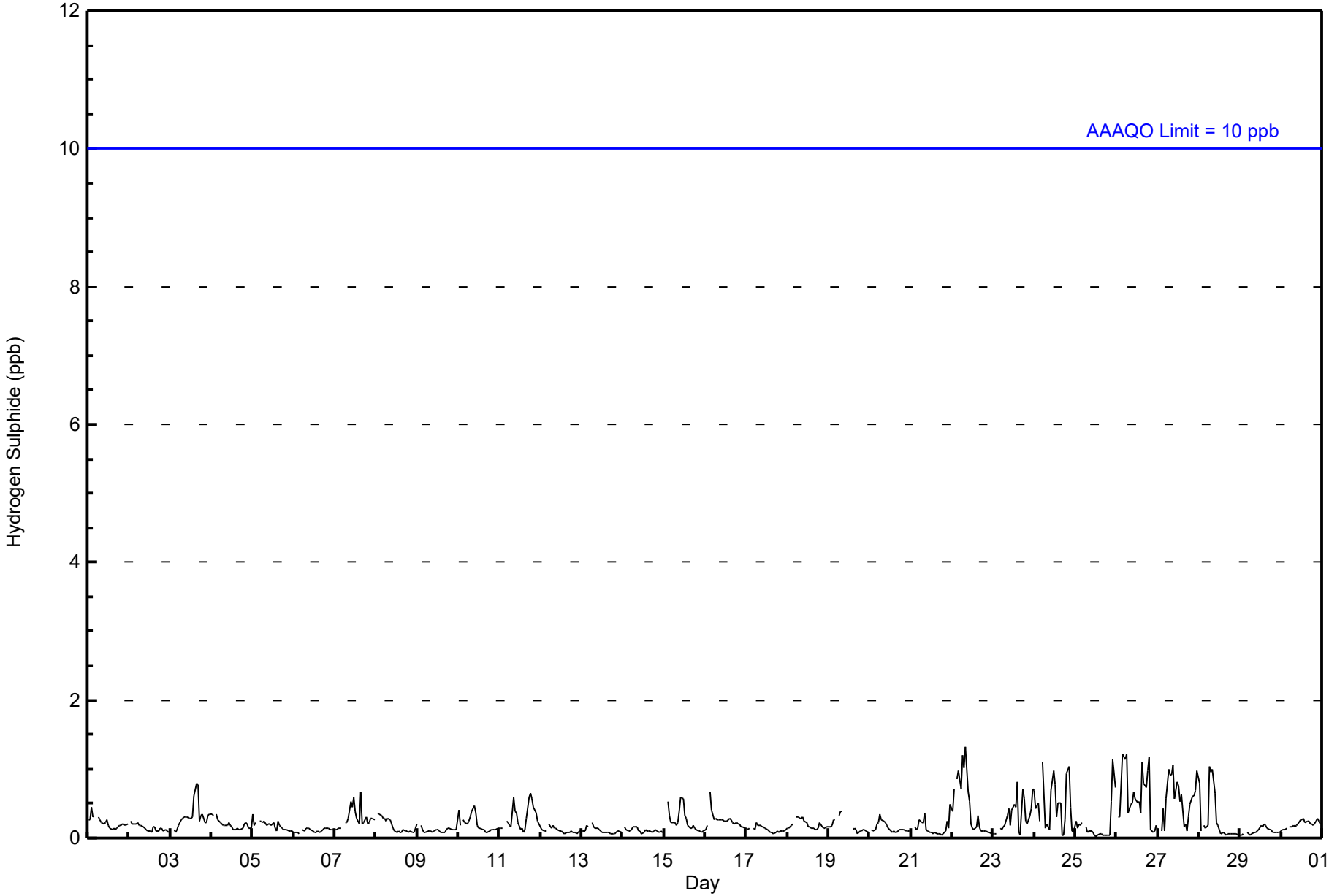
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay - September 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: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	18	19	9	10	27	44	69	126	96	36	30	39	52	36	31	43	685
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	18	19	9	10	27	44	69	126	96	36	30	39	52	36	31	43	685

Total Number of Valid Hours: 685

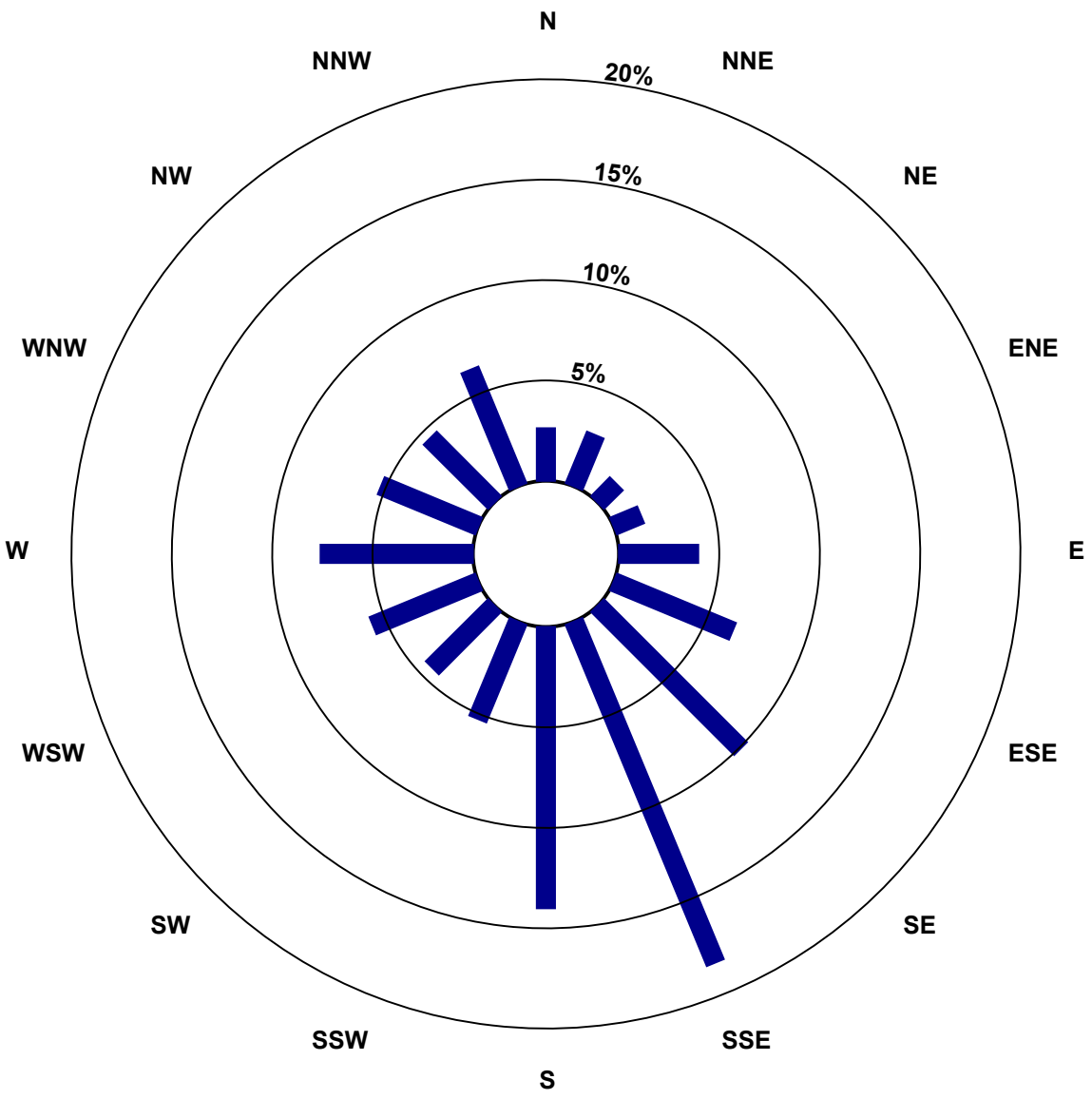
Total Number of Hours: 720

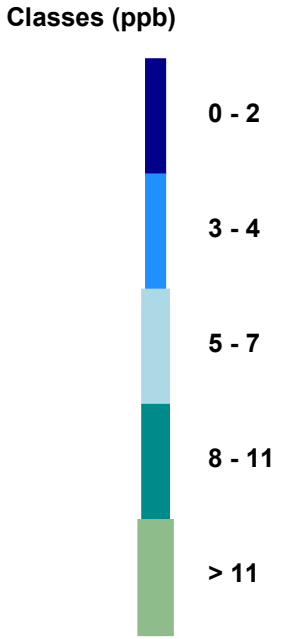
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay





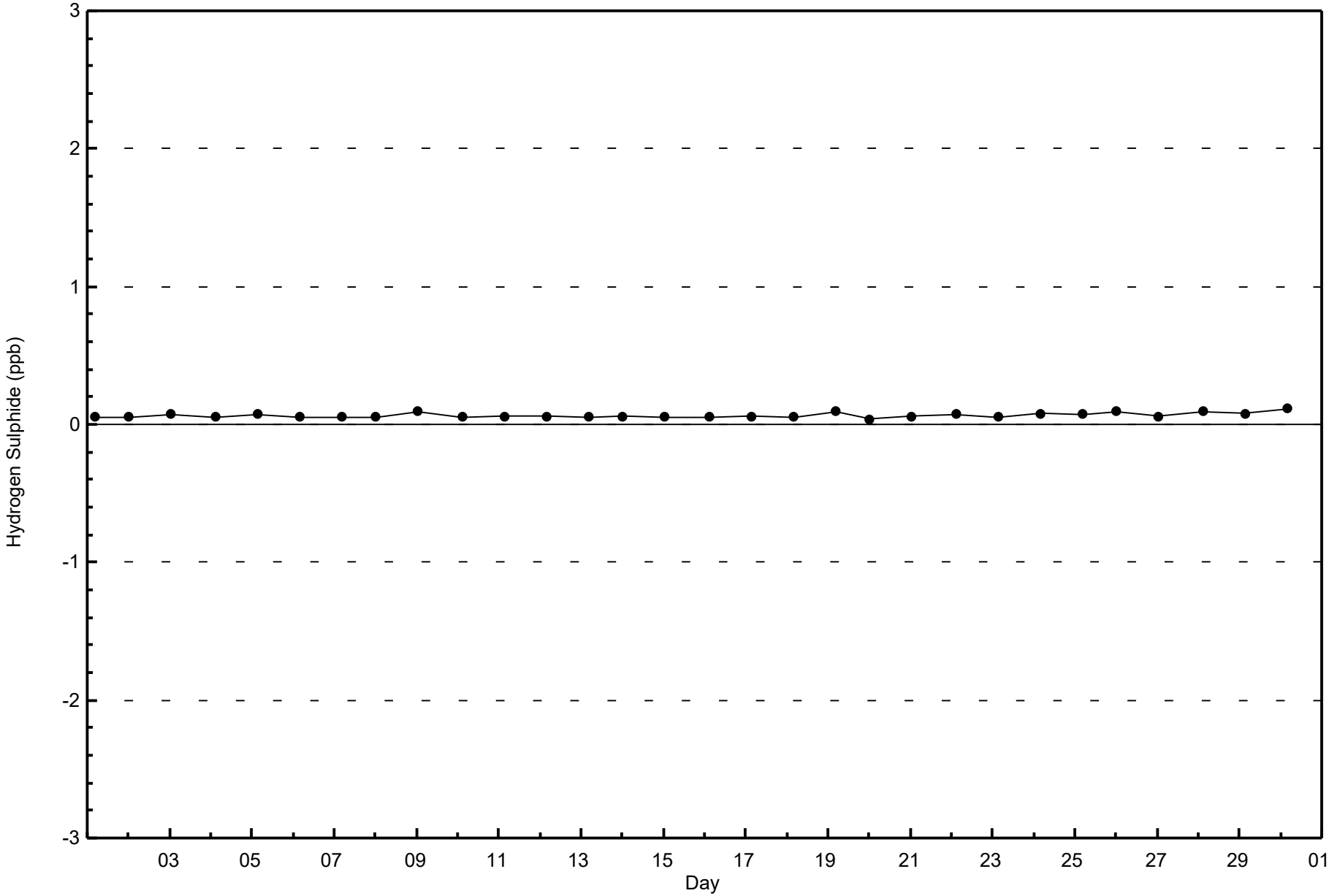
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay - September 2025

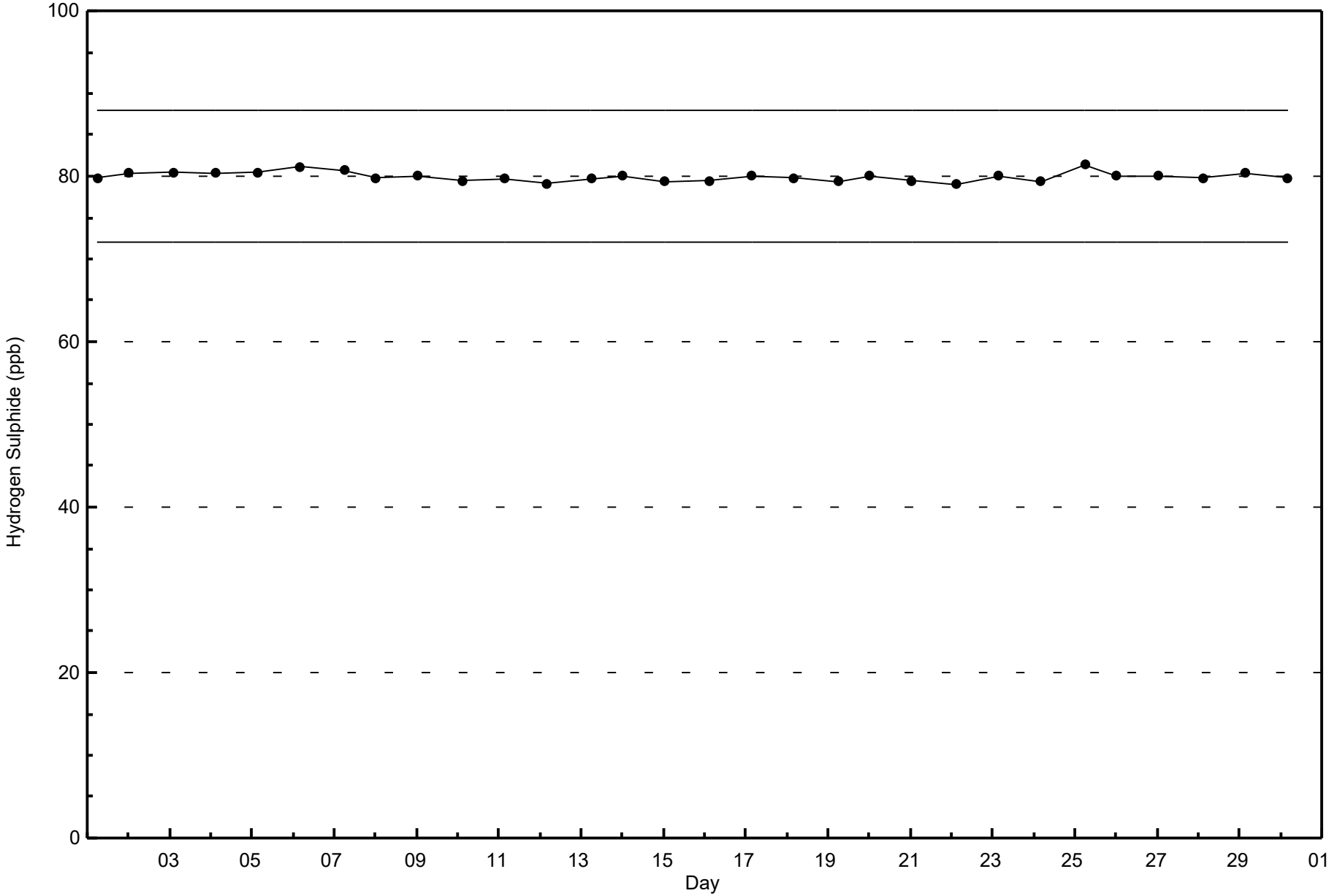


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Sawbones Bay - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Sawbones Bay - September 2025

Maximum Value: 30.5 ppb on Sep 20 07:00

Maximum Daily Average: 4.0 ppb on Sep 22

Minimum Value: 0.0 ppb on Sep 1 01:00

Minimum Daily Average: 0.2 ppb on Sep 2

Maximum Diurnal Average: 4.7 ppb at hour 7

Minimum Diurnal Average: 0.2 ppb at hour 18

Monthly Average: 1.25 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 1.1 P_{90} = 3.2 P_{99} = 12.4

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.0	0.0	Z	0.3	0.1	0.6	0.5	0.4	0.4	0.2	0.6	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.9
2-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.9	0.9	0.3	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.9
3-Sep	0.1	0.2	0.1	0.1	Z	0.1	0.2	0.2	1.4	0.6	0.5	0.4	0.5	0.4	1.9	2.6	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.5	2.6
4-Sep	0.1	0.0	0.0	0.1	0.1	Z	0.1	0.2	0.2	0.3	12.4	0.8	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7	12.4
5-Sep	Z	1.8	0.6	1.7	2.4	3.0	3.8	3.1	1.1	1.8	1.1	1.2	0.9	0.9	0.4	1.4	1.1	0.9	0.1	0.1	0.1	0.1	0.1	0.2	1.2	3.8
6-Sep	0.2	Z	0.2	0.3	0.1	0.2	0.4	1.3	1.0	0.7	0.5	0.5	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.4	1.3
7-Sep	0.2	0.2	Z	0.2	0.2	0.3	0.8	3.7	1.4	1.2	1.3	2.0	0.9	0.3	0.2	1.1	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.6	3.7
8-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.7	1.0	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	1.0
9-Sep	0.3	0.2	0.1	0.2	Z	0.2	0.3	0.5	0.4	0.3	0.5	1.9	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9
10-Sep	0.2	0.1	0.1	0.2	0.2	Z	0.3	2.0	2.8	2.1	1.7	0.5	0.2	0.2	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.9	0.3	0.6	2.8
11-Sep	Z	0.3	0.4	0.4	1.6	3.3	2.2	3.4	4.2	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.8	4.2
12-Sep	0.2	Z	0.1	0.1	0.1	0.3	1.0	15.9	2.1	1.0	1.0	0.2	0.3	0.3	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	1.0	15.9
13-Sep	0.1	0.1	Z	0.2	0.2	0.2	0.3	1.4	1.0	1.5	0.4	1.2	0.9	0.2	1.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.5
14-Sep	0.1	0.1	0.1	Z	0.2	0.4	0.3	0.3	3.6	0.5	3.3	2.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.6	3.6
15-Sep	1.5	0.6	1.0	0.4	Z	1.6	1.6	1.3	3.2	3.9	4.8	1.1	0.9	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	4.8
16-Sep	0.1	0.2	0.3	0.2	0.2	Z	1.1	0.6	0.8	0.7	0.3	0.2	0.3	0.4	1.0	0.9	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.1
17-Sep	Z	0.2	0.2	0.2	0.2	0.2	24.7	10.3	7.4	1.0	1.8	2.7	2.2	1.2	0.4	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.4	24.7
18-Sep	0.1	Z	0.1	0.1	0.1	0.1	9.4	2.6	1.1	C	C	C	C	C	1.4	0.7	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.9	9.4
19-Sep	0.1	0.0	Z	0.3	0.4	0.6	6.2	3.0	3.1	1.8	1.2	0.5	1.2	1.0	1.6	0.7	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	1.0	6.2
20-Sep	0.1	0.0	0.1	Z	0.8	3.6	30.5	10.8	4.0	4.0	1.3	3.2	1.0	0.7	0.5	0.5	0.3	0.0	0.1	0.0	0.1	0.1	0.0	0.0	2.7	30.5
21-Sep	0.1	0.1	0.1	0.2	Z	1.4	3.0	2.5	1.0	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.7	0.4	3.0
22-Sep	1.3	6.5	7.7	9.4	11.3	Z	11.3	11.9	4.7	3.0	3.6	3.4	3.0	2.9	2.9	5.4	2.9	0.5	0.2	0.2	0.2	0.1	0.1	0.1	4.0	11.9
23-Sep	Z	0.2	0.3	0.2	0.2	0.3	0.3	1.6	3.1	4.4	0.6	1.5	2.3	3.0	0.6	0.9	0.1	0.9	0.5	0.0	0.3	2.3	2.4	1.4	1.2	4.4
24-Sep	1.9	Z	0.3	0.6	0.1	1.9	1.3	1.5	0.8	1.6	6.4	3.2	1.3	0.6	0.7	0.7	0.2	0.1	0.3	7.8	9.0	3.4	0.4	0.2	1.9	9.0
25-Sep	0.1	0.2	Z	0.1	0.4	0.9	15.4	0.9	3.5	6.9	3.3	1.1	0.7	0.5	2.0	5.4	0.8	0.1	0.1	0.1	0.1	0.6	1.8	1.9	2.0	15.4
26-Sep	4.7	1.0	1.4	Z	7.1	5.6	2.7	1.3	1.5	1.0	1.1	3.3	1.3	1.0	0.8	1.5	1.1	0.7	5.8	4.1	0.6	0.2	0.2	0.2	2.1	7.1
27-Sep	0.3	0.8	0.3	1.8	Z	8.1	11.3	9.7	8.3	2.5	3.4	3.8	5.5	10.7	3.3	1.2	1.7	0.7	1.9	1.8	2.9	3.5	2.5	3.0	3.9	11.3
28-Sep	4.1	0.4	0.6	0.3	1.3	Z	9.8	10.3	7.0	1.8	1.4	1.0	0.4	0.1	1.9	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.8	10.3
29-Sep	Z	0.1	0.1	0.1	0.1	0.1	0.2	4.3	0.8	1.5	2.7	0.2	12.8	9.1	19.8	16.0	7.8	0.2	0.1	0.2	0.1	0.2	0.1	0.2	3.3	19.8
30-Sep	0.1	Z	0.2	0.1	0.1	1.7	2.7	3.2	2.6	0.8	1.0	0.9	1.0	0.6	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.7	3.2
	0.6	0.5	0.6	0.7	1.1	1.4	4.7	3.6	2.4	1.6	2.0	1.3	1.4	1.3	1.5	1.4	0.7	0.2	0.4	0.5	0.5	0.4	0.3	0.3	Diurnal Average	
	4.7	6.5	7.7	9.4	11.3	8.1	30.5	15.9	8.3	6.9	12.4	3.8	12.8	10.7	19.8	16.0	7.8	0.9	5.8	7.8	9.0	3.5	2.5	3.0	Diurnal Maximum	

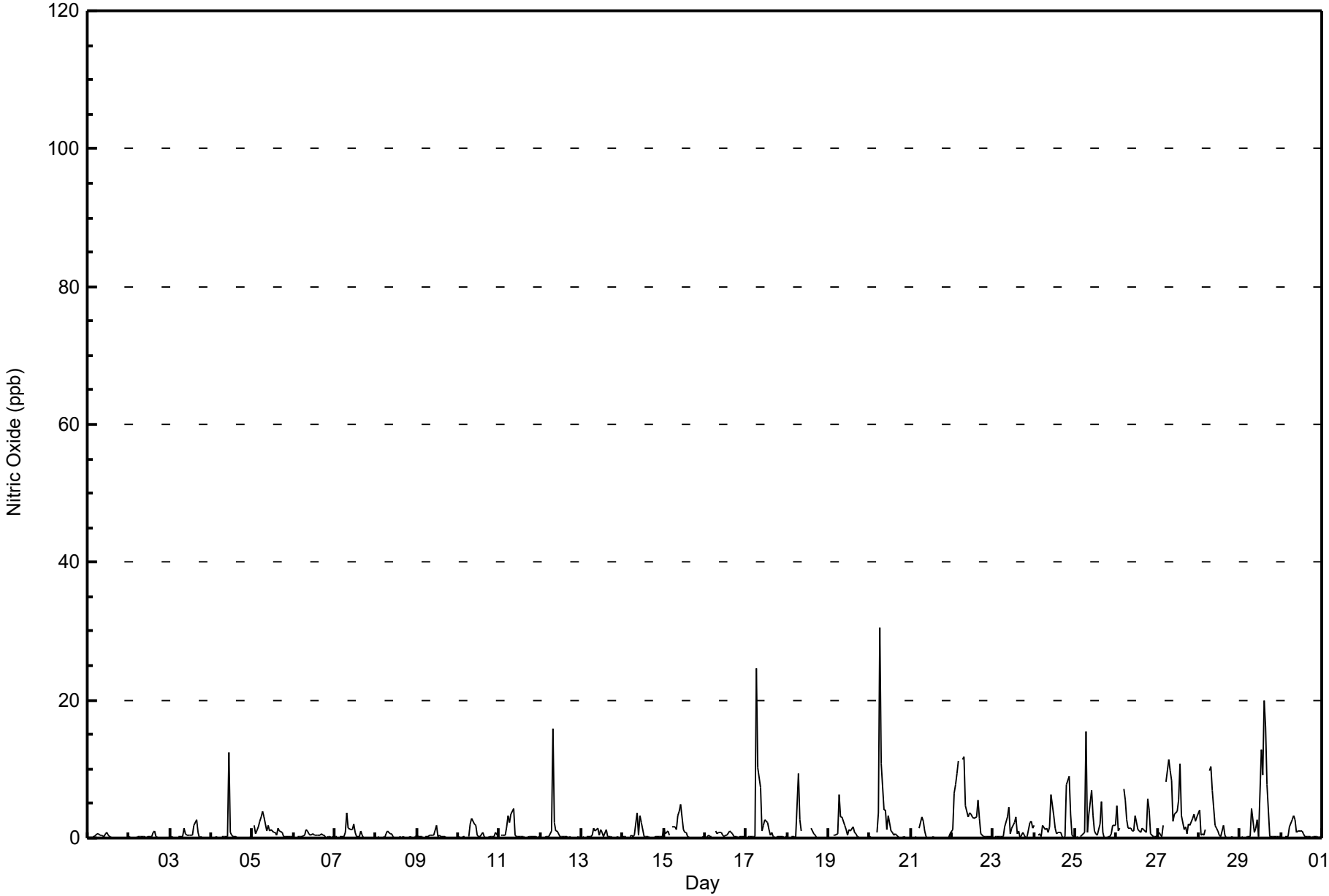
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Sawbones Bay - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	99.71	99.71
21 - 40	2	0.29	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Sawbones Bay - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	19	9	10	28	43	72	126	90	39	29	41	50	35	29	43	683
21 - 40	0	0	0	0	0	0	1	1	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	20	19	9	10	28	43	73	127	90	39	29	41	50	35	29	43	685

Total Number of Valid Hours: 685

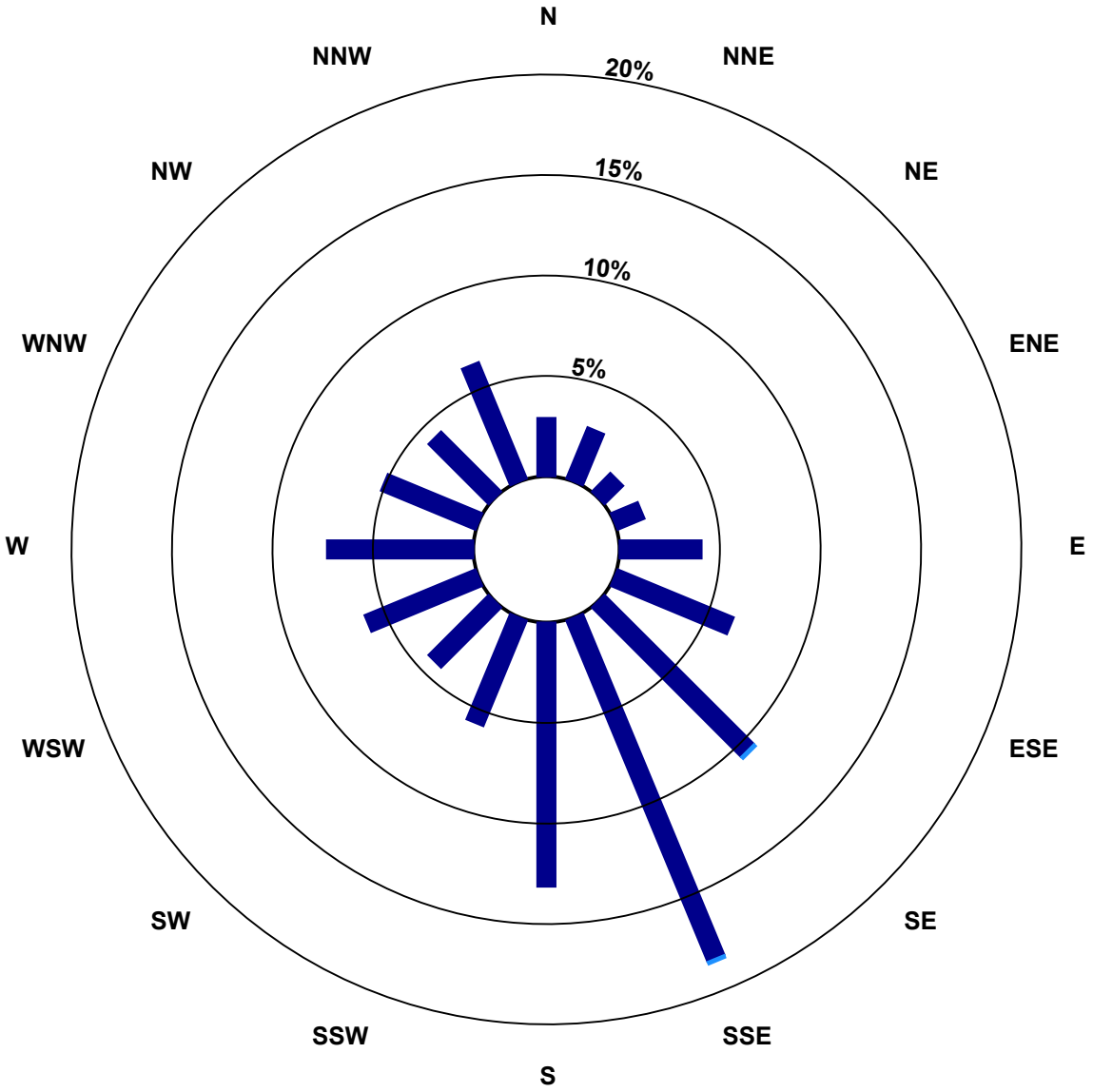
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Sawbones Bay



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

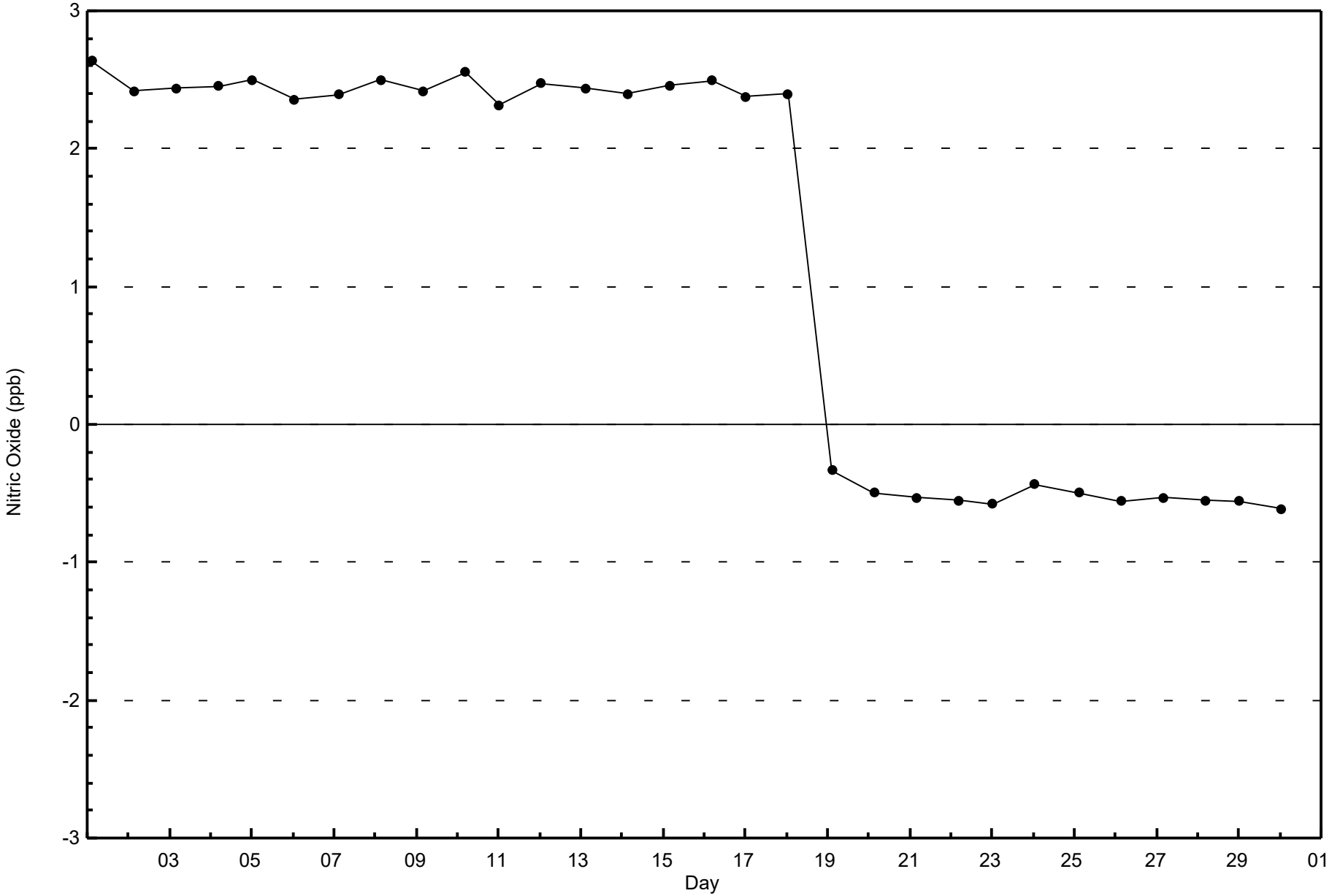
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Sawbones Bay - September 2025

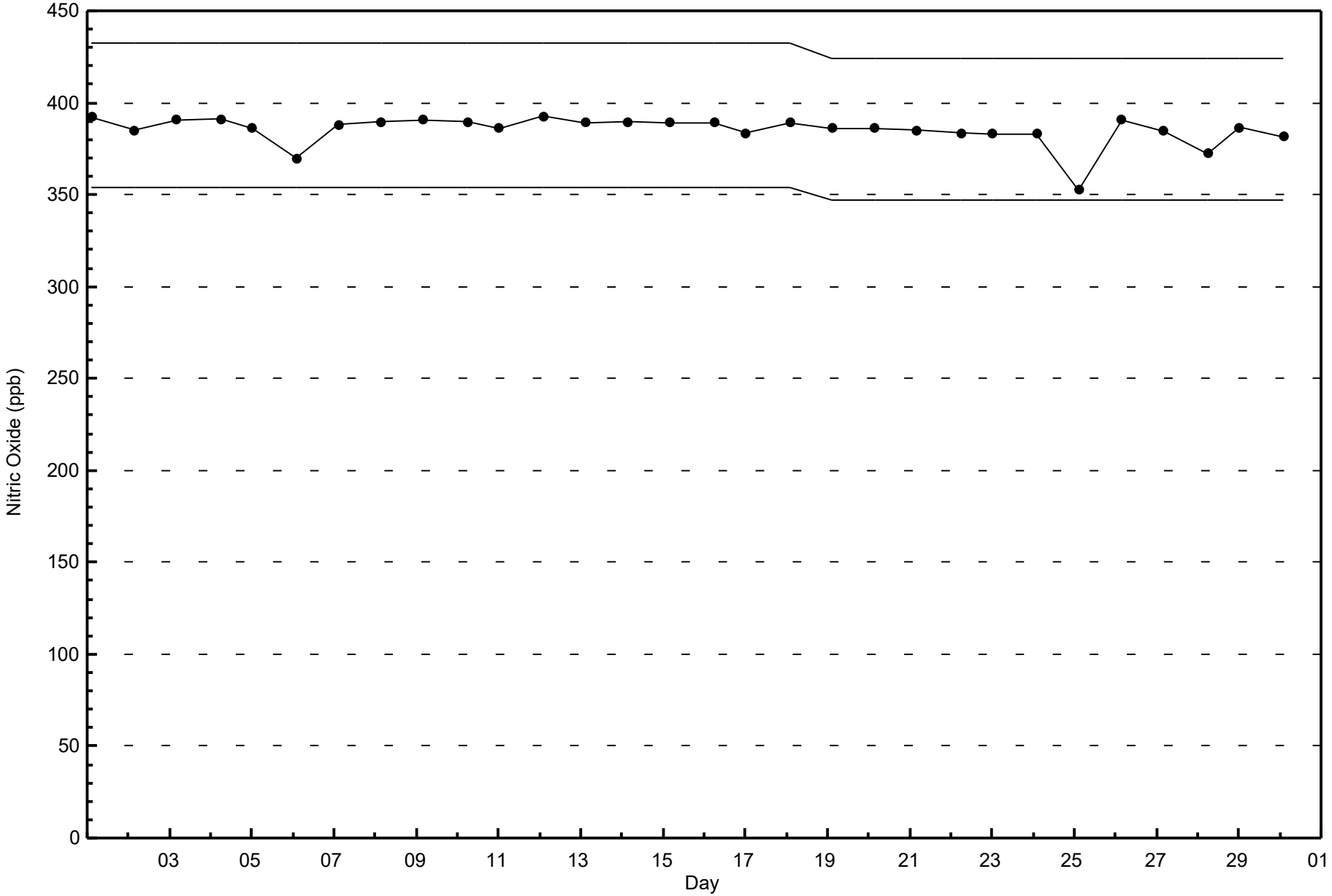


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Sawbones Bay - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.6 ppb on Sep 24 21:00 Maximum Daily Average: 7.5 ppb on Sep 27

Minimum Value: 0.2 ppb on Sep 10 17:00 Minimum Daily Average: 1.1 ppb on Sep 8
Maximum Diurnal Average: 5.5 ppb at hour 7 Minimum Diurnal Average: 1.6 ppb at hour 18
Monthly Average: 3.03 ppb Percentiles: P_1 = 0.3 P_{10} = 0.7 Q_1 = 1.2 Median = 2.0 Q_3 = 3.6 P_{90} = 6.4 P_{99} = 15.3

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.8	1.7	Z	2.7	2.4	1.5	1.8	1.5	1.3	1.0	1.5	2.2	1.0	0.6	0.6	0.7	0.7	0.9	1.3	1.8	2.3	2.2	1.7	1.2	1.5	2.7
2-Sep	1.2	1.1	1.6	Z	1.5	1.4	1.1	0.9	0.9	1.0	0.9	0.8	0.8	0.7	3.2	4.1	1.9	1.0	0.8	0.8	0.9	1.0	0.9	1.0	1.3	4.1
3-Sep	1.7	2.7	2.0	2.1	Z	2.6	2.0	1.8	3.3	2.3	1.9	1.9	2.7	3.7	7.8	9.2	4.6	1.5	2.6	2.5	1.2	1.2	1.4	1.3	2.8	9.2
4-Sep	1.4	1.5	1.9	1.8	1.3	Z	1.1	1.0	1.1	1.1	5.7	2.2	1.4	1.0	0.7	0.6	0.5	0.7	1.0	1.5	1.6	1.5	1.0	1.3	1.4	5.7
5-Sep	Z	4.7	3.8	3.2	4.6	3.0	2.1	3.3	3.1	5.0	3.5	2.6	2.5	2.3	1.6	4.0	3.4	4.0	1.2	0.8	0.9	1.3	1.3	1.1	2.8	5.0
6-Sep	0.8	Z	1.5	0.5	1.9	1.2	0.7	2.4	2.3	1.8	1.5	1.4	1.3	1.3	1.5	1.4	2.3	3.1	4.1	1.4	3.2	3.0	2.1	2.2	1.9	4.1
7-Sep	2.5	2.8	Z	2.8	2.9	3.6	4.5	6.1	5.0	5.3	5.0	6.9	5.9	2.6	1.7	5.5	2.8	1.3	1.9	1.3	1.5	2.0	1.7	1.5	3.4	6.9
8-Sep	1.4	1.4	1.5	Z	2.2	1.9	2.1	2.2	1.5	1.1	0.8	0.4	0.3	0.3	0.6	0.4	1.5	0.8	0.4	0.5	0.6	0.7	0.8	1.1	1.1	2.2
9-Sep	1.6	1.2	1.1	0.8	Z	2.0	1.4	1.6	1.5	1.6	1.6	2.8	1.2	1.7	1.5	1.5	1.7	1.7	1.0	1.1	0.9	1.1	1.1	1.3	1.4	2.8
10-Sep	4.8	4.7	3.1	4.1	5.7	Z	3.7	5.6	7.0	6.1	4.5	1.7	0.5	0.5	0.8	0.3	0.2	0.2	0.3	0.5	0.6	0.8	3.6	1.7	2.7	7.0
11-Sep	Z	4.2	3.8	3.1	4.3	4.3	2.6	2.3	3.7	2.5	2.2	1.2	0.7	0.7	0.5	0.5	1.1	2.9	3.0	2.9	3.2	3.0	1.5	1.9	2.4	4.3
12-Sep	1.8	Z	1.5	1.2	1.2	2.6	1.9	10.0	4.1	2.7	2.2	1.2	1.2	1.5	1.1	1.1	0.8	2.2	0.9	1.7	1.5	1.4	3.4	4.5	2.2	10.0
13-Sep	1.3	1.0	Z	3.5	3.2	2.2	1.7	2.9	3.4	4.3	2.1	3.4	2.8	1.7	6.2	0.6	0.7	0.5	0.4	0.6	1.4	2.0	1.7	1.8	2.1	6.2
14-Sep	1.7	3.3	2.7	Z	4.0	3.7	2.3	2.4	7.4	1.8	5.6	6.2	0.9	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.8	0.7	2.4	1.0	2.2	7.4
15-Sep	1.7	1.7	3.2	2.5	Z	3.9	3.0	2.2	3.9	4.4	6.6	3.0	2.4	2.0	1.0	0.8	0.7	0.8	0.7	0.8	0.6	0.6	0.7	3.2	2.2	6.6
16-Sep	2.1	2.0	2.0	1.3	1.6	Z	3.2	2.4	1.9	1.7	1.5	1.3	2.6	1.4	3.4	2.1	1.6	1.5	1.9	1.7	1.6	1.1	0.9	0.8	1.8	3.4
17-Sep	Z	2.8	1.0	1.4	2.2	1.6	9.4	5.9	4.7	2.2	2.6	3.4	3.1	1.8	0.9	1.4	0.4	0.3	0.5	0.5	0.6	0.6	0.7	1.1	2.1	9.4
18-Sep	1.6	Z	1.9	1.9	1.9	1.7	8.3	3.9	2.6	C	C	C	C	C	3.1	2.5	2.8	2.1	1.1	3.4	1.9	2.0	2.1	2.4	2.6	8.3
19-Sep	2.3	2.6	Z	3.7	3.1	4.0	8.2	6.3	5.8	4.0	3.2	1.6	2.7	2.8	4.7	3.2	3.1	2.2	2.0	2.8	3.9	4.0	2.4	1.6	3.5	8.2
20-Sep	3.3	3.8	2.5	Z	5.9	4.9	15.1	13.2	8.5	6.9	3.6	8.0	3.2	2.4	2.0	2.8	1.9	1.1	1.3	1.0	0.7	0.7	0.9	0.8	4.1	15.1
21-Sep	0.9	1.2	1.3	1.7	Z	9.5	9.1	7.5	4.5	1.2	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.7	0.8	1.1	0.8	2.1	2.0	9.5
22-Sep	3.4	12.3	13.9	15.2	14.5	Z	14.7	13.5	7.1	4.5	4.8	4.4	4.3	4.3	5.0	8.5	6.3	2.4	1.9	2.3	2.4	1.7	1.3	1.4	6.5	15.2
23-Sep	Z	2.3	2.9	2.9	2.6	4.5	5.1	6.4	6.5	8.3	1.9	3.7	4.9	5.5	2.0	1.5	1.0	4.4	2.8	1.7	2.8	7.4	9.2	7.1	4.2	9.2
24-Sep	8.8	Z	3.5	4.2	2.0	7.9	4.3	5.3	2.9	4.2	9.1	5.2	2.8	1.8	1.9	1.9	1.1	1.0	1.6	14.4	19.6	12.2	3.5	3.1	5.3	19.6
25-Sep	2.5	2.8	Z	1.6	3.0	2.4	9.9	4.2	6.6	4.6	4.1	2.1	1.5	1.4	4.3	9.9	2.3	0.7	1.0	2.3	3.1	3.6	6.3	8.6	3.9	9.9
26-Sep	17.6	6.6	5.8	Z	14.3	8.9	5.3	3.7	3.0	2.1	1.9	4.2	2.4	1.8	1.7	2.9	2.8	2.7	15.0	13.1	3.4	2.4	2.9	3.8	5.6	17.6
27-Sep	2.8	4.8	2.6	5.7	Z	12.5	18.4	16.0	11.7	4.3	5.1	5.6	6.7	10.7	6.0	2.7	4.4	3.2	6.3	7.5	8.3	8.4	8.0	10.1	7.5	18.4
28-Sep	13.8	2.7	4.2	4.0	4.9	Z	17.1	15.1	9.9	3.0	2.5	2.1	1.0	0.5	3.3	0.9	0.4	0.6	0.7	0.6	0.6	1.1	0.7	0.6	3.9	17.1
29-Sep	Z	1.0	0.7	0.7	0.7	0.4	0.4	3.4	1.1	1.4	2.7	0.6	9.6	7.6	16.7	15.9	8.9	1.2	0.9	0.8	0.8	0.7	0.8	0.7	3.4	16.7
30-Sep	0.9	Z	1.5	1.6	1.4	4.0	5.6	10.0	6.1	3.2	3.4	4.2	4.4	3.6	2.3	2.1	1.5	1.3	1.3	1.4	2.2	1.9	1.6	1.2	2.9	10.0
	3.3	3.1	2.9	3.0	3.7	3.8	5.5	5.4	4.4	3.2	3.2	2.9	2.6	2.3	2.9	3.0	2.1	1.6	2.0	2.4	2.5	2.4	2.2	2.4	Diurnal Average	
	17.6	12.3	13.9	15.2	14.5	12.5	18.4	16.0	11.7	8.3	9.1	8.0	9.6	10.7	16.7	15.9	8.9	4.4	15.0	14.4	19.6	12.2	9.2	10.1	Diurnal Maximum	

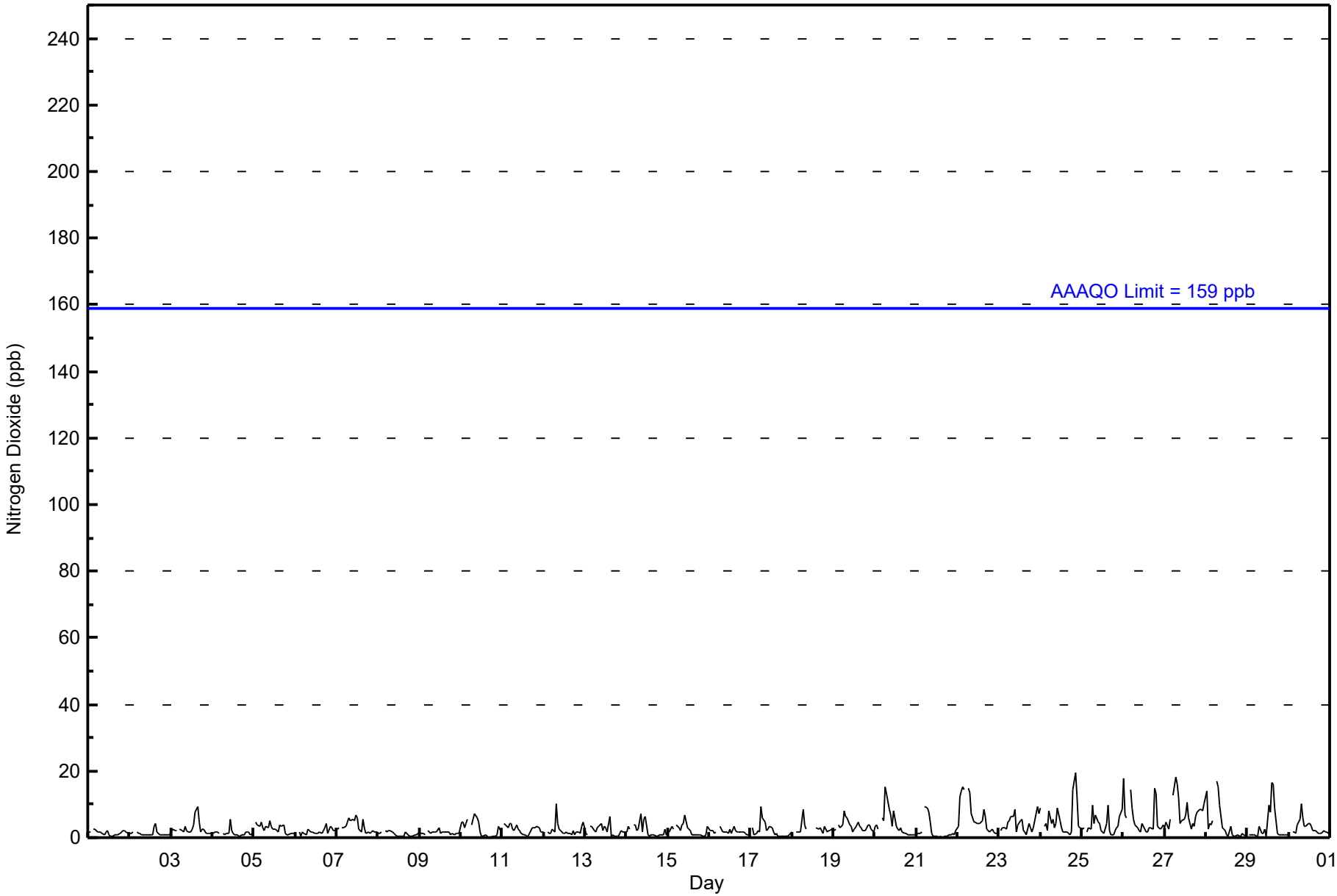
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay - September 2025



Nitrogen Dioxide (NO_2) - ppb
Sawbones Bay - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	19	9	10	28	43	73	127	90	39	29	41	50	35	29	43	685
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	20	19	9	10	28	43	73	127	90	39	29	41	50	35	29	43	685

Total Number of Valid Hours: 685

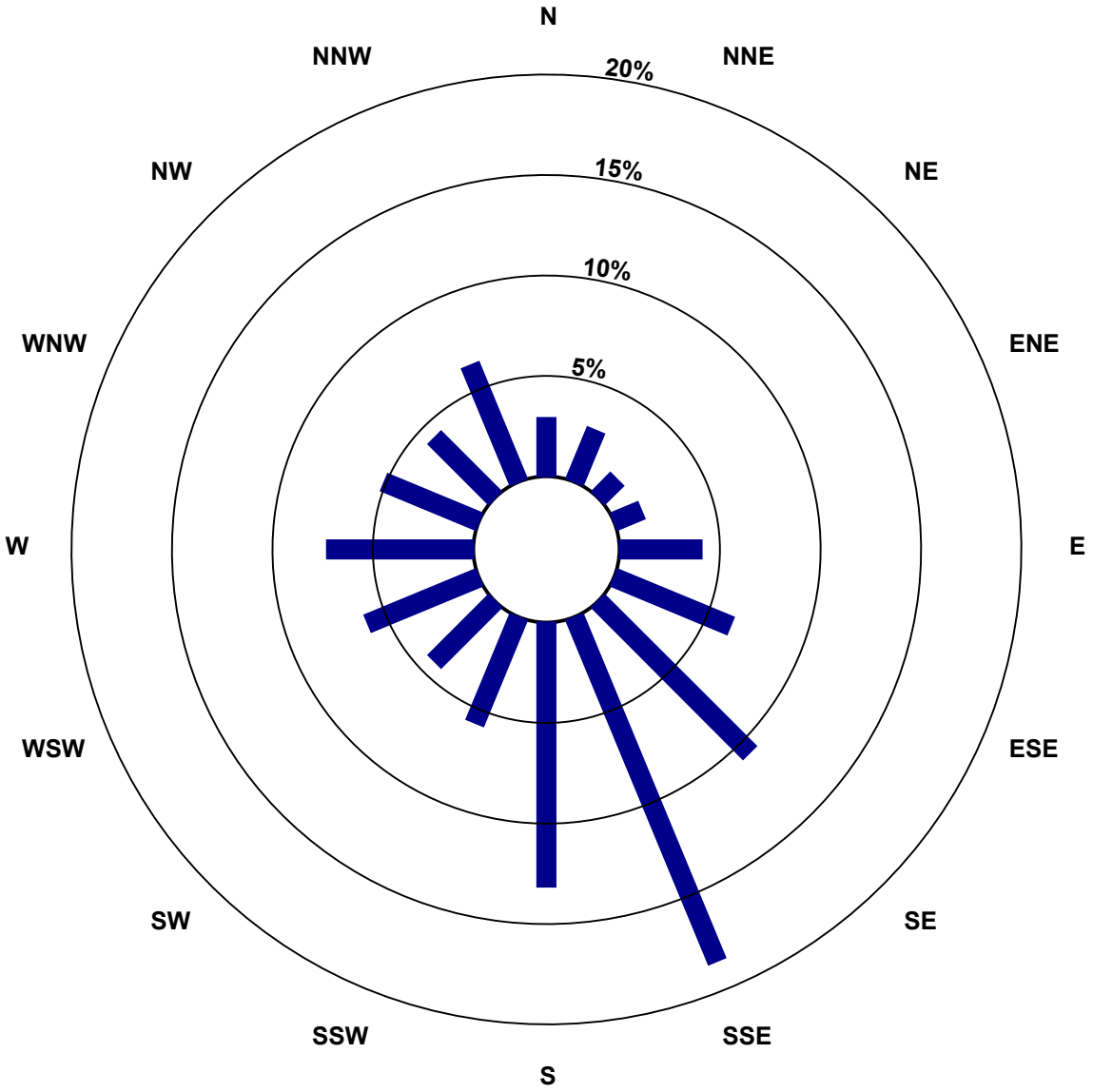
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

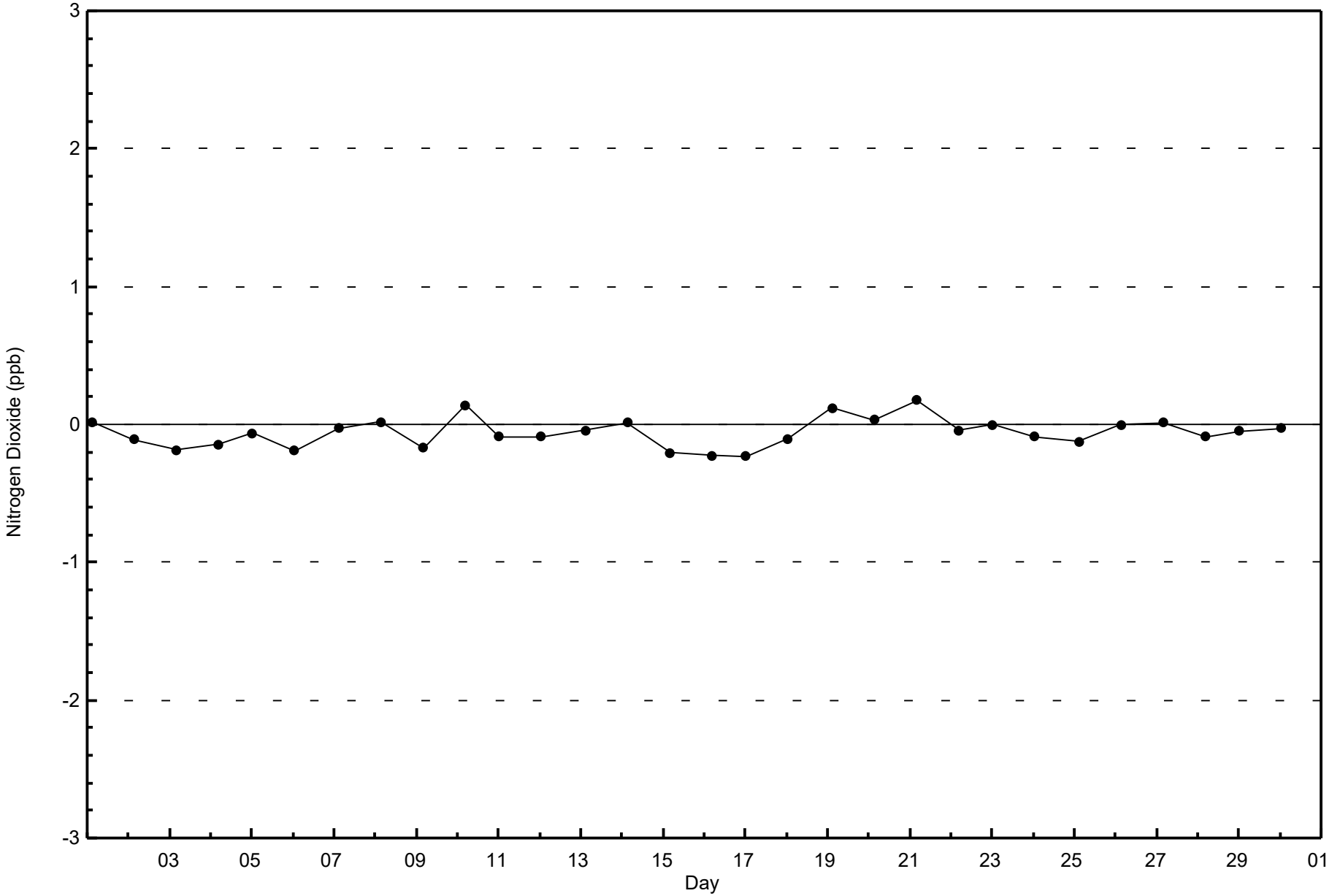
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay - September 2025

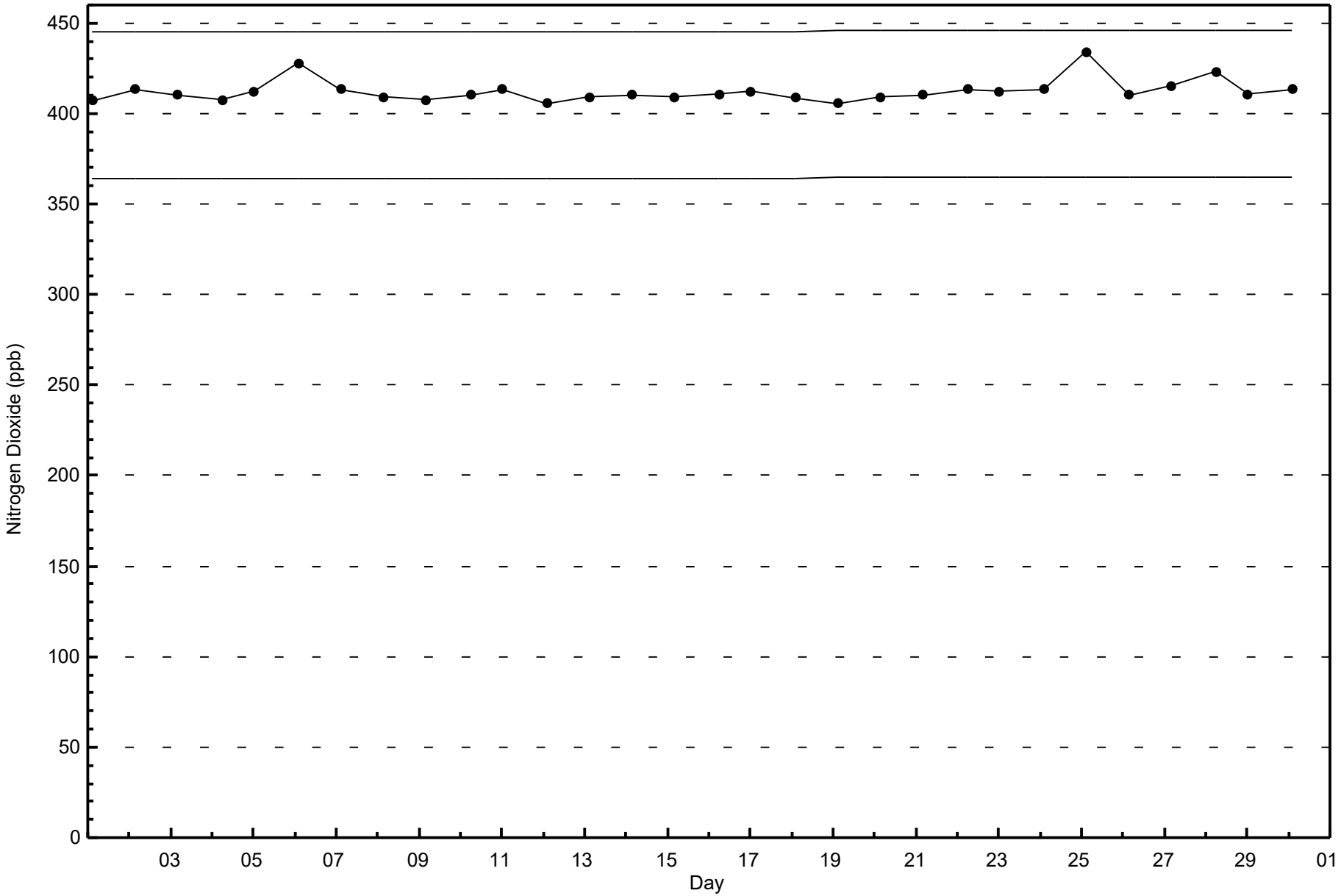


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Sawbones Bay - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay - September 2025

Maximum Value: 45.6 ppb on Sep 20 07:00

Maximum Daily Average: 11.3 ppb on Sep 27

Minimum Value: 0.3 ppb on Sep 21 15:00

Minimum Daily Average: 1.3 ppb on Sep 8

Maximum Diurnal Average: 10.3 ppb at hour 7

Minimum Diurnal Average: 1.8 ppb at hour 18

Monthly Average: 4.28 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.8 Q_1 = 1.3 Median = 2.4 Q_3 = 4.6 P_{90} = 9.5 P_{99} = 26.2

Hours in Service:	720
Hours of Data:	685
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.8	1.7	Z	3.0	2.5	2.1	2.3	1.9	1.7	1.2	2.1	3.1	1.4	0.8	0.6	0.7	0.7	0.9	1.3	1.8	2.4	2.2	1.7	1.3	1.7	3.1
2-Sep	1.3	1.2	1.7	Z	1.6	1.5	1.2	1.1	1.1	1.2	1.0	1.0	1.0	0.8	4.1	5.0	2.2	1.0	0.8	0.9	1.0	1.1	0.9	1.0	1.5	5.0
3-Sep	1.8	2.9	2.1	2.2	Z	2.7	2.2	2.0	4.7	2.9	2.4	2.3	3.2	4.1	9.7	11.8	5.3	1.6	2.7	2.6	1.3	1.3	1.5	1.3	3.3	11.8
4-Sep	1.5	1.5	1.9	1.9	1.4	Z	1.2	1.2	1.3	1.4	18.1	3.0	1.7	1.2	0.8	0.6	0.6	0.8	1.0	1.5	1.6	1.5	1.0	1.5	2.1	18.1
5-Sep	Z	6.5	4.4	4.9	7.0	6.0	5.9	6.4	4.2	6.8	4.6	3.8	3.4	3.2	2.0	5.4	4.5	4.9	1.3	0.9	1.0	1.4	1.4	1.3	4.0	7.0
6-Sep	1.0	Z	1.7	0.8	2.0	1.4	1.1	3.7	3.3	2.5	2.0	1.9	1.7	1.6	1.8	1.8	2.8	3.5	4.5	1.5	3.3	3.1	2.2	2.3	2.2	4.5
7-Sep	2.7	3.0	Z	3.0	3.1	3.9	5.3	9.8	6.4	6.5	6.3	8.9	6.8	2.9	1.9	6.6	3.2	1.4	2.0	1.3	1.6	2.1	1.8	1.6	4.0	9.8
8-Sep	1.5	1.5	1.6	Z	2.3	2.0	2.8	3.2	2.2	1.6	1.0	0.5	0.4	0.4	0.7	0.5	1.8	0.9	0.5	0.6	0.7	0.7	0.9	1.3	1.3	3.2
9-Sep	1.9	1.4	1.2	1.0	Z	2.2	1.7	2.1	1.9	1.9	2.1	4.7	1.5	2.0	1.7	1.7	1.9	1.8	1.0	1.1	0.9	1.1	1.1	1.3	1.7	4.7
10-Sep	5.0	4.8	3.2	4.3	5.9	Z	4.0	7.6	9.8	8.2	6.2	2.2	0.7	0.7	1.5	0.5	0.3	0.3	0.4	0.6	0.7	0.9	4.5	2.0	3.2	9.8
11-Sep	Z	4.5	4.2	3.5	5.9	7.6	4.8	5.7	7.9	2.8	2.4	1.3	0.8	0.8	0.7	0.6	1.2	3.0	3.1	3.0	3.3	3.2	1.6	2.0	3.2	7.9
12-Sep	2.0	Z	1.6	1.3	1.3	2.9	2.9	25.9	6.2	3.7	3.2	1.4	1.5	1.8	1.3	1.3	0.8	2.3	0.9	1.8	1.6	1.5	3.5	4.6	3.3	25.9
13-Sep	1.4	1.1	Z	3.7	3.4	2.4	2.0	4.3	4.4	5.8	2.5	4.6	3.7	1.9	7.5	0.7	0.8	0.6	0.5	0.7	1.5	2.1	1.8	1.9	2.6	7.5
14-Sep	1.8	3.4	2.8	Z	4.2	4.1	2.6	2.7	11.0	2.3	8.9	8.5	1.2	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.9	0.8	2.6	1.1	2.8	11.0
15-Sep	3.2	2.3	4.2	2.9	Z	5.5	4.6	3.5	7.1	8.3	11.4	4.1	3.3	2.8	1.1	0.9	0.7	0.8	0.7	0.8	0.6	0.6	0.7	3.4	3.2	11.4
16-Sep	2.2	2.2	2.3	1.5	1.8	Z	4.3	3.0	2.7	2.4	1.8	1.5	2.9	1.8	4.4	3.0	2.2	1.6	2.0	1.8	1.7	1.2	1.0	1.0	2.2	4.4
17-Sep	Z	3.0	1.2	1.6	2.4	1.8	34.1	16.2	12.1	3.2	4.4	6.1	5.3	3.0	1.3	2.1	0.7	0.4	0.6	0.6	0.7	0.7	0.8	1.2	4.5	34.1
18-Sep	1.7	Z	2.0	2.0	2.0	1.8	17.7	6.5	3.7	C	C	C	C	C	4.5	3.2	3.2	2.2	1.1	3.5	1.9	2.0	2.1	2.4	3.5	17.7
19-Sep	2.4	2.6	Z	4.0	3.5	4.6	14.4	9.3	8.9	5.8	4.4	2.1	3.9	3.8	6.3	3.9	3.7	2.4	2.1	2.9	4.0	4.1	2.4	1.6	4.5	14.4
20-Sep	3.4	3.8	2.6	Z	6.7	8.5	45.6	24.0	12.5	10.9	4.9	11.2	4.2	3.1	2.5	3.3	2.2	1.1	1.4	1.0	0.8	0.8	0.9	0.8	6.8	45.6
21-Sep	1.0	1.3	1.4	1.9	Z	10.9	12.1	10.0	5.5	1.5	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.8	0.9	1.2	0.9	2.8	2.4	12.1
22-Sep	4.7	18.8	21.6	24.6	25.8	Z	26.0	25.4	11.8	7.5	8.4	7.8	7.3	7.2	7.9	13.9	9.2	2.9	2.1	2.5	2.6	1.8	1.4	1.5	10.5	26.0
23-Sep	Z	2.5	3.2	3.1	2.8	4.8	5.4	8.0	9.6	12.7	2.5	5.2	7.2	8.5	2.6	2.4	1.1	5.3	3.3	1.7	3.1	9.7	11.6	8.5	5.4	12.7
24-Sep	10.7	Z	3.8	4.8	2.1	9.8	5.6	6.8	3.7	5.8	15.5	8.4	4.1	2.4	2.6	2.6	1.3	1.1	1.9	22.2	28.6	15.6	3.9	3.3	7.2	28.6
25-Sep	2.6	3.0	Z	1.7	3.4	3.3	25.3	5.1	10.1	11.5	7.4	3.2	2.2	1.9	6.3	15.3	3.1	0.8	1.1	2.4	3.2	4.2	8.1	10.5	5.9	25.3
26-Sep	22.3	7.6	7.2	Z	21.4	14.5	8.0	5.0	4.5	3.1	3.0	7.5	3.7	2.8	2.5	4.4	3.9	3.4	20.8	17.2	4.0	2.6	3.1	4.0	7.7	22.3
27-Sep	3.1	5.6	2.9	7.5	Z	20.6	29.7	25.7	20.0	6.8	8.5	9.4	12.2	21.4	9.3	3.9	6.1	3.9	8.2	9.3	11.2	11.9	10.5	13.1	11.3	29.7
28-Sep	17.9	3.1	4.8	4.3	6.2	Z	26.9	25.4	16.9	4.8	3.9	3.1	1.4	0.6	5.2	1.2	0.5	0.7	0.8	0.7	0.7	1.2	0.8	0.7	5.7	26.9
29-Sep	Z	1.1	0.8	0.8	0.8	0.5	0.6	7.7	1.9	2.9	5.4	0.8	22.4	16.7	36.5	31.9	16.7	1.4	1.0	1.0	0.9	0.9	0.9	0.9	6.7	36.5
30-Sep	1.0	Z	1.7	1.7	1.5	5.7	8.3	13.2	8.7	4.0	4.4	5.1	5.4	4.2	2.5	2.3	1.7	1.4	1.4	1.6	2.4	2.1	1.7	1.3	3.6	13.2
	4.0	3.6	3.5	3.7	4.8	5.2	10.3	9.1	6.9	4.8	5.1	4.2	4.0	3.6	4.4	4.4	2.8	1.8	2.3	3.0	3.0	2.8	2.6	2.7	Diurnal Average	
	22.3	18.8	21.6	24.6	25.8	20.6	45.6	25.9	20.0	12.7	18.1	11.2	22.4	21.4	36.5	31.9	16.7	5.3	20.8	22.2	28.6	15.6	11.6	13.1	Diurnal Maximum	

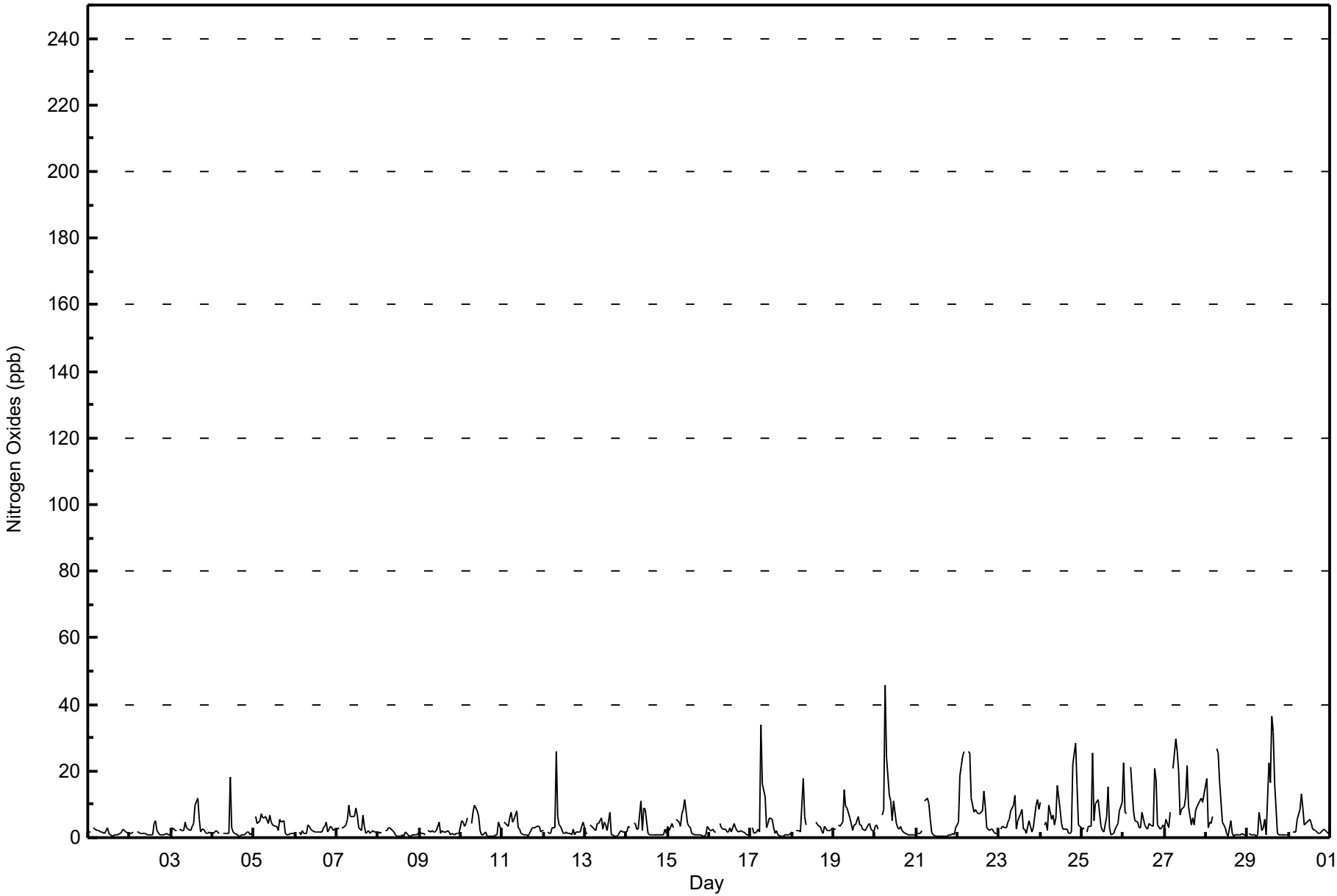
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay - September 2025



Nitrogen Oxides (NO_X) - ppb
Sawbones Bay - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	661	96.50	96.50
21 - 40	23	3.36	99.85
11 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	19	9	10	28	43	72	120	90	39	28	26	50	35	29	43	661
21 - 40	0	0	0	0	0	0	1	6	0	0	1	15	0	0	0	0	23
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	20	19	9	10	28	43	73	127	90	39	29	41	50	35	29	43	685

Total Number of Valid Hours: 685

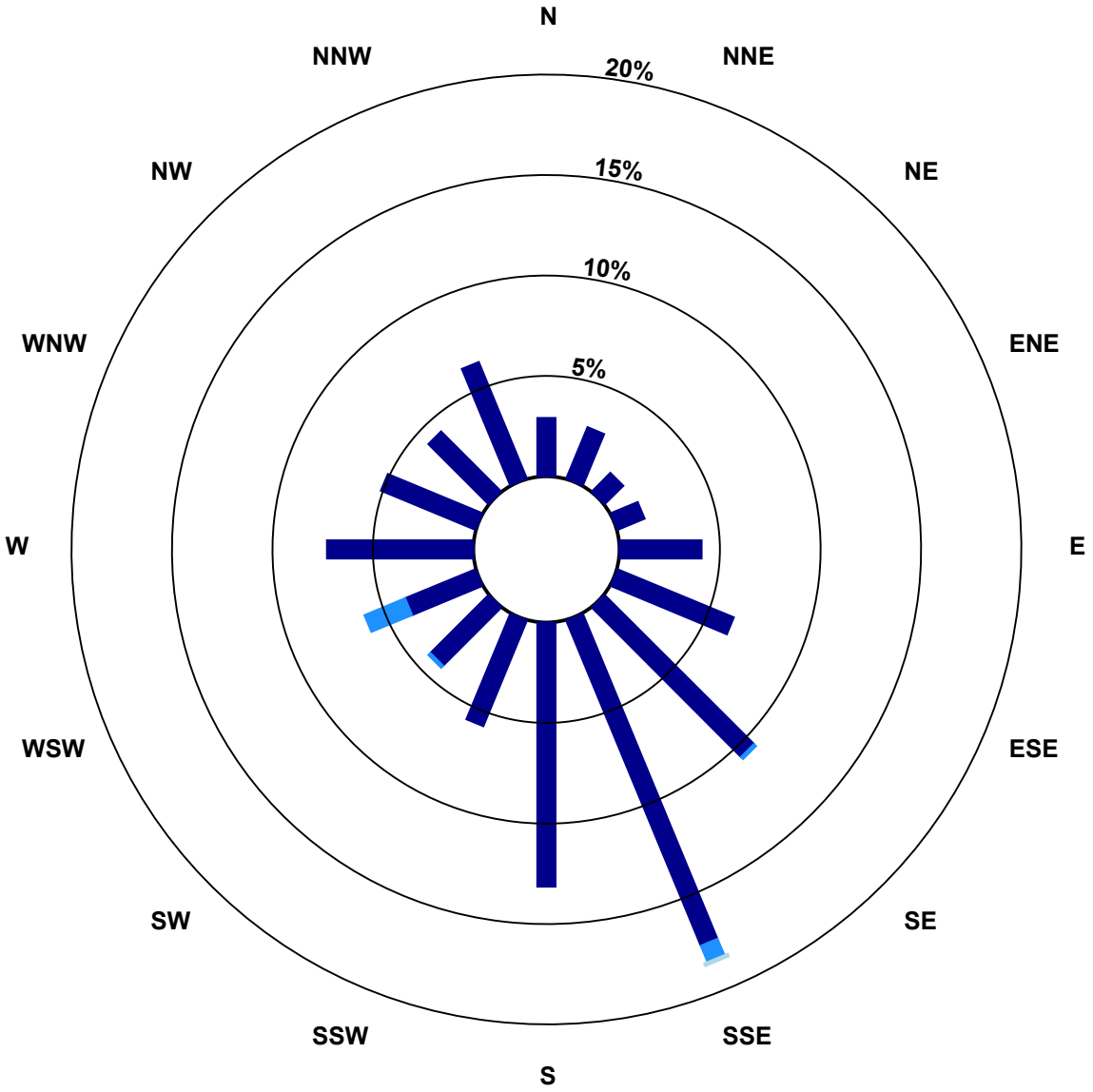
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

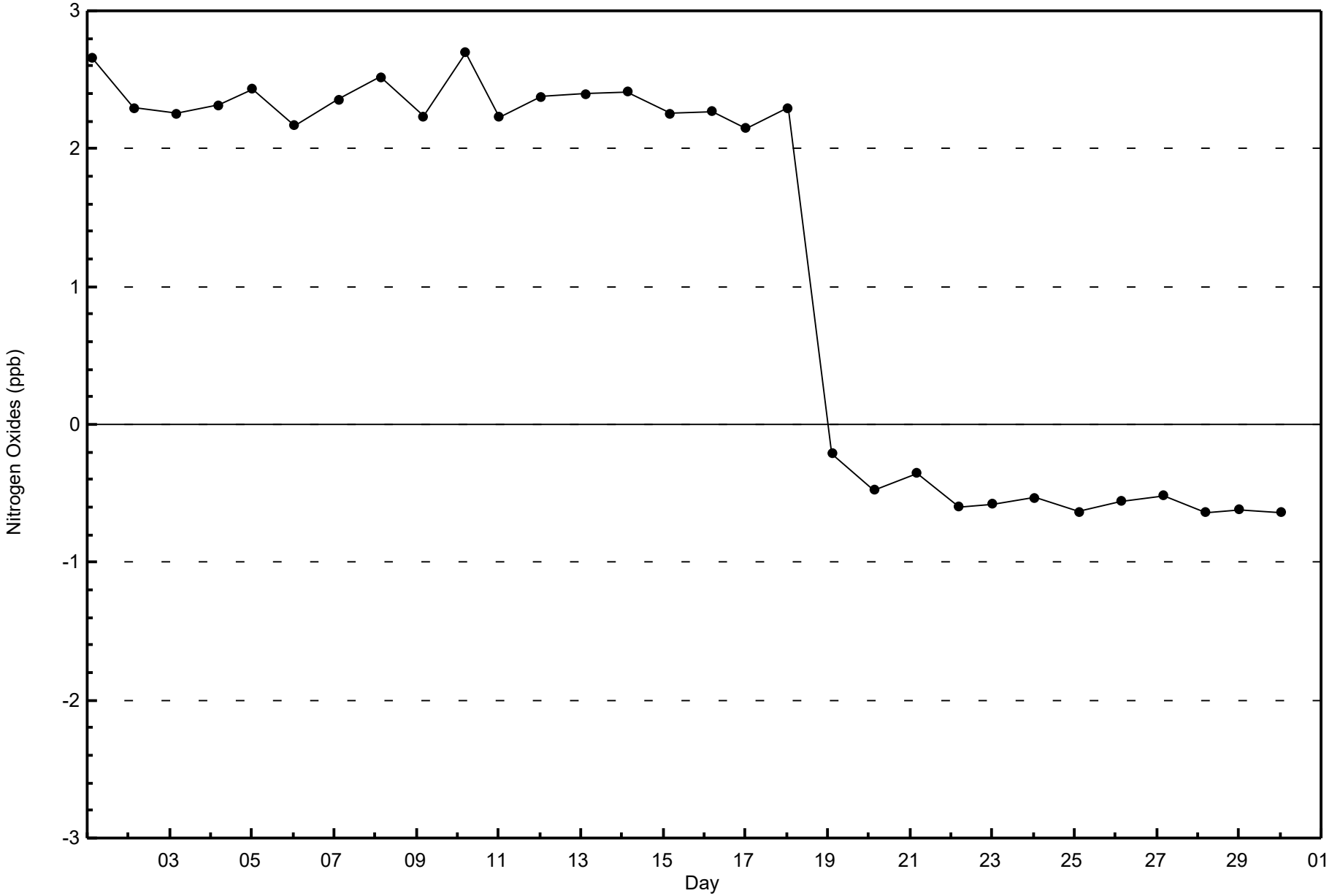
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay - September 2025

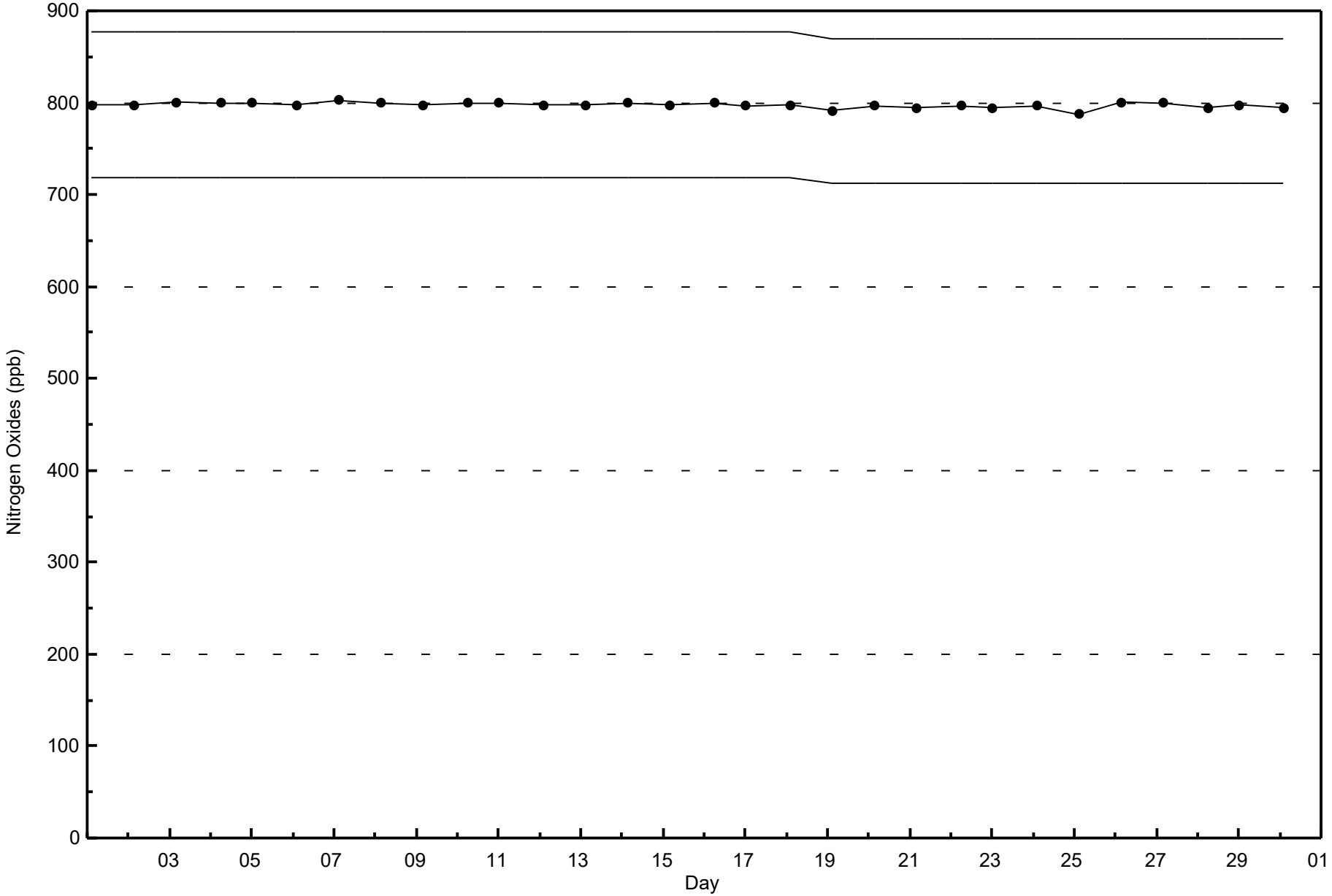


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Sawbones Bay - September 2025



Maximum Value: 28.8 C on Sep 9 15:00

Maximum Daily Average: 19.0 C on Sep 13

Minimum Value: -0.7 C on Sep 5 06:00

Minimum Daily Average: 9.6 C on Sep 25

Maximum Diurnal Average: 20.8 C at hour 16

Minimum Diurnal Average: 8.3 C at hour 6

Monthly Average: 14.25 C

Percentiles: P_1 = 1.1 P_{10} = 7.8 Q_1 = 10.2 Median = 13.6 Q_3 = 17.8 P_{90} = 22.0 P_{99} = 27.2

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

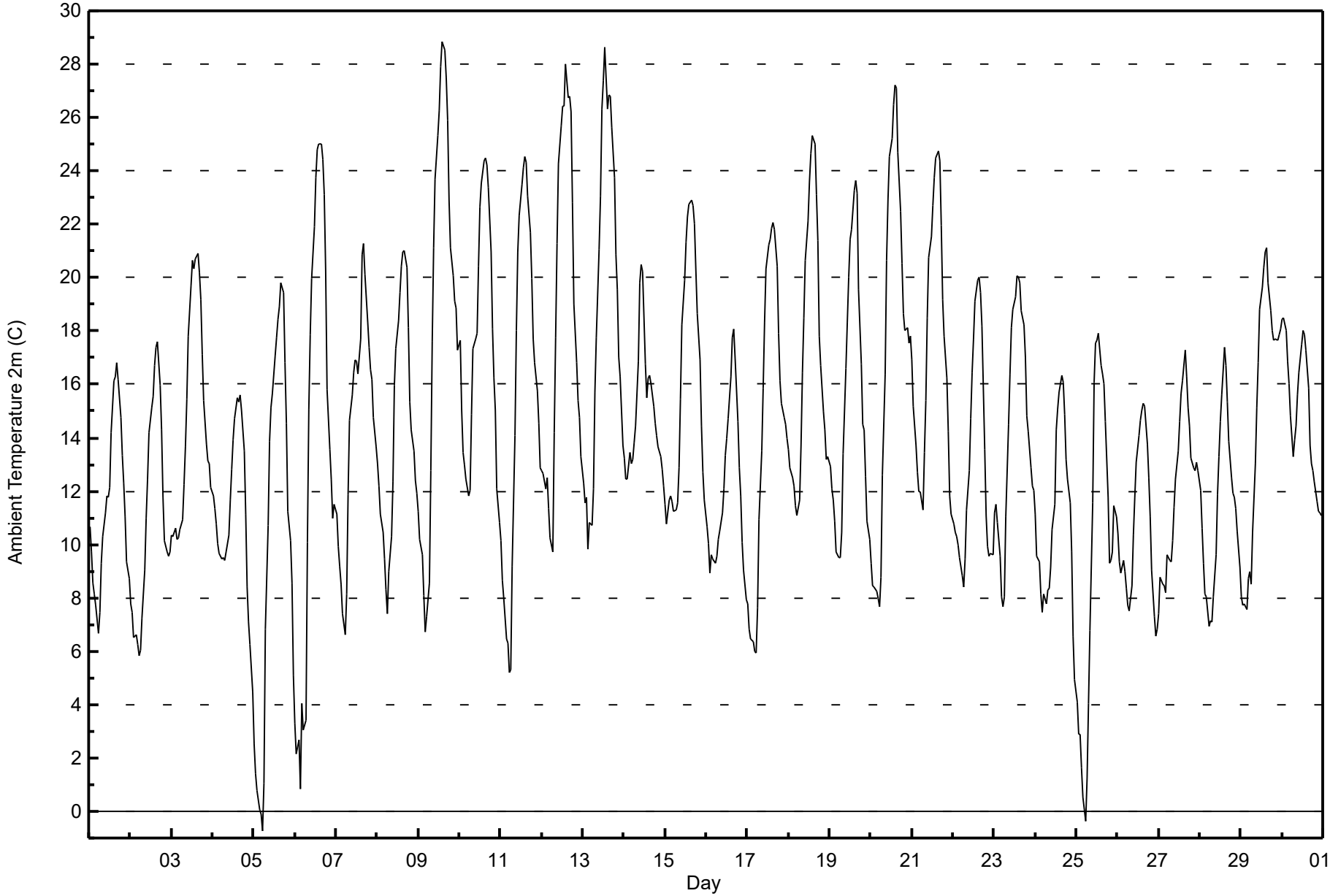
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10.7	9.7	8.5	8.1	7.7	6.7	7.5	9.3	10.3	11.2	11.8	11.8	12.1	14.2	16.1	16.3	16.8	16.2	14.8	13.4	12.3	11.0	9.4	8.7	11.4	16.8
2-Sep	7.8	7.4	6.5	6.6	6.3	5.8	6.0	7.3	9.0	11.0	12.4	14.2	15.1	15.5	16.7	17.4	17.6	16.0	14.3	11.8	10.1	9.7	9.6	9.7	11.0	17.6
3-Sep	10.3	10.3	10.6	10.2	10.2	10.5	10.9	12.2	13.7	15.4	17.8	19.7	20.6	20.3	20.7	20.9	20.2	19.2	17.2	15.4	13.8	13.1	13.1	12.2	14.9	20.9
4-Sep	11.8	11.4	10.7	10.1	9.7	9.4	9.5	9.4	9.7	10.4	11.7	12.8	13.9	14.7	15.5	15.3	15.6	15.0	13.5	11.2	8.4	7.1	6.3	4.5	11.2	15.6
5-Sep	2.5	1.4	0.8	0.0	-0.1	-0.7	1.0	6.8	10.7	13.9	15.1	15.6	17.1	17.7	18.5	18.9	19.8	19.5	16.8	14.6	11.3	10.2	8.6	5.1	10.2	19.8
6-Sep	3.3	2.1	2.7	0.9	4.1	3.1	3.4	10.1	15.1	17.8	20.0	21.9	23.7	24.8	25.0	25.0	24.4	23.1	20.3	15.8	13.6	12.5	11.0	11.5	14.0	25.0
7-Sep	11.2	9.9	9.2	8.5	7.4	6.6	8.1	11.9	14.7	15.6	16.5	16.9	16.9	16.4	17.7	20.9	21.3	20.1	18.3	17.4	16.5	16.2	14.7	13.7	14.4	21.3
8-Sep	13.0	12.2	11.2	10.4	9.5	8.3	7.4	9.0	10.3	12.4	16.0	17.4	18.4	19.4	20.4	21.0	21.0	20.4	18.1	15.3	14.3	13.5	12.4	11.9	14.3	21.0
9-Sep	11.2	10.2	9.6	8.1	6.7	7.3	8.6	12.8	17.6	21.1	23.7	25.3	26.3	27.9	28.8	28.5	27.5	25.9	22.9	21.1	20.0	19.1	18.9	17.3	18.6	28.8
10-Sep	17.6	15.0	13.4	13.0	12.5	11.8	12.0	14.9	17.3	17.7	17.9	20.4	22.7	23.6	24.4	24.5	24.2	23.4	21.0	18.1	16.2	15.0	12.1	10.8	17.5	24.5
11-Sep	10.2	8.7	8.0	6.5	6.3	5.2	5.3	9.2	14.1	18.0	21.0	22.4	23.5	24.1	24.5	24.4	23.1	21.7	20.0	17.7	16.8	15.7	14.6	12.9	15.6	24.5
12-Sep	12.7	12.7	12.1	12.5	11.4	10.3	9.7	14.2	17.7	21.3	24.3	25.7	26.4	26.4	28.0	26.8	26.8	26.2	22.8	19.0	16.8	15.4	14.8	13.3	18.6	28.0
13-Sep	12.3	11.6	11.8	9.8	10.8	10.7	12.1	15.7	17.8	21.0	23.0	26.3	27.4	28.7	26.3	26.8	26.8	25.6	23.8	20.9	19.5	17.0	16.3	13.7	19.0	28.7
14-Sep	13.3	12.5	12.5	13.4	13.1	13.2	13.8	14.5	16.8	19.8	20.5	20.2	16.8	15.5	16.2	16.3	16.0	15.2	14.6	14.1	13.7	13.3	12.8	12.2	15.0	20.5
15-Sep	11.5	10.7	11.7	11.8	11.6	11.3	11.3	11.5	12.9	15.5	18.2	19.9	21.3	22.3	22.7	22.9	22.7	22.0	20.3	18.7	16.9	14.5	12.7	11.6	16.1	22.9
16-Sep	10.7	10.0	9.0	9.6	9.4	9.3	9.6	10.2	10.5	11.2	12.1	13.4	14.0	14.7	16.3	17.8	18.1	17.0	14.6	12.9	11.8	10.1	9.0	8.0	12.0	18.1
17-Sep	7.8	6.8	6.5	6.3	6.0	5.9	7.6	10.9	13.5	15.9	18.3	20.3	21.2	21.5	21.9	22.1	21.8	20.4	17.9	16.1	15.3	14.7	14.5	14.0	14.5	22.1
18-Sep	13.5	12.9	12.5	12.2	11.5	11.1	11.7	13.7	16.5	18.5	20.6	22.1	23.6	24.6	25.3	25.0	23.1	21.4	17.8	16.7	15.0	14.3	13.2	13.3	17.1	25.3
19-Sep	12.9	12.1	11.7	10.9	9.7	9.5	9.5	10.5	13.4	16.6	18.3	20.0	21.5	21.8	23.3	23.7	23.2	19.5	16.8	14.5	14.3	12.5	10.9	10.2	15.3	23.7
20-Sep	9.3	8.5	8.4	8.2	8.0	7.7	8.8	12.6	16.4	20.6	22.9	24.5	25.2	26.5	27.2	27.1	24.7	22.5	20.5	18.6	18.0	18.1	17.6	17.8	17.5	27.2
21-Sep	16.9	15.2	13.7	12.7	12.0	12.0	11.3	13.5	15.4	18.5	20.8	21.6	22.7	23.8	24.5	24.7	24.4	22.0	19.2	17.8	16.3	14.2	11.8	11.1	17.3	24.7
22-Sep	10.8	10.5	10.3	10.0	9.5	8.9	8.4	9.4	11.3	12.8	14.7	16.4	17.7	19.2	19.9	20.0	19.5	18.2	13.6	11.1	9.9	9.6	9.7	9.6	12.9	20.0
23-Sep	11.2	11.5	10.8	9.6	8.0	7.7	8.1	11.0	14.5	16.4	18.1	18.8	19.3	20.1	20.0	19.8	18.8	18.2	17.0	14.8	14.2	12.9	12.2	12.0	14.4	20.1
24-Sep	11.2	9.5	9.3	8.1	7.5	8.2	7.8	8.3	8.3	9.1	10.6	11.5	14.3	15.1	15.7	16.3	16.1	14.9	13.2	12.5	11.6	9.7	6.6	5.0	10.8	16.3
25-Sep	4.1	2.9	2.9	1.6	0.5	-0.4	1.2	4.0	6.8	11.6	16.1	17.5	17.7	17.9	16.7	16.4	16.0	14.6	11.8	9.3	9.4	9.7	11.4	11.0	9.6	17.9
26-Sep	10.4	9.3	8.9	9.4	9.0	8.4	7.7	7.5	8.5	10.3	11.8	13.1	14.1	14.7	15.0	15.3	15.2	13.8	12.5	11.1	9.0	7.3	6.6	6.8	10.7	15.3
27-Sep	7.4	8.8	8.5	8.5	8.2	9.6	9.4	9.4	10.2	11.4	12.4	13.5	14.6	15.7	16.1	17.3	16.3	15.1	14.5	13.3	12.9	12.8	13.1	12.7	12.1	17.3
28-Sep	12.0	10.6	9.3	8.2	8.0	6.9	7.1	7.1	8.0	9.6	11.9	13.3	14.6	15.6	17.4	16.7	15.3	13.9	12.5	11.9	11.8	11.3	10.5	9.1	11.4	17.4
29-Sep	8.0	7.7	7.8	7.6	8.7	9.0	8.5	10.4	13.0	15.1	16.8	18.8	19.7	20.4	21.0	21.1	19.8	18.8	18.0	17.6	17.7	17.6	17.8	18.1	15.0	21.1
30-Sep	18.4	18.5	18.0	16.9	16.0	14.8	13.3	13.9	14.4	15.6	16.4	17.5	18.0	17.9	17.3	15.9	13.7	13.0	12.7	12.4	11.6	11.2	11.2	11.1	15.0	18.5
	10.8	10.0	9.6	9.0	8.6	8.3	8.6	10.7	12.9	15.2	17.1	18.4	19.3	20.0	20.6	20.8	20.3	19.1	17.0	15.2	14.0	13.0	12.1	11.3	Diurnal Average	
	18.4	18.5	18.0	16.9	16.0	14.8	13.8	15.7	17.8	21.3	24.3	26.3	27.4	28.7	28.8	28.5	27.5	26.2	23.8	21.1	20.0	19.1	18.9	18.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Sawbones Bay - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	3	0.42	0.42
0 - 10	165	22.92	23.33
10 - 20	431	59.86	83.19
> 20	121	16.81	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Sawbones Bay - September 2025

Maximum Value: 99.7 % on Sep 15 07:00

Maximum Daily Average: 88.0 % on Sep 14

Minimum Value: 17.9 % on Sep 23 15:00

Minimum Daily Average: 43.6 % on Sep 27

Maximum Diurnal Average: 84.8 % at hour 5

Minimum Diurnal Average: 41.6 % at hour 16

Monthly Average: 64.23 %

Percentiles: P_1 = 25.4 P_{10} = 36.1 Q_1 = 47.2 Median = 62.9 Q_3 = 81.7 P_{90} = 94.0 P_{99} = 99.1

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

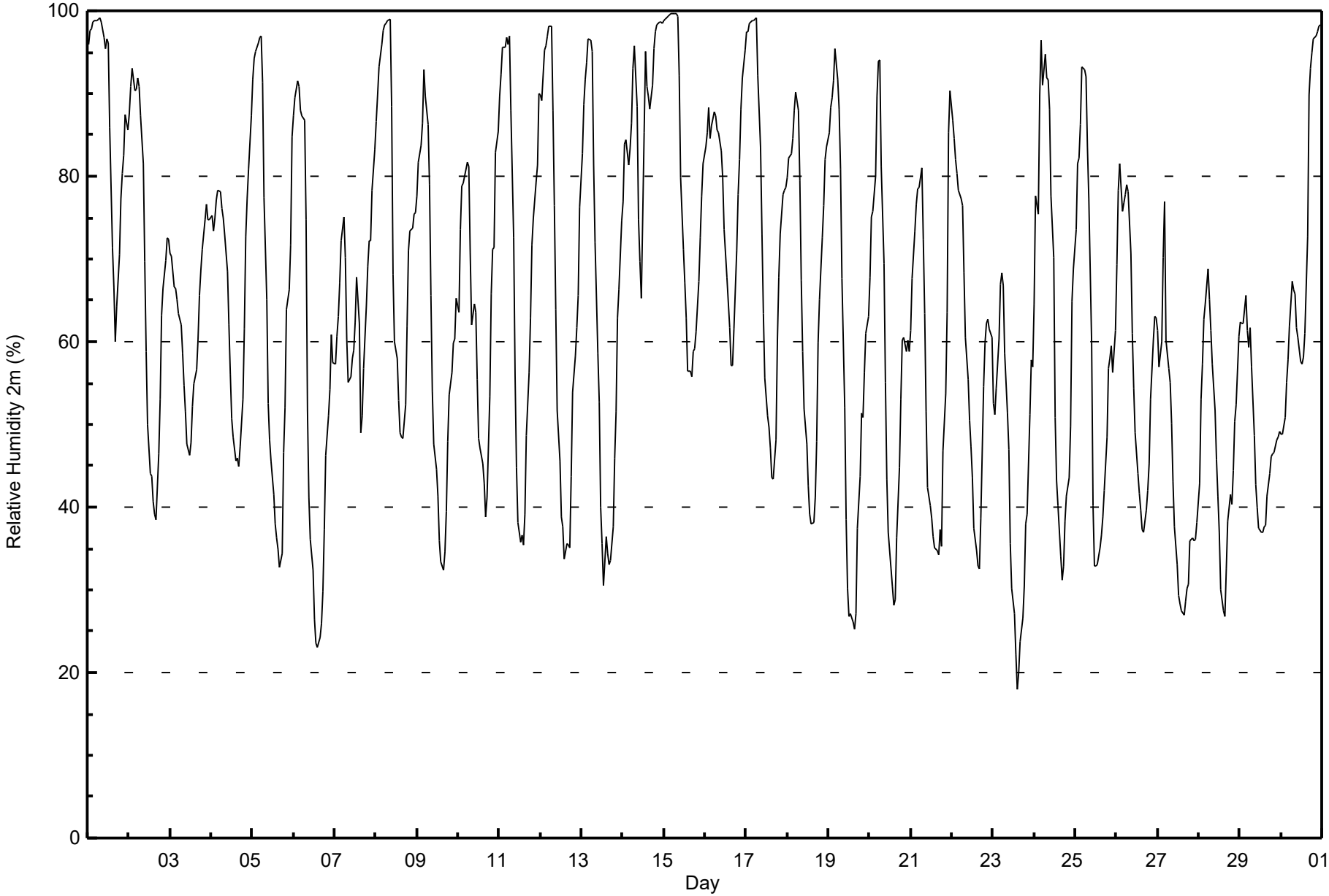
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95.9	97.6	97.8	98.6	98.9	98.8	99.0	99.1	98.7	96.8	95.5	96.7	96.2	86.0	71.3	66.6	60.1	64.2	70.4	77.3	80.4	82.6	87.5	85.5	87.6	99.1
2-Sep	87.6	90.8	93.1	90.3	90.6	91.9	90.9	87.3	81.4	69.7	58.8	49.9	44.1	43.7	40.6	39.2	38.5	46.5	53.1	63.2	66.4	69.7	72.6	72.4	68.0	93.1
3-Sep	70.7	70.4	66.6	66.4	65.1	63.3	62.0	58.6	54.8	51.5	47.6	46.3	47.8	52.3	54.9	56.7	60.3	65.5	68.7	71.3	74.7	76.6	74.8	74.8	62.6	76.6
4-Sep	75.2	73.3	74.9	77.1	78.4	78.2	76.2	74.9	72.9	68.4	62.0	56.2	50.7	48.5	45.5	46.0	44.9	47.2	53.1	61.5	72.7	77.2	80.8	87.2	66.0	87.2
5-Sep	91.8	94.2	95.2	96.1	96.9	97.0	91.3	77.5	65.0	52.6	48.2	45.6	41.6	38.0	36.3	35.0	32.7	34.4	46.5	52.1	63.9	66.2	71.8	84.7	64.8	97.0
6-Sep	87.2	89.5	91.5	90.8	88.0	87.3	86.8	74.8	51.7	41.2	36.2	32.4	26.5	23.5	23.1	24.2	26.0	29.8	37.3	46.3	51.0	54.2	60.9	57.5	54.9	91.5
7-Sep	57.4	60.7	63.0	67.2	72.1	75.1	70.2	60.3	55.1	55.8	57.9	58.9	62.4	67.8	62.2	48.9	50.9	56.8	64.5	69.2	72.3	72.2	78.4	83.3	64.3	83.3
8-Sep	86.5	89.8	93.2	95.9	97.6	98.3	98.5	98.9	99.0	88.4	68.2	60.1	58.0	52.8	49.0	48.6	48.3	52.4	61.9	71.1	73.4	73.8	75.3	75.7	75.6	99.0
9-Sep	77.6	81.7	83.8	86.5	92.8	89.6	86.3	78.9	65.6	54.1	47.5	44.6	41.4	35.9	33.3	32.4	34.5	39.5	47.9	53.6	56.3	59.8	60.3	65.3	60.4	92.8
10-Sep	63.6	73.5	78.8	79.1	80.0	81.7	81.1	70.8	62.0	64.6	63.6	55.5	48.3	47.1	45.3	42.9	38.8	41.3	53.3	65.8	71.2	71.3	82.8	85.4	64.5	85.4
11-Sep	89.6	92.3	95.6	95.6	96.8	96.0	97.0	88.0	72.6	55.9	44.8	38.1	35.8	36.6	35.5	39.1	48.7	56.2	62.9	71.7	74.9	79.2	81.3	90.0	69.8	97.0
12-Sep	89.9	89.2	95.3	95.8	97.0	98.1	98.2	87.9	76.4	64.0	51.7	45.5	38.8	37.7	33.7	35.6	35.4	35.1	43.7	53.9	58.3	61.7	65.5	76.3	65.2	98.2
13-Sep	82.8	88.6	91.7	93.8	96.7	96.4	95.1	81.4	72.0	58.7	52.8	39.9	35.5	30.5	36.5	34.4	33.0	33.6	37.7	46.0	51.5	62.9	66.2	74.6	62.2	96.7
14-Sep	77.0	83.8	84.4	81.4	83.4	86.5	93.1	95.8	88.5	74.8	69.7	65.3	85.3	95.1	90.8	89.6	88.1	91.1	95.4	97.5	98.4	98.6	98.7	98.6	88.0	98.7
15-Sep	98.9	99.0	99.4	99.5	99.6	99.6	99.7	99.6	99.4	92.2	79.8	71.1	67.1	62.8	56.4	56.4	55.7	58.7	59.2	61.2	67.2	72.5	77.6	81.6	79.8	99.7
16-Sep	83.6	85.3	88.3	84.6	86.2	87.7	87.3	85.6	85.3	83.1	79.9	73.5	70.6	67.9	61.7	57.2	57.1	61.5	71.1	77.8	82.1	88.2	91.9	95.3	78.9	95.3
17-Sep	97.4	97.5	98.5	98.8	98.9	99.1	99.1	92.2	83.4	73.1	63.4	55.5	51.1	49.7	47.2	43.6	43.4	48.2	60.2	67.7	73.0	77.8	78.2	78.7	74.0	99.1
18-Sep	79.8	82.2	82.8	84.5	88.0	90.1	88.0	79.6	67.4	58.9	51.9	47.7	42.5	39.2	37.9	38.2	41.1	48.0	59.8	65.0	72.5	76.5	82.1	83.6	66.1	90.1
19-Sep	85.3	88.3	89.5	91.6	95.5	91.8	88.1	80.8	67.6	52.1	38.5	30.2	26.8	27.2	26.1	25.2	27.1	37.4	43.7	51.4	50.8	56.3	60.9	63.1	58.1	95.5
20-Sep	67.9	75.1	75.8	79.9	89.7	94.0	94.1	81.2	69.5	55.2	43.3	36.9	32.5	30.3	28.1	28.8	36.3	44.7	53.0	60.1	60.5	58.7	60.2	58.8	58.9	94.1
21-Sep	61.3	67.6	73.4	76.6	78.4	78.6	81.0	72.3	63.4	51.4	42.3	40.2	38.7	36.4	35.1	34.8	34.2	37.3	35.3	46.8	53.7	63.5	85.3	90.4	57.4	90.4
22-Sep	86.8	84.5	82.1	80.3	78.3	77.3	76.5	68.4	60.5	55.3	50.6	47.3	43.6	37.5	34.8	32.9	32.5	38.7	54.6	59.8	62.3	62.7	61.6	60.4	59.6	86.8
23-Sep	52.6	51.2	54.4	60.4	67.0	68.3	66.7	58.7	51.4	46.9	35.6	30.2	27.1	22.3	17.9	20.1	23.8	26.6	30.5	38.0	39.2	51.1	57.8	56.9	43.9	68.3
24-Sep	64.5	77.6	75.4	89.8	96.4	91.0	94.7	91.8	91.6	88.2	77.7	70.2	50.8	43.3	40.2	34.0	31.2	33.0	38.4	41.4	43.6	49.8	64.9	68.8	64.5	96.4
25-Sep	73.5	81.5	82.2	86.3	93.2	92.9	92.0	83.6	77.4	59.9	40.1	32.9	32.9	33.1	35.1	36.6	38.8	42.1	48.5	56.8	57.9	59.5	56.2	61.3	60.6	93.2
26-Sep	69.4	78.4	81.6	75.8	76.8	77.9	78.9	78.1	70.7	61.0	54.4	49.0	44.1	41.6	39.7	37.3	36.9	39.6	42.0	45.3	53.1	60.2	63.0	62.8	59.1	81.6
27-Sep	61.4	56.9	60.0	70.2	76.9	60.1	56.8	55.0	50.2	43.0	37.6	33.0	29.4	28.2	27.4	26.9	28.7	30.2	30.8	36.0	36.3	35.9	36.2	38.2	43.6	76.9
28-Sep	42.9	53.0	57.3	62.7	64.5	68.8	65.1	61.4	57.3	51.6	45.8	41.3	36.9	29.9	27.4	26.7	32.5	38.4	41.5	40.3	44.5	50.3	52.3	60.7	48.1	68.8
29-Sep	62.4	62.2	62.3	65.6	61.3	59.4	61.7	56.9	48.6	42.7	40.1	37.4	36.9	37.0	37.7	37.8	41.4	44.0	46.2	46.4	46.6	48.1	48.5	49.1	49.2	65.6
30-Sep	48.9	48.9	50.9	55.1	57.7	61.8	67.3	66.3	65.7	61.6	60.6	57.7	57.3	58.2	61.0	72.8	89.8	93.0	94.9	96.6	97.0	97.4	98.1	98.3	71.5	98.3
	75.6	78.8	80.6	82.5	84.8	84.5	84.1	78.2	70.8	62.4	54.9	49.6	46.7	44.7	42.4	41.6	43.0	47.2	53.5	59.7	63.5	67.2	71.1	74.0	Diurnal Average	
	98.9	99.0	99.4	99.5	99.6	99.6	99.7	99.6	99.4	96.8	95.5	96.7	96.2	95.1	90.8	89.6	89.8	93.0	95.4	97.5	98.4	98.6	98.7	98.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Sawbones Bay - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	1	0.14	0.14
20 - 40	119	16.53	16.67
40 - 60	189	26.25	42.92
60 - 80	216	30.00	72.92
80 - 100	195	27.08	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Sawbones Bay - September 2025

Maximum Speed: 29 km/h on Sep 26 13:00

Maximum Daily Speed Average: 16.4 km/h on Sep 26

Minimum Speed Value: 1 km/h on Sep 15 01:00

Minimum Daily Speed Average: 1.3 km/h on Sep 7

Maximum Diurnal Speed Average: 5.2 km/h at hour 11

Minimum Diurnal Speed Average: 0.5 km/h at hour 19

Monthly Average Velocity: 3.3 km/h 209.8 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 8 Q_3 = 13 P_{90} = 18 P_{99} = 25

Hours in Service: 720

Hours of Data: 720

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	NW7	NW4	W2	WNW6	NW3	SE2	NW4	NNW2	N5	E4	SSW4	NW6	NNW8	NNW6	NW10	N10	N9	N9	NNW7	NNW6	NNW7	NNW8	N7	N8	NNW4.9	N10
2-Sep	N5	NW5	NNW5	NNW5	NNW3	N6	NNE5	ENE1	NE5	ENE4	NNE4	SSE4	ESE3	E5	SE2	S3	SE3	ESE7	ESE6	E8	ESE9	SE8	SE8	SSE9	E2.6	ESE9
3-Sep	SSE10	SSE10	SSE12	SSE9	SSE10	SSE12	SSE12	S13	S13	S12	S12	S11	SSW12	SSW11	SW13	WSW15	W15	NNW19	NNW24	NNW21	NNW20	NNW18	NNW23	NNW22	WSW3.1	NNW24
4-Sep	NNW20	NNW22	NNW18	NW16	WNW15	WNW13	NW15	NW19	NNW18	NNW22	NNW22	NNW22	NNW21	NNW18	NW19	NNW18	NNW17	NNW15	NNW9	NNW7	N5	N5	N5	WNW3	NNW14.7	NNW22
5-Sep	S1	S4	SSE2	S4	S4	S5	SSE4	SSE3	SE3	SSW7	SSW6	WSW6	WSW4	W7	SSW1	WSW9	SSW7	SSW5	E3	ESE8	SE6	ESE7	ESE6	E4	S3.1	WSW9
6-Sep	SE5	SE4	SE4	SE6	ESE7	SE7	ESE6	ESE5	SSE8	SE9	SSE10	SSE10	S11	S14	SSW14	S12	S12	S11	S6	SSE6	SSE7	SSE7	SSE8	SSE10	SSE7.5	S14
7-Sep	SSE8	SSE4	SSE4	S4	S5	S4	S3	SSE5	S3	SW4	SW6	W5	SW4	S2	NW4	W3	W7	NW2	NNW2	NNW6	N8	N11	N9	N7	W1.3	N11
8-Sep	N5	N4	NW5	NW4	NNW5	NW4	WNW3	NNW5	NNE6	NNE5	NNE8	NNE7	N8	NNE6	NNE6	NNE5	NE4	NNE7	NE7	ENE8	E9	E8	E7	ESE8	NNE4.2	E9
9-Sep	ESE8	E7	ESE6	ESE5	SSE5	SE5	ESE6	ESE6	SE8	SSE10	SSE12	SSE13	SE16	SSE14	S14	S14	S15	S8	SE7	SE8	SSE9	SSE10	SSE11	SSE9	SSE8.5	SE16
10-Sep	SSW6	S4	S5	S6	S5	S4	SSE5	S7	SW8	WSW9	WSW8	WNW9	NW8	WNW8	NW10	NW8	WNW10	NW7	NNE6	NNE6	NNE5	ENE3	E2	S2	W2.5	WNW10
11-Sep	NW2	SSW1	W2	SE4	SW2	SSE2	NW2	WNW1	NNE2	NNE5	NE6	ENE8	E7	E7	E6	ESE8	ENE9	E7	E6	E6	ESE8	ESE7	SE6	SSE6	E3.5	ENE9
12-Sep	SE6	ESE7	ESE5	SE7	SE6	SSE4	SSE4	SSE4	SSE8	SSE10	SSE9	S9	S8	S5	SSE7	SE5	SE6	S6	SE7	SSE6	SSE6	SSE6	SSE6	SSE5	SSE6.0	SSE10
13-Sep	SE4	SE5	ESE6	E5	ESE7	ESE7	ESE6	SE4	SE3	SSE2	WNW2	SE8	SSE8	S8	SE5	SE6	SE5	SE4	SE7	ESE7	ESE7	ESE6	ESE8	SSE5	SE5.1	ESE8
14-Sep	SE5	SSE5	SSE4	SSE5	SE6	SSE5	ENE3	ESE5	S2	SSE4	SSE5	SE6	E11	E7	E8	ENE10	ENE10	NE9	NE6	ENE4	E2	SE5	SE2	NNE2	ESE4.2	E11
15-Sep	SE1	SE3	SW2	SSW4	S4	SSW5	SSW6	S5	S6	SW9	WSW14	W17	W18	W16	WNW20	WNW18	WNW16	WNW14	WNW14	WNW13	NW15	NW9	WNW7	WNW10	W8.2	WNW20
16-Sep	WNW10	W12	W12	W17	W16	W12	WNW10	W11	WNW13	WNW14	WNW10	NW8	WNW11	NW9	NW7	E1	ESE5	ESE5	ESE7	ESE8	ESE8	ESE8	E9	E9	WNW4.5	W17
17-Sep	ESE8	SSE7	S5	SSE6	SSE7	SSE7	SE8	SSE8	SSE11	SSE11	SSE12	SSE10	SE11	SE14	SE15	SE14	SE15	SE14	SE11	SE9	SE11	SE12	SSE14	SSE14	SE10.3	SE15
18-Sep	SSE13	SSE12	SSE14	SSE13	SSE11	SSE10	SSE10	S10	S14	S16	S15	S13	S15	S16	S14	S13	SSW11	S7	SSE6	S6	SSE5	SSE8	SSE7	S7	S10.9	S16
19-Sep	S6	SE2	S3	S3	SSW4	SSW3	SSW4	SW3	S3	SSW2	WSW4	SSW5	SSW6	WSW7	SSE6	SSW7	SSW8	S7	S6	SSE4	SE2	SE3	SSE8	SSE7	S4.1	SSW8
20-Sep	SSE6	SSE7	SSE9	SSE5	SSE4	SE6	SSE8	SSE6	SSE6	S6	S11	S13	S12	S12	S13	S13	SSE10	SSE9	ESE8	ESE9	SE10	SSE11	SSE12	SSE13	SSE8.7	SSE13
21-Sep	SSE11	SSE10	SSE8	S7	SSW5	SSW5	S5	S4	WNW8	NNW8	NNW12	NNE12	NNE10	NNE9	N8	NNW8	N9	NW14	NW18	WNW16	WNW21	WNW18	WNW15	W17	WNW5.1	WNW21
22-Sep	W17	WSW17	WSW18	WSW18	WSW21	WSW21	WSW16	WSW20	WSW20	W18	WSW16	SW17	SW19	SW18	SW17	SW18	SW17	SSW9	S6	S6	SSE7	SSE9	SSE9	SSE8	SW13.2	WSW21
23-Sep	S10	S9	S7	S5	S5	S3	SSE4	S5	SSW6	W12	W19	W16	W16	WSW19	W23	WNW21	WNW15	W14	W14	WNW10	SW8	SW12	SW13	W13	WSW9.3	W23
24-Sep	WSW13	W11	W13	SSW7	S6	SW9	SSW8	SSW13	SSW12	SSW12	WSW17	WSW18	W24	W23	W20	WNW18	WNW19	WNW17	W14	WSW16	WSW15	WSW9	SSW8	S4	WSW11.7	W24
25-Sep	SSE2	S5	S5	S4	S6	SSE5	SSE7	SSE7	SSE7	SSE8	S14	S16	S15	SSE12	SSE12	SSE13	SE13	SSE12	SSE7	SSE6	SSE6	SSW6	W13	W14	S7.5	S16
26-Sep	WSW13	SW8	SW6	WSW14	WSW17	WSW21	W21	W16	W20	W22	W25	W26	W29	W28	W27	W28	W26	W19	WSW17	SW12	SSW9	S6	S7	S6	W16.4	W29
27-Sep	S7	S10	S10	SW12	SSW17	SW23	WSW20	WSW20	WSW24	W24	W23	WSW24	WSW25	WSW20	W17	SW10	SSW13	SSW14	SW14	SW7	SW11	W20	WSW19	WSW19	WSW15.4	WSW25
28-Sep	SW16	SSW17	SSW12	SSW14	SW13	SW12	WSW18	WSW17	WSW16	W14	WSW8	W7	NW8	NNW7	S5	SE1	E7	E6	E6	E7	SE7	SE7	SE8	ESE8	SW5.4	WSW18
29-Sep	ESE9	ESE10	ESE9	ESE10	SE12	SE15	ESE14	SE18	SE18	SE23	SE23	SE19	SSE20	SSE20	SSE16	SSE17	SSE14	SSE13	SE11	ESE10	SE13	SE13	SSE17	SSE19	SE14.6	SE23
30-Sep	SSE17	SSE16	SSE11	SSE12	SSE11	SSE9	SSE7	SSE7	S6	S7	S7	S6	S5	ESE1	NNW5	NNW4	NE11	NE8	NE6	WNW9	NW8	NNW6	N11	NNW10	SSE2.6	SSE17
	S3.2	S3.7	S3.5	SSW4.1	SSW4.5	SSW4.6	SSW3.8	SSW4.1	SW4.4	SW4.5	SW5.2	SW4.9	SW4.8	SW4.9	WSW4.6	SW3.9	SW3.0	SW1.7	SW0.5	SSE0.7	SSE1.4	SSE1.9	S2.6	SSW2.7	Diurnal Average	
	NNW20	NNW22	WSW18	WSW18	WSW21	SW23	W21	WSW20	WSW24	W24	W25	W26	W29	W28	W27	W28	W26	W19	NNW24	NNW21	WNW21	W20	NNW23	NNW22	Diurnal Maximum	

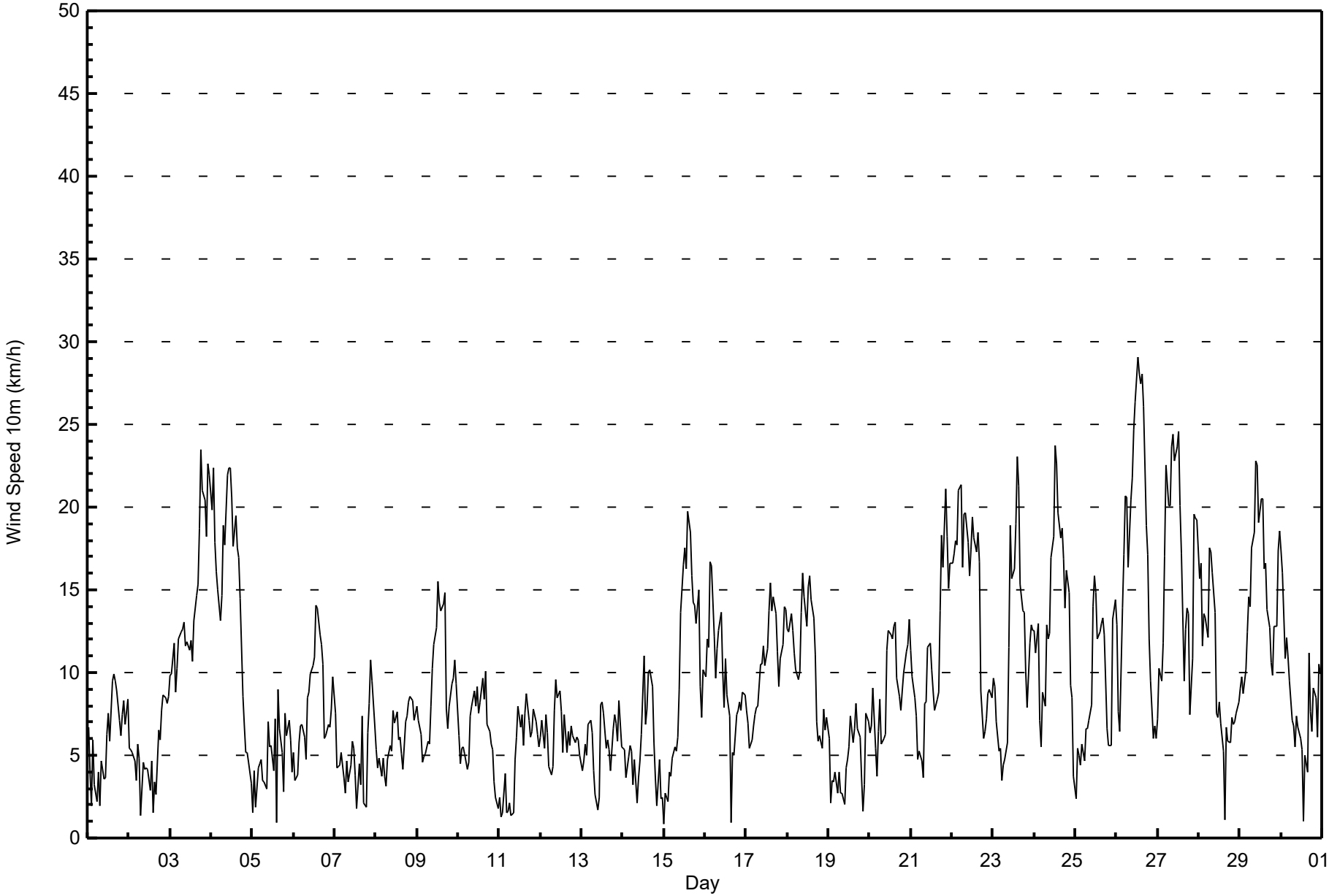
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Sawbones Bay - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	178	24.72	24.72
6 - 11	317	44.03	68.75
12 - 19	178	24.72	93.47
20 - 28	46	6.39	99.86
29 - 38	1	0.14	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Sawbones Bay - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	8	2	5	8	8	26	30	36	13	4	3	4	4	11	9	178
6 - 11	13	10	7	5	20	38	31	74	39	17	10	7	5	13	13	15	317
12 - 19	0	1	0	0	0	1	15	28	26	11	15	22	27	16	7	9	178
20 - 28	0	0	0	0	0	0	2	2	0	0	1	11	16	3	0	11	46
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	19	9	10	28	47	74	134	101	41	30	43	53	36	31	44	720

Total Number of Valid Hours: 720

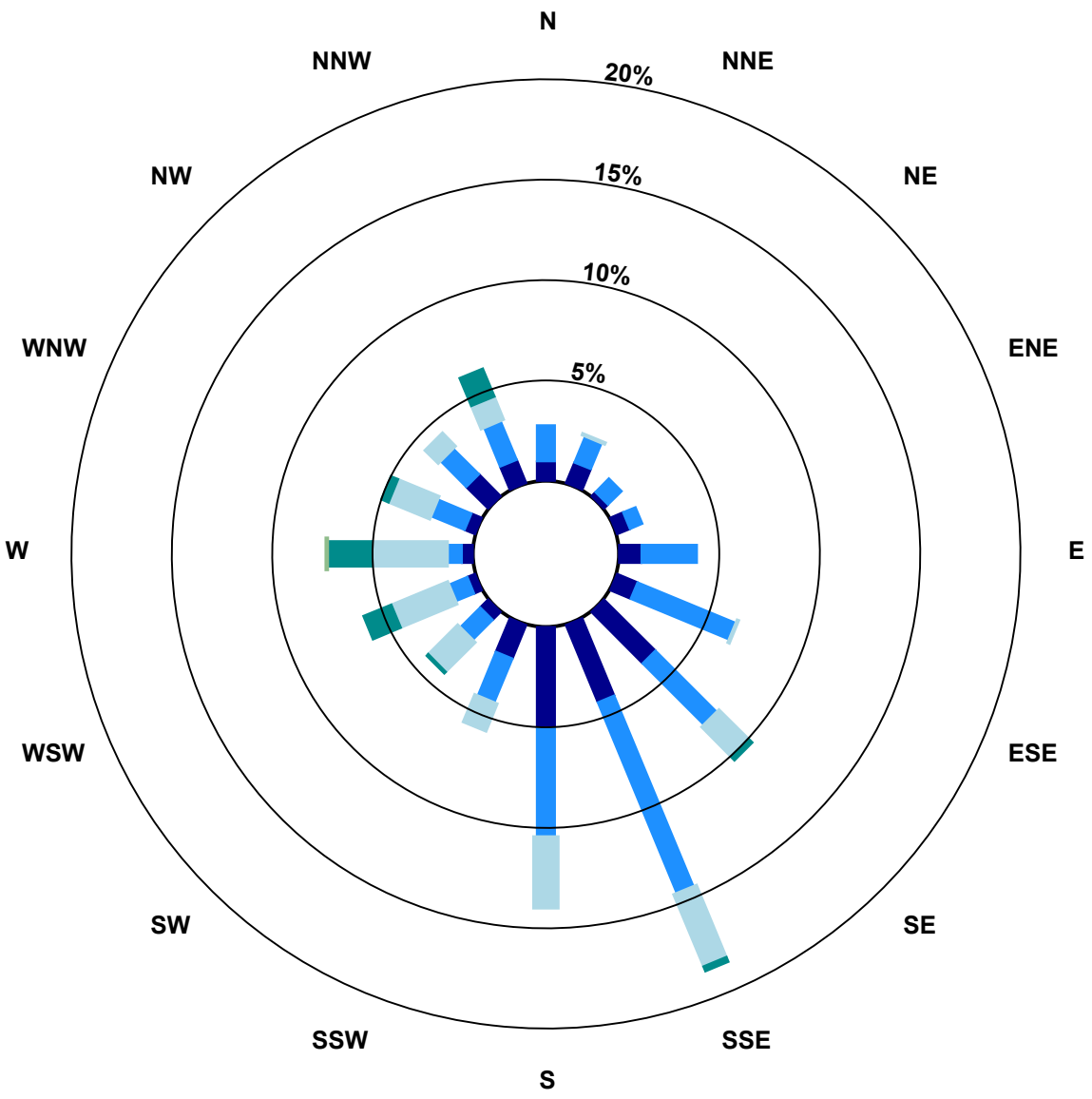
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Sawbones Bay



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 720

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0

Maximum Value: 7 km/h on Sep 27 22:00

Minimum Value: 0 km/h on Sep 4 21:00

Percentiles: $P_1 = 1$ $P_{10} = 1$ $Q_1 = 2$ Median = 2 $Q_3 = 4$ $P_{90} = 5$ $P_{99} = 6$

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	2	1	2	1	2	2	1	1	2	1	2	3	2	2	3	2	2	2	1	1	2	2	1	1	3
2-Sep	1	1	1	1	2	1	1	1	1	2	3	2	2	2	2	2	2	2	1	2	1	2	2	2	3
3-Sep	2	2	3	3	3	4	4	4	4	4	3	4	3	4	4	4	4	6	7	6	5	5	7	5	7
4-Sep	6	5	4	4	3	3	4	4	4	6	6	6	5	5	5	4	4	4	3	2	0	1	1	1	6
5-Sep	2	2	2	1	1	1	1	1	1	3	3	3	4	3	3	4	3	3	2	1	1	1	2	1	4
6-Sep	1	1	2	1	1	2	1	1	2	3	3	3	4	4	4	4	4	4	2	1	1	1	1	2	4
7-Sep	2	1	1	0	1	2	1	2	1	2	2	3	3	2	2	2	2	2	3	1	2	2	2	2	3
8-Sep	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	3	2	2	1	1	1	2	1	2	3
9-Sep	1	1	1	1	1	2	1	1	3	3	3	4	5	5	5	4	5	3	2	1	2	3	3	2	5
10-Sep	3	1	1	1	1	2	1	2	3	3	3	3	3	3	3	3	2	2	1	1	1	1	1	1	3
11-Sep	1	2	2	2	2	2	1	2	2	2	2	3	3	3	2	3	2	1	1	1	1	1	1	1	3
12-Sep	1	2	2	1	1	2	2	2	2	3	3	3	4	3	4	3	4	3	1	1	1	1	1	1	4
13-Sep	1	1	1	1	2	1	2	2	1	1	1	4	4	5	3	4	3	2	2	2	2	2	2	1	5
14-Sep	1	2	2	1	1	2	3	2	2	2	3	2	7	2	2	2	3	2	2	1	1	1	2	2	7
15-Sep	1	1	2	2	1	2	2	2	2	3	4	4	4	4	5	4	4	4	3	2	4	2	1	1	5
16-Sep	1	2	3	3	3	2	2	2	2	2	2	2	3	3	3	2	2	2	1	1	1	1	1	1	3
17-Sep	1	1	1	1	1	1	1	2	4	4	4	4	4	4	4	4	5	4	3	2	2	3	4	4	5
18-Sep	4	4	4	4	3	3	3	3	4	5	5	5	5	5	5	4	4	2	1	2	1	2	2	2	5
19-Sep	1	2	2	2	2	2	2	2	2	1	2	2	3	4	2	3	3	2	2	2	2	2	1	1	4
20-Sep	1	1	1	2	1	2	1	2	2	2	3	4	4	5	4	4	4	2	2	2	3	3	4	3	5
21-Sep	3	2	2	2	2	3	2	1	2	3	3	3	3	3	3	3	2	6	5	5	5	6	3	3	6
22-Sep	3	4	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4	1	1	1	1	1	2	5
23-Sep	2	2	2	1	2	2	2	3	2	5	4	4	5	6	5	5	3	4	3	2	2	6	5	3	6
24-Sep	5	3	3	3	1	3	3	4	3	3	4	4	5	5	5	4	4	3	3	4	4	4	2	2	5
25-Sep	2	2	2	2	1	2	1	1	1	2	6	5	4	4	4	4	4	3	3	1	1	6	3	3	6
26-Sep	3	3	4	3	5	4	4	4	6	5	5	6	6	7	6	6	6	5	4	4	2	2	1	2	7
27-Sep	2	3	3	4	4	6	5	5	6	6	5	6	6	5	5	4	5	4	4	3	3	7	5	5	7
28-Sep	4	3	4	4	4	3	4	4	3	3	3	4	3	3	3	2	2	1	1	1	2	2	2	1	4
29-Sep	2	2	2	2	4	4	4	6	6	6	7	6	7	6	5	5	4	4	3	3	4	3	5	5	7
30-Sep	5	4	3	3	3	3	2	2	2	3	3	3	2	2	1	3	2	3	3	3	2	1	3	2	5
	6	5	4	4	5	6	5	6	6	6	7	6	7	7	6	6	6	6	7	6	5	7	7	5	
	Diurnal Maximum																								

Direction of Maximum Speed: 271 deg on Sep 26 13:00
Direction of Maximum Daily Speed Average: 259.5 deg on Sep 26

Direction of Minimum Speed: 146 deg on Sep 15 01:00

Direction of Minimum Daily Speed Average: 1.3 deg on Sep 7

Monthly Average Direction: 209.8 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	312	306	269	291	304	138	321	332	353	87	204	325	333	342	324	8	360	2	347	343	332	344	360	357	339.6
2-Sep	358	310	342	336	348	4	19	77	53	78	32	152	118	90	127	171	146	107	114	99	104	127	126	148	87.4
3-Sep	157	158	157	156	157	164	168	170	172	176	175	180	192	207	227	243	267	336	345	347	338	334	336	337	244.4
4-Sep	336	340	328	314	299	301	309	321	327	341	337	337	341	327	320	342	328	337	342	346	357	356	5	302	330.1
5-Sep	171	175	166	169	177	169	166	149	143	197	207	254	239	261	210	244	207	209	86	122	138	106	107	97	178.0
6-Sep	140	139	125	133	123	129	104	117	149	144	148	155	175	185	194	188	183	182	185	157	159	157	167	159	160.9
7-Sep	160	158	167	171	172	175	181	167	185	235	219	265	233	183	304	269	274	320	334	331	349	357	353	353	263.0
8-Sep	4	356	318	310	327	319	297	341	16	18	17	19	9	16	20	27	40	21	48	75	91	100	101	108	29.2
9-Sep	102	95	118	118	148	140	109	120	142	157	156	152	146	167	182	188	186	180	142	136	148	156	158	166	152.8
10-Sep	209	175	172	179	185	191	167	191	235	251	242	299	321	293	307	318	299	323	12	29	20	77	80	179	269.1
11-Sep	307	207	277	146	235	160	312	301	18	24	41	63	97	83	92	103	76	100	90	84	103	113	142	160	92.6
12-Sep	142	119	116	129	141	154	151	158	154	155	155	170	182	184	158	126	132	185	135	158	165	161	149	159	151.8
13-Sep	136	125	109	97	104	104	113	126	139	166	284	145	155	179	138	137	140	125	126	110	110	103	112	155	127.4
14-Sep	145	156	154	151	146	150	75	120	171	157	160	138	95	101	85	70	66	54	53	65	94	140	146	33	106.8
15-Sep	146	146	236	207	176	192	193	176	191	226	247	266	272	272	284	288	298	288	287	288	313	317	292	282	272.3
16-Sep	287	278	280	275	277	279	282	276	282	287	290	308	298	304	311	80	116	115	112	112	110	107	97	95	284.8
17-Sep	116	156	170	157	155	153	144	150	155	157	150	157	137	124	125	126	137	144	145	132	139	146	151	156	143.5
18-Sep	160	158	160	160	157	163	162	169	178	180	181	180	172	173	174	190	195	179	165	185	163	155	167	183	171.6
19-Sep	178	141	174	184	192	202	197	225	182	203	258	204	204	244	159	199	201	190	182	165	141	137	157	156	187.9
20-Sep	150	153	160	166	168	143	158	152	160	171	185	170	176	176	175	177	167	151	120	117	137	151	156	147	159.3
21-Sep	149	157	165	171	195	199	177	181	286	345	340	23	18	23	2	343	350	309	304	288	287	293	287	270	301.3
22-Sep	269	252	251	250	252	249	243	247	254	261	243	220	217	216	218	227	218	195	179	171	160	162	161	164	231.4
23-Sep	176	178	179	177	175	190	159	179	202	262	277	269	261	254	278	284	289	270	269	284	226	222	234	266	251.9
24-Sep	254	269	277	203	173	230	201	211	201	205	248	257	272	275	274	285	287	282	268	249	247	243	201	190	253.2
25-Sep	154	177	173	180	172	151	159	155	156	158	182	174	179	168	162	158	145	150	163	161	161	209	270	263	174.4
26-Sep	246	220	227	245	251	252	260	278	276	275	272	264	271	273	273	266	269	265	254	234	205	185	180	178	259.5
27-Sep	179	184	178	234	208	232	241	249	250	262	269	255	256	246	259	219	211	209	225	220	228	269	245	250	240.2
28-Sep	236	211	204	210	217	222	246	251	254	270	248	278	315	334	181	128	92	100	96	100	127	144	132	109	220.7
29-Sep	107	110	106	113	127	128	118	137	139	143	145	146	154	157	154	147	155	149	126	115	126	131	149	149	138.3
30-Sep	151	159	162	150	156	159	168	161	169	185	183	180	175	113	341	340	50	41	47	290	319	344	353	338	149.6
	188.1	184.8	190.4	196.9	197.1	200.6	202.6	206.9	214.3	221.5	228.6	224.0	226.9	228.2	237.7	233.1	228.2	230.5	225.6	164.4	164.4	163.9	173.6	191.7	
	Diurnal Average																								

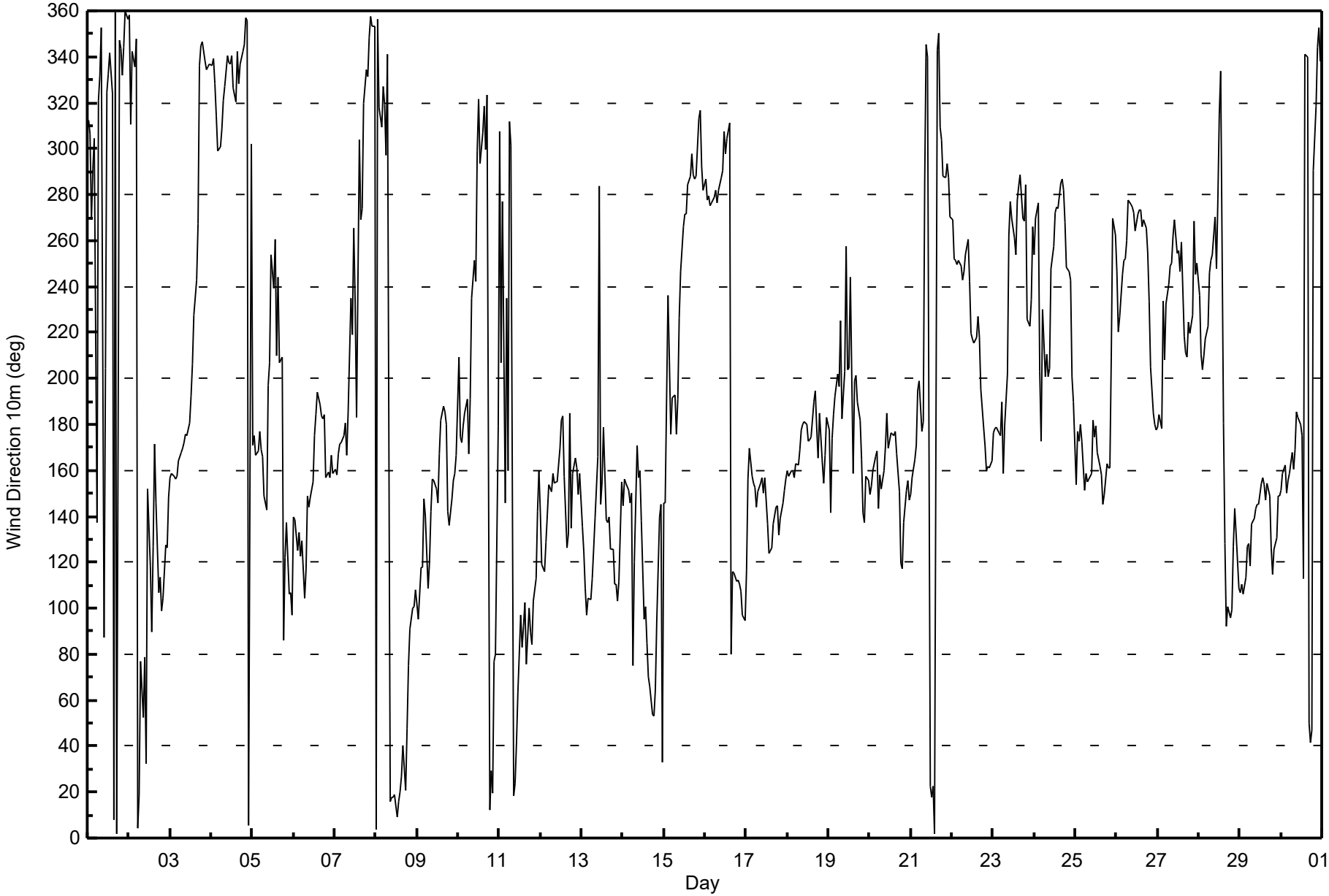
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Sawbones Bay - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Sawbones Bay - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 98 deg on Sep 28 16:00

Minimum Value: 5 deg on Sep 17 00:00

Percentiles: P_1 = 7 P_{10} = 11 Q_1 = 14 Median = 19 Q_3 = 27 P_{90} = 46 P_{99} = 82

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	15	37	61	14	29	44	49	57	30	40	42	23	22	35	31	18	19	15	13	13	10	12	11	13	61
2-Sep	24	15	10	8	20	11	9	50	20	37	73	61	78	70	91	61	79	17	15	15	13	19	20	15	91
3-Sep	16	17	18	18	18	19	21	20	23	26	23	26	24	24	26	24	17	26	18	17	17	17	15	16	26
4-Sep	16	17	16	14	13	13	14	16	15	18	18	20	21	23	17	20	19	18	17	12	16	13	11	47	47
5-Sep	65	33	82	17	17	12	17	17	51	37	59	57	80	52	98	43	38	37	55	15	11	14	21	23	98
6-Sep	8	30	24	11	14	20	12	19	20	24	26	28	34	28	26	26	24	21	16	10	10	14	11	13	34
7-Sep	16	13	8	7	6	24	39	27	42	45	35	34	43	69	41	54	29	88	82	10	12	15	14	15	88
8-Sep	16	16	14	8	13	13	10	28	23	35	26	46	33	60	55	69	47	19	11	9	10	13	13	12	69
9-Sep	9	9	12	13	19	28	11	20	19	21	22	22	23	28	25	22	22	23	17	13	15	17	18	16	28
10-Sep	46	18	15	17	15	24	30	23	37	37	32	26	42	34	38	33	17	26	11	11	13	27	34	71	71
11-Sep	17	63	66	20	61	87	35	55	77	30	36	30	40	38	49	36	17	13	9	8	12	14	13	9	87
12-Sep	11	14	51	12	11	37	41	20	21	20	25	30	42	59	48	64	44	30	12	11	9	8	9	10	64
13-Sep	18	9	10	13	14	12	14	21	31	55	60	21	29	28	21	26	25	15	17	21	17	13	18	6	60
14-Sep	12	15	46	9	11	29	58	25	70	30	32	24	23	17	17	14	13	10	13	9	32	15	64	21	70
15-Sep	57	43	49	36	29	22	22	23	23	26	23	20	18	22	14	17	18	12	11	13	13	11	8	6	57
16-Sep	7	9	9	9	8	9	10	8	10	12	16	28	24	25	36	97	30	27	16	13	12	17	6	5	97
17-Sep	17	9	10	10	9	12	16	17	18	23	22	28	30	25	25	25	20	20	18	16	17	17	18	17	30
18-Sep	20	18	18	19	17	19	19	23	21	21	23	29	23	23	24	23	20	21	12	34	14	16	16	22	34
19-Sep	14	64	58	51	29	62	32	38	46	75	51	53	59	50	43	46	24	17	18	58	73	63	7	7	75
20-Sep	7	9	9	11	15	13	12	19	27	30	23	24	24	27	24	22	20	20	17	14	17	17	17	17	30
21-Sep	17	15	14	15	36	28	25	28	15	28	23	21	25	27	34	33	25	26	13	13	12	15	12	16	36
22-Sep	16	13	11	12	10	11	12	13	14	18	27	21	18	19	21	23	19	20	12	15	8	12	13	14	27
23-Sep	17	18	18	18	17	37	31	37	39	32	13	21	25	25	16	13	13	18	16	19	36	32	18	23	39
24-Sep	27	24	11	30	24	24	22	19	17	18	18	16	15	17	19	22	13	10	18	14	15	30	16	63	63
25-Sep	74	22	31	22	12	18	10	12	15	20	22	23	21	25	21	21	19	18	16	10	13	41	15	18	74
26-Sep	13	35	45	13	11	11	16	13	12	13	15	17	15	16	14	16	15	15	14	23	18	22	14	19	45
27-Sep	18	18	18	39	17	21	17	16	15	17	19	18	21	25	21	38	22	17	23	26	25	22	25	20	39
28-Sep	19	15	17	17	19	20	14	13	14	23	36	64	41	37	50	98	18	13	9	14	23	14	14	14	98
29-Sep	14	17	16	16	19	19	21	20	19	19	19	21	18	18	19	19	18	18	21	18	20	21	18	16	21
30-Sep	16	17	19	15	16	15	13	14	20	23	23	30	28	84	23	34	16	28	47	20	26	17	14	18	84
	74	64	82	51	61	87	58	57	77	75	73	64	80	84	98	98	79	88	82	58	73	63	64	71	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS507
KIRBY SOUTH
SEPTEMBER 2025

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

October 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY SOUTH (AMS 507)
SEPTEMBER 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	687	33	33	100	11.4	0	2.7	0
H2S (ppb) Average	681	38	39	99.86	0.6	0	0.3	0
THC (ppm) Average	687	33	33	100	3.3	-	2.7	-
NO2 (ppb) Average	684	35	36	99.86	6.9	0	2.1	-
NO (ppb) Average	684	35	36	99.86	6.7	-	1.6	-
NOX (ppb) Average	684	35	36	99.86	13.4	-	3.3	-
Temperature 2 m (C) Average	720	0	0	100	26.7	-	20.8	-
Relative Humidity (%) Average	720	0	0	100	98.9	-	84.7	-
Wind Speed 10 m (km/h) Average	720	0	0	100	28	-	19	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY SOUTH(AMS507)
SEPTEMBER 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.6	1.2	-	0	0	0.1	0.3	0.6	1.1	11.4
H2S (ppb) Average	681	0.14	0.1	-	0	0	0.1	0.1	0.2	0.2	0.6
THC (ppm) Average	687	2.38	0.2	-	2.2	2.2	2.3	2.3	2.4	2.6	3.3
NO2 (ppb) Average	684	1.28	0.9	-	0.1	0.3	0.6	1	1.8	2.4	6.9
NO (ppb) Average	684	0.25	0.7	-	0	0	0	0	0.1	0.5	6.7
NOX (ppb) Average	684	1.52	1.4	-	0.1	0.4	0.7	1.1	2	2.8	13.4
Temperature 2 m (C) Average	720	14.31	4.8	-	2.5	8.4	10.7	13.9	17.6	21.3	26.7
Relative Humidity (%) Average	720	62.95	19.3	-	19.7	37.3	47.6	62.7	78.6	89.8	98.9
Wind Speed 10 m (km/h) Average	720	11.3	5	-	1	5	8	11	15	18	28
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY SOUTH (AMS507)
SEPTEMBER 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, NO2	18 Sep 2025 15:00	18 Sep 2025 15:00	1	Maintenance - sample manifold cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Kirby South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11.4 ppb on Sep 27 08:00 Maximum Daily Average: 2.7 ppb on Sep 27

Minimum Value: 0.0 ppb on Sep 1 06:00 Minimum Daily Average: 0.2 ppb on Sep 4
Maximum Diurnal Average: 1.1 ppb at hour 14 Minimum Diurnal Average: 0.2 ppb at hour 18
Monthly Average: 0.60 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 5.8

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	0.0	0.0	Z	0.0	0.0	0.3	0.5	0.8	0.5	0.6	0.6	0.9	1.1	0.5	0.2	0.3	0.7	0.3	0.2	0.8	1.7	1.3	0.7	0.5	1.7
2-Sep	0.4	0.5	0.5	0.3	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.7	1.3	1.4	1.5	0.5	0.1	0.1	0.1	0.3	0.7	0.6	0.5	1.7
3-Sep	1.2	2.5	1.1	0.5	0.4	Z	0.8	0.7	0.4	0.3	0.3	0.3	0.4	0.2	1.5	2.4	0.5	0.3	0.2	0.7	0.2	0.0	0.2	0.0	0.7	2.5
4-Sep	Z	0.5	0.9	0.4	0.2	0.2	0.2	0.3	0.2	0.3	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.2	0.9
5-Sep	0.3	Z	0.1	0.2	0.1	0.2	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.5	0.7	0.6	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.7	0.3	0.7
6-Sep	0.7	0.6	Z	0.8	0.8	0.6	0.6	0.8	0.7	0.6	0.5	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.0	0.8	0.5	1.0
7-Sep	0.5	0.4	0.3	Z	0.2	0.1	0.1	0.1	0.5	0.8	0.3	0.3	0.2	0.4	0.5	0.7	0.4	0.2	0.1	0.1	0.2	0.5	0.9	0.6	0.4	0.9
8-Sep	0.8	0.8	0.6	0.8	Z	0.6	0.3	0.6	0.4	0.2	0.2	0.2	0.2	0.3	3.2	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.5	3.2
9-Sep	0.9	1.2	1.0	1.0	0.7	Z	0.9	0.9	0.9	0.8	0.6	0.5	0.5	0.3	0.3	0.2	0.3	0.2	0.2	0.4	0.8	1.1	1.2	0.9	0.7	1.2
10-Sep	Z	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.3	0.4	0.8	1.0	0.8	0.4	0.6	0.5	0.3	0.3	0.2	0.2	0.4	0.4	0.4	1.0
11-Sep	0.4	Z	0.6	0.9	1.0	0.5	0.4	0.9	1.0	0.7	0.6	0.5	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.5	1.0
12-Sep	0.5	0.5	Z	0.4	0.5	0.7	0.7	0.9	1.1	0.7	0.4	0.3	0.3	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.7	0.4	1.1
13-Sep	0.7	0.9	0.6	Z	0.8	0.8	0.9	0.6	0.5	0.4	0.3	0.4	0.2	0.4	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.7	0.4	0.9
14-Sep	0.4	0.4	0.4	0.5	Z	0.8	0.6	0.3	0.3	0.2	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	0.0	0.2	0.8
15-Sep	0.0	0.0	0.2	0.1	0.0	Z	0.1	0.0	0.0	5.1	4.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	5.1
16-Sep	Z	0.2	0.3	0.1	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.5	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.4	0.2	0.2	0.5
17-Sep	0.7	Z	0.7	0.4	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.4	0.3	0.2	0.1	0.4	0.5	0.5	0.7	0.3	0.7
18-Sep	0.4	0.9	Z	4.1	2.9	1.5	0.9	0.6	0.6	0.5	0.3	0.2	0.3	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.1
19-Sep	0.0	0.0	0.0	Z	1.1	0.2	0.0	0.0	0.5	0.2	0.9	3.0	2.9	0.9	2.7	1.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.0
20-Sep	0.1	0.0	0.2	0.1	Z	0.3	0.2	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.7	0.9	0.6	0.8	0.9	0.3	0.9
21-Sep	0.8	0.8	0.8	0.9	0.9	Z	0.4	0.4	0.4	1.4	1.4	1.5	1.4	0.7	0.7	1.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.5
22-Sep	Z	0.0	0.1	0.7	0.0	0.0	2.1	3.8	11.1	1.2	5.2	4.3	9.8	7.2	5.8	6.1	3.9	0.2	0.2	0.1	0.1	0.1	0.2	0.1	2.7	11.1
23-Sep	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.8	0.2	0.0	0.1	1.8	0.1	1.3	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	1.8
24-Sep	0.0	0.1	Z	0.0	0.1	0.1	0.2	0.1	0.8	0.1	1.4	0.6	0.5	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.2	1.4
25-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.3	0.6	0.1	0.3	0.3	0.4	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.1	0.0	0.2	0.6
26-Sep	0.0	0.6	0.2	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.3	1.8	0.0	0.0	0.0	0.4	3.3
27-Sep	0.0	0.0	0.0	1.1	4.4	Z	4.8	11.4	5.4	1.6	0.4	0.9	5.2	6.7	5.1	5.8	4.0	0.1	0.2	0.6	3.0	1.7	0.2	0.2	2.7	11.4
28-Sep	Z	0.2	0.2	0.2	0.7	3.9	2.3	1.8	0.3	0.1	4.0	4.3	0.4	3.0	1.8	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.6	0.3	1.1	4.3
29-Sep	0.2	Z	0.4	0.3	0.2	0.3	0.6	0.4	0.1	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.4	0.3	0.4	0.7	0.4	0.4	0.5	0.8	0.4	0.8
30-Sep	0.7	0.6	Z	0.9	0.9	0.7	0.8	0.8	0.6	0.7	0.8	1.2	0.7	2.7	2.5	0.9	0.6	0.4	0.3	0.2	0.2	0.1	1.1	0.4	0.8	2.7
	0.4	0.5	0.4	0.6	0.7	0.5	0.6	0.9	1.0	0.6	0.8	0.7	0.9	1.1	1.0	0.9	0.5	0.2	0.2	0.3	0.4	0.3	0.4	0.3	Diurnal Average	
	1.2	2.5	1.1	4.1	4.4	3.9	4.8	11.4	11.1	5.1	5.2	4.3	9.8	7.2	5.8	6.1	4.0	0.7	2.3	3.3	3.0	1.7	1.3	0.9	Diurnal Maximum	

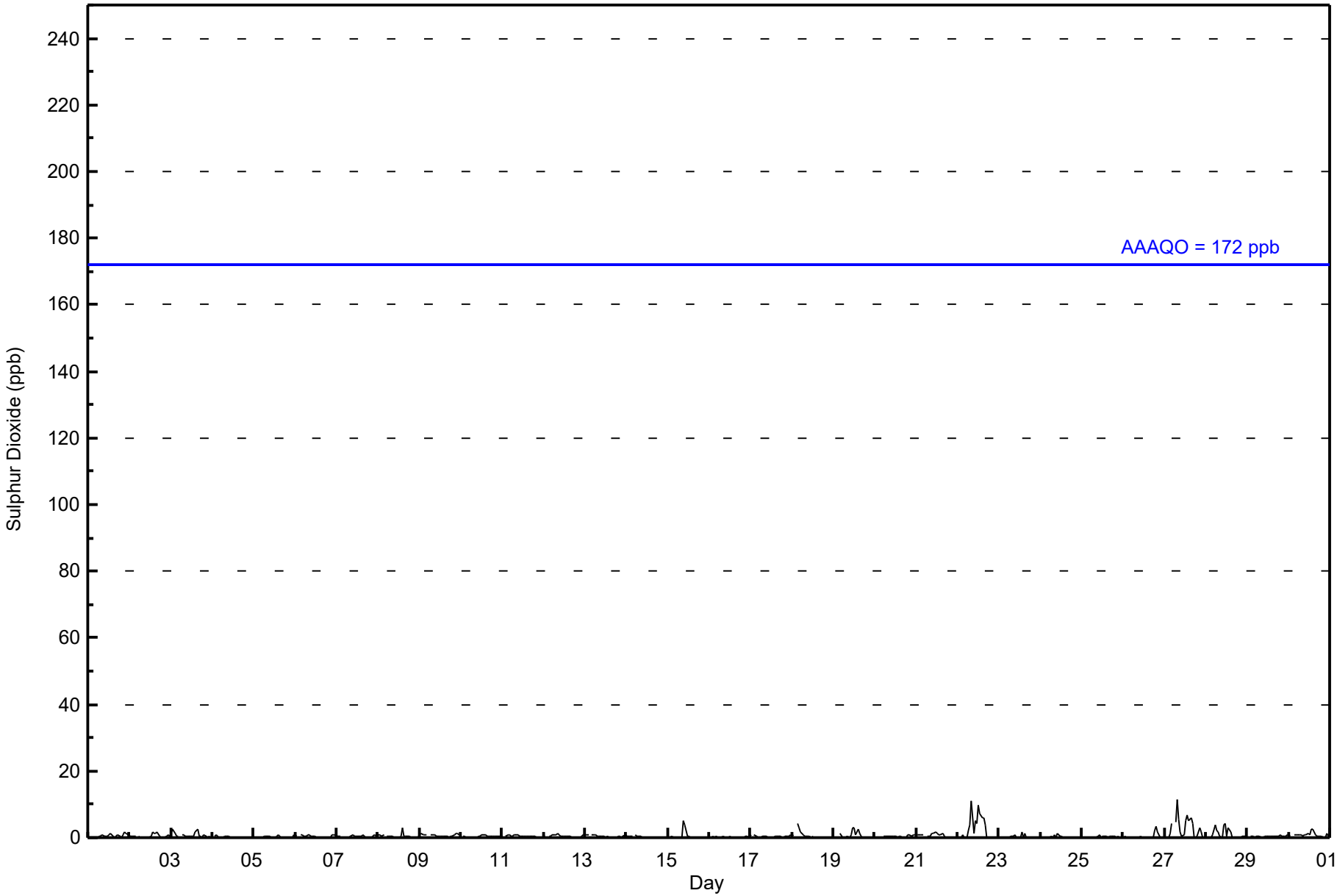
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Kirby South - September 2025



Sulphur Dioxide (SO_2) - ppb
Kirby South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	685	99.71	99.71
11 - 20	2	0.29	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: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Kirby South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	29	26	19	22	14	16	21	93	131	64	36	34	72	53	25	30	685
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	2	0	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	29	26	19	22	14	16	21	93	131	64	36	34	74	53	25	30	687

Total Number of Valid Hours: 687

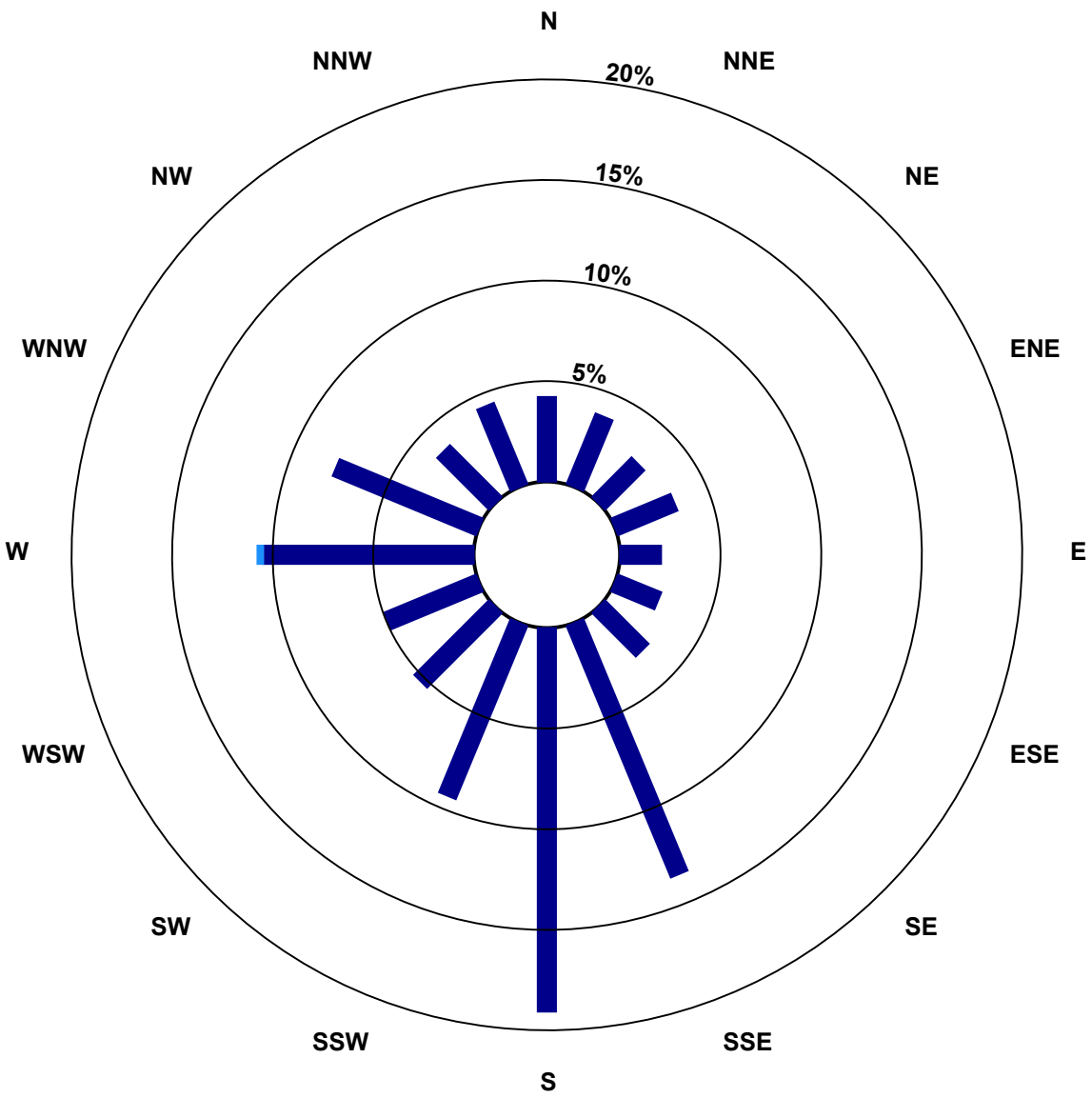
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Sulphur Dioxide (SO_2) - ppb

Kirby South



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

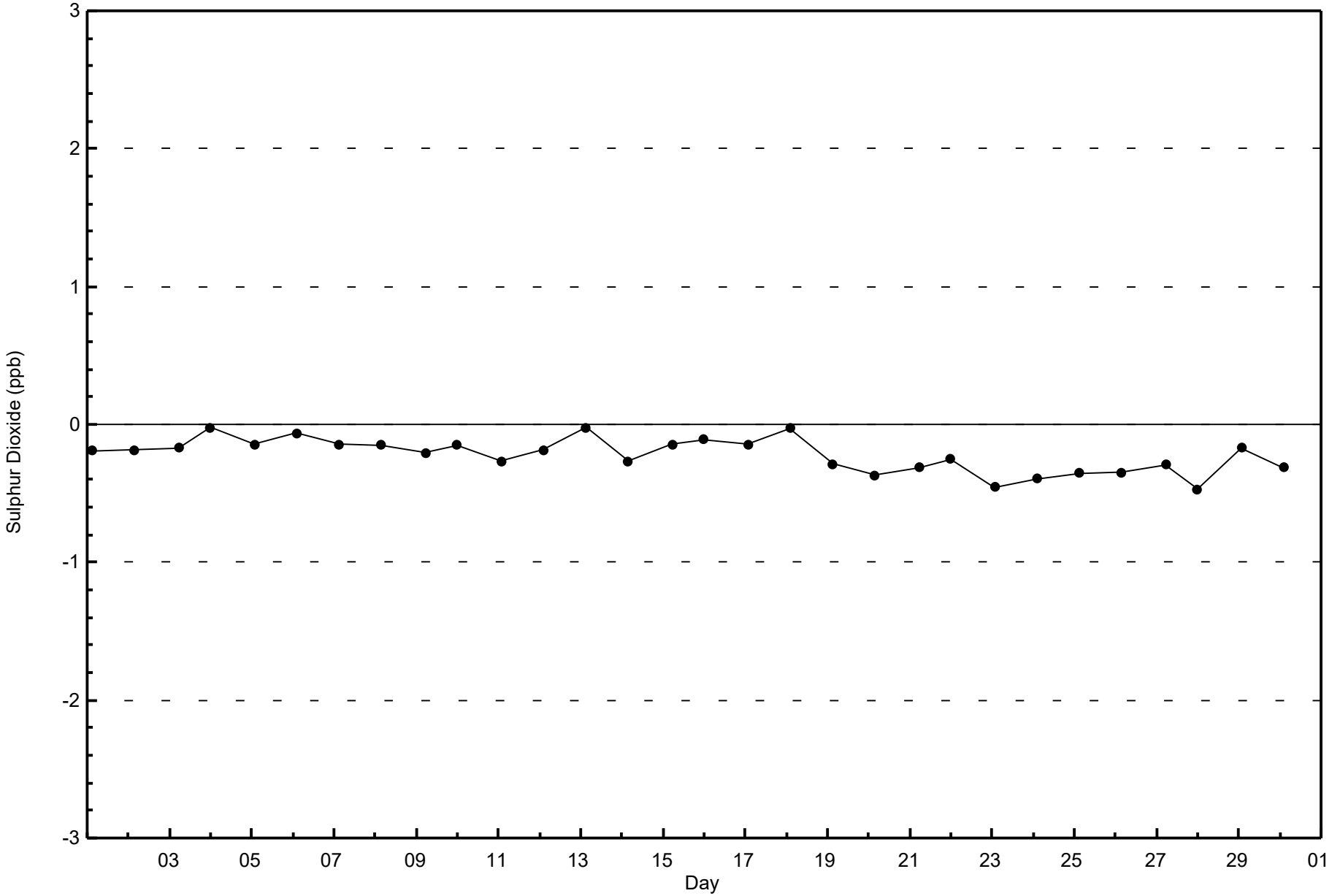
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Kirby South - September 2025

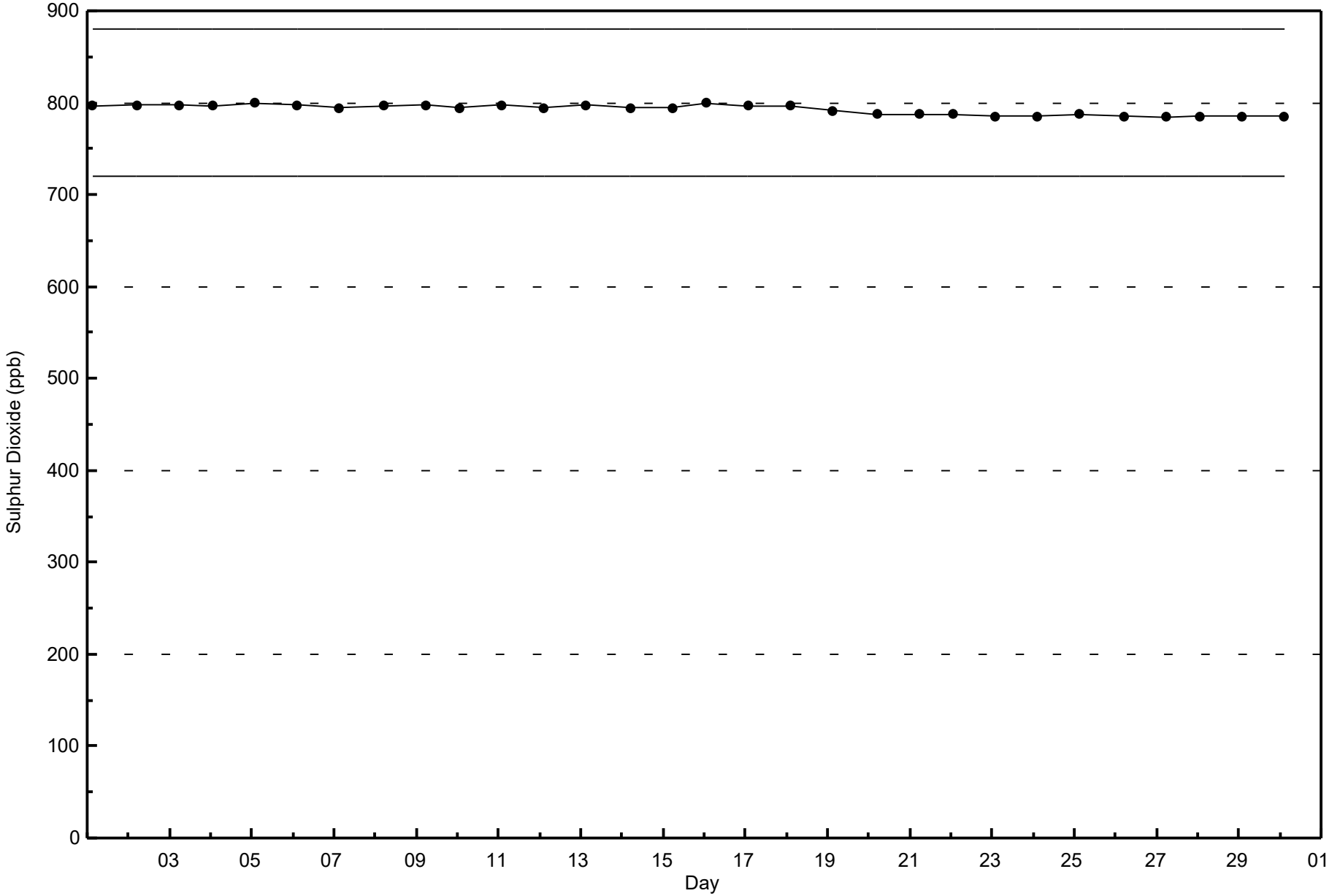


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Sep 11 09:00 Maximum Daily Average: 0.3 ppb on Sep 3

Minimum Value: 0.0 ppb on Sep 24 03:00
Maximum Diurnal Average: 0.2 ppb at hour 7
Monthly Average: 0.14 ppb

Minimum Daily Average: 0.1 ppb on Sep 26
Minimum Diurnal Average: 0.1 ppb at hour 15
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.2 P_{99} = 0.4

Hours in Service:	720
Hours of Data:	681
Hours of Missing Data:	39
Hours of Calibration:	38
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.4	0.3	0.3	0.3	Z	0.3	0.5	0.5	0.4	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	0.5
2-Sep	0.2	0.2	0.3	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.3
3-Sep	Z	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.4
4-Sep	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
5-Sep	0.2	0.2	Z	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	0.2
6-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
7-Sep	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.3
8-Sep	0.3	0.3	0.3	0.4	0.3	Z	0.4	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	0.1	0.1	0.1	0.1	0.2	0.4
9-Sep	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	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2
10-Sep	0.2	Z	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	0.2	0.1	0.2	0.2	0.1	0.2	0.3
11-Sep	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.2	0.6
12-Sep	0.1	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	0.1	0.1	0.1	0.1	0.2
13-Sep	0.1	0.1	0.1	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	0.1	0.0	0.0	0.1	0.1	0.1	0.2
14-Sep	0.1	0.1	0.1	0.1	0.2	Z	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.3
15-Sep	Z	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
16-Sep	0.1	Z	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	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
17-Sep	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	0.1	0.1	0.2	0.2	0.2
18-Sep	0.2	0.2	0.2	Z	0.4	0.3	C	C	C	C	C	C	C	C	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	--	0.4
19-Sep	0.1	0.1	0.2	0.2	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	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.3
20-Sep	0.0	0.0	0.1	0.2	0.2	Z	0.3	0.3	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	0.4
21-Sep	Z	0.2	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	0.2	0.2	0.2	0.1	0.2	0.4
22-Sep	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
23-Sep	0.1	0.1	Z	0.2	0.2	0.2	0.2	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	0.0	0.0	0.0	0.0	0.1	0.2
24-Sep	0.0	0.0	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	0.1	0.1	0.2	0.1	0.1	0.2
25-Sep	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	0.0	0.1	0.1
26-Sep	0.0	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
27-Sep	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Sep	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	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.2
29-Sep	0.0	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
30-Sep	0.1	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
	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	Diurnal Maximum	

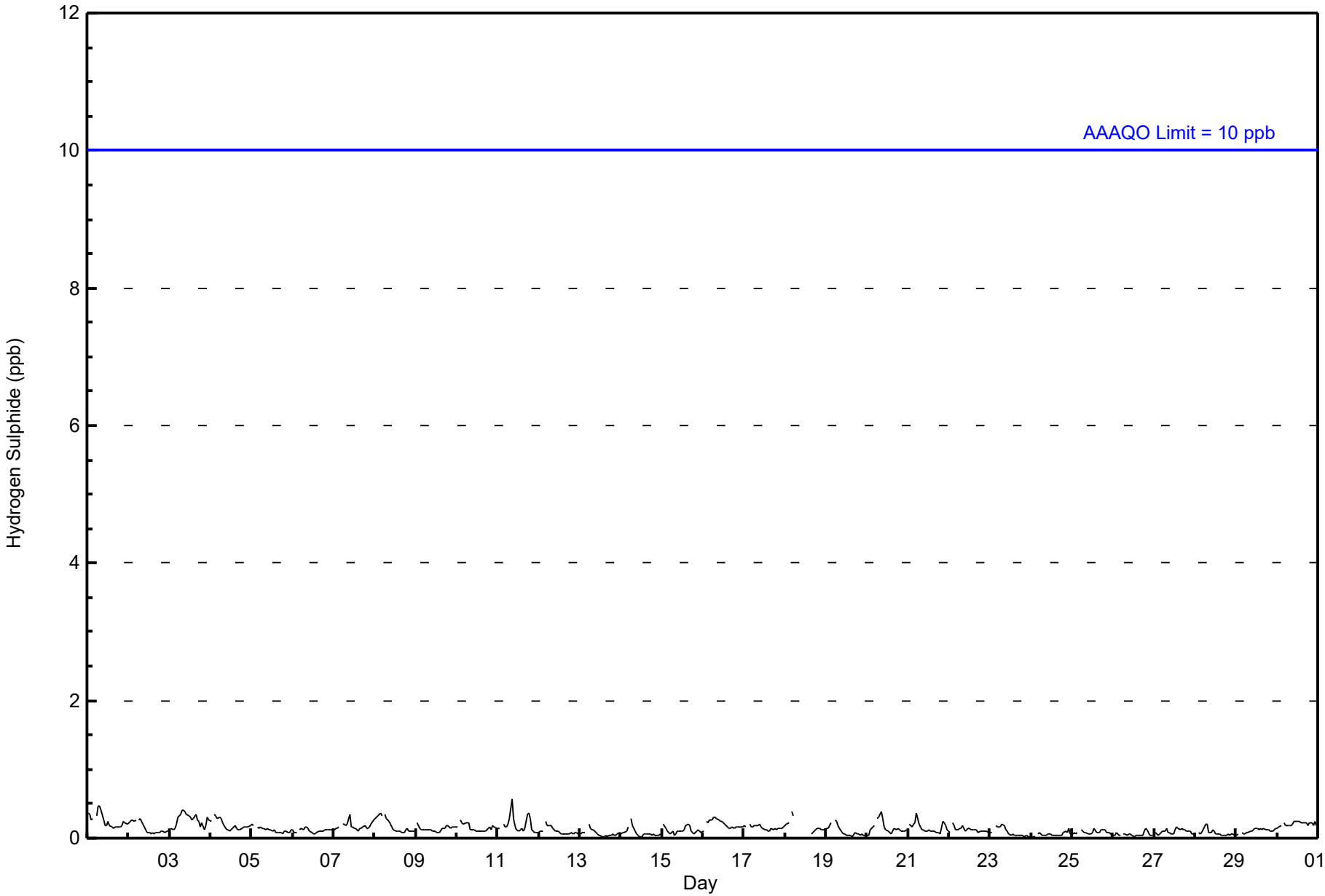
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby South - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	681	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: 681

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Kirby South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	28	27	18	23	14	17	19	92	127	60	37	35	75	52	27	30	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	28	27	18	23	14	17	19	92	127	60	37	35	75	52	27	30	681

Total Number of Valid Hours: 681

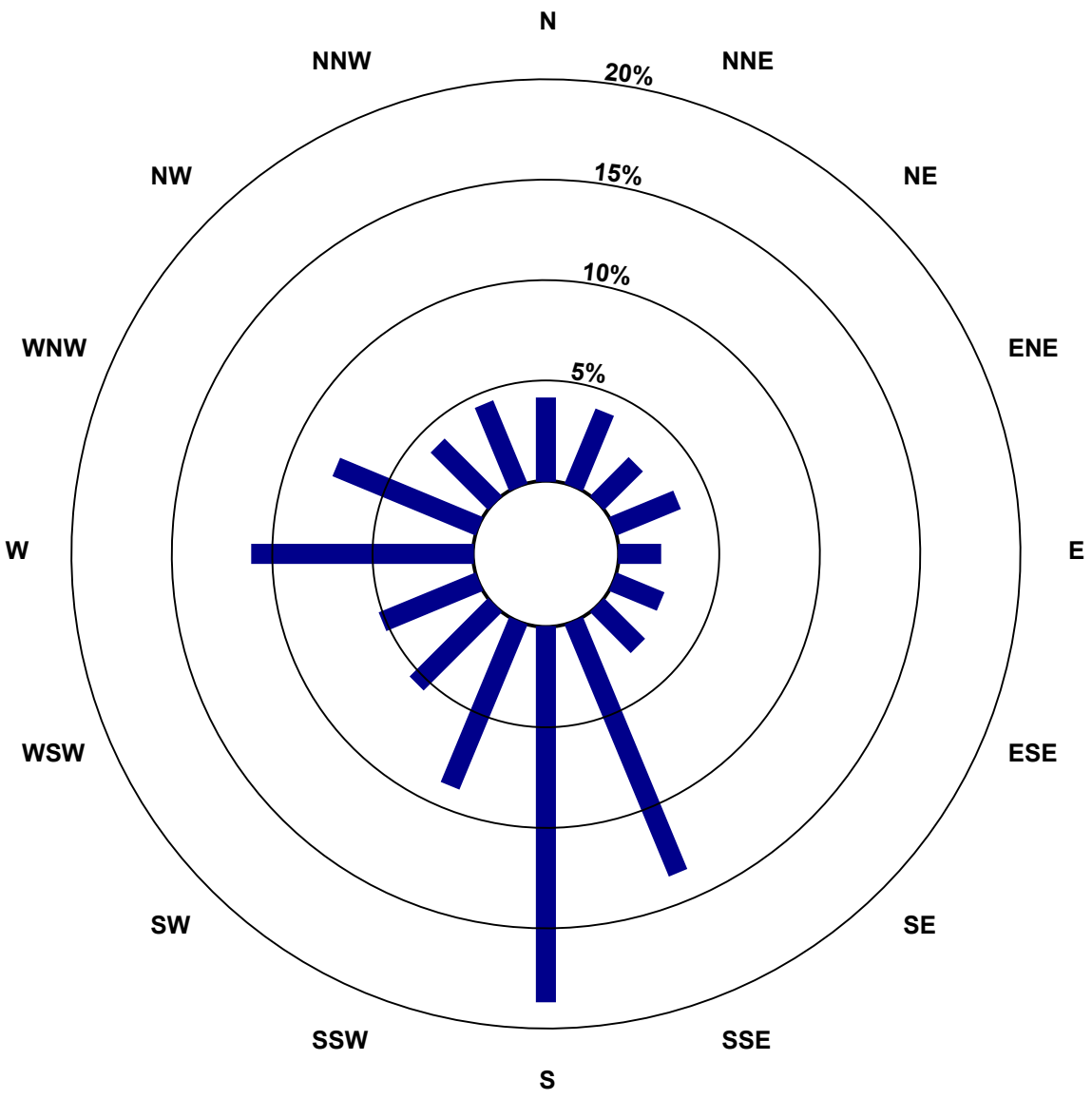
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Hydrogen Sulphide (H_2S) - ppb

Kirby South



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

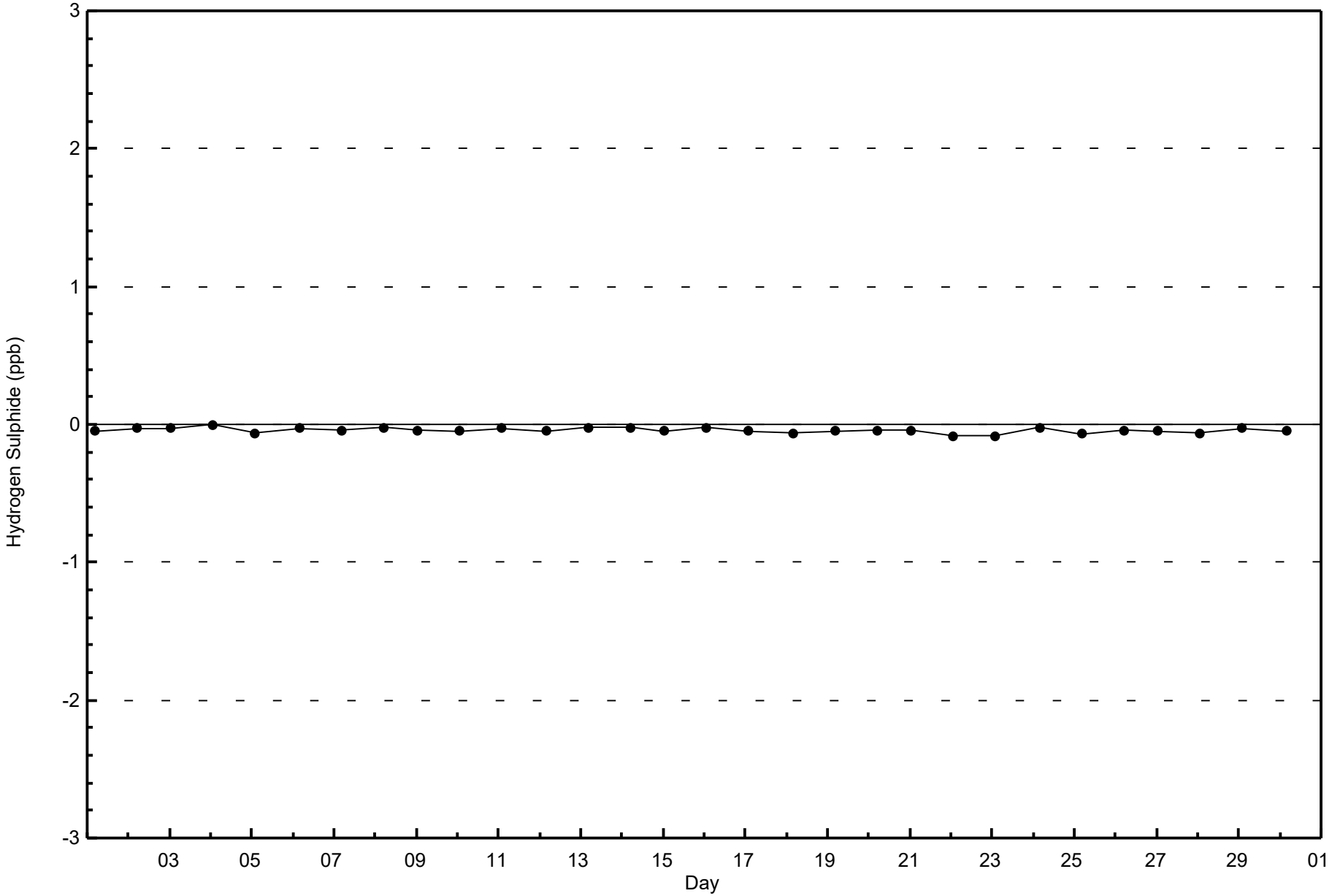
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby South - September 2025

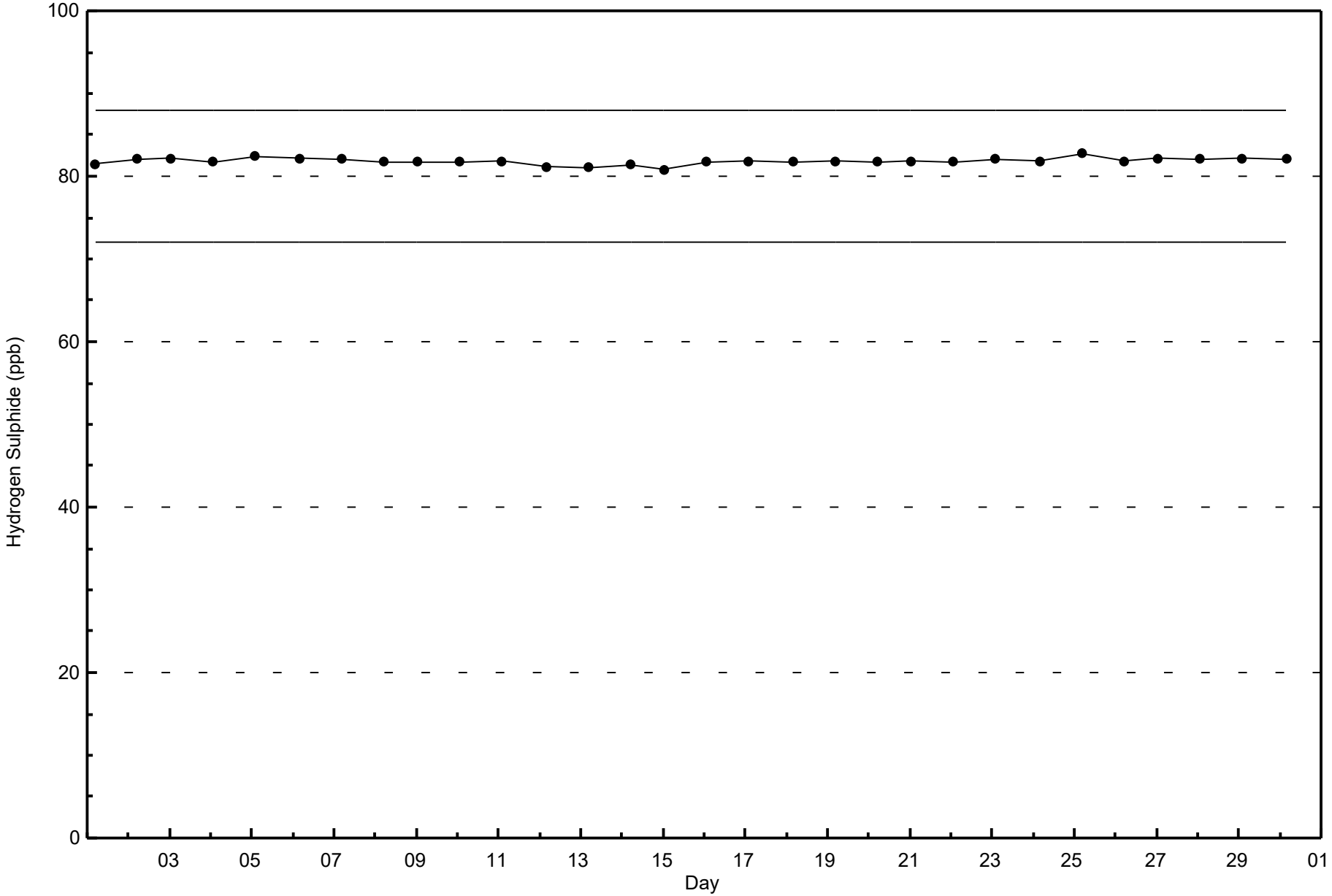


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025

Maximum Value: 3.3 ppm on Sep 11 07:00

Maximum Daily Average: 2.7 ppm on Sep 1

Minimum Value: 2.2 ppm on Sep 28 08:00

Minimum Daily Average: 2.2 ppm on Sep 22

Maximum Diurnal Average: 2.5 ppm at hour 20

Minimum Diurnal Average: 2.3 ppm at hour 13

Monthly Average: 2.38 ppm

Percentiles: P_1 = 2.2 P_{10} = 2.2 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.6 P_{99} = 2.9

Hours in Service:	720
Hours of Data:	687
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	2.7	3.0	2.7	Z	2.9	2.8	2.8	2.7	2.6	2.5	2.5	2.5	2.6	2.6	2.5	2.5	2.5	2.6	2.7	2.8	2.7	2.7	2.7	2.7	2.7	3.0
2-Sep	2.8	2.7	2.8	2.7	Z	3.0	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.7	2.5	2.4	2.4	2.4	2.5	3.0
3-Sep	2.4	2.4	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.5	2.5	2.4	2.5
4-Sep	Z	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.7	2.8	2.8	2.9	2.8	2.5	2.9
5-Sep	2.5	Z	2.7	2.6	2.5	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.6	2.4	2.4	2.4	2.4	2.4	2.7
6-Sep	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	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	2.4	2.4
7-Sep	2.4	2.4	2.4	Z	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.6	2.6	2.5	2.7
8-Sep	2.6	2.6	2.7	2.8	Z	2.6	2.9	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.6	2.4	2.4	2.4	2.5	2.5	2.9
9-Sep	2.5	2.4	2.4	2.4	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.4	2.3	2.5
10-Sep	Z	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.4	2.6	2.9	2.8	3.2	3.0	2.8	2.5	3.2
11-Sep	2.8	Z	2.6	2.6	2.7	3.1	3.3	2.7	2.8	2.5	2.4	2.4	2.3	2.3	2.3	2.4	2.5	2.6	2.7	2.7	2.3	2.3	2.3	2.3	2.6	3.3
12-Sep	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
13-Sep	2.3	2.3	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	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
14-Sep	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4
15-Sep	2.5	2.4	2.6	2.5	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.5	2.6	2.5	2.4	2.6
16-Sep	Z	2.5	2.5	2.5	2.5	2.6	2.6	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.6
17-Sep	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	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	2.4
18-Sep	2.3	2.3	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	C	C	C	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
19-Sep	2.3	2.3	2.3	Z	2.4	2.4	2.6	2.6	2.4	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	2.6
20-Sep	2.2	2.3	2.3	2.3	Z	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	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.4
21-Sep	2.2	2.2	2.3	2.3	2.4	Z	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.5
22-Sep	Z	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	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3
23-Sep	2.3	Z	2.3	2.3	2.3	2.4	2.5	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.5
24-Sep	2.3	2.4	Z	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.6	2.6	2.5	2.4	2.6
25-Sep	2.4	2.3	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.9	2.4	2.4	2.4	2.4	2.4	2.9
26-Sep	2.3	2.3	2.3	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	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.4
27-Sep	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	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
28-Sep	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
29-Sep	2.4	Z	2.4	2.4	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	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.4
30-Sep	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.5	2.4	2.5	2.6	2.6	2.6	2.5	2.6	2.5	2.4	2.6
	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.4	2.4	2.4	Diurnal Average	
	2.8	3.0	2.8	2.8	2.9	3.1	3.3	2.7	2.8	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.6	2.7	2.9	2.8	3.2	3.0	2.8	Diurnal Maximum	

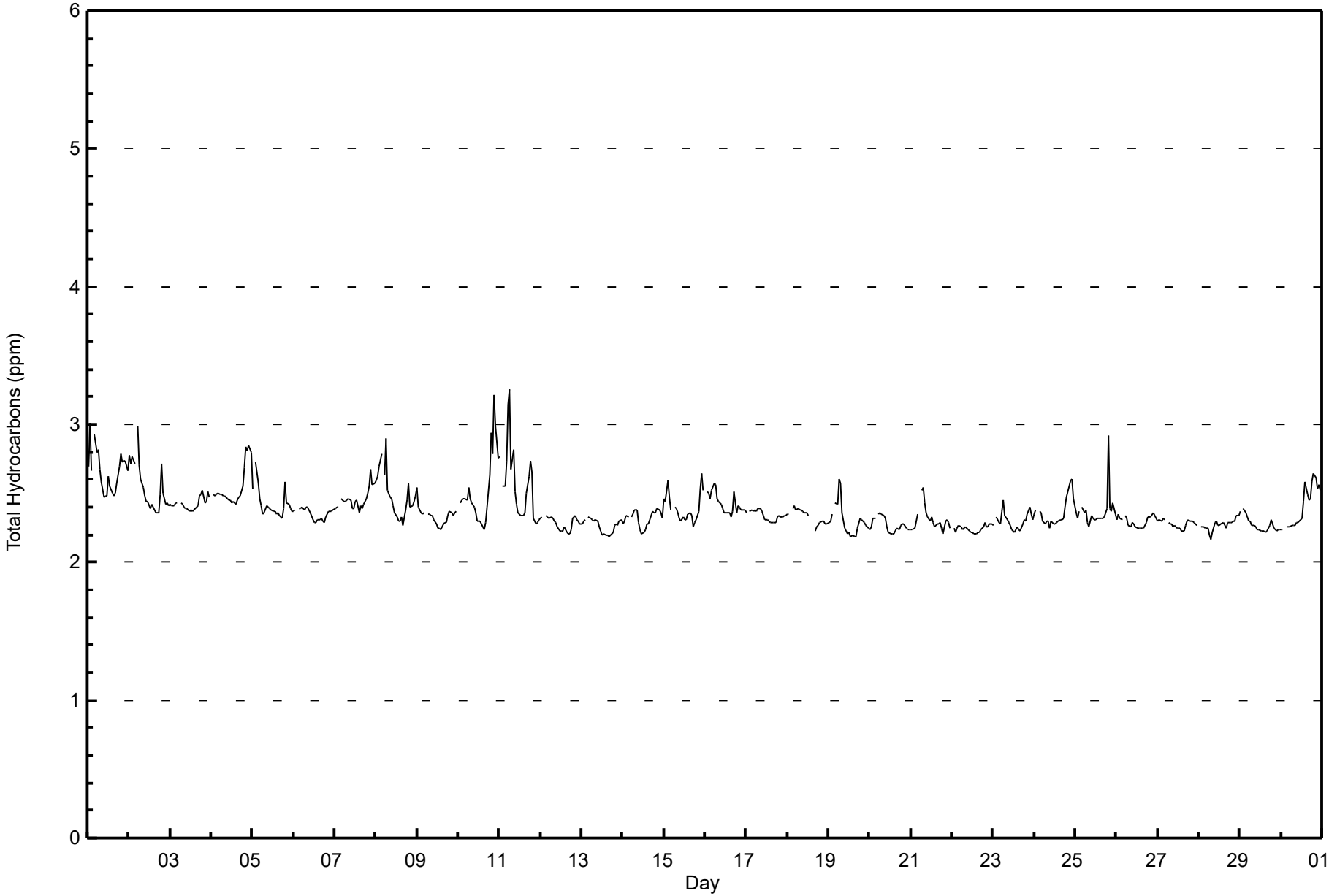
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	684	99.56	99.56
3.1 - 10.0	3	0.44	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	28	24	19	22	14	16	21	93	131	64	36	34	74	53	25	30	684
3.1 - 10.0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	26	19	22	14	16	21	93	131	64	36	34	74	53	25	30	687

Total Number of Valid Hours: 687

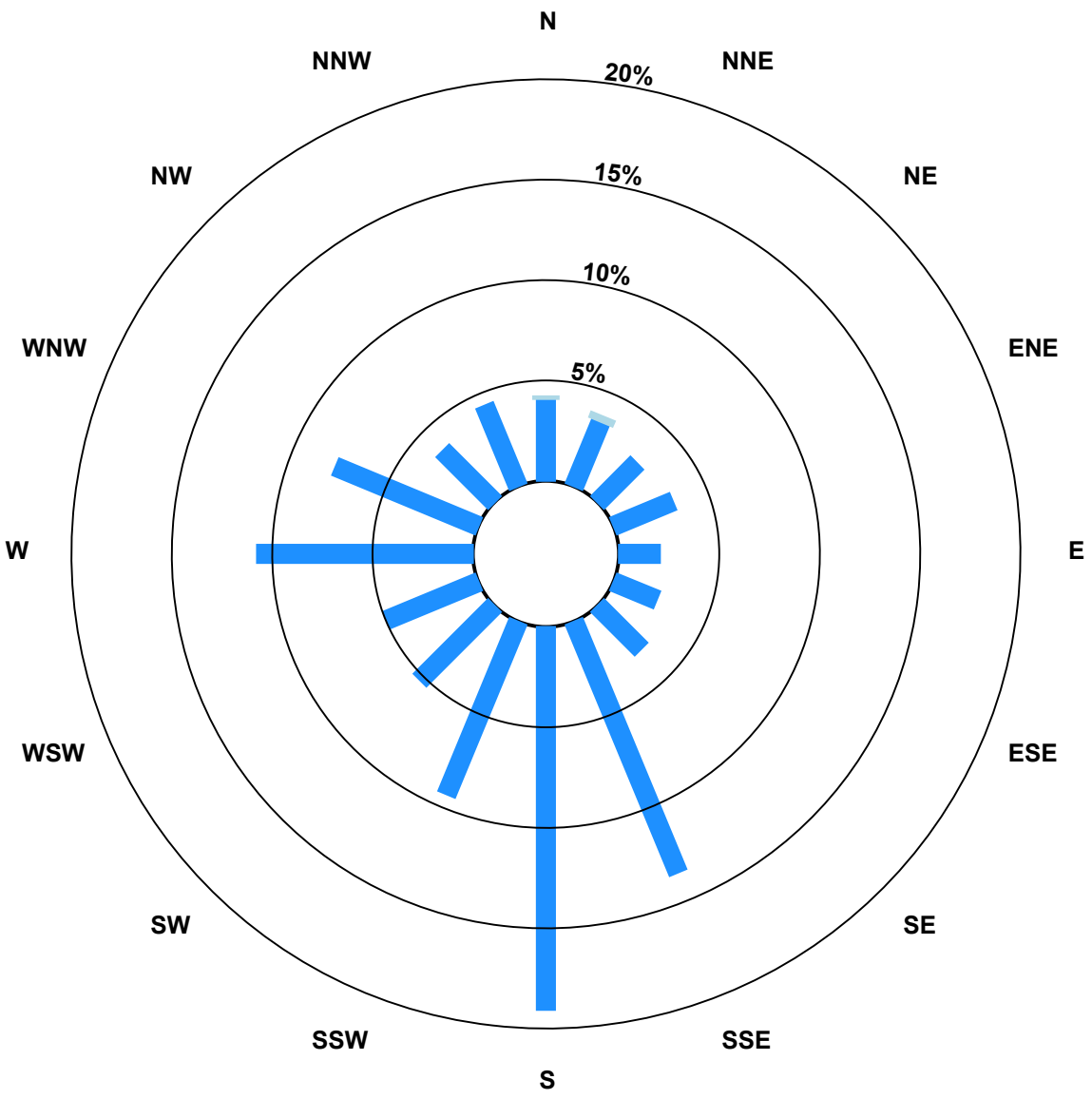
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Total Hydrocarbons (THC) - ppm

Kirby South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

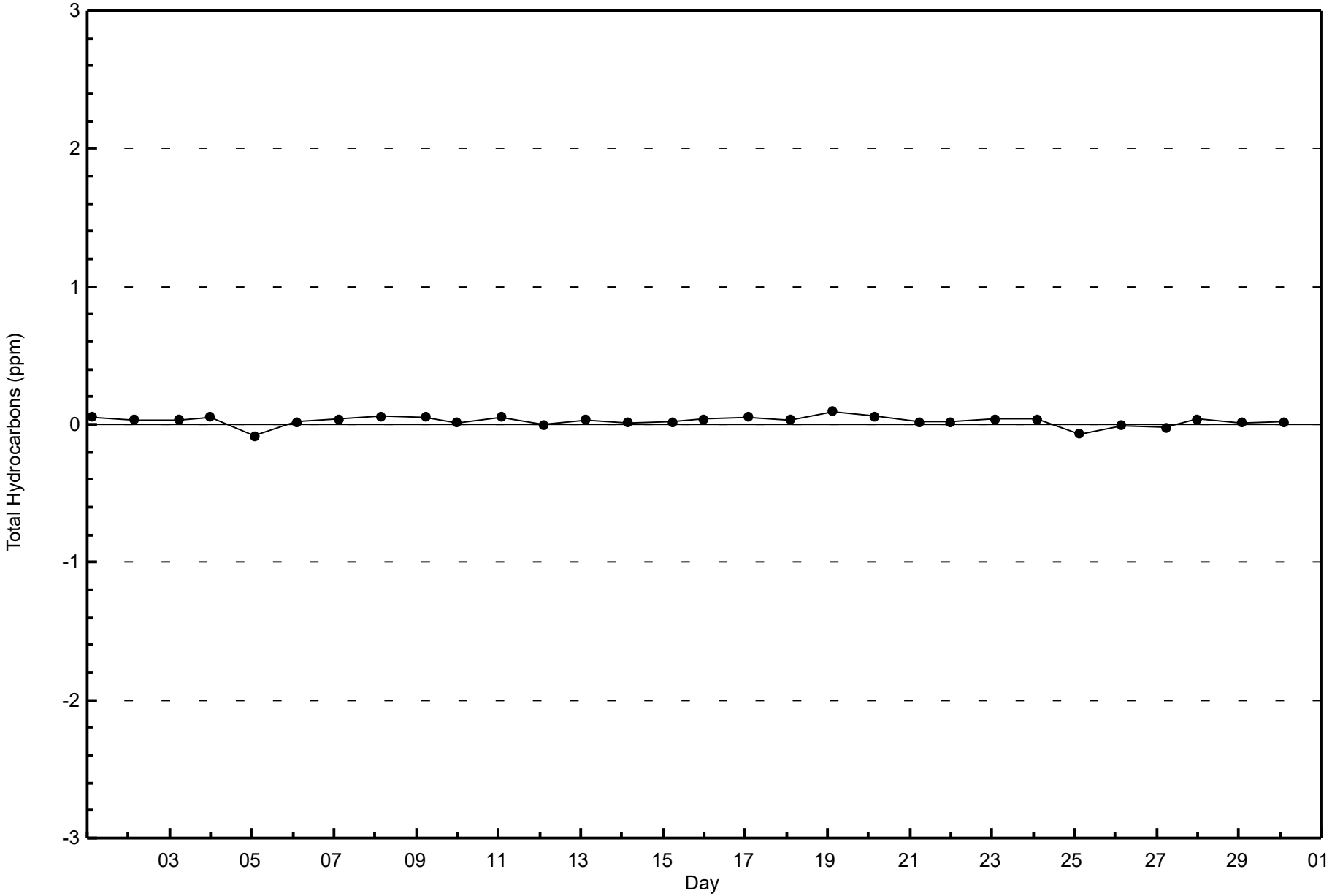
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025

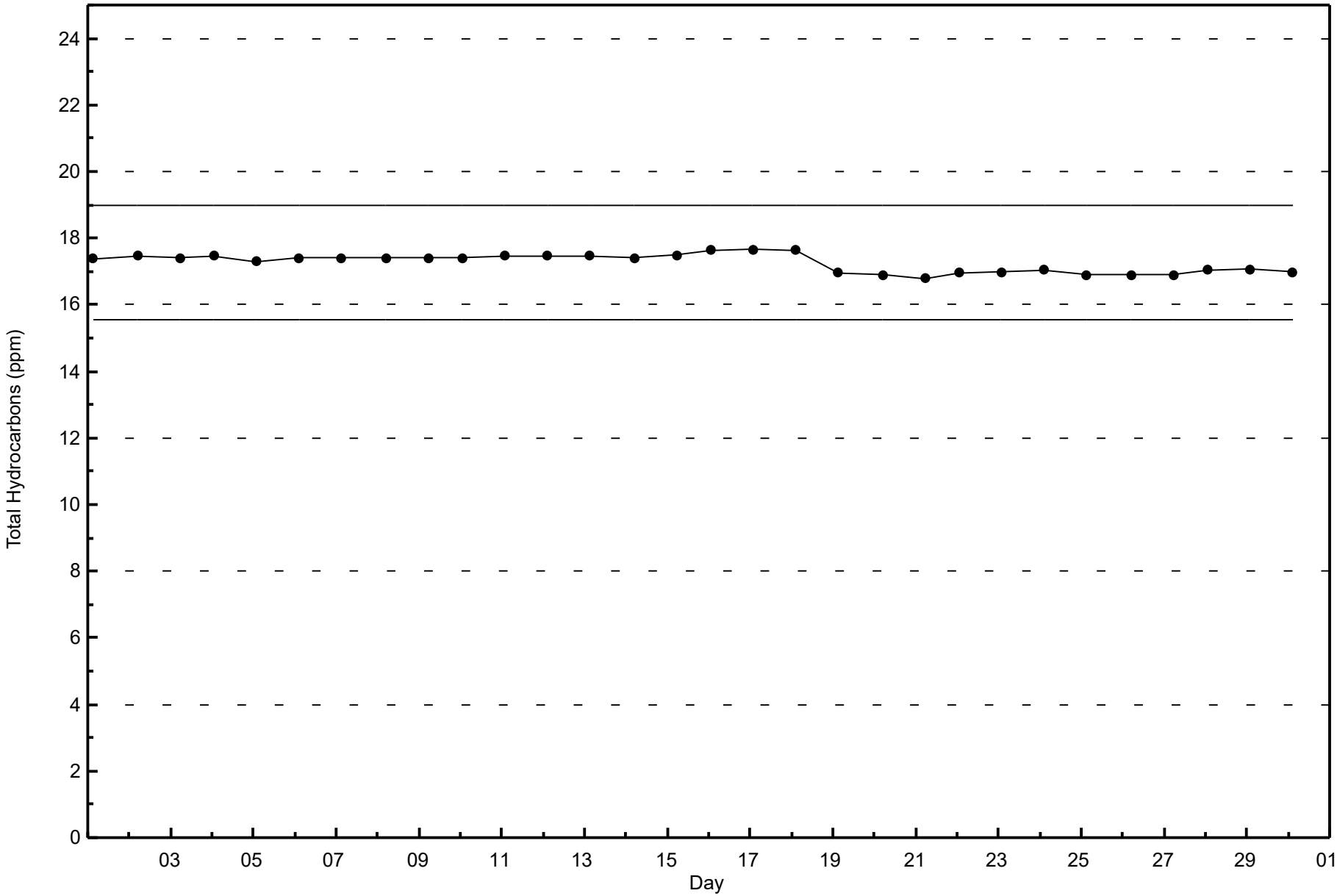


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Kirby South - September 2025

Maximum Value: 6.7 ppb on Sep 22 09:00

Maximum Daily Average: 1.6 ppb on Sep 22

Minimum Value: 0.0 ppb on Sep 2 18:00

Minimum Daily Average: 0.0 ppb on Sep 14

Maximum Diurnal Average: 0.6 ppb at hour 14

Minimum Diurnal Average: 0.0 ppb at hour 18

Monthly Average: 0.25 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} = 3.7

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	0.1	Z	0.1	2.1	0.1	0.1	0.2	0.5	1.4	0.6	0.2	0.4	1.1	0.6	0.3	0.1	0.1	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.4	2.1
2-Sep	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	0.4	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
3-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
4-Sep	0.0	0.0	0.0	0.0	Z	0.0	1.0	1.5	1.5	1.2	1.2	1.2	2.5	5.2	6.5	2.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	1.1	6.5
5-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.2	0.1	0.1	0.2	0.6	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
6-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.6	0.6	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	0.1	0.6
7-Sep	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	1.0	0.5	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	1.0
8-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.6	0.5	0.4	0.1	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
9-Sep	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
10-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	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	0.2
11-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.1	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
12-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	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	0.4
13-Sep	0.0	Z	0.0	0.0	0.0	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	0.2
14-Sep	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
15-Sep	0.0	0.0	0.1	Z	0.0	0.0	0.2	0.1	0.3	3.7	1.9	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	0.3	3.7
16-Sep	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	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	0.2
17-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.5	0.6	0.4	0.1	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
18-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
19-Sep	0.0	Z	0.1	0.1	0.1	0.1	0.3	0.5	0.6	0.1	0.5	0.8	1.0	0.3	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
20-Sep	0.0	0.0	Z	0.0	0.0	0.0	0.1	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	0.0	0.0	0.0	0.3
21-Sep	0.0	0.0	0.0	Z	0.0	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
22-Sep	0.0	0.1	0.2	0.5	Z	0.0	1.2	2.6	6.7	0.8	3.4	3.0	5.5	4.4	2.9	2.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	6.7
23-Sep	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.3	0.4	0.1	0.0	0.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0
24-Sep	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.1	1.1	0.5	0.6	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.1
25-Sep	0.0	Z	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
26-Sep	0.0	0.2	Z	0.0	0.0	0.1	0.2	0.3	0.3	1.0	1.4	0.9	0.1	0.1	0.0	0.0	0.0	0.0	0.8	1.5	0.7	0.0	0.0	0.0	0.3	1.5
27-Sep	0.0	0.0	0.0	Z	1.6	2.1	2.0	6.5	2.9	1.2	0.3	0.5	3.2	4.1	2.7	2.8	1.3	0.0	0.0	0.1	0.7	0.6	0.0	0.0	1.4	6.5
28-Sep	0.3	0.0	0.0	0.0	Z	1.2	0.8	0.7	0.1	0.0	2.6	1.9	0.2	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.6
29-Sep	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
30-Sep	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4
	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.6	0.6	0.5	0.5	0.4	0.6	0.6	0.6	0.4	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	Diurnal Average	
	0.3	0.2	0.2	2.1	1.6	2.1	2.0	6.5	6.7	3.7	3.4	3.0	5.5	5.2	6.5	2.9	1.8	0.1	0.8	1.5	0.7	0.6	0.1	0.1	Diurnal Maximum	

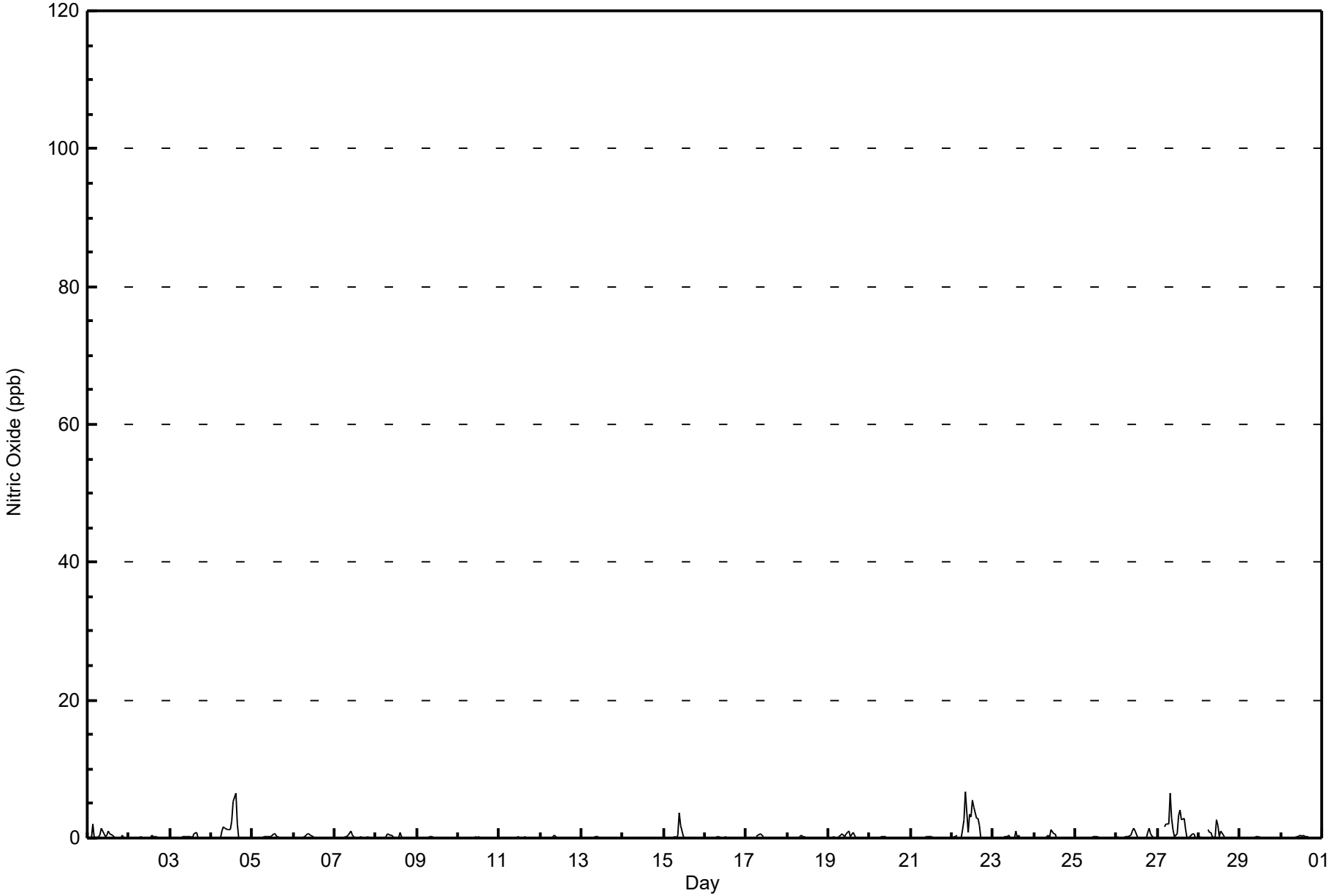
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Kirby South - September 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Kirby South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684
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	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684

Total Number of Valid Hours: 684

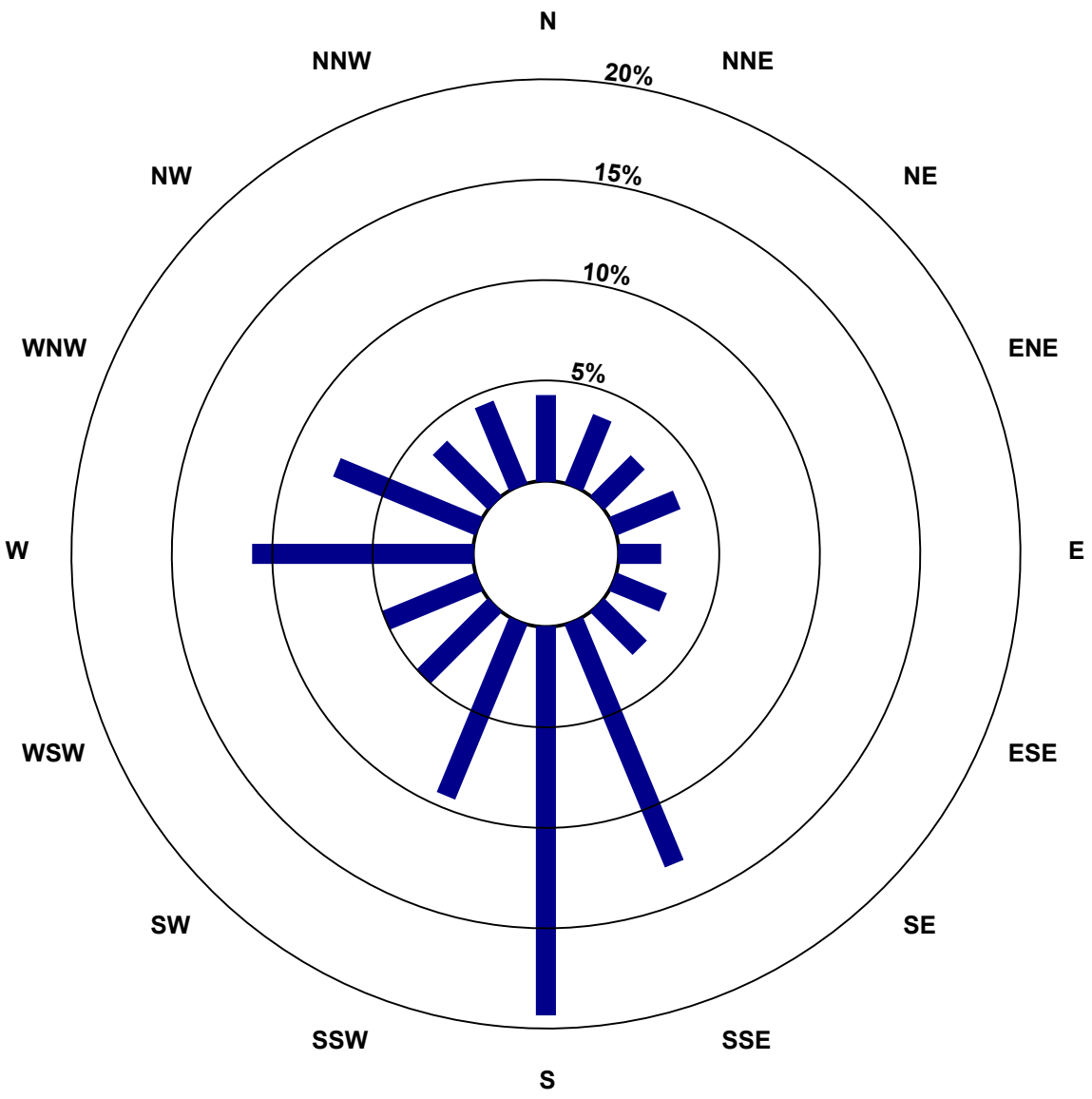
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitric Oxide (NO) - ppb

Kirby South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

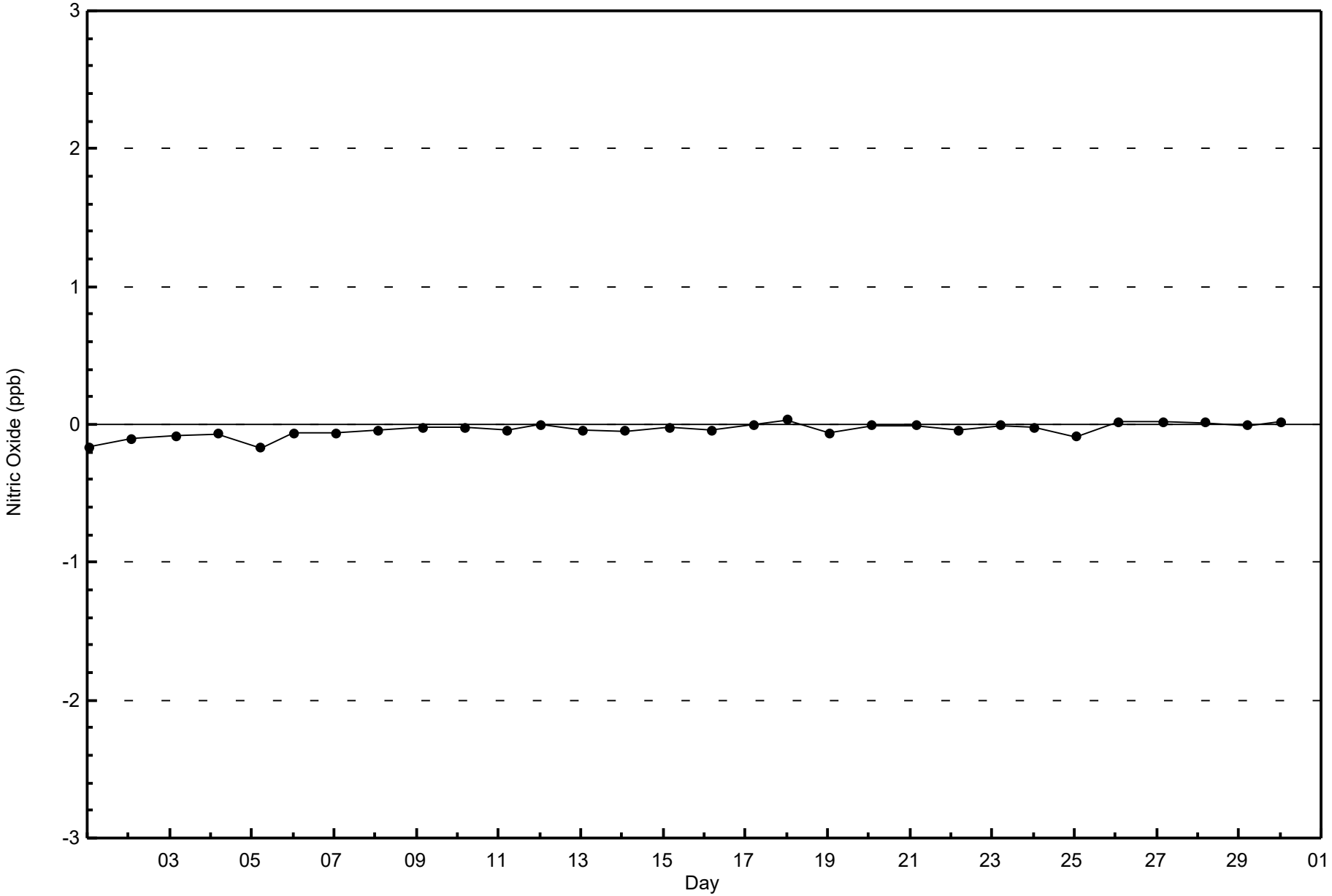
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Kirby South - September 2025

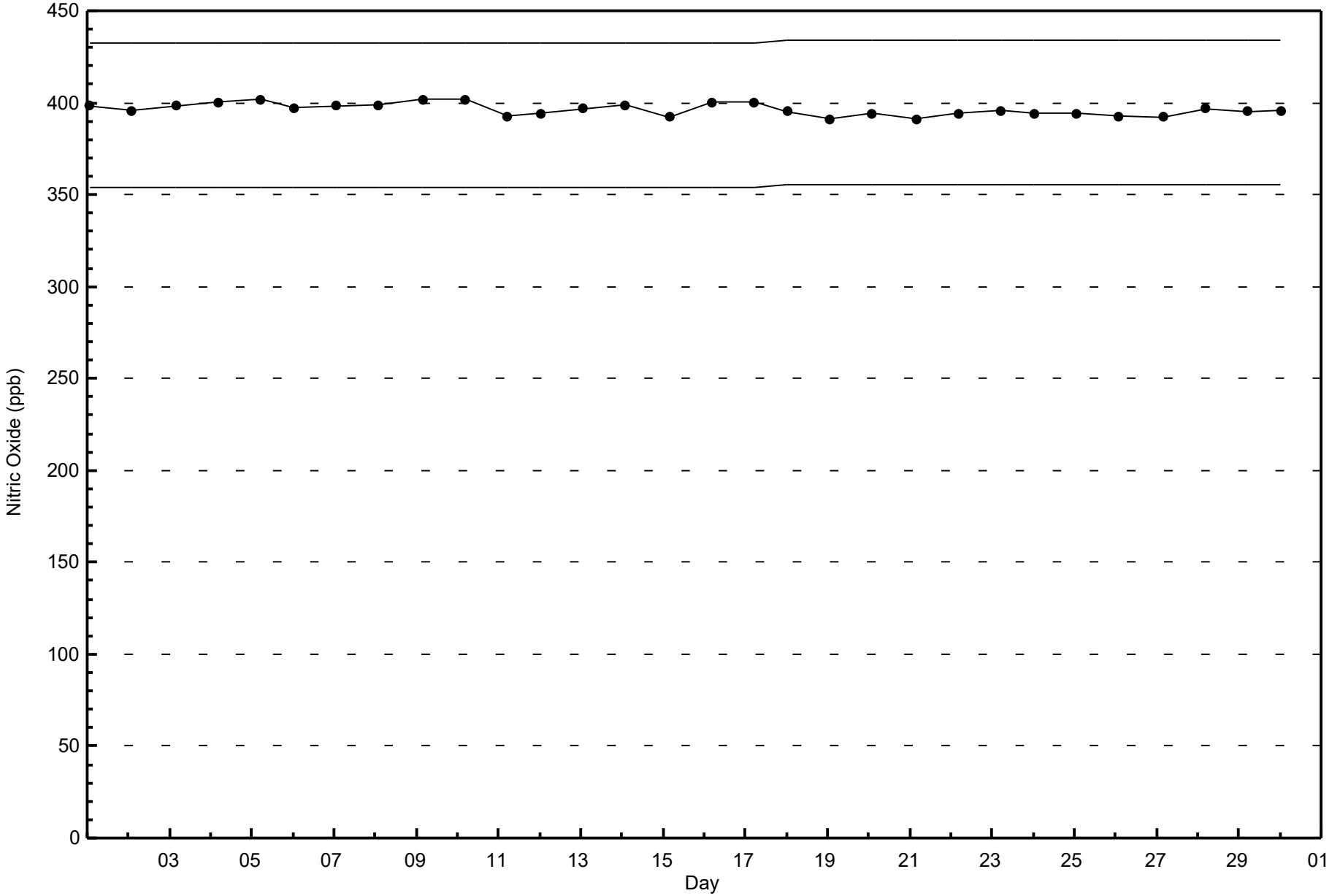


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.9 ppb on Sep 27 08:00 Maximum Daily Average: 2.1 ppb on Sep 7

Minimum Value: 0.1 ppb on Sep 28 18:00 Minimum Daily Average: 0.6 ppb on Sep 24
Maximum Diurnal Average: 1.8 ppb at hour 6 Minimum Diurnal Average: 0.7 ppb at hour 18
Monthly Average: 1.28 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.6 Median = 1.0 Q_3 = 1.8 P_{90} = 2.4 P_{99} = 4.1

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.4	Z	1.0	1.7	1.3	1.3	1.8	2.8	3.0	1.6	1.9	2.5	3.6	1.8	1.2	0.9	1.0	1.1	0.9	0.9	2.1	2.5	2.7	2.4	1.8	3.6
2-Sep	2.1	2.2	Z	1.9	1.8	1.5	1.2	1.5	1.1	1.0	0.8	0.7	0.8	1.6	1.7	1.7	1.6	1.0	0.5	0.5	0.5	1.2	1.9	2.0	1.3	2.2
3-Sep	3.4	5.0	2.8	Z	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.7	1.8	1.7	2.7	3.5	2.1	1.5	1.2	2.4	1.2	1.0	1.6	1.4	2.0	5.0
4-Sep	1.2	1.5	1.3	0.7	Z	0.6	1.1	1.4	1.4	0.9	0.8	1.4	1.1	1.8	2.8	0.8	0.3	0.3	0.3	0.3	0.2	0.4	1.2	1.1	1.0	2.8
5-Sep	1.2	1.1	0.7	0.4	0.3	Z	0.9	1.1	0.6	0.6	0.4	0.5	0.6	0.9	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	1.8	0.6	1.8
6-Sep	Z	1.9	2.1	2.1	2.0	1.9	2.1	2.3	1.9	1.6	1.5	1.0	0.8	0.7	0.7	1.1	1.1	0.9	0.9	1.0	1.1	2.1	2.8	2.4	1.6	2.8
7-Sep	2.2	Z	2.3	2.3	2.4	2.3	2.3	2.1	2.2	4.3	3.6	2.7	1.9	1.5	1.5	1.7	1.2	1.0	1.1	2.4	1.3	1.0	2.2	2.7	2.1	4.3
8-Sep	3.0	3.0	Z	3.1	2.7	2.4	1.8	1.8	1.2	1.0	0.8	0.7	0.6	0.6	2.4	0.8	0.6	0.6	0.5	0.4	0.4	0.4	0.7	0.6	1.3	3.1
9-Sep	4.3	5.3	2.2	Z	2.5	2.4	2.5	1.8	1.6	1.5	1.4	1.2	1.1	1.0	1.0	1.4	1.4	1.2	1.3	1.5	1.8	2.5	2.9	2.7	2.0	5.3
10-Sep	2.4	2.3	2.4	2.6	Z	2.6	2.2	1.6	1.5	1.0	1.3	0.8	1.0	1.0	0.9	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.7	1.2	2.6
11-Sep	0.7	0.7	0.8	1.0	1.2	Z	1.0	1.4	2.9	1.4	1.1	0.9	0.7	0.7	0.8	1.3	0.9	1.6	1.5	1.0	0.7	0.6	0.5	0.5	1.0	2.9
12-Sep	Z	1.7	1.7	2.0	2.5	2.8	2.4	2.1	2.3	1.5	1.0	0.8	0.8	0.8	0.8	0.9	0.6	0.6	0.6	0.6	0.7	0.9	1.1	1.4	1.3	2.8
13-Sep	1.8	Z	2.3	2.2	2.1	2.1	2.0	1.7	1.6	1.4	1.0	1.3	0.9	0.8	0.7	0.7	0.6	0.6	0.7	0.9	1.0	0.8	1.0	2.0	1.3	2.3
14-Sep	1.3	1.6	Z	2.0	1.8	3.2	2.2	1.4	0.8	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.9	3.2
15-Sep	0.4	0.5	1.6	Z	0.6	0.5	0.9	0.5	0.6	3.9	2.6	0.8	0.6	0.6	0.8	0.8	0.6	0.4	0.5	0.6	0.6	0.5	0.4	0.6	0.9	3.9
16-Sep	0.8	0.6	1.0	0.7	Z	0.7	0.9	1.1	0.9	0.6	0.6	0.6	0.9	0.6	0.5	0.4	0.5	0.5	0.3	0.6	0.7	0.8	1.5	0.8	0.7	1.5
17-Sep	3.5	2.6	2.7	2.5	2.2	Z	2.4	1.5	1.3	1.1	0.9	C	C	C	C	C	1.1	0.9	0.7	0.6	1.1	1.3	1.5	1.7	1.6	3.5
18-Sep	Z	2.0	2.2	2.3	2.0	1.7	1.6	1.3	1.2	0.8	0.7	0.7	0.8	0.8	M	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.2	2.3
19-Sep	1.0	Z	1.0	1.8	2.8	1.7	2.6	2.4	1.7	0.7	1.4	1.7	2.1	0.9	1.9	1.0	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	1.2	2.8
20-Sep	0.3	0.9	Z	2.0	2.1	2.2	2.2	1.9	1.6	1.3	1.0	1.0	0.9	0.8	0.8	1.2	1.1	1.0	1.0	1.2	1.3	1.3	1.6	2.0	1.3	2.2
21-Sep	2.1	2.1	2.1	Z	2.1	2.3	1.7	1.0	0.7	0.7	0.8	1.0	1.3	0.9	0.9	1.0	0.5	0.3	0.3	0.4	0.7	0.7	0.7	0.4	1.1	2.3
22-Sep	0.3	0.6	0.8	1.2	Z	0.6	2.0	2.4	5.3	0.8	2.5	2.4	4.5	4.0	2.8	3.3	2.1	0.3	0.2	0.2	0.3	0.3	0.8	1.3	1.7	5.3
23-Sep	2.1	2.1	1.8	1.7	1.7	Z	1.7	1.6	1.3	1.2	0.5	0.3	0.3	1.2	0.5	1.2	0.4	0.5	0.4	0.6	1.1	0.5	0.4	0.5	1.0	2.1
24-Sep	Z	0.6	0.5	0.5	1.0	0.9	0.8	0.6	1.2	0.3	1.3	0.9	0.6	0.3	0.3	0.2	0.2	0.4	0.2	0.3	0.5	0.3	0.5	0.3	0.6	1.3
25-Sep	0.4	Z	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.7	0.6	0.9	1.0	0.7	0.6	0.8	1.4	1.4	1.2	0.9	1.3	1.1	0.7	0.7	1.4
26-Sep	0.4	1.1	Z	0.9	0.7	1.3	1.7	1.2	0.8	1.1	1.4	1.2	0.4	0.3	0.4	0.3	0.3	0.2	2.5	3.2	2.6	0.3	0.3	0.3	1.0	3.2
27-Sep	0.3	0.3	0.3	Z	3.5	3.1	3.6	6.9	3.2	1.2	0.5	0.6	2.2	3.5	3.2	4.0	2.6	0.2	0.3	0.8	2.3	1.2	0.3	0.4	1.9	6.9
28-Sep	1.0	0.3	0.3	0.2	Z	2.9	2.3	1.8	0.7	0.5	2.1	1.8	0.4	1.8	1.0	0.2	0.2	0.1	0.2	0.2	0.7	1.3	1.3	1.1	1.0	2.9
29-Sep	0.9	1.1	1.3	1.2	0.8	Z	1.8	1.2	0.7	0.7	0.7	0.8	0.9	0.9	0.8	1.0	1.2	0.9	0.9	1.3	1.0	1.0	1.2	1.3	1.0	1.8
30-Sep	Z	1.5	2.0	2.4	2.0	1.8	2.0	2.0	2.0	2.2	1.9	2.2	1.7	3.3	3.4	2.2	1.8	2.2	2.3	1.8	1.7	1.4	1.9	1.3	2.0	3.4
	1.5	1.7	1.5	1.6	1.8	1.8	1.8	1.7	1.6	1.2	1.2	1.1	1.2	1.2	1.3	1.2	0.9	0.7	0.8	0.9	1.0	0.9	1.2	1.2	Diurnal Average	
	4.3	5.3	2.8	3.1	3.5	3.2	3.6	6.9	5.3	4.3	3.6	2.7	4.5	4.0	3.4	4.0	2.6	2.2	2.5	3.2	2.6	2.5	2.9	2.7	Diurnal Maximum	

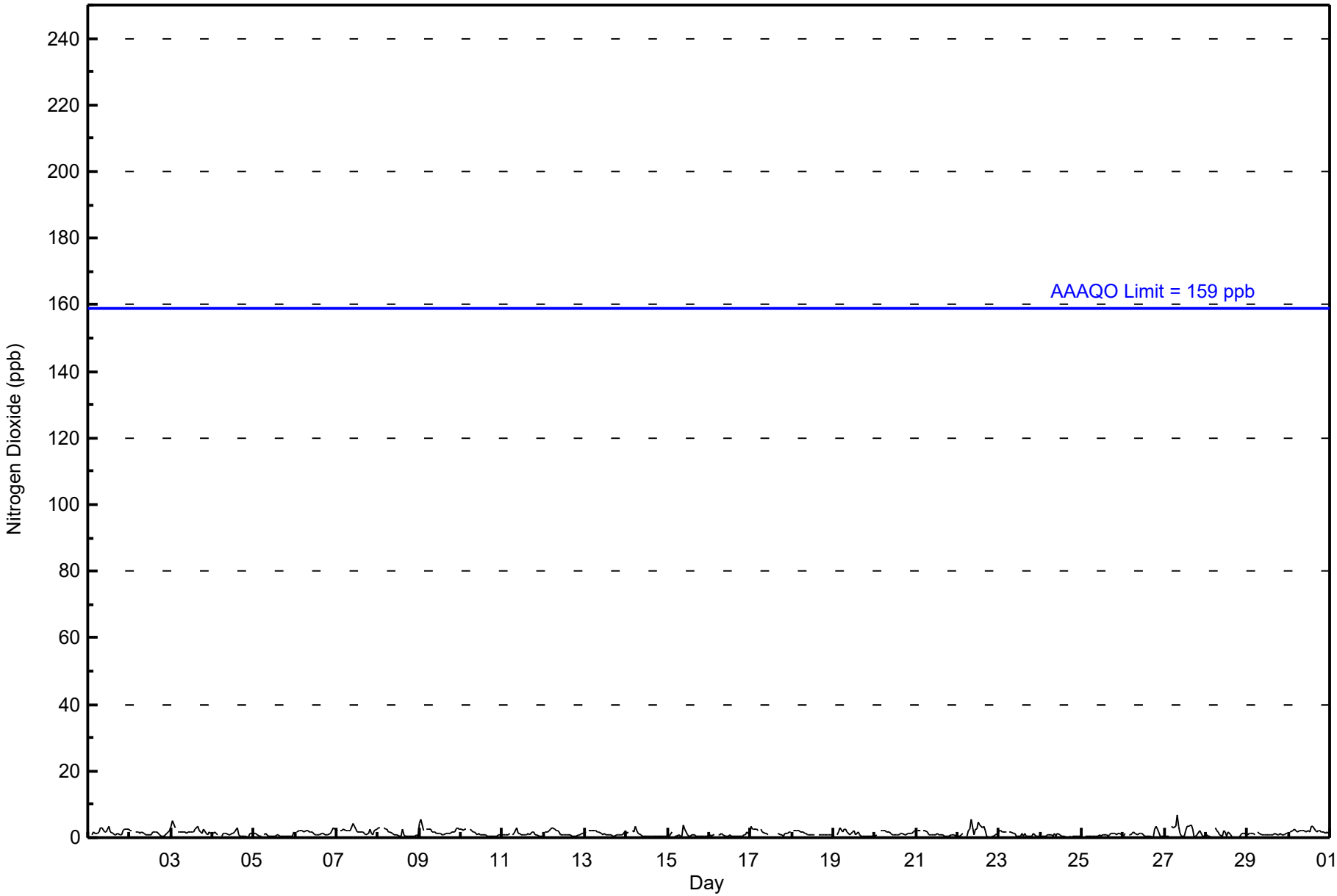
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby South - September 2025



Nitrogen Dioxide (NO_2) - ppb
Kirby South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Kirby South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684
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	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684

Total Number of Valid Hours: 684

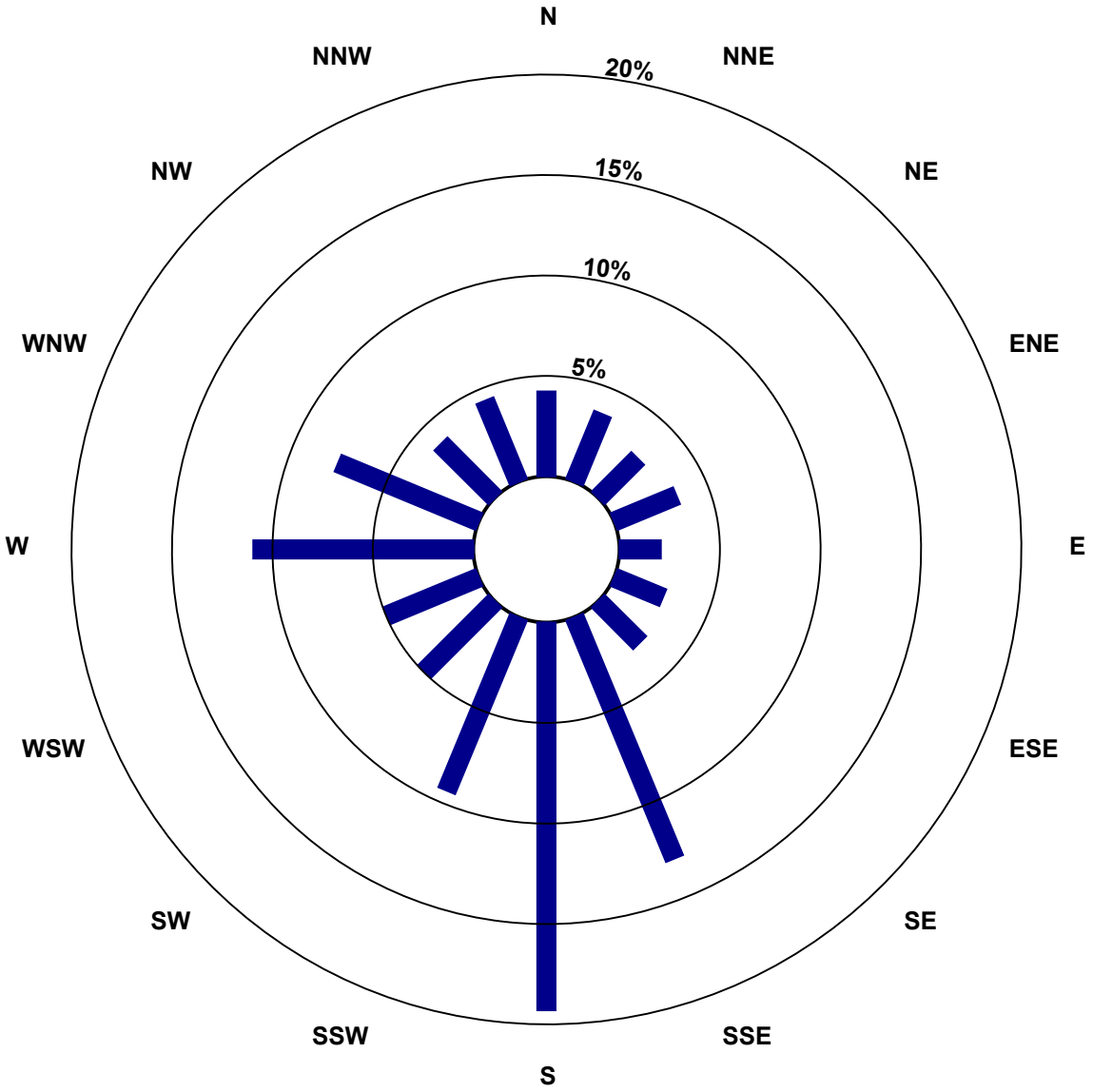
Total Number of Hours: 720

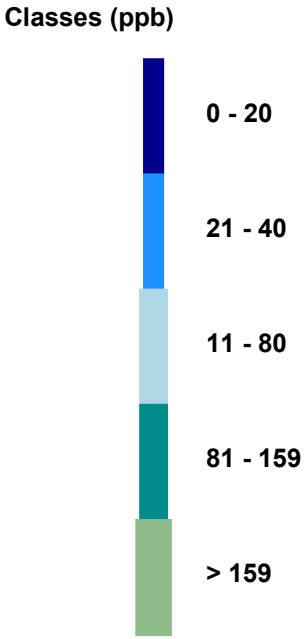
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Dioxide (NO_2) - ppb

Kirby South





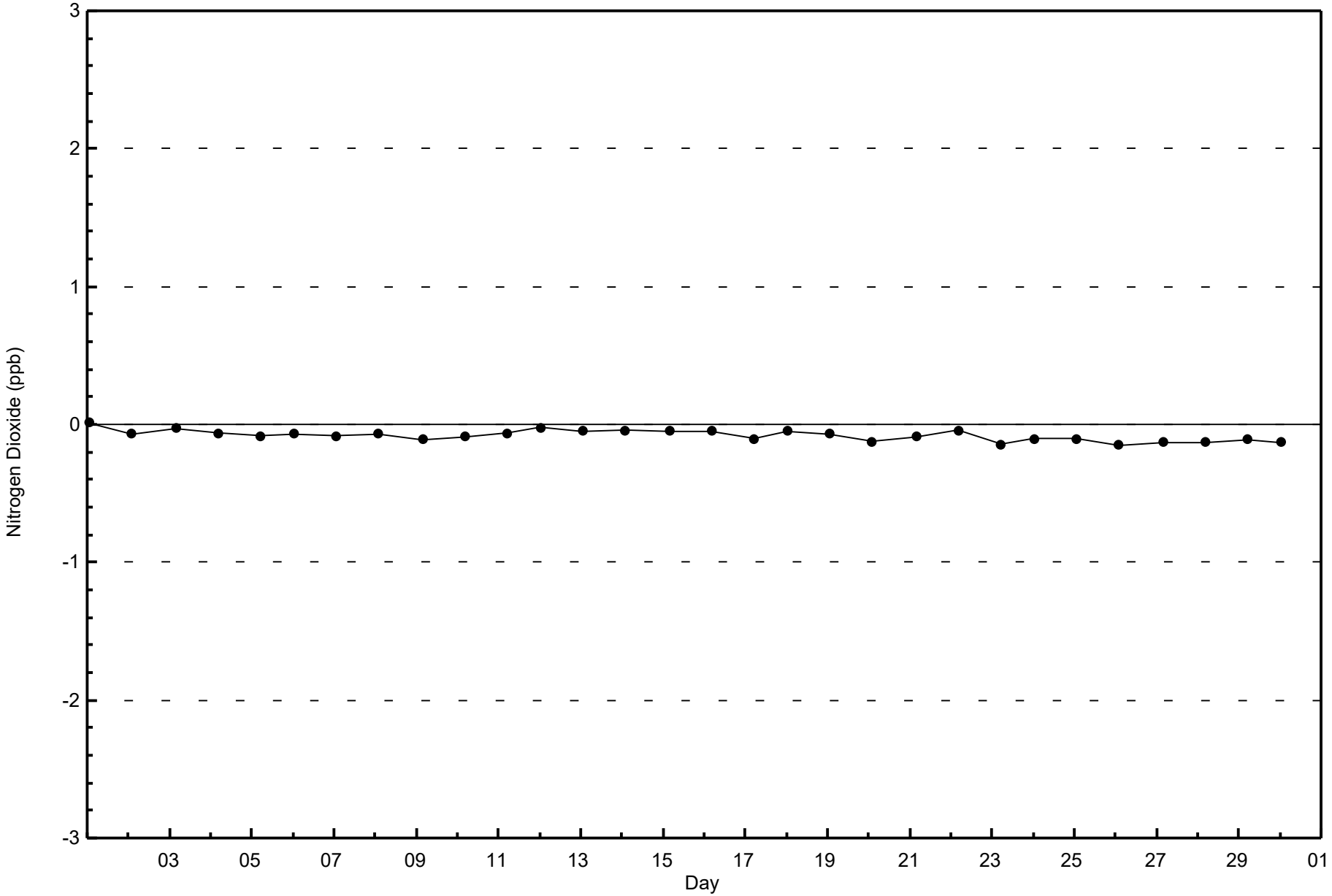
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby South - September 2025

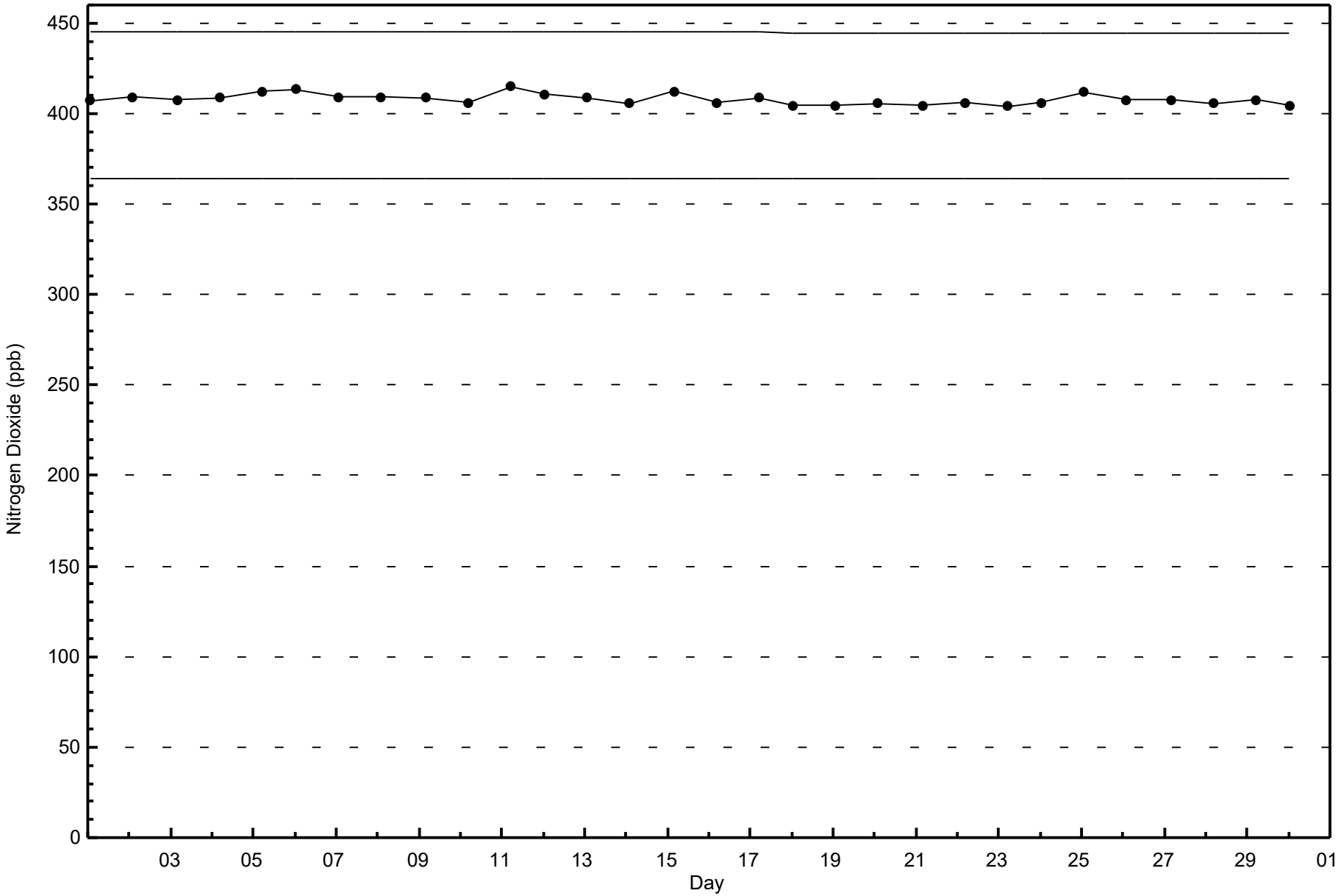


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Kirby South - September 2025

Maximum Value: 13.4 ppb on Sep 27 08:00

Maximum Daily Average: 3.3 ppb on Sep 27

Minimum Value: 0.1 ppb on Sep 28 18:00

Minimum Daily Average: 0.7 ppb on Sep 24

Maximum Diurnal Average: 2.3 ppb at hour 8

Minimum Diurnal Average: 0.8 ppb at hour 18

Monthly Average: 1.52 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.4$ $Q_1 = 0.7$ Median = 1.1 $Q_3 = 2.0$ $P_{90} = 2.8$ $P_{99} = 7.1$

Hours in Service:	720
Hours of Data:	684
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	1.5	Z	1.1	3.8	1.4	1.4	2.0	3.3	4.4	2.2	2.1	2.9	4.7	2.4	1.5	1.0	1.1	1.2	0.9	0.9	2.5	2.5	2.7	2.4	2.2	4.7
2-Sep	2.1	2.2	Z	1.9	1.8	1.5	1.3	1.6	1.2	1.0	0.8	0.7	0.9	2.0	1.9	1.9	1.8	1.0	0.5	0.5	0.5	1.2	1.9	2.0	1.4	2.2
3-Sep	3.4	5.0	2.8	Z	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.9	2.0	1.8	3.3	4.3	2.2	1.5	1.2	2.4	1.2	1.0	1.6	1.4	2.1	5.0
4-Sep	1.2	1.5	1.3	0.7	Z	0.6	2.1	2.9	2.9	2.1	2.0	2.6	3.6	7.0	9.3	2.8	0.4	0.3	0.3	0.3	0.3	0.5	1.3	1.2	2.0	9.3
5-Sep	1.2	1.1	0.7	0.4	0.3	Z	1.0	1.4	0.8	0.7	0.5	0.7	1.2	1.4	1.0	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	1.8	0.8	1.8
6-Sep	Z	1.9	2.1	2.1	2.0	1.9	2.2	2.8	2.5	2.2	1.9	1.1	0.8	0.7	0.7	1.1	1.1	0.9	0.9	1.0	1.1	2.1	2.8	2.4	1.7	2.8
7-Sep	2.2	Z	2.3	2.3	2.4	2.3	2.4	2.3	2.5	5.3	4.1	2.9	2.0	1.6	1.6	1.9	1.2	1.0	1.1	2.5	1.3	1.0	2.2	2.7	2.2	5.3
8-Sep	3.0	3.0	Z	3.1	2.7	2.4	2.0	2.4	1.7	1.4	0.9	0.7	0.6	0.6	3.2	1.0	0.6	0.6	0.5	0.4	0.4	0.4	0.7	0.6	1.4	3.2
9-Sep	4.3	5.3	2.2	Z	2.5	2.4	2.6	1.9	1.8	1.7	1.5	1.2	1.1	1.0	1.0	1.4	1.4	1.2	1.3	1.5	1.8	2.5	2.9	2.7	2.0	5.3
10-Sep	2.4	2.3	2.4	2.6	Z	2.6	2.2	1.6	1.5	1.0	1.5	0.8	1.2	1.0	0.9	0.6	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.7	1.3	2.6
11-Sep	0.7	0.7	0.8	1.0	1.2	Z	1.0	1.5	3.0	1.5	1.1	1.0	0.7	0.7	0.8	1.5	0.9	1.6	1.5	1.0	0.7	0.6	0.5	0.5	1.1	3.0
12-Sep	Z	1.7	1.7	2.0	2.5	2.8	2.5	2.3	2.7	1.7	1.0	0.8	0.8	0.8	0.8	0.9	0.6	0.6	0.6	0.6	0.7	0.9	1.1	1.4	1.4	2.8
13-Sep	1.8	Z	2.3	2.2	2.1	2.1	2.0	1.8	1.8	1.5	1.1	1.4	0.9	0.8	0.7	0.7	0.6	0.6	0.7	0.9	1.0	0.8	1.0	2.0	1.3	2.3
14-Sep	1.3	1.6	Z	2.0	1.8	3.2	2.3	1.5	0.8	0.6	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.9	3.2
15-Sep	0.4	0.5	1.7	Z	0.6	0.5	1.1	0.6	0.9	7.6	4.5	1.0	0.7	0.6	0.8	0.8	0.6	0.4	0.5	0.6	0.6	0.5	0.4	0.6	1.2	7.6
16-Sep	0.8	0.6	1.0	0.7	Z	0.7	0.9	1.3	1.1	0.7	0.7	0.7	1.1	0.6	0.5	0.4	0.5	0.5	0.3	0.6	0.7	0.8	1.5	0.8	0.7	1.5
17-Sep	3.5	2.6	2.7	2.5	2.2	Z	2.6	2.0	1.9	1.5	1.0	C	C	C	C	C	1.1	0.9	0.7	0.6	1.1	1.3	1.5	1.7	1.7	3.5
18-Sep	Z	2.0	2.2	2.3	2.0	1.7	1.7	1.6	1.5	1.0	0.8	0.8	0.9	0.9	M	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.2	2.3
19-Sep	1.0	Z	1.1	1.9	2.9	1.8	2.9	2.9	2.3	0.8	1.9	2.5	3.1	1.2	2.7	1.4	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	1.5	3.1
20-Sep	0.3	0.9	Z	2.0	2.1	2.2	2.3	2.1	1.9	1.5	1.1	1.0	0.9	0.8	0.8	1.2	1.1	1.0	1.0	1.2	1.3	1.3	1.6	2.0	1.4	2.3
21-Sep	2.1	2.1	2.1	Z	2.1	2.3	1.7	1.1	0.8	0.8	0.9	1.2	1.5	0.9	0.9	1.1	0.5	0.3	0.3	0.4	0.7	0.7	0.7	0.5	1.1	2.3
22-Sep	0.3	0.7	1.0	1.7	Z	0.6	3.2	5.0	12.0	1.6	5.9	5.4	10.0	8.4	5.7	6.2	3.9	0.3	0.2	0.2	0.3	0.3	0.8	1.3	3.3	12.0
23-Sep	2.1	2.1	1.8	1.7	1.7	Z	1.7	1.8	1.6	1.6	0.6	0.3	0.3	2.2	0.5	1.7	0.4	0.5	0.4	0.6	1.1	0.5	0.4	0.5	1.1	2.2
24-Sep	Z	0.6	0.5	0.5	1.0	1.0	0.9	0.7	1.6	0.4	2.4	1.4	1.2	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.6	0.4	0.6	0.4	0.7	2.4
25-Sep	0.4	Z	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.5	0.8	0.7	1.1	1.2	0.8	0.7	0.9	1.4	1.4	1.2	0.9	1.3	1.1	0.7	0.8	1.4
26-Sep	0.4	1.3	Z	0.9	0.7	1.4	1.9	1.5	1.1	2.1	2.8	2.1	0.5	0.4	0.4	0.3	0.3	0.2	3.3	4.7	3.3	0.3	0.3	0.3	1.3	4.7
27-Sep	0.3	0.3	0.3	Z	5.1	5.2	5.6	13.4	6.1	2.4	0.8	1.1	5.4	7.6	5.9	6.8	3.9	0.2	0.3	0.9	3.0	1.8	0.3	0.4	3.3	13.4
28-Sep	1.3	0.3	0.3	0.2	Z	4.1	3.1	2.5	0.8	0.5	4.7	3.7	0.6	2.9	1.5	0.2	0.2	0.1	0.2	0.2	0.7	1.3	1.3	1.1	1.4	4.7
29-Sep	0.9	1.1	1.3	1.2	0.8	Z	1.8	1.3	0.8	0.8	0.8	0.9	1.0	1.0	0.9	1.0	1.2	0.9	0.9	1.3	1.0	1.0	1.2	1.3	1.1	1.8
30-Sep	Z	1.5	2.0	2.4	2.0	1.8	2.0	2.1	2.1	2.5	2.2	2.6	1.9	3.7	3.6	2.3	1.9	2.2	2.3	1.8	1.7	1.4	2.0	1.3	2.2	3.7
	1.6	1.7	1.5	1.7	1.8	1.9	2.0	2.3	2.2	1.7	1.7	1.5	1.8	1.9	1.9	1.6	1.0	0.8	0.8	1.0	1.0	1.0	1.2	1.2	Diurnal Average	
	4.3	5.3	2.8	3.8	5.1	5.2	5.6	13.4	12.0	7.6	5.9	5.4	10.0	8.4	9.3	6.8	3.9	2.2	3.3	4.7	3.3	2.5	2.9	2.7	Diurnal Maximum	

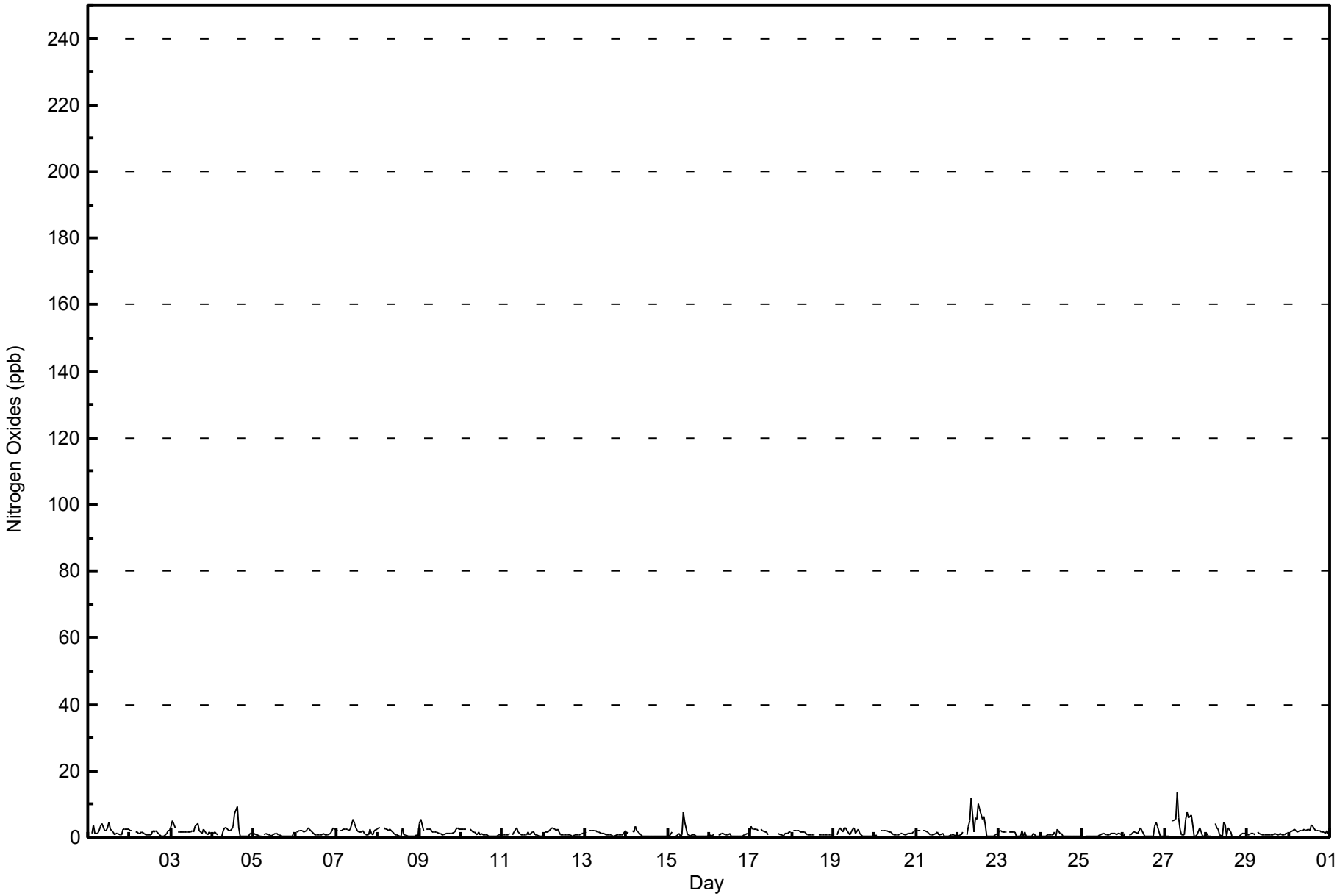
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Kirby South - September 2025



Nitrogen Oxides (NO_X) - ppb
Kirby South - September 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Kirby South - September 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684
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	29	25	19	23	14	18	20	89	132	64	34	34	75	52	26	30	684

Total Number of Valid Hours: 684

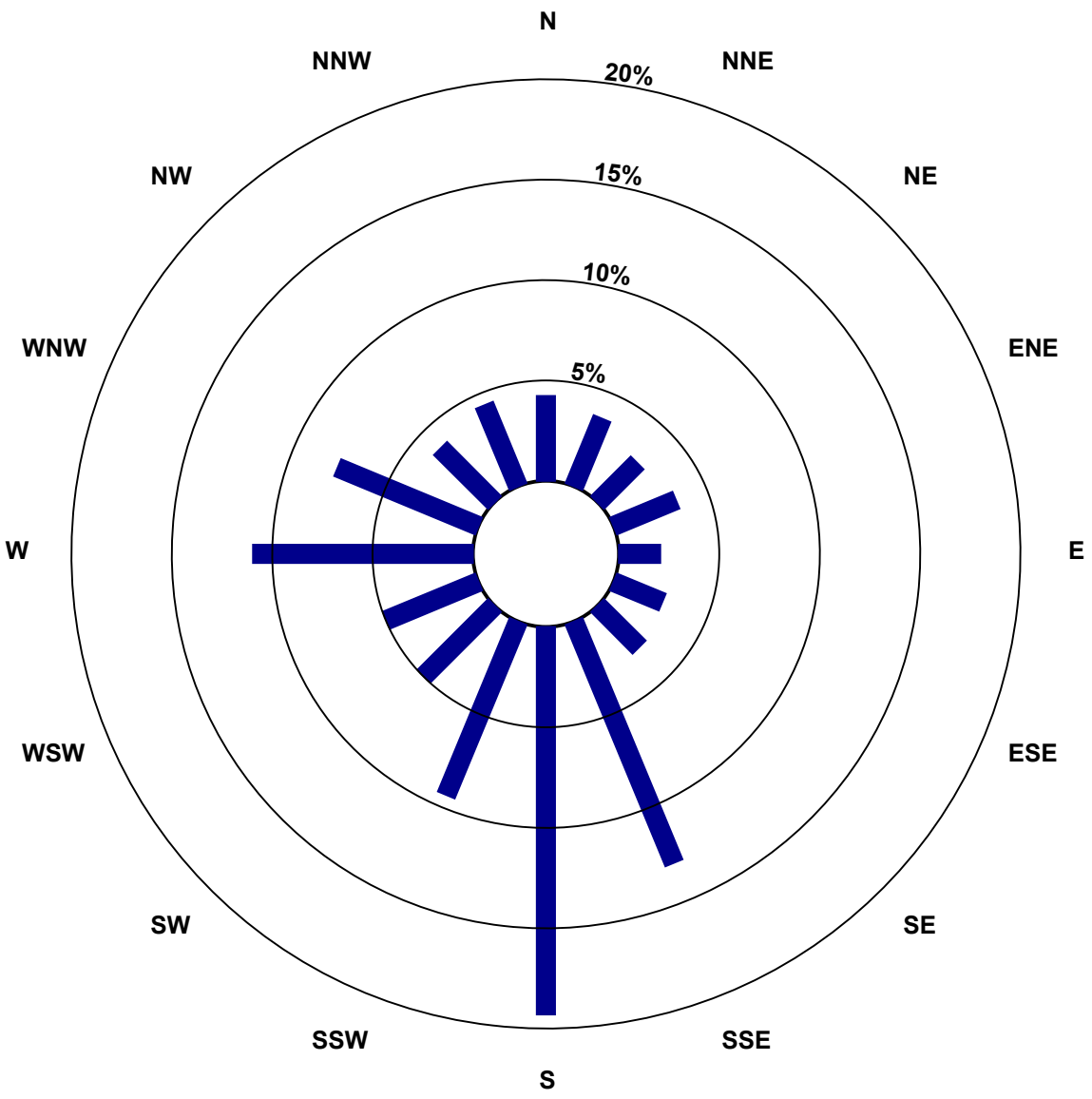
Total Number of Hours: 720

Wood Buffalo Environmental Association

Wind Rose Sep 2025

Nitrogen Oxides (NO_X) - ppb

Kirby South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

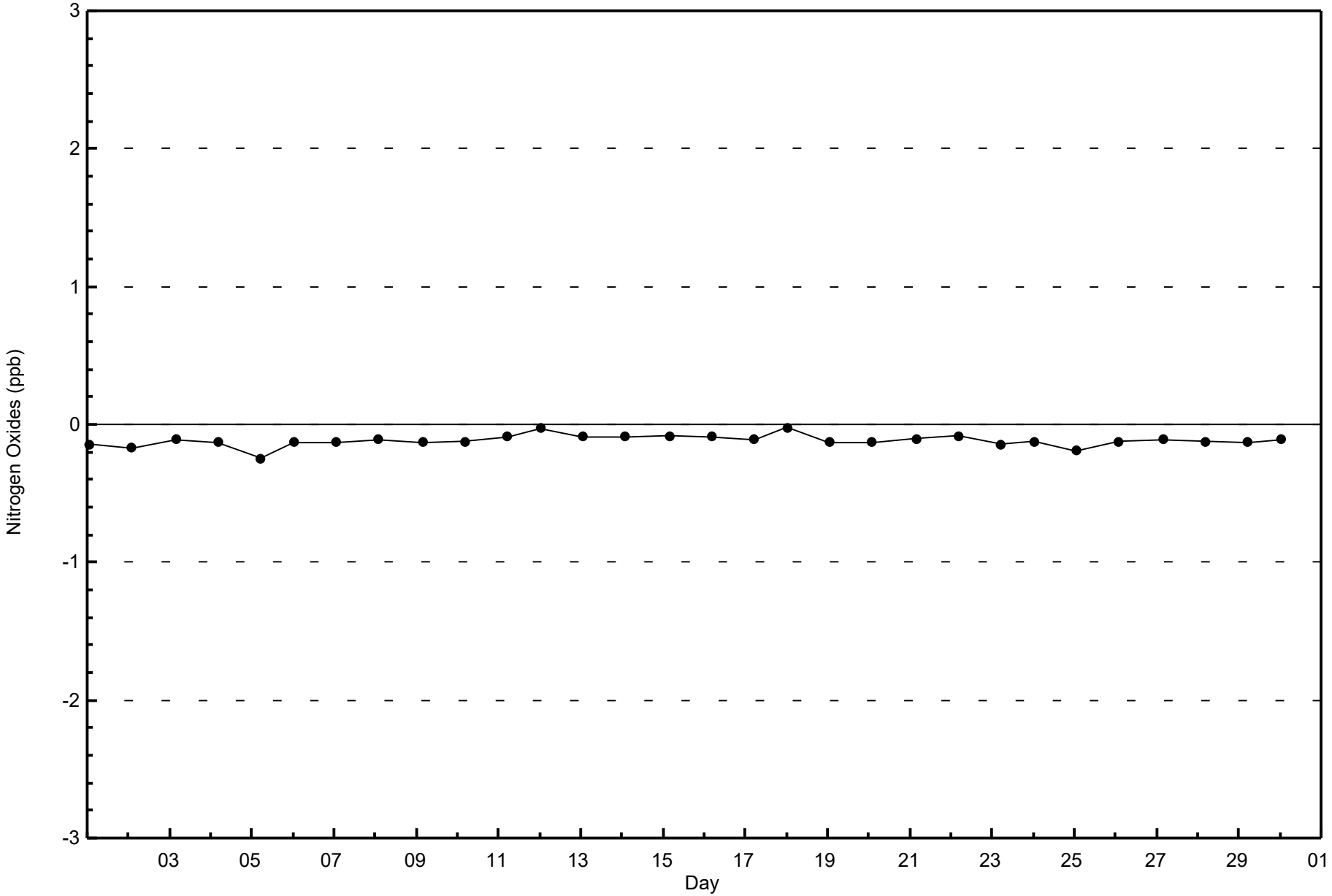
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Kirby South - September 2025

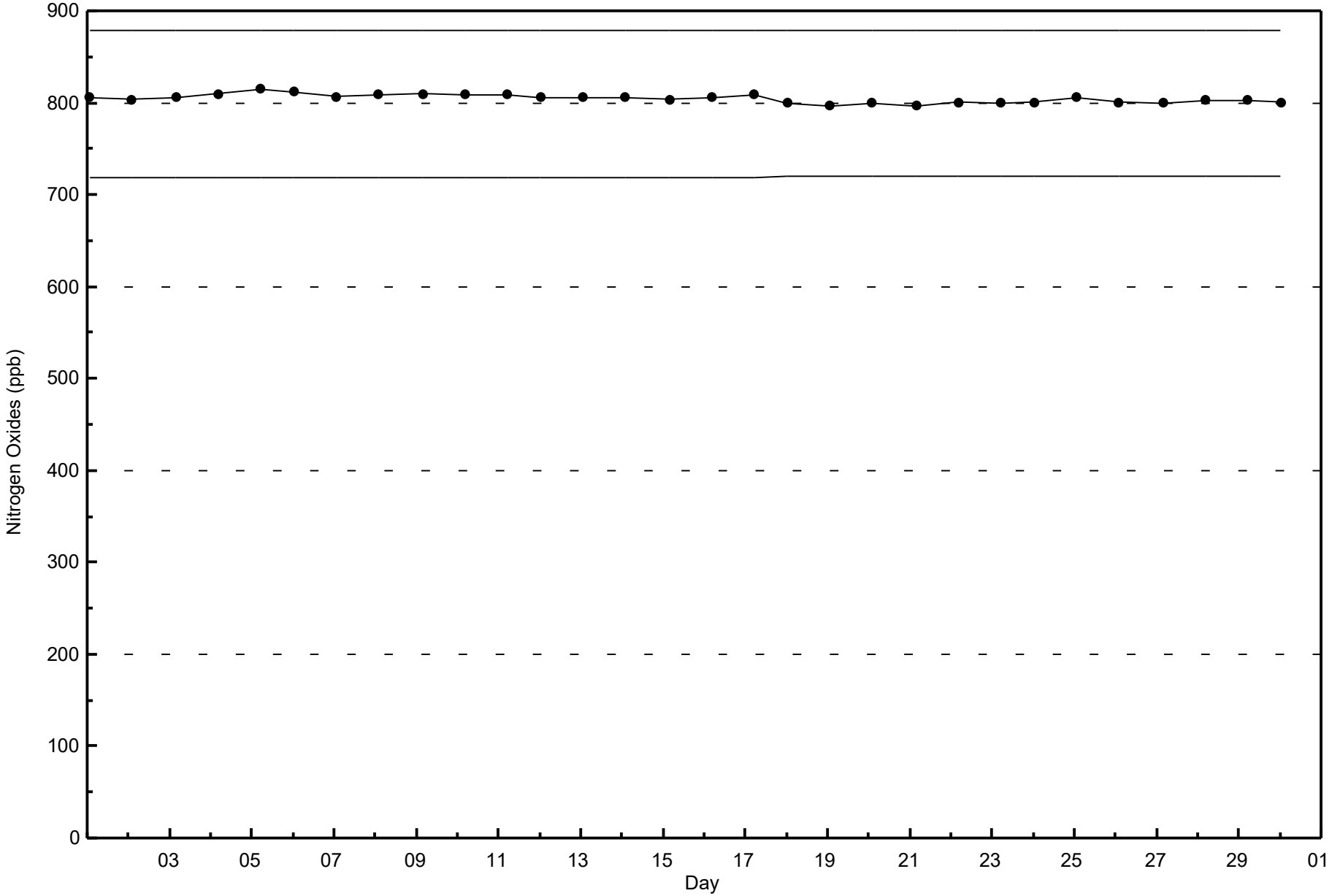


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Kirby South - September 2025



Maximum Value: 26.7 C on Sep 13 16:00

Maximum Daily Average: 20.8 C on Sep 13

Minimum Value: 2.5 C on Sep 5 05:00

Minimum Daily Average: 9.7 C on Sep 25

Maximum Diurnal Average: 19.7 C at hour 16

Minimum Diurnal Average: 9.6 C at hour 6

Monthly Average: 14.31 C

Percentiles: P_1 = 3.7 P_{10} = 8.4 Q_1 = 10.7 Median = 13.9 Q_3 = 17.6 P_{90} = 21.3 P_{99} = 25.4

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

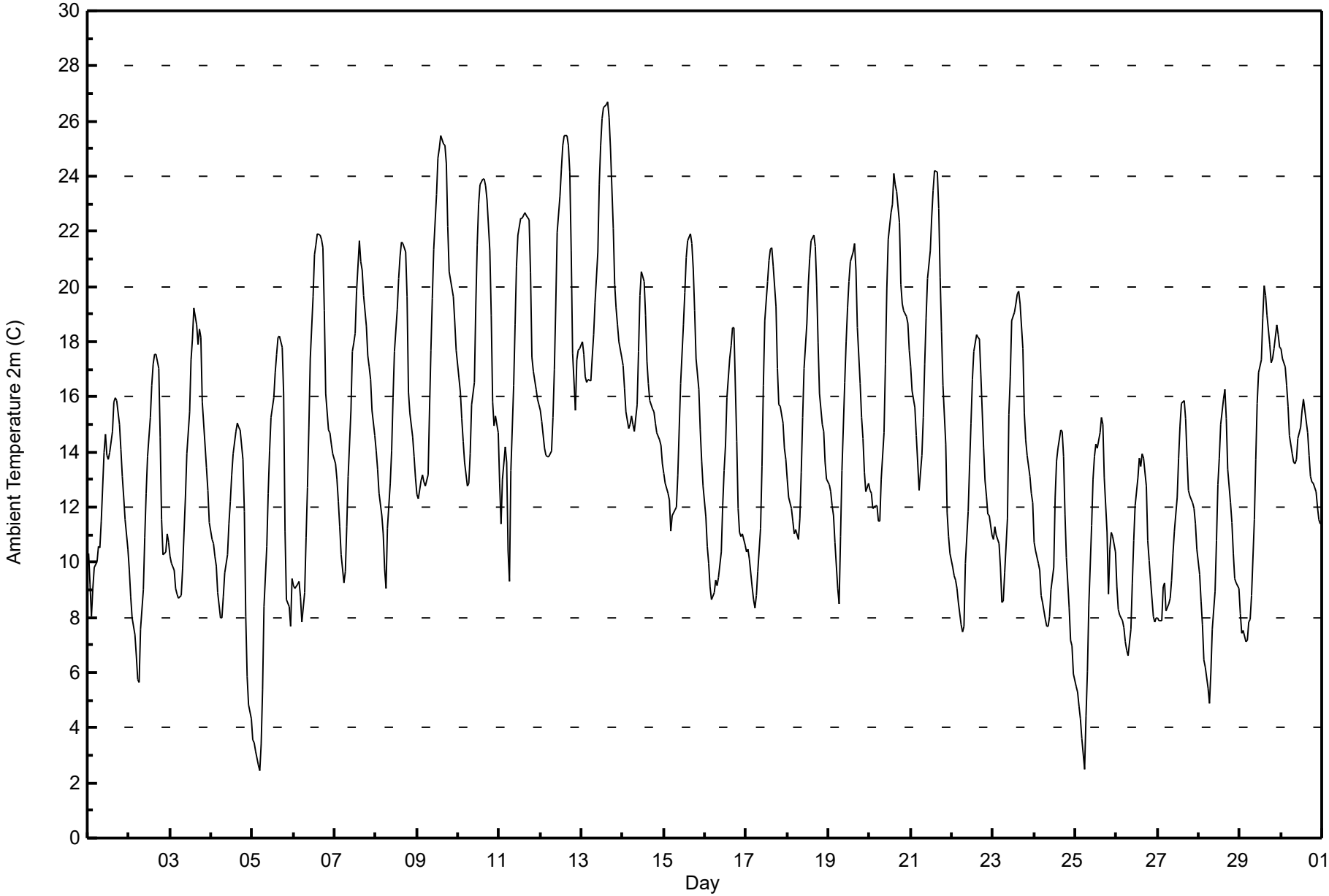
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	10.3	9.2	8.0	9.0	9.8	10.0	10.6	10.5	11.5	14.0	14.6	13.9	13.7	14.0	14.8	15.8	15.9	15.9	15.0	14.1	13.1	12.4	11.6	10.5	12.4	15.9
2-Sep	9.7	8.7	8.0	7.4	6.6	5.7	5.7	7.6	9.0	10.9	12.5	13.8	15.3	16.4	17.2	17.6	17.5	17.0	14.6	11.6	10.3	10.4	11.0	10.7	11.5	17.6
3-Sep	10.2	10.0	9.7	9.0	8.8	8.7	8.8	9.8	11.1	12.3	13.9	15.5	17.4	18.1	19.2	18.6	17.9	18.5	18.2	15.8	14.2	13.4	12.6	11.4	13.5	19.2
4-Sep	10.8	10.7	10.2	9.9	8.9	8.0	8.0	8.7	9.6	10.3	11.4	12.2	13.2	13.9	14.8	15.1	14.9	14.8	13.7	11.8	8.1	5.9	4.8	4.3	10.6	15.1
5-Sep	3.6	3.4	3.1	2.6	2.5	3.4	5.4	8.4	10.6	12.5	14.0	15.2	16.0	16.9	17.5	18.1	18.2	17.8	16.1	11.2	8.6	8.4	7.7	9.4	10.4	18.2
6-Sep	9.2	9.1	9.2	9.3	8.7	7.8	8.9	10.9	12.7	14.9	17.4	19.6	21.2	21.5	21.9	21.9	21.7	21.4	19.1	16.1	14.8	14.7	14.3	13.9	15.0	21.9
7-Sep	13.6	13.0	12.2	11.3	10.3	9.3	9.7	11.3	13.1	15.5	17.6	18.0	18.3	19.8	21.7	20.9	20.6	19.7	18.5	17.5	17.1	16.6	15.5	14.6	15.6	21.7
8-Sep	14.0	13.4	12.5	11.7	11.0	9.7	9.0	11.2	12.9	14.0	16.0	17.6	19.2	20.3	21.1	21.6	21.5	21.3	19.6	16.2	15.4	14.6	13.8	13.1	15.4	21.6
9-Sep	12.4	12.3	13.0	13.1	12.9	12.8	13.2	15.5	17.7	19.6	21.4	23.4	24.7	25.0	25.5	25.2	25.1	24.4	22.2	20.5	19.9	19.6	18.7	17.7	19.0	25.5
10-Sep	16.7	16.2	15.2	14.4	13.6	12.8	12.9	13.9	15.7	16.5	19.3	21.5	23.0	23.7	23.9	23.9	23.6	23.1	21.3	19.0	15.8	14.9	15.3	14.7	18.0	23.9
11-Sep	12.9	11.4	13.0	14.2	13.6	10.4	9.3	13.3	16.4	18.6	20.7	21.9	22.5	22.5	22.6	22.7	22.6	22.4	20.5	17.5	16.9	16.3	15.9	15.7	17.2	22.7
12-Sep	15.5	15.1	14.2	13.9	13.8	13.8	14.1	15.3	17.0	19.3	21.9	23.3	24.2	25.1	25.5	25.5	25.1	24.2	21.3	17.6	15.5	17.4	17.7	17.8	18.9	25.5
13-Sep	18.0	17.5	16.7	16.5	16.6	16.6	17.4	18.3	19.4	21.3	23.7	25.1	26.1	26.5	26.6	26.7	26.2	25.0	22.1	20.1	19.2	18.6	18.0	17.5	20.8	26.7
14-Sep	17.1	16.3	15.5	14.8	15.0	15.3	15.0	14.8	15.7	17.7	19.7	20.5	20.2	19.0	17.3	16.5	15.9	15.5	15.4	15.1	14.7	14.5	14.2	13.6	16.2	20.5
15-Sep	13.2	12.8	12.5	12.2	11.1	11.7	11.9	12.0	13.2	14.9	16.5	18.6	19.8	21.0	21.7	21.9	21.5	20.7	19.1	17.4	16.3	14.8	13.7	12.8	15.9	21.9
16-Sep	11.6	10.6	10.0	9.1	8.6	8.9	9.3	9.2	9.5	10.4	12.1	13.3	14.3	16.0	17.4	17.9	18.5	18.5	14.4	12.0	11.1	10.9	11.0	10.6	12.3	18.5
17-Sep	10.4	10.5	10.1	9.1	8.6	8.4	8.8	9.7	11.2	13.5	16.4	18.8	20.2	21.0	21.4	21.4	20.7	19.3	17.0	15.7	15.7	15.0	14.1	13.7	14.6	21.4
18-Sep	13.0	12.4	11.9	11.5	11.0	11.2	10.8	11.6	13.3	15.2	17.1	18.7	20.0	21.0	21.7	21.9	21.4	20.0	17.9	16.1	15.0	14.8	13.7	13.0	15.6	21.9
19-Sep	12.8	12.5	12.1	11.7	10.7	9.0	8.5	10.9	13.3	16.5	18.0	19.2	20.2	20.9	21.3	21.6	20.6	18.5	16.5	15.2	14.5	13.3	12.5	12.9	15.1	21.6
20-Sep	12.6	12.5	11.9	12.0	12.0	11.5	11.5	13.0	14.7	17.2	19.9	21.7	22.7	23.0	24.1	23.7	23.5	22.3	20.1	19.4	19.1	18.9	18.6	17.7	17.7	24.1
21-Sep	17.1	16.2	15.6	14.6	13.6	12.6	13.9	15.2	17.2	18.9	20.3	21.3	22.5	23.5	24.2	24.2	22.8	20.3	18.4	16.4	14.3	11.8	10.9	10.3	17.3	24.2
22-Sep	9.8	9.5	9.3	9.1	8.6	7.7	7.5	7.7	9.9	11.9	13.5	15.0	16.6	17.6	18.3	18.2	18.1	16.8	14.1	13.0	12.4	11.8	11.7	11.0	12.5	18.3
23-Sep	10.9	11.3	11.0	10.7	9.8	8.5	8.6	9.6	11.6	15.3	16.7	18.8	19.1	19.4	19.7	19.8	19.4	17.8	15.4	14.4	13.9	13.1	12.5	12.1	14.1	19.8
24-Sep	10.8	10.4	10.0	9.7	8.8	8.5	7.9	7.7	7.7	8.0	9.0	9.8	12.3	13.7	14.2	14.8	14.7	13.8	11.7	10.2	8.3	7.2	7.0	5.9	10.1	14.8
25-Sep	5.5	5.3	4.8	4.3	3.6	2.5	4.4	6.1	8.4	11.3	13.0	13.8	14.3	14.1	14.7	15.3	15.0	13.1	11.1	8.9	10.5	11.1	10.9	10.4	9.7	15.3
26-Sep	9.1	8.3	8.1	7.9	7.6	7.1	6.8	6.6	7.6	9.3	10.8	12.0	13.1	13.8	13.5	14.0	13.8	12.7	10.8	10.1	9.4	8.1	7.8	8.0	9.8	14.0
27-Sep	8.0	7.9	7.9	9.1	9.3	8.2	8.5	8.7	9.4	10.3	11.1	12.4	13.8	15.0	15.8	15.9	15.2	13.8	12.6	12.4	12.1	12.0	11.4	10.5	11.3	15.9
28-Sep	9.5	8.6	7.7	6.4	6.2	5.5	4.9	6.0	7.6	9.0	10.8	12.8	13.8	15.0	15.9	16.3	15.2	13.4	12.2	11.4	10.3	9.4	9.3	9.1	10.3	16.3
29-Sep	8.2	7.4	7.5	7.1	7.2	7.9	7.9	8.8	11.5	13.7	15.8	16.9	17.4	18.9	20.0	19.7	19.0	17.9	17.3	17.4	17.7	18.6	18.2	17.8	14.2	20.0
30-Sep	17.7	17.4	17.1	16.4	15.7	14.6	13.9	13.6	13.6	13.7	14.5	14.9	15.5	15.9	15.5	14.7	13.9	13.1	12.9	12.9	12.6	12.0	11.5	11.4	14.4	17.7
	11.8	11.3	10.9	10.6	10.2	9.6	9.8	10.9	12.4	14.2	16.0	17.3	18.3	19.1	19.6	19.7	19.3	18.4	16.6	14.9	13.9	13.3	12.9	12.4	Diurnal Average	
	18.0	17.5	17.1	16.5	16.6	16.6	17.4	18.3	19.4	21.3	23.7	25.1	26.1	26.5	26.6	26.7	26.2	25.0	22.2	20.5	19.9	19.6	18.7	17.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Kirby South - September 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	0	0.00	0.00
0 - 10	149	20.69	20.69
10 - 20	470	65.28	85.97
> 20	101	14.03	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Kirby South - September 2025

Maximum Value: 98.9 % on Sep 15 07:00

Maximum Daily Average: 84.7 % on Sep 1

Minimum Value: 19.7 % on Sep 23 14:00

Minimum Daily Average: 42.3 % on Sep 23

Maximum Diurnal Average: 81.3 % at hour 6

Minimum Diurnal Average: 42.6 % at hour 16

Monthly Average: 62.95 %

Percentiles: P_1 = 25.9 P_{10} = 37.3 Q_1 = 47.6 Median = 62.7 Q_3 = 78.6 P_{90} = 89.8 P_{99} = 98.3

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

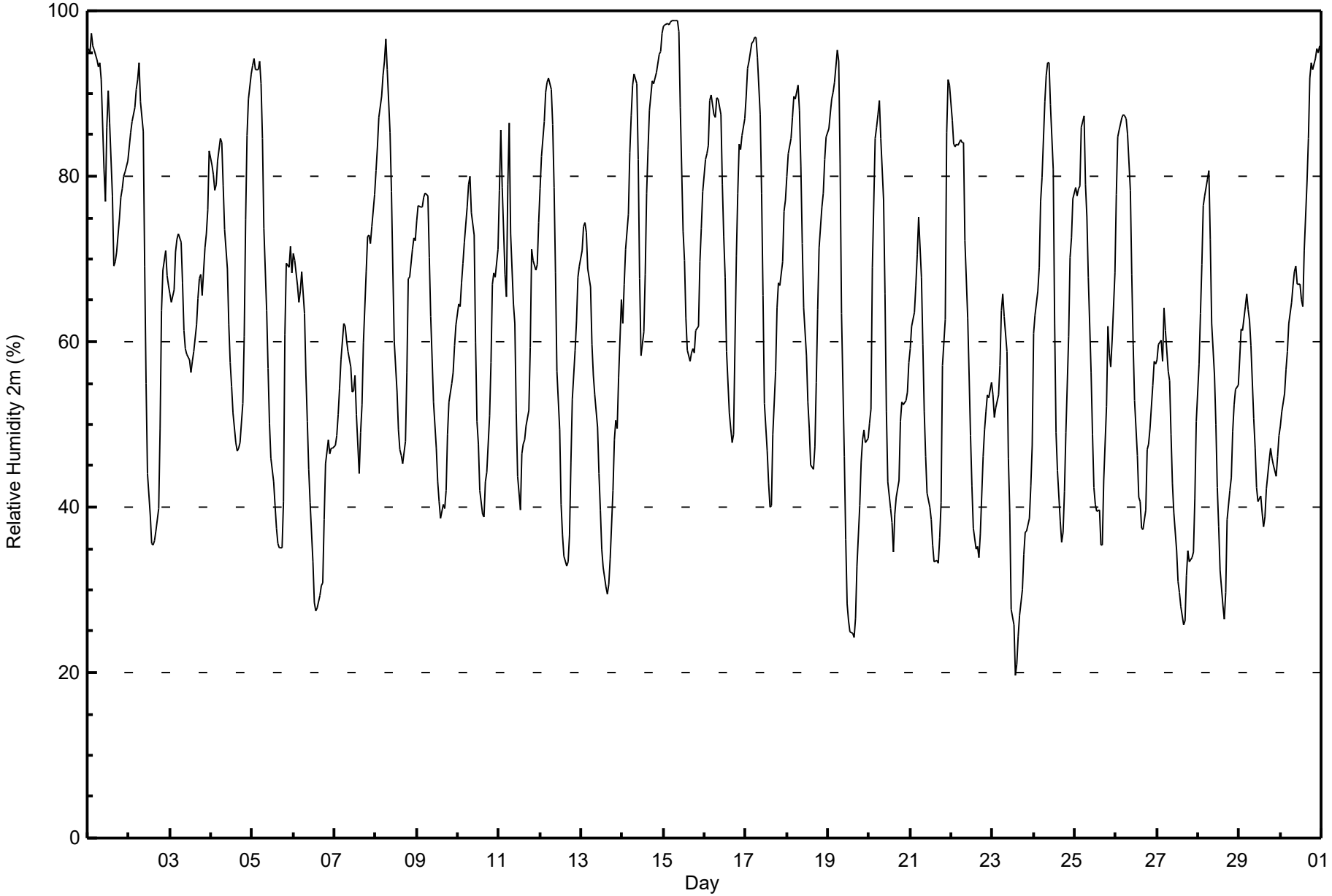
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Sep	95.5	94.9	97.3	95.8	95.2	94.1	93.1	93.8	91.8	80.8	76.9	85.9	90.4	86.4	77.7	69.2	69.6	70.9	75.0	77.4	78.5	80.0	80.5	81.9	84.7	97.3
2-Sep	83.6	85.3	86.6	88.3	90.5	91.7	93.7	89.0	85.5	69.1	54.8	44.0	38.9	35.6	35.4	35.9	37.1	39.8	49.5	63.7	68.7	71.1	67.9	66.8	65.5	93.7
3-Sep	65.8	64.8	66.4	70.9	72.4	73.0	72.0	67.2	61.4	59.2	58.5	57.7	56.3	57.6	58.9	62.1	65.3	67.7	68.1	65.6	71.4	73.0	75.9	83.0	66.4	83.0
4-Sep	81.3	80.2	78.3	79.0	81.8	84.5	84.0	78.8	73.5	68.8	62.0	57.5	54.5	51.3	47.9	46.8	47.1	47.8	52.6	60.7	74.8	85.0	89.3	92.4	69.2	92.4
5-Sep	93.3	94.2	92.9	92.8	93.9	91.2	84.5	73.7	63.8	56.8	50.1	45.9	43.0	40.1	37.4	35.6	35.1	35.0	40.7	60.9	69.5	69.0	71.5	68.3	64.1	94.2
6-Sep	70.6	69.9	66.8	64.7	66.1	68.5	63.4	56.0	50.4	44.6	40.6	33.4	28.5	27.4	27.7	29.3	30.4	30.9	38.4	45.3	48.1	46.5	47.1	47.1	47.6	70.6
7-Sep	47.4	48.7	51.3	54.4	57.9	62.2	61.9	60.2	58.8	57.0	53.8	54.1	56.0	51.2	44.0	49.1	52.3	59.8	68.4	72.8	72.9	71.9	73.9	77.8	59.1	77.8
8-Sep	80.7	83.6	87.1	89.7	92.2	93.8	96.6	92.8	85.3	78.2	68.6	60.0	53.9	49.3	46.9	46.3	45.2	47.9	56.2	67.6	67.8	71.1	72.6	72.3	71.1	96.6
9-Sep	74.6	76.4	76.3	76.2	77.4	78.0	77.5	70.1	63.0	57.9	52.8	47.2	43.0	40.6	38.7	40.3	39.8	42.0	48.8	52.7	54.9	56.3	59.5	62.0	58.6	78.0
10-Sep	64.6	64.2	67.2	69.6	72.0	76.2	79.0	80.0	75.5	72.9	59.9	50.4	47.6	42.1	39.2	38.8	43.0	44.2	51.0	57.4	67.0	68.3	67.8	71.1	61.2	80.0
11-Sep	78.3	85.5	78.6	68.1	65.3	78.9	86.4	73.0	64.6	62.3	51.3	43.7	39.6	46.4	47.7	48.1	49.9	51.7	59.3	71.1	69.9	68.6	69.4	74.4	63.8	86.4
12-Sep	78.5	82.3	86.5	90.1	91.3	91.9	90.5	86.2	78.7	68.3	56.5	49.3	40.4	36.5	34.1	32.9	33.4	36.7	45.4	53.1	59.0	62.6	67.9	69.2	63.4	91.9
13-Sep	71.1	74.0	74.4	73.2	68.8	66.6	59.7	56.0	53.5	49.6	44.0	39.6	34.9	32.8	30.4	29.5	30.6	33.7	42.1	48.1	50.4	49.5	55.7	65.1	51.4	74.4
14-Sep	62.2	67.0	71.1	75.4	82.9	87.3	90.9	92.3	91.2	82.0	67.6	58.4	61.1	68.2	78.1	83.2	88.0	91.6	91.1	91.9	92.6	94.7	95.2	97.3	81.7	97.3
15-Sep	98.1	98.3	98.4	98.3	98.6	98.8	98.9	98.8	98.8	97.4	88.3	73.5	69.8	62.9	59.0	57.6	58.6	59.2	58.6	61.3	61.9	69.7	73.7	78.1	79.9	98.9
16-Sep	82.1	82.6	83.7	89.2	89.8	87.4	87.2	89.4	89.4	87.5	79.0	72.6	67.8	58.8	51.4	49.5	47.8	48.8	70.4	77.9	83.8	83.2	84.9	86.9	76.3	89.8
17-Sep	89.6	93.1	94.0	96.1	96.2	96.8	96.8	94.4	87.5	78.0	65.5	52.6	46.8	42.9	40.1	40.1	48.8	56.5	64.1	67.1	66.7	69.6	75.8	77.1	72.3	96.8
18-Sep	79.9	82.7	84.7	87.1	89.6	89.3	91.1	88.0	81.1	71.8	64.1	58.2	52.7	49.5	45.0	44.6	47.2	55.2	64.0	71.3	76.3	77.9	82.0	84.7	71.6	91.1
19-Sep	85.7	87.7	89.4	90.1	91.4	95.3	93.9	81.6	63.4	46.1	36.1	28.4	26.3	24.9	24.8	24.2	26.5	32.9	40.2	45.4	48.2	49.4	47.8	48.2	55.3	95.3
20-Sep	50.2	51.8	68.9	84.5	86.0	87.5	89.1	84.5	77.0	65.8	51.6	43.0	39.8	38.2	34.6	39.2	41.2	43.3	50.4	52.7	52.4	52.9	54.0	57.5	58.2	89.1
21-Sep	59.2	61.9	63.5	66.7	70.5	75.1	67.7	59.6	51.6	46.1	41.7	40.0	38.5	35.4	33.4	33.5	33.2	36.2	40.6	57.1	62.8	85.2	91.8	91.0	55.9	91.8
22-Sep	86.7	83.8	83.6	84.0	83.7	84.4	84.1	84.0	72.2	62.8	55.9	48.6	42.5	37.4	34.9	35.2	33.9	36.8	46.1	49.3	51.6	53.6	53.1	55.0	60.1	86.7
23-Sep	53.5	50.9	52.1	53.5	57.1	63.8	65.8	63.0	58.8	45.9	39.3	27.6	25.8	19.7	21.0	24.4	26.9	30.0	34.2	36.9	37.1	38.7	42.6	47.4	42.3	65.8
24-Sep	61.0	63.2	66.0	69.0	77.0	79.8	89.0	92.2	93.7	93.7	88.6	80.9	62.2	49.0	44.4	38.2	35.7	36.9	41.8	48.9	60.6	70.3	72.6	77.2	66.3	93.7
25-Sep	78.7	77.7	78.5	78.8	85.9	87.3	78.9	75.1	67.9	56.3	48.8	42.5	40.4	39.6	39.7	35.4	35.4	43.3	52.2	61.9	58.7	56.9	60.1	68.3	60.3	87.3
26-Sep	77.7	84.7	85.6	87.2	87.5	87.3	87.0	85.1	78.2	68.2	59.6	52.8	46.3	41.3	40.7	37.5	37.3	39.6	47.0	47.6	49.5	54.7	57.7	57.2	62.4	87.5
27-Sep	57.8	59.7	60.1	57.6	64.1	61.3	56.4	55.3	48.8	42.8	39.2	34.7	31.1	29.7	28.0	25.7	26.2	31.6	34.8	33.4	33.9	34.5	41.0	50.3	43.3	64.1
28-Sep	57.3	63.4	69.4	76.4	77.7	79.6	80.7	72.4	62.3	55.9	50.0	42.4	37.6	32.3	28.2	26.5	29.7	38.4	42.0	43.5	49.2	52.4	54.3	54.8	53.2	80.7
29-Sep	57.9	61.5	61.3	64.2	65.7	63.8	62.5	59.4	50.8	47.0	42.4	40.7	41.4	39.4	37.6	38.8	42.2	45.6	47.1	46.0	45.2	43.8	46.1	48.6	50.0	65.7
30-Sep	49.8	51.6	53.7	56.7	58.8	62.2	64.8	66.9	68.5	69.1	67.0	66.9	65.0	64.3	71.0	79.4	84.6	91.8	93.7	92.9	94.3	95.5	94.9	95.7	73.3	95.7
	72.4	74.2	75.8	77.6	79.6	81.3	80.9	77.3	71.6	64.7	57.2	51.1	47.4	44.4	42.6	42.6	44.1	47.5	53.8	59.4	62.6	65.2	67.5	70.2	Diurnal Average	
	98.1	98.3	98.4	98.3	98.6	98.8	98.9	98.8	98.8	97.4	88.6	85.9	90.4	86.4	78.1	83.2	88.0	91.8	93.7	92.9	94.3	95.5	95.2	97.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Kirby South - September 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	1	0.14	0.14
20 - 40	100	13.89	14.03
40 - 60	230	31.94	45.97
60 - 80	224	31.11	77.08
80 - 100	165	22.92	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Kirby South - September 2025

Maximum Speed: 28 km/h on Sep 26 13:00

Maximum Daily Speed Average: 18.8 km/h on Sep 29

Minimum Speed Value: 1 km/h on Sep 2 16:00

Minimum Daily Speed Average: 3.8 km/h on Sep 2

Maximum Diurnal Speed Average: 6.1 km/h at hour 13

Minimum Diurnal Speed Average: 1.3 km/h at hour 19

Monthly Average Velocity: 4.6 km/h 213.6 deg

Percentiles: P_1 = 2 P_{10} = 5 Q_1 = 8 Median = 11 Q_3 = 15 P_{90} = 18 P_{99} = 26

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	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	Average	Maximum
1-Sep	WSW3	NW2	W2	NW3	N4	NE3	N5	NNE6	ENE4	NE6	NNE6	NE4	N5	N7	N9	N11	N9	N8	N5	N5	N6	N8	N8	NNE7	N5.0	N11
2-Sep	NNE9	NNE8	NNE7	NNE6	NNE8	NE5	NE2	NE4	E6	ENE8	E7	NE6	E5	NE6	NNW3	ESE1	SE4	SE4	ESE7	ESE5	SE8	SSE13	S13	S13	E3.8	S13
3-Sep	S13	S14	S15	S13	S14	S15	S15	SSW17	SSW19	S18	SSW17	SSW15	SSW17	SSW14	SW15	WSW16	W14	NW12	N20	N23	N21	N19	N15	N19	SW5.5	N23
4-Sep	NNW15	NNW18	NNW19	NNW16	NNW14	NW14	NNW14	NNW19	NNW19	N20	NNW20	NNW18	NNW19	NNW19	NNW19	NNW18	NNW16	NNW13	NNW9	NNW7	N4	NW4	NNW4	N3	NNW14.0	NNW20
5-Sep	NE2	ESE3	SSE4	SSW5	SSW7	SSW8	SSW8	SSW10	SW11	SSW10	SSW5	SSW7	SSW6	S5	SSW7	SSW5	S8	SSW6	SSW7	S5	S7	S7	S8	S10	SSW6.2	SW11
6-Sep	S9	S11	S11	S11	S10	S9	S11	S13	S12	SSE13	SSE13	S13	S14	SSW17	SSW15	S16	S13	S11	S8	SSE8	SSE9	S11	S11	S11	S11.5	SSW17
7-Sep	SSW11	SSW12	SSW11	SSW11	SW11	SW9	SW9	SW9	WSW10	WSW8	W9	WNW7	W4	ENE2	W3	WNW8	WNW8	WNW8	W9	W7	NW8	N8	NNE10	NNE11	WSW4.9	SSW12
8-Sep	NNE10	NNE8	NNE8	NNE7	NNE7	NNE3	NNE4	NE9	ENE9	NE8	ENE9	ENE9	ENE4	NE1	NW3	NE6	NW5	NNE5	NE5	E6	E8	ESE8	ESE8	SE9	NE5.1	NNE10
9-Sep	SE9	SSE10	SSE12	S11	S8	SSE8	S9	SSE11	SSE12	S13	SSE15	SSE17	S16	S17	SSW16	S17	S14	SSE9	SSE8	SSE11	SSE14	SSE15	SSE14	S12	SSE12.2	S17
10-Sep	SSW10	SSW11	SSW11	SSW9	SW8	SW10	SW11	SW7	WSW12	SW8	WNW9	WNW9	WNW8	WNW10	WNW10	WNW10	NW10	NNW6	N6	N5	N4	N6	NNE7	NNE6	W4.7	WSW12
11-Sep	NE5	ENE4	ESE6	E7	E6	NNE4	NNE4	NE5	NE7	ENE9	ENE10	E11	ENE7	E8	ESE5	SE4	N3	ENE8	E5	ESE6	SSE10	SSE9	SSE10	SSE10	E4.9	E11
12-Sep	SSE10	S9	SSW8	SSE8	S8	S9	SSW10	S10	S11	S11	SSE11	S10	S8	SSE8	SSE5	SSW7	SSW9	SSE7	SSE7	S7	SSE8	SSE11	SSE11	SSE11	S8.7	SSE11
13-Sep	S12	S11	S10	S11	S11	S10	S11	S11	S11	S12	S13	S14	S13	S11	S11	S10	S9	S8	SSE8	SSE9	S9	SSE9	SSE11	S12	S10.6	SSE14
14-Sep	S13	S11	SSW9	S8	SSE9	SSE7	SSW6	ESE11	E5	ESE9	ESE13	E16	ESE14	E15	ENE14	E13	ENE11	ENE7	NE6	E6	ENE5	ENE5	ESE3	SSE3	ESE6.9	E16
15-Sep	SSW2	WSW2	WSW4	SW4	SW7	SW8	WSW9	SW9	SW9	W13	W14	W15	W17	WNW16	WNW17	WNW18	WNW15	WNW15	WNW12	WNW11	NW12	NNW8	NNW6	NW7	WNW9.0	WNW18
16-Sep	NW10	NW10	NW11	WNW10	NW11	NNW10	NNW8	W9	W11	WNW12	WNW8	WNW9	WNW9	NW8	NW10	WNW9	NW6	NNE2	SSE4	ESE7	SSE8	SE8	SSE9	SSE9	WNW4.7	WNW12
17-Sep	SSE11	SSE11	S10	S9	SSE9	SSE9	SSE11	SSE11	S13	S14	S16	S15	SSE16	SSE17	SSE17	SSE16	SSE16	SSE16	SE12	SSE14	SSE18	SSE20	SSE18	SSE18	SSE13.9	SSE20
18-Sep	S15	S15	S18	S16	S18	S19	S18	SSW18	SSW21	S19	S17	SSW17	S19	S18	S17	S15	S13	SSE11	S10	S7	SSW8	S9	S11	S11	S14.8	SSW21
19-Sep	SSW9	SW9	SW4	SW6	WSW3	W6	W8	WNW7	W5	W3	WNW5	W4	W6	W8	W10	WSW9	WSW10	WSW6	SW4	SSW5	SSW7	SSW8	S7	S9	WSW5.3	WSW10
20-Sep	S9	S10	S9	S10	SSW9	SSW10	S10	S10	S10	SSW10	S12	S16	S17	S16	S17	S16	SSE13	SSE11	SSE10	SSE13	SSE15	SSE17	SSE17	SSE16	S12.1	S17
21-Sep	SSE15	S14	S13	SSW12	SW9	WSW8	NW7	N7	NNE13	NNE15	NNE14	NNE14	NNE10	NE7	N5	NNW8	NNW14	NW16	NW19	NW22	NW24	NW13	WNW16	W17	NW6.5	NW24
22-Sep	W14	W16	W17	W18	W16	W13	WSW15	WSW13	W16	W16	W19	W20	W20	WSW21	WSW19	WSW20	WSW17	SW11	SSW10	S11	S11	S12	S14	S13	WSW13.3	WSW21
23-Sep	S15	S16	S13	SSW13	SSW13	SW12	SW10	SW10	SW10	WNW12	WNW15	WNW19	W18	WNW19	WNW16	W16	WNW14	WNW11	W8	WNW9	W8	W10	W10	W11	W9.9	WNW19
24-Sep	WNW9	NW13	NW9	WNW4	WSW5	W12	W11	W16	WSW11	SW14	W17	W17	W22	WNW20	WNW19	WNW18	WNW16	WNW13	WNW9	W9	WSW8	WSW8	WSW8	SW8	W11.4	W22
25-Sep	SW10	SW10	SW10	SW9	SW6	SSW8	SSW8	S10	S9	S11	SSW19	S20	S19	S16	S16	SSE17	SSE16	SSE12	SSE5	SSW4	S10	SW10	WNW9	WNW13	SSW9.9	S20
26-Sep	W13	WSW10	W13	W12	W12	W12	W15	W17	W20	W22	W25	W26	W28	WNW28	WNW25	WNW27	WNW21	W14	W12	W15	W13	SW10	SSW8	SSW9	W16.2	W28
27-Sep	SSW11	SSW10	SSW11	WSW16	WSW16	WSW19	W24	W24	W27	W28	W27	W24	W23	W24	WSW19	WSW18	WSW16	SW11	SW10	WSW12	WSW11	W16	WNW18	WNW19	WSW16.7	W28
28-Sep	W12	SSW9	SSW10	SW11	WSW13	WSW13	WSW14	W17	W16	WNW12	W13	W14	WNW10	W6	SSW2	SSW6	SSE7	SE7	SSE7	SSE9	SSE9	SSE10	SE13	SE14	SW6.5	W17
29-Sep	SE13	SE13	SE14	ESE12	SE15	SE19	SE23	SE25	SSE26	SSE26	SSE28	SSE26	SSE25	S21	S21	SSE23	SSE17	SE14	SE13	SE16	SE17	SSE22	SSE20	SSE20	SSE18.8	SSE28
30-Sep	SSE18	SSE16	S15	S15	S17	S15	S11	SSE9	S8	SSW10	SSW10	SW4	SSW5	NE3	ENE3	ENE11	ENE13	ENE9	ENE6	NW5	NNW6	NNW8	NNW11	NW8	SSE4.2	SSE18
	SSW5.3	SSW5.5	SSW5.8	SSW5.9	SSW5.8	SSW6.0	SW5.9	SW5.6	SW5.9	SW5.3	SW5.7	SW5.4	SW6.1	SW5.1	WSW5.7	SW5.5	WSW4.1	SW2.0	SSW1.3	SSW2.1	S3.0	S3.9	S3.9	S4.6	Diurnal Average	
	SSE18	NNW18	NNW19	W18	S18	S19	W24	SE25	W27	W28	SSE28	SSE26	W28	WNW28	WNW25	WNW27	WNW21	NW16	N20	N23	NW24	SSE22	SSE20	SSE20	Diurnal Maximum	

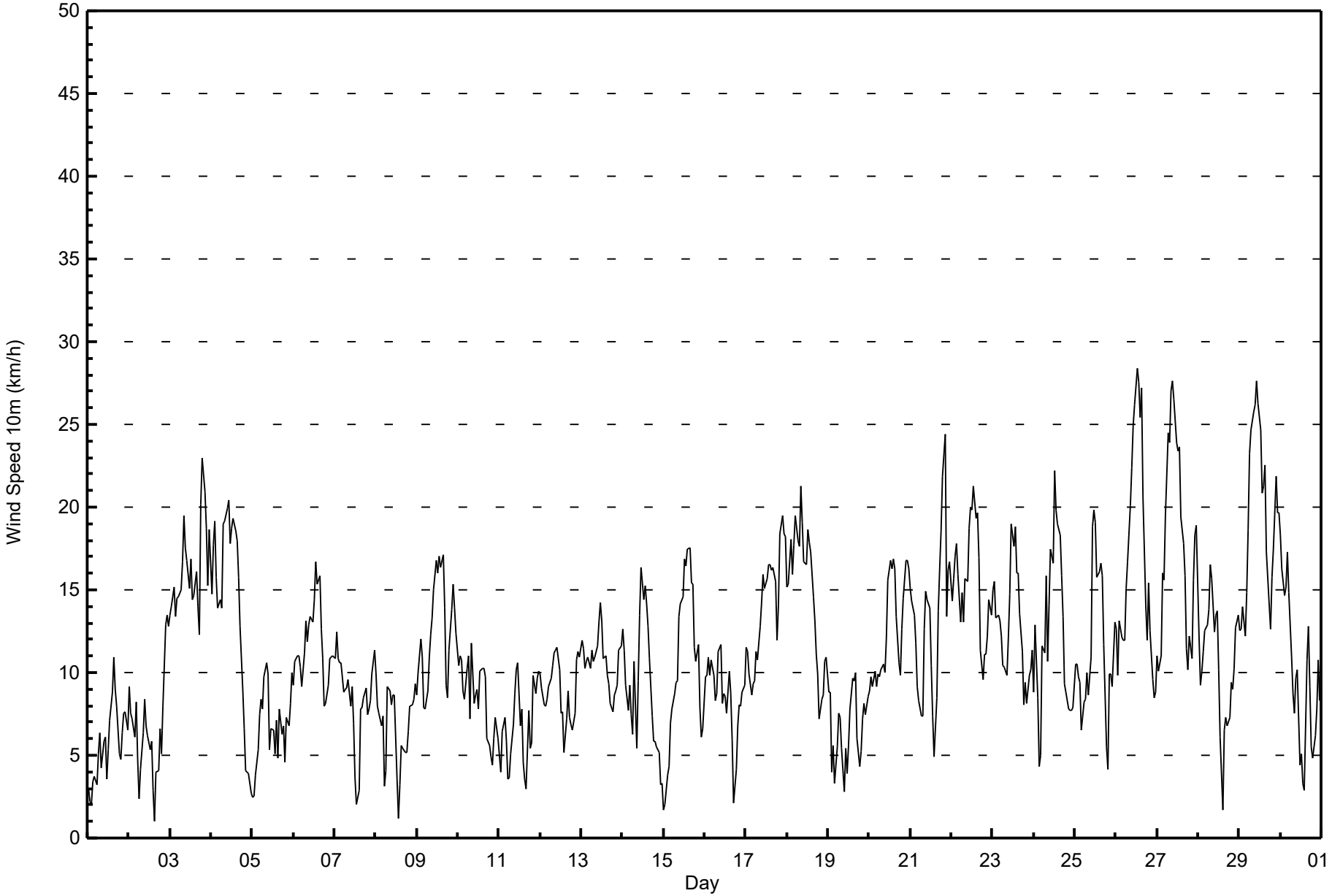
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Kirby South - September 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	86	11.94	11.94
6 - 11	342	47.50	59.44
12 - 19	246	34.17	93.61
20 - 28	46	6.39	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Kirby South - September 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	11	6	10	8	2	6	3	5	2	8	4	5	6	2	6	2	86
6 - 11	12	18	9	13	9	8	5	46	69	43	32	13	17	24	13	11	342
12 - 19	2	4	0	2	3	4	11	35	66	16	3	16	38	22	7	17	246
20 - 28	4	0	0	0	0	0	2	10	3	1	0	2	16	5	2	1	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	29	28	19	23	14	18	21	96	140	68	39	36	77	53	28	31	720

Total Number of Valid Hours: 720

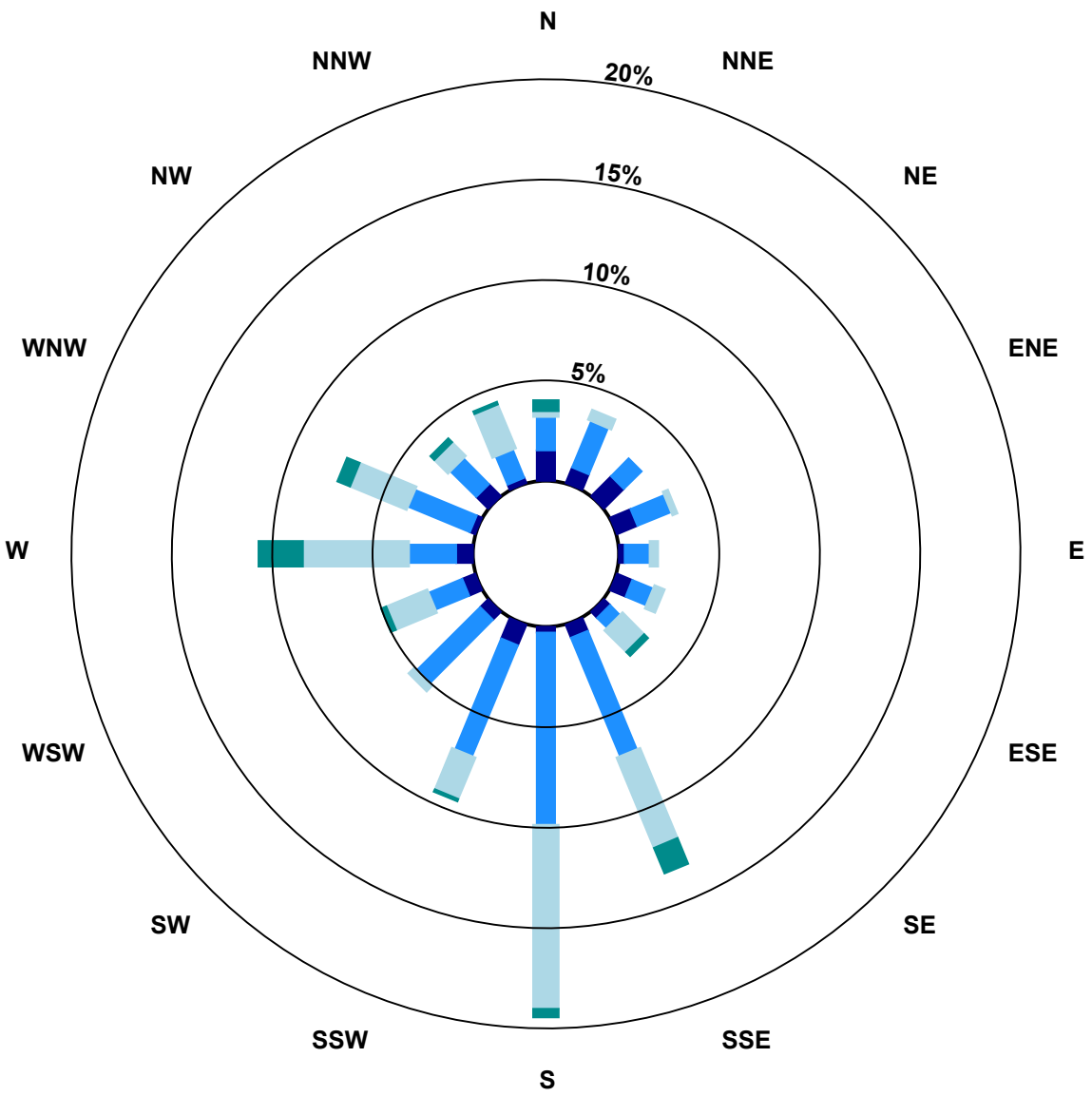
Total Number of Hours: 720

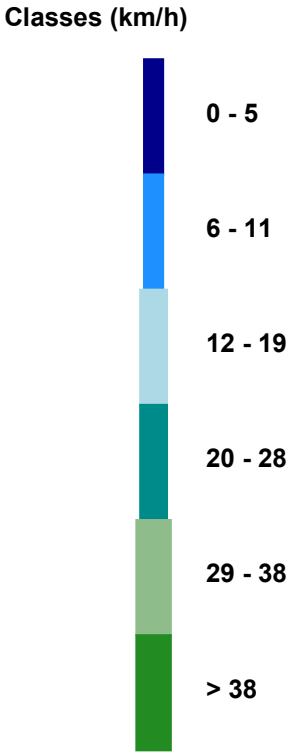
Wood Buffalo Environmental Association

Wind Rose Sep 2025

Wind Speed 10m (WS10) - km/h

Kirby South





Total Number of Valid Hours: 720

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Kirby South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Sep 3 19:00

Minimum Value: 1 km/h on Sep 5 21:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 4 P_{90} = 5 P_{99} = 7

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	1	1	2	1	2	2	2	2	1	2	2	2	1	2	2	3	3	2	1	1	1	1	2	1	3
2-Sep	2	2	1	2	1	1	1	1	2	2	3	3	3	3	3	2	2	2	1	2	2	3	3	3	3
3-Sep	3	3	4	3	3	3	4	5	5	5	4	4	4	4	3	4	3	4	7	7	7	5	5	5	7
4-Sep	4	5	6	5	4	3	4	5	6	6	6	5	5	5	5	6	4	4	3	1	1	1	1	1	6
5-Sep	1	1	1	1	1	1	1	2	2	2	3	4	4	4	3	3	3	2	1	2	1	1	2	1	4
6-Sep	1	2	2	2	2	2	2	3	3	3	3	3	4	4	5	4	4	3	1	1	1	2	2	2	5
7-Sep	2	2	2	2	2	1	2	2	2	2	2	2	2	1	2	1	1	1	2	1	2	2	2	2	2
8-Sep	2	1	1	1	1	2	2	3	2	2	3	3	2	2	2	3	2	2	1	2	1	1	1	2	3
9-Sep	1	2	2	3	2	2	2	2	4	3	4	4	4	4	5	4	4	2	1	2	3	3	3	2	5
10-Sep	2	2	2	2	2	3	2	2	5	3	3	2	3	3	3	2	2	1	1	1	1	1	1	1	5
11-Sep	1	1	1	1	1	1	1	1	1	2	3	3	3	3	2	3	2	3	2	3	1	1	1	1	3
12-Sep	2	2	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	2	1	1	1	1	2	2	3
13-Sep	3	2	2	2	2	2	2	2	3	3	3	3	4	4	3	4	3	2	1	1	1	1	2	2	4
14-Sep	2	2	2	1	3	2	1	2	2	3	3	4	4	5	3	3	3	2	2	1	1	1	1	1	5
15-Sep	1	1	1	2	2	2	2	2	2	3	3	4	4	4	4	4	3	4	3	3	3	2	1	1	4
16-Sep	2	2	2	2	2	2	2	2	2	2	2	4	3	3	4	2	2	1	1	1	1	1	1	1	4
17-Sep	2	2	2	2	2	2	3	3	3	4	4	4	4	4	4	4	4	4	2	3	4	5	5	4	5
18-Sep	4	3	4	4	4	4	4	4	5	5	4	5	5	5	5	5	3	3	2	1	1	2	2	2	5
19-Sep	2	2	2	2	1	1	1	1	1	1	2	2	4	4	4	2	3	1	2	3	1	1	1	1	4
20-Sep	1	1	1	2	2	2	2	2	2	2	3	5	4	4	4	4	3	2	2	2	3	3	4	3	5
21-Sep	3	3	3	2	3	2	2	2	3	4	3	3	3	3	3	3	5	6	5	5	5	6	4	4	6
22-Sep	2	3	3	3	3	3	3	4	3	3	4	5	5	5	4	5	4	3	1	2	2	2	3	3	5
23-Sep	3	3	3	3	2	3	2	2	2	4	4	4	5	4	4	4	3	3	1	2	1	1	2	2	5
24-Sep	2	4	2	2	2	3	3	3	3	3	3	3	5	5	4	5	4	3	1	1	2	1	1	2	5
25-Sep	1	2	2	2	2	1	1	2	2	3	5	6	5	4	4	4	5	4	1	1	2	5	2	2	6
26-Sep	2	3	3	2	2	2	3	3	4	5	5	5	6	7	6	6	5	3	4	4	3	2	3	1	7
27-Sep	3	2	2	5	3	5	5	5	6	6	6	5	5	6	5	4	4	2	1	3	3	3	5	5	6
28-Sep	4	2	2	2	2	3	3	3	3	2	3	3	4	3	2	3	2	1	1	2	1	2	2	3	4
29-Sep	2	2	3	2	3	4	5	5	7	7	7	7	7	6	6	6	4	3	4	4	4	5	5	5	7
30-Sep	4	4	4	4	4	4	3	2	2	2	3	2	3	3	2	2	2	3	2	2	2	3	3	2	4
	4	5	6	5	4	5	5	5	7	7	7	7	7	7	6	6	5	6	7	7	7	6	5	5	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Kirby South - September 2025

Direction of Maximum Speed: 280 deg on Sep 26 13:00
Direction of Maximum Daily Speed Average: 151.1 deg on Sep 29

Direction of Minimum Speed: 110 deg on Sep 2 16:00

Direction of Minimum Daily Speed Average: 3.8 deg on Sep 2

Monthly Average Direction: 213.6 deg

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
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	Average
1-Sep	246	317	268	310	352	41	6	25	65	55	13	44	10	355	358	358	5	7	0	358	4	2	9	31	7.2
2-Sep	18	22	25	27	32	50	36	45	82	78	88	52	101	45	340	110	135	130	104	107	134	157	171	177	88.2
3-Sep	178	177	180	182	180	185	185	194	196	191	196	201	206	203	233	258	275	320	358	7	0	356	349	351	223.9
4-Sep	346	342	346	342	332	321	332	335	342	349	345	348	330	332	328	336	334	338	333	336	351	323	343	351	337.9
5-Sep	46	108	152	195	208	208	203	207	220	206	192	197	205	186	212	193	176	206	211	191	188	186	180	179	195.9
6-Sep	181	185	181	174	176	171	173	171	171	168	168	177	189	196	195	191	187	181	170	163	161	170	174	178	178.3
7-Sep	192	196	207	211	214	228	229	229	243	256	268	284	277	69	260	294	285	283	277	281	313	359	28	26	255.4
8-Sep	26	24	23	13	23	24	12	36	60	54	64	72	63	44	310	36	308	17	55	94	100	106	109	127	52.4
9-Sep	136	156	163	172	171	155	169	167	165	170	165	163	176	186	194	184	179	165	149	149	153	159	166	179	168.0
10-Sep	200	199	212	207	215	222	227	232	242	217	289	293	289	303	294	287	317	335	350	355	6	9	23	32	265.4
11-Sep	56	65	103	100	95	19	21	48	45	61	76	97	71	101	102	132	357	67	96	122	155	162	167	160	97.2
12-Sep	167	191	200	168	178	183	192	188	178	173	165	179	177	160	150	208	195	167	163	174	161	166	162	166	175.6
13-Sep	171	177	176	181	187	179	174	184	180	177	183	169	176	190	189	171	181	170	166	168	169	161	154	172	175.5
14-Sep	175	185	192	175	161	166	196	113	98	114	111	100	104	79	69	90	72	67	54	85	65	76	114	162	113.5
15-Sep	205	252	251	232	225	232	245	224	229	269	268	275	281	295	292	297	303	293	300	298	311	345	342	314	281.8
16-Sep	311	326	315	302	311	332	343	277	278	288	290	283	291	305	306	294	323	14	152	122	153	146	149	158	295.7
17-Sep	166	167	174	172	164	158	162	158	170	177	174	169	165	157	167	167	160	151	143	149	157	158	164	168	163.1
18-Sep	170	171	170	186	184	179	184	195	194	184	191	193	178	184	185	183	172	165	171	184	193	184	183	184	182.4
19-Sep	208	219	214	221	242	276	276	284	278	274	291	276	281	266	281	256	245	251	222	208	195	192	188	179	241.0
20-Sep	184	184	186	191	203	196	191	190	185	199	188	191	183	171	175	178	167	163	151	148	150	153	163	163	175.3
21-Sep	167	173	183	202	219	257	317	355	12	19	13	28	23	44	355	336	328	321	324	307	308	314	292	280	318.4
22-Sep	274	269	263	262	268	267	254	250	264	270	267	259	260	257	246	244	241	227	193	180	180	177	183	183	245.6
23-Sep	181	183	189	201	211	226	227	231	225	288	296	292	281	285	290	272	287	296	279	287	281	279	280	278	259.0
24-Sep	290	314	313	283	247	263	273	272	241	226	269	269	279	283	291	290	294	283	282	261	253	245	247	225	273.6
25-Sep	220	221	223	217	216	203	200	191	187	188	194	186	173	175	169	160	161	160	165	194	179	223	284	285	192.8
26-Sep	275	258	266	270	271	270	272	273	277	276	272	273	280	283	282	282	285	278	259	260	260	223	206	192	270.8
27-Sep	199	202	200	252	246	243	269	265	268	272	274	280	271	264	257	248	245	229	221	237	255	271	294	285	258.6
28-Sep	259	208	212	225	241	253	256	261	278	284	273	272	283	274	203	192	159	144	150	157	156	149	144	138	227.7
29-Sep	130	124	131	121	128	138	140	143	153	159	166	164	168	174	173	167	163	137	128	139	146	152	155	155	151.1
30-Sep	159	168	180	171	170	172	179	163	184	207	211	226	202	49	59	68	72	78	59	325	338	341	347	324	162.1
	192.0	195.1	199.5	206.6	208.2	213.7	221.2	218.2	219.4	220.3	227.7	224.9	229.1	233.9	239.7	235.2	237.3	227.2	200.6	196.7	186.8	178.2	182.3	189.1	
	Diurnal Average																								

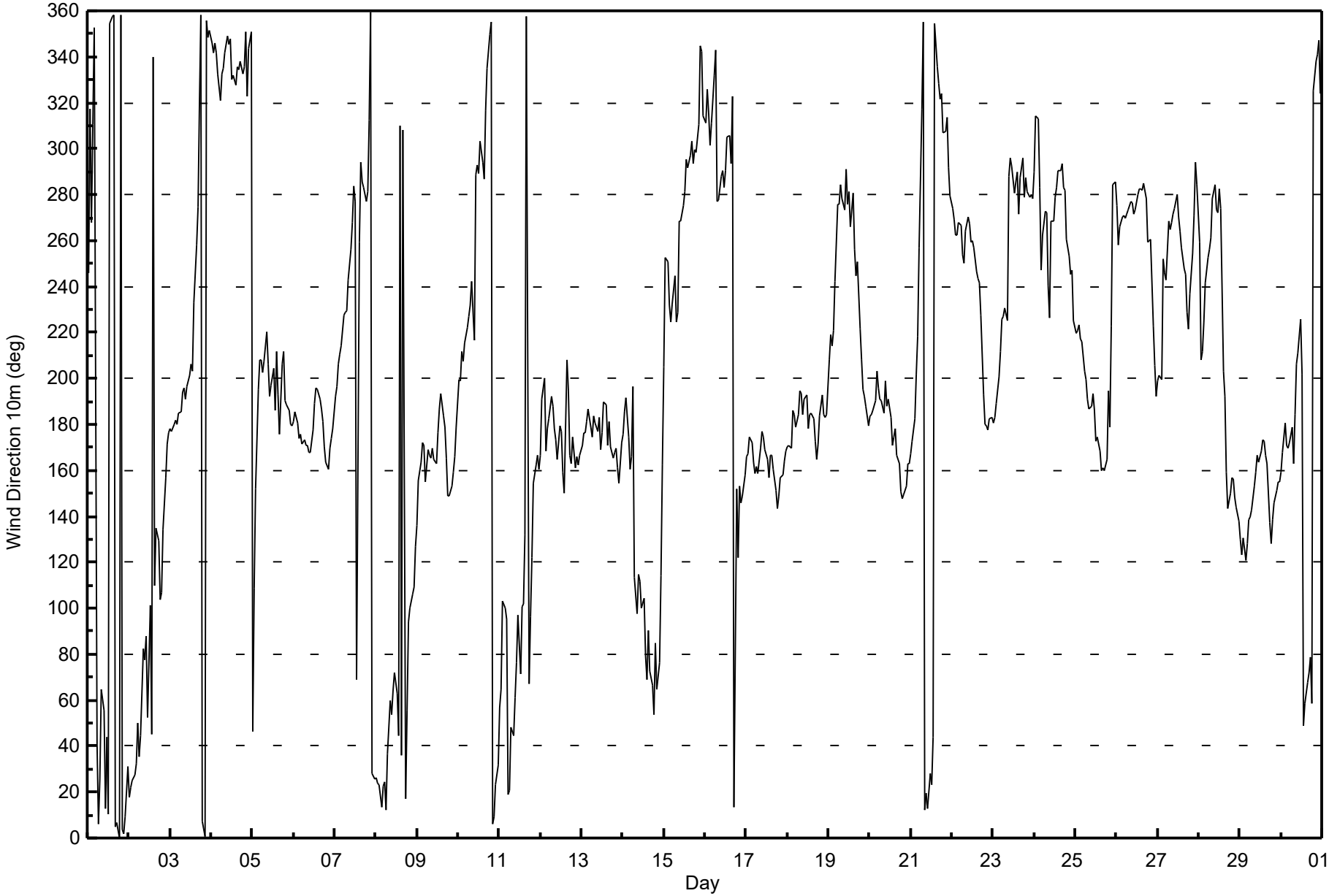
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Kirby South - September 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Kirby South - September 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 103 deg on Sep 8 14:00

Minimum Value: 3 deg on Sep 5 05:00

Percentiles: P_1 = 5 P_{10} = 10 Q_1 = 12 Median = 15 Q_3 = 20 P_{90} = 32 P_{99} = 78

Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Hours of Calibration:	0
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-Sep	51	37	42	38	28	28	19	20	25	27	34	48	20	20	20	20	22	16	18	17	14	14	16	16	51
2-Sep	8	11	11	13	9	12	53	19	20	21	43	54	61	70	86	99	66	45	13	24	18	14	14	14	99
3-Sep	13	13	14	14	14	14	16	16	15	17	18	19	19	17	20	20	12	26	19	16	19	18	18	17	26
4-Sep	17	18	17	17	15	14	17	17	20	22	21	22	19	22	21	21	18	18	15	15	23	15	15	12	23
5-Sep	31	17	15	19	3	7	8	11	14	24	54	52	62	76	48	66	31	24	10	11	4	4	7	7	76
6-Sep	9	10	12	10	11	10	12	14	17	20	20	22	24	24	23	22	18	18	8	9	6	10	11	13	24
7-Sep	12	12	12	10	11	10	11	11	13	16	12	19	30	84	71	15	13	10	10	15	20	18	13	11	84
8-Sep	14	13	12	13	9	41	14	12	22	24	29	34	80	103	79	55	58	34	17	17	7	6	7	9	103
9-Sep	10	11	12	15	15	13	13	14	16	18	18	20	22	21	23	18	18	14	8	10	11	14	14	13	23
10-Sep	15	14	12	13	11	9	9	23	40	17	31	19	32	33	21	18	22	18	16	15	12	11	8	9	40
11-Sep	12	10	14	11	16	16	14	11	15	14	24	25	49	27	64	58	70	14	24	27	9	4	5	8	70
12-Sep	10	19	10	14	12	13	12	13	16	22	21	27	43	51	66	41	24	14	5	8	14	5	9	11	66
13-Sep	13	13	11	10	12	13	12	14	18	18	18	21	25	34	30	27	17	16	7	5	5	5	11	12	34
14-Sep	13	14	14	12	16	24	28	14	22	20	21	22	21	23	15	17	14	15	15	18	14	21	34	20	34
15-Sep	36	24	21	16	10	13	17	12	19	12	13	17	16	19	17	20	17	14	14	14	19	17	18	17	36
16-Sep	15	13	13	13	14	15	18	27	11	15	31	32	36	39	27	24	36	78	22	24	8	9	10	7	78
17-Sep	9	12	14	12	13	12	13	14	16	18	19	20	22	19	20	22	20	14	12	13	14	14	15	15	22
18-Sep	14	15	14	16	14	13	15	16	16	18	20	24	19	22	22	23	20	14	14	10	13	14	14	12	24
19-Sep	16	13	32	32	25	6	5	10	22	52	37	76	67	45	35	32	19	13	28	27	11	6	7	7	76
20-Sep	7	10	11	12	11	11	10	12	14	21	23	21	20	19	19	18	18	14	10	12	12	13	14	13	23
21-Sep	14	14	15	13	18	15	32	17	16	17	20	20	30	46	75	33	31	14	15	14	13	22	13	11	75
22-Sep	11	11	9	9	9	9	11	16	12	13	12	17	19	18	20	19	16	14	10	11	12	12	13	13	20
23-Sep	13	14	14	14	14	11	10	13	13	24	17	18	18	18	19	17	15	15	7	13	9	8	8	11	24
24-Sep	15	15	15	30	48	19	16	10	26	15	13	13	16	18	17	18	17	12	8	17	15	11	14	12	48
25-Sep	7	11	9	8	14	8	8	13	14	20	19	19	20	20	19	18	17	14	10	16	13	44	12	12	44
26-Sep	10	14	10	9	9	9	10	10	11	14	13	14	15	15	14	13	14	11	16	13	14	16	30	12	30
27-Sep	16	11	15	32	19	15	11	11	12	12	14	15	15	19	20	16	19	12	10	17	21	10	17	17	32
28-Sep	23	11	11	11	14	13	12	10	12	17	19	20	33	55	94	44	20	9	11	12	9	11	12	12	94
29-Sep	11	13	12	12	13	12	12	13	15	16	16	15	17	17	19	16	17	13	13	13	14	13	15	14	19
30-Sep	16	16	16	15	15	14	18	16	23	15	19	52	51	83	50	14	14	16	21	38	18	25	16	19	83
	51	37	42	38	48	41	53	27	40	52	54	76	80	103	94	99	70	78	28	38	23	44	34	20	
	Diurnal Maximum																								

Appendix 1 - Summary of Ambient Air Quality Objectives (AAAQOs) and Ambient Air Quality Guidelines (AAAQGs) in September 2025

Site	Paramter	Date/Time	Reference	Period	Reported	Final	Status
Buffalo Viewpoint	PM2.5	1Sep25, 24:00	446085	24-hr	43	43.2	exc
Patricia McInnes	PM2.5	1Sep25, 24:00	446086	24-hr	57	57.3	exc
Athabasca Valley	PM2.5	1Sep25, 24:00	446087	24-hr	65	64.8	exc
Fort Chip	PM2.5	1Sep25, 24:00	446088	24-hr	56	56.3	exc
Barge Landing	PM2.5	1Sep25, 24:00	446089	24-hr	47	46.8	exc
Ft. McKay S	PM2.5	1Sep25, 24:00	446090	24-hr	56	55.9	exc
Anzac	PM2.5	1Sep25, 24:00	446091	24-hr	55	54.6	exc
Wapasu	PM2.5	1Sep25, 24:00	446092	24-hr	34	34.4	exc
Stony Mtn.	PM2.5	1Sep25, 24:00	446093	24-hr	48	47.7	exc
Conklin	PM2.5	1Sep25, 24:00	446094	24-hr	41	40.8	exc
Bertha Ganter	PM2.5	1Sep25, 24:00	446095	24-hr	52	52.1	exc
Janvier	PM2.5	1Sep25, 24:00	446096	24-hr	41	41.1	exc
Fort Hills	PM2.5	1Sep25, 24:00	446097	24-hr	46	46.3	exc
Surmont 2	PM2.5	1Sep25, 24:00	446098	24-hr	43	42.9	exc
Ells River	PM2.5	1Sep25, 24:00	446099	24-hr	48	47.6	exc
Bertha Ganter	PM2.5	2Sep25, 24:00	446095	24-hr	51	50.7	exc
Buffalo Viewpoint	PM2.5	2Sep25, 24:00	446085	24-hr	40	39.6	exc
Patricia McInnes	PM2.5	2Sep25, 24:00	446086	24-hr	42	42.2	exc
Athabasca Valley	PM2.5	2Sep25, 24:00	446087	24-hr	52	51.8	exc
Barge Landing	PM2.5	2Sep25, 24:00	446089	24-hr	45	44.6	exc
Ft. McKay S	PM2.5	2Sep25, 24:00	446090	24-hr	51	50.7	exc
Anzac	PM2.5	2Sep25, 24:00	446091	24-hr	40	40.5	exc
Ells River	PM2.5	2Sep25, 24:00	446099	24-hr	33	33.1	exc
Wapasu	PM2.5	2Sep25, 24:00	446092	24-hr	31	30.5	exc
Stony Mtn.	PM2.5	2Sep25, 24:00	446093	24-hr	68	68.1	exc
Conklin	PM2.5	2Sep25, 24:00	446094	24-hr	54	54.2	exc
Janvier	PM2.5	2Sep25, 24:00	446096	24-hr	64	64.4	exc
Fort Hills	PM2.5	2Sep25, 24:00	446097	24-hr	42	42.2	exc
Surmont 2	PM2.5	2Sep25, 24:00	446098	24-hr	44	44.1	exc
Bertha Ganter	PM2.5	3Sep25, 24:00	446095	24-hr	61	61.3	exc
Buffalo Viewpoint	PM2.5	3Sep25, 24:00	446085	24-hr	50	50.3	exc
Patricia McInnes	PM2.5	3Sep25, 24:00	446086	24-hr	55	54.7	exc
Athabasca Valley	PM2.5	3Sep25, 24:00	446087	24-hr	57	56.9	exc
Fort Chip	PM2.5	3Sep25, 24:00	446088	24-hr	57	56.8	exc

Site	Paramter	Date/Time	Reference	Period	Reported	Final	Status
Barge Landing	PM2.5	3Sep25, 24:00	446089	24-hr	59	59.5	exc
Ft. McKay S	PM2.5	3Sep25, 24:00	446090	24-hr	56	56.2	exc
Anzac	PM2.5	3Sep25, 24:00	446091	24-hr	45	45.1	exc
Wapasu	PM2.5	3Sep25, 24:00	446092	24-hr	54	54.1	exc
Stony Mtn.	PM2.5	3Sep25, 24:00	446093	24-hr	40	41.1	exc
Conklin	PM2.5	3Sep25, 24:00	446094	24-hr	40	39.9	exc
Janvier	PM2.5	3Sep25, 24:00	446096	24-hr	39	38.7	exc
Fort Hills	PM2.5	3Sep25, 24:00	446097	24-hr	53	53.4	exc
Surmont 2	PM2.5	3Sep25, 24:00	446098	24-hr	41	41.4	exc
Bertha Ganter	PM2.5	6Sep25, 24:00	446095	24-hr	32	31.6	exc
Patricia McInnes	PM2.5	6Sep25, 24:00	446086	24-hr	38	38.1	exc
Barge Landing	PM2.5	6Sep25, 24:00	446089	24-hr	34	33.7	exc
Ft. McKay S	PM2.5	6Sep25, 24:00	446090	24-hr	35	35.0	exc
Fort Hills	PM2.5	6Sep25, 24:00	446097	24-hr	46	45.8	exc
Fort Hills	PM2.5	7Sep25, 24:00	446097	24-hr	30	30.2	exc
Bertha Ganter	PM2.5	8Sep25, 24:00	446095	24-hr	30	29.8	exc
Buffalo Viewpoint	PM2.5	8Sep25, 24:00	446085	24-hr	30	29.7	exc
Ft. McKay S	PM2.5	8Sep25, 24:00	446090	24-hr	35	34.7	exc
Fort Hills	PM2.5	8Sep25, 24:00	446097	24-hr	39	39.0	exc
Bertha Ganter	PM2.5	9Sep25, 24:00	446095	24-hr	37	36.8	exc
Buffalo Viewpoint	PM2.5	9Sep25, 24:00	446085	24-hr	29	29.5	exc
Patricia McInnes	PM2.5	9Sep25, 24:00	446086	24-hr	37	36.8	exc
Athabasca Valley	PM2.5	9Sep25, 24:00	446087	24-hr	34	33.8	exc
Barge Landing	PM2.5	9Sep25, 24:00	446089	24-hr	32	32.1	exc
Ft. McKay S	PM2.5	9Sep25, 24:00	446090	24-hr	43	43.5	exc
Anzac	PM2.5	9Sep25, 24:00	446091	24-hr	37	37.0	exc
Fort Hills	PM2.5	9Sep25, 24:00	446097	24-hr	33	33.1	exc
Stony Mtn.	PM2.5	11Sep25, 24:00	446093	24-hr	57	56.9	exc
Conklin	PM2.5	11Sep25, 24:00	446094	24-hr	42	42.3	exc
Janvier	PM2.5	11Sep25, 24:00	446096	24-hr	46	45.9	exc
Anzac	PM2.5	12Sep25, 24:00	446091	24-hr	43	42.6	exc
Wapasu	PM2.5	12Sep25, 24:00	446092	24-hr	51	50.6	exc
Conklin	PM2.5	12Sep25, 24:00	446094	24-hr	43	42.6	exc
Janvier	PM2.5	12Sep25, 24:00	446096	24-hr	45	44.9	exc
Fort Hills	PM2.5	12Sep25, 24:00	446097	24-hr	64	63.6	exc
Bertha Ganter	PM2.5	12Sep25, 24:00	446095	24-hr	68	68.5	exc

Site	Paramter	Date/Time	Reference	Period	Reported	Final	Status
Buffalo Viewpoint	PM2.5	12Sep25, 24:00	446085	24-hr	61	60.9	exc
Patricia McInnes	PM2.5	12Sep25, 24:00	446086	24-hr	68	68.4	exc
Athabasca Valley	PM2.5	12Sep25, 24:00	446087	24-hr	70	69.8	exc
Fort Chip	PM2.5	12Sep25, 24:00	446088	24-hr	60	60.2	exc
Barge Landing	PM2.5	12Sep25, 24:00	446089	24-hr	84	84.1	exc
Ft. McKay S	PM2.5	12Sep25, 24:00	446090	24-hr	78	78.4	exc
Surmont 2	PM2.5	12Sep25, 24:00	446098	24-hr	34	34.1	exc
Bertha Ganter	PM2.5	13Sep25, 24:00	446095	24-hr	49	49.3	exc
Fort Chip	PM2.5	13Sep25, 24:00	446088	24-hr	41	41.1	exc
Barge Landing	PM2.5	13Sep25, 24:00	446089	24-hr	45	45.0	exc
Ft. McKay S	PM2.5	13Sep25, 24:00	446090	24-hr	45	45.1	exc
Wapasu	PM2.5	13Sep25, 24:00	446092	24-hr	33	33.2	exc
Fort Hills	PM2.5	13Sep25, 24:00	446097	24-hr	45	45.5	exc
Bertha Ganter	PM2.5	14Sep25, 24:00	446095	24-hr	55	55.2	exc
Buffalo Viewpoint	PM2.5	14Sep25, 24:00	446085	24-hr	63	63.0	exc
Patricia McInnes	PM2.5	14Sep25, 24:00	446086	24-hr	76	75.9	exc
Athabasca Valley	PM2.5	14Sep25, 24:00	446087	24-hr	71	70.8	exc
Fort Chip	PM2.5	14Sep25, 24:00	446088	24-hr	41	41.1	exc
Barge Landing	PM2.5	14Sep25, 24:00	446089	24-hr	55	54.6	exc
Ft. McKay S	PM2.5	14Sep25, 24:00	446090	24-hr	54	53.5	exc
Anzac	PM2.5	14Sep25, 24:00	446091	24-hr	42	42.2	exc
Wapasu	PM2.5	14Sep25, 24:00	446092	24-hr	172	172.2	exc
Janvier	PM2.5	14Sep25, 24:00	446096	24-hr	30	30.4	exc
Fort Hills	PM2.5	14Sep25, 24:00	446097	24-hr	55	55.0	exc
Ells River	PM2.5	14Sep25, 24:00	446099	24-hr	30	29.6	exc
Ft. McKay S	PM2.5	15Sep25, 24:00	446090	24-hr	31	30.7	exc
Bertha Ganter	SO2	17Sep25, 13:00	445504	1-hr	199	199.2	exc
Barge Landing	SO2	17Sep25, 13:00	445505	1-hr	260	260.0	exc
Waskōw ohci Pimâtisiwin	SO2	17Sep25, 13:00	445510	1-hr	182		exc
Ft. McKay S	PM2.5	17Sep25, 24:00	446090	24-hr	29	29.5	exc
Fort Hills	PM2.5	18Sep25, 24:00	446097	24-hr	32	31.8	exc
Barge Landing	PM2.5	19Sep25, 24:00	446089	24-hr	29	29.3	exc
Ft. McKay S	PM2.5	19Sep25, 24:00	446090	24-hr	31	31.4	exc
Bertha Ganter	PM2.5	24Sep25, 24:00	446095	24-hr	34	34.4	exc
Buffalo Viewpoint	PM2.5	24Sep25, 24:00	446085	24-hr	31	31.1	exc
Barge Landing	PM2.5	24Sep25, 24:00	446089	24-hr	32	31.8	exc

Site	Paramter	Date/Time	Reference	Period	Reported	Final	Status
Fort Hills	PM2.5	24Sep25, 24:00	446097	24-hr	36	35.6	exc
Bertha Ganter	PM2.5	25Sep25, 24:00	446095	24-hr	32	32.2	exc
Barge Landing	PM2.5	25Sep25, 24:00	446089	24-hr	32	31.6	exc
Wapasu	PM2.5	26Sep25, 24:00	446092	24-hr	32	31.8	exc
Buffalo Viewpoint	PM2.5	28Sep25, 24:00	446085	24-hr	31	31.3	exc
Buffalo Viewpoint	PM2.5	29Sep25, 24:00	446085	24-hr	30	30.3	exc
Athabasca Valley	PM2.5	29Sep25, 24:00	446087	24-hr	35	35.0	exc
Wapasu	PM2.5	29Sep25, 24:00	446092	24-hr	33	33.4	exc
Bertha Ganter	PM2.5	30Sep25, 24:00	446095	24-hr	39	39.0	exc
Buffalo Viewpoint	PM2.5	30Sep25, 24:00	446085	24-hr	46	45.6	exc
Patricia McInnes	PM2.5	30Sep25, 24:00	446086	24-hr	36	35.8	exc
Athabasca Valley	PM2.5	30Sep25, 24:00	446087	24-hr	39	38.6	exc
Fort Chip	PM2.5	30Sep25, 24:00	446088	24-hr	39	38.9	exc
Barge Landing	PM2.5	30Sep25, 24:00	446089	24-hr	36	35.5	exc
Ft. McKay S	PM2.5	30Sep25, 24:00	446090	24-hr	32	32.0	exc
Anzac	PM2.5	30Sep25, 24:00	446091	24-hr	41	41.5	exc
Fort Hills	PM2.5	30Sep25, 24:00	446097	24-hr	35	35.2	exc
Ells River	TRS	1Sep25, 10:30		30-min	6	5.9	exc
Bertha Ganter	TRS	9Sep25, 18:30		30-min	5	5.3	exc
Ft. McKay S	TRS	9Sep25, 19:00		30-min	5	5	nae
Barge Landing	TRS	11Sep25, 09:00		30-min	11	11.5	exc
Ft. McKay S	TRS	11Sep25, 09:00		30-min	7	7.3	exc
Bertha Ganter	TRS	11Sep25, 10:00		30-min	5	5.3	exc
Barge Landing	TRS	11Sep25, 09:30		30-min	10	9.8	exc
Barge Landing	TRS	11Sep25, 10:00		30-min	6	6.7	exc
Bertha Ganter	TRS	11Sep25, 10:30		30-min	5	5.5	exc
Barge Landing	TRS	11Sep25, 10:30		30-min	6	6	exc
Bertha Ganter	TRS	12Sep25, 08:00		30-min	5	5.4	exc
Ells River	TRS	12Sep25, 08:00		30-min	6	5.7	exc
Bertha Ganter	TRS	12Sep25, 08:30		30-min	6	6.1	exc
Ells River	TRS	12Sep25, 08:30		30-min	7	6.9	exc
Ells River	TRS	12Sep25, 09:30		30-min	6	5.7	exc
Ft. McKay S	TRS	12Sep25, 17:30		30-min	5	4.9	nae
Ft. McKay S	TRS	12Sep25, 18:00		30-min	6	5.5	exc
Ft. McKay S	TRS	12Sep25, 18:30		30-min	6	5.4	exc
Ft. McKay S	TRS	12Sep25, 19:00		30-min	6	5.3	exc
Fort Hills	TRS	14Sep25, 09:00		30-min	6	5.8	exc
Barge Landing	TRS	15Sep25, 02:30		30-min	6	6.1	exc
Barge Landing	TRS	15Sep25, 06:30		30-min	6	6	exc
Bertha Ganter	TRS	15Sep25, 07:00		30-min	7	7.7	exc

Site	Paramter	Date/Time	Reference	Period	Reported	Final	Status
Ft. McKay S	TRS	15Sep25, 07:00		30-min	6	6.2	exc
Barge Landing	TRS	17Sep25, 12:30		30-min	5	5.3	exc
Bertha Ganter	TRS	17Sep25, 13:00		30-min	8	7.9	exc
Barge Landing	TRS	17Sep25, 13:00		30-min	6	5.7	exc
Bertha Ganter	TRS	17Sep25, 21:30		30-min	6	5.7	exc
Bertha Ganter	TRS	17Sep25, 22:00		30-min	5	5.5	exc
Ft. McKay S	TRS	18Sep25, 00:30		30-min	5	5.1	exc
Ft. McKay S	TRS	18Sep25, 01:00		30-min	6	5.8	exc
Ft. McKay S	TRS	18Sep25, 01:30		30-min	5	4.8	nae
Bertha Ganter	TRS	18Sep25, 02:00		30-min	5	5.5	exc
Barge Landing	TRS	20Sep25, 20:30		30-min	6	5.8	exc
Ells River	TRS	21Sep25, 09:30		30-min	20.334	20.334	nae
Ells River	TRS	24Sep25, 18:30		30-min	10.175	10.175	nae
Ells River	TRS	26Sep25, 11:30		30-min	10.191	10.191	nae
Ells River	TRS	27Sep25, 14:30		30-min	10.1	10.1	nae
Ells River	TRS	30Sep25, 10:00		30-min	11.281	11.281	nae

*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

October 31, 2025
9:52:26 AM
Request # 4857967

Submitted by: EN6138_BAS
Submission Date: Oct 31, 2025 9:50:56 AM

File Type	File Name
Ambient Data	AMB-WBEA-202509-V00.xml

Total Number of Files: 1

*** End of Report ***

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

October 31, 2025
9:57:43 AM
Request # 4857977

Submitted by: EN6138_BAS
Submission Date: Oct 31, 2025 9:57:28 AM

File Type	File Name
Airshed Monitoring Report	WBEA-202509.pdf

Total Number of Files: 1

*** End of Report ***

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

October 31, 2025
9:58:26 AM
Request # 4857978

Submitted by: EN6138_BAS
Submission Date: Oct 31, 2025 9:58:13 AM

File Type	File Name
Calibration Report	CAL-WBEA-202509.pdf

Total Number of Files: 1

*** End of Report ***



End of Report