



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

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Wood Buffalo Environmental Association

APRIL 2025 MONTHLY REPORT

CONTINUOUS MONITORING

May 30, 2025

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





Table of Contents

Continuous Monitoring Summaries

Summary Letter.....	1
Network Summary	15
Bertha Ganter – Fort McKay	1-1
Station Summaries	1-2
Station Percentiles	1-3
Station Downtime	1-4
Data Summaries	1-5
Mildred Lake.....	2-1
Station Summaries	2-2
Station Percentiles	2-3
Station Downtime	2-4
Data Summaries	2-5
Lower Camp Meteorology	3-1
Station Summaries	3-2
Station Percentiles	3-3
Station Downtime	3-4
Data Summaries	3-5
Buffalo Viewpoint.....	4-1
Station Summaries	4-2
Station Percentiles	4-3
Station Downtime	4-4
Data Summaries	4-5
Mannix.....	5-1
Station Summaries	5-2
Station Percentiles	5-3
Station Downtime	5-4
Data Summaries	5-5
Patricia McInnes.....	6-1
Station Summaries	6-2
Station Percentiles	6-3
Station Downtime	6-4
Data Summaries	6-5



Athabasca Valley	7-1
Station Summaries	7-2
Station Percentiles	7-3
Station Downtime	7-4
Data Summaries	7-5
 Fort Chipewyan	 8-1
Station Summaries	8-2
Station Percentiles	8-3
Station Downtime	8-4
Data Summaries	8-5
 Barge Landing.....	 9-1
Station Summaries	9-2
Station Percentiles	9-3
Station Downtime	9-4
Data Summaries	9-5
 Lower Camp	 11-1
Station Summaries	11-2
Station Percentiles	11-3
Station Downtime	11-4
Data Summaries	11-5
 Fort McKay South.....	 13-1
Station Summaries	13-2
Station Percentiles	13-3
Station Downtime	13-4
Data Summaries	13-5
 Anzac	 14-1
Station Summaries	14-2
Station Percentiles	14-3
Station Downtime	14-4
Data Summaries	14-5
 Wapasu.....	 17-1
Station Summaries	17-2
Station Percentiles	17-3
Station Downtime	17-4
Data Summaries	17-5
 Stony Mountain.....	 18-1
Station Summaries	18-2
Station Percentiles	18-3
Station Downtime	18-4
Data Summaries	18-5



Firebag	19-1
Station Summaries	19-2
Station Percentiles	19-3
Station Downtime	19-4
Data Summaries	19-5
 Mackay River	 20-1
Station Summaries	20-2
Station Percentiles	20-3
Station Downtime	20-4
Data Summaries	20-5
 Conklin	 21-1
Station Summaries	21-2
Station Percentiles	21-3
Station Downtime	21-4
Data Summaries	21-5
 Janvier	 22-1
Station Summaries	22-2
Station Percentiles	22-3
Station Downtime	22-4
Data Summaries	22-5
 Fort Hills	 23-1
Station Summaries	23-2
Station Percentiles	23-3
Station Downtime	23-4
Data Summaries	23-5
 Waskōw ohci Pimâtisiwin	 25-1
Station Summaries	25-2
Station Percentiles	25-3
Station Downtime	25-4
Data Summaries	25-5
 Jackfish 2/3	 27-1
Station Summaries	27-2
Station Percentiles	27-3
Station Downtime	27-4
Data Summaries	27-5
 Surmont 2	 29-1
Station Summaries	29-2
Station Percentiles	29-3
Station Downtime	29-4
Data Summaries	29-5



Ells River	30-1
Station Summaries	30-2
Station Percentiles	30-3
Station Downtime	30-4
Data Summaries	30-5
 Blackrod	 31-1
Station Summaries	31-2
Station Percentiles	31-3
Station Downtime	31-4
Data Summaries	31-5
 Monday Creek	 33-1
Station Summaries	33-2
Station Percentiles	33-3
Station Downtime	33-4
Data Summaries	33-5
 Sawbones Bay	 505-1
Station Summaries	505-2
Station Percentiles	505-3
Station Downtime	505-4
Data Summaries	505-5
 Jackfish 1	 506-1
Station Summaries	506-2
Station Percentiles	506-3
Station Downtime	506-4
Data Summaries	506-5
 Kirby North	 508-1
Station Summaries	508-2
Station Percentiles	508-3
Station Downtime	508-4
Data Summaries	508-5
 Hangingstone Expansion	 512-1
Station Summaries	512-2
Station Percentiles	512-3
Station Downtime	512-4
Data Summaries	512-5

**WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AMBIENT AIR QUALITY MONITORING REPORT
April 2025**

REPORT HISTORY

Revision 1: Resubmission of Ozone (O₃) Data for AMS 17 due to Baseline Correction Error

During an internal quality review of the April and May monthly reports, WBEA identified an operator error affecting ozone data at station AMS 17. Specifically, an incorrect baseline points were mistakenly accepted during the analyzer's baseline correction process, impacting data for February, March, and April 2025.

Upon identifying the issue, the WBEA staff reviewed and corrected the affected data in accordance with WBEA's QA/QC validation procedures. As no exceedances occurred during this period, no changes were required to exceedance reporting. However, summary statistics were updated to reflect the corrected data. The corrected AMS 17 data and revised monthly report, incorporating updated ozone values and summaries, were resubmitted to the Electronic Transfer System (ETS) on June 2, 2025.



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May 30, 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 April 2025
Wood Buffalo Environmental Association

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

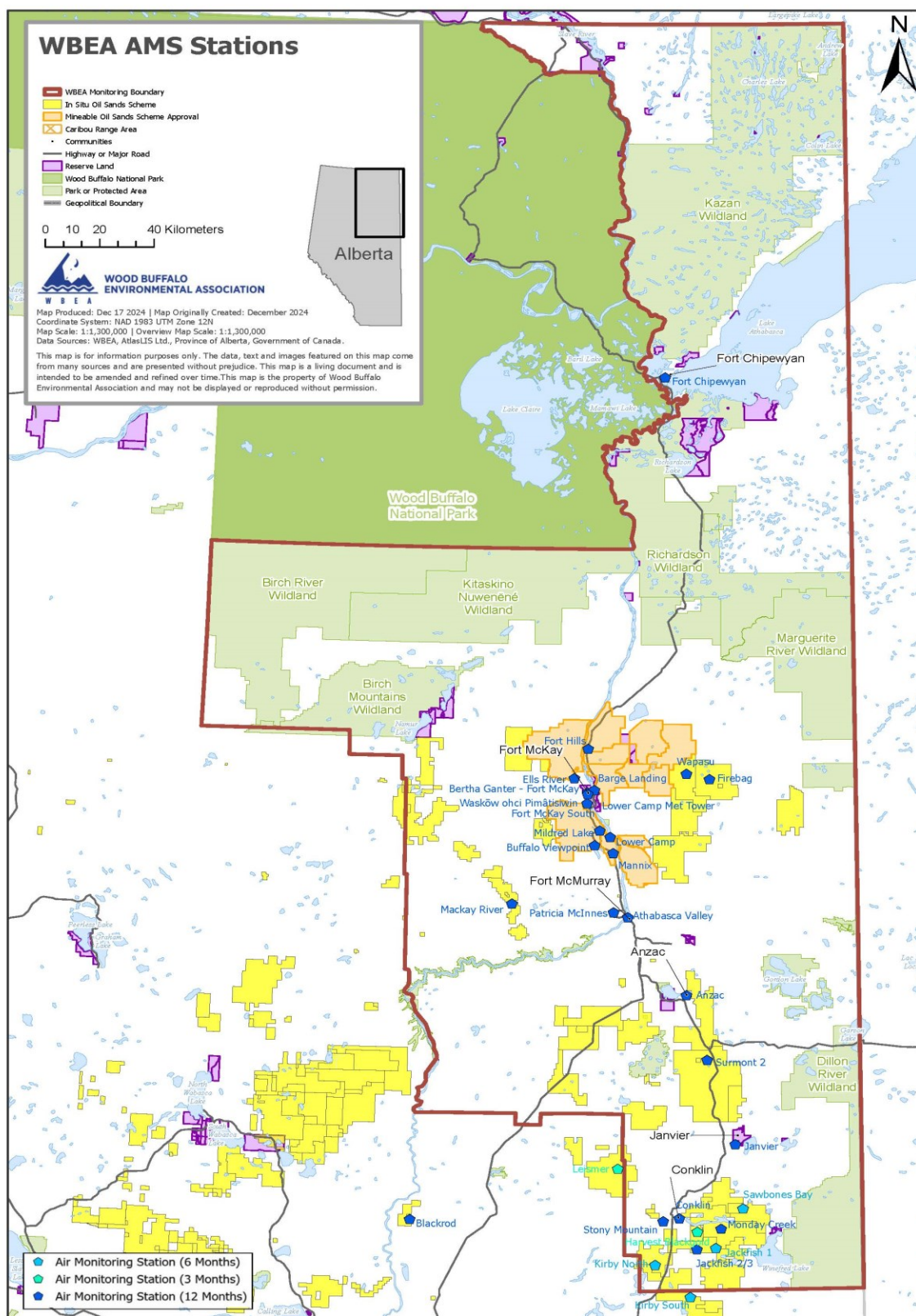
The continuous ambient air quality monitoring network stations are:

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



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

Industry Operators		EPEA Approval No.
Athabasca Oil Operations		289664-01-00; 241311-01-00
Canadian Natural		153125-01-00; 20809-02-00; 149968-01-05; 224816-01-00; 237382-01-00; 308463-00-00
Cenovus Energy Inc.		48522-02-00; 206355-01-00
Chemtrade Logistics		404827-00-00
CNOOC International		137467-01-00, 236394-01-00
Connacher Oil and Gas Ltd.		240008-01-00
ConocoPhillips Company		48263-01-00
Greenfire Resources Operating Corporation		153105-01-00
H.J. Baker Sulphur Canada ULC		426549-00-00
Hammerstone Infrastructure Materials Ltd.		189942-01-00
Harvest Operations Corp.		246984-01-00
Imperial Oil Limited		46586-01-00
Inter Pipeline Limited		73203-02-00
IPC Canada Ltd.		301778-00-01
Keyera Energy Ltd.		187-03-03; 462683-00-00
MEG Energy Corp.		216466-01-00
Parsons Creek Aggregates		231302-00-00
PetroChina Canada Ltd.		254465-01-00
Suncor Energy Inc.		94-03-00; 80105-01-00; 151469-01-00; 48408-02-00
Sunshine Oilsands Ltd.		305529-00-00
Surmont Energy		318401-00-00
Syncrude Canada Ltd.		26-03-00
Titan Tire Reclamation Corporation		364232-00-00
Government and Non-Government Organizations		
Alberta Energy Regulator		Health Canada
Alberta Environment and Protected Areas		Keyano College
Alberta Health		Parks Canada
Alberta Health Services		Regional Municipality of Wood Buffalo
Environment and Climate Change Canada		
Indigenous Communities		
Athabasca Chipewyan First Nation		Fort McKay Métis Nation
Chard Métis Nation		Fort McMurray 468 First Nation
Chipewyan Prairie Dene First Nation		Lakeland Métis
Christina River Dene Nation Council		McMurray Métis
Conklin Resource Development Advisory Committee		Mikisew Cree First Nation
Fort Chipewyan Métis Nation		Smith's Landing First Nation
Fort McKay First Nation		



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

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

There were no ambient concentrations in excess of the Alberta Ambient Air Quality Objectives or Guidelines (AAAQO/AAAQG) as indicated in the Air Monitoring Directive Section RC 15-F for CO, H₂S, NH₃, NO₂, O₃, and SO₂

There was one ambient ground-level concentrations in excess of the 1-hour PM_{2.5} guideline reported to AEPA; following data validation and processing, the exceedance was confirmed.

There was one ambient ground-level concentrations in excess of the 30-minute TRS guideline reported to AEPA; following data validation and processing, the exceedance was confirmed.

Site	Parameter	Date / Time	Reference	Period	Reported	Final	Status*
Ft. McKay S	TRS	15Apr25, 07:30	NA	30-min	7	6.8	exc
Fort Hills	PM _{2.5}	21Apr25, 05:00	439836	1-hr	115	115.5	exc

Status Legend:

late	exceedance, raw values were not found to be in exceedance in real time, and/or were not reported, but final values were found to be an exceedance after data processing.
exc	exceedance, raw values reported in real time were confirmed to be in exceedance after data processing
nae	not an exceedance, raw values reported in real time were found not in exceedance after data processing.
ret	retracted, reported exceedance was found to be not an exceedance after investigation of measurement system status and/or validation of raw data in conjunction with all associated measurement parameters.

2.0 Data Processing and Validation

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

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



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

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

3.0 Operational Status

3.1 Continuous Monitoring

In April 2025, there were 2 instances of monitoring instruments operating less than 90% of the time.

Station	Parameter	Details
Barge Landing	THC/NMHC/CH ₄	The THC/NMHC/CH ₄ analyzer at the Barge Landing AMS operated for less than 90% of April 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on May 9, 2025 (reference number 440537).
		During the month of April, a series of technical issues impacted the THC/NMHC/CH ₄ analyzer data quality resulting in 99 hours of invalid data and an operational time of 85.42% for the month. During the daily system check on April 4 and 5, the daily span was outside of AMD criteria. Subsequent troubleshooting determined analyzer replacement was required, which was completed on April 5. Data during this period was invalidated for a total of 58 hours. From mid to late April, the analyzer displayed excessive baseline noise, indicating instability in the analyzer’s performance. Various maintenance activities were conducted, including recalibration and span adjustments, which rectified the issue on April 29. A total of 41 hours were invalidated during this period.
Fort Chipewyan	Total Reduced Sulphur (TRS)	The TRS analyzer at Fort Chipewyan AMS operated less than 90% of April and May 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on May 28, 2025 (reference number 441112).
		On April 13, during a routine system check, the TRS span failed to meet AMD compliance standards. In response, WBEA promptly initiated an investigation and performed a recalibration of the analyzer on April 15, which temporarily restored compliance. However, by April 21, TRS span checks indicated a decline, resulting in continued non-compliance in the subsequent days. Throughout April, WBEA implemented a series of corrective actions, including the reinstatement of daily quality assurance checks, recalibrations to adjust zero and span settings, replacement of scrubber beads, and ultimately, the replacement of both the TRS analyzer and the external converter. During the data validation process, 320 hours of data were invalidated in April and 616 hours in May.

3.2 Intermittent Monitoring

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

3.3 General Network Notes

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

Total hydrocarbon (THC), non-methane hydrocarbon (NMHC), and methane (CH₄) measurements are collected at some air monitoring stations in the WBEA network using the Thermo Environmental model 55i direct THC/CH₄/NMHC analyzer. This analyzer uses a Gas Chromatography (GC) based system, which resets the baseline value at the start of every run. This may cause the ambient background to indicate a response below the expected 1.8 ppm background level. When all measurable criteria indicate valid data

during the QAQC and validation process, the data is reported without any additional flags. However, a response below the expected 1.8 ppm triggers an investigation of the analyzer to determine if there is an issue.

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

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

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

Station 1, Bertha Ganter – Fort McKay

The NH₃ analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. Additional time is required for stabilization after exposure to high concentrations of NH₃ gas, and this is an inherent behavior in the NH₃ analyzer operations due to the properties of the NH₃ gas. Data for 1 hour following the daily spans have been reported as invalid for a total of 29 hours this month.

Unstable operation due to excessive baseline noise of the PM_{2.5} analyzer on April 1 and 2 resulted in 36 hours of invalid data.

Unstable operation due to excessive baseline drift of the NH₃ analyzer on April 2, 13, and 27 resulted in 3 hours of downtime.

Cleaning of the manifold on April 2 interrupted the normal operations of all gaseous analyzers, except for CO analyzer, for 1 hour.

Maintenance to complete calibration of the NH₃ analyzer over two days on April 14 and 15 resulted in 17 hours of downtime.

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



Station 2, Mildred Lake

Cleaning of the manifold on April 28 interrupted the normal operations of all gaseous analyzers for 1-2 hours.

Flatlines in the output signal of the wind sensor on April 9 and 20 resulted in 9 hours of invalid data.

Station 3, Lower Camp – Meteorology

Failure to record data of the relative humidity and temperature sensor at 20-meter elevation throughout the month resulted in 56 hours of invalid data.

Flatline in the output signal of the wind sensor at 100-meter elevation on April 16 resulted in 1 hour of invalid data.

Flatline in the output signal of the wind sensor at 163-meter elevation on April 16 and 22 resulted in 3 hours of invalid data.

Station 4, Buffalo Viewpoint

Cleaning of the manifold on April 28 interrupted the normal operations of all gaseous analyzers for 1 hour.

Flatlines in the output signal of the wind sensor on April 9 and 20 resulted in 3 hours of invalid data.

Station 5, Mannix

An internal audit on April 8 interrupted the normal operations of all air quality analyzers for 2-3 hours.

Cleaning of the manifold on April 14 interrupted the normal operations of all gaseous analyzers for 2 hours.

The relative humidity sensor at 2-meter elevation operated out of range on April 9 resulting in 4 hours of invalid data.

Flatline in the output signal of the wind sensor at 20-meter elevation on April 16 resulted in 5 hours of invalid data.

Flatline in the output signal of the wind sensor at 45-meter elevation on April 16 resulted in 5 hours of invalid data.

Flatline in the output signal of the wind sensor at 75-meter elevation on April 16, 19 and 20 resulted in 14 hours of invalid data.

Flatline in the output signal of the wind sensor at 90-meter elevation on April 16, 19 and 20 resulted in 18 hours of invalid data.

Station 6, Patricia McInnes

The NH₃ analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. NH₃ analyzers require additional time for stabilization after being exposed to high concentrations, this is due to the physical properties of the NH₃ gas. Data for 1 hour following each daily span has been reported as invalid for a total of 37 hours this month.

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

Maintenance to replace support gas cylinder of the THC/NMHC/CH₄ analyzer on April 17 resulted in 3 hours of invalid data.

Flatline in the output signal of the wind sensor on April 9 and 20 resulted in 10 hours of invalid data.

Station 7, Athabasca Valley

Maintenance to replace support gas cylinders for the THC/NMHC/CH₄ analyzer on April 17 resulted in 2 hours of downtime.

Unstable operation due to excessive baseline noise of the PM_{2.5} analyzer on April 1 resulted in 9 hours of invalid data.

The relative humidity sensor operated out of range on April 9 resulting in 9 hours of invalid data.

Flatlines in the output signal of the wind sensor at 10-meter elevation throughout the month resulted in 10 hours of invalid data.

Station 8, Fort Chipewyan

The station power failure on April 10 interrupted the normal operations of all air quality analyzers for 1 hour.

Unstable operation due to AMD non-compliance of the TRS analyzer on April 12 to 15 resulted in 81 hours of downtime.

Maintenance to verify daily QA response of the TRS analyzer on April 15, 23 and 30 resulted in 4 hours of downtime.

Analyzer failure due to inconsistent response of the TRS analyzer from April 23 to May 1 resulted in 234 hours of downtime.

Station 9, Barge Landing

Unstable operation due to flatline in analyzer output signal of the TRS analyzer on April 3 resulted in 6 hours of invalid data.

The station power failure on April 8 interrupted the normal operations of all air quality analyzers for 6 hours.



Unstable operation due to excessive baseline noise and AMD non-compliance of the THC/NMHC/CH₄ analyzer throughout the month resulted in 67 hours of invalid data. Subsequent maintenances to replace the analyzer, recalibration, and to adjust span on April 4, 21 and 29, resulted in additional 25, 3 and 4 hours of downtime, respectively.

Unstable operation due to excessive baseline noise of the PM_{2.5} analyzer on April 8 to 9 resulted in 27 hours of downtime. Subsequent maintenance to replace the PM_{2.5} analyzer on April 9 and 10 resulted in additional 18 hours of downtime.

Flatlines in the output signal of the wind sensor at 10-meter elevation throughout the month resulted in 14 hours of invalid data.

Station 11, Lower Camp

Maintenance to verify daily QA response of all gaseous analyzers on April 24 resulted in 2 hours of downtime.

Unstable operation due to AMD non-compliance of the THC/NMHC/CH₄ analyzer on April 24 to 25 resulted in 36 hours of invalid data.

Flatlines in the output signal of the wind sensor on April 9 and 20 resulted in 9 hours of invalid data.

Station 13, Fort McKay South

A station power failure on April 8 caused the SO₂ analyzer signal to flatline, this resulted in 3 hours of downtime before the analyzer could be restarted.

The daily span check for the NO_x/NO/NO₂ analyzer was outside the 10% AMD criteria on April 9 due to station calibrator configuration. The station operator purged the gas lines, installed an ozone cleanser, and performed a calibration to validate analyzer response.

Flatlines in the output signal of the wind sensor throughout the March resulted in 9 hours of invalid data.

Station 14, Anzac

The surface leaf wetness sensor operated out of range on April 13 and 16 resulting in 2 hours of invalid data.

Station 17, Wapasu

Unstable operation due O₃ analyzer being unresponsive on April 12 to 13 resulted in 33 hours of invalid data. Subsequent maintenance to reboot and recalibrate the analyzer on April 13 resulted in additional 3 hours of downtime.

The relative humidity sensor operated out of range on April 16 resulting in 2 hours of invalid data.

Flatlines in the output signal of the wind sensor throughout the month resulted in 23 hours of invalid data.



Station 18, Stony Mountain

Maintenance to replace support gas cylinder of the THC/NMHC/CH₄ analyzer on April 17 resulted in 3 hours of invalid data.

Station 19, Firebag

Maintenance to verify daily QA response of all gaseous analyzers on April 25 resulted in 1-2 hours of downtime.

Cleaning of the manifold on April 29 interrupted the normal operations of all gaseous analyzers except for H₂S for 1 hour.

Station 20, MacKay River

Flatlines in the output signal of the wind sensor throughout the month resulted in 28 hours of invalid data.

Station 21, Conklin

The station power failure on April 1 interrupted the normal operations of all air quality analyzers for 6 hours.

A flatline in the output signal of the wind sensor on April 6 and 16 resulted in 3 hours of invalid data.

The relative humidity sensor operated out of range on April 16 and 29 resulting in 3 hours of invalid data.

Station 22, Janvier

A flatline in the output signal of the wind sensor at the 10-meter elevation on April 16 and 17 resulted in 5 hours of invalid data.

A flatline in the output signal of the wind sensor at the 20-meter elevation on April 16 and 17 resulted in 9 hours of invalid data.

Station 23, Fort Hills

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

Station 25, Waskōw ohci Pimâtisiwin

The relative humidity sensor operated out of range on April 9, 13 and 23 resulting in 38 hours of invalid data.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 22 hours of invalid data.



Station 27, Jackfish 2/3

No operational issues to note.

Station 29, Surmont 2

Cleaning of the manifold on April 14 interrupted the normal operations of the H₂S and NO_x/NO/NO₂ analyzers for 1 hour.

Maintenance to replace the PM_{2.5} analyzer and subsequent stabilization of the analyzer on April 14 and 15 resulted in 19 hours of downtime.

An internal audit on April 17 interrupted the normal operations of all air quality analyzers for 1 to 3 hours.

A flatline in the output signal of the wind sensor on April 4, 9, and 14 resulted in 9 hours of invalid data.

Station 30, Ells River

Cleaning of the manifold on April 16 interrupted the normal operations of all gaseous analyzers, except for NO_x/NO/NO₂ analyzer, for 1 hour.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 21 hours of invalid data.

Station 31, Blackrod

No operational issues to note.

Station 33, Monday Creek

Maintenance to replace the NO_x/NO/NO₂ analyzer and subsequent stabilization of the analyzer on April 2 and 3 resulted in 18 hours of downtime.

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

Station 505, Sawbones Bay

Note: The Sawbones Bay AMS portable commenced monitoring on April 1, 2025. Install calibration were completed in March and April 2025 and files are included with routine monthly calibration files, in the monthly calibration report for April 2025.

A flatline in the output signal of the wind sensor on April 11 resulted in 2 hours of invalid data.

Station 506, Jackfish 1

A flatline in the output signal of the wind sensor on April 16 through 18 resulted in 35 hours of invalid data.



Station 508, Kirby North

Maintenance to replace the power distribution card on April 3 interrupted the normal operations of all parameters for 1 hour.

Station 512, Hangingstone Expansion

Maintenance to verify daily QA response of the NO_x/NO/NO₂ analyzer on April 8 resulted in 1 hour of downtime.

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

Yours sincerely,

Wood Buffalo Environmental Association

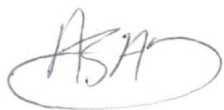
The representative of the Person Responsible for this monitoring program is Emilie Briggs, Operations Manager, WBEA.

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 and Denny Estador 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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E: ahidayat@wbea.org

Denny Estador, Data Technician
Wood Buffalo Environmental Association
T: (780) 713-8510
E: destador@wbea.org

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.



Asad Hidayat
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R01_2504



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

	April 2025 Page 1 of 3 Created: May 30 2025 09:16:55									
APPROVAL NUMBERS	REPORT DATE									
	MONTH	YEAR								
289664-00-00	4	2025								
241311-00-00	CONTINUOUS AMBIENT MONITORING									
20809-02-00										
149968-01-00										
237382-00-00			30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE			
48522-01-00	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	
240008-00-00	SO2(ppb)	1	100	-	-	27	0	6.4	0	
48263-01-00	SO2(ppb)	2	100	-	-	58.1	0	12.6	0	
224816-00-00	SO2(ppb)	4	100	-	-	36.4	0	6.5	0	
151469-01-00	SO2(ppb)	5	99	-	-	37.5	0	3.7	0	
189942-00-00	SO2(ppb)	6	100	-	-	20.3	0	3.7	0	
206355-00-00	SO2(ppb)	7	100	-	-	16.6	0	2.3	0	
46586-00-00	SO2(ppb)	8	100	-	-	1.7	0	0.6	0	
73203-02-00	SO2(ppb)	9	99	-	-	26.8	0	4.6	0	
216466-01-00	SO2(ppb)	11	100	-	-	30.3	0	3.9	0	
137467-01-00	SO2(ppb)	13	100	-	-	83.3	0	12.5	0	
236394-00-00	SO2(ppb)	14	100	-	-	10.8	0	1.5	0	
254465-00-00	SO2(ppb)	17	100	-	-	16.8	0	2.9	0	
094-03-00	SO2(ppb)	18	100	-	-	3.3	0	1.0	0	
80105-01-00	SO2(ppb)	19	100	-	-	26.2	0	3.8	0	
305529-00-00	SO2(ppb)	20	100	-	-	16.9	0	2.9	0	
318401-00-00	SO2(ppb)	21	99	-	-	4.3	0	0.9	0	
026-03-00	SO2(ppb)	22	100	-	-	2.6	0	0.9	0	
364232-00-00	SO2(ppb)	23	100	-	-	19.1	0	3.5	0	
228044-00-00	SO2(ppb)	25	100	-	-	27.7	0	6.2	0	
247548-00-00	SO2(ppb)	27	100	-	-	15.2	0	2.0	0	
231302-00-00	SO2(ppb)	29	100	-	-	11.8	0	1.6	0	
246984-01-00	SO2(ppb)	30	100	-	-	30.9	0	3.4	0	
153125-01-00	SO2(ppb)	31	100	-	-	1.5	0	0.5	0	
	SO2(ppb)	33	100	-	-	12.3	0	2.0	0	
	SO2(ppb)	505	100	-	-	36.8	0	6.9	0	
	SO2(ppb)	506	100	-	-	20.8	0	3.3	0	
	SO2(ppb)	508	100	-	-	6.4	0	2.3	0	
	SO2(ppb)	512	100	-	-	64.3	0	6.9	0	
	H2S(ppb)	1	100	-	-	2.3	0	0.6	0	
	H2S(ppb)	2	100	-	-	3.2	0	0.6	0	
	H2S(ppb)	4	100	-	-	3.4	0	0.5	0	
	H2S(ppb)	5	99	-	-	5.3	0	0.8	0	
	H2S(ppb)	11	100	-	-	4.2	0	0.6	0	
	H2S(ppb)	17	100	-	-	0.9	0	0.2	0	
	H2S(ppb)	19	100	-	-	1.4	0	0.2	0	
	H2S(ppb)	20	100	-	-	1.0	0	0.2	0	
	H2S(ppb)	25	100	-	-	2.9	0	0.8	0	
	H2S(ppb)	27	100	-	-	1.0	0	0.2	0	
	H2S(ppb)	29	100	-	-	1.0	0	0.2	0	
	H2S(ppb)	31	100	-	-	3.7	0	0.3	0	
	H2S(ppb)	33	100	-	-	0.5	0	0.2	0	
	H2S(ppb)	505	100	-	-	4.3	0	0.8	0	
	H2S(ppb)	506	100	-	-	7.5	0	0.6	0	
	H2S(ppb)	508	100	-	-	4.0	0	0.4	0	
	H2S(ppb)	512	100	-	-	2.0	0	0.3	0	
	TRS(ppb)	1	100		2.9	0	2.7	-	1.0	-
	TRS(ppb)	6	100		0.8	0	0.7	-	0.3	-
	TRS(ppb)	7	100		1.7	0	1.4	-	0.3	-
	TRS(ppb)	8	56		0.4	0	0.3	-	0.2	-
	TRS(ppb)	9	98		3.6	0	3.1	-	0.9	-
	TRS(ppb)	13	100		6.8	1	5.4	-	1.0	-
	TRS(ppb)	14	100		0.9	0	0.7	-	0.3	-
	TRS(ppb)	18	100		0.7	0	0.7	-	0.5	-
	TRS(ppb)	21	99		0.5	0	0.4	-	0.3	-
TRS(ppb)	22	100		0.6	0	0.5	-	0.2	-	
TRS(ppb)	23	100		2.8	0	2.7	-	0.9	-	
TRS(ppb)	30	100		2.6	0	2.2	-	1.0	-	
THC(ppm)	1	100		-	-	3.0	-	2.4	-	
THC(ppm)	2	100		-	-	3.8	-	2.4	-	
THC(ppm)	4	100		-	-	4.3	-	2.2	-	
THC(ppm)	5	99		-	-	4.1	-	2.4	-	
THC(ppm)	6	99		-	-	3.1	-	2.2	-	

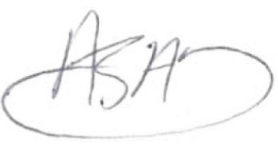
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

April 2025
Page 2 of 3
Created: May 30 2025 09:16:55

	April 2025 Page 2 of 3 Created: May 30 2025 09:16:55								
APPROVAL NUMBERS	REPORT DATE								
	MONTH	YEAR							
289664-00-00	4	2025							
241311-00-00	CONTINUOUS AMBIENT MONITORING								
20809-02-00				30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
149968-01-00	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
237382-00-00	THC(ppm)	7	100	-	-	2.4	0	2.1	-
48522-01-00	THC(ppm)	9	85	-	-	2.9	0	2.3	-
240008-00-00	THC(ppm)	11	95	-	-	3.2	0	2.2	-
48263-01-00	THC(ppm)	13	100	-	-	3.0	0	2.5	-
224816-00-00	THC(ppm)	14	100	-	-	2.2	0	2.0	-
151469-01-00	THC(ppm)	17	100	-	-	3.0	0	2.3	-
189942-00-00	THC(ppm)	18	100	-	-	2.1	0	2.1	-
206355-00-00	THC(ppm)	19	100	-	-	2.6	0	2.2	-
46586-00-00	THC(ppm)	20	100	-	-	3.0	0	2.4	-
73203-02-00	THC(ppm)	21	99	-	-	2.4	0	2.1	-
216466-01-00	THC(ppm)	22	100	-	-	2.3	0	2.1	-
137467-01-00	THC(ppm)	23	100	-	-	8.0	0	3.2	-
236394-00-00	THC(ppm)	29	100	-	-	2.4	0	2.4	-
254465-00-00	THC(ppm)	30	100	-	-	5.1	0	2.8	-
094-03-00	THC(ppm)	508	100	-	-	2.5	0	2.3	-
80105-01-00	O3(ppb)	1	100	-	-	50.8	0	34.9	-
305529-00-00	O3(ppb)	4	100	-	-	53.9	0	44.4	-
318401-00-00	O3(ppb)	6	100	-	-	59.8	0	46.1	-
026-03-00	O3(ppb)	7	100	-	-	59.5	0	45.3	-
364232-00-00	O3(ppb)	8	100	-	-	49.5	0	44.9	-
228044-00-00	O3(ppb)	13	100	-	-	52.8	0	38.3	-
247548-00-00	O3(ppb)	14	100	-	-	56.4	0	49.9	-
231302-00-00	O3(ppb)	17	95	-	-	57.0	0	48.6	-
246984-01-00	O3(ppb)	18	100	-	-	54.7	0	49.2	-
153125-01-00	O3(ppb)	21	99	-	-	60.2	0	46.8	-
	O3(ppb)	22	100	-	-	61.3	0	51.8	-
	NO2(ppb)	1	100	-	-	40.3	0	16.3	-
	NO2(ppb)	4	100	-	-	28.0	0	8.7	-
	NO2(ppb)	6	100	-	-	27.2	0	9.0	-
	NO2(ppb)	7	100	-	-	31.8	0	11.0	-
	NO2(ppb)	8	100	-	-	9.8	0	2.6	-
	NO2(ppb)	9	99	-	-	46.3	0	20.4	-
	NO2(ppb)	13	100	-	-	27.2	0	14.3	-
	NO2(ppb)	14	100	-	-	15.8	0	3.3	-
	NO2(ppb)	17	100	-	-	23.3	0	5.9	-
	NO2(ppb)	18	100	-	-	3.8	0	1.2	-
	NO2(ppb)	19	100	-	-	29.8	0	5.6	-
	NO2(ppb)	20	100	-	-	17.7	0	4.0	-
	NO2(ppb)	21	99	-	-	21.5	0	2.8	-
	NO2(ppb)	22	100	-	-	5.0	0	2.1	-
	NO2(ppb)	23	100	-	-	47.6	0	25.2	-
	NO2(ppb)	27	100	-	-	8.7	0	1.8	-
	NO2(ppb)	29	99	-	-	11.9	0	3.0	-
	NO2(ppb)	30	100	-	-	46.3	0	15.5	-
	NO2(ppb)	31	100	-	-	25.0	0	10.0	-
	NO2(ppb)	33	98	-	-	20.4	0	5.1	-
	NO2(ppb)	505	100	-	-	23.5	0	9.1	-
	NO2(ppb)	506	100	-	-	14.2	0	3.8	-
	NO2(ppb)	508	100	-	-	8.9	0	3.2	-
	NO2(ppb)	512	100	-	-	7.7	0	2.9	-
	CO(ppm)	1	100	-	-	0.4	0	0.3	-
	CO(ppm)	7	100	-	-	0.4	0	0.2	-
	CO(ppm)	8	100	-	-	0.2	0	0.1	-
	CO(ppm)	18	100	-	-	0.2	0	0.2	-
	CO2(ppm)	1	100	-	-	475.8	-	461.6	-
	CO2(ppm)	8	100	-	-	450.2	-	444.7	-
	CO2(ppm)	18	100	-	-	455.3	-	445.5	-
	NH3(ppb)	1	93	-	-	0.0	0	0.0	-
	NH3(ppb)	6	95	-	-	0.0	0	0.0	-
	PM2.5(ug/m3)	1	95	-	-	45.5	0	15.4	0
	PM2.5(ug/m3)	4	100	-	-	21.6	0	7.7	0
	PM2.5(ug/m3)	6	100	-	-	74.0	0	8.5	0

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

April 2025
Page 3 of 3
Created: May 30 2025 09:16:55

APPROVAL NUMBERS	REPORT DATE								
	MONTH	YEAR							
289664-00-00 241311-00-00 20809-02-00 149968-01-00 237382-00-00 48522-01-00 240008-00-00 48263-01-00 224816-00-00 151469-01-00 189942-00-00 206355-00-00 46586-00-00 73203-02-00 216466-01-00 137467-01-00 236394-00-00 254465-00-00 094-03-00 80105-01-00 305529-00-00 318401-00-00 026-03-00 364232-00-00 228044-00-00 247548-00-00 231302-00-00 246984-01-00 153125-01-00	4	2025	CONTINUOUS AMBIENT MONITORING						
			30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE		
	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
	PM2.5(ug/m3)	7	99	-	-	21.7	0	10.2	0
	PM2.5(ug/m3)	8	100	-	-	20.6	0	4.2	0
	PM2.5(ug/m3)	9	93	-	-	39.7	0	17.7	0
	PM2.5(ug/m3)	13	100	-	-	32.2	0	13.5	0
	PM2.5(ug/m3)	14	100	-	-	23	0	4.7	0
	PM2.5(ug/m3)	17	100	-	-	18.6	0	5.7	0
	PM2.5(ug/m3)	18	100	-	-	7.4	0	5	0
	PM2.5(ug/m3)	21	99	-	-	40.2	0	6.8	0
	PM2.5(ug/m3)	22	100	-	-	24.9	0	5.3	0
	PM2.5(ug/m3)	23	100	-	-	115.5	1	18.7	0
	PM2.5(ug/m3)	29	97	-	-	263.7	0	25.3	0
	PM2.5(ug/m3)	30	100	-	-	30.1	0	12.1	0
	WS(km/h)	1	98	-	-	-	-	-	-
	WS(km/h)	2	99	-	-	-	-	-	-
	WS(km/h)	4	100	-	-	-	-	-	-
	WS(km/h)	5	99	-	-	-	-	-	-
	WS(km/h)	6	99	-	-	-	-	-	-
	WS(km/h)	7	99	-	-	-	-	-	-
	WS(km/h)	8	97	-	-	-	-	-	-
	WS(km/h)	9	100	-	-	-	-	-	-
	WS(km/h)	11	99	-	-	-	-	-	-
	WS(km/h)	13	99	-	-	-	-	-	-
	WS(km/h)	14	100	-	-	-	-	-	-
	WS(km/h)	17	97	-	-	-	-	-	-
	WS(km/h)	18	100	-	-	-	-	-	-
	WS(km/h)	19	100	-	-	-	-	-	-
	WS(km/h)	20	96	-	-	-	-	-	-
	WS(km/h)	21	100	-	-	-	-	-	-
	WS(km/h)	22	99	-	-	-	-	-	-
	WS(km/h)	23	99	-	-	-	-	-	-
	WS(km/h)	25	97	-	-	-	-	-	-
	WS(km/h)	27	100	-	-	-	-	-	-
	WS(km/h)	29	99	-	-	-	-	-	-
	WS(km/h)	30	97	-	-	-	-	-	-
	WS(km/h)	31	100	-	-	-	-	-	-
	WS(km/h)	33	100	-	-	-	-	-	-
	WS(km/h)	505	100	-	-	-	-	-	-
	WS(km/h)	506	95	-	-	-	-	-	-
	WS(km/h)	508	100	-	-	-	-	-	-
	WS(km/h)	512	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 APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY - BERTHA GANTER (AMS01)
APRIL 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	35	36	99.86	-	-	26.8	0	6.4	0
H2S(ppb) Average	683	36	37	99.86	-	-	2.3	0	0.6	0
TRS(ppb) Average	684	35	36	99.86	2.9	0	2.7	-	1	-
THC(ppm) Average	684	35	36	99.86	-	-	3	-	2.4	-
NMHC(ppm) Average	684	35	36	99.86	-	-	0.302	-	0.111	-
CH4(ppm) Average	684	35	36	99.86	-	-	2.8	-	2.3	-
O3 (ppb) Average	685	34	35	99.86	-	-	50.8	0	34.9	-
NO2 (ppb) Average	682	37	38	99.86	-	-	40.3	0	16.3	-
NO (ppb) Average	682	37	38	99.86	-	-	40.3	-	7.8	-
NOX (ppb) Average	682	37	38	99.86	-	-	59.5	-	19.9	-
NH3 (ppb) Average	627	43	93	93.06	-	-	0	0	0	-
PM2.5 (ug/m3) Average	681	3	39	95	-	-	45.5	0	15.4	0
CO(ppm) Average	685	35	35	100	-	-	0.4	0	0.3	0
CO2(ppm) Average	685	34	35	99.86	-	-	475.8	0	461.6	0
Temperature 2 m (C) Average	720	0	0	100	-	-	23	-	13.2	-
Temperature 10 m (C) Average	720	0	0	100	-	-	22.4	-	13.6	-
Relative Humidity (%) Average	720	0	0	100	-	-	98.7	-	92.1	-
Wind Speed 10 m (km/h) Average	707	0	13	98.19	-	-	31	-	17	-
Wind Direction 10 m (deg) Average	707	0	13	98.19	-	-	-	-	-	-
Precipitation (mm) Total	720	0	0	100	-	-	3.9	-	14.3	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	70.2	-	31.9	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	825.5	-	290.9	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	1.16	3.3	-	0	0	0	0.1	0.5	3.1	26.8
H2S (ppb) Average	683	0.18	0.2	-	0	0	0.1	0.1	0.2	0.4	2.3
TRS (ppb) Average	684	0.55	0.2	-	0.3	0.4	0.4	0.5	0.6	0.8	2.7
THC (ppm) Average	684	2.13	0.2	-	2	2	2	2.1	2.2	2.3	3
NMHC(ppm) Average	684	0.027	0.047	-	0	0	0	0	0	0.1	0.302
CH4(ppm) Average	684	2.1	0.1	-	2	2	2	2.1	2.1	2.3	
O3 (ppb) Average	685	25	11.2	-	0.5	8.4	17	26.5	33.5	38.3	50.8
NO2 (ppb) Average	682	6.25	6.4	-	0	0	1.4	4.3	9.1	14.9	40.3
NO (ppb) Average	682	1.95	3.7	-	0	0	0	0.9	2.2	4.8	40.3
NOX (ppb) Average	682	8.2	8.5	-	0	1	2.2	5.6	11.2	18.7	59.5
NH3 (ppb) Average	627	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	681	6.63	5.3	-	0.1	2.3	3.4	5.2	8.1	12.9	45.5
CO(ppm) Average	685	0.24	0	-	0.1	0.2	0.2	0.2	0.3	0.3	0.4
CO2(ppm) Average	685	447.66	7	-	438.8	441.4	442.6	445.2	450.8	459	475.8
Temperature 2 m (C) Average	720	4.15	6.6	-	-14.2	-3.9	-0.3	3.9	8.8	13	23
Temperature 10 m (C) Average	720	4.1	6.5	-	-13.7	-3.8	-0.2	4.1	8.7	12.5	22.4
Relative Humidity (%) Average	720	58.98	21.5	-	14.8	29.4	41.9	59.8	74.6	89.4	98.7
Wind Speed 10 m (km/h) Average	707	9	6	-	1	3	4	8	13	17	31
Wind Direction 10 m (deg) Average	707	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	30.31	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	720	4.77	9	-	0.3	1	1.4	1.9	2.8	12	70.2
Global Solar Radiation (W/m2) Average	720	198.75	254.5	-	0	0	0	51.3	374.1	634.4	825.5

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
All Gaseous Analyzers (except CO)	02 Apr 2025 15:00	02 Apr 2025 15:00	1	Maintenance - sample manifold cleaned
PM2.5	01 Apr 2025 01:00	02 Apr 2025 12:00	36	Unstable Operation - excessive baseline noise
NH3	02 Apr 2025 10:00	02 Apr 2025 10:00	1	Unstable Operation - excessive baseline noise
NH3	13 Apr 2025 08:00	13 Apr 2025 08:00	1	Unstable Operation - excessive baseline noise
NH3	27 Apr 2025 21:00	27 Apr 2025 21:00	1	Unstable Operation - excessive baseline noise
NH3	14 Apr 2025 19:00	15 Apr 2025 11:00	17	Maintenance - calibration in progress
NH3	01 Apr 2025 06:00	30 Apr 2025 05:00	29	Stabilization after daily QA check
Wind Speed, Wind Direction	08 Apr 2025 22:00	25 Apr 2025 07:00	13	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

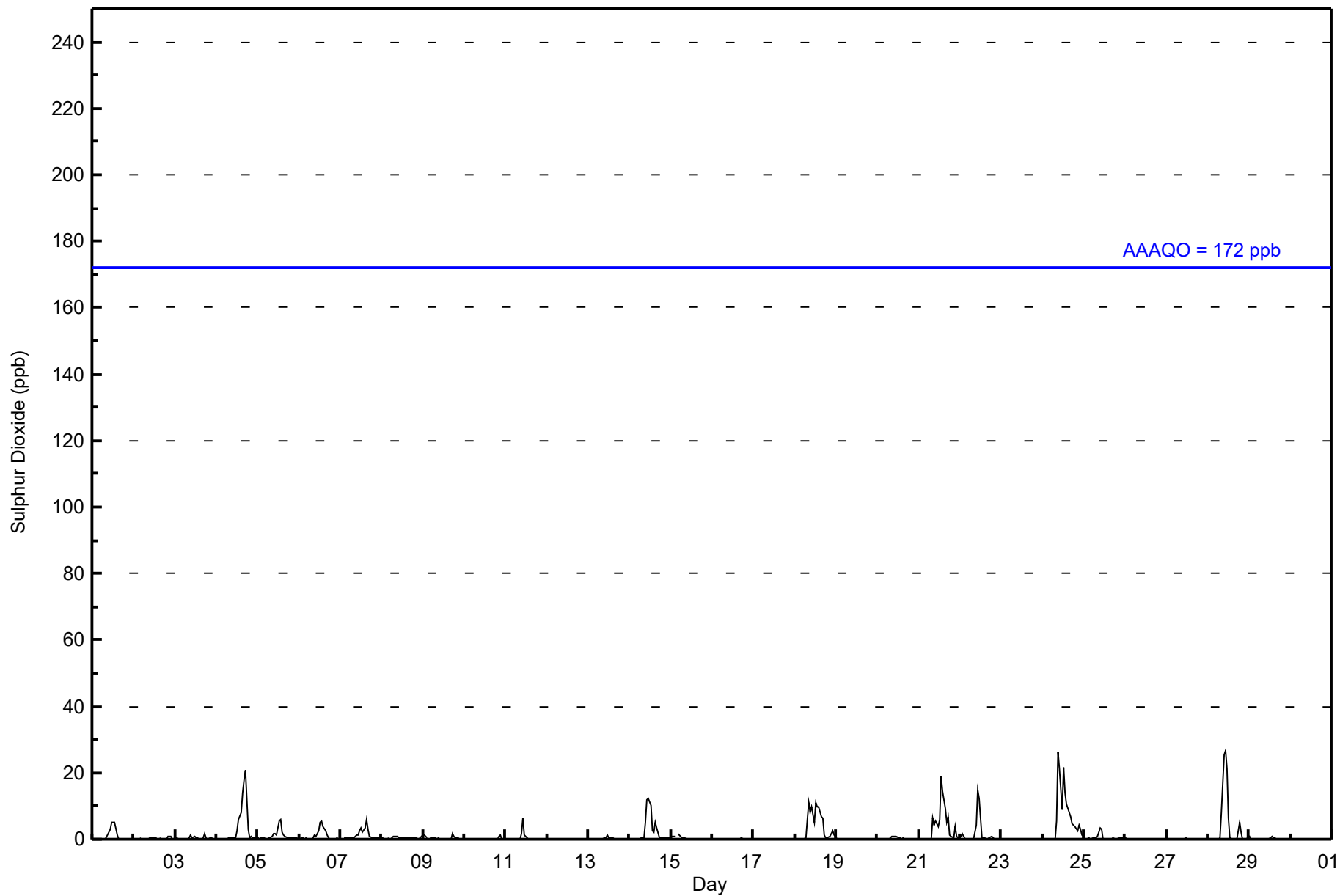
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 26.8 ppb on Apr 28 11:00 Maximum Daily Average: 6.4 ppb on Apr 24																				Hours in Service: 720 Hours of Data: 684							
Minimum Value: 0.0 ppb on Apr 1 01:00 Minimum Daily Average: 0.0 ppb on Apr 17 Maximum Diurnal Average: 3.7 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 4 Monthly Average: 1.16 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 3.1 P ₉₉ = 19.3																				Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.0	3.2	5.2	5.3	5.1	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.0	5.3
2-Apr	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.4	M	0.3	0.2	0.1	0.2	0.2	0.9	0.8	0.1	0.1	0.1	0.3	0.9
3-Apr	0.4	0.6	0.0	Z	0.1	0.0	0.1	0.1	0.4	1.3	0.5	0.7	0.3	0.2	0.2	0.1	0.4	1.7	0.5	0.2	0.2	0.2	0.2	0.1	0.4	1.7	
4-Apr	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.3	0.3	0.4	0.3	0.3	2.6	6.0	8.0	14.1	17.8	20.8	3.0	0.5	0.8	0.6	0.4	0.3	3.4	20.8	
5-Apr	0.4	0.2	0.4	0.5	0.3	Z	0.3	0.5	0.8	1.6	1.5	1.2	5.5	5.8	2.1	1.2	0.8	0.4	0.3	0.4	0.3	0.3	0.3	0.3	1.1	5.8	
6-Apr	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	1.3	0.9	2.7	5.2	5.4	3.7	2.5	1.4	0.4	0.1	0.1	0.1	0.1	0.2	0.2	1.1	5.4	
7-Apr	0.2	Z	0.2	0.3	0.5	0.6	0.3	0.3	0.5	1.2	1.3	2.7	3.2	2.1	3.6	6.1	3.0	0.9	0.5	0.2	0.3	0.3	0.2	0.3	1.2	6.1	
8-Apr	0.3	0.3	Z	0.3	0.2	0.2	0.4	0.6	0.9	1.0	0.6	0.5	0.4	0.5	0.4	0.3	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.8	0.4	1.0	
9-Apr	1.2	1.2	0.6	Z	0.4	0.3	0.2	0.3	0.2	0.3	0.2	C	C	C	C	C	0.2	1.6	1.0	0.6	0.3	0.2	0.1	0.0	0.5	1.6	
10-Apr	0.1	0.0	0.1	0.1	Z	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	0.8	1.1	0.2	0.0	0.1	1.1	
11-Apr	0.0	0.0	0.0	0.2	0.2	Z	0.1	0.1	0.2	1.9	6.2	1.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.2	
12-Apr	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	0.1	0.0	0.0	0.0	0.1	
13-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.6	1.2	0.6	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.2	1.2	
14-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.4	5.2	12.0	12.3	10.2	2.6	2.0	5.0	3.3	0.5	0.5	0.5	0.6	0.5	0.6	0.6	2.5	12.3	
15-Apr	0.5	0.7	0.7	Z	1.6	1.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	1.6	
16-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
17-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	
18-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.6	6.1	11.0	8.1	9.8	4.9	10.8	9.9	9.6	6.8	6.2	1.2	0.3	0.2	0.8	1.6	2.6	1.1	4.0	11.0	
19-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
20-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.8	0.5	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	
21-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	6.6	4.3	5.4	4.0	6.1	19.0	14.4	9.5	4.9	6.6	1.4	0.8	0.6	4.0	0.7	0.5	3.9	19.0	
22-Apr	1.0	1.7	0.8	0.5	Z	0.2	0.2	0.2	0.2	4.2	14.6	12.3	6.4	0.3	0.4	0.0	0.0	0.5	1.0	0.5	0.0	0.0	0.0	0.0	2.0	14.6	
23-Apr	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.1	
24-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	5.4	26.4	21.1	9.1	21.6	14.1	10.4	8.0	6.7	4.5	4.1	4.0	2.7	4.3	3.0	1.4	6.4	26.4	
25-Apr	0.9	Z	0.5	0.3	0.2	0.2	0.3	0.5	0.8	3.4	2.9	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.5	3.4	
26-Apr	0.3	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
27-Apr	0.0	0.0	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	0.0	0.0	0.2	
28-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	8.2	25.3	26.8	21.3	6.2	0.5	0.0	0.0	0.0	0.2	5.2	2.0	0.1	0.1	0.1	0.6	4.2	26.8	
29-Apr	0.8	0.1	0.1	0.2	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.6	1.0	0.3	0.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.0	
30-Apr	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	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	666	97.37	97.37
11 - 20	11	1.61	98.98
21 - 60	7	1.02	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 (SO₂) - ppb
Fort McKay - Bertha Ganter - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	62	69	22	9	12	7	27	95	101	38	20	25	48	38	41	41	655
11 - 20	0	0	0	1	0	0	0	7	3	0	0	0	0	0	0	0	11
21 - 60	0	0	0	1	1	1	0	3	1	0	0	0	0	0	0	0	7
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	62	69	22	11	13	8	27	105	105	38	20	25	48	38	41	41	673

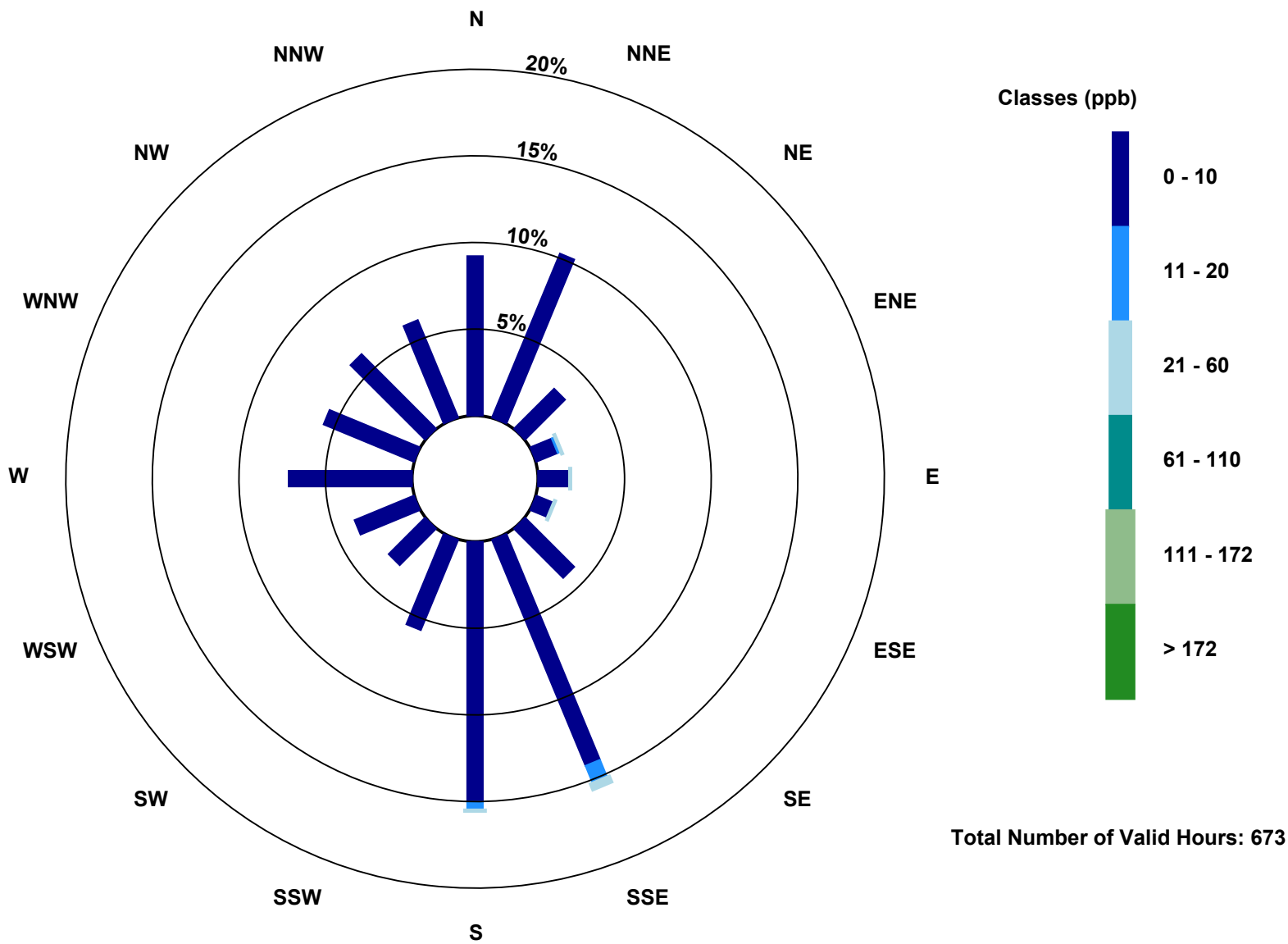
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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



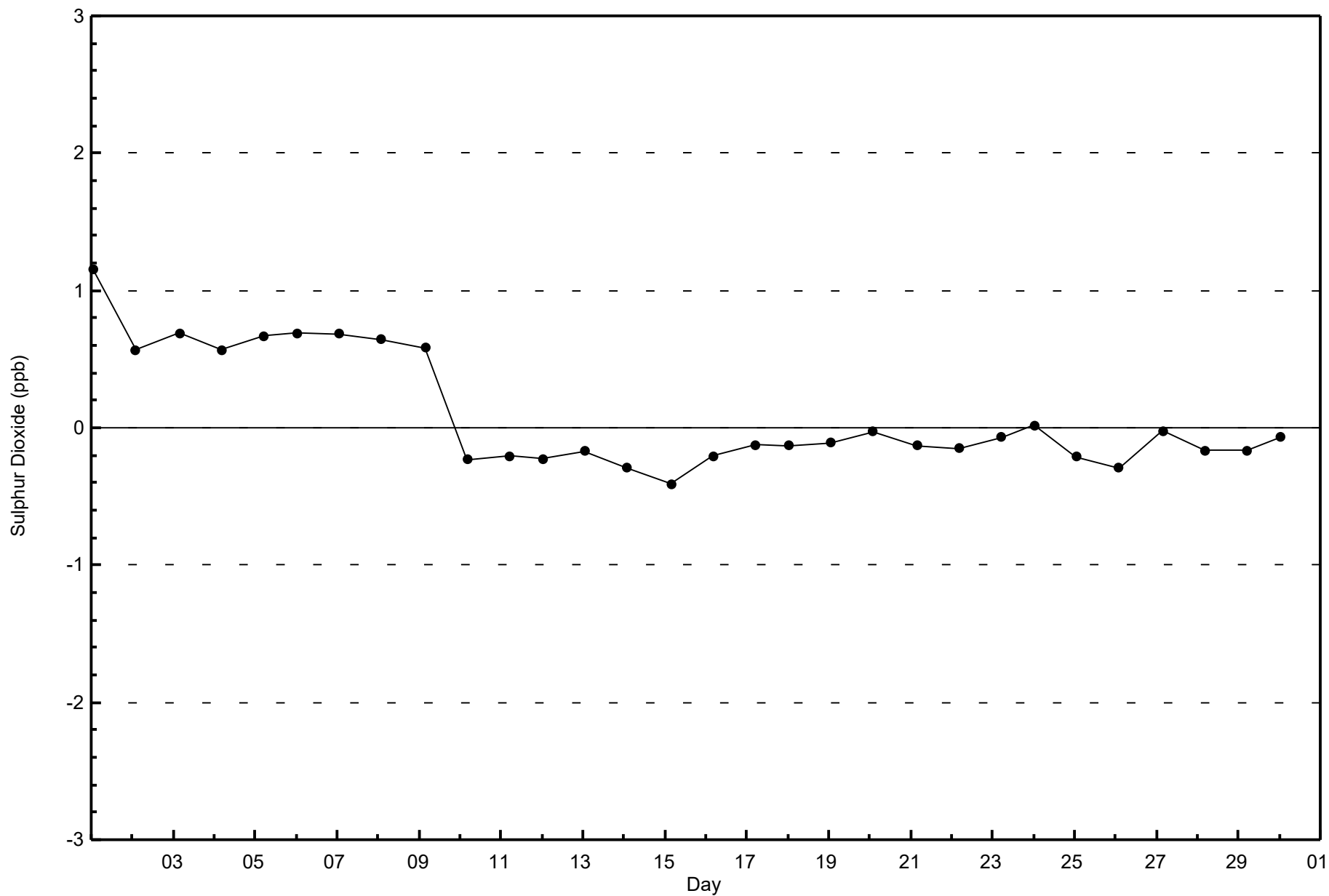


Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

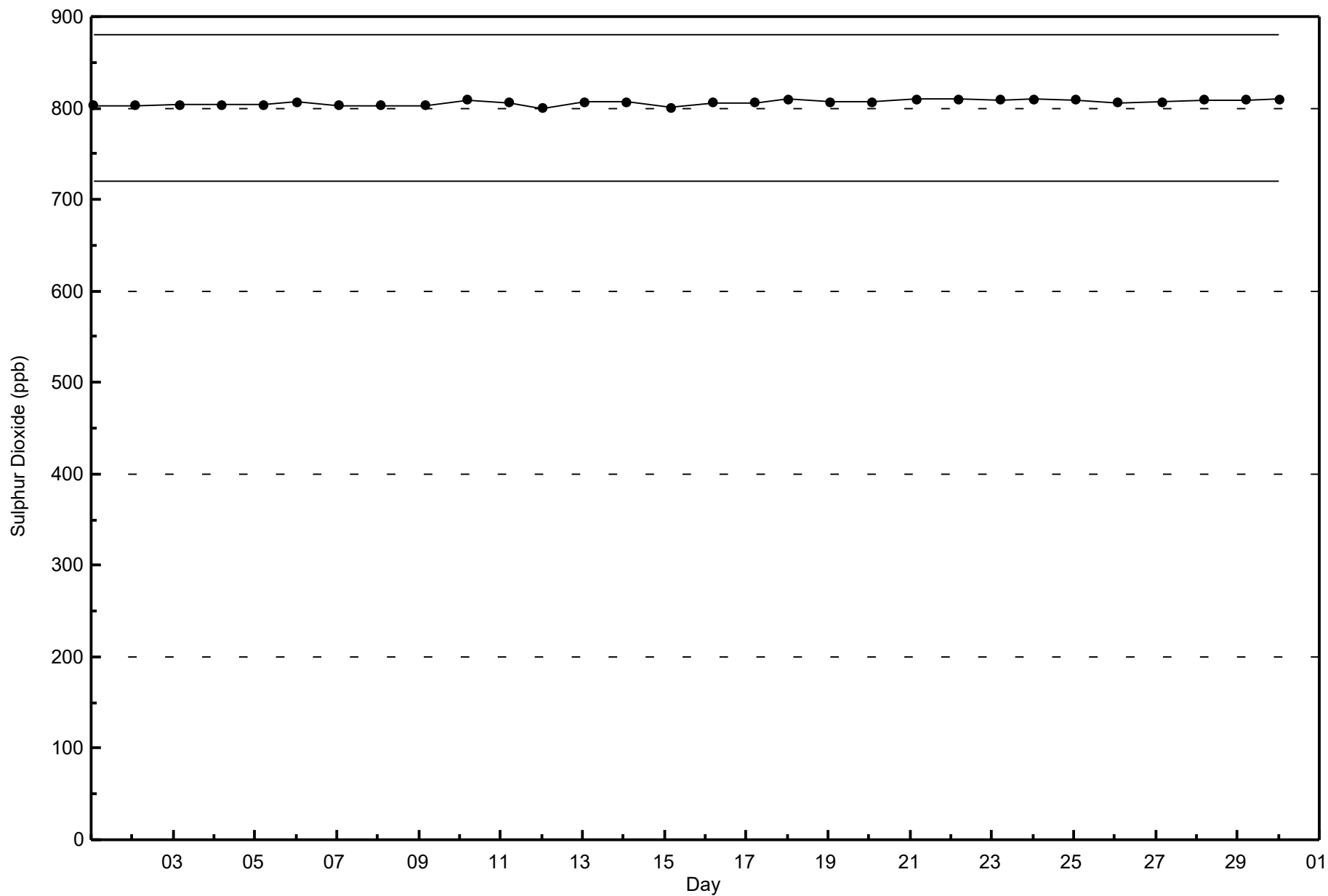
Fort McKay - Bertha Ganter - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

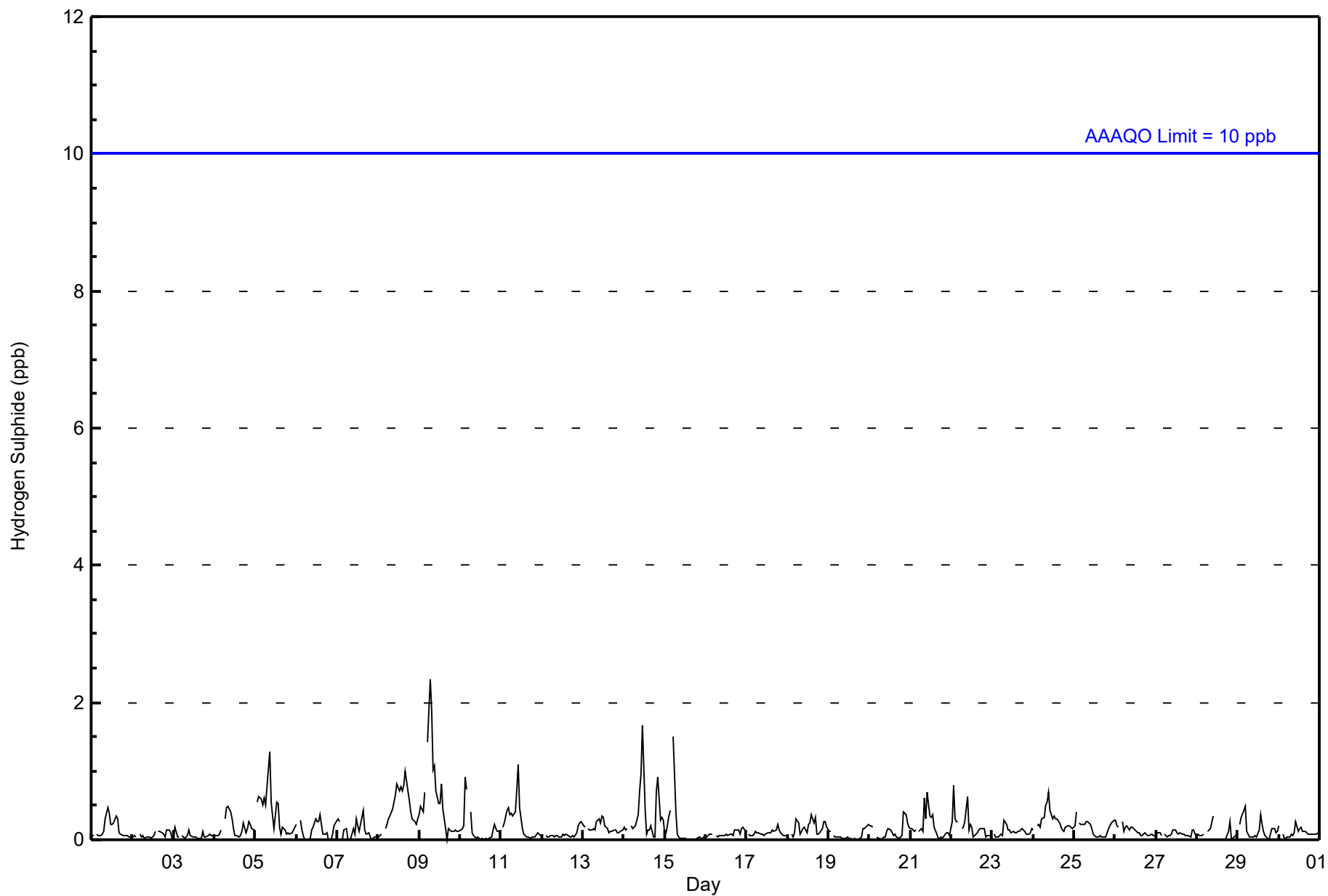
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): Maximum Value: 2.3 ppb on Apr 9 07:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 0.6 ppb on Apr 9						Hours in Service: 720		
Minimum Value: 0.0 ppb on Apr 6 06:00 Maximum Diurnal Average: 0.3 ppb at hour 10 Monthly Average: 0.18 ppb																			Minimum Daily Average: 0.1 ppb on Apr 3 Minimum Diurnal Average: 0.1 ppb at hour 19 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.1						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 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-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.4	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	0.0	0.2	0.5
2-Apr	0.0	0.1	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	M	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1
3-Apr	0.0	0.2	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
4-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.5	
5-Apr	Z	0.6	0.6	0.6	0.5	0.6	0.5	0.8	1.3	0.5	0.3	0.2	0.5	0.5	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.3
6-Apr	0.2	Z	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.4	
7-Apr	0.3	0.3	Z	0.0	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.3	0.2	0.1	0.3	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
8-Apr	0.0	0.1	0.1	Z	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.8	0.7	0.8	0.7	0.8	1.0	0.7	0.6	0.4	0.3	0.3	0.2	0.3	0.5	1.0	
9-Apr	0.4	0.5	0.4	0.7	Z	1.4	2.3	1.9	1.0	1.1	0.7	0.5	0.5	0.8	0.5	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.6	2.3	
10-Apr	0.1	0.2	0.2	0.9	0.7	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	0.0	0.1	0.2	0.2	0.1	0.1	0.2	0.9	
11-Apr	Z	0.2	0.2	0.4	0.5	0.4	0.4	0.4	0.4	0.7	1.1	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	1.1	
12-Apr	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.1	0.3	
13-Apr	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.1	0.3	0.3	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	
14-Apr	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.4	0.7	1.0	1.7	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.7	0.9	0.3	0.3	0.3	0.4	1.7	
15-Apr	0.1	0.1	0.3	0.4	Z	1.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5	
16-Apr	0.0	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	
17-Apr	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
18-Apr	0.0	Z	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.4	
19-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.2	
20-Apr	0.2	0.2	0.2	Z	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	0.0	0.0	0.1	0.4	0.4	0.2	0.2	0.1	0.4	
21-Apr	0.2	0.2	0.1	0.1	Z	0.1	0.2	0.1	0.6	0.3	0.7	0.3	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.7	
22-Apr	0.3	0.8	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.6	0.1	0.2	0.2	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.2	0.8	
23-Apr	Z	0.1	0.1	0.0	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	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	
24-Apr	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.5	0.5	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.7	
25-Apr	0.2	0.4	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.2	0.4	
26-Apr	0.3	0.2	0.2	Z	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
27-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	
28-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.3	C	C	C	C	C	C	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.1	-	0.3	
29-Apr	Z	0.2	0.3	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.4	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.5	
30-Apr	0.2	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	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	0.3	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	61	69	23	11	13	8	28	106	103	38	19	25	47	39	40	41	671
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	61	69	23	11	13	8	28	106	103	38	19	25	47	39	40	41	671

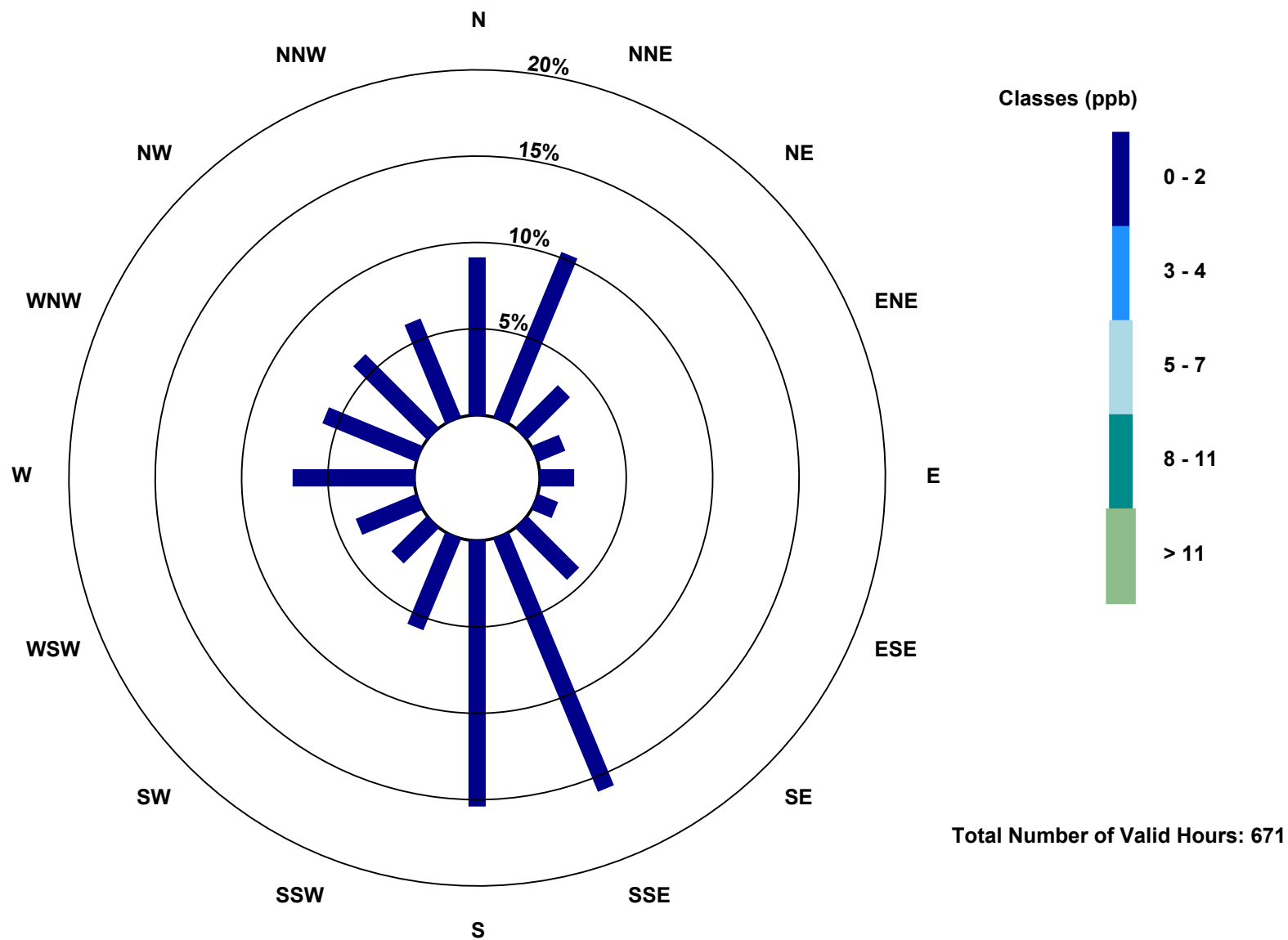
Total Number of Valid Hours: 671

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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



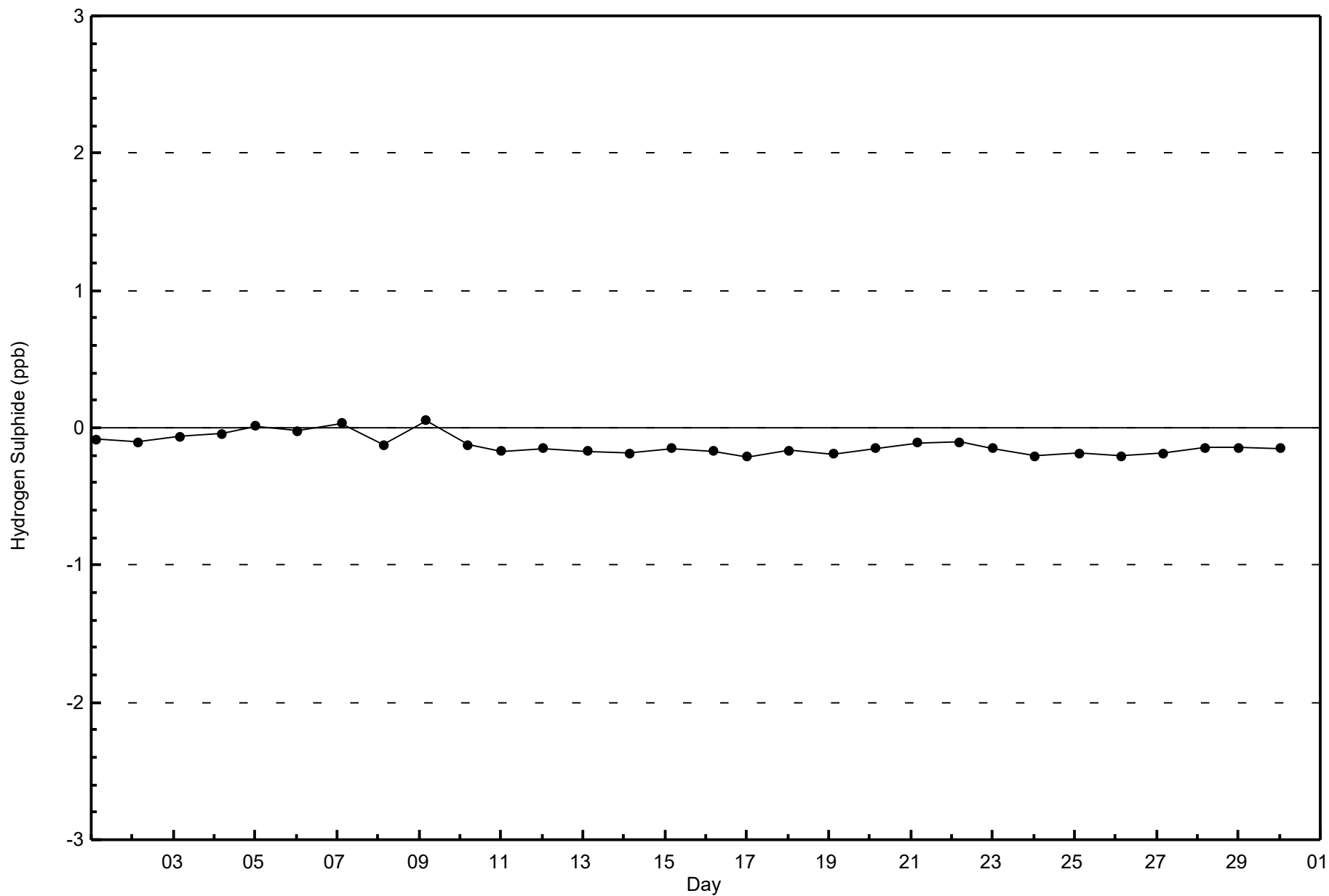


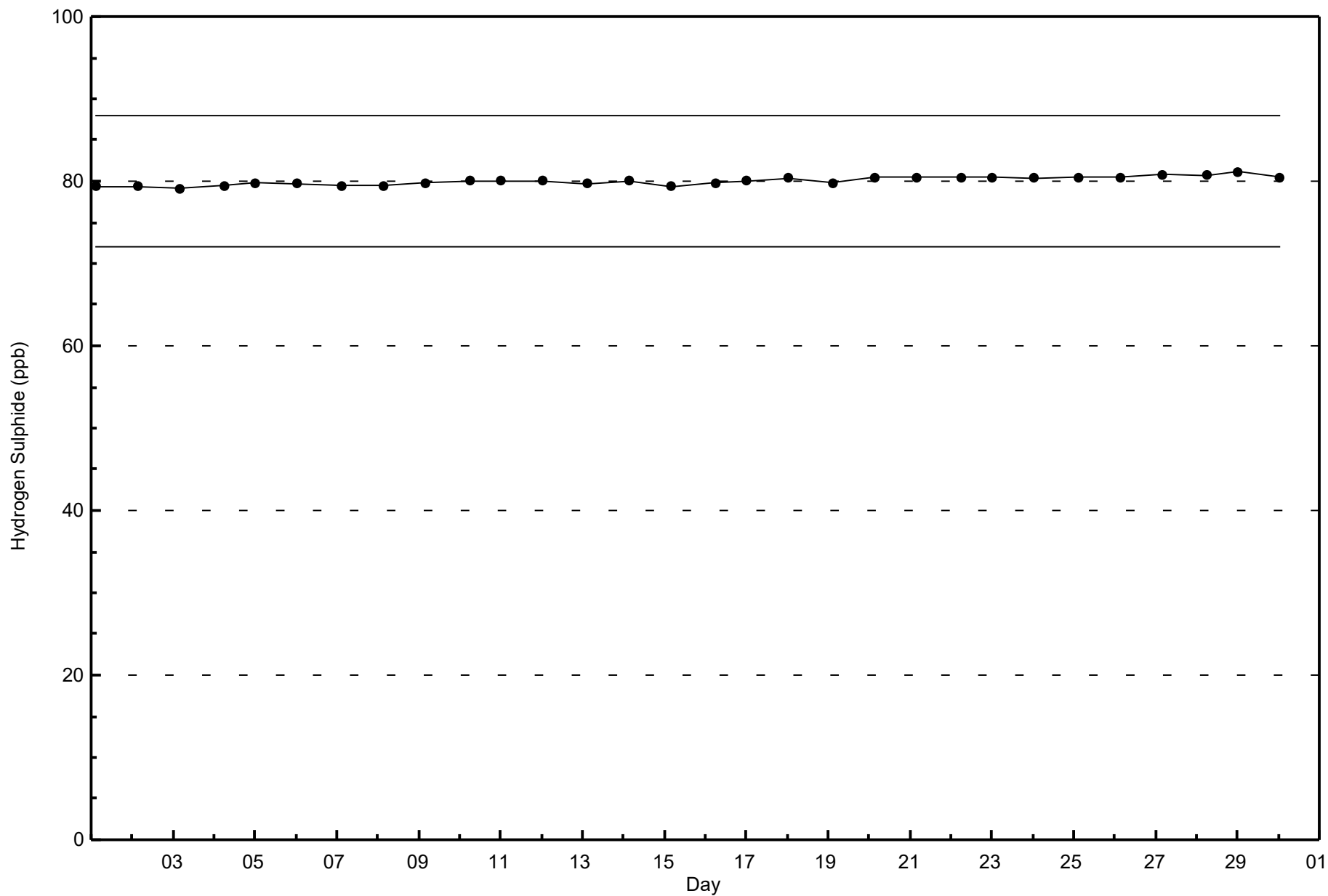
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H₂S) - ppb

Fort McKay - Bertha Ganter - April 2025







Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440							
Maximum Value: 2.9 ppb on Apr 9 06:30 Maximum Daily Average: 1.0 ppb on Apr 9																			Periods of Valid Data: 1365							
Minimum Value: 0.3 ppb on Apr 23 05:00 Minimum Daily Average: 0.4 ppb on Apr 2																			Periods of Invalid Data: 75							
Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 19																			Periods of Calibration: 71							
Monthly Average: 0.55 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.5																			Percent Operational Time: 99.7							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.7	0.8 0.7	0.7 0.6	0.6 0.5	0.6 0.5	0.6 0.8	0.5 0.8	0.8 0.4	0.4 0.4	0.4 0.4	0.4 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
2-Apr	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 M	0.4 M	M 0.5	M 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.6	0.6 0.5	0.4 0.4	0.4 0.4	0.4	0.6
3-Apr	0.4 0.4	0.6 0.5	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.6
4-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	Z SP	0.6 0.6	0.7 0.8	0.8 0.8	0.8 0.7	0.6 0.7	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.7	0.5 0.5	0.5 0.6	0.6 0.8	0.7 0.6	0.6 0.6	0.6 0.6	0.5 0.6	0.6	0.8
5-Apr	Z SP	0.8 1.1	1.0 1.1	1.1 0.9	0.9 0.9	1.0 1.0	0.9 0.8	0.8 1.4	1.6 1.6	1.0 0.8	0.8 0.7	0.6 0.6	0.8 1.1	1.1 0.8	0.6 0.6	0.5 0.5	0.6 0.6	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.6	0.8	1.6
6-Apr	0.5 0.5	Z SP	0.6 0.6	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6 0.5	0.5 0.6	0.7 0.8	0.7 0.7	0.6 0.8	0.9 0.7	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.6	0.6 0.6	0.5	0.9
7-Apr	0.7 0.7	0.7 0.7	Z SP	0.4 0.4	0.5 0.7	0.6 0.6	0.5 0.4	0.4 0.4	0.4 0.5	0.6 0.6	0.5 0.5	0.8 0.7	0.7 0.6	0.5 0.6	0.7 0.8	0.8 0.9	0.7 0.5	0.5 0.5	0.6 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.6	0.9
8-Apr	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.6	0.6 0.6	0.7 0.8	0.7 0.8	0.9 0.9	1.0 1.0	1.0 1.1	1.2 1.2	1.1 1.1	1.1 1.2	1.1 1.1	1.1 1.2	1.5 1.3	1.2 1.1	1.1 0.9	0.9 0.8	0.7 0.7	0.7 0.7	0.6 0.6	0.6 0.9	0.9	1.5
9-Apr	0.8 0.8	0.9 1.0	0.9 0.8	1.0 1.3	Z SP	1.5 2.2	2.9 2.5	2.5 2.0	1.4 1.4	1.6 1.3	1.2 1.1	1.0 0.9	1.0 0.9	1.1 1.4	1.0 0.8	0.7 0.5	0.5 0.4	0.6 0.7	0.7 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	1.0	2.9
10-Apr	0.6 0.6	0.6 0.6	0.6 0.7	1.2 1.5	1.2 1.0	Z SP	1.0 0.6	0.6 0.4	0.6 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.6	1.5
11-Apr	Z SP	0.5 0.6	0.6 0.6	0.6 0.7	0.7 0.7	0.7 0.7	0.8 0.7	0.7 0.7	0.7 0.7	0.8 1.2	1.4 1.5	0.9 0.7	0.6 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6	1.5
12-Apr	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 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 0.5	0.5 0.6	0.5 0.6	0.6 0.6	0.4	0.6
13-Apr	0.6 0.5	0.5 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.7 0.6	0.6 0.6	0.7 0.7	0.7 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 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.7
14-Apr	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.7 0.7	0.8 1.2	1.0 1.6	2.1 1.9	1.0 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.6	0.4 0.4	0.4 0.4	0.5 1.5	1.6 0.9	0.6 0.7	0.7 0.7	0.7 0.5	0.7	2.1
15-Apr	0.4 0.4	0.4 0.4	0.6 0.8	0.7 0.8	Z SP	1.0 2.6	0.8 0.7	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.3 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 0.4	0.5	2.6



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	Z SP	0.4 0.4	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4
17-Apr	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.4 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4
18-Apr	0.4 0.3	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.7 0.6	0.6 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.4 0.6	0.4 0.4	0.5 0.6	0.5 0.6	0.9 0.6	0.7 0.5	0.6 0.8	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.6	0.7 0.5	0.5 0.7	0.6 0.5	0.6 0.5	0.6 0.5
19-Apr	0.5 0.5	0.5 0.5	Z SP	0.5 0.4	0.5 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 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	0.6 0.5	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6
20-Apr	0.6 0.5	0.6 0.5	0.6 0.5	Z SP	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 0.6	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.7 0.9	0.8 0.7	0.6 0.6	0.6 0.5	0.6 0.5	0.6 0.5
21-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.8 1.2	0.8 0.6	0.9 1.3	0.9 0.6	0.5 0.9	0.8 0.7	0.6 0.6	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4
22-Apr	0.4 0.9	1.4 0.9	0.7 0.6	0.6 0.6	0.6 0.6	Z SP	0.5 0.5	0.5 0.5	0.6 0.7	1.2 0.7	0.5 0.5	0.6 0.6	0.6 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.6 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4
23-Apr	Z SP	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5
24-Apr	0.5 0.5	Z SP	0.5 0.6	0.6 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.6	0.7 0.8	0.9 0.9	0.9 0.6	0.6 0.7	0.7 0.7	0.7 0.7	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	0.6 0.5	0.5 0.5	0.5 0.5
25-Apr	0.5 0.5	0.8 0.7	Z SP	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.7	0.6 0.7	0.6 0.7
26-Apr	0.7 0.7	0.6 0.5	0.5 0.5	Z SP	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4
27-Apr	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	Z SP	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.5 0.6	0.4 0.5	0.6 0.5	0.5 0.5	0.5 0.5
28-Apr	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.4	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.6	0.9 0.6	C C	C C	C C	C C	C C	C 0.5	0.4 0.4	0.4 0.4	0.5 0.6	0.8 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5
29-Apr	Z SP	0.6 0.6	0.6 0.8	0.8 0.8	0.9 0.9	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.6	0.9 0.6	0.7 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	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
30-Apr	0.5 0.6	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4
																										Diurnal Average
																										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

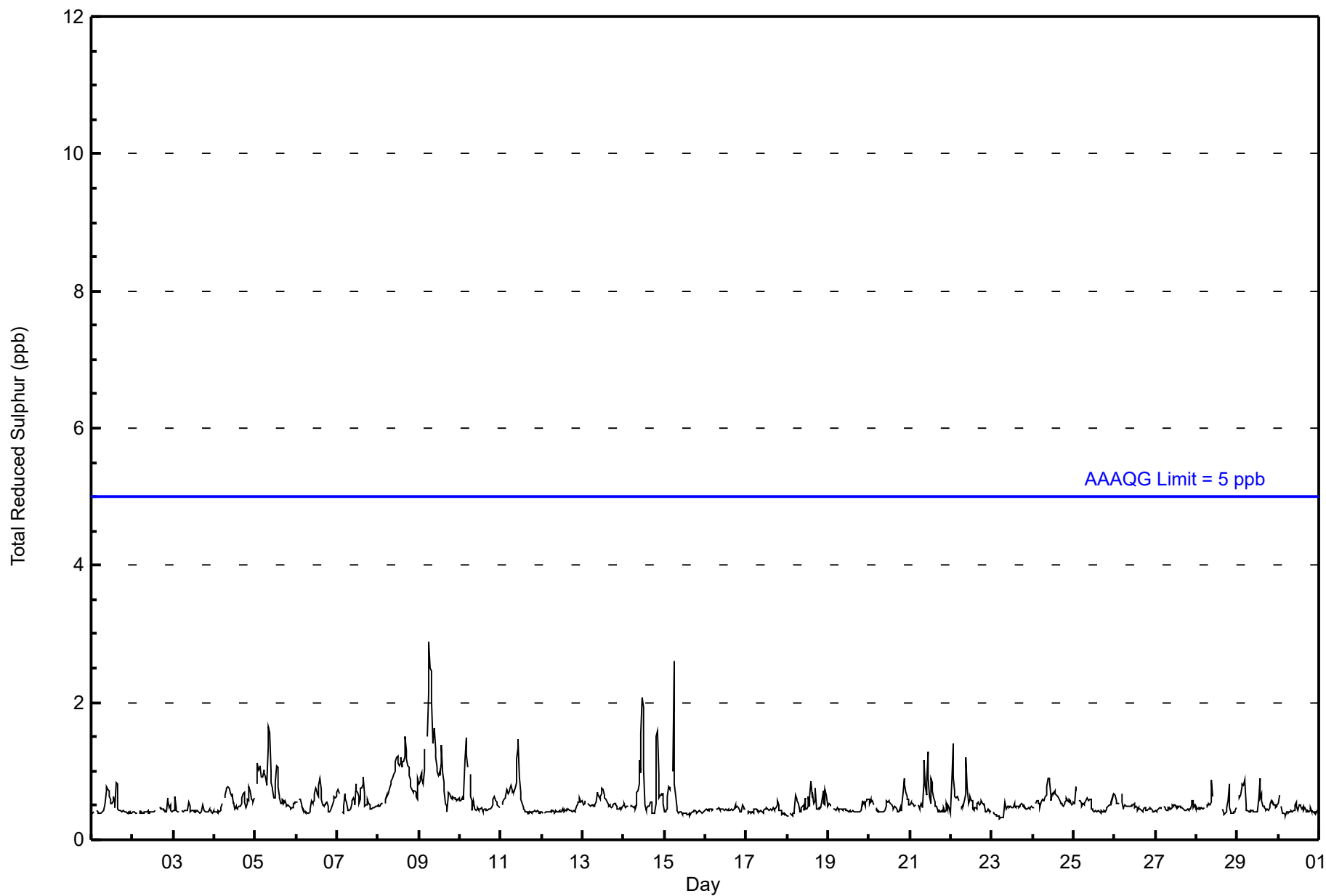
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 2.7 ppb on Apr 9 07:00																			Maximum Daily Average: 1.0 ppb on Apr 9										Hours in Service: 720	
Minimum Value: 0.3 ppb on Apr 23 06:00																			Minimum Daily Average: 0.4 ppb on Apr 17										Hours of Data: 684	
Maximum Diurnal Average: 0.6 ppb at hour 10																			Minimum Diurnal Average: 0.5 ppb at hour 19										Hours of Missing Data: 36	
Monthly Average: 0.55 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.4										Hours of Calibration: 35	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.6	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8				
2-Apr	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	M	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5				
3-Apr	0.4	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
4-Apr	0.4	0.4	0.4	0.4	0.5	Z	0.6	0.7	0.8	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.8				
5-Apr	Z	1.0	1.0	1.0	0.9	1.0	0.9	1.1	1.6	0.9	0.7	0.6	1.0	0.9	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.6				
6-Apr	0.5	Z	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.5	0.8				
7-Apr	0.7	0.7	Z	0.4	0.6	0.6	0.4	0.4	0.5	0.6	0.5	0.8	0.7	0.6	0.8	0.9	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.6	0.9				
8-Apr	0.5	0.5	0.5	Z	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.1	1.2	1.1	1.2	1.4	1.1	1.0	0.8	0.7	0.7	0.7	0.7	0.9	1.4				
9-Apr	0.8	0.9	0.9	1.2	Z	1.8	2.7	2.3	1.4	1.5	1.1	1.0	1.0	1.3	0.9	0.6	0.4	0.7	0.6	0.6	0.6	0.6	0.6	0.6	1.0	2.7				
10-Apr	0.6	0.6	0.6	1.3	1.1	Z	0.8	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.6	1.3				
11-Apr	Z	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.4	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	0.6	1.4				
12-Apr	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.4	0.6				
13-Apr	0.5	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7				
14-Apr	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.7	1.0	1.3	2.0	0.8	0.4	0.5	0.5	0.6	0.4	0.4	1.0	1.3	0.6	0.7	0.6	0.7	2.0				
15-Apr	0.4	0.4	0.7	0.7	Z	1.8	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.8				
16-Apr	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5				
17-Apr	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5				
18-Apr	0.3	Z	0.4	0.4	0.4	0.6	0.6	0.4	0.4	0.5	0.5	0.4	0.6	0.6	0.7	0.6	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.7				
19-Apr	0.5	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	0.5	0.5	0.6	0.6	0.5	0.6				
20-Apr	0.6	0.6	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.8	0.7	0.6	0.5	0.5	0.8				
21-Apr	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	1.0	0.7	1.1	0.8	0.7	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	1.1				
22-Apr	0.6	1.2	0.7	0.6	0.6	Z	0.5	0.5	0.6	1.0	0.5	0.6	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.6	1.2				
23-Apr	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5				
24-Apr	0.5	Z	0.6	0.6	0.5	0.6	0.6	0.6	0.7	0.9	0.8	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.9				
25-Apr	0.5	0.7	Z	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.7				
26-Apr	0.7	0.6	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.7				
27-Apr	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5				
28-Apr	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.8	C	C	C	C	C	0.5	0.4	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.8				
29-Apr	Z	0.6	0.7	0.8	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.9				
30-Apr	0.6	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6				
																									Diurnal Average	Diurnal Maximum				
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	61	69	23	11	13	8	28	106	104	37	19	25	47	39	40	41	671
3 - 4	0	0	0	0	0	0	0	0	0	1	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	61	69	23	11	13	8	28	106	104	38	19	25	47	39	40	41	672

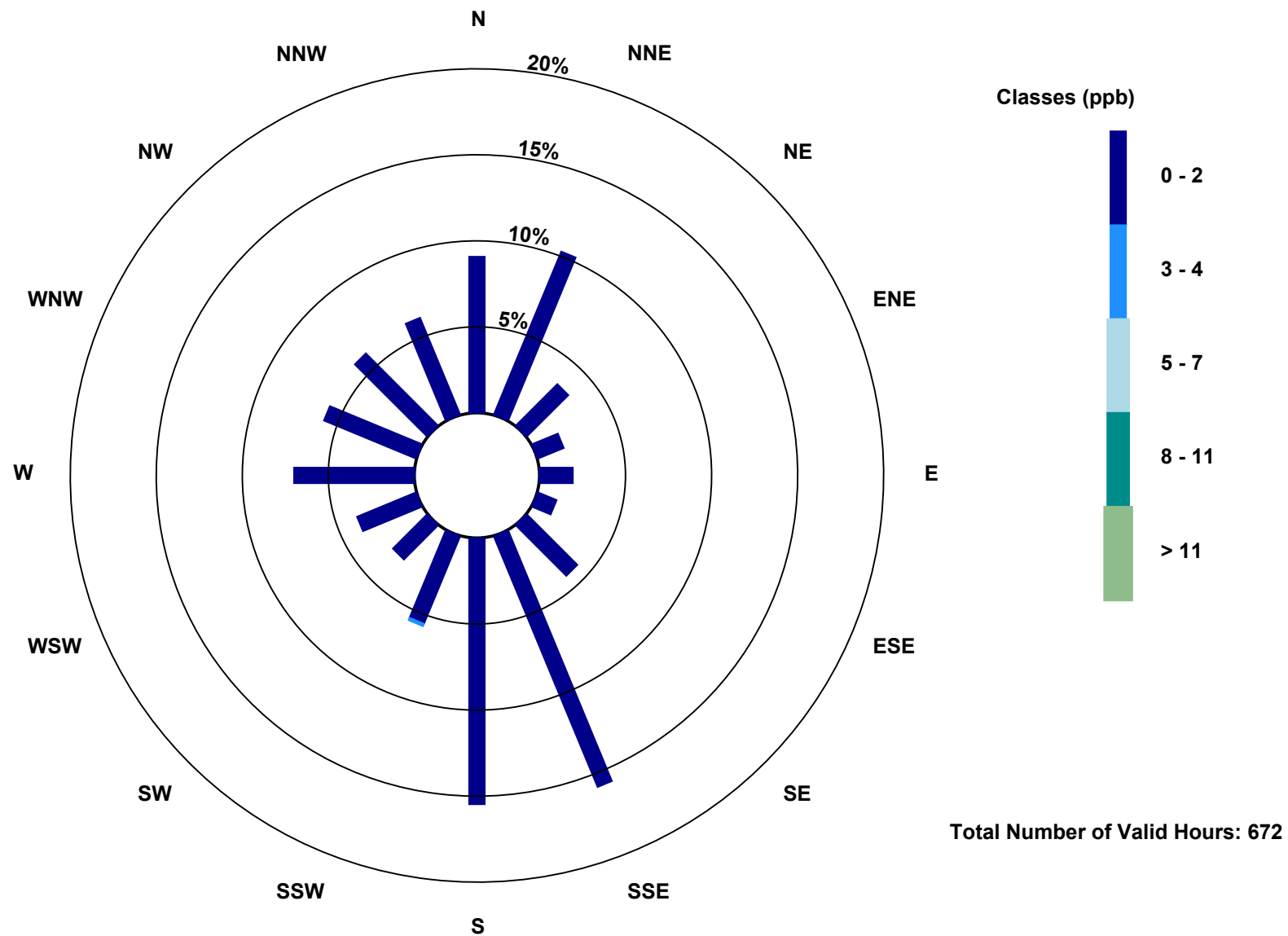
Total Number of Valid Hours: 672

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

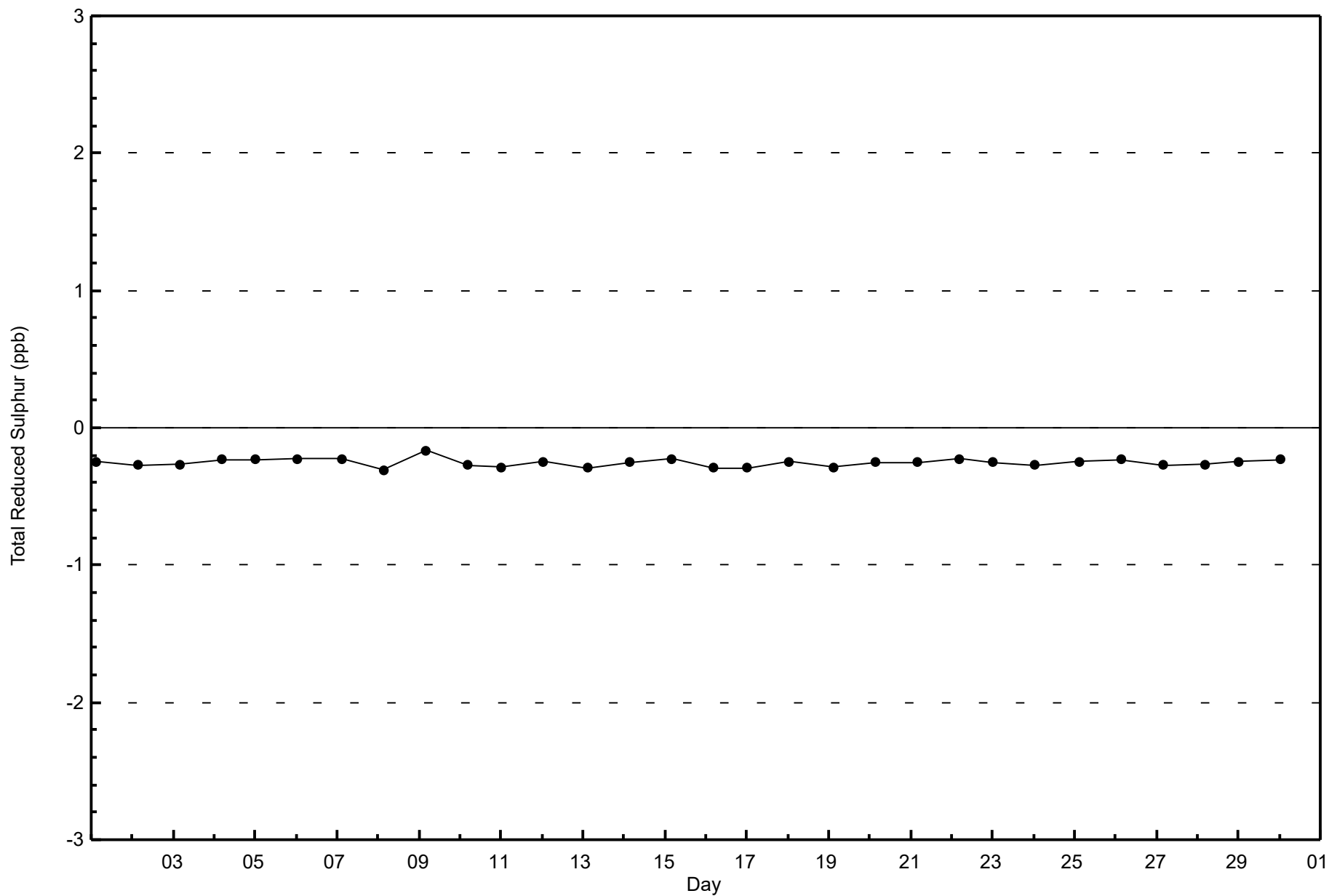
Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter

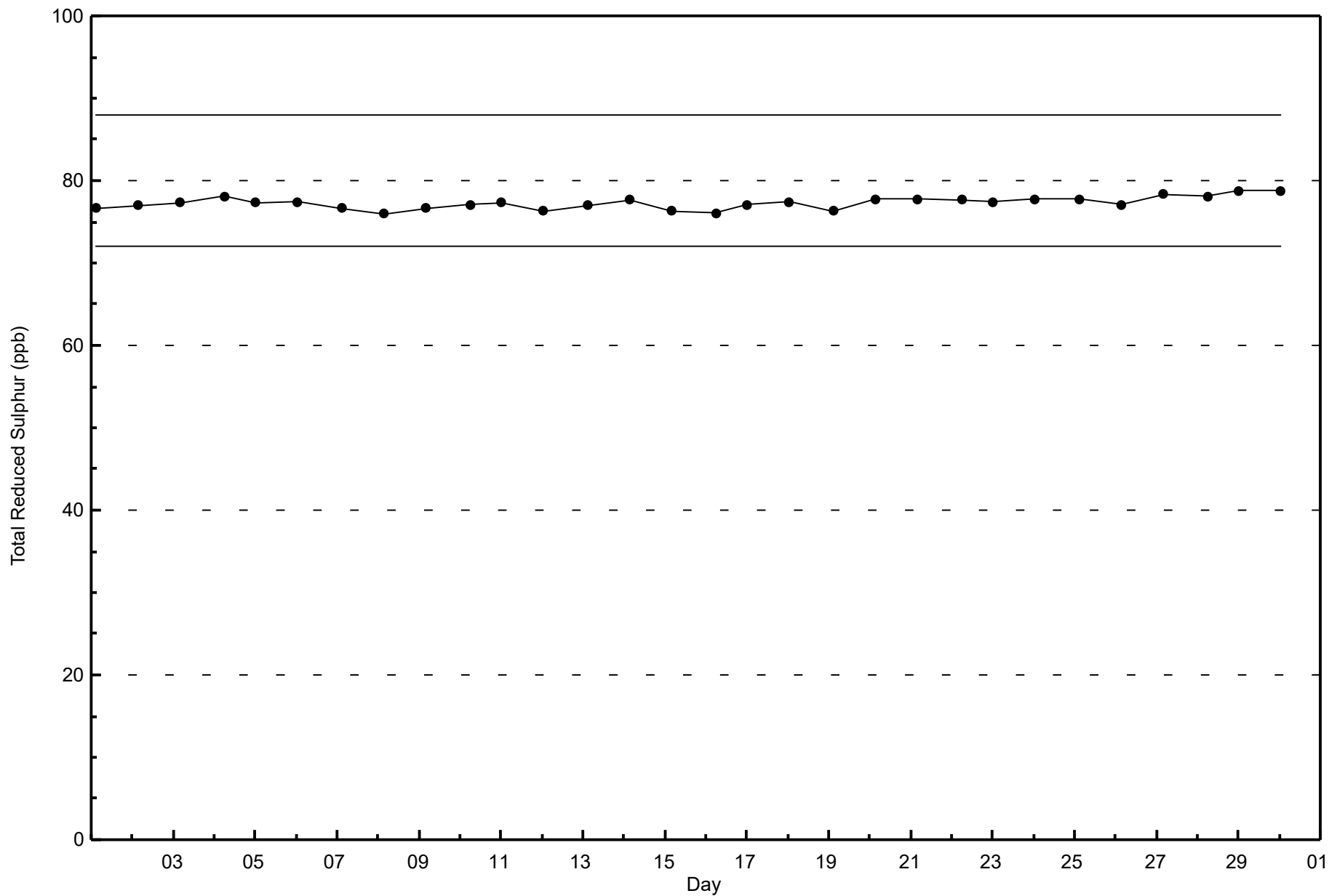




Wood Buffalo Environmental Association
Zero Responses

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







Wood Buffalo Environmental Association

Summary of Hour Averages

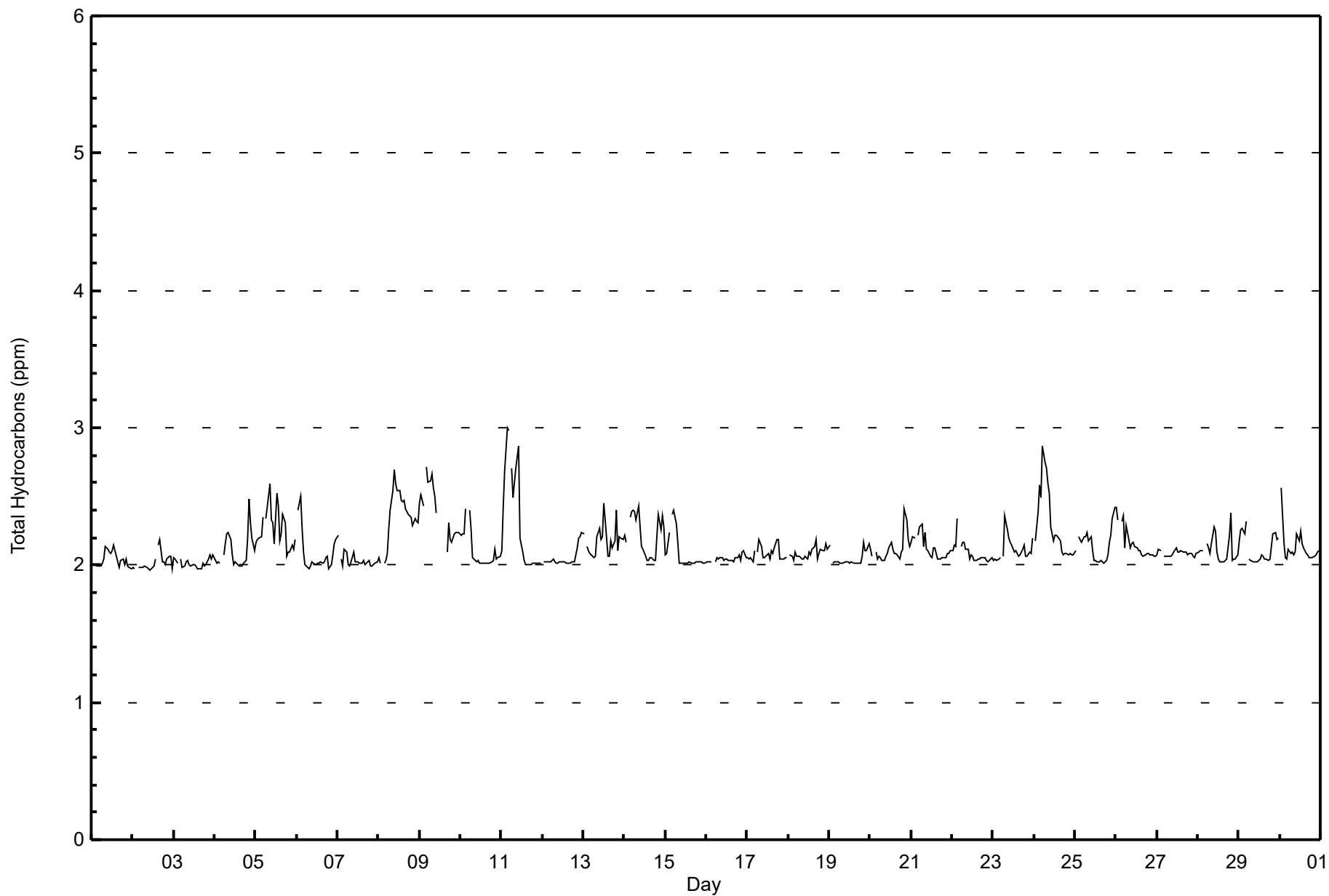
Total Hydrocarbons (THC) - ppm Fort McKay - Bertha Ganter - April 2025

Maximum Value: 3.0 ppm on Apr 11 04:00																		Maximum Daily Average: 2.4 ppm on Apr 9																		Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 2 11:00																		Minimum Daily Average: 2.0 ppm on Apr 2																		Hours of Data: 684	
Maximum Diurnal Average: 2.2 ppm at hour 5																		Minimum Diurnal Average: 2.1 ppm at hour 16																		Hours of Missing Data: 36	
Monthly Average: 2.13 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.2 P ₉₀ = 2.3 P ₉₉ = 2.7																		Hours of Calibration: 35	
																																				Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	2.0	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1										
2-Apr	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	M	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2										
3-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1										
4-Apr	2.0	2.0	2.0	2.0	Z	2.1	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5	2.3	2.2	2.1	2.1	2.5										
5-Apr	2.2	2.2	2.2	2.2	2.4	Z	2.3	2.4	2.6	2.3	2.3	2.2	2.5	2.4	2.2	2.2	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.6										
6-Apr	Z	2.4	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.5											
7-Apr	2.2	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2										
8-Apr	2.1	2.0	Z	2.0	2.0	2.1	2.3	2.4	2.5	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.7										
9-Apr	2.5	2.5	2.4	Z	2.7	2.6	2.6	2.7	2.6	2.5	2.4	C	C	C	C	C	2.1	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.7										
10-Apr	2.2	2.2	2.2	2.4	Z	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.4										
11-Apr	2.1	2.4	2.7	3.0	3.0	Z	2.7	2.5	2.7	2.8	2.9	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	2.3	3.0										
12-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.2										
13-Apr	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.4	2.3	2.1	2.1	2.2	2.1	2.2	2.4	2.1	2.2	2.2	2.2	2.2	2.2	2.4										
14-Apr	2.2	2.2	Z	2.3	2.4	2.4	2.4	2.3	2.4	2.3	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.4	2.3	2.4	2.3	2.2	2.4	2.4										
15-Apr	2.1	2.1	2.2	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4										
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1										
17-Apr	2.0	2.0	2.1	2.0	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	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.2										
18-Apr	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2										
19-Apr	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.2	2.0	2.0	2.2										
20-Apr	2.1	2.1	Z	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.4	2.3	2.2	2.1	2.1	2.4										
21-Apr	2.2	2.2	2.2	Z	2.2	2.3	2.3	2.1	2.2	2.1	2.1	2.1	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	2.3										
22-Apr	2.1	2.1	2.1	2.3	Z	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.3										
23-Apr	2.0	2.0	2.0	2.0	2.1	Z	2.1	2.4	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	2.1	2.1	2.2	2.1	2.1	2.4										
24-Apr	Z	2.2	2.4	2.6	2.5	2.9	2.7	2.7	2.6	2.5	2.3	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	2.3	2.9										
25-Apr	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.1	2.4											
26-Apr	2.4	2.3	Z	2.3	2.4	2.1	2.3	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4										
27-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1										
28-Apr	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.0	2.0	2.0	2.1	2.1	2.1	2.4										
29-Apr	2.2	2.3	2.3	2.2	2.3	Z	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	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.3										
30-Apr	Z	2.6	2.2	2.1	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6										
2.1 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1																								Diurnal Average													
2.5 2.6 2.7 3.0 3.0 2.9 2.7 2.7 2.7 2.8 2.9 2.5 2.5 2.5 2.5 2.5 2.5 2.4 2.4 2.4 2.4 2.5 2.3 2.4 2.4																								Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	259	37.87	37.87
2.1 - 3.0	425	62.13	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
Fort McKay - Bertha Ganter - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	11	5	1	0	2	3	8	38	31	15	12	18	39	30	28	16	257
2.1 - 3.0	51	64	21	11	11	5	19	67	74	23	8	7	9	8	13	25	416
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	62	69	22	11	13	8	27	105	105	38	20	25	48	38	41	41	673

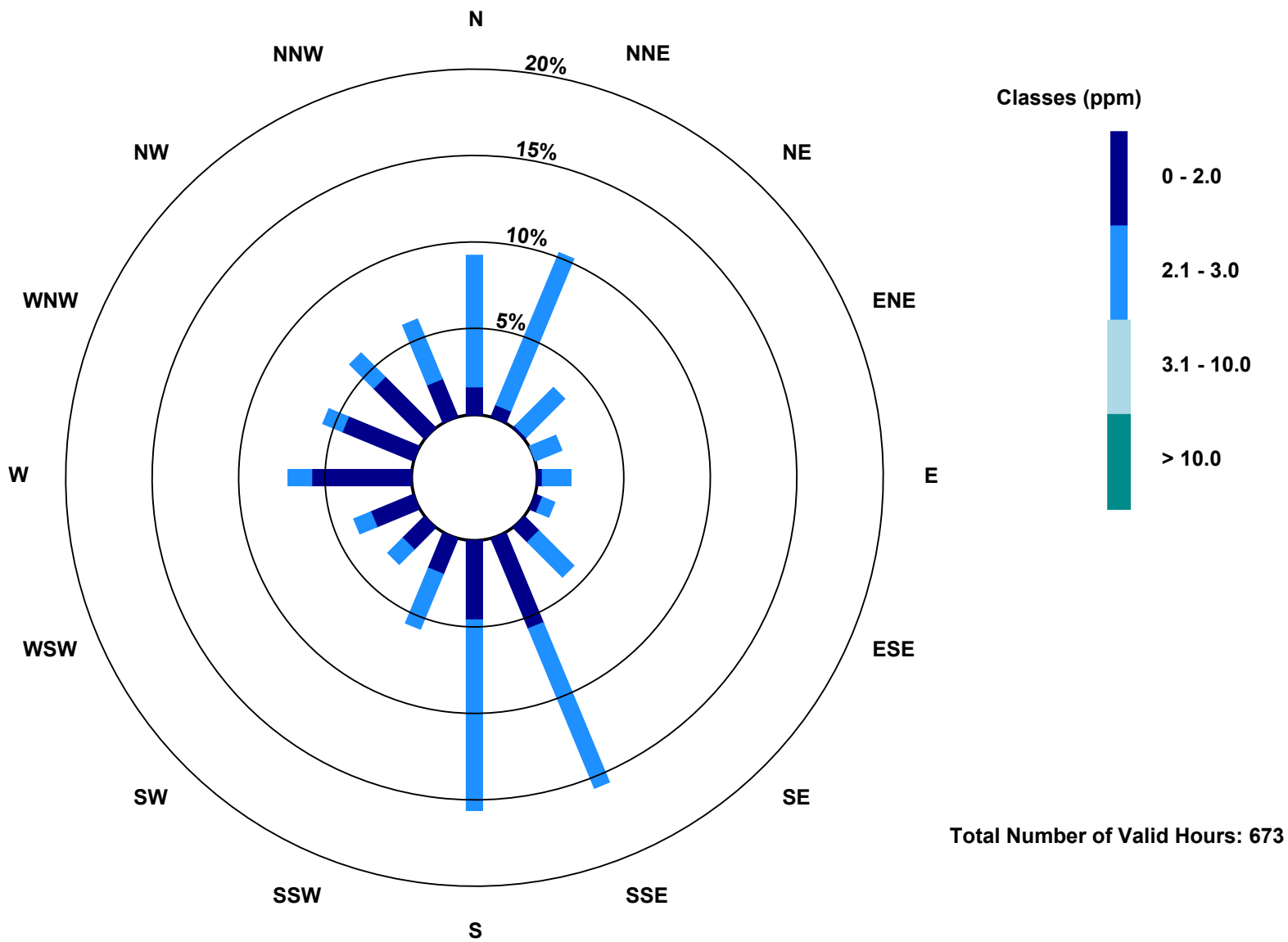
Total Number of Valid Hours: 673

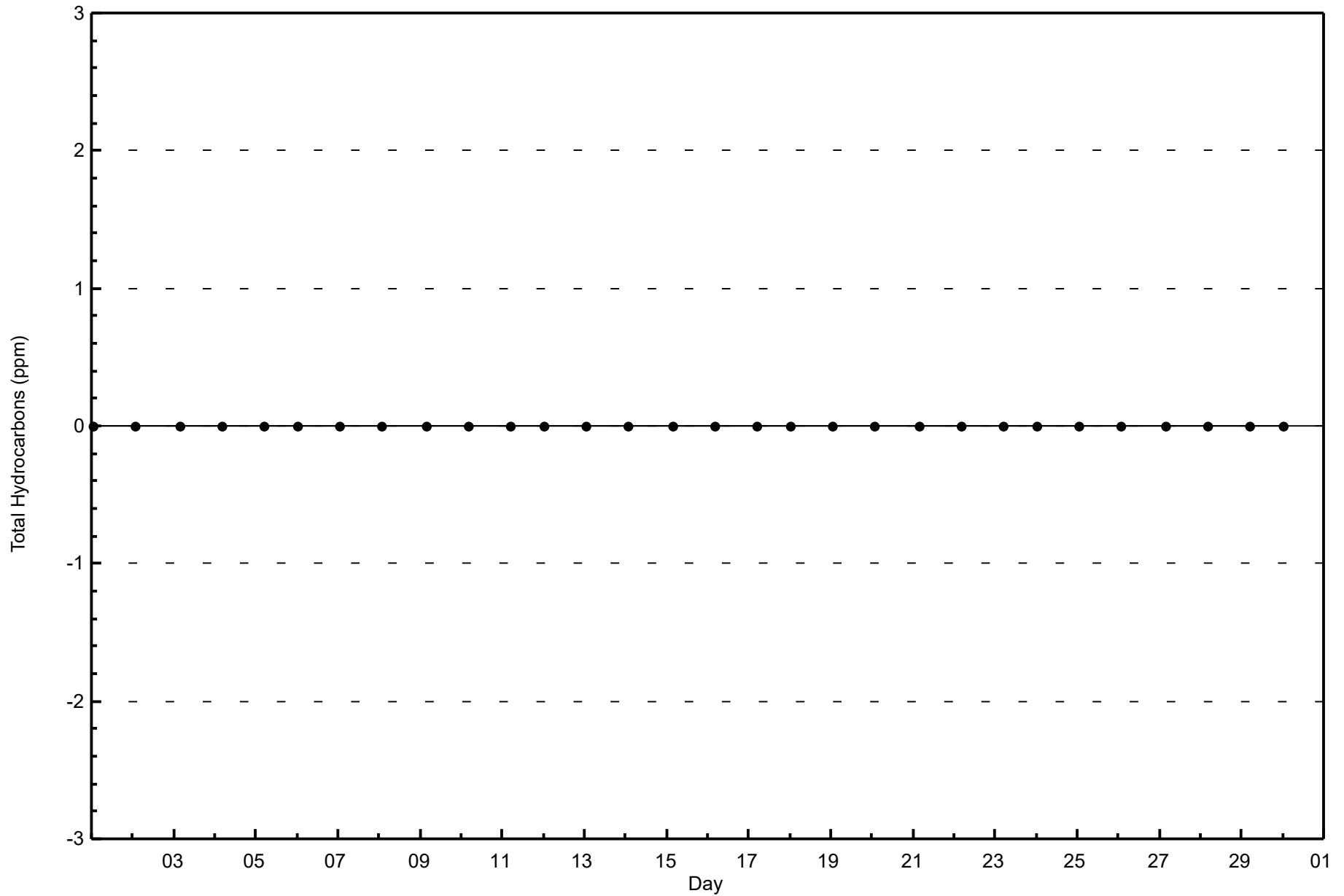
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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

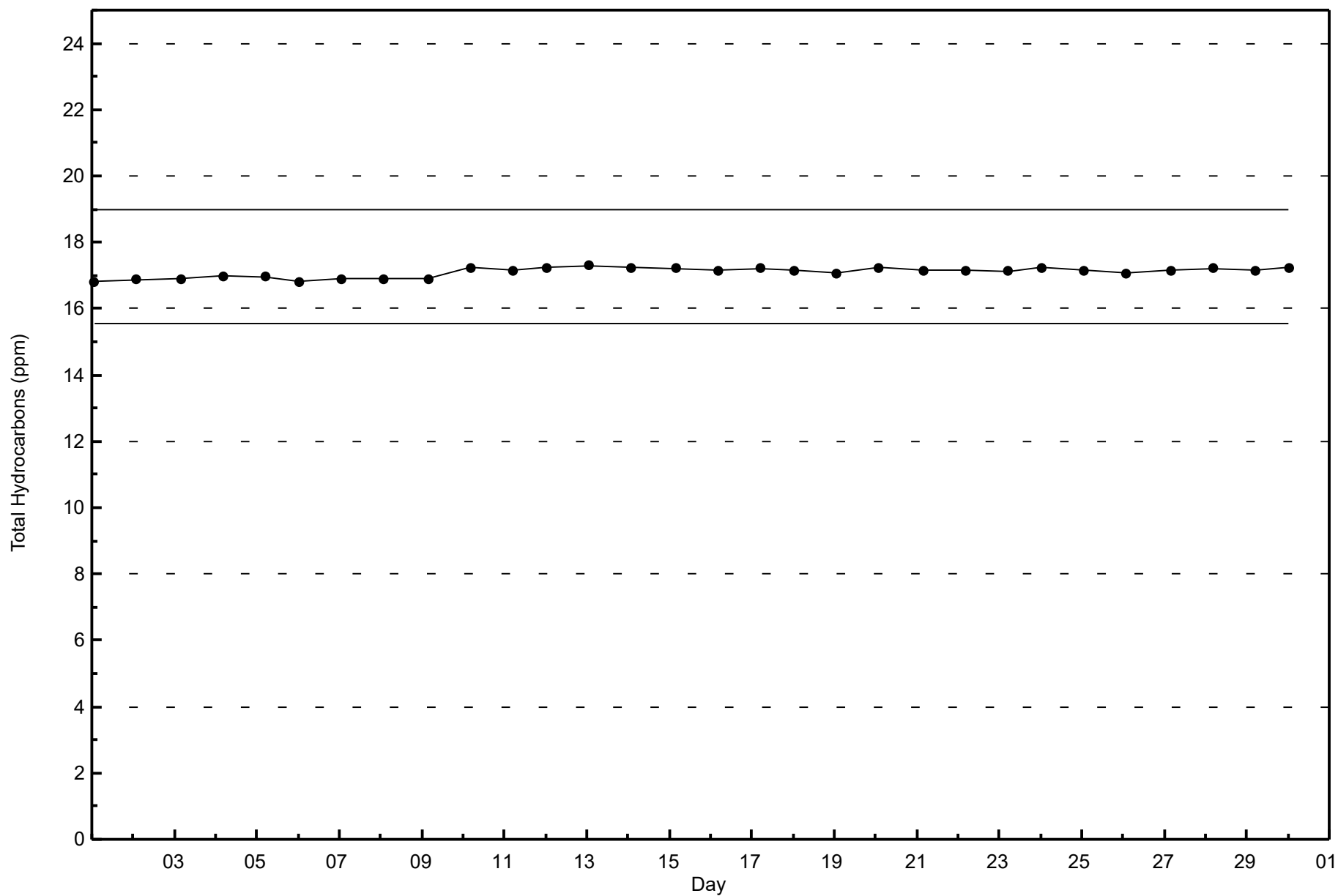






Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

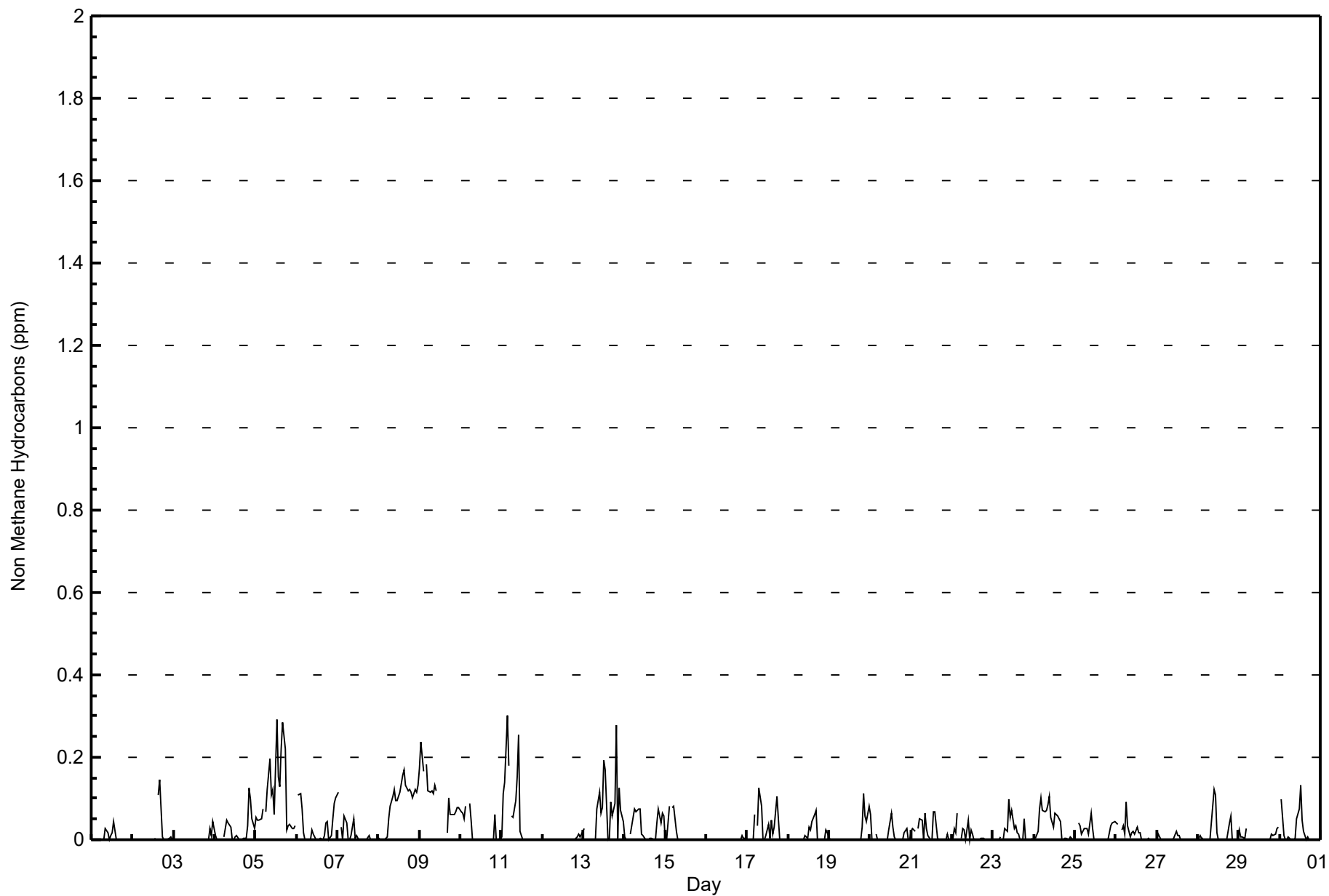
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 0.302 ppm on Apr 11 04:00																				Maximum Daily Average: 0.111 ppm on Apr 9					Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 01:00																				Minimum Daily Average: 0.001 ppm on Apr 16					Hours of Data: 684	
Maximum Diurnal Average: 0.044 ppm at hour 10																				Minimum Diurnal Average: 0.017 ppm at hour 19					Hours of Missing Data: 36	
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 of Calibration: 35	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.000	Z	0.000	0.000	0.000	0.001	0.000	0.001	0.028	0.016	0.001	0.011	0.017	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.043
2-Apr	0.000	0.000	Z	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	M	0.108	0.145	0.005	0.000	0.000	0.000	0.004	0.008	0.000	0.013	0.145
3-Apr	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	0.027	0.009	0.045	0.004	0.045
4-Apr	0.011	0.000	0.000	0.000	Z	0.006	0.027	0.047	0.040	0.029	0.000	0.000	0.007	0.011	0.000	0.000	0.000	0.005	0.004	0.034	0.126	0.097	0.051	0.026	0.023	0.126
5-Apr	0.056	0.048	0.047	0.050	0.074	Z	0.069	0.121	0.197	0.108	0.123	0.062	0.291	0.153	0.130	0.220	0.286	0.220	0.023	0.036	0.036	0.026	0.026	0.034	0.106	0.291
6-Apr	Z	0.109	0.111	0.076	0.015	0.001	0.000	0.000	0.001	0.024	0.015	0.001	0.000	0.000	0.004	0.001	0.011	0.041	0.042	0.000	0.011	0.051	0.088	0.102	0.031	0.111
7-Apr	0.116	Z	0.030	0.000	0.058	0.041	0.000	0.001	0.010	0.052	0.005	0.009	0.002	0.002	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.015	0.116
8-Apr	0.002	0.000	Z	0.000	0.003	0.008	0.052	0.080	0.105	0.122	0.094	0.094	0.116	0.137	0.158	0.169	0.132	0.119	0.122	0.115	0.102	0.122	0.116	0.133	0.091	0.169
9-Apr	0.173	0.236	0.167	Z	0.183	0.120	0.116	0.117	0.111	0.131	0.119	C	C	C	C	C	0.017	0.102	0.062	0.060	0.063	0.069	0.079	0.077	0.111	0.236
10-Apr	0.069	0.065	0.052	0.082	Z	0.088	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	0.060	0.000	0.000	0.002	0.020	0.088
11-Apr	0.007	0.113	0.139	0.302	0.181	Z	0.059	0.055	0.095	0.153	0.255	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.060	0.302
12-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.015	0.006	0.012	0.002	0.015
13-Apr	0.026	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.074	0.115	0.066	0.077	0.193	0.170	0.001	0.003	0.092	0.059	0.088	0.277	0.002	0.126	0.072	0.045	0.065	0.277
14-Apr	0.008	0.001	Z	0.012	0.033	0.053	0.074	0.068	0.073	0.073	0.015	0.010	0.000	0.000	0.000	0.005	0.002	0.000	0.000	0.041	0.074	0.042	0.064	0.057	0.031	0.074
15-Apr	0.000	0.001	0.080	Z	0.079	0.081	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	0.000	0.000	0.000	0.000	0.000	0.011	0.081
16-Apr	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	0.010	0.002	0.003	0.001	0.010	
17-Apr	0.000	0.000	0.000	0.000	0.063	Z	0.035	0.125	0.081	0.000	0.000	0.009	0.038	0.004	0.048	0.014	0.032	0.104	0.050	0.000	0.000	0.000	0.000	0.001	0.026	0.125
18-Apr	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.003	0.029	0.023	0.044	0.059	0.073	0.001	0.000	0.000	0.000	0.000	0.022	0.016	0.012	0.073
19-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.113	0.056	0.045	0.081	0.014	0.113
20-Apr	0.061	0.000	Z	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.065	0.029	0.007	0.000	0.000	0.000	0.000	0.000	0.018	0.026	0.000	0.000	0.011	0.065
21-Apr	0.019	0.026	0.020	Z	0.026	0.051	0.047	0.001	0.063	0.027	0.011	0.000	0.001	0.068	0.069	0.003	0.000	0.002	0.000	0.000	0.000	0.014	0.000	0.000	0.019	0.069
22-Apr	0.004	0.028	0.017	0.064	Z	0.002	0.026	0.023	0.001	0.048	0.000	0.025	0.015	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.011	0.064
23-Apr	0.000	0.000	0.000	0.000	0.007	Z	0.000	0.026	0.021	0.100	0.055	0.070	0.027	0.034	0.017	0.015	0.001	0.001	0.050	0.000	0.000	0.000	0.000	0.002	0.019	0.100
24-Apr	Z	0.003	0.021	0.075	0.103	0.072	0.068	0.070	0.085	0.106	0.055	0.030	0.065	0.060	0.058	0.043	0.001	0.000	0.003	0.002	0.000	0.006	0.004	0.001	0.040	0.106
25-Apr	0.001	Z	0.041	0.034	0.013	0.026	0.028	0.028	0.015	0.065	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.018	0.035	0.042	0.044	0.018	0.065
26-Apr	0.041	0.036	Z	0.023	0.033	0.013	0.091	0.035	0.006	0.017	0.021	0.014	0.030	0.018	0.018	0.000	0.000	0.001	0.001	0.002	0.001	0.000	0.000	0.000	0.017	0.091
27-Apr	0.000	0.013	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.004	0.022	0.009	0.010	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.003	0.022
28-Apr	0.003	0.010	0.003	0.002	Z	0.000	0.000	0.000	0.040	0.123	0.109	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.057	0.000	0.000	0.000	0.000	0.018	0.123
29-Apr	0.023	0.006	0.007	0.002	0.028	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.010	0.012	0.027	0.029	0.007	0.029
30-Apr	Z	0.098	0.011	0.001	0.000	0.006	0.001	0.000	0.001	0.002	0.052	0.076	0.132	0.049	0.022	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.132
Diurnal Average																										Diurnal Maximum
0.025 0.032 0.030 0.030 0.036 0.023 0.025 0.027 0.035 0.044 0.035 0.020 0.036 0.028 0.021 0.022 0.027 0.022 0.017 0.022 0.021 0.025 0.022 0.024																										
0.173 0.236 0.167 0.302 0.183 0.120 0.116 0.125 0.197 0.153 0.255 0.094 0.291 0.170 0.158 0.220 0.286 0.220 0.122 0.277 0.126 0.126 0.116 0.133																										
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	392	57.31	57.31
0.006 - 0.05	162	23.68	80.99
0.06 - 0.1	111	16.23	97.22
> 0.1	19	2.78	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	38	29	10	3	3	4	14	50	48	23	13	19	42	32	33	26	387
0.006 - 0.05	14	20	5	4	3	3	5	31	33	10	4	4	4	5	3	10	158
0.06 - 0.1	9	14	6	4	7	1	8	18	23	4	3	2	1	1	4	4	109
> 0.1	1	6	1	0	0	0	0	6	1	1	0	0	1	0	1	1	19
Totals	62	69	22	11	13	8	27	105	105	38	20	25	48	38	41	41	673

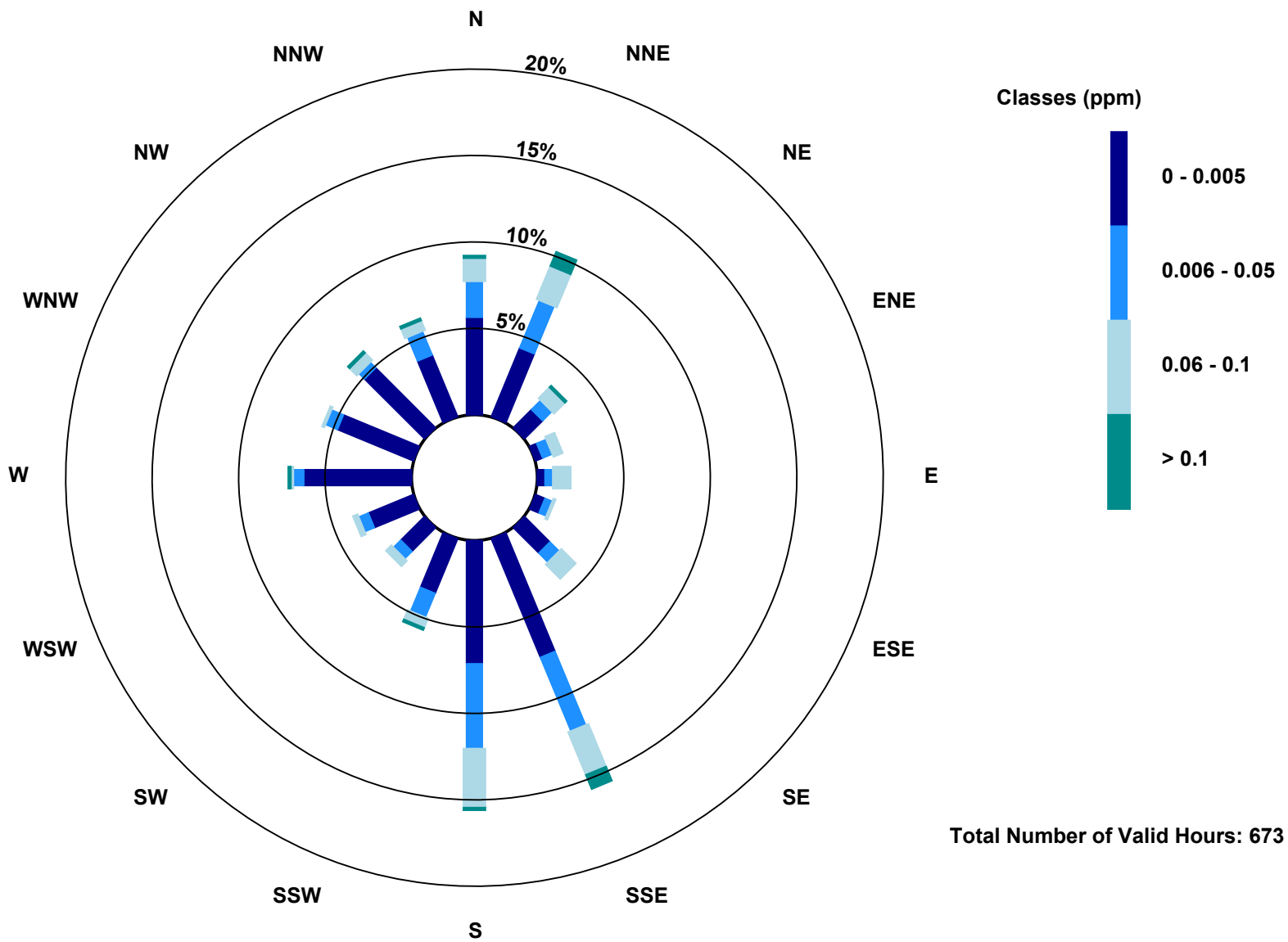
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

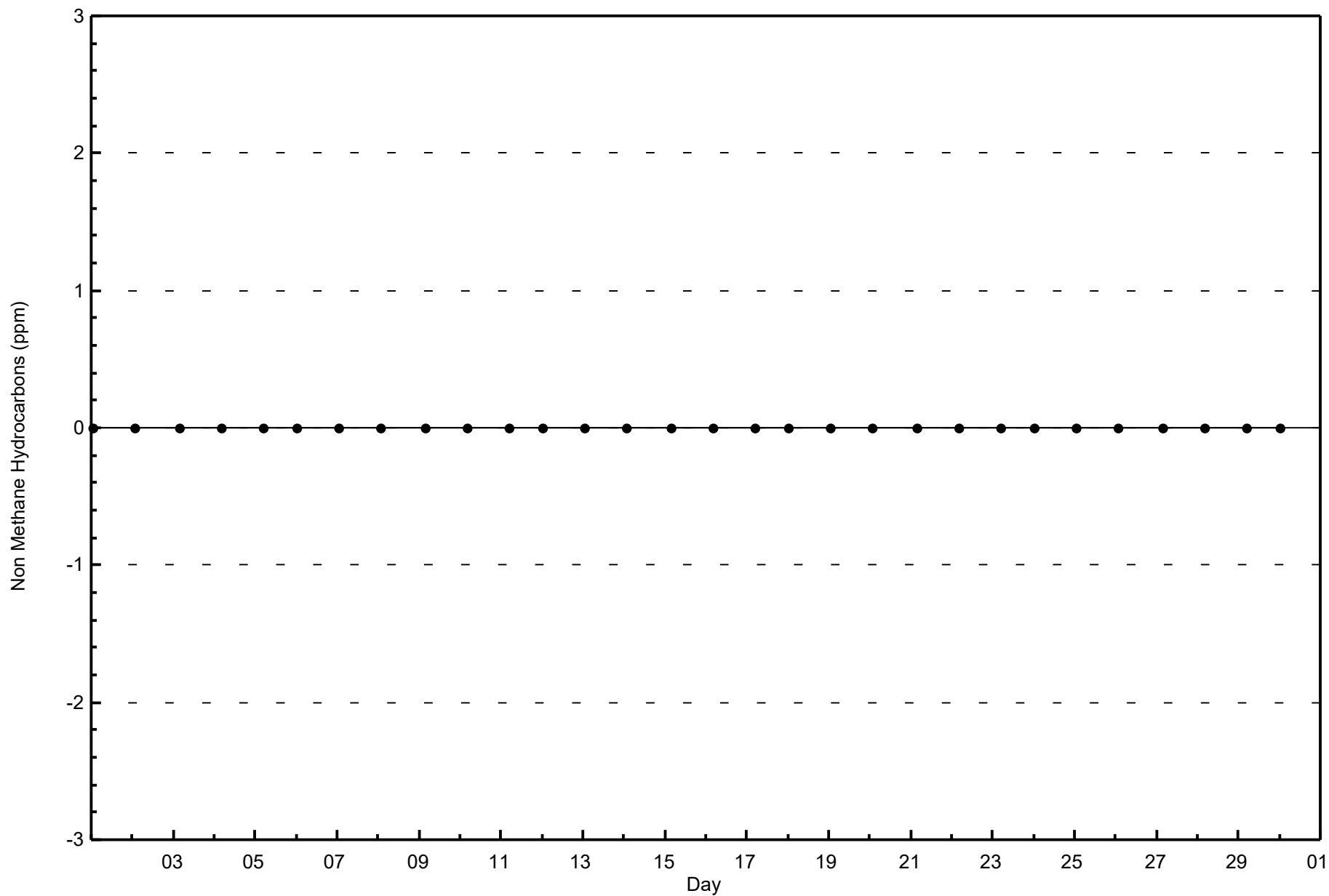
Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter

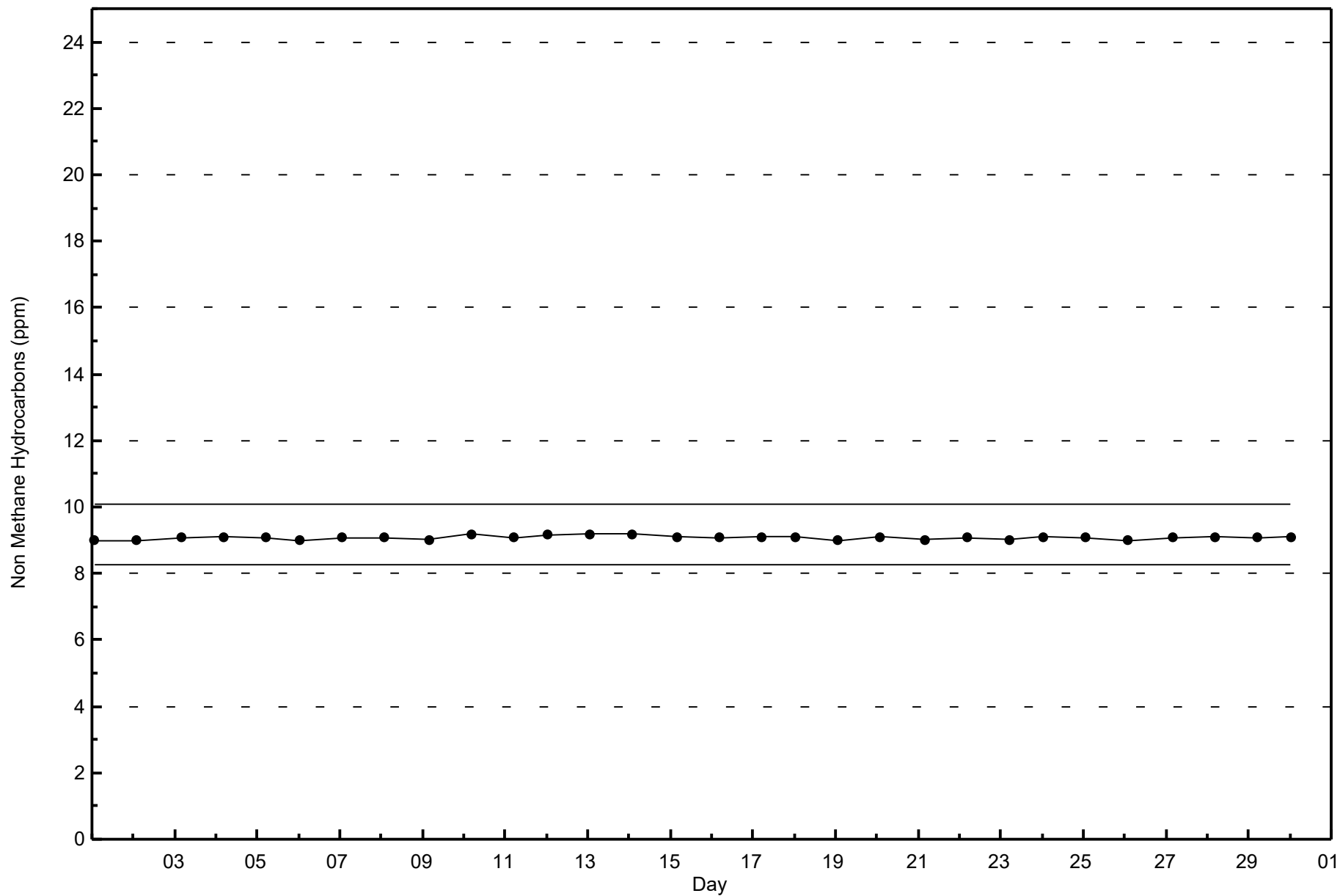




Wood Buffalo Environmental Association
Zero Responses

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







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

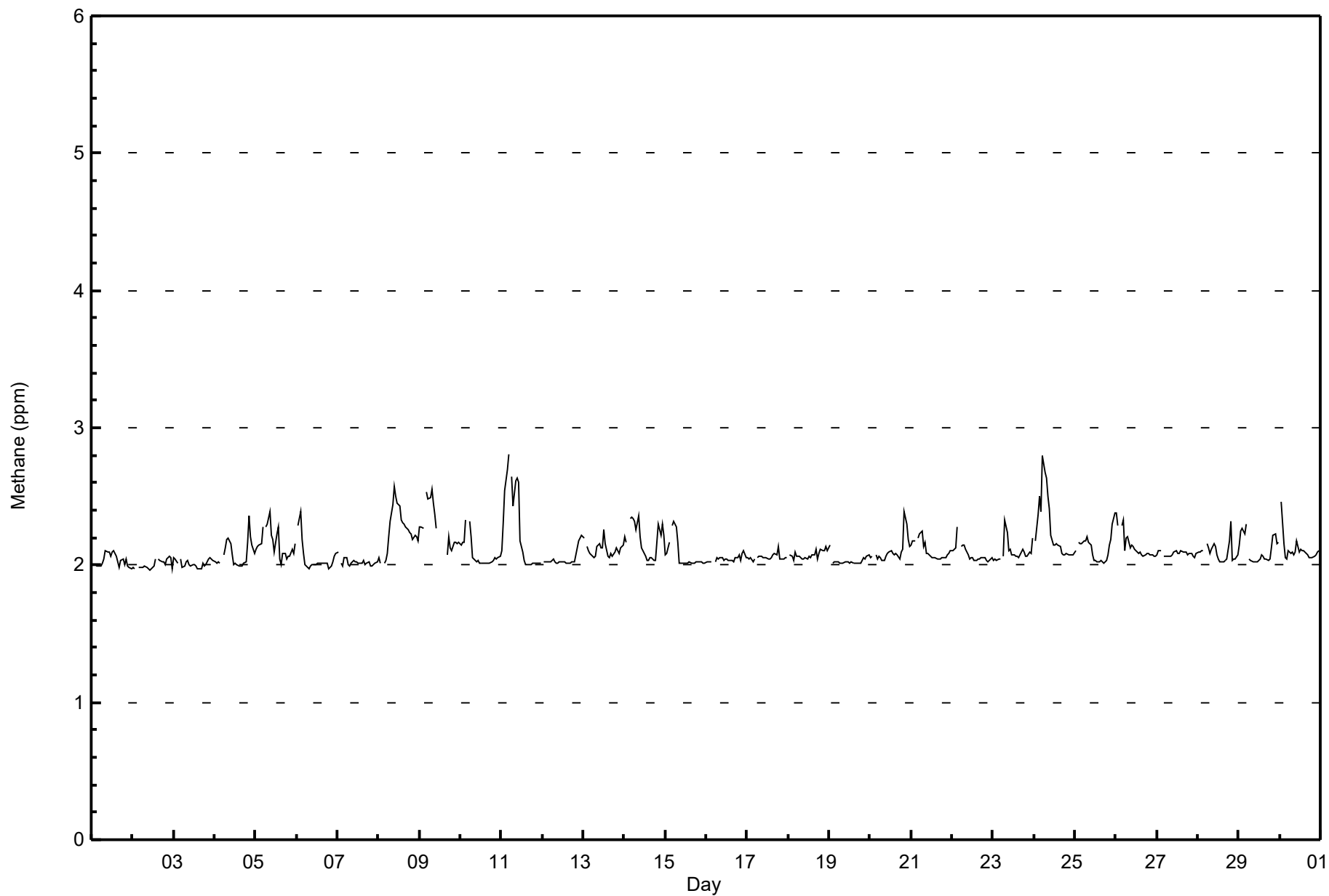
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 720										
Maximum Value: 2.8 ppm on Apr 11 05:00 Maximum Daily Average: 2.3 ppm on Apr 9																	Hours of Data: 684										
Minimum Value: 2.0 ppm on Apr 2 11:00 Minimum Daily Average: 2.0 ppm on Apr 2																	Hours of Missing Data: 36										
Maximum Diurnal Average: 2.2 ppm at hour 5 Minimum Diurnal Average: 2.0 ppm at hour 16																	Hours of Calibration: 35										
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 = 2.3 P ₉₉ = 2.6																	Percent Operational Time: 99.9										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	M	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-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
3-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1
4-Apr	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.2	2.1	2.1	2.1	2.4
5-Apr	2.1	2.1	2.1	2.2	2.3	Z	2.3	2.3	2.4	2.2	2.2	2.1	2.2	2.3	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.4	
6-Apr	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4	
7-Apr	2.1	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
8-Apr	2.0	2.0	Z	2.0	2.0	2.1	2.2	2.3	2.4	2.6	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.6	
9-Apr	2.3	2.3	2.3	Z	2.5	2.5	2.5	2.6	2.4	2.4	2.3	C	C	C	C	C	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.6	
10-Apr	2.2	2.2	2.2	2.3	Z	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.3	
11-Apr	2.1	2.3	2.5	2.7	2.8	Z	2.6	2.4	2.6	2.6	2.6	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.8	
12-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	
13-Apr	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	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	
14-Apr	2.2	2.2	Z	2.3	2.4	2.3	2.3	2.3	2.4	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.3	2.2	2.3	2.2	2.2	2.4	
15-Apr	2.1	2.1	2.2	Z	2.3	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	
17-Apr	2.0	2.0	2.1	2.0	2.0	Z	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	2.0	2.0	2.0	2.1	2.1	2.1	2.1	
18-Apr	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
19-Apr	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	
20-Apr	2.1	2.1	Z	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.4	2.3	2.2	2.1	2.1	2.4	
21-Apr	2.1	2.2	2.2	Z	2.2	2.2	2.3	2.1	2.2	2.1	2.1	2.1	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	2.3	
22-Apr	2.1	2.1	2.1	2.3	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.3	
23-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.1	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	2.2	2.1	2.3	
24-Apr	Z	2.2	2.4	2.5	2.4	2.8	2.7	2.6	2.5	2.4	2.2	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	2.8	
25-Apr	2.1	Z	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	2.2	2.2	2.3	2.4	2.1	
26-Apr	2.4	2.3	Z	2.3	2.3	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	
27-Apr	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	
28-Apr	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.0	2.0	2.0	2.1	2.1	2.3	
29-Apr	2.1	2.2	2.3	2.2	2.3	Z	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	2.1	2.2	2.2	2.2	2.2	2.2	2.3	
30-Apr	Z	2.5	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	
2.1 2.1 2.1 2.1 2.2 2.1 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1																									Diurnal Average		
2.4 2.5 2.5 2.7 2.8 2.8 2.7 2.6 2.6 2.6 2.6 2.5 2.4 2.3 2.3 2.3 2.3 2.3 2.3 2.2 2.3 2.4 2.3 2.3 2.4																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	277	40.50	40.50
2.1 - 3.0	407	59.50	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 (CH₄) - ppm
Fort McKay - Bertha Ganter - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	14	11	2	0	2	3	8	41	33	16	13	18	39	30	28	17	275
2.1 - 3.0	48	58	20	11	11	5	19	64	72	22	7	7	9	8	13	24	398
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	62	69	22	11	13	8	27	105	105	38	20	25	48	38	41	41	673

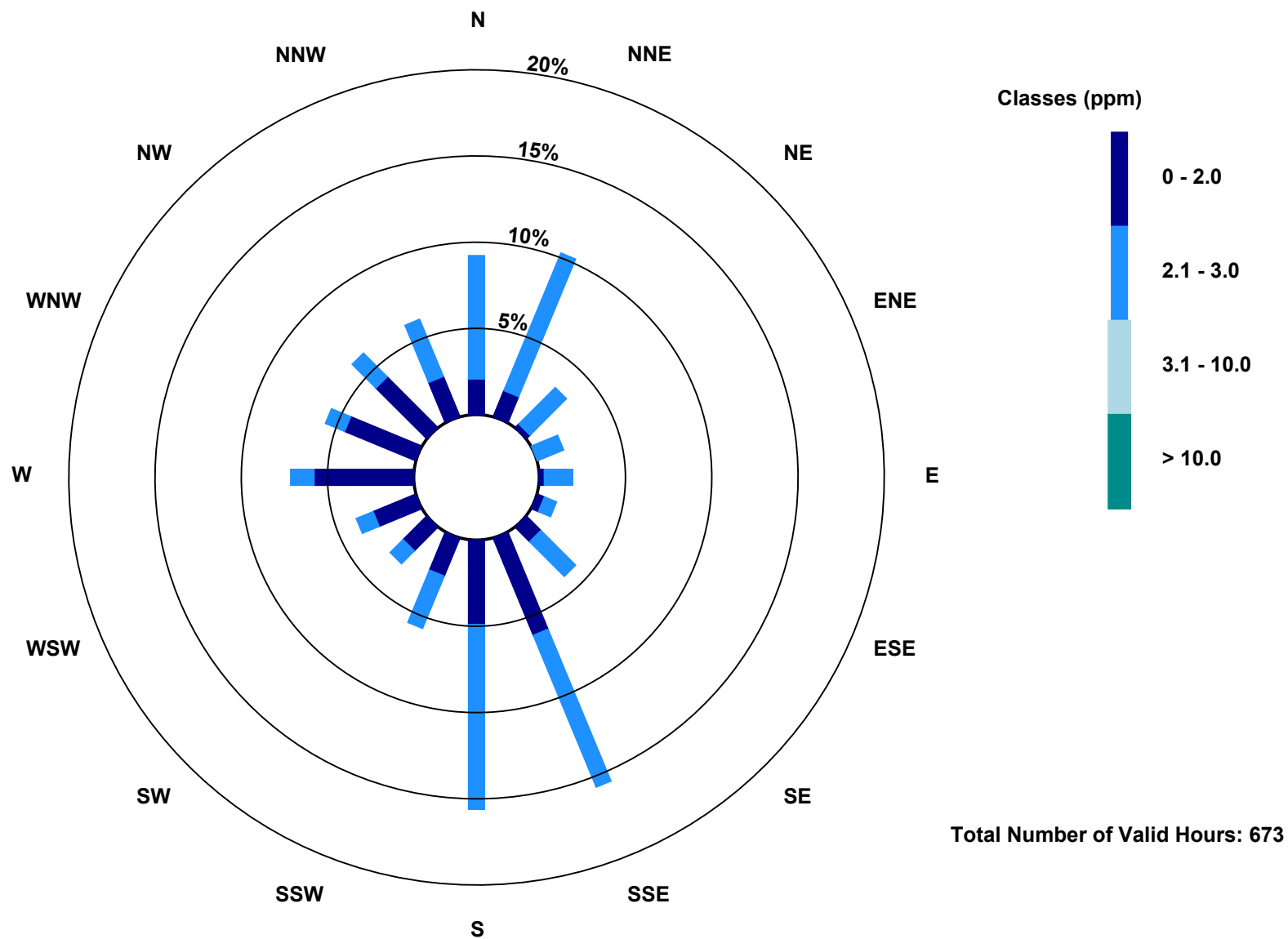
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Methane (CH₄) - ppm
Fort McKay - Bertha Ganter



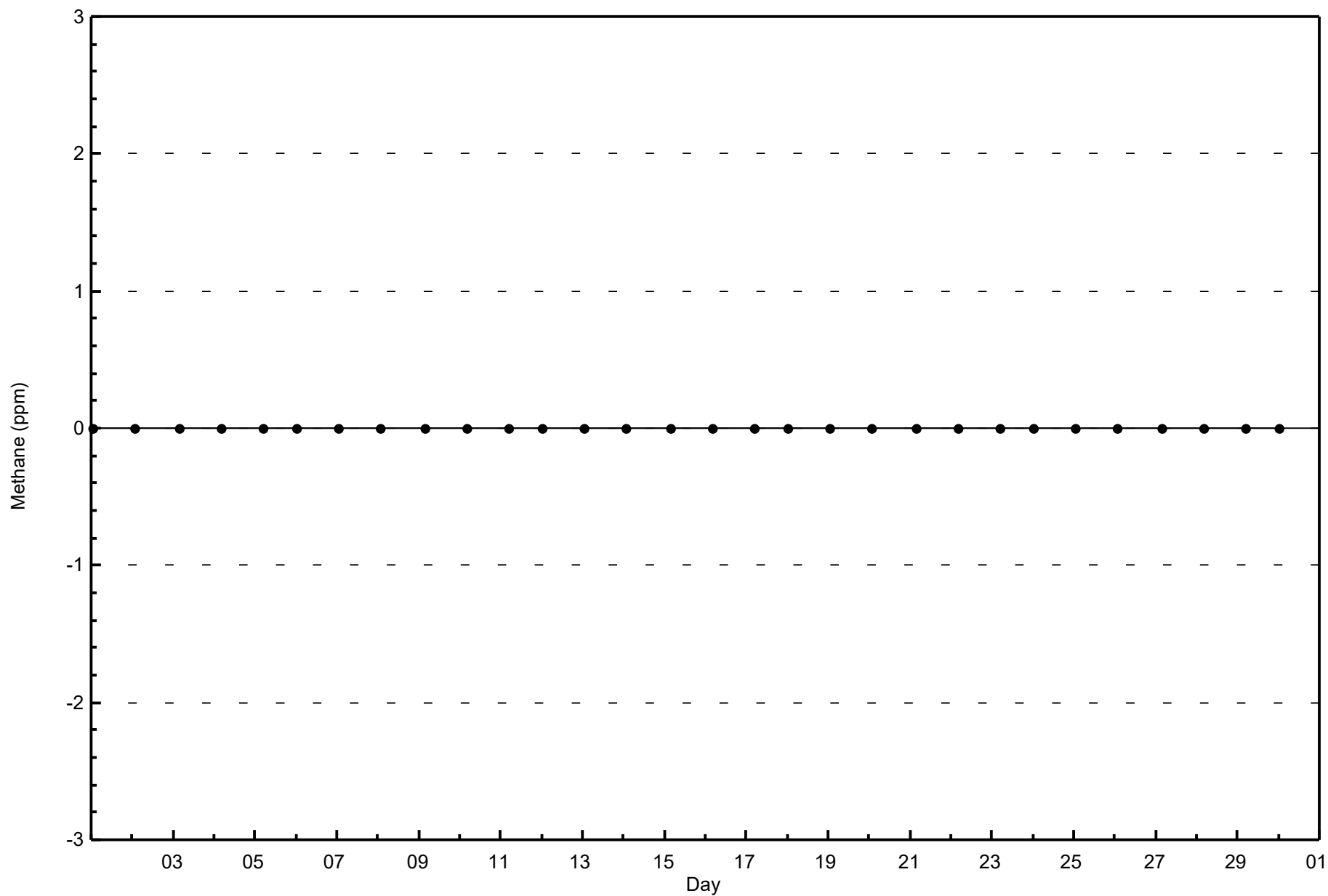


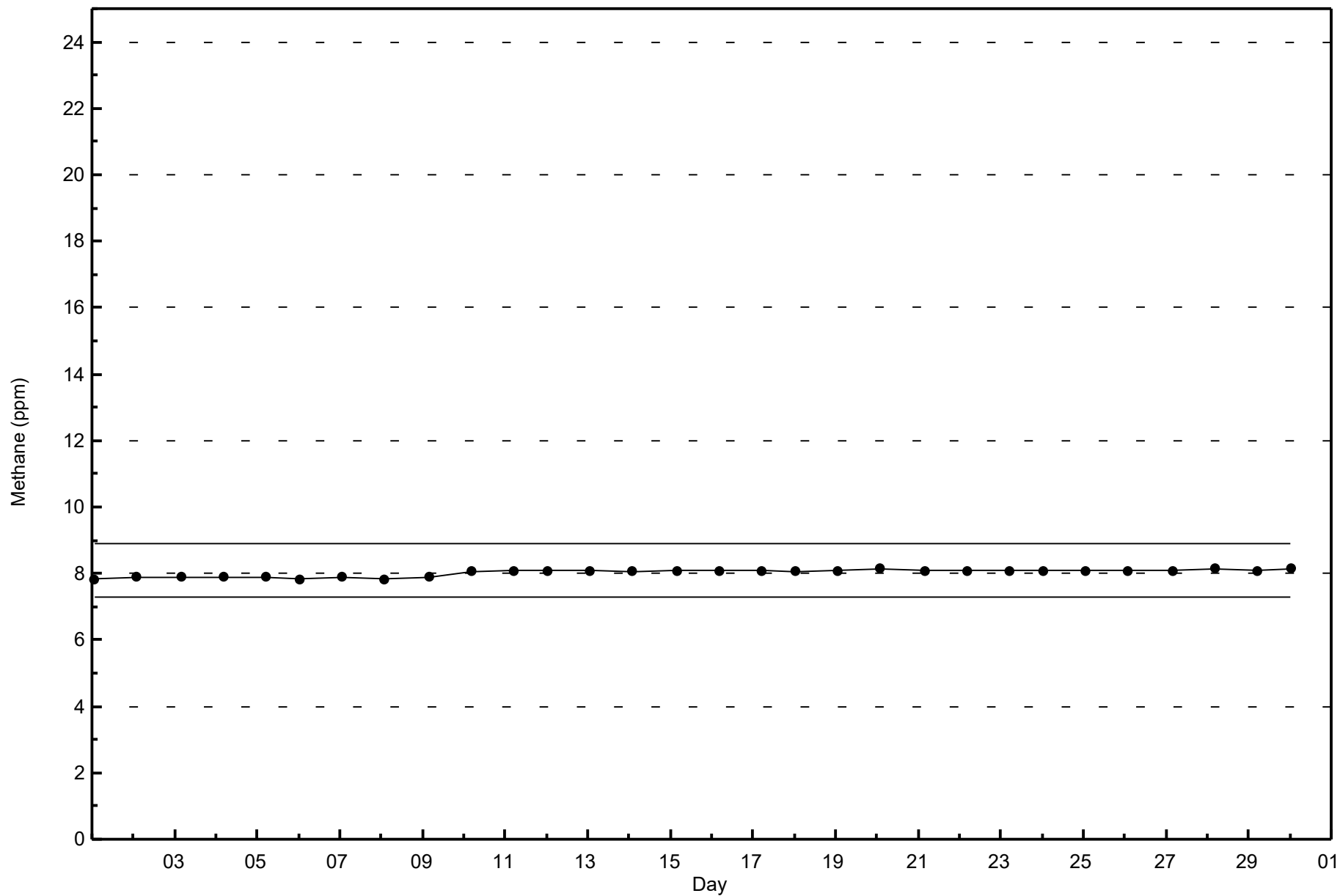
Wood Buffalo Environmental Association

Zero Responses

Methane (CH₄) - ppm

Fort McKay - Bertha Ganter - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

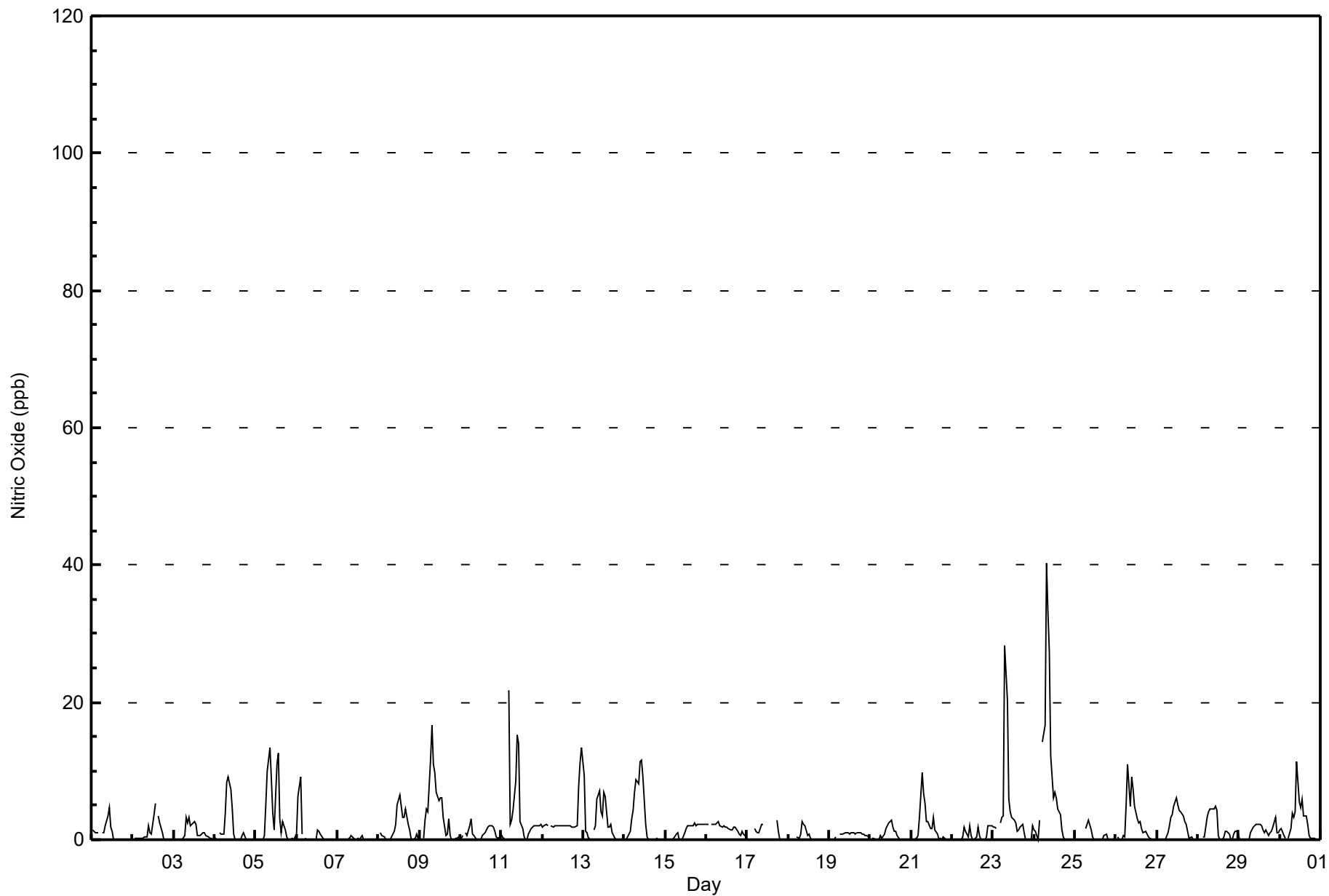
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 40.3 ppb on Apr 24 08:00																			Maximum Daily Average: 7.8 ppb on Apr 24							Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 14:00																			Minimum Daily Average: 0.1 ppb on Apr 7							Hours of Data: 682	
Maximum Diurnal Average: 5.5 ppb at hour 8																			Minimum Diurnal Average: 0.4 ppb at hour 21							Hours of Missing Data: 38	
Monthly Average: 1.95 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.9 Q ₃ = 2.2 P ₉₀ = 4.8 P ₉₉ = 16.6							Hours of Calibration: 37	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1.4	1.2	1.0	1.0	1.1	Z	1.1	1.1	2.0	3.5	4.7	1.8	1.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.7	
2-Apr	Z	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	2.0	1.1	0.7	3.6	5.2	M	3.4	2.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	5.2	
3-Apr	0.2	Z	0.0	0.0	0.0	0.0	0.6	3.2	2.5	3.3	2.1	2.4	2.7	2.2	0.6	0.6	0.8	1.0	1.0	0.6	0.5	0.3	0.2	0.0	1.1	3.3	
4-Apr	0.1	0.1	Z	1.0	0.9	0.9	3.8	8.3	9.2	7.3	4.4	0.7	0.0	0.0	0.0	0.1	0.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	9.2	
5-Apr	0.0	0.0	0.0	Z	0.0	0.6	5.0	9.9	13.4	8.7	3.8	1.3	10.9	12.6	3.0	1.0	2.6	1.5	0.4	0.0	0.0	0.2	0.0	0.3	3.3	13.4	
6-Apr	0.9	6.4	9.1	0.8	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.4	1.2	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	9.1	
7-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.3	0.3	0.7	0.1	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.7	
8-Apr	Z	1.0	0.6	0.3	0.0	0.0	0.0	0.0	0.9	1.3	2.3	5.2	6.6	4.9	3.3	3.3	4.5	2.2	1.4	0.3	0.0	0.1	0.8	0.2	1.7	6.6	
9-Apr	1.1	Z	0.2	2.9	4.4	4.1	11.9	16.6	11.0	9.8	6.9	5.6	6.1	6.2	3.2	0.6	0.8	3.1	0.7	0.1	0.0	0.2	0.2	0.3	4.2	16.6	
10-Apr	0.2	0.6	Z	0.9	0.5	2.1	3.1	0.9	0.7	0.0	0.0	0.0	0.0	0.6	1.1	1.5	1.7	2.0	2.1	1.8	1.1	0.4	0.3	0.5	1.0	3.1	
11-Apr	0.5	0.2	0.2	Z	21.8	2.3	2.9	4.3	8.6	15.2	14.1	2.6	1.6	0.3	0.0	0.0	0.9	1.7	1.9	2.0	2.0	1.9	2.1	2.2	3.9	21.8	
12-Apr	1.9	2.0	2.2	2.0	Z	2.1	1.8	2.0	1.9	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	2.0	7.7	11.2	13.5	3.1	13.5	
13-Apr	9.4	1.2	0.9	0.1	0.2	Z	1.4	2.0	5.8	7.1	4.0	3.6	6.9	6.3	1.9	1.8	2.3	1.0	0.2	0.0	0.0	0.0	0.0	0.3	2.4	9.4	
14-Apr	Z	0.1	0.3	1.2	3.1	4.2	6.9	8.7	8.2	11.4	11.7	9.1	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	2.9	11.7	
15-Apr	0.0	Z	0.0	0.0	0.1	0.2	0.9	1.1	0.0	0.0	0.0	0.9	1.7	1.9	1.9	2.1	2.1	2.3	2.1	2.2	2.2	2.2	2.2	2.2	1.2	2.3	
16-Apr	2.3	2.2	Z	2.3	2.3	2.2	2.4	2.6	2.1	1.9	2.0	1.8	1.8	1.6	1.5	1.4	1.8	1.9	1.2	0.9	0.5	1.1	0.9	0.3	1.7	2.6	
17-Apr	0.0	0.0	0.0	Z	1.7	1.2	1.0	1.0	2.2	2.3	C	C	C	C	C	C	C	2.9	1.3	0.0	0.0	0.0	0.0	0.0	-	2.9	
18-Apr	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.8	2.6	2.3	2.0	0.6	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.6	
19-Apr	0.0	0.0	0.0	0.0	0.4	Z	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	1.0	0.9	0.8	0.6	0.5	0.3	0.7	1.0	
20-Apr	Z	0.3	0.1	0.0	0.0	0.0	0.6	0.2	0.8	1.5	2.1	2.5	2.8	1.8	1.1	1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.8	
21-Apr	0.1	Z	0.1	0.3	0.6	3.3	9.8	6.8	5.4	2.7	2.7	1.7	1.6	3.2	1.5	0.8	0.1	0.2	0.0	0.4	0.0	0.0	0.0	0.0	1.8	9.8	
22-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.4	1.9	1.3	0.4	2.1	0.6	0.0	0.0	0.5	1.7	0.6	0.0	0.0	0.0	0.4	2.0	2.1	2.0	0.7	2.1	
23-Apr	1.9	1.8	1.6	Z	2.4	3.3	3.4	28.3	20.2	6.0	4.0	3.3	2.8	2.5	1.2	1.5	1.9	2.2	0.9	0.1	0.0	0.0	0.0	1.9	4.0	28.3	
24-Apr	1.5	1.3	0.1	2.9	Z	14.2	16.6	40.3	33.3	27.5	12.3	6.1	6.9	6.2	4.5	3.6	1.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	7.8	40.3	
25-Apr	0.0	0.0	0.0	0.0	0.0	Z	1.6	2.3	2.9	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.0	0.0	0.0	0.0	0.2	0.4	2.9	
26-Apr	Z	0.3	0.0	0.1	0.6	0.5	5.0	11.0	5.0	9.1	7.3	5.0	3.1	2.5	2.7	1.6	1.0	1.3	0.8	0.4	0.2	0.0	0.0	0.0	2.5	11.0	
27-Apr	0.0	Z	0.0	0.0	0.0	0.1	1.1	2.0	3.2	3.7	4.9	6.0	5.1	4.2	4.2	3.5	2.7	2.2	1.1	0.2	0.4	0.1	0.0	0.0	1.9	6.0	
28-Apr	0.1	0.0	Z	0.3	0.4	3.2	4.1	4.4	4.4	4.4	4.9	4.3	0.6	0.0	0.0	0.5	1.3	1.2	0.8	0.0	0.0	0.9	1.2	1.2	1.7	4.9	
29-Apr	0.1	0.0	0.0	Z	0.0	0.0	0.0	1.1	1.8	2.1	2.3	2.2	2.3	2.1	1.5	1.0	1.4	0.5	1.1	1.2	1.8	3.3	0.9	1.0	1.2	3.3	
30-Apr	1.4	1.6	0.6	0.2	Z	0.2	1.6	3.8	3.2	4.0	11.4	5.4	4.6	5.9	3.4	3.4	2.3	0.6	0.3	0.1	0.2	0.0	0.1	0.0	2.4	11.4	
0.9 0.8 0.7 0.7 1.6 1.8 2.9 5.5 5.1 4.7 4.0 2.6 2.8 2.6 1.5 1.3 1.3 1.1 0.7 0.4 0.4 0.7 0.8 0.9																									Diurnal Average		
9.4 6.4 9.1 2.9 21.8 14.2 16.6 40.3 33.3 27.5 14.1 9.1 10.9 12.6 4.5 3.6 4.5 3.1 2.1 2.2 2.2 7.7 11.2 13.5																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	99.27	99.27
21 - 40	5	0.73	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	61	63	21	11	13	6	28	110	105	37	18	25	46	41	39	41	665
21 - 40	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	64	21	11	13	7	29	110	105	37	18	25	46	41	39	43	670

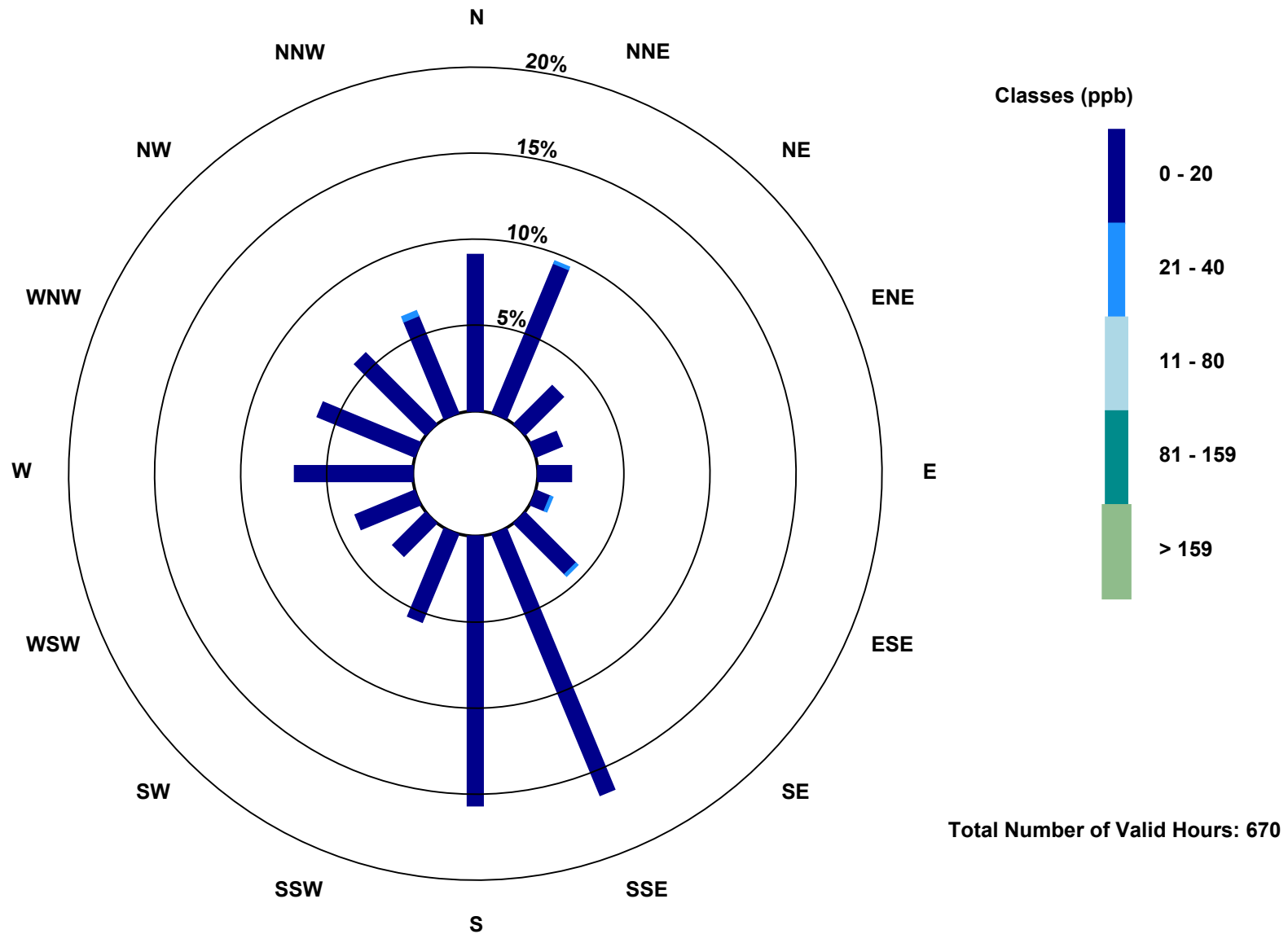
Total Number of Valid Hours: 670

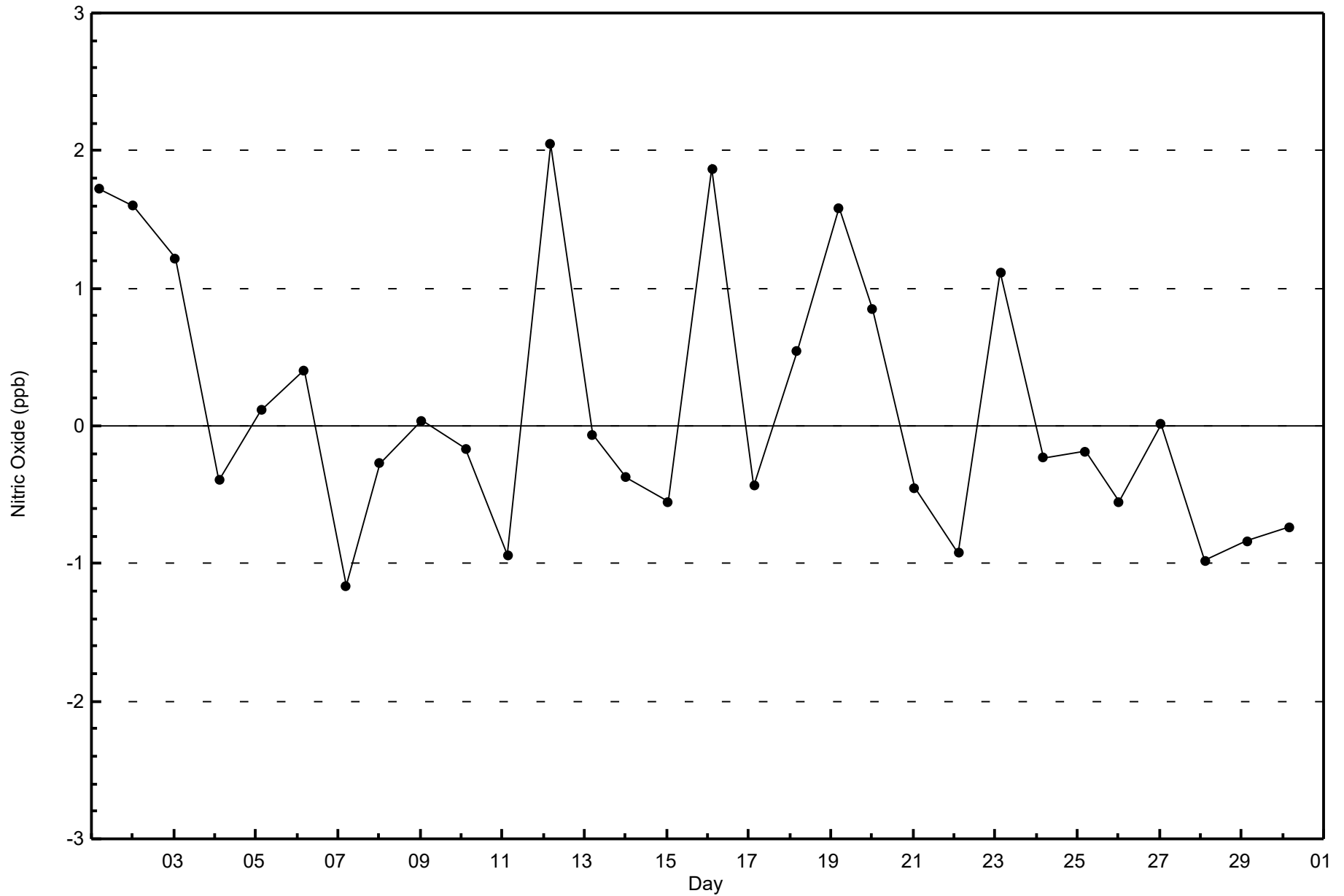
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





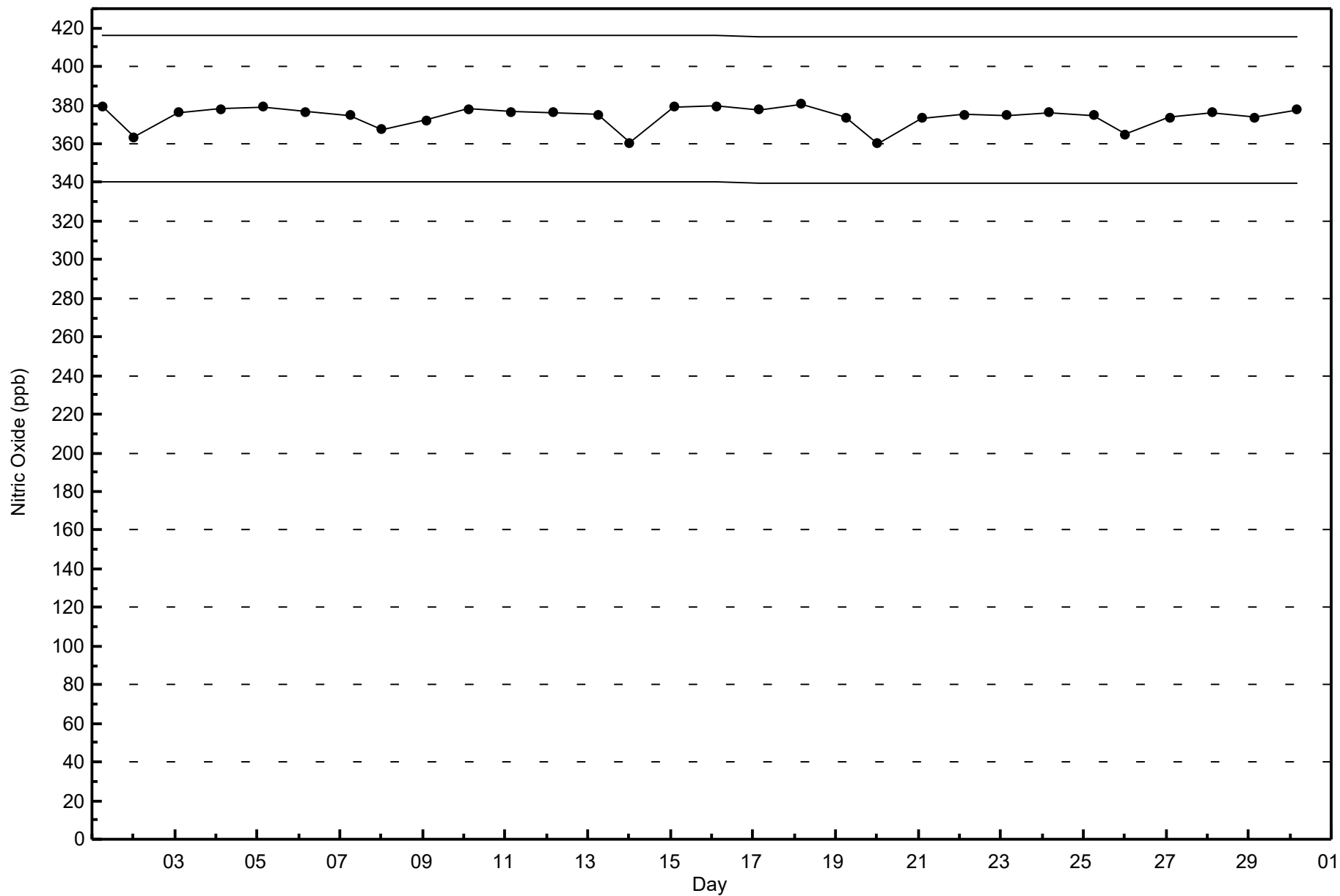


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

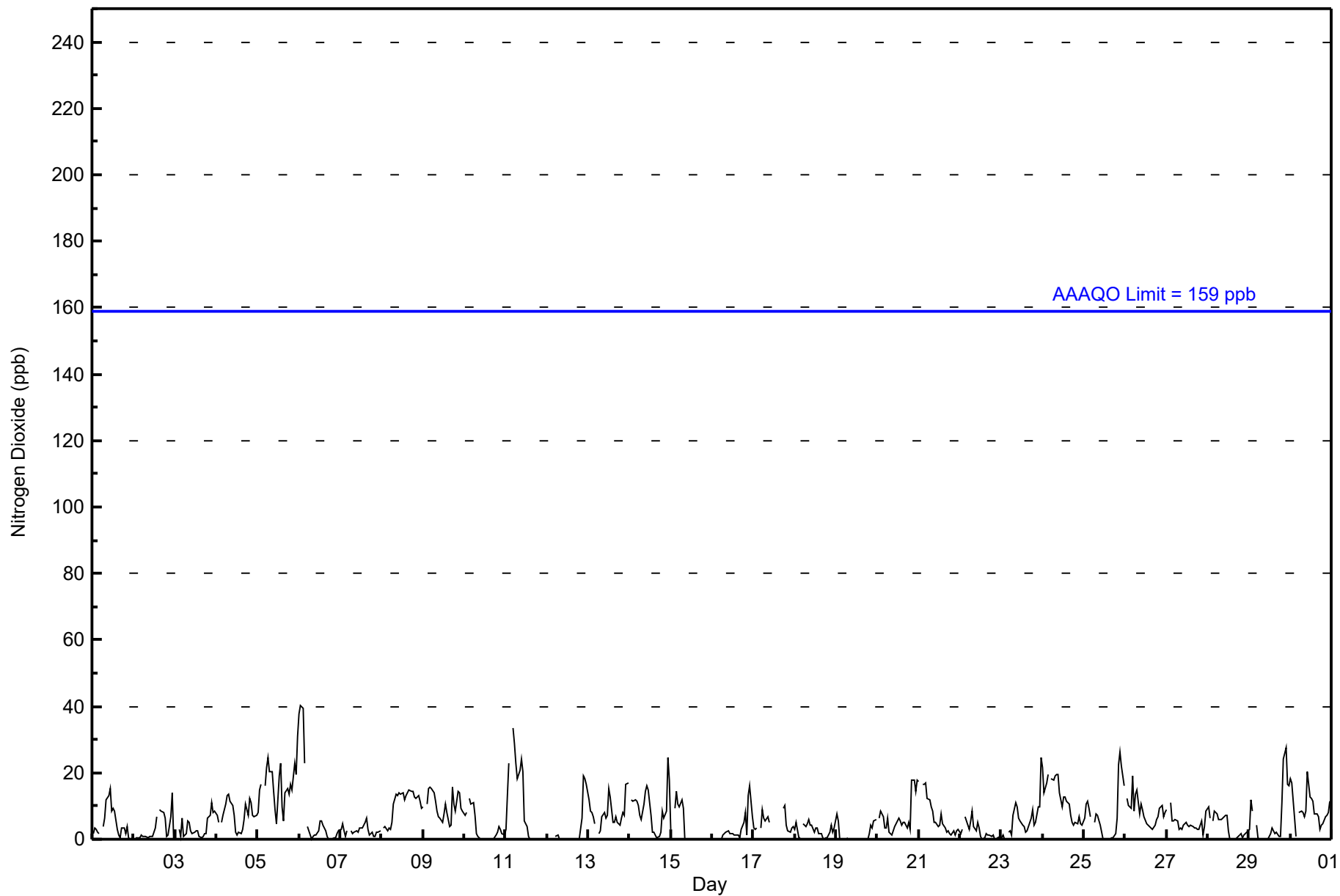
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 40.3 ppb on Apr 6 02:00 Maximum Daily Average: 16.3 ppb on Apr 5																			Hours of Data: 682							
Minimum Value: 0.0 ppb on Apr 1 23:00 Minimum Daily Average: 1.6 ppb on Apr 19																			Hours of Missing Data: 38							
Maximum Diurnal Average: 9.0 ppb at hour 3 Minimum Diurnal Average: 3.3 ppb at hour 16																			Hours of Calibration: 37							
Monthly Average: 6.25 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 1.4 Median = 4.3 Q ₃ = 9.1 P ₉₀ = 14.9 P ₉₉ = 26.6																			Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.8	3.2	3.1	2.1	1.8	Z	3.7	6.2	11.9	13.3	15.2	8.5	9.5	8.5	2.9	1.4	0.5	3.4	3.4	1.8	3.9	0.6	0.0	0.3	4.7	15.2
2-Apr	Z	0.5	0.6	0.5	1.2	1.0	0.7	0.8	0.3	1.0	0.7	0.7	3.5	6.8	M	8.9	8.3	8.1	6.4	0.7	1.1	6.7	14.0	0.0	3.3	14.0
3-Apr	2.4	Z	3.0	0.8	6.4	1.0	1.6	5.6	4.9	2.7	1.6	2.2	2.7	2.5	0.8	0.5	0.7	1.8	1.7	6.4	7.3	10.9	8.2	8.4	3.7	10.9
4-Apr	7.0	5.0	Z	5.0	7.1	10.4	13.3	13.4	11.5	10.1	7.1	2.1	1.4	2.0	1.9	2.8	5.8	10.7	7.0	12.2	11.2	7.0	6.8	7.0	7.3	13.4
5-Apr	8.1	14.9	16.6	Z	16.2	21.6	24.4	20.3	20.4	14.5	9.1	4.6	19.2	22.7	9.8	5.5	14.0	15.3	13.5	16.4	14.9	23.0	19.7	31.0	16.3	31.0
6-Apr	37.8	40.3	39.3	22.8	Z	4.0	1.4	0.0	0.9	1.4	1.1	2.5	5.5	5.3	4.1	2.6	1.0	0.0	0.1	0.0	0.3	0.5	1.7	2.7	7.6	40.3
7-Apr	3.1	4.7	2.6	0.7	2.6	Z	2.6	1.7	2.2	2.7	2.3	3.2	3.6	3.4	5.1	6.2	3.0	1.3	2.1	0.9	0.9	2.0	2.1	2.6	2.7	6.2
8-Apr	Z	3.3	3.7	2.4	3.3	3.1	5.0	10.8	13.6	13.3	14.1	13.5	13.9	11.8	13.1	13.9	14.7	14.4	14.6	12.9	12.1	13.0	11.5	9.3	10.5	14.7
9-Apr	9.6	Z	10.7	15.4	15.8	15.4	13.9	11.6	8.3	6.9	6.5	5.1	7.8	10.7	8.2	4.0	4.4	15.6	10.6	8.3	14.2	13.9	9.5	8.3	10.2	15.8
10-Apr	7.0	7.9	Z	12.2	10.4	10.9	7.0	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.0	3.7	2.8	1.6	1.4	3.1	12.2
11-Apr	2.8	13.2	22.7	Z	33.6	28.9	22.7	18.1	20.9	24.0	20.2	5.3	3.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	33.6
12-Apr	0.0	0.0	0.0	0.0	Z	0.7	1.4	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	6.3	19.1	18.4	16.4	2.7	19.1
13-Apr	11.8	8.5	8.2	6.7	4.8	Z	1.9	2.4	6.8	7.9	6.2	7.0	15.1	12.7	5.1	5.2	6.8	5.1	4.1	6.4	8.1	7.0	16.5	16.9	7.9	16.9
14-Apr	Z	11.9	11.5	11.8	11.5	10.0	7.0	6.1	10.7	14.3	16.1	14.7	7.0	2.2	2.0	1.4	0.6	0.7	2.3	8.4	6.2	8.3	24.5	18.0	9.0	24.5
15-Apr	2.9	Z	9.3	14.4	10.8	9.9	11.9	9.4	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	0.0	0.0	0.0	3.0	14.4
16-Apr	0.0	0.0	Z	0.0	0.0	0.0	1.4	1.9	2.2	2.5	1.7	1.9	1.6	1.4	1.2	1.3	0.4	3.0	5.2	7.9	1.3	13.0	15.9	6.8	3.1	15.9
17-Apr	3.6	3.0	3.4	Z	3.2	8.7	6.5	5.7	6.6	5.1	C	C	C	C	C	C	C	9.5	10.0	4.2	2.4	2.3	3.6	3.9	--	10.0
18-Apr	3.1	5.0	0.4	0.4	Z	4.6	3.7	4.8	5.9	4.3	4.2	2.2	3.3	3.2	1.8	1.6	0.6	0.0	0.5	0.3	2.0	4.4	2.0	3.3	2.7	5.9
19-Apr	7.6	5.6	0.0	0.0	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	1.5	4.1	3.6	5.4	6.0	1.6	7.6
20-Apr	Z	6.2	8.6	6.9	3.5	3.6	6.3	2.2	1.3	2.5	3.7	4.8	6.3	5.3	4.2	5.0	5.0	3.6	5.0	2.9	17.9	17.8	14.4	17.8	6.7	17.9
21-Apr	17.4	Z	16.6	16.6	17.1	12.3	11.7	9.7	8.3	5.0	5.1	3.9	4.1	7.8	4.6	3.3	2.1	2.7	1.9	1.4	2.5	1.2	2.4	3.0	7.0	17.4
22-Apr	1.5	3.0	Z	6.9	5.3	3.0	5.3	8.4	4.0	2.7	5.2	3.4	0.9	0.0	0.4	1.5	1.2	1.3	0.9	1.3	0.2	0.0	0.5	0.9	2.5	8.4
23-Apr	0.6	1.4	0.2	Z	2.0	2.4	1.4	7.3	11.0	9.8	6.5	5.6	4.2	4.0	2.3	2.6	3.9	6.4	9.1	4.4	5.1	9.7	9.8	24.7	5.8	24.7
24-Apr	21.5	13.9	17.0	19.5	Z	18.4	17.7	19.2	19.6	19.4	13.8	9.9	12.9	12.5	11.5	10.5	7.3	4.9	4.2	5.0	4.8	6.6	4.5	4.1	12.1	21.5
25-Apr	6.5	10.4	11.4	9.3	6.8	Z	5.0	7.6	7.4	4.2	2.0	0.1	0.0	0.0	0.0	0.0	0.4	0.4	1.5	6.5	22.6	26.4	22.0	16.2	7.2	26.4
26-Apr	Z	12.3	10.0	9.3	19.1	8.5	13.6	14.8	7.6	10.7	9.1	6.7	4.5	4.1	4.0	3.3	3.0	4.3	5.9	6.7	9.4	10.1	6.9	7.9	8.3	19.1
27-Apr	8.8	Z	11.2	5.6	5.4	6.0	5.5	3.1	3.5	3.1	4.1	5.0	4.4	4.0	4.1	4.0	3.5	3.6	3.1	3.1	5.3	1.2	4.0	8.5	4.8	11.2
28-Apr	9.6	6.2	Z	5.7	8.5	7.8	5.8	6.0	6.0	6.8	7.3	7.1	2.4	0.0	0.0	0.0	0.1	0.3	1.4	1.7	0.5	1.1	1.5	2.4	3.8	9.6
29-Apr	2.8	11.9	8.5	Z	4.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0	1.9	3.2	2.6	1.6	2.3	0.7	0.7	10.9	24.1	27.4	16.4	16.0	5.9	27.4
30-Apr	18.2	16.8	6.5	0.9	Z	7.9	8.5	8.1	6.7	8.6	20.4	12.8	12.3	11.4	7.7	7.7	6.6	3.1	4.4	4.5	6.6	7.1	8.1	11.6	9.0	20.4
7.8 8.4 9.0 7.0 8.0 8.0 7.0 6.9 6.8 6.6 6.3 4.6 5.2 5.1 3.5 3.3 3.3 4.0 4.0 4.6 6.6 8.2 8.4 8.5																								Diurnal Average		
37.8 40.3 39.3 22.8 33.6 28.9 24.4 20.3 20.9 24.0 20.4 14.7 19.2 22.7 13.1 13.9 14.7 15.6 14.6 16.4 24.1 27.4 24.5 31.0																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	659	96.63	96.63
21 - 40	23	3.37	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	58	62	20	11	12	7	29	109	102	35	18	25	44	40	39	36	647
21 - 40	3	2	1	0	1	0	0	1	3	2	0	0	2	1	0	7	23
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	61	64	21	11	13	7	29	110	105	37	18	25	46	41	39	43	670

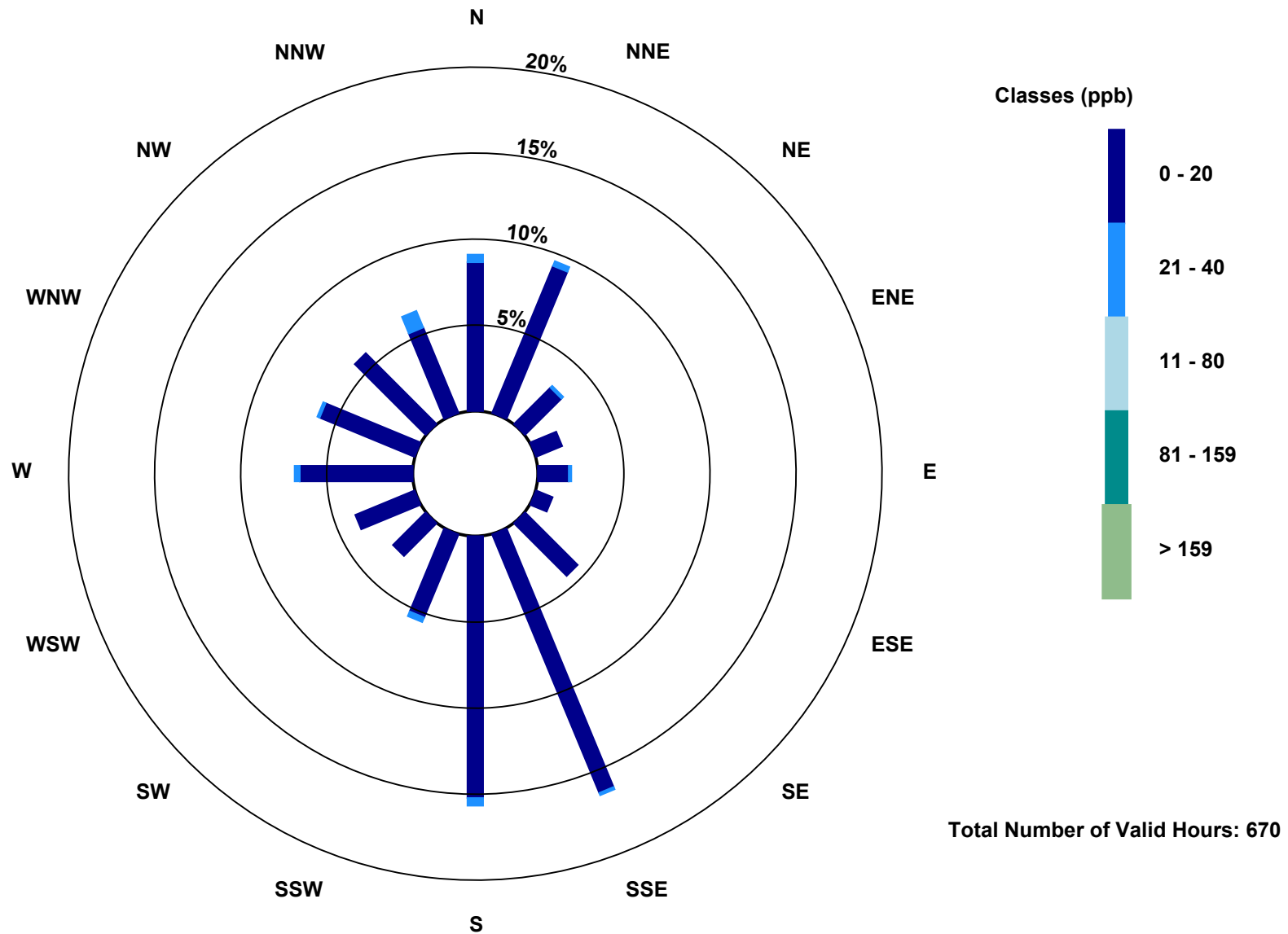
Total Number of Valid Hours: 670

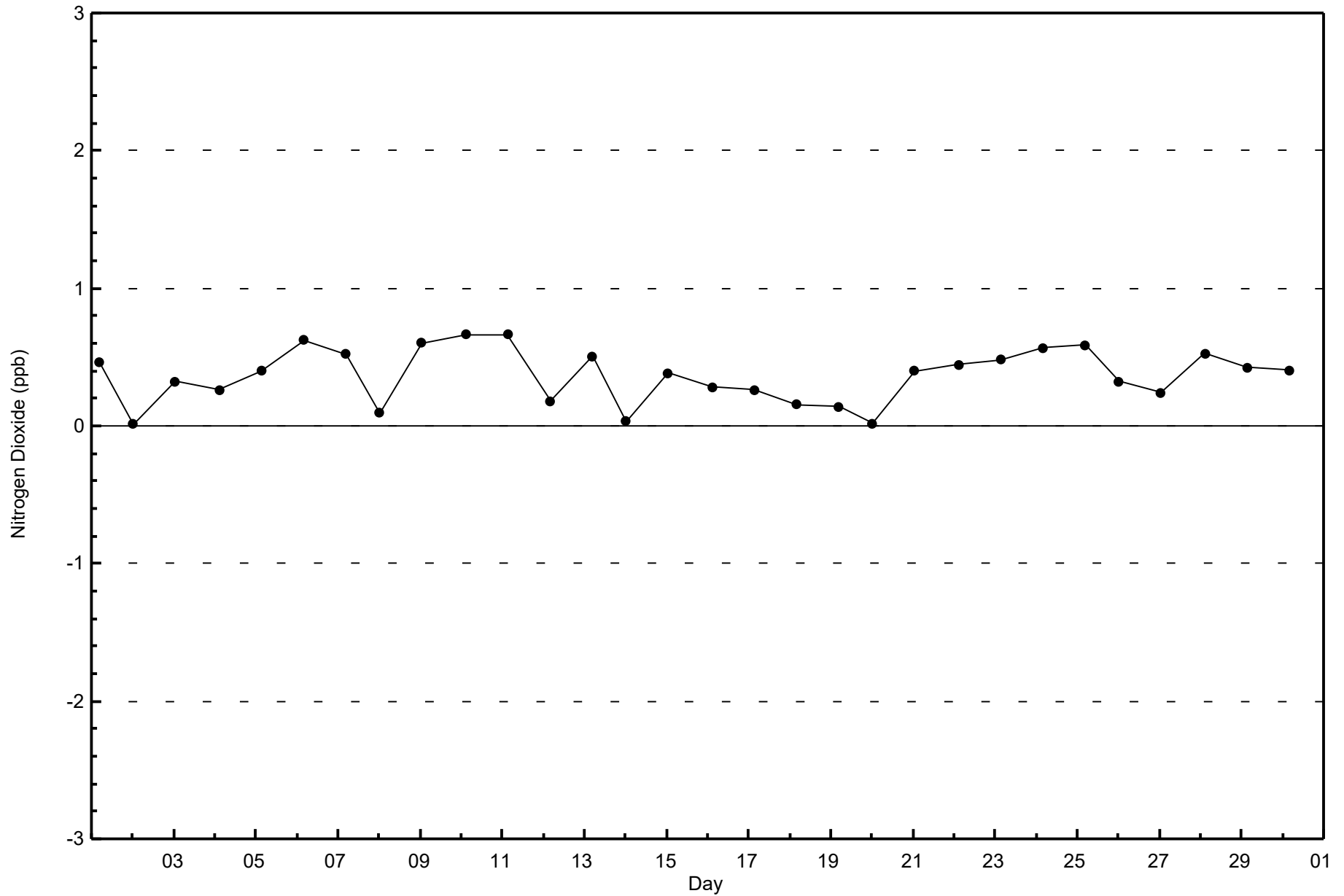
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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

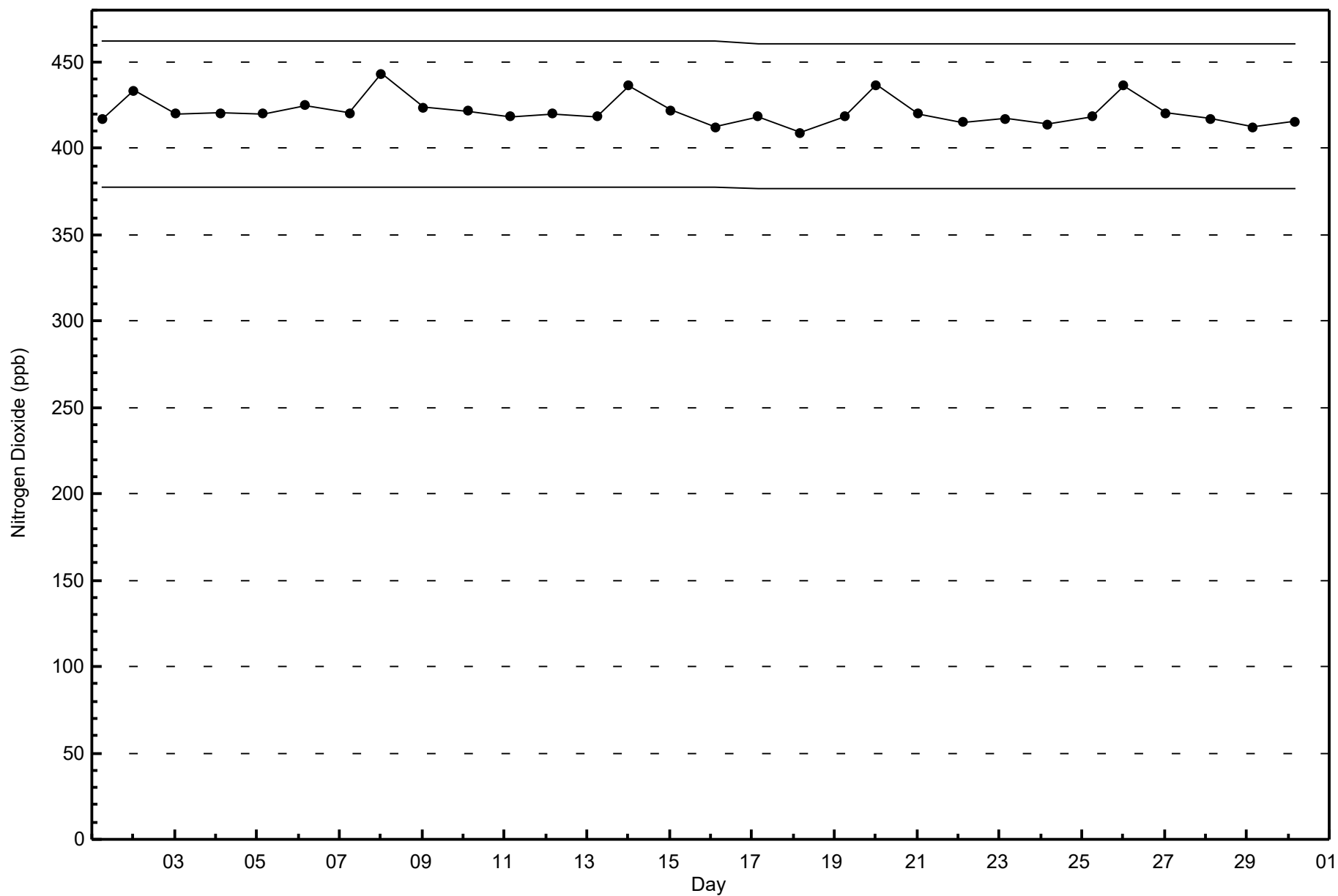






Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

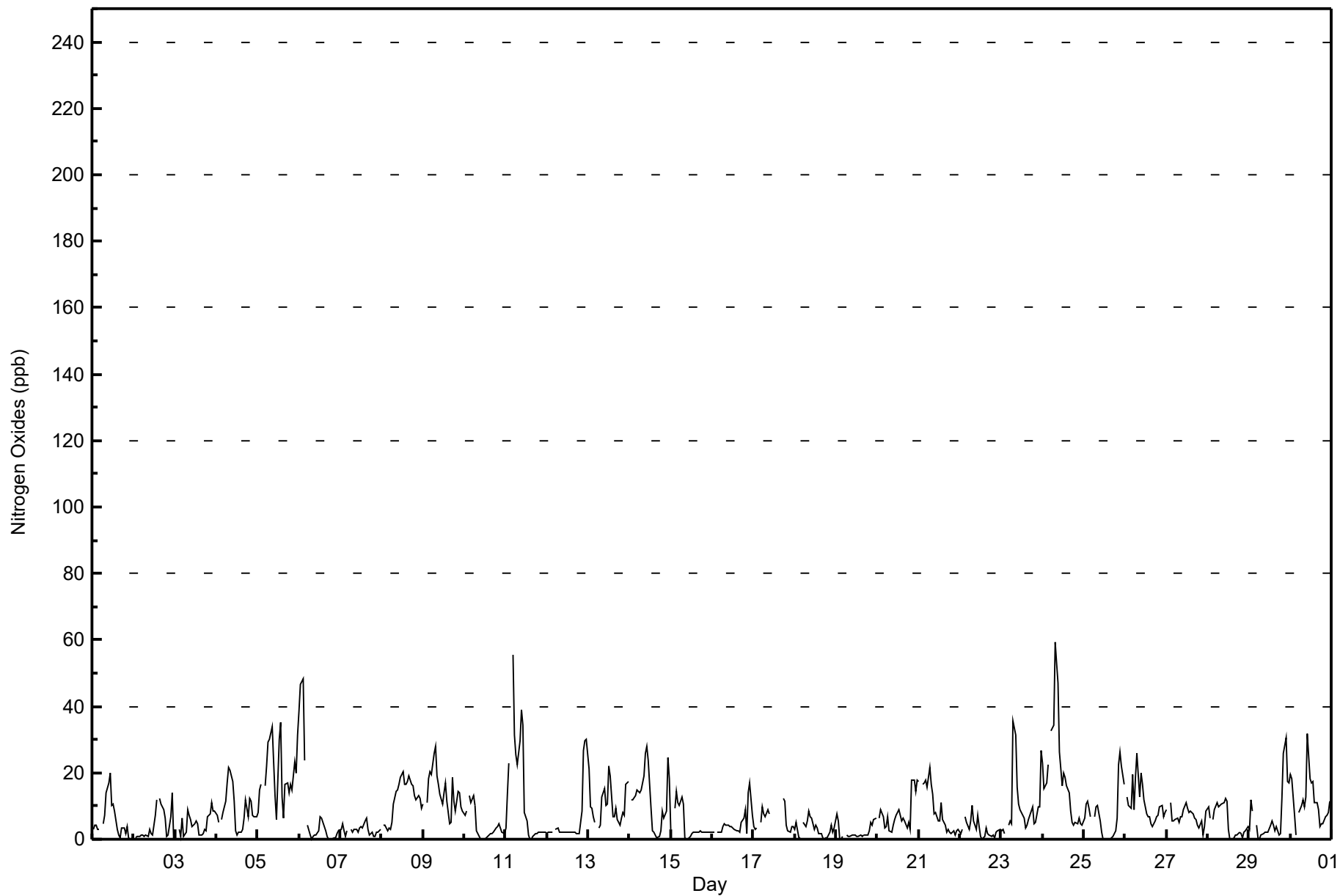
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 59.5 ppb on Apr 24 08:00																			Maximum Daily Average: 19.9 ppb on Apr 24										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 23:00																			Minimum Daily Average: 2.2 ppb on Apr 19										Hours of Data: 682	
Maximum Diurnal Average: 12.4 ppb at hour 8																			Minimum Diurnal Average: 4.6 ppb at hour 16										Hours of Missing Data: 38	
Monthly Average: 8.20 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 1.0 Q ₁ = 2.2 Median = 5.6 Q ₃ = 11.2 P ₉₀ = 18.7 P ₉₉ = 38.8										Hours of Calibration: 37	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	3.2	4.4	4.1	3.1	2.9	Z	4.8	7.3	13.9	16.8	19.9	10.3	10.7	8.5	2.9	1.4	0.5	3.5	3.4	1.8	3.9	0.6	0.0	0.3	5.6	19.9				
2-Apr	Z	0.6	0.8	0.7	1.4	1.3	1.0	1.1	0.7	3.0	1.8	1.4	7.1	12.0	M	12.3	10.7	9.1	6.4	0.7	1.1	6.7	14.0	0.0	4.3	14.0				
3-Apr	2.6	Z	3.0	0.8	6.4	1.0	2.2	8.8	7.4	6.0	3.7	4.6	5.4	4.7	1.4	1.1	1.5	2.8	2.7	7.0	7.8	11.2	8.4	8.4	4.7	11.2				
4-Apr	7.1	5.1	Z	6.0	8.0	11.3	17.1	21.7	20.7	17.4	11.5	2.8	1.4	2.0	1.9	2.9	6.5	11.8	7.0	12.2	11.2	7.0	6.8	7.0	9.0	21.7				
5-Apr	8.1	14.9	16.6	Z	16.2	22.2	29.4	30.2	33.8	23.2	12.9	5.9	30.1	35.3	12.8	6.5	16.6	16.8	13.9	16.4	14.9	23.2	19.7	31.3	19.6	35.3				
6-Apr	38.7	46.7	48.4	23.6	Z	4.1	1.4	0.0	0.9	1.4	1.1	2.6	6.9	6.5	4.9	2.7	1.0	0.0	0.1	0.0	0.3	0.5	1.7	2.7	8.5	48.4				
7-Apr	3.1	4.7	2.7	0.7	2.6	Z	2.9	2.0	2.9	2.8	2.3	3.2	3.7	3.4	5.6	6.2	3.0	1.3	2.1	0.9	0.9	2.0	2.1	2.8	2.8	6.2				
8-Apr	Z	4.3	4.3	2.7	3.3	3.1	5.0	10.8	14.5	14.6	16.4	18.7	20.5	16.7	16.4	17.2	19.2	16.6	16.0	13.2	12.1	13.1	12.3	9.5	12.2	20.5				
9-Apr	10.7	Z	10.9	18.3	20.2	19.5	25.8	28.2	19.3	16.7	13.4	10.7	13.9	16.9	11.4	4.6	5.2	18.7	11.3	8.4	14.2	14.1	9.7	8.6	14.4	28.2				
10-Apr	7.2	8.5	Z	13.1	10.9	13.0	10.1	2.7	1.6	0.0	0.0	0.0	0.0	0.6	1.1	1.5	1.7	2.0	3.2	3.8	4.8	3.2	1.9	1.9	4.0	13.1				
11-Apr	3.3	13.4	22.9	Z	55.4	31.2	25.6	22.4	29.5	39.2	34.3	7.9	5.3	1.2	0.0	0.0	0.9	1.7	1.9	2.0	2.0	1.9	2.1	2.2	13.3	55.4				
12-Apr	1.9	2.0	2.2	2.0	Z	2.8	3.2	2.2	1.9	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	8.3	26.8	29.6	29.9	5.9	29.9				
13-Apr	21.2	9.7	9.1	6.8	5.0	Z	3.3	4.4	12.6	15.0	10.2	10.6	22.0	19.0	7.0	7.0	9.1	6.1	4.3	6.4	8.1	7.0	16.5	17.2	10.3	22.0				
14-Apr	Z	12.0	11.8	13.0	14.6	14.2	13.9	14.8	18.9	25.7	27.8	23.8	9.2	2.6	2.0	1.4	0.6	0.7	2.3	8.6	6.2	8.3	24.5	18.0	12.0	27.8				
15-Apr	2.9	Z	9.3	14.4	10.9	10.1	12.8	10.5	0.2	0.0	0.0	0.9	1.7	1.9	1.9	2.1	2.1	2.4	2.1	2.2	2.2	2.2	2.2	2.2	4.2	14.4				
16-Apr	2.3	2.2	Z	2.3	2.3	2.2	3.8	4.5	4.3	4.4	3.7	3.7	3.4	3.0	2.7	2.7	2.2	4.9	6.4	8.8	1.8	14.1	16.8	7.1	4.8	16.8				
17-Apr	3.6	3.0	3.4	Z	4.9	9.9	7.5	6.7	8.8	7.4	C	C	C	C	C	C	C	12.4	11.3	4.2	2.4	2.3	3.6	3.9	--	12.4				
18-Apr	3.1	5.0	0.4	0.4	Z	4.9	3.9	5.6	8.5	6.6	6.2	2.8	4.2	3.4	1.8	1.6	0.6	0.0	0.5	0.3	2.0	4.4	2.0	3.3	3.1	8.5				
19-Apr	7.6	5.6	0.0	0.0	0.6	Z	1.1	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.2	1.1	1.2	2.4	4.9	4.2	5.9	6.3	2.2	7.6				
20-Apr	Z	6.5	8.7	6.9	3.5	3.6	6.9	2.4	2.1	4.0	5.8	7.3	9.1	7.1	5.3	6.2	5.7	3.6	5.0	2.9	17.9	17.8	14.4	17.8	7.4	17.9				
21-Apr	17.5	Z	16.7	16.9	17.7	15.6	21.5	16.5	13.7	7.7	7.8	5.6	5.7	11.0	6.1	4.1	2.2	2.9	1.9	1.8	2.5	1.2	2.4	3.0	8.8	21.5				
22-Apr	1.5	3.0	Z	6.9	5.3	3.0	5.7	10.3	5.3	3.1	7.3	4.0	0.9	0.0	0.9	3.2	1.8	1.3	0.9	1.3	0.6	2.0	2.6	2.9	3.2	10.3				
23-Apr	2.5	3.2	1.8	Z	4.4	5.7	4.8	35.6	31.2	15.8	10.5	8.9	7.0	6.5	3.5	4.1	5.8	8.6	10.0	4.5	5.1	9.7	9.8	26.6	9.8	35.6				
24-Apr	23.0	15.2	17.1	22.4	Z	32.6	34.3	59.5	52.9	46.9	26.1	16.0	19.8	18.7	16.0	14.1	8.7	5.3	4.2	5.0	4.8	6.6	4.5	4.1	19.9	59.5				
25-Apr	6.5	10.4	11.4	9.3	6.8	Z	6.6	9.9	10.3	5.6	2.3	0.1	0.0	0.0	0.0	0.0	0.4	1.0	2.4	6.5	22.6	26.4	22.0	16.4	7.7	26.4				
26-Apr	Z	12.6	10.0	9.4	19.7	9.0	18.6	25.8	12.6	19.8	16.4	11.7	7.6	6.6	6.7	4.9	4.0	5.6	6.7	7.1	9.6	10.1	6.9	7.9	10.8	25.8				
27-Apr	8.8	Z	11.2	5.6	5.4	6.1	6.6	5.1	6.7	6.8	9.0	11.0	9.5	8.2	8.3	7.5	6.2	5.8	4.2	3.3	5.7	1.3	4.0	8.5	6.7	11.2				
28-Apr	9.7	6.2	Z	6.0	8.9	11.0	9.9	10.4	10.4	11.2	12.2	11.4	3.0	0.0	0.0	0.5	1.4	1.5	2.2	1.7	0.5	2.0	2.7	3.6	5.5	12.2				
29-Apr	2.9	11.9	8.5	Z	4.2	0.5	0.0	1.2	1.8	2.1	2.3	2.2	4.2	5.3	4.1	2.6	3.7	1.2	1.8	12.1	25.9	30.7	17.3	17.0	7.1	30.7				
30-Apr	19.6	18.4	7.1	1.1	Z	8.1	10.1	11.9	9.9	12.6	31.8	18.2	16.9	17.3	11.1	11.1	8.9	3.7	4.7	4.6	6.8	7.1	8.2	11.6	11.3	31.8				
8.7 9.2 9.7 7.7 9.7 9.8 10.0 12.4 11.9 11.3 10.3 7.2 8.0 7.6 5.0 4.6 4.6 5.1 4.7 5.1 7.0 8.9 9.2 9.4																														
38.7 46.7 48.4 23.6 55.4 32.6 34.3 59.5 52.9 46.9 34.3 23.8 30.1 35.3 16.4 17.2 19.2 18.7 16.0 16.4 25.9 30.7 29.6 31.3																														
Diurnal Average																														
Diurnal Maximum																														
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	629	92.23	92.23
21 - 40	47	6.89	99.12
41 - 80	6	0.88	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 Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	56	59	19	10	10	6	26	101	101	34	16	25	44	39	37	35	618
21 - 40	4	5	1	1	3	0	2	9	4	3	2	0	2	2	2	6	46
11 - 80	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2	6
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	64	21	11	13	7	29	110	105	37	18	25	46	41	39	43	670

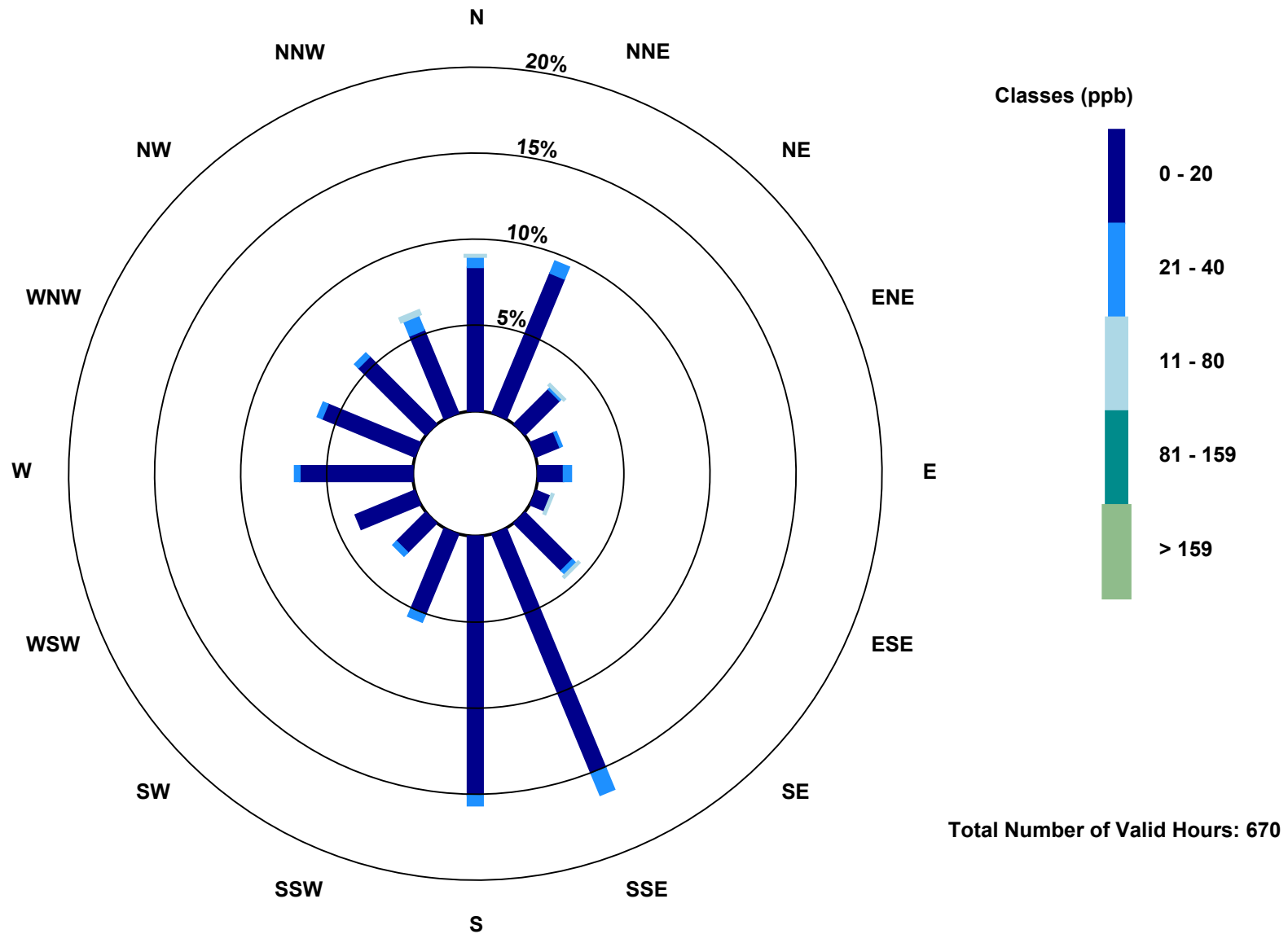
Total Number of Valid Hours: 670

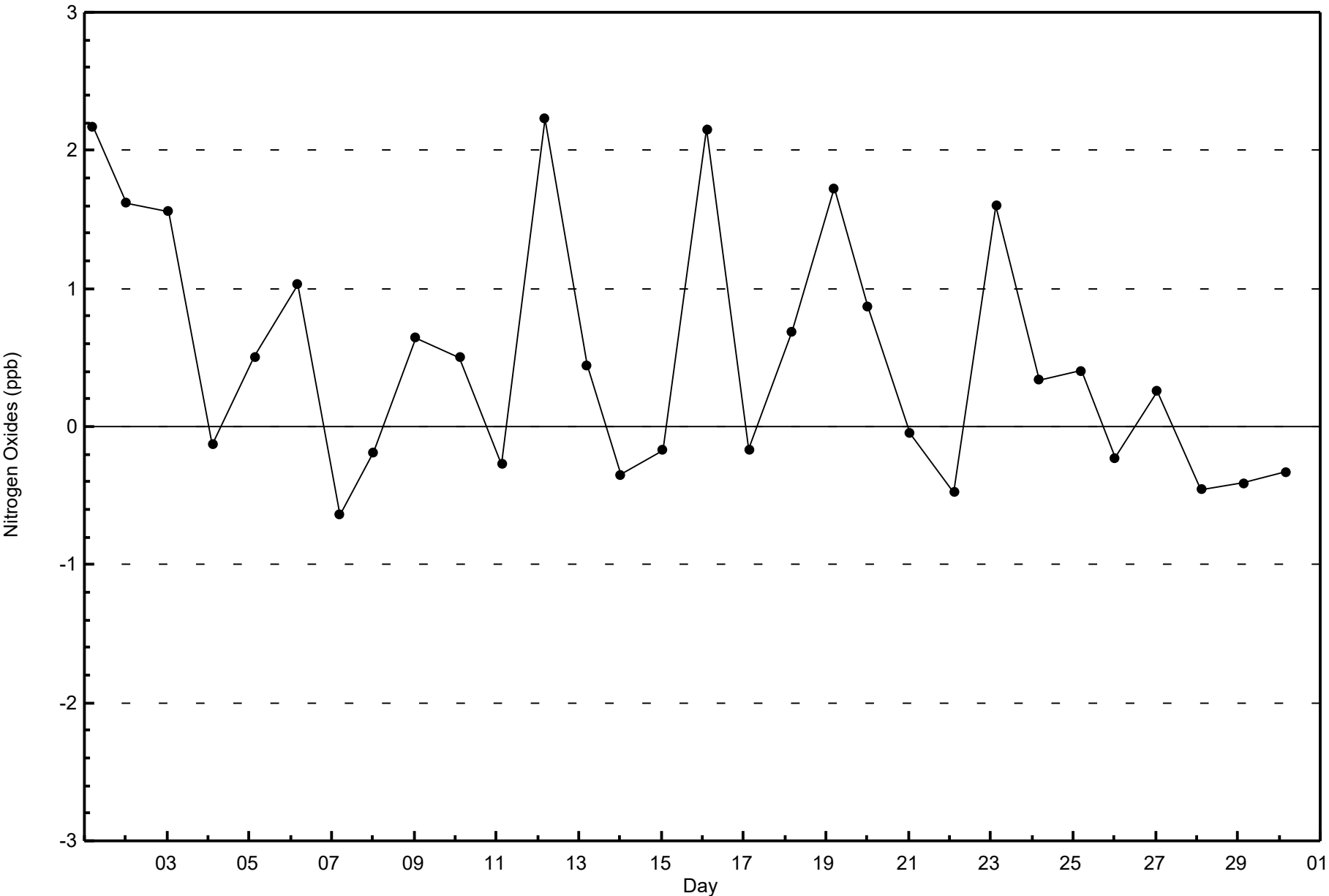
Total Number of Hours: 720

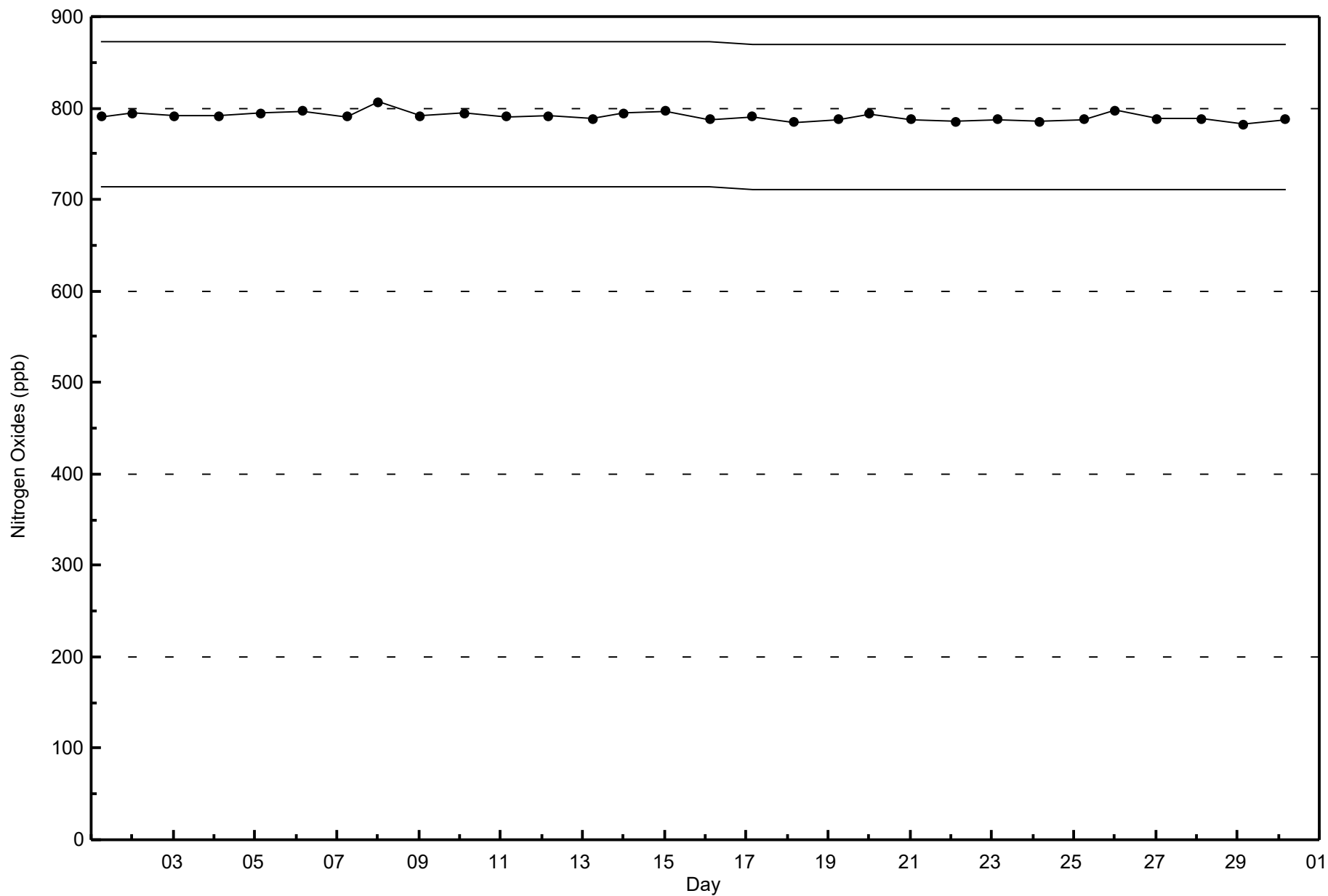


Wood Buffalo Environmental Association
Wind Rose Apr 2025

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









Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 50.8 ppb on Apr 25 18:00 Maximum Daily Average: 34.9 ppb on Apr 7																				Hours in Service: 720						
Minimum Value: 0.5 ppb on Apr 11 05:00 Minimum Daily Average: 12.3 ppb on Apr 8 Maximum Diurnal Average: 33.7 ppb at hour 17 Minimum Diurnal Average: 16.0 ppb at hour 4 Monthly Average: 25.00 ppb Percentiles: P ₁ = 1.4 P ₁₀ = 8.4 Q ₁ = 17.0 Median = 26.5 Q ₃ = 33.5 P ₉₀ = 38.3 P ₉₉ = 48.9																				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 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-Apr	33.2	30.1	30.4	Z	31.7	29.2	27.3	24.9	20.0	19.3	17.9	C	C	C	C	26.8	32.9	29.6	28.4	28.0	27.5	31.0	34.3	34.0	28.2	34.3
2-Apr	33.4	33.3	31.5	30.3	Z	29.9	31.3	31.8	33.9	35.9	36.5	37.8	38.3	33.9	M	32.5	33.4	33.3	33.1	36.3	38.3	32.2	27.8	39.8	33.8	39.8
3-Apr	35.7	31.5	33.8	34.7	29.7	Z	32.9	31.8	31.6	35.0	35.8	35.0	35.4	36.3	37.8	38.0	37.5	37.2	37.0	31.5	28.3	23.4	22.6	18.5	32.6	38.0
4-Apr	Z	20.2	15.0	14.2	12.9	10.6	9.8	14.6	19.8	24.8	30.5	38.3	40.0	40.3	40.7	40.5	38.1	33.7	35.3	29.0	27.3	29.3	29.8	28.9	27.1	40.7
5-Apr	24.0	Z	16.2	15.6	12.7	8.4	9.9	14.5	18.9	25.4	33.0	40.1	29.5	29.1	40.4	43.1	36.3	34.7	33.1	29.5	28.3	21.4	22.9	12.5	25.2	43.1
6-Apr	5.1	1.4	Z	18.4	28.3	34.3	35.7	37.6	37.5	37.6	38.4	38.3	36.0	36.6	37.4	38.1	39.7	39.1	37.6	37.3	35.2	33.8	32.3	29.8	32.4	39.7
7-Apr	29.4	28.6	31.8	Z	31.7	28.0	32.0	33.5	35.5	36.4	37.3	38.3	38.8	39.0	37.7	35.9	38.1	37.7	35.3	36.2	37.0	36.2	34.7	33.3	34.9	39.0
8-Apr	27.7	30.5	24.5	20.0	Z	8.8	8.6	12.2	12.1	13.2	12.1	12.3	10.4	12.5	11.6	11.1	10.9	9.9	8.7	5.9	6.7	3.5	2.3	7.3	12.3	30.5
9-Apr	2.5	2.4	3.2	1.2	1.0	Z	2.6	3.8	5.6	8.3	10.4	15.3	18.9	23.3	27.7	35.3	38.5	26.0	28.1	24.6	18.7	14.6	9.3	8.4	14.3	38.5
10-Apr	Z	5.3	6.2	2.5	6.7	4.6	14.8	27.9	29.1	32.6	34.2	37.8	42.0	43.7	45.2	43.9	44.2	43.9	41.7	36.6	31.9	31.6	26.3	20.4	28.4	45.2
11-Apr	18.6	Z	6.6	1.9	0.5	3.7	7.5	9.1	7.1	8.2	19.3	32.3	36.6	39.4	36.9	36.9	36.8	35.9	33.8	31.7	30.0	28.6	29.9	30.1	22.7	39.4
12-Apr	27.4	29.2	Z	30.1	29.2	25.0	19.3	25.3	28.4	30.7	30.2	29.9	30.2	31.2	33.7	32.6	32.8	31.3	30.3	27.7	16.6	2.5	0.5	0.6	25.0	33.7
13-Apr	1.3	5.4	4.5	Z	7.3	9.3	10.3	11.5	13.8	18.2	23.3	25.4	22.2	23.9	30.4	29.4	26.5	27.1	27.8	25.3	24.1	22.5	14.0	10.2	18.0	30.4
14-Apr	4.3	10.6	6.0	2.0	Z	2.0	4.3	8.0	16.5	17.6	18.9	24.5	33.7	39.3	41.8	43.0	41.5	37.6	34.8	26.3	25.8	23.1	10.6	18.0	21.3	43.0
15-Apr	31.4	29.1	22.9	18.0	19.5	Z	19.9	24.5	35.2	38.9	40.6	41.3	41.3	41.6	41.7	41.1	40.4	42.6	41.7	39.9	38.1	37.0	36.9	33.8	34.7	42.6
16-Apr	Z	26.8	24.6	22.9	22.6	25.1	30.3	32.3	32.6	32.2	32.7	32.9	32.9	34.3	31.5	29.2	30.5	28.9	27.6	24.6	31.1	19.6	18.2	24.5	28.2	34.3
17-Apr	27.2	Z	26.7	29.2	23.1	15.1	16.2	16.3	16.0	17.5	20.4	22.9	24.1	27.2	28.0	27.2	28.0	24.0	21.8	23.1	22.4	20.6	17.3	15.2	22.2	29.2
18-Apr	16.0	15.0	Z	21.6	20.0	18.5	20.9	20.4	19.7	21.6	25.4	31.5	34.2	35.9	36.2	36.0	36.9	35.8	35.6	34.8	33.4	31.4	32.8	33.3	28.1	36.9
19-Apr	29.8	31.3	39.9	Z	33.0	32.5	36.0	38.0	39.4	40.5	40.4	40.3	40.3	39.2	40.1	40.0	39.3	37.6	36.0	31.8	24.0	22.2	20.6	19.0	34.4	40.5
20-Apr	21.2	19.6	17.7	19.9	Z	26.5	26.4	30.7	31.9	31.0	30.2	29.2	29.6	30.9	32.4	31.9	31.2	31.4	28.8	29.3	15.3	14.9	17.5	13.9	25.7	32.4
21-Apr	8.3	3.5	4.8	4.3	3.4	Z	5.1	16.0	20.2	27.4	29.2	32.3	34.4	32.1	34.8	35.3	35.9	34.5	33.8	33.4	31.4	31.1	27.5	27.3	23.7	35.9
22-Apr	Z	22.2	20.6	17.0	14.7	15.5	12.1	12.5	23.3	30.0	27.6	30.9	33.5	35.3	30.8	31.2	32.4	30.4	29.4	26.4	31.6	26.2	21.9	14.9	24.8	35.3
23-Apr	13.7	Z	10.4	8.0	4.9	3.3	6.1	6.4	13.4	16.5	20.9	25.0	26.6	26.7	26.3	26.0	24.9	23.1	19.9	23.0	19.6	15.2	14.2	3.4	16.4	26.7
24-Apr	6.1	10.3	Z	1.3	2.6	1.5	3.2	4.8	7.2	10.5	20.5	26.5	25.6	27.3	29.4	31.6	35.1	37.9	39.4	34.4	30.9	28.8	28.1	25.1	20.4	39.4
25-Apr	20.5	15.5	11.9	Z	10.7	9.8	12.8	19.3	24.9	34.9	45.1	50.1	49.2	48.8	50.7	50.3	49.9	50.8	49.4	40.3	23.2	17.8	18.3	24.2	31.7	50.8
26-Apr	20.7	17.5	17.5	17.2	Z	16.1	11.5	11.9	18.4	15.9	17.9	20.5	22.7	22.8	22.2	23.3	22.1	18.9	16.3	14.8	12.6	13.0	16.0	14.9	17.6	23.3
27-Apr	13.8	11.9	14.2	17.9	15.3	Z	14.9	16.9	15.7	16.4	15.4	15.3	17.0	18.1	18.8	19.0	20.0	20.2	20.6	21.5	18.5	22.7	19.0	14.5	17.3	22.7
28-Apr	Z	9.6	7.0	6.5	3.5	3.8	9.5	16.5	19.9	22.9	24.2	25.2	31.7	38.6	40.3	41.3	40.9	38.0	36.1	37.4	43.6	42.0	38.0	35.1	26.6	43.6
29-Apr	31.5	Z	20.1	22.5	16.2	18.4	19.6	21.4	22.3	23.6	23.6	26.0	28.6	32.0	29.8	33.5	34.7	38.7	36.1	23.5	9.5	5.2	7.0	4.7	23.0	38.7
30-Apr	3.4	6.0	Z	21.9	22.8	19.9	21.7	21.7	23.9	22.9	13.5	19.7	17.2	16.9	20.7	22.0	23.0	27.1	24.9	22.9	20.5	21.0	23.1	20.0	19.9	27.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										

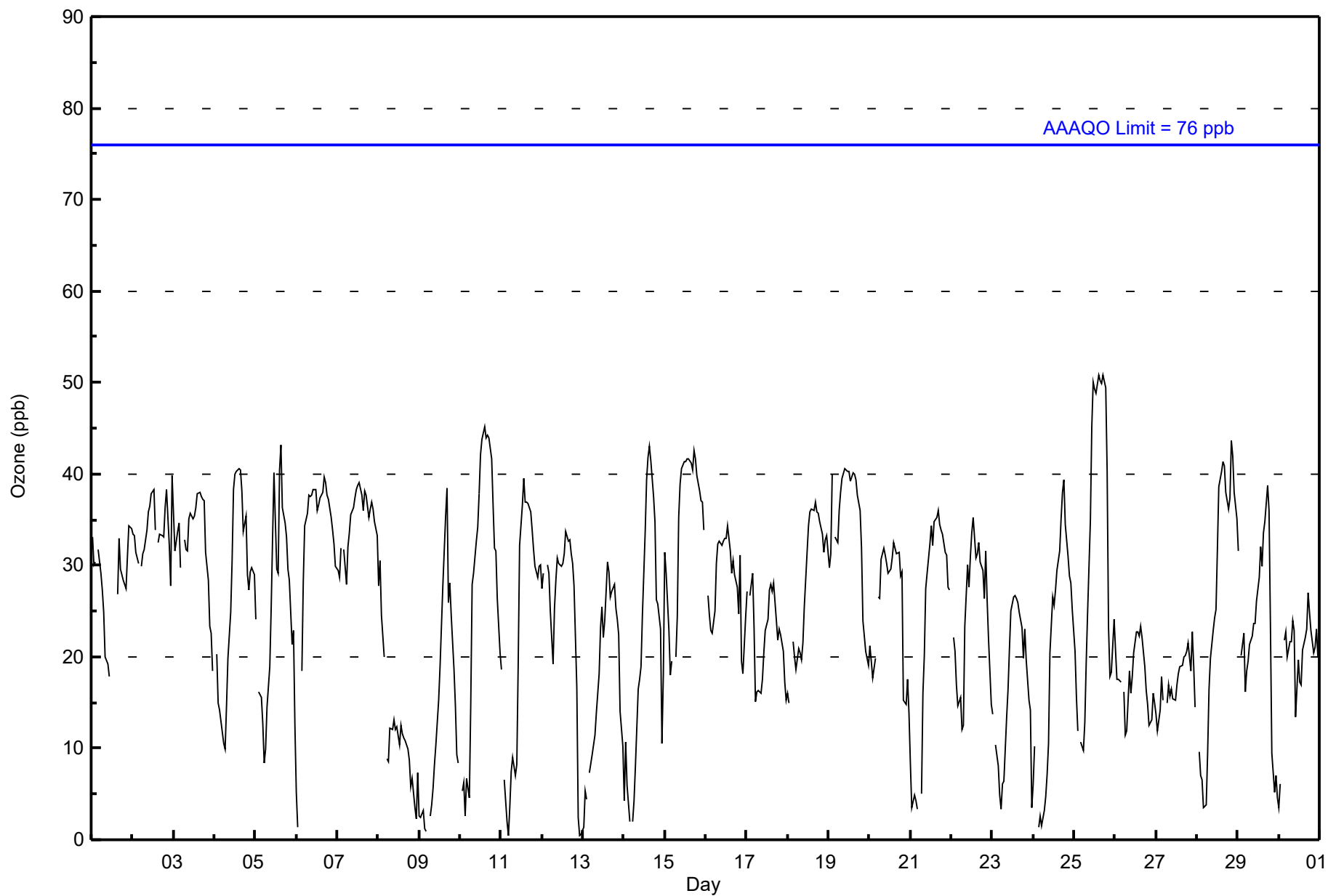


Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	238	34.74	34.74
21 - 50	445	64.96	99.71
51 - 82	2	0.29	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 (O₃) - ppb
Fort McKay - Bertha Ganter - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	29	4	5	5	1	15	38	34	13	6	7	5	12	11	20	230
21 - 50	36	40	18	6	8	7	13	71	67	24	13	18	38	29	30	23	441
51 - 82	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	69	22	11	13	8	28	109	102	38	19	25	43	41	41	43	673

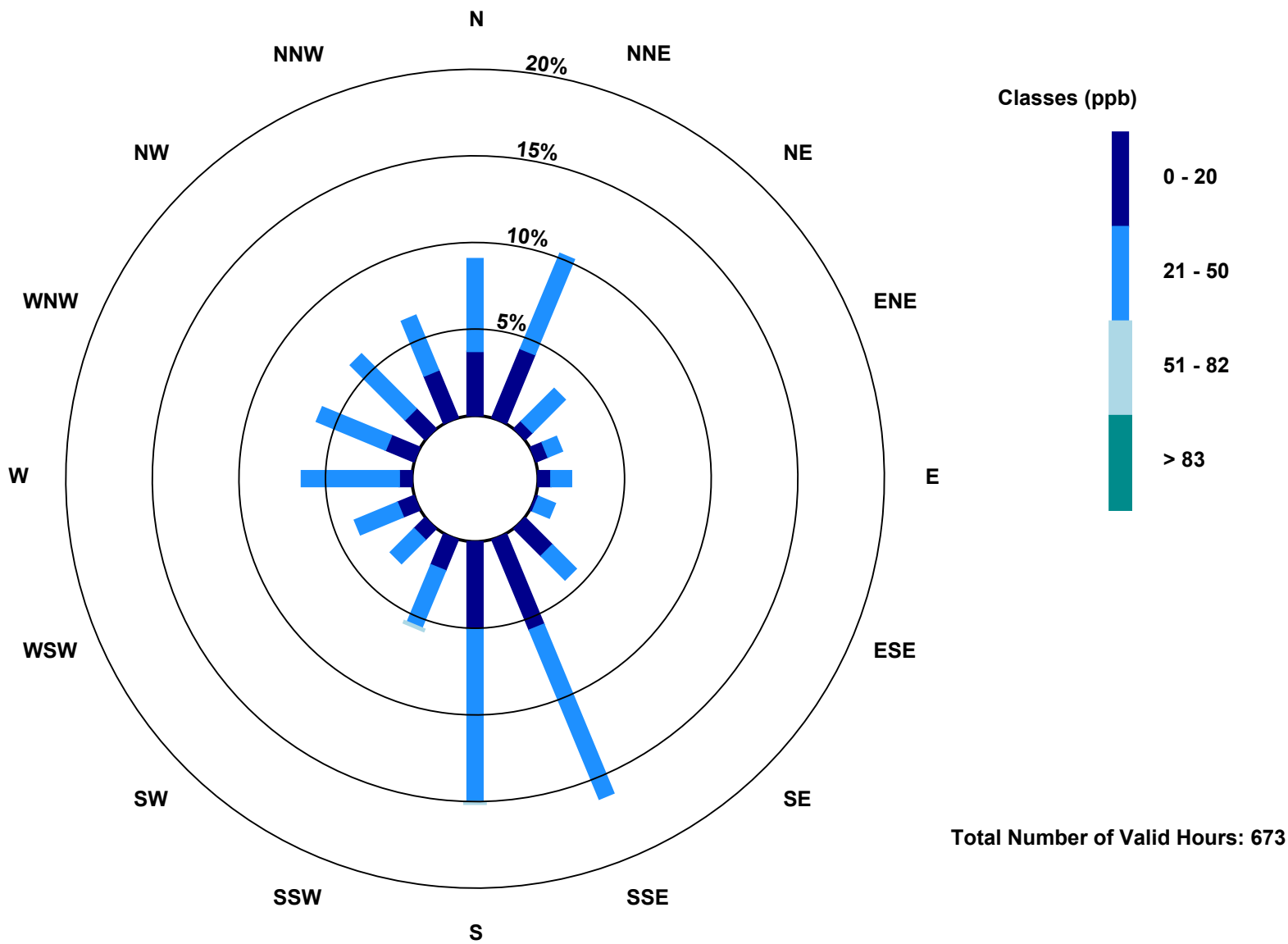
Total Number of Valid Hours: 673

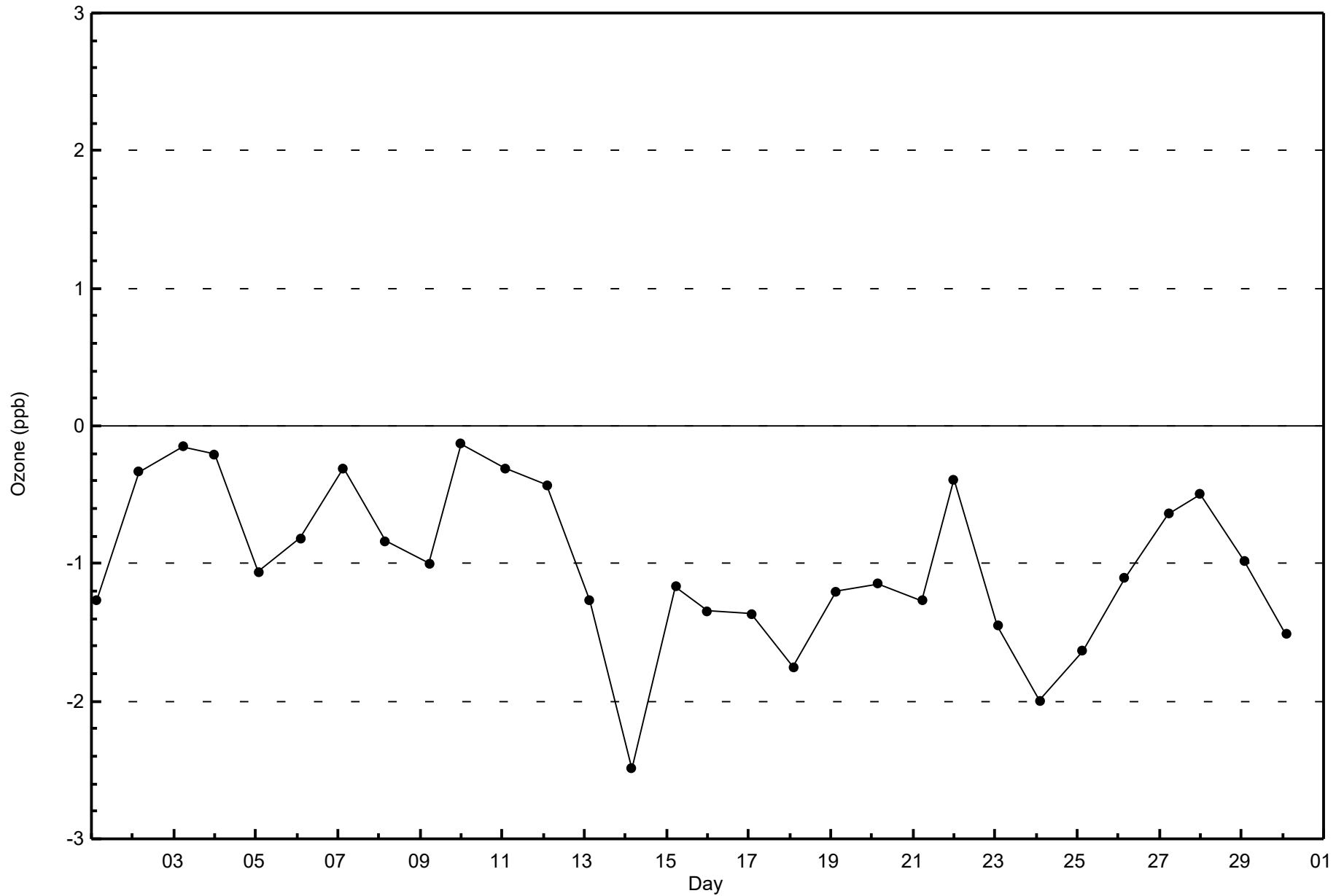
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ozone (O₃) - ppb
Fort McKay - Bertha Ganter

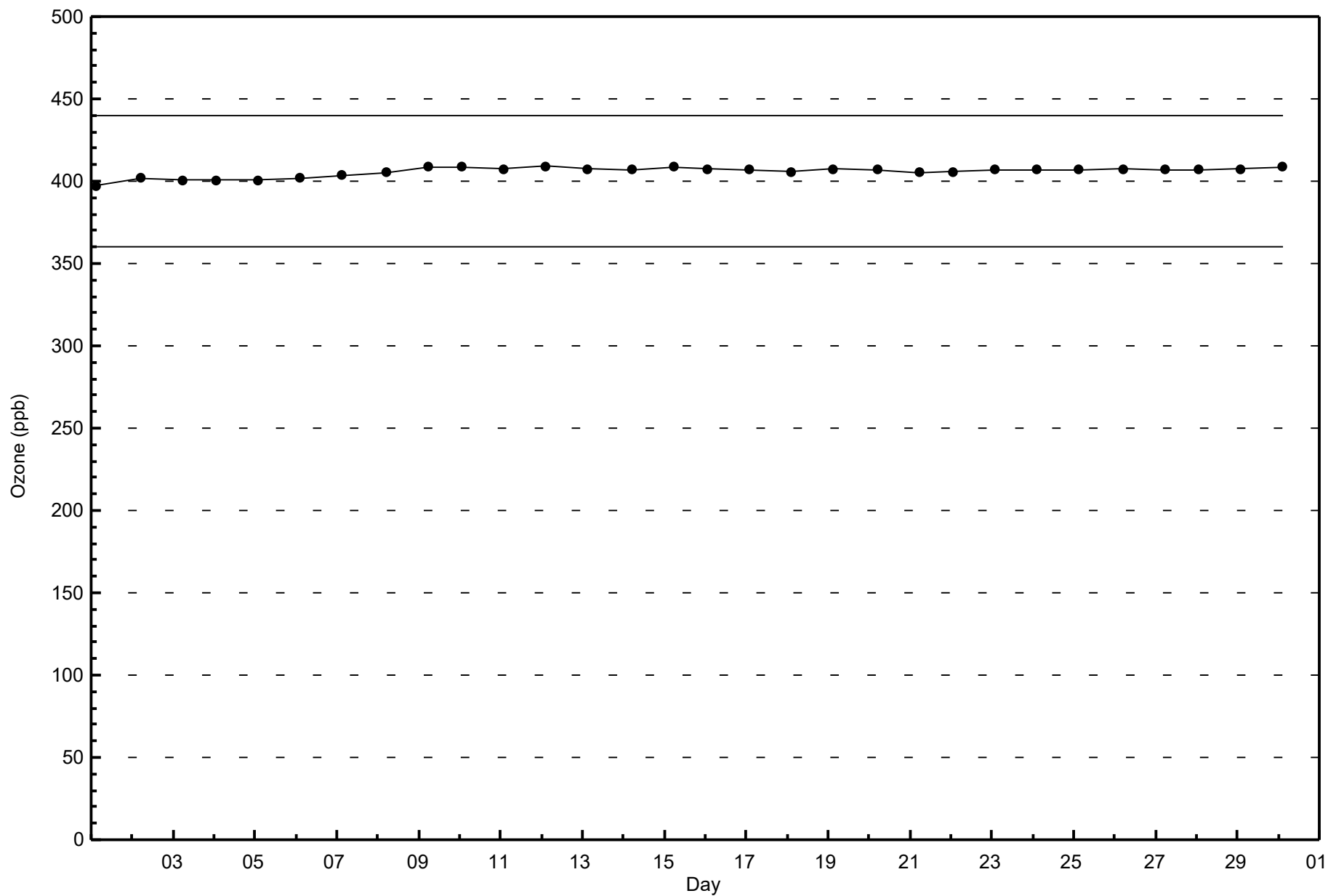






Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

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

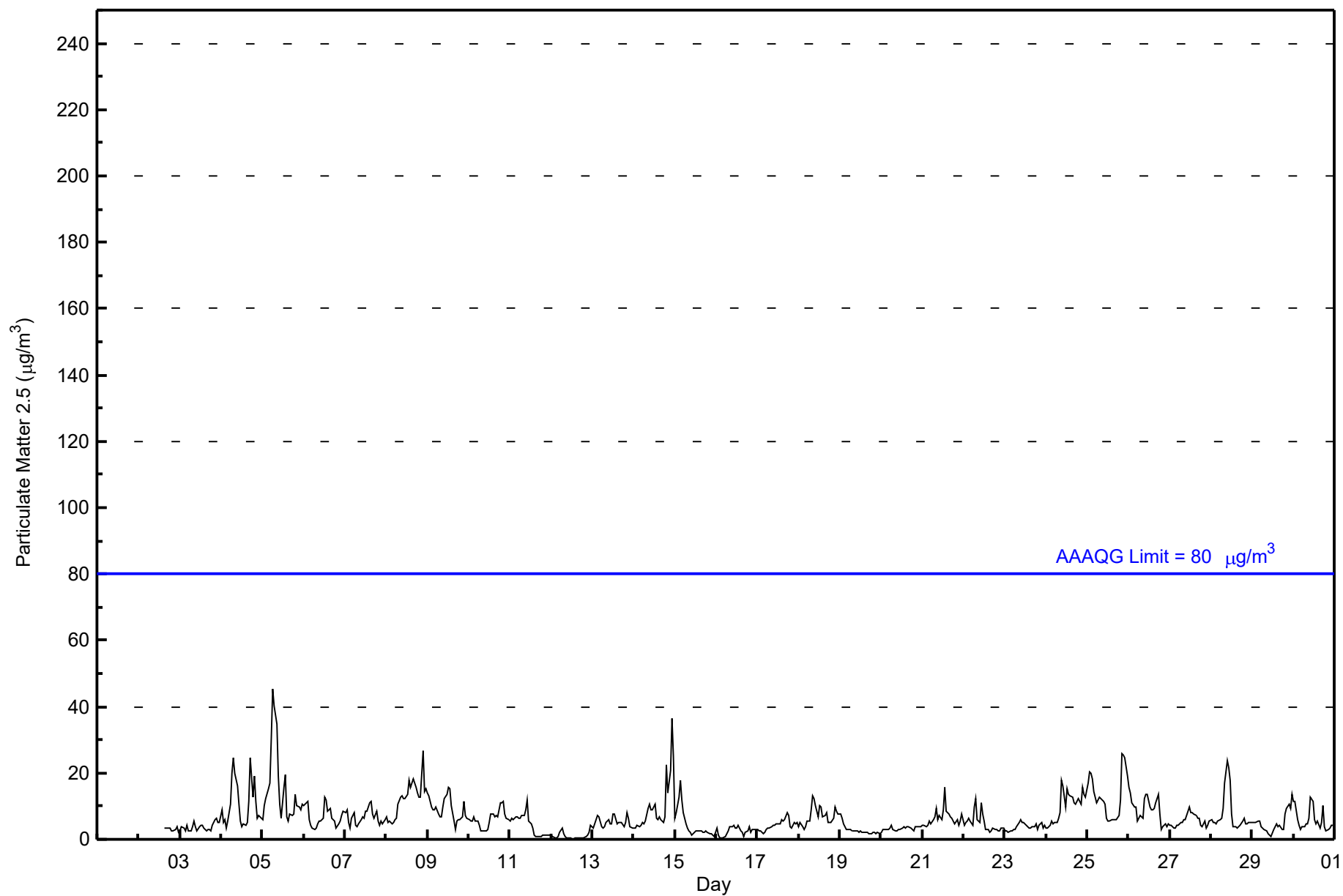
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720							
Maximum Value: 45.5 µg/m³ on Apr 5 07:00 Maximum Daily Average: 15.4 µg/m³ on Apr 5																				Hours of Data: 681							
Minimum Value: 0.1 µg/m³ on Apr 12 13:00 Minimum Daily Average: 1.0 µg/m³ on Apr 12																				Hours of Missing Data: 39							
Maximum Diurnal Average: 8.1 µg/m³ at hour 10 Minimum Diurnal Average: 5.5 µg/m³ at hour 19																				Hours of Calibration: 3							
Monthly Average: 6.63 µg/m³ Percentiles: P ₁ = 0.3 P ₁₀ = 2.3 Q ₁ = 3.4 Median = 5.2 Q ₃ = 8.1 P ₉₀ = 12.9 P ₉₉ = 25.4																				Percent Operational Time: 95.0							
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-Apr	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	--	--
2-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	3.6	3.5	3.5	3.2	2.6	2.6	2.8	4.0	1.9	--	4.0
3-Apr	2.4	3.9	3.3	2.4	4.4	2.5	2.7	3.9	5.5	4.0	2.6	3.9	4.3	4.2	3.2	2.7	3.1	2.9	2.7	4.2	5.9	6.3	5.1	5.0	3.8	6.3	
4-Apr	9.0	5.1	5.8	3.5	5.5	10.5	19.9	24.4	20.1	16.2	10.8	5.5	4.0	4.6	4.3	5.1	11.4	24.5	12.7	19.3	11.2	6.5	7.1	6.3	10.6	24.5	
5-Apr	5.8	10.2	12.3	15.2	16.8	30.6	45.5	40.1	34.7	19.2	10.7	6.2	15.9	19.4	6.8	5.3	7.5	7.3	7.6	13.5	10.0	9.6	8.7	10.8	15.4	45.5	
6-Apr	10.3	10.8	11.3	5.8	4.4	3.4	3.0	3.4	4.6	5.7	5.5	6.3	12.8	11.7	8.4	9.2	6.5	6.0	5.6	3.3	4.6	5.4	7.3	8.3	6.8	12.8	
7-Apr	8.0	9.1	5.3	3.4	6.5	8.2	4.2	3.7	4.7	6.1	6.9	6.4	8.5	8.4	10.9	11.5	7.6	6.2	8.4	5.4	4.2	5.7	4.5	5.8	6.6	11.5	
8-Apr	6.9	4.9	5.5	4.6	5.3	5.8	6.3	10.4	12.9	13.1	12.2	12.1	13.6	17.8	15.8	16.9	18.1	15.8	14.2	12.6	12.7	26.5	14.3	15.3	12.2	26.5	
9-Apr	13.9	12.9	9.8	8.8	9.0	9.7	7.6	6.8	6.9	9.7	12.3	13.8	15.7	15.4	10.3	5.3	2.8	5.7	6.1	5.9	6.9	11.2	7.4	6.4	9.2	15.7	
10-Apr	6.0	5.7	5.3	6.9	5.6	5.7	4.2	2.6	2.6	2.4	2.8	3.2	5.2	7.6	7.8	6.9	7.4	6.9	10.9	10.9	11.5	7.5	6.2	5.8	6.1	11.5	
11-Apr	5.7	6.4	6.1	6.6	6.7	6.4	6.2	7.2	7.1	9.1	11.7	5.4	4.6	3.5	1.1	0.9	0.7	0.9	0.8	1.3	1.4	1.1	1.2	1.3	4.3	11.7	
12-Apr	1.4	0.9	0.6	0.5	1.0	2.3	3.2	1.8	1.0	0.4	0.3	0.3	0.1	0.2	0.4	0.6	0.3	0.3	0.3	0.3	0.9	1.4	2.3	4.2	1.0	4.2	
13-Apr	3.6	4.5	5.8	7.1	6.9	3.9	3.3	3.6	5.3	6.0	4.6	4.6	7.7	7.5	4.5	4.9	5.2	5.0	4.0	4.9	7.8	6.5	3.7	3.6	5.2	7.8	
14-Apr	3.5	3.3	4.2	3.6	4.4	4.9	4.5	5.4	9.3	10.6	8.8	8.9	10.4	6.3	6.0	6.6	5.9	5.2	6.8	22.4	14.1	20.8	36.3	24.9	9.9	36.3	
15-Apr	6.3	8.2	12.9	17.6	11.8	8.2	4.8	3.5	2.5	2.3	1.1	2.2	2.7	2.7	2.6	2.5	2.2	1.9	2.4	2.3	1.7	1.5	1.2	0.8	4.4	17.6	
16-Apr	3.3	1.2	0.3	0.3	0.5	0.9	1.8	2.4	4.0	3.8	4.0	3.5	3.4	4.3	2.6	2.2	1.0	1.9	2.7	3.7	2.1	3.1	2.9	3.0	2.4	4.3	
17-Apr	2.8	2.7	2.4	1.6	2.1	2.9	3.3	3.6	3.9	4.4	4.0	4.7	4.9	4.7	5.8	5.5	5.8	7.9	7.1	4.0	3.4	5.0	4.5	5.1	4.3	7.9	
18-Apr	3.6	5.2	3.8	2.9	4.0	5.3	5.7	8.8	13.1	12.2	10.2	6.9	10.0	9.7	6.8	7.3	7.9	5.2	5.1	5.1	6.4	9.6	8.5	7.7	7.1	13.1	
19-Apr	7.7	6.4	4.7	3.7	3.1	3.1	2.8	2.7	2.6	2.6	2.6	2.2	2.4	2.3	2.0	2.2	2.0	1.8	1.6	2.1	2.1	1.5	2.0	1.8	2.8	7.7	
20-Apr	2.1	2.8	3.1	2.8	2.9	3.2	4.2	2.9	2.5	2.6	3.2	3.1	3.6	3.7	3.6	3.9	3.9	3.3	3.0	2.6	3.6	3.9	3.7	3.7	3.2	4.2	
21-Apr	4.1	4.3	3.9	4.3	5.6	4.7	6.1	6.8	9.4	6.1	7.1	6.1	8.7	15.8	8.6	7.6	6.6	6.5	5.5	4.8	5.8	4.2	5.7	7.6	6.5	15.8	
22-Apr	4.1	5.2	5.5	6.2	5.6	4.3	9.7	12.4	5.9	5.2	11.2	7.6	5.4	2.9	3.2	2.2	2.7	3.4	2.9	2.9	2.6	2.5	3.4	3.4	5.0	12.4	
23-Apr	2.6	2.7	2.3	2.4	2.6	2.9	2.9	3.7	5.3	5.7	5.2	5.2	4.1	3.7	3.6	3.5	3.7	3.7	4.6	3.1	4.3	4.9	3.2	4.3	3.8	5.7	
24-Apr	3.3	3.6	4.2	5.3	4.5	5.1	5.1	6.3	8.0	18.0	16.3	9.9	15.1	13.4	13.0	12.9	11.2	10.5	11.3	12.1	10.7	15.9	13.5	12.8	10.1	18.0	
25-Apr	16.7	20.5	20.1	18.2	14.5	10.9	11.7	12.7	12.2	11.5	10.5	6.5	5.4	5.4	6.0	6.0	5.9	5.7	7.0	11.8	25.7	25.4	24.4	19.1	13.1	25.7	
26-Apr	15.5	13.9	10.8	9.7	9.6	5.6	6.2	7.2	6.4	12.2	13.6	13.5	9.9	8.9	8.7	9.3	11.1	13.6	7.5	2.9	4.0	4.5	3.7	4.5	8.9	15.5	
27-Apr	4.4	4.4	3.5	3.2	4.2	4.2	5.2	5.1	5.8	6.0	7.0	9.7	8.1	8.2	7.5	7.3	6.4	6.3	4.0	3.9	5.7	3.5	4.3	5.6	5.6	9.7	
28-Apr	5.9	5.1	5.2	4.5	5.6	5.9	6.5	9.5	17.0	23.6	21.8	17.9	7.5	4.0	3.7	3.2	3.7	4.0	5.5	6.4	4.6	4.9	5.0	5.1	7.8	23.6	
29-Apr	5.2	5.2	5.3	5.4	5.4	3.7	3.2	2.8	2.4	1.7	1.2	0.7	2.8	4.0	4.6	4.0	4.4	3.1	2.9	7.7	9.5	10.5	9.5	13.6	4.9	13.6	
30-Apr	11.5	11.4	6.0	4.1	3.1	3.9	4.0	4.8	4.8	6.2	12.6	11.5	5.9	4.5	5.4	3.3	5.2	10.3	3.9	2.5	2.9	3.4	4.2	4.4	5.8	12.6	
6.3 6.5 6.0 5.7 5.8 6.0 6.9 7.4 7.9 8.1 7.9 6.7 7.2 7.3 6.0 5.6 5.6 6.2 5.5 6.4 6.5 7.4 7.2 7.0																									Diurnal Average		
16.7 20.5 20.1 18.2 16.8 30.6 45.5 40.1 34.7 23.6 21.8 17.9 15.9 19.4 15.8 16.9 18.1 24.5 14.2 22.4 25.7 26.5 36.3 24.9																									Diurnal Maximum		
C - Calibration UO - Unstable Operation																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr: 80 µg/m³ 24-hr: 29 µg/m³																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	368	54.04	54.04
6 - 15	271	39.79	93.83
16 - 25	35	5.14	98.97
26 - 80	7	1.03	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	44	41	12	3	7	4	6	28	30	18	12	22	36	33	34	29	359
6 - 15	20	27	10	8	4	3	18	55	68	20	8	4	5	3	5	10	268
16 - 25	0	1	1	0	2	1	4	16	8	1	0	0	0	0	0	1	35
26 - 80	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	6
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	64	69	23	11	13	8	28	102	108	40	20	26	41	36	39	40	668

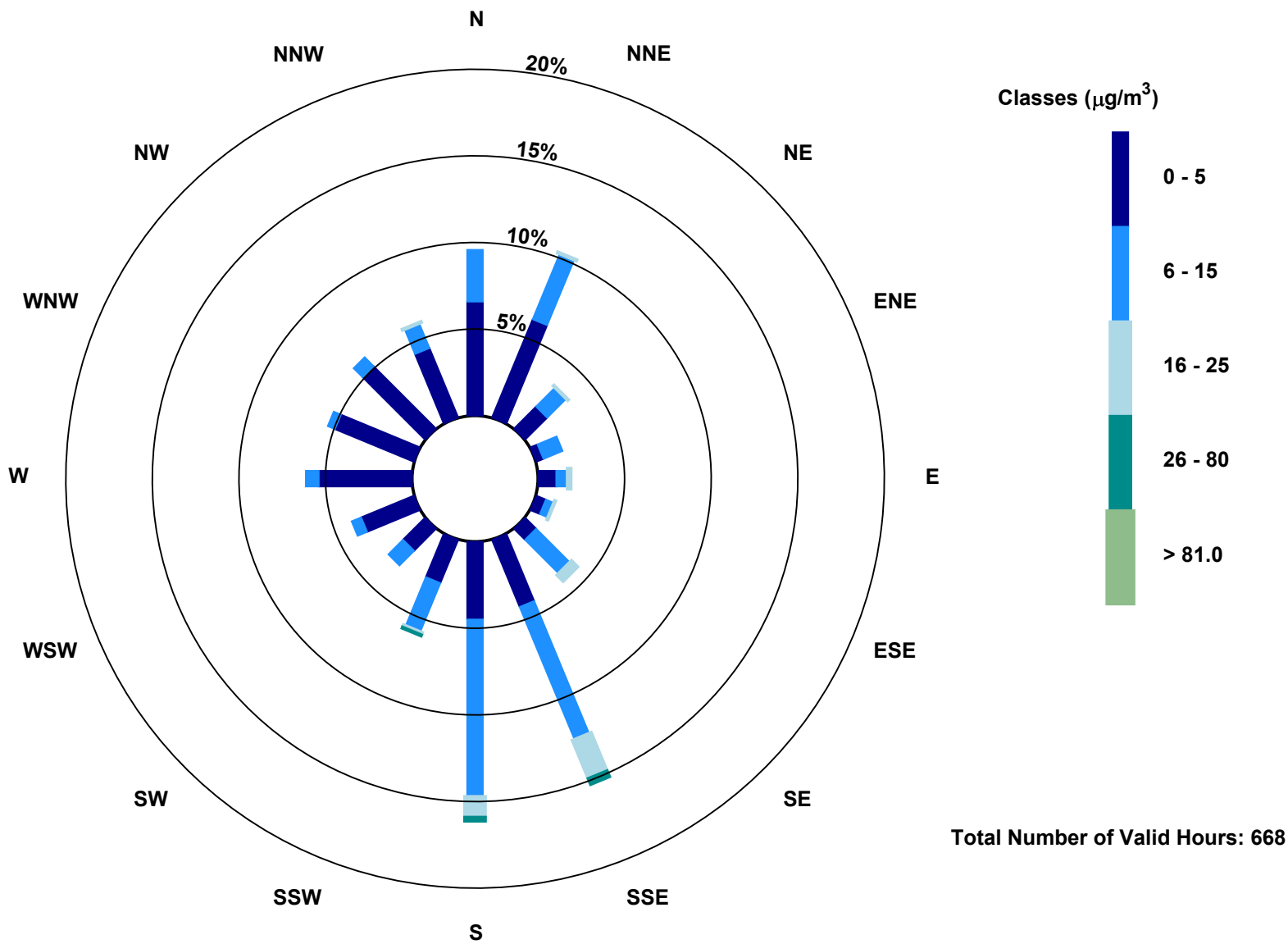
Total Number of Valid Hours: 668

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

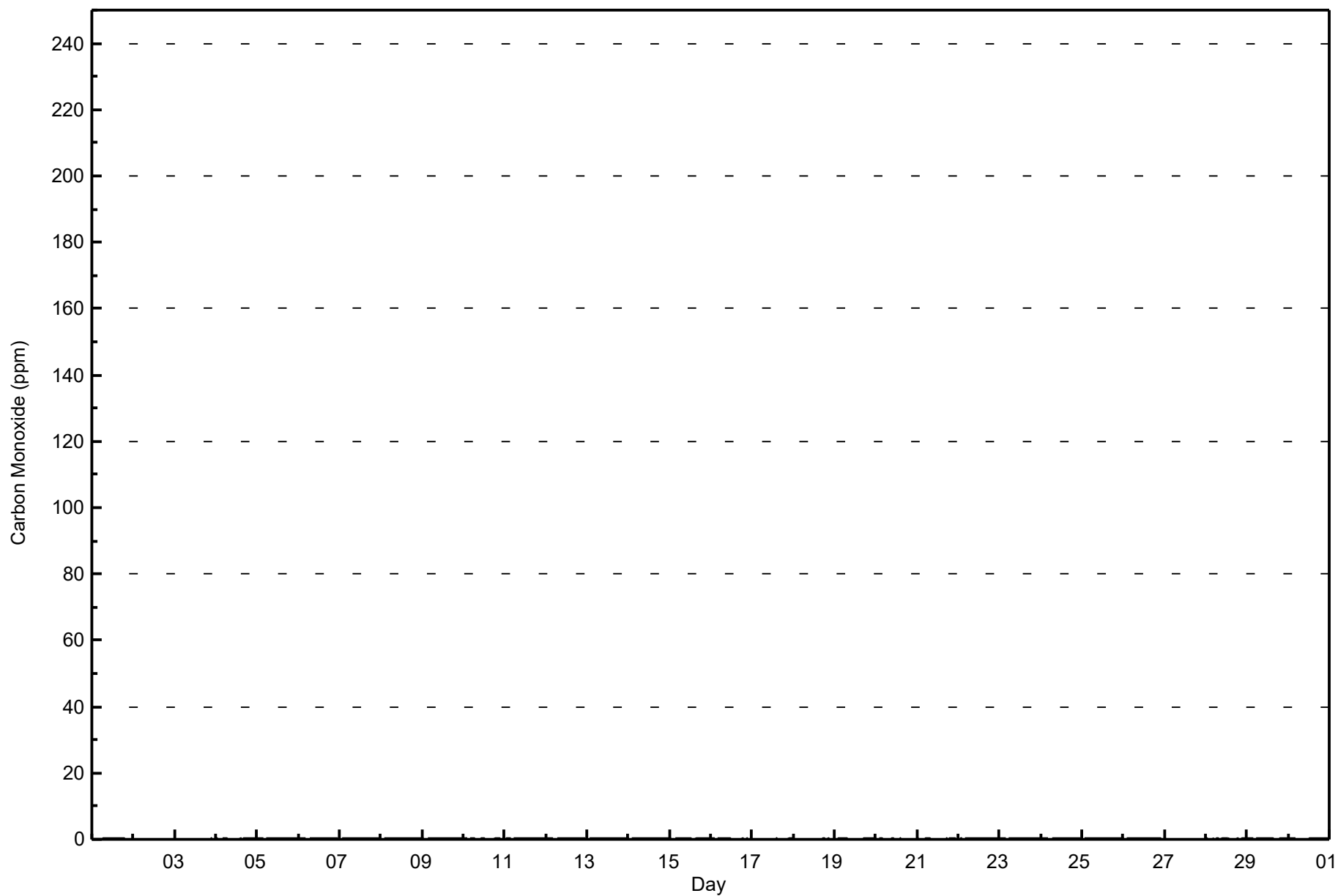
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720								
Maximum Value: 0.4 ppm on Apr 8 22:00 Maximum Daily Average: 0.3 ppm on Apr 8																			Hours of Data: 685								
Minimum Value: 0.1 ppm on Apr 17 16:00 Minimum Daily Average: 0.2 ppm on Apr 2																			Hours of Missing Data: 35								
Maximum Diurnal Average: 0.2 ppm at hour 22 Minimum Diurnal Average: 0.2 ppm at hour 9																			Hours of Calibration: 35								
Monthly Average: 0.24 ppm Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.3 P ₉₉ = 0.3																			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-Apr	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	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
2-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-Apr	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
4-Apr	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	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3
5-Apr	0.2	0.2	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3
6-Apr	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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
7-Apr	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	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3
8-Apr	0.2	Z	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	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4
9-Apr	0.3	0.3	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	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
10-Apr	0.2	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	0.3	0.2	0.2	0.2	0.2	0.2	0.3
11-Apr	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3
12-Apr	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
13-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
14-Apr	0.2	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
15-Apr	0.2	0.2	Z	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	0.3	0.2	0.3	0.3
16-Apr	0.3	0.3	0.3	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	0.3
17-Apr	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3
18-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
19-Apr	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	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3
20-Apr	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
21-Apr	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
22-Apr	0.2	0.2	0.2	Z	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
23-Apr	0.3	0.3	0.2	0.3	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
24-Apr	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3
25-Apr	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	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
26-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3
27-Apr	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
28-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
29-Apr	0.3	0.3	0.3	0.3	Z	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	0.2	0.2	0.2	0.3	0.2	0.3	0.3
30-Apr	0.3	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	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
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 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		
0.3 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 0.4 0.3 0.4 0.4 0.3 0.4 0.4 0.3 0.3 0.3																									Diurnal Maximum		
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	679	99.12	99.12
0.4 - 0.5	6	0.88	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	61	69	22	11	13	7	27	107	103	36	20	25	49	38	39	41	668
0.4 - 0.5	0	0	0	0	0	0	2	0	1	0	0	1	0	0	0	1	5
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	69	22	11	13	7	29	107	104	36	20	26	49	38	39	42	673

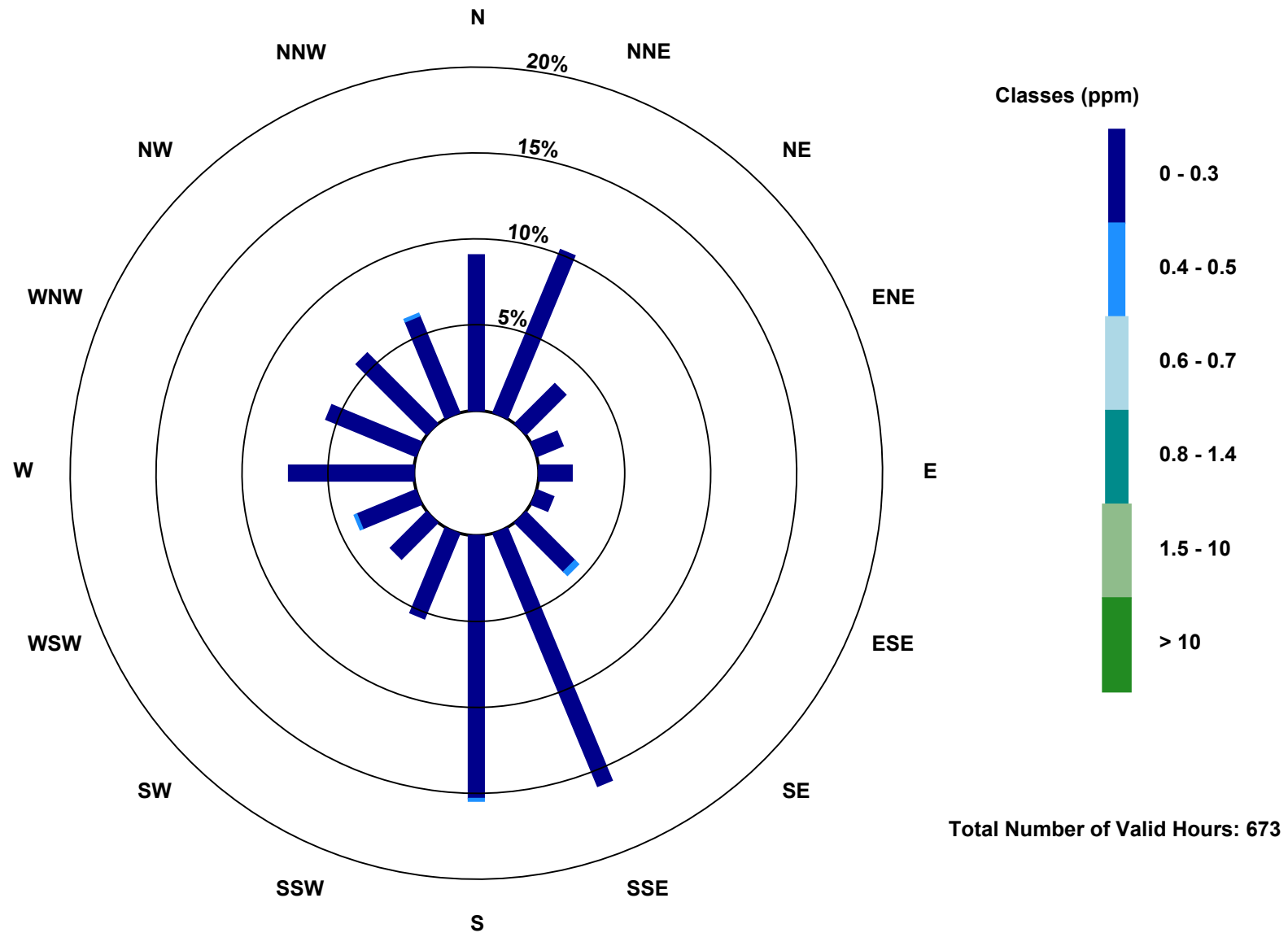
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

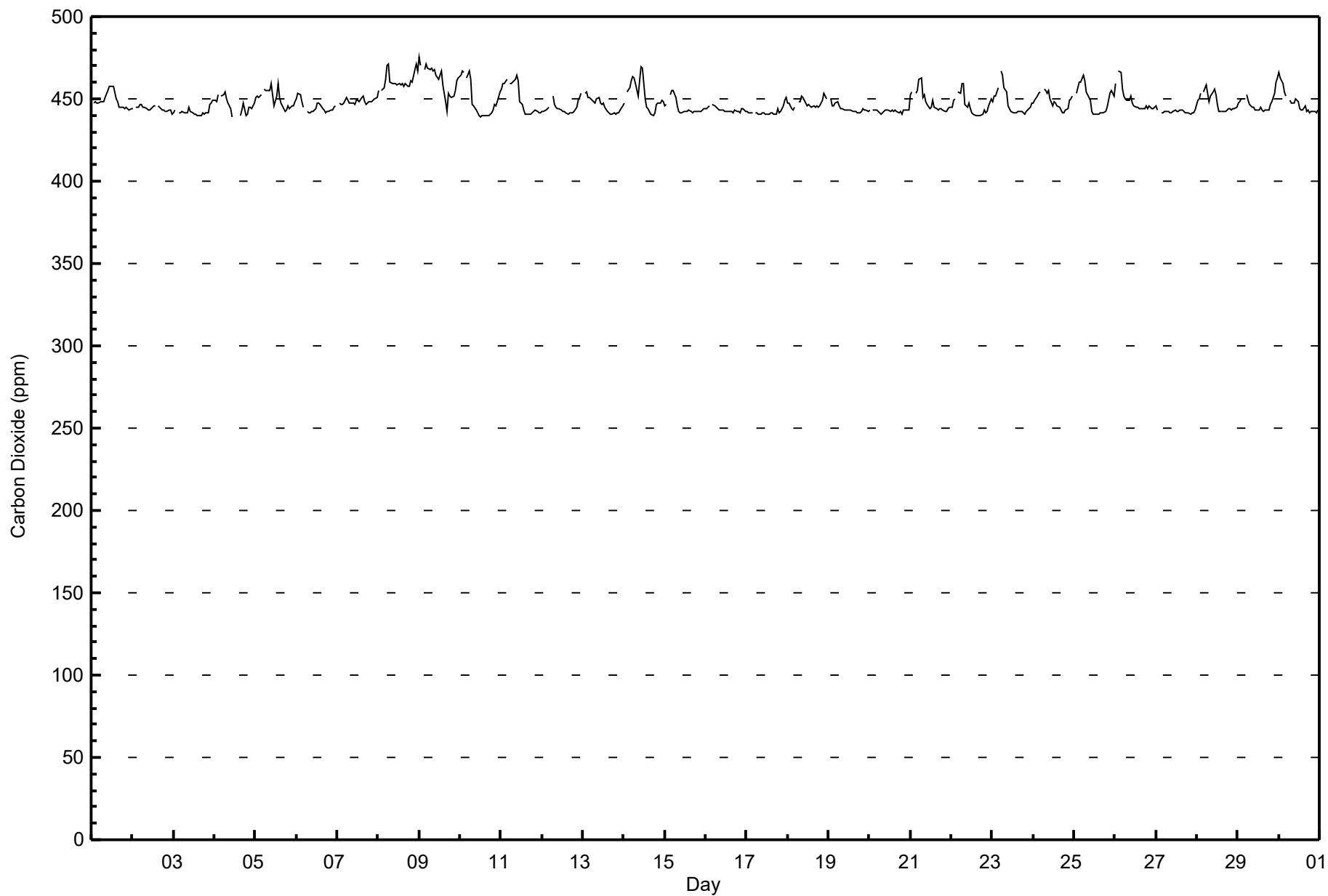
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																								Hours in Service: 720			
Maximum Value: 475.8 ppm on Apr 9 01:00 Maximum Daily Average: 461.6 ppm on Apr 9																								Hours of Data: 685			
Minimum Value: 438.8 ppm on Apr 4 11:00 Minimum Daily Average: 442.3 ppm on Apr 3																								Hours of Missing Data: 35			
Maximum Diurnal Average: 454.4 ppm at hour 6 Minimum Diurnal Average: 443.0 ppm at hour 17																								Hours of Calibration: 34			
Monthly Average: 447.66 ppm Percentiles: P ₁ = 439.7 P ₁₀ = 441.4 Q ₁ = 442.6 Median = 445.2 Q ₃ = 450.8 P ₉₀ = 459.0 P ₉₉ = 469.1																								Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	447.6	448.4	447.8	447.2	448.1	448.6	448.6	450.5	455.3	457.3	457.4	457.9	457.3	449.9	448.2	445.2	444.8	444.7	444.3	444.5	444.2	443.4	443.7	448.9	457.9	
2-Apr	444.1	Z	445.2	445.1	446.6	446.6	445.3	445.3	444.1	443.4	443.3	444.2	445.8	446.1	M	445.6	444.5	443.5	443.3	442.4	442.5	443.0	442.9	440.9	444.3	446.6	
3-Apr	441.8	443.3	Z	441.2	441.4	442.8	441.5	441.4	441.5	444.5	442.5	441.3	440.9	440.6	439.7	439.7	439.8	441.2	440.3	441.6	441.9	446.5	447.1	449.2	442.3	449.2	
4-Apr	448.8	448.2	452.4	Z	451.3	452.3	454.3	450.4	447.0	444.4	438.8	C	C	C	C	439.6	442.9	447.2	440.2	440.4	444.6	444.7	444.4	447.5	446.3	454.3	
5-Apr	450.6	451.6	451.2	452.8	Z	456.1	454.9	454.8	455.3	459.1	452.6	445.9	451.4	459.6	451.2	447.4	445.4	442.0	443.0	445.5	443.7	445.5	446.1	448.0	450.2	459.6	
6-Apr	450.3	453.0	452.7	448.2	445.3	Z	442.2	441.3	441.6	442.3	442.6	443.8	447.4	447.6	446.6	444.0	442.8	441.9	442.7	442.6	443.3	443.4	444.6	445.7	445.0	453.0	
7-Apr	Z	447.4	447.0	446.7	447.8	451.1	449.1	447.4	447.5	447.8	447.0	449.0	449.1	448.3	450.8	451.9	448.0	446.6	448.3	448.0	448.7	449.2	450.1	450.7	448.6	451.9	
8-Apr	455.0	Z	455.0	457.0	461.8	469.9	470.9	459.8	459.7	459.6	459.4	458.1	459.3	458.2	459.2	458.0	459.4	457.7	457.7	460.6	460.2	468.2	471.4	467.1	461.0	471.4	
9-Apr	475.8	470.2	Z	467.9	471.1	469.0	468.1	468.5	467.1	467.6	464.6	461.6	464.8	466.9	458.2	448.0	442.2	453.6	451.5	450.8	451.4	454.7	461.1	462.4	461.6	475.8	
10-Apr	464.5	467.0	466.3	Z	462.3	467.2	461.6	446.3	445.5	443.2	441.9	439.9	439.2	439.5	439.4	439.6	439.7	440.1	441.8	443.3	446.8	446.1	448.6	454.0	448.9	467.2	
11-Apr	455.7	459.0	459.4	462.1	Z	459.7	459.2	460.3	461.6	464.1	460.7	448.6	446.5	443.2	440.8	440.7	440.8	440.8	441.2	442.2	443.0	442.5	441.9	441.8	450.2	464.1	
12-Apr	442.1	442.6	443.6	444.3	444.9	Z	451.8	446.2	444.5	444.2	443.8	443.2	442.7	442.1	441.2	441.0	441.5	441.8	441.7	442.2	444.9	449.1	450.8	453.4	444.5	453.4	
13-Apr	Z	453.8	454.6	451.0	450.8	449.6	448.3	447.1	449.9	451.0	447.3	446.9	447.2	444.5	442.3	441.4	440.5	440.7	441.5	440.7	441.3	441.8	442.9	446.0	446.1	454.6	
14-Apr	447.6	Z	454.6	457.2	460.8	463.6	462.8	459.5	451.3	460.7	469.2	468.5	450.2	445.0	444.0	442.4	440.8	439.5	441.3	447.0	447.7	447.6	449.0	448.3	452.1	469.2	
15-Apr	446.0	446.9	Z	452.3	454.7	455.4	450.6	445.9	442.3	441.6	441.8	442.2	442.3	442.6	442.9	442.2	441.9	442.0	442.0	442.4	442.4	442.7	443.4	443.9	444.8	455.4	
16-Apr	444.3	444.9	445.6	Z	446.6	446.0	444.6	443.9	443.4	443.1	442.8	442.6	442.2	442.0	442.5	442.6	441.8	443.0	442.7	442.5	441.6	444.2	443.7	442.6	443.4	446.6	
17-Apr	442.3	441.9	441.7	441.1	Z	441.5	441.9	441.0	440.7	441.2	441.4	440.7	440.3	440.7	441.3	441.2	441.1	440.3	444.3	441.5	442.0	446.1	448.9	451.0	442.3	451.0	
18-Apr	447.6	447.6	443.7	443.3	444.8	Z	448.1	448.3	451.7	450.7	449.5	445.9	446.6	446.1	445.0	445.9	445.0	445.7	445.2	446.0	449.5	453.0	451.3	449.8	447.4	453.0	
19-Apr	Z	449.7	445.5	446.2	447.7	448.3	445.8	444.0	443.7	443.4	443.2	443.2	443.0	442.9	442.7	442.4	442.1	441.8	441.9	442.4	443.8	443.1	443.0	442.7	444.0	449.7	
20-Apr	442.9	Z	442.9	442.8	443.2	442.5	441.6	440.7	442.7	443.2	443.5	443.1	442.8	443.1	442.2	442.8	442.1	441.8	442.6	440.7	442.9	443.2	442.8	443.6	442.6	443.6	
21-Apr	452.6	454.2	Z	453.2	455.3	461.5	462.7	450.6	452.7	448.0	446.9	444.2	444.7	449.0	445.3	444.3	443.0	443.9	443.8	443.3	442.3	442.8	444.4	444.5	448.4	462.7	
22-Apr	444.9	449.0	450.4	Z	453.9	453.3	459.0	459.3	446.9	444.5	447.7	444.0	441.3	440.3	440.1	440.2	439.8	440.2	440.9	442.8	441.3	442.4	445.7	449.9	446.0	459.3	
23-Apr	448.4	451.5	451.8	456.7	Z	467.1	464.1	457.0	454.0	446.0	444.3	442.1	441.4	441.7	441.7	442.2	442.1	442.3	441.7	440.4	442.5	444.4	445.2	447.9	447.7	467.1	
24-Apr	447.9	449.2	451.4	453.0	454.6	Z	455.6	455.3	453.0	455.1	450.0	445.7	448.4	447.4	446.0	444.9	443.2	441.9	441.5	443.4	444.4	449.1	450.1	451.8	448.8	455.6	
25-Apr	Z	453.4	456.8	460.2	460.0	464.4	460.9	454.6	452.7	449.0	442.8	440.5	440.4	440.4	440.7	441.2	441.4	441.7	442.8	444.6	448.8	453.1	454.8	452.0	449.4	464.4	
26-Apr	459.0	Z	466.5	466.5	455.7	451.5	449.6	449.1	449.1	451.8	447.3	446.1	445.0	444.8	444.0	443.8	443.7	444.4	445.6	444.2	445.5	443.7	443.9	444.5	448.9	466.5	
27-Apr	446.0	443.4	Z	441.4	441.5	442.6	442.7	442.3	441.9	441.9	442.7	442.9	442.6	442.8	443.0	443.0	442.7	441.2	441.9	441.2	440.9	441.2	441.6	443.3	442.4	446.0	
28-Apr	449.2	449.7	453.2	Z	454.3	458.6	453.3	448.7	451.7	454.6	456.0	452.9	446.2	442.1	442.2	442.1	442.1	442.3	443.9	444.0	443.6	443.8	443.8	444.6	447.9	458.6	
29-Apr	447.2	448.1	449.8	450.1	Z	452.2	449.5	447.0	445.2	444.7	443.3	442.9	443.6	444.5	443.3	442.0	443.5	443.1	443.1	446.6	448.7	453.2	459.8	462.9	447.6	462.9	
30-Apr	466.1	462.9	459.0	454.1	451.4	Z	449.1	447.5	447.7	447.4	450.4	448.0	444.4	443.6	443.3	445.4	442.4	443.1	441.9	442.0	442.5	442.3	441.7	443.4	447.8	466.1	
450.4 451.0 451.5 451.3 451.8 454.4 452.6 449.7 448.9 449.1 448.1 446.7 446.1 446.0 444.6 443.8 443.0 443.3 443.5 444.0 444.9 446.5 447.6 448.6																										Diurnal Average	
475.8 470.2 466.5 467.9 471.1 469.9 470.9 468.5 467.1 467.6 469.2 468.5 464.8 466.9 459.2 458.0 459.4 457.7 457.7 460.6 460.2 468.2 471.4 467.1																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	27	3.94	3.94
440 - 460	609	88.91	92.85
460 - 480	49	7.15	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	0	1	1	0	0	0	0	3	7	2	5	1	2	0	3	2	27
440 - 460	60	68	22	11	13	7	27	90	85	28	13	22	42	39	35	39	601
460 - 480	1	1	0	0	0	0	2	10	12	6	2	3	5	0	1	2	45
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	70	23	11	13	7	29	103	104	36	20	26	49	39	39	43	673

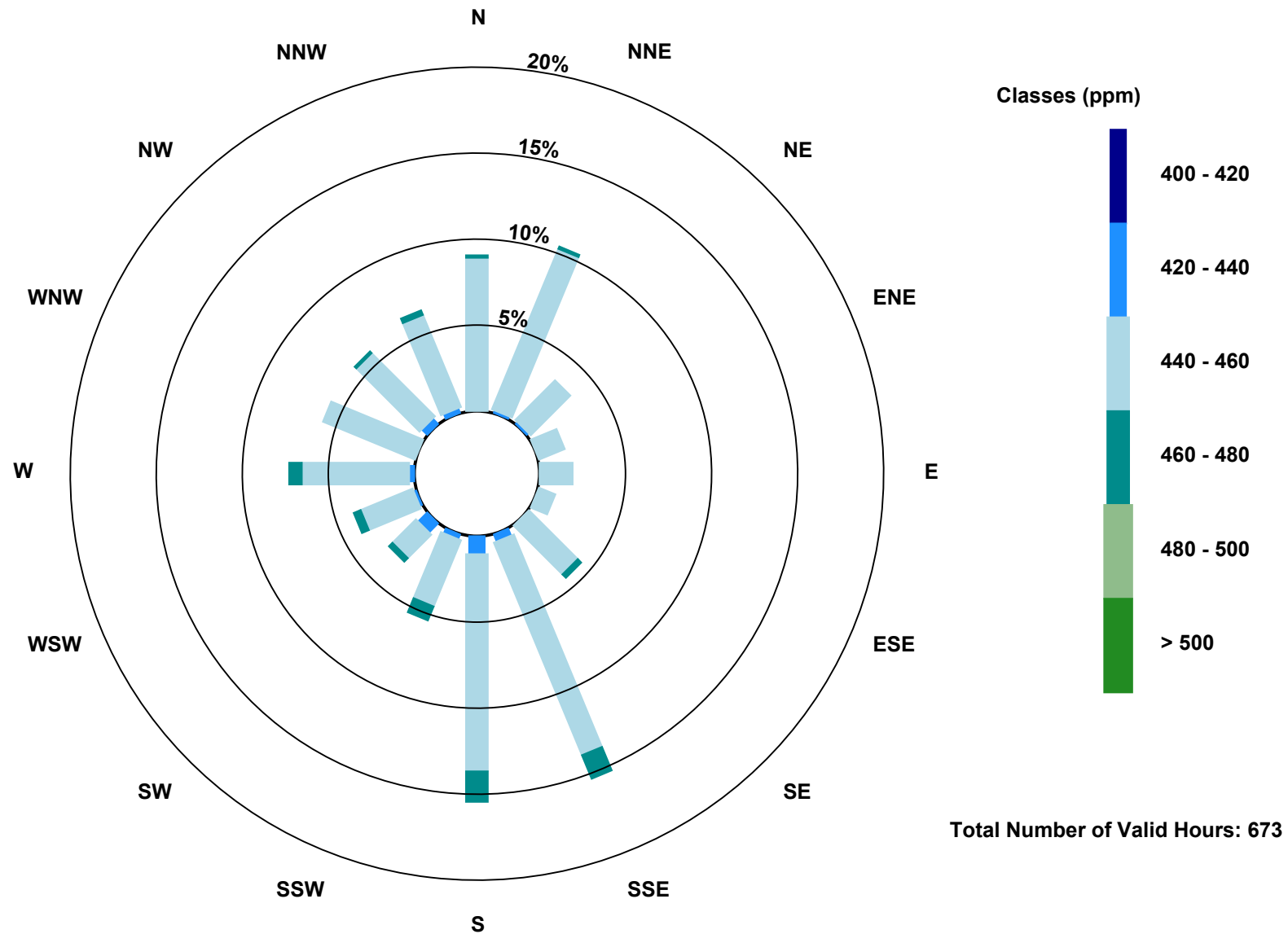
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH₃) - ppb

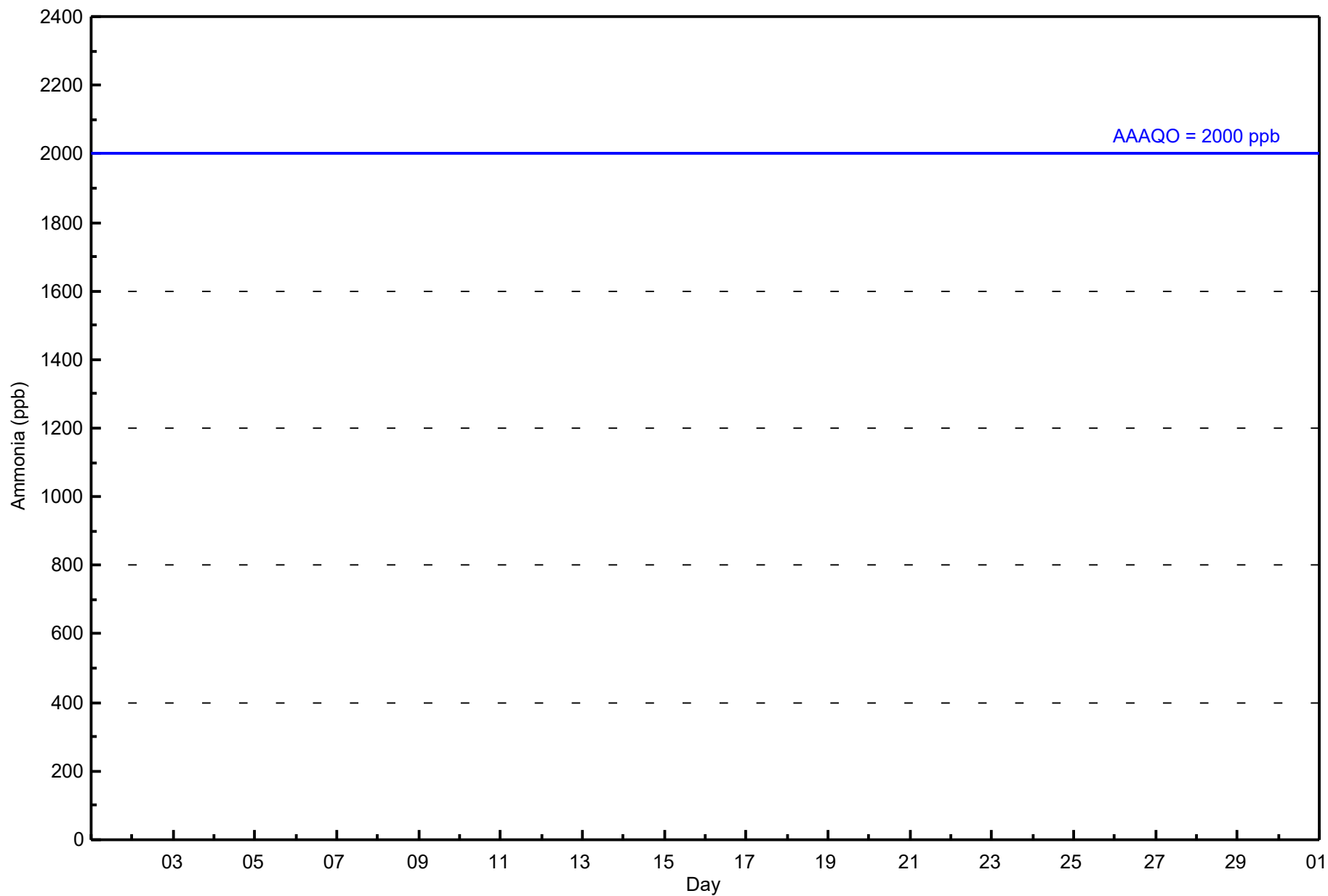
Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0																			Hours in Service: 720											
Maximum Value: 0.0 ppb on Apr 1 01:00																			Maximum Daily Average: 0.0 ppb on Apr 1						Hours of Data: 627					
Minimum Value: 0.0 ppb on Apr 1 01:00																			Minimum Daily Average: 0.0 ppb on Apr 1						Hours of Missing Data: 93					
Maximum Diurnal Average: 0.0 ppb at hour 1																			Minimum Diurnal Average: 0.0 ppb at hour 1						Hours of Calibration: 43					
Monthly Average: 0.00 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 = 0.0						Percent Operational Time: 93.1					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	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				
2-Apr	0.0	0.0	0.0	0.0	0.0	Z	RE	0.0	0.0	0.0	UO	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				
3-Apr	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				
4-Apr	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				
5-Apr	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
6-Apr	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				
7-Apr	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				
8-Apr	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				
9-Apr	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
10-Apr	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				
11-Apr	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				
12-Apr	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				
13-Apr	0.0	0.0	0.0	0.0	Z	RE	0.0	UO	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	M	M	M	M	M	M	--				
15-Apr	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	--				
16-Apr	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				
17-Apr	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
18-Apr	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				
19-Apr	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				
20-Apr	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				
21-Apr	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				
22-Apr	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				
23-Apr	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				
24-Apr	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				
25-Apr	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				
26-Apr	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				
27-Apr	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	UO	0.0	0.0	0.0	0.0				
28-Apr	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				
29-Apr	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				
30-Apr	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				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation RE - Recovery																														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	627	100.00	100.00
6 - 10	0	0.00	100.00
11 - 15	0	0.00	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: 627

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	58	68	23	11	12	7	29	97	89	34	16	21	37	36	38	41	617
6 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	58	68	23	11	12	7	29	97	89	34	16	21	37	36	38	41	617

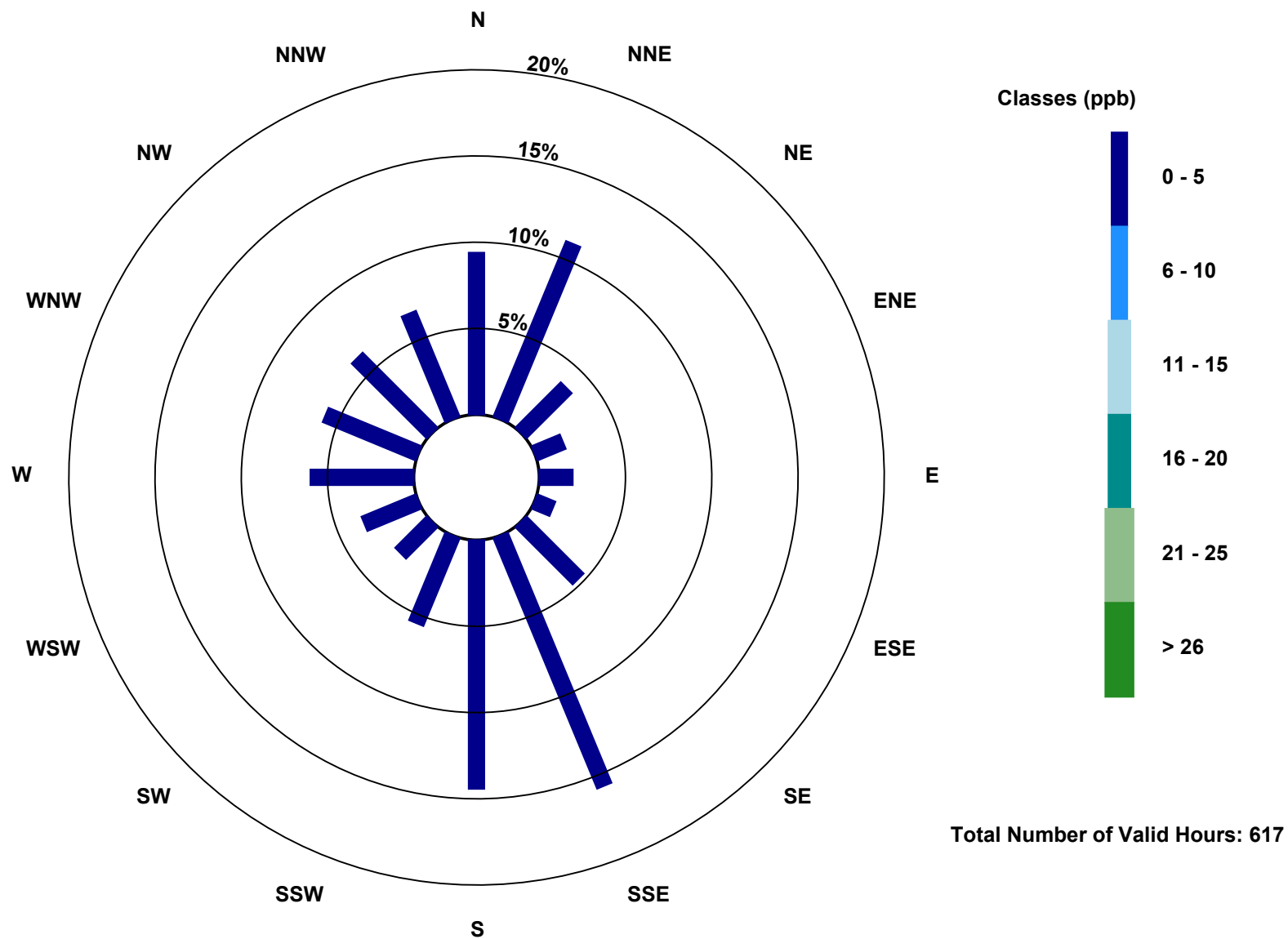
Total Number of Valid Hours: 617

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter



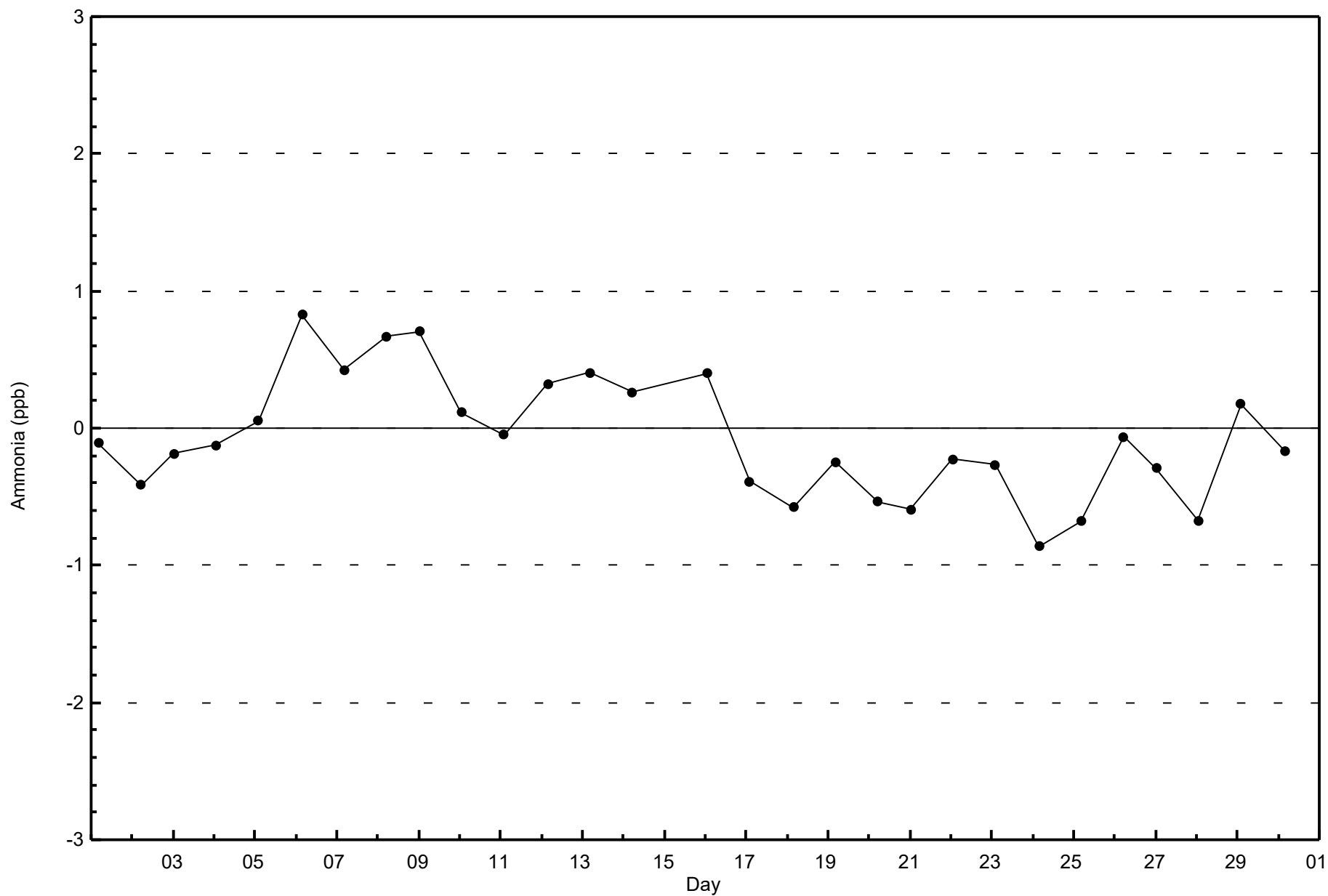


Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - April 2025



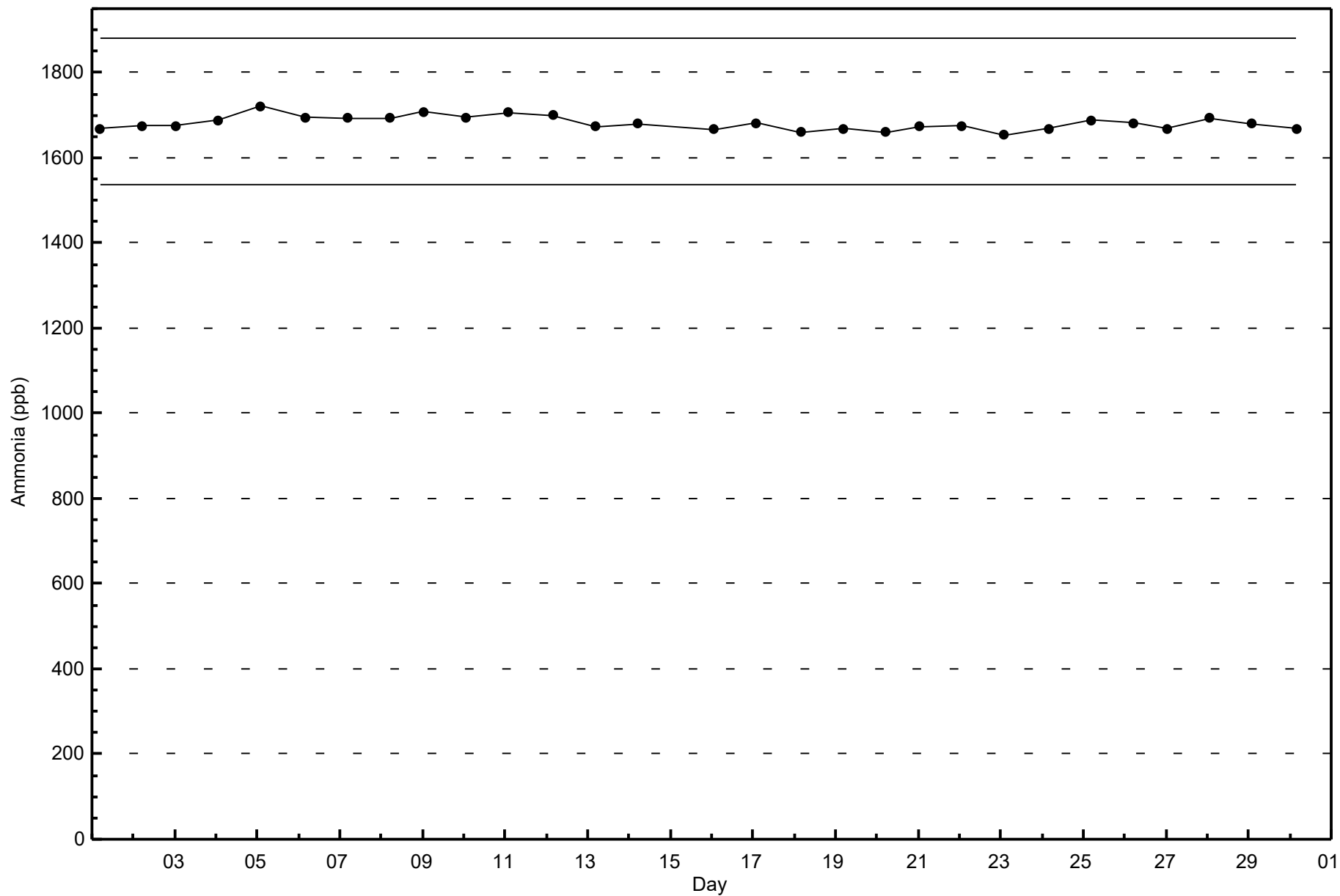


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 10m (AT10) - C

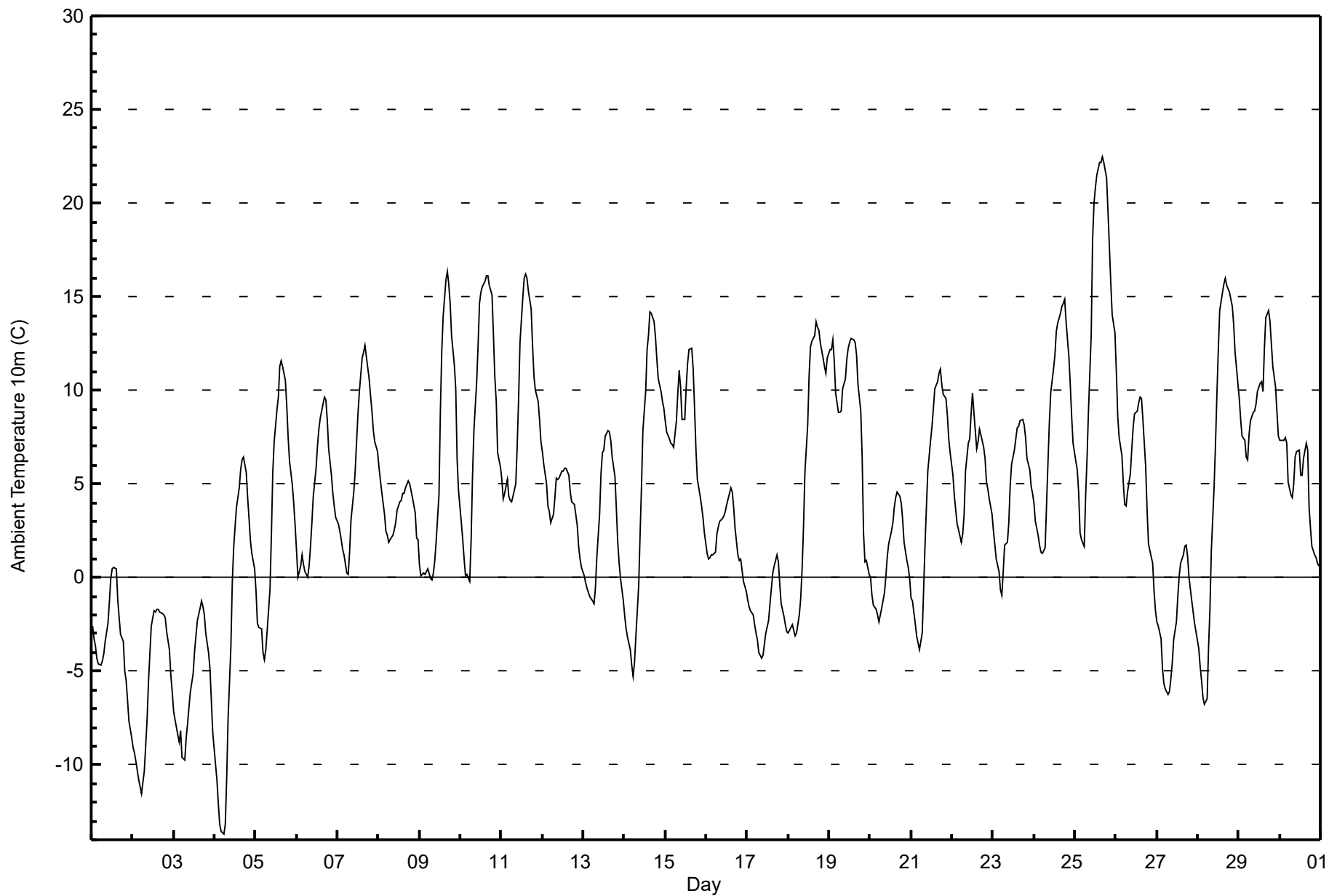
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 22.4 C on Apr 25 17:00																				Maximum Daily Average: 13.6 C on Apr 25					Hours in Service: 720	
Minimum Value: -13.7 C on Apr 4 06:00																				Minimum Daily Average: -5.7 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 9.0 C at hour 17																				Minimum Diurnal Average: -1.0 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 4.10 C																				Percentiles: P ₁ = -10.9 P ₁₀ = -3.8 Q ₁ = -0.2 Median = 4.1 Q ₃ = 8.7 P ₉₀ = 12.5 P ₉₉ = 19.9					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	-2.6	-3.2	-3.7	-4.3	-4.6	-4.7	-4.5	-4.1	-3.4	-2.5	-1.3	-0.1	0.5	0.6	0.5	-1.2	-2.1	-3.1	-3.4	-5.0	-5.5	-6.6	-7.7	-8.6	-3.3	0.6
2-Apr	-9.1	-9.4	-9.8	-10.8	-11.2	-11.5	-11.0	-10.4	-7.6	-5.6	-4.0	-2.6	-1.7	-1.8	-1.7	-1.7	-1.8	-1.9	-2.0	-2.2	-2.9	-3.9	-5.2	-6.1	-5.7	-1.7
3-Apr	-7.1	-7.6	-8.4	-8.8	-8.2	-9.6	-9.7	-8.5	-7.8	-6.9	-6.1	-5.1	-3.9	-3.1	-2.3	-1.6	-1.3	-1.6	-2.0	-3.0	-4.0	-4.8	-6.5	-8.2	-5.7	-1.3
4-Apr	-10.0	-10.8	-12.1	-13.2	-13.6	-13.7	-13.2	-10.7	-7.5	-3.7	-0.3	1.6	2.7	3.7	4.8	5.7	6.3	6.4	5.6	4.2	3.1	2.0	1.3	0.5	-2.5	6.4
5-Apr	-0.7	-2.5	-2.7	-2.7	-4.0	-4.4	-3.9	-2.8	-0.6	2.3	5.6	7.3	9.0	9.7	11.3	11.6	11.3	10.6	9.2	7.5	6.2	5.0	4.0	2.8	3.7	11.6
6-Apr	1.4	0.0	0.6	1.2	0.7	0.3	0.0	0.6	1.7	2.9	4.3	5.8	7.1	7.9	8.5	9.3	9.7	9.5	8.5	6.9	5.4	4.5	3.8	3.2	4.3	9.7
7-Apr	2.8	2.5	2.1	1.5	1.2	0.2	0.2	1.4	3.1	4.6	5.7	7.3	8.8	9.9	11.7	12.1	12.4	11.8	10.6	9.7	8.9	7.9	7.2	6.7	6.3	12.4
8-Apr	5.9	5.3	4.6	3.4	2.4	2.2	1.9	2.0	2.3	2.6	2.9	3.6	4.0	4.1	4.5	4.5	4.8	5.1	5.0	4.6	4.3	3.5	2.1	2.0	3.7	5.9
9-Apr	0.7	0.1	0.3	0.1	0.3	0.5	0.0	-0.1	0.2	0.9	1.9	4.4	8.9	12.1	14.0	15.9	16.3	15.7	14.7	12.9	11.4	10.1	6.3	4.6	6.3	16.3
10-Apr	2.9	2.0	1.0	0.1	0.2	-0.2	2.0	5.4	7.8	10.5	12.4	14.7	15.2	15.5	15.8	16.1	16.1	15.6	15.1	12.9	10.7	9.4	6.7	5.9	8.9	16.1
11-Apr	5.2	4.2	4.5	5.2	4.4	4.1	4.0	4.4	5.1	7.0	9.5	12.5	15.0	16.0	16.2	16.0	15.3	14.4	12.4	10.8	10.0	9.4	8.5	7.2	9.2	16.2
12-Apr	6.7	6.1	5.0	3.8	3.5	2.9	3.4	4.3	5.3	5.2	5.3	5.7	5.7	5.8	5.8	5.4	4.6	4.1	4.0	3.9	2.8	1.6	1.0	0.6	4.3	6.7
13-Apr	0.1	-0.3	-0.6	-0.8	-1.0	-1.2	-1.4	-0.6	1.1	3.4	5.6	6.7	6.8	7.5	7.8	7.8	7.3	6.4	5.4	3.7	1.9	0.8	-0.1	-1.3	2.7	7.8
14-Apr	-2.1	-2.7	-3.2	-3.8	-4.7	-5.2	-4.5	-3.1	-0.4	2.3	4.9	7.8	9.9	12.2	12.9	14.2	14.1	13.7	12.8	11.7	10.6	9.9	9.4	9.1	5.2	14.2
15-Apr	8.3	7.8	7.4	7.2	7.1	7.0	8.3	9.9	11.0	10.2	8.4	8.5	10.2	11.5	12.1	12.2	11.1	9.1	6.8	5.3	4.3	3.8	3.2	2.4	8.0	12.2
16-Apr	1.3	1.0	1.0	1.2	1.2	1.4	2.3	2.7	3.0	3.1	3.3	3.5	3.9	4.2	4.8	4.6	3.7	2.6	1.2	0.9	1.0	0.4	-0.2	-0.7	2.2	4.8
17-Apr	-1.2	-1.5	-1.8	-2.0	-2.5	-3.0	-3.4	-4.0	-4.3	-4.1	-3.6	-2.9	-2.3	-1.4	-0.6	0.2	0.6	1.2	0.9	-0.3	-1.4	-2.1	-2.5	-2.9	-1.9	1.2
18-Apr	-3.0	-2.8	-2.5	-2.8	-3.1	-2.9	-2.0	-1.1	0.5	2.7	5.6	8.1	10.8	12.3	12.7	12.9	13.6	13.4	13.2	12.6	11.8	11.3	10.9	11.8	6.0	13.6
19-Apr	12.2	12.1	12.7	11.6	9.8	8.8	8.8	8.9	10.1	10.6	11.7	12.2	12.6	12.8	12.7	12.5	11.9	10.3	8.9	6.4	2.3	0.9	0.9	0.2	9.2	12.8
20-Apr	0.0	-1.0	-1.4	-1.7	-2.0	-2.4	-2.0	-1.6	-0.8	0.1	1.2	1.8	2.5	2.9	3.7	4.3	4.6	4.4	4.0	3.1	1.9	0.9	0.6	0.0	1.0	4.6
21-Apr	-1.1	-1.3	-2.5	-3.1	-3.5	-3.9	-3.0	-0.7	1.8	3.8	5.7	7.3	8.1	9.0	10.1	10.5	10.9	11.2	10.3	9.8	9.6	8.7	7.4	6.6	4.7	11.2
22-Apr	5.4	4.4	3.6	2.9	2.5	1.9	2.3	3.4	5.7	7.2	7.4	8.8	9.9	8.8	6.9	7.3	8.0	7.7	6.9	6.4	5.1	4.7	4.2	3.4	5.6	9.9
23-Apr	2.5	1.8	1.0	0.3	-0.6	-1.0	0.3	1.7	1.9	2.9	4.9	6.0	6.8	7.4	8.0	8.0	8.4	8.5	8.1	7.5	6.4	5.8	4.9	4.5	4.4	8.5
24-Apr	3.9	3.0	2.3	1.7	1.3	1.3	1.6	3.8	6.0	8.3	9.8	11.1	11.9	13.2	13.6	14.1	14.5	14.7	14.9	13.6	11.8	10.3	8.6	7.2	8.4	14.9
25-Apr	6.2	5.7	4.6	2.4	2.0	1.6	4.3	6.3	8.8	13.0	18.1	20.0	20.8	21.5	22.1	22.2	22.4	22.2	21.4	19.6	17.7	15.8	14.1	13.1	13.6	22.4
26-Apr	11.0	8.6	7.5	6.5	5.0	3.9	3.8	4.5	5.5	6.8	8.0	8.8	8.9	9.4	9.6	9.5	8.4	5.9	3.6	1.8	1.4	0.7	-0.7	-1.8	5.7	11.0
27-Apr	-2.4	-2.6	-3.2	-4.8	-5.7	-5.9	-6.3	-6.1	-5.4	-4.6	-3.3	-2.4	-1.0	0.1	0.7	1.2	1.6	1.7	1.1	0.0	-1.3	-1.8	-2.5	-2.9	-2.3	1.7
28-Apr	-3.8	-4.8	-5.5	-6.4	-6.7	-6.4	-3.8	-1.7	1.5	4.8	7.2	9.8	12.2	14.3	15.2	15.7	15.9	15.6	15.2	14.8	14.5	13.6	12.0	10.4	6.4	15.9
29-Apr	9.6	8.5	7.6	7.3	6.4	6.3	7.6	8.3	8.8	8.9	9.3	10.0	10.4	10.5	10.0	12.3	13.9	14.3	13.7	12.5	11.3	10.2	8.8	7.6	9.7	14.3
30-Apr	7.3	7.3	7.3	7.5	7.2	5.1	4.4	4.2	5.0	6.4	6.8	6.8	5.5	5.4	6.4	7.2	6.8	3.8	2.6	1.7	1.2	1.0	0.7	0.6	4.9	7.5
																									Diurnal Average	
																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	187	25.97	25.97
0 - 10	399	55.42	81.39
10 - 20	126	17.50	98.89
> 20	8	1.11	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

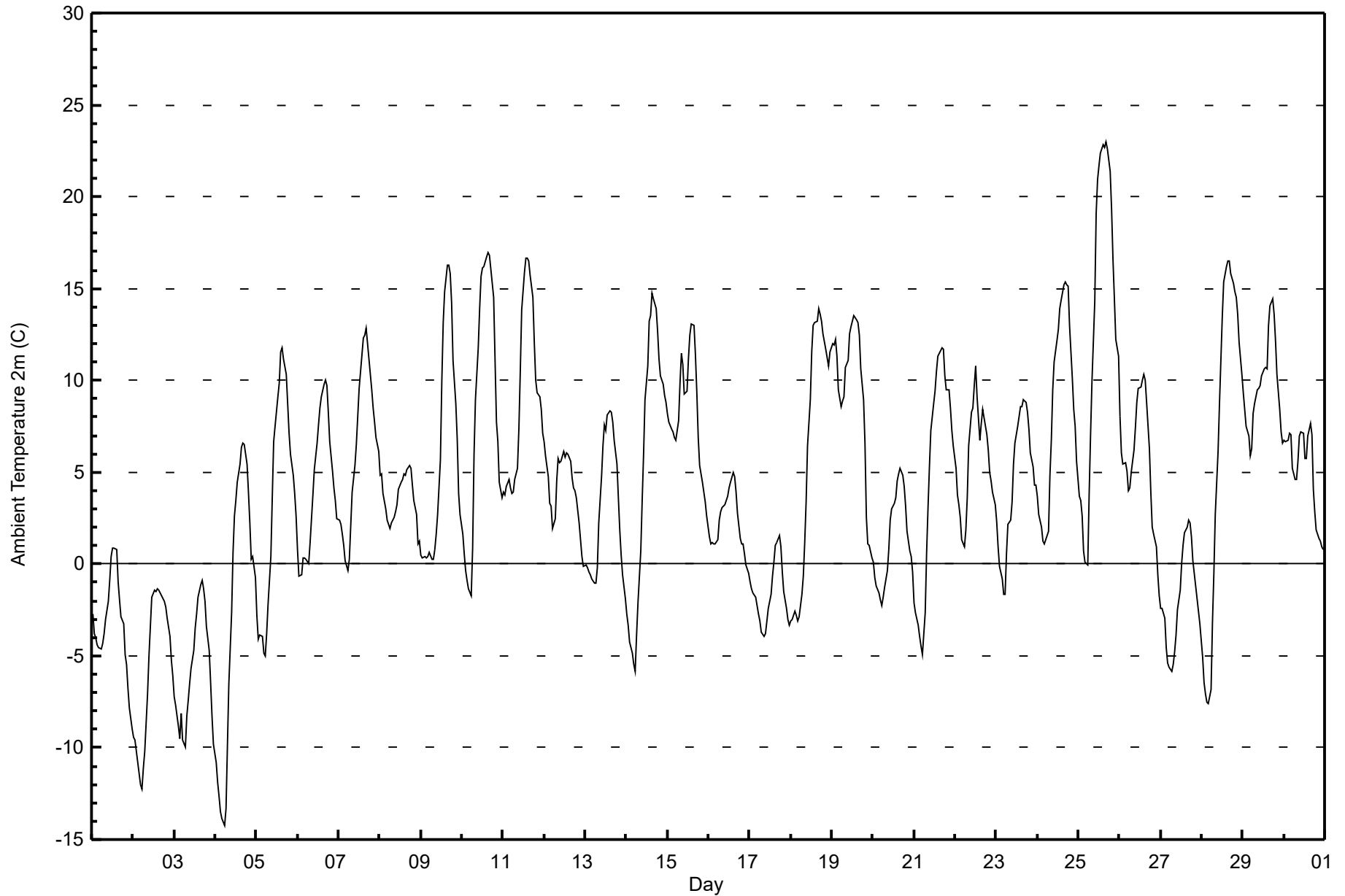
Ambient Temperature 2m (AT2) - C Fort McKay - Bertha Ganter - April 2025

Maximum Value: 23.0 C on Apr 25 17:00																			Maximum Daily Average: 13.2 C on Apr 25										Hours in Service: 720			
Minimum Value: -14.2 C on Apr 4 06:00																			Minimum Daily Average: -5.8 C on Apr 3										Hours of Data: 720			
Maximum Diurnal Average: 9.5 C at hour 16																			Minimum Diurnal Average: -1.3 C at hour 6										Hours of Missing Data: 0			
Monthly Average: 4.15 C																			Percentiles: P ₁ = -11.8 P ₁₀ = -3.9 Q ₁ = -0.3 Median = 3.9 Q ₃ = 8.8 P ₉₀ = 13.0 P ₉₉ = 20.6										Hours of Calibration: 0			
																													Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	-2.7	-3.8	-4.0	-4.4	-4.6	-4.6	-4.3	-3.8	-3.1	-2.0	-0.9	0.4	0.9	0.9	0.8	-0.9	-1.9	-2.9	-3.3	-4.9	-5.4	-6.7	-7.8	-8.9	-3.3	0.9						
2-Apr	-9.5	-9.6	-10.2	-11.4	-12.0	-12.3	-11.1	-10.2	-7.0	-5.0	-3.4	-1.8	-1.4	-1.5	-1.4	-1.4	-1.6	-1.8	-2.0	-2.3	-3.0	-3.9	-5.3	-6.1	-5.6	-1.4						
3-Apr	-7.2	-7.7	-8.8	-9.5	-8.1	-9.6	-9.9	-8.3	-7.4	-6.5	-5.7	-4.7	-3.5	-2.7	-1.8	-1.1	-0.9	-1.4	-2.0	-3.4	-4.7	-6.5	-8.3	-9.8	-5.8	-0.9						
4-Apr	-10.8	-11.9	-12.7	-13.5	-13.8	-14.2	-13.4	-9.9	-6.5	-2.7	0.6	2.6	3.5	4.5	5.4	6.3	6.6	6.5	5.4	3.9	2.2	0.3	0.4	-0.7	-2.6	6.6						
5-Apr	-2.8	-4.1	-3.9	-3.9	-4.9	-5.0	-3.8	-2.2	0.4	3.6	6.6	7.5	9.1	9.9	11.5	11.7	11.2	10.3	8.7	7.1	5.9	4.8	3.8	2.6	3.5	11.7						
6-Apr	0.8	-0.6	-0.6	0.4	0.3	0.3	0.1	1.1	2.4	3.8	5.1	6.6	7.6	8.5	9.1	9.8	10.0	9.7	8.2	6.7	5.1	4.1	3.5	2.5	4.3	10.0						
7-Apr	2.4	2.1	1.6	1.0	0.2	-0.4	0.2	2.1	3.9	5.4	6.5	8.0	9.5	10.5	12.3	12.4	12.9	12.0	10.3	9.5	8.5	7.7	6.9	6.1	6.3	12.9						
8-Apr	4.8	4.9	3.8	3.0	2.4	2.1	1.9	2.2	2.5	2.9	3.2	4.1	4.5	4.6	4.9	4.8	5.1	5.4	5.2	4.3	3.4	2.7	1.1	1.2	3.5	5.4						
9-Apr	0.5	0.3	0.4	0.3	0.4	0.7	0.3	0.3	0.8	1.6	2.7	5.7	9.9	13.2	14.8	16.2	16.3	15.8	14.2	11.1	8.7	6.8	3.8	2.7	6.1	16.3						
10-Apr	1.6	0.5	-0.3	-0.9	-1.3	-1.7	0.9	6.0	9.0	11.7	13.9	15.7	16.1	16.2	16.7	17.0	16.8	16.0	14.5	11.0	7.8	6.6	4.5	3.6	8.4	17.0						
11-Apr	3.9	3.8	4.2	4.6	4.1	3.8	3.9	4.6	5.2	7.4	10.5	13.9	15.9	16.7	16.7	16.5	15.7	14.5	12.1	10.0	9.3	9.1	8.4	7.2	9.2	16.7						
12-Apr	6.7	5.9	4.7	3.3	3.2	2.0	2.5	4.6	5.8	5.5	5.6	6.2	5.8	6.0	6.0	5.6	4.7	4.2	4.0	3.6	2.2	1.3	0.4	-0.1	4.1	6.7						
13-Apr	0.0	-0.2	-0.4	-0.6	-0.8	-1.1	-1.1	-0.2	2.2	4.8	6.5	7.6	7.3	8.1	8.3	8.3	7.7	6.8	5.5	3.6	1.9	0.5	-0.6	-1.9	3.0	8.3						
14-Apr	-2.7	-3.3	-4.2	-4.9	-5.4	-5.8	-3.9	-2.1	0.7	3.4	6.0	9.0	10.8	13.2	13.5	14.7	14.5	13.9	12.7	11.1	10.2	9.8	9.2	8.8	5.4	14.7						
15-Apr	8.2	7.7	7.3	7.2	6.9	6.7	7.8	9.9	11.4	10.8	9.3	9.4	11.2	12.5	13.0	13.0	11.4	9.3	6.9	5.3	4.4	3.9	3.4	2.6	8.3	13.0						
16-Apr	1.5	1.1	1.1	1.1	1.1	1.3	2.4	2.8	3.1	3.3	3.5	3.7	4.1	4.5	5.0	4.8	3.9	2.8	1.4	1.1	1.1	0.5	0.0	-0.5	2.3	5.0						
17-Apr	-1.0	-1.3	-1.6	-1.8	-2.3	-2.7	-3.1	-3.7	-3.9	-3.8	-3.1	-2.4	-1.6	-0.7	0.1	1.0	1.2	1.6	1.0	-0.5	-1.5	-2.4	-3.1	-3.3	-1.6	1.6						
18-Apr	-3.1	-3.0	-2.6	-2.8	-3.1	-2.9	-1.7	-0.7	1.1	3.4	6.4	9.0	11.5	13.0	13.1	13.2	13.9	13.6	13.3	12.5	11.7	11.3	10.8	11.6	6.2	13.9						
19-Apr	12.0	11.9	12.2	11.3	9.5	8.6	8.9	9.1	10.7	11.1	12.5	12.9	13.2	13.5	13.3	13.1	12.4	10.6	9.0	6.6	2.5	1.1	1.0	0.3	9.5	13.5						
20-Apr	0.1	-0.8	-1.2	-1.6	-2.0	-2.3	-1.8	-1.3	-0.3	0.8	2.4	3.0	3.3	3.6	4.5	4.9	5.2	4.8	4.3	3.1	1.8	0.7	0.4	-0.5	1.3	5.2						
21-Apr	-2.1	-2.6	-3.3	-4.0	-4.5	-4.9	-2.7	0.6	3.1	5.3	7.2	8.7	9.4	10.4	11.4	11.6	11.8	11.7	10.2	9.5	9.5	8.5	7.2	6.4	4.9	11.8						
22-Apr	5.2	3.8	3.3	2.5	1.3	1.0	1.9	3.6	6.4	8.3	8.5	9.7	10.8	9.1	6.7	7.7	8.4	7.9	7.0	6.2	5.0	4.5	3.9	3.2	5.7	10.8						
23-Apr	2.3	1.0	-0.1	-0.8	-1.7	-1.7	0.5	2.2	2.4	3.4	5.4	6.6	7.5	8.1	8.6	8.5	8.9	8.8	8.2	7.3	6.0	5.3	4.3	4.3	4.4	8.9						
24-Apr	3.7	2.7	2.0	1.3	1.1	1.3	1.8	4.8	6.7	9.5	11.0	12.1	12.8	13.9	14.3	15.2	15.3	15.2	15.2	13.0	10.1	8.4	7.5	5.6	8.5	15.3						
25-Apr	3.7	3.5	2.6	0.7	0.1	-0.1	3.8	7.1	9.9	14.3	19.1	20.9	21.7	22.4	22.8	22.7	23.0	22.6	21.4	19.3	16.6	14.4	12.2	11.3	13.2	23.0						
26-Apr	8.1	6.1	5.4	5.5	5.1	4.0	4.1	5.0	6.2	7.4	8.8	9.5	9.6	10.0	10.3	10.0	8.8	6.3	3.9	2.0	1.6	0.9	-0.6	-1.7	5.7	10.3						
27-Apr	-2.4	-2.4	-3.0	-4.5	-5.4	-5.6	-5.9	-5.5	-4.7	-3.8	-2.5	-1.4	0.0	1.0	1.7	2.0	2.4	2.2	1.4	0.2	-1.2	-1.8	-2.6	-3.3	-1.9	2.4						
28-Apr	-5.1	-6.5	-7.1	-7.5	-7.6	-6.8	-3.2	-0.5	2.7	6.2	8.7	11.1	13.5	15.4	16.2	16.5	16.5	15.9	15.3	14.8	14.5	13.6	12.1	10.3	6.6	16.5						
29-Apr	9.3	8.4	7.5	7.0	5.9	6.3	8.2	8.7	9.5	9.5	9.7	10.3	10.6	10.7	10.6	13.0	14.0	14.4	13.6	12.2	10.3	8.4	7.2	6.6	9.7	14.4						
30-Apr	6.7	6.7	6.7	7.1	7.0	5.2	4.6	4.6	5.6	7.0	7.2	7.1	5.7	5.8	7.0	7.6	7.1	4.1	2.9	1.9	1.4	1.2	0.9	0.8	5.1	7.6						
1.1 0.4 0.0 -0.5 -1.0 -1.3 -0.4 1.0 2.6 4.2 5.7 7.0 8.0 8.7 9.2 9.5 9.4 8.7 7.6 6.2 4.9 3.8 2.8 2.0																									Diurnal Average							
12.0 11.9 12.2 11.3 9.5 8.6 8.9 9.9 11.4 14.3 19.1 20.9 21.7 22.4 22.8 22.7 23.0 22.6 21.4 19.3 16.6 14.4 12.2 11.6																									Diurnal Maximum							



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	189	26.25	26.25
0 - 10	391	54.31	80.56
10 - 20	132	18.33	98.89
> 20	8	1.11	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) - %

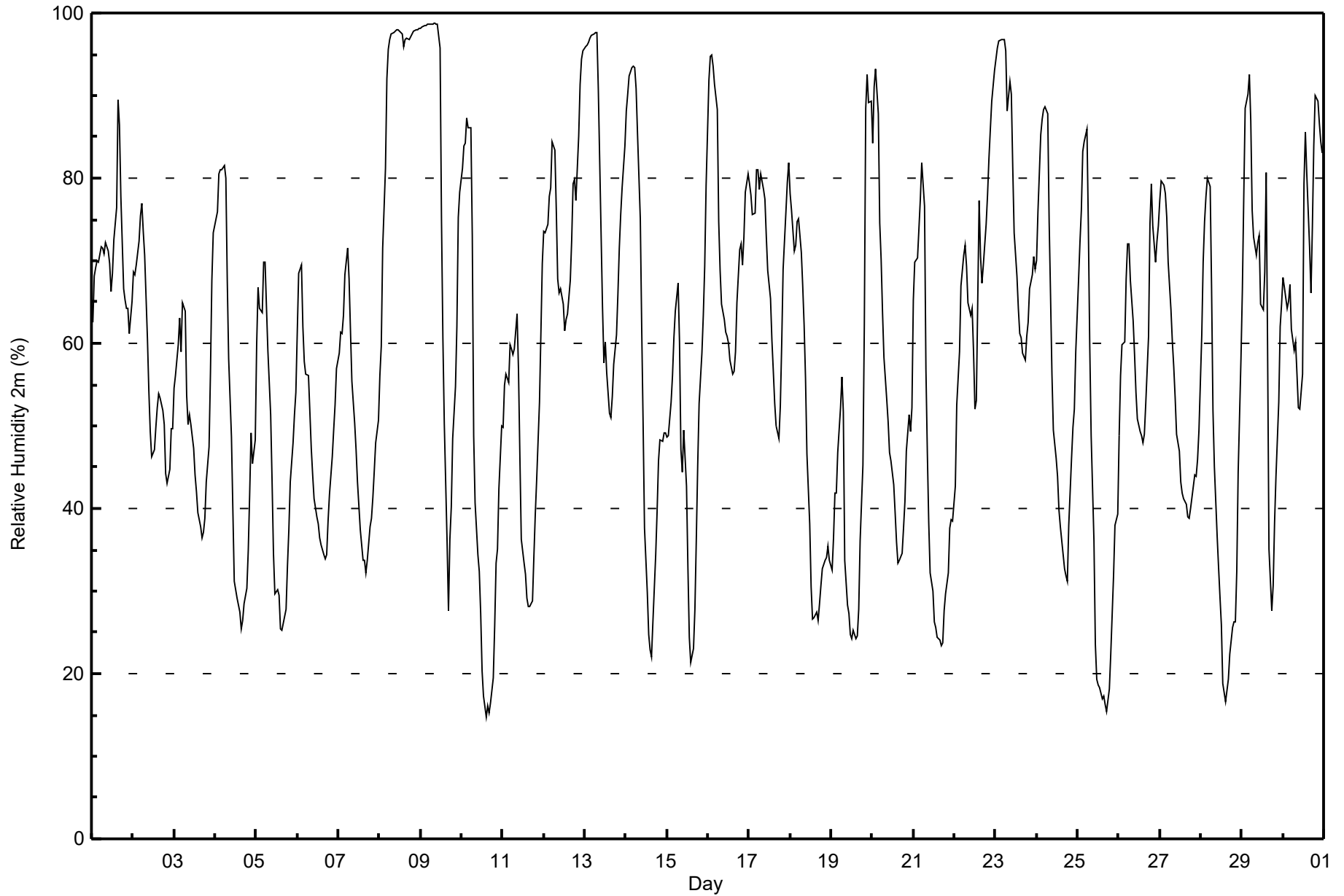
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 98.7 % on Apr 9 09:00																			Maximum Daily Average: 92.1 % on Apr 8																			Hours in Service: 720	
Minimum Value: 14.8 % on Apr 10 15:00																			Minimum Daily Average: 42.1 % on Apr 25																			Hours of Data: 720	
Maximum Diurnal Average: 77.7 % at hour 6																			Minimum Diurnal Average: 41.7 % at hour 17																			Hours of Missing Data: 0	
Monthly Average: 58.98 %																			Percentiles: P ₁ = 16.9 P ₁₀ = 29.4 Q ₁ = 41.9 Median = 59.8 Q ₃ = 74.6 P ₉₀ = 89.4 P ₉₉ = 98.5																			Hours of Calibration: 0	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	62.5	68.1	69.2	70.0	69.9	71.7	71.5	70.8	72.2	71.2	69.7	66.2	68.5	72.5	76.4	89.6	86.5	77.8	66.7	65.3	64.2	64.3	61.2	65.1	70.5	89.6													
2-Apr	68.6	68.3	69.5	72.4	75.5	76.9	73.5	70.7	60.5	54.2	49.4	46.2	47.2	49.9	52.2	53.9	53.3	51.8	50.2	44.2	43.1	44.7	49.6	49.6	57.3	76.9													
3-Apr	54.6	56.1	59.8	63.0	58.9	65.0	64.0	53.7	50.2	51.3	50.2	47.3	44.0	42.0	39.4	37.8	36.4	37.1	38.8	43.2	47.5	56.5	67.6	73.4	51.6	73.4													
4-Apr	75.1	75.9	80.6	81.0	80.9	81.5	80.0	67.6	58.1	48.6	39.8	31.2	30.1	29.2	27.4	25.4	26.5	28.5	30.3	34.8	41.6	49.2	45.5	48.3	50.7	81.5													
5-Apr	59.8	66.8	64.2	63.8	69.9	69.8	64.5	59.2	51.3	43.5	34.6	29.7	30.2	29.5	25.4	25.3	26.1	27.8	33.1	37.5	43.3	47.9	51.3	54.0	46.2	69.9													
6-Apr	61.4	68.5	69.5	62.1	57.7	56.3	56.2	51.8	47.3	44.1	41.1	38.9	38.1	36.4	35.6	34.3	33.8	34.4	38.4	41.7	46.2	49.6	52.5	56.9	48.0	69.5													
7-Apr	58.9	61.3	61.2	63.4	68.3	71.6	67.8	61.6	55.4	50.4	47.1	43.3	40.3	37.5	33.7	33.7	32.2	33.7	37.8	38.8	41.3	44.6	47.9	50.7	49.3	71.6													
8-Apr	56.1	59.6	71.5	81.1	92.0	95.5	96.7	97.4	97.6	97.8	98.0	98.0	97.6	97.4	96.0	96.8	96.9	96.8	97.1	97.4	97.9	98.0	97.9	98.1	92.1	98.1													
9-Apr	98.1	98.3	98.4	98.5	98.7	98.7	98.7	98.7	98.7	98.7	98.7	95.7	75.1	60.7	50.4	35.9	27.7	36.3	40.2	48.5	54.7	62.0	75.2	78.3	76.0	98.7													
10-Apr	81.3	83.9	84.3	87.3	86.1	86.0	73.1	48.8	40.6	34.5	32.3	27.3	20.4	17.3	14.8	16.1	15.2	16.4	19.5	25.8	33.4	35.1	42.4	50.0	44.7	87.3													
11-Apr	49.9	55.0	56.2	55.3	59.8	59.3	58.6	59.2	63.6	56.7	46.3	36.3	33.4	32.0	29.1	28.2	28.2	28.8	34.2	39.4	43.6	52.8	61.2	69.7	47.4	69.7													
12-Apr	73.5	73.4	74.4	77.8	78.8	84.3	83.4	76.0	67.8	66.0	66.6	64.7	61.6	62.9	63.5	67.6	72.5	79.4	79.9	77.3	85.0	91.4	94.5	95.5	75.7	95.5													
13-Apr	95.9	96.2	96.5	97.0	97.4	97.5	97.6	97.7	90.9	73.2	64.4	57.7	60.1	56.5	51.6	51.1	53.5	57.4	61.0	65.9	71.5	75.6	78.8	83.9	76.2	97.7													
14-Apr	88.1	90.1	92.4	93.5	93.6	93.4	90.9	85.4	75.1	61.8	50.3	37.6	29.7	24.8	22.8	22.0	26.3	34.3	39.7	45.8	48.3	48.2	49.1	49.2	58.0	93.6													
15-Apr	48.7	48.7	52.9	56.2	60.8	64.0	67.3	60.2	47.1	44.5	49.5	42.7	32.9	24.4	21.3	23.1	27.8	36.3	45.3	52.6	58.9	63.5	69.3	79.2	49.0	79.2													
16-Apr	91.9	94.7	95.0	93.5	91.4	88.2	74.7	68.8	64.8	62.8	61.4	60.9	59.9	58.0	56.3	56.6	59.0	65.0	71.3	72.1	69.4	72.9	78.2	80.4	72.8	95.0													
17-Apr	79.2	78.0	75.5	75.8	81.1	81.1	78.6	80.5	78.6	77.5	72.9	68.8	65.4	60.4	56.5	52.7	50.0	48.5	52.4	59.9	68.9	75.9	79.5	81.8	70.0	81.8													
18-Apr	78.1	76.1	71.2	71.9	74.7	75.0	71.0	66.9	62.2	55.8	46.6	38.2	30.6	26.7	26.7	27.5	26.4	28.6	30.6	32.7	33.7	34.0	35.4	33.8	48.1	78.1													
19-Apr	32.5	36.4	41.9	41.8	46.8	52.2	55.9	51.6	33.6	28.2	27.3	24.8	24.3	25.2	24.3	24.6	27.8	36.1	45.3	62.2	88.5	92.6	89.2	89.2	45.9	92.6													
20-Apr	84.3	91.0	93.3	87.9	74.5	70.3	63.8	58.2	53.2	50.6	46.7	45.8	42.9	39.4	35.9	33.4	33.8	34.5	37.6	40.9	46.9	51.3	49.3	52.1	54.9	93.3													
21-Apr	65.2	69.8	70.3	73.8	77.4	81.9	76.7	56.8	46.8	38.3	32.2	30.0	26.3	25.7	24.4	24.0	23.4	23.6	27.6	29.7	32.2	37.7	38.7	38.6	44.6	81.9													
22-Apr	42.6	52.6	55.7	59.0	66.9	70.7	71.9	69.4	64.9	63.4	64.3	59.0	52.0	53.1	77.3	70.5	67.3	69.5	74.4	77.9	82.4	86.0	89.3	93.1	68.0	93.1													
23-Apr	94.5	95.7	96.6	96.8	96.7	96.8	95.4	88.1	91.8	90.2	81.4	73.5	68.1	64.3	61.2	60.6	58.8	58.0	60.8	62.6	66.6	68.3	70.6	68.9	77.8	96.8													
24-Apr	70.0	76.0	85.2	87.2	88.3	88.6	87.7	74.7	65.7	56.3	49.5	46.1	43.9	39.9	37.9	34.4	32.7	31.9	31.2	37.9	46.0	49.8	52.0	59.0	57.2	88.6													
25-Apr	67.6	72.3	76.1	83.2	84.4	86.0	74.3	59.6	48.8	36.1	23.6	19.3	18.7	18.3	16.9	17.2	16.2	15.4	18.1	22.4	27.2	31.8	38.0	39.2	42.1	86.0													
26-Apr	48.9	56.1	59.8	60.1	67.8	72.0	72.0	67.6	62.8	58.7	54.0	50.9	49.3	48.7	48.0	49.0	52.7	60.8	74.4	79.4	74.3	69.9	72.4	74.3	61.8	79.4													
27-Apr	77.3	79.7	79.2	78.1	75.2	69.8	64.0	60.1	57.1	53.4	49.0	46.9	43.2	41.9	41.1	40.5	38.9	38.9	40.0	41.4	44.1	43.8	46.0	49.4	54.1	79.7													
28-Apr	60.9	69.8	74.7	77.9	80.0	78.9	66.7	51.9	45.1	36.6	32.8	29.4	25.9	18.9	16.7	17.9	19.3	22.3	25.6	26.2	26.2	32.4	44.4	58.1	43.3	80.0													
29-Apr	66.5	77.8	88.5	90.1	92.5	87.0	76.1	72.9	70.7	72.2	73.1	64.7	64.1	68.6	80.7	59.7	35.1	27.7	30.7	38.4	44.0	52.9	62.0	64.8	65.0	92.5													
30-Apr	68.0	66.8	64.2	65.1	67.2	61.7	59.2	60.1	56.3	52.1	52.1	56.3	79.3	85.6	80.5	71.6	66.1	74.0	83.9	90.0	89.4	86.6	84.4	83.1	71.0	90.0													
Diurnal Average																																							
98.1 98.3 98.4 98.5 98.7 98.7 98.7 98.7 98.7 98.7 98.7 98.0 97.6 97.4 96.0 96.8 96.9 96.8 97.1 97.4 97.9 98.0 97.9 98.1																																							
Diurnal Maximum																																							



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

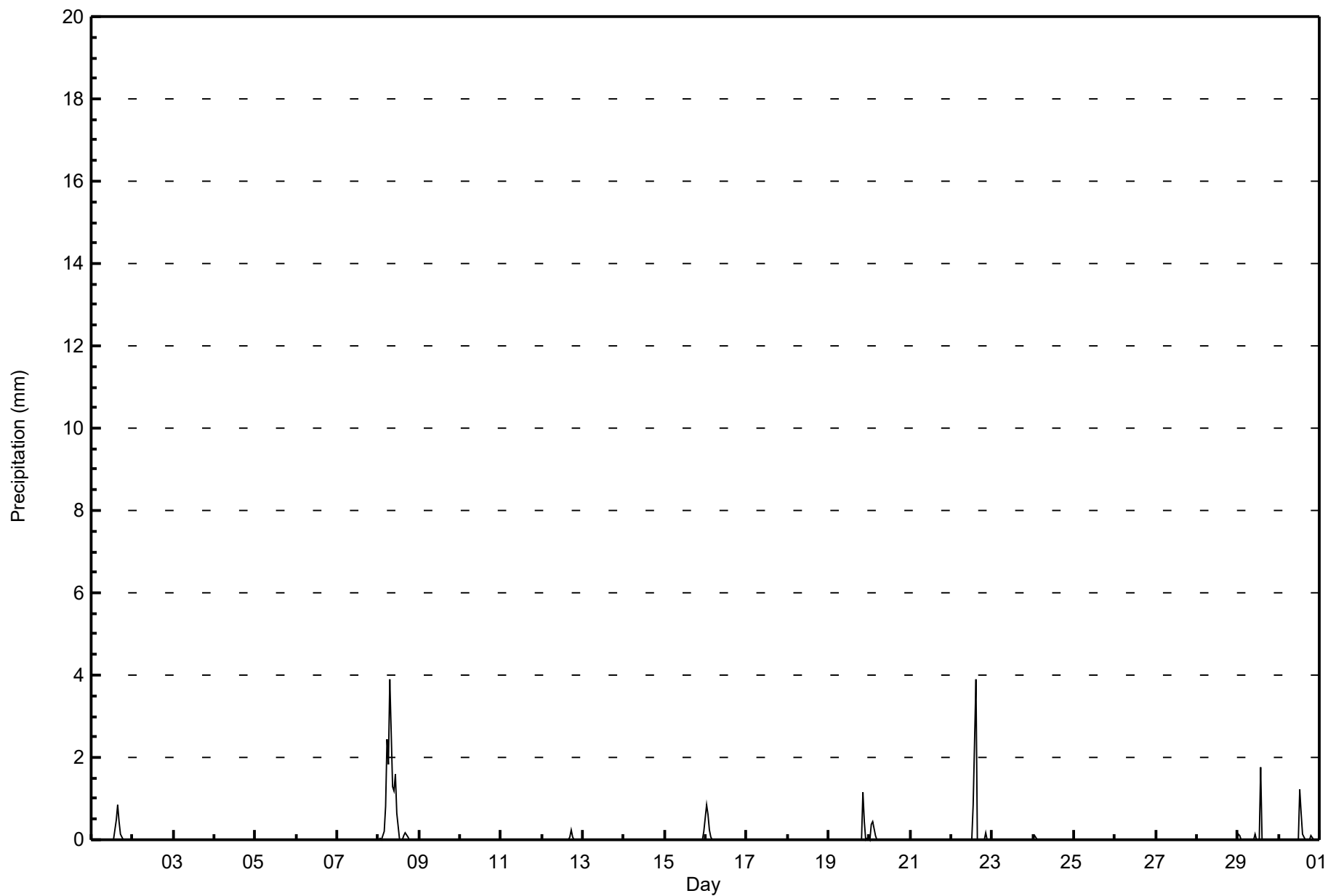
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 3.9 mm on Apr 8 08:00																		Maximum Daily Total: 14.3 mm on Apr 8										Hours in Service: 720	
Minimum Value: 0.0 mm on Apr 1 01:00																		Minimum Daily Total: 0.0 mm on Apr 2										Hours of Data: 720	
Maximum Diurnal Total: 4.5 mm at hour 15																		Minimum Diurnal Total: 0.0 mm at hour 23										Hours of Missing Data: 0	
Monthly Total: 30.31 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 = 1.2										Hours of Calibration: 0	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Total	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.9			
2-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.1	0.0	0.2	0.8	2.4	1.8	3.9	1.3	1.2	1.6	0.7	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	14.3	3.9			
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.2			
13-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2			
16-Apr	0.8	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.8			
17-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.4	0.0	0.1	1.7	1.2			
20-Apr	0.0	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4			
21-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.9	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	4.9	3.9			
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	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	0.0	0.1	0.1			
25-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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	2.1	1.8			
30-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.1	1.2			
		1.0	1.2	0.7	0.4	0.8	2.4	1.8	3.9	1.3	1.2	1.8	0.7	1.2	3.2	4.5	0.9	0.7	0.4	0.1	0.1	1.3	0.4	0.0	0.3	Diurnal Average			
		0.8	0.6	0.4	0.2	0.8	2.4	1.8	3.9	1.3	1.2	1.6	0.7	1.2	1.8	3.9	0.9	0.4	0.2	0.1	0.1	1.2	0.4	0.0	0.2	Diurnal Maximum			



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	698	96.94	96.94
0.4 - 0.5	5	0.69	97.64
0.6 - 0.7	3	0.42	98.06
0.8 - 1.4	8	1.11	99.17
1.5 - 10	6	0.83	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) - %

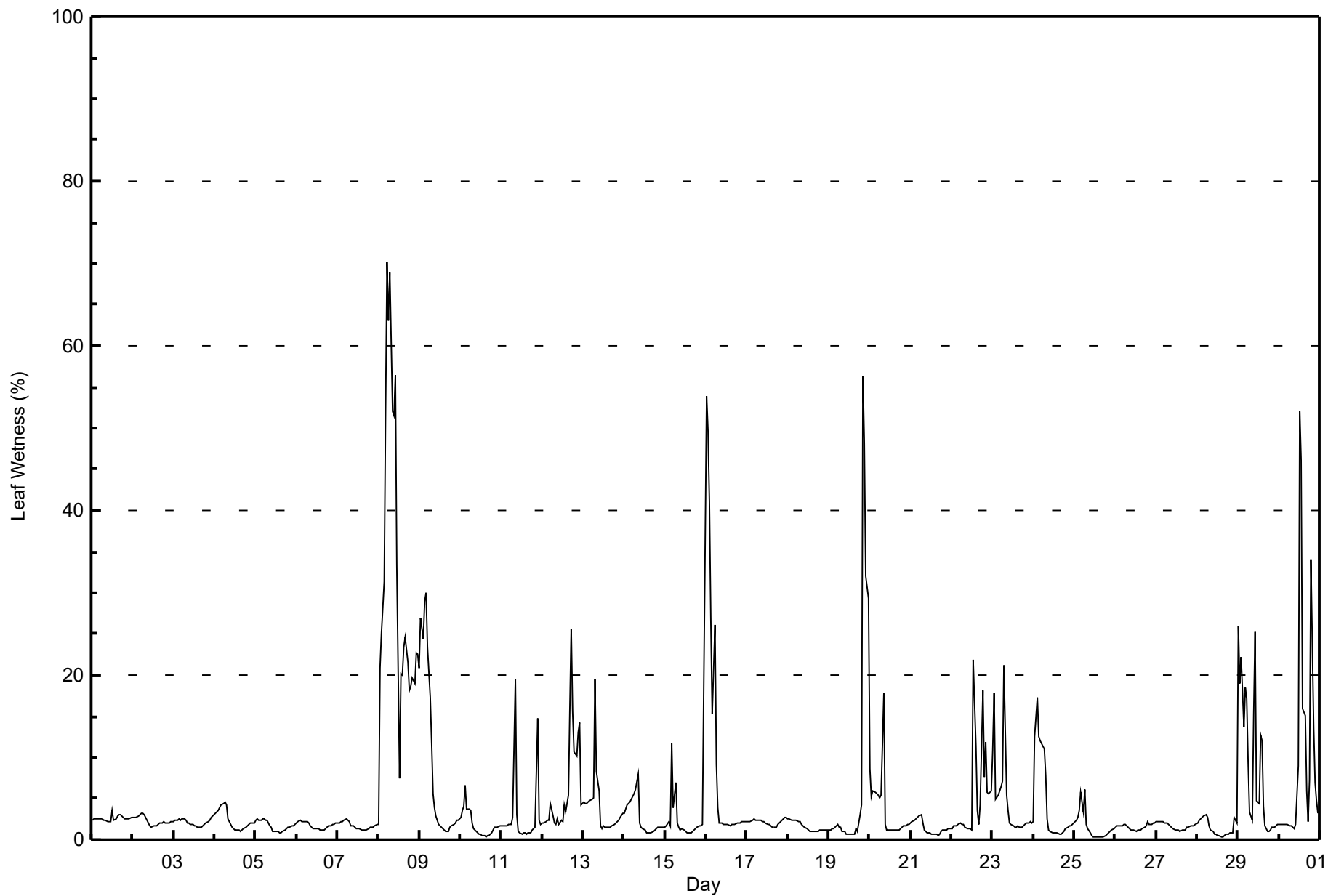
Fort McKay - Bertha Ganter - April 2025

Maximum Value: 70.2 % on Apr 8 06:00																			Maximum Daily Average: 31.9 % on Apr 8										Hours in Service: 720	
Minimum Value: 0.3 % on Apr 25 18:00																			Minimum Daily Average: 1.4 % on Apr 28										Hours of Data: 720	
Maximum Diurnal Average: 7.6 % at hour 6																			Minimum Diurnal Average: 2.7 % at hour 16										Hours of Missing Data: 0	
Monthly Average: 4.77 %																			Percentiles: P ₁ = 0.4 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 1.9 Q ₃ = 2.8 P ₉₀ = 12.0 P ₉₉ = 52.1										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	2.4	2.5	2.5	2.6	2.5	2.5	2.5	2.4	2.3	2.2	2.2	2.1	3.5	2.3	2.5	2.8	3.1	3.1	2.8	2.6	2.6	2.6	2.6	2.7	2.6	3.5				
2-Apr	2.7	2.7	2.8	3.0	3.1	3.3	3.3	3.1	2.4	2.1	1.7	1.6	1.8	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	3.3				
3-Apr	2.3	2.3	2.5	2.6	2.4	2.5	2.6	2.4	2.0	2.1	1.9	1.8	1.7	1.7	1.6	1.5	1.6	1.7	1.9	2.1	2.2	2.4	2.7	2.9	2.1	2.9				
4-Apr	3.2	3.4	3.6	3.9	4.2	4.4	4.6	4.3	2.6	1.9	1.5	1.3	1.3	1.3	1.2	1.1	1.1	1.3	1.5	1.7	1.8	2.0	2.0	2.1	2.4	4.6				
5-Apr	2.3	2.5	2.5	2.5	2.5	2.6	2.4	2.3	1.7	1.5	1.0	1.0	1.0	1.0	0.9	0.9	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.9	1.7	2.6				
6-Apr	2.1	2.3	2.3	2.2	2.2	2.1	2.1	2.0	1.7	1.6	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.3	1.5	1.6	1.8	1.9	1.9	2.0	1.7	2.3				
7-Apr	2.1	2.1	2.2	2.2	2.4	2.5	2.3	2.2	1.8	1.7	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.7	2.5				
8-Apr	1.8	20.8	25.1	31.3	52.4	70.2	63.1	69.0	52.1	51.6	56.4	33.4	7.4	20.2	19.9	23.5	24.6	21.5	18.2	18.6	19.6	19.0	22.7	22.5	31.9	70.2				
9-Apr	20.9	27.0	24.4	29.0	30.0	23.4	17.2	11.7	5.6	3.9	2.8	1.9	1.6	1.5	1.3	1.1	1.0	1.1	1.5	1.7	1.9	2.0	2.3	2.4	9.1	30.0				
10-Apr	2.7	3.6	4.1	6.5	3.7	3.7	3.6	2.1	1.4	1.1	0.9	0.7	0.7	0.6	0.5	0.4	0.4	0.5	0.9	1.2	1.5	1.6	1.6	1.6	1.9	6.5				
11-Apr	1.6	1.7	1.7	1.7	1.9	1.8	1.8	2.7	19.4	3.0	1.1	0.8	0.8	0.8	0.8	0.7	0.8	0.9	1.2	1.4	1.5	14.8	2.4	1.9	2.8	19.4				
12-Apr	2.0	2.1	2.1	2.4	2.4	4.4	2.9	2.1	1.9	2.5	1.9	2.3	2.1	4.2	3.3	5.4	15.9	25.7	15.5	10.6	10.2	13.0	14.2	4.3	6.4	25.7				
13-Apr	4.6	4.4	4.5	4.5	4.7	4.8	5.2	19.5	8.4	5.9	1.6	1.4	1.6	1.5	1.5	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.7	3.2	3.9	19.5				
14-Apr	3.2	3.7	4.2	4.6	5.0	5.3	5.6	6.1	8.0	2.1	1.6	1.3	1.1	0.9	0.9	0.8	0.9	1.1	1.2	1.4	1.5	1.5	1.5	1.6	2.7	8.0				
15-Apr	1.6	1.7	2.3	1.7	11.7	3.8	6.9	2.0	1.5	1.2	1.3	1.2	1.1	0.9	0.8	0.8	1.0	1.2	1.4	1.6	1.7	1.8	1.9	19.6	2.9	19.6				
16-Apr	53.9	49.7	40.9	26.9	15.3	26.1	9.2	3.9	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.1	2.2	2.2	10.7	53.9				
17-Apr	2.3	2.3	2.2	2.3	2.5	2.4	2.3	2.3	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.6	1.6	1.6	1.9	2.1	2.3	2.5	2.8	2.8	2.2	2.8				
18-Apr	2.5	2.5	2.4	2.3	2.4	2.4	2.3	2.1	1.9	1.8	1.5	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.6	2.5				
19-Apr	1.2	1.3	1.3	1.4	1.5	1.8	1.6	1.5	1.1	1.0	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.0	3.0	4.2	56.3	48.2	32.1	29.4	8.1	56.3				
20-Apr	8.7	5.3	5.9	5.8	5.6	5.4	5.0	5.4	17.8	1.8	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.3	1.4	1.5	1.7	1.8	1.8	1.9	3.6	17.8				
21-Apr	2.1	2.2	2.3	2.5	2.7	2.9	3.0	2.1	1.2	1.0	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.7	1.0	1.2	1.2	1.3	1.3	1.4	1.4	3.0				
22-Apr	1.4	1.7	1.7	1.8	1.9	2.0	1.9	1.8	1.6	1.4	1.3	1.4	1.2	21.8	11.3	3.5	1.8	4.2	18.2	7.7	11.8	5.8	5.6	5.9	5.0	21.8				
23-Apr	10.9	17.7	4.8	5.4	5.9	6.5	7.1	21.2	5.5	3.5	2.1	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.8	1.9	2.0	2.1	2.2	2.1	4.8	21.2				
24-Apr	2.1	12.6	17.3	12.5	12.0	11.7	11.0	7.8	2.6	1.3	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.9	1.0	1.3	1.6	1.7	1.7	1.9	4.4	17.3				
25-Apr	2.1	2.4	2.6	3.5	5.8	3.4	6.1	1.8	1.3	0.8	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.9	1.0	1.2	1.3	1.6	6.1				
26-Apr	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.6	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.5	1.7	2.1	1.9	1.9	2.0	2.1	1.6	2.1				
27-Apr	2.2	2.2	2.1	2.2	2.2	2.1	2.0	1.9	1.6	1.5	1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.2	1.4	1.6	1.6	1.7	1.7	1.8	1.6	2.2				
28-Apr	2.1	2.3	2.5	2.7	2.8	3.0	2.7	1.7	1.2	1.0	0.7	0.7	0.6	0.5	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.9	2.7	2.1	1.4	3.0				
29-Apr	26.0	18.9	22.3	13.7	18.5	17.0	9.4	3.4	2.4	15.3	25.3	4.7	4.5	12.7	12.0	4.1	1.7	1.0	1.1	1.2	1.4	1.6	1.7	1.8	9.2	26.0				
30-Apr	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.5	1.3	1.8	8.9	52.1	46.2	15.9	15.1	6.0	2.2	7.4	34.1	13.6	6.9	4.8	3.2	9.8	52.1				
																									Diurnal Average					
																									Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	5	0.69	0.69
0.4 - 0.5	12	1.67	2.36
0.6 - 0.7	24	3.33	5.69
0.8 - 1.4	158	21.94	27.64
1.5 - 10	427	59.31	86.94
> 10	82	11.39	98.33

Total Number of Valid Hours: 720

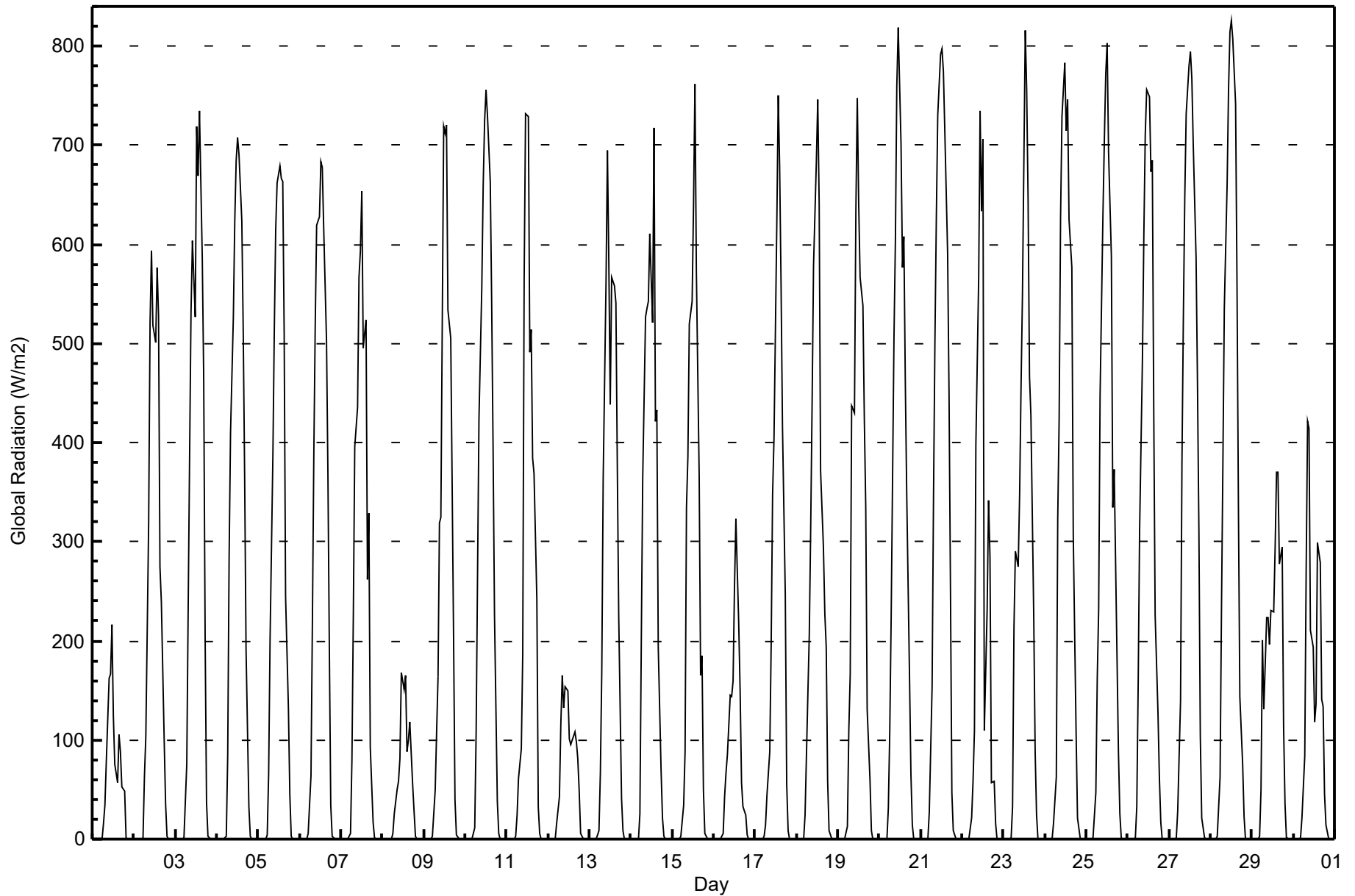
Total Number of Hours: 720

Maximum Value: 825.5 W/m2 on Apr 28 13:00																				Maximum Daily Average: 290.9 W/m2 on Apr 27										Hours in Service: 720	
Minimum Value: 0.0 W/m2 on Apr 1 01:00																				Minimum Daily Average: 45.7 W/m2 on Apr 8										Hours of Data: 720	
Maximum Diurnal Average: 587.8 W/m2 at hour 13																				Minimum Diurnal Average: 0.0 W/m2 at hour 1										Hours of Missing Data: 0	
Monthly Average: 198.75 W/m2																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 51.3 Q ₃ = 374.1 P ₉₀ = 634.4 P ₉₉ = 793.5										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	0.0	0.0	0.0	0.0	0.0	0.5	15.3	33.5	78.0	161.9	167.0	216.8	124.6	75.4	56.5	105.2	88.5	52.6	48.5	1.9	0.0	0.0	0.0	0.0	51.1	216.8					
2-Apr	0.0	0.0	0.0	0.0	0.0	1.6	62.0	103.4	319.2	520.9	593.5	517.9	500.8	576.4	527.9	274.8	238.9	100.2	35.2	2.7	0.0	0.0	0.0	0.0	182.3	593.5					
3-Apr	0.0	0.0	0.0	0.0	0.0	2.1	75.8	233.9	386.3	530.5	603.1	527.2	718.4	669.6	734.6	585.5	464.7	205.5	36.6	2.3	0.0	0.0	0.0	0.0	240.7	734.6					
4-Apr	0.0	0.0	0.0	0.0	0.0	2.3	84.4	284.9	409.6	527.3	624.0	684.3	707.7	690.4	624.0	511.2	366.2	191.3	33.2	2.9	0.0	0.0	0.0	0.0	239.3	707.7					
5-Apr	0.0	0.0	0.0	0.0	0.0	5.0	66.2	201.3	385.2	512.8	615.5	662.4	679.4	665.8	663.9	510.3	245.4	133.1	45.6	2.3	0.0	0.0	0.0	0.0	224.8	679.4					
6-Apr	0.0	0.0	0.0	0.0	0.0	5.4	64.3	219.5	386.6	518.3	618.7	628.0	683.4	677.4	616.8	501.9	367.9	192.3	34.1	3.4	0.0	0.0	0.0	0.0	229.9	683.4					
7-Apr	0.0	0.0	0.0	0.0	0.0	6.3	79.5	226.3	395.6	435.4	567.1	593.6	653.8	495.6	523.6	262.7	328.7	92.2	16.4	1.3	0.0	0.0	0.0	0.0	194.9	653.8					
8-Apr	0.0	0.0	0.0	0.0	0.0	0.2	5.4	25.1	49.1	58.9	80.8	167.9	151.3	164.9	88.9	100.1	117.9	55.2	29.1	3.0	0.0	0.0	0.0	0.0	45.7	167.9					
9-Apr	0.0	0.0	0.0	0.0	0.0	3.3	50.0	108.1	163.1	319.1	324.9	718.9	712.4	720.9	533.3	505.3	357.3	204.4	40.0	3.9	0.0	0.0	0.0	0.0	198.5	720.9					
10-Apr	0.0	0.0	0.0	0.0	0.0	12.1	107.5	268.5	424.2	557.2	661.2	725.2	755.5	730.6	663.0	540.9	393.3	226.3	39.0	6.1	0.0	0.0	0.0	0.0	254.6	755.5					
11-Apr	0.0	0.0	0.0	0.0	0.0	2.8	24.6	61.4	91.2	186.2	564.2	731.9	728.7	490.7	514.0	384.5	368.3	241.4	33.1	5.6	0.0	0.0	0.0	0.0	184.5	731.9					
12-Apr	0.0	0.0	0.0	0.0	0.0	15.1	42.9	116.6	164.7	132.7	153.4	149.6	101.5	95.3	99.5	108.1	97.6	81.4	48.4	6.4	0.0	0.0	0.0	0.0	58.9	164.7					
13-Apr	0.0	0.0	0.0	0.0	0.0	8.8	67.4	170.0	365.1	561.2	694.9	580.3	439.2	566.1	557.5	540.4	376.1	225.4	41.8	8.1	0.0	0.0	0.0	0.0	216.8	694.9					
14-Apr	0.0	0.0	0.0	0.0	0.0	25.9	200.5	364.1	527.1	535.5	542.9	610.2	520.7	718.2	421.5	432.9	193.0	70.4	20.7	3.2	0.0	0.0	0.0	0.0	216.1	718.2					
15-Apr	0.0	0.0	0.0	0.0	0.0	2.9	34.6	87.9	334.1	386.3	519.4	542.4	640.3	762.3	574.0	365.3	165.3	185.8	50.0	6.1	0.0	0.0	0.0	0.0	194.0	762.3					
16-Apr	0.0	0.0	0.0	0.0	0.0	6.2	43.0	67.0	85.5	144.7	143.4	158.8	253.1	323.1	218.4	149.3	56.6	32.3	24.8	4.7	0.0	0.0	0.0	0.0	71.3	323.1					
17-Apr	0.0	0.0	0.0	0.0	0.0	2.3	14.8	43.5	88.6	195.8	347.6	404.1	622.8	750.4	677.7	560.1	416.6	246.8	54.9	8.7	0.1	0.0	0.0	0.0	184.8	750.4					
18-Apr	0.0	0.0	0.0	0.0	0.2	24.8	146.3	206.3	314.8	440.1	578.1	683.5	746.6	640.6	371.5	294.9	228.2	194.1	58.1	8.3	0.0	0.0	0.0	0.0	205.7	746.6					
19-Apr	0.0	0.0	0.0	0.0	0.1	12.6	110.2	166.9	436.8	429.8	633.7	747.5	641.0	566.3	537.6	423.3	333.9	130.8	59.1	8.8	0.0	0.0	0.0	0.0	218.3	747.5					
20-Apr	0.0	0.0	0.0	0.0	0.1	30.6	108.8	223.3	506.2	603.0	760.3	818.2	700.0	576.4	608.6	464.6	349.8	164.0	65.5	14.0	0.0	0.0	0.0	0.0	249.7	818.2					
21-Apr	0.0	0.0	0.0	0.0	0.0	27.4	153.1	344.5	502.8	626.5	730.0	791.7	797.6	774.1	715.2	591.6	447.9	254.7	46.7	8.8	0.0	0.0	0.0	0.0	283.9	797.6					
22-Apr	0.0	0.0	0.0	0.0	0.4	21.5	57.7	109.8	397.2	567.0	734.5	633.0	706.6	109.9	232.4	341.7	284.9	57.2	58.7	15.7	0.0	0.0	0.0	0.0	180.3	734.5					
23-Apr	0.0	0.0	0.0	0.0	0.7	32.9	213.7	290.5	274.3	346.8	455.9	548.5	816.1	756.3	644.7	466.6	427.2	224.6	87.6	24.6	0.4	0.0	0.0	0.0	233.8	816.1					
24-Apr	0.0	0.0	0.0	0.0	0.4	15.8	62.5	323.7	423.7	627.0	729.4	782.6	714.6	746.7	625.2	577.3	307.5	205.9	107.5	21.7	0.3	0.0	0.0	0.0	261.3	782.6					
25-Apr	0.0	0.0	0.0	0.0	1.4	47.2	162.7	232.3	447.4	628.2	703.8	771.7	803.1	693.2	588.5	335.1	373.5	278.0	88.6	25.3	0.7	0.0	0.0	0.0	257.5	803.1					
26-Apr	0.0	0.0	0.0	0.0	1.2	32.2	158.0	312.0	483.6	609.4	711.0	756.4	748.9	673.1	685.3	436.2	226.5	128.4	62.5	17.2	0.5	0.0	0.0	0.0	251.8	756.4					
27-Apr	0.0	0.0	0.0	0.0	1.3	27.9	140.0	380.2	526.3	648.2	731.3	780.8	793.9	767.5	699.8	587.0	459.8	311.4	103.5	20.7	1.3	0.0	0.0	0.0	290.9	793.9					
28-Apr	0.0	0.0	0.0	0.0	3.0	63.3	231.6	378.9	534.9	660.6	755.8	814.9	825.5	806.8	741.1	559.1	336.4	144.0	75.1	22.5	0.3	0.0	0.0	0.0	289.8	825.5					
29-Apr	0.0	0.0	0.0	0.0	3.1	49.4	201.4	131.0	223.0	223.3	196.3	231.2	229.5	293.3	370.6	369.7	277.0	294.1	113.3	36.2	1.4	0.0	0.0	0.0	135.1	370.6					
30-Apr	0.0	0.0	0.0	0.0	1.4	20.8	84.0	272.3	421.0	414.1	210.7	194.3	117.7	136.0	298.7	278.9	141.4	134.1	45.4	14.7	0.5	0.0	0.0	0.0	116.1	421.0					
																									Diurnal Average						
																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	316	43.89	43.89
21 - 100	89	12.36	56.25
101 - 300	105	14.58	70.83
301 - 600	120	16.67	87.50
601 - 900	90	12.50	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

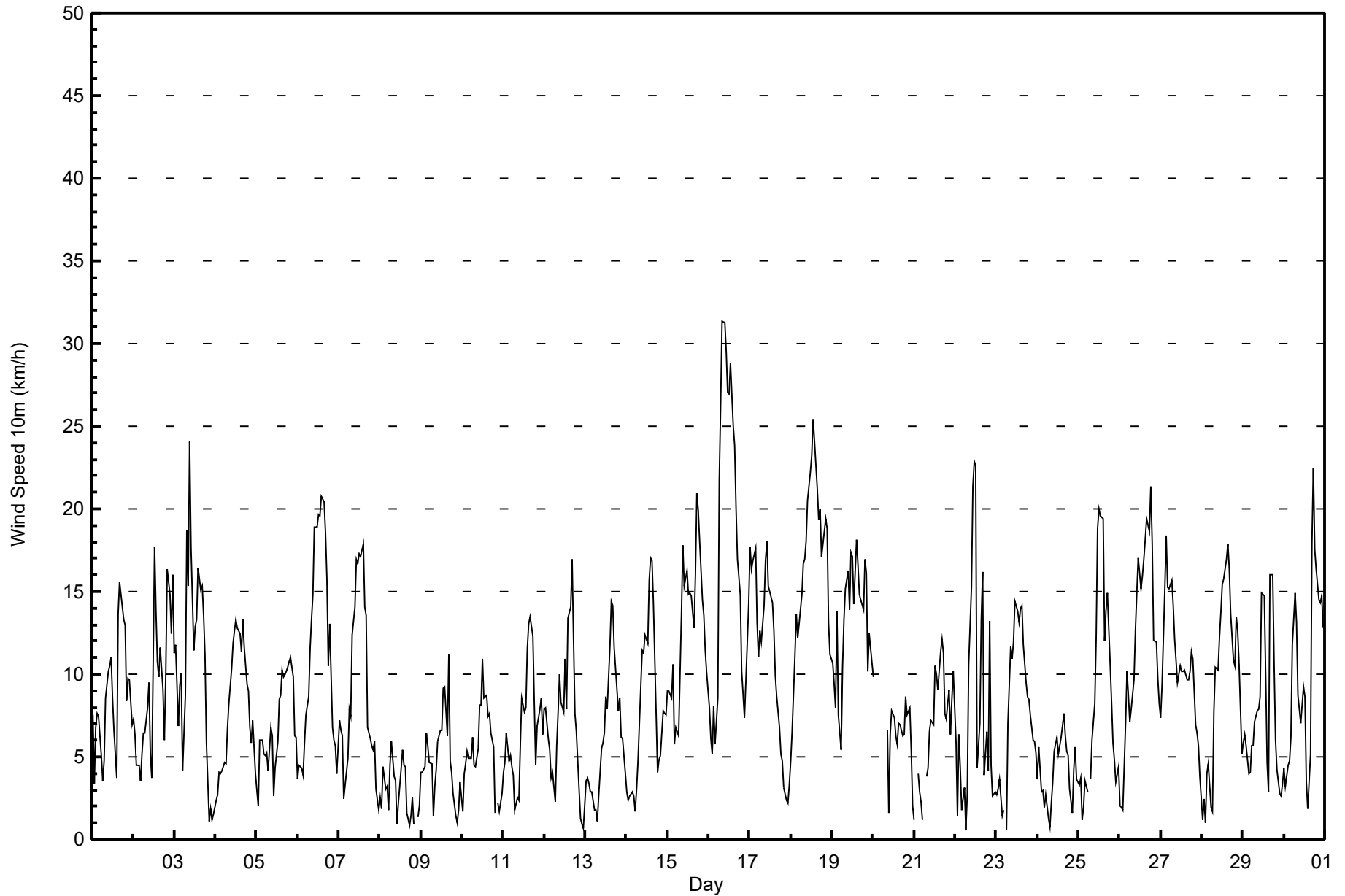
Fort McKay - Bertha Ganter - April 2025

Maximum Speed: 31 km/h on Apr 16 09:00														Maximum Daily Speed Average: 16.7 km/h on Apr 18														Hours in Service: 720	
Minimum Speed Value: 1 km/h on Apr 22 07:00														Minimum Daily Speed Average: 1.6 km/h on Apr 8														Hours of Data: 707	
Maximum Diurnal Speed Average: 2.3 km/h at hour 18														Minimum Diurnal Speed Average: 0.7 km/h at hour 6														Hours of Missing Data: 13	
Monthly Average Velocity: 0.7 km/h 272.2 deg														Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 4 Median = 8 Q ₃ = 13 P ₉₀ = 17 P ₉₉ = 25														Percent Operational Time: 98.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Apr	SSE8	SSE3	SSE7	SE8	SSE7	SE5	SSE4	SSE5	SSE9	SSE10	S10	S11	SSE9	SSE7	W4WNW14	NW16	NNW15	NNW13	NNW13	NW8	NW10WNW10	WNW7	WSW1.8	NW16					
2-Apr	W7	WNW6	W5	W4	W4	W5	W6	WSW6	W8	WNW9	WNW5	WNW4	NNW18	NNE14	NE11	NE10	NNE12	N9	NW6	NW10	NNW16	NNW15	NNW12	NNW16	NNW6.8	NNW18			
3-Apr	NNW11	NW12	WNW7	NW9	NW10	W4	WNW9	NW19	NW15	N24	NNW18	NNW11	NW13	NW13	NW16	NW15	NW15	N14	NNW11	NW6	NNE1	SSW2	WSW1	SW2	NW10.1	N24			
4-Apr	SW2	SSW3	S4	SSE4	S4	S5	S5	SSE7	SSE8	SSE10	SSE12	SSE13	SSE13	SSE13	SSE12	SSE11	SSE13	SSE12	S9	S9	SSW7	S6	S7	SSW4	SSE7.7	SSE13			
5-Apr	SW3	S2	S6	S6	S5	S5	S5	SSE4	SSE7	SE6	E3	NE4	NE6	NNE9	NE9	NNE10	NNE10	N10	N10	N11	N11	N10	NNW6	NNW6	NNE2.7	N11			
6-Apr	NNW4	N4	NE4	E4	ESE6	ESE8	ESE9	SSE12	SSE13	S15	S19	S19	SSE20	S20	S21	S20	S19	S16	SSE10	SSE13	SSE7	SSE6	S6	SSE4	SSE10.1	S21			
7-Apr	SSE7	SSE7	SSE6	SE2	S3	SSE5	SSE8	SSE7	S12	S14	S17	S17	S17	S17	S18	S14	S14	S7	SE6	SE6	SSE5	SSE6	SSE3	SSE2	SSE9.1	S18			
8-Apr	N3	SE2	WNW4	NNW3	SSW3	S2	SSE4	S6	SE4	SSE4	S1	SE2	SSE4	SSE5	SSE4	SSE4	SE2	E1	S1	NNW3	NW1	UO	WSW1	WSW2	S1.6	S6			
9-Apr	SSE4	SSW4	SSE4	SSE6	S6	S5	SSW5	SW1	SSE3	SE4	S6	SSE7	SE7	SSE9	SE9	N6	NNW11	NE5	E4	NNE3	NNE1	S1	W2	SW4	SSE2.4	NNW11			
10-Apr	S2	S4	S5	S5	S5	SSE5	S6	SW5	SSW4	SSW6	S8	SW8WSW11	W9	SW9	SW7	SW8	SSE6	SE6	ESE2	UO	SE2	NNE2	NW3	SSW4.3	WSW11				
11-Apr	WNW4	N5	NNW6	NW5	NNW5	WNW4	N4	SW2	NNE3	W2	SSE6	S9	SW8	WSW8	W12	W13	W13	W12	W8	WSW5	WSW7	WSW8	WSW9	WSW6	W4.9	W13			
12-Apr	WSW8	W8	WSW6	WSW5	SW4	SSW4	SW2	SW6	W8WNW10	W8	W8WNW11	W8	NW13	NW14	NW17	NW12	NW8	NNW7	NNE3	E1	ENE1	SE1	WSW5.8	NW17					
13-Apr	SSE4	SE4	SE3	SSE3	S3	SSW2	NNW2	N1	SSE3	SSE6	E6	E6	NNE9	NNE8	NNE12	NNE14	NNE14	NNE12	NE9	NNE8	NNE9	N6	NNW6	NW4	NE4.1	NNE14			
14-Apr	WNW3	NW2	WNW3	WNW3	W3	WSW2	S3	SE5	SSE9	SSE11	S11	S12	SSE12	SSE16	SSE17	SSE17	S14	SW7	S4	SSE5	SSE5	SSE8	SSE8	SSE8	S6.7	SSE17			
15-Apr	S9	S9	S9	S11	S6	S7	S6	SSW10WSW14	W18	W15	W16WSW15	W15WSW15	W13	W16WNW21	W20	W18	W15	W14	W11	W10	WSW10.3	WNW21							
16-Apr	WSW8	W6	W5	WNW8	WNW6	NW9	NW22	NW26	NW31	NW31	NNW29	NNW27	NW27	NNW29	NNW25	NNW24	N20	N17	N15	N10	N9	NNE7	N10	NNE14	NNW15.9	NW31			
17-Apr	N18	N16	N17	N18	N13	NNE11	NNE13	NNE12	NNE14	NNE17	NNE18	NNE15	NNE15	NNE14	NNE13	NE10	NE9	NE7	ENE5	E5	E3	SSE2	SSE2	SSE3	NNE10.1	NNE18			
18-Apr	SSE5	S7	S11	S14	S12	S13	S15	S17	SSE17	SSE18	SSE20	SSE22	S23	S25	S24	S21	S19	SSE20	S17	S18	S19	S19	SSE13	S11	S16.7	S25			
19-Apr	SSW11	SSW9	WSW8WNW14	WNW8	W5	W10	W13	W15WNW16WNW14WNW17WNW17	W14WNW18	W17WNW15WNW14WNW14	NNW17	NNE16	NNE10	NNE12	NNE11	WNW10.2	WNW18												
20-Apr	NNE10	UO	UO	UO	UO	UO	UO	UO	NNE7	NNE2	E6	E8	ENE7	NE6	NE6	NE7	ENE7	NE6	NE6	NE9	NNE8	N8	NNE5	NNE2	----	NNE10			
21-Apr	SSW1	UO	NW4	NNW3	NNW2	W1	UO	SE4	SE4	SSE7	SSE7	SSE7	SE11	SSE10	S9	SSE11	SSE12	SSE11	SSE8	SSW7	S9	S6	SSE8	S10	SSE5.9	SSE12			
22-Apr	S6	SW1	S6	S4	NE2	NNW3	SE1	S3	S11	S15	SSE21	SSE23	SSE23	W4	SSW7	S13	S16	S4	S7	SSW4	NW13	WNW4	SW3	SSW3	S6.2	SSE23			
23-Apr	WNW3	NW3	WNW4	SW1	SSW2	UO	W1	NNE7	N12	N11	N12	N14	NNE14	NNE13	NNE14	NNE14	NNE12	NNE9	N9	NNW8	NNW8	NW6	NNW6	NNW5	N7.2	N14			
24-Apr	NNW4	WNW6	WNW3	WNW3	NW2	NW3	NW1	SE1	NNW2	ESE3	E5	ESE6	ENE5	ENE6	ENE6	SE8	SE6	SSE5	SE5	ESE3	SE2	SSE4	S6	SSE4	ESE1.7	SE8			
25-Apr	S3	SSE4	SE1	NNW2	NW4	NNW3	UO	SSE4	SSE6	SSE8	S12	SSW19	S20	S20	S19	SSW12	SSW14	SSW15	SSW11	SSW8	SSW6	SSW5	S3	S4	S7.9	S20			
26-Apr	WSW2	SSW2	SSW2	N7	NNE10	NNE9	N7	N8	N10	NNE13	NNE15	NNE17	NNE15	NE16	NNE17	NNE18	NNE19	N19	N21	N18	N12	N12	NNW10	N8	NNE11.3	N21			
27-Apr	N7	N9	N15	N18	NNE15	N15	NNE16	NNE14	NNE12	NNE11	NE10	ENE11	E10	ENE10	ENE10	ENE10	NE10	NE10	NE11	NE11	NNE7	NE6	NNE6	NNE4	NNE9.9	N18			
28-Apr	SSW1	WNW2	WSW1	WNW4	WNW5	WSW2	SE2	SSE8	SSE10	S10	SSE12	SSE14	SSE15	S16	S17	S18	S16	S14	S11	SSW10	SSW13	SSW13	SW11	SSE5	S8.4	S18			
29-Apr	SSW6	S6	SSE6	SSW4	SW4	WSW6	W6	WSW7	WSW8	W8	WNW9	NW15	NW15	NNW10	S5	SSW3	N16	N16	N11	N6	NNW4	W3	SSW3	SSW3	WNW3.7	N16			
30-Apr	S4	SSW3	W4	W5	WNW6	N12	N15	N13	N9	NNE8	NNE7	N9	NNE9	NNW3	ESE2	NNE5	N18	N22	N18	N16	N14	N14	N15	N13	N8.9	N22			
WSW1.4WSW1.5WSW1.1 W1.4 W1.0 W0.7WNW1.0WSW1.0WSW1.3 SW1.2 S1.7 S1.9 S1.4 S1.0SSW1.5 SW0.8 NW1.5NNW2.3 N2.0NNW2.2NNW2.2 NW1.1WNW1.2WNW1.1																								Diurnal Average					
N18 N16 N17 N18 NNE15 N15 NW22 NW26 NW31 NW31 NNW29 NNW27 NW27 NNW29 NNW25 NNW24 N20 N22 N21 W18 S19 S19 S19 N15 NNW16																								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 McKay - Bertha Ganter - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	223	31.54	31.54
6 - 11	268	37.91	69.45
12 - 19	184	26.03	95.47
20 - 28	28	3.96	99.43
29 - 38	4	0.57	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
Fort McKay - Bertha Ganter - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	11	4	3	8	4	20	35	30	22	12	10	17	16	11	15	223
6 - 11	25	25	19	8	5	4	10	47	37	12	8	14	14	16	10	14	268
12 - 19	30	34	1	0	0	0	0	23	34	6	0	3	17	10	16	10	184
20 - 28	4	0	0	0	0	0	0	7	9	0	0	0	1	1	3	3	28
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	64	70	24	11	13	8	30	112	110	40	20	27	49	43	42	44	707

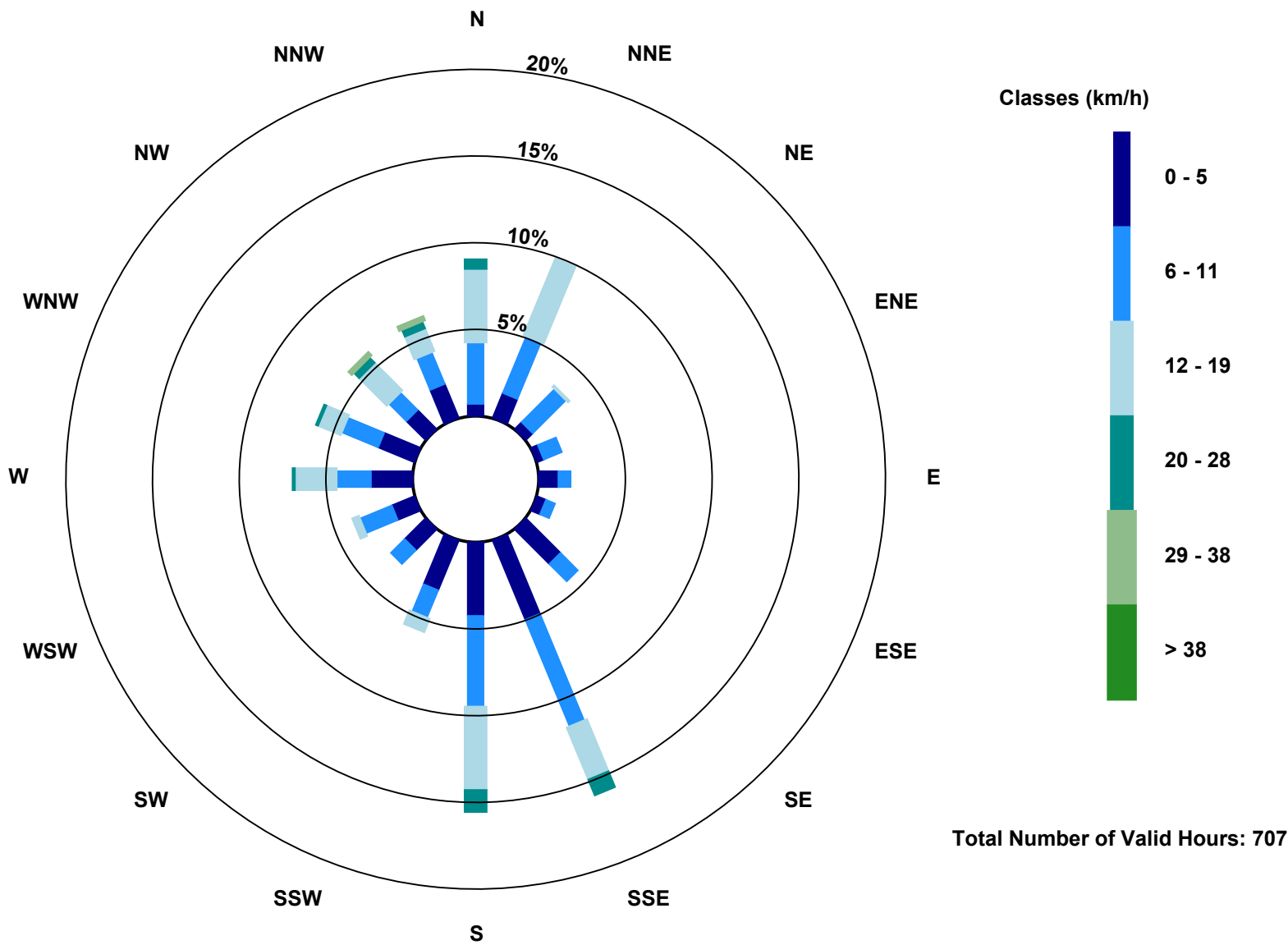
Total Number of Valid Hours: 707

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on Apr 15 19:00																		Hours in Service: 720 Hours of Data: 707 Hours of Missing Data: 13 Hours of Calibration: 0 Percent Operational Time: 98.2								
Minimum Value: 1 km/h on Apr 21 03:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 2 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	1	2	1	1	1	1	2	2	2	2	2	1	6	4	4	4	3	4	3	4	4	4	2	6
2-Apr	2	2	1	1	1	2	2	3	4	3	3	4	6	5	3	3	3	3	5	2	4	6	4	4	6	
3-Apr	3	3	2	4	4	1	4	4	4	6	6	4	5	5	5	6	5	4	3	2	2	1	1	1	6	
4-Apr	2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	
5-Apr	2	1	1	1	1	1	2	2	1	1	2	1	2	2	2	3	3	2	2	2	2	3	2	2	3	
6-Apr	2	1	1	1	2	2	3	3	3	3	4	4	4	4	4	4	4	3	3	3	2	2	2	1	4	
7-Apr	2	2	2	2	3	1	1	2	2	3	3	4	3	4	4	3	3	3	1	2	2	2	2	1	4	
8-Apr	1	1	2	2	2	1	3	2	2	2	2	1	1	1	1	1	2	2	1	1	1	UO	2	1	3	
9-Apr	1	1	1	2	1	1	2	1	1	1	2	1	2	3	2	5	4	3	2	1	1	1	1	2	5	
10-Apr	3	2	2	1	1	1	2	3	2	2	2	4	4	4	4	3	3	2	1	1	UO	1	1	1	4	
11-Apr	2	2	2	2	3	2	1	2	2	2	4	3	3	4	5	6	6	5	4	1	2	3	3	2	6	
12-Apr	3	3	3	2	1	1	1	2	3	4	3	3	4	3	4	5	4	4	3	1	1	1	1	1	5	
13-Apr	1	1	1	1	2	1	1	1	2	2	2	2	3	3	4	4	4	4	3	2	2	1	1	3	4	
14-Apr	1	2	1	1	1	2	1	1	2	2	2	3	2	3	3	4	4	4	1	1	1	1	1	1	4	
15-Apr	2	2	2	2	3	3	1	3	6	8	7	8	6	7	6	5	7	9	10	8	6	6	5	4	10	
16-Apr	3	3	2	3	2	4	6	6	7	7	7	7	6	7	6	6	4	4	4	3	3	2	2	3	7	
17-Apr	4	4	4	4	4	3	3	3	3	4	5	5	4	4	4	3	3	2	2	2	1	1	2	1	5	
18-Apr	1	2	3	3	3	3	4	4	3	3	4	5	6	6	6	5	5	4	3	3	4	4	4	3	6	
19-Apr	3	3	3	5	3	2	6	5	6	7	6	7	7	6	7	7	7	6	6	6	5	4	4	3	7	
20-Apr	5	UO	UO	UO	UO	UO	UO	UO	3	2	2	3	3	3	3	3	2	2	2	3	2	2	2	2	5	
21-Apr	1	UO	1	1	1	1	UO	1	1	2	3	3	3	3	3	4	3	3	2	4	3	1	2	3	4	
22-Apr	4	2	1	2	1	2	1	2	4	4	4	4	4	7	4	4	5	3	4	1	8	4	2	2	8	
23-Apr	2	2	1	1	1	UO	1	3	3	2	3	4	4	4	4	4	3	2	2	2	1	2	2	1	4	
24-Apr	2	1	1	1	1	2	3	1	1	2	2	3	2	3	2	3	2	2	1	1	2	1	1	2	3	
25-Apr	1	1	1	2	1	1	UO	1	1	2	8	6	5	6	6	5	5	5	4	3	1	2	1	1	8	
26-Apr	1	1	2	2	3	2	2	2	2	3	4	4	4	5	5	5	5	5	4	4	2	2	2	2	5	
27-Apr	2	3	4	4	4	4	4	3	3	4	4	3	3	3	3	3	3	3	4	3	2	3	1	2	4	
28-Apr	1	1	1	2	1	1	2	2	2	3	2	3	4	6	6	6	5	4	2	5	5	5	4	2	6	
29-Apr	2	2	2	1	2	2	3	3	3	3	3	4	4	7	1	2	4	5	3	2	1	2	1	1	7	
30-Apr	1	2	2	2	3	4	3	3	3	3	2	2	3	4	2	2	8	5	5	3	3	3	3	3	8	
5 4 4 5 4 4 6 6 7 8 8 8 7 7 7 7 8 9 10 8 8 6 5 4																										
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

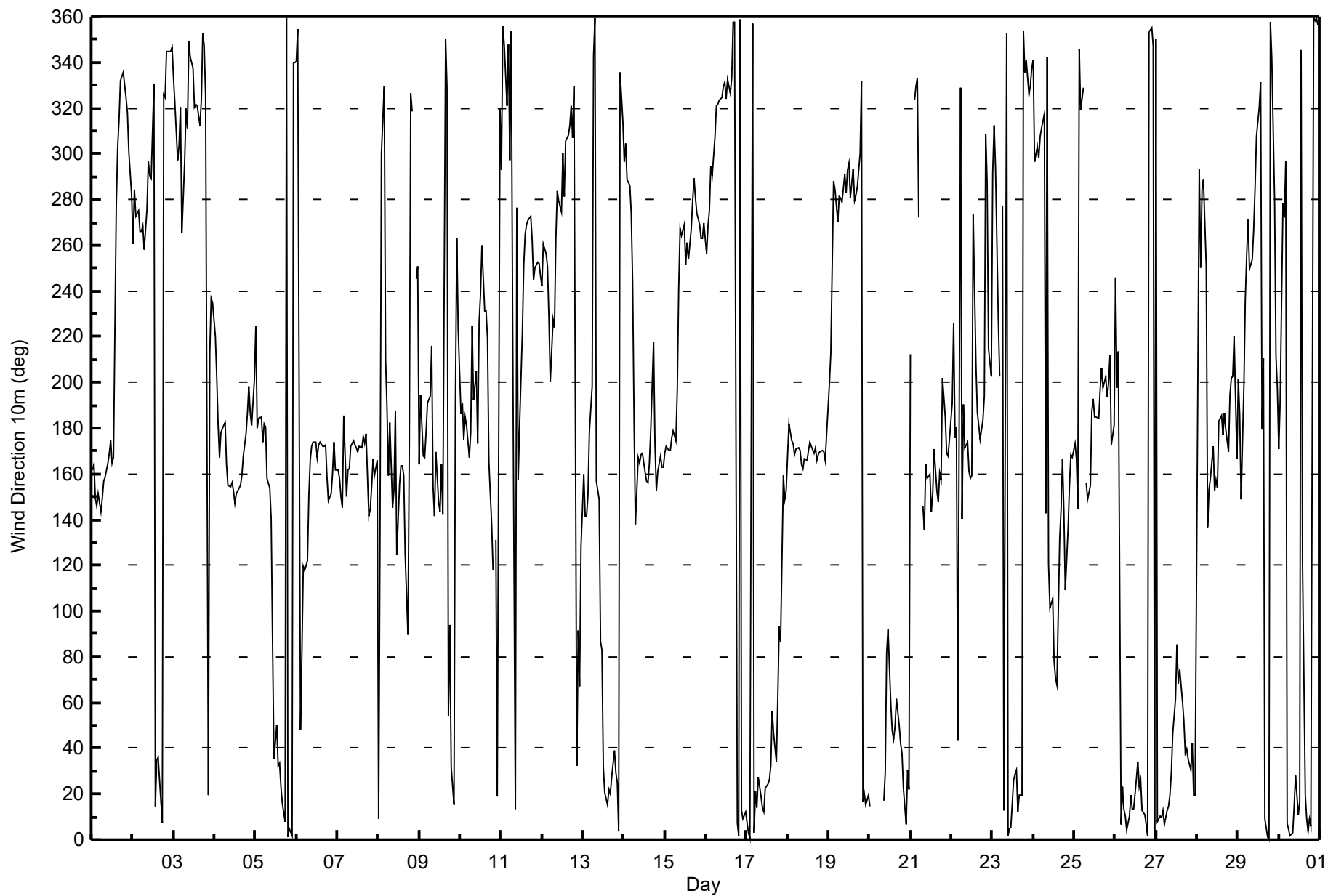
Fort McKay - Bertha Ganter - April 2025

Direction of Maximum Speed: 323 deg on Apr 16 09:00 Direction of Maximum Daily Speed Average: 169.6 deg on Apr 18																				Hours in Service: 720					
Direction of Minimum Speed: 140 deg on Apr 22 07:00 Direction of Minimum Daily Speed Average: 1.6 deg on Apr 8																				Hours of Data: 707					
Monthly Average Direction: 272.2 deg																				Hours of Missing Data: 13					
																				Percent Operational Time: 98.2					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	162	164	150	146	151	144	150	157	158	165	169	175	165	167	277	303	315	332	336	330	325	318	301	282	243.7
2-Apr	260	284	273	275	266	266	268	258	276	297	291	289	331	15	35	36	26	7	326	325	345	345	345	347	330.9
3-Apr	333	322	297	304	320	265	297	320	311	349	342	337	320	321	321	312	324	353	347	326	19	212	237	235	324.6
4-Apr	220	203	181	167	178	181	182	164	155	154	156	153	147	151	154	155	159	168	178	187	198	187	181	201	166.2
5-Apr	225	180	184	185	174	182	180	158	154	140	86	35	50	32	34	23	16	8	359	1	5	2	340	340	27.3
6-Apr	340	354	48	81	119	118	122	151	166	172	174	174	167	173	174	172	172	173	159	148	152	161	174	162	162.2
7-Apr	162	158	150	145	185	150	161	162	172	175	173	172	169	172	171	176	173	178	142	145	155	166	159	166	167.6
8-Apr	9	136	300	330	210	189	159	183	145	153	187	125	156	164	164	160	125	90	174	327	319	UO	245	251	172.7
9-Apr	164	194	168	167	178	191	194	216	154	142	170	148	143	164	142	350	329	54	94	31	15	190	263	224	161.0
10-Apr	186	191	175	185	181	167	178	225	192	205	174	227	239	260	231	231	219	166	138	118	UO	131	19	320	203.7
11-Apr	293	356	348	321	348	297	354	229	14	276	157	181	222	251	265	269	271	273	262	245	250	253	252	246	266.8
12-Apr	242	261	256	251	229	200	228	224	263	284	279	275	300	281	306	308	312	321	307	329	32	91	67	128	286.8
13-Apr	160	142	142	150	178	198	343	359	157	149	87	83	32	21	15	22	20	28	39	29	25	4	336	314	35.2
14-Apr	296	304	289	286	274	243	184	138	167	165	169	169	160	157	156	165	179	218	173	152	161	168	163	163	170.6
15-Apr	169	172	170	170	176	179	174	197	241	267	264	269	252	261	254	267	279	289	281	274	269	263	263	270	252.4
16-Apr	256	269	275	295	290	308	321	321	323	325	329	331	324	332	327	333	358	358	7	2	359	13	9	12	331.8
17-Apr	7	3	1	357	3	21	14	28	19	14	12	23	24	26	32	56	47	34	62	93	87	159	149	152	21.2
18-Apr	168	182	175	173	169	171	171	170	164	162	167	166	170	174	172	169	171	166	169	169	170	170	166	178	169.6
19-Apr	199	213	251	288	285	270	281	281	279	291	283	293	296	281	294	280	282	286	300	332	16	20	15	19	295.3
20-Apr	15	UO	UO	UO	UO	UO	UO	UO	17	29	82	92	59	48	44	50	62	50	42	38	23	7	30	22	--
21-Apr	212	UO	324	330	333	272	UO	146	135	164	158	160	143	152	171	153	148	160	158	202	185	169	168	175	163.5
22-Apr	191	226	176	180	44	329	140	190	171	174	161	158	159	274	207	187	181	175	184	194	309	287	215	202	181.2
23-Apr	292	313	294	228	203	UO	277	13	353	2	5	6	26	29	30	12	19	20	354	336	341	326	330	337	2.3
24-Apr	341	297	303	298	308	311	318	143	342	121	101	105	78	71	68	132	144	167	144	109	136	155	169	167	118.4
25-Apr	173	167	145	346	319	329	UO	156	149	155	187	193	185	185	184	197	206	198	202	194	200	212	173	181	189.2
26-Apr	246	198	213	7	23	14	11	4	10	20	13	14	27	34	23	26	13	11	7	2	354	355	347	0	11.8
27-Apr	350	8	10	10	13	6	13	15	19	29	47	61	86	68	74	60	52	38	40	35	31	42	19	19	30.4
28-Apr	201	294	250	285	288	251	137	153	158	172	153	157	154	183	186	177	187	179	170	195	202	202	220	167	181.6
29-Apr	202	186	149	198	236	256	272	250	254	267	285	308	320	331	179	210	9	1	0	357	342	280	211	197	298.9
30-Apr	171	192	278	272	296	7	2	2	3	15	28	11	16	345	122	19	9	3	9	6	360	358	359	356	2.0
240.5 250.0 242.3 274.6 276.1 265.2 297.1 256.6 239.6 235.7 176.2 177.5 171.5 188.8 192.0 233.1 324.5 343.9 354.3 343.2 337.8 308.1 299.9 301.0																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Summary of Hour Standard Deviations

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 98 deg on Apr 9 22:00																		Hours in Service: 720 Hours of Data: 707 Hours of Missing Data: 13 Hours of Calibration: 0 Percent Operational Time: 98.2							
Minimum Value: 8 deg on Apr 14 20:00																									
Percentiles: P ₁ = 11 P ₁₀ = 13 Q ₁ = 18 Median = 24 Q ₃ = 36 P ₉₀ = 54 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	12	30	10	10	11	15	27	13	14	15	13	17	18	17	64	14	18	18	18	12	13	16	18	20	64
2-Apr	20	21	22	19	17	19	27	34	38	28	67	76	19	29	25	22	20	25	28	15	19	23	22	21	76
3-Apr	19	13	15	16	33	25	23	13	20	23	25	33	35	26	27	28	26	27	23	26	92	53	56	41	92
4-Apr	42	61	16	19	13	17	13	16	11	12	13	15	14	12	12	10	10	12	12	13	14	11	13	30	61
5-Apr	47	27	13	14	23	23	22	51	16	12	57	42	26	23	25	24	22	22	26	26	24	24	45	17	57
6-Apr	48	28	20	29	18	14	18	14	15	14	13	14	13	14	14	13	13	13	14	12	15	21	23	20	48
7-Apr	16	15	13	53	67	13	11	15	16	14	15	14	16	15	15	14	14	19	13	20	19	20	79	54	79
8-Apr	40	49	18	54	41	38	47	19	45	32	88	42	20	18	17	35	61	81	63	37	32	UO	53	29	88
9-Apr	33	15	23	11	15	23	24	78	28	31	26	20	21	21	16	63	29	47	38	24	72	98	75	63	98
10-Apr	74	35	23	14	16	20	27	78	60	48	33	59	40	51	48	45	46	24	14	14	UO	43	67	46	78
11-Apr	40	52	36	34	58	41	40	86	74	80	69	33	50	48	39	38	35	35	33	28	27	35	42	39	86
12-Apr	33	37	31	28	39	15	45	35	41	27	33	35	23	31	19	15	14	20	18	20	47	35	46	71	71
13-Apr	13	19	21	20	43	52	71	70	72	25	50	44	29	41	32	21	24	24	21	16	18	24	17	54	72
14-Apr	18	31	10	9	21	68	33	12	17	17	15	18	16	17	15	16	24	35	24	8	12	11	11	11	68
15-Apr	13	13	13	12	53	23	21	25	40	38	40	37	42	42	41	39	31	24	31	33	37	37	36	35	53
16-Apr	36	37	32	16	16	23	12	13	14	15	16	17	18	18	18	23	24	26	22	26	25	24	25	23	37
17-Apr	25	25	26	24	24	20	23	20	20	23	24	23	26	25	30	32	30	33	33	31	49	55	51	22	55
18-Apr	21	17	14	14	13	13	14	14	12	13	14	14	16	16	15	15	14	11	12	12	12	12	21	21	21
19-Apr	22	29	38	19	21	32	28	28	31	25	32	30	30	39	31	31	39	28	20	31	21	20	21	20	39
20-Apr	21	UO	UO	UO	UO	UO	UO	UO	34	87	50	40	48	46	63	44	37	32	25	19	17	18	22	57	87
21-Apr	61	UO	23	22	21	45	UO	23	27	34	36	44	31	34	43	23	16	15	13	34	30	30	12	12	61
22-Apr	48	80	16	56	72	65	86	42	21	23	12	13	15	87	54	29	19	72	40	26	24	78	48	52	87
23-Apr	48	47	38	38	38	UO	82	25	19	22	24	21	26	28	25	26	25	25	24	13	17	27	14	28	82
24-Apr	36	22	68	24	56	34	70	90	66	74	48	49	62	56	50	31	34	26	24	42	60	13	14	16	90
25-Apr	14	11	75	32	17	17	UO	18	16	18	55	25	23	22	22	30	28	24	26	18	13	17	15	21	75
26-Apr	35	34	79	31	25	26	31	27	27	26	27	26	28	26	26	21	24	24	24	25	24	23	20	23	79
27-Apr	23	23	23	21	21	22	23	25	27	36	37	36	35	34	35	40	32	29	26	21	24	27	24	30	40
28-Apr	72	11	56	25	13	20	79	19	19	27	17	17	19	29	25	22	22	18	13	24	26	30	36	18	79
29-Apr	22	20	15	30	26	39	41	38	43	39	26	17	16	65	24	77	27	25	26	23	22	37	27	23	77
30-Apr	21	54	28	23	26	22	26	26	32	45	33	23	26	68	82	48	26	23	21	17	16	15	14	15	82
74 80 79 56 72 68 86 90 74 87 88 76 62 87 82 77 61 81 63 42 92 98 79 71																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS02 MILDRED LAKE APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
APRIL 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	684	34	36	99.72	58.1	0	12.6	0
H2S (ppb) Average	682	36	38	99.72	3.2	0	0.6	0
THC (ppm) Average	682	37	38	99.86	3.8	-	2.4	-
NMHC(ppm) Average	682	37	38	99.86	0.799	-	0.052	-
CH4(ppm) Average	682	37	38	99.86	3.8	-	2.4	-
Temperature (C) Average	720	0	0	100	22.3	-	13.9	-
Relative Humidity (%) Average	720	0	0	100	100	-	93.3	-
Wind Speed 10 m (km/h) Average	711	0	9	98.75	33	-	19	-
Wind Direction 10 m (deg) Average	711	0	9	98.75	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	2.01	5.5	-	0	0	0.1	0.3	0.6	6.2	58.1
H2S (ppb) Average	682	0.24	0.3	-	0	0	0.1	0.1	0.3	0.6	3.2
THC (ppm) Average	682	2.08	0.2	-	1.9	2	2	2	2.1	2.3	3.8
NMHC(ppm) Average	682	0.011	0.039	-	0	0	0	0	0	0	0.799
CH4(ppm) Average	682	2.07	0.2	-	1.9	2	2	2	2.1	2.2	3.8
Temperature 2 m (C) Average	720	4.28	6.4	-	-11.7	-3.8	-0.2	4.4	8.9	12.3	22.3
Relative Humidity (%) Average	720	58.51	21.2	-	17.4	30.7	41.9	58.2	73.9	90	100
Wind Speed 10 m (km/h) Average	711	10.5	6	-	0	3	6	10	14	18	33
Wind Direction 10 m (deg) Average	711	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	28 Apr 2025 13:00	28 Apr 2025 14:00	1-2	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	09 Apr 2025 01:00	09 Apr 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 00:00	20 Apr 2025 07:00	8	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

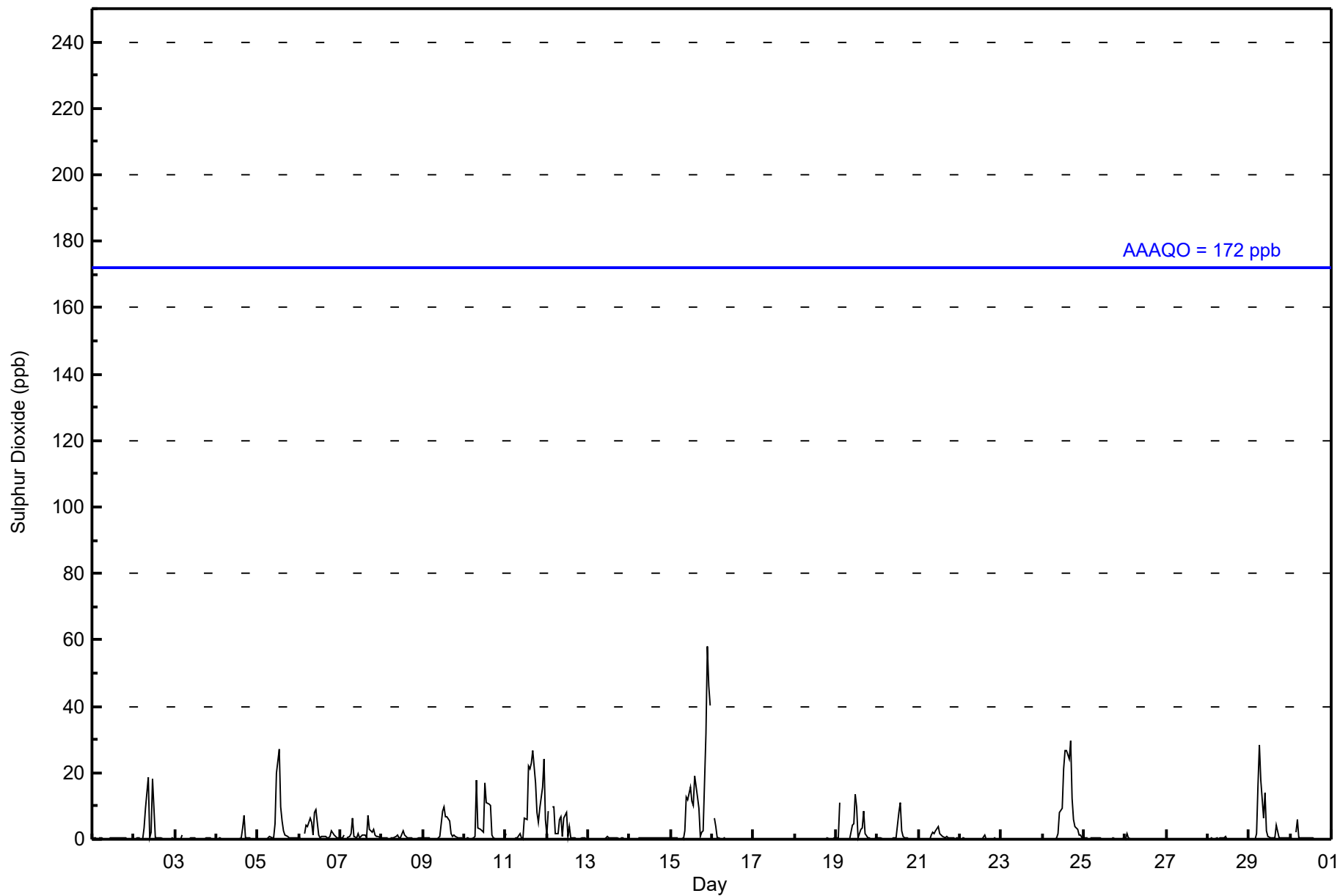
Mildred Lake - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720											
Maximum Value: 58.1 ppb on Apr 15 22:00																			Maximum Daily Average: 12.6 ppb on Apr 15						Hours of Data: 684					
Minimum Value: 0.0 ppb on Apr 3 03:00																			Minimum Daily Average: 0.0 ppb on Apr 17						Hours of Missing Data: 36					
Maximum Diurnal Average: 4.3 ppb at hour 13																			Minimum Diurnal Average: 0.3 ppb at hour 1						Hours of Calibration: 34					
Monthly Average: 2.01 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.6 P ₉₀ = 6.2 P ₉₉ = 26.9						Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.2	0.4	0.4	Z	0.5	0.6	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.4	0.6	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.6				
2-Apr	0.1	0.1	0.3	0.2	Z	0.1	3.6	9.4	18.7	0.6	2.1	18.0	0.6	0.3	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.1	2.4	18.7				
3-Apr	0.1	0.1	0.0	0.0	1.1	Z	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	1.1				
4-Apr	Z	0.3	0.2	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	3.5	7.2	0.4	0.6	0.3	0.2	0.1	0.0	0.0	0.6	7.2				
5-Apr	0.1	Z	0.0	0.0	0.0	0.1	0.4	0.7	0.4	0.4	4.6	19.8	26.9	9.9	5.3	2.5	1.3	0.9	0.6	0.5	0.4	0.3	0.5	0.5	3.3	26.9				
6-Apr	0.3	0.4	Z	1.5	4.1	3.8	6.2	5.1	1.2	7.9	9.0	1.3	0.5	0.7	1.0	0.9	0.4	0.4	1.0	2.5	1.3	0.8	0.4	0.6	2.2	9.0				
7-Apr	0.4	0.4	1.1	Z	0.4	0.7	1.7	6.4	0.8	0.6	1.5	0.6	0.9	1.2	1.1	0.4	7.3	3.0	2.1	3.0	1.2	0.9	0.8	0.5	1.6	7.3				
8-Apr	0.4	0.3	0.3	0.2	Z	0.4	0.4	0.6	1.0	1.1	0.6	0.5	2.4	1.3	0.9	0.5	0.6	0.4	0.1	0.0	0.1	0.4	0.5	0.3	0.6	2.4				
9-Apr	0.3	0.5	0.3	0.4	0.3	Z	0.1	0.1	0.2	0.4	0.9	8.6	9.9	6.7	6.8	5.5	1.6	1.0	1.4	0.8	0.5	0.4	0.4	0.4	2.1	9.9				
10-Apr	Z	0.3	0.3	0.2	0.1	0.3	0.7	17.9	3.3	3.0	2.6	2.1	16.8	11.1	10.8	10.1	1.3	0.2	0.0	0.1	0.0	0.0	0.0	0.0	3.5	17.9				
11-Apr	1.5	Z	0.0	0.0	0.0	0.2	0.3	0.2	1.5	0.4	0.2	6.5	6.0	22.1	21.1	23.0	26.8	16.8	8.2	4.9	9.1	15.8	24.1	6.1	8.5	26.8				
12-Apr	1.4	8.3	Z	9.7	9.8	1.7	1.7	5.9	6.8	0.8	6.4	7.8	1.1	3.8	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.1	2.9	9.8				
13-Apr	0.0	0.0	0.1	Z	0.1	0.0	0.2	0.2	0.1	0.2	0.3	0.8	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.8				
14-Apr	0.1	0.2	0.2	0.1	Z	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.4	0.5	0.5	0.3	0.3	0.5				
15-Apr	0.3	0.3	0.2	0.5	0.2	Z	0.3	0.1	2.7	12.8	11.7	15.7	11.3	10.4	19.1	12.8	9.4	0.7	1.9	2.5	31.7	58.1	46.3	40.2	12.6	58.1				
16-Apr	Z	6.5	3.8	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.5				
17-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
18-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.2				
19-Apr	0.3	0.3	11.0	Z	0.2	0.1	0.0	0.1	0.2	4.2	4.7	13.7	9.9	0.6	3.1	3.5	8.5	1.6	0.3	0.3	0.1	0.1	0.1	0.2	2.7	13.7				
20-Apr	0.2	0.3	0.3	0.2	Z	0.1	0.0	0.1	0.2	0.3	0.3	0.3	8.1	10.9	2.7	1.0	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.0	1.1	10.9				
21-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	1.5	2.1	1.6	2.7	4.0	1.5	1.3	1.0	0.5	0.9	0.4	0.4	0.4	0.2	0.2	0.2	0.4	0.8	4.0				
22-Apr	Z	0.4	0.3	0.1	0.2	0.2	0.2	0.0	0.2	0.0	0.1	0.2	0.1	0.1	1.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2	1.1				
23-Apr	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1				
24-Apr	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	1.8	8.1	9.1	21.3	26.8	26.7	24.0	29.6	12.1	6.0	3.7	2.9	1.4	1.5	0.4	7.6	29.6				
25-Apr	0.5	0.4	0.6	Z	0.4	0.3	0.4	0.4	0.4	0.5	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.2	0.3	0.2	0.6				
26-Apr	0.1	1.7	0.3	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.7				
27-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2				
28-Apr	Z	0.1	0.3	0.2	0.0	0.2	0.2	0.3	0.4	0.5	0.6	0.1	M	M	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.6				
29-Apr	0.0	Z	0.2	0.1	1.7	16.0	28.5	17.8	6.5	14.1	2.6	0.7	0.4	0.5	0.3	0.6	4.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	4.2	28.5				
30-Apr	0.4	0.6	Z	2.2	5.9	0.5	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.6	5.9				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	646	94.44	94.44
11 - 20	22	3.22	97.66
21 - 60	16	2.34	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 (SO₂) - ppb
Mildred Lake - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	100	41	14	13	14	26	85	84	49	38	20	12	28	31	36	47	638
11 - 20	0	0	0	1	0	0	0	0	0	1	1	12	5	2	0	0	22
21 - 60	2	0	1	0	0	0	0	0	0	1	0	2	9	0	0	1	16
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	102	41	15	14	14	26	85	84	49	40	21	26	42	33	36	48	676

Total Number of Valid Hours: 676

Total Number of Hours: 720



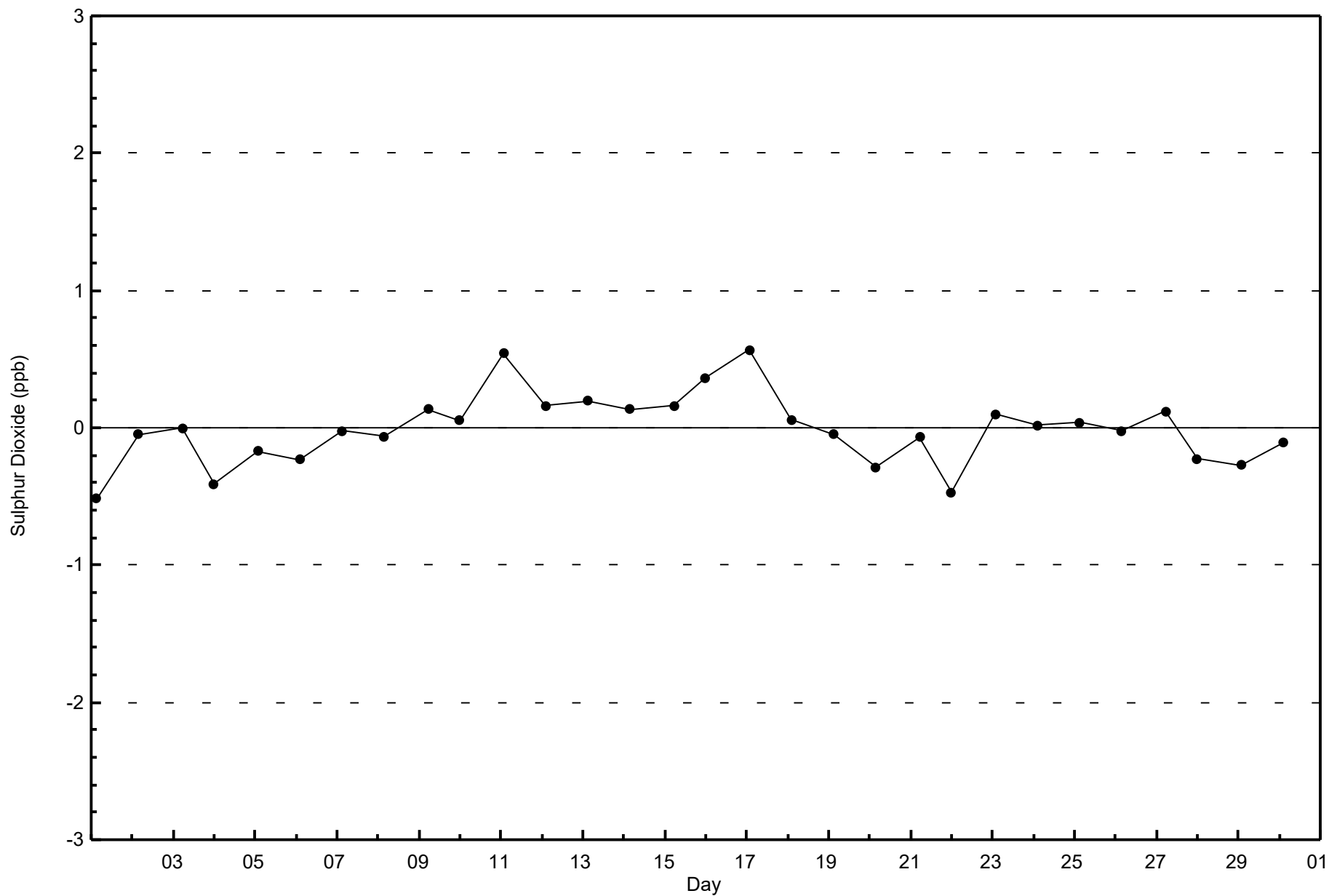
Sulphur Dioxide (SO₂) - ppb
Mildred Lake





Wood Buffalo Environmental Association
Zero Responses

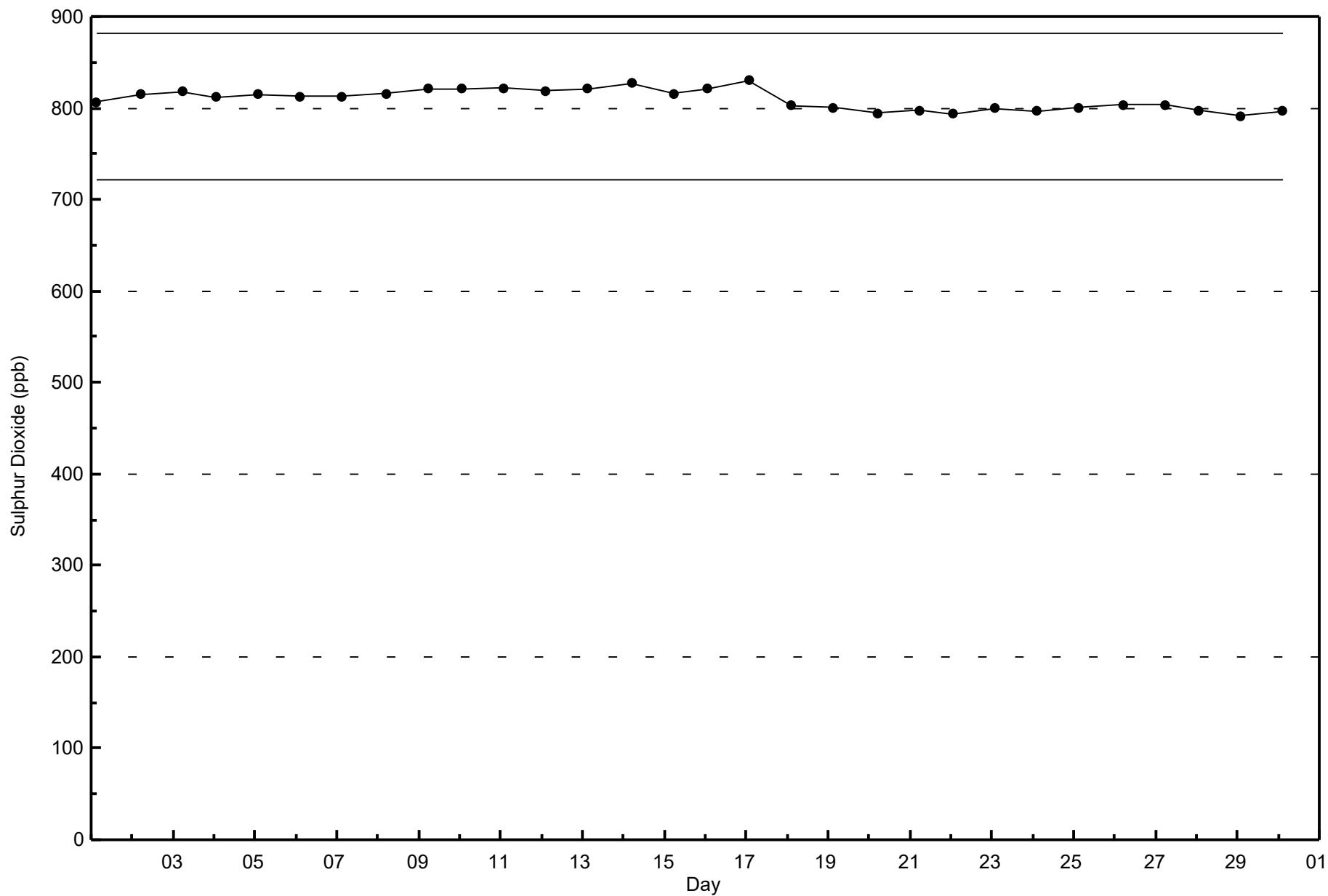
Sulphur Dioxide (SO₂) - ppb
Mildred Lake - April 2025





Wood Buffalo Environmental Association
Span Responses

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

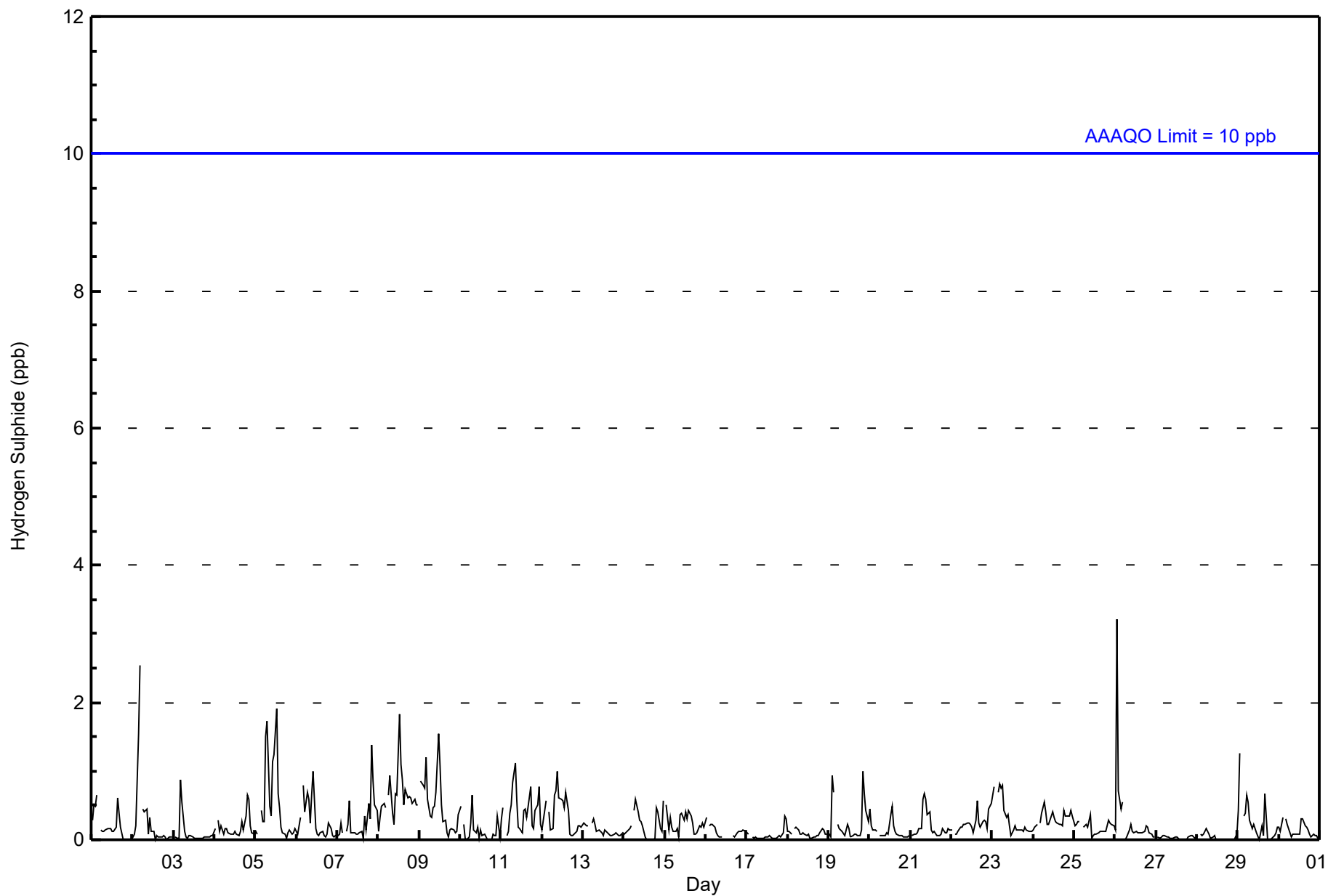


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Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	680	99.71	99.71
3 - 4	2	0.29	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 (H₂S) - ppb
Mildred Lake - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	107	41	16	13	13	27	82	84	53	39	20	26	42	32	36	42	673
3 - 4	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	41	16	13	13	27	83	84	53	39	20	26	42	33	36	42	675

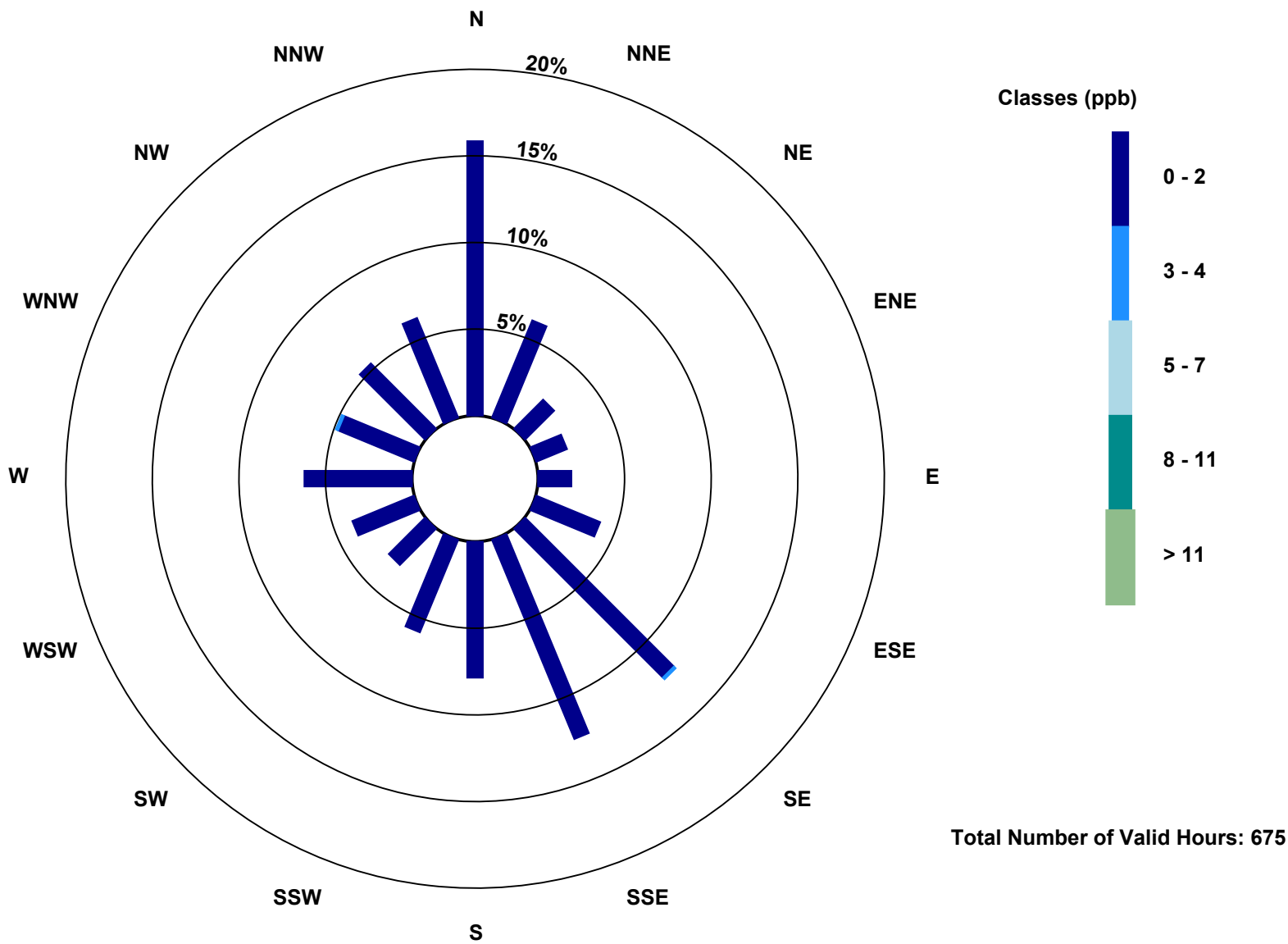
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

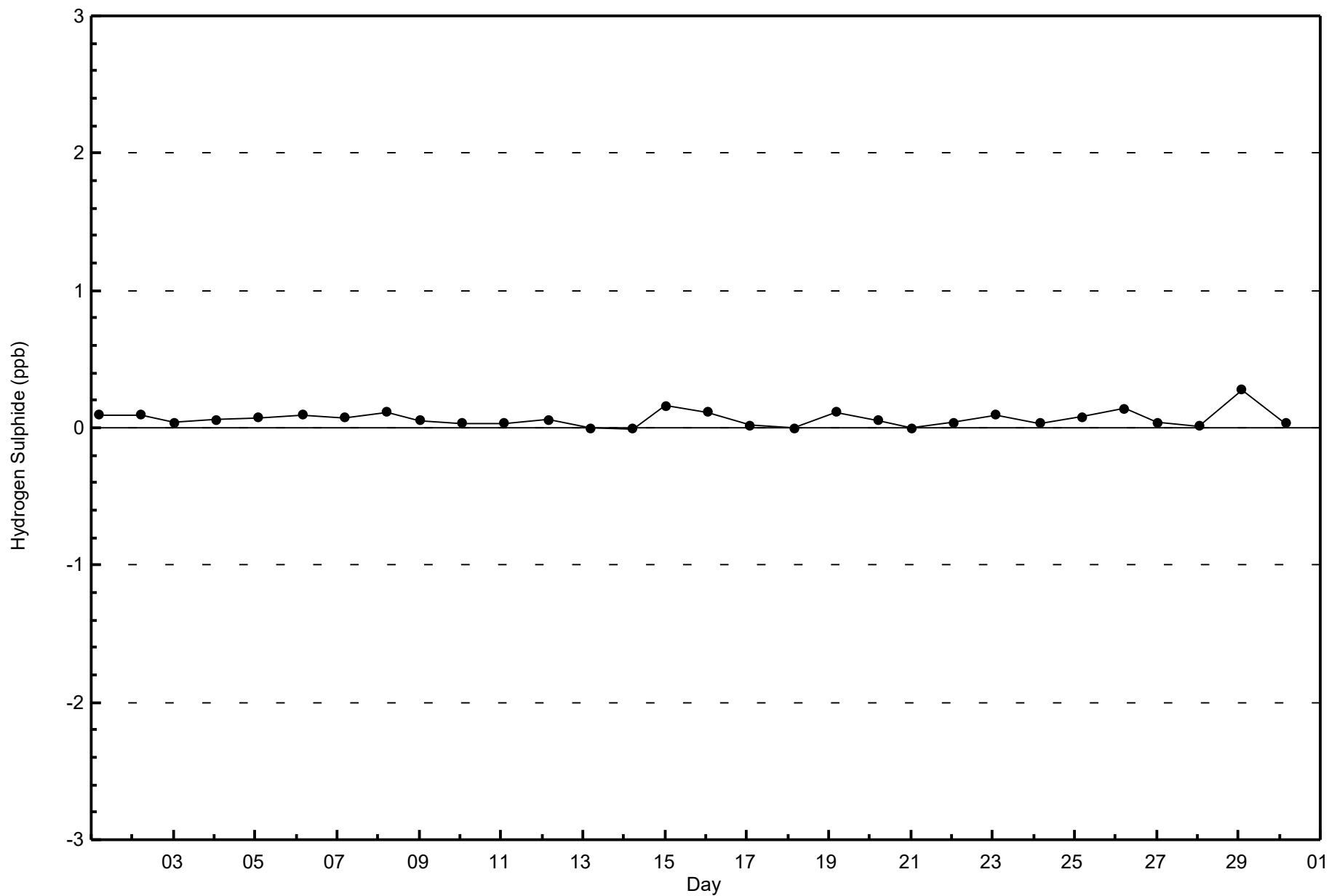
Hydrogen Sulphide (H₂S) - ppb
Mildred Lake

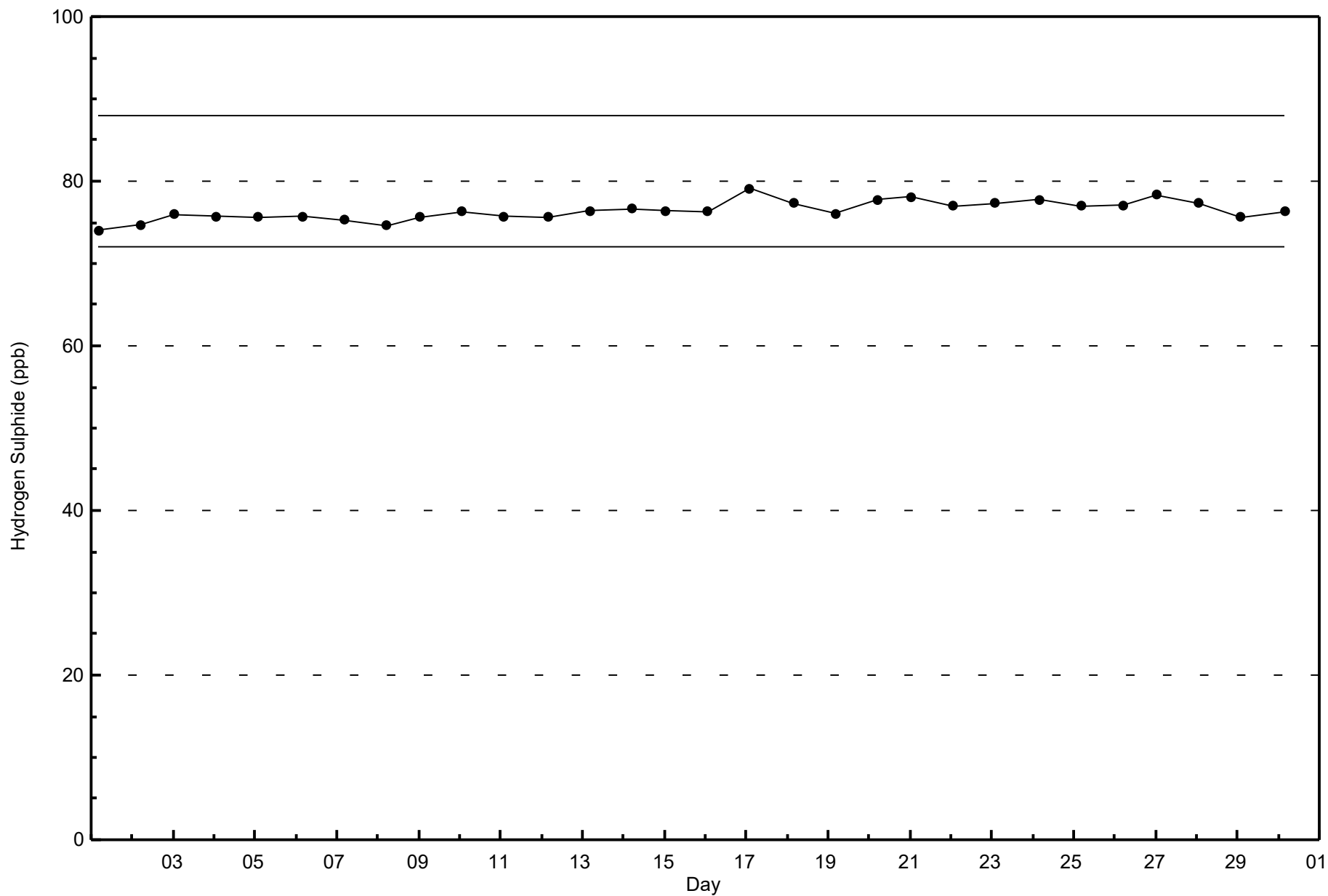




Wood Buffalo Environmental Association
Zero Responses

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







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

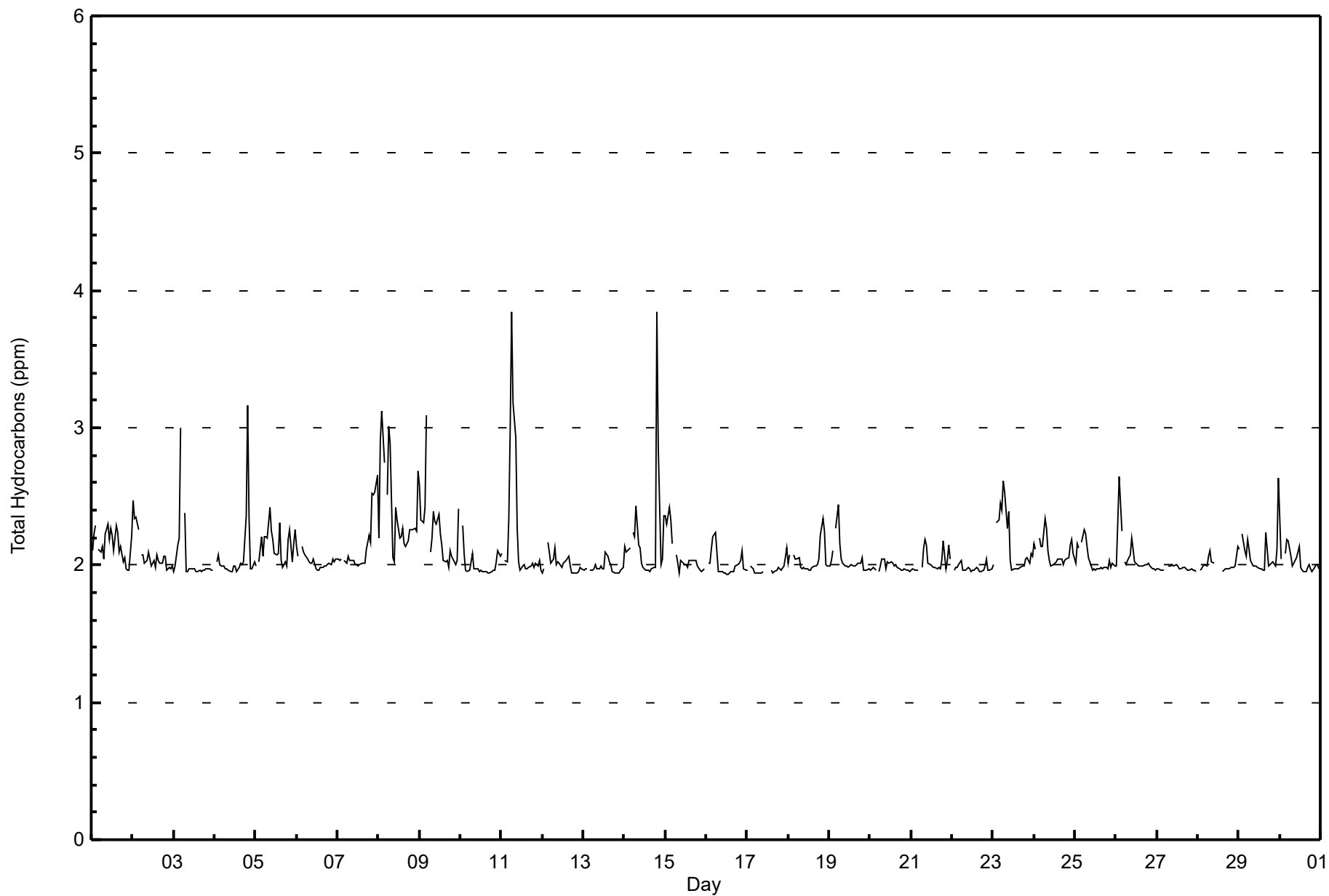
Mildred Lake - April 2025

Maximum Value: 3.8 ppm on Apr 14 20:00																			Maximum Daily Average: 2.4 ppm on Apr 8										Hours in Service: 720	
Minimum Value: 1.9 ppm on Apr 16 14:00																			Minimum Daily Average: 2.0 ppm on Apr 17										Hours of Data: 682	
Maximum Diurnal Average: 2.2 ppm at hour 7																			Minimum Diurnal Average: 2.0 ppm at hour 18										Hours of Missing Data: 38	
Monthly Average: 2.08 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 = 3.0										Hours of Calibration: 37	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	2.1	2.2	2.3	Z	2.1	2.1	2.1	2.0	2.2	2.3	2.2	2.3	2.2	2.1	2.3	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.2	2.1	2.3				
2-Apr	2.5	2.3	2.4	2.3	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.5				
3-Apr	2.0	2.0	2.1	2.2	3.0	Z	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0				
4-Apr	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.2	2.4	2.0	2.0	2.0	2.1	3.2				
5-Apr	2.0	Z	2.0	2.2	2.1	2.2	2.2	2.2	2.4	2.3	2.2	2.1	2.1	2.1	2.3	2.0	2.0	2.0	2.0	2.2	2.3	2.0	2.2	2.3	2.1	2.4				
6-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1				
7-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.5	2.5	2.5	2.7	2.1	2.7				
8-Apr	2.2	2.9	3.1	2.7	Z	2.5	3.0	2.9	2.1	2.0	2.4	2.3	2.2	2.2	2.3	2.2	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.7	2.4	3.1				
9-Apr	2.6	2.3	2.3	2.4	3.1	Z	2.1	2.2	2.4	2.3	2.3	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.4	2.2	3.1				
10-Apr	Z	2.3	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	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.3				
11-Apr	2.1	Z	2.0	2.0	2.3	3.0	3.8	3.2	2.9	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	2.2	3.8				
12-Apr	1.9	2.0	Z	2.2	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2				
13-Apr	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	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1				
14-Apr	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	3.8	2.9	2.0	2.0	2.4	2.2	3.8				
15-Apr	2.4	2.3	2.4	2.3	2.2	Z	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.4				
16-Apr	Z	2.0	2.0	2.1	2.2	2.2	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	2.0	2.0	2.1	2.0	2.0	2.0	2.2				
17-Apr	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	C	C	C	C	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1				
18-Apr	2.0	2.1	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.0	2.0	2.0	2.3				
19-Apr	2.0	2.0	2.1	Z	2.3	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.4				
20-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
21-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.1	2.0	2.0	2.2				
22-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
23-Apr	2.0	Z	2.3	2.3	2.5	2.4	2.6	2.5	2.3	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.6				
24-Apr	2.2	2.1	Z	2.2	2.1	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.3				
25-Apr	2.0	2.2	2.1	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	2.0	2.3				
26-Apr	2.0	2.3	2.6	2.2	Z	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6				
27-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
28-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	C	C	C	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1				
29-Apr	2.1	Z	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.6	2.1	2.6				
30-Apr	2.3	2.0	Z	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	465	68.18	68.18
2.1 - 3.0	211	30.94	99.12
3.1 - 10.0	6	0.88	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	85	37	14	9	9	8	43	49	36	28	15	20	33	16	24	32	458
2.1 - 3.0	16	4	1	5	5	17	38	35	12	12	6	5	9	17	12	16	210
3.1 - 10.0	1	0	0	0	0	1	2	0	1	0	0	1	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	102	41	15	14	14	26	83	84	49	40	21	26	42	33	36	48	674

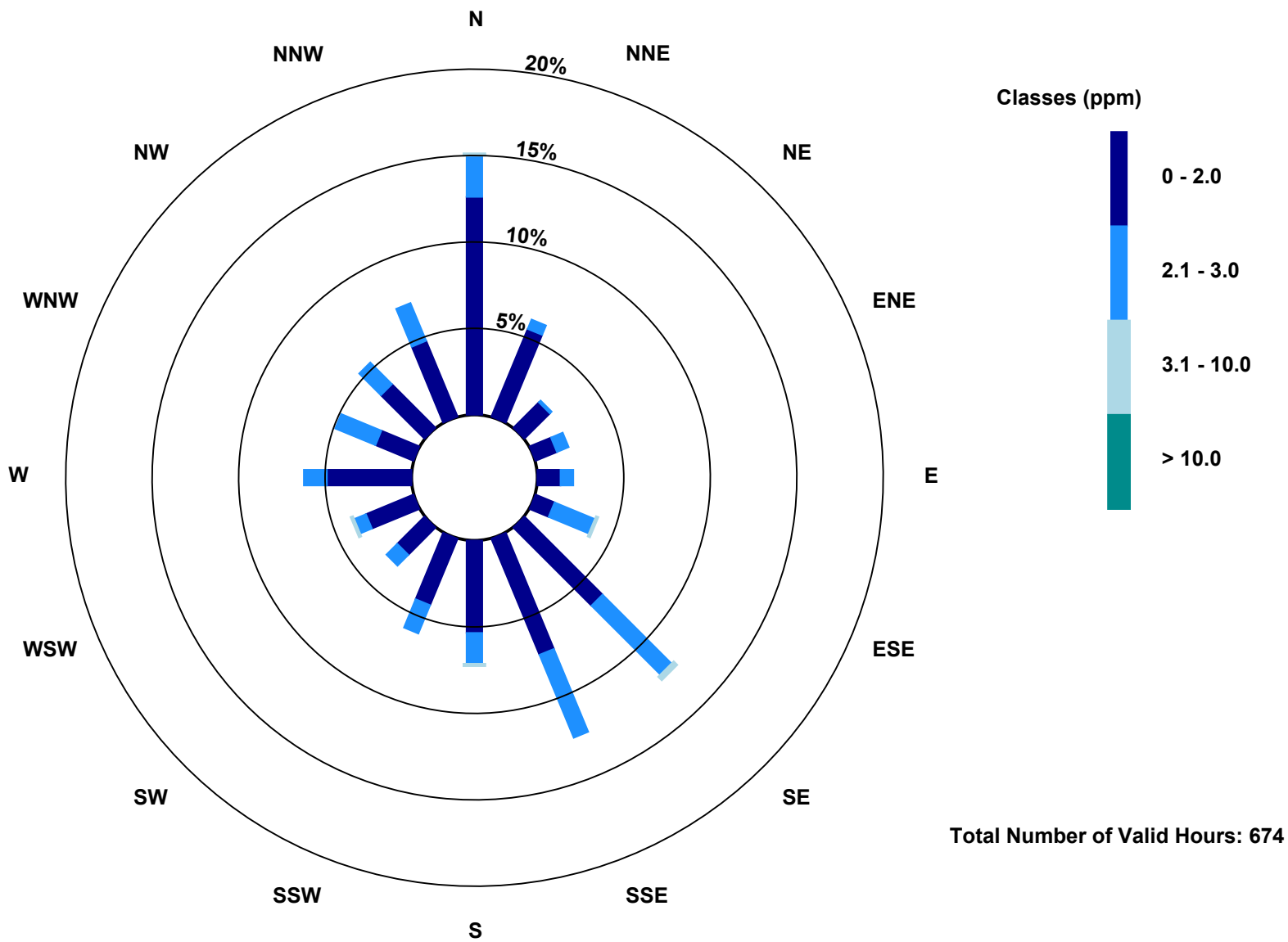
Total Number of Valid Hours: 674

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Mildred Lake



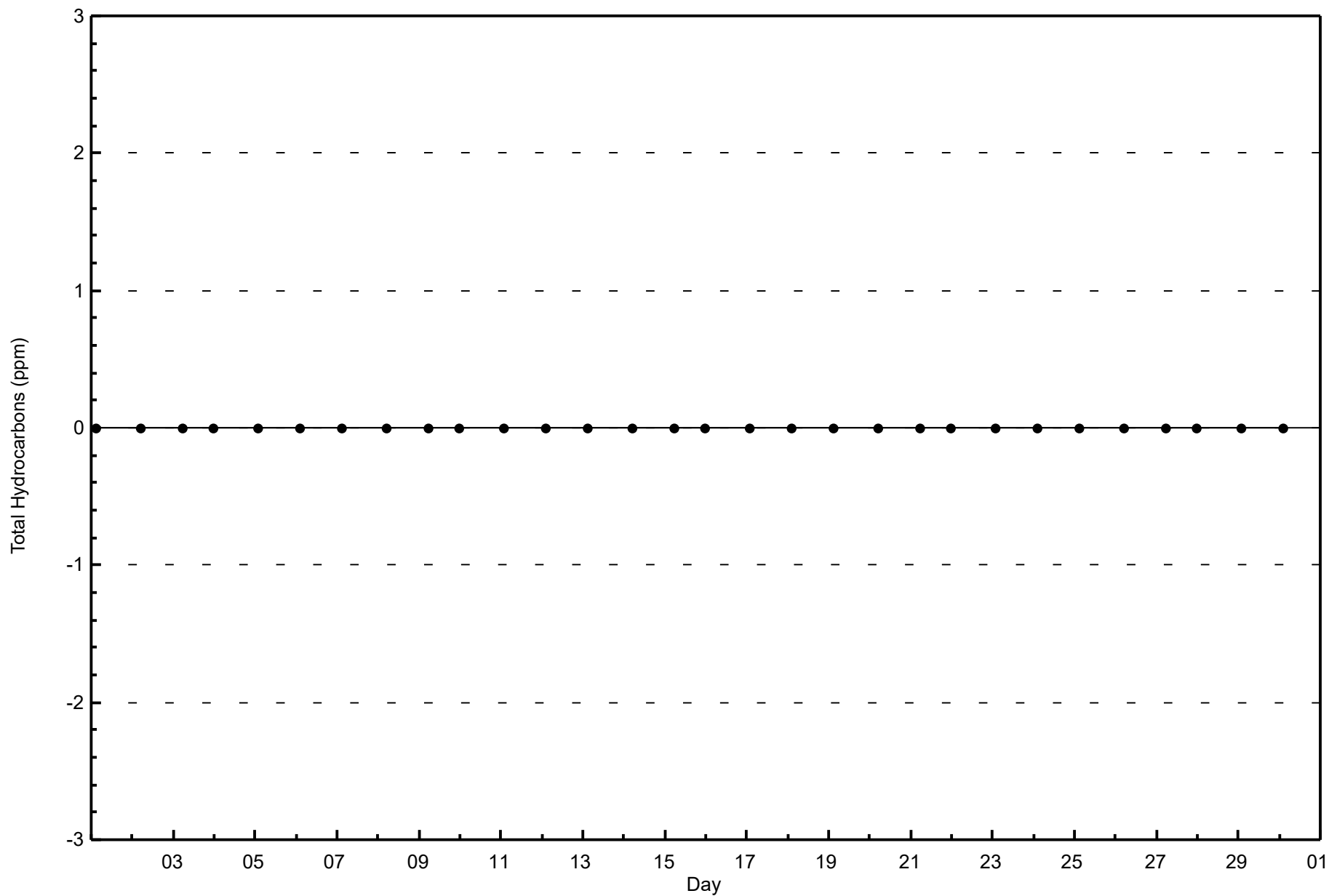


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

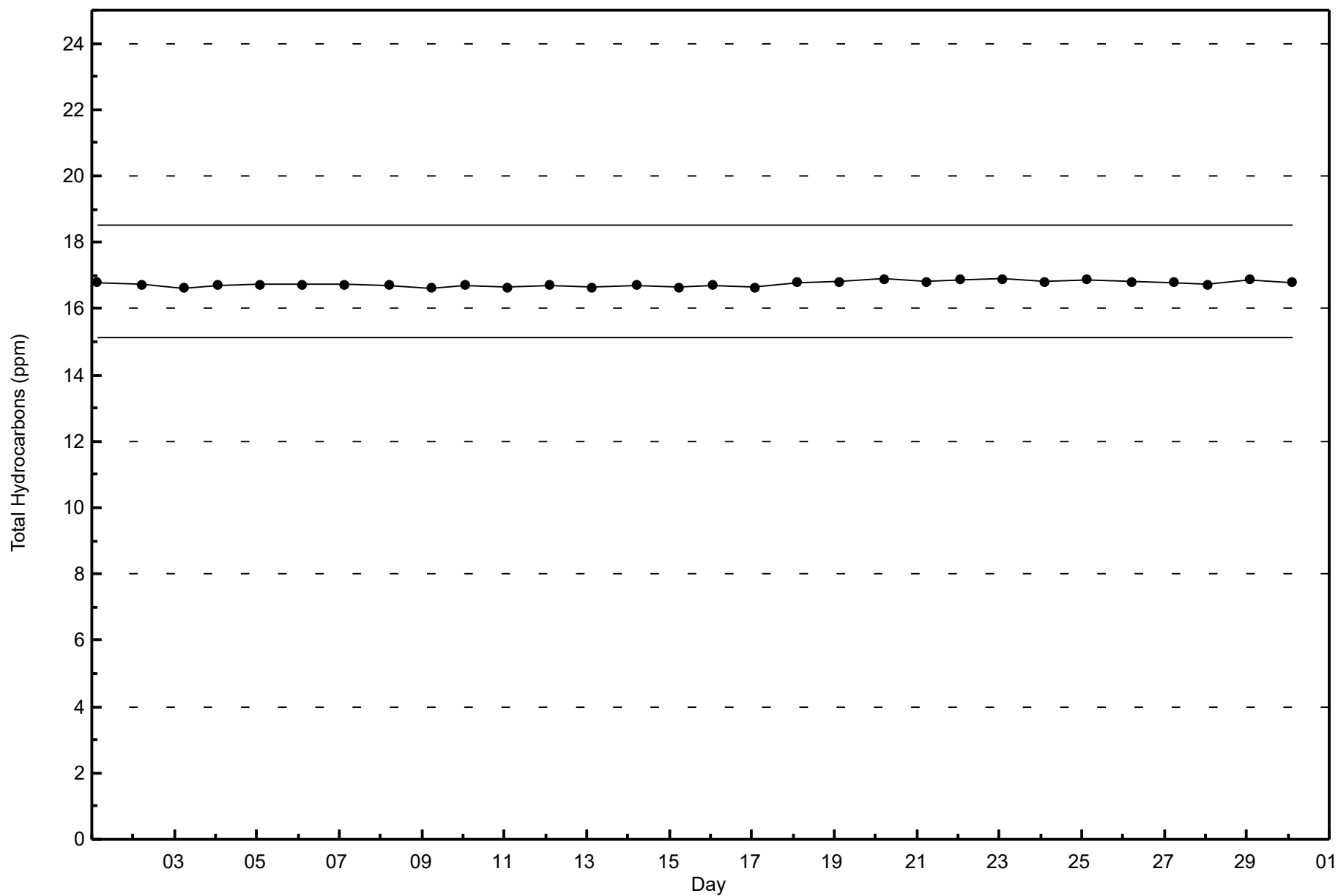
Mildred Lake - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

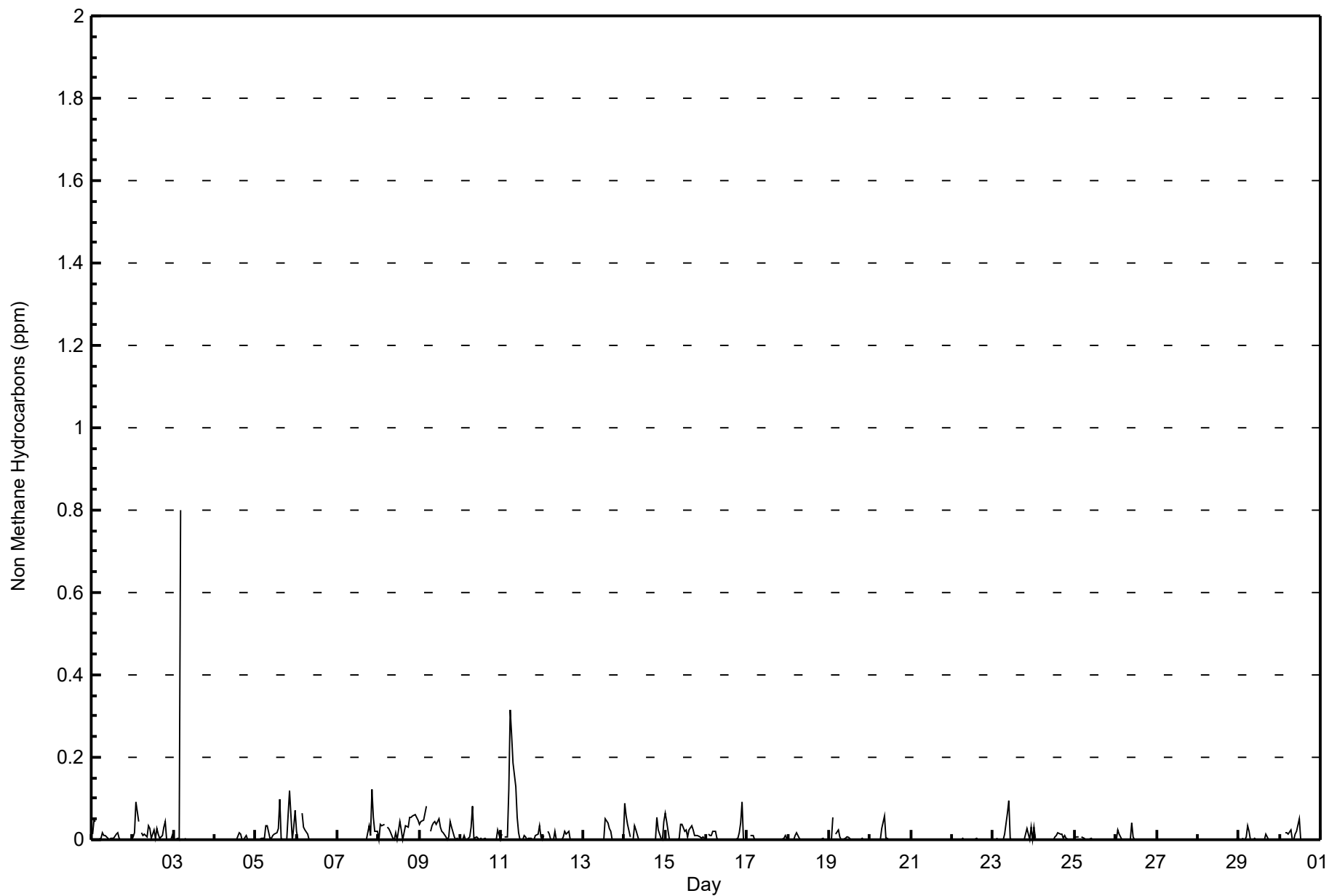
Mildred Lake - April 2025

Maximum Value: 0.799 ppm on Apr 3 05:00																			Maximum Daily Average: 0.052 ppm on Apr 11										Hours in Service: 720			
Minimum Value: 0.000 ppm on Apr 1 05:00																			Minimum Daily Average: 0.000 ppm on Apr 27										Hours of Data: 682			
Maximum Diurnal Average: 0.045 ppm at hour 5																			Minimum Diurnal Average: 0.002 ppm at hour 18										Hours of Missing Data: 38			
Monthly Average: 0.011 ppm																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1										Hours of Calibration: 37			
																							Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	0.014	0.048	0.046	Z	0.000	0.004	0.017	0.012	0.011	0.003	0.000	0.005	0.002	0.003	0.012	0.018	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.048						
2-Apr	0.008	0.017	0.093	0.043	Z	0.017	0.009	0.013	0.007	0.032	0.028	0.003	0.024	0.004	0.026	0.014	0.004	0.009	0.029	0.045	0.000	0.002	0.000	0.010	0.019	0.093						
3-Apr	0.000	0.000	0.002	0.000	0.799	Z	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	0.001	0.000	0.000	0.035	0.799							
4-Apr	Z	0.000	0.001	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.016	0.015	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.002	0.016							
5-Apr	0.000	Z	0.001	0.002	0.003	0.005	0.035	0.034	0.002	0.002	0.009	0.012	0.017	0.026	0.099	0.004	0.000	0.000	0.000	0.060	0.120	0.001	0.031	0.072	0.023	0.120						
6-Apr	0.022	0.001	Z	0.064	0.029	0.023	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.064							
7-Apr	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	0.001	0.035	0.009	0.122	0.055	0.020	0.022	0.011	0.122						
8-Apr	0.000	0.037	0.036	0.038	Z	0.031	0.027	0.019	0.003	0.001	0.017	0.000	0.045	0.025	0.000	0.018	0.034	0.031	0.055	0.056	0.058	0.060	0.053	0.047	0.030	0.060						
9-Apr	0.039	0.044	0.047	0.063	0.083	Z	0.021	0.035	0.040	0.044	0.037	0.052	0.029	0.021	0.016	0.008	0.000	0.007	0.045	0.029	0.008	0.002	0.002	0.000	0.029	0.083						
10-Apr	Z	0.001	0.011	0.000	0.000	0.007	0.030	0.081	0.004	0.007	0.003	0.000	0.005	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.008	0.081						
11-Apr	0.015	Z	0.006	0.006	0.121	0.316	0.253	0.186	0.128	0.054	0.018	0.000	0.000	0.010	0.005	0.000	0.003	0.003	0.002	0.001	0.009	0.014	0.033	0.006	0.052	0.316						
12-Apr	0.000	0.009	Z	0.019	0.014	0.000	0.000	0.020	0.001	0.000	0.001	0.000	0.006	0.020	0.013	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.021						
13-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.051	0.041	0.026	0.022	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.051							
14-Apr	0.089	0.058	0.036	0.006	Z	0.001	0.034	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.055	0.023	0.002	0.000	0.044	0.016	0.089						
15-Apr	0.065	0.045	0.000	0.000	0.000	Z	0.000	0.001	0.003	0.036	0.039	0.019	0.024	0.007	0.024	0.034	0.023	0.011	0.011	0.009	0.008	0.003	0.007	0.003	0.016	0.065						
16-Apr	Z	0.013	0.012	0.009	0.021	0.019	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.017	0.042	0.091	0.002	0.000	0.010	0.091						
17-Apr	0.000	Z	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.010	0.004	0.002	0.011						
18-Apr	0.000	0.000	Z	0.001	0.012	0.017	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	0.004	0.000	0.000	0.000	0.002	0.017						
19-Apr	0.000	0.000	0.053	Z	0.012	0.023	0.006	0.000	0.000	0.002	0.006	0.006	0.003	0.000	0.001	0.001	0.001	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.005	0.053						
20-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.027	0.059	0.003	0.005	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.059						
21-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.000	0.001						
22-Apr	Z	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	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003						
23-Apr	0.000	Z	0.002	0.000	0.001	0.000	0.001	0.015	0.065	0.097	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.027	0.001	0.029	0.000	0.011	0.097						
24-Apr	0.029	0.003	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.012	0.019	0.012	0.015	0.002	0.009	0.002	0.001	0.000	0.000	0.002	0.005	0.029						
25-Apr	0.006	0.007	0.006	Z	0.005	0.003	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007						
26-Apr	0.000	0.025	0.014	0.000	Z	0.000	0.000	0.000	0.000	0.041	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	0.004	0.041						
27-Apr	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-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.003						
29-Apr	0.002	Z	0.004	0.001	0.006	0.033	0.019	0.001	0.000	0.004	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	0.001	0.004	0.033						
30-Apr	0.000	0.000	Z	0.018	0.017	0.012	0.023	0.000	0.000	0.012	0.021	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.052						
Diurnal Average																										Diurnal Maximum						
0.012 0.012 0.015 0.011 0.045 0.020 0.017 0.016 0.011 0.011 0.007 0.005 0.006 0.006 0.009 0.006 0.004 0.002 0.007 0.010 0.014 0.008 0.007 0.007																																
0.089 0.058 0.093 0.064 0.799 0.316 0.253 0.186 0.128 0.097 0.039 0.052 0.045 0.051 0.099 0.034 0.034 0.031 0.055 0.060 0.122 0.091 0.053 0.072																																
Z - zerospan C - Calibration M - Maintenance																																



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	487	71.41	71.41
0.006 - 0.05	168	24.63	96.04
0.06 - 0.1	23	3.37	99.41
> 0.1	4	0.59	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	75	38	12	10	10	10	57	71	41	34	18	12	23	10	29	30	480
0.006 - 0.05	21	1	3	4	3	14	23	13	7	6	3	12	19	21	4	13	167
0.06 - 0.1	5	2	0	0	1	2	3	0	1	0	0	1	0	1	2	5	23
> 0.1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	4
Totals	102	41	15	14	14	26	83	84	49	40	21	26	42	33	36	48	674

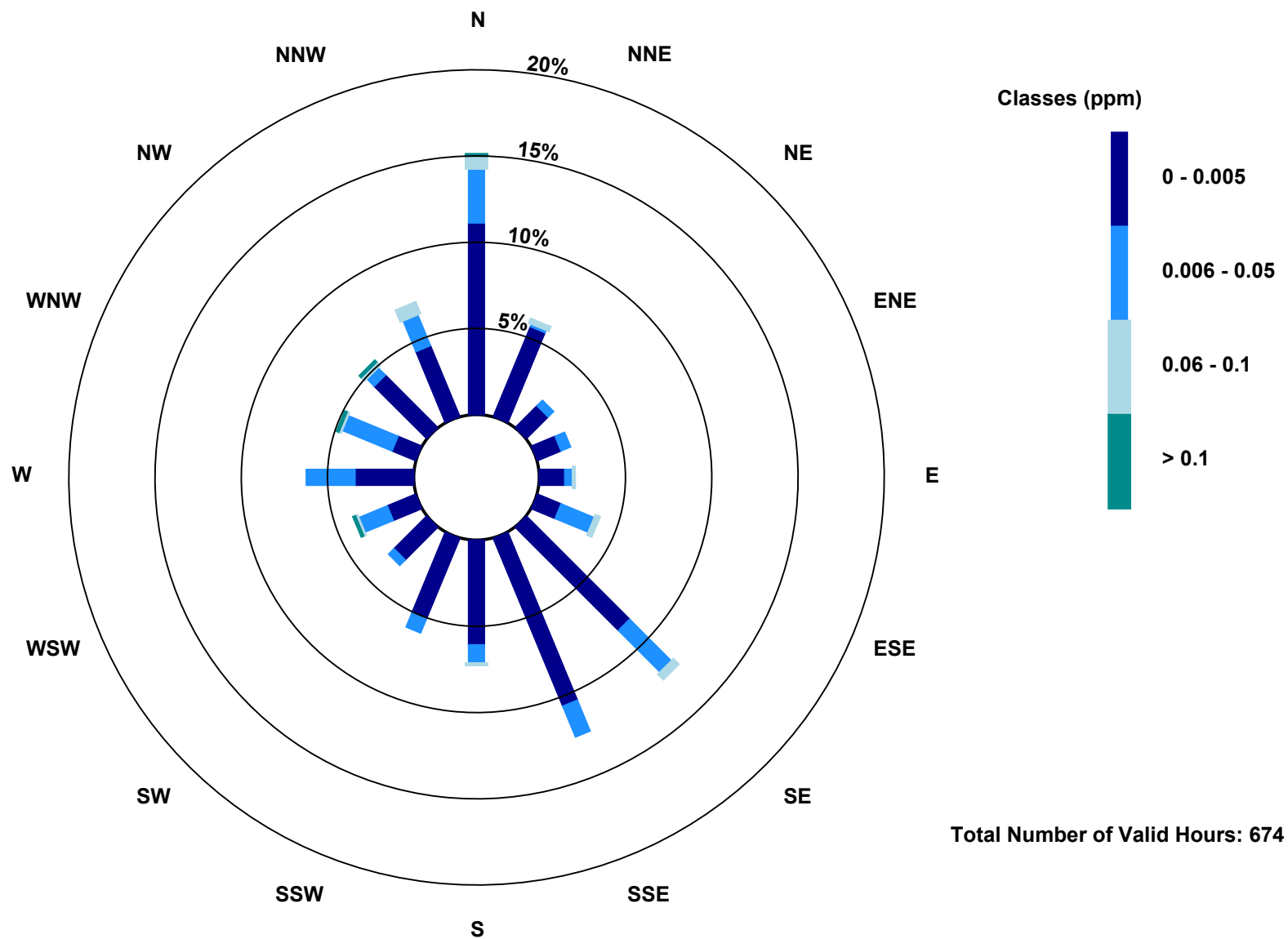
Total Number of Valid Hours: 674

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

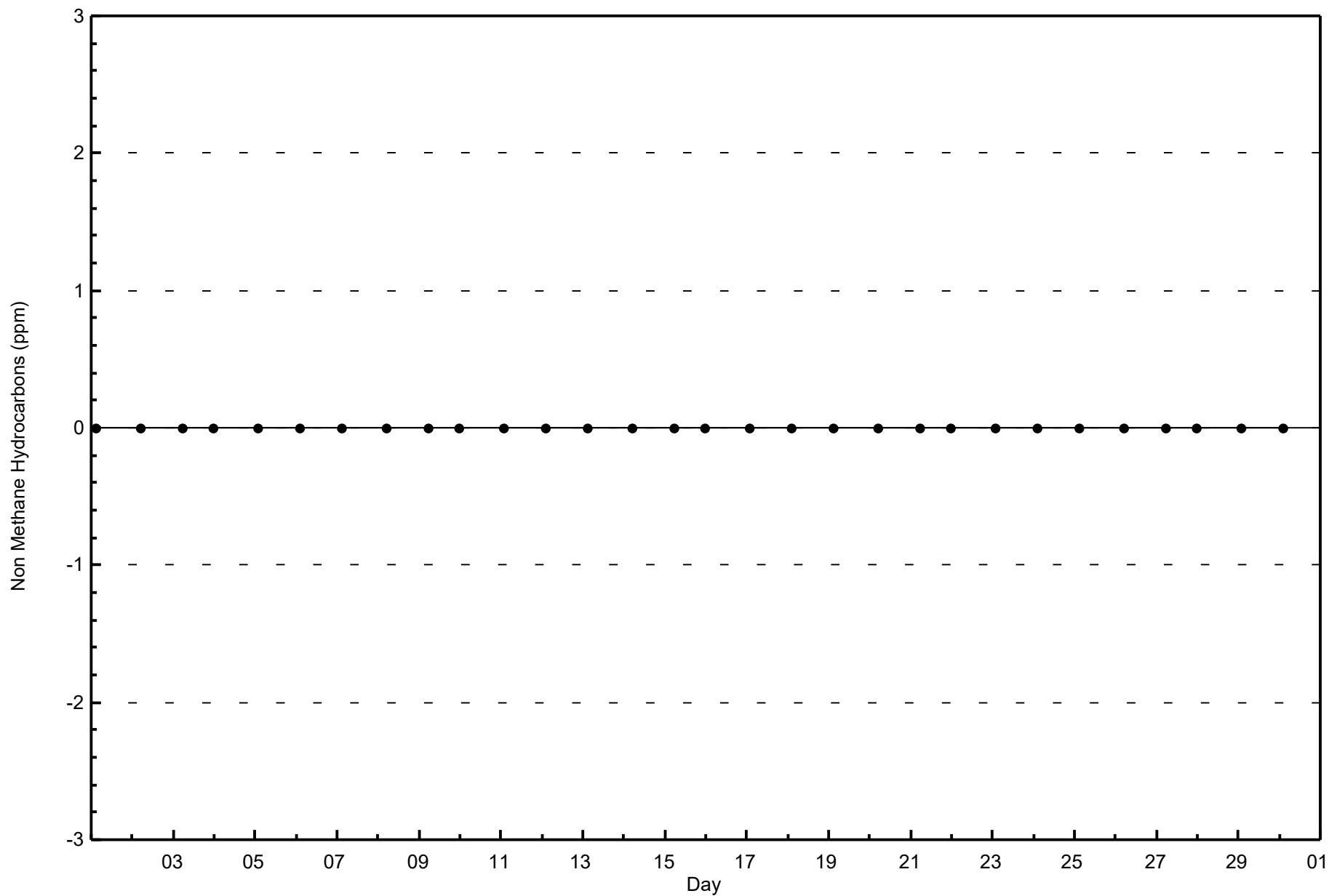
Non Methane Hydrocarbons (NMHC) - ppm
Mildred Lake

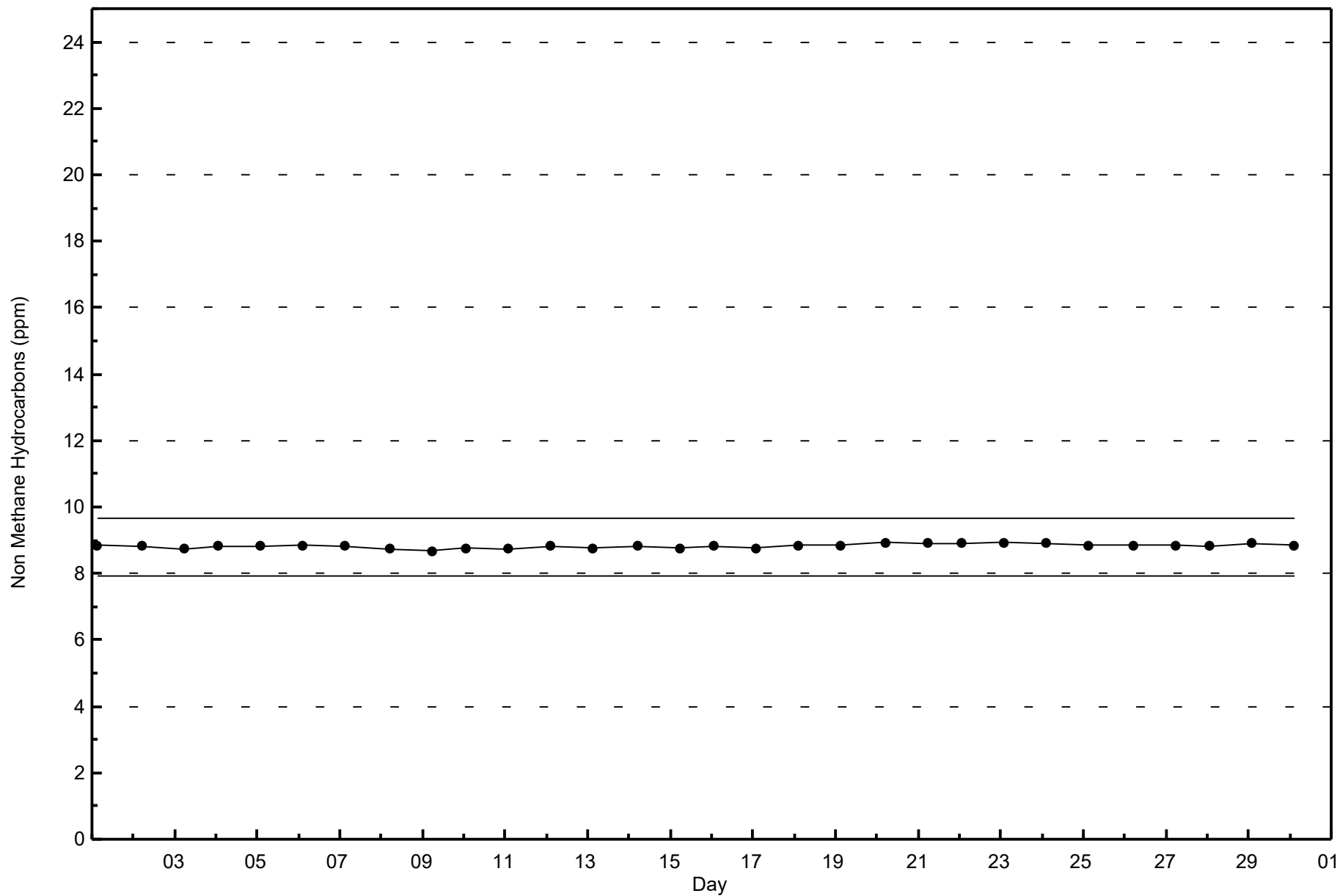




Wood Buffalo Environmental Association
Zero Responses

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



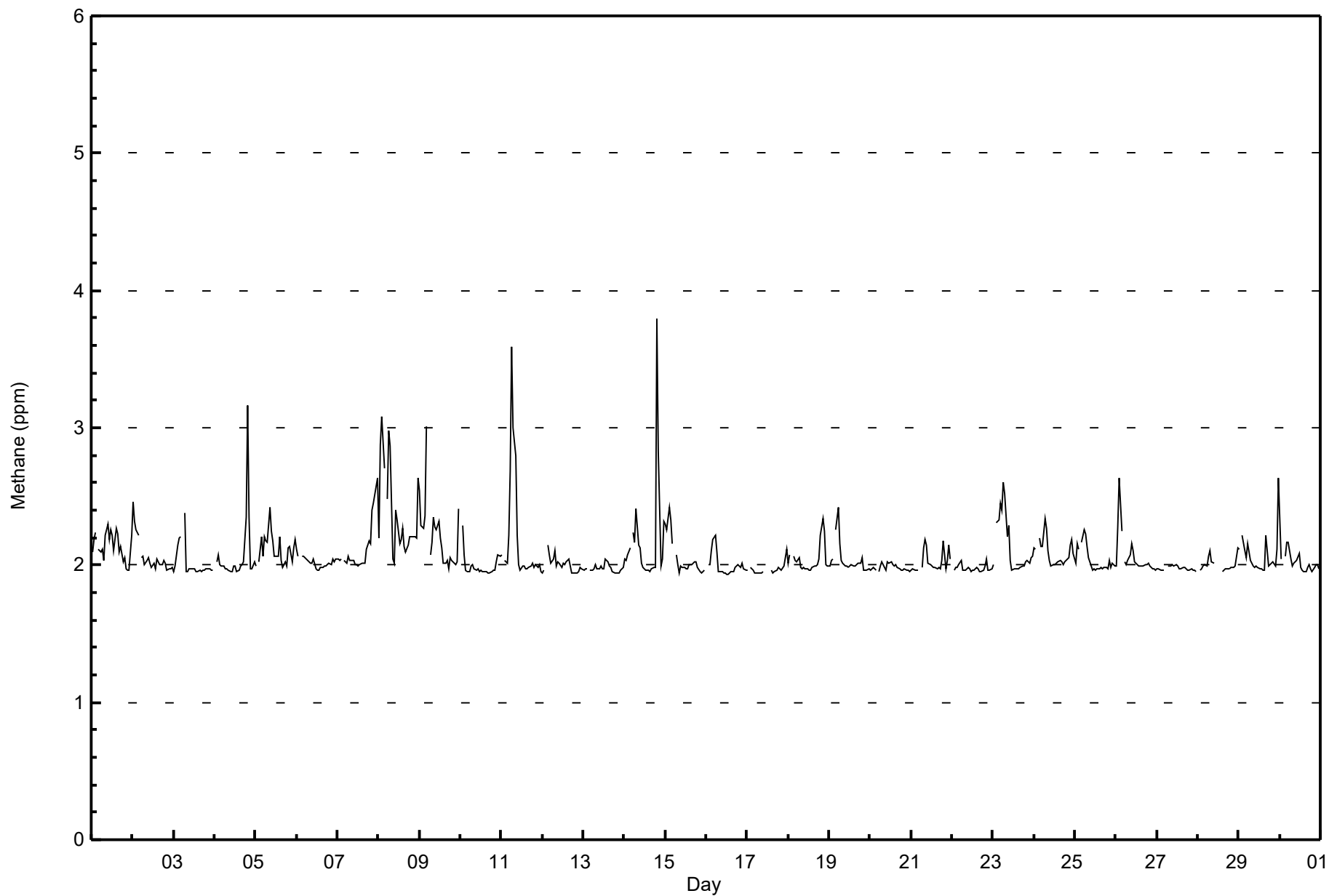


Number of Exceedences (AAAQO): Maximum Value: 3.8 ppm on Apr 14 20:00																	1-hr: 0 24-hr: 0 Maximum Daily Average: 2.4 ppm on Apr 8										Hours in Service: 720 Hours of Data: 682 Hours of Missing Data: 38 Hours of Calibration: 37 Percent Operational Time: 99.9				
Minimum Value: 1.9 ppm on Apr 16 14:00 Maximum Diurnal Average: 2.2 ppm at hour 7 Monthly Average: 2.07 ppm																	Minimum Daily Average: 2.0 ppm on Apr 17 Minimum Diurnal Average: 2.0 ppm at hour 14 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 = 2.9														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	2.1	2.2	2.2	Z	2.1	2.1	2.1	2.0	2.2	2.3	2.2	2.3	2.2	2.1	2.3	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.2	2.1	2.3					
2-Apr	2.5	2.3	2.3	2.2	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5					
3-Apr	2.0	2.0	2.1	2.2	2.2	Z	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4					
4-Apr	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	3.2	2.4	2.0	2.0	2.0	2.1	3.2					
5-Apr	2.0	Z	2.0	2.2	2.1	2.2	2.2	2.2	2.4	2.2	2.2	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.1	2.4					
6-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
7-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.4	2.5	2.5	2.6	2.1	2.6					
8-Apr	2.2	2.9	3.1	2.7	Z	2.5	3.0	2.9	2.0	2.0	2.4	2.3	2.2	2.2	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.6	2.4	3.1					
9-Apr	2.5	2.3	2.3	2.4	3.0	Z	2.1	2.2	2.4	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.4	2.2	3.0					
10-Apr	Z	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.3					
11-Apr	2.1	Z	2.0	2.0	2.2	2.7	3.6	3.0	2.8	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	2.2	3.6					
12-Apr	1.9	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1					
13-Apr	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0					
14-Apr	2.0	2.0	2.1	2.1	Z	2.2	2.2	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	3.8	2.8	2.0	2.0	2.3	2.2	3.8					
15-Apr	2.3	2.3	2.4	2.3	2.2	Z	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.4					
16-Apr	Z	2.0	2.0	2.1	2.2	2.2	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	2.0	2.0	2.0	2.0	2.0	2.0	2.2					
17-Apr	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	C	C	C	C	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1					
18-Apr	2.0	2.1	Z	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.0	2.0	2.0	2.3					
19-Apr	2.0	2.0	2.0	Z	2.3	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.4					
20-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
21-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.1	2.0	2.0	2.2					
22-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
23-Apr	2.0	Z	2.3	2.3	2.5	2.4	2.6	2.5	2.2	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.6					
24-Apr	2.1	2.1	Z	2.2	2.1	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.3					
25-Apr	2.0	2.2	2.1	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	2.0	2.3					
26-Apr	2.0	2.3	2.6	2.2	Z	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6					
27-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
28-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	C	C	C	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1					
29-Apr	2.1	Z	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.6	2.1	2.6					
30-Apr	2.3	2.0	Z	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3					
2.1 2.1 2.2 2.1 2.1 2.1 2.2 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.0 2.0 2.1																									Diurnal Average						
2.5 2.9 3.1 2.7 3.0 2.7 3.6 3.0 2.8 2.3 2.4 2.3 2.2 2.2 2.3 2.2 2.2 2.1 2.3 3.8 2.8 2.5 2.5 2.6																									Diurnal Maximum						
Z - zerospan C - Calibration M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Mildred Lake - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Mildred Lake - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	482	70.67	70.67
2.1 - 3.0	196	28.74	99.41
3.1 - 10.0	4	0.59	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Mildred Lake - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	89	38	14	10	9	8	44	49	36	28	16	22	33	17	25	37	475
2.1 - 3.0	12	3	1	4	5	17	37	35	13	12	5	4	9	16	11	11	195
3.1 - 10.0	1	0	0	0	0	1	2	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	102	41	15	14	14	26	83	84	49	40	21	26	42	33	36	48	674

Total Number of Valid Hours: 674

Total Number of Hours: 720



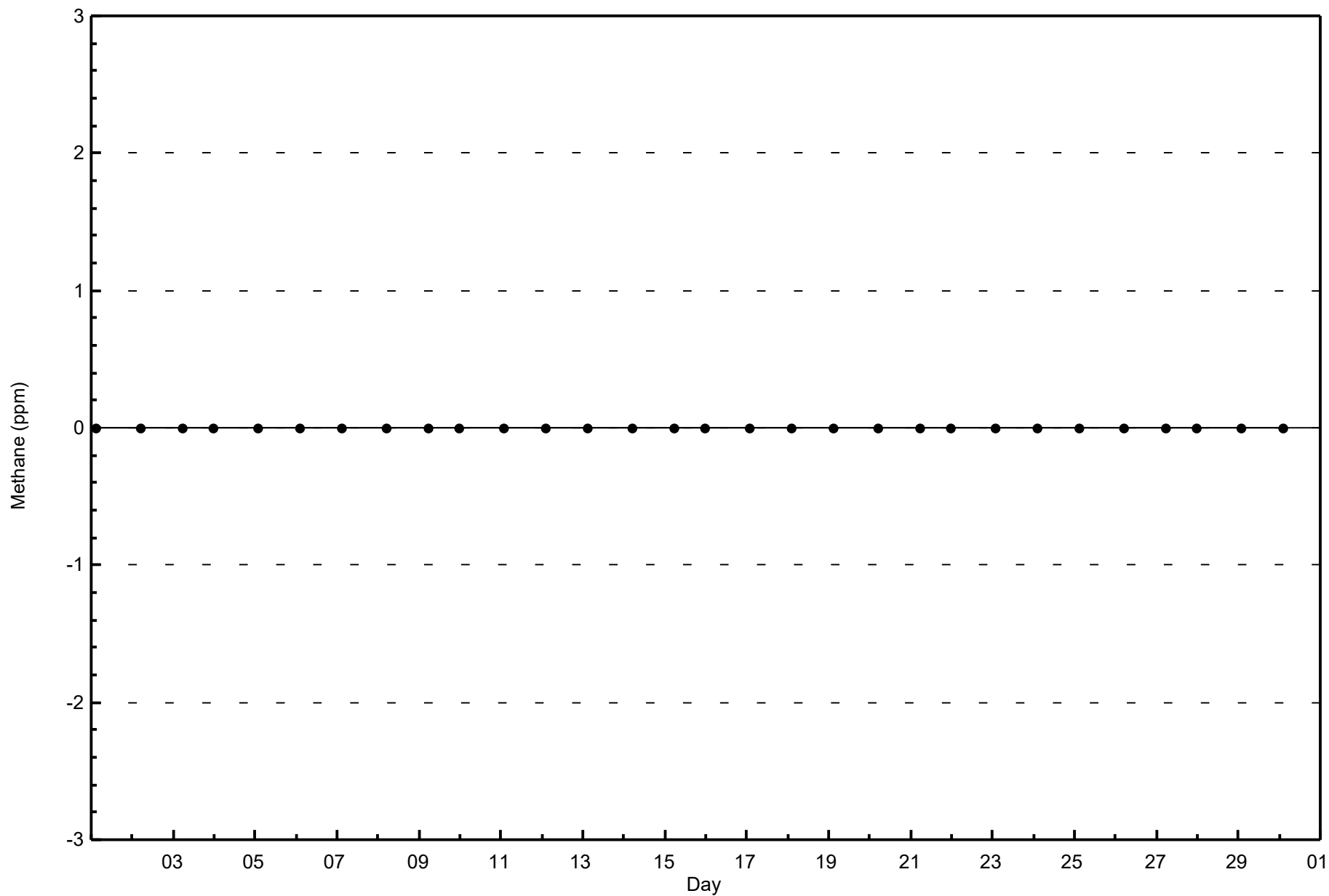
Methane (CH₄) - ppm
Mildred Lake





Wood Buffalo Environmental Association
Zero Responses

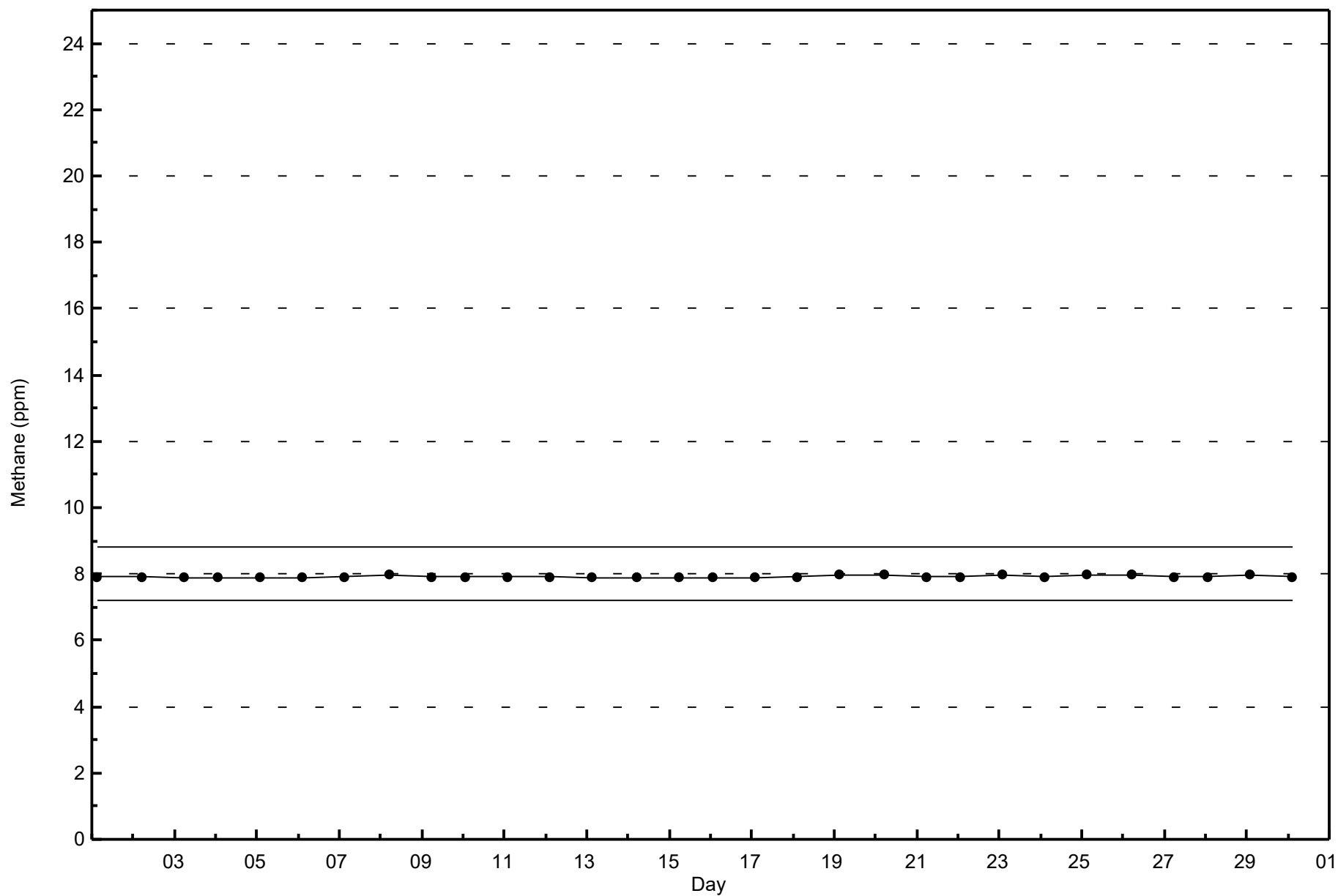
Methane (CH₄) - ppm
Mildred Lake - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Mildred Lake - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

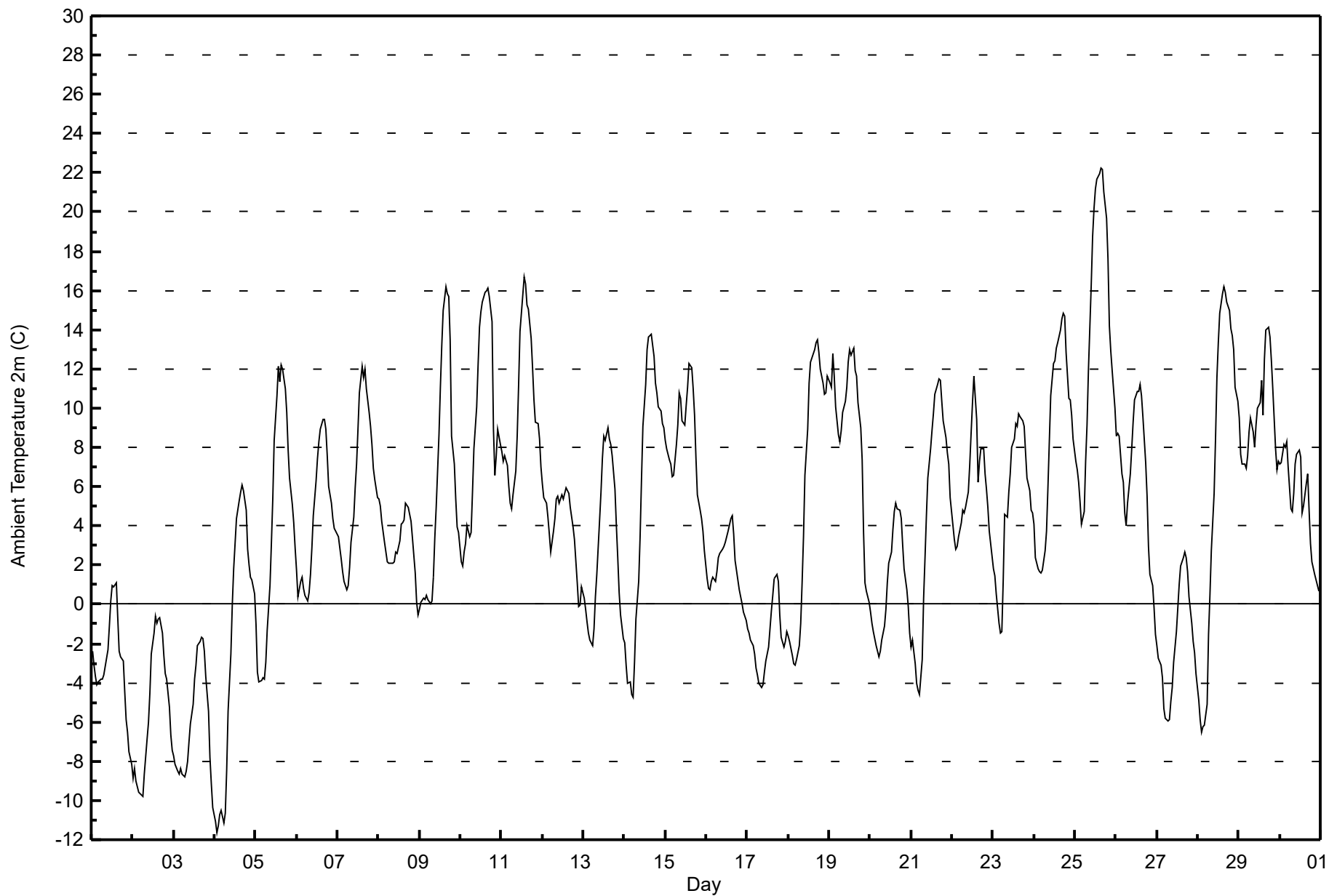
Mildred Lake - April 2025

Maximum Value: 22.3 C on Apr 25 16:00																				Maximum Daily Average: 13.9 C on Apr 25					Hours in Service: 720	
Minimum Value: -11.7 C on Apr 4 02:00																				Minimum Daily Average: -6.1 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 9.1 C at hour 16																				Minimum Diurnal Average: -0.3 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 4.28 C																				Percentiles: P ₁ = -10.3 P ₁₀ = -3.8 Q ₁ = -0.2 Median = 4.4 Q ₃ = 8.9 P ₉₀ = 12.3 P ₉₉ = 19.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	-2.4	-3.1	-3.6	-4.1	-3.9	-3.8	-3.8	-3.6	-3.2	-2.3	-1.1	0.2	0.9	0.9	1.1	-0.7	-2.4	-2.7	-2.9	-4.5	-5.9	-6.5	-7.5	-8.2	-3.0	1.1
2-Apr	-8.9	-8.4	-9.0	-9.6	-9.6	-9.8	-9.8	-8.7	-6.8	-6.0	-4.5	-2.5	-1.5	-0.6	-1.0	-0.7	-0.7	-1.4	-2.6	-3.5	-3.8	-5.2	-6.6	-7.5	-5.4	-0.6
3-Apr	-7.7	-8.1	-8.5	-8.6	-8.4	-8.7	-8.8	-8.5	-8.0	-7.0	-6.1	-5.1	-3.8	-3.1	-2.1	-1.9	-1.7	-1.8	-2.4	-3.7	-5.5	-7.8	-9.2	-10.4	-6.1	-1.7
4-Apr	-11.1	-11.7	-11.3	-10.7	-10.5	-11.2	-10.7	-8.5	-5.5	-2.5	0.0	1.8	3.1	4.4	5.3	5.7	6.1	5.8	4.8	2.8	2.0	1.4	1.3	0.5	-2.0	6.1
5-Apr	-1.0	-3.4	-3.9	-3.9	-3.7	-3.8	-3.0	-1.4	1.0	3.1	5.4	8.4	10.6	12.2	11.4	12.2	12.0	11.0	9.8	7.9	6.4	5.1	4.1	2.9	4.1	12.2
6-Apr	1.7	0.4	1.2	1.4	0.8	0.5	0.2	0.6	1.5	2.9	4.5	6.3	7.5	8.3	8.9	9.4	9.5	8.9	7.6	6.0	5.1	4.3	3.9	3.7	4.4	9.5
7-Apr	3.4	2.9	2.3	1.7	1.2	0.8	1.0	1.9	3.2	4.4	5.9	7.2	8.9	10.8	12.1	11.6	12.0	11.0	9.8	9.1	8.2	6.9	6.4	5.5	6.2	12.1
8-Apr	5.4	5.0	4.2	3.2	2.7	2.2	2.1	2.1	2.1	2.2	2.6	2.6	3.2	4.1	4.2	4.3	5.2	4.9	4.6	4.2	3.4	1.6	0.1	-0.6	3.1	5.4
9-Apr	-0.3	0.1	0.3	0.3	0.5	0.3	0.0	0.2	1.4	3.4	5.0	8.6	11.1	13.2	15.0	16.2	15.8	15.7	13.5	8.6	7.1	5.4	4.0	3.6	6.2	16.2
10-Apr	2.1	1.9	2.7	3.1	4.0	3.4	3.6	5.7	7.9	10.1	12.2	14.1	14.9	15.4	15.9	16.0	16.1	15.7	14.4	8.9	6.6	7.6	8.9	8.2	9.1	16.1
11-Apr	7.8	7.3	7.6	7.1	6.0	5.1	4.9	5.6	6.8	8.6	11.1	13.9	15.8	16.7	16.3	15.3	15.1	13.6	12.0	10.4	9.3	9.2	8.4	7.0	10.0	16.7
12-Apr	6.1	5.4	5.1	4.4	3.6	2.6	3.7	4.4	5.3	5.5	5.2	5.6	5.4	5.7	6.0	5.6	5.0	4.4	3.9	3.3	1.1	-0.1	0.0	0.9	4.1	6.1
13-Apr	0.3	-0.3	-0.9	-1.5	-1.8	-2.1	-1.3	0.4	1.5	4.3	5.7	7.4	8.6	8.4	9.0	8.5	8.1	7.6	5.9	4.0	2.4	0.6	-0.5	-1.8	3.0	9.0
14-Apr	-2.0	-3.1	-4.1	-4.0	-4.6	-4.8	-3.0	-0.7	1.1	3.4	6.4	9.1	11.2	13.0	13.6	13.7	13.8	12.7	11.3	10.8	10.1	9.9	9.2	9.0	5.5	13.8
15-Apr	8.4	7.9	7.4	7.2	6.5	6.6	8.1	9.2	10.8	10.5	9.4	9.1	10.1	11.1	12.2	12.0	11.0	9.7	7.4	5.6	4.8	4.4	3.7	2.7	8.2	12.2
16-Apr	1.3	0.8	0.8	1.2	1.4	1.2	1.7	2.4	2.6	2.8	3.0	3.2	3.5	3.8	4.4	4.5	3.6	2.2	1.2	0.7	0.4	0.0	-0.4	-0.9	1.9	4.5
17-Apr	-1.2	-1.5	-1.8	-2.1	-2.6	-3.3	-3.6	-4.0	-4.3	-4.1	-3.5	-2.9	-2.2	-1.2	-0.3	0.5	1.3	1.5	1.2	-0.6	-1.7	-2.1	-1.9	-1.4	-1.7	1.5
18-Apr	-1.6	-1.9	-2.6	-3.0	-3.1	-2.8	-2.1	-0.9	1.1	3.4	6.6	8.9	11.3	12.3	12.6	13.0	13.3	13.5	12.9	12.0	11.3	10.7	10.8	11.6	6.1	13.5
19-Apr	11.3	11.1	12.8	11.7	10.1	8.6	8.3	8.8	9.8	10.4	11.1	12.3	13.0	12.7	13.1	11.9	11.6	10.3	9.0	7.4	3.6	1.1	0.7	0.1	9.2	13.1
20-Apr	-0.4	-1.0	-1.4	-2.1	-2.4	-2.7	-2.4	-1.8	-1.1	-0.2	1.1	2.1	2.7	3.8	4.8	5.2	4.9	4.8	4.4	3.0	1.8	0.8	-0.1	-1.4	0.9	5.2
21-Apr	-2.2	-1.8	-3.0	-4.0	-4.4	-4.6	-2.8	0.3	2.4	4.5	6.4	7.9	8.8	9.7	10.7	11.2	11.5	11.5	10.4	9.4	8.5	7.7	7.2	5.5	4.6	11.5
22-Apr	4.0	3.3	2.8	2.9	3.5	4.2	4.8	4.7	4.9	5.7	7.1	8.7	10.3	11.6	9.4	6.2	7.3	7.9	7.9	6.6	5.8	5.0	3.7	2.4	5.9	11.6
23-Apr	1.8	1.5	0.5	-1.0	-1.5	-1.4	1.2	4.6	4.4	5.8	6.6	8.0	8.4	9.2	9.1	9.7	9.6	9.3	9.1	7.7	6.4	5.8	4.8	4.7	5.2	9.7
24-Apr	4.1	2.4	1.8	1.6	1.6	1.7	2.7	3.8	5.9	8.3	10.7	12.3	12.4	13.0	13.3	14.0	14.5	14.8	14.7	12.8	10.5	10.4	9.7	8.4	8.6	14.8
25-Apr	7.3	6.9	6.2	5.2	4.1	4.7	7.3	9.1	11.9	16.2	18.8	20.2	21.1	21.7	22.0	22.3	22.2	21.1	19.7	17.6	14.2	12.9	11.9	10.0	13.9	22.3
26-Apr	8.6	8.7	8.6	6.7	6.2	4.7	4.0	5.2	6.6	7.9	9.3	10.4	10.8	10.9	11.2	10.6	9.5	7.2	5.5	3.0	1.6	1.0	-0.2	-1.5	6.5	11.2
27-Apr	-2.1	-2.7	-3.1	-3.7	-5.3	-5.8	-5.9	-5.9	-5.0	-4.3	-2.9	-1.4	-0.2	1.0	2.0	2.4	2.7	2.4	1.7	0.4	-1.0	-1.9	-2.5	-3.5	-1.9	2.7
28-Apr	-4.9	-5.8	-6.5	-6.3	-6.2	-5.1	-1.5	0.5	2.7	5.6	8.4	11.6	13.4	14.9	15.8	16.2	15.9	15.4	15.0	14.1	13.7	13.0	11.0	10.3	6.7	16.2
29-Apr	9.5	7.7	7.2	7.2	6.9	7.6	8.8	9.5	8.8	8.0	9.1	10.0	10.3	11.4	9.6	12.5	13.9	14.1	13.6	12.4	11.0	7.9	6.8	7.3	9.6	14.1
30-Apr	7.2	7.2	8.2	8.0	8.3	7.0	4.9	4.7	5.7	7.1	7.7	7.8	7.5	4.6	5.0	6.1	6.7	4.8	3.1	2.2	1.5	1.2	1.0	0.7	5.3	8.3
																									Diurnal Average	
																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	185	25.69	25.69
0 - 10	394	54.72	80.42
10 - 20	134	18.61	99.03
> 20	7	0.97	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) - %

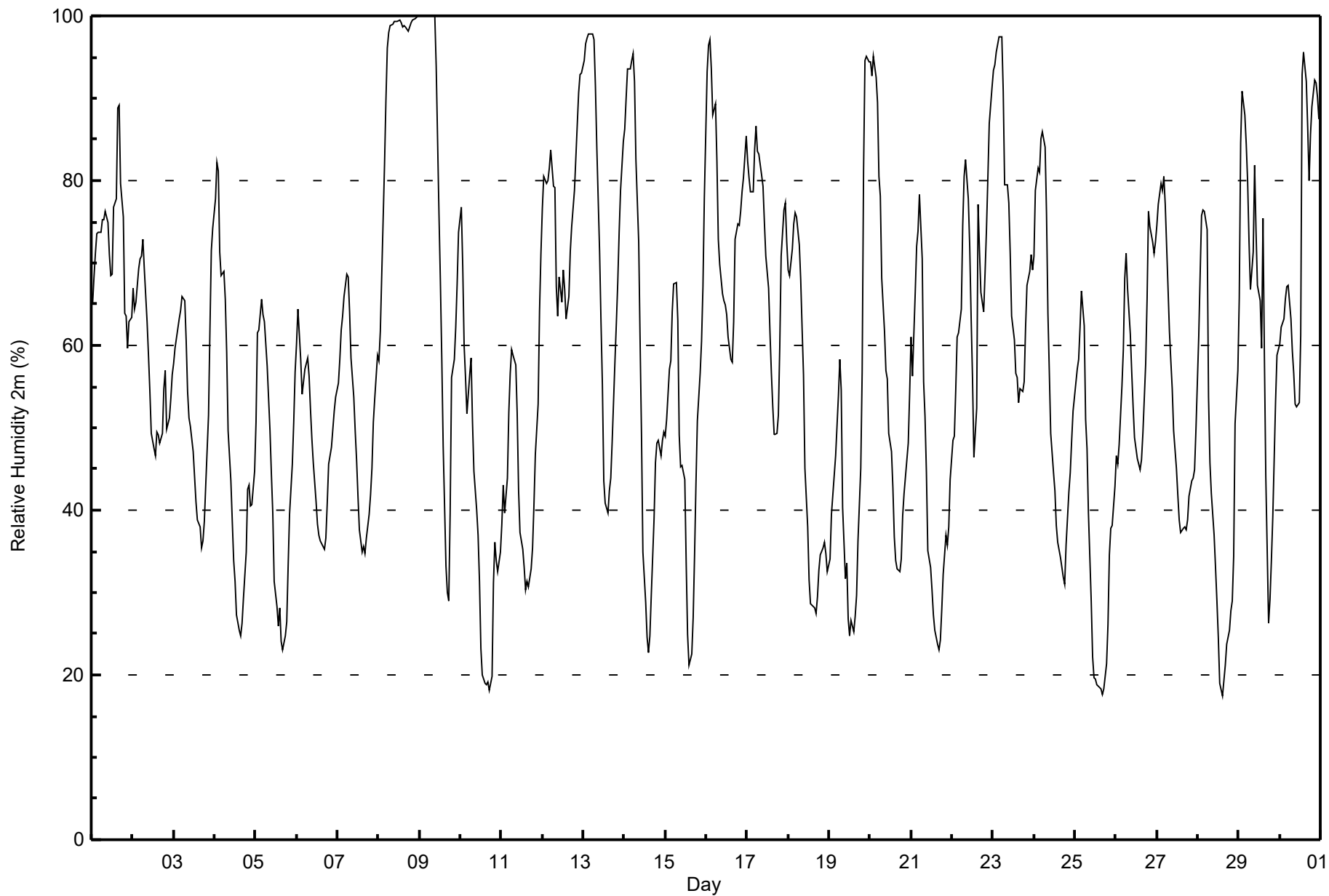
Mildred Lake - April 2025

Maximum Value: 100.0 % on Apr 9 00:00																				Maximum Daily Average: 93.3 % on Apr 8				Hours in Service: 720		
Minimum Value: 17.4 % on Apr 28 15:00																				Minimum Daily Average: 36.8 % on Apr 25				Hours of Data: 720		
Maximum Diurnal Average: 75.4 % at hour 6																				Minimum Diurnal Average: 42.8 % at hour 17				Hours of Missing Data: 0		
Monthly Average: 58.51 %																				Percentiles: P ₁ = 18.9 P ₁₀ = 30.7 Q ₁ = 41.9 Median = 58.2 Q ₃ = 73.9 P ₉₀ = 90.0 P ₉₉ = 100.0				Hours of Calibration: 0		
																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	65.1	68.2	71.2	73.6	73.7	73.8	75.2	75.3	76.3	74.9	71.0	68.5	68.7	76.8	77.8	88.8	89.1	79.6	75.6	63.8	63.6	59.7	62.9	63.4	72.4	89.1
2-Apr	67.0	64.5	65.3	69.2	70.5	70.9	73.0	69.3	63.0	58.8	54.4	49.3	47.5	46.6	49.4	49.1	48.1	49.3	54.7	57.0	49.8	51.2	53.5	56.4	57.8	73.0
3-Apr	57.7	59.7	62.0	63.3	64.2	65.9	65.4	60.4	54.5	51.1	50.1	47.1	44.0	41.0	38.7	37.9	35.5	36.2	38.7	43.1	51.6	61.8	71.5	74.2	53.2	74.2
4-Apr	77.9	82.2	81.2	71.4	68.6	69.0	65.5	59.2	49.7	43.6	38.6	34.0	31.3	27.4	25.4	24.8	26.3	29.4	35.0	42.5	43.0	40.6	40.6	44.7	48.0	82.2
5-Apr	50.6	61.5	61.9	65.6	63.8	62.9	60.1	57.4	49.6	44.3	39.6	31.3	28.4	26.0	28.2	24.1	23.1	24.8	26.4	33.3	39.5	45.6	50.6	56.7	44.0	65.6
6-Apr	60.2	64.4	58.3	54.1	55.6	57.1	58.5	56.3	52.2	48.7	45.7	41.0	38.3	37.0	36.3	35.5	35.3	36.6	40.8	45.6	47.6	49.8	52.0	53.6	48.4	64.4
7-Apr	55.4	58.3	61.8	63.5	66.0	68.6	68.3	64.1	58.4	53.7	49.7	46.1	41.7	37.7	34.9	35.5	34.8	36.6	39.5	41.9	45.0	50.8	53.6	58.8	51.0	68.6
8-Apr	58.2	61.7	68.5	81.8	89.7	96.1	98.1	98.8	99.1	99.3	99.4	99.4	99.4	99.1	98.6	98.9	98.7	98.1	98.6	99.2	99.4	99.7	99.9	100.0	93.3	100.0
9-Apr	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	75.9	67.9	58.5	47.8	33.2	30.1	29.1	39.7	56.1	58.4	62.2	67.5	73.7	74.7	100.0
10-Apr	76.8	69.7	60.0	56.1	51.6	56.4	58.5	50.8	44.8	40.0	37.0	31.3	23.2	20.0	19.0	18.8	19.2	18.1	19.8	31.2	36.1	33.8	32.5	34.9	39.1	76.8
11-Apr	38.3	43.1	39.6	43.9	51.8	56.6	59.5	58.8	57.6	51.6	42.4	37.3	35.3	33.1	30.3	31.4	30.7	33.0	35.5	40.7	46.8	52.8	64.3	71.2	45.2	71.2
12-Apr	76.6	80.5	79.7	80.1	81.5	83.7	79.3	79.2	67.1	63.6	68.3	65.2	69.1	66.8	63.3	66.0	71.3	74.4	76.6	78.9	86.9	90.7	92.9	93.1	76.4	93.1
13-Apr	94.6	96.6	97.2	97.9	97.8	97.7	97.2	91.5	84.1	71.4	62.9	55.3	43.6	40.9	39.6	42.3	43.8	48.3	58.1	62.8	67.6	73.7	78.7	84.8	72.0	97.9
14-Apr	86.3	90.0	93.6	93.6	94.7	95.4	92.0	82.5	72.6	60.5	49.1	35.0	28.8	24.7	22.7	24.8	29.6	38.9	45.7	48.1	48.4	46.7	48.4	49.4	58.4	95.4
15-Apr	49.0	51.1	57.1	58.2	64.1	67.5	67.6	63.0	49.1	45.2	45.5	43.8	33.6	24.9	21.2	22.5	27.0	34.5	43.2	50.9	56.7	60.5	67.0	78.0	49.2	78.0
16-Apr	93.3	96.5	97.1	93.6	87.9	89.3	82.5	72.9	69.9	66.3	65.4	65.0	63.8	61.0	58.3	58.0	62.9	72.8	74.8	74.6	76.3	78.6	80.3	85.4	76.1	97.1
17-Apr	82.4	80.3	78.6	78.6	83.7	86.6	83.6	83.3	80.7	79.4	75.0	70.9	67.0	61.6	56.5	52.5	49.2	49.3	51.5	59.9	70.8	76.5	77.2	72.5	71.1	86.6
18-Apr	69.1	68.4	71.7	74.8	76.1	75.7	72.3	68.0	62.0	56.5	45.1	37.9	31.5	28.6	28.5	28.2	27.4	29.4	32.6	34.5	35.4	36.2	34.8	32.6	48.2	76.1
19-Apr	34.2	39.6	41.8	44.3	46.6	53.9	58.4	54.6	40.4	31.7	33.6	26.8	24.7	26.7	25.3	27.2	29.7	36.3	45.0	56.7	81.1	94.6	95.1	94.4	47.6	95.1
20-Apr	94.3	92.8	95.1	92.6	89.5	80.5	78.1	68.2	61.8	56.9	55.9	49.4	47.2	42.8	36.8	33.9	32.8	32.6	34.1	39.2	42.1	46.1	48.1	54.2	58.5	95.1
21-Apr	61.0	56.3	66.4	72.1	73.8	78.2	70.6	55.6	51.4	44.5	35.0	33.0	30.3	27.3	25.4	23.7	23.0	24.2	28.0	32.2	36.9	35.7	38.0	43.8	44.4	78.2
22-Apr	48.4	49.0	54.5	61.0	61.6	64.5	74.7	80.5	82.5	77.7	72.1	63.5	56.1	46.4	52.3	77.0	71.6	66.4	64.1	68.8	74.0	80.3	86.9	91.3	67.7	91.3
23-Apr	93.4	94.0	95.6	97.4	97.5	97.5	90.8	79.4	79.4	77.3	71.1	63.6	60.7	56.5	56.1	53.0	54.7	54.5	55.6	62.3	67.3	68.9	71.0	69.2	73.6	97.5
24-Apr	70.8	78.9	81.5	81.0	85.2	86.0	84.1	75.9	63.8	56.8	49.3	44.6	42.4	38.1	36.0	34.3	33.1	31.9	31.0	35.8	42.2	44.6	48.5	52.0	55.3	86.0
25-Apr	55.4	57.1	58.3	62.2	66.7	62.4	51.1	47.4	39.6	29.0	22.2	19.6	19.5	18.9	18.4	18.3	17.7	18.3	21.3	26.1	34.6	37.8	38.2	42.8	36.8	66.7
26-Apr	46.7	45.7	47.9	55.1	59.5	68.2	71.3	67.0	61.3	56.7	52.6	48.7	46.3	45.6	44.9	46.1	49.2	57.8	65.6	76.3	74.4	72.6	71.1	72.5	58.5	76.3
27-Apr	74.6	77.1	79.7	78.8	80.5	77.2	66.9	61.7	58.2	54.8	49.6	45.1	41.9	38.8	37.3	37.8	37.9	37.6	38.8	41.7	43.5	43.9	44.8	49.8	54.1	80.5
28-Apr	61.2	68.7	75.8	76.5	76.3	74.1	53.8	45.8	42.1	36.9	33.0	29.1	24.6	18.9	17.4	19.3	21.1	23.8	25.5	27.7	29.0	34.4	50.5	57.0	42.6	76.5
29-Apr	65.8	84.6	90.8	87.9	84.4	79.8	72.6	66.7	71.4	81.9	73.9	67.3	65.4	59.7	75.4	58.7	44.1	26.2	29.2	33.8	39.2	53.2	58.8	59.5	63.8	90.8
30-Apr	60.2	62.2	63.3	65.6	67.0	67.3	63.1	59.3	56.7	52.8	52.6	53.0	61.2	92.9	95.7	92.0	86.4	80.1	85.7	89.0	92.3	91.9	90.1	87.5	73.7	95.7
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - April 2025

Maximum Speed: 33 km/h on Apr 16 10:00														Maximum Daily Speed Average: 17.1 km/h on Apr 18														Hours in Service: 720			
Minimum Speed Value: 0 km/h on Apr 5 02:00														Minimum Daily Speed Average: 1.3 km/h on Apr 24														Hours of Data: 711			
Maximum Diurnal Speed Average: 3.3 km/h at hour 18														Minimum Diurnal Speed Average: 0.3 km/h at hour 23														Hours of Missing Data: 9			
Monthly Average Velocity: 1.0 km/h 264.7 deg														Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 6 Median = 10 Q ₃ = 14 P ₉₀ = 18 P ₉₉ = 27														Percent Operational Time: 98.8			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	SE11	SE10	SE8	SE12	SE11	SSE13	SE12	SSE12	SSE9	SSE13	SSE14	SSE14	SSE9	SSE7	SSE6	WNW14	WNW17	WNW15	NNW13	NW16	NW15	NW14	NW14	WNW12	S2.1	WNW17					
2-Apr	WNW8	NW11	WNW10	WNW9	WNW8	WNW13	W13	W12	WNW13	WNW13	WNW12	WNW6	NW10	NNW17	N15	N14	N14	N14	NNW7	NW8	NNW10	N7	N6	N7	NW9.2	NNW17					
3-Apr	NNW11	NW12	NW12	NW12	WNW10	WNW10	NW11	NW16	NW18	NW18	NNW18	NNW14	NW15	NW18	NW15	NW16	NNW18	NNW16	NNW11	N6	N5	NE2	SW3	SE2	NW11.3	NNW18					
4-Apr	S3	SSW4	SW4	SW4	SSW4	S6	SSE6	S8	S6	S8	S8	SSE9	SSE10	SSE8	SSE8	SE7	SE8	SE9	SE8	SE7	SSE7	SSE7	SSE9	SSE5	SSE6.3	SSE10					
5-Apr	SSW5	S0	E4	S2	SSE6	SE6	SE4	S4	SSE8	SSE6	SSW5	SSW4	SSW4	W5	NW15	NNW13	N12	N10	N11	NNW13	N13	N12	N8	N7	NNW2.4	NW15					
6-Apr	ENE3	ENE5	ESE8	ESE7	ESE8	ESE10	SE11	SE12	SE18	SE15	SE16	SE21	SE20	SE19	SE21	SE21	SE22	SE21	SE17	SE15	SE19	SSE24	SSE23	SE22	SE15.3	SSE24					
7-Apr	SSE22	SSE19	SE14	SSE17	SSE19	SE14	SE12	SE12	SE16	SSE18	SE16	SSE19	SE19	SE17	SE16	SE18	SE14	ESE10	ESE7	ESE8	ESE7	SE6	ESE3	W2	SE13.3	SSE22					
8-Apr	SSE4	SE4	ESE2	N6	ESE1	SSE3	SE4	SSE4	SW2	SE5	SE6	E6	ESE4	SSE4	SE2	S3	E4	NNE4	ESE1	NNW2	NNW1	NNE2	NNW1	SSW3	SE1.8	E6					
9-Apr	UO	SSW2	SSE4	SE3	S6	S7	S7	SE4	SE3	E3	SE5	SSE8	SE10	SE11	SSE5	WNW6	NW5	N3	ENE6	ENE5	ENE6	ENE3	SSE3	SW3	SE2.9	SE11					
10-Apr	SSE4	SW3	SW7	SW8	SW10	SW9	SSW8	WSW12	SSW7	S7	SSW10	SW11	WSW13	WSW14	WSW11	SW9	SSW8	SSW7	SE4	E6	E8	E9	ESE10	E9	SSW5.5	WSW14					
11-Apr	SE6	E5	E8	NE6	NW5	NW5	N4	WSW2	E8	S7	S9	SSW8	SW9	WSW14	WSW18	W18	W19	W19	W14	WSW9	WSW9	WSW13	W18	SW10	WSW6.2	W19					
12-Apr	WSW10	WSW10	W11	W10	W9	WSW7	W6	WNW12	WNW13	WNW14	W15	W13	WNW13	WNW13	WNW14	WNW14	NW19	NW19	NW14	NNW5	NNW3	N4	NNE4	NE3	WNW9.3	NW19					
13-Apr	ENE4	E3	ENE4	NE4	NE2	NNE2	NE1	NNW5	NNW6	SW4	W4	E1	NW9	NNW16	NNW15	N13	N15	N12	NNE10	NE7	NNE7	N6	N6	N5	N5.5	NNW16					
14-Apr	N6	N5	N5	NNW4	N4	S2	SE4	SSE6	SSE9	SSE12	SSE11	SE13	SE13	SE16	SSE15	SSE14	SSW10	SSW8	SSE5	SE7	SE8	SE10	ESE8	ESE10	SSE6.2	SE16					
15-Apr	SE12	SE11	SSE9	SE8	SSE6	S6	SSW5	SSW12	WSW20	WSW27	WSW23	WSW23	W23	W24	WSW22	WSW24	W21	WNW25	WNW26	WNW31	W27	W27	W23	W22	WSW14.9	WNW31					
16-Apr	W17	W16	W15	WNW12	WNW14	WNW14	NW19	NW30	NW30	NW33	NNW30	NNW26	NNW28	NNW29	NNW23	NNW23	N15	N11	N15	N12	NNW8	NNE5	N7	N10	NW16.9	NW33					
17-Apr	N13	N15	N15	N17	N14	N12	N11	NNE13	N14	N14	N15	N16	N15	N17	N12	NE9	N8	NNW10	NNE6	ENE6	E6	E6	SE7	SE10	N9.9	N17					
18-Apr	SE13	SSE15	SSE14	SSE14	SSE14	SE16	SSE19	SSE15	SSE15	SSE17	SSE21	SSE22	SSE22	SSE23	S22	S21	S21	SSE17	SSE15	SSE19	SE18	SSE18	S13	SSW16	SSE17.1	SSE23					
19-Apr	SSW15	SW13	WSW15	W15	WNW14	WNW10	W13	WNW18	W16	W18	W18	W18	W19	WNW19	W20	W21	W20	W16	NW19	NW18	NNE14	NNE13	N10	UO	WNW13.3	W21					
20-Apr	UO	UO	UO	UO	UO	UO	UO	N9	N8	NW5	W7	W6	SSE6	SW7	S7	ESE4	NNE6	NNE10	NNE8	NNE7	NNE8	NE8	NE6	NNE3	---	NNE10					
21-Apr	ENE3	ENE5	NNE2	NNE3	N3	N2	NNE2	SSW0	S5	S7	SSE9	SSE8	SSE5	SSE4	S2	SE8	SE6	SE12	SSE11	SSE10	S9	SSE10	SSE13	SE6	SSE4.8	SSE13					
22-Apr	SSE5	SSE5	SSE7	SSW5	S6	S8	S8	SSW8	S11	SSE15	SSE17	SSE15	SSE17	SSE15	SW17	S16	S17	S12	ENE4	ESE7	NNE6	NE3	ESE1	SE2	S7.8	SW17					
23-Apr	WSW1	NNW6	WSW1	SSW2	SSW2	ENE0	N1	NE1	N10	NNW12	N13	N13	N16	NNE15	NNE12	NNE12	N13	N9	N7	NNW8	NNW8	NNW8	N8	N10	N7.2	N16					
24-Apr	N7	NNW3	NNE4	NNE4	NW1	SE1	SSW3	SSW5	SW2	SSW2	S4	S6	W3	NNW7	N5	N4	NE5	ENE6	ESE7	ESE6	SE6	ESE7	SE7	ESE7	E1.3	ESE7					
25-Apr	ESE6	SE8	ESE9	SE8	SE6	SE7	SE10	SE10	SE10	S15	S24	S24	S22	S22	SSW16	SSW16	SSW17	SSW14	SSW11	S8	S7	S8	SSW6	SSW2	S10.5	S24					
26-Apr	SE3	SE6	S5	SE2	N10	N11	N14	N9	NNW9	N12	NNW14	N15	NNE18	N18	N18	N19	N19	N18	N16	N17	N13	NNE11	N10	NNE8	N11.0	N19					
27-Apr	N6	N6	N9	N15	NNE15	NNE13	N14	N14	NNW11	NNW11	N10	N8	NNE8	N8	N9	NNE9	NNE10	NNE12	NNE12	NE10	NNE9	NNE9	NE7	E4	NNE9.3	NNE15					
28-Apr	NE3	NNE2	NNE3	NNW2	N3	SW1	SSE12	SSE13	SSE11	SSE10	SE11	SE16	SSE17	S17	S19	S19	SSW16	S15	S13	S10	SSW16	SSW14	SSW13	SSE10	S9.4	S19					
29-Apr	S10	S6	SE7	S8	WSW8	WSW10	W10	W14	W16	W15	W15	WNW15	NW15	NW17	NNW5	WSW3	NW9	N15	N11	N7	N7	NNE3	S3	SSW5	WNW5.6	NW17					
30-Apr	S5	SW7	WSW8	W9	W10	NNW11	N12	N12	N11	NNW9	NNW8	N10	NNE14	N8	NE6	N7	NNW9	N19	N18	N18	N14	N14	N13	N13	N8.7	N19					
SSE2.1 S1.3 S1.0 SW0.8WSW1.4 SW1.0SSW0.9 W1.9WSW2.2WSW2.7 SW2.6SSW2.6 SW1.8 W2.6 W3.1 W2.4WNW2.9NNW3.3 N3.1 N2.3 N1.9 NE1.0 E0.3 SE0.7																										Diurnal Average					
SSE22 SSE19WSW15 N17 SSE19 SE16 NW19 NW30 NW30 NW33NNW30 NNW26 NNW28 NNW29 NNW23 WSW24 SE22WNW25WNW26WNW31 W27 W27 SSE23 W22																										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

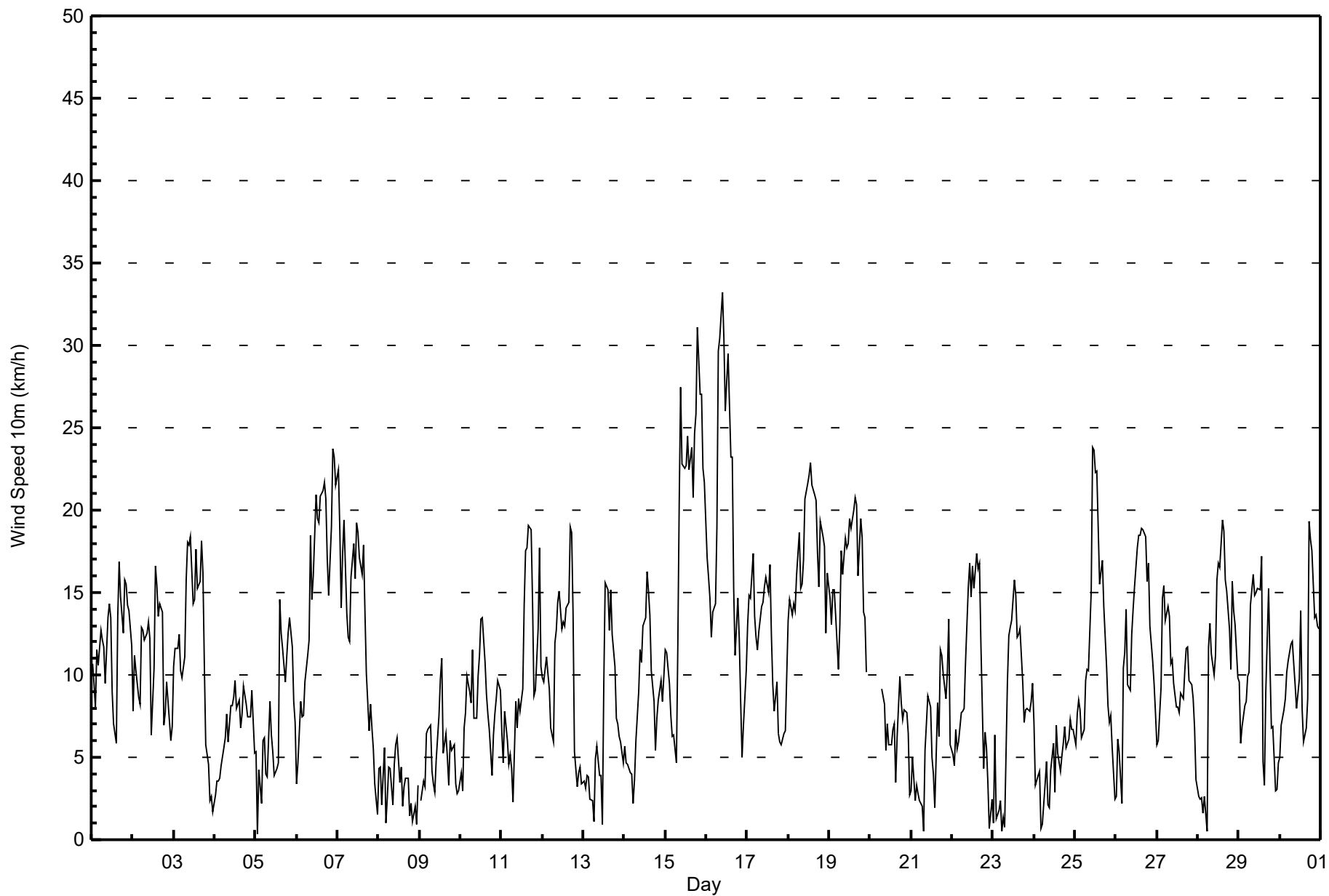
Wind Speed 10m (WS10) - km/h
Mildred Lake - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on Apr 15 20:00																		Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8								
Minimum Value: 0 km/h on Apr 12 22:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	7	5	4	4	3	3	3	3	3	3	7
2-Apr	2	3	3	2	2	4	4	3	4	3	3	3	4	4	4	4	4	4	2	2	2	2	2	2	2	4
3-Apr	2	3	2	3	2	2	3	4	4	4	5	4	5	5	4	5	4	4	3	2	1	1	1	1	1	5
4-Apr	1	1	3	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	1	1	3
5-Apr	1	1	1	1	2	2	1	1	2	1	2	2	2	3	3	3	3	2	3	2	2	3	2	1	1	3
6-Apr	1	2	3	2	2	3	3	3	4	3	4	5	5	4	5	5	5	5	3	3	4	4	4	4	4	5
7-Apr	4	5	4	5	4	5	4	3	4	3	4	4	4	4	4	4	5	3	2	2	2	2	3	2	5	
8-Apr	1	1	1	1	2	2	1	1	1	1	1	2	1	1	2	2	1	1	2	1	1	1	1	1	1	2
9-Apr	UO	2	1	1	1	2	2	1	1	2	1	2	2	2	3	2	2	1	1	1	1	2	2	2	2	3
10-Apr	2	2	3	3	3	3	3	4	4	2	3	4	4	4	4	3	3	2	1	1	2	2	2	2	2	4
11-Apr	2	3	2	2	2	3	2	1	3	3	2	2	3	5	6	5	6	6	5	3	3	4	6	4	4	6
12-Apr	3	3	4	4	4	2	3	4	3	5	4	4	4	4	4	4	4	4	5	2	1	0	1	1	1	5
13-Apr	1	1	1	1	1	1	1	2	2	2	2	3	7	4	5	4	4	4	3	2	2	2	1	1	1	7
14-Apr	1	1	1	1	1	1	1	2	2	2	2	3	3	4	4	4	4	3	1	1	2	2	2	3	4	
15-Apr	3	2	2	1	2	3	2	4	8	9	8	8	7	8	7	8	7	8	8	10	9	8	7	6	10	
16-Apr	5	5	4	4	4	4	6	8	6	7	6	5	7	7	5	5	4	3	4	3	2	2	2	4	8	
17-Apr	4	4	4	4	4	3	3	4	3	4	4	4	4	4	4	4	3	3	2	2	1	1	2	3	4	
18-Apr	4	4	3	3	3	3	4	3	3	3	5	5	6	5	5	5	5	4	3	4	4	4	6	4	6	
19-Apr	4	4	6	4	4	3	5	5	5	6	5	6	6	6	6	7	6	5	6	7	4	4	3	UO	7	
20-Apr	UO	UO	UO	UO	UO	UO	UO	4	2	3	3	3	3	2	2	3	3	3	2	2	2	2	2	2	4	
21-Apr	2	3	2	1	1	1	1	2	2	2	2	2	3	3	3	3	4	3	2	4	4	2	3	3	4	
22-Apr	2	2	2	3	2	2	2	2	3	3	3	4	4	4	7	5	4	5	2	1	4	1	2	1	7	
23-Apr	2	2	2	1	1	1	1	2	3	3	3	4	4	4	4	3	3	3	2	1	1	1	1	2	4	
24-Apr	2	2	2	1	1	1	1	1	2	2	2	2	2	3	2	2	2	2	2	1	1	1	1	1	3	
25-Apr	1	1	2	1	4	2	3	3	3	8	5	7	7	6	5	5	5	5	3	2	1	1	1	2	8	
26-Apr	2	2	3	2	6	3	3	3	3	3	4	4	5	5	5	5	5	5	4	5	3	3	2	2	6	
27-Apr	2	1	2	4	4	4	4	3	4	4	4	4	4	4	4	4	3	3	4	3	3	2	2	1	4	
28-Apr	1	1	1	1	1	1	3	3	3	2	3	4	4	6	6	5	5	4	3	4	5	6	5	2	6	
29-Apr	3	1	1	2	3	4	4	5	4	4	4	5	4	6	6	3	6	5	3	2	1	2	1	1	6	
30-Apr	2	2	3	4	3	4	3	3	3	3	2	3	4	3	2	1	2	6	4	4	3	3	3	3	6	
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	153	21.52	21.52
6 - 11	268	37.69	59.21
12 - 19	241	33.90	93.11
20 - 28	43	6.05	99.16
29 - 38	6	0.84	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	14	14	9	10	7	7	15	15	12	18	9	4	3	1	4	11	153
6 - 11	42	17	8	4	8	21	36	32	26	11	10	10	8	9	6	20	268
12 - 19	54	12	0	0	0	0	29	35	10	11	2	7	24	22	23	12	241
20 - 28	0	0	0	0	0	0	7	7	7	0	0	6	10	2	0	4	43
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	2	6
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	110	43	17	14	15	28	87	89	55	40	21	27	45	35	36	49	711

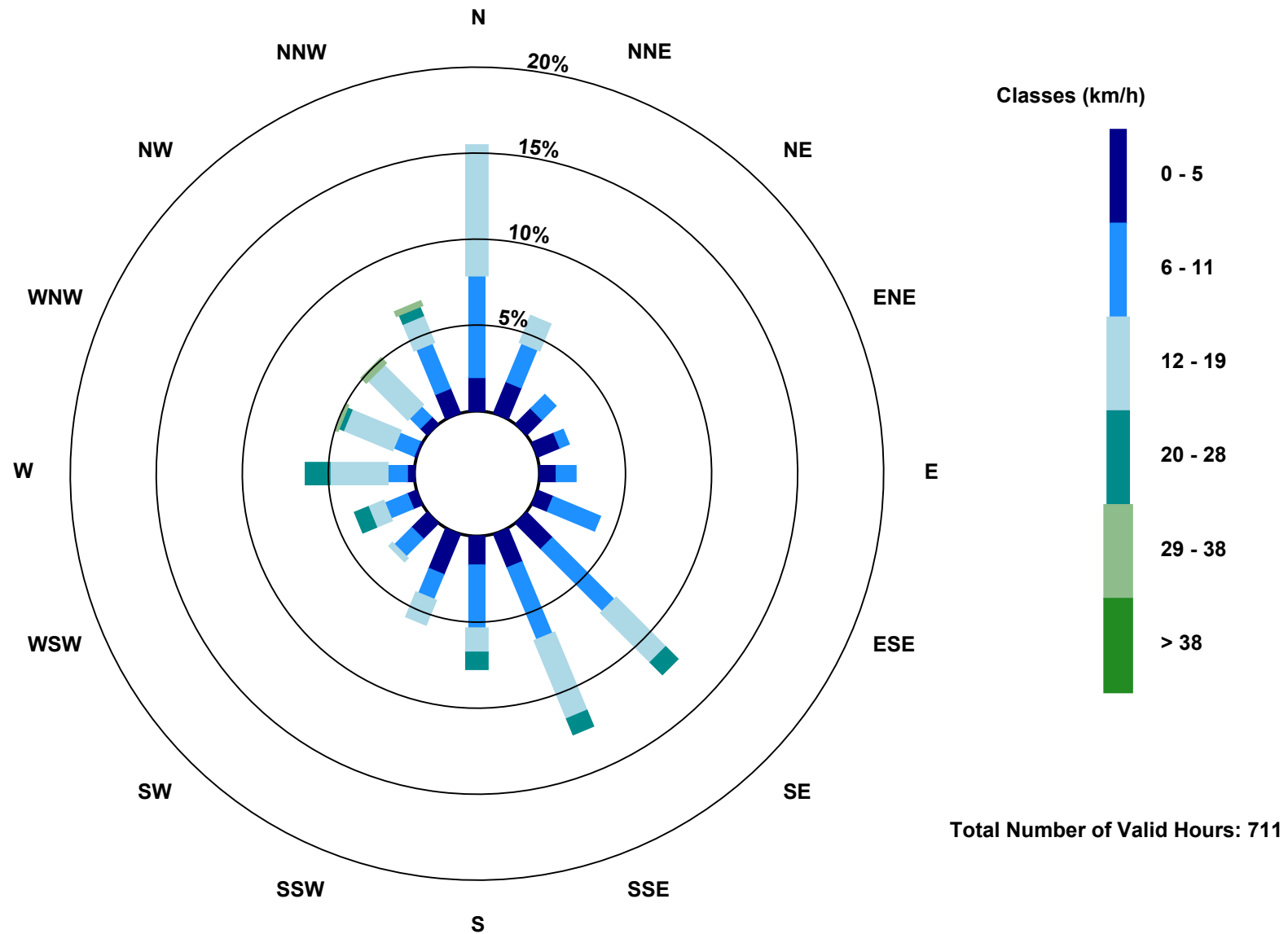
Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - April 2025

Direction of Maximum Speed: 326 deg on Apr 16 10:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 159.8 deg on Apr 18																				Hours of Data:		711			
Direction of Minimum Speed: 179 deg on Apr 5 02:00										Direction of Minimum Daily Speed Average: 1.3 deg on Apr 24										Hours of Missing Data:		9			
Monthly Average Direction: 264.7 deg																				Percent Operational Time:		98.8			
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	131	130	137	142	140	147	146	156	161	153	149	148	156	149	159	295	290	300	333	317	326	320	317	301	189.8
2-Apr	294	304	302	287	288	282	277	277	286	302	301	282	312	339	351	351	3	349	346	315	339	9	7	0	318.1
3-Apr	329	315	310	312	300	303	312	319	316	323	333	337	318	322	307	315	331	332	331	351	9	53	233	133	321.5
4-Apr	190	210	225	223	205	171	165	182	181	188	173	156	152	157	165	130	141	146	144	142	165	159	153	158	164.0
5-Apr	200	179	95	184	168	131	131	185	160	157	197	210	209	262	316	345	360	360	357	348	353	353	354	350	344.3
6-Apr	57	72	112	116	123	120	127	137	145	132	129	141	142	140	142	140	141	141	141	143	146	149	148	145	138.0
7-Apr	147	147	139	148	147	139	138	130	145	148	138	148	144	142	140	140	129	122	113	116	123	137	123	260	140.1
8-Apr	159	140	108	350	121	168	142	163	236	142	136	99	122	153	134	178	82	15	122	331	343	12	347	194	130.3
9-Apr	UO	208	154	133	170	175	170	132	144	99	134	155	129	140	154	288	308	359	65	58	61	68	165	228	138.6
10-Apr	159	226	217	214	229	221	209	239	213	190	201	229	255	237	238	225	203	194	146	98	83	101	109	101	204.7
11-Apr	143	95	80	47	323	315	5	248	96	184	171	197	215	253	253	273	268	271	275	251	248	249	259	234	251.0
12-Apr	237	246	264	263	261	238	266	291	282	287	279	281	286	288	292	294	313	320	320	330	342	360	16	43	289.5
13-Apr	76	91	71	49	40	21	41	338	327	233	281	98	325	333	338	3	359	3	30	35	26	5	1	355	0.4
14-Apr	351	7	359	340	5	180	140	152	149	160	151	139	135	139	157	167	194	212	168	144	137	139	114	118	146.5
15-Apr	129	135	148	135	167	175	196	195	239	250	257	257	261	268	255	253	263	293	290	282	272	270	273	274	257.5
16-Apr	278	276	277	286	296	298	313	321	322	326	327	331	331	330	336	335	356	7	359	353	346	12	8	3	325.2
17-Apr	3	357	356	354	355	8	7	14	7	4	7	4	359	356	3	35	9	331	25	60	79	101	124	136	10.1
18-Apr	141	153	159	151	149	146	149	157	156	156	162	162	163	165	172	169	174	159	158	150	144	157	181	193	159.8
19-Apr	199	218	253	273	295	291	277	282	281	281	277	272	279	282	279	277	276	281	311	316	16	16	6	UO	284.4
20-Apr	UO	UO	UO	UO	UO	UO	UO	6	349	317	259	274	168	226	184	108	31	23	32	29	20	35	43	29	--
21-Apr	71	72	22	32	357	10	33	208	171	169	167	167	162	160	185	141	139	141	147	149	191	149	149	137	147.0
22-Apr	161	158	163	198	171	171	188	197	169	156	155	165	166	168	230	184	187	178	77	102	18	47	103	131	170.8
23-Apr	257	344	258	194	197	77	10	49	351	348	6	3	10	26	23	14	8	11	351	342	347	343	350	349	1.2
24-Apr	356	335	13	24	326	140	194	209	233	201	186	184	261	338	359	352	40	74	115	113	124	121	125	121	92.9
25-Apr	112	124	121	136	138	145	146	142	136	174	185	180	187	187	207	195	209	213	211	189	190	190	199	208	178.7
26-Apr	141	127	174	143	349	356	352	354	340	349	347	357	12	5	9	10	360	8	9	3	4	17	9	18	4.0
27-Apr	5	358	0	10	15	18	5	8	334	346	354	350	14	350	11	29	33	26	30	34	22	18	43	81	12.2
28-Apr	49	23	23	330	352	232	150	160	155	156	140	145	155	177	187	185	192	180	174	191	205	203	204	150	173.7
29-Apr	188	175	133	173	240	257	265	277	277	277	278	287	312	325	334	250	325	5	3	359	1	19	179	208	290.1
30-Apr	191	215	251	261	279	327	2	354	354	344	348	8	20	2	39	359	347	358	3	4	0	358	4	3	351.1
163.9 174.1 190.2 235.3 251.5 225.3 206.5 261.4 256.2 245.5 227.0 206.7 232.3 268.6 263.6 270.2 301.3 331.4 357.5 0.6 10.5 53.3 99.3 144.4																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

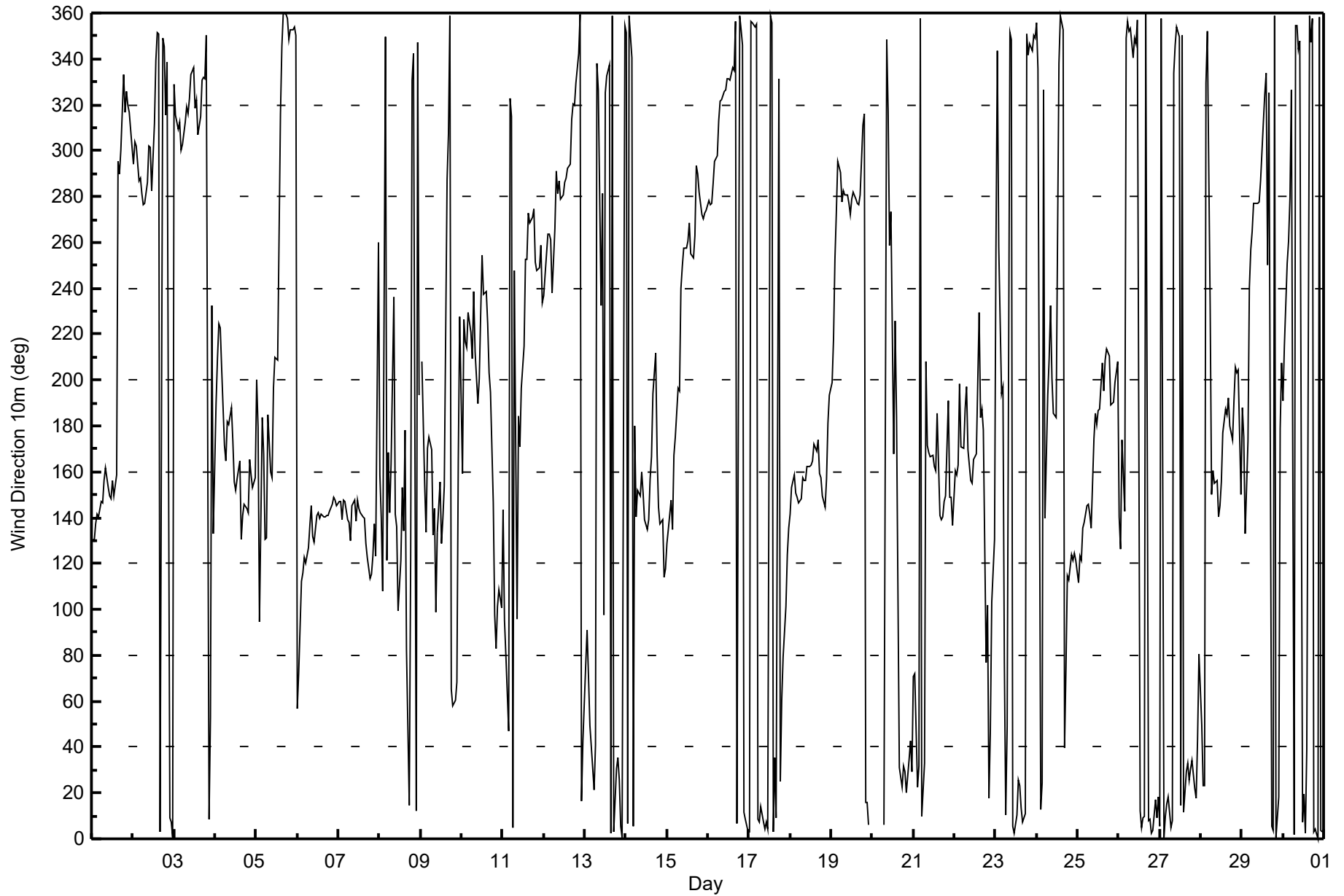
Mildred Lake - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 97 deg on Apr 21 08:00																									Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8
Minimum Value: 6 deg on Apr 10 21:00																									
Percentiles: P ₁ = 9 P ₁₀ = 13 Q ₁ = 16 Median = 20 Q ₃ = 27 P ₉₀ = 46 P ₉₉ = 88																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	16	17	16	11	14	11	14	17	19	12	12	12	15	21	25	36	17	18	18	13	9	12	12	15	36
2-Apr	16	16	16	17	16	17	19	19	25	20	20	46	30	18	21	24	21	17	15	9	18	21	19	18	46
3-Apr	13	11	12	12	17	17	15	12	14	14	19	24	24	16	21	20	15	13	17	18	28	49	13	61	61
4-Apr	28	23	32	26	29	20	15	16	24	17	21	18	18	28	21	34	24	16	11	14	11	14	13	18	34
5-Apr	14	88	21	66	24	15	18	21	18	20	25	45	46	52	11	17	23	15	14	11	13	15	11	9	88
6-Apr	43	18	17	17	18	19	19	17	14	20	19	15	16	16	15	15	15	14	13	12	11	11	11	12	43
7-Apr	11	13	15	13	13	16	16	17	15	12	18	13	15	16	17	14	19	20	17	17	18	21	83	75	83
8-Apr	18	19	38	16	74	51	25	23	57	28	20	26	29	28	76	49	39	37	74	49	55	21	70	19	76
9-Apr	UO	40	32	30	18	14	22	22	39	46	39	20	23	20	62	36	36	53	15	10	16	44	58	58	62
10-Apr	39	73	22	25	29	32	27	25	43	21	20	27	29	26	30	32	33	26	39	14	6	9	16	11	73
11-Apr	29	59	13	32	55	26	35	65	18	40	26	27	35	27	25	21	21	20	19	24	26	24	20	26	65
12-Apr	24	25	23	26	27	22	35	22	19	18	19	19	20	22	20	19	13	12	11	16	19	7	14	19	35
13-Apr	18	22	19	15	19	34	78	18	32	65	66	97	64	21	26	23	21	21	20	18	22	18	12	10	97
14-Apr	8	13	14	17	21	43	20	20	22	19	23	18	18	19	17	16	29	22	23	11	14	14	15	18	43
15-Apr	19	16	16	17	26	43	44	28	23	23	24	23	24	21	24	24	26	18	20	19	20	20	20	19	44
16-Apr	19	19	19	18	17	16	15	10	11	12	11	13	12	13	14	14	20	21	17	16	14	25	17	17	25
17-Apr	18	17	16	17	20	18	21	20	19	20	21	21	22	22	31	35	42	23	33	15	18	12	13	17	42
18-Apr	14	14	14	12	14	11	12	15	15	15	15	16	16	16	16	18	15	15	14	12	13	17	42	15	42
19-Apr	17	23	24	22	17	18	20	19	20	22	22	24	23	21	20	19	19	19	18	17	25	19	18	UO	25
20-Apr	UO	UO	UO	UO	UO	UO	UO	19	28	58	43	57	46	45	41	76	46	22	21	16	16	18	19	36	76
21-Apr	39	27	70	21	14	26	28	97	27	31	28	35	78	85	94	34	70	20	12	26	26	22	13	25	97
22-Apr	40	43	23	44	28	21	21	21	18	15	16	19	19	21	39	25	16	18	45	11	39	30	92	49	92
23-Apr	76	24	65	28	37	83	58	89	25	20	22	26	25	30	29	28	25	25	22	12	11	11	11	10	89
24-Apr	16	32	38	32	83	55	37	35	69	93	67	53	69	36	33	49	40	34	20	13	14	13	13	14	93
25-Apr	17	13	15	11	47	19	14	15	20	34	17	18	19	19	23	23	25	22	23	14	9	10	18	60	60
26-Apr	48	15	43	77	38	27	18	26	23	20	22	26	26	20	23	23	20	21	20	18	16	19	18	19	77
27-Apr	17	16	16	20	19	20	21	23	31	29	40	50	50	55	49	47	35	26	20	20	19	18	23	24	55
28-Apr	23	23	27	70	36	78	14	17	18	19	24	18	18	25	20	20	23	17	14	22	22	28	26	13	78
29-Apr	21	25	15	23	33	27	27	20	19	19	19	19	22	18	84	89	51	20	20	20	17	33	41	20	89
30-Apr	22	27	23	27	23	31	19	23	26	27	19	24	22	31	28	30	17	17	18	18	16	15	17	17	31
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS03 LOWER CAMP METEOROLOGY APRIL 2025

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

May 30, 2025

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

APRIL 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	664	0	56	92.22	22.3	-	15.1	-
Temperature 45 m (C) Average	720	0	0	100	22.2	-	14.9	-
Temperature 100 m (C) Average	720	0	0	100	21.5	-	14.9	-
Temperature 163 m (C) Average	720	0	0	100	20.8	-	14.9	-
Relative Humidity 20 m (%) Average	664	0	56	92.22	98.9	-	90.0	-
Relative Humidity 45 m (%) Average	720	0	0	100	98.5	-	87.7	-
Relative Humidity 100 m (%) Average	720	0	0	100	99.4	-	86.5	-
Relative Humidity 163 m (%) Average	720	0	0	100	98.3	-	84.6	-
Wind Speed 20 m (km/h) Average	720	0	0	100	38	-	24.0	-
Wind Speed 45 m (km/h) Average	720	0	0	100	46	-	30.0	-
Wind Speed 100 m (km/h) Average	719	0	1	99.86	56	-	37.0	-
Wind Speed 163 m (km/h) Average	717	0	3	99.58	62	-	41.0	-
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	719	0	1	99.86	-	-	-	-
Wind Direction 163 m (deg) Average	717	0	3	99.58	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	0	0	100	0.6	-	0.0	-
Vertical Wind Speed 45 m (km/h) Average	720	0	0	100	1.1	-	0.5	-
Vertical Wind Speed 100 m (km/h) Average	719	0	1	99.86	2.8	-	0.4	-
Vertical Wind Speed 163 m (km/h) Average	717	0	3	99.58	4.2	-	1.6	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
Temperature 20 m (C) Average	664	4.8	6.6	-	-12.1	-3.5	0.2	4.8	9.8	13.2	22.3
Temperature 45 m (C) Average	720	4.8	6.3	-	-11.3	-3.3	0.3	4.8	9.3	13	22.2
Temperature 100 m (C) Average	720	4.64	6.2	-	-9.5	-3.2	0	4.8	9.2	12.7	21.5
Temperature 163 m (C) Average	720	4.34	6.2	-	-9.3	-3.6	-0.1	4.3	8.9	12.5	20.8
Relative Humidity 20 m (%) Average	664	56.19	21.8	-	15.1	27.8	38.6	55.3	72.7	87.6	98.9
Relative Humidity 45 m (%) Average	720	54.77	21	-	14.8	27.4	37.7	53.3	70.3	84.6	98.5
Relative Humidity 100 m (%) Average	720	54.6	21.1	-	15.2	27.4	37.7	53	70	85.6	99.4
Relative Humidity 163 m (%) Average	720	53.19	21	-	15.2	26.5	36.2	50.8	69.3	83.9	98.3
Wind Speed 20 m (km/h) Average	720	11.1	7	-	0	2	5	10	16	21	38
Wind Speed 45 m (km/h) Average	720	15.1	9	-	0	3	8	14	21	28	46
Wind Speed 100 m (km/h) Average	719	18.6	11	-	0	5	10	18	26	33	56
Wind Speed 163 m (km/h) Average	717	21.2	12	-	1	5	12	21	29	36	62
Wind Direction 20 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	717	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	720	-0.29	0.4	-	-1.7	-0.9	-0.5	-0.2	0	0.1	0.6
Vertical Wind Speed 45 m (km/h) Average	720	0.15	0.3	-	-1.2	-0.3	0	0.2	0.3	0.5	1.1
Vertical Wind Speed 100 m (km/h) Average	719	0	0.6	-	-2	-0.7	-0.3	0	0.2	0.6	2.8
Vertical Wind Speed 163 m (km/h) Average	717	0.47	0.8	-	-1.4	-0.4	0	0.3	0.8	1.5	4.2

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Relative Humidity, Temperature, 20m	01 Apr 2025 09:00	01 Apr 2025 19:00	11	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	02 Apr 2025 14:00	02 Apr 2025 15:00	2	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	02 Apr 2025 18:00	02 Apr 2025 19:00	2	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	03 Apr 2025 14:00	03 Apr 2025 15:00	2	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	04 Apr 2025 19:00	04 Apr 2025 19:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	06 Apr 2025 08:00	06 Apr 2025 10:00	3	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	06 Apr 2025 21:00	07 Apr 2025 02:00	6	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	07 Apr 2025 08:00	07 Apr 2025 11:00	4	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	10 Apr 2025 20:00	10 Apr 2025 21:00	2	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	11 Apr 2025 00:00	11 Apr 2025 02:00	3	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	11 Apr 2025 05:00	11 Apr 2025 05:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	11 Apr 2025 07:00	11 Apr 2025 07:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	11 Apr 2025 11:00	11 Apr 2025 11:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	15 Apr 2025 21:00	15 Apr 2025 22:00	2	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	16 Apr 2025 00:00	16 Apr 2025 00:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	16 Apr 2025 08:00	16 Apr 2025 11:00	4	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	23 Apr 2025 10:00	23 Apr 2025 10:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	25 Apr 2025 03:00	25 Apr 2025 03:00	1	DAS Failure - data not recorded
Relative Humidity, Temperature, 20m	30 Apr 2025 02:00	30 Apr 2025 09:00	8	DAS Failure - data not recorded
Wind Speed, Wind Direction, Vertical Wind Speed, 100m	16 Apr 2025 03:00	16 Apr 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	16 Apr 2025 02:00	16 Apr 2025 03:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	22 Apr 2025 16:00	22 Apr 2025 16:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

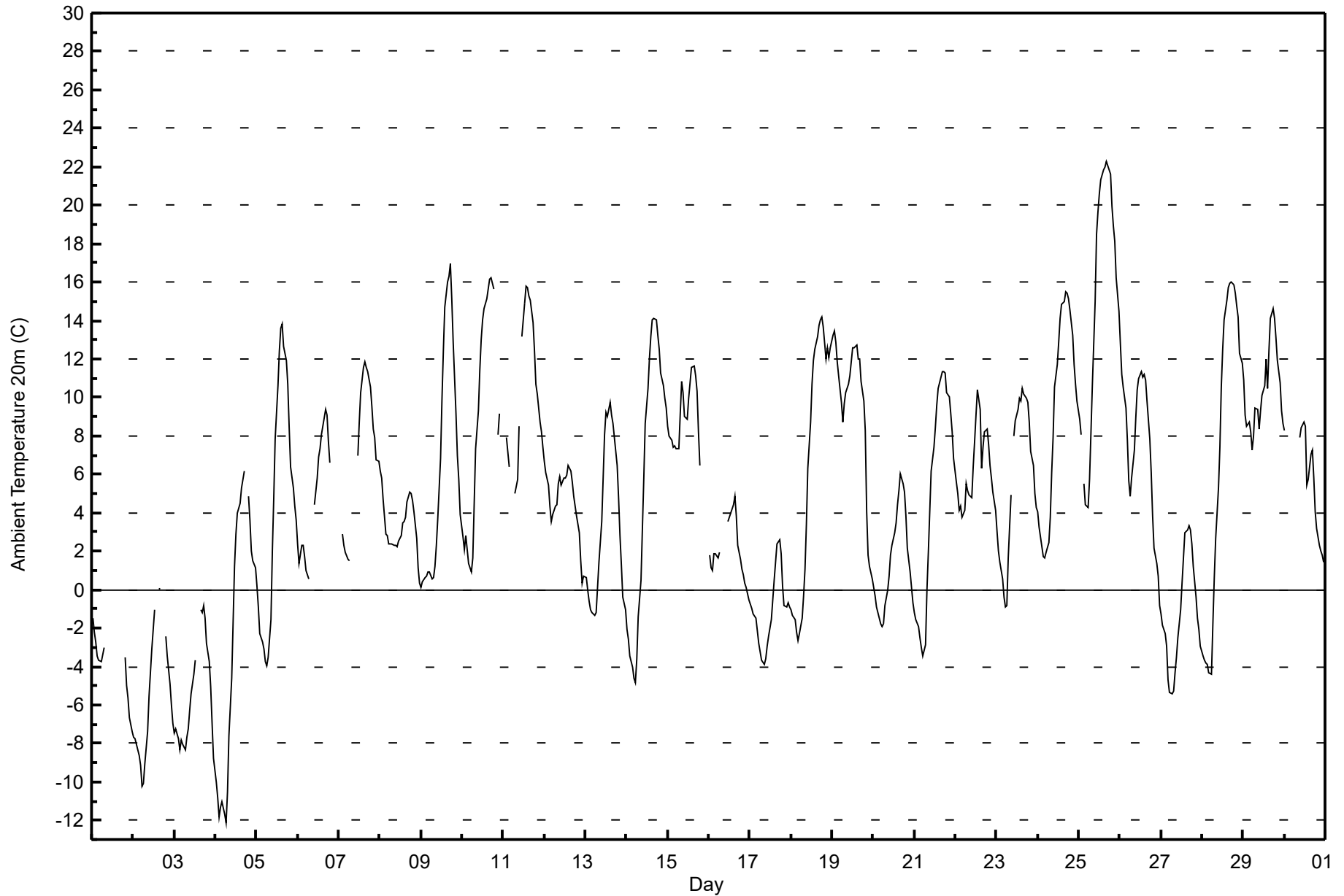
Lower Camp Met Tower - April 2025

Maximum Value: 22.3 C on Apr 25 17:00																				Maximum Daily Average: 15.1 C on Apr 25										Hours in Service: 720	
Minimum Value: -12.1 C on Apr 4 07:00																				Minimum Daily Average: -5.8 C on Apr 2										Hours of Data: 664	
Maximum Diurnal Average: 10.2 C at hour 15																				Minimum Diurnal Average: -0.3 C at hour 6										Hours of Missing Data: 56	
Monthly Average: 4.80 C																				Percentiles: P ₁ = -10.3 P ₁₀ = -3.5 Q ₁ = 0.2 Median = 4.8 Q ₃ = 9.8 P ₉₀ = 13.2 P ₉₉ = 20.2										Hours of Calibration: 0	
																														Percent Operational Time: 92.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	-1.5	-2.2	-2.7	-3.4	-3.6	-3.8	-3.4	-3.0	DF	DF	DF	DF	DF	DF	DF	DF	DF	DF	DF	-3.5	-5.0	-5.6	-6.6	-7.4	--	-1.5					
2-Apr	-7.7	-7.8	-8.1	-8.6	-9.1	-10.2	-10.1	-9.0	-7.4	-5.6	-4.3	-3.1	-1.0	DF	DF	0.0	0.1	DF	DF	-2.5	-3.4	-4.9	-6.0	-6.9	-5.8	0.1					
3-Apr	-7.5	-7.2	-7.8	-8.3	-7.8	-8.0	-8.3	-7.7	-7.2	-6.3	-5.4	-4.4	-3.6	DF	DF	-1.0	-1.2	-0.8	-1.5	-2.8	-3.7	-5.0	-7.0	-8.8	-5.5	-0.8					
4-Apr	-10.0	-10.8	-11.8	-11.4	-11.0	-11.7	-12.1	-10.5	-7.6	-4.6	-1.7	1.2	2.9	4.0	4.5	5.3	5.7	6.1	DF	4.8	3.6	2.0	1.5	1.2	-2.6	6.1					
5-Apr	0.2	-0.9	-2.3	-2.7	-3.1	-3.7	-4.0	-3.5	-1.5	2.0	4.8	7.8	10.6	12.5	13.6	13.8	12.6	11.9	10.7	8.4	6.4	5.3	4.4	3.6	4.5	13.8					
6-Apr	2.4	1.4	2.3	2.3	1.7	1.0	0.6	DF	DF	DF	4.4	5.8	6.9	7.3	8.1	8.9	9.3	9.1	7.7	6.6	DF	DF	DF	DF	--	9.3					
7-Apr	DF	DF	2.9	2.3	2.0	1.6	1.5	DF	DF	DF	DF	7.0	8.7	10.2	11.6	11.8	11.6	11.3	10.5	9.5	8.4	7.9	6.7	6.7	7.3	11.8					
8-Apr	6.2	5.8	4.7	2.9	2.8	2.4	2.4	2.4	2.3	2.3	2.2	2.5	2.8	3.5	3.6	3.8	4.6	5.1	5.0	4.7	4.0	2.7	1.2	0.3	3.3	6.2					
9-Apr	0.1	0.4	0.6	0.7	0.9	0.9	0.5	0.6	1.2	2.3	3.7	6.8	9.9	12.4	14.7	16.0	16.3	17.0	15.2	12.9	9.1	7.0	5.8	3.9	6.6	17.0					
10-Apr	2.8	2.1	2.8	2.1	1.3	0.9	1.6	4.5	7.4	9.3	11.4	13.0	14.1	14.6	15.1	15.7	16.1	16.2	15.7	DF	DF	8.1	9.1	DF	8.8	16.2					
11-Apr	DF	DF	7.9	6.4	DF	4.5	DF	5.0	5.8	8.5	DF	13.2	14.9	15.8	15.8	15.3	15.1	13.9	12.4	10.7	10.2	8.7	8.2	7.4	10.5	15.8					
12-Apr	6.7	6.1	5.5	4.3	3.5	3.9	4.3	4.4	5.5	5.9	5.5	5.8	5.8	5.9	6.5	6.1	5.6	4.9	4.4	3.8	3.0	1.5	0.4	0.7	4.6	6.7					
13-Apr	0.6	0.0	-0.6	-1.0	-1.2	-1.4	-1.2	0.1	1.5	3.5	5.8	8.0	9.2	9.0	9.8	9.1	8.6	7.9	6.4	4.8	2.8	1.3	-0.4	-1.1	3.4	9.8					
14-Apr	-2.1	-2.6	-3.4	-4.0	-4.6	-4.8	-3.6	-1.4	0.5	3.2	5.8	8.6	10.4	12.0	13.2	14.0	14.1	14.0	13.3	12.5	11.3	10.6	9.9	9.5	5.7	14.1					
15-Apr	8.5	8.0	7.8	7.4	7.5	7.3	7.3	9.2	10.8	10.3	9.0	8.9	10.0	10.8	11.6	11.6	11.1	10.3	8.2	6.4	DF	DF	4.2	DF	8.9	11.6					
16-Apr	1.8	1.2	1.0	1.9	1.8	1.6	1.9	DF	DF	DF	DF	3.6	3.7	4.0	4.5	4.8	3.8	2.3	1.6	1.1	0.8	0.3	0.1	-0.5	2.1	4.8					
17-Apr	-0.7	-1.0	-1.3	-1.5	-2.1	-2.8	-3.2	-3.7	-3.9	-3.6	-2.9	-2.5	-1.6	-0.5	0.5	1.4	2.4	2.6	1.9	0.2	-0.8	-0.9	-0.7	-0.9	-1.1	2.6					
18-Apr	-1.0	-1.3	-1.6	-2.2	-2.6	-2.3	-1.5	-0.4	1.1	3.4	6.3	8.7	10.7	11.9	12.5	13.1	13.7	14.1	14.2	13.7	12.0	12.6	12.0	12.6	6.7	14.2					
19-Apr	13.3	13.5	12.8	11.8	11.1	9.7	8.7	9.7	10.2	10.7	11.1	11.8	12.6	12.6	12.7	12.0	12.0	10.8	9.8	8.3	4.0	1.8	1.2	0.6	9.7	13.5					
20-Apr	0.1	-0.3	-0.9	-1.5	-1.8	-1.9	-1.7	-0.8	0.0	0.7	1.8	2.3	3.0	3.5	4.5	5.1	6.0	5.5	5.1	3.9	2.1	0.9	0.1	-0.7	1.5	6.0					
21-Apr	-1.2	-1.6	-1.9	-2.5	-3.0	-3.4	-2.8	0.0	1.9	4.1	6.2	7.4	8.5	9.6	10.5	11.0	11.3	11.3	11.3	10.2	10.0	9.1	8.2	6.8	5.0	11.3					
22-Apr	5.6	5.0	4.2	4.3	3.7	4.1	5.5	5.2	4.9	4.8	6.4	7.7	9.1	10.4	9.4	6.3	7.4	8.2	8.4	7.5	6.4	5.8	5.1	4.1	6.2	10.4					
23-Apr	3.0	2.0	1.4	0.5	-0.4	-0.9	-0.8	1.7	5.0	DF	8.0	8.8	9.4	9.9	9.8	10.5	10.2	10.0	9.7	8.7	7.2	6.5	5.0	4.3	5.6	10.5					
24-Apr	4.1	3.2	2.2	1.7	1.6	1.9	2.5	3.8	6.1	7.9	10.6	11.7	12.9	14.1	14.8	15.0	15.5	15.4	15.2	14.6	13.2	11.7	10.7	9.8	9.2	15.5					
25-Apr	8.9	8.1	DF	5.5	4.4	4.3	5.7	8.1	10.6	15.0	18.5	19.6	20.6	21.3	21.8	22.0	22.3	22.1	21.6	20.0	18.9	18.1	16.2	14.5	15.1	22.3					
26-Apr	12.8	11.2	10.5	9.5	7.7	5.7	4.9	5.8	7.3	9.0	10.4	11.0	11.3	11.0	11.2	10.9	9.8	7.9	6.1	3.8	2.1	1.4	0.7	-0.8	7.5	12.8					
27-Apr	-1.3	-1.9	-2.3	-3.0	-4.7	-5.3	-5.4	-5.2	-4.4	-3.5	-2.5	-1.0	0.3	1.7	2.9	3.1	3.3	3.1	2.4	1.2	-0.4	-1.5	-2.1	-2.9	-1.2	3.3					
28-Apr	-3.5	-3.7	-3.8	-3.9	-4.3	-4.4	-1.8	0.6	2.7	5.3	7.4	10.6	12.5	14.0	15.1	15.7	15.9	16.0	15.9	15.4	14.8	14.2	12.3	11.8	7.3	16.0					
29-Apr	10.9	9.1	8.5	8.7	8.2	7.2	8.0	9.5	9.4	8.4	9.3	10.1	10.6	12.0	10.4	12.4	14.1	14.6	14.1	13.1	11.9	10.7	9.3	8.7	10.4	14.6					
30-Apr	8.3	DF	DF	DF	DF	DF	DF	DF	DF	7.9	8.4	8.7	8.5	5.5	5.8	7.1	7.3	5.8	4.0	3.2	2.3	2.0	1.8	1.4	--	8.7					
2.1 1.3 0.9 0.6 0.0 -0.3 -0.2 1.0 2.5 4.0 5.4 6.9 8.1 9.6 10.2 9.7 9.8 9.9 9.2 6.9 5.6 4.7 3.8 2.9																									Diurnal Average						
13.3 13.5 12.8 11.8 11.1 9.7 8.7 9.7 10.8 15.0 18.5 19.6 20.6 21.3 21.8 22.0 22.3 22.1 21.6 20.0 18.9 18.1 16.2 14.5																									Diurnal Maximum						
DF - DAS Failure																															



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	159	23.95	23.95
0 - 10	349	52.56	76.51
10 - 20	149	22.44	98.95
> 20	7	1.05	100.00

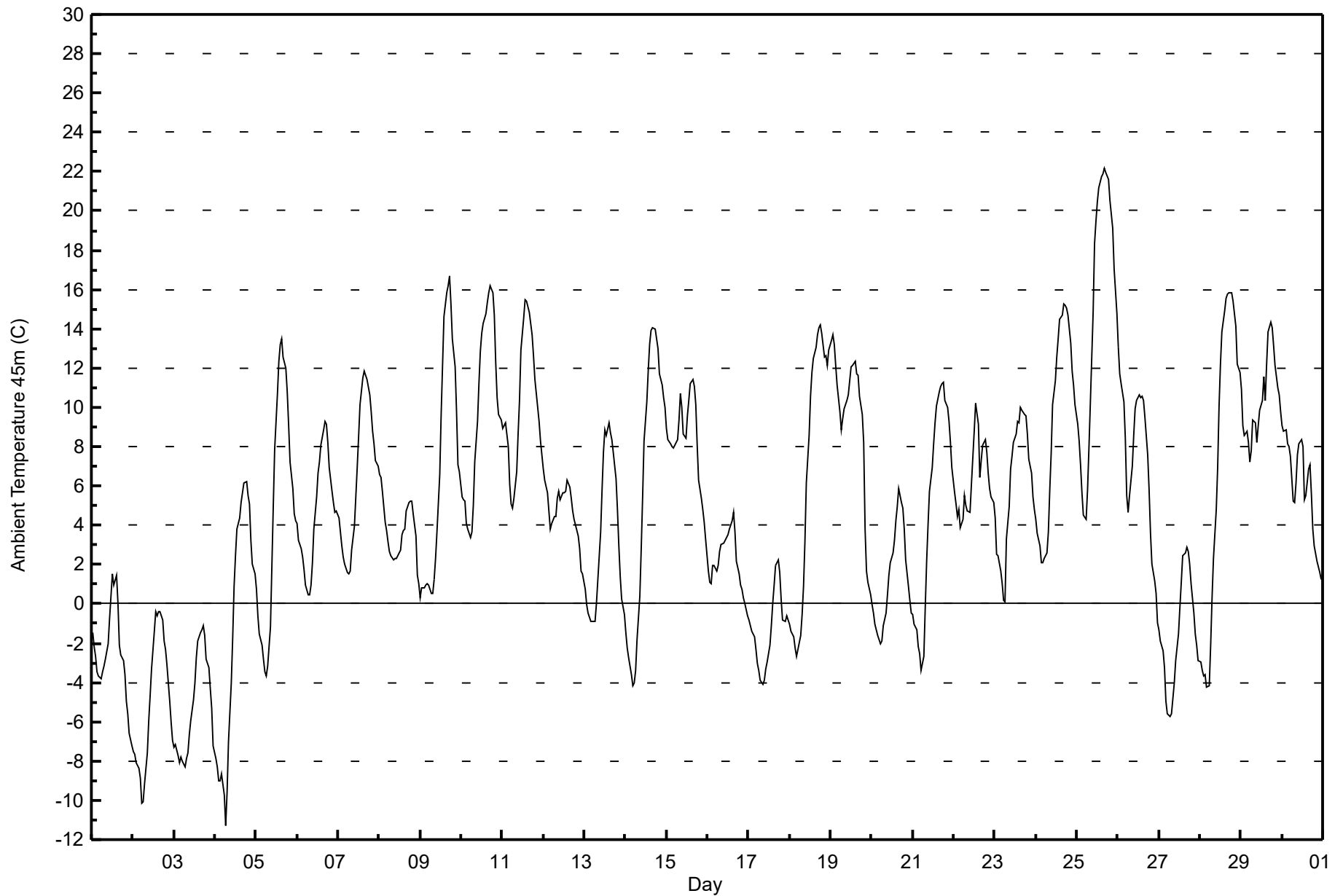
Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	171	23.75	23.75
0 - 10	388	53.89	77.64
10 - 20	153	21.25	98.89
> 20	8	1.11	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	180	25.00	25.00
0 - 10	399	55.42	80.42
10 - 20	132	18.33	98.75
> 20	9	1.25	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 163m (AT163) - C

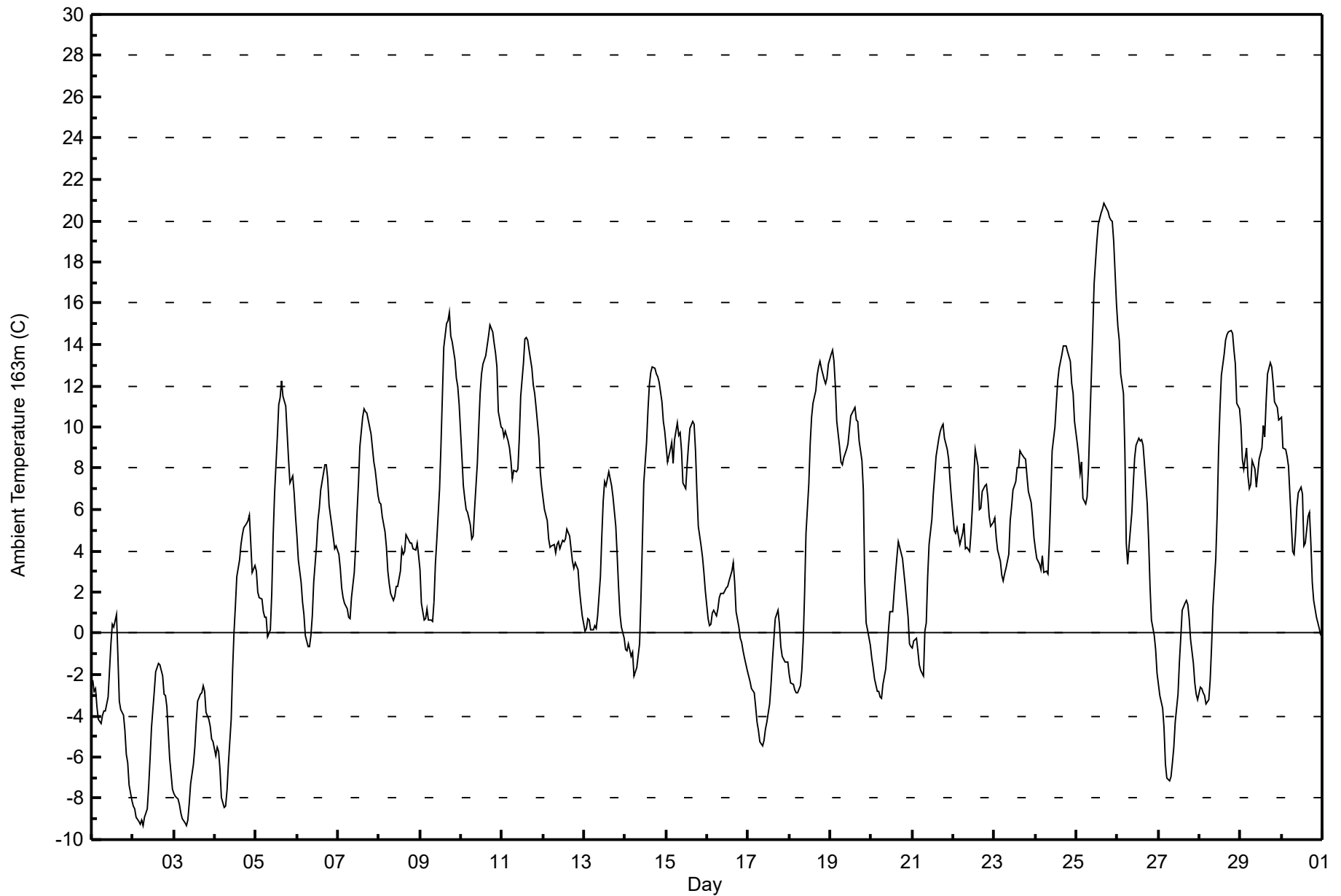
Lower Camp Met Tower - April 2025

Maximum Value: 20.8 C on Apr 25 17:00																				Maximum Daily Average: 14.9 C on Apr 25					Hours in Service: 720	
Minimum Value: -9.3 C on Apr 3 08:00																				Minimum Daily Average: -6.1 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 8.1 C at hour 17																				Minimum Diurnal Average: 0.6 C at hour 7					Hours of Missing Data: 0	
Monthly Average: 4.34 C																				Percentiles: P ₁ = -9.0 P ₁₀ = -3.6 Q ₁ = -0.1 Median = 4.3 Q ₃ = 8.9 P ₉₀ = 12.5 P ₉₉ = 19.9					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	-2.3	-2.8	-2.7	-3.6	-4.1	-4.4	-4.0	-3.8	-3.8	-3.1	-1.8	-0.5	0.4	0.3	0.9	-1.1	-3.3	-3.7	-4.0	-4.7	-5.9	-6.3	-7.4	-8.1	-3.3	0.9
2-Apr	-8.3	-8.5	-8.9	-9.1	-9.3	-9.1	-9.3	-8.9	-8.5	-7.4	-6.1	-4.6	-2.8	-1.9	-1.6	-1.5	-1.5	-2.1	-3.0	-3.0	-3.5	-6.0	-6.8	-7.5	-5.8	-1.5
3-Apr	-7.8	-7.9	-8.0	-8.3	-8.7	-9.0	-9.2	-9.3	-9.1	-8.2	-7.3	-6.3	-5.6	-4.3	-3.3	-2.9	-2.9	-2.6	-2.8	-3.8	-4.2	-4.5	-5.1	-5.2	-6.1	-2.6
4-Apr	-5.9	-5.5	-5.7	-6.6	-7.9	-8.5	-8.4	-7.6	-6.4	-4.2	-1.8	0.0	1.3	2.7	3.5	4.3	4.8	5.1	5.4	5.4	5.7	4.4	2.9	3.3	-0.8	5.7
5-Apr	3.0	2.0	1.8	1.7	1.0	0.8	0.8	-0.2	0.1	1.9	4.7	6.7	9.5	11.1	11.4	12.3	11.5	11.0	9.7	8.4	7.3	7.6	6.8	5.7	5.7	12.3
6-Apr	4.7	3.5	2.5	1.5	0.9	-0.1	-0.7	-0.7	-0.1	0.9	2.5	4.2	5.5	6.1	7.0	7.7	8.2	8.2	7.5	6.2	5.2	4.6	4.1	4.2	3.9	8.2
7-Apr	3.8	3.2	2.2	1.7	1.5	1.2	0.8	0.7	1.7	3.0	4.2	5.9	7.3	9.0	10.5	10.9	10.7	10.7	10.0	9.7	9.0	8.3	7.9	6.7	5.9	10.9
8-Apr	6.3	6.3	5.7	4.9	4.2	3.0	2.4	1.9	1.6	1.8	2.3	2.3	3.0	4.1	3.8	4.0	4.8	4.5	4.4	4.3	4.1	4.0	4.3	3.8	3.8	6.3
9-Apr	3.1	1.5	0.6	0.7	1.2	0.6	0.6	0.6	1.5	3.4	4.5	7.0	9.1	11.5	13.9	15.0	15.1	15.6	14.4	14.2	13.2	12.4	12.0	11.1	7.6	15.6
10-Apr	8.5	7.2	6.5	6.0	5.9	5.3	4.6	4.7	6.0	8.2	10.0	11.6	12.6	13.0	13.5	14.0	14.4	15.0	14.6	14.0	13.6	12.9	10.7	10.0	10.1	15.0
11-Apr	9.9	9.5	9.8	9.3	9.0	8.4	7.5	7.9	7.8	8.0	9.5	11.5	13.1	14.3	14.4	14.2	13.7	12.8	12.0	11.6	11.0	9.5	7.8	7.1	10.4	14.4
12-Apr	6.5	6.0	5.4	4.6	4.2	4.3	4.3	3.9	4.3	4.4	4.1	4.5	4.4	4.6	5.0	4.7	4.1	3.5	3.1	3.4	3.1	2.1	1.4	0.8	4.0	6.5
13-Apr	0.1	0.2	0.7	0.6	0.2	0.1	0.4	0.2	0.8	2.8	4.7	6.4	7.4	7.2	7.8	7.5	7.2	6.6	5.2	3.7	2.2	0.9	0.3	-0.2	3.0	7.8
14-Apr	-0.8	-0.8	-0.5	-1.1	-0.9	-2.1	-1.9	-1.7	-0.5	1.7	4.5	7.3	9.3	10.8	12.0	12.7	12.9	12.9	12.6	12.5	12.2	11.2	10.3	9.8	5.9	12.9
15-Apr	9.0	8.3	8.9	9.3	8.2	9.4	10.2	9.6	9.8	8.9	7.3	7.0	8.2	9.1	9.9	10.3	10.1	8.8	6.9	5.2	4.2	3.7	2.9	2.1	7.8	10.3
16-Apr	0.7	0.4	0.4	1.0	1.1	0.8	1.2	1.7	1.9	1.9	2.1	2.2	2.3	2.5	3.0	3.4	2.5	1.1	0.3	-0.2	-0.4	-0.8	-1.2	-1.8	1.1	3.4
17-Apr	-2.1	-2.4	-2.7	-2.9	-3.6	-4.3	-4.7	-5.2	-5.4	-5.2	-4.6	-4.3	-3.4	-2.5	-1.3	-0.3	0.7	1.1	0.4	-0.6	-1.1	-1.4	-1.4	-1.4	-2.4	1.1
18-Apr	-2.0	-2.4	-2.5	-2.8	-2.9	-2.9	-2.5	-1.8	-0.4	1.9	4.8	7.2	9.2	10.4	11.1	11.8	12.5	12.9	13.2	12.8	12.3	12.1	12.4	13.0	5.7	13.2
19-Apr	13.5	13.7	13.2	12.0	10.2	9.0	8.3	8.2	8.5	8.9	9.2	9.9	10.5	10.7	10.9	10.4	10.3	9.3	8.4	7.0	2.5	0.5	0.1	-0.6	8.5	13.7
20-Apr	-1.2	-1.6	-2.2	-2.8	-2.8	-3.1	-3.2	-2.4	-1.7	-0.9	0.1	1.0	1.0	2.0	2.9	3.7	4.4	3.9	3.6	3.0	2.3	0.7	-0.5	-0.7	0.2	4.4
21-Apr	-0.7	-0.4	-0.3	-0.8	-1.5	-1.8	-2.1	0.1	0.5	2.7	4.3	5.6	6.8	7.6	8.6	9.4	9.8	10.0	10.1	9.4	8.9	8.4	7.4	6.5	4.5	10.1
22-Apr	5.0	4.8	5.1	4.7	4.3	4.8	5.3	4.1	4.1	3.9	4.9	6.1	7.5	8.9	8.1	6.0	6.1	6.9	7.2	7.2	6.6	5.6	5.2	5.4	5.8	8.9
23-Apr	5.6	4.7	4.1	3.5	2.8	2.5	2.9	3.1	3.8	5.5	6.1	7.0	7.3	8.1	8.0	8.8	8.7	8.5	8.4	7.6	6.9	6.3	5.6	4.7	5.9	8.8
24-Apr	4.1	3.6	3.4	3.1	3.8	2.9	3.0	2.9	4.4	6.6	8.8	10.0	11.1	12.3	12.9	13.5	13.9	13.9	13.9	13.7	13.2	12.1	11.6	10.3	8.7	13.9
25-Apr	9.2	8.6	7.8	8.3	6.5	6.3	6.6	8.0	10.3	14.6	16.9	18.0	19.0	19.8	20.4	20.6	20.8	20.7	20.4	20.1	20.0	19.9	19.0	15.9	14.9	20.8
26-Apr	14.9	14.2	12.6	11.6	8.8	4.4	3.4	4.2	5.9	7.2	8.5	9.1	9.4	9.3	9.4	9.1	8.2	6.3	4.5	2.3	0.7	-0.1	-0.8	-1.9	6.7	14.9
27-Apr	-2.5	-3.0	-3.6	-4.6	-6.3	-7.0	-7.1	-7.0	-6.2	-5.5	-4.3	-3.0	-1.4	-0.2	1.1	1.4	1.6	1.4	0.7	-0.3	-1.5	-2.4	-2.9	-3.2	-2.7	1.6
28-Apr	-2.6	-2.7	-2.9	-3.0	-3.4	-3.2	-2.3	-0.7	1.3	3.6	5.8	8.8	10.9	12.5	13.6	14.2	14.4	14.6	14.7	14.6	13.7	13.1	11.1	10.9	6.5	14.7
29-Apr	10.1	8.4	8.0	9.0	7.6	7.0	7.3	8.3	8.0	7.1	7.7	8.5	9.0	10.0	9.5	11.2	12.6	13.1	12.9	12.2	11.2	10.9	10.3	10.4	9.6	13.1
30-Apr	10.5	9.0	8.9	8.6	8.1	6.8	4.0	3.8	4.8	6.1	6.8	7.1	6.7	4.2	4.4	5.6	5.8	4.3	2.5	1.6	0.8	0.5	0.2	-0.1	5.0	10.5
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	181	25.14	25.14
0 - 10	402	55.83	80.97
10 - 20	130	18.06	99.03
> 20	7	0.97	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

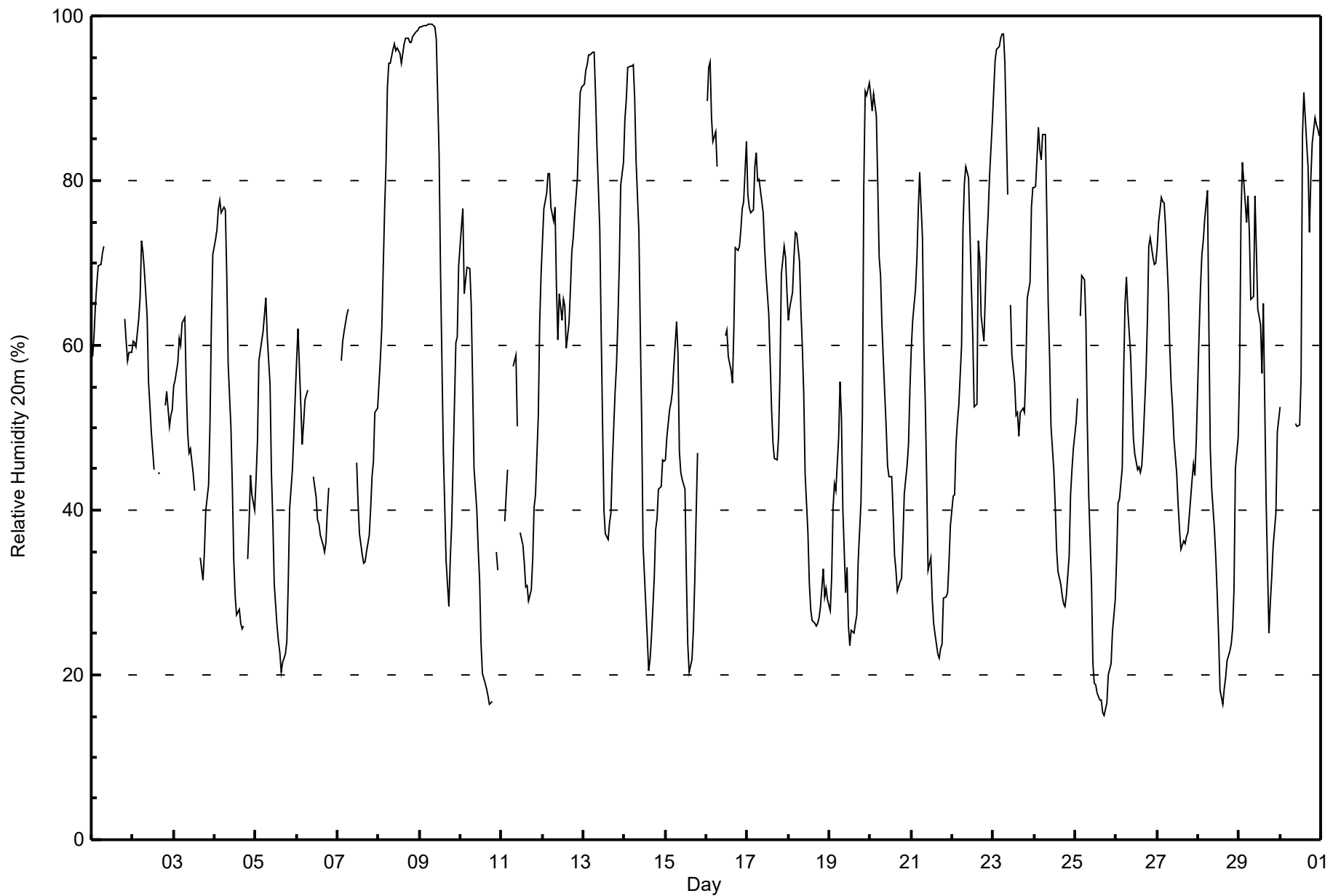
Lower Camp Met Tower - April 2025

Maximum Value: 98.9 % on Apr 9 07:00																				Maximum Daily Average: 90.0 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.1 % on Apr 25 18:00																				Minimum Daily Average: 33.2 % on Apr 25					Hours of Data: 664	
Maximum Diurnal Average: 74.3 % at hour 6																				Minimum Diurnal Average: 39.1 % at hour 17					Hours of Missing Data: 56	
Monthly Average: 56.19 %																				Percentiles: P ₁ = 16.9 P ₁₀ = 27.8 Q ₁ = 38.6 Median = 55.3 Q ₃ = 72.7 P ₉₀ = 87.6 P ₉₉ = 98.7					Hours of Calibration: 0	
																				Percent Operational Time: 92.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	58.7	61.2	64.9	67.5	69.7	69.8	71.3	72.1	DF	DF	DF	DF	DF	DF	DF	DF	DF	DF	DF	63.1	60.5	58.2	59.2	59.1	--	72.1
2-Apr	60.5	60.4	59.9	63.2	66.0	72.8	71.3	69.1	63.6	55.5	52.7	49.5	45.0	DF	DF	44.5	44.4	DF	DF	52.7	54.4	50.2	51.5	52.2	57.0	72.8
3-Apr	55.1	55.7	57.9	60.9	60.0	62.7	63.5	55.1	49.4	47.0	47.5	44.5	42.4	DF	DF	34.2	32.8	31.5	34.9	40.1	43.0	50.4	62.7	71.0	50.1	71.0
4-Apr	72.8	74.0	76.6	77.6	76.1	76.8	76.5	68.7	57.7	50.1	42.8	34.0	29.6	27.3	27.9	26.3	25.6	26.0	DF	34.1	38.4	44.2	41.8	40.0	49.8	77.6
5-Apr	43.9	48.5	58.1	60.5	61.7	63.7	65.7	61.1	55.2	44.4	38.6	31.0	26.0	24.0	22.7	20.3	21.6	22.6	24.0	31.0	40.1	44.8	49.0	53.8	42.2	65.7
6-Apr	58.2	62.0	52.8	48.0	50.6	53.3	54.5	DF	DF	DF	44.1	41.6	38.8	38.3	37.0	35.7	35.0	36.1	39.9	42.7	DF	DF	DF	DF	--	62.0
7-Apr	DF	DF	58.1	60.4	61.7	63.7	64.5	DF	DF	DF	DF	45.8	40.8	37.0	34.6	33.5	33.6	34.9	36.9	40.2	44.0	45.9	51.9	52.3	46.7	64.5
8-Apr	55.5	58.5	62.3	76.4	82.1	91.3	94.3	94.3	96.0	96.7	95.8	96.0	95.5	94.3	95.5	96.6	97.2	97.3	96.8	96.7	97.5	97.9	98.1	98.4	90.0	98.4
9-Apr	98.6	98.7	98.8	98.8	98.9	98.9	98.9	98.9	98.9	98.7	97.1	83.2	69.1	58.2	47.4	33.9	31.0	28.4	34.0	38.3	52.9	60.4	60.9	69.6	73.0	98.9
10-Apr	74.5	76.7	66.3	67.9	69.4	69.3	64.9	55.3	45.1	39.9	35.3	31.5	24.0	20.2	19.0	18.3	17.4	16.5	16.8	DF	DF	35.0	32.8	DF	42.7	76.7
11-Apr	DF	DF	38.7	44.9	DF	57.4	DF	57.4	58.9	50.1	DF	37.3	35.7	33.6	30.6	30.8	28.9	30.3	34.0	40.4	41.8	51.3	62.8	68.7	43.9	68.7
12-Apr	72.7	76.6	78.6	80.9	80.8	76.8	75.1	76.8	67.2	60.7	66.2	63.0	65.6	64.7	59.7	62.6	66.8	71.4	73.0	75.7	80.3	86.0	90.6	91.4	73.5	91.4
13-Apr	91.7	93.3	94.1	95.3	95.3	95.6	95.6	90.4	84.0	74.3	61.9	50.7	39.9	37.2	36.5	38.5	39.7	45.8	54.4	57.6	63.2	69.9	79.5	82.2	69.4	95.6
14-Apr	87.5	89.9	93.7	93.9	93.9	94.1	90.0	82.3	73.8	62.1	50.9	35.8	28.3	24.5	20.5	21.8	24.6	31.7	37.6	39.0	42.5	43.0	46.1	46.0	56.4	94.1
15-Apr	46.1	48.8	52.3	53.1	54.4	57.4	62.9	59.0	47.1	44.6	43.7	42.5	32.1	23.7	20.3	21.9	25.5	31.3	39.5	47.0	DF	DF	62.1	DF	43.6	62.9
16-Apr	89.6	93.7	94.3	87.7	84.7	85.9	81.7	DF	DF	DF	DF	61.2	61.9	58.7	57.0	55.5	62.0	71.8	71.6	72.1	74.1	76.6	77.5	84.8	75.1	94.3
17-Apr	78.2	76.8	76.2	76.4	81.7	83.3	80.0	80.2	77.4	76.1	71.8	68.7	63.7	57.9	52.2	48.1	46.2	46.1	48.9	56.5	68.6	72.1	70.7	66.4	67.7	83.3
18-Apr	63.0	64.6	66.5	70.7	73.7	73.5	70.2	64.2	59.9	54.3	44.5	37.4	31.3	28.0	26.6	26.2	26.0	26.3	27.0	28.3	32.9	29.4	30.4	29.2	45.2	73.7
19-Apr	27.8	31.9	40.3	43.2	42.3	48.8	55.6	51.2	40.1	30.0	33.0	25.9	23.6	25.5	25.0	26.3	27.3	34.0	41.0	51.3	79.3	90.8	90.3	91.9	44.9	91.9
20-Apr	90.3	88.5	90.6	87.8	79.4	70.7	68.4	62.4	54.0	50.2	45.4	44.1	44.1	39.7	34.6	32.8	30.3	31.3	31.6	36.4	42.1	45.5	48.0	54.5	54.3	90.6
21-Apr	59.6	63.1	66.7	70.6	76.5	81.0	73.1	59.8	53.1	43.9	32.7	34.2	29.2	26.3	24.9	22.5	22.0	23.2	23.7	29.3	29.5	30.0	33.8	38.1	43.6	81.0
22-Apr	41.7	41.8	48.0	50.7	52.8	60.0	74.3	79.7	81.7	80.4	73.7	67.2	61.2	52.5	53.0	72.7	70.5	63.5	60.5	66.1	72.4	75.8	80.5	87.1	65.3	87.1
23-Apr	90.8	94.7	95.9	96.3	97.3	97.8	97.9	94.2	78.3	DF	64.9	58.8	55.5	51.6	51.9	49.1	51.9	52.4	51.8	57.2	65.8	67.6	76.8	79.2	72.9	97.9
24-Apr	79.2	79.2	86.5	83.8	82.6	85.5	85.6	76.0	65.2	58.7	50.2	45.0	40.6	35.2	32.6	31.0	29.7	28.7	28.4	29.7	34.4	41.9	44.8	47.5	54.3	86.5
25-Apr	50.7	53.5	DF	63.5	68.4	68.0	62.6	50.6	41.9	31.1	21.3	19.0	18.8	17.8	16.9	16.9	15.5	15.1	16.6	20.1	20.6	21.4	25.3	29.1	33.2	68.4
26-Apr	34.2	40.9	41.3	45.1	56.7	65.0	68.2	64.2	58.8	53.6	48.6	46.8	44.9	45.3	44.6	45.4	48.6	56.5	62.9	72.0	73.1	70.7	69.9	70.1	55.3	73.1
27-Apr	71.8	75.0	77.9	77.4	77.3	74.4	66.5	59.9	55.3	52.6	48.6	44.5	40.6	37.6	35.3	36.3	35.9	36.7	37.4	39.3	43.7	45.6	44.3	48.5	52.6	77.9
28-Apr	61.4	66.9	71.1	72.7	75.3	78.8	62.5	47.6	42.7	37.6	34.2	29.7	24.5	18.2	16.5	18.3	19.7	21.8	22.9	23.7	25.5	30.4	45.2	48.8	41.5	78.8
29-Apr	56.8	75.6	82.3	77.5	74.9	78.1	73.6	65.6	65.9	78.1	71.6	64.5	62.5	56.5	65.1	53.1	41.0	25.1	28.9	31.9	35.6	39.7	49.4	51.1	58.5	82.3
30-Apr	52.6	DF	DF	DF	DF	DF	DF	DF	DF	50.4	50.2	50.3	56.0	85.4	90.6	84.6	81.8	73.8	80.4	84.5	87.6	86.7	86.2	85.4	--	90.6
65.1 68.5 69.7 70.8 73.0 74.3 73.9 69.1 62.9 56.8 52.6 47.7 43.8 41.5 39.9 39.2 39.1 39.6 42.8 48.2 53.5 55.8 59.4 62.8																										Diurnal Average
98.6 98.7 98.8 98.8 98.9 98.9 98.9 98.9 98.9 98.7 97.1 96.0 95.5 94.3 95.5 96.6 97.2 97.3 96.8 96.7 97.5 97.9 98.1 98.4																										Diurnal Maximum
DF - DAS Failure																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	17	2.56	2.56
20 - 40	161	24.25	26.81
40 - 60	199	29.97	56.78
60 - 80	184	27.71	84.49
80 - 100	103	15.51	100.00

Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

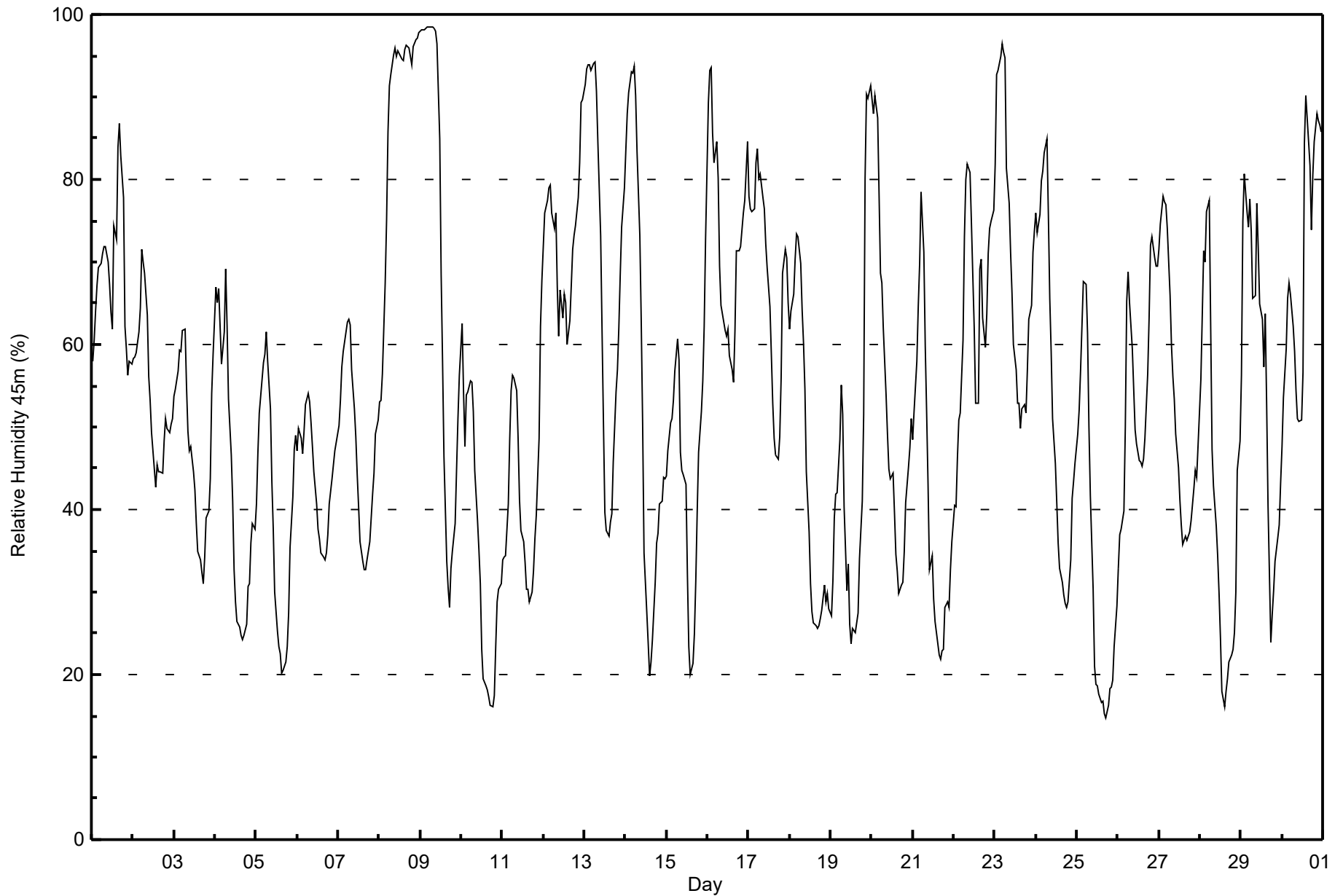
Lower Camp Met Tower - April 2025

Maximum Value: 98.5 % on Apr 9 06:00																			Maximum Daily Average: 87.7 % on Apr 8										Hours in Service: 720	
Minimum Value: 14.8 % on Apr 25 18:00																			Minimum Daily Average: 33.4 % on Apr 25										Hours of Data: 720	
Maximum Diurnal Average: 71.9 % at hour 6																			Minimum Diurnal Average: 40.4 % at hour 17										Hours of Missing Data: 0	
Monthly Average: 54.77 %																			Percentiles: P ₁ = 16.8 P ₁₀ = 27.4 Q ₁ = 37.7 Median = 53.3 Q ₃ = 70.3 P ₉₀ = 84.6 P ₉₉ = 98.2										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	57.9	60.5	64.0	67.1	69.4	69.9	71.1	71.8	71.8	70.0	67.4	63.9	61.8	74.3	72.7	83.9	86.9	82.8	77.8	62.1	59.4	56.3	58.0	57.7	68.3	86.9				
2-Apr	58.4	58.5	58.9	61.5	64.4	71.5	70.0	68.7	63.6	56.1	53.2	49.4	44.9	42.7	45.5	44.5	44.5	44.4	48.3	51.0	49.8	49.4	50.3	51.0	54.2	71.5				
3-Apr	53.7	54.6	56.8	59.4	59.1	61.7	61.9	54.9	49.5	47.1	47.5	44.5	42.3	38.3	35.0	34.0	32.4	31.1	34.2	39.0	39.9	43.8	54.0	58.8	47.2	61.9				
4-Apr	67.0	65.1	66.8	62.2	57.7	61.5	69.2	62.2	53.4	46.6	41.0	32.7	28.8	26.4	25.8	24.8	24.3	24.8	26.1	30.8	31.0	36.0	38.3	37.7	43.3	69.2				
5-Apr	40.7	46.9	51.7	55.7	57.9	58.8	61.5	57.9	52.1	43.3	37.6	29.9	25.3	23.5	22.6	20.1	20.6	21.6	23.4	27.4	35.3	41.5	47.3	49.0	39.7	61.5				
6-Apr	47.1	49.8	48.6	46.8	49.6	52.7	54.1	53.0	50.5	47.6	44.5	40.7	37.6	36.4	34.8	34.3	34.0	34.8	36.9	40.7	43.7	45.4	47.2	48.1	44.1	54.1				
7-Apr	50.1	53.3	57.2	59.2	60.3	62.7	63.0	62.3	57.0	52.2	48.8	44.3	40.3	36.1	33.8	32.8	32.8	33.9	36.1	38.9	41.8	44.4	49.2	50.9	47.6	63.0				
8-Apr	53.0	53.2	56.5	67.5	75.1	85.7	91.3	92.7	95.1	96.0	95.0	95.5	94.9	94.5	94.4	95.8	96.3	96.0	94.8	93.9	96.1	97.0	97.1	97.7	87.7	97.7				
9-Apr	97.9	98.2	98.2	98.3	98.5	98.5	98.5	98.5	98.2	97.9	96.4	85.0	68.5	58.0	46.4	33.7	30.5	28.1	33.0	34.9	38.3	44.8	51.0	56.3	70.3	98.5				
10-Apr	62.5	54.2	47.6	53.9	54.3	55.6	55.4	51.9	44.8	38.7	35.0	31.1	23.1	19.5	18.6	18.1	17.3	16.2	16.1	17.5	23.4	28.8	30.4	31.0	35.2	62.5				
11-Apr	33.9	34.2	34.3	40.7	48.5	54.5	56.3	55.9	54.4	48.7	41.2	37.5	36.1	33.5	30.3	30.4	28.9	30.1	32.5	36.4	39.4	48.7	62.2	67.8	42.4	67.8				
12-Apr	71.9	76.0	77.5	78.9	79.3	75.9	74.1	76.0	67.0	61.0	66.7	63.3	66.0	65.1	60.0	62.9	67.1	71.6	73.2	74.5	77.8	82.1	89.3	89.6	72.8	89.6				
13-Apr	91.6	93.4	94.0	93.9	93.2	94.0	94.3	90.7	84.5	73.2	61.7	50.5	39.7	37.4	36.8	38.5	39.5	45.8	54.2	57.0	62.0	68.5	74.2	78.9	68.6	94.3				
14-Apr	83.6	88.0	90.5	93.1	92.9	93.7	90.2	83.4	73.3	62.8	50.6	34.7	27.5	23.7	19.8	21.5	24.2	31.2	35.9	37.1	40.6	41.1	43.8	43.7	55.3	93.7				
15-Apr	44.1	47.1	50.6	51.0	53.1	56.7	60.7	58.2	46.9	44.7	44.3	43.1	32.2	23.4	20.0	21.4	24.9	31.3	39.6	47.0	51.9	55.6	62.3	72.8	45.1	72.8				
16-Apr	89.3	93.2	93.6	85.7	82.1	84.5	80.2	69.5	64.8	62.8	61.7	61.0	61.9	58.6	57.0	55.4	61.6	71.3	71.3	71.9	73.9	75.9	77.4	84.6	72.9	93.6				
17-Apr	78.0	76.5	76.0	76.5	82.0	83.7	80.2	80.6	77.8	76.5	72.2	69.3	64.5	58.8	52.8	48.6	46.6	46.2	48.8	55.9	68.7	71.6	70.5	65.1	67.8	83.7				
18-Apr	61.9	64.0	66.1	70.4	73.3	73.1	69.9	64.3	60.2	54.5	44.6	37.2	31.0	27.7	26.2	25.9	25.7	25.9	26.7	27.8	30.9	28.7	29.8	27.9	44.7	73.3				
19-Apr	27.1	31.4	39.0	41.8	42.1	48.5	55.1	51.6	40.4	30.1	33.4	26.1	23.8	25.6	25.1	26.2	27.4	34.1	41.1	51.6	80.1	90.3	89.8	91.4	44.7	91.4				
20-Apr	89.7	88.0	90.2	87.5	78.1	68.7	67.4	62.1	53.9	49.2	44.9	43.8	44.5	39.6	34.6	32.5	29.8	30.8	31.1	35.0	40.8	45.0	47.4	51.1	53.6	90.2				
21-Apr	48.5	51.8	58.0	64.5	69.7	78.5	71.2	59.8	51.6	43.0	32.7	34.4	29.2	26.4	25.0	22.4	21.8	22.9	23.0	28.1	28.7	28.1	32.7	36.1	41.2	78.5				
22-Apr	40.5	40.4	46.3	50.9	51.7	60.5	73.1	79.9	81.9	80.9	74.7	68.2	62.1	52.9	53.0	69.1	70.3	63.3	59.6	63.8	71.1	74.1	74.9	76.4	64.1	81.9				
23-Apr	81.8	92.7	93.2	94.8	96.5	95.5	94.7	81.4	77.2	71.2	66.3	60.1	57.0	52.8	52.9	49.8	52.3	52.7	51.7	56.9	63.0	64.7	71.1	73.8	71.0	96.5				
24-Apr	76.0	73.5	75.8	79.8	81.0	83.2	85.0	75.7	65.6	59.2	51.1	45.6	40.9	35.9	32.8	31.2	29.7	28.6	28.1	28.9	34.0	41.4	43.4	45.6	53.0	85.0				
25-Apr	49.1	52.0	56.8	62.2	67.6	67.4	61.4	50.1	41.8	30.3	21.1	18.8	18.7	17.6	16.7	16.7	15.2	14.8	16.3	18.3	18.5	19.3	23.4	28.3	33.4	67.6				
26-Apr	33.0	36.9	37.7	39.8	50.0	65.3	68.9	65.2	59.6	54.5	49.6	47.9	45.9	45.8	45.3	46.1	48.7	56.5	63.2	72.1	73.0	70.6	69.4	69.5	54.8	73.0				
27-Apr	71.5	74.6	77.9	77.3	77.0	74.0	66.0	59.9	56.0	53.3	49.2	45.0	41.1	38.1	35.7	36.8	36.2	36.8	37.2	38.6	42.6	44.8	43.9	47.7	52.6	77.9				
28-Apr	55.7	63.5	71.3	70.0	76.1	77.4	62.4	47.4	42.9	37.9	34.4	29.9	24.4	18.0	16.1	18.0	19.5	21.5	22.4	23.1	25.0	30.0	44.7	48.2	40.8	77.4				
29-Apr	56.2	74.9	80.6	76.1	74.3	77.6	73.7	65.5	66.0	77.2	71.7	65.0	63.0	57.2	63.8	52.9	40.5	23.9	27.2	30.2	33.8	36.6	38.1	43.3	57.1	80.6				
30-Apr	47.6	53.5	59.5	65.5	67.5	66.1	62.2	59.2	54.4	51.1	50.8	50.9	56.5	84.4	90.2	84.5	81.7	73.8	80.6	84.6	88.0	87.1	86.6	85.7	69.7	90.2				
60.6 63.3 65.8 67.7 69.4 71.9 71.4 67.0 61.9 57.3 53.0 48.3 44.5 42.4 40.8 40.4 40.4 40.9 43.0 45.8 50.1 53.1 56.6 58.9																										Diurnal Average				
97.9 98.2 98.2 98.3 98.5 98.5 98.5 98.5 98.2 97.9 96.4 95.5 94.9 94.5 94.4 95.8 96.3 96.0 94.8 93.9 96.1 97.0 97.1 97.7																										Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	24	3.33	3.33
20 - 40	176	24.44	27.78
40 - 60	235	32.64	60.42
60 - 80	187	25.97	86.39
80 - 100	98	13.61	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 100m (RH100) - %

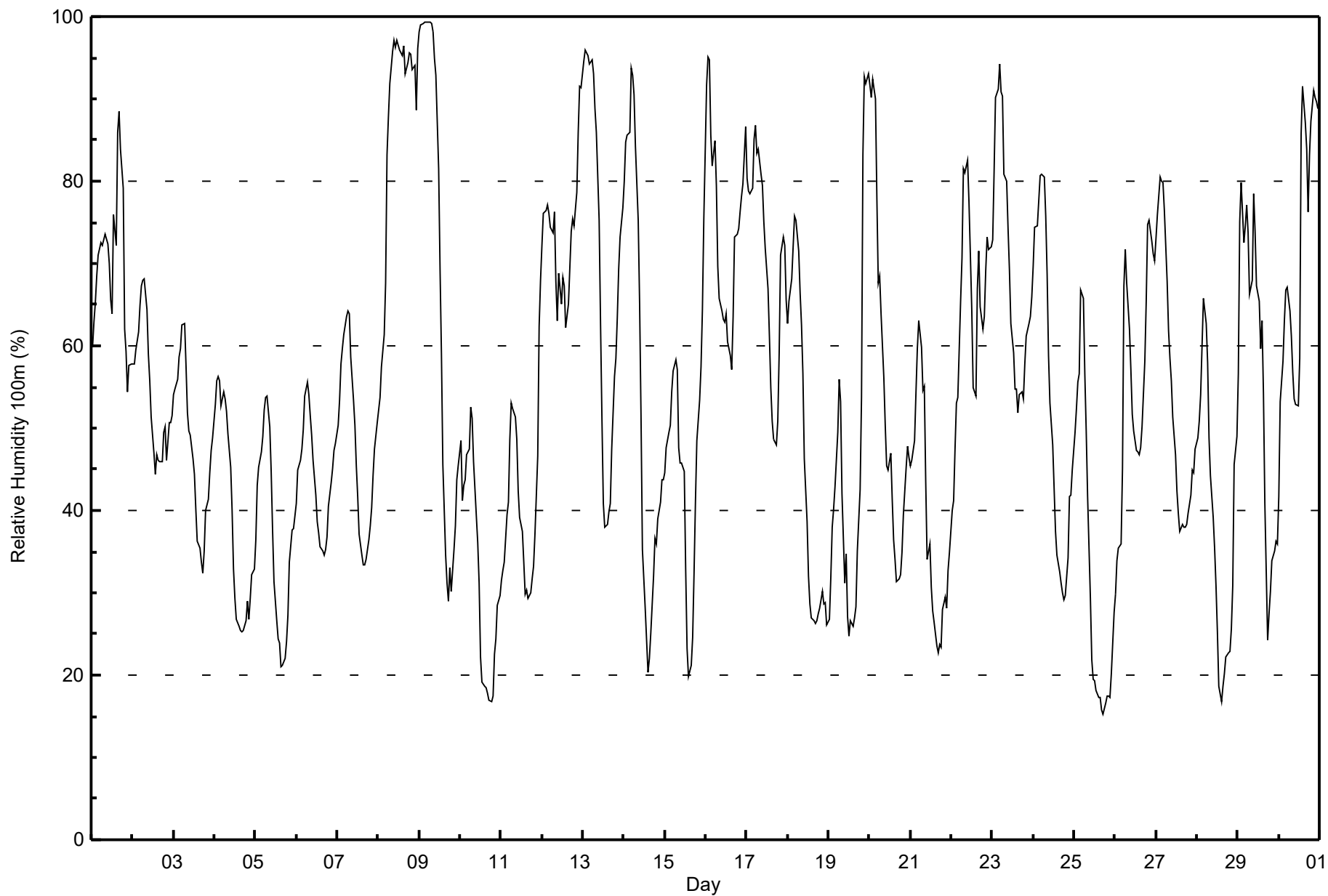
Lower Camp Met Tower - April 2025

Maximum Value: 99.4 % on Apr 9 06:00																				Maximum Daily Average: 86.5 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.2 % on Apr 25 18:00																				Minimum Daily Average: 32.5 % on Apr 10					Hours of Data: 720	
Maximum Diurnal Average: 70.1 % at hour 6																				Minimum Diurnal Average: 41.3 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 54.60 %																				Percentiles: P ₁ = 17.3 P ₁₀ = 27.4 Q ₁ = 37.7 Median = 53.0 Q ₃ = 70.0 P ₉₀ = 85.6 P ₉₉ = 98.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	59.9	62.9	65.2	68.5	71.1	72.6	72.3	72.8	73.5	72.3	69.9	65.6	63.9	75.9	72.2	86.0	88.6	83.8	79.2	62.1	59.4	54.5	57.6	57.9	69.5	88.6
2-Apr	57.7	57.8	59.6	61.7	64.8	67.2	68.0	68.1	64.3	59.0	55.8	51.4	46.9	44.4	46.8	46.0	45.9	45.9	49.5	50.2	46.0	50.6	50.7	51.5	54.6	68.1
3-Apr	54.0	54.8	55.9	58.6	59.6	62.5	62.6	57.4	51.9	49.6	49.2	46.3	44.4	40.2	36.3	35.4	33.8	32.3	35.2	40.0	41.3	44.5	47.2	48.9	47.6	62.6
4-Apr	52.9	55.8	56.3	55.8	52.8	54.5	53.5	52.1	49.4	45.3	40.1	32.9	29.3	26.8	25.9	25.4	25.2	25.5	26.6	29.1	26.9	29.2	32.1	32.9	39.0	56.3
5-Apr	36.4	43.1	45.3	47.1	49.1	52.1	53.7	53.9	50.2	44.8	37.6	31.3	26.7	24.4	24.0	21.0	21.2	22.0	24.1	27.3	33.8	37.6	37.7	39.3	36.8	53.9
6-Apr	40.8	44.9	46.1	47.4	49.8	53.9	55.6	54.1	51.5	49.2	46.1	41.9	38.7	37.3	35.6	35.0	34.6	35.3	36.8	40.6	43.4	45.0	47.3	48.1	44.1	55.6
7-Apr	50.3	53.3	57.8	59.6	61.4	63.6	64.3	63.8	58.7	53.5	50.3	45.5	41.6	37.1	34.5	33.4	33.3	34.1	36.5	38.1	40.3	44.2	47.4	50.8	48.1	64.3
8-Apr	52.1	53.8	57.4	61.3	67.7	83.2	87.7	91.9	95.8	97.2	96.3	97.1	95.9	95.7	95.3	96.4	93.0	94.4	95.6	95.5	93.6	94.1	88.6	96.0	86.5	97.2
9-Apr	98.2	99.0	99.1	99.3	99.4	99.4	99.4	99.1	98.2	95.0	92.9	81.5	69.3	59.0	45.7	34.5	31.2	29.0	33.0	30.1	35.2	38.1	43.7	45.5	68.9	99.4
10-Apr	48.4	41.2	43.0	43.7	46.7	47.4	52.5	51.2	45.9	39.4	36.0	31.2	22.3	19.2	18.6	18.6	17.9	16.9	16.8	17.5	22.6	24.4	28.4	29.7	32.5	52.5
11-Apr	31.6	32.7	33.7	39.5	41.0	48.6	53.0	52.4	51.3	48.7	42.4	39.2	37.4	33.7	29.9	30.3	29.2	30.0	31.7	33.1	37.2	46.6	62.4	68.0	41.0	68.0
12-Apr	72.2	76.0	76.4	77.1	76.2	74.3	73.8	76.2	67.9	63.1	68.8	65.1	68.4	67.2	62.1	65.1	69.5	73.8	75.4	74.7	78.7	86.0	91.5	91.3	73.8	91.5
13-Apr	94.5	95.9	95.6	95.3	94.3	94.7	93.1	88.8	85.9	75.2	62.6	51.1	40.9	38.0	38.3	39.9	40.8	47.5	56.3	58.5	63.3	69.4	73.2	76.7	69.6	95.9
14-Apr	80.0	84.8	85.6	86.0	93.7	92.9	90.5	84.3	75.2	65.2	51.5	35.2	28.1	24.2	20.4	22.1	25.0	32.0	36.6	36.0	38.9	40.9	43.8	43.8	54.9	93.7
15-Apr	44.6	47.6	49.6	50.3	54.4	56.9	58.4	57.1	47.6	45.8	45.7	44.7	32.8	23.1	19.9	21.1	24.6	32.4	40.9	48.4	53.4	57.5	64.5	75.4	45.7	75.4
16-Apr	91.7	95.1	94.8	85.5	81.9	84.9	79.6	69.6	65.7	64.2	63.3	62.8	64.0	60.5	58.8	57.1	63.6	73.3	73.6	74.3	76.3	78.1	79.7	86.6	74.4	95.1
17-Apr	80.4	78.9	78.5	79.1	85.1	86.8	83.4	83.9	80.8	79.4	75.0	71.8	67.0	61.2	55.0	50.8	48.7	48.0	50.9	59.2	71.1	73.2	72.2	65.6	70.2	86.8
18-Apr	62.7	65.4	68.2	72.1	75.7	75.2	71.6	66.5	62.6	56.6	46.4	38.7	32.0	28.6	27.0	26.7	26.2	26.6	27.4	28.2	30.1	28.7	28.8	26.1	45.8	75.7
19-Apr	26.8	31.8	37.9	40.2	42.9	49.5	55.9	53.3	42.0	31.2	34.8	27.1	24.8	26.7	26.0	26.9	28.3	35.1	42.5	53.7	83.3	92.8	91.9	93.0	45.8	93.0
20-Apr	91.7	90.2	92.3	89.9	78.0	67.7	68.5	63.9	56.1	50.3	45.5	44.9	46.9	41.4	36.5	34.1	31.4	31.7	32.2	35.0	39.5	45.3	47.7	46.5	54.5	92.3
21-Apr	45.4	46.1	48.5	54.3	59.7	63.0	59.9	54.6	55.1	43.6	34.0	35.9	30.6	27.7	26.4	23.5	22.7	23.7	23.5	27.9	29.4	28.2	32.8	34.9	38.8	63.0
22-Apr	40.0	41.2	47.4	53.0	53.8	65.4	70.8	81.5	80.9	82.6	77.5	71.0	64.4	54.9	53.9	66.9	71.5	64.7	62.0	63.5	69.1	73.2	71.6	72.1	64.7	82.6
23-Apr	72.9	81.3	90.2	91.3	94.3	90.9	90.3	80.8	80.0	74.3	69.2	62.6	59.1	54.8	54.8	51.8	54.0	54.5	53.5	57.8	61.2	62.6	63.5	65.9	69.6	94.3
24-Apr	69.7	74.5	74.5	77.6	80.6	80.8	80.4	75.7	68.7	58.7	53.1	47.9	42.7	37.5	34.6	32.6	31.2	29.9	29.1	29.7	34.2	41.7	41.8	44.8	53.0	80.8
25-Apr	49.5	52.3	55.7	56.5	66.8	65.8	56.7	49.7	41.7	29.3	21.8	19.5	19.3	18.2	17.2	17.3	15.7	15.2	16.6	17.5	17.4	17.2	20.2	27.6	32.7	66.8
26-Apr	29.8	34.0	35.4	35.9	45.1	67.3	71.7	67.7	62.1	57.1	51.7	49.6	47.3	47.1	46.8	47.6	50.2	58.2	65.4	74.7	75.3	72.7	71.1	70.3	55.6	75.3
27-Apr	73.1	75.9	80.5	80.0	79.8	76.5	67.9	61.9	58.4	55.8	51.4	46.7	42.4	39.7	37.4	38.3	37.9	37.9	38.4	39.6	41.9	44.9	44.5	47.4	54.1	80.5
28-Apr	48.7	50.8	54.1	60.1	65.7	62.7	57.9	48.8	44.3	39.1	35.5	30.8	25.3	18.6	16.7	18.6	20.2	22.1	22.7	22.8	25.5	30.8	45.6	49.0	38.2	65.7
29-Apr	56.5	75.1	79.8	72.5	74.5	77.1	73.8	66.3	67.9	78.5	73.9	67.3	65.5	59.7	63.1	54.2	40.9	24.3	27.4	30.2	33.9	35.2	36.3	35.9	57.1	79.8
30-Apr	41.7	53.3	58.1	63.0	66.7	67.1	64.3	61.2	56.8	53.6	52.9	52.8	58.5	85.7	91.6	87.1	83.9	76.2	83.2	87.3	91.0	90.2	89.7	88.8	71.0	91.6
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	22	3.06	3.06
20 - 40	181	25.14	28.19
40 - 60	243	33.75	61.94
60 - 80	174	24.17	86.11
80 - 100	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 163m (RH163) - %

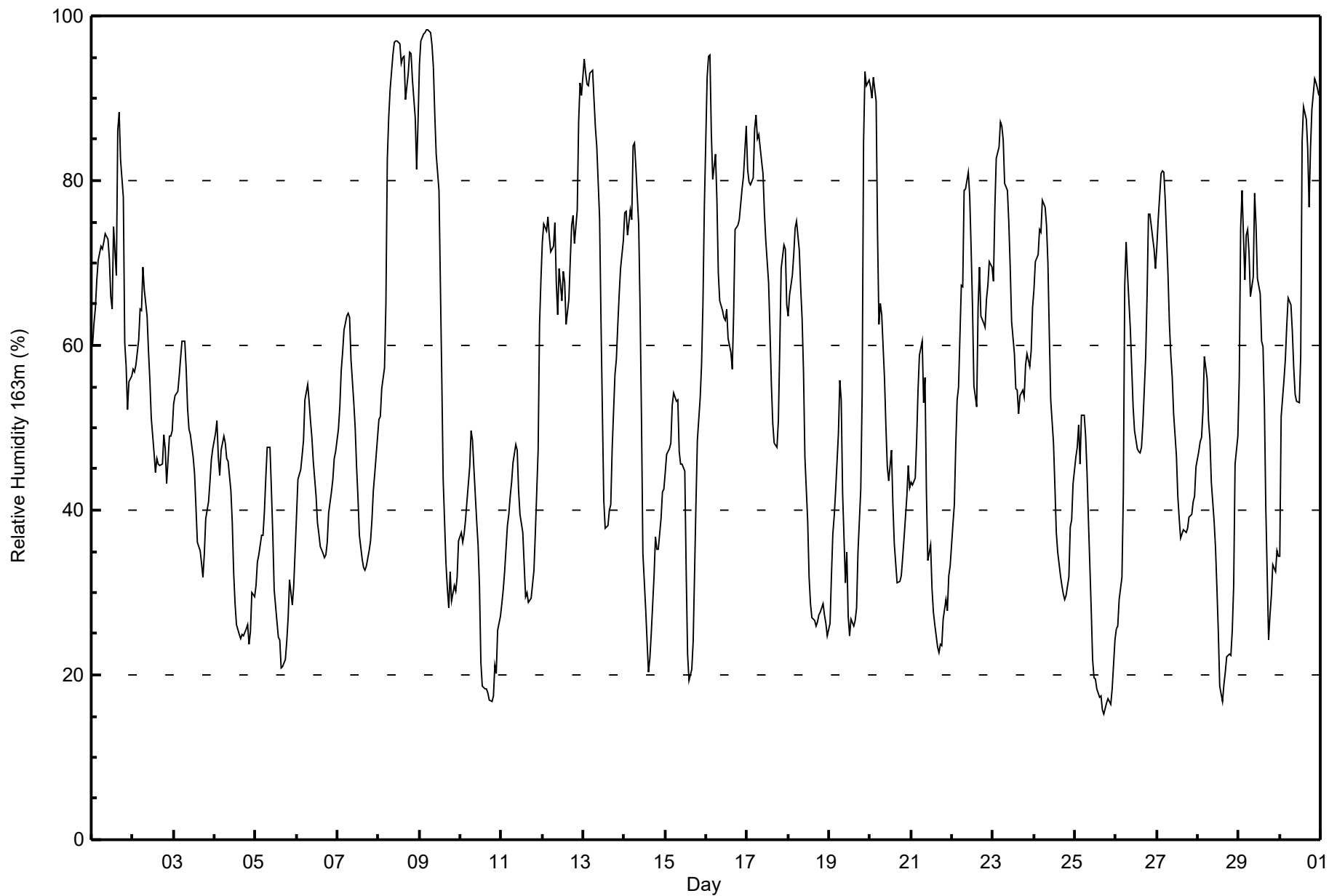
Lower Camp Met Tower - April 2025

Maximum Value: 98.3 % on Apr 9 06:00																				Maximum Daily Average: 84.6 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.2 % on Apr 25 18:00																				Minimum Daily Average: 29.5 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 67.1 % at hour 6																				Minimum Diurnal Average: 41.0 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 53.19 %																				Percentiles: P ₁ = 17.0 P ₁₀ = 26.5 Q ₁ = 36.2 Median = 50.8 Q ₃ = 69.3 P ₉₀ = 83.9 P ₉₉ = 97.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	60.2	62.6	64.5	67.9	70.3	72.1	71.6	72.5	73.5	72.9	70.5	66.0	64.4	74.4	68.5	86.0	88.3	82.6	78.0	60.3	57.5	52.2	55.5	56.3	68.7	88.3
2-Apr	57.1	56.8	57.7	60.6	64.4	64.3	69.5	66.8	63.5	59.3	55.8	51.1	47.0	44.6	46.2	45.6	45.5	45.6	49.2	47.5	43.2	49.0	49.0	49.6	53.7	69.5
3-Apr	52.9	53.9	54.3	56.3	58.6	60.5	60.5	57.2	52.3	49.9	49.1	46.4	44.4	40.3	36.2	35.0	33.6	31.9	34.7	39.0	41.0	43.4	46.1	47.5	46.9	60.5
4-Apr	49.3	50.8	46.5	44.2	47.3	49.0	48.1	46.2	46.0	42.4	38.5	32.3	28.7	26.0	24.9	24.5	24.9	24.7	25.6	26.1	23.7	25.3	30.0	29.6	35.6	50.8
5-Apr	30.9	33.8	34.6	37.0	36.9	39.9	43.9	47.7	47.6	42.6	37.1	30.3	26.4	24.5	24.2	20.9	21.1	21.9	24.0	27.0	31.5	28.5	30.9	35.2	32.4	47.7
6-Apr	39.3	43.7	45.0	46.6	48.5	53.4	55.2	53.3	50.8	48.8	45.9	41.6	38.4	37.2	35.5	34.7	34.3	34.6	36.1	39.7	42.2	43.7	46.3	47.2	43.4	55.2
7-Apr	49.7	52.6	56.9	59.1	61.9	63.6	63.9	63.5	58.3	53.1	50.1	45.2	41.6	36.9	34.1	33.1	32.7	33.2	35.1	36.3	38.8	42.5	44.4	48.9	47.3	63.9
8-Apr	51.0	51.4	54.7	57.2	65.2	82.6	87.6	91.0	95.2	96.8	97.0	97.0	96.7	94.2	95.0	95.1	89.8	93.0	95.6	95.4	92.2	87.7	81.3	87.1	84.6	97.0
9-Apr	94.1	97.0	97.8	98.0	98.2	98.3	98.0	96.4	93.8	87.9	83.2	78.8	67.4	56.1	43.7	33.6	30.5	28.2	32.5	29.0	30.9	30.1	31.9	36.2	65.5	98.3
10-Apr	37.3	36.1	37.2	38.8	41.1	45.2	49.6	48.4	45.1	38.6	35.8	30.6	21.5	18.6	18.3	18.2	17.8	16.9	16.7	17.5	21.1	20.2	25.4	27.1	30.1	49.6
11-Apr	28.7	30.3	32.5	38.1	39.4	41.7	43.3	45.8	47.9	47.3	42.3	39.4	37.3	33.3	29.5	29.9	28.9	29.3	31.0	32.7	37.3	47.4	62.5	68.0	39.3	68.0
12-Apr	72.6	74.8	74.0	75.6	73.3	71.4	72.0	75.0	67.7	63.7	69.4	65.5	68.9	67.6	62.6	65.7	70.3	74.7	75.8	72.5	76.4	87.2	91.9	90.3	73.3	91.9
13-Apr	94.8	93.1	91.8	91.4	93.1	93.3	89.8	86.5	84.1	75.4	63.1	51.8	41.3	37.8	38.1	39.9	40.7	47.5	56.4	58.3	62.3	66.1	69.3	72.7	68.3	94.8
14-Apr	76.0	76.3	73.4	76.4	75.2	84.2	84.6	81.5	74.6	64.4	51.1	34.8	27.9	24.0	20.3	22.1	25.1	32.0	36.8	35.2	35.3	39.0	42.2	42.6	51.5	84.6
15-Apr	44.6	46.7	47.5	48.2	52.7	54.2	53.2	53.3	47.1	45.6	45.6	44.7	32.5	22.5	19.4	20.6	24.0	32.3	40.9	48.4	53.5	57.6	65.1	76.7	44.9	76.7
16-Apr	92.6	95.1	95.2	85.7	80.2	83.3	77.6	68.8	65.5	64.2	63.4	63.1	64.3	60.8	59.1	57.1	64.1	74.0	74.5	75.2	77.1	78.9	80.6	86.6	74.5	95.2
17-Apr	81.4	79.8	79.4	80.3	86.3	88.0	85.1	85.6	82.4	80.9	76.1	72.8	67.6	61.7	55.3	50.5	48.2	47.7	50.8	59.6	69.3	72.1	71.6	65.0	70.7	88.0
18-Apr	63.5	66.0	68.5	71.0	74.2	75.1	71.6	66.9	63.1	56.8	46.5	38.7	31.9	28.6	27.0	26.6	26.0	26.5	27.2	27.7	28.7	27.2	26.3	24.8	45.4	75.1
19-Apr	26.2	32.0	37.1	39.4	42.4	49.4	55.8	53.4	42.1	31.2	34.9	27.1	24.8	26.7	25.9	26.7	28.2	34.9	42.5	54.2	84.6	93.3	91.6	92.2	45.7	93.3
20-Apr	91.3	90.1	92.5	89.7	73.7	62.5	65.1	63.7	56.0	50.3	45.3	43.6	47.2	40.7	35.9	33.6	31.2	31.4	32.0	34.3	36.6	41.7	45.4	42.7	53.2	92.5
21-Apr	43.4	43.1	43.9	48.5	54.5	58.9	60.5	53.0	56.2	42.3	34.0	35.8	30.5	27.6	26.0	23.4	22.7	23.7	23.5	26.9	29.2	27.8	32.0	33.3	37.5	60.5
22-Apr	38.3	40.7	47.7	53.3	54.9	67.2	67.1	78.8	79.0	81.1	78.1	71.9	64.7	55.1	52.5	64.5	69.6	63.6	62.7	62.2	65.5	67.3	70.2	69.4	63.6	81.1
23-Apr	67.7	76.6	82.8	84.0	87.1	86.6	84.9	79.7	78.8	75.0	69.5	62.9	59.0	54.7	54.6	51.7	53.9	54.5	53.7	57.6	58.9	57.4	59.3	64.6	67.3	87.1
24-Apr	66.8	70.2	71.0	74.0	73.8	77.6	76.9	74.6	69.9	61.4	53.3	48.1	43.0	37.2	34.8	32.0	30.9	29.8	29.1	29.7	31.9	37.9	38.7	43.2	51.5	77.6
25-Apr	46.5	47.6	50.4	45.7	51.6	51.5	49.0	44.6	38.9	28.0	21.9	19.6	19.4	18.3	17.4	17.4	15.8	15.2	16.6	17.2	16.8	16.4	18.2	24.2	29.5	51.6
26-Apr	25.7	25.9	29.2	31.9	42.0	67.3	72.6	68.6	62.0	57.3	52.5	49.7	47.4	47.1	46.9	47.6	50.4	58.7	66.1	75.9	75.9	73.1	71.7	69.3	54.8	75.9
27-Apr	72.1	75.4	80.9	81.1	81.0	77.6	68.5	62.5	58.9	56.1	51.7	46.6	41.8	39.0	36.6	37.6	37.4	37.3	37.9	39.2	39.4	41.1	41.7	45.2	53.6	81.1
28-Apr	47.1	48.3	48.9	52.0	58.6	55.9	50.9	48.6	43.5	38.7	35.4	30.6	25.3	18.6	16.8	18.8	20.3	22.2	22.5	22.3	25.5	30.8	45.7	49.0	36.5	58.6
29-Apr	56.2	74.3	78.8	68.0	73.5	74.1	71.2	65.9	68.3	78.4	74.5	68.1	66.3	60.5	59.7	52.8	40.3	24.2	27.2	29.7	33.3	32.6	35.0	34.4	56.1	78.8
30-Apr	34.3	51.4	55.7	58.2	62.3	65.7	64.9	61.7	57.4	54.1	53.2	53.1	58.7	84.7	89.0	87.5	83.9	76.7	83.9	88.6	92.4	91.9	91.1	90.4	70.5	92.4
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	23	3.19	3.19
20 - 40	204	28.33	31.53
40 - 60	227	31.53	63.06
60 - 80	175	24.31	87.36
80 - 100	91	12.64	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 - April 2025

Maximum Speed: 38 km/h on Apr 18 22:00										Maximum Daily Speed Average: 24.0 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 23 05:00										Minimum Daily Speed Average: 0.5 km/h on Apr 1										Hours of Data: 720						
Maximum Diurnal Speed Average: 3.0 km/h at hour 16										Minimum Diurnal Speed Average: 0.3 km/h at hour 5										Hours of Missing Data: 0						
Monthly Average Velocity: 1.1 km/h 208.1 deg										Percentiles: P ₁ = 0 P ₁₀ = 2 Q ₁ = 5 Median = 10 Q ₃ = 16 P ₉₀ = 21 P ₉₉ = 31										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	ESE8	ESE11	SE9	ESE7	ESE3	ESE2	SE5	SE8	SSE10	SE9	SE9	SE10	SSE12	SE12	SE7WNW10	WNW18	WNW15	NNW12	NW13	NW10	NW11	NW11	WNW12	SSE0.5	WNW18	
2-Apr	WNW12	WNW11	NW12	WNW10	W7WSW11	WSW19	WSW14	WSW13	WNW11	W11WSW10	WNW7	NNW13	N16	N14	N14	NNW14	NNW8	NW4	NNW6	NNW7	NNW6	NW5	WNW8.3	WSW19		
3-Apr	NW7	NW12	NW9	NW8	NW8	NNW5	NNW7	NNW11	NNW15	NNW16	NNW17	NNW13	NNW11	NNW12	NNW14	NNW12	NW14	NNW14	NNW10	NNW4	N4	WSW1	NW1	NW1	NNW9.2	NNW17
4-Apr	N1	SE2	SE3	ESE7	SE12	SE13	SE14	SE14	SE12	SE12	SE11	SE9	SE9	SE8	SE11	SE10	SE12	SE10	SE12	SE8	SE9	SE6	ESE4	ESE7	SE8.9	SE14
5-Apr	SE6	SE2	S1	SSE2	SE6	SE9	SE8	SE8	SE9	SE7	SE5	S4	S3	SSW0	NNW6	NNW11	N12	NNW10	NNW9	NNW10	NNW10	NNW9	NNW5	NNW4	NE1.5	N12
6-Apr	N4	N4	ESE10	ESE11	ESE9	ESE12	ESE12	SE14	SE17	ESE17	ESE19	SE21	SE21	SE23	SE25	SE22	SE21	SE18	SE21	SE21	SE21	SE21	SE21	SE22	SE16.2	SE25
7-Apr	SE21	SE18	SE14	SE14	ESE17	ESE16	SE18	SE16	SE18	SE19	SE18	SE20	SE17	SE20	SE17	ESE16	SE17	ESE10	ESE3	ESE5	ESE4	SE6	SE8	WSW1	SE13.7	SE21
8-Apr	SSE1	SSE1	NNW2	NNW4	W1	ESE3	SE4	SE3	NNW2	SE4	SE8	ESE6	SE5	SE7	ESE7	SE4	E3	NW4	WSW3	NW3	W2	N2	W1	E2	ESE1.5	SE8
9-Apr	SE3	ENE1	SE0	SE3	SE7	SSE7	SE6	SE5	SE5	ESE3	SSE5	ESE7	SE11	SE12	SE7	E3	SE2	NNE2	NNE1	NE1	WNW2	NNW2	SW2	ESE2	SE3.5	SE12
10-Apr	SE5	SE4	SE9	SE12	SE15	SE13	SE13	SSE7	SSW8	SW9	SW14	SW19	WSW18	WSW17	WSW14	WSW10	WSW7	S3	SE2	ESE5	SE3	SE5	SE8	ESE7	S5.5	SW19
11-Apr	SE3	E2	ESE3	NNW5	NNW5	NNW4	NNW5	NW3	NNE2	S7	SE11	SSW6	WSW11	WSW20	WSW23	WSW18	W21	W20	WSW15	SW14	WSW16	WSW18	WSW17	WSW13	WSW8.3	WSW23
12-Apr	WSW10	WSW14	WSW15	WSW14	WSW14	SW11	WSW4	W5WSW12	WNW14	W15	W13	WNW13	WNW12	WNW16	WNW14	NW17	NW15	NW9	NNW3	S1	NW1	NW3	NW2	W9.0	NW17	
13-Apr	NNE3	ENE3	NNE2	N3	NNW2	NW3	NW2	NNW2	NNW2	S3	NNE3	N8	N11	NNW12	NNW14	N13	N16	N14	NNE12	NNE8	N7	NW5	NNW2	NNW1	N5.6	N16
14-Apr	NW2	NW2	NNW3	NNW3	ENE0	E0	SE0	ESE3	SE9	SE9	SE11	SE11	SE13	SE17	SSE19	SSE20	S16	SSW16	S10	SSE11	SE13	SE15	SE13	ESE14	SSE8.1	SSE20
15-Apr	SE13	SE8	SE11	SE14	SE11	SE10	ESE8	S15WSW25	WSW31	WSW27	W25WSW27	WSW30	WSW26	WSW28	W25	WNW25	WNW25	WNW33	W29	W28	W25	W23	WSW15.4	WNW33		
16-Apr	W18	W17	W16	WNW16	WNW13	WNW13	NW15	NW20	NW23	NW21	NNW19	NNW17	NNW19	NNW20	NNW17	NNW18	N16	N13	NNW15	NNW13	NNW6	N5	NNW7	NNW11	NW13.7	NW23
17-Apr	N14	N16	N15	NNW17	N13	NNE13	N15	N14	N16	N17	N17	N15	N15	N14	NNW12	N10	N7	NNW8	NNE7	NE5	E3	SE5	ESE5	SE11	N10.1	N17
18-Apr	SE15	SE17	SSE14	SE13	SE15	SE16	SE17	SE21	SE18	SSE21	SSE26	SSE28	SSE30	SSE31	SSE31	SSE30	SSE25	SSE27	SSE30	SSE36	SE29	SSE38	SSE29	S27	SSE24.0	SSE38
19-Apr	SSW26	SW23	WSW20	WSW17	WNW14	WNW11	W11	WNW18	WNW17	W20	W18	W21	W21	WNW21	W21	W22	W23	W18	NW16	NW15	N13	N12	NNW8	N11	W13.8	SSW26
20-Apr	N10	N10	NNW8	NNW8	N7	N7	N8	N9	N9	N8	N7	NNW3	W3	S5	SSE4	S5	N4	NNE9	NE8	NE6	N5	NNW3	NW2	N2	N4.7	N10
21-Apr	NNE2	N3	NNW4	NNW3	NNW4	NW3	NNW1	NNE0	E2	SSE5	SE9	SE10	SSE6	SE6	SSE6	SSE8	SSE11	SSE13	S14	SE13	S15	SSE15	SSE22	SE14	SSE5.9	SSE22
22-Apr	E3	SSE5	SE12	SE9	ESE7	SSE3	SSE22	S13	SSE14	SSE25	SSE21	SSE18	SSE18	SSE19	SW26	S21	S22	SSE16	NE2	ESE6	NNW3	NW1	W1	S0	SSE10.3	SW26
23-Apr	NNW1	NW2	NW0	ENE0	ESE0	NW1	NNW1	NNW1	NNW4	NNW9	NNW12	NNW13	N13	N14	N11	NNW12	N12	N10	NNW6	NNW6	NNW5	NNW4	N6	N3	NNW6.1	N14
24-Apr	N3	E1	E0	NNE1	ENE0	SSE1	ESE3	WSW2	NE2	NE5	E3	ESE5	S3	NNE6	N8	NE6	ENE2	SE6	SE8	ESE7	SE7	SE8	ESE10	ESE9	ESE2.7	ESE10
25-Apr	SE10	SE7	SE6	SE7	SSE1	SE2	ESE1	ESE6	ESE9	SSE19	S32	S33	S32	S30	S25	SSW25	SSW29	SSW26	SSW21	S14	SSW17	SSW19	S9	ESE7	S14.6	S33
26-Apr	ESE6	SE7	SE9	SE6	NNW8	NNW9	NNW9	NNW8	NW8	NNW12	NNW13	N16	N18	N20	N19	N19	NNE18	N20	N16	N18	N12	N11	N11	N11	N10.3	N20
27-Apr	N8	N7	NNW9	N15	N19	N16	N17	N14	N12	N12	N10	N10	N10	N9	N8	N10	N10	N11	NNE12	NNE10	N9	NNW5	NNE4	ENE2	N10.1	N19
28-Apr	N3	NNW2	NNW2	NNW4	NNW5	NW3	SE2	SE14	SE13	SE11	SE15	SE16	SSE19	S20	S23	S25	S23	S22	S18	S16	SSW19	SSW20	SSW22	SSE18	S11.2	S25
29-Apr	S16	SSW7	SE6	SSE14	WSW13	WSW11	WSW11	WSW14	W17	W15	W13	WNW18	NW12	NNW12	WNW8	WSW5	NW10	N18	N11	N6	NNW5	WSW1	SSW1	SE3	W5.6	WNW18
30-Apr	ESE5	SSW6	WSW18	WSW10	W7	NNW9	NNW13	NNW9	NNW8	NNW7	NNW8	NNW8	N14	NNW7	NNE2	NNW5	NNW8	NNW17	N18	N16	N16	N16	N14	N13	NNW8.1	WSW18
SSE1.8SSW1.3SSW1.5 S0.6 NE0.3 E0.7 SE1.1 S1.1 SW1.2SSW1.9 S2.2SSW2.7SSW2.3 SW2.5 SW2.8WSW3.0 W2.7 NW2.8NNW1.4 NE0.7WSW0.4 S1.6 S1.7 SE1.6																								Diurnal Average		
SSW26 SW23WSW20WSW17 N19 ESE16 SSE22 SE21WSW25WSW31 S32 S33 S32 SSE31 SSE31 SSE30 SSW29 SSE27 SSE30 SSE36 SE29 SSE38 SSE29 S27																								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

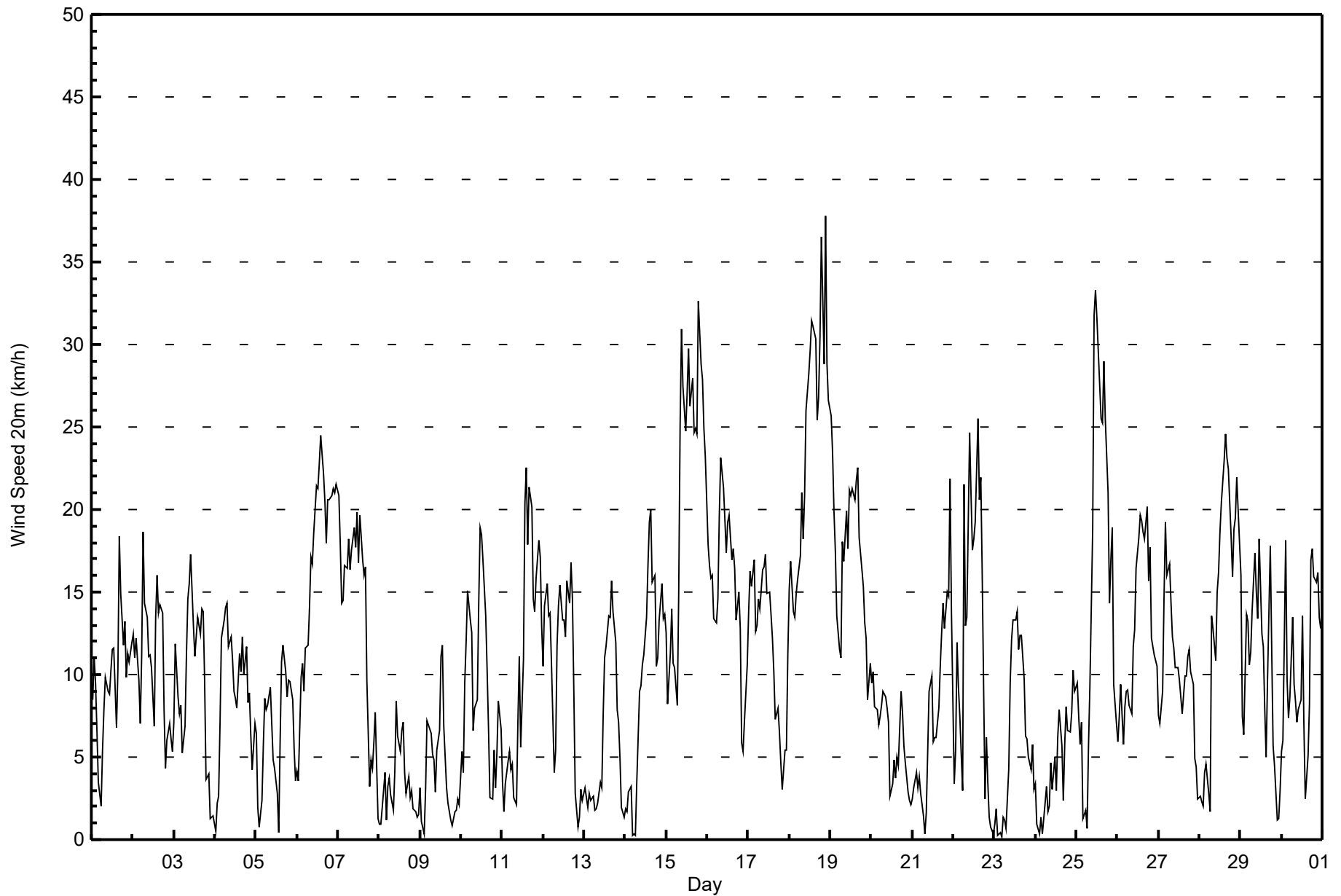
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 15 20:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on Apr 14 03:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	4	4	4	2	2	3	3	2	2	3	3	3	4	2	7	6	6	3	4	4	4	3	3	7
2-Apr	3	3	3	3	3	4	5	4	4	5	4	3	4	5	5	4	4	4	4	1	2	3	3	2	5
3-Apr	2	3	3	3	3	2	3	5	5	6	7	5	4	5	6	5	5	5	4	2	1	1	1	1	7
4-Apr	1	1	3	2	2	2	2	2	2	3	3	3	3	2	3	2	2	2	2	2	2	3	3	2	3
5-Apr	3	1	1	2	1	3	4	2	2	2	3	2	1	2	3	3	3	3	3	2	3	3	3	3	4
6-Apr	2	2	5	4	4	5	6	6	6	6	6	7	7	7	7	7	7	6	6	6	6	6	6	6	7
7-Apr	7	5	5	5	5	5	5	5	5	6	6	6	6	6	5	5	4	4	3	3	4	2	3	2	7
8-Apr	1	1	1	2	1	2	1	1	1	2	2	3	2	3	2	3	1	1	2	2	1	1	1	1	3
9-Apr	1	1	1	1	2	2	2	1	1	1	2	2	3	3	5	1	2	2	1	1	1	3	2	3	5
10-Apr	3	3	3	2	2	1	2	3	4	4	3	4	5	5	4	3	3	1	2	2	2	3	1	2	5
11-Apr	2	2	4	3	3	2	1	2	3	4	3	3	5	5	6	7	8	6	4	2	4	4	6	3	8
12-Apr	4	3	4	3	4	3	2	2	5	5	5	5	5	5	6	5	6	5	5	1	1	1	1	1	6
13-Apr	1	1	1	1	1	1	1	1	1	1	2	3	7	4	5	4	4	5	4	2	2	2	1	1	7
14-Apr	1	1	1	1	1	1	1	2	3	3	3	3	4	4	4	4	4	4	2	2	2	2	2	4	4
15-Apr	5	3	5	3	3	3	4	8	7	10	10	9	9	9	9	9	8	9	9	12	11	10	8	8	12
16-Apr	6	5	5	5	4	4	4	6	8	8	7	7	7	8	7	7	6	4	5	5	2	2	3	3	8
17-Apr	5	6	5	6	5	5	5	5	5	5	6	5	5	5	5	4	3	3	3	2	2	2	5	6	
18-Apr	5	4	3	3	4	5	5	7	5	5	5	6	6	6	6	6	5	6	5	7	4	6	5	4	7
19-Apr	5	5	5	5	5	4	4	7	6	7	7	8	7	8	7	8	8	7	6	6	5	4	3	4	8
20-Apr	3	4	4	4	3	3	3	3	3	3	3	3	3	2	2	2	3	3	3	2	2	2	1	1	4
21-Apr	1	1	1	1	1	1	1	1	2	2	3	3	3	4	3	5	3	4	3	4	7	3	4	7	7
22-Apr	2	2	2	3	3	3	5	5	8	4	4	4	5	5	10	10	4	5	2	2	5	1	1	1	10
23-Apr	2	1	1	1	1	1	1	1	3	3	4	5	5	5	4	4	4	3	2	2	2	2	2	2	5
24-Apr	1	1	2	2	1	1	2	2	2	2	2	2	2	3	3	3	2	3	2	1	2	2	2	2	3
25-Apr	3	3	2	3	1	1	1	3	3	9	6	7	7	6	7	6	6	5	5	2	3	2	6	3	9
26-Apr	2	2	5	2	4	4	3	3	3	4	4	5	6	6	7	7	6	6	5	6	4	4	4	4	7
27-Apr	3	3	4	5	6	5	5	5	5	5	4	3	4	4	3	4	4	4	5	4	3	3	2	1	6
28-Apr	1	1	1	2	2	1	3	3	3	3	4	4	6	6	6	6	5	5	3	4	5	6	8	3	8
29-Apr	4	4	3	4	4	4	4	4	6	5	6	6	5	5	7	3	7	7	4	3	2	1	1	2	7
30-Apr	2	4	4	6	4	6	4	4	3	3	3	3	5	4	2	2	3	7	6	5	5	4	4	4	7
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	192	26.67	26.67
6 - 11	211	29.31	55.97
12 - 19	226	31.39	87.36
20 - 28	73	10.14	97.50
29 - 38	18	2.50	100.00
> 38	0	0.00	100.00

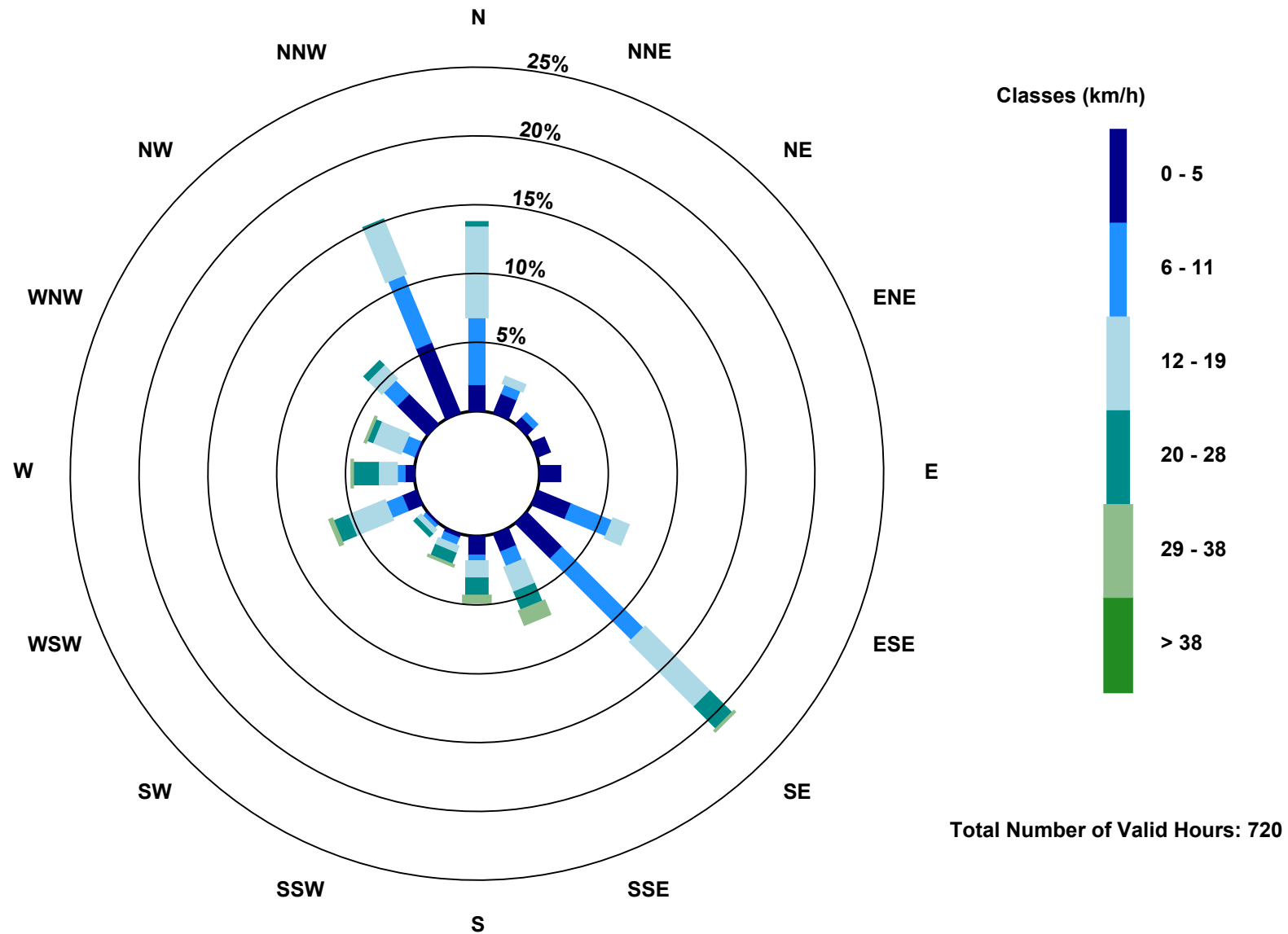
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - April 2025

Maximum Speed: 46 km/h on Apr 15 20:00										Maximum Daily Speed Average: 27.9 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 23 04:00										Minimum Daily Speed Average: 1.1 km/h on Apr 1										Hours of Data: 720						
Maximum Diurnal Speed Average: 4.8 km/h at hour 18										Minimum Diurnal Speed Average: 0.4 km/h at hour 5										Hours of Missing Data: 0						
Monthly Average Velocity: 0.8 km/h 225.9 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 8 Median = 14 Q ₃ = 21 P ₉₀ = 28 P ₉₉ = 38										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	ESE14	ESE19	ESE17	ESE13	ESE8	ESE6	ESE11	SE12	SE11	SE11	SE13	SE16	SSE13	SE15	SE10	NNW14	NNW27	NNW21	NNW17	NW19	NW16	NW18	NW17	NNW19	ESE1.1	NNW27
2-Apr	WNW20	WNW18	WNW18	WNW16	WNW12	WSW17	WSW26	WSW21	WSW17	NNW15	WSW14	WSW11	WNW10	NNW19	N22	N19	N21	NNW19	NNW13	NW8	NNW11	NNW10	NNW10	NNW8	NW12.3	WSW26
3-Apr	NW12	NW17	NW15	NW13	NW13	NW8	NNW11	NNW17	NNW22	NNW21	NNW25	NNW18	NNW15	NNW16	NNW18	NNW18	NW19	NNW20	NNW14	N7	N7	NNE2	W3	NW1	NNW13.5	NNW25
4-Apr	SSW1	SSE4	SSE5	SSE6	SSE9	SE12	SE16	SE15	ESE11	SE10	SE11	SE10	SE10	SE8	SE12	SE11	SE13	SE11	SE15	SE14	SE14	SE13	ESE10	SE12	SE10.4	SE16
5-Apr	SE10	SE4	SE5	SE6	SE10	ESE12	SE11	ESE8	ESE10	SE8	SE5	SSE4	S2	NW1	NNW8	NNW14	N17	N16	NNW15	NNW14	NNW11	NNW9	NNW9	NNW5	NE2.8	N17
6-Apr	ENE5	E6	ESE18	ESE18	ESE15	ESE18	ESE19	ESE23	SE28	ESE25	ESE28	SE32	SE32	SE36	SE39	SE35	SE32	SE29	SE34	SE33	SE34	SE36	SE35	SE36	SE26.7	SE39
7-Apr	SE36	SE30	SE23	SE25	SE27	ESE25	SE30	SE27	SE28	SE31	SE27	SE31	ESE25	SE30	SE26	ESE24	ESE24	ESE17	ESE7	ESE10	ESE12	ESE8	ESE15	SSE3	SE22.4	SE36
8-Apr	SE1	SE2	ESE1	NNW7	WNW3	SE4	SE6	SE5	N2	ESE5	SE12	ESE10	ESE7	SE7	ESE9	SE5	ENE2	NNW5	SSW2	NNW3	N3	NW2	WNW2	SW0	ESE2.3	SE12
9-Apr	SE4	S1	SSE1	SE5	SE9	SSE8	SE8	SE6	ESE5	ESE3	SE5	ESE7	SE13	SE14	SE7	ENE3	SSE1	NNE4	NE5	NE4	NNW0	ENE3	SE3	SSE4	ESE4.3	SE14
10-Apr	SE7	S6	SSE7	SE13	SE13	SE14	SE10	SSW9	SW9	SW10	SW16	SW21	WSW23	WSW21	WSW16	WSW12	WSW8	SSW2	SE2	E8	ESE8	ESE11	SE12	ESE12	S6.5	WSW23
11-Apr	ESE9	ESE8	SE9	ENE3	NNW7	NNW5	NNW5	WNW4	E6	S9	SE13	SW5	WSW13	WSW26	WSW30	WSW25	W30	W29	W22	WSW19	WSW23	WSW27	WSW25	WSW18	WSW11.1	WSW30
12-Apr	WSW16	SW19	WSW21	WSW21	WSW20	SW15	WSW7	W9	WSW16	NNW20	W22	W19	NNW18	NNW17	NNW21	NNW20	NW23	NW20	NW15	NNW6	NW1	N3	N6	N4	W12.6	NNW23
13-Apr	NE4	E3	ENE2	NE2	NNE2	NNW3	NNW4	NW2	NNW3	S3	N4	N10	NNW16	NNW17	NNW20	N20	N24	N20	NNE18	NNE12	N12	NNW8	NNW7	NNW4	N8.3	N24
14-Apr	NW3	NW2	NNW4	NNW5	NNW3	SSE1	ESE4	ESE5	SE11	SE11	SE13	SE15	SE17	SE21	SSE22	SSE22	S17	SSW19	S13	SSE15	SE18	SE21	ESE19	ESE23	SE10.2	ESE23
15-Apr	ESE23	ESE16	SE16	SE18	SE12	SSE11	SE8	S19	WSW32	WSW42	WSW37	W34	WSW36	WSW40	WSW37	WSW37	W35	NNW34	NNW34	NNW46	W41	W38	W35	W32	WSW21.3	NNW46
16-Apr	W24	W23	W23	NNW24	NNW21	NNW20	NW21	NW28	NW34	NW31	NNW30	NNW27	NNW28	NNW30	NNW25	NNW28	N25	N20	N22	NNW19	NNW10	N9	N11	N16	NW20.3	NW34
17-Apr	N20	N25	N22	NNW24	N19	N19	N21	N21	N23	N24	N24	N22	N21	N19	N16	N13	N9	NNW11	NNE10	NE9	E6	SE7	SE6	SE18	N14.4	N25
18-Apr	SE23	SE23	SSE16	SE17	SE22	SE23	SE25	SE25	SE21	SSE23	SSE29	SSE30	SSE32	SSE34	SSE34	SSE33	SSE28	SSE30	SSE34	SSE41	SE33	SSE43	SSE34	S32	SSE27.9	SSE43
19-Apr	SSW31	SW29	WSW28	WSW25	NNW19	NNW17	W17	NNW24	W24	W27	W24	W28	W27	NNW28	W28	W31	W31	W25	NW23	NW21	NNE20	N19	NNW13	N17	W18.9	W31
20-Apr	N14	N16	NNW13	NNW12	N10	N12	N12	N13	N11	N10	N9	NNW4	NNW5	S4	SE4	SSE5	N6	NNE12	NE12	NE9	N8	N4	NNW4	N3	N7.3	N16
21-Apr	ENE4	NE5	NNE3	NNW3	NNW5	NNW5	NNW3	NW1	E1	SE6	SE10	SE11	SE6	SE8	SE7	SSE9	SSE12	SSE14	S17	SE18	S17	SSE18	SE25	SE20	SE7.1	SE25
22-Apr	ESE7	SSE7	SE13	SSE9	ESE11	SSE7	SSE25	S15	SSE15	SSE26	SSE23	SSE20	SSE21	SSE21	SW31	SSW23	S23	SSE18	NE3	ESE10	N5	NNW3	N2	SE1	SSE11.7	SW31
23-Apr	NW2	NNW5	NW4	NNW0	W2	NNW2	NNW1	NE1	NNW6	NNW12	NNW16	NNW17	N18	N19	N17	NNW17	N17	N13	NNW10	NNW11	NNW9	NNW8	NNW11	NNW8	NNW9.2	N19
24-Apr	NNW7	N2	NNE2	NNE3	S1	SW1	SE5	SW2	NNE2	NE4	E3	ESE5	S2	NNE7	N9	NNE6	ENE2	SE7	SE9	ESE9	SE8	SE9	SE13	ESE14	E2.9	ESE14
25-Apr	ESE16	SE14	SE10	SE14	SE5	SE4	ESE3	ESE8	ESE13	SSE21	S34	S36	S33	S31	S28	SSW27	SSW31	SSW28	SSW24	SSW19	SSW22	SSW24	S13	ESE8	S16.9	S36
26-Apr	ESE9	SE13	SE13	SE8	NNW11	NNW13	NNW13	NNW10	NW9	NNW15	NNW16	N22	N26	N29	N29	N27	N26	N31	N23	N26	N17	N16	N16	N15	N14.6	N31
27-Apr	N12	N11	NNW14	N21	N27	N23	N24	N19	N16	N15	N13	N12	N12	N11	N9	N13	N13	N16	NNE17	NNE15	N14	N8	NNE6	E3	N13.9	N27
28-Apr	NE2	N1	ENE0	NNW3	NNW7	NNW3	SE4	SE17	SE15	SE13	SE18	SE20	SSE20	S23	S25	S26	S25	S24	S20	S19	SSW22	SSW22	SSW26	SSE21	S12.8	S26
29-Apr	S19	S10	SE11	SSE17	WSW18	WSW16	WSW15	WSW19	W23	W21	W19	NNW24	NW18	NNW16	NW11	W5	NW14	N28	N19	N10	NNW8	N3	SW2	S5	W7.8	N28
30-Apr	SE7	SSW9	WSW23	WSW16	WSW13	NW12	NNW19	N14	NNW11	NNW9	NNW10	NNW11	N19	NNW10	NNE4	NNW7	NNW11	NNW25	N25	N24	N23	N22	N19	N17	NNW11.3	N25
SE3.3 SSE2.1 S2.3 S1.1NNW0.4 E0.4 ESE1.3 S0.9WSW1.1 SW1.9SSW1.8SSW2.4 SW1.8WSW2.1WSW2.9 W3.4NNW4.0 NW4.8 N3.3NNE2.0NNW0.7 S1.3 SSE1.4 SE2.4																										Diurnal Average
SE36 SE30 WSW28WSW25 SE27 ESE25 SE30 NW28 NW34 WSW42WSW37 S36 WSW36WSW40 SE39 WSW37 W35WNNW34 SSE34WNNW46 W41 SSE43 SE35 SE36																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 45m (WS45) - km/h

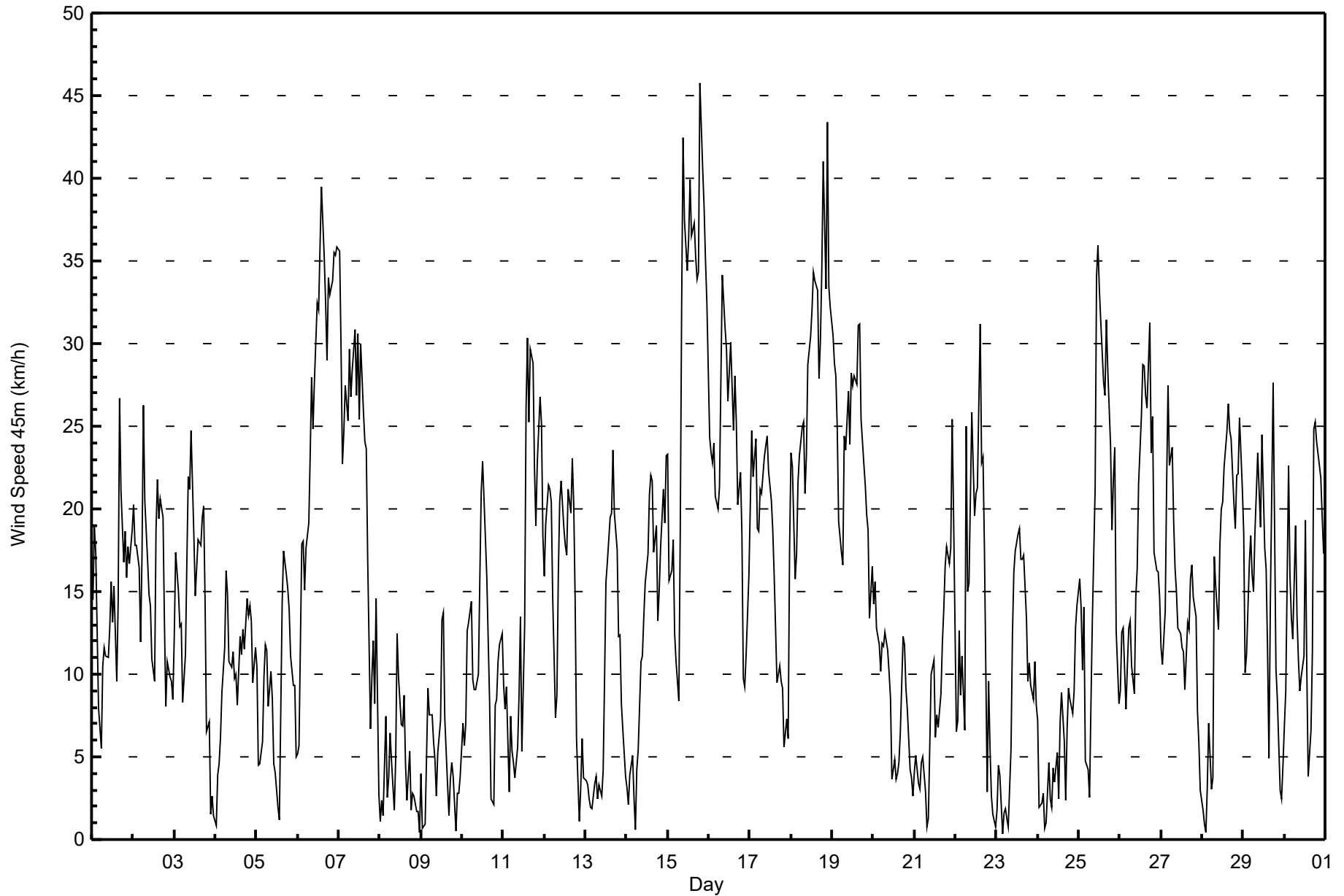
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on Apr 22 15:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on Apr 23 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	3	4	4	3	3	5	4	2	2	3	3	3	3	3	9	6	6	3	5	4	4	4	3	9
2-Apr	3	3	3	3	3	5	4	3	3	6	4	3	5	6	5	4	4	4	4	2	3	3	4	3	6
3-Apr	3	3	4	4	4	2	3	5	5	6	8	6	5	5	6	6	6	5	4	2	1	1	1	1	8
4-Apr	1	2	2	2	2	3	1	2	2	2	2	2	3	2	2	2	1	2	1	2	2	3	4	2	4
5-Apr	5	2	1	2	1	4	3	2	2	2	3	2	1	2	3	3	3	2	2	2	2	2	2	3	5
6-Apr	2	2	6	3	4	5	6	5	4	5	6	5	5	5	5	6	6	5	4	4	5	6	5	4	6
7-Apr	4	4	5	5	5	4	3	3	3	3	4	4	6	4	5	4	3	5	5	5	6	2	3	3	6
8-Apr	1	2	1	3	2	2	1	1	2	3	2	2	2	3	3	3	2	1	1	1	2	1	2	1	3
9-Apr	1	1	1	2	1	2	1	1	1	1	2	2	2	2	5	2	2	3	2	2	2	4	2	2	5
10-Apr	4	4	2	3	3	2	3	4	4	5	3	3	4	5	3	3	3	1	2	2	3	2	2	3	5
11-Apr	5	3	5	3	2	3	2	2	4	4	3	3	5	5	5	7	7	6	4	2	4	3	7	3	7
12-Apr	5	3	3	3	4	3	3	3	5	5	5	4	5	5	5	5	6	6	6	2	1	1	1	1	6
13-Apr	1	1	1	1	1	1	2	1	2	1	2	3	9	5	5	5	4	4	3	2	2	3	1	1	9
14-Apr	1	1	1	1	2	1	1	2	3	3	4	3	3	5	4	5	4	4	2	2	2	2	2	4	5
15-Apr	5	4	5	3	3	3	4	8	7	8	9	8	9	8	9	7	8	9	10	12	11	9	8	7	12
16-Apr	5	5	4	5	4	4	4	6	9	9	8	7	8	8	7	6	5	4	5	5	3	2	3	3	9
17-Apr	4	6	5	6	5	5	5	4	5	5	6	5	5	5	5	4	3	3	2	2	2	3	2	6	6
18-Apr	4	5	3	3	4	4	5	6	4	4	5	6	6	6	6	6	6	6	6	8	5	6	5	4	8
19-Apr	6	5	5	5	5	4	6	7	7	7	7	7	7	7	7	8	8	7	6	6	5	4	3	5	8
20-Apr	4	4	4	4	3	3	3	3	3	3	3	3	3	2	2	2	4	4	3	2	2	2	2	1	4
21-Apr	2	2	1	2	2	1	1	1	1	3	3	2	3	3	3	5	3	4	3	5	7	3	4	6	7
22-Apr	4	2	2	2	3	4	5	5	8	3	4	4	4	5	13	11	4	5	3	3	7	2	2	1	13
23-Apr	3	2	2	1	1	1	1	1	3	3	4	4	5	5	4	4	4	3	2	2	2	2	1	2	5
24-Apr	2	1	2	2	1	1	2	2	2	2	2	2	3	2	3	2	2	4	2	1	2	2	2	3	4
25-Apr	3	3	2	3	3	2	2	3	3	9	7	7	7	6	7	6	6	6	5	2	3	3	7	2	9
26-Apr	3	2	6	3	6	5	4	3	3	4	4	4	6	5	6	7	6	5	5	5	4	3	3	3	7
27-Apr	3	3	4	5	5	4	5	4	5	5	4	4	4	4	3	5	5	5	4	3	3	3	3	2	5
28-Apr	1	1	1	2	2	1	4	3	3	3	4	4	6	6	6	6	6	5	3	4	6	7	8	3	8
29-Apr	4	5	3	4	3	4	3	5	6	4	5	5	5	6	10	3	9	7	4	3	2	2	3	2	10
30-Apr	3	4	4	7	4	6	3	5	3	3	2	3	5	4	3	2	3	8	5	5	4	3	4	4	8
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	136	18.89	18.89
6 - 11	157	21.81	40.69
12 - 19	208	28.89	69.58
20 - 28	151	20.97	90.56
29 - 38	61	8.47	99.03
> 38	7	0.97	100.00

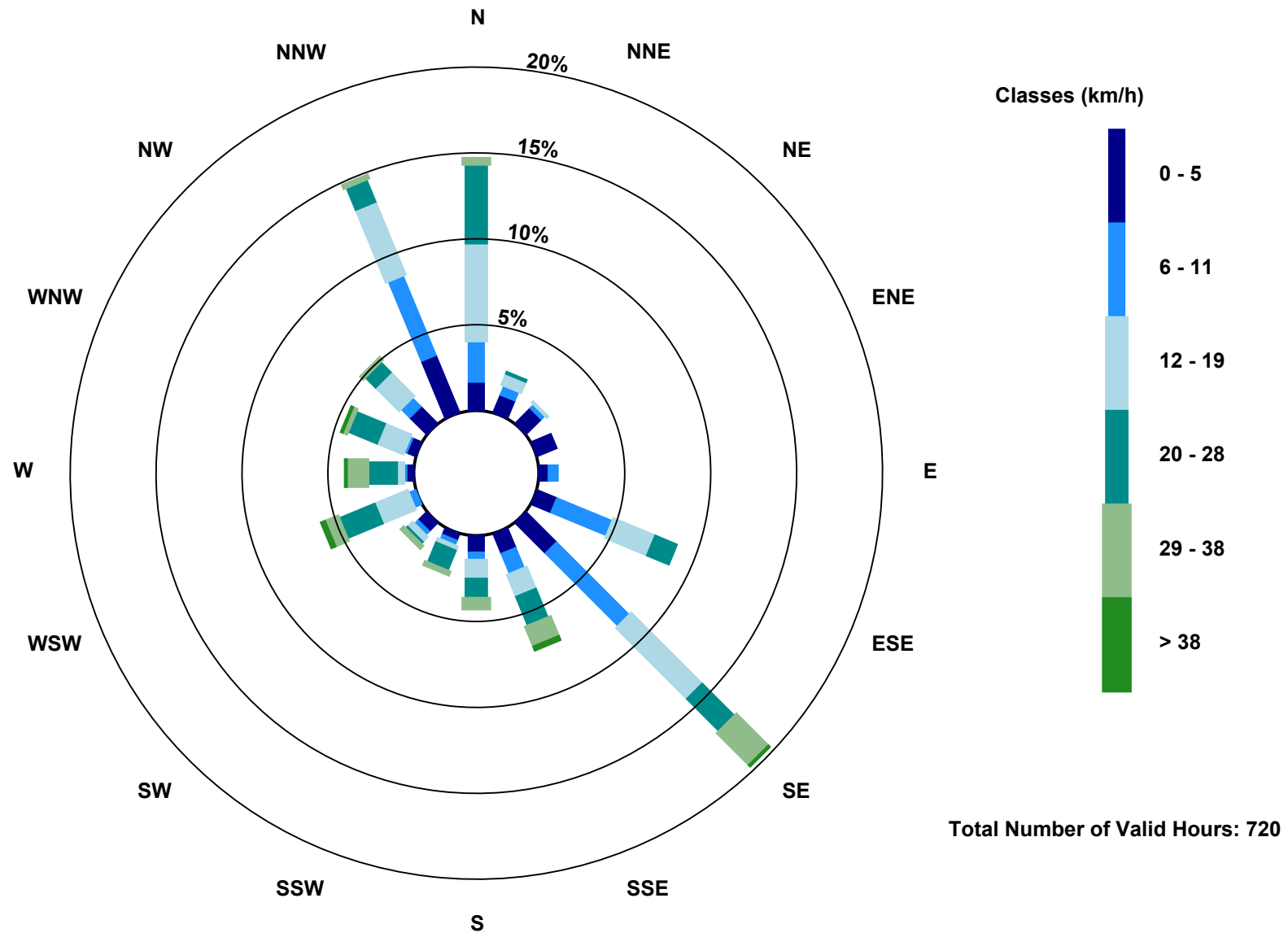
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - April 2025

Maximum Speed: 56 km/h on Apr 15 20:00														Maximum Daily Speed Average: 33.3 km/h on Apr 6														Hours in Service: 720			
Minimum Speed Value: 0 km/h on Apr 9 17:00														Minimum Daily Speed Average: 1.8 km/h on Apr 1														Hours of Data: 719			
Maximum Diurnal Speed Average: 5.6 km/h at hour 18														Minimum Diurnal Speed Average: 1.4 km/h at hour 21														Hours of Missing Data: 1			
Monthly Average Velocity: 1.6 km/h 232.6 deg														Percentiles: P ₁ = 1 P ₁₀ = 5 Q ₁ = 10 Median = 18 Q ₃ = 26 P ₉₀ = 33 P ₉₉ = 46														Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	ESE21	ESE25	SE25	ESE21	SE16	SE13	SE19	SE18	SE14	SE14	SE14	SE18	SSE15	SE18	SSE13	WNW17	WNW32	WNW27	NNW19	NW26	NW24	NW27	NW25	WNW26	SE1.8	WNW32					
2-Apr	WNW26	WNW25	WNW24	WNW23	WNW18	W25	W33	W27	W20	WNW17	WNW15	WSW12	NW12	NNW21	N23	N21	N23	NNW22	NNW17	NW13	NNW17	N13	N14	N14	NW16.1	W33					
3-Apr	NNW20	NW25	NW25	NW23	NW21	NW14	NW17	NW21	NNW27	NNW25	NNW27	NNW21	NNW17	NNW19	NNW20	NW21	NW24	NNW25	NNW18	N10	N9	ENE6	SSW0	ENE2	NNW17.4	NNW27					
4-Apr	SW5	WSW10	WSW13	SW12	SW11	SSW8	S10	SSW11	SSW7	S8	SSE9	SE9	SE10	SE7	ESE10	ESE10	SE11	SE11	SE15	SE16	SSE20	SE18	SE19	SSE21	SSE9.3	SSE21					
5-Apr	SSE17	SE8	SE7	SSE9	SSE10	SE11	SE16	SE8	SSE11	SE7	ESE3	SE4	ENE1	NNW3	NW7	NNW15	N18	N18	N18	N19	N17	N12	NNE7	E8	ENE3.1	N19					
6-Apr	ESE16	ESE18	SE27	ESE25	SE22	ESE24	ESE25	SE30	SE32	SE31	SE32	SE36	SE35	SE39	SE42	SE40	SE38	SE35	SE40	SE40	SE43	SE45	SE43	SE44	SE33.3	SE45					
7-Apr	SE43	SE38	SE31	SE34	SE34	SE33	SE35	SE30	SE31	SE33	SE31	SE33	SE29	SE34	SE31	SE29	SE27	ESE24	ESE13	ESE19	ESE24	SE16	SE23	SE9	SE28.4	SE43					
8-Apr	SE4	SE6	ESE6	NNE4	E2	S5	SE11	SE9	NW1	SE5	SE12	ESE13	SE7	SE6	SSE6	SSW5	SE1	N5	ESE3	NNE4	N3	N3	NNE4	SSE2	ESE3.5	ESE13					
9-Apr	SSE3	SW7	S3	SE7	SSE10	S10	SSE7	SE5	SE3	E2	ESE4	SE8	ESE13	SE14	SSE6	ENE3	WSW0	NNE5	NE10	NE14	ENE8	ESE7	SE6	SSW7	SE4.7	NE14					
10-Apr	S3	WSW14	SW12	SSW7	SW11	SSW8	SW13	SW18	SW11	SW12	SW17	SW23	WSW27	WSW23	WSW18	WSW14	W9	SW3	SSE3	E10	ESE13	ESE21	ESE21	ESE21	SSW8.9	WSW27					
11-Apr	ESE20	ESE15	ESE15	ESE12	E4	W5	NNW6	WSW5	ESE15	S12	SE13	SW7	WSW16	WSW31	WSW37	W32	W38	W37	W30	WSW27	WSW33	WSW37	WSW34	WSW26	WSW13.9	W38					
12-Apr	WSW24	WSW28	WSW29	WSW29	WSW29	WSW22	WSW15	W14	WSW21	WNW24	W27	W23	WNW23	WNW22	WNW26	WNW25	NW29	NW26	NW21	NW12	NNW7	N5	NNE6	NE7	W17.4	NW29					
13-Apr	ENE4	E3	ESE3	E3	E4	ENE2	NW1	NW5	NW6	ESE2	N4	N9	NNW18	NNW20	NNW21	N21	N26	N22	NNE19	NNE17	N17	N12	N12	NNW9	N9.5	N26					
14-Apr	NNW9	N8	N5	NNW6	NNW7	S2	SE9	SE11	SE13	SE13	SE14	SE17	SE18	SE23	SSE24	S24	S19	SSW23	SSW16	SSE20	SE21	SE24	SE25	SE30	SSE11.9	SE30					
15-Apr	SE30	SE22	SE22	SE21	SSE14	SSW16	SSW17	SSW28	WSW40	WSW50	WSW46	W42	WSW44	WSW48	WSW45	WSW44	W44	WNW42	WNW44	WNW56	W51	W47	W44	W40	WSW28.1	WNW56					
16-Apr	W31	W30	UO	WNW31	WNW28	WNW28	NW30	NW38	NW46	NW42	NNW41	NNW37	NNW36	NNW40	NNW31	NNW37	N29	N24	N26	N22	NNW14	N13	N15	N20	NW27.1	NW46					
17-Apr	N24	N29	N25	NNW29	N22	N22	N24	N23	N26	N27	N27	N25	N23	N20	N18	N13	N10	NNW11	NNE11	ENE13	E13	SE11	SSE10	SE23	N16.0	NNW29					
18-Apr	SE31	SE27	SSE20	SE20	SE26	SE29	SE30	SE29	SSE21	SSE24	SSE31	SSE33	SSE35	SSE37	SSE38	SSE38	S32	SSE34	SSE39	SSE46	SSE38	SSE52	S45	S45	SSE32.5	SSE52					
19-Apr	SSW43	SW39	WSW39	W34	WNW27	WNW24	W22	WNW30	W28	W33	W29	W33	W32	WNW32	W33	W38	W37	W31	NW30	NW27	NNE24	N23	N17	N22	W24.0	SSW43					
20-Apr	N18	N19	N17	N14	N15	N17	N15	N14	N13	N11	N9	NNW4	WNW5	SSW2	SE4	SSE5	N7	NNE13	NE13	ENE12	NE16	NE10	NE6	E5	N9.3	N19					
21-Apr	E11	E8	ESE9	ESE8	SE5	WSW1	N2	SE1	S1	SE6	SE10	SE10	SE6	SE9	SE7	SSE10	SSE12	SSE15	S19	SE24	S18	SSE20	SSE30	SSE26	SE10.2	SSE30					
22-Apr	SE12	SSE9	S12	SSW12	SSE13	S14	S29	S20	SSE17	SSE28	SSE23	SSE20	SSE22	SSE22	SW38	SSW25	S27	S20	NNE1	ESE11	NNE7	NNE6	NE5	ENE2	S13.6	SW38					
23-Apr	NNE0	NNW10	NW8	WNW1	SW2	W4	W1	E1	NNW6	NNW13	NNW18	NNW18	N20	N21	N19	N18	N18	N14	N11	NNW14	NNW16	NNW14	NNW17	NNW13	NNW11.0	N21					
24-Apr	NNW12	NNW3	N5	N4	SE2	SSE2	S4	SW4	NW2	NNE2	ESE3	SE5	SW3	NNE6	N8	NNE6	E3	SE7	SE9	ESE10	SE12	SE13	SE19	SE22	ESE3.4	SE22					
25-Apr	SE21	SE18	SE17	SE21	SE12	SE11	SE9	SE11	SE15	SSE25	S37	S39	S36	S35	SSW30	SSW31	SSW36	SW33	SSW28	SSW26	SSW29	SSW30	SSW21	S9	S21.2	S39					
26-Apr	SSE13	SSE14	SSE14	S5	NNW10	N15	NNW17	NNW11	NNW9	NNW15	NNW16	N23	N27	N30	N31	N29	NNE29	N34	N26	N28	N20	N19	N19	N20	N15.7	N34					
27-Apr	N15	N14	N16	N24	N30	N25	N26	N21	N18	N16	N14	N14	N12	N13	N10	N14	N13	NNE18	NNE19	NNE17	NNE19	NNE12	NE10	ESE6	N15.9	N30					
28-Apr	ESE6	ESE3	ESE5	SE4	N2	ESE1	SE11	SE16	SE15	SE12	SE18	SE21	SSE22	S25	SSW27	S29	SSW27	S27	S24	S25	SSW27	SSW26	SSW30	SSE25	S15.9	SSW30					
29-Apr	S25	SSW16	SE16	S22	WSW26	WSW25	WSW21	W24	W29	W26	W23	WNW28	NW21	NNW19	NW14	WNW5	NNW19	N31	N22	N14	N11	NNE11	ESE1	SSW10	WNW9.8	N31					
30-Apr	S11	SW18	WSW28	WSW26	W22	NW16	N21	N15	NNW12	NNW9	NNW10	NNW12	NNE20	N13	NNE5	N7	NNW13	N29	N29	N28	N25	N24	N23	N20	NNW12.9	NNW29					
SSE5.3 S3.4 S3.5SSW3.0WSW2.1 SW2.4SSW1.8 SW2.5WSW2.7WSW3.0 SW2.4SSW3.0WSW2.7WSW3.0WSW4.3 W4.7WNW5.2 NW5.6 N4.1 NNE2.6 NNE1.4 SE1.8 SSE2.6 SSE4.2																										Diurnal Average					
SE43 SW39WSW39 W34 SE34 SE33 SE35 NW38 NW46 WSW50WSW46 W42 WSW44WSW48WSW45WSW44 W44WNW42WNW44WNW56 W51 SSE52 S45 S45																										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 100m (WS100) - km/h

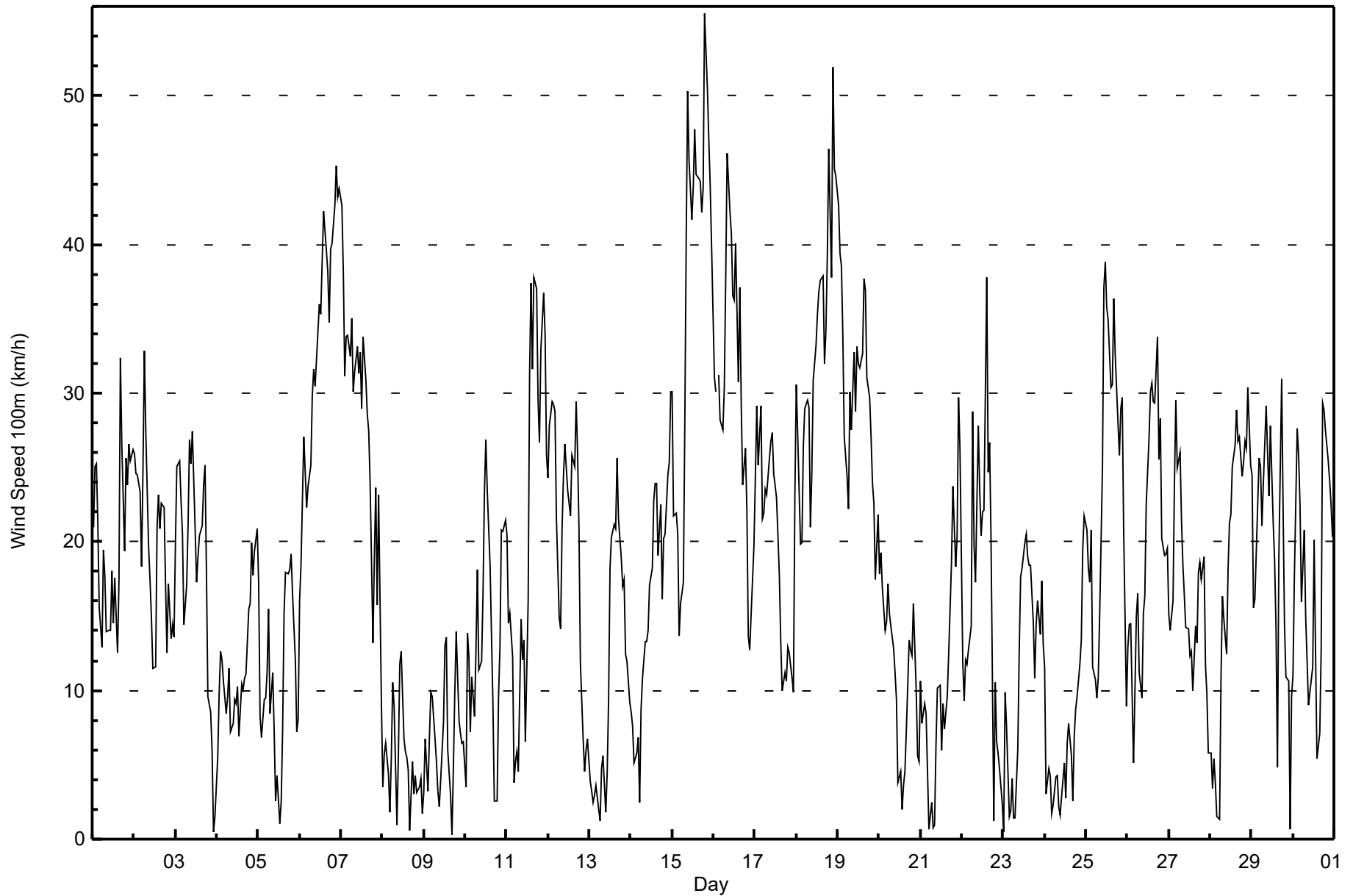
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 16 km/h on Apr 22 15:00																		Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9							
Minimum Value: 1 km/h on Apr 14 00:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	2	2	3	3	4	5	4	2	2	3	2	3	2	3	9	5	6	3	5	5	3	3	3	9
2-Apr	3	2	2	3	4	5	2	3	3	5	4	3	5	6	4	3	3	3	3	2	4	3	4	3	6
3-Apr	5	4	4	3	4	3	4	5	5	6	7	5	5	5	5	6	6	5	3	2	2	1	1	1	7
4-Apr	4	3	5	3	2	2	1	1	2	2	2	2	3	2	2	1	1	1	2	2	2	2	3	3	5
5-Apr	3	2	3	1	2	2	1	2	2	2	2	2	1	2	3	3	3	2	2	1	3	2	2	4	4
6-Apr	4	3	3	2	3	5	7	4	3	4	4	4	5	3	3	4	5	5	3	3	4	4	4	3	7
7-Apr	3	3	5	4	5	4	3	3	3	3	4	3	5	4	4	4	3	4	7	4	4	2	3	6	7
8-Apr	2	2	1	2	1	2	2	1	2	3	3	2	2	2	3	2	2	1	2	2	1	1	1	1	3
9-Apr	1	3	1	3	1	2	2	1	1	1	1	2	1	2	5	2	2	3	2	2	3	3	3	4	5
10-Apr	3	6	6	3	3	3	3	5	5	4	3	3	3	4	3	3	4	2	2	2	2	3	2	3	6
11-Apr	4	3	5	5	2	2	3	2	6	5	3	3	6	5	4	6	5	4	3	1	3	4	7	2	7
12-Apr	5	2	3	2	4	2	3	3	4	5	4	4	5	5	5	5	6	5	6	2	2	1	2	1	6
13-Apr	1	2	1	1	1	1	1	3	2	1	2	3	9	5	4	5	3	4	3	3	3	3	1	1	9
14-Apr	1	1	2	2	2	1	2	1	2	2	3	2	3	5	4	5	4	4	2	2	3	3	2	3	5
15-Apr	3	4	3	2	4	5	5	7	7	7	8	7	8	6	8	6	7	8	9	12	11	9	6	6	12
16-Apr	5	4	UO	4	4	4	5	6	8	8	8	7	8	8	7	6	6	4	4	4	3	2	3	3	8
17-Apr	4	5	4	5	4	5	4	4	4	5	5	4	4	4	4	3	2	3	2	1	3	4	3	7	7
18-Apr	4	6	4	3	3	4	4	5	5	5	5	6	6	7	6	6	6	5	4	8	6	5	4	4	8
19-Apr	4	5	4	5	4	4	7	7	6	6	7	6	7	7	6	8	7	7	6	7	6	4	2	4	8
20-Apr	3	4	4	4	5	3	3	2	3	2	3	3	3	2	2	2	4	3	2	3	3	5	3	3	5
21-Apr	4	2	3	2	2	1	1	1	1	3	2	2	3	3	3	5	3	3	3	6	8	4	5	6	8
22-Apr	7	2	2	3	3	7	5	7	7	3	3	4	4	5	16	13	5	6	2	4	7	2	2	1	16
23-Apr	2	3	4	1	1	1	1	1	2	3	4	4	5	4	3	4	4	4	2	2	2	1	2	2	5
24-Apr	3	2	2	2	1	1	2	3	1	1	2	2	2	2	3	2	2	4	2	2	3	3	2	3	4
25-Apr	3	3	2	2	2	3	4	3	2	9	7	7	7	6	6	6	6	5	5	2	2	1	9	4	9
26-Apr	3	2	7	2	7	4	4	4	3	4	4	3	5	4	4	5	5	4	5	4	3	2	2	3	7
27-Apr	3	3	4	5	4	4	4	3	4	5	4	3	3	3	3	4	3	4	4	3	3	4	4	2	5
28-Apr	2	1	2	2	1	2	4	2	3	2	4	4	6	6	6	6	6	5	3	4	5	7	8	2	8
29-Apr	4	6	3	4	3	3	3	5	5	4	4	4	4	6	12	3	10	6	4	3	3	4	2	4	12
30-Apr	3	6	3	5	6	5	2	4	3	2	2	3	4	3	3	2	3	7	4	4	3	3	3	3	7
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	92	12.80	12.80
6 - 11	123	17.11	29.90
12 - 19	182	25.31	55.22
20 - 28	182	25.31	80.53
29 - 38	101	14.05	94.58
> 38	39	5.42	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720



Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - April 2025

Maximum Speed: 62 km/h on Apr 15 20:00															Maximum Daily Speed Average: 36.9 km/h on Apr 6															Hours in Service: 720	
Minimum Speed Value: 1 km/h on Apr 13 06:00															Minimum Daily Speed Average: 2.7 km/h on Apr 1															Hours of Data: 717	
Maximum Diurnal Speed Average: 6.9 km/h at hour 1															Minimum Diurnal Speed Average: 2.7 km/h at hour 20															Hours of Missing Data: 3	
Monthly Average Velocity: 2.4 km/h 230.8 deg															Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 12 Median = 21 Q ₃ = 29 P ₉₀ = 36 P ₉₉ = 52															Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	SE24	SE26	SE26	SE25	SE21	SE21	SE25	SE22	SE18	SE16	SSE14	SSE18	SSE16	SSE20	S18WNW19WNW36	NW30 NNW22	NW30 NNW29	NW31	NW31	NW31					S2.7	WNW36					
2-Apr	WNW27	NW27	NW29WNW25WNW22	W28	W31	W29	W21	NW19WNW15	W13	NW12 NNW22	N23	N22	N23	N23	N19 NNW16	N22 NNE20	N21	N21							NW18.4	W31					
3-Apr	NNW26 NNW30	NW31	NW30	NW26	NW20	NW23 NNW25	NNW29 NNW27	NNW29 NNW22	NNW19 NNW20	NNW22 NNW23	NNW26 NNW27	NNW20 NNE14	NNE11	NE8	ENE3	ESE4									NNW20.3	NW31					
4-Apr	SSW3	W8	W12	W17WSW18WSW16	SW12	SW14	SSW10	SSW10	SSW9	SSE9	SE10	SE6	SE9	ESE9	SE10	SSE11	SSE15	SSE20	SSE24	S26	SSE22	S25			S10.1	S26					
5-Apr	S22	S13	S6	S6	S10	SSE12	SSE12	SSE15	SSE14	SSE7	S3	ESE5	NNE1	NNW3	NW8	N15 NNE18	NNE19	N19 NNE22	NNE20	E12	ESE10	ESE18			E3.2	NNE22					
6-Apr	SE23	SE25	SE31	SE28	SE28	SE28	SE30	SE36	SE34	SE34	SE34	SE38	SE36	SE40	SE43	SE42	SE40	SE39	SE43	SE44	SE48	SE50	SE47	SE48	SE36.9	SE50					
7-Apr	SE46	SE42	SE37	SE40	SE36	SE34	SE38	SE34	SE34	SE34	SE35	SE34	SE31	SE36	SE35	SE31	SE29	SE20	SE26	SE27	SE18	SE25	SE13	SE31.8	SE46						
8-Apr	SE7	SE9	SE10	E4	SSE5	S9	SE11	SSE10	W3	SSW5	S8	SE9	S3	ESE2	S4	S4	ENE3	NE8	E5	NE6	NNE4	NE2	ESE5	SSW1	SE4.0	SE11					
9-Apr	S4	SW8	S3	SSE6	SSW10	S11	SSW8	SSW4	SSW4	S3	SSE4	S9	SE13	SSE13	S5	NE2	W2	NNE6	NE10	NE14	ENE15	E9	ESE12	SSW13	SSE4.3	ENE15					
10-Apr	WSW9	W19WSW21	SW20WSW27	SW20	SW24WSW27	SW15	SW15	SW18WSW24	WSW28WSW25WSW20WSW15	W10	W3	S3	E7	SE13	SE28	SE30	SE27								SW12.7	SE30					
11-Apr	SE26	SE22	ESE23	ESE21	ESE15	SSW9	SSW4	S12	ESE23	SSE15	SSE13	SW9WSW19WSW32WSW39	W34	W41	W40	W33	W29	W36	W40	W38WSW30					WSW14.7	W41					
12-Apr	WSW30	W31	W34	W33	W33	W26	W22	W18	W23WNW26	W27	W25WNW25WNW24WNW29WNW28	NW32	NW28	NW24 NNW18	N13	NNE5	NNE4	NE11							WNW20.6	W34					
13-Apr	ENE3	S2	SSW5	S2	ESE3	ENE1	WNW5	NW11	NNW7	NE3	N4	N9 NNW19	NNW22 NNW22	N22	N26	NNE22	NNE20	NE22	NNE24	NNE20	NNE16	NNE11			N10.6	N26					
14-Apr	NE8	ENE4	ENE2	NNE1	E3	S7	SSE10	SSE11	SSE15	SE15	SE14	SE17	SSE19	SE23	SSE25	S25	S21	SSW24	SSW17	S23	SSE28	SSE28	SE27	SE32	SSE14.7	SE32					
15-Apr	SE29	SE25	SSE27	S22	SSW18	SW24	SW26	SSW35WSW44WSW52	W48	W44WSW46WSW50WSW48WSW47							W48WNW48WNW49WNW62	W56	W53	W49	W44			WSW33.4	WNW62						
16-Apr	W38	UO	UO	WNW36WNW35	NW35	NW37	NW44	NW52 NNW49	NNW47 NNW42 NNW42	NNW45 NNW34 NNW43	N33	N26	N29	N24	N17	N17	N18	N23							NNW32.0	NW52					
17-Apr	N27	N32	N27	N31	N24 NNE25	N26	N25	N27	N27	N28	N26	N23	N21	N18	N13	N10	N11	NE10	ENE11	ESE16	SE16	SE14	SE26		NNE16.5	N32					
18-Apr	SE32	SE29	SSE24	SSE25	SSE27	SSE30	SSE31	SSE31	SSE22	SSE26	SSE32	SSE35	SSE38	SSE40	S41	S42	S36	SSE37	SSE43	SSE52	SSE47	SSE58	S55	SSW53	SSE36.0	SSE58					
19-Apr	SW51WSW47WSW43	W38WNW34WNW29WNW27WNW34WNW29	W34	W30	W35	W34WNW34	W35	W41	W40WNW34	NW33	NW31	NNE28	NNE27	N23	N26										WNW26.9	SW51					
20-Apr	NNE23	N24	N20	N16 NNE21	N23	N20	N15	N13	N11	N9	NNW4	WNW4	SW1	SE3	SSE4	N8	NNE13	NE13	ENE13	NE21	ENE18	ENE11	E9		NNE11.1	N24					
21-Apr	ESE16	ESE16	SE15	SE14	SE12	S5	E2	SSE1	S3	SE7	SE10	SE10	SE6	SE9	SE7	SSE10	SSE12	SSE16	S20	SE28	SSW19	SSE22	SSE33	SSE30	SSE12.5	SSE33					
22-Apr	SSE16	SSW11	SSW11	SW18	S19	S25	S29	S24	SSE18	SSE27	SSE24	SSE21	SSE23	SSE23	SW39	UO	S32	S24	W1	SE6	NNE7	N9	NNE6	NW3	S14.4	SW39					
23-Apr	WSW2	NW10	NW13	W6	NW6	NNW5	NNW4	NNW5	NNW9	N13	N17	N18	N19	N20	NNE19	N18	N18	N14	N11	N14	N20	N19	N19	NNE12	N12.1	N20					
24-Apr	N9	E2	NNW4	E2	S3	SSE5	S10	SSW6	WNW3	W2	SE2	SE4	WSW4	NNE5	NNW6	NE5	SSE2	SE6	SE8	ESE10	SE20	SE23	SE25	SE26	SE5.2	SE26					
25-Apr	SSE27	SSE26	SSE23	SSE34	SSE25	SSE23	SSE19	SSE16	S17	S29	S39	S41	SSW38	SSW37	SSW33	SSW33	SSW39	SW35	SSW30	SSW29	SW30	SW29	SW26	SSW21	S26.7	S41					
26-Apr	SSW18	S17	SSW16WSW13	NNW9	N16	N17	N12	NNW9 NNW15	NNW17	N22	N26	N30	NNE32	NNE30	NNE31	N34	NNE27	NNE30	N23	N21	N19	NNE24			N15.8	N34					
27-Apr	N18	N16	N18	N24 NNE31	NNE26	N27	N22	N19	N17	N15	N14	N12	N13	N10	N14	N13	NNE18	NNE19	NE19	NNE26	NE22	ENE16	ESE11		NNE17.0	NNE31					
28-Apr	SE8	SE8	SE12	SE13	SSE8	SSE11	SSE19	SSE16	SSE14	SSE12	SE18	SSE22	SSE23	SSW27	SSW28	S30	SSW29	S29	S28	SSW30	SSW30	SSW30	SSW33	S27	S19.1	SSW33					
29-Apr	SSW29	SSW19	SE17	SSW25WSW31	W32	W27	W27	W32	W28	W26WNW29	NW22 NNW20	NNW11	NW6	NNW22	N32	N24	NNE19	NNE15	NNE19	ENE5	S8				WNW11.1	W32					
30-Apr	SSW19WSW26	W30	W29	W26	NW19	N21	N14	NNW12	NNW9	NNW9	N11	NNE21	NNE15	NE9	N7	NNW14	N31	N31	N29	N28	N26	N24	N21		NNW14.2	N31					
S6.9 S5.2SSW4.5 SW5.0WSW4.5 SW4.5 SW3.5 SW4.1WSW3.8WSW3.9 SW3.4 SW3.8WSW3.6WSW3.7WSW4.9 W4.8WNW5.5 NW5.4 N4.2 NNE2.7 NE2.8 ESE3.2 SSE4.2 SSE5.8																								Diurnal Average							
SW51WSW47WSW43 SE40 SE36 NW35 SE38 NW44 NW52WSW52 W48 W44WSW46WSW50WSW48WSW47 W48WNW48WNW49WNW62 W56 SSE58 S55 SSW53																								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

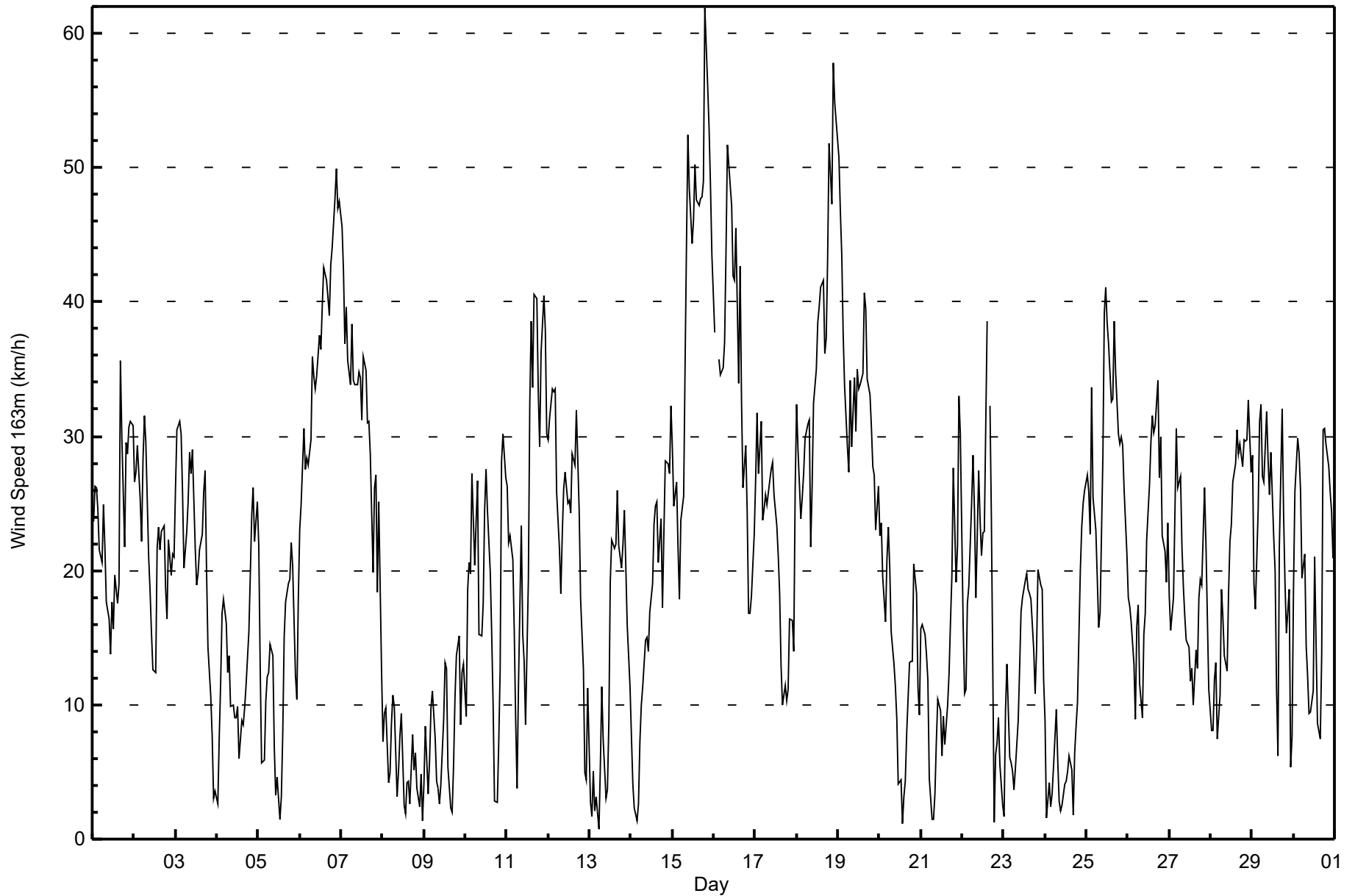
Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 16 km/h on Apr 22 15:00																		Hours of Data: 717							
Minimum Value: 0 km/h on Apr 23 07:00																		Hours of Missing Data: 3							
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 9																		Hours of Calibration: 0							
																		Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	2	2	1	2	3	3	4	2	2	2	2	3	2	2	9	4	6	3	5	5	3	3	2	9
2-Apr	3	3	2	2	5	4	3	4	4	5	4	3	5	5	3	3	3	3	4	3	4	4	5	4	5
3-Apr	4	4	3	2	4	2	4	4	4	6	6	4	5	5	5	5	5	4	3	2	2	1	2	1	6
4-Apr	2	2	3	3	1	3	2	1	2	2	2	2	3	2	2	2	1	1	2	2	2	4	4	2	4
5-Apr	3	3	2	1	2	2	1	2	3	1	1	3	1	2	3	3	3	3	2	2	2	3	4	4	4
6-Apr	2	3	2	2	3	5	8	4	3	3	4	3	4	3	3	4	4	5	3	3	4	4	3	3	8
7-Apr	3	2	5	3	4	4	2	3	2	2	3	3	5	3	4	3	4	3	6	2	3	3	2	8	8
8-Apr	2	2	1	2	2	2	2	1	2	2	2	3	2	2	2	2	3	3	3	3	1	1	2	1	3
9-Apr	1	2	2	1	1	2	2	1	1	1	2	2	1	2	4	2	2	3	3	2	3	2	5	4	5
10-Apr	5	4	6	4	3	3	3	4	6	4	3	2	2	3	3	3	4	2	1	3	4	3	3	2	6
11-Apr	4	3	4	7	4	2	3	8	6	5	3	4	5	4	3	5	5	4	3	1	3	4	6	3	8
12-Apr	4	2	3	3	4	2	1	4	4	5	3	4	5	5	4	5	5	5	5	2	2	2	2	2	5
13-Apr	2	2	1	1	1	1	2	2	3	2	2	3	11	5	4	4	3	4	3	3	2	2	2	1	11
14-Apr	1	1	1	1	1	2	2	2	2	2	2	2	3	4	4	5	4	3	3	3	2	3	3	2	5
15-Apr	3	4	4	3	5	8	6	5	7	6	7	5	7	5	7	5	6	9	9	12	10	7	5	6	12
16-Apr	3	UO	UO	3	3	4	4	6	8	7	7	6	8	7	6	5	6	4	4	3	3	3	3	4	8
17-Apr	5	6	4	4	5	5	4	4	4	5	4	4	4	4	4	3	2	2	2	2	5	4	4	5	6
18-Apr	4	6	3	3	3	4	4	5	5	6	5	5	6	7	6	5	5	4	3	6	7	4	3	4	7
19-Apr	3	4	5	4	4	4	6	7	6	6	6	5	7	6	6	8	6	7	6	6	5	4	3	4	8
20-Apr	4	5	4	4	5	3	3	3	2	2	3	3	3	2	2	1	4	3	2	2	2	3	4	3	5
21-Apr	4	2	4	2	3	2	1	1	1	2	2	3	2	4	3	4	4	4	2	7	8	5	5	4	8
22-Apr	9	4	2	4	3	3	5	6	4	3	3	4	5	5	16	UO	5	5	3	3	8	2	3	1	16
23-Apr	1	2	2	1	1	1	0	2	2	3	3	4	5	3	3	4	4	3	1	1	3	3	1	2	5
24-Apr	1	2	2	2	2	2	2	4	2	2	2	2	2	2	3	2	2	4	2	2	4	2	2	3	4
25-Apr	5	4	4	3	4	3	5	3	3	9	7	6	7	7	6	6	5	6	5	2	1	1	4	4	9
26-Apr	3	2	5	3	5	4	3	4	3	4	4	3	5	4	4	5	6	4	5	4	4	3	3	3	6
27-Apr	2	3	4	4	4	3	4	3	4	4	4	3	3	3	3	4	3	3	3	3	5	5	3	5	5
28-Apr	3	3	1	3	2	3	3	2	3	2	4	4	6	6	7	5	6	4	3	3	5	7	6	2	7
29-Apr	4	5	3	4	3	2	2	4	4	4	4	3	4	7	6	4	10	5	4	3	5	5	3	3	10
30-Apr	3	3	1	3	3	4	2	4	3	3	2	3	4	3	4	2	3	7	5	5	3	3	3	3	7
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	77	10.74	10.74
6 - 11	102	14.23	24.97
12 - 19	150	20.92	45.89
20 - 28	198	27.62	73.50
29 - 38	130	18.13	91.63
> 38	60	8.37	100.00

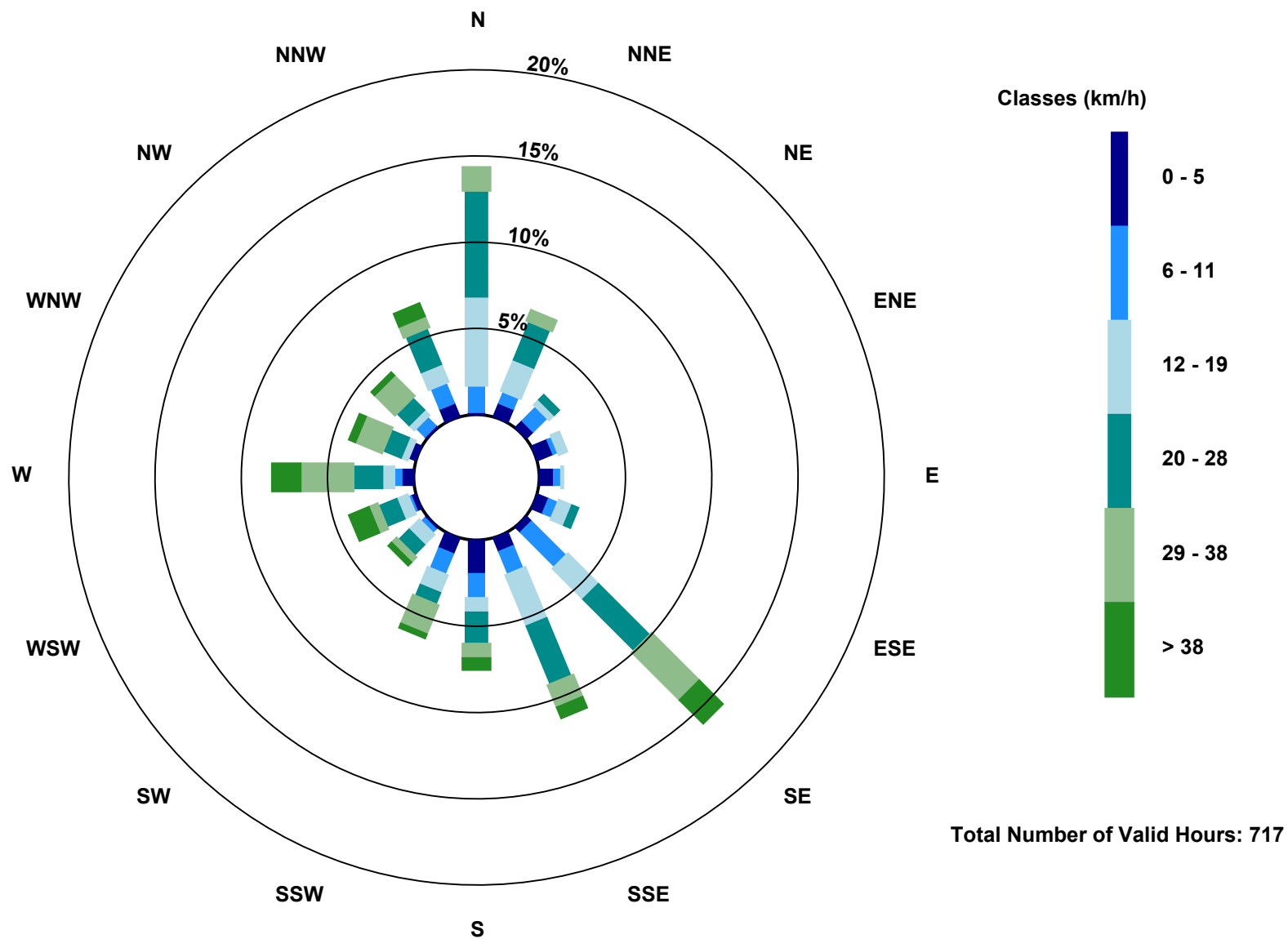
Total Number of Valid Hours: 717

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Lower Camp Met Tower - April 2025

Direction of Maximum Speed: 150 deg on Apr 18 22:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 152.7 deg on Apr 18																				Hours of Data:		720			
Direction of Minimum Speed: 115 deg on Apr 23 05:00										Direction of Minimum Daily Speed Average: 0.5 deg on Apr 1										Hours of Missing Data:		0			
Monthly Average Direction: 208.1 deg																				Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	111	116	124	112	121	120	124	140	153	144	128	127	153	138	141	289	288	302	344	316	321	313	315	299	164.9
2-Apr	282	297	306	286	280	252	251	252	248	300	281	238	293	339	351	350	351	345	337	319	339	342	339	323	302.2
3-Apr	314	310	311	317	312	335	332	327	331	333	345	341	327	335	332	327	326	330	341	335	353	253	322	305	329.0
4-Apr	6	133	125	120	129	128	133	126	125	131	130	132	129	135	134	137	138	139	140	133	124	129	112	116	130.2
5-Apr	130	145	177	163	129	130	134	138	133	137	144	173	181	211	336	343	5	347	333	346	345	346	330	336	38.1
6-Apr	354	2	107	111	113	112	114	124	129	122	121	129	129	130	130	130	127	127	130	127	127	128	127	131	124.7
7-Apr	132	126	124	125	123	120	128	129	128	130	126	132	125	129	125	123	124	116	122	120	123	136	130	248	126.6
8-Apr	166	167	332	341	272	106	136	143	347	126	128	118	129	139	118	128	79	323	246	321	270	350	273	88	119.8
9-Apr	136	60	137	139	138	151	146	137	129	120	147	122	135	136	130	83	146	18	13	40	289	337	218	111	132.9
10-Apr	124	135	128	134	125	125	124	168	207	215	227	236	242	244	242	244	251	186	126	103	124	128	135	110	184.0
11-Apr	125	79	115	339	334	340	348	319	13	182	136	206	246	245	247	258	268	265	258	235	243	249	251	241	250.6
12-Apr	243	237	243	252	246	232	248	272	253	283	263	260	289	286	303	299	313	319	324	331	178	315	323	322	274.8
13-Apr	27	78	29	357	334	324	323	344	327	181	20	358	350	341	348	353	350	7	16	16	351	324	338	334	355.3
14-Apr	310	323	331	330	57	97	141	121	135	131	139	132	130	141	151	167	170	203	184	148	128	130	125	122	146.4
15-Apr	130	131	140	130	126	136	114	183	242	251	258	262	254	251	255	250	261	298	296	288	273	267	267	267	254.3
16-Apr	267	267	265	287	293	296	305	314	319	321	328	328	331	328	339	330	351	354	348	344	344	353	344	347	319.1
17-Apr	354	351	350	345	4	13	3	6	360	357	354	359	355	349	346	356	353	342	26	50	93	127	114	129	2.0
18-Apr	131	142	159	141	130	132	134	145	144	153	152	158	161	162	166	162	165	152	152	151	144	150	155	174	152.7
19-Apr	195	215	245	255	303	292	266	289	282	271	264	264	273	286	267	270	271	279	312	319	9	0	340	350	276.0
20-Apr	6	353	336	338	350	7	352	357	351	4	357	344	274	191	149	175	352	16	45	35	356	334	324	354	357.7
21-Apr	19	352	348	330	340	325	331	14	92	157	141	145	156	131	148	157	154	161	170	138	183	158	147	142	151.5
22-Apr	84	161	129	134	118	159	159	175	159	164	155	152	149	156	219	191	180	163	51	119	348	309	259	185	162.9
23-Apr	345	309	317	77	115	325	348	336	340	342	340	339	357	354	2	345	355	350	341	331	339	328	349	358	346.7
24-Apr	352	89	97	30	67	157	115	241	39	47	88	119	178	17	357	36	67	139	137	123	142	133	123	123	102.9
25-Apr	126	133	145	129	161	139	123	107	120	157	175	175	186	189	189	197	196	212	202	183	192	193	176	107	179.8
26-Apr	112	135	146	143	333	338	329	341	321	330	338	351	358	358	9	7	13	356	8	10	1	9	358	1	0.2
27-Apr	349	354	341	3	11	11	3	352	351	350	360	7	5	5	1	356	354	9	24	23	5	338	24	66	2.8
28-Apr	352	337	342	327	333	316	127	138	137	133	132	138	153	186	189	181	190	177	170	174	204	202	208	156	174.1
29-Apr	183	192	133	155	238	251	245	252	266	260	276	285	307	335	303	248	318	355	5	350	341	242	203	133	272.5
30-Apr	119	206	238	254	266	328	345	348	348	337	334	345	3	345	16	343	335	341	350	355	349	349	353	349	337.3
151.5 191.3 198.2 169.7 52.4 92.3 124.0 173.7 223.4 210.0 185.3 192.2 208.7 215.9 227.8 237.2 265.3 306.2 344.5 36.0 237.8 189.1 177.0 142.3																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

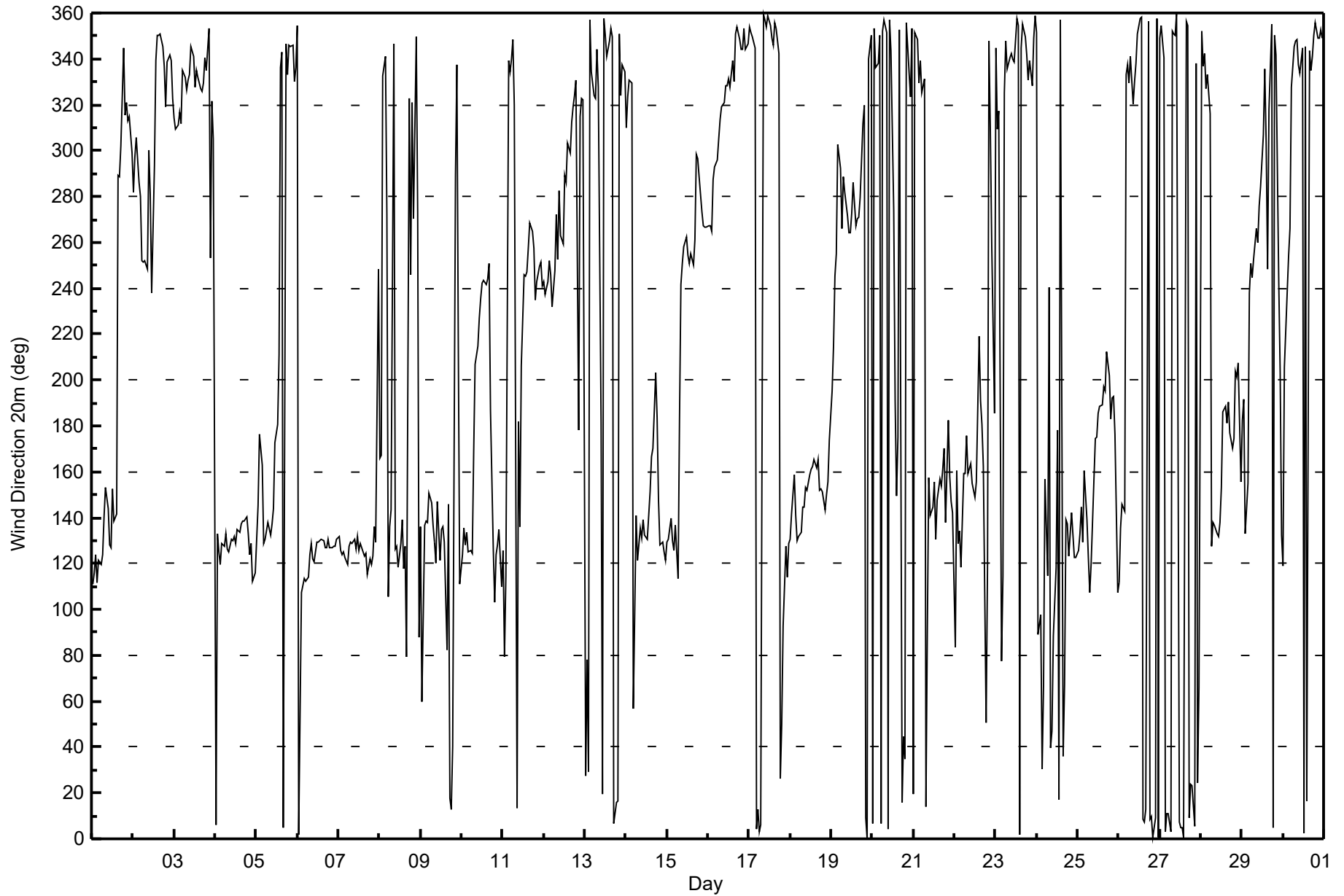
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on Apr 14 07:00																			Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 5 deg on Apr 25 22:00																									
Percentiles: P ₁ = 7 P ₁₀ = 12 Q ₁ = 15 Median = 19 Q ₃ = 31 P ₉₀ = 60 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	22	18	22	33	41	77	32	22	11	14	16	16	19	17	22	48	17	23	14	16	14	18	15	15	77
2-Apr	13	17	14	16	24	15	12	14	23	27	28	24	55	19	16	17	17	14	16	20	23	22	33	23	55
3-Apr	15	12	21	20	17	23	19	22	19	20	18	24	27	24	30	26	19	17	18	32	27	57	54	55	57
4-Apr	69	31	60	18	6	6	7	7	7	7	11	16	20	19	12	12	8	9	8	11	11	21	53	19	69
5-Apr	43	68	82	59	14	12	21	11	10	13	34	22	42	101	42	14	18	14	14	9	9	13	28	58	101
6-Apr	36	35	28	17	22	22	20	20	17	17	16	15	15	15	14	15	16	16	13	13	14	15	15	14	36
7-Apr	15	16	15	18	16	14	14	14	16	15	16	14	18	15	16	16	15	23	76	42	78	20	32	89	89
8-Apr	79	67	37	36	60	31	31	25	56	17	12	26	16	11	16	79	50	24	82	57	60	49	42	68	82
9-Apr	21	74	88	27	9	12	18	13	19	47	24	14	11	11	48	41	76	89	85	86	75	87	48	89	89
10-Apr	54	44	19	8	6	7	9	41	35	37	13	10	14	14	16	17	25	49	71	18	36	17	14	12	71
11-Apr	71	89	87	63	45	31	29	63	93	53	15	43	23	14	14	16	18	18	15	7	10	11	15	11	93
12-Apr	13	11	11	12	13	10	38	32	18	22	19	20	24	30	18	20	15	16	18	27	77	60	18	33	77
13-Apr	27	30	37	14	31	27	43	56	60	19	82	23	35	25	19	17	15	20	17	20	15	27	75	60	82
14-Apr	36	22	18	11	89	80	102	24	16	18	13	17	13	13	13	12	22	10	18	13	7	7	9	14	102
15-Apr	19	20	42	9	13	25	41	45	14	17	19	20	17	15	19	17	20	20	22	19	19	18	18	17	45
16-Apr	16	16	16	16	16	16	16	15	17	18	18	17	18	17	18	17	19	16	16	15	20	20	16	15	20
17-Apr	17	15	14	15	23	16	17	19	19	18	18	20	20	20	23	23	26	19	31	24	35	39	23	17	39
18-Apr	15	14	10	14	13	15	16	16	13	13	10	11	12	13	10	10	12	9	7	7	8	8	8	9	16
19-Apr	9	15	13	25	17	18	19	20	22	22	21	21	21	21	21	23	21	20	18	20	20	17	18	18	25
20-Apr	19	20	17	19	25	18	18	18	19	24	29	75	79	49	59	33	76	21	25	26	23	50	69	43	79
21-Apr	41	36	27	22	13	16	46	95	69	31	18	13	42	67	43	36	29	16	12	18	21	17	10	16	95
22-Apr	59	40	11	19	22	67	14	12	30	8	13	17	15	17	41	31	10	16	65	17	95	80	83	86	95
23-Apr	93	31	91	88	96	46	62	93	46	19	16	18	20	21	21	19	18	18	16	15	20	19	10	24	96
24-Apr	21	71	94	68	91	44	37	75	81	24	58	39	81	40	28	36	72	32	10	16	16	11	9	13	94
25-Apr	14	21	24	23	82	71	97	20	16	26	11	14	15	16	13	14	13	14	9	6	5	5	51	26	97
26-Apr	20	11	43	41	20	34	19	20	27	23	20	15	19	19	19	20	18	17	18	16	18	18	18	14	43
27-Apr	18	20	17	19	17	17	17	19	22	24	23	24	27	34	31	30	32	26	21	18	18	35	40	39	40
28-Apr	23	23	32	26	14	25	79	12	13	18	14	16	16	26	21	16	14	13	9	16	14	19	12	10	79
29-Apr	17	59	39	17	19	18	16	20	17	17	24	17	27	21	30	62	51	18	19	28	25	62	67	46	67
30-Apr	18	54	9	39	33	39	14	19	24	33	22	21	21	31	75	28	16	16	15	18	16	14	18	16	75
	93	89	94	88	96	80	102	95	93	53	82	75	81	101	75	79	76	89	85	86	95	87	83	89	
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - April 2025

Direction of Maximum Speed: 287 deg on Apr 15 20:00 Direction of Maximum Daily Speed Average: 151.4 deg on Apr 18																				Hours in Service: 720					
Direction of Minimum Speed: 340 deg on Apr 23 04:00 Direction of Minimum Daily Speed Average: 1.1 deg on Apr 1																				Hours of Data: 720					
Monthly Average Direction: 225.9 deg																				Hours of Missing Data: 0					
																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-Apr	110	114	122	112	109	110	120	130	143	134	125	124	148	134	138	288	288	301	344	317	322	314	316	300	104.3
2-Apr	286	297	303	288	282	249	251	253	251	300	282	245	302	339	350	351	353	345	341	320	339	348	348	333	304.8
3-Apr	323	310	304	305	305	317	322	327	329	333	344	341	329	335	332	327	324	330	341	349	349	29	259	309	327.3
4-Apr	203	150	163	149	151	134	129	127	118	136	125	131	126	127	127	128	133	136	136	134	140	130	121	125	132.3
5-Apr	136	133	133	146	126	123	124	122	121	124	126	161	181	319	331	345	6	353	338	340	336	338	337	348	36.7
6-Apr	62	92	115	116	116	115	117	123	127	121	119	127	126	128	129	127	124	126	129	126	126	127	126	130	124.1
7-Apr	130	127	125	127	124	121	127	128	127	128	124	128	123	127	124	123	123	116	116	113	111	121	120	161	124.8
8-Apr	136	131	114	337	289	135	131	135	6	123	127	115	121	127	118	129	63	337	196	347	350	314	296	235	112.6
9-Apr	128	187	149	132	135	158	141	131	115	102	134	110	126	131	134	73	151	12	40	49	327	65	124	147	122.4
10-Apr	144	184	164	131	134	131	139	202	215	220	226	235	243	243	243	247	256	198	135	84	107	123	124	112	189.7
11-Apr	119	111	125	74	329	328	343	285	82	178	134	218	249	245	247	258	267	264	259	237	240	247	250	237	245.6
12-Apr	239	235	242	251	244	232	238	270	254	282	263	260	290	285	301	298	311	319	322	328	318	349	357	4	275.2
13-Apr	38	84	73	52	15	337	331	322	327	171	10	358	344	340	348	353	351	6	15	19	357	340	334	335	356.2
14-Apr	323	320	328	332	329	161	123	118	131	126	133	127	131	134	152	167	170	205	189	153	126	129	120	119	142.5
15-Apr	121	122	132	128	125	150	145	188	241	250	257	260	253	250	254	250	260	296	294	287	271	267	266	267	253.4
16-Apr	266	266	264	286	293	295	304	315	320	322	328	329	332	327	339	330	353	357	352	347	345	355	349	350	320.4
17-Apr	356	354	351	346	3	10	3	5	0	357	355	1	356	349	351	360	353	344	29	54	92	127	136	124	3.6
18-Apr	128	136	155	138	129	129	132	144	144	152	152	158	160	162	165	161	166	152	153	151	144	149	159	179	151.4
19-Apr	198	217	242	253	300	291	269	289	281	271	264	264	272	287	267	270	270	280	311	319	12	1	346	355	277.9
20-Apr	6	358	342	344	354	3	354	356	353	359	358	345	284	186	139	168	353	14	43	41	9	357	345	9	1.1
21-Apr	69	35	23	343	338	337	341	314	87	139	133	136	143	129	136	154	149	159	169	133	185	154	146	144	144.4
22-Apr	111	152	137	159	120	149	162	175	157	161	154	151	149	154	221	195	180	164	49	119	357	344	10	128	162.2
23-Apr	307	332	311	340	264	342	346	47	333	342	341	341	359	356	4	348	356	353	344	333	336	330	342	346	345.9
24-Apr	344	355	15	13	190	218	132	235	12	41	89	115	185	15	357	30	68	133	133	112	143	142	128	119	99.6
25-Apr	123	126	126	126	132	125	108	106	120	156	174	175	186	189	189	198	196	212	204	192	200	201	189	117	177.3
26-Apr	122	130	144	140	342	341	332	341	320	332	339	353	359	360	9	6	11	357	7	8	1	7	358	2	1.7
27-Apr	354	359	344	3	8	9	3	351	352	352	357	3	3	2	1	358	358	10	22	23	7	351	28	84	3.1
28-Apr	44	7	74	340	347	348	128	134	134	129	127	138	151	186	188	181	191	177	172	177	205	204	208	156	171.7
29-Apr	183	190	128	157	240	250	246	257	265	259	276	286	307	335	310	263	325	357	3	357	342	356	218	185	279.9
30-Apr	135	212	239	251	258	321	347	351	347	337	331	346	4	347	20	345	334	343	354	357	353	351	355	353	337.8
139.2 160.9 185.9 178.0 335.7 81.3 123.3 182.0 241.5 231.8 192.1 193.5 229.4 236.8 241.7 259.5 288.5 322.1 351.9 23.0 344.2 175.0 165.3 135.0																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 45m (WD45) - deg

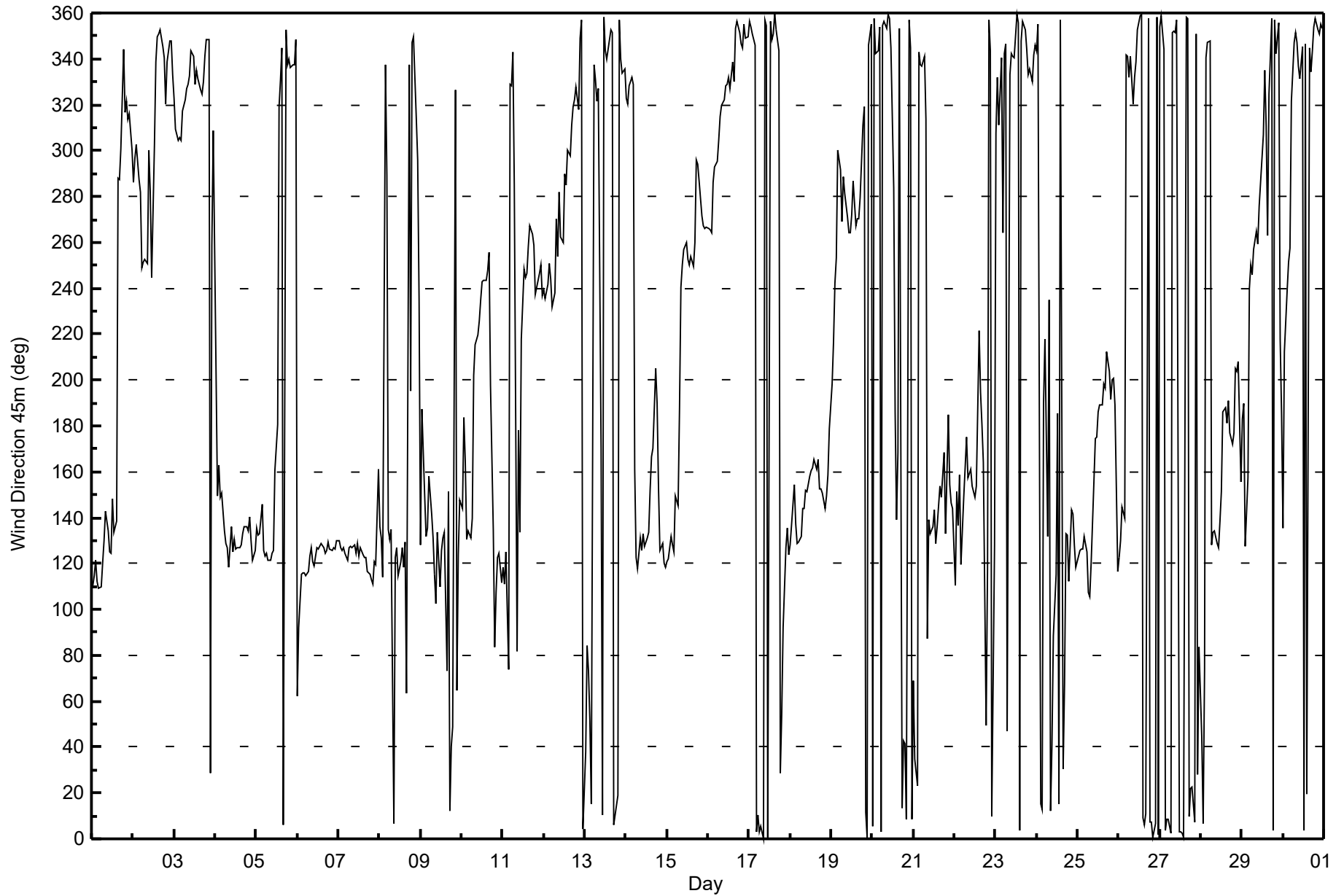
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 107 deg on Apr 9 21:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on Apr 7 08:00																									
Percentiles: P ₁ = 5 P ₁₀ = 7 Q ₁ = 10 Median = 13 Q ₃ = 24 P ₉₀ = 50 P ₉₉ = 86																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Apr	11	8	10	16	17	25	18	14	11	12	8	7	19	15	19	46	11	18	10	12	10	14	11	10	46
2-Apr	6	10	10	9	17	9	5	7	20	21	20	20	47	14	8	11	12	10	8	11	20	17	22	15	47
3-Apr	9	9	12	12	11	19	13	14	12	15	14	17	21	20	26	22	13	11	11	23	22	53	25	54	54
4-Apr	69	48	32	24	15	9	5	7	7	13	9	13	15	15	9	10	6	7	5	5	7	7	22	11	69
5-Apr	28	16	12	13	6	5	8	10	6	8	37	30	55	90	36	10	13	10	9	7	7	8	10	35	90
6-Apr	44	27	11	8	11	11	11	10	6	9	9	6	8	5	4	6	7	7	5	6	6	7	6	5	44
7-Apr	4	6	9	8	7	7	4	4	5	4	7	5	10	6	8	8	9	11	71	20	21	12	11	73	73
8-Apr	65	35	45	10	51	36	16	15	67	31	5	17	10	10	16	75	53	19	82	57	53	54	46	87	87
9-Apr	20	90	83	10	9	14	15	10	15	46	23	9	5	6	57	40	82	46	30	38	107	74	58	77	107
10-Apr	52	35	32	9	10	6	19	34	28	29	11	7	9	10	12	16	16	51	67	10	10	6	10	5	67
11-Apr	59	31	23	77	30	30	28	51	47	51	14	46	19	9	9	11	11	11	8	7	7	5	10	6	77
12-Apr	10	7	8	8	8	7	19	24	14	15	15	14	19	26	14	14	11	13	12	11	71	24	15	16	71
13-Apr	25	22	25	24	60	9	17	33	49	37	56	13	26	21	14	11	9	15	12	13	9	15	9	18	60
14-Apr	17	19	8	10	73	79	14	12	11	13	8	11	9	11	13	11	22	8	17	13	5	5	6	6	79
15-Apr	8	9	24	8	12	33	48	38	11	11	13	14	12	10	14	12	14	16	19	13	12	12	12	12	48
16-Apr	12	11	9	10	9	9	12	11	12	12	12	12	12	11	12	11	14	9	10	10	14	12	11	9	14
17-Apr	11	9	9	9	16	10	10	11	12	12	12	13	15	14	19	18	18	13	26	12	19	30	21	10	30
18-Apr	9	11	9	12	8	9	10	13	11	11	9	11	11	12	9	9	12	8	6	6	8	6	7	9	13
19-Apr	9	13	9	23	12	13	16	14	16	17	14	15	18	16	16	17	15	16	14	18	13	11	11	11	23
20-Apr	13	13	12	12	19	12	13	12	14	16	19	66	63	64	50	33	55	15	18	22	17	55	62	42	66
21-Apr	43	22	32	34	16	7	22	88	68	28	15	11	37	46	39	31	28	16	8	15	23	17	9	11	88
22-Apr	33	28	12	30	17	36	14	13	27	7	11	15	14	17	40	31	10	14	74	13	70	47	76	87	87
23-Apr	72	10	54	79	35	47	47	61	31	14	10	11	15	14	13	13	13	12	11	10	9	9	7	7	79
24-Apr	10	37	59	48	65	62	27	70	90	25	51	38	82	32	21	33	72	27	10	14	17	12	8	11	90
25-Apr	9	9	11	7	30	48	55	16	9	26	10	13	15	15	12	13	12	12	9	5	4	5	51	22	55
26-Apr	17	5	31	25	39	24	12	15	25	17	18	9	13	12	12	14	13	9	12	9	11	10	11	9	39
27-Apr	13	14	12	13	11	10	11	15	14	17	17	15	18	21	26	24	28	20	14	13	11	26	37	49	49
28-Apr	69	69	97	24	8	25	55	7	9	13	9	14	18	25	20	15	14	13	9	14	12	18	11	10	97
29-Apr	19	42	13	21	15	10	10	16	12	12	18	10	23	14	22	59	47	11	11	20	18	64	71	32	71
30-Apr	30	50	5	25	16	37	8	14	16	24	18	16	15	24	67	19	10	11	9	11	10	9	11	11	67
72 90 97 79 73 79 55 88 90 51 56 66 82 90 67 75 82 51 82 57 107 74 76 87																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - April 2025

Direction of Maximum Speed: 286 deg on Apr 15 20:00																					Hours in Service:		720			
Direction of Maximum Daily Speed Average: 127.9 deg on Apr 6																					Hours of Data:		719			
Direction of Minimum Speed: 253 deg on Apr 9 17:00										Direction of Minimum Daily Speed Average: 1.8 deg on Apr 1											Hours of Missing Data:		1			
Monthly Average Direction: 232.6 deg																					Percent Operational Time:		99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	117	120	126	123	125	129	127	130	135	131	133	131	155	142	152	286	290	301	343	318	323	317	317	301		132.3
2-Apr	293	301	301	288	286	263	267	262	261	301	288	255	304	337	350	352	355	347	348	324	342	2	358	352		309.2
3-Apr	332	318	311	309	309	304	316	325	330	333	342	339	327	332	332	325	325	331	342	4	0	61	209	66		328.3
4-Apr	230	241	248	233	218	209	186	195	192	183	163	140	132	124	121	116	127	142	139	142	157	146	138	149		162.7
5-Apr	154	146	138	152	167	146	134	146	151	124	119	130	67	340	318	345	11	2	350	351	355	10	16	101		58.0
6-Apr	117	118	124	123	126	121	123	127	129	125	124	129	129	130	130	129	128	128	132	130	131	132	130	133		127.9
7-Apr	133	131	131	132	130	127	129	129	128	130	125	129	125	129	127	127	122	123	121	121	128	125	138		128.1	
8-Apr	130	130	114	15	92	169	137	137	313	144	136	120	130	125	151	194	135	11	114	31	9	352	24	150		121.2
9-Apr	158	216	179	131	151	174	154	140	138	88	113	136	121	135	151	58	253	13	46	56	78	108	134	201		126.1
10-Apr	174	243	224	201	220	211	221	230	220	221	225	236	245	244	245	250	261	231	161	91	116	120	119	118		211.8
11-Apr	122	119	120	106	95	264	335	243	116	170	146	221	245	244	248	261	268	264	262	252	253	252	256	244		241.7
12-Apr	246	247	252	257	257	247	247	273	257	284	264	262	289	286	299	299	312	320	319	326	346	6	25	39		278.8
13-Apr	58	100	106	98	96	65	306	311	315	114	3	357	341	335	345	353	353	9	20	26	11	3	354	347		0.6
14-Apr	344	352	1	334	337	190	133	133	135	131	134	131	139	136	156	170	174	208	200	163	144	141	129	125		147.5
15-Apr	127	125	142	142	158	198	193	200	242	251	258	260	253	251	255	251	262	296	294	286	271	267	267	268		252.6
16-Apr	266	270	UO	287	295	298	310	317	321	324	330	330	332	329	340	332	354	359	355	350	347	359	356	354		324.3
17-Apr	358	356	354	348	4	11	4	7	1	358	356	3	356	349	353	3	354	344	30	60	94	128	150	130		7.0
18-Apr	133	139	152	146	138	136	139	146	152	157	156	160	162	165	168	164	170	157	157	153	150	154	171	190		156.4
19-Apr	205	227	248	260	298	292	278	289	281	274	267	266	275	288	271	272	272	280	311	318	16	6	357	1		279.8
20-Apr	11	1	350	352	4	3	357	356	353	356	354	340	292	201	128	164	358	18	44	57	34	40	41	80		10.4
21-Apr	101	95	108	111	129	257	8	126	169	125	128	133	131	130	129	158	148	159	170	136	189	155	148	151		143.2
22-Apr	134	160	180	203	154	176	170	178	157	158	157	158	157	157	226	205	184	172	27	123	14	17	52	73		170.6
23-Apr	28	333	324	283	232	261	273	91	332	343	342	342	3	359	8	354	360	358	353	343	348	342	341	345		348.0
24-Apr	343	336	358	360	128	165	187	220	317	16	106	124	216	19	352	32	89	129	129	111	125	132	132	132		110.4
25-Apr	137	138	133	142	130	126	124	127	136	168	176	178	189	191	192	201	199	214	207	199	212	213	207	170		181.7
26-Apr	155	147	161	181	345	350	339	341	330	334	340	352	1	3	9	9	12	360	10	9	3	6	359	7		2.2
27-Apr	1	0	352	3	9	9	1	354	352	351	356	3	359	2	359	1	0	13	24	28	20	12	43	115		6.3
28-Apr	122	115	121	137	9	109	141	138	142	137	127	145	158	189	192	185	194	179	176	185	208	206	209	162		174.3
29-Apr	188	197	132	173	247	255	255	263	267	261	277	288	311	333	322	294	331	360	4	4	1	25	120	201		281.5
30-Apr	184	232	251	257	259	315	350	353	346	336	331	348	12	356	32	349	339	349	356	359	354	352	355	355		333.9
153.8 187.3 182.5 210.6 240.0 235.9 200.7 224.0 251.3 245.9 224.0 210.9 246.6 250.8 249.8 264.2 287.9 320.7 348.9 25.6 23.8 133.9 150.2 147.4																										
Diurnal Average																										
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 100m (WD100) - deg

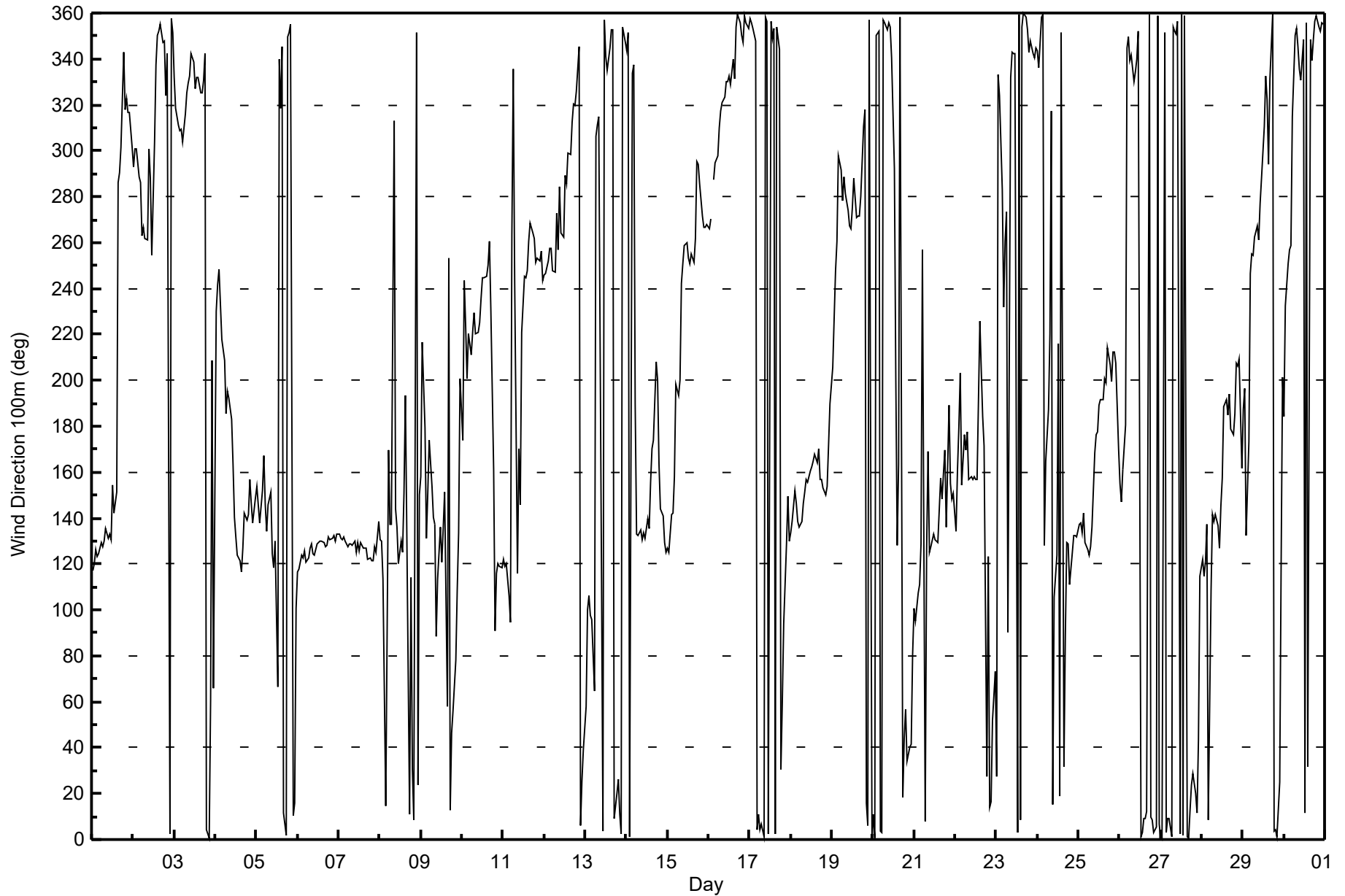
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 96 deg on Apr 22 19:00																									Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9
Minimum Value: 3 deg on Apr 7 07:00																									
Percentiles: P ₁ = 3 P ₁₀ = 5 Q ₁ = 7 Median = 11 Q ₃ = 17 P ₉₀ = 36 P ₉₉ = 81																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	6	3	3	6	8	11	7	6	8	8	6	7	17	13	17	45	6	15	8	8	6	9	6	8	45
2-Apr	4	8	7	5	9	7	4	4	18	16	18	17	39	12	7	9	10	8	5	9	22	14	15	12	39
3-Apr	10	5	5	8	8	10	10	11	8	12	12	14	18	16	21	18	10	9	10	14	21	15	95	55	95
4-Apr	19	16	15	11	7	16	8	8	13	14	17	19	15	16	9	8	6	9	5	7	5	9	9	7	19
5-Apr	8	13	7	11	7	6	8	16	9	15	45	16	88	73	34	11	12	8	7	5	7	11	22	37	88
6-Apr	8	6	4	4	6	7	6	6	4	5	6	5	6	3	3	4	4	5	3	3	4	4	3	3	8
7-Apr	3	3	4	4	4	3	3	3	3	3	5	4	7	4	6	6	7	6	26	6	5	6	3	57	57
8-Apr	34	8	6	38	50	27	14	9	92	51	9	14	16	12	32	50	81	17	57	36	34	11	18	49	92
9-Apr	33	20	33	11	17	11	18	14	54	37	22	11	7	8	74	47	94	35	10	6	28	35	41	47	94
10-Apr	80	12	23	21	18	19	11	15	16	13	8	6	6	7	8	15	13	58	53	11	9	4	6	4	80
11-Apr	9	9	9	15	55	32	39	66	15	33	15	45	13	5	6	9	6	6	4	6	4	4	5	5	66
12-Apr	8	5	6	5	4	6	8	20	10	12	12	10	17	22	10	11	7	8	8	7	14	11	13	10	22
13-Apr	22	14	20	13	13	22	70	23	22	57	47	10	19	19	14	11	8	14	9	9	6	11	5	3	70
14-Apr	4	6	9	6	7	66	9	6	9	9	10	10	11	11	12	9	22	7	15	6	8	6	5	3	66
15-Apr	4	7	12	8	16	22	26	19	9	10	9	10	9	7	10	11	11	12	15	10	9	8	8	9	26
16-Apr	8	7	UO	6	6	7	9	6	8	9	8	8	9	8	10	8	13	7	8	7	10	8	7	6	13
17-Apr	8	6	7	7	14	8	9	9	10	9	10	10	12	12	15	18	16	11	23	11	11	18	13	7	23
18-Apr	5	9	8	7	6	7	9	9	11	11	8	9	10	11	8	7	11	7	5	5	7	5	7	5	11
19-Apr	7	11	7	20	8	9	15	12	12	15	11	12	15	13	13	14	12	13	11	18	10	8	8	8	20
20-Apr	11	9	8	9	13	8	9	8	10	12	15	58	62	80	50	28	58	11	18	16	9	26	37	28	80
21-Apr	14	12	10	13	16	74	49	75	81	24	10	12	36	23	33	29	27	16	5	13	22	15	7	6	81
22-Apr	26	19	13	22	20	17	12	11	18	6	9	13	13	16	38	28	8	12	96	10	64	24	24	38	96
23-Apr	79	6	20	43	40	17	49	50	21	13	9	10	15	12	11	12	13	12	9	6	4	7	4	7	79
24-Apr	7	64	47	29	39	38	31	58	69	74	46	35	78	31	31	26	69	17	15	10	16	11	8	6	78
25-Apr	7	6	5	6	8	8	22	17	13	18	9	10	14	14	11	11	9	10	7	5	3	4	29	30	30
26-Apr	19	6	25	29	51	17	10	11	18	14	14	8	11	11	9	12	10	6	10	7	8	7	6	6	51
27-Apr	7	8	8	9	8	7	7	11	10	13	15	10	13	11	16	17	26	14	10	8	8	19	29	27	29
28-Apr	14	14	11	55	77	75	15	7	11	12	7	14	16	22	18	14	14	11	7	12	11	17	10	9	77
29-Apr	17	32	9	26	12	5	6	9	7	8	14	7	20	11	17	54	37	9	10	12	17	16	81	17	81
30-Apr	19	21	6	6	8	36	5	9	13	20	16	12	15	19	51	17	9	8	6	8	6	7	7	6	51
	80	64	47	55	77	75	70	75	92	74	47	58	88	80	74	54	94	58	96	36	64	35	95	57	
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 163m (WD163) - deg

Lower Camp Met Tower - April 2025

Direction of Maximum Speed: 287 deg on Apr 15 20:00 Direction of Maximum Daily Speed Average: 133.1 deg on Apr 6																				Hours in Service:		720				
Direction of Minimum Speed: 66 deg on Apr 13 06:00 Direction of Minimum Daily Speed Average: 2.7 deg on Apr 1																				Hours of Data:		717				
																				Hours of Missing Data:		3				
Monthly Average Direction: 230.8 deg																				Percent Operational Time:		99.6				
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	129	133	138	138	137	136	135	136	133	136	151	148	165	161	170	286	295	304	344	321	328	320	321	307		172.7
2-Apr	299	308	305	294	292	278	278	279	276	304	295	263	306	339	354	357	359	353	351	329	353	15	4	4		318.2
3-Apr	341	328	321	319	321	315	324	329	333	337	344	342	331	334	334	330	329	335	345	12	12	52	75	115		334.2
4-Apr	207	263	262	260	246	241	228	226	213	211	194	159	146	138	129	122	132	153	152	158	165	169	164	171		185.7
5-Apr	182	185	175	179	186	164	157	158	164	161	169	112	17	339	323	350	19	12	5	13	27	84	118	122		97.9
6-Apr	126	126	131	131	134	129	131	131	134	131	131	134	134	134	134	133	133	132	134	134	135	137	136	138		133.1
7-Apr	139	137	135	135	140	138	135	132	133	134	129	133	130	134	132	133	134	130	130	130	131	137	134	139		134.0
8-Apr	135	137	126	98	152	171	146	158	260	200	171	131	181	117	184	180	76	47	80	52	27	39	104	198		134.6
9-Apr	169	216	186	162	192	181	201	202	202	183	168	178	140	151	187	48	265	14	51	56	69	85	123	196		148.7
10-Apr	242	262	245	235	239	232	235	242	229	225	227	240	249	248	249	253	262	263	180	93	131	128	126	131		223.8
11-Apr	133	130	119	102	116	213	202	170	120	164	164	226	245	249	252	264	271	267	267	259	262	259	262	252		236.9
12-Apr	256	261	263	266	271	264	265	277	263	288	269	266	290	288	301	302	315	323	321	330	352	14	21	40		286.2
13-Apr	77	189	200	187	120	66	292	320	327	46	359	351	339	336	345	356	357	13	25	34	24	23	17	30		4.0
14-Apr	35	63	78	29	86	174	151	154	147	143	141	141	148	143	162	174	180	212	206	169	158	152	142	135		156.1
15-Apr	140	144	165	175	193	225	215	213	246	255	262	263	257	254	258	255	265	297	295	287	274	270	270	273		255.4
16-Apr	273	UO	UO	293	301	304	317	323	326	328	334	334	336	333	344	336	358	4	1	355	353	7	2	1		331.1
17-Apr	4	2	360	353	8	14	9	11	7	3	2	7	0	354	358	10	357	349	35	67	105	131	145	138		13.5
18-Apr	141	145	152	153	154	150	150	154	161	162	161	164	167	168	171	169	175	163	163	158	156	164	185	198		163.8
19-Apr	216	239	255	270	299	295	287	292	284	277	272	271	278	290	275	275	276	284	312	321	21	15	11	9		285.2
20-Apr	17	8	360	5	14	9	4	359	357	357	354	340	287	227	137	160	4	28	50	70	56	64	68	89		21.7
21-Apr	106	117	126	124	132	171	85	154	176	134	127	131	134	136	136	165	151	162	172	141	193	159	152	154		146.3
22-Apr	150	194	213	232	188	189	178	180	164	152	161	167	166	163	231	UO	190	178	276	136	14	4	16	311		181.3
23-Apr	256	321	322	280	306	333	345	333	343	354	350	350	11	9	16	3	8	8	1	355	0	2	6	16		356.2
24-Apr	11	80	344	86	175	157	179	198	292	281	146	142	239	25	346	36	148	131	130	117	127	132	142	143		133.5
25-Apr	152	156	151	157	158	155	154	165	170	180	181	180	192	195	195	204	202	217	210	206	222	222	216	206		187.6
26-Apr	196	182	201	249	339	5	354	350	342	343	342	357	8	9	12	16	16	6	14	12	10	10	1	14		3.0
27-Apr	7	4	4	8	15	14	5	357	354	353	358	6	1	4	2	5	6	18	29	35	33	38	61	122		14.6
28-Apr	144	136	133	143	149	147	148	151	159	151	135	155	163	192	194	189	197	182	181	193	211	209	211	170		177.6
29-Apr	195	209	146	192	255	262	266	271	271	266	280	293	316	334	342	323	339	6	7	13	18	29	63	191		289.4
30-Apr	201	246	269	277	277	324	358	0	346	340	338	354	21	16	47	358	348	357	4	6	1	357	1	3		339.8
170.9 187.2 200.1 223.4 236.4 234.5 224.4 233.3 251.3 248.3 236.1 223.9 248.1 254.1 250.3 275.8 287.5 322.9 350.9 28.1 53.2 114.9 147.4 154.5																										
Diurnal Average																										
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 163m (WD163) - deg

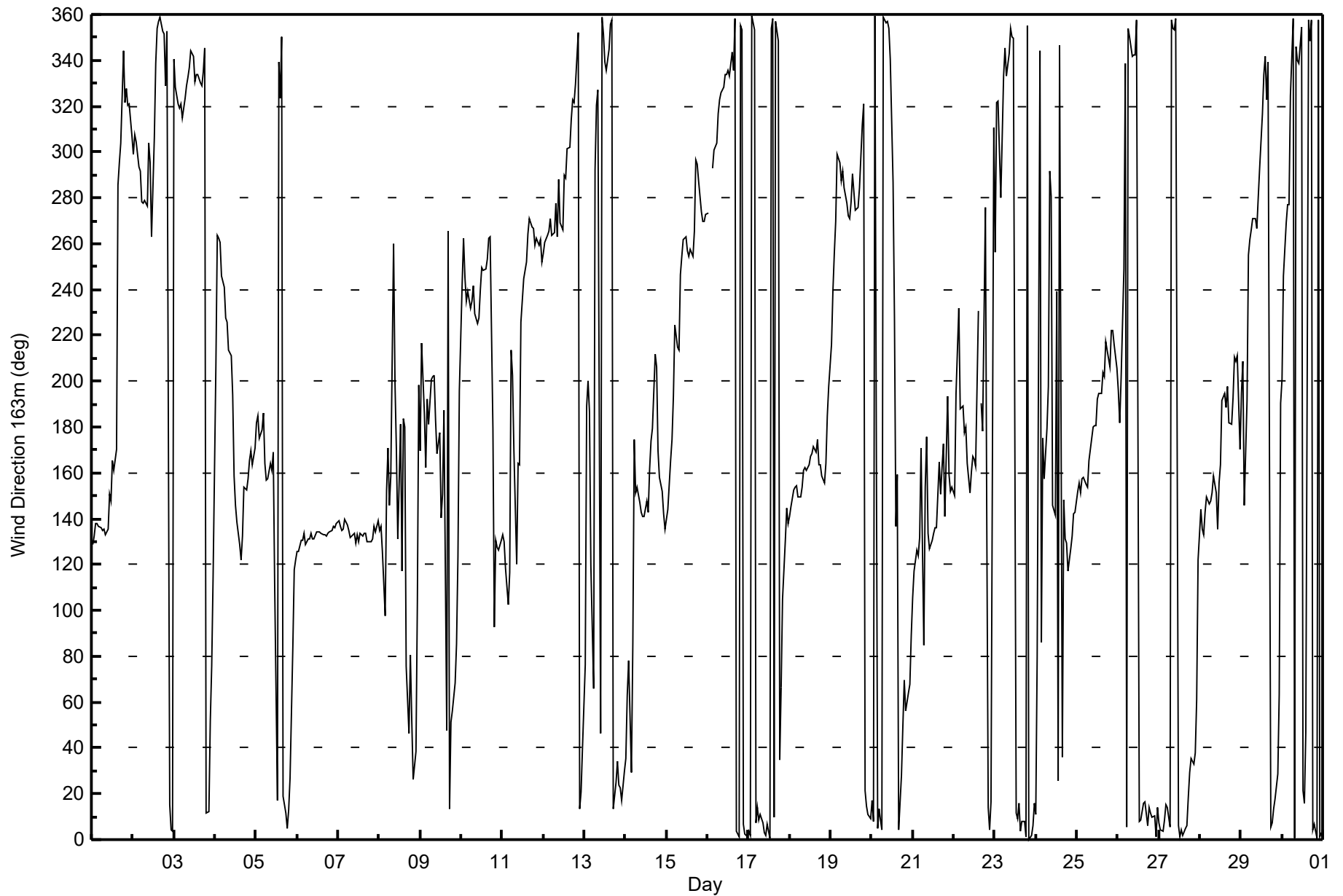
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 95 deg on Apr 20 14:00																		Hours in Service: 720							
Minimum Value: 2 deg on Apr 10 23:00																		Hours of Data: 717							
Percentiles: P ₁ = 3 P ₁₀ = 4 Q ₁ = 6 Median = 9 Q ₃ = 14 P ₉₀ = 29 P ₉₉ = 72																		Hours of Missing Data: 3							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	3	4	4	4	5	4	5	6	6	11	9	12	8	11	46	5	12	7	7	5	7	5	6	46
2-Apr	3	7	5	4	7	7	3	3	16	14	18	15	35	13	7	9	10	7	4	8	21	10	10	7	35
3-Apr	9	4	4	5	7	6	9	8	6	10	10	12	15	14	19	14	8	8	9	9	17	8	20	21	21
4-Apr	41	19	11	4	5	7	7	8	8	11	17	22	20	28	13	11	10	11	8	5	3	5	9	8	41
5-Apr	11	8	11	9	6	8	8	8	9	11	30	23	72	48	28	12	11	7	8	6	11	19	12	8	72
6-Apr	3	5	4	3	4	5	5	4	4	4	5	4	6	3	3	4	4	4	3	3	3	3	3	3	6
7-Apr	3	3	4	3	5	5	3	3	3	3	4	4	6	4	5	5	5	4	6	4	3	6	4	47	47
8-Apr	13	6	7	23	19	20	11	13	48	30	12	19	73	50	30	57	79	10	28	19	26	26	31	38	79
9-Apr	14	16	40	21	11	11	22	16	13	29	23	14	14	14	61	59	72	30	9	6	10	12	32	20	72
10-Apr	14	10	10	8	5	8	5	5	15	9	7	6	5	6	7	12	13	61	51	10	14	3	2	2	61
11-Apr	5	6	11	8	16	30	54	47	11	27	15	31	8	4	6	8	5	4	4	4	3	5	4	4	54
12-Apr	7	4	4	5	4	7	6	18	8	11	11	8	14	18	7	8	6	7	7	6	14	12	17	9	18
13-Apr	37	71	11	41	29	66	18	8	23	52	53	17	18	16	13	11	7	14	8	5	3	8	4	6	71
14-Apr	7	16	8	34	42	14	10	7	8	9	10	10	12	12	12	8	21	6	15	4	4	5	7	4	42
15-Apr	4	10	14	11	22	9	19	13	8	9	8	10	8	7	8	10	10	10	13	9	7	7	6	7	22
16-Apr	5	UO	UO	5	5	5	7	5	7	7	6	6	7	6	9	6	12	7	7	6	7	9	8	6	12
17-Apr	8	6	7	7	12	7	8	8	9	8	9	9	11	11	16	18	17	11	23	12	10	10	12	6	23
18-Apr	5	8	5	6	6	8	8	9	12	10	8	9	9	10	6	5	9	6	4	4	6	6	7	4	12
19-Apr	7	9	5	17	5	7	13	10	12	14	10	11	15	13	12	12	10	11	10	18	9	8	7	8	18
20-Apr	8	8	7	8	9	4	8	9	8	12	16	51	66	95	56	31	34	12	16	8	4	6	17	14	95
21-Apr	9	5	4	4	13	24	73	37	32	16	9	13	31	28	33	30	23	14	4	14	23	13	5	3	73
22-Apr	25	17	10	10	10	6	13	6	12	5	9	12	12	15	36	UO	7	9	94	28	62	15	14	38	94
23-Apr	52	9	10	13	13	13	16	23	17	12	9	8	16	13	10	14	14	13	9	4	4	6	8	17	52
24-Apr	19	87	46	55	34	15	11	49	59	68	55	38	64	42	47	26	89	21	14	10	7	5	5	6	89
25-Apr	8	6	8	4	5	7	9	12	12	12	8	9	13	13	10	10	9	9	6	6	3	5	12	11	13
26-Apr	16	10	27	15	38	18	10	12	15	10	12	10	11	9	8	10	9	6	8	6	7	6	7	5	38
27-Apr	6	7	7	8	7	7	7	10	10	12	12	11	14	12	16	17	25	11	9	6	4	9	16	22	25
28-Apr	14	8	6	11	13	8	6	8	12	13	10	13	16	21	16	13	13	9	7	11	12	15	11	8	21
29-Apr	14	27	11	26	9	3	5	7	5	6	13	7	19	11	15	50	28	8	10	6	11	8	53	19	53
30-Apr	7	14	10	4	5	30	6	13	11	18	12	13	13	15	15	18	10	7	7	7	6	6	6	7	30
52 87 46 55 42 66 73 49 59 68 55 51 73 95 61 59 89 61 94 28 62 26 53 47																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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



Maximum Value: 0.6 km/h on Apr 24 11:00																	Maximum Daily Average: 0.0 km/h on Apr 20										Hours in Service: 720	
Minimum Value: -1.7 km/h on Apr 25 11:00																	Minimum Daily Average: -0.9 km/h on Apr 15										Hours of Data: 720	
Maximum Diurnal Average: -0.1 km/h at hour 6																	Minimum Diurnal Average: -0.5 km/h at hour 17										Hours of Missing Data: 0	
Monthly Average: -0.29 km/h																	Percentiles: P ₁ = -1.4 P ₁₀ = -0.9 Q ₁ = -0.5 Median = -0.2 Q ₃ = 0.0 P ₉₀ = 0.1 P ₉₉ = 0.3										Hours of Calibration: 0	
																											Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	-0.3	-0.3	-0.1	-0.4	0.0	-0.2	0.0	-0.2	-0.4	-0.4	-0.2	-0.1	-0.5	-0.2	0.0	-0.4	-0.7	-0.6	-0.3	-0.3	-0.1	-0.3	-0.3	-0.6	-0.3	0.0		
2-Apr	-0.6	-0.5	-0.5	-0.4	-0.2	-0.4	-1.0	-0.7	-0.7	-0.2	-0.5	-0.6	-0.1	-0.3	-0.6	-0.4	-0.3	-0.3	-0.2	-0.1	0.0	0.0	0.0	-0.2	-0.4	0.0		
3-Apr	-0.2	-0.6	-0.3	-0.3	-0.2	0.1	0.1	0.1	-0.2	-0.3	-0.5	0.0	0.0	0.1	-0.4	0.1	-0.2	0.0	-0.1	-0.1	0.0	0.0	0.1	0.0	-0.1	0.1		
4-Apr	0.0	0.0	0.1	0.2	0.3	0.4	-0.1	-0.2	-0.3	-0.4	-0.4	-0.1	0.1	-0.4	-0.3	-0.3	-0.3	-0.3	-0.2	0.2	0.2	0.1	-0.3	-0.3	-0.1	0.4		
5-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.3	0.1	-0.2	-0.4	-0.2	0.3	0.1	-0.5	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	0.1	-0.1	0.3		
6-Apr	0.2	0.1	-0.2	-0.2	-0.4	-0.5	-0.3	-0.2	-0.4	-0.3	-0.4	-0.5	-0.5	-0.8	-0.8	-0.5	-0.5	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.4	0.2		
7-Apr	-0.7	-0.7	-0.6	-0.5	-0.4	-0.6	-0.4	-0.4	-0.5	-0.6	-0.5	-0.6	-0.3	-0.8	-0.6	-0.4	-0.5	-0.4	-0.2	-0.1	0.0	-0.1	-0.4	-0.1	-0.4	0.0		
8-Apr	0.0	0.1	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1	0.0	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.2	-0.2	0.0	0.0	0.0	0.0	-0.1	0.1		
9-Apr	0.0	0.1	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.1	0.1	0.0	-0.5	-0.1	-0.4	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.3		
10-Apr	0.1	0.1	0.4	0.4	0.0	0.3	0.2	0.2	-0.3	-0.3	-0.6	-1.0	-0.9	-1.1	-0.8	-0.6	-0.4	-0.4	0.1	0.2	0.1	0.1	0.2	0.1	-0.2	0.4		
11-Apr	0.0	0.0	0.1	0.1	-0.1	-0.2	0.0	-0.1	0.0	-0.3	-0.4	-0.3	-0.8	-1.3	-1.0	-0.8	-1.3	-0.9	-0.7	-0.5	-0.7	-1.0	-1.0	-0.6	-0.5	0.1		
12-Apr	-0.5	-0.5	-0.7	-0.6	-0.6	-0.1	-0.1	-0.3	-0.7	-0.5	-0.8	-0.6	-0.6	-0.7	-0.8	-0.6	-0.8	-0.5	0.0	-0.1	0.0	0.0	0.0	0.0	-0.4	0.0		
13-Apr	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	-0.2	0.3	0.6	0.3	-0.1	-0.3	-0.3	-0.4	-0.2	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.6		
14-Apr	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.2	-0.1	-0.2	-0.4	-0.5	-0.6	-1.1	-0.6	-0.8	-0.5	0.0	-0.2	-0.2	-0.4	-0.3	-0.3	0.0		
15-Apr	-0.2	-0.2	-0.4	-0.3	-0.1	0.0	-0.1	-0.7	-1.2	-1.4	-1.5	-1.1	-1.6	-1.7	-1.3	-1.5	-1.3	-1.2	-0.7	-0.9	-0.9	-1.4	-1.2	-1.3	-0.9	0.0		
16-Apr	-1.1	-0.9	-1.0	-0.7	-0.6	-0.5	-0.7	-0.6	-0.3	-0.4	-0.1	0.0	0.1	0.0	-0.1	0.1	0.0	-0.4	-0.3	-0.4	0.0	0.1	-0.1	-0.1	-0.3	0.1		
17-Apr	-0.3	-0.1	-0.4	-0.4	0.2	0.1	-0.1	0.1	-0.2	-0.3	-0.4	0.1	-0.2	0.0	-0.2	-0.3	0.0	-0.1	0.0	0.0	0.0	-0.2	-0.2	-0.4	-0.1	0.2		
18-Apr	-0.3	-0.4	-0.1	-0.4	-0.5	-0.4	-0.5	-0.7	-0.7	-0.8	-1.0	-1.1	-1.0	-1.4	-1.4	-1.3	-1.2	-0.8	-0.9	-1.1	-1.1	-1.2	-0.7	-1.2	-0.8	-0.1		
19-Apr	-1.0	-0.8	-0.9	-0.8	-0.5	-0.5	-0.5	-0.6	-0.6	-1.0	-0.7	-1.3	-1.2	-1.2	-0.9	-0.8	-1.3	-0.9	-0.5	-0.7	0.0	0.1	-0.1	-0.1	-0.7	0.1		
20-Apr	0.1	-0.1	0.1	-0.1	0.1	0.3	0.3	0.0	-0.1	-0.1	0.3	0.1	0.1	-0.1	0.2	-0.4	-0.1	0.2	-0.1	0.1	0.0	-0.1	-0.1	0.1	0.0	0.3		
21-Apr	0.1	0.0	0.1	0.1	0.0	-0.1	0.1	0.0	-0.1	-0.3	-0.2	-0.2	-0.6	0.2	-0.1	-0.3	-0.5	-0.6	-0.7	-0.6	-0.8	-0.6	-0.6	-0.2	-0.2	0.2		
22-Apr	0.1	-0.2	-0.3	0.0	-0.4	0.1	-0.9	-0.5	-0.4	-0.9	-0.8	-0.5	-0.7	-0.8	-1.4	-1.1	-0.6	-0.4	0.1	-0.1	0.0	0.0	0.0	0.1	-0.4	0.1		
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.4	-0.2	-0.1	-0.2	0.0	-0.2	0.2	-0.3	-0.4	-0.1	-0.1	0.1	0.0	-0.2	-0.1	0.0	0.0	0.4		
24-Apr	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	-0.5	-0.2	0.1	-0.2	0.0	0.1	-0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.4	0.0	0.6		
25-Apr	-0.3	-0.1	0.0	-0.1	-0.1	0.0	0.0	-0.2	-0.3	-0.7	-1.7	-1.6	-1.6	-1.2	-1.4	-1.4	-1.3	-1.2	-1.0	-0.6	-0.7	-0.8	-0.1	-0.1	-0.7	0.0		
26-Apr	-0.3	0.0	-0.1	0.1	-0.2	-0.3	0.1	-0.2	-0.3	-0.4	-0.4	-0.7	-0.3	-0.4	0.1	0.0	-0.2	-0.1	-0.1	0.0	-0.2	0.2	-0.1	0.0	-0.2	0.2		
27-Apr	0.2	0.0	0.1	0.1	0.1	0.1	0.0	-0.2	0.0	0.0	-0.1	0.3	0.0	0.1	0.3	0.0	-0.2	0.3	0.0	0.1	0.1	0.1	-0.3	-0.1	0.0	0.3		
28-Apr	0.1	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.6	-0.6	-0.3	-0.5	-0.4	-1.0	-0.9	-0.9	-1.1	-1.2	-1.4	-1.0	-0.8	-1.0	-1.0	-1.2	-0.5	-0.6	0.1		
29-Apr	-1.0	-0.3	0.0	-0.2	-0.5	-0.6	-0.6	-0.6	-0.9	-0.8	-0.3	-1.1	-0.3	0.0	-0.4	-0.2	-0.1	-0.1	0.2	0.0	-0.1	0.1	0.0	0.1	-0.3	0.2		
30-Apr	0.1	0.0	-0.5	-0.3	-0.1	-0.3	-0.5	-0.1	-0.1	0.1	-0.2	-0.1	0.0	0.0	0.1	0.0	-0.2	-0.2	-0.4	-0.2	-0.3	-0.7	-0.2	-0.3	-0.2	0.1		
																									Diurnal Average			
																									Diurnal Maximum			



Wood Buffalo Environmental Association
Summary of Hour Standard Deviations

Vertical Wind Speed 20m (VW20) - km/h
Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 1 Maximum Value: 6.0 km/h on Apr 15 20:00																				Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0					
Minimum Value: 0.1 km/h on Apr 14 01:00																									
Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 1.0 Median = 1.8 Q ₃ = 2.6 P ₉₀ = 3.3 P ₉₉ = 4.8																									
Day	Hourly Period Ending At (MST)																			Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	21	22	23	24
1-Apr	1.8	2.3	2.1	1.9	1.1	0.9	1.8	1.8	1.2	1.3	1.7	2.1	1.5	1.7	1.0	2.5	3.4	2.9	1.8	2.4	1.9	2.0	1.9	1.9	3.4
2-Apr	1.8	1.9	2.0	1.6	1.3	1.8	2.5	2.5	2.1	2.6	2.5	1.9	2.5	2.8	2.6	2.4	2.7	2.3	1.5	0.5	0.9	1.5	1.4	1.1	2.8
3-Apr	1.1	1.7	1.6	1.3	1.6	1.0	1.4	2.6	3.0	3.2	3.1	2.9	2.5	2.8	2.9	2.8	2.9	2.8	1.9	0.7	0.4	0.2	0.2	0.2	3.2
4-Apr	0.1	0.4	0.6	0.9	0.8	1.0	1.3	1.4	1.2	1.3	1.7	1.8	2.0	1.7	1.7	1.5	1.3	1.0	1.1	0.8	0.8	1.0	1.2	1.1	2.0
5-Apr	0.8	0.3	0.2	0.3	0.5	0.9	1.0	0.8	1.3	1.4	1.3	1.1	1.1	1.3	1.8	1.8	1.9	1.6	1.5	1.1	1.0	0.9	0.9	0.9	1.9
6-Apr	1.0	0.8	2.1	2.3	2.0	2.4	2.7	3.2	3.6	3.5	3.8	4.2	4.1	4.2	4.4	4.2	4.1	3.5	3.6	3.6	3.7	3.9	4.1	3.7	4.4
7-Apr	3.8	3.3	2.8	3.0	3.3	3.0	3.2	3.1	3.6	3.7	3.6	3.5	3.4	3.6	3.2	2.9	2.4	2.1	1.1	1.0	1.5	0.6	1.4	0.7	3.8
8-Apr	0.2	0.1	0.1	0.6	0.2	0.2	0.4	0.4	0.4	0.5	1.2	1.3	0.8	0.9	0.7	0.7	0.4	0.6	0.4	0.5	0.3	0.2	0.2	0.2	1.3
9-Apr	0.2	0.3	0.2	0.2	0.6	0.7	0.7	0.9	1.1	1.2	1.6	1.3	1.9	1.7	1.3	1.1	1.0	0.7	0.5	0.4	0.5	0.4	0.3	0.6	1.9
10-Apr	0.5	0.8	1.1	0.6	0.9	0.7	1.1	1.7	1.7	1.4	1.7	1.9	2.5	2.4	2.0	1.9	1.6	1.1	0.5	0.5	0.4	0.4	0.6	0.6	2.5
11-Apr	0.8	0.7	0.7	1.0	0.9	0.6	0.5	0.6	0.7	1.3	2.0	1.8	2.3	3.1	3.5	3.2	4.0	3.7	2.4	0.9	1.8	2.3	2.8	1.7	4.0
12-Apr	1.5	1.6	1.8	1.8	2.0	1.2	0.6	1.0	2.1	2.8	2.9	2.6	2.6	2.6	2.9	2.7	2.8	2.7	2.0	0.5	0.1	0.2	0.2	0.4	2.9
13-Apr	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.6	1.1	1.2	1.7	2.3	2.9	2.7	2.7	2.4	2.5	2.5	2.0	1.4	1.1	0.7	0.4	0.2	2.9
14-Apr	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.9	1.6	2.0	2.0	2.1	2.1	2.4	2.2	1.9	1.6	1.6	0.7	0.8	1.1	1.3	1.2	2.3	2.4
15-Apr	2.5	1.7	1.6	1.3	0.8	0.9	1.4	1.9	3.6	5.2	5.0	4.8	4.7	4.9	4.6	4.2	4.5	4.7	4.7	6.0	5.6	5.2	4.8	4.2	6.0
16-Apr	3.2	3.0	2.8	2.8	2.3	2.3	2.6	3.5	4.5	4.4	4.3	3.8	3.9	4.2	3.3	3.6	3.2	2.4	2.7	2.3	1.2	1.1	1.4	1.9	4.5
17-Apr	2.5	3.0	2.6	2.8	2.5	2.4	2.7	2.7	3.0	3.0	3.2	3.1	2.9	2.9	2.5	2.2	2.0	1.7	1.4	1.0	0.9	0.9	0.8	2.3	3.2
18-Apr	2.8	2.6	1.5	1.7	2.4	2.9	3.1	2.9	2.6	2.5	2.7	2.9	3.2	3.3	2.9	3.0	2.5	2.6	2.7	3.1	2.7	3.6	2.5	2.2	3.6
19-Apr	2.8	2.7	2.7	2.6	2.5	1.9	2.0	3.5	3.5	3.9	3.5	4.0	4.0	3.8	4.1	4.4	4.1	3.5	3.1	2.8	2.8	2.4	1.7	2.1	4.4
20-Apr	2.0	2.0	1.6	1.5	1.4	1.5	1.7	1.9	1.9	1.9	2.2	2.0	2.0	2.0	1.8	1.6	1.7	2.0	1.7	1.1	1.0	0.9	0.7	0.6	2.2
21-Apr	0.6	0.5	0.5	0.3	0.4	0.3	0.5	0.9	1.2	1.6	2.1	1.9	1.9	2.2	2.1	1.8	1.8	1.4	1.0	1.9	1.6	1.3	2.2	2.0	2.2
22-Apr	1.3	0.8	1.1	1.0	1.3	0.9	1.8	1.5	1.8	2.2	2.3	2.5	2.7	2.5	3.8	2.3	2.3	1.9	0.7	0.7	1.3	0.4	0.1	0.2	3.8
23-Apr	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.9	1.6	2.1	2.5	2.6	2.9	2.9	2.5	2.4	2.3	2.0	1.1	1.1	0.7	0.7	0.7	0.5	2.9
24-Apr	0.5	0.2	0.2	0.3	0.1	0.1	0.5	1.1	1.5	1.6	1.7	1.9	2.3	2.0	2.0	2.0	1.7	1.4	1.0	0.5	0.9	0.7	1.0	1.2	2.3
25-Apr	1.7	1.6	1.1	1.5	0.8	0.7	0.7	1.3	1.9	2.5	3.0	3.2	3.3	3.3	2.6	2.7	3.1	2.8	2.1	0.8	1.0	1.3	1.2	1.0	3.3
26-Apr	0.9	0.9	1.1	0.5	1.3	1.7	2.1	1.7	2.0	2.4	2.6	2.9	3.4	3.7	3.7	3.6	3.2	3.7	3.1	3.1	2.3	2.2	2.1	1.9	3.7
27-Apr	1.7	1.4	1.8	2.9	3.3	2.9	3.0	2.8	2.6	2.7	2.7	2.6	2.5	2.7	2.4	2.5	2.3	2.5	2.4	1.8	1.7	1.3	1.4	0.6	3.3
28-Apr	0.3	0.2	0.2	0.5	0.5	0.3	1.0	2.1	2.0	2.3	2.6	2.8	2.7	2.8	2.9	2.7	2.4	2.1	1.6	1.5	2.1	2.3	2.3	1.5	2.9
29-Apr	1.7	1.1	1.1	1.4	1.9	2.0	1.8	2.5	3.3	2.8	3.0	3.1	2.6	2.7	1.8	1.5	2.8	3.3	2.3	1.1	0.8	0.4	0.5	0.5	3.3
30-Apr	0.7	1.1	1.8	2.0	1.9	2.0	2.1	2.0	2.1	2.1	1.7	1.8	2.8	1.3	1.1	1.4	1.6	3.0	3.0	3.0	2.8	2.5	2.5	2.3	3.0
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - April 2025

Maximum Value: 1.1 km/h on Apr 24 11:00																			Maximum Daily Average: 0.5 km/h on Apr 6							Hours in Service: 720	
Minimum Value: -1.2 km/h on Apr 19 14:00																			Minimum Daily Average: -0.2 km/h on Apr 19							Hours of Data: 720	
Maximum Diurnal Average: 0.3 km/h at hour 4																			Minimum Diurnal Average: 0.0 km/h at hour 16							Hours of Missing Data: 0	
Monthly Average: 0.15 km/h																			Percentiles: P ₁ = -0.7 P ₁₀ = -0.3 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 0.9							Hours of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.4	0.4	0.8	0.6	0.3	0.2	0.7	0.7	0.6	0.2	0.2	0.4	0.1	0.3	0.5	-0.2	-0.8	-0.7	0.0	-0.4	-0.1	-0.3	-0.3	-0.6	0.1	0.8	
2-Apr	-0.4	-0.5	-0.6	-0.1	0.2	0.4	0.3	0.2	0.3	0.2	-0.2	0.0	0.3	0.1	-0.3	-0.4	0.0	-0.1	0.2	0.0	0.1	0.2	0.1	0.0	0.0	0.4	
3-Apr	0.0	-0.5	-0.1	-0.2	-0.1	0.3	0.0	0.2	-0.3	-0.1	0.0	0.2	0.5	0.1	-0.1	0.5	-0.3	-0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.5	
4-Apr	0.2	0.3	0.3	0.4	0.4	0.7	0.4	0.3	0.0	0.1	0.0	0.3	0.5	0.0	0.2	0.3	0.2	0.3	0.4	0.9	0.8	0.6	0.0	-0.2	0.3	0.9	
5-Apr	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.2	0.1	0.2	0.2	-0.3	0.0	0.9	1.1	-0.1	0.4	0.3	0.1	0.2	0.0	0.1	0.0	0.3	0.3	1.1	
6-Apr	0.5	0.2	0.4	0.4	0.6	0.3	0.6	0.7	0.4	0.7	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.6	0.6	0.6	0.7	0.5	0.7	
7-Apr	0.7	0.3	0.2	0.4	0.5	0.4	0.4	0.5	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.5	0.3	0.4	0.6	0.2	0.3	0.1	0.4	0.7	
8-Apr	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.1	0.3	0.2	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.3	
9-Apr	0.2	0.2	0.1	0.4	0.3	0.1	0.1	0.1	0.2	0.5	0.2	-0.2	0.3	0.3	0.8	0.2	0.4	0.4	0.4	0.1	0.1	0.3	0.2	0.3	0.3	0.8	
10-Apr	0.4	0.1	0.4	0.8	0.4	0.8	0.4	0.9	0.1	0.3	0.4	-0.1	0.0	-0.3	-0.2	-0.2	-0.1	-0.3	0.2	0.2	0.6	0.4	0.4	0.5	0.3	0.9	
11-Apr	0.7	0.4	0.4	0.3	0.1	-0.1	0.1	0.1	0.2	0.5	0.1	0.5	-0.2	-0.2	-0.1	0.0	-0.6	-0.5	-0.1	0.2	0.1	0.1	-0.1	0.3	0.1	0.7	
12-Apr	0.2	0.4	0.1	0.1	0.4	0.5	0.3	0.1	0.0	-0.1	-0.2	0.0	-0.2	-0.4	-0.8	-0.5	-0.6	-0.6	0.0	0.1	0.1	0.2	0.3	0.2	0.0	0.5	
13-Apr	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	-0.2	0.7	0.5	0.4	0.1	0.3	0.0	0.0	0.2	0.5	0.2	0.1	0.1	0.1	0.2	0.2	0.7	
14-Apr	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.6	0.4	0.2	0.5	0.1	-0.5	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.6	0.2	0.6	
15-Apr	0.7	0.5	0.0	0.1	0.2	0.4	0.3	0.1	0.2	-0.2	-0.3	-0.4	0.0	-0.2	0.0	0.0	-0.1	-0.8	-0.7	-1.0	-0.7	-0.3	-0.3	-0.7	-0.1	0.7	
16-Apr	-0.3	-0.5	-0.5	-0.5	-0.4	-0.5	-0.6	-0.6	-0.6	-0.2	-0.2	0.2	-0.1	-0.4	0.1	-0.1	0.3	0.4	0.1	0.1	0.1	0.2	0.2	0.2	-0.1	0.4	
17-Apr	0.2	0.6	0.2	0.1	0.4	0.3	0.2	0.3	0.1	0.2	0.0	0.6	0.2	-0.3	-0.1	-0.2	-0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.5	0.1	0.6	
18-Apr	0.6	0.7	0.8	0.6	0.3	0.6	0.5	0.0	0.2	-0.2	-0.4	-0.2	0.1	-0.5	-0.6	-0.5	-0.3	-0.2	-0.3	-0.2	0.9	-0.1	-0.1	0.1	0.1	0.9	
19-Apr	0.3	0.3	0.3	0.1	-0.4	-0.3	-0.1	-0.4	-0.1	-0.6	-0.2	-0.7	-0.4	-1.2	-0.3	-0.2	-0.7	-0.3	-0.4	-0.4	0.6	0.4	0.1	0.3	-0.2	0.6	
20-Apr	0.2	0.3	0.3	0.2	0.3	0.4	0.7	0.2	-0.1	-0.1	0.4	0.5	0.8	0.1	0.6	-0.1	0.1	0.3	0.0	0.1	0.2	0.1	0.0	0.3	0.2	0.8	
21-Apr	0.1	0.0	0.1	0.3	0.1	0.1	0.3	0.0	-0.1	0.0	0.2	0.1	-0.4	0.7	0.3	-0.1	0.0	-0.1	-0.3	0.5	0.0	0.0	0.9	1.1	0.2	1.1	
22-Apr	0.4	0.0	0.0	0.2	0.0	0.6	-0.1	0.2	0.3	0.0	-0.2	0.5	0.1	0.2	0.3	0.1	0.8	0.3	0.1	0.3	0.1	0.2	0.2	0.2	0.2	0.8	
23-Apr	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.7	0.3	0.1	-0.1	0.4	0.2	0.5	0.1	0.1	0.2	0.2	0.2	0.2	0.0	-0.1	0.1	0.2	0.7	
24-Apr	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.0	0.0	1.1	-0.1	0.0	0.2	0.0	0.0	0.5	0.2	0.4	0.2	0.0	0.1	0.1	-0.1	0.2	1.1	
25-Apr	0.2	0.4	0.6	0.6	0.4	0.2	0.3	0.0	0.4	0.0	-0.7	-0.4	-0.1	0.4	-0.1	-0.1	0.0	0.0	0.0	0.4	0.4	0.5	0.8	0.1	0.2	0.8	
26-Apr	-0.4	0.5	0.6	0.5	0.2	0.0	0.2	-0.1	0.2	-0.1	0.1	-0.3	0.2	0.0	0.3	0.6	0.3	0.2	0.4	0.3	0.5	0.6	0.6	0.3	0.2	0.6	
27-Apr	0.7	0.5	0.4	0.8	0.5	0.3	0.5	-0.3	-0.2	0.2	-0.2	0.4	0.0	0.1	0.4	0.2	-0.1	0.7	0.4	0.5	0.2	0.5	-0.3	-0.1	0.2	0.8	
28-Apr	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	-0.1	0.2	0.2	0.2	-0.4	0.2	0.4	0.1	0.0	-0.4	-0.3	-0.3	-0.1	0.0	0.0	0.0	0.0	0.4	
29-Apr	-0.2	0.2	0.5	0.7	0.3	0.0	0.1	0.2	-0.3	-0.2	0.2	-1.0	-0.2	0.1	-0.3	0.1	0.4	0.4	0.7	0.3	0.1	0.2	0.2	0.3	0.1	0.7	
30-Apr	0.4	0.7	0.6	0.9	0.8	0.2	0.0	0.2	-0.2	0.1	0.0	0.2	0.5	0.2	0.1	0.1	-0.2	0.1	0.4	0.6	0.2	-0.2	0.3	0.3	0.3	0.9	



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 1 Maximum Value: 6.0 km/h on Apr 15 20:00																			Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 0.1 km/h on Apr 14 02:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 1.7 Q ₃ = 2.5 P ₉₀ = 3.1 P ₉₉ = 4.8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.6	1.8	2.2	2.1	1.4	1.2	2.1	1.8	1.3	1.2	1.2	1.5	1.7	1.4	1.0	2.5	3.1	2.7	1.5	2.4	2.0	1.9	2.0	1.6	3.1
2-Apr	1.2	1.6	1.9	1.4	1.3	1.5	1.7	1.7	2.0	2.9	2.8	2.3	2.5	2.9	2.1	1.9	2.4	1.9	1.4	0.4	1.0	1.8	1.7	1.2	2.9
3-Apr	1.2	1.6	1.6	1.4	1.7	1.4	1.4	2.8	3.2	3.4	2.8	2.7	3.0	3.1	3.0	3.1	3.0	2.8	1.8	0.7	0.3	0.2	0.2	0.2	3.4
4-Apr	0.2	0.8	1.0	1.1	1.0	0.9	0.6	1.0	0.8	0.9	1.1	1.6	1.8	1.6	1.1	1.0	0.8	0.8	0.9	0.7	1.0	1.2	1.5	1.2	1.8
5-Apr	1.3	0.5	0.3	0.4	0.5	0.5	0.7	0.4	0.6	0.9	1.1	0.8	1.1	1.5	1.9	1.6	1.5	1.2	1.4	1.1	0.9	0.7	0.8	1.3	1.9
6-Apr	1.2	1.2	1.8	1.8	1.8	2.1	2.3	2.6	2.2	2.9	3.1	2.8	2.7	2.6	2.3	2.7	2.8	2.4	2.0	2.3	2.6	2.7	2.8	2.2	3.1
7-Apr	2.0	2.3	2.4	2.4	2.1	2.0	1.8	1.6	2.1	1.9	2.5	1.8	2.5	2.3	2.3	2.0	1.6	1.8	1.3	1.1	1.8	0.9	1.4	1.1	2.5
8-Apr	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.5	0.7	1.0	0.5	0.5	0.5	0.5	0.3	0.5	0.4	0.4	0.2	0.2	0.2	0.2	1.0
9-Apr	0.3	0.4	0.2	0.2	0.5	0.8	0.7	0.8	0.9	1.3	1.3	0.8	0.8	1.0	1.2	1.1	1.1	0.8	0.8	0.7	0.8	0.6	0.5	0.8	1.3
10-Apr	0.8	1.2	1.2	0.9	1.3	1.0	1.4	2.1	1.9	1.6	2.1	1.8	2.2	2.0	2.0	1.8	1.7	1.1	0.6	0.6	0.7	0.6	1.0	0.7	2.2
11-Apr	1.1	1.0	0.8	1.2	1.1	0.5	0.4	0.5	0.9	1.6	1.5	2.1	2.5	2.6	3.0	2.8	4.1	3.5	2.1	0.9	1.5	1.7	2.3	1.4	4.1
12-Apr	1.3	1.6	1.7	1.2	1.6	1.2	0.9	1.2	2.0	2.8	2.7	2.5	2.7	2.5	2.8	2.7	3.1	2.7	2.3	0.6	0.2	0.3	0.2	0.5	3.1
13-Apr	0.4	0.3	0.2	0.2	0.2	0.2	0.4	0.7	0.9	1.1	1.8	1.9	2.7	2.6	2.5	1.8	1.9	2.0	1.9	1.5	1.0	0.8	0.4	0.3	2.7
14-Apr	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.9	1.3	1.7	1.4	1.6	1.5	2.0	2.4	2.1	1.9	1.8	0.8	0.9	1.1	1.2	1.2	1.7	2.4
15-Apr	2.1	1.6	1.7	1.3	1.0	1.1	1.6	2.3	3.4	4.3	4.9	4.4	4.1	4.3	4.5	3.9	4.2	4.9	5.3	6.0	5.9	5.3	4.9	4.4	6.0
16-Apr	3.4	3.2	2.4	2.5	2.1	2.2	2.6	3.8	4.9	4.8	4.7	4.1	3.9	4.5	3.3	3.9	2.8	2.0	2.3	1.9	1.2	1.0	1.4	1.6	4.9
17-Apr	2.2	2.4	2.0	2.4	2.3	2.3	2.3	2.3	2.4	2.6	2.7	2.6	2.7	2.7	2.3	2.0	1.8	1.7	1.3	0.9	1.1	1.0	1.1	1.9	2.7
18-Apr	2.5	2.2	1.8	1.6	2.1	2.5	2.7	3.1	2.8	2.9	3.2	3.5	3.9	3.9	3.4	3.5	3.1	2.8	2.9	3.7	2.8	3.9	2.9	2.6	3.9
19-Apr	3.4	2.9	2.4	2.3	2.6	1.8	2.1	3.7	3.5	3.8	3.6	4.0	3.9	3.6	3.9	4.3	4.1	3.7	3.3	2.8	2.9	2.0	1.4	2.1	4.3
20-Apr	1.9	2.0	1.7	1.4	1.4	1.5	1.7	1.9	1.8	1.8	2.2	2.1	2.4	2.1	2.3	1.8	1.7	1.9	1.5	1.0	1.2	1.2	1.2	0.9	2.4
21-Apr	1.1	0.6	0.6	0.6	0.6	0.3	0.5	0.9	1.1	1.7	1.9	1.7	2.0	2.4	2.2	2.3	1.9	1.7	1.2	1.9	2.2	1.4	2.4	1.9	2.4
22-Apr	1.8	1.0	1.1	1.2	1.2	1.2	1.7	1.7	1.8	2.6	2.6	2.9	2.8	3.0	3.6	2.3	2.9	2.2	0.7	0.5	1.1	0.5	0.2	0.2	3.6
23-Apr	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.7	1.6	2.1	2.4	2.5	2.6	2.6	2.2	2.0	2.0	1.7	0.9	1.0	0.9	0.7	0.5	0.5	2.6
24-Apr	0.6	0.2	0.3	0.3	0.3	0.2	0.5	1.2	1.5	1.4	1.7	2.0	2.6	2.1	2.2	2.1	2.0	1.4	0.8	0.6	1.1	1.1	1.3	1.6	2.6
25-Apr	1.6	1.5	1.2	1.2	1.1	0.9	0.8	1.1	1.6	2.6	3.7	4.0	4.2	4.1	3.4	3.4	3.6	3.1	2.4	1.1	1.4	1.7	1.7	1.4	4.2
26-Apr	1.2	0.7	1.0	0.7	1.0	1.6	2.1	1.8	2.3	2.5	2.5	2.2	2.8	2.8	3.2	2.9	2.9	2.6	2.6	2.5	2.1	1.7	1.9	1.6	3.2
27-Apr	1.7	1.4	1.7	2.7	2.7	2.5	2.7	2.4	2.6	2.6	2.4	2.5	2.6	2.4	2.5	2.4	2.1	2.4	2.2	1.9	1.7	1.5	1.7	0.7	2.7
28-Apr	0.5	0.2	0.3	0.6	0.5	0.4	1.4	1.5	1.6	1.9	2.0	2.6	3.2	3.6	3.6	3.5	3.1	2.4	1.9	1.8	2.7	2.6	2.6	1.4	3.6
29-Apr	1.9	1.3	1.1	1.5	1.9	1.8	1.9	2.5	3.3	2.6	3.0	2.7	2.6	2.7	1.8	1.7	2.6	2.7	1.9	1.0	1.0	0.5	0.5	0.8	3.3
30-Apr	1.1	1.5	1.4	1.8	2.0	1.9	1.7	1.7	2.0	2.3	1.8	1.6	2.6	1.5	1.1	1.4	1.4	2.7	2.5	2.6	2.2	2.0	2.3	2.0	2.7
3.4 3.2 2.4 2.7 2.7 2.5 2.7 3.8 4.9 4.8 4.9 4.4 4.2 4.5 4.5 4.3 4.2 4.9 5.3 6.0 5.9 5.3 4.9 4.4																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - April 2025

Maximum Value: 2.8 km/h on Apr 22 00:00																		Maximum Daily Average: 0.4 km/h on Apr 6										Hours in Service: 720	
Minimum Value: -2.0 km/h on Apr 15 20:00																		Minimum Daily Average: -0.6 km/h on Apr 16										Hours of Data: 719	
Maximum Diurnal Average: 0.3 km/h at hour 4																		Minimum Diurnal Average: -0.3 km/h at hour 16										Hours of Missing Data: 1	
Monthly Average: 0.00 km/h																		Percentiles: P ₁ = -1.3 P ₁₀ = -0.7 Q ₁ = -0.3 Median = 0.0 Q ₃ = 0.2 P ₉₀ = 0.6 P ₉₉ = 1.8										Hours of Calibration: 0	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.6	0.6	1.5	2.0	1.4	0.6	2.2	1.6	1.5	0.2	-0.2	0.3	0.1	0.4	0.6	-0.4	-1.5	-1.2	-0.3	-0.9	-0.6	-0.9	-0.8	-1.1	0.2	2.2			
2-Apr	-1.1	-1.0	-1.2	-0.5	0.0	0.3	-0.1	-0.1	0.1	0.0	-0.6	-0.3	0.5	0.0	-1.2	-0.9	0.1	-0.5	0.0	-0.3	-0.1	-0.1	0.0	0.0	-0.3	0.5			
3-Apr	-0.3	-0.8	-0.5	-0.4	-0.2	0.2	-0.3	-0.3	-1.2	-0.9	-0.2	-0.6	0.3	0.3	0.3	0.6	-0.8	-0.7	0.2	0.3	-0.2	-0.1	0.0	0.0	-0.2	0.6			
4-Apr	0.0	0.0	0.0	0.3	0.0	-0.2	-0.4	-0.1	-0.1	-0.2	0.1	-0.1	0.3	-0.3	-0.2	-0.1	-0.2	0.0	0.1	0.9	0.4	-0.1	0.1	-1.0	0.0	0.9			
5-Apr	0.0	0.0	0.2	0.2	-0.2	0.4	0.5	0.0	0.1	-0.2	0.0	-0.2	0.0	1.1	1.6	-0.5	0.1	-0.1	-0.2	0.0	0.1	0.1	0.0	0.2	0.1	1.6			
6-Apr	0.4	0.6	0.7	0.6	1.0	0.6	1.0	0.9	-0.2	0.2	0.4	-0.1	0.3	0.1	-0.1	0.3	-0.1	0.1	0.7	0.4	0.7	1.0	0.2	0.3	0.4	1.0			
7-Apr	0.3	0.0	0.1	0.5	0.1	0.0	-0.5	-0.2	-0.3	-0.1	0.0	-0.2	0.0	-0.5	0.1	-0.4	-0.3	0.8	0.5	0.7	1.6	0.3	0.8	0.2	0.2	1.6			
8-Apr	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	-0.1	0.0	-0.1	0.1	-0.2	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1			
9-Apr	0.0	0.0	0.0	0.2	0.1	-0.3	0.0	0.1	0.1	0.2	-0.2	0.0	-0.2	-0.1	0.6	-0.1	0.2	0.2	0.5	0.1	0.3	0.2	0.1	0.0	0.1	0.6			
10-Apr	0.0	-0.4	0.1	-0.2	-0.4	-0.2	-0.2	0.9	-0.1	0.2	0.2	-0.5	-0.3	-0.6	-0.4	-0.3	-0.3	-0.5	0.0	0.1	0.5	0.3	0.1	0.3	-0.1	0.9			
11-Apr	1.4	0.4	0.3	0.5	0.0	0.0	-0.1	-0.1	0.6	0.6	0.0	0.3	-0.5	-0.4	-0.4	-0.2	-1.0	-0.8	-0.5	-0.2	-0.2	-0.3	-0.2	-0.1	0.0	1.4			
12-Apr	-0.1	-0.3	-0.2	-0.1	0.4	0.2	0.0	-0.3	0.1	-0.4	-0.2	-0.3	-0.5	-0.8	-1.4	-0.9	-1.0	-1.0	-0.5	-0.3	0.0	0.0	0.0	-0.1	-0.3	0.4			
13-Apr	-0.2	0.0	0.0	0.1	0.1	0.0	0.0	-0.2	-0.4	0.0	0.6	-0.7	0.1	-0.5	0.0	-0.3	-0.5	-0.1	0.3	0.0	0.0	0.0	0.0	0.0	-0.1	0.6			
14-Apr	0.0	0.0	0.0	0.0	0.1	-0.1	0.3	0.1	-0.2	0.0	0.6	0.2	0.1	1.3	0.1	-0.8	0.3	-0.3	0.1	0.0	0.3	0.9	0.6	0.7	0.2	1.3			
15-Apr	1.5	1.0	0.5	-0.1	-0.2	0.1	0.7	0.4	0.1	-0.4	-0.5	-0.6	-0.1	-0.4	-0.3	-0.2	-0.5	-1.7	-1.3	-2.0	-1.2	-0.9	-1.1	-0.8	-0.3	1.5			
16-Apr	-0.7	-0.8	UO	-1.1	-1.0	-1.0	-0.9	-0.9	-1.6	-0.7	-0.9	-0.8	-0.4	-1.0	-0.2	-1.0	-0.3	0.4	0.0	-0.3	-0.1	0.0	0.2	0.0	-0.6	0.4			
17-Apr	0.0	0.4	0.3	-0.3	0.2	0.1	-0.2	0.0	-0.3	0.1	-0.5	0.3	-0.4	-1.1	-0.8	-0.6	-0.6	-0.5	-0.1	0.0	0.2	-0.3	-0.4	1.4	-0.1	1.4			
18-Apr	1.9	1.8	1.9	1.5	0.8	1.3	1.7	0.5	0.2	0.1	-0.8	-0.5	0.1	-0.6	-0.2	-0.6	-0.2	-0.4	-0.5	0.0	1.3	-0.2	-0.4	0.2	0.4	1.9			
19-Apr	0.3	0.3	-0.1	-0.2	-1.2	-0.9	-0.2	-0.9	-0.2	-0.9	-0.6	-0.8	-0.2	-1.4	-0.4	-0.5	-0.8	-0.4	-1.0	-0.8	0.7	0.3	-0.1	0.1	-0.4	0.7			
20-Apr	0.0	0.6	0.0	-0.2	-0.1	0.0	0.4	0.2	-0.6	-0.8	-0.4	0.1	1.6	0.0	0.4	-0.6	0.3	0.4	0.0	0.1	0.2	0.0	-0.3	-0.1	0.0	1.6			
21-Apr	-0.1	0.0	0.2	0.2	0.0	0.0	0.0	-0.1	-0.4	-0.4	0.3	-0.2	-0.2	0.5	0.7	-0.7	-0.4	-0.1	-0.7	0.9	0.0	0.4	2.3	2.8	0.2	2.8			
22-Apr	1.4	-0.3	-0.2	-0.3	0.1	0.5	0.2	0.1	1.2	0.4	-0.2	0.8	0.3	0.3	0.3	-0.1	0.5	0.5	-0.1	0.2	0.0	0.1	0.0	0.0	0.2	1.4			
23-Apr	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.1	0.5	0.6	-0.3	-0.5	0.3	0.2	0.0	-0.4	0.2	-0.1	-0.1	0.2	0.0	-0.1	-0.4	-0.1	0.0	0.6			
24-Apr	0.0	0.0	0.1	-0.1	-0.1	0.0	0.0	0.3	-0.2	-0.3	0.9	0.0	-0.2	0.0	-0.3	-1.1	0.4	0.0	0.0	0.1	0.6	0.1	-0.4	0.0	0.0	0.9			
25-Apr	0.9	1.2	1.2	1.2	0.9	0.3	0.6	0.0	0.2	0.0	-0.7	-0.3	0.1	-0.2	-0.4	-0.4	-0.3	-0.1	-0.4	0.0	0.4	0.5	1.4	-0.1	0.2	1.4			
26-Apr	-0.8	0.5	0.2	-0.1	0.0	-0.2	0.0	-0.7	0.1	0.1	0.1	-0.8	-0.2	-0.4	0.0	0.8	0.5	-0.3	0.2	-0.2	0.6	0.4	0.3	0.5	0.0	0.8			
27-Apr	1.0	0.9	0.5	0.8	-0.1	-0.3	-0.3	-0.6	-1.2	-0.2	-0.5	-0.8	-0.9	-0.7	0.1	0.1	-0.7	0.9	0.6	0.0	0.3	0.5	-0.7	-0.1	-0.1	1.0			
28-Apr	0.2	0.0	-0.1	-0.1	0.0	0.1	0.0	-0.4	-0.1	0.0	-0.1	-0.2	-0.2	-0.1	1.0	-0.1	-0.1	-0.8	-0.4	-0.5	0.0	0.0	-0.4	-0.6	-0.1	1.0			
29-Apr	-0.3	0.2	0.8	1.1	0.0	-0.2	-0.2	-0.2	-0.7	-0.3	0.1	-1.6	-0.4	-0.4	-0.8	0.0	0.2	0.0	0.6	0.2	-0.3	0.2	0.0	0.1	-0.1	1.1			
30-Apr	0.0	1.1	0.2	2.2	1.6	0.4	-0.3	0.0	-0.9	-0.3	-0.3	0.0	0.5	0.0	-0.1	0.1	-0.6	0.1	0.5	0.4	0.2	-0.4	0.3	0.4	0.2	2.2			
																								Diurnal Average					
																								Diurnal Maximum					
UO - Unstable Operation																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6.1 km/h on Apr 15 20:00																			Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9						
Minimum Value: 0.1 km/h on Apr 23 07:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 1.7 Q ₃ = 2.5 P ₉₀ = 3.2 P ₉₉ = 4.5																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.4	1.1	1.4	1.7	1.6	1.7	1.6	1.3	1.5	1.4	1.3	1.5	2.1	1.6	1.3	2.5	2.6	2.3	1.4	1.9	1.6	1.6	1.5	1.4	2.6
2-Apr	0.7	1.1	1.5	1.2	1.2	1.0	0.8	1.0	1.8	3.4	3.2	2.5	3.2	3.2	2.4	2.3	2.8	2.1	1.0	0.5	1.1	2.2	2.2	1.5	3.4
3-Apr	1.2	1.5	1.0	1.4	1.7	1.5	1.5	2.9	2.9	3.4	3.1	3.1	3.8	3.8	3.9	3.4	2.9	2.8	1.8	1.1	0.8	0.3	0.4	0.2	3.9
4-Apr	0.4	0.9	1.1	1.3	0.7	0.8	0.6	0.8	0.8	1.0	1.1	1.5	1.8	1.5	1.2	1.0	0.9	1.1	1.2	1.3	1.5	1.9	1.9	1.8	1.9
5-Apr	2.0	0.7	0.4	0.4	0.5	0.5	0.8	0.5	0.6	0.6	0.9	0.9	1.5	1.9	2.2	1.9	1.7	1.4	1.3	1.0	0.8	0.8	1.0	1.5	2.2
6-Apr	1.2	1.3	1.3	1.3	1.8	1.9	1.9	2.6	1.8	2.5	2.9	2.7	2.7	2.3	2.2	2.6	2.5	2.4	2.0	2.0	2.2	2.4	2.1	2.0	2.9
7-Apr	1.9	1.7	2.0	1.9	1.8	1.6	1.6	1.4	1.7	1.5	2.5	2.0	2.6	2.2	2.4	2.0	1.6	1.6	1.4	1.1	1.3	1.0	1.0	1.4	2.6
8-Apr	0.4	0.3	0.3	0.4	0.3	0.4	0.6	0.6	0.3	0.6	0.6	0.9	0.6	0.3	0.5	0.6	0.4	0.4	0.6	0.5	0.3	0.1	0.1	0.2	0.9
9-Apr	0.3	0.7	0.5	0.3	0.6	0.9	0.9	0.7	0.3	1.1	0.7	0.7	0.7	1.3	1.5	1.0	1.2	0.9	0.8	0.5	1.3	0.7	0.5	0.8	1.5
10-Apr	1.0	1.3	1.6	1.3	1.8	1.5	1.6	2.5	2.1	2.1	2.6	1.4	1.6	1.7	1.7	1.7	1.5	1.1	0.9	0.7	0.9	0.7	0.8	0.9	2.6
11-Apr	1.6	1.1	1.0	1.4	1.3	0.7	0.6	0.8	1.0	1.8	1.7	2.2	2.2	1.9	1.8	2.4	2.9	2.6	1.6	0.4	0.7	0.9	1.6	0.8	2.9
12-Apr	0.9	0.9	1.3	0.7	0.7	0.8	0.9	1.5	1.7	2.9	2.2	2.1	3.0	2.3	2.7	2.6	2.7	2.5	1.7	0.6	0.3	0.4	0.3	0.8	3.0
13-Apr	0.5	0.3	0.2	0.2	0.3	0.2	0.3	0.5	0.6	1.0	2.0	0.9	3.5	2.9	3.2	2.1	2.1	2.4	2.4	1.5	1.1	0.9	0.4	0.2	3.5
14-Apr	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.7	1.4	1.5	1.4	1.9	2.0	2.6	2.9	2.4	2.2	1.7	0.6	1.0	1.7	1.6	1.4	1.2	2.9
15-Apr	1.5	1.5	2.4	1.8	1.7	1.4	2.1	2.3	3.0	3.4	3.8	3.8	3.6	3.4	3.7	3.2	3.5	5.3	5.4	6.1	5.4	4.9	4.4	3.9	6.1
16-Apr	3.3	2.5	UO	2.1	2.2	2.4	2.4	3.1	4.0	4.3	4.3	3.8	4.1	4.1	3.2	3.6	3.2	2.4	2.3	1.8	1.3	1.2	1.5	1.5	4.3
17-Apr	2.4	2.4	2.2	2.3	2.4	2.5	2.6	2.8	2.8	2.8	2.8	3.2	2.8	2.9	3.0	2.3	1.9	2.0	1.5	0.5	1.1	1.4	1.5	1.9	3.2
18-Apr	2.2	2.1	2.0	1.9	2.1	2.5	3.0	3.4	3.1	3.5	3.4	4.2	4.3	4.3	3.6	3.5	3.0	3.0	2.5	3.6	4.2	3.3	2.2	2.2	4.3
19-Apr	2.9	2.3	1.9	1.9	2.7	1.8	2.6	4.0	3.6	3.4	3.4	3.9	4.3	4.1	3.9	3.9	3.7	3.4	2.8	2.8	3.2	2.4	1.3	2.2	4.3
20-Apr	2.1	2.2	1.7	1.5	1.7	1.6	1.9	2.0	1.8	1.8	2.1	2.3	2.8	2.3	2.6	1.9	2.1	2.4	1.9	0.7	1.3	1.9	1.9	1.6	2.8
21-Apr	1.2	0.7	1.0	0.9	0.7	0.3	0.2	0.6	0.9	1.3	1.5	1.6	2.3	2.7	2.5	2.8	2.4	2.3	1.4	2.2	2.8	1.8	2.7	1.9	2.8
22-Apr	2.4	1.5	1.3	1.4	1.2	1.4	1.7	1.5	1.9	2.2	3.0	3.5	3.6	3.8	3.0	2.7	3.0	2.2	0.9	0.5	1.0	0.6	0.4	0.3	3.8
23-Apr	0.4	0.3	0.4	0.2	0.1	0.2	0.1	0.3	1.7	2.3	2.5	2.9	3.0	3.0	2.7	2.3	2.3	1.6	0.9	0.6	0.5	0.6	0.6	0.5	3.0
24-Apr	0.4	0.3	0.3	0.5	0.2	0.4	0.5	1.3	1.5	1.2	1.7	2.4	2.5	2.2	2.5	1.7	2.4	1.6	1.1	0.7	1.5	1.5	1.5	2.0	2.5
25-Apr	1.9	1.5	1.2	1.6	1.0	1.0	1.5	1.3	1.5	3.1	4.1	4.2	4.5	4.6	3.8	3.7	3.6	3.1	2.1	1.1	0.7	0.6	1.8	1.9	4.6
26-Apr	1.5	0.8	1.3	0.8	0.9	1.5	1.9	1.7	2.4	2.8	3.3	2.4	3.2	3.1	3.5	3.8	3.3	2.8	3.0	2.5	2.4	1.9	1.9	1.4	3.8
27-Apr	1.9	1.4	1.9	3.0	2.8	2.7	3.0	2.6	2.9	3.0	2.9	2.2	2.2	2.3	2.7	3.2	2.6	3.1	3.0	2.1	1.6	2.2	2.3	1.1	3.2
28-Apr	0.7	0.5	0.6	1.1	0.7	0.5	1.8	1.8	2.0	1.7	2.0	3.0	3.8	4.1	4.8	4.0	3.4	2.6	1.8	1.8	2.7	2.7	2.2	1.0	4.8
29-Apr	1.8	1.1	1.4	1.7	1.5	1.2	1.4	2.3	2.9	2.2	3.0	2.8	2.8	2.9	1.9	1.7	2.8	3.1	2.1	1.1	1.4	0.7	0.6	1.0	3.1
30-Apr	1.4	1.7	0.7	1.6	1.9	2.0	1.6	1.8	2.0	2.3	2.0	1.7	2.9	1.7	1.2	1.6	1.4	2.4	2.7	2.7	2.3	2.1	2.6	2.2	2.9
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - April 2025

Maximum Value: 4.2 km/h on Apr 30 04:00																			Maximum Daily Average: 1.6 km/h on Apr 15							Hours in Service: 720	
Minimum Value: -1.4 km/h on Apr 5 00:00																			Minimum Daily Average: -0.2 km/h on Apr 27							Hours of Data: 717	
Maximum Diurnal Average: 0.9 km/h at hour 4																			Minimum Diurnal Average: 0.1 km/h at hour 12							Hours of Missing Data: 3	
Monthly Average: 0.47 km/h																			Percentiles: P ₁ = -1.1 P ₁₀ = -0.4 Q ₁ = 0.0 Median = 0.3 Q ₃ = 0.8 P ₉₀ = 1.5 P ₉₉ = 3.0							Hours of Calibration: 0	
																										Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.8	0.7	2.1	3.0	2.4	1.5	3.2	2.2	2.0	0.5	0.0	1.1	0.7	0.9	1.6	0.8	-0.1	0.0	0.0	-0.1	0.0	-0.2	0.0	-0.2	0.9	3.2	
2-Apr	-0.4	-0.3	-0.4	0.5	1.0	1.7	1.2	1.0	1.0	0.4	0.6	0.3	1.1	0.8	-1.1	-1.1	0.4	-0.8	0.2	0.2	0.5	0.5	0.4	0.2	0.3	1.7	
3-Apr	0.3	-0.1	0.4	0.2	0.4	0.9	0.3	0.3	-1.1	-0.8	0.2	-0.4	0.8	0.9	1.1	1.2	-0.4	-0.4	0.6	0.8	-0.2	-0.1	0.0	0.1	0.2	1.2	
4-Apr	0.2	0.5	0.8	1.4	0.7	0.6	0.4	0.8	0.7	0.5	0.4	0.0	0.1	-0.3	-0.2	-0.1	-0.1	0.1	0.6	1.4	1.1	-0.5	-0.3	-1.4	0.3	1.4	
5-Apr	-0.1	0.2	0.1	0.2	0.3	0.5	0.8	0.4	0.5	0.2	0.1	0.2	0.3	0.9	2.2	-0.2	0.4	-0.1	-0.3	0.0	0.5	-0.1	0.2	0.3	0.3	2.2	
6-Apr	0.2	0.4	0.7	0.9	1.4	0.9	1.3	0.8	-0.1	-0.1	0.0	-0.5	0.1	-0.2	-0.4	0.2	-0.3	-0.2	0.4	0.6	0.9	1.3	0.8	0.6	0.4	1.4	
7-Apr	1.0	0.2	0.2	0.2	0.5	0.2	-0.6	-0.7	-0.7	-0.4	-1.0	-0.6	-0.7	-0.9	-0.3	-0.9	-0.7	0.9	0.8	0.7	1.6	0.7	1.1	0.3	0.1	1.6	
8-Apr	0.4	0.4	0.3	0.1	0.2	0.3	0.5	0.3	0.4	0.3	0.2	0.0	0.2	0.1	0.3	0.3	-0.1	-0.2	-0.1	-0.1	0.0	0.1	0.1	0.2	0.2	0.5	
9-Apr	0.2	0.5	0.2	0.2	0.3	0.2	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.7	0.0	0.2	0.3	0.2	-0.2	0.0	0.1	0.3	0.4	0.2	0.7	
10-Apr	0.5	0.4	1.2	0.8	1.2	0.5	0.9	2.9	0.8	0.9	0.8	0.6	0.7	0.5	0.5	0.4	0.1	0.0	0.0	0.1	0.5	0.3	0.2	0.4	0.6	2.9	
11-Apr	1.5	0.4	0.2	-0.2	0.2	0.5	0.3	0.6	0.5	1.3	0.2	0.6	0.4	0.9	1.3	1.6	1.1	1.2	1.0	1.5	1.5	1.8	1.5	1.4	0.9	1.8	
12-Apr	1.5	1.6	1.3	1.6	2.1	1.8	1.2	0.7	1.4	1.4	1.4	1.3	0.9	0.3	-0.7	0.0	-0.2	-0.1	0.1	0.2	0.3	0.1	0.2	0.0	0.8	2.1	
13-Apr	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.0	-0.1	0.7	0.3	-0.9	-0.1	-0.2	0.1	-0.5	-0.6	-0.2	0.2	0.0	0.3	0.4	0.4	0.3	0.1	0.7	
14-Apr	0.1	0.0	0.0	0.1	0.1	0.2	0.4	0.3	0.3	0.1	1.0	0.3	0.5	2.2	0.4	-0.2	0.8	0.7	0.7	0.8	1.4	2.2	1.7	1.3	0.6	2.2	
15-Apr	1.8	2.1	0.9	-0.4	0.3	1.4	2.6	2.2	2.3	2.5	2.1	1.6	2.4	2.2	2.0	2.1	1.9	0.2	0.7	0.7	1.4	1.4	1.6	1.5	1.6	2.6	
16-Apr	1.1	UO	UO	0.7	0.3	0.2	0.0	0.0	-0.5	0.1	-0.2	-0.3	0.1	-0.5	0.2	-0.3	0.0	0.2	-0.2	-0.1	0.3	-0.1	0.3	0.0	0.1	1.1	
17-Apr	-0.1	0.1	0.4	-0.1	0.2	0.3	-0.4	-0.3	0.0	0.1	-0.4	0.0	-0.6	-1.0	-0.9	-0.5	-0.7	-0.4	-0.1	-0.1	0.2	0.1	-0.3	1.6	-0.1	1.6	
18-Apr	2.7	3.0	2.6	1.8	1.4	1.8	2.4	1.4	0.7	0.8	-0.3	0.1	0.9	0.6	0.8	0.4	0.7	0.2	0.1	0.7	1.5	0.5	1.0	2.0	1.2	3.0	
19-Apr	2.3	2.2	2.2	1.7	-0.2	0.1	1.1	0.9	1.8	0.7	1.2	1.0	1.8	0.5	1.6	1.5	1.2	1.4	-0.4	0.0	0.8	0.1	-0.2	-0.1	1.0	2.3	
20-Apr	0.2	0.7	0.1	-0.1	-0.3	-0.5	0.0	0.3	-0.6	-1.1	-0.8	-0.1	2.3	-0.8	0.1	-0.7	0.6	0.5	-0.2	0.0	-0.3	0.0	-0.6	0.0	-0.1	2.3	
21-Apr	-0.4	0.2	0.2	0.4	0.4	0.2	0.1	0.1	-0.1	-0.5	0.2	-0.5	-0.3	0.1	0.6	-0.4	-0.5	0.4	-0.4	1.6	0.3	1.6	3.1	3.9	0.4	3.9	
22-Apr	2.4	0.0	0.5	0.7	0.8	1.4	1.2	1.2	2.1	1.5	0.3	0.8	0.7	0.6	2.3	UO	1.2	1.4	0.3	0.2	0.3	0.2	0.2	0.1	0.9	2.4	
23-Apr	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.4	0.9	0.1	-0.4	0.3	0.1	-0.4	-0.4	0.6	0.4	0.0	0.4	0.0	0.0	-0.4	0.2	0.1	0.9	
24-Apr	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.6	0.0	-0.4	0.7	-0.1	-0.2	-0.2	0.4	-0.9	0.0	0.1	-0.1	0.3	1.2	0.3	0.4	0.7	0.2	1.2	
25-Apr	2.1	2.6	2.1	3.0	2.6	0.8	0.5	0.2	0.7	0.8	0.1	0.7	1.4	0.6	0.1	0.7	0.6	1.1	0.6	0.6	1.7	1.7	2.9	0.9	1.2	3.0	
26-Apr	-0.4	0.3	0.7	0.6	0.2	0.0	0.2	-0.3	0.3	0.5	0.6	-0.7	0.0	-0.3	-0.3	0.8	0.3	-0.6	0.2	-0.4	0.4	0.0	0.2	1.1	0.1	1.1	
27-Apr	1.2	0.7	0.5	1.0	-0.3	-0.6	-1.0	-0.7	-1.4	-0.3	-0.4	-1.3	-1.3	-1.2	-0.4	0.5	-0.7	0.7	0.5	-0.2	0.4	0.6	-1.0	0.4	-0.2	1.2	
28-Apr	0.3	0.3	0.1	0.4	0.3	0.6	1.2	-0.3	0.2	0.0	-0.3	-0.1	0.4	0.4	1.9	0.6	0.6	0.0	0.2	0.2	1.1	1.2	0.4	-0.1	0.4	1.9	
29-Apr	0.3	1.0	1.2	2.3	1.4	1.4	1.0	1.0	0.8	1.1	1.8	-0.6	0.4	0.0	-0.4	0.5	0.8	-0.2	0.4	0.4	-0.3	0.3	-0.1	0.3	0.6	2.3	
30-Apr	1.2	3.3	1.5	4.2	3.2	1.2	-0.3	0.4	-0.8	0.0	-0.2	0.2	0.5	-0.1	-0.3	0.4	-0.3	0.1	0.0	0.1	-0.1	-0.5	-0.1	0.2	0.6	4.2	
Diurnal Average																									0.7		
Diurnal Maximum																									2.7		
UO - Unstable Operation																											



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.8 km/h on Apr 15 20:00																				Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6					
Minimum Value: 0.1 km/h on Apr 14 04:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 1.7 Q ₃ = 2.5 P ₉₀ = 3.3 P ₉₉ = 4.6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.4	1.2	1.4	1.2	1.2	1.7	1.5	1.6	1.7	1.4	1.5	1.7	2.2	1.5	1.1	2.3	2.1	2.1	1.3	1.8	1.3	1.3	1.2	0.9	2.3
2-Apr	0.7	0.8	0.9	1.0	1.2	0.8	1.0	0.9	2.3	3.4	3.7	2.4	3.6	3.7	2.6	2.7	3.1	2.0	0.9	0.6	1.2	2.4	2.6	1.7	3.7
3-Apr	1.4	1.3	1.0	1.3	1.6	1.4	1.6	2.6	2.4	3.1	3.3	3.5	3.9	4.3	4.0	3.4	2.6	2.4	1.8	1.2	1.0	0.3	0.5	0.4	4.3
4-Apr	0.4	0.4	0.7	0.7	0.7	0.7	0.6	0.7	1.0	1.2	1.3	1.6	1.9	1.5	1.4	1.1	1.0	1.2	1.2	1.3	0.6	1.4	2.0	1.3	2.0
5-Apr	1.9	0.7	0.4	0.4	0.7	0.6	0.8	0.5	0.6	0.6	0.6	0.7	1.5	1.7	2.4	2.2	1.8	1.5	1.5	1.2	0.9	0.7	1.2	1.3	2.4
6-Apr	0.9	1.5	1.3	1.1	1.6	1.5	1.8	2.2	1.8	2.0	2.6	2.5	2.8	2.2	2.2	2.5	2.3	2.3	2.1	2.2	2.4	2.5	2.1	2.3	2.8
7-Apr	2.1	1.8	2.1	1.8	2.3	2.1	1.5	1.5	1.5	1.6	2.2	1.9	2.7	2.3	2.3	2.2	1.8	1.3	1.5	1.1	1.1	1.0	1.1	1.0	2.7
8-Apr	0.6	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.4	0.8	0.6	0.7	0.5	0.3	0.5	0.7	0.7	0.5	0.8	0.7	0.5	0.4	0.3	0.2	0.8
9-Apr	0.2	0.7	0.8	0.4	0.7	0.7	0.9	0.6	0.4	0.5	0.5	0.7	0.8	1.5	1.6	1.1	1.7	1.0	0.8	0.5	1.1	0.8	0.7	0.9	1.7
10-Apr	1.0	0.9	1.2	1.3	1.3	1.8	1.5	1.7	2.2	2.3	2.3	1.3	1.5	1.7	1.9	1.6	1.3	1.2	1.0	0.8	1.1	0.6	0.8	0.9	2.3
11-Apr	1.5	1.3	1.2	1.9	1.4	1.0	0.7	1.1	1.1	1.9	1.9	2.5	1.8	1.7	1.9	2.7	2.5	2.0	1.4	0.5	0.7	1.3	1.9	0.8	2.7
12-Apr	1.0	1.0	1.5	1.0	0.7	0.8	0.7	1.9	1.9	2.8	2.1	2.0	2.9	2.4	2.2	2.4	2.6	2.5	1.7	0.7	0.4	0.4	0.3	0.9	2.9
13-Apr	0.4	0.2	0.4	0.3	0.4	0.3	0.5	0.4	0.6	1.6	1.9	1.1	3.6	3.3	3.5	2.4	2.5	2.7	2.4	1.1	0.7	0.9	0.5	0.2	3.6
14-Apr	0.2	0.3	0.2	0.1	0.2	0.4	0.6	0.8	1.3	1.5	1.6	2.0	2.3	3.1	3.4	2.4	2.3	1.7	0.8	0.7	1.2	1.6	1.5	1.5	3.4
15-Apr	1.9	1.6	3.3	2.1	1.5	1.4	2.1	2.2	3.0	3.5	3.8	3.6	3.6	3.3	3.5	3.3	3.0	4.9	5.4	5.8	4.8	4.3	4.0	3.5	5.8
16-Apr	2.4	UO	UO	1.8	1.7	1.8	2.2	3.1	3.9	3.9	3.6	3.1	3.4	3.1	3.0	2.8	3.2	2.5	2.4	1.9	1.1	1.2	1.7	1.7	3.9
17-Apr	2.6	2.7	2.5	2.4	2.4	2.5	2.6	2.8	3.1	2.9	3.2	3.7	3.3	3.3	3.1	2.7	2.1	2.0	1.5	0.5	0.6	1.4	1.7	2.2	3.7
18-Apr	2.3	2.3	1.7	2.0	2.2	2.8	3.5	3.4	3.2	3.5	3.4	3.8	4.2	4.2	3.4	3.0	2.6	2.9	2.2	2.9	4.2	2.2	2.2	2.3	4.2
19-Apr	2.3	2.1	2.0	2.0	2.0	1.4	2.9	3.8	3.7	3.3	3.3	4.1	4.6	4.4	4.2	3.7	3.3	3.0	2.6	2.5	3.0	2.5	1.6	2.3	4.6
20-Apr	2.2	2.3	1.6	1.6	1.5	0.9	1.8	2.0	1.9	2.0	2.1	2.3	3.2	2.0	2.5	1.9	2.5	2.6	1.9	0.6	0.6	1.5	2.3	1.5	3.2
21-Apr	1.0	0.7	0.8	0.5	0.5	0.3	0.2	0.4	0.7	1.2	1.6	1.8	2.4	2.8	2.8	3.2	2.7	2.7	1.9	2.6	2.9	2.4	2.7	1.3	3.2
22-Apr	2.9	2.0	1.0	1.5	1.0	1.4	2.0	1.3	1.7	1.6	2.9	3.4	3.9	4.0	2.6	UO	2.4	1.9	1.0	0.5	1.3	0.8	0.4	0.3	4.0
23-Apr	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.5	1.7	2.4	2.4	3.0	3.3	3.3	3.0	2.8	2.9	2.0	0.9	0.6	0.5	0.6	0.6	0.7	3.3
24-Apr	0.4	0.3	0.3	0.6	0.3	0.3	0.6	1.0	1.4	1.3	2.0	2.1	2.7	2.0	2.8	2.0	2.3	1.7	1.1	0.8	1.3	1.3	1.6	2.1	2.8
25-Apr	2.8	2.1	2.1	1.6	1.8	1.7	2.2	1.7	1.6	3.5	3.8	4.6	4.7	4.8	3.8	3.7	3.4	3.2	1.9	0.9	0.5	0.5	1.7	2.6	4.8
26-Apr	1.9	0.9	1.3	0.8	1.1	1.4	1.4	1.6	2.3	2.7	3.5	2.9	3.8	3.4	3.8	4.2	3.5	3.2	3.1	2.4	2.3	1.6	1.6	1.2	4.2
27-Apr	1.7	1.1	1.9	3.3	2.8	2.5	3.1	2.8	3.1	3.3	3.4	2.0	2.0	2.2	2.9	3.5	3.0	3.5	2.9	1.5	0.8	2.0	2.3	1.0	3.5
28-Apr	0.7	0.6	0.8	1.6	1.2	1.0	1.6	1.9	2.1	2.0	2.2	3.1	4.1	4.5	5.2	4.3	3.8	2.6	1.6	1.7	2.8	3.0	2.1	0.8	5.2
29-Apr	1.7	1.1	1.9	1.7	1.4	1.0	1.1	2.3	2.1	1.8	2.8	2.6	3.0	2.9	1.8	2.0	3.1	3.3	2.1	1.1	1.7	0.7	0.7	0.7	3.3
30-Apr	1.0	1.6	0.9	2.2	1.8	1.9	1.4	2.1	2.1	2.4	1.9	1.8	2.8	1.7	1.1	1.5	1.4	2.4	3.0	2.8	2.3	2.2	2.4	2.1	3.0
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS04 BUFFALO VIEWPOINT APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)

APRIL 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	32	33	99.86	36.4	0	6.5	0
H2S (ppb) Average	684	35	36	99.86	3.4	0	0.5	0
THC (ppm) Average	687	32	33	99.86	4.3	-	2.2	-
NMHC(ppm) Average	687	32	33	99.86	0.356	-	0.026	-
CH4(ppm) Average	687	32	33	99.86	4.2	-	2.2	-
O3(ppb) Average	686	33	34	99.86	53.9	0	44.4	-
NO2(ppb) Average	684	35	36	99.86	28	0	8.7	-
NO(ppb) Average	684	35	36	99.86	23.5	-	3.3	-
NOX(ppb) Average	684	35	36	99.86	43.4	-	10.8	-
PM2.5(ug/m3) Average	719	1	1	100	21.6	0	7.7	0
Temperature (C) Average	720	0	0	100	22	-	14	-
Relative Humidity (%) Average	720	0	0	100	98.6	-	90.7	-
Wind Speed 10 m (km/h) Average	717	0	3	99.58	34	-	22	-
Wind Direction 10 m (deg) Average	717	0	3	99.58	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	1.17	3.8	-	0	0	0	0.1	0.3	2.5	36.4
H2S (ppb) Average	684	0.22	0.3	-	0	0.1	0.1	0.1	0.2	0.5	3.4
THC (ppm) Average	687	2.09	0.2	-	2	2	2	2.1	2.1	2.2	4.3
NMHC(ppm) Average	687	0.002	0.021	-	0	0	0	0	0	0	0.356
CH4(ppm) Average	687	2.09	0.1	-	2	2	2	2.1	2.1	2.2	4.2
O3(ppb) Average	686	31.64	9.8	-	2.1	18.2	25.8	33	38.8	42.6	53.9
NO2(ppb) Average	684	3.48	4.2	-	0	0.3	0.7	1.8	4.8	8.9	28
NO(ppb) Average	684	0.84	2.2	-	0	0	0.1	0.2	0.6	2	23.5
NOX(ppb) Average	684	4.32	5.7	-	0	0.4	0.8	2	5.8	11	43.4
PM2.5(ug/m3) Average	719	3.97	2.8	-	0.3	1.6	2.5	3.1	4.6	7.2	21.6
Temperature 2 m (C) Average	720	4.34	6.5	-	-14.8	-3.9	-0.1	4.4	9	12.6	22
Relative Humidity (%) Average	720	57.66	21.4	-	16.4	29.4	40.9	56.3	73.8	88.8	98.6
Wind Speed 10 m (km/h) Average	717	10.2	6	-	0	4	6	9	14	18	34
Wind Direction 10 m (deg) Average	717	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	28 Apr 2025 07:00	28 Apr 2025 07:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	09 Apr 2025 08:00	09 Apr 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 06:00	20 Apr 2025 07:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

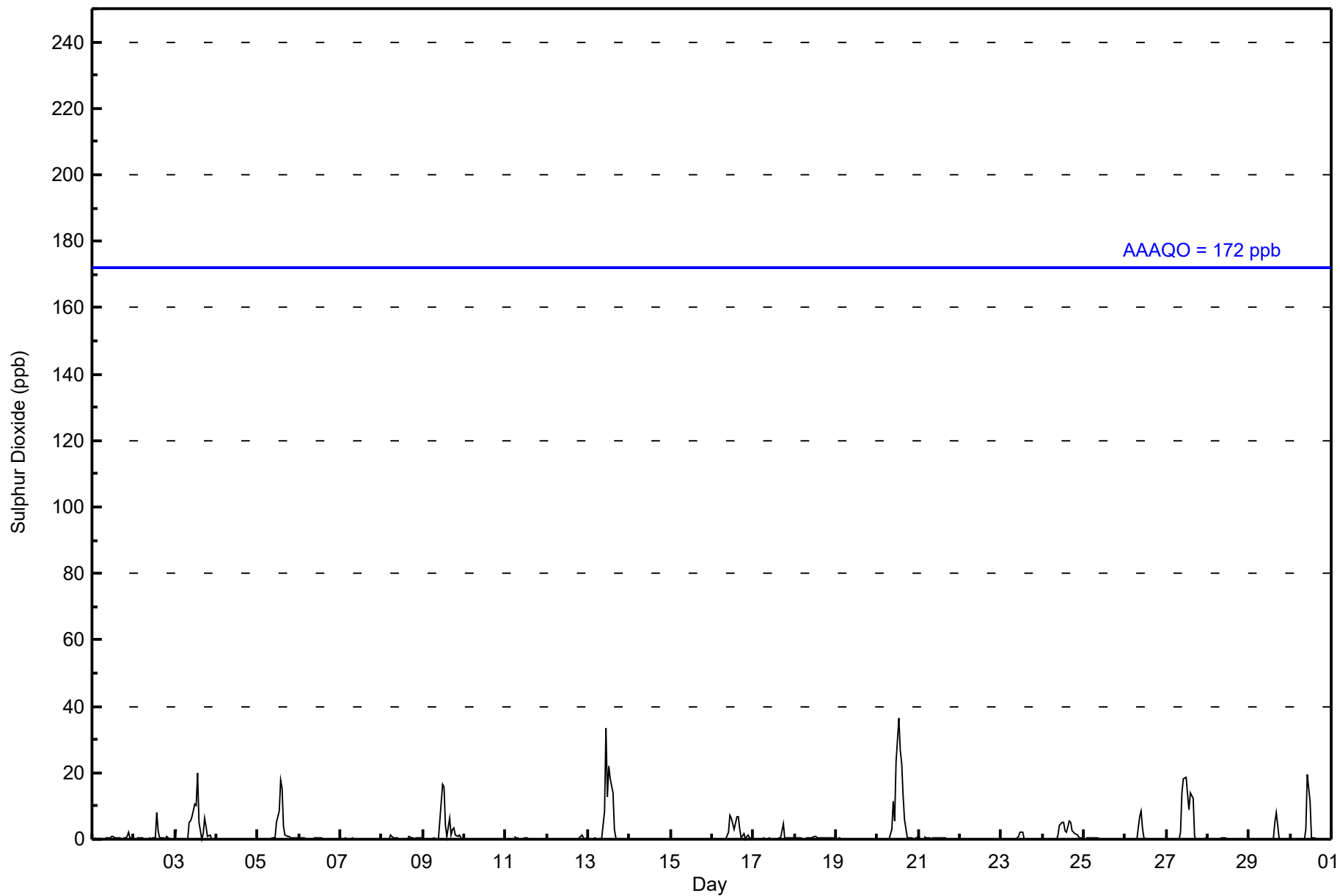
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 36.4 ppb on Apr 20 13:00 Maximum Daily Average: 6.5 ppb on Apr 20																			Hours in Service: 720 Hours of Data: 687							
Minimum Value: 0.0 ppb on Apr 2 23:00 Minimum Daily Average: 0.0 ppb on Apr 4 Maximum Diurnal Average: 4.0 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 3 Monthly Average: 1.17 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 2.5 P ₉₉ = 19.7																			Hours of Missing Data: 33 Hours of Calibration: 32 Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.6	0.6	0.3	0.3	0.2	0.3	0.3	0.8	2.0	0.4	0.3	0.4	2.0
2-Apr	0.3	Z	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.1	0.3	0.3	8.2	2.7	0.5	0.4	0.3	0.2	0.9	0.2	0.1	0.0	0.0	0.7	8.2
3-Apr	0.3	2.8	Z	0.0	0.0	0.0	0.0	0.1	5.0	5.4	6.7	10.7	10.2	19.8	5.3	0.0	1.8	6.3	3.9	0.7	1.5	0.1	0.1	0.0	3.5	19.8
4-Apr	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
5-Apr	0.0	0.0	0.0	0.1	Z	0.0	0.1	0.2	0.3	0.3	0.4	4.9	8.5	18.0	15.1	3.7	1.5	0.9	0.7	0.4	0.5	0.5	0.4	0.5	2.5	18.0
6-Apr	0.5	0.5	0.4	0.3	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
7-Apr	Z	0.1	0.1	0.3	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
8-Apr	0.0	Z	0.0	0.0	0.0	1.1	0.8	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.1	0.2	0.8	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.3	1.1
9-Apr	0.3	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.0	0.1	5.5	16.5	15.6	4.3	1.0	6.4	1.3	3.0	3.4	1.4	0.7	1.5	0.6	0.2	2.7	16.5
10-Apr	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	0.2	0.0	0.0	0.0	0.0	0.2
11-Apr	0.0	0.0	0.0	0.0	Z	0.7	0.3	0.3	0.2	0.0	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
12-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.5	1.1	0.4	0.1	0.2	0.1	1.1
13-Apr	Z	0.1	0.0	0.0	0.3	0.2	0.1	0.1	0.3	8.5	33.5	12.6	22.2	18.4	13.9	3.0	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	4.9	33.5
14-Apr	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	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2
15-Apr	0.2	0.1	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.2
16-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	2.1	7.4	6.5	4.7	3.2	6.7	6.9	2.9	0.3	1.6	0.1	1.0	1.3	0.2	0.1	2.0	7.4
17-Apr	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.3	4.7	0.2	0.3	0.5	0.4	0.3	0.3	0.4	4.7
18-Apr	0.3	0.3	0.2	0.3	0.2	Z	0.4	0.5	0.5	0.6	0.5	0.7	0.7	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.7
19-Apr	Z	0.3	0.2	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.3
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	2.9	11.6	5.4	23.1	36.4	26.7	22.7	13.2	6.1	0.3	0.3	0.3	0.3	0.2	0.3	0.4	6.5	36.4
21-Apr	0.8	0.9	Z	0.8	0.4	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.2	0.2	0.3	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.9
22-Apr	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.2
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.7	1.9	2.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0
24-Apr	0.0	0.0	0.1	0.0	0.0	Z	C	C	0.0	1.4	4.2	5.1	4.9	2.4	2.1	5.6	5.2	2.7	1.9	1.7	1.1	0.6	0.3	0.2	1.9	5.6
25-Apr	Z	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
26-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	6.7	8.5	3.4	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	0.8	8.5
27-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	2.0	13.9	18.1	18.6	13.4	9.0	14.1	12.5	1.0	0.2	0.1	0.0	0.1	0.1	0.0	0.4	4.5	18.6
28-Apr	0.0	0.1	0.0	Z	0.0	0.0	M	0.2	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
29-Apr	0.1	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	0.3	4.9	8.0	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.6	8.0
30-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	2.8	19.6	11.6	0.5	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	1.6	19.6
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	662	96.36	96.36
11 - 20	19	2.77	99.13
21 - 60	6	0.87	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 (SO₂) - ppb
Buffalo Viewpoint - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	103	41	15	9	5	44	73	87	53	26	10	27	54	32	39	41	659
11 - 20	5	2	1	1	0	1	0	1	0	0	0	0	0	0	2	6	19
21 - 60	2	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0	6
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	110	44	16	10	5	45	73	88	53	26	11	27	54	33	42	47	684

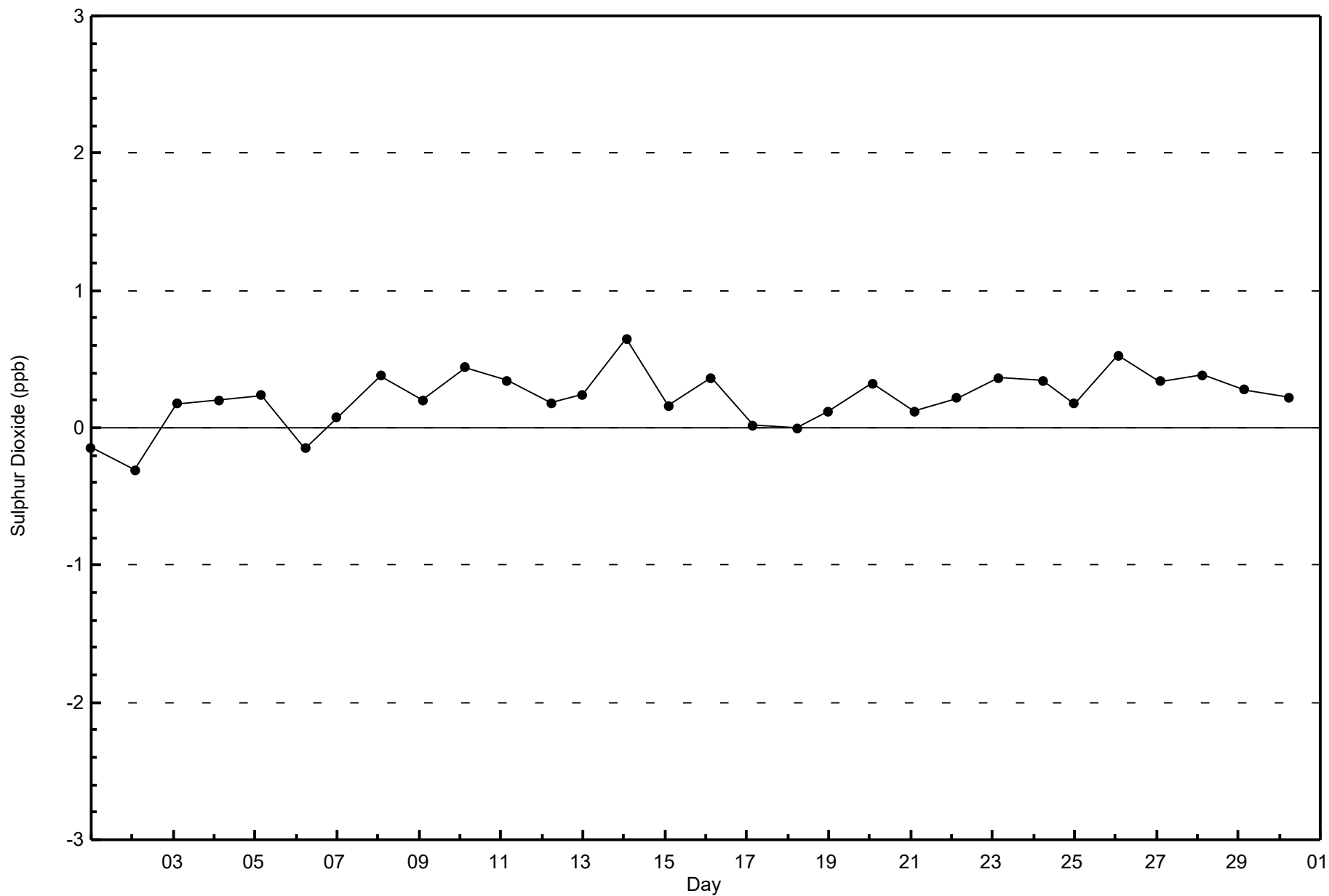
Total Number of Valid Hours: 684

Total Number of Hours: 720



Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint

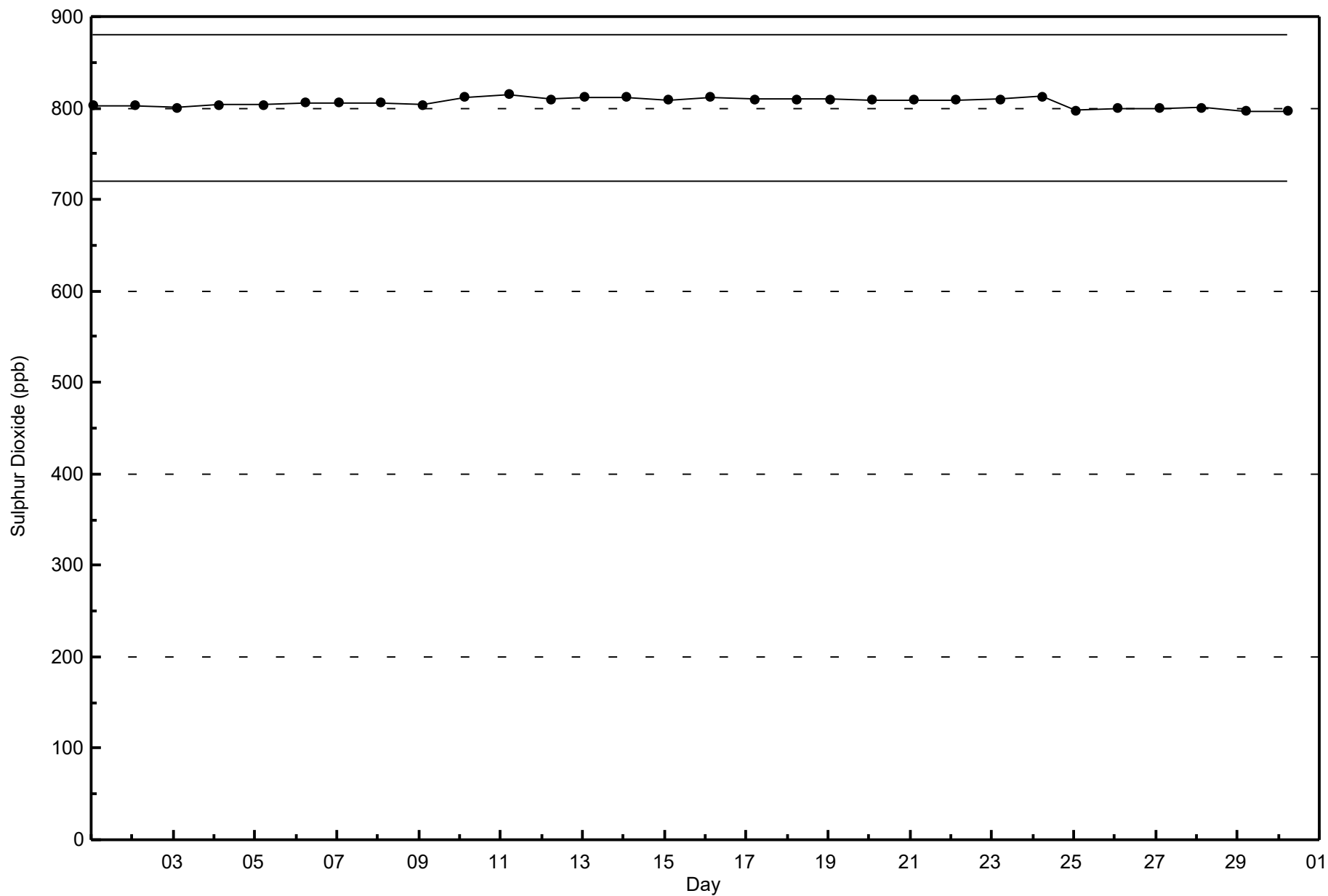






Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

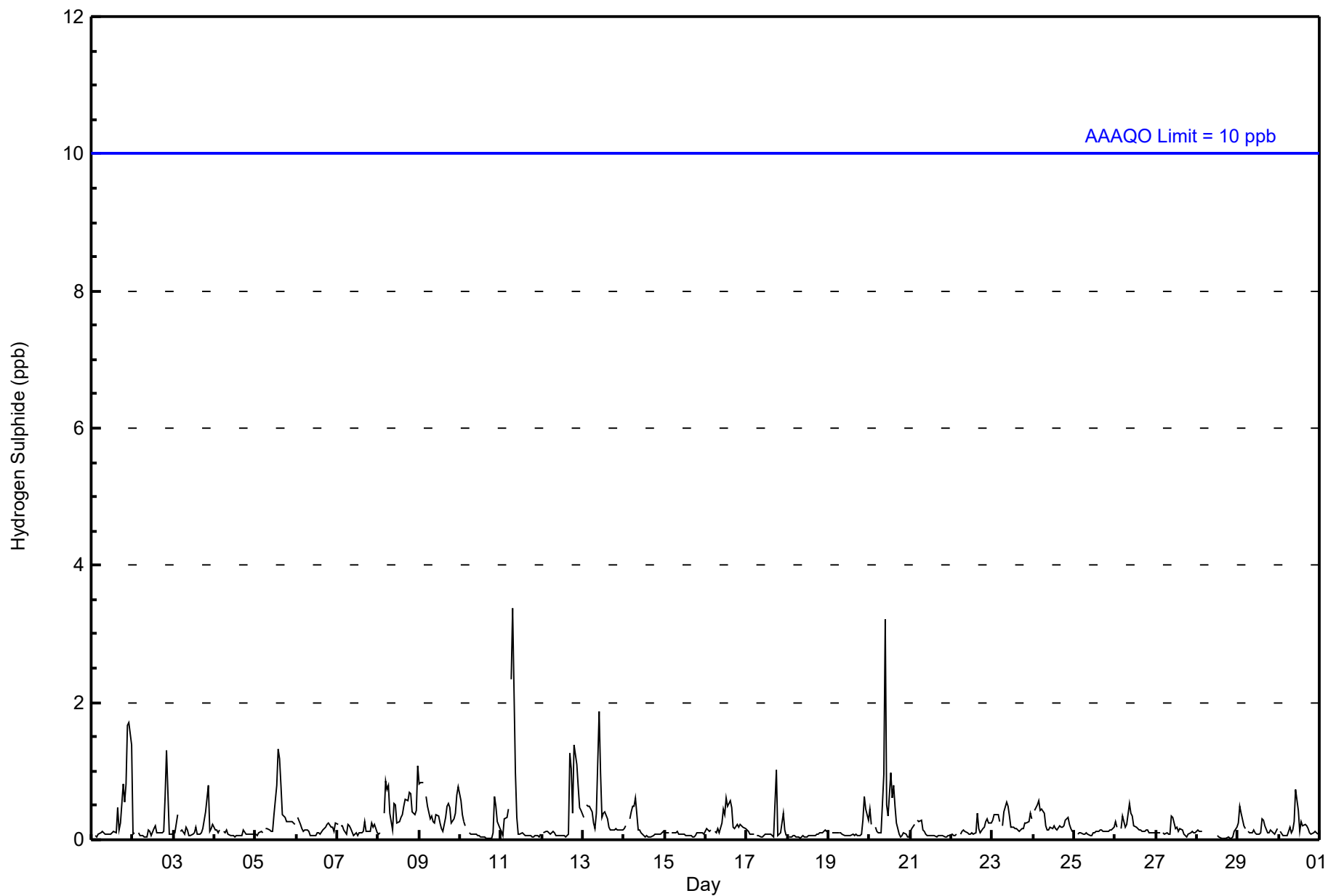
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): Maximum Value: 3.4 ppb on Apr 11 08:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.5 ppb on Apr 8					Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9				
Minimum Value: 0.0 ppb on Apr 10 18:00 Maximum Diurnal Average: 0.3 ppb at hour 10 Monthly Average: 0.22 ppb																				Minimum Daily Average: 0.1 ppb on Apr 18 Minimum Diurnal Average: 0.2 ppb at hour 12 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.4									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.2	0.8	0.5	0.8	1.7	1.7	1.4	0.4	1.7			
2-Apr	0.1	0.1	Z	0.1	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	0.6	1.3	0.1	0.1	0.1	0.2	1.3			
3-Apr	0.1	0.1	0.4	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.4	0.8	0.1	0.2	0.2	0.2	0.8			
4-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
5-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.4	0.8	1.3	1.2	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	1.3			
6-Apr	Z	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3			
7-Apr	0.2	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3			
8-Apr	0.1	0.1	Z	0.4	0.9	0.7	0.8	0.4	0.1	0.5	0.5	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.4	0.4	0.4	1.1	0.5	1.1			
9-Apr	0.8	0.8	0.8	Z	0.6	0.5	0.3	0.3	0.3	0.2	0.4	0.4	0.2	0.2	0.1	0.3	0.5	0.5	0.5	0.2	0.3	0.4	0.7	0.8	0.4	0.8			
10-Apr	0.6	0.4	0.3	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.5	0.3	0.2	0.2	0.6			
11-Apr	0.1	0.1	0.3	0.3	0.5	Z	2.3	3.4	1.0	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	0.0	0.1	0.4	3.4			
12-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	1.3	1.0	0.4	1.4	1.1	0.8	0.5	0.4	0.3	1.4			
13-Apr	0.3	Z	0.5	0.5	0.5	0.4	0.2	0.2	0.4	1.9	1.0	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.4	1.9			
14-Apr	0.2	0.2	Z	0.3	0.4	0.5	0.5	0.6	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	0.6			
15-Apr	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
16-Apr	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.4	0.4	0.6	0.5	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6			
17-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	1.0	0.1	0.1	0.1	0.4	0.1	0.1	0.1	1.0			
18-Apr	Z	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
19-Apr	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	0.3	0.6	0.4	0.3	0.1	0.6			
20-Apr	0.4	0.2	Z	0.2	0.1	0.1	0.1	0.1	1.0	3.2	0.5	0.4	1.0	0.6	0.8	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.4	3.2			
21-Apr	0.1	0.2	0.2	Z	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	0.0	0.0	0.1	0.1	0.1	0.3			
22-Apr	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	0.4	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.4			
23-Apr	0.3	0.4	0.4	0.4	0.3	Z	0.2	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.5			
24-Apr	Z	0.4	0.5	0.6	0.4	0.4	0.4	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	0.3	0.2	0.2	0.1	0.3	0.6			
25-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2			
26-Apr	0.3	0.2	Z	0.2	0.3	0.3	0.2	0.2	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	0.1	0.2	0.5			
27-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4			
28-Apr	0.1	0.1	0.1	0.1	Z	0.1	M	C	C	C	C	C	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			
29-Apr	0.2	0.5	0.4	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5			
30-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.7	0.4	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.7			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	682	99.71	99.71
3 - 4	2	0.29	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

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	110	45	16	9	5	45	71	85	52	30	11	26	55	32	41	46	679
3 - 4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	110	45	16	9	5	45	71	86	52	30	11	26	55	32	42	46	681

Total Number of Valid Hours: 681

Total Number of Hours: 720



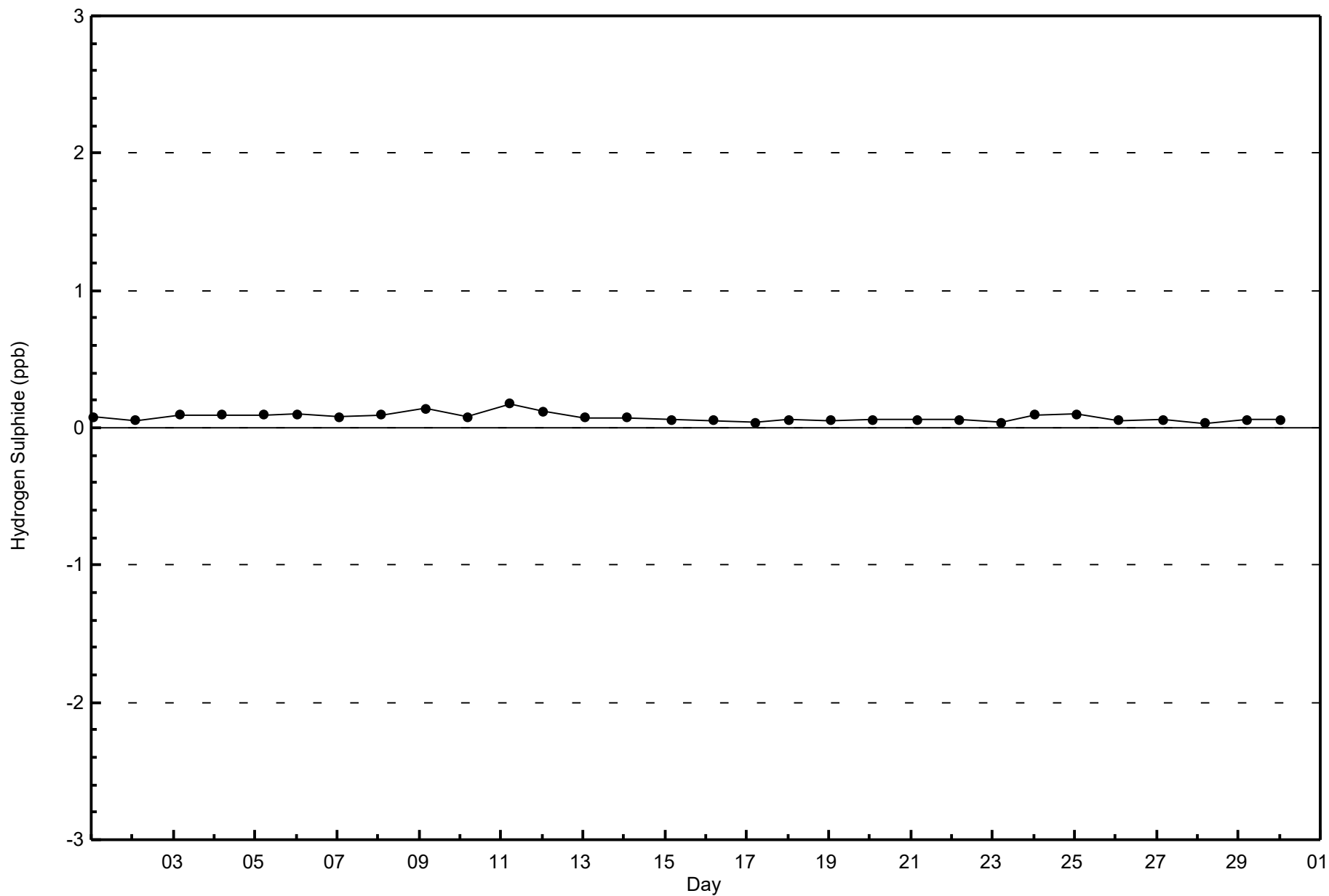
Hydrogen Sulphide (H₂S) - ppb
Buffalo Viewpoint

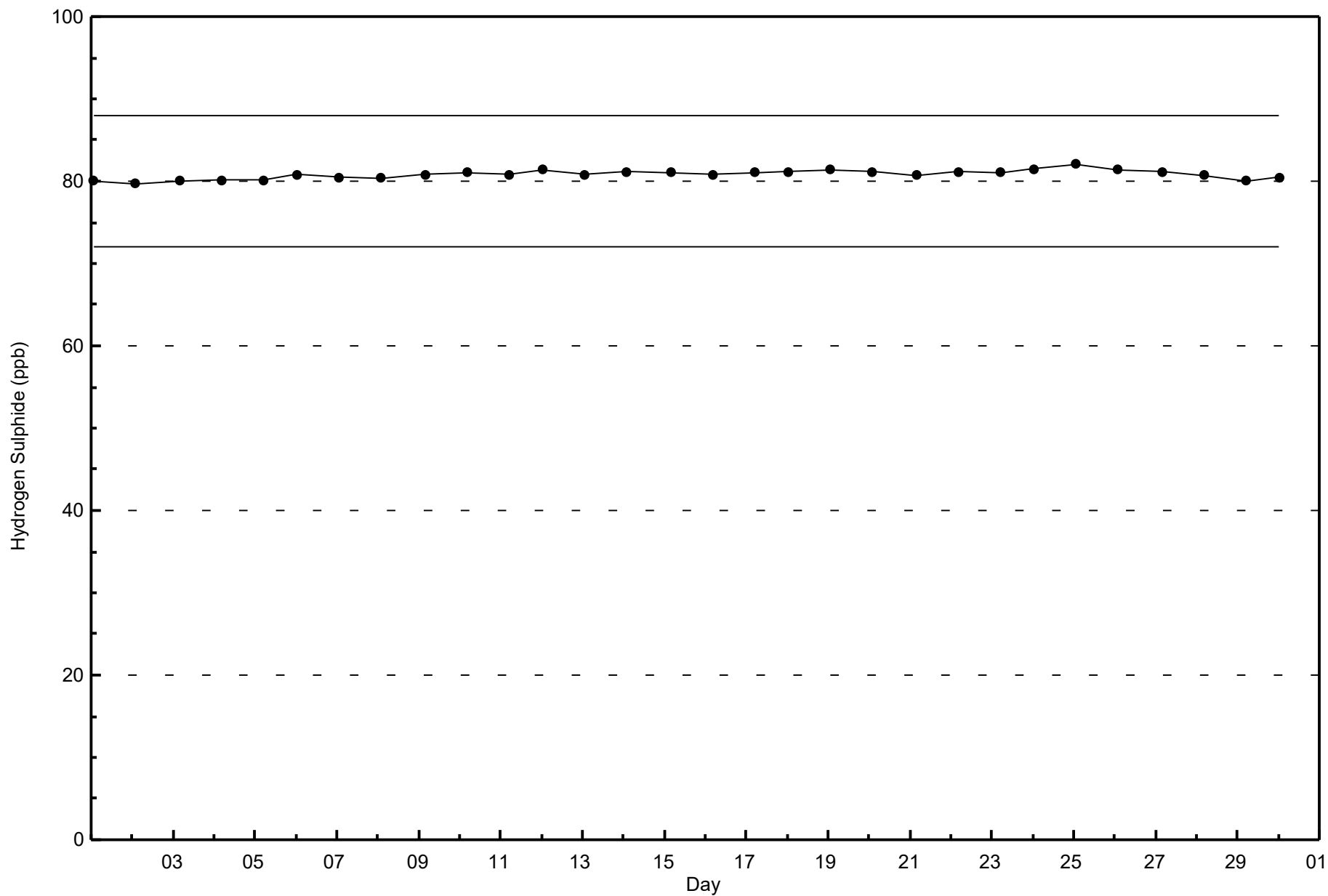




Wood Buffalo Environmental Association
Zero Responses

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







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

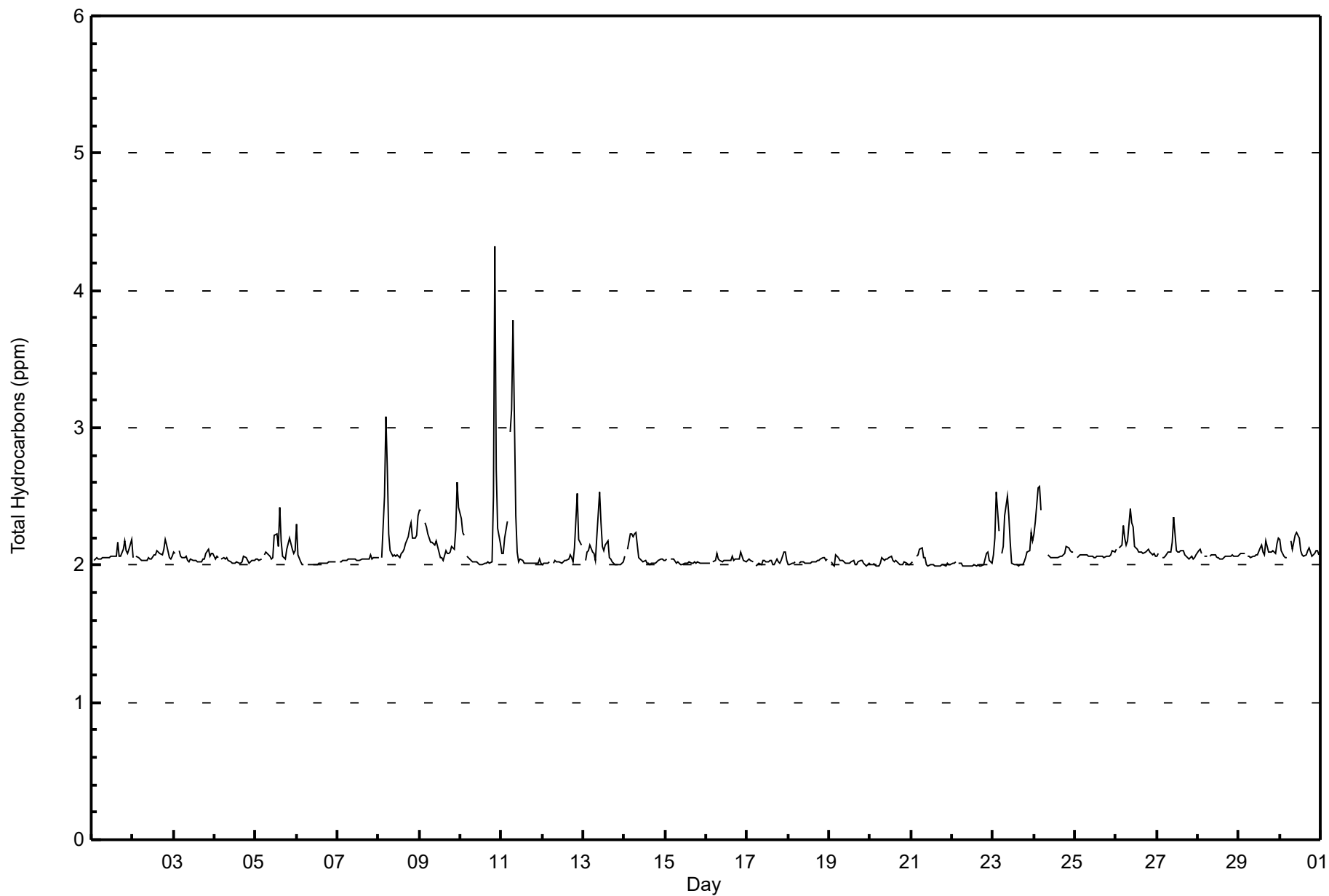
Buffalo Viewpoint - April 2025

Maximum Value: 4.3 ppm on Apr 10 21:00																		Maximum Daily Average: 2.2 ppm on Apr 11																		Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 22 12:00																		Minimum Daily Average: 2.0 ppm on Apr 22																		Hours of Data: 687	
Maximum Diurnal Average: 2.2 ppm at hour 21																		Minimum Diurnal Average: 2.0 ppm at hour 17																		Hours of Missing Data: 33	
Monthly Average: 2.09 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 = 2.6																		Hours of Calibration: 32	
																		Percent Operational Time: 99.9																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	Z	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2										
2-Apr	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.2										
3-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1										
4-Apr	2.0	2.1	2.1	Z	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1										
5-Apr	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.1	2.4	2.2	2.1	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.4										
6-Apr	2.3	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3										
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1										
8-Apr	2.1	Z	2.1	2.5	3.1	2.7	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.4	2.2	3.1										
9-Apr	2.4	2.4	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.6	2.4	2.2	2.6										
10-Apr	2.3	2.2	2.2	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	2.5	4.3	2.7	2.3	2.2	2.2	4.3										
11-Apr	2.1	2.1	2.2	2.3	Z	3.0	3.1	3.8	2.4	2.1	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	3.8										
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.5	2.2	2.2	2.1	2.1	2.5										
13-Apr	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.5	2.3	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5										
14-Apr	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2										
15-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0										
16-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1										
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1										
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1										
19-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1										
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1										
21-Apr	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1										
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1										
23-Apr	2.1	2.2	2.5	2.2	Z	2.1	2.1	2.4	2.5	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.5										
24-Apr	2.2	2.3	2.6	2.6	2.4	Z	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6										
25-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1										
26-Apr	2.1	Z	2.1	2.1	2.3	2.2	2.1	2.2	2.4	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4										
27-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.3										
28-Apr	2.1	2.1	2.1	Z	2.1	2.1	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1										
29-Apr	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2										
30-Apr	2.2	2.1	2.1	2.1	2.1	Z	2.2	2.1	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										
		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	Diurnal Average												
		2.4	2.4	2.6	2.6	3.1	3.0	3.1	3.8	2.5	2.5	2.3	2.2	2.2	2.1	2.4	2.2	2.2	2.2	2.3	2.5	4.3	2.7	2.6	2.4	Diurnal Maximum											
Z - zerospan		C - Calibration				M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	332	48.33	48.33
2.1 - 3.0	351	51.09	99.42
3.1 - 10.0	4	0.58	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	38	19	6	5	2	31	44	36	26	8	4	24	38	18	14	17	330
2.1 - 3.0	71	25	10	5	3	12	29	51	27	18	7	3	16	15	28	30	350
3.1 - 10.0	1	0	0	0	0	2	0	1	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	110	44	16	10	5	45	73	88	53	26	11	27	54	33	42	47	684

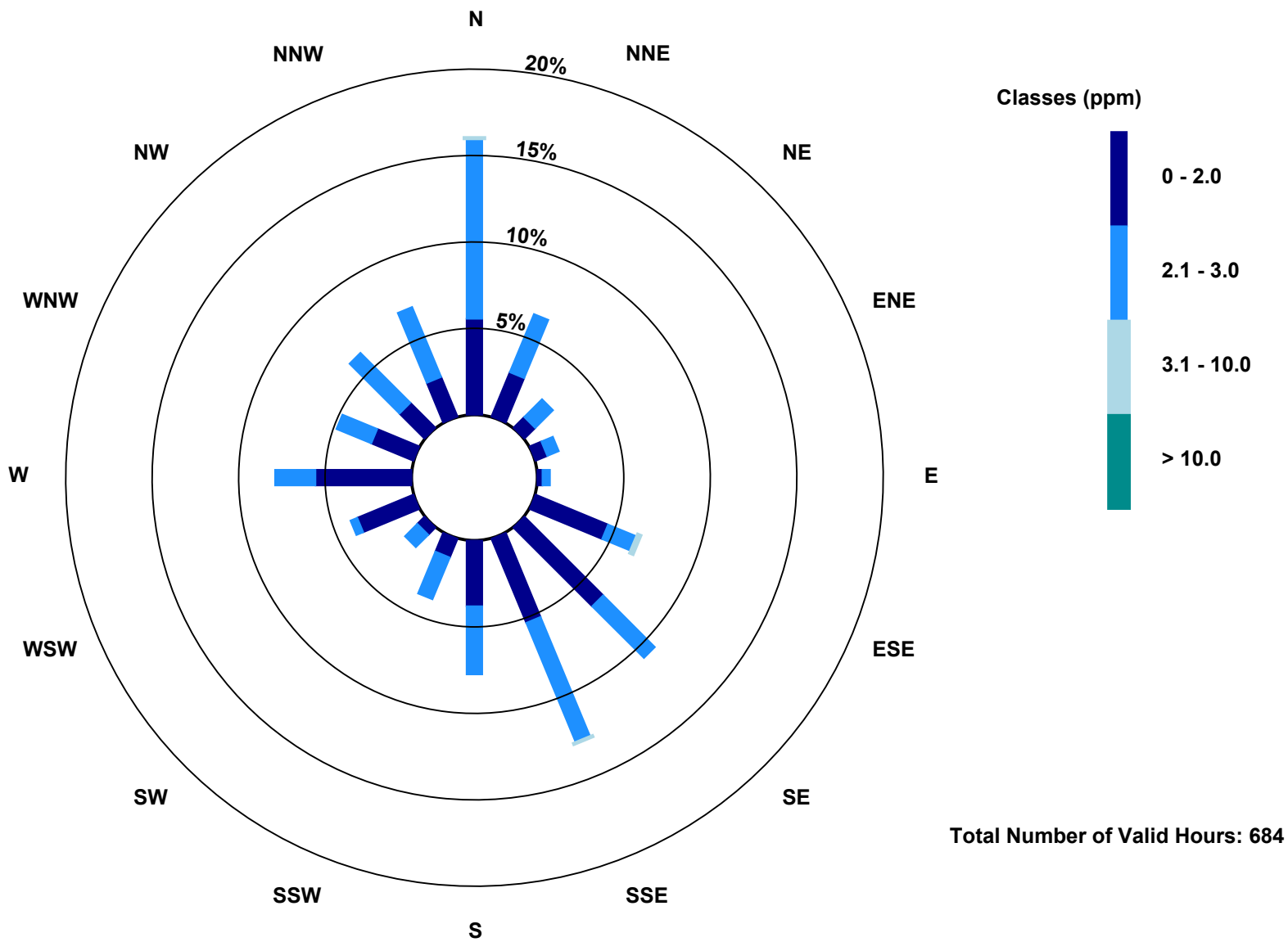
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint



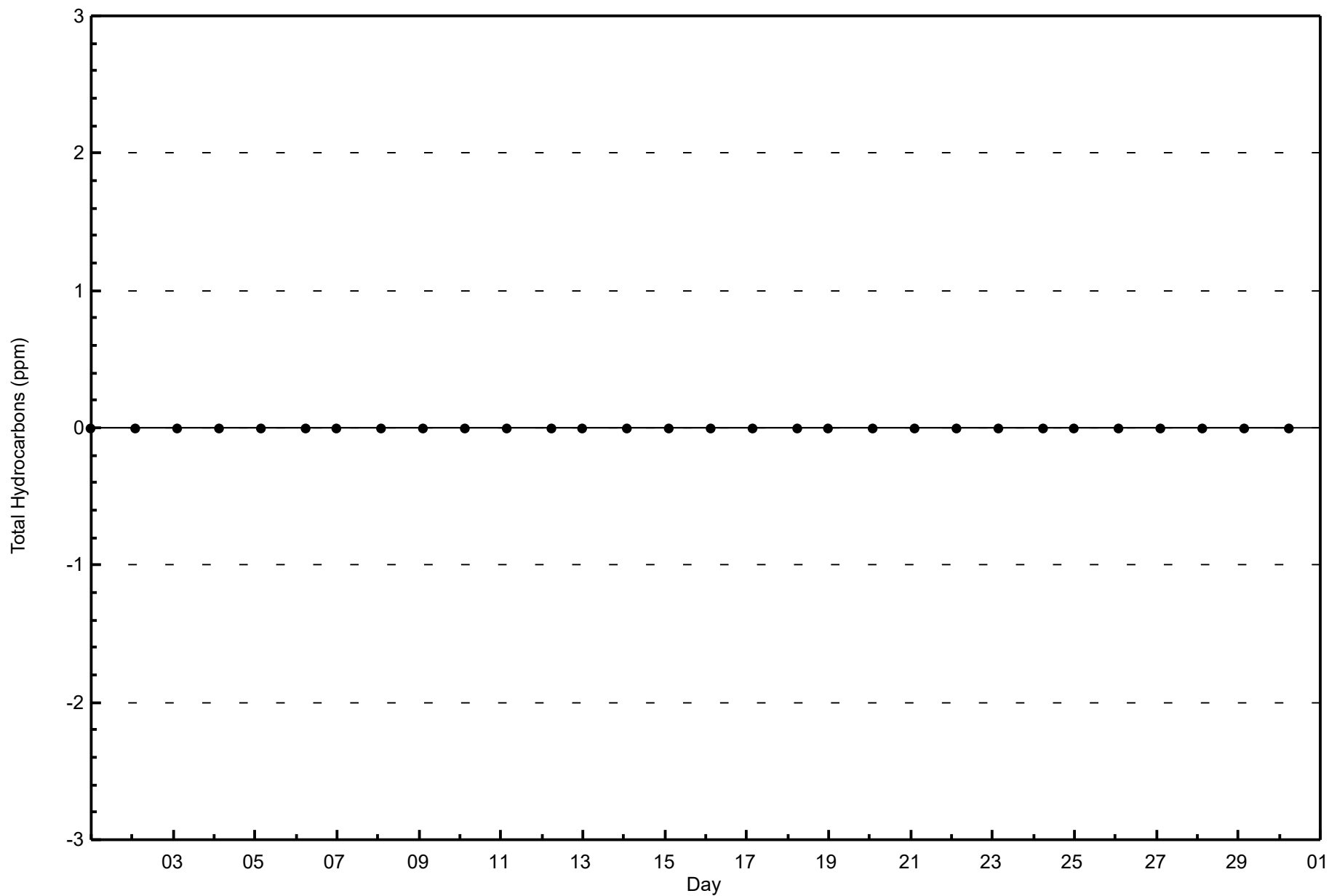


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

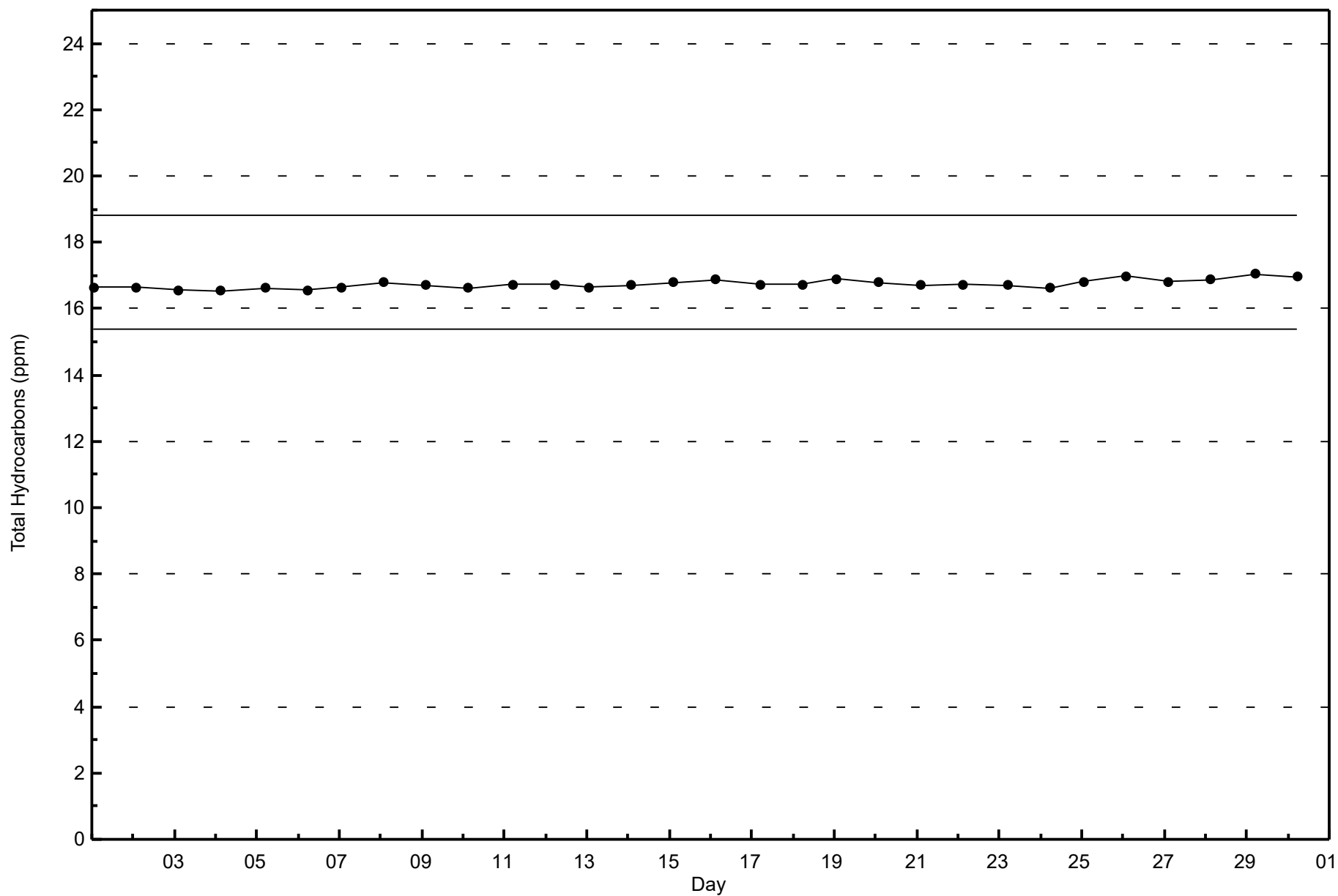
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

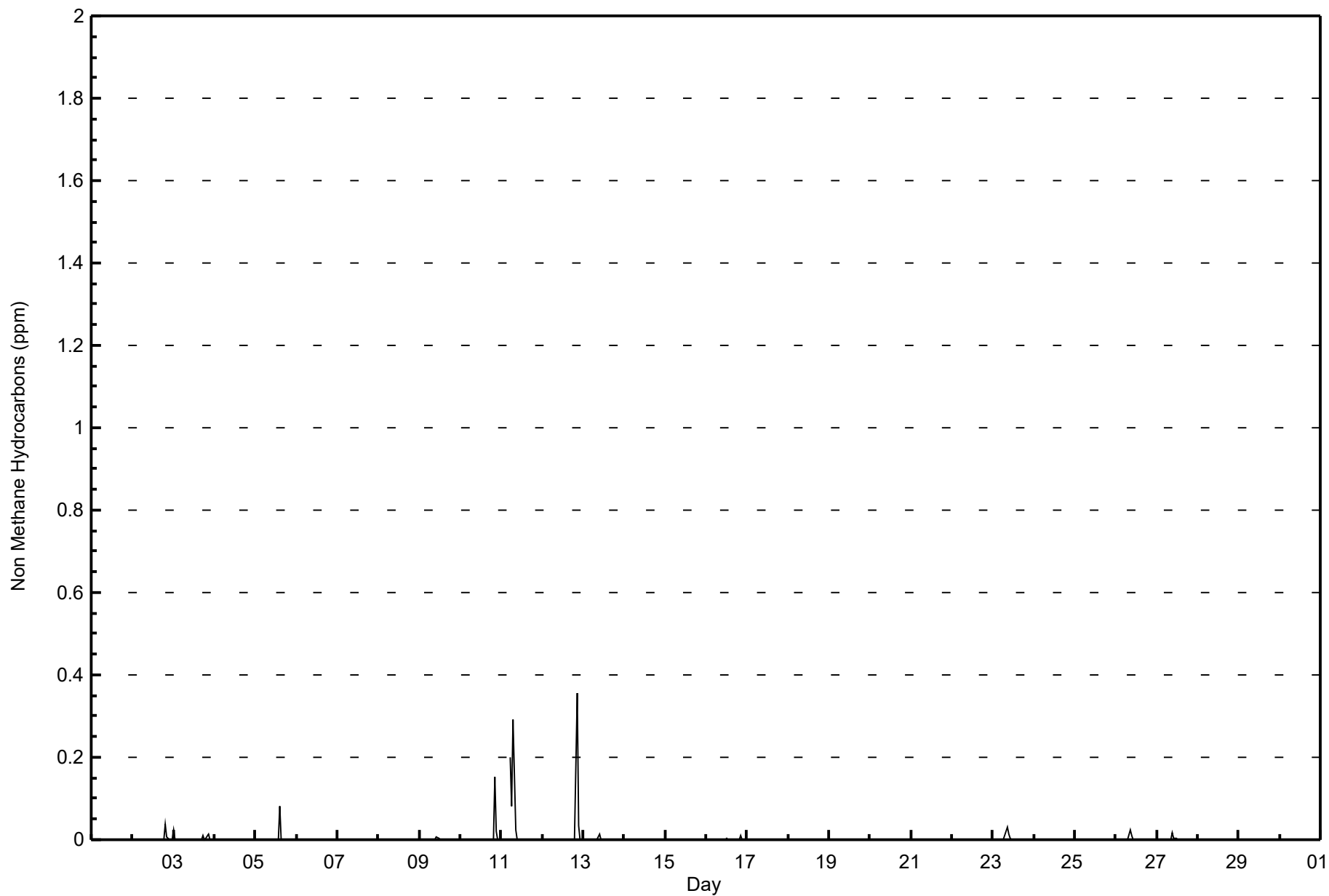
Buffalo Viewpoint - April 2025

Maximum Value: 0.356 ppm on Apr 12 21:00																				Maximum Daily Average: 0.026 ppm on Apr 11					Hours in Service: 720				
Minimum Value: 0.000 ppm on Apr 1 02:00																				Minimum Daily Average: 0.000 ppm on Apr 1					Hours of Data: 687				
Maximum Diurnal Average: 0.018 ppm at hour 21																				Minimum Diurnal Average: 0.000 ppm at hour 2					Hours of Missing Data: 33				
Monthly Average: 0.002 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0					Hours of Calibration: 32				
																									Percent Operational Time: 99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.008	0.000	0.000	0.000	0.002	0.039			
3-Apr	0.022	0.000	Z	0.000	0.000	0.000	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	0.004	0.012	0.000	0.000	0.000	0.002	0.022			
4-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
5-Apr	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	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.080			
6-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
7-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008			
10-Apr	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	0.153	0.022	0.000	0.008	0.153			
11-Apr	0.000	0.000	0.000	0.000	Z	0.201	0.082	0.290	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.290			
12-Apr	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	0.356	0.032	0.000	0.000	0.017	0.356			
13-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.013			
14-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
16-Apr	0.000	0.000	0.000	Z	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	0.011	0.000	0.000	0.000	0.001	0.011			
17-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
18-Apr	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			
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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			
22-Apr	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			
23-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.009	0.030	0.013	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.030			
24-Apr	0.000	0.000	0.000	0.000	0.000	Z	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	0.000	0.000	0.000	0.000	0.000			
25-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.025	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	0.002	0.025			
27-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.016			
28-Apr	0.000	0.000	0.000	Z	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
29-Apr	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			
30-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
0.001 0.000 0.000 0.000 0.000 0.008 0.003 0.010 0.003 0.002 0.000 0.000 0.000 0.000 0.003 0.000 0.000 0.000 0.000 0.001 0.018 0.002 0.000 0.000																													
0.022 0.000 0.000 0.000 0.000 0.201 0.082 0.290 0.030 0.016 0.008 0.003 0.002 0.000 0.080 0.000 0.000 0.009 0.000 0.039 0.356 0.032 0.000 0.000																													
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	664	96.65	96.65
0.006 - 0.05	17	2.47	99.13
0.06 - 0.1	2	0.29	99.42
> 0.1	4	0.58	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	105	43	16	10	5	44	71	87	53	26	11	27	54	31	39	39	661
0.006 - 0.05	3	1	0	0	0	0	2	0	0	0	0	0	0	1	3	7	17
0.06 - 0.1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
> 0.1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	4
Totals	110	44	16	10	5	45	73	88	53	26	11	27	54	33	42	47	684

Total Number of Valid Hours: 684

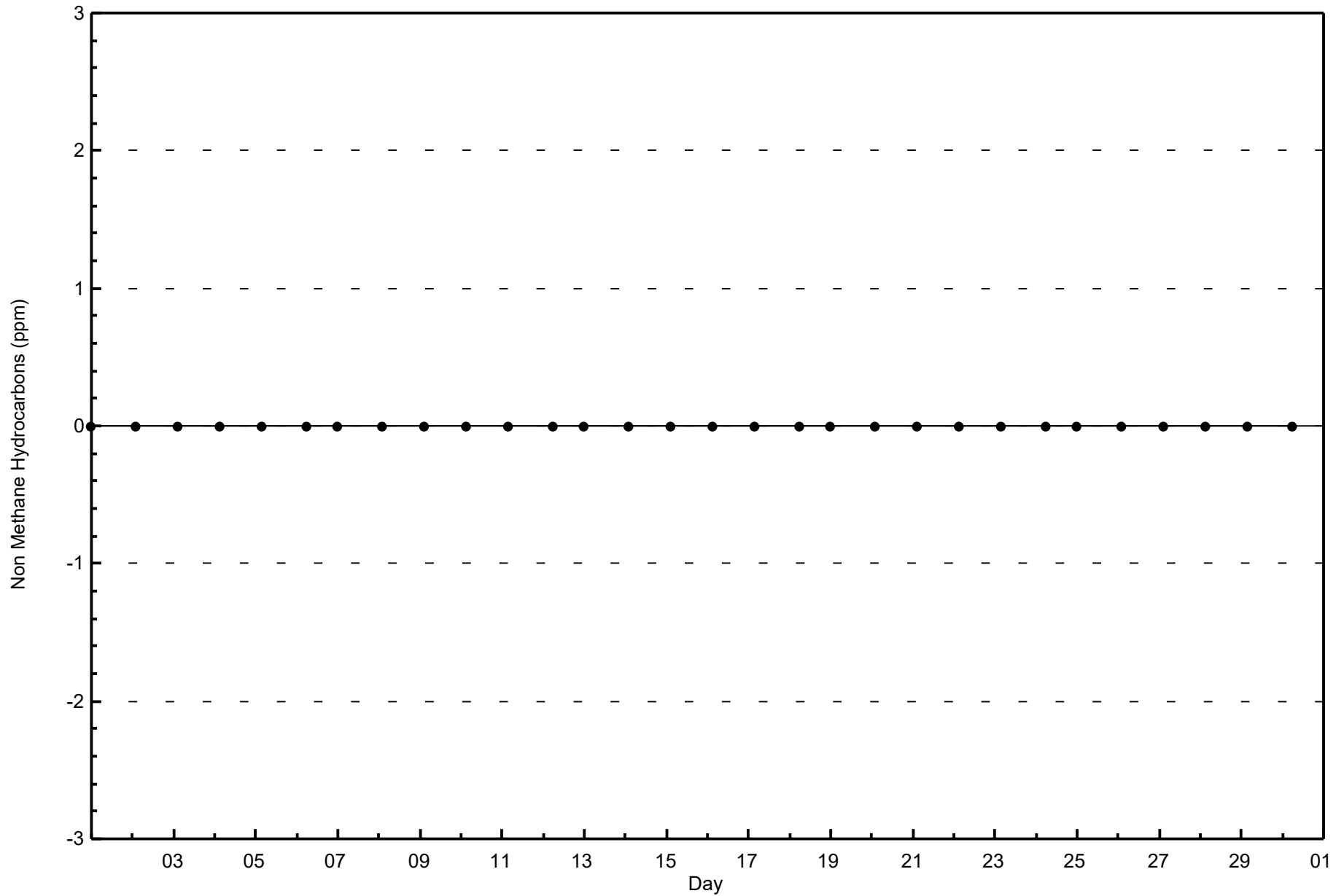
Total Number of Hours: 720

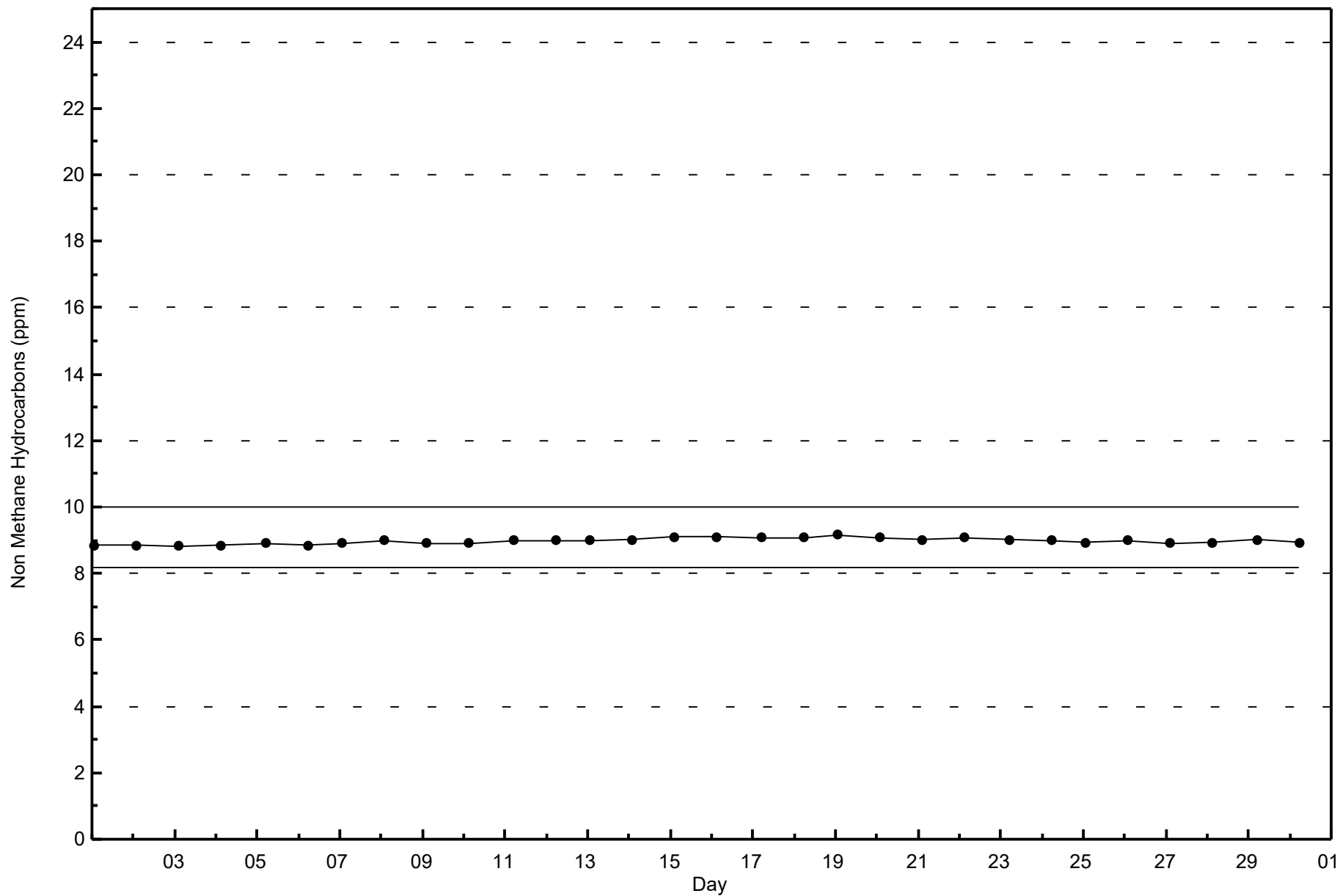


Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint









Wood Buffalo Environmental Association

Summary of Hour Averages

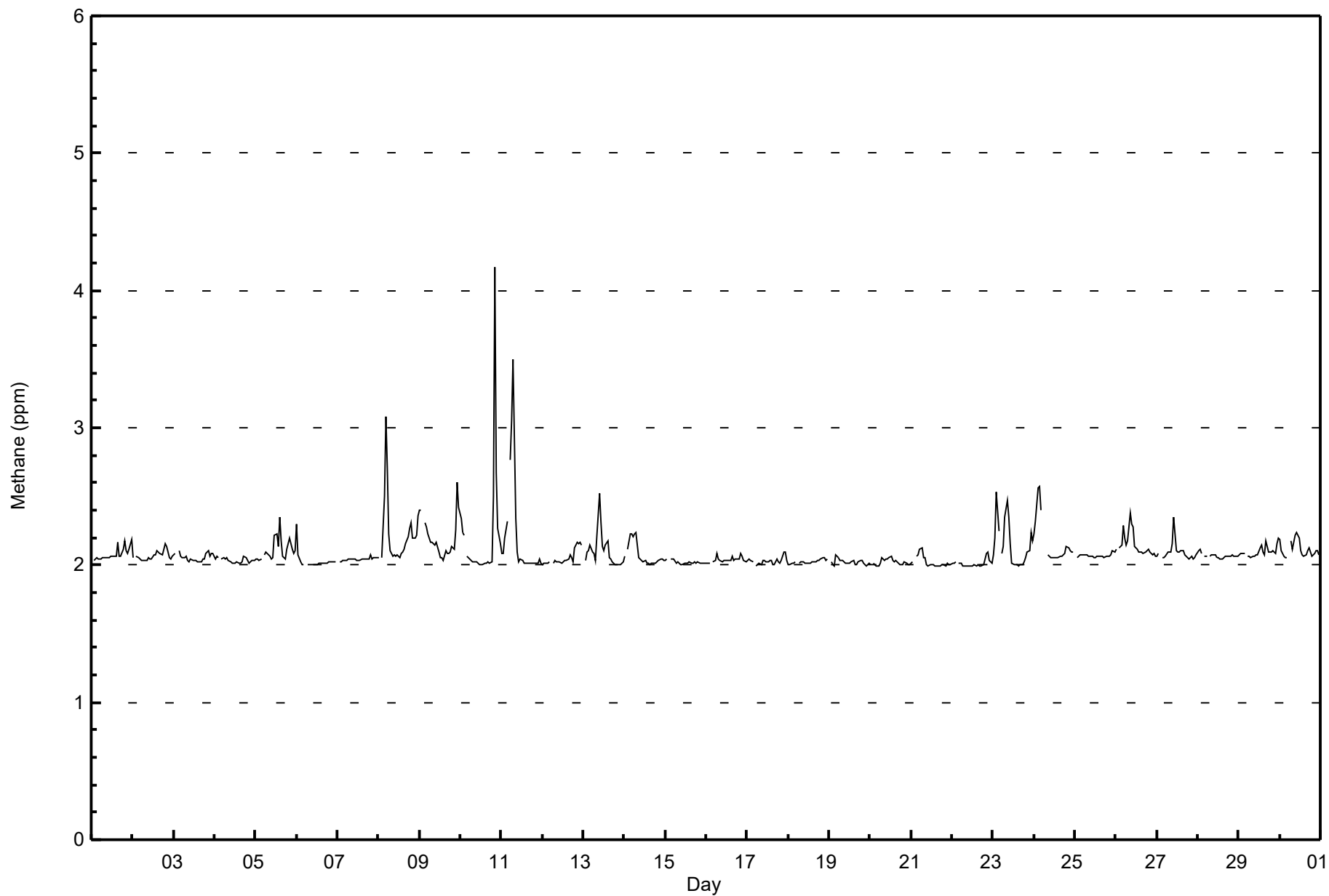
Methane (CH₄) - ppm Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.2 ppm on Apr 10 21:00 Maximum Daily Average: 2.2 ppm on Apr 8																		Hours in Service: 720									
Minimum Value: 2.0 ppm on Apr 22 12:00 Minimum Daily Average: 2.0 ppm on Apr 22 Maximum Diurnal Average: 2.1 ppm at hour 21 Minimum Diurnal Average: 2.0 ppm at hour 17 Monthly Average: 2.09 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 = 2.6																		Hours of Data: 687									
																		Hours of Missing Data: 33									
																		Hours of Calibration: 32									
																		Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2
2-Apr	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.2
3-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Apr	2.0	2.1	2.1	Z	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Apr	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.1	2.3	2.2	2.1	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.3
6-Apr	2.3	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1
8-Apr	2.1	Z	2.1	2.5	3.1	2.7	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.4	2.2	3.1	
9-Apr	2.4	2.4	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.3	2.6	2.4	2.2	2.6	
10-Apr	2.3	2.2	2.2	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	2.5	4.2	2.7	2.3	2.2	2.2	4.2	
11-Apr	2.1	2.1	2.2	2.3	Z	2.8	3.0	3.5	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	2.2	3.5	
12-Apr	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	2.1	2.2	2.2	2.2	2.1	2.1	2.2	
13-Apr	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.5	2.3	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5	
14-Apr	2.1	Z	2.1	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	
15-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
16-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	
19-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	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	
21-Apr	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	
23-Apr	2.1	2.2	2.5	2.2	Z	2.1	2.1	2.3	2.5	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.5	
24-Apr	2.2	2.3	2.6	2.6	2.4	Z	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6	
25-Apr	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	
26-Apr	2.1	Z	2.1	2.1	2.3	2.2	2.1	2.2	2.4	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	
27-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.3	
28-Apr	2.1	2.1	2.1	Z	2.1	2.1	M	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	
29-Apr	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	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	
30-Apr	2.2	2.1	2.1	2.1	2.1	Z	2.2	2.1	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	2.2	
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 2.0 2.1 2.1 2.0 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.1																									Diurnal Average		
2.4 2.4 2.6 2.6 3.1 2.8 3.0 3.5 2.5 2.5 2.3 2.2 2.2 2.1 2.3 2.2 2.2 2.2 2.3 2.5 4.2 2.7 2.6 2.4																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Buffalo Viewpoint - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	332	48.33	48.33
2.1 - 3.0	352	51.24	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

Methane (CH₄) - ppm
Buffalo Viewpoint - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	38	19	6	5	2	31	44	36	26	8	4	24	38	18	14	17	330
2.1 - 3.0	72	25	10	5	3	12	29	51	27	18	7	3	16	15	28	30	351
3.1 - 10.0	0	0	0	0	0	2	0	1	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	110	44	16	10	5	45	73	88	53	26	11	27	54	33	42	47	684

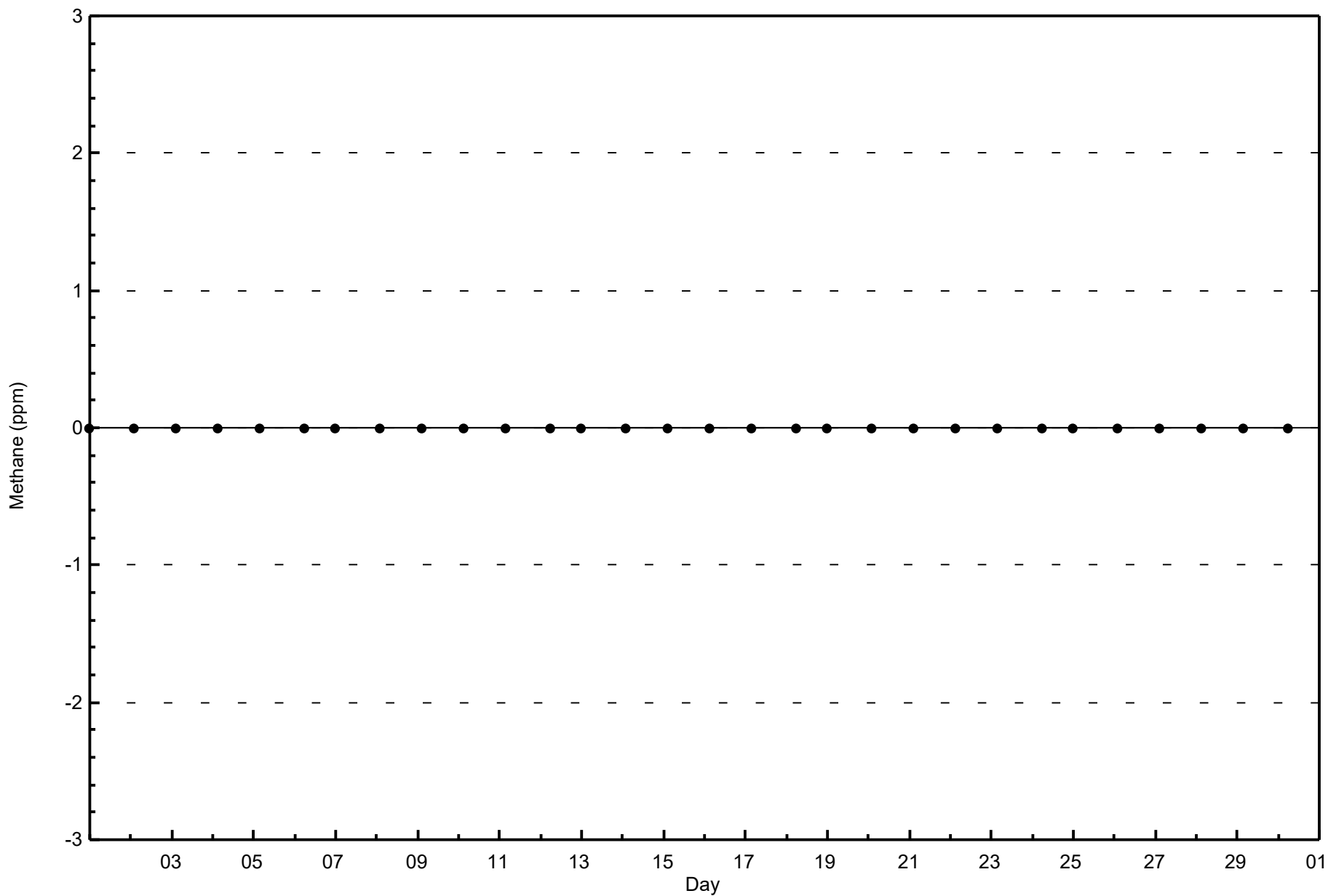
Total Number of Valid Hours: 684

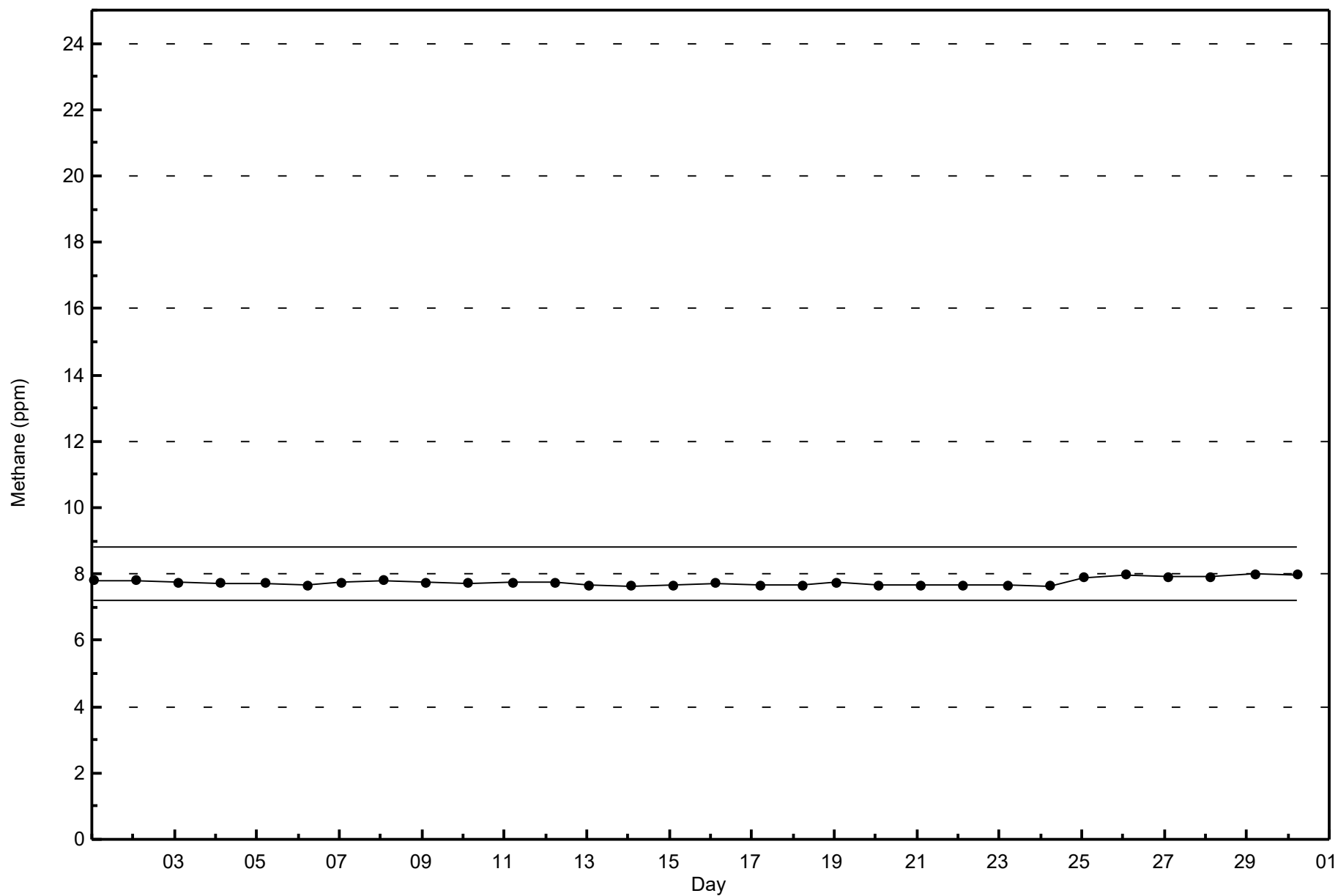
Total Number of Hours: 720



Methane (CH₄) - ppm
Buffalo Viewpoint





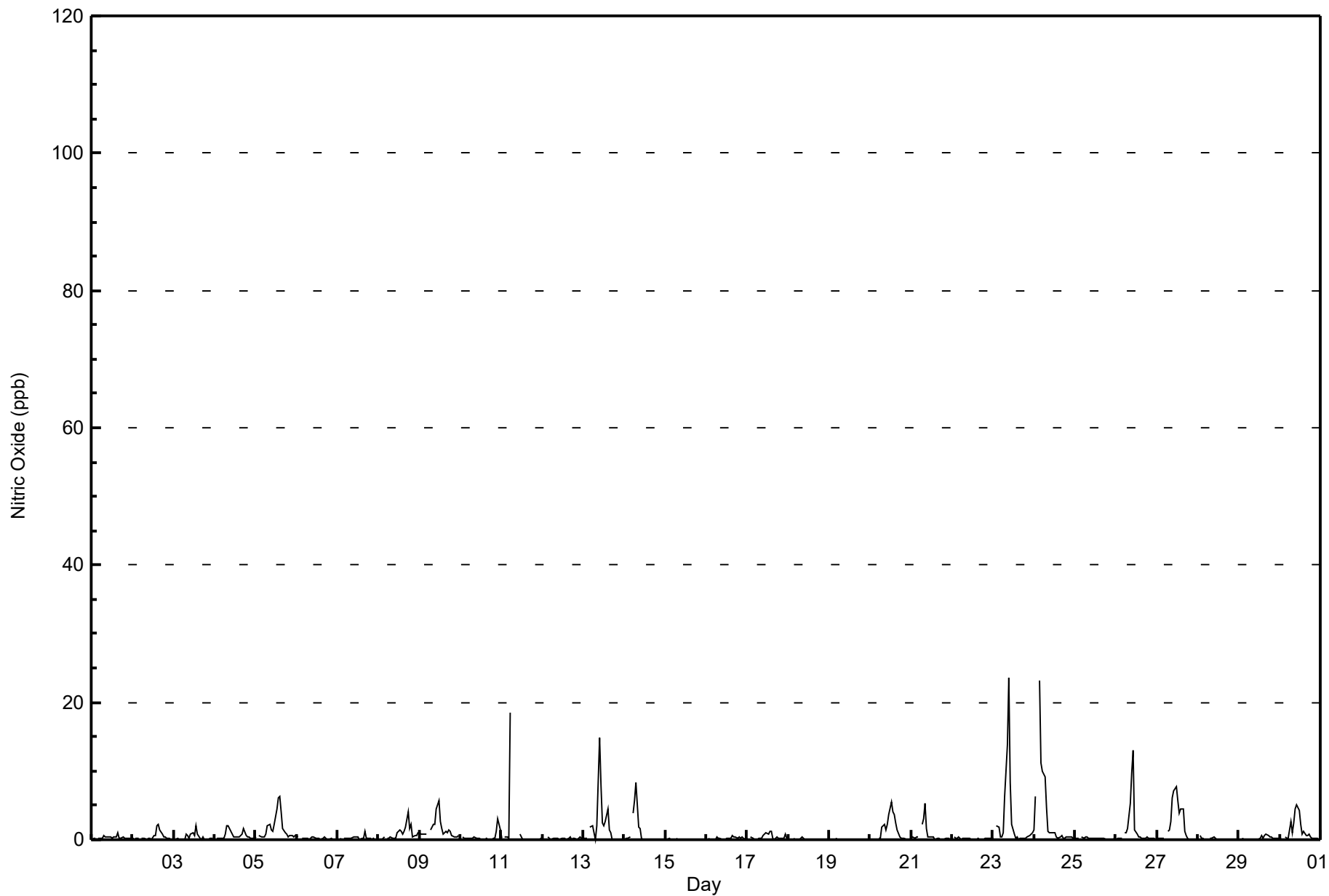


Maximum Value: 23.5 ppb on Apr 23 10:00																			Maximum Daily Average: 3.3 ppb on Apr 24							Hours in Service: 720			
Minimum Value: 0.0 ppb on Apr 2 02:00																			Minimum Daily Average: 0.0 ppb on Apr 19							Hours of Data: 684			
Maximum Diurnal Average: 2.5 ppb at hour 10																			Minimum Diurnal Average: 0.2 ppb at hour 21							Hours of Missing Data: 36			
Monthly Average: 0.84 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.6 P ₉₀ = 2.0 P ₉₉ = 10.2							Hours of Calibration: 35			
																										Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.1	0.2	0.1	Z	0.2	0.2	0.3	0.5	0.4	0.4	0.4	0.3	0.4	0.4	1.1	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3			
2-Apr	0.2	0.0	0.2	0.1	Z	0.2	0.1	0.2	0.1	0.3	0.2	0.0	0.6	0.6	2.0	2.2	1.5	0.8	0.5	0.4	0.1	0.2	0.0	0.1	0.1				
3-Apr	0.0	0.1	0.2	0.1	0.0	Z	0.1	0.9	0.5	0.1	0.7	1.0	0.6	2.0	0.9	0.2	0.0	0.4	0.1	0.1	0.1	0.2	0.2	0.2	0.2				
4-Apr	Z	0.2	0.3	0.3	0.2	0.1	0.8	2.0	2.0	1.1	0.8	0.5	0.3	0.3	0.3	0.6	0.8	1.5	0.6	0.4	0.4	0.3	0.2	0.3	0.3				
5-Apr	0.3	Z	0.6	0.3	0.3	0.4	0.8	2.0	2.2	1.4	1.2	2.2	4.4	6.0	6.4	4.2	1.5	1.1	0.8	0.4	0.6	0.6	0.5	0.5	0.5				
6-Apr	0.6	0.3	Z	0.2	0.2	0.2	0.1	0.0	0.2	0.4	0.4	0.2	0.2	0.3	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
7-Apr	0.0	0.0	0.1	Z	0.2	0.1	0.2	0.3	0.2	0.4	0.4	0.3	0.3	0.1	0.1	0.2	1.2	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.1				
8-Apr	0.0	0.1	0.0	0.3	Z	0.3	0.2	0.3	0.2	0.3	0.1	0.9	1.4	1.3	0.9	1.3	1.9	4.1	1.6	2.3	0.5	0.6	0.6	1.1	0.9				
9-Apr	0.9	0.9	0.7	0.7	0.7	Z	1.3	1.8	2.2	2.3	4.4	5.7	2.6	1.6	0.7	1.2	0.9	1.5	1.1	0.6	0.4	0.4	0.4	0.7	1.5				
10-Apr	Z	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.4	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.3	1.3	3.0	1.5	0.4				
11-Apr	0.2	Z	0.4	0.3	0.2	18.4	C	C	C	C	C	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1				
12-Apr	0.1	0.0	Z	0.3	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.5	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.2				
13-Apr	0.2	0.2	0.2	Z	1.9	2.1	1.0	0.1	2.1	14.8	8.0	2.3	2.1	2.7	4.4	1.4	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9				
14-Apr	0.0	0.3	0.2	0.4	Z	3.8	5.6	8.4	1.8	1.6	0.1	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	1.0				
15-Apr	0.0	0.0	0.1	0.0	0.0	Z	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	0.0	0.0	0.0				
16-Apr	Z	0.2	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.6	0.5	0.4	0.3	0.3	0.2	0.3	0.2	0.1	0.2				
17-Apr	0.2	Z	0.4	0.2	0.0	0.1	0.0	0.3	0.2	0.7	0.8	1.0	0.9	1.1	1.2	0.3	0.0	0.4	0.3	0.2	0.2	0.2	0.8	0.1	0.4				
18-Apr	0.0	0.0	Z	0.2	0.1	0.0	0.1	0.2	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
19-Apr	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	0.1	0.0	0.0	0.0				
20-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	1.8	2.2	1.5	2.3	3.7	5.4	4.1	3.6	2.5	1.4	0.3	0.1	0.1	0.2	0.1	0.0	0.1	1.3				
21-Apr	0.2	0.3	0.3	0.3	0.5	Z	2.3	3.0	5.2	1.7	0.4	0.4	0.4	0.5	0.1	0.1	0.2	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.7				
22-Apr	Z	0.5	0.2	0.2	0.3	0.1	0.2	0.1	0.1	0.3	0.3	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.2				
23-Apr	0.2	Z	2.0	1.9	0.3	0.4	1.0	6.4	13.8	23.5	8.3	2.1	0.9	0.2	0.4	0.1	0.1	0.2	0.2	0.1	0.4	0.6	0.9	1.0	2.8				
24-Apr	1.5	6.3	Z	23.2	11.2	10.0	9.2	4.6	1.3	1.0	0.9	0.9	1.0	0.4	0.2	0.5	0.6	0.3	0.2	0.4	0.5	0.4	0.3	0.2	3.3				
25-Apr	0.1	0.1	0.2	Z	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2				
26-Apr	0.0	0.2	0.2	0.1	Z	1.1	1.0	1.6	5.3	9.7	13.0	1.4	0.9	0.5	0.3	0.2	0.1	0.3	0.4	0.3	0.2	0.2	0.1	0.1	1.6				
27-Apr	0.1	0.2	0.1	0.1	0.2	Z	1.3	1.5	2.6	6.0	7.0	7.6	5.7	3.8	4.6	4.5	1.2	0.6	0.3	0.0	0.0	0.0	0.1	0.0	2.1				
28-Apr	Z	0.6	0.2	0.1	0.0	0.0	M	0.3	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	0.1				
29-Apr	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.3	0.5	0.8	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2				
30-Apr	0.2	0.1	Z	0.4	0.3	0.2	2.5	1.0	2.4	4.5	5.1	4.3	2.2	0.8	1.1	0.6	0.6	0.9	0.4	0.2	0.1	0.2	0.2	0.1	1.2				
																								Diurnal Average					
																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.71	99.71
21 - 40	2	0.29	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
721 - 740	0	0.00	100.00
741 - 760	0	0.00	100.00
761 - 780	0	0.00	100.00
781 - 800	0	0.00	100.00
801 - 820	0	0.00	100.00
821 - 840	0	0.00	100.00
841 - 860	0	0.00	100.00
861 - 880	0	0.00	100.00
881 - 900	0	0.00	100.00
901 - 920	0	0.00	100.00
921 - 940	0	0.00	100.00
941 - 960	0	0.00	100.00
961 - 980	0	0.00	100.00
981 - 1000	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	108	44	16	10	5	44	72	88	51	29	12	26	51	36	39	48	679
21 - 40	1	0	0	0	0	0	0	0	1	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	109	44	16	10	5	44	72	88	52	29	12	26	51	36	39	48	681

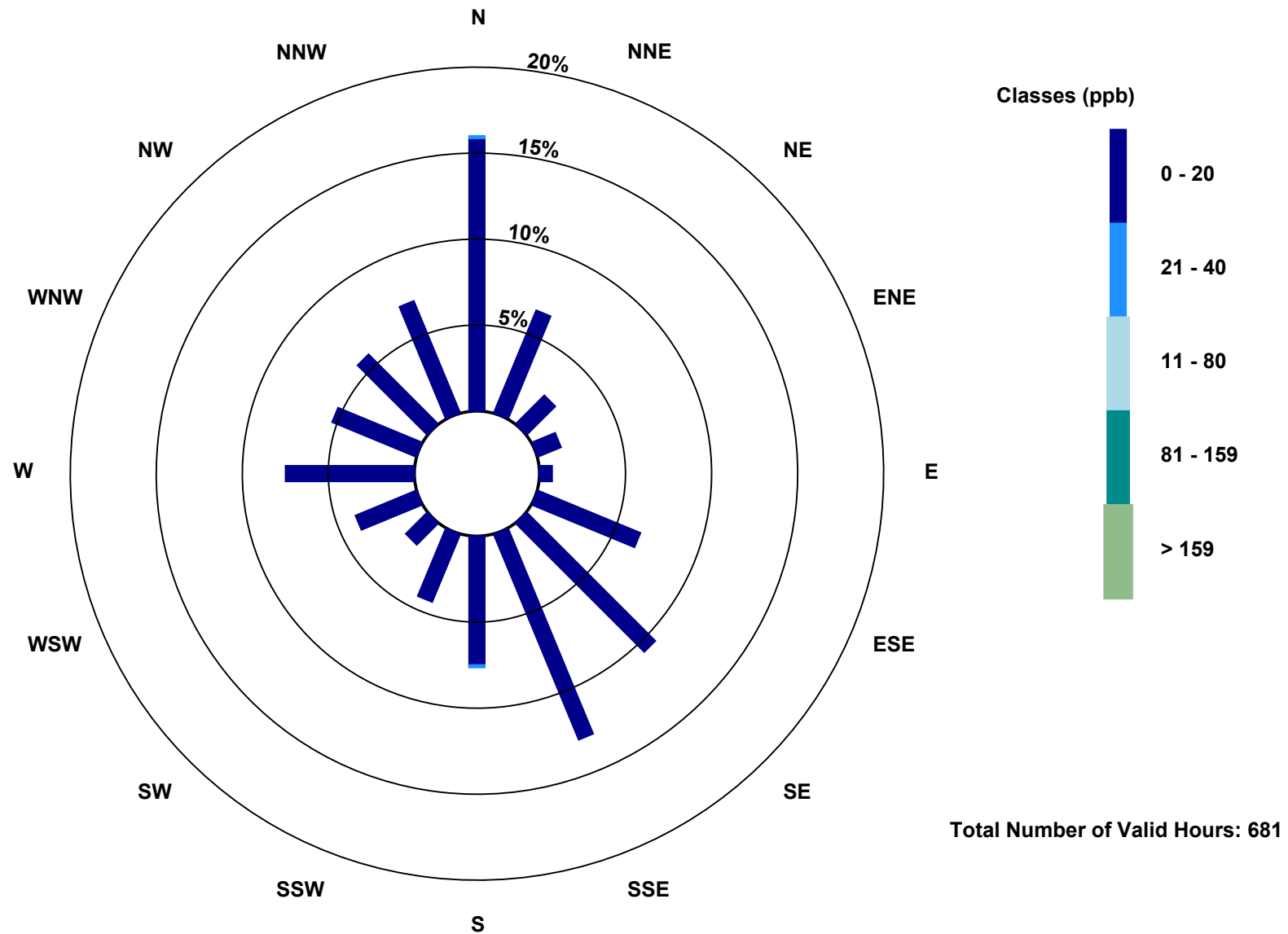
Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

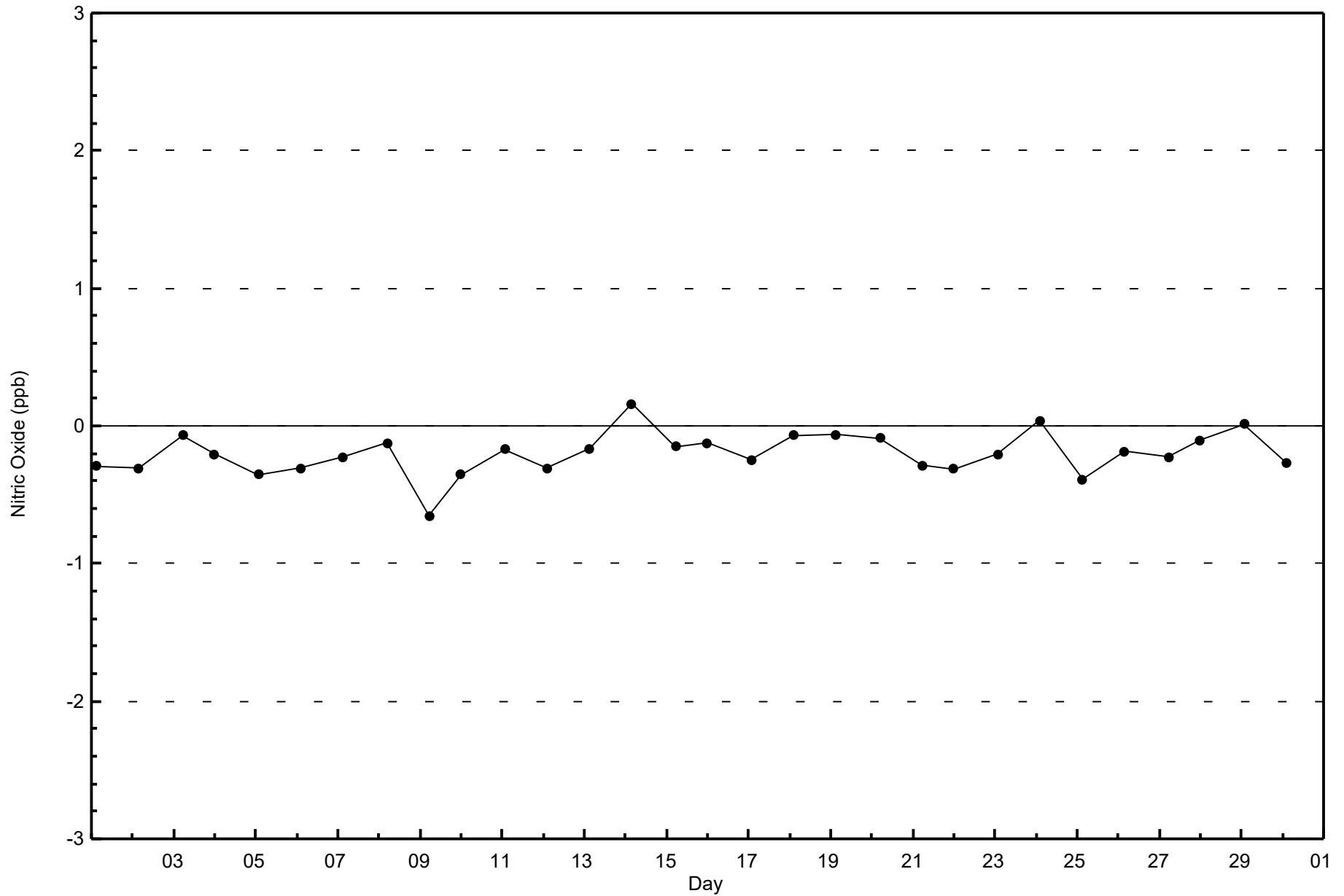
Nitric Oxide (NO) - ppb
Buffalo Viewpoint





Wood Buffalo Environmental Association
Zero Responses

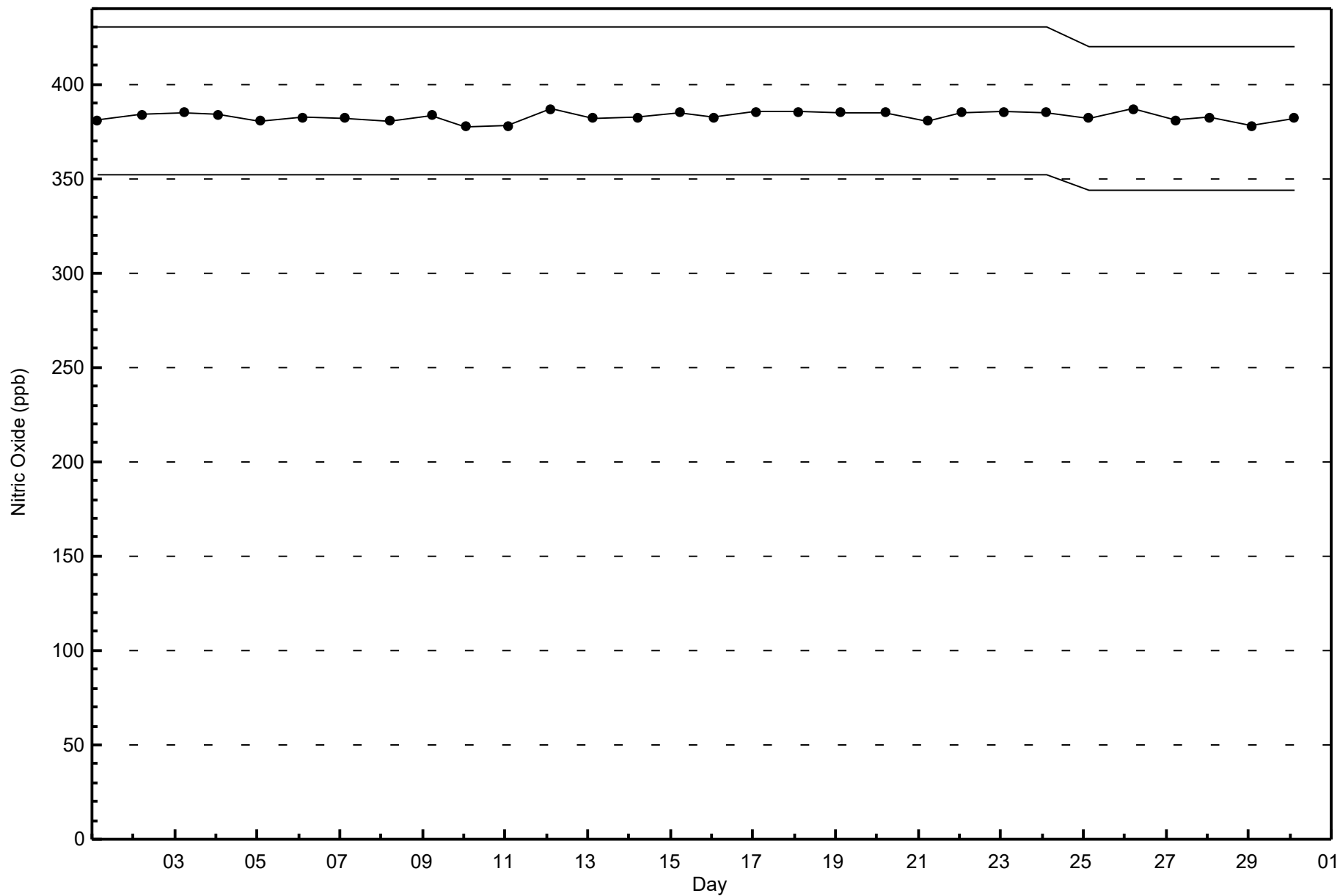
Nitric Oxide (NO) - ppb
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

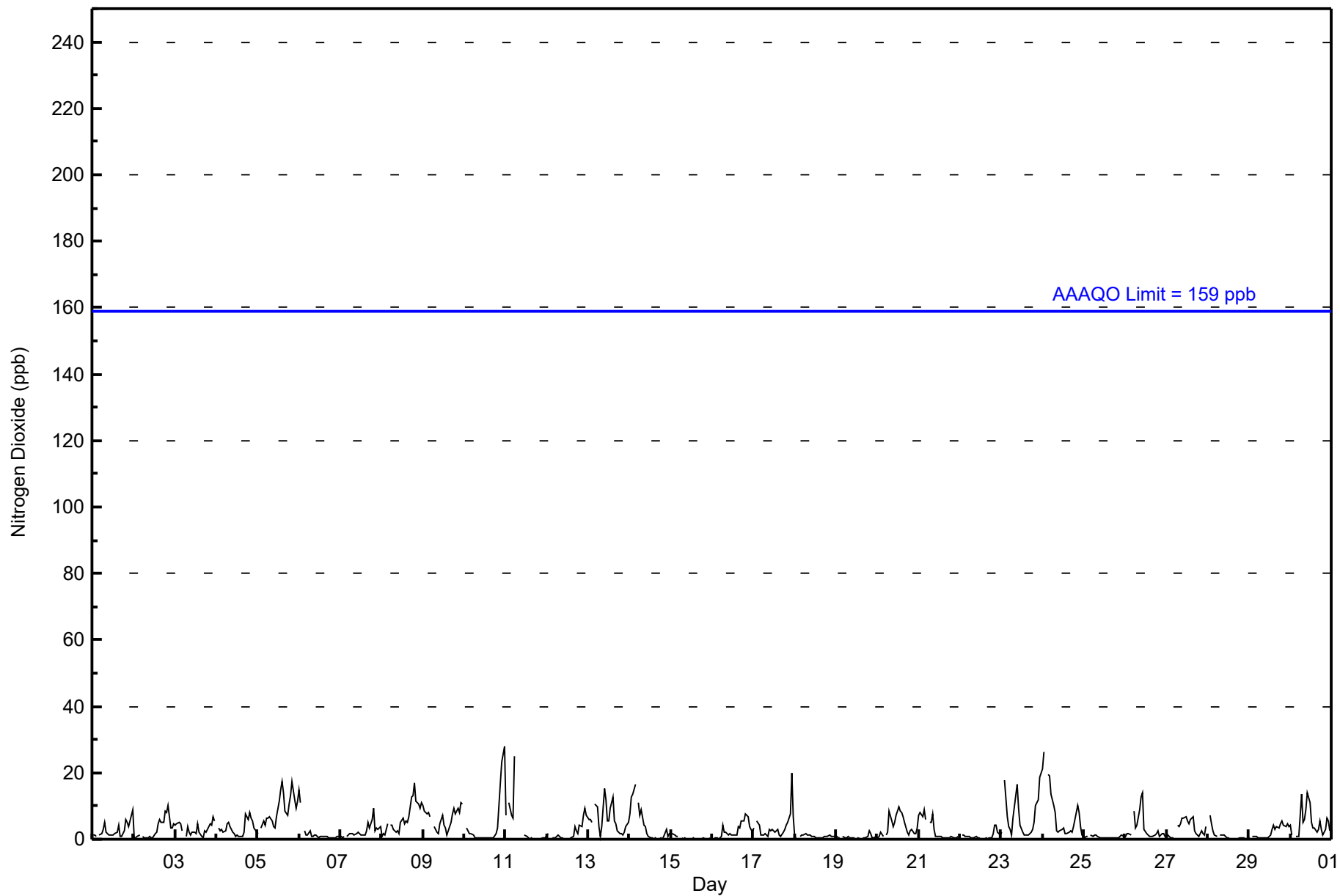
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 28.0 ppb on Apr 11 00:00 Maximum Daily Average: 8.7 ppb on Apr 5																				Hours in Service: 720						
Minimum Value: 0.0 ppb on Apr 11 20:00 Minimum Daily Average: 0.4 ppb on Apr 15 Maximum Diurnal Average: 5.3 ppb at hour 23 Minimum Diurnal Average: 2.3 ppb at hour 17 Monthly Average: 3.48 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 1.8 Q ₃ = 4.8 P ₉₀ = 8.9 P ₉₉ = 19.6																				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 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-Apr	1.3	1.4	1.0	Z	1.2	1.9	3.1	5.0	2.2	1.3	1.2	1.3	1.3	1.6	2.1	4.3	0.8	0.8	2.6	6.0	5.0	3.9	5.5	9.0	2.8	9.0
2-Apr	0.4	0.5	1.0	1.1	Z	0.7	0.6	0.6	0.6	0.8	0.6	0.6	1.8	2.2	4.7	5.8	5.1	5.0	8.5	7.9	10.3	3.5	3.2	4.5	3.0	10.3
3-Apr	4.1	4.8	5.1	4.6	2.6	Z	0.7	3.9	2.1	1.1	2.2	2.2	1.6	4.5	2.1	0.7	0.6	2.6	2.1	2.8	4.8	4.2	6.7	5.5	3.1	6.7
4-Apr	Z	3.5	2.5	2.9	2.3	2.6	4.6	4.9	3.8	2.1	1.5	1.0	1.1	0.8	0.7	0.7	2.2	7.8	6.0	8.1	6.4	5.3	3.3	2.2	3.3	8.1
5-Apr	1.8	Z	3.5	5.7	4.2	6.5	6.2	6.9	5.3	3.8	3.5	6.6	11.3	14.7	17.4	14.1	8.3	7.0	10.4	13.2	17.4	11.8	9.2	11.3	8.7	17.4
6-Apr	14.8	11.0	Z	2.5	1.1	1.1	2.4	0.7	0.8	1.2	1.3	0.6	0.7	0.7	0.7	0.8	0.7	0.5	0.6	0.5	0.6	0.5	0.8	1.0	2.0	14.8
7-Apr	0.8	0.6	0.7	Z	1.0	1.7	1.7	1.7	1.3	1.8	2.0	1.7	1.3	1.2	1.3	2.4	5.1	3.2	6.1	9.5	2.7	3.6	2.9	4.0	2.5	9.5
8-Apr	1.0	1.5	1.2	4.6	Z	4.4	4.2	2.9	2.3	2.5	1.7	5.1	6.3	4.6	5.4	4.9	6.9	12.5	13.0	17.0	11.3	10.8	9.5	11.2	6.3	17.0
9-Apr	10.1	8.5	7.7	8.2	6.6	Z	4.0	2.8	2.3	1.8	4.6	7.2	4.4	3.2	1.2	3.8	5.0	7.5	9.2	7.7	9.2	8.2	11.2	10.5	6.3	11.2
10-Apr	Z	3.6	2.5	1.8	1.7	1.3	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	1.8	3.3	10.1	17.1	23.2	28.0	4.3	28.0
11-Apr	7.2	Z	10.9	7.0	6.4	25.0	C	C	C	C	C	1.2	0.9	0.4	0.2	0.3	0.2	0.1	0.1	0.0	0.1	0.4	0.4	0.6	3.4	25.0
12-Apr	1.1	1.6	Z	0.5	0.3	0.5	1.3	0.9	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.7	4.0	2.5	1.6	4.2	3.7	7.4	9.5	7.4	2.1	9.5
13-Apr	5.8	5.8	5.0	Z	10.7	9.8	3.8	0.7	4.0	15.4	12.0	5.5	5.4	9.2	12.5	5.7	4.7	2.4	1.6	1.9	1.4	2.3	4.0	5.1	5.9	15.4
14-Apr	7.7	12.5	13.6	16.7	Z	10.9	7.3	8.9	4.2	3.8	1.5	1.0	0.5	0.3	0.1	0.3	0.2	0.2	0.3	0.2	0.7	3.0	1.0	1.9	4.2	16.7
15-Apr	1.6	1.6	1.1	0.8	0.9	Z	0.3	0.2	0.3	0.2	0.0	0.1	0.2	0.4	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.3	0.4	1.6
16-Apr	Z	0.5	0.4	0.5	0.2	1.0	4.4	2.3	2.1	1.4	1.5	1.4	1.3	1.1	1.4	3.8	3.5	5.5	5.3	7.5	7.3	6.6	4.0	2.1	2.8	7.5
17-Apr	3.3	Z	5.6	4.3	1.4	1.1	1.4	1.9	1.0	3.0	2.4	2.8	2.2	2.6	2.8	1.3	1.0	2.2	3.1	4.1	5.1	7.8	20.1	6.8	3.8	20.1
18-Apr	0.8	0.4	Z	0.9	1.1	1.4	1.6	1.4	1.3	1.1	0.8	0.8	0.6	0.3	0.4	0.6	0.4	0.7	0.7	0.7	1.1	0.8	0.7	0.8	0.8	1.6
19-Apr	0.8	0.6	0.5	Z	0.8	0.3	0.6	0.7	0.6	0.3	0.3	0.1	0.2	0.3	0.1	0.2	0.3	0.5	0.7	2.6	1.8	0.6	0.6	1.0	0.6	2.6
20-Apr	0.4	0.8	2.3	0.7	Z	1.1	2.0	8.4	5.7	3.7	5.1	7.1	9.8	8.5	8.0	6.6	5.1	2.0	1.4	2.6	2.9	1.6	1.8	3.2	3.9	9.8
21-Apr	7.0	8.0	6.7	9.0	5.9	Z	5.1	5.2	7.8	2.9	1.0	0.9	0.7	0.9	0.5	0.5	0.3	0.6	0.6	0.8	0.4	0.5	0.4	0.9	2.9	9.0
22-Apr	Z	1.4	1.2	0.9	0.8	0.7	0.5	0.3	0.4	1.0	0.5	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.4	1.8	4.4	4.4	2.3	1.4	1.0	4.4
23-Apr	2.0	Z	17.6	6.9	3.9	2.8	1.4	6.5	13.0	16.7	9.3	4.3	2.1	1.2	1.4	1.1	1.2	2.2	3.0	5.1	10.3	11.8	18.7	20.1	7.1	20.1
24-Apr	21.2	26.4	Z	19.5	19.2	13.5	10.2	7.9	2.5	2.2	2.4	2.8	3.4	1.5	1.5	2.3	2.7	2.1	3.9	6.0	10.0	8.1	3.9	1.3	7.6	26.4
25-Apr	0.6	0.8	0.9	Z	1.2	1.0	1.2	1.3	1.0	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.9	1.3	0.8	0.7	1.3
26-Apr	1.0	1.7	1.5	1.3	Z	8.3	3.6	4.1	9.0	12.5	13.8	3.0	1.8	1.1	1.0	0.7	0.7	1.3	1.7	2.4	1.0	1.5	1.5	0.7	3.3	13.8
27-Apr	0.4	1.2	0.6	0.4	0.5	Z	4.1	4.0	4.5	6.2	6.4	6.8	5.7	4.8	6.0	6.6	2.4	1.7	1.2	1.0	2.5	1.6	1.3	4.0	3.2	6.8
28-Apr	Z	7.0	4.6	2.7	1.1	0.8	M	1.1	1.2	1.1	1.0	0.3	0.3	0.0	0.2	0.1	0.2	0.1	0.3	0.5	0.6	0.4	0.2	0.4	1.1	7.0
29-Apr	0.5	Z	0.7	0.8	0.7	0.4	0.3	0.3	0.3	0.3	0.4	0.5	1.4	2.9	4.1	3.0	4.0	3.4	4.6	5.4	4.4	3.9	4.8	3.8	2.2	5.4
30-Apr	4.1	1.4	Z	0.9	0.7	1.0	13.6	4.9	5.8	8.8	13.9	11.0	5.2	3.6	3.6	2.2	2.9	5.6	3.1	1.1	2.8	6.2	5.6	2.6	4.8	13.9
4.0 4.3 3.9 4.2 3.1 4.0 3.2 3.1 3.0 3.4 3.2 2.6 2.4 2.5 2.7 2.5 2.3 2.7 3.1 4.2 4.6 4.6 5.3 5.1																								Diurnal Average		
21.2 26.4 17.6 19.5 19.2 25.0 13.6 8.9 13.0 16.7 13.9 11.0 11.3 14.7 17.4 14.1 8.3 12.5 13.0 17.0 17.4 17.1 23.2 28.0																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	679	99.27	99.27
21 - 40	5	0.73	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	109	44	16	10	5	44	70	88	52	29	12	26	51	35	38	47	676
21 - 40	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	1	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	109	44	16	10	5	44	72	88	52	29	12	26	51	36	39	48	681

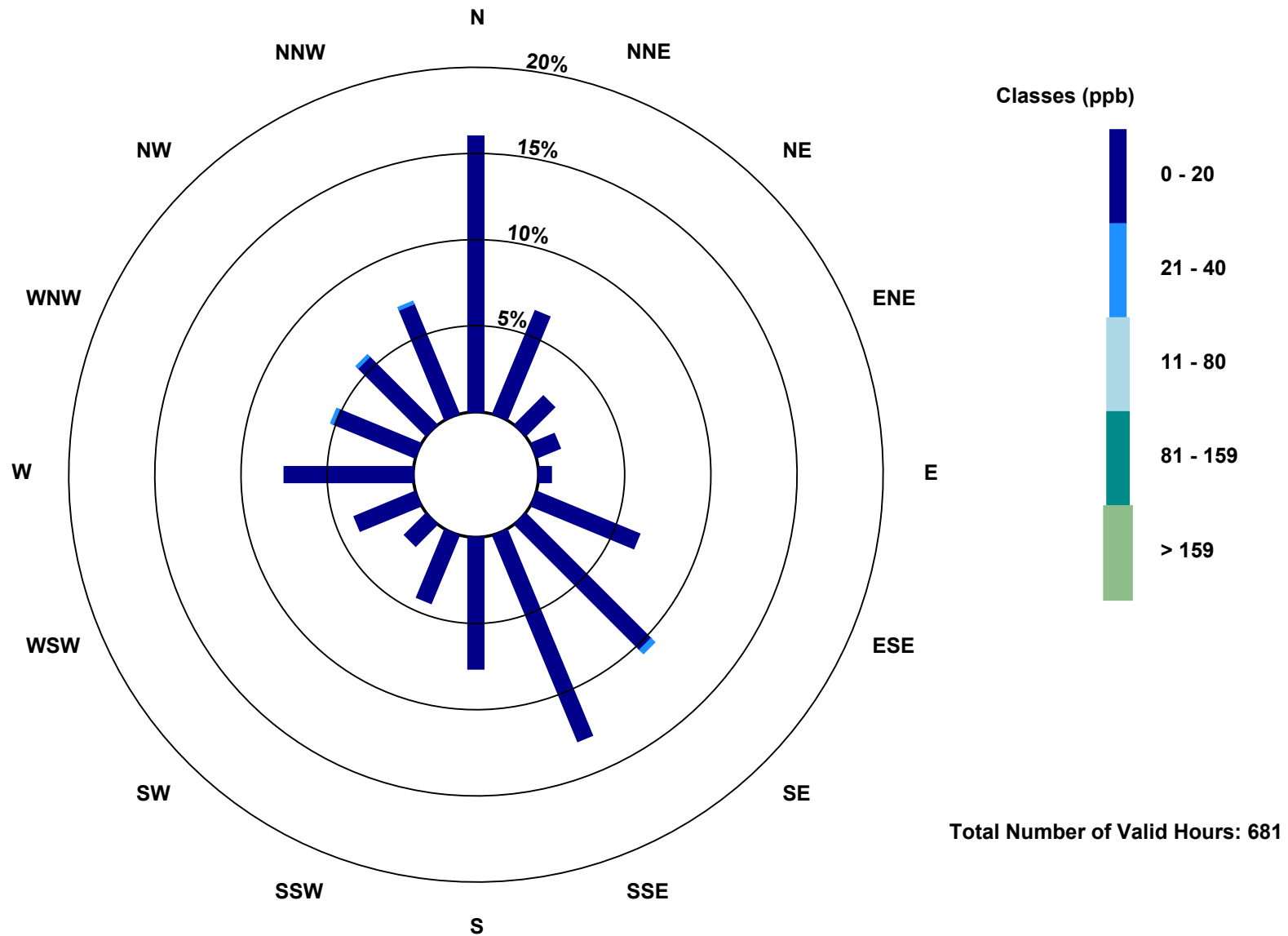
Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

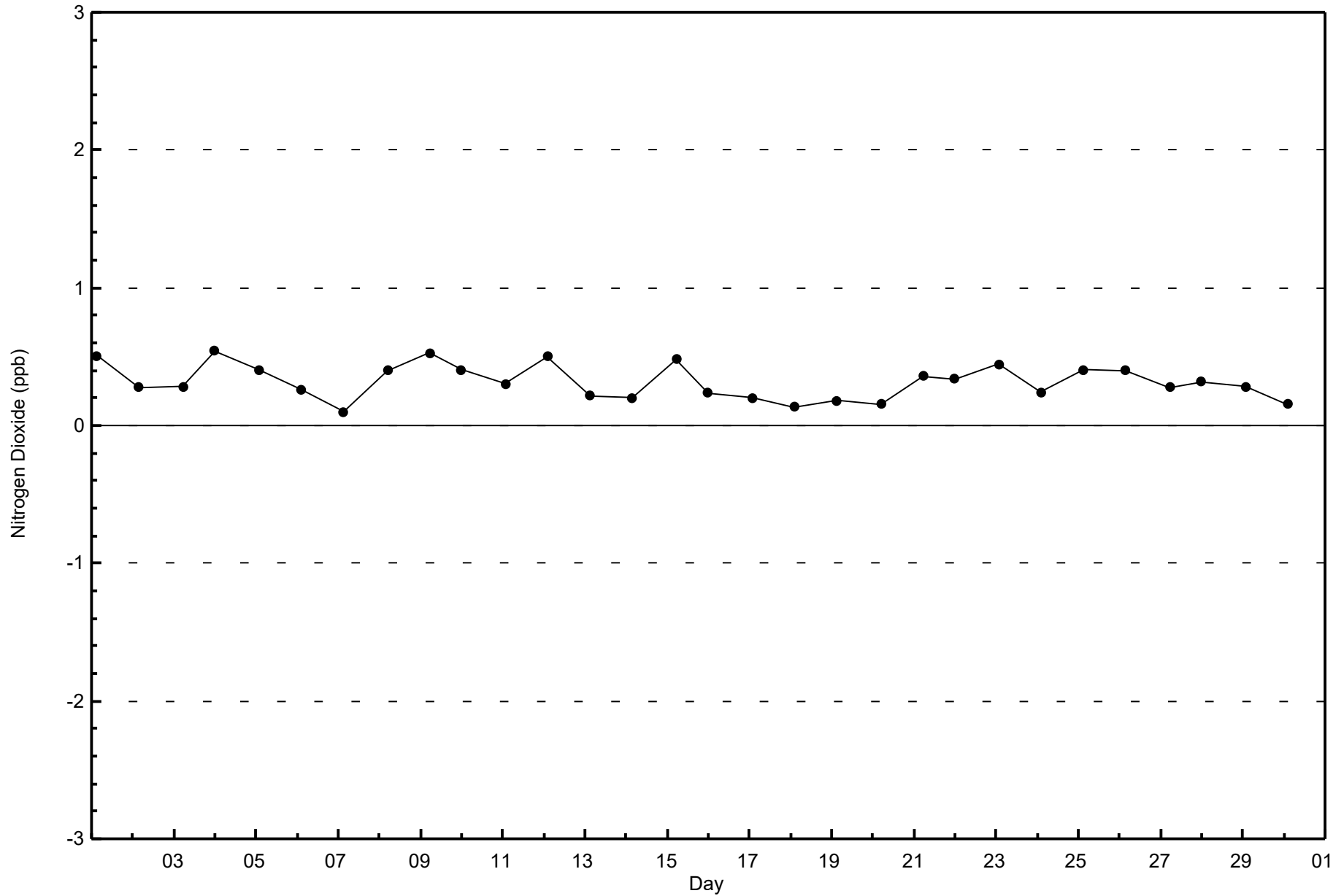
Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint





Wood Buffalo Environmental Association
Zero Responses

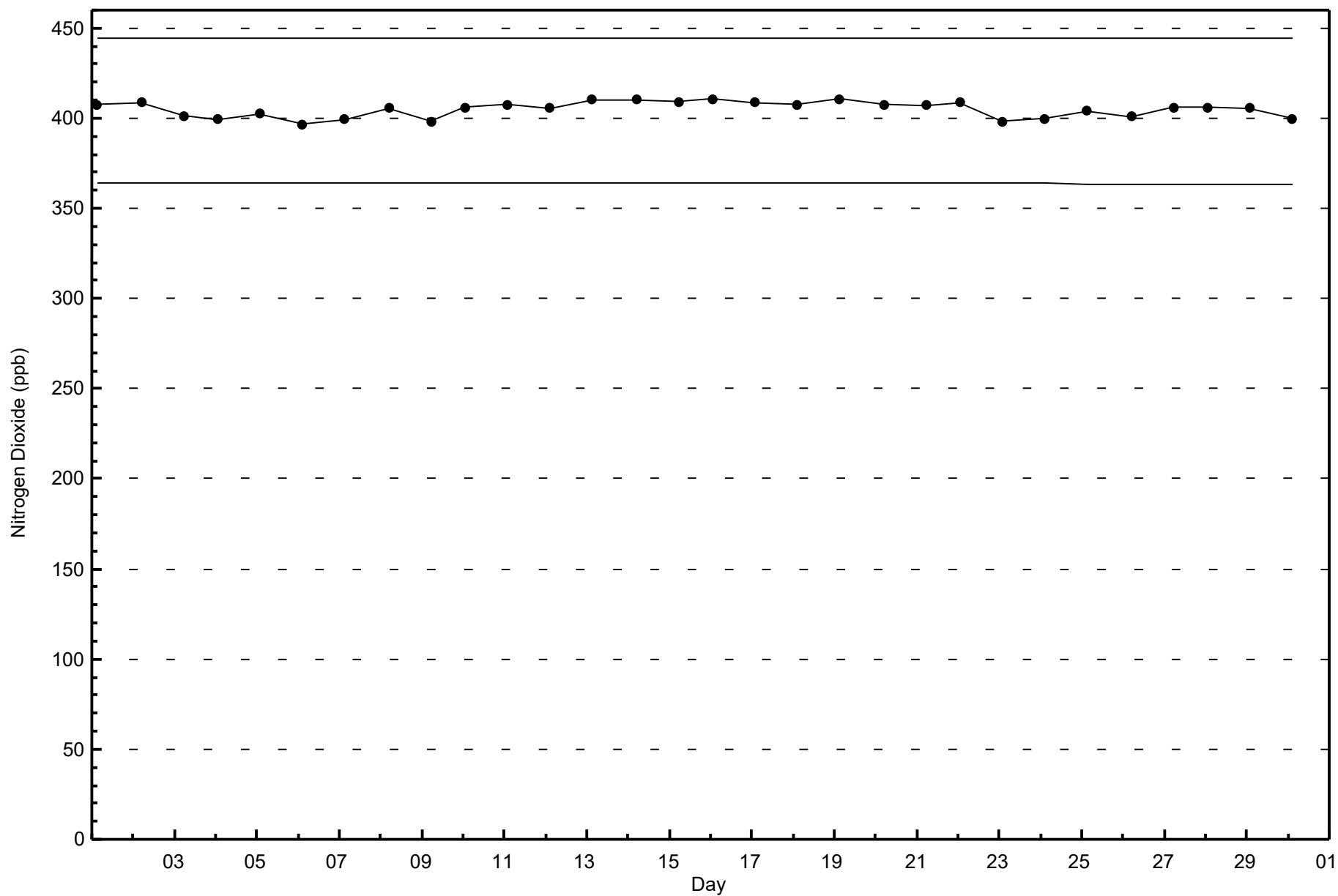
Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

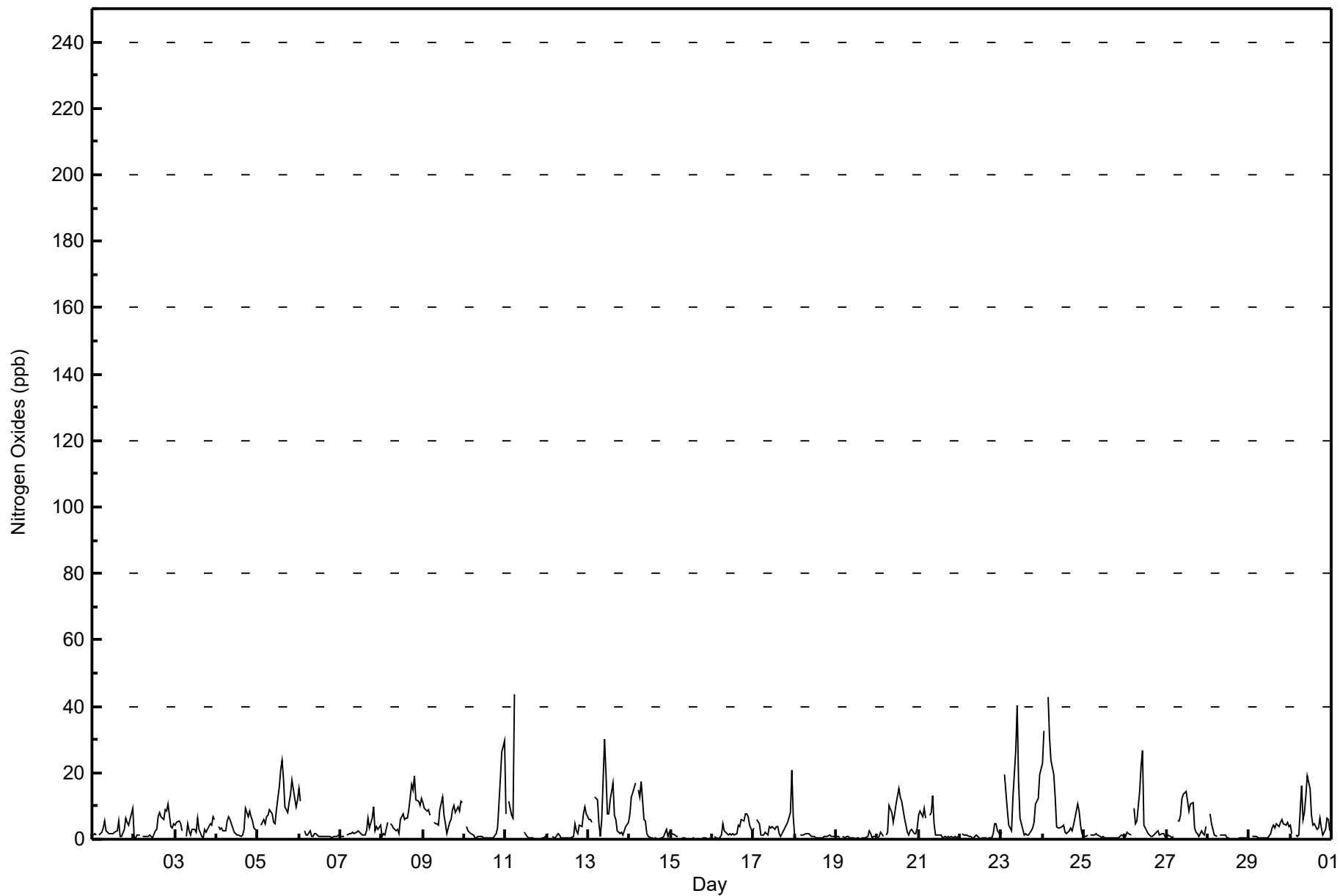
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 43.4 ppb on Apr 11 06:00 Maximum Daily Average: 10.8 ppb on Apr 24																				Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 28 14:00 Minimum Daily Average: 0.4 ppb on Apr 15 Maximum Diurnal Average: 5.9 ppb at hour 10 Minimum Diurnal Average: 2.8 ppb at hour 17 Monthly Average: 4.32 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 2.0 Q ₃ = 5.8 P ₉₀ = 11.0 P ₉₉ = 27.3																				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 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-Apr	1.4	1.6	1.1	Z	1.4	2.1	3.4	5.5	2.6	1.7	1.6	1.7	1.6	2.0	2.5	5.4	1.0	1.0	2.9	6.3	5.2	4.1	5.8	9.3	3.1	9.3	
2-Apr	0.6	0.5	1.2	1.2	Z	0.9	0.7	0.8	0.7	1.1	0.8	0.6	2.4	2.8	6.7	8.0	6.6	5.8	9.0	8.3	10.4	3.7	3.2	4.6	3.5	10.4	
3-Apr	4.1	4.9	5.3	4.7	2.6	Z	0.8	4.8	2.6	1.2	2.9	3.2	2.2	6.5	3.0	0.9	0.6	3.0	2.2	2.9	4.9	4.4	6.9	5.7	3.5	6.9	
4-Apr	Z	3.7	2.8	3.2	2.5	2.7	5.4	6.9	5.8	3.2	2.3	1.5	1.4	1.1	1.0	1.3	3.0	9.3	6.6	8.5	6.8	5.6	3.5	2.5	3.9	9.3	
5-Apr	2.1	Z	4.1	6.0	4.5	6.9	7.0	8.9	7.5	5.2	4.7	8.8	15.7	20.7	23.8	18.3	9.8	8.1	11.2	13.6	18.0	12.4	9.7	11.8	10.4	23.8	
6-Apr	15.4	11.3	Z	2.7	1.3	1.3	2.5	0.7	1.0	1.6	1.7	0.8	0.9	1.0	0.7	0.9	1.0	0.7	0.7	0.6	0.7	0.6	0.9	1.1	2.2	15.4	
7-Apr	0.8	0.6	0.8	Z	1.2	1.8	1.9	2.0	1.5	2.2	2.4	2.0	1.6	1.3	1.4	2.6	6.3	3.3	6.3	9.7	2.7	3.7	3.0	4.1	2.7	9.7	
8-Apr	1.0	1.6	1.2	4.9	Z	4.7	4.4	3.2	2.5	2.8	1.8	6.0	7.7	5.9	6.3	6.2	8.8	16.6	14.6	19.3	11.8	11.4	10.1	12.3	7.2	19.3	
9-Apr	11.0	9.4	8.4	8.9	7.3	Z	5.3	4.6	4.5	4.1	9.0	12.9	7.0	4.8	1.9	5.0	5.9	9.0	10.3	8.3	9.6	8.6	11.6	11.2	7.8	12.9	
10-Apr	Z	4.0	2.7	2.0	1.9	1.5	0.5	0.6	1.0	0.9	0.7	0.5	0.4	0.4	0.3	0.4	0.3	0.4	1.8	3.5	10.4	18.4	26.2	29.5	4.7	29.5	
11-Apr	7.4	Z	11.3	7.3	6.6	43.4	C	C	C	C	C	2.0	0.9	0.4	0.2	0.3	0.2	0.1	0.1	0.0	0.1	0.4	0.4	0.8	4.6	43.4	
12-Apr	1.2	1.6	Z	0.8	0.5	0.6	1.6	1.1	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.9	4.5	2.6	1.8	4.3	3.8	7.6	9.8	7.7	2.3	9.8	
13-Apr	6.0	6.0	5.2	Z	12.6	11.9	4.8	0.8	6.1	30.2	20.0	7.8	7.5	11.9	16.9	7.1	5.8	2.5	1.6	1.9	1.4	2.3	4.0	5.1	7.8	30.2	
14-Apr	7.7	12.8	13.8	17.1	Z	14.7	12.9	17.3	6.0	5.4	1.6	1.0	0.5	0.3	0.1	0.3	0.2	0.2	0.3	0.2	0.7	3.0	1.0	1.9	5.2	17.3	
15-Apr	1.6	1.6	1.2	0.8	0.9	Z	0.4	0.3	0.4	0.2	0.1	0.2	0.2	0.4	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.3	0.4	1.6	
16-Apr	Z	0.7	0.4	0.5	0.2	1.1	4.7	2.5	2.3	1.4	1.6	1.5	1.5	1.2	1.6	4.4	4.0	5.9	5.6	7.8	7.5	6.9	4.2	2.2	3.0	7.8	
17-Apr	3.5	Z	6.0	4.5	1.4	1.2	1.4	2.2	1.2	3.7	3.2	3.8	3.1	3.7	4.0	1.6	1.0	2.6	3.4	4.3	5.3	8.0	20.9	6.9	4.2	20.9	
18-Apr	0.8	0.4	Z	1.1	1.2	1.4	1.7	1.6	1.7	1.2	0.9	0.8	0.6	0.3	0.4	0.6	0.4	0.7	0.7	0.7	1.1	0.8	0.7	0.8	0.9	1.7	
19-Apr	0.8	0.6	0.5	Z	0.9	0.3	0.6	0.7	0.6	0.3	0.3	0.1	0.2	0.3	0.1	0.2	0.3	0.5	0.7	2.6	1.8	0.6	0.7	1.0	0.6	2.6	
20-Apr	0.4	0.8	2.3	0.7	Z	1.2	2.2	10.2	7.9	5.2	7.4	10.8	15.2	12.6	11.6	9.1	6.5	2.3	1.5	2.7	3.1	1.7	1.8	3.3	5.2	15.2	
21-Apr	7.2	8.3	7.0	9.3	6.4	Z	7.4	8.2	13.0	4.6	1.4	1.3	1.1	1.4	0.6	0.6	0.5	0.7	0.6	0.8	0.6	0.7	0.5	1.0	3.6	13.0	
22-Apr	Z	1.9	1.4	1.1	1.1	0.8	0.7	0.4	0.5	1.3	0.8	0.3	0.1	0.3	0.3	0.5	0.2	0.3	0.4	1.9	4.5	4.7	2.5	1.5	1.2	4.7	
23-Apr	2.2	Z	19.6	8.8	4.2	3.2	2.4	12.9	26.8	40.2	17.6	6.4	3.0	1.4	1.8	1.2	1.3	2.4	3.2	5.2	10.7	12.4	19.6	21.1	9.9	40.2	
24-Apr	22.7	32.7	Z	42.7	30.4	23.5	19.4	12.5	3.8	3.2	3.3	3.7	4.4	1.9	1.7	2.8	3.3	2.4	4.1	6.4	10.5	8.5	4.2	1.5	10.8	42.7	
25-Apr	0.7	0.9	1.1	Z	1.5	1.2	1.5	1.6	1.2	0.8	0.6	0.8	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.9	1.4	0.9	0.8	1.6	
26-Apr	1.0	1.9	1.7	1.4	Z	9.4	4.6	5.7	14.3	22.2	26.8	4.4	2.7	1.6	1.3	0.9	0.8	1.6	2.1	2.7	1.2	1.7	1.6	0.8	4.9	26.8	
27-Apr	0.5	1.4	0.7	0.5	0.7	Z	5.4	5.5	7.1	12.2	13.4	14.4	11.4	8.6	10.6	11.1	3.6	2.3	1.5	1.0	2.5	1.6	1.4	4.0	5.3	14.4	
28-Apr	Z	7.6	4.8	2.8	1.1	0.8	M	1.4	1.4	1.5	1.2	0.3	0.3	0.0	0.2	0.1	0.2	0.1	0.3	0.5	0.6	0.4	0.2	0.4	1.2	7.6	
29-Apr	0.5	Z	0.9	0.8	0.7	0.4	0.3	0.3	0.3	0.3	0.4	0.5	1.7	3.5	4.4	3.5	4.8	3.9	5.0	5.7	4.7	4.2	5.0	4.0	2.4	5.7	
30-Apr	4.3	1.5	Z	1.3	1.0	1.2	16.1	5.9	8.2	13.3	19.0	15.3	7.4	4.4	4.7	2.8	3.5	6.5	3.5	1.3	2.9	6.4	5.8	2.7	6.0	19.0	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	667	97.51	97.51
21 - 40	15	2.19	99.71
41 - 80	2	0.29	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
Buffalo Viewpoint - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	103	43	16	10	5	44	70	87	50	29	12	26	50	35	38	46	664
21 - 40	6	1	0	0	0	0	2	1	1	0	0	0	1	0	1	2	15
11 - 80	0	0	0	0	0	0	0	0	1	0	0	0	0	1	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	109	44	16	10	5	44	72	88	52	29	12	26	51	36	39	48	681

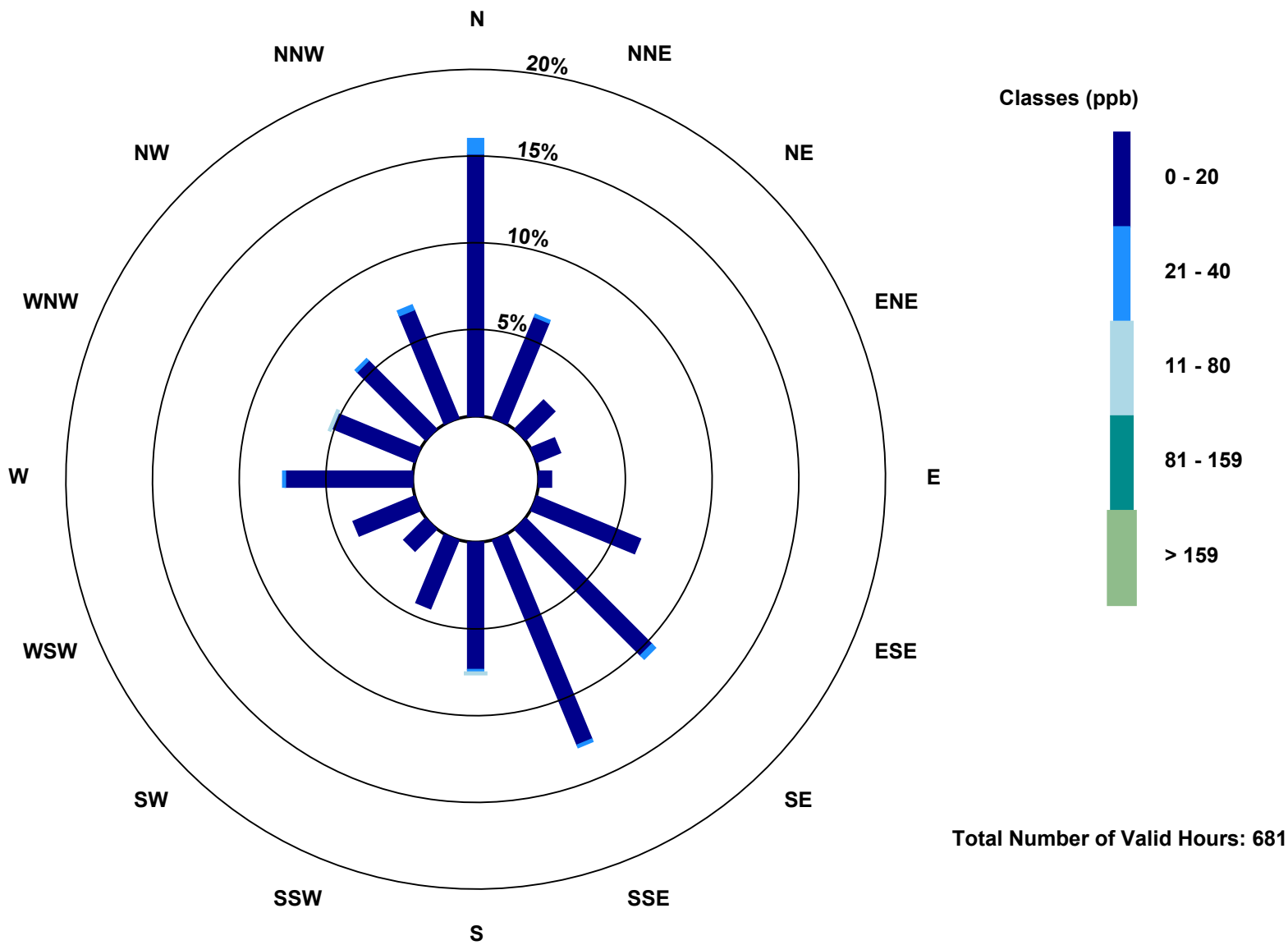
Total Number of Valid Hours: 681

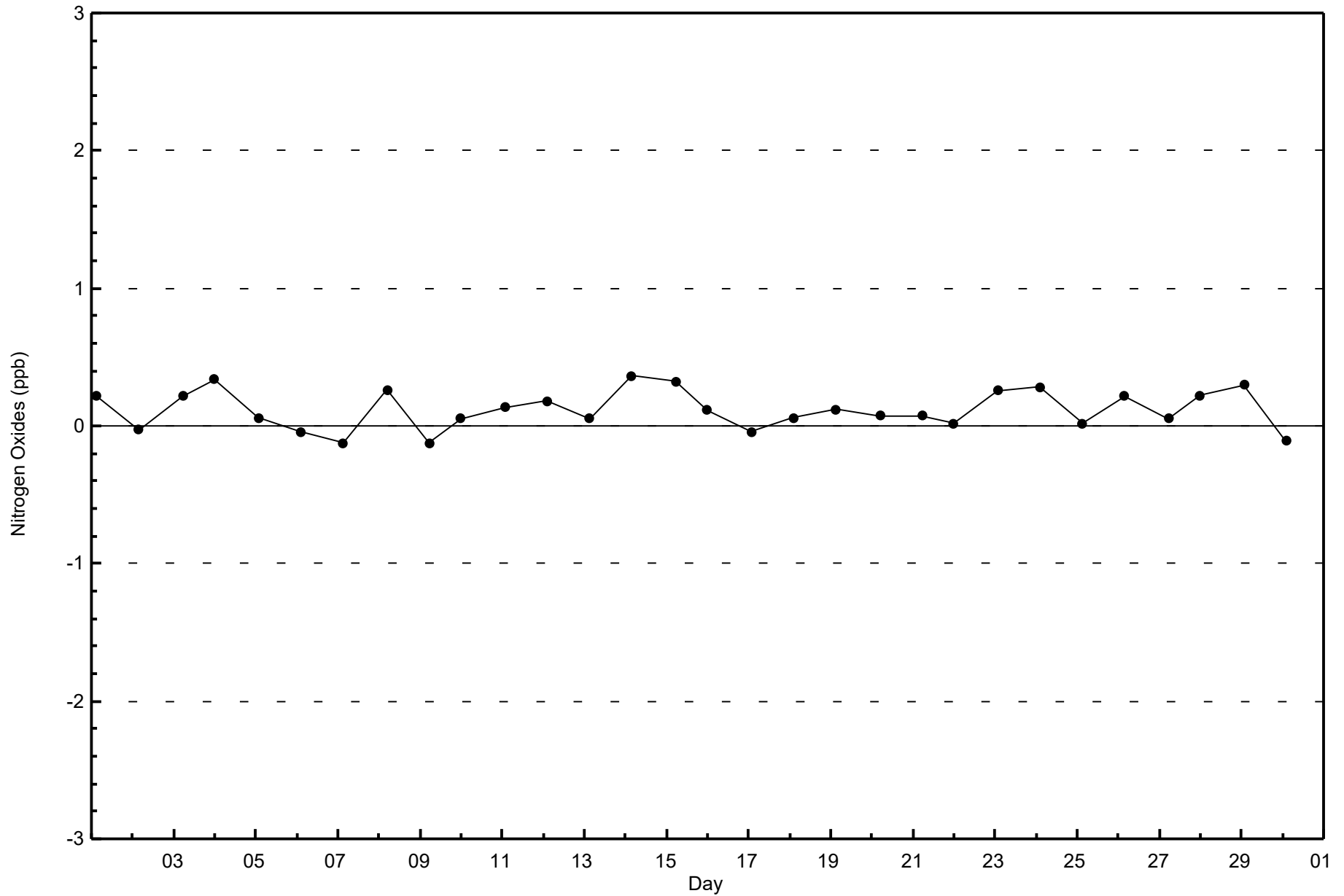
Total Number of Hours: 720

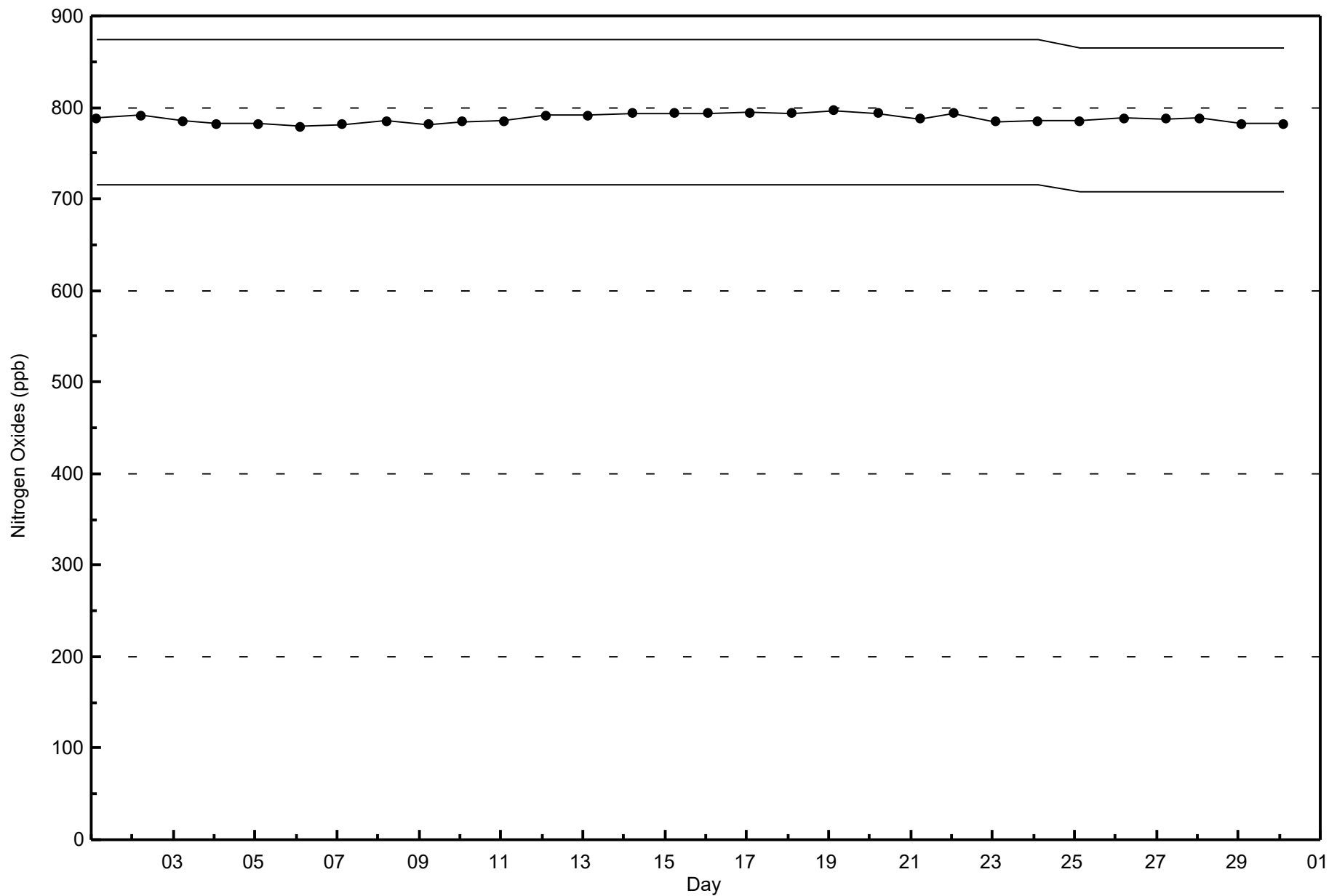


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint





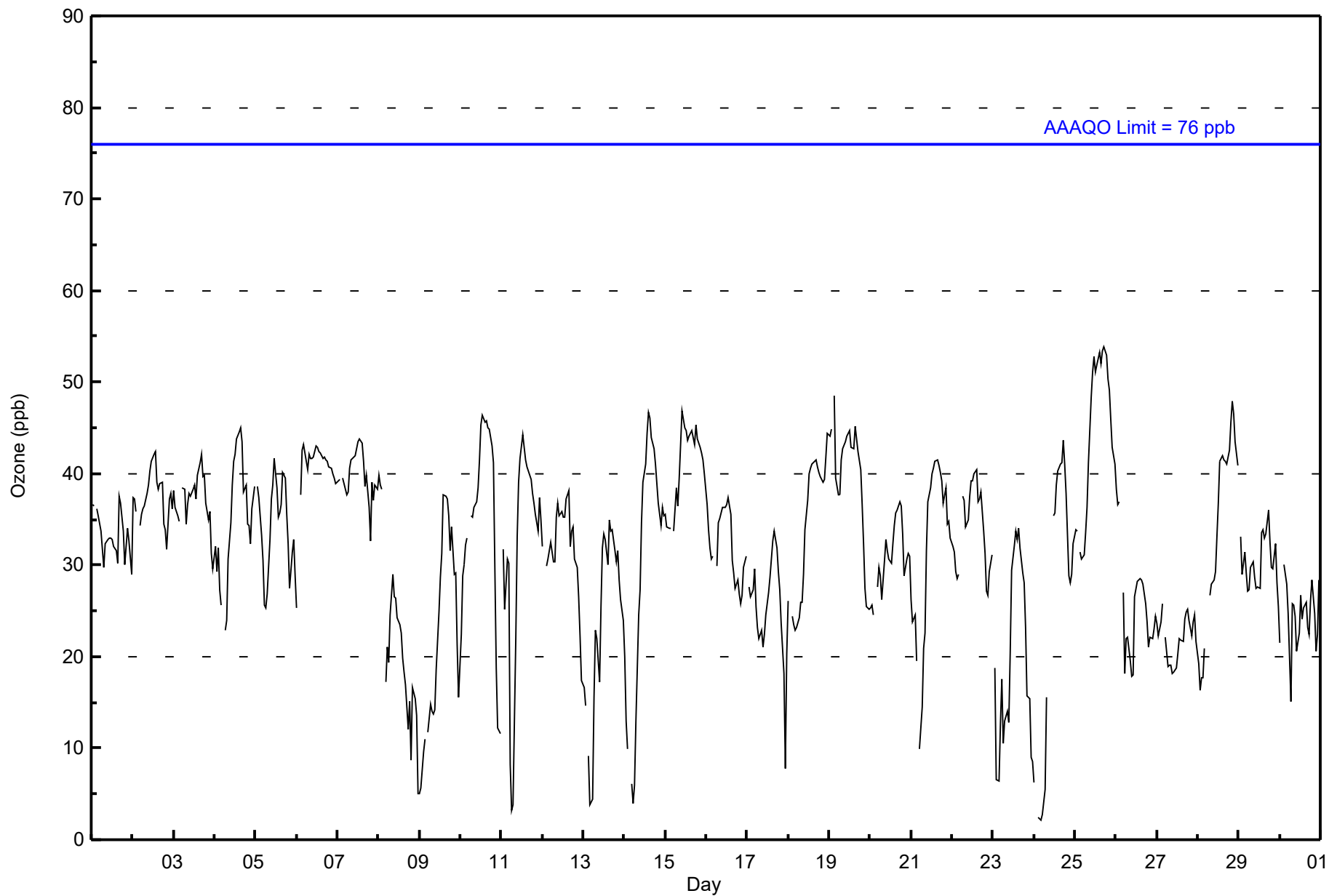


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 53.9 ppb on Apr 25 18:00 Maximum Daily Average: 44.4 ppb on Apr 25																				Hours in Service: 720 Hours of Data: 686						
Minimum Value: 2.1 ppb on Apr 24 05:00 Minimum Daily Average: 19.8 ppb on Apr 23 Maximum Diurnal Average: 37.4 ppb at hour 15 Minimum Diurnal Average: 23.9 ppb at hour 6 Monthly Average: 31.64 ppb Percentiles: P ₁ = 3.9 P ₁₀ = 18.2 Q ₁ = 25.8 Median = 33.0 Q ₃ = 38.8 P ₉₀ = 42.6 P ₉₉ = 51.3																				Hours of Missing Data: 34 Hours of Calibration: 33 Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	36.5	36.5	Z	36.1	35.4	33.7	31.7	29.7	32.3	32.8	33.0	33.0	32.8	32.0	31.6	30.2	37.6	36.8	33.6	30.1	32.0	34.0	32.7	28.9	33.2	37.6
2-Apr	37.4	37.2	35.9	Z	34.3	35.5	36.2	36.5	37.8	38.7	40.2	41.4	42.0	42.4	39.1	38.3	39.0	39.0	34.5	33.8	31.7	37.2	37.9	36.2	37.5	42.4
3-Apr	38.1	36.3	35.4	34.8	Z	38.4	38.2	34.5	36.6	37.8	37.5	38.3	38.7	37.2	39.7	41.3	42.0	39.6	39.8	36.7	34.9	35.8	31.2	29.6	37.1	42.0
4-Apr	32.0	29.4	31.9	27.3	25.6	Z	22.8	24.0	30.6	34.6	38.7	41.3	42.1	43.7	44.5	44.9	43.5	38.0	38.7	34.5	34.4	32.3	36.2	38.6	35.2	44.9
5-Apr	Z	38.5	37.4	33.3	30.6	25.7	25.3	26.8	32.8	37.1	38.8	41.6	38.5	35.2	35.6	36.6	40.1	39.5	35.5	32.4	27.5	31.5	32.7	28.9	34.0	41.6
6-Apr	25.3	Z	37.6	42.5	43.2	42.2	40.4	42.1	41.7	41.7	41.8	43.0	42.8	42.4	42.3	41.7	41.8	41.4	41.3	40.7	40.6	40.0	39.5	38.8	40.6	43.2
7-Apr	39.2	39.3	Z	39.4	38.8	37.7	38.0	40.5	41.4	41.8	42.0	42.7	43.5	43.7	43.3	41.3	38.6	39.9	36.3	32.7	39.0	37.1	38.7	38.2	39.7	43.7
8-Apr	39.9	38.7	38.3	Z	17.3	21.0	19.4	24.6	29.0	26.5	26.3	24.3	23.6	22.5	19.8	18.3	17.0	12.1	15.1	8.7	16.7	15.4	13.5	5.0	21.4	39.9
9-Apr	5.1	5.7	9.6	11.0	Z	11.8	14.8	14.0	13.8	14.1	18.7	24.8	28.7	31.3	37.7	37.5	37.2	35.4	31.6	34.2	29.0	29.2	21.3	15.5	22.2	37.7
10-Apr	22.5	28.8	30.1	32.2	33.0	Z	35.4	35.2	36.3	36.8	38.4	41.4	45.4	46.4	45.6	45.7	45.1	44.8	43.0	41.3	29.8	18.8	12.3	11.7	34.8	46.4
11-Apr	Z	31.7	25.2	30.6	30.2	8.2	3.3	3.9	21.9	33.2	39.0	41.7	44.2	42.8	41.5	40.8	40.3	39.4	37.9	36.8	35.5	33.8	37.4	35.0	31.9	44.2
12-Apr	32.0	Z	29.9	30.6	31.6	32.4	30.4	30.4	35.2	36.8	35.4	35.9	35.2	35.2	37.2	38.1	32.0	33.7	34.2	30.7	29.7	26.5	22.2	17.4	31.9	38.1
13-Apr	16.6	14.6	Z	9.2	3.8	4.4	15.6	22.8	22.0	17.2	25.5	31.9	33.4	32.8	30.1	34.9	33.7	33.8	31.6	30.3	31.6	28.4	26.2	24.0	24.1	34.9
14-Apr	20.0	13.0	9.8	Z	6.1	3.9	6.0	12.9	24.5	27.3	34.6	39.1	41.0	44.3	46.7	46.1	43.9	42.7	41.0	38.8	36.7	34.3	36.3	35.4	29.8	46.7
15-Apr	35.5	34.1	34.0	34.0	Z	33.7	38.5	36.5	39.6	43.1	46.8	45.1	44.6	43.6	44.1	44.7	43.9	43.2	45.3	43.8	42.9	42.2	41.5	39.9	40.9	46.8
16-Apr	36.6	33.9	31.9	30.6	30.9	Z	29.9	34.7	35.1	36.4	36.3	36.3	36.6	37.3	35.6	30.6	29.2	27.4	28.4	26.8	25.8	26.7	29.8	31.0	32.1	37.3
17-Apr	Z	27.6	26.5	27.3	29.7	25.5	23.2	22.0	22.8	21.0	22.4	24.6	27.0	28.6	30.6	32.7	33.7	31.9	29.3	27.4	23.7	18.2	7.8	20.4	25.4	33.7
18-Apr	26.1	Z	24.4	23.5	22.9	23.2	24.3	25.9	25.9	29.0	33.9	37.1	39.9	40.6	41.0	41.3	41.6	40.8	40.2	39.7	39.1	39.4	41.8	44.3	34.2	44.3
19-Apr	44.1	44.8	Z	48.5	39.5	37.6	37.7	41.5	42.8	43.5	44.1	44.4	44.7	42.8	42.7	45.1	43.8	42.5	40.5	36.6	32.3	27.4	25.5	25.2	39.9	48.5
20-Apr	25.3	25.7	24.6	Z	27.6	29.7	28.8	26.2	30.6	32.8	31.6	30.7	30.2	32.3	34.3	35.6	36.0	36.9	36.4	33.4	28.8	30.7	31.3	31.0	30.9	36.9
21-Apr	26.2	23.7	24.5	19.5	Z	9.9	14.5	20.9	22.6	31.6	36.9	38.4	40.0	40.5	41.3	41.4	40.8	40.2	39.3	36.8	38.4	34.5	34.8	33.0	31.7	41.4
22-Apr	32.0	31.4	29.2	28.5	29.1	Z	37.6	37.1	34.1	34.9	37.5	39.1	39.1	39.9	40.5	37.0	37.2	37.9	33.6	31.2	27.2	26.7	29.3	31.1	34.0	40.5
23-Apr	Z	18.8	6.6	6.4	12.7	17.5	10.6	13.0	14.0	12.8	20.5	29.5	32.2	33.8	32.7	34.0	31.9	29.2	28.1	23.3	15.8	15.4	9.1	8.5	19.8	34.0
24-Apr	6.2	Z	2.5	2.3	2.1	2.8	5.5	15.5	C	C	C	35.4	35.7	38.7	40.2	41.1	41.1	43.7	41.0	37.8	28.9	28.0	29.0	32.4	25.5	43.7
25-Apr	33.9	33.7	Z	31.4	30.7	31.1	33.5	36.2	41.2	48.4	51.2	52.8	51.1	51.8	53.2	52.0	53.4	53.9	52.9	50.3	49.2	45.9	42.9	41.0	44.4	53.9
26-Apr	38.3	36.6	37.0	Z	26.9	18.2	21.9	22.2	19.5	17.9	18.0	26.5	28.2	28.4	28.5	28.4	27.9	25.7	23.8	21.0	22.1	21.9	23.1	24.4	25.5	38.3
27-Apr	23.7	22.3	23.7	25.8	Z	22.2	18.9	19.0	19.1	18.2	18.4	18.8	20.3	21.9	21.9	21.6	24.2	24.9	25.1	24.0	22.3	23.8	24.5	21.6	22.0	25.8
28-Apr	19.2	16.2	17.6	17.7	20.8	Z	M	26.7	27.9	28.3	29.4	33.2	36.8	41.4	41.9	41.5	41.4	41.0	42.5	45.6	47.9	46.6	43.5	40.9	34.0	47.9
29-Apr	Z	33.1	29.0	31.4	29.2	27.1	27.4	29.8	30.3	28.6	27.5	27.6	27.4	33.5	33.8	33.0	33.3	36.0	32.5	29.8	29.7	32.3	28.1	25.4	30.3	36.0
30-Apr	21.5	Z	30.0	29.0	27.9	24.7	15.2	25.7	25.6	24.4	20.6	22.5	26.7	24.1	25.4	25.9	23.2	22.5	26.1	28.4	24.7	20.7	22.4	28.3	24.6	30.0
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Buffalo Viewpoint - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	87	12.68	12.68
21 - 50	590	86.01	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 (O₃) - ppb
Buffalo Viewpoint - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	6	5	0	0	3	10	17	6	4	0	0	2	4	5	10	86
21 - 50	96	38	12	9	4	41	66	70	44	18	9	26	51	32	35	37	588
51 - 82	0	0	0	0	0	0	0	0	2	6	1	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	110	44	17	9	4	44	76	87	52	28	10	26	53	36	40	47	683

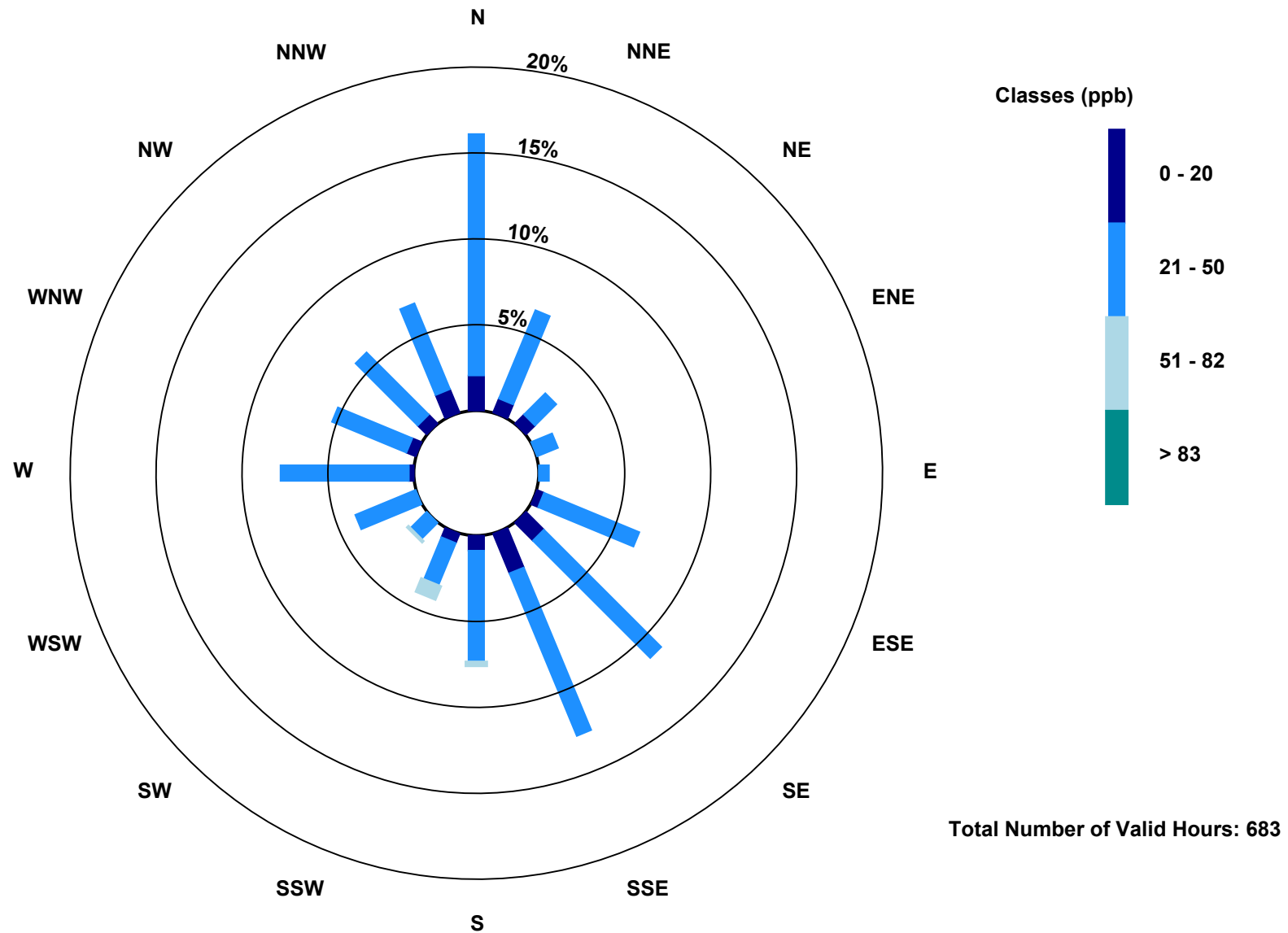
Total Number of Valid Hours: 683

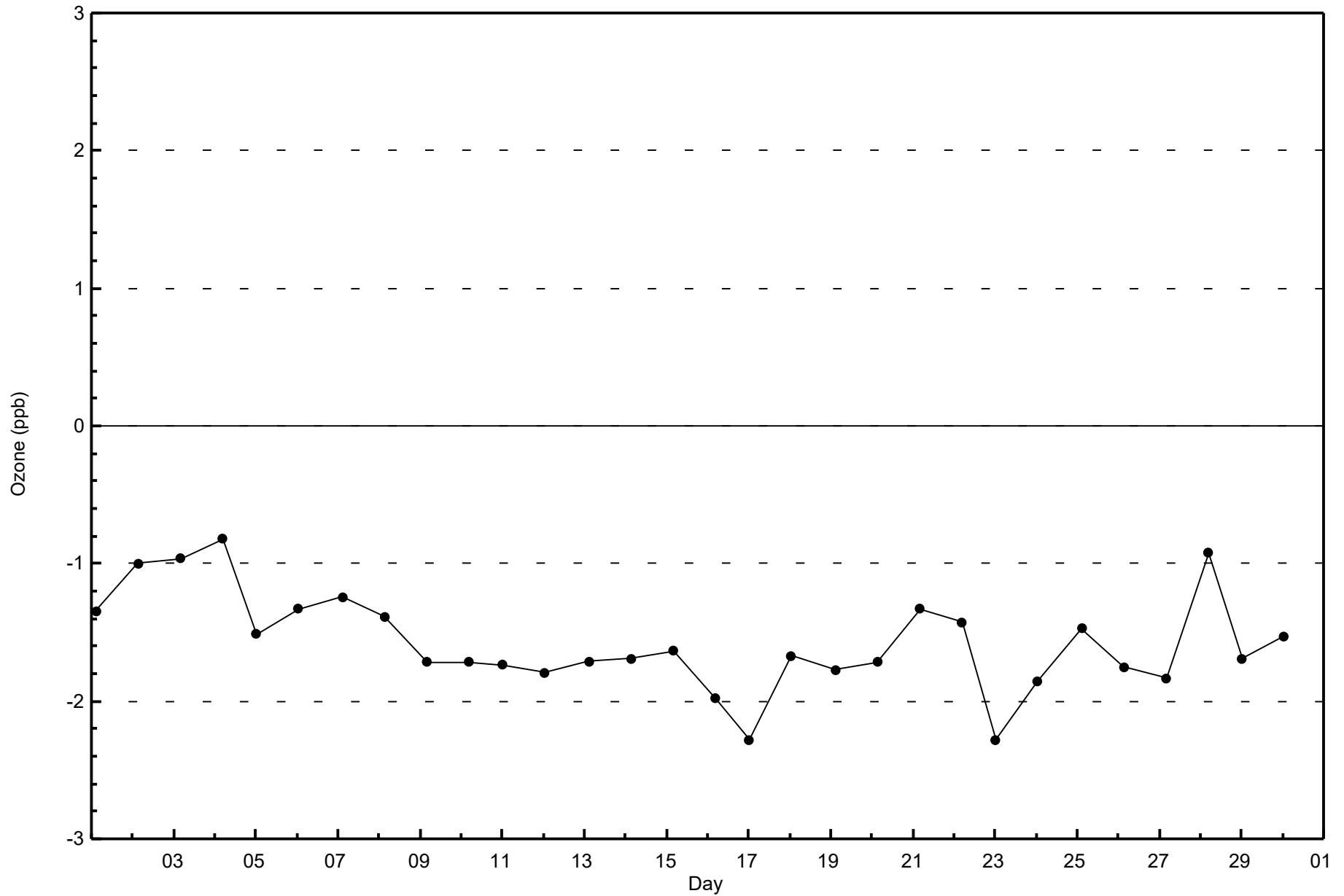
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ozone (O_3) - ppb
Buffalo Viewpoint

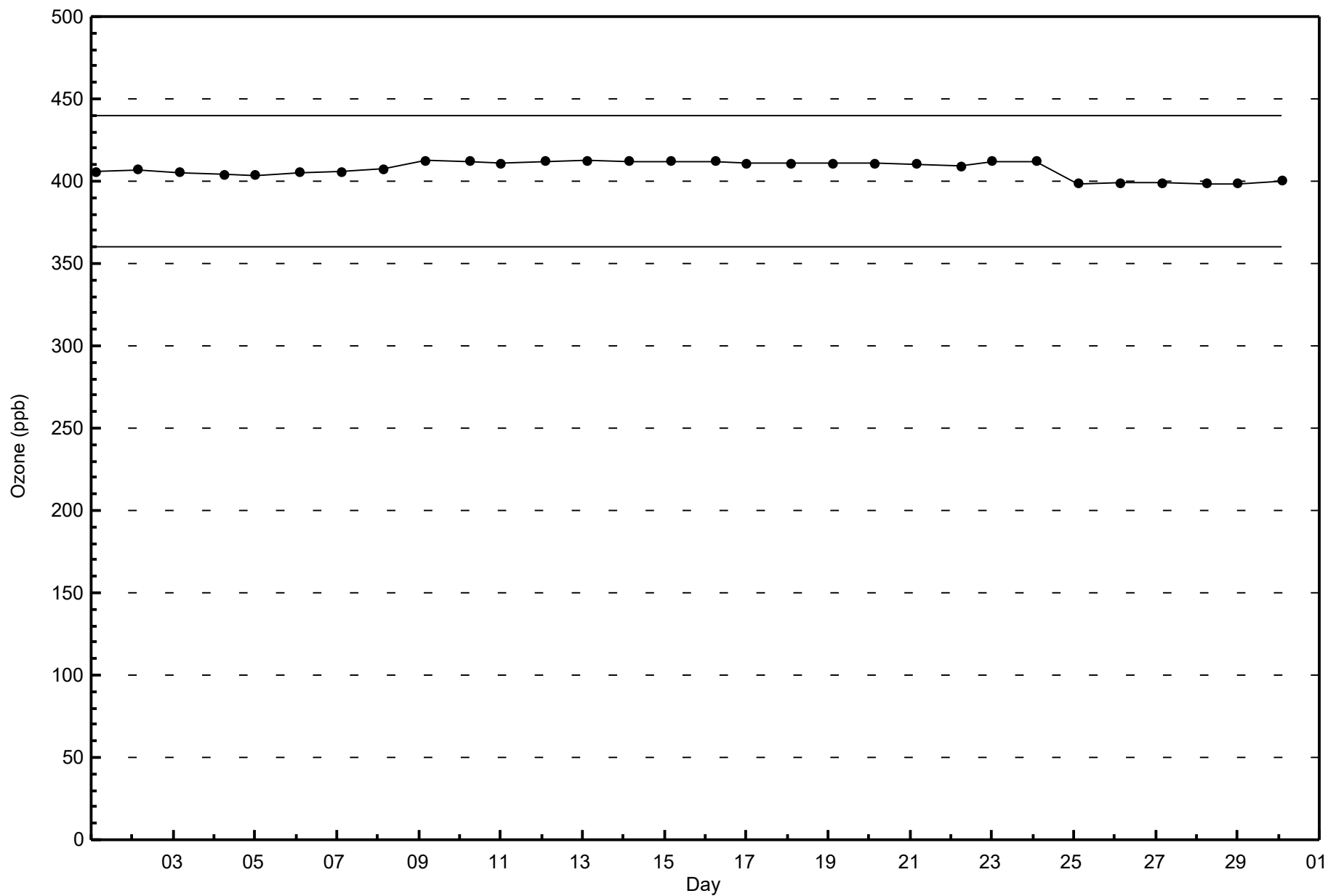






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Buffalo Viewpoint - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

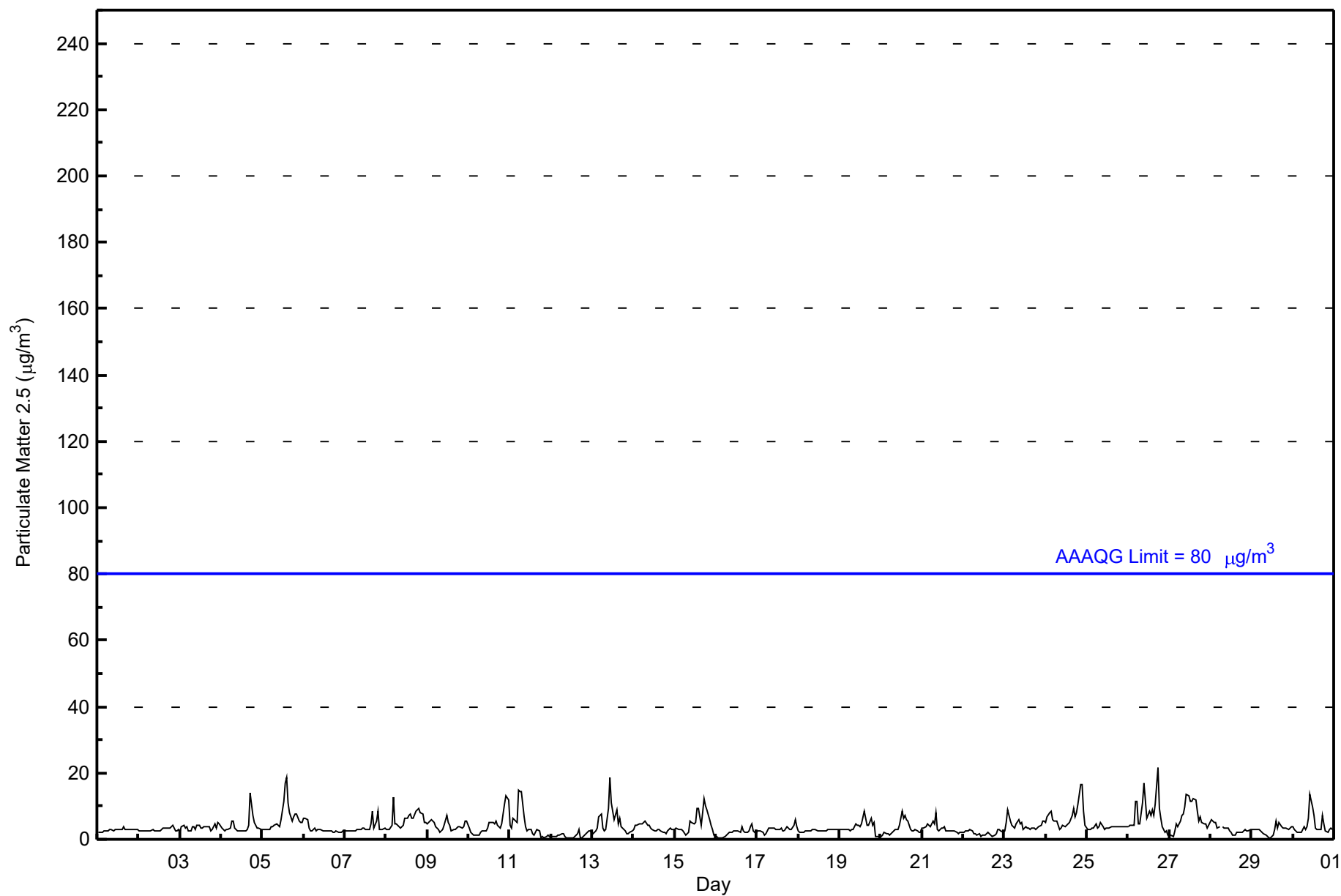
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 21.6 µg/m³ on Apr 26 18:00 Maximum Daily Average: 7.7 µg/m³ on Apr 26																				Hours in Service: 720 Hours of Data: 719						
Minimum Value: 0.3 µg/m³ on Apr 16 03:00 Maximum Diurnal Average: 4.9 µg/m³ at hour 15 Monthly Average: 3.97 µg/m³																				Hours of Missing Data: 1 Hours of Calibration: 1 Percent Operational Time: 100.0						
Minimum Daily Average: 1.2 µg/m³ on Apr 12 Minimum Diurnal Average: 3.0 µg/m³ at hour 1 Percentiles: P ₁ = 0.5 P ₁₀ = 1.6 Q ₁ = 2.5 Median = 3.1 Q ₃ = 4.6 P ₉₀ = 7.2 P ₉₉ = 14.8																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.0	2.2	2.0	2.2	2.4	2.6	2.7	3.0	2.9	2.7	2.9	2.8	2.9	2.9	3.0	3.9	3.2	3.1	2.8	2.9	2.9	2.9	2.9	2.9	2.8	3.9
2-Apr	2.7	2.7	2.6	2.6	2.5	2.7	2.6	2.7	2.8	2.6	2.4	2.4	2.5	3.0	3.5	3.4	3.4	3.2	3.5	3.7	4.4	2.4	2.4	2.8	2.9	4.4
3-Apr	2.3	3.6	4.2	3.3	3.6	2.5	2.5	3.8	3.8	3.1	4.0	4.2	3.3	3.5	4.0	3.9	4.0	3.6	2.6	3.0	4.7	3.2	5.1	4.8	3.6	5.1
4-Apr	3.4	3.1	2.3	2.9	2.8	3.3	5.3	5.6	3.2	2.7	2.5	2.5	2.5	2.5	2.4	2.9	4.4	13.9	7.2	5.0	4.2	3.5	3.5	3.1	3.9	13.9
5-Apr	2.9	2.9	2.9	3.0	3.1	3.7	3.7	4.3	4.7	4.0	3.9	6.0	11.5	17.0	18.8	11.1	7.9	5.6	6.9	7.6	7.5	5.6	5.1	5.1	6.5	18.8
6-Apr	6.4	6.3	6.0	3.3	2.7	2.5	3.4	2.6	2.8	2.8	3.1	2.4	2.5	2.5	2.5	2.7	2.4	2.2	2.3	2.4	2.3	2.1	2.3	2.4	3.0	6.4
7-Apr	2.3	2.3	2.4	2.5	2.7	2.7	2.7	2.9	2.9	2.9	3.4	3.3	3.1	3.1	3.0	4.6	8.4	3.5	5.7	8.3	3.1	3.1	3.0	3.3	3.6	8.4
8-Apr	2.8	3.1	3.0	4.2	12.7	4.9	4.5	4.1	3.6	3.8	4.4	6.4	6.3	7.4	7.7	6.5	6.2	8.3	9.0	9.4	7.9	7.6	5.1	4.9	6.0	12.7
9-Apr	4.6	5.1	5.8	5.4	5.0	3.9	2.8	2.3	2.4	3.0	4.4	7.1	5.3	4.3	2.7	2.9	2.8	3.4	3.9	3.9	3.5	4.0	5.7	5.5	4.2	7.1
10-Apr	3.2	2.1	1.9	1.5	1.3	1.4	1.4	2.0	2.6	2.7	2.5	3.2	5.1	5.1	5.2	4.8	5.3	4.3	3.5	4.5	7.6	10.7	13.1	11.7	4.5	13.1
11-Apr	4.4	3.2	6.3	5.6	5.0	14.9	14.3	14.3	6.7	3.7	2.6	3.0	2.9	1.9	1.4	2.3	2.9	2.6	0.6	0.7	0.6	0.9	1.1	1.0	4.3	14.9
12-Apr	1.0	0.8	0.8	0.8	1.1	1.4	1.7	1.6	0.7	0.4	0.5	0.5	0.3	0.5	0.9	1.5	2.9	0.6	0.5	1.0	1.6	2.0	2.6	2.3	1.2	2.9
13-Apr	1.6	2.2	2.5	3.4	6.6	7.4	3.6	2.7	2.9	9.2	18.5	10.8	8.3	5.8	9.0	4.7	6.2	3.8	2.9	2.4	1.5	1.8	2.2	2.6	5.1	18.5
14-Apr	3.2	4.2	4.4	4.7	4.7	4.8	5.0	5.7	4.3	4.1	3.2	2.8	2.6	2.7	2.9	2.9	2.5	2.2	2.0	1.9	2.6	3.2	2.9	3.0	3.4	5.7
15-Apr	3.2	3.2	3.0	2.8	2.8	2.7	1.3	1.5	2.0	5.5	5.1	4.7	5.1	9.4	9.3	4.4	7.8	12.4	10.1	8.7	5.8	4.4	2.9	1.5	5.0	12.4
16-Apr	0.8	0.6	0.3	0.3	0.4	0.8	1.2	1.6	1.9	2.1	2.4	2.5	2.4	2.7	2.3	3.9	2.8	2.1	1.9	2.6	4.0	4.7	2.4	1.9	2.0	4.7
17-Apr	2.4	2.6	2.4	1.9	1.3	1.9	2.6	3.2	3.5	3.5	3.5	3.1	3.1	3.1	3.2	2.6	2.5	3.7	3.2	3.0	3.1	4.4	5.9	3.6	3.1	5.9
18-Apr	2.3	2.1	2.2	2.2	2.4	2.5	2.5	2.7	2.9	2.9	2.8	2.6	2.5	2.5	2.6	2.6	2.7	2.8	3.0	3.1	3.1	3.0	2.9	2.9	2.7	3.1
19-Apr	3.2	3.0	3.0	2.9	3.2	2.8	2.6	2.8	2.8	4.8	4.1	4.1	3.7	4.6	8.3	6.5	4.4	4.0	6.2	4.2	5.3	0.7	0.7	1.0	3.7	8.3
20-Apr	1.0	1.2	2.0	1.6	1.6	1.4	1.6	2.1	3.0	3.1	2.9	4.3	8.4	6.2	7.0	5.8	5.3	2.8	2.4	2.3	2.9	2.6	2.0	2.3	3.2	8.4
21-Apr	3.3	3.4	3.9	4.8	4.2	3.8	5.7	4.7	8.2	3.1	2.5	3.4	3.4	4.0	2.6	2.4	2.5	2.5	2.6	2.5	2.2	1.9	2.0	2.1	3.4	8.2
22-Apr	2.3	2.6	2.5	2.6	2.8	2.7	1.9	1.5	1.4	1.5	1.1	1.3	1.5	1.3	2.1	1.8	1.2	1.0	1.2	1.9	2.8	2.9	2.4	2.2	1.9	2.9
23-Apr	2.5	5.0	8.8	5.4	4.4	4.0	3.3	4.7	6.1	4.6	5.1	3.2	3.9	3.5	3.3	3.1	3.6	3.5	3.0	3.4	3.9	4.4	5.3	5.4	4.3	8.8
24-Apr	5.1	6.6	8.0	8.3	5.8	5.6	5.3	4.2	2.9	3.4	4.1	3.8	4.4	4.5	4.9	7.3	9.2	6.8	8.3	10.6	16.4	16.5	8.3	4.1	6.8	16.5
25-Apr	2.8	2.8	3.0	3.3	3.4	4.6	3.6	4.0	5.1	3.7	3.2	3.3	3.3	3.6	3.8	4.0	3.9	3.7	3.7	3.6	3.7	3.7	3.7	4.0	3.6	5.1
26-Apr	4.0	4.3	4.3	4.4	11.6	11.6	4.8	4.7	11.2	17.0	11.9	6.2	8.4	7.2	9.1	7.0	10.4	21.6	9.1	6.2	3.8	2.3	2.6	1.3	7.7	21.6
27-Apr	1.4	1.2	1.0	2.5	4.5	3.7	5.4	7.0	7.5	9.7	13.7	13.3	11.3	11.3	12.1	12.0	8.4	5.4	7.0	5.0	4.8	4.8	3.5	4.1	6.7	13.7
28-Apr	5.8	5.5	5.2	5.2	3.2	3.8	C	4.0	3.2	3.5	3.4	2.5	2.2	1.3	1.4	2.0	2.1	2.2	2.3	2.5	2.8	2.7	2.7	2.8	3.1	5.8
29-Apr	2.9	3.0	2.9	3.0	2.8	2.5	2.1	1.6	1.2	0.8	0.5	0.5	1.3	3.1	5.3	3.4	5.2	3.9	3.4	3.5	3.3	3.1	3.3	3.7	2.8	5.3
30-Apr	3.7	3.0	2.2	2.1	2.0	2.0	3.9	3.1	4.0	6.3	13.5	9.7	7.1	3.3	3.1	3.1	3.1	7.0	4.9	2.4	2.0	3.0	3.3	2.9	4.2	13.5
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	599	83.31	83.31
6 - 15	113	15.72	99.03
16 - 25	7	0.97	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Buffalo Viewpoint - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	75	33	14	8	5	34	65	82	53	30	11	27	49	29	39	42	596
6 - 15	34	11	3	2	0	12	10	13	3	0	1	1	6	7	4	6	113
16 - 25	4	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	113	45	17	10	5	46	77	95	56	30	12	28	55	36	43	48	716

Total Number of Valid Hours: 716

Total Number of Hours: 720



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

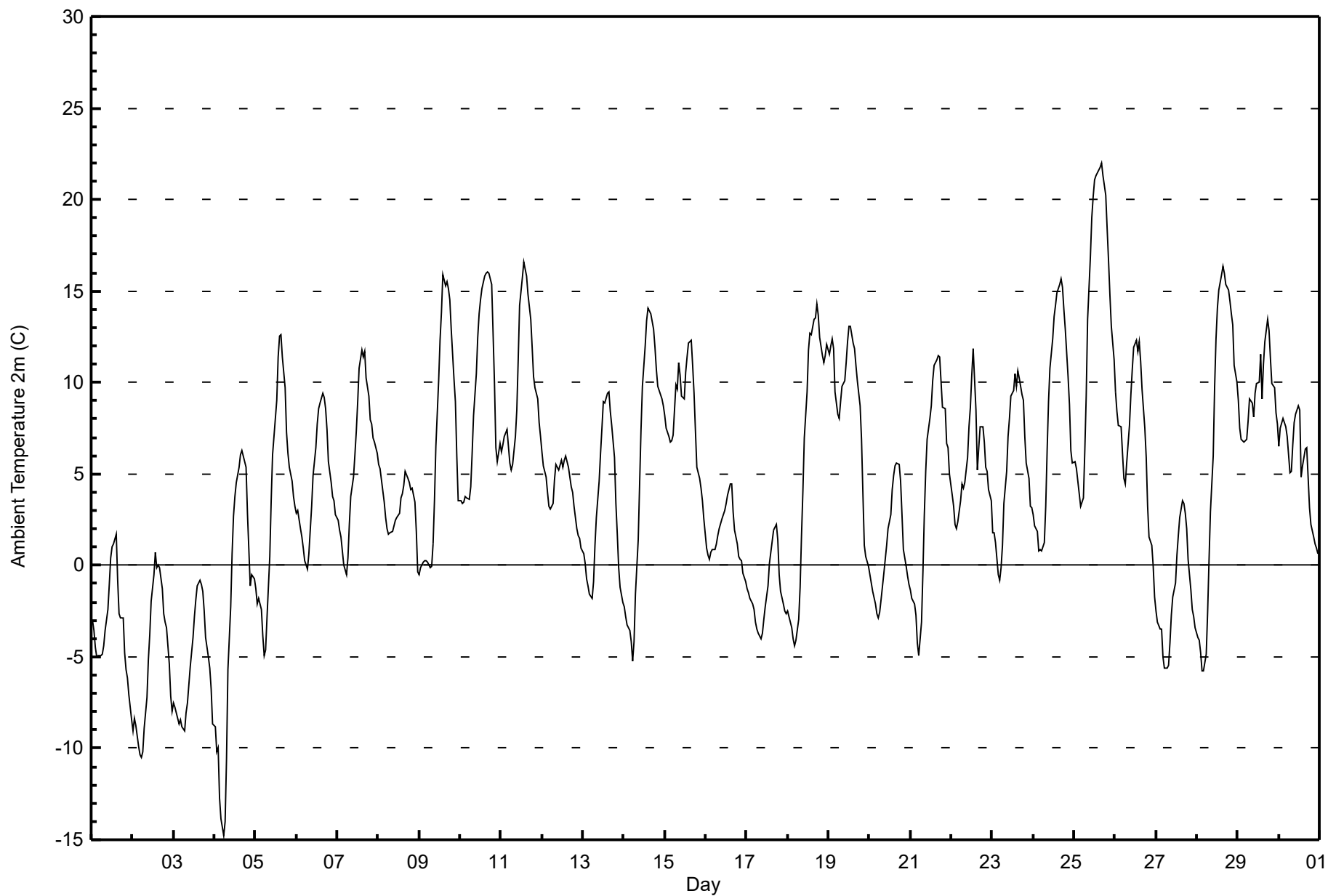


Maximum Value: 22.0 C on Apr 25 17:00																				Maximum Daily Average: 14.0 C on Apr 25					Hours in Service: 720				
Minimum Value: -14.8 C on Apr 4 06:00																				Minimum Daily Average: -5.5 C on Apr 3					Hours of Data: 720				
Maximum Diurnal Average: 9.3 C at hour 16																				Minimum Diurnal Average: -0.7 C at hour 6					Hours of Missing Data: 0				
Monthly Average: 4.34 C																				Percentiles: P ₁ = -10.2 P ₁₀ = -3.9 Q ₁ = -0.1 Median = 4.4 Q ₃ = 9.0 P ₉₀ = 12.6 P ₉₉ = 20.0					Hours of Calibration: 0				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	-3.1	-3.5	-4.5	-5.0	-5.0	-5.0	-4.9	-4.4	-3.6	-2.4	-1.0	0.4	1.0	1.2	1.7	-0.8	-2.6	-2.9	-2.9	-4.7	-5.7	-6.2	-7.1	-8.4	-3.3	1.7			
2-Apr	-9.1	-8.4	-8.8	-9.9	-10.4	-10.5	-10.2	-8.9	-7.2	-5.2	-3.8	-2.0	-0.5	0.7	-0.1	0.1	-0.1	-1.3	-2.7	-3.1	-3.4	-5.4	-7.1	-8.0	-5.2	0.7			
3-Apr	-7.5	-7.7	-8.4	-8.7	-8.5	-8.8	-9.1	-8.1	-7.5	-6.5	-5.5	-4.0	-2.8	-1.9	-1.1	-0.8	-1.1	-1.5	-2.5	-3.9	-5.0	-5.6	-6.7	-8.6	-5.5	-0.8			
4-Apr	-8.8	-10.2	-10.0	-12.7	-13.8	-14.8	-14.0	-10.6	-5.7	-2.2	0.7	2.7	3.8	4.5	5.4	6.1	6.3	6.0	5.4	2.8	0.8	-1.1	-0.5	-0.7	-2.5	6.3			
5-Apr	-1.3	-2.1	-1.8	-2.4	-3.9	-4.9	-4.6	-2.9	0.5	3.5	6.0	7.0	9.0	11.4	12.5	12.6	11.4	9.7	7.2	6.2	5.3	4.6	3.8	3.3	3.8	12.6			
6-Apr	2.8	3.0	2.0	1.6	0.9	0.3	-0.2	0.7	2.0	3.2	4.9	6.4	7.7	8.5	8.8	9.4	9.2	8.5	7.4	5.7	4.5	3.7	3.5	2.8	4.5	9.4			
7-Apr	2.4	2.0	1.5	0.8	0.0	-0.5	0.4	2.2	3.8	4.8	6.1	7.3	8.9	10.8	11.8	11.4	11.7	10.2	9.3	8.0	7.7	7.0	6.8	6.1	5.9	11.8			
8-Apr	5.6	5.3	4.7	3.4	2.7	2.0	1.7	1.8	1.8	2.2	2.4	2.6	2.9	3.7	3.9	4.4	5.1	4.8	4.5	4.2	4.2	3.5	1.9	-0.4	3.3	5.6			
9-Apr	-0.5	-0.1	0.2	0.2	0.3	0.1	-0.2	0.0	1.2	3.6	6.5	10.1	12.3	13.9	15.9	15.3	15.5	15.1	14.5	13.0	10.2	9.0	6.0	3.5	6.9	15.9			
10-Apr	3.5	3.4	3.5	3.8	3.7	3.6	4.3	6.2	8.2	10.5	12.5	13.8	14.5	15.1	15.8	16.0	16.0	16.0	15.3	12.7	9.9	6.4	5.6	6.7	9.5	16.0			
11-Apr	6.2	6.6	7.0	7.4	6.5	5.6	5.2	5.5	7.0	8.5	11.2	14.2	15.8	16.6	16.2	15.8	14.8	13.4	11.9	10.3	9.7	9.1	7.8	7.0	10.0	16.6			
12-Apr	6.2	5.4	4.9	4.0	3.2	3.1	3.4	4.7	5.5	5.4	5.2	5.8	5.4	5.7	6.0	5.4	4.8	4.3	4.0	3.2	2.0	1.6	1.5	1.0	4.2	6.2			
13-Apr	0.6	0.1	-0.7	-1.1	-1.5	-1.8	-0.9	1.1	2.6	4.6	6.1	7.5	9.0	8.9	9.4	9.5	8.4	7.7	5.9	3.4	1.7	-0.1	-1.2	-2.0	3.2	9.5			
14-Apr	-2.3	-2.8	-3.3	-3.6	-4.2	-5.2	-4.2	-1.6	1.4	4.4	7.4	9.8	12.0	13.4	14.0	13.9	13.8	12.9	11.9	10.7	9.8	9.3	9.1	8.7	5.7	14.0			
15-Apr	8.2	7.5	7.1	6.7	6.8	7.1	9.8	9.6	11.1	10.4	9.2	9.1	10.5	11.4	12.2	12.3	10.9	9.4	7.4	5.4	4.7	4.2	3.6	2.5	8.2	12.3			
16-Apr	0.9	0.5	0.3	0.7	0.9	0.8	1.2	1.6	2.0	2.6	2.8	3.0	3.4	3.9	4.4	4.4	2.9	1.9	1.2	0.5	0.3	0.2	-0.4	-0.9	1.6	4.4			
17-Apr	-1.3	-1.5	-1.8	-2.1	-2.4	-3.1	-3.5	-3.7	-4.0	-3.7	-2.9	-2.3	-1.1	0.1	0.7	1.4	2.0	2.3	1.4	-0.5	-1.4	-2.1	-2.5	-2.6	-1.5	2.3			
18-Apr	-2.5	-2.8	-3.4	-4.0	-4.4	-4.1	-3.0	-1.2	1.6	4.0	7.0	9.5	11.7	12.7	12.6	13.5	13.5	14.3	13.7	12.5	11.5	11.1	11.5	12.1	6.1	14.3			
19-Apr	11.5	12.0	12.4	11.8	9.5	8.3	8.0	8.9	9.8	10.1	11.1	12.2	13.1	13.1	12.2	11.9	10.9	10.1	8.7	6.9	4.0	1.1	0.5	-0.1	9.1	13.1			
20-Apr	-0.5	-1.0	-1.4	-2.1	-2.7	-2.9	-2.5	-1.9	-0.4	0.3	1.1	2.0	2.8	4.1	4.9	5.5	5.6	5.5	4.6	2.8	0.9	0.0	-0.6	-1.1	1.0	5.6			
21-Apr	-1.4	-1.8	-2.1	-2.8	-4.3	-4.9	-3.1	-0.4	2.8	5.2	6.9	8.0	8.7	10.1	10.9	11.3	11.5	11.4	10.0	8.6	8.6	6.7	6.4	5.0	4.6	11.5			
22-Apr	3.9	3.2	2.2	2.0	2.4	3.5	4.5	4.2	4.5	5.9	7.5	8.6	10.4	11.8	8.5	5.2	6.4	7.6	7.6	6.7	5.3	5.1	4.1	3.5	5.6	11.8			
23-Apr	1.8	1.8	1.3	-0.5	-0.8	-0.1	1.1	3.4	5.1	7.1	8.1	9.3	9.6	10.5	9.8	10.7	10.3	9.3	9.0	7.1	5.6	4.8	3.2	3.2	5.4	10.7			
24-Apr	2.8	2.1	1.9	0.8	0.9	0.8	1.2	3.3	6.3	9.0	10.8	12.4	13.6	14.2	14.9	15.4	15.7	15.2	14.0	12.9	10.3	8.8	6.3	5.6	8.3	15.7			
25-Apr	5.6	5.3	4.6	3.9	3.2	3.7	6.2	9.2	13.4	16.9	19.0	20.2	21.1	21.3	21.6	21.8	22.0	21.3	20.2	18.4	16.6	14.8	13.1	11.3	14.0	22.0			
26-Apr	9.5	8.4	7.6	7.6	6.2	4.7	4.5	5.6	7.6	9.3	10.7	11.9	12.3	11.7	12.2	11.2	9.6	7.5	5.9	3.2	1.6	1.1	-0.1	-1.7	7.0	12.3			
27-Apr	-2.5	-3.1	-3.5	-3.5	-5.0	-5.6	-5.6	-5.5	-4.2	-2.7	-1.8	-1.0	0.6	1.6	2.6	3.5	3.3	2.9	2.0	0.3	-1.3	-2.4	-2.8	-3.4	-1.5	3.5			
28-Apr	-4.0	-4.1	-4.7	-5.7	-5.8	-4.9	-2.6	0.2	3.0	6.0	9.7	12.4	14.1	15.0	15.9	16.3	16.0	15.4	15.0	14.4	13.8	13.1	11.0	10.0	7.1	16.3			
29-Apr	9.0	7.5	6.9	6.7	6.8	6.9	7.9	9.1	8.9	8.1	9.4	9.9	10.0	11.5	9.1	11.0	12.3	13.4	12.8	11.3	10.0	9.7	8.3	7.7	9.3	13.4			
30-Apr	6.5	7.5	8.0	7.8	7.6	7.0	5.1	5.1	6.6	7.8	8.3	8.7	8.5	4.8	5.4	6.4	6.4	4.9	3.1	2.2	1.5	1.2	1.0	0.7	5.5	8.7			
1.4 1.1 0.7 0.2 -0.4 -0.7 -0.1 1.1 2.8 4.3 5.9 7.2 8.3 9.0 9.3 9.3 9.1 8.5 7.5 6.0 4.8 3.8 2.9 2.1																									Diurnal Average				
11.5 12.0 12.4 11.8 9.5 8.3 9.8 9.6 13.4 16.9 19.0 20.2 21.1 21.3 21.6 21.8 22.0 21.3 20.2 18.4 16.6 14.8 13.1 12.1																									Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	187	25.97	25.97
0 - 10	389	54.03	80.00
10 - 20	136	18.89	98.89
> 20	8	1.11	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) - %

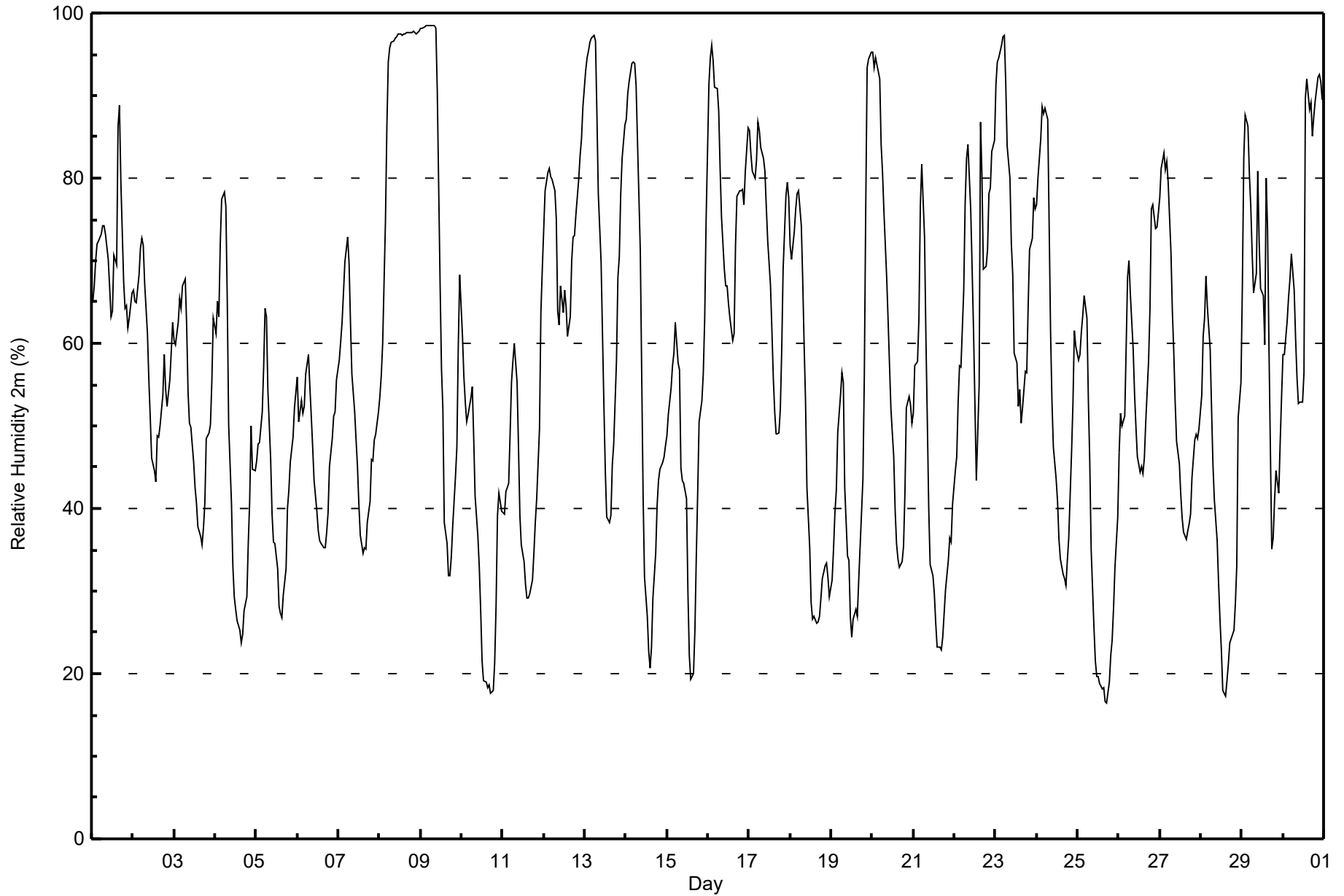
Buffalo Viewpoint - April 2025

Maximum Value: 98.6 % on Apr 9 07:00																				Maximum Daily Average: 90.7 % on Apr 8					Hours in Service: 720	
Minimum Value: 16.4 % on Apr 25 18:00																				Minimum Daily Average: 35.2 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 75.5 % at hour 6																				Minimum Diurnal Average: 42.1 % at hour 15					Hours of Missing Data: 0	
Monthly Average: 57.66 %																				Percentiles: P ₁ = 18.4 P ₁₀ = 29.4 Q ₁ = 40.9 Median = 56.3 Q ₃ = 73.8 P ₉₀ = 88.8 P ₉₉ = 98.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	65.1	66.9	69.9	72.0	72.3	73.3	74.2	74.2	73.2	70.2	66.8	63.2	63.9	70.6	69.5	86.2	88.8	79.7	67.5	64.2	64.6	61.8	63.0	66.2	70.3	88.8
2-Apr	66.5	65.1	64.9	68.2	71.5	72.7	71.8	67.3	61.3	55.7	51.0	46.1	44.6	43.2	48.9	48.7	50.1	53.8	58.7	54.4	52.3	55.7	59.1	62.6	58.1	72.7
3-Apr	60.3	59.9	62.6	65.4	64.2	66.9	67.9	62.2	54.1	50.4	49.8	45.5	42.5	40.6	37.7	36.6	35.7	37.6	40.8	48.6	49.2	50.2	55.5	63.0	52.0	67.9
4-Apr	61.2	65.1	63.2	72.1	77.4	78.3	76.6	65.2	50.2	40.7	33.0	29.4	27.9	26.5	25.2	23.7	24.7	27.6	29.3	35.7	40.9	50.0	44.8	44.7	46.4	78.3
5-Apr	45.8	47.9	47.9	51.7	57.0	64.3	63.3	54.3	45.9	39.3	35.9	35.8	32.7	28.2	27.3	26.8	29.4	32.7	39.9	42.2	45.7	48.7	52.3	54.1	43.7	64.3
6-Apr	56.0	50.6	53.0	51.5	52.4	56.3	58.7	54.7	51.3	47.5	43.4	39.7	37.3	36.1	35.8	35.2	35.2	37.1	39.5	45.1	48.5	51.2	51.8	55.5	46.8	58.7
7-Apr	57.9	60.1	62.6	66.1	69.8	73.0	69.7	62.5	56.3	51.7	48.2	45.1	40.6	36.7	34.6	35.3	35.1	38.2	40.9	45.9	45.8	48.2	49.0	51.7	51.0	73.0
8-Apr	53.5	56.1	60.1	74.9	86.3	94.0	95.8	96.5	96.6	96.9	97.2	97.4	97.3	97.4	97.5	97.6	97.6	97.7	97.6	97.7	97.7	97.5	97.6	97.8	90.7	97.8
9-Apr	98.1	98.2	98.3	98.4	98.5	98.5	98.6	98.5	98.4	98.1	90.4	67.3	57.0	52.1	38.3	35.7	31.8	31.8	34.1	37.8	43.9	47.5	59.6	68.4	70.0	98.6
10-Apr	60.8	55.9	52.9	50.4	51.3	53.3	54.7	48.6	41.5	36.6	32.9	27.7	21.5	19.1	18.9	18.4	18.7	17.6	18.1	21.4	28.3	39.1	41.9	39.7	36.2	60.8
11-Apr	39.4	39.4	42.1	43.1	49.0	55.3	57.8	60.0	55.3	47.5	39.2	35.7	33.5	30.8	29.1	29.2	29.6	31.4	34.6	38.3	41.1	49.7	63.7	68.9	43.5	68.9
12-Apr	73.8	78.5	80.7	81.2	80.2	79.8	78.5	75.1	63.9	62.3	67.0	63.6	66.4	64.4	60.8	63.3	70.0	72.8	73.1	75.6	79.8	82.8	84.7	88.7	73.6	88.7
13-Apr	93.0	94.6	95.5	96.4	97.0	97.3	96.7	87.8	78.1	69.8	61.0	52.6	44.6	39.0	38.4	39.2	45.2	47.9	57.9	68.0	70.5	77.9	82.4	86.4	71.5	97.3
14-Apr	87.1	90.2	91.8	93.9	94.1	93.9	91.2	84.3	71.2	56.2	41.5	31.8	27.0	22.8	20.6	23.2	29.1	34.5	40.3	43.4	44.8	45.5	46.2	47.6	56.3	94.1
15-Apr	48.8	51.4	54.6	57.3	58.9	62.6	57.7	56.9	45.0	43.4	43.0	41.2	30.0	22.1	19.3	20.0	25.2	34.2	42.0	50.4	53.0	56.4	63.1	74.9	46.3	74.9
16-Apr	91.4	94.6	96.1	94.2	91.0	90.9	88.2	81.1	75.2	69.0	67.0	66.9	64.8	63.1	60.3	61.2	71.8	77.8	78.5	78.4	78.6	76.7	80.9	86.1	78.5	96.1
17-Apr	85.8	82.9	80.9	80.0	82.2	86.8	85.7	83.8	82.4	80.9	76.4	72.4	67.0	61.4	55.8	51.8	49.0	49.1	52.1	59.2	69.1	77.7	79.4	77.6	72.1	86.8
18-Apr	71.8	70.2	73.6	76.2	78.1	78.5	74.2	67.6	59.9	53.0	42.5	35.3	28.6	26.6	27.0	26.1	26.2	26.9	29.1	31.6	33.0	33.3	31.6	29.4	47.1	78.5
19-Apr	31.3	35.2	39.5	42.3	49.1	53.7	56.4	55.3	42.5	34.2	33.8	27.0	24.4	26.5	27.8	27.0	31.4	35.5	43.6	56.1	76.3	93.3	94.3	95.3	47.2	95.3
20-Apr	95.2	93.4	94.6	92.9	92.0	84.0	80.7	76.0	67.7	62.8	57.2	52.0	46.3	39.9	35.7	33.9	32.8	33.6	35.4	41.9	52.2	53.6	52.6	50.4	60.7	95.2
21-Apr	51.5	57.3	57.8	63.0	76.7	81.7	73.0	60.4	50.6	40.0	33.2	31.9	29.6	26.1	23.3	23.2	22.9	24.5	27.2	30.2	33.7	36.5	35.9	40.6	42.9	81.7
22-Apr	44.5	46.3	52.8	57.2	57.1	66.4	77.0	82.3	84.1	76.1	69.0	61.5	52.6	43.4	55.0	86.8	80.3	69.0	69.3	71.4	78.1	78.8	83.3	84.6	67.8	86.8
23-Apr	91.4	94.1	94.5	96.1	97.1	97.3	91.6	83.9	79.9	72.0	68.3	58.8	57.7	52.3	54.3	50.3	52.2	56.6	56.4	64.5	71.4	72.6	77.6	76.3	73.6	97.3
24-Apr	76.8	80.1	84.7	88.7	87.9	88.6	87.1	74.4	61.5	53.1	47.4	43.5	40.9	36.3	33.8	32.0	31.5	30.6	33.7	36.5	46.8	52.6	61.5	59.6	57.1	88.7
25-Apr	57.9	58.7	61.3	63.5	65.8	63.1	53.3	45.8	35.0	25.6	21.5	19.6	19.6	18.9	18.1	18.4	16.5	16.4	19.0	22.2	24.1	27.9	32.8	38.9	35.2	65.8
26-Apr	46.8	51.5	50.1	51.1	59.6	68.0	69.9	65.9	59.4	53.9	49.9	46.3	44.5	45.0	44.2	46.2	50.4	57.8	64.0	76.3	76.8	73.8	74.0	75.8	58.4	76.8
27-Apr	77.7	81.2	83.1	81.1	82.0	79.5	71.1	64.0	59.1	52.9	48.2	45.5	41.7	38.9	37.2	36.2	37.3	38.1	39.4	43.8	48.3	48.9	48.6	49.6	55.5	83.1
28-Apr	53.8	60.8	63.1	68.1	64.5	59.4	52.0	45.3	41.0	36.1	31.0	26.6	22.8	17.9	17.3	19.1	21.2	23.7	24.7	25.2	28.4	33.1	51.1	55.2	39.2	68.1
29-Apr	66.9	82.3	87.6	86.2	80.5	76.7	70.8	66.2	68.5	80.9	72.2	66.6	65.8	59.9	80.0	73.7	59.5	35.0	36.4	41.0	44.6	41.9	47.9	53.6	64.4	87.6
30-Apr	58.7	58.6	62.7	65.5	67.7	70.8	66.4	60.7	56.0	52.8	52.8	52.8	56.4	89.7	92.0	88.3	89.1	85.1	87.5	89.3	92.2	92.6	91.7	89.6	73.7	92.6
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - April 2025

Maximum Speed: 34 km/h on Apr 15 10:00										Maximum Daily Speed Average: 18.3 km/h on Apr 15										Hours in Service: 720							
Minimum Speed Value: 0 km/h on Apr 20 15:00										Minimum Daily Speed Average: 0.5 km/h on Apr 24										Hours of Data: 717							
Maximum Diurnal Speed Average: 4.4 km/h at hour 18										Minimum Diurnal Speed Average: 0.5 km/h at hour 23										Hours of Missing Data: 3							
Monthly Average Velocity: 1.7 km/h 296.2 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 6 Median = 9 Q ₃ = 14 P ₉₀ = 18 P ₉₉ = 29										Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Apr	SE6	SSE8	SSE6	SSE7	SE8	SE7	SE8	SSE6	SSE8	SSE8	SSE9	SSE8	SSE8	SE6	SSE4WNW14WNW17	NW16	NW15	NW15	NNW15	NNW14	NNW14	NNW10	W1.6	WNW17			
2-Apr	WNW8	WNW8WNW10	W9	W11WSW12WSW16	W16	W15	NW12	NW9	WNW8	NW11	NNW14	N16	N13	N15	N15	N9	NW11	NNW13	NNE11	N6	N9	NW8.9	W16				
3-Apr	NNW13	NNW14	NW11	NW11	NW10	NW10	NW10	NW13	NW15	NW17	NNW14	NNW13	NNW11	NNW13	NW12	NW16	NNW16	NNW15	NNW15	NNW9	NNW5	N2	WSW4	SW4	NW10.9	NNW17	
4-Apr	W6	W6	W6	S4	S5	SSE8	SE8	SSE7	S5	S5	SSW4	ESE3	ESE7	E7	ESE9	ESE9	ESE8	SE8	SE5	SE6	SSE6	SSE6	SE7	SE8	SSE4.8	ESE9	
5-Apr	SSE8	SSE2	ESE4	SE6	SSE6	SE8	SE7	S6	SSE7	ESE5	N3	N7	N6	N7	N7	NNW9	N9	N8	N9	N9	NNE10	NNE9	NNE7	NNE6	NE2.9	NNE10	
6-Apr	ENE2	ESE5	SE9	SE10	SE11	SE12	SE13	SE12	ESE13	ESE14	ESE16	ESE16	SE13	SE14	ESE17	ESE14	SE15	ESE15	SE16	SE16	SE14	SE12	SE10	SE10	SE12.2	ESE17	
7-Apr	SE9	SE8	SE10	SE7	SE6	SE5	SE5	SE8	ESE11	ESE13	ESE14	ESE14	ESE14	ESE13	ESE12	ESE13	ESE12	ESE10	SE6	ESE8	SE7	SE8	SSE8	S6	SE9.1	ESE14	
8-Apr	SSE5	SE6	SE3	N4	ESE2	S3	SSE5	S6	WSW3	SE5	SSE7	SE6	SE5	SSE4	SSE4	SE3	SSE1	NNE4	SSE1	N3	NE4	NNE3	NE1	SSE4	SE2.4	SSE7	
9-Apr	SE6	SSW4	ESE4	SE5	SSE4	S4	S6	UO	SSE3	SSW1	NW1	SSE5	ESE10	ESE10	SE1	NW3	WNW4	NNE1	ENE3	ENE7	ENE3	S1	S3	S5	SE2.5	ESE10	
10-Apr	NW3	W6	SW5	SSW6	S5	ENE1	NNW4	NW4	WSW6	NW5	W11WSW16	W19	W15WNW11	W10	NW7	WNW7	NNE1	E7	ESE7	SE7	SE5	SE4	W4.0	W19			
11-Apr	S5	ESE4	ESE6	NE2	WNW3	WNW5	N5	SSE1	SE4	S7	SSW9	WSW6WSW13WSW19WSW23	W20	W23	W21	W15	WSW9WSW11WSW18WSW16WSW11	WSW8.3	W23								
12-Apr	WSW12WSW10WSW12WSW13WSW13	SW7	SW4	W9	W15	W16	W14	W16WNW15WNW13WNW15	NW16	NW16	NW16	NNW12	NW8	NNW5	WNW3	W3	NNE4	WNW9.4	W16								
13-Apr	NNE4	ESE2	SE3	NE0	N2	N4	WNW6	WNW6	NW6	NNE4	NNE6	NNE5	N6	NNW16	NNW14	N16	N16	N14	NNE11	NNE7	NNE8	N7	N5	N5	N6.3	N16	
14-Apr	NW2	N4	NNW4	NNW5	SE1	SSE3	SE4	SSE5	SE7	SE8	ESE9	SE10	SE10	SSE10	S14	S11	SSW12	SW11	SSE5	SSE6	SE7	SSE8	SE8	SE10	SSE5.3	S14	
15-Apr	SE10	SSE8	SSE9	SE9	SSE7	S8	SSW9	SSW12WSW25WSW34	W30	W27	W28	W30	W29WSW29	W29WNW24WNW28WNW30	W31	W29	W29	W29	W25	W18.3	WSW34						
16-Apr	W20	W21	W17	W15WNW15	NW17	NW20	NW23	NW27	NNW27	NNW29	NNW26	NNW26	NNW25	NNW23	NNW22	N18	N15	N16	N15	NNW11	N10	NNE10	N12	NNW16.6	NNW29		
17-Apr	N14	N17	N19	N20	N19	N14	N14	NNE15	N16	N16	N16	N18	N15	N17	N13	NNE9	N8	NNW7	NNE6	ENE8	ENE6	SE5	SSE5	SSE6	N11.1	N20	
18-Apr	SSE9	SSE10	SSE9	SSE9	SSE10	SSE11	SSE12	SSE13	SSE12	SSE14	SSE16	S18	S19	S18	S18	S17	S16	SSE15	SSE14	SSE16	SSE16	SSE15	S14	SSW17	SSE13.9	S19	
19-Apr	SSW14	SW14WSW15WSW15WNW12WNW11	W14WNW16	W18	W20WNW21	W20	W22WNW20WNW20	W24	W19WNW17WNW16	NW16	N17	NNE16	N12	N15	WNW13.3	W24											
20-Apr	N11	N14	N12	NNE14	NNE7	UO	UO	NNE7	N8	NW7	WNW8	WNW7	N4	NW5	SW0	ENE4	NNE5	NNE9	NNE10	NE8	NNE8	NE9	NE7	NE6	NNE6.4	N14	
21-Apr	NE6	NE5	NE5	NE4	S2	SE2	SSE2	SSE3	ESE3	SE4	ESE8	ESE7	E8	SE5	SSE5	SE6	S4	SE9	SE7	S5	SSW7	SE7	SSE9	SSE7	SE4.0	SE9	
22-Apr	S6	SSE7	SE9	SSE7	SSE6	SSE6	S7	S8	S9	SSE12	SSE13	S12	S13	SSW13WSW24	S8	S11	S11	W1	ESE6	S2	NE4	ENE3	ESE2	S6.8	WSW24		
23-Apr	SSW4	NW5	WNW2	SSE5	SSW2	WNW3	W1	NW1	N7	N9	NNW10	N11	N16	NNE13	NNE13	N12	N11	N9	N6	NNW8	N7	NNW6	NNW7	NNW6	N6.0	N16	
24-Apr	NNW6	NW5	NW5	S2	W4	S3	S4	SSW5	W3	SSW3	SW7	NE2	N8	N9	N8	N7	N6	ESE5	ESE6	ESE5	SE5	SE6	SSE5	SSE6	ENE0.5	N9	
25-Apr	SSE8	SSE9	SSE9	SSE9	SE8	SE7	SSE7	SSE7	SSE7	SSW18	S19	S19	SSW19	SSW17	SSW18	SSW16	SSW18	SW18	SSW13	SSW8	S7	S7	SSE8	SE10	S11.0	SSW19	
26-Apr	SE12	SE9	SSE3	E2	N8	N11	N12	N9	NNW6	N10	N14	N17	N19	N20	N21	N20	N19	N22	N19	N20	N14	NNE12	N9	NNE8	N11.3	N22	
27-Apr	N8	N7	N9	N16	N18	N14	N15	N15	N12	NNW9	NNW7	NNE7	NE7	NNE8	N8	N9	NNE11	NNE12	NNE13	NNE11	NNE11	NNE10	NE8	E4	NNE9.9	N18	
28-Apr	SSE4	SSE4	SSE4	SSE4	SSE4	S5	SSE7	SSE9	S9	SSE9	SE11	SSE11	SSE12	S15	S16	SSW15	SSW14	S12	S10	SSW11	SSW13	SW15	SSW12	SSE7	S8.9	S16	
29-Apr	S8	SSE5	SSE6	S7WSW12WSW16	W14	W15	W16	W14WNW15WNW15	NW13	NW13	N5	SSW4	W3	N18	N10	NNE9	NNE9	ENE5	S4	SW7	WNW5.5	N18					
30-Apr	S6	SW8	W10	W14	W15WNW10	N12	N12	N11	N7	NW4	N7	NNE16	N11	NE5	NW5	NNW8	N18	N18	N18	N14	NNW13	N13	N14	NNW8.1	N18		
S1.6 SW1.4 SW1.1 SW0.9WSW1.7WSW1.3WSW1.2 W1.7 W2.7 W2.7 W2.6 W2.1WNW2.5 NW3.4NNW3.3WNW3.6 NW4.2NNW4.4NNW3.9 N3.1 N2.2 N1.2WSW0.5 S0.5																								Diurnal Average			
W20 W21 N19 N20 N19 NW17 NW20 NW23 NW27 WSW34 W30 W27 W28 W30 W29WSW29 W29WNW24WNW28WNW30 W31 W29 W29 W25																								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

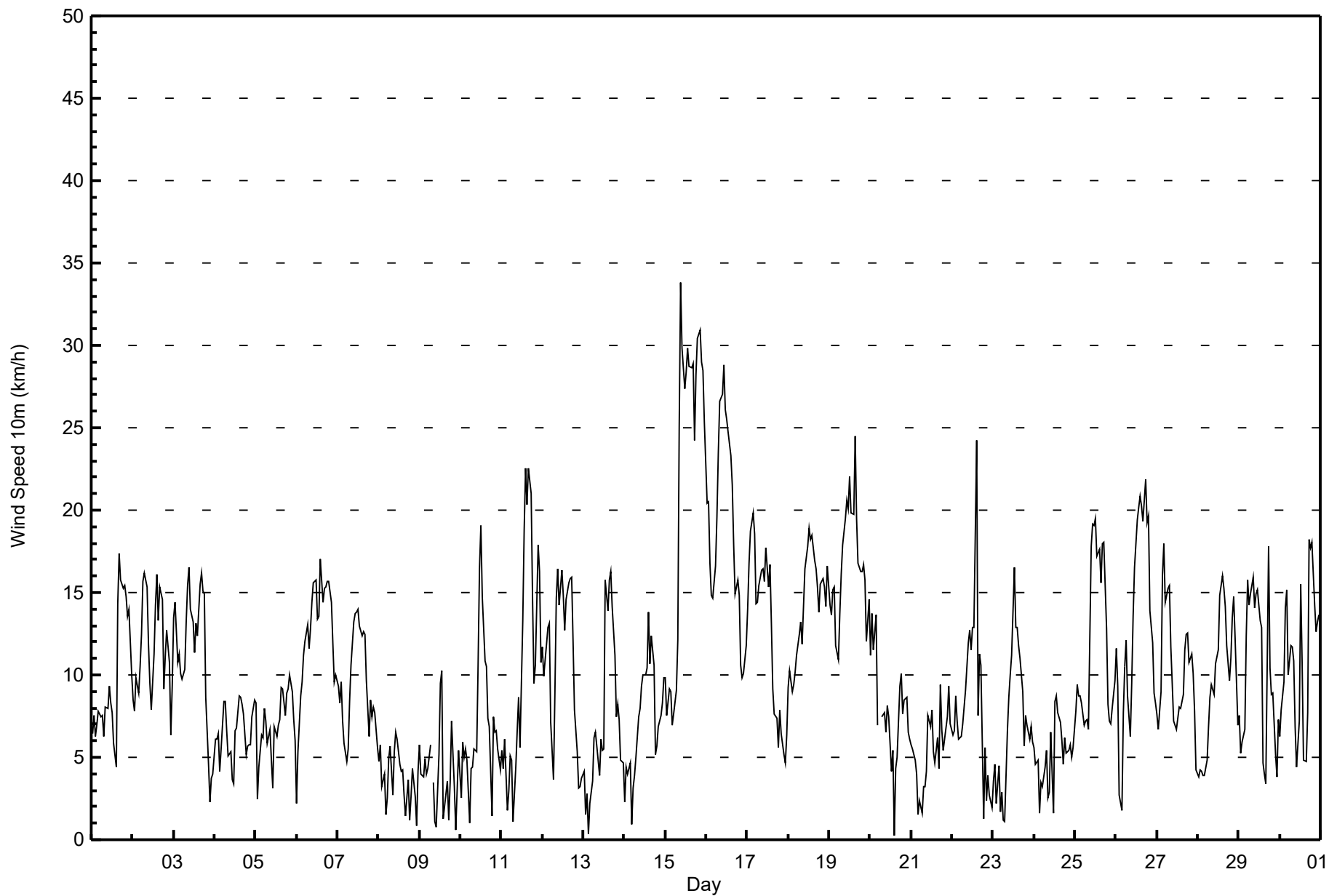
Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on Apr 22 15:00																		Hours in Service: 720							
Minimum Value: 1 km/h on Apr 5 05:00																		Hours of Data: 717							
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																		Hours of Missing Data: 3							
																		Hours of Calibration: 0							
																		Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	2	2	2	2	2	2	2	3	3	3	3	2	3	1	8	5	5	5	4	4	4	4	3	8
2-Apr	2	2	3	2	3	3	3	3	4	4	3	3	4	4	4	4	4	4	3	3	4	3	3	3	4
3-Apr	4	4	3	3	3	2	2	5	5	5	5	4	4	4	4	5	5	5	4	2	2	2	1	1	5
4-Apr	2	2	2	1	1	2	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2
5-Apr	2	1	1	1	1	1	1	1	2	1	2	1	1	1	2	2	2	2	1	2	2	2	1	1	2
6-Apr	2	1	4	3	4	4	4	4	3	4	4	5	4	5	4	4	5	5	5	5	5	4	3	3	5
7-Apr	3	3	3	2	2	1	2	3	3	3	3	4	4	4	4	3	3	3	2	2	2	2	3	2	4
8-Apr	1	1	1	1	2	2	1	1	2	2	2	2	2	1	2	2	2	1	1	1	1	2	1	2	2
9-Apr	1	1	1	1	1	1	2	UO	1	1	1	2	3	3	2	2	1	2	2	1	2	2	2	2	3
10-Apr	2	2	2	2	2	2	2	3	3	2	3	5	5	4	3	3	2	2	1	1	1	1	1	1	5
11-Apr	2	2	2	2	2	1	2	3	3	2	3	3	4	6	5	6	6	5	3	2	3	5	5	3	6
12-Apr	3	2	3	3	3	2	2	3	4	5	4	4	5	3	5	5	5	4	4	2	2	1	1	1	5
13-Apr	1	2	1	1	1	1	2	2	2	2	2	2	3	5	5	4	4	4	3	2	2	2	1	1	5
14-Apr	2	1	1	1	2	1	1	2	2	3	3	3	4	4	5	3	4	3	2	1	2	2	2	3	5
15-Apr	3	2	3	3	2	2	3	5	9	10	8	6	7	8	8	8	7	7	9	10	8	7	7	6	10
16-Apr	4	4	3	4	4	5	6	8	8	8	9	8	7	7	7	6	6	5	4	3	3	3	2	3	9
17-Apr	4	4	5	5	5	4	4	4	4	5	4	5	4	5	5	3	2	2	2	2	2	1	2	2	5
18-Apr	3	3	3	3	3	3	4	4	4	5	6	6	6	6	6	5	5	5	4	5	5	5	5	5	6
19-Apr	3	3	5	4	3	3	3	5	6	6	6	6	7	7	6	6	8	5	6	5	5	5	4	3	8
20-Apr	3	4	3	4	2	UO	UO	2	2	2	2	3	3	2	2	2	3	3	3	1	2	2	2	2	4
21-Apr	1	2	1	2	1	1	1	2	1	2	2	3	3	3	3	3	2	3	2	3	4	2	3	2	4
22-Apr	2	2	1	1	2	2	3	3	3	4	4	4	4	4	11	4	3	3	4	2	2	2	2	1	11
23-Apr	2	2	1	1	2	1	1	1	2	3	4	4	4	4	4	3	3	3	2	2	1	1	1	1	4
24-Apr	1	1	2	2	1	1	1	2	2	2	2	3	3	3	3	3	2	2	2	1	1	1	1	1	3
25-Apr	2	3	3	2	2	2	2	2	3	6	6	6	6	6	5	5	5	5	5	2	1	1	2	1	6
26-Apr	1	2	3	2	3	4	3	3	2	3	4	4	5	5	6	6	5	6	5	5	4	3	2	2	6
27-Apr	2	2	3	5	5	4	4	4	4	3	3	3	3	4	3	3	3	3	4	3	3	3	2	1	5
28-Apr	1	1	1	1	1	1	2	3	3	3	4	4	5	6	6	5	4	4	3	5	6	5	6	2	6
29-Apr	4	1	2	2	4	4	4	5	4	4	4	4	4	4	8	2	4	5	3	2	2	2	2	2	8
30-Apr	1	2	3	4	3	3	3	4	3	2	2	4	4	4	2	2	3	7	5	4	4	3	4	3	7
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	165	23.01	23.01
6 - 11	290	40.45	63.46
12 - 19	216	30.13	93.58
20 - 28	35	4.88	98.47
29 - 38	11	1.53	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
Buffalo Viewpoint - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	11	9	10	7	2	13	19	29	20	8	4	2	6	6	13	6	165
6 - 11	43	27	7	3	3	17	48	54	21	6	5	6	10	12	13	15	290
12 - 19	53	9	0	0	0	16	10	13	15	16	3	15	20	12	14	20	216
20 - 28	6	0	0	0	0	0	0	0	0	0	0	3	12	5	3	6	35
29 - 38	0	0	0	0	0	0	0	0	0	0	0	2	7	1	0	1	11
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	113	45	17	10	5	46	77	96	56	30	12	28	55	36	43	48	717

Total Number of Valid Hours: 717

Total Number of Hours: 720



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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - April 2025

Direction of Maximum Speed: 257 deg on Apr 15 10:00 Direction of Maximum Daily Speed Average: 260.1 deg on Apr 15																				Hours in Service: 720					
Direction of Minimum Speed: 229 deg on Apr 20 15:00 Direction of Minimum Daily Speed Average: 0.5 deg on Apr 24																				Hours of Data: 717					
Monthly Average Direction: 296.2 deg																				Hours of Missing Data: 3					
																				Percent Operational Time: 99.6					
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1-Apr	146	149	159	152	143	144	144	148	158	162	157	159	168	133	162	301	302	306	321	319	332	328	328	313	267.1
2-Apr	295	298	299	276	266	256	257	262	270	308	306	295	312	334	0	7	360	358	353	326	336	19	3	1	316.5
3-Apr	342	329	314	320	306	306	308	321	325	326	330	329	330	336	319	318	328	336	339	348	332	355	246	218	324.8
4-Apr	265	263	261	181	169	163	142	148	172	182	192	114	117	91	122	116	118	124	145	138	161	159	140	137	148.9
5-Apr	155	162	105	143	166	131	146	173	164	121	2	6	4	6	353	347	351	2	354	9	18	23	20	24	35.8
6-Apr	75	120	132	136	135	126	128	128	117	112	115	116	127	124	114	121	124	123	133	136	140	143	145	141	126.5
7-Apr	139	138	140	138	141	134	133	124	121	111	113	117	112	113	114	116	120	117	124	123	146	141	164	182	126.0
8-Apr	153	146	129	11	115	182	164	174	251	132	149	127	134	160	165	135	153	33	160	11	53	33	52	163	137.4
9-Apr	136	205	118	139	166	172	184	UO	161	205	313	165	123	113	127	323	295	29	59	71	61	185	188	183	140.0
10-Apr	311	267	224	205	191	57	346	315	241	319	261	252	263	270	282	275	308	289	32	91	116	141	144	143	260.2
11-Apr	172	118	104	50	283	293	9	147	137	187	193	240	256	256	258	266	272	269	261	238	240	255	258	246	252.5
12-Apr	247	241	246	257	252	221	218	279	275	280	271	264	286	303	303	306	326	325	329	326	333	300	281	20	284.5
13-Apr	32	113	124	42	1	351	294	296	320	17	23	31	356	336	341	357	4	359	25	28	27	8	354	358	359.2
14-Apr	319	349	333	340	138	167	139	159	143	138	122	132	140	153	174	178	210	215	164	150	141	147	142	138	156.9
15-Apr	139	151	148	140	160	181	203	210	248	257	262	262	263	266	263	257	263	295	296	290	271	268	266	268	260.1
16-Apr	264	265	265	280	294	310	317	324	324	329	331	334	333	336	337	336	355	5	355	356	347	354	21	10	326.3
17-Apr	4	357	358	358	356	10	7	13	8	1	2	2	359	358	355	12	359	341	15	60	65	129	149	158	6.3
18-Apr	151	158	164	153	150	154	155	161	166	167	168	169	179	182	178	182	178	166	164	154	154	159	178	197	167.8
19-Apr	201	218	243	253	303	293	267	288	279	279	283	277	272	285	290	273	274	295	294	308	5	14	5	7	286.2
20-Apr	9	8	8	16	19	UO	UO	17	355	307	285	289	359	320	229	70	28	27	29	54	23	38	45	52	11.8
21-Apr	45	37	43	46	187	136	153	160	122	134	112	114	94	131	162	129	188	132	141	181	197	139	157	168	131.6
22-Apr	170	151	136	148	152	150	171	185	170	164	168	178	183	193	242	181	189	183	281	120	175	35	63	109	175.9
23-Apr	203	313	287	160	208	303	262	318	3	350	341	2	9	18	12	10	353	2	356	345	349	338	348	339	354.3
24-Apr	335	309	324	174	264	172	172	194	261	192	216	54	3	2	6	10	354	109	111	110	134	134	155	156	70.5
25-Apr	162	158	154	153	145	144	157	157	159	193	187	188	194	198	203	196	208	217	208	196	188	182	154	145	184.3
26-Apr	135	134	164	87	354	355	349	357	328	351	359	357	5	360	1	0	1	7	6	1	1	12	2	13	4.1
27-Apr	8	360	357	10	11	7	8	9	359	334	344	30	42	29	359	7	29	25	23	22	16	17	46	88	13.4
28-Apr	159	167	149	156	167	169	163	163	173	148	132	163	167	188	191	196	197	184	184	205	212	214	204	151	181.3
29-Apr	189	150	149	184	243	253	263	271	270	271	289	297	307	316	8	211	281	2	1	15	22	62	190	215	284.9
30-Apr	170	214	264	265	262	303	359	360	1	357	312	11	16	11	40	325	345	355	358	357	354	348	356	1	343.5
186.4 218.9 222.9 230.9 251.9 240.1 248.1 274.9 274.9 274.3 270.6 277.3 299.9 308.4 292.7 299.4 305.7 335.1 344.5 358.4 355.4 2.0 257.9 175.2																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

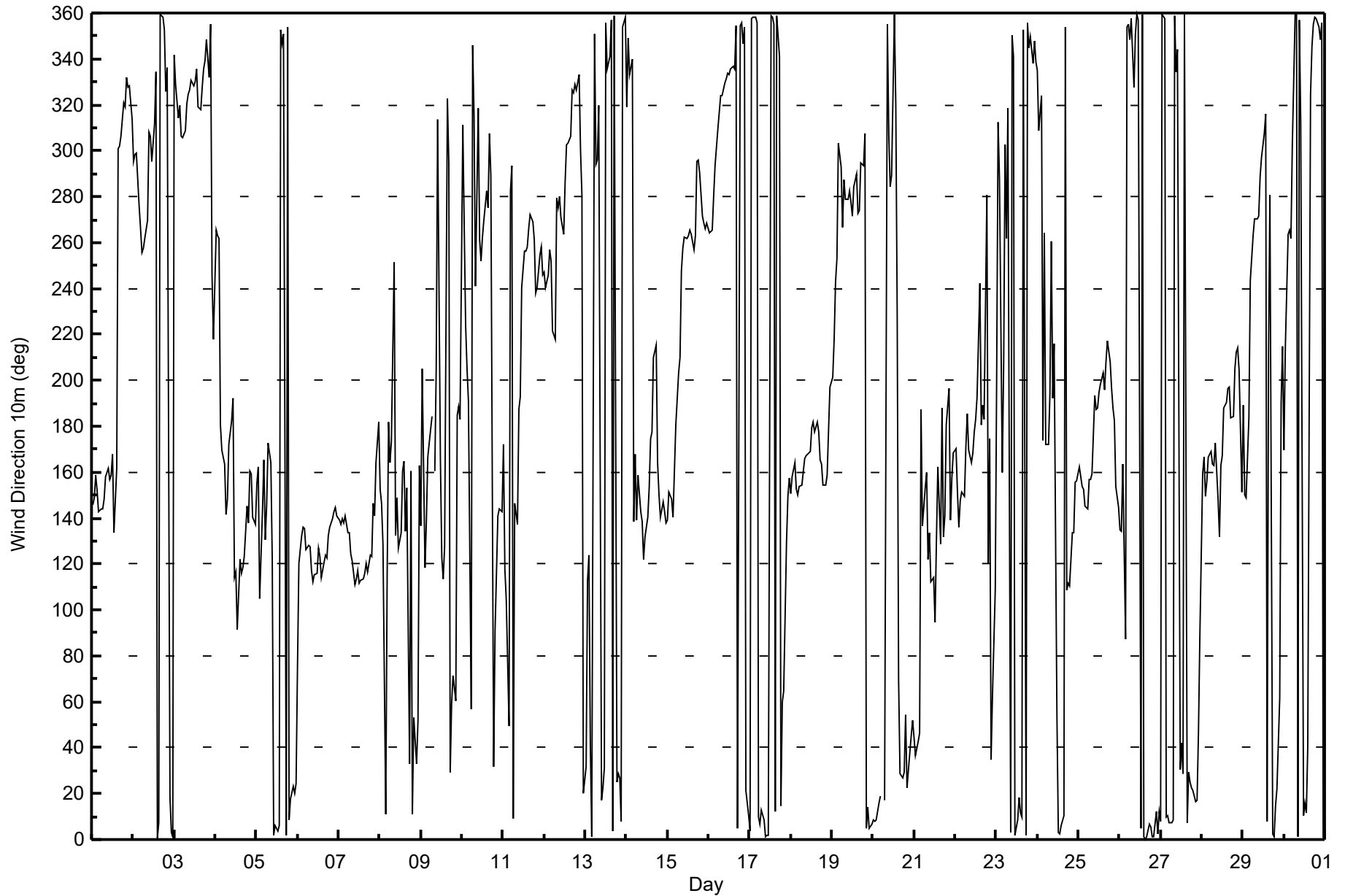
Buffalo Viewpoint - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 108 deg on Apr 20 15:00																			Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6						
Minimum Value: 4 deg on Apr 20 05:00																									
Percentiles: P ₁ = 9 P ₁₀ = 16 Q ₁ = 20 Median = 24 Q ₃ = 31 P ₉₀ = 49 P ₉₉ = 91																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	36	34	33	31	29	28	30	33	27	28	29	34	33	45	33	41	21	21	20	18	17	17	17	21	45
2-Apr	18	21	20	15	11	15	13	13	17	22	26	35	27	26	21	22	22	21	21	17	23	22	33	23	35
3-Apr	22	17	19	18	21	18	18	20	21	21	25	22	29	24	27	23	23	20	17	19	33	41	8	27	41
4-Apr	20	25	17	31	19	12	10	16	26	30	72	88	53	37	25	22	21	20	21	19	16	15	19	17	88
5-Apr	15	49	25	8	16	11	18	17	32	40	71	16	16	16	24	19	19	19	12	17	14	10	9	10	71
6-Apr	63	21	27	28	28	27	25	27	23	19	21	23	28	28	21	24	25	24	28	27	29	31	31	30	63
7-Apr	31	31	32	32	26	24	28	32	26	20	21	23	19	21	21	21	21	23	30	18	26	20	26	35	35
8-Apr	24	19	37	30	65	38	27	26	35	45	25	29	24	38	32	81	78	40	79	46	16	35	83	30	83
9-Apr	15	32	30	14	29	23	19	UO	42	88	96	44	24	20	96	52	39	28	68	13	63	88	71	41	96
10-Apr	67	27	31	37	48	92	44	62	52	52	26	19	17	20	27	25	25	26	85	14	14	12	15	18	92
11-Apr	35	52	52	80	40	24	26	89	64	36	24	52	24	23	13	16	18	16	12	17	17	13	14	17	89
12-Apr	16	17	18	12	16	13	39	21	20	20	19	16	25	22	21	21	18	19	17	15	20	23	23	21	39
13-Apr	13	62	23	91	27	43	20	28	31	44	39	55	56	21	23	25	22	23	21	19	18	17	14	14	91
14-Apr	33	17	15	19	96	55	26	32	36	35	30	31	37	37	32	31	20	17	34	26	25	26	25	25	96
15-Apr	27	30	27	21	26	39	27	30	19	16	15	16	16	18	18	17	15	23	23	22	18	15	15	15	39
16-Apr	13	12	12	20	20	21	19	20	20	21	20	20	20	20	19	19	25	24	25	20	19	22	21	20	25
17-Apr	22	21	20	21	22	20	22	22	22	22	23	22	24	23	26	31	30	24	33	12	23	31	30	32	33
18-Apr	28	28	29	27	30	29	28	30	29	30	30	31	32	29	28	28	28	28	28	29	27	29	29	21	32
19-Apr	17	17	19	17	22	23	16	21	22	22	23	24	21	25	25	19	23	24	28	29	30	22	21	20	30
20-Apr	20	22	19	18	4	UO	UO	10	28	37	29	39	70	57	108	62	59	25	22	15	16	17	29	26	108
21-Apr	13	14	16	31	72	24	45	53	65	66	37	64	37	69	80	55	76	32	27	41	32	28	29	27	80
22-Apr	30	27	9	24	30	29	39	26	32	31	32	33	32	30	28	41	25	26	92	38	86	52	50	59	92
23-Apr	50	16	53	21	56	34	58	68	20	27	27	27	24	27	24	27	23	24	23	18	14	12	9	12	68
24-Apr	12	22	36	88	39	44	28	41	77	85	40	94	26	31	30	49	34	56	17	13	19	19	24	25	94
25-Apr	24	27	29	30	30	29	31	28	41	25	26	26	27	26	24	25	24	18	19	15	12	9	15	14	41
26-Apr	8	13	77	78	29	32	22	24	32	30	23	22	24	24	24	24	24	24	23	23	22	21	21	20	78
27-Apr	18	19	21	21	21	22	24	22	25	29	49	46	50	40	44	41	27	22	25	21	20	19	17	33	50
28-Apr	17	15	19	31	30	20	28	31	32	35	35	39	43	35	29	32	25	28	27	31	30	22	30	27	43
29-Apr	26	23	27	26	25	15	16	18	19	19	22	22	23	22	77	42	59	23	21	18	20	13	62	14	77
30-Apr	25	20	26	14	12	32	21	23	23	35	39	37	25	24	39	33	25	24	24	21	22	21	22	22	39
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS05
MANNIX
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)

APRIL 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	681	35	39	99.44	37.5	0	3.7	0
H2S (ppb) Average	680	36	40	99.44	5	0	0.8	0
THC (ppm) Average	680	35	40	99.31	4.1	-	2.4	-
NMHC(ppm) Average	680	35	40	99.31	0.276	-	0.033	-
CH4(ppm) Average	680	35	40	99.31	4	-	2.4	-
Temperature 2 m (C) Average	720	0	0	100	24.1	-	14.3	-
Temperature 20 m (C) Average	720	0	0	100	21.9	-	14.5	-
Temperature 45 m (C) Average	720	0	0	100	21.4	-	14.6	-
Temperature 75 m (C) Average	720	0	0	100	21	-	14.9	-
Temperature 90 m (C) Average	720	0	0	100	20.7	-	14.7	-
Relative Humidity 2 m (%) Average	716	0	4	99.44	100	-	92	-
Relative Humidity 20 m (%) Average	720	0	0	100	99	-	87	-
Relative Humidity 45 m (%) Average	720	0	0	100	99	-	86	-
Relative Humidity 75 m (%) Average	720	0	0	100	100	-	86	-
Relative Humidity 90 m (%) Average	720	0	0	100	100	-	86	-
Wind Speed 20 m (km/h) Average	715	0	5	99.31	44	-	28	-
Wind Speed 45 m (km/h) Average	715	0	5	99.31	49	-	34	-
Wind Speed 75 m (km/h) Average	706	0	14	98.06	51	-	37	-
Wind Speed 90 m (km/h) Average	702	0	18	97.5	53	-	39	-
Wind Direction 20 m (deg) Average	715	0	5	99.31	-	-	-	-
Wind Direction 45 m (deg) Average	715	0	5	99.31	-	-	-	-
Wind Direction 75 m (deg) Average	706	0	14	98.06	-	-	-	-
Wind Direction 90 m (deg) Average	702	0	18	97.5	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	715	0	5	99.31	1.4	-	1	-
Vertical Wind Speed 45 m (km/h) Average	715	0	5	99.31	3.3	-	2.1	-
Vertical Wind Speed 75 m (km/h) Average	706	0	14	98.06	2.3	-	0.8	-
Vertical Wind Speed 90 m (km/h) Average	702	0	18	97.5	2.4	-	0.9	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	681	0.86	2.6	-	0	0	0.1	0.1	0.4	2	37.5
H2S (ppb) Average	680	0.26	0.4	-	0	0.1	0.1	0.1	0.3	0.5	5.3
THC (ppm) Average	680	2.04	0.2	-	1.9	2	2	2	2	2.2	4.1
NMHC(ppm) Average	680	0.009	0.024	-	0	0	0	0	0	0	0.276
CH4(ppm) Average	680	2.03	0.2	-	1.9	1.9	2	2	2	2.1	4
Temperature 2 m (C) Average	720	4.57	6.5	-	-11.7	-3.6	0.2	4.5	9.4	12.8	24.1
Temperature 20 m (C) Average	720	4.43	6.3	-	-11.2	-3.6	0	4.6	9.1	12.3	21.9
Temperature 45 m (C) Average	720	4.2	6.3	-	-11.3	-4	-0.3	4.4	8.8	12.2	21.4
Temperature 75 m (C) Average	720	4.35	6.2	-	-10.6	-3.8	0	4.5	8.9	12.2	21
Temperature 90 m (C) Average	720	3.69	6.4	-	-11.6	-4.7	-0.8	3.8	8.4	11.8	20.7
Relative Humidity 2 m (%) Average	716	57.5	22	-	16	30	40	55	74	90	100
Relative Humidity 20 m (%) Average	720	54.8	21	-	16	28	38	53	71	86	99
Relative Humidity 45 m (%) Average	720	54.1	21	-	15	27	37	51	70	85	99
Relative Humidity 75 m (%) Average	720	54.6	21	-	16	27	37	52	71	86	100
Relative Humidity 90 m (%) Average	720	54.5	22	-	16	27	37	52	71	86	100
Wind Speed 20 m (km/h) Average	715	13.3	8	-	1	4	8	12	17	23	44
Wind Speed 45 m (km/h) Average	715	16.9	9	-	0	6	10	17	22	29	49
Wind Speed 75 m (km/h) Average	706	18.5	10	-	1	6	11	18	25	32	51
Wind Speed 90 m (km/h) Average	702	19.7	10	-	1	6	12	20	27	33	53
Wind Direction 20 m (deg) Average	715	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	715	-	-	-	-	-	-	-	-	-	-
Wind Direction 75 m (deg) Average	706	-	-	-	-	-	-	-	-	-	-
Wind Direction 90 m (deg) Average	702	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	715	0.08	0.5	-	-1.5	-0.5	-0.3	0	0.5	0.8	1.4
Vertical Wind Speed 45 m (km/h) Average	715	0.22	0.9	-	-2.5	-0.9	-0.4	0.1	0.8	1.4	3.3
Vertical Wind Speed 75 m (km/h) Average	706	0.06	0.6	-	-1.4	-0.6	-0.3	0	0.4	0.8	2.3
Vertical Wind Speed 90 m (km/h) Average	702	0.27	0.5	-	-1.6	-0.3	0	0.2	0.5	0.9	2.4

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	08 Apr 2025 11:00	08 Apr 2025 12:00	2-3	Maintenance - WBEA internal audit
ALL GASEOUS ANALYZERS	14 Apr 2025 14:00	14 Apr 2025 15:00	2	Maintenance - sample manifold cleaned
Relative Humidity, 2m	09 Apr 2025 07:00	09 Apr 2025 10:00	4	Sensor operated out of range
Wind Speed, Wind Direction, Vertical Wind Speed, 20m	16 Apr 2025 02:00	16 Apr 2025 06:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 45m	16 Apr 2025 01:00	16 Apr 2025 05:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 75m	16 Apr 2025 01:00	16 Apr 2025 07:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 75m	19 Apr 2025 22:00	20 Apr 2025 04:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 90m	16 Apr 2025 01:00	16 Apr 2025 07:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 90m	19 Apr 2025 22:00	20 Apr 2025 08:00	11	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

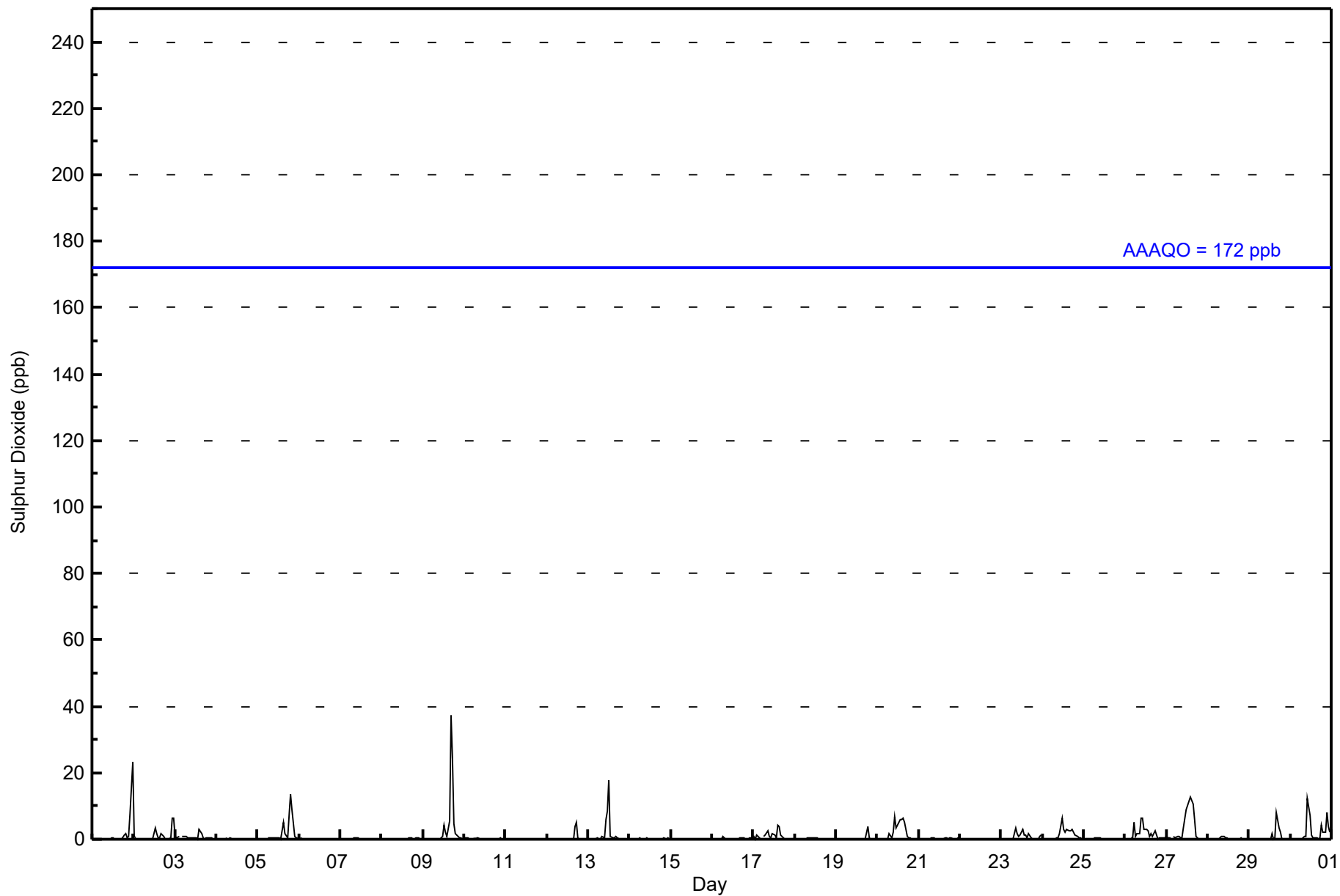
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 37.5 ppb on Apr 9 17:00 Maximum Daily Average: 3.7 ppb on Apr 9																				Hours in Service: 720 Hours of Data: 681						
Minimum Value: 0.0 ppb on Apr 1 18:00 Minimum Daily Average: 0.0 ppb on Apr 15 Maximum Diurnal Average: 2.5 ppb at hour 17 Minimum Diurnal Average: 0.1 ppb at hour 4 Monthly Average: 0.86 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 2.0 P ₉₉ = 11.7																				Hours of Missing Data: 39 Hours of Calibration: 35 Percent Operational Time: 99.4						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.4	0.2	0.2	0.1	0.0	0.0	1.1	1.8	0.6	0.9	7.5	23.4	1.6	23.4
2-Apr	0.7	0.3	Z	0.2	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.1	3.5	1.8	0.3	0.3	1.6	1.0	0.1	0.1	0.2	0.6	6.4	6.4	1.1	6.4
3-Apr	1.0	0.3	0.9	Z	0.9	0.9	0.7	0.3	0.2	0.4	0.4	0.2	0.4	0.0	2.8	1.6	0.4	0.0	0.3	0.2	0.3	0.3	0.1	0.1	0.6	2.8
4-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
5-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.3	0.3	0.3	0.3	0.5	0.3	0.1	2.5	5.1	1.6	0.6	7.0	13.5	8.9	0.9	0.6	0.5	1.9	13.5
6-Apr	Z	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	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.3
7-Apr	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.3
8-Apr	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	M	M	0.1	0.0	0.1	0.3	0.3	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.3
9-Apr	0.2	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.8	4.3	2.2	0.7	5.3	37.5	24.2	4.8	1.7	0.8	0.5	0.4	0.2	3.7	37.5
10-Apr	0.2	0.3	0.2	0.2	Z	0.3	0.2	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.4
11-Apr	0.1	0.1	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
12-Apr	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	3.8	5.1	0.5	0.1	0.0	0.0	0.0	0.0	0.4	5.1
13-Apr	0.0	Z	0.0	0.0	0.1	0.2	0.1	0.0	1.0	0.6	6.1	8.4	18.0	0.9	0.4	0.3	1.0	0.4	0.2	0.1	0.1	0.1	0.1	0.1	1.7	18.0
14-Apr	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	M	M	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
15-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	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
16-Apr	0.0	0.0	0.0	0.0	Z	0.0	1.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.6	0.3	0.1	0.0	0.1	0.3	0.3	0.2	1.0
17-Apr	0.7	0.1	1.1	0.3	0.1	Z	0.7	1.1	2.4	0.8	0.6	1.5	1.4	0.5	4.2	3.8	1.1	0.5	0.1	0.0	0.1	0.1	0.2	0.0	0.9	4.2
18-Apr	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.5	0.5	0.6	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.6
19-Apr	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.3	0.0	0.0	0.0	0.2	0.2	3.7
20-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	1.9	0.4	2.2	6.7	3.2	5.0	5.8	6.0	6.3	5.3	0.7	0.2	0.3	0.1	0.0	0.1	0.1	1.9	6.7
21-Apr	0.2	0.1	0.0	Z	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	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.3
22-Apr	0.2	0.2	0.1	0.1	Z	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	0.1	0.1	0.1	0.0	0.2
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	3.5	1.7	0.9	1.5	2.8	1.4	1.2	0.4	1.9	0.3	0.2	0.0	0.2	0.1	0.8	1.4	0.8	3.5
24-Apr	Z	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.6	1.5	6.4	2.9	2.2	3.0	2.7	2.4	2.8	2.0	1.3	0.7	0.3	0.2	0.1	1.3	6.4
25-Apr	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
26-Apr	0.1	0.1	Z	0.4	0.4	5.0	0.7	1.6	1.5	6.4	6.3	2.8	2.8	2.7	0.8	1.6	1.0	2.3	1.4	0.2	0.5	0.5	0.4	0.4	1.7	6.4
27-Apr	0.8	0.4	0.3	Z	1.1	0.4	0.8	0.8	0.4	0.5	3.3	8.8	10.1	11.5	12.7	10.6	6.1	1.0	0.3	0.2	0.1	0.1	0.2	0.1	3.1	12.7
28-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.4	0.8	0.8	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.2	0.8
29-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.7	0.2	0.2	8.3	3.3	2.2	0.2	0.1	0.1	0.1	0.0	0.7	8.3
30-Apr	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.4	0.8	0.9	12.2	7.4	1.4	0.3	0.2	0.2	0.2	0.4	4.3	2.0	2.2	8.0	3.8	2.3	2.1	12.2
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Mannix - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mannix - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	672	98.68	98.68
11 - 20	6	0.88	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: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mannix - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	60	49	11	14	14	17	107	109	40	21	21	26	54	35	41	49	668
11 - 20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	6
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	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	62	49	11	14	14	17	107	109	40	21	21	26	54	36	43	53	677

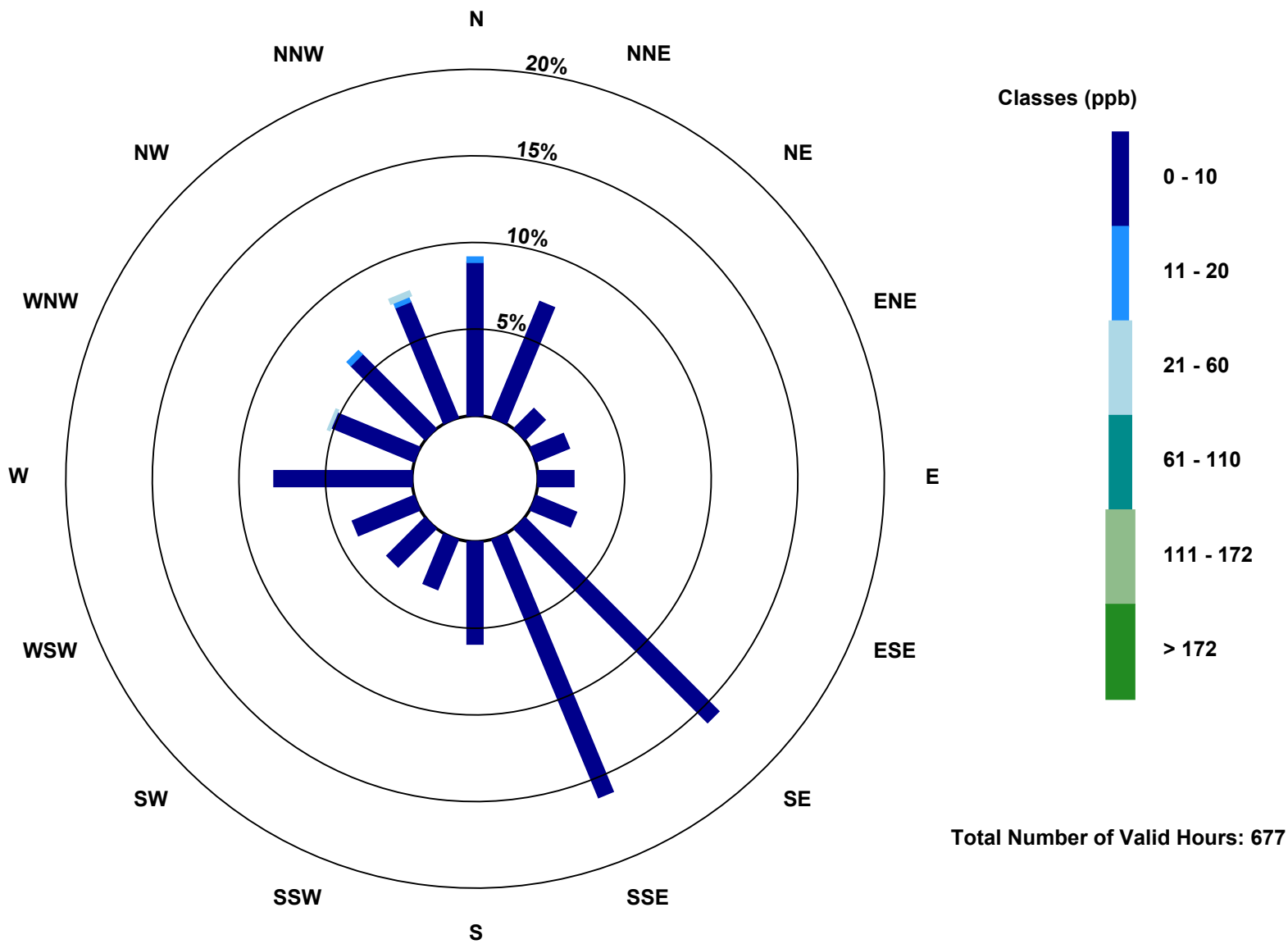
Total Number of Valid Hours: 677

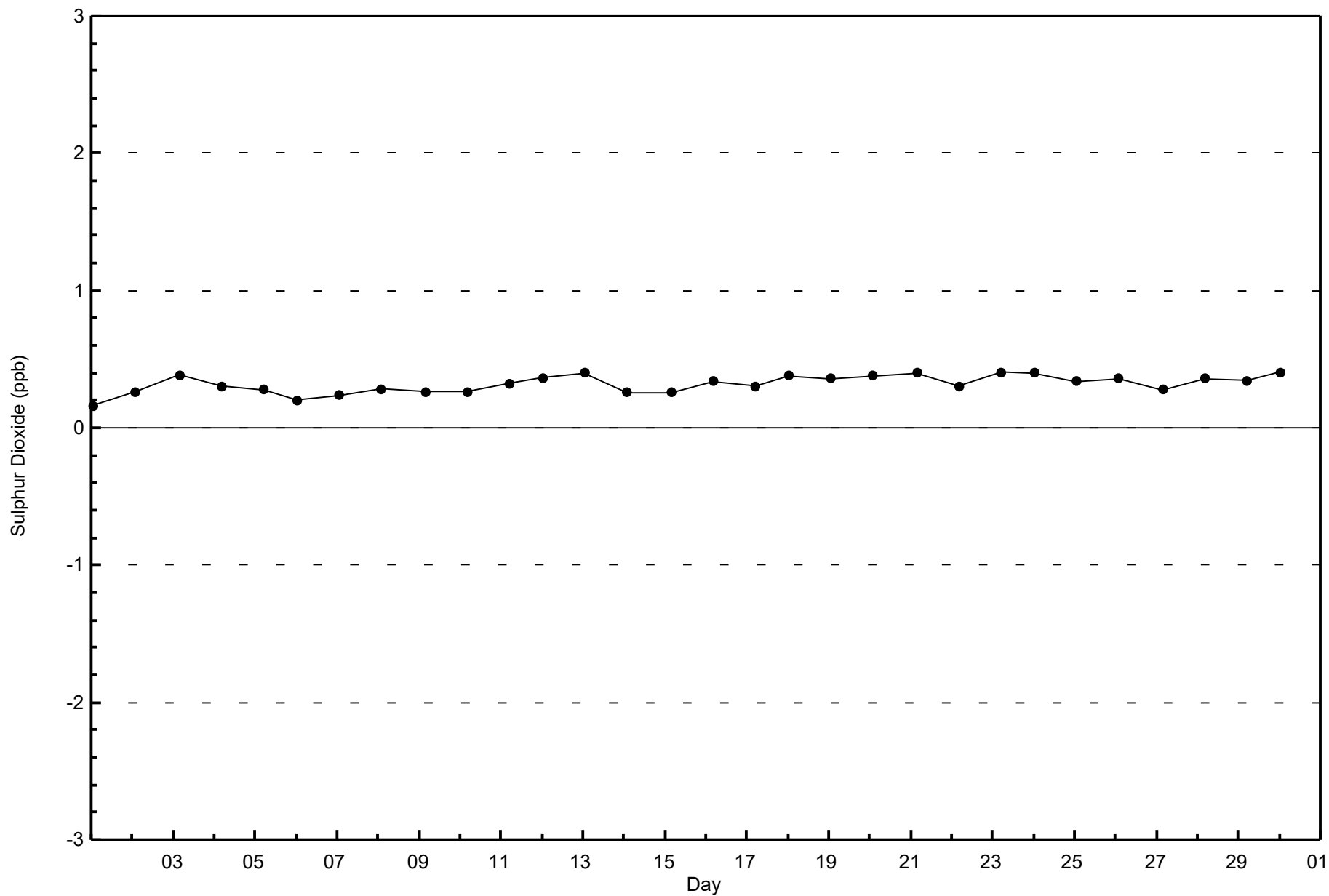
Total Number of Hours: 720

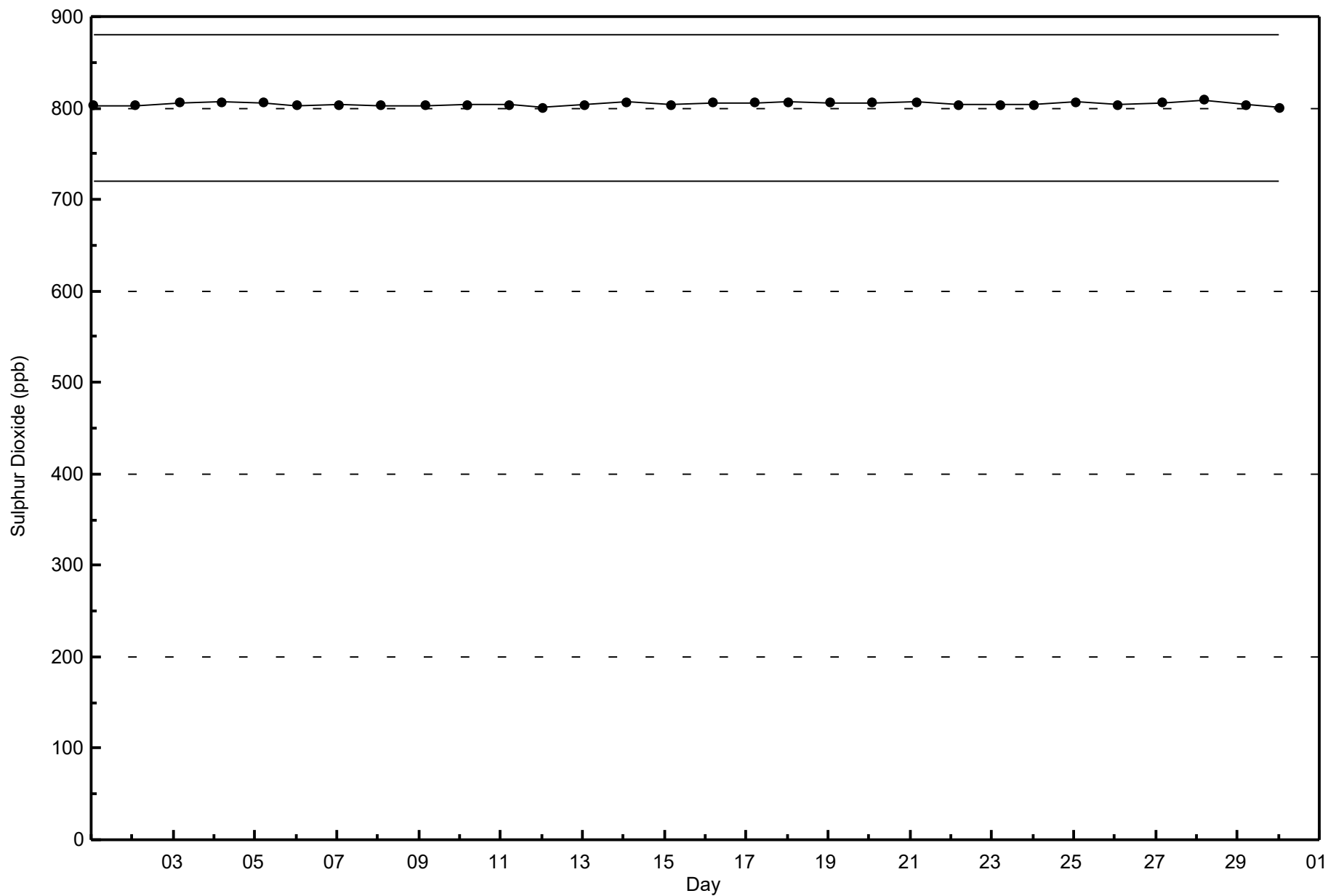


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Mannix









Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

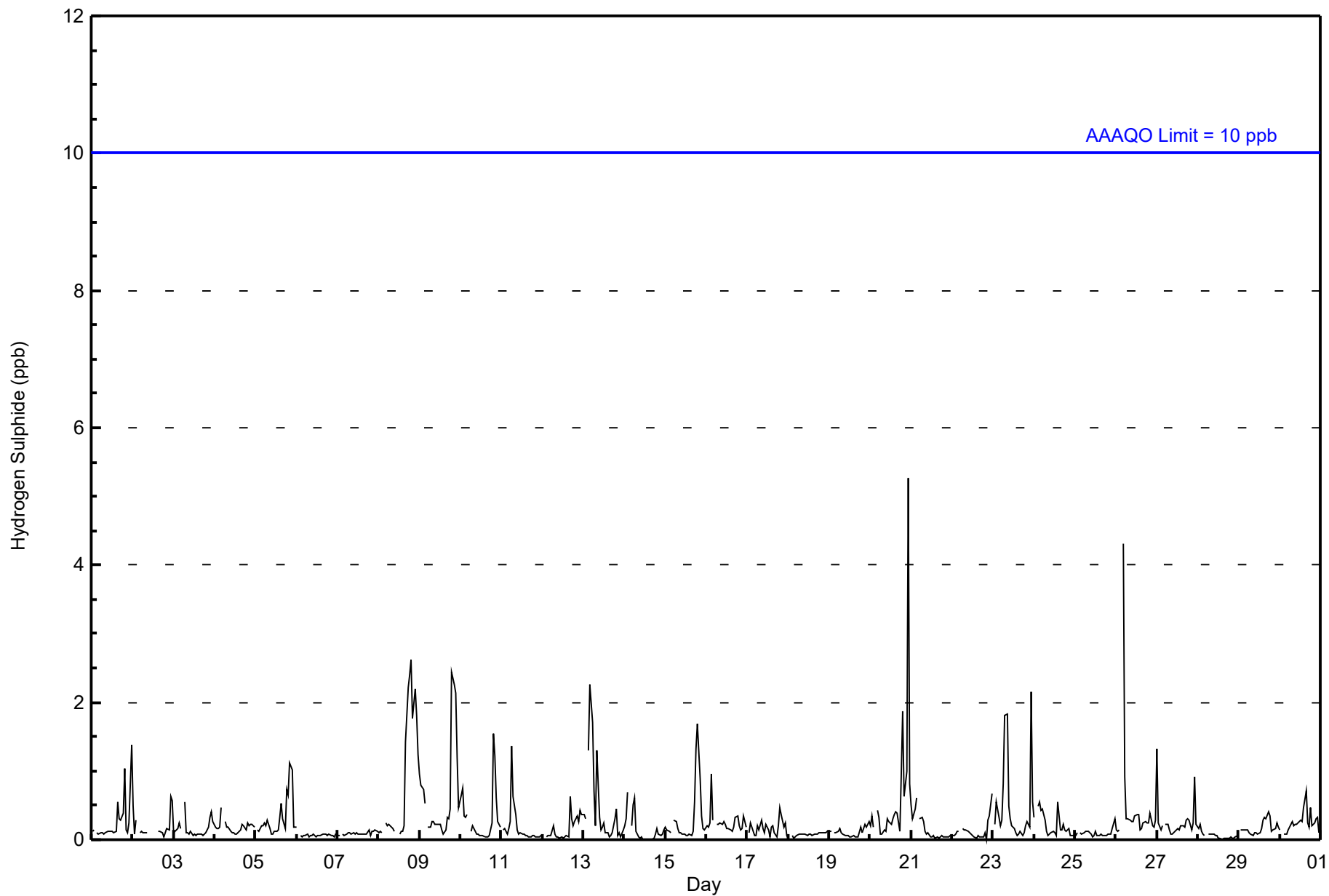
Mannix - April 2025

Number of Exceedences (AAAQO): Maximum Value: 5.3 ppb on Apr 20 23:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 0.8 ppb on Apr 8																		Hours in Service: 720 Hours of Data: 680 Hours of Missing Data: 40 Hours of Calibration: 36 Percent Operational Time: 99.4			
Minimum Value: 0.0 ppb on Apr 14 13:00 Maximum Diurnal Average: 0.5 ppb at hour 23 Monthly Average: 0.26 ppb																		Minimum Daily Average: 0.1 ppb on Apr 28 Minimum Diurnal Average: 0.1 ppb at hour 14 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.5 P ₉₉ = 2.2																					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	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	0.5	0.3	0.3	0.4	1.0	0.2	0.1	0.2	1.4	0.3	1.4													
2-Apr	0.5	0.1	0.3	Z	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.6	0.6	--	0.6													
3-Apr	0.1	0.1	0.2	0.2	0.2	Z	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.5													
4-Apr	0.2	0.2	0.2	0.2	0.5	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.5													
5-Apr	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.3	0.2	0.7	0.7	1.1	1.0	0.2	0.2	0.3	1.1													
6-Apr	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2													
7-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1													
8-Apr	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	M	M	0.1	0.1	0.1	0.2	1.4	2.2	2.4	2.6	1.8	2.2	1.8	1.2	0.8	2.6													
9-Apr	1.0	0.8	0.7	0.5	Z	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.4	2.4	2.3	2.1	1.2	0.5	0.6	2.4													
10-Apr	0.6	0.8	0.3	0.3	0.4	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	1.5	1.2	0.6	0.3	0.2	0.3	1.5													
11-Apr	Z	0.1	0.2	0.1	0.2	0.3	1.4	0.6	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	1.4													
12-Apr	0.1	Z	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.3	0.2	0.3	0.4	0.3	0.4	0.4	0.2	0.6													
13-Apr	0.4	0.3	Z	1.3	2.3	1.7	0.7	0.2	1.3	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.3	0.5	0.1	0.1	0.0	0.1	0.5	2.3													
14-Apr	0.2	0.3	0.7	Z	0.2	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	M	M	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.7													
15-Apr	0.2	0.1	0.1	0.1	Z	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	1.3	1.7	0.9	0.3	0.2	0.2	0.3	1.7													
16-Apr	0.2	0.2	0.2	1.0	0.3	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.3	0.2	0.2	1.0													
17-Apr	Z	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.2	0.5	0.4	0.2	0.3	0.1	0.2	0.5													
18-Apr	0.0	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1													
19-Apr	0.1	0.1	Z	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	0.0	0.0	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.3													
20-Apr	0.2	0.4	0.2	Z	0.4	0.3	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.1	0.9	1.9	0.6	1.0	5.3	0.8	0.6	5.3													
21-Apr	0.5	0.3	0.5	0.6	Z	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.6													
22-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.7	0.1	0.7													
23-Apr	Z	0.2	0.6	0.3	0.2	0.3	0.8	1.8	1.8	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	2.2	0.5	0.5	2.2													
24-Apr	0.3	Z	0.5	0.5	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.6													
25-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3													
26-Apr	0.1	0.1	0.1	Z	4.3	0.9	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.1	0.2	0.3	0.3	0.2	0.2	0.4	0.2	0.2	0.3	0.5	4.3													
27-Apr	1.3	0.3	0.1	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.1	0.2	0.9	0.2	0.3	1.3													
28-Apr	0.2	0.2	0.1	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	0.1	0.1	0.2													
29-Apr	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.1	0.1	0.2	0.2	0.2	0.2	0.4													
30-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.7	0.2	0.2	0.5	0.2	0.2	0.3	0.3	0.1	0.2	0.7													
																									Diurnal Average														
																									Diurnal Maximum														
Z - zerospan C - Calibration M - Maintenance																																							
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																																							



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Mannix - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mannix - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	677	99.56	99.56
3 - 4	2	0.29	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: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mannix - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	61	49	11	13	14	18	106	107	39	21	20	30	56	31	45	52	673
3 - 4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5 - 7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	50	11	14	14	18	106	107	39	21	20	30	56	31	45	52	676

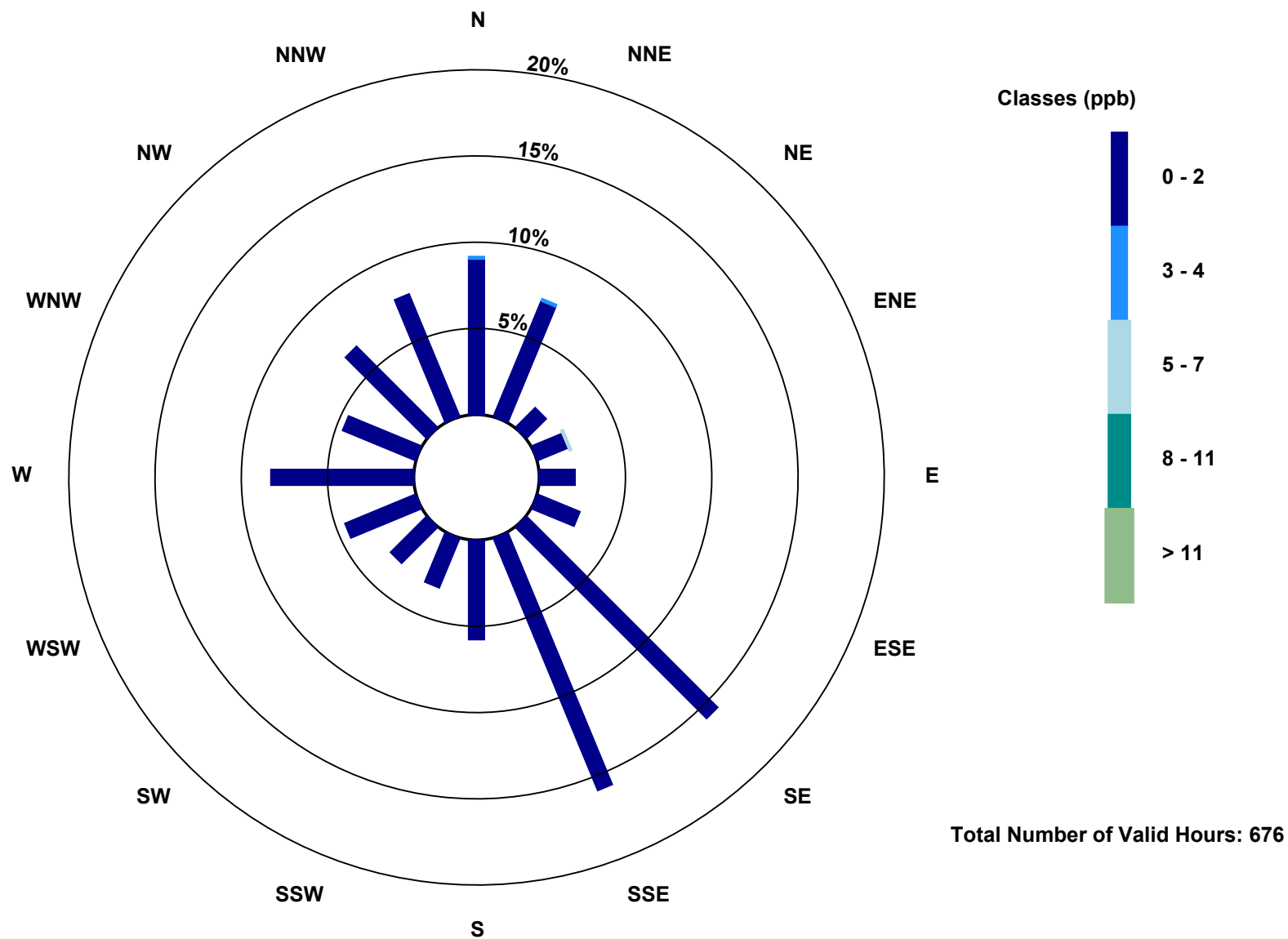
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H_2S) - ppb
Mannix



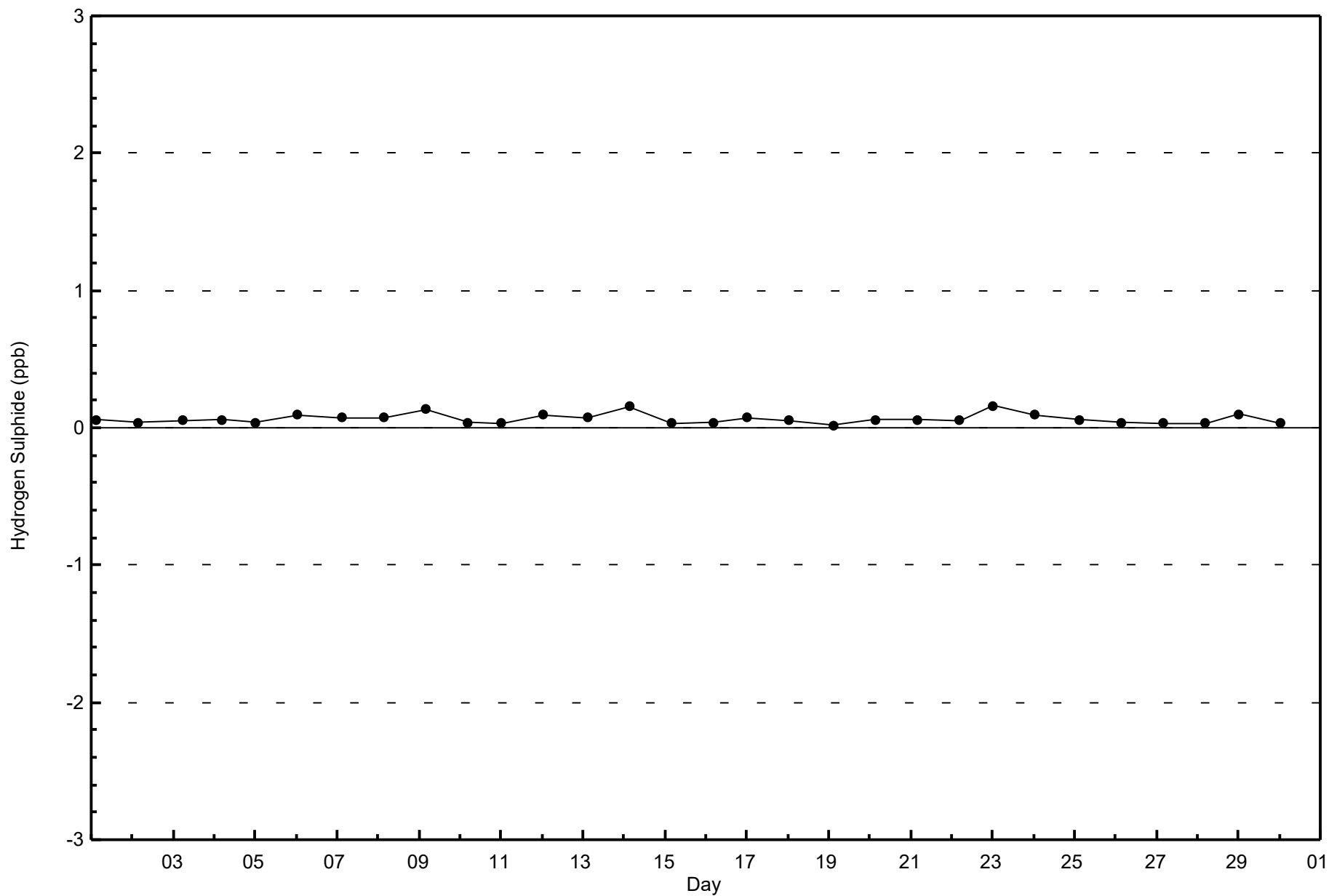


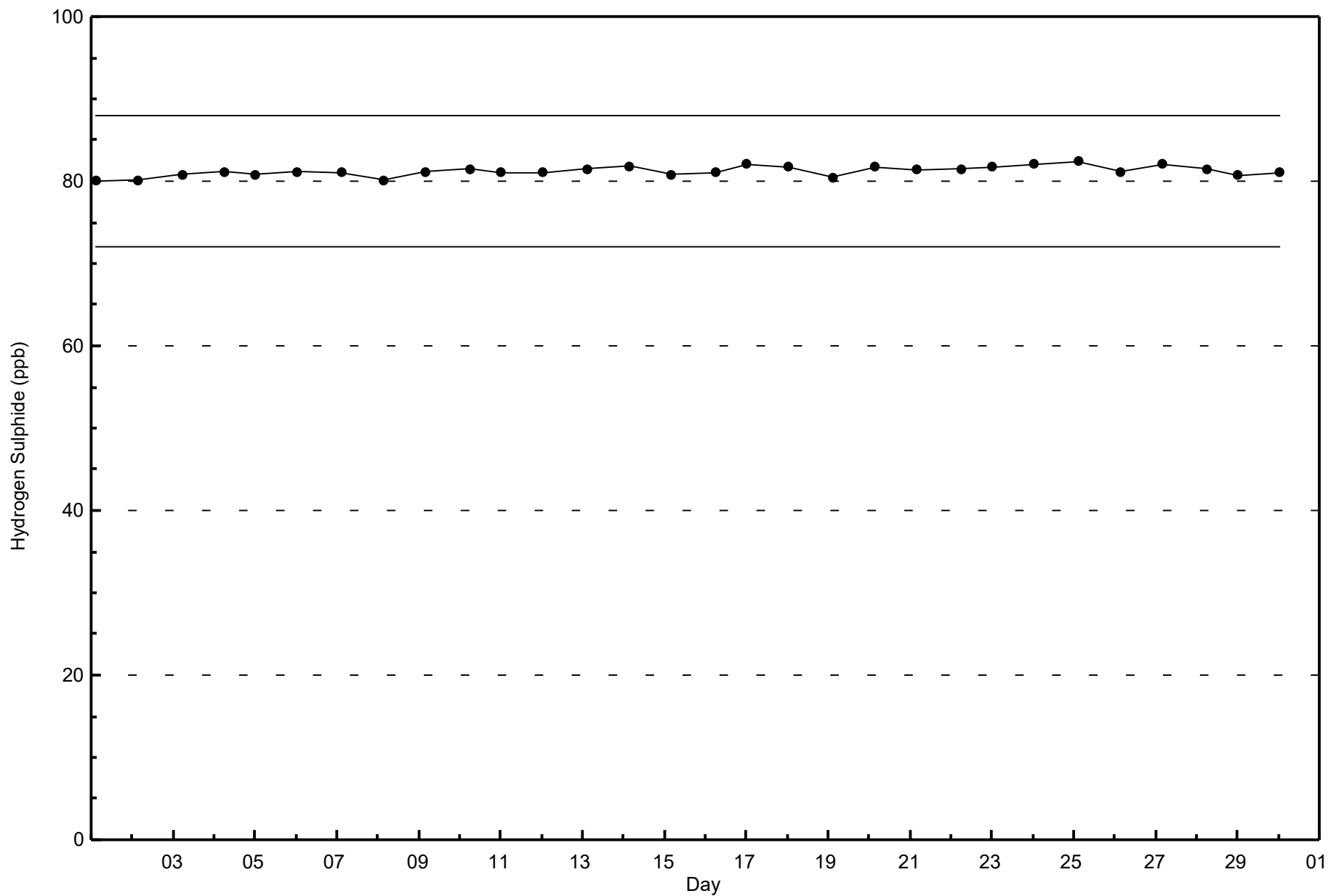
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

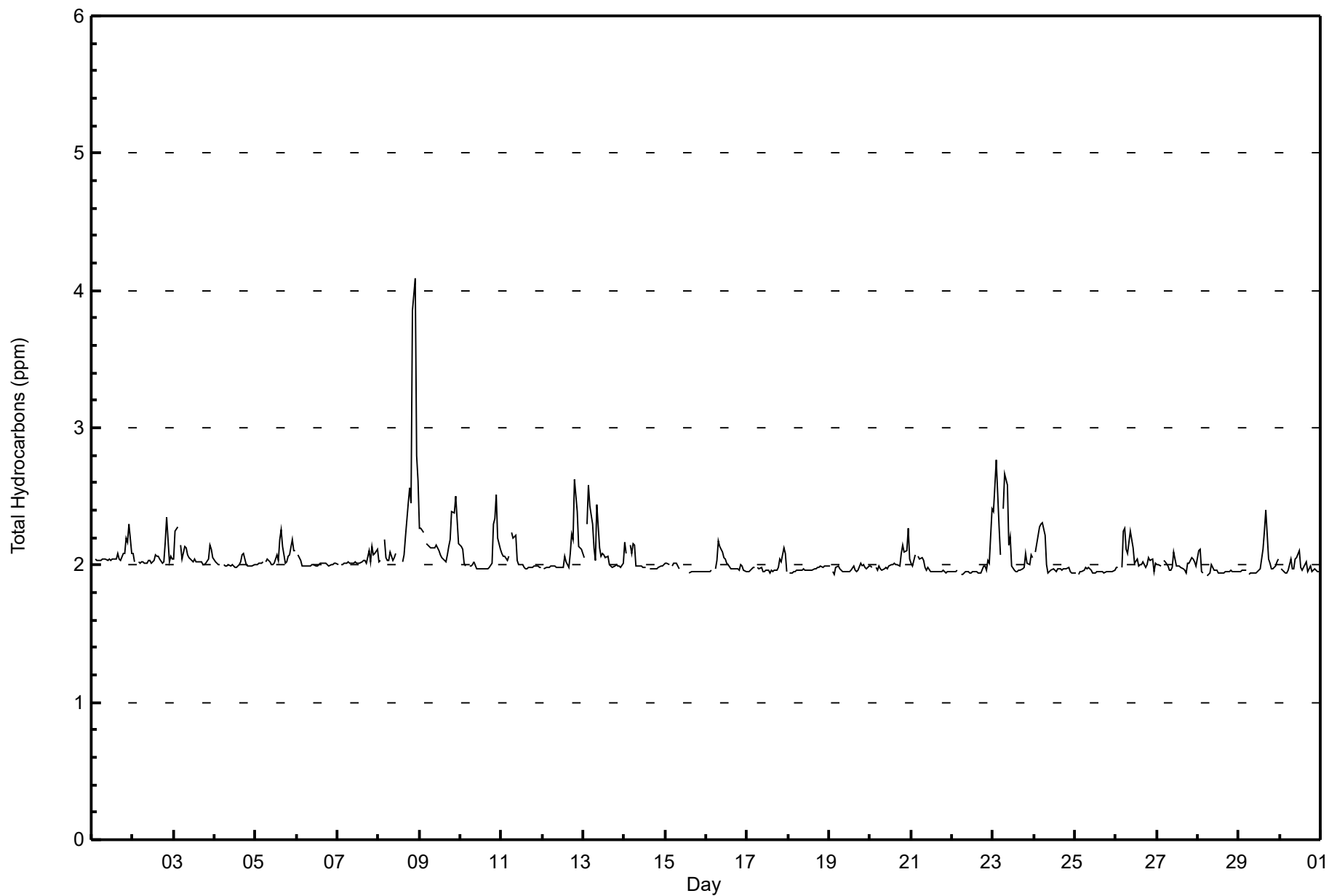
Mannix - April 2025

Maximum Value: 4.1 ppm on Apr 8 22:00																		Maximum Daily Average: 2.4 ppm on Apr 8																		Hours in Service: 720	
Minimum Value: 1.9 ppm on Apr 28 06:00																		Minimum Daily Average: 2.0 ppm on Apr 25																		Hours of Data: 680	
Maximum Diurnal Average: 2.1 ppm at hour 22																		Minimum Diurnal Average: 2.0 ppm at hour 14																		Hours of Missing Data: 40	
Monthly Average: 2.04 ppm																		Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.2 P ₉₉ = 2.6																		Hours of Calibration: 35	
																																				Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	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	2.0	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.3											
2-Apr	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.0	2.1	2.0	2.1	2.3											
3-Apr	2.0	2.2	2.3	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3											
4-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
5-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.2	2.3	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.3											
6-Apr	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
7-Apr	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	2.0	2.1	2.1	2.1	2.1	2.0	2.1											
8-Apr	2.0	2.0	Z	2.2	2.1	2.0	2.0	2.1	2.0	2.1	2.1	M	M	M	2.0	2.1	2.2	2.5	2.6	2.5	3.9	4.1	2.8	2.6	2.4	4.1											
9-Apr	2.3	2.3	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.4	2.4	2.5	2.3	2.2	2.2	2.5											
10-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.5	2.2	2.1	2.1	2.5											
11-Apr	2.1	2.1	2.1	2.0	2.1	Z	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2											
12-Apr	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	2.1	2.0	2.0	2.1	2.2	2.2	2.6	2.4	2.1	2.1	2.1	2.1	2.6											
13-Apr	2.1	Z	2.3	2.6	2.4	2.3	2.1	2.0	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6										
14-Apr	2.2	2.1	Z	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2											
15-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2											
17-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1											
18-Apr	Z	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	2.0											
19-Apr	2.0	Z	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
20-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3	2.0	2.0	2.3											
21-Apr	2.0	2.0	2.1	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.1											
22-Apr	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	2.0	1.9	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	2.4	2.0	2.4											
23-Apr	2.4	2.6	2.8	2.3	2.1	Z	2.4	2.7	2.6	2.1	2.2	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	2.8											
24-Apr	Z	2.1	2.2	2.3	2.3	2.3	2.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.3											
25-Apr	1.9	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0											
26-Apr	2.0	2.0	Z	2.0	2.2	2.3	2.1	2.1	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.3											
27-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1											
28-Apr	2.1	2.1	2.0	1.9	Z	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1											
29-Apr	2.0	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4											
30-Apr	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
																								Diurnal Average													
																								Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Mannix - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mannix - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	514	75.59	75.59
2.1 - 3.0	164	24.12	99.71
3.1 - 10.0	2	0.29	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mannix - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	53	43	5	5	8	9	87	91	35	18	12	23	50	23	12	36	510
2.1 - 3.0	9	5	6	9	6	8	20	17	5	3	9	3	4	13	31	16	164
3.1 - 10.0	0	1	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	62	49	11	14	14	17	107	108	40	21	21	26	54	36	43	53	676

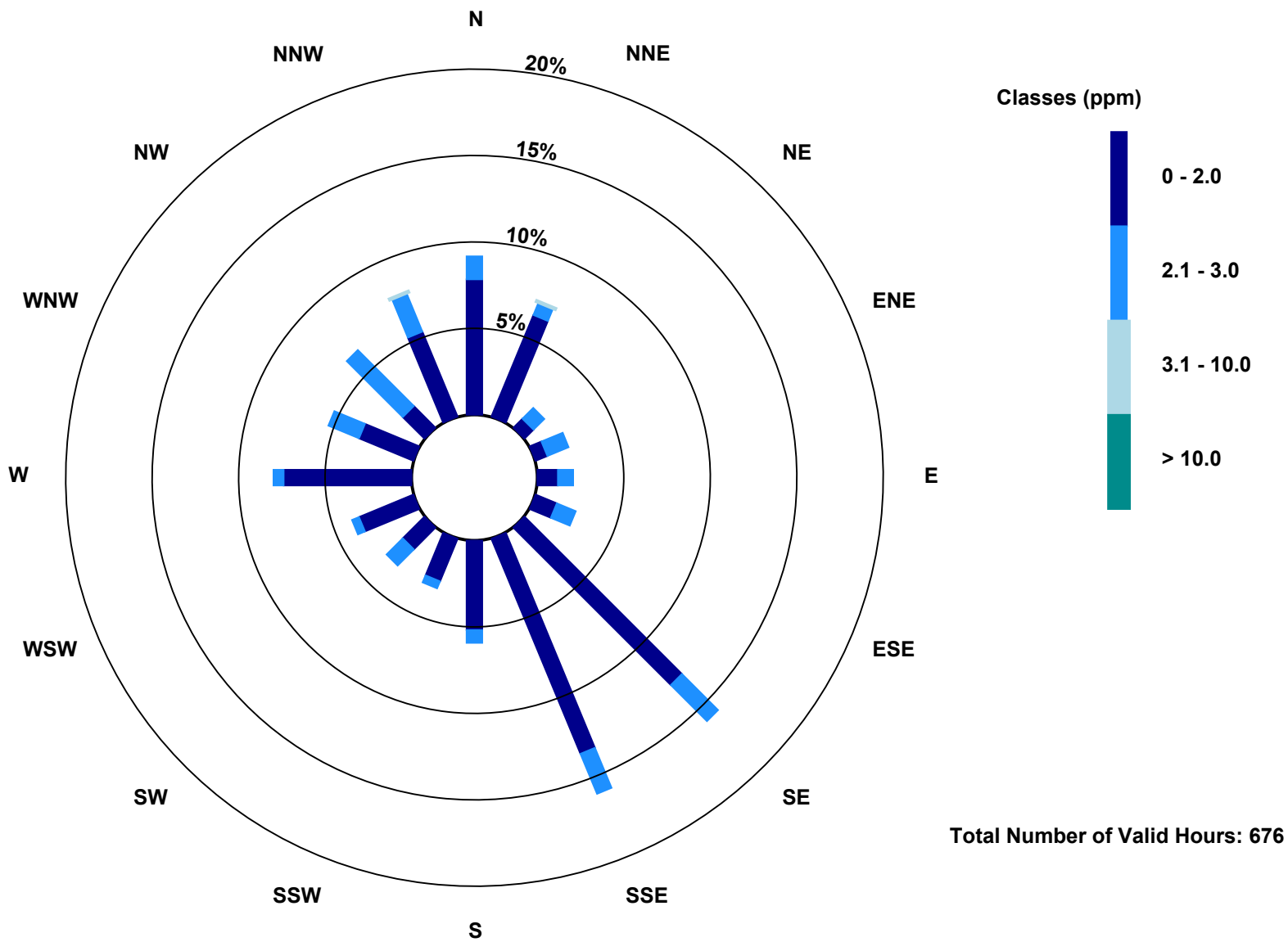
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Mannix



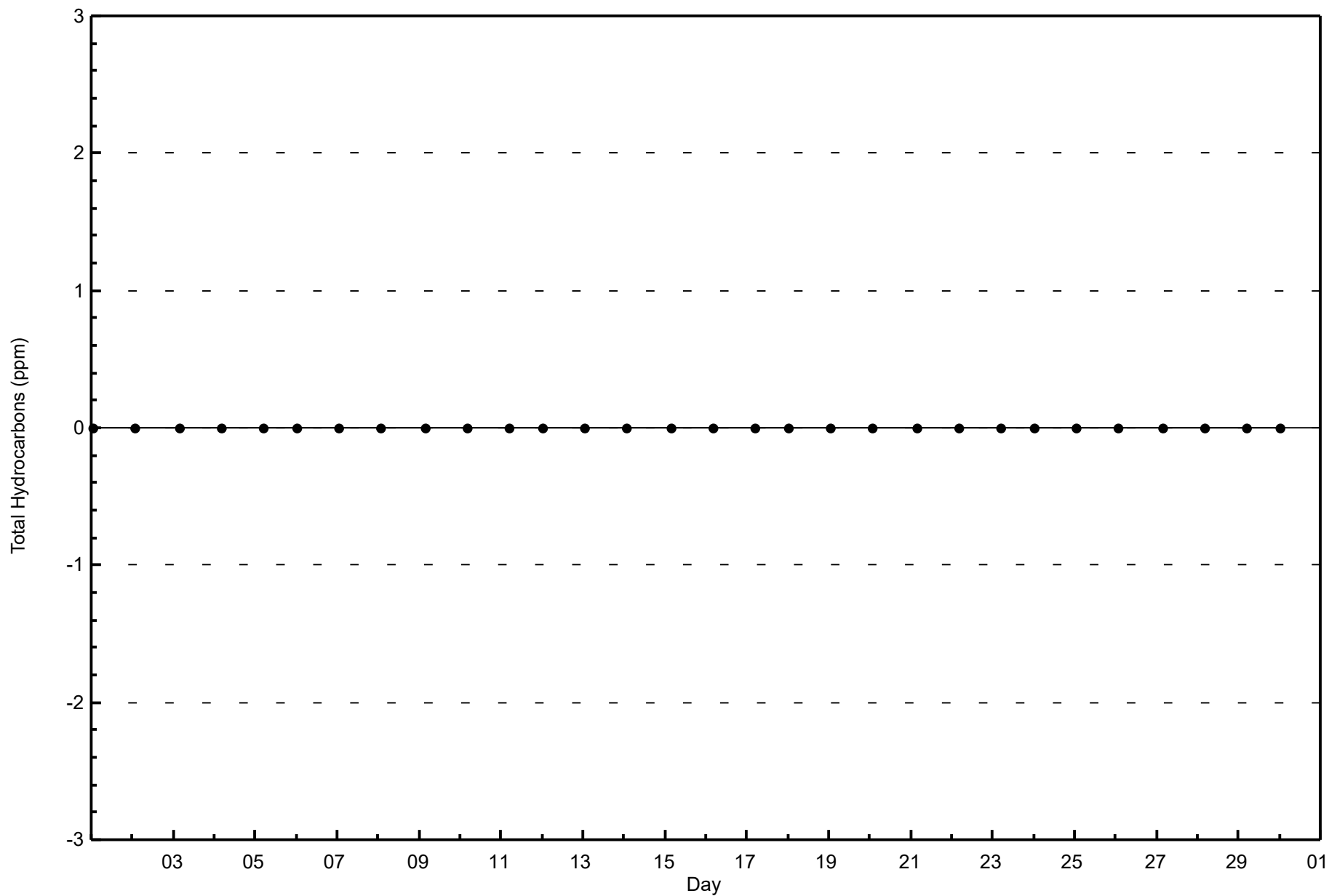


Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

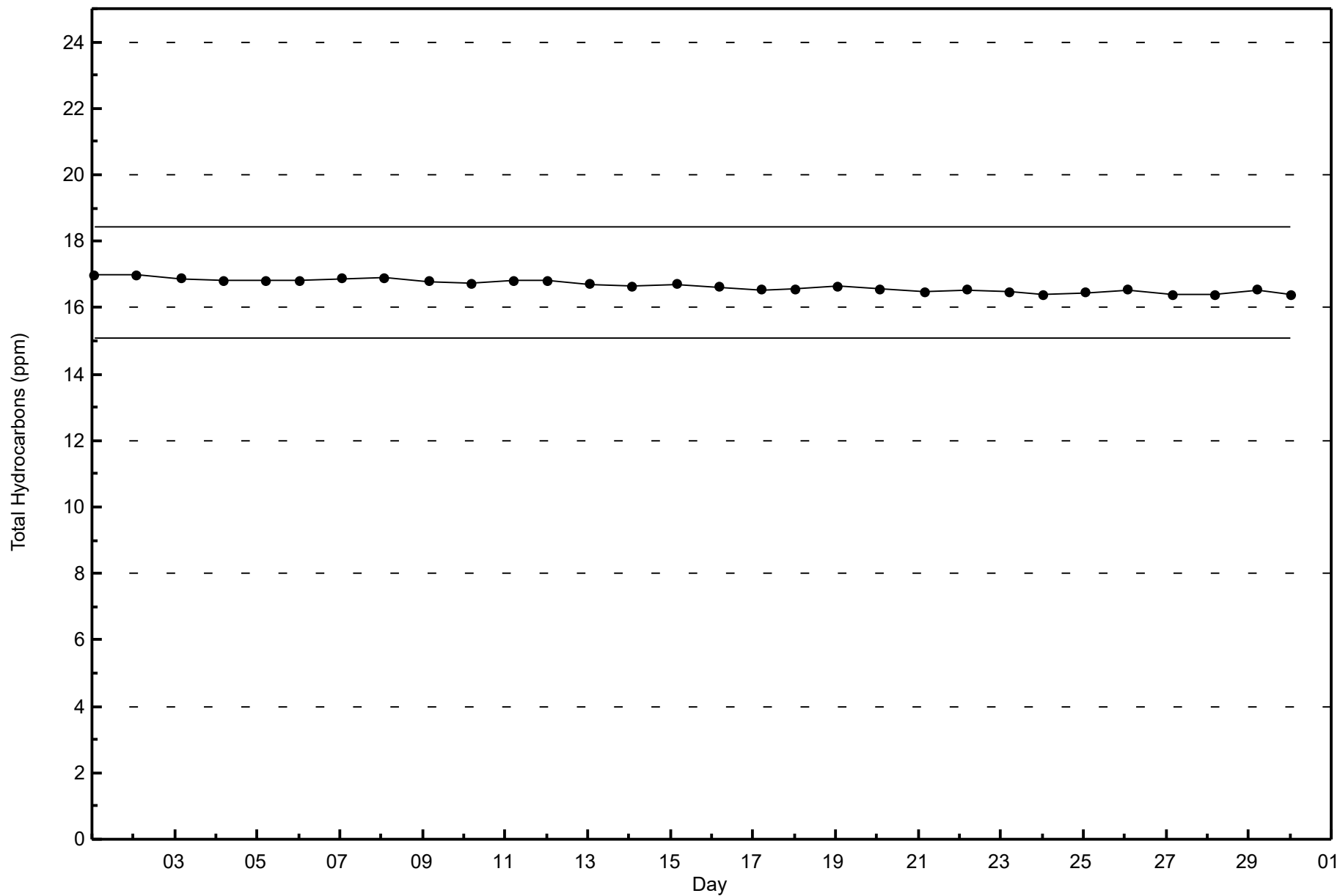
Mannix - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Mannix - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

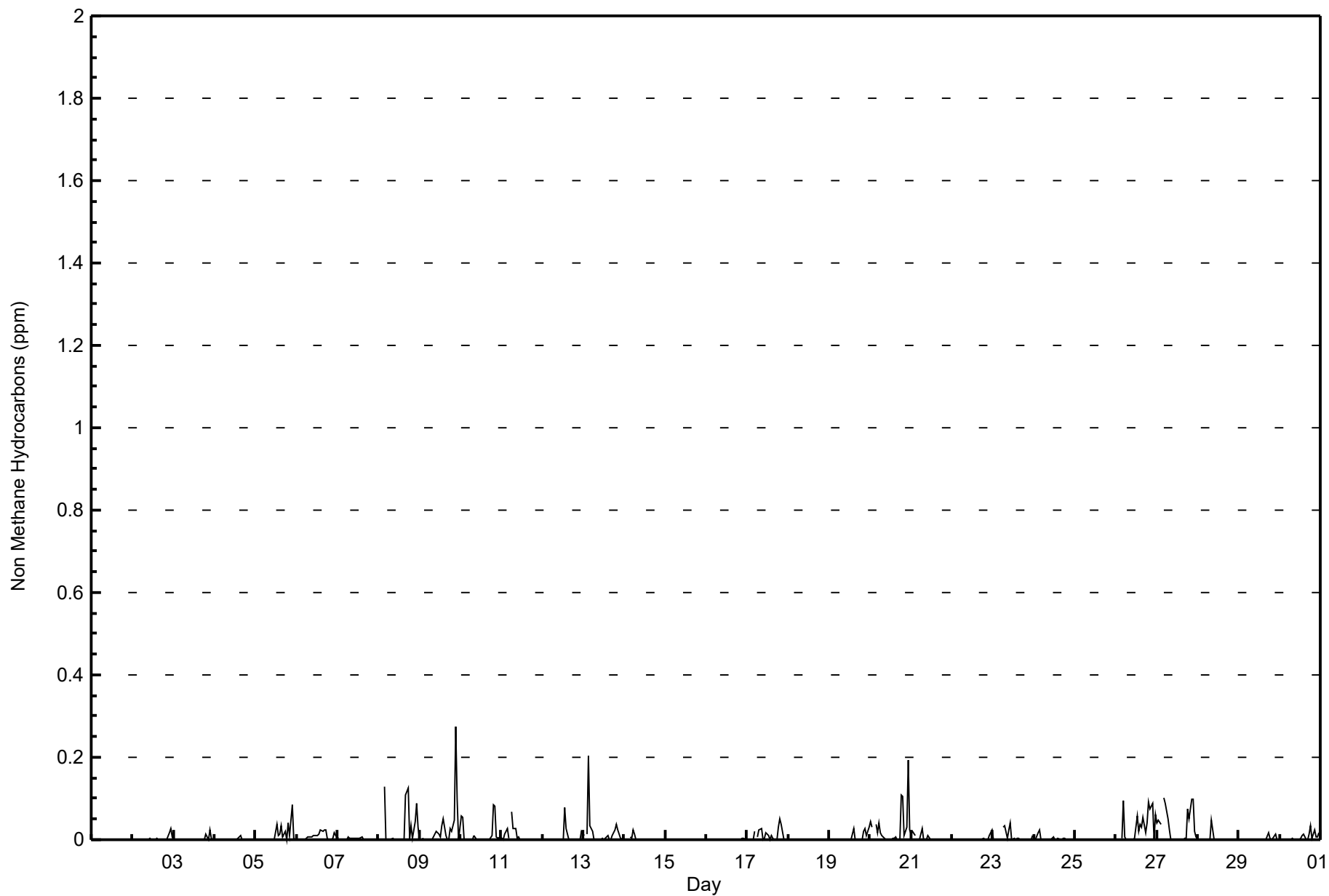
Mannix - April 2025

Maximum Value: 0.276 ppm on Apr 9 22:00																			Maximum Daily Average: 0.033 ppm on Apr 27										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 01:00																			Minimum Daily Average: 0.000 ppm on Apr 1										Hours of Data: 680	
Maximum Diurnal Average: 0.025 ppm at hour 22																			Minimum Diurnal Average: 0.002 ppm at hour 10										Hours of Missing Data: 40	
Monthly Average: 0.009 ppm																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.1										Hours of Calibration: 35	
																													Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.001	0.000	0.018	0.028	0.005	0.003				
3-Apr	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	0.013	0.000	0.023	0.005	0.000	0.002					
4-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001					
5-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.011	0.014	0.033	0.005	0.022	0.000	0.040	0.011	0.085	0.003	0.000	0.011					
6-Apr	Z	0.000	0.000	0.000	0.000	0.002	0.007	0.008	0.006	0.007	0.010	0.011	0.010	0.014	0.024	0.021	0.024	0.025	0.003	0.000	0.000	0.005	0.016	0.010	0.009					
7-Apr	0.002	Z	0.001	0.001	0.001	0.000	0.008	0.002	0.003	0.002	0.002	0.003	0.003	0.004	0.006	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.002					
8-Apr	0.000	0.000	Z	0.128	0.000	0.000	0.000	0.000	0.003	0.000	0.000	M	M	M	0.000	0.000	0.110	0.127	0.003	0.035	0.004	0.043	0.089	0.030	0.029					
9-Apr	0.003	0.002	0.005	Z	0.000	0.001	0.000	0.000	0.006	0.012	0.021	0.012	0.008	0.033	0.050	0.010	0.000	0.000	0.026	0.022	0.048	0.276	0.098	0.000	0.027					
10-Apr	0.057	0.056	0.001	0.000	Z	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.086	0.081	0.007	0.004	0.006	0.014					
11-Apr	0.003	0.002	0.013	0.027	0.002	Z	0.069	0.029	0.026	0.003	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	0.008					
12-Apr	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	0.079	0.026	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.021	0.006					
13-Apr	0.011	Z	0.012	0.204	0.034	0.020	0.002	0.000	0.000	0.000	0.000	0.003	0.000	0.002	0.010	0.000	0.001	0.010	0.023	0.036	0.022	0.013	0.002	0.000	0.018					
14-Apr	0.000	0.000	Z	0.005	0.002	0.025	0.015	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002					
15-Apr	0.000	0.000	0.000	Z	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	0.000					
16-Apr	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	0.000	0.000	0.000	0.002	0.004	0.000	0.000					
17-Apr	0.000	0.000	0.001	0.000	0.019	Z	0.007	0.022	0.028	0.000	0.003	0.018	0.011	0.000	0.009	0.002	0.000	0.000	0.030	0.051	0.037	0.000	0.000	0.000	0.010					
18-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.022	0.026	0.010	0.030	0.005					
20-Apr	0.043	0.032	Z	0.037	0.016	0.042	0.017	0.009	0.003	0.000	0.000	0.000	0.000	0.002	0.004	0.006	0.001	0.001	0.110	0.104	0.012	0.031	0.194	0.023	0.030					
21-Apr	0.012	0.020	0.009	Z	0.000	0.000	0.026	0.000	0.000	0.001	0.009	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	0.003					
22-Apr	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	0.002	0.000	0.000	0.000	0.011	0.023	0.002					
23-Apr	0.001	0.000	0.000	0.000	0.000	Z	0.029	0.034	0.004	0.024	0.042	0.000	0.002	0.000	0.005	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.009	0.007					
24-Apr	Z	0.000	0.018	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.004	0.002	0.002	0.002	0.003	0.001	0.000	0.000	0.000	0.000	0.003					
25-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.004	0.096	0.007	0.000	0.000	0.000	0.000	0.000	0.002	0.057	0.019	0.037	0.030	0.054	0.018	0.041	0.092	0.076	0.089	0.001	0.060	0.030					
27-Apr	0.040	0.047	0.037	Z	0.101	0.089	0.050	0.024	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.005	0.002	0.075	0.052	0.098	0.098	0.021	0.008	0.033					
28-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.047	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	0.002					
29-Apr	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	0.016	0.005	0.001	0.005	0.015	0.000	0.000	0.002					
30-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.003	0.009	0.012	0.001	0.000	0.015	0.035	0.005	0.025	0.006	0.006	0.018	0.006					
0.007 0.006 0.004 0.017 0.011 0.007 0.008 0.004 0.005 0.002 0.003 0.002 0.005 0.006 0.008 0.004 0.007 0.008 0.012 0.018 0.015 0.025 0.016 0.008																										Diurnal Average				
0.057 0.056 0.037 0.204 0.101 0.089 0.069 0.034 0.047 0.024 0.042 0.018 0.057 0.079 0.050 0.033 0.110 0.127 0.110 0.104 0.098 0.276 0.194 0.060																										Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	521	76.62	76.62
0.006 - 0.05	131	19.26	95.88
0.06 - 0.1	25	3.68	99.56
> 0.1	3	0.44	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	36	7	2	1	5	7	83	100	39	19	17	26	54	31	41	49	517
0.006 - 0.05	26	31	6	8	7	9	22	7	1	1	3	0	0	4	2	4	131
0.06 - 0.1	0	11	3	3	1	1	2	1	0	1	1	0	0	1	0	0	25
> 0.1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
Totals	62	49	11	14	14	17	107	108	40	21	21	26	54	36	43	53	676

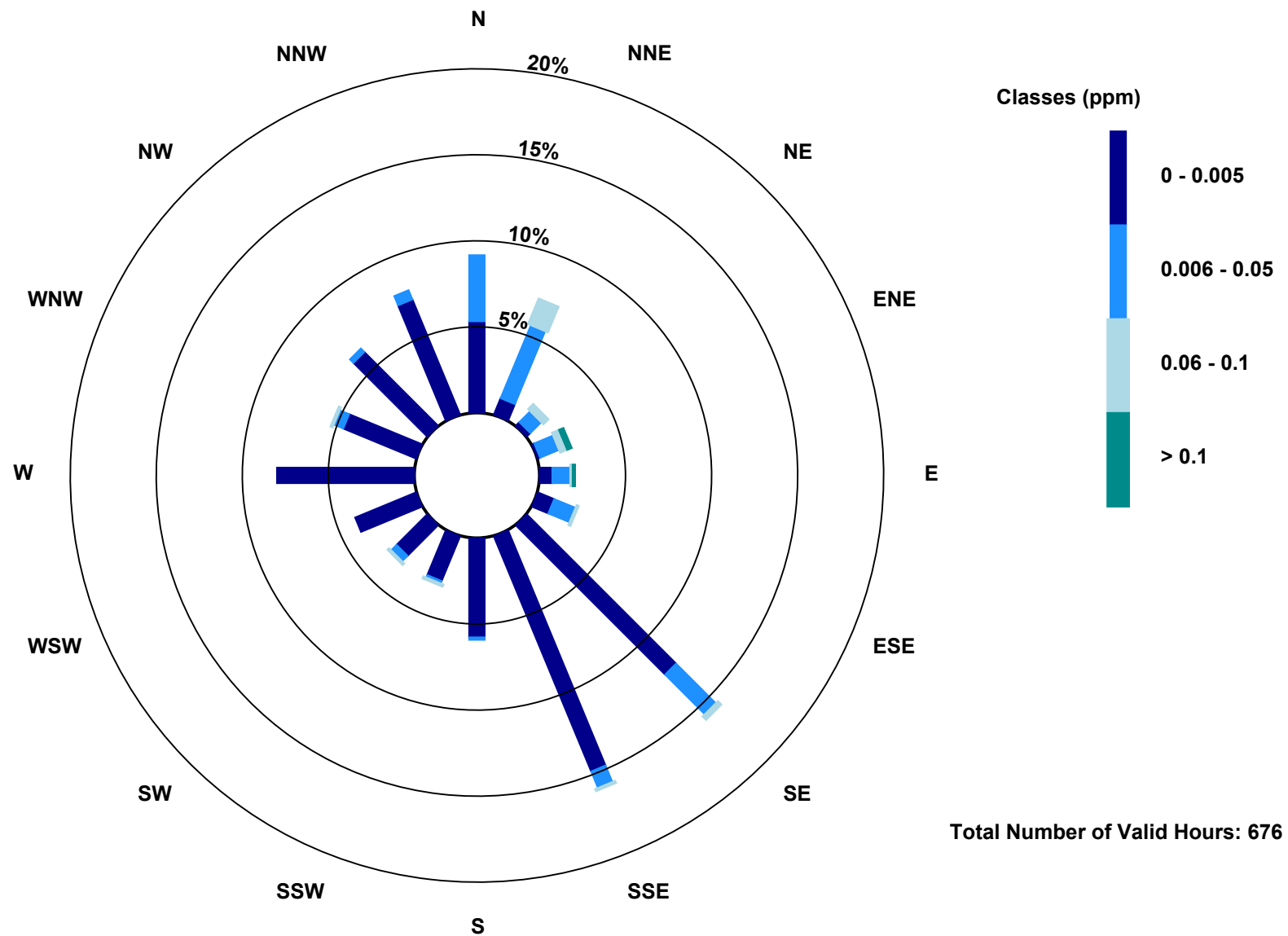
Total Number of Valid Hours: 676

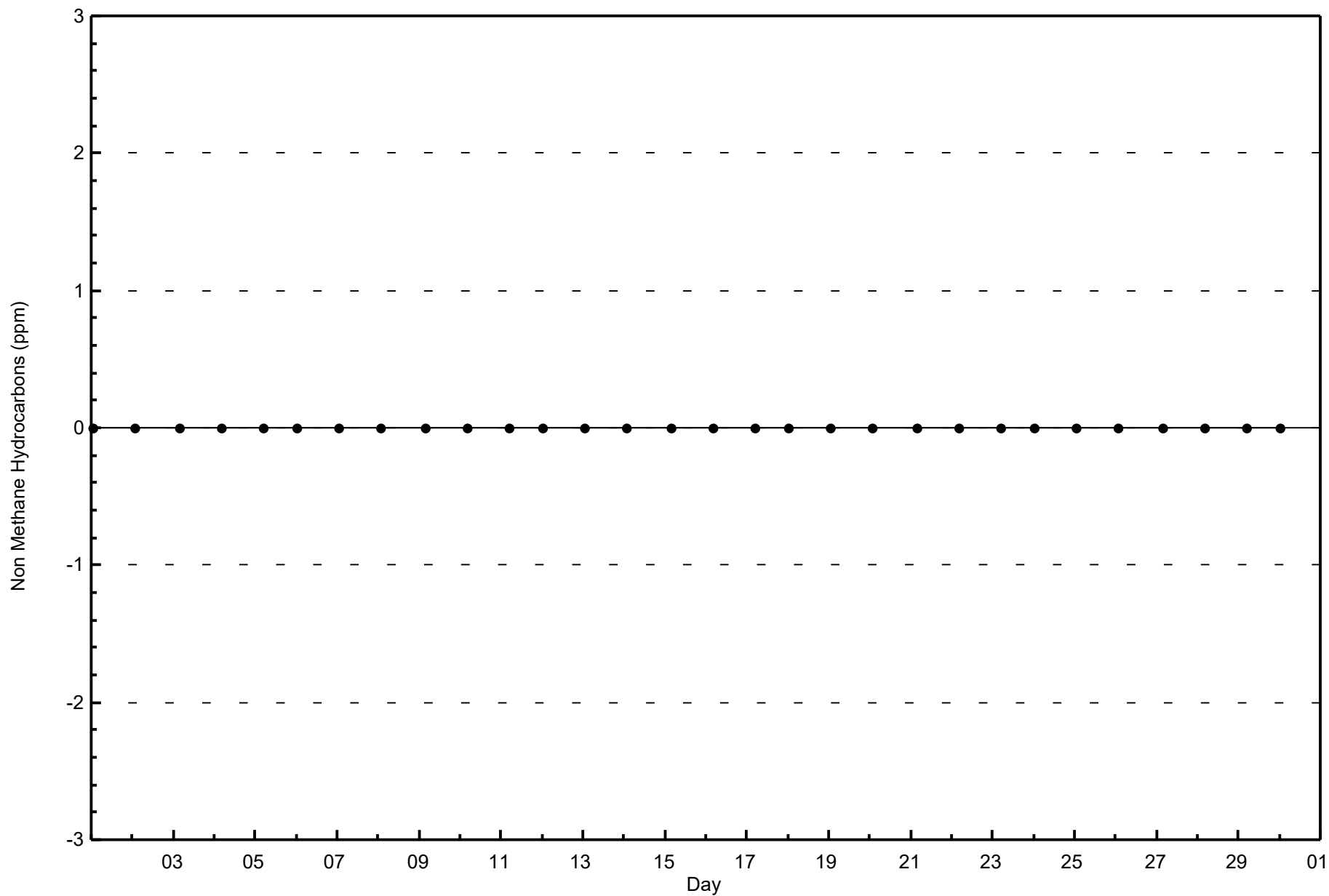
Total Number of Hours: 720

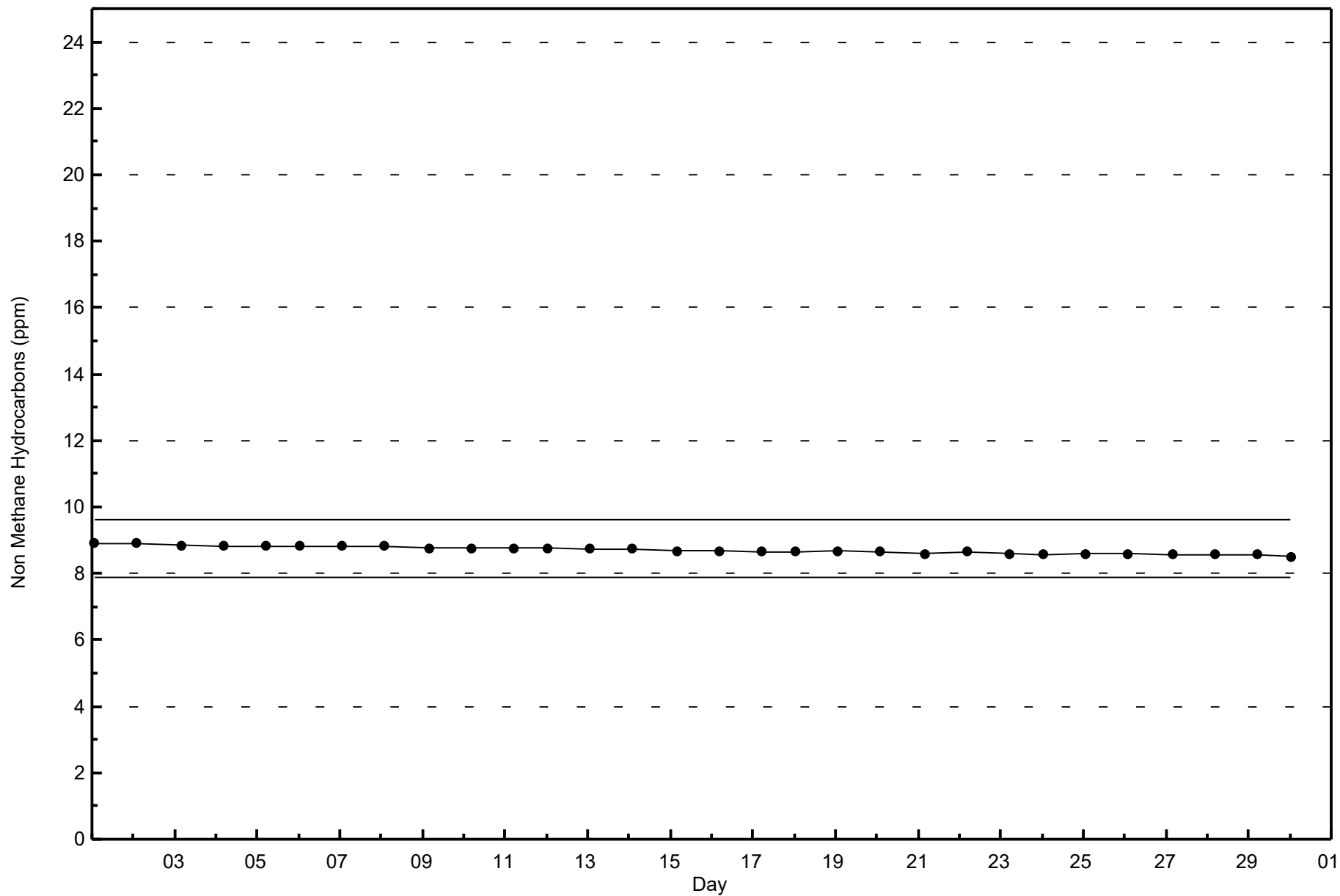


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Mannix





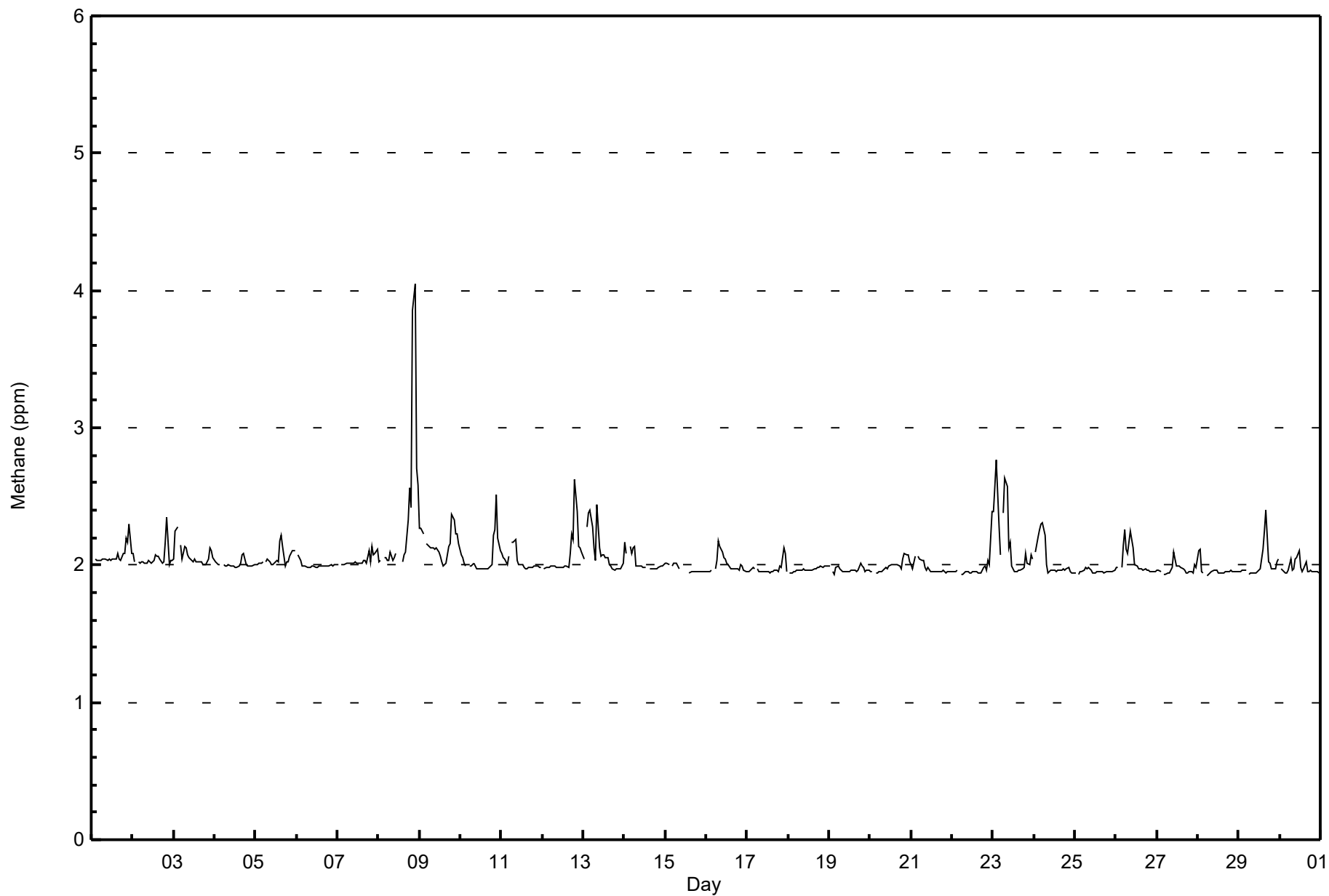


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 720										
Maximum Value: 4.0 ppm on Apr 8 22:00 Maximum Daily Average: 2.4 ppm on Apr 8																	Hours of Data: 680										
Minimum Value: 1.9 ppm on Apr 28 06:00 Minimum Daily Average: 2.0 ppm on Apr 25																	Hours of Missing Data: 40										
Maximum Diurnal Average: 2.1 ppm at hour 21 Minimum Diurnal Average: 2.0 ppm at hour 14																	Hours of Calibration: 35										
Monthly Average: 2.03 ppm Percentiles: P ₁ = 1.9 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.6																	Percent Operational Time: 99.3										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	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	2.0	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.3	
2-Apr	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.0	2.0	2.0	2.1	2.3	
3-Apr	2.0	2.2	2.3	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3	
4-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
5-Apr	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	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	
6-Apr	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
7-Apr	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	2.0	2.1	2.1	2.1	2.1	2.1	2.1	
8-Apr	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	M	M	M	2.0	2.1	2.1	2.3	2.6	2.4	3.9	4.0	2.7	2.6	2.4	4.0	
9-Apr	2.3	2.3	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	2.1	2.1	2.2	2.4	2.3	2.2	2.2	2.2	2.2	2.4	
10-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.5	2.2	2.1	2.1	2.5	
11-Apr	2.1	2.1	2.0	2.0	2.1	Z	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	
12-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.6	2.4	2.1	2.1	2.1	2.1	2.6	
13-Apr	2.0	Z	2.3	2.4	2.4	2.3	2.1	2.0	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
14-Apr	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
15-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	C	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
17-Apr	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	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	
18-Apr	Z	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	2.0	
19-Apr	2.0	Z	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
20-Apr	2.0	2.0	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	2.1	2.1	2.1	2.0	2.0	2.1	
21-Apr	2.0	2.0	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.1	
22-Apr	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	2.0	1.9	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	2.4	2.0	2.4	
23-Apr	2.4	2.6	2.8	2.3	2.1	Z	2.4	2.6	2.6	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.2	2.8	
24-Apr	Z	2.1	2.2	2.3	2.3	2.3	2.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.3	
25-Apr	1.9	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	
26-Apr	2.0	2.0	Z	2.0	2.2	2.3	2.1	2.1	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
27-Apr	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.1	
28-Apr	2.1	2.1	2.0	1.9	Z	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	
29-Apr	2.0	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	
30-Apr	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.1	
2.0 2.0 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.0																									Diurnal Average		
2.4 2.6 2.8 2.4 2.4 2.3 2.4 2.6 2.6 2.2 2.2 2.1 2.1 2.1 2.2 2.2 2.4 2.3 2.6 2.6 3.9 4.0 2.7 2.6																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Mannix - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Mannix - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	525	77.21	77.21
2.1 - 3.0	153	22.50	99.71
3.1 - 10.0	2	0.29	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Mannix - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	54	45	7	5	10	9	88	91	36	18	12	23	50	24	12	37	521
2.1 - 3.0	8	3	4	9	4	8	19	17	4	3	9	3	4	12	31	15	153
3.1 - 10.0	0	1	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	62	49	11	14	14	17	107	108	40	21	21	26	54	36	43	53	676

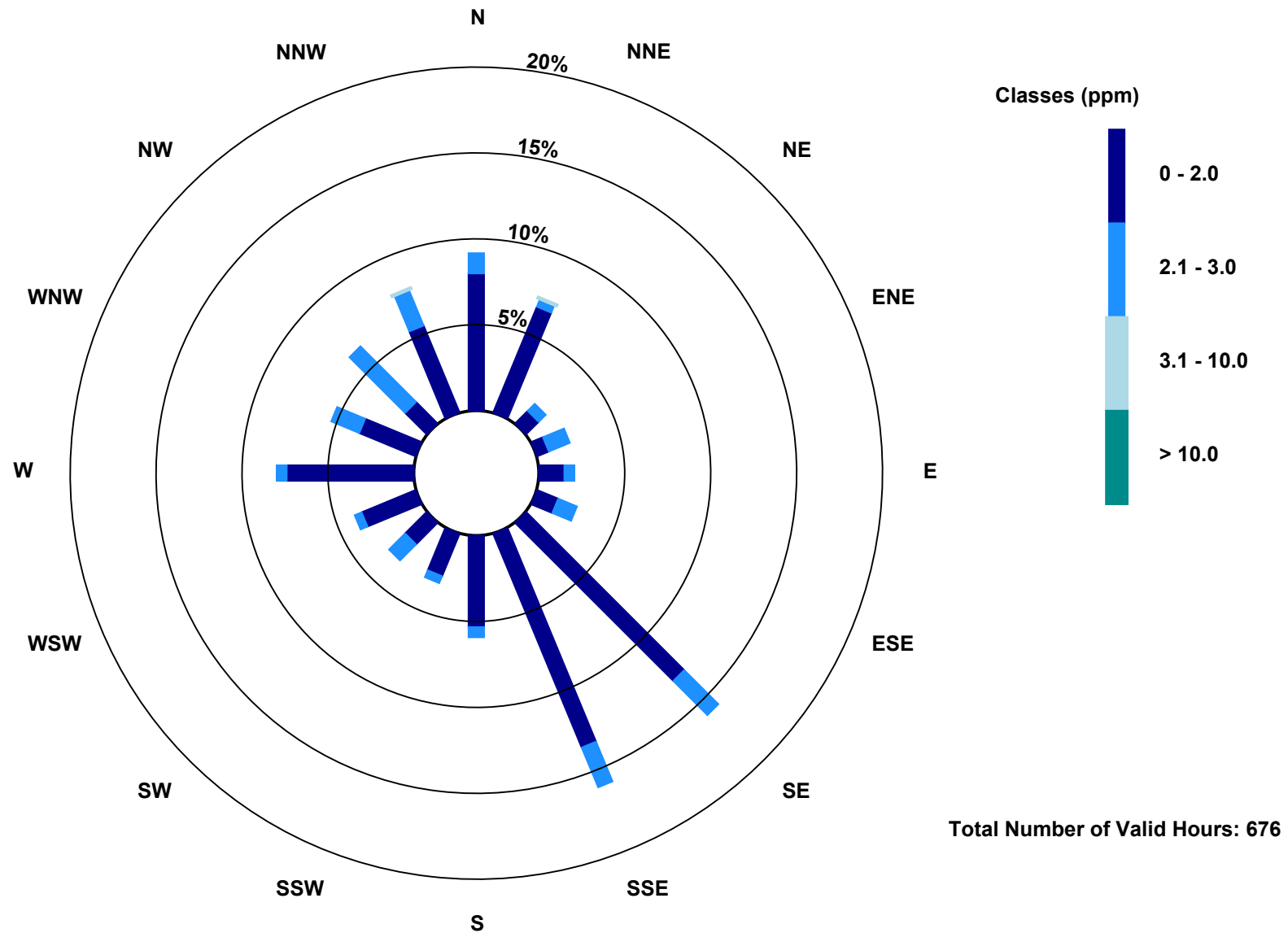
Total Number of Valid Hours: 676

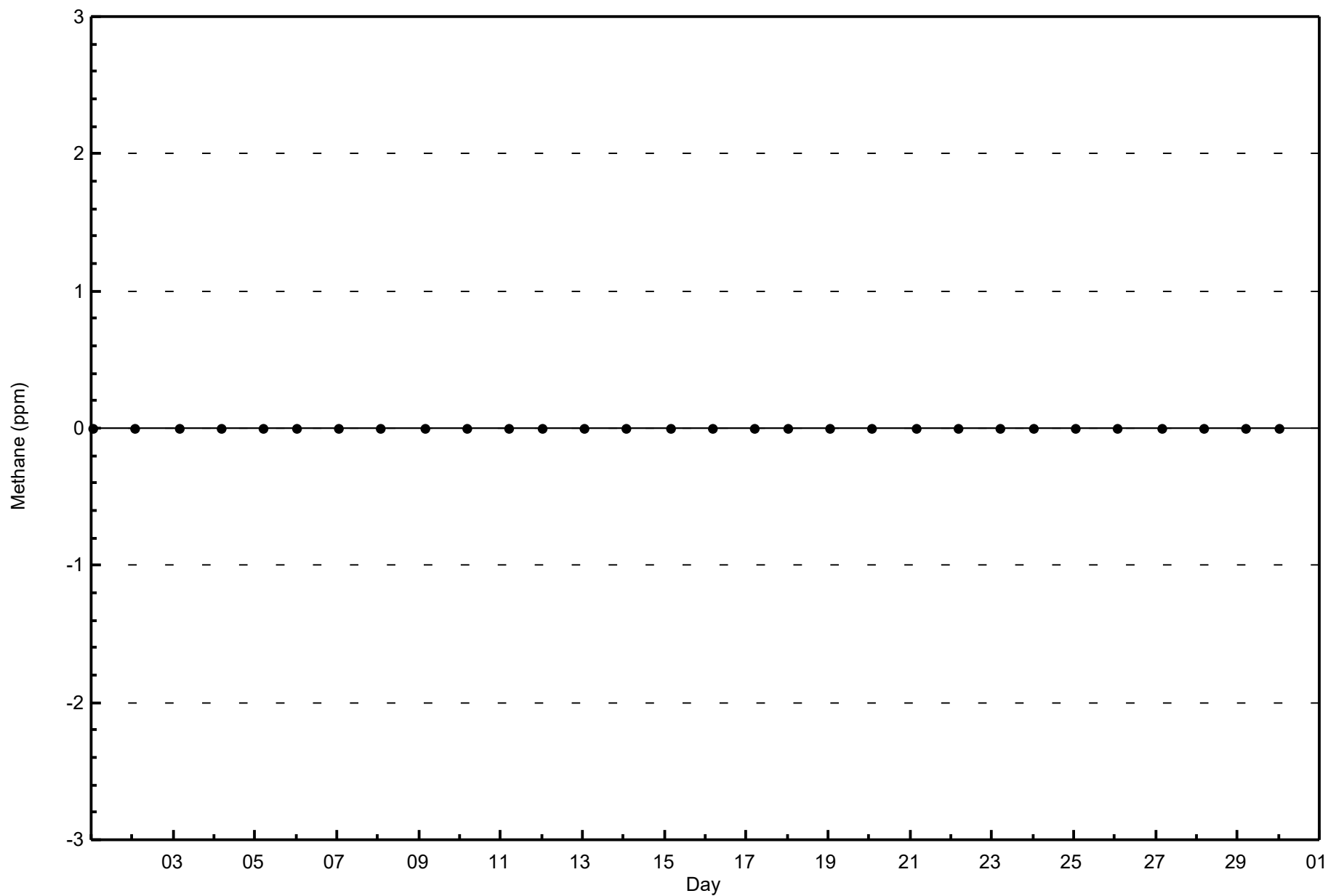
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Methane (CH₄) - ppm
Mannix

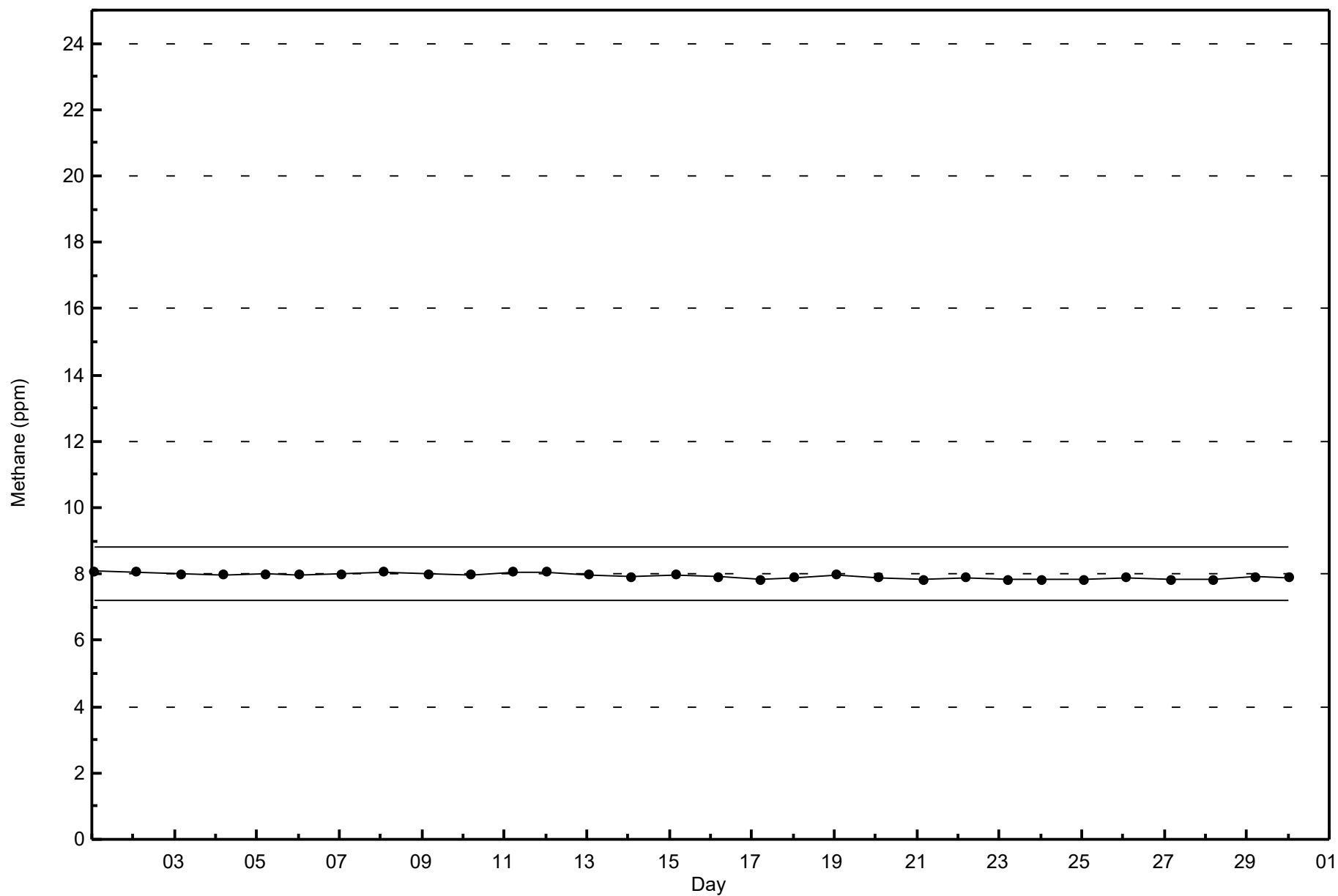






Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Mannix - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

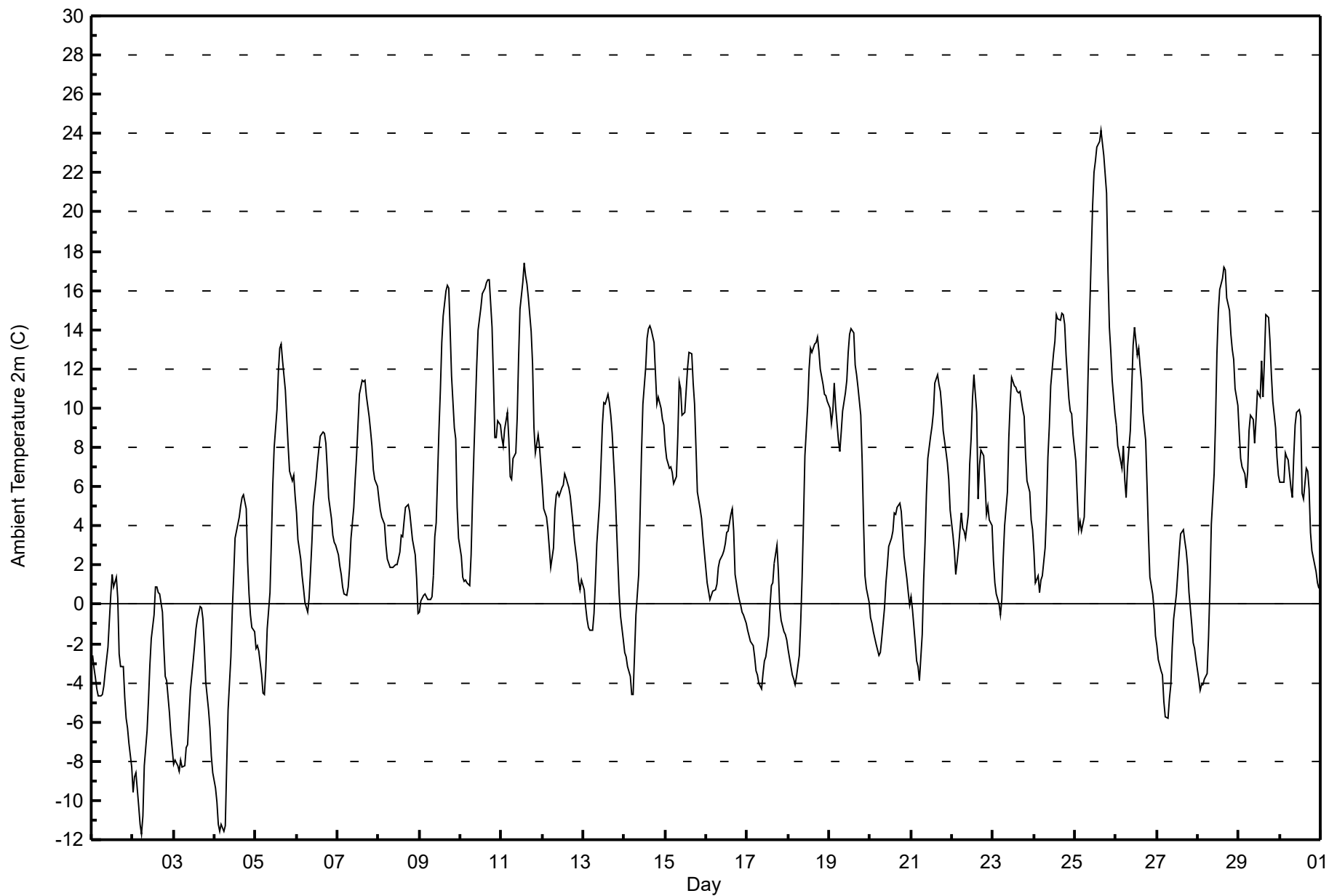
Mannix - April 2025

Maximum Value: 24.1 C on Apr 25 16:00																				Maximum Daily Average: 14.3 C on Apr 25										Hours in Service: 720	
Minimum Value: -11.7 C on Apr 2 06:00																				Minimum Daily Average: -5.2 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 9.6 C at hour 16																				Minimum Diurnal Average: -0.4 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 4.57 C																				Percentiles: P ₁ = -10.7 P ₁₀ = -3.6 Q ₁ = 0.2 Median = 4.5 Q ₃ = 9.4 P ₉₀ = 12.8 P ₉₉ = 20.8										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
2-Apr	-2.6	-3.2	-3.8	-4.3	-4.6	-4.7	-4.6	-4.1	-3.5	-2.2	-0.8	0.4	1.5	0.9	1.4	0.3	-2.5	-3.1	-3.1	-4.7	-5.8	-6.3	-7.1	-8.3	-3.1	1.5					
3-Apr	-9.6	-8.8	-8.6	-10.3	-11.2	-11.7	-10.8	-8.2	-6.4	-4.9	-3.1	-1.8	-0.5	0.9	0.9	0.6	0.5	-0.4	-2.2	-3.7	-3.9	-5.5	-6.6	-7.4	-5.1	0.9					
4-Apr	-8.2	-7.9	-8.2	-8.5	-8.0	-8.3	-8.2	-7.3	-7.2	-5.8	-4.4	-2.9	-2.1	-1.2	-0.8	-0.1	-0.2	-0.8	-2.2	-4.0	-5.4	-6.3	-7.8	-8.6	-5.2	-0.1					
5-Apr	-9.3	-10.1	-11.2	-11.6	-11.2	-11.6	-11.3	-8.2	-5.3	-2.7	-0.3	1.5	3.4	3.7	4.5	5.0	5.5	5.6	4.9	2.2	0.5	-0.5	-1.2	-1.4	-2.5	5.6					
6-Apr	-2.3	-2.1	-2.4	-3.6	-4.5	-4.6	-3.3	-1.3	0.6	3.2	6.1	8.0	9.9	11.8	13.1	13.3	12.5	10.9	9.5	8.1	6.8	6.3	6.6	5.5	4.5	13.3					
7-Apr	4.6	3.3	2.3	1.4	0.8	0.1	-0.4	0.3	1.6	3.2	5.0	6.4	7.2	7.9	8.6	8.8	8.7	8.2	6.9	5.4	4.3	3.5	3.2	3.0	4.4	8.8					
8-Apr	2.5	1.9	1.5	0.9	0.6	0.4	0.9	1.8	3.4	4.9	6.3	7.6	9.1	10.7	11.4	11.3	11.4	10.7	9.6	8.9	8.1	6.9	6.4	6.0	6.0	11.4					
9-Apr	5.4	4.8	4.5	4.1	3.1	2.3	2.1	1.9	1.9	1.9	2.0	2.1	2.7	3.5	3.5	4.3	4.9	5.1	4.7	4.0	3.3	2.5	1.3	-0.4	3.1	5.4					
10-Apr	-0.4	0.1	0.4	0.6	0.4	0.3	0.2	0.4	1.4	3.4	4.2	8.9	10.9	13.3	14.7	16.0	16.3	16.1	14.0	11.7	9.0	8.4	5.0	3.4	6.6	16.3					
11-Apr	2.5	1.4	1.2	1.3	1.1	0.9	2.5	5.3	7.7	12.1	14.0	14.6	15.1	15.8	16.1	16.4	16.5	16.5	14.1	11.5	8.5	8.5	9.3	9.1	9.3	16.5					
12-Apr	8.5	8.1	9.0	9.8	8.5	6.5	6.4	7.4	7.7	9.5	12.6	15.0	16.4	17.4	16.8	16.3	15.6	13.9	12.3	9.0	7.7	8.6	8.0	7.0	10.7	17.4					
13-Apr	6.0	4.9	4.4	3.8	2.9	1.9	2.9	4.8	5.6	5.7	5.5	6.0	6.1	6.6	6.5	5.9	5.5	4.8	4.1	3.3	2.1	1.2	0.7	1.2	4.3	6.6					
14-Apr	0.7	-0.1	-0.8	-1.2	-1.4	-1.3	-0.4	1.2	3.1	5.2	7.2	9.1	10.2	10.2	10.7	10.3	9.6	8.7	6.0	4.1	2.3	0.5	-0.6	-1.8	3.8	10.7					
15-Apr	-2.5	-2.7	-3.2	-3.6	-4.6	-4.6	-2.6	-0.5	1.5	4.6	7.7	10.2	12.1	13.5	14.1	14.2	14.0	13.4	11.8	10.2	10.6	10.0	9.5	9.1	5.9	14.2					
16-Apr	8.1	7.4	6.9	7.0	6.8	6.2	6.5	8.6	11.4	11.0	9.7	9.8	10.9	12.1	12.8	12.8	11.3	10.2	8.0	5.7	4.9	4.4	3.4	2.7	8.3	12.8					
17-Apr	1.1	0.7	0.2	0.4	0.6	0.7	1.0	1.9	2.2	2.5	2.7	3.1	3.6	3.7	4.6	4.9	3.7	1.5	0.6	0.3	-0.1	-0.4	-0.5	-1.0	1.6	4.9					
18-Apr	-1.3	-1.6	-1.9	-2.1	-2.6	-3.4	-3.6	-4.1	-4.3	-3.5	-2.9	-2.7	-1.6	-0.1	0.9	1.1	2.1	3.1	1.7	-0.2	-0.8	-1.4	-1.5	-1.8	-1.4	3.1					
19-Apr	-2.3	-2.8	-3.6	-3.8	-4.1	-3.7	-2.6	-0.9	1.4	4.3	7.6	10.1	12.0	13.1	12.8	13.3	13.4	13.7	12.9	12.0	11.2	10.7	10.6	10.4	6.1	13.7					
20-Apr	10.0	9.2	9.9	11.3	10.1	8.4	7.8	8.8	9.8	10.7	11.4	12.8	13.8	14.0	13.8	12.2	11.7	11.1	9.7	7.3	4.1	1.5	0.8	0.1	9.2	14.0					
21-Apr	-0.7	-0.9	-1.4	-2.0	-2.3	-2.6	-2.5	-1.7	-0.2	1.1	1.9	3.0	3.4	3.7	4.6	4.6	4.9	5.2	4.7	3.6	2.5	1.3	0.6	0.0	1.3	5.2					
22-Apr	0.4	-0.3	-2.0	-2.9	-3.2	-3.9	-1.5	1.2	3.1	5.6	7.4	8.6	9.0	9.8	11.3	11.7	11.2	10.9	10.0	8.8	7.8	7.2	6.4	4.8	5.1	11.7					
23-Apr	3.5	2.7	1.5	2.2	2.9	4.6	3.9	3.7	3.4	4.6	7.2	8.4	10.5	11.7	9.8	5.4	7.1	7.9	7.6	6.2	4.6	5.0	4.3	4.0	5.5	11.7					
24-Apr	2.2	1.1	0.5	0.0	-0.5	0.2	2.4	4.0	5.7	8.5	10.3	11.5	11.2	11.1	10.8	10.8	10.8	9.9	9.6	7.6	6.3	5.7	4.3	3.8	6.2	11.5					
25-Apr	2.7	1.1	1.4	0.6	1.2	1.5	2.9	4.7	7.5	9.1	11.2	12.8	13.4	14.8	14.6	14.5	14.9	14.8	14.3	12.7	10.5	9.9	9.7	8.7	8.7	14.9					
26-Apr	7.3	5.5	3.8	4.3	3.8	4.5	6.8	9.4	12.4	17.7	20.4	22.0	22.6	23.3	23.6	24.1	23.6	22.8	21.0	16.9	14.1	12.9	11.5	9.7	14.3	24.1					
27-Apr	9.2	8.1	7.7	6.9	8.1	6.4	5.5	7.0	8.8	11.0	13.2	14.1	12.7	13.1	12.1	11.3	9.8	8.4	6.0	3.5	1.3	0.5	-0.2	-1.6	7.6	14.1					
28-Apr	-2.1	-2.8	-3.4	-3.6	-5.0	-5.8	-5.8	-4.8	-4.1	-2.2	-0.8	0.5	1.6	2.6	3.6	3.8	3.3	2.8	2.0	0.6	-1.0	-2.0	-2.3	-2.8	-1.2	3.8					
29-Apr	-3.8	-4.4	-4.1	-4.1	-3.8	-3.6	-1.7	0.9	4.1	6.6	9.3	12.8	14.9	16.0	16.6	17.2	17.0	15.6	15.0	13.8	13.0	12.5	11.0	10.1	7.5	17.2					
30-Apr	8.7	7.4	7.0	6.7	6.0	6.7	8.8	9.6	9.4	8.3	9.4	10.9	10.5	12.4	10.6	12.4	14.8	14.6	13.4	11.7	10.4	9.0	7.5	6.6	9.7	14.8					
31-Apr	6.2	6.2	6.2	7.7	7.5	7.4	6.0	5.4	7.5	9.1	9.8	9.9	9.6	5.7	5.4	6.9	6.8	5.8	3.6	2.7	2.0	1.6	1.1	0.8	5.9	9.9					
																									Diurnal Average						
																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	176	24.44	24.44
0 - 10	389	54.03	78.47
10 - 20	146	20.28	98.75
> 20	9	1.25	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

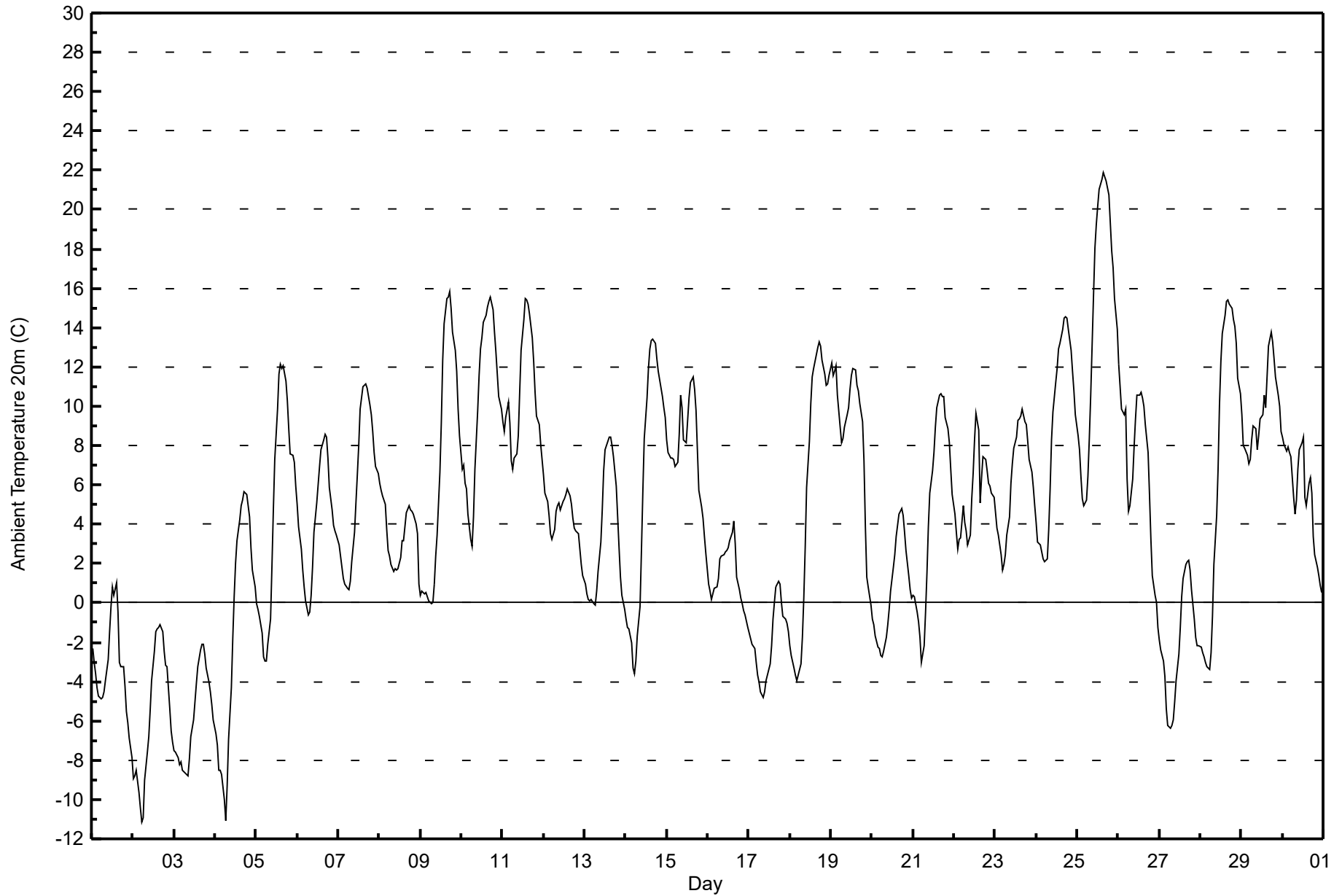
Mannix - April 2025

Maximum Value: 21.9 C on Apr 25 16:00																			Maximum Daily Average: 14.5 C on Apr 25										Hours in Service: 720				
Minimum Value: -11.2 C on Apr 2 06:00																			Minimum Daily Average: -5.8 C on Apr 3										Hours of Data: 720				
Maximum Diurnal Average: 8.7 C at hour 17																			Minimum Diurnal Average: 0.1 C at hour 7										Hours of Missing Data: 0				
Monthly Average: 4.43 C																			Percentiles: P ₁ = -9.0 P ₁₀ = -3.6 Q ₁ = 0.0 Median = 4.6 Q ₃ = 9.1 P ₉₀ = 12.3 P ₉₉ = 19.3										Hours of Calibration: 0				
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Apr	-2.3	-3.1	-3.6	-4.3	-4.8	-4.9	-4.8	-4.5	-3.9	-2.9	-1.5	-0.2	0.8	0.4	1.0	-0.5	-3.0	-3.3	-3.3	-4.2	-5.5	-6.1	-6.8	-7.9	-3.3	1.0							
2-Apr	-8.9	-8.8	-8.5	-9.7	-10.5	-11.2	-11.0	-9.0	-7.6	-6.8	-5.4	-4.0	-2.4	-1.5	-1.3	-1.2	-1.1	-1.5	-2.5	-3.1	-3.2	-5.4	-6.5	-7.1	-5.8	-1.1							
3-Apr	-7.5	-7.6	-7.9	-8.2	-8.1	-8.5	-8.7	-8.7	-8.8	-8.0	-6.8	-5.9	-5.0	-4.1	-3.3	-2.4	-2.1	-2.1	-2.6	-3.3	-4.0	-4.5	-5.2	-6.0	-5.8	-2.1							
4-Apr	-6.6	-7.2	-8.5	-8.5	-8.7	-10.0	-11.0	-9.3	-6.9	-4.3	-1.8	0.3	2.0	3.2	4.2	4.9	5.2	5.6	5.5	5.0	4.3	2.8	1.7	0.8	-1.6	5.6							
5-Apr	-0.1	-0.4	-0.7	-1.5	-2.8	-2.9	-3.0	-2.1	-0.8	1.9	4.7	7.3	9.8	11.7	12.1	11.9	12.1	11.3	10.2	8.9	7.6	7.5	7.2	6.0	4.8	12.1							
6-Apr	5.0	3.9	2.7	1.7	0.8	0.1	-0.6	-0.5	0.4	1.8	3.6	5.1	6.0	6.9	7.8	8.3	8.6	8.4	7.4	5.9	4.7	4.0	3.6	3.5	4.1	8.6							
7-Apr	2.9	2.4	1.8	1.2	0.9	0.8	0.7	1.1	2.1	3.6	5.1	6.5	8.0	9.8	11.0	11.1	11.1	10.9	10.1	9.5	8.7	7.7	6.9	6.6	5.9	11.1							
8-Apr	6.0	5.7	5.4	5.0	3.8	2.6	2.4	1.9	1.6	1.7	1.7	2.3	3.2	3.1	3.9	4.6	4.9	4.7	4.7	4.5	4.0	3.5	0.9	3.5	6.0								
9-Apr	0.4	0.6	0.5	0.5	0.3	0.1	0.0	0.0	0.9	2.4	3.4	6.7	9.1	12.3	14.2	15.5	15.5	15.8	15.0	13.8	12.9	11.8	9.9	8.5	7.1	15.8							
10-Apr	6.8	7.0	6.1	5.8	4.5	3.2	2.9	4.4	6.8	9.8	11.5	12.9	13.5	14.3	14.6	15.0	15.3	15.6	14.9	13.8	12.8	11.6	10.5	9.8	10.1	15.6							
11-Apr	9.2	8.7	9.4	10.2	9.2	7.2	6.8	7.4	7.6	8.5	10.7	12.8	14.4	15.5	15.4	15.2	14.7	13.5	12.3	10.7	9.5	9.1	8.1	7.3	10.6	15.5							
12-Apr	6.5	5.6	5.2	4.4	3.5	3.2	3.7	4.6	5.0	5.1	4.8	5.1	5.3	5.5	5.8	5.5	5.0	4.3	3.8	3.7	3.5	2.7	2.0	1.4	4.4	6.5							
13-Apr	1.0	0.4	0.2	0.1	0.2	-0.1	-0.1	0.6	1.6	3.1	4.8	6.7	7.8	8.0	8.4	8.4	8.0	7.5	5.9	4.4	2.8	1.3	0.4	-0.3	3.4	8.4							
14-Apr	-0.8	-1.2	-1.3	-2.1	-3.3	-3.6	-2.9	-1.7	-0.2	2.6	5.6	8.4	10.4	11.9	12.9	13.3	13.4	13.2	12.4	11.8	11.4	10.5	10.0	9.4	5.8	13.4							
15-Apr	8.3	7.6	7.3	7.3	7.3	7.0	7.2	8.6	10.6	9.9	8.3	8.1	9.3	10.4	11.2	11.5	10.9	9.7	7.7	5.7	4.8	4.3	3.4	2.6	7.9	11.5							
16-Apr	1.0	0.6	0.2	0.4	0.7	0.8	1.2	2.2	2.4	2.4	2.6	2.7	2.8	3.2	3.6	4.2	3.0	1.3	0.7	0.3	0.0	-0.4	-0.6	-1.2	1.4	4.2							
17-Apr	-1.5	-1.8	-2.1	-2.4	-3.0	-3.7	-4.0	-4.5	-4.8	-4.5	-3.9	-3.7	-3.1	-2.1	-0.8	0.0	0.8	1.1	1.0	0.0	-0.7	-0.8	-1.0	-1.5	-2.0	1.1							
18-Apr	-2.2	-2.7	-3.3	-3.7	-4.0	-3.7	-3.1	-1.7	0.3	2.8	5.8	8.2	10.1	11.5	11.9	12.6	13.0	13.3	13.1	12.4	11.6	11.1	11.2	11.5	5.7	13.3							
19-Apr	12.2	11.6	11.8	12.1	10.5	8.9	8.1	8.4	8.9	9.6	9.9	10.8	11.6	11.9	11.9	11.1	10.8	10.2	9.2	7.2	3.9	1.3	0.8	-0.1	8.8	12.2							
20-Apr	-0.8	-1.1	-1.6	-2.3	-2.3	-2.7	-2.8	-2.4	-1.8	-1.1	-0.3	0.6	1.8	2.4	3.4	3.9	4.5	4.8	4.4	3.6	2.6	1.4	0.7	0.3	0.6	4.8							
21-Apr	0.4	0.3	-0.4	-1.0	-1.8	-3.0	-2.2	-0.5	1.5	3.9	5.6	6.7	7.6	9.0	9.9	10.6	10.6	10.5	10.5	9.5	8.9	8.1	6.8	5.5	4.9	10.6							
22-Apr	4.5	3.6	2.7	3.2	3.3	4.9	4.1	3.7	3.0	3.4	5.3	6.6	8.3	9.7	8.8	5.1	6.4	7.4	7.3	6.7	6.1	5.9	5.6	5.4	5.5	9.7							
23-Apr	4.6	3.8	3.4	2.5	1.6	1.9	2.5	3.4	4.4	6.1	7.1	7.9	8.5	9.3	9.3	9.5	9.9	9.2	9.1	8.2	7.3	6.6	5.9	5.0	6.1	9.9							
24-Apr	4.1	3.1	2.9	2.6	2.2	2.1	2.2	3.7	5.8	8.3	9.7	11.2	11.9	12.9	13.2	13.9	14.5	14.5	14.4	13.9	12.9	11.8	10.8	9.6	8.8	14.5							
25-Apr	8.5	7.8	6.5	5.3	4.9	5.2	6.4	8.4	10.6	15.6	18.1	19.2	20.1	21.1	21.5	21.9	21.7	21.5	20.7	19.3	17.9	17.1	15.5	13.9	14.5	21.9							
26-Apr	12.2	11.0	9.9	9.6	9.9	6.3	4.6	4.9	6.3	7.9	9.4	10.5	10.6	10.7	10.4	10.0	9.1	7.7	5.5	3.3	1.4	0.4	0.0	-1.2	7.1	12.2							
27-Apr	-1.9	-2.4	-3.0	-3.8	-5.4	-6.2	-6.4	-6.2	-6.0	-5.0	-3.9	-2.6	-1.3	0.3	1.2	1.9	2.1	2.1	1.7	0.7	-0.8	-1.7	-2.1	-2.2	-2.1	2.1							
28-Apr	-2.3	-2.5	-2.7	-3.0	-3.2	-3.4	-2.5	-0.7	2.0	4.4	6.8	10.1	12.3	13.7	14.6	15.3	15.4	15.2	15.0	14.4	14.0	13.2	11.4	10.6	7.0	15.4							
29-Apr	9.6	8.0	7.8	7.5	7.1	7.3	8.3	9.0	8.9	7.8	8.5	9.3	9.5	10.6	9.9	11.5	13.1	13.8	13.3	12.4	11.5	10.6	10.0	8.7	9.7	13.8							
30-Apr	8.4	8.1	7.7	7.9	7.6	7.4	5.4	4.5	5.2	6.8	7.8	8.1	8.4	5.4	4.9	6.1	6.3	5.6	3.4	2.5	1.8	1.4	0.9	0.6	5.5	8.4							
Diurnal Average																																	
Diurnal Maximum																																	



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	180	25.00	25.00
0 - 10	397	55.14	80.14
10 - 20	136	18.89	99.03
> 20	7	0.97	100.00

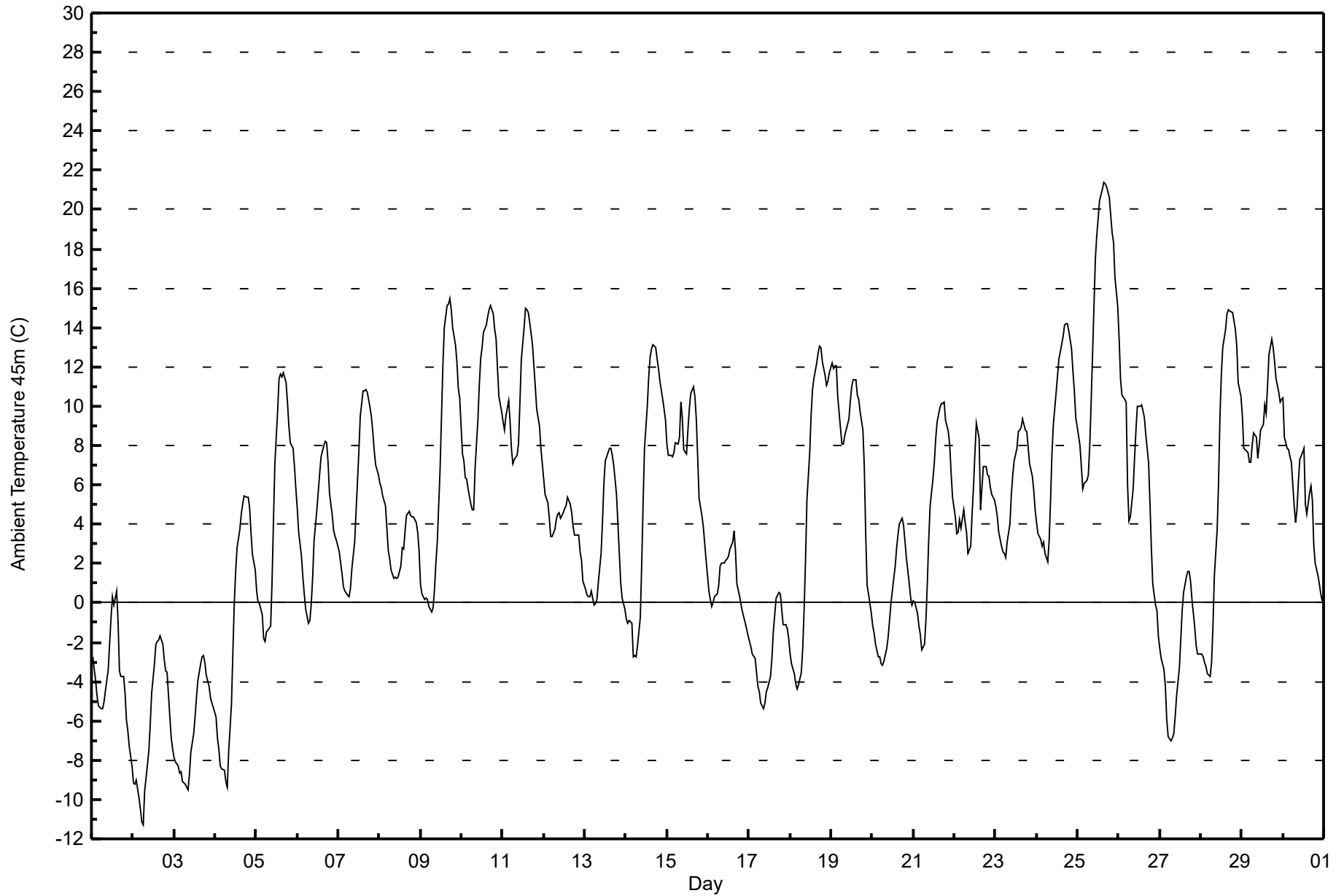
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	193	26.81	26.81
0 - 10	385	53.47	80.28
10 - 20	136	18.89	99.17
> 20	6	0.83	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 75m (AT75) - C

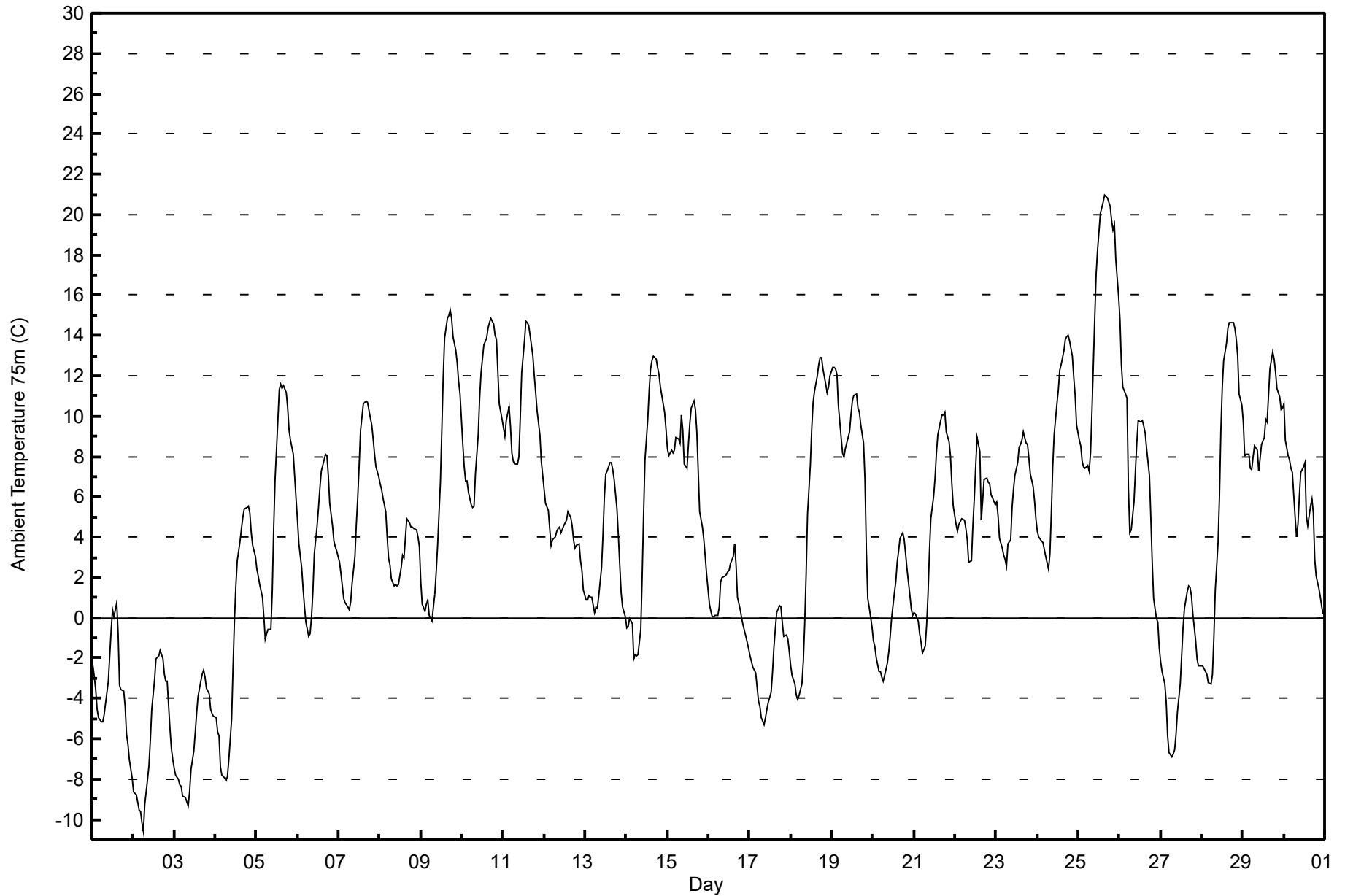
Mannix - April 2025

Maximum Value: 21.0 C on Apr 25 16:00																				Maximum Daily Average: 14.9 C on Apr 25						Hours in Service: 720	
Minimum Value: -10.6 C on Apr 2 07:00																				Minimum Daily Average: -6.1 C on Apr 3						Hours of Data: 720	
Maximum Diurnal Average: 8.1 C at hour 17																				Minimum Diurnal Average: 0.5 C at hour 7						Hours of Missing Data: 0	
Monthly Average: 4.35 C																				Percentiles: P ₁ = -8.9 P ₁₀ = -3.8 Q ₁ = 0.0 Median = 4.5 Q ₃ = 8.9 P ₉₀ = 12.2 P ₉₉ = 19.5						Hours of Calibration: 0	
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	-2.4	-2.9	-3.5	-4.5	-5.0	-5.1	-5.2	-4.8	-4.3	-3.2	-1.9	-0.6	0.4	0.0	0.8	-0.8	-3.4	-3.6	-3.6	-4.4	-5.8	-6.3	-7.1	-8.0	-3.5	0.8	
2-Apr	-8.6	-8.7	-8.8	-9.5	-9.6	-10.2	-10.6	-9.3	-8.0	-7.3	-6.1	-4.5	-3.0	-2.1	-1.9	-1.9	-1.6	-2.0	-2.8	-3.1	-3.1	-5.5	-6.5	-7.1	-5.9	-1.6	
3-Apr	-7.5	-7.8	-8.0	-8.3	-8.4	-8.8	-8.9	-9.2	-9.3	-8.6	-7.5	-6.7	-5.7	-4.8	-3.9	-3.1	-2.8	-2.6	-2.9	-3.5	-3.8	-4.5	-4.8	-4.9	-6.1	-2.6	
4-Apr	-4.9	-5.7	-5.9	-7.4	-7.8	-8.0	-8.1	-7.9	-7.0	-5.0	-2.5	-0.2	1.6	2.8	3.8	4.4	5.0	5.4	5.5	5.6	5.2	4.2	3.6	3.1	-0.8	5.6	
5-Apr	2.4	2.0	1.6	1.0	0.0	-1.0	-0.8	-0.6	-0.6	1.3	4.4	6.9	9.8	11.3	11.6	11.4	11.5	11.2	10.4	9.3	8.8	8.1	7.0	5.9	5.5	11.6	
6-Apr	4.9	3.7	2.5	1.5	0.5	-0.2	-0.9	-0.8	0.0	1.3	3.2	4.5	5.5	6.4	7.3	7.9	8.1	8.1	7.1	5.7	4.5	3.8	3.5	3.3	3.8	8.1	
7-Apr	2.8	2.2	1.5	1.0	0.7	0.5	0.4	0.8	1.7	3.1	4.6	6.0	7.5	9.3	10.6	10.7	10.7	10.7	9.9	9.5	8.9	8.1	7.5	7.0	5.7	10.7	
8-Apr	6.7	6.4	5.9	5.3	4.0	3.0	2.6	1.9	1.6	1.7	1.6	1.6	2.5	3.1	3.0	4.0	4.9	4.7	4.5	4.5	4.5	4.4	4.0	3.5	3.7	6.7	
9-Apr	1.8	0.7	0.3	0.7	0.9	0.1	-0.2	0.6	1.1	2.3	3.6	6.7	9.3	12.0	13.9	14.9	15.0	15.3	14.8	14.0	13.2	12.6	11.7	11.1	7.3	15.3	
10-Apr	8.6	7.5	6.8	6.8	6.2	5.6	5.4	5.6	7.1	9.1	10.9	12.2	12.8	13.5	13.9	14.3	14.7	14.8	14.5	14.0	13.8	12.2	10.6	9.9	10.5	14.8	
11-Apr	9.4	9.0	9.8	10.5	9.5	8.2	7.8	7.6	7.6	7.9	9.9	12.2	13.8	14.7	14.7	14.5	14.0	13.0	12.0	11.2	10.3	9.1	7.8	7.1	10.5	14.7	
12-Apr	6.4	5.7	5.3	4.4	3.6	3.8	4.0	4.3	4.5	4.5	4.2	4.5	4.7	4.9	5.3	5.0	4.6	3.9	3.5	3.6	3.7	2.8	2.3	1.4	4.2	6.4	
13-Apr	0.9	0.9	1.1	1.1	1.0	0.3	0.5	0.5	1.1	2.5	4.1	5.9	7.1	7.3	7.7	7.7	7.3	6.9	5.4	4.1	2.6	1.2	0.5	0.0	3.2	7.7	
14-Apr	-0.5	-0.4	0.0	-0.3	-2.0	-1.8	-1.9	-1.9	-0.6	2.0	5.1	7.8	9.9	11.3	12.3	12.7	13.0	12.9	12.4	12.1	11.5	10.6	10.2	9.4	6.0	13.0	
15-Apr	8.4	8.1	8.3	8.2	8.3	9.0	8.8	8.7	10.1	9.3	7.6	7.4	8.6	9.6	10.4	10.8	10.3	9.2	7.3	5.3	4.5	3.9	3.0	2.2	7.8	10.8	
16-Apr	0.7	0.3	0.0	0.0	0.1	0.1	0.5	1.8	2.0	2.1	2.2	2.3	2.3	2.7	3.0	3.7	2.6	1.0	0.4	0.0	-0.4	-0.6	-0.9	-1.5	1.0	3.7	
17-Apr	-1.9	-2.2	-2.5	-2.7	-3.4	-4.1	-4.4	-5.0	-5.3	-5.0	-4.5	-4.2	-3.7	-2.8	-1.5	-0.6	0.3	0.6	0.5	-0.2	-0.9	-0.9	-1.1	-1.7	-2.4	0.6	
18-Apr	-2.4	-2.9	-3.3	-3.8	-4.0	-3.9	-3.3	-2.2	-0.3	2.2	5.1	7.5	9.4	10.7	11.2	12.0	12.5	12.9	12.9	12.3	11.6	11.2	11.5	12.0	5.4	12.9	
19-Apr	12.4	12.4	12.4	12.1	10.5	9.0	8.2	8.0	8.4	8.9	9.2	10.0	10.7	11.1	11.1	10.4	10.2	9.5	8.7	6.9	3.4	0.9	0.5	-0.4	8.5	12.4	
20-Apr	-1.1	-1.4	-2.0	-2.6	-2.6	-3.0	-3.1	-2.9	-2.3	-1.7	-0.9	0.0	1.3	1.8	2.7	3.3	3.9	4.2	3.9	3.2	2.4	1.2	0.4	0.1	0.2	4.2	
21-Apr	0.3	0.2	-0.2	-0.8	-1.2	-1.7	-1.4	-0.4	1.2	3.3	4.9	6.1	7.0	8.2	9.1	9.8	10.0	10.0	10.2	9.2	8.7	8.0	6.7	5.5	4.7	10.2	
22-Apr	4.6	4.3	4.6	4.7	4.9	4.8	4.4	3.9	2.8	2.8	4.6	5.9	7.5	9.0	8.3	4.9	5.8	6.9	6.9	6.7	6.7	6.1	6.0	5.6	5.5	9.0	
23-Apr	5.7	5.0	4.0	3.4	3.1	2.9	2.6	3.7	3.9	5.4	6.4	7.1	7.7	8.5	8.6	8.8	9.2	8.6	8.6	7.9	7.1	6.5	5.8	4.9	6.1	9.2	
24-Apr	4.3	4.0	3.8	3.7	3.4	3.0	2.4	3.2	5.2	7.5	9.1	10.6	11.3	12.3	12.5	13.2	13.8	13.9	14.0	13.7	13.0	11.9	11.0	9.6	8.8	14.0	
25-Apr	8.8	8.5	7.8	7.5	7.4	7.5	7.3	8.2	10.3	14.9	17.1	18.2	19.2	20.1	20.6	21.0	20.9	20.8	20.4	19.7	19.2	19.5	17.8	16.0	14.9	21.0	
26-Apr	14.8	12.6	11.4	11.1	10.9	6.4	4.2	4.4	5.8	7.3	8.7	9.8	9.7	9.8	9.5	9.2	8.4	7.0	5.0	2.7	1.0	0.0	-0.3	-1.5	7.0	14.8	
27-Apr	-2.2	-2.7	-3.3	-4.2	-5.9	-6.7	-6.9	-6.8	-6.5	-5.8	-4.7	-3.3	-1.9	-0.5	0.5	1.3	1.6	1.5	1.1	0.2	-1.2	-2.0	-2.4	-2.4	-2.6	1.6	
28-Apr	-2.4	-2.5	-2.7	-2.8	-3.3	-3.3	-2.8	-1.0	1.3	3.7	6.0	9.3	11.4	12.8	13.6	14.4	14.6	14.6	14.7	14.3	13.8	13.0	11.1	10.5	6.6	14.7	
29-Apr	9.7	8.0	8.1	8.1	7.4	7.3	8.0	8.5	8.3	7.3	7.9	8.6	8.9	9.9	9.7	11.0	12.4	13.2	12.9	12.2	11.4	11.0	10.4	10.4	9.6	13.2	
30-Apr	10.6	8.8	8.1	7.9	7.4	7.2	5.0	4.0	4.6	6.0	7.2	7.5	7.7	5.0	4.5	5.5	5.9	5.2	2.9	2.0	1.4	1.0	0.5	0.2	5.3	10.6	
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	181	25.14	25.14
0 - 10	400	55.56	80.69
10 - 20	133	18.47	99.17
> 20	6	0.83	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 90m (AT90) - C

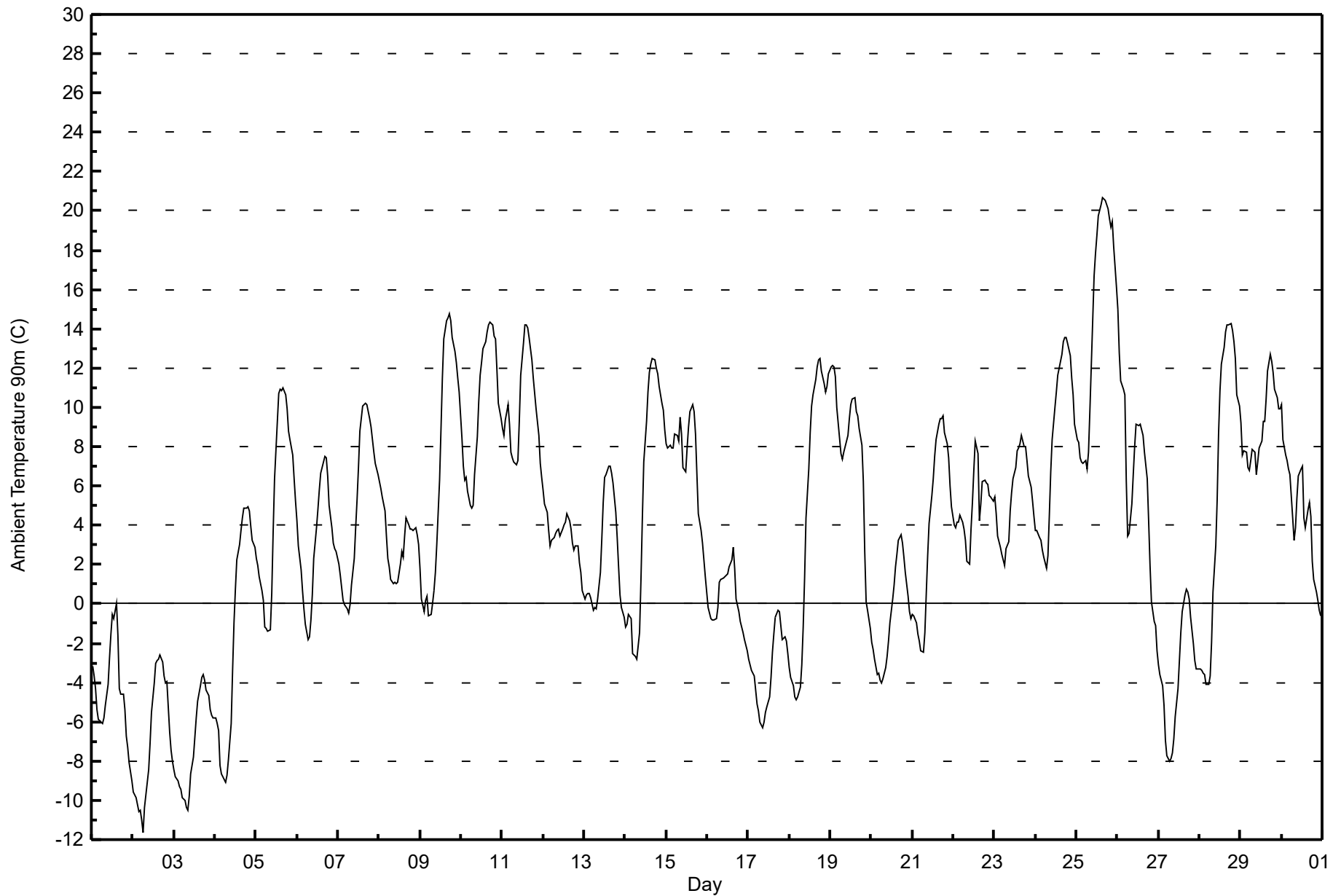
Mannix - April 2025

Maximum Value: 20.7 C on Apr 25 16:00																				Maximum Daily Average: 14.7 C on Apr 25										Hours in Service: 720	
Minimum Value: -11.6 C on Apr 2 07:00																				Minimum Daily Average: -7.1 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 7.5 C at hour 17																				Minimum Diurnal Average: -0.3 C at hour 7										Hours of Missing Data: 0	
Monthly Average: 3.69 C																				Percentiles: P ₁ = -10.0 P ₁₀ = -4.7 Q ₁ = -0.8 Median = 3.8 Q ₃ = 8.4 P ₉₀ = 11.8 P ₉₉ = 19.4										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	-3.2	-3.7	-4.3	-5.4	-5.9	-6.1	-6.1	-5.8	-5.2	-4.1	-2.8	-1.5	-0.5	-0.8	0.0	-1.6	-4.3	-4.6	-4.6	-5.4	-6.8	-7.3	-8.1	-9.0	-4.5	0.0					
2-Apr	-9.6	-9.7	-9.9	-10.6	-10.5	-11.0	-11.6	-10.4	-9.1	-8.4	-7.1	-5.6	-4.0	-3.0	-2.9	-2.8	-2.6	-3.0	-3.7	-4.0	-4.0	-6.5	-7.4	-8.0	-6.9	-2.6					
3-Apr	-8.4	-8.8	-9.0	-9.3	-9.4	-9.9	-10.0	-10.3	-10.5	-9.8	-8.6	-7.8	-6.8	-5.8	-5.0	-4.1	-3.8	-3.6	-3.9	-4.4	-4.6	-5.4	-5.7	-5.8	-7.1	-3.6					
4-Apr	-5.8	-6.1	-6.5	-8.2	-8.7	-8.9	-9.1	-8.7	-7.9	-6.1	-3.4	-0.9	0.7	2.2	3.0	3.7	4.4	4.9	4.8	4.9	4.7	3.9	3.3	2.9	-1.5	4.9					
5-Apr	2.3	2.0	1.4	0.7	0.2	-1.2	-1.2	-1.4	-1.3	0.5	3.6	6.4	9.3	10.7	11.0	10.8	11.0	10.6	9.9	8.8	8.4	7.6	6.4	5.2	5.1	11.0					
6-Apr	4.2	3.0	1.8	0.7	-0.3	-1.1	-1.8	-1.7	-0.8	0.4	2.3	3.9	4.8	5.8	6.6	7.2	7.5	7.5	6.5	5.0	3.9	3.1	2.8	2.6	3.1	7.5					
7-Apr	2.0	1.5	0.8	0.2	-0.1	-0.3	-0.4	0.0	1.0	2.3	3.9	5.3	6.9	8.8	10.1	10.1	10.2	10.2	9.4	9.0	8.3	7.7	7.1	6.6	5.0	10.2					
8-Apr	6.2	5.9	5.5	4.7	3.4	2.3	1.9	1.3	1.0	1.1	1.1	1.1	2.0	2.7	2.4	3.4	4.4	4.0	3.8	3.8	3.7	3.9	3.5	3.0	3.2	6.2					
9-Apr	1.8	0.3	-0.4	0.2	0.4	-0.6	-0.6	0.0	0.7	1.6	3.0	6.3	8.9	11.5	13.5	14.4	14.6	14.8	14.4	13.6	12.9	12.3	11.5	10.8	6.9	14.8					
10-Apr	8.4	7.0	6.3	6.5	5.7	5.0	4.9	5.0	6.5	8.5	10.3	11.6	12.3	13.0	13.4	13.8	14.2	14.4	14.2	13.6	13.5	11.9	10.2	9.4	10.0	14.4					
11-Apr	9.0	8.5	9.4	10.1	9.2	7.7	7.5	7.2	7.1	7.3	9.3	11.6	13.3	14.2	14.2	14.1	13.5	12.5	11.5	10.7	9.9	8.6	7.2	6.5	10.0	14.2					
12-Apr	5.8	5.1	4.7	3.7	2.9	3.2	3.4	3.6	3.7	3.8	3.5	3.8	4.0	4.1	4.6	4.3	3.8	3.1	2.7	2.9	3.0	2.1	1.6	0.7	3.5	5.8					
13-Apr	0.3	0.4	0.5	0.5	0.3	-0.3	-0.2	-0.3	0.3	1.6	3.3	5.2	6.4	6.6	7.0	7.0	6.6	6.2	4.7	3.4	1.9	0.5	-0.2	-0.7	2.5	7.0					
14-Apr	-1.2	-1.1	-0.5	-0.7	-2.5	-2.6	-2.7	-2.8	-1.5	1.2	4.4	7.2	9.3	10.8	11.8	12.2	12.5	12.4	12.0	11.7	11.1	10.2	9.8	8.9	5.4	12.5					
15-Apr	8.1	7.9	8.1	7.9	8.0	8.7	8.6	8.3	9.5	8.6	6.9	6.7	7.9	9.0	9.8	10.2	9.8	8.6	6.6	4.6	3.7	3.1	2.3	1.4	7.3	10.2					
16-Apr	-0.1	-0.5	-0.8	-0.8	-0.8	-0.8	-0.2	1.1	1.3	1.3	1.4	1.5	1.5	1.9	2.3	2.9	1.8	0.3	-0.4	-0.9	-1.2	-1.4	-1.8	-2.4	0.2	2.9					
17-Apr	-2.8	-3.1	-3.4	-3.6	-4.4	-5.1	-5.4	-6.0	-6.3	-6.0	-5.5	-5.2	-4.7	-3.7	-2.4	-1.5	-0.7	-0.3	-0.4	-1.1	-1.8	-1.7	-1.9	-2.5	-3.3	-0.3					
18-Apr	-3.3	-3.8	-4.2	-4.7	-4.9	-4.7	-4.2	-3.1	-1.2	1.3	4.4	6.9	8.7	10.1	10.6	11.5	12.0	12.4	12.5	11.9	11.2	10.8	11.1	11.7	4.7	12.5					
19-Apr	12.0	12.2	12.0	11.6	10.0	8.4	7.6	7.4	7.7	8.3	8.6	9.4	10.1	10.5	10.5	9.8	9.6	8.9	8.1	6.2	2.6	0.1	-0.3	-1.3	7.9	12.2					
20-Apr	-2.0	-2.3	-2.8	-3.6	-3.6	-3.9	-4.0	-3.8	-3.2	-2.7	-1.9	-1.0	0.3	1.0	1.9	2.6	3.2	3.5	3.1	2.4	1.6	0.4	-0.4	-0.7	-0.7	3.5					
21-Apr	-0.5	-0.6	-0.9	-1.5	-1.9	-2.4	-2.5	-1.5	0.5	2.4	4.1	5.5	6.4	7.5	8.4	9.1	9.5	9.5	9.6	8.7	8.1	7.4	6.0	4.9	4.0	9.6					
22-Apr	4.0	3.9	4.1	4.2	4.5	4.2	3.8	3.2	2.2	2.0	3.8	5.2	6.8	8.3	7.7	4.2	5.1	6.2	6.3	6.2	6.1	5.5	5.5	5.2	4.9	8.3					
23-Apr	5.4	4.6	3.4	2.9	2.5	2.3	2.0	2.8	3.1	4.7	5.7	6.4	7.0	7.8	7.9	8.1	8.6	8.0	8.0	7.3	6.5	5.9	5.2	4.4	5.4	8.6					
24-Apr	3.7	3.7	3.4	3.3	2.7	2.4	1.8	2.4	4.5	6.8	8.4	10.0	10.8	11.7	12.0	12.7	13.4	13.5	13.6	13.3	12.6	11.5	10.6	9.2	8.3	13.6					
25-Apr	8.4	8.2	7.4	7.2	7.1	7.3	6.8	7.7	9.9	14.4	16.7	17.8	18.8	19.7	20.3	20.7	20.6	20.5	20.1	19.6	19.2	19.4	18.2	16.1	14.7	20.7					
26-Apr	15.0	12.7	11.3	10.9	10.6	6.3	3.4	3.6	5.1	6.6	8.0	9.1	9.1	9.1	8.9	8.5	7.7	6.3	4.2	1.9	0.1	-0.9	-1.1	-2.4	6.4	15.0					
27-Apr	-3.1	-3.6	-4.2	-5.1	-6.9	-7.8	-8.0	-7.9	-7.6	-6.9	-5.7	-4.3	-2.9	-1.4	-0.4	0.4	0.7	0.6	0.2	-0.7	-2.0	-2.9	-3.3	-3.3	-3.6	0.7					
28-Apr	-3.3	-3.4	-3.5	-3.6	-4.1	-4.1	-3.7	-1.9	0.6	2.9	5.3	8.6	10.9	12.2	13.1	13.9	14.2	14.2	14.2	13.9	13.3	12.5	10.6	10.1	6.0	14.2					
29-Apr	9.2	7.5	7.8	7.7	6.9	6.8	7.3	7.9	7.7	6.6	7.2	8.0	8.3	9.3	9.3	10.4	11.8	12.7	12.4	11.8	10.9	10.5	9.9	9.9	9.1	12.7					
30-Apr	10.1	8.3	7.6	7.3	6.9	6.6	4.4	3.3	3.9	5.3	6.5	6.9	7.0	4.3	3.9	4.8	5.2	4.5	2.2	1.2	0.6	0.2	-0.3	-0.6	4.6	10.1					
																									Diurnal Average						
																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	217	30.14	30.14
0 - 10	379	52.64	82.78
10 - 20	119	16.53	99.31
> 20	5	0.69	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity (RH) - %

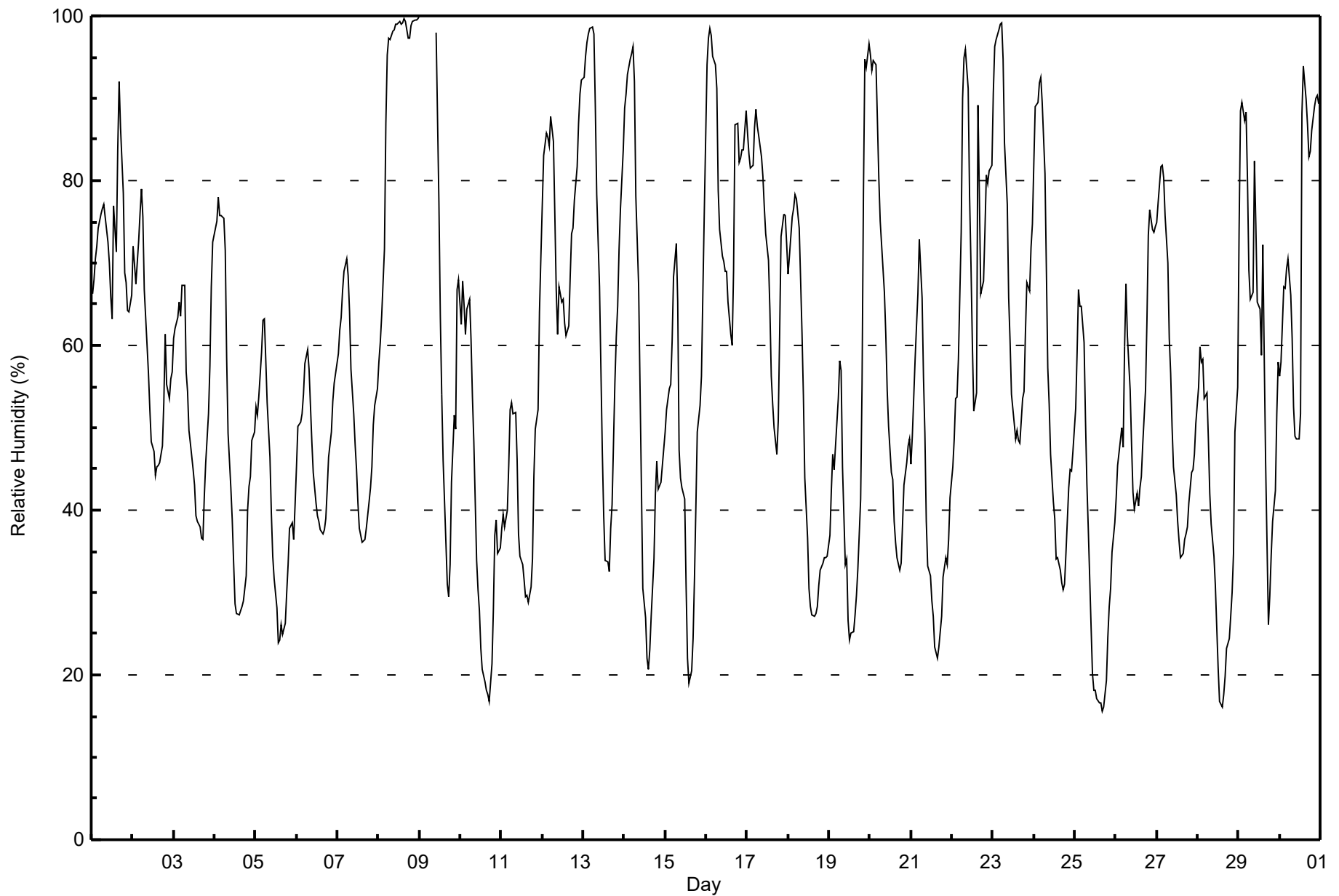
Mannix - April 2025

Maximum Value: 100 % on Apr 9 01:00																		Maximum Daily Average: 92.2 % on Apr 8								Hours in Service: 720	
Minimum Value: 16 % on Apr 25 17:00																		Minimum Daily Average: 35.0 % on Apr 25								Hours of Data: 716	
Maximum Diurnal Average: 76.1 % at hour 6																		Minimum Diurnal Average: 41.8 % at hour 15								Hours of Missing Data: 4	
Monthly Average: 57.5 %																		Percentiles: P ₁ = 17 P ₁₀ = 30 Q ₁ = 40 Median = 55 Q ₃ = 74 P ₉₀ = 90 P ₉₉ = 100								Hours of Calibration: 0	
																										Percent Operational Time: 99.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	66	68	71	72	74	76	77	77	76	73	70	66	63	77	71	84	92	86	78	69	68	64	64	66	72.8	92	
2-Apr	72	70	67	73	76	79	76	67	60	57	52	48	47	44	45	45	46	48	53	61	55	54	56	57	58.7	79	
3-Apr	61	62	63	65	64	67	67	57	54	50	48	45	43	39	39	38	37	36	42	46	52	57	67	73	53.0	73	
4-Apr	74	75	78	76	76	75	71	58	49	43	39	34	29	28	27	28	28	29	32	40	43	44	48	50	48.9	78	
5-Apr	52	52	54	59	63	63	58	53	46	40	34	32	28	24	24	26	25	26	30	33	38	39	36	41	40.7	63	
6-Apr	45	50	51	52	54	58	60	57	53	48	45	41	39	39	38	37	38	39	43	46	50	53	55	57	47.7	60	
7-Apr	59	62	63	67	69	70	68	64	57	52	48	45	41	38	36	36	36	38	41	43	45	50	53	55	51.5	70	
8-Apr	58	60	64	72	87	95	97	97	98	98	99	99	99	99	99	100	99	97	97	99	99	99	99	100	92.2	100	
9-Apr	100	100	100	100	100	100	OR	OR	OR	OR	98	77	64	54	46	36	31	30	33	43	51	50	67	68	67.4	100	
10-Apr	63	68	65	61	64	66	61	54	48	34	30	28	23	21	19	18	18	17	21	28	37	39	35	35	39.7	68	
11-Apr	38	39	38	40	45	52	53	52	52	46	37	34	33	32	30	30	29	31	34	44	50	52	64	71	42.7	71	
12-Apr	77	83	86	85	84	88	85	76	67	61	67	65	66	63	61	62	68	73	74	78	82	87	90	92	75.9	92	
13-Apr	93	95	97	98	98	99	98	89	78	67	57	47	39	34	34	33	38	41	55	61	65	72	77	84	68.6	99	
14-Apr	89	91	93	95	95	96	92	78	67	55	43	30	27	22	21	23	27	34	42	46	43	43	46	47	56.1	96	
15-Apr	49	52	55	55	61	68	72	65	47	44	43	41	31	22	19	21	24	32	40	50	53	56	66	76	47.6	76	
16-Apr	94	97	99	98	95	94	91	79	74	71	70	69	69	65	61	60	69	87	87	82	83	84	84	89	81.3	99	
17-Apr	86	83	82	82	87	89	87	85	83	81	77	74	70	64	56	53	50	47	51	61	73	76	76	72	72.7	89	
18-Apr	69	71	76	77	78	78	74	68	61	54	44	37	31	28	27	27	28	28	31	33	34	34	34	34	48.1	78	
19-Apr	37	42	47	45	48	54	58	57	45	33	34	27	24	25	25	27	30	33	41	55	78	95	94	97	48.0	97	
20-Apr	95	93	95	94	87	80	75	72	66	61	55	50	45	44	39	36	34	33	34	38	43	46	48	49	58.8	95	
21-Apr	46	49	58	62	66	73	66	56	49	39	33	32	29	27	23	22	23	25	27	32	34	33	36	42	41.0	73	
22-Apr	45	49	54	54	58	74	90	95	96	91	78	70	60	52	54	89	78	66	68	74	81	80	81	82	71.6	96	
23-Apr	91	96	97	98	99	99	95	85	77	66	60	54	51	49	50	48	48	54	54	62	68	67	72	75	71.4	99	
24-Apr	82	89	89	92	92	89	81	69	57	53	47	41	39	34	34	33	31	30	31	35	43	45	45	47	55.4	92	
25-Apr	52	59	67	65	65	60	51	43	38	26	20	18	18	17	17	17	16	16	19	25	28	30	35	39	35.0	67	
26-Apr	41	45	47	50	48	60	67	61	55	48	42	40	42	41	43	44	48	55	63	73	76	74	74	74	54.6	76	
27-Apr	75	77	82	82	80	76	70	61	57	50	45	42	39	36	34	35	36	37	38	41	45	45	47	51	53.3	82	
28-Apr	55	60	58	58	54	54	49	42	38	34	31	26	21	17	16	18	20	23	24	27	30	35	50	55	37.2	60	
29-Apr	74	88	89	87	88	80	69	66	66	82	75	65	64	59	72	59	46	26	30	35	39	42	52	58	63.0	89	
30-Apr	56	58	67	67	69	70	66	61	53	49	49	49	52	88	94	90	87	83	84	86	89	90	90	89	72.3	94	
Diurnal Average																											
Diurnal Maximum																											
OR - Out of Range																											



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity (RH) - %
Mannix - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity (RH) - %
Mannix - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	17	2.37	2.37
20 - 40	164	22.91	25.28
40 - 60	218	30.45	55.73
60 - 80	185	25.84	81.56
80 - 100	126	17.60	99.16

Total Number of Valid Hours: 716

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

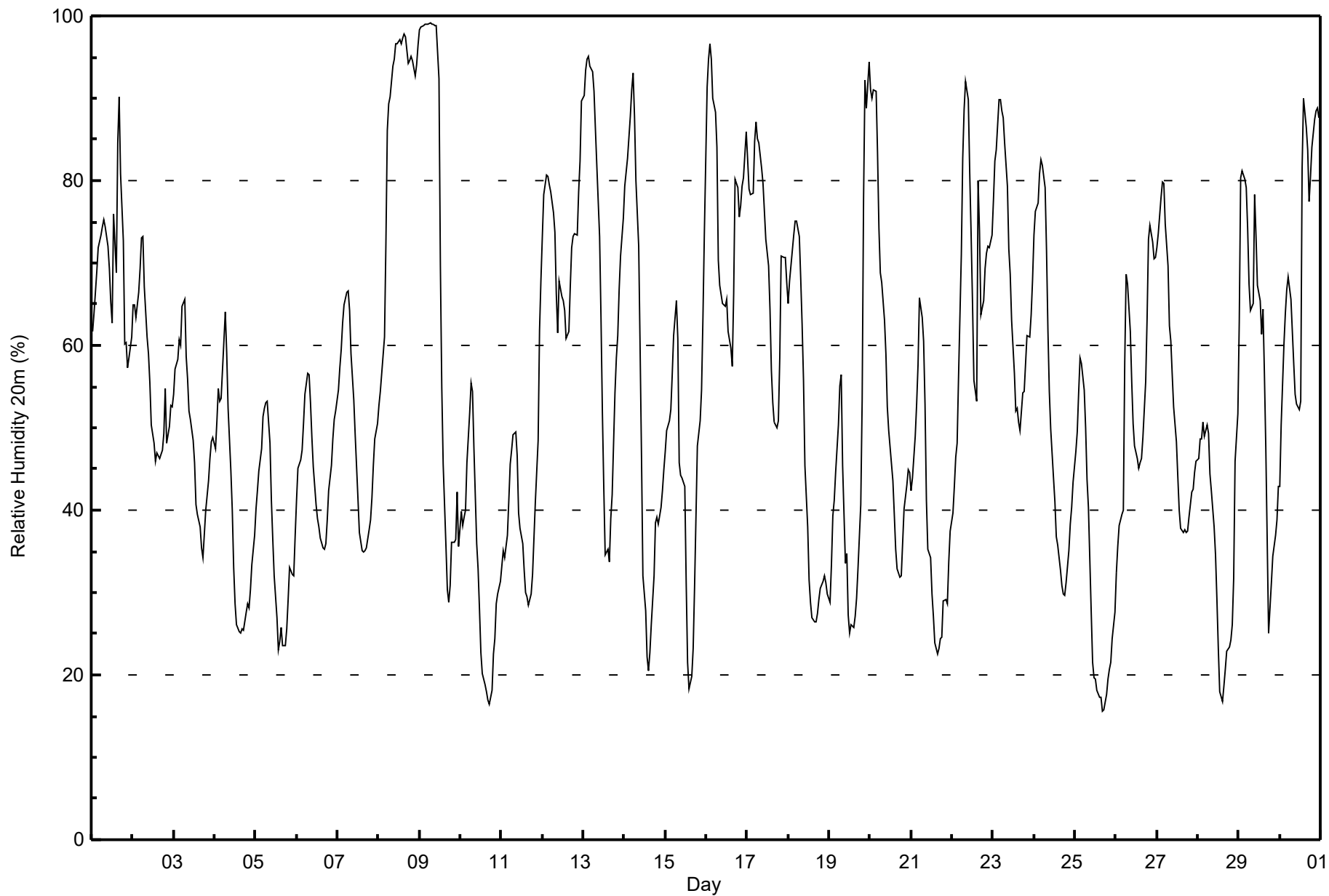
Mannix - April 2025

Maximum Value: 99 % on Apr 9 07:00																	Maximum Daily Average: 87.2 % on Apr 8																	Hours in Service: 720	
Minimum Value: 16 % on Apr 25 17:00																	Minimum Daily Average: 31.7 % on Apr 25																	Hours of Data: 720	
Maximum Diurnal Average: 70.5 % at hour 6																	Minimum Diurnal Average: 41.6 % at hour 15																	Hours of Missing Data: 0	
Monthly Average: 54.8 %																	Percentiles: P ₁ = 18 P ₁₀ = 28 Q ₁ = 38 Median = 53 Q ₃ = 71 P ₉₀ = 86 P ₉₉ = 99																	Hours of Calibration: 0	
																																		Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Apr	62	64	66	69	72	73	74	75	74	72	69	65	63	76	69	85	90	81	73	60	60	57	58	61	69.6	90									
2-Apr	65	65	63	66	69	73	73	67	61	59	55	50	48	46	47	47	46	47	49	55	48	50	53	53	56.5	73									
3-Apr	54	57	58	61	60	65	66	59	56	52	51	48	46	41	39	38	35	34	37	40	44	46	48	49	49.3	66									
4-Apr	47	51	55	53	54	61	64	59	52	45	40	33	29	26	25	25	26	25	28	29	28	30	33	37	39.8	64									
5-Apr	40	42	45	47	51	52	53	53	48	41	36	32	27	23	24	26	24	24	26	29	33	32	32	37	36.6	53									
6-Apr	41	45	46	47	50	54	57	56	53	49	45	41	39	38	37	35	35	36	39	42	45	49	51	52	45.2	57									
7-Apr	55	57	60	63	65	66	67	64	59	53	49	45	41	37	35	35	35	35	38	39	42	45	49	50	49.4	67									
8-Apr	53	54	57	61	72	86	89	90	94	95	97	97	97	97	97	98	97	94	95	95	95	93	94	97	87.2	98									
9-Apr	98	99	99	99	99	99	99	99	99	99	99	92	70	55	46	36	30	29	31	36	36	37	42	36	69.2	99									
10-Apr	40	38	39	40	46	52	55	54	48	36	33	28	23	20	19	18	17	17	18	22	24	29	30	31	32.4	55									
11-Apr	33	35	34	37	41	46	47	49	50	47	40	38	36	33	30	29	29	30	32	37	41	48	62	68	40.5	68									
12-Apr	73	78	81	81	80	79	76	74	66	61	68	66	66	64	61	62	67	72	73	74	73	79	82	90	72.7	90									
13-Apr	90	93	95	95	94	93	91	86	82	73	63	52	43	35	35	34	39	42	54	58	61	67	71	75	67.6	95									
14-Apr	79	81	83	88	91	93	88	80	72	60	47	32	28	22	20	23	26	32	38	39	38	40	42	45	53.7	93									
15-Apr	47	50	51	52	56	61	65	61	46	44	44	43	31	21	18	20	23	31	39	48	51	55	63	74	45.6	74									
16-Apr	91	95	97	95	90	88	84	70	67	65	65	65	66	62	60	57	66	80	79	76	77	79	80	86	76.7	97									
17-Apr	83	79	78	78	85	87	85	85	81	80	76	73	70	64	57	53	51	50	51	59	71	71	71	68	71.0	87									
18-Apr	65	68	71	73	75	75	73	68	63	56	46	38	32	29	27	26	26	27	29	31	31	32	31	30	46.8	75									
19-Apr	29	33	39	41	45	50	55	56	45	34	35	27	25	26	26	27	29	33	41	53	78	92	89	94	46.0	94									
20-Apr	91	90	91	91	83	74	69	68	63	59	53	50	46	44	40	35	33	32	32	36	40	43	45	45	56.3	91									
21-Apr	42	44	49	53	58	66	63	60	53	41	35	34	30	27	24	23	23	24	25	29	29	29	34	37	38.8	66									
22-Apr	40	43	46	48	56	71	83	89	92	90	81	74	65	56	53	80	74	64	65	69	71	72	72	73	67.8	92									
23-Apr	78	82	84	90	90	88	88	85	79	72	69	63	57	52	52	51	50	54	54	58	61	61	64	68	68.7	90									
24-Apr	73	76	77	81	83	82	79	71	62	54	50	44	41	37	36	33	31	30	30	31	35	38	40	43	52.4	83									
25-Apr	47	50	54	58	58	55	50	44	40	28	21	20	20	18	17	17	16	16	18	19	21	22	24	28	31.7	58									
26-Apr	32	36	38	39	40	58	69	67	62	56	50	48	46	45	46	46	49	56	63	73	75	73	71	71	54.5	75									
27-Apr	72	74	78	80	80	75	70	62	60	56	53	48	44	40	38	37	38	37	37	39	42	43	45	46	53.9	80									
28-Apr	46	49	49	51	49	50	49	44	42	38	35	29	23	18	17	19	21	23	23	24	26	32	46	52	35.6	52									
29-Apr	63	80	81	80	79	74	67	64	65	78	73	67	66	61	64	57	48	25	28	31	34	37	39	43	58.6	81									
30-Apr	43	50	60	64	67	68	66	62	58	54	53	52	53	81	90	86	84	78	81	84	87	88	89	88	70.3	90									
59.1		62.0	64.2	66.1	67.9	70.5	70.5	67.5	63.1	58.2	54.3	49.8	45.6	43.1	41.6	41.9	41.9	41.9	44.2	47.2	50.0	52.3	55.0	57.5	Diurnal Average										
98		99	99	99	99	99	99	99	99	99	99	97	97	97	97	98	97	94	95	95	95	93	94	97	Diurnal Maximum										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	19	2.64	2.64
20 - 40	189	26.25	28.89
40 - 60	225	31.25	60.14
60 - 80	180	25.00	85.14
80 - 100	107	14.86	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) - %

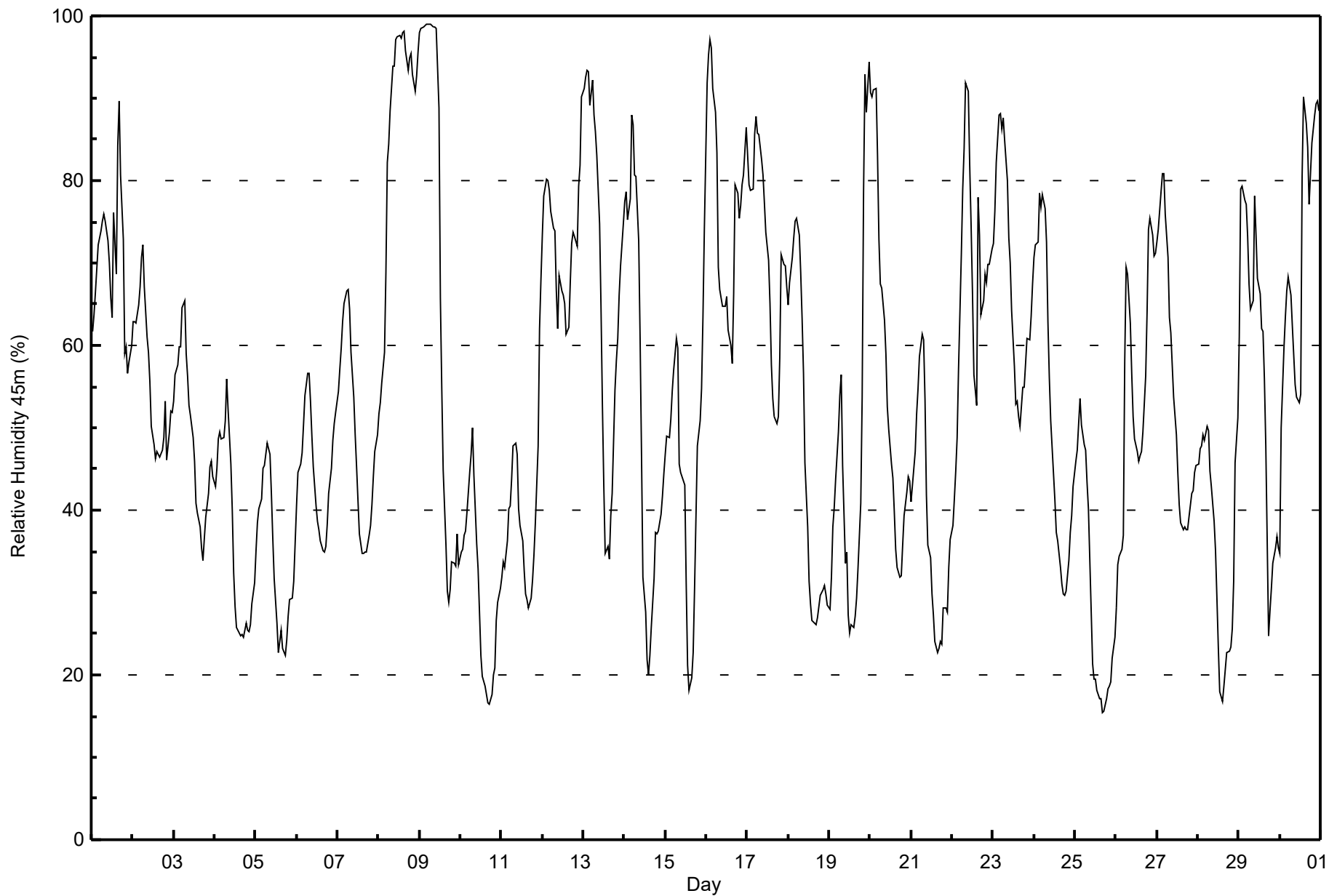
Mannix - April 2025

Maximum Value: 99 % on Apr 9 07:00																		Maximum Daily Average: 86.2 % on Apr 8																		Hours in Service: 720	
Minimum Value: 15 % on Apr 25 17:00																		Minimum Daily Average: 29.9 % on Apr 25																		Hours of Data: 720	
Maximum Diurnal Average: 68.4 % at hour 7																		Minimum Diurnal Average: 41.6 % at hour 15																		Hours of Missing Data: 0	
Monthly Average: 54.1 %																		Percentiles: P ₁ = 17 P ₁₀ = 27 Q ₁ = 37 Median = 51 Q ₃ = 70 P ₉₀ = 85 P ₉₉ = 99																		Hours of Calibration: 0	
																																				Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	62	64	67	69	72	74	75	76	75	73	70	66	63	76	69	84	90	81	73	59	60	57	58	60	69.6	90											
2-Apr	63	63	63	65	67	71	72	67	61	59	56	50	48	46	47	47	46	47	49	53	46	49	52	52	55.8	72											
3-Apr	53	56	58	60	60	65	65	59	56	53	52	49	46	41	40	38	35	34	37	39	42	45	46	44	48.8	65											
4-Apr	43	45	49	50	49	49	51	56	52	46	40	32	28	26	25	25	25	25	26	26	25	26	29	31	36.5	56											
5-Apr	35	38	40	41	45	45	47	48	47	42	37	32	26	23	24	25	23	22	24	27	29	29	31	36	34.1	48											
6-Apr	41	45	46	47	50	54	57	57	53	49	45	40	39	38	36	35	35	36	38	42	45	48	51	52	44.9	57											
7-Apr	54	57	60	63	65	67	67	64	59	54	49	45	41	37	35	35	35	35	37	38	41	44	47	49	49.1	67											
8-Apr	52	53	55	59	69	82	84	89	94	94	97	97	98	97	98	98	96	93	95	95	93	91	93	96	86.2	98											
9-Apr	98	99	99	99	99	99	99	99	99	99	99	89	66	55	45	36	30	29	30	34	34	33	37	33	68.2	99											
10-Apr	35	35	37	38	40	45	47	50	44	36	33	28	22	20	19	18	17	16	18	20	21	27	29	30	30.1	50											
11-Apr	32	34	33	36	40	41	44	48	48	47	40	38	36	33	30	29	28	29	31	35	38	48	62	68	39.5	68											
12-Apr	73	78	80	80	79	76	74	74	67	62	68	67	66	65	61	62	68	72	74	73	72	79	82	90	72.6	90											
13-Apr	91	93	93	93	89	92	88	86	83	75	65	53	43	35	36	34	39	42	55	58	61	66	70	75	67.3	93											
14-Apr	78	79	75	78	88	87	81	80	73	61	47	32	28	22	20	22	26	32	37	37	37	40	42	44	51.9	88											
15-Apr	47	49	49	51	54	57	61	60	46	45	44	43	31	21	18	20	23	30	39	48	51	55	63	74	44.9	74											
16-Apr	92	95	97	96	91	88	83	69	67	65	65	65	66	62	60	58	66	80	78	75	77	79	81	86	76.8	97											
17-Apr	83	80	79	79	86	88	86	86	83	81	77	74	70	65	58	53	51	51	51	59	71	70	70	67	71.5	88											
18-Apr	65	68	71	73	75	75	73	69	63	57	46	38	31	29	27	26	26	27	28	30	30	31	30	28	46.5	75											
19-Apr	28	32	38	40	44	49	54	56	45	33	35	27	25	26	26	27	29	33	41	54	79	93	88	94	45.7	94											
20-Apr	91	90	91	91	83	73	68	67	63	59	53	50	46	44	40	35	33	32	32	36	39	42	44	44	56.0	91											
21-Apr	41	43	47	52	55	59	61	61	53	42	36	34	30	27	24	23	23	24	24	28	28	28	33	36	38.0	61											
22-Apr	38	41	45	49	57	71	79	84	92	91	82	75	66	56	53	78	73	64	65	69	68	70	70	72	67.0	92											
23-Apr	72	76	82	88	88	86	88	85	80	73	70	64	57	53	53	51	50	55	55	58	61	61	64	68	68.3	88											
24-Apr	71	72	73	78	77	78	77	72	63	56	51	44	41	37	36	33	31	30	30	30	34	37	39	43	51.4	78											
25-Apr	46	47	50	54	50	48	47	43	40	28	21	20	19	18	17	17	15	16	17	18	19	19	22	25	29.9	54											
26-Apr	28	33	34	35	37	58	69	69	63	57	51	49	47	46	47	47	49	56	64	74	75	73	71	71	54.4	75											
27-Apr	72	74	79	81	81	76	71	63	61	58	54	49	45	41	39	38	38	38	38	39	42	42	45	45	54.5	81											
28-Apr	46	47	48	49	49	50	50	45	43	39	35	29	23	18	17	19	21	23	23	23	26	31	46	51	35.4	51											
29-Apr	61	79	79	78	77	73	67	64	65	78	73	68	66	62	62	56	48	25	28	30	34	35	37	35	57.6	79											
30-Apr	35	50	60	63	67	68	66	62	59	55	54	53	54	81	90	87	84	77	81	85	88	89	90	88	70.2	90											
57.5 60.5 62.5 64.5 66.1 68.1 68.4 67.0 63.2 58.8 54.8 50.0 45.7 43.3 41.6 41.9 41.8 41.7 43.9 46.4 48.8 51.3 54.0 56.3																									Diurnal Average												
98 99 99 99 99 99 99 99 99 99 99 99 97 98 97 98 98 96 93 95 95 93 93 93 96																									Diurnal Maximum												



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	22	3.06	3.06
20 - 40	196	27.22	30.28
40 - 60	223	30.97	61.25
60 - 80	182	25.28	86.53
80 - 100	97	13.47	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 75m (RH75) - %

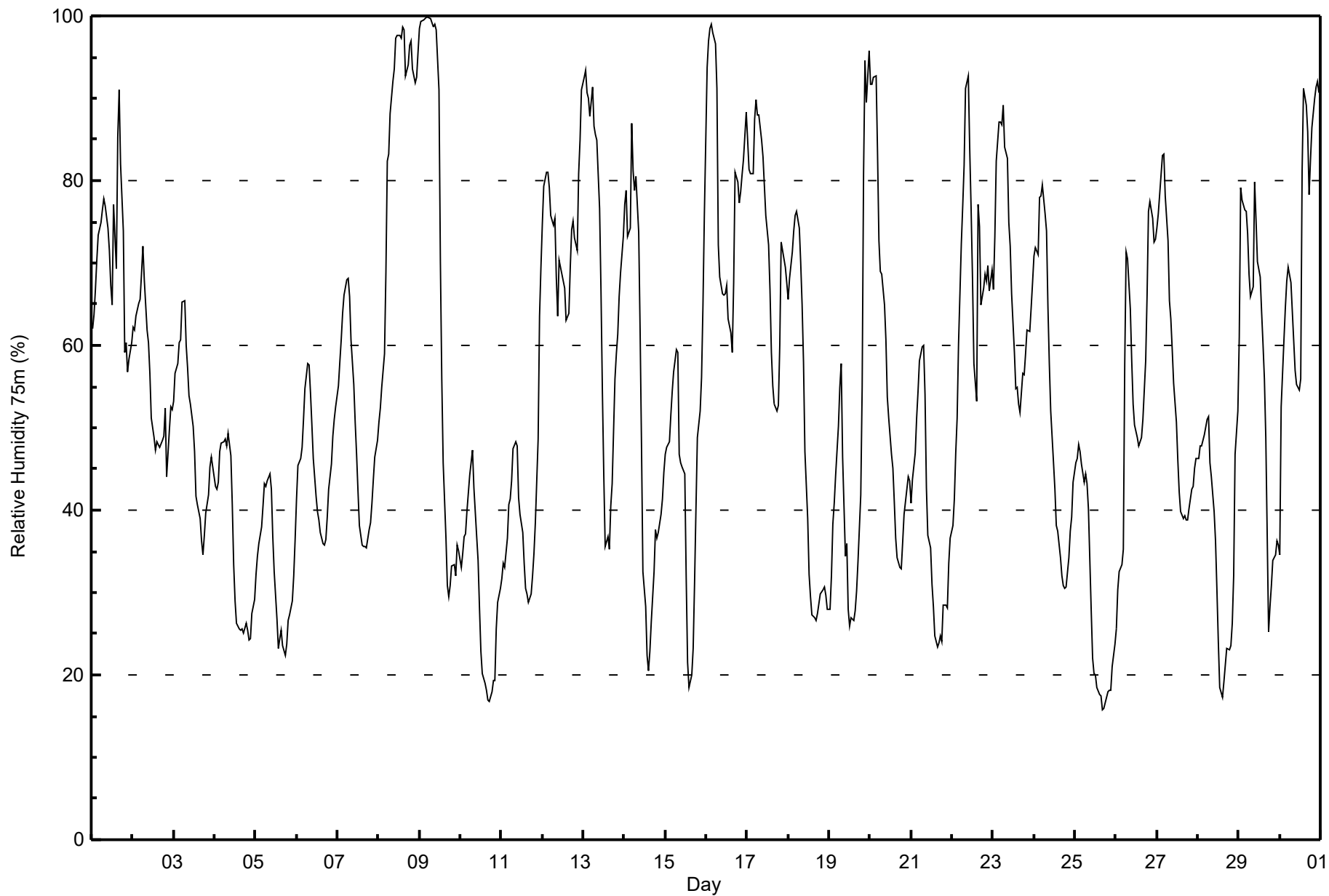
Mannix - April 2025

Maximum Value: 100 % on Apr 9 05:00																		Maximum Daily Average: 86.1 % on Apr 8																		Hours in Service: 720					
Minimum Value: 16 % on Apr 25 17:00																		Minimum Daily Average: 29.0 % on Apr 25																		Hours of Data: 720					
Maximum Diurnal Average: 68.6 % at hour 7																		Minimum Diurnal Average: 42.5 % at hour 15																		Hours of Missing Data: 0					
Monthly Average: 54.6 %																		Percentiles: P ₁ = 18 P ₁₀ = 27 Q ₁ = 37 Median = 52 Q ₃ = 71 P ₉₀ = 86 P ₉₉ = 99																		Hours of Calibration: 0					
																																				Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-Apr	62	64	67	70	73	75	76	78	77	74	72	67	65	77	69	85	91	82	74	59	60	57	58	60	70.6	91															
2-Apr	62	62	64	65	66	69	72	68	62	60	57	51	49	47	48	48	48	48	49	52	44	50	53	52	56.1	72															
3-Apr	53	57	58	60	61	65	65	60	57	54	53	50	47	42	41	39	36	35	37	40	42	45	46	45	49.5	65															
4-Apr	43	43	43	47	48	48	49	48	49	47	41	33	29	26	26	25	26	25	26	25	24	24	28	29	35.5	49															
5-Apr	32	34	36	38	41	43	43	44	44	43	37	33	27	23	24	25	23	22	24	27	27	29	32	36	32.8	44															
6-Apr	41	45	46	48	51	55	58	58	54	50	46	42	40	39	37	36	36	36	39	43	46	49	51	52	45.8	58															
7-Apr	55	58	61	64	66	68	68	66	61	55	51	47	42	38	36	36	36	35	38	38	41	44	46	49	49.9	68															
8-Apr	51	52	55	59	69	82	83	88	92	94	97	98	98	97	99	98	93	94	96	97	93	92	92	96	86.1	99															
9-Apr	99	99	100	100	100	100	100	99	99	99	98	91	70	56	46	37	31	30	31	33	33	32	36	35	68.8	100															
10-Apr	33	35	37	37	40	44	46	47	43	37	34	28	23	20	19	18	17	17	18	19	19	26	29	30	29.8	47															
11-Apr	32	34	33	37	41	41	43	47	48	48	41	39	37	33	30	30	29	30	32	35	39	49	64	70	40.1	70															
12-Apr	75	79	81	81	79	76	75	75	68	64	70	69	68	67	63	64	69	74	75	73	71	81	85	91	73.9	91															
13-Apr	93	93	91	90	88	91	87	86	85	77	67	54	44	36	37	35	40	43	56	59	61	66	69	73	67.5	93															
14-Apr	77	79	73	74	87	81	79	81	74	62	48	33	28	22	21	23	26	32	38	37	37	40	41	45	51.5	87															
15-Apr	47	48	48	51	54	57	59	59	47	46	45	44	32	22	18	20	23	31	40	49	52	56	65	76	45.4	76															
16-Apr	94	97	98	99	98	97	91	72	68	66	66	66	67	63	62	59	68	81	80	77	79	81	82	88	79.2	99															
17-Apr	85	81	81	81	87	90	88	88	85	83	79	76	72	67	59	55	53	52	53	60	73	70	70	68	73.1	90															
18-Apr	66	68	71	74	76	76	74	70	65	58	47	39	32	29	27	27	27	27	29	30	30	31	30	28	47.1	76															
19-Apr	28	32	38	41	44	50	55	58	46	34	36	28	26	27	27	28	30	34	42	55	81	95	89	96	46.6	96															
20-Apr	92	92	93	93	83	73	69	69	65	61	54	51	47	45	41	37	34	33	33	36	39	43	44	44	57.0	93															
21-Apr	41	44	47	51	54	58	60	60	54	43	37	35	31	28	25	23	24	25	24	29	28	28	34	37	38.3	60															
22-Apr	38	41	47	51	60	72	77	82	91	93	84	77	68	58	53	77	74	65	67	69	68	70	67	69	67.4	93															
23-Apr	67	73	82	87	87	87	89	84	83	75	72	66	59	55	55	53	52	57	56	59	62	62	65	68	68.9	89															
24-Apr	71	72	71	78	78	79	76	74	65	58	52	46	43	38	37	34	32	31	31	31	34	37	39	43	52.1	79															
25-Apr	46	46	48	47	46	43	44	43	40	28	22	20	20	19	18	18	16	16	17	18	18	21	24	24	29.0	48															
26-Apr	26	30	33	33	35	58	71	71	64	58	53	50	49	48	48	49	51	58	66	76	77	75	73	73	55.3	77															
27-Apr	74	76	81	83	83	78	73	65	63	59	55	51	46	42	40	39	39	39	39	40	43	43	45	46	56.0	83															
28-Apr	46	48	48	48	49	51	51	46	44	40	36	30	24	19	17	19	21	23	23	24	26	32	47	52	36.1	52															
29-Apr	61	79	78	76	76	74	69	66	67	80	75	70	68	64	60	56	49	25	28	31	34	35	36	36	58.0	80															
30-Apr	35	52	61	65	68	69	68	64	61	57	55	55	56	81	91	89	86	78	83	86	90	91	92	91	71.8	92															
57.4 60.5 62.3 64.3 66.3 68.4 68.6 67.2 64.1 60.0 56.0 51.3 46.9 44.3 42.5 42.7 42.7 42.7 44.8 46.9 49.1 51.6 54.3 56.7																									Diurnal Average																
99 99 100 100 100 100 100 100 99 99 99 98 98 98 97 99 98 93 94 96 97 93 95 92 96																									Diurnal Maximum																



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	20	2.78	2.78
20 - 40	195	27.08	29.86
40 - 60	219	30.42	60.28
60 - 80	181	25.14	85.42
80 - 100	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 90m (RH90) - %

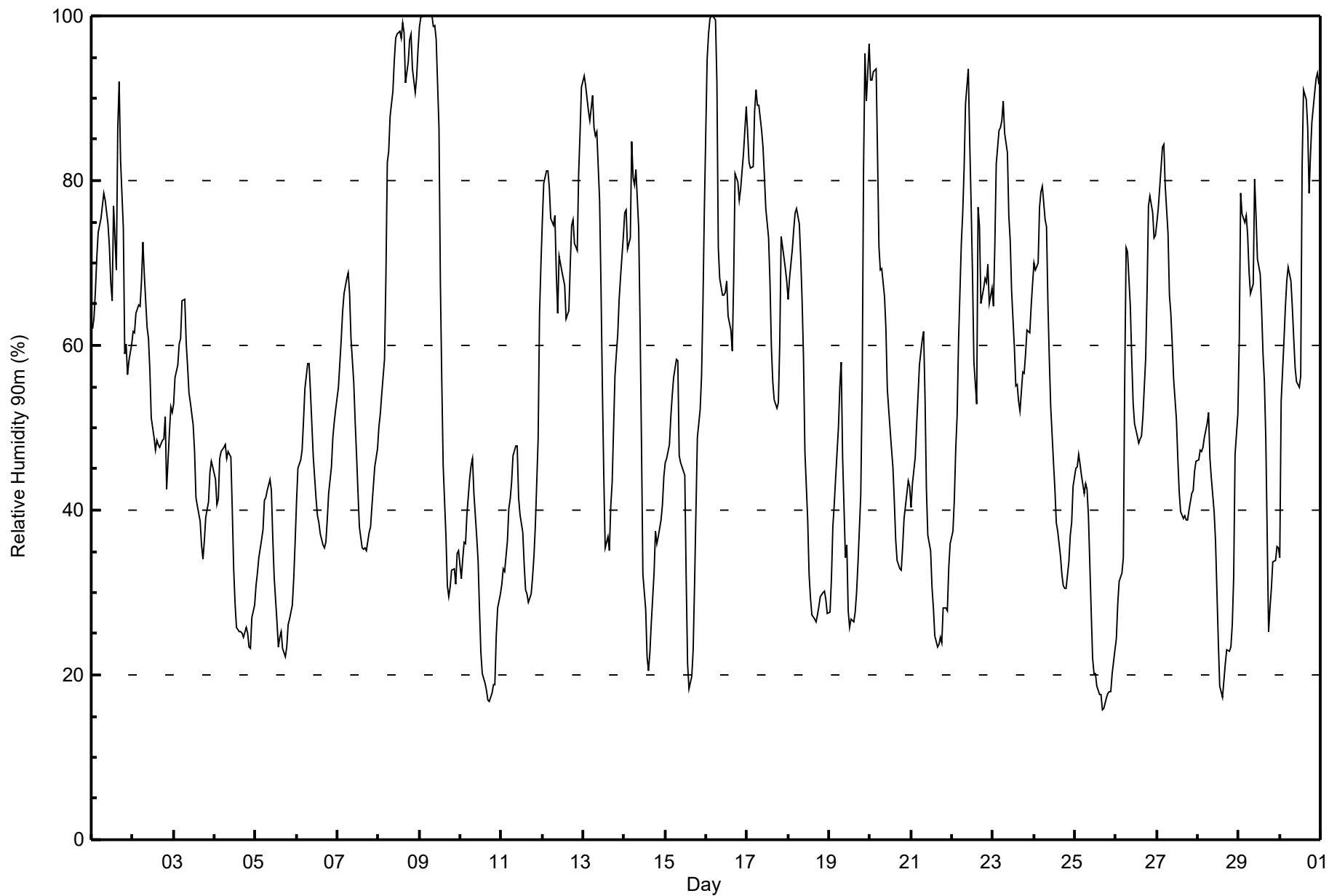
Mannix - April 2025

Maximum Value: 100 % on Apr 9 03:00																		Maximum Daily Average: 86.0 % on Apr 8										Hours in Service: 720	
Minimum Value: 16 % on Apr 25 17:00																		Minimum Daily Average: 28.5 % on Apr 25										Hours of Data: 720	
Maximum Diurnal Average: 68.7 % at hour 7																		Minimum Diurnal Average: 42.4 % at hour 15										Hours of Missing Data: 0	
Monthly Average: 54.5 %																		Percentiles: P ₁ = 18 P ₁₀ = 27 Q ₁ = 37 Median = 52 Q ₃ = 71 P ₉₀ = 86 P ₉₉ = 100										Hours of Calibration: 0	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	62	63	67	71	74	75	77	78	78	75	72	68	66	77	69	86	92	82	74	59	60	56	58	60	70.8	92			
2-Apr	62	61	64	65	65	68	72	69	62	61	57	51	49	47	48	48	48	48	49	51	42	49	52	52	55.9	72			
3-Apr	53	56	58	60	61	65	66	60	57	54	53	50	47	42	40	39	36	34	36	39	41	45	46	45	49.3	66			
4-Apr	44	41	41	46	47	48	48	46	47	47	40	33	29	26	25	25	25	25	26	25	23	23	27	29	34.8	48			
5-Apr	31	32	34	36	38	41	41	42	44	42	37	32	26	23	25	25	23	22	23	26	27	28	32	36	32.0	44			
6-Apr	41	45	46	47	51	55	58	58	54	50	46	41	39	38	37	36	35	36	39	42	45	49	51	52	45.6	58			
7-Apr	55	58	61	64	66	68	69	66	61	55	51	47	42	38	35	35	35	35	37	38	40	43	45	47	49.7	69			
8-Apr	50	52	54	58	68	82	84	88	91	95	97	98	98	97	99	98	92	94	97	98	94	91	93	96	86.0	99			
9-Apr	99	100	100	100	100	100	100	100	99	99	97	87	68	56	45	37	31	29	31	33	33	31	35	35	68.4	100			
10-Apr	32	34	36	36	39	44	45	46	42	37	34	28	23	20	19	18	17	17	18	19	19	25	28	30	29.4	46			
11-Apr	31	33	33	36	40	41	43	47	48	48	42	40	37	33	30	30	29	30	32	34	38	49	64	70	39.9	70			
12-Apr	75	80	81	81	79	75	75	76	69	64	71	69	68	67	63	64	70	74	75	72	71	81	86	91	74.1	91			
13-Apr	93	92	90	88	87	90	86	86	86	78	67	55	44	35	37	35	41	43	56	59	61	66	68	73	67.4	93			
14-Apr	76	76	72	73	85	80	80	81	74	62	48	32	28	22	20	23	26	32	37	36	37	39	41	44	51.1	85			
15-Apr	46	46	48	51	54	56	58	58	47	46	45	44	32	21	18	20	23	31	40	49	52	56	65	76	45.2	76			
16-Apr	95	98	100	100	100	99	92	72	68	66	66	66	68	64	62	59	68	81	80	78	79	81	83	89	79.7	100			
17-Apr	86	82	82	82	88	91	89	89	86	84	80	77	73	68	60	56	53	52	53	60	73	71	69	68	73.8	91			
18-Apr	66	68	72	74	76	77	75	71	65	58	47	39	32	29	27	27	26	27	28	29	30	30	29	27	47.1	77			
19-Apr	28	32	38	41	44	50	55	58	46	34	36	28	26	27	26	28	30	34	42	55	82	95	90	97	46.6	97			
20-Apr	92	92	93	94	83	72	69	69	66	62	55	52	48	45	41	36	34	33	33	36	39	42	43	43	57.2	94			
21-Apr	40	43	46	50	54	58	61	62	54	43	37	35	31	28	25	23	24	25	24	28	28	28	33	36	38.1	62			
22-Apr	38	41	48	52	61	72	76	82	89	93	85	77	69	58	53	77	74	65	67	68	68	70	65	67	67.2	93			
23-Apr	65	72	82	86	86	87	90	86	83	76	73	67	60	55	55	53	52	57	57	59	62	62	65	67	69.0	90			
24-Apr	70	69	70	77	79	79	75	74	65	58	53	46	43	38	38	34	32	31	30	30	34	37	39	43	51.8	79			
25-Apr	45	45	47	46	44	42	43	42	39	28	22	20	20	19	18	18	16	16	17	18	18	18	20	23	28.5	47			
26-Apr	24	29	31	32	34	56	72	71	65	58	53	51	49	48	49	49	51	58	67	77	78	76	73	73	55.3	78			
27-Apr	75	77	82	84	84	79	74	66	64	60	56	51	46	42	40	39	39	39	39	40	42	42	45	46	56.3	84			
28-Apr	46	47	47	48	49	50	52	46	44	40	36	30	24	19	17	19	21	23	23	23	26	32	47	52	35.9	52			
29-Apr	61	79	76	75	76	73	69	66	67	80	76	71	69	64	59	56	49	25	28	30	34	34	36	35	57.8	80			
30-Apr	34	53	61	65	68	69	68	65	61	57	56	55	56	82	91	90	86	78	83	87	91	92	93	92	72.2	93			
57.1 59.9 61.9 64.0 66.0 68.2 68.7 67.4 64.1 60.4 56.2 51.3 46.9 44.3 42.4 42.8 42.6 42.6 44.7 46.7 48.9 51.4 54.0 56.5																									Diurnal Average				
99 100 100 100 100 100 100 100 100 99 99 97 98 98 97 99 98 92 94 97 98 94 95 93 97																									Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	21	2.92	2.92
20 - 40	199	27.64	30.56
40 - 60	210	29.17	59.72
60 - 80	183	25.42	85.14
80 - 100	100	13.89	99.03

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 - April 2025

Maximum Speed: 44 km/h on Apr 15 21:00										Maximum Daily Speed Average: 22.8 km/h on Apr 15										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 9 10:00										Minimum Daily Speed Average: 2.6 km/h on Apr 5										Hours of Data: 715						
Maximum Diurnal Speed Average: 4.5 km/h at hour 17										Minimum Diurnal Speed Average: 1.3 km/h at hour 21										Hours of Missing Data: 5						
Monthly Average Velocity: 1.6 km/h 229.4 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 8 Median = 12 Q ₃ = 17 P ₉₀ = 23 P ₉₉ = 35										Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE19	SE19	SE19	SE17	SE13	SE13	SE13	SE12	SSE10	SSE10	SSE11	SSE8	SSE11	SE8	SE9	W13WNW25WNW21	NW15	NW20	NW16	NNW16	NW17WNW15				SSW2.8	WNW25
2-Apr	W11	W11	W12	W11	W10WSW10WSW14		W17	W18WNW18WNW14WNW13WNW13	NNW14	N17	N16	NNW17	NNW15	NNW14	NW8	NNW14	NNE15	NNE14	N13					NW10.8	WNW18	
3-Apr	NNW14	NW18	NW17	NW16	NW17WNW12WNW13		NW20	NW22	NW20	NNW17	NNW15	NW16	NW18	NNW16	NNW15	NW17	NNW16	NNW13	N10	NNW6	ENE1	SW5	WSW7	NW13.4	NW22	
4-Apr	W8	W9	WSW5	S6	S8	S9	SSE9	SSE9	SSE7	SE7	SE6	SE8	SSE8	SE7	ESE5	ESE6	SE8	SE8	SE9	SSE10	SSE12	SSE10	SSE13	SSE13	SSE6.9	SSE13
5-Apr	SSE11	SSE9	SE7	SSE6	S6	SE6	SSE8	SSE6	SSE9	SSE7	SSE4	SE4	E3	ESE2	NW5WNW10	N9	NNE13	N13	N13	NNE11	ENE7	SE10	ESE10	ESE2.6	N13	
6-Apr	ESE12	SE13	SE17	SE19	SE19	SE21	SE23	SE20	SE21	SE22	SE22	SE25	SE23	SE23	SE24	SE25	SE24	SE26	SE25	SE29	SE30	SE26	SE24	SE23	SE22.3	SE30
7-Apr	SE22	SE21	SE24	SE21	SE19	SE17	SE19	SE19	SE21	SE20	SE21	SE22	SE21	SE21	SE21	SE18	SE11	SE16	SE9	SE14	SE13	SSE11	SE12	SSE12	SE17.7	SE24
8-Apr	SSE9	SSE8	SSE6	SE2	S5	SSE6	SSE7	SSE7	W3	SSE5	SSE7	SE9	SSE3	SSE4	S5	SW3	NE3	NE3	SE3	N3	NNW4	NNE5	ENE2	SW7	SSE3.1	SSE9
9-Apr	SW5	SSW6	S3	SE4	SSE7	SSE8	SSE7	SSE4	SSE3	SSW1	SE4	SE4	SE9	SE10	SE6	ENE1	NNW6	NNW3	NE4	ENE6	ENE7	ENE6	SW5	SW9	SE2.8	SE10
10-Apr	SSE1	SW3	SSW6	S9	S11	SSE12	SSE10	SSE7	SSE4	SW13	SW10	W19	W19	W16	W13	W11WSW11	WSW5	ENE4	E4	SE6	SE8	SE11	ESE11	SSW5.1	W19	
11-Apr	SE11	ESE7	E12	ESE14	SSE6	WSW7	ESE1	SSE6	ESE10	SSE10	SSE12	WSW8WSW11WSW23	W27	W28	W31	W29	W21WSW12WSW14WSW21	W22WSW14						WSW9.3	W31	
12-Apr	WSW13WSW13WSW16WSW15WSW14	WSW8	SW3	W14	W18	W22	W22	W20	W21WNW18WNW17WNW21	NW21	NW20	NW17	NW10	NNW8	WNW3	WNW4	NNE5							W12.6	W22	
13-Apr	NNE5	NNE1	SE2	E2	SSE1	NNW2	NNW7	NNW9	NW6	NW5	NW7	NW5	NW10	NNW19	NNW17	N18	NNW17	N16	NNE15	NNE13	NNE12	NNE9	N9	N5	NNW7.4	NNW19
14-Apr	NNW3	N5	NNE5	WNW4	SSE4	SW4	SSE7	SSE9	SE12	SSE12	SE11	SSE13	SE12	SE17	SSE18	SSE16	S13	SSW12	S8	SSE10	SE12	SE12	SE12	SE17	SSE8.5	SSE18
15-Apr	SE18	SE15	SSE12	SSE14	SSE11	S8	SSE12	SSW14WSW29WSW39	W40	W37	W35WSW37WSW35	W35	W36WNW31WNW34	W40	W44	W36	W35	W33						WSW22.8	W44	
16-Apr	W26	UO	UO	UO	UO	UO	NNW21	NW30	NW31	NW33	NNW28	NNW26	NNW25	NNW26	NNW20	NNW23	NNW19	N16	N16	NNW18	NNW12	N8	N9	N12	NNW19.5	NW33
17-Apr	N13	NNW19	N16	NNW20	N16	NNE20	N13	NNE19	NNE20	NNW16	N15	N16	N15	NNW15	N11	NNE10	N7	NNW10	N7	NE8	E9	SE11	SE11	SE14	N10.4	NNE20
18-Apr	SE15	SSE14	SSE14	SSE15	SE16	SE18	SSE17	SSE21	SSE22	SSE23	SSE25	SSE26	SSE29	SSE25	S28	S29	S26	SSE23	SSE24	SSE25	SSE22	SSE23	S19	S15	SSE21.2	S29
19-Apr	SSW17	SW17	SW17WSW22WNW17WNW14	W16	W22	W27	W28	W28	W30	W28	W29WNW27	W34	W28WNW25WNW21WNW21	N19	NNE20	N18	NNE13							W17.8	W34	
20-Apr	NNE18	NNE13	N12	NNE12	NNE10	NNE9	N8	N8	NNW7	NW8	WNW7	NW7	NW1	NE2	NNE3	E7	E7	ENE4	NE12	NE11	NE9	NE11	ENE10	ENE8	NNE6.8	NNE18
21-Apr	ENE10	E7	ESE1	SE2	SSE6	SSW4	S2	SW1	SE6	SE7	SE8	SE7	E7	ESE7	SSE7	SSE9	SSE7	SSE11	SSE11	SE12	SSW6	SSE13	SSE17	SSE13	SE6.7	SSE17
22-Apr	SSE14	SSW6	SSE9	SSE9	SSE13	S12	S13	S14	SSE18	SSE20	SSE18	SSE16	SSE17	SSE19WSW23	W13	S14	S15	SSW2	SE5	S6	N9	NNE5	ENE5		S9.4	WSW23
23-Apr	SW3	WNW6	WNW4	WSW5	WSW6	NW3	E1	E3	N4	NNW8	NW11	NW15	N16	NNE14	N15	NNE14	N10	N10	NNW7	NNW8	NNW9	NNW8	N6	NNW5	NNW6.5	N16
24-Apr	WNW4	W6	NNW3	SW3	W4	S4	S7	SSE7	S3	ESE3	SE5	SE3	NNW4	NW4	NNE5	E7	E5	E8	ESE5	ESE6	SE11	SE13	SE15	SE15	SE3.5	SE15
25-Apr	SSE14	SSE12	SSE11	SE14	SSE13	SE13	SSE14	SSE16	SE10	S17	S24	S24	S25	S23	SSW22	SSW22	SW26	SW23	SW17	SSW11	SSW11	SSW12	S13	S12	S15.0	SW26
26-Apr	SSE9	SSE10	SSE10	SE6	NNE1	N10	NW12	NW9	NW9	NW11	NW15	N16	NNE22	N23	NNE26	NNE26	NNE23	N22	N22	NNE22	NNE15	NNE15	N11	NNE10	N11.2	NNE26
27-Apr	NNE10	N11	N11	N17	NNE22	NNE16	NNE17	N16	N14	NNW12	NNW10	NW8	NNW8	NNW7	NNW8	N11	NNE12	NE15	NNE13	NNE14	NNE15	NNE12	NE8	ESE7	N11.2	NNE22
28-Apr	SE8	SE6	SE11	SSE12	SSE12	SE11	SE14	SSE14	SSE11	SE10	SE13	SSE15	S14	S18	S21	SSW18	SSW17	S16	S13	S12	SSW18	SSW16	SW16	SSE10	S12.4	S21
29-Apr	S13	S7	SSE9	S13	SW11WSW12	W15	W20	W23	W21	W23WNW23WNW20	NW15	NW13	WNW5WNW11	N19	N12	N8	N9	NNE7	SW3	SW10				W8.3	W23	
30-Apr	SSW9	SSW8	WSW9	W16WSW13	W10	NNW11	N11	NNW10	NW8	NW9	NNW7	NNE16	NNE13	NE6	N5	N8	N17	NNE26	N25	N17	N14	N18	NNE20		N8.6	NNE26
SSE3.9 S3.0 SSE3.3 S3.5 S3.5 S3.0 S2.9SSW2.3WSW2.9WSW4.4WSW4.4WSW2.9 W2.9 W3.4 W4.1WNW4.5 NW3.7 N3.6 N2.4 N1.3 E1.5 SSE1.6 SSE2.5																								Diurnal Average		
W26 SE21 SE24 WSW22 NNE22 SE21 SE23 NW30 NW31 WSW39 W40 W37 W35WSW37WSW35 W35 W36WNW31WNW34WNW40 W44 W36 W35 W33																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

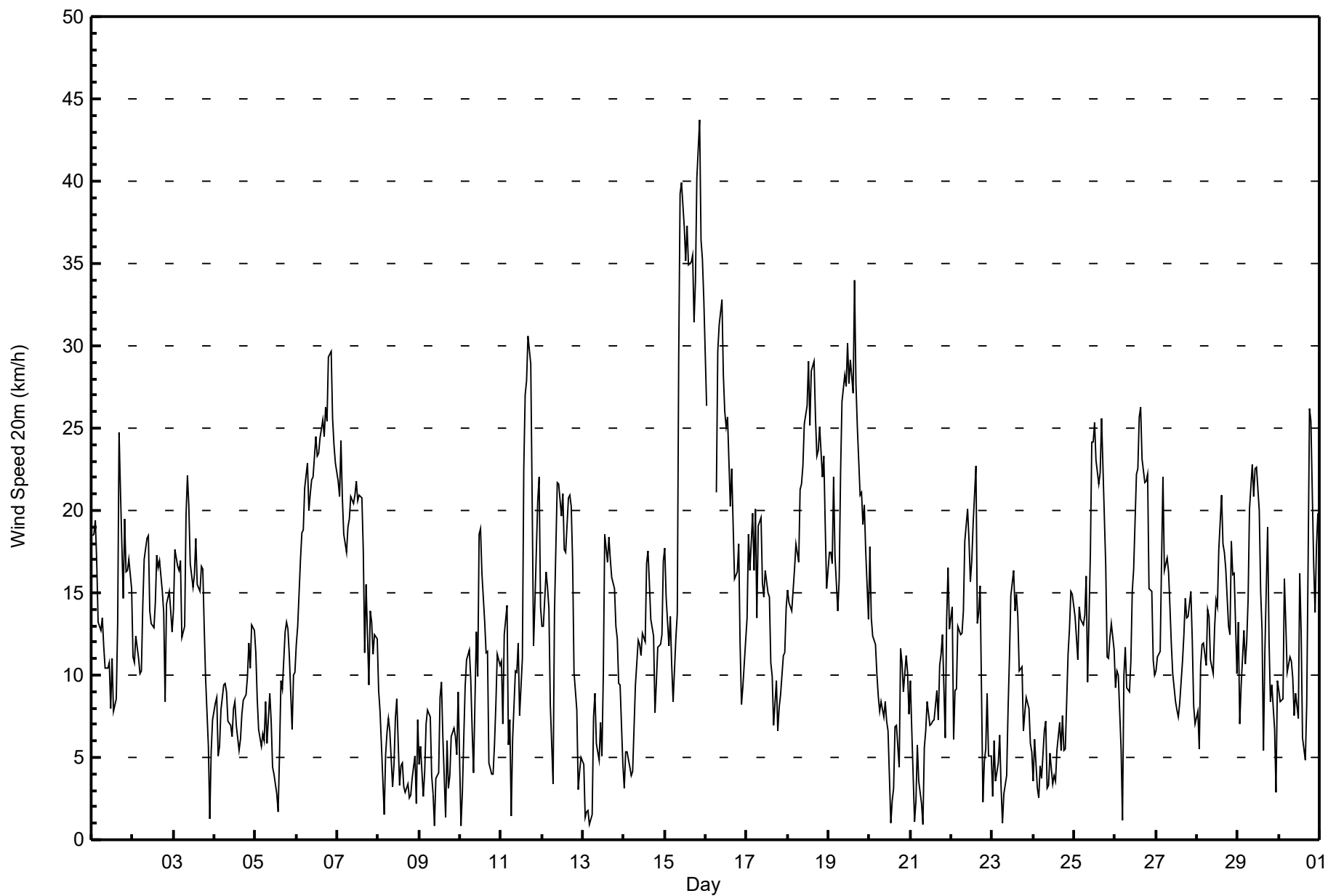
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 22 15:00																		Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3								
Minimum Value: 1 km/h on Apr 23 07:00 Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 4 Q ₃ = 5 P ₉₀ = 7 P ₉₉ = 9																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	4	4	5	5	3	3	3	4	2	2	3	3	3	2	2	11	6	5	5	5	5	5	4	4	4	11
2-Apr	2	2	4	2	1	2	2	3	5	5	4	4	5	5	5	5	5	4	4	2	4	4	3	3	3	5
3-Apr	4	5	4	4	5	3	4	5	5	5	6	6	5	5	5	5	5	5	4	3	2	1	3	1	6	
4-Apr	1	1	1	1	2	1	1	2	2	2	2	3	3	3	2	2	2	2	2	1	1	1	3	3	3	
5-Apr	2	1	4	1	2	4	2	2	3	3	2	2	1	2	4	2	4	3	3	3	2	4	4	4	4	
6-Apr	4	5	4	5	5	5	6	6	6	6	6	7	6	6	7	7	7	7	7	7	7	7	6	6	7	
7-Apr	6	6	6	6	5	5	5	5	6	6	6	7	6	6	6	6	4	5	4	4	3	3	2	3	7	
8-Apr	3	1	3	1	1	2	3	3	2	3	2	3	2	2	3	2	2	1	2	1	1	2	1	2	3	
9-Apr	1	2	2	1	1	2	2	1	1	2	2	2	3	3	2	3	3	2	2	2	2	2	4	2	4	
10-Apr	2	1	2	1	2	1	1	2	4	4	4	8	6	5	5	5	5	3	2	1	3	3	4	4	8	
11-Apr	4	3	4	6	4	2	2	4	5	5	4	3	5	7	6	6	7	6	5	2	2	6	6	4	7	
12-Apr	3	2	3	4	4	3	1	6	4	4	4	4	5	5	5	5	5	6	6	3	2	1	1	1	6	
13-Apr	1	2	1	1	1	1	2	2	2	2	4	3	4	7	6	5	6	5	5	3	3	2	3	3	7	
14-Apr	1	1	1	1	2	1	1	3	3	3	3	4	4	5	6	5	4	4	2	1	3	3	3	4	6	
15-Apr	4	4	3	3	3	2	3	5	8	9	9	9	8	8	9	8	8	8	10	9	10	8	8	6	10	
16-Apr	5	UO	UO	UO	UO	UO	5	8	8	9	8	7	8	7	7	7	6	5	5	5	4	3	3	4	9	
17-Apr	5	6	6	6	5	5	5	6	5	6	6	5	5	5	4	3	3	3	2	2	3	4	2	4	6	
18-Apr	4	3	3	3	4	4	4	5	5	6	6	7	8	8	8	8	7	5	5	6	5	5	5	5	8	
19-Apr	5	4	4	5	5	3	3	6	5	6	7	8	7	7	7	9	8	7	6	8	5	5	5	4	9	
20-Apr	4	5	4	4	4	3	3	4	3	3	3	4	3	3	3	3	3	3	3	2	2	2	2	2	5	
21-Apr	2	3	2	2	2	2	1	1	2	3	3	4	4	4	5	5	4	3	3	4	4	4	4	3	5	
22-Apr	3	3	2	3	3	4	4	3	4	4	5	5	5	6	12	9	6	5	3	2	3	2	2	1	12	
23-Apr	2	2	2	2	1	2	1	1	3	3	4	5	5	4	4	4	3	3	3	2	2	2	2	2	5	
24-Apr	2	2	2	2	1	2	3	3	2	2	2	3	3	3	3	3	3	3	2	2	2	3	3	4	4	
25-Apr	3	2	2	3	2	2	3	4	4	9	9	9	9	9	9	8	8	7	6	3	2	2	2	2	9	
26-Apr	3	3	4	2	2	4	4	4	3	4	4	5	6	6	6	7	6	6	6	6	4	4	3	3	7	
27-Apr	3	3	3	6	6	5	5	5	4	4	5	4	4	4	5	4	4	4	4	4	3	4	2	3	6	
28-Apr	3	3	3	3	4	2	3	4	4	3	4	5	6	8	8	8	7	6	4	4	7	7	7	2	8	
29-Apr	5	3	3	4	2	3	3	5	5	5	5	5	5	5	9	2	5	7	4	3	2	2	3	2	9	
30-Apr	2	2	3	3	3	3	4	4	3	3	2	3	4	5	3	2	3	7	6	6	7	5	5	4	7	
6 6 6 6 6 5 6 8 8 9 9 9 9 9 9 12 11 8 8 10 9 10 8 8 6																										
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	101	14.13	14.13
6 - 11	229	32.03	46.15
12 - 19	245	34.27	80.42
20 - 28	112	15.66	96.08
29 - 38	24	3.36	99.44
> 38	4	0.56	100.00

Total Number of Valid Hours: 715

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	9	3	7	6	7	10	10	6	4	10	3	2	7	6	6	101
6 - 11	23	8	6	7	7	9	34	56	11	8	5	9	9	6	14	17	229
12 - 19	32	24	2	0	1	2	41	38	17	8	5	11	14	11	16	23	245
20 - 28	4	11	0	0	0	0	28	12	7	2	2	4	19	10	6	7	112
29 - 38	0	0	0	0	0	0	2	1	1	0	0	3	12	2	3	0	24
> 38	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4
Totals	64	52	11	14	14	18	115	117	42	22	22	31	58	37	45	53	715

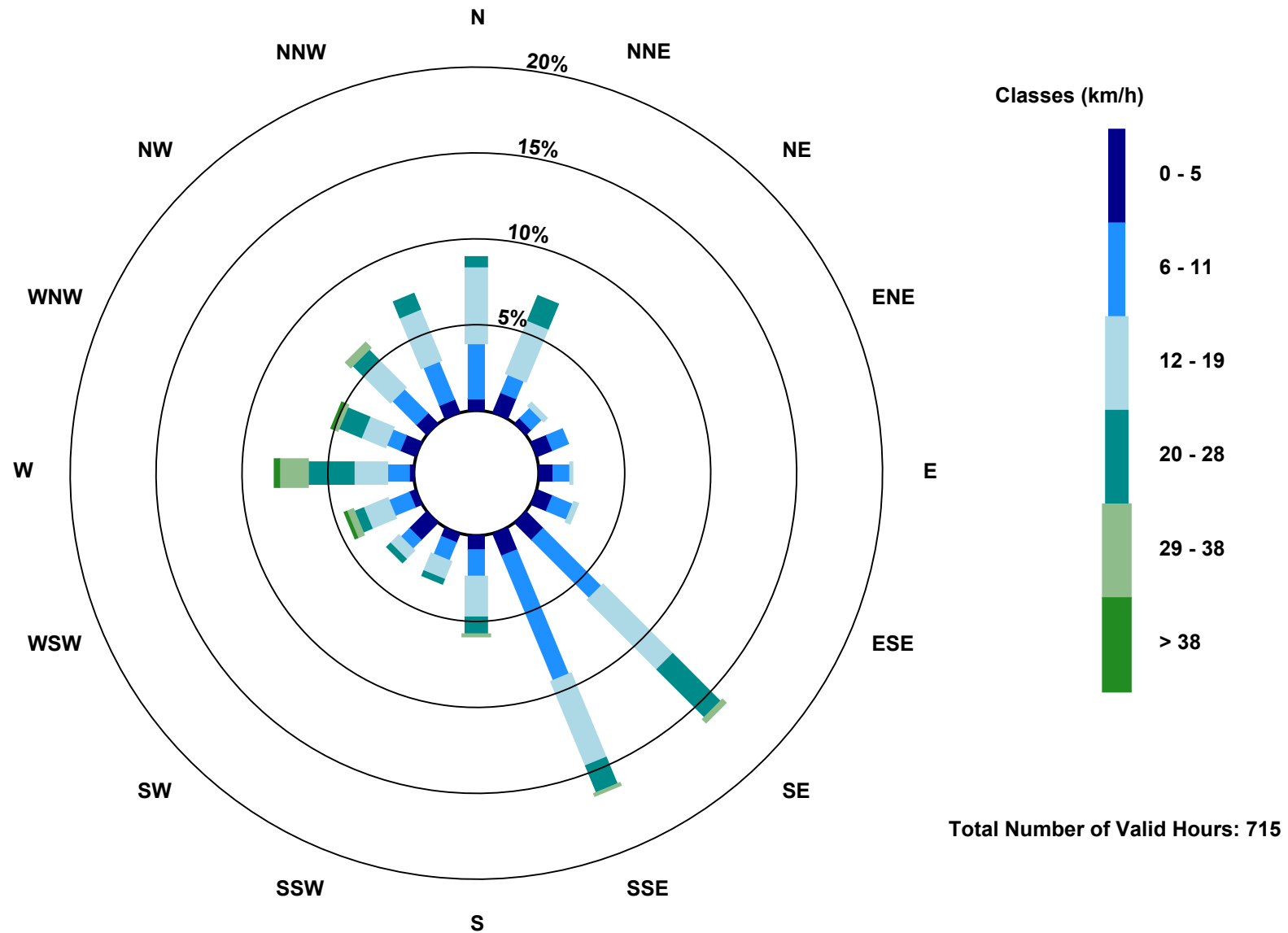
Total Number of Valid Hours: 715

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Mannix - April 2025

Maximum Speed: 49 km/h on Apr 15 21:00																Maximum Daily Speed Average: 27.1 km/h on Apr 18										Hours in Service: 720	
Minimum Speed Value: 0 km/h on Apr 13 02:00																Minimum Daily Speed Average: 3.0 km/h on Apr 1										Hours of Data: 715	
Maximum Diurnal Speed Average: 5.8 km/h at hour 1																Minimum Diurnal Speed Average: 1.7 km/h at hour 21										Hours of Missing Data: 5	
Monthly Average Velocity: 2.0 km/h 225.9 deg																Percentiles: P ₁ = 1 P ₁₀ = 6 Q ₁ = 10 Median = 17 Q ₃ = 22 P ₉₀ = 29 P ₉₉ = 42										Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	SE23	SE23	SE25	SE22	SE17	SE17	SE17	SE15	SSE12	SSE12	SSE13	SSE9	SSE13	SE9	SE11	W16WNW31WNW27	NW19WNW26	NW22	NW23	NW23WNW21					SSW3.0	WNW31	
2-Apr	W16	W15	W15	W15	W16WSW18WSW21		W19	W21WNW22WNW17WNW15WNW15	NNW18	NNW21	NNW20	NNW21	NNW19	NNW19	NNW13	NNW20	N19	N19	N17					NW14.2	WNW22		
3-Apr	NNW21	NW24	NW23	NW23	NW22WNW16WNW18		NW25	NW28	NW25	NNW20	NW19	NW20	NW22	NW19	NNW19	NW21	NNW21	NNW18	N13	NNW9	ENE3	SSW4	WSW7		NW17.3	NW28	
4-Apr	W11	W13	W12	SW8	SSW7	SSW11	S10	S10	SSE8	SSE8	SSE7	SE9	SSE9	SE8	ESE6	ESE7	SE8	SE10	SE12	SSE15	SSE18	SSE19	SSE22	SSE20	SSE8.3	SSE22	
5-Apr	SSE20	SSE16	SE12	SSE12	SSE14	SE11	SE15	SE11	SSE11	SSE8	SSE4	SE4	ESE2	ESE2	NW6WNW11	N11	N18	N20	N19	NNE15	E11	ESE12	ESE12		ESE4.5	N20	
6-Apr	ESE14	ESE14	SE20	SE23	SE23	SE25	SE26	SE22	SE23	SE23	SE23	SE28	SE27	SE26	SE27	SE28	SE29	SE30	SE30	SE35	SE36	SE32	SE29	SE29	SE25.9	SE36	
7-Apr	SE28	SE27	SE29	SE26	SE24	SE20	SE21	SE22	SE23	SE22	SE23	SE24	SE22	SE23	SE23	SE21	SE13	SE17	SE13	SE16	SE16	SE15	SE17	SE16	SE20.8	SE29	
8-Apr	SSE12	SE12	SE9	ESE3	SSE7	SSE7	SSE11	SSE9	WSW3	SSE6	SSE9	SE10	SSE4	S5	S6	SW5	NE4	NE4	ESE2	N4	N5	NNE7	NE5	SSW3	SE4.0	SE12	
9-Apr	SW7	SSW10	S4	SE5	SSE9	SSE10	SSE8	SSE4	SSE3	SW1	SE3	SSE4	SE9	SE10	SE6	N1	NW7	NW4	NE6	ENE10	ENE9	E10	S5	SSW13	SE3.5	SSW13	
10-Apr	WSW6	WSW7	SW10	SW12	SSW12	S13	S11	S9	SSW8	SSW16	SW12WSW21	W21	W18	W15	W13WSW14	WSW6	ENE4	ESE5	SE11	ESE10	ESE12	ESE12			SW7.2	WSW21	
11-Apr	SE14	ESE10	E15	E18	SE7	SW11	SE5	SSE9	ESE13	SSE13	SSE14	SW9WSW13WSW26	W31WSW32	W35	W33	W24WSW18WSW22WSW27WSW26WSW18								SW11.2	W35		
12-Apr	WSW18WSW19WSW23WSW21WSW21WSW15	WSW8	W17	W20	W25	W24WSW22	W24WNW21WNW22WNW26	NW27	NW27	NW23	NW15	NNW13	NW5	NW7	NNE6									W16.3	NW27		
13-Apr	NNE5	WNW0	SSE2	SE3	W3	WNW5WNW14WNW12	NW7	NW5	NW8	NW6	NW12	NW24	NNW21	NNW22	NNW22	N20	NNE20	NNE18	NNE17	N13	N14	N9		NNW9.8	NW24		
14-Apr	NNW6	NNE6	NE6	N4	SE5	SSE7	SSE11	SSE11	SE14	SSE13	SE13	SE14	SE14	SE20	SSE22	SSE20	S18	SSW19	S13	SSE15	SE17	SE17	SE18	SE22	SSE11.4	SE22	
15-Apr	SE23	SE20	SSE18	SSE20	S17	SSW14	S19	SSW21WSW36WSW46	W45WSW43WSW40WSW43WSW40WSW40WSW41WNW38WNW41	W47	W49	W42	W40	W37										WSW27.0	W49		
16-Apr	UO	UO	UO	UO	UOWNW26WNW28	NW39	NW41	NW43	NW38	NW34	NNW33	NNW34	NNW27	NNW30	NNW26	N21	N22	NNW24	NNW16	N11	N13	N16		NNW26.3	NW43		
17-Apr	N17	NNW25	N22	NNW26	N21	NNE25	N18	N24	N25	NNW20	N19	N20	N18	NNW18	N13	NNE11	N8	NNW11	N9	NE10	E11	SE13	SE15	SE19	N13.2	NNW26	
18-Apr	SE20	SSE19	SSE19	SSE20	SE22	SE23	SSE22	SSE26	SSE25	SSE27	SSE30	SSE32	SSE36	SSE31	S37	SSE37	SSE32	SSE28	SSE30	SSE33	SSE29	SSE30	S28	S24	SSE27.1	S37	
19-Apr	SSW28	SW28	SW25WSW28WNW24WNW20	W20	W27	W31	W32	W31	W34	W31	W33WNW32	W38	W31	W30WNW26WNW26	N25	NNE25	N23	NNE19						W21.6	W38		
20-Apr	NNE23	NNE17	N17	NNE15	NNE13	NNE12	N10	N10	NNW9	NW10	WNW9	NW8	NW1	NE3	NNE3	E7	E8	NE5	NE13	NE13	NE12	NE15	ENE13	ENE9	NNE8.6	NNE23	
21-Apr	E11	E8	E4	ESE3	SE7	SSE8	SE2	SSW2	SE6	SE8	SE9	SE8	E8	ESE8	SSE9	SSE11	SE9	SSE13	SSE14	SE17	S9	SSE18	SE22	SSE17	SE8.7	SE22	
22-Apr	SSE20	S11	S13	S11	S21	S19	S19	S21	SSE22	SSE23	SSE22	SSE18	SSE20	SSE22	SW28	W16	S20	S20	SSW4	ESE5	SSE10	N12	NNE7	NE7	S12.7	SW28	
23-Apr	NE2	NW5	NNW5	WSW1	W4	NNW5	NE2	E3	N5	NNW9	NW12	NW18	N19	NNE16	N18	NNE15	N12	N13	NNW8	NNW11	NNW12	NNW11	N9	N8	N8.4	N19	
24-Apr	NW6	WNW6	NNW6	S1	WNW2	SSE5	S10	SSE9	SSE4	SE3	SE6	SE4	NNW5	NW5	NNE6	ENE7	E5	E8	E6	ESE8	SE17	SE18	SE22	SE20	SE4.6	SE22	
25-Apr	SSE20	SSE19	SSE19	SE23	SE22	SE22	SSE21	SSE19	SSE12	S25	S34	S35	S35	S32	SSW31	SSW32	SSW34	SW29	SSW23	SSW20	SSW22	SSW24	S20	S18	S22.5	S35	
26-Apr	SSE16	SSE19	S17	SE8	ESE1	N14	NW15	NW11	NW10	NW13	NW17	NNW19	NNE27	N27	NNE31	NNE32	NNE29	N29	N27	NNE29	NNE20	NNE19	N15	N13	N13.3	NNE32	
27-Apr	N12	N14	N14	N21	NNE28	NNE20	NNE22	N19	NNW18	NNW15	NNW12	NW10	NNW10	NNW9	NNW10	N13	NNE15	NE17	NNE16	NNE17	NNE19	NNE16	NE10	ESE9	N13.8	NNE28	
28-Apr	SE9	SE7	SE14	SE17	SE16	SE15	SE17	SE15	SSE13	SE12	SE15	SSE18	S18	S23	S28	SSW24	S25	S24	S20	S19	SSW26	SSW24	SW23	SSE15	S16.6	S28	
29-Apr	S21	S12	SSE14	S19WSW16WSW17	W17	W23	W26	W24	W25	W27WNW24	NW19	NW17	WNW6WNW13	N25	N16	N13	N13	NNE12	SSW1	SW12				W9.6	WNW27		
30-Apr	SSW17	SW15WSW14	W20WSW18WNW14	NNW16	N12	NNW12	NW10	NW10	NNW9	NNE20	NNE16	NNE7	N6	N10	N22	N33	N33	N22	N18	N23	N25			NNW11.0	N33		
SSE5.8 S4.5 S4.3 S4.4 S4.4SSW3.8 S3.6SSW2.9WSW3.8WSW5.3 SW5.0WSW5.0WSW3.5 W3.5 W4.1 W5.1 W5.5 NW4.9NNW4.6 N3.1NNE1.7 E2.2 SE2.3 SSE3.5																								Diurnal Average			
SE28 SW28 SE29 WSW28 NNE28 WNW26WNW28 NW39 NW41 WSW46 W45WSW43WSW40WSW43WSW40WSW40WSW41WNW38WNW41 W47 W49 W42 W40 W37																								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 45m (WS45) - km/h

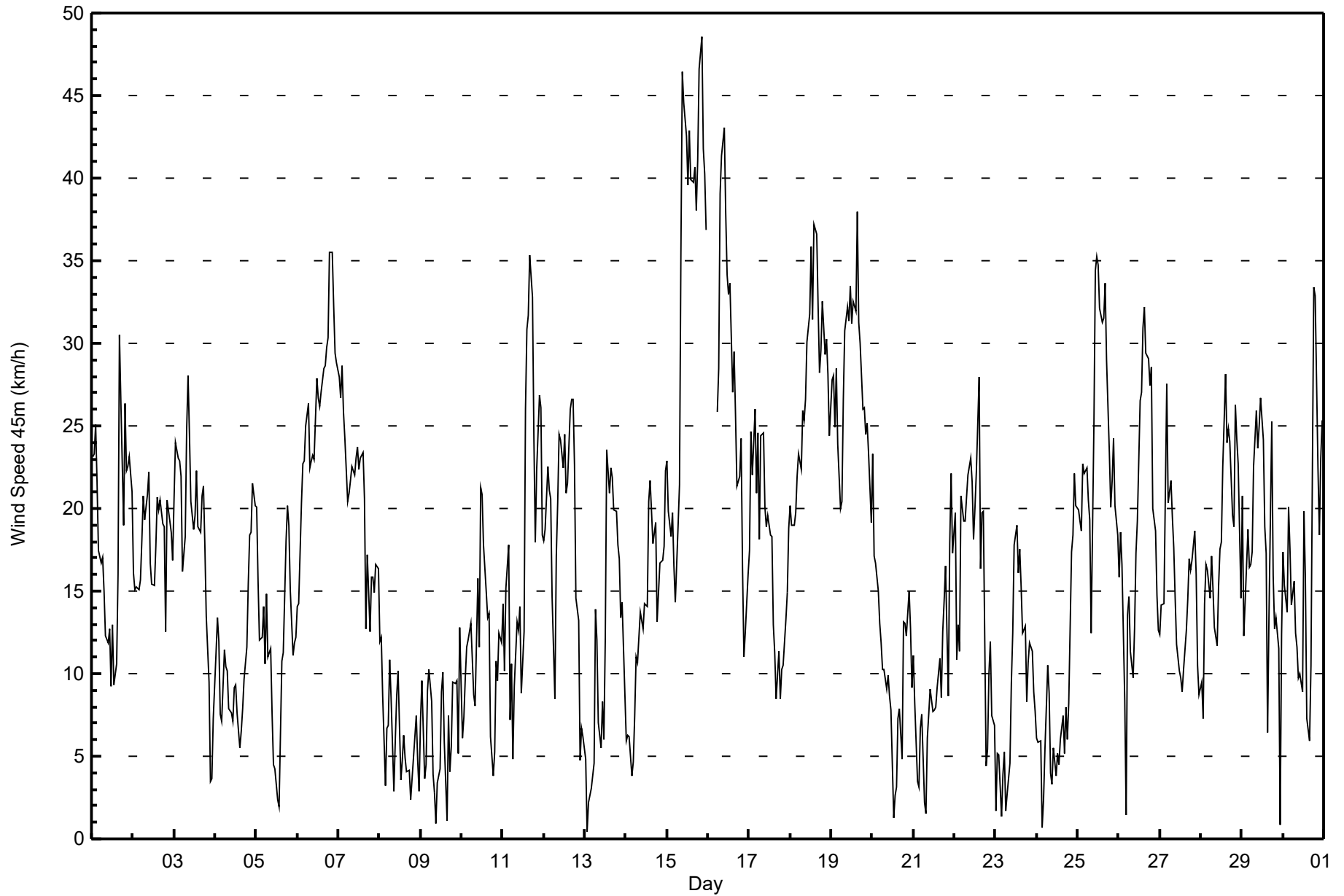
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 1 16:00																	Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3								
Minimum Value: 1 km/h on Apr 14 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 4 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	3	4	5	4	4	3	4	2	2	3	3	2	2	2	12	5	5	5	4	5	4	3	3	12
2-Apr	2	3	4	2	1	2	2	3	4	4	4	3	5	5	4	4	4	4	4	2	4	3	3	4	5
3-Apr	4	4	4	3	5	2	3	4	4	4	6	5	5	4	4	4	4	4	3	3	3	1	2	2	6
4-Apr	2	2	3	2	2	1	1	1	1	2	2	2	3	3	2	2	2	2	2	2	1	1	3	2	3
5-Apr	2	1	4	2	3	4	2	3	2	2	1	2	1	2	5	2	4	2	3	3	2	3	4	4	5
6-Apr	5	5	4	5	4	6	6	6	6	6	6	7	6	6	7	6	7	7	7	6	7	7	6	6	7
7-Apr	6	6	6	6	5	5	4	5	5	5	6	7	5	6	5	7	4	5	5	4	3	3	2	3	7
8-Apr	3	1	4	1	2	2	2	3	2	3	2	3	2	2	3	2	3	2	2	1	1	1	2	3	4
9-Apr	3	2	2	2	2	1	2	1	1	2	2	2	2	3	2	3	2	1	3	2	2	2	6	3	6
10-Apr	5	3	4	2	3	2	1	2	5	3	4	8	6	5	5	5	5	2	2	2	2	3	3	3	8
11-Apr	5	4	5	7	5	2	3	5	6	5	4	4	4	7	5	7	6	5	5	2	2	6	6	4	7
12-Apr	2	2	3	3	4	4	2	6	4	4	4	4	5	4	3	4	5	5	5	3	2	3	1	2	6
13-Apr	1	1	1	1	2	2	2	2	2	2	4	3	4	8	5	5	5	4	4	3	2	2	3	3	8
14-Apr	1	1	1	1	2	1	2	3	3	2	3	3	4	5	6	4	4	4	2	1	2	2	3	4	6
15-Apr	3	3	4	3	4	3	4	4	9	9	9	8	8	8	8	8	8	7	10	8	9	8	7	5	10
16-Apr	UO	UO	UO	UO	UO	4	4	7	8	8	8	7	8	7	7	7	6	5	6	4	4	3	3	4	8
17-Apr	5	5	5	5	5	4	5	6	5	5	5	5	5	5	4	3	3	3	2	3	3	4	3	3	6
18-Apr	4	3	2	3	3	4	4	4	4	5	6	6	6	7	6	6	6	5	4	5	5	4	3	4	7
19-Apr	5	3	4	5	4	3	3	5	5	5	6	7	7	6	6	9	8	7	5	9	5	4	4	5	9
20-Apr	4	5	5	3	4	4	3	4	3	3	3	4	3	3	3	3	3	3	3	2	2	2	2	2	5
21-Apr	2	3	3	2	3	2	1	2	2	3	3	4	4	4	5	5	4	3	2	4	4	5	4	3	5
22-Apr	3	4	3	5	3	4	4	2	3	4	3	4	5	5	11	10	5	4	4	2	3	3	2	2	11
23-Apr	2	4	3	1	1	2	1	1	3	3	4	4	4	4	4	3	3	3	2	2	3	3	2	3	4
24-Apr	4	2	2	1	1	3	2	3	2	2	2	3	4	3	3	3	3	3	2	3	2	2	3	4	4
25-Apr	3	3	3	2	2	2	3	3	3	10	6	8	8	8	8	7	7	7	5	2	2	1	2	2	10
26-Apr	2	3	5	4	3	5	3	4	2	3	3	4	5	5	5	5	6	6	5	5	4	4	3	3	6
27-Apr	3	3	3	6	5	5	4	4	4	4	5	4	5	4	5	4	4	4	3	3	3	3	2	3	6
28-Apr	3	3	2	3	4	2	3	3	3	3	3	5	6	6	7	7	6	5	3	4	7	8	8	2	8
29-Apr	4	4	3	4	2	3	3	6	5	5	5	4	4	4	10	3	6	7	4	3	2	3	2	3	10
30-Apr	2	3	3	2	2	3	4	3	4	3	2	2	4	5	3	2	3	7	5	4	7	4	5	2	7
6 6 6 7 5 6 6 7 9 10 9 8 8 8 11 12 8 7 10 9 9 8 8 6																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	71	9.93	9.93
6 - 11	149	20.84	30.77
12 - 19	226	31.61	62.38
20 - 28	195	27.27	89.65
29 - 38	58	8.11	97.76
> 38	16	2.24	100.00

Total Number of Valid Hours: 715

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	2	7	2	3	8	8	10	3	5	2	2	2	3	6	3	71
6 - 11	11	7	5	4	10	7	25	25	9	4	5	5	1	4	14	13	149
12 - 19	34	18	5	1	2	7	36	35	14	6	4	13	14	9	12	16	226
20 - 28	19	10	0	0	0	0	46	20	14	9	4	11	14	15	17	16	195
29 - 38	3	4	0	0	0	0	9	10	5	3	1	2	13	3	2	3	58
> 38	0	0	0	0	0	0	0	0	0	0	0	7	5	1	3	0	16
Totals	72	41	17	7	15	22	124	100	45	27	16	40	49	35	54	51	715

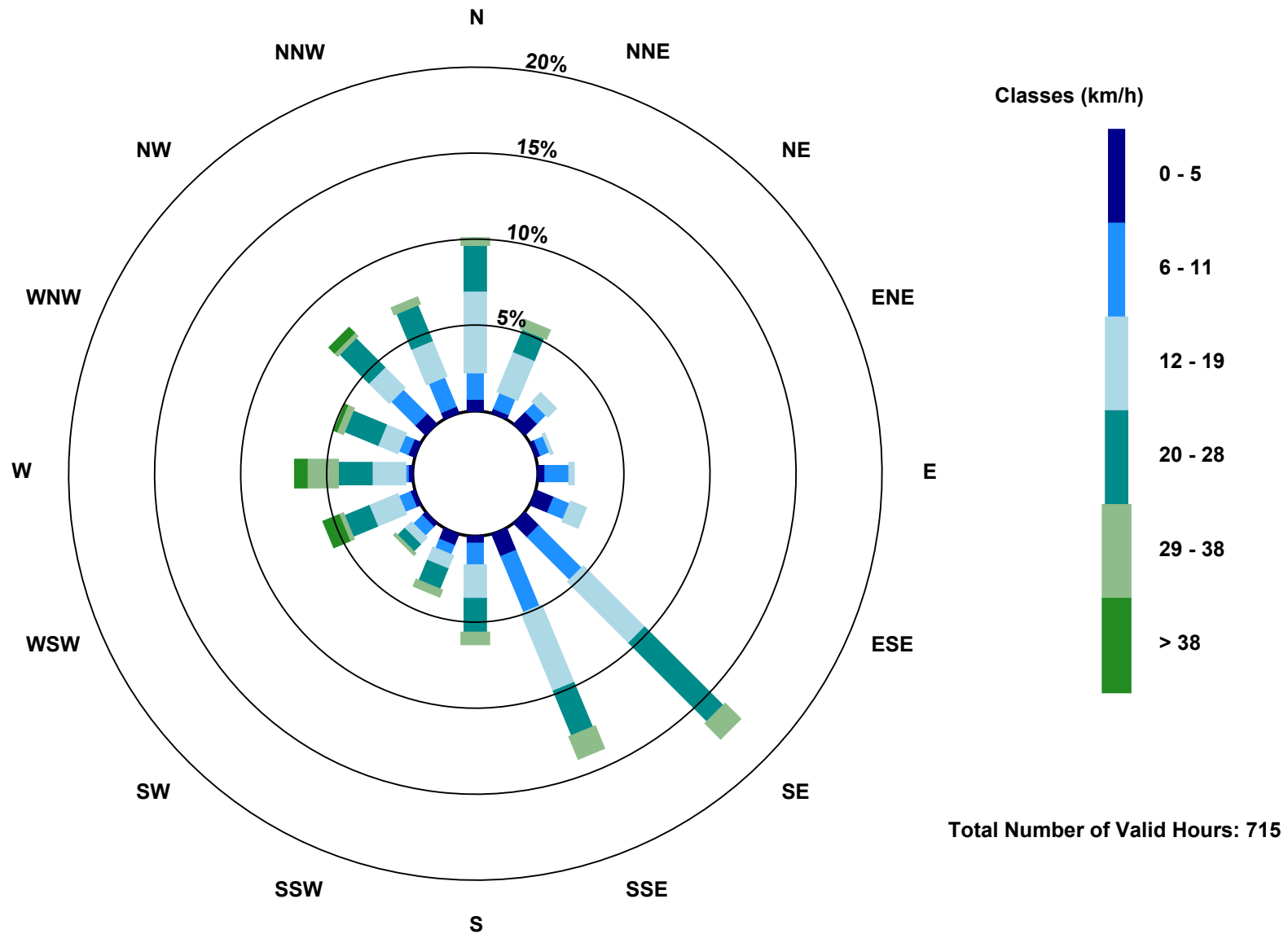
Total Number of Valid Hours: 715

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 75m (WS75) - km/h

Mannix - April 2025

Maximum Speed: 51 km/h on Apr 15 21:00															Maximum Daily Speed Average: 31.4 km/h on Apr 18										Hours in Service: 720		
Minimum Speed Value: 1 km/h on Apr 26 05:00															Minimum Daily Speed Average: 3.0 km/h on Apr 1										Hours of Data: 706		
Maximum Diurnal Speed Average: 7.2 km/h at hour 1															Minimum Diurnal Speed Average: 2.4 km/h at hour 21										Hours of Missing Data: 14		
Monthly Average Velocity: 2.4 km/h 231.2 deg															Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 11 Median = 18 Q ₃ = 25 P ₉₀ = 32 P ₉₉ = 45										Percent Operational Time: 98.1		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	SE24	SE24	SE24	SE22	SE21	SE20	SE19	SE18	SSE15	SSE14	SSE11	SSE14	SSE11	SSE13	W17WNW33WNW28	NNW21	NW29	NNW26	NNW26	NW26	NW24					S3.0	WNW33
2-Apr	WNW20	WNW19	WNW16	W18	W21	W25	W26	W21	W22WNW22WNW17	WNW16	NW16	NNW19	N22	N21	N22	N21	N23	NNW16	NNW26	NNE22	NNE20	N20			NW16.3	NNW26	
3-Apr	NNW26	NW28	NW27	NW26	NW25	NW18	NW21	NNW27	NW30	NW26	NNW22	NNW20	NNW20	NNW23	NNW20	NNW20	NNW22	NNW23	N21	N15	N14	ENE5	S3	W6	NNW19.2	NW30	
4-Apr	WNW12	W17WNW16	WSW13	WSW9	SW14	SW12	SSW12	SSW9	S8	SSE8	SE9	SSE10	SE7	ESE5	ESE6	SE6	SE9	SSE13	SSE17	SSE23	S26	S29	SSE28		S9.3	S29	
5-Apr	S26	S17	SSE8	SSE13	S17	SSE17	SE19	SSE17	SSE17	SSE7	SE4	SE4	ESE2	ESE2	NNW6	NW10	N12	NNE20	N24	NNE21	NE15	E12	ESE10	ESE10	ESE5.3	S26	
6-Apr	ESE12	ESE11	SE17	SE20	SE23	SE20	SE22	SE19	SE19	SE17	SE17	SE23	SE22	SE20	SE21	SE22	SE24	SE24	SE27	SE33	SE34	SE32	SE29	SE29	SE22.3	SE34	
7-Apr	SE28	SE26	SE26	SE24	SE26	SE18	SE17	SE17	SE17	SE16	SE16	SE18	SE17	SE18	SE19	SE18	SE12	SE13	SE13	SE12	SE11	SE13	SE11	SE16	SE17.6	SE28	
8-Apr	SE9	SE12	SE9	ESE5	SSE8	SSE8	SE12	SE8	SSE1	S6	SSE11	SSE12	SSE3	SSE4	S7	SSW4	NE6	NE6	E3	NNE4	N5	NE6	ENE5	SSE2	SE4.5	SSE12	
9-Apr	S6	SSW11	S5	SE6	S12	SSE12	SSE8	SSE3	S2	WSW1	S3	SSE5	SE8	SE9	SE5	N2	NNW8	NNW4	ENE7	ENE12	E11	E12	SSE7	SSW13	SSE4.0	SSW13	
10-Apr	W12	W12	WSW14	WSW16	SW15	SSW12	SW11	SW10	SW12	SW16	SW12	W23	W21	W19	W15	W13	WSW14	WSW6	ENE4	ESE6	SE11	ESE8	ESE9	ESE9	SW9.0	W23	
11-Apr	SE13	ESE9	ESE12	ESE16	SE7	SSW12	SE8	SSE14	ESE10	SSE14	S15	SW9	W13	WSW28	W31	W33	W37	W34	W26	WSW22	WSW28	W32	W29	WSW22	WSW12.5	W37	
12-Apr	WSW22	WSW24	WSW27	W25	W25	WSW20	WSW13	W19	W21	W26	W25	W24	W26	WNW22	WNW22	WNW28	NW29	NW29	NW27	NW18	NNW17	N6	NW6	NNE7	WNW18.2	NW29	
13-Apr	NE5	W2	WSW4	W3	WNW7	WNW9	WNW18	NNW14	NW7	NW5	NNW8	NNW6	NW12	NNW25	NNW21	N24	N24	N22	NNE22	NNE22	NNE21	NNE17	NNE18	NNE11	N11.1	NNW25	
14-Apr	NNE7	NE6	ENE6	NNE4	SE5	SSE12	SE13	SSE13	SSE15	SSE13	SE12	SSE15	SSE15	SSE21	SSE23	SSE22	S20	SSW22	SSW16	SSE20	SSE22	SSE23	SE22	SE23	SSE13.3	SSE23	
15-Apr	SE25	SE24	SSE25	SSE25	SSW20	SW19	SSW23	SSW28	WSW39	WSW51	W47	W45	W42	W46	W43	W43	W44	WNW40	WNW44	WNW50	W51	W44	W43	W39	WSW30.0	W51	
16-Apr	UO	UO	UO	UO	UO	UO	UO	NW44	NW46	NW48	NNW44	NNW39	NNW37	NNW38	N30	NNW34	N29	N25	N25	N28	N19	N13	N15	N18	---	NW48	
17-Apr	N20	N29	N25	N30	N24	NNE28	N20	NNE27	NNE27	N22	N21	NNE21	N20	NNW19	NNE14	NNE12	N9	NNW11	NNE9	NE12	E11	SE10	SE16	SE22	NNE15.0	N30	
18-Apr	SSE25	SSE24	SSE23	SSE25	SSE28	SE29	SSE28	SSE29	S27	SSE28	SSE32	SSE34	SSE39	SSE34	S41	S40	S36	SSE32	SSE34	SSE39	SSE36	SSE37	S34	SSW31	SSE31.4	S41	
19-Apr	SSW35	SW35	WSW31	WSW33	WNW27	WNW24	W23	WNW28	W32	W33	W33	W35	W32	W34	WNW33	W40	W33	WNW32	WNW28	NW28	N27	UO	UO	UO	W27.2	W40	
20-Apr	UO	UO	UO	UO	NNE16	NNE19	NNE12	N11	N9	NW10	WNW9	NW7	NNW1	NE3	NE3	E7	E8	ENE6	ENE14	ENE15	ENE15	ENE18	ENE16	E11	NE8.2	NNE19	
21-Apr	E11	ESE8	ESE5	E4	SE6	SE8	ESE3	SSE2	SSE6	SE7	SE8	SE7	E8	ESE8	SSE10	S11	SE9	SSE14	SSE16	SE20	S10	SSE21	SSE27	SSE22	SE9.7	SSE27	
22-Apr	SSE25	SSW13	SSW12	SSW13	S28	S24	S23	S23	SSE26	SSE25	SSE22	SSE19	SSE21	SSE24	SW30	W18	S22	S22	SSW6	ESE4	SSE10	NNE13	NE10	ENE8	S14.1	SW30	
23-Apr	ENE3	N5	NNW7	NW3	NW5	NNW6	NE3	E2	N5	N10	NW12	NNW17	N20	NNE18	NNE19	NNE16	NNE14	NNE14	N9	NNW12	N14	N13	N11	N8	N9.4	N20	
24-Apr	NNW7	NW6	NNW6	E1	SW1	SSE7	S14	SSE10	SSE4	SE3	SE5	SE4	NNW6	NW4	NE6	ENE8	E6	E8	ESE6	ESE8	SSE21	SE21	SE27	SE26	SE5.7	SE27	
25-Apr	SSE27	SSE27	SSE25	SSE28	SSE29	SSE30	SSE27	S22	SSE16	S29	S38	S38	S38	S36	SSW34	SSW35	SSW37	SW32	SW27	SSW26	SW27	SW31	SSW25	SSW22	S26.8	S38	
26-Apr	S18	SSE25	S19	SSE4	SSE1	N15	NNW16	NNW11	NW9	NNW12	NNW17	N20	NNE29	NNE29	NNE33	NNE35	NNE33	N33	NNE31	NNE32	NNE23	NNE21	N18	NNE15	N14.5	NNE35	
27-Apr	NNE14	NNE16	NNE15	NNE23	NNE31	NNE23	NNE24	N21	N19	NNW15	NNW12	NW11	NNW10	NNW10	N11	N13	NNE15	NE19	NE18	NNE19	NNE22	NE20	ENE13	ESE8	NNE15.3	NNE31	
28-Apr	SE8	SE7	SE14	SE20	SE21	SE19	SE20	SSE16	SSE14	SSE12	SE15	SSE19	S19	S24	S31	SSW27	SSW27	S27	S23	SSW23	SSW30	SSW28	SW26	SSE19	S18.6	S31	
29-Apr	S26	S17	SSE19	S23	WSW21	W21	W19	W24	W27	W24	W25	WNW27	WNW25	NW20	NNW19	NW7	NW14	N28	N18	NNE16	NNE17	NE17	ENE4	SW11	WNW9.5	N28	
30-Apr	SSW17	SW20	W18	W23	W20	WNW16	N18	NNE13	NNW12	NW10	NW9	NNW9	NNE21	NNE17	NE8	N6	N12	N25	NNE37	NNE36	NNE26	NNE21	NNE25	NNE27	N12.2	NNE37	
S7.2 S6.0 S5.2 S5.2SSW5.0SSW4.6 S4.6 SW3.4WSW4.3WSW5.5WSW5.0WSW5.1 W3.7 W3.8 W4.2 W5.4WNW5.6 NW5.4 N5.1NNE3.7 NE2.4 ESE2.8 SSE3.4 SSE4.8																									Diurnal Average		
SSW35 SW35WSW31WSW33 NNE31 SSE30 SSE28 NW44 NW46WSW51 W47 W45 W42 W46 W43 W43 W44WNW40WNW44WNW50 W51 W44 W43 W39																									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 75m (WS75) - km/h

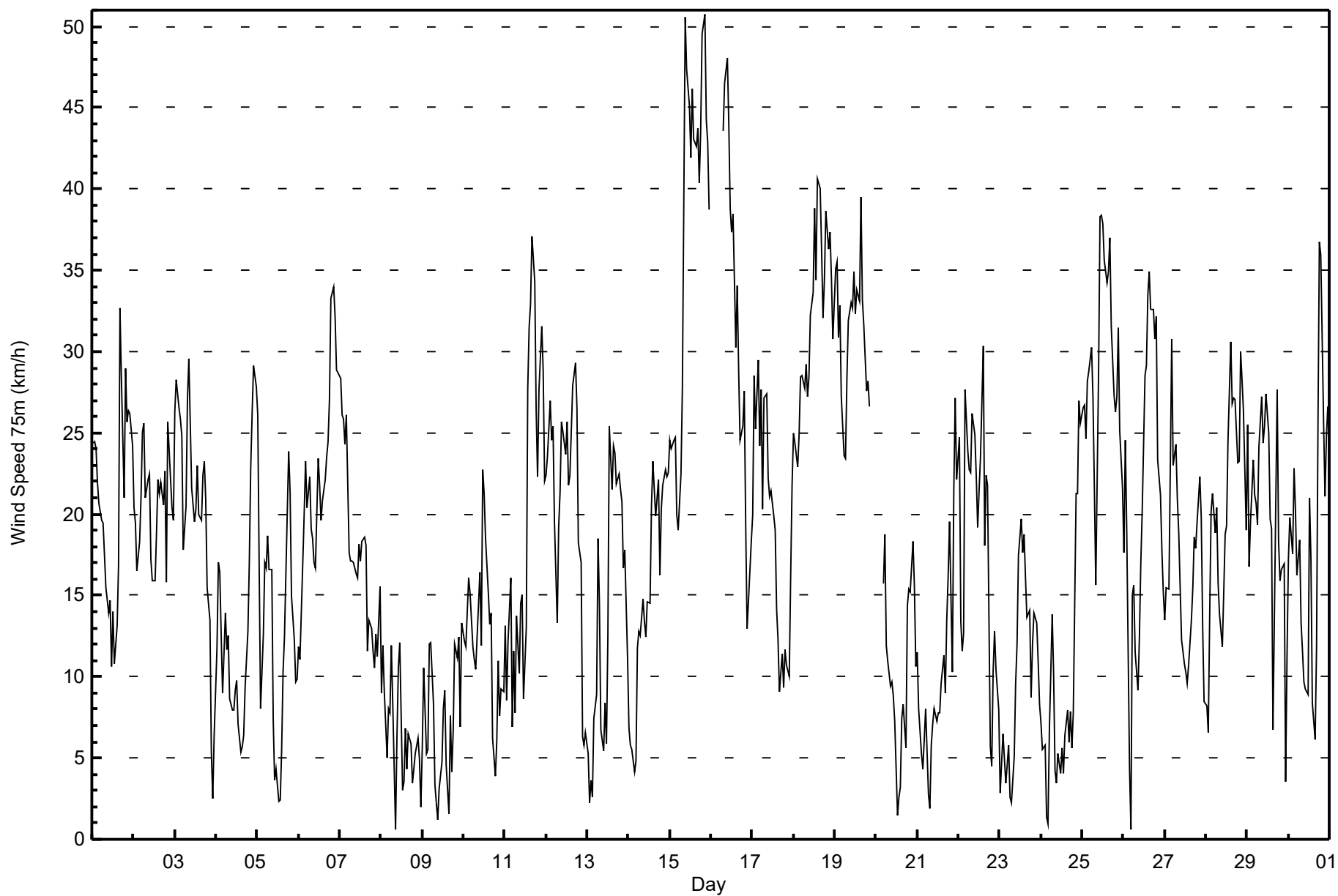
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 1 16:00																	Hours in Service: 720 Hours of Data: 706 Hours of Missing Data: 14 Hours of Calibration: 0 Percent Operational Time: 98.1								
Minimum Value: 0 km/h on Apr 14 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 7 P ₉₉ = 10																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	5	5	5	5	4	4	4	2	2	3	3	2	2	2	12	5	4	5	5	6	4	4	3	12
2-Apr	2	3	4	2	1	2	2	3	4	4	4	3	4	6	4	4	4	4	3	3	4	3	2	5	6
3-Apr	3	4	4	4	6	2	3	4	4	4	5	5	5	4	4	4	4	4	3	4	4	2	1	2	6
4-Apr	2	3	1	3	3	2	2	2	2	2	2	3	3	2	2	2	2	2	1	2	1	2	1	2	3
5-Apr	3	3	3	2	3	3	1	1	3	3	2	2	1	2	4	2	4	1	3	3	2	3	4	4	4
6-Apr	5	4	6	7	6	8	8	7	7	6	7	9	8	8	9	8	9	10	9	10	10	9	9	9	10
7-Apr	8	8	9	8	6	7	6	7	7	6	6	7	7	7	8	8	5	6	6	5	5	4	5	5	9
8-Apr	4	4	5	2	2	4	2	3	2	4	2	4	2	2	3	2	4	3	3	2	1	1	2	1	5
9-Apr	2	2	2	2	2	1	2	1	1	1	2	2	3	3	2	3	2	2	4	2	3	3	4	3	4
10-Apr	5	3	4	3	4	2	2	2	4	3	4	8	6	5	5	5	5	2	2	3	4	3	3	3	8
11-Apr	6	3	4	7	5	2	5	7	5	5	4	4	5	8	5	6	6	5	4	2	2	5	6	4	8
12-Apr	2	2	3	3	4	4	2	5	4	4	4	4	4	4	3	4	5	5	5	3	1	5	1	1	5
13-Apr	2	1	1	2	2	2	3	4	2	3	4	3	5	8	5	4	5	4	3	2	2	2	2	4	8
14-Apr	1	2	1	0	2	2	2	3	2	3	3	4	5	6	6	4	4	3	2	2	2	2	3	5	6
15-Apr	3	2	3	3	5	4	5	3	9	8	8	8	8	8	8	7	8	7	10	8	9	8	7	6	10
16-Apr	UO	UO	UO	UO	UO	UO	UO	7	7	7	8	7	9	8	7	7	7	5	6	4	4	3	3	5	9
17-Apr	5	5	5	5	4	4	5	6	5	5	5	5	5	5	4	3	3	2	2	2	3	4	4	4	6
18-Apr	4	3	2	2	2	4	3	4	4	4	5	6	6	7	6	6	6	5	4	4	4	4	4	4	7
19-Apr	5	3	4	5	3	3	3	5	5	5	6	7	7	6	5	10	8	7	5	10	5	UO	UO	UO	10
20-Apr	UO	UO	UO	UO	4	5	4	4	3	3	3	4	2	3	3	3	3	3	3	2	2	2	3	2	5
21-Apr	3	3	3	2	3	2	2	2	2	3	3	3	4	4	5	5	4	3	3	4	4	5	4	3	5
22-Apr	3	4	2	5	5	5	3	2	3	3	3	4	4	5	11	10	5	4	5	2	4	3	2	1	11
23-Apr	2	3	3	1	1	1	1	1	3	2	4	3	4	4	3	3	3	3	2	3	3	3	2	3	4
24-Apr	4	2	2	1	1	3	2	3	2	2	2	3	4	3	3	3	3	2	2	3	2	3	3	4	4
25-Apr	3	3	1	2	1	1	3	3	3	10	7	8	7	8	8	8	8	6	4	2	2	1	3	3	10
26-Apr	2	3	5	4	3	5	3	4	2	3	3	4	4	5	5	5	5	6	4	5	4	4	3	3	6
27-Apr	2	3	3	6	4	5	4	4	4	4	5	4	4	4	5	4	4	3	3	3	3	3	3	4	6
28-Apr	4	4	5	4	4	3	3	3	3	3	4	6	6	6	7	7	6	5	3	4	8	9	8	2	9
29-Apr	4	4	3	4	2	3	4	6	5	5	5	4	4	4	10	3	7	7	4	3	2	2	3	3	10
30-Apr	3	3	2	2	2	3	4	3	4	3	2	3	4	5	4	2	4	7	5	3	7	4	4	2	7
8 8 9 8 6 8 8 7 9 10 8 9 9 8 11 12 9 10 10 10 10 9 9 9 9																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	59	8.36	8.36
6 - 11	134	18.98	27.34
12 - 19	192	27.20	54.53
20 - 28	220	31.16	85.69
29 - 38	75	10.62	96.32
> 38	26	3.68	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 75m (WS75) - km/h

Mannix - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	2	4	5	4	7	7	10	4	1	1	2	2	0	4	2	59
6 - 11	10	4	7	5	8	16	23	17	6	3	4	2	1	3	11	14	134
12 - 19	16	23	5	7	2	3	33	32	9	9	7	5	13	10	5	13	192
20 - 28	26	24	0	0	0	0	34	35	15	11	4	9	23	12	11	16	220
29 - 38	4	10	0	0	0	0	6	10	9	6	4	2	13	3	4	4	75
> 38	0	0	0	0	0	0	0	2	2	0	0	2	12	3	3	2	26
Totals	60	63	16	17	14	26	103	106	45	30	20	22	64	31	38	51	706

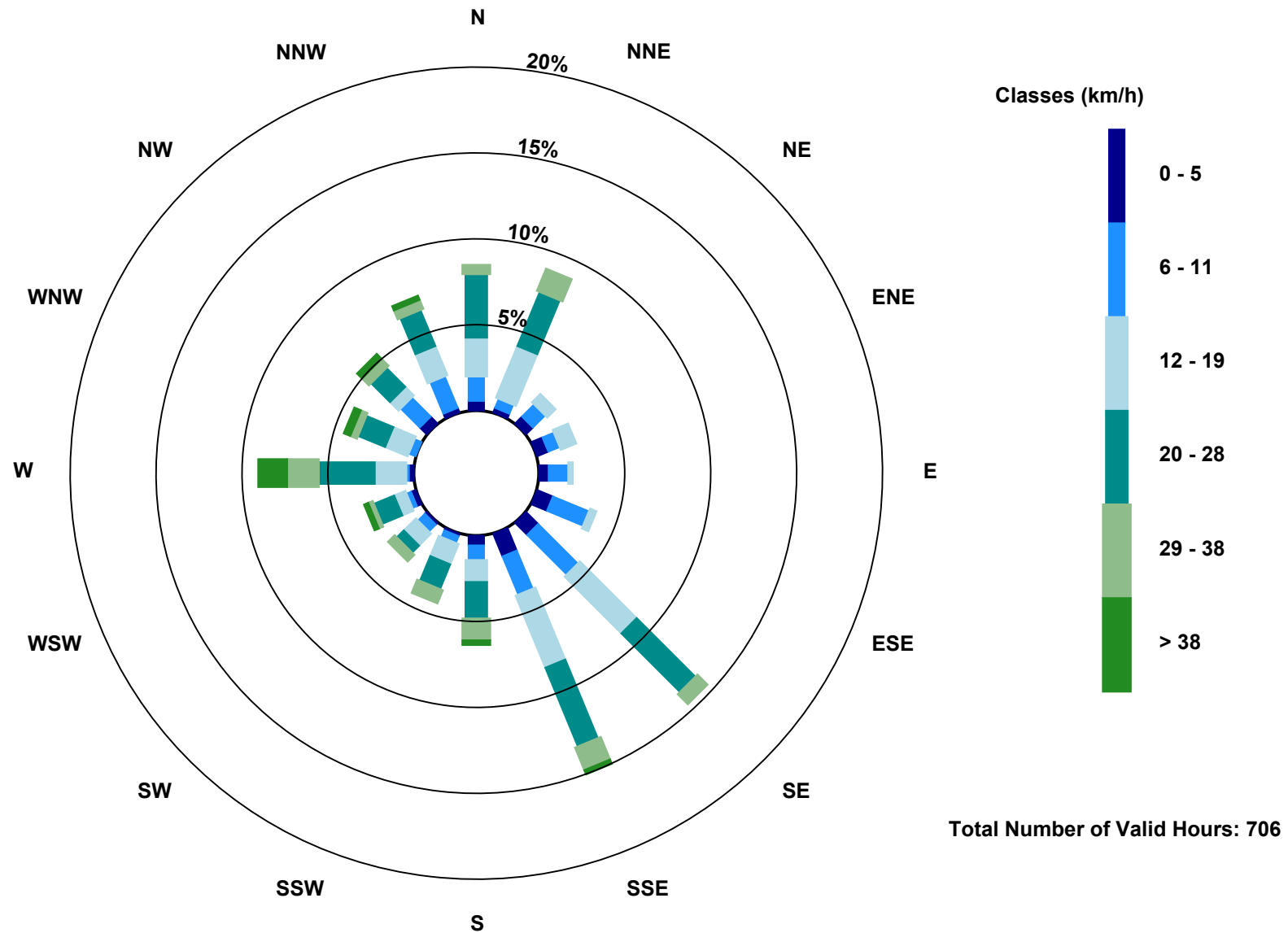
Total Number of Valid Hours: 706

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 90m (WS90) - km/h

Mannix - April 2025

Maximum Speed: 53 km/h on Apr 15 21:00																Maximum Daily Speed Average: 32.2 km/h on Apr 18										Hours in Service: 720	
Minimum Speed Value: 1 km/h on Apr 26 05:00																Minimum Daily Speed Average: 3.1 km/h on Apr 1										Hours of Data: 702	
Maximum Diurnal Speed Average: 7.5 km/h at hour 1																Minimum Diurnal Speed Average: 2.6 km/h at hour 21										Hours of Missing Data: 18	
Monthly Average Velocity: 2.7 km/h 232.8 deg																Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 12 Median = 20 Q ₃ = 27 P ₉₀ = 33 P ₉₉ = 47										Percent Operational Time: 97.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	SE27	SE29	SE28	SE24	SE23	SE21	SE21	SE19	SSE17	SSE15	SSE11	SSE11	SSE14	SSE14	W18WNW34WNW30	NNW23	NW31	NNW28	NNW28	NW28	NW26			S3.1	WNW34		
2-Apr	WNW23WNW22WNW18	W21	W24	W28	W28	W22	W23WNW23WNW18WNW17WNW17	NNW20	N23	N22	N23	N21	N24	NNW18	NNW28	NNE23	N21	N21					NW17.9	W28			
3-Apr	NNW29	NW31	NW29	NW28	NW27	NW19	NW22	NNW29	NW31	NW27	NNW22	NNW20	NNW21	NW24	NNW21	NNW20	NNW24	NNW25	NNW22	N16	N15	NE6	S2	W6	NNW20.6	NW31	
4-Apr	WNW10	W20	W19WSW15WSW11	SW16	SW13	SW14	SSW9	S8	S8	SSE10	SSE10	SE7	ESE6	ESE7	SE7	SE10	SSE13	SSE17	SSE24	SSE29	S30	S27			S9.6	S30	
5-Apr	S25	SSW15	S6	SSE8	S14	SSE17	SSE19	SSE18	SSE19	SSE7	SE4	SE5	ESE2	ESE3	NNW5	NW11	N13	NNE20	N24	NNE22	NE14	E15	ESE13	ESE13	ESE4.9	S25	
6-Apr	ESE15	ESE15	SE19	SE22	SE25	SE24	SE26	SE23	SE22	SE22	SE22	SE27	SE26	SE25	SE26	SE28	SE29	SE29	SE31	SE36	SE37	SE36	SE34	SE33	SE26.3	SE37	
7-Apr	SE33	SE30	SE30	SE28	SE29	SE23	SE22	SE22	SE22	SE20	SE21	SE23	SE22	SE23	SE23	SE22	SE15	SE18	SE15	SE15	SE14	SE14	SE14	SE17	SE21.4	SE33	
8-Apr	SE11	SE13	SE10	ESE6	SSE8	SSE8	SE11	SE9	SE1	S5	SSE10	SSE12	SE2	SE3	S7	SSW3	NE7	NE7	ENE4	NE5	N5	NE6	ENE4	SSE3	SE4.7	SE13	
9-Apr	S4	SSW10	SSW6	SSE6	S11	SSE12	S7	SW4	SW3	W2	SW4	S5	SE9	SE10	SE5	N2	NW8	NNW4	ENE7	ENE13	E12	E14	SE8	SSW13	SSE3.8	E14	
10-Apr	W15	W14WSW17WSW20	SW17	SW13	SW13	SW12	SW14	SW17	SW12	W23	W22	W19	W16	W14WSW14	WSW7	E4	SE7	SE14	ESE14	ESE16	ESE16				SW9.6	W23	
11-Apr	SE17	ESE13	ESE18	ESE23	ESE9	SSW12	SE11	SSE16	ESE15	SSE15	S15	SW9	W13WSW29	W33	W34	W38	W36	W28WSW24WSW30	W34	W30WSW24					WSW12.4	W38	
12-Apr	WSW25WSW26WSW29	W27	W28WSW21WSW16	W21	W22	W27	W26	W24	W27WNW23WNW24WNW30	NW31	NW31	NW29	NW21	NNW18	N7	NW6	NNE6								WNW19.8	NW31	
13-Apr	NNE4	W4	WSW5	WNW5WNW10WNW12WNW20WNW16	NW7	NW6	NNW9	NW6	NW13	NNW27	NNW22	N25	N25	N23	NNE23	NNE22	NNE22	NNE18	NNE19	NNE11					NNW11.8	NNW27	
14-Apr	NNE7	NE5	ENE5	NE4	ESE5	SSE13	SE12	SSE14	SSE15	SSE13	SE13	SE15	SSE15	SSE21	SSE23	S22	S20	SSW23	SSW17	SSE22	SSE23	SSE25	SE25	SE25	SSE14.0	SE25	
15-Apr	SE25	SSE26	S26	S24	SSW21	SW22	SSW24	SSW30WSW41WSW52	W49	W47	W43	W48	W45	W44	W45WNW43WNW46WNW52	W53	W46	W45	W40						WSW31.9	W53	
16-Apr	UO	UO	UO	UO	UO	UO	UO	NW46	NW50	NW51	NNW47	NNW41	NNW40	NNW41	NNW32	NNW37	NNW30	N26	N27	N29	NNW21	N14	N16	N20	---	NW51	
17-Apr	N21	N30	N26	N31	N25	NNE28	N21	NNE28	N28	N23	N22	N22	N21	NNW20	N14	NNE12	N9	NNW12	NNE10	NE12	E12	SE12	SE18	SE22	N15.5	N31	
18-Apr	SE26	SSE26	SSE24	SSE26	SSE30	SE30	SSE29	SSE30	S27	SSE28	SSE32	SSE33	SSE39	SSE34	S41	S40	S36	SSE33	SSE36	SSE40	SSE39	SSE39	S36	SSW33	SSE32.2	S41	
19-Apr	SSW38	SW38WSW34WSW35WNW30WNW26	W26WNW30	W33	W34	W34	W36	W34	W35WNW35	W41	W35WNW33WNW29WNW30	N27	UO	UO	UO										W29.1	W41	
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	NNW11	NW10	WNW9	NW7	NNW2	ENE3	NE3	E7	E9	ENE6	NE14	ENE16	ENE16	ENE19	ENE17	E12	---	ENE19	
21-Apr	E13	ESE10	ESE7	E6	SE6	SE8	ESE5	SSE2	SE6	SE8	SE9	SE8	ESE8	ESE8	SSE10	SSE12	SE9	SSE14	SSE16	SE21	S11	SSE22	SSE29	SSE24	SE10.4	SSE29	
22-Apr	SSE27	SSW14	SW12	SW14	SSW29	S25	S23	S22	SSE27	SSE25	SSE22	SSE19	SSE21	SSE24	SW31	W20	S23	S22	SSW6	ESE6	SE10	NNE13	NE11	ENE8	S14.2	SW31	
23-Apr	E4	N5	NNW7	NW5	NW6	NNW6	NNE2	E2	N5	N10	NW12	NNW18	N20	NNE18	NNE19	NNE16	N14	N14	N9	NNW13	N15	N14	N12	N7	N9.7	N20	
24-Apr	NNW7	WNW6	N6	E2	S1	SE7	S13	SSE11	SSE4	SE4	SE5	SE4	NNW5	NW4	NNE6	ENE8	E6	E9	ESE6	ESE9	SE22	SE22	SE28	SE28	SE6.1	SE28	
25-Apr	SSE29	SSE29	SSE26	SSE30	SSE30	SSE32	SSE30	S22	S16	S29	S38	S39	S38	S36	SSW34	SSW35	SW38	SW32	SW28	SSW28	SW29	SW31	SSW27	SSW23	S27.7	S39	
26-Apr	SSW18	S24	SSW19	S3	W1	N14	NNW17	NNW12	NW9	NW12	NNW17	N21	NNE29	NNE30	NNE34	NNE35	NNE33	N33	NNE32	NNE33	NNE24	NNE22	N19	NNE16	N15.0	NNE35	
27-Apr	NNE14	NNE16	N16	N23	NNE31	NNE23	NNE25	N22	N19	NNW16	NNW13	NW11	NNW11	NNW10	NNW11	N14	NNE15	NE18	NNE18	NNE20	NNE23	NNE21	ENE14	ESE9	NNE15.6	NNE31	
28-Apr	SE9	SE8	SE15	SE21	SE23	SE20	SE22	SSE16	SSE14	SSE12	SE16	SSE19	S19	S25	S31	SSW27	SSW27	S27	S24	SSW24	SSW31	SSW29	SW28	SSE20	S19.1	S31	
29-Apr	S27	SSW18	SSE20	S24WSW24	W23	W21	W25	W28	W26	W26WNW28WNW26	NW21	NNW19	NW7	NW14	N29	N19	NNE17	NNE18	NE18	ENE5	SW11				WNW10.4	N29	
30-Apr	SSW17WSW22	W20	W25	W22WNW18	N19	N14	NNW12	NW10	NW9	NNW9	NNE21	NNE17	NNE9	N6	N12	N27	NNE37	NNE37	NNE26	N22	N25	NNE26			NNW12.8	NNE37	
S7.5 SSW6.3SSW5.5SSW5.3SSW5.9SSW5.7 S5.3 SW4.3WSW4.7WSW5.8WSW5.2WSW5.3 W4.0 W4.0 W4.5 W5.8WNW6.0 NW5.8 N5.5 N3.8 NE2.6 ESE3.1 SSE3.8 SSE5.2																								Diurnal Average			
SSW38 SW38WSW34WSW35 NNE31 SSE32 SSE30 NW46 NW50 WSW52 W49 W47 W43 W48 W45 W44 W45WNW43WNW46WNW52 W53 W46 W45 W40																								Diurnal Maximum			
UO - Unstable Operation																											
All monthly, daily, and diurnal averages have been calculated using vector methods																											



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 90m (WS90) - km/h

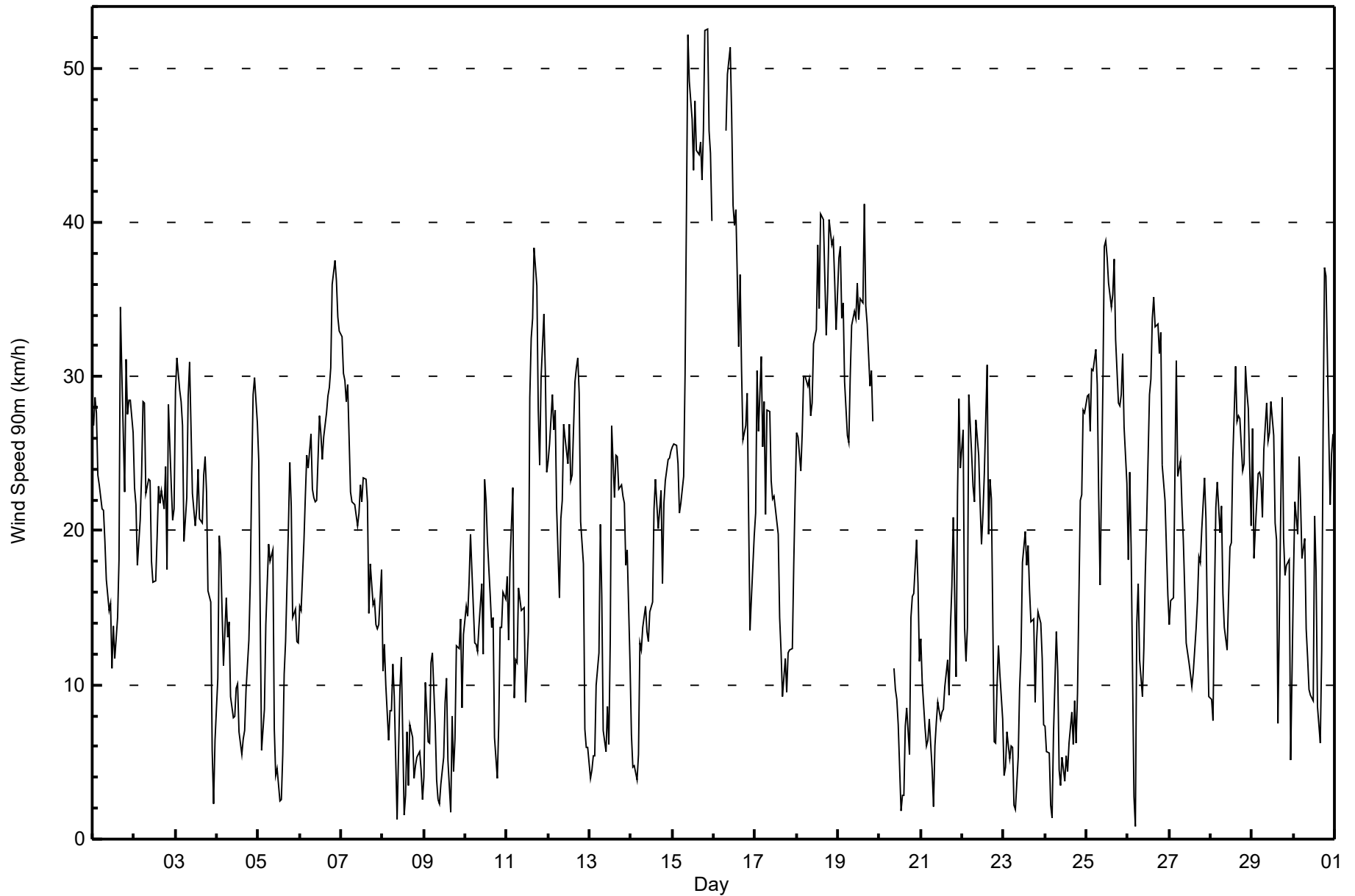
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 22 15:00																		Hours in Service: 720 Hours of Data: 702 Hours of Missing Data: 18 Hours of Calibration: 0 Percent Operational Time: 97.5							
Minimum Value: 1 km/h on Apr 8 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	2	5	4	3	3	2	3	2	2	3	3	2	2	2	12	5	5	5	5	7	4	3	3	12
2-Apr	2	3	3	3	1	2	2	4	4	4	4	3	4	6	4	4	4	4	3	3	4	3	3	6	6
3-Apr	3	3	4	4	6	2	3	4	4	4	5	5	5	3	4	4	5	4	3	4	3	2	1	2	6
4-Apr	3	2	2	4	3	2	2	2	2	2	2	2	3	2	2	2	2	2	1	2	2	2	1	3	4
5-Apr	2	4	2	2	4	2	2	1	3	3	1	2	1	2	4	2	4	1	2	4	2	3	4	4	4
6-Apr	4	4	5	5	5	5	5	6	6	5	5	7	6	6	6	6	6	7	7	7	7	6	7	6	7
7-Apr	6	6	6	6	4	5	5	5	5	4	5	5	5	5	6	7	4	5	5	4	3	3	3	4	7
8-Apr	2	4	4	1	2	4	2	2	2	3	2	3	2	2	3	2	4	3	3	2	1	1	1	1	4
9-Apr	2	2	2	2	2	1	2	1	2	2	2	2	2	3	2	3	2	2	4	2	3	2	3	2	4
10-Apr	5	3	4	3	4	2	3	2	4	3	4	8	6	5	5	5	5	2	2	3	3	3	3	4	8
11-Apr	5	3	5	8	7	2	4	6	5	5	4	4	5	7	5	6	6	5	4	2	2	5	6	4	8
12-Apr	2	2	3	4	4	5	3	5	4	4	4	3	4	4	4	4	5	5	5	2	2	6	1	1	6
13-Apr	3	2	2	2	2	3	2	4	2	3	4	3	5	9	5	4	5	4	3	2	2	2	2	3	9
14-Apr	1	2	1	1	2	2	2	2	2	2	2	4	4	5	6	4	3	3	2	1	2	1	2	3	6
15-Apr	2	2	3	3	5	5	5	3	9	7	8	8	7	7	8	7	8	7	10	8	9	8	7	6	10
16-Apr	UO	UO	UO	UO	UO	UO	UO	7	7	7	8	7	9	8	7	7	7	5	6	4	4	3	4	5	9
17-Apr	5	5	5	5	4	4	5	5	5	6	5	5	5	5	4	3	3	2	2	2	3	3	4	3	6
18-Apr	3	2	2	2	2	3	3	4	4	4	5	5	6	7	6	6	6	5	4	4	4	4	3	4	7
19-Apr	5	3	4	5	3	3	3	5	4	5	6	7	6	6	5	10	8	6	5	10	4	UO	UO	UO	10
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	5	3	3	3	3	3	3	3	3	3	3	2	2	2	3	3	5
21-Apr	2	3	4	2	2	2	2	2	2	3	3	3	3	4	5	5	4	3	3	3	4	5	3	3	5
22-Apr	3	5	2	5	6	4	2	2	2	3	2	4	4	5	12	10	5	4	5	3	4	3	2	1	12
23-Apr	2	2	2	1	1	1	1	1	3	2	4	3	4	3	3	3	3	3	2	3	3	3	2	3	4
24-Apr	3	1	2	1	1	4	2	3	2	2	2	3	4	3	3	3	3	2	2	3	2	2	3	3	4
25-Apr	3	2	1	2	1	1	3	4	3	10	7	7	7	8	8	8	7	6	4	2	1	1	2	3	10
26-Apr	2	4	5	4	3	5	3	4	2	3	3	4	4	4	5	5	5	6	4	5	4	4	3	3	6
27-Apr	2	2	3	6	4	5	4	3	4	4	5	4	4	4	5	4	3	3	2	3	2	3	3	3	6
28-Apr	4	3	3	3	4	3	2	3	2	3	3	5	6	6	7	7	6	5	3	4	8	9	7	2	9
29-Apr	4	4	3	3	2	3	4	6	5	5	5	4	4	4	9	3	7	7	4	3	2	2	5	3	9
30-Apr	3	3	2	2	2	3	4	3	4	3	2	3	3	6	4	2	4	7	5	3	7	4	4	2	7
																		Diurnal Maximum							
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	56	7.98	7.98
6 - 11	116	16.52	24.50
12 - 19	173	24.64	49.15
20 - 28	220	31.34	80.48
29 - 38	106	15.10	95.58
> 38	31	4.42	100.00

Total Number of Valid Hours: 702

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 90m (WS90) - km/h

Mannix - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	2	4	5	4	4	9	3	6	1	3	1	3	1	2	4	56
6 - 11	6	6	5	4	5	12	23	11	7	5	1	2	1	4	13	11	116
12 - 19	18	16	5	6	6	10	19	30	5	9	12	4	8	7	5	13	173
20 - 28	31	18	0	0	0	1	44	23	19	9	3	8	28	10	9	17	220
29 - 38	5	10	0	0	0	0	14	16	8	8	6	5	13	9	7	5	106
> 38	0	0	0	0	0	0	0	4	3	0	0	2	12	3	3	4	31
Totals	64	52	14	15	15	27	109	87	48	32	25	22	65	34	39	54	702

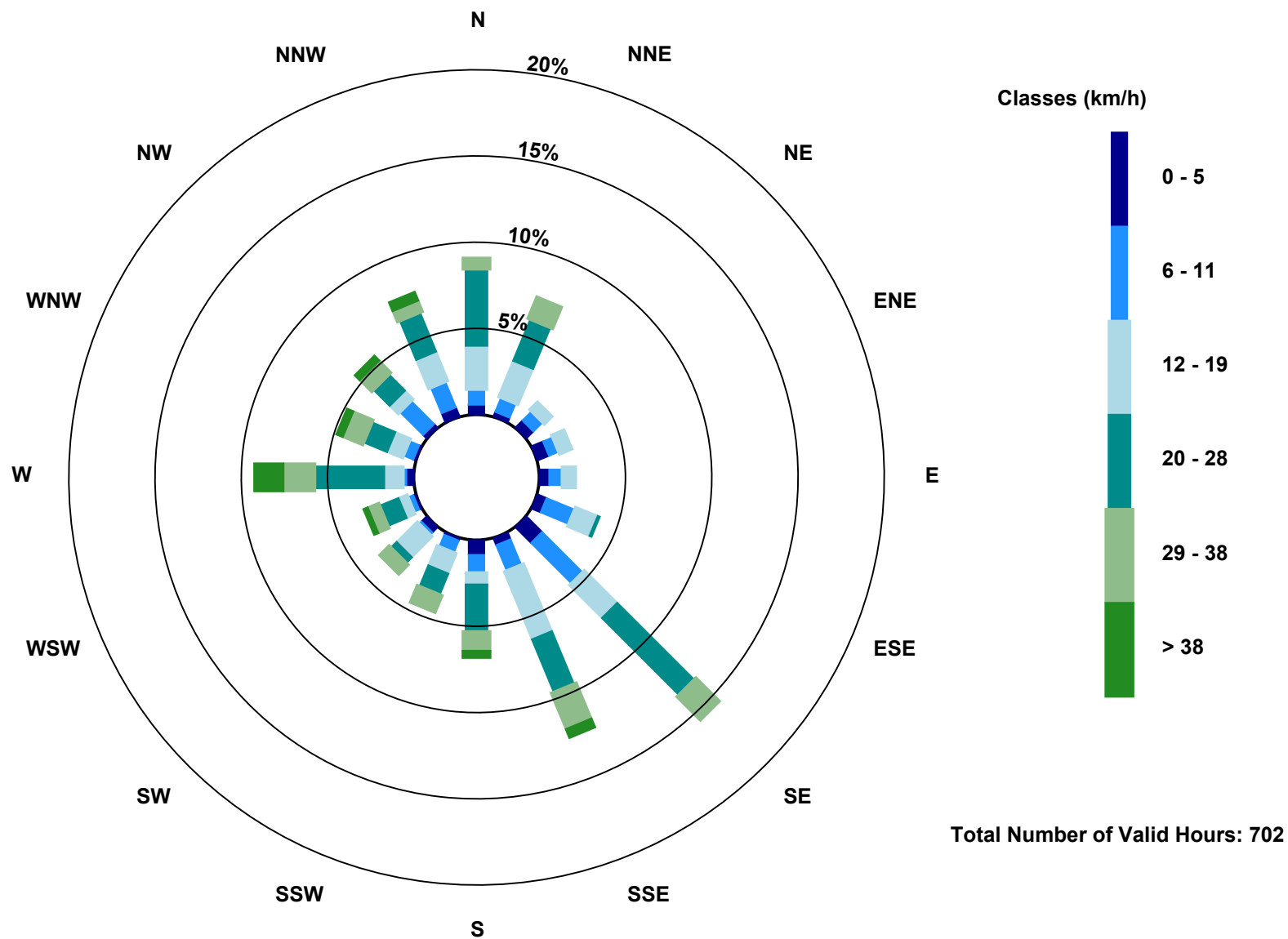
Total Number of Valid Hours: 702

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Mannix - April 2025

Direction of Maximum Speed: 270 deg on Apr 15 21:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 255.0 deg on Apr 15																				Hours of Data:		715			
Direction of Minimum Speed: 209 deg on Apr 9 10:00										Direction of Minimum Daily Speed Average: 2.6 deg on Apr 5										Hours of Missing Data:		5			
Monthly Average Direction: 229.4 deg																				Percent Operational Time:		99.3			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	136	137	136	138	142	143	140	144	154	156	154	153	163	142	146	279	288	293	322	306	323	327	314	299	191.6
2-Apr	273	274	280	271	266	252	258	267	278	293	296	285	300	329	349	350	348	348	342	322	335	16	14	5	311.5
3-Apr	336	315	313	307	312	291	302	325	314	315	328	327	323	322	327	329	325	336	344	4	335	70	232	253	320.1
4-Apr	267	272	251	189	173	171	156	159	150	146	145	133	150	140	116	114	136	136	143	151	163	166	161	165	159.5
5-Apr	162	151	141	158	171	144	147	159	152	154	156	132	94	115	318	302	352	13	359	11	14	77	124	110	104.0
6-Apr	119	125	137	137	141	136	135	135	133	133	133	134	133	134	134	133	133	133	135	137	137	134	131	133	133.8
7-Apr	133	133	135	133	135	131	131	133	132	133	132	133	132	132	134	134	127	132	128	130	137	148	144	147	133.8
8-Apr	162	159	151	137	190	162	159	160	260	168	159	143	156	163	185	222	46	56	124	353	333	29	78	232	160.5
9-Apr	232	211	176	131	153	152	166	155	153	209	124	140	129	133	127	70	329	328	38	59	70	74	214	226	143.2
10-Apr	158	220	200	185	172	152	155	154	166	214	228	260	270	260	269	260	253	255	66	84	127	128	124	122	209.5
11-Apr	142	121	95	102	157	248	104	162	106	166	162	240	258	251	267	261	266	267	267	243	239	256	260	249	242.0
12-Apr	244	243	244	257	252	237	224	270	270	272	265	259	275	294	297	297	309	316	321	316	330	302	298	17	279.7
13-Apr	24	21	128	100	150	294	282	291	321	313	317	310	317	327	332	349	348	354	28	28	14	12	6	360	346.5
14-Apr	331	9	15	290	168	223	162	149	146	150	146	147	139	143	164	164	170	194	184	158	139	140	136	134	152.9
15-Apr	135	140	152	154	168	172	167	196	243	255	264	260	261	258	257	259	260	286	288	281	270	265	263	264	255.0
16-Apr	265	UO	UO	UO	UO	UO	302	315	318	321	327	327	331	331	346	338	343	357	352	345	342	359	2	356	328.8
17-Apr	355	344	353	346	5	17	3	13	12	348	356	10	355	341	10	33	353	329	10	42	86	137	145	140	8.3
18-Apr	144	151	163	150	143	142	149	158	167	158	157	160	164	165	173	169	169	157	157	153	148	153	171	182	159.3
19-Apr	205	215	234	249	287	290	270	278	278	274	270	270	275	276	292	271	267	283	299	298	7	16	11	16	280.7
20-Apr	20	22	356	20	30	23	5	2	343	313	292	312	308	37	27	82	92	65	52	55	49	47	63	78	26.4
21-Apr	77	92	121	129	161	206	191	215	146	136	132	126	96	107	153	168	147	151	156	145	198	151	147	159	143.2
22-Apr	160	202	161	165	167	185	173	171	156	156	162	156	159	153	238	261	190	171	205	124	169	1	14	58	171.6
23-Apr	232	296	298	245	258	312	84	85	356	342	310	323	5	17	10	17	8	5	343	333	344	339	353	347	345.9
24-Apr	303	264	336	224	263	187	183	164	171	120	144	140	334	323	29	85	90	101	105	122	145	139	143	141	139.1
25-Apr	150	152	150	146	148	145	149	162	146	178	184	188	186	187	197	207	216	226	216	204	208	199	174	169	183.1
26-Apr	152	148	168	132	26	350	320	323	311	322	319	349	20	9	16	16	16	4	11	20	21	16	352	17	6.8
27-Apr	12	10	7	9	20	19	18	2	350	344	328	312	336	337	345	5	23	39	33	25	18	24	51	119	11.0
28-Apr	140	139	143	149	150	153	145	149	149	138	140	164	170	181	179	198	194	183	179	189	209	197	218	155	171.7
29-Apr	184	188	152	172	235	257	260	267	268	270	276	284	294	316	316	296	296	359	5	357	9	23	232	231	280.6
30-Apr	199	208	246	261	255	281	345	8	335	314	307	338	22	16	38	4	2	360	14	11	9	6	9	14	349.7
165.6 169.2 165.8 172.2 178.6 173.5 178.9 211.3 242.5 242.5 236.4 241.4 258.6 264.1 271.4 275.9 281.8 313.9 349.4 3.7 10.2 80.8 154.3 155.7																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

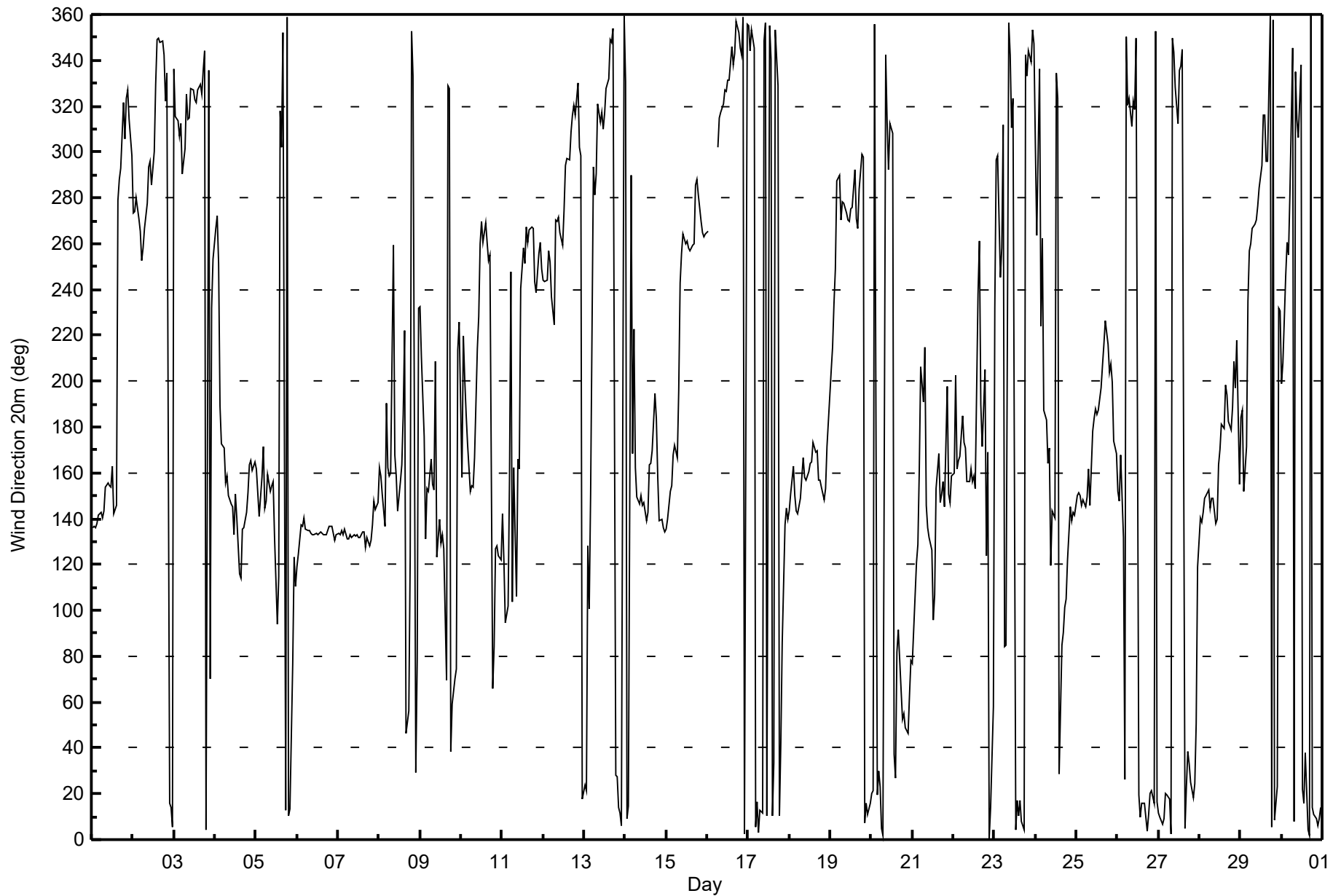
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 101 deg on Apr 21 03:00																		Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3							
Minimum Value: 4 deg on Apr 4 20:00																									
Percentiles: P ₁ = 6 P ₁₀ = 9 Q ₁ = 11 Median = 14 Q ₃ = 22 P ₉₀ = 38 P ₉₉ = 87																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	7	7	7	9	10	11	9	13	10	10	11	13	18	16	15	45	10	10	23	11	14	14	12	12	45
2-Apr	9	13	18	7	6	9	9	8	12	13	16	16	30	17	15	15	16	17	12	22	20	9	10	13	30
3-Apr	13	11	11	13	15	11	16	12	11	12	19	23	18	15	16	18	18	15	13	17	25	82	47	6	82
4-Apr	11	7	29	22	8	13	7	8	12	15	33	13	19	20	35	27	10	8	8	4	6	4	5	6	35
5-Apr	9	8	18	11	10	30	12	24	12	15	21	29	33	68	53	17	35	11	10	12	9	30	16	13	68
6-Apr	16	15	8	9	10	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	16
7-Apr	8	8	8	8	9	8	7	8	8	8	10	9	8	9	9	14	17	10	19	10	8	11	8	9	19
8-Apr	25	7	14	64	25	9	13	25	55	48	12	15	25	16	26	42	67	29	60	58	26	12	41	11	67
9-Apr	14	15	42	21	8	10	15	16	34	80	42	50	10	14	14	91	26	27	35	10	20	21	49	17	91
10-Apr	88	46	29	18	25	5	6	11	64	14	30	28	16	19	19	29	30	45	34	21	11	9	12	10	88
11-Apr	25	19	11	16	53	25	93	56	21	32	20	34	26	19	15	13	12	11	9	10	8	10	10	11	93
12-Apr	10	8	10	9	10	11	40	15	14	13	12	12	16	12	14	12	11	11	12	11	12	47	32	14	47
13-Apr	11	70	33	21	63	54	10	11	20	36	47	42	26	17	20	19	15	22	13	12	10	11	10	14	70
14-Apr	21	11	26	23	42	22	10	11	12	11	14	13	14	17	19	18	30	18	20	10	8	8	9	8	42
15-Apr	7	11	11	9	16	19	15	20	11	13	10	13	13	13	14	12	12	14	11	10	10	10	9	9	20
16-Apr	8	UO	UO	UO	UO	UO	12	10	11	12	12	12	13	13	15	14	17	14	15	12	13	20	16	15	20
17-Apr	15	13	14	13	23	12	17	14	16	16	19	16	21	18	29	26	46	21	35	14	18	10	9	8	46
18-Apr	9	10	8	9	8	9	10	10	11	10	10	12	14	16	12	11	11	11	8	9	9	8	11	14	16
19-Apr	13	11	13	10	18	10	8	9	10	12	13	14	15	15	17	12	13	12	13	22	21	12	12	14	22
20-Apr	11	15	19	13	15	17	18	22	28	28	35	59	96	81	76	34	28	53	17	12	12	11	13	11	96
21-Apr	10	19	101	70	19	32	30	93	19	27	25	42	46	34	43	38	33	16	10	13	49	11	10	10	101
22-Apr	8	36	9	13	11	17	17	12	9	10	13	17	17	13	38	50	17	13	96	15	36	14	26	14	96
23-Apr	71	38	29	21	12	35	52	25	58	35	20	18	24	19	15	17	22	14	23	15	13	16	14	26	71
24-Apr	52	15	51	60	17	23	18	22	58	42	33	74	73	74	55	33	42	28	25	15	8	8	8	9	74
25-Apr	9	7	8	7	7	7	9	9	14	26	17	18	20	21	19	18	15	15	14	12	9	8	9	6	26
26-Apr	14	10	31	28	78	31	16	21	17	19	15	23	15	16	11	12	13	15	14	11	14	12	14	17	78
27-Apr	11	11	12	14	12	14	14	18	19	23	34	38	48	42	46	33	23	18	19	14	10	11	21	29	48
28-Apr	13	25	10	8	10	8	9	11	20	13	13	21	27	25	19	28	21	16	13	21	17	21	19	11	28
29-Apr	18	24	9	17	22	12	13	11	13	12	11	12	18	17	16	48	34	19	18	14	11	15	89	7	89
30-Apr	18	10	22	7	10	28	16	27	28	29	16	28	16	20	34	39	22	19	11	10	15	15	13	9	39
88 70 101 70 78 54 93 93 64 80 47 74 96 81 76 91 67 53 96 58 49 82 89 29																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Mannix - April 2025

Direction of Maximum Speed: 267 deg on Apr 15 21:00 Direction of Maximum Daily Speed Average: 157.7 deg on Apr 18																				Hours in Service: 720					
Direction of Minimum Speed: 292 deg on Apr 13 02:00 Direction of Minimum Daily Speed Average: 3.0 deg on Apr 1																				Hours of Data: 715					
Monthly Average Direction: 225.9 deg																				Hours of Missing Data: 5					
																				Percent Operational Time: 99.3					
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	132	131	131	134	137	140	137	140	148	150	150	153	163	141	144	273	287	290	321	303	322	324	313	298	191.8
2-Apr	277	280	280	272	269	255	258	264	275	291	295	282	299	329	346	348	347	347	342	327	333	11	8	359	309.8
3-Apr	335	315	313	306	311	293	303	324	311	313	328	325	321	320	325	328	324	333	341	360	347	58	213	257	320.1
4-Apr	274	268	280	233	208	202	182	173	166	157	158	136	149	138	113	112	132	134	140	148	159	166	164	158	168.7
5-Apr	160	156	142	150	165	140	131	141	153	154	151	136	102	120	314	302	354	10	360	6	20	81	119	109	108.6
6-Apr	115	119	131	132	136	130	129	130	129	126	126	129	129	128	128	127	129	129	130	132	132	130	128	130	129.0
7-Apr	130	130	130	129	132	127	127	128	127	128	126	126	127	126	128	129	124	126	127	125	129	141	135	138	128.9
8-Apr	147	142	139	109	164	163	149	147	248	166	158	143	153	169	185	216	41	41	102	8	350	25	48	210	143.3
9-Apr	214	203	182	130	155	154	165	151	160	234	143	149	129	131	125	356	322	326	45	61	76	85	182	213	144.9
10-Apr	254	254	226	215	205	176	179	178	205	212	227	257	267	259	265	259	249	252	59	106	129	119	118	118	219.2
11-Apr	135	116	96	99	138	217	134	154	106	163	164	232	256	250	264	258	263	265	264	244	242	254	258	247	236.1
12-Apr	244	244	245	256	253	245	242	267	267	269	262	256	272	291	294	294	306	314	318	317	332	326	304	22	278.2
13-Apr	32	292	164	146	269	292	287	290	318	315	322	316	315	325	331	347	347	352	25	24	12	9	7	5	343.7
14-Apr	347	17	38	5	135	166	147	148	146	147	143	143	139	141	162	163	170	192	186	158	138	141	135	131	148.9
15-Apr	132	137	154	155	177	197	177	195	241	252	261	257	258	256	254	256	257	283	285	279	267	262	261	261	249.8
16-Apr	UO	UO	UO	UO	UO	289	301	313	316	319	324	324	330	329	343	336	341	355	350	345	341	355	358	352	328.7
17-Apr	353	343	351	343	2	13	3	10	8	347	354	6	353	341	5	26	350	327	7	43	83	130	138	139	5.7
18-Apr	143	148	157	147	141	140	147	155	165	156	155	159	162	163	171	166	167	157	156	152	147	152	170	183	157.7
19-Apr	203	215	235	248	286	290	269	277	275	271	268	267	273	274	289	268	264	280	296	297	4	12	9	15	277.9
20-Apr	16	17	353	18	25	19	3	360	337	314	293	311	307	38	22	80	84	56	49	54	47	47	62	74	22.9
21-Apr	81	91	100	109	140	157	141	196	144	136	128	126	98	106	152	167	144	150	153	142	191	148	145	156	140.0
22-Apr	157	191	174	189	173	184	175	172	154	156	159	156	157	152	231	259	187	169	199	121	153	5	26	52	171.6
23-Apr	52	317	328	237	270	336	55	82	351	342	312	323	2	14	7	14	4	3	341	331	348	342	355	351	349.9
24-Apr	326	293	333	179	286	156	173	162	164	127	145	146	329	314	24	75	88	95	100	106	144	138	142	139	132.2
25-Apr	148	149	151	143	141	143	152	162	154	177	180	184	183	185	193	203	211	224	213	202	208	206	183	174	181.1
26-Apr	161	151	170	141	116	350	324	324	310	321	317	348	14	8	13	13	12	1	9	17	17	13	350	11	5.1
27-Apr	10	9	5	6	16	17	14	359	346	340	328	314	331	336	342	359	18	34	28	23	17	24	50	115	8.2
28-Apr	133	132	135	142	144	147	144	145	151	140	138	161	170	180	177	194	189	179	177	186	205	193	214	156	170.0
29-Apr	183	185	151	170	237	258	259	264	266	266	274	281	293	315	319	296	297	357	2	2	8	27	207	221	278.3
30-Apr	203	218	253	261	256	284	345	6	331	314	305	334	18	14	33	1	357	357	10	7	7	4	6	10	343.7
155.3 171.0 169.2 170.0 180.1 192.3 184.4 210.5 244.9 243.6 236.1 239.3 258.0 265.5 266.2 272.0 279.5 312.3 345.6 3.4 22.6 86.4 139.4 147.3																									
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 45m (WD45) - deg

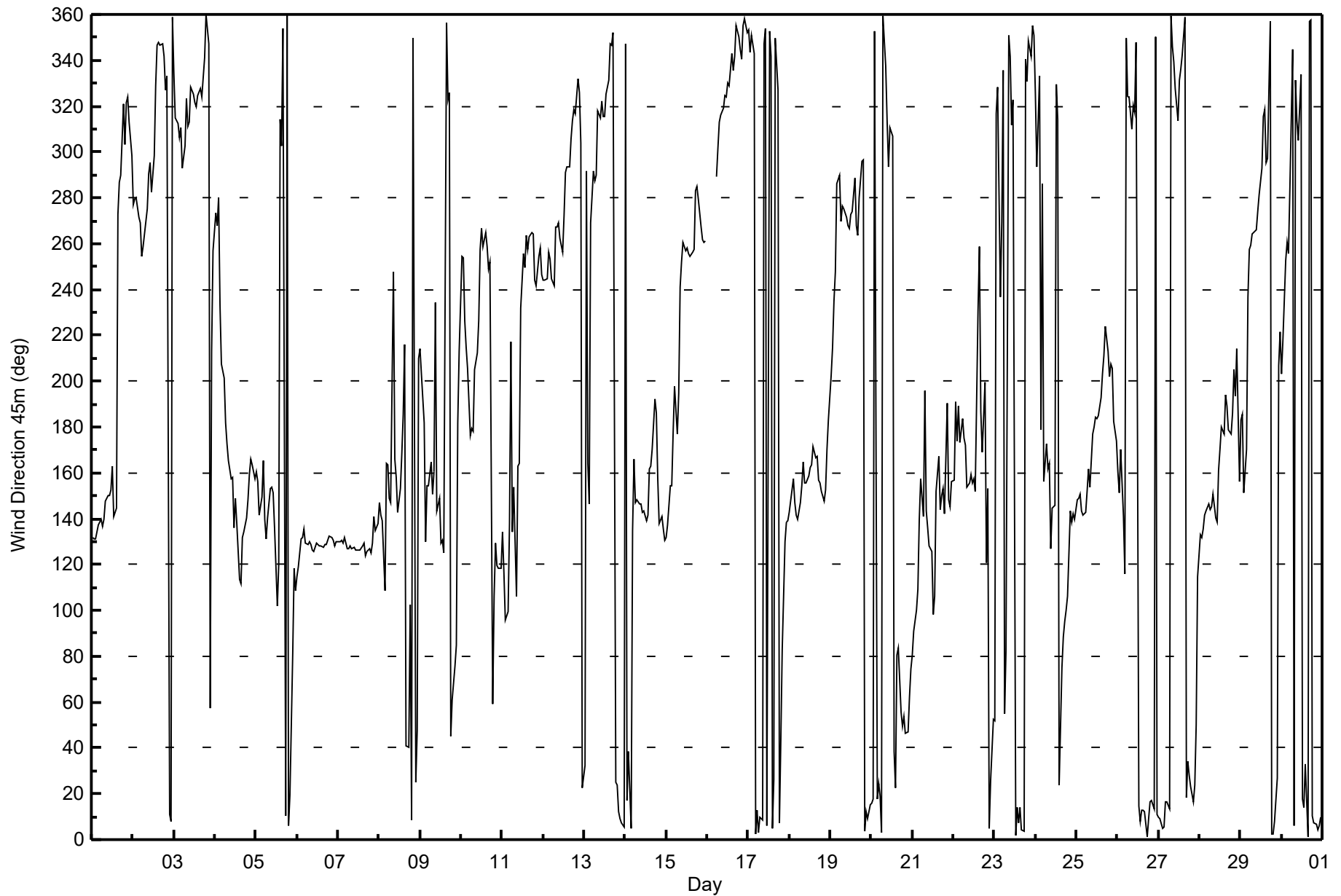
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 99 deg on Apr 20 13:00																		Hours of Data: 715							
Minimum Value: 2 deg on Apr 4 22:00																		Hours of Missing Data: 5							
Percentiles: P ₁ = 4 P ₁₀ = 6 Q ₁ = 8 Median = 11 Q ₃ = 18 P ₉₀ = 33 P ₉₉ = 80																		Hours of Calibration: 0							
																		Percent Operational Time: 99.3							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	4	4	7	8	8	7	10	8	8	9	11	15	14	13	47	7	8	23	8	11	11	9	9	47
2-Apr	6	10	16	5	6	4	5	7	10	10	13	13	26	14	12	11	12	13	7	18	19	6	7	10	26
3-Apr	9	9	8	10	12	8	13	9	8	10	17	19	14	12	13	15	14	11	10	14	18	42	54	10	54
4-Apr	5	7	12	17	17	15	11	8	12	15	26	11	18	14	34	22	10	6	6	2	6	2	4	3	34
5-Apr	5	4	10	8	6	10	3	13	11	11	18	25	43	66	43	14	33	7	6	8	9	22	14	12	66
6-Apr	13	13	7	7	8	7	6	8	8	7	8	7	7	7	8	7	7	7	6	6	6	6	6	6	13
7-Apr	6	6	6	6	6	6	6	8	7	6	8	9	8	7	7	12	14	9	17	8	6	10	7	8	17
8-Apr	19	5	12	34	19	19	10	21	73	45	9	13	25	16	25	34	69	23	66	49	12	10	32	57	73
9-Apr	11	12	36	11	9	6	12	19	35	75	41	38	9	13	14	90	19	20	38	9	16	13	51	17	90
10-Apr	60	17	20	14	20	10	13	18	51	10	26	20	13	17	16	26	27	38	37	25	9	7	9	9	60
11-Apr	18	14	9	13	46	26	70	48	17	28	17	26	20	16	13	11	11	9	7	8	6	7	7	9	70
12-Apr	7	6	7	6	7	5	17	13	12	12	10	9	15	10	11	9	8	8	9	8	9	39	26	14	39
13-Apr	11	89	27	26	33	22	6	8	17	29	30	38	21	15	16	15	13	19	9	8	7	7	5	6	89
14-Apr	10	11	12	18	25	10	7	9	8	8	10	10	13	16	17	16	28	14	18	7	4	6	7	5	28
15-Apr	4	9	8	6	12	20	9	18	10	11	8	10	11	11	12	10	10	12	9	9	9	8	8	7	20
16-Apr	UO	UO	UO	UO	UO	12	9	7	8	9	9	9	10	10	12	10	14	11	12	9	10	17	12	11	17
17-Apr	13	10	11	10	20	8	13	11	13	12	15	13	18	15	23	23	38	17	30	15	16	8	7	6	38
18-Apr	7	7	5	6	6	6	7	9	9	8	8	9	10	13	8	8	8	9	7	6	6	6	7	10	13
19-Apr	7	8	10	8	16	8	6	8	8	11	10	13	14	13	16	9	12	11	13	22	19	9	8	11	22
20-Apr	8	10	17	10	12	14	15	17	23	25	28	44	99	76	80	33	24	55	15	9	10	9	10	10	99
21-Apr	10	19	58	50	12	12	34	80	18	22	22	40	40	34	38	31	29	13	8	11	44	8	7	8	80
22-Apr	7	24	15	22	9	13	12	9	6	8	9	13	13	11	37	45	11	9	94	11	16	13	19	9	94
23-Apr	72	70	17	64	14	28	51	21	55	29	16	15	20	17	11	14	18	10	21	12	9	11	10	24	72
24-Apr	27	26	39	88	39	13	13	19	46	46	30	65	69	60	51	27	49	27	24	16	5	5	5	7	88
25-Apr	6	5	4	4	4	4	6	6	13	20	9	11	16	16	14	14	12	13	11	6	3	3	10	5	20
26-Apr	11	5	20	33	86	27	12	15	15	13	11	19	12	13	8	9	10	12	11	8	11	10	11	14	86
27-Apr	7	8	11	11	8	11	11	15	13	18	31	29	35	31	36	29	19	14	15	10	8	9	18	27	36
28-Apr	11	14	8	6	8	6	7	8	16	12	9	18	24	21	13	23	15	10	8	18	14	16	16	10	24
29-Apr	14	18	5	19	20	8	10	10	12	11	9	9	17	14	11	37	32	16	15	9	9	10	88	4	88
30-Apr	10	6	17	4	5	24	12	24	25	24	14	24	12	15	31	34	19	17	7	5	10	11	9	5	34
72 89 58 88 86 28 70 80 73 75 41 65 99 76 80 90 69 55 94 49 44 42 88 57																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 75m (WD75) - deg

Mannix - April 2025

Direction of Maximum Speed: 273 deg on Apr 15 21:00 Direction of Maximum Daily Speed Average: 162.8 deg on Apr 18																				Hours in Service: 720					
Direction of Minimum Speed: 166 deg on Apr 26 05:00 Direction of Minimum Daily Speed Average: 3.0 deg on Apr 1																				Hours of Data: 706					
Monthly Average Direction: 231.2 deg																				Hours of Missing Data: 14					
																				Percent Operational Time: 98.1					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	139	139	138	138	140	141	140	144	149	149	150	154	168	148	152	275	293	296	329	310	330	330	321	306	191.2
2-Apr	290	293	289	280	279	263	267	270	281	296	302	287	304	336	353	355	355	353	351	339	342	17	12	2	316.3
3-Apr	344	324	321	315	319	304	314	332	319	320	337	333	330	327	332	335	332	339	349	5	1	58	185	266	329.3
4-Apr	285	272	283	247	240	227	220	211	193	174	168	146	156	142	117	114	134	140	147	153	162	169	170	168	184.0
5-Apr	173	180	160	166	173	153	144	148	157	152	141	137	117	116	329	313	7	20	11	19	43	96	122	119	122.1
6-Apr	120	123	135	136	140	134	135	135	133	131	130	136	134	133	132	133	134	134	136	138	138	138	137	138	134.7
7-Apr	138	137	136	137	139	134	133	132	132	132	131	131	132	132	133	134	130	130	134	130	130	141	133	138	134.2
8-Apr	140	138	136	105	156	161	144	142	168	174	161	149	147	162	187	207	49	44	81	33	8	35	68	156	134.1
9-Apr	191	205	190	143	177	165	168	167	189	254	176	167	141	139	128	358	330	340	58	66	82	88	161	202	148.9
10-Apr	265	262	242	239	229	212	220	219	225	218	228	261	270	263	268	261	252	254	73	123	135	119	121	121	236.0
11-Apr	137	120	105	103	127	200	145	152	116	165	170	235	260	253	267	262	267	270	268	251	251	259	263	252	241.3
12-Apr	250	252	253	262	260	255	252	271	272	275	267	260	277	296	299	299	313	322	326	326	344	353	318	31	284.2
13-Apr	39	264	238	265	285	286	287	295	324	324	335	328	326	333	339	354	354	1	32	32	22	20	19	24	349.5
14-Apr	12	38	57	28	125	159	142	151	151	148	146	148	147	148	166	168	176	197	193	164	148	149	144	139	154.1
15-Apr	140	146	167	167	197	221	194	203	245	256	265	261	262	260	259	260	261	288	291	285	273	267	266	266	253.1
16-Apr	UO	UO	UO	UO	UO	UO	UO	320	324	326	332	332	337	337	349	343	349	4	0	354	351	2	5	359	--
17-Apr	2	352	359	351	9	20	11	17	14	356	1	13	0	348	13	32	359	334	17	53	91	132	140	142	13.1
18-Apr	147	152	159	151	147	145	152	160	170	162	161	163	167	168	176	171	173	163	163	158	154	159	177	192	162.8
19-Apr	209	223	242	253	292	296	276	283	281	277	273	272	278	279	294	273	268	286	301	304	11	UO	UO	UO	275.1
20-Apr	UO	UO	UO	UO	28	21	13	8	349	324	302	318	338	55	41	89	84	61	57	62	58	59	73	85	38.7
21-Apr	94	102	106	101	136	139	112	153	147	141	129	130	101	110	156	170	146	154	155	146	188	153	150	159	143.1
22-Apr	161	201	207	213	188	188	181	177	159	160	163	162	163	157	234	264	190	174	202	116	150	17	38	61	178.2
23-Apr	61	0	341	308	313	338	47	92	4	353	323	334	11	24	15	22	14	13	353	342	1	355	8	8	1.4
24-Apr	336	310	348	84	215	148	173	159	163	130	144	138	339	315	34	77	91	98	106	110	147	143	146	145	134.4
25-Apr	153	153	149	147	152	154	162	172	168	184	184	187	188	189	196	207	213	228	216	207	214	217	204	199	186.6
26-Apr	189	167	189	157	166	4	339	338	319	328	328	355	20	15	20	20	19	8	16	23	23	20	359	17	11.1
27-Apr	17	16	12	12	23	24	21	6	352	347	338	321	341	345	352	6	26	41	34	30	26	34	60	121	16.4
28-Apr	135	132	137	143	145	146	146	150	155	148	145	165	175	183	181	198	193	183	183	192	209	198	217	164	174.3
29-Apr	188	190	158	178	248	263	265	271	271	271	280	287	300	323	331	312	309	5	11	14	19	37	76	216	284.6
30-Apr	205	234	263	267	263	292	358	13	340	326	314	343	26	21	38	10	4	5	16	14	15	12	13	17	350.8
169.8 189.0 189.6 189.8 194.6 193.1 185.8 221.5 251.5 252.7 246.7 246.7 268.1 276.6 274.4 279.9 288.2 322.2 354.7 12.3 37.2 110.6 152.4 161.3																									
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 75m (WD75) - deg

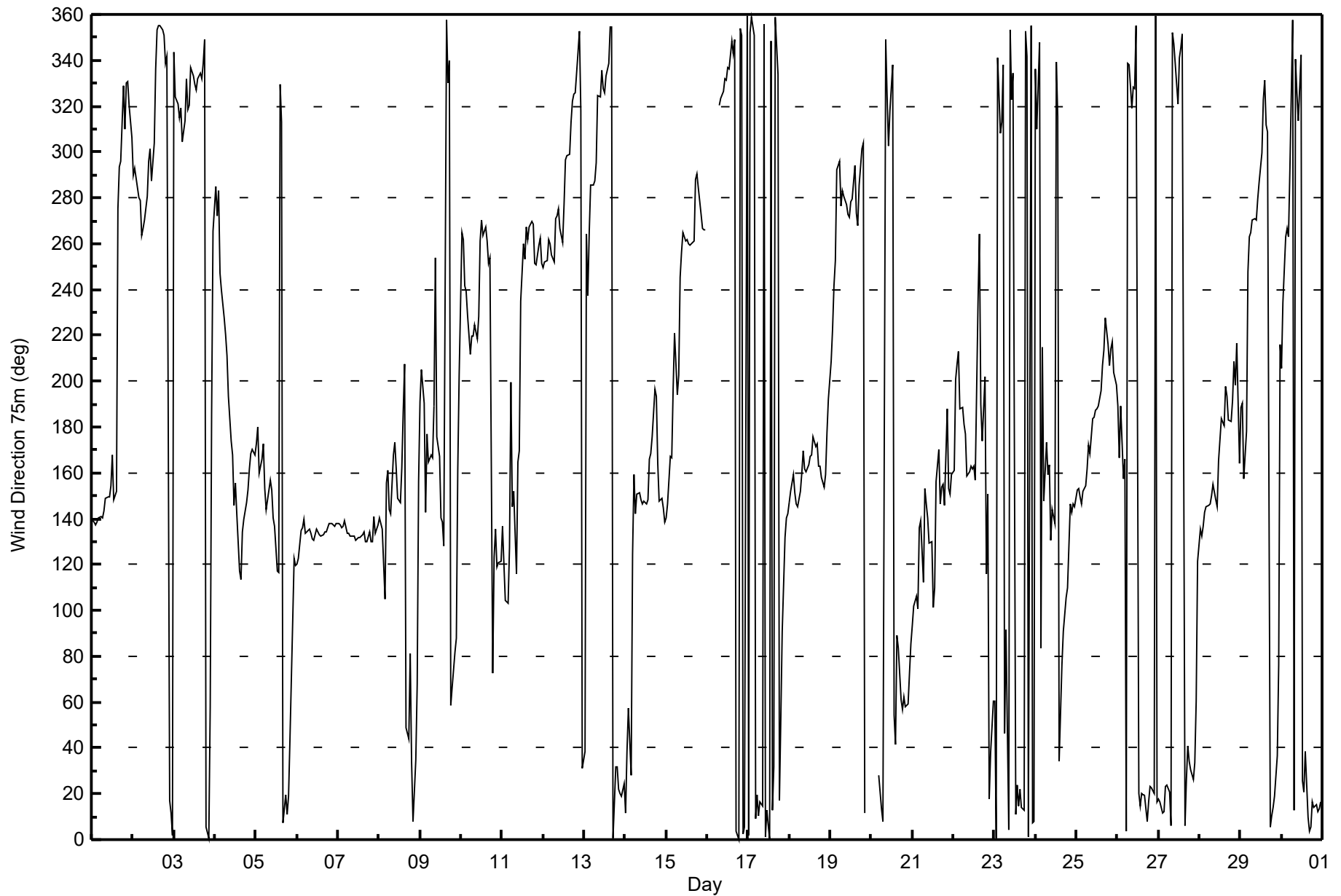
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 98 deg on Apr 8 09:00																		Hours of Data: 706							
Minimum Value: 1 deg on Apr 4 22:00																		Hours of Missing Data: 14							
Percentiles: P ₁ = 3 P ₁₀ = 5 Q ₁ = 8 Median = 11 Q ₃ = 16 P ₉₀ = 29 P ₉₉ = 78																		Hours of Calibration: 0							
																		Percent Operational Time: 98.1							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	4	4	6	6	6	5	8	6	8	8	10	14	12	12	49	6	7	24	8	8	10	8	8	49
2-Apr	4	8	16	4	10	3	4	7	10	10	13	12	25	13	10	9	10	12	5	13	18	5	7	8	25
3-Apr	7	7	7	10	11	7	13	8	7	9	17	19	13	11	12	13	13	9	8	13	13	22	51	19	51
4-Apr	4	10	14	10	12	10	9	9	14	15	19	13	17	15	30	19	14	8	6	2	6	1	2	3	30
5-Apr	2	7	15	5	3	5	4	5	8	13	20	21	36	53	60	12	30	5	5	10	13	14	15	13	60
6-Apr	14	13	9	8	7	9	8	10	10	10	11	8	8	9	10	9	9	8	7	6	6	6	6	6	14
7-Apr	6	6	7	7	5	9	9	11	10	10	10	10	10	10	10	12	15	12	16	11	12	13	11	9	16
8-Apr	16	7	15	27	10	21	7	15	98	43	7	12	52	28	25	43	63	16	60	43	10	12	38	38	98
9-Apr	10	10	28	12	6	5	14	27	57	76	39	32	15	15	20	85	18	21	37	7	13	8	39	18	85
10-Apr	18	11	8	8	14	13	13	13	26	10	26	19	13	18	16	27	29	41	39	23	12	13	13	13	41
11-Apr	15	14	11	13	41	22	36	25	18	26	16	29	20	15	13	10	10	8	7	7	5	6	7	8	41
12-Apr	7	5	6	6	6	6	10	13	11	12	9	9	15	9	10	8	7	7	7	6	8	34	24	13	34
13-Apr	16	46	19	44	12	15	4	9	20	27	35	38	19	13	16	13	12	17	7	6	5	5	3	5	46
14-Apr	7	9	9	16	27	7	6	9	8	8	10	10	11	15	18	15	28	14	16	6	3	4	6	5	28
15-Apr	3	7	7	5	16	14	10	16	9	10	8	10	10	10	11	9	10	12	9	8	8	8	8	7	16
16-Apr	UO	UO	UO	UO	UO	UO	UO	7	7	8	7	8	9	8	11	8	12	9	10	7	7	15	10	10	15
17-Apr	13	8	10	8	19	7	11	9	12	11	14	12	16	16	21	22	34	15	28	14	17	11	8	4	34
18-Apr	5	5	4	5	3	4	6	7	8	7	7	8	9	11	7	7	7	8	6	5	5	6	6	8	11
19-Apr	6	8	8	8	15	7	6	7	8	10	11	13	13	13	15	9	12	10	13	24	19	UO	UO	UO	24
20-Apr	UO	UO	UO	UO	8	9	14	17	23	25	29	43	91	78	73	32	23	49	13	7	8	7	8	10	91
21-Apr	9	17	22	15	11	7	23	66	19	21	20	31	38	30	38	28	24	13	8	9	35	7	6	6	66
22-Apr	6	19	13	25	7	10	12	9	4	7	8	12	11	10	36	43	10	8	94	15	18	18	14	6	94
23-Apr	58	50	13	30	18	12	26	20	48	27	15	14	18	15	9	12	16	9	21	10	8	9	8	26	58
24-Apr	19	13	36	84	91	13	11	14	36	42	24	51	68	63	49	23	38	22	21	16	4	5	4	5	91
25-Apr	4	3	3	4	3	4	6	6	11	15	8	10	15	15	13	13	11	12	9	5	4	1	10	7	15
26-Apr	14	4	24	59	90	25	12	15	14	11	10	17	10	12	7	7	8	10	10	6	8	9	8	13	90
27-Apr	6	7	10	10	6	10	8	12	11	16	29	28	29	30	32	26	16	12	13	7	5	7	16	24	32
28-Apr	13	15	9	6	6	5	5	6	12	13	10	16	22	20	12	20	13	8	7	16	12	15	15	10	22
29-Apr	13	15	4	20	17	8	10	9	11	10	8	8	17	13	11	37	33	14	14	8	6	7	71	5	71
30-Apr	9	6	12	4	5	24	9	22	24	23	15	22	11	13	26	30	18	15	5	4	8	8	7	3	30
58 50 36 84 91 25 36 66 98 76 39 51 91 78 73 85 63 49 94 43 35 34 71 38																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 90m (WD90) - deg

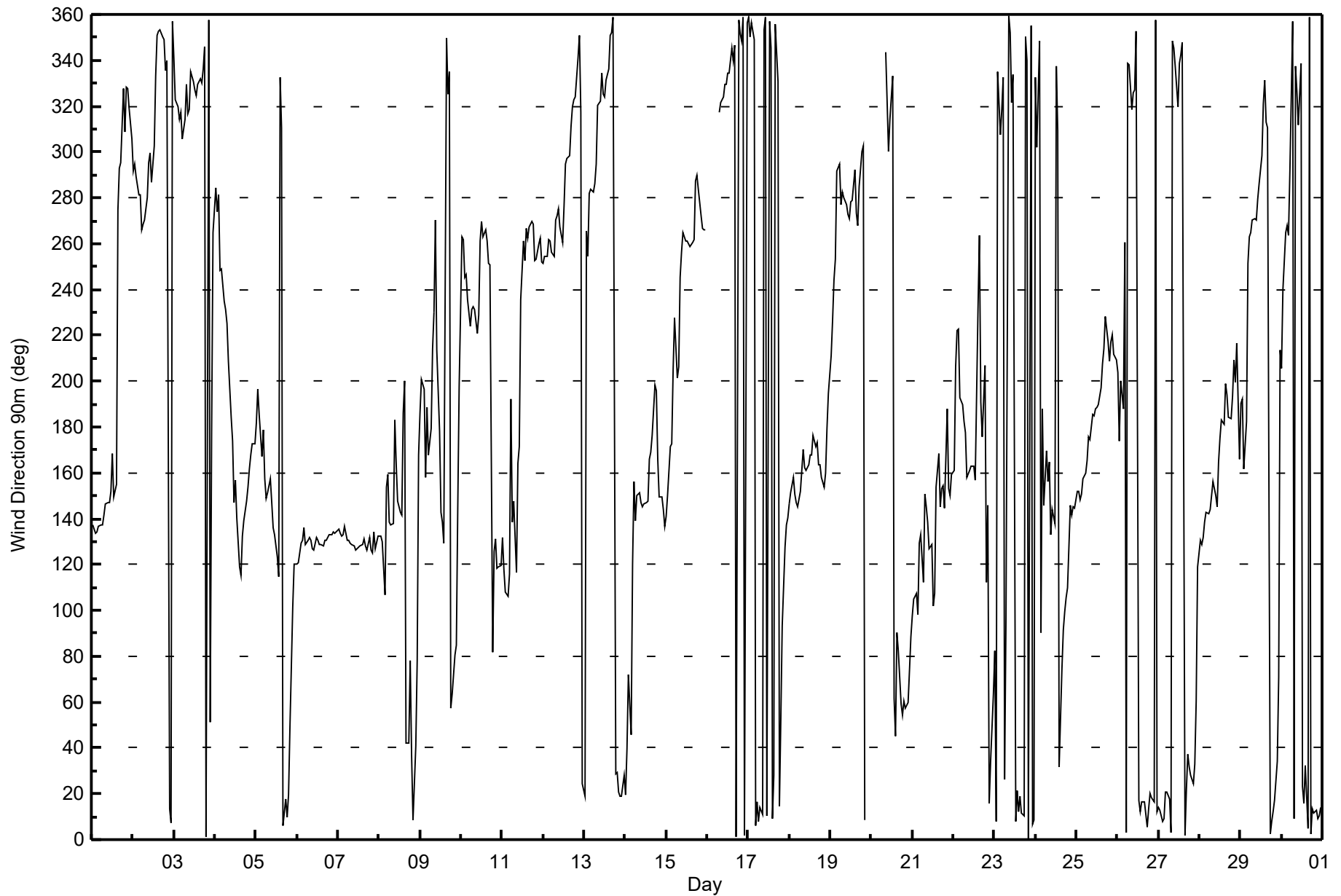
Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on Apr 26 05:00																		Hours in Service: 720 Hours of Data: 702 Hours of Missing Data: 18 Hours of Calibration: 0 Percent Operational Time: 97.5							
Minimum Value: 1 deg on Apr 4 22:00																									
Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 10 Q ₃ = 16 P ₉₀ = 28 P ₉₉ = 77																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	2	3	5	5	5	4	7	5	7	8	10	15	11	11	48	6	7	22	7	7	9	7	7	48
2-Apr	3	7	14	4	9	4	3	7	9	9	12	12	23	12	10	9	10	12	4	11	18	5	7	8	23
3-Apr	7	6	6	9	10	7	11	8	6	8	16	18	12	10	11	12	12	8	7	13	13	20	51	18	51
4-Apr	3	9	13	8	9	8	7	7	13	16	18	13	17	15	30	18	13	7	6	2	6	1	2	4	30
5-Apr	3	9	26	6	4	6	4	4	6	14	16	23	39	54	67	11	28	5	4	12	15	12	12	10	67
6-Apr	11	10	8	6	7	7	6	8	8	7	8	7	6	6	7	6	6	7	6	5	5	5	5	5	11
7-Apr	5	5	6	5	4	7	7	8	7	7	7	8	7	7	8	10	12	9	14	7	7	9	7	6	14
8-Apr	12	6	11	21	11	19	8	13	91	55	10	12	84	45	28	60	37	17	53	40	11	17	42	26	91
9-Apr	16	11	21	21	6	7	19	33	64	59	36	32	16	14	22	84	16	21	42	6	14	7	36	18	84
10-Apr	17	9	6	6	12	11	9	10	22	10	28	18	13	17	15	26	28	38	45	21	9	7	7	7	45
11-Apr	12	8	7	10	40	21	30	19	14	25	17	28	19	14	13	10	10	8	6	6	4	5	7	8	40
12-Apr	7	5	5	5	5	7	8	12	10	11	8	8	14	8	9	7	6	6	6	5	7	30	23	15	30
13-Apr	48	35	13	17	9	12	2	9	20	28	34	35	18	12	15	12	11	16	7	6	4	5	3	5	48
14-Apr	8	14	9	13	30	7	7	8	7	9	9	10	11	15	18	15	28	14	16	6	2	3	6	4	30
15-Apr	4	7	7	6	17	11	11	15	8	10	7	9	10	9	10	9	9	11	8	8	8	7	7	7	17
16-Apr	UO	UO	UO	UO	UO	UO	UO	11	6	7	7	7	8	8	10	8	12	8	9	7	7	13	10	10	13
17-Apr	12	7	10	8	18	6	11	9	11	11	13	12	16	15	20	21	34	14	28	14	17	8	6	4	34
18-Apr	5	4	4	4	2	3	6	8	7	7	7	8	9	12	7	7	7	8	6	5	5	6	6	7	12
19-Apr	6	7	8	7	15	6	6	7	7	10	10	12	12	13	14	8	12	10	12	23	18	UO	UO	UO	23
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	16	24	27	42	87	77	77	34	25	54	13	7	8	7	8	9	87
21-Apr	9	14	15	10	9	9	16	63	17	20	19	28	37	27	39	27	23	13	8	9	34	7	6	5	63
22-Apr	5	23	12	25	6	9	12	9	4	7	8	12	11	11	35	40	10	8	90	12	17	22	13	10	90
23-Apr	29	49	13	20	17	10	39	33	46	25	15	14	18	14	9	11	14	8	21	10	8	8	7	33	49
24-Apr	9	11	35	70	67	15	12	13	33	43	21	54	69	60	51	24	41	22	19	13	4	5	4	5	70
25-Apr	4	3	2	4	3	4	5	6	11	14	8	10	15	15	13	13	10	11	8	4	4	1	9	6	15
26-Apr	12	7	25	72	100	28	12	15	15	10	10	16	10	11	6	6	7	10	9	6	8	8	8	12	100
27-Apr	6	7	10	10	5	9	8	11	11	15	27	24	29	28	29	26	16	11	13	7	4	7	17	22	29
28-Apr	10	10	6	5	5	5	5	6	12	14	10	15	23	20	11	20	13	9	7	15	12	15	15	9	23
29-Apr	13	15	4	22	15	7	9	9	10	10	7	8	16	12	11	34	32	14	13	8	6	7	63	6	63
30-Apr	10	5	10	4	4	23	8	21	23	24	15	23	11	12	25	28	17	14	5	4	7	8	7	3	28
48 49 35 72 100 28 39 63 91 59 36 54 87 77 77 84 41 54 90 40 34 30 63 33																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - April 2025

Maximum Value: 1.4 km/h on Apr 6 22:00										Maximum Daily Average: 1.0 km/h on Apr 6										Hours in Service: 720						
Minimum Value: -1.5 km/h on Apr 16 10:00										Minimum Daily Average: -0.7 km/h on Apr 16										Hours of Data: 715						
Maximum Diurnal Average: 0.2 km/h at hour 1										Minimum Diurnal Average: -0.1 km/h at hour 18										Hours of Missing Data: 5						
Monthly Average: 0.08 km/h										Percentiles: P ₁ = -0.9 P ₁₀ = -0.5 Q ₁ = -0.3 Median = 0.0 Q ₃ = 0.5 P ₉₀ = 0.8 P ₉₉ = 1.2										Hours of Calibration: 0						
																				Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	0.8	0.9	1.1	0.8	0.7	0.6	0.7	0.7	0.3	0.4	0.4	0.5	0.4	0.3	0.4	-0.3	-0.6	-0.5	-0.5	-0.5	-0.6	-0.7	-0.6	-0.4	0.2	1.1
2-Apr	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	0.0	-0.3	0.0	-0.7	-0.7	-0.7	-0.8	-0.6	-0.6	-0.3	-0.7	-0.6	-0.4	-0.5	-0.4	0.0
3-Apr	-0.6	-0.7	-0.4	-0.5	-0.6	-0.3	-0.1	-1.0	-0.8	-0.7	-0.5	-0.2	-0.6	-0.7	-0.7	-0.5	-0.4	-0.6	-0.5	-0.3	-0.2	0.0	-0.1	-0.1	-0.5	0.0
4-Apr	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.1	0.2	0.5	0.5	0.7	0.4	0.4	0.2	0.6	0.6	0.5	0.3	0.4	0.5	0.5	0.5	0.7	0.7	0.3	0.7
5-Apr	0.5	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.4	0.2	0.2	0.4	0.3	0.0	0.2	-0.2	-0.3	-0.4	-0.6	-0.5	-0.4	0.5	0.9	1.1	0.2	1.1
6-Apr	1.3	1.3	0.9	0.9	0.9	0.9	0.9	0.8	1.0	0.9	1.1	0.9	1.0	1.0	1.1	1.0	1.1	0.9	1.3	1.2	1.2	1.4	1.0	1.3	1.0	1.4
7-Apr	1.1	1.1	1.2	1.0	1.0	0.7	0.6	0.7	0.6	0.8	0.9	1.2	0.8	0.8	0.9	0.9	0.6	0.7	0.7	0.8	0.7	0.5	0.6	0.7	0.8	1.2
8-Apr	0.4	0.3	0.2	0.1	0.0	0.2	0.3	0.3	0.1	0.3	0.4	0.4	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	-0.1	0.0	0.1	-0.2	0.2	0.4
9-Apr	0.0	0.0	0.1	0.3	0.3	0.3	0.2	0.2	0.1	-0.1	0.5	0.3	0.3	0.5	0.3	0.3	-0.1	0.0	0.0	0.0	0.1	0.1	0.0	-0.3	0.1	0.5
10-Apr	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.2	0.4	-0.1	-0.1	-0.5	-0.5	-0.2	-0.2	-0.2	-0.2	0.1	0.1	0.1	0.4	0.5	0.7	0.7	0.1	0.7
11-Apr	0.6	0.6	0.5	0.8	0.3	-0.1	0.2	0.2	0.5	0.4	0.6	-0.2	-0.3	-0.1	-0.2	-0.5	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	-0.2	-0.2	0.1	0.8
12-Apr	-0.2	-0.2	-0.2	-0.1	-0.3	-0.2	0.0	-0.1	-0.2	-0.4	-0.2	-0.1	-0.3	-0.5	-0.3	-0.5	-0.6	-0.6	-0.7	-0.4	-0.4	-0.1	-0.1	-0.1	-0.3	0.0
13-Apr	-0.1	0.0	0.1	0.1	0.1	-0.1	-0.1	-0.2	-0.1	0.0	-0.2	0.1	-0.5	-0.6	-0.7	-0.6	-0.6	-0.7	0.0	-0.2	-0.4	-0.5	-0.4	-0.2	-0.2	0.1
14-Apr	-0.2	-0.1	0.0	-0.2	0.1	-0.1	0.1	0.4	0.6	0.5	0.7	0.7	0.8	1.0	0.7	0.5	0.6	0.1	0.1	0.5	0.7	0.6	0.7	0.9	0.4	1.0
15-Apr	1.0	0.8	0.7	0.7	0.3	0.2	0.4	0.0	-0.5	-0.6	-0.7	-0.6	-0.5	-0.7	-0.5	-0.6	-0.5	-0.7	-0.5	-0.5	-0.8	-0.4	-0.4	-0.4	-0.2	1.0
16-Apr	-0.1	UO	UO	UO	UO	UO	-0.5	-0.9	-1.0	-1.5	-1.1	-1.0	-0.9	-1.0	-0.7	-0.9	-0.5	-0.5	-0.5	-0.8	-0.4	-0.2	-0.2	-0.3	-0.7	-0.1
17-Apr	-0.6	-0.6	-0.5	-0.8	-0.5	-0.6	-0.2	-0.4	-0.5	-0.5	-0.1	-0.6	-0.4	-0.5	0.1	-0.2	0.0	-0.4	0.0	0.1	0.4	0.5	0.5	0.6	-0.2	0.6
18-Apr	0.9	0.8	0.6	0.7	0.9	0.9	1.0	1.0	0.8	1.0	1.2	1.3	1.2	1.2	0.4	0.9	0.7	1.1	1.2	1.3	1.1	1.1	0.5	0.1	0.9	1.3
19-Apr	-0.1	-0.2	-0.2	-0.4	-0.4	-0.2	-0.1	-0.2	-0.4	-0.2	-0.3	-0.3	-0.3	-0.4	-0.3	-0.4	-0.3	-0.3	-0.6	-0.6	-0.6	-0.8	-0.5	0.0	-0.3	0.0
20-Apr	-0.4	-0.1	-0.4	0.0	0.0	0.0	-0.4	-0.1	-0.1	-0.2	-0.2	-0.4	0.1	0.1	0.0	0.3	0.4	0.0	0.3	0.1	0.1	0.0	0.4	0.3	0.0	0.4
21-Apr	0.4	0.7	0.3	0.1	0.4	0.0	-0.1	0.5	0.3	0.6	0.6	0.7	0.4	0.5	0.7	0.5	0.6	0.5	0.7	0.6	0.0	0.7	1.0	0.6	0.5	1.0
22-Apr	0.8	0.1	0.3	0.2	0.5	0.1	0.4	0.4	0.9	1.1	0.8	0.6	1.0	1.1	0.0	-0.2	0.0	0.4	0.0	0.4	0.2	-0.4	-0.2	0.1	0.4	1.1
23-Apr	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0.1	0.0	-0.1	-0.2	-0.4	-0.3	-0.5	0.1	-0.3	-0.4	0.1	-0.3	-0.1	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	0.1
24-Apr	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.2	0.3	0.1	0.1	0.1	0.6	0.1	-0.2	0.3	0.0	0.4	0.5	0.4	0.3	0.5	0.7	0.8	0.7	0.2	0.8
25-Apr	0.6	0.6	0.5	0.8	0.6	0.6	0.6	0.6	0.6	0.5	0.1	0.4	0.1	0.4	0.2	0.0	-0.3	-0.1	-0.1	0.0	-0.1	-0.1	0.3	0.4	0.3	0.8
26-Apr	0.3	0.7	0.4	0.3	0.0	-0.3	-0.4	0.0	-0.3	-0.5	-0.6	-0.4	-0.5	-0.8	-0.9	-0.9	-0.5	-0.3	-0.7	-0.4	-0.2	-0.3	-0.3	-0.3	-0.3	0.7
27-Apr	-0.4	-0.4	-0.4	-0.5	-0.6	-0.3	-0.3	-0.5	-0.3	-0.3	-0.2	0.1	-0.4	0.0	0.0	-0.4	-0.1	-0.2	-0.1	0.0	-0.3	0.0	0.2	0.5	-0.2	0.5
28-Apr	0.6	0.2	0.5	0.5	0.5	0.4	0.5	0.5	0.7	0.5	0.7	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.1	0.2	-0.2	0.1	0.0	0.5	0.4	0.7
29-Apr	0.1	0.1	0.6	0.4	-0.3	-0.2	-0.3	-0.3	-0.2	0.0	-0.2	0.0	-0.4	-0.2	-0.6	0.1	-0.3	-0.4	-0.2	-0.4	-0.4	-0.2	-0.1	0.0	-0.1	0.6
30-Apr	0.1	-0.1	-0.1	-0.2	-0.3	-0.1	-0.3	-0.3	-0.3	0.0	-0.2	-0.2	-0.1	-0.3	-0.1	0.1	-0.1	-0.4	-0.8	-1.2	-0.3	-0.3	-0.6	-0.7	-0.3	0.1
																									Diurnal Average	
																									Diurnal Maximum	
UO - Unstable Operation																										

UO - Unstable Operation



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.3 km/h on Apr 15 10:00																			Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3						
Minimum Value: 0.2 km/h on Apr 13 02:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 1.7 Q ₃ = 2.4 P ₉₀ = 2.9 P ₉₉ = 3.9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.8	1.8	2.1	2.0	1.8	1.8	1.6	1.5	1.2	1.1	1.3	1.1	1.4	0.9	1.0	2.0	2.5	2.3	2.1	2.1	2.2	2.3	2.1	1.6	2.5
2-Apr	0.7	1.0	1.1	0.6	0.6	1.0	1.4	1.5	1.8	2.1	2.0	1.8	2.1	2.4	2.7	2.6	2.5	2.3	1.9	1.0	1.9	1.7	1.6	1.7	2.7
3-Apr	2.0	2.1	2.0	2.0	2.2	1.5	1.8	2.6	2.6	2.6	2.7	2.8	2.6	2.6	2.3	2.5	2.5	2.5	2.0	1.2	0.8	0.5	0.3	0.2	2.8
4-Apr	0.2	0.3	0.2	0.4	0.3	0.5	0.6	0.9	1.2	1.4	1.6	1.5	1.7	1.6	1.6	1.5	1.2	0.9	0.7	0.3	0.4	0.4	0.7	0.8	1.7
5-Apr	0.8	0.7	0.7	0.2	0.4	0.7	0.7	0.8	1.4	1.4	1.4	1.5	1.3	1.5	1.7	1.3	1.4	1.5	1.8	1.6	0.9	1.3	1.5	1.6	1.8
6-Apr	1.9	1.9	1.9	2.2	2.2	2.6	2.6	2.4	2.5	2.5	2.8	2.8	2.7	2.7	2.9	2.9	2.9	3.0	2.8	3.0	3.2	2.9	2.5	2.5	3.2
7-Apr	2.5	2.3	2.5	2.3	2.1	2.1	2.0	2.4	2.3	2.2	2.6	2.8	2.5	2.5	2.6	2.5	1.7	2.0	1.3	1.6	1.4	0.9	1.1	1.0	2.8
8-Apr	0.8	0.5	0.5	0.3	0.3	0.3	0.6	0.8	0.4	0.8	0.8	1.0	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.5	0.2	0.3	0.3	0.3	1.0
9-Apr	0.2	0.7	0.5	0.5	0.5	0.8	0.9	0.8	1.0	1.2	1.4	1.3	1.4	1.6	1.2	1.8	1.4	0.9	0.6	0.5	0.4	0.5	0.4	0.4	1.8
10-Apr	0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.8	1.5	1.8	1.8	2.1	2.1	2.1	2.0	2.0	1.7	1.3	0.7	0.5	0.7	1.2	1.5	1.4	2.1
11-Apr	1.6	1.1	1.3	1.8	1.0	0.6	0.7	1.1	1.3	1.8	1.8	1.9	1.9	2.8	2.7	2.9	3.0	2.7	1.8	0.9	1.1	2.4	2.3	1.8	3.0
12-Apr	1.5	1.3	1.7	1.7	1.8	0.9	0.6	1.6	1.8	2.1	2.1	2.1	2.3	2.1	2.1	2.2	2.5	2.6	2.2	1.1	0.9	0.4	0.3	0.5	2.6
13-Apr	0.3	0.2	0.2	0.2	0.2	0.5	0.7	1.2	1.2	1.8	2.0	2.1	2.2	2.9	2.6	3.0	2.7	2.4	2.3	1.6	1.5	1.1	1.0	0.4	3.0
14-Apr	0.2	0.2	0.2	0.3	0.4	0.4	0.6	1.2	1.5	1.6	1.7	1.8	1.9	2.2	2.4	2.0	1.9	2.1	0.9	0.7	1.2	1.3	1.3	1.8	2.4
15-Apr	1.8	1.5	1.1	1.2	1.0	0.9	1.1	2.1	3.5	4.3	3.5	3.6	3.3	4.1	4.0	3.6	3.5	3.3	3.8	4.0	3.5	3.3	3.3	2.7	4.3
16-Apr	2.2	UO	UO	UO	UO	UO	2.5	3.4	4.0	4.2	3.9	3.6	3.7	3.6	3.2	3.4	3.1	2.4	2.4	2.6	1.8	1.2	1.5	2.0	4.2
17-Apr	2.1	2.8	2.7	3.0	2.5	2.5	2.4	2.7	2.6	2.5	2.6	2.5	2.5	2.6	2.3	2.1	1.8	1.7	1.4	1.1	1.1	1.1	1.1	1.5	3.0
18-Apr	1.9	1.7	1.2	1.5	1.9	2.0	2.1	2.3	2.4	2.4	2.7	2.8	3.2	3.2	3.5	3.3	2.9	2.4	2.2	2.5	2.5	2.3	2.2	2.1	3.5
19-Apr	2.5	2.1	1.7	2.4	1.9	1.6	1.1	2.1	2.4	2.7	2.7	2.9	2.9	3.1	3.0	2.9	2.6	2.6	2.3	2.5	2.5	2.5	2.5	2.2	3.1
20-Apr	2.5	2.1	2.1	2.0	1.6	1.7	1.4	1.6	1.6	1.8	1.9	2.0	2.2	2.1	2.2	1.9	1.9	1.5	1.8	1.3	1.2	1.4	1.4	0.8	2.5
21-Apr	1.0	1.1	0.7	0.4	0.6	0.6	0.6	1.2	1.5	1.7	1.9	2.1	2.1	2.1	2.3	2.3	1.5	1.4	1.2	1.4	1.2	1.4	2.0	1.2	2.3
22-Apr	1.2	0.8	0.5	0.8	1.2	1.7	1.3	1.5	1.7	2.0	2.1	2.1	2.3	2.3	3.2	1.9	2.4	2.0	1.2	0.7	0.5	1.0	0.5	0.5	3.2
23-Apr	0.2	0.3	0.2	0.3	0.3	0.5	0.4	0.9	1.5	2.0	2.0	2.5	2.7	2.8	2.4	2.3	1.9	1.7	1.1	0.9	1.1	1.1	0.6	0.6	2.8
24-Apr	0.4	0.3	0.3	0.3	0.5	0.3	1.2	1.3	1.8	1.8	1.8	2.0	2.0	2.3	2.0	1.9	1.6	1.4	1.0	0.8	1.1	1.3	1.7	1.7	2.3
25-Apr	1.5	1.1	0.9	1.4	1.2	1.3	1.5	1.6	1.5	3.3	3.8	4.2	3.8	3.8	3.6	3.6	3.4	2.9	2.3	1.5	1.1	1.2	0.7	0.6	4.2
26-Apr	0.7	1.2	0.8	0.6	0.6	1.5	1.6	1.7	1.5	1.9	2.2	2.7	3.2	3.3	3.3	3.3	3.2	3.3	3.1	2.8	2.2	2.2	1.6	1.4	3.3
27-Apr	1.1	1.4	1.4	2.3	2.9	2.4	2.6	2.5	2.4	2.5	2.5	2.5	2.4	2.6	2.4	2.3	2.2	2.1	2.0	1.9	1.7	1.6	1.2	0.9	2.9
28-Apr	0.9	0.6	1.2	1.3	1.4	1.1	1.7	1.4	1.7	1.7	1.9	2.6	2.6	2.9	3.2	3.3	2.9	2.7	1.9	1.7	2.6	2.5	2.3	1.1	3.3
29-Apr	1.9	1.0	0.8	1.2	1.2	1.5	1.8	2.0	2.4	2.0	2.0	2.5	2.2	2.4	1.9	1.4	2.1	2.9	2.1	1.3	1.0	0.7	0.4	0.4	2.9
30-Apr	0.7	0.9	0.9	1.3	1.5	1.5	2.1	1.7	2.0	1.8	1.5	1.6	2.6	1.7	1.2	1.4	1.5	2.5	3.2	3.0	2.4	2.2	2.3	2.2	3.2
2.5 2.8 2.7 3.0 2.9 2.6 2.6 3.4 4.0 4.3 3.9 4.2 3.8 4.1 4.0 3.6 3.5 3.3 3.8 4.0 3.5 3.3 3.3 2.7																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - April 2025

Maximum Value: 3.3 km/h on Apr 18 14:00																		Maximum Daily Average: 2.1 km/h on Apr 18										Hours in Service: 720	
Minimum Value: -2.5 km/h on Apr 16 10:00																		Minimum Daily Average: -1.3 km/h on Apr 16										Hours of Data: 715	
Maximum Diurnal Average: 0.5 km/h at hour 1																		Minimum Diurnal Average: -0.1 km/h at hour 19										Hours of Missing Data: 5	
Monthly Average: 0.22 km/h																		Percentiles: P ₁ = -1.7 P ₁₀ = -0.9 Q ₁ = -0.4 Median = 0.1 Q ₃ = 0.8 P ₉₀ = 1.4 P ₉₉ = 2.3										Hours of Calibration: 0	
																												Percent Operational Time: 99.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	1.5	1.4	1.6	1.2	1.0	0.9	1.0	0.9	0.6	0.6	0.6	0.7	0.9	0.6	0.8	-0.3	-0.9	-0.6	-0.9	-0.8	-1.1	-1.2	-1.1	-0.6	0.3	1.6			
2-Apr	-0.3	-0.2	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1	-0.3	0.1	-0.5	-0.3	-1.1	-1.3	-1.3	-1.5	-0.9	-1.3	-0.7	-1.3	-1.0	-0.8	-0.5	-0.6	0.1			
3-Apr	-1.4	-1.1	-1.0	-0.9	-0.8	-0.5	-0.3	-1.7	-1.5	-1.0	-0.5	-0.4	-0.9	-1.5	-1.1	-0.9	-0.9	-1.2	-1.0	-0.6	-0.2	0.1	0.2	0.0	-0.8	0.2			
4-Apr	-0.1	-0.1	-0.4	0.0	0.1	0.2	0.1	0.4	0.6	0.8	0.9	0.5	0.5	0.2	1.0	1.0	0.5	0.3	0.8	1.0	1.3	1.3	1.6	1.6	0.6	1.6			
5-Apr	1.6	0.9	0.5	0.8	0.9	0.7	1.1	0.8	0.9	0.1	0.2	0.7	0.4	0.0	0.3	-0.3	-0.4	-0.7	-1.0	-1.1	-0.5	0.8	1.5	2.0	0.4	2.0			
6-Apr	2.2	2.2	0.9	1.1	1.3	0.8	0.7	0.7	1.2	0.7	1.0	0.8	0.9	0.6	1.2	0.7	1.2	0.8	1.5	1.6	1.6	1.7	1.1	1.5	1.2	2.2			
7-Apr	1.4	1.4	1.5	1.4	1.3	0.8	0.3	0.6	0.6	0.6	0.5	1.2	0.6	0.5	0.9	1.2	0.7	0.9	1.1	1.0	0.9	1.0	1.1	1.1	0.9	1.5			
8-Apr	0.8	0.6	0.5	0.2	0.4	0.3	0.6	0.6	0.1	0.6	0.8	0.8	0.4	0.4	0.5	0.3	0.1	0.1	0.2	0.1	-0.1	0.0	0.0	0.1	0.4	0.8			
9-Apr	0.2	0.3	0.2	0.3	0.6	0.6	0.6	0.2	0.3	0.0	0.7	0.6	0.0	0.6	0.4	0.4	-0.3	-0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.3	0.7			
10-Apr	0.0	0.0	0.0	0.1	0.3	0.5	0.2	0.6	1.6	0.5	0.3	-0.3	-0.5	0.6	0.0	-0.2	-0.1	0.2	0.2	0.1	0.9	0.5	0.6	1.0	0.3	1.6			
11-Apr	1.0	0.9	0.4	1.0	0.6	0.3	0.4	0.6	0.7	0.8	1.2	-0.1	-0.1	0.6	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0.0	0.0	0.3	1.2			
12-Apr	0.0	-0.1	-0.2	-0.1	-0.1	-0.1	0.1	0.0	0.0	-0.3	0.2	0.1	-0.2	-0.3	-0.4	-0.6	-1.0	-1.0	-1.1	-0.8	-0.9	-0.1	-0.1	-0.2	-0.3	0.2			
13-Apr	-0.1	0.1	0.3	0.2	0.0	-0.2	-0.3	-0.4	-0.1	0.1	-0.2	-0.1	-0.8	-1.1	-1.4	-1.2	-1.1	-1.0	-0.4	-0.6	-0.8	-1.0	-0.7	-0.3	-0.5	0.3			
14-Apr	-0.3	-0.1	0.1	-0.1	0.4	0.4	0.7	0.5	0.7	0.8	0.8	0.8	1.5	1.6	1.7	1.3	1.2	0.7	0.6	1.1	1.2	1.2	1.0	1.3	0.8	1.7			
15-Apr	1.3	1.3	1.4	1.6	1.0	0.4	1.0	0.9	-0.2	-0.2	-0.4	-0.4	-0.2	-0.2	0.0	0.0	0.0	-0.7	-0.6	-0.3	-0.2	0.1	-0.3	-0.3	0.2	1.6			
16-Apr	UO	UO	UO	UO	UO	-0.7	-0.7	-1.8	-2.2	-2.5	-2.1	-1.8	-1.9	-1.8	-1.2	-1.5	-1.5	-0.9	-1.0	-1.7	-1.1	-0.5	-0.1	-0.4	-1.3	-0.1			
17-Apr	-0.5	-1.1	-0.7	-1.4	-1.0	-1.1	-0.2	-0.8	-0.9	-0.7	-0.3	-0.8	-0.7	-0.7	0.3	-0.5	0.1	-0.7	-0.2	0.1	0.5	0.5	0.8	1.2	-0.4	1.2			
18-Apr	1.6	1.6	1.4	1.5	1.5	1.6	1.6	2.1	2.0	2.2	2.4	2.8	2.7	3.3	2.1	2.7	2.1	2.3	2.3	2.6	2.2	2.4	1.9	1.3	2.1	3.3			
19-Apr	0.6	0.3	0.1	-0.1	-0.5	-0.5	-0.2	-0.2	-0.5	-0.1	-0.4	-0.1	-0.2	-0.1	-0.3	-0.1	-0.1	-0.4	-0.5	-1.0	-1.3	-1.4	-1.1	-0.6	-0.4	0.6			
20-Apr	-1.3	-0.5	-0.9	-0.4	-0.4	0.1	-0.6	0.1	-0.1	-0.2	-0.2	-0.3	0.2	0.4	0.0	0.4	0.4	-0.2	0.3	0.1	-0.1	-0.2	0.5	0.4	-0.1	0.5			
21-Apr	0.2	0.8	0.8	0.3	0.9	0.6	0.0	0.6	0.3	0.7	0.8	0.7	0.4	1.0	1.2	1.0	1.6	1.0	1.1	1.1	0.3	1.3	1.7	1.4	0.8	1.7			
22-Apr	1.6	0.6	0.7	0.4	1.3	1.0	1.1	1.1	1.7	2.2	1.7	1.4	2.0	2.0	0.6	-0.1	1.0	1.5	0.3	0.5	0.7	-0.6	-0.3	0.0	0.9	2.2			
23-Apr	0.0	-0.1	-0.2	0.1	0.0	-0.2	0.2	0.1	0.0	-0.3	-0.4	-0.3	-1.0	0.2	-0.7	-0.6	0.0	-0.4	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4	-0.3	0.2			
24-Apr	-0.2	-0.1	-0.2	0.1	0.0	0.3	0.5	0.6	0.4	0.2	0.0	1.2	0.1	-0.4	0.3	0.1	0.6	0.8	0.7	1.2	1.1	1.2	1.5	1.5	0.5	1.5			
25-Apr	1.5	1.3	1.3	1.7	1.7	1.7	1.7	1.3	1.1	2.0	1.6	1.9	1.6	2.2	1.5	1.1	0.7	0.7	0.4	0.4	0.2	0.1	0.9	1.2	1.3	2.2			
26-Apr	1.0	1.7	1.0	0.6	0.1	-0.6	-0.6	0.1	-0.5	-0.8	-0.9	-0.5	-1.2	-1.2	-1.3	-1.7	-1.2	-1.0	-1.3	-1.0	-0.4	-0.6	-0.5	-0.3	-0.5	1.7			
27-Apr	-0.7	-0.4	-0.6	-0.5	-1.3	-0.5	-0.7	-0.9	-0.9	-0.5	-0.4	0.0	-0.5	0.3	-0.4	-0.5	-0.2	-0.3	-0.1	-0.3	-0.7	-0.4	0.2	0.8	-0.4	0.8			
28-Apr	0.9	0.4	0.8	1.1	1.3	0.9	1.1	0.8	1.5	0.7	1.0	1.2	1.5	1.1	1.3	1.4	1.4	1.2	1.1	1.0	0.4	1.0	0.7	1.1	1.0	1.5			
29-Apr	0.9	0.6	1.2	1.1	0.0	0.1	-0.2	-0.1	-0.3	0.1	-0.1	0.0	-0.6	-0.6	-1.1	0.2	-0.4	-0.6	-0.5	-0.8	-0.6	-0.4	0.0	0.3	-0.1	1.2			
30-Apr	0.6	0.1	-0.1	-0.1	0.0	-0.2	-0.7	-0.5	-0.7	0.2	-0.4	-0.5	-0.6	-0.6	-0.1	-0.1	-0.4	-0.6	-1.7	-1.9	-0.6	-0.6	-1.2	-1.3	-0.5	0.6			
Diurnal Average																													
Diurnal Maximum																													
UO - Unstable Operation																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.5 km/h on Apr 15 15:00																									Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3
Minimum Value: 0.1 km/h on Apr 4 00:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 1.1 Median = 1.9 Q ₃ = 2.6 P ₉₀ = 3.2 P ₉₉ = 4.2																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.6	1.6	1.9	2.1	2.2	2.0	1.9	1.8	1.5	1.4	1.6	1.5	1.6	1.1	1.1	2.0	2.6	2.5	2.1	2.0	2.5	2.4	2.2	1.5	2.6
2-Apr	0.7	1.2	1.3	0.7	0.5	0.7	1.0	1.6	2.3	2.2	2.5	2.3	2.4	3.0	3.0	2.9	2.8	2.7	2.1	1.0	2.1	1.5	1.4	1.8	3.0
3-Apr	2.3	2.3	2.0	2.0	2.5	1.3	1.8	2.7	2.5	2.9	3.4	3.5	3.2	2.9	2.9	2.9	3.0	2.7	2.1	1.2	1.2	0.8	0.3	0.1	3.5
4-Apr	0.2	0.2	0.4	0.6	0.7	0.8	0.7	0.8	1.2	1.6	1.7	1.9	2.1	2.0	2.0	1.7	1.5	1.1	0.6	0.2	0.3	0.6	0.7	0.8	2.1
5-Apr	0.8	0.8	0.8	0.4	0.4	0.7	0.8	0.8	1.4	1.5	1.3	1.5	1.5	1.7	2.0	1.5	1.5	1.1	1.4	1.4	1.1	1.6	1.9	2.0	2.0
6-Apr	2.4	2.4	2.2	2.3	2.5	2.7	2.8	2.6	2.8	2.9	3.3	2.8	3.1	2.8	3.2	3.2	3.2	3.2	2.9	3.1	3.3	3.0	2.5	2.6	3.3
7-Apr	2.5	2.4	2.6	2.5	2.2	2.3	2.1	2.7	2.6	2.5	3.0	3.1	2.7	2.8	2.7	2.9	2.3	2.5	1.6	1.9	1.5	0.8	0.9	1.1	3.1
8-Apr	0.8	0.6	0.7	0.4	0.4	0.4	0.7	0.9	0.4	0.8	0.9	1.1	0.7	0.7	0.8	0.7	0.4	0.7	0.8	0.7	0.2	0.3	0.3	0.2	1.1
9-Apr	0.3	0.5	0.6	0.5	0.4	0.7	1.0	1.0	1.1	1.2	1.5	1.5	1.4	1.9	1.3	2.2	1.7	1.0	0.7	0.8	0.7	0.7	0.6	0.5	2.2
10-Apr	0.5	1.0	0.6	0.6	0.9	0.8	0.9	0.9	2.1	2.0	2.3	2.4	2.3	2.8	2.3	2.3	2.0	1.6	0.9	0.9	0.8	1.4	1.8	1.8	2.8
11-Apr	1.8	1.3	1.5	2.2	1.3	0.7	1.0	1.2	1.3	2.1	2.3	2.2	2.4	3.3	2.9	3.0	3.3	3.0	2.0	0.7	0.7	2.3	2.5	1.9	3.3
12-Apr	1.6	1.2	1.8	1.5	1.7	0.8	0.8	1.8	2.0	2.2	2.5	2.3	2.5	2.4	2.1	2.4	2.3	2.6	2.4	1.2	0.9	0.6	0.2	0.7	2.6
13-Apr	0.5	0.2	0.3	0.5	0.6	0.6	0.6	1.1	1.6	2.2	2.4	2.4	2.8	3.5	3.1	3.2	3.1	2.6	2.2	1.6	1.4	1.1	0.8	0.4	3.5
14-Apr	0.2	0.1	0.2	0.2	0.5	0.4	0.6	1.3	1.7	1.9	2.1	2.2	2.5	2.6	2.6	2.1	2.0	1.8	0.8	0.8	1.1	1.4	1.2	1.6	2.6
15-Apr	1.5	1.3	1.2	1.2	1.0	1.0	1.1	2.1	3.8	4.5	4.0	3.8	3.9	4.5	4.5	4.3	4.1	3.5	4.1	4.4	4.2	3.8	3.9	3.4	4.5
16-Apr	UO	UO	UO	UO	UO	2.1	2.7	3.6	4.1	4.4	4.4	3.9	4.2	4.1	3.6	3.9	3.4	2.6	2.6	2.7	2.0	1.3	1.8	2.3	4.4
17-Apr	2.4	3.2	3.0	3.3	2.5	2.5	2.8	2.7	2.7	2.9	2.9	2.7	3.0	3.1	3.0	2.6	2.5	2.1	1.5	1.2	1.2	1.4	1.2	1.7	3.3
18-Apr	2.2	2.0	1.1	1.7	2.1	2.3	2.3	2.6	2.7	2.9	3.2	3.4	3.5	3.4	3.3	3.4	2.9	2.5	2.5	2.8	2.8	2.6	2.0	2.2	3.5
19-Apr	2.5	1.7	1.8	2.5	1.9	1.5	1.3	2.3	2.5	2.8	3.0	3.3	3.3	3.6	3.3	3.2	3.0	2.9	2.4	2.8	2.4	2.5	2.5	2.5	3.6
20-Apr	2.7	2.3	2.3	2.2	1.9	2.0	1.7	2.0	2.0	2.3	2.4	2.5	2.3	2.2	2.6	2.2	2.1	1.8	2.0	1.3	1.2	1.3	1.5	1.0	2.7
21-Apr	1.2	1.4	1.1	0.6	0.6	0.7	0.6	1.3	1.5	2.2	2.4	2.6	2.3	2.7	2.7	2.8	2.1	1.8	1.5	1.7	1.7	1.8	2.3	1.4	2.8
22-Apr	1.4	1.0	0.7	1.2	0.9	1.7	1.1	0.8	1.7	2.5	2.4	2.7	2.8	3.0	3.2	2.0	2.4	2.0	1.3	0.9	0.6	1.1	0.5	0.7	3.2
23-Apr	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.9	1.7	2.3	2.5	3.1	3.1	3.3	2.7	2.5	2.4	1.8	1.2	1.0	1.1	1.1	0.7	0.7	3.3
24-Apr	0.5	0.2	0.3	0.4	0.4	0.3	0.9	1.5	2.0	1.9	2.0	2.4	2.5	2.6	2.4	2.3	2.0	2.0	1.3	1.0	1.0	1.1	1.6	1.9	2.6
25-Apr	1.7	1.3	0.7	1.1	0.9	0.9	1.5	1.6	1.6	3.3	3.6	4.0	3.8	4.0	3.6	3.7	3.6	3.0	2.2	1.3	0.4	0.5	0.6	0.5	4.0
26-Apr	0.8	1.2	1.0	0.9	0.7	1.5	1.7	1.9	1.7	2.3	2.7	3.4	3.5	3.6	3.2	3.4	3.1	3.2	2.9	2.8	2.3	2.2	1.7	1.5	3.6
27-Apr	1.2	1.5	1.5	2.4	2.8	2.7	2.6	2.7	2.5	2.9	3.0	3.1	3.1	3.2	2.8	3.0	2.6	2.5	2.2	2.0	1.8	1.7	1.4	1.2	3.2
28-Apr	1.1	0.8	1.3	1.4	1.8	1.2	1.9	1.7	1.9	2.1	2.3	3.1	3.3	3.3	3.2	3.5	2.9	2.5	1.7	1.9	2.6	2.5	2.4	1.1	3.5
29-Apr	1.9	0.9	0.8	1.3	1.2	1.7	2.1	2.5	2.7	2.2	2.2	2.8	2.3	2.8	2.1	1.6	2.5	3.4	2.4	1.4	1.1	0.8	0.5	0.3	3.4
30-Apr	0.4	0.7	0.7	1.1	1.1	1.5	2.1	1.9	2.3	2.3	1.7	1.7	2.4	1.8	1.5	1.7	1.7	2.8	2.9	2.4	2.6	2.2	2.0	1.7	2.9
	2.7	3.2	3.0	3.3	2.8	2.7	2.8	3.6	4.1	4.5	4.4	4.0	4.2	4.5	4.5	4.3	4.1	3.5	4.1	4.4	4.2	3.8	3.9	3.4	
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - April 2025

Maximum Value: 2.3 km/h on Apr 10 09:00																			Maximum Daily Average: 0.8 km/h on Apr 15										Hours in Service: 720	
Minimum Value: -1.4 km/h on Apr 6 14:00																			Minimum Daily Average: -0.8 km/h on Apr 6										Hours of Data: 706	
Maximum Diurnal Average: 0.3 km/h at hour 12																			Minimum Diurnal Average: -0.2 km/h at hour 21										Hours of Missing Data: 14	
Monthly Average: 0.06 km/h																			Percentiles: P ₁ = -1.2 P ₁₀ = -0.6 Q ₁ = -0.3 Median = 0.0 Q ₃ = 0.4 P ₉₀ = 0.8 P ₉₉ = 1.5										Hours of Calibration: 0	
																													Percent Operational Time: 98.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	-0.6	-0.6	-0.5	-0.6	-0.6	-0.7	-0.8	-0.4	-0.3	-0.4	-0.4	-0.1	-0.1	-0.2	0.0	0.2	0.6	0.7	-0.1	0.4	0.0	-0.1	0.0	0.5	-0.2	0.7				
2-Apr	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.7	0.7	0.9	0.1	0.1	-0.3	-0.8	-0.7	-1.0	-0.1	-0.8	-0.3	-0.5	-0.7	-0.3	0.3	0.0	0.9				
3-Apr	-0.5	0.1	0.1	0.4	0.4	0.4	0.6	-0.4	-0.2	0.0	0.8	0.5	0.0	-0.7	-0.2	-0.2	0.0	-0.3	-0.3	-0.3	0.3	-0.1	0.1	0.1	0.0	0.8				
4-Apr	0.2	0.3	0.4	0.3	0.0	0.0	-0.1	-0.2	0.0	0.3	0.5	-0.3	-0.1	-0.6	0.6	0.9	-0.1	-0.8	-0.3	-0.1	0.4	0.8	1.0	0.8	0.2	1.0				
5-Apr	0.9	0.2	-0.1	0.3	0.4	0.1	-0.1	-0.1	0.3	-0.4	-0.1	0.3	0.2	-0.1	0.8	0.0	0.0	-0.4	-0.3	-0.6	-0.4	0.1	0.8	1.6	0.1	1.6				
6-Apr	1.8	1.5	-1.0	-1.0	-0.8	-1.2	-1.1	-0.8	-0.5	-0.9	-0.4	-1.3	-1.1	-1.4	-0.8	-1.1	-0.9	-1.2	-0.9	-1.3	-1.3	-0.9	-1.0	-0.9	-0.8	1.8				
7-Apr	-0.9	-0.8	-1.0	-0.9	-0.9	-0.9	-1.2	-0.9	-0.9	-0.9	-0.9	-0.5	-1.0	-1.0	-0.9	-0.3	-0.5	-0.2	0.2	-0.3	-0.3	-0.3	-0.4	-0.3	-0.7	0.2				
8-Apr	-0.3	-0.6	-0.4	-0.1	0.0	-0.1	-0.3	-0.1	-0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.2	-0.2	-0.1	-0.2	0.0	-0.1	0.0	-0.1	0.1	-0.1	0.2				
9-Apr	0.1	0.0	0.0	-0.1	0.1	-0.1	0.1	-0.1	0.1	-0.1	0.2	0.4	-0.7	0.0	-0.1	0.5	-0.1	0.0	0.0	-0.2	-0.4	-0.7	0.2	0.1	0.0	0.5				
10-Apr	0.3	0.4	0.2	0.0	0.1	0.0	-0.1	0.2	2.3	0.3	0.0	0.1	0.0	1.4	0.3	0.1	0.1	0.2	0.1	-0.4	-0.2	-0.2	-0.4	-0.1	0.2	2.3				
11-Apr	-0.1	0.2	-0.8	-0.3	0.1	0.1	0.2	-0.1	-0.1	-0.1	0.3	-0.1	0.1	1.1	1.1	0.7	1.2	1.0	0.5	0.3	0.2	0.7	0.8	0.5	0.3	1.2				
12-Apr	0.3	0.3	0.3	0.5	0.7	0.4	0.2	0.5	0.8	0.5	1.0	0.6	0.8	0.9	0.7	0.7	0.3	0.1	-0.1	-0.1	-0.2	0.2	0.1	-0.3	0.4	1.0				
13-Apr	-0.3	0.0	0.1	0.0	0.1	0.2	0.4	0.4	0.2	0.1	0.0	-0.1	-0.6	-0.1	-0.3	-0.7	-0.3	-0.4	-0.5	-0.5	-0.4	-0.9	-0.4	-0.1	-0.2	0.4				
14-Apr	-0.1	-0.1	0.0	-0.1	0.0	0.1	-0.3	-0.3	-0.4	-0.4	-0.2	-0.5	0.4	0.0	0.3	0.1	0.3	0.1	0.2	0.4	-0.3	-0.3	-0.6	-0.6	-0.1	0.4				
15-Apr	-0.9	-0.4	0.7	0.7	0.4	0.2	0.2	0.3	0.3	1.0	0.9	1.0	1.0	1.0	1.1	1.5	1.3	1.3	1.7	1.9	1.6	1.2	0.8	0.8	0.8	1.9				
16-Apr	UO	UO	UO	UO	UO	UO	UO	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.3	0.0	-0.2	-0.4	-0.2	-0.4	-0.9	-0.4	-0.2	0.3	0.6	--	0.6				
17-Apr	0.4	-0.1	0.6	-0.3	-0.6	-0.5	0.9	-0.2	-0.3	0.5	0.7	0.0	-0.1	-0.1	0.6	-0.4	0.5	-0.3	-0.1	-0.1	-0.1	-0.8	-0.6	-0.5	0.0	0.9				
18-Apr	-0.3	0.0	0.5	-0.1	-0.6	-0.5	-0.1	0.6	0.9	0.9	0.5	1.2	1.0	2.0	0.7	1.1	0.9	0.8	0.8	0.5	0.1	0.5	0.8	0.5	0.5	2.0				
19-Apr	0.1	0.2	0.2	0.4	0.7	0.5	0.6	0.9	0.7	1.1	0.4	1.2	1.3	1.5	1.3	1.0	0.9	0.6	1.1	0.3	-0.8	UO	UO	UO	0.7	1.5				
20-Apr	UO	UO	UO	UO	0.1	-1.3	-0.2	0.7	0.6	0.5	0.3	0.2	0.0	0.2	-0.2	0.1	0.0	-0.6	-0.2	-0.4	-0.3	-0.7	-0.1	-0.2	-0.1	0.7				
21-Apr	-0.6	0.3	0.7	0.1	0.2	-0.1	-0.1	0.5	-0.3	0.3	0.4	-0.2	-0.4	0.8	0.6	0.6	1.1	0.1	0.2	-0.4	-0.1	0.0	-0.1	0.5	0.2	1.1				
22-Apr	0.5	0.4	0.2	0.2	0.5	0.3	0.3	0.2	0.2	0.9	0.5	0.4	0.9	0.6	0.9	0.2	0.5	0.7	0.2	0.0	0.2	-0.3	-0.3	-0.4	0.3	0.9				
23-Apr	-0.1	0.1	-0.1	0.0	0.0	-0.1	0.0	0.1	0.2	0.1	0.3	0.5	-0.7	0.5	-0.5	-0.3	0.1	0.0	0.0	-0.2	-0.3	-0.2	-0.2	-0.1	0.0	0.5				
24-Apr	0.0	0.0	0.0	-0.1	0.1	-0.1	0.0	0.1	0.4	0.0	-0.6	1.2	0.3	-0.5	0.6	-0.4	0.3	0.6	0.6	1.2	-0.4	-0.5	-0.6	-0.3	0.1	1.2				
25-Apr	0.0	-0.1	-0.2	-0.2	0.0	0.2	0.6	0.5	0.4	1.0	0.1	0.8	0.5	1.3	0.4	0.5	0.2	0.9	0.1	-0.1	-0.1	0.0	0.1	0.2	0.3	1.3				
26-Apr	0.4	0.8	0.4	0.0	0.0	-0.1	0.1	0.6	0.0	-0.3	-0.3	0.4	-0.8	-0.5	-0.7	-1.1	-0.6	0.3	-0.3	-0.6	-0.2	-0.3	0.1	-0.2	-0.1	0.8				
27-Apr	-0.5	0.1	0.0	0.5	-1.2	-0.1	-0.4	-0.4	-0.4	-0.2	0.2	0.5	-0.4	0.8	-0.1	-0.3	0.3	-0.5	-0.2	-0.3	-0.5	-0.5	-0.3	-0.1	-0.2	0.8				
28-Apr	0.1	-0.2	-0.6	-0.5	-0.4	-0.4	-0.3	-0.3	0.8	0.0	-0.3	0.4	0.8	0.0	-0.1	0.9	0.6	0.4	0.4	0.5	-0.3	0.3	0.3	0.4	0.1	0.9				
29-Apr	0.1	0.2	0.4	0.4	0.3	0.5	0.2	0.7	0.5	0.9	0.9	1.3	0.5	0.2	-0.5	0.5	-0.1	0.5	0.1	-0.4	-0.4	-0.5	-0.1	0.2	0.3	1.3				
30-Apr	0.1	0.1	0.3	0.4	0.4	0.6	-0.1	-0.2	-0.2	0.7	0.1	-0.2	-0.6	-0.3	-0.1	-0.3	-0.1	0.4	-1.1	-1.3	-0.1	0.0	-0.6	-1.0	-0.1	0.7				
Diurnal Average																														
Diurnal Maximum																														
UO - Unstable Operation																														



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.8 km/h on Apr 15 20:00																			Hours in Service: 720 Hours of Data: 706 Hours of Missing Data: 14 Hours of Calibration: 0 Percent Operational Time: 98.1						
Minimum Value: 0.2 km/h on Apr 14 04:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 1.1 Median = 1.9 Q ₃ = 2.6 P ₉₀ = 3.3 P ₉₉ = 4.3																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1.3	1.4	1.6	1.9	1.9	1.8	1.7	1.7	1.2	1.3	1.5	1.5	1.8	1.0	1.0	1.9	2.6	2.6	1.9	2.0	2.1	2.2	1.9	1.4	2.6
2-Apr	0.6	1.2	1.2	0.7	0.4	0.5	0.9	1.7	2.5	2.5	2.7	2.5	2.6	3.1	3.0	3.1	2.8	2.9	1.6	0.9	1.6	1.4	1.3	1.9	3.1
3-Apr	1.8	2.0	2.0	1.9	2.3	1.3	1.8	2.5	2.3	2.7	3.5	3.6	3.3	2.9	3.1	3.0	2.9	2.5	2.0	1.0	1.4	1.1	0.3	0.2	3.6
4-Apr	0.3	0.3	0.4	0.7	0.8	1.0	0.9	0.8	0.9	1.6	1.7	1.8	2.3	1.9	2.1	1.9	1.5	1.0	0.5	0.2	0.4	0.4	0.4	0.6	2.3
5-Apr	0.5	0.8	0.9	0.4	0.3	0.8	0.7	0.6	1.2	1.1	1.1	1.6	1.7	1.9	2.5	1.5	1.4	0.7	1.0	1.4	1.4	2.4	2.5	2.7	2.7
6-Apr	3.1	3.1	2.1	2.2	2.3	2.4	2.6	2.6	3.1	3.0	3.4	3.0	2.9	2.8	3.2	2.9	2.9	3.0	2.7	2.9	3.0	2.7	2.5	2.4	3.4
7-Apr	2.4	2.3	2.6	2.4	1.9	2.2	2.2	2.7	2.6	2.6	3.0	3.2	2.8	2.7	2.6	3.1	2.7	2.9	2.0	2.1	1.9	0.9	1.4	1.3	3.2
8-Apr	1.0	0.9	1.0	0.7	0.3	0.3	0.6	0.9	0.4	0.9	0.6	0.9	0.6	0.4	0.6	0.7	0.5	0.7	1.0	0.7	0.2	0.2	0.3	0.2	1.0
9-Apr	0.2	0.3	0.5	0.5	0.3	0.5	0.8	0.6	1.1	1.1	1.1	1.4	1.4	2.1	1.5	2.5	1.9	1.0	0.8	0.7	0.9	1.0	1.1	0.7	2.5
10-Apr	0.6	1.3	0.8	0.7	1.1	1.0	1.1	1.1	2.4	2.0	2.2	2.4	2.7	3.1	2.7	2.8	2.4	1.7	1.0	1.1	1.2	2.1	2.4	2.3	3.1
11-Apr	2.0	2.0	2.5	3.2	1.7	0.8	1.3	1.2	2.1	1.9	2.4	2.5	2.7	3.4	3.1	3.4	3.8	3.2	2.2	0.7	0.6	2.3	2.4	2.0	3.8
12-Apr	1.6	1.0	1.6	1.4	1.5	0.7	0.9	2.0	2.1	2.4	2.6	2.3	2.4	2.5	2.2	2.5	2.3	2.3	2.0	1.1	0.4	0.6	0.3	0.5	2.6
13-Apr	0.4	0.3	0.2	0.5	0.7	0.6	0.4	1.0	1.7	2.2	2.6	2.5	3.0	3.5	3.5	3.1	3.0	2.4	1.8	1.2	1.1	1.0	0.6	0.3	3.5
14-Apr	0.2	0.2	0.2	0.2	0.7	0.3	0.6	1.2	1.5	1.9	2.1	2.3	2.6	2.9	2.8	2.1	2.0	1.6	0.5	0.6	0.7	0.9	1.0	1.4	2.9
15-Apr	1.3	0.9	1.1	1.0	0.9	1.1	1.1	1.8	3.8	4.4	4.1	3.9	4.2	4.6	4.4	4.6	4.2	3.8	4.4	4.8	4.7	4.1	4.3	3.6	4.8
16-Apr	UO	UO	UO	UO	UO	UO	UO	3.3	3.6	3.9	4.2	3.4	3.8	3.7	3.5	3.6	3.5	2.6	2.3	2.5	1.9	1.3	1.8	2.4	4.2
17-Apr	2.5	2.9	3.0	3.0	2.4	2.4	2.9	2.6	2.6	3.1	2.9	2.9	2.9	3.5	3.3	3.0	2.8	2.5	1.6	1.1	1.6	1.7	1.3	1.4	3.5
18-Apr	1.7	1.5	1.0	1.3	1.4	1.6	2.1	2.6	2.7	2.8	3.0	3.7	3.7	3.7	3.2	3.3	2.9	2.6	2.4	2.4	2.4	2.2	2.0	2.2	3.7
19-Apr	2.2	1.4	1.7	2.4	1.8	1.6	1.4	2.4	2.6	3.1	3.3	3.6	4.1	3.8	3.7	3.5	3.1	2.9	2.5	2.5	2.1	UO	UO	UO	4.1
20-Apr	UO	UO	UO	UO	1.9	1.7	1.8	1.9	2.4	2.9	2.7	2.9	2.7	2.5	2.9	2.7	2.5	2.3	2.1	1.2	1.1	1.2	1.7	1.2	2.9
21-Apr	1.6	1.9	1.4	0.9	0.8	0.7	0.8	1.3	1.4	2.4	2.8	2.8	2.5	3.3	3.2	3.2	2.6	2.0	1.5	1.5	2.0	1.6	1.9	1.3	3.3
22-Apr	1.3	1.1	0.8	1.2	0.8	1.5	1.0	0.6	1.2	2.6	2.5	3.0	3.2	3.0	3.1	1.9	2.5	2.1	1.2	1.2	0.8	1.3	0.5	0.7	3.2
23-Apr	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.7	1.7	2.6	2.9	3.6	3.4	3.6	2.6	2.7	2.6	1.7	1.3	0.9	1.1	1.1	0.7	0.5	3.6
24-Apr	0.4	0.3	0.4	0.6	0.5	0.4	0.7	1.6	2.2	2.0	2.0	2.7	2.8	2.8	2.6	2.6	2.2	2.5	1.7	1.5	0.8	1.1	1.3	1.8	2.8
25-Apr	1.5	1.1	0.5	0.9	0.8	0.8	1.4	1.4	1.7	3.5	3.7	4.1	4.1	4.3	3.7	3.7	3.7	3.0	2.0	1.1	0.3	0.2	0.5	0.6	4.3
26-Apr	1.0	0.8	0.9	0.9	0.8	1.3	1.6	1.9	2.0	2.6	2.7	3.8	3.4	3.5	3.1	2.9	2.6	3.3	2.6	2.4	2.2	2.1	1.5	1.4	3.8
27-Apr	1.2	1.4	1.4	2.3	2.2	2.8	2.4	2.6	2.9	3.1	3.6	3.5	3.5	3.6	3.3	3.4	3.0	2.4	2.2	1.6	1.5	1.4	1.3	1.4	3.6
28-Apr	1.3	1.0	1.3	1.3	1.9	1.2	1.5	1.7	2.2	2.1	2.3	3.5	3.7	3.9	3.6	3.9	3.2	2.5	1.8	1.8	2.5	2.5	2.4	1.0	3.9
29-Apr	1.5	0.7	0.5	1.2	1.3	1.9	2.1	2.9	2.7	2.3	2.5	3.1	2.4	2.9	2.1	1.8	2.6	3.6	2.4	1.4	1.2	0.5	0.7	0.3	3.6
30-Apr	0.3	0.7	0.9	1.1	1.1	1.8	1.7	2.1	2.6	2.6	1.9	2.1	2.2	1.5	1.4	1.7	1.8	2.6	2.5	1.8	2.5	2.1	1.9	1.3	2.6
3.1 3.1 3.0 3.2 2.4 2.8 2.9 3.3 3.8 4.4 4.2 4.1 4.2 4.6 4.4 4.6 4.2 3.8 4.4 4.8 4.7 4.1 4.3 3.6																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 5.0 km/h on Apr 15 20:00																			Hours in Service: 720 Hours of Data: 702 Hours of Missing Data: 18 Hours of Calibration: 0 Percent Operational Time: 97.5						
Minimum Value: 0.2 km/h on Apr 4 00:00																									
Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 1.9 Q ₃ = 2.7 P ₉₀ = 3.4 P ₉₉ = 4.4																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	0.9	1.0	1.3	1.6	1.6	1.5	1.3	1.5	1.2	1.2	1.6	1.5	1.8	1.0	0.9	1.7	2.5	2.6	1.9	1.9	1.9	2.0	1.8	1.3	2.6
2-Apr	0.6	1.2	1.2	0.7	0.4	0.5	0.9	1.8	2.5	2.7	2.9	2.6	2.6	3.1	3.1	3.2	2.9	3.0	1.3	0.8	1.4	1.5	1.4	2.2	3.2
3-Apr	1.7	1.9	1.9	1.9	2.4	1.3	1.9	2.3	2.2	2.8	3.6	3.8	3.2	2.8	3.1	3.0	3.1	2.5	1.8	1.1	1.6	1.3	0.4	0.2	3.8
4-Apr	0.3	0.3	0.5	0.8	0.8	0.9	0.9	0.8	1.0	1.6	1.7	1.8	2.3	1.9	2.1	1.9	1.5	1.0	0.4	0.2	0.2	0.3	0.3	0.4	2.3
5-Apr	0.5	0.9	1.0	0.4	0.3	0.9	0.8	0.6	1.0	1.0	1.0	1.4	1.6	1.8	2.3	1.5	1.4	0.7	0.9	1.6	1.5	2.1	2.4	2.5	2.5
6-Apr	2.8	2.9	2.2	2.1	2.2	2.5	2.6	2.8	3.1	3.1	3.6	2.9	2.8	2.6	3.2	3.0	3.1	3.0	3.0	3.0	3.2	2.8	2.4	2.3	3.6
7-Apr	2.3	2.1	2.5	2.3	1.7	2.1	2.0	2.8	2.6	2.7	3.0	3.2	2.8	2.8	2.6	3.1	2.6	2.9	1.9	2.2	1.9	0.8	1.2	1.2	3.2
8-Apr	1.0	0.7	0.8	0.6	0.3	0.4	0.7	0.9	0.3	0.9	0.5	0.7	0.5	0.4	0.6	0.6	0.5	0.7	0.9	0.7	0.3	0.3	0.4	0.2	1.0
9-Apr	0.2	0.3	0.4	0.5	0.4	0.5	0.7	0.6	1.0	1.0	0.9	1.4	1.3	2.1	1.5	2.5	1.9	1.0	0.8	0.5	0.8	0.9	0.7	0.8	2.5
10-Apr	0.6	1.3	0.7	0.7	1.1	1.1	1.1	1.2	2.5	2.0	2.3	2.5	2.8	3.0	2.9	2.9	2.4	1.7	1.0	1.0	1.1	2.0	2.1	2.2	3.0
11-Apr	2.1	1.7	1.8	2.6	1.5	0.9	1.0	1.3	1.4	1.8	2.5	2.5	2.8	3.5	3.2	3.5	3.8	3.3	2.2	0.7	0.6	2.2	2.5	2.0	3.8
12-Apr	1.5	0.9	1.5	1.5	1.5	0.6	1.0	2.1	2.2	2.3	2.6	2.4	2.5	2.5	2.2	2.5	2.3	2.2	1.9	1.0	0.3	0.7	0.3	0.5	2.6
13-Apr	0.3	0.3	0.3	0.6	0.7	0.5	0.3	0.9	1.7	2.1	2.7	2.5	3.1	3.5	3.7	3.2	3.0	2.5	1.6	1.2	1.0	0.9	0.6	0.3	3.7
14-Apr	0.3	0.2	0.3	0.2	0.7	0.4	0.5	1.2	1.5	1.8	2.2	2.4	2.6	3.1	2.9	2.2	2.0	1.5	0.5	0.5	0.5	0.8	0.7	1.2	3.1
15-Apr	1.2	1.0	1.1	1.1	0.8	1.2	1.2	1.8	3.9	4.3	4.2	4.0	4.3	4.7	4.6	4.8	4.2	3.8	4.4	5.0	4.8	4.4	4.5	3.7	5.0
16-Apr	UO	UO	UO	UO	UO	UO	UO	3.3	3.6	3.7	3.9	3.4	3.8	3.5	3.5	3.7	3.5	2.7	2.3	2.5	1.8	1.4	1.8	2.5	3.9
17-Apr	2.7	2.9	3.2	3.0	2.4	2.5	3.0	2.7	2.7	3.2	2.9	3.1	2.9	3.6	3.3	2.9	2.8	2.6	1.6	1.0	1.3	1.7	1.2	1.4	3.6
18-Apr	1.7	1.4	0.9	1.2	1.3	1.5	2.0	2.7	2.9	3.0	3.3	4.0	4.0	3.9	3.4	3.5	2.9	2.7	2.6	2.5	2.5	2.2	2.1	2.3	4.0
19-Apr	2.2	1.5	1.7	2.4	1.7	1.5	1.4	2.2	2.6	3.1	3.4	3.7	4.2	4.0	3.8	3.5	3.1	2.8	2.4	2.3	2.1	UO	UO	UO	4.2
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	2.5	2.9	2.8	3.2	2.8	2.5	3.0	2.9	2.5	2.3	2.1	1.2	1.1	1.3	1.8	1.2	3.2
21-Apr	1.5	1.7	1.4	0.6	0.8	0.8	0.6	1.3	1.3	2.3	3.0	3.0	2.7	3.4	3.3	3.5	2.6	2.1	1.5	1.6	2.2	1.7	1.9	1.3	3.5
22-Apr	1.3	1.3	0.8	1.3	0.8	1.4	1.1	0.6	1.1	2.7	2.8	3.1	3.3	3.1	3.2	2.1	2.5	2.0	1.2	0.9	0.7	1.5	0.4	0.5	3.3
23-Apr	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.5	1.6	2.6	2.9	3.8	3.4	3.9	2.7	2.8	2.8	1.7	1.2	0.8	1.1	1.2	0.8	0.5	3.9
24-Apr	0.4	0.3	0.4	0.6	0.6	0.4	0.6	1.5	2.3	2.1	2.1	2.8	2.8	2.9	2.6	2.6	2.1	2.6	1.7	1.4	1.0	1.2	1.4	1.8	2.9
25-Apr	1.5	1.1	0.5	1.0	0.9	0.9	1.4	1.3	1.7	3.7	3.7	4.3	4.2	4.5	3.9	3.8	3.7	3.1	2.1	1.1	0.3	0.2	0.4	0.6	4.5
26-Apr	1.0	0.8	1.1	1.1	0.8	1.4	1.6	1.8	2.0	2.6	2.7	4.0	3.5	3.4	2.9	3.1	2.5	3.4	2.7	2.3	2.3	2.1	1.5	1.4	4.0
27-Apr	1.2	1.5	1.5	2.4	2.2	2.8	2.5	2.7	3.0	3.3	3.8	3.8	3.5	3.8	3.5	3.5	3.1	2.4	2.2	1.5	1.3	1.3	1.2	1.2	3.8
28-Apr	1.3	0.9	1.1	1.2	1.9	1.0	1.3	1.6	2.2	2.1	2.3	3.7	3.9	4.1	3.8	4.1	3.4	2.5	1.7	2.0	2.6	2.8	2.3	1.0	4.1
29-Apr	1.5	0.7	0.4	1.3	1.4	2.0	2.2	2.9	2.6	2.4	2.7	3.3	2.5	2.9	2.1	1.8	2.6	3.7	2.3	1.5	1.1	0.5	0.8	0.4	3.7
30-Apr	0.2	0.7	0.9	1.1	1.1	1.8	1.6	2.2	2.6	2.6	2.0	2.2	2.3	1.5	1.4	1.8	1.8	2.7	2.5	1.9	2.7	2.3	2.0	1.3	2.7
2.8 2.9 3.2 3.0 2.4 2.8 3.0 3.3 3.9 4.3 4.2 4.3 4.3 4.7 4.6 4.8 4.2 3.8 4.4 5.0 4.8 4.4 4.5 3.7																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS06
PATRICIA MCINNES
APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
APRIL 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	34	35	99.86	-	-	20.3	0	3.7	0
TRS (ppb) Average	683	36	37	99.86	0.8	0	0.7	0	0.3	0
THC (ppm) Average	682	34	38	99.44	-	-	3.1	-	2.2	-
NMHC(ppm) Average	682	34	38	99.44	-	-	0.334	-	0.059	-
CH4(ppm) Average	682	34	38	99.44	-	-	3	-	2.1	-
O3 (ppb) Average	685	34	35	99.86	-	-	59.8	0	46.1	-
NO2 (ppb) Average	682	37	38	99.86	-	-	27.2	0	9	-
NO (ppb) Average	682	37	38	99.86	-	-	19.9	-	2.5	-
NOX (ppb) Average	682	37	38	99.86	-	-	36.9	-	10.7	-
NH3 (ppb) Average	636	46	84	94.72	-	-	0	0	0	-
PM2.5 (ug/m3) Average	718	2	2	100	-	-	74	0	8.5	0
Temperature 2 m (C) Average	720	0	0	100	-	-	22	-	13.3	-
Relative Humidity (%) Average	720	0	0	100	-	-	99.3	-	89.3	-
Wind Speed 10 m (km/h) Average	710	0	10	98.61	-	-	36	-	23	-
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 - PATRICIA McINNES (AMS06)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	0.71	1.8	-	0	0	0.1	0.2	0.5	1.7	20.3
TRS (ppb) Average	683	0.16	0.1	-	0.1	0.1	0.1	0.1	0.2	0.2	0.7
THC (ppm) Average	682	2.04	0.1	-	1.9	2	2	2	2	2.1	3.1
NMHC(ppm) Average	682	0.005	0.029	-	0	0	0	0	0	0	0.334
CH4(ppm) Average	682	2.03	0.1	-	1.9	2	2	2	2	2.1	3
O3 (ppb) Average	685	35.64	10.4	-	1.9	21.7	28.3	37.5	43.7	47.4	59.8
NO2 (ppb) Average	682	3.31	4.1	-	0	0	0.6	1.9	4.5	7.9	27.2
NO (ppb) Average	682	0.85	1.7	-	0	0	0.1	0.3	0.8	1.9	19.9
NOX (ppb) Average	682	4.16	5.4	-	0	0.1	0.8	2.4	5.4	9.8	36.9
NH3 (ppb) Average	636	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	718	3.64	3.6	-	0.1	1.4	2.2	3	4.2	6.4	74
Temperature 2 m (C) Average	720	4.5	6.6	-	-13.7	-4	0	4.7	9.4	13.1	22
Relative Humidity (%) Average	720	56.98	22	-	17.1	28.8	38.8	55.6	74.5	89.2	99.3
Wind Speed 10 m (km/h) Average	710	11.9	7	-	0	5	7	10	16	22	36
Wind Direction 10 m (deg) Average	710	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	11 Apr 2025 13:00	11 Apr 2025 13:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	17 Apr 2025 10:00	17 Apr 2025 12:00	3	Maintenance - replaced support gas cylinder
NH3	01 Apr 2025 06:00	30 Apr 2025 06:00	37	Stabilization after daily QA check
Wind Speed, Wind Direction	09 Apr 2025 06:00	09 Apr 2025 07:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 01:00	20 Apr 2025 08:00	8	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

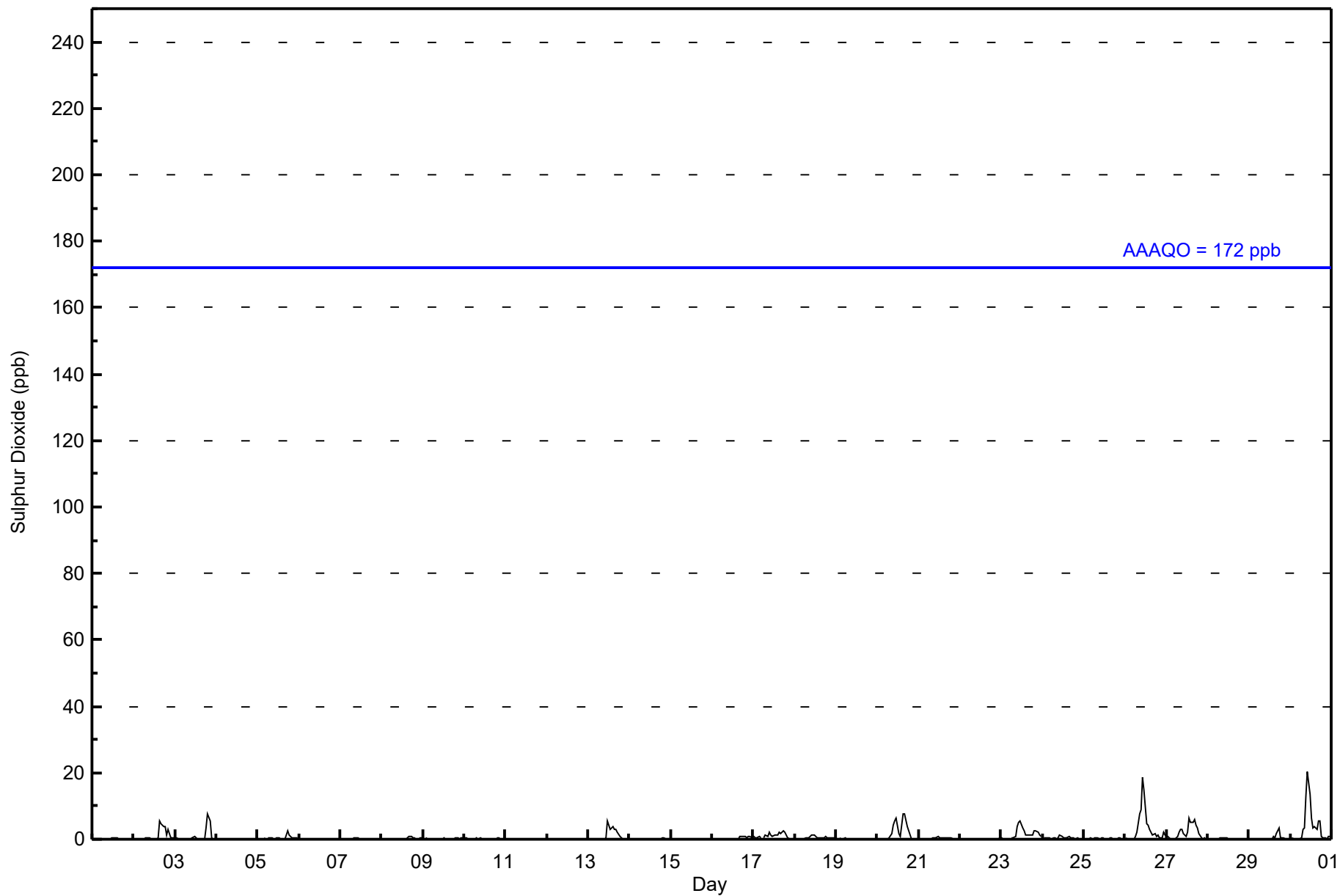
Patricia McInnes - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																Hours in Service: 720											
Maximum Value: 20.3 ppb on Apr 30 11:00 Maximum Daily Average: 3.7 ppb on Apr 30																Hours of Data: 685											
Minimum Value: 0.0 ppb on Apr 1 03:00 Minimum Daily Average: 0.0 ppb on Apr 11																Hours of Missing Data: 35											
Maximum Diurnal Average: 2.0 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 6																Hours of Calibration: 34											
Monthly Average: 0.71 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.7 P ₉₉ = 7.8																Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.5	0.5	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.5	
2-Apr	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.3	5.4	4.7	3.9	3.7	1.2	2.8	0.3	0.3	0.5	1.1	5.4	
3-Apr	0.6	0.4	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.8	0.2	0.1	0.2	0.1	0.0	0.1	3.4	7.8	5.7	0.5	0.1	0.0	0.9	7.8	
4-Apr	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	
5-Apr	0.1	0.2	0.1	0.2	0.2	Z	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	2.6	1.3	0.7	0.5	0.5	0.5	0.3	0.4	2.6	
6-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	
7-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4	
8-Apr	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	0.2	0.9	0.8	0.6	0.3	0.1	0.1	0.6	0.5	0.2	0.9	
9-Apr	0.3	0.2	0.3	Z	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.5	0.3	0.2	0.5	
10-Apr	0.5	0.2	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.5	
11-Apr	0.1	0.1	0.2	0.2	0.1	Z	0.1	0.1	C	C	C	C	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
12-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
13-Apr	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.6	5.5	4.1	3.1	3.7	3.1	2.9	2.2	1.0	0.3	0.2	0.1	0.1	0.0	1.2	5.5	
14-Apr	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.3	
15-Apr	0.1	0.1	0.2	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	
16-Apr	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.8	1.0	0.9	0.7	0.2	1.0	1.0	0.4	0.3	1.0	
17-Apr	0.7	0.3	0.5	0.7	0.6	Z	0.4	1.2	0.7	2.3	1.3	0.7	1.2	1.1	1.3	2.1	1.8	2.4	2.3	1.4	0.2	0.2	0.1	0.1	1.0	2.4	
18-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.7	1.3	1.1	0.8	0.4	0.2	0.3	0.2	0.2	0.7	0.4	0.3	0.6	0.5	0.3	0.4	1.3	
19-Apr	0.4	Z	0.2	0.2	0.1	0.2	0.2	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	0.1	0.4	
20-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.5	1.6	4.0	5.3	6.3	1.7	1.0	4.1	7.7	7.8	4.0	2.4	1.2	0.2	0.2	0.1	0.1	2.1	7.8	
21-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.7	
22-Apr	0.1	0.2	0.2	0.1	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.1	0.4	
23-Apr	0.3	0.2	0.1	0.1	0.1	Z	0.3	0.5	0.9	3.9	5.0	5.6	3.5	2.7	1.4	1.2	1.4	1.4	1.1	2.7	2.4	2.1	1.3	0.7	1.7	5.6	
24-Apr	Z	0.2	0.3	0.2	0.3	0.2	0.4	0.3	0.2	0.6	1.2	0.8	0.5	0.4	0.5	0.7	0.6	0.5	0.4	0.2	0.5	0.1	0.1	0.2	0.4	1.2	
25-Apr	0.2	Z	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.1	0.5	0.3	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.5	
26-Apr	0.2	0.3	Z	0.2	0.2	0.2	0.7	2.3	7.5	9.0	18.8	15.0	4.8	4.4	2.8	2.0	1.3	1.7	0.8	1.5	0.4	0.5	2.1	1.3	3.4	18.8	
27-Apr	1.0	0.8	0.2	Z	0.2	0.1	0.9	1.9	2.9	2.8	1.6	1.0	2.3	6.2	5.2	4.9	5.9	4.1	3.4	1.7	0.3	0.2	0.3	0.2	2.1	6.2	
28-Apr	0.2	0.1	0.1	0.0	Z	0.1	0.2	0.3	0.5	0.5	0.6	0.3	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.2	0.2	0.6	
29-Apr	0.2	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3	1.6	3.6	0.5	0.5	0.4	0.2	0.0	0.2	0.4	3.6	
30-Apr	Z	0.3	0.2	0.0	0.0	0.2	0.3	2.9	3.3	12.9	20.3	13.5	6.5	3.3	3.6	2.8	5.3	5.5	1.0	0.6	0.4	0.2	1.0	0.9	3.7	20.3	
		0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.7	1.4	2.0	1.8	1.0	0.8	0.9	1.1	1.2	1.2	0.8	0.8	0.6	0.3	0.3	0.3	Diurnal Average		
		1.0	0.8	0.5	0.7	0.6	0.2	0.9	2.9	7.5	12.9	20.3	15.0	6.5	6.2	5.2	7.7	7.8	5.5	3.7	7.8	5.7	2.1	2.1	1.3	Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	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: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	79	30	14	20	17	57	76	30	47	33	35	41	58	51	34	49	671
11 - 20	4	0	1	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	83	30	15	20	17	57	76	30	47	33	35	41	58	51	34	49	676

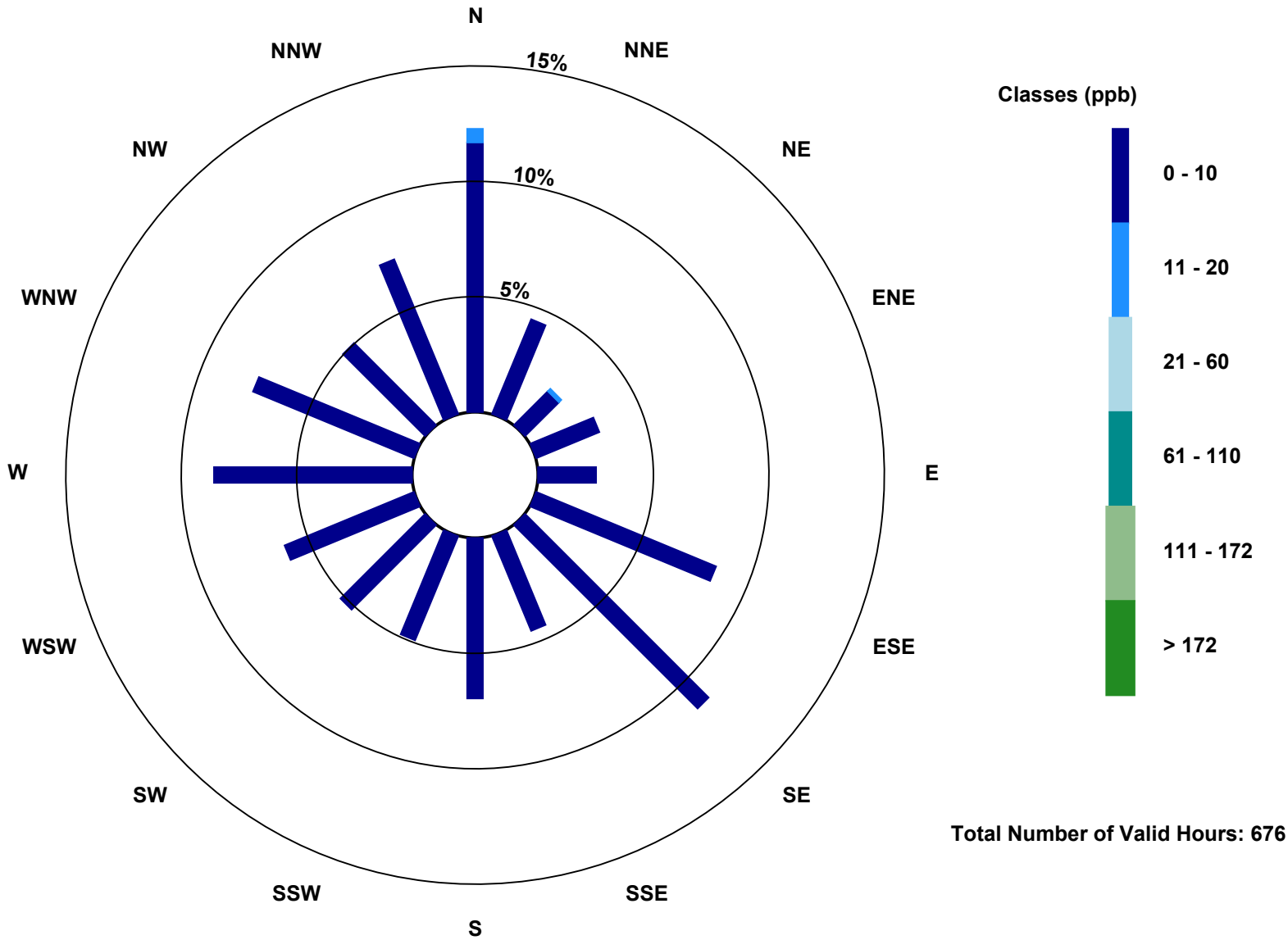
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

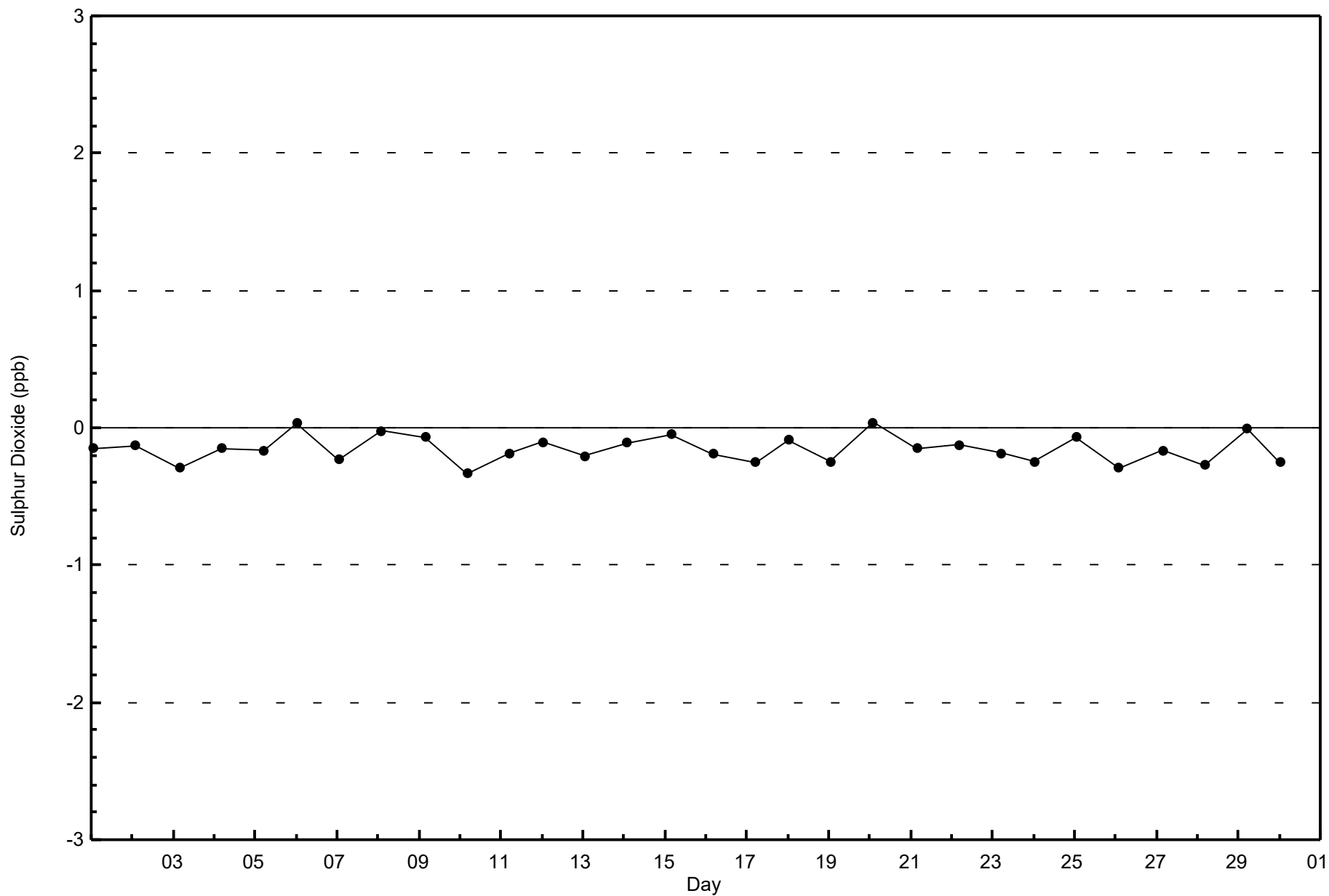
Sulphur Dioxide (SO₂) - ppb
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

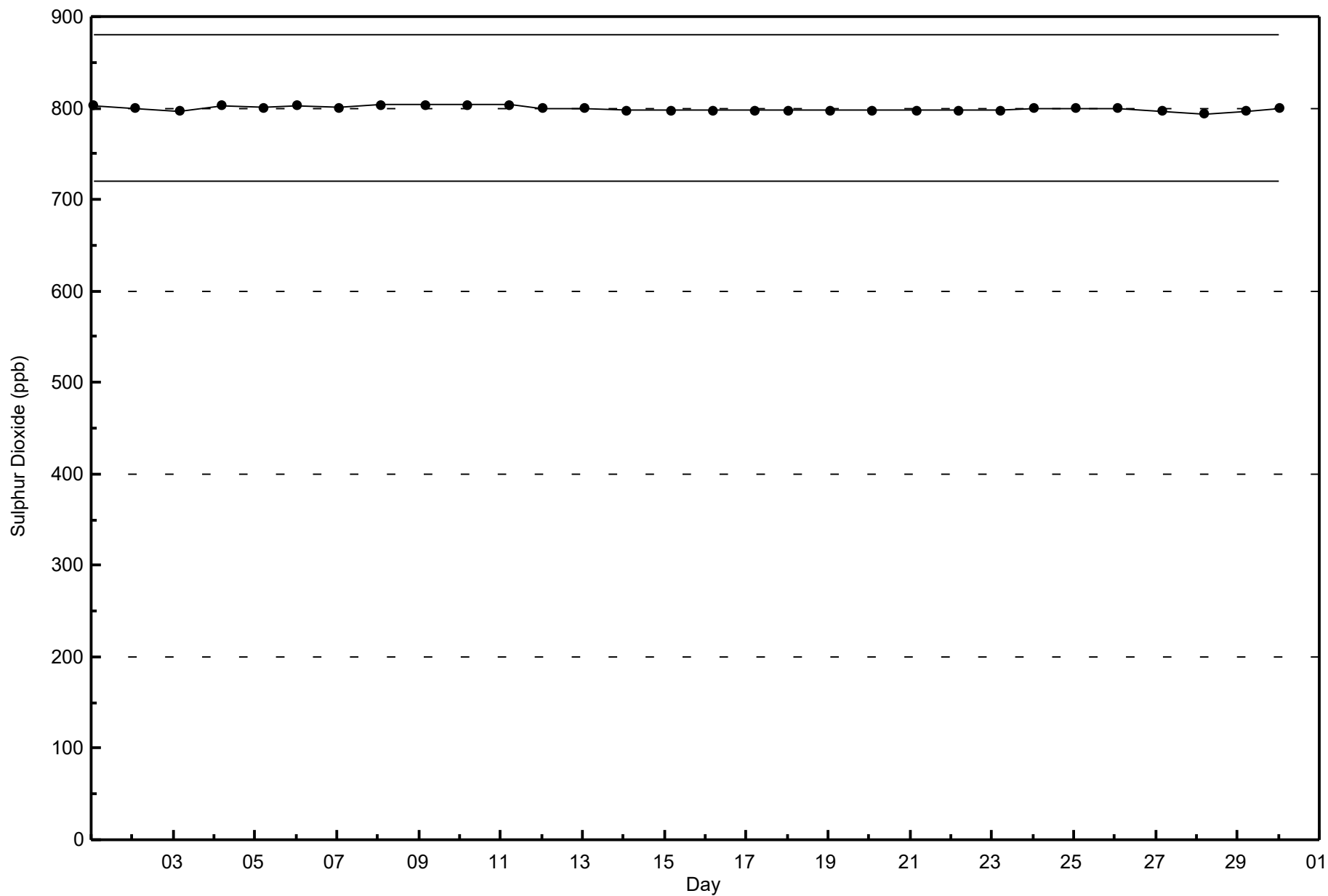
Sulphur Dioxide (SO₂) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																		Periods in Service: 1440									
Maximum Value: 0.8 ppb on Apr 26 07:30 Maximum Daily Average: 0.3 ppb on Apr 26																		Periods of Valid Data: 1367									
Minimum Value: 0.1 ppb on Apr 10 17:00 Minimum Daily Average: 0.1 ppb on Apr 28																		Periods of Invalid Data: 73									
Maximum Diurnal Average: 0.2 ppb at hour 12 Minimum Diurnal Average: 0.1 ppb at hour 17																		Periods of Calibration: 71									
Monthly Average: 0.16 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.6																		Percent Operational Time: 99.9									
Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
1-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
2-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.3	0.2 0.2	0.3 0.2	0.1	0.3
3-Apr	0.3 0.2	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.3
4-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1	0.2
5-Apr	Z 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 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.4	0.4 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2	0.4
6-Apr	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.1
7-Apr	0.1 0.1	0.1 0.1	Z SP	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	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
8-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.3	0.4 0.4	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.5	0.4 0.6	0.6 0.6	0.6 0.6	0.3	0.6
9-Apr	0.6 0.6	0.5 0.5	0.6 0.6	0.5 0.4	Z SP	0.3 0.3	0.3 0.3	0.2 0.1	0.2 0.1	0.1 0.3	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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	0.6
10-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
11-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.2 0.1	M M	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1	0.2
12-Apr	0.1 0.2	Z SP	0.2 0.2	0.1 0.2	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 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.1	0.1 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
14-Apr	0.2 0.2	0.2 0.2	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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
15-Apr	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	Z SP	0.2 0.2	0.2 0.1	0.1 0.2	C C	C C	C C	C C	C C	C 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	0.2 0.2	0.2 0.2	0.2 0.2	--	0.3
17-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.3	0.2 0.3	0.5 0.2	0.2 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.1 0.1	0.1 0.1	0.2	0.5
18-Apr	0.1 0.1	Z SP	0.2 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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	0.2
19-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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	0.2 0.2	0.2 0.2	0.1	0.3
20-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	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 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.3
21-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	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 0.1	0.1 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 0.2	0.1	0.2
22-Apr	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	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	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2	0.2
23-Apr	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.4	0.4 0.6	0.2 0.3	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.2	0.6
24-Apr	0.3 0.3	Z SP	0.3 0.4	0.4 0.3	0.4 0.4	0.3 0.4	0.4 0.4	0.3 0.2	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.4 0.3	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.4
25-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.2 0.6	0.8 0.6	0.6 0.5	0.6 0.6	0.7 0.7	0.8 0.3	0.4 0.4	0.4 0.6	0.3 0.3	0.2 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	0.3 0.3	0.3 0.2	0.3	0.8
27-Apr	0.2 0.2	0.3 0.2	0.1 0.1	0.1 0.1	Z 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 0.1	0.2 0.5	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.1	0.2	0.5
28-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
29-Apr	Z SP	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.3	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1	0.3
30-Apr	0.2 0.2	Z SP	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.3	0.3 0.2	0.2 0.2	0.3 0.4	0.3 0.2	0.2 0.2	0.3 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.2	0.2	0.4
																								Diurnal Average		
																								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

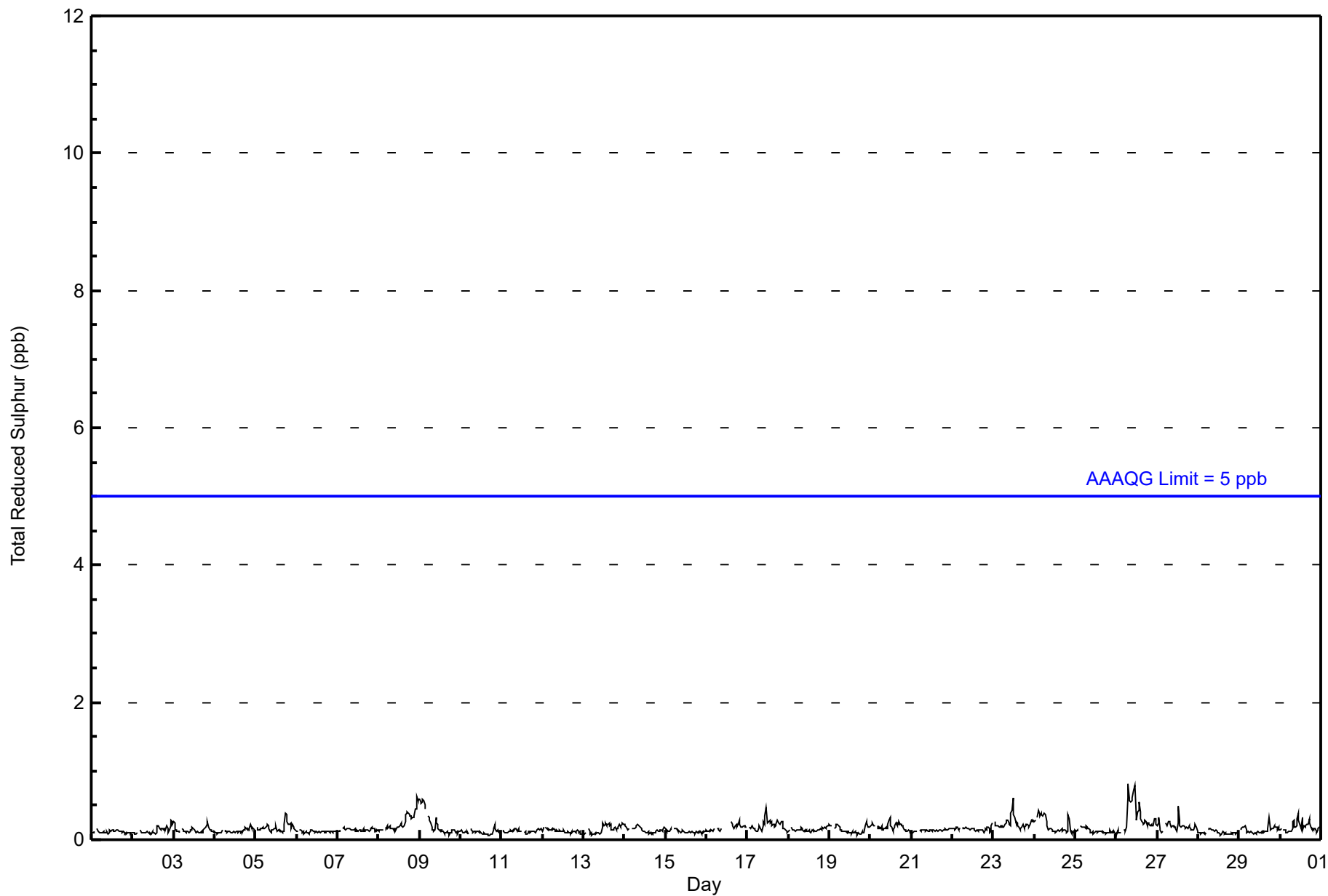
Patricia McInnes - April 2025

Maximum Value: 0.7 ppb on Apr 26 08:00																				Maximum Daily Average: 0.3 ppb on Apr 26					Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 10 17:00																				Minimum Daily Average: 0.1 ppb on Apr 28					Hours of Data: 683	
Maximum Diurnal Average: 0.2 ppb at hour 12																				Minimum Diurnal Average: 0.1 ppb at hour 17					Hours of Missing Data: 37	
Monthly Average: 0.16 ppb																				Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.6					Hours of Calibration: 36	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.3
3-Apr	0.2	0.1	0.1	0.1	Z	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
4-Apr	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2
5-Apr	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3
6-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2
8-Apr	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.6	0.3	0.6
9-Apr	0.6	0.5	0.6	0.5	Z	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
10-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2
11-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	M	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
12-Apr	0.1	Z	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	0.2
13-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
14-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
15-Apr	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
16-Apr	0.1	0.1	0.1	0.1	0.2	Z	0.2	0.1	0.1	C	C	C	C	C	C	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	--	0.3
17-Apr	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.4	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.4
18-Apr	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
19-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
20-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	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
21-Apr	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	0.2	0.2	0.1	0.2
22-Apr	0.2	0.2	0.2	0.2	0.2	Z	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	0.2	0.1	0.2	0.2	0.2
23-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.5
24-Apr	0.3	Z	0.4	0.4	0.4	0.4	0.4	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	0.3	0.1	0.1	0.1	0.2	0.4
25-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
26-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.4	0.7	0.6	0.6	0.7	0.6	0.3	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.7
27-Apr	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.4
28-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
29-Apr	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2
30-Apr	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	82	29	15	21	17	59	76	29	49	34	34	42	58	51	32	46	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	82	29	15	21	17	59	76	29	49	34	34	42	58	51	32	46	674

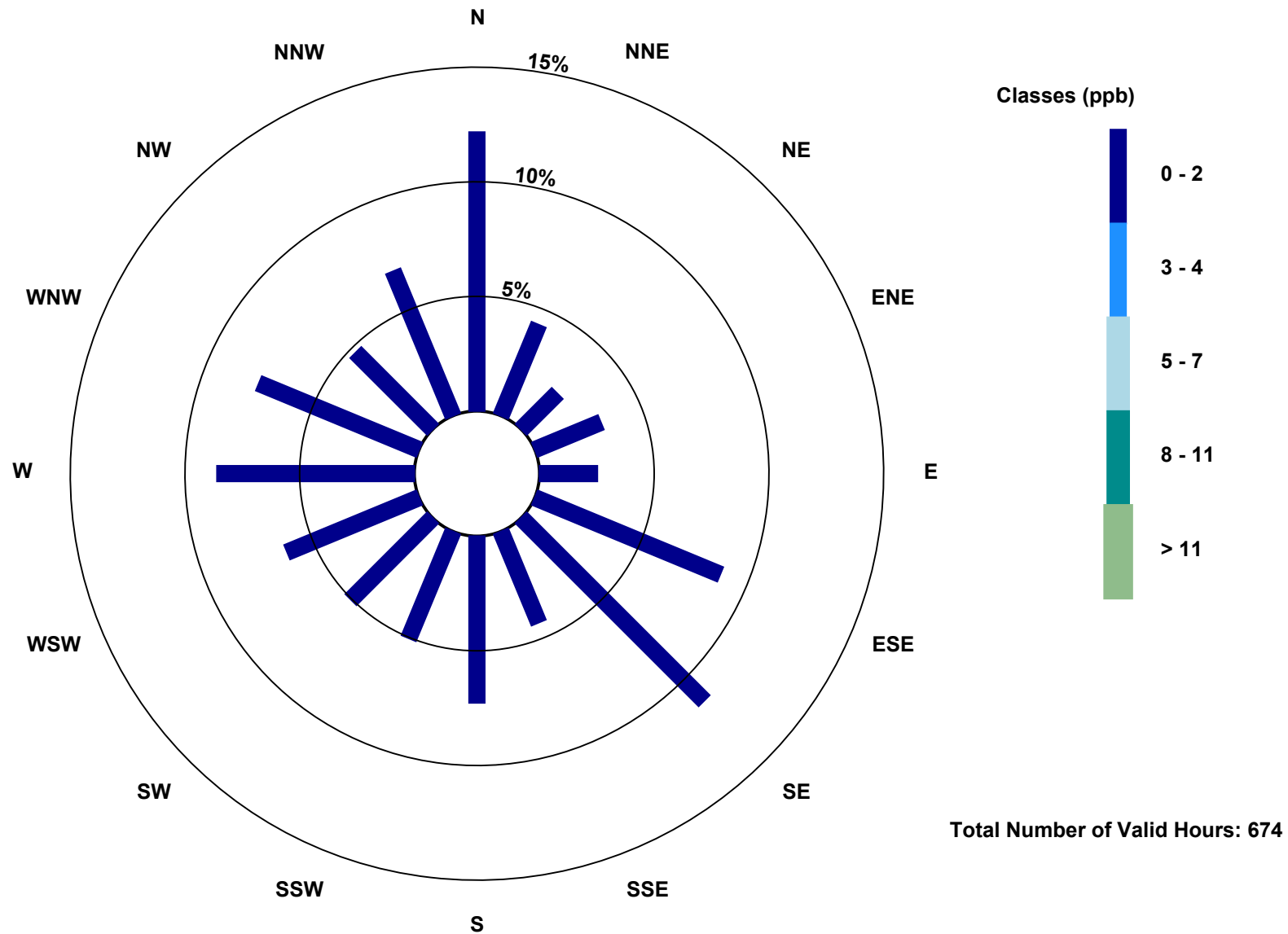
Total Number of Valid Hours: 674

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

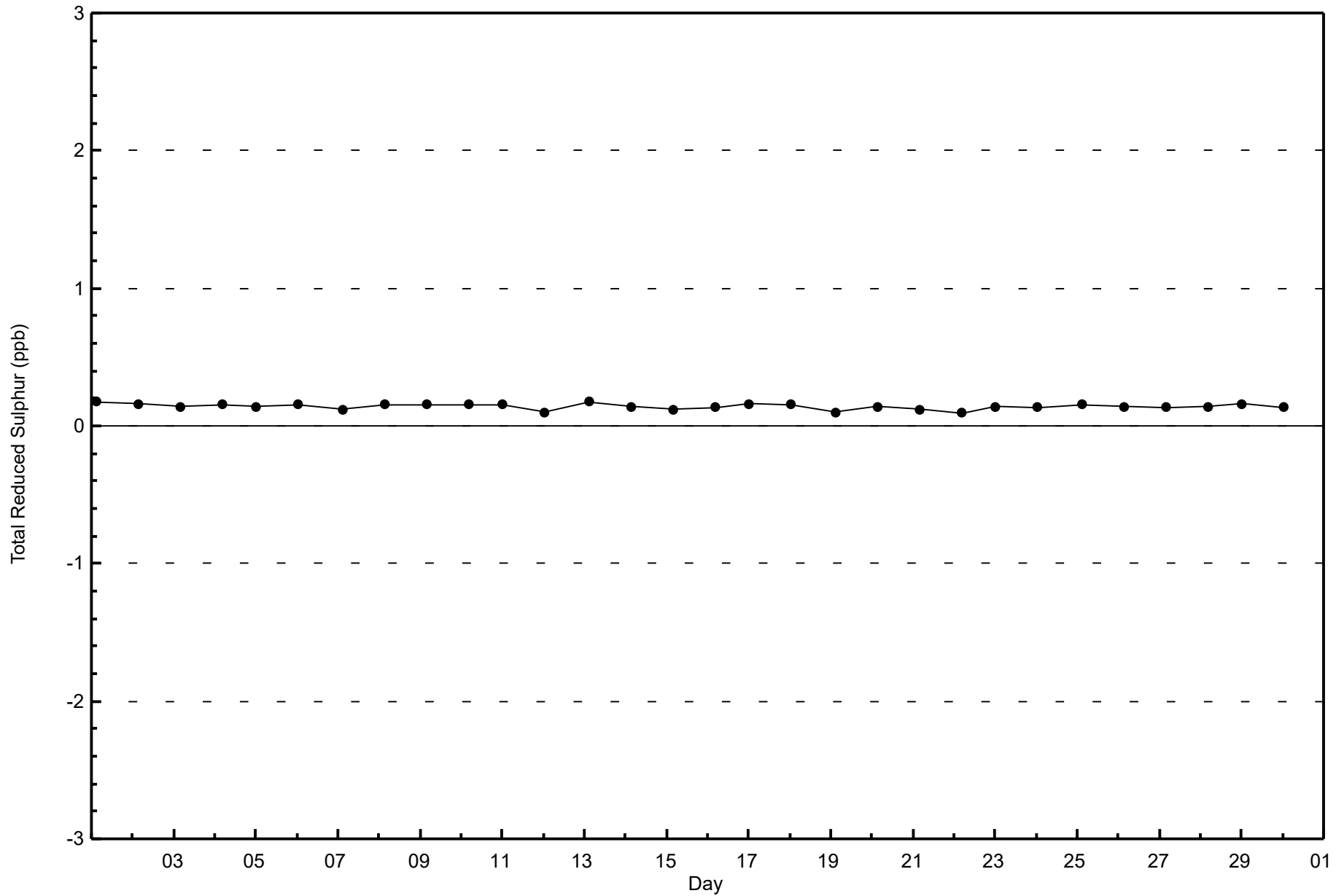
Total Reduced Sulphur (TRS) - ppb
Patricia McInnes

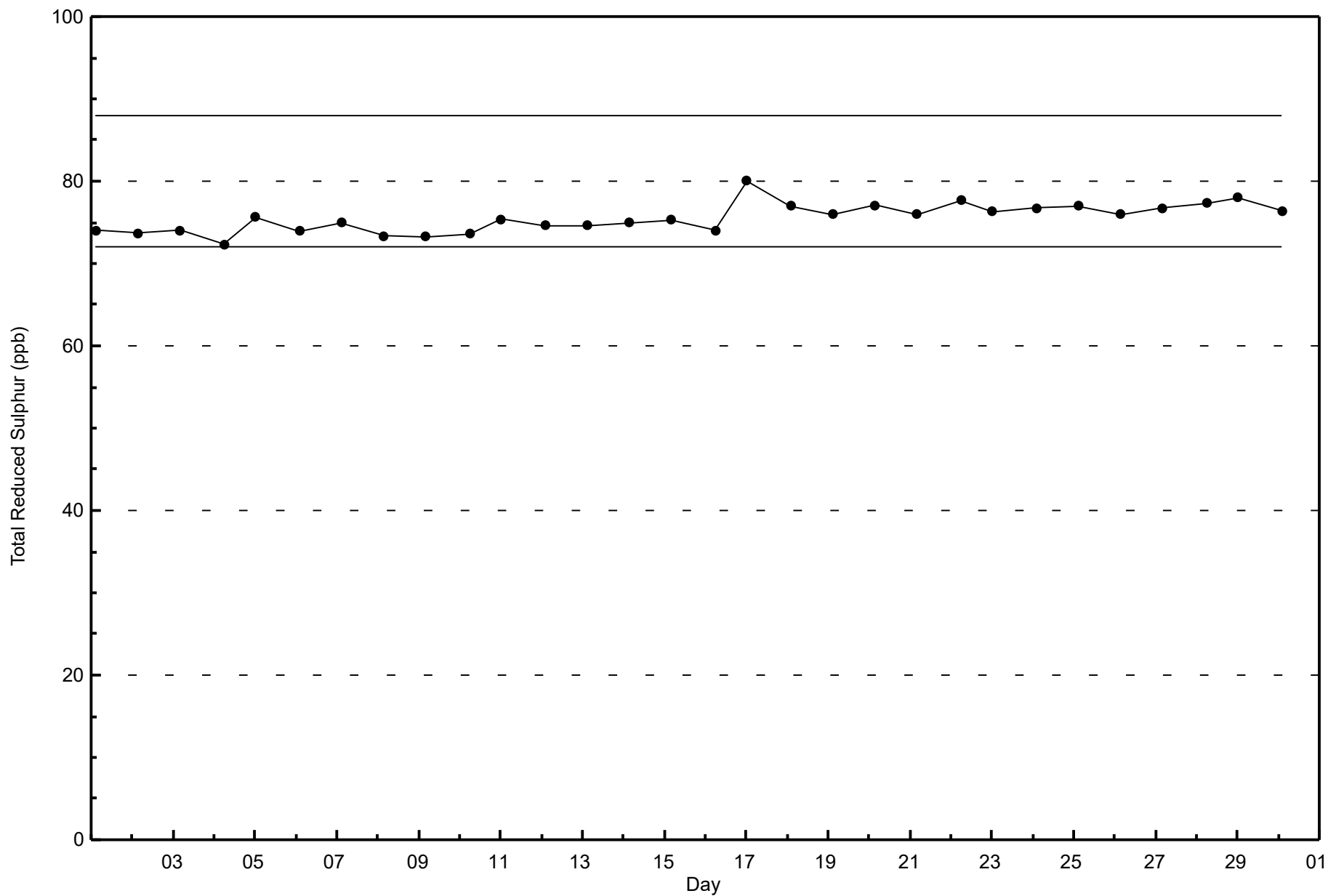




Wood Buffalo Environmental Association
Zero Responses

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



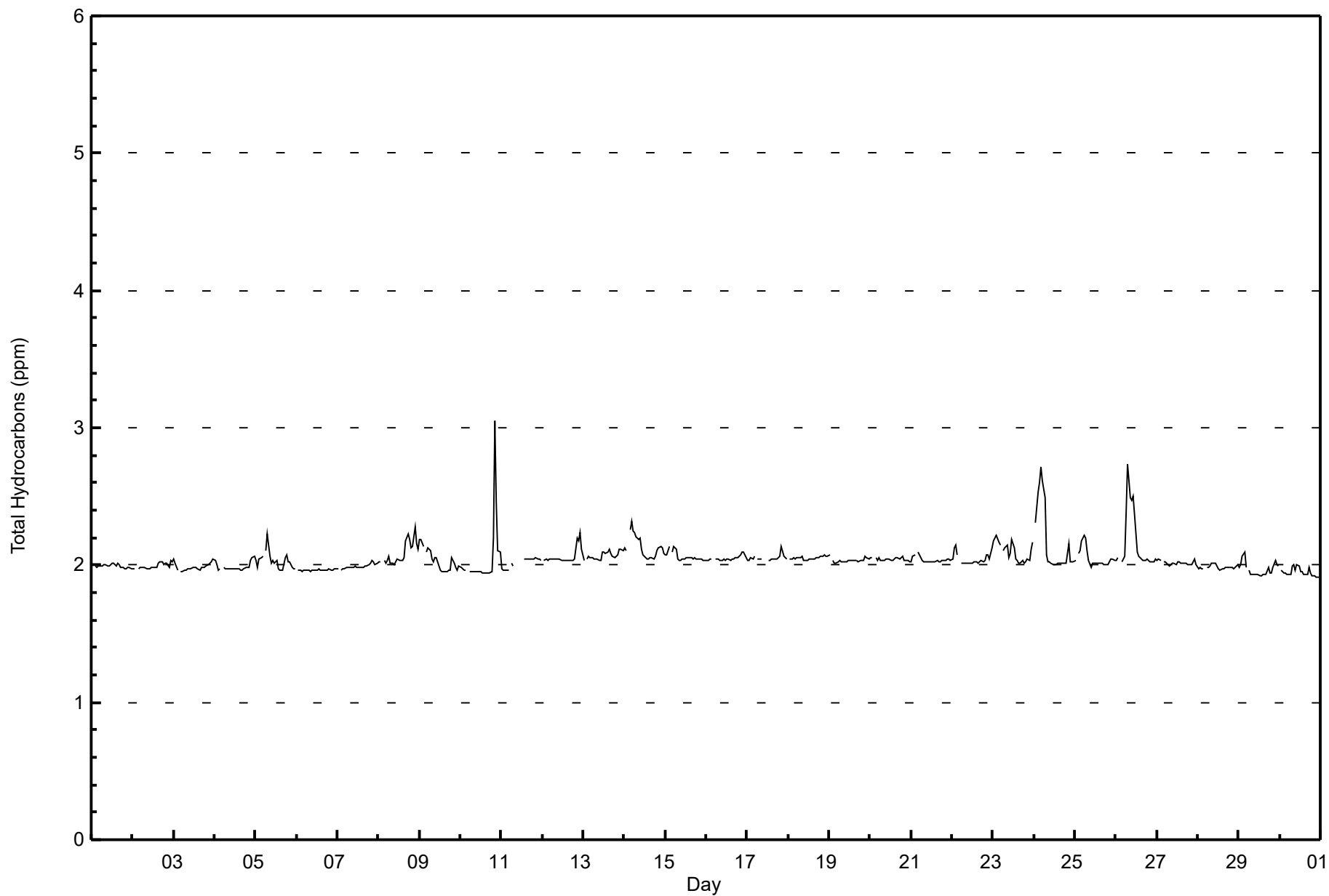


Maximum Value: 3.1 ppm on Apr 10 21:00																				Maximum Daily Average: 2.2 ppm on Apr 24					Hours in Service: 720				
Minimum Value: 1.9 ppm on Apr 30 22:00																				Minimum Daily Average: 1.9 ppm on Apr 30					Hours of Data: 682				
Maximum Diurnal Average: 2.1 ppm at hour 21																				Minimum Diurnal Average: 2.0 ppm at hour 15					Hours of Missing Data: 38				
Monthly Average: 2.04 ppm																				Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.5					Hours of Calibration: 34				
																				Percent Operational Time: 99.4									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2-Apr	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			
3-Apr	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			
4-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1			
5-Apr	2.0	2.0	2.0	2.1	2.1	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.2			
6-Apr	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			
7-Apr	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			
8-Apr	2.0	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	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.3			
9-Apr	2.2	2.2	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.1	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	2.2			
10-Apr	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	1.9	1.9	1.9	2.0	2.2	3.1	2.5	2.1	2.1	2.0	3.1			
11-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	C	C	C	C	M	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			
12-Apr	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	2.2	2.2	2.1	2.1	2.2			
13-Apr	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
14-Apr	2.1	2.1	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3			
15-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1			
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1			
17-Apr	2.0	2.0	2.1	2.0	2.1	Z	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1			
18-Apr	Z	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	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
19-Apr	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1			
20-Apr	2.1	2.1	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1			
21-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
22-Apr	2.0	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1			
23-Apr	2.2	2.2	2.2	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2			
24-Apr	Z	2.3	2.5	2.6	2.7	2.6	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.2	2.7			
25-Apr	2.0	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2			
26-Apr	2.0	2.1	Z	2.0	2.0	2.1	2.4	2.7	2.5	2.5	2.5	2.4	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.7				
27-Apr	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			
28-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
29-Apr	2.0	2.0	2.1	2.1	2.0	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.1				
30-Apr	Z	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	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	517	75.81	75.81
2.1 - 3.0	164	24.05	99.85
3.1 - 10.0	1	0.15	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	60	15	9	14	14	49	58	14	34	29	29	32	50	43	28	36	514
2.1 - 3.0	20	15	6	6	3	7	18	16	13	4	6	9	8	8	6	13	158
3.1 - 10.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	80	30	15	20	17	57	76	30	47	33	35	41	58	51	34	49	673

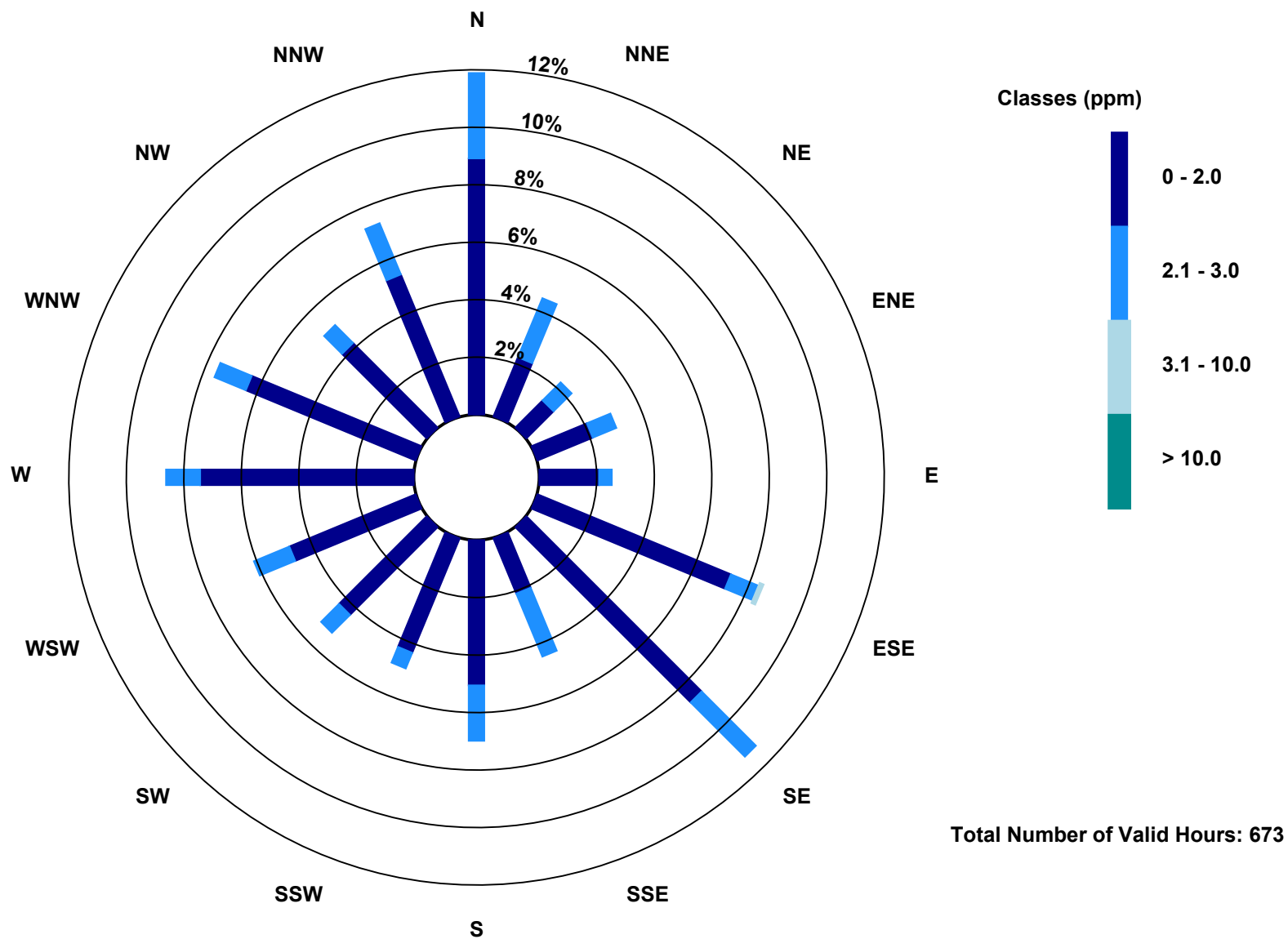
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

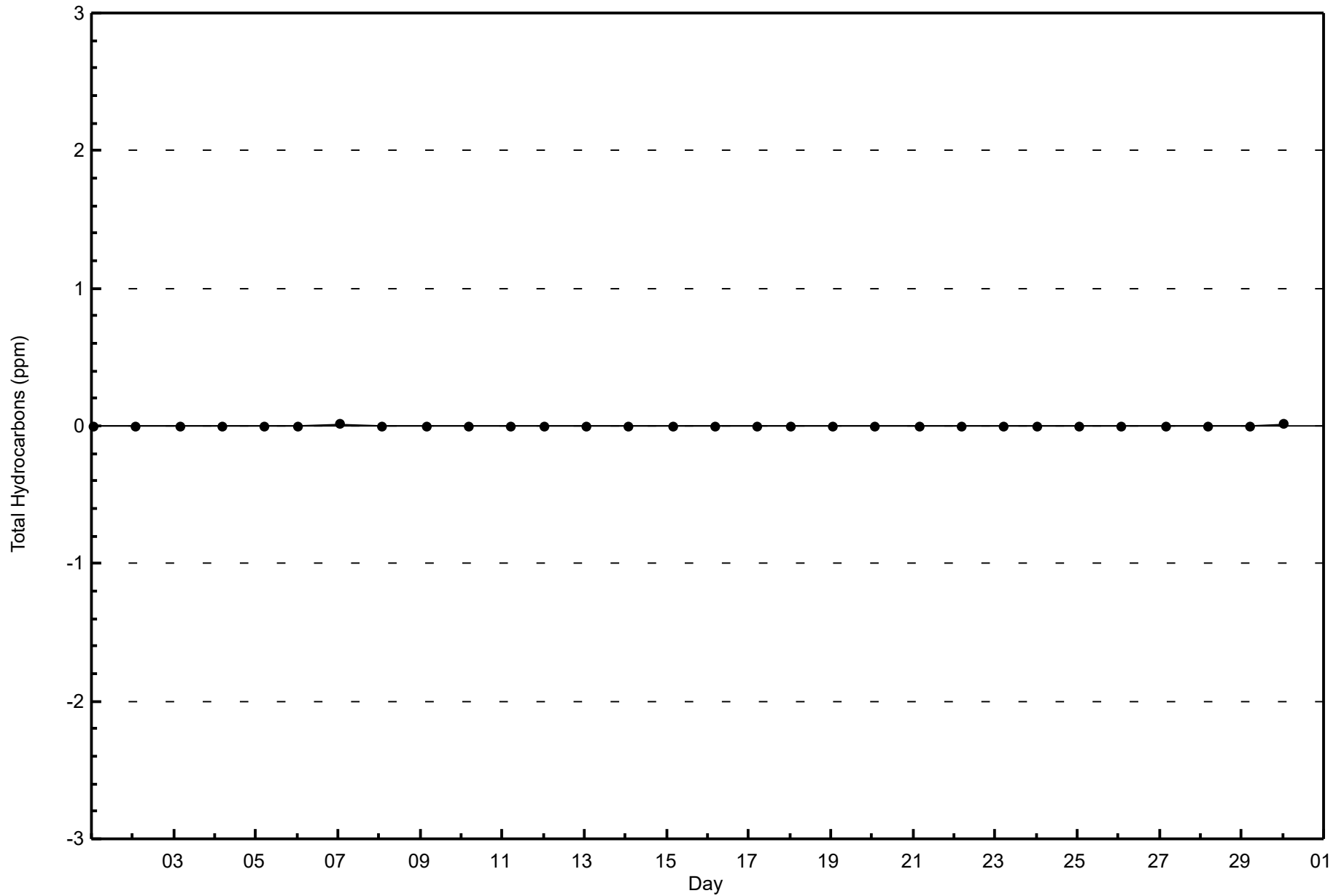
Total Hydrocarbons (THC) - ppm
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

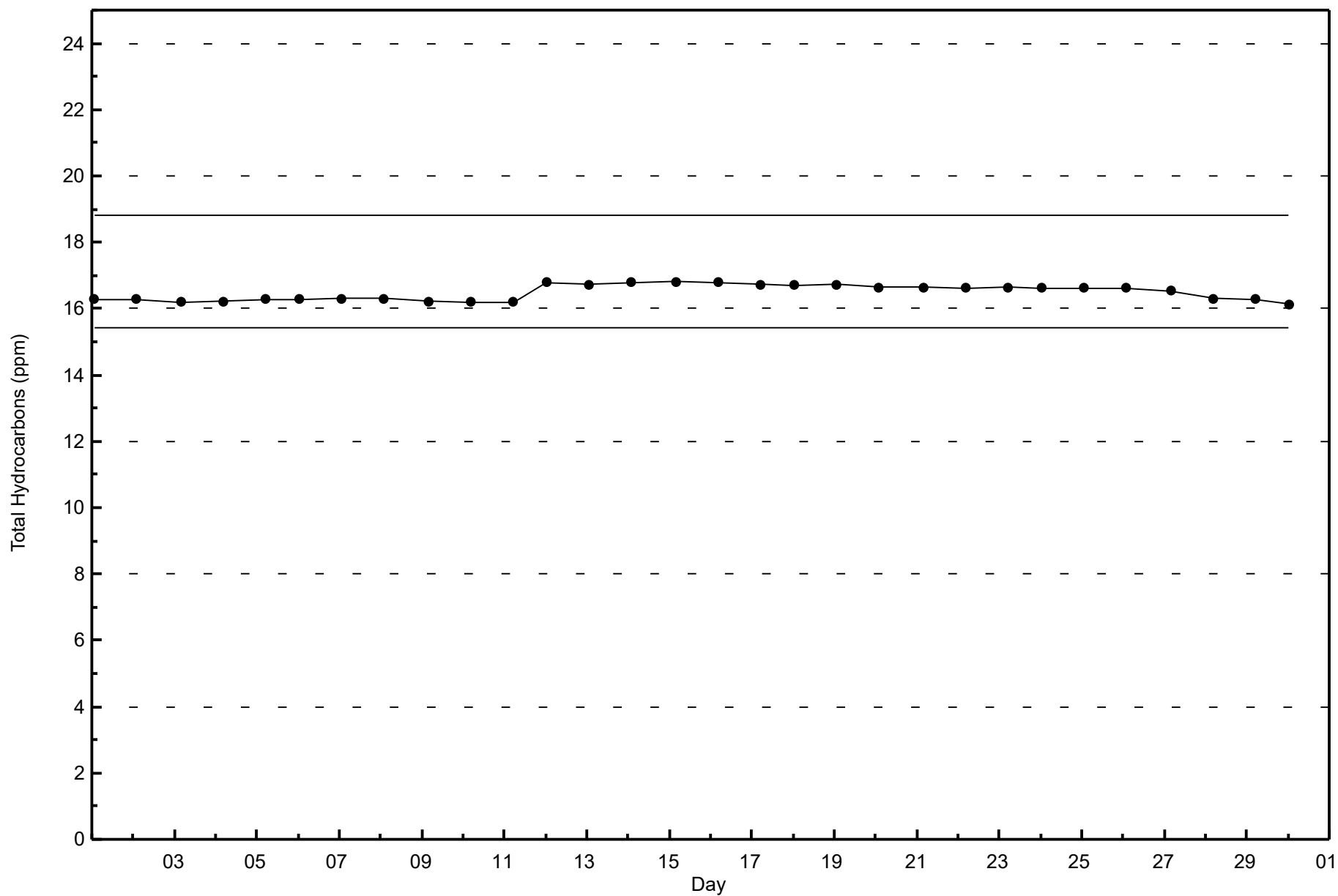
Total Hydrocarbons (THC) - ppm
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Span Responses

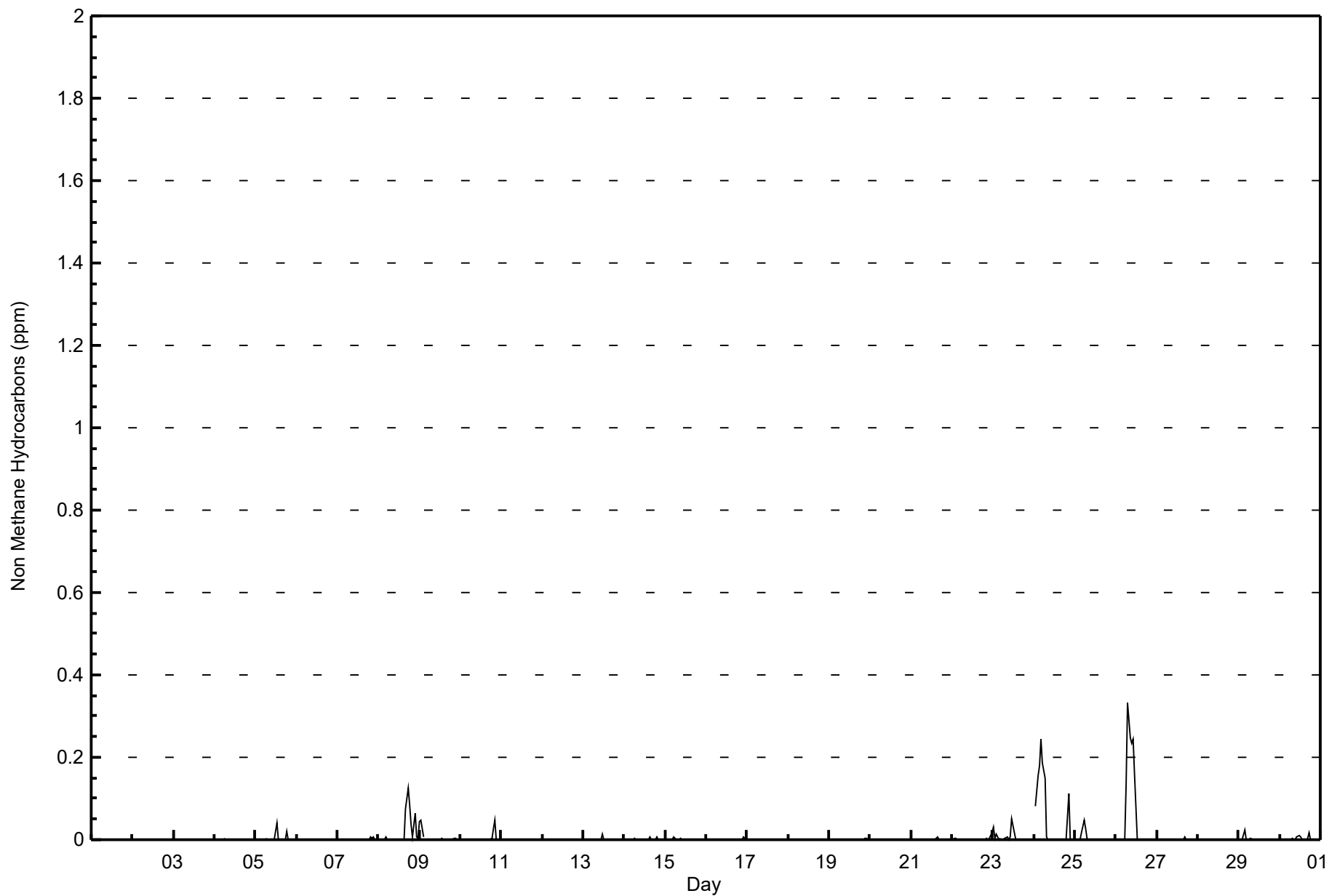
Total Hydrocarbons (THC) - ppm
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	635	93.11	93.11
0.006 - 0.05	30	4.40	97.51
0.06 - 0.1	8	1.17	98.68
> 0.1	9	1.32	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	73	26	11	16	17	54	71	28	45	32	34	38	58	48	31	44	626
0.006 - 0.05	3	2	3	3	0	3	3	2	2	0	1	3	0	2	2	1	30
0.06 - 0.1	2	1	0	1	0	0	2	0	0	0	0	0	0	0	1	1	8
> 0.1	2	1	1	0	0	0	0	0	0	1	0	0	0	1	0	3	9
Totals	80	30	15	20	17	57	76	30	47	33	35	41	58	51	34	49	673

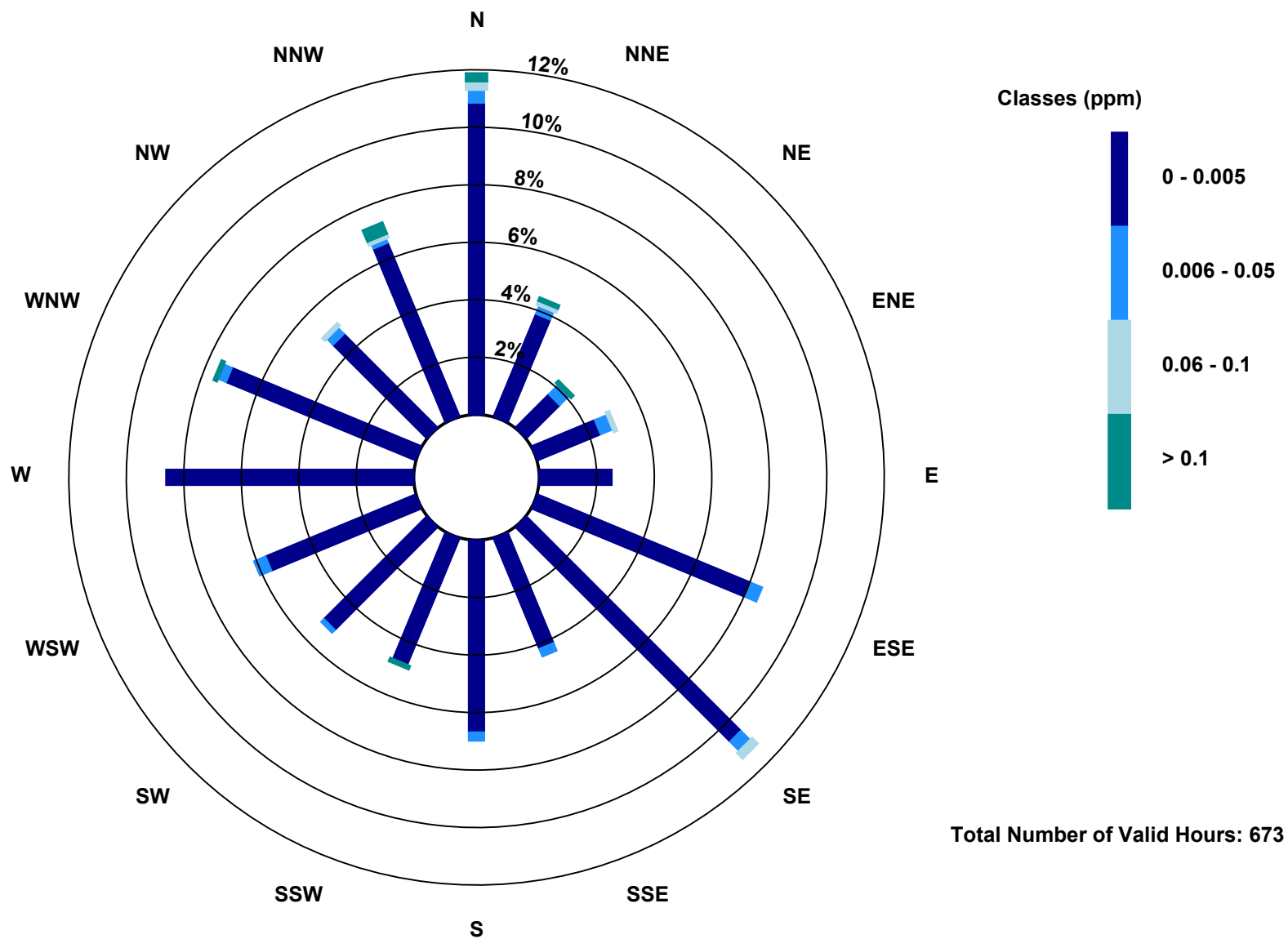
Total Number of Valid Hours: 673

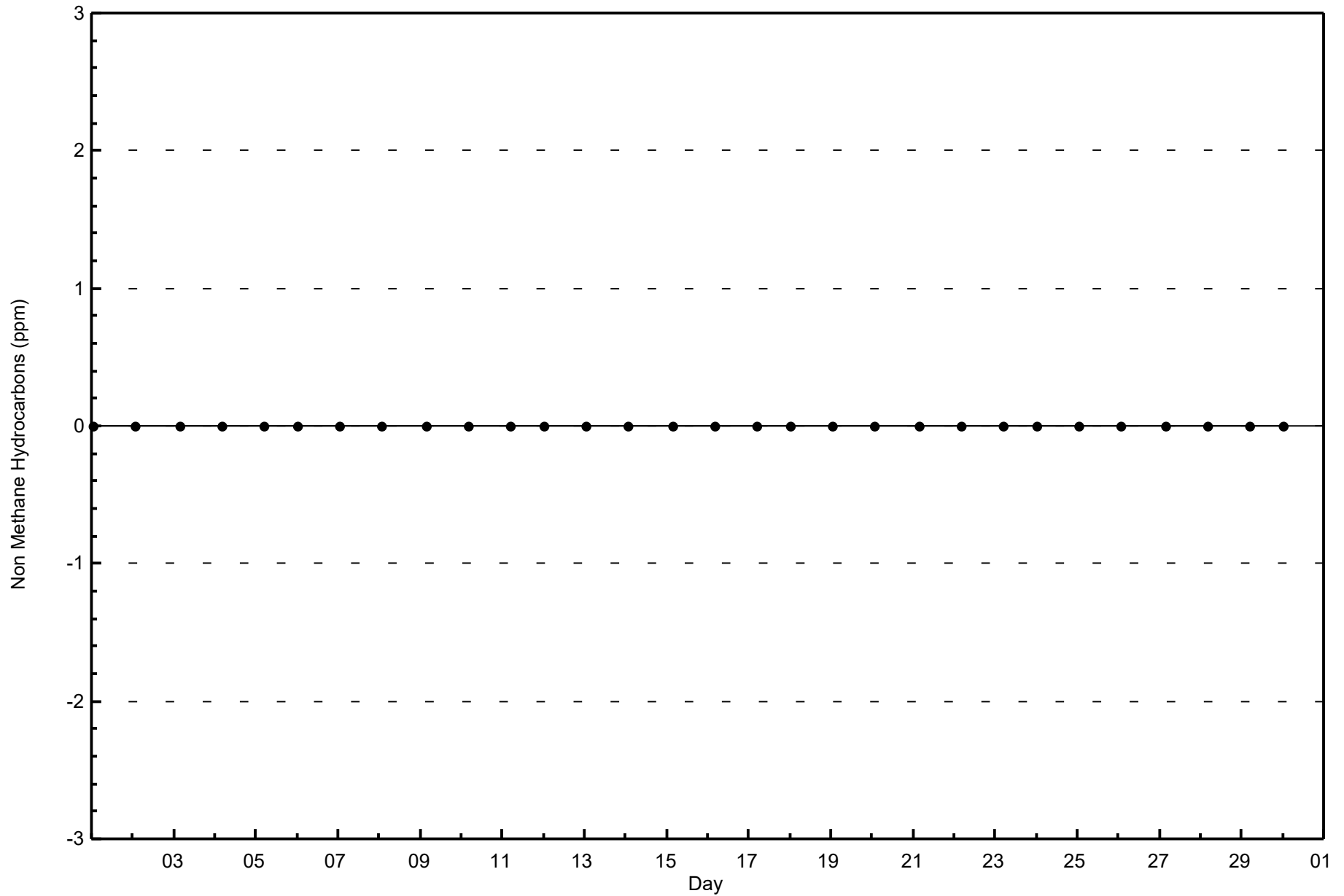
Total Number of Hours: 720

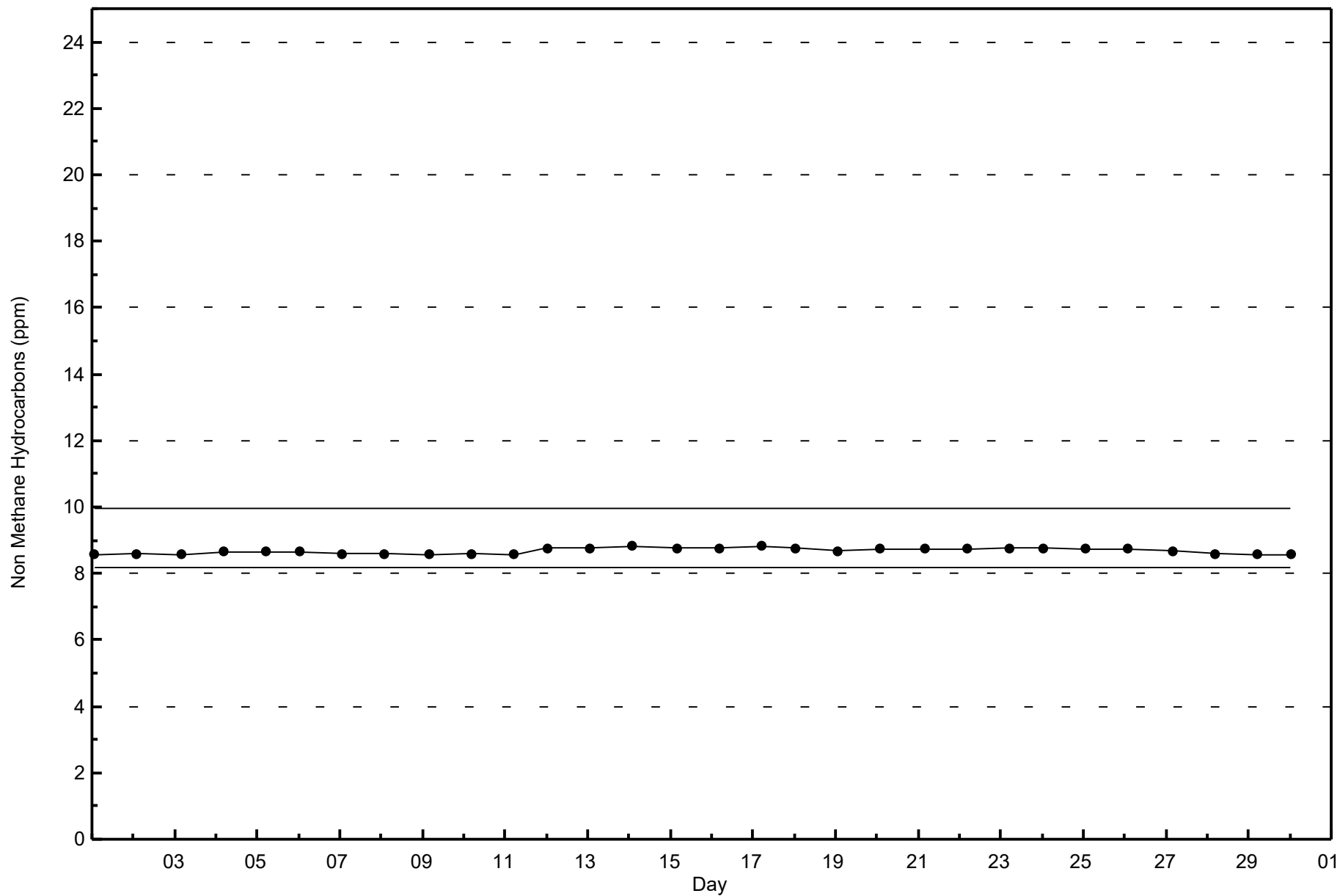


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Patricia McInnes





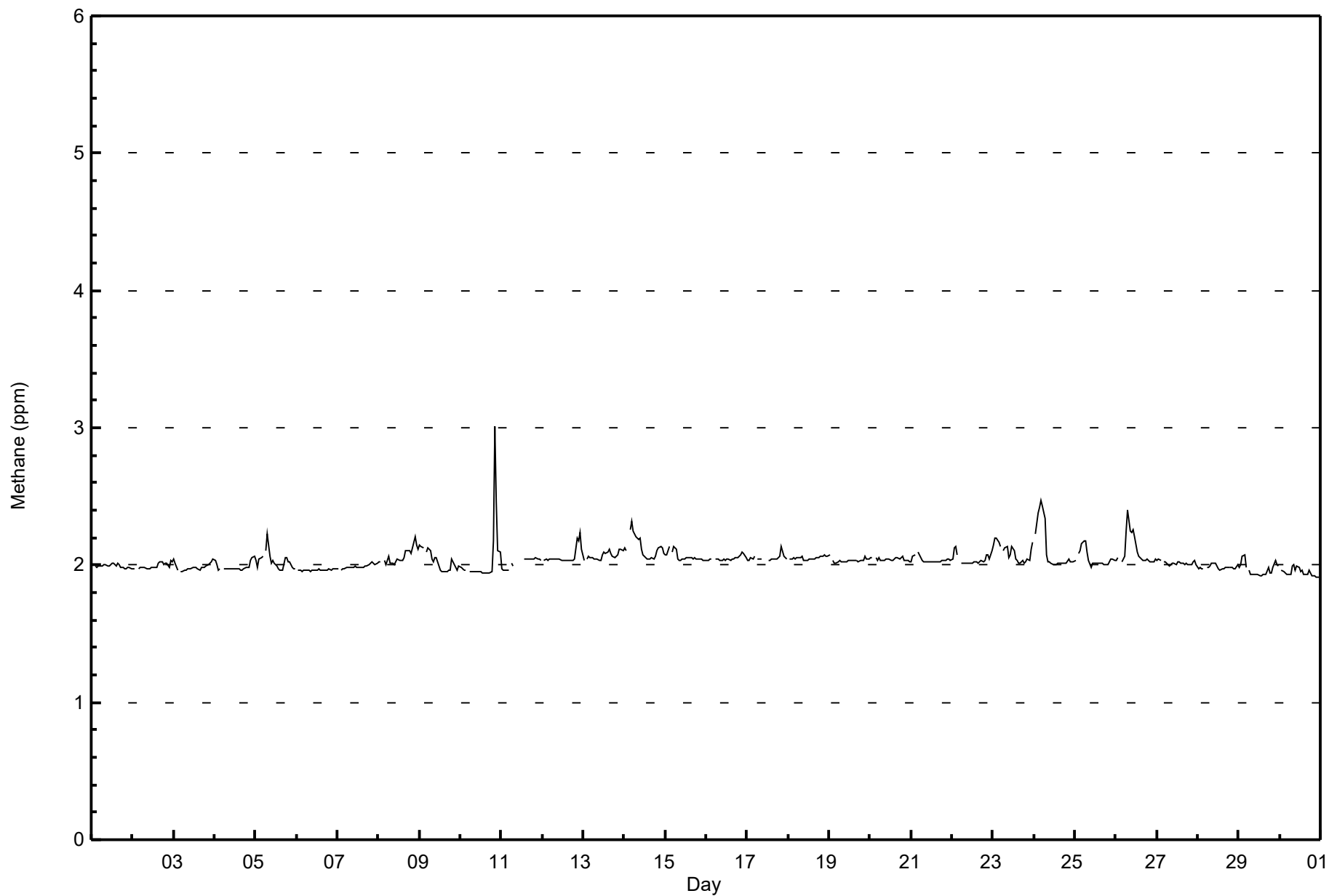


Number of Exceedences (AAAQO): Maximum Value: 3.0 ppm on Apr 10 21:00																	1-hr: 0 24-hr: 0 Maximum Daily Average: 2.1 ppm on Apr 14										Hours in Service: 720 Hours of Data: 682 Hours of Missing Data: 38 Hours of Calibration: 34 Percent Operational Time: 99.4				
Minimum Value: 1.9 ppm on Apr 30 22:00 Maximum Diurnal Average: 2.1 ppm at hour 21 Monthly Average: 2.03 ppm																	Minimum Daily Average: 1.9 ppm on Apr 30 Minimum Diurnal Average: 2.0 ppm at hour 15 Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.3														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
2-Apr	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					
3-Apr	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					
4-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1					
5-Apr	2.0	2.0	2.0	2.1	2.1	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.2					
6-Apr	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					
7-Apr	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					
8-Apr	2.0	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	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2					
9-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.1	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	2.1					
10-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	3.0	2.5	2.1	2.1	2.0	3.0					
11-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	C	C	C	C	M	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					
12-Apr	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	2.2	2.2	2.1	2.1	2.2					
13-Apr	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1					
14-Apr	2.1	2.1	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3					
15-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1					
16-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1					
17-Apr	2.0	2.0	2.1	2.0	2.1	Z	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1					
18-Apr	Z	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	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1					
19-Apr	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1					
20-Apr	2.1	2.1	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1					
21-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
22-Apr	2.0	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1					
23-Apr	2.1	2.2	2.2	2.2	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	2.2	2.1	2.2					
24-Apr	Z	2.2	2.4	2.4	2.5	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5					
25-Apr	2.0	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2					
26-Apr	2.0	2.1	Z	2.0	2.0	2.1	2.2	2.4	2.2	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	2.1	2.4					
27-Apr	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					
28-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
29-Apr	2.0	2.0	2.1	2.1	2.0	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1					
30-Apr	Z	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	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0					
																									Diurnal Average						
																									Diurnal Maximum						
Z - zerospan C - Calibration M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Patricia McInnes - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	520	76.25	76.25
2.1 - 3.0	162	23.75	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Patricia McInnes - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	61	15	9	14	14	49	59	14	35	29	29	32	50	43	28	36	517
2.1 - 3.0	19	15	6	6	3	8	17	16	12	4	6	9	8	8	6	13	156
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	80	30	15	20	17	57	76	30	47	33	35	41	58	51	34	49	673

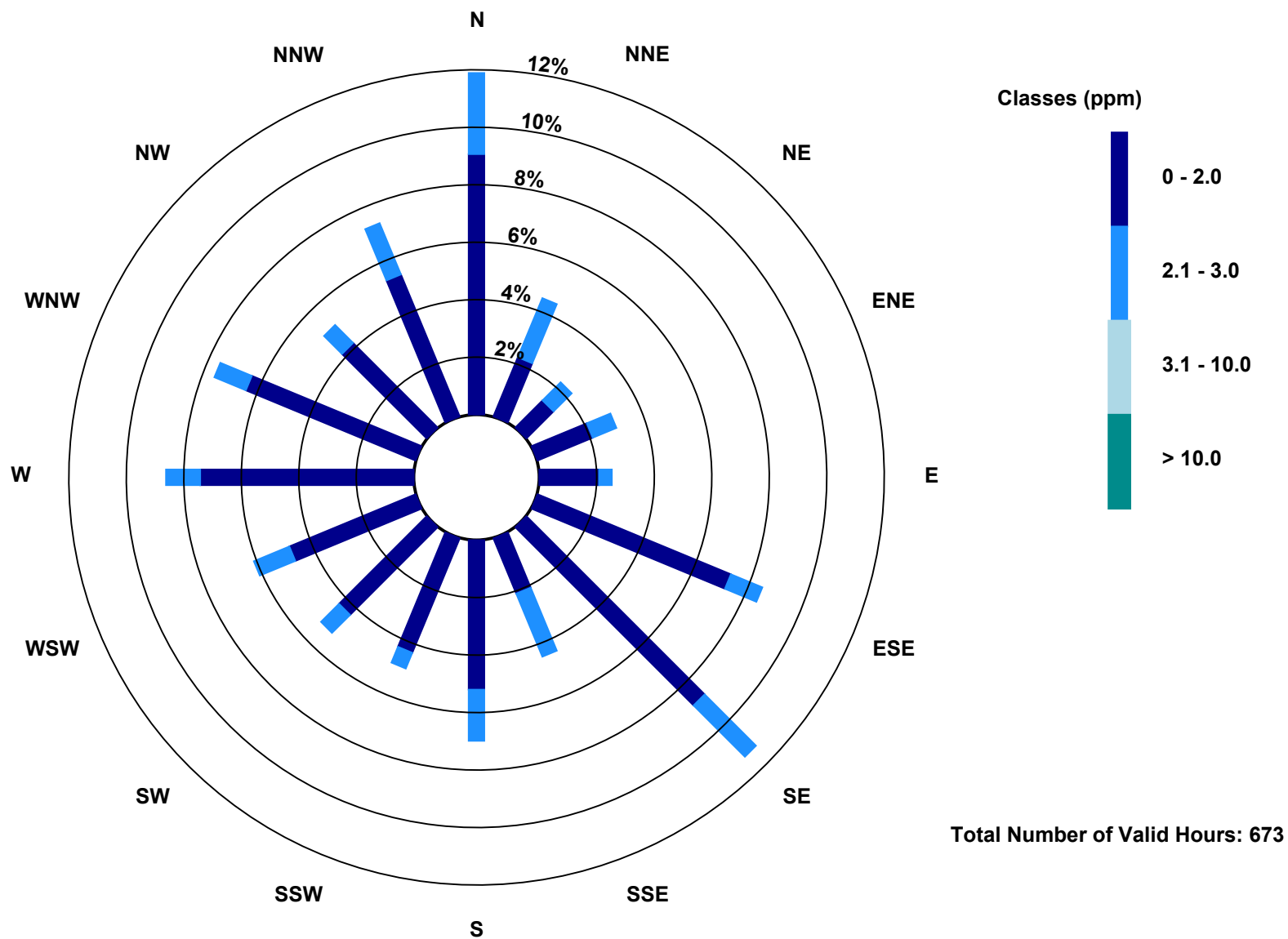
Total Number of Valid Hours: 673

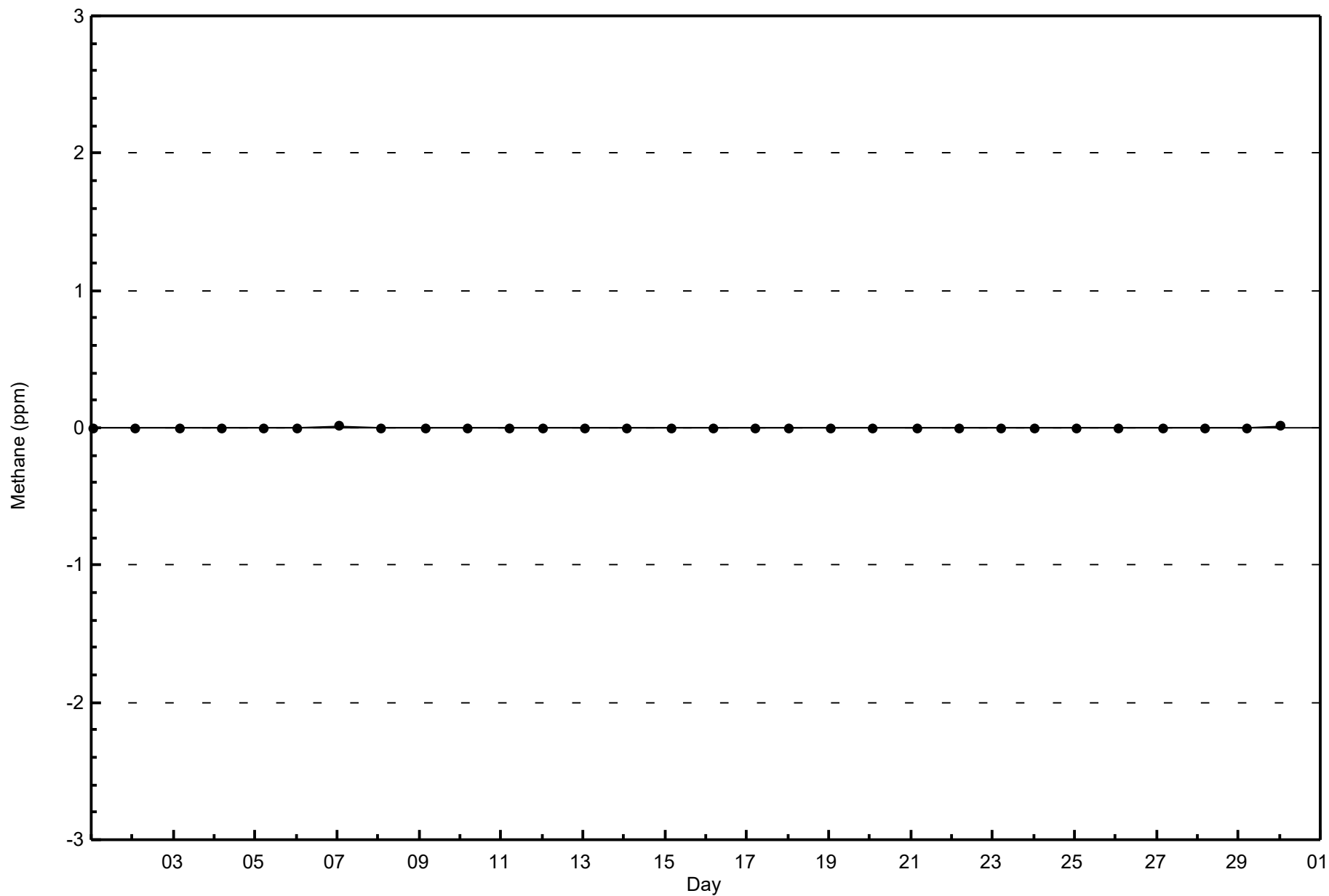
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Methane (CH₄) - ppm
Patricia McInnes

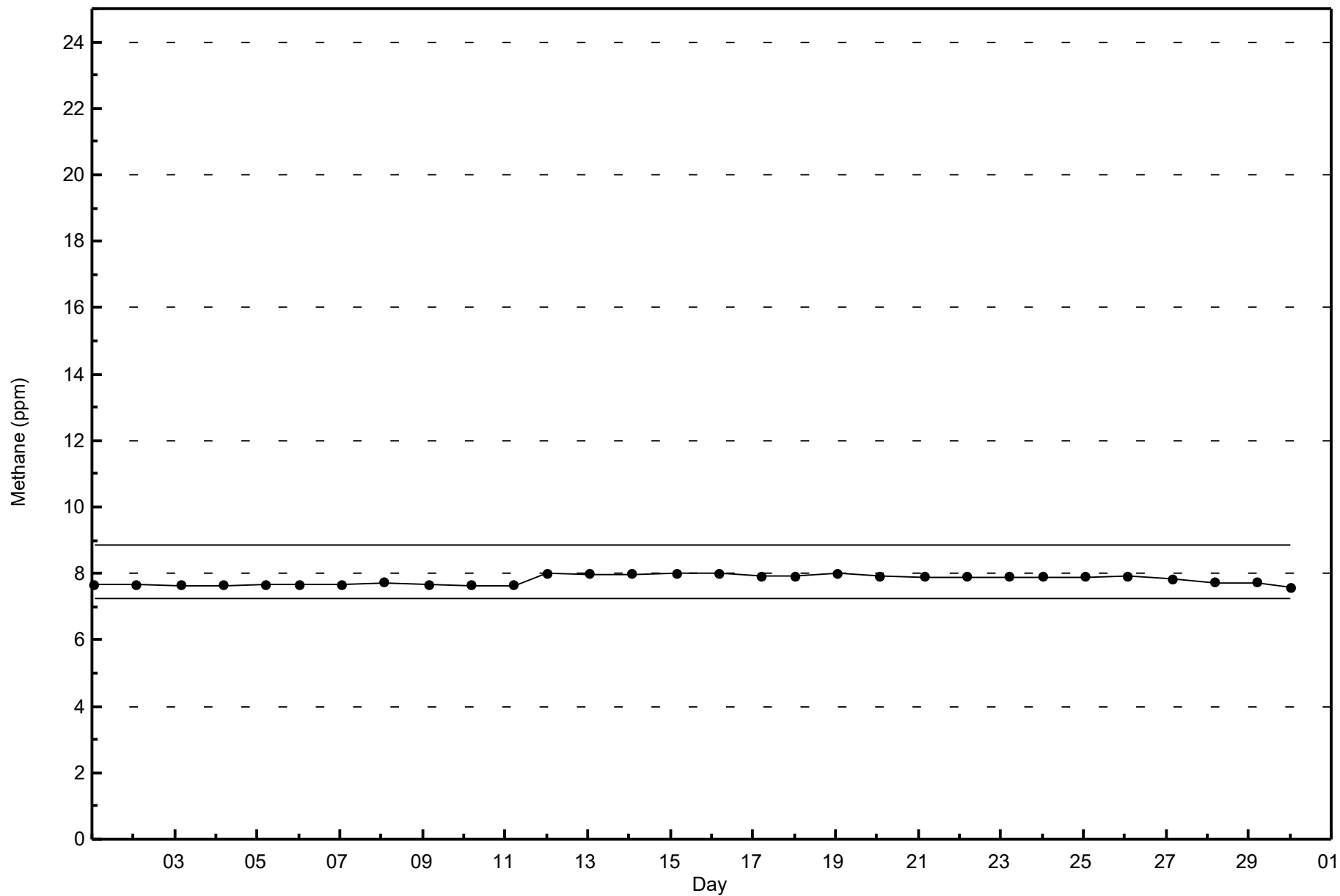






Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Patricia McInnes - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

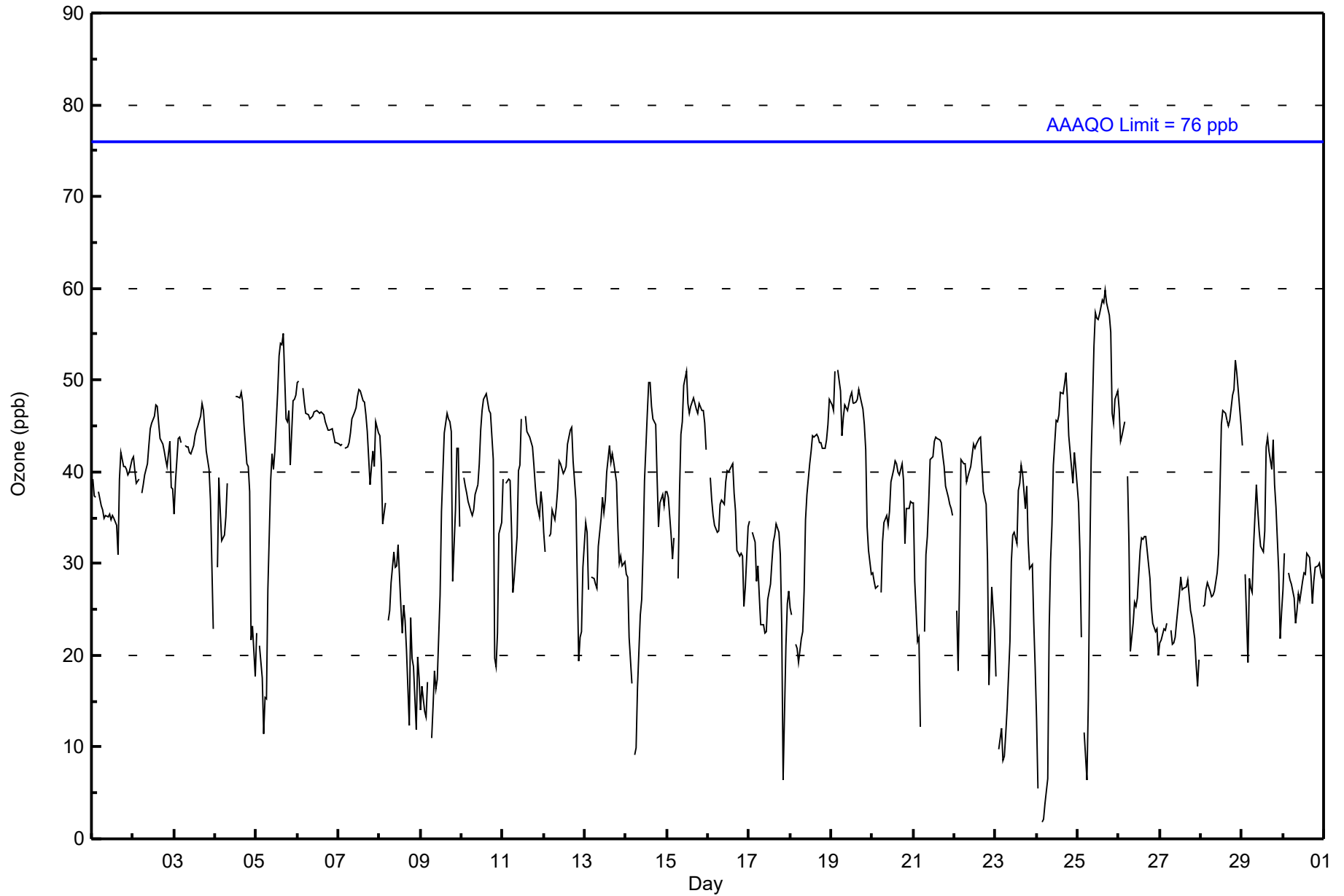
Patricia McInnes - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 59.8 ppb on Apr 25 17:00 Maximum Daily Average: 46.1 ppb on Apr 6																				Hours in Service: 720 Hours of Data: 685						
Minimum Value: 1.9 ppb on Apr 24 04:00 Minimum Daily Average: 23.5 ppb on Apr 27 Maximum Diurnal Average: 42.9 ppb at hour 15 Minimum Diurnal Average: 28.1 ppb at hour 7 Monthly Average: 35.64 ppb Percentiles: P ₁ = 8.2 P ₁₀ = 21.7 Q ₁ = 28.3 Median = 37.5 Q ₃ = 43.7 P ₉₀ = 47.4 P ₉₉ = 56.8																				Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	39.2	37.3	37.3	Z	37.9	36.3	35.8	35.0	35.2	35.1	35.3	34.7	35.2	35.0	34.2	31.0	39.3	42.2	40.6	40.5	40.2	39.6	40.0	41.3	37.3	42.2
2-Apr	41.7	40.1	38.8	39.3	Z	37.7	38.6	39.6	40.9	42.9	44.7	45.3	46.0	47.3	47.2	45.2	43.6	43.0	42.2	41.4	40.6	43.4	38.3	38.2	42.0	47.3
3-Apr	35.4	38.9	43.7	43.7	43.2	Z	42.8	42.7	42.7	42.1	41.9	42.9	43.9	44.5	44.9	46.1	47.4	46.7	44.4	42.2	40.3	36.9	29.9	22.8	41.3	47.4
4-Apr	Z	29.6	39.4	35.7	32.6	33.1	35.0	38.8	C	C	C	C	48.2	48.2	48.1	48.7	47.6	45.1	40.9	40.6	37.8	21.6	23.2	17.7	37.5	48.7
5-Apr	22.4	Z	21.0	17.6	11.4	15.3	15.2	27.1	39.0	42.0	40.3	42.3	48.7	52.6	54.0	53.8	55.0	45.8	45.4	46.7	40.8	47.7	47.9	48.3	38.3	55.0
6-Apr	49.7	49.8	Z	49.1	47.6	46.4	46.2	45.8	45.9	46.1	46.5	46.6	46.5	46.4	46.5	46.1	45.4	45.0	44.5	44.6	44.7	44.0	43.2	43.2	46.1	49.8
7-Apr	43.0	42.8	43.1	Z	42.6	42.7	43.1	44.2	45.7	46.6	47.1	48.2	48.9	48.8	47.7	47.6	46.2	44.4	38.6	40.6	42.3	40.6	45.4	44.3	44.5	48.9
8-Apr	44.0	41.0	34.3	36.6	Z	23.8	24.8	27.9	31.3	29.7	29.7	32.1	25.2	22.4	25.4	23.8	20.6	12.4	24.0	19.7	18.8	11.9	19.8	17.5	25.9	44.0
9-Apr	14.1	16.7	13.9	13.2	17.1	Z	11.0	14.4	18.3	16.3	17.4	26.5	35.7	39.9	44.2	46.4	45.8	45.4	44.4	28.0	35.8	42.6	42.5	34.0	28.9	46.4
10-Apr	Z	39.4	38.4	37.6	36.8	35.7	35.2	35.8	37.5	38.6	40.8	44.6	46.7	47.9	48.4	47.6	46.7	46.4	41.3	19.6	18.7	22.4	33.3	34.5	38.0	48.4
11-Apr	39.2	Z	38.7	39.2	39.0	33.8	26.9	28.6	33.0	40.1	40.7	45.7	M	46.1	44.5	44.0	43.8	42.7	40.8	38.4	36.6	35.1	37.8	36.5	38.7	46.1
12-Apr	33.4	31.3	Z	32.9	33.2	35.9	34.8	36.2	38.1	41.3	40.9	39.8	40.0	40.6	43.0	44.6	44.9	41.2	39.0	36.9	19.4	21.9	22.6	29.7	35.7	44.9
13-Apr	34.5	33.4	27.1	Z	28.5	28.4	27.8	27.3	31.9	34.9	37.2	35.5	36.9	39.9	42.8	41.0	42.0	41.1	38.8	33.8	30.1	30.8	29.8	30.1	34.1	42.8
14-Apr	28.9	28.6	22.0	16.9	Z	9.1	9.8	16.5	24.4	26.0	31.6	39.1	46.4	49.7	49.7	47.2	45.8	45.1	39.3	34.0	36.6	37.5	36.3	37.8	33.0	49.7
15-Apr	37.8	37.3	33.1	30.5	32.8	Z	28.4	37.6	44.1	45.5	49.4	50.9	47.4	46.4	47.2	48.1	47.4	46.9	46.4	47.4	46.7	46.6	45.3	42.3	42.9	50.9
16-Apr	Z	39.4	37.0	35.2	34.2	33.4	33.5	36.4	36.9	36.4	38.9	40.1	40.0	40.3	40.9	37.7	35.6	31.4	30.8	31.2	30.8	25.3	27.4	34.0	35.1	40.9
17-Apr	34.6	Z	33.4	32.3	28.1	29.8	26.5	23.3	23.4	22.4	22.6	26.1	27.8	30.1	32.3	33.1	34.3	33.5	31.0	23.4	6.5	21.0	25.6	27.0	27.3	34.6
18-Apr	25.2	24.3	Z	21.3	20.7	19.3	21.8	22.5	27.0	34.7	37.6	40.9	42.3	43.9	43.8	44.1	43.8	43.2	43.2	42.5	42.6	43.5	45.1	48.0	35.7	48.0
19-Apr	47.2	46.7	51.0	Z	51.1	48.7	44.0	45.9	47.3	46.7	47.5	48.2	48.6	47.4	47.5	47.9	49.0	48.2	46.9	45.2	42.4	34.1	31.4	28.8	45.3	51.1
20-Apr	28.9	28.1	27.2	27.7	Z	26.8	32.4	34.4	35.3	34.2	35.8	38.9	40.3	41.2	40.9	40.0	39.6	40.8	39.0	32.3	36.0	35.9	36.8	36.6	35.2	41.2
21-Apr	36.6	28.1	21.5	21.9	12.2	Z	22.6	31.0	32.9	36.7	41.3	41.7	43.3	43.7	43.7	43.5	43.1	41.8	40.5	38.4	37.3	36.5	36.0	35.2	35.2	43.7
22-Apr	Z	24.8	18.3	28.0	41.3	40.8	40.8	38.9	39.6	40.5	41.8	43.0	42.6	43.0	43.6	43.8	40.8	37.8	36.4	30.2	16.9	21.6	27.4	22.7	35.0	43.8
23-Apr	17.7	Z	9.8	12.1	8.5	9.0	11.4	14.2	21.5	30.2	33.1	33.4	32.3	38.0	38.7	40.8	39.8	36.0	38.4	32.6	29.5	30.0	23.6	18.8	26.0	40.8
24-Apr	13.2	5.4	Z	1.9	2.2	3.8	6.5	22.7	30.2	34.2	40.7	45.6	45.5	46.2	48.7	48.6	49.6	50.8	48.0	43.9	40.5	38.8	42.0	40.4	32.6	50.8
25-Apr	36.6	31.3	22.0	Z	11.6	6.5	15.0	30.3	41.4	53.6	57.3	56.7	56.6	57.2	58.7	58.4	59.8	58.5	57.1	55.3	46.4	45.2	47.9	48.8	44.0	59.8
26-Apr	46.9	43.3	44.0	45.4	Z	39.5	32.1	20.4	23.4	25.8	25.4	26.2	31.4	32.8	32.6	32.9	33.0	29.9	28.3	25.1	23.5	22.6	22.8	20.0	30.8	46.9
27-Apr	21.3	21.6	22.8	22.7	23.5	Z	22.7	21.2	21.3	22.0	23.7	26.8	28.5	27.2	27.4	27.5	28.2	26.5	24.8	24.1	21.9	18.9	16.7	19.6	23.5	28.5
28-Apr	Z	25.4	25.4	27.1	27.9	27.1	26.4	26.5	27.0	29.0	31.1	38.0	45.2	46.7	46.4	45.6	45.0	45.5	48.3	48.9	52.2	50.8	48.9	45.2	38.2	52.2
29-Apr	42.9	Z	28.9	19.2	28.4	27.3	26.8	31.9	38.6	35.9	33.6	31.8	31.2	33.5	42.7	43.8	42.2	40.3	43.5	38.5	36.1	28.9	21.8	24.7	33.6	43.8
30-Apr	27.1	31.0	Z	28.9	28.3	27.7	26.2	23.5	24.9	26.6	25.9	28.1	29.0	28.8	31.1	30.6	28.7	25.6	28.1	29.6	29.7	30.0	29.0	28.3	28.1	31.1
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration M - Maintenance Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O_3) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Patricia McInnes - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	56	8.18	8.18
21 - 50	608	88.76	96.93
51 - 82	21	3.07	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 (O₃) - ppb
Patricia McInnes - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	4	1	0	4	3	3	6	2	5	5	3	6	1	4	5	3	55
21 - 50	78	27	14	17	12	55	71	26	40	21	31	32	54	47	31	45	601
51 - 82	0	2	1	0	1	0	0	0	1	8	3	3	2	0	0	0	21
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	82	30	15	21	16	58	77	28	46	34	37	41	57	51	36	48	677

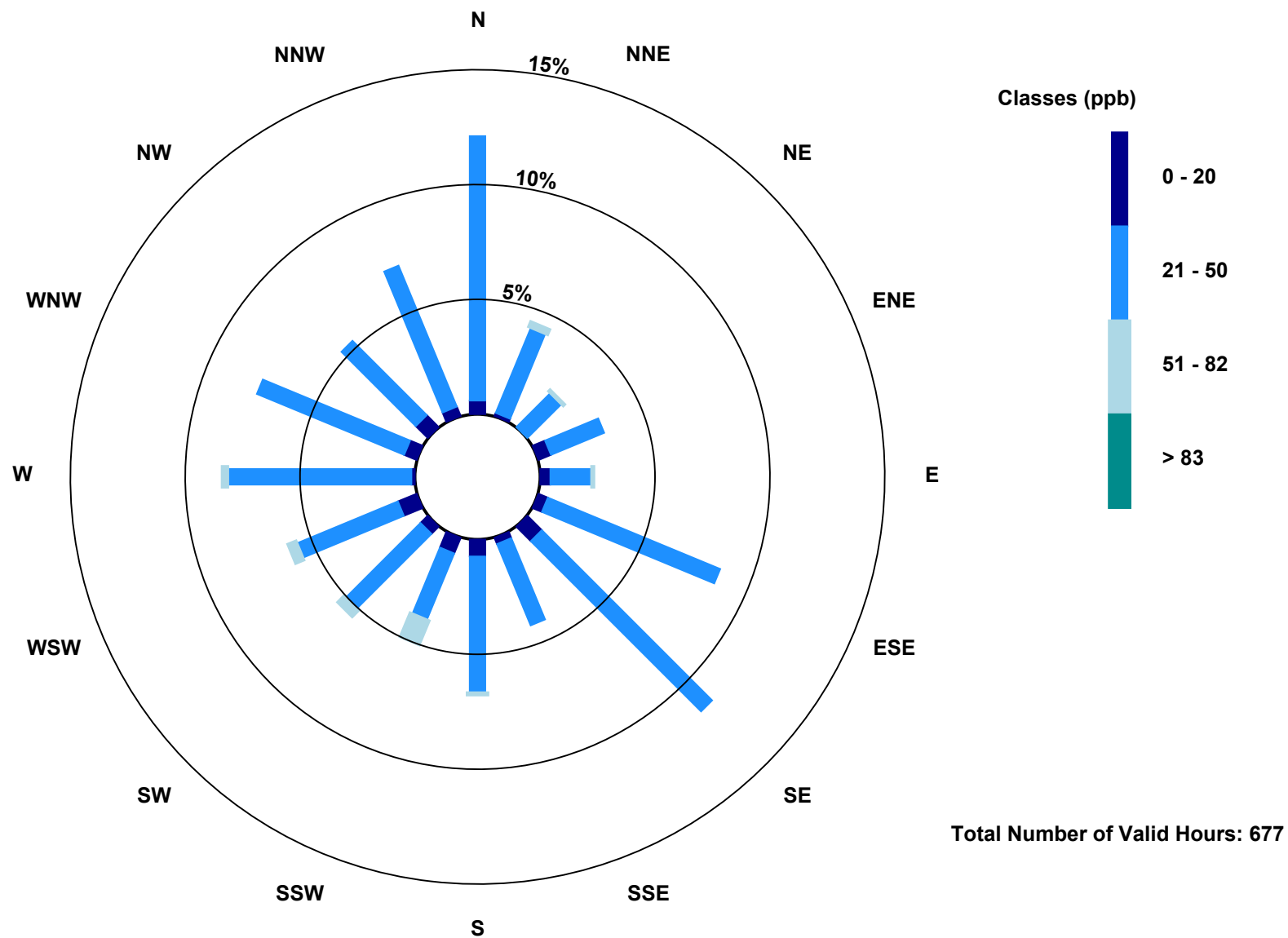
Total Number of Valid Hours: 677

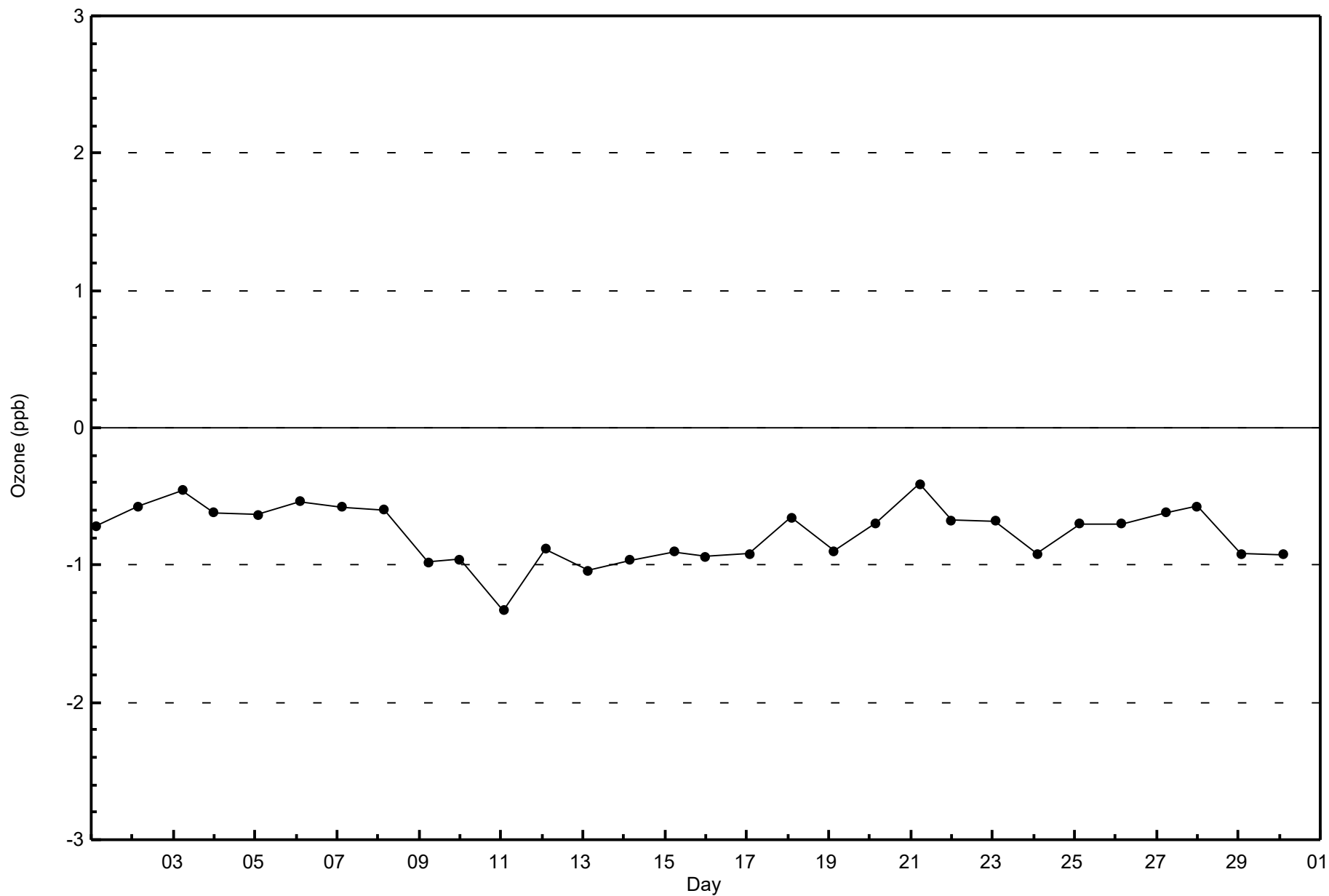
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ozone (O_3) - ppb
Patricia McInnes

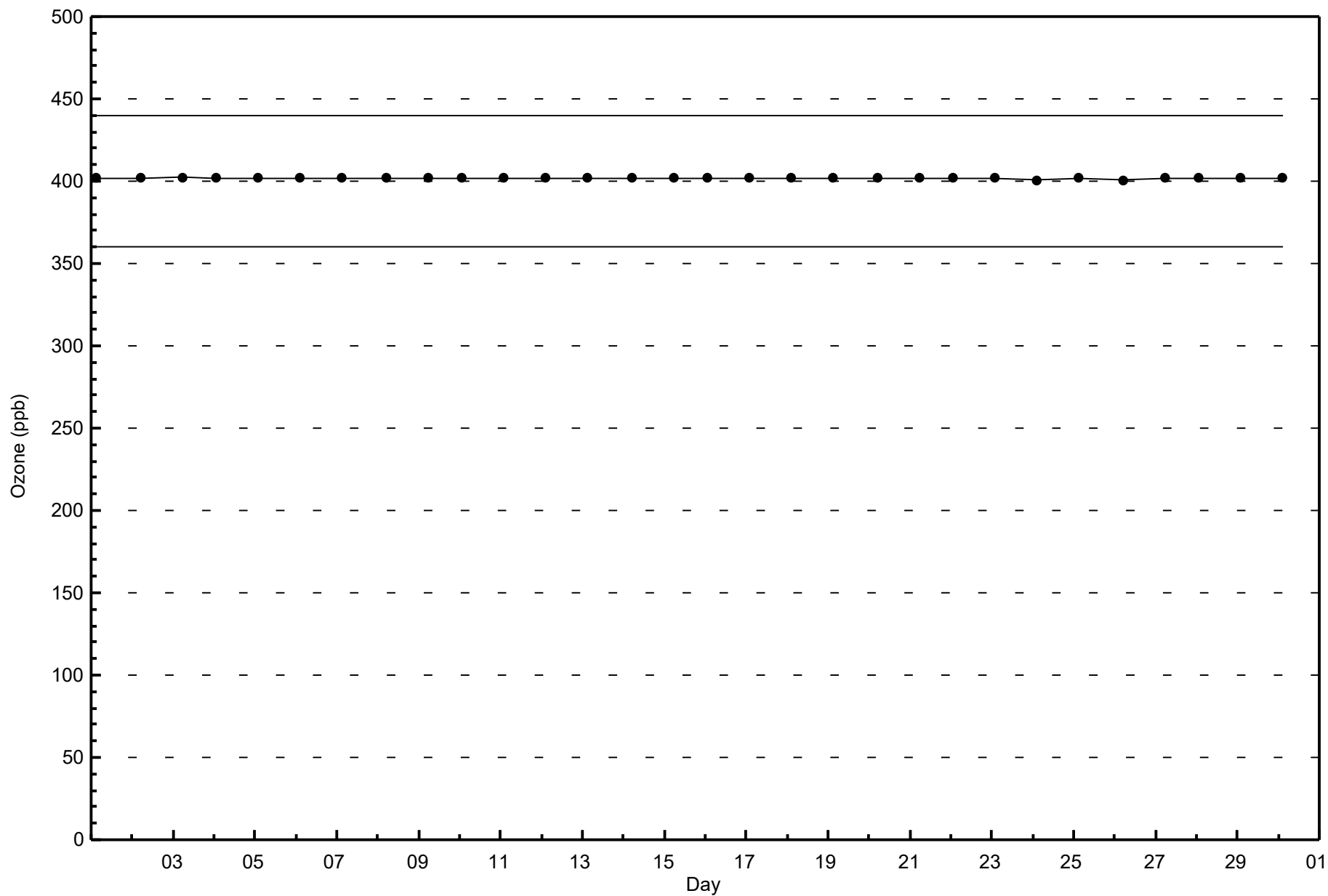






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Patricia McInnes - April 2025

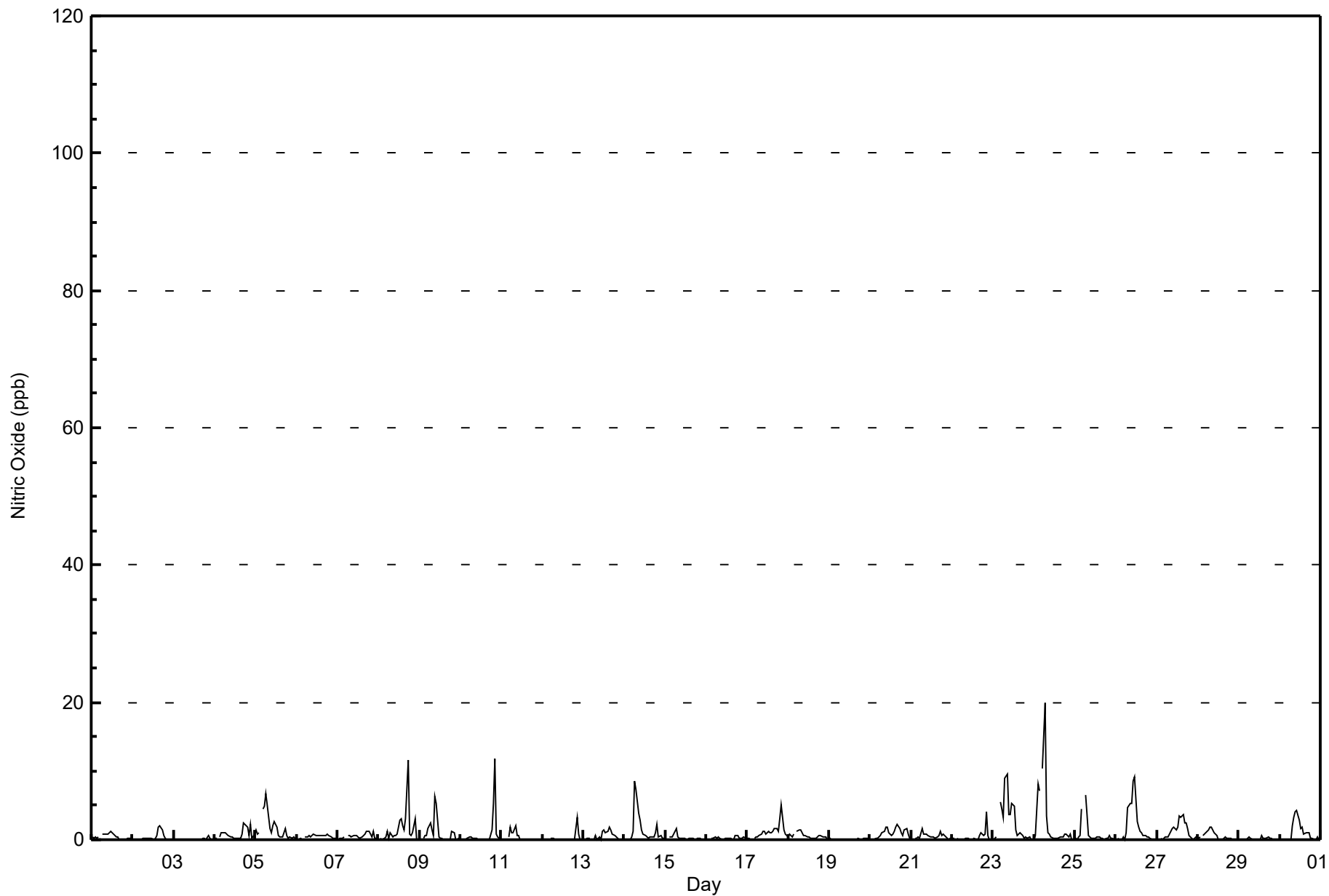


Maximum Value: 19.9 ppb on Apr 24 07:00										Maximum Daily Average: 2.5 ppb on Apr 24										Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 3 01:00										Minimum Daily Average: 0.1 ppb on Apr 19										Hours of Data: 682							
Maximum Diurnal Average: 2.0 ppb at hour 7										Minimum Diurnal Average: 0.2 ppb at hour 24										Hours of Missing Data: 38							
Monthly Average: 0.85 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.8 P ₉₀ = 1.9 P ₉₉ = 8.6										Hours of Calibration: 37							
																				Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.3	0.2	0.4	0.2	0.4	Z	0.7	0.9	0.8	0.8	0.9	1.3	1.0	0.7	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.4	1.3
2-Apr	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.5	1.8	1.9	1.4	0.6	0.1	0.0	0.0	0.1	0.1	0.1	0.3	1.9
3-Apr	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.1	C	C	C	C	C	C	C	0.1	0.0	0.1	0.2	0.1	0.7	0.2	0.0	0.1	--	0.7	
4-Apr	0.1	0.2	Z	0.4	1.0	1.0	1.1	0.7	0.7	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.8	2.5	2.1	1.9	0.6	2.2	0.2	0.8	0.8	2.5	
5-Apr	1.3	0.7	1.1	Z	4.4	4.9	6.8	5.0	1.6	1.0	2.1	2.7	1.7	0.6	0.4	0.4	0.3	1.6	0.5	0.1	0.3	0.2	0.4	0.3	1.7	6.8	
6-Apr	0.1	0.1	0.2	0.0	Z	0.3	0.4	0.5	0.4	0.5	0.7	0.6	0.7	0.6	0.5	0.5	0.7	0.6	0.8	0.7	0.4	0.3	0.2	0.2	0.4	0.8	
7-Apr	0.1	0.1	0.2	0.2	0.4	Z	0.6	0.6	0.5	0.6	0.6	0.5	0.3	0.2	0.4	0.5	0.8	1.2	1.2	0.8	0.4	1.2	0.2	0.1	0.5	1.2	
8-Apr	Z	0.1	0.1	0.3	0.3	1.3	0.2	1.0	0.4	0.6	0.7	0.8	2.9	3.0	2.0	1.5	3.1	11.5	0.8	0.7	1.1	3.1	0.0	0.0	1.5	11.5	
9-Apr	0.2	Z	0.2	0.7	0.7	1.7	2.4	1.4	0.7	6.3	5.2	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	1.1	1.0	0.0	0.0	0.2	1.0	6.3	
10-Apr	0.0	0.0	Z	0.1	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.3	11.8	0.9	0.3	0.0	0.9	11.8	
11-Apr	0.0	0.0	0.1	Z	0.4	1.8	1.0	1.1	2.0	0.6	0.5	0.1	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0	
12-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.2	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	3.3	0.9	0.0	0.0	0.2	3.3	
13-Apr	0.0	0.0	0.1	0.2	0.1	Z	0.0	0.6	0.0	0.4	0.0	1.2	1.4	1.1	1.3	1.9	1.3	0.9	0.6	0.4	0.2	0.0	0.1	0.0	0.5	1.9	
14-Apr	Z	0.0	0.0	0.1	0.4	1.3	8.6	7.2	3.9	2.7	1.5	0.9	0.6	0.4	0.3	0.4	0.4	0.3	1.0	2.3	0.4	0.6	0.3	0.3	1.5	8.6	
15-Apr	0.2	Z	0.4	0.5	0.5	0.8	1.6	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.3	1.6	
16-Apr	0.0	0.0	Z	0.1	0.2	0.4	0.2	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.0	0.1	0.6	0.5	0.1	0.1	0.1	0.4	0.2	0.2	0.6	
17-Apr	0.2	0.2	0.0	Z	0.1	0.3	0.4	0.7	0.8	1.2	1.3	0.9	1.1	1.1	1.0	1.3	1.7	1.6	1.2	3.1	5.1	1.4	0.8	0.6	1.1	5.1	
18-Apr	0.4	0.8	0.4	0.9	Z	1.2	1.3	1.3	1.0	0.5	0.6	0.4	0.3	0.2	0.1	0.2	0.2	0.4	0.6	0.5	0.4	0.3	0.4	0.1	0.5	1.3	
19-Apr	0.2	0.1	0.1	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	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.3	
20-Apr	Z	0.1	0.0	0.2	0.2	0.4	0.6	0.9	1.1	1.8	1.9	1.1	0.7	0.7	1.2	1.9	2.3	1.5	1.0	0.6	1.4	1.6	0.8	0.2	1.0	2.3	
21-Apr	0.2	Z	0.1	0.2	0.4	0.2	1.7	0.9	0.7	0.9	0.6	0.4	0.3	0.3	0.2	0.4	0.5	1.3	0.5	0.8	0.3	0.1	0.1	0.3	0.5	1.7	
22-Apr	0.2	0.1	Z	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.0	0.2	0.0	0.1	0.7	1.1	0.6	0.8	4.0	0.6	0.1	0.0	0.4	4.0	
23-Apr	0.0	0.3	0.4	Z	5.6	4.4	3.3	8.9	9.6	3.7	3.7	5.3	4.8	1.5	0.7	0.9	1.0	0.5	0.3	0.4	0.3	0.3	0.1	0.0	2.4	9.6	
24-Apr	0.1	0.6	8.2	7.2	Z	10.5	19.9	3.4	1.0	0.9	0.5	0.3	0.2	0.2	0.2	0.5	0.5	0.3	0.8	0.8	0.5	0.9	0.1	0.1	2.5	19.9	
25-Apr	0.2	0.1	0.3	0.5	4.5	Z	6.4	3.8	0.7	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.0	0.2	0.2	0.6	0.1	0.1	0.1	0.9	6.4	
26-Apr	Z	0.1	0.0	0.1	0.3	0.0	1.0	4.6	5.2	5.4	8.5	9.2	2.6	1.8	1.2	1.1	0.7	0.6	0.4	0.4	0.2	0.0	0.1	0.1	1.9	9.2	
27-Apr	0.0	Z	0.1	0.0	0.2	0.4	0.5	0.9	1.2	1.6	1.8	1.4	1.8	3.5	3.3	3.7	2.4	2.4	1.7	0.6	0.2	0.1	0.3	0.4	1.2	3.7	
28-Apr	0.1	0.4	Z	0.6	0.8	1.2	1.4	1.8	1.9	0.9	0.9	0.6	0.0	0.1	0.1	0.2	0.3	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.5	1.9	
29-Apr	0.0	0.1	0.0	Z	0.0	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.6	0.3	0.2	0.2	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.6	
30-Apr	0.1	0.0	0.0	0.0	Z	0.0	0.0	2.0	3.2	4.0	4.4	2.9	1.6	1.9	0.8	1.0	1.1	1.1	0.3	0.2	0.1	0.1	0.4	0.0	1.1	4.4	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	83	30	14	20	17	60	74	29	48	34	38	43	59	48	34	42	673
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	83	30	14	20	17	60	74	29	48	34	38	43	59	48	34	42	673

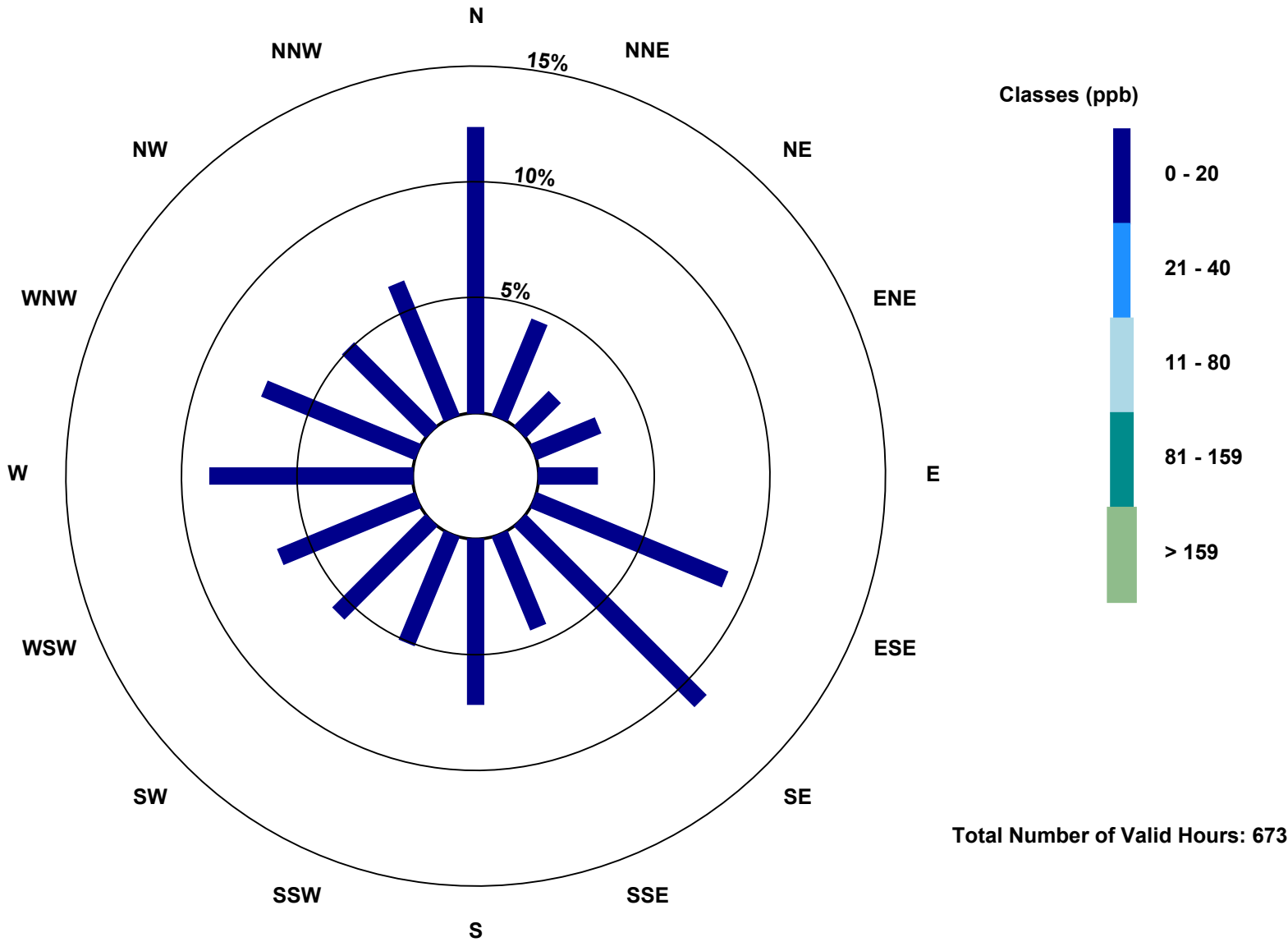
Total Number of Valid Hours: 673

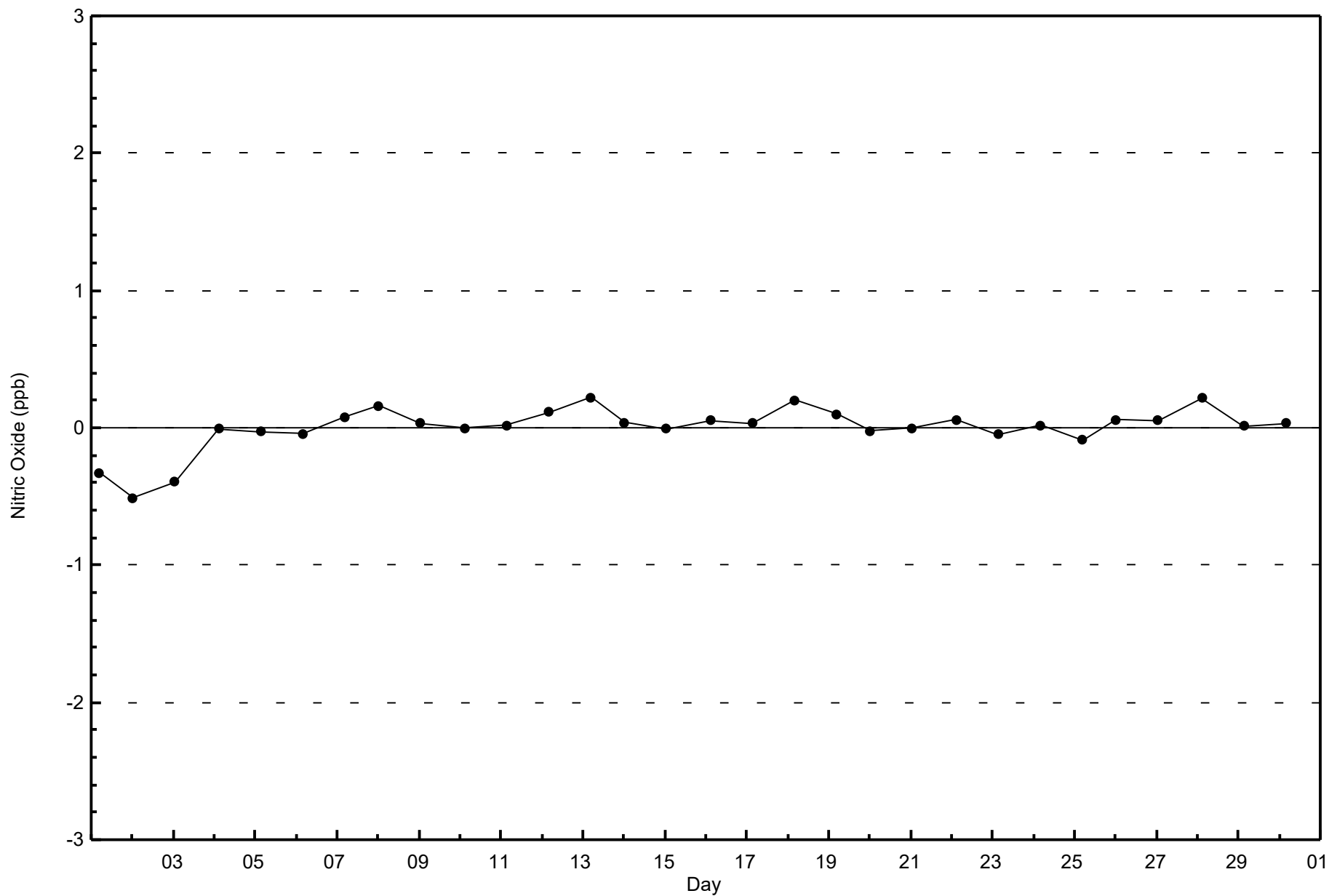
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitric Oxide (NO) - ppb
Patricia McInnes

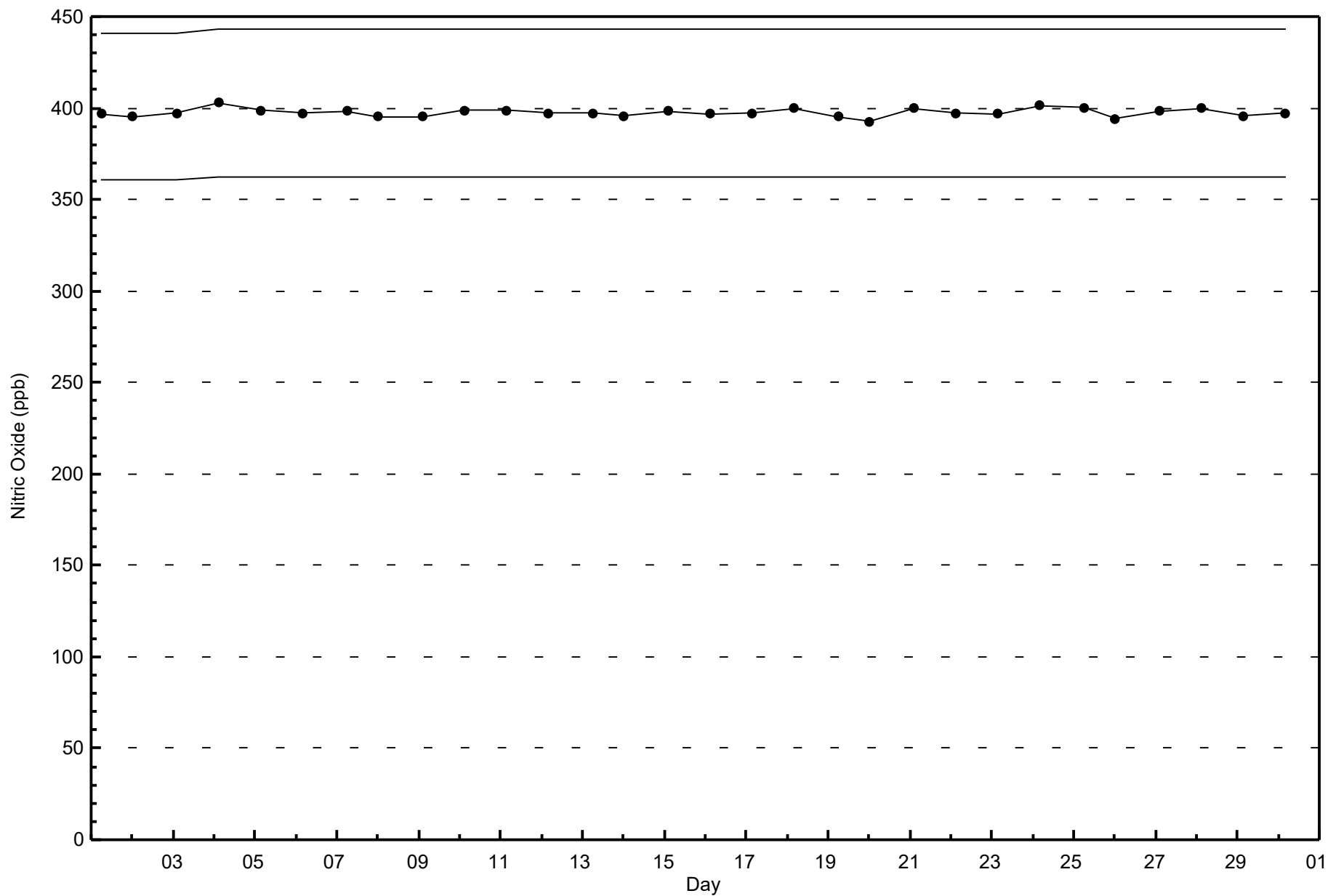






Wood Buffalo Environmental Association
Span Responses

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

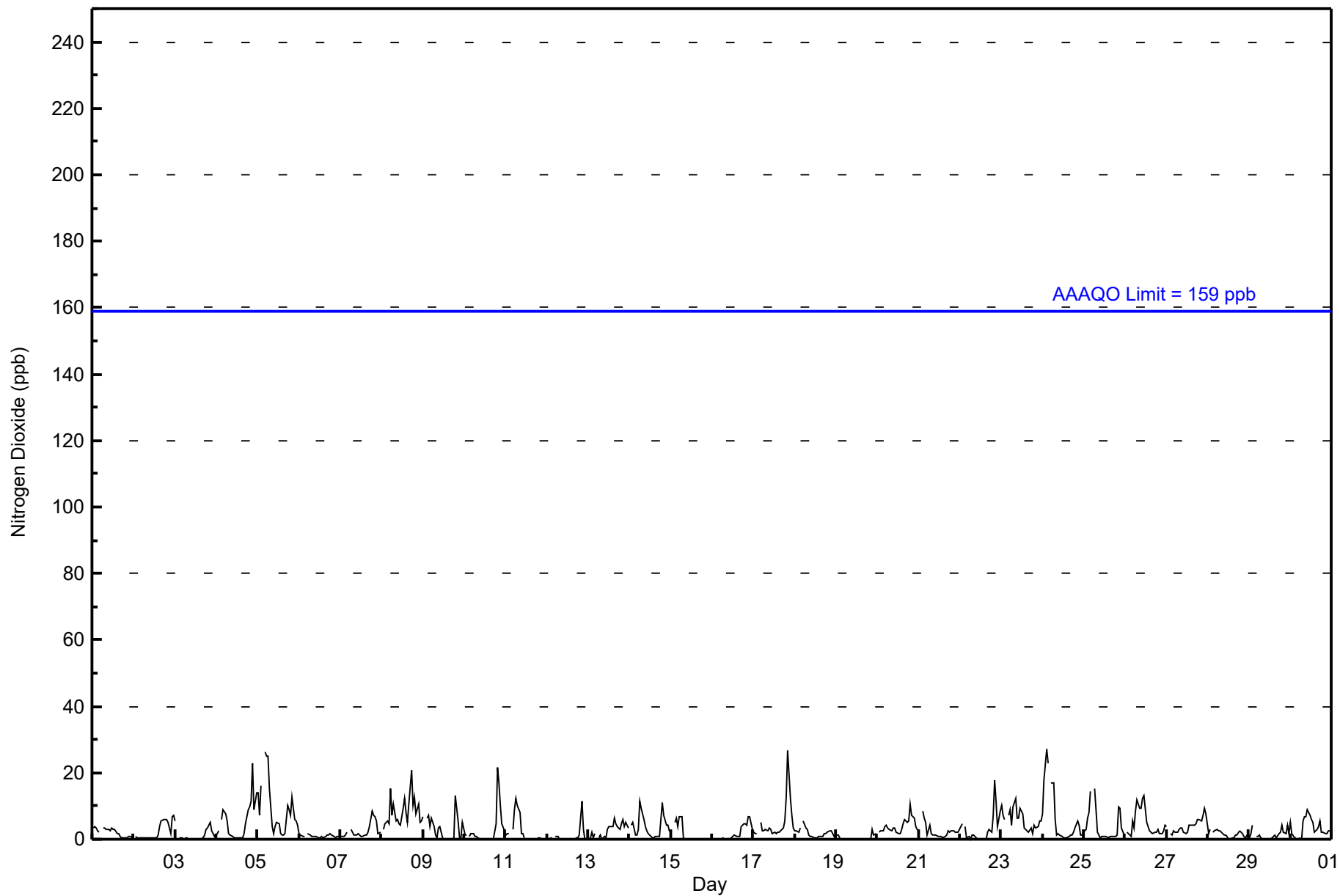


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.2 ppb on Apr 24 03:00 Maximum Daily Average: 9.0 ppb on Apr 5																			Hours in Service: 720 Hours of Data: 682 Hours of Missing Data: 38 Hours of Calibration: 37 Percent Operational Time: 99.9							
Minimum Value: 0.0 ppb on Apr 9 15:00 Maximum Diurnal Average: 6.3 ppb at hour 21 Monthly Average: 3.31 ppb																			Minimum Daily Average: 0.4 ppb on Apr 19 Minimum Diurnal Average: 1.4 ppb at hour 15 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.6 Median = 1.9 Q ₃ = 4.5 P ₉₀ = 7.9 P ₉₉ = 21.8							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	3.2	4.0	3.4	2.5	2.0	Z	3.4	3.5	3.0	2.9	2.6	3.2	2.8	3.0	1.8	1.6	0.7	0.5	0.3	0.3	0.4	0.7	0.8	0.3	2.0	4.0
2-Apr	Z	0.7	0.5	0.3	0.5	0.4	0.3	0.6	0.4	0.4	0.3	0.4	0.3	0.3	1.3	4.0	5.3	5.9	5.8	5.8	4.9	1.6	6.9	7.4	2.4	7.4
3-Apr	5.4	Z	0.3	0.3	0.4	0.2	0.3	0.3	C	C	C	C	C	C	C	0.5	0.5	1.2	2.9	3.6	5.0	2.6	1.5	0.9	--	5.4
4-Apr	1.9	2.7	Z	6.0	8.7	7.8	5.4	1.7	1.1	0.7	0.4	0.3	0.4	0.4	0.3	0.5	1.6	4.5	8.9	9.6	11.6	22.8	8.8	13.8	5.2	22.8
5-Apr	14.1	7.2	16.1	Z	26.4	25.0	24.9	15.2	3.9	1.8	4.0	5.2	4.5	1.7	1.2	1.1	1.7	10.3	8.8	7.1	12.5	6.0	5.3	4.1	9.0	26.4
6-Apr	1.9	1.1	1.0	0.9	Z	1.7	1.1	1.0	0.7	0.7	0.7	0.6	0.6	0.8	0.6	0.7	1.1	1.2	1.6	1.2	0.8	0.6	0.8	0.8	1.0	1.9
7-Apr	0.9	1.0	0.8	1.2	2.3	Z	3.0	2.0	1.2	1.1	1.5	1.3	0.9	1.0	1.2	1.3	2.0	3.8	8.4	7.3	6.9	5.6	1.8	2.3	2.6	8.4
8-Apr	Z	3.1	4.7	5.3	4.8	15.1	7.4	10.6	5.4	6.1	4.7	4.3	9.3	12.1	7.9	5.2	10.5	20.9	10.3	12.5	7.8	10.4	5.1	5.3	8.2	20.9
9-Apr	6.9	Z	6.3	7.4	4.0	6.3	4.0	1.3	0.5	3.3	3.8	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.3	13.1	5.7	0.5	0.5	5.2	3.0	13.1
10-Apr	1.3	1.1	Z	0.9	1.7	1.6	1.0	0.7	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.8	21.6	16.9	10.0	4.7	2.4	3.0	21.6
11-Apr	1.1	1.6	1.9	Z	2.9	8.7	12.2	10.2	7.9	1.9	1.6	0.4	M	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	2.3	12.2
12-Apr	0.4	0.1	0.6	0.0	Z	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	1.2	11.5	2.8	0.2	0.1	0.8	11.5
13-Apr	0.0	0.4	2.1	0.6	1.9	Z	0.4	1.4	0.1	0.8	0.4	2.9	3.8	3.9	3.8	6.2	4.5	3.7	3.1	4.7	5.9	3.9	5.0	3.3	2.7	6.2
14-Apr	Z	4.3	5.2	1.3	1.4	2.9	11.3	9.3	5.9	4.0	2.4	1.6	0.8	0.4	0.3	0.9	0.7	1.0	5.9	11.0	7.1	4.1	4.1	2.4	3.8	11.3
15-Apr	2.3	Z	5.2	6.2	3.7	6.6	6.9	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	0.1	0.0	0.0	1.4	6.9
16-Apr	0.0	0.0	Z	0.2	0.0	0.1	0.4	0.1	0.1	0.0	0.1	0.4	1.0	1.1	0.8	0.7	0.8	3.8	4.7	4.6	4.1	6.8	6.6	2.8	1.7	6.8
17-Apr	2.1	1.7	1.7	Z	5.1	2.4	2.5	3.1	2.4	3.3	3.0	1.5	2.1	1.9	2.1	2.0	2.6	3.6	5.3	12.5	26.6	12.1	7.1	3.3	4.8	26.6
18-Apr	2.5	2.4	2.2	3.4	Z	5.4	3.4	2.8	1.3	0.9	0.7	0.6	0.5	0.5	0.7	0.8	1.0	1.5	1.6	2.3	2.5	2.6	1.6	1.0	1.8	5.4
19-Apr	1.2	1.1	0.3	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	2.9	1.3	1.6	0.4	2.9
20-Apr	Z	2.3	2.4	2.6	3.9	4.4	3.3	2.8	2.5	3.5	3.5	2.2	1.5	1.7	2.9	4.5	5.8	5.0	5.6	10.5	7.3	6.2	3.9	2.8	4.0	10.5
21-Apr	2.7	Z	8.3	6.4	5.2	1.3	4.1	1.8	1.1	1.1	1.2	0.8	0.7	0.7	0.5	0.7	1.4	2.6	2.2	2.5	2.4	2.1	2.0	2.1	2.3	8.3
22-Apr	3.7	4.7	Z	3.9	0.5	0.8	0.0	1.2	1.2	0.6	0.2	0.2	0.0	0.2	0.0	0.0	2.0	2.9	2.0	7.0	17.7	11.4	3.8	8.6	3.2	17.7
23-Apr	10.0	7.1	5.8	Z	7.2	8.8	4.4	9.9	12.2	6.5	6.4	9.2	7.7	3.2	2.9	2.4	2.3	3.6	1.8	4.3	3.6	3.7	5.5	5.4	5.8	12.2
24-Apr	7.6	18.0	27.2	22.9	Z	16.8	17.0	5.8	1.3	1.7	1.3	0.9	0.4	0.4	0.6	0.9	1.3	1.4	2.1	3.4	5.3	4.1	1.3	1.2	6.2	27.2
25-Apr	2.4	3.1	6.2	7.9	14.6	Z	15.1	9.1	2.3	0.5	0.8	0.7	0.7	0.8	0.5	0.8	0.8	0.7	0.7	1.4	9.7	9.2	3.4	1.3	4.0	15.1
26-Apr	Z	2.0	1.9	0.8	5.4	3.3	8.5	11.9	9.4	9.3	12.3	13.3	4.9	3.7	2.5	2.2	1.7	2.3	2.3	3.1	1.9	1.9	2.7	4.4	4.9	13.3
27-Apr	3.9	Z	1.5	1.1	2.7	2.3	2.2	3.0	3.3	3.2	2.2	1.7	2.3	4.1	4.2	4.4	4.1	4.7	6.1	6.1	5.5	7.2	9.2	7.7	4.0	9.2
28-Apr	1.7	2.9	Z	2.2	2.4	2.9	2.6	2.5	2.3	1.4	1.3	0.9	0.2	0.2	0.3	0.4	1.2	1.4	2.4	2.2	1.6	0.8	0.5	1.7	1.6	2.9
29-Apr	0.5	1.6	4.4	Z	0.7	0.9	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.9	1.3	0.6	1.9	2.2	4.1	2.0	1.9	4.1	1.9	1.3	4.4
30-Apr	5.2	1.6	0.5	0.6	Z	0.4	0.1	5.3	6.7	6.6	8.7	7.1	6.0	5.2	2.1	3.1	3.7	5.6	2.3	2.0	1.8	1.8	2.4	2.4	3.5	8.7
3.3 3.0 4.4 3.4 4.3 5.1 4.9 3.9 2.6 2.2 2.2 2.1 1.8 1.6 1.4 1.5 1.9 3.2 3.4 5.5 6.3 4.9 3.4 3.2																									Diurnal Average	
14.1 18.0 27.2 22.9 26.4 25.0 24.9 15.2 12.2 9.3 12.3 13.3 9.3 12.1 7.9 6.2 10.5 20.9 10.3 21.6 26.6 22.8 9.2 13.8																									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 (NO₂) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	673	98.68	98.68
21 - 40	9	1.32	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	83	30	14	19	16	59	73	29	45	34	38	43	59	48	34	40	664
21 - 40	0	0	0	1	1	1	1	0	3	0	0	0	0	0	0	2	9
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	30	14	20	17	60	74	29	48	34	38	43	59	48	34	42	673

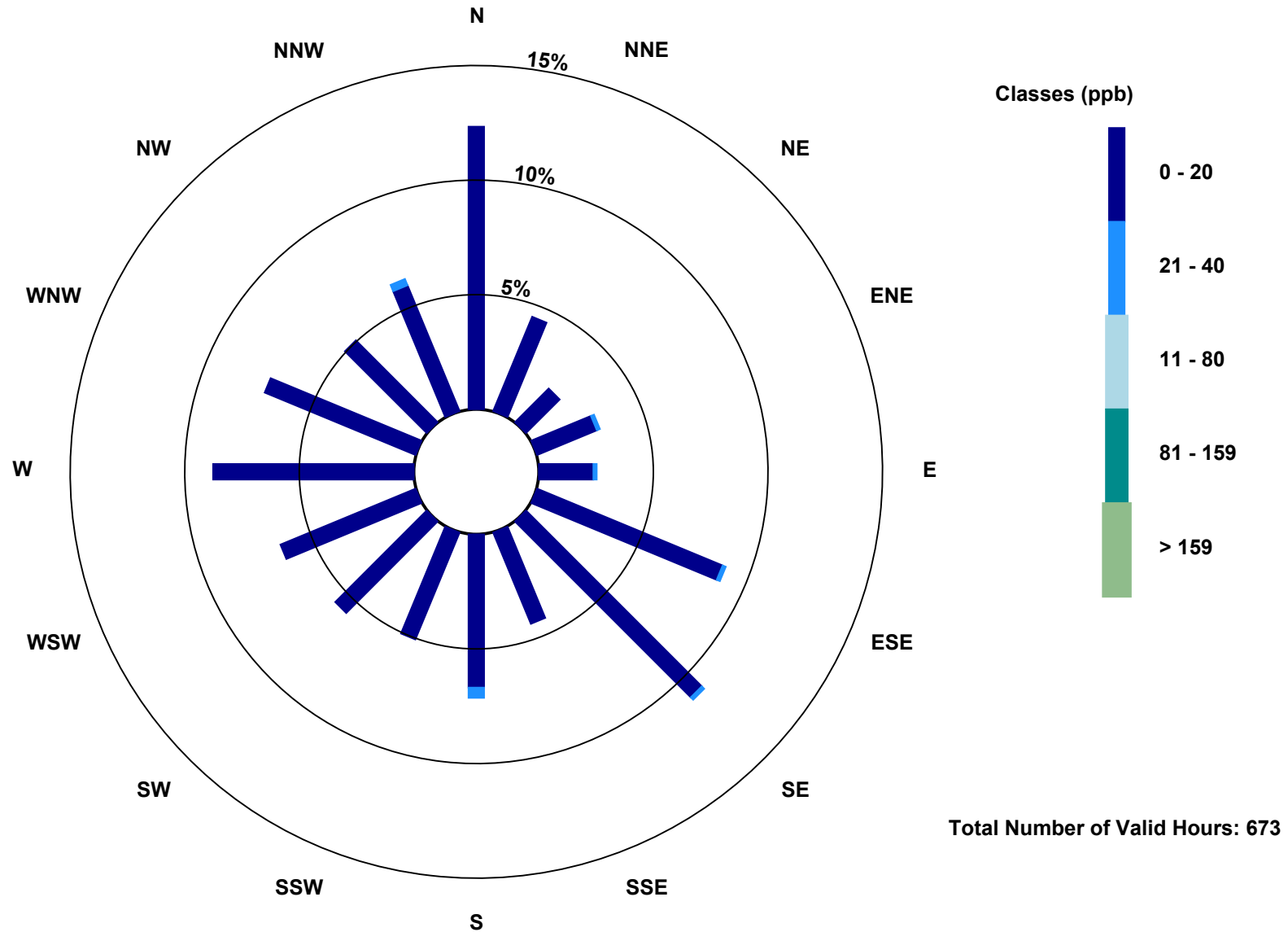
Total Number of Valid Hours: 673

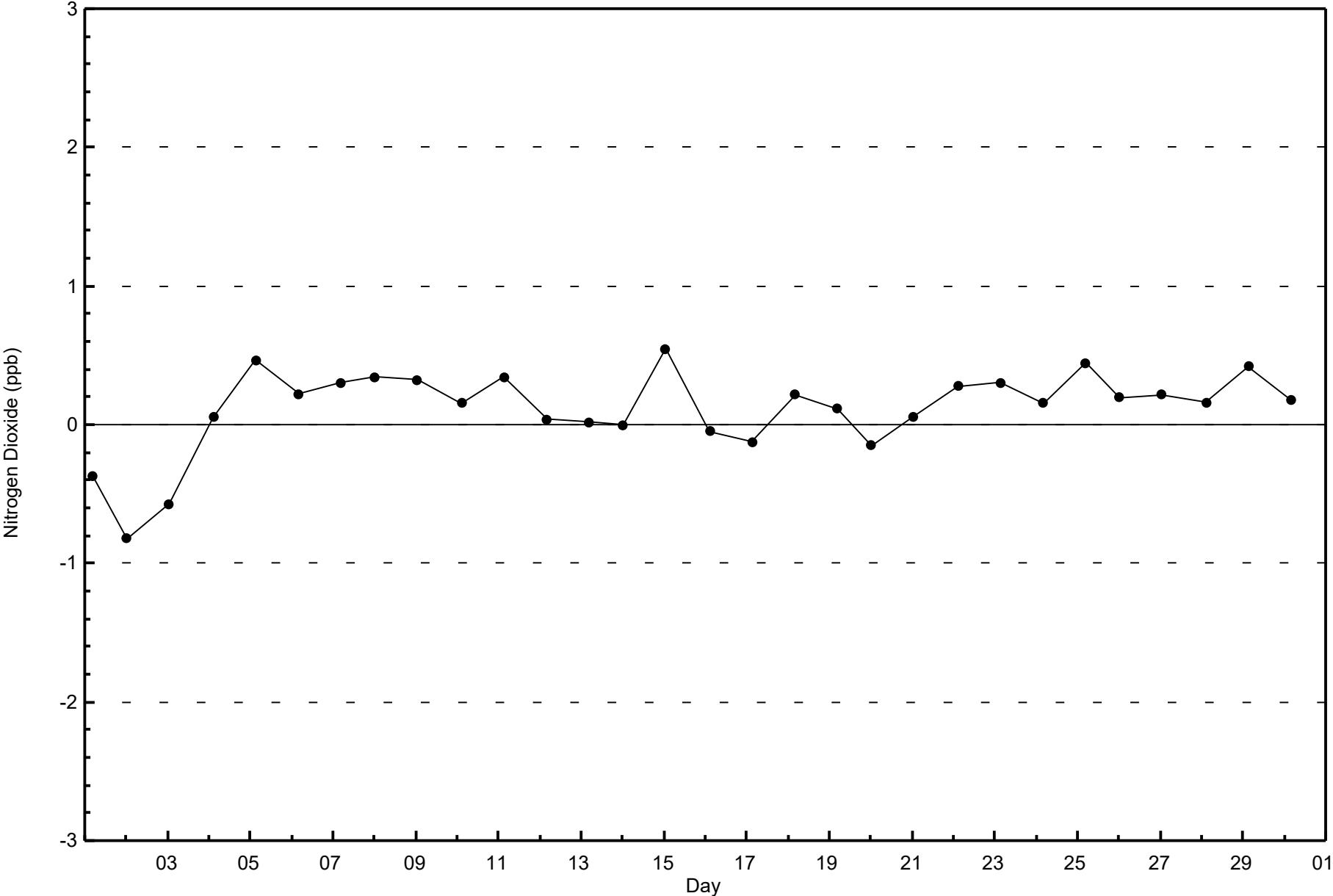
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes

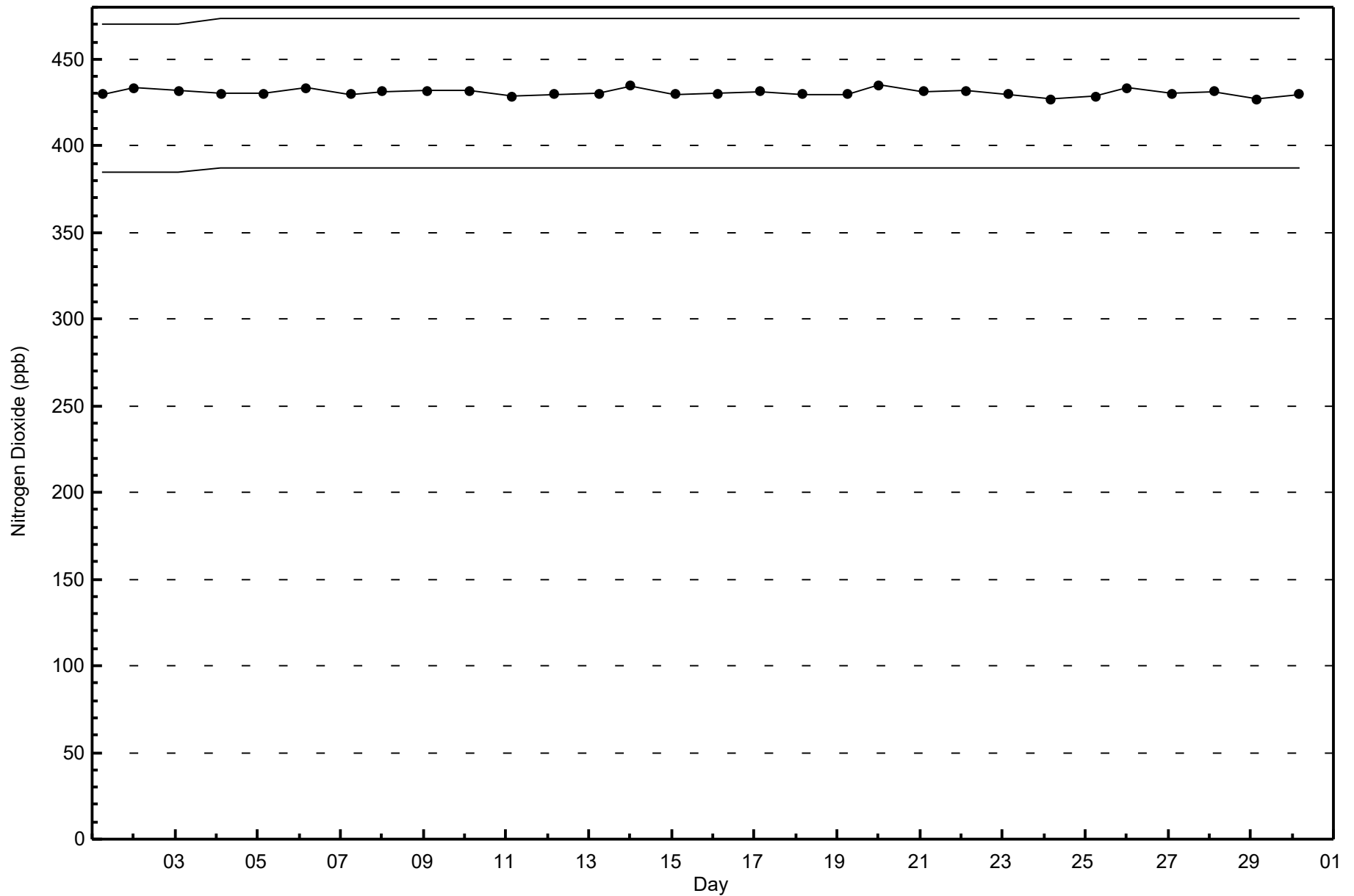






Wood Buffalo Environmental Association
Span Responses

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

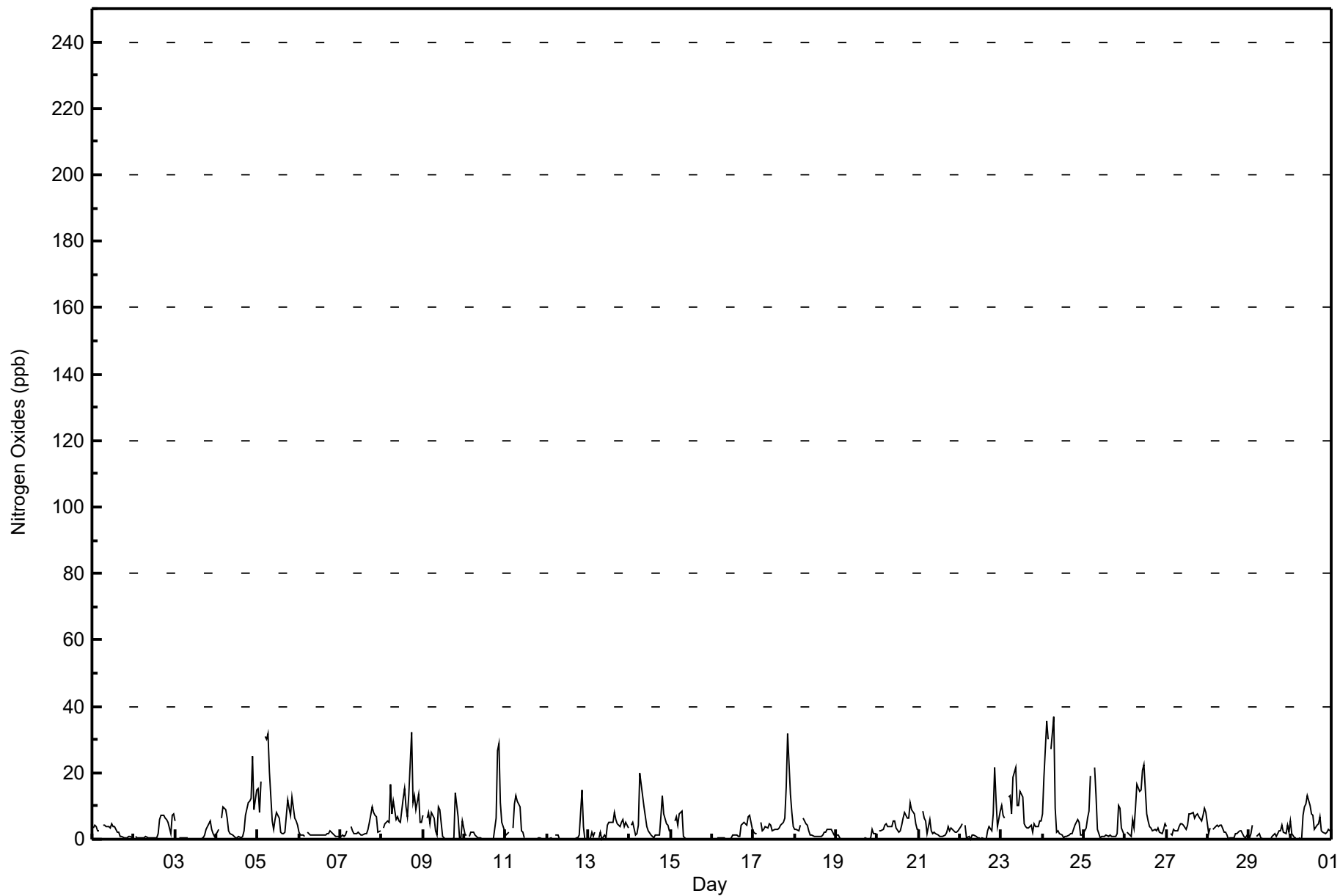


Maximum Value: 36.9 ppb on Apr 24 07:00																			Maximum Daily Average: 10.7 ppb on Apr 5										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 9 17:00																			Minimum Daily Average: 0.5 ppb on Apr 19										Hours of Data: 682	
Maximum Diurnal Average: 7.4 ppb at hour 21																			Minimum Diurnal Average: 1.9 ppb at hour 15										Hours of Missing Data: 38	
Monthly Average: 4.16 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.8 Median = 2.4 Q ₃ = 5.4 P ₉₀ = 9.8 P ₉₉ = 30.0										Hours of Calibration: 37	
																													Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	3.5	4.2	3.8	2.7	2.4	Z	4.1	4.4	3.8	3.7	3.5	4.5	3.8	3.7	2.2	1.9	0.8	0.6	0.4	0.4	0.4	0.8	0.9	0.5	2.5	4.5				
2-Apr	Z	0.8	0.5	0.4	0.6	0.5	0.4	0.7	0.6	0.6	0.4	0.5	0.3	0.4	1.8	5.8	7.2	7.3	6.4	5.9	4.9	1.6	7.0	7.5	2.7	7.5				
3-Apr	5.4	Z	0.3	0.3	0.5	0.2	0.3	0.4	C	C	C	C	C	C	C	0.6	0.5	1.3	3.1	3.7	5.7	2.8	1.5	1.0	--	5.7				
4-Apr	2.0	2.9	Z	6.4	9.7	8.8	6.5	2.4	1.8	1.2	0.8	0.5	0.6	0.6	0.5	0.7	2.4	7.0	11.0	11.5	12.2	25.0	9.0	14.6	6.0	25.0				
5-Apr	15.4	7.9	17.2	Z	30.8	29.9	31.7	20.2	5.5	2.8	6.1	7.9	6.2	2.3	1.6	1.5	2.0	11.9	9.3	7.2	12.8	6.2	5.7	4.4	10.7	31.7				
6-Apr	2.0	1.2	1.2	0.9	Z	2.0	1.5	1.5	1.1	1.2	1.4	1.2	1.3	1.4	1.1	1.2	1.8	1.8	2.4	1.9	1.2	0.9	1.0	1.0	1.4	2.4				
7-Apr	1.0	1.1	1.0	1.4	2.7	Z	3.6	2.6	1.7	1.7	2.1	1.8	1.2	1.2	1.6	1.8	2.8	5.0	9.6	8.1	7.3	6.8	2.0	2.4	3.1	9.6				
8-Apr	Z	3.2	4.8	5.6	5.1	16.4	7.6	11.6	5.8	6.7	5.4	5.1	12.2	15.1	9.9	6.7	13.6	32.4	11.1	13.2	8.9	13.5	5.1	5.3	9.7	32.4				
9-Apr	7.1	Z	6.5	8.1	4.7	8.0	6.4	2.7	1.2	9.6	9.0	1.0	0.3	0.2	0.1	0.0	0.0	0.0	0.3	14.2	6.7	0.5	0.5	5.4	4.0	14.2				
10-Apr	1.3	1.1	Z	1.0	1.9	1.9	1.4	1.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	6.3	26.9	28.7	10.9	5.0	2.4	4.0	28.7				
11-Apr	1.1	1.6	2.0	Z	3.3	10.5	13.2	11.3	9.9	2.5	2.1	0.5	M	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	2.7	13.2				
12-Apr	0.4	0.1	0.6	0.0	Z	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.6	1.2	14.8	3.7	0.2	1.1	14.8				
13-Apr	0.0	0.4	2.2	0.8	2.0	Z	0.4	2.0	0.1	1.2	0.4	4.1	5.2	5.0	5.1	8.1	5.8	4.6	3.7	5.1	6.1	3.9	5.1	3.3	3.2	8.1				
14-Apr	Z	4.3	5.2	1.4	1.8	4.2	19.9	16.5	9.8	6.7	3.9	2.5	1.4	0.8	0.6	1.3	1.1	1.3	6.9	13.3	7.5	4.7	4.4	2.7	5.3	19.9				
15-Apr	2.5	Z	5.6	6.7	4.2	7.4	8.5	0.9	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	1.6	8.5				
16-Apr	0.0	0.0	Z	0.3	0.2	0.5	0.6	0.5	0.2	0.1	0.2	0.5	1.2	1.3	1.1	0.7	0.9	4.4	5.2	4.7	4.2	6.9	7.0	3.0	1.9	7.0				
17-Apr	2.3	1.9	1.7	Z	5.2	2.7	2.9	3.8	3.2	4.5	4.3	2.4	3.2	3.0	3.1	3.3	4.3	5.2	6.5	15.6	31.7	13.5	7.9	3.9	5.9	31.7				
18-Apr	2.9	3.2	2.6	4.3	Z	6.6	4.7	4.1	2.3	1.4	1.3	1.0	0.8	0.7	0.8	1.0	1.2	1.9	2.2	2.8	2.9	2.9	2.0	1.1	2.4	6.6				
19-Apr	1.4	1.2	0.4	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	0.4	0.2	0.2	0.3	3.1	1.6	1.7	0.5	3.1				
20-Apr	Z	2.4	2.4	2.8	4.1	4.8	3.9	3.7	3.6	5.3	5.4	3.3	2.2	2.4	4.1	6.4	8.1	6.5	6.6	11.1	8.7	7.8	4.7	3.0	4.9	11.1				
21-Apr	2.9	Z	8.4	6.6	5.6	1.5	5.8	2.7	1.8	2.0	1.8	1.2	1.0	1.0	0.7	1.1	1.9	3.9	2.7	3.3	2.7	2.2	2.1	2.4	2.8	8.4				
22-Apr	3.9	4.8	Z	4.1	0.5	0.8	0.0	1.3	1.3	0.9	0.3	0.3	0.0	0.4	0.0	0.1	2.7	4.0	2.6	7.8	21.7	12.0	3.9	8.6	3.6	21.7				
23-Apr	10.0	7.4	6.2	Z	12.8	13.2	7.7	18.8	21.8	10.2	10.1	14.5	12.5	4.7	3.6	3.3	3.3	4.1	2.1	4.7	3.9	4.0	5.6	5.4	8.3	21.8				
24-Apr	7.7	18.6	35.4	30.1	Z	27.3	36.9	9.2	2.3	2.6	1.8	1.2	0.6	0.6	0.8	1.4	1.8	1.7	2.9	4.2	5.8	5.0	1.4	1.3	8.7	36.9				
25-Apr	2.6	3.2	6.5	8.4	19.1	Z	21.5	12.9	3.0	0.6	1.0	0.9	1.0	1.2	0.9	1.1	1.0	0.7	0.9	1.6	10.3	9.3	3.5	1.4	4.9	21.5				
26-Apr	Z	2.1	1.9	0.9	5.7	3.3	9.5	16.5	14.6	14.7	20.8	22.5	7.5	5.5	3.7	3.3	2.4	2.9	2.7	3.5	2.1	1.9	2.8	4.5	6.8	22.5				
27-Apr	3.9	Z	1.6	1.1	2.9	2.7	2.7	3.9	4.5	4.8	4.0	3.1	4.1	7.6	7.5	8.1	6.5	7.1	7.8	6.7	5.7	7.3	9.5	8.1	5.3	9.5				
28-Apr	1.8	3.3	Z	2.8	3.2	4.1	4.0	4.3	4.2	2.3	2.2	1.5	0.2	0.3	0.4	0.6	1.5	1.5	2.6	2.4	1.6	0.8	0.5	1.7	2.1	4.3				
29-Apr	0.5	1.7	4.4	Z	0.7	1.2	1.5	0.6	0.0	0.0	0.0	0.0	0.1	0.9	1.2	1.5	0.8	2.3	2.5	4.2	2.0	1.9	4.1	1.9	1.5	4.4				
30-Apr	5.3	1.6	0.5	0.6	Z	0.4	0.1	7.3	9.9	10.6	13.1	10.0	7.6	7.1	2.9	4.1	4.8	6.7	2.6	2.2	1.9	1.9	2.8	2.4	4.6	13.1				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	665	97.51	97.51
21 - 40	17	2.49	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	81	30	14	19	15	57	72	28	45	34	38	43	59	47	34	40	656
21 - 40	2	0	0	1	2	3	2	1	3	0	0	0	0	1	0	2	17
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	30	14	20	17	60	74	29	48	34	38	43	59	48	34	42	673

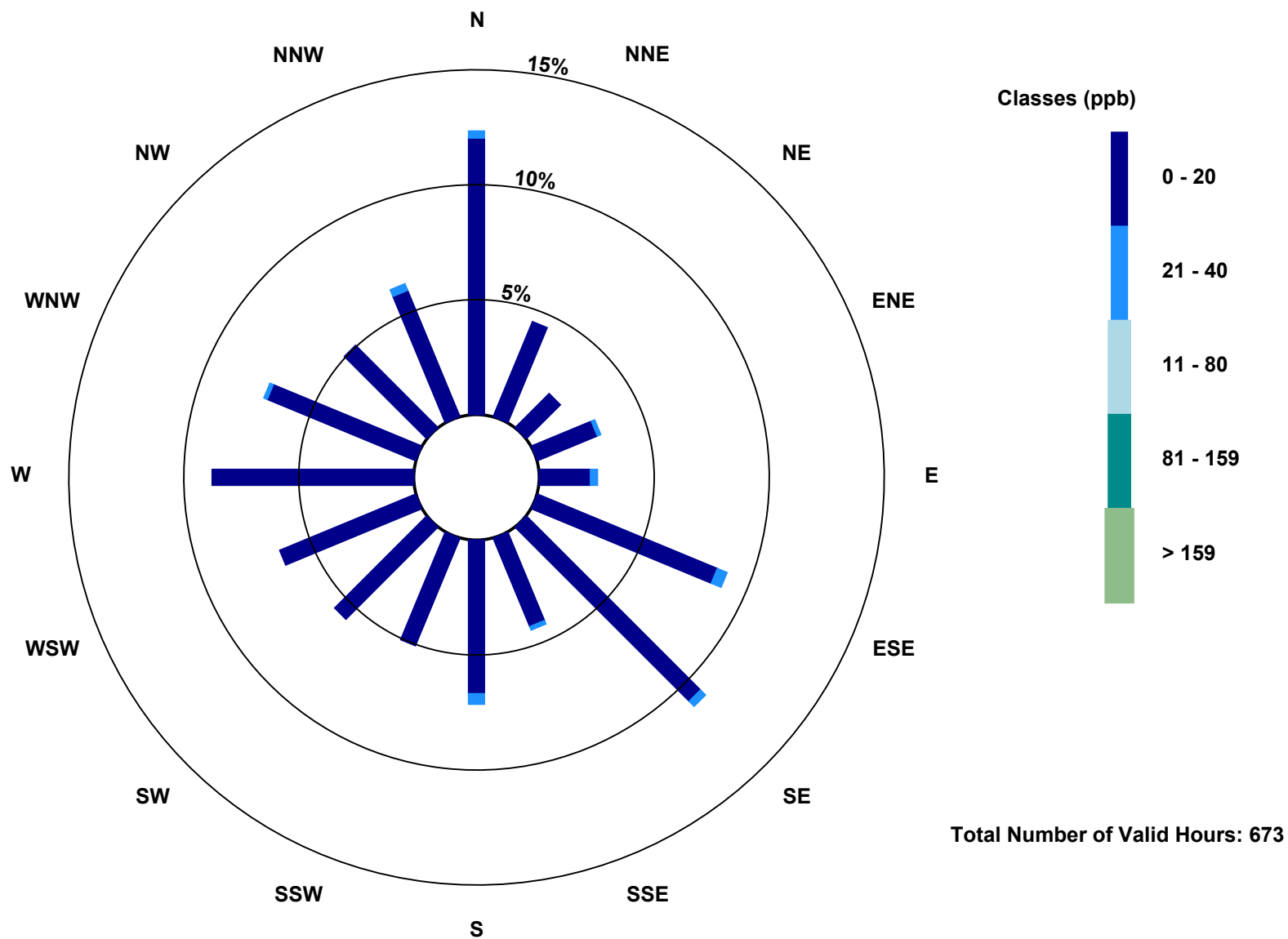
Total Number of Valid Hours: 673

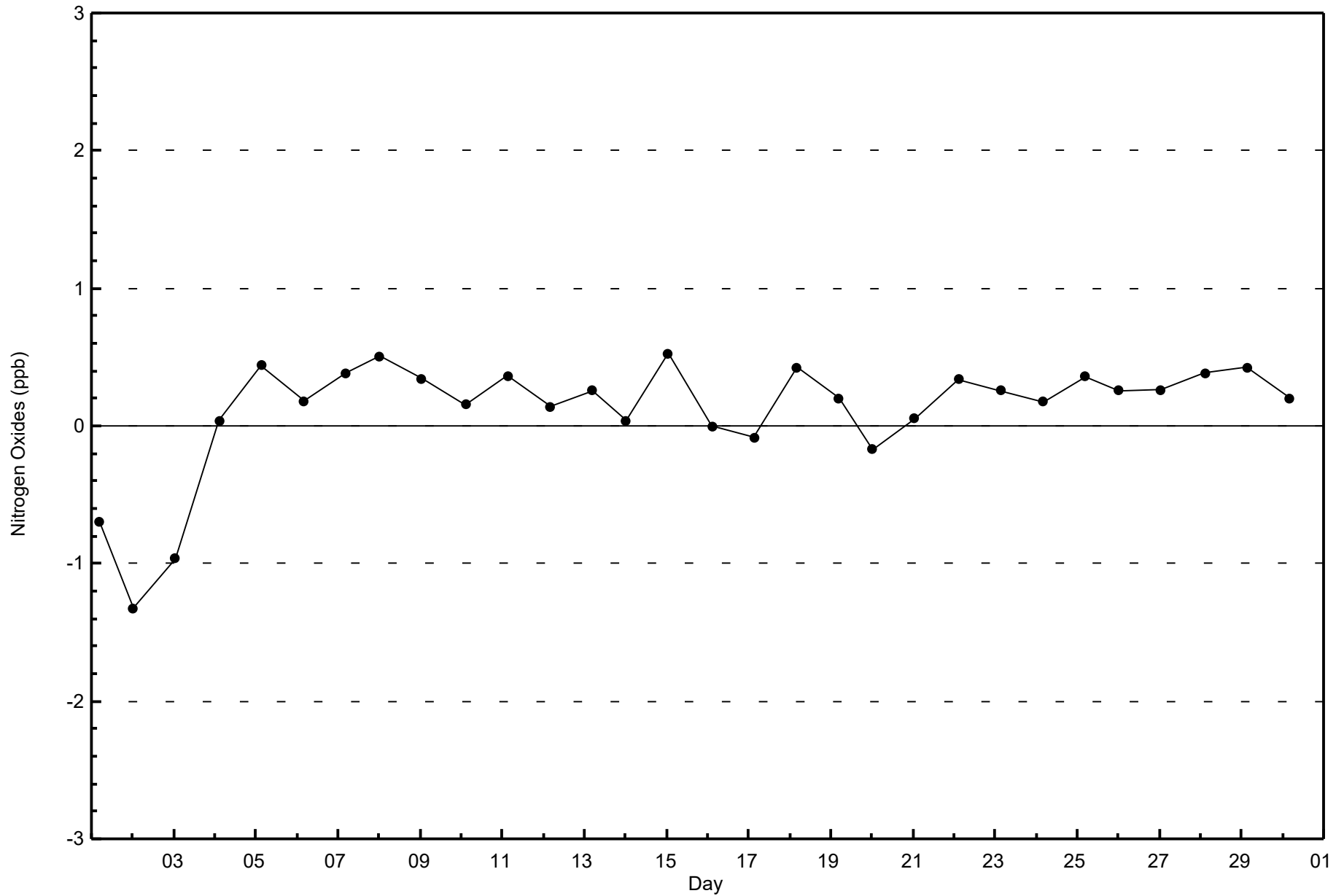
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Patricia McInnes

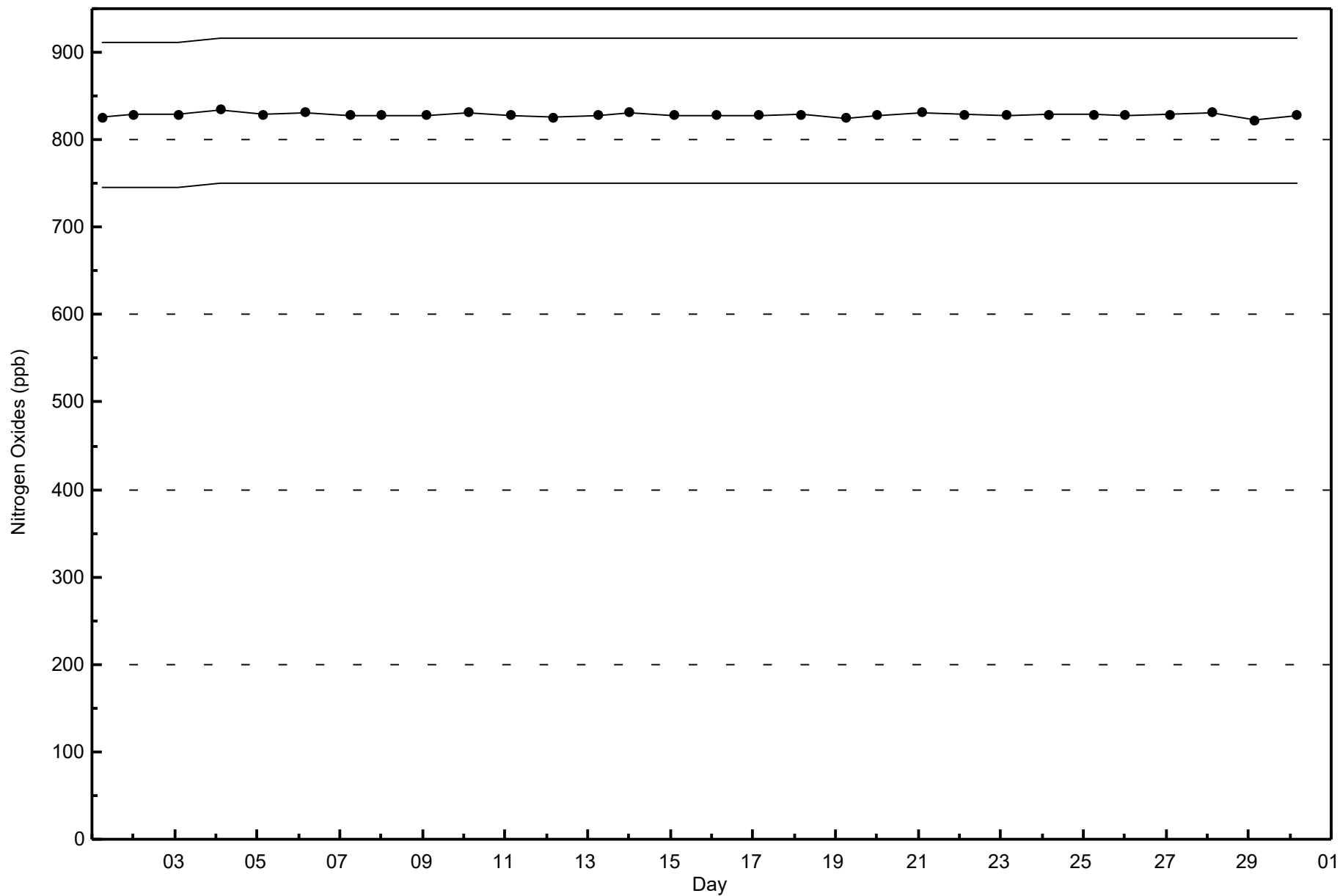






Wood Buffalo Environmental Association
Span Responses

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

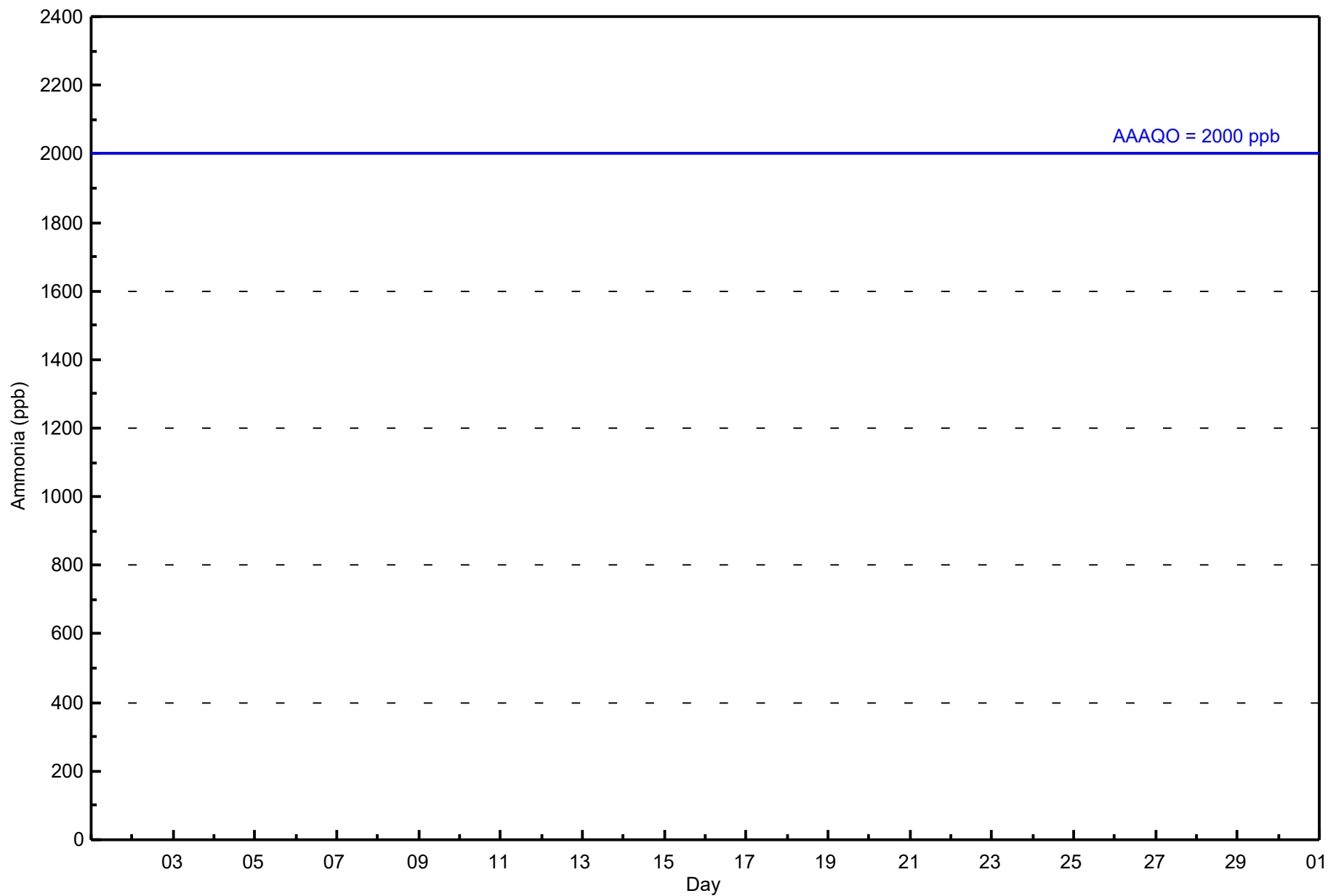


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Wood Buffalo Environmental Association
Hourly Averages

Ammonia (NH₃) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ammonia (NH₃) - ppb
Patricia McInnes - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	636	100.00	100.00
6 - 10	0	0.00	100.00
11 - 15	0	0.00	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: 636

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Ammonia (NH₃) - ppb
Patricia McInnes - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	81	29	14	20	15	46	66	27	46	35	34	38	51	48	32	46	628
6 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	81	29	14	20	15	46	66	27	46	35	34	38	51	48	32	46	628

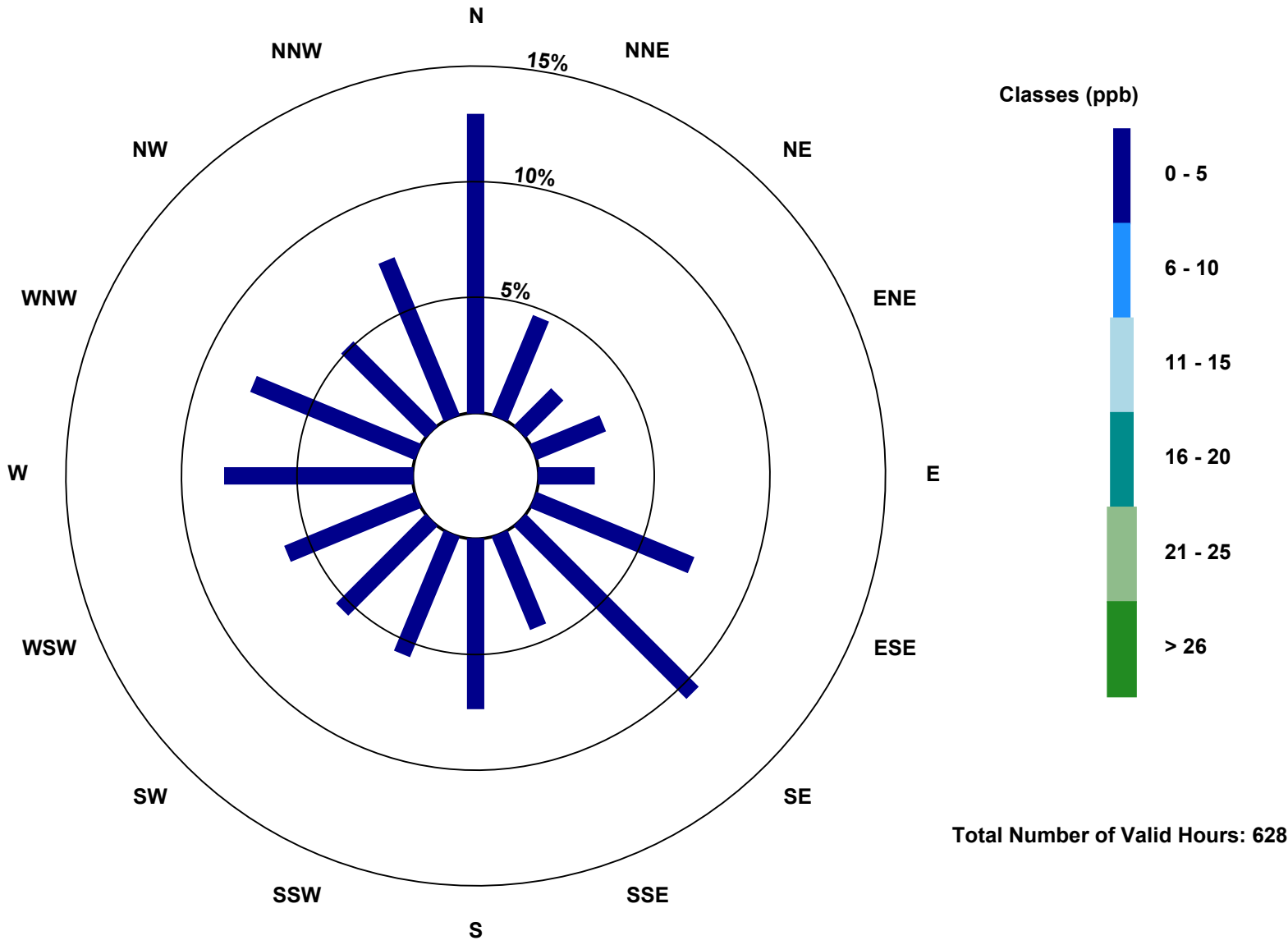
Total Number of Valid Hours: 628

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

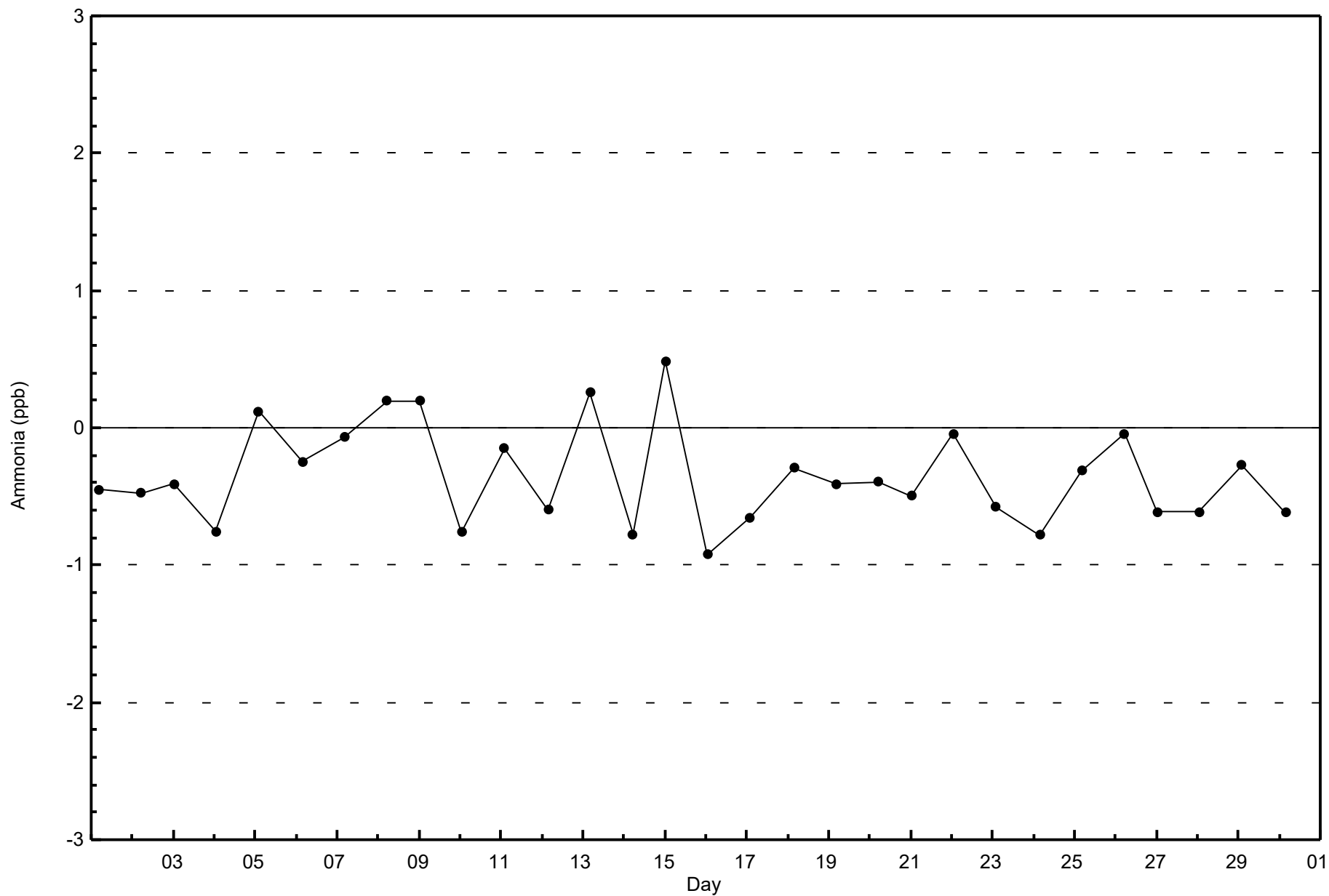
Ammonia (NH₃) - ppb
Patricia McInnes





Wood Buffalo Environmental Association
Zero Responses

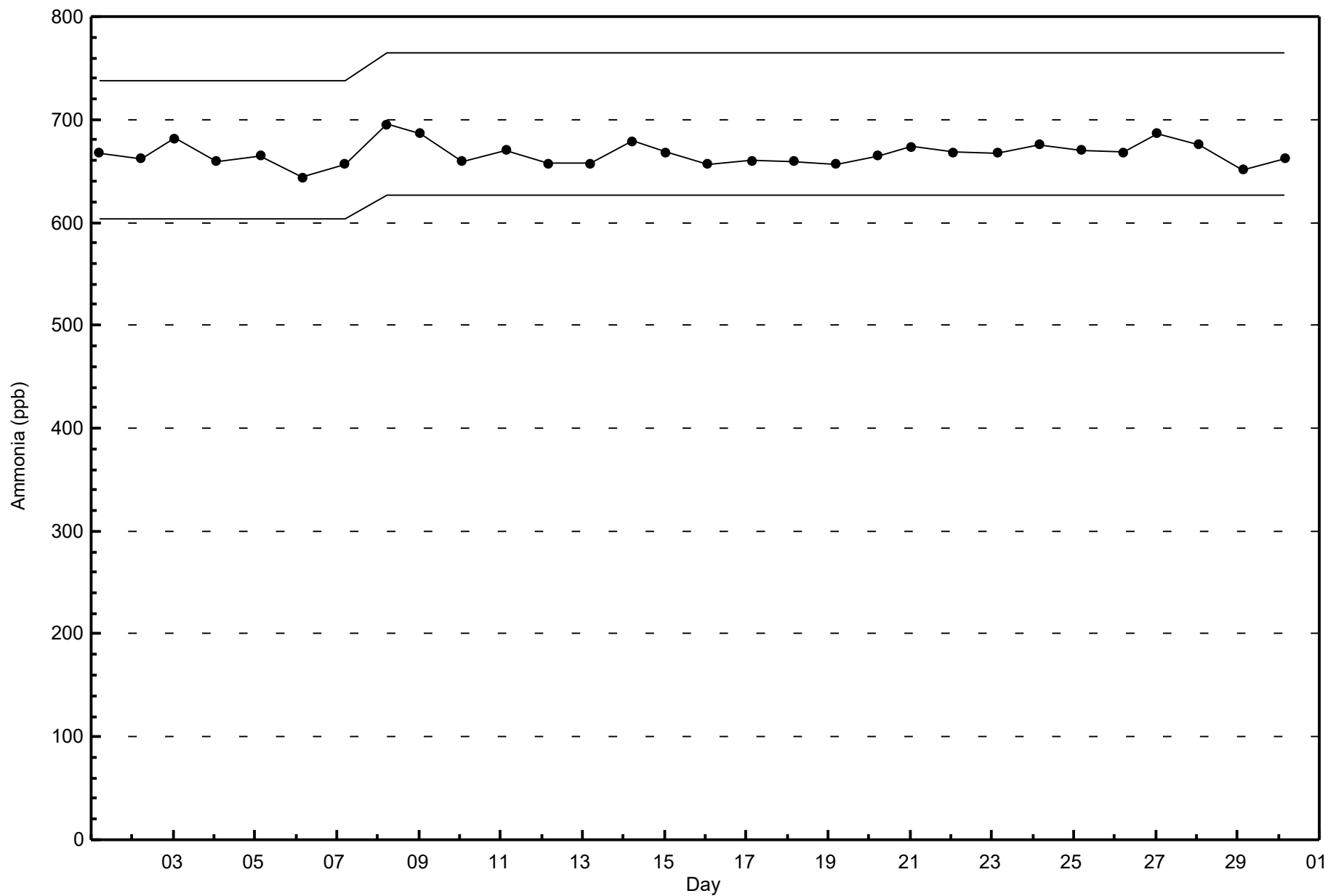
Ammonia (NH_3) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association
Span Responses

Ammonia (NH₃) - ppb
Patricia McInnes - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

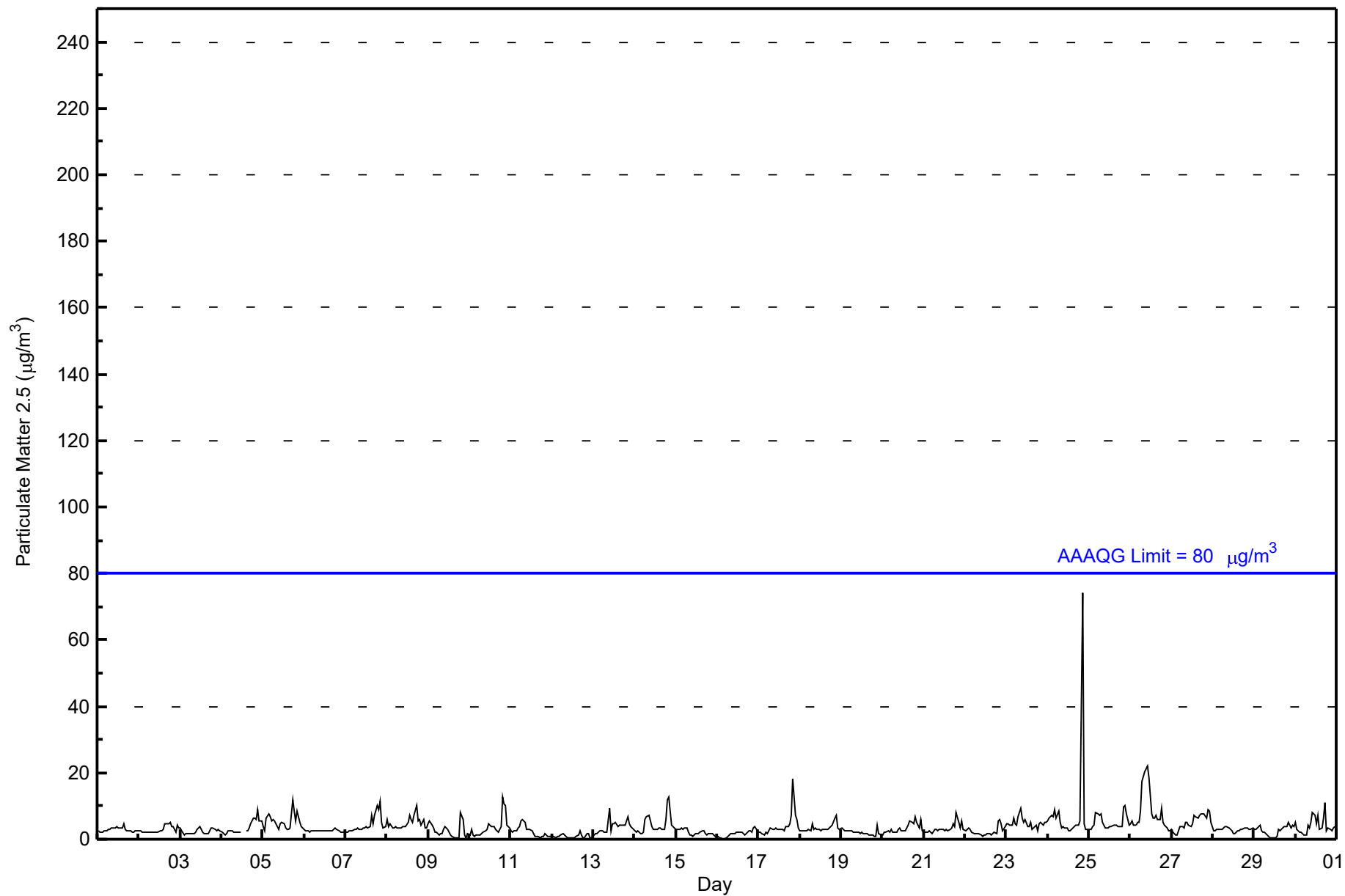
Patricia McInnes - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 74.0 µg/m ³ on Apr 24 21:00 Maximum Daily Average: 8.5 µg/m ³ on Apr 26																								Hours in Service: 720 Hours of Data: 718		
Minimum Value: 0.1 µg/m ³ on Apr 16 04:00 Maximum Diurnal Average: 7.9 µg/m ³ at hour 21 Monthly Average: 3.64 µg/m ³ Minimum Daily Average: 0.9 µg/m ³ on Apr 12 Minimum Diurnal Average: 2.8 µg/m ³ at hour 3 Percentiles: P ₁ = 0.3 P ₁₀ = 1.4 Q ₁ = 2.2 Median = 3.0 Q ₃ = 4.2 P ₉₀ = 6.4 P ₉₉ = 12.6																								Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.3	2.2	2.2	2.2	2.5	2.6	2.8	3.2	3.2	3.4	3.5	3.6	3.4	3.3	3.2	4.6	3.2	2.7	2.6	2.4	2.3	2.3	2.4	2.3	2.9	4.6
2-Apr	2.5	2.4	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.2	2.4	2.6	2.9	4.7	4.8	4.5	5.0	3.7	3.7	2.3	4.2	3.5	3.0	5.0
3-Apr	3.3	2.7	1.4	1.5	1.6	1.6	1.6	1.7	1.8	2.0	3.1	3.6	3.1	2.0	1.7	1.6	1.7	2.6	3.4	3.5	3.0	2.6	2.8	2.6	2.4	3.6
4-Apr	2.1	1.5	1.4	1.8	2.6	2.6	2.8	2.2	2.2	2.2	2.2	2.0	C	C	2.5	2.7	3.5	4.5	6.6	6.5	5.9	9.0	5.6	5.4	3.5	9.0
5-Apr	3.7	2.6	6.5	7.6	6.8	5.3	5.8	5.4	3.8	3.0	4.5	5.0	4.7	3.3	3.0	2.9	3.5	12.1	8.3	5.4	8.4	5.0	4.0	3.5	5.2	12.1
6-Apr	2.8	2.6	2.6	2.3	2.4	2.4	2.4	2.4	2.7	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.7	2.8	3.2	3.0	2.7	2.3	2.2	2.1	2.6	3.2
7-Apr	2.1	2.3	2.4	2.5	2.7	2.8	3.0	3.4	3.2	3.1	3.5	3.4	3.8	3.3	3.6	7.0	4.7	7.3	10.1	9.0	11.6	5.3	3.4	3.7	4.5	11.6
8-Apr	5.7	4.0	4.5	3.5	3.3	3.7	3.3	3.6	3.4	3.6	3.6	3.6	5.1	7.3	6.1	5.1	7.2	10.0	5.7	6.0	4.3	5.9	3.2	3.2	4.8	10.0
9-Apr	4.5	5.5	4.1	3.3	2.0	2.0	1.4	1.7	1.9	3.1	3.8	2.8	2.0	1.4	1.0	0.6	0.5	0.6	0.6	8.2	6.0	1.4	0.5	1.6	2.5	8.2
10-Apr	1.3	3.0	1.4	0.9	1.4	1.4	1.4	1.7	2.3	2.6	3.0	4.9	4.2	4.0	3.7	3.0	2.5	2.2	3.8	12.5	10.8	10.1	4.3	3.6	3.8	12.5
11-Apr	2.6	2.2	2.6	2.5	3.2	3.9	5.5	5.8	5.0	3.1	2.9	2.8	2.6	1.6	0.7	0.7	0.7	0.5	0.7	0.7	1.8	0.8	1.0	0.7	2.3	5.8
12-Apr	0.7	0.7	0.6	0.7	0.9	1.4	1.6	1.3	0.7	0.3	0.3	0.4	0.4	0.4	0.9	1.4	2.5	1.2	0.5	0.4	1.9	1.6	0.6	0.6	0.9	2.5
13-Apr	1.1	1.7	1.7	2.2	2.7	2.6	2.3	2.2	2.1	9.3	2.4	4.7	4.9	5.1	3.8	4.2	4.2	4.4	4.3	5.4	6.6	4.7	4.0	3.1	3.7	9.3
14-Apr	2.4	2.2	2.4	1.9	1.6	2.2	5.9	6.9	7.3	5.4	3.7	3.1	2.9	3.2	3.2	3.5	3.0	2.8	6.1	11.9	12.7	4.3	3.8	3.3	4.4	12.7
15-Apr	3.2	2.9	3.1	3.4	2.8	3.2	3.3	2.0	1.5	1.2	0.8	1.5	1.7	1.6	2.1	2.4	2.4	1.8	1.1	1.5	1.7	1.6	1.1	1.0	2.0	3.4
16-Apr	1.0	0.6	0.2	0.1	0.2	0.3	0.7	1.1	1.5	1.6	1.8	2.0	2.2	2.1	2.2	1.6	1.1	1.9	2.4	2.5	2.3	3.3	3.7	2.4	1.6	3.7
17-Apr	1.9	1.9	1.9	1.4	2.1	1.6	2.4	3.3	3.1	3.1	3.6	2.9	3.1	3.0	3.0	2.7	3.7	3.8	4.7	7.0	18.3	7.1	5.9	3.3	4.0	18.3
18-Apr	2.7	2.5	2.4	2.6	2.7	2.8	2.7	4.6	3.1	3.2	2.8	2.9	2.7	2.9	2.9	2.9	3.1	3.3	3.8	4.4	6.4	7.1	3.5	3.1	3.4	7.1
19-Apr	3.2	3.1	2.6	2.5	2.5	2.6	2.5	2.1	1.9	2.0	2.2	1.8	1.9	1.6	1.5	1.5	1.3	1.3	1.3	1.0	0.9	4.3	1.9	1.2	2.0	4.3
20-Apr	1.3	1.9	2.3	2.4	2.0	2.8	2.2	2.3	2.0	3.1	3.2	2.6	2.5	2.7	3.3	4.2	5.6	5.1	4.7	6.8	4.9	3.4	6.1	2.4	3.3	6.8
21-Apr	2.3	2.3	2.1	2.5	2.2	1.8	2.8	2.8	2.6	2.8	2.8	2.9	2.7	2.9	2.6	2.9	3.5	4.7	3.6	8.2	4.9	3.2	5.3	2.8	3.2	8.2
22-Apr	2.7	2.9	3.3	2.9	2.2	1.9	1.7	1.8	1.5	1.2	0.9	1.3	1.2	1.7	1.6	1.3	1.5	2.2	1.6	5.5	5.9	4.6	2.7	3.7	2.4	5.9
23-Apr	4.9	4.7	4.3	4.2	6.4	4.7	4.1	6.8	9.3	6.2	4.9	5.8	3.7	3.7	5.1	3.1	3.4	4.1	2.7	4.5	5.0	4.1	4.9	5.1	4.8	9.3
24-Apr	5.4	6.4	7.2	6.6	8.9	6.4	8.6	5.1	3.6	3.7	3.3	3.4	2.7	2.6	3.1	3.6	4.2	4.1	4.2	5.5	74.0	4.5	2.9	2.8	7.6	74.0
25-Apr	2.8	2.9	3.7	4.4	8.1	7.8	7.0	7.4	5.0	3.5	3.5	3.5	3.7	4.0	4.0	4.4	4.2	3.9	3.7	3.8	9.7	10.2	7.5	4.4	5.1	10.2
26-Apr	4.5	5.3	4.3	4.4	5.1	4.9	8.4	17.3	20.5	21.1	22.2	18.8	7.7	6.4	6.2	7.2	5.7	5.9	9.4	5.0	4.1	3.4	2.4	2.6	8.5	22.2
27-Apr	2.8	2.3	1.4	1.3	2.4	3.9	3.8	3.3	5.2	5.2	4.3	3.8	4.7	7.4	6.7	6.5	7.1	7.5	7.7	7.6	6.5	8.9	8.6	4.9	5.2	8.9
28-Apr	2.6	2.7	2.8	3.0	2.8	3.0	3.4	3.8	3.9	3.5	3.2	2.6	1.7	1.7	2.5	2.7	2.8	2.9	3.3	3.3	3.3	2.9	2.9	3.3	2.9	3.9
29-Apr	3.1	3.1	3.3	4.1	2.7	2.3	2.0	1.5	0.7	0.5	0.5	0.3	0.2	1.0	2.8	2.7	3.0	3.8	3.8	3.9	5.0	3.4	4.1	3.9	2.6	5.0
30-Apr	5.1	3.0	2.3	2.3	1.8	1.4	1.4	4.3	3.5	5.2	8.1	7.0	4.8	7.3	3.1	3.2	6.2	11.0	2.7	3.2	3.1	2.7	3.3	4.0	4.2	11.0
2.9 2.8 2.8 2.8 3.0 2.9 3.3 3.8 3.7 3.8 3.7 3.6 3.1 3.2 3.1 3.3 3.4 4.2 4.1 5.1 7.9 4.4 3.6 3.0																								Diurnal Average		
5.7 6.4 7.2 7.6 8.9 7.8 8.6 17.3 20.5 21.1 22.2 18.8 7.7 7.4 6.7 7.2 7.2 12.1 10.1 12.5 74.0 10.2 8.6 5.4																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m ³ 24-hr 29 µg/m ³																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	618	86.07	86.07
6 - 15	93	12.95	99.03
16 - 25	6	0.84	99.86
26 - 80	1	0.14	100.00
> 81.0	0	0.00	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}) - µg/m³
Patricia McInnes - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	70	19	7	14	15	51	65	23	40	34	36	43	61	51	35	44	608
6 - 15	12	10	7	7	1	10	15	7	8	2	3	3	0	2	1	5	93
16 - 25	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	6
26 - 80	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	84	30	15	21	17	61	81	30	48	36	39	46	61	53	36	50	708

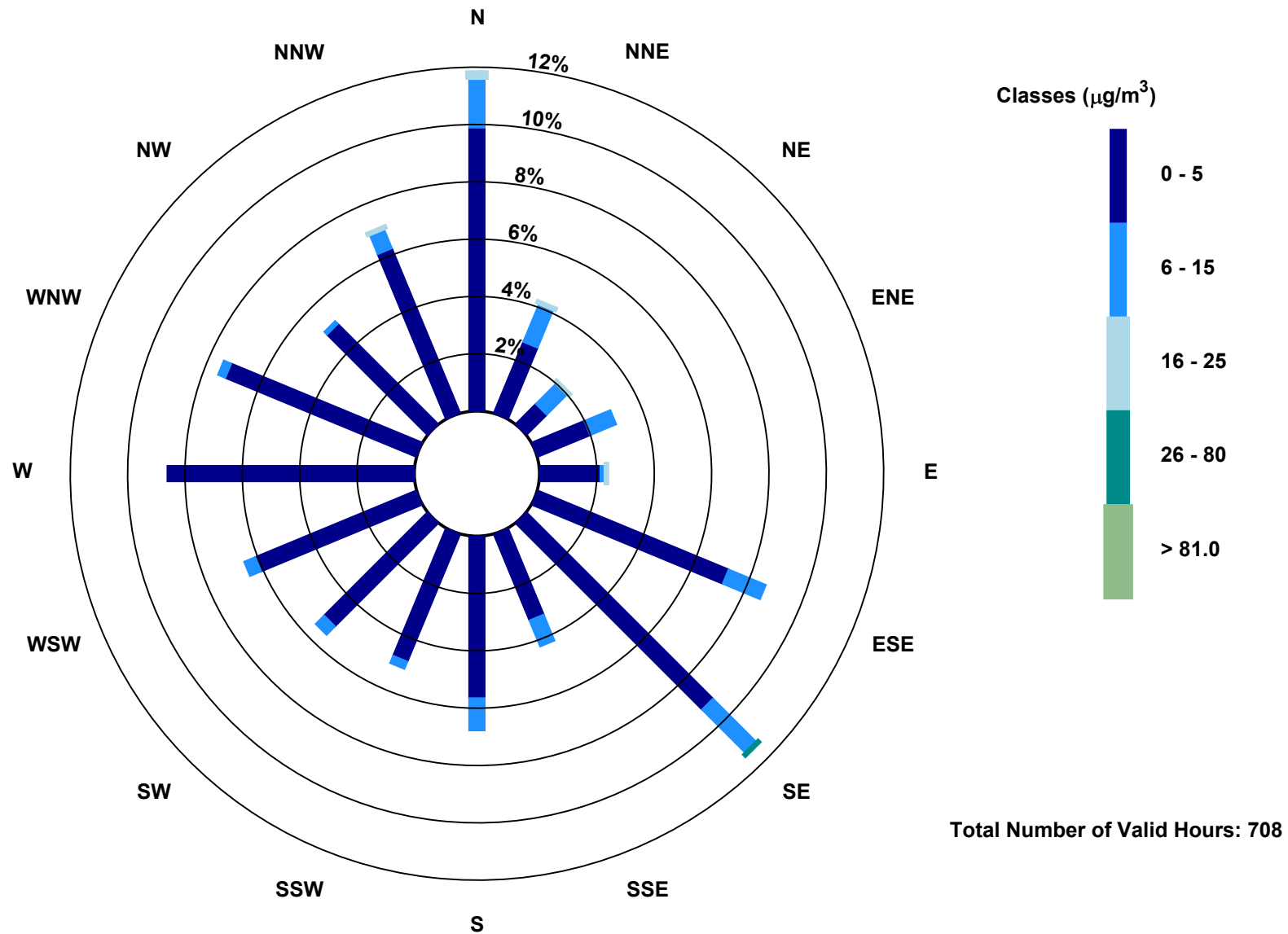
Total Number of Valid Hours: 708

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

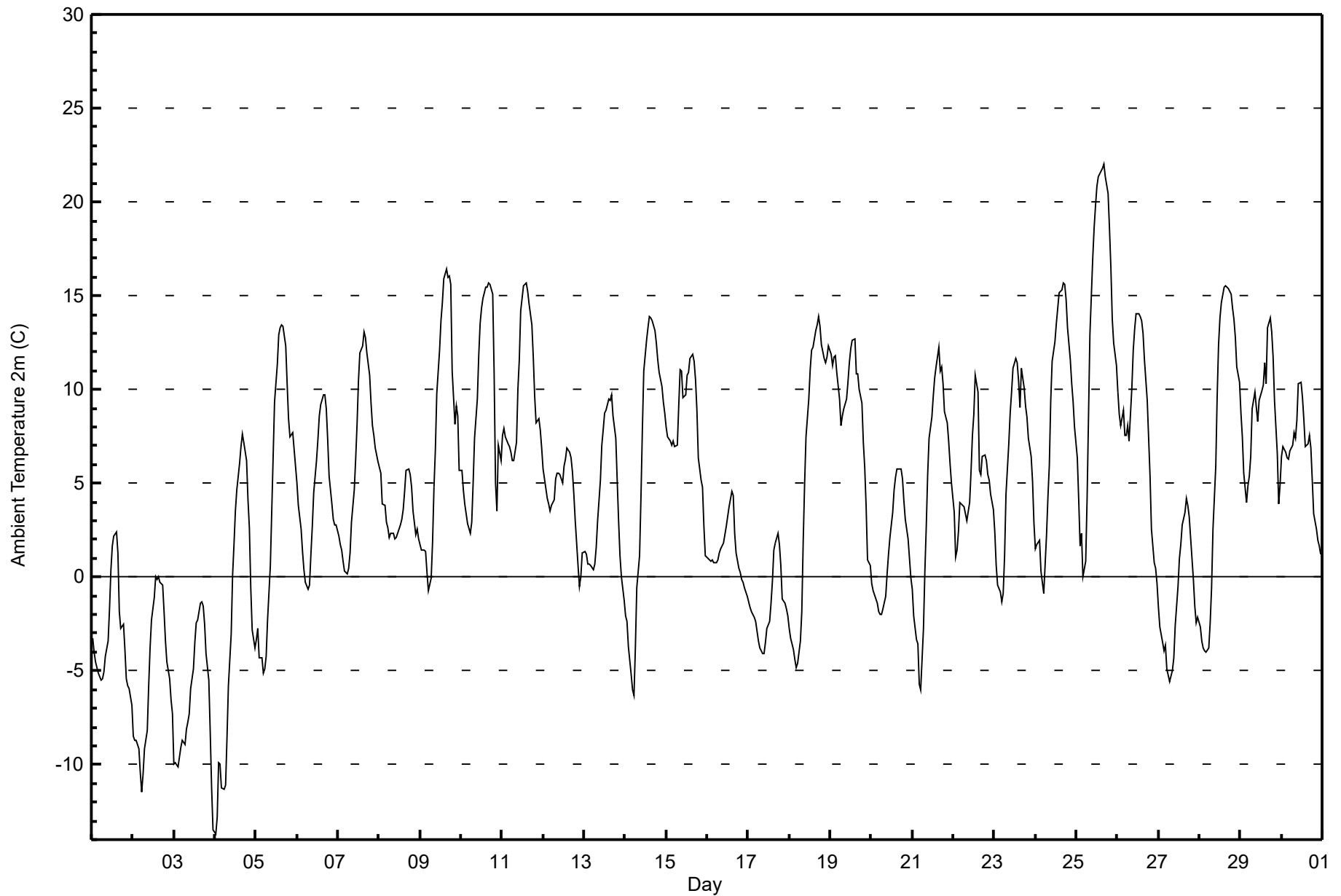
Patricia McInnes - April 2025

Maximum Value: 22.0 C on Apr 25 17:00																				Maximum Daily Average: 13.3 C on Apr 25										Hours in Service: 720	
Minimum Value: -13.7 C on Apr 4 01:00																				Minimum Daily Average: -6.6 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 9.6 C at hour 15																				Minimum Diurnal Average: -0.6 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 4.50 C																				Percentiles: P ₁ = -11.0 P ₁₀ = -4.0 Q ₁ = 0.0 Median = 4.7 Q ₃ = 9.4 P ₉₀ = 13.1 P ₉₉ = 19.5										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	-3.2	-4.0	-4.5	-4.8	-5.1	-5.5	-5.4	-5.0	-4.2	-3.4	-1.7	0.4	1.6	2.2	2.4	1.3	-1.8	-2.7	-2.5	-3.9	-5.4	-5.8	-6.0	-6.9	-3.1	2.4					
2-Apr	-8.5	-8.7	-8.7	-9.1	-10.5	-11.5	-10.5	-9.2	-8.2	-5.8	-3.8	-2.3	-1.1	0.0	-0.2	0.0	-0.2	-0.4	-1.9	-3.4	-4.5	-5.4	-6.5	-7.3	-5.3	0.0					
3-Apr	-10.0	-9.9	-10.2	-9.6	-9.0	-8.7	-8.9	-8.1	-7.7	-7.3	-6.0	-4.9	-3.5	-2.5	-2.3	-1.4	-1.3	-1.5	-2.5	-4.1	-5.5	-8.3	-11.2	-13.5	-6.6	-1.3					
4-Apr	-13.7	-12.8	-9.9	-10.0	-11.3	-11.3	-11.1	-8.6	-5.8	-3.0	0.1	1.7	3.5	4.6	6.1	6.9	7.6	7.2	6.2	4.1	2.7	-0.5	-2.8	-3.7	-2.2	7.6					
5-Apr	-3.4	-2.8	-4.3	-4.3	-5.1	-4.9	-4.2	-2.3	0.6	3.6	6.5	9.3	11.4	12.9	13.3	13.5	13.4	12.3	10.3	8.4	7.5	7.7	6.8	5.9	4.7	13.5					
6-Apr	5.0	3.8	2.5	1.4	0.4	-0.3	-0.7	-0.4	1.2	2.7	4.5	6.2	7.3	8.6	9.2	9.7	9.7	9.0	7.4	5.4	3.9	3.1	2.8	2.7	4.4	9.7					
7-Apr	2.2	1.8	1.4	0.9	0.3	0.2	0.5	1.3	2.9	4.6	6.3	8.1	10.4	12.0	12.3	13.1	12.8	12.0	10.7	9.2	8.1	7.5	6.9	6.2	6.3	13.1					
8-Apr	5.8	5.5	3.9	3.8	2.9	2.6	2.1	2.3	2.3	2.1	2.1	2.3	2.8	3.1	3.6	4.6	5.7	5.8	5.5	4.8	3.5	2.2	2.6	2.0	3.5	5.8					
9-Apr	1.8	1.4	1.4	1.4	0.2	-0.7	-0.1	1.9	4.8	6.8	9.8	12.1	13.7	14.6	15.9	16.4	16.0	16.0	15.6	11.0	8.2	9.1	8.6	5.7	8.0	16.4					
10-Apr	5.7	4.6	3.9	3.4	2.9	2.3	2.9	5.0	7.4	9.5	11.8	13.5	14.4	14.9	15.4	15.5	15.7	15.6	15.1	10.9	5.0	3.5	7.0	6.2	8.8	15.7					
11-Apr	7.6	7.9	7.4	7.1	7.0	6.7	6.2	6.2	7.2	10.0	11.6	14.2	15.5	15.6	15.7	15.3	14.6	13.4	11.8	9.6	8.2	8.4	7.9	6.9	10.1	15.7					
12-Apr	5.8	5.2	4.2	3.9	3.5	3.8	4.1	5.3	5.5	5.6	5.5	5.0	5.9	6.3	6.9	6.6	6.4	5.6	4.5	3.0	0.6	-0.5	0.0	1.3	4.3	6.9					
13-Apr	1.3	1.2	0.7	0.7	0.6	0.4	0.7	1.6	3.0	5.1	7.1	7.8	8.7	8.9	9.5	9.5	9.7	8.6	7.4	5.2	3.0	1.2	0.0	-1.2	4.2	9.7					
14-Apr	-2.1	-2.4	-3.7	-5.2	-6.0	-6.3	-3.8	-0.6	1.1	4.3	7.8	11.0	12.7	13.3	13.9	13.8	13.6	13.2	12.5	11.6	10.9	10.2	9.4	8.7	5.7	13.9					
15-Apr	8.0	7.5	7.3	7.0	7.3	7.0	7.0	9.1	11.0	11.0	9.6	9.7	10.7	10.9	11.7	11.9	11.5	10.5	8.9	6.4	5.1	4.8	2.7	1.2	8.2	11.9					
16-Apr	1.0	0.9	0.8	0.9	0.7	0.8	0.9	1.3	1.5	1.8	2.2	2.7	3.3	3.8	4.6	4.4	2.3	1.3	0.5	0.2	-0.1	-0.3	-0.5	-1.0	1.4	4.6					
17-Apr	-1.3	-1.6	-1.9	-2.2	-2.4	-2.9	-3.4	-3.8	-4.1	-4.1	-3.5	-2.7	-2.4	-1.4	-0.2	1.5	1.8	2.3	1.8	0.6	-1.2	-1.4	-1.7	-2.1	-1.5	2.3					
18-Apr	-2.7	-3.3	-3.9	-4.4	-4.8	-4.6	-3.4	-1.9	1.9	4.9	7.4	9.5	11.0	12.1	12.2	13.1	13.5	13.9	13.4	12.4	11.7	11.4	11.7	12.3	6.0	13.9					
19-Apr	11.9	11.3	11.7	11.8	10.9	9.5	8.1	8.6	9.0	9.5	10.4	11.4	12.2	12.6	12.7	10.8	10.8	10.0	9.3	7.2	5.8	3.8	0.9	0.6	9.2	12.7					
20-Apr	-0.4	-0.7	-0.9	-1.4	-1.8	-2.0	-2.0	-1.7	-1.0	0.1	1.2	2.1	3.5	4.7	5.3	5.8	5.8	5.7	5.2	4.0	3.1	2.0	1.0	0.0	1.6	5.8					
21-Apr	-0.7	-2.0	-3.3	-3.6	-5.7	-6.0	-2.7	0.3	2.7	5.5	7.4	8.5	9.7	10.6	11.2	12.3	11.0	11.2	10.3	8.8	8.2	7.2	6.1	5.0	4.7	12.3					
22-Apr	3.4	1.1	1.4	2.4	4.0	3.8	3.7	3.4	3.0	4.0	5.6	7.5	8.7	10.8	9.8	5.7	5.4	6.4	6.5	6.2	5.5	5.2	4.5	3.6	5.1	10.8					
23-Apr	2.4	0.6	-0.4	-0.8	-1.3	-0.8	1.1	4.4	7.1	8.7	9.9	11.1	11.7	11.5	10.5	9.0	11.1	10.1	9.1	8.5	7.4	6.4	5.1	2.8	6.0	11.7					
24-Apr	1.5	1.8	2.0	0.3	-0.2	-0.9	2.2	4.3	6.0	9.4	11.5	12.5	13.5	14.3	15.1	15.3	15.7	15.6	14.8	13.3	11.6	10.3	9.3	8.0	8.6	15.7					
25-Apr	6.4	4.2	1.7	2.4	0.0	0.9	4.2	8.5	12.9	17.0	18.6	19.8	20.8	21.4	21.7	21.8	22.0	21.3	20.4	18.6	16.5	13.8	12.5	11.3	13.3	22.0					
26-Apr	9.8	8.7	8.1	8.9	7.6	7.5	8.1	7.2	10.1	12.1	13.2	14.0	14.0	13.9	13.7	13.0	11.6	9.4	7.4	5.4	2.6	0.7	0.5	-0.4	8.6	14.0					
27-Apr	-1.7	-2.7	-3.5	-3.9	-3.7	-4.9	-5.5	-5.3	-4.9	-4.3	-2.6	-0.5	1.0	1.8	2.8	3.5	4.2	3.8	3.3	2.1	-0.1	-1.5	-2.4	-2.2	-1.1	4.2					
28-Apr	-2.7	-3.4	-3.8	-3.9	-4.0	-3.8	-2.5	-0.5	2.6	5.9	9.6	12.4	13.8	14.7	15.4	15.5	15.5	15.4	15.1	14.4	13.7	12.8	11.2	10.4	7.2	15.5					
29-Apr	8.8	7.5	5.6	4.0	4.8	5.4	6.5	9.0	9.9	9.1	8.3	9.4	9.9	10.2	11.4	10.3	13.3	13.8	13.1	11.7	9.4	6.6	3.9	4.9	8.6	13.8					
30-Apr	6.4	7.0	6.7	6.3	6.3	6.7	7.0	7.7	7.4	8.4	10.3	10.4	9.6	8.4	6.9	7.1	7.5	6.8	5.2	3.4	2.5	1.9	1.6	1.2	6.4	10.4					
Diurnal Average																															
Diurnal Maximum																															



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	181	25.14	25.14
0 - 10	381	52.92	78.06
10 - 20	151	20.97	99.03
> 20	7	0.97	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) - %

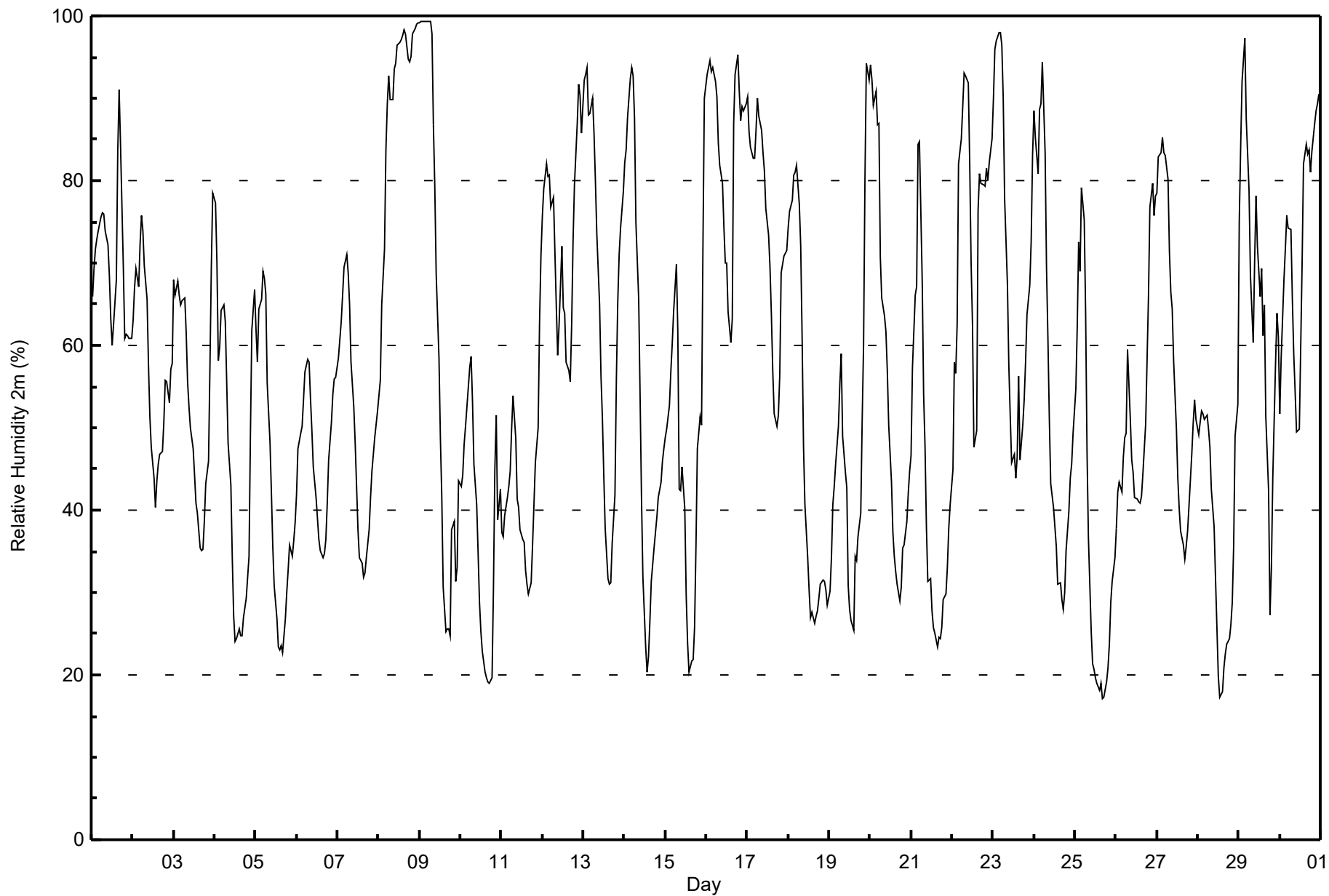
Patricia McInnes - April 2025

Maximum Value: 99.3 % on Apr 9 06:00																				Maximum Daily Average: 89.3 % on Apr 8					Hours in Service: 720				Hours of Data: 720
Minimum Value: 17.1 % on Apr 25 17:00										Minimum Daily Average: 36.7 % on Apr 28										Hours of Missing Data: 0				Hours of Calibration: 0					
Maximum Diurnal Average: 75.5 % at hour 6										Minimum Diurnal Average: 40.1 % at hour 15										Percent Operational Time: 100.0									
Monthly Average: 56.98 %										Percentiles: P ₁ = 19.0 P ₁₀ = 28.8 Q ₁ = 38.8 Median = 55.6 Q ₃ = 74.5 P ₉₀ = 89.2 P ₉₉ = 99.1																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	66.0	69.4	71.6	72.9	73.9	75.5	76.2	75.9	74.0	72.1	68.5	63.1	59.9	62.6	68.0	83.6	91.0	84.2	69.5	60.9	61.4	61.1	60.9	60.9	70.1	91.0			
2-Apr	63.1	66.9	69.3	67.2	72.3	75.7	73.9	69.7	65.6	57.6	51.4	47.6	43.9	40.4	43.5	45.6	46.8	47.0	50.7	55.7	55.6	53.1	57.2	57.8	57.4	75.7			
3-Apr	68.0	66.0	67.8	66.1	64.9	65.5	65.7	61.5	55.6	52.6	50.1	47.4	44.3	40.8	39.7	35.5	35.1	35.3	38.7	43.3	45.9	57.3	69.6	78.5	54.0	78.5			
4-Apr	77.3	70.2	58.2	59.9	64.3	65.0	62.9	55.5	48.1	43.1	34.3	27.0	24.1	24.4	25.6	24.8	24.7	27.0	29.4	31.9	34.3	49.3	61.9	66.7	45.4	77.3			
5-Apr	61.8	57.9	64.5	65.5	69.0	68.2	66.3	55.4	48.2	42.2	35.6	30.9	26.8	23.3	23.1	23.6	22.8	26.8	30.1	32.8	35.8	34.3	36.2	38.5	42.5	69.0			
6-Apr	41.8	47.5	49.4	50.2	53.4	56.8	58.4	57.9	53.6	49.6	45.2	41.6	39.0	36.5	35.1	34.2	34.8	36.5	40.8	46.0	50.7	54.1	56.0	56.1	46.9	58.4			
7-Apr	58.5	60.6	62.9	66.1	69.6	71.0	68.9	64.8	58.0	52.6	48.2	43.0	37.6	34.2	33.6	31.9	32.5	34.3	37.7	41.5	44.8	46.8	48.9	52.1	50.0	71.0			
8-Apr	53.9	55.7	65.0	71.8	83.8	89.3	92.6	89.8	89.8	93.6	94.3	96.5	96.7	97.1	97.6	98.4	97.8	94.8	94.4	95.1	97.8	98.5	99.0	99.1	89.3	99.1			
9-Apr	99.2	99.3	99.3	99.3	99.3	99.3	99.3	97.8	86.7	79.4	68.7	58.4	48.9	41.7	30.6	25.3	25.6	25.5	24.7	37.6	38.6	31.4	33.1	43.6	62.2	99.3			
10-Apr	43.0	44.2	48.0	50.1	52.5	57.3	58.7	53.3	45.6	40.7	34.9	28.8	25.3	22.8	20.3	19.6	19.2	18.9	19.6	30.4	45.0	51.5	38.8	42.6	38.0	58.7			
11-Apr	37.4	36.8	39.4	41.5	42.9	44.7	49.7	53.8	48.6	41.3	40.3	37.6	36.4	36.0	32.8	31.0	29.9	31.2	35.7	40.7	45.7	50.0	62.6	70.8	42.4	70.8			
12-Apr	75.5	79.0	82.0	80.5	80.7	76.8	77.9	71.3	64.7	58.7	62.6	72.0	64.6	63.9	58.0	57.0	55.6	62.5	72.7	79.5	86.9	91.7	90.3	85.7	72.9	91.7			
13-Apr	92.2	92.9	93.8	88.0	88.2	90.0	85.7	80.0	73.6	64.9	56.2	51.2	44.2	37.7	31.6	31.0	31.2	35.8	41.8	55.7	65.3	71.0	74.2	78.7	64.8	93.8			
14-Apr	82.2	83.8	87.6	92.3	93.7	92.7	87.7	74.9	65.6	53.7	41.6	31.8	23.5	20.3	22.2	26.4	31.3	35.4	37.3	39.2	41.5	43.5	45.9	47.5	54.2	93.7			
15-Apr	48.8	49.9	52.8	56.8	60.2	64.1	69.8	61.7	42.6	42.3	45.3	40.2	29.7	23.8	20.4	21.8	21.9	25.7	35.5	47.4	51.4	50.3	72.1	90.1	46.9	90.1			
16-Apr	92.8	93.8	94.5	93.3	93.7	92.1	90.2	84.5	81.9	79.7	74.3	69.9	70.0	64.1	60.4	63.2	87.0	92.9	95.3	90.9	87.2	89.0	88.4	89.4	84.1	95.3			
17-Apr	90.2	85.9	84.1	82.7	82.7	86.1	90.0	87.8	86.1	83.5	81.2	76.6	73.4	69.4	63.7	56.8	51.8	50.1	51.5	56.5	68.9	70.8	71.2	71.5	73.8	90.2			
18-Apr	74.2	76.3	77.6	80.6	81.0	81.8	77.1	72.0	61.1	47.8	40.6	34.2	30.3	27.0	27.6	26.3	27.1	27.8	29.2	31.0	31.5	31.3	30.3	28.5	48.0	81.8			
19-Apr	30.1	34.2	40.7	42.8	45.7	50.2	55.3	59.0	48.9	44.5	42.6	30.9	27.9	26.6	25.4	34.5	34.0	36.7	39.6	50.8	59.9	80.2	94.3	92.2	47.0	94.3			
20-Apr	94.1	92.2	89.2	90.9	86.7	86.9	70.6	65.7	63.5	61.8	57.0	50.4	43.4	37.4	34.4	32.6	31.1	28.9	30.6	35.5	35.7	38.7	42.0	44.7	56.0	94.1			
21-Apr	46.5	57.3	66.1	67.1	84.5	84.7	67.8	54.1	47.8	38.0	31.3	31.6	27.7	25.7	25.1	23.4	24.6	24.3	25.7	29.2	29.9	33.1	37.8	40.6	42.7	84.7			
22-Apr	44.9	58.0	56.7	62.5	82.0	85.1	88.9	93.1	92.8	91.9	82.2	69.9	62.5	47.6	49.7	76.5	80.8	79.6	79.5	79.3	81.5	80.0	82.2	85.0	74.7	93.1			
23-Apr	89.9	95.9	97.0	98.1	97.9	96.4	89.9	77.9	67.4	57.6	51.4	45.8	46.8	43.9	46.5	56.2	46.2	50.3	53.3	57.9	63.8	67.3	72.6	83.0	68.9	98.1			
24-Apr	88.5	85.3	80.8	88.7	89.3	94.3	83.5	69.3	60.8	51.3	43.3	40.4	38.0	35.7	31.0	31.1	29.2	28.0	30.1	35.0	39.9	43.9	45.6	49.3	54.7	94.3			
25-Apr	54.8	62.3	72.5	69.0	79.2	75.2	63.9	47.1	36.6	25.2	21.4	20.6	19.6	18.9	18.2	18.9	17.1	17.2	19.1	20.8	23.8	28.9	31.4	34.3	37.3	79.2			
26-Apr	37.9	42.2	43.4	42.2	46.4	48.8	49.2	59.4	51.0	46.1	44.5	41.5	41.4	41.0	40.9	41.7	44.4	50.4	58.2	65.9	76.8	79.6	75.8	78.2	52.0	79.6			
27-Apr	78.4	82.9	83.4	85.2	83.4	83.1	80.2	71.3	66.5	64.4	58.1	49.8	43.9	40.2	37.5	35.8	34.1	35.6	37.5	40.4	46.8	50.5	53.4	51.0	58.1	85.2			
28-Apr	49.1	50.6	52.1	51.7	51.0	51.5	49.9	47.7	42.6	37.9	31.7	25.8	19.8	17.2	17.9	20.8	22.5	23.7	24.5	26.1	28.8	35.7	48.9	52.9	36.7	52.9			
29-Apr	75.1	84.1	92.1	97.3	87.5	83.2	78.9	68.5	60.4	70.2	78.2	72.1	66.0	69.4	61.2	65.0	51.3	42.5	27.3	32.9	43.9	57.9	64.0	61.0	66.2	97.3			
30-Apr	51.7	58.4	67.9	71.7	75.7	74.3	74.1	65.8	59.0	54.5	49.5	49.8	59.9	70.0	82.1	84.3	83.1	83.7	81.1	83.6	87.0	88.6	89.3	90.6	72.3	90.6			
Diurnal Average																													
Diurnal Maximum																													



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - April 2025

Maximum Speed: 36 km/h on Apr 15 10:00										Maximum Daily Speed Average: 20.3 km/h on Apr 15										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 9 20:00										Minimum Daily Speed Average: 0.5 km/h on Apr 8										Hours of Data: 710						
Maximum Diurnal Speed Average: 4.9 km/h at hour 15										Minimum Diurnal Speed Average: 0.3 km/h at hour 24										Hours of Missing Data: 10						
Monthly Average Velocity: 2.1 km/h 277.5 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 10 Q ₃ = 16 P ₉₀ = 22 P ₉₉ = 32										Percent Operational Time: 98.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE9	ESE9	SE9	SE12	SE15	SE12	SE13	SE11	SE10	SE10	SE10	SE8	S6	S6	SW10	WSW13	NW21	NW18	NW17	NW18	NW12	NNW12	NW9	NW14	SSW1.0	NW21
2-Apr	WNNW10	WSW7	W10	W9	W9	W13	W14	W12	W13	WNNW14	NW15	WNNW13	NNW13	NW15	N15	N17	N17	N18	N15	NNW10	NW9	NNW8	N8	N6	NW9.3	N18
3-Apr	NW5	WNNW10	WNNW11	WNNW12	WNNW12	WNNW12	WNNW14	NW18	NNW23	NW21	NNW19	NNW17	NNW13	NNW15	NNW17	NNW18	NNW19	N18	N13	NNW8	NW7	WNNW5	W6	W5	NW12.2	NNW23
4-Apr	WSW4	SW7	WSW12	SW9	SSW6	SSW8	SW8	SSW8	S8	S9	S9	S8	S7	S9	S8	S9	SSE7	E9	ESE7	SE8	SE6	S6	S4	S6	S6.0	WSW12
5-Apr	S7	SSW9	S7	S7	S6	S7	SE6	SSE7	S7	SSE4	E5	ENE4	ENE6	E6	NE6	NNE8	NNE8	NNE10	N8	NNW8	NE5	E7	E7	ESE10	ESE2.9	NNE10
6-Apr	ESE12	ESE15	ESE15	ESE17	SE16	ESE18	ESE18	ESE21	ESE18	ESE19	ESE22	ESE23	ESE24	ESE22	ESE23	ESE23	ESE22	ESE22	ESE21	ESE22	ESE24	SE19	ESE18	SE17	ESE19.6	ESE24
7-Apr	SE16	SE15	SE17	SE16	SE13	SE15	SE15	ESE17	ESE21	ESE18	ESE18	ESE19	ESE22	ESE19	ESE16	SE13	SE7	SE3	ESE7	SE6	SE8	SE9	SE8	ESE13.9	ESE22	
8-Apr	SE8	SE5	NW2	SE6	ESE4	NNE3	NW2	NE6	N4	SE3	SSW5	SE6	E5	S3	SW5	NNW4	NNE2	ENE2	N4	WSW3	WNNW2	N4	NW5	WNNW4	E0.5	SE8
9-Apr	WSW2	WSW3	SW3	SSW4	SW6	UO	UO	SSW6	SSW6	ENE2	ENE3	S3	SW6	SW11	W17	WNNW16	WNNW13	WNNW10	WNNW6	NE0	WNNW7	NW10	WNNW9	SSW6	W4.9	W17
10-Apr	WSW12	SW11	SW13	SW13	SW13	SW14	SW17	WSW13	SW10	SW13	SW14	WSW18	W17	W15	WSW12	WSW16	WSW11	WSW9	SSE5	ESE4	ESE5	ESE6	ESE6	E4	SW9.0	WSW18
11-Apr	ESE5	E8	E7	SE9	SE8	ESE7	NE2	ESE0	ESE7	SE10	S8	WSW6	W15	WNNW21	W23	W26	WSW29	W24	W20	WSW11	WSW12	W16	W16	WSW13	WSW7.5	WSW29
12-Apr	WSW9	WSW11	WSW10	W13	W9	W6	WSW10	W19	W20	WNNW18	W18	W18	W20	WNNW20	WNNW22	WNNW23	NW24	NNW20	NNW16	WNNW6	WSW4	WSW6	W7	WNNW10	WNNW12.7	NW24
13-Apr	W9	W9	WSW7	WSW8	W9	WNNW6	W11	WNNW9	NW10	N8	NNE9	ENE11	NNE13	N12	N18	N18	N19	N20	N15	NNE11	N7	NNW7	NNW8	NNW8	NNW7.7	N20
14-Apr	NNW6	N5	WSW3	WSW3	W1	W0	ESE4	SE5	SSE7	SSE8	SSE8	SE6	SSE9	S13	S16	S14	SSW17	SSW13	SSE7	SE7	SSE8	SE8	SE6	SE8	SSE5.4	SSW17
15-Apr	SE8	SE8	SSE6	S7	SW7	SW4	S7	SW15	WSW31	WSW36	W36	W32	W29	W32	W32	W33	W33	WNNW31	NW24	WNNW32	WNNW32	W31	W33	W21	W20.3	WSW36
16-Apr	W21	W20	WNNW18	WNNW19	WNNW20	WNNW18	WNNW20	NW24	NW24	NW23	NW22	NNW22	NNW24	NNW23	NNW26	NNW22	NNW21	N14	N12	N12	NNW10	NW5	NNE6	N10	NW16.1	NNW26
17-Apr	N12	N14	N14	N14	N15	N17	N17	N17	N18	N18	N16	N17	N17	N16	N13	N11	NNE10	NNE9	NNE9	ENE6	E4	ESE7	SE7	SE12	N10.9	NNE18
18-Apr	SE11	SE11	SE9	SE9	SE10	SE11	SE12	SE12	SSE13	S19	S19	S23	S23	S26	S24	S26	S22	S21	S18	SSE15	SSE13	S13	S13	SSW15	S15.2	S26
19-Apr	SW14	SW13	WSW16	WSW19	W17	WNNW11	WNNW13	WNNW20	WNNW26	W23	W26	W29	W29	WNNW27	WNNW27	WNNW27	W27	W24	W20	WNNW18	NW14	N14	N15	N16	WNNW17.7	W29
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	NNW5	NNW7	NNW8	NW7	N6	N6	N7	ENE7	ENE8	ENE9	ENE7	NNE6	ENE8	ENE9	ENE10	E8	---	ENE10
21-Apr	E8	NE4	NNE5	ENE5	NNE3	NNW3	SE2	SE8	ESE9	ESE11	ESE11	E10	E7	ESE5	SSE6	ESE6	ESE6	ESE9	ESE14	SE14	SE10	SE9	SE11	SE10	ESE6.7	ESE14
22-Apr	SE7	S3	ENE2	SW10	WSW9	W7	WNNW11	SW5	S8	SSE11	S10	SSW8	WSW9	SSW15	WSW16	WNNW23	SW5	SSE7	S8	S4	E3	NE3	N9	N8	SW4.3	WNNW23
23-Apr	NW2	WNNW3	WNNW4	NW5	WSW2	SW4	SSW2	SE2	ESE3	NE2	NE7	NE5	NNE15	NNE14	N11	S10	ENE4	N12	W7	NNW6	WNNW7	NNW6	NNW5	NNW4	N3.1	NNE15
24-Apr	NW6	NW7	NNW7	NNW4	SSW2	WNNW1	SE3	SE9	SSE9	SE7	E6	NNE3	S2	N6	N7	ENE8	SSE5	SSW5	SE9	SE10	SE9	SE10	SE12	SE10	ESE2.9	SE12
25-Apr	SE7	SE7	SSE5	SSE6	SE5	SSE5	SSE4	SSE5	SSE8	SSW20	S26	SSW25	SSW25	SSW23	SSW23	SSW24	SW25	SW24	WSW17	WSW12	SW7	SW6	SSW7	SW9	SSW12.2	S26
26-Apr	SSW10	SSW9	SSW7	SW13	SSW8	W5	NNW6	NNW9	NNE4	NE9	N17	N22	NNE22	NNE23	NNE22	N24	N25	N22	NNE22	N18	N18	N12	N9	N7	N10.3	N25
27-Apr	N6	NW6	NW7	NNW8	N14	N17	N16	N13	N13	NNW14	NW12	N8	NNE8	NE12	ENE11	ENE10	ENE9	NE12	NNE13	NNE12	N10	N9	N6	E7	N8.9	N17
28-Apr	ESE10	ESE8	ESE8	SE11	SE12	SE11	SE10	SSE9	SSE7	SSE9	SE9	SE8	S16	SSW20	SSW19	SSW19	SSW18	SSW16	S14	SSW12	SSW16	SW15	SW13	SSE8	S10.1	SSW20
29-Apr	SSW13	SSE5	ESE3	S5	WSW14	WSW12	SW9	W12	WNNW23	W23	W22	WNNW20	WNNW22	NW17	N19	NNW4	NW6	N14	N14	N7	NNW6	NW6	WSW3	WSW6	WNNW8.2	W23
30-Apr	SW6	SW10	SW12	WSW10	WSW10	WSW10	W8	NNW12	N12	N10	N6	NE10	NE12	NNE19	N15	NNE8	NNW11	NNW15	N19	N19	N18	N16	N13	N14	NNW8.4	NNE19
SSW2.4SSW2.3 SW2.6 SW3.4 SW3.3WSW2.1WSW2.0WSW1.9 W2.8WSW2.7 W2.3 W2.2WNNW2.8WNNW3.3WNNW4.9WNNW4.9WNNW4.6 NW4.6NNW3.6NNW2.7 NW1.8 NW1.5WNNW1.2 SW0.3																										Diurnal Average
W21 W20WNNW18WNNW19WNNW20WNNW18WNNW20 NW24 WSW31WSW36 W36 W32 W29 W32 W32 W33 W33WNNW31 NW24WNNW32WNNW32 W31 W33 W21																										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

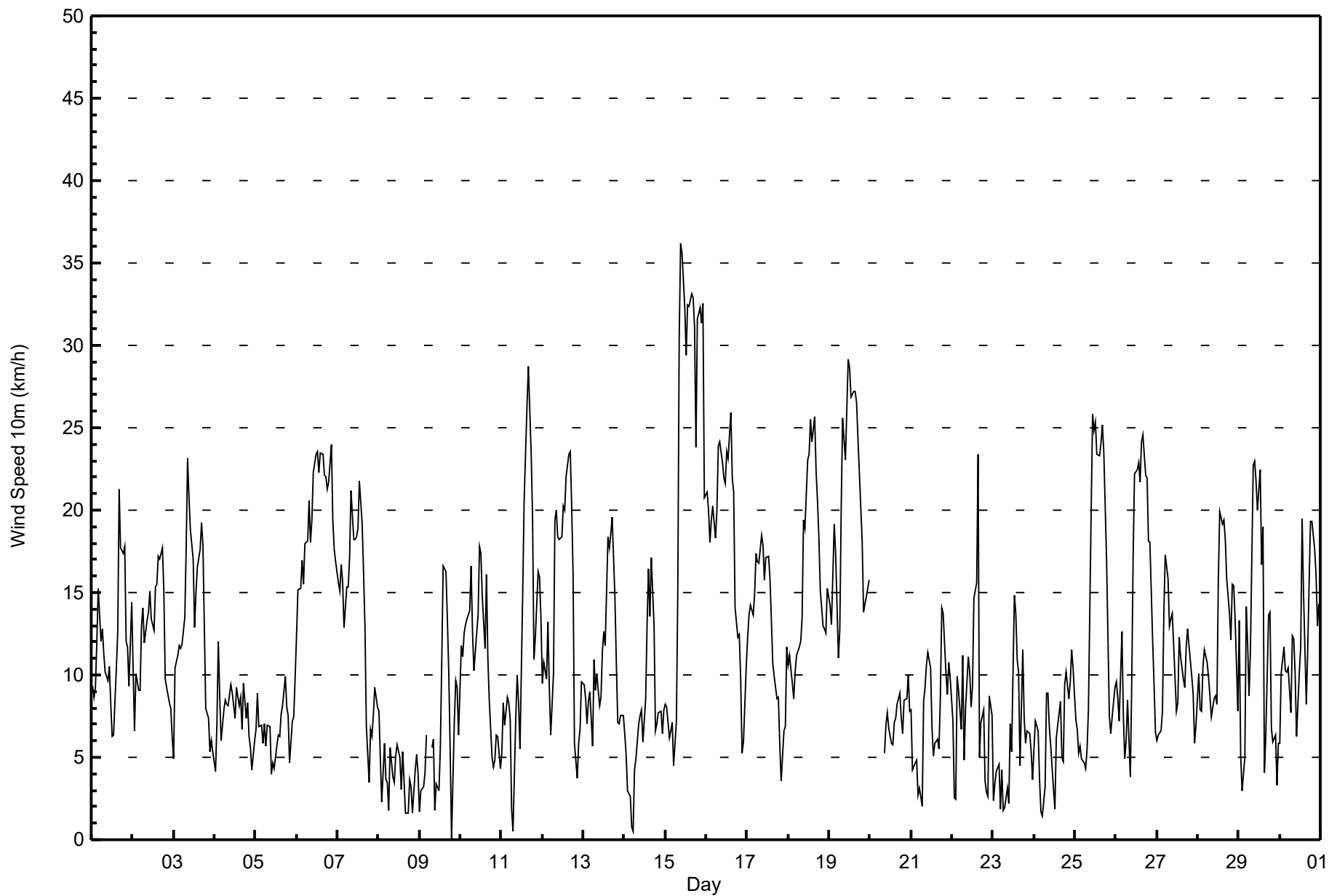
Patricia McInnes - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 22 15:00																		Hours in Service: 720							
Minimum Value: 1 km/h on Apr 29 22:00																		Hours of Data: 710							
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																		Hours of Missing Data: 10							
																		Hours of Calibration: 0							
																		Percent Operational Time: 98.6							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	2	2	2	3	3	3	3	3	2	2	2	2	2	4	3	4	5	5	4	3	2	2	4	5
2-Apr	3	1	2	2	2	2	2	3	3	6	3	4	4	4	4	4	4	3	4	2	1	1	1	2	6
3-Apr	2	1	1	2	2	2	2	4	4	5	4	4	4	4	4	4	4	3	4	2	1	1	1	1	5
4-Apr	1	2	2	1	2	1	1	2	1	2	2	2	2	2	2	2	2	2	1	1	2	2	1	1	2
5-Apr	1	1	2	1	1	1	1	1	2	2	1	1	2	2	2	2	2	2	1	2	2	2	1	2	2
6-Apr	3	3	3	4	4	4	4	5	5	4	5	5	6	5	5	5	5	5	5	5	5	4	4	4	6
7-Apr	3	3	3	3	3	3	3	4	5	4	4	4	5	5	5	5	4	3	2	2	2	3	2	1	5
8-Apr	1	2	1	2	1	1	1	1	2	2	2	2	1	2	3	2	1	2	1	2	1	2	1	1	3
9-Apr	1	1	1	1	2	UO	UO	1	2	2	1	2	3	3	5	4	4	2	2	1	4	2	2	1	5
10-Apr	3	1	2	2	2	2	3	3	2	2	3	4	4	4	4	4	3	3	2	1	2	2	2	2	4
11-Apr	4	3	2	2	2	1	2	3	3	2	2	3	5	5	5	6	6	5	5	2	2	3	4	3	6
12-Apr	1	2	2	3	2	2	3	6	4	4	4	5	4	4	5	5	5	4	4	2	1	1	1	3	6
13-Apr	2	2	1	1	3	2	2	2	2	3	3	4	4	5	5	4	5	4	3	2	1	1	1	1	5
14-Apr	1	3	1	1	1	1	1	1	2	2	2	2	4	4	4	4	4	4	1	1	1	1	1	1	4
15-Apr	1	1	1	1	2	2	2	5	9	9	8	7	6	7	8	7	7	7	5	8	8	8	8	4	9
16-Apr	4	4	3	3	4	4	4	4	5	5	5	5	5	5	5	5	4	3	3	5	2	2	2	2	5
17-Apr	3	3	3	4	4	3	4	4	5	4	4	4	4	4	3	4	3	3	2	1	2	1	2	3	5
18-Apr	2	2	2	2	2	2	3	2	3	4	5	5	6	6	5	6	5	5	4	3	3	3	2	3	6
19-Apr	3	2	4	3	3	3	2	6	5	5	7	7	7	6	6	8	7	6	7	5	4	4	3	4	8
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	5	4	3	3	3	3	3	4	3	3	2	2	2	3	3	2	5
21-Apr	2	2	1	1	1	1	2	2	2	3	3	4	4	4	4	4	3	3	4	3	4	5	2	2	5
22-Apr	1	1	3	4	2	2	3	2	2	2	3	3	4	4	9	6	8	2	2	1	2	2	2	2	9
23-Apr	1	2	1	1	1	1	1	1	1	3	2	4	4	4	4	3	4	3	2	2	2	2	1	2	4
24-Apr	1	1	1	1	2	1	1	3	3	2	3	2	3	3	4	3	3	3	4	2	1	1	2	2	4
25-Apr	2	1	1	1	1	1	1	1	2	7	6	6	6	7	6	6	6	5	4	2	3	1	1	1	7
26-Apr	1	1	1	3	2	4	4	3	2	3	3	4	4	5	5	5	5	5	4	5	4	2	3	2	5
27-Apr	1	1	1	1	4	3	3	3	3	3	3	4	4	4	3	3	4	3	2	2	2	1	2	4	
28-Apr	2	2	2	3	3	2	2	2	2	2	3	3	5	6	5	6	5	4	4	4	6	4	6	2	6
29-Apr	7	2	1	2	3	2	2	8	5	5	5	5	4	5	8	2	2	5	4	2	1	1	1	3	8
30-Apr	2	2	2	1	2	2	1	4	2	3	3	3	4	4	5	2	3	3	5	4	4	3	3	3	5
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	105	14.79	14.79
6 - 11	292	41.13	55.92
12 - 19	209	29.44	85.35
20 - 28	87	12.25	97.61
29 - 38	17	2.39	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
Patricia McInnes - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	6	7	7	5	9	8	8	7	5	6	9	4	6	7	7	105
6 - 11	24	12	5	14	12	18	55	19	25	13	17	18	14	14	11	21	292
12 - 19	51	8	3	0	0	20	18	3	10	11	14	16	16	15	10	14	209
20 - 28	5	4	0	0	0	14	0	0	8	7	2	0	16	15	8	8	87
29 - 38	0	0	0	0	0	0	0	0	0	0	0	3	11	3	0	0	17
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	84	30	15	21	17	61	81	30	50	36	39	46	61	53	36	50	710

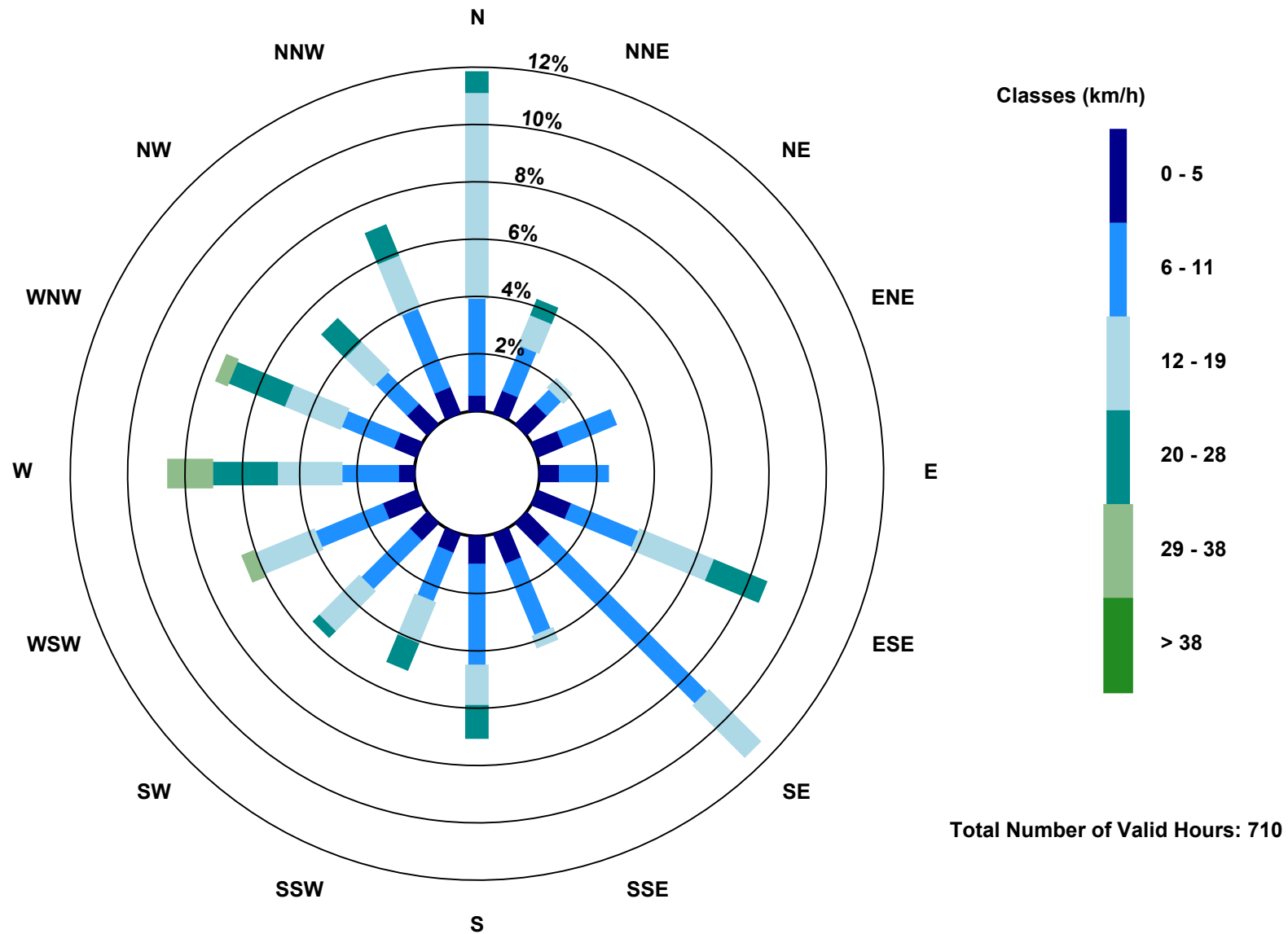
Total Number of Valid Hours: 710

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Patricia McInnes - April 2025

Direction of Maximum Speed: 258 deg on Apr 15 10:00 Direction of Maximum Daily Speed Average: 268.2 deg on Apr 15																				Hours in Service:		720			
Direction of Minimum Speed: 43 deg on Apr 9 20:00 Direction of Minimum Daily Speed Average: 0.5 deg on Apr 8																				Hours of Data:		710			
																				Hours of Missing Data:		10			
Monthly Average Direction: 277.5 deg																				Percent Operational Time:		98.6			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	126	118	125	126	127	130	132	134	136	137	133	145	170	191	221	247	312	310	313	311	326	331	310	309	195.6
2-Apr	300	258	267	275	261	262	267	267	263	287	307	301	302	312	1	11	4	5	359	336	312	332	354	7	313.2
3-Apr	318	301	303	297	299	303	303	317	327	326	341	346	346	334	333	345	343	354	356	336	307	296	263	260	325.8
4-Apr	247	232	248	229	205	202	220	213	189	179	182	181	170	177	175	179	152	92	108	127	146	183	173	179	184.5
5-Apr	188	195	178	175	172	179	137	156	172	150	81	78	75	86	48	26	24	16	356	347	39	99	99	103	103.6
6-Apr	106	109	115	118	126	118	120	123	118	114	114	114	118	115	116	120	116	119	119	120	123	124	119	124	118.0
7-Apr	128	125	125	126	131	125	124	123	123	112	113	113	116	117	119	121	124	126	133	110	142	128	130	134	121.9
8-Apr	137	142	322	124	107	27	322	42	356	139	201	143	85	180	228	330	25	64	3	253	289	350	318	287	91.0
9-Apr	254	253	222	194	222	UO	UO	201	206	68	58	187	218	226	262	286	298	296	296	43	295	312	290	212	263.0
10-Apr	245	232	235	235	227	229	231	237	233	223	229	240	275	276	255	250	240	247	168	105	108	121	112	100	235.1
11-Apr	117	100	98	127	136	112	41	105	117	140	178	239	276	282	273	268	256	277	272	257	254	266	275	256	255.2
12-Apr	244	254	242	263	263	259	252	265	267	290	273	274	273	286	299	303	316	336	339	298	251	253	274	283	283.2
13-Apr	280	270	242	256	262	289	278	292	313	352	32	66	27	11	3	354	6	10	11	13	357	342	346	342	344.8
14-Apr	348	352	254	253	273	259	121	127	153	150	147	130	150	183	191	188	207	211	159	146	147	129	126	137	168.5
15-Apr	132	142	168	169	227	229	184	220	253	258	275	273	266	265	275	261	265	288	308	303	291	279	273	264	268.2
16-Apr	268	278	284	287	288	290	298	305	309	311	321	334	340	343	345	332	331	6	7	351	340	325	14	8	318.8
17-Apr	6	0	351	357	358	1	7	10	11	3	355	355	4	0	4	355	30	15	33	59	100	115	131	129	10.2
18-Apr	136	134	143	130	132	138	143	143	159	179	178	181	181	187	185	181	184	182	174	159	158	169	191	210	170.7
19-Apr	217	226	247	254	263	289	295	288	283	270	278	274	276	287	283	288	279	272	281	296	314	360	353	6	282.1
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	345	341	333	315	349	11	11	57	65	65	57	18	58	68	76	90	--
21-Apr	95	49	28	63	16	333	144	126	104	104	110	87	82	112	155	123	122	120	123	130	139	125	128	127	111.6
22-Apr	137	184	69	219	250	269	295	227	185	159	173	194	237	195	257	291	231	162	188	175	99	35	357	349	226.6
23-Apr	319	295	302	315	254	223	212	124	108	56	52	49	24	23	6	179	63	1	280	346	282	344	347	339	357.3
24-Apr	306	317	344	333	196	291	127	137	157	132	84	26	181	5	358	63	161	201	140	132	135	137	132	136	122.2
25-Apr	137	135	157	164	143	155	152	148	167	200	190	192	193	194	211	211	216	231	242	240	224	215	210	222	201.0
26-Apr	212	198	212	230	198	277	330	343	18	38	8	6	14	13	12	10	7	6	16	6	8	354	351	3	2.4
27-Apr	349	326	319	330	356	8	6	6	349	332	324	350	20	52	63	61	58	48	28	14	1	2	10	80	10.3
28-Apr	107	111	118	130	132	131	128	150	149	159	129	144	174	193	200	213	198	193	191	202	198	221	215	152	174.3
29-Apr	213	160	117	186	249	237	219	274	287	276	278	291	297	320	351	332	316	349	7	0	328	318	243	240	290.3
30-Apr	231	225	231	239	250	255	263	348	3	357	2	35	37	15	358	16	343	342	359	354	353	1	354	354	344.3
195.1 206.1 226.6 219.2 226.4 239.5 245.6 252.1 261.6 254.0 270.2 279.9 290.9 290.0 296.3 285.5 294.9 324.6 344.2 340.8 317.8 321.8 302.7 219.3																									
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

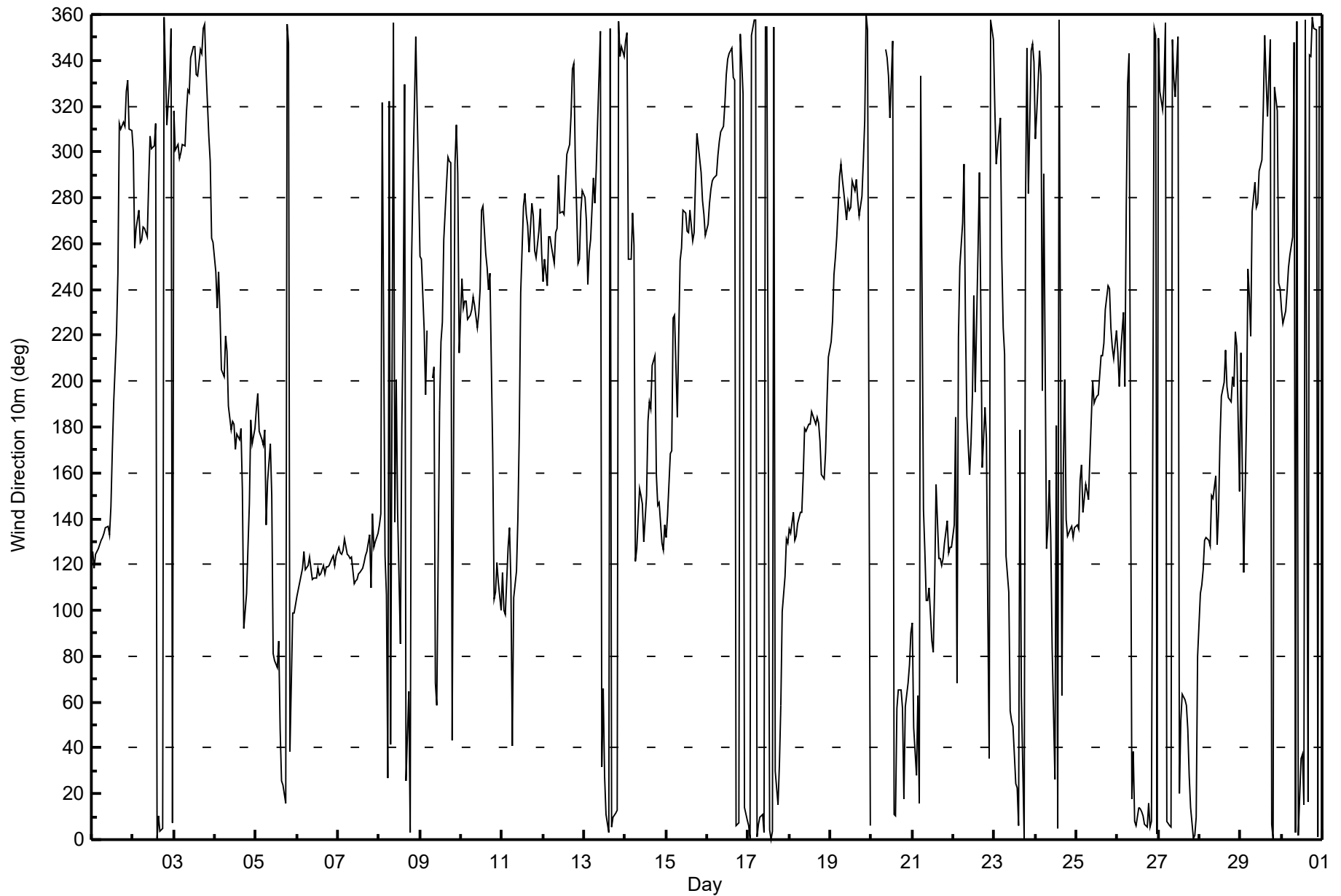
Patricia McInnes - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on Apr 11 08:00 Minimum Value: 6 deg on Apr 4 00:00 Percentiles: P ₁ = 7 P ₁₀ = 10 Q ₁ = 12 Median = 16 Q ₃ = 24 P ₉₀ = 45 P ₉₉ = 85																									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 Maximum
1-Apr	9	10	11	12	12	13	13	15	14	14	14	15	27	19	19	21	11	14	13	9	14	9	12	11	27
2-Apr	13	11	13	8	8	8	9	10	11	33	15	23	22	19	20	16	17	17	15	17	7	21	12	18	33
3-Apr	28	7	7	15	10	9	9	11	13	12	18	18	26	19	18	17	17	17	16	14	7	22	6	6	28
4-Apr	25	19	8	12	22	13	11	21	15	14	16	20	30	22	24	22	38	14	12	8	17	11	17	7	38
5-Apr	9	12	15	12	18	13	20	14	19	49	34	27	25	27	32	25	16	15	14	13	43	15	17	13	49
6-Apr	11	11	13	12	12	12	13	13	14	14	12	13	14	13	13	12	13	12	12	11	12	13	10	11	14
7-Apr	12	11	12	12	12	11	12	12	12	14	15	16	15	14	13	16	24	33	52	29	55	12	13	10	55
8-Apr	10	35	55	28	39	31	43	28	41	55	40	24	20	49	28	52	70	93	35	65	51	22	20	13	93
9-Apr	64	38	30	15	14	UO	UO	18	22	85	46	76	61	26	34	16	14	15	11	103	28	21	18	16	103
10-Apr	14	8	13	9	10	9	9	13	15	15	19	16	19	21	28	20	23	24	29	9	8	14	22	33	33
11-Apr	68	47	26	20	17	20	76	103	39	25	30	58	29	14	16	14	13	13	11	8	8	10	10	11	103
12-Apr	9	14	14	12	16	17	19	14	15	16	15	17	14	14	14	12	12	11	14	22	11	9	11	8	22
13-Apr	12	15	11	10	16	16	8	11	14	31	31	25	27	32	17	21	22	17	15	11	14	9	10	9	32
14-Apr	12	28	25	36	41	88	25	21	22	26	29	43	45	23	23	20	20	19	16	8	11	10	11	10	88
15-Apr	10	12	15	12	17	38	18	16	15	15	15	16	15	15	16	14	14	11	12	12	12	15	13	13	38
16-Apr	11	12	11	11	11	11	10	10	10	10	12	11	14	12	15	17	18	15	14	13	15	12	19	13	19
17-Apr	16	16	14	15	17	15	14	15	14	17	16	20	18	19	24	29	24	29	22	25	10	12	15	12	29
18-Apr	14	12	15	12	10	12	12	12	16	14	16	15	16	16	14	13	14	14	14	13	11	12	15	15	16
19-Apr	13	13	12	11	10	13	10	11	12	14	17	17	16	16	17	17	14	14	17	10	14	18	15	16	18
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	18	45	44	59	53	63	48	58	51	28	27	14	14	17	15	19	63
21-Apr	15	33	12	13	33	15	84	20	17	17	26	31	74	76	73	84	45	18	14	13	20	27	11	11	84
22-Apr	9	57	75	28	18	26	10	47	14	17	18	37	28	24	47	26	79	18	12	32	58	66	21	15	79
23-Apr	49	47	32	24	81	20	56	60	70	100	39	63	25	22	49	26	71	33	17	13	43	35	18	61	100
24-Apr	21	10	12	13	60	77	36	17	19	33	45	86	92	58	56	41	56	66	26	11	10	9	11	14	92
25-Apr	11	9	19	9	12	15	23	19	22	17	15	19	18	20	17	18	18	18	12	10	21	9	12	7	23
26-Apr	11	11	13	16	21	55	72	24	49	24	18	17	17	19	20	20	16	17	14	17	16	14	13	12	72
27-Apr	13	12	9	15	17	18	17	16	17	21	23	49	52	28	25	33	37	25	15	12	13	12	17	23	52
28-Apr	10	11	13	13	13	13	16	16	23	26	28	45	26	24	24	23	17	18	13	22	21	16	22	20	45
29-Apr	20	31	41	20	13	12	15	33	14	15	13	14	13	24	24	51	37	19	15	15	11	10	26	20	51
30-Apr	20	16	9	10	10	11	13	24	19	27	48	21	21	13	18	27	18	12	16	15	16	16	15	15	48
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

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





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS07 ATHABASCA VALLEY APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
APRIL 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	-	-	16.6	0	2.3	0
TRS (ppb) Average	685	35	35	100	1.7	0	1.4	0	0.3	0
THC (ppm) Average	684	34	36	99.72	-	-	2.4	-	2.1	-
NMHC (ppm) Average	684	34	36	99.72	-	-	0.136	-	0.007	-
CH4(ppm) Average	684	34	36	99.72	-	-	2.4	-	2.1	-
O3 (ppb) Average	686	34	34	100	-	-	59.5	0	45.3	-
NO2 (ppb) Average	683	37	37	100	-	-	31.8	0	11	-
NO (ppb) Average	683	37	37	100	-	-	11.9	-	2.6	-
NOX (ppb) Average	683	37	37	100	-	-	36.4	-	13.5	-
PM2.5 (ug/m3) Average	705	6	15	98.75	-	-	21.7	0	10.2	0
CO(ppm) Average	685	35	35	100	-	-	0.4	0	0.2	-
Temperature 2 m (C) Average	720	0	0	100	-	-	22.9	-	14.1	-
Relative Humidity (%) Average	711	0	9	98.75	-	-	100	-	88	-
Barometric Pressure (inHg) Average	720	0	0	100	-	-	29.4	-	29.3	-
Wind Speed 10 m (km/h) Average	710	0	10	98.61	-	-	39	-	25	-
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 - ATHABASCA VALLEY (AMS07)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.53	1.4	-	0	0	0	0.1	0.3	1.3	16.6
TRS (ppb) Average	685	0.17	0.1	-	0.1	0.1	0.1	0.1	0.2	0.3	1.4
THC (ppm) Average	684	2.06	0.1	-	2	2	2	2	2.1	2.1	2.4
NMHC (ppm) Average	684	0.001	0.008	-	0	0	0	0	0	0	0.136
CH4(ppm) Average	684	2.06	0.1	-	2	2	2	2	2.1	2.1	2.4
O3 (ppb) Average	686	32.94	11.2	-	3.3	17.9	25.1	33.9	41.9	46.3	59.5
NO2 (ppb) Average	683	5.18	4.8	-	0.5	1	1.9	3.5	6.6	12.2	31.8
NO (ppb) Average	683	0.99	1.5	-	0	0	0.1	0.5	1.2	2.5	11.9
NOX (ppb) Average	683	6.17	5.7	-	0.5	1.1	2.4	4.2	7.6	14.6	36.4
PM2.5 (ug/m3) Average	705	4.34	2.7	-	0.2	2	2.8	3.6	5.1	7	21.7
CO(ppm) Average	685	0.15	0	-	0.1	0.1	0.1	0.1	0.2	0.2	0.4
Temperature 2 m (C) Average	720	5.02	6.5	-	-13.6	-3.2	0.6	4.8	10	13.5	22.9
Relative Humidity (%) Average	711	54.92	20.8	-	15.8	26.8	38.4	54.1	70.3	85.5	100
Barometric Pressure (inHg) Average	720	28.99	0.2	-	28.5	28.7	28.8	29	29.2	29.2	29.4
Wind Speed 10 m (km/h) Average	710	10.9	7	-	0	3	5	9	15	21	39
Wind Direction 10 m (deg) Average	710	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

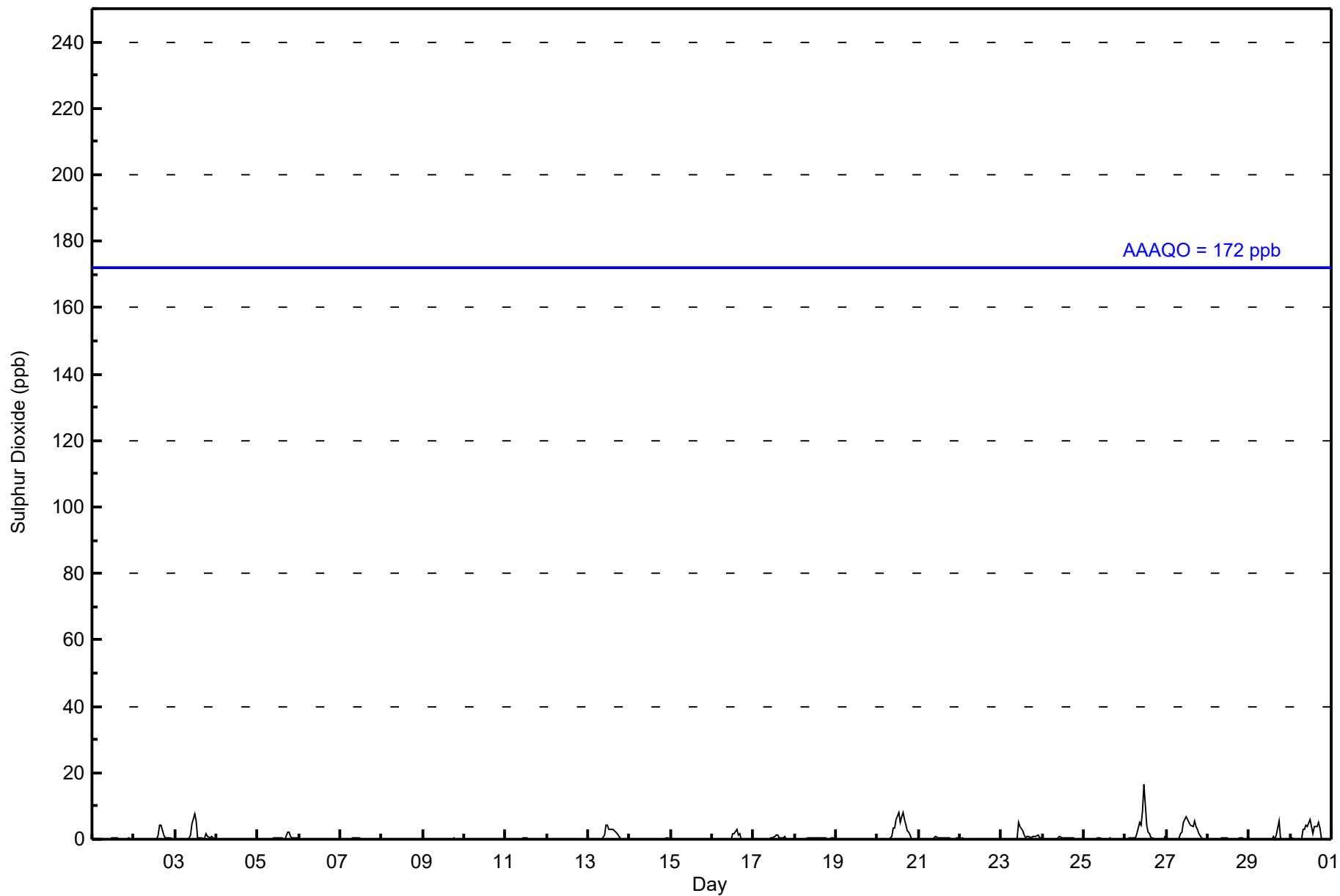
Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	17 Apr 2025 10:00	17 Apr 2025 11:00	2	Maintenance - replaced support gas cylinder
PM2.5	01 Apr 2025 01:00	01 Apr 2025 09:00	9	Unstable Operations - excessive baseline noise
Relative Humidity	09 Apr 2025 02:00	09 Apr 2025 10:00	9	Sensor operated out of range
Wind Speed, Wind Direction	11 Apr 2025 02:00	11 Apr 2025 05:00	4	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Apr 2025 23:00	17 Apr 2025 04:00	6	Flat line in sensor output signal

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720								
Maximum Value: 16.6 ppb on Apr 26 12:00 Maximum Daily Average: 2.3 ppb on Apr 20																		Hours of Data: 686								
Minimum Value: 0.0 ppb on Apr 8 13:00 Minimum Daily Average: 0.0 ppb on Apr 12																		Hours of Missing Data: 34								
Maximum Diurnal Average: 1.9 ppb at hour 12 Minimum Diurnal Average: 0.1 ppb at hour 4																		Hours of Calibration: 34								
Monthly Average: 0.53 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.3 P ₉₉ = 6.2																		Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.4	0.4	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.5	0.1	0.1	0.1	0.5
2-Apr	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	1.1	4.1	4.3	1.4	0.5	0.4	0.3	0.4	0.1	0.0	0.6	4.3
3-Apr	0.0	0.2	Z	0.0	0.0	0.0	0.0	0.1	0.4	1.4	4.6	7.7	5.4	0.6	0.4	0.3	0.0	0.5	1.8	0.9	0.5	0.9	0.5	0.1	1.1	7.7
4-Apr	0.0	0.1	0.0	Z	0.1	0.0	0.0	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	0.0	0.1	0.2
5-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	2.3	2.2	0.8	0.6	0.4	0.3	0.2	0.4	2.3
6-Apr	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1	0.3
7-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	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	0.1	0.1	0.4
8-Apr	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2
9-Apr	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.2
10-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
11-Apr	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.1	4.1	3.0	2.8	3.1	2.4	2.1	1.6	0.5	0.1	0.1	0.1	0.1	0.0	4.1
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.3
15-Apr	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	0.1	0.0	0.0	0.1	0.1
16-Apr	0.0	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.6	1.8	2.9	1.3	1.7	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.5	2.9
17-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.7	1.2	1.1	0.6	0.3	0.4	0.6	0.2	0.1	0.1	0.1	0.1	0.3	1.2
18-Apr	0.0	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.5
19-Apr	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.2
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.9	3.3	3.3	6.0	8.0	5.3	7.0	8.1	5.8	2.5	2.3	1.2	0.1	0.1	0.1	0.0	2.3	8.1
21-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.5	0.7	0.4	0.2	0.3	0.3	0.6	0.4	0.3	0.3	0.1	0.1	0.1	0.3	0.2	0.2	0.7
22-Apr	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
23-Apr	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.5	5.1	4.0	2.6	1.2	0.5	0.7	0.9	0.5	0.8	0.7	0.7	1.1	0.5	0.2	0.9	5.1
24-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.3	0.8	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.8
25-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.4
26-Apr	0.5	Z	0.3	0.3	0.3	0.2	0.2	1.6	4.9	4.4	8.5	16.6	4.1	2.1	1.7	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.8	2.1	16.6
27-Apr	0.5	0.3	Z	0.2	0.2	0.0	0.1	0.4	1.6	2.2	5.0	7.0	5.9	5.2	4.0	3.8	5.3	3.7	3.1	1.8	0.2	0.2	0.1	0.1	2.2	7.0
28-Apr	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.4	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.6
29-Apr	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.8	0.2	1.5	5.6	0.2	0.1	0.1	0.1	0.1	0.0	0.4	5.6
30-Apr	0.1	0.2	0.2	0.1	0.0	Z	0.1	3.1	3.1	4.2	3.7	6.1	4.0	1.8	4.0	3.7	5.1	3.2	0.5	0.2	0.2	0.1	0.1	0.2	1.9	6.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	685	99.85	99.85
11 - 20	1	0.15	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 (SO₂) - ppb
Athabasca Valley - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	28	0	8	15	44	114	60	31	24	22	33	44	48	40	76	89	676
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
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	28	0	8	15	44	114	60	31	24	22	33	44	48	40	76	90	677

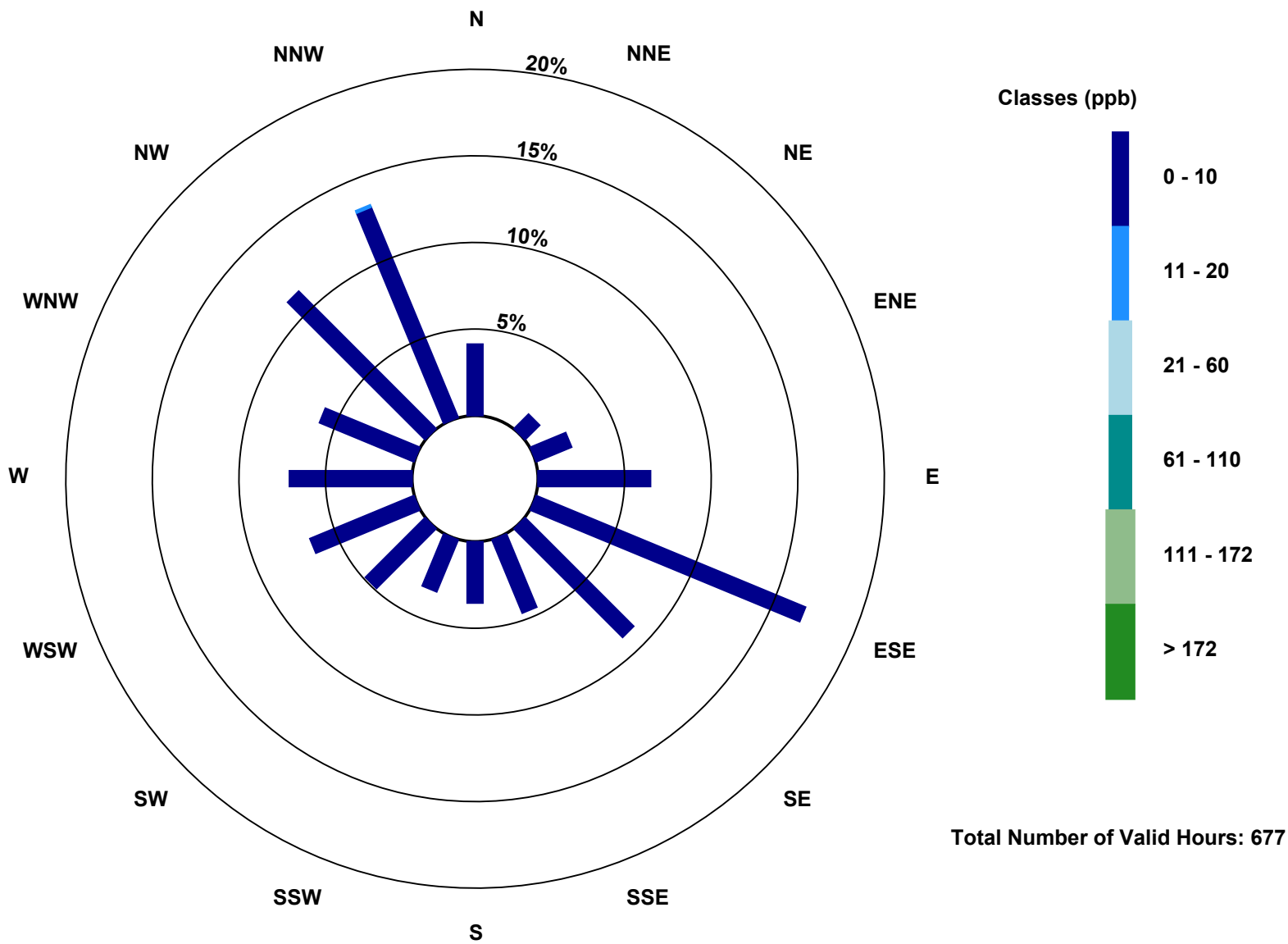
Total Number of Valid Hours: 677

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

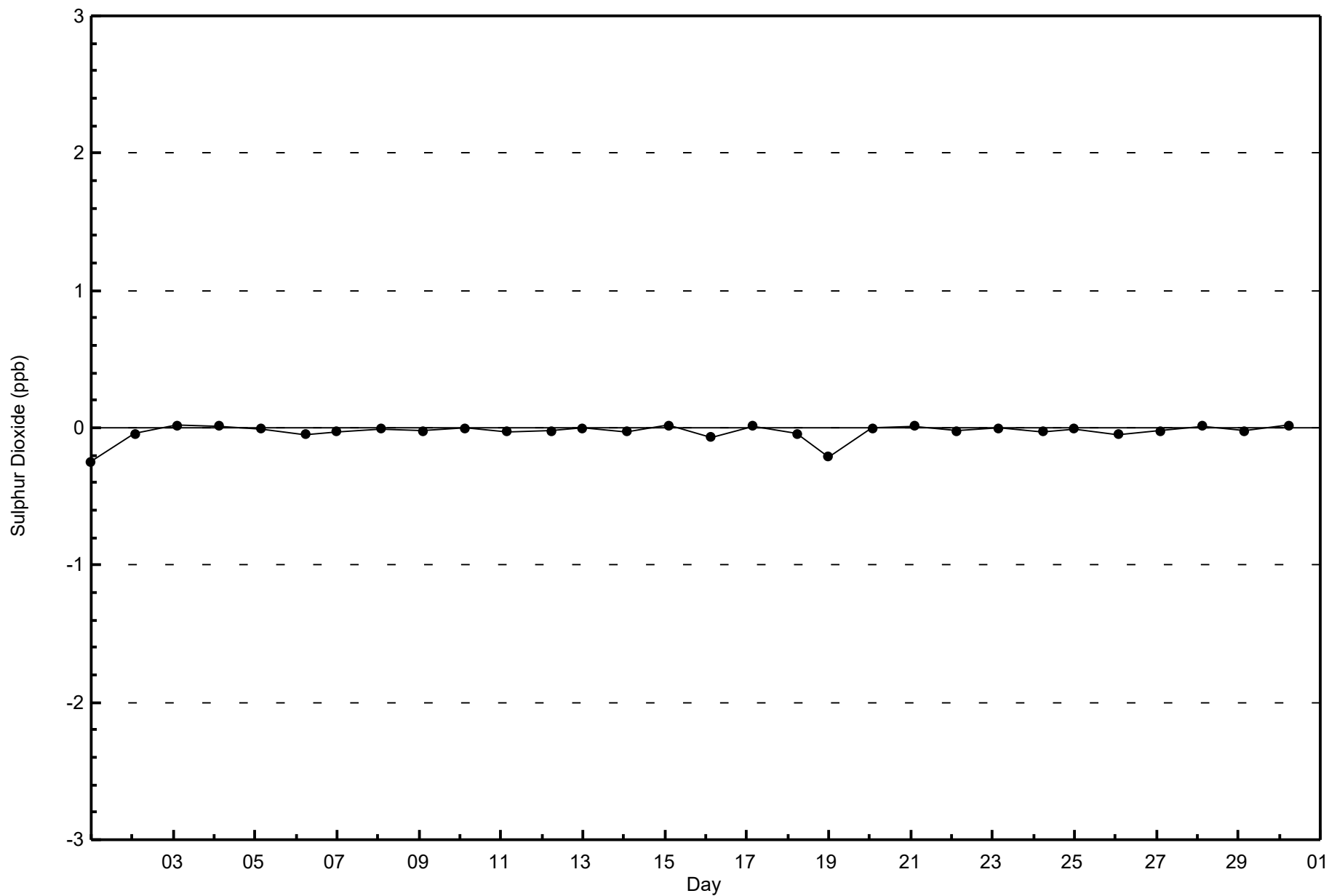
Sulphur Dioxide (SO₂) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

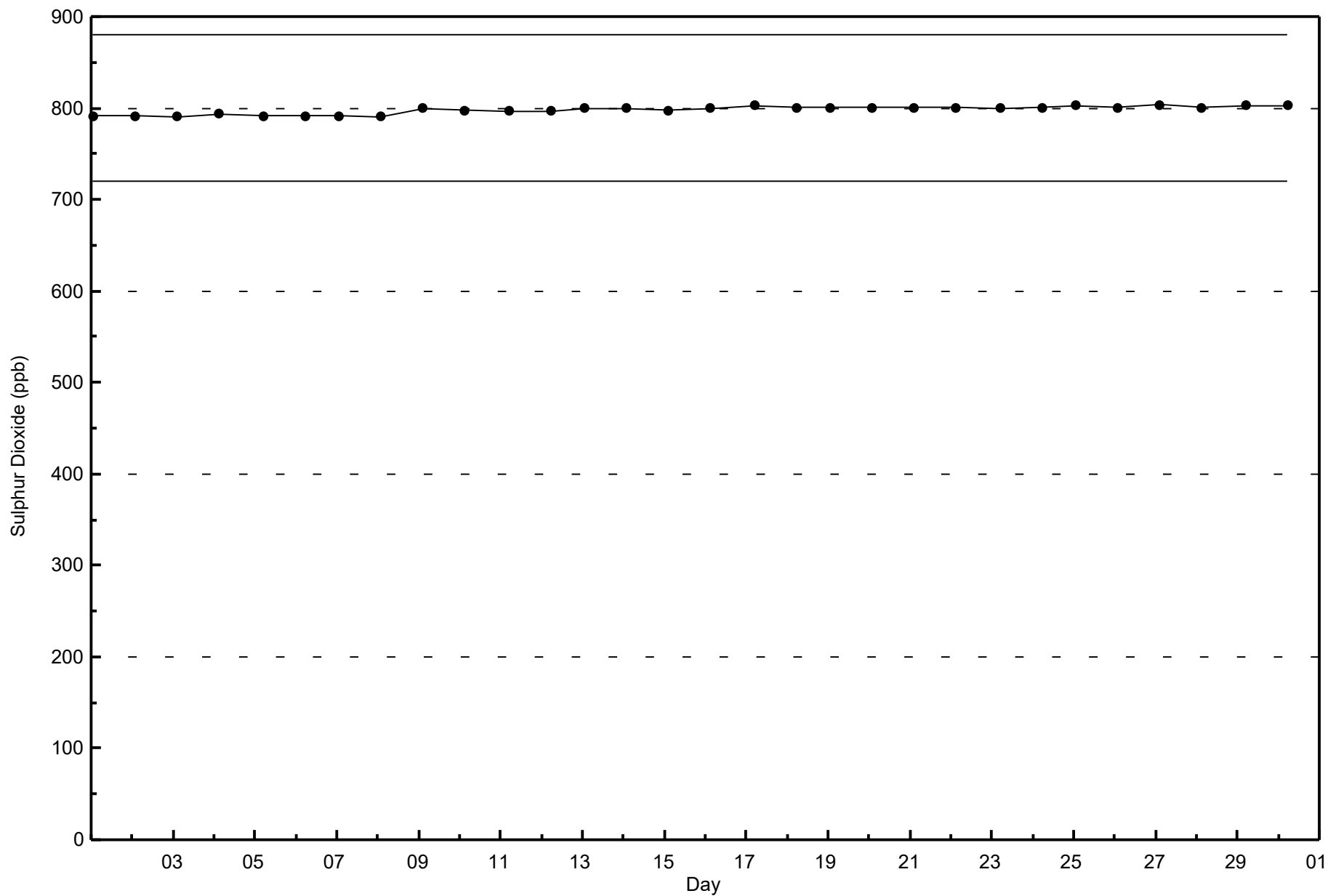
Sulphur Dioxide (SO₂) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																		Periods in Service: 1440																			
Maximum Value: 1.7 ppb on Apr 5 22:00																		Maximum Daily Average: 0.3 ppb on Apr 5										Periods of Valid Data: 1370									
Minimum Value: 0.0 ppb on Apr 6 12:30																		Minimum Daily Average: 0.1 ppb on Apr 6										Periods of Invalid Data: 70									
Maximum Diurnal Average: 0.2 ppb at hour 23																		Minimum Diurnal Average: 0.1 ppb at hour 17										Periods of Calibration: 70									
Monthly Average: 0.17 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5										Percent Operational Time: 100.0									
Day	Period Ending At (MST)																								Daily Average	Daily Maximum											
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00													
1-Apr	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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 0.4	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.4										
2-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.1	0.1 0.1	0.1	0.2										
3-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 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 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.1	0.2										
4-Apr	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 C	C C	C C	C C	C C	C 0.4	0.2 0.2	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4										
5-Apr	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.4	0.4 0.5	0.5 0.8	0.7 1.7	1.6 1.2	1.0 1.2	0.3	1.7												
6-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.0 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.1										
7-Apr	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1	0.1	0.2										
8-Apr	0.1 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.2	0.3												
9-Apr	0.2 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.2	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 0.1	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 0.1	0.2 0.2	0.2 0.2	0.2	0.3												
10-Apr	0.2 0.2	0.2 0.2	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1	0.1	0.2											
11-Apr	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.2	Z SP	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.1	0.3											
12-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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	0.1	0.4											
13-Apr	0.1 0.1	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.1	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 0.3	0.2 0.2	0.2 0.2	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.2	0.4												
14-Apr	0.3 0.3	0.3 0.3	Z SP	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	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 0.2	0.2 0.2	0.2 0.1	0.2	0.4												
15-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.1	0.3											



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1	0.2
17-Apr	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.3	0.3 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.3
18-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1	0.2
19-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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	0.3 0.2	0.1	0.3
20-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.4	0.6 0.5	0.4 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	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.6
21-Apr	0.1 0.1	0.2 0.3	0.3 0.1	Z SP	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.3
22-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.3 0.2	0.2 0.4	0.1	0.4
23-Apr	0.5 0.2	0.2 0.2	0.1 0.2	0.5 0.3	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.5	0.2 0.5	0.4 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.3 0.4	0.3 0.3	0.2	0.5
24-Apr	Z SP	0.3 0.4	0.3 0.5	0.4 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 0.1	0.1 0.1	0.1 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	0.5
25-Apr	0.1 0.1	Z SP	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 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.2 0.2	0.1	0.2
26-Apr	0.1 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.3	0.6 0.5	0.6 0.6	0.4 0.5	0.4 0.4	0.3 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.3	0.4 0.3	0.3	0.6
27-Apr	0.4 0.2	0.3 0.4	0.4 0.3	Z SP	0.3 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.4	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.4	0.2 0.1	0.1 0.1	0.2	0.4
28-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1	0.2
29-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.1 0.1	0.1 0.1	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 0.3	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
30-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.4	0.3 0.2	0.2 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.4
0.2 0.2 0.2 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 0.2 0.2 0.2																									Diurnal Average	
0.5 0.4 0.5 0.5 0.3 0.3 0.3 0.6 0.6 0.5 0.5 0.5 0.6 0.4 0.4 0.3 0.3 0.4 0.5 0.5 0.8 1.7 1.6 1.2																									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

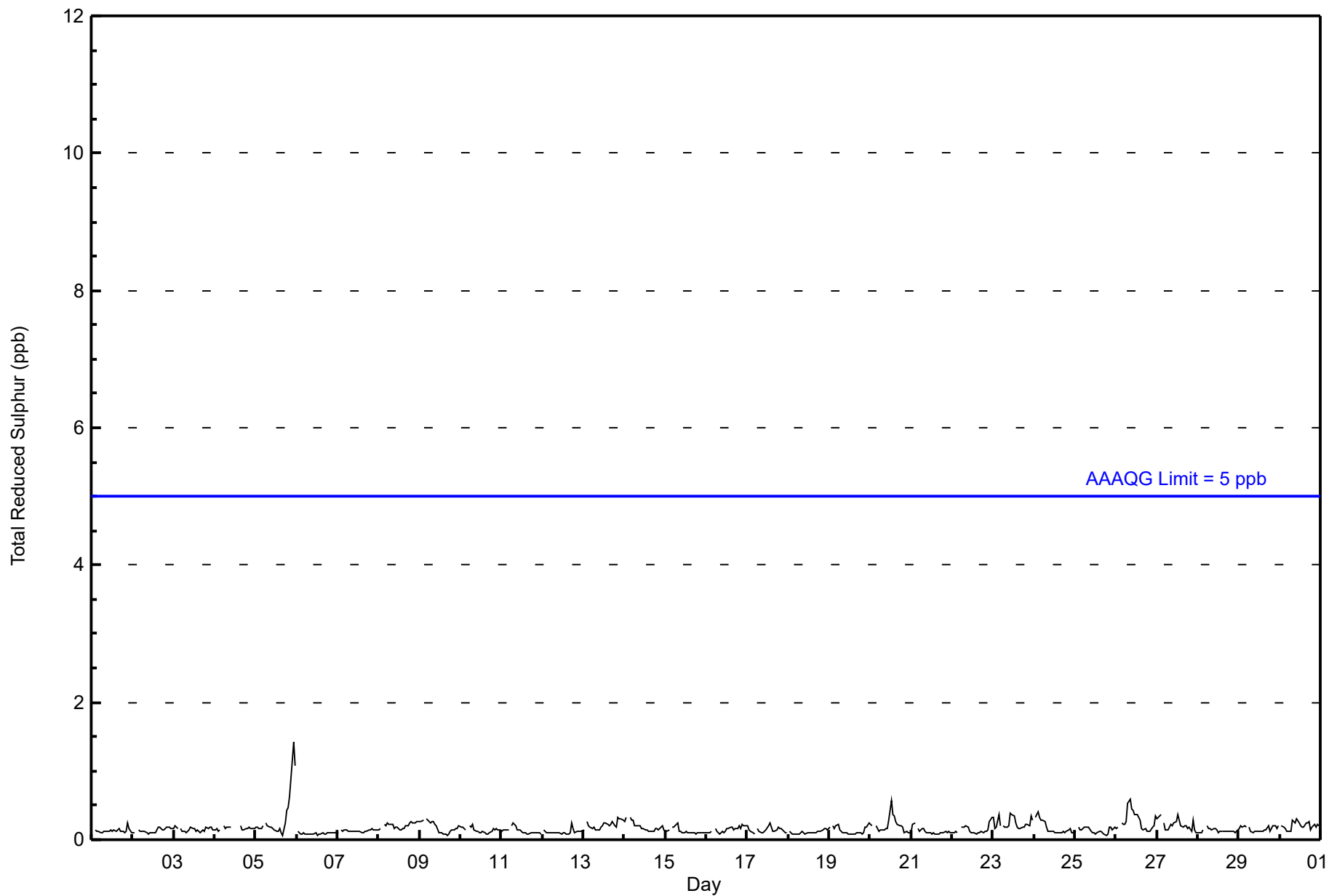
Athabasca Valley - April 2025

Maximum Value: 1.4 ppb on Apr 5 23:00										Maximum Daily Average: 0.3 ppb on Apr 5										Hours in Service: 720						
Minimum Value: 0.1 ppb on Apr 6 13:00										Minimum Daily Average: 0.1 ppb on Apr 6										Hours of Data: 685						
Maximum Diurnal Average: 0.2 ppb at hour 23										Minimum Diurnal Average: 0.1 ppb at hour 17										Hours of Missing Data: 35						
Monthly Average: 0.17 ppb										Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5										Hours of Calibration: 35						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
2-Apr	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	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2
3-Apr	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2
4-Apr	0.2	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
5-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.5	0.6	1.2	1.4	1.1	0.3	1.4
6-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
8-Apr	0.1	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	0.3	0.2	0.2	0.3	0.3	0.2	0.3
9-Apr	0.3	0.3	0.3	Z	0.3	0.3	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	0.2	0.2	0.2	0.2	0.3
10-Apr	0.2	0.2	0.2	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	0.2	0.2	0.2	0.1	0.1	0.1	0.2
11-Apr	0.1	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	0.1	0.1	0.1	0.2
12-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-Apr	0.1	Z	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	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2
14-Apr	0.3	0.3	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3
15-Apr	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
16-Apr	0.1	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
17-Apr	0.2	0.2	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
18-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
19-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.3
20-Apr	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.6
21-Apr	0.1	0.2	0.2	Z	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	0.2
22-Apr	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.3
23-Apr	0.3	0.2	0.2	0.4	0.2	Z	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.4
24-Apr	Z	0.3	0.4	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.4
25-Apr	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	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2
26-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.5	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.3	0.6
27-Apr	0.3	0.3	0.4	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.1	0.2	0.2	0.4
28-Apr	0.1	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2
29-Apr	0.2	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	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
30-Apr	Z	0.2	0.2	0.2	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - April 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

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	29	0	7	11	45	113	60	31	24	23	33	44	48	40	77	90	675
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	29	0	7	11	45	113	60	31	24	23	33	44	48	40	77	90	675

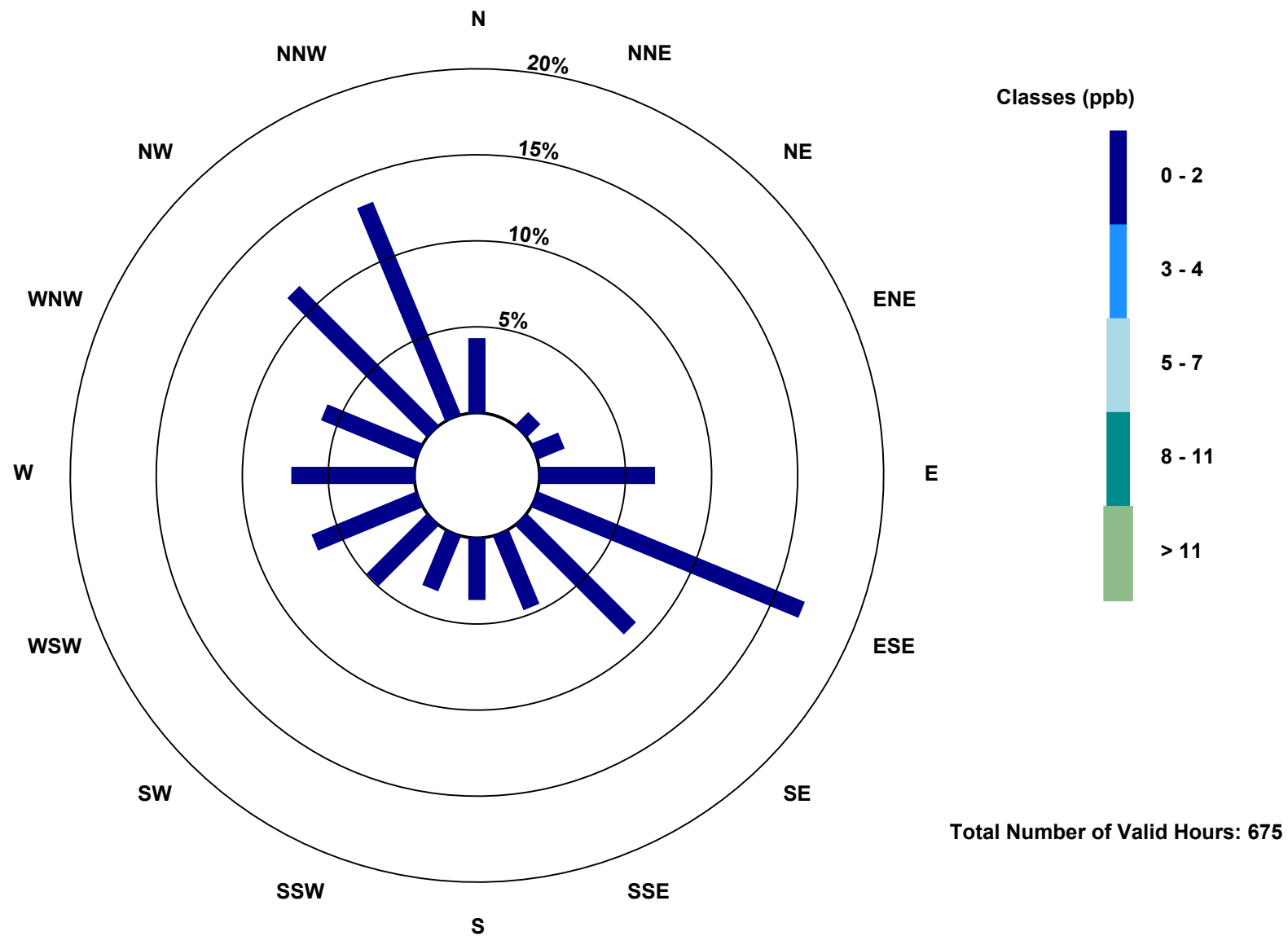
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

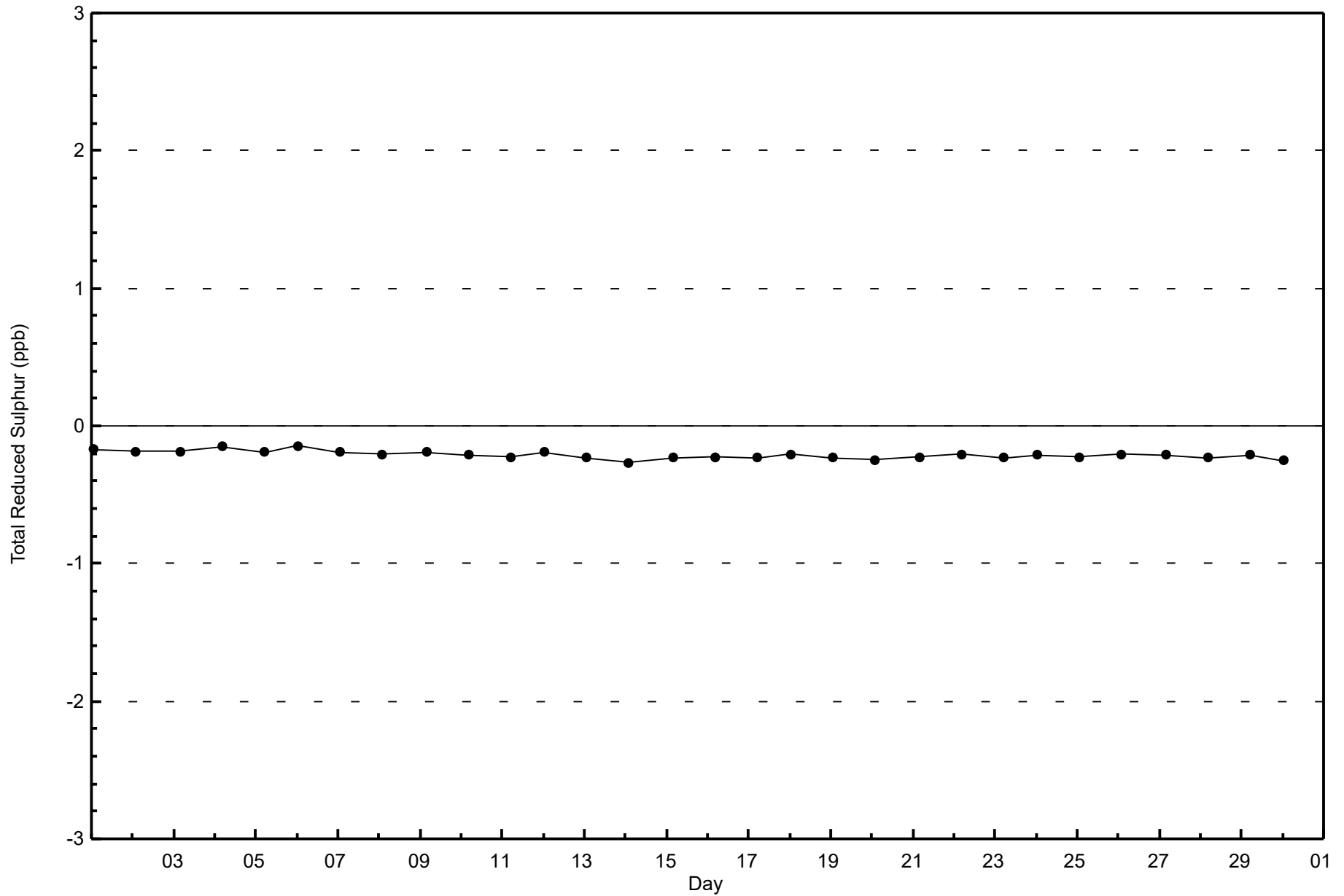
Total Reduced Sulphur (TRS) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

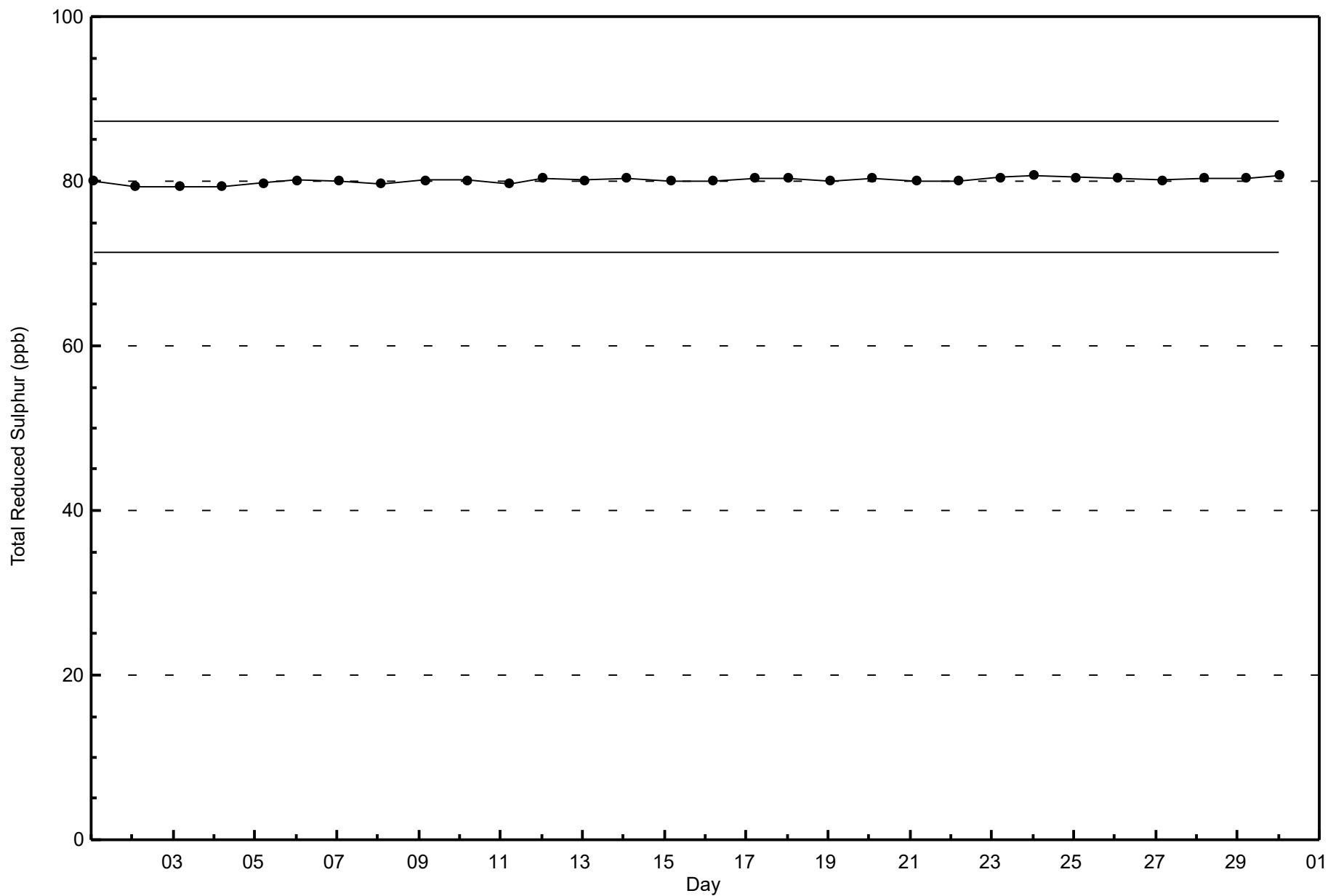
Total Reduced Sulphur (TRS) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

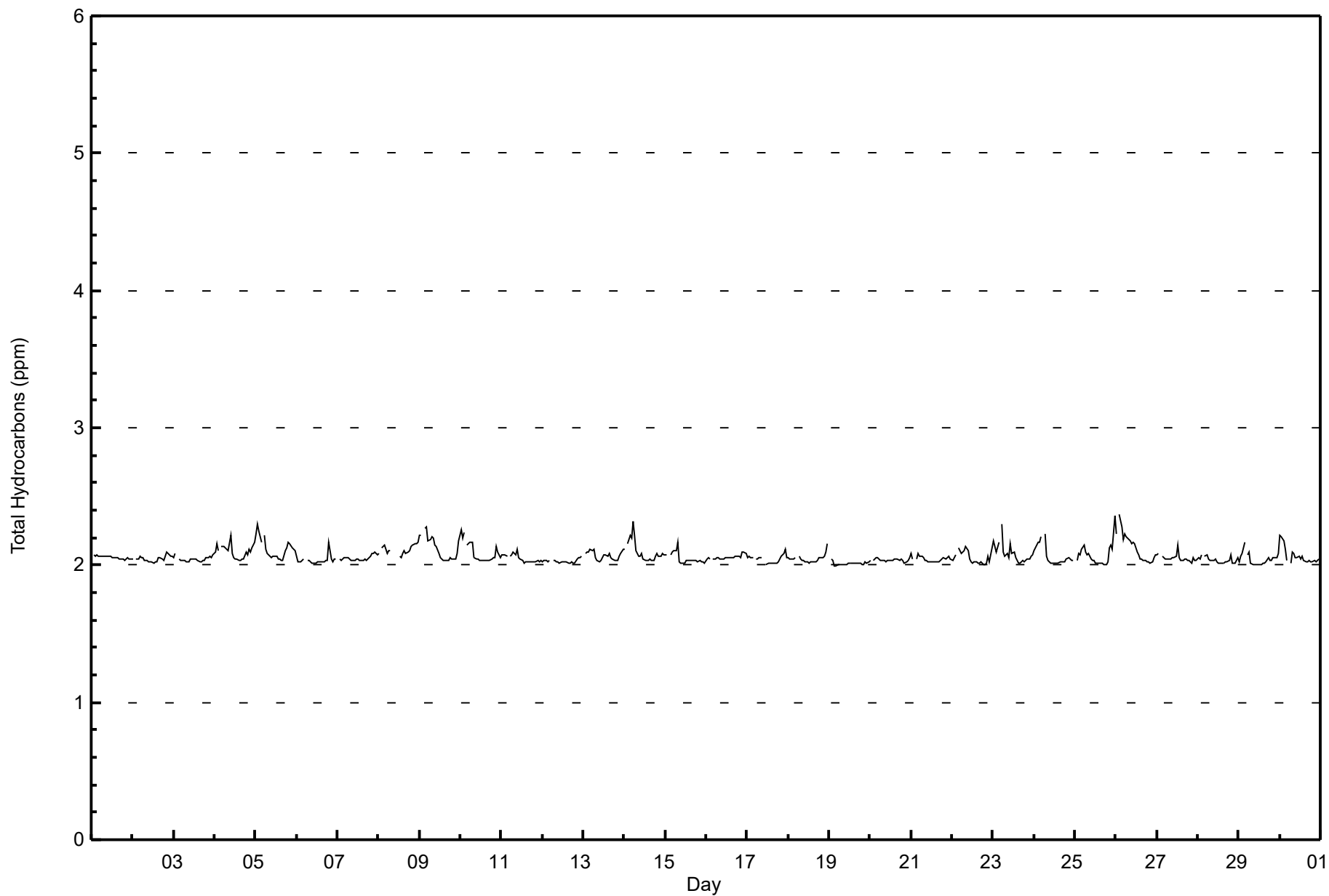
Athabasca Valley - April 2025

Maximum Value: 2.4 ppm on Apr 26 03:00																				Maximum Daily Average: 2.1 ppm on Apr 26										Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 19 05:00																				Minimum Daily Average: 2.0 ppm on Apr 19										Hours of Data: 684	
Maximum Diurnal Average: 2.1 ppm at hour 6																				Minimum Diurnal Average: 2.0 ppm at hour 17										Hours of Missing Data: 36	
Monthly Average: 2.06 ppm																				Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3										Hours of Calibration: 34	
																				Percent Operational Time: 99.7											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1				
2-Apr	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1				
3-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1					
4-Apr	2.1	2.2	2.1	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	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2					
5-Apr	2.2	2.3	2.3	2.2	Z	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	2.2	2.2	2.1	2.1	2.1	2.1	2.3					
6-Apr	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.2					
7-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1					
8-Apr	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	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					
9-Apr	2.2	2.2	Z	2.3	2.3	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	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.3					
10-Apr	2.3	2.2	2.2	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	2.0	2.1	2.1	2.1	2.1	2.3					
11-Apr	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	2.0	2.0	2.0	2.0	2.0	2.1					
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1					
13-Apr	Z	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1					
14-Apr	2.1	Z	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3					
15-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2					
16-Apr	2.0	2.1	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	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					
17-Apr	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.1	2.0	M	M	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					
18-Apr	2.1	2.0	2.0	2.0	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.2					
19-Apr	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					
20-Apr	2.0	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
21-Apr	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.1					
22-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1					
23-Apr	2.2	2.1	2.1	2.2	Z	2.3	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3					
24-Apr	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2					
25-Apr	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	2.1	2.1	2.4	2.1	2.4					
26-Apr	2.2	Z	2.4	2.3	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	2.4					
27-Apr	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1					
28-Apr	2.1	2.0	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1					
29-Apr	2.0	2.1	2.1	2.2	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	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.2					
30-Apr	2.2	2.2	2.2	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2					
																									Diurnal Average						
																									Diurnal Maximum						
Z - zerospan		C - Calibration				M - Maintenance																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	374	54.68	54.68
2.1 - 3.0	310	45.32	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
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	19	0	7	7	22	41	12	15	15	17	25	35	41	26	46	46	374
2.1 - 3.0	9	0	1	8	22	73	48	16	9	5	8	9	7	14	28	44	301
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	28	0	8	15	44	114	60	31	24	22	33	44	48	40	74	90	675

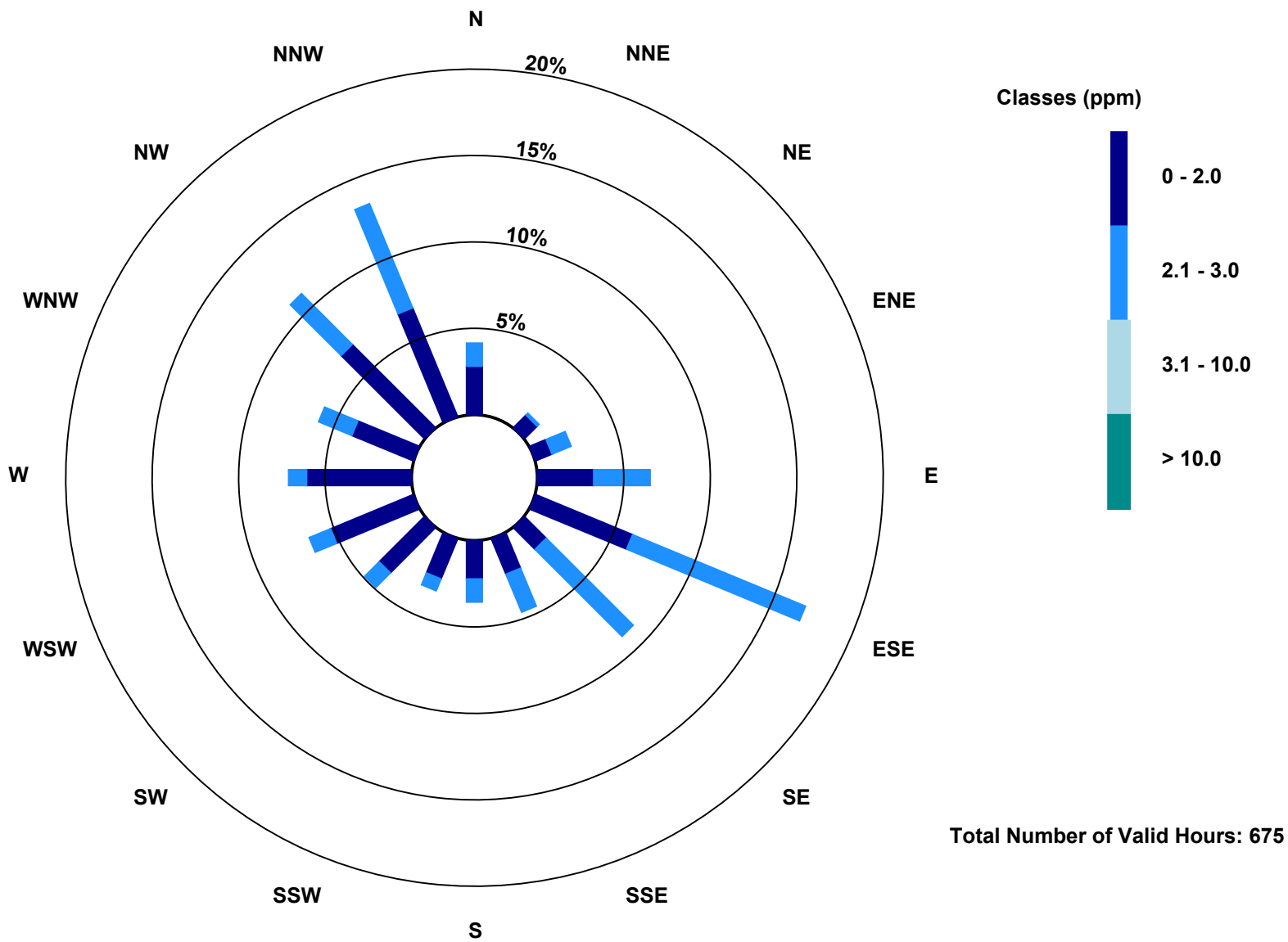
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

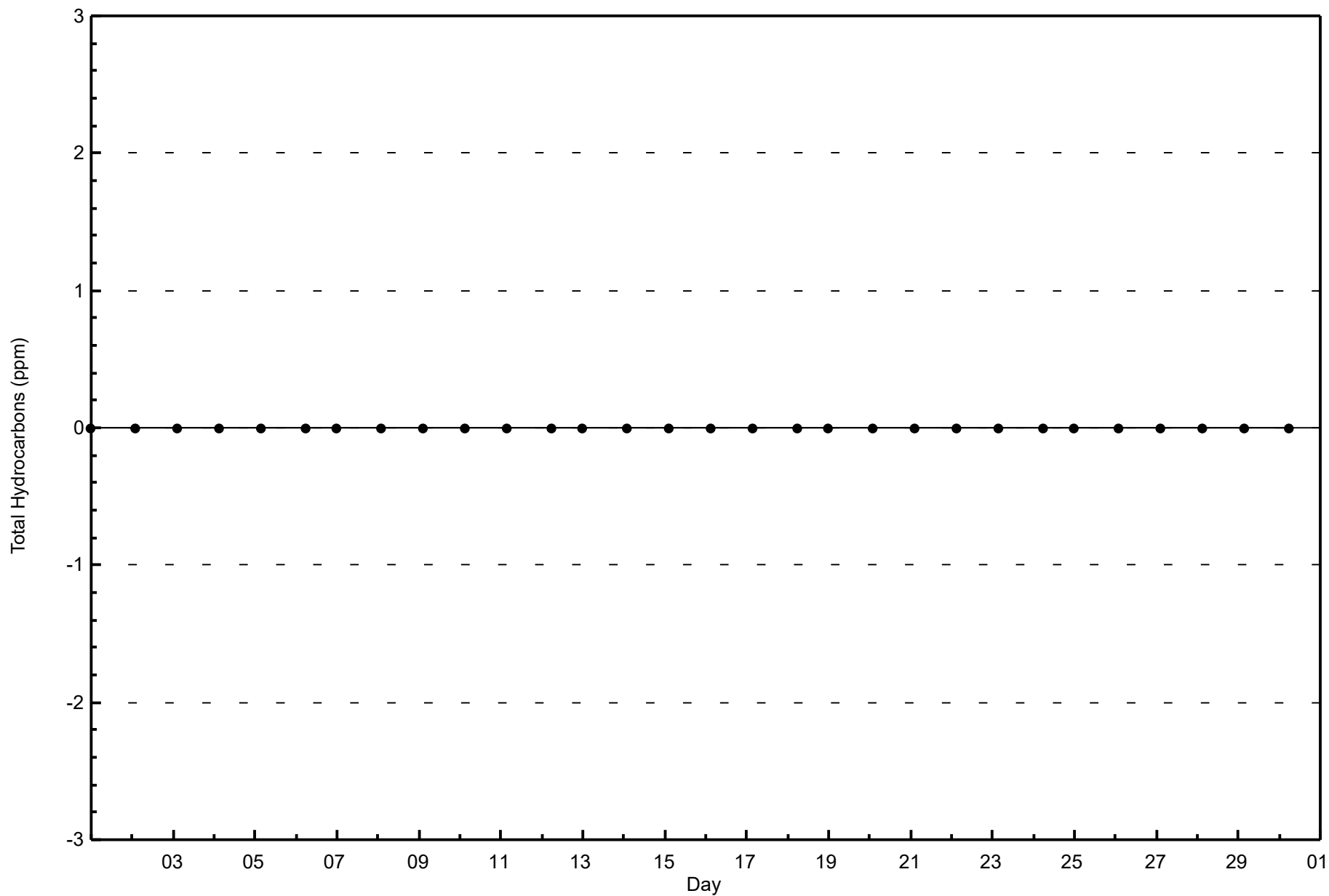
Total Hydrocarbons (THC) - ppm
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

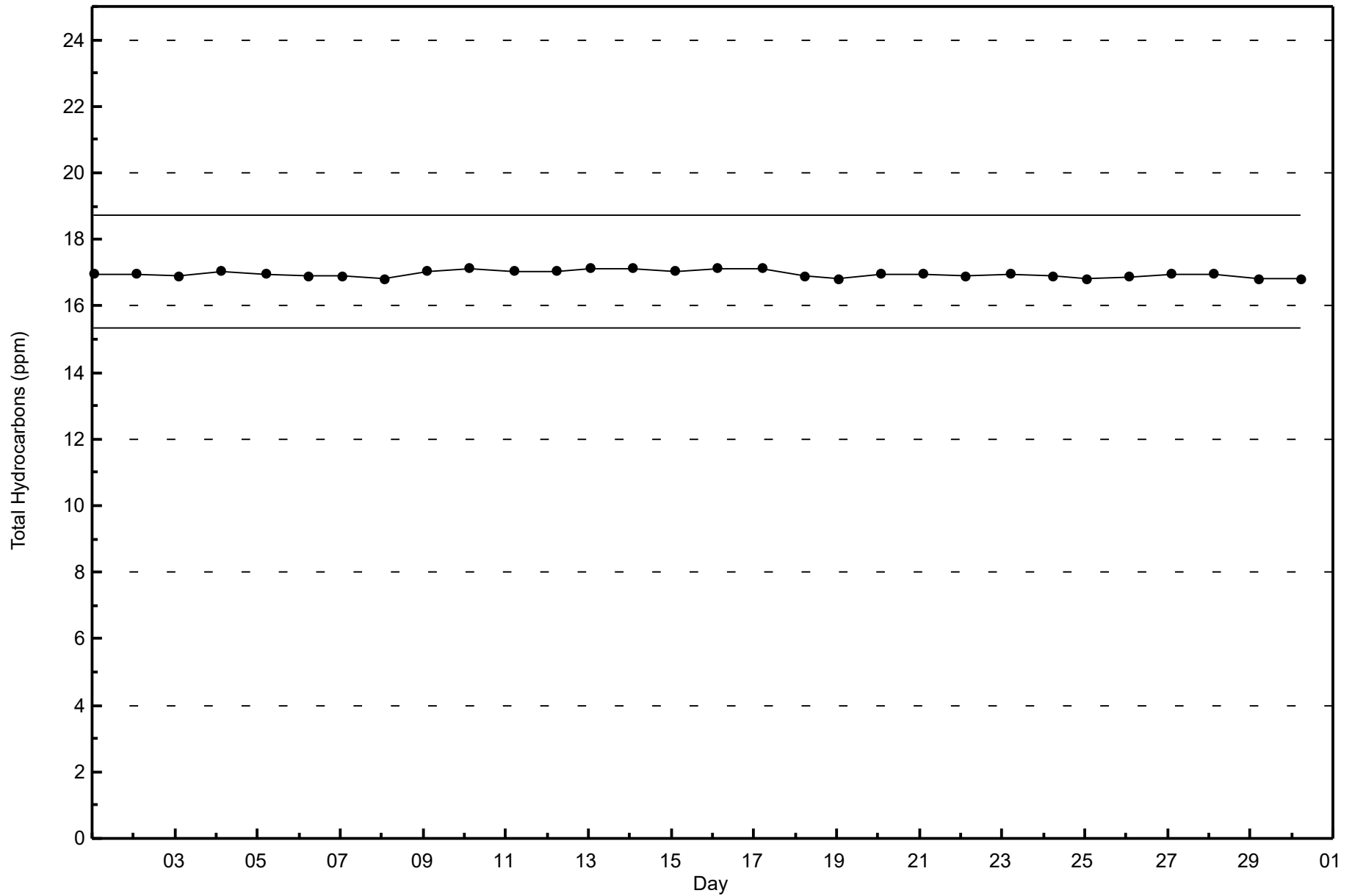
Total Hydrocarbons (THC) - ppm
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

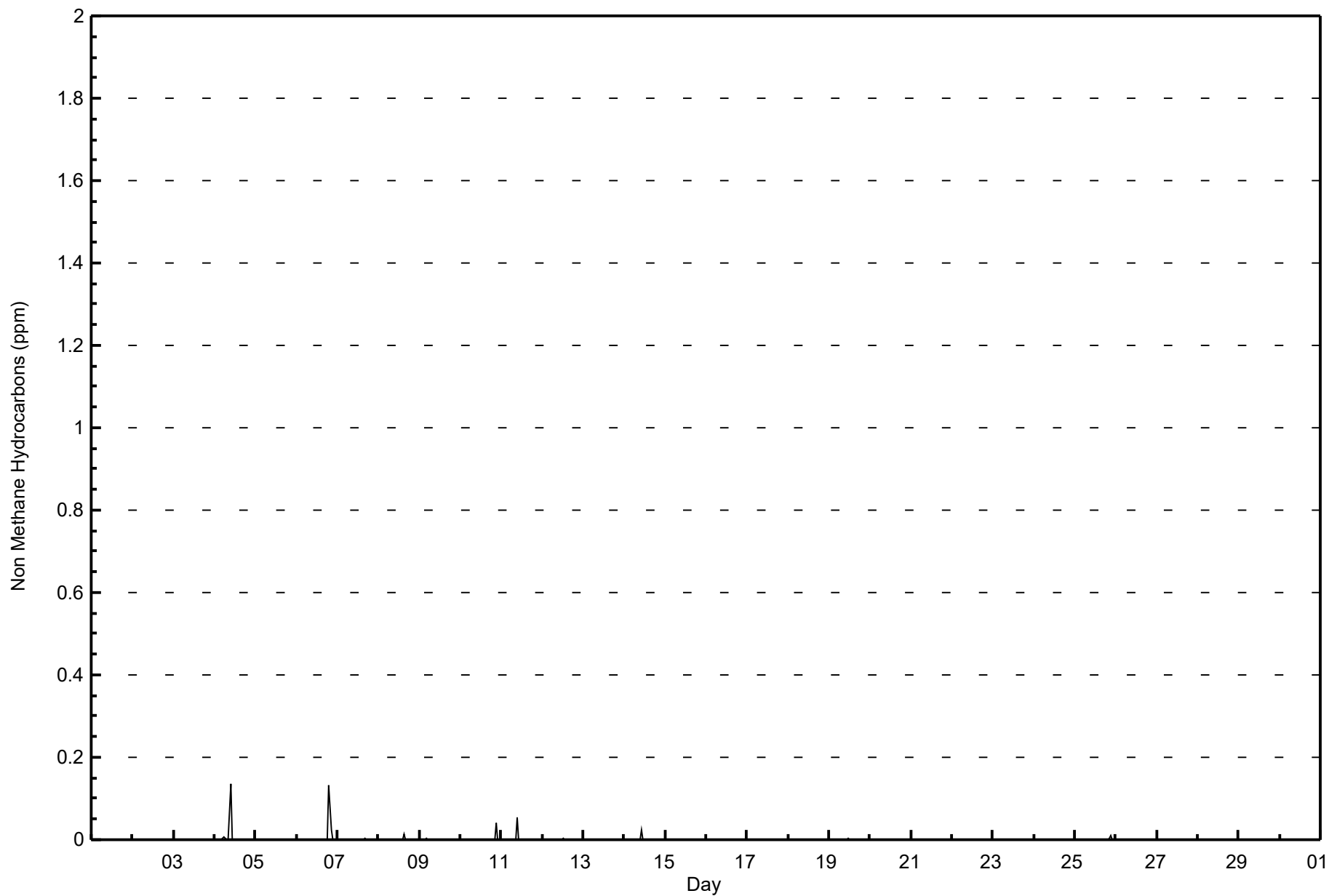
Athabasca Valley - April 2025

Maximum Value: 0.136 ppm on Apr 4 10:00																				Maximum Daily Average: 0.007 ppm on Apr 6										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																				Minimum Daily Average: 0.000 ppm on Apr 1										Hours of Data: 684	
Maximum Diurnal Average: 0.007 ppm at hour 10																				Minimum Diurnal Average: 0.000 ppm at hour 1										Hours of Missing Data: 36	
Monthly Average: 0.001 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0										Hours of Calibration: 34	
																				Percent Operational Time: 99.7											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
4-Apr	0.000	0.000	0.000	Z	0.000	0.005	0.004	0.000	0.001	0.136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.136					
5-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
6-Apr	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	0.131	0.023	0.000	0.000	0.000	0.007	0.131					
7-Apr	Z	0.000	0.000	0.000	0.000	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	0.000	0.002					
8-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.014	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.014					
9-Apr	0.000	0.000	Z	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003					
10-Apr	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	0.042	0.000	0.000	0.002	0.042					
11-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.056					
12-Apr	0.000	0.000	0.000	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	0.000	0.000	0.000	0.000	0.002					
13-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.025					
15-Apr	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					
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
17-Apr	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	0.000					
18-Apr	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					
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003					
20-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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					
22-Apr	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					
23-Apr	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					
24-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
25-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	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	0.005	0.010	0.000	0.000	0.001	0.010					
26-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
28-Apr	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					
29-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001					
30-Apr	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					
																									Diurnal Average						
																									Diurnal Maximum						
Z - zerospan		C - Calibration				M - Maintenance																									



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	676	98.83	98.83
0.006 - 0.05	5	0.73	99.56
0.06 - 0.1	3	0.44	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
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	28	0	8	15	44	108	59	31	24	22	33	44	48	40	74	89	667
0.006 - 0.05	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	1	5
0.06 - 0.1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	0	8	15	44	114	60	31	24	22	33	44	48	40	74	90	675

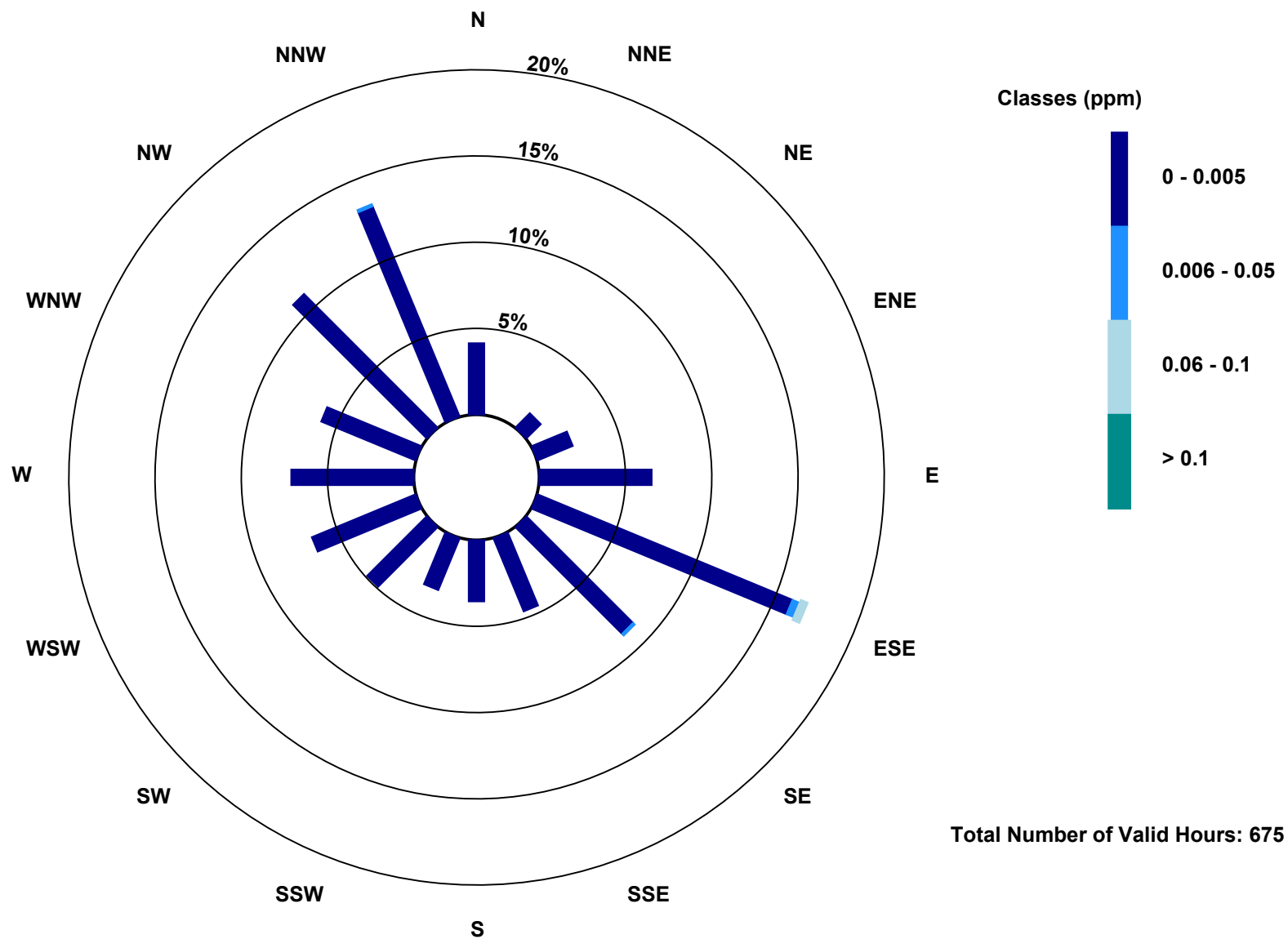
Total Number of Valid Hours: 675

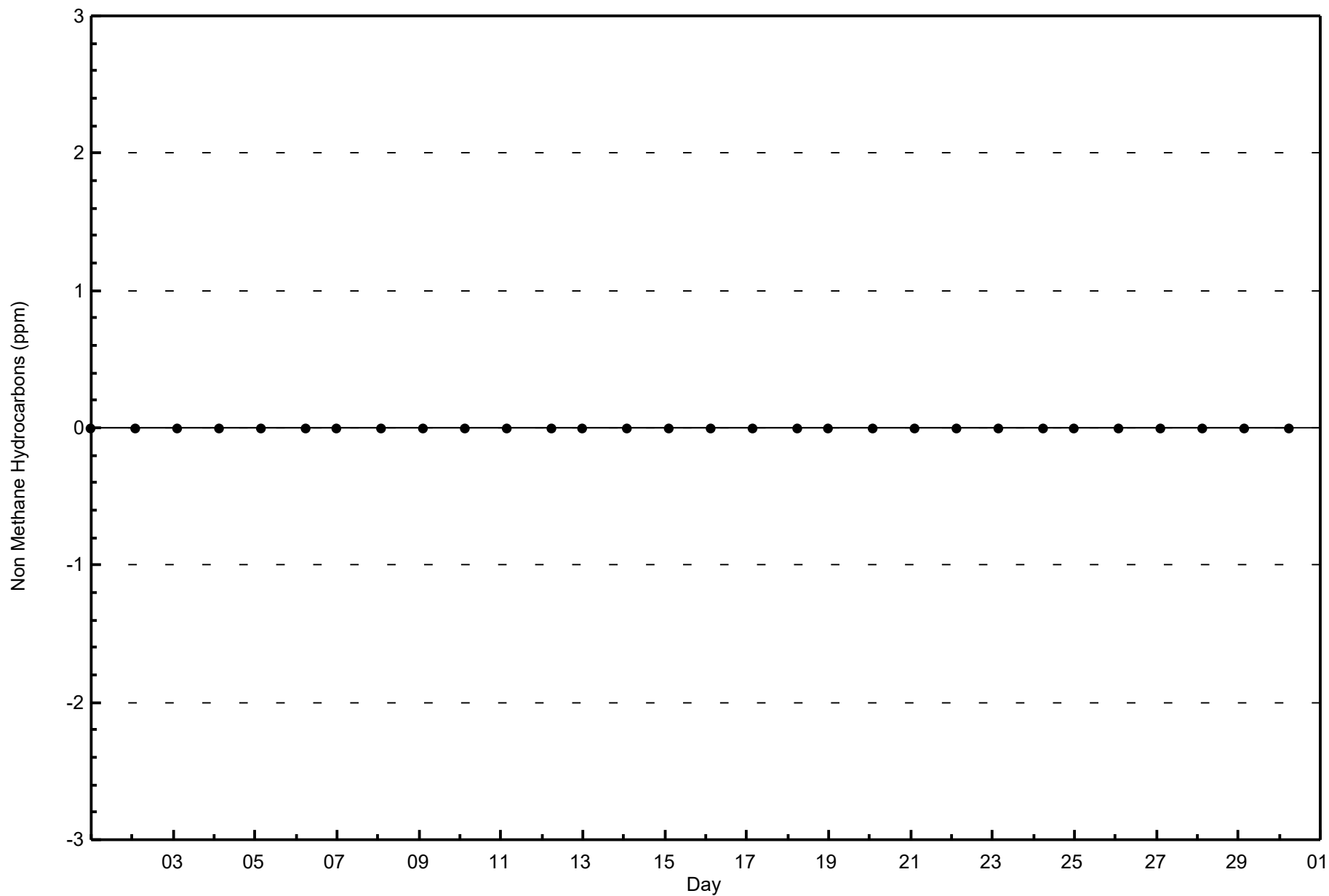
Total Number of Hours: 720

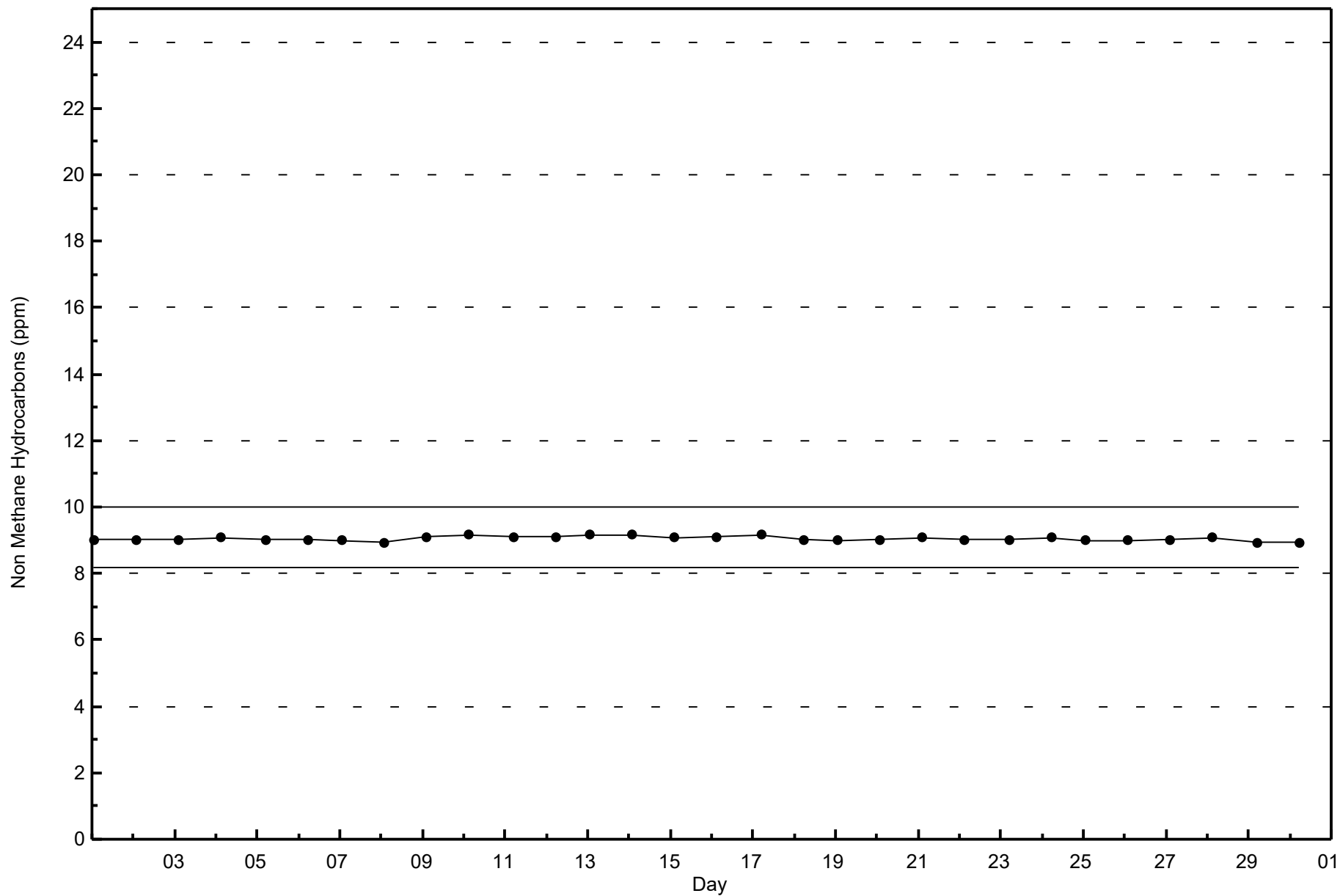


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Athabasca Valley





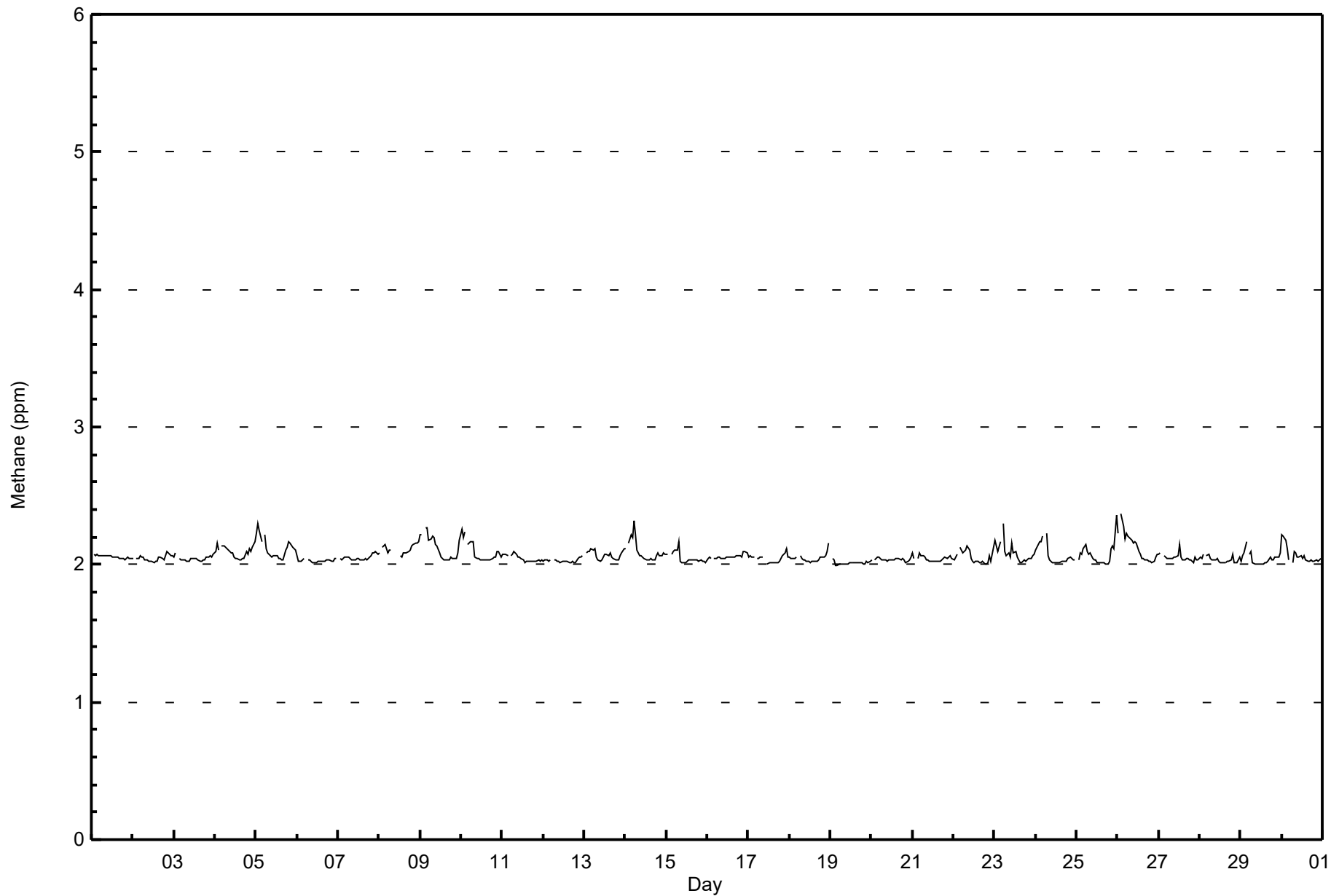


Number of Exceedences (AAAQO): Maximum Value: 2.4 ppm on Apr 26 03:00										1-hr: 0 24-hr: 0 Maximum Daily Average: 2.1 ppm on Apr 26										Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7						
Minimum Value: 2.0 ppm on Apr 19 05:00 Maximum Diurnal Average: 2.1 ppm at hour 6 Monthly Average: 2.06 ppm										Minimum Daily Average: 2.0 ppm on Apr 19 Minimum Diurnal Average: 2.0 ppm at hour 17 Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3																
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-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1
2-Apr	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
3-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
4-Apr	2.1	2.2	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	2.1	2.1	2.1	2.2	2.1	2.2
5-Apr	2.2	2.3	2.3	2.2	Z	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	2.2	2.2	2.1	2.1	2.1	2.1	2.3
6-Apr	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
7-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
8-Apr	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	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
9-Apr	2.2	2.2	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.3
10-Apr	2.3	2.2	2.2	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	2.0	2.1	2.1	2.1	2.1	2.3
11-Apr	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	2.0	2.0	2.0	2.0	2.0	2.1
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
13-Apr	Z	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	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
14-Apr	2.1	Z	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
15-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
16-Apr	2.0	2.1	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	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
17-Apr	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.1	2.0	M	M	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
18-Apr	2.1	2.0	2.0	2.0	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.2
19-Apr	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
20-Apr	2.0	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
21-Apr	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.1
22-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1
23-Apr	2.2	2.1	2.1	2.2	Z	2.3	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3
24-Apr	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2
25-Apr	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	2.1	2.1	2.4	2.1	2.4
26-Apr	2.2	Z	2.4	2.3	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	2.4
27-Apr	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1
28-Apr	2.1	2.0	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1
29-Apr	2.0	2.1	2.1	2.2	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	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.2
30-Apr	2.2	2.2	2.2	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.1 2.1 2.1 2.1 2.1																									Diurnal Average	
2.3 2.3 2.4 2.3 2.3 2.3 2.2 2.2 2.2 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.2 2.2 2.2 2.2 2.4																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	375	54.82	54.82
2.1 - 3.0	309	45.18	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 (CH₄) - ppm
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	19	0	7	7	22	42	12	15	15	17	25	35	41	26	46	46	375
2.1 - 3.0	9	0	1	8	22	72	48	16	9	5	8	9	7	14	28	44	300
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	28	0	8	15	44	114	60	31	24	22	33	44	48	40	74	90	675

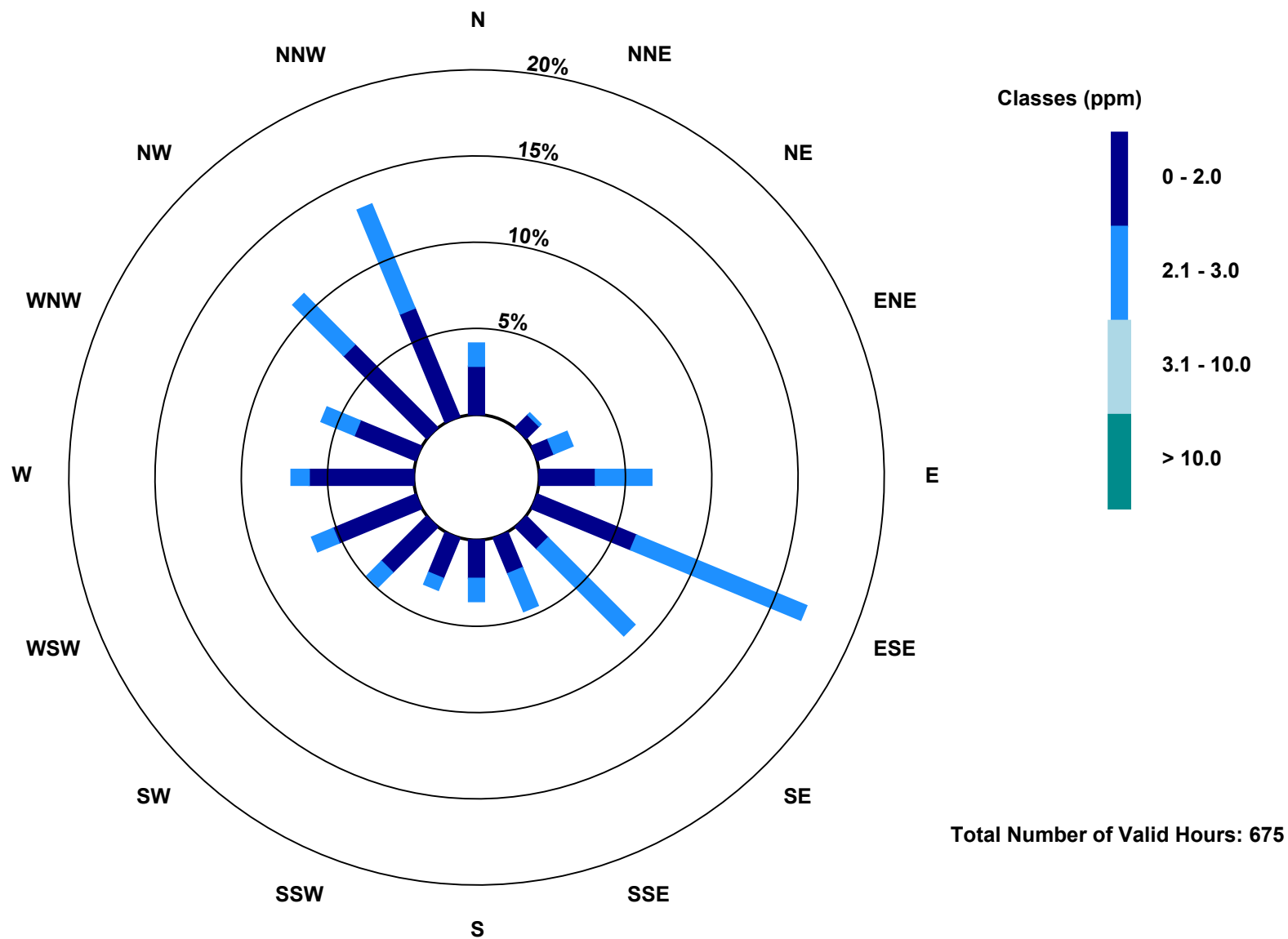
Total Number of Valid Hours: 675

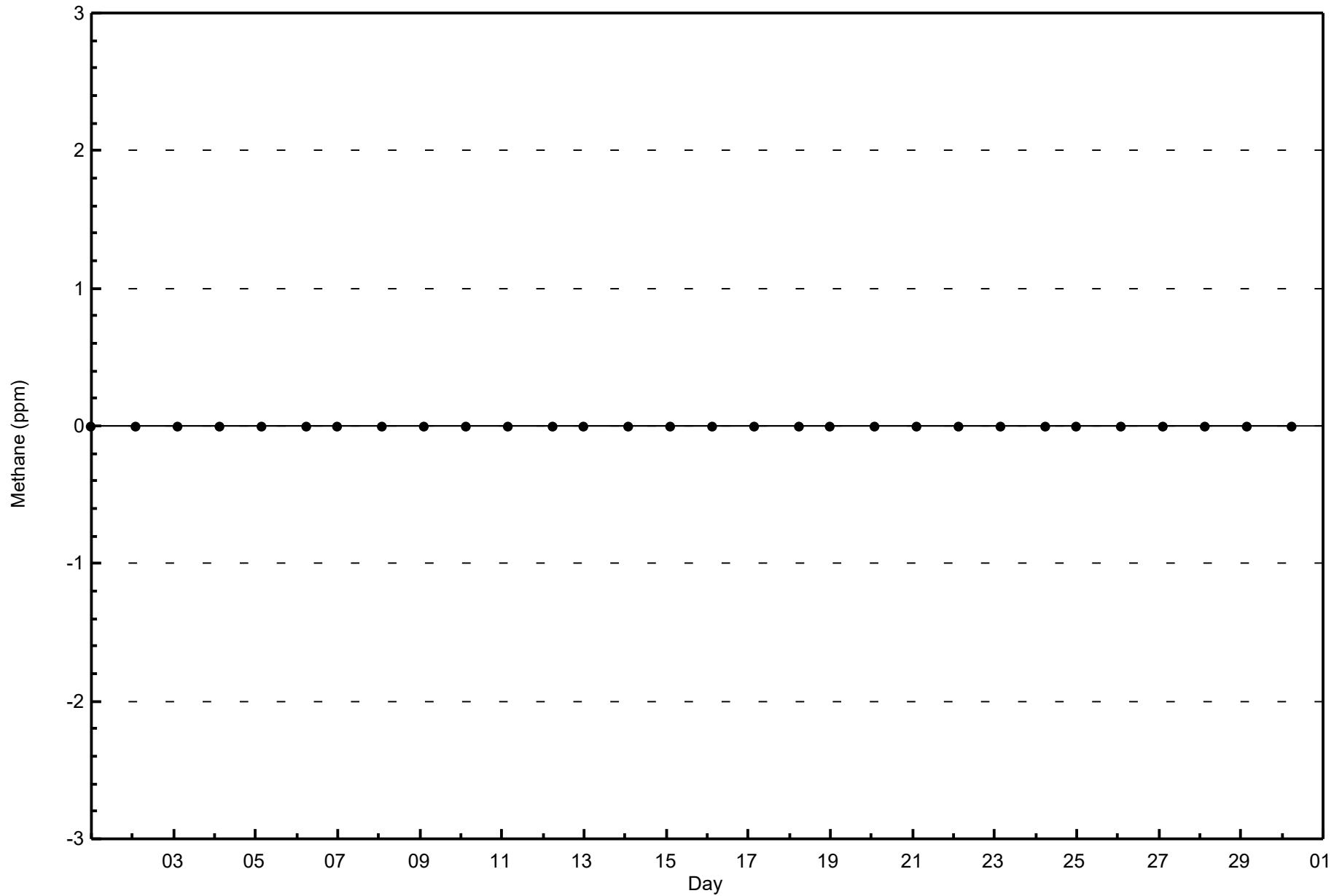
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Methane (CH₄) - ppm
Athabasca Valley

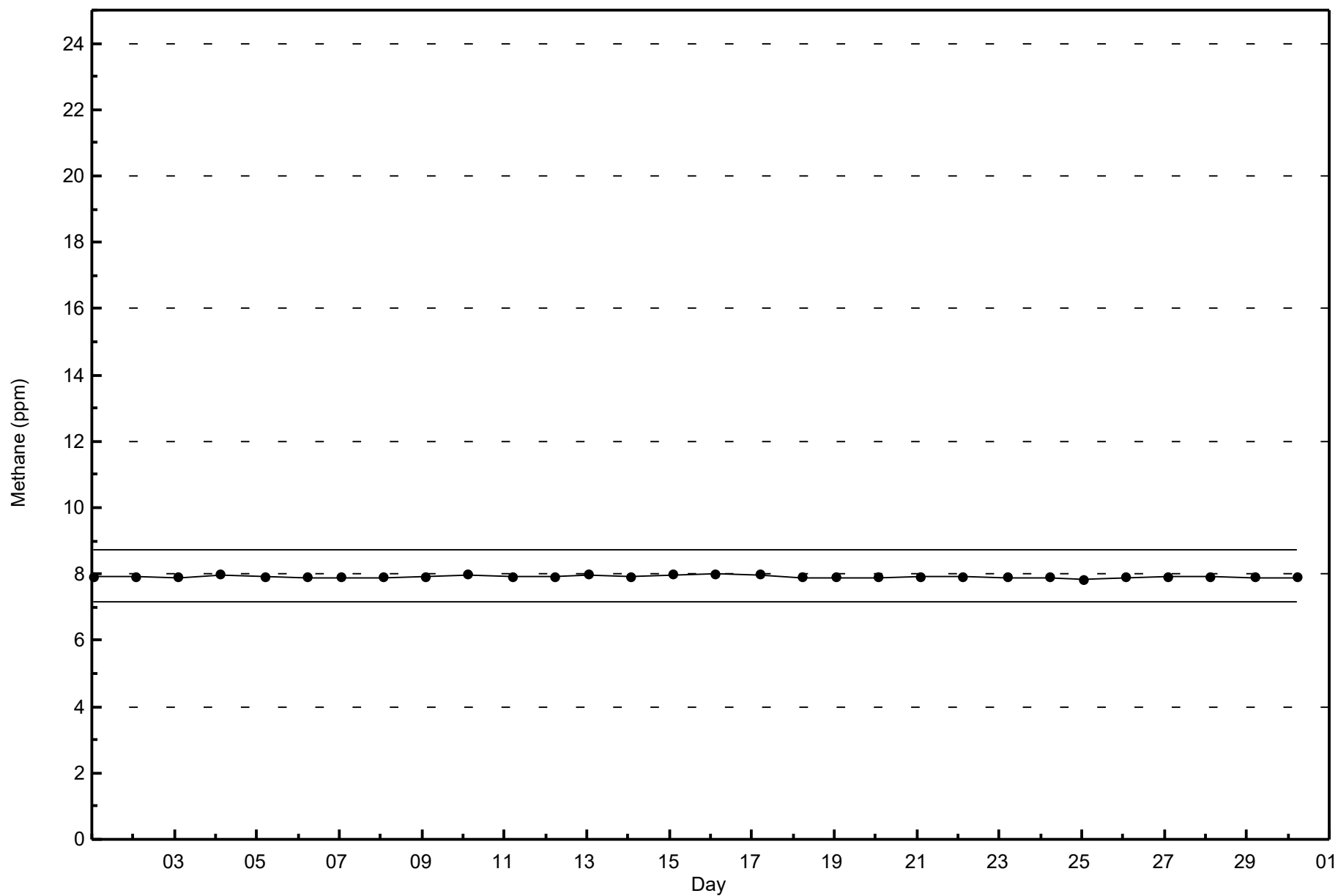






Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Athabasca Valley - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

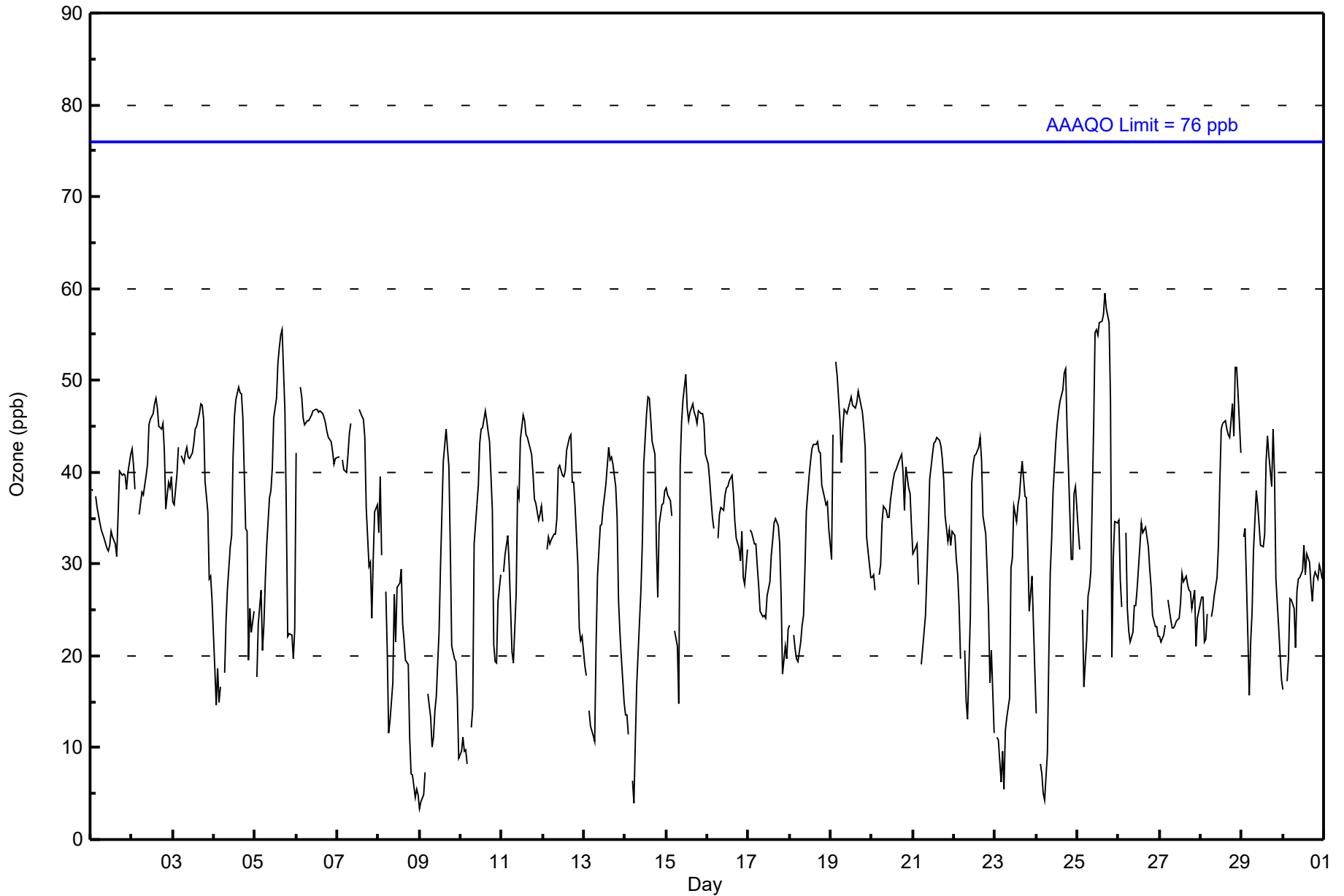
Athabasca Valley - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 59.5 ppb on Apr 25 17:00 Maximum Daily Average: 45.3 ppb on Apr 6																			Hours in Service: 720							
Minimum Value: 3.3 ppb on Apr 9 01:00 Minimum Daily Average: 19.6 ppb on Apr 8 Maximum Diurnal Average: 42.4 ppb at hour 16 Minimum Diurnal Average: 25.0 ppb at hour 7 Monthly Average: 32.94 ppb Percentiles: P ₁ = 5.0 P ₁₀ = 17.9 Q ₁ = 25.1 Median = 33.9 Q ₃ = 41.9 P ₉₀ = 46.3 P ₉₉ = 55.5																			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 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-Apr	38.1	38.0	Z	37.4	36.1	34.4	33.7	33.2	32.8	31.7	31.4	32.0	33.6	32.9	32.1	30.8	35.4	40.1	39.7	39.8	39.6	38.1	40.0	42.0	35.8	42.0
2-Apr	42.6	40.7	38.1	Z	35.4	36.6	37.9	37.6	39.7	40.8	45.1	45.7	46.4	47.5	48.1	47.0	45.0	44.7	45.3	42.3	36.1	39.0	38.3	39.6	41.7	48.1
3-Apr	36.7	36.5	39.9	42.7	Z	41.8	41.0	42.1	42.6	41.6	41.6	42.1	43.2	44.7	45.0	46.4	47.5	47.3	45.8	39.0	35.7	28.4	28.7	26.1	40.3	47.5
4-Apr	18.6	14.6	18.6	15.0	16.6	Z	18.2	23.7	27.4	31.9	33.2	41.7	46.0	47.9	49.2	48.7	48.5	45.9	33.9	33.5	19.6	25.2	22.6	24.8	30.7	49.2
5-Apr	Z	17.8	23.5	27.2	20.7	23.4	28.2	32.1	37.2	37.9	40.5	45.9	48.0	51.9	53.6	54.9	55.5	46.7	35.7	22.1	22.4	22.3	19.7	23.0	34.4	55.5
6-Apr	42.0	Z	49.3	48.2	45.9	45.2	45.6	45.6	45.9	46.2	46.7	46.8	46.8	46.5	46.7	46.4	45.9	45.3	44.4	43.8	43.3	42.2	40.9	41.6	45.3	49.3
7-Apr	41.6	41.7	Z	41.4	40.2	40.0	41.9	44.3	45.3	C	C	C	C	46.8	46.0	45.8	43.8	36.2	29.8	30.3	24.2	30.6	35.8	36.5	39.1	46.8
8-Apr	33.4	39.5	31.0	Z	27.0	20.5	11.6	13.0	17.0	26.8	21.6	27.4	27.9	29.4	23.6	21.7	19.5	19.1	11.1	7.1	7.1	4.6	5.5	4.9	19.6	39.5
9-Apr	3.3	4.2	4.9	7.3	Z	15.8	13.3	10.0	11.1	14.1	15.5	22.7	29.8	35.6	41.2	44.7	42.5	40.6	31.7	21.0	19.7	19.4	15.5	8.8	20.5	44.7
10-Apr	9.6	11.1	9.7	9.8	8.3	Z	12.1	14.3	32.2	36.4	38.6	43.2	44.7	44.9	46.7	45.6	44.4	43.4	35.9	21.2	19.3	19.3	25.9	28.9	28.1	46.7
11-Apr	Z	29.1	30.9	33.1	29.9	25.2	20.4	19.1	26.9	37.9	37.3	43.7	46.2	45.6	44.0	43.7	43.2	41.9	39.8	37.0	36.6	34.7	35.4	36.3	35.6	46.2
12-Apr	34.6	Z	31.6	32.9	32.1	32.6	33.3	33.3	35.0	40.4	40.7	39.7	39.5	40.2	42.5	43.8	44.0	38.9	38.9	36.3	29.9	23.1	21.6	22.2	35.1	44.0
13-Apr	18.9	17.9	Z	14.1	12.4	11.3	10.7	21.2	28.7	34.2	34.3	36.1	37.3	38.7	42.8	41.4	41.6	40.9	38.5	35.1	26.1	22.5	19.9	14.9	27.8	42.8
14-Apr	13.6	13.6	11.5	Z	6.4	3.9	10.6	16.9	23.7	27.2	32.4	40.8	46.3	48.2	48.0	45.8	43.3	41.9	32.0	26.4	34.4	36.5	36.6	37.9	29.5	48.2
15-Apr	38.3	37.5	36.9	35.3	Z	22.7	21.1	14.8	40.7	45.4	47.8	50.7	47.0	45.6	46.5	47.4	46.6	46.1	45.3	46.6	46.3	46.3	45.3	41.9	41.0	50.7
16-Apr	40.9	39.2	37.0	35.1	33.8	Z	32.8	35.3	36.2	35.9	37.5	38.3	38.4	39.1	39.7	37.6	34.6	32.8	31.7	30.4	33.5	28.6	27.8	31.5	35.1	40.9
17-Apr	Z	33.7	33.4	32.2	32.1	29.7	27.6	24.8	24.3	24.4	24.0	26.5	28.1	30.9	32.7	34.5	34.9	34.2	32.2	26.6	18.0	21.0	19.7	22.8	28.2	34.9
18-Apr	23.3	Z	22.3	20.8	19.7	19.4	21.5	23.3	24.4	29.5	35.7	39.7	41.1	42.6	43.0	43.1	43.3	42.3	42.1	38.7	37.3	36.4	36.7	33.9	33.0	43.3
19-Apr	30.4	44.1	Z	52.1	50.4	45.6	41.0	44.7	46.8	46.3	46.9	47.5	48.2	47.3	47.0	47.6	48.7	48.0	46.5	44.9	42.7	32.9	31.3	28.6	43.9	52.1
20-Apr	28.6	28.8	27.2	Z	28.8	29.9	34.5	36.3	35.9	35.1	35.0	36.9	39.2	39.9	40.3	40.8	41.2	41.9	40.0	35.9	40.6	38.3	37.6	34.2	35.9	41.9
21-Apr	31.2	31.4	32.1	27.7	Z	19.1	22.6	24.4	28.8	33.3	39.2	41.9	43.2	43.3	43.8	43.5	42.9	41.5	39.2	35.3	32.5	33.7	32.0	33.5	34.6	43.8
22-Apr	33.1	30.5	28.9	25.3	19.6	Z	20.6	15.2	13.1	24.2	38.9	40.9	41.8	42.0	42.7	43.8	41.3	35.2	33.3	29.3	24.8	17.0	20.7	11.5	29.3	43.8
23-Apr	Z	11.1	10.8	6.2	9.6	5.5	11.9	13.2	15.4	29.5	30.6	36.2	34.7	36.4	37.3	39.5	41.2	37.4	37.2	31.5	24.8	28.6	23.5	18.5	24.8	41.2
24-Apr	13.8	Z	8.2	7.1	5.0	4.2	9.4	20.1	29.0	32.7	37.9	43.3	45.3	46.7	47.7	48.9	50.7	51.2	44.9	40.4	30.5	30.5	37.7	38.4	31.5	51.2
25-Apr	33.8	31.6	Z	25.1	16.6	21.8	26.5	27.5	29.3	45.1	55.2	55.5	54.9	56.2	56.4	57.2	59.5	57.9	56.3	47.8	19.8	30.7	34.6	34.5	40.6	59.5
26-Apr	34.8	28.3	25.3	Z	33.4	25.2	22.7	21.5	22.6	25.5	25.5	27.4	32.0	34.5	33.5	33.7	34.0	31.9	29.4	27.4	24.4	23.1	23.2	22.2	27.9	34.8
27-Apr	22.2	21.5	22.3	23.4	Z	26.1	24.0	23.1	23.0	23.4	23.8	24.1	25.8	29.1	28.0	28.7	27.8	27.1	27.0	25.1	27.2	21.1	24.1	24.9	24.9	29.1
28-Apr	26.4	26.4	21.5	21.8	24.5	Z	24.3	25.2	26.5	28.5	32.1	38.9	44.7	45.4	45.5	44.7	44.1	43.7	47.5	44.0	51.5	51.4	48.6	42.1	36.9	51.5
29-Apr	Z	33.0	33.9	22.1	15.7	21.5	24.7	31.5	38.0	36.5	34.3	32.1	31.9	33.3	41.3	43.9	41.8	38.5	44.7	39.7	28.3	23.0	20.1	17.3	31.6	44.7
30-Apr	16.4	Z	17.3	19.8	26.2	26.1	25.2	20.9	27.0	28.3	28.6	29.3	32.1	28.9	31.1	30.3	27.7	26.0	28.5	29.1	28.4	29.9	29.2	28.4	26.7	32.1
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Athabasca Valley - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	95	13.85	13.85
21 - 50	572	83.38	97.23
51 - 82	19	2.77	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 (O₃) - ppb
Athabasca Valley - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	2	0	0	3	14	18	16	7	3	3	3	3	5	3	9	6	95
21 - 50	26	0	8	11	28	96	45	21	16	19	25	40	42	36	66	84	563
51 - 82	0	0	0	0	0	0	0	2	3	3	4	1	0	2	3	1	19
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	0	8	14	42	114	61	30	22	25	32	44	47	41	78	91	677

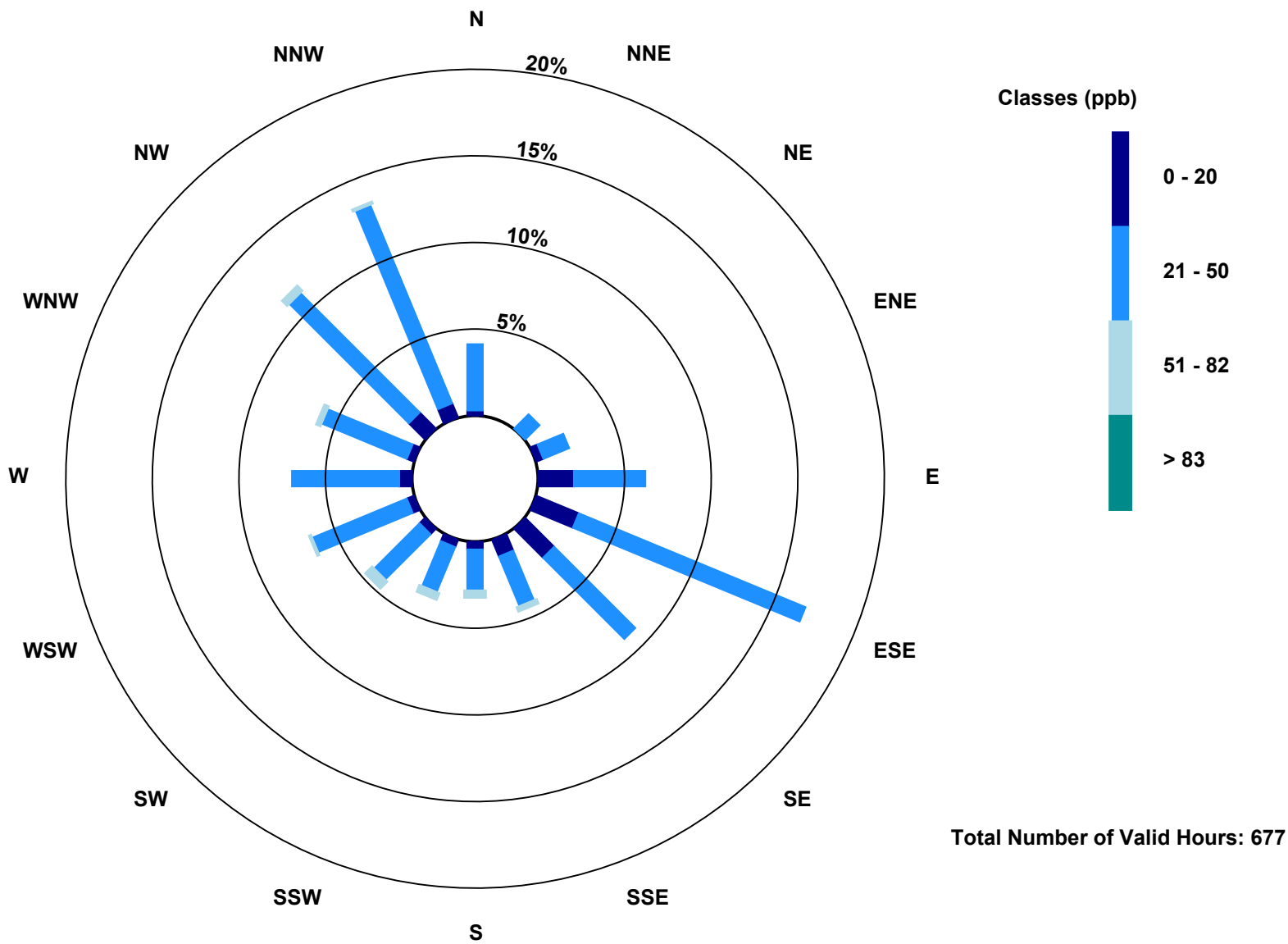
Total Number of Valid Hours: 677

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

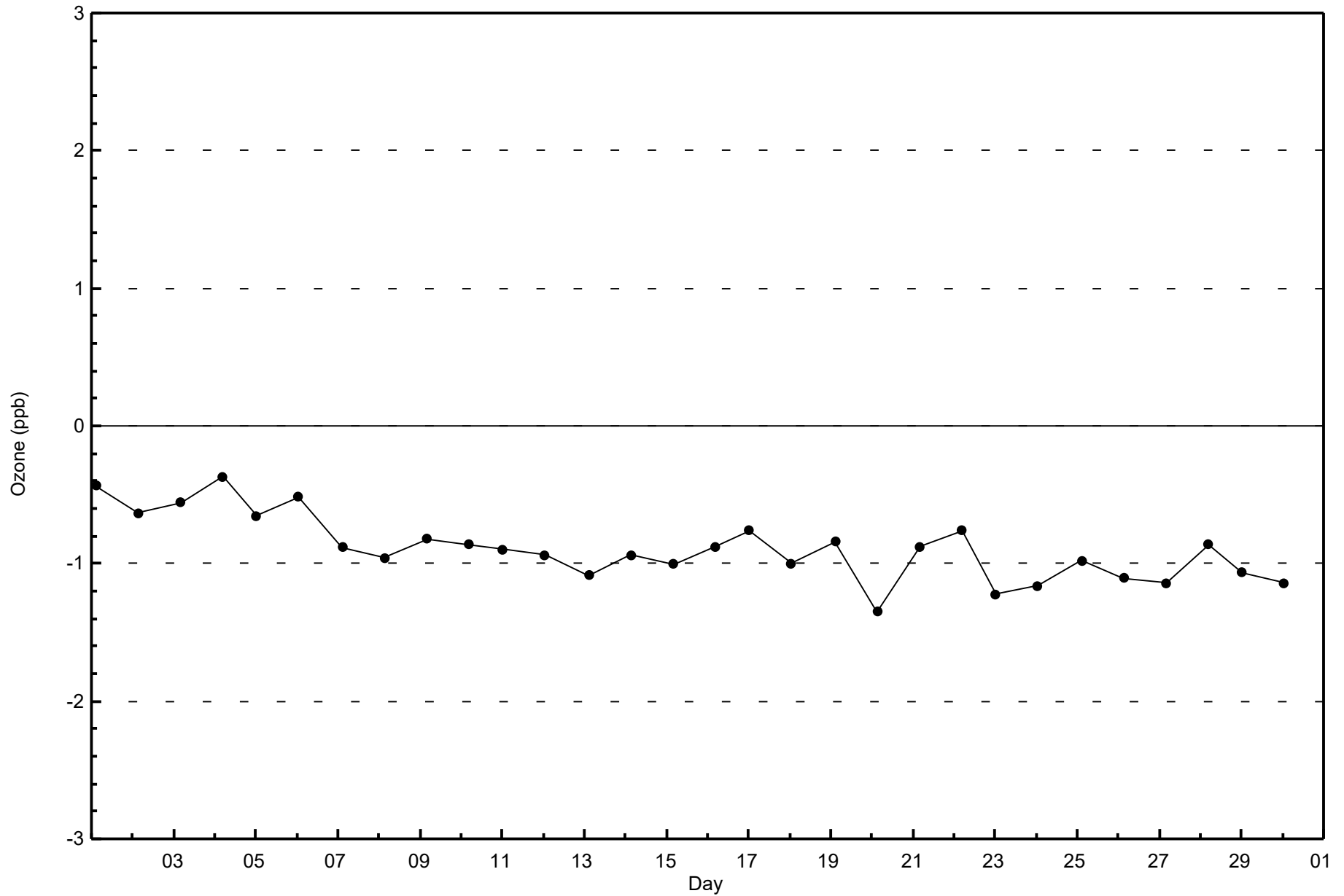
Ozone (O₃) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

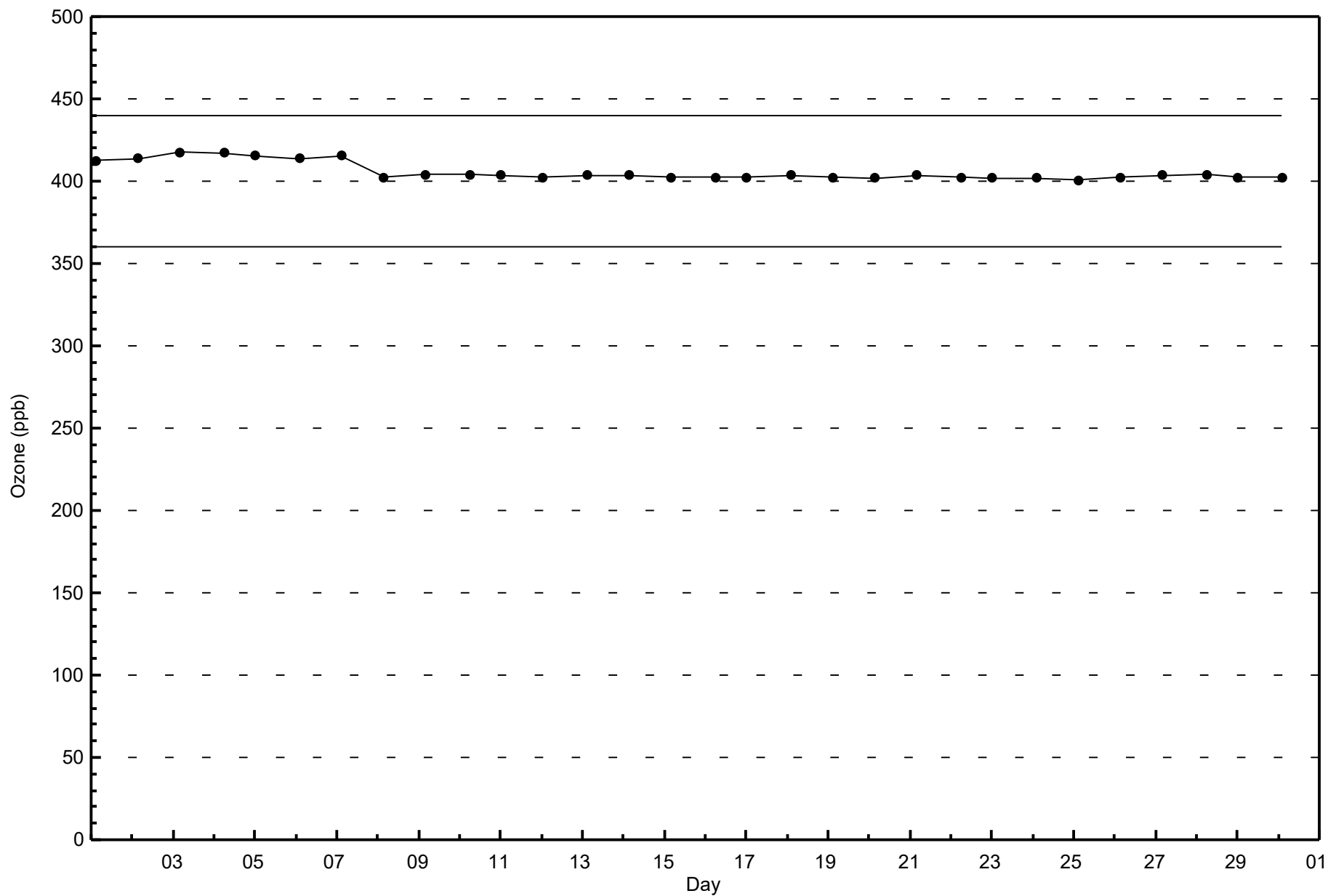
Ozone (O₃) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Athabasca Valley - April 2025

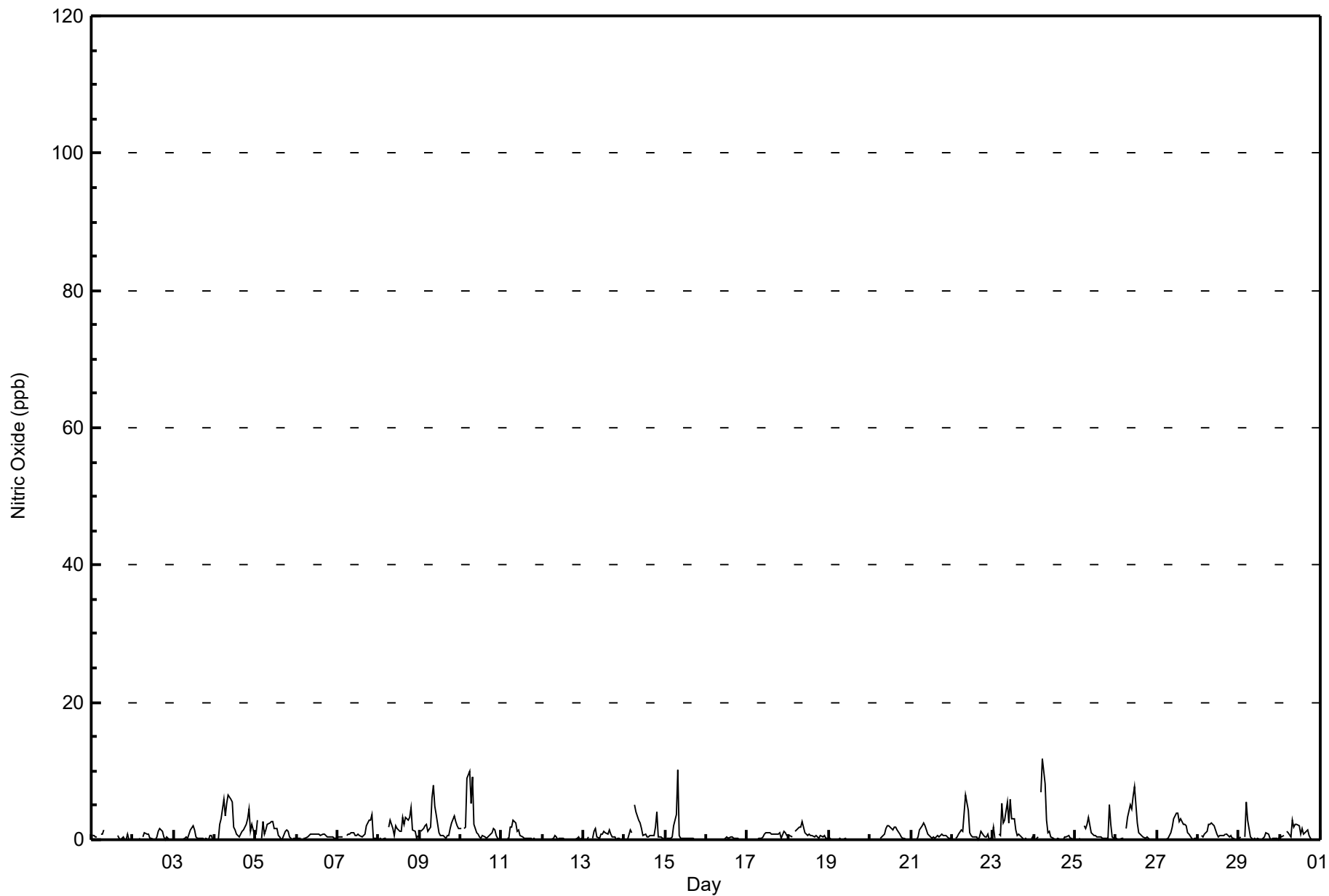


Maximum Value: 11.9 ppb on Apr 24 06:00																			Maximum Daily Average: 2.6 ppb on Apr 4						Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 20:00																			Minimum Daily Average: 0.1 ppb on Apr 19						Hours of Data: 683	
Maximum Diurnal Average: 2.5 ppb at hour 8																			Minimum Diurnal Average: 0.2 ppb at hour 24						Hours of Missing Data: 37	
Monthly Average: 0.99 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.5 Q ₃ = 1.2 P ₉₀ = 2.5 P ₉₉ = 7.8						Hours of Calibration: 37	
																			Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.5	0.6	0.4	0.3	Z	0.9	0.9	1.3	C	C	C	C	C	C	0.7	0.2	0.1	0.3	0.0	0.0	0.7	0.0	0.0	--	1.3	
2-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.3	0.9	0.8	0.9	0.1	0.1	0.1	0.1	0.4	1.1	1.6	1.2	0.3	0.0	0.3	0.0	0.0	0.0	0.4	1.6
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.9	1.5	2.0	1.4	0.4	0.3	0.2	0.2	0.1	0.0	0.2	0.1	0.5	0.6	0.1	0.4	2.0
4-Apr	0.1	Z	0.0	2.3	3.1	5.9	3.4	5.3	6.5	6.0	5.4	1.9	1.4	0.8	0.4	0.7	1.2	1.5	2.2	3.0	4.6	1.3	2.2	0.7	2.6	6.5
5-Apr	0.8	2.9	Z	0.3	2.7	0.9	1.5	2.3	2.3	2.7	2.6	1.6	1.6	0.7	0.3	0.1	0.2	1.3	1.4	1.2	0.4	0.0	0.2	0.1	1.2	2.9
6-Apr	0.2	0.1	0.1	Z	0.2	0.3	0.4	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.6	0.7	0.8	0.6	0.4	0.5	0.4	0.3	0.2	0.2	0.5	0.8
7-Apr	0.4	0.3	0.3	0.5	Z	0.7	0.8	0.9	1.1	0.9	0.6	0.6	0.8	0.6	0.5	0.5	0.7	2.1	2.9	2.8	3.6	0.2	0.3	0.1	1.0	3.6
8-Apr	0.0	0.1	0.1	0.2	0.2	Z	1.8	2.8	1.7	0.5	2.0	1.6	1.3	1.3	3.3	2.2	3.2	2.9	3.3	4.6	1.5	1.2	0.3	0.5	1.6	4.6
9-Apr	Z	1.3	1.6	2.0	2.2	1.1	1.9	6.1	8.0	4.8	3.6	1.0	0.5	0.6	0.6	0.2	0.6	0.5	1.5	2.5	3.5	2.7	2.1	1.5	2.2	8.0
10-Apr	1.6	Z	1.5	1.8	9.0	9.9	5.4	9.2	2.3	0.9	0.8	0.4	0.3	0.6	0.4	0.3	0.5	0.5	1.1	1.7	1.4	0.7	0.1	0.0	2.2	9.9
11-Apr	0.0	0.1	Z	0.1	0.1	1.8	1.9	2.9	2.4	1.3	1.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.6	2.9
12-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.6	0.4	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.5	0.0	0.3	0.1	0.6
13-Apr	0.0	0.0	0.0	0.4	Z	0.2	1.2	1.5	0.5	0.1	0.8	0.8	1.2	1.0	0.8	1.4	0.8	0.5	0.4	0.0	0.2	0.1	0.0	0.2	0.5	1.5
14-Apr	0.0	0.1	0.0	1.4	0.9	Z	5.2	4.0	2.8	2.4	1.6	0.6	0.8	0.4	0.4	0.6	0.7	0.7	1.9	4.1	0.4	0.3	0.2	0.2	1.3	5.2
15-Apr	Z	0.3	0.2	0.3	0.5	2.1	3.7	10.2	0.5	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	10.2
16-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4
17-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.8	1.0	0.9	1.0	0.8	0.7	0.7	0.8	0.8	1.1	0.3	1.2	1.1	0.6	0.5	1.2
18-Apr	0.7	0.6	0.5	Z	1.2	1.4	1.7	1.8	2.7	1.8	1.0	0.7	0.9	0.6	0.5	0.5	0.5	0.3	0.7	0.5	0.5	0.2	0.3	0.3	0.9	2.7
19-Apr	0.2	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
20-Apr	0.0	0.0	0.0	0.1	0.0	Z	0.2	0.3	0.9	1.5	2.1	2.1	1.6	1.3	1.8	1.7	1.4	0.8	0.4	0.2	0.1	0.1	0.0	0.0	0.7	2.1
21-Apr	Z	0.0	0.0	0.0	0.5	1.3	2.1	2.4	2.0	1.4	0.8	0.4	0.1	0.4	0.2	0.5	0.4	0.7	0.8	0.6	0.6	0.3	0.2	0.2	0.7	2.4
22-Apr	0.2	Z	0.1	0.4	0.8	1.5	1.2	3.9	6.4	4.2	1.0	0.5	0.3	0.4	0.4	0.1	0.4	1.2	0.7	0.5	0.4	0.8	0.0	0.5	1.1	6.4
23-Apr	1.8	0.2	Z	0.8	0.6	5.3	2.5	2.8	5.4	2.4	6.0	3.1	3.1	1.4	0.6	0.9	0.6	0.1	0.1	0.2	0.0	0.0	0.0	0.4	1.7	6.0
24-Apr	0.1	0.0	0.5	Z	6.9	11.9	8.1	2.9	1.0	1.1	0.5	0.2	0.1	0.0	0.2	0.0	0.0	0.1	0.5	0.4	0.7	0.1	0.1	0.0	1.5	11.9
25-Apr	0.0	0.0	0.0	0.1	Z	1.9	1.5	2.2	3.2	1.1	0.8	0.5	0.6	0.4	0.4	0.3	0.2	0.2	0.3	0.3	5.1	2.3	0.5	0.0	1.0	5.1
26-Apr	0.1	0.0	0.0	0.3	0.3	Z	1.6	3.2	5.0	4.5	6.3	7.8	2.4	1.0	0.8	0.7	0.5	0.3	0.4	0.2	0.0	0.0	0.0	0.0	1.5	7.8
27-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.5	1.0	1.8	3.0	3.8	3.8	2.7	3.0	2.1	2.3	2.1	1.1	0.8	0.2	0.1	0.2	0.3	1.3	3.8
28-Apr	0.3	Z	0.6	0.5	0.7	1.2	2.3	2.3	2.3	1.9	1.4	0.8	0.4	0.7	0.6	0.7	0.8	0.8	0.5	0.5	0.2	0.1	0.1	0.1	0.9	2.3
29-Apr	0.1	0.4	Z	0.5	5.5	2.8	1.7	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.4	1.0	0.9	0.1	0.0	0.1	0.1	0.2	0.0	0.7	5.5
30-Apr	0.5	0.4	0.6	Z	1.2	1.0	0.5	2.8	1.9	2.2	2.3	2.0	0.8	1.6	0.8	1.3	1.3	0.7	0.2	0.1	0.0	0.0	0.0	0.0	1.0	2.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	0	8	15	43	116	57	30	23	24	32	43	49	41	77	89	675
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	28	0	8	15	43	116	57	30	23	24	32	43	49	41	77	89	675

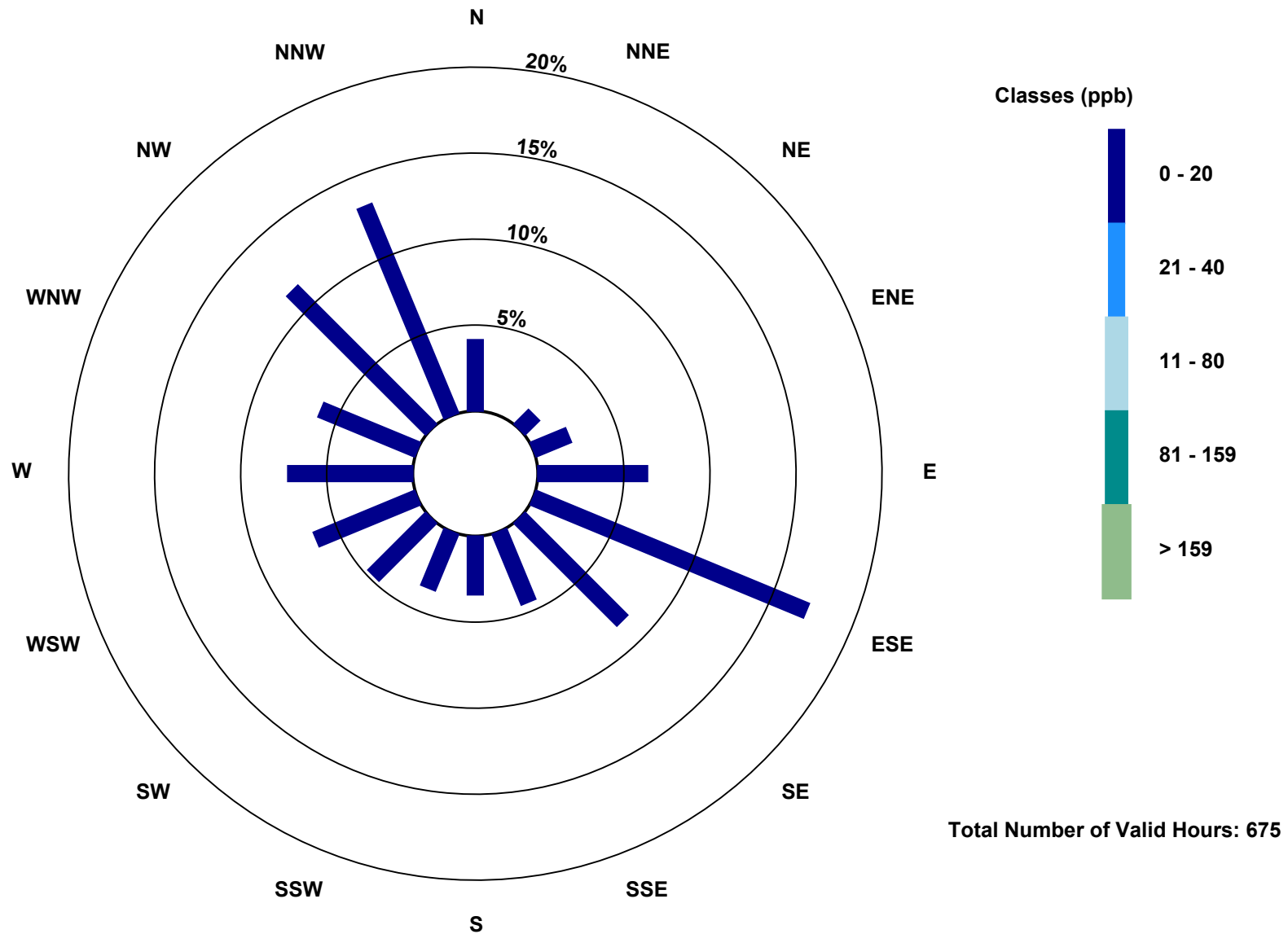
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

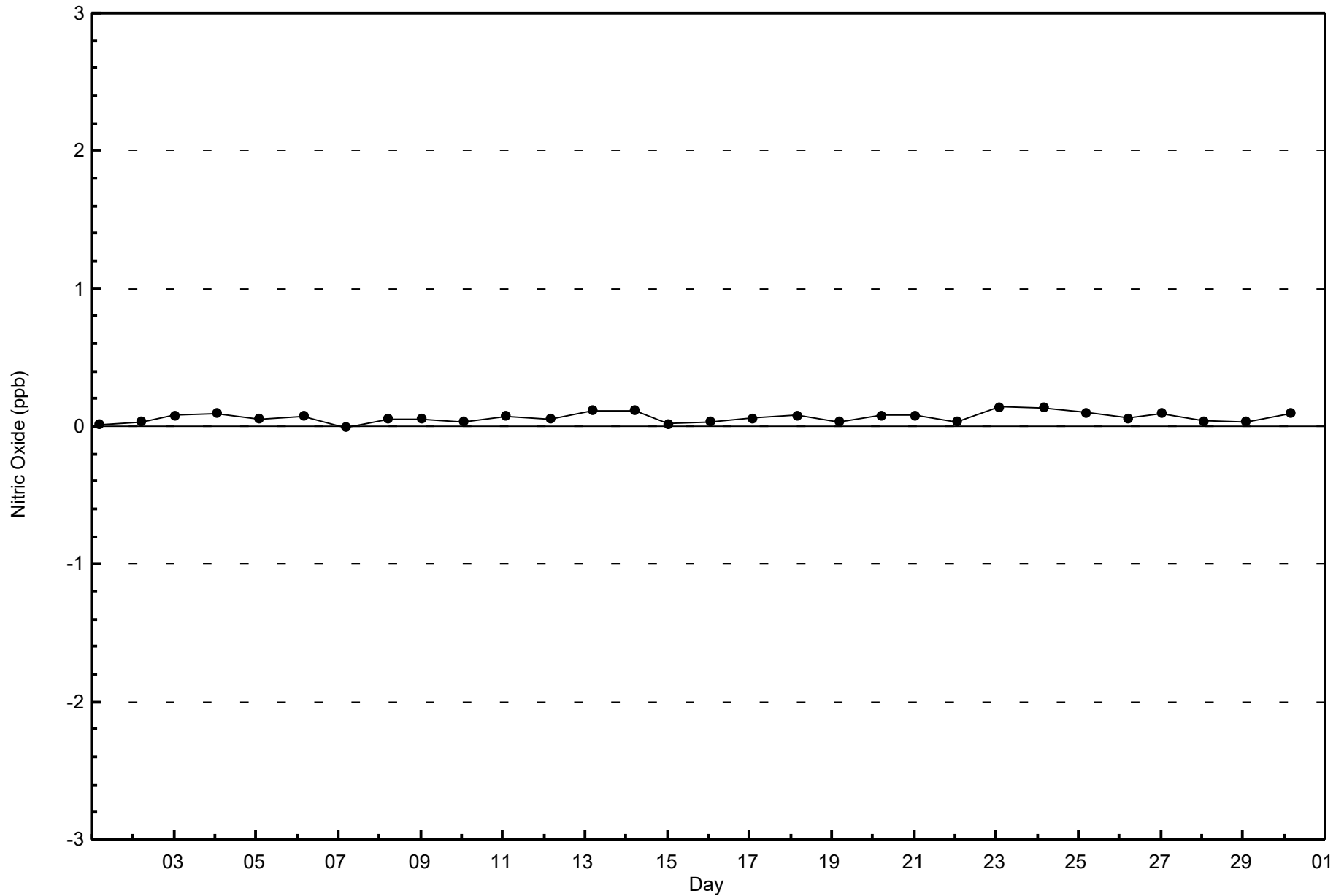
Nitric Oxide (NO) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

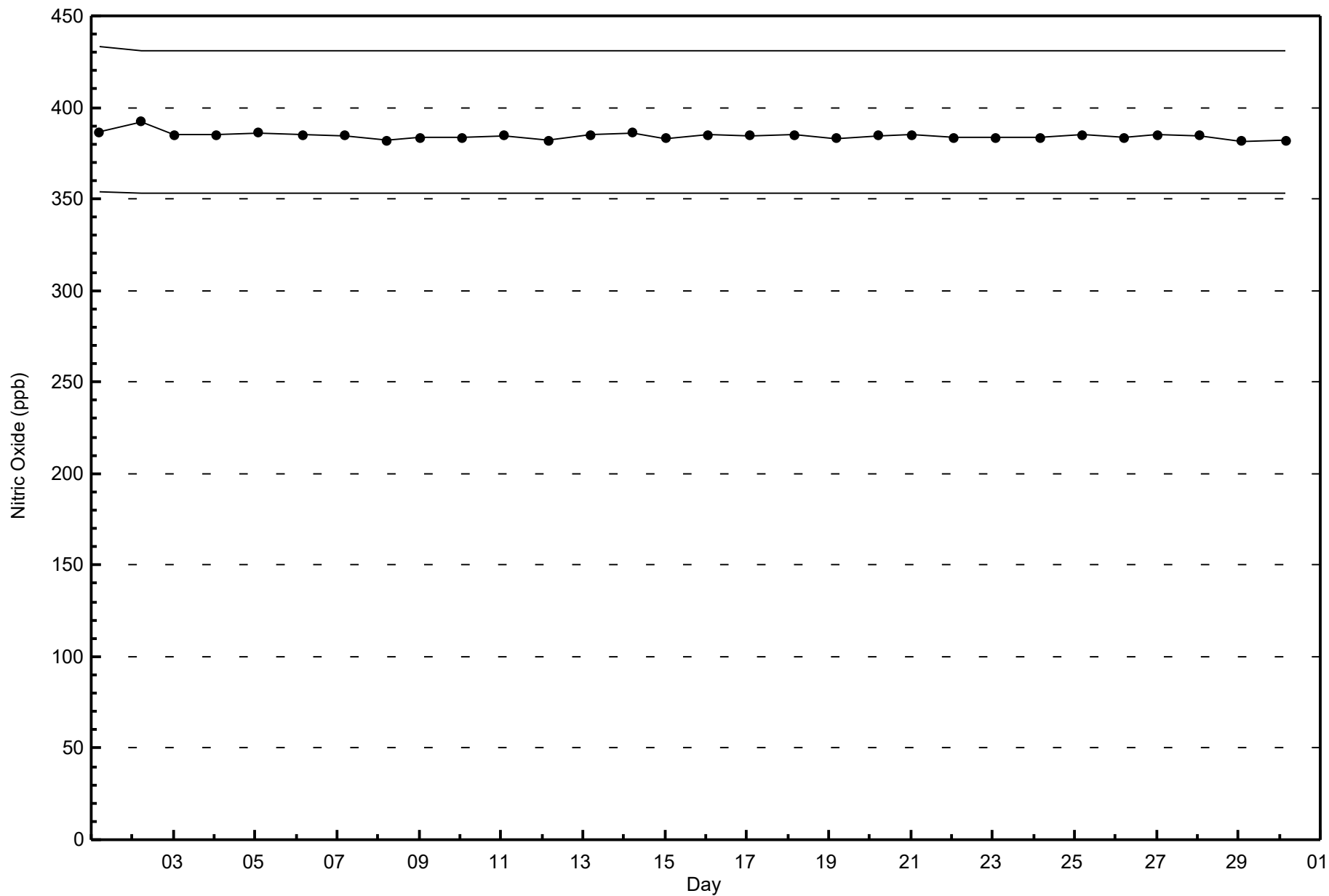
Nitric Oxide (NO) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

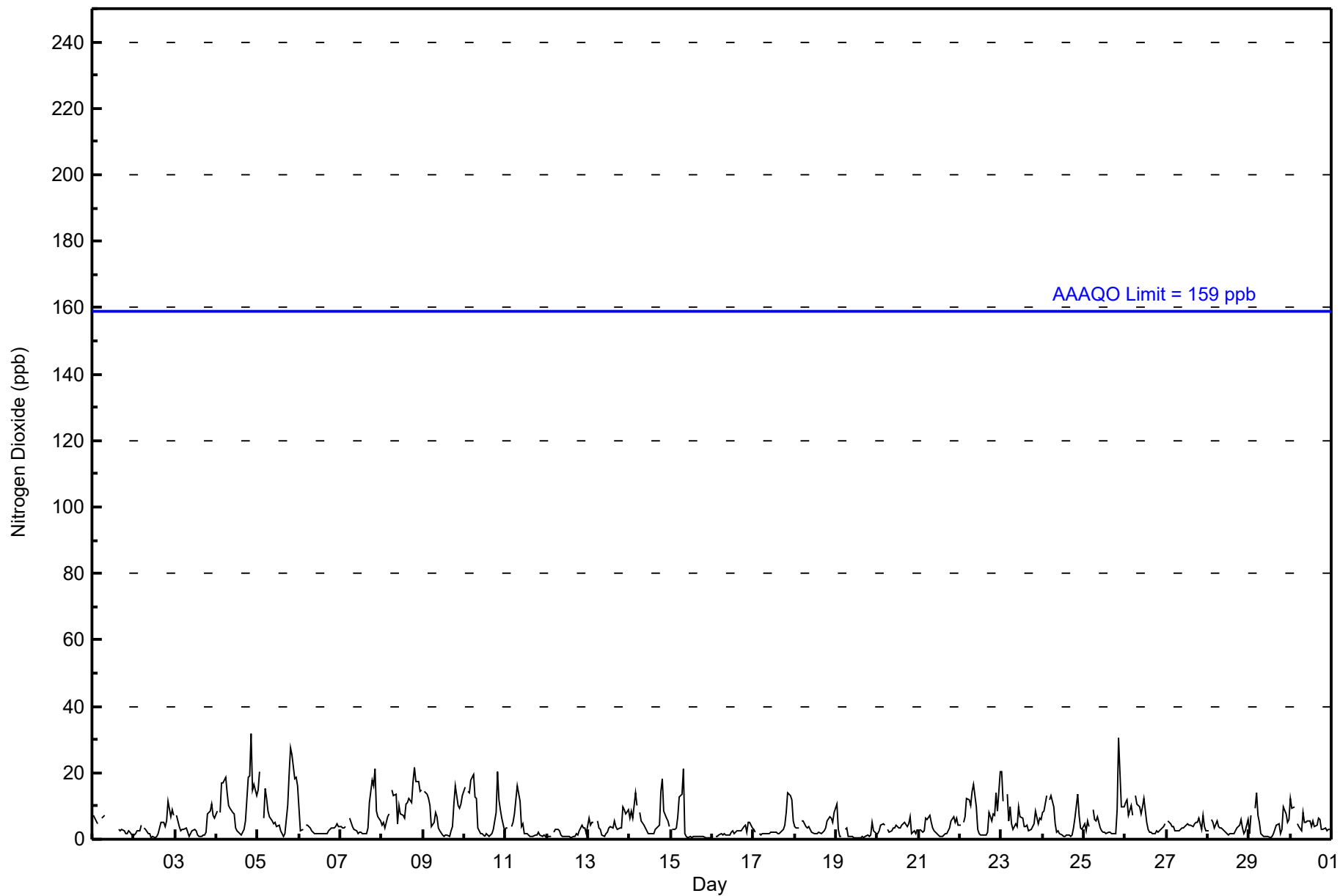
Athabasca Valley - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 31.8 ppb on Apr 4 21:00 Maximum Daily Average: 11.0 ppb on Apr 8																	Hours in Service: 720									
Minimum Value: 0.5 ppb on Apr 2 13:00 Minimum Daily Average: 1.7 ppb on Apr 12 Maximum Diurnal Average: 9.4 ppb at hour 21 Minimum Diurnal Average: 2.1 ppb at hour 14 Monthly Average: 5.18 ppb Percentiles: P ₁ = 0.6 P ₁₀ = 1.0 Q ₁ = 1.9 Median = 3.5 Q ₃ = 6.6 P ₉₀ = 12.2 P ₉₉ = 20.6																	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 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-Apr	7.3	6.4	5.5	4.7	Z	6.4	6.6	7.1	C	C	C	C	C	C	C	3.0	2.7	2.8	2.5	1.8	1.8	2.7	2.0	0.9	--	7.3
2-Apr	1.2	1.7	2.4	2.4	4.4	Z	3.2	2.9	1.8	1.6	0.6	0.7	0.5	0.7	1.5	3.5	5.1	5.1	3.7	5.7	11.3	6.6	8.7	7.3	3.6	11.3
3-Apr	Z	7.2	4.0	2.7	3.0	3.1	3.6	2.0	1.0	1.8	2.6	3.1	2.4	1.2	1.0	0.7	1.1	1.3	2.0	7.5	8.3	10.8	7.0	6.3	3.6	10.8
4-Apr	8.4	Z	7.9	16.9	16.8	18.7	13.8	10.1	9.4	7.9	7.6	3.2	2.5	2.2	1.2	2.3	2.8	5.7	18.7	19.0	31.8	14.8	16.4	13.0	10.9	31.8
5-Apr	14.7	20.2	Z	6.3	15.1	12.2	8.6	6.8	5.5	4.8	5.2	4.0	4.4	2.5	1.7	0.8	1.6	10.0	19.6	27.7	25.5	18.3	18.8	16.3	10.9	27.7
6-Apr	9.3	2.5	2.8	Z	4.2	4.2	3.2	2.7	2.2	1.8	1.7	1.5	1.7	1.7	1.6	1.9	1.9	2.4	3.1	3.5	3.4	3.9	4.6	3.7	3.0	9.3
7-Apr	3.7	3.4	3.3	3.9	Z	6.3	5.2	3.7	2.9	2.6	1.9	2.0	2.1	1.8	1.7	1.7	3.4	10.9	17.9	16.2	21.0	8.5	6.7	5.6	5.9	21.0
8-Apr	4.3	5.1	3.3	6.9	7.5	Z	14.9	13.3	13.5	4.8	10.3	7.7	7.1	6.5	10.6	10.9	12.3	11.2	17.5	21.4	17.5	17.4	14.3	15.0	11.0	21.4
9-Apr	Z	14.3	13.6	12.2	10.1	3.8	5.0	8.0	6.9	3.3	2.7	1.3	1.0	1.3	1.2	0.8	2.5	3.8	10.8	16.2	10.2	9.4	10.7	13.2	7.1	16.2
10-Apr	15.6	Z	14.5	14.0	17.8	19.6	12.6	12.1	3.6	1.9	1.8	1.1	0.9	1.6	1.0	1.1	1.8	2.8	7.9	20.4	12.0	8.9	6.3	2.6	7.9	20.4
11-Apr	3.2	3.2	Z	3.9	4.9	7.6	11.8	16.2	11.4	3.9	4.6	1.9	1.5	1.1	0.7	0.7	0.9	1.1	1.3	2.3	1.4	1.0	1.1	1.0	3.8	16.2
12-Apr	0.7	0.9	0.7	Z	2.1	2.9	2.8	2.4	1.3	0.8	1.0	0.9	0.9	0.7	0.5	0.7	0.9	1.7	1.3	2.5	4.3	3.5	3.6	1.9	1.7	4.3
13-Apr	6.3	4.2	4.9	5.1	Z	5.5	3.2	3.0	1.4	0.7	1.7	2.1	3.3	4.0	3.3	5.5	4.0	3.0	3.2	3.5	9.6	8.7	7.6	8.8	4.5	9.6
14-Apr	6.3	8.4	6.4	13.8	10.2	Z	7.9	5.3	4.2	3.6	2.7	1.6	1.8	1.7	1.8	3.1	3.2	4.4	14.2	18.1	8.6	6.3	5.4	4.0	6.2	18.1
15-Apr	Z	3.1	2.8	3.5	6.7	12.9	13.6	21.2	1.7	0.7	0.6	0.7	0.6	0.8	0.8	0.7	1.0	0.8	1.0	0.9	0.6	0.5	0.5	0.6	3.3	21.2
16-Apr	0.7	Z	0.8	0.9	1.1	1.6	1.3	1.5	1.2	1.1	1.2	2.3	2.4	1.9	2.4	2.5	2.7	2.6	3.8	4.4	2.1	5.0	5.2	3.3	2.3	5.2
17-Apr	2.9	2.2	Z	1.7	1.3	1.5	1.5	1.6	1.7	1.6	2.0	2.1	2.1	2.0	1.8	1.8	2.2	2.9	4.4	8.2	13.8	13.1	11.8	5.3	3.9	13.8
18-Apr	4.0	3.5	3.4	Z	5.4	5.6	4.0	3.3	3.9	3.1	2.1	1.7	1.5	1.5	2.0	1.7	2.1	2.7	3.2	5.7	6.6	6.4	5.1	8.1	3.8	8.1
19-Apr	10.8	2.8	1.0	0.7	Z	2.9	3.3	0.9	0.7	0.8	0.6	0.6	0.6	0.6	0.5	0.7	0.6	1.0	1.3	1.0	1.1	4.9	2.6	1.9	1.8	10.8
20-Apr	1.9	2.4	4.1	4.7	4.4	Z	3.1	2.1	2.7	3.3	3.6	4.1	3.5	3.2	4.4	4.8	4.9	4.0	4.6	6.7	1.7	2.7	1.9	2.9	3.6	6.7
21-Apr	Z	3.0	2.3	2.7	6.4	6.1	7.3	5.0	3.5	2.6	2.1	1.1	0.8	1.0	1.0	1.6	1.7	2.7	3.5	5.4	6.9	4.9	6.2	4.4	3.6	7.3
22-Apr	4.3	Z	5.1	6.6	12.1	12.0	10.3	14.6	16.6	9.9	2.8	1.7	1.3	1.4	1.4	1.2	2.1	8.2	5.4	7.5	7.0	13.8	8.3	20.2	7.6	20.2
23-Apr	20.5	11.3	Z	13.4	5.6	9.9	4.8	2.9	4.7	4.0	9.8	6.6	6.5	4.0	3.7	4.2	2.4	3.1	3.7	4.6	8.4	4.7	6.4	6.1	6.6	20.5
24-Apr	8.2	8.5	13.2	Z	11.9	13.3	9.9	4.7	2.2	2.4	1.6	1.1	0.8	0.9	1.1	1.1	1.0	1.2	3.5	6.4	13.6	7.0	3.3	3.1	5.2	13.6
25-Apr	4.6	2.5	5.4	3.8	Z	9.0	5.9	5.6	6.9	3.3	2.7	2.3	2.2	1.9	2.0	2.1	1.7	1.6	1.7	8.8	30.4	20.0	9.6	9.6	6.2	30.4
26-Apr	11.1	11.8	7.3	10.1	7.4	Z	13.2	10.4	9.6	7.8	9.6	12.2	5.0	3.0	2.3	2.0	1.9	1.7	2.6	2.0	2.4	3.4	3.9	4.8	6.3	13.2
27-Apr	Z	5.6	4.6	3.8	4.0	2.7	2.4	2.5	3.1	3.4	3.6	4.2	4.5	4.1	4.3	3.8	4.7	5.0	5.2	6.4	2.9	7.0	3.8	2.7	4.1	7.0
28-Apr	2.7	Z	5.9	4.9	3.6	5.4	4.0	3.3	3.2	2.7	2.2	1.6	1.1	1.6	1.5	1.7	2.6	3.5	4.2	5.8	3.4	1.8	2.5	6.0	3.3	6.0
29-Apr	1.8	7.1	Z	9.2	14.0	7.2	5.0	1.6	0.8	1.0	0.8	0.8	0.6	0.8	1.5	2.8	4.1	4.8	1.7	3.1	9.7	7.8	5.2	6.1	4.2	14.0
30-Apr	12.2	9.4	9.9	Z	4.6	3.8	2.7	8.2	5.1	5.1	5.4	5.7	4.0	5.7	3.7	4.3	6.2	6.0	2.8	3.0	3.5	2.6	2.9	2.9	5.2	12.2
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	675	98.83	98.83
21 - 40	8	1.17	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

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

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	0	8	15	43	116	55	28	23	23	31	43	49	41	75	89	667
21 - 40	0	0	0	0	0	0	2	2	0	1	1	0	0	0	2	0	8
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	28	0	8	15	43	116	57	30	23	24	32	43	49	41	77	89	675

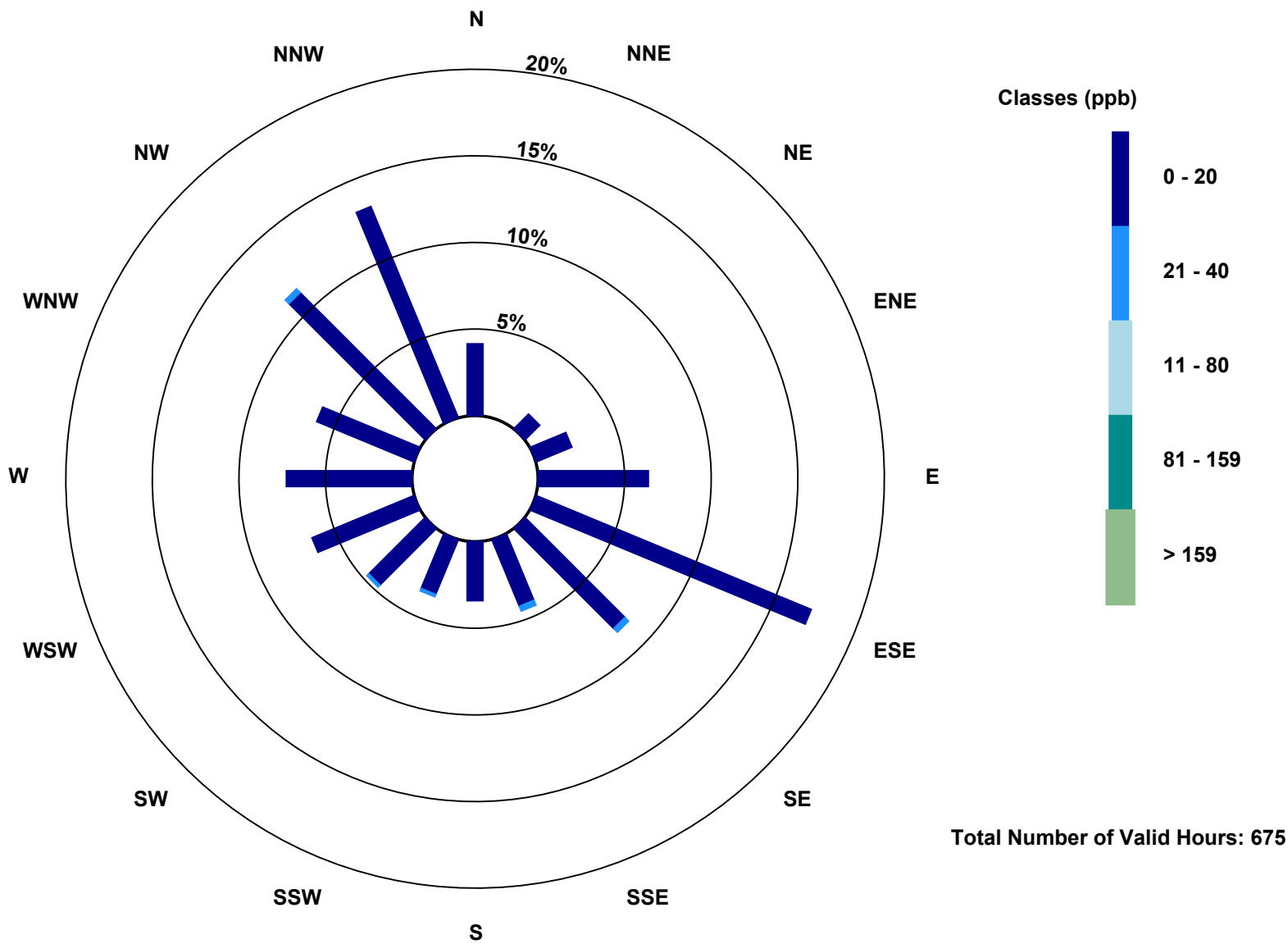
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

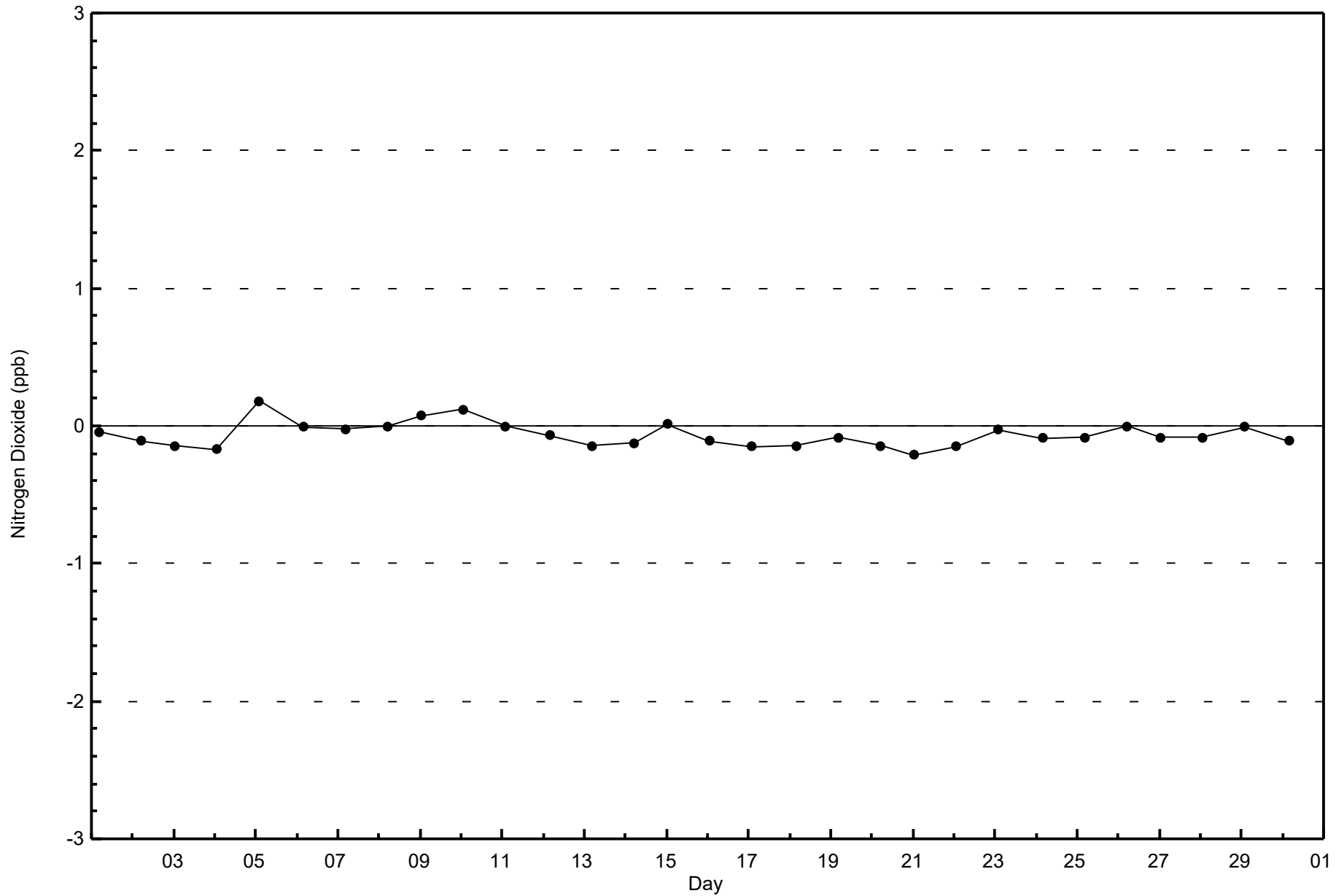
Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

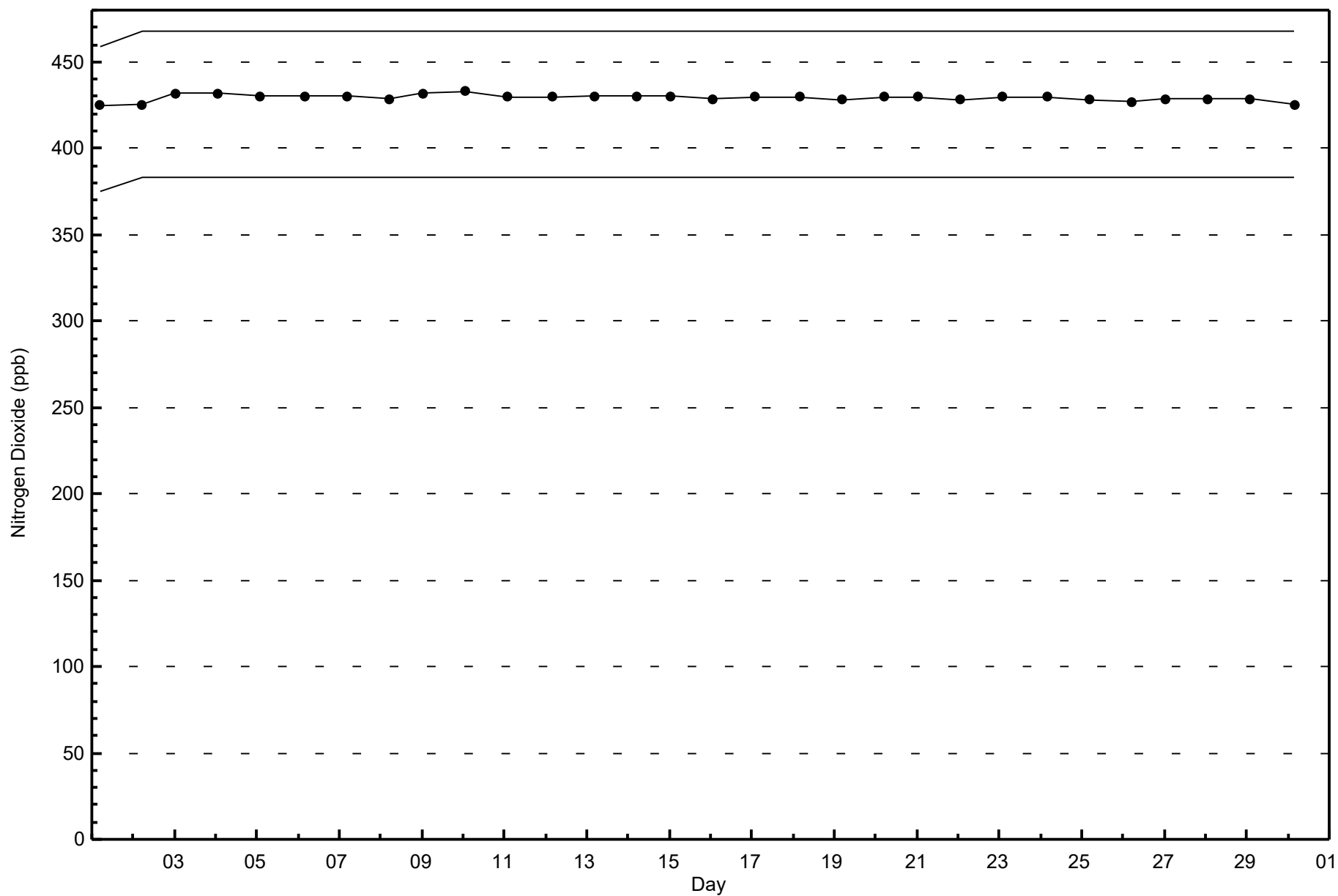
Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

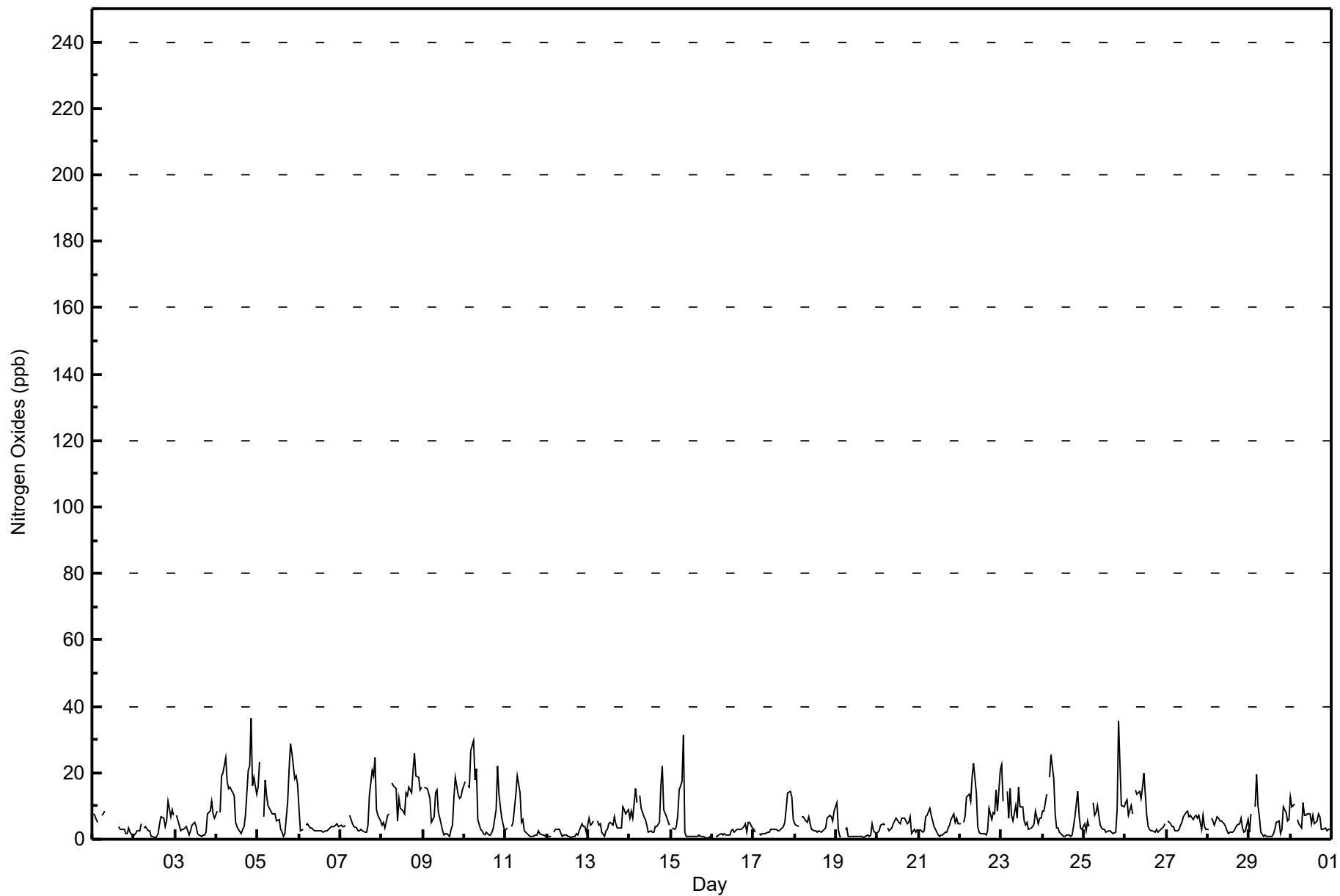
Athabasca Valley - April 2025

Maximum Value: 36.4 ppb on Apr 4 21:00																		Maximum Daily Average: 13.5 ppb on Apr 4										Hours in Service: 720	
Minimum Value: 0.5 ppb on Apr 15 22:00																		Minimum Daily Average: 1.8 ppb on Apr 12										Hours of Data: 683	
Maximum Diurnal Average: 10.2 ppb at hour 21																		Minimum Diurnal Average: 2.8 ppb at hour 14										Hours of Missing Data: 37	
Monthly Average: 6.17 ppb																		Percentiles: P ₁ = 0.6 P ₁₀ = 1.1 Q ₁ = 2.4 Median = 4.2 Q ₃ = 7.6 P ₉₀ = 14.6 P ₉₉ = 25.9										Hours of Calibration: 37	
																		Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	7.8	7.0	5.9	5.0	Z	7.3	7.5	8.4	C	C	C	C	C	C	C	3.7	2.9	2.9	2.8	1.8	1.8	3.4	2.0	0.9	--	8.4			
2-Apr	1.2	1.7	2.4	2.4	4.5	Z	3.5	3.8	2.6	2.5	0.7	0.8	0.6	0.8	1.9	4.6	6.7	6.3	4.0	5.7	11.6	6.6	8.7	7.3	4.0	11.6			
3-Apr	Z	7.2	4.0	2.7	3.0	3.1	3.8	2.4	1.3	2.7	4.1	5.1	3.8	1.6	1.3	0.9	1.3	1.4	2.0	7.7	8.4	11.3	7.6	6.4	4.1	11.3			
4-Apr	8.5	Z	7.9	19.2	19.9	24.6	17.2	15.4	15.9	13.9	13.0	5.1	3.9	3.0	1.6	3.0	4.0	7.2	20.9	22.0	36.4	16.1	18.6	13.7	13.5	36.4			
5-Apr	15.5	23.1	Z	6.6	17.8	13.1	10.1	9.1	7.8	7.5	7.8	5.6	6.0	3.2	2.0	0.9	1.8	11.3	21.0	28.9	25.9	18.3	19.0	16.4	12.1	28.9			
6-Apr	9.5	2.6	2.9	Z	4.4	4.5	3.6	3.4	3.0	2.6	2.5	2.3	2.4	2.5	2.2	2.6	2.7	3.0	3.5	4.0	3.8	4.2	4.8	3.9	3.5	9.5			
7-Apr	4.1	3.7	3.6	4.4	Z	7.0	6.0	4.6	4.0	3.5	2.5	2.6	2.9	2.4	2.2	2.2	4.1	13.0	20.8	19.0	24.6	8.7	7.0	5.7	6.9	24.6			
8-Apr	4.3	5.2	3.4	7.1	7.7	Z	16.7	16.1	15.2	5.3	12.3	9.3	8.4	7.8	13.9	13.1	15.5	14.1	20.8	26.0	19.0	18.6	14.6	15.5	12.6	26.0			
9-Apr	Z	15.6	15.2	14.2	12.3	4.9	6.9	14.1	14.9	8.1	6.3	2.3	1.5	1.9	1.8	1.0	3.1	4.3	12.3	18.7	13.7	12.1	12.8	14.7	9.2	18.7			
10-Apr	17.2	Z	16.0	15.8	26.8	29.5	18.0	21.3	5.9	2.8	2.6	1.5	1.2	2.2	1.4	1.4	2.3	3.3	9.0	22.1	13.4	9.6	6.4	2.6	10.1	29.5			
11-Apr	3.2	3.3	Z	4.0	5.0	9.4	13.7	19.1	13.8	5.2	6.1	2.4	1.8	1.3	0.9	0.9	1.1	1.3	1.4	2.4	1.5	1.1	1.1	1.0	4.4	19.1			
12-Apr	0.7	0.9	0.7	Z	2.1	3.0	3.0	3.0	1.7	0.8	1.1	1.1	1.0	0.8	0.5	0.7	0.9	1.8	1.3	2.5	4.5	4.0	3.6	2.2	1.8	4.5			
13-Apr	6.3	4.2	4.9	5.5	Z	5.7	4.4	4.5	1.9	0.8	2.5	2.9	4.5	5.0	4.1	6.9	4.8	3.5	3.6	3.5	9.8	8.8	7.6	9.0	5.0	9.8			
14-Apr	6.3	8.5	6.4	15.2	11.1	Z	13.1	9.3	7.0	6.0	4.3	2.2	2.6	2.1	2.2	3.7	3.9	5.1	16.1	22.2	9.0	6.6	5.6	4.2	7.5	22.2			
15-Apr	Z	3.4	3.0	3.8	7.2	15.0	17.3	31.4	2.2	0.9	0.8	0.8	0.8	1.0	1.0	0.9	1.2	0.8	1.0	0.9	0.6	0.5	0.5	0.6	4.1	31.4			
16-Apr	0.7	Z	0.8	0.9	1.1	1.7	1.4	1.6	1.3	1.2	1.3	2.5	2.8	2.1	2.8	2.8	3.0	2.8	4.0	4.5	2.1	5.0	5.2	3.3	2.4	5.2			
17-Apr	2.9	2.2	Z	1.7	1.3	1.6	1.6	1.8	1.9	2.0	2.8	3.1	3.0	3.0	2.6	2.5	2.9	3.7	5.2	9.3	14.1	14.3	12.9	5.9	4.4	14.3			
18-Apr	4.7	4.1	3.9	Z	6.6	7.0	5.7	5.1	6.6	4.9	3.1	2.4	2.4	2.1	2.5	2.2	2.6	3.2	3.5	6.4	7.1	6.9	5.3	8.4	4.6	8.4			
19-Apr	11.0	2.8	1.0	0.7	Z	3.0	3.5	1.0	0.8	0.9	0.7	0.7	0.7	0.7	0.6	0.7	0.6	1.0	1.3	1.0	1.1	4.9	2.6	1.9	1.9	11.0			
20-Apr	1.9	2.4	4.1	4.8	4.4	Z	3.3	2.4	3.6	4.8	5.7	6.2	5.1	4.5	6.2	6.5	6.3	4.8	5.0	6.9	1.8	2.8	1.9	2.9	4.3	6.9			
21-Apr	Z	3.0	2.3	2.7	6.9	7.4	9.4	7.4	5.5	4.0	2.9	1.5	0.9	1.4	1.2	2.1	2.1	3.4	4.3	6.0	7.5	5.2	6.4	4.6	4.3	9.4			
22-Apr	4.5	Z	5.2	7.0	12.9	13.5	11.5	18.5	23.0	14.1	3.8	2.2	1.6	1.8	1.8	1.3	2.5	9.4	6.1	8.0	7.4	14.6	8.3	20.7	8.7	23.0			
23-Apr	22.3	11.5	Z	14.2	6.2	15.2	7.3	5.7	10.1	6.4	15.8	9.7	9.6	5.4	4.3	5.1	3.0	3.2	3.8	4.8	8.4	4.7	6.4	6.5	8.2	22.3			
24-Apr	8.3	8.5	13.7	Z	18.8	25.2	18.0	7.6	3.2	3.5	2.1	1.3	0.9	0.9	1.3	1.1	1.0	1.3	4.0	6.8	14.3	7.1	3.4	3.1	6.8	25.2			
25-Apr	4.6	2.5	5.4	3.9	Z	10.9	7.4	7.8	10.1	4.4	3.5	2.8	2.8	2.3	2.4	2.4	1.9	1.8	2.0	9.1	35.5	22.3	10.1	9.6	7.2	35.5			
26-Apr	11.2	11.8	7.3	10.4	7.7	Z	14.8	13.6	14.6	12.3	15.9	20.0	7.4	4.0	3.1	2.7	2.4	2.0	3.0	2.2	2.4	3.4	3.9	4.8	7.9	20.0			
27-Apr	Z	5.6	4.6	3.8	4.0	2.7	2.6	3.0	4.1	5.2	6.6	8.0	8.3	6.8	7.3	5.9	7.0	7.1	6.3	7.2	3.1	7.1	4.0	3.0	5.4	8.3			
28-Apr	3.0	Z	6.5	5.4	4.3	6.6	6.3	5.6	5.5	4.6	3.6	2.4	1.5	2.3	2.1	2.4	3.4	4.3	4.7	6.3	3.6	1.9	2.6	6.1	4.1	6.6			
29-Apr	1.9	7.5	Z	9.7	19.5	10.0	6.7	2.0	0.9	1.2	0.9	0.9	0.7	0.9	1.7	3.2	5.1	5.7	1.8	3.1	9.8	7.9	5.4	6.1	4.9	19.5			
30-Apr	12.7	9.8	10.5	Z	5.8	4.8	3.2	11.0	7.0	7.3	7.7	7.7	4.8	7.3	4.5	5.6	7.5	6.7	3.0	3.1	3.5	2.6	2.9	2.9	6.2	12.7			
7.0 6.3 5.7 6.8 8.8 9.5 8.3 8.7 6.7 4.8 4.9 4.0 3.2 2.8 2.8 3.1 3.6 4.7 6.6 9.1 10.2 8.0 6.7 6.5																								Diurnal Average					
22.3 23.1 16.0 19.2 26.8 29.5 18.0 31.4 23.0 14.1 15.9 20.0 9.6 7.8 13.9 13.1 15.5 14.1 21.0 28.9 36.4 22.3 19.0 20.7																								Diurnal Maximum					
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	659	96.49	96.49
21 - 40	24	3.51	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	0	8	15	41	112	51	26	23	23	31	42	49	41	74	87	651
21 - 40	0	0	0	0	2	4	6	4	0	1	1	1	0	0	3	2	24
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	0	8	15	43	116	57	30	23	24	32	43	49	41	77	89	675

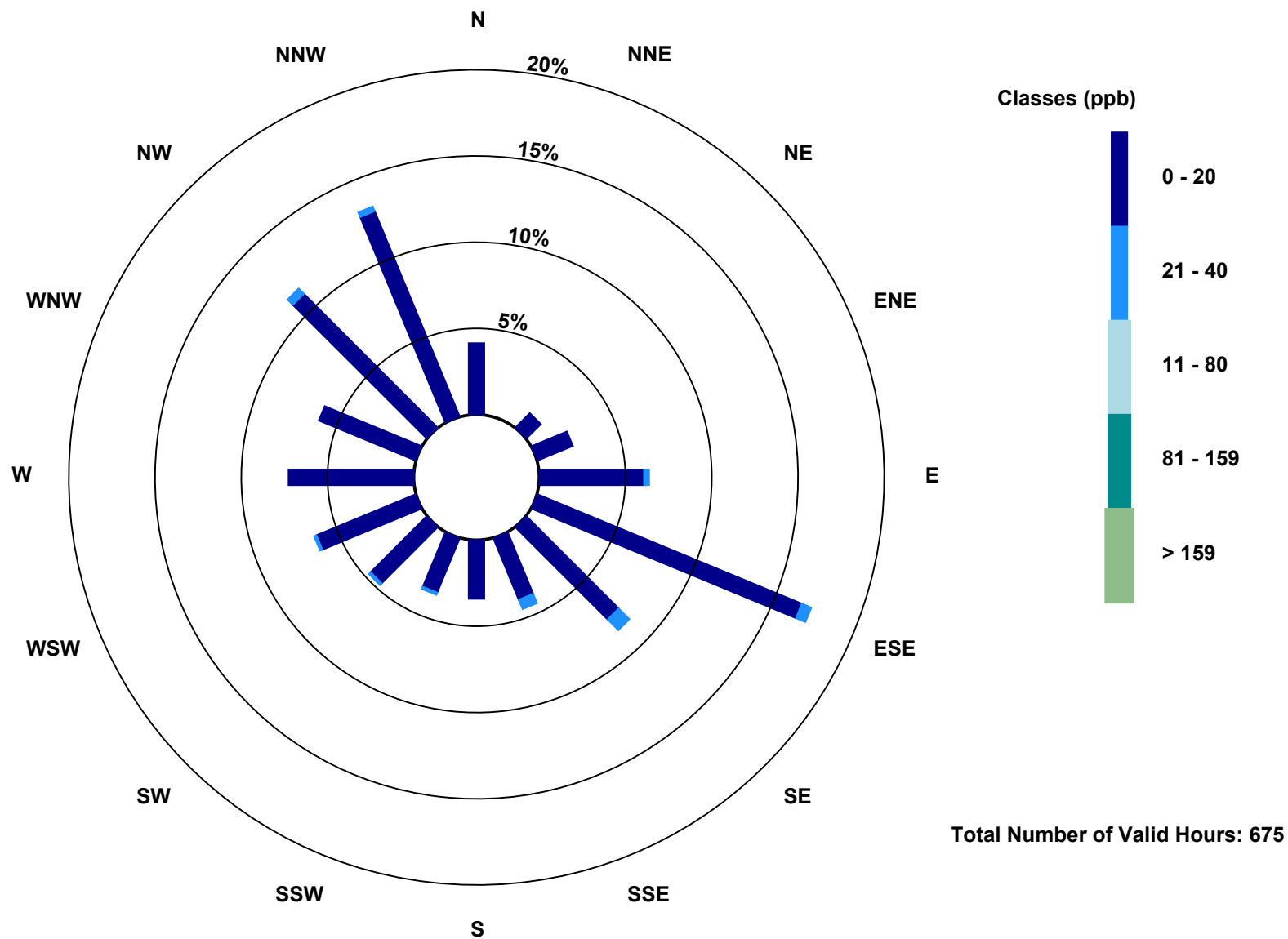
Total Number of Valid Hours: 675

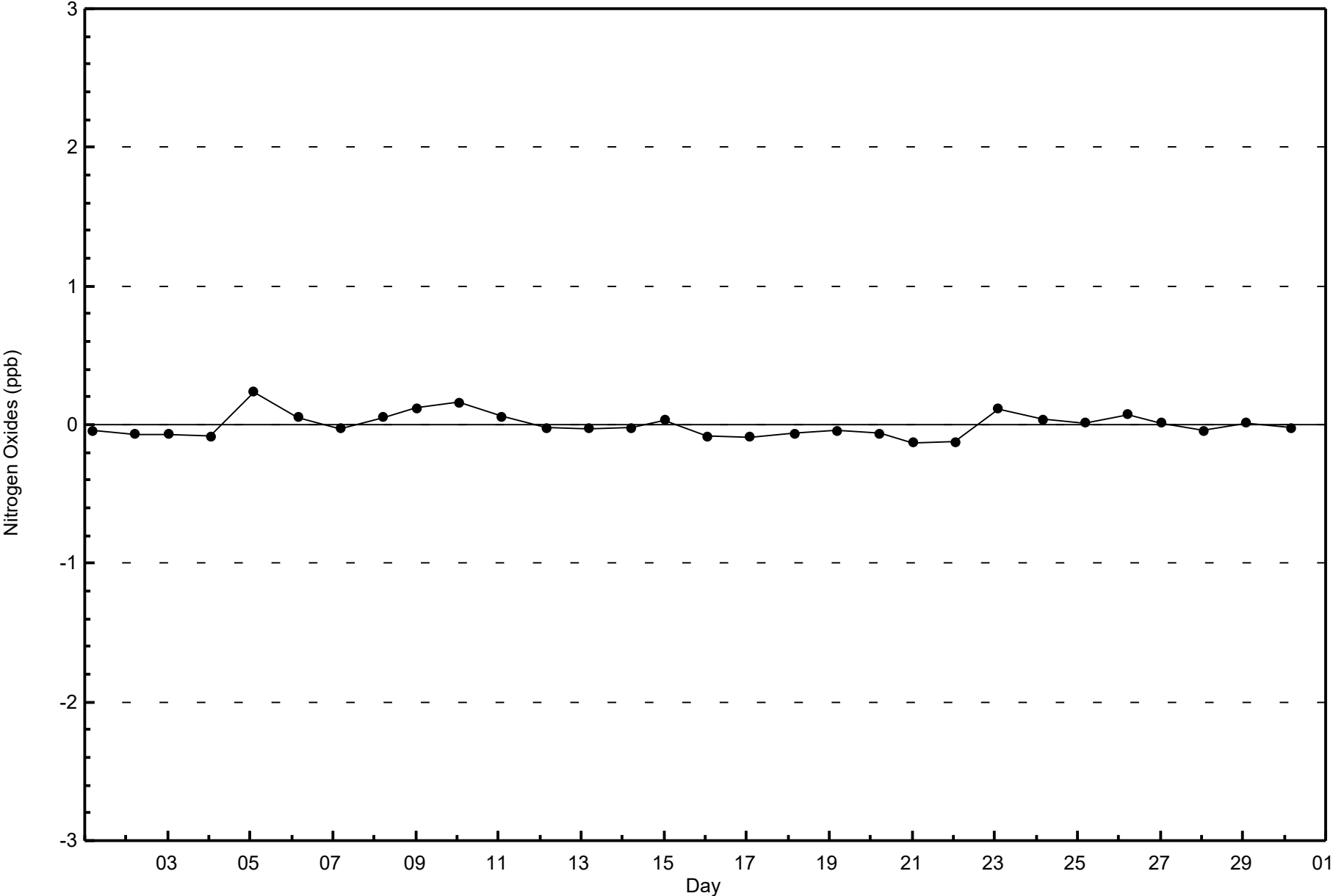
Total Number of Hours: 720

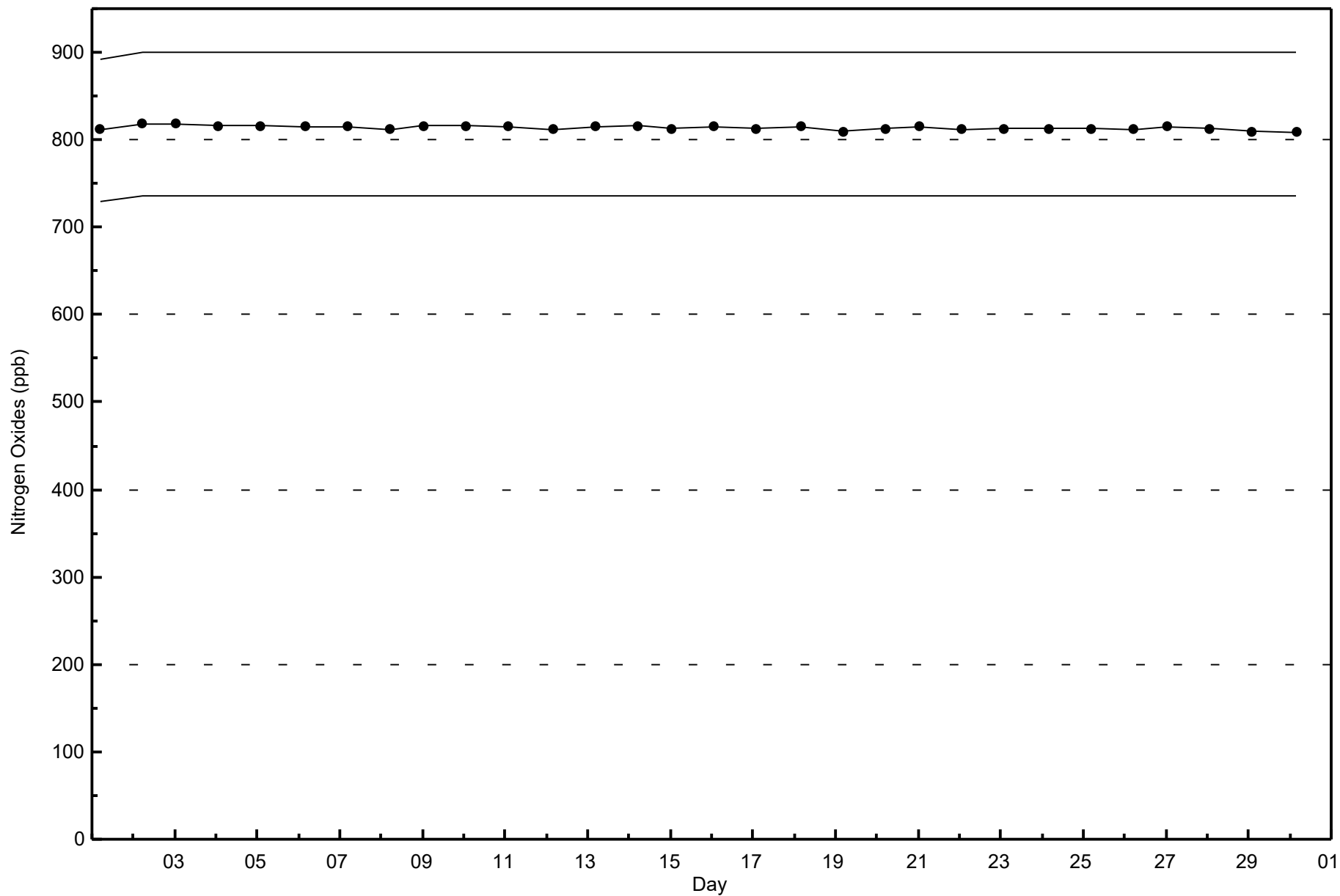


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Athabasca Valley









Wood Buffalo Environmental Association

Summary of Hour Averages

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

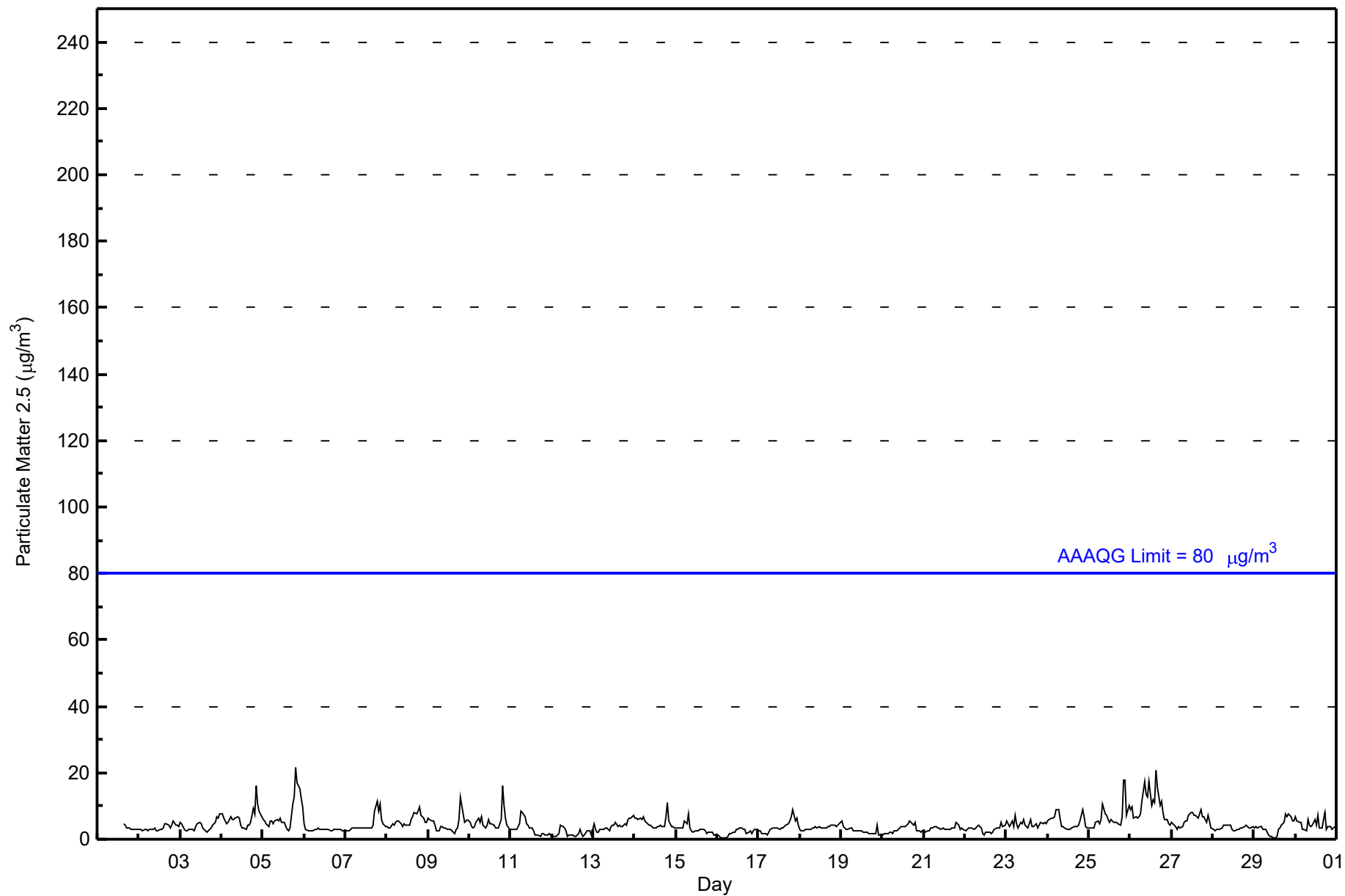
Athabasca Valley - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 21.7 µg/m³ on Apr 5 20:00 Maximum Daily Average: 10.2 µg/m³ on Apr 26																		Hours in Service: 720								
Minimum Value: 0.2 µg/m³ on Apr 16 04:00 Minimum Daily Average: 1.8 µg/m³ on Apr 12 Maximum Diurnal Average: 6.3 µg/m³ at hour 21 Minimum Diurnal Average: 3.4 µg/m³ at hour 3 Monthly Average: 4.34 µg/m³ Percentiles: P ₁ = 0.7 P ₁₀ = 2.0 Q ₁ = 2.8 Median = 3.6 Q ₃ = 5.1 P ₉₀ = 7.0 P ₉₉ = 16.2																		Hours of Data: 705								
																		Hours of Missing Data: 15								
																		Hours of Calibration: 6								
																		Percent Operational Time: 98.8								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	C	4.9	4.4	3.5	3.4	2.8	2.8	2.9	2.9	2.8	--	4.9
2-Apr	2.9	2.9	2.7	2.8	2.9	2.8	2.9	2.9	3.2	3.4	2.7	2.7	2.8	3.0	3.3	4.8	4.5	4.1	3.4	4.1	5.3	4.0	4.1	3.9	3.4	5.3
3-Apr	5.1	4.5	3.1	2.4	2.7	2.8	3.0	3.0	2.6	3.7	4.5	5.1	4.8	3.5	3.0	2.2	2.5	3.0	3.5	4.4	5.2	6.9	6.5	7.5	4.0	7.5
4-Apr	7.7	6.2	5.3	4.5	5.0	7.0	5.9	6.0	6.4	6.8	6.3	4.4	3.5	3.6	3.1	4.1	4.2	5.0	9.4	7.6	16.2	10.7	8.6	6.7	6.4	16.2
5-Apr	5.8	5.4	4.5	4.0	5.5	5.5	4.7	5.5	5.7	5.5	6.6	4.9	5.2	3.6	3.2	2.6	3.3	10.8	12.6	21.7	16.9	15.2	12.4	9.6	7.5	21.7
6-Apr	4.6	2.8	2.7	2.5	2.6	2.6	2.8	3.1	3.2	3.0	3.0	3.1	3.1	2.9	2.8	2.7	2.7	2.8	2.9	3.0	3.0	2.8	2.7	2.7	2.9	4.6
7-Apr	2.5	2.5	2.6	2.8	3.2	3.5	3.4	3.5	3.5	3.5	3.4	3.4	3.5	3.3	3.3	3.4	4.1	8.3	11.6	8.4	10.6	6.1	4.7	3.8	4.5	11.6
8-Apr	3.8	3.4	3.2	4.5	4.0	5.1	5.6	5.4	4.6	4.0	4.6	4.4	4.3	4.3	6.1	6.6	8.2	7.7	8.5	9.9	7.1	6.5	5.0	4.9	5.5	9.9
9-Apr	6.2	6.1	5.3	5.7	4.3	2.6	2.7	3.6	3.9	3.5	3.5	3.0	3.2	3.0	2.7	1.7	2.8	3.3	5.9	12.9	7.8	5.2	5.4	5.9	4.6	12.9
10-Apr	4.9	3.9	3.6	3.7	5.1	6.2	5.1	6.9	4.1	3.3	4.0	5.7	4.6	4.6	4.2	3.5	3.4	3.3	6.0	16.2	10.2	6.3	4.3	2.9	5.3	16.2
11-Apr	2.8	2.9	3.0	3.2	3.8	4.8	8.4	7.9	6.8	4.8	4.2	3.3	3.3	2.6	1.5	1.4	1.3	1.0	1.6	1.6	1.3	1.3	1.6	1.3	3.2	8.4
12-Apr	1.0	1.0	0.9	1.1	1.7	4.4	3.8	3.4	2.7	1.0	1.1	1.2	1.2	0.9	1.0	1.7	2.8	1.7	0.8	1.2	2.7	2.6	2.7	1.4	1.8	4.4
13-Apr	4.8	3.1	2.3	2.1	3.0	2.8	2.9	3.3	3.5	2.6	3.7	4.2	4.3	5.3	4.0	4.2	3.6	3.9	4.5	4.3	6.0	6.5	6.2	7.1	4.1	7.1
14-Apr	6.4	6.3	6.1	6.5	5.9	6.6	5.5	5.2	4.3	4.4	3.9	3.3	3.4	3.6	3.9	4.3	4.0	3.9	6.8	11.1	5.4	4.0	3.8	3.6	5.1	11.1
15-Apr	3.3	3.2	3.5	3.2	3.6	5.5	4.7	7.8	3.3	2.5	1.9	2.3	2.4	2.4	2.8	3.1	3.0	2.4	1.8	2.0	2.3	1.9	1.5	1.2	3.0	7.8
16-Apr	1.2	0.9	0.4	0.2	0.3	0.6	1.0	1.5	1.8	2.0	2.1	2.9	3.0	3.4	3.6	3.1	2.8	1.9	2.2	2.7	1.7	2.7	3.0	2.8	2.0	3.6
17-Apr	2.7	2.4	1.7	1.6	1.6	1.3	2.2	3.1	3.3	3.2	3.5	3.4	3.2	3.4	3.4	3.7	4.1	4.7	5.4	6.8	8.7	5.4	6.3	4.2	3.7	8.7
18-Apr	2.9	2.7	2.7	2.9	2.9	2.9	2.9	3.2	3.5	3.8	3.6	3.6	3.6	3.4	3.4	3.4	3.6	3.7	4.0	4.2	4.3	3.7	4.2	4.6	3.5	4.6
19-Apr	5.6	3.9	3.3	2.8	2.8	3.2	3.6	2.6	2.5	2.6	2.6	2.5	2.6	2.2	2.0	2.1	1.9	1.9	1.8	1.7	1.6	4.4	1.2	1.2	2.6	5.6
20-Apr	1.2	1.5	1.6	1.8	2.2	2.1	1.8	2.4	2.4	2.9	3.5	3.7	3.8	3.6	4.2	4.7	5.3	4.6	4.4	4.9	2.7	2.7	2.2	2.4	3.0	5.3
21-Apr	2.4	2.3	2.4	2.4	3.6	3.4	3.8	3.8	3.5	3.2	2.9	3.4	2.8	3.0	2.9	3.1	3.3	3.2	3.4	5.3	4.4	3.1	3.3	2.9	3.2	5.3
22-Apr	2.6	2.8	3.3	3.5	3.5	3.0	3.3	3.6	4.4	3.6	1.5	1.3	2.0	2.0	2.3	1.8	2.1	2.8	3.2	3.5	3.2	4.9	3.7	4.4	3.0	4.9
23-Apr	5.3	4.5	3.8	5.7	3.8	7.1	4.8	3.4	4.9	4.5	6.1	4.2	3.6	4.9	5.8	3.6	3.7	4.7	3.6	4.4	5.0	4.7	4.9	4.6	4.7	7.1
24-Apr	5.7	5.9	6.3	6.2	7.0	9.0	9.0	6.0	3.7	3.9	3.5	3.0	3.0	3.1	3.2	3.6	3.7	3.8	4.4	5.3	8.7	6.9	3.6	3.4	5.1	9.0
25-Apr	3.5	3.3	3.5	3.4	5.2	5.3	4.9	6.0	10.6	7.5	7.2	5.7	5.0	5.9	5.1	5.3	5.0	4.5	4.3	6.7	17.8	17.6	7.3	10.2	6.7	17.8
26-Apr	8.8	9.7	6.5	6.6	6.4	6.8	7.8	11.5	17.3	13.7	12.7	17.4	10.0	11.9	11.1	21.0	15.6	10.2	11.3	7.9	6.1	5.9	4.9	4.1	10.2	21.0
27-Apr	5.0	4.9	3.7	2.8	3.6	3.5	3.7	5.0	5.5	5.6	7.0	8.0	8.2	7.4	7.0	6.4	7.8	8.8	6.9	6.7	5.1	7.1	5.7	3.2	5.8	8.8
28-Apr	2.8	2.6	2.8	3.1	3.0	3.3	4.1	4.3	4.2	4.3	4.1	2.8	2.6	2.5	2.9	3.0	3.3	3.6	3.8	4.1	3.8	3.5	3.3	3.6	3.4	4.3
29-Apr	3.4	3.7	3.5	3.8	3.8	2.9	3.0	2.8	1.2	0.7	0.7	0.5	0.4	1.0	3.0	3.3	4.2	5.0	7.6	7.0	7.7	6.9	5.5	5.5	3.6	7.7
30-Apr	6.7	5.5	4.9	5.1	3.1	3.0	2.6	6.1	4.3	3.8	4.2	6.0	4.2	7.2	3.3	3.5	6.0	8.0	2.8	3.7	3.8	3.1	3.5	4.0	4.5	8.0
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration UO - Unstable Operation																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr: 80 µg/m³ 24-hr: 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	557	79.01	79.01
6 - 15	138	19.57	98.58
16 - 25	10	1.42	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Athabasca Valley - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	20	0	6	15	34	97	37	21	19	21	29	44	44	37	61	62	547
6 - 15	8	0	2	1	13	19	20	10	5	3	5	1	6	4	16	25	138
16 - 25	0	0	0	0	0	0	2	1	0	0	0	1	0	0	2	4	10
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	0	8	16	47	116	59	32	24	24	34	46	50	41	79	91	695

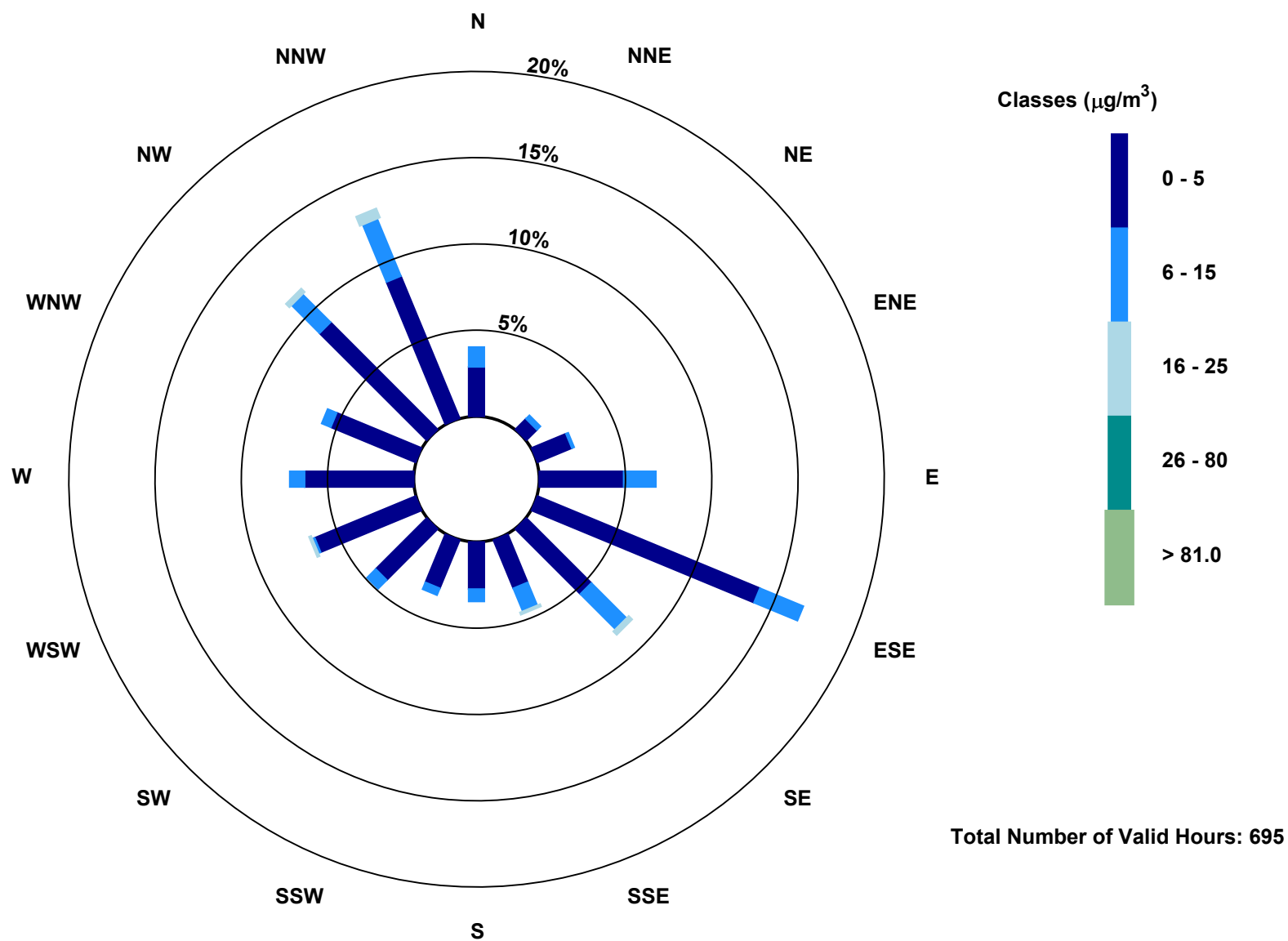
Total Number of Valid Hours: 695

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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

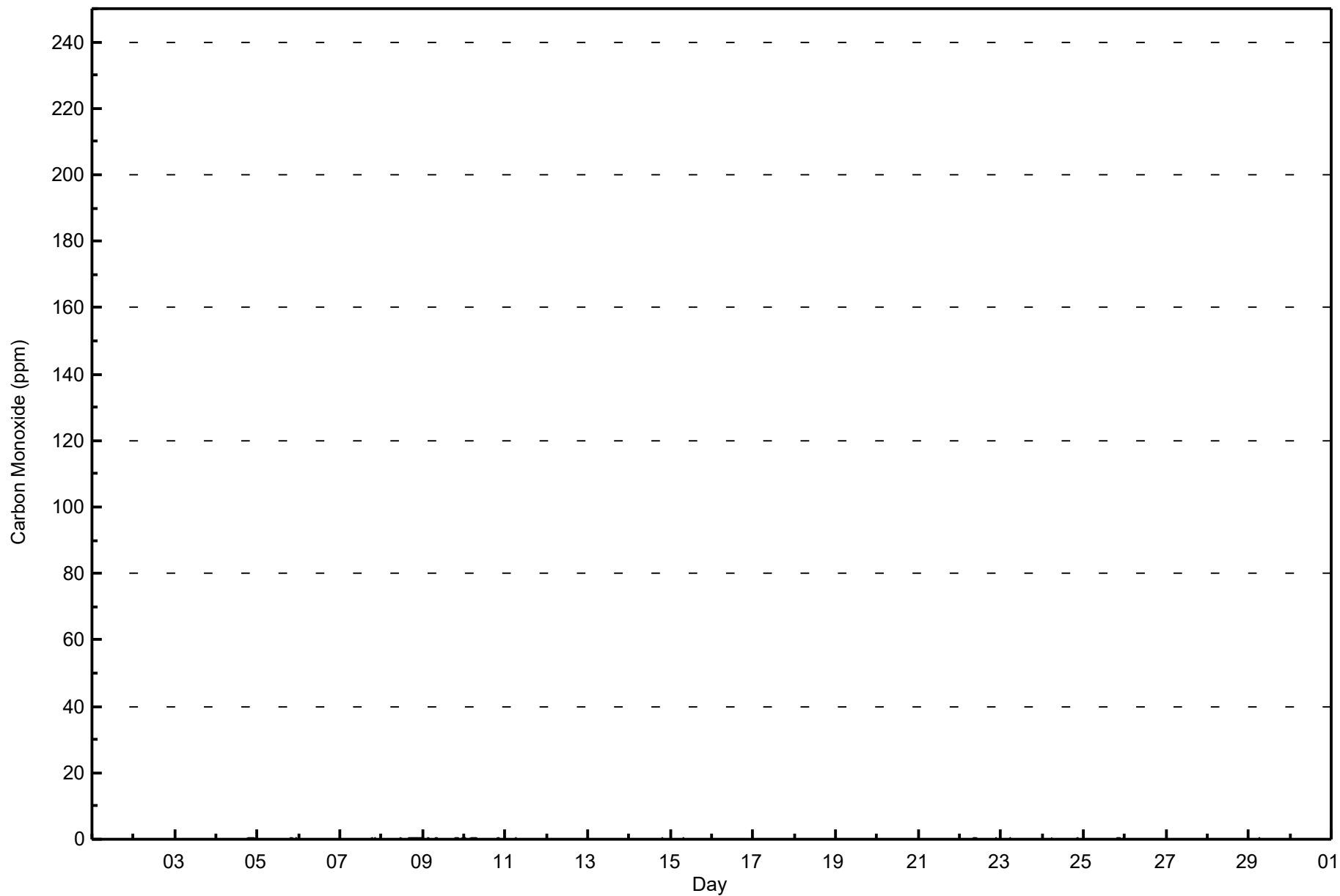


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 0.4 ppm on Apr 25 21:00 Maximum Daily Average: 0.2 ppm on Apr 8																	Hours in Service: 720 Hours of Data: 685											
Minimum Value: 0.1 ppm on Apr 12 06:00 Maximum Diurnal Average: 0.2 ppm at hour 21 Monthly Average: 0.15 ppm																	Minimum Daily Average: 0.1 ppm on Apr 12 Minimum Diurnal Average: 0.1 ppm at hour 3 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3		Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	0.1	0.1	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
2-Apr	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	0.1	0.1	0.1	0.1	0.1	0.2
3-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	
4-Apr	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	0.2	0.2	0.2	0.2	0.3	
5-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
6-Apr	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	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
7-Apr	0.1	0.1	0.1	0.1	0.1	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
8-Apr	Z	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	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	
9-Apr	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
10-Apr	0.2	0.2	Z	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	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
11-Apr	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
12-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
13-Apr	0.1	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	
14-Apr	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	
15-Apr	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	
16-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
17-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	
18-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	
19-Apr	0.2	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
20-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
21-Apr	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	
22-Apr	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
23-Apr	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
24-Apr	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	
25-Apr	0.1	0.1	0.2	0.1	0.2	Z	0.1	0.2	0.2	0.1	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.2	0.4	0.4	
26-Apr	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	
27-Apr	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	0.1	
28-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
29-Apr	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	
30-Apr	0.2	0.2	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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 0.2 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																									Diurnal Average			
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.3 0.4 0.3 0.2 0.3																									Diurnal Maximum			
Z - zerospan C - Calibration																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																												



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	684	99.85	99.85
0.4 - 0.5	1	0.15	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Athabasca Valley - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	28	0	8	16	47	112	61	28	22	23	34	43	47	40	77	90	676
0.4 - 0.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	0	8	16	47	112	62	28	22	23	34	43	47	40	77	90	677

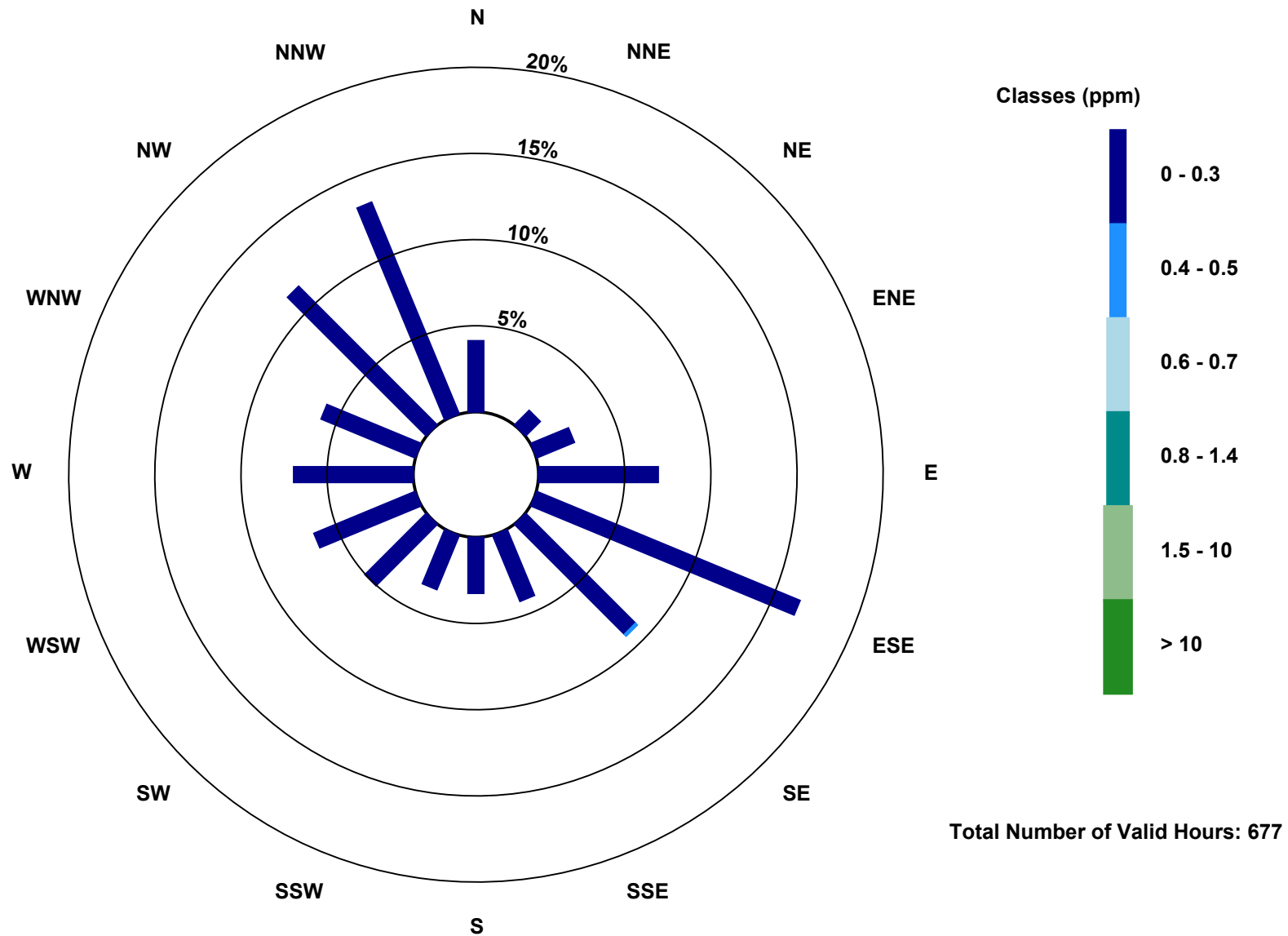
Total Number of Valid Hours: 677

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

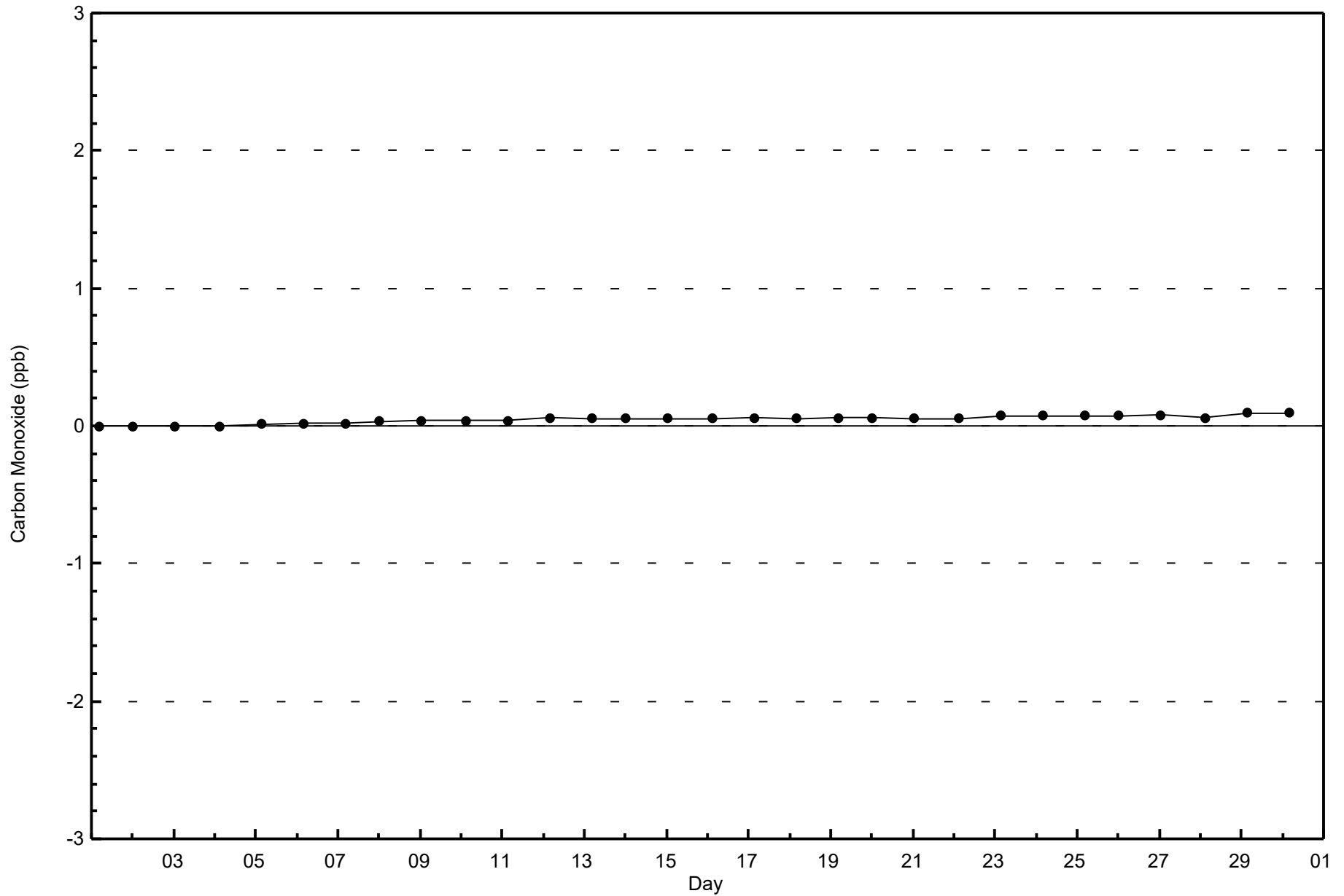
Carbon Monoxide (CO) - ppm
Athabasca Valley





Wood Buffalo Environmental Association
Zero Responses

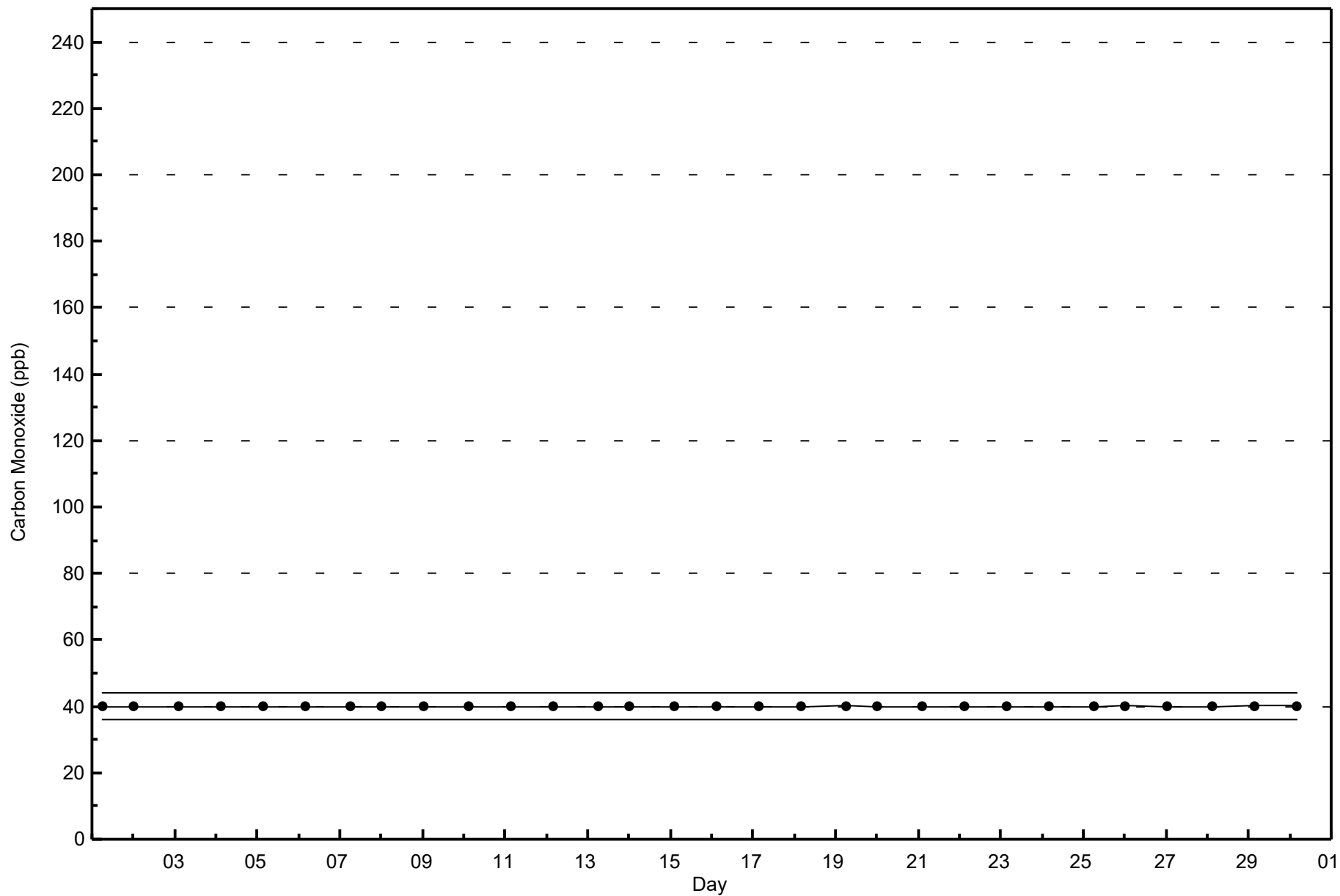
Carbon Monoxide (CO) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Span Responses

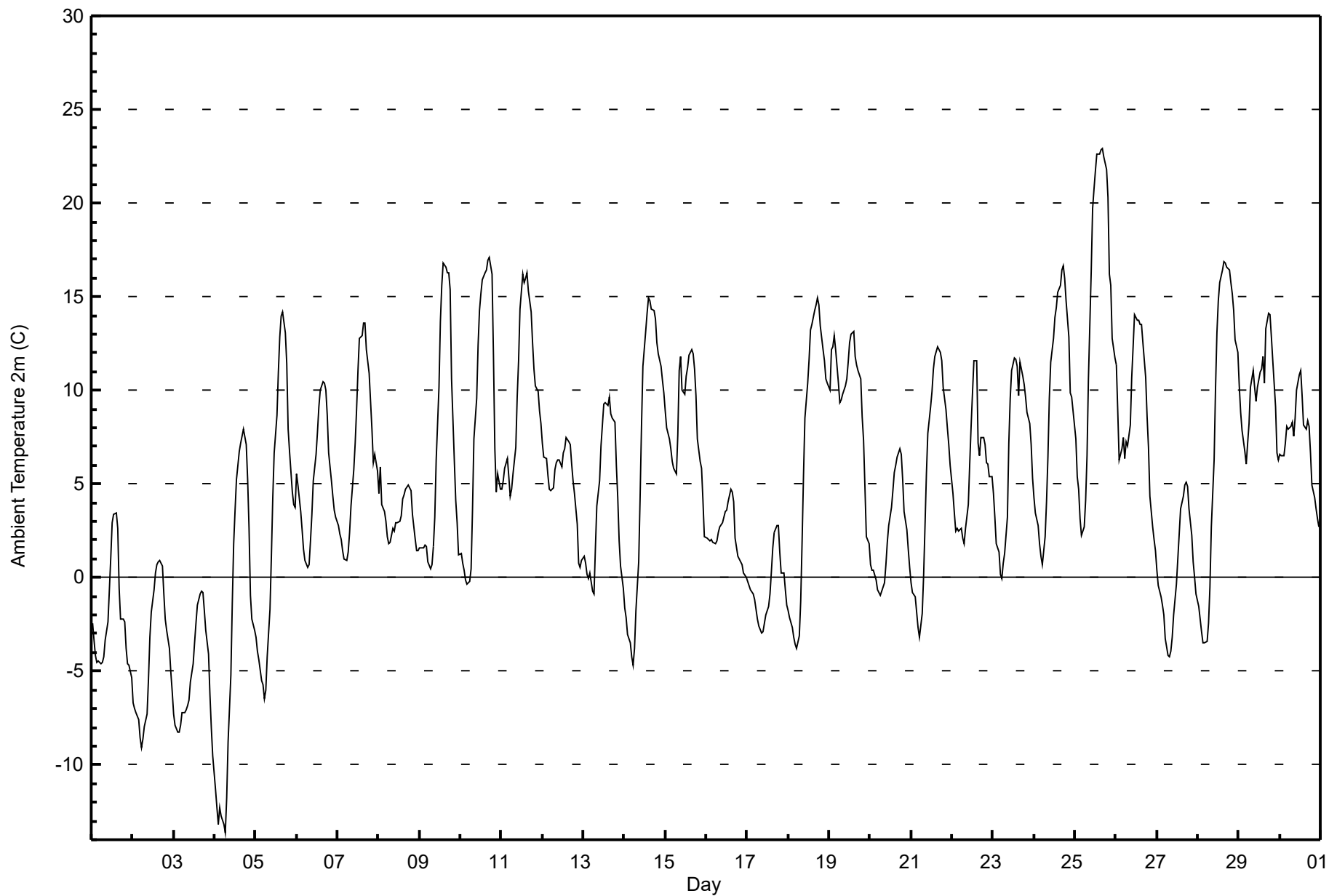
Carbon Monoxide (CO) - ppb
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Athabasca Valley - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	159	22.08	22.08
0 - 10	382	53.06	75.14
10 - 20	170	23.61	98.75
> 20	9	1.25	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

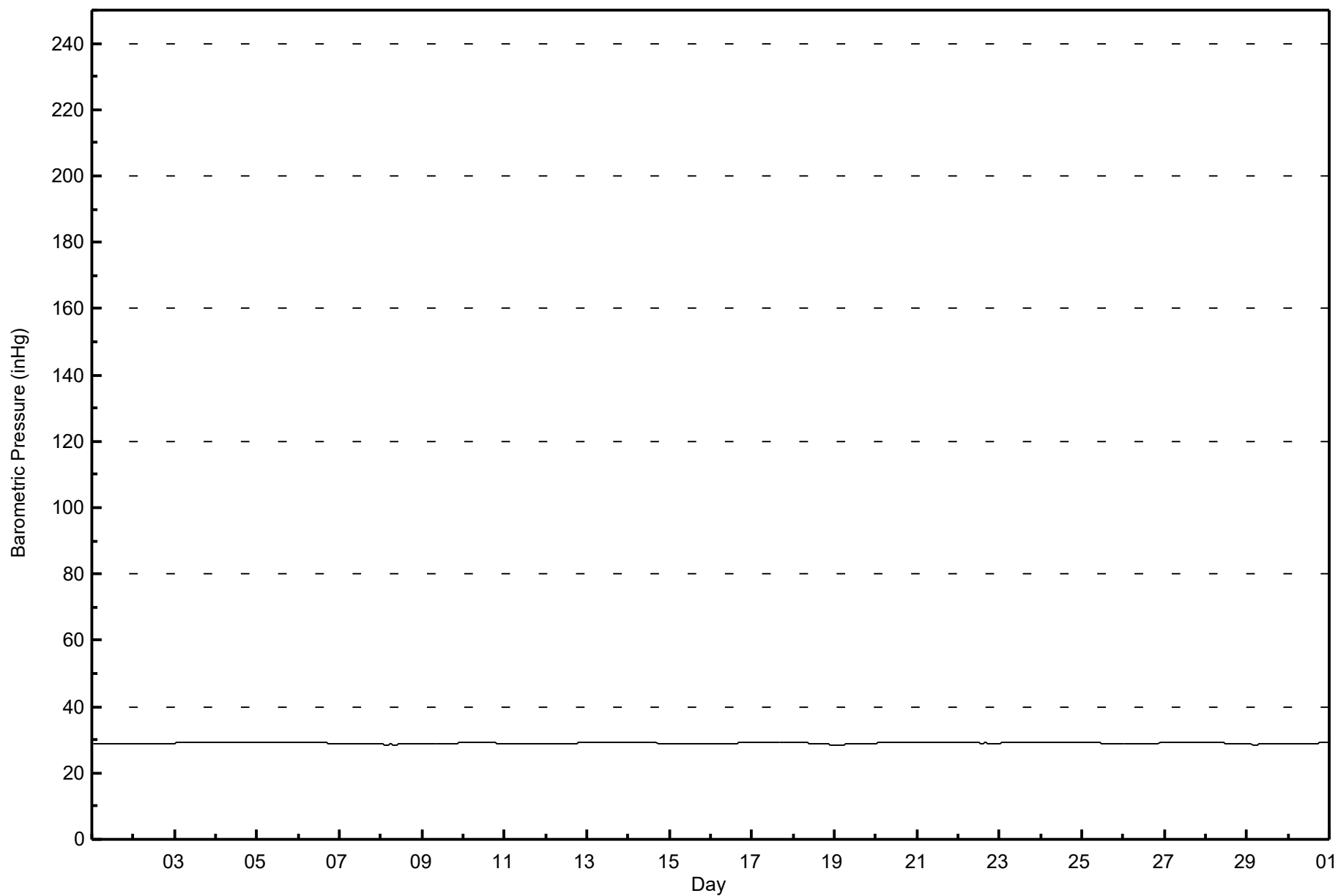
Athabasca Valley - April 2025

Maximum Value: 29.4 inHg on Apr 4 08:00																				Maximum Daily Average: 29.3 inHg on Apr 4					Hours in Service: 720	
Minimum Value: 28.5 inHg on Apr 19 01:00																				Minimum Daily Average: 28.6 inHg on Apr 8					Hours of Data: 720	
Maximum Diurnal Average: 29.0 inHg at hour 24																				Minimum Diurnal Average: 29.0 inHg at hour 16					Hours of Missing Data: 0	
Monthly Average: 28.99 inHg																				Percentiles: P ₁ = 28.6 P ₁₀ = 28.7 Q ₁ = 28.8 Median = 29.0 Q ₃ = 29.2 P ₉₀ = 29.2 P ₉₉ = 29.4					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	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	28.8	28.8	28.8	28.7	28.8
2-Apr	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	29.0	29.0	28.9	29.0
3-Apr	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	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.3
4-Apr	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	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
5-Apr	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2
6-Apr	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
7-Apr	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.8	28.9
8-Apr	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	28.7	28.7	28.7	28.7	28.7	28.8	28.6	28.8
9-Apr	28.8	28.8	28.8	28.8	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	29.1	29.1	28.9	29.1
10-Apr	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	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	29.1	29.2
11-Apr	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.8	28.7	28.7	28.8	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	28.9
12-Apr	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	28.9	29.1
13-Apr	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.2	29.3
14-Apr	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	29.1	29.3
15-Apr	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9
16-Apr	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	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.1
17-Apr	29.1	29.1	29.1	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	29.3	29.3	29.2	29.2	29.3
18-Apr	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	28.8	28.8	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.5	28.9	29.2
19-Apr	28.5	28.5	28.5	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	28.8	28.8	28.8	28.8	28.9	28.9	28.9	29.0	28.7	29.0
20-Apr	29.0	29.0	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	29.2	29.2	29.2	29.2	29.1	29.2
21-Apr	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2
22-Apr	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
23-Apr	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	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2
24-Apr	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	29.3
25-Apr	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.0	29.0	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	29.0	29.2
26-Apr	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	28.8	28.9	28.9	28.9	29.0	29.0	29.0	29.1	29.1	28.8	29.1
27-Apr	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2
28-Apr	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	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	29.0	29.2
29-Apr	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.8
30-Apr	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	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.2	29.0	29.2
29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0																										Diurnal Average
29.3 29.3 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Athabasca Valley - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

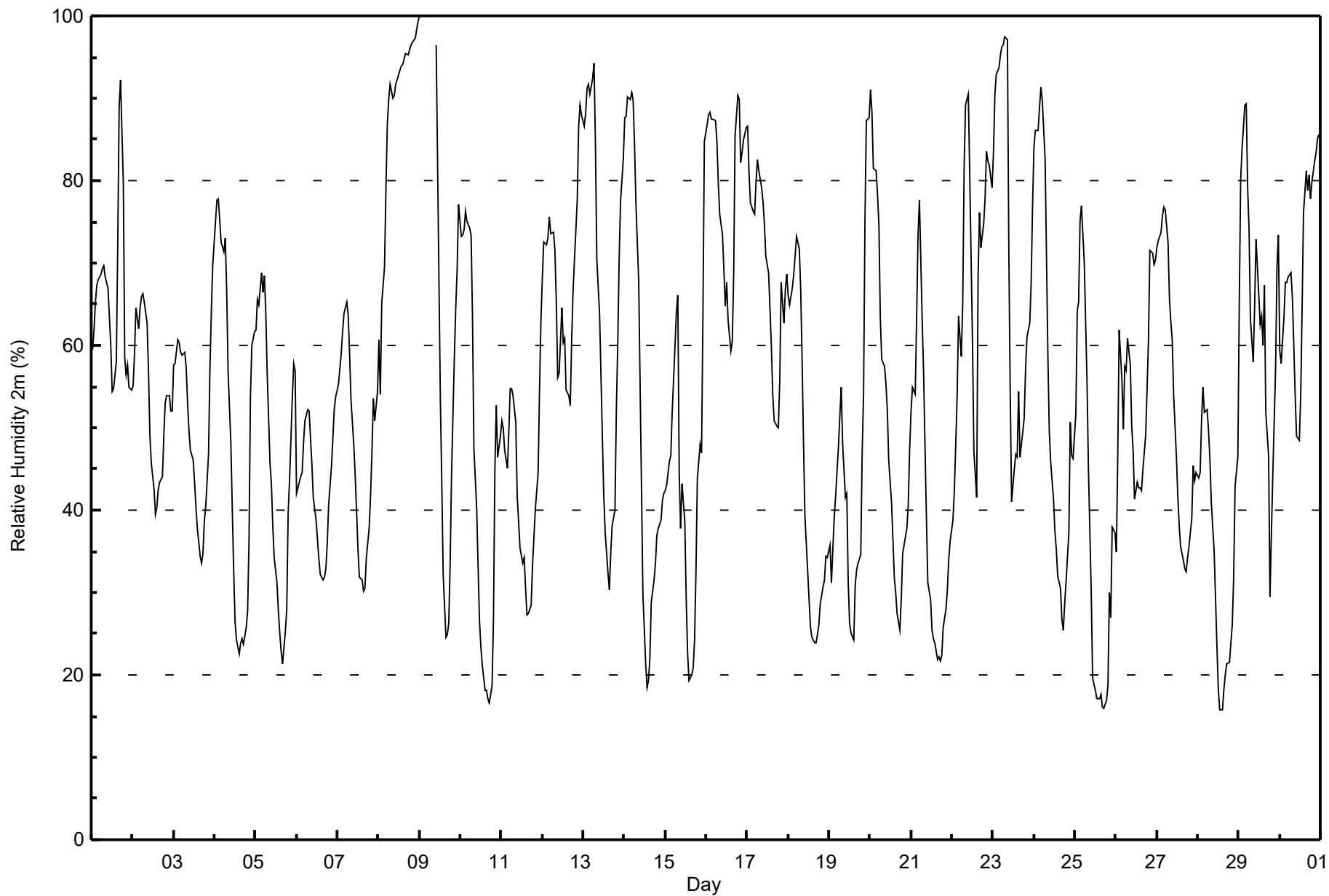
Athabasca Valley - April 2025

Maximum Value: 100.0 % on Apr 9 01:00																				Maximum Daily Average: 88.0 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.8 % on Apr 28 14:00																				Minimum Daily Average: 34.4 % on Apr 28					Hours of Data: 711	
Maximum Diurnal Average: 71.2 % at hour 6																				Minimum Diurnal Average: 38.0 % at hour 15					Hours of Missing Data: 9	
Monthly Average: 54.92 %																				Percentiles: P ₁ = 17.1 P ₁₀ = 26.8 Q ₁ = 38.4 Median = 54.1 Q ₃ = 70.3 P ₉₀ = 85.5 P ₉₉ = 96.5					Hours of Calibration: 0	
																									Percent Operational Time: 98.8	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	59.4	61.9	65.3	67.3	67.9	68.7	69.4	69.6	68.3	67.0	63.6	59.9	54.4	54.7	58.0	72.4	89.0	92.3	79.7	58.5	56.5	57.6	54.9	54.6	65.5	92.3
2-Apr	55.0	58.9	64.5	62.1	64.6	65.9	66.3	65.2	62.7	56.9	49.1	45.8	42.5	39.6	40.3	42.6	43.4	44.0	49.2	53.1	54.0	53.9	52.0	52.1	53.5	66.3
3-Apr	57.6	57.8	60.6	60.4	59.1	58.9	59.1	57.3	53.0	49.7	47.3	46.1	43.4	40.3	37.9	34.4	33.5	34.8	38.6	40.5	46.8	57.1	64.1	69.6	50.3	69.6
4-Apr	75.0	77.6	77.7	75.2	72.5	71.3	73.0	66.7	57.0	47.9	40.2	32.7	26.5	24.3	22.5	23.9	24.3	23.8	25.8	27.8	36.4	53.8	60.1	61.7	49.1	77.7
5-Apr	61.8	65.5	65.0	68.9	66.5	68.4	63.9	56.7	45.8	43.2	38.2	34.3	31.2	27.7	25.0	23.0	21.3	25.3	28.0	39.6	43.5	53.8	57.7	56.9	46.3	68.9
6-Apr	42.0	42.6	44.1	44.6	48.1	50.8	52.2	52.0	48.9	45.7	41.5	38.8	36.4	34.1	32.2	31.5	31.8	33.0	35.9	40.6	45.3	48.6	52.2	53.7	42.8	53.7
7-Apr	55.3	57.2	59.0	61.7	63.9	65.3	63.7	59.0	53.4	48.0	44.3	39.8	35.3	31.9	31.5	30.2	30.5	34.2	37.8	41.7	47.0	53.5	50.9	54.3	47.9	65.3
8-Apr	60.7	54.0	65.1	69.5	78.9	86.8	89.8	91.7	90.1	90.4	91.7	92.1	93.3	93.9	94.0	94.8	95.3	95.3	96.0	96.5	96.7	97.4	98.3	99.4	88.0	99.4
9-Apr	100.0	OR	OR	OR	OR	OR	OR	OR	OR	OR	96.4	67.6	53.4	43.4	32.3	24.6	25.0	26.3	33.5	44.4	58.4	64.6	69.1	77.2	--	100.0
10-Apr	73.2	73.5	74.0	76.3	75.1	74.2	73.4	63.3	47.4	40.1	33.3	26.7	23.4	21.2	18.2	18.2	17.1	16.5	18.7	26.6	44.6	52.6	46.5	49.0	45.1	76.3
11-Apr	50.8	50.1	47.4	45.0	49.5	54.8	54.8	53.9	50.6	41.6	38.7	35.5	33.6	34.3	30.5	27.3	27.5	28.4	33.4	36.8	40.1	44.6	54.8	63.0	42.8	63.0
12-Apr	68.2	72.5	72.2	73.1	75.5	73.6	73.8	71.6	65.4	56.1	56.6	64.6	60.4	60.8	54.7	54.0	52.6	60.6	66.7	70.3	77.6	86.7	89.1	88.0	68.5	89.1
13-Apr	86.6	88.2	91.2	91.8	90.6	92.4	94.2	84.8	70.5	63.7	56.2	48.6	41.6	37.2	32.4	30.4	34.8	38.1	39.9	52.2	60.2	70.5	77.4	82.7	64.9	94.2
14-Apr	87.7	87.8	90.3	89.8	90.6	89.8	84.4	77.2	67.7	55.3	42.5	29.9	21.4	18.4	19.3	22.0	28.9	31.5	33.6	37.0	37.9	38.9	41.2	42.1	52.7	90.6
15-Apr	42.5	43.1	45.9	46.7	52.0	56.0	64.1	66.1	44.8	37.8	43.2	38.6	29.3	22.7	19.4	20.0	20.9	24.2	32.5	43.8	47.9	47.0	63.7	84.8	43.2	84.8
16-Apr	86.7	87.9	88.4	87.5	87.4	87.3	84.7	79.7	76.0	73.4	69.2	64.8	67.6	63.0	59.4	60.6	68.4	85.5	90.3	89.8	82.2	83.3	84.9	86.5	78.9	90.3
17-Apr	86.7	80.8	77.3	76.3	76.0	79.9	82.5	81.2	79.1	77.5	74.7	70.9	68.8	64.3	59.8	53.9	50.8	50.1	50.0	55.8	67.6	62.7	66.7	68.7	69.2	86.7
18-Apr	66.2	64.9	67.0	68.7	70.9	73.2	71.8	66.7	58.2	48.2	39.3	32.5	29.2	25.8	24.6	23.9	23.8	24.8	26.1	28.6	30.6	31.5	34.4	34.3	44.4	73.2
19-Apr	35.8	31.3	35.2	39.1	41.7	47.7	51.4	54.9	48.1	41.5	42.0	31.4	26.3	25.2	24.3	30.8	32.7	33.6	34.6	46.9	54.1	75.1	87.2	87.6	44.1	87.6
20-Apr	91.0	88.4	81.6	81.1	78.3	74.6	63.2	58.3	57.4	55.4	52.2	46.2	41.1	36.7	31.9	30.0	27.4	25.5	29.1	34.7	35.8	37.7	40.6	47.5	51.9	91.0
21-Apr	52.0	54.9	54.1	63.4	73.5	77.7	62.9	56.7	47.7	39.1	31.2	29.1	25.4	24.3	24.0	21.8	22.2	21.6	22.4	25.7	27.9	30.3	34.0	36.2	39.9	77.7
22-Apr	38.8	42.4	48.0	53.8	63.5	58.7	65.2	81.5	89.2	90.5	80.9	70.7	60.3	47.2	41.5	68.3	76.2	71.9	74.7	77.8	83.5	82.4	81.8	79.2	67.8	90.5
23-Apr	83.2	90.4	92.8	93.8	95.3	96.2	96.5	97.5	97.2	71.6	54.4	41.0	45.1	46.9	46.4	54.4	46.5	49.5	51.1	57.1	61.1	62.7	67.6	77.0	69.8	97.5
24-Apr	84.1	86.1	86.1	88.9	91.4	89.6	82.5	70.4	58.5	49.5	45.7	41.4	37.5	35.3	32.1	30.5	26.8	25.4	28.7	31.4	37.3	50.7	46.6	46.3	54.3	91.4
25-Apr	51.7	64.2	65.2	75.1	76.9	70.1	62.9	55.7	45.1	30.2	19.7	18.9	18.2	17.1	17.2	17.6	16.2	15.9	16.9	18.8	30.1	27.0	38.0	37.2	37.7	76.9
26-Apr	35.0	46.6	61.8	55.8	49.8	57.4	56.9	60.9	57.7	50.2	47.2	41.4	43.3	42.7	42.8	42.3	44.9	49.2	54.7	60.7	71.5	71.2	69.9	70.4	53.5	71.5
27-Apr	71.8	72.6	73.7	75.8	76.8	76.5	72.5	65.8	62.8	60.7	54.1	46.5	41.7	38.2	35.6	34.0	32.9	32.5	34.3	35.6	39.0	45.4	43.5	44.5	52.8	76.8
28-Apr	44.0	44.5	50.9	55.0	51.8	52.2	49.7	46.2	40.8	35.1	29.3	23.5	18.3	15.8	15.8	18.2	20.0	21.4	21.5	23.9	26.2	31.9	42.9	46.5	34.4	55.0
29-Apr	65.0	79.9	83.9	89.2	89.3	79.1	74.1	63.2	58.0	64.7	72.9	69.5	62.5	63.5	60.0	67.3	51.9	46.7	29.4	37.2	44.3	57.1	69.6	73.4	64.7	89.3
30-Apr	59.3	57.7	63.5	67.7	67.6	68.3	68.9	66.0	60.3	54.0	48.9	48.5	53.9	64.5	76.1	81.2	78.8	80.7	77.8	79.9	82.3	83.4	85.0	85.5	69.2	85.5
Diurnal Average																									Diurnal Maximum	
100.0 90.4 92.8 93.8 95.3 96.2 96.5 97.5 97.2 90.5 96.4 92.1 93.3 93.9 94.0 94.8 95.3 95.3 96.0 96.5 96.7 97.4 98.3 99.4																										
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Athabasca Valley - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - April 2025

Maximum Speed: 39 km/h on Apr 15 11:00										Maximum Daily Speed Average: 18.8 km/h on Apr 19										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 17 21:00										Minimum Daily Speed Average: 0.6 km/h on Apr 8										Hours of Data: 710						
Maximum Diurnal Speed Average: 7.3 km/h at hour 17										Minimum Diurnal Speed Average: 0.4 km/h at hour 8										Hours of Missing Data: 10						
Monthly Average Velocity: 2.3 km/h 271.5 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 5 Median = 9 Q ₃ = 15 P ₉₀ = 21 P ₉₉ = 34										Percent Operational Time: 98.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	ESE10	ESE10	ESE9	ESE8	ESE12	ESE12	ESE11	SE12	SE11	SE8	SE8	SE7	SE4	N1	SSW2	SW12	NW19	NW18	WNW15	WNW23	WNW15	WNW14	WNW13	WNW17	WSW1.1	WNW23
2-Apr	W15	WSW9	WSW9	WSW11	WSW11	WSW13	WSW19	SW15	SW16	SW13	WNW17	NW11	WNW16	NW18	NNW14	NNW14	NNW14	N14	N10	NW7	NW3	NNW8	NNW7	N5	WNW8.8	WSW19
3-Apr	W3	WSW6	W5	WSW11	W11	W17	W16	NNW18	NW24	NW24	NW21	NW19	NNW14	NW12	NNW13	NW17	NW22	NNW16	NNW12	NW5	WNW3	SW3	S2	E2	NW10.9	NW24
4-Apr	ESE1	SE3	ESE3	SE5	SE5	SE5	SE6	SE11	SE10	ESE9	ESE7	ENE8	ENE7	ENE4	E4	E8	ENE9	E6	ESE7	ESE7	SSE4	SE3	SE3	SSE3	ESE5.2	SE11
5-Apr	SSE4	SSE5	S4	SE2	SE5	SE5	ESE7	ESE7	ESE9	E7	NE5	NNW2	WNW3	WNW5	NW7	NW9	NNW9	NNW8	NNW6	NW3	NW2	NW4	NNW2	NW1	NNE0.9	ESE9
6-Apr	ESE7	E10	E10	ESE12	ESE10	ESE12	ESE13	ESE16	ESE15	E16	E18	E19	E18	E17	E17	E18	ESE18	ESE17	ESE18	ESE17	ESE16	ESE11	ESE8	ESE11	ESE14.3	E19
7-Apr	ESE14	ESE16	ESE14	ESE14	ESE14	ESE13	ESE16	ESE21	ESE20	E13	E15	E16	ESE20	E17	E15	E16	ESE9	SSW4	SSE5	SE4	SSE4	ESE5	ESE6	ESE5	ESE11.8	ESE21
8-Apr	ESE4	SE7	ESE1	ESE2	NW2	NNW4	NW1	NNW5	NW4	NW2	SSW2	E2	N2	SW3	S3	NNW4	NNW2	WNW3	NW1	SSW3	W3	NW3	WNW1	ENE2	NW0.6	SE7
9-Apr	E3	SSE0	E2	ESE5	SSE5	S7	SSE5	SE6	E5	NNW5	NNW4	WNW2	S4	SSW8	SW15	W19	WSW11	WNW7	WNW2	WSW4	SW2	WSW2	SE1	E3	SW2.4	WSW19
10-Apr	SE6	ESE5	ESE6	ESE5	SE4	SE5	ESE5	E5	S10	SSW12	SSW11	SW16	SW15	SW12	SW14	WSW12	SSW11	SSW7	SSE1	WSW1	SE1	ESE3	ESE4	ENE3	SSW4.7	SW16
11-Apr	ENE2	UO	UO	UO	UO	ENE3	N1	E4	SE4	ESE10	SSE3	S6	SW9	W22	W28	WSW30	WSW31	WSW24	W20	SW11	WSW15	WSW17	W14	SW9	WSW10.5	WSW31
12-Apr	SW8	WSW10	SW12	WSW13	WSW9	SW5	WSW6	WSW13	SW16	W21	W20	W21	W25	W22	W25	WNW26	WNW24	NW18	NW19	WNW8	SW5	WSW2	WSW3	SW3	W12.4	WNW26
13-Apr	ENE2	NW2	S2	SE3	SSE2	WNW2	E2	SSW6	W7	NW9	N9	NNW8	NNW11	NNW10	NNW15	NNW15	NNW14	NNW15	N11	NNW8	NNW7	NNW4	NW6	W4	NNW5.7	NNW15
14-Apr	W2	W1	SE2	E2	ENE3	E4	ESE6	ESE6	ESE9	ESE7	ESE7	ENE8	SE7	SSE10	S12	SSE10	SSW13	S12	SE6	ESE7	ESE10	ESE12	SE7	ESE10	SE5.9	SSW13
15-Apr	ESE14	ESE14	ESE13	ESE13	ESE9	SE8	SE9	SE5	SW21	WSW35	W39	WSW36	WSW34	WSW34	WSW35	WSW34	WSW34	W32	WNW28	WNW31	W33	W35	W39	SW21	WSW18.4	W39
16-Apr	WSW20	WSW21	WSW22	WSW24	W23	W22	W22	WNW24	WNW27	WNW25	WNW22	NW26	NW24	NNW22	NNW20	NNW13	NW26	NNW14	NW12	NW11	NW10	NW7	UO	UO	WNW17.4	WNW27
17-Apr	UO	UO	UO	UO	NNW13	NNW14	NNW16	NNW14	NNW15	NW20	NW20	NNW19	NNW17	NW16	NW14	NW13	NW11	NW11	N6	NE3	S0	ESE7	ESE7	ESE10	NNW9.8	NW20
18-Apr	ESE12	ESE12	SE10	ESE12	ESE15	ESE14	SE14	ESE14	ESE12	ESE14	SE15	SSE20	SSE22	SSE21	SSE20	SSE21	SSE20	SE17	SE18	SE13	SE12	SE13	ESE9	ESE10	SE14.3	SSE22
19-Apr	SE7	SSW9	SW14	SW19	SW17	W9	W15	W20	W25	WSW25	W26	W32	W31	W29	W27	W33	W32	W27	WSW20	W21	WNW18	NW17	NW17	NNW15	W18.8	W33
20-Apr	NNW16	NW12	NW13	N10	N9	NNW9	NNW13	N10	NNW11	NNW9	N10	NNW8	N9	NNW7	N8	NNW8	N6	N6	NNW7	N5	NE5	NE4	ENE4	E4	NNW7.7	NNW16
21-Apr	ENE3	N5	N6	NE2	ENE2	E3	E4	E3	ESE4	SE8	ESE9	ESE6	NE3	ENE10	NE4	E7	E8	E10	ESE14	ESE11	SE7	ESE10	ESE10	ESE9	E5.7	ESE14
22-Apr	ESE8	ESE8	ESE6	SE4	ESE8	ESE8	ESE10	ESE5	E4	ESE7	SE10	SE6	SSW5	SSW10	WSW15	W26	W9	SE6	S6	SSW2	WSW2	S0	NNW8	NNW7	SSE2.5	W26
23-Apr	SW4	WSW2	NW1	NW3	E2	E3	S4	SW5	WSW3	NW6	NNW9	NNW8	NNW15	NNW18	NW16	SSW11	W4	NW10	WNW13	NNW4	WSW6	NW5	WNW3	N2	WNW4.5	NNW18
24-Apr	W4	W3	NW3	SW2	SSE2	ESE3	E4	SE6	SE10	ESE6	WNW4	WNW6	NW7	NW9	NW6	NW6	NW4	WNW3	ESE13	ESE8	ESE5	ESE5	ESE9	ESE9	ESE1.0	ESE13
25-Apr	SSE6	SSE2	SE4	SE2	SSE2	SE8	ESE7	ESE7	E4	S9	S21	SSE22	S22	S23	SSW23	S22	SW25	SW22	SW16	SSW5	SE6	SE8	SSE6	E6	S9.5	SW25
26-Apr	ESE7	ESE5	E3	SE8	ESE10	E6	NNW0	NNW13	NNW6	NNW9	NNW15	NNW18	NW25	NNW25	NNW25	NNW25	NNW24	NNW23	NNW19	N16	NNW19	NNW15	NW12	NNW9	NNW11.1	NNW25
27-Apr	NW8	NW9	WNW10	WNW13	NW15	NNW18	NNW15	NNW14	NW14	WNW16	NW13	N8	N10	NNW8	N7	NW7	NW8	N9	NNW10	N10	N11	NNW7	N6	NE5	NNW9.6	NNW18
28-Apr	E8	E7	SE6	ESE7	ESE12	ESE10	ESE13	SE12	SE10	ESE8	ESE8	SE6	S14	S16	S15	S17	S16	SSE15	SSE14	SSE11	S15	SSW18	S10	SE4	SSE9.7	SSW18
29-Apr	S11	SE5	SE3	ESE4	SSW3	SSW4	SSE4	WSW7	W22	W27	W25	W21	W27	WNW21	NW18	NW4	WSW5	WNW8	NNW12	NW5	WNW4	SW2	E1	ESE2	W7.2	W27
30-Apr	SE7	ESE7	ESE5	SE3	SSW9	SSW11	SW7	NW12	NNW14	NNW10	N8	NNW9	NNW9	NNW18	NNW17	NW8	NW11	NW15	NNW19	NW21	NW21	NNW17	NW19	NW17	NW8.7	NW21
SSE2.5 SSE2.3 SSE1.8 SSE2.2 SSE2.1 SSE1.6 SSE1.4 S0.4WSW2.1 W3.0WNW3.8WNW4.0 W5.3 W5.9WNW6.6 W6.9 W7.3WNW5.7 NW3.9 NW2.9WNW2.5 W1.9WNW1.7 ENE0.5																										Diurnal Average
WSW20WSW21WSW22WSW24 W23 W22 W22WNW24WNW27WSW35 W39WSW36WSW34WSW34WSW35WSW34WSW34 W32WNW28WNW31WNW33 W35 W39 SW21																										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

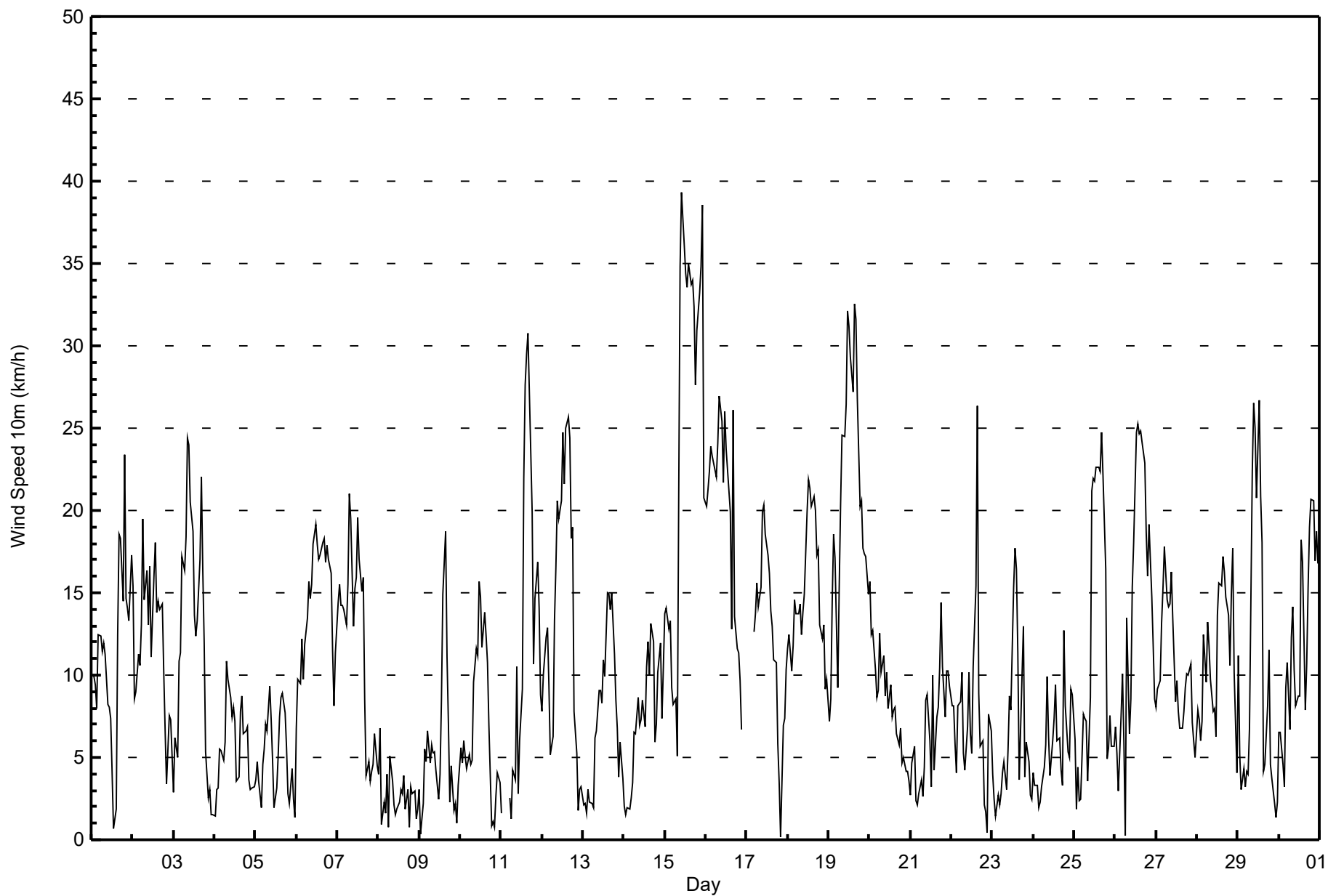
Wind Speed 10m (WS10) - km/h
Athabasca Valley - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 12 km/h on Apr 22 17:00																		Hours in Service: 720 Hours of Data: 710 Hours of Missing Data: 10 Hours of Calibration: 0 Percent Operational Time: 98.6								
Minimum Value: 1 km/h on Apr 8 23:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 9																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	3	2	3	3	3	3	3	3	3	2	2	2	2	1	3	3	6	3	3	4	3	3	3	3	4	6
2-Apr	5	2	2	1	1	3	3	3	2	3	5	5	5	5	4	3	3	4	3	2	2	3	2	1	5	
3-Apr	2	2	2	4	4	2	3	4	5	4	5	5	4	3	4	5	5	5	2	2	1	2	1	1	5	
4-Apr	1	1	1	1	2	2	3	2	2	2	2	1	2	2	3	2	2	1	1	2	1	1	1	2	3	
5-Apr	1	1	1	2	2	3	2	2	2	3	1	1	1	1	2	1	2	2	3	2	1	1	2	1	3	
6-Apr	3	3	3	3	3	3	4	4	5	4	5	4	5	4	5	5	5	5	4	4	3	3	3	3	5	
7-Apr	2	3	3	3	3	2	3	4	5	4	4	5	5	5	4	5	5	2	2	1	2	2	2	2	5	
8-Apr	2	2	2	1	2	2	1	2	1	1	2	1	2	1	2	2	1	1	1	3	1	1	1	1	3	
9-Apr	2	1	1	2	1	2	1	1	1	2	1	1	2	4	6	5	5	2	1	2	2	2	2	2	6	
10-Apr	1	1	2	2	2	2	1	1	4	3	2	5	5	4	6	5	3	2	1	1	2	1	2	2	6	
11-Apr	2	UO	UO	UO	UO	1	2	3	3	3	2	2	6	7	6	6	7	5	5	1	3	5	6	2	7	
12-Apr	2	4	3	2	3	2	2	9	5	5	5	7	5	4	5	4	5	5	5	4	2	1	1	1	9	
13-Apr	1	1	1	1	1	1	1	3	3	3	2	2	3	4	5	4	4	4	3	2	1	1	1	1	5	
14-Apr	1	1	2	2	1	1	2	2	2	2	2	2	3	4	3	3	4	4	1	3	2	3	2	4	4	
15-Apr	2	3	3	2	3	3	3	3	11	9	9	8	8	8	7	8	9	7	6	6	7	8	10	5	11	
16-Apr	3	3	4	4	4	3	3	5	4	4	5	5	6	7	5	4	7	4	3	2	4	1	UO	UO	7	
17-Apr	UO	UO	UO	UO	5	4	5	4	4	5	4	4	4	3	4	3	2	2	3	2	2	2	2	2	5	
18-Apr	2	3	4	2	3	3	3	3	3	3	5	5	5	5	6	5	5	5	5	3	3	2	2	2	6	
19-Apr	2	2	3	3	4	2	4	4	5	6	6	7	7	8	6	9	7	7	7	5	4	5	5	4	9	
20-Apr	3	3	3	3	2	3	3	3	3	2	3	3	3	3	3	3	2	3	2	3	3	2	2	2	3	
21-Apr	1	2	2	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	4	2	3	3	4	3	4	
22-Apr	3	2	3	2	3	2	3	2	1	2	3	3	2	4	11	8	12	1	1	2	2	2	3	1	12	
23-Apr	2	1	2	2	1	1	2	2	1	2	2	3	4	3	3	7	2	3	6	2	4	1	2	2	7	
24-Apr	1	1	2	1	1	1	1	2	2	3	2	1	3	2	3	3	2	1	4	2	2	2	3	2	4	
25-Apr	2	1	2	1	1	4	2	2	2	9	7	6	7	7	6	7	5	5	5	3	2	2	2	2	9	
26-Apr	2	2	2	4	2	3	3	4	2	2	3	5	4	4	4	5	5	6	5	4	5	5	2	3	6	
27-Apr	2	2	1	1	4	4	4	3	3	4	4	4	3	3	3	3	3	3	3	2	2	2	1	1	4	
28-Apr	2	2	2	4	3	2	3	3	2	2	3	4	6	5	7	6	4	4	4	3	5	7	6	1	7	
29-Apr	5	1	2	2	4	6	2	6	6	7	5	4	5	5	10	3	2	5	5	2	1	1	1	1	10	
30-Apr	2	2	2	1	4	3	2	5	3	3	2	2	2	6	5	2	3	3	5	4	3	4	3	2	6	
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Athabasca Valley - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Athabasca Valley - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	200	28.17	28.17
6 - 11	232	32.68	60.85
12 - 19	180	25.35	86.20
20 - 28	78	10.99	97.18
29 - 38	18	2.54	99.72
> 38	2	0.28	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
Athabasca Valley - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	0	8	11	22	22	26	16	8	9	10	9	9	12	19	12	200
6 - 11	20	0	0	5	12	62	31	5	6	11	5	12	4	5	22	32	232
12 - 19	2	0	0	0	13	36	8	3	8	3	15	9	5	12	26	40	180
20 - 28	0	0	0	0	0	3	0	8	2	2	4	7	23	10	12	7	78
29 - 38	0	0	0	0	0	0	0	0	0	0	0	9	7	2	0	0	18
> 38	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Totals	29	0	8	16	47	123	65	32	24	25	34	46	50	41	79	91	710

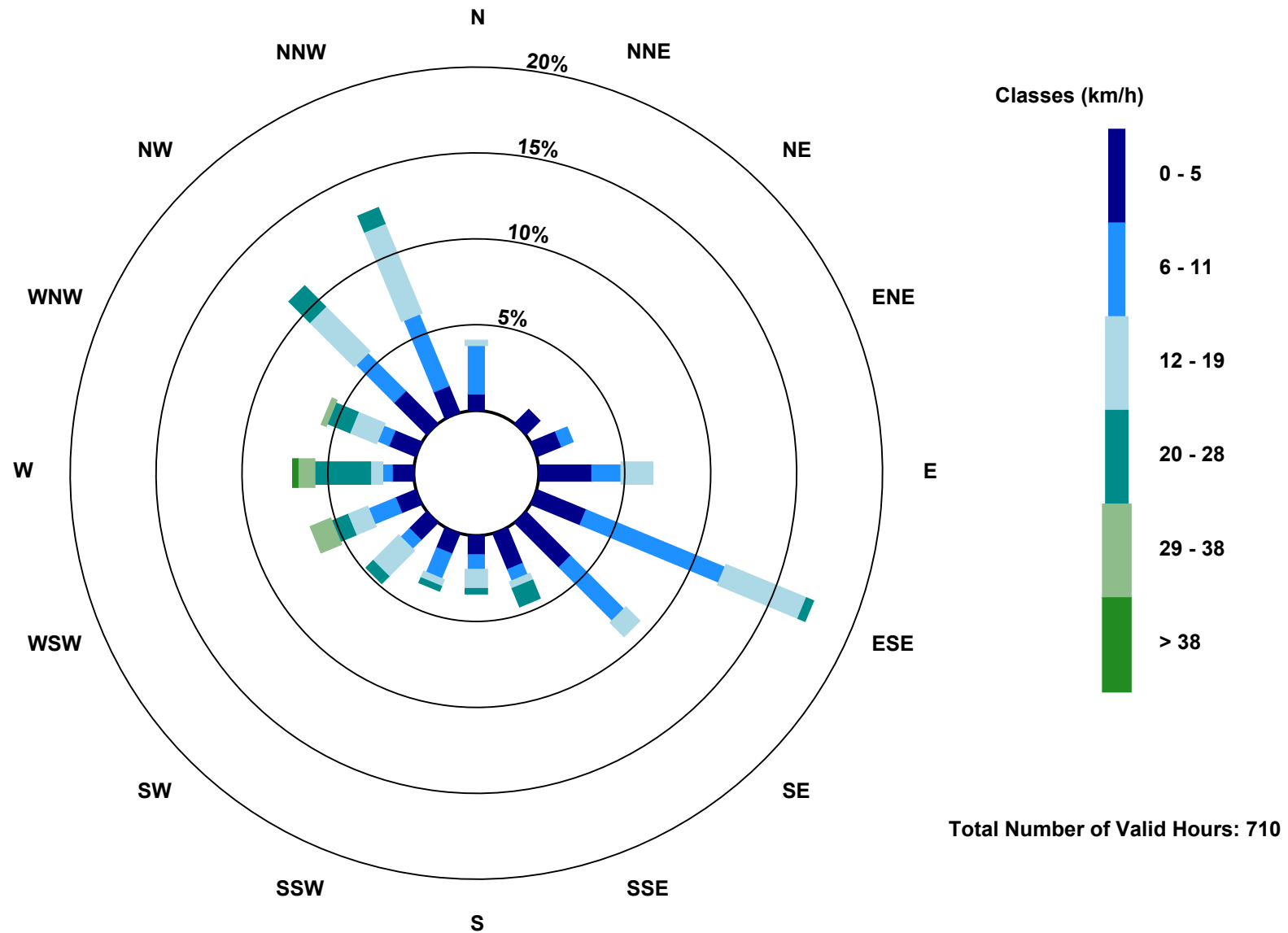
Total Number of Valid Hours: 710

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Athabasca Valley





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - April 2025

Direction of Maximum Speed: 261 deg on Apr 15 11:00 Direction of Maximum Daily Speed Average: 266.4 deg on Apr 19																				Hours in Service: 720					
Direction of Minimum Speed: 174 deg on Apr 17 21:00 Direction of Minimum Daily Speed Average: 0.6 deg on Apr 8																				Hours of Data: 710					
Monthly Average Direction: 271.5 deg																				Hours of Missing Data: 10					
																				Percent Operational Time: 98.6					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	121	122	116	108	116	117	122	126	128	145	128	138	131	350	197	224	306	309	301	286	298	302	301	297	240.7
2-Apr	280	250	238	252	243	244	254	232	221	231	301	313	294	305	336	336	339	359	349	311	310	327	341	352	288.6
3-Apr	260	242	265	253	269	269	273	294	312	305	323	322	332	324	330	321	320	330	330	324	291	236	185	100	305.6
4-Apr	120	129	110	132	130	128	124	127	126	117	105	60	72	77	79	85	76	96	122	119	161	128	125	164	109.8
5-Apr	162	168	169	137	143	125	111	115	119	94	52	334	285	296	319	324	330	341	329	310	314	307	340	326	17.8
6-Apr	107	96	99	108	114	108	108	107	105	97	98	100	98	97	97	101	102	103	106	108	109	117	110	112	103.9
7-Apr	117	116	111	116	122	114	109	107	108	94	91	100	105	100	94	94	102	201	150	133	159	104	117	116	108.7
8-Apr	119	125	115	113	315	328	313	333	326	308	206	93	7	235	173	329	334	293	323	208	260	312	289	70	312.3
9-Apr	83	165	91	118	151	191	163	135	94	341	331	288	169	197	222	259	255	282	296	249	214	237	126	97	219.4
10-Apr	132	119	111	120	131	133	113	90	186	198	197	234	232	222	226	242	213	207	148	240	132	112	103	74	193.2
11-Apr	57	UO	UO	UO	UO	65	352	83	132	121	151	188	232	259	259	246	248	254	265	236	237	240	262	228	244.9
12-Apr	228	245	234	247	254	218	239	244	231	271	261	263	260	268	281	294	300	323	315	293	219	251	249	234	268.6
13-Apr	62	307	169	131	154	287	92	204	265	308	349	334	344	335	330	335	332	334	355	338	333	333	320	264	329.7
14-Apr	274	280	126	96	76	87	116	116	121	112	119	72	138	161	171	164	200	186	144	111	117	120	127	120	136.4
15-Apr	122	123	116	118	122	129	127	138	230	242	261	258	256	253	256	253	254	270	289	291	281	268	261	235	253.4
16-Apr	241	252	254	258	261	261	267	283	285	287	298	311	319	327	332	333	318	328	320	316	320	305	UO	UO	290.8
17-Apr	UO	UO	UO	UO	345	344	342	346	346	325	324	333	330	324	315	316	313	322	360	48	174	112	121	111	336.6
18-Apr	117	111	124	112	117	122	125	119	112	115	138	150	151	153	157	156	154	146	143	125	125	125	106	117	133.9
19-Apr	140	198	223	234	233	260	277	269	261	250	266	264	263	266	271	271	265	259	257	279	298	321	326	328	266.4
20-Apr	328	324	326	356	357	336	328	353	327	331	349	346	358	345	358	341	356	10	332	9	45	35	73	89	346.5
21-Apr	69	358	350	53	75	96	93	80	111	125	120	117	43	69	43	91	89	99	109	112	136	113	109	117	97.8
22-Apr	123	115	107	133	113	112	115	113	100	107	127	133	199	204	240	278	259	135	190	207	242	174	330	332	165.9
23-Apr	230	237	304	323	91	86	189	222	253	318	328	327	328	327	313	205	268	323	284	348	242	315	295	6	301.8
24-Apr	275	264	309	232	158	103	99	124	133	123	297	292	318	320	326	318	306	294	123	115	116	114	112	123	111.1
25-Apr	152	147	131	125	163	129	123	112	88	172	169	165	182	175	195	191	218	223	231	207	139	143	148	82	178.5
26-Apr	110	119	91	124	119	97	343	330	346	341	329	335	326	327	328	329	328	331	347	351	334	328	320	331	337.1
27-Apr	314	310	302	303	325	341	345	342	323	299	305	350	358	344	0	322	322	356	339	6	353	339	10	42	333.3
28-Apr	101	99	124	123	113	112	118	131	135	116	109	137	186	178	173	185	179	166	156	154	176	196	191	141	153.8
29-Apr	185	139	128	120	193	194	167	248	276	265	266	269	279	291	323	312	238	290	341	324	298	218	93	104	272.8
30-Apr	133	119	116	125	206	199	223	316	332	337	356	330	335	330	331	321	317	317	334	324	321	328	315	318	321.9
150.2 153.5 163.1 166.3 163.7 154.1 155.3 183.7 249.4 265.2 285.3 285.0 280.9 280.4 282.4 273.1 279.4 293.5 306.0 307.1 285.1 279.8 294.9 68.6																									
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

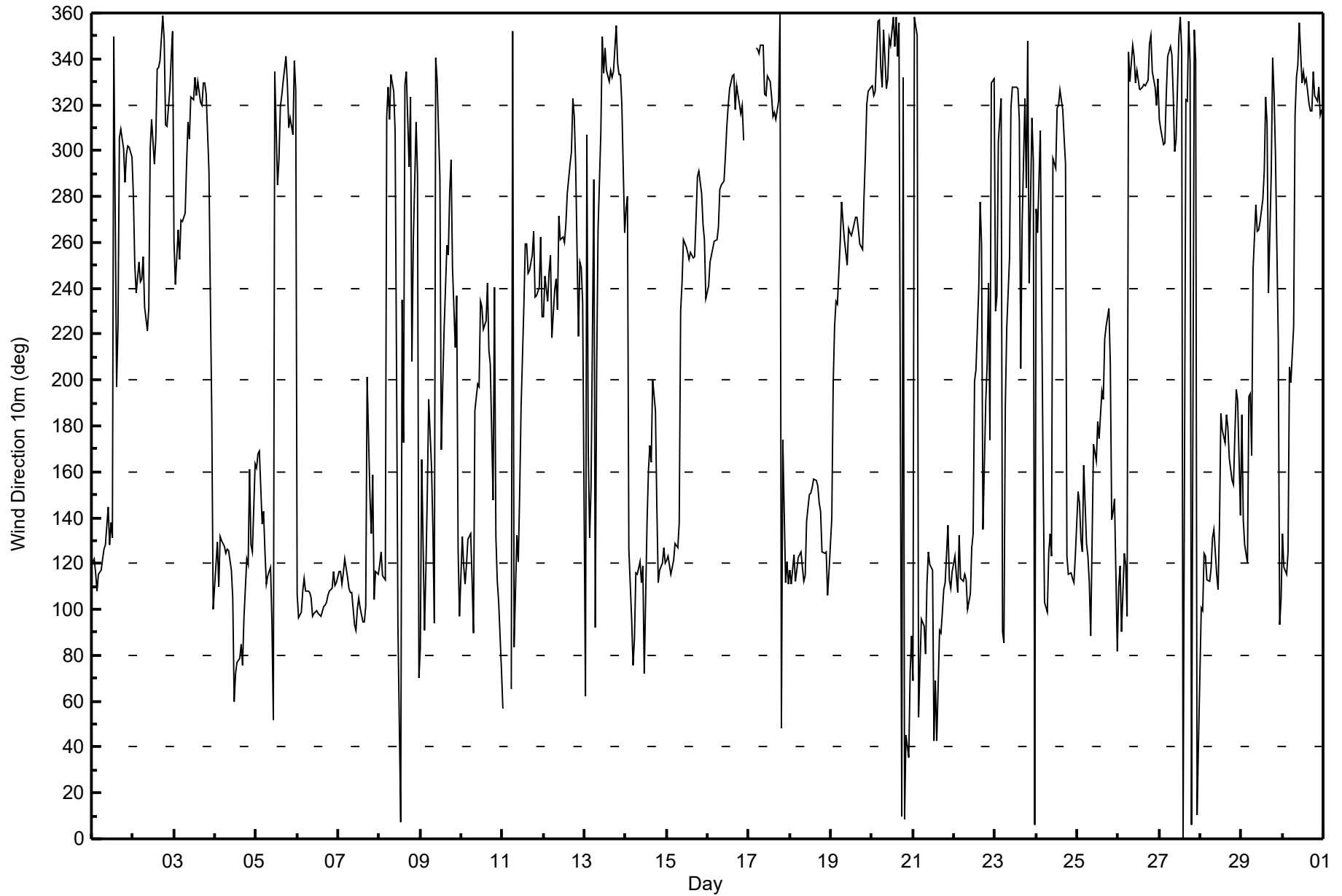
Athabasca Valley - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 106 deg on Apr 26 07:00																			Hours in Service: 720 Hours of Data: 710 Hours of Missing Data: 10 Hours of Calibration: 0 Percent Operational Time: 98.6						
Minimum Value: 8 deg on Apr 30 23:00																									
Percentiles: P ₁ = 9 P ₁₀ = 12 Q ₁ = 15 Median = 21 Q ₃ = 38 P ₉₀ = 64 P ₉₉ = 94																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	13	14	19	28	15	16	16	15	15	16	17	19	59	92	84	15	27	9	13	9	11	10	10	15	92
2-Apr	16	19	16	11	8	10	9	11	10	25	20	34	19	18	23	17	18	21	19	27	52	25	17	20	52
3-Apr	54	30	39	20	23	12	11	13	13	14	16	18	25	24	21	18	12	15	14	28	41	61	86	77	86
4-Apr	78	45	42	17	29	38	32	10	11	17	16	9	38	78	89	31	15	22	16	19	29	28	37	41	89
5-Apr	45	28	25	86	30	19	21	25	17	25	14	57	59	14	12	10	12	16	52	81	74	16	58	82	86
6-Apr	26	20	21	18	19	18	17	17	19	19	19	18	19	20	19	18	17	17	14	13	14	18	17	13	26
7-Apr	11	12	13	13	13	13	12	12	13	22	21	20	16	18	20	21	63	51	38	52	38	43	27	36	63
8-Apr	63	23	106	64	74	33	87	27	37	54	93	68	55	38	75	69	90	46	76	65	39	33	76	65	106
9-Apr	52	97	66	23	32	25	21	18	20	41	27	63	64	41	25	18	28	26	58	37	89	75	101	65	101
10-Apr	16	28	31	33	44	31	35	31	37	15	12	22	24	24	29	26	17	21	82	67	77	49	50	40	82
11-Apr	96	UO	UO	UO	UO	62	87	70	85	23	82	35	41	18	13	19	15	17	14	9	9	12	14	16	96
12-Apr	11	18	12	13	16	16	26	31	23	18	13	13	12	13	17	12	12	16	14	31	26	86	30	50	86
13-Apr	74	52	60	47	71	34	69	39	39	25	24	25	27	21	26	18	18	17	17	15	14	29	19	21	74
14-Apr	51	73	74	60	33	24	20	25	17	29	31	26	60	42	27	38	19	20	19	22	15	15	22	19	74
15-Apr	11	12	15	12	27	32	34	43	21	16	14	14	14	16	16	15	14	15	12	15	12	11	13	12	43
16-Apr	12	10	9	9	9	10	10	10	11	9	12	10	12	15	17	17	13	14	14	10	17	13	UO	UO	17
17-Apr	UO	UO	UO	UO	20	20	19	20	20	13	12	18	16	14	21	16	16	13	45	58	91	20	18	14	91
18-Apr	15	15	22	13	12	13	12	14	16	16	27	19	17	18	17	18	15	16	17	14	14	12	20	11	27
19-Apr	24	21	10	11	10	21	13	11	13	16	20	16	18	17	19	17	11	11	17	11	24	11	12	14	24
20-Apr	14	12	12	19	18	20	12	22	15	29	31	49	34	42	42	37	42	56	30	40	64	51	51	45	64
21-Apr	50	27	30	55	50	41	34	52	51	27	31	68	82	23	73	38	39	20	14	14	30	20	16	18	82
22-Apr	21	18	45	53	28	14	18	24	27	20	24	54	36	27	37	25	79	25	27	83	78	96	21	18	96
23-Apr	51	51	94	85	38	51	31	24	28	22	16	27	12	11	22	37	48	23	13	46	38	47	52	53	94
24-Apr	39	50	61	81	59	50	36	46	22	45	64	14	38	18	45	43	66	35	22	15	18	25	19	21	81
25-Apr	32	77	24	53	69	24	25	18	71	96	25	22	27	30	25	22	15	16	14	39	17	17	34	23	96
26-Apr	16	24	81	55	14	52	106	16	29	27	15	17	10	11	11	13	14	17	20	19	16	22	19	27	106
27-Apr	25	14	11	9	26	19	20	20	23	24	30	45	32	48	57	47	34	27	22	15	15	26	17	33	57
28-Apr	19	20	28	28	15	17	15	16	20	27	30	61	36	34	39	27	28	23	15	23	28	25	32	49	61
29-Apr	27	18	55	45	67	69	69	44	18	14	11	14	14	16	18	52	58	33	19	41	29	89	77	68	89
30-Apr	33	20	35	72	37	18	17	38	16	25	23	23	27	13	15	17	15	13	19	12	9	15	8	9	72
96 97 106 86 74 69 106 70 85 96 93 68 82 92 89 69 90 56 82 83 91 96 101 82																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Athabasca Valley - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS08 FORT CHIPEWYAN APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
APRIL 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	33	34	99.86	-	-	1.7	0	0.6	0
TRS (ppb) Average	377	23	343	55.56	0.4	0	0.3	0	0.2	0
O3(ppb) Average	685	34	35	99.86	-	-	49.5	0	44.9	-
NO2(ppb) Average	680	39	40	99.86	-	-	9.8	0	2.6	-
NO(ppb) Average	680	39	40	99.86	-	-	2.9	-	0.6	-
NOX(ppb) Average	680	39	40	99.86	-	-	11.1	-	3.2	-
PM2.5(ug/m3) Average	718	1	2	99.86	-	-	20.6	0	4.2	0
CO(ppm) Average	686	33	34	99.86	-	-	0.2	0	0.1	-
CO2(ppm) Average	685	34	35	99.86	-	-	450.2	-	444.7	-
Temperature 2 m (C) Average	720	0	0	100	-	-	15.2	-	8.6	-
Relative Humidity (%) Average	720	0	0	100	-	-	98.1	-	94.5	-
Wind Speed 10 m (km/h) Average	699	0	21	97.08	-	-	41	-	30	-
Wind Direction 10 m (deg) Average	699	0	21	97.08	-	-	-	-	-	-
PC(mm) Total	720	0	0	100	-	-	0.9	-	4.1	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	32.1	-	18.6	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	867.2	-	283.5	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	686	0.07	0.2	-	0	0	0	0	0	0.2	1.7
TRS (ppb) Average	377	0.16	0	-	0	0.1	0.1	0.2	0.2	0.2	0.3
O3(ppb) Average	685	36.39	6.9	-	13.1	27.7	31.3	37.5	42.3	44.5	49.5
NO2(ppb) Average	680	0.54	0.9	-	0.1	0.2	0.2	0.3	0.5	1	9.8
NO(ppb) Average	680	0.06	0.2	-	0	0	0	0	0	0.1	2.9
NOX(ppb) Average	680	0.59	1	-	0.1	0.2	0.2	0.4	0.6	1	11.1
PM2.5(ug/m3) Average	718	2.33	1.2	-	0.1	1	1.7	2.2	2.8	3.4	20.6
CO(ppm) Average	686	0.05	0	-	0	0	0	0.1	0.1	0.1	0.2
CO2(ppm) Average	685	437.34	3.3	-	431.9	433.6	434.6	436.8	439.5	441.4	450.2
Temperature 2 m (C) Average	720	-0.46	5.8	-	-17.5	-8.9	-3.8	0.1	3.2	6	15.2
Relative Humidity (%) Average	720	67.74	15.8	-	20	46.7	56.4	68.7	78.7	90.1	98.1
Wind Speed 10 m (km/h) Average	699	16	8	-	1	6	10	16	21	26	41
Wind Direction 10 m (deg) Average	699	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	14.66	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	720	3.41	5.5	-	0.4	1.2	1.4	1.6	1.8	7.9	32.1
Global Solar Radiation (W/m2) Average	720	195.97	241.3	-	0	0	0	66.3	352.9	615	867.2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	10 Apr 2025 17:00	10 Apr 2025 17:00	1	Station power failure
TRS	12 Apr 2025 02:00	15 Apr 2025 10:00	81	Unstable Operation - AMD non-compliance
TRS	15 Apr 2025 11:00	15 Apr 2025 12:00	2	Maintenance - analyzer recalibrated
TRS	21 Apr 2025 05:00	23 Apr 2025 07:00	51	Analyzer Failure - inconsistent response
TRS	23 Apr 2025 08:00	23 Apr 2025 08:00	1	Maintenance - reinitiated daily QA check
TRS	23 Apr 2025 09:00	30 Apr 2025 08:00	168	Analyzer Failure - inconsistent response
TRS	30 Apr 2025 09:00	30 Apr 2025 09:00	1	Maintenance - reinitiated daily QA check
TRS	30 Apr 2025 10:00	01 May 2025 00:00	15	Analyzer Failure - inconsistent response



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

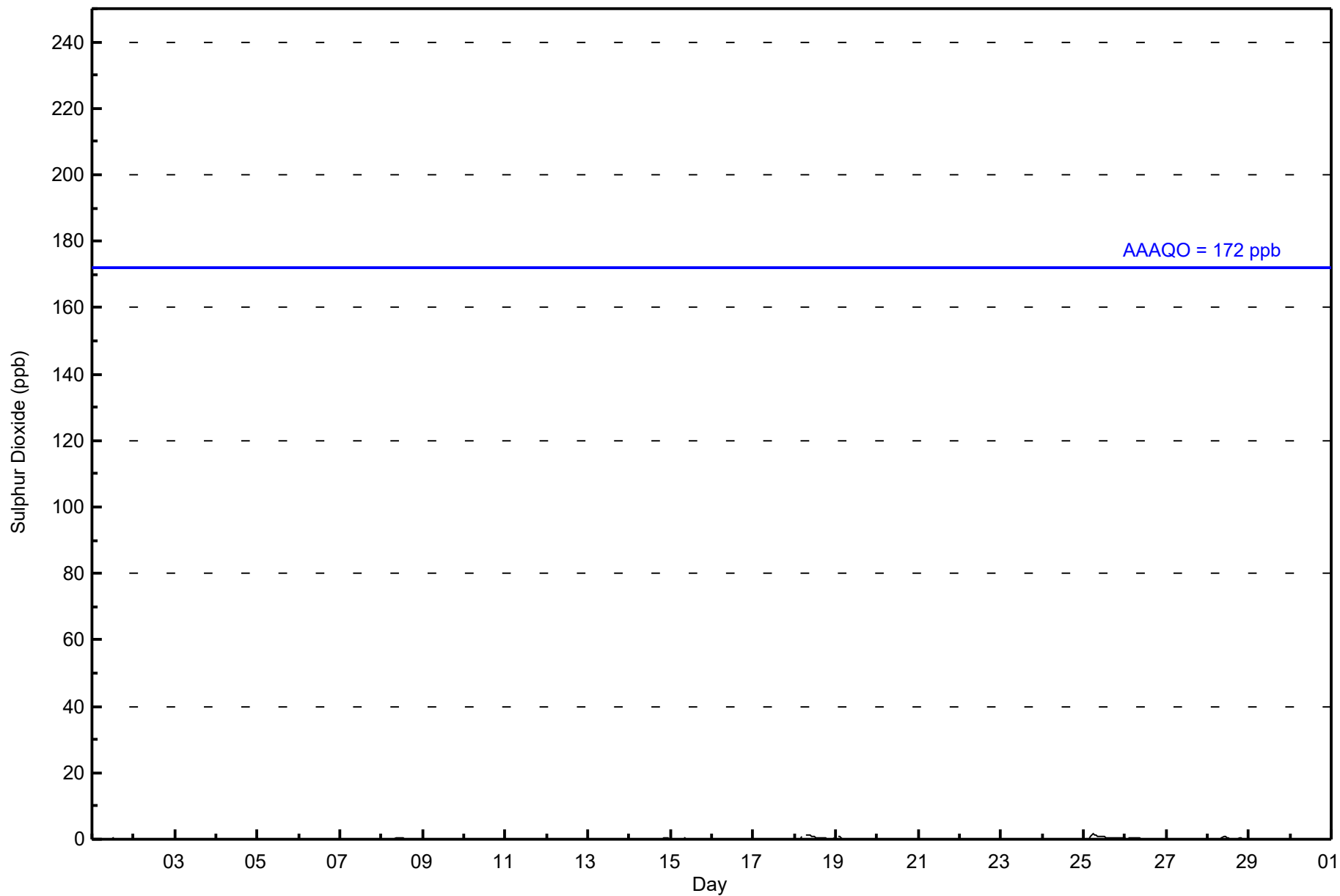
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 1.7 ppb on Apr 25 06:00																				Maximum Daily Average: 0.6 ppb on Apr 25		Hours of Data: 686				
Minimum Value: 0.0 ppb on Apr 1 22:00																				Minimum Daily Average: 0.0 ppb on Apr 30		Hours of Missing Data: 34				
Maximum Diurnal Average: 0.1 ppb at hour 10																				Minimum Diurnal Average: 0.0 ppb at hour 1		Hours of Calibration: 33				
Monthly Average: 0.07 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 = 1.0		Percent Operational Time: 99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
2-Apr	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	0.0	0.0	0.1
3-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6-Apr	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
7-Apr	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Apr	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
9-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
10-Apr	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	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.4	0.2	0.1	0.1	0.4
15-Apr	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
16-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-Apr	0.0	0.0	0.0	0.2	0.7	Z	1.2	1.3	1.2	1.4	0.9	0.7	0.6	0.6	0.5	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.5	1.4
19-Apr	Z	0.8	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21-Apr	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	0.2	0.1	0.0	0.2
22-Apr	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	0.0	0.1
23-Apr	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
24-Apr	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
25-Apr	Z	0.0	0.1	0.2	0.8	1.7	1.3	1.2	1.0	1.0	0.9	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.6	1.7
26-Apr	0.3	Z	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	0.0	0.0	0.2	0.3
27-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.7	0.7	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.2	0.3	0.2	0.1	0.0	0.0	0.2	0.7
29-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0	0.1
30-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0																									Diurnal Average	
0.3 0.8 0.7 0.3 0.8 1.7 1.3 1.3 1.2 1.4 0.9 0.8 0.7 0.6 0.5 0.4 0.4 0.4 0.3 0.4 0.4 0.5 0.5 0.4																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - April 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 (SO₂) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	14	17	30	107	166	36	14	24	7	3	11	29	49	35	97	28	667
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	14	17	30	107	166	36	14	24	7	3	11	29	49	35	97	28	667

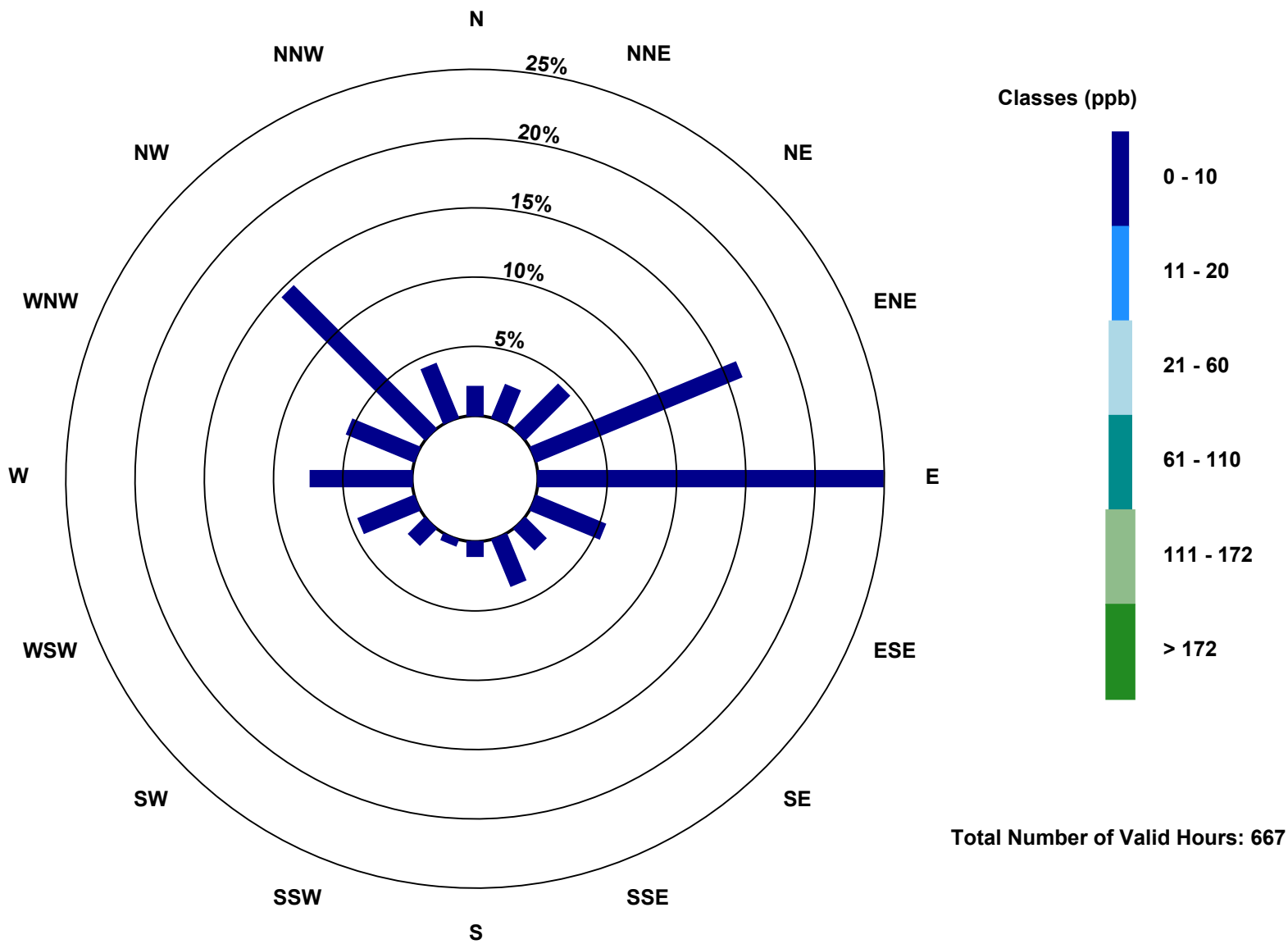
Total Number of Valid Hours: 667

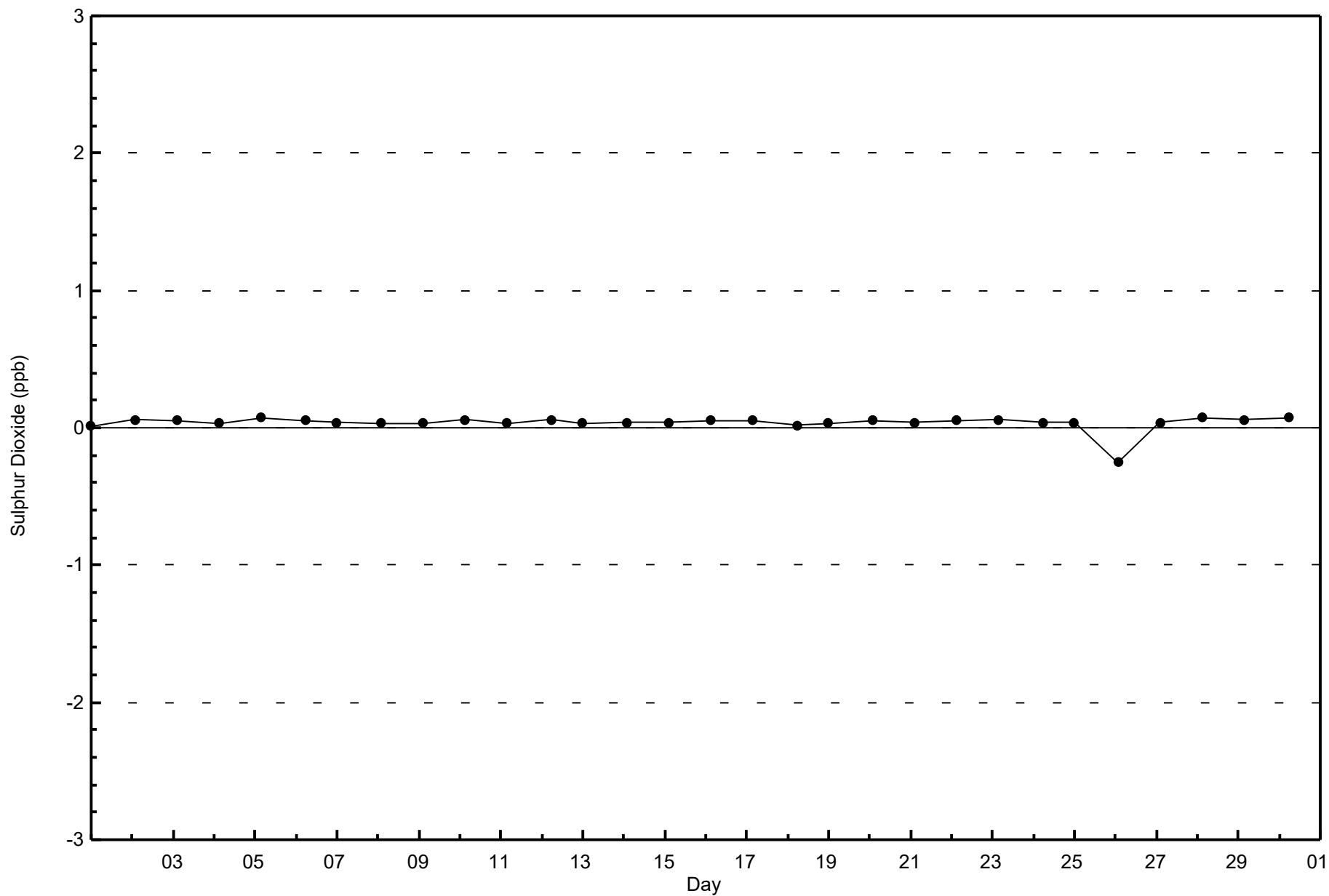
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan

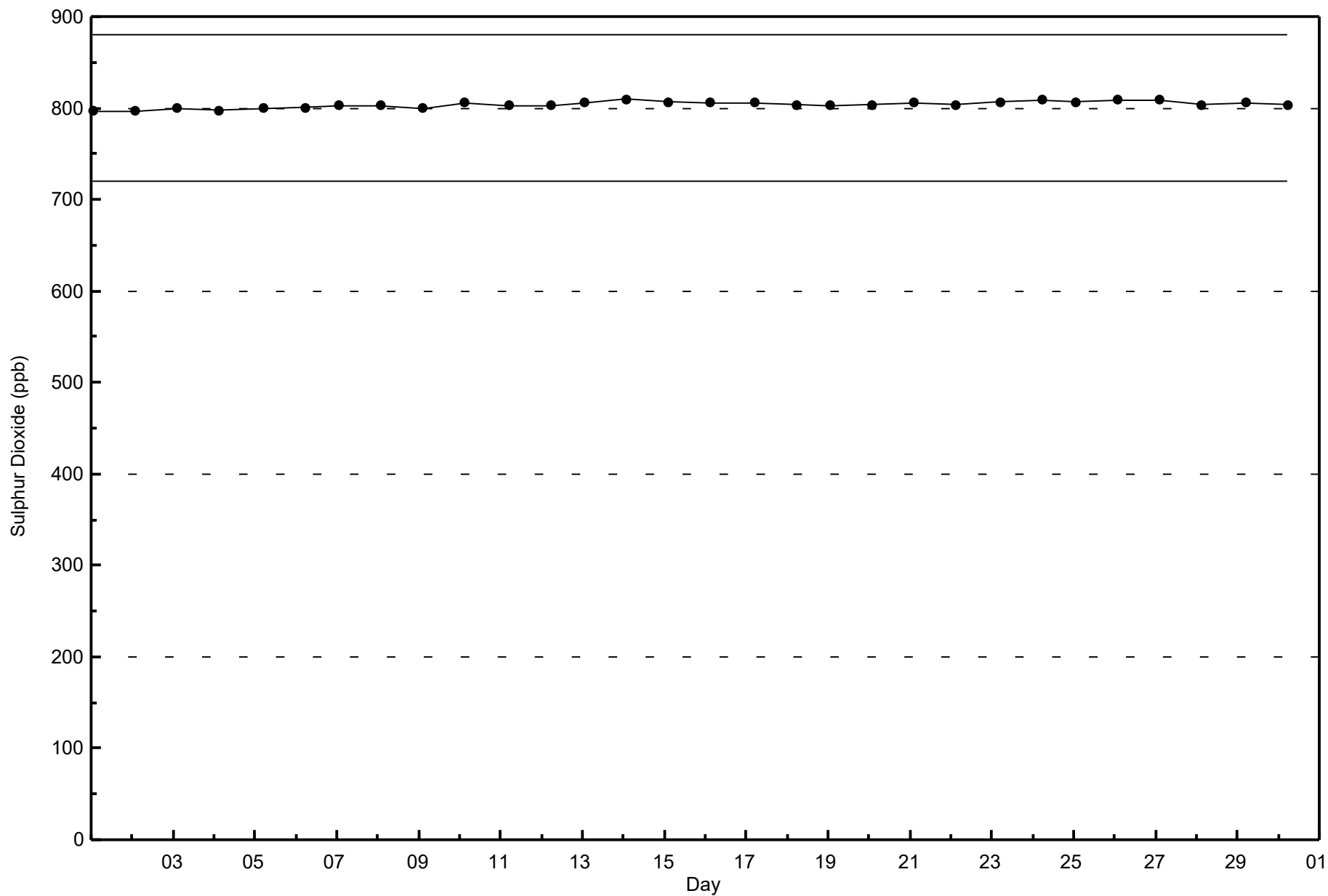






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																				Periods in Service: 1440						
Maximum Value: 0.4 ppb on Apr 15 12:30										Maximum Daily Average: 0.2 ppb on Apr 4										Periods of Valid Data: 756						
Minimum Value: 0.0 ppb on Apr 11 15:00										Minimum Daily Average: 0.1 ppb on Apr 11										Periods of Invalid Data: 684						
Maximum Diurnal Average: 0.2 ppb at hour 6										Minimum Diurnal Average: 0.2 ppb at hour 19										Periods of Calibration: 44						
Monthly Average: 0.16 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3										Percent Operational Time: 55.6						
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 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 0.2
2-Apr	0.1 0.2	0.2 0.2	Z SP	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 0.1	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	
3-Apr	0.2 0.2	0.2 0.2	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	
4-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	
5-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 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 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.1	0.2 0.1	
6-Apr	Z 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	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2 0.2	
7-Apr	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 0.2	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	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	
8-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 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	0.2 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	0.2 0.2	
9-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 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	0.2 0.2	0.2 0.2	0.2 0.2	
10-Apr	0.2 0.1	0.1 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	PF PF	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	
11-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 C	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	0.0 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 0.2	0.2 0.1	
12-Apr	Z SP	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	-- --	
13-Apr	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	-- --	
14-Apr	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	-- --	
15-Apr	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO M	UO UO	UO M	M M	M M	0.4 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.4 0.1	

Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
16-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
17-Apr	0.1 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
18-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	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
19-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.3	0.2 0.2	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	0.3
20-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.2	0.2
21-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	0.1
22-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
23-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	M M	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
24-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
25-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
26-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
27-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
28-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
29-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF M	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
30-Apr	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF M	M AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure UO - Unstable Operation 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

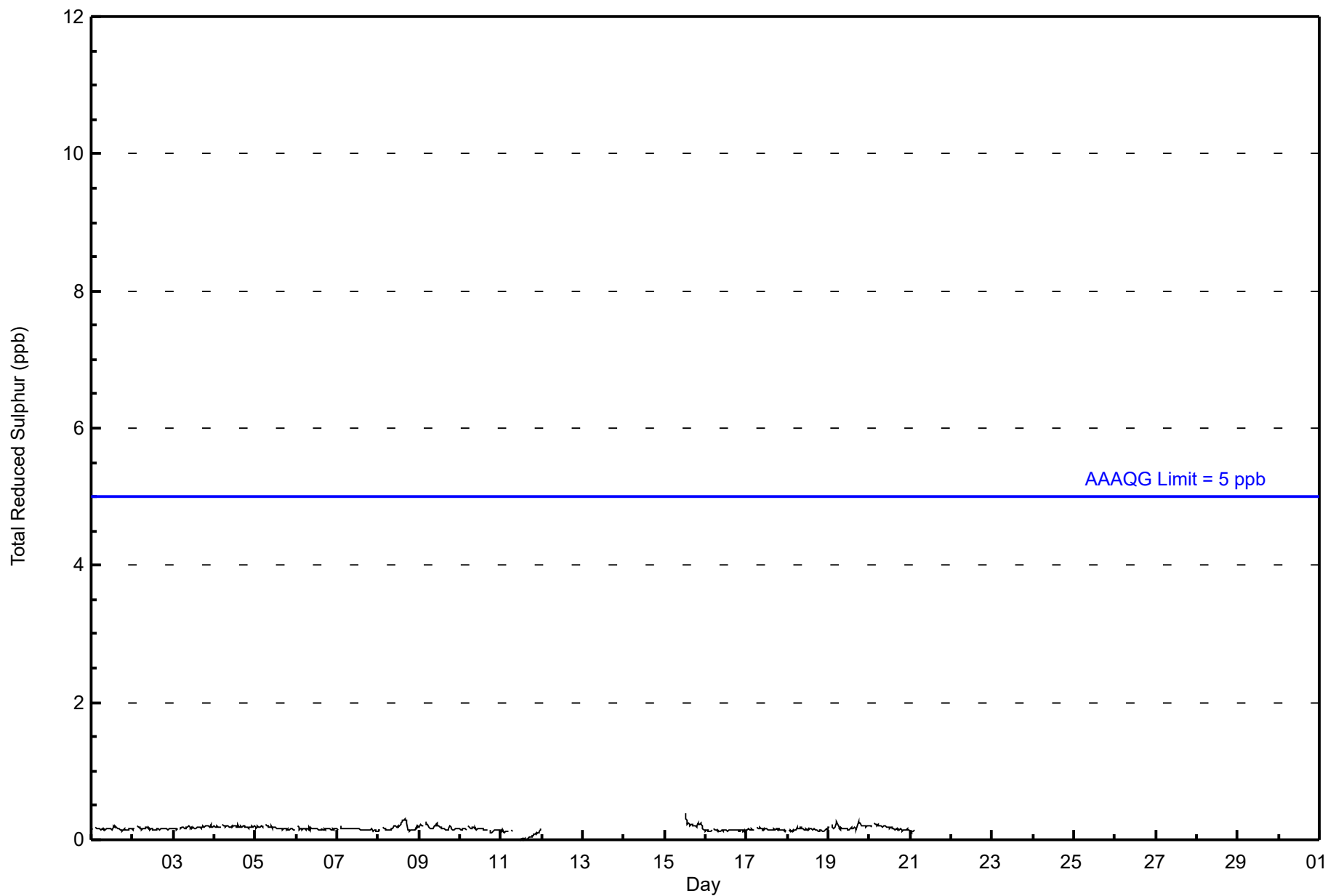
Fort Chipewyan - April 2025

Maximum Value: 0.3 ppb on Apr 15 13:00																			Maximum Daily Average: 0.2 ppb on Apr 4																			Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 11 16:00																			Minimum Daily Average: 0.1 ppb on Apr 11																			Hours of Data: 377	
Maximum Diurnal Average: 0.2 ppb at hour 6																			Minimum Diurnal Average: 0.2 ppb at hour 19																			Hours of Missing Data: 343	
Monthly Average: 0.16 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3																			Hours of Calibration: 23	
																																						Percent Operational Time: 55.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2													
2-Apr	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	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2													
3-Apr	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													
4-Apr	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													
5-Apr	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	0.1	0.2	0.1	0.1	0.2	0.2													
6-Apr	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2													
7-Apr	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2													
8-Apr	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3													
9-Apr	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	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2													
10-Apr	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	0.1	PF	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2													
11-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	C	C	C	C	C	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													
12-Apr	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--													
13-Apr	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	--													
14-Apr	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	--													
15-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	--	0.3													
16-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1													
17-Apr	0.1	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2													
18-Apr	Z	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2													
19-Apr	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	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3													
20-Apr	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	0.1	0.1	0.1	0.2	0.2													
21-Apr	0.1	0.1	0.1	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.1													
22-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
23-Apr	AF	AF	AF	AF	AF	AF	AF	M	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
24-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
25-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
26-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
27-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
28-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
29-Apr	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
30-Apr	AF	AF	AF	AF	AF	AF	AF	AF	M	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--													
Diurnal Average																								Diurnal Average															
Diurnal Maximum																								Diurnal Maximum															
Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure UO - Unstable Operation 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 Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	377	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: 377

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	4	3	8	54	65	22	6	20	6	2	8	27	47	25	67	6	370
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	4	3	8	54	65	22	6	20	6	2	8	27	47	25	67	6	370

Total Number of Valid Hours: 370

Total Number of Hours: 720



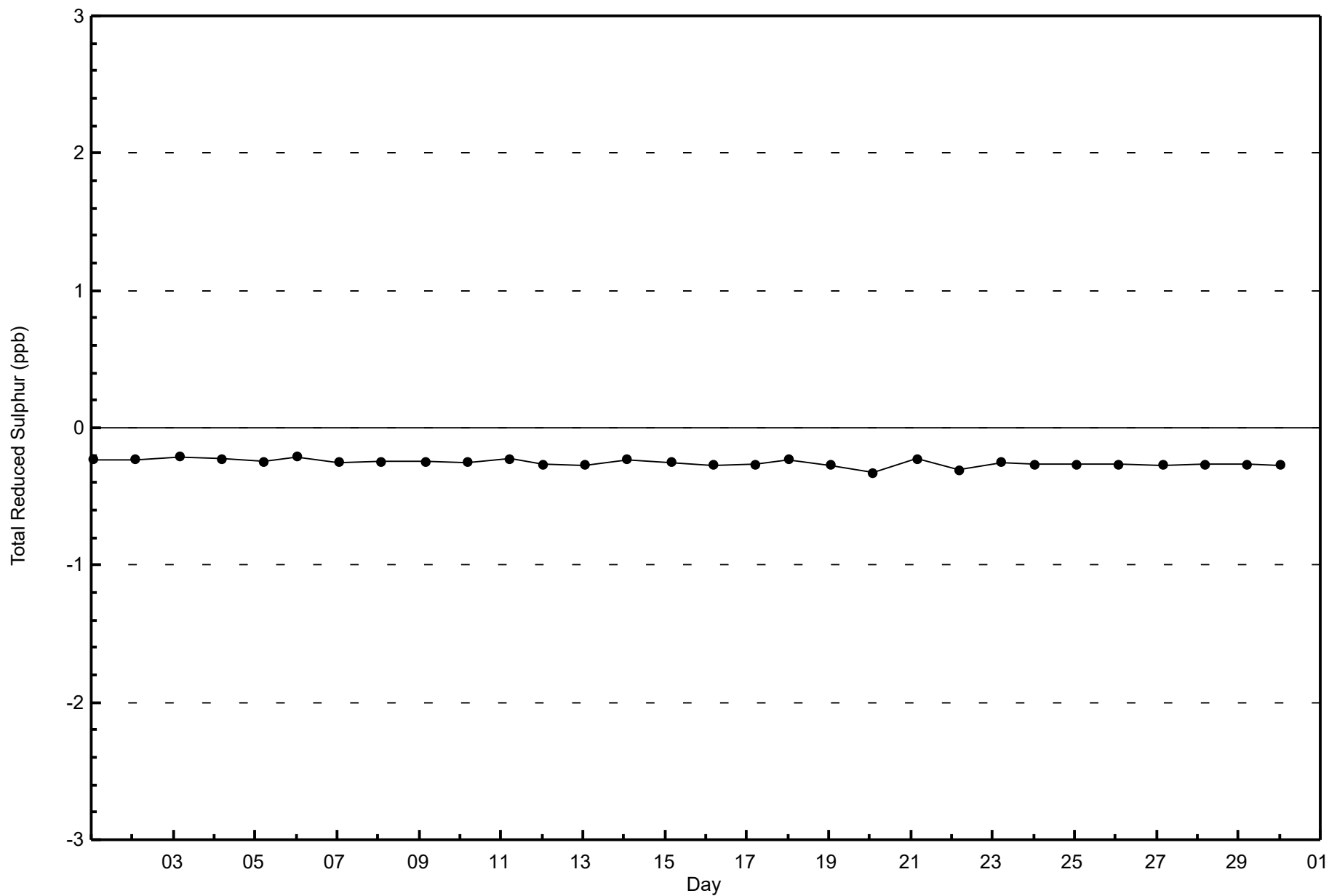
Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan

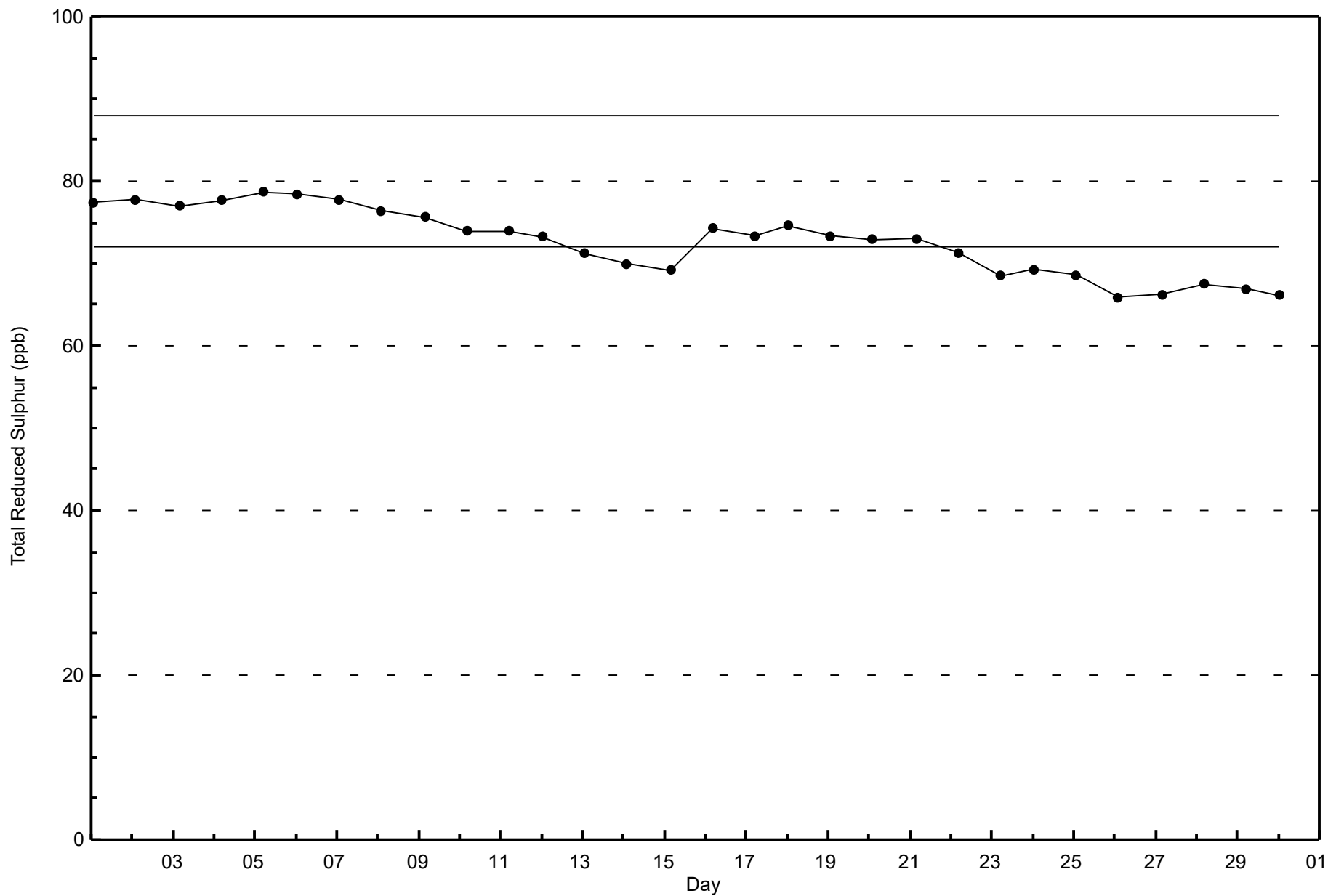




Wood Buffalo Environmental Association
Zero Responses

Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

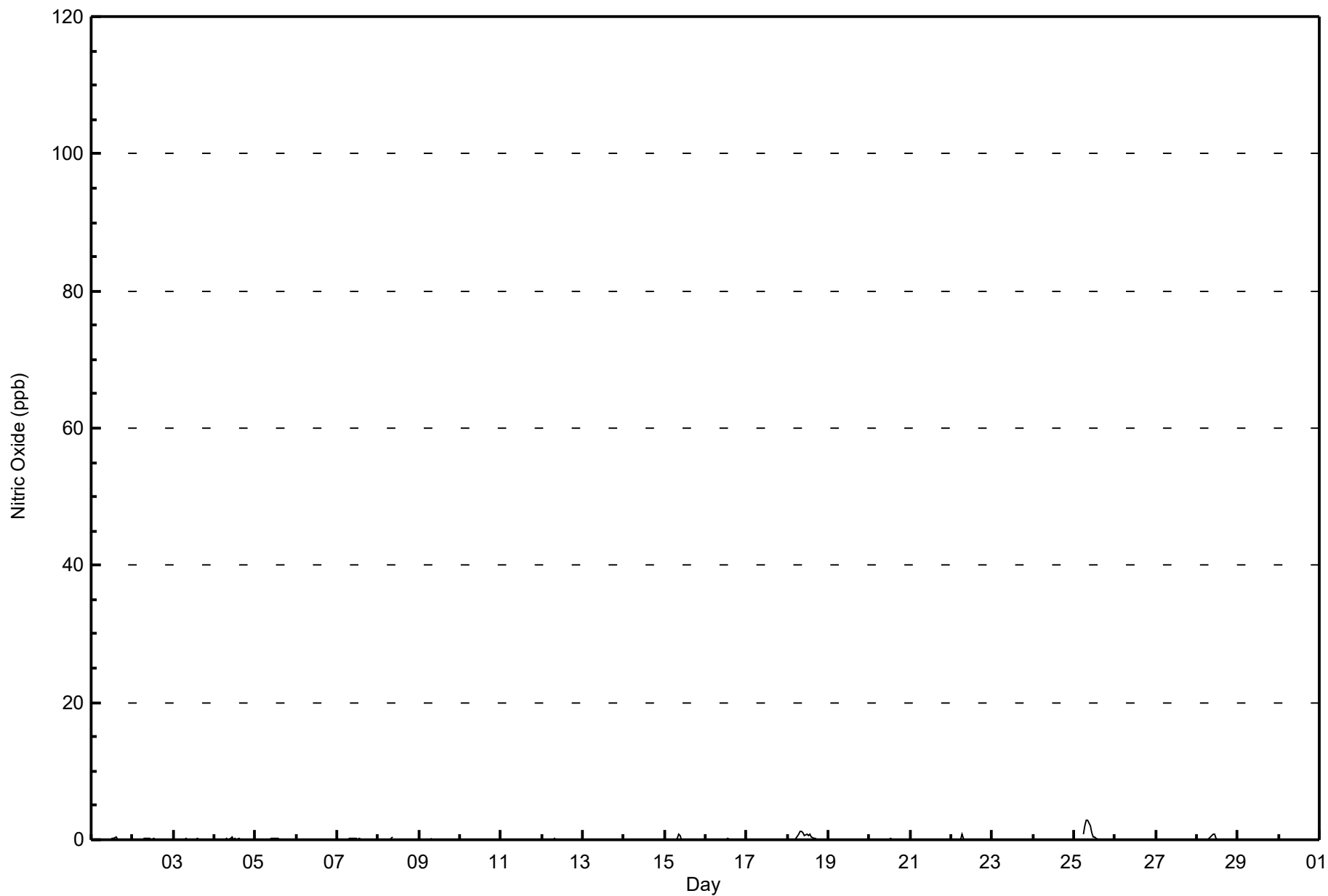
Fort Chipewyan - April 2025

Maximum Value: 2.9 ppb on Apr 25 08:00																			Maximum Daily Average: 0.6 ppb on Apr 25							Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 7 20:00																			Minimum Daily Average: 0.0 ppb on Apr 19							Hours of Data: 680	
Maximum Diurnal Average: 0.2 ppb at hour 9																			Minimum Diurnal Average: 0.0 ppb at hour 21							Hours of Missing Data: 40	
Monthly Average: 0.06 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 = 1.1							Hours of Calibration: 39	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	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	0.2	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
2-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
4-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.3	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
5-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
8-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	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	0.0	0.3	
9-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.2	
10-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
11-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
12-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
13-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-Apr	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	
15-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	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	0.1	0.8	
16-Apr	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	0.0	0.0	0.0	0.1	
17-Apr	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	
18-Apr	0.0	0.0	0.1	Z	0.0	0.1	0.9	1.1	1.2	1.1	0.7	0.7	0.6	0.8	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2	
19-Apr	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	
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
21-Apr	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	
22-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.9	0.1	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	0.9	
23-Apr	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	
24-Apr	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	
25-Apr	0.0	0.0	0.0	0.0	Z	0.8	2.1	2.9	2.8	2.1	1.1	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.9	
26-Apr	0.0	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	0.0	0.0	0.0	0.1	
27-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.9	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	
29-Apr	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	0.0	0.1	
30-Apr	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	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	13	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660
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	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660

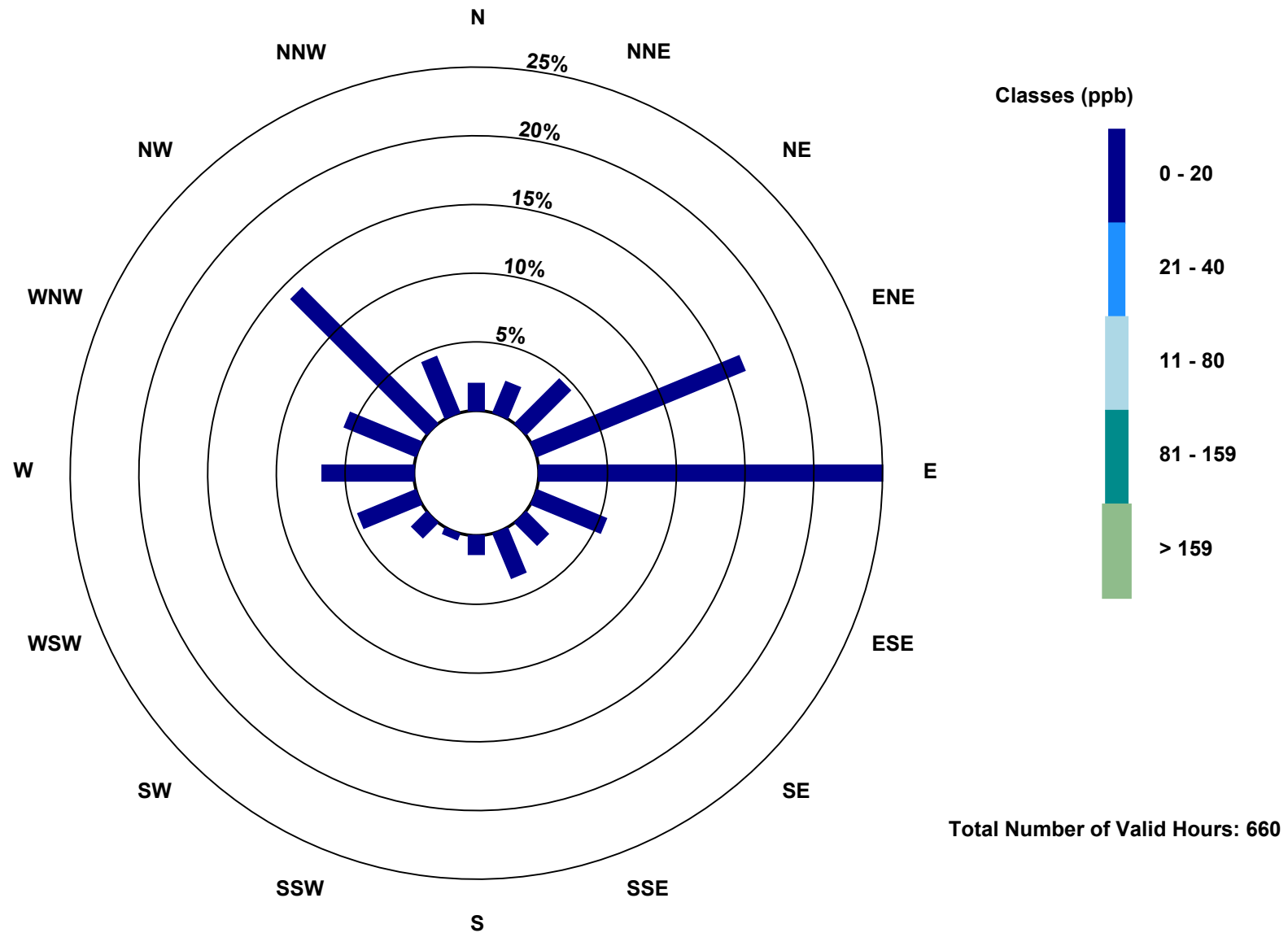
Total Number of Valid Hours: 660

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

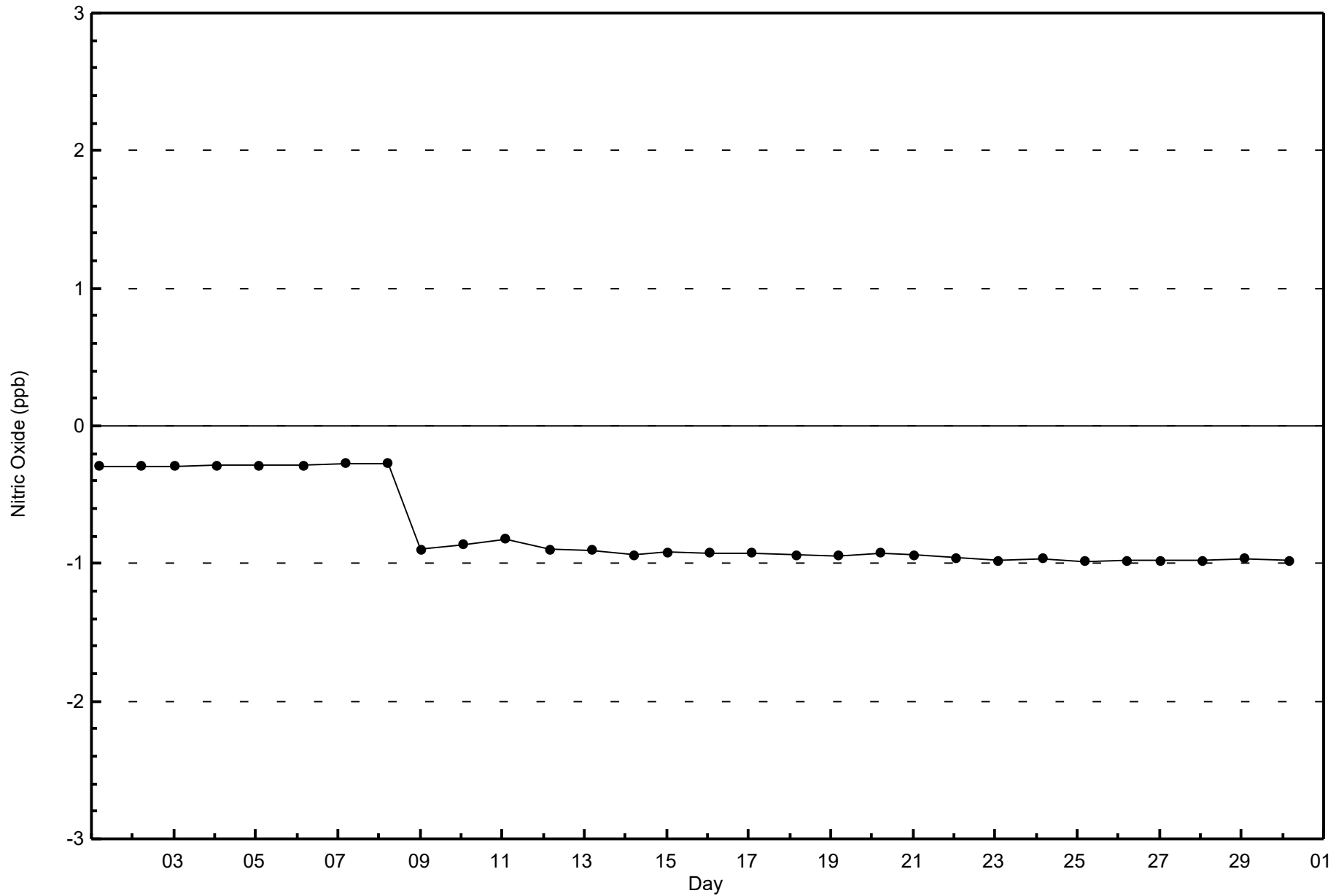
Nitric Oxide (NO) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

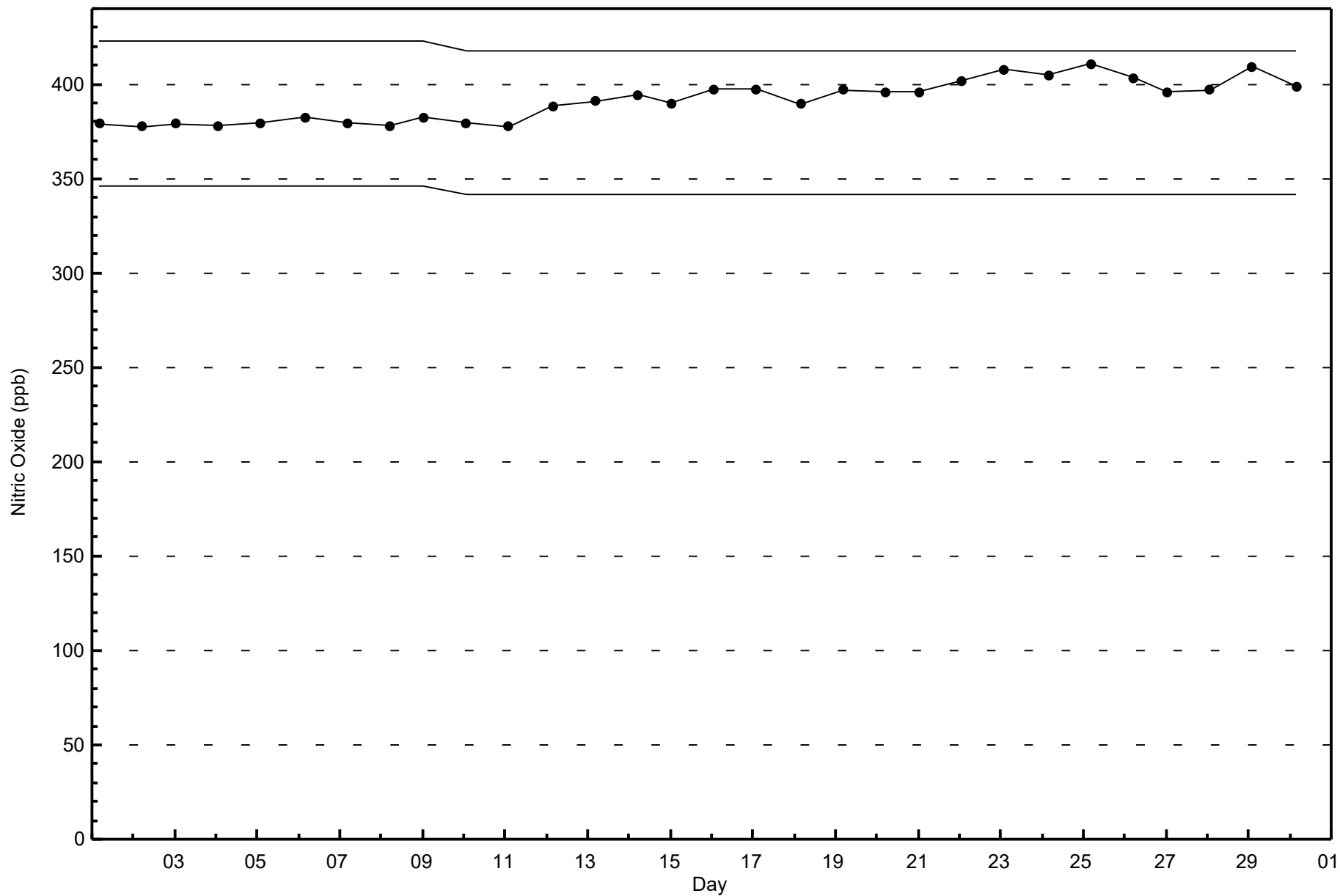
Nitric Oxide (NO) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

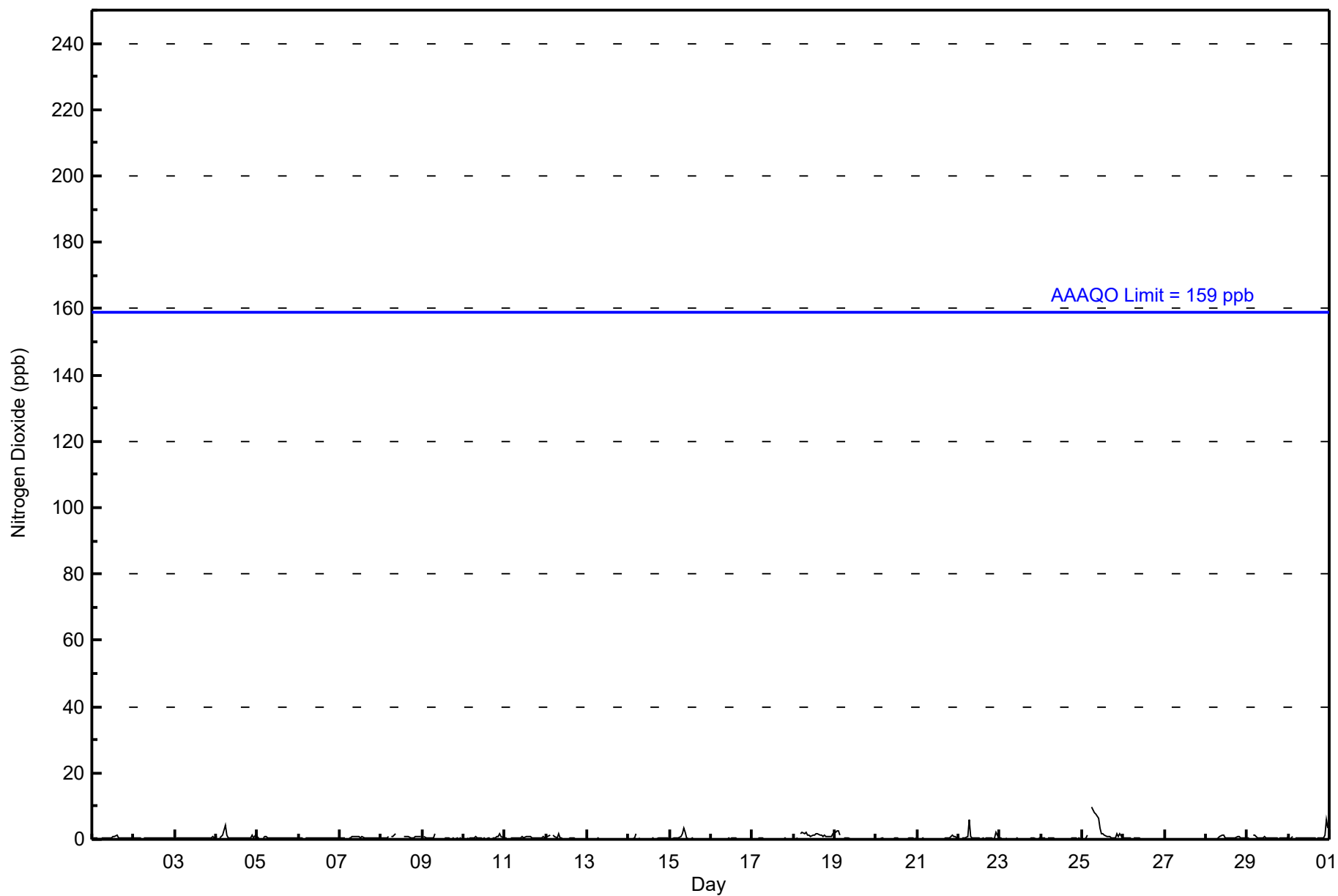
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): Maximum Value: 9.8 ppb on Apr 25 06:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 2.6 ppb on Apr 25					Hours in Service: 720 Hours of Data: 680 Hours of Missing Data: 40 Hours of Calibration: 39 Percent Operational Time: 99.9				
Minimum Value: 0.1 ppb on Apr 13 22:00 Maximum Diurnal Average: 1.0 ppb at hour 6 Monthly Average: 0.54 ppb										Minimum Daily Average: 0.2 ppb on Apr 13 Minimum Diurnal Average: 0.3 ppb at hour 18 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.5 P ₉₀ = 1.0 P ₉₉ = 4.5																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.5	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8	1.0	1.2	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.5	1.2		
2-Apr	0.3	0.4	0.3	0.3	0.3	Z	0.5	0.5	0.5	0.6	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.6		
3-Apr	Z	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.7	0.6	0.4	0.7		
4-Apr	0.7	Z	0.3	0.7	1.4	4.1	1.3	0.4	0.3	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	1.3	0.4	1.9	0.8	4.1		
5-Apr	0.5	0.4	Z	0.4	1.0	0.7	0.4	0.4	0.4	0.5	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	1.0		
6-Apr	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.3	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	0.3	0.3	0.3	0.4	0.4		
7-Apr	0.3	0.4	0.5	0.6	Z	0.5	0.6	0.8	0.9	0.7	0.7	0.8	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.6	0.9		
8-Apr	0.5	0.5	0.5	0.6	0.7	Z	0.7	1.0	1.9	C	C	C	C	1.0	0.9	0.8	0.9	0.6	0.6	0.6	0.7	1.0	0.9	1.0	0.8	1.9	1.9		
9-Apr	Z	0.8	0.6	0.6	0.6	0.5	0.6	1.6	C	C	C	C	C	0.3	0.3	0.3	0.2	0.2	0.5	0.2	0.3	0.2	0.3	0.2	0.5	1.6			
10-Apr	0.3	Z	0.3	0.2	0.3	0.5	0.4	0.7	0.3	0.3	0.3	0.2	0.4	0.2	0.3	0.3	PF	0.3	0.6	0.8	1.0	1.5	0.8	0.5	0.5	1.5			
11-Apr	0.4	0.3	Z	0.3	0.3	0.4	0.5	0.4	0.5	0.6	0.7	0.6	0.9	0.8	0.7	0.8	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.5	0.9	0.9		
12-Apr	0.7	0.9	1.2	Z	1.1	0.8	0.4	1.9	0.6	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	0.5	1.9		
13-Apr	0.2	0.2	0.2	0.2	Z	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4		
14-Apr	0.1	0.1	0.2	0.3	1.6	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	1.6			
15-Apr	Z	0.2	0.3	0.3	0.3	0.4	0.7	1.7	3.4	2.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	3.4		
16-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	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	0.4		
17-Apr	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4		
18-Apr	0.2	0.2	0.5	Z	1.9	2.0	1.9	2.0	1.4	1.2	1.0	1.2	1.2	1.7	1.6	1.1	1.2	0.9	1.1	1.0	0.8	0.8	1.0	1.6	1.2	2.0			
19-Apr	2.1	2.4	2.7	1.2	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	0.2	0.5	2.7		
20-Apr	0.2	0.2	0.2	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	0.2	0.3	0.3	0.5		
21-Apr	Z	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	1.2	0.8	0.7	0.6	0.3	1.2			
22-Apr	0.7	Z	0.5	0.4	0.4	0.8	6.1	0.8	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.6	0.3	0.4	0.4	0.2	0.5	2.3	0.5	0.7	6.1			
23-Apr	0.4	0.3	Z	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	0.3	0.6	0.3	0.2	0.2	0.3	0.3	0.6			
24-Apr	0.2	0.3	0.4	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	0.3	0.5	0.3	0.2	0.3	0.2	0.3	0.5			
25-Apr	0.2	0.2	0.3	1.3	Z	9.8	9.0	7.9	7.7	6.2	3.4	1.8	1.9	1.4	1.0	0.9	0.7	0.6	0.6	0.4	1.5	0.9	1.5	0.4	2.6	9.8			
26-Apr	0.6	0.4	0.3	0.6	0.4	Z	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6			
27-Apr	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			
28-Apr	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.4	1.0	1.3	1.4	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.7	0.6	0.5	0.5	0.5	0.5	1.4			
29-Apr	0.6	0.6	Z	1.1	1.2	0.9	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.5	0.6	0.3	0.6	1.2			
30-Apr	0.7	0.2	1.0	Z	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.5	1.4	6.1	3.5	0.8	6.1			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration PF - Power Failure																													
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	13	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660
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	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660

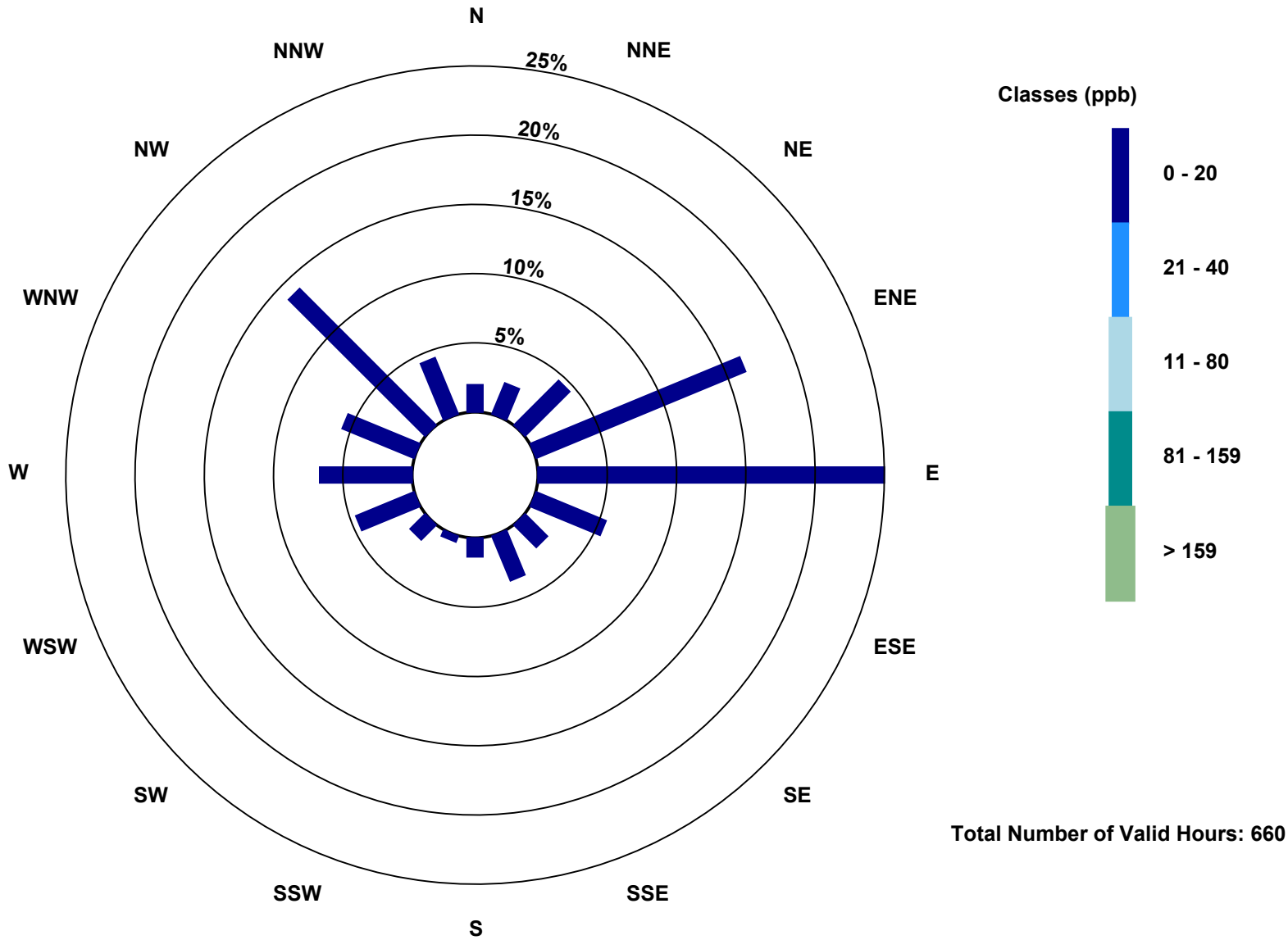
Total Number of Valid Hours: 660

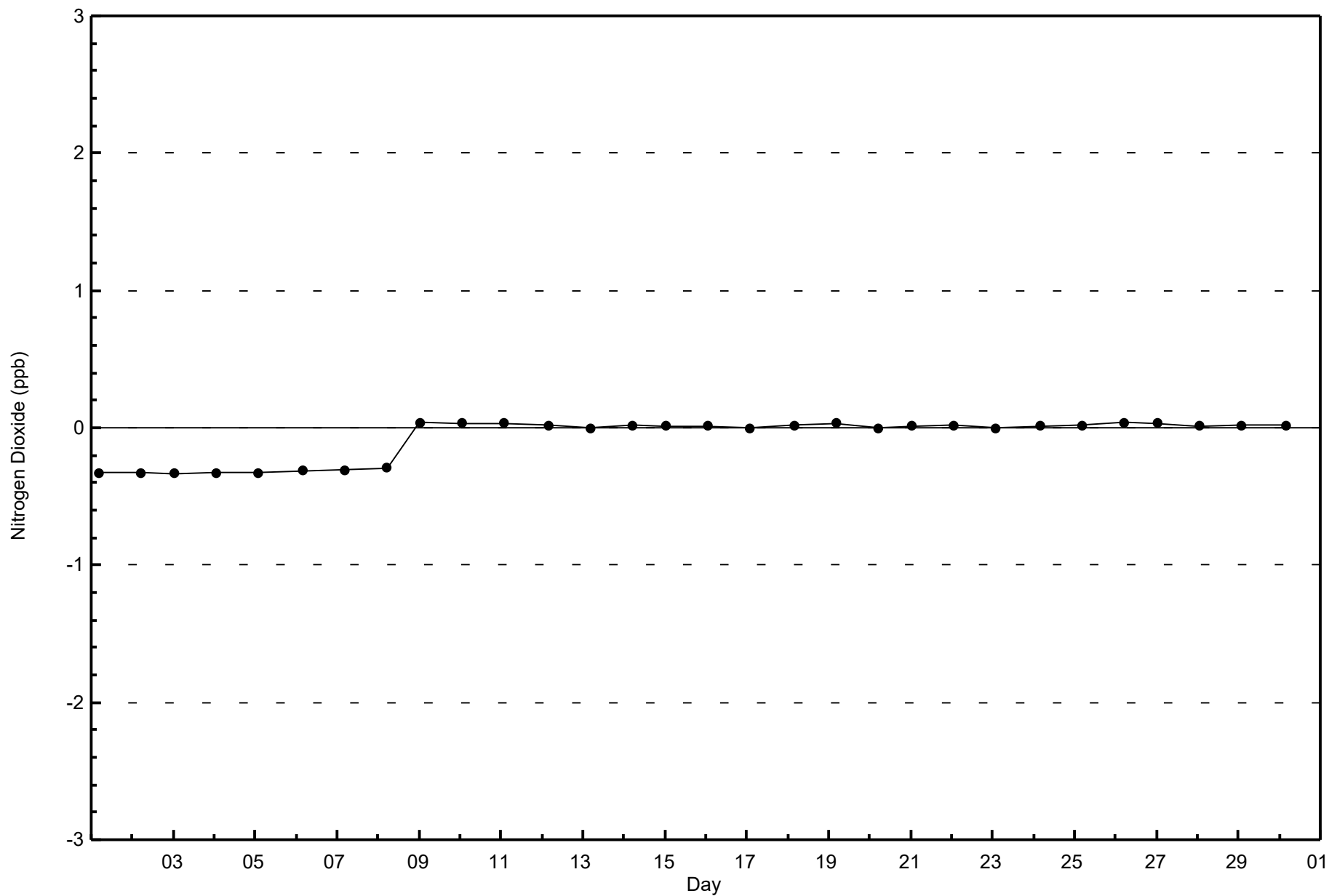
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan

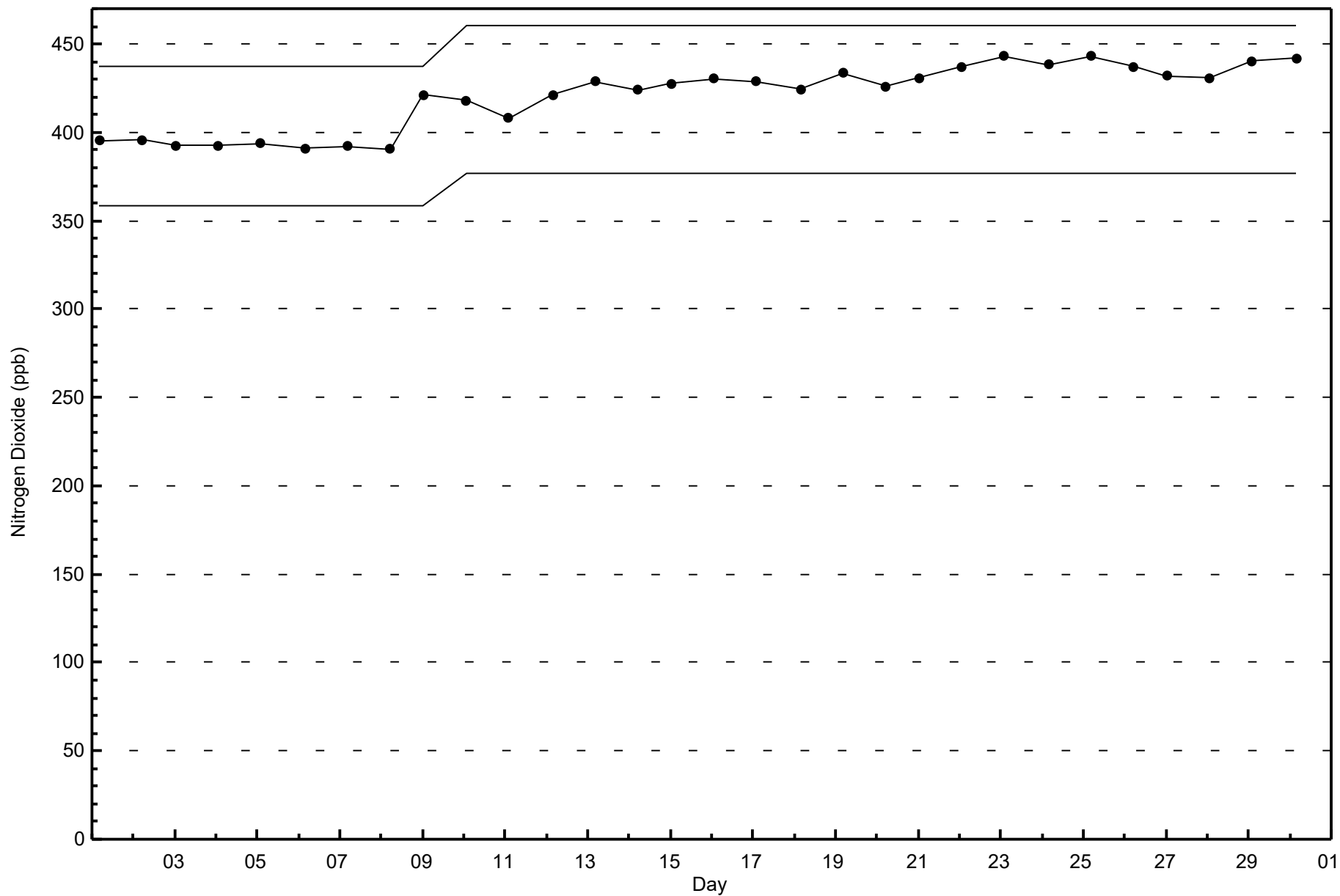






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan - April 2025

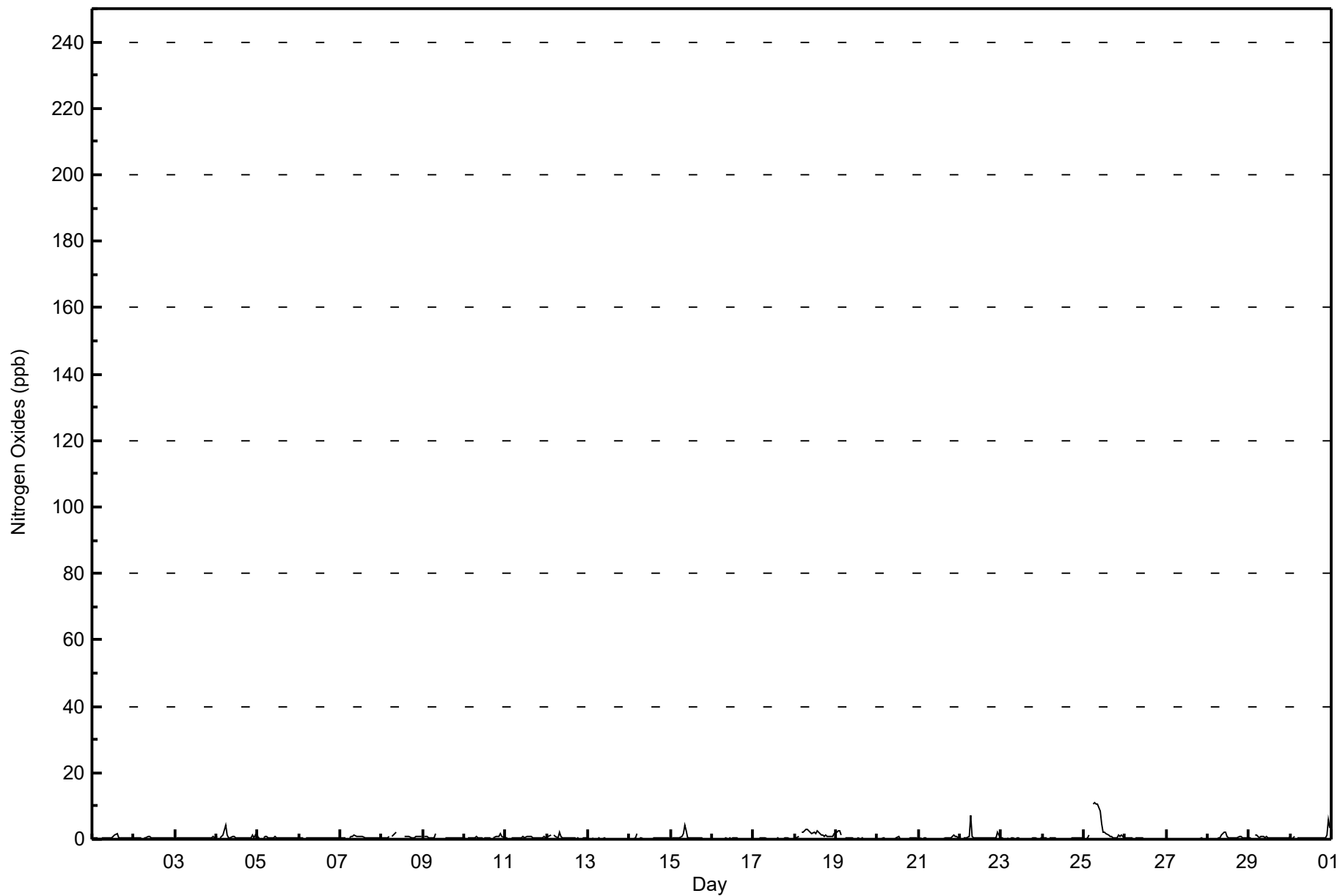


Maximum Value: 11.1 ppb on Apr 25 07:00																		Maximum Daily Average: 3.2 ppb on Apr 25										Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 14 01:00																		Minimum Daily Average: 0.2 ppb on Apr 27										Hours of Data: 680	
Maximum Diurnal Average: 1.1 ppb at hour 7																		Minimum Diurnal Average: 0.3 ppb at hour 18										Hours of Missing Data: 40	
Monthly Average: 0.59 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.4 Q ₃ = 0.6 P ₉₀ = 1.0 P ₉₉ = 4.9										Hours of Calibration: 39	
																		Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.5	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.9	1.2	1.5	0.6	0.5	0.4	0.5	0.4	0.4	0.3	0.4	0.3	0.5	1.5			
2-Apr	0.3	0.4	0.3	0.3	0.3	Z	0.6	0.6	0.7	0.9	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.9			
3-Apr	Z	0.4	0.4	0.5	0.4	0.4	0.5	0.6	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.7	0.6	0.4	0.7			
4-Apr	0.7	Z	0.3	0.7	1.4	4.2	1.4	0.5	0.3	0.8	0.7	0.4	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	1.3	0.4	1.9	0.8	4.2			
5-Apr	0.5	0.4	Z	0.4	1.0	0.7	0.4	0.5	0.4	0.6	0.8	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	1.0			
6-Apr	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4			
7-Apr	0.3	0.4	0.5	0.6	Z	0.5	0.6	1.0	1.1	0.8	0.8	1.0	0.7	0.8	0.6	0.6	0.5	0.5	0.6	0.4	0.5	0.5	0.5	0.4	0.6	1.1			
8-Apr	0.5	0.5	0.5	0.6	0.7	Z	0.7	1.1	2.2	C	C	C	C	C	1.0	0.9	0.8	0.9	0.6	0.6	0.6	0.7	1.0	0.9	1.0	0.8	2.2		
9-Apr	Z	0.8	0.6	0.6	0.6	0.5	0.6	1.8	C	C	C	C	C	C	0.3	0.3	0.3	0.2	0.2	0.5	0.2	0.3	0.2	0.3	0.2	0.5	1.8		
10-Apr	0.3	Z	0.3	0.2	0.3	0.5	0.4	0.8	0.3	0.3	0.3	0.2	0.4	0.2	0.3	0.3	PF	0.3	0.6	0.8	1.0	1.5	0.8	0.5	0.5	1.5			
11-Apr	0.4	0.3	Z	0.3	0.3	0.4	0.5	0.4	0.5	0.6	0.7	0.6	1.0	0.9	0.7	0.8	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.6	1.0			
12-Apr	0.7	0.9	1.2	Z	1.1	0.8	0.4	2.2	0.7	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	0.5	2.2			
13-Apr	0.2	0.2	0.2	0.2	Z	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4			
14-Apr	0.1	0.1	0.2	0.3	1.6	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	1.6			
15-Apr	Z	0.2	0.3	0.3	0.3	0.4	0.7	1.8	4.2	2.7	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	0.2	0.6	4.2			
16-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5			
17-Apr	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4			
18-Apr	0.2	0.2	0.6	Z	1.9	2.1	2.8	3.1	2.6	2.3	1.7	1.9	1.8	2.5	2.0	1.3	1.3	1.0	1.1	1.0	0.8	0.8	1.0	1.6	1.6	3.1			
19-Apr	2.1	2.4	2.7	1.2	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	0.5	2.7			
20-Apr	0.2	0.2	0.2	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	0.2	0.3	0.3	0.6			
21-Apr	Z	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	1.2	0.8	0.7	0.6	0.3	1.2			
22-Apr	0.7	Z	0.5	0.4	0.4	0.8	7.0	0.9	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.6	0.3	0.4	0.4	0.2	0.5	2.3	0.5	0.8	7.0			
23-Apr	0.4	0.3	Z	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	0.3	0.6	0.3	0.2	0.2	0.3	0.2	0.6			
24-Apr	0.2	0.3	0.4	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	0.3	0.5	0.3	0.2	0.3	0.2	0.3	0.5			
25-Apr	0.2	0.2	0.3	1.3	Z	10.6	11.1	10.8	10.5	8.3	4.5	2.2	2.2	1.6	1.1	1.0	0.7	0.6	0.6	0.4	1.5	0.9	1.5	0.4	3.2	11.1			
26-Apr	0.6	0.4	0.3	0.6	0.4	Z	0.3	0.4	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6			
27-Apr	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			
28-Apr	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.5	1.5	2.2	2.1	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.7	0.7	0.6	0.5	0.5	0.5	0.6	2.2			
29-Apr	0.6	0.6	Z	1.1	1.2	0.9	0.6	0.7	0.7	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.5	0.6	0.3	0.6	1.2			
30-Apr	0.7	0.2	1.0	Z	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.5	1.4	6.1	3.5	0.8	6.1			
																								Diurnal Average					
																								Diurnal Maximum					
Z - zerospan C - Calibration PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	13	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660
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	16	30	108	165	36	15	23	9	3	10	30	44	37	92	29	660

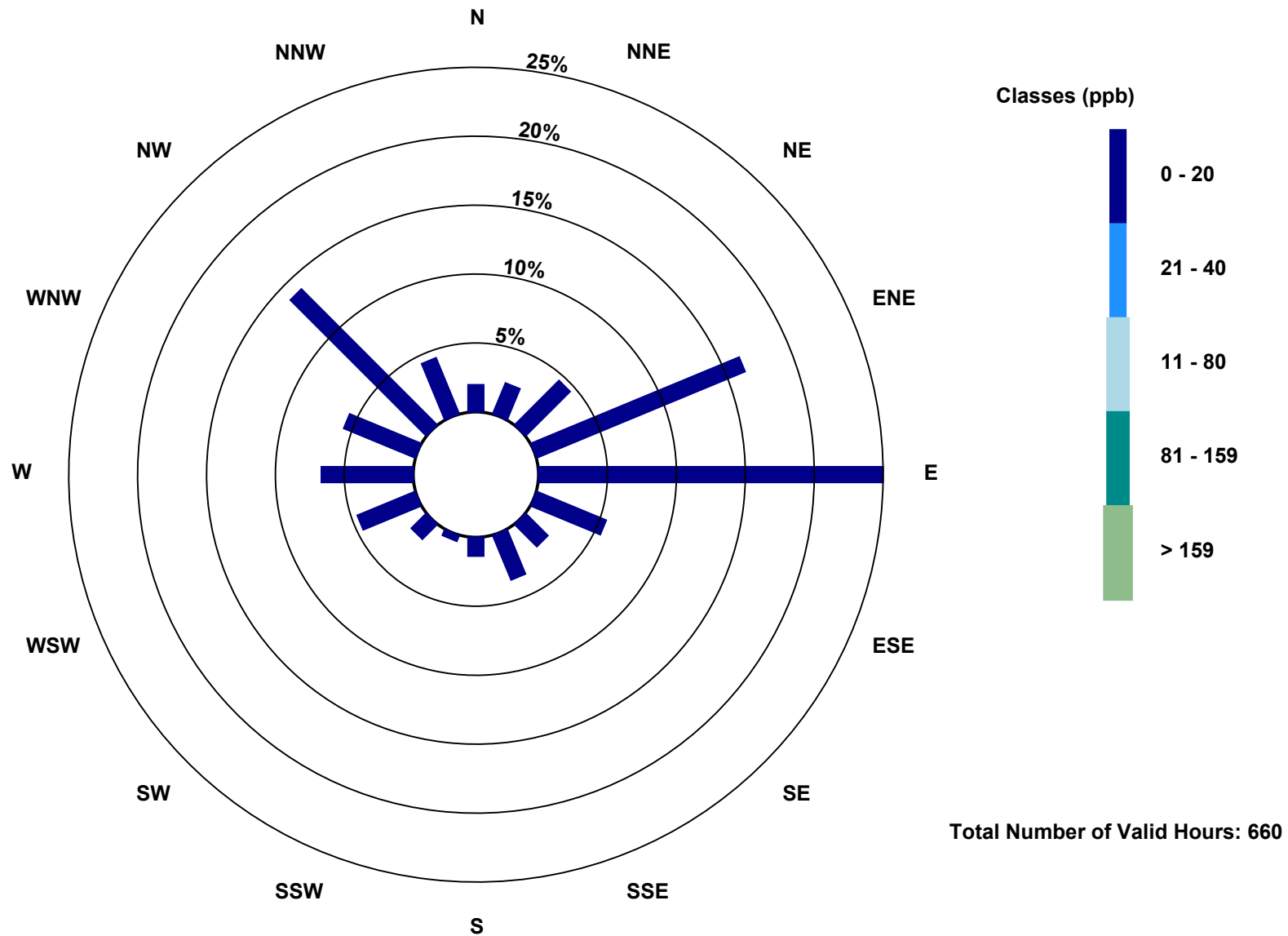
Total Number of Valid Hours: 660

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

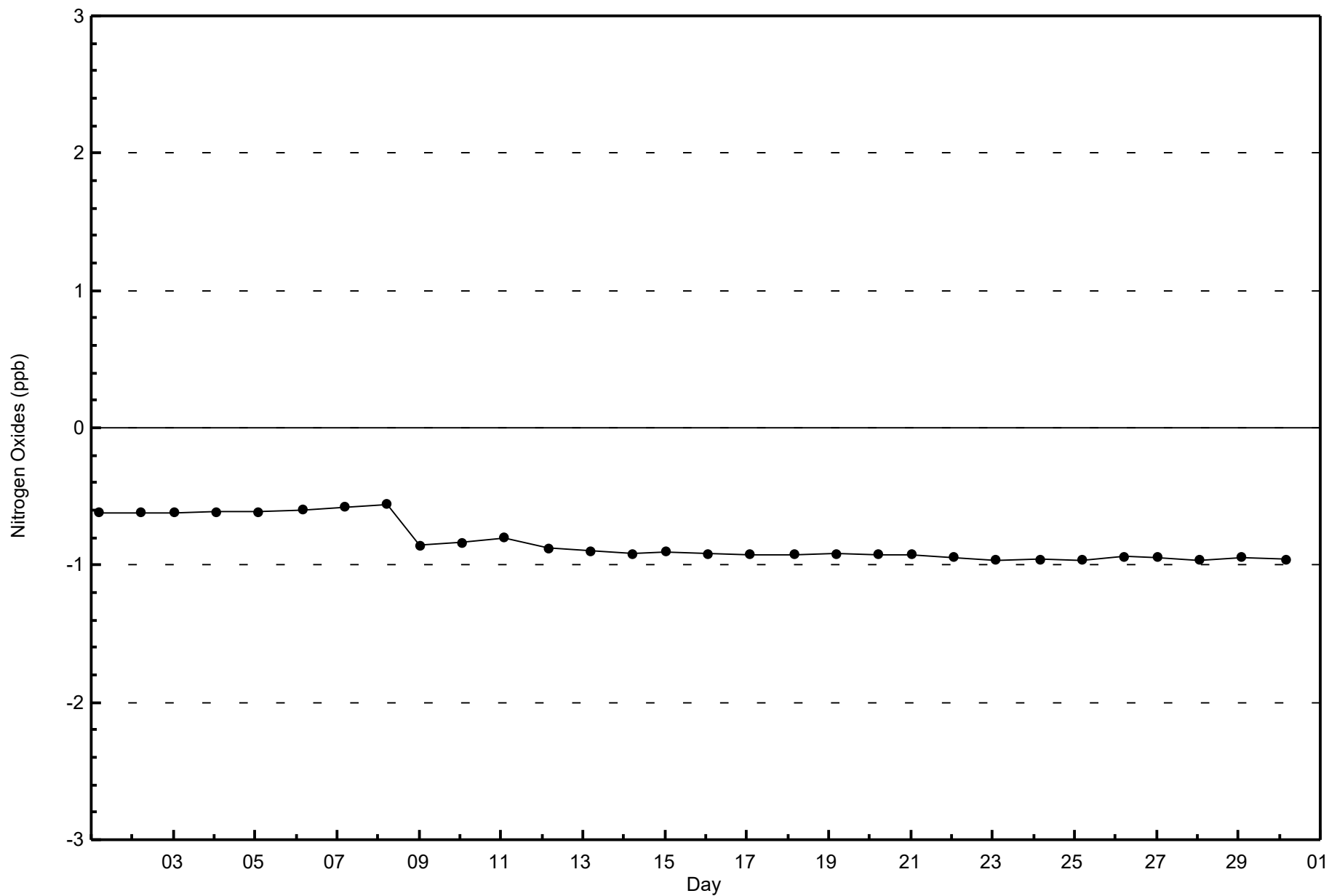
Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

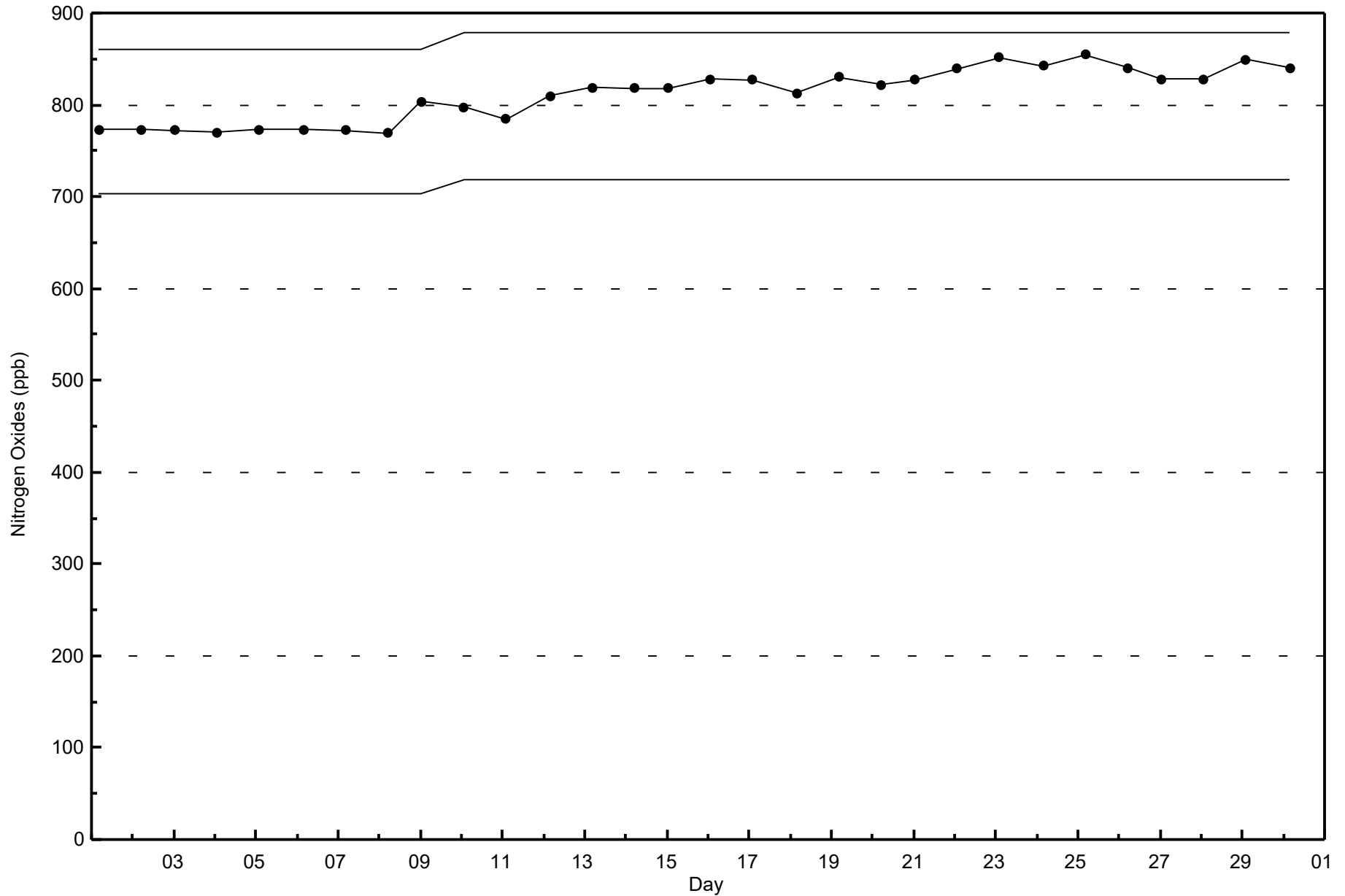
Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

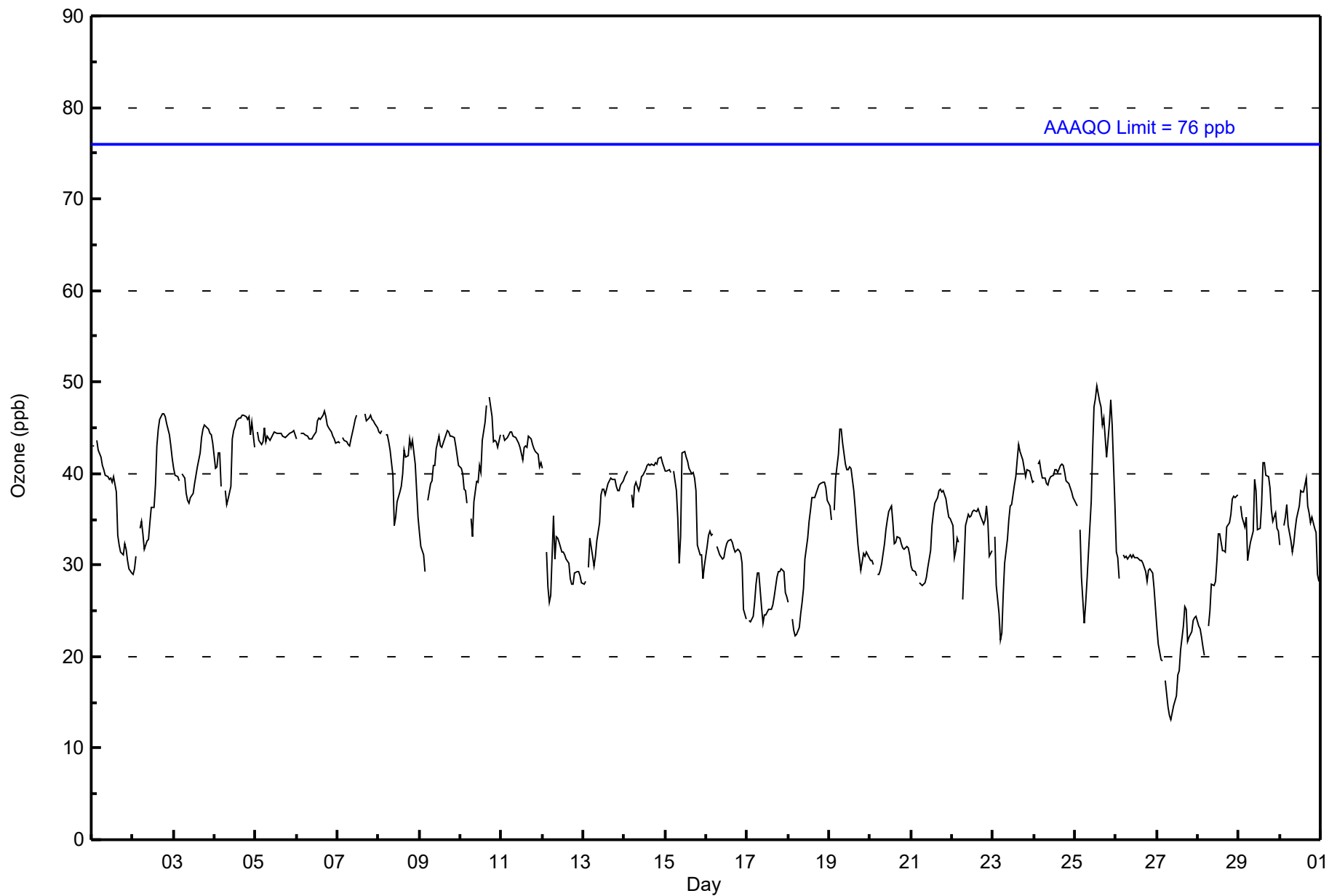
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 49.5 ppb on Apr 25 14:00 Maximum Daily Average: 44.9 ppb on Apr 7																								Hours in Service: 720		
Minimum Value: 13.1 ppb on Apr 27 09:00 Minimum Daily Average: 19.9 ppb on Apr 27 Maximum Diurnal Average: 38.7 ppb at hour 18 Minimum Diurnal Average: 34.1 ppb at hour 8 Monthly Average: 36.39 ppb Percentiles: P ₁ = 17.9 P ₁₀ = 27.7 Q ₁ = 31.3 Median = 37.5 Q ₃ = 42.3 P ₉₀ = 44.5 P ₉₉ = 47.2																								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 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-Apr	43.0	43.0	Z	43.6	42.5	41.8	40.8	40.4	39.8	39.6	39.4	39.5	39.0	39.6	38.0	33.3	32.2	31.4	31.2	32.4	31.7	30.5	29.6	29.1	37.0	43.6
2-Apr	29.0	29.6	30.9	Z	34.0	34.7	33.5	31.8	32.6	32.7	34.6	36.2	36.2	38.8	43.1	44.9	45.9	46.6	46.5	46.2	45.4	44.2	43.0	41.6	38.3	46.6
3-Apr	40.5	39.9	39.7	39.2	Z	40.0	39.6	37.9	37.1	36.7	37.4	37.9	39.0	39.8	40.7	42.3	44.0	44.9	45.3	45.1	44.8	44.4	44.2	43.3	41.0	45.3
4-Apr	40.6	40.7	42.3	42.3	38.6	Z	38.1	36.6	37.2	38.6	43.8	44.6	45.1	45.8	46.1	46.1	46.3	46.3	46.2	46.0	46.2	44.2	45.7	42.8	43.1	46.3
5-Apr	Z	44.6	43.7	43.1	43.5	45.1	43.5	44.1	43.7	43.9	44.3	44.5	44.4	44.3	44.4	44.4	44.1	43.9	44.0	44.2	44.4	44.6	44.6	44.3	44.2	45.1
6-Apr	43.8	Z	44.4	44.4	44.5	44.3	44.0	43.8	43.8	43.8	44.1	44.5	45.7	46.1	46.0	46.4	46.8	46.2	45.4	44.9	44.5	44.1	43.8	43.4	44.7	46.8
7-Apr	43.4	43.4	Z	44.0	43.6	43.5	43.2	43.1	43.8	45.2	45.9	46.4	C	C	C	C	46.6	45.8	46.1	46.4	45.9	45.8	45.4	44.9	44.9	46.6
8-Apr	44.5	44.4	44.7	Z	44.2	44.3	43.5	42.6	39.7	34.3	35.3	37.0	38.0	38.6	40.0	42.6	41.8	41.9	43.7	42.9	43.6	41.1	38.1	35.2	41.0	44.7
9-Apr	33.5	32.0	31.1	29.2	Z	37.0	38.9	39.2	40.9	40.9	42.6	44.1	43.0	42.8	43.4	44.2	44.7	44.6	44.1	44.1	43.9	43.1	41.9	40.9	40.4	44.7
10-Apr	40.6	40.0	38.3	38.2	36.7	Z	35.0	33.1	36.8	39.2	39.0	40.8	40.1	43.7	45.6	47.4	PF	48.3	46.2	43.5	43.6	43.4	42.8	44.2	41.2	48.3
11-Apr	Z	44.2	43.6	44.0	44.2	44.6	44.6	44.1	44.0	43.7	43.3	42.9	41.5	42.9	43.1	42.9	44.0	43.9	43.1	42.7	42.3	42.1	40.8	41.1	43.2	44.6
12-Apr	40.5	Z	31.4	27.6	25.9	26.7	35.4	30.7	33.1	33.0	32.4	31.5	31.4	31.0	30.7	30.2	28.6	27.9	27.9	29.1	29.3	29.3	28.8	28.0	30.5	40.5
13-Apr	27.9	28.2	Z	29.7	32.9	31.0	29.9	30.9	32.6	34.6	37.6	38.3	38.3	37.6	38.8	39.3	39.5	39.4	39.3	38.7	38.1	38.1	38.8	39.2	35.6	39.5
14-Apr	39.6	40.0	40.2	Z	37.7	36.2	38.5	39.1	38.1	38.8	39.7	39.9	40.4	40.9	41.0	41.0	41.0	40.9	41.2	41.0	41.7	41.7	41.2	40.7	40.0	41.7
15-Apr	40.3	40.2	40.4	40.2	Z	40.2	38.2	35.1	30.2	33.2	42.3	42.4	41.8	41.4	40.5	39.9	40.1	39.5	38.2	32.2	31.1	31.0	28.6	30.0	37.3	42.4
16-Apr	32.1	33.2	33.7	33.3	33.4	Z	32.0	31.6	31.1	30.6	30.8	31.8	32.4	32.6	32.8	32.6	31.9	31.5	31.7	31.6	31.3	30.2	25.2	24.1	31.4	33.7
17-Apr	Z	23.9	23.8	24.4	25.9	28.0	29.1	29.1	25.3	23.7	24.5	24.6	25.2	25.1	25.1	25.6	26.5	28.7	29.3	29.3	29.5	29.2	27.0	26.5	26.5	29.5
18-Apr	26.0	Z	24.1	22.9	22.2	22.5	23.2	24.8	26.0	27.5	30.6	33.0	34.7	36.0	37.3	37.4	37.8	38.3	38.7	38.9	39.1	39.0	38.5	37.0	32.0	39.1
19-Apr	36.5	35.0	Z	36.0	39.4	42.0	44.8	44.9	43.4	41.1	40.4	40.4	40.7	40.6	38.1	36.3	34.2	32.2	29.4	30.4	31.2	30.9	31.4	30.9	37.0	44.9
20-Apr	30.6	30.5	30.0	Z	29.0	29.0	29.5	30.1	32.3	33.9	34.9	35.8	36.4	34.7	32.4	32.4	33.1	33.0	32.4	31.9	31.8	32.0	31.8	31.1	32.1	36.4
21-Apr	29.9	29.5	29.4	28.8	Z	28.0	27.7	28.0	28.1	28.6	29.8	31.5	34.3	35.8	36.8	37.4	38.1	38.2	38.0	38.1	37.2	36.1	35.2	35.1	33.0	38.2
22-Apr	34.3	30.8	31.6	33.0	32.5	Z	26.3	30.4	34.4	35.6	35.2	35.4	35.8	36.0	35.9	36.2	35.7	35.2	34.5	35.0	36.5	34.8	31.0	31.6	33.8	36.5
23-Apr	Z	33.0	27.8	24.7	21.9	22.6	26.9	30.3	32.8	34.9	36.5	36.7	38.7	39.6	41.5	43.2	42.4	41.5	40.5	39.7	40.4	40.3	39.6	39.1	35.4	43.2
24-Apr	39.3	Z	41.0	41.3	40.2	39.5	39.5	38.9	38.8	39.3	39.6	39.8	40.5	40.5	40.1	40.8	41.1	40.9	40.1	39.2	38.9	38.4	38.0	37.3	39.7	41.3
25-Apr	36.8	36.5	Z	33.8	28.8	23.6	25.7	28.4	31.3	36.9	42.6	47.3	48.2	49.5	48.0	47.2	45.4	46.0	41.8	43.6	45.5	48.1	45.3	36.5	39.9	49.5
26-Apr	31.4	30.8	28.5	Z	31.2	30.8	31.0	30.7	31.1	30.9	31.1	30.8	30.8	30.6	30.5	30.5	30.3	29.3	28.2	29.5	29.6	29.1	27.5	25.4	30.0	31.4
27-Apr	23.2	21.4	19.7	19.6	Z	17.4	14.5	13.6	13.1	13.9	14.6	15.7	17.9	18.4	20.7	23.3	25.4	25.1	21.6	22.1	22.7	23.9	24.3	24.4	19.9	25.4
28-Apr	23.3	23.0	22.1	21.1	20.1	Z	23.4	25.1	28.0	27.8	28.3	30.5	33.4	33.4	31.5	31.5	31.4	34.2	34.7	35.6	37.2	37.5	37.4	37.7	29.9	37.7
29-Apr	Z	36.5	35.3	34.2	35.2	30.5	31.6	32.4	33.8	39.3	38.2	33.8	34.0	36.6	41.2	41.2	39.9	39.7	38.4	36.1	34.8	35.7	34.1	33.7	35.9	41.2
30-Apr	32.2	Z	34.3	35.2	36.6	34.3	32.6	31.5	32.4	33.9	35.1	36.5	38.1	37.9	38.0	39.5	36.4	35.7	34.7	35.2	34.1	33.6	29.0	28.3	34.6	39.5
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	12	1.75	1.75
21 - 50	673	98.25	100.00
51 - 82	0	0.00	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 (O₃) - ppb
Fort Chipewyan - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	0	0	1	0	0	0	0	0	0	0	2	9	0	12
21 - 50	13	16	29	110	161	34	15	23	8	3	11	33	49	34	86	29	654
51 - 82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	13	16	29	110	161	35	15	23	8	3	11	33	49	36	95	29	666

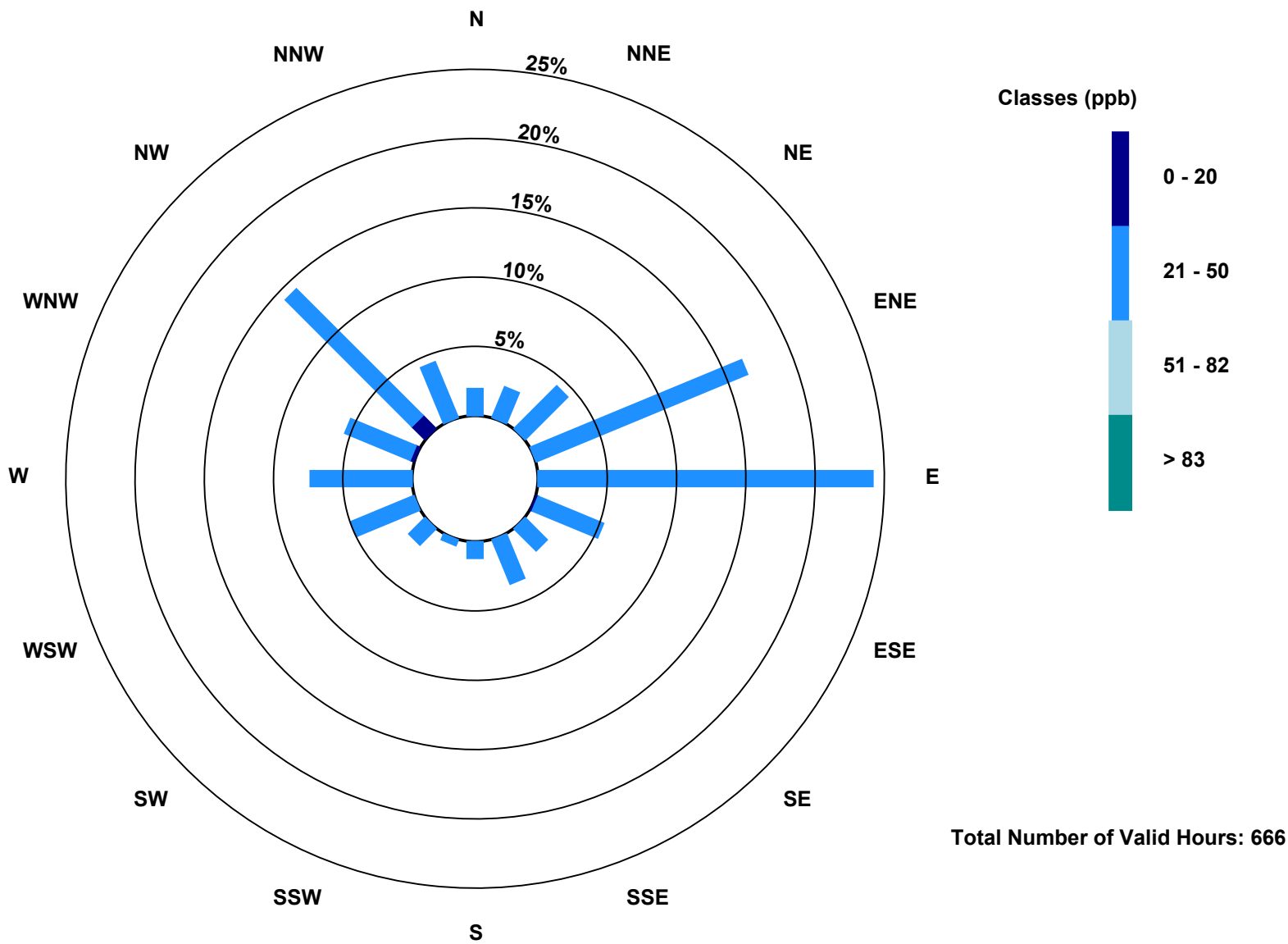
Total Number of Valid Hours: 666

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

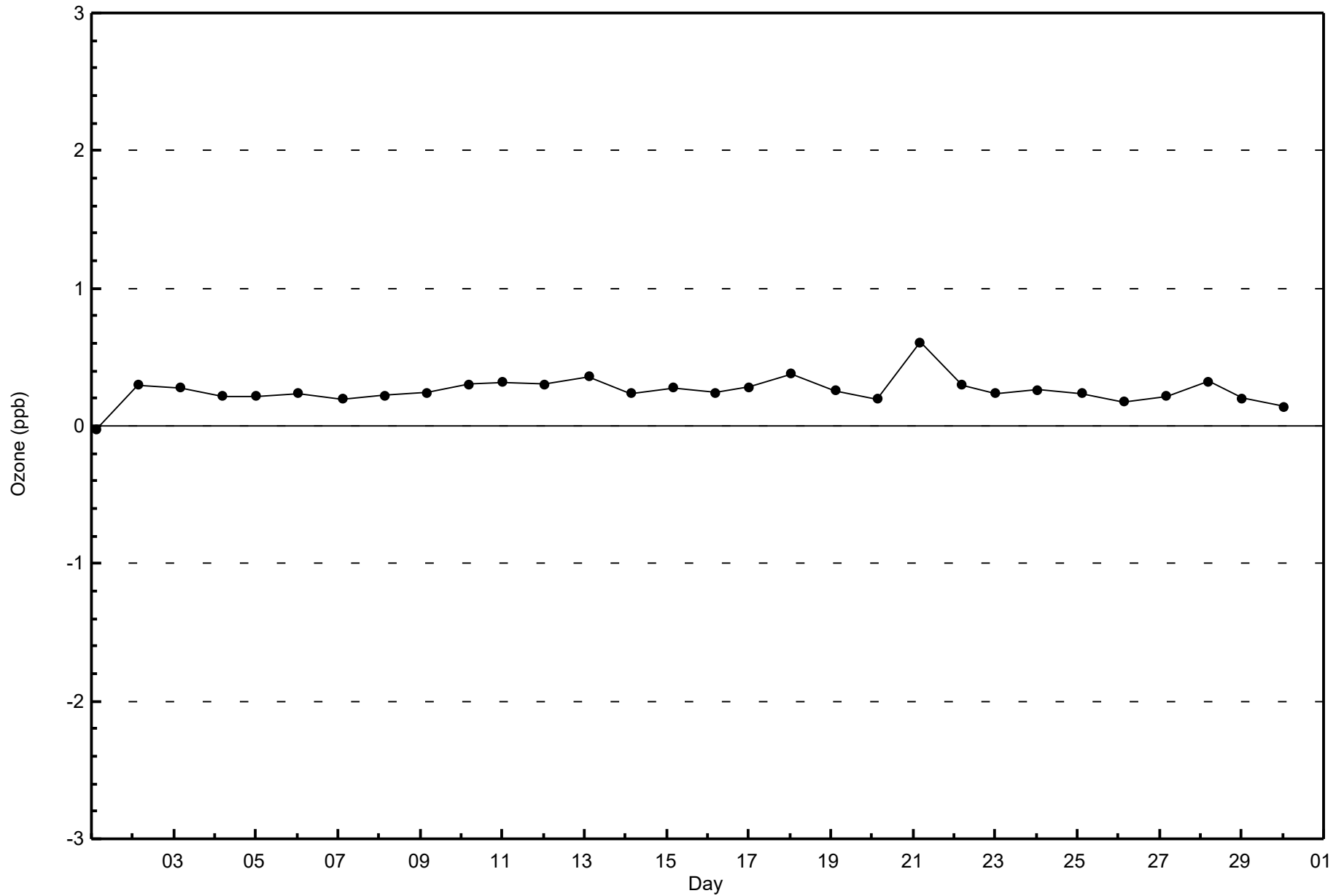
Ozone (O₃) - ppb
Fort Chipewyan





Wood Buffalo Environmental Association
Zero Responses

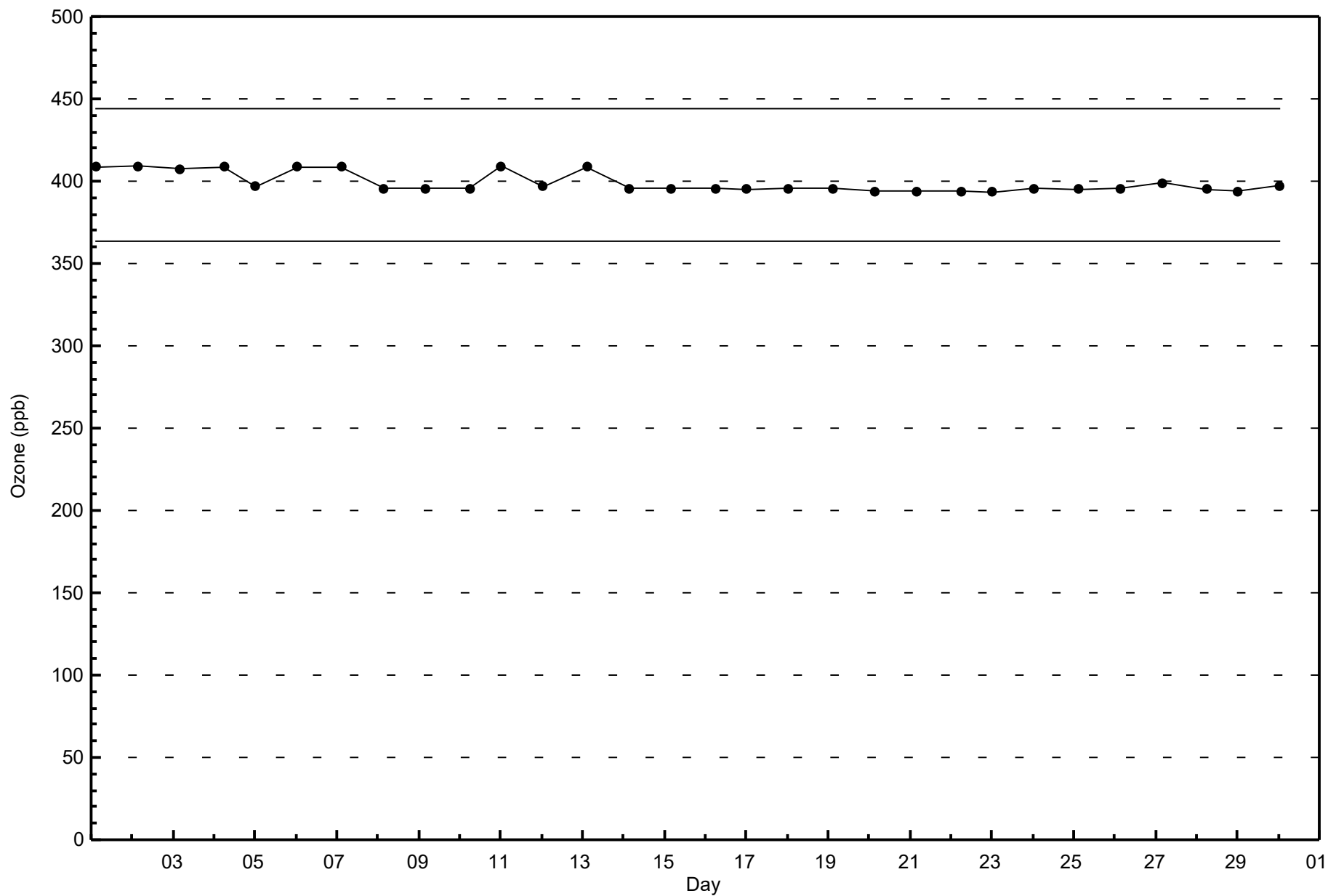
Ozone (O₃) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

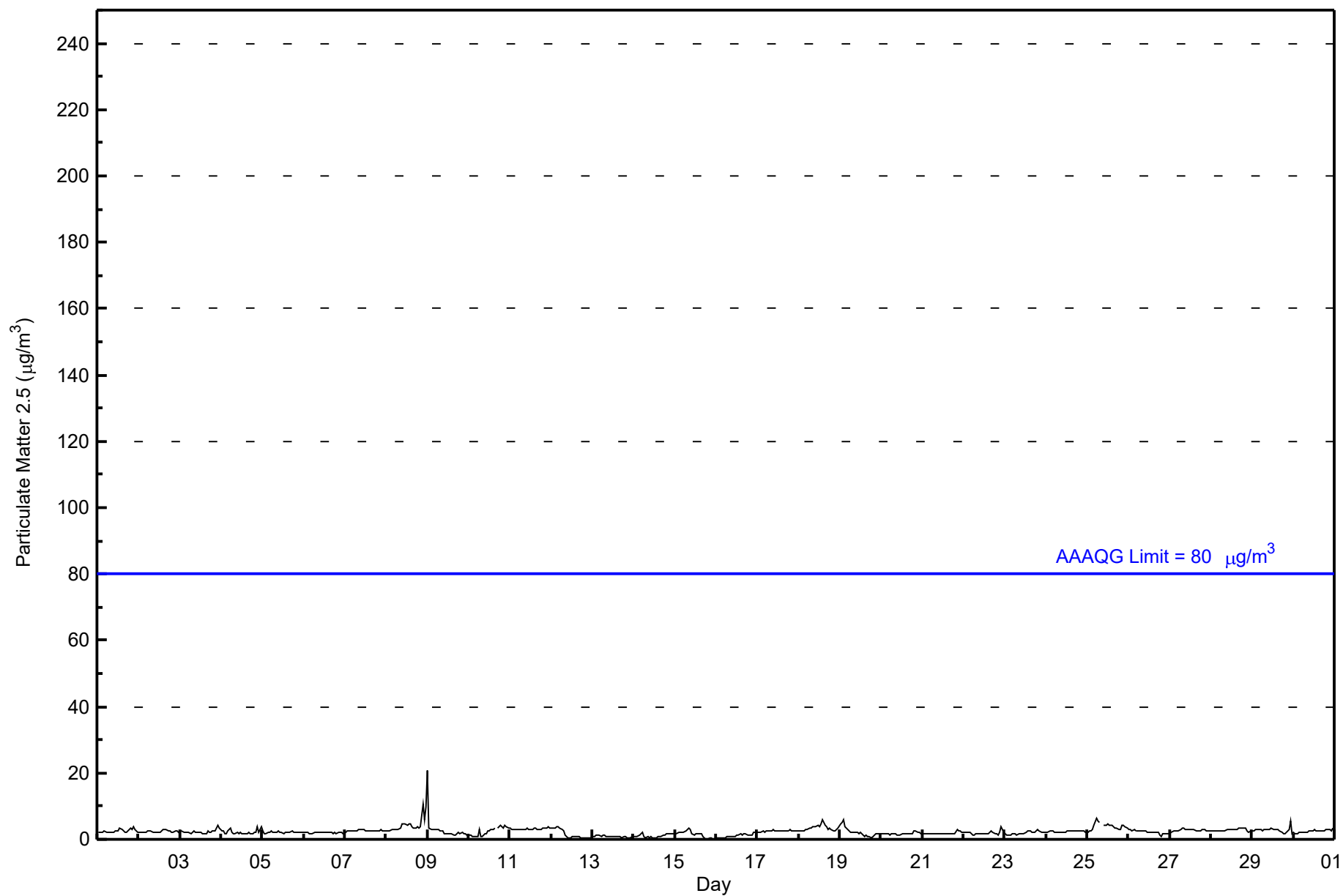
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): Maximum Value: 20.6 µg/m³ on Apr 9 01:00																				1-hr: 0 Maximum Daily Average: 4.2 µg/m³ on Apr 8					24-hr: 0 Minimum Value: 0.1 µg/m³ on Apr 15 19:00 Minimum Daily Average: 0.8 µg/m³ on Apr 13 Maximum Diurnal Average: 2.8 µg/m³ at hour 1 Minimum Diurnal Average: 2.1 µg/m³ at hour 19 Monthly Average: 2.33 µg/m³ Percentiles: P ₁ = 0.4 P ₁₀ = 1.0 Q ₁ = 1.7 Median = 2.2 Q ₃ = 2.8 P ₉₀ = 3.4 P ₉₉ = 5.5					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 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-Apr	2.1	2.0	2.0	2.2	2.4	2.2	2.1	2.2	2.2	2.2	2.4	2.5	2.7	3.2	3.1	2.5	2.3	2.2	2.8	3.2	3.0	3.9	2.8	2.2	2.5	3.9					
2-Apr	2.3	2.2	2.2	2.3	2.3	2.5	2.7	2.4	2.2	2.2	2.1	2.0	2.2	2.7	3.1	3.0	3.2	2.6	2.4	2.1	2.1	2.7	2.5	2.1	2.4	3.2					
3-Apr	2.6	2.6	2.1	2.0	2.0	2.0	1.9	2.0	2.4	2.2	2.0	1.9	2.0	1.9	1.7	1.9	2.5	2.1	2.0	2.7	2.4	3.5	4.4	3.6	2.4	4.4					
4-Apr	2.5	2.5	1.8	1.8	2.5	3.4	2.0	1.8	1.7	2.1	1.9	2.0	1.8	1.8	1.7	1.7	1.9	1.8	1.8	1.9	2.2	4.0	2.3	3.8	2.2	4.0					
5-Apr	2.5	1.9	1.9	2.1	2.2	2.6	1.9	2.2	2.0	2.4	2.2	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.6					
6-Apr	2.2	2.0	1.9	1.8	1.9	1.9	2.2	2.3	2.0	1.9	1.9	2.1	2.0	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.3					
7-Apr	2.2	2.4	2.3	2.5	2.5	2.6	2.6	2.6	2.8	2.8	2.8	2.8	2.7	2.7	2.6	2.6	2.4	2.6	2.6	2.6	2.7	2.8	2.6	2.5	2.6	2.8					
8-Apr	2.7	2.7	2.7	3.0	2.9	2.9	2.8	3.0	3.2	4.8	4.6	4.7	4.3	4.5	4.5	3.7	3.4	3.3	3.7	3.3	3.9	10.4	6.1	9.6	4.2	10.4					
9-Apr	20.6	3.2	3.1	3.0	2.8	3.0	3.0	2.6	2.7	2.4	1.9	1.7	1.7	1.7	1.6	1.4	1.3	1.5	2.1	1.6	2.0	1.6	1.5	1.4	2.9	20.6					
10-Apr	1.2	1.2	0.9	0.8	0.8	0.8	3.0	0.9	1.0	1.8	1.9	2.5	2.4	3.0	3.1	3.4	PF	3.3	4.1	3.7	3.5	4.3	3.7	3.5	2.4	4.3					
11-Apr	3.3	3.2	3.1	3.0	3.0	2.8	2.9	3.0	3.0	3.0	3.3	3.1	3.2	3.0	3.4	3.6	3.1	3.0	3.0	3.4	3.2	3.2	3.8	3.5	3.2	3.8					
12-Apr	3.5	3.6	3.4	3.9	4.0	3.5	3.0	2.5	1.1	0.7	0.5	0.5	0.7	0.9	0.8	1.0	0.8	0.6	0.5	0.6	0.6	0.5	0.6	0.6	1.6	4.0					
13-Apr	0.7	0.9	1.1	1.1	1.1	1.0	1.1	1.1	0.9	0.8	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.8	1.1					
14-Apr	0.7	0.7	0.7	1.4	1.9	2.0	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.9	1.0	1.4	1.4	1.7	1.8	1.9	1.6	1.6	1.1	2.0					
15-Apr	1.7	1.8	2.0	2.0	2.0	2.2	2.5	2.9	3.5	2.9	1.7	1.3	1.7	1.9	1.5	1.5	0.9	0.3	0.1	0.2	0.4	0.4	0.2	0.1	1.5	3.5					
16-Apr	0.3	0.5	0.4	0.5	0.5	0.6	0.7	0.9	0.9	0.8	0.9	1.0	1.1	1.3	1.6	1.5	1.7	1.9	1.5	1.3	1.3	1.4	1.9	2.1	1.1	2.1					
17-Apr	1.9	2.1	2.1	2.4	2.3	2.5	2.7	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.8	2.7	2.5	2.4	2.4	2.6	2.9					
18-Apr	2.4	2.5	2.6	2.7	3.0	3.2	3.4	3.5	3.7	3.7	3.7	4.1	4.0	4.7	6.0	4.4	3.9	3.2	3.5	2.9	2.7	2.7	2.8	3.4	3.4	6.0					
19-Apr	4.8	4.9	5.9	4.0	3.3	2.5	2.2	2.3	2.1	2.0	2.1	1.9	2.0	1.7	1.0	1.3	0.8	0.8	0.6	1.0	1.4	1.6	1.6	1.6	2.2	5.9					
20-Apr	1.6	1.6	1.6	1.7	1.6	1.5	1.5	1.7	1.6	1.4	1.4	1.4	1.6	1.5	1.5	1.6	1.6	1.6	1.7	2.6	2.5	2.1	1.9	1.8	1.7	2.6					
21-Apr	1.9	1.8	1.7	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.7	1.6	1.6	1.6	3.0	2.7	2.4	2.3	1.9	3.0					
22-Apr	2.2	2.2	2.1	1.9	1.9	1.5	1.3	1.8	1.6	1.6	1.8	1.9	1.7	1.6	1.9	2.3	2.5	2.0	1.7	1.7	1.5	2.1	4.0	2.3	2.0	4.0					
23-Apr	1.8	1.3	1.4	1.4	1.5	1.8	1.8	1.5	1.6	1.7	1.8	1.8	2.1	2.3	2.5	2.5	2.3	2.0	2.4	2.8	2.5	2.1	2.1	2.2	2.0	2.8					
24-Apr	2.1	2.3	2.4	2.5	2.4	2.3	2.3	2.3	2.1	2.2	2.3	2.2	2.4	2.4	2.3	2.5	2.5	2.5	2.5	2.6	2.6	2.5	2.3	2.2	2.4	2.6					
25-Apr	2.3	2.3	2.4	2.9	4.2	6.4	5.6	5.0	C	4.3	4.0	4.1	4.7	4.4	4.0	3.9	3.6	3.4	3.0	3.0	4.3	4.1	3.9	3.2	3.9	6.4					
26-Apr	2.9	2.8	2.7	2.9	2.7	2.6	2.6	2.5	2.5	2.5	2.3	2.1	2.1	2.2	2.2	2.3	2.3	2.2	1.1	0.9	1.7	1.8	1.7	1.6	2.2	2.9					
27-Apr	1.9	2.2	2.4	2.4	2.6	2.6	2.8	3.3	3.3	3.1	3.2	3.2	3.0	2.9	2.8	2.7	2.7	2.7	2.8	2.8	3.0	2.7	2.6	2.6	2.8	3.3					
28-Apr	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.6	2.7	3.0	3.2	2.9	2.9	2.9	2.8	3.0	3.4	3.3	3.3	3.3	3.2	2.6	2.1	2.4	2.8	3.4					
29-Apr	2.6	2.7	2.8	3.0	2.9	2.9	2.7	2.9	2.9	3.0	3.2	3.2	3.1	2.9	2.9	2.8	2.4	2.1	1.8	1.8	2.0	3.1	5.3	1.9	2.8	5.3					
30-Apr	2.1	1.5	1.7	2.0	2.1	2.0	2.1	2.1	2.1	2.5	2.6	2.7	2.9	2.7	2.7	2.7	2.5	2.4	2.4	2.9	2.8	2.8	2.7	3.4	2.4	3.4					
2.8 2.2 2.2 2.3 2.3 2.4 2.3 2.3 2.2 2.3 2.3 2.3 2.3 2.4 2.4 2.3 2.2 2.1 2.1 2.2 2.3 2.7 2.5 2.5																									Diurnal Average						
20.6 4.9 5.9 4.0 4.2 6.4 5.6 5.0 3.7 4.8 4.6 4.7 4.7 4.7 6.0 4.4 3.9 3.4 4.1 3.7 4.3 10.4 6.1 9.6																									Diurnal Maximum						
C - Calibration PF - Power Failure																															
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																															



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Chipewyan - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	710	98.89	98.89
6 - 15	7	0.97	99.86
16 - 25	1	0.14	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Fort Chipewyan - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	14	18	32	113	170	38	15	22	8	3	11	33	50	36	97	29	689
6 - 15	0	0	0	0	0	0	0	2	1	0	0	0	1	2	1	0	7
16 - 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	18	32	113	170	38	15	24	9	3	11	33	51	38	99	29	697

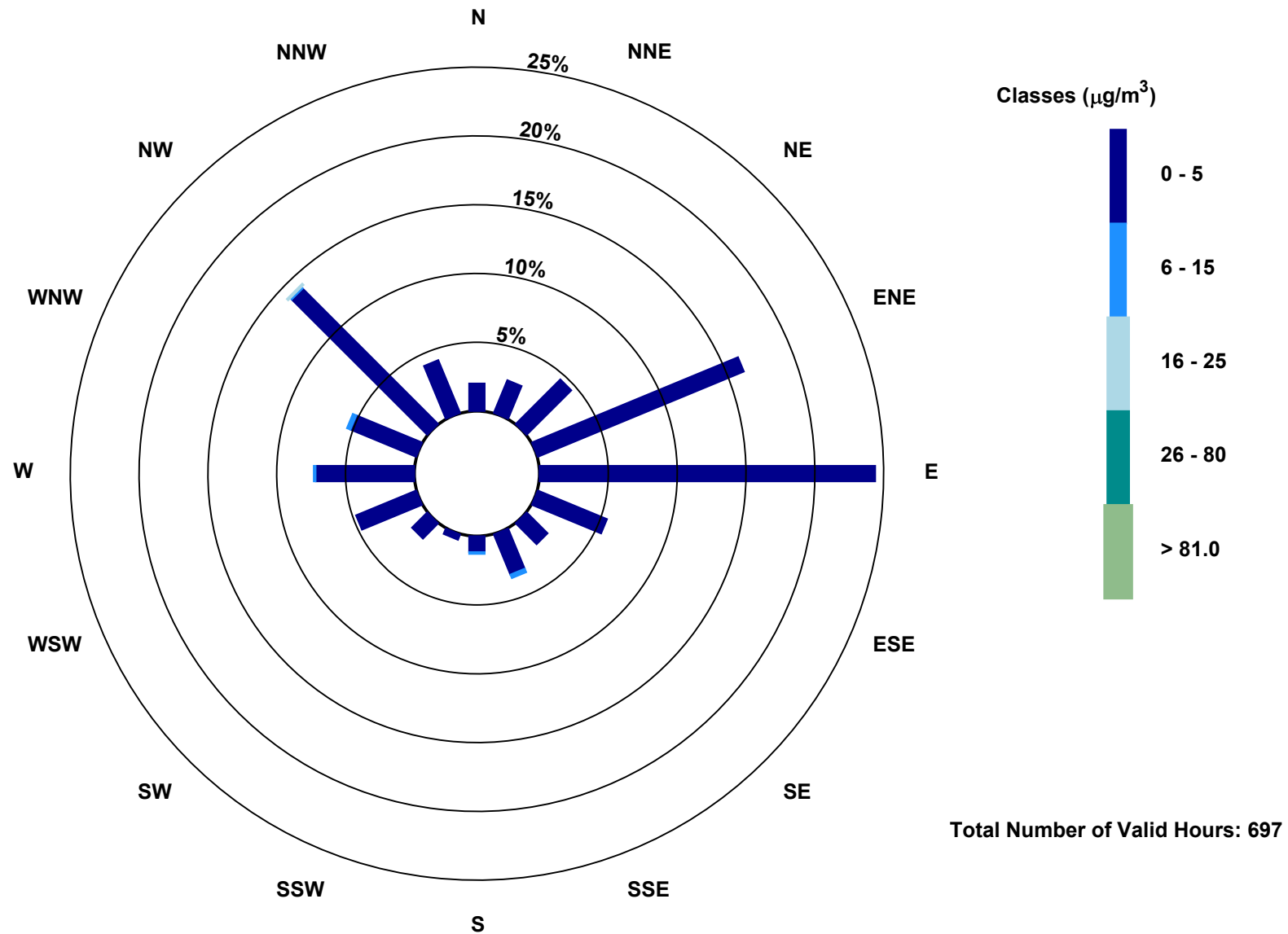
Total Number of Valid Hours: 697

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

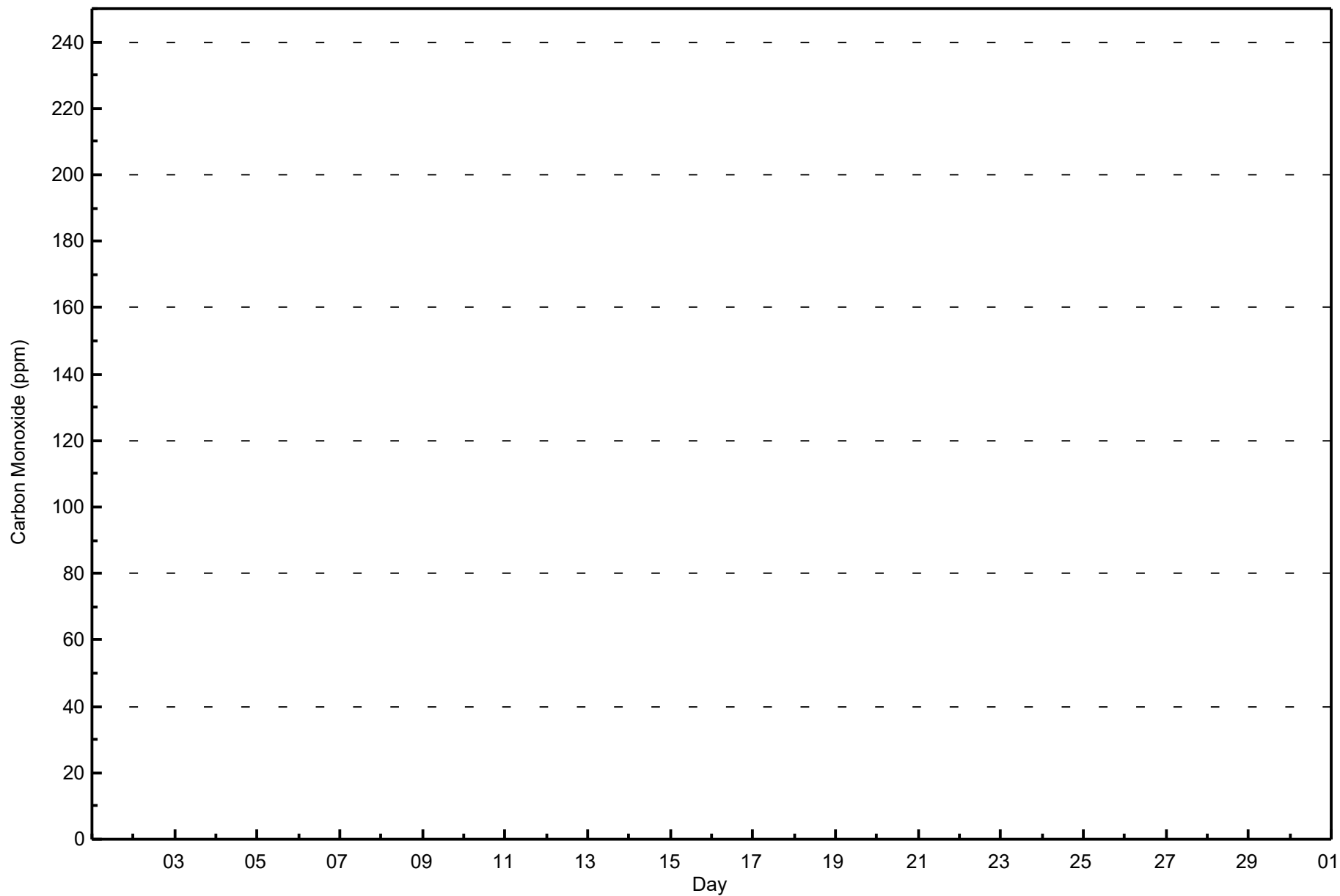
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): Maximum Value: 0.2 ppm on Apr 10 20:00																		1-hr: 0 Maximum Daily Average: 0.1 ppm on Apr 4						24-hr: 0 Minimum Daily Average: 0.0 ppm on Apr 12 Minimum Diurnal Average: 0.0 ppm at hour 11 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.1 P ₉₉ = 0.2						Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 33 Percent Operational Time: 99.9			
Minimum Value: 0.0 ppm on Apr 8 09:00 Maximum Diurnal Average: 0.1 ppm at hour 6 Monthly Average: 0.05 ppm																																	
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-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
2-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
3-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
4-Apr	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
5-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1							
6-Apr	0.1	0.1	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	0.1	0.1								
7-Apr	0.0	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1								
8-Apr	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								
9-Apr	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								
10-Apr	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	C	C	C	0.2	PF	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1								
11-Apr	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	0.0	0.0								
12-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
13-Apr	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								
14-Apr	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1								
15-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
16-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0								
17-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1								
18-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
19-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0								
20-Apr	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								
21-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1								
22-Apr	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								
23-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1								
24-Apr	0.1	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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1								
25-Apr	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								
26-Apr	Z	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	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1								
27-Apr	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								
28-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
29-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1								
30-Apr	0.1	0.1	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1								
																									Diurnal Average								
																									Diurnal Maximum								
Z - zerospan C - Calibration PF - Power Failure																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																																	



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort Chipewyan - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	686	100.00	100.00
0.4 - 0.5	0	0.00	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Fort Chipewyan - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	14	16	30	110	165	36	15	22	9	2	11	29	47	36	98	27	667
0.4 - 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	16	30	110	165	36	15	22	9	2	11	29	47	36	98	27	667

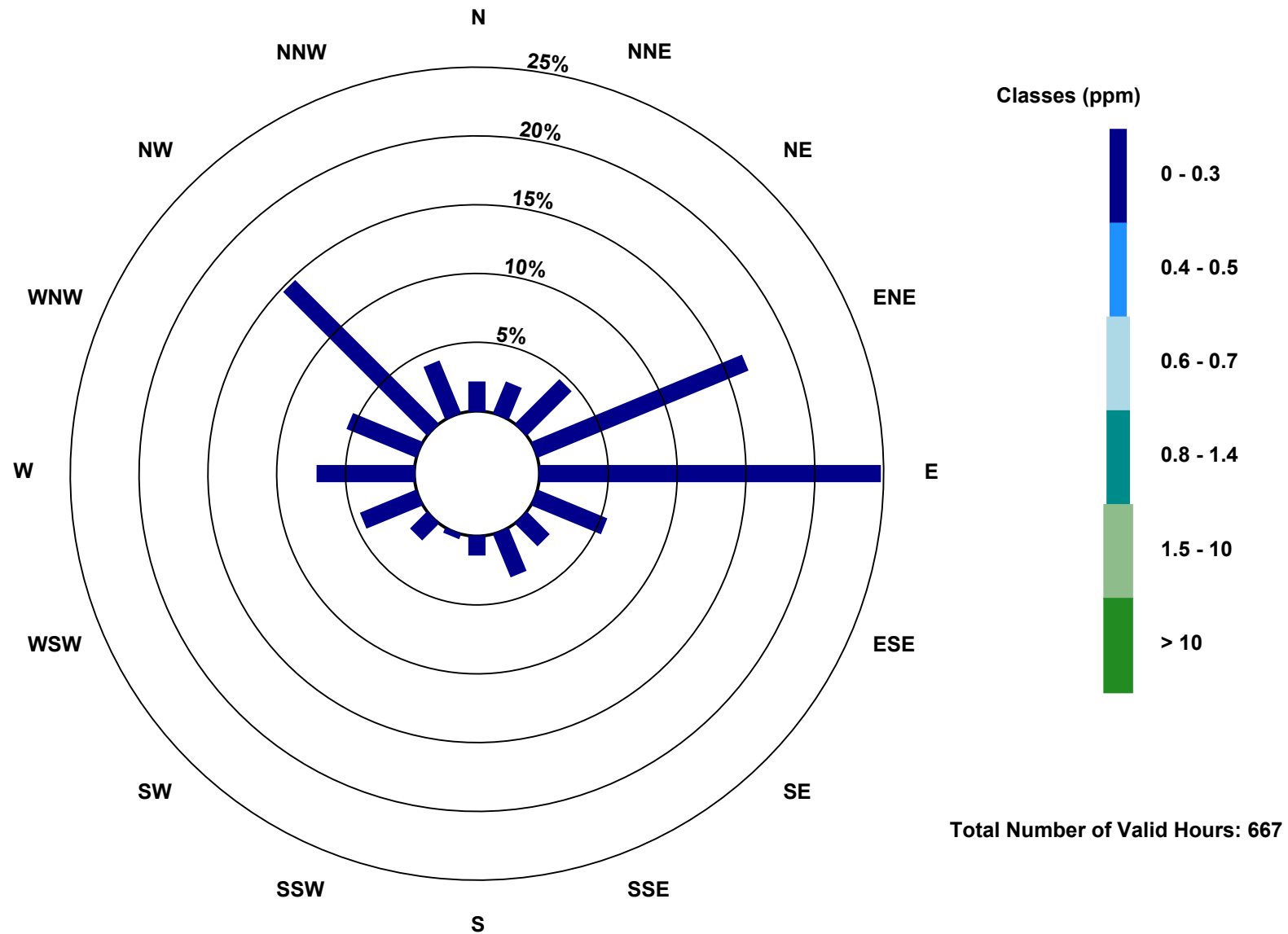
Total Number of Valid Hours: 667

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Carbon Monoxide (CO) - ppm
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

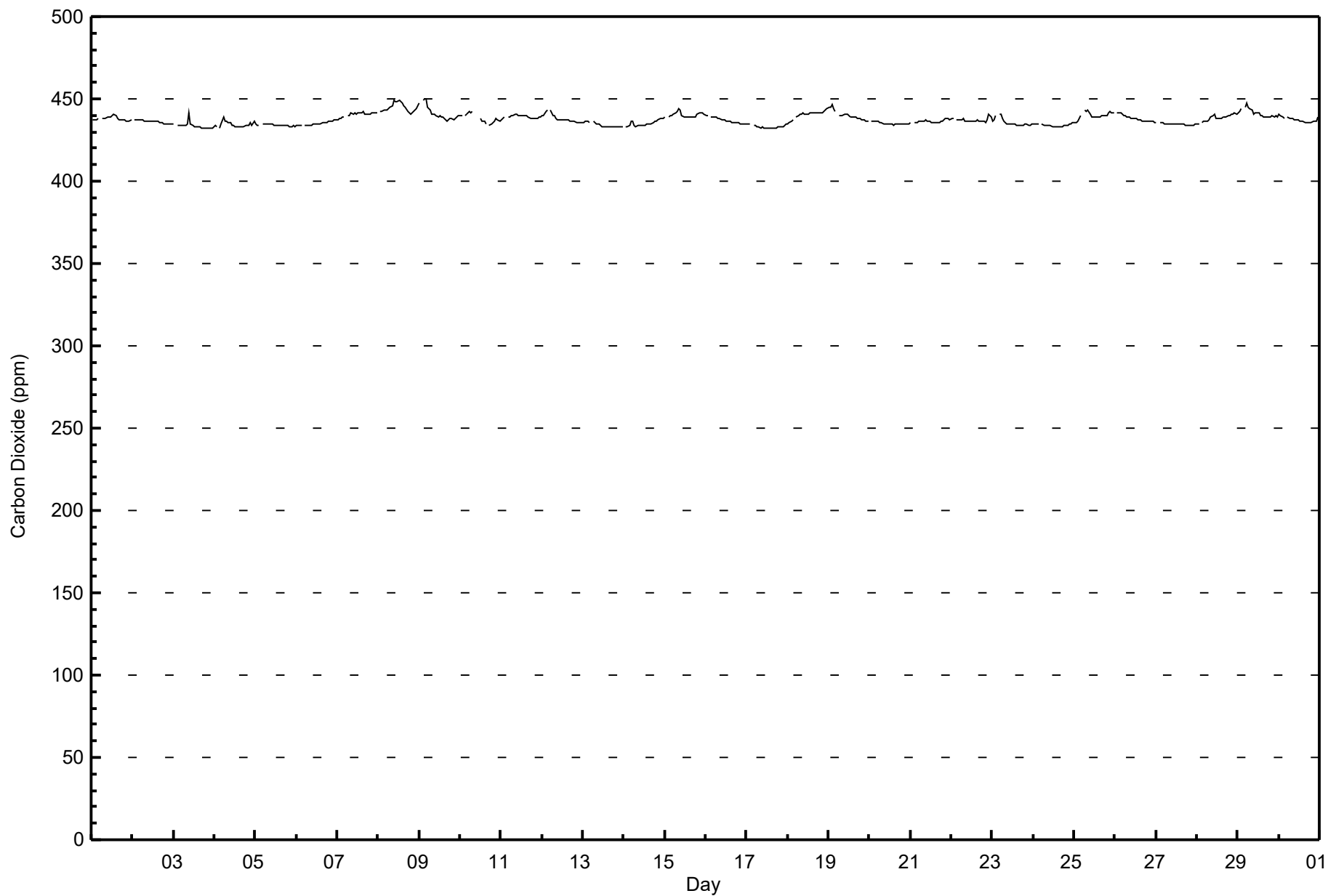
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 450.2 ppm on Apr 9 05:00 Maximum Daily Average: 444.7 ppm on Apr 8																								Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 34 Percent Operational Time: 99.9		
Minimum Value: 431.9 ppm on Apr 3 21:00 Maximum Diurnal Average: 438.6 ppm at hour 5 Monthly Average: 437.34 ppm												Minimum Daily Average: 433.1 ppm on Apr 17 Minimum Diurnal Average: 436.3 ppm at hour 18 Percentiles: P ₁ = 432.3 P ₁₀ = 433.6 Q ₁ = 434.6 Median = 436.8 Q ₃ = 439.5 P ₉₀ = 441.4 P ₉₉ = 448.4														
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	437.1	437.2	437.4	437.5	437.7	Z	437.8	438.2	438.4	438.8	439.0	439.3	439.8	440.6	439.5	438.1	437.6	437.3	437.2	436.9	436.7	436.7	436.8	436.9	437.9	440.6
2-Apr	Z	437.3	437.2	437.4	437.4	437.3	437.2	436.8	436.7	436.8	436.6	436.5	436.6	436.8	436.8	436.4	436.0	435.6	435.2	434.7	434.5	434.4	434.4	434.5	436.2	437.4
3-Apr	434.4	Z	434.0	434.0	434.0	433.8	433.6	433.5	435.1	441.9	434.8	433.5	433.1	432.9	432.9	432.7	432.5	432.4	432.3	432.2	431.9	432.1	432.4	432.5	433.6	441.9
4-Apr	433.6	433.4	Z	432.3	434.7	438.7	436.2	436.3	435.9	435.8	433.6	433.5	433.3	433.1	433.0	433.0	433.0	433.3	433.5	433.9	433.7	435.4	434.0	436.5	434.3	438.7
5-Apr	434.4	434.3	434.3	Z	435.0	434.4	434.5	434.9	435.0	435.0	434.5	434.2	433.9	433.8	433.6	433.6	433.7	433.7	433.6	433.5	433.4	433.4	433.6	433.4	434.1	435.0
6-Apr	433.6	433.7	433.7	433.6	Z	433.7	433.9	434.0	434.2	434.2	434.4	434.5	434.5	434.9	435.1	435.2	435.3	435.7	435.9	436.1	436.2	436.5	436.9	437.2	434.9	437.2
7-Apr	437.5	438.0	438.3	438.6	438.9	Z	439.5	440.2	441.1	440.9	441.9	440.9	441.4	441.2	441.6	442.2	440.3	440.3	440.6	440.7	441.1	441.5	441.6	441.9	440.5	442.2
8-Apr	Z	442.3	442.6	442.8	443.2	443.4	443.8	444.7	446.0	449.3	448.6	448.5	448.7	448.4	447.4	445.8	444.7	442.6	441.1	440.5	441.2	443.0	443.9	445.8	444.7	449.3
9-Apr	447.8	Z	448.7	450.0	450.2	445.1	443.1	440.5	440.3	440.6	439.5	438.8	439.9	439.3	439.2	437.2	436.8	437.2	438.1	437.8	437.6	438.0	439.0	439.7	441.1	450.2
10-Apr	439.4	439.6	Z	439.6	440.5	442.2	441.7	442.4	C	C	C	C	437.8	436.2	436.1	434.4	PF	434.3	435.0	435.9	436.8	438.2	437.6	436.8	438.0	442.4
11-Apr	436.9	438.1	438.9	Z	439.2	439.3	439.7	439.7	440.3	440.4	440.1	439.9	440.1	439.6	439.4	439.6	439.0	438.5	438.3	438.4	438.4	438.4	439.1	439.2	439.1	440.4
12-Apr	439.6	440.2	442.6	443.6	Z	443.2	439.5	440.0	438.0	437.7	437.4	437.3	437.5	437.3	437.2	437.0	436.7	436.4	436.2	436.1	435.8	435.8	435.8	436.0	438.1	443.6
13-Apr	435.9	436.0	436.1	436.3	435.4	Z	436.1	435.6	435.0	434.7	433.8	433.4	433.3	433.3	432.9	432.8	432.8	432.8	432.7	432.8	433.1	433.2	433.0	433.0	434.1	436.3
14-Apr	Z	432.9	433.0	433.7	436.0	436.8	433.8	433.2	434.0	433.8	433.8	434.0	434.2	434.4	434.7	434.9	435.2	435.6	436.1	436.6	437.3	437.9	438.0	438.2	435.1	438.2
15-Apr	438.6	Z	439.2	439.7	439.9	440.4	441.2	442.1	444.1	442.9	440.2	439.2	438.8	439.3	438.9	438.7	438.8	438.8	439.0	441.0	441.4	441.2	441.3	440.8	440.2	444.1
16-Apr	440.1	439.7	Z	439.3	439.0	438.8	438.7	438.2	437.9	437.5	437.2	437.0	436.8	436.6	436.1	435.6	435.5	435.3	435.3	435.3	435.1	435.1	434.9	434.8	437.0	440.1
17-Apr	434.7	434.7	434.5	Z	433.8	433.5	433.1	432.6	432.4	432.7	432.4	432.3	432.3	432.3	432.4	432.6	432.4	432.5	432.7	432.9	433.0	433.1	434.1	434.7	433.1	434.7
18-Apr	434.9	435.4	436.4	437.2	Z	438.6	439.5	440.3	440.9	441.2	440.9	440.9	440.8	441.2	441.2	441.3	441.5	441.6	441.4	441.2	441.7	442.4	443.2	444.0	440.3	444.0
19-Apr	444.6	445.2	446.4	444.3	442.3	Z	440.1	439.9	440.0	440.4	440.5	440.4	440.0	439.0	439.0	439.1	438.9	438.4	438.1	437.7	437.5	437.2	436.8	436.6	440.1	446.4
20-Apr	Z	436.2	436.1	436.4	436.5	436.4	435.9	435.7	435.1	434.7	434.5	434.4	434.5	434.4	434.3	434.4	434.3	434.4	434.5	434.8	435.0	434.9	434.5	434.7	435.1	436.5
21-Apr	435.3	Z	435.6	435.9	435.9	436.1	436.7	436.7	436.9	437.2	436.8	436.6	436.0	435.7	435.6	435.5	435.4	435.7	436.0	436.4	438.2	438.3	438.0	437.3	436.4	438.3
22-Apr	438.2	438.5	Z	437.3	437.5	437.2	437.4	438.3	436.5	436.3	436.6	436.6	436.4	436.4	436.4	437.3	436.5	436.2	436.1	436.1	435.8	437.0	440.4	438.6	437.1	440.4
23-Apr	436.9	436.9	439.5	Z	440.5	440.7	438.2	436.2	434.9	434.5	434.5	434.5	434.9	434.4	434.1	434.0	433.9	434.0	434.3	435.0	434.5	434.1	434.1	434.4	435.6	440.7
24-Apr	434.5	434.8	434.6	434.3	Z	434.6	434.1	434.0	433.8	433.8	433.6	433.4	433.3	433.2	433.2	433.0	433.0	433.2	433.6	434.1	434.0	434.3	434.6	435.2	433.9	435.2
25-Apr	435.6	435.9	436.3	437.7	439.7	Z	442.8	442.7	443.4	440.8	439.4	438.8	439.2	439.0	438.9	439.2	439.6	439.5	440.1	440.2	441.3	442.0	441.8	441.5	439.8	443.4
26-Apr	Z	441.1	441.7	441.2	440.5	440.1	439.6	438.8	438.6	438.4	438.4	437.9	437.8	437.5	437.2	437.0	436.8	436.5	436.6	436.6	436.4	436.2	436.1	435.8	438.1	441.7
27-Apr	435.7	Z	435.5	435.5	435.3	435.0	434.7	434.6	434.5	434.4	434.6	434.5	434.4	434.6	434.5	434.4	434.3	434.3	434.2	434.2	434.2	434.0	434.1	434.3	434.6	435.7
28-Apr	434.6	434.9	Z	435.6	436.1	436.4	436.7	437.4	438.8	440.2	440.5	438.5	438.1	438.2	438.5	438.8	439.0	439.3	439.6	440.0	440.3	440.8	441.3	441.0	438.5	441.3
29-Apr	441.6	442.3	443.9	Z	445.1	447.4	445.0	443.9	443.2	440.9	441.2	441.6	441.3	440.2	439.7	438.9	439.0	438.8	438.8	439.2	439.8	438.9	440.1	439.3	441.3	447.4
30-Apr	440.6	439.8	439.1	438.5	Z	438.7	438.5	438.3	438.0	437.6	437.3	437.2	436.7	436.6	436.4	436.0	436.0	435.9	435.8	435.9	436.4	436.2	436.2	438.7	437.4	440.6
					Diurnal Average																					
					Diurnal Maximum																					
Z - zerospan C - Calibration PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	571	83.36	83.36
440 - 460	114	16.64	100.00
460 - 480	0	0.00	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	10	14	24	109	148	24	9	6	1	2	9	26	33	25	89	23	552
440 - 460	4	2	6	1	17	12	6	16	8	0	2	3	13	11	9	4	114
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	16	30	110	165	36	15	22	9	2	11	29	46	36	98	27	666

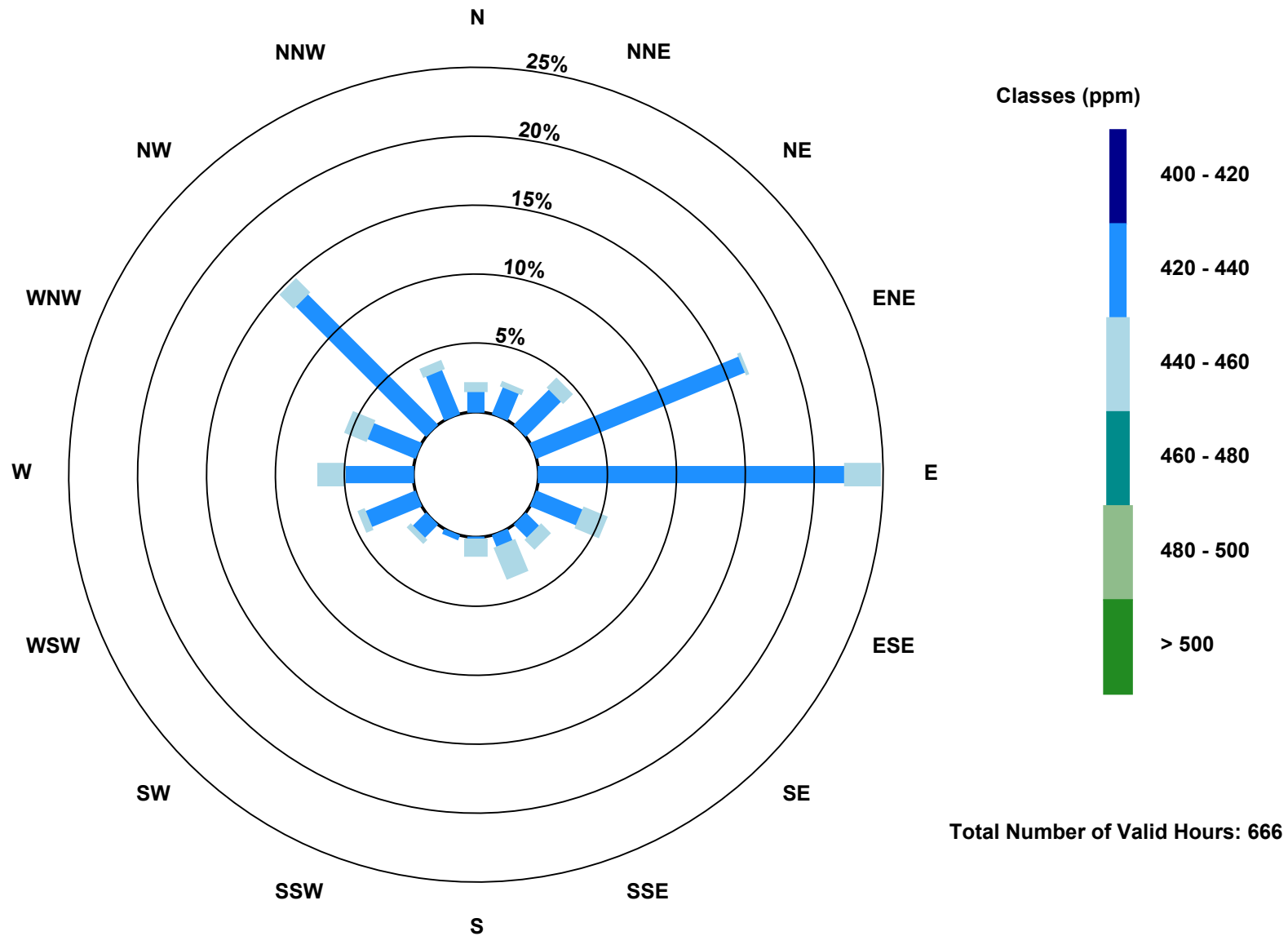
Total Number of Valid Hours: 666

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Carbon Dioxide (CO₂) - ppm
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

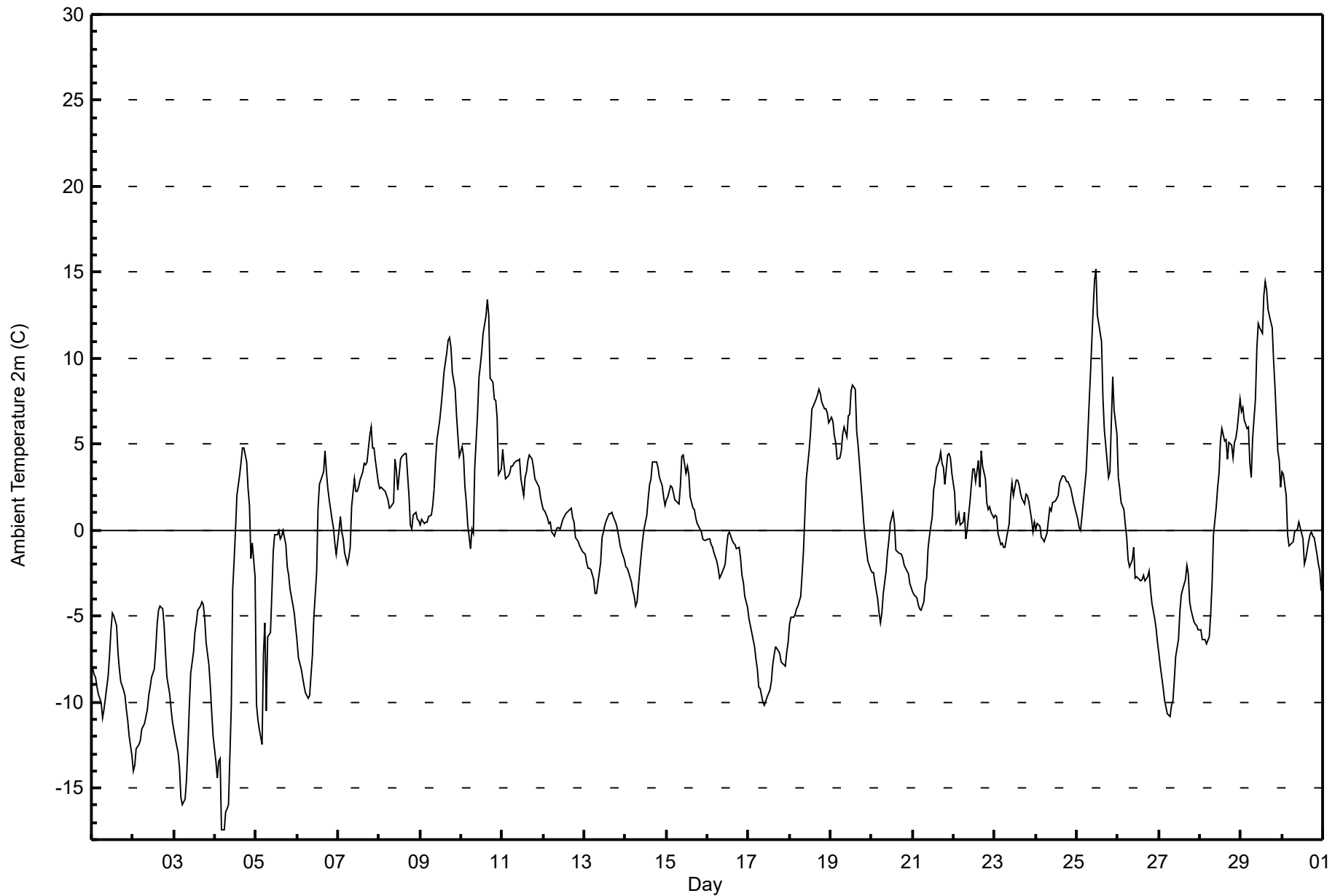
Fort Chipewyan - April 2025

Maximum Value: 15.2 C on Apr 25 12:00																				Maximum Daily Average: 8.6 C on Apr 29										Hours in Service: 720	
Minimum Value: -17.5 C on Apr 4 05:00																				Minimum Daily Average: -9.6 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 2.4 C at hour 17																				Minimum Diurnal Average: -3.6 C at hour 7										Hours of Missing Data: 0	
Monthly Average: -0.46 C																				Percentiles: P ₁ = -15.4 P ₁₀ = -8.9 Q ₁ = -3.8 Median = 0.1 Q ₃ = 3.2 P ₉₀ = 6.0 P ₉₉ = 12.7										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	-8.0	-8.4	-8.6	-9.1	-9.5	-10.0	-10.9	-10.4	-9.8	-8.5	-7.3	-5.8	-4.8	-5.0	-5.6	-7.1	-8.1	-8.8	-9.3	-9.6	-10.4	-11.1	-12.0	-13.1	-8.8	-4.8					
2-Apr	-14.0	-13.7	-12.7	-12.4	-12.2	-11.6	-11.4	-11.2	-10.4	-9.6	-9.2	-8.6	-8.1	-7.0	-5.5	-4.6	-4.4	-4.6	-5.5	-7.2	-8.5	-9.6	-10.4	-11.2	-9.3	-4.4					
3-Apr	-11.7	-12.2	-13.0	-13.9	-15.5	-16.0	-15.6	-14.5	-12.6	-10.3	-8.3	-7.1	-6.0	-5.4	-4.7	-4.4	-4.2	-4.3	-5.1	-6.5	-7.8	-9.0	-10.6	-12.0	-9.6	-4.2					
4-Apr	-13.5	-14.4	-13.4	-13.3	-17.5	-17.4	-16.3	-16.2	-15.9	-10.3	-3.4	-1.8	0.0	2.0	3.2	3.9	4.8	4.8	3.9	2.4	1.5	-1.6	-0.8	-2.7	-5.5	4.8					
5-Apr	-10.1	-11.0	-11.6	-12.4	-7.2	-5.4	-10.5	-6.2	-5.9	-3.7	-1.2	-0.3	-0.2	0.0	-0.5	-0.4	0.0	-0.9	-2.1	-2.6	-3.4	-4.3	-4.8	-5.6	-4.6	0.0					
6-Apr	-6.4	-7.4	-8.1	-8.6	-9.1	-9.5	-9.8	-9.6	-8.4	-7.3	-5.1	-2.4	1.2	2.6	2.9	3.4	4.7	3.4	2.4	1.8	0.7	0.1	-0.8	-1.4	-2.9	4.7					
7-Apr	0.0	0.8	-0.1	-0.5	-1.4	-1.9	-1.5	-1.0	1.4	3.0	2.2	2.3	2.5	2.9	3.4	3.9	3.8	4.0	5.5	6.0	4.8	4.8	4.1	2.8	2.2	6.0					
8-Apr	2.4	2.5	2.4	2.3	2.0	1.8	1.3	1.4	1.6	4.1	3.5	2.3	4.1	4.3	4.4	4.4	4.5	2.0	0.3	0.1	0.9	1.0	0.7	0.6	2.3	4.5					
9-Apr	0.3	0.6	0.4	0.5	0.4	0.8	0.9	1.4	2.4	4.1	5.3	6.4	7.2	8.1	9.2	10.3	11.0	11.2	10.6	9.2	8.2	6.7	5.4	4.3	5.2	11.2					
10-Apr	4.9	4.3	2.5	1.6	0.3	-1.0	0.1	-0.2	3.6	6.7	8.8	9.6	10.4	11.5	12.4	13.4	12.5	8.9	8.6	7.6	7.6	6.5	3.2	3.6	6.1	13.4					
11-Apr	4.7	3.7	3.0	3.2	3.3	3.7	3.8	3.9	4.1	4.1	4.2	3.0	2.0	3.1	3.4	4.0	4.3	4.1	3.6	3.0	2.8	2.5	1.9	1.5	3.4	4.7					
12-Apr	1.2	1.1	0.7	0.3	0.5	-0.1	-0.4	0.0	0.2	0.2	0.1	0.7	0.8	1.0	1.0	1.2	1.3	0.7	0.4	-0.4	-0.7	-0.9	-1.0	-1.2	0.3	1.3					
13-Apr	-1.4	-1.9	-2.2	-2.2	-2.3	-2.9	-3.7	-3.7	-3.1	-1.9	-0.4	-0.1	0.3	0.6	1.0	0.9	1.0	0.8	0.4	0.1	-0.4	-0.9	-1.3	-1.8	-1.1	1.0					
14-Apr	-2.1	-2.2	-2.4	-3.0	-3.5	-3.9	-4.4	-4.2	-2.3	-1.4	-0.6	0.1	0.9	1.8	2.7	3.0	4.0	4.0	4.0	3.6	3.1	2.5	1.9	1.4	0.1	4.0					
15-Apr	1.8	1.9	2.6	2.5	2.2	1.8	1.6	1.5	2.6	4.3	4.4	3.3	3.8	3.2	1.9	1.3	1.2	0.7	0.4	0.3	-0.1	-0.5	-0.6	-0.6	1.7	4.4					
16-Apr	-0.5	-0.5	-0.8	-1.0	-1.4	-1.8	-2.2	-2.8	-2.6	-2.2	-2.0	-1.0	-0.3	-0.1	-0.6	-0.8	-0.9	-1.0	-1.0	-1.6	-2.6	-3.0	-3.9	-4.5	-1.6	-0.1					
17-Apr	-5.2	-5.5	-6.0	-6.8	-7.5	-8.1	-9.2	-9.3	-10.0	-10.2	-9.9	-9.7	-9.3	-8.8	-7.8	-7.2	-6.8	-7.0	-7.2	-7.6	-7.8	-7.9	-7.1	-6.5	-7.8	-5.2					
18-Apr	-5.4	-5.0	-5.1	-4.9	-4.6	-4.4	-3.9	-2.5	-1.1	0.9	3.0	4.6	5.7	7.1	7.3	7.7	7.9	8.2	8.0	7.5	7.1	7.1	6.8	6.2	2.4	8.2					
19-Apr	6.6	6.3	5.5	5.1	4.1	4.2	4.6	5.6	6.0	5.4	6.6	6.7	8.1	8.5	8.2	5.8	4.9	3.9	1.7	0.5	-0.5	-1.2	-1.8	-2.3	4.3	8.5					
20-Apr	-2.5	-2.5	-3.1	-4.0	-4.8	-5.4	-4.8	-3.7	-2.4	-1.3	-0.6	0.4	1.0	0.4	-1.1	-1.2	-1.3	-1.4	-1.7	-2.0	-2.3	-2.5	-3.1	-3.3	-2.2	1.0					
21-Apr	-3.6	-3.8	-4.0	-4.3	-4.6	-4.6	-4.1	-3.2	-2.8	-1.1	-0.3	0.8	2.3	2.8	3.6	4.1	4.6	3.9	3.7	2.7	4.4	4.5	4.2	3.3	0.3	4.6					
22-Apr	2.2	0.4	0.6	1.0	0.3	0.5	1.0	-0.5	0.0	1.7	2.7	3.5	3.6	2.8	4.1	2.5	4.6	3.7	3.0	1.6	1.2	1.4	1.0	0.7	1.8	4.6					
23-Apr	0.9	0.8	-0.2	-0.8	-0.8	-1.0	-1.0	-0.5	0.4	1.9	2.8	2.0	2.9	2.9	2.7	2.2	1.9	1.5	2.1	2.0	1.7	0.7	-0.1	0.5	1.1	2.9					
24-Apr	0.0	0.4	0.2	-0.4	-0.5	-0.7	-0.2	0.6	1.3	1.1	1.6	1.7	1.8	2.0	2.8	3.2	3.1	3.0	2.8	2.8	2.5	2.0	1.6	1.3	1.4	3.2					
25-Apr	0.6	0.2	0.0	0.8	1.7	3.4	5.2	7.1	8.9	12.8	14.5	15.2	12.5	12.0	11.0	7.7	5.8	5.0	3.0	3.4	6.3	8.9	7.0	5.6	6.6	15.2					
26-Apr	3.1	2.4	1.6	1.2	0.3	-0.5	-1.7	-2.1	-1.8	-1.0	-2.8	-2.7	-2.8	-2.9	-2.8	-2.6	-3.0	-2.7	-2.4	-3.4	-4.3	-5.1	-5.7	-6.5	-2.0	3.1					
27-Apr	-7.2	-7.9	-9.1	-9.9	-10.3	-10.7	-10.8	-10.2	-10.0	-8.7	-7.4	-6.4	-4.8	-3.8	-3.4	-2.9	-2.1	-2.5	-4.2	-4.7	-5.3	-5.5	-5.6	-5.8	-6.6	-2.1					
28-Apr	-5.8	-6.3	-6.3	-6.4	-6.6	-6.2	-4.9	-3.1	-0.3	1.4	2.5	3.4	5.2	5.9	5.2	5.3	4.1	5.1	4.9	4.2	5.1	5.3	6.0	7.6	1.1	7.6					
29-Apr	6.9	7.1	6.4	5.9	6.0	3.9	3.1	5.4	7.6	10.6	12.0	11.8	11.5	13.7	14.4	14.0	12.8	12.1	11.8	9.9	8.3	4.7	4.0	2.5	8.6	14.4					
30-Apr	3.4	3.2	2.0	-0.3	-0.9	-0.9	-0.7	-0.1	-0.1	0.1	0.5	-0.2	-0.5	-1.9	-1.7	-0.6	-0.2	-0.1	-0.3	-0.4	-1.4	-2.0	-2.4	-3.5	-0.4	3.4					
Diurnal Average																															
Diurnal Maximum																															



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort Chipewyan - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	350	48.61	48.61
0 - 10	345	47.92	96.53
10 - 20	25	3.47	100.00
> 20	0	0.00	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) - %

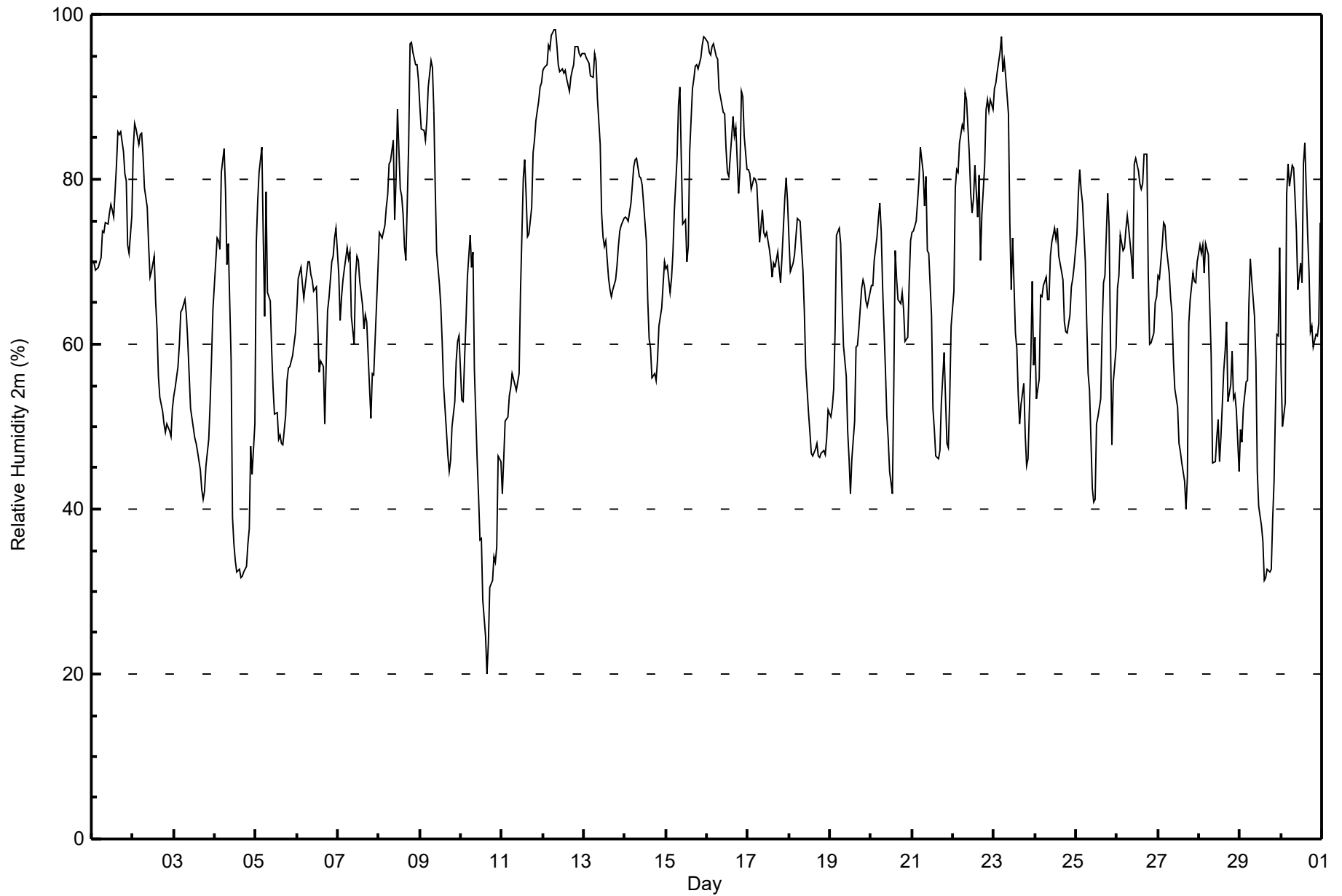
Fort Chipewyan - April 2025

Maximum Value: 98.1 % on Apr 12 08:00																				Maximum Daily Average: 94.5 % on Apr 12					Hours in Service: 720	
Minimum Value: 20.0 % on Apr 10 16:00																				Minimum Daily Average: 45.0 % on Apr 10					Hours of Data: 720	
Maximum Diurnal Average: 77.5 % at hour 7																				Minimum Diurnal Average: 60.5 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 67.74 %																				Percentiles: P ₁ = 31.7 P ₁₀ = 46.7 Q ₁ = 56.4 Median = 68.7 Q ₃ = 78.7 P ₉₀ = 90.1 P ₉₉ = 96.6					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	70.0	69.9	68.9	69.2	69.4	70.5	73.8	73.6	74.7	74.5	76.0	76.9	76.3	75.5	81.7	85.8	85.5	85.8	83.4	80.7	79.8	72.0	71.0	75.6	75.8	85.8
2-Apr	83.8	86.8	86.1	84.2	85.5	85.6	82.8	79.0	76.7	72.0	68.2	68.8	70.7	65.2	61.8	56.2	53.6	51.8	50.4	49.2	50.4	49.5	48.7	52.3	67.5	86.8
3-Apr	53.8	54.7	57.3	60.1	63.9	64.2	65.5	63.5	60.3	56.2	52.2	49.8	48.6	48.0	47.0	44.8	42.4	41.3	42.2	45.3	48.5	52.9	58.3	64.2	53.5	65.5
4-Apr	70.0	72.9	72.5	71.6	80.8	83.8	78.7	69.6	72.2	58.2	39.0	35.7	33.7	32.3	32.6	31.7	31.8	32.4	33.0	35.7	37.7	47.6	44.2	50.4	52.0	83.8
5-Apr	72.2	77.3	80.9	83.9	72.9	63.3	78.5	66.3	65.3	59.3	54.7	51.4	51.7	48.4	49.0	47.9	47.7	51.3	55.5	57.2	57.3	58.6	60.0	61.4	61.3	83.9
6-Apr	64.3	68.0	69.3	67.3	65.6	67.1	70.0	70.0	68.4	67.8	66.5	67.0	62.2	56.6	58.0	57.3	50.3	57.7	64.1	65.5	69.9	70.7	72.9	74.1	65.4	74.1
7-Apr	68.4	62.9	65.7	67.8	69.2	71.7	70.4	71.3	63.3	60.0	68.3	70.6	70.1	67.6	64.8	61.9	63.5	62.7	54.7	51.0	56.5	56.2	60.5	69.0	64.5	71.7
8-Apr	73.6	73.2	72.9	74.4	76.6	78.1	81.9	82.1	84.8	75.1	80.2	88.5	78.9	78.0	75.8	71.9	70.2	84.2	96.5	96.6	95.5	93.9	93.9	92.0	82.0	96.6
9-Apr	88.9	86.0	85.9	84.7	87.1	91.2	94.4	93.6	88.4	78.9	71.2	67.3	64.5	60.1	54.9	49.5	46.5	44.6	46.0	50.1	53.0	58.0	60.4	61.0	69.4	94.4
10-Apr	53.3	53.1	58.3	62.8	68.1	73.2	69.3	71.2	56.9	45.9	41.6	36.2	36.4	28.9	24.5	20.0	23.7	30.6	31.4	34.2	33.5	35.5	46.4	45.8	45.0	73.2
11-Apr	41.9	46.0	50.7	51.1	53.7	54.8	56.4	55.8	54.5	55.4	56.5	66.4	80.2	82.4	78.1	73.0	73.5	76.6	83.3	84.7	87.2	89.5	91.1	91.7	68.1	91.7
12-Apr	93.2	93.6	93.9	96.3	95.8	97.4	98.1	98.1	96.3	94.0	93.1	93.4	92.9	93.2	92.2	90.7	92.3	93.3	93.8	96.1	96.1	95.3	94.9	95.2	94.5	98.1
13-Apr	95.3	94.8	94.4	94.2	92.5	92.3	95.3	94.4	89.9	84.2	75.9	73.1	71.8	72.5	68.0	66.6	65.7	66.6	67.8	69.4	71.9	73.7	74.4	75.3	80.0	95.3
14-Apr	75.5	75.3	75.0	77.1	79.3	81.4	82.4	82.5	80.4	80.2	79.3	77.1	72.5	65.4	60.7	59.5	55.9	56.5	55.6	58.1	62.2	64.5	67.3	70.0	70.6	82.5
15-Apr	69.1	69.6	66.3	68.0	71.0	76.2	82.7	88.9	91.3	82.6	74.6	75.0	70.1	71.9	83.4	91.1	92.2	93.7	93.9	93.4	94.7	96.4	97.2	97.1	82.9	97.2
16-Apr	96.6	95.4	95.0	96.1	96.5	94.9	94.6	90.9	90.1	88.1	88.0	83.8	80.8	80.4	85.1	87.7	85.3	86.2	78.3	81.4	90.6	90.1	85.2	81.1	88.4	96.6
17-Apr	81.2	80.6	78.8	80.2	79.9	79.3	76.0	72.4	76.2	73.6	73.1	73.6	71.6	70.2	68.1	69.8	69.3	71.2	69.2	67.5	70.4	77.7	80.1	77.4	74.5	81.2
18-Apr	72.9	68.9	69.9	70.8	73.0	75.3	75.0	71.7	69.0	64.0	57.3	51.7	49.3	46.8	46.5	47.3	47.9	46.5	46.2	46.7	47.1	46.7	48.7	52.0	58.0	75.3
19-Apr	51.1	52.4	54.6	61.5	73.2	74.0	72.2	65.8	59.8	56.1	49.4	46.1	41.8	46.1	50.6	59.7	59.9	61.9	66.7	67.8	67.1	65.2	64.5	66.2	59.7	74.0
20-Apr	67.1	67.1	70.1	73.0	75.3	77.1	73.7	66.9	57.0	51.3	48.5	44.6	41.9	55.1	71.3	67.9	65.5	64.9	66.2	64.2	60.4	60.9	67.5	72.5	63.7	77.1
21-Apr	73.6	73.7	74.9	77.3	79.8	83.9	80.8	76.8	80.4	71.3	71.0	63.4	52.2	49.7	46.5	46.0	47.2	53.0	56.0	58.9	47.9	47.4	53.4	62.2	63.6	83.9
22-Apr	66.4	78.9	81.3	80.9	84.4	86.6	86.1	90.6	89.6	83.1	78.4	76.0	77.7	81.8	75.3	80.5	70.2	75.8	81.6	88.4	89.7	88.2	89.6	88.5	82.1	90.6
23-Apr	91.1	91.8	93.1	95.4	97.4	93.1	94.4	92.6	87.9	74.8	66.5	72.9	61.4	59.4	53.9	50.4	52.8	55.2	49.0	45.3	46.2	58.1	67.6	57.5	71.1	97.4
24-Apr	60.8	53.4	55.8	65.9	65.7	67.2	68.1	65.4	65.4	70.7	72.4	74.0	72.6	74.0	70.7	68.8	67.8	62.7	61.6	61.4	63.6	66.9	68.0	69.5	66.3	74.0
25-Apr	73.4	78.1	81.2	78.6	77.1	70.1	62.6	56.4	54.4	42.5	40.8	41.2	50.4	51.2	53.3	61.7	67.5	68.3	78.3	74.2	60.4	47.9	55.4	59.5	61.9	81.2
26-Apr	66.8	68.3	73.1	71.3	71.7	73.9	75.6	74.0	70.5	68.0	81.8	82.6	81.0	79.4	78.7	79.5	83.0	83.0	68.6	60.0	60.2	61.3	65.1	65.8	72.6	83.0
27-Apr	68.2	67.9	72.1	74.7	74.5	71.7	68.7	65.5	63.6	58.1	54.6	52.4	47.9	46.9	45.6	43.4	40.0	43.9	62.6	65.4	68.6	67.7	67.5	70.0	60.9	74.7
28-Apr	72.0	71.0	72.0	68.7	72.2	70.8	64.8	58.6	45.6	45.7	48.6	50.9	45.8	48.7	56.9	59.1	62.8	53.1	55.1	59.2	53.3	53.8	52.0	44.6	57.7	72.2
29-Apr	49.6	48.1	52.2	55.4	55.6	65.0	70.4	67.8	63.4	57.9	44.6	40.3	38.0	36.0	31.3	31.7	32.8	32.3	32.8	38.9	43.4	61.2	61.1	71.7	49.2	71.7
30-Apr	57.2	49.9	53.0	78.1	81.9	79.2	81.7	81.3	77.7	73.5	66.6	69.8	67.5	81.9	84.4	73.4	68.8	61.5	62.2	59.6	61.1	61.0	62.5	74.8	69.5	84.4
70.7 71.0 72.5 74.7 76.3 77.1 77.5 75.2 72.5 67.4 64.6 64.0 62.0 61.8 61.7 61.2 60.5 61.6 62.9 63.5 64.1 65.6 67.6 69.6																										Diurnal Average
96.6 95.4 95.0 96.3 97.4 97.4 98.1 98.1 96.3 94.0 93.1 93.4 92.9 93.2 92.2 91.1 92.3 93.7 96.5 96.6 96.1 96.4 97.2 97.1																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Fort Chipewyan - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	30	4.17	4.17
40 - 60	190	26.39	30.56
60 - 80	335	46.53	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

Leaf Wetness (LW) - %

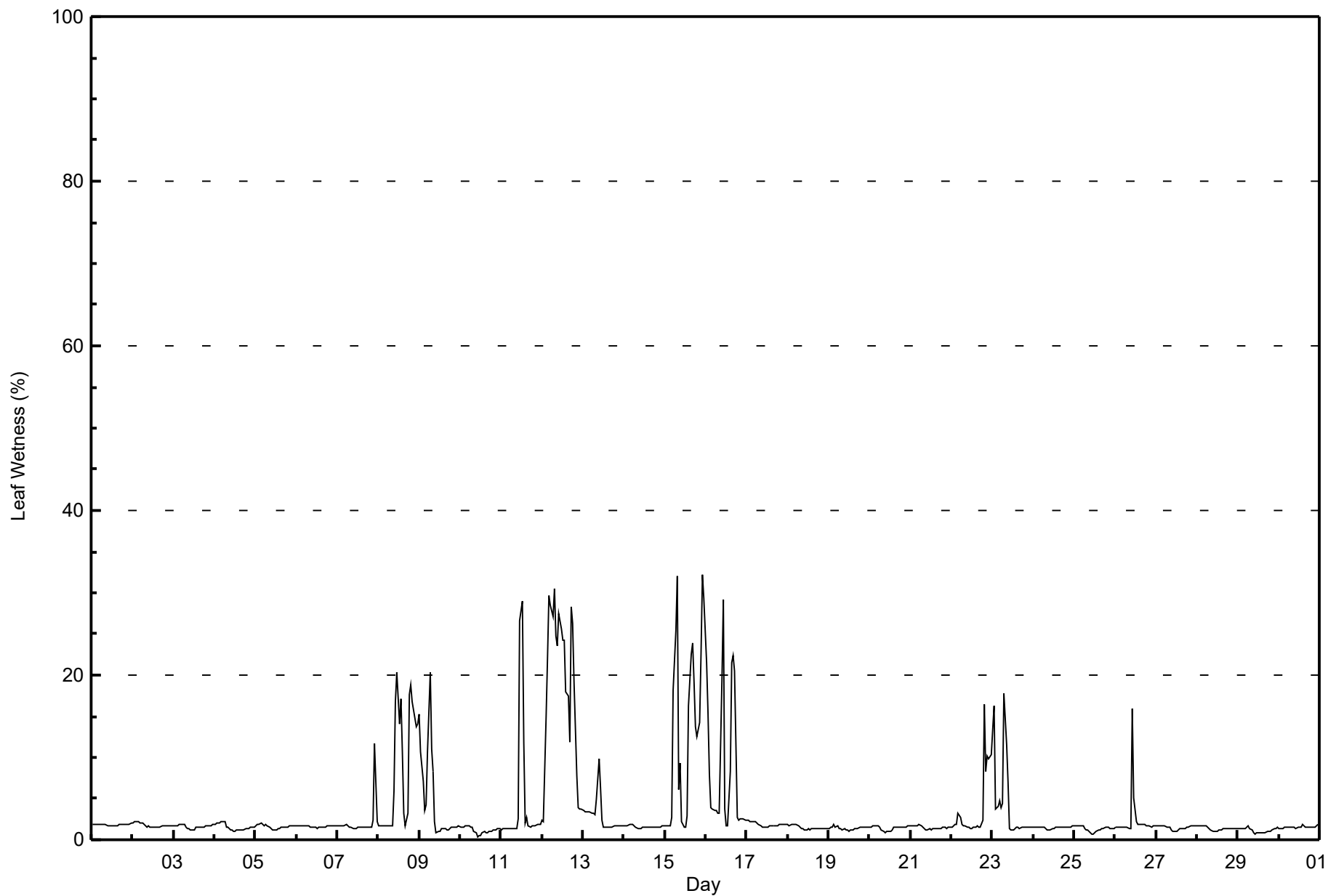
Fort Chipewyan - April 2025

Maximum Value: 32.1 % on Apr 15 23:00																			Maximum Daily Average: 18.6 % on Apr 12																			Hours in Service: 720			
Minimum Value: 0.4 % on Apr 10 11:00																			Minimum Daily Average: 1.1 % on Apr 29																			Hours of Data: 720			
Maximum Diurnal Average: 4.5 % at hour 8																			Minimum Diurnal Average: 2.7 % at hour 3																			Hours of Missing Data: 0			
Monthly Average: 3.41 %																			Percentiles: P ₁ = 0.8 P ₁₀ = 1.2 Q ₁ = 1.4 Median = 1.6 Q ₃ = 1.8 P ₉₀ = 7.9 P ₉₉ = 28.5																			Hours of Calibration: 0			
																																						Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-Apr	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.8	2.0															
2-Apr	2.1	2.2	2.2	2.1	2.0	2.0	2.0	1.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	2.2															
3-Apr	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.4	1.3	1.1	1.1	1.2	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.6	1.9															
4-Apr	1.9	2.0	2.0	2.0	2.1	2.3	2.2	1.5	1.6	1.3	1.2	1.1	1.0	1.2	1.2	1.3	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.5	2.3															
5-Apr	1.8	1.8	1.9	2.0	1.9	1.7	1.8	1.6	1.5	1.4	1.2	1.2	1.2	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.6	2.0															
6-Apr	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.6	1.8															
7-Apr	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.6	1.4	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.5	1.6	1.6	1.5	1.5	2.4	11.7	2.1	2.1	11.7															
8-Apr	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.7	6.0	16.8	20.4	14.1	17.0	10.7	3.2	1.7	3.3	17.6	18.7	16.7	14.8	13.7	14.0	8.5	20.4															
9-Apr	15.2	10.7	7.0	3.5	4.2	10.6	20.3	11.1	8.3	2.2	0.9	1.0	1.1	1.3	1.4	1.3	1.3	1.2	1.3	1.4	1.5	1.6	1.6	1.6	4.7	20.3															
10-Apr	1.5	1.5	1.6	1.6	1.7	1.7	1.5	1.5	1.0	0.9	0.4	0.5	0.6	0.9	0.9	0.9	0.9	1.0	1.1	1.2	1.2	1.2	1.3	1.3	1.2	1.7															
11-Apr	1.3	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3	2.5	26.6	28.9	11.8	2.0	2.7	1.7	1.6	1.7	1.8	1.8	1.8	1.9	1.9	4.2	28.9															
12-Apr	2.5	2.1	14.9	22.0	29.6	28.5	27.0	30.5	24.7	23.5	27.4	25.6	24.3	24.2	17.9	17.5	11.8	28.3	26.3	19.2	7.9	3.9	3.7	3.7	18.6	30.5															
13-Apr	3.6	3.4	3.5	3.5	3.3	3.2	3.2	3.0	4.9	9.9	6.3	2.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	2.9	9.9															
14-Apr	1.8	1.8	1.8	1.9	1.9	1.9	1.7	1.6	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.6	1.9															
15-Apr	1.6	1.6	1.6	1.6	2.8	18.2	25.4	32.0	6.1	9.3	2.2	1.6	1.5	2.9	16.3	22.6	23.8	19.2	13.8	12.5	14.3	22.5	32.1	29.4	13.1	32.1															
16-Apr	21.6	15.5	7.9	3.9	3.7	3.6	3.5	3.3	3.2	19.5	29.2	3.6	1.7	1.7	8.4	21.6	22.3	20.5	2.7	2.5	2.6	2.6	2.5	2.4	8.7	29.2															
17-Apr	2.4	2.3	2.3	2.2	2.2	2.2	2.1	1.8	1.8	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.4															
18-Apr	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.4	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.8															
19-Apr	1.4	1.4	1.5	1.8	1.6	1.6	1.4	1.3	1.2	1.3	1.2	1.2	1.1	1.1	1.2	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.4	1.8															
20-Apr	1.6	1.6	1.6	1.7	1.7	1.7	1.5	1.3	1.0	0.9	1.0	1.0	1.0	1.2	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.4	1.7															
21-Apr	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.5	1.4	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.8															
22-Apr	1.6	1.7	1.9	1.9	3.1	2.7	1.8	1.8	1.7	1.5	1.5	1.4	1.4	1.5	1.6	1.6	1.6	1.6	2.4	16.5	8.2	10.1	9.8	10.4	3.7	16.5															
23-Apr	13.4	16.3	3.7	4.1	4.7	4.0	4.3	17.9	11.5	7.0	1.3	1.3	1.3	1.4	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.5	1.6	1.6	4.5	17.9															
24-Apr	1.6	1.5	1.5	1.6	1.6	1.6	1.5	1.4	1.2	1.2	1.2	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.5	1.6															
25-Apr	1.7	1.7	1.8	1.8	1.7	1.7	1.4	1.2	1.1	0.8	0.7	0.7	0.8	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.8															
26-Apr	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	16.0	5.1	2.2	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.6	2.4	16.0															
27-Apr	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.5	1.2	1.0	1.0	1.0	1.1	1.3	1.4	1.3	1.3	1.5	1.6	1.6	1.6	1.6	1.7	1.5	1.7															
28-Apr	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.3	1.2	1.0	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.7															
29-Apr	1.3	1.3	1.4	1.4	1.4	1.4	1.7	1.4	1.2	0.8	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.1	1.7															
30-Apr	1.4	1.3	1.3	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.5	1.5	1.6	1.8	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.8	1.5	1.8															
																									Diurnal Average																
																									Diurnal Maximum																



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Fort Chipewyan - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	0	0.00	0.00
0.4 - 0.5	2	0.28	0.28
0.6 - 0.7	4	0.56	0.83
0.8 - 1.4	196	27.22	28.06
1.5 - 10	408	56.67	84.72
> 10	66	9.17	93.89

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

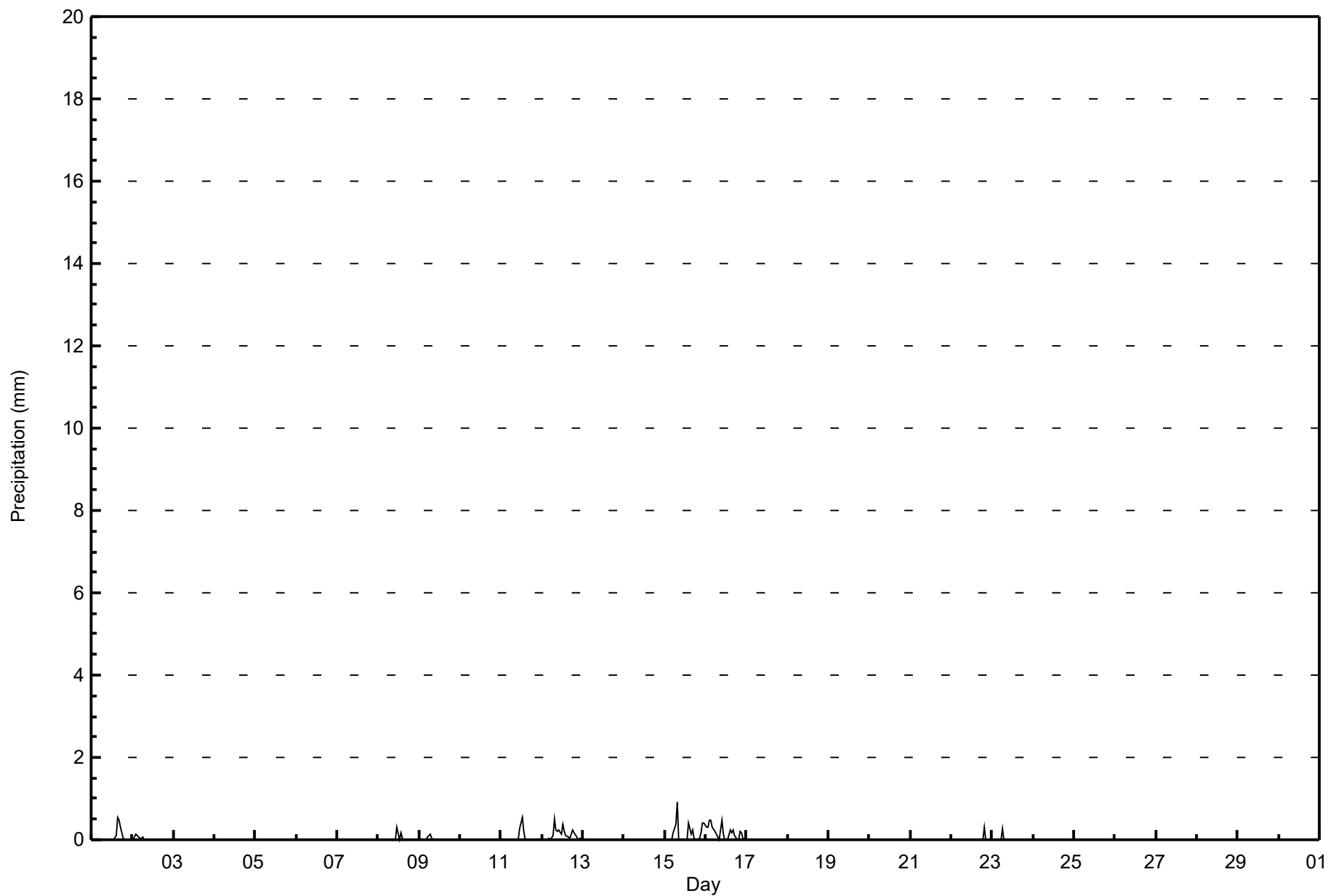
Fort Chipewyan - April 2025

Maximum Value: 0.9 mm on Apr 15 08:00																				Maximum Daily Total: 4.1 mm on Apr 16					Hours in Service: 720				
Minimum Value: 0.0 mm on Apr 1 01:00																				Minimum Daily Total: 0.0 mm on Apr 3					Hours of Data: 720				
Maximum Diurnal Total: 1.6 mm at hour 8																				Minimum Diurnal Total: 0.2 mm at hour 9					Hours of Missing Data: 0				
Monthly Total: 14.66 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 = 0.5					Hours of Calibration: 0				
																									Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.0	0.0	0.0	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	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.5			
2-Apr	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	0.0	0.0	0.0	0.0	0.0	0.4	0.1			
3-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3			
9-Apr	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2			
10-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.6			
12-Apr	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5	0.2	0.2	0.2	0.1	0.4	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.1	0.1	3.0	0.5			
13-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.4	0.4	3.3	0.9			
16-Apr	0.3	0.3	0.5	0.5	0.3	0.2	0.1	0.1	0.0	0.5	0.1	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.0	0.0	0.2	0.2	0.0	0.0	4.1	0.5			
17-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.3	0.3			
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3			
24-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Diurnal Average																													
Diurnal Maximum																													



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Fort Chipewyan - April 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	707	98.19	98.19
0.4 - 0.5	11	1.53	99.72
0.6 - 0.7	1	0.14	99.86
0.8 - 1.4	1	0.14	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 720

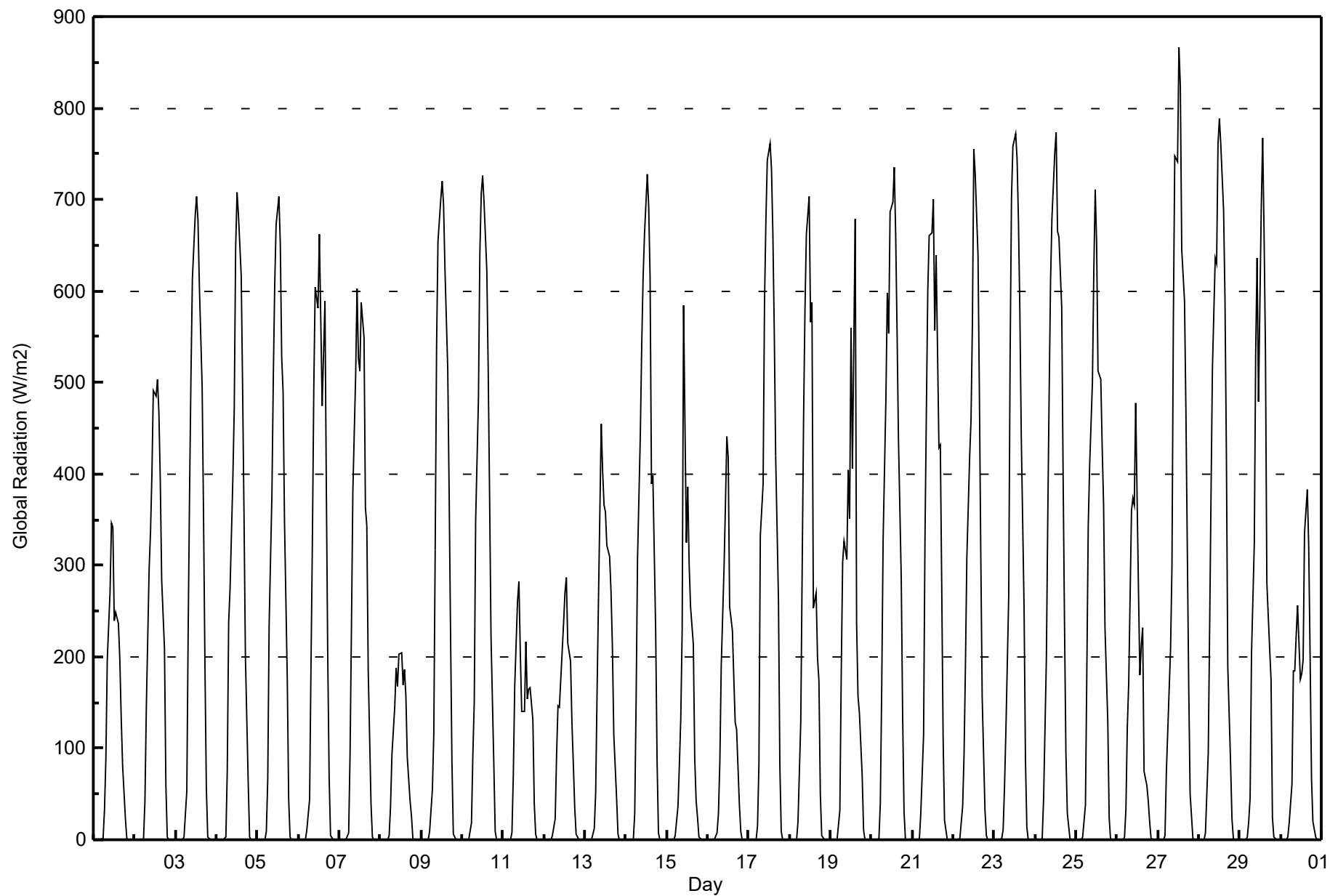
Total Number of Hours: 720

Maximum Value: 867.2 W/m2 on Apr 27 13:00																				Maximum Daily Average: 283.5 W/m2 on Apr 28										Hours in Service: 720	
Minimum Value: 0.0 W/m2 on Apr 1 04:00																				Minimum Daily Average: 71.5 W/m2 on Apr 8										Hours of Data: 720	
Maximum Diurnal Average: 566.7 W/m2 at hour 13																				Minimum Diurnal Average: 0.0 W/m2 at hour 23										Hours of Missing Data: 0	
Monthly Average: 195.97 W/m2																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 66.3 Q ₃ = 352.9 P ₉₀ = 615.0 P ₉₉ = 760.7										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	0.0	0.0	0.0	0.0	0.0	1.3	31.8	88.3	196.9	271.7	345.6	341.4	239.2	248.5	236.7	196.4	132.8	81.6	23.2	1.4	0.0	0.0	0.0	0.0	101.5	345.6					
2-Apr	0.0	0.0	0.0	0.0	0.0	1.9	42.1	145.5	296.1	337.6	400.1	490.5	485.5	503.2	467.1	392.2	283.6	208.8	60.2	2.4	0.0	0.0	0.0	0.0	171.5	503.2					
3-Apr	0.0	0.0	0.0	0.0	0.0	3.0	52.8	231.7	382.4	510.0	612.8	682.0	703.1	678.0	605.1	493.9	351.6	190.7	56.1	3.3	0.1	0.1	0.0	0.0	231.5	703.1					
4-Apr	0.0	0.0	0.0	0.0	0.0	3.6	76.8	237.4	274.5	395.5	471.9	647.1	707.6	682.6	616.3	492.2	354.1	199.2	62.5	3.3	0.0	0.0	0.0	0.0	217.7	707.6					
5-Apr	0.0	0.0	0.0	0.0	0.0	8.5	66.0	235.4	378.5	506.5	607.5	673.0	703.4	650.8	527.6	489.4	349.3	174.7	44.8	2.8	0.0	0.0	0.0	0.0	225.8	703.4					
6-Apr	0.0	0.0	0.0	0.0	0.0	10.1	44.9	190.3	325.8	492.9	603.9	580.5	661.7	569.6	474.2	588.9	383.2	199.3	68.3	4.4	0.0	0.0	0.0	0.0	216.6	661.7					
7-Apr	0.0	0.0	0.0	0.0	0.0	8.3	95.0	233.3	382.1	507.3	602.9	526.4	513.1	586.7	549.2	363.2	343.0	186.1	39.6	2.6	0.0	0.0	0.0	0.0	205.8	602.9					
8-Apr	0.0	0.0	0.0	0.0	0.0	4.1	36.9	92.8	144.2	188.3	168.0	203.5	205.1	168.6	185.9	157.1	90.7	42.7	25.7	2.1	0.0	0.0	0.0	0.0	71.5	205.1					
9-Apr	0.0	0.0	0.0	0.0	0.0	8.6	54.4	115.2	316.6	540.1	654.6	700.2	719.7	693.7	623.3	514.4	378.0	226.7	85.1	6.6	0.0	0.0	0.0	0.0	234.9	719.7					
10-Apr	0.0	0.0	0.0	0.0	0.1	18.8	92.7	151.2	349.5	481.8	641.0	705.8	725.6	696.9	622.0	512.3	374.1	222.6	84.0	8.5	0.0	0.0	0.0	0.0	236.9	725.6					
11-Apr	0.0	0.0	0.0	0.0	0.0	7.6	71.1	167.4	261.2	282.5	204.5	140.6	140.1	216.9	153.4	164.3	166.3	131.0	39.9	6.0	0.0	0.0	0.0	0.0	89.7	282.5					
12-Apr	0.0	0.0	0.0	0.0	0.0	4.4	22.5	93.7	145.8	145.3	175.1	237.0	269.8	286.8	214.8	194.9	127.9	81.7	35.6	6.0	0.0	0.0	0.0	0.0	85.1	286.8					
13-Apr	0.0	0.0	0.0	0.0	0.0	11.6	50.2	160.1	260.3	454.1	402.9	366.9	358.0	321.8	310.0	271.0	210.0	113.9	46.2	6.4	0.0	0.0	0.0	0.0	139.3	454.1					
14-Apr	0.0	0.0	0.0	0.0	0.2	28.2	152.4	306.1	442.9	540.4	615.5	662.6	727.2	692.0	614.9	388.9	398.3	228.6	87.1	7.8	0.0	0.0	0.0	0.0	245.6	727.2					
15-Apr	0.0	0.0	0.0	0.0	0.0	4.2	36.2	82.0	132.1	231.0	583.6	325.0	385.5	301.2	254.4	212.8	88.8	42.8	23.8	3.4	0.0	0.0	0.0	0.0	112.8	583.6					
16-Apr	0.0	0.0	0.0	0.0	0.1	7.2	29.1	85.9	190.4	297.3	366.8	440.6	418.6	255.0	229.5	176.7	128.4	120.5	38.7	9.1	0.0	0.0	0.0	0.0	116.4	440.6					
17-Apr	0.0	0.0	0.0	0.0	0.3	15.1	82.7	332.3	388.3	586.6	677.6	742.3	761.1	733.7	662.0	555.0	420.1	262.3	81.5	8.9	0.1	0.0	0.0	0.0	262.9	761.1					
18-Apr	0.0	0.0	0.0	0.0	0.4	19.3	129.1	296.8	461.2	580.4	662.5	702.9	565.4	586.6	253.8	269.3	198.5	174.4	49.7	4.2	0.0	0.0	0.0	0.0	206.4	702.9					
19-Apr	0.0	0.0	0.0	0.0	0.7	32.3	182.5	304.3	326.2	307.3	404.6	351.1	559.4	405.9	678.8	236.1	156.8	139.1	69.9	10.5	0.0	0.0	0.0	0.0	173.6	678.8					
20-Apr	0.0	0.0	0.0	0.0	2.2	40.4	166.9	327.3	481.8	598.5	553.5	685.7	696.8	735.6	662.7	554.7	437.2	285.7	134.0	30.2	0.5	0.0	0.0	0.0	266.4	735.6					
21-Apr	0.0	0.0	0.0	0.0	1.3	29.5	114.7	330.1	468.2	599.2	660.9	663.9	700.0	557.1	639.7	428.6	432.2	276.9	110.7	22.0	0.5	0.0	0.0	0.0	251.5	700.0					
22-Apr	0.0	0.0	0.0	0.0	1.6	36.1	93.5	191.4	307.4	418.1	458.6	565.3	754.8	728.2	638.6	487.1	311.3	156.0	32.5	5.2	0.2	0.0	0.0	0.0	216.1	754.8					
23-Apr	0.1	0.1	0.0	0.0	0.9	11.4	57.9	120.7	266.0	526.1	701.2	758.5	771.6	745.1	675.8	576.6	442.1	255.5	89.2	13.7	0.2	0.0	0.0	0.0	250.5	771.6					
24-Apr	0.0	0.0	0.0	0.0	2.2	44.1	198.0	352.5	490.2	610.9	680.9	750.5	772.9	664.6	658.7	580.8	397.3	235.5	95.1	29.7	0.7	0.0	0.0	0.0	273.5	772.9					
25-Apr	0.0	0.0	0.0	0.0	2.3	38.2	186.8	342.6	408.8	500.8	622.5	710.9	653.6	513.0	503.0	428.5	366.7	232.4	130.1	24.1	0.5	0.0	0.0	0.0	236.0	710.9					
26-Apr	0.0	0.0	0.0	0.0	2.5	33.5	124.1	170.8	359.8	374.4	366.8	477.4	272.9	179.6	212.2	232.6	74.9	60.2	43.4	19.3	0.8	0.0	0.0	0.0	125.2	477.4					
27-Apr	0.0	0.0	0.0	0.0	4.3	75.4	164.8	208.9	298.3	568.1	746.9	741.2	867.2	823.0	645.7	588.7	468.5	316.6	169.0	50.3	2.2	0.0	0.0	0.0	280.8	867.2					
28-Apr	0.0	0.0	0.0	0.0	8.1	94.4	232.1	378.7	515.7	636.3	630.4	761.7	789.2	759.0	688.0	590.3	422.7	189.3	83.7	23.6	1.0	0.0	0.0	0.0	283.5	789.2					
29-Apr	0.0	0.0	0.0	0.0	2.5	19.3	45.1	202.2	324.0	532.8	636.3	478.8	691.1	766.6	664.3	533.8	280.4	208.7	175.5	24.0	2.6	0.0	0.0	0.0	232.8	766.6					
30-Apr	0.0	0.0	0.0	0.0	2.4	18.6	60.3	184.2	185.0	222.4	256.6	175.4	181.9	196.5	334.8	383.5	320.7	200.4	66.5	20.2	3.7	0.0	0.0	0.0	117.2	383.5					
0.0 0.0 0.0 0.0 1.1 21.3 93.1 212.0 325.3 441.5 517.2 543.0 566.7 531.6 486.7 401.8 296.3 181.5 71.7 12.1 0.4 0.0 0.0 0.0 Diurnal Average																															
0.1 0.1 0.0 0.0 8.1 94.4 232.1 378.7 515.7 636.3 746.9 761.7 867.2 823.0 688.0 590.3 468.5 316.6 175.5 50.3 3.7 0.1 0.0 0.0 Diurnal Maximum																															



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Global Radiation (GR) - W/m2
Fort Chipewyan - April 2025

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	313	43.47	43.47
21 - 100	75	10.42	53.89
101 - 300	123	17.08	70.97
301 - 600	130	18.06	89.03
601 - 900	79	10.97	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 - April 2025

Maximum Speed: 41 km/h on Apr 18 13:00										Maximum Daily Speed Average: 29.1 km/h on Apr 6										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 8 21:00										Minimum Daily Speed Average: 1.8 km/h on Apr 8										Hours of Data: 699						
Maximum Diurnal Speed Average: 7.9 km/h at hour 9										Minimum Diurnal Speed Average: 4.6 km/h at hour 13										Hours of Missing Data: 21						
Monthly Average Velocity: 6.0 km/h 68.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 10 Median = 16 Q ₃ = 21 P ₉₀ = 26 P ₉₉ = 37										Percent Operational Time: 97.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	E21	E21	E22	E23	E22	E24	E22	E21	E24	E23	E21	E16	SE2	W19	W19	W17	W20WNW18	NW15	NW14	NW13	NW14WNW11	W10	ENE5.0	E24		
2-Apr	WSW10	WSW10	WSW11	W13	W13	W13WNW11	NW13	NW11WNW13WNW14	W16	W17	NW18	NW21	NW22	NW21	NW20	NW21	NW20	NW21	NW17	NW16	NW16	NW18WNW17	WNW14.7	NW22		
3-Apr	WNW16WNW17WNW16WNW15WNW15WNW14WNW15	NW17	NW18	NW20	NW17	NW19	NW18	NW21	NW17	NW19	NW18	NW21	NW17	NW19	NW18	NW12	NW11	NW8	NNW5	WNW5	W6	SW4	NW14.0	NW21		
4-Apr	WSW7	W7	WNW9	W4	SE2	ESE2	SW7	SE3	ENE7	SW4	W15	W19	W19	W15	W16	W17WSW13	WSW9WSW10	WSW9	WNW8	ENE3	SSW4	E4	W7.0	W19		
5-Apr	E9	ENE9	E11	E13	ENE15	ENE19	E23	E30	E29	ENE25	ENE21	NE22	ENE22	ENE26	ENE25	NE23	NE23	NE25	NE26	ENE31	ENE35	ENE36	ENE36	ENE37	ENE23.3	ENE37
6-Apr	ENE38	ENE38	ENE34	ENE34	ENE35	ENE37	ENE39	ENE33	E34	E34	E33	E30	ESE26	ESE31	ESE26	ESE25	ESE26	ESE28	ESE25	E26	E25	E25	E26	E22	E29.1	ENE39
7-Apr	ESE20	SE17	ESE15	ESE16	ESE15	ESE15	ESE17	ESE20	SE22	SE18	ESE21	E20	E22	E24	E23	E23	E16	E13	SE17	SSE20	SE10	ESE8	ESE12	E11	ESE16.3	E24
8-Apr	E8	ESE8	ESE7	E7	E9	E7	ENE6	E7	E4	W6	NNE2	N2	NW8	NW6	NW8	NW9	WNW6	NE5	E9	E7	S1	W6	WNW5	WNW5	NE1.8	NW9
9-Apr	NW5	W6	WSW5	W6	WNW7WNW10	W12	W10	W11	W11WSW13WSW15	W17WSW16WSW15WSW12WSW10	W8	W7	WSW8	SW6	SW8	SW9	SW11								W9.5	W17
10-Apr	W10WSW12	W11	WNW9	WNW9	W10	W7	WSW8	W8	W13	WSW9WSW14WSW12	W12WSW10	SW8	WSW7	E5	ENE6	E5	ENE7	ENE9	ENE10	ENE16					W4.3	ENE16
11-Apr	ENE21	ENE23	ENE24	ENE28	ENE27	ENE29	ENE30	ENE30	ENE32	ENE28	ENE19	ENE21	ENE25	ENE25	ENE17	ENE21	ENE23	ENE22	ENE24	ENE20	ENE21	ENE20	ENE14	ENE15	ENE23.2	ENE32
12-Apr	ENE11	NE4	WNW5	NW3	SSW2	ESE4	E4	NNE5	NNE9	NNE10	NNE9	NNW7	NNW8	NNW6	NW5	NNW5	NW9	NW11	NW11	NW12	UO	UO	UO	UO	NNW4.9	NW12
13-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	W8WNW10WNW11	WNW9	W9	WNW9	NW11	NW10	NNW8	NNW7	NNW6	NNE6	N6	NNW7	N6			---	NW11
14-Apr	NNE5	ENE4	ENE4	NE4	NE7	ENE7	E11	E13	E15	E19	E21	ENE25	ENE30	ENE32	ENE33	ENE33	ENE29	ENE27	ENE27	ENE26	E28	E24	E23	E18	ENE19.3	ENE33
15-Apr	E22	E22	E21	E21	E20	E13	E14	ESE10	SE8WSW22WSW29WSW30WSW28WSW31WSW31	SW31WSW25WSW22WSW21	W19	W19	W18WNW15WNW16												WSW8.6	SW31
16-Apr	NW17	NW16	UO	UO	UO	UO	UO	UO	UO	UO	NW19	NW21	NW21	NW20	NW19	NW13	NW15	NW13	NW13	NNW11	NNW11	NNW10	N11	N10	---	NW21
17-Apr	N10	NNE10	NNE10	NE15	NE16	NE20	ENE22	ENE21	E25	E29	E28	E29	E26	E21	E22	E24	E17	E17	E18	E16	E19	E20	ESE20	ESE19	ENE18.4	E29
18-Apr	SE22	SSE22	SSE24	SSE27	SSE33	S26	SSE28	SSE33	SSE36	SSE33	SSE37	SSE40	SSE41	SSE36	S33	SSE30	SSE29	SSE27	SSE21	SSE20	SSE21	SSE25	S31	S22	SSE28.9	SSE41
19-Apr	S15	SW7	NW14WNW15	W18	W18	W18	W24	W24	W26	W19	W22	W22	NW13	NW19	NW16	NW15	NW16	NW17	NW16	NW16	NW14	NW14	NW11		WNW14.4	W26
20-Apr	NNW12	NW10	NW10	NW7	NW9	NW9	NNW8	NW7	NW10	NW10	NW10	NW10	NW10	ENE10	E20	E20	E21	E20	E18	ENE16	ENE14	ENE13	ENE14	ENE14	NE6.3	E21
21-Apr	ENE12	E11	E12	E12	E14	E13	E12	E14	E16	E15	E17	E21	E21	E24	E26	E22	E21	E19	E15	E9	ENE7	SSE3WSW12WNW10			E13.0	E26
22-Apr	WNW6	SW9	WSW6	WNW7	N6	NNE7	NE5	E12	E16	E17	E15	E15	E19	E22	E20	E23	ENE16	E14	NE7	SE6	SE5	NE4	E4	NNW5	E7.9	E23
23-Apr	NW3	NW7	NW10NNW11NNW10NNW11	N8	N9	N10	NNE9	E9	ESE14	E14	E17	E19	E19	E19	E19	E20	ENE15	ENE15	ENE21	E21	E18	ENE16			ENE9.8	E21
24-Apr	E17	ENE17	NE18	ENE24	ENE22	ENE21	ENE20	ENE21	E17	E18	E18	E20	E22	E23	E22	E24	E23	ENE25	ENE24	ENE21	ENE24	ENE25	E25	ENE26	ENE21.2	ENE26
25-Apr	E23	E18	E18	E16	E12	SSE11	SSE9	SE8	ESE8	SSE3	E8	E11	E14	E16	E13	E14	E10	E11	E14	E14	N4	N8	NE13	NE13	E10.6	E23
26-Apr	NNE11	NNE14	NNW10	NE12	NE15	NE17	NE25	NE17	NE19	NE15	ENE30	E28	E25	E19	E16	E13	E9	NE3	NW15	NW16	NW18	NW17	NW15	NW16	NE10.5	ENE30
27-Apr	NW16	NW16	NW15	NW15	NW14	NW14	NW14	NW13	NW13	NW12	NW11WNW12	NW10WNW10	NNW9	NNW9	NNW7	NNW6	E17	ENE15	ENE15	E17	E18	E21			NNW7.3	E21
28-Apr	ESE21	ESE18	ESE18	SE17	ESE15	ESE16	ESE17	ESE17	SE18	ESE16	ESE17	E21	E20	E21	E22	E23	E27	E25	E23	E22	E22	E21	ESE16	S21	ESE18.2	E27
29-Apr	S14	S7	ESE5	ESE3	NE4	E6	E6	E3	SW3	W11WNW12	NW15NNW16NNW17NNW18NNW16	NW15NNW12NNW11	NNW7	N6	ENE9	ENE8	ENE7								NNW5.0	NNW18
30-Apr	N7	NNE13	NNE15	NE17	NE18	ENE15	NE18	ENE17	ENE21	ENE19	NE21	ENE22	NE20	ENE25	ENE24	ENE23	ENE22	ENE20	ENE15	NE11	NNE7	NNE7	NE2	E2	NE15.3	ENE25
ENE5.5 ENE4.7 ENE5.1 ENE6.1 ENE6.4 ENE6.8 ENE7.3 ENE7.6 E7.9 ENE4.8 ENE5.1 ENE4.8 ENE4.6 ENE5.6 ENE5.6 ENE6.2 ENE5.4 ENE6.7 ENE6.8 ENE6.2 ENE6.9 ENE6.8 ENE5.7 ENE5.3																										Diurnal Average
ENE38 ENE38 ENE34 ENE34 ENE35 ENE37 ENE39 SSE33 SSE36 E34 SSE37 SSE40 SSE41 SSE36 S33 ENE33 ENE29 ESE28 ENE27 ENE31 ENE35 ENE36 ENE36 ENE37																										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

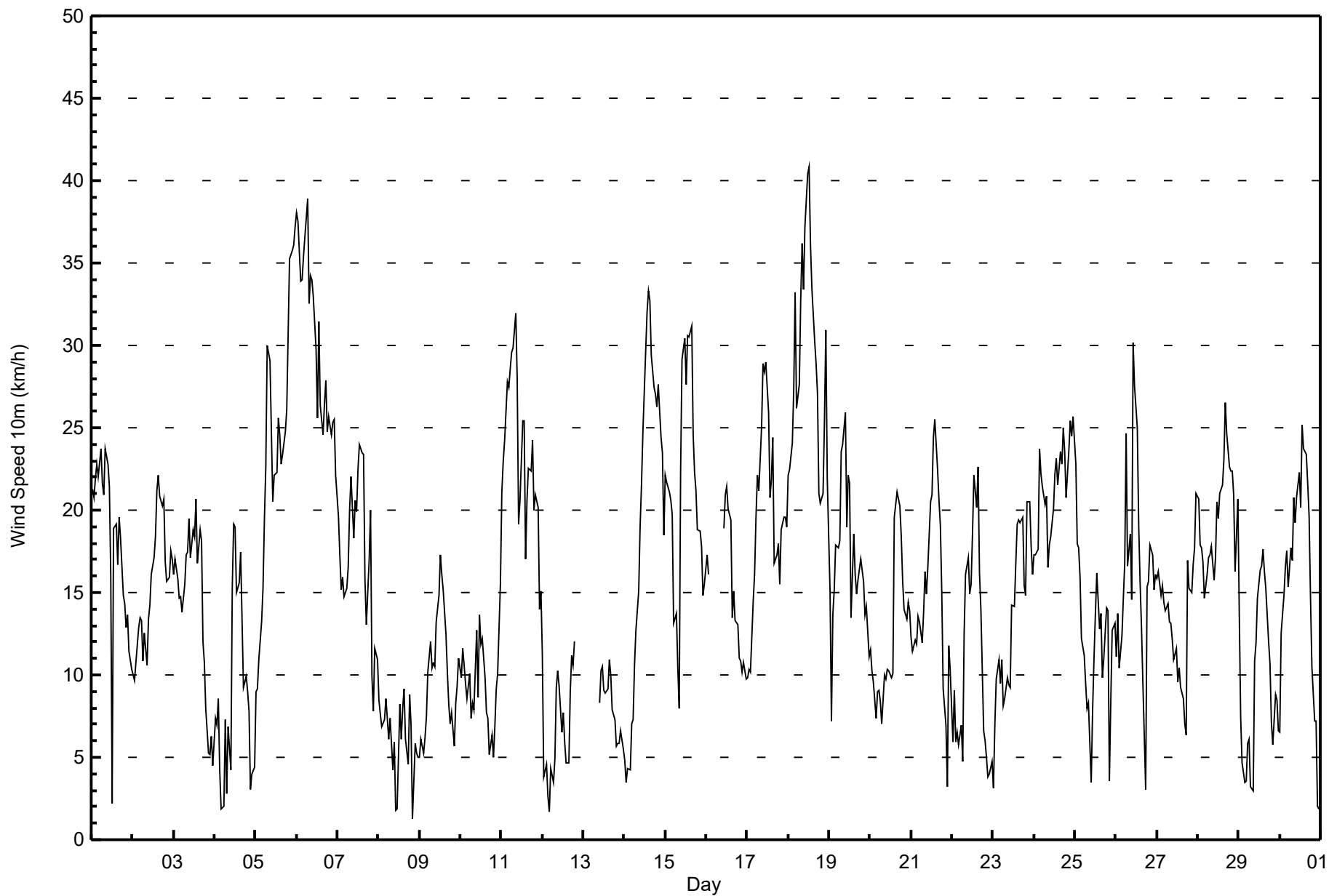
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 720									
Maximum Value: 10 km/h on Apr 15 10:00																	Hours of Data: 699									
Minimum Value: 1 km/h on Apr 14 05:00																	Hours of Missing Data: 21									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																	Hours of Calibration: 0									
																	Percent Operational Time: 97.1									
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	2	3	2	3	3	3	3	2	2	5	4	5	5	4	4	4	4	4	4	3	2	5	
2-Apr	2	2	2	3	3	3	3	4	4	5	5	4	4	6	6	7	7	7	6	6	5	5	5	4	7	
3-Apr	4	4	4	4	3	4	4	5	5	6	6	5	6	5	6	6	5	4	3	2	1	1	2	3	6	
4-Apr	1	2	1	2	1	1	3	1	1	4	4	5	5	4	4	4	4	2	2	1	2	1	1	3	5	
5-Apr	2	3	3	3	3	3	2	3	3	2	3	4	4	3	4	4	4	4	4	4	4	4	3	3	4	
6-Apr	4	4	3	3	3	3	5	3	4	3	3	3	3	2	2	3	3	3	2	2	2	2	1	2	5	
7-Apr	3	3	2	2	2	2	2	3	3	3	2	2	2	1	1	2	3	2	3	2	5	2	2	2	5	
8-Apr	1	1	1	1	1	1	2	2	2	4	2	2	2	3	2	3	3	2	2	1	2	2	2	1	4	
9-Apr	1	1	1	1	1	2	2	3	3	2	4	4	4	4	3	3	3	2	3	2	1	1	1	2	3	4
10-Apr	2	3	2	2	1	2	2	3	2	4	2	3	3	3	2	2	2	1	1	1	1	1	2	3	4	
11-Apr	3	3	3	3	3	3	3	4	4	4	4	3	4	6	2	4	4	2	3	3	3	5	2	2	6	
12-Apr	2	2	1	2	2	2	1	2	3	3	3	3	3	3	2	3	4	3	3	3	UO	UO	UO	UO	4	
13-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	4	3	3	3	3	3	4	4	3	3	2	2	2	2	2	4	
14-Apr	2	2	1	2	1	1	1	2	1	2	2	3	3	3	3	3	3	3	2	2	2	2	3	3	3	
15-Apr	2	2	2	2	3	2	1	1	3	10	8	7	7	7	7	7	6	6	6	4	4	4	3	4	10	
16-Apr	5	5	UO	UO	UO	UO	UO	UO	UO	UO	7	7	7	7	6	5	5	5	5	5	4	4	4	4	7	
17-Apr	3	3	3	5	3	4	4	3	2	2	2	3	2	2	3	4	2	1	3	2	3	2	2	2	5	
18-Apr	3	3	3	5	4	4	4	6	5	5	6	5	5	5	5	4	4	4	3	3	4	4	4	4	6	
19-Apr	5	3	4	4	5	4	5	6	6	6	5	5	6	6	6	5	5	6	5	5	5	4	5	4	6	
20-Apr	5	4	4	2	2	2	3	3	4	4	4	5	4	6	2	2	2	2	2	2	1	1	1	1	6	
21-Apr	1	1	1	1	1	1	1	1	1	1	2	2	4	2	2	3	2	2	1	2	1	2	6	4	6	
22-Apr	2	2	1	2	3	3	2	3	2	2	2	2	2	2	2	3	4	4	3	3	4	2	1	3	4	
23-Apr	2	2	2	3	3	3	3	3	3	3	2	1	2	2	2	2	2	2	2	2	3	2	2	2	3	
24-Apr	2	2	3	3	3	3	2	3	2	1	2	2	2	2	2	2	2	3	4	3	3	3	3	3	4	
25-Apr	4	3	2	2	1	2	2	2	2	3	3	3	2	3	3	2	2	2	2	3	3	4	3	3	4	
26-Apr	5	4	6	4	5	4	5	5	5	4	6	3	2	2	2	2	2	3	6	6	6	6	5	5	6	
27-Apr	5	6	5	5	5	5	6	5	4	5	4	4	4	4	4	4	4	4	2	2	2	1	2	2	6	
28-Apr	2	2	2	2	1	2	1	1	3	2	2	2	2	2	2	2	2	3	3	2	2	2	3	3	3	
29-Apr	3	2	1	2	2	1	1	1	2	3	5	6	6	6	7	6	6	5	4	3	2	2	2	2	7	
30-Apr	2	3	4	4	4	3	4	3	4	3	6	4	5	5	4	4	4	3	4	2	1	2	1	1	6	
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	53	7.58	7.58
6 - 11	181	25.89	33.48
12 - 19	239	34.19	67.67
20 - 28	177	25.32	92.99
29 - 38	46	6.58	99.57
> 38	3	0.43	100.00

Total Number of Valid Hours: 699

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Chipewyan - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2	3	7	4	8	4	4	2	1	2	3	1	1	4	4	3	53
6 - 11	12	12	3	14	20	6	4	2	1	1	7	14	20	17	28	20	181
12 - 19	0	3	13	26	59	17	5	0	2	0	0	10	24	17	57	6	239
20 - 28	0	0	9	46	75	11	2	10	3	0	0	5	6	0	10	0	177
29 - 38	0	0	0	22	8	1	0	8	2	0	1	4	0	0	0	0	46
> 38	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3
Totals	14	18	32	113	170	39	15	24	9	3	11	34	51	38	99	29	699

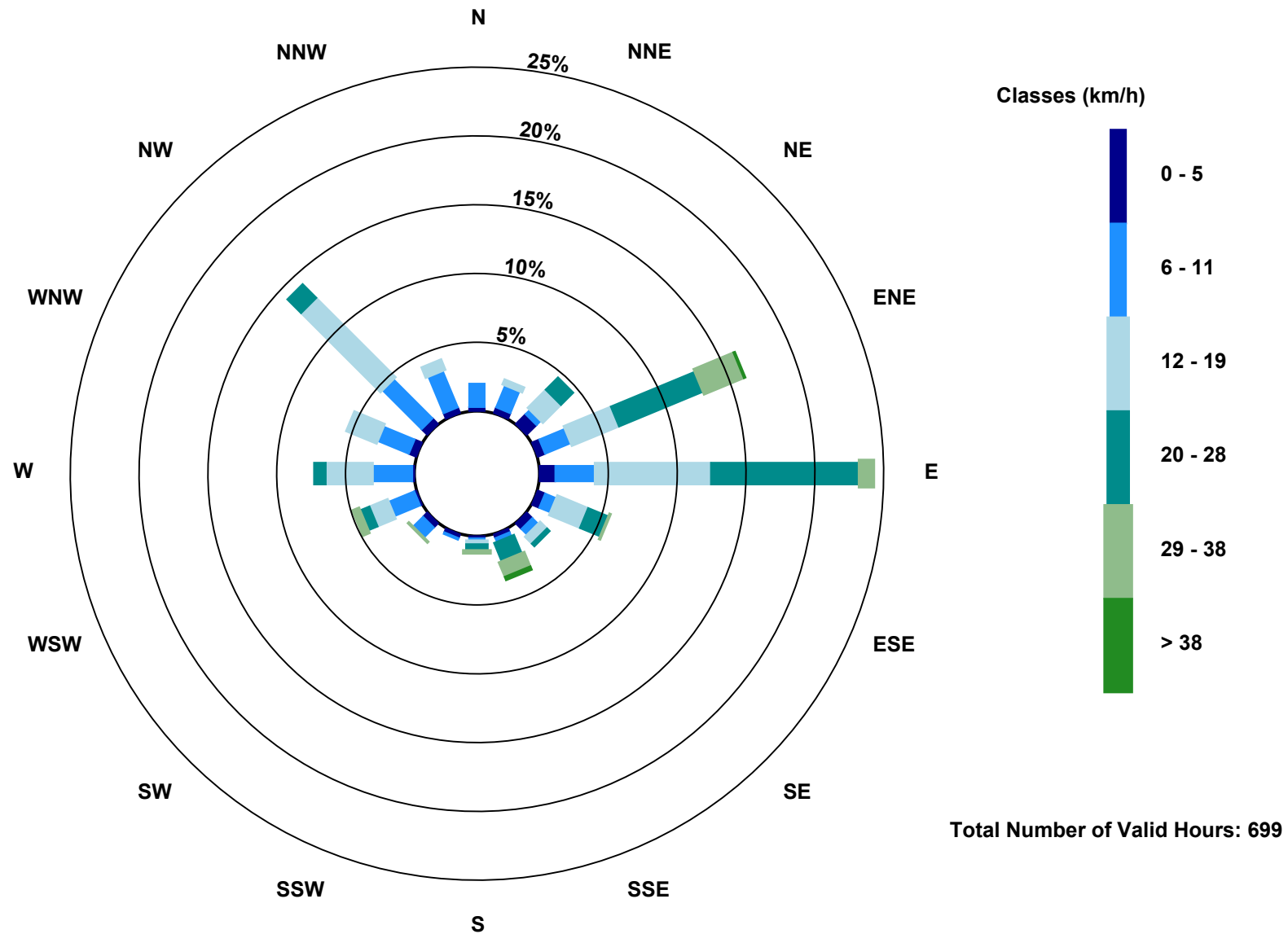
Total Number of Valid Hours: 699

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Fort Chipewyan





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - April 2025

Direction of Maximum Speed: 166 deg on Apr 18 13:00 Direction of Maximum Daily Speed Average: 89.3 deg on Apr 6																				Hours in Service: 720					
Direction of Minimum Speed: 187 deg on Apr 8 21:00 Direction of Minimum Daily Speed Average: 1.8 deg on Apr 8																				Hours of Data: 699					
Monthly Average Direction: 68.0 deg																				Hours of Missing Data: 21					
																				Percent Operational Time: 97.1					
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	82	85	84	84	82	85	90	91	86	83	88	91	125	265	268	270	279	284	308	305	313	306	290	264	60.0
2-Apr	257	253	246	269	275	281	299	304	308	300	303	281	279	306	310	310	312	315	309	313	317	314	305	297	297.8
3-Apr	298	301	300	295	282	294	302	310	310	314	315	310	310	306	309	309	311	316	317	318	338	300	280	235	305.3
4-Apr	255	269	285	276	139	103	214	135	73	234	260	262	268	269	263	259	256	256	243	258	290	70	210	81	258.9
5-Apr	86	76	87	86	63	78	94	79	79	73	66	56	61	61	60	51	51	53	53	61	70	73	74	75	68.5
6-Apr	74	74	74	72	73	75	78	76	79	82	81	81	109	114	110	111	122	118	105	101	96	97	98	99	89.3
7-Apr	116	131	105	112	119	114	120	118	130	133	103	93	83	84	83	88	91	88	136	149	128	112	114	98	109.3
8-Apr	100	103	113	101	94	82	75	80	95	266	28	1	314	305	310	312	302	54	88	87	187	273	283	294	49.2
9-Apr	322	271	255	269	288	286	281	275	271	271	252	256	260	254	253	249	251	265	275	254	234	225	222	227	259.4
10-Apr	259	256	281	293	288	281	279	249	260	267	239	249	242	260	246	228	239	91	72	88	69	67	77	67	263.3
11-Apr	72	77	73	70	71	71	67	68	72	66	58	71	57	62	65	62	69	71	71	68	68	70	57	65	67.9
12-Apr	60	37	283	321	202	110	92	22	17	22	21	345	335	342	322	327	317	314	306	313	UO	UO	UO	UO	348.6
13-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	270	285	298	299	281	302	313	312	333	342	329	15	355	347	5	--
14-Apr	24	65	64	54	55	69	87	86	84	82	82	78	78	77	76	76	77	78	77	76	80	82	81	91	78.0
15-Apr	84	84	81	82	83	87	99	110	143	253	249	243	245	245	242	233	239	252	255	261	262	274	290	301	240.4
16-Apr	307	314	UO	UO	UO	UO	UO	UO	UO	UO	320	325	325	323	318	320	315	321	322	338	343	343	10	1	--
17-Apr	356	19	19	52	55	54	59	71	82	82	84	84	85	90	83	81	85	89	80	80	83	87	102	116	77.1
18-Apr	133	151	154	161	168	169	168	164	167	167	168	168	166	167	171	165	165	162	154	150	153	162	174	179	163.9
19-Apr	180	229	308	291	260	270	270	272	265	260	263	260	261	306	316	318	313	314	320	322	322	322	320	323	286.6
20-Apr	331	317	320	304	306	315	330	323	315	313	312	314	311	77	93	85	82	81	79	73	70	74	78	76	38.0
21-Apr	77	79	80	80	80	82	84	87	88	85	87	83	82	81	80	80	82	85	86	84	75	163	246	293	82.6
22-Apr	283	218	252	288	356	18	37	98	82	82	86	88	87	87	83	89	62	81	51	131	127	42	84	333	79.5
23-Apr	305	309	317	337	347	341	0	359	358	18	86	103	99	94	88	85	83	80	74	62	75	81	84	76	63.4
24-Apr	79	61	56	67	68	71	75	73	84	89	91	92	88	87	86	85	84	75	63	64	74	78	80	78	77.0
25-Apr	80	85	93	92	98	155	159	136	115	167	93	84	85	83	85	93	100	92	96	87	5	11	53	47	89.8
26-Apr	20	29	346	39	53	50	54	37	47	55	78	87	88	86	88	96	95	56	317	318	310	312	314	312	41.5
27-Apr	306	312	314	317	318	322	323	313	315	321	308	298	307	295	330	345	339	15	83	75	76	82	82	84	346.2
28-Apr	103	114	120	129	119	114	112	108	134	121	110	84	83	84	85	84	84	82	82	85	85	89	116	175	101.4
29-Apr	190	189	109	108	47	80	80	79	219	279	300	321	327	329	331	332	325	334	343	343	351	64	67	72	339.1
30-Apr	9	26	29	40	50	57	53	60	62	57	50	63	44	57	61	66	71	66	64	48	30	12	43	82	53.5
71.8 68.8 61.2 65.6 69.5 69.6 75.2 76.7 81.5 72.7 71.5 71.9 64.7 66.1 62.4 66.4 62.3 62.6 57.5 59.0 60.5 64.4 75.4 73.8																									
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

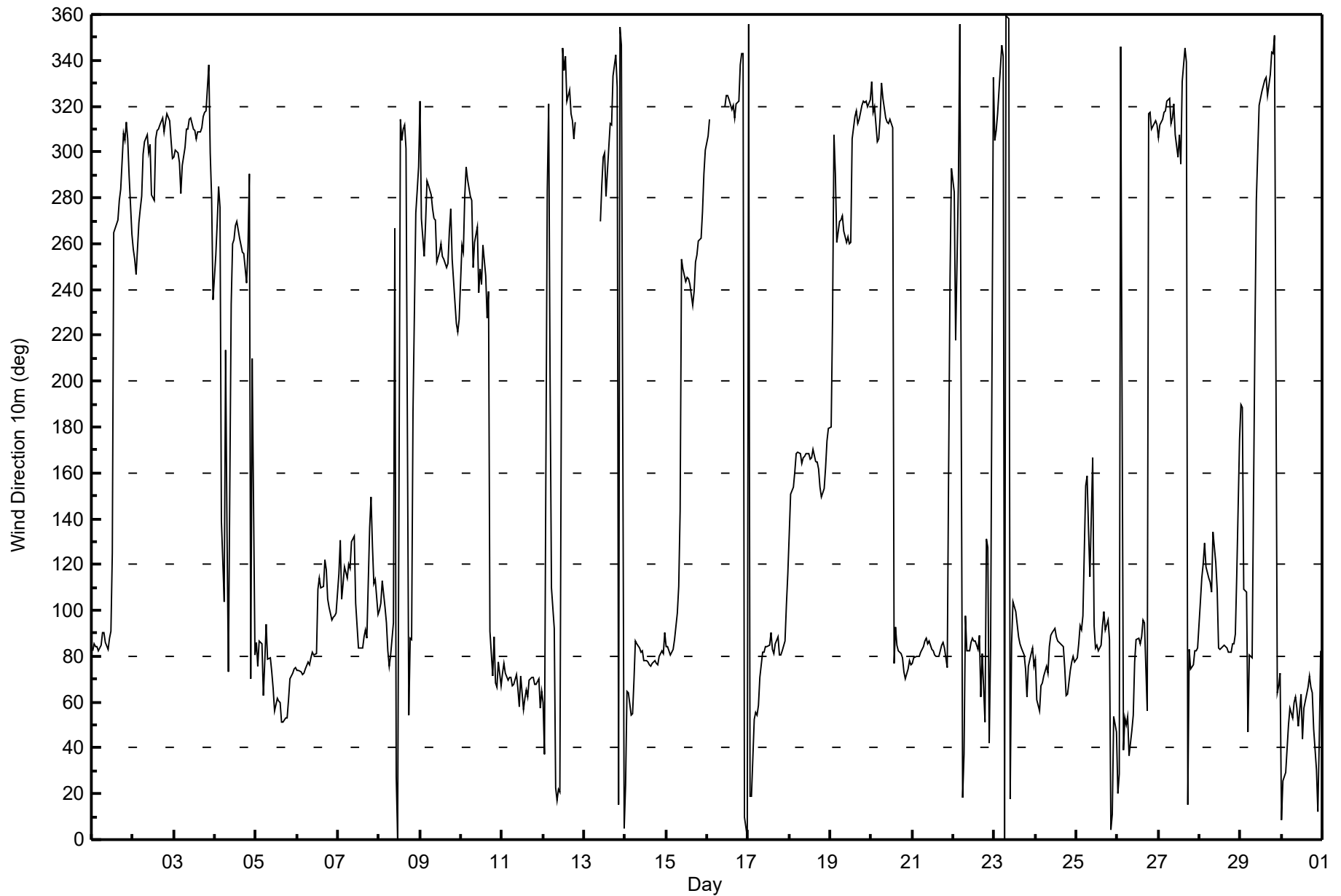
Wind Direction 10m (WD10) - deg
Fort Chipewyan - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 79 deg on Apr 25 10:00																		Hours in Service: 720							
Minimum Value: 3 deg on Apr 7 15:00																		Hours of Data: 699							
Percentiles: P ₁ = 4 P ₁₀ = 5 Q ₁ = 7 Median = 13 Q ₃ = 20 P ₉₀ = 30 P ₉₉ = 70																		Hours of Missing Data: 21							
																		Hours of Calibration: 0							
																		Percent Operational Time: 97.1							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	6	7	7	7	8	8	8	7	7	9	6	5	78	15	15	15	13	15	16	16	19	16	15	14	78
2-Apr	12	12	13	14	13	14	17	17	20	20	23	17	18	20	18	18	20	22	16	20	20	19	15	14	23
3-Apr	15	15	14	14	13	14	14	16	18	19	23	19	19	17	23	19	18	24	21	16	20	25	23	41	41
4-Apr	8	16	6	48	58	48	31	57	13	72	15	15	14	18	17	15	15	15	12	14	8	32	13	44	72
5-Apr	6	6	6	4	7	16	6	4	5	6	9	8	10	7	9	9	8	8	8	8	7	6	6	6	16
6-Apr	6	6	6	6	7	7	7	7	7	6	6	5	15	6	4	6	9	6	8	5	5	6	4	5	15
7-Apr	11	10	14	9	9	13	11	7	10	11	11	7	4	3	3	6	9	5	20	7	34	30	13	9	34
8-Apr	10	15	15	5	6	6	12	7	76	24	72	70	20	20	16	18	18	60	10	15	69	24	27	21	76
9-Apr	13	16	15	14	13	14	14	17	16	18	17	18	14	14	15	15	18	15	12	7	12	9	10	12	18
10-Apr	14	16	15	15	15	21	32	26	24	18	18	15	17	19	18	18	27	28	16	20	7	8	13	8	32
11-Apr	6	5	7	7	7	7	8	8	7	8	10	9	7	8	12	9	9	7	6	8	7	8	7	7	12
12-Apr	8	55	9	52	65	39	31	22	19	19	20	31	24	31	30	67	21	19	17	17	UO	UO	UO	UO	67
13-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	19	24	19	30	34	30	25	28	28	29	30	20	21	22	30	34
14-Apr	24	35	25	33	4	10	4	5	4	4	4	4	4	5	5	6	5	5	5	5	5	5	5	20	35
15-Apr	5	6	6	6	6	7	8	10	30	25	17	16	15	16	15	14	15	16	15	15	14	15	16	16	30
16-Apr	18	20	UO	UO	UO	UO	UO	UO	UO	UO	22	23	23	24	21	27	21	24	23	27	24	28	22	25	28
17-Apr	24	22	18	23	10	12	9	12	5	5	4	4	4	5	6	5	7	3	7	5	5	5	7	8	24
18-Apr	10	10	10	11	8	8	8	9	8	8	8	8	7	7	8	8	7	8	9	10	11	10	7	8	11
19-Apr	11	50	15	20	14	13	14	15	14	14	14	15	15	33	23	24	23	26	24	23	23	25	24	27	50
20-Apr	26	24	25	17	18	17	29	33	28	35	39	42	43	74	8	5	5	6	5	6	6	6	5	5	74
21-Apr	5	6	5	6	6	6	7	6	4	4	5	6	6	5	6	6	5	5	3	6	12	59	26	19	59
22-Apr	25	23	19	15	15	13	23	16	6	6	6	5	5	5	6	5	22	9	29	51	48	37	33	75	75
23-Apr	30	11	13	20	21	22	29	25	26	32	43	8	6	6	5	5	5	5	9	10	7	6	7	7	43
24-Apr	7	17	11	8	8	7	7	8	9	5	5	5	5	5	4	6	6	9	8	9	7	7	7	6	17
25-Apr	8	11	7	7	8	22	13	25	22	79	19	7	9	7	10	9	15	10	7	8	69	34	21	11	79
26-Apr	41	18	44	19	14	14	12	15	15	16	9	7	6	7	7	8	9	66	21	21	19	20	20	20	66
27-Apr	18	21	21	21	22	26	25	25	24	33	40	33	55	40	43	50	64	62	6	8	8	6	6	8	64
28-Apr	8	6	7	7	5	5	5	5	14	19	7	9	6	6	5	6	6	7	7	6	6	6	27	9	27
29-Apr	13	17	33	34	29	13	13	41	68	21	30	28	29	28	29	30	27	27	29	20	33	16	18	19	68
30-Apr	24	15	17	15	10	11	12	11	10	11	19	12	15	10	10	13	12	13	12	11	14	15	47	31	47
41 55 44 52 65 48 32 57 76 79 72 70 78 74 43 67 64 66 29 51 69 59 47 75																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort Chipewyan - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS09 BARGE LANDING APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
APRIL 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	681	33	39	99.17	-	-	26.8	0	4.6	0
TRS(ppb) Average	675	33	45	98.33	3.6	0	3.1	0	0.9	0
THC(ppm) Average	585	30	135	85.42	-	-	2.9	-	2.3	-
NMHC(ppm) Average	585	30	135	85.42	-	-	0.765	-	0.095	-
CH4(ppm) Average	585	30	135	85.42	-	-	2.6	-	2.2	-
NO2 (ppb) Average	679	35	41	99.17	-	-	46.3	0	20.4	-
NO (ppb) Average	679	35	41	99.17	-	-	43.3	-	7	-
NOX (ppb) Average	679	35	41	99.17	-	-	65	-	25.7	-
PM2.5(ug/m3) Average	668	1	52	92.92	-	-	39.7	0	17.7	0
Temperature (C) Average	720	0	0	100	-	-	23.4	-	13.6	-
Relative Humidity (%) Average	720	0	0	100	-	-	100	-	94.8	-
Barometric Pressure (inHg) Average	720	0	0	100	-	-	29.3	-	29.2	-
Wind Speed 10 m (km/h) Average	706	0	14	98.06	-	-	22	-	15	-
Wind Direction 10 m (deg) Average	706	0	14	98.06	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	720	0	0	100	-	-	35	-	23	-
Wind Direction 20 m (deg) Average	720	0	0	100	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Min	P10	Percentile					Max
							Q1	Median	Q3	P90		
SO2 (ppb) Average	681	0.94	2.6	-	0	0	0	0.1	0.4	2.6	26.8	
TRS(ppb) Average	675	0.41	0.3	-	0.2	0.2	0.3	0.3	0.4	0.7	3.1	
THC(ppm) Average	585	2.05	0.2	-	1.8	1.9	2	2	2.1	2.3	2.9	
NMHC(ppm) Average	585	0.028	0.059	-	0	0	0	0	0	0.1	0.765	
CH4(ppm) Average	585	2.02	0.1	-	1.8	1.9	2	2	2.1	2.2	2.6	
NO2 (ppb) Average	679	7.73	7.5	-	0.2	0.4	1.9	5.6	11.2	17.7	46.3	
NO (ppb) Average	679	2.28	4.8	-	0	0	0	0.3	2.3	6.2	43.3	
NOX (ppb) Average	679	10	10.9	-	0.2	0.4	2.1	6.8	14.1	22.5	65	
PM2.5(ug/m3) Average	668	5.89	5.1	-	0.1	1.7	3	4.4	7.1	11.2	39.7	
Temperature (C) Average	720	4.34	6.7	-	-13.2	-3.9	-0.2	4.3	9.1	13.1	23.4	
Relative Humidity (%) Average	720	59.82	22.1	-	15.8	29.8	41.9	59.9	75.5	93.8	100	
Barometric Pressure (inHg) Average	720	28.89	0.2	-	28.4	28.6	28.7	28.9	29.1	29.1	29.3	
Wind Speed 10 m (km/h) Average	706	6.8	4	-	0	2	4	6	9	12	22	
Wind Direction 10 m (deg) Average	706	111	-	-	-	-	-	-	-	-	-	
Wind Speed 20 m (km/h) Average	720	11.8	6	-	1	5	7	11	15	20	35	
Wind Direction 20 m (deg) Average	720	254.1	-	-	-	-	-	-	-	-	-	

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	08 Apr 2025 07:00	08 Apr 2025 12:00	6	Station power failure
TRS	03 Apr 2025 15:00	03 Apr 2025 20:00	6	Unstable Operation - flatline in analyzer output signal
THC/ NMHC/ CH4	03 Apr 2025 04:00	04 Apr 2025 12:00	33	Unstable Operation - AMD non-compliance
THC/ NMHC/ CH4	04 Apr 2025 13:00	05 Apr 2025 13:00	25	Maintenance - replaced analyzer
THC/ NMHC/ CH4	12 Apr 2025 08:00	12 Apr 2025 21:00	14	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	13 Apr 2025 03:00	13 Apr 2025 04:00	2	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	21 Apr 2025 04:00	21 Apr 2025 05:00	2	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	21 Apr 2025 07:00	21 Apr 2025 09:00	3	Maintenance - recalibration to address baseline instability
THC/ NMHC/ CH4	21 Apr 2025 22:00	22 Apr 2025 02:00	5	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	26 Apr 2025 21:00	27 Apr 2025 02:00	6	Unstable Operation - excessive baseline noise
THC/ NMHC/ CH4	27 Apr 2025 10:00	27 Apr 2025 14:00	5	Unstable Operation - excessive baseline noise
	29 Apr 2025 10:00	29 Apr 2025 13:00	4	Maintenance - recalibration to address baseline instability
PM2.5	08 Apr 2025 13:00	09 Apr 2025 15:00	27	Unstable Operation - excessive baseline noise
PM2.5	09 Apr 2025 17:00	10 Apr 2025 09:00	18	Maintenance - replaced analyzer
Wind Speed, Wind Direction 10m	08 Apr 2025 21:00	08 Apr 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	14 Apr 2025 03:00	14 Apr 2025 04:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	20 Apr 2025 01:00	20 Apr 2025 07:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	21 Apr 2025 02:00	21 Apr 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	21 Apr 2025 05:00	21 Apr 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	23 Apr 2025 06:00	23 Apr 2025 06:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

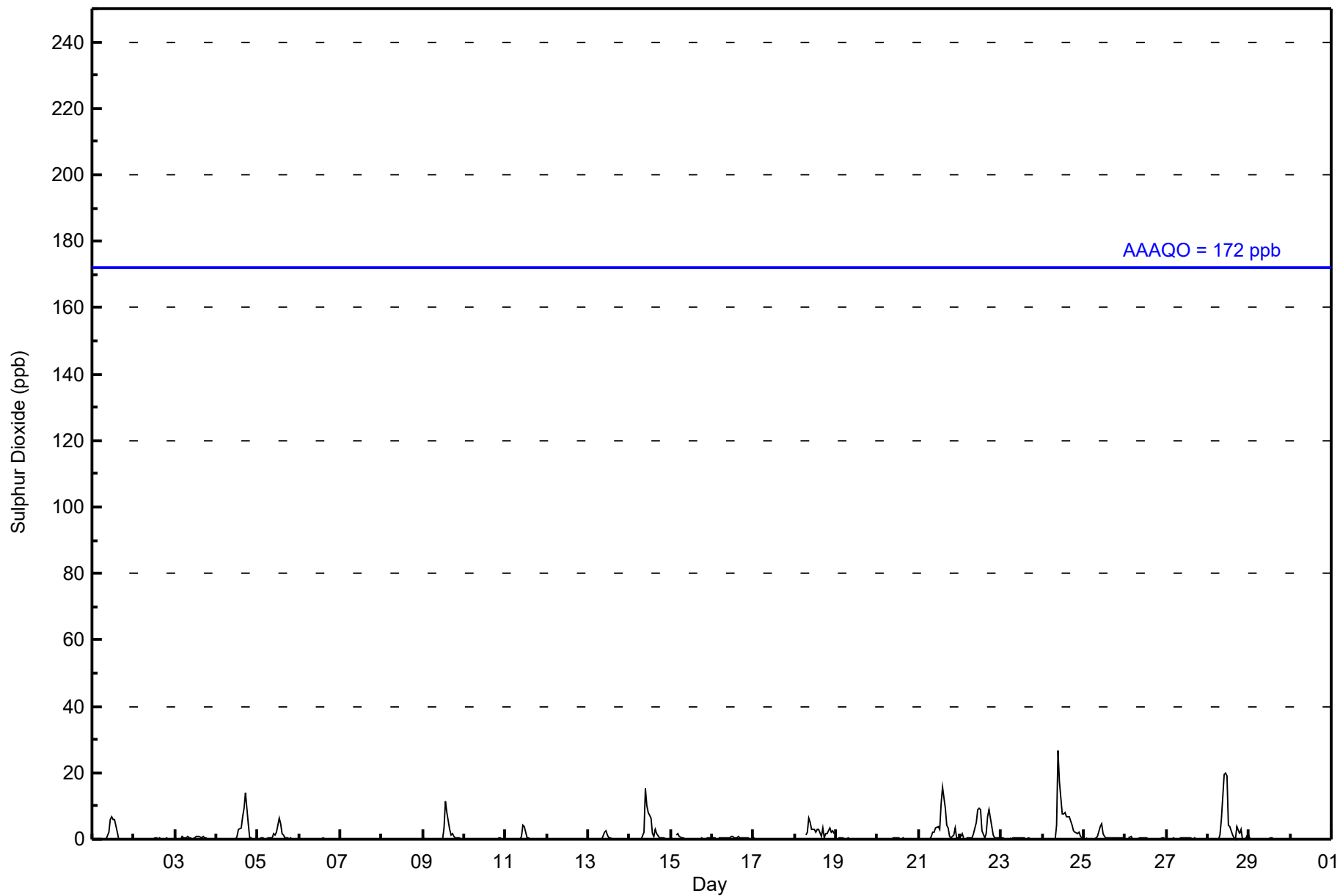
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 26.8 ppb on Apr 24 10:00 Maximum Daily Average: 4.6 ppb on Apr 24																				Hours in Service: 720 Hours of Data: 681						
Minimum Value: 0.0 ppb on Apr 1 17:00 Minimum Daily Average: 0.0 ppb on Apr 12 Maximum Diurnal Average: 3.1 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 3 Monthly Average: 0.94 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 2.6 P ₉₉ = 14.3																				Hours of Missing Data: 39 Hours of Calibration: 33 Percent Operational Time: 99.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	2.2	5.8	6.7	6.1	6.1	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	6.7
2-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.5	0.3	0.2	0.2	0.1	0.0	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.5
3-Apr	0.2	0.4	Z	0.1	0.7	0.3	0.3	0.7	0.4	0.3	0.1	0.4	0.9	0.7	0.7	0.4	0.7	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.4	0.9
4-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.7	3.0	3.5	6.8	9.2	14.1	4.7	0.6	0.3	0.1	0.0	0.4	1.9	14.1
5-Apr	0.1	0.0	0.5	0.6	Z	0.2	0.4	0.3	0.6	1.7	1.4	2.3	6.4	4.8	1.8	1.1	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.1	1.0	6.4
6-Apr	0.1	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
7-Apr	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	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	0.0	0.2	
8-Apr	0.1	Z	0.1	0.1	0.0	0.1	PF	PF	PF	PF	PF	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-	0.1
9-Apr	0.2	0.4	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	11.5	7.9	2.8	1.3	1.5	0.7	0.4	0.2	0.2	0.1	0.0	1.3	11.5
10-Apr	0.0	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	0.1	0.1	0.1	0.1	0.2	0.0	0.5	0.5	0.0	0.0	0.1	0.5
11-Apr	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.0	0.0	0.9	4.4	3.9	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.4
12-Apr	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	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1	2.5	1.2	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.5
14-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	2.1	15.2	10.0	8.1	6.3	1.7	0.8	3.0	1.9	0.3	0.3	0.3	0.2	0.2	0.1	0.1	2.2	15.2
15-Apr	0.0	0.3	Z	1.2	1.6	1.0	0.4	0.3	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3	1.6
16-Apr	0.3	0.3	0.3	Z	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.7	0.5	0.6	0.7	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.7
17-Apr	0.2	0.2	0.2	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
18-Apr	0.0	0.0	0.0	0.0	0.1	Z	1.2	2.0	6.4	5.1	3.0	3.1	2.2	3.0	3.1	0.9	3.3	0.5	1.7	1.8	3.2	2.3	2.5	1.6	2.0	6.4
19-Apr	Z	0.6	0.4	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.4	0.4	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
21-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.8	1.9	2.1	3.4	4.0	3.1	10.4	15.8	9.3	4.4	3.5	1.0	0.5	1.3	3.2	0.4	0.6	2.9	15.8
22-Apr	0.9	1.8	0.6	Z	0.4	0.2	0.3	0.4	1.7	5.1	8.7	9.3	9.0	2.7	0.5	1.5	6.8	9.0	3.6	1.2	0.5	0.2	0.3	0.2	2.8	9.3
23-Apr	0.3	0.3	0.2	0.1	Z	0.2	0.1	0.2	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.4
24-Apr	0.2	0.0	0.0	0.0	0.0	Z	0.0	0.0	4.1	26.8	17.3	7.6	7.6	8.2	7.0	6.8	5.5	4.3	2.6	2.1	1.6	2.1	1.0	0.3	4.6	26.8
25-Apr	Z	0.3	0.0	0.0	0.1	0.0	0.2	0.4	0.8	3.8	4.5	1.6	0.8	0.2	0.2	0.5	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.7	4.5
26-Apr	0.2	Z	0.5	0.7	0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.7
27-Apr	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.2	0.4
28-Apr	0.1	0.0	0.0	Z	0.0	0.2	0.0	1.2	6.1	19.4	19.8	19.3	4.1	4.0	1.3	0.5	0.0	3.6	1.7	2.8	0.2	0.1	0.1	1.5	3.7	19.8
29-Apr	0.5	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.5
30-Apr	0.1	0.0	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	672	98.68	98.68
11 - 20	8	1.17	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: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	64	78	31	14	16	23	46	97	60	34	21	50	41	25	20	52	672
11 - 20	0	0	0	0	0	0	0	1	6	0	0	0	0	1	0	0	8
21 - 60	0	0	0	0	0	0	0	0	0	0	1	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	64	78	31	14	16	23	46	98	66	34	22	50	41	26	20	52	681

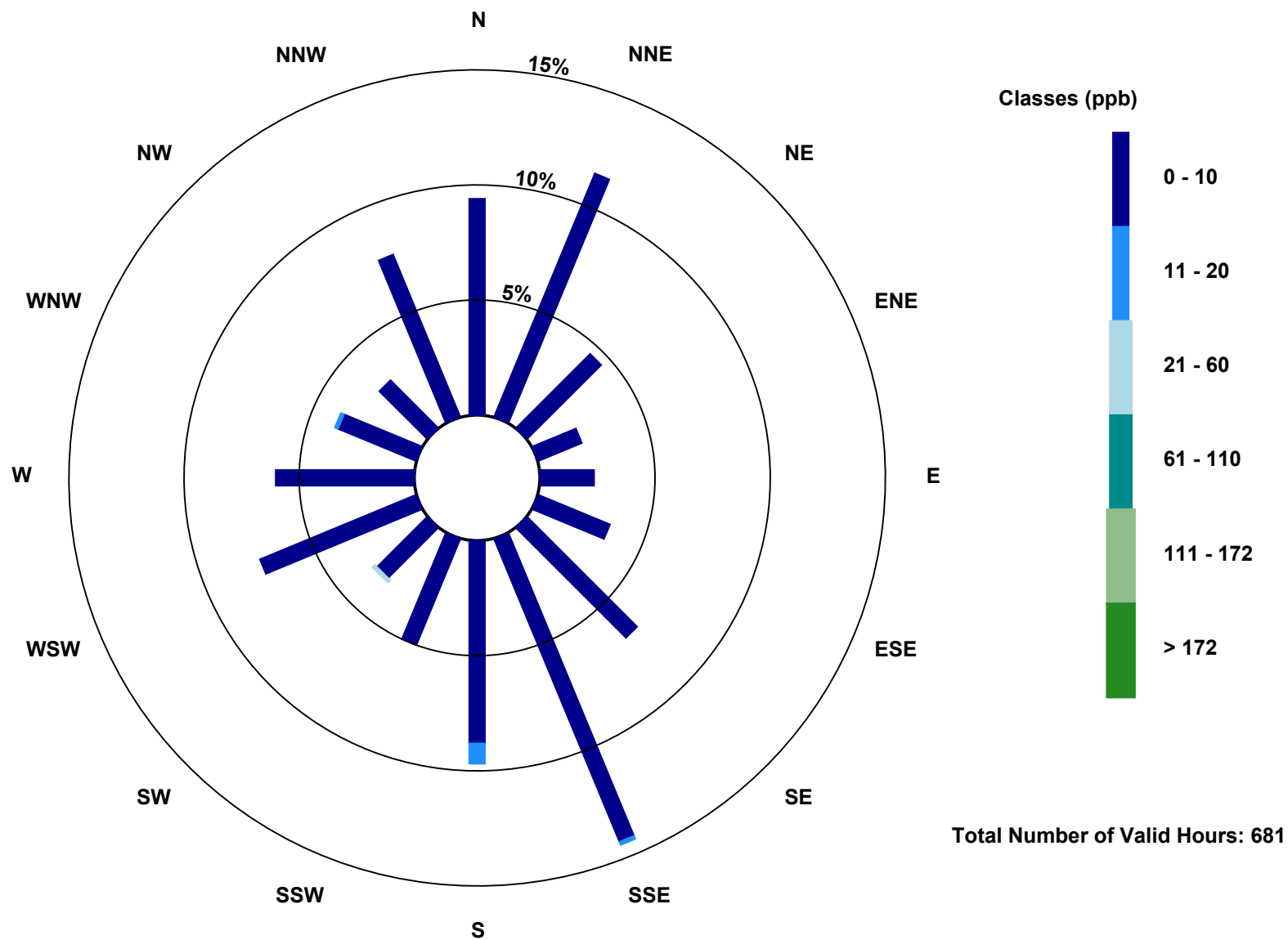
Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

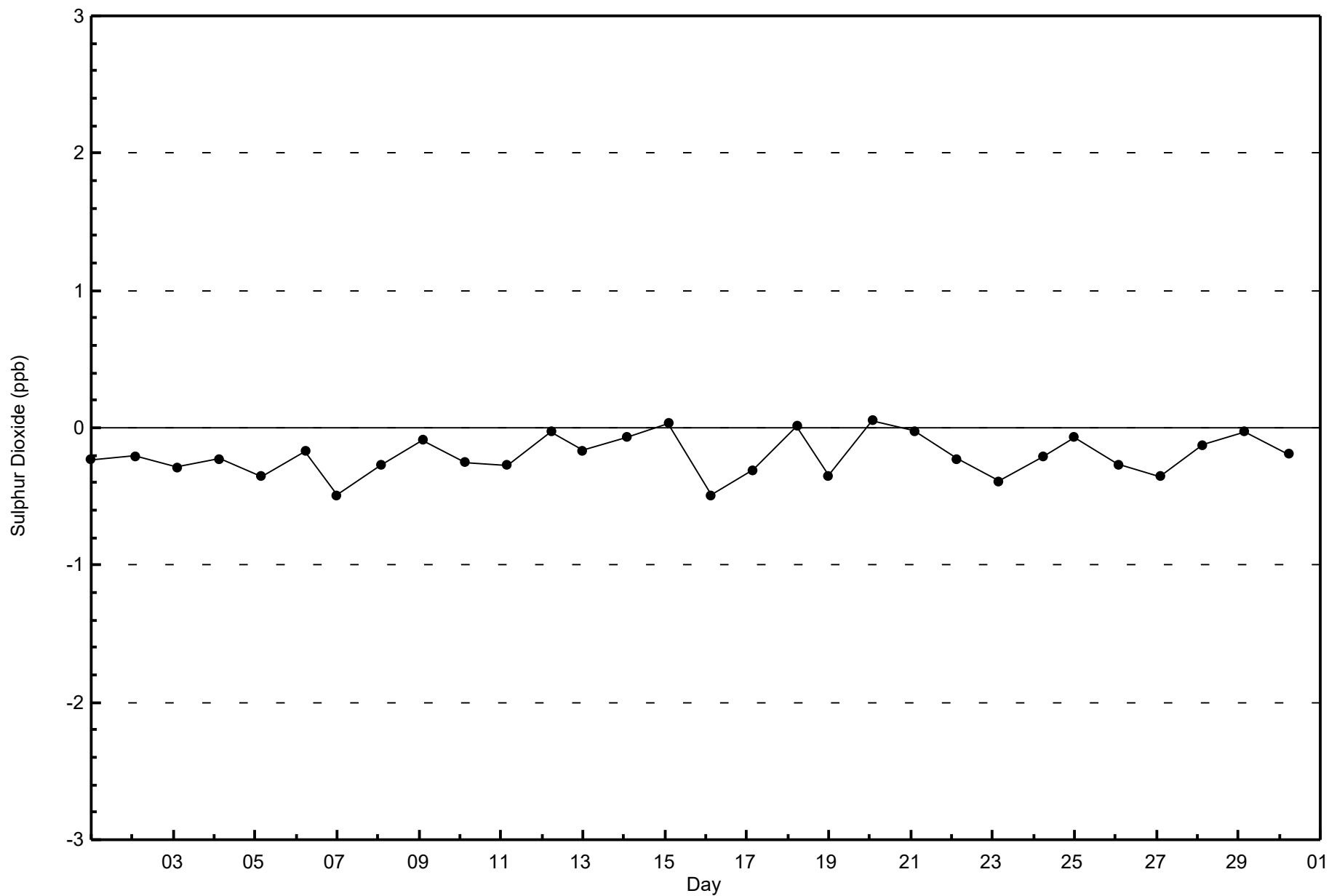
Sulphur Dioxide (SO₂) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

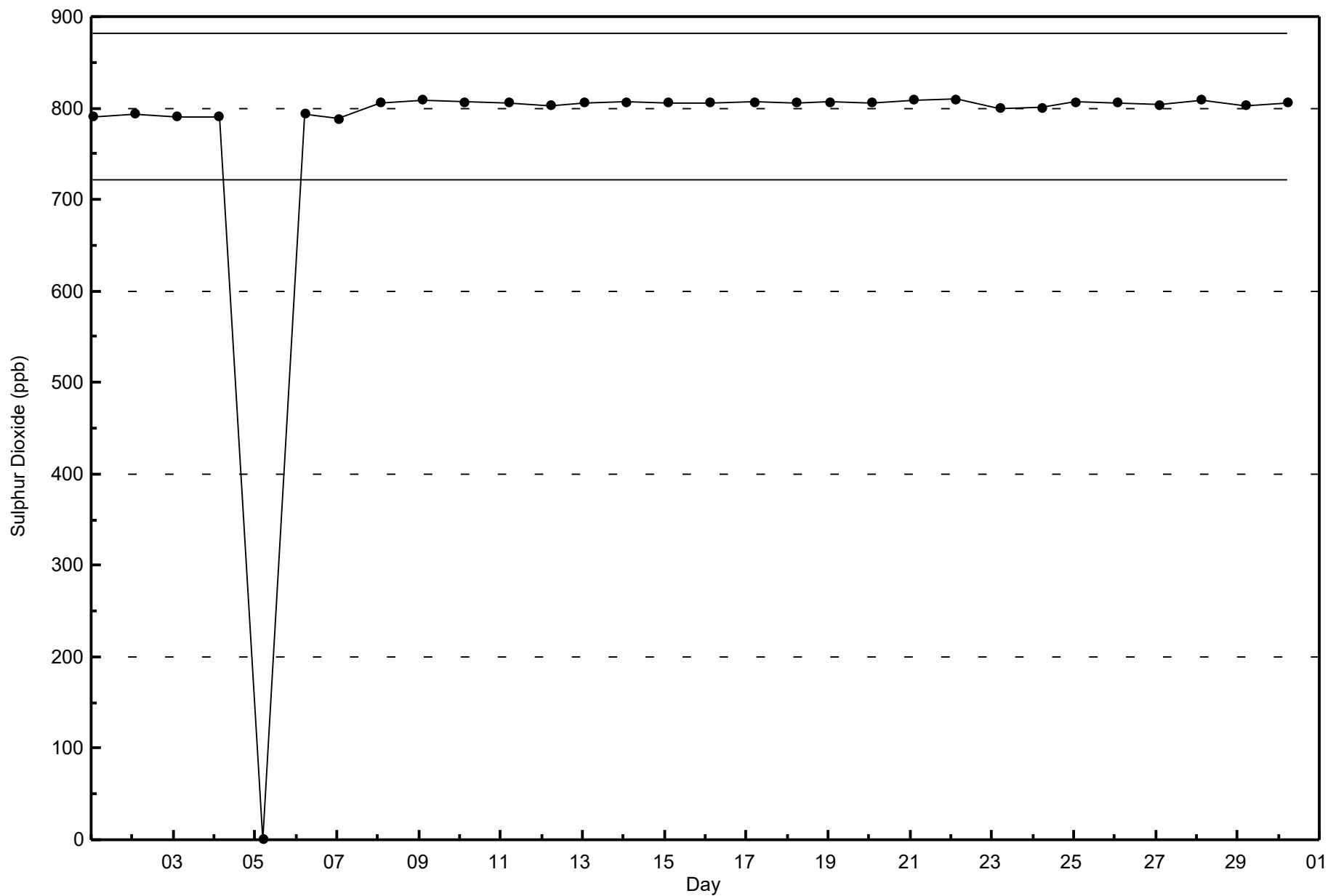
Sulphur Dioxide (SO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440							
Maximum Value: 3.6 ppb on Apr 15 06:30 Maximum Daily Average: 0.9 ppb on Apr 9																			Periods of Valid Data: 1352							
Minimum Value: 0.2 ppb on Apr 10 15:30 Minimum Daily Average: 0.3 ppb on Apr 19																			Periods of Invalid Data: 88							
Maximum Diurnal Average: 0.5 ppb at hour 7 Minimum Diurnal Average: 0.3 ppb at hour 19																			Periods of Calibration: 66							
Monthly Average: 0.41 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 1.6																			Percent Operational Time: 98.5							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.3	C C	C C	C C	C C	0.6 0.5	0.3 0.9	0.7 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.3	0.9
2-Apr	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.3 0.4	0.3 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.4	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 0.2	0.5 0.4	0.4 0.3	0.3 0.2	0.3	0.5
3-Apr	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	0.3 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	--	0.5
4-Apr	0.5 0.5	0.5 0.4	0.4 0.5	0.3 0.3	Z SP	0.4 0.6	0.6 0.6	0.6 0.7	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.4 0.3	0.4 0.4	0.4 0.5	0.6 0.7	0.6 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.6 0.7	0.5	0.7
5-Apr	0.6 0.7	0.6 0.7	0.9 0.8	0.7 0.6	0.8 1.2	1.4 1.4	1.2 1.2	1.2 1.2	1.1 1.2	1.0 0.9	0.8 0.7	1.0 1.2	1.1 0.7	0.6 0.4	0.4 0.4	0.5 0.4	0.3 0.3	0.3 0.4	0.4 0.4	0.3 0.4	0.4 0.3	0.5 0.5	0.4 0.4	0.4 0.4	0.7	1.4
6-Apr	Z SP	0.5 0.5	0.6 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	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3	0.6
7-Apr	0.3 0.2	Z SP	0.3 0.3	0.2 0.2	0.3 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 0.3	0.3 0.3	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.4
8-Apr	0.3 0.3	0.3 0.3	Z SP	0.4 0.4	0.4 0.5	0.5 0.5	0.5 PF	PF PF	PF PF	PF PF	PF PF	PF 1.0	1.1 1.0	1.0 0.9	1.0 1.1	1.1 1.1	1.0 1.0	0.9 0.8	0.7 0.7	0.6 0.6	0.5 0.5	0.6 0.6	0.6 0.8	0.6 0.8	0.7	1.1
9-Apr	0.8 0.6	0.8 1.3	1.2 1.0	Z SP	1.2 1.3	1.5 1.9	2.2 1.7	1.7 2.0	1.9 1.7	1.5 1.2	0.9 0.9	0.8 0.8	0.8 0.9	1.0 0.6	0.7 0.5	0.4 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	0.4 0.4	0.4 0.4	0.9	2.2
10-Apr	0.4 0.4	0.4 0.4	0.5 0.9	1.5 1.7	Z SP	0.9 0.8	0.4 0.3	0.4 0.3	0.3 0.2	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 0.3	0.4 0.4	0.4 0.4	0.3 0.3	0.2 0.2	0.2 0.3	0.4	1.7
11-Apr	0.3 0.3	0.3 0.4	0.4 0.4	0.4 0.5	0.4 0.4	Z SP	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.8	1.1 1.2	0.8 0.5	0.5 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4	1.2
12-Apr	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.3	0.4
13-Apr	0.4 0.4	Z SP	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 0.6	0.6 0.8	1.0 0.7	0.6 0.6	0.5 0.5	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.4	0.3 0.3	0.4	1.0
14-Apr	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.4 0.4	0.5 0.6	0.4 0.3	0.3 0.5	0.7 1.4	1.8 1.0	0.9 0.9	0.9 1.1	0.7 0.4	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.2	0.3 0.3	1.3 1.2	0.5 0.4	0.5 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.5	1.8
15-Apr	0.3 0.2	0.3 0.2	0.3 0.4	Z SP	0.6 0.7	0.8 2.1	3.6 2.7	1.8 3.1	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.5	3.6



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.4 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	0.3 0.3	0.4 0.4	0.4 0.3	0.3 0.3	0.3	0.4
17-Apr	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.4
18-Apr	Z SP	0.3 0.4	0.4 0.5	0.3 0.4	0.4 0.4	0.6 0.8	0.9 0.8	0.7 0.4	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.4 0.3	0.3 0.3	0.4 0.6	0.4 0.9	0.4 0.7	0.8 0.5	0.5 0.4	0.4 0.4	0.4	0.9	
19-Apr	0.3 0.3	Z SP	0.3 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.4	0.4 0.4	0.3 0.5	0.4 0.4	0.3	0.5	
20-Apr	0.3 0.4	0.4 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.4	0.5 0.4	0.3 0.3	0.3 0.3	0.3 0.3	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	0.3 0.2	0.3 0.3	0.3 0.4	0.3 0.3	0.4 0.3	0.3	0.5	
21-Apr	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.3 0.4	0.4 0.5	0.5 0.4	0.3 0.8	0.7 0.8	0.7 0.6	0.6 1.0	0.9 0.6	0.4 0.6	0.7 0.6	0.5 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3	1.0	
22-Apr	0.5 0.6	0.7 0.6	0.5 0.5	0.4 0.5	Z SP	0.5 0.5	0.5 0.7	0.6 0.4	0.5 0.9	1.3 0.5	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.3	0.3 0.6	0.3 1.0	0.6 0.9	1.0 0.5	0.8 0.5	0.5 0.5	0.3 0.3	0.3 0.3	0.3 0.3	0.5	1.3	
23-Apr	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.2 0.2	0.2 0.4	0.6 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.7	0.5 0.6	0.4 0.4	0.4	0.7		
24-Apr	Z SP	0.5 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 0.6	0.8 0.8	0.8 0.7	0.8 0.8	0.7 0.6	0.6 0.6	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.5	0.8	
25-Apr	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.5 0.5	0.5 0.6	0.6 0.6	0.4	0.6	
26-Apr	0.6 0.5	0.6 0.7	Z SP	1.4 1.0	0.4 0.5	0.5 0.3	0.5 0.4	0.3 0.3	0.4 0.5	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 0.3	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	0.4	1.4	
27-Apr	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	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 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.4 0.3	0.3 0.3	0.3	0.4	
28-Apr	0.3 0.3	0.3 0.2	0.3 0.2	0.2 0.2	Z SP	0.4 0.3	0.3 0.3	0.4 0.5	0.5 0.4	0.6 0.5	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.4	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.4	0.3	0.6	
29-Apr	0.4 0.4	0.5 0.5	0.6 0.6	0.6 0.6	0.7 0.7	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 0.4	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	0.4 0.4	0.4 0.4	0.5	0.7	
30-Apr	Z SP	0.5 0.5	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.3 0.4	0.4 0.4	0.4 0.4	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.5	
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration UO - Unstable Operation PF - Power Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

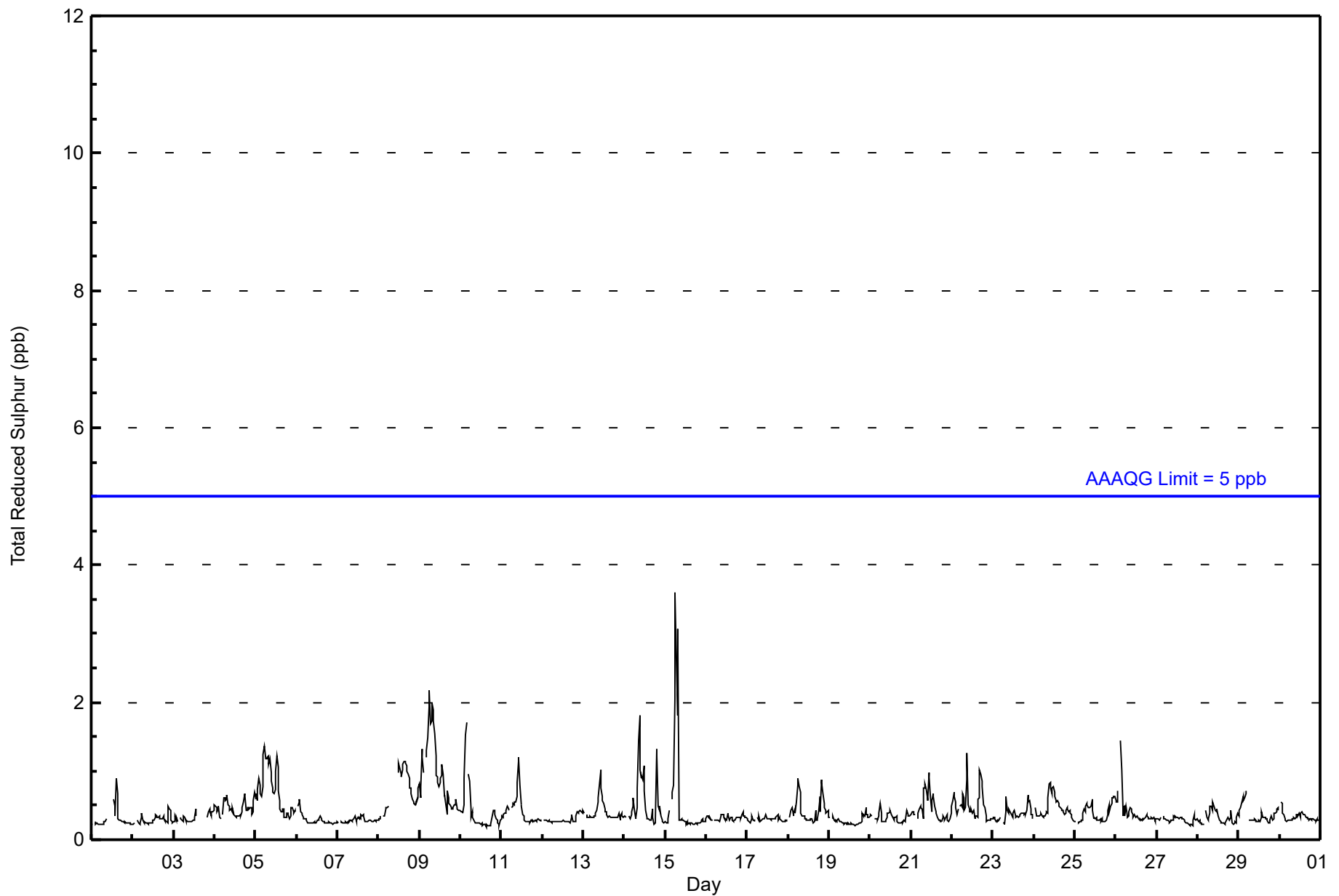
Barge Landing - April 2025

Maximum Value: 3.1 ppb on Apr 15 07:00														Maximum Daily Average: 0.9 ppb on Apr 9														Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 10 18:00														Minimum Daily Average: 0.3 ppb on Apr 19														Hours of Data: 675	
Maximum Diurnal Average: 0.5 ppb at hour 7														Minimum Diurnal Average: 0.3 ppb at hour 19														Hours of Missing Data: 45	
Monthly Average: 0.41 ppb														Percentiles: P ₁ = 0.2 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.3 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 1.5														Hours of Calibration: 33	
																												Percent Operational Time: 98.3	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	C	C	C	C	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.6			
2-Apr	0.2	0.2	Z	0.3	0.2	0.4	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	0.5	0.4	0.3	0.3	0.5			
3-Apr	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	0.4	UO	UO	UO	UO	UO	UO	0.4	0.4	0.4	0.4	--	0.4			
4-Apr	0.5	0.4	0.5	0.3	Z	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.4	0.5	0.5	0.4	0.6	0.5	0.6			
5-Apr	0.6	0.7	0.9	0.6	1.0	1.4	1.2	1.2	1.1	0.9	0.7	0.7	1.1	0.9	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.5	0.4	0.4	0.7	1.4			
6-Apr	Z	0.5	0.5	0.4	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	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.5			
7-Apr	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	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4			
8-Apr	0.3	0.3	Z	0.4	0.5	0.5	PF	PF	PF	PF	PF	PF	1.1	0.9	1.1	1.1	1.1	1.0	0.8	0.7	0.6	0.5	0.6	0.7	--	1.1			
9-Apr	0.7	1.0	1.1	Z	1.3	1.7	1.9	1.9	1.8	1.4	0.9	0.8	0.9	1.0	0.8	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.9	1.9			
10-Apr	0.4	0.4	0.7	1.6	Z	0.9	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.3	0.4	1.6			
11-Apr	0.3	0.3	0.4	0.5	0.4	Z	0.5	0.5	0.6	0.7	1.2	0.7	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	1.2			
12-Apr	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4			
13-Apr	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.9	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.9			
14-Apr	0.3	0.3	Z	0.3	0.4	0.5	0.4	0.4	1.1	1.4	0.9	1.0	0.6	0.3	0.3	0.3	0.4	0.3	0.3	1.3	0.5	0.4	0.3	0.2	0.5	1.4			
15-Apr	0.2	0.2	0.4	Z	0.6	1.4	3.1	2.4	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	0.3	0.3	0.3	0.5	3.1			
16-Apr	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	0.4	0.3	0.3	0.3	0.4			
17-Apr	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
18-Apr	Z	0.4	0.5	0.4	0.4	0.7	0.8	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5	0.6	0.8	0.5	0.4	0.4	0.4	0.8			
19-Apr	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	0.3	0.4	0.4	0.4	0.3	0.3	0.4			
20-Apr	0.4	0.3	Z	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.5			
21-Apr	0.4	0.4	0.4	Z	0.3	0.5	0.5	0.5	0.8	0.7	0.8	0.8	0.5	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.8			
22-Apr	0.5	0.7	0.5	0.4	Z	0.5	0.6	0.5	0.7	0.9	0.4	0.4	0.4	0.4	0.3	0.5	0.8	0.9	0.6	0.5	0.3	0.3	0.3	0.3	0.5	0.9			
23-Apr	0.3	0.3	0.3	0.3	0.3	Z	0.2	0.3	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.4	0.6			
24-Apr	Z	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.5	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.5	0.8			
25-Apr	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.4	0.6			
26-Apr	0.6	0.6	Z	1.2	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	1.2			
27-Apr	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3			
28-Apr	0.3	0.3	0.2	0.2	Z	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.2	0.2	0.3	0.4	0.3	0.5			
29-Apr	0.4	0.5	0.6	0.6	0.7	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.7			
30-Apr	Z	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5			
																								Diurnal Average					
																								Diurnal Maximum					
Z - zerospan C - Calibration UO - Unstable Operation PF - Power Failure																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																													



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	674	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: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	63	74	31	14	16	25	43	100	66	33	24	47	42	27	18	51	674
3 - 4	0	0	0	0	0	0	0	1	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	63	74	31	14	16	25	43	101	66	33	24	47	42	27	18	51	675

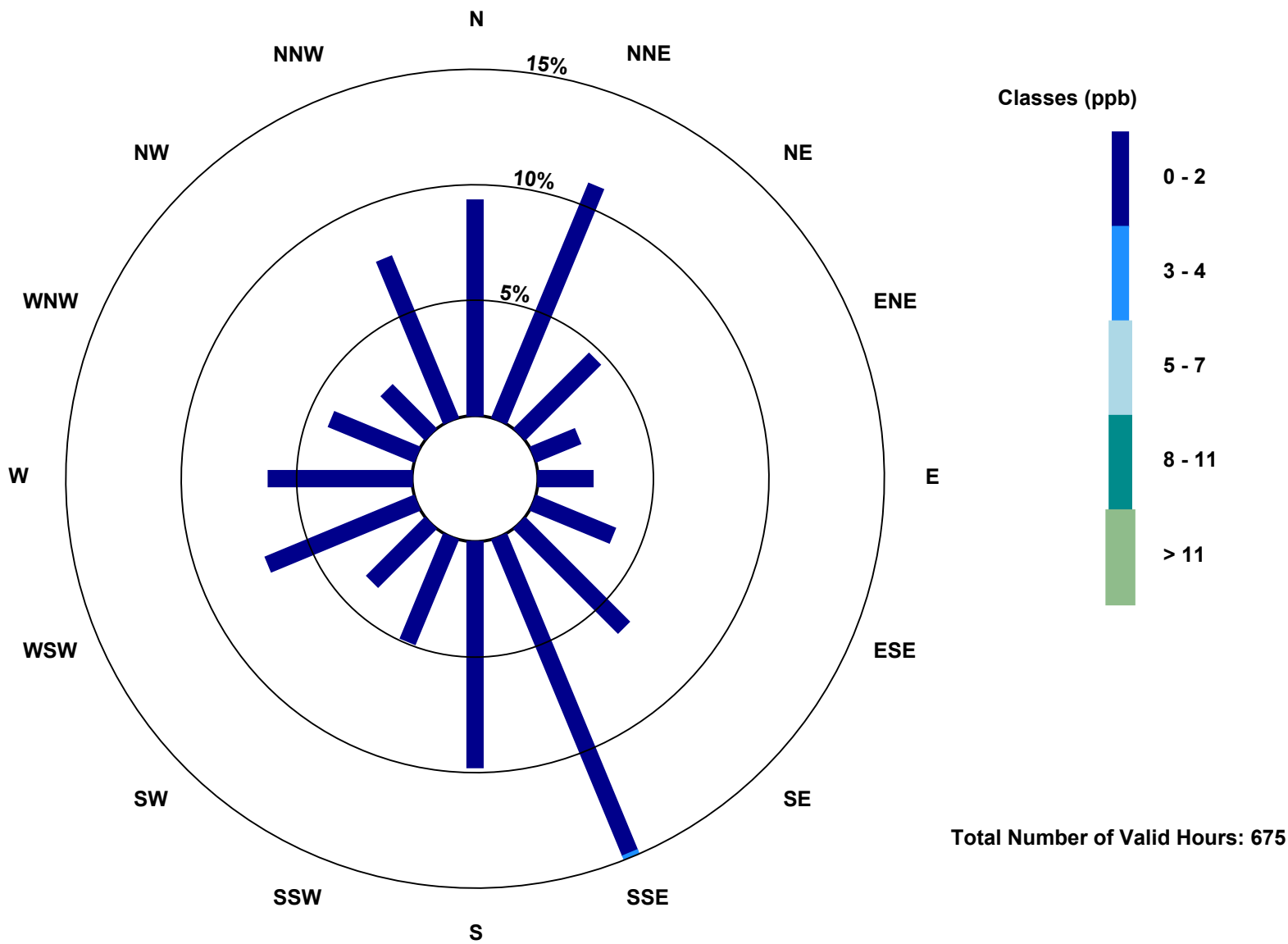
Total Number of Valid Hours: 675

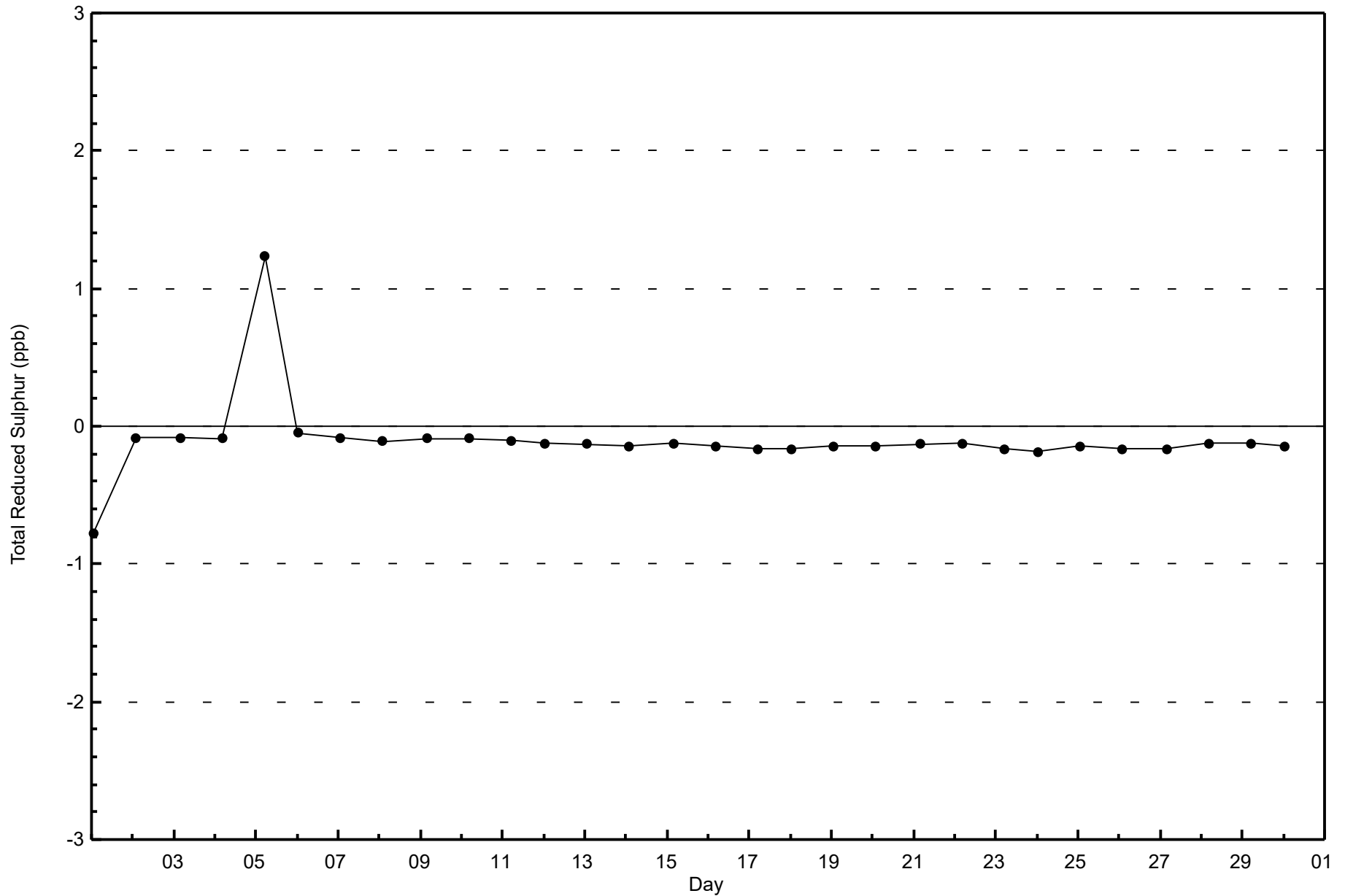
Total Number of Hours: 720

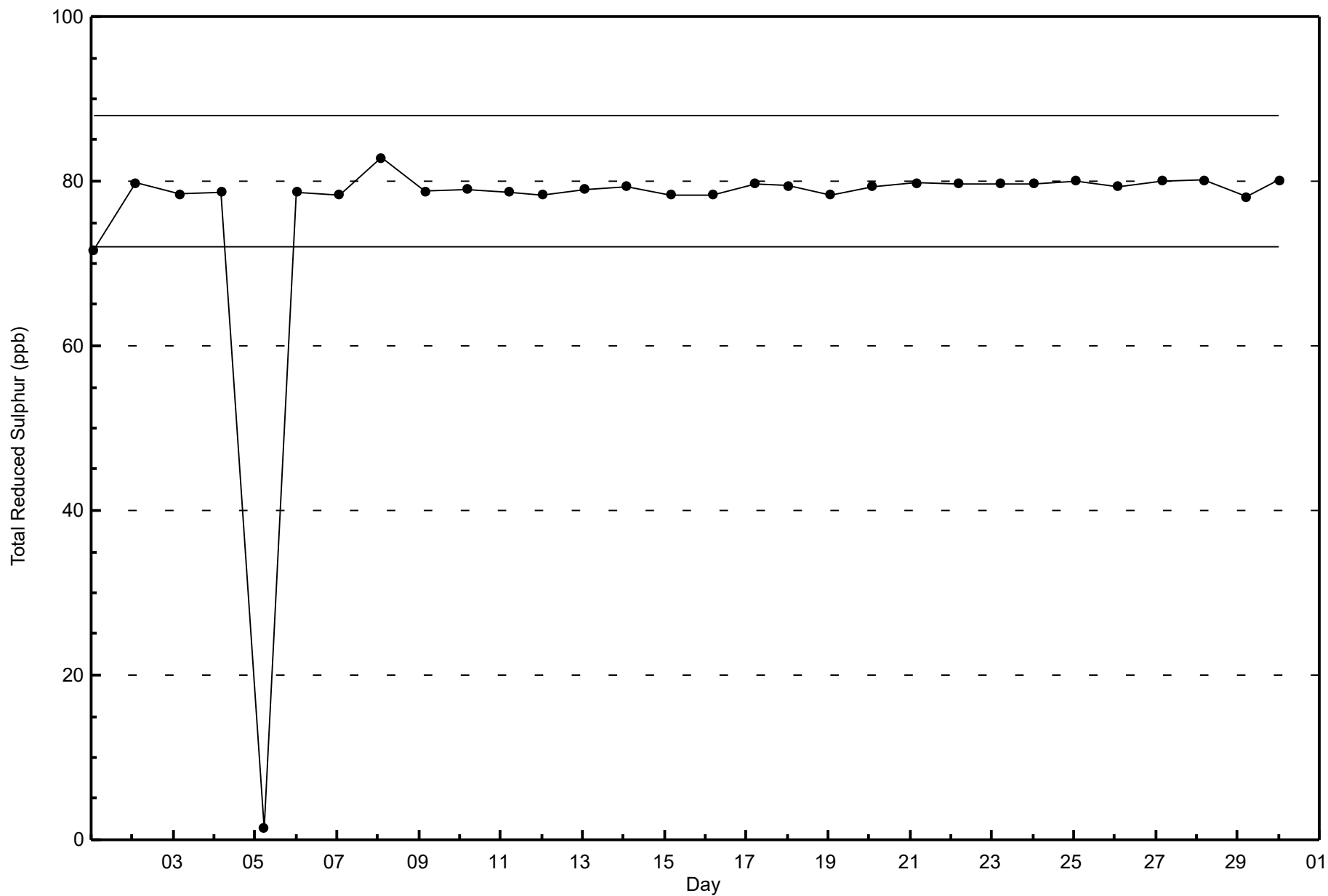


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Barge Landing





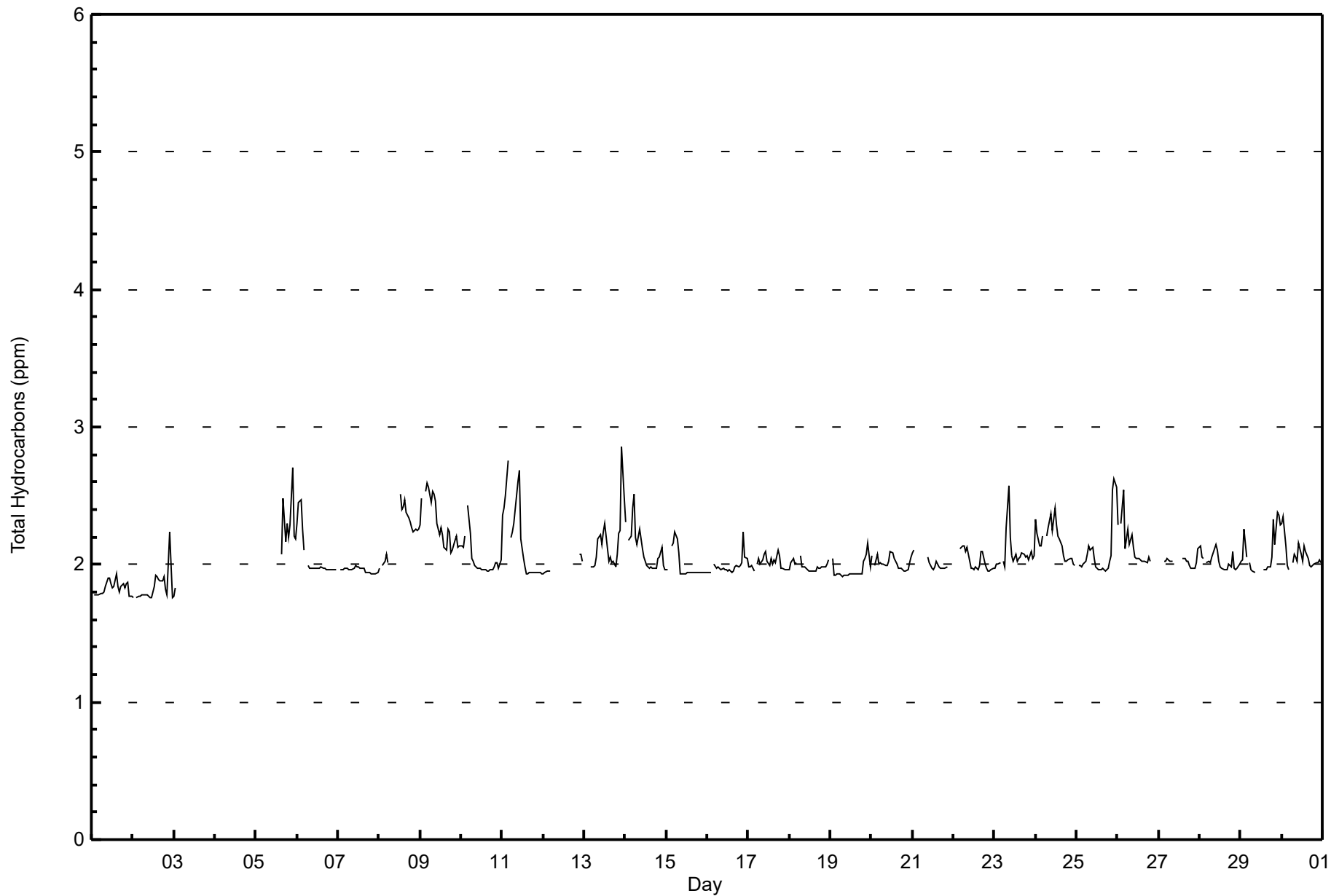


Maximum Value: 2.9 ppm on Apr 13 23:00																		Maximum Daily Average: 2.3 ppm on Apr 9						Hours in Service: 720							
Minimum Value: 1.8 ppm on Apr 3 00:00																		Minimum Daily Average: 1.8 ppm on Apr 1						Hours of Data: 585							
Maximum Diurnal Average: 2.1 ppm at hour 22																		Minimum Diurnal Average: 2.0 ppm at hour 19						Hours of Missing Data: 135							
Monthly Average: 2.05 ppm																		Percentiles: P ₁ = 1.8 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.3 P ₉₉ = 2.6						Hours of Calibration: 30							
																		Percent Operational Time: 85.4													
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8				
2-Apr	1.8	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	2.2	2.0	1.8	1.8	2.2					
3-Apr	1.8	1.8	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	1.8					
4-Apr	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	--					
5-Apr	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	2.1	2.5	2.2	2.3	2.2	2.3	2.7	2.2	2.2	2.2	2.7					
6-Apr	2.3	2.5	2.5	2.3	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5					
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0					
8-Apr	2.0	Z	2.0	2.0	2.1	2.0	PF	PF	PF	PF	PF	PF	2.5	2.4	2.4	2.5	2.4	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	--					
9-Apr	2.3	2.5	Z	2.5	2.6	2.6	2.4	2.5	2.5	2.5	2.3	2.2	2.3	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.6					
10-Apr	2.1	2.1	2.2	Z	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4					
11-Apr	2.4	2.4	2.5	2.8	Z	2.2	2.2	2.3	2.5	2.6	2.7	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.8					
12-Apr	1.9	1.9	1.9	2.0	2.0	Z	1.9	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2.1	2.1	2.0	2.0	2.1					
13-Apr	Z	2.0	UO	UO	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.2	2.3	2.2	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.2	2.9	2.5	2.2	2.9					
14-Apr	2.3	Z	2.2	2.2	2.4	2.5	2.2	2.1	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	2.0	2.0	2.1	2.5					
15-Apr	2.0	2.0	Z	2.1	2.2	2.2	2.2	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	1.9	1.9	1.9	1.9	1.9	2.2					
16-Apr	1.9	1.9	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.2					
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
19-Apr	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.0	2.0	2.2					
20-Apr	2.1	Z	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	2.0	2.0	2.0	2.1	2.1	2.1					
21-Apr	2.1	2.1	Z	UO	UO	2.1	M	M	M	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	UO	2.1					
22-Apr	UO	UO	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	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1					
23-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.3	2.6	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.6					
24-Apr	2.3	2.2	2.1	2.1	2.2	Z	2.2	2.3	2.3	2.4	2.3	2.4	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4					
25-Apr	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	2.5	2.6	2.6	2.6	2.6					
26-Apr	2.3	Z	2.3	2.5	2.1	2.2	2.3	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	UO	UO	UO	UO	UO	2.5					
27-Apr	UO	UO	Z	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	UO	UO	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	--					
28-Apr	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1					
29-Apr	2.0	2.0	2.3	2.1	Z	2.0	2.0	2.0	1.9	M	M	M	M	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.4	2.4	2.3	2.3	2.4					
30-Apr	2.3	2.4	2.1	2.0	2.0	Z	2.0	2.1	2.1	2.0	2.2	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4					
																								Diurnal Average							
																								Diurnal Maximum							
Z - zerospan																								C - Calibration		M - Maintenance		UO - Unstable Operation		PF - Power Failure	



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	389	66.50	66.50
2.1 - 3.0	196	33.50	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 585

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	34	39	17	3	6	13	31	68	25	16	16	38	33	18	13	19	389
2.1 - 3.0	22	33	9	10	7	7	12	20	26	12	4	9	3	1	2	19	196
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	72	26	13	13	20	43	88	51	28	20	47	36	19	15	38	585

Total Number of Valid Hours: 585

Total Number of Hours: 720



Total Hydrocarbons (THC) - ppm

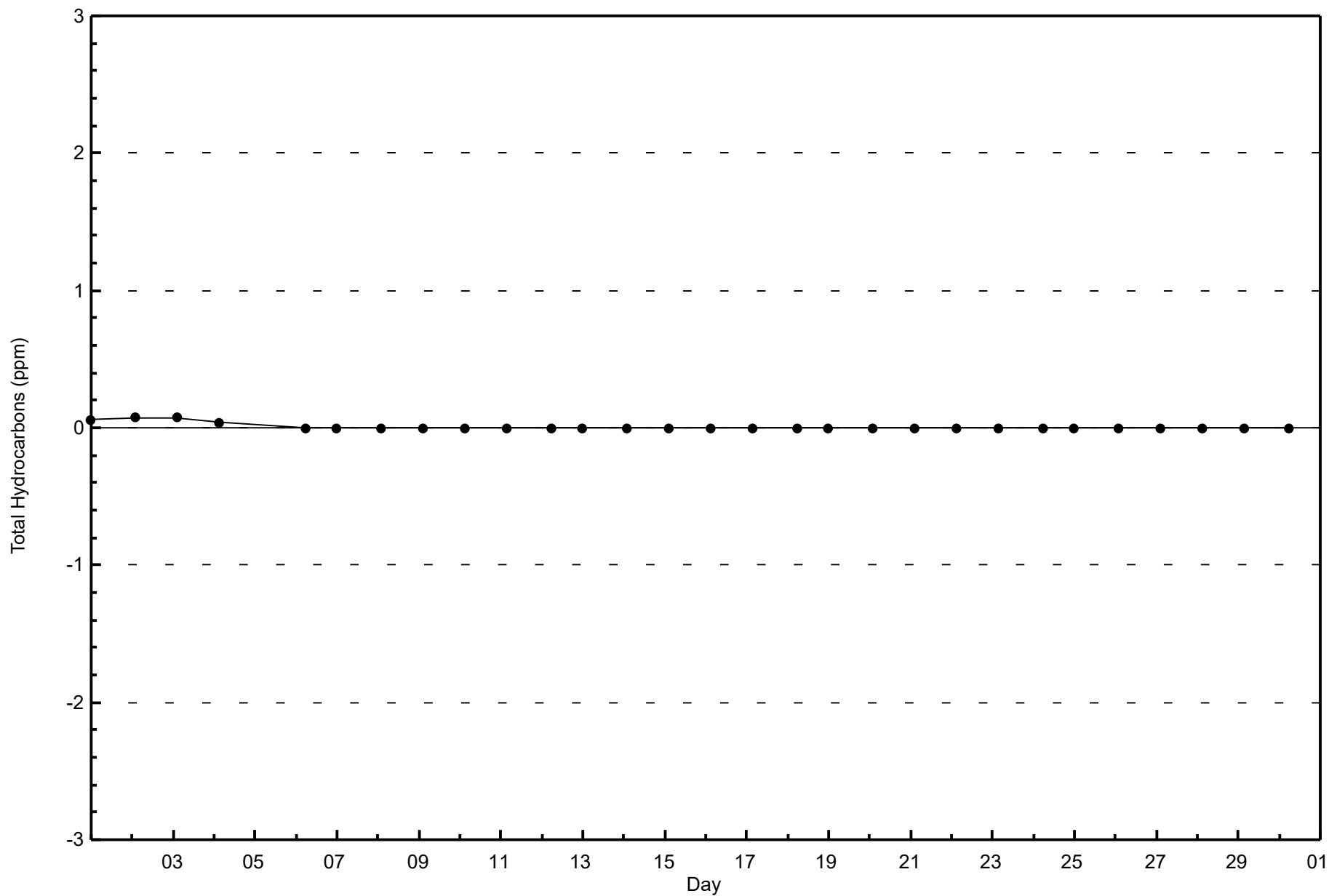
Barge Landing

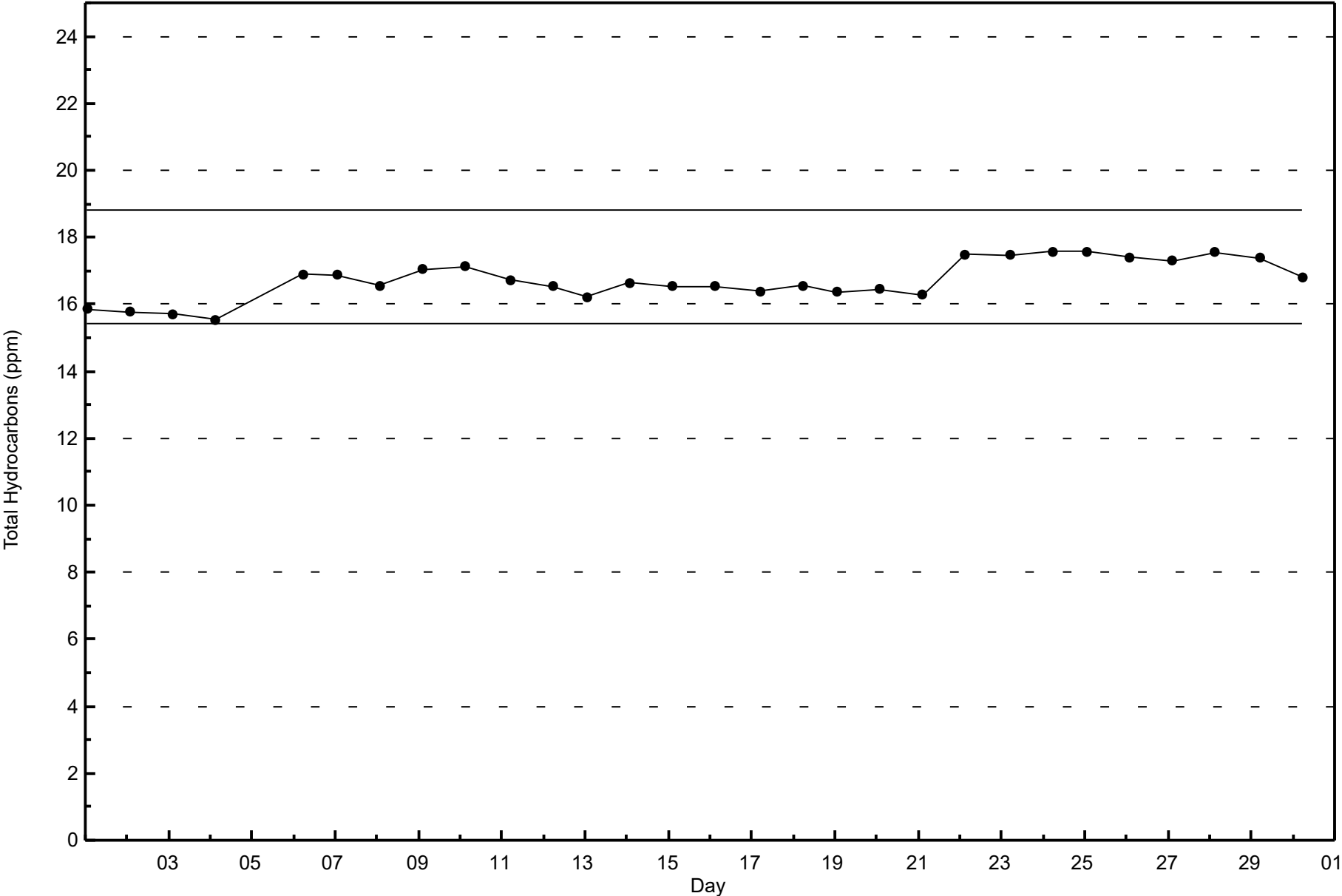




Wood Buffalo Environmental Association
Zero Responses

Total Hydrocarbons (THC) - ppm
Barge Landing - April 2025





Summary of Hour Averages

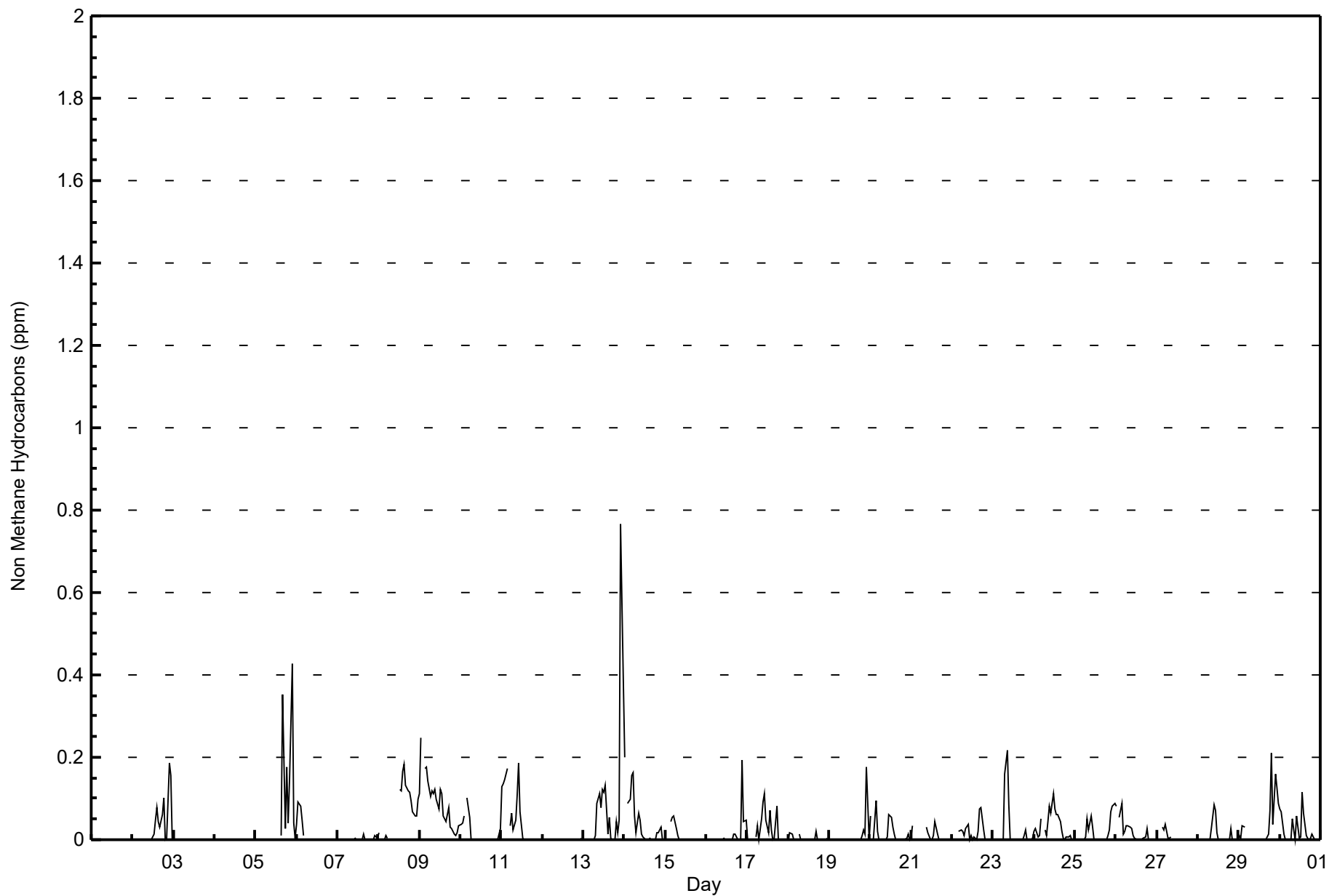
Barge Landing - April 2025

Maximum Value: 0.765 ppm on Apr 13 23:00																	Maximum Daily Average: 0.095 ppm on Apr 13																	Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																	Minimum Daily Average: 0.000 ppm on Apr 1																	Hours of Data: 585	
Maximum Diurnal Average: 0.057 ppm at hour 23																	Minimum Diurnal Average: 0.014 ppm at hour 21																	Hours of Missing Data: 135	
Monthly Average: 0.028 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 of Calibration: 30	
																																		Percent Operational Time: 85.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.047	0.078	0.042	0.031	0.062	0.103	0.000	0.003	0.188	0.157	0.000	0.000	0.000	0.000							
3-Apr	0.000	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	UO	UO	UO							
4-Apr	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	M	M	M							
5-Apr	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	0.010	0.354	0.026	0.175	0.041	0.147	0.429	0.040	0.004	0.000	0.000	0.000	0.000							
6-Apr	0.039	0.091	0.080	0.048	0.010	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
7-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.001	0.000	0.001	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.003	0.000	0.000	0.000							
8-Apr	0.015	Z	0.000	0.000	0.010	0.003	PF	PF	PF	PF	PF	PF	0.122	0.117	0.166	0.183	0.131	0.117	0.114	0.096	0.067	0.059	0.056	0.098	0.000	0.000	0.000	0.000							
9-Apr	0.113	0.248	Z	0.172	0.175	0.141	0.104	0.119	0.113	0.122	0.097	0.076	0.123	0.111	0.057	0.046	0.062	0.079	0.032	0.028	0.012	0.010	0.017	0.034	0.000	0.000	0.000	0.000							
10-Apr	0.038	0.039	0.058	Z	0.103	0.054	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
11-Apr	0.130	0.135	0.146	0.175	Z	0.033	0.065	0.022	0.049	0.109	0.187	0.069	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
12-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	0.000	0.000	0.000	0.002	0.000	0.000	0.000							
13-Apr	Z	0.000	UO	UO	0.000	0.000	0.000	0.010	0.088	0.111	0.078	0.122	0.117	0.133	0.015	0.056	0.003	0.001	0.000	0.043	0.016	0.049	0.765	0.383	0.000	0.000	0.000	0.000							
14-Apr	0.200	Z	0.087	0.100	0.156	0.164	0.059	0.018	0.065	0.046	0.015	0.008	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.016	0.016	0.030	0.000	0.000	0.000	0.000	0.000	0.000							
15-Apr	0.000	0.000	Z	0.044	0.053	0.058	0.028	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.001	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.014	0.013	0.000	0.000	0.000	0.192	0.043	0.046	0.000	0.000	0.000	0.000							
17-Apr	0.000	0.000	0.000	0.000	Z	0.008	0.035	0.000	0.052	0.090	0.111	0.048	0.018	0.070	0.023	0.000	0.004	0.081	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
18-Apr	0.000	0.018	0.015	0.000	0.000	Z	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000							
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.024	0.014	0.176	0.000	0.000	0.000	0.000	0.000							
20-Apr	0.057	Z	0.000	0.096	0.021	0.000	0.000	0.000	0.000	0.000	0.008	0.060	0.053	0.032	0.012	0.001	0.000	0.000	0.000	0.000	0.000	0.003	0.013	0.001	0.000	0.000	0.000	0.000							
21-Apr	0.008	0.034	Z	UO	UO	0.003	M	M	M	0.030	0.016	0.000	0.000	0.011	0.045	0.013	0.000	0.000	0.000	0.000	0.001	UO	UO	UO	0.000	0.000	0.000	0.000							
22-Apr	UO	UO	0.020	Z	0.019	0.022	0.022	0.012	0.029	0.038	0.000	0.009	0.001	0.008	0.000	0.020	0.075	0.078	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
23-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.161	0.216	0.084	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.012	0.025	0.000	0.001	0.001	0.002	0.000	0.000	0.000	0.000							
24-Apr	0.019	0.027	0.008	0.009	0.051	Z	0.025	0.009	0.044	0.082	0.065	0.111	0.075	0.061	0.062	0.045	0.021	0.003	0.002	0.007	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000							
25-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.008	0.050	0.024	0.059	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.024	0.069	0.080	0.088	0.000	0.000	0.000	0.000							
26-Apr	0.082	Z	0.055	0.089	0.014	0.019	0.035	0.035	0.030	0.027	0.011	0.003	0.001	0.000	0.001	0.000	0.005	0.007	0.028	0.000	UO	UO	UO	UO	0.000	0.000	0.000	0.000							
27-Apr	UO	UO	Z	0.029	0.025	0.038	0.004	0.004	0.007	UO	UO	UO	UO	UO	0.000	0.000	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-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.026	0.086	0.070	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.026	0.000	0.000	0.000	0.001	0.000	0.000	0.000							
29-Apr	0.011	0.004	0.036	0.031	Z	0.000	0.000	0.000	0.000	M	M	M	M	0.000	0.000	0.000	0.000	0.015	0.071	0.209	0.036	0.159	0.127	0.087	0.000	0.000	0.000	0.000							
30-Apr	0.073	0.067	0.014	0.000	0.000	Z	0.000	0.049	0.025	0.000	0.056	0.003	0.008	0.115	0.063	0.012	0.005	0.000	0.003	0.012	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000							
0.037 0.032 0.024 0.038 0.029 0.025 0.016 0.021 0.032 0.038 0.033 0.023 0.022 0.028 0.020 0.017 0.027 0.018 0.021 0.019 0.014 0.047 0.057 0.030																	Diurnal Average																		
0.200 0.248 0.146 0.175 0.175 0.164 0.104 0.161 0.216 0.122 0.187 0.122 0.123 0.133 0.166 0.183 0.354 0.117 0.175 0.209 0.147 0.429 0.765 0.383																	Diurnal Maximum																		
Z - zerospan			C - Calibration				M - Maintenance				UO - Unstable Operation				PF - Power Failure																				



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	346	59.15	59.15
0.006 - 0.05	134	22.91	82.05
0.06 - 0.1	82	14.02	96.07
> 0.1	23	3.93	100.00

Total Number of Valid Hours: 585

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	24	25	17	7	4	13	30	60	20	14	15	37	32	18	12	18	346
0.006 - 0.05	21	28	4	2	6	4	8	19	16	7	1	5	2	0	2	9	134
0.06 - 0.1	8	13	4	4	2	3	4	9	12	6	3	5	2	1	1	5	82
> 0.1	3	6	1	0	1	0	1	0	3	1	1	0	0	0	0	6	23
Totals	56	72	26	13	13	20	43	88	51	28	20	47	36	19	15	38	585

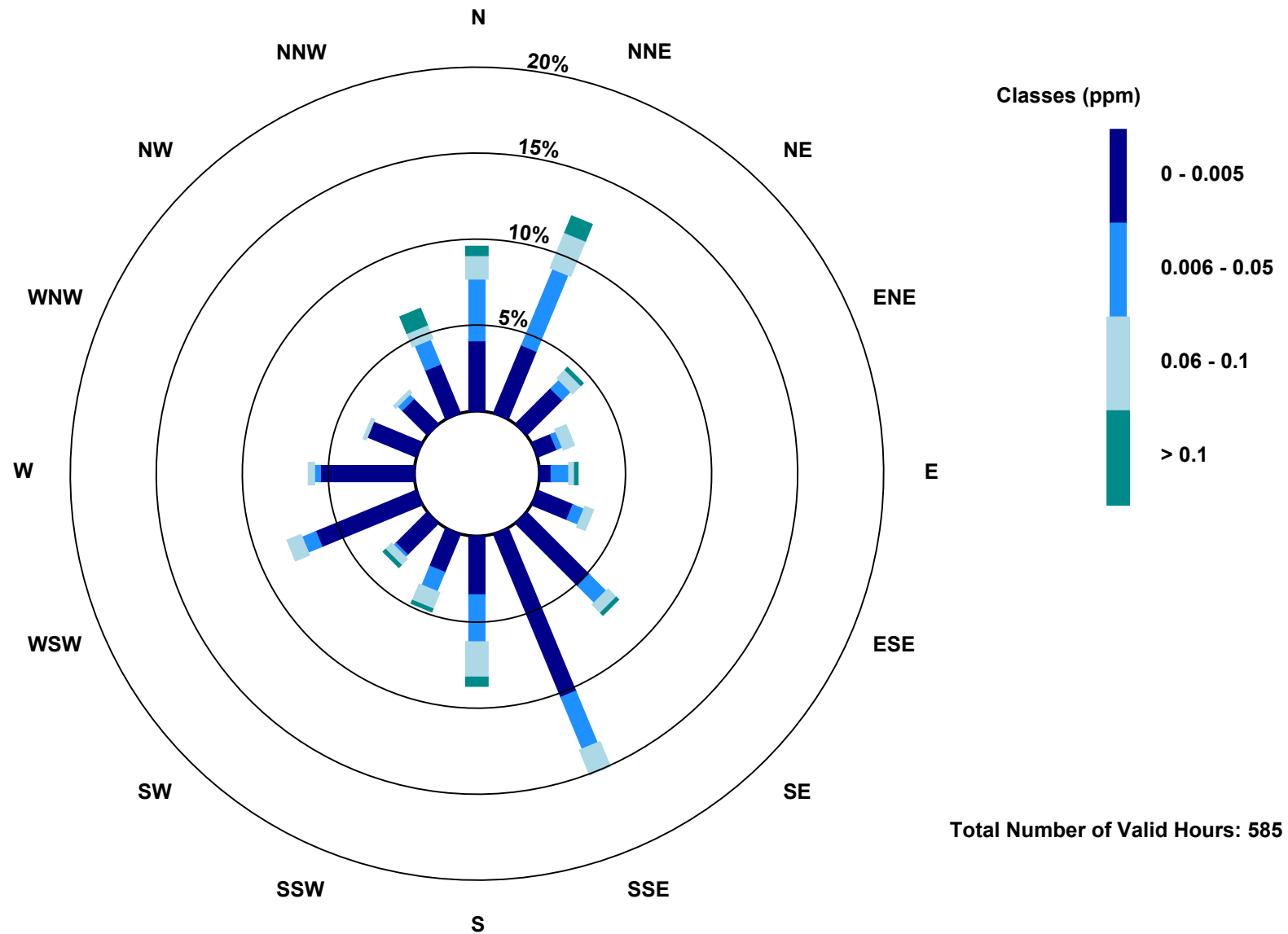
Total Number of Valid Hours: 585

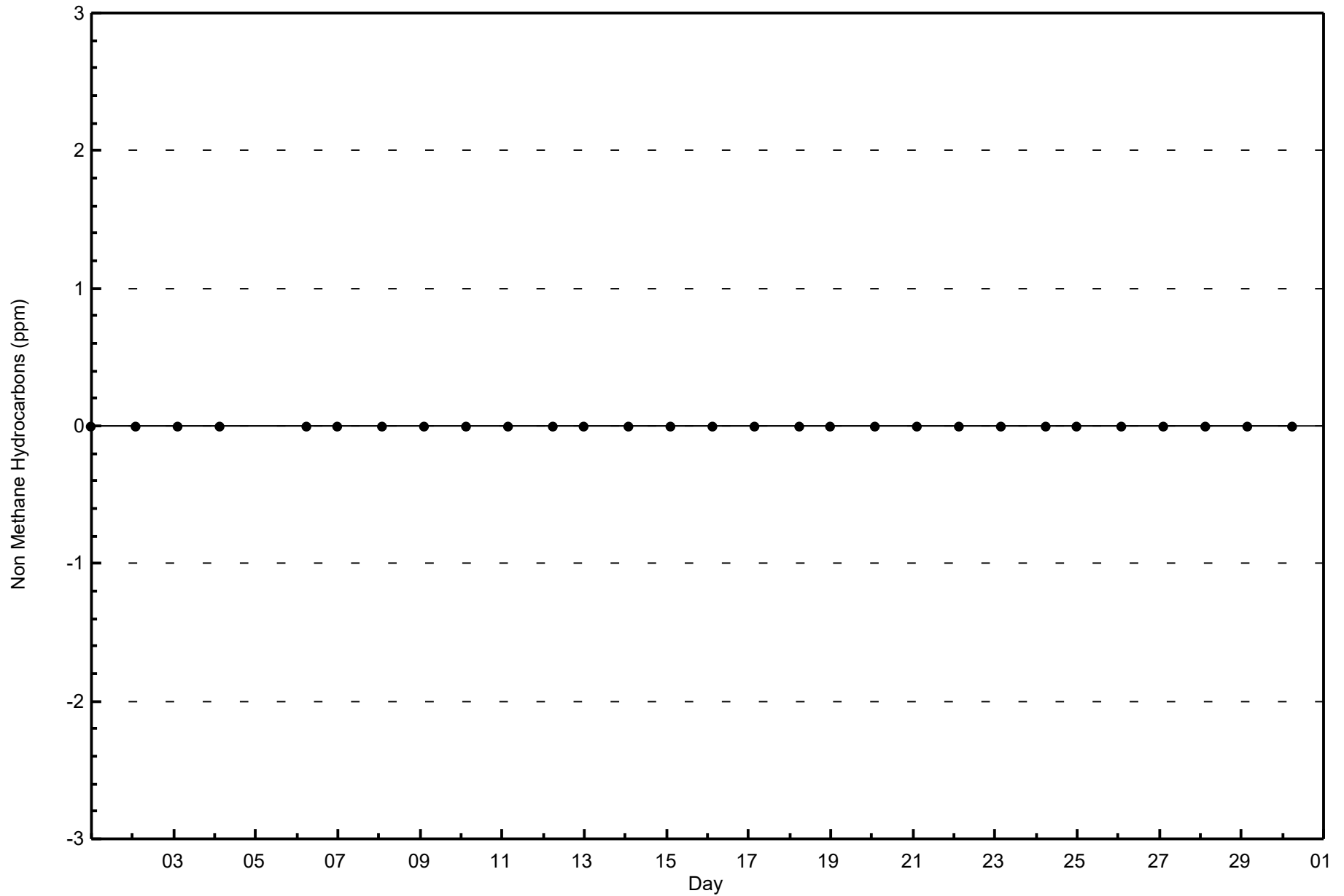
Total Number of Hours: 720

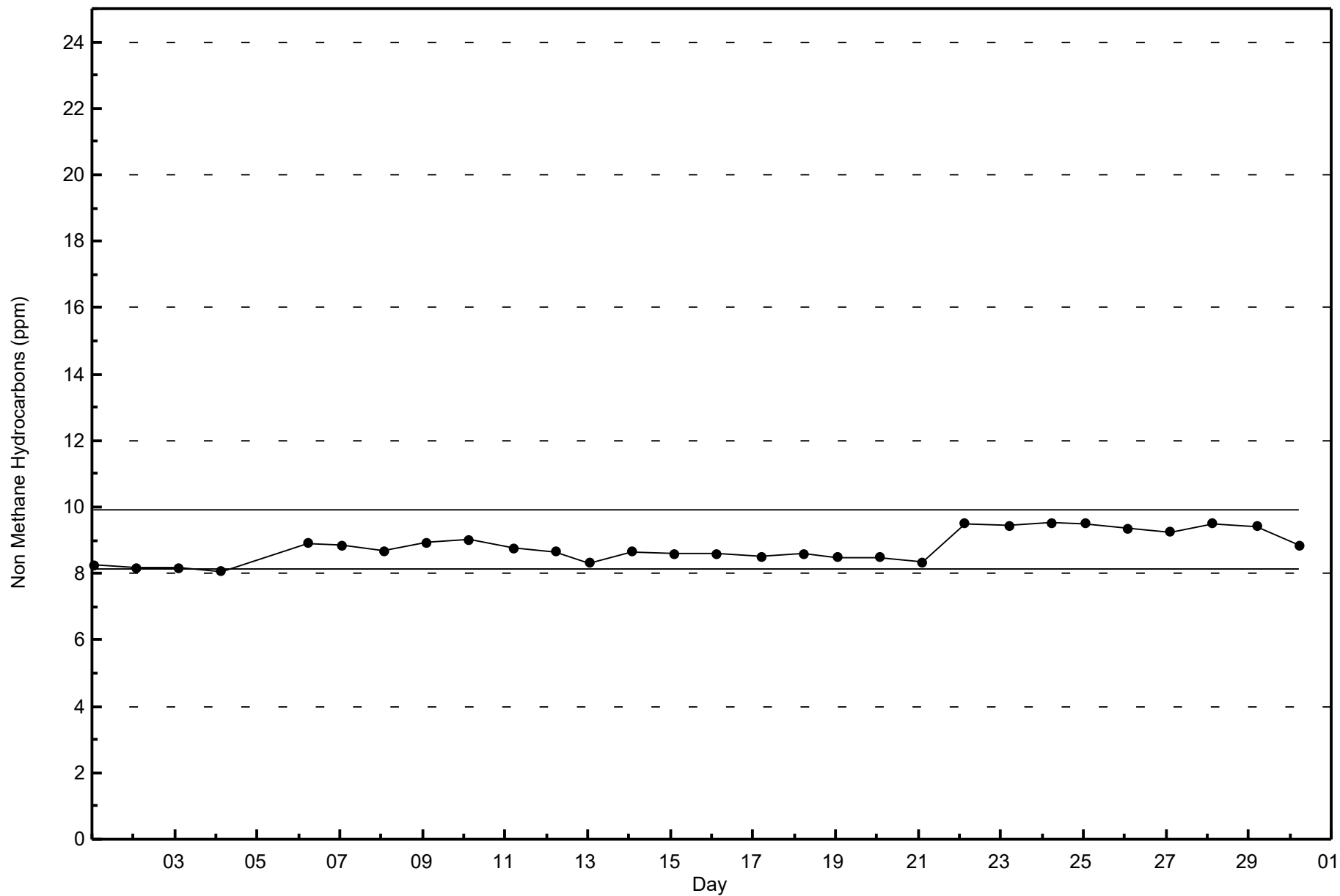


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Barge Landing









Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

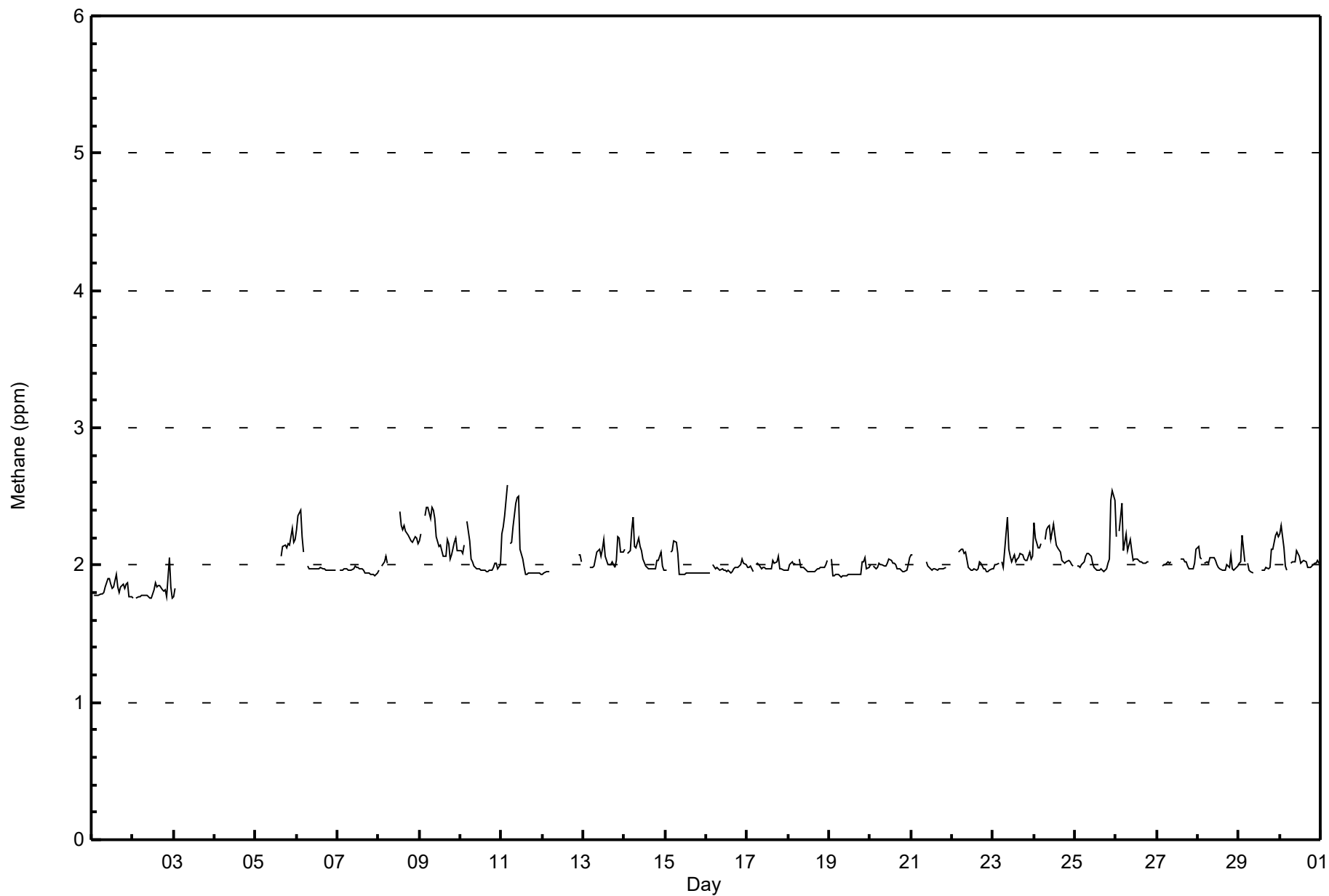
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.6 ppm on Apr 11 04:00 Maximum Daily Average: 2.2 ppm on Apr 9																		Hours in Service: 720 Hours of Data: 585 Hours of Missing Data: 135 Hours of Calibration: 30 Percent Operational Time: 85.4									
Minimum Value: 1.8 ppm on Apr 3 00:00 Minimum Daily Average: 1.8 ppm on Apr 2 Maximum Diurnal Average: 2.1 ppm at hour 9 Minimum Diurnal Average: 2.0 ppm at hour 19 Monthly Average: 2.02 ppm Percentiles: P ₁ = 1.8 P ₁₀ = 1.9 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.5																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9
2-Apr	1.8	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	1.8	1.8	1.8	2.1	
3-Apr	1.8	1.8	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	1.8	
4-Apr	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	--	
5-Apr	M	M	M	M	M	M	M	M	M	M	M	M	M	C	C	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.2	2.2	2.2	2.3	
6-Apr	2.3	2.4	2.4	2.2	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	
8-Apr	2.0	Z	2.0	2.0	2.1	2.0	PF	PF	PF	PF	PF	PF	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	--	
9-Apr	2.2	2.2	Z	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.4	
10-Apr	2.1	2.1	2.1	Z	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
11-Apr	2.2	2.3	2.4	2.6	Z	2.2	2.2	2.3	2.5	2.5	2.5	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	
12-Apr	1.9	1.9	1.9	2.0	2.0	Z	1.9	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2.1	2.1	2.0	2.1		
13-Apr	Z	2.0	UO	UO	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.2	
14-Apr	2.1	Z	2.1	2.1	2.3	2.3	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.3	
15-Apr	2.0	2.0	Z	2.1	2.1	2.2	2.2	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	1.9	1.9	1.9	1.9	1.9	2.2	
16-Apr	1.9	1.9	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	
18-Apr	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	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
19-Apr	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.1	
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
21-Apr	2.1	2.1	Z	UO	UO	2.1	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	UO	--	
22-Apr	UO	UO	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	
23-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.4	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.4	
24-Apr	2.3	2.2	2.1	2.1	2.2	Z	2.2	2.3	2.3	2.3	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	2.3	
25-Apr	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	2.0	2.5	2.5	2.5	2.5	2.5	
26-Apr	2.2	Z	2.2	2.4	2.1	2.2	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	UO	UO	2.4	
27-Apr	UO	UO	Z	2.0	2.0	2.0	2.0	2.0	2.0	UO	UO	UO	UO	UO	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	--	
28-Apr	2.1	2.1	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	
29-Apr	2.0	2.0	2.2	2.0	Z	2.0	2.0	2.0	1.9	M	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	
30-Apr	2.2	2.3	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	421	71.97	71.97
2.1 - 3.0	164	28.03	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 585

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Barge Landing - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	42	45	21	3	8	14	32	71	29	16	16	39	34	18	13	20	421
2.1 - 3.0	14	27	5	10	5	6	11	17	22	12	4	8	2	1	2	18	164
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	72	26	13	13	20	43	88	51	28	20	47	36	19	15	38	585

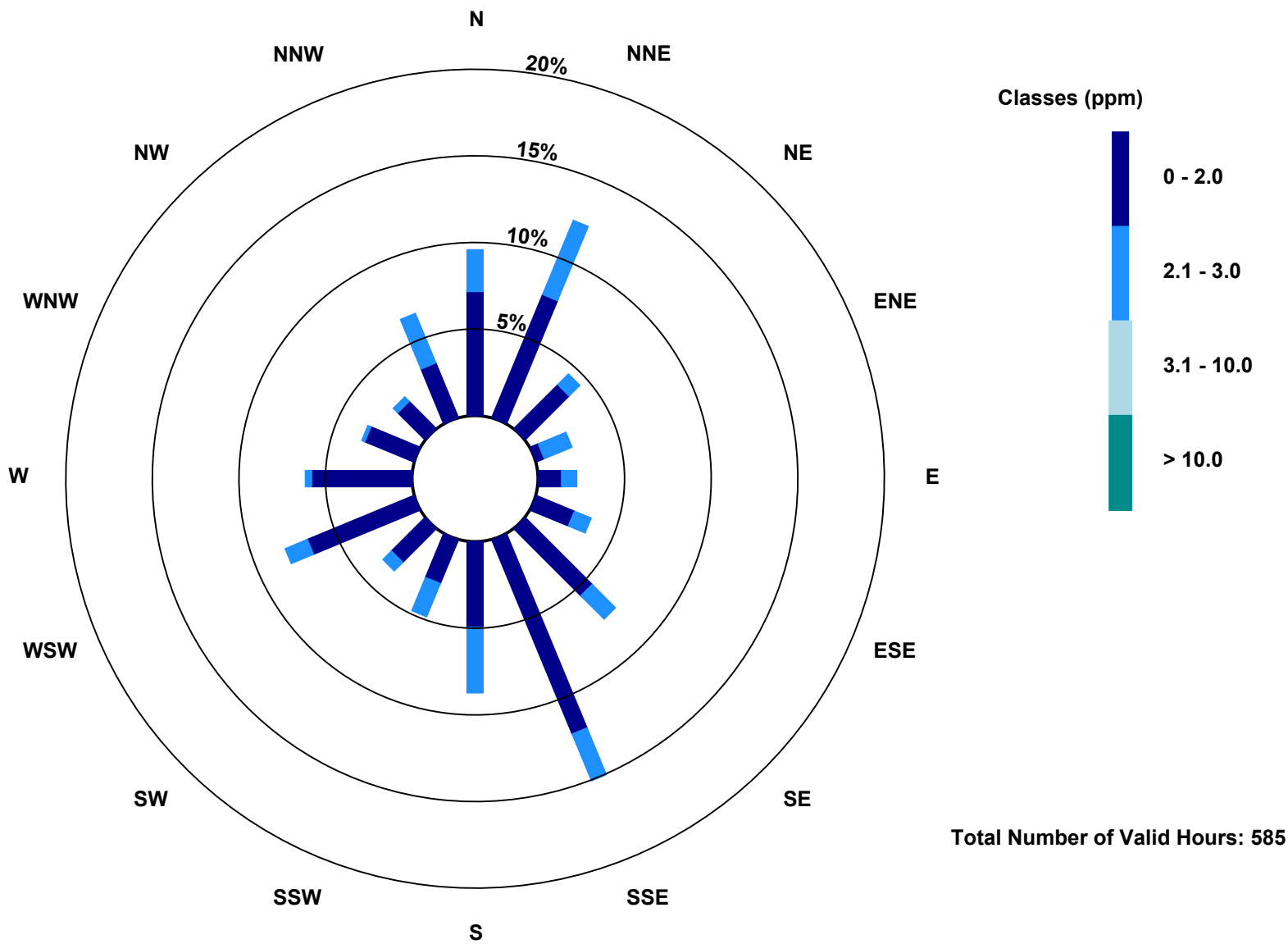
Total Number of Valid Hours: 585

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

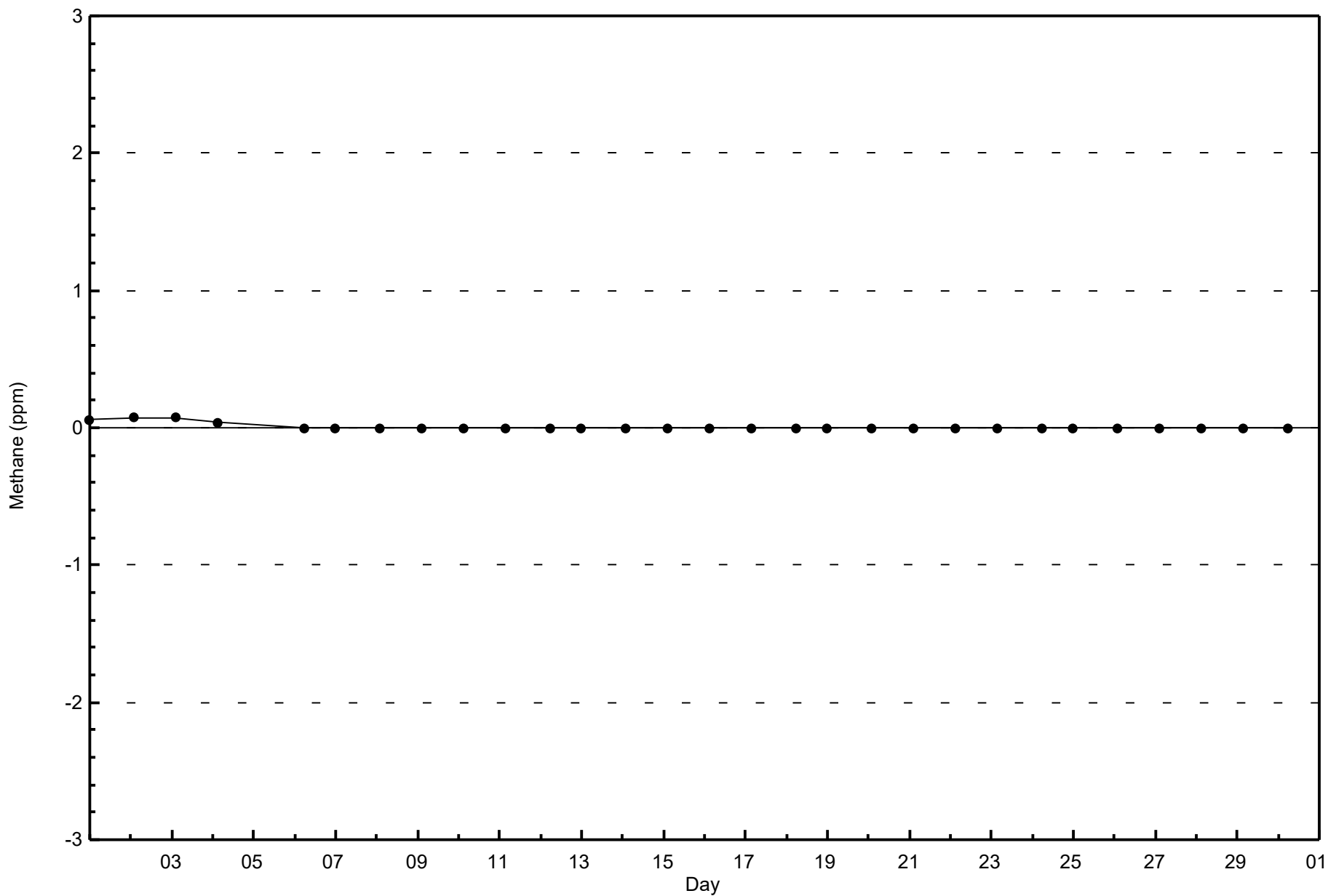
Methane (CH₄) - ppm
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

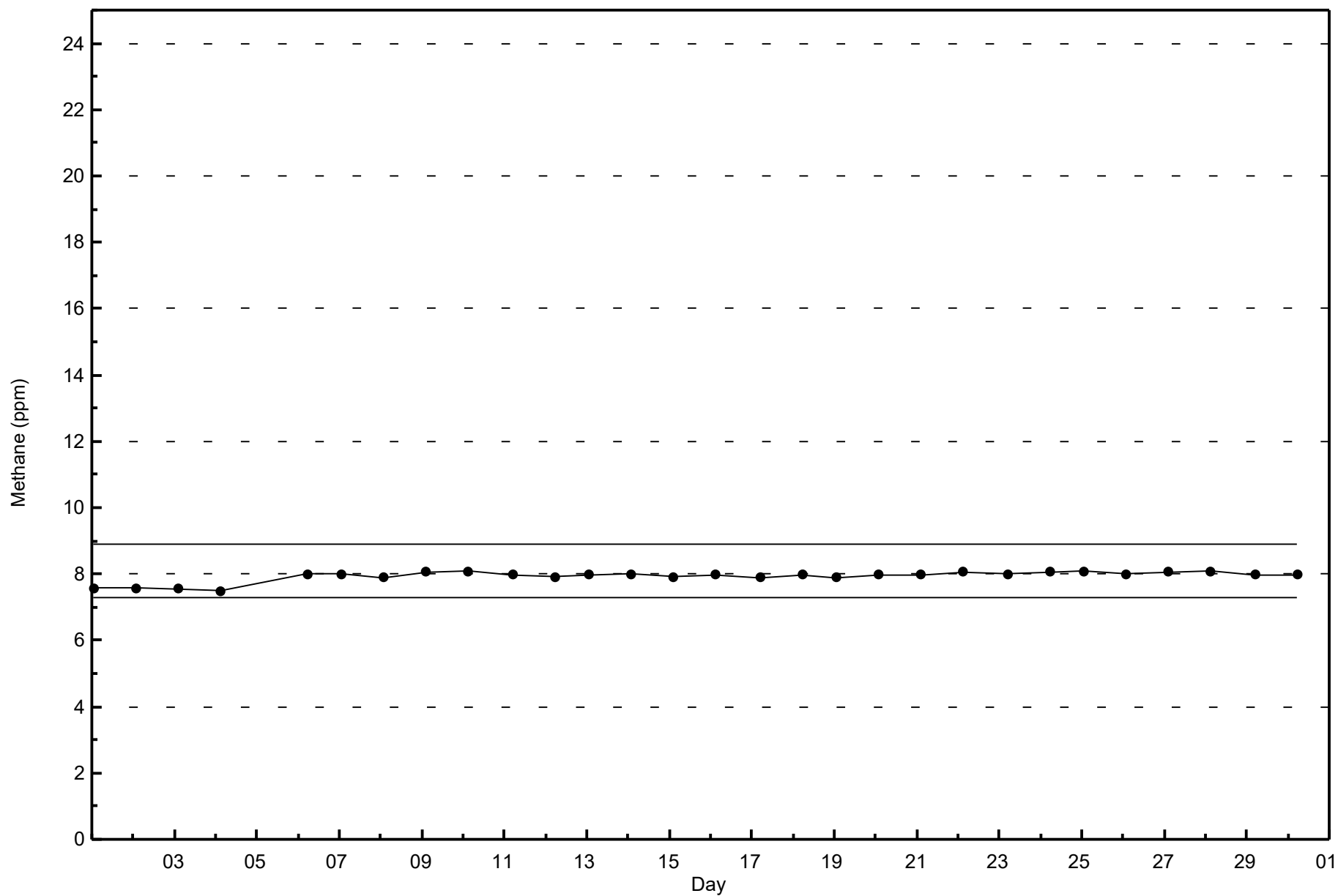
Methane (CH₄) - ppm
Barge Landing - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Barge Landing - April 2025

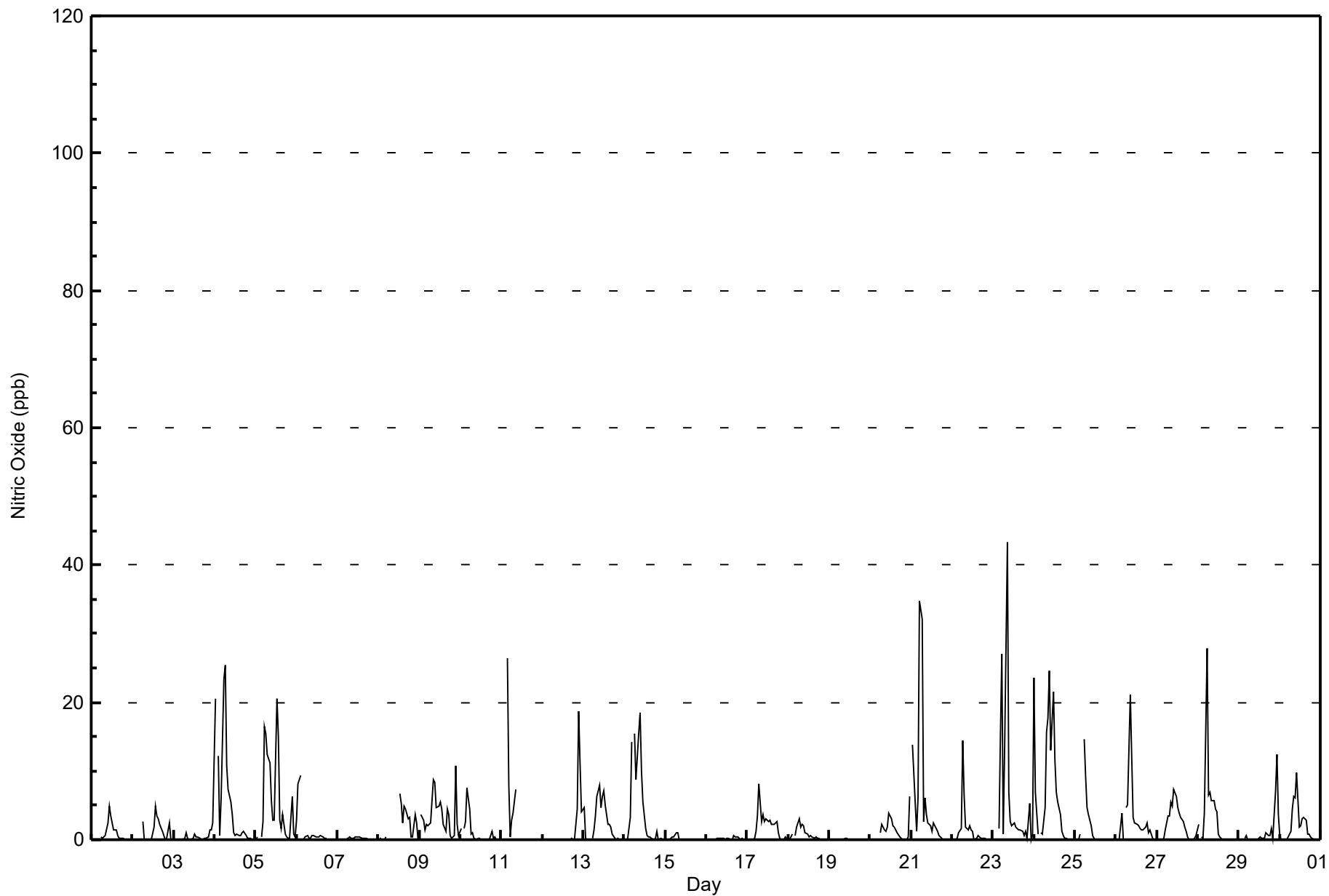


Maximum Value: 43.3 ppb on Apr 23 09:00										Maximum Daily Average: 7.0 ppb on Apr 24										Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 3 00:00										Minimum Daily Average: 0.0 ppb on Apr 19										Hours of Data: 679							
Maximum Diurnal Average: 6.4 ppb at hour 6										Minimum Diurnal Average: 0.3 ppb at hour 20										Hours of Missing Data: 41							
Monthly Average: 2.28 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.3 Q ₃ = 2.3 P ₉₀ = 6.2 P ₉₉ = 24.7										Hours of Calibration: 35							
																				Percent Operational Time: 99.2							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.1	0.0	0.0	0.0	Z	0.3	0.3	0.5	0.5	2.5	4.9	3.4	2.4	1.5	1.4	0.5	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.8	4.9	
2-Apr	0.0	0.0	0.0	0.0	0.1	Z	2.6	0.0	0.1	0.0	0.0	0.0	1.8	4.8	3.5	3.0	2.2	1.2	0.6	0.0	0.2	2.4	0.1	0.0	1.0	4.8	
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.1	0.1	0.0	0.3	0.9	0.5	0.4	0.3	0.1	0.0	0.1	0.2	0.4	1.5	1.5	2.4	0.4	2.4	
4-Apr	20.6	Z	12.2	0.6	5.9	23.4	25.5	10.9	7.4	5.6	3.6	0.9	0.7	0.8	0.5	0.6	0.9	1.2	0.6	0.1	0.1	0.1	0.0	0.1	5.3	25.5	
5-Apr	0.0	0.4	Z	0.4	2.6	16.4	15.4	12.4	11.2	5.7	2.8	2.9	20.5	15.2	2.8	1.6	3.8	0.8	0.3	0.2	0.2	6.4	0.8	0.5	5.4	20.5	
6-Apr	2.8	8.2	9.4	Z	0.1	0.5	0.5	0.3	0.2	0.5	0.6	0.5	0.4	0.4	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	9.4	
7-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.3	0.2	0.3	0.5	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.5	
8-Apr	0.0	0.1	0.0	0.0	0.3	Z	PF	PF	PF	PF	PF	PF	6.7	5.2	2.4	4.8	4.5	3.0	3.2	0.5	0.5	3.6	2.5	0.1	--	6.7	
9-Apr	Z	3.7	2.8	1.5	2.2	2.1	2.5	5.7	8.8	8.4	4.7	4.9	5.4	4.6	2.2	1.3	4.6	3.6	0.5	0.2	0.6	10.9	2.2	0.5	3.6	10.9	
10-Apr	1.7	Z	1.7	2.6	7.6	4.5	0.9	0.9	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.3	0.3	0.1	0.0	0.0	1.0	7.6	
11-Apr	0.1	0.1	Z	26.4	7.8	0.5	2.9	3.8	7.2	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	26.4	
12-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	4.4	18.7	11.2	4.1	1.7	18.7	
13-Apr	4.7	0.1	0.1	0.1	Z	0.2	1.4	3.5	6.3	8.0	4.6	6.3	7.2	5.2	2.2	2.3	1.8	0.7	0.3	0.1	0.1	0.1	0.1	0.2	2.4	8.0	
14-Apr	0.1	0.0	0.0	3.3	14.2	Z	15.4	8.7	15.4	18.5	10.0	5.5	1.6	0.6	0.3	0.3	0.2	0.0	0.2	1.1	0.1	0.1	0.1	0.0	4.2	18.5	
15-Apr	Z	0.0	0.0	0.1	0.3	0.4	1.0	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	0.0	0.0	0.0	0.0	0.1	1.0	
16-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.6	
17-Apr	0.1	0.0	Z	0.0	0.1	1.2	3.5	8.1	2.6	3.7	2.6	3.1	2.7	2.9	2.3	2.2	2.2	2.6	1.1	0.2	0.0	0.0	0.5	0.2	1.8	8.1	
18-Apr	0.1	0.0	0.9	Z	0.5	1.9	3.1	1.8	2.2	1.9	1.0	0.8	0.4	0.6	0.4	0.2	0.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.7	3.1	
19-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	1.0	2.1	1.3	1.1	1.8	3.9	3.0	2.0	1.9	1.5	1.0	0.4	0.1	0.1	0.0	0.0	0.3	6.4	1.2	6.4	
21-Apr	Z	13.9	5.3	1.2	6.1	34.7	32.2	2.7	6.1	3.7	2.4	2.0	1.3	2.5	2.1	1.2	0.5	0.4	0.2	0.1	0.0	0.1	0.1	0.1	5.2	34.7	
22-Apr	0.1	Z	0.1	0.2	1.0	1.6	14.4	6.4	1.9	1.4	2.0	1.4	1.3	0.1	0.2	0.5	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	1.5	14.4	
23-Apr	0.0	0.0	Z	1.7	15.3	27.1	0.7	13.2	43.3	6.8	2.6	2.1	2.5	1.8	1.7	1.4	1.4	1.2	0.7	1.3	0.3	5.3	0.1	0.8	5.7	43.3	
24-Apr	23.5	6.9	0.8	Z	1.0	0.8	4.7	15.7	17.6	24.5	12.9	21.6	11.7	6.8	5.5	3.7	1.3	0.6	0.3	0.1	0.0	0.0	0.0	0.0	7.0	24.5	
25-Apr	0.0	0.0	0.0	0.7	Z	14.6	9.1	4.7	3.6	2.1	0.5	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.6	14.6	
26-Apr	0.1	0.1	0.1	3.8	0.1	Z	4.7	5.1	21.1	12.0	3.2	2.4	2.2	2.0	1.5	1.4	1.5	1.8	2.5	1.1	1.4	0.1	0.1	0.1	3.0	21.1	
27-Apr	Z	0.1	0.0	0.0	0.1	1.4	3.6	3.5	5.4	5.0	7.2	6.2	4.8	3.9	3.2	2.7	1.9	1.2	0.5	0.0	0.0	0.0	0.2	0.7	2.2	7.2	
28-Apr	2.3	Z	0.3	0.3	3.9	27.8	6.5	6.9	5.6	5.6	4.5	4.0	0.9	0.4	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	27.8	
29-Apr	0.0	0.0	Z	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.3	0.3	1.0	0.7	0.6	1.6	0.2	7.1	12.3	3.7	1.3	12.3	
30-Apr	0.6	0.1	0.0	Z	0.0	0.4	1.3	4.4	6.2	6.2	9.8	1.8	1.9	3.1	3.3	2.8	0.8	0.8	0.5	0.2	0.0	0.0	0.0	0.0	1.9	9.8	
2.3 1.4 1.4 1.7 2.8 6.4 5.3 4.3 6.0 4.4 3.0 2.7 2.8 2.3 1.3 1.1 1.1 0.7 0.5 0.3 0.3 1.9 1.1 0.7																								Diurnal Average			
23.5 13.9 12.2 26.4 15.3 34.7 32.2 15.7 43.3 24.5 12.9 21.6 20.5 15.2 5.5 4.8 4.6 3.6 3.2 1.6 4.4 18.7 12.3 6.4																								Diurnal Maximum			
Z - zerospan C - Calibration PF - Power Failure																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	665	97.94	97.94
21 - 40	13	1.91	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	60	77	31	13	13	24	45	101	64	31	22	44	42	27	19	52	665
21 - 40	2	2	0	1	1	1	0	0	2	1	1	1	0	0	0	1	13
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	62	79	31	14	14	25	45	101	66	32	23	45	42	27	19	54	679

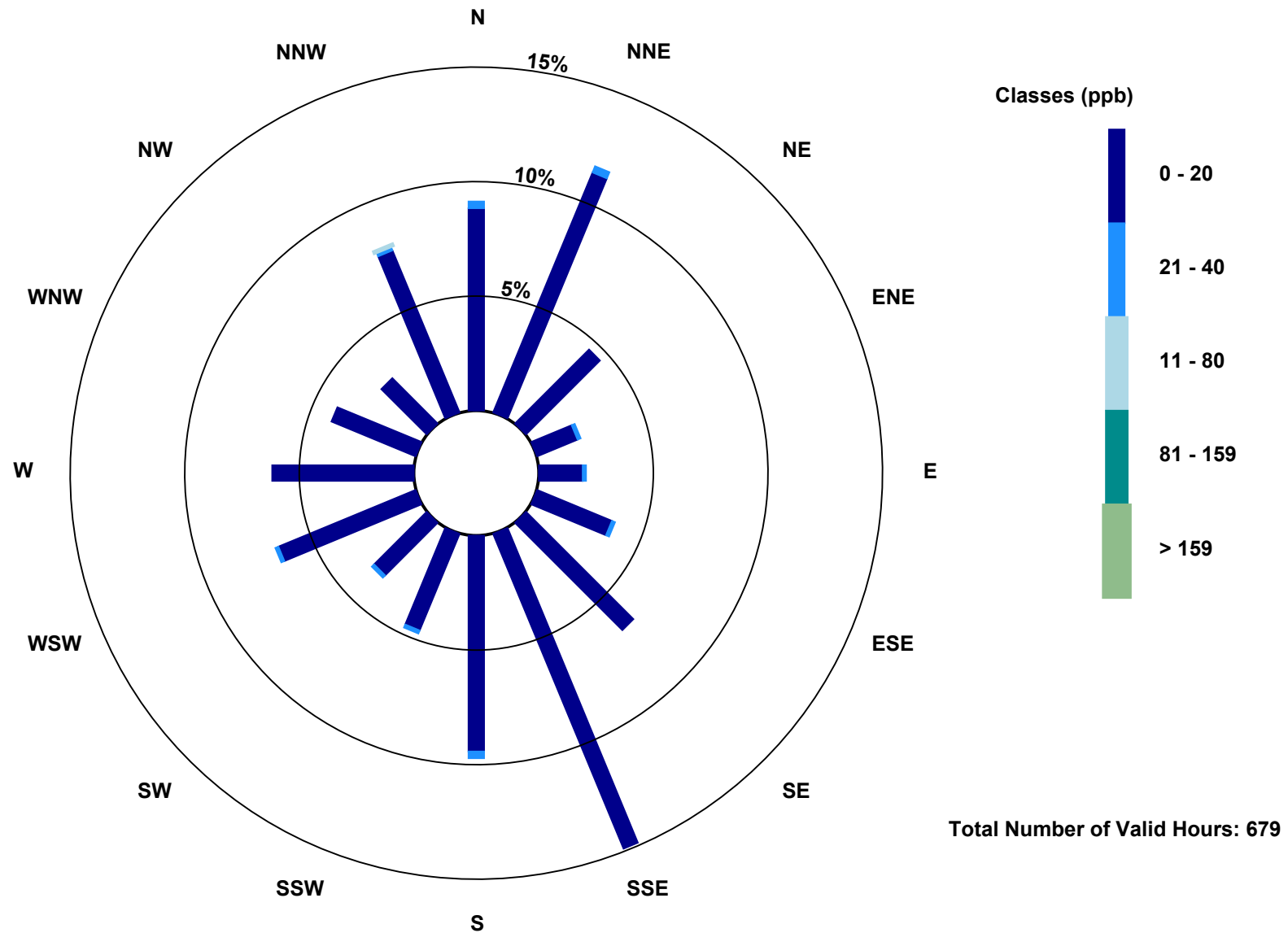
Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

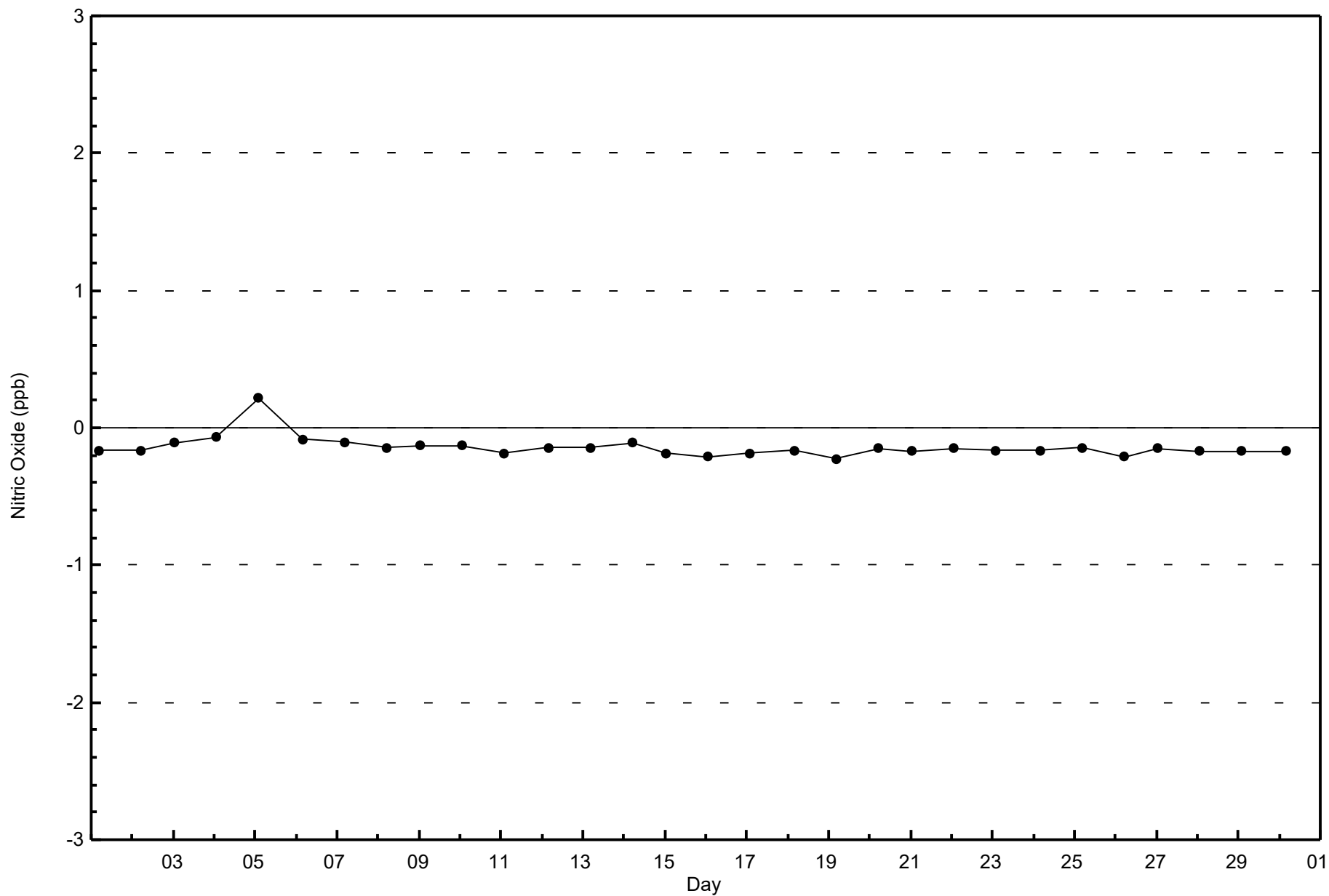
Nitric Oxide (NO) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

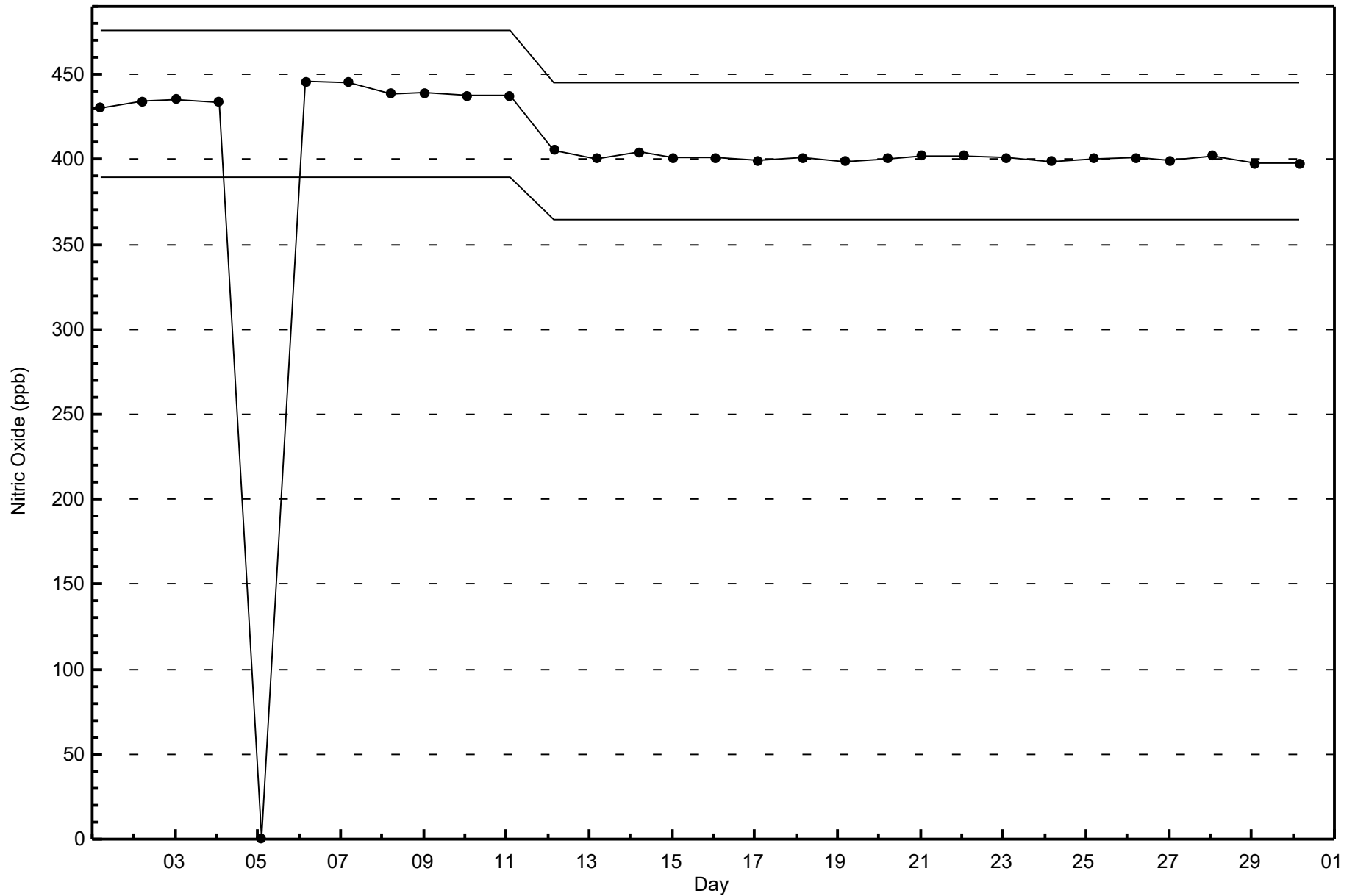
Nitric Oxide (NO) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Barge Landing - April 2025

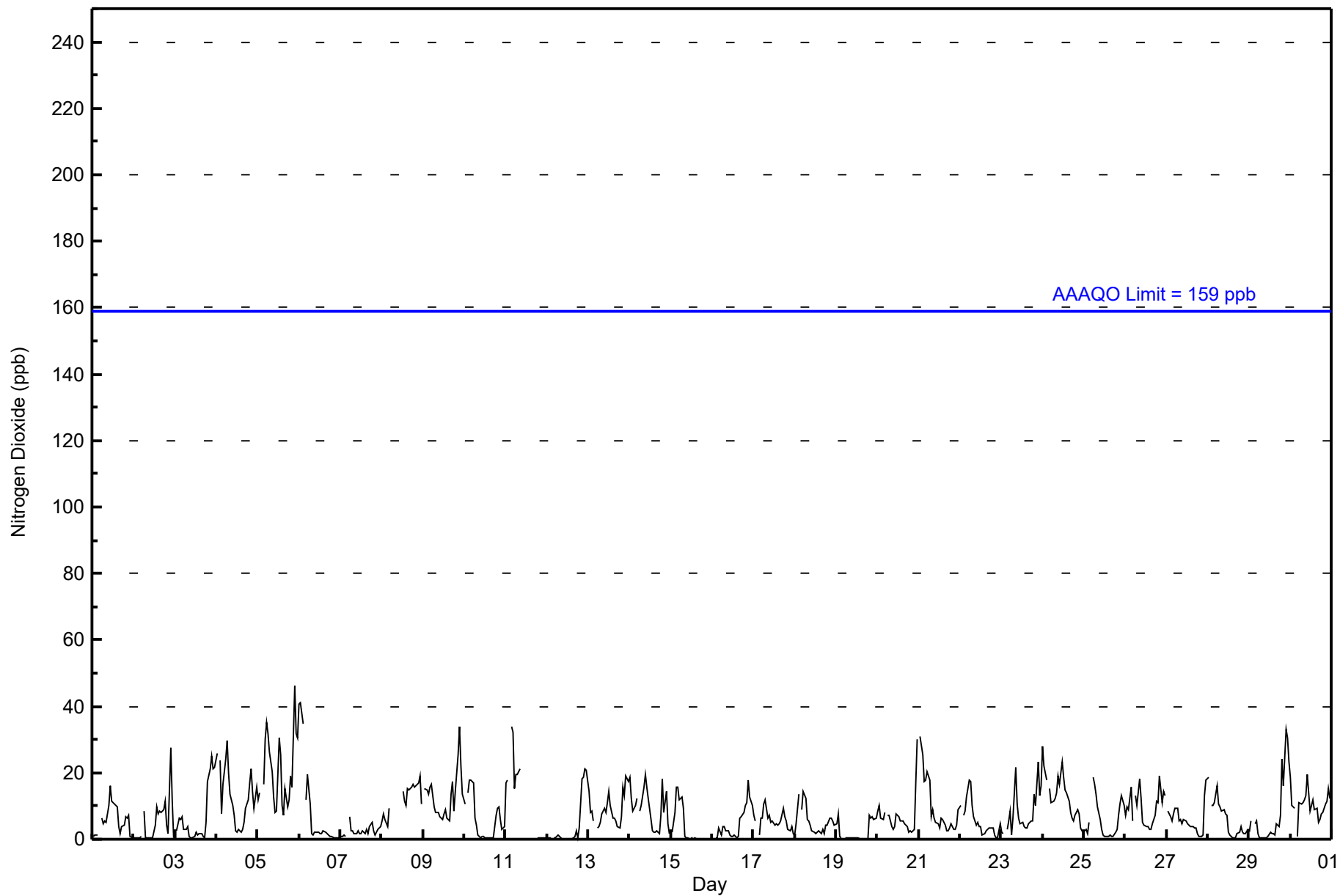


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 46.3 ppb on Apr 5 22:00 Maximum Daily Average: 20.4 ppb on Apr 5																			Hours of Data: 679							
Minimum Value: 0.2 ppb on Apr 11 15:00 Minimum Daily Average: 2.2 ppb on Apr 19																			Hours of Missing Data: 41							
Maximum Diurnal Average: 12.3 ppb at hour 22 Minimum Diurnal Average: 3.8 ppb at hour 16																			Hours of Calibration: 35							
Monthly Average: 7.73 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 1.9 Median = 5.6 Q ₃ = 11.2 P ₉₀ = 17.7 P ₉₉ = 33.3																			Percent Operational Time: 99.2							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.0	1.3	1.3	1.4	Z	6.2	4.7	5.6	5.1	10.0	16.1	11.5	11.0	10.8	9.6	3.7	1.8	3.9	4.2	6.6	6.3	7.4	0.7	0.4	5.7	16.1
2-Apr	0.4	0.3	0.3	0.3	0.8	Z	8.3	0.6	0.4	0.4	0.4	0.5	4.4	9.6	7.8	8.6	7.9	8.7	11.5	4.1	1.8	27.5	11.6	0.3	5.1	27.5
3-Apr	Z	2.5	6.3	5.8	6.8	3.0	2.8	3.8	0.8	0.4	0.4	0.8	2.1	1.4	1.7	1.5	0.7	0.5	4.9	17.5	21.3	25.2	21.2	21.5	6.6	25.2
4-Apr	26.0	Z	23.7	7.6	16.7	24.3	29.7	20.1	13.6	10.0	7.4	2.6	2.2	2.9	2.3	2.9	5.1	9.3	12.0	17.0	21.0	14.6	9.3	15.5	12.9	29.7
5-Apr	11.7	13.9	Z	16.6	30.1	35.3	31.8	26.4	20.3	12.9	8.2	8.6	30.4	25.5	10.3	7.2	15.1	9.8	11.8	18.9	15.6	46.3	31.7	30.6	20.4	46.3
6-Apr	40.6	41.3	34.8	Z	11.8	19.7	10.5	1.9	1.2	2.3	2.2	2.0	1.9	1.9	2.4	2.2	1.6	1.4	0.8	0.9	0.5	0.5	0.5	0.5	8.0	41.3
7-Apr	0.7	0.8	1.1	1.0	Z	6.8	2.5	2.4	1.5	1.8	2.4	1.9	1.9	2.5	1.8	2.8	1.8	4.0	5.0	2.4	1.4	2.1	3.1	3.9	2.4	6.8
8-Apr	5.4	7.8	5.9	3.7	9.4	Z	PF	PF	PF	PF	PF	PF	14.4	11.4	10.2	15.4	15.0	15.8	16.7	15.5	16.2	17.0	19.1	10.8	-	19.1
9-Apr	Z	15.1	14.8	13.5	15.6	16.4	9.6	8.1	8.1	7.9	6.6	5.9	7.8	8.9	6.2	5.3	13.6	17.5	8.4	14.3	25.3	33.8	21.9	13.7	13.0	33.8
10-Apr	10.6	Z	13.8	17.7	17.6	16.8	6.2	4.3	1.2	0.4	0.7	0.7	0.4	0.5	0.4	0.4	0.4	0.5	7.4	9.3	9.6	6.0	3.0	4.0	5.7	17.7
11-Apr	17.0	17.6	Z	34.1	32.0	15.4	19.6	19.3	21.1	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.4	9.9	34.1
12-Apr	0.4	0.3	0.3	Z	0.5	0.4	1.3	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9	2.4	0.6	3.6	18.3	18.8	21.3	20.7	4.0	21.3
13-Apr	14.5	8.1	8.4	5.5	Z	3.4	3.8	4.9	7.8	9.4	8.2	11.2	14.3	10.3	6.4	6.4	5.4	3.9	3.6	6.7	15.7	13.1	19.1	17.3	9.0	19.1
14-Apr	18.5	12.3	8.5	10.0	12.1	Z	8.5	10.2	15.8	19.7	15.7	12.1	6.0	2.4	2.1	2.3	2.7	1.7	7.1	18.1	8.1	14.3	4.8	1.5	9.3	19.7
15-Apr	Z	2.1	7.9	15.5	15.5	11.7	12.9	9.5	0.7	0.3	0.3	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.4	15.5
16-Apr	0.2	Z	0.3	0.3	3.5	1.4	3.9	3.8	2.6	2.6	1.3	1.0	1.0	1.2	0.6	0.9	6.2	6.6	8.1	10.0	10.9	17.9	12.6	10.0	4.6	17.9
17-Apr	7.2	5.7	Z	1.1	6.5	6.2	10.4	12.0	6.2	7.3	5.2	5.3	4.2	4.5	4.2	4.6	5.5	9.4	6.9	5.5	2.9	2.4	3.9	1.9	5.6	12.0
18-Apr	1.2	4.7	13.4	Z	9.1	14.5	12.2	6.1	5.4	4.1	2.5	2.1	1.6	2.1	2.7	1.8	3.1	1.9	4.1	4.3	6.4	6.5	5.3	4.1	5.2	14.5
19-Apr	4.6	7.7	1.0	0.4	Z	0.4	0.4	0.3	0.4	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	7.0	6.2	6.8	5.9	6.2	2.2	7.7
20-Apr	8.6	10.1	6.4	6.0	8.0	Z	7.2	7.3	3.9	3.0	4.0	7.6	6.7	5.6	5.3	5.4	4.8	3.9	2.0	2.4	2.3	3.1	16.9	30.1	7.0	30.1
21-Apr	Z	30.8	25.3	17.5	17.8	20.2	17.6	6.7	8.8	6.4	5.0	4.8	3.6	6.5	6.0	4.2	2.7	2.7	3.3	4.8	2.8	2.9	4.1	9.0	9.3	30.8
22-Apr	10.0	Z	7.0	8.3	12.8	18.0	17.3	10.1	6.6	4.4	4.9	4.0	3.7	1.1	1.6	2.6	2.8	3.5	3.6	3.6	1.2	0.4	0.6	4.8	5.8	18.0
23-Apr	2.2	1.5	Z	3.0	5.7	8.5	1.3	6.5	21.7	10.8	6.4	4.6	5.0	3.7	3.6	3.5	4.6	5.4	5.5	13.7	10.3	23.3	13.0	15.9	7.8	23.3
24-Apr	27.8	22.0	17.7	Z	15.4	10.9	11.6	12.1	14.1	19.1	16.5	23.5	18.5	15.0	13.8	11.6	8.0	6.3	5.6	7.1	9.1	7.8	3.5	2.6	13.0	27.8
25-Apr	2.7	3.0	1.9	5.1	Z	18.6	16.7	13.4	9.7	5.9	2.9	1.2	1.0	0.8	0.7	1.1	0.9	0.7	2.0	3.0	7.3	10.7	13.3	10.2	5.8	18.6
26-Apr	7.4	9.8	9.1	15.8	5.7	Z	13.0	10.3	18.1	12.1	5.0	4.1	3.9	3.8	3.1	3.0	4.5	7.4	11.5	11.0	19.0	11.2	14.2	13.3	9.4	19.0
27-Apr	Z	8.4	6.9	5.7	7.8	9.5	9.2	5.4	5.8	4.7	6.1	5.6	4.8	4.3	4.0	4.0	3.4	3.2	1.9	0.7	0.9	1.4	13.0	17.8	5.8	17.8
28-Apr	18.7	Z	10.0	10.0	11.0	16.2	10.4	9.9	8.6	8.8	7.5	7.1	2.2	1.3	0.5	0.5	0.4	1.5	2.0	3.9	2.1	1.6	1.7	2.8	6.0	18.7
29-Apr	2.7	5.7	Z	4.6	5.7	1.6	0.5	0.4	0.4	0.3	0.3	0.9	2.2	1.6	1.6	1.4	4.8	3.9	7.4	24.0	16.3	33.1	30.5	23.4	7.5	33.1
30-Apr	18.8	10.0	9.3	Z	1.0	11.2	10.7	11.1	12.0	13.0	19.6	8.4	10.1	12.0	9.1	9.2	5.2	6.0	7.7	8.0	10.8	11.5	15.3	12.2	10.5	19.6
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	93.81	93.81
21 - 40	39	5.74	99.56
41 - 80	3	0.44	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	60	71	30	10	11	24	41	96	62	31	22	45	42	27	19	46	637
21 - 40	1	7	1	3	3	1	4	5	4	1	1	0	0	0	0	8	39
11 - 80	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	79	31	14	14	25	45	101	66	32	23	45	42	27	19	54	679

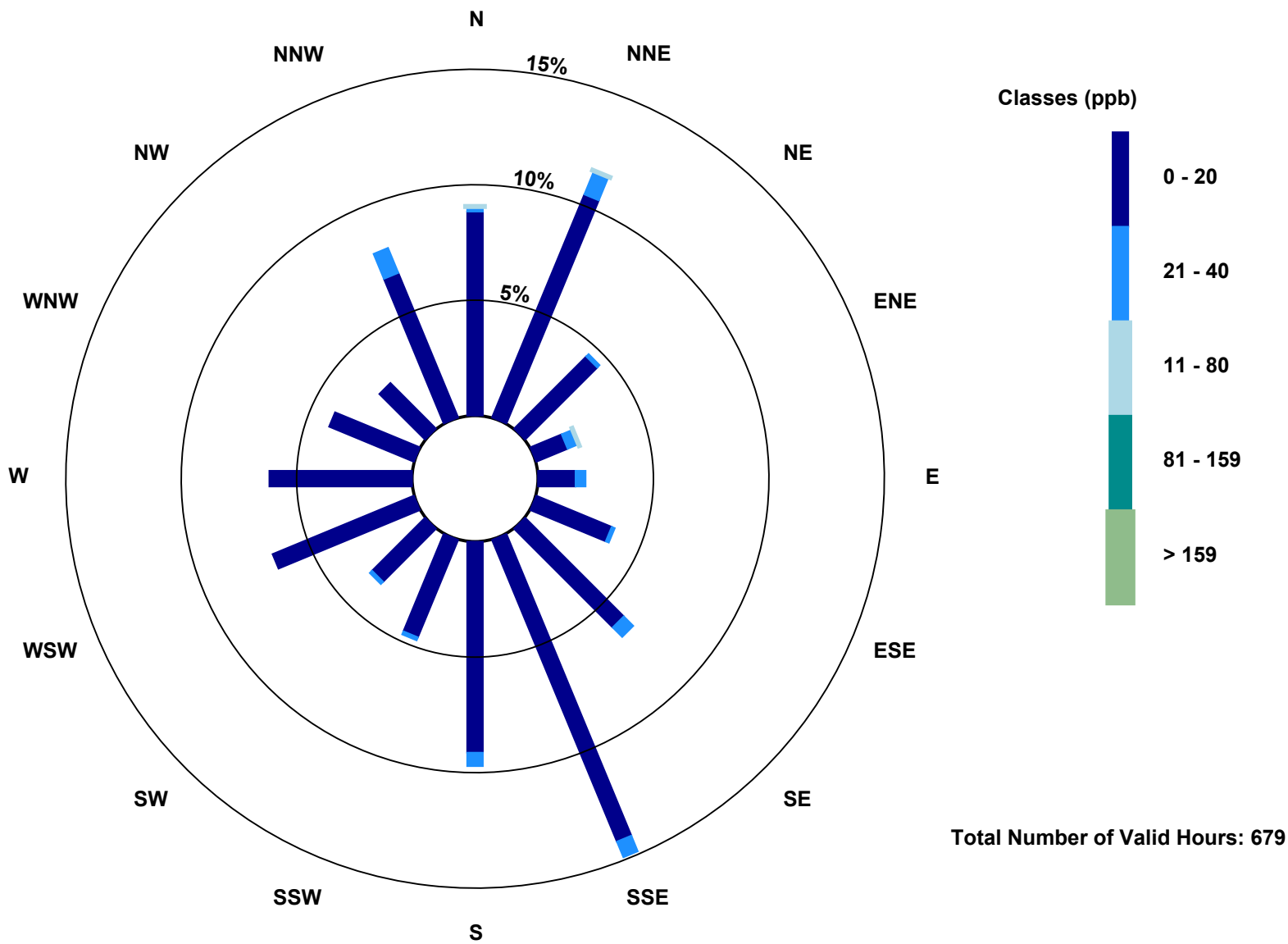
Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

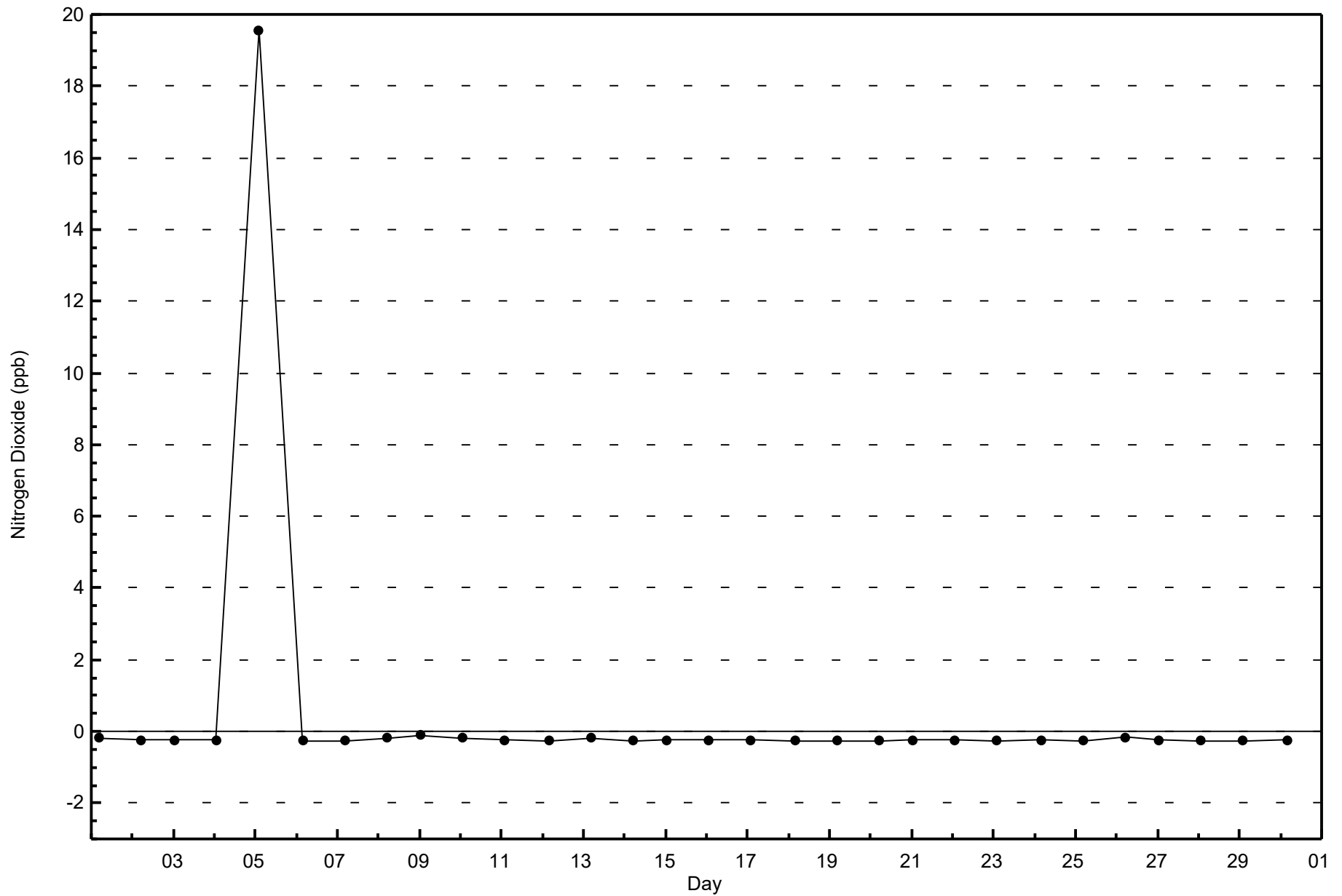
Nitrogen Dioxide (NO₂) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

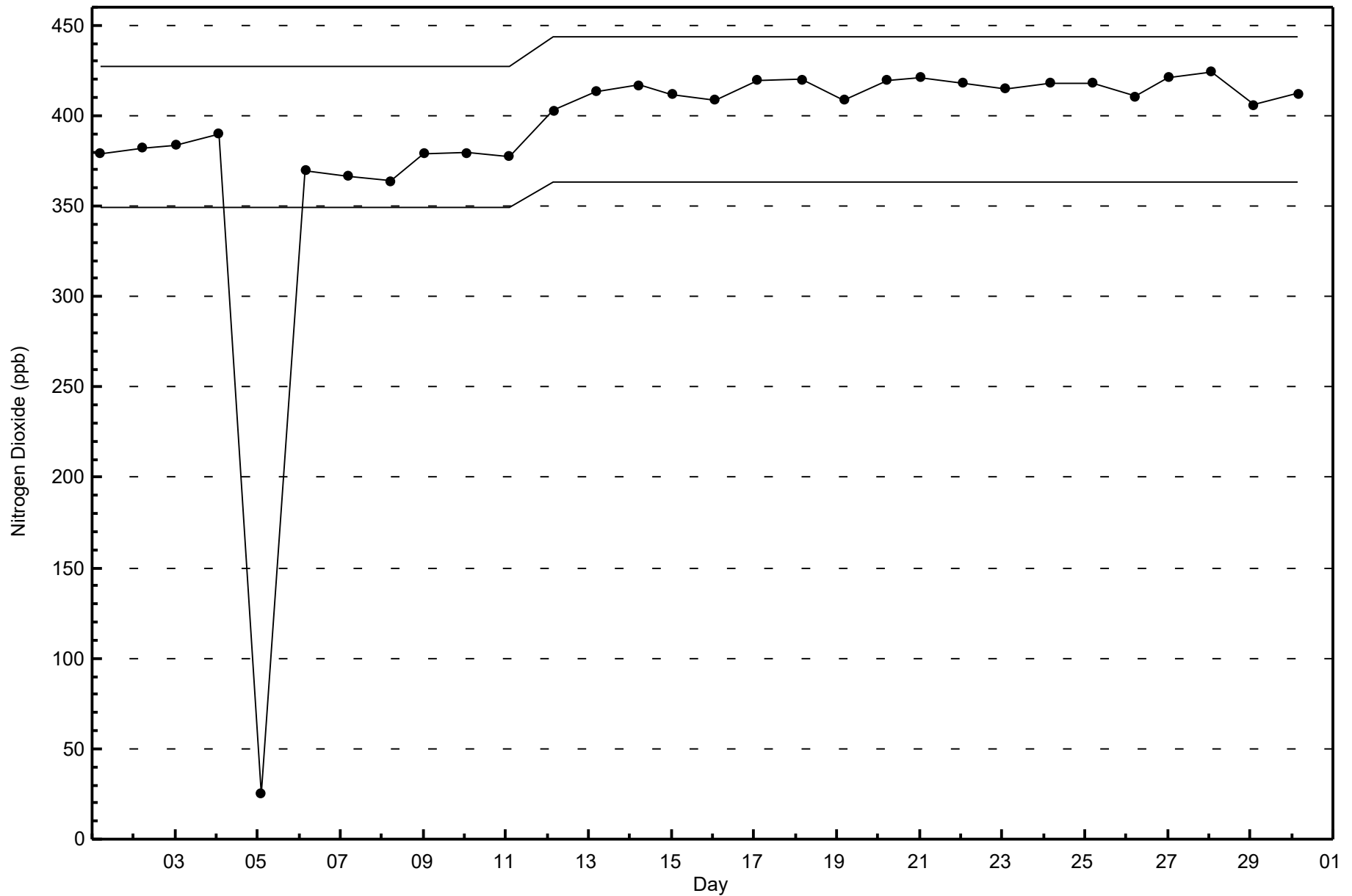
Nitrogen Dioxide (NO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

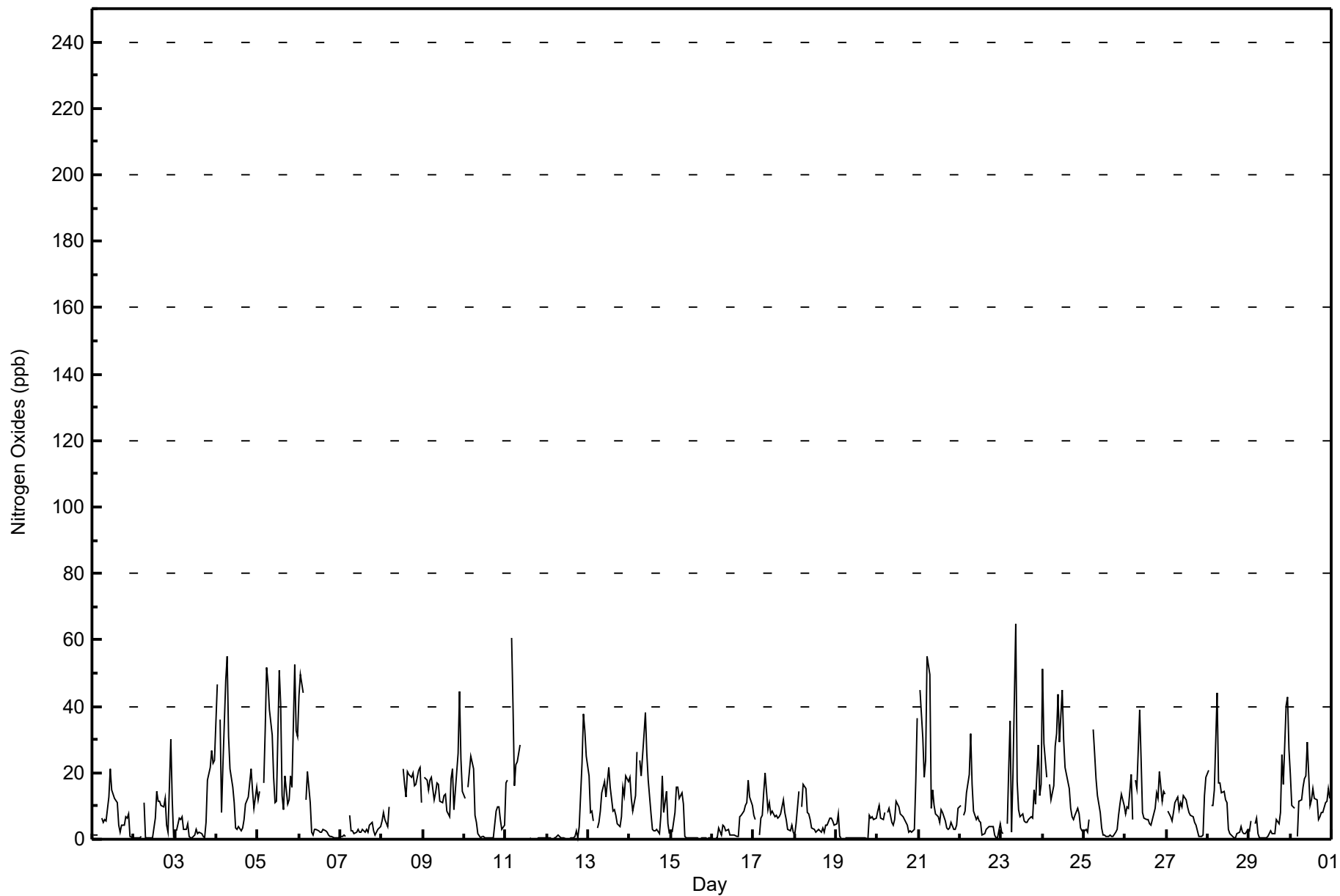
Barge Landing - April 2025

Maximum Value: 65.0 ppb on Apr 23 09:00																				Maximum Daily Average: 25.7 ppb on Apr 5					Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 11 18:00																				Minimum Daily Average: 2.2 ppb on Apr 19					Hours of Data: 679	
Maximum Diurnal Average: 18.3 ppb at hour 6																				Minimum Diurnal Average: 4.9 ppb at hour 16					Hours of Missing Data: 41	
Monthly Average: 10.00 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 2.1 Median = 6.8 Q ₃ = 14.1 P ₉₀ = 22.5 P ₉₉ = 50.9					Hours of Calibration: 35	
																									Percent Operational Time: 99.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	1.1	1.3	1.3	1.4	Z	6.5	5.0	6.1	5.6	12.5	21.0	14.9	13.4	12.3	11.0	4.2	2.0	4.2	4.4	6.7	6.4	7.4	0.7	0.4	6.5	21.0
2-Apr	0.4	0.3	0.3	0.3	0.9	Z	10.9	0.6	0.5	0.4	0.4	0.5	6.2	14.4	11.4	11.6	10.1	9.9	12.1	4.1	2.0	29.9	11.7	0.3	6.1	29.9
3-Apr	Z	2.5	6.3	5.8	6.8	3.0	2.9	4.8	0.9	0.5	0.4	1.1	3.0	1.9	2.1	1.8	0.8	0.5	5.0	17.7	21.7	26.7	22.7	23.9	7.1	26.7
4-Apr	46.6	Z	35.9	8.2	22.6	47.7	55.2	31.0	21.0	15.6	11.0	3.5	2.9	3.7	2.8	3.5	6.0	10.5	12.6	17.1	21.1	14.7	9.3	15.6	18.2	55.2
5-Apr	11.7	14.3	Z	17.0	32.7	51.7	47.2	38.8	31.5	18.6	11.0	11.5	50.9	40.7	13.1	8.8	18.9	10.6	12.1	19.1	15.8	52.7	32.5	31.1	25.7	52.7
6-Apr	43.4	49.5	44.2	Z	11.9	20.2	11.0	2.2	1.4	2.8	2.8	2.5	2.3	2.3	2.9	2.6	1.9	1.5	0.8	0.9	0.5	0.5	0.5	0.5	9.1	49.5
7-Apr	0.7	0.8	1.1	1.0	Z	7.0	2.6	2.7	1.7	2.1	2.9	2.2	2.3	2.9	2.1	3.1	2.0	4.2	5.1	2.5	1.4	2.1	3.1	3.9	2.6	7.0
8-Apr	5.4	7.9	5.9	3.7	9.7	Z	PF	PF	PF	PF	PF	PF	21.1	16.6	12.6	20.2	19.5	18.8	19.9	16.0	16.7	20.6	21.6	10.9	--	21.6
9-Apr	Z	18.8	17.6	15.0	17.8	18.5	12.1	13.8	16.9	16.3	11.3	10.8	13.2	13.5	8.4	6.6	18.2	21.1	8.9	14.5	25.9	44.7	24.1	14.2	16.6	44.7
10-Apr	12.3	Z	15.5	20.3	25.2	21.3	7.1	5.2	1.5	0.5	0.8	0.9	0.4	0.5	0.4	0.4	0.4	0.5	8.6	9.6	9.9	6.1	3.0	4.0	6.7	25.2
11-Apr	17.1	17.7	Z	60.5	39.8	15.9	22.5	23.1	28.3	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.4	12.6	60.5
12-Apr	0.4	0.3	0.3	Z	0.5	0.4	1.3	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9	2.5	0.6	3.6	22.7	37.5	32.5	24.8	5.7	37.5
13-Apr	19.2	8.2	8.5	5.6	Z	3.6	5.2	8.4	14.1	17.4	12.8	17.5	21.5	15.5	8.6	8.7	7.2	4.6	3.9	6.8	15.8	13.2	19.2	17.5	11.4	21.5
14-Apr	18.6	12.3	8.5	13.3	26.3	Z	23.9	18.9	31.2	38.2	25.7	17.6	7.6	3.0	2.4	2.6	2.9	1.7	7.3	19.2	8.2	14.4	4.9	1.5	13.5	38.2
15-Apr	Z	2.1	7.9	15.6	15.8	12.1	13.9	10.5	0.8	0.3	0.3	0.2	0.3	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.6	15.8
16-Apr	0.2	Z	0.3	0.3	3.5	1.4	4.1	4.0	2.7	2.8	1.4	1.1	1.2	1.4	0.7	1.0	6.8	7.1	8.4	10.1	11.0	18.0	12.7	10.1	4.8	18.0
17-Apr	7.3	5.7	Z	1.1	6.6	7.4	13.9	20.1	8.8	11.0	7.8	8.4	6.9	7.4	6.5	6.8	7.7	12.0	8.0	5.7	2.9	2.4	4.4	2.1	7.4	20.1
18-Apr	1.3	4.7	14.3	Z	9.6	16.4	15.3	7.9	7.6	6.0	3.5	2.9	2.0	2.7	3.1	2.0	3.4	2.0	4.3	4.3	6.4	6.5	5.3	4.1	5.9	16.4
19-Apr	4.6	7.7	1.0	0.4	Z	0.4	0.4	0.3	0.5	0.6	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	7.1	6.3	6.8	5.9	6.2	2.2	7.7
20-Apr	8.6	10.1	6.4	6.0	8.0	Z	8.2	9.4	5.2	4.1	5.8	11.5	9.7	7.6	7.2	6.9	5.8	4.3	2.1	2.5	2.3	3.1	17.2	36.5	8.2	36.5
21-Apr	Z	44.7	30.6	18.7	23.9	54.9	49.8	9.4	14.9	10.1	7.4	6.8	4.9	9.0	8.1	5.4	3.2	3.1	3.5	4.9	2.8	3.0	4.2	9.1	14.5	54.9
22-Apr	10.1	Z	7.1	8.5	13.8	19.6	31.7	16.5	8.5	5.8	6.9	5.4	5.0	1.2	1.8	3.1	3.3	3.7	3.8	3.7	1.2	0.4	0.6	4.8	7.2	31.7
23-Apr	2.2	1.5	Z	4.7	21.0	35.6	2.0	19.7	65.0	17.6	9.0	6.7	7.5	5.5	5.3	4.9	6.0	6.6	6.2	15.0	10.6	28.6	13.1	16.7	13.5	65.0
24-Apr	51.3	28.9	18.5	Z	16.4	11.7	16.3	27.8	31.7	43.6	29.4	45.1	30.2	21.8	19.3	15.3	9.3	6.9	5.9	7.2	9.1	7.8	3.5	2.6	20.0	51.3
25-Apr	2.7	3.0	1.9	5.8	Z	33.2	25.8	18.1	13.3	8.0	3.4	1.3	1.1	0.9	0.7	1.1	1.0	0.7	2.0	3.0	7.3	10.7	13.4	10.3	7.3	33.2
26-Apr	7.5	9.9	9.2	19.6	5.8	Z	17.7	15.4	39.2	24.1	8.2	6.5	6.1	5.8	4.6	4.4	6.0	9.2	14.0	12.1	20.4	11.3	14.3	13.4	12.4	39.2
27-Apr	Z	8.5	6.9	5.7	7.9	10.9	12.8	8.9	11.2	9.7	13.3	11.8	9.6	8.2	7.2	6.7	5.3	4.4	2.4	0.7	0.9	1.4	13.2	18.5	8.1	18.5
28-Apr	21.0	Z	10.3	10.3	14.9	44.0	16.9	16.8	14.2	14.4	12.0	11.1	3.1	1.7	0.6	0.5	0.4	1.6	2.0	3.9	2.1	1.6	1.7	2.8	9.0	44.0
29-Apr	2.7	5.7	Z	4.8	6.3	1.6	0.5	0.4	0.4	0.3	0.3	1.0	2.5	1.7	1.9	1.7	5.8	4.6	8.0	25.6	16.5	40.2	42.8	27.1	8.8	42.8
30-Apr	19.4	10.1	9.3	Z	1.0	11.6	12.0	15.5	18.2	19.2	29.4	10.2	12.0	15.1	12.4	12.0	6.0	6.8	8.2	8.2	10.8	11.5	15.3	12.2	12.5	29.4
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	597	87.92	87.92
21 - 40	60	8.84	96.76
41 - 80	22	3.24	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Barge Landing - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	59	66	28	6	10	22	37	92	57	27	21	41	41	26	19	45	597
21 - 40	1	9	3	6	1	2	6	7	7	4	1	4	1	1	0	7	60
11 - 80	2	4	0	2	3	1	2	2	2	1	1	0	0	0	0	2	22
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	62	79	31	14	14	25	45	101	66	32	23	45	42	27	19	54	679

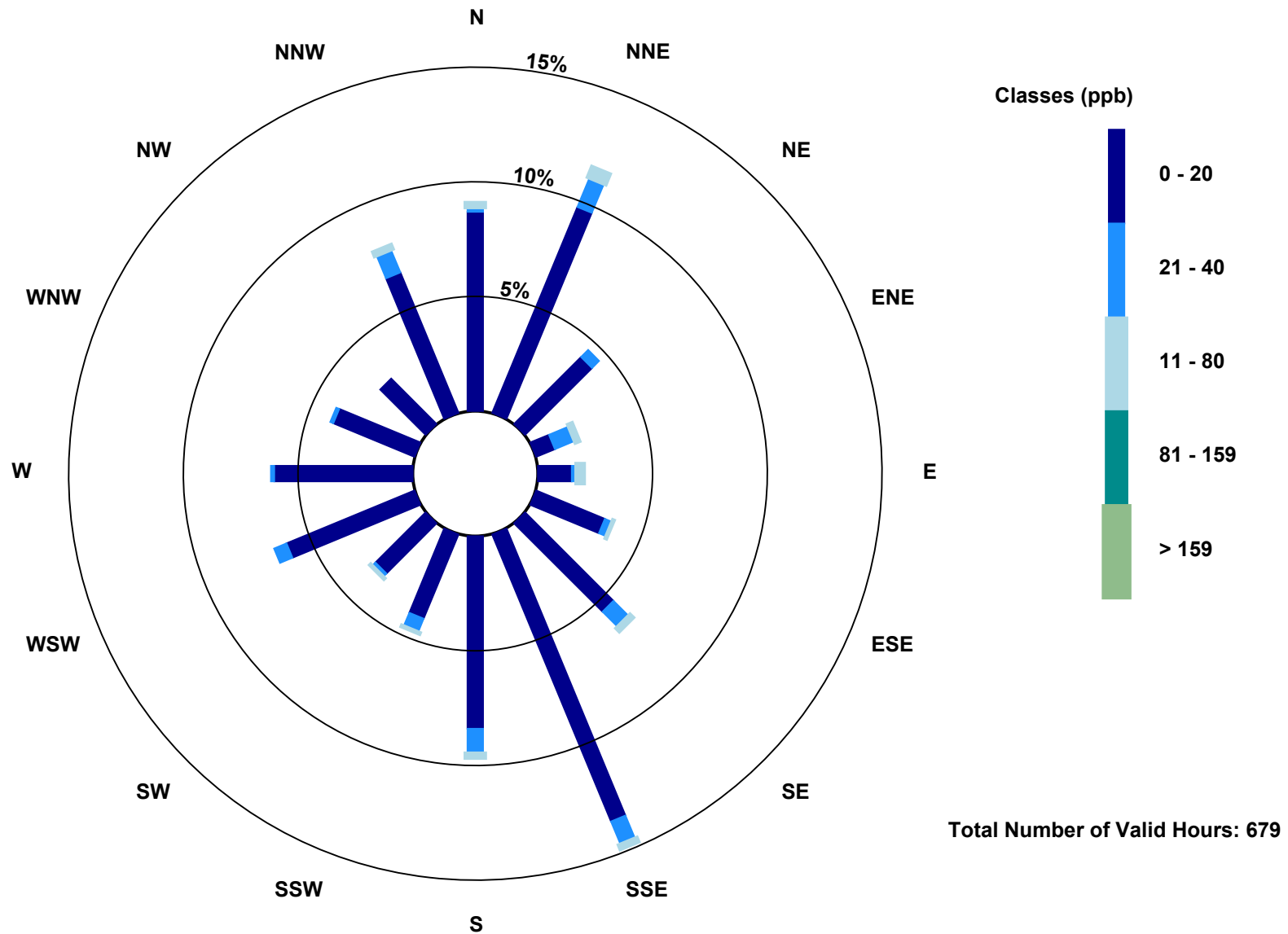
Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

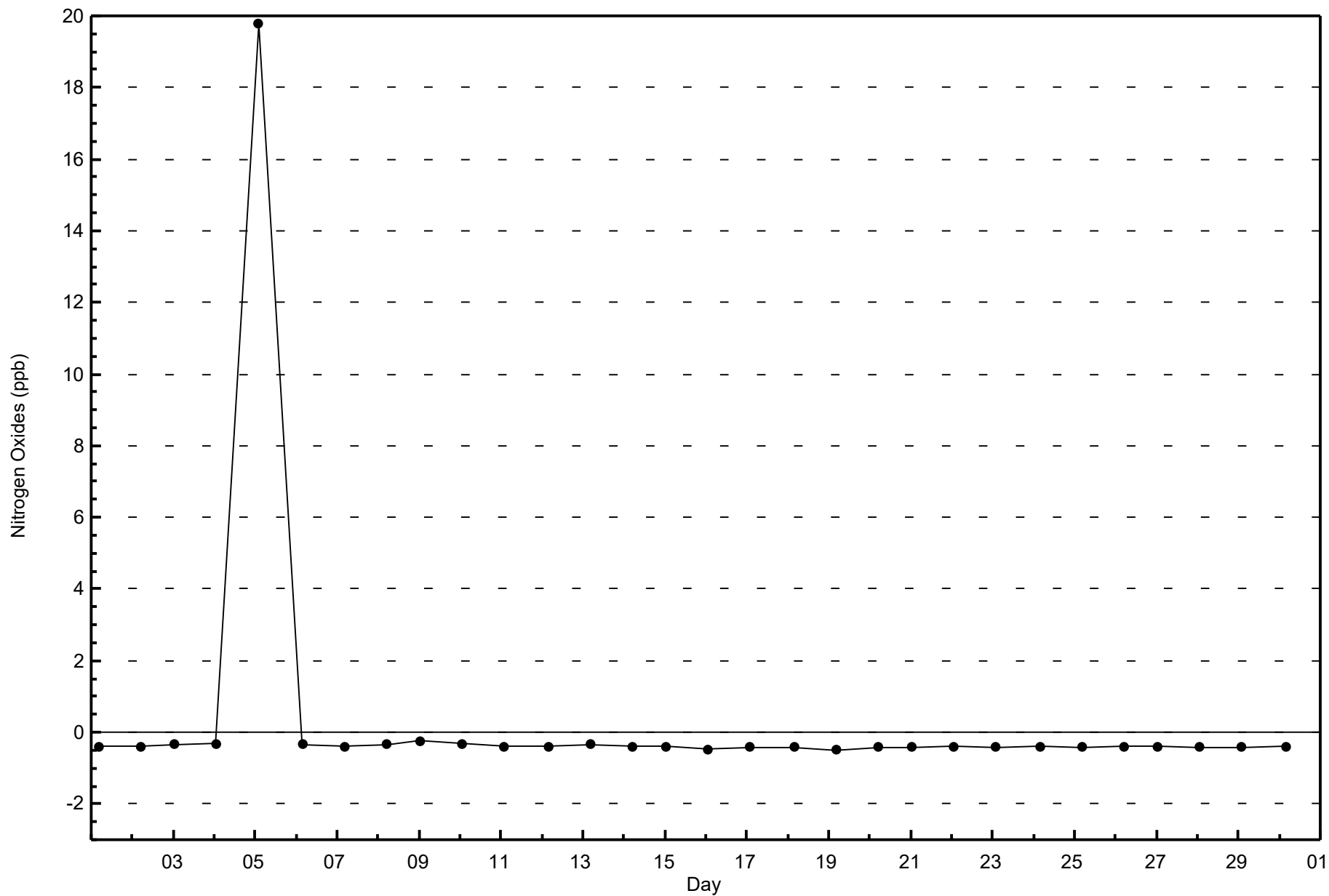
Nitrogen Oxides (NO_x) - ppb
Barge Landing





Wood Buffalo Environmental Association
Zero Responses

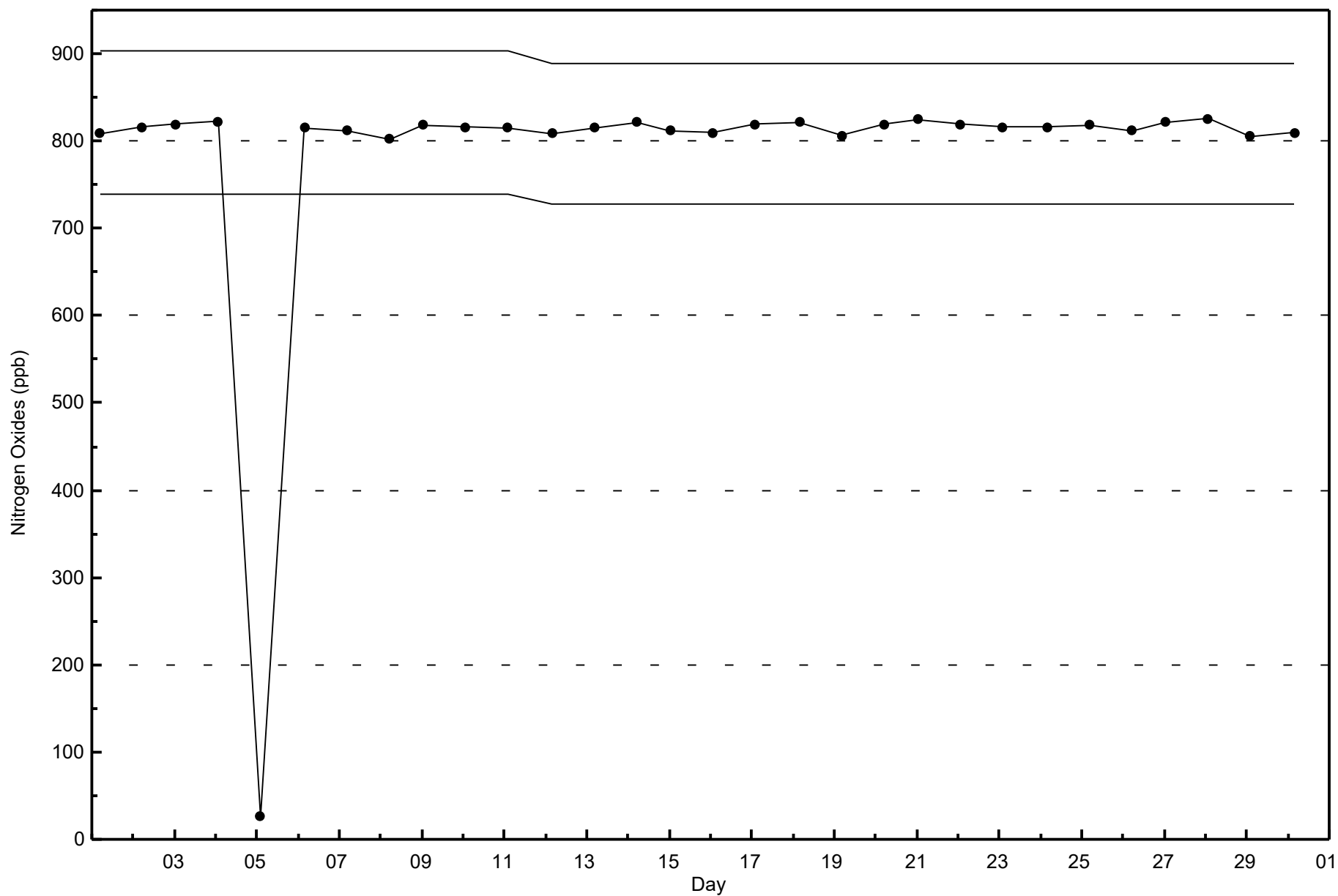
Nitrogen Oxides (NO_x) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

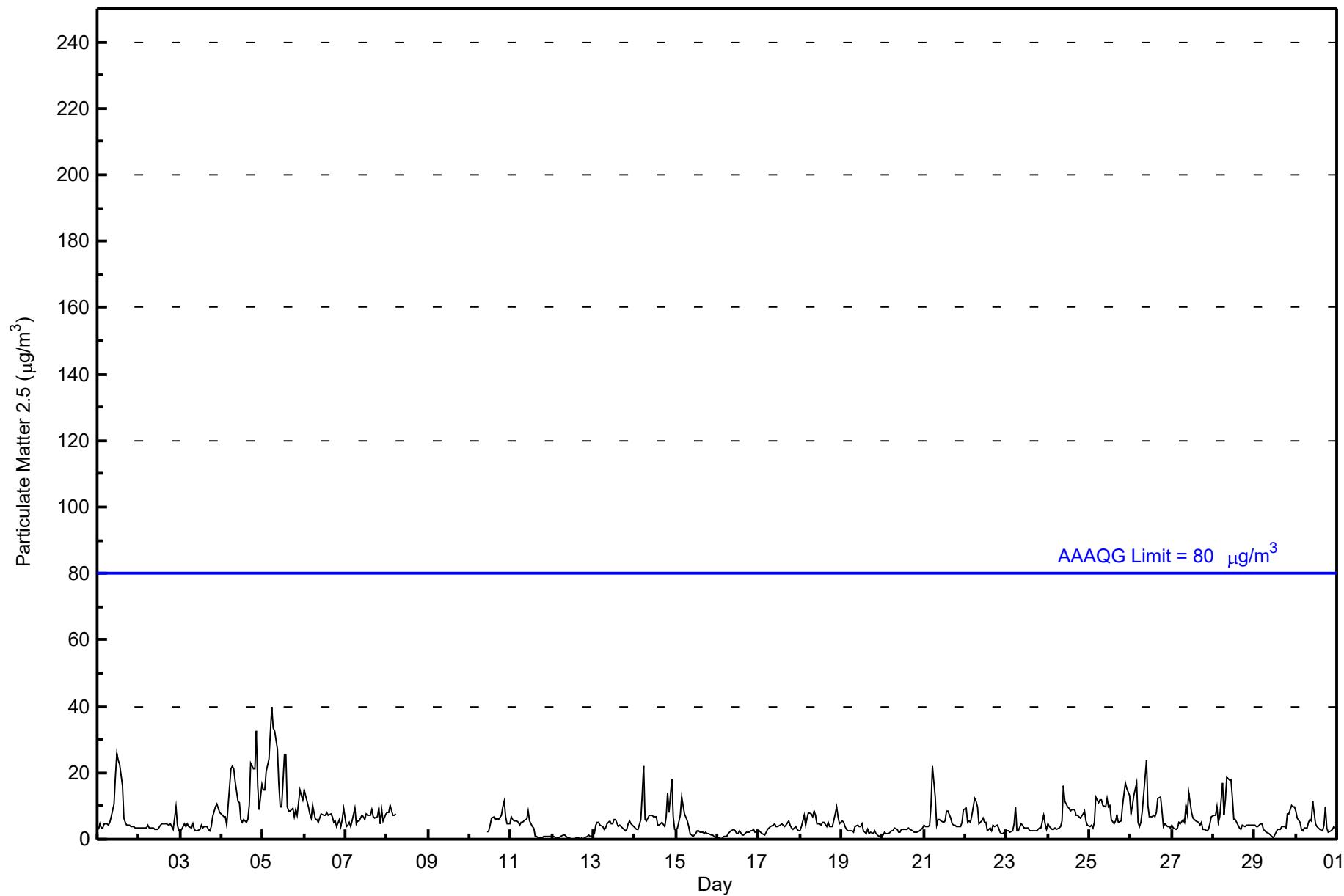
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 39.7 µg/m³ on Apr 5 06:00 Minimum Value: 0.1 µg/m³ on Apr 12 13:00 Maximum Diurnal Average: 8.8 µg/m³ at hour 6 Monthly Average: 5.89 µg/m³																				Hours in Service: 720 Hours of Data: 668 Hours of Missing Data: 52 Hours of Calibration: 1 Percent Operational Time: 92.9							
Maximum Daily Average: 17.7 µg/m³ on Apr 5 Minimum Daily Average: 0.6 µg/m³ on Apr 12 Minimum Diurnal Average: 4.6 µg/m³ at hour 16 Percentiles: P ₁ = 0.2 P ₁₀ = 1.7 Q ₁ = 3.0 Median = 4.4 Q ₃ = 7.1 P ₉₀ = 11.2 P ₉₉ = 25.7																											
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-Apr	2.9	4.5	3.4	3.3	4.8	4.9	4.4	5.0	6.6	10.5	18.9	26.0	23.8	22.5	16.2	6.4	4.9	4.2	4.0	4.0	3.8	3.8	3.3	3.2	8.1	26.0	
2-Apr	3.2	3.3	3.2	3.2	3.4	4.4	3.5	3.3	3.3	3.1	3.0	3.1	4.2	4.8	4.6	4.6	4.5	4.4	4.5	3.7	2.9	9.7	4.3	2.4	3.9	9.7	
3-Apr	2.6	2.9	4.7	4.0	4.7	3.7	3.4	4.6	3.0	2.6	2.5	3.1	4.4	3.5	3.7	3.7	2.9	2.6	3.7	6.7	9.9	10.6	9.3	7.9	4.6	10.6	
4-Apr	7.0	6.6	6.8	4.2	10.0	21.4	22.2	21.4	17.4	11.4	11.0	5.9	5.0	6.0	5.1	5.9	10.1	22.8	21.0	21.2	32.4	16.0	8.7	16.4	13.2	32.4	
5-Apr	14.9	14.6	20.4	24.1	32.4	39.7	33.4	32.8	27.3	16.4	9.6	9.9	25.5	25.3	9.9	8.6	8.7	9.5	7.0	9.1	7.1	14.7	13.0	11.7	17.7	39.7	
6-Apr	14.7	13.0	9.6	7.7	6.4	10.1	5.8	5.8	5.1	6.4	7.6	7.4	7.3	7.9	7.4	7.7	6.8	4.9	5.6	4.0	5.8	3.9	5.9	9.2	7.3	14.7	
7-Apr	3.8	4.1	5.1	3.9	5.3	9.5	4.7	5.3	5.5	7.2	6.8	6.0	7.5	7.3	7.0	9.1	6.9	6.3	6.8	9.2	4.5	8.9	5.5	7.5	6.4	9.5	
8-Apr	8.2	8.0	10.4	7.0	7.3	7.7	PF	PF	PF	PF	PF	PF	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	10.4	
9-Apr	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	--	--
10-Apr	M	M	M	M	M	M	M	M	M	M	C	2.1	2.4	4.3	6.2	6.7	6.0	6.3	5.8	7.1	10.0	11.5	6.9	4.7	4.8	--	11.5
11-Apr	6.6	5.8	5.4	5.5	5.0	4.3	5.1	5.2	5.8	6.1	8.5	5.4	4.0	3.3	0.8	0.7	0.5	0.6	0.6	1.0	1.0	0.6	0.9	1.0	3.5	8.5	
12-Apr	1.0	0.7	0.4	0.3	0.4	0.8	1.2	1.3	0.9	0.3	0.2	0.2	0.1	0.1	0.3	0.5	0.2	0.3	0.2	0.4	0.9	1.1	0.9	0.8	0.6	1.3	
13-Apr	1.5	4.2	5.2	5.2	4.4	4.0	3.1	3.4	4.7	5.4	4.5	4.7	6.0	5.8	4.0	4.2	4.0	3.5	2.6	2.8	4.5	5.3	4.7	3.8	4.2	6.0	
14-Apr	3.6	3.1	3.0	6.1	13.6	21.9	6.1	5.6	7.4	7.1	7.1	6.6	6.9	4.4	4.1	4.8	5.0	3.8	6.8	13.8	8.1	18.2	6.6	3.0	7.4	21.9	
15-Apr	2.9	3.4	7.3	12.7	10.0	7.7	5.6	4.0	1.7	1.3	0.7	1.7	2.6	2.4	2.3	2.0	1.8	2.0	1.7	1.8	1.3	1.1	0.9	0.5	3.3	12.7	
16-Apr	0.5	0.3	0.2	0.2	0.7	0.7	1.6	2.2	2.7	2.9	2.3	1.9	1.9	2.5	1.4	1.2	1.9	2.1	2.1	2.7	2.7	2.8	2.3	2.6	1.8	2.9	
17-Apr	2.5	2.2	1.9	1.5	2.0	2.8	3.4	3.9	4.2	4.6	4.0	3.9	4.1	4.5	4.4	3.8	4.2	5.7	4.0	3.2	3.0	4.0	3.2	2.7	3.5	5.7	
18-Apr	2.6	3.6	7.2	4.1	6.4	8.1	7.8	6.8	8.4	7.4	4.7	4.5	4.2	5.0	5.0	3.8	5.2	3.8	4.0	3.7	7.8	9.7	6.6	4.8	5.6	9.7	
19-Apr	5.3	4.9	3.8	2.9	2.6	2.6	2.5	2.3	3.9	4.4	3.7	3.7	4.5	2.5	1.6	3.1	1.6	2.1	1.6	2.5	1.7	1.4	1.1	1.2	2.8	5.3	
20-Apr	1.4	2.1	1.7	1.8	2.0	2.7	2.4	3.2	2.9	2.2	2.2	2.8	3.1	3.0	3.2	3.3	3.0	2.5	2.0	2.1	2.2	2.4	3.1	3.3	2.5	3.3	
21-Apr	4.0	3.9	3.6	4.3	10.2	22.1	12.8	4.2	5.9	6.0	5.5	5.0	5.4	8.5	8.6	6.4	4.7	4.3	4.1	3.8	3.8	3.7	5.1	8.9	6.5	22.1	
22-Apr	9.1	4.9	5.6	5.1	7.3	12.3	11.4	9.8	4.6	5.4	6.2	5.2	5.2	2.7	3.2	2.5	4.2	3.7	4.1	3.2	2.1	1.7	1.7	2.4	5.1	12.3	
23-Apr	2.4	2.5	2.1	2.5	4.6	9.5	2.6	2.3	4.8	4.0	3.3	3.6	3.2	2.7	2.7	2.7	2.5	2.7	2.9	3.6	3.4	7.3	4.6	3.2	3.6	9.5	
24-Apr	4.5	3.8	3.1	3.2	3.6	3.1	3.3	3.8	5.4	16.3	11.6	9.7	9.4	8.5	8.9	8.8	7.4	7.1	6.8	6.6	7.7	8.3	5.5	4.1	6.7	16.3	
25-Apr	3.7	4.4	3.5	5.0	12.9	11.1	12.1	11.8	10.2	9.9	12.3	9.8	10.2	6.1	4.8	5.5	7.4	5.0	5.5	10.4	13.7	17.1	15.2	13.3	9.2	17.1	
26-Apr	7.8	10.0	13.0	16.9	5.2	3.8	5.2	8.3	18.8	23.8	10.0	6.7	6.9	7.3	6.7	8.2	12.2	12.7	8.6	3.7	4.8	3.9	3.7	3.4	8.8	23.8	
27-Apr	4.3	3.5	3.0	3.2	5.1	4.6	5.9	5.1	10.3	7.5	14.0	8.1	6.3	6.1	5.3	4.9	4.4	4.9	3.1	3.0	2.7	2.9	4.8	6.8	5.4	14.0	
28-Apr	7.3	7.1	9.6	5.3	6.6	16.7	7.2	12.0	18.4	17.7	17.8	12.4	6.1	5.9	4.3	3.6	3.1	4.1	3.9	4.1	4.4	4.1	4.4	4.4	7.9	18.4	
29-Apr	4.2	3.7	3.9	4.5	4.6	3.0	2.6	2.1	1.8	1.2	0.8	0.4	2.3	2.8	2.8	3.0	3.9	3.6	3.6	7.6	7.7	10.0	9.9	9.7	4.2	10.0	
30-Apr	8.3	6.5	4.9	3.1	2.6	3.5	3.4	5.2	5.9	5.7	11.3	4.7	4.0	3.2	3.0	2.6	4.3	9.7	3.3	1.9	2.4	2.9	3.6	3.5	4.6	11.3	
5.0 4.9 5.4 5.4 6.6 8.8 6.8 6.7 7.3 7.3 6.9 5.9 6.4 6.1 4.9 4.6 4.7 5.2 4.7 5.3 5.9 6.5 5.1 5.2																								Diurnal Average			
14.9 14.6 20.4 24.1 32.4 39.7 33.4 32.8 27.3 23.8 18.9 26.0 25.5 25.3 16.2 9.1 12.2 22.8 21.0 21.2 32.4 18.2 15.2 16.4																								Diurnal Maximum			
C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																											



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Barge Landing - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	423	63.32	63.32
6 - 15	208	31.14	94.46
16 - 25	29	4.34	98.80
26 - 80	8	1.20	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 668

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Barge Landing - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	47	53	23	6	6	6	25	35	22	10	14	42	41	26	18	49	423
6 - 15	17	24	6	3	7	17	16	57	25	15	5	7	0	1	2	6	208
16 - 25	1	2	1	1	1	1	1	5	12	1	1	1	0	1	0	0	29
26 - 80	0	1	0	0	0	0	3	1	2	1	0	0	0	0	0	0	8
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	65	80	30	10	14	24	45	98	61	27	20	50	41	28	20	55	668

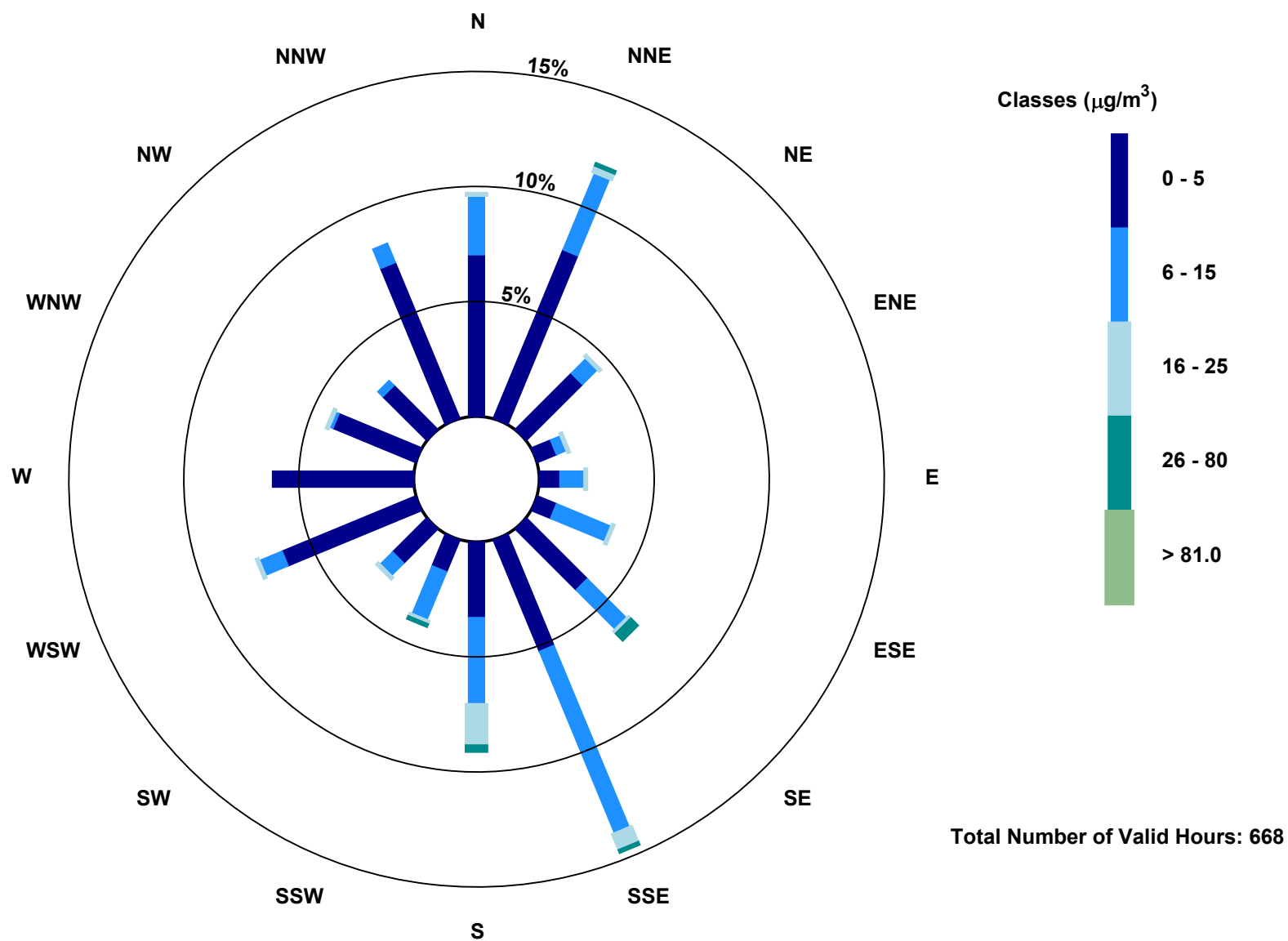
Total Number of Valid Hours: 668

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

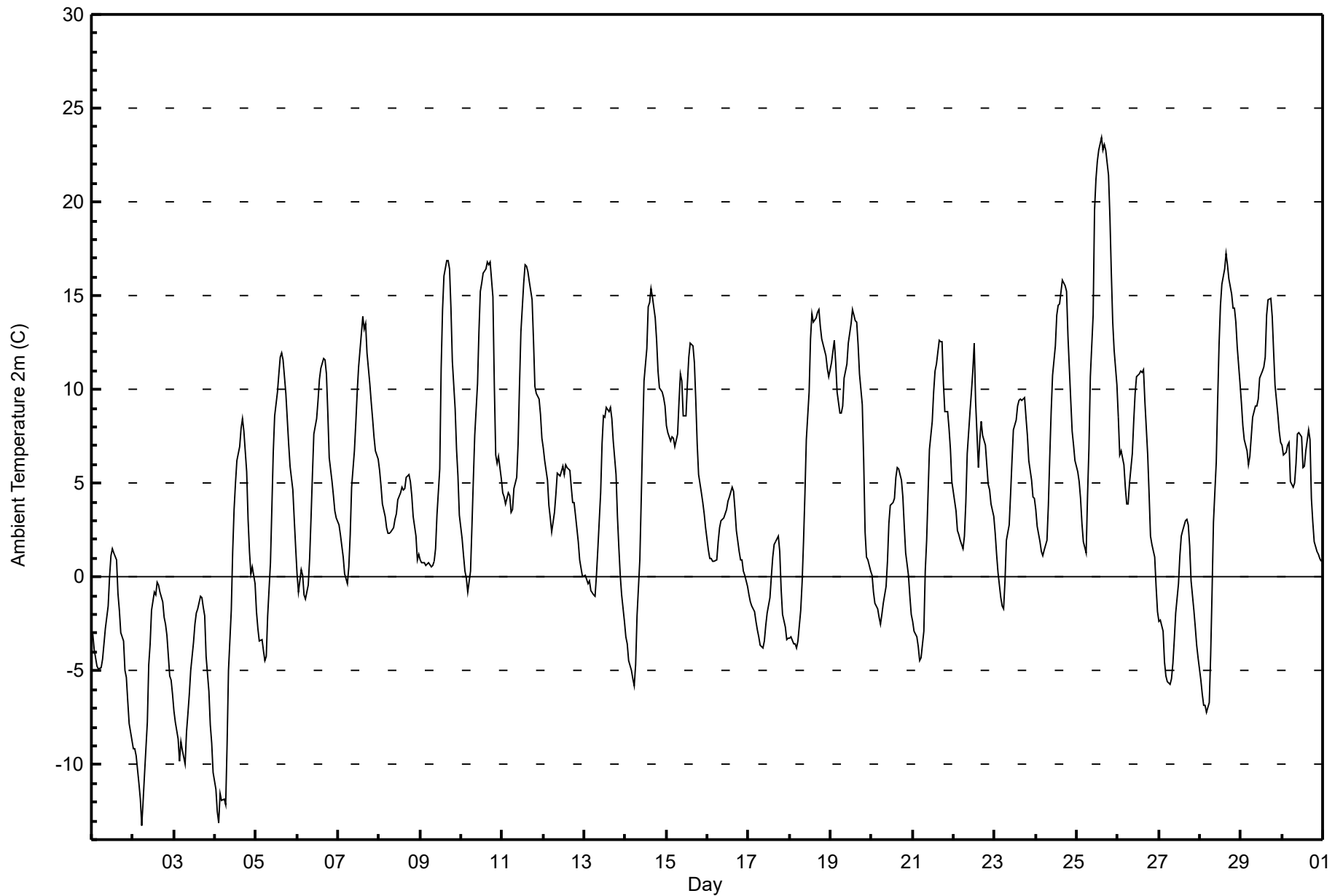
Barge Landing - April 2025

Maximum Value: 23.4 C on Apr 25 15:00																				Maximum Daily Average: 13.6 C on Apr 25										Hours in Service: 720	
Minimum Value: -13.2 C on Apr 2 06:00																				Minimum Daily Average: -5.9 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 10.0 C at hour 16																				Minimum Diurnal Average: -1.1 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 4.34 C																				Percentiles: P ₁ = -11.8 P ₁₀ = -3.9 Q ₁ = -0.2 Median = 4.3 Q ₃ = 9.1 P ₉₀ = 13.1 P ₉₉ = 20.9										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	-3.0	-3.9	-4.3	-4.8	-4.9	-4.8	-4.3	-3.5	-2.7	-1.5	0.0	1.1	1.5	1.3	0.9	-0.9	-1.8	-3.0	-3.4	-5.0	-5.4	-6.6	-7.8	-8.7	-3.1	1.5					
2-Apr	-9.1	-9.2	-9.5	-11.0	-11.9	-13.2	-11.9	-10.5	-7.7	-4.7	-3.6	-1.8	-0.8	-1.0	-0.3	-0.4	-0.8	-1.3	-2.1	-2.5	-3.1	-5.3	-5.5	-6.3	-5.6	-0.3					
3-Apr	-7.1	-7.8	-8.7	-9.8	-8.8	-9.2	-9.9	-8.3	-7.3	-6.2	-5.0	-3.5	-2.6	-1.9	-1.7	-1.0	-1.1	-1.6	-2.1	-4.3	-6.1	-7.9	-8.8	-10.4	-5.9	-1.0					
4-Apr	-11.3	-12.5	-13.1	-11.6	-11.9	-11.8	-12.1	-8.9	-5.0	-1.8	1.4	3.6	5.0	6.2	7.0	7.9	8.4	7.8	5.6	3.1	1.3	0.2	0.5	-0.4	-1.8	8.4					
5-Apr	-1.8	-2.7	-3.4	-3.3	-3.9	-4.5	-4.2	-2.1	0.8	3.6	6.6	8.6	9.9	10.9	11.7	12.0	11.6	9.8	8.5	7.1	5.9	4.6	3.1	1.6	3.8	12.0					
6-Apr	0.2	-0.8	0.4	0.1	-0.9	-1.2	-0.4	1.0	3.2	5.4	7.6	8.4	9.4	10.5	11.1	11.6	11.6	10.8	8.8	6.4	5.1	4.4	3.5	3.1	5.0	11.6					
7-Apr	2.8	2.3	1.7	1.0	0.2	-0.4	0.5	2.3	4.8	6.7	8.2	9.9	11.2	12.1	13.9	13.2	13.5	12.0	10.3	9.4	8.4	7.5	6.7	6.3	6.9	13.9					
8-Apr	5.7	4.9	3.9	3.2	2.6	2.4	2.3	2.4	2.6	3.1	3.4	4.1	4.5	4.8	4.6	4.8	5.3	5.5	5.1	4.4	3.2	2.2	0.9	1.2	3.6	5.7					
9-Apr	0.9	0.8	0.8	0.6	0.7	0.8	0.6	0.6	0.8	1.5	3.3	5.8	11.1	14.3	16.1	16.9	16.8	16.4	14.3	11.5	9.0	6.8	5.4	3.3	6.6	16.9					
10-Apr	2.1	1.1	0.3	0.0	-0.8	0.3	2.7	5.1	7.5	10.3	13.0	15.2	15.7	16.2	16.4	16.8	16.7	16.8	14.9	10.2	6.5	6.1	6.5	5.3	8.5	16.8					
11-Apr	4.5	4.3	3.9	4.5	4.4	3.5	3.6	4.7	5.3	7.1	10.2	13.1	15.7	16.6	16.6	16.3	15.8	14.8	12.6	10.2	9.8	9.5	8.7	7.4	9.3	16.6					
12-Apr	6.9	6.2	5.2	3.8	3.2	2.4	3.5	4.4	5.6	5.5	5.4	5.9	5.5	6.0	5.8	5.7	4.8	4.0	4.0	3.3	1.9	0.9	0.5	0.0	4.2	6.9					
13-Apr	0.1	-0.1	-0.4	-0.2	-0.7	-1.0	-1.1	0.1	1.5	4.5	7.1	8.6	8.5	9.1	8.8	9.1	8.5	7.3	5.5	3.2	1.6	0.1	-0.9	-2.4	3.2	9.1					
14-Apr	-3.2	-3.6	-4.4	-4.9	-5.4	-5.8	-4.7	-2.1	0.9	4.1	7.5	10.5	12.2	14.4	14.7	15.4	14.9	13.8	12.6	11.0	10.1	9.9	9.6	9.1	5.7	15.4					
15-Apr	8.0	7.7	7.3	7.5	7.4	6.9	7.6	9.4	10.8	10.4	8.6	8.6	10.3	11.7	12.5	12.3	11.5	9.4	7.1	5.4	4.5	4.0	3.4	2.6	8.1	12.5					
16-Apr	1.4	1.0	1.0	0.9	0.8	0.9	1.9	2.7	3.0	3.1	3.4	3.6	4.0	4.3	4.8	4.6	3.6	2.5	1.4	0.9	0.9	0.3	0.1	-0.5	2.1	4.8					
17-Apr	-1.0	-1.3	-1.6	-1.8	-2.4	-2.8	-3.2	-3.7	-3.8	-3.4	-2.6	-1.9	-1.1	0.0	1.1	1.8	1.9	2.2	1.4	-0.7	-2.0	-2.6	-3.3	-3.3	-1.4	2.2					
18-Apr	-3.3	-3.2	-3.6	-3.6	-3.8	-3.4	-1.8	-0.3	1.9	4.4	7.3	9.9	12.7	14.1	13.6	13.8	14.1	14.3	13.3	12.7	12.1	11.8	11.1	10.7	6.4	14.3					
19-Apr	11.4	12.0	12.6	11.5	9.8	8.8	8.8	9.1	10.6	11.4	12.5	13.0	13.5	14.3	13.7	13.6	12.4	10.8	9.2	6.2	2.4	1.1	0.9	0.3	9.6	14.3					
20-Apr	0.1	-0.8	-1.4	-1.7	-2.1	-2.5	-2.0	-1.4	-0.5	0.8	2.8	3.8	3.9	4.2	5.3	5.8	5.7	5.1	4.3	2.7	1.3	0.1	-1.1	-2.0	1.3	5.8					
21-Apr	-2.3	-2.9	-3.1	-3.7	-4.4	-4.3	-2.9	0.3	2.0	4.5	6.8	8.3	9.9	11.0	11.3	12.6	12.5	12.6	10.3	8.8	8.9	7.9	6.8	5.1	4.8	12.6					
22-Apr	4.0	3.5	2.5	2.2	2.0	1.5	2.2	4.0	6.6	8.8	9.9	11.0	12.5	9.4	5.8	7.3	8.3	7.6	7.1	6.0	5.0	4.6	3.9	3.3	5.8	12.5					
23-Apr	2.3	1.2	0.2	-1.1	-1.6	-1.7	-0.2	1.9	2.8	4.4	6.2	7.8	8.3	9.1	9.4	9.5	9.4	9.5	8.6	7.5	6.2	5.2	4.3	4.2	4.7	9.5					
24-Apr	3.6	2.7	1.9	1.4	1.1	1.5	2.0	3.8	6.4	8.8	10.7	12.3	14.0	14.5	14.5	15.8	15.7	15.5	15.3	12.8	9.4	7.8	7.0	6.2	8.5	15.8					
25-Apr	5.6	5.1	4.2	2.8	1.9	1.3	4.3	6.9	10.7	14.0	19.5	21.2	22.2	22.7	23.4	22.8	23.0	22.7	21.4	19.2	16.2	13.6	12.1	10.2	13.6	23.4					
26-Apr	8.5	6.5	6.7	6.0	4.8	3.9	3.9	5.0	6.6	8.3	9.8	10.7	10.8	11.0	10.9	11.1	9.4	6.5	4.4	2.2	1.7	1.1	-0.5	-1.8	6.1	11.1					
27-Apr	-2.4	-2.3	-2.9	-4.5	-5.3	-5.6	-5.7	-5.4	-4.6	-3.3	-1.9	-0.3	1.2	2.2	2.5	3.0	3.1	2.8	1.6	-0.2	-1.8	-2.6	-3.6	-4.3	-1.7	3.1					
28-Apr	-5.5	-6.2	-6.9	-6.8	-7.2	-6.7	-4.1	-0.8	3.0	6.2	9.4	12.4	14.5	15.6	16.4	17.2	16.7	15.9	15.1	14.3	14.4	13.6	12.3	10.3	6.8	17.2					
29-Apr	9.2	8.1	7.4	6.7	6.0	6.4	7.4	8.5	9.1	9.1	9.5	10.6	11.0	11.2	11.7	13.9	14.8	14.9	13.9	12.0	10.2	8.6	7.8	7.2	9.8	14.9					
30-Apr	7.0	6.5	6.7	7.0	7.2	5.1	4.8	5.0	6.0	7.6	7.7	7.5	5.8	5.9	6.7	7.9	7.3	4.2	2.9	1.9	1.4	1.2	1.0	0.8	5.2	7.9					
1.1 0.6 0.1 -0.3 -0.8 -1.1 -0.4 1.0 2.7 4.4 6.2 7.6 8.7 9.4 9.6 10.0 9.8 9.0 7.7 6.0 4.6 3.6 2.8 1.9																									Diurnal Average						
11.4 12.0 12.6 11.5 9.8 8.8 8.8 9.4 10.8 14.0 19.5 21.2 22.2 22.7 23.4 22.8 23.0 22.7 21.4 19.2 16.2 13.6 12.3 10.7																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Barge Landing - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	185	25.69	25.69
0 - 10	385	53.47	79.17
10 - 20	142	19.72	98.89
> 20	8	1.11	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) - %

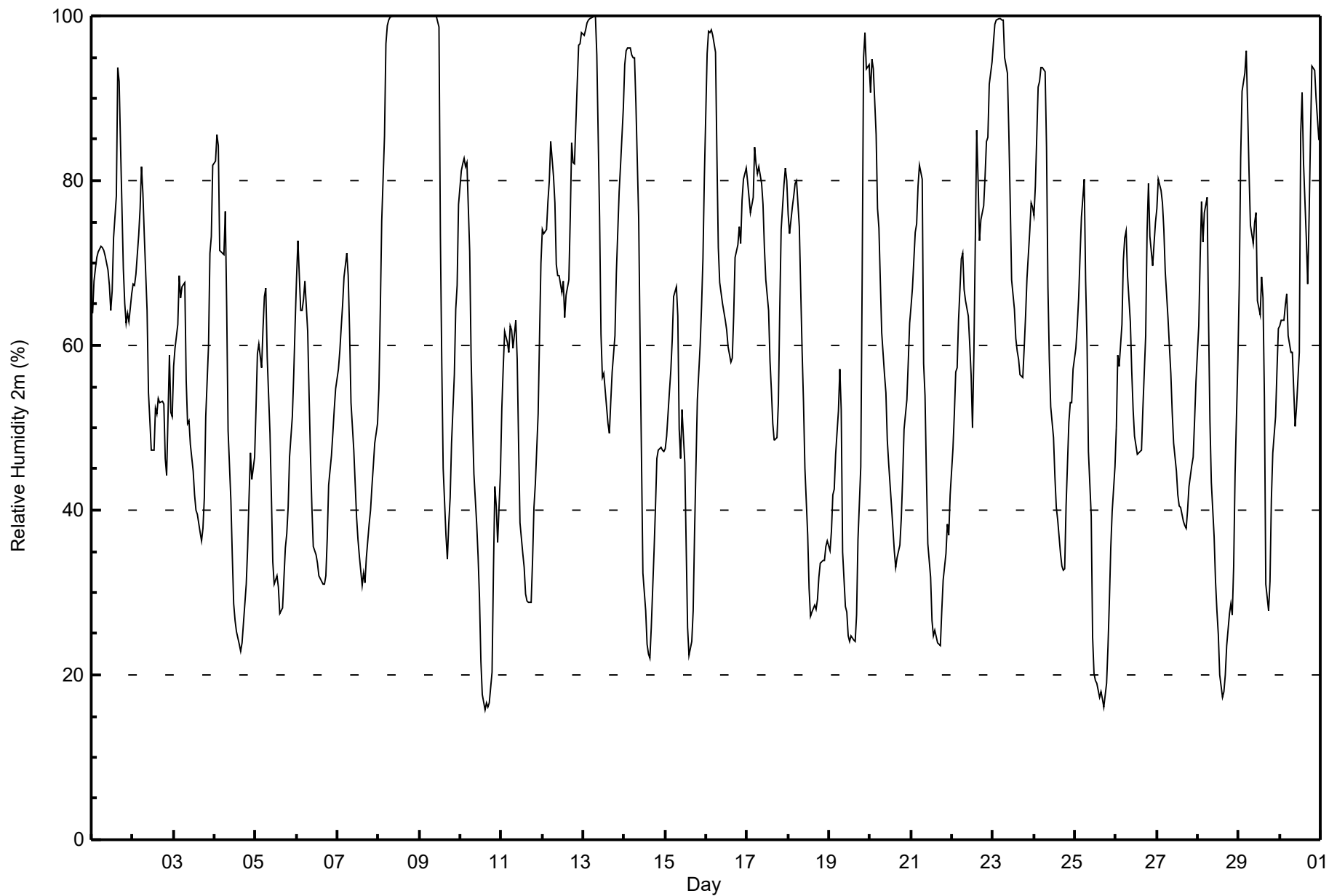
Barge Landing - April 2025

Maximum Value: 100.0 % on Apr 8 10:00																				Maximum Daily Average: 94.8 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.8 % on Apr 10 15:00																				Minimum Daily Average: 40.5 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 78.5 % at hour 6																				Minimum Diurnal Average: 42.3 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 59.82 %																				Percentiles: P ₁ = 17.4 P ₁₀ = 29.8 Q ₁ = 41.9 Median = 59.9 Q ₃ = 75.5 P ₉₀ = 93.8 P ₉₉ = 100.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	63.8	67.7	69.3	70.7	71.3	72.0	71.9	71.6	70.9	69.2	67.3	64.3	66.6	73.1	78.1	93.8	92.0	84.3	69.4	65.1	62.8	63.9	62.9	66.2	71.2	93.8
2-Apr	67.4	67.3	68.6	73.3	76.6	81.6	78.4	73.4	64.3	54.2	50.8	47.3	47.3	52.4	51.7	53.5	53.1	53.2	52.8	46.3	44.2	58.8	51.8	51.3	59.2	81.6
3-Apr	57.4	59.7	62.6	68.5	65.8	67.0	67.6	55.8	50.6	50.8	47.9	44.7	41.9	40.0	39.5	37.2	36.3	37.9	41.6	51.3	60.0	71.2	73.3	81.9	54.6	81.9
4-Apr	82.4	85.6	84.3	71.5	71.3	71.0	76.3	64.5	49.7	41.3	34.7	28.7	26.6	25.2	23.7	22.8	24.0	26.4	30.9	35.5	41.5	46.9	43.7	46.4	48.1	85.6
5-Apr	52.3	59.0	60.1	57.3	62.1	65.9	67.0	58.6	49.3	41.7	33.7	31.1	32.0	30.8	27.4	27.7	28.1	35.4	37.2	40.4	46.4	51.3	56.4	62.5	46.4	67.0
6-Apr	68.2	72.7	64.2	64.2	65.7	67.8	61.7	54.0	46.6	40.4	35.6	34.6	33.5	32.0	31.7	31.0	31.0	32.0	36.6	43.1	46.7	49.3	52.1	54.8	47.9	72.7
7-Apr	57.1	59.3	62.1	64.9	68.3	71.2	68.5	61.8	53.1	47.2	43.2	39.2	36.4	34.4	30.9	32.3	31.2	34.2	38.3	40.0	42.9	45.5	48.2	50.5	48.4	71.2
8-Apr	54.7	64.4	75.1	85.4	96.7	98.8	99.5	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.8	100.0
9-Apr	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.6	73.4	57.7	45.1	36.9	34.0	38.4	41.6	48.1	56.4	64.4	67.3	77.1	76.6	100.0
10-Apr	81.3	82.0	82.8	81.8	82.1	71.4	58.7	50.8	44.3	38.3	34.5	29.3	21.8	17.6	15.8	16.5	16.1	16.6	20.4	32.7	42.9	40.5	36.2	44.6	44.1	82.8
11-Apr	52.4	57.2	61.6	60.3	59.2	62.4	61.9	59.7	63.0	58.3	48.1	38.5	34.8	33.0	29.8	29.1	28.8	28.9	33.9	40.3	43.3	51.7	61.0	70.0	48.6	70.0
12-Apr	74.0	73.5	74.0	77.5	80.0	84.7	80.5	77.3	69.9	68.4	68.5	66.5	67.7	63.3	66.1	67.9	75.5	84.6	82.2	82.1	91.8	96.4	96.6	97.9	77.8	97.9
13-Apr	97.6	98.3	99.2	99.6	99.7	99.8	99.9	100.0	95.2	75.5	61.3	56.2	56.7	54.6	50.5	49.2	53.2	56.7	61.2	68.8	73.8	78.6	81.8	88.9	77.3	100.0
14-Apr	94.1	95.8	96.1	96.2	95.3	94.9	94.9	89.3	75.2	60.3	46.4	32.4	27.9	23.8	22.5	22.1	25.8	35.2	40.3	46.3	47.2	47.6	47.3	47.2	58.5	96.2
15-Apr	47.4	49.1	54.4	57.0	60.7	65.9	67.1	63.5	49.9	46.3	52.2	45.7	35.5	25.8	22.4	24.1	27.9	37.2	45.4	53.4	60.0	64.7	70.6	80.3	50.3	80.3
16-Apr	95.4	98.1	98.0	98.3	97.7	95.6	83.1	71.9	67.6	65.1	64.1	63.0	61.9	59.8	57.9	58.4	63.6	70.6	72.3	74.5	72.4	77.7	80.2	81.6	76.2	98.3
17-Apr	79.9	78.0	76.2	77.9	84.1	82.0	80.8	81.6	79.6	77.1	71.9	67.9	64.2	58.1	54.6	50.5	48.4	48.8	53.0	64.4	74.1	79.5	81.6	80.0	70.6	84.1
18-Apr	75.9	73.5	76.8	78.1	79.6	79.9	74.3	66.8	59.4	53.1	45.2	36.9	30.4	27.1	27.7	28.5	28.0	29.1	31.9	33.6	33.9	34.0	35.5	36.2	49.0	79.9
19-Apr	35.1	37.4	41.9	42.5	46.8	52.0	57.0	52.3	34.9	28.4	27.7	24.8	24.0	24.8	24.2	24.0	27.3	36.4	45.2	68.2	94.9	97.9	93.5	94.1	47.3	97.9
20-Apr	90.6	94.7	93.6	85.6	76.6	74.2	67.9	61.6	56.4	54.3	48.5	45.7	40.4	37.9	35.1	33.1	34.3	35.7	38.9	43.9	49.8	53.5	57.9	62.7	57.2	94.7
21-Apr	64.8	67.0	73.7	74.8	79.3	81.8	80.2	57.8	53.9	44.2	36.0	31.9	26.5	24.8	25.4	23.9	23.7	23.6	27.7	31.5	34.8	38.3	36.9	41.8	46.0	81.8
22-Apr	47.5	51.6	56.7	57.2	63.0	70.5	71.2	66.7	65.5	63.6	60.2	56.4	50.0	59.1	86.0	80.0	72.7	75.2	76.9	80.6	84.8	85.2	91.6	94.3	69.5	94.3
23-Apr	96.7	98.9	99.5	99.6	99.6	99.5	99.4	94.9	93.1	86.0	77.5	67.9	64.4	60.8	59.4	58.3	56.4	56.0	59.6	63.5	68.2	73.9	77.3	76.8	78.6	99.6
24-Apr	75.7	79.3	91.3	92.1	93.7	93.8	93.3	84.0	67.2	58.3	52.5	48.9	44.0	40.3	38.9	34.7	33.2	32.8	32.8	40.5	50.6	53.1	53.0	57.1	60.0	93.8
25-Apr	59.6	62.3	65.7	70.8	75.6	80.2	67.7	60.3	47.1	39.3	24.5	20.2	19.3	18.9	17.4	18.0	17.1	16.1	19.0	23.4	29.0	35.4	39.9	45.2	40.5	80.2
26-Apr	50.1	58.8	57.5	62.5	70.3	73.0	73.9	68.6	62.9	57.0	52.2	48.9	46.8	46.9	47.1	47.3	52.3	61.1	73.9	79.7	73.2	69.7	72.3	74.8	61.7	79.7
27-Apr	76.7	80.1	78.9	77.4	74.1	69.0	63.3	59.8	56.7	51.9	48.2	44.7	41.9	40.4	40.4	38.7	38.1	37.9	40.0	42.9	45.4	46.4	50.8	55.5	54.1	80.1
28-Apr	62.4	70.7	77.5	72.5	76.1	78.0	63.3	50.8	43.5	36.8	31.3	27.7	24.9	20.0	17.3	18.0	20.0	23.6	27.4	28.6	27.3	33.3	44.4	58.1	43.1	78.0
29-Apr	67.3	82.7	90.9	93.0	95.8	88.7	80.9	74.7	72.4	74.9	76.1	65.4	63.8	68.4	65.8	53.7	30.9	27.8	31.3	41.4	46.9	51.4	56.9	62.0	65.1	95.8
30-Apr	62.3	63.0	63.0	64.8	66.2	61.2	59.1	59.1	54.6	50.2	52.6	59.2	85.8	90.6	82.2	73.0	67.4	75.6	85.4	93.8	93.3	89.9	87.5	84.9	71.9	93.8
69.7 72.9 75.2 75.9 77.8 78.5 75.6 69.7 63.2 57.7 53.1 48.9 46.3 44.7 43.8 42.8 42.3 45.0 48.2 53.5 58.0 61.7 63.6 67.5																										Diurnal Average
100.0 100.0																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

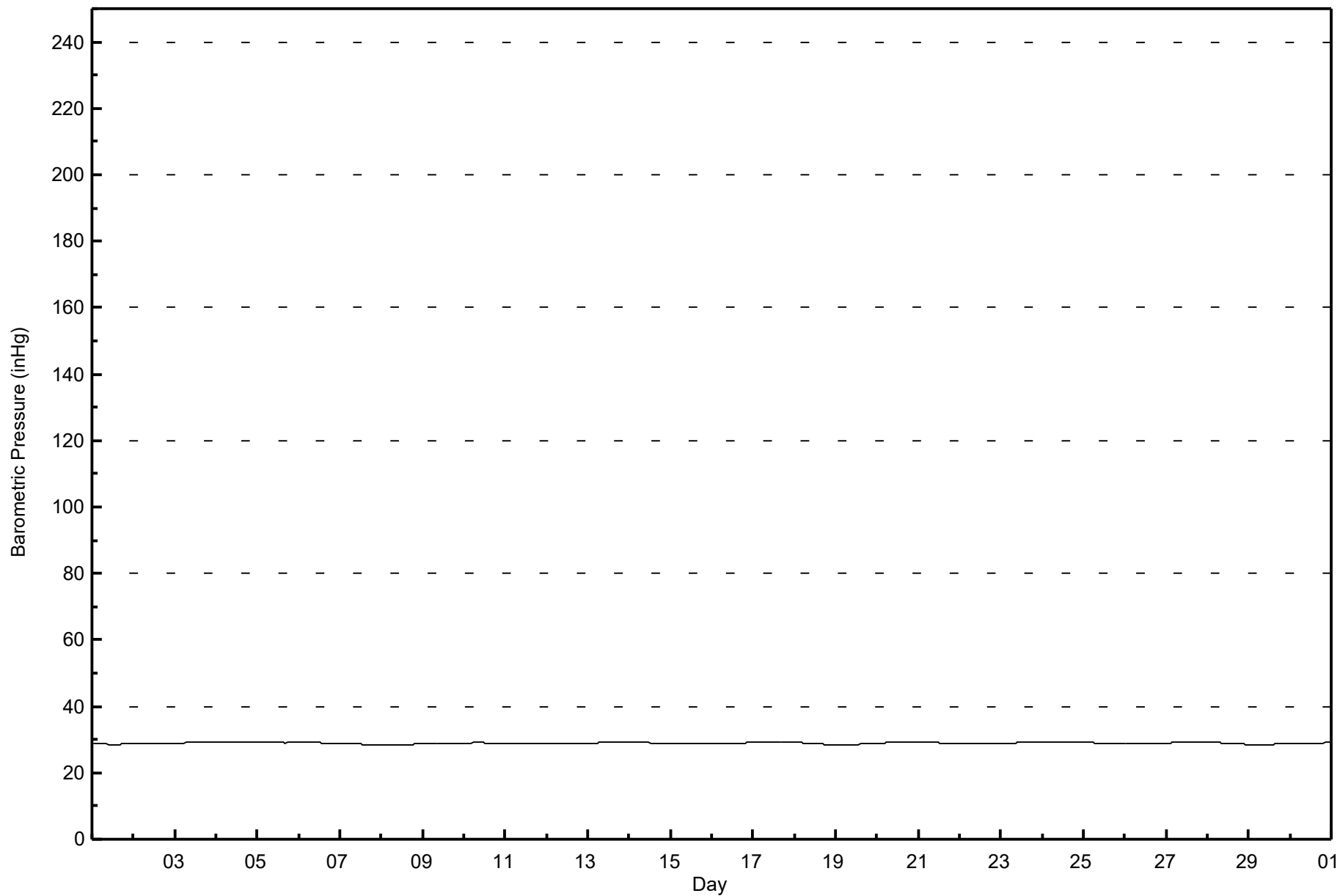
Barge Landing - April 2025

Maximum Value: 29.3 inHg on Apr 4 07:00																				Maximum Daily Average: 29.2 inHg on Apr 4				Hours in Service: 720			
Minimum Value: 28.4 inHg on Apr 19 01:00																				Minimum Daily Average: 28.6 inHg on Apr 8				Hours of Data: 720			
Maximum Diurnal Average: 28.9 inHg at hour 24																				Minimum Diurnal Average: 28.9 inHg at hour 16				Hours of Missing Data: 0			
Monthly Average: 28.89 inHg																				Percentiles: P ₁ = 28.5 P ₁₀ = 28.6 Q ₁ = 28.7 Median = 28.9 Q ₃ = 29.1 P ₉₀ = 29.1 P ₉₉ = 29.3				Hours of Calibration: 0			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7	
2-Apr	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	28.9	28.9	28.9	28.8	28.9	
3-Apr	28.9	28.9	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	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2	
4-Apr	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.2	29.3	
5-Apr	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	29.1	29.1	29.1	29.1	29.1	29.1	
6-Apr	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1	
7-Apr	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	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.7	28.8	
8-Apr	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	28.6	28.6	28.6	28.7	28.6	28.7	
9-Apr	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	28.8	29.0	
10-Apr	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	28.9	28.9	28.9	28.9	28.8	28.8	29.0	29.0	
11-Apr	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	
12-Apr	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	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	28.8	29.0	
13-Apr	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	29.2	29.2	29.2	29.2	29.1	29.2	
14-Apr	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	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	29.0	29.2	
15-Apr	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.7	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	28.7	28.8	
16-Apr	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	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	28.9	29.0	
17-Apr	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	29.2	29.2	29.2	29.2	29.2	29.1	29.2	29.2	
18-Apr	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.8	28.8	28.8	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.5	28.4	28.4	28.4	28.8	29.1	
19-Apr	28.4	28.4	28.4	28.4	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.8	28.8	28.8	28.9	28.9	28.6	28.9	
20-Apr	28.9	28.9	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	29.1	29.1	29.1	29.1	29.1	
21-Apr	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	29.0	29.1	
22-Apr	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	28.9	29.0	
23-Apr	28.9	28.9	28.9	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	29.0	29.1	
24-Apr	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	
25-Apr	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.8	29.1	
26-Apr	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	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	29.0	29.0	29.0	28.8	29.0	
27-Apr	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	
28-Apr	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	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.9	29.1	
29-Apr	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	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.7	
30-Apr	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	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1	29.1	29.1	28.9	29.1	
28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9 28.9																										Diurnal Average	
29.2 29.2 29.2 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.3 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2 29.2																										Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - April 2025

Maximum Speed: 22 km/h on Apr 15 20:00														Maximum Daily Speed Average: 11.6 km/h on Apr 15														Hours in Service: 720	
Minimum Speed Value: 0 km/h on Apr 29 22:00														Minimum Daily Speed Average: 0.9 km/h on Apr 24														Hours of Data: 706	
Maximum Diurnal Speed Average: 2.6 km/h at hour 10														Minimum Diurnal Speed Average: 0.2 km/h at hour 7														Hours of Missing Data: 14	
Monthly Average Velocity: 0.5 km/h 242.3 deg														Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 6 Q ₃ = 9 P ₉₀ = 12 P ₉₉ = 19														Percent Operational Time: 98.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	SE8	SE5	SE6	SE8	SE7	SE5	SE5	SSE5	SSE6	SSE8	S7	S7	S6	S4	NW3	NW8	NW9	NNW8	NNW8	NW9	NW7	NW7	WNW8	W7	SSW1.0	NW9			
2-Apr	W6	W8	WSW7	WSW4	WSW4	SSE2	SW5	WSW7	WSW7	NNW6	WSW7	NNW5	N8	NNE9	NE8	NE9	NNE8	NNE6	NNW4	NNW5	N8	N4	NNW9	NNW9	NW3.4	NNW9			
3-Apr	NNW9	NNW6	NW5	NW4	NNW4	W1	NNW5	NNW9	NNW11	NNW13	NNW12	NNW9	NNW9	NNW9	NNW9	NNW10	NNW10	NNW8	N5	NNW2	E3	SE2	ESE2	ESE3	NNW5.9	NNW13			
4-Apr	SE4	SSE2	SSE3	SW4	SSW4	SSE3	SE4	SSE4	S5	SSW7	SSW8	SSE7	SSE7	SSE7	S6	SSE6	S7	S7	SSE7	SSE5	S5	S6	SSE7	SSE4	S5.0	SSW8			
5-Apr	SSW3	SE3	SE5	SSE4	ESE4	ESE5	SE3	SE3	SSW4	WSW5	NNW2	NNE5	NE5	NNE7	NNE8	NNE8	NNE8	N6	N5	N6	N6	N5	NNW4	NNW3	NNE2.1	NNE8			
6-Apr	N3	NE3	E5	E2	ENE1	E5	ESE6	SE9	SSE10	SSE8	SSE11	S12	SE12	SSE12	S11	S12	SSE13	SE12	SE11	SE8	SE9	SSE9	SSE7	SSE7	SSE7.5	SSE13			
7-Apr	SSE7	SE7	SE7	SSE6	SSE5	SE7	SE8	SE8	SSE9	SSE8	SSE8	SE8	SSE8	SSE9	S13	SSE8	SE8	SE7	ESE7	SE8	SE6	SE4	SE1	S2	SSE6.9	S13			
8-Apr	E3	ESE4	NNW1	N2	SE2	SSE2	SE4	S4	SSE3	SE3	ESE2	ESE3	SW3	SSW3	SW4	S4	SSE2	ESE1	SE2	NNE1	UO	ESE1	SE1	WSW4	SSE1.5	S4			
9-Apr	SE2	S3	SSE3	SE4	SSE4	SSW4	SSW4	SW2	W3	SW2	SSE4	SE6	SE6	SSW6	SW3	NNW5	N5	ENE5	E5	ENE5	E4	ESE3	SSE2	ESE1	SE1.9	SE6			
10-Apr	ESE2	SSE4	SE5	SE5	ESE5	SSE4	SSW6	SW7	SW7	SW7	SW7	SW8	WSW13	WSW11	WSW10	SW9	WSW10	SW4	ESE3	E5	E5	E5	SE5	NNW1	SSW3.8	WSW13			
11-Apr	NNW4	NNW4	NW4	NNW6	NNW7	NW5	N4	WSW3	NNE1	WSW4	SW4	SW8	WSW8	WSW8	W14	W14	W15	W14	W9	WSW5	WSW8	WSW10	WSW12	WSW9	W6.2	W15			
12-Apr	WSW10	WSW11	WSW8	WSW6	WSW5	SW4	WSW5	WSW7	W8	W9	W9	W9	NNW8	NNW8	NW8	NW9	NW8	NW5	NW5	NNW3	ENE3	ENE2	E2	ENE3	W4.8	WSW11			
13-Apr	SE3	ESE4	ESE4	ESE3	SE3	SSW2	NW1	NW1	WSW2	WSW3	NE2	NE3	NNE6	NNE6	N7	NNE10	NNE9	NE8	NE7	NE6	NE6	N4	NNW4	NNW2	NE3.0	NNE10			
14-Apr	NNW2	N2	UO	UO	ESE1	ESE2	SE4	SE4	S6	SSW7	S6	SSE8	SSE8	SE11	SSE12	SSE10	S9	SW7	SSE3	ESE5	SE7	SE7	SE9	SE10	SSE5.4	SSE12			
15-Apr	SE10	SE8	SSE7	SSE7	S5	SSE6	SSE5	SSW9	WSW19	WSW21	W20	WSW20	WSW19	W21	WSW19	W17	W16	NNW16	W19	W22	W20	W18	W16	W14	WSW11.6	W22			
16-Apr	WSW10	WSW8	W7	WNW3	NW3	NW5	NNW10	NW13	NW16	NNW17	NNW15	NNW15	NNW15	NNW16	NNW14	NNW13	N11	N9	N11	N6	N6	NNE5	N6	N9	NNW8.8	NNW17			
17-Apr	N11	N12	N12	N11	NNE8	NNE9	NNE8	NNE8	NNE10	NNE11	NNE11	NNE11	NNE11	NNE11	NE9	NE7	NNE7	NE6	ENE5	E5	E5	E4	SE3	SE6	NNE7.2	N12			
18-Apr	SE6	SSE5	SSE6	SSE7	SE8	SSE8	SSE9	SSE12	S11	SSE12	SSE14	S15	S16	S16	S15	S13	S13	SSE13	SSE12	SSE14	SSE15	SSE15	SSE11	SSE7	SSE11.1	S16			
19-Apr	SSW9	SW11	WSW12	NNW11	WNW6	WSW5	W9	NNW13	W14	NNW15	W13	NNW14	NNW12	NNW12	NNW13	W16	W15	W13	NNW10	N9	NNE9	NE7	NNE10	NNE8	NNW8.6	W16			
20-Apr	UO	UO	UO	UO	UO	UO	UO	NNE5	N5	NNE4	NE5	E6	NE5	NE5	N4	NE5	ENE4	ENE4	NE5	NE6	NE6	NE6	NE4	W1	---	NE6			
21-Apr	E1	UO	N2	N1	UO	UO	E3	ESE3	WSW4	WSW4	WSW5	WSW7	WSW7	SW6	SSW6	SSE6	SSE8	SSE7	SE6	SSW4	S6	SE6	SE8	SSE5	S3.1	SE8			
22-Apr	S2	S1	SSE4	SSE2	SSE1	SE1	SE1	SSW2	S7	SSE11	SSE13	S13	SSE14	WNW3	SW6	S8	S12	S4	S6	S3	NW7	WNW1	SW2	SSE2	S4.4	SSE14			
23-Apr	WNW1	NNW2	NW2	WSW1	SW2	UO	WSW2	NNW4	NNW7	NNE7	NNE8	NNE9	NNE10	NNE10	NNE10	NNE10	NNE7	NNE6	N6	NNW5	N4	NNW3	NNW4	NNW5	N4.8	NNE10			
24-Apr	NNE2	NW2	NNW2	NNW1	NW2	NNW2	NNW1	WSW2	WSW4	WSW3	WNW4	N5	NNE4	NNE4	N3	SE1	ESE3	E2	ESE5	E4	E4	ESE6	SE7	SE6	ENE0.9	SE7			
25-Apr	SE6	SE6	SE5	SE3	ESE1	E2	SSW1	SSW3	SSW4	WSW4	S11	S15	SSW14	SSW14	SSW14	SSW12	SW14	SW13	SSW10	SSW7	S5	SSE5	SSE5	ESE5	SSW6.5	S15			
26-Apr	ESE2	SE4	S3	NNE4	NNE7	NNE7	NNE5	NNE6	N6	NNE8	NNE10	NNE10	NNE10	NNE12	NNE11	NE12	NNE11	N12	N11	N10	N7	N6	N6	N6	NNE7.1	N12			
27-Apr	N6	NNE6	N9	N12	NNE9	NNE9	NNE9	NNE9	NNE8	NNE7	NE8	NE8	ENE8	NE8	NE8	NE8	NE8	NE8	NE8	NE8	NE6	NE6	ENE5	E3	NNE7.1	N12			
28-Apr	SE2	E2	E3	E2	ENE1	ESE3	ESE3	S5	S8	S8	S8	SSE8	SSE10	SSW11	SSW12	SSW12	SSW12	S9	SSE7	SSW7	SSW11	SW11	SW12	SSE5	S6.1	SSW12			
29-Apr	SSW5	S5	SE5	SSE3	SSW4	WSW8	WSW7	WSW10	WSW11	WSW10	W7	NW9	NNW7	NNW7	S0	WSW5	N12	N10	N6	NNE4	N4	ENE0	SE2	S3	W2.5	N12			
30-Apr	SE4	SSE3	WSW2	WSW2	WNW3	N7	N9	NNE7	N6	N5	NNE6	N5	NNE5	NNW2	WSW2	NNW4	N10	N12	N11	N9	N9	N9	N8	N8	N5.2	N12			
S1.1 S1.0 S0.9 SE0.3 SE0.3 SE0.8 SSE0.2 SW1.2WSW2.5 W2.6 SW1.7 SW1.4 SW1.0 W1.4WSW2.0 W1.7NNW1.2NNW1.3NNE1.0NNE1.0 NE0.8 ESE0.8 S0.5 SE0.5																										Diurnal Average			
N11 N12 N12 N12 NNE9 NNE9 NNW10 NW13WSW19WSW21 W20WSW20WSW19 W21WSW19 W17 W16NNW16 W19 W22 W20 W18 W16 W14																										Diurnal Maximum			
UO - Unstable Operation																													
All monthly, daily, and diurnal averages have been calculated using vector methods																													



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

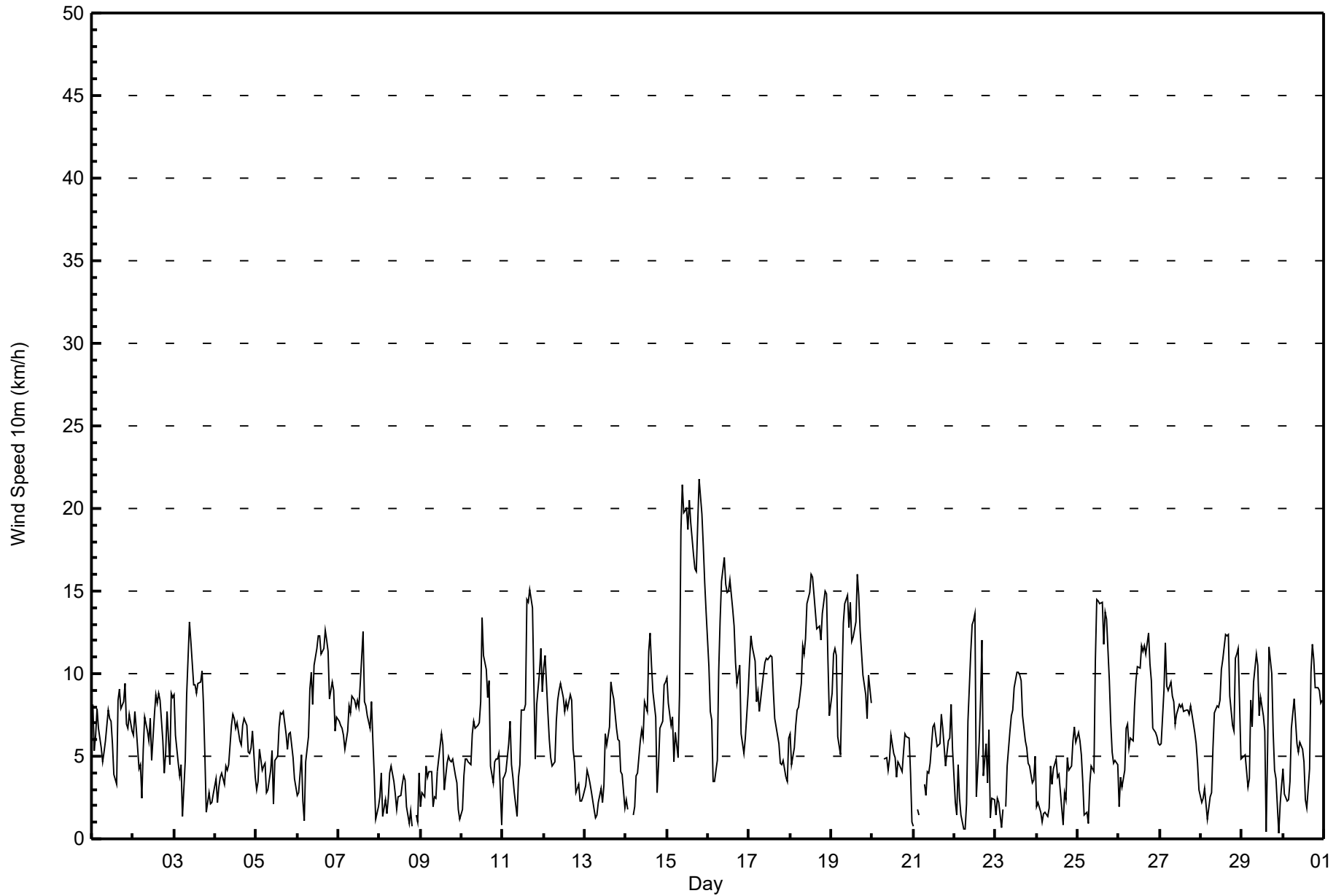
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 19:00																	Hours in Service: 720 Hours of Data: 706 Hours of Missing Data: 14 Hours of Calibration: 0 Percent Operational Time: 98.1								
Minimum Value: 0 km/h on Apr 14 01:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 2 Q ₃ = 3 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	1	2	2	2	1	1	2	2	2	3	3	2	2	3	3	4	3	3	3	3	3	3	2	4
2-Apr	2	3	2	1	1	1	2	3	2	2	2	3	3	3	2	3	2	2	2	2	3	1	3	3	3
3-Apr	3	2	2	1	2	2	2	3	4	5	3	3	3	3	3	3	3	3	2	1	2	2	1	1	5
4-Apr	1	1	1	2	1	1	1	2	2	2	3	3	3	3	3	2	3	3	2	1	1	1	2	2	3
5-Apr	1	1	1	1	1	1	1	2	2	2	1	1	1	2	2	2	2	2	2	2	2	1	1	1	2
6-Apr	1	1	2	1	1	2	2	3	3	4	4	5	4	5	4	5	4	4	4	3	3	3	2	3	5
7-Apr	2	2	2	2	1	2	3	2	3	3	3	3	3	4	5	3	3	3	2	2	2	2	2	1	5
8-Apr	1	1	1	1	2	1	2	1	2	2	1	1	1	1	1	2	1	1	1	1	UO	1	1	1	2
9-Apr	1	1	1	1	1	2	2	1	1	1	2	2	2	3	2	3	3	2	1	2	1	1	1	2	3
10-Apr	2	2	1	1	1	2	3	3	2	2	3	4	5	4	4	3	4	3	1	1	1	1	1	1	5
11-Apr	1	2	1	1	2	2	1	2	2	3	2	2	3	4	5	5	6	5	4	2	2	3	4	3	6
12-Apr	3	3	2	2	1	1	1	2	3	4	4	3	3	3	3	4	4	2	2	1	1	2	2	1	4
13-Apr	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	2	2	2	2	1	1	1	3
14-Apr	0	1	UO	UO	1	2	1	2	2	3	2	3	3	4	5	4	4	3	1	1	1	2	2	2	5
15-Apr	2	2	2	2	2	2	2	3	6	8	8	7	6	7	7	7	6	7	8	8	7	6	5	5	8
16-Apr	3	2	3	1	1	2	4	5	5	6	6	5	5	6	4	4	4	3	3	2	2	2	2	3	6
17-Apr	3	4	4	4	3	3	2	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1	2	1	4
18-Apr	1	1	1	2	2	2	4	4	4	5	6	6	6	6	6	5	5	5	4	5	5	5	4	3	6
19-Apr	3	4	4	5	3	2	4	5	5	6	5	6	5	5	6	6	5	5	5	4	3	3	3	3	6
20-Apr	UO	UO	UO	UO	UO	UO	UO	3	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	1	3
21-Apr	1	UO	1	1	UO	UO	1	2	1	2	2	3	3	4	4	3	4	3	2	2	3	2	2	1	4
22-Apr	2	2	1	2	1	1	1	1	4	4	5	5	5	5	5	3	5	3	3	1	6	2	1	2	6
23-Apr	1	1	1	1	1	UO	1	1	2	3	2	3	3	3	3	3	2	2	2	1	1	1	1	1	3
24-Apr	1	1	2	1	1	1	1	2	1	2	2	2	2	2	2	2	2	1	2	1	1	1	1	1	2
25-Apr	1	1	2	1	1	1	1	1	2	2	6	6	6	5	5	5	5	5	4	2	1	1	1	1	6
26-Apr	1	1	2	2	3	2	2	2	2	3	3	3	3	4	4	4	4	4	4	3	2	2	2	2	4
27-Apr	1	2	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	2	3	3	2	2	2	1	3
28-Apr	1	1	1	1	1	1	2	2	3	3	3	3	5	5	5	5	5	3	3	4	5	5	5	2	5
29-Apr	2	1	1	1	1	3	3	3	3	3	3	3	3	4	2	2	4	3	2	2	1	1	2	1	4
30-Apr	1	1	2	1	2	3	3	2	2	2	2	2	2	2	1	2	4	4	3	3	3	3	2	3	4
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Barge Landing - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	298	42.21	42.21
6 - 11	318	45.04	87.25
12 - 19	84	11.90	99.15
20 - 28	6	0.85	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Barge Landing - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	20	14	9	12	23	29	37	33	17	14	12	25	2	8	14	29	298
6 - 11	38	52	24	1	1	3	35	43	21	13	12	26	11	7	10	21	318
12 - 19	6	1	1	0	0	0	2	13	12	7	3	6	15	7	2	9	84
20 - 28	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0	0	6
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	64	67	34	13	24	32	74	89	50	34	27	59	32	22	26	59	706

Total Number of Valid Hours: 706

Total Number of Hours: 720



Wind Speed 10m (WS10) - km/h

Barge Landing





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Barge Landing - April 2025

Direction of Maximum Speed: 268 deg on Apr 15 20:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 252.4 deg on Apr 15																				Hours of Data:		706			
Direction of Minimum Speed: 75 deg on Apr 29 22:00										Direction of Minimum Daily Speed Average: 0.9 deg on Apr 24										Hours of Missing Data:		14			
Monthly Average Direction: 242.3 deg																				Percent Operational Time:		98.1			
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	135	132	128	129	136	129	134	147	159	164	169	172	183	174	304	315	309	331	334	323	326	317	292	270	200.5
2-Apr	260	270	254	250	243	147	235	242	248	295	251	295	352	27	35	38	25	19	346	336	352	11	345	348	322.3
3-Apr	335	332	316	324	329	263	333	331	342	340	339	343	336	334	337	332	342	341	352	343	92	125	118	106	339.1
4-Apr	146	150	165	214	197	168	128	168	187	206	198	168	158	166	190	160	171	172	167	162	178	169	154	158	171.9
5-Apr	207	139	137	161	121	120	130	134	207	247	332	12	38	19	12	15	18	7	355	352	356	355	345	340	21.8
6-Apr	2	51	94	87	58	101	116	143	147	156	159	173	145	156	171	171	155	136	135	145	144	148	150	152	146.3
7-Apr	153	141	143	148	153	131	142	146	156	149	149	146	159	160	175	159	138	126	119	131	137	137	132	176	147.1
8-Apr	96	113	344	357	143	166	137	170	156	134	104	118	219	209	234	179	166	107	126	21	UO	110	137	248	157.6
9-Apr	129	173	147	136	168	193	200	214	265	216	167	133	139	192	230	339	9	73	100	73	87	117	168	117	144.2
10-Apr	123	154	137	125	115	162	209	225	229	224	214	231	244	247	243	233	238	224	119	92	86	99	135	328	207.0
11-Apr	336	335	319	340	342	320	349	248	18	249	223	229	238	239	262	262	261	266	262	244	248	254	252	243	265.1
12-Apr	243	257	254	241	239	223	243	238	262	277	265	278	286	298	312	309	318	325	314	342	66	74	82	70	276.4
13-Apr	126	123	114	103	129	201	313	315	250	252	51	56	26	20	4	14	31	37	46	44	34	7	347	342	34.7
14-Apr	344	352	UO	UO	114	122	126	136	188	201	170	164	161	146	153	165	175	219	154	118	126	133	132	133	154.7
15-Apr	133	144	162	148	173	153	158	198	244	256	259	258	250	260	251	268	278	297	280	268	264	259	260	263	252.4
16-Apr	257	254	262	298	311	305	327	326	326	331	336	337	333	333	340	337	2	7	6	2	355	23	10	9	333.8
17-Apr	6	7	359	352	15	22	20	25	15	17	16	21	28	19	38	41	25	42	63	86	94	97	138	133	25.8
18-Apr	139	163	155	150	142	148	154	163	170	160	167	174	170	176	175	169	172	157	154	157	157	161	159	147	162.1
19-Apr	201	231	256	290	292	252	272	282	278	282	278	283	289	301	292	277	274	277	288	356	17	35	14	26	287.8
20-Apr	UO	UO	UO	UO	UO	UO	UO	14	11	23	52	85	44	35	11	34	66	59	50	48	49	53	43	281	--
21-Apr	99	UO	357	7	UO	UO	96	113	254	255	252	254	240	229	195	160	159	162	142	193	173	145	136	148	182.1
22-Apr	170	180	153	155	156	137	129	211	180	167	161	173	164	282	230	188	183	186	177	172	309	290	236	154	179.9
23-Apr	291	336	304	237	229	UO	249	339	346	18	19	26	21	29	24	16	26	27	356	340	351	338	340	342	6.3
24-Apr	18	321	338	345	313	344	330	252	242	245	295	9	29	14	2	131	106	101	113	89	88	121	138	133	71.5
25-Apr	139	132	134	141	121	90	207	204	196	252	188	189	197	206	207	209	223	216	209	195	174	158	161	123	191.8
26-Apr	109	124	172	29	14	21	20	19	359	21	27	29	32	32	29	34	14	5	11	6	355	4	354	358	19.7
27-Apr	2	12	7	8	13	12	12	15	19	19	36	56	61	51	47	48	39	42	44	50	51	55	59	97	32.5
28-Apr	135	87	101	92	69	117	120	180	184	178	175	161	158	208	199	206	202	187	163	195	213	219	228	151	186.7
29-Apr	192	172	131	159	206	247	253	246	247	256	275	307	329	329	175	251	11	5	6	13	359	75	146	169	280.0
30-Apr	137	165	248	242	302	355	357	14	356	358	31	6	14	332	258	342	7	3	4	2	357	359	360	359	359.6
169.7 177.1 175.7 126.8 125.3 130.4 160.1 232.5 249.1 258.8 234.5 224.5 222.8 268.9 256.4 273.4 302.3 343.7 24.7 30.4 43.4 115.2 170.2 127.1																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

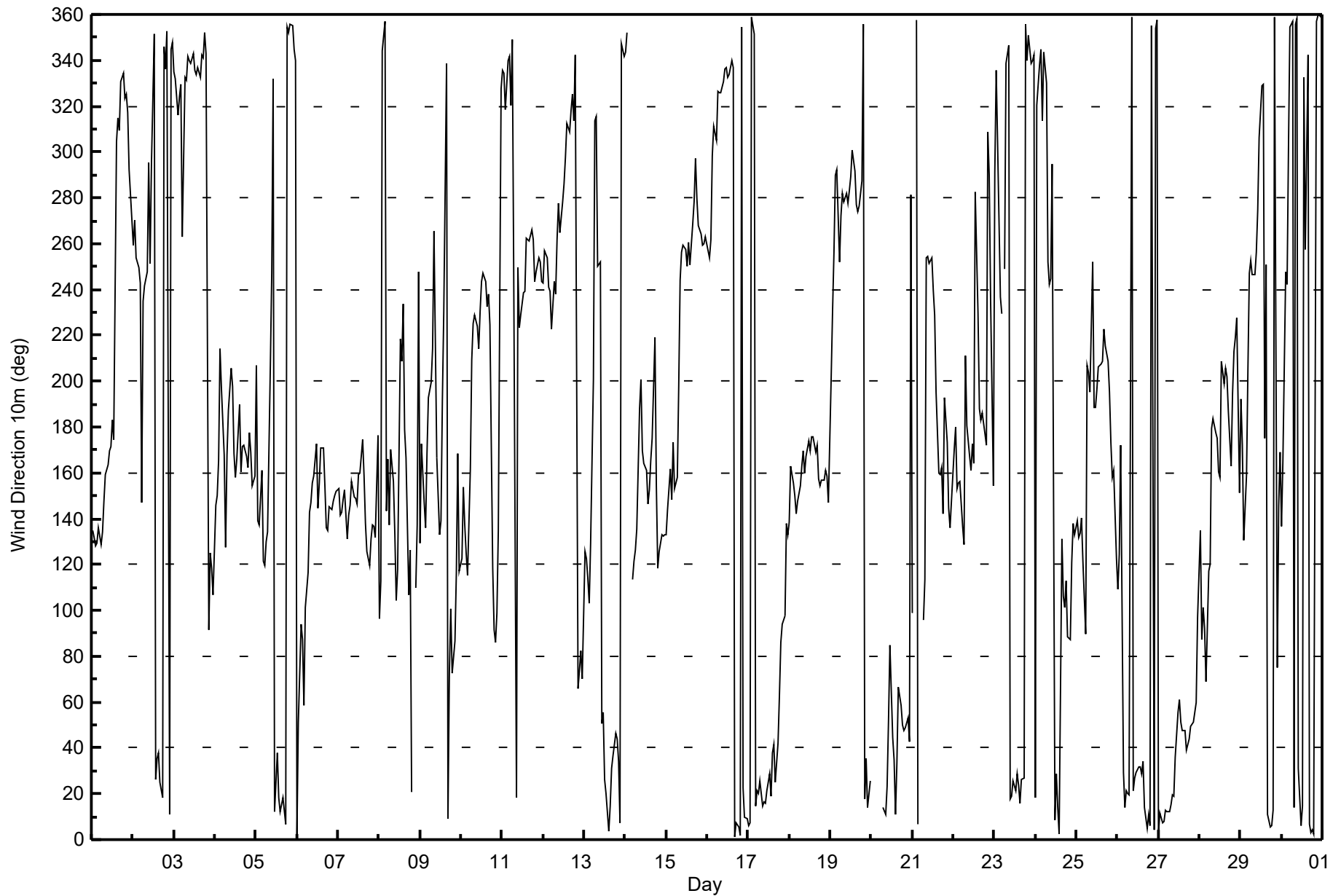
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on Apr 29 15:00																			Hours in Service: 720 Hours of Data: 706 Hours of Missing Data: 14 Hours of Calibration: 0 Percent Operational Time: 98.1						
Minimum Value: 8 deg on Apr 10 20:00																									
Percentiles: P ₁ = 11 P ₁₀ = 17 Q ₁ = 21 Median = 27 Q ₃ = 36 P ₉₀ = 55 P ₉₉ = 87																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	13	13	10	11	14	11	16	23	26	25	29	30	37	37	64	23	26	22	19	20	20	22	27	22	64
2-Apr	21	26	18	20	21	47	26	25	27	39	28	75	33	25	27	23	21	24	27	18	22	16	21	18	75
3-Apr	21	21	24	20	30	68	17	23	20	21	21	26	35	27	27	27	19	20	29	33	61	57	28	16	68
4-Apr	15	47	44	48	22	31	12	36	37	29	37	43	42	42	51	47	35	28	21	17	19	18	19	34	51
5-Apr	35	38	17	28	19	11	30	39	44	33	64	29	30	21	22	16	17	19	17	16	16	16	17	41	64
6-Apr	27	40	14	22	66	16	17	26	28	39	33	34	27	30	30	30	27	19	17	19	20	22	21	22	66
7-Apr	21	17	18	20	21	12	20	27	30	33	35	36	40	31	30	32	27	17	12	14	17	29	77	54	77
8-Apr	41	11	49	35	83	28	22	27	33	48	55	52	49	37	28	37	53	77	71	25	UO	46	72	15	83
9-Apr	64	33	20	13	24	30	37	72	43	56	42	37	34	48	83	53	42	23	17	20	28	57	79	97	97
10-Apr	86	49	21	22	16	34	32	26	24	25	40	41	25	30	33	36	24	42	35	8	10	20	17	87	87
11-Apr	27	50	45	20	19	20	12	79	79	61	49	34	37	45	26	28	29	27	24	19	19	22	21	19	79
12-Apr	18	21	22	21	20	19	20	18	31	30	27	31	29	31	24	26	26	25	27	22	31	17	49	22	49
13-Apr	23	12	16	17	20	49	63	55	55	75	90	76	34	58	37	27	23	22	22	16	15	18	16	32	90
14-Apr	10	18	UO	UO	48	48	16	31	40	39	45	34	35	31	28	34	32	26	36	9	11	13	12	13	48
15-Apr	13	21	24	21	43	24	34	27	22	26	27	26	24	28	25	28	28	30	32	27	25	24	22	23	43
16-Apr	23	21	24	40	32	32	21	20	20	20	21	21	22	23	19	19	23	22	20	21	19	23	22	19	40
17-Apr	21	20	19	20	24	21	22	20	22	21	22	25	24	24	29	33	31	30	23	16	17	30	41	10	41
18-Apr	14	18	19	18	15	18	25	25	30	29	30	32	31	31	29	30	29	25	23	23	24	23	26	22	32
19-Apr	29	23	21	30	33	29	29	31	31	31	33	32	37	34	35	32	31	33	32	37	26	20	20	19	37
20-Apr	UO	UO	UO	UO	UO	UO	UO	22	31	55	62	48	58	50	74	38	34	33	20	18	17	21	48	70	74
21-Apr	42	UO	15	30	UO	UO	15	58	24	35	57	34	45	67	58	53	46	34	19	35	31	33	14	16	67
22-Apr	55	78	18	40	50	78	84	46	34	30	30	33	31	87	71	36	28	66	37	27	53	92	40	61	92
23-Apr	49	18	18	77	33	UO	47	21	26	29	25	27	25	28	26	24	27	28	20	16	14	24	14	16	77
24-Apr	56	29	60	19	68	66	86	95	40	75	58	55	64	74	78	102	72	50	25	13	12	11	12	12	102
25-Apr	9	11	14	24	67	35	71	36	46	47	39	33	34	34	31	34	30	25	26	25	21	15	15	20	71
26-Apr	49	16	73	35	34	23	26	27	36	26	25	26	24	23	23	24	23	21	21	20	22	22	19	15	73
27-Apr	17	22	19	20	21	20	22	25	28	41	35	33	38	33	34	34	30	27	26	20	19	20	25	50	50
28-Apr	33	16	12	28	35	20	63	43	41	39	40	42	42	41	35	37	32	30	26	33	26	26	27	29	63
29-Apr	28	25	14	33	28	20	27	20	21	23	31	31	27	59	103	52	22	24	21	25	19	85	63	35	103
30-Apr	19	55	61	63	49	21	21	26	27	41	27	27	43	49	61	34	23	22	20	20	19	18	20	20	63
86 78 73 77 83 78 86 95 79 75 90 76 64 87 103 102 72 77 71 37 61 92 79 97																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Barge Landing - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - April 2025

Maximum Speed: 35 km/h on Apr 15 20:00										Maximum Daily Speed Average: 19.5 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 29 15:00										Minimum Daily Speed Average: 2.0 km/h on Apr 24										Hours of Data: 720						
Maximum Diurnal Speed Average: 3.4 km/h at hour 10										Minimum Diurnal Speed Average: 0.1 km/h at hour 5										Hours of Missing Data: 0						
Monthly Average Velocity: 0.7 km/h 262.2 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 11 Q ₃ = 15 P ₉₀ = 20 P ₉₉ = 29										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE13	SE9	SE10	SE12	SE11	SE8	SE7	SSE8	SSE10	SSE13	SSE12	S12	S9	S6	WNW5	NW15WNW17	NW14	NNW15	NW16	NW12	NW12WNW14	W12	SW2.1	WNW17		
2-Apr	W11	W14WSW11	W8WSW10	SW4WSW10WSW12	WSW9	WNW9	WSW9	WNW8	NNW12	NNE16	NNE14	NNE16	NNE16	NNE11	NNW8	NNW11	N14	N10	NNW17	NNW15		NW6.7	NNW17			
3-Apr	NNW16	NW12	WNW9	NW8	NNW9	WNW3	NNW10	NW15	NNW18	NNW22	NNW19	NNW14	NNW14	NNW14	NNW15	NNW16	NNW17	NNW14	N10	N5	E6	ESE6	SSE4	SSE5	NNW10.1	NNW22
4-Apr	S5	SSW6	SW7	SW9	SSW9	SSW8	S7	S7	S6	SSW9	S11	S11	SSE10	SSE10	S9	SSE9	S11	S12	SSE13	SSE12	S12	S13	SSE14	S9	S9.1	SSE14
5-Apr	SSW8	S8	SSE11	SSE10	SE9	SE9	SSE6	SE5	SSW6	WSW6	NNW3	N6	NNE7	NNE11	NNE13	NNE13	NNE15	N12	N10	N12	N12	N10	NNW9	NNW8	NNE3.2	NNE15
6-Apr	NNE5	ENE9	E11	ESE7	ESE4	E9	ESE10	SSE13	SSE15	SSE14	SSE17	S18	SSE19	SSE19	SSE18	SSE19	SSE21	SE18	SE17	SSE14	SSE16	SSE16	SSE12	SSE14	SE12.7	SSE21
7-Apr	SSE13	SE12	SSE13	SSE12	SSE10	SE12	SSE13	SSE12	SSE14	SSE14	SSE12	SSE13	SSE12	SSE15	S19	SSE13	SE12	SE11	ESE12	SE13	SE10	SE7	SSE4	S5	SSE11.4	S19
8-Apr	ESE6	ESE9	NNE2	N6	SE3	S6	SE7	SSE8	SSE5	SE4	ESE3	ESE3	SSW3	SSW4	SW5	S6	SSE3	ESE2	ESE3	NE3	ENE4	ESE4	SSE4	WSW8	SSE2.7	ESE9
9-Apr	SSW3	S5	S5	SE7	S7	S7	SSW6	SSW2	W2	SSW3	SSE6	SE7	SE9	S8	SW3	NNW8	N8	ENE9	E9	ENE12	ENE9	E9	SSE6	SSW3	SE3.2	ENE12
10-Apr	SSE4	S9	SSE9	SSE9	SE9	S9	SSW11	SW10	SW8	SW9	SSW10	SW11	WSW19	WSW15	WSW14	SW11	SW12	SSW6	SE5	ESE10	E13	E12	SE10	SSE2	SSW6.3	WSW19
11-Apr	NW8	NNW7	NNW8	NNW12	NNW13	NW9	NNW8	WSW5	NNE3	WSW4	SSW6	SW9	WSW10	WSW12	W22	W23	W24	W22	W15	WSW11	WSW14	WSW16	WSW18	WSW14	W9.9	W24
12-Apr	WSW16	W17	WSW12	WSW11	WSW9	SW10	WSW9	SW11	W12	W15	W14	W13	WNW13	WNW14	NW14	WNW15	NW15	NW9	WNW9	NNW7	NE8	ENE7	ENE6	ENE6	W8.1	W17
13-Apr	ESE6	SE7	ESE6	E6	SE5	S2	NW2	NW2	WSW2	W3	ENE3	NE5	NNE10	NNE8	N11	N16	NNE17	NNE16	NE13	NE13	NNE14	NNE9	N9	NNW7	NNE5.9	NNE17
14-Apr	NNW7	NNW6	NNW5	N5	NE3	E5	SE6	SE6	S8	S9	SSE8	SSE13	SSE13	SSE17	SSE21	SSE17	S15	SW12	S6	SE9	SE12	SE12	SE14	SE15	SSE7.3	SSE21
15-Apr	SE15	SSE14	SSE13	SSE14	S9	SSE12	SSE9	SSW15	WSW27	WSW32	W30	W29	WSW27	W31	WSW28	W27	W27	WNW29	W32	W35	W31	W27	W24	W22	WSW18.3	W35
16-Apr	WSW16	WSW12	W12	WNW8	WNW8	NNW10	NW18	NW23	NW27	NW30	NNW28	NNW27	NNW25	NNW27	NNW24	NNW24	N18	N17	N18	N11	N10	NNE11	N11	N16	NNW15.7	NW30
17-Apr	N19	N21	N20	NNW19	NNE15	NNE17	NNE16	NNE17	NNE18	NNE20	NNE21	NNE20	NNE20	NNE19	NNE16	NE12	NNE11	NE9	NE8	E9	E10	E9	SE7	SE10	NNE12.9	N21
18-Apr	SE11	SSE9	SSE12	SSE13	SSE13	SSE14	SSE17	SSE19	SSE18	SSE20	SSE24	S25	SSE27	S25	S25	SSE22	S21	SSE22	SSE22	SSE25	SSE26	SSE26	SSE20	SSE13	SSE19.5	SSE27
19-Apr	SSW15	SW18	WSW19	NNW20	NNW12	WSW9	W16	W22	W24	W24	W20	W22	NNW20	NNW21	NNW22	W26	W24	W21	NNW17	N17	NNE18	NNE15	NNE19	NNE17	WNW14.4	W26
20-Apr	NNE16	NNE13	NNE11	N11	N12	N10	N12	N12	NNE7	NNE7	NE8	E9	NE8	NE8	NNE6	NE9	ENE8	NE8	NE11	NE14	NE14	NE15	NE11	NE3	NNE9.4	NNE16
21-Apr	E4	SE1	NNW3	NNE4	ENE5	ENE5	E7	ESE4	W5	WSW5	WSW6	W9	SW9	SW9	S8	SSE9	SSE11	SSE11	SSE11	S9	S11	SSE11	SE13	SSE11	SSE4.5	SE13
22-Apr	S6	S4	SSE11	S7	SSW4	SSE4	SSW4	SSW5	S12	SSE19	SSE21	S21	SSE22	W6	SW8	S14	S20	S6	S10	S8	WNW12	W4	SW5	S5	S8.3	SSE22
23-Apr	WNW5	NW6	NW7	WNW3	WSW5	WSW5	WSW4	N7	NNW11	NNE13	NNE13	NNE16	NNE18	NNE18	NNE19	NNE17	NNE14	NNE11	N9	NNW9	N9	NNW8	NNW8	NNW10	N8.5	NNE19
24-Apr	NNE5	NNW6	NNW5	N4	NNW3	NNW3	NNW2	W1	WSW5	SW3	WNW6	N7	NNE5	NNE6	N4	E1	ESE4	ESE3	ESE7	E9	E11	SE12	SE13	SE11	ENE2.0	SE13
25-Apr	SE12	SE11	SE10	SSE8	SSE5	SE5	SSE2	S5	S6	WSW5	S16	S23	SSW22	SSW21	SSW21	SSW18	SW20	SSW20	SSW15	SSW13	S11	S10	S11	SSE9	S11.4	S23
26-Apr	SSE6	S7	S8	NE8	NNE13	NNE14	NNE10	NNE10	N9	NNE13	NNE17	NNE19	NNE19	NNE22	NNE22	NNE23	NNE21	N21	N20	N17	N11	N12	N11	N10	NNE12.4	NNE23
27-Apr	N11	NNE10	N16	N21	NNE17	N16	N17	NNE16	NNE14	NNE11	NE12	NE13	NE12	NE13	NE13	NE13	NE13	NE13	NE15	NE15	NE13	NE12	ENE11	ENE8	NNE13.0	N21
28-Apr	SE5	ESE5	ESE7	ESE5	ESE3	ESE4	SE4	S8	S11	S12	S12	SSE12	SSE15	SSW15	SSW18	SSW18	SSW19	S14	SSE13	S12	SSW17	SW17	SW18	SSE8	S9.8	SSW19
29-Apr	SSW9	S10	SE9	SSE7	SW8	WSW13	WSW10	WSW13	WSW16	WSW15	W12	WNW15	NW13	NNW11	E1	WSW6	N21	N18	N12	NNE9	N9	NNE3	SSE2	S9	WNW4.2	N21
30-Apr	SSE8	S7	WSW6	WSW5	WNW7	N12	N15	N12	N8	N9	NNE10	N9	NNE10	N4	W2	NNW6	N18	N21	N19	N16	N16	N16	N14	N14	N8.9	N21
S1.7 S1.7 S1.6SSW0.4 SE0.1 SSE0.8 W0.5WSW1.7WSW3.4 W3.4WSW2.1 SW1.8WSW1.1WNW2.1 W2.5WNW2.7 NW2.4NNW2.6NNE1.9NNE2.1 NE2.1 E2.0 SSE0.8 SSE0.8																										Diurnal Average
N19 N21 N20 N21 NNE17 NNE17 NW18 NW23 NW27 WSW32 W30 W29 WSW27 W31 WSW28 W27 W27 WNW29 W32 W35 W31 W27 W24 W22																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

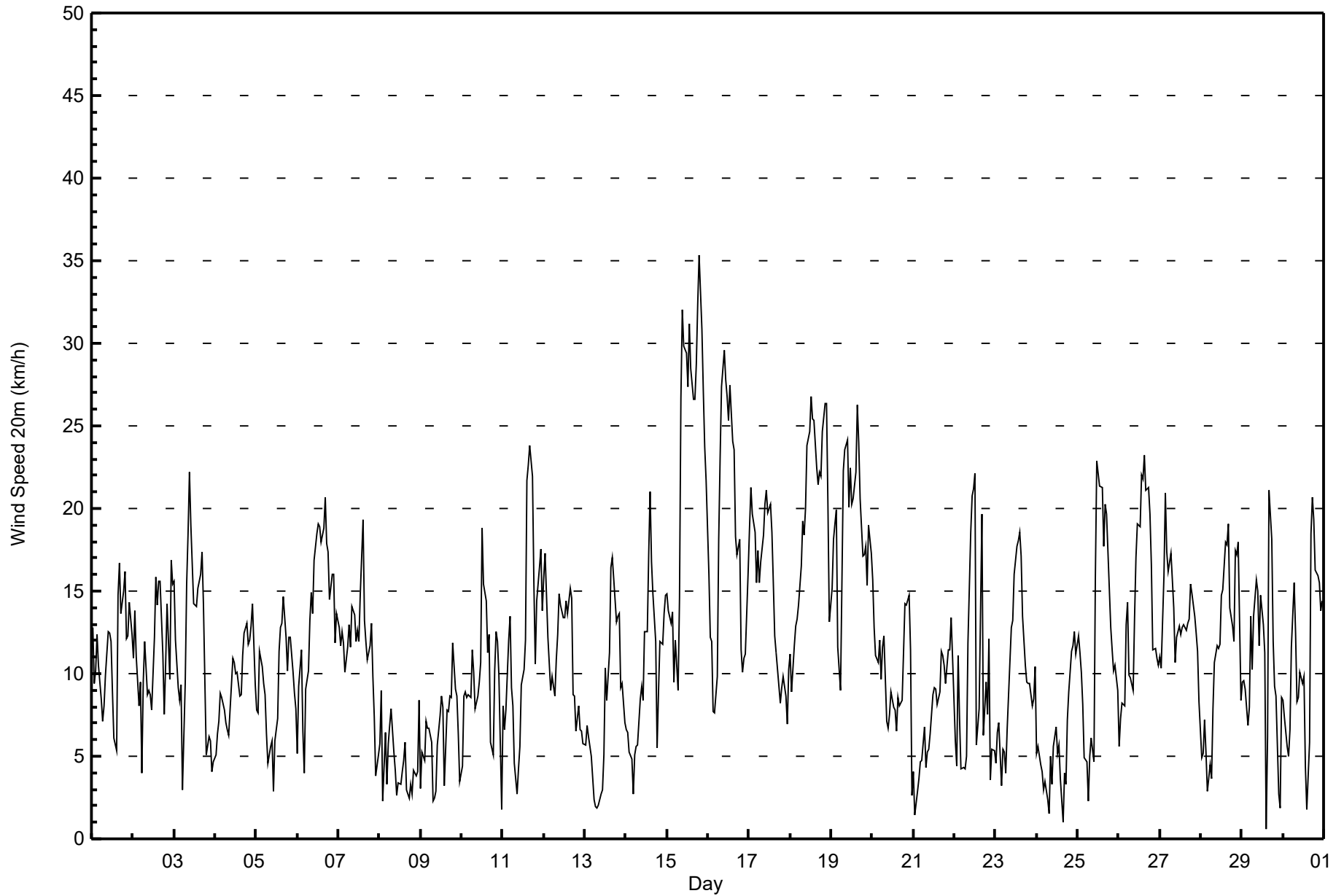
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on Apr 15 19:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on Apr 4 00:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	2	2	2	2	1	1	2	2	3	3	3	2	2	6	5	5	4	4	4	4	5	4	2	6
2-Apr	2	4	2	2	1	2	3	4	2	3	3	5	5	4	4	4	3	3	4	3	5	2	5	4	5
3-Apr	5	3	3	2	4	2	3	5	5	7	5	5	5	5	5	4	4	4	3	1	2	2	1	1	7
4-Apr	1	1	2	3	2	1	1	2	1	3	3	4	3	4	3	3	3	3	2	2	2	2	2	3	4
5-Apr	1	1	1	1	2	1	2	2	2	2	2	1	2	3	3	3	3	3	2	3	3	2	1	2	3
6-Apr	1	2	2	1	2	2	2	4	4	5	4	5	5	5	5	5	5	5	5	3	4	3	3	3	5
7-Apr	2	2	2	2	1	2	3	3	3	3	3	4	3	5	5	3	3	4	2	2	3	2	2	1	5
8-Apr	2	1	2	1	3	1	2	1	2	2	1	2	1	1	1	2	2	2	2	1	1	1	1	1	3
9-Apr	1	1	2	1	1	2	2	2	1	1	2	2	2	3	2	5	4	2	1	2	2	2	2	3	5
10-Apr	3	2	1	2	1	2	3	3	2	2	3	5	5	5	4	4	4	3	2	1	1	2	2	2	5
11-Apr	2	3	3	2	3	3	2	3	2	4	3	3	4	5	6	6	7	6	5	2	3	4	4	3	7
12-Apr	3	4	3	3	2	1	1	2	4	4	5	4	4	5	4	6	5	3	3	1	2	1	2	2	6
13-Apr	1	1	1	1	1	1	1	1	1	2	2	3	3	4	4	5	5	4	3	2	3	2	2	2	5
14-Apr	1	1	1	1	1	2	2	2	2	3	3	3	3	5	5	5	4	4	1	1	1	2	2	3	5
15-Apr	2	2	2	2	3	2	2	4	8	9	9	9	8	9	8	8	8	10	10	10	9	7	6	5	10
16-Apr	4	3	3	2	2	4	6	6	7	9	8	7	7	8	6	6	6	5	6	4	4	3	4	4	9
17-Apr	5	6	6	6	5	4	4	5	5	6	6	5	6	4	4	4	3	3	2	2	2	2	2	2	6
18-Apr	2	2	2	2	2	3	4	4	5	5	6	7	7	7	6	6	5	5	5	5	6	5	5	3	7
19-Apr	4	4	4	6	4	2	6	6	7	8	6	7	6	7	8	8	7	6	6	7	5	4	5	5	8
20-Apr	4	4	4	4	4	3	4	3	3	2	3	3	3	3	3	3	3	2	3	3	3	3	4	2	4
21-Apr	1	1	2	1	2	3	1	2	1	2	2	3	3	4	4	4	4	4	2	3	3	4	3	2	4
22-Apr	3	2	2	3	2	1	1	1	5	4	5	6	6	7	6	4	6	5	3	2	9	4	1	2	9
23-Apr	1	2	1	2	2	1	2	2	2	4	3	4	5	5	5	4	4	3	3	2	1	1	2	2	5
24-Apr	2	2	3	1	2	1	2	2	2	2	2	3	3	3	3	3	2	2	2	1	1	1	2	2	3
25-Apr	1	1	2	2	2	1	1	1	2	2	7	7	6	6	6	5	6	5	4	3	2	1	1	1	7
26-Apr	2	1	4	4	5	3	3	3	3	4	4	5	5	5	5	6	6	6	6	5	3	4	3	2	6
27-Apr	2	3	4	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	3	2	2	2	3	5
28-Apr	1	1	1	2	1	2	2	3	3	3	4	4	6	6	6	5	6	4	3	5	6	5	6	2	6
29-Apr	3	2	2	2	2	3	3	3	4	4	4	5	4	7	2	4	6	5	4	3	2	3	1	2	7
30-Apr	1	2	2	2	4	4	4	4	2	3	3	3	5	3	2	3	8	6	5	5	4	4	4	4	8
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Barge Landing - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Barge Landing - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	109	15.14	15.14
6 - 11	273	37.92	53.06
12 - 19	255	35.42	88.47
20 - 28	74	10.28	98.75
29 - 38	9	1.25	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 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	7	4	4	3	15	8	12	8	9	5	12	4	4	2	7	109
6 - 11	24	24	9	9	12	12	26	30	41	12	14	17	4	9	6	24	273
12 - 19	30	41	18	1	1	2	17	51	13	10	5	18	11	10	9	18	255
20 - 28	7	8	0	0	0	0	0	14	7	4	1	3	17	4	2	7	74
29 - 38	0	0	0	0	0	0	0	0	0	0	0	1	6	1	1	0	9
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	66	80	31	14	16	29	51	107	69	35	25	51	42	28	20	56	720

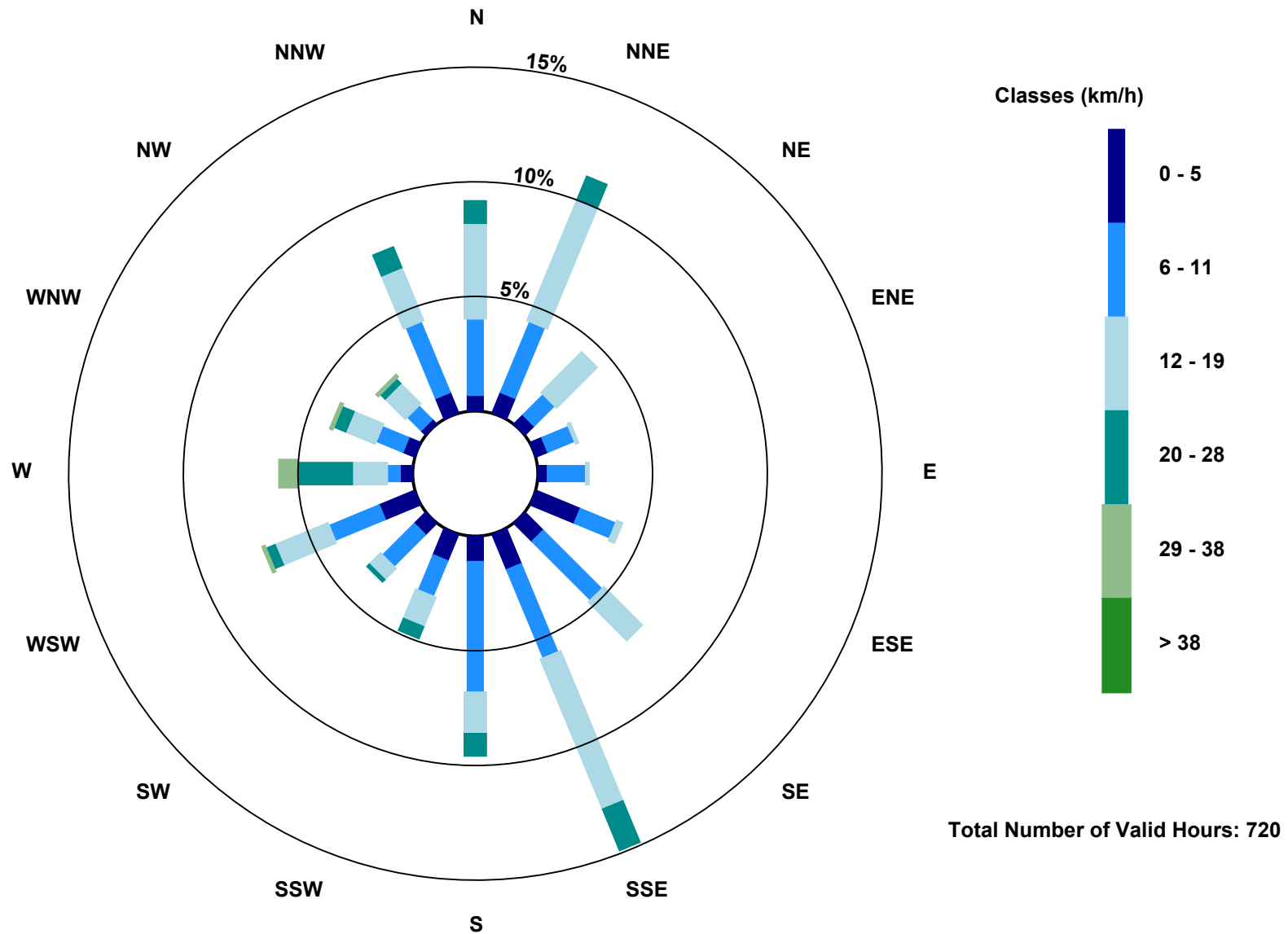
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 20m (WS20) - km/h
Barge Landing





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Barge Landing - April 2025

Direction of Maximum Speed: 269 deg on Apr 15 20:00 Direction of Maximum Daily Speed Average: 161.5 deg on Apr 18																				Hours in Service:		720			
Direction of Minimum Speed: 101 deg on Apr 29 15:00 Direction of Minimum Daily Speed Average: 2.0 deg on Apr 24																				Hours of Data:		720			
																				Hours of Missing Data:		0			
Monthly Average Direction: 262.2 deg																				Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	139	138	133	132	137	130	139	150	158	161	165	169	178	169	301	307	302	326	330	317	318	307	286	272	219.3
2-Apr	261	271	258	260	254	218	247	244	250	292	252	289	346	25	30	32	22	16	340	333	350	11	342	345	323.3
3-Apr	330	326	303	308	331	291	330	325	338	337	335	340	332	329	334	327	339	338	352	349	79	106	157	160	334.1
4-Apr	185	213	222	219	205	198	174	171	176	192	189	170	159	163	182	160	171	169	166	167	180	175	163	169	178.3
5-Apr	204	174	155	167	139	135	150	139	194	239	338	11	33	16	12	14	16	9	352	353	356	356	343	338	19.7
6-Apr	17	77	100	102	111	101	117	147	149	155	160	169	147	157	167	168	154	141	139	148	147	151	152	153	145.3
7-Apr	154	146	147	151	154	132	147	147	155	148	150	147	155	161	169	158	142	126	123	134	141	142	153	180	148.5
8-Apr	115	114	29	349	127	175	143	167	162	140	103	119	202	195	222	176	160	102	117	51	61	120	155	249	146.6
9-Apr	194	170	172	146	170	189	194	205	262	200	163	135	139	180	221	337	2	67	97	68	74	91	168	193	137.0
10-Apr	159	178	167	158	124	188	211	223	224	222	208	225	244	247	240	231	236	210	124	103	96	101	128	167	196.0
11-Apr	309	341	344	336	340	318	336	255	24	254	209	223	237	239	262	264	261	267	263	247	248	253	251	245	268.8
12-Apr	243	259	255	241	242	226	242	236	265	274	269	277	286	293	304	299	311	320	303	339	55	66	65	60	277.7
13-Apr	119	124	111	100	124	184	316	319	255	259	66	43	21	17	1	11	27	30	40	39	30	12	356	335	30.4
14-Apr	337	345	341	349	41	94	135	140	177	189	165	163	161	148	153	164	174	215	171	128	131	137	136	136	153.0
15-Apr	136	148	163	154	171	159	167	198	245	257	259	260	250	261	252	268	276	290	277	269	265	260	261	264	251.3
16-Apr	258	257	265	288	299	300	318	318	320	325	333	332	328	329	337	334	358	6	5	1	355	20	10	9	330.5
17-Apr	5	5	357	348	13	18	18	22	13	13	13	19	25	17	32	37	22	38	56	84	88	96	142	141	23.5
18-Apr	144	164	160	155	149	153	157	162	168	160	164	171	166	172	172	166	170	158	156	157	156	159	158	152	161.5
19-Apr	200	226	256	284	284	257	272	280	276	279	276	279	286	295	288	276	273	276	284	352	17	28	13	22	287.7
20-Apr	19	14	14	5	360	355	360	10	14	27	50	81	43	34	17	34	59	53	44	43	45	50	53	40	29.8
21-Apr	80	146	343	33	58	68	82	111	259	257	248	261	236	222	188	163	157	161	147	187	173	148	141	155	168.5
22-Apr	174	187	162	175	195	160	210	207	175	165	161	169	164	277	219	186	178	185	176	175	302	281	232	177	181.7
23-Apr	289	323	308	301	238	239	248	349	346	16	17	22	20	25	22	15	23	24	357	342	351	342	336	341	0.1
24-Apr	24	328	347	9	340	340	334	262	240	233	296	5	27	20	4	100	108	103	112	94	96	126	141	141	75.3
25-Apr	143	137	140	157	148	133	167	180	181	240	186	184	194	199	203	203	218	213	207	195	183	175	174	155	186.7
26-Apr	165	174	181	42	20	18	17	18	354	18	25	26	27	28	24	28	12	3	9	5	358	5	354	1	17.7
27-Apr	6	12	8	7	12	10	10	12	17	19	34	49	52	45	45	43	38	37	39	43	46	50	57	67	29.5
28-Apr	132	102	117	121	120	119	126	173	179	176	171	162	158	201	195	202	197	182	163	191	210	215	225	153	181.6
29-Apr	192	178	140	165	215	248	256	246	248	257	276	299	324	329	101	254	7	4	5	17	5	18	150	186	285.5
30-Apr	161	178	253	248	299	354	356	11	351	353	26	7	15	353	278	347	6	2	5	3	357	358	359	359	358.1
178.9 188.4 190.2 204.8 127.2 150.3 271.2 244.2 253.5 262.5 239.2 233.1 241.2 284.9 264.9 285.9 316.6 346.0 16.1 32.7 48.8 94.8 156.2 163.9																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

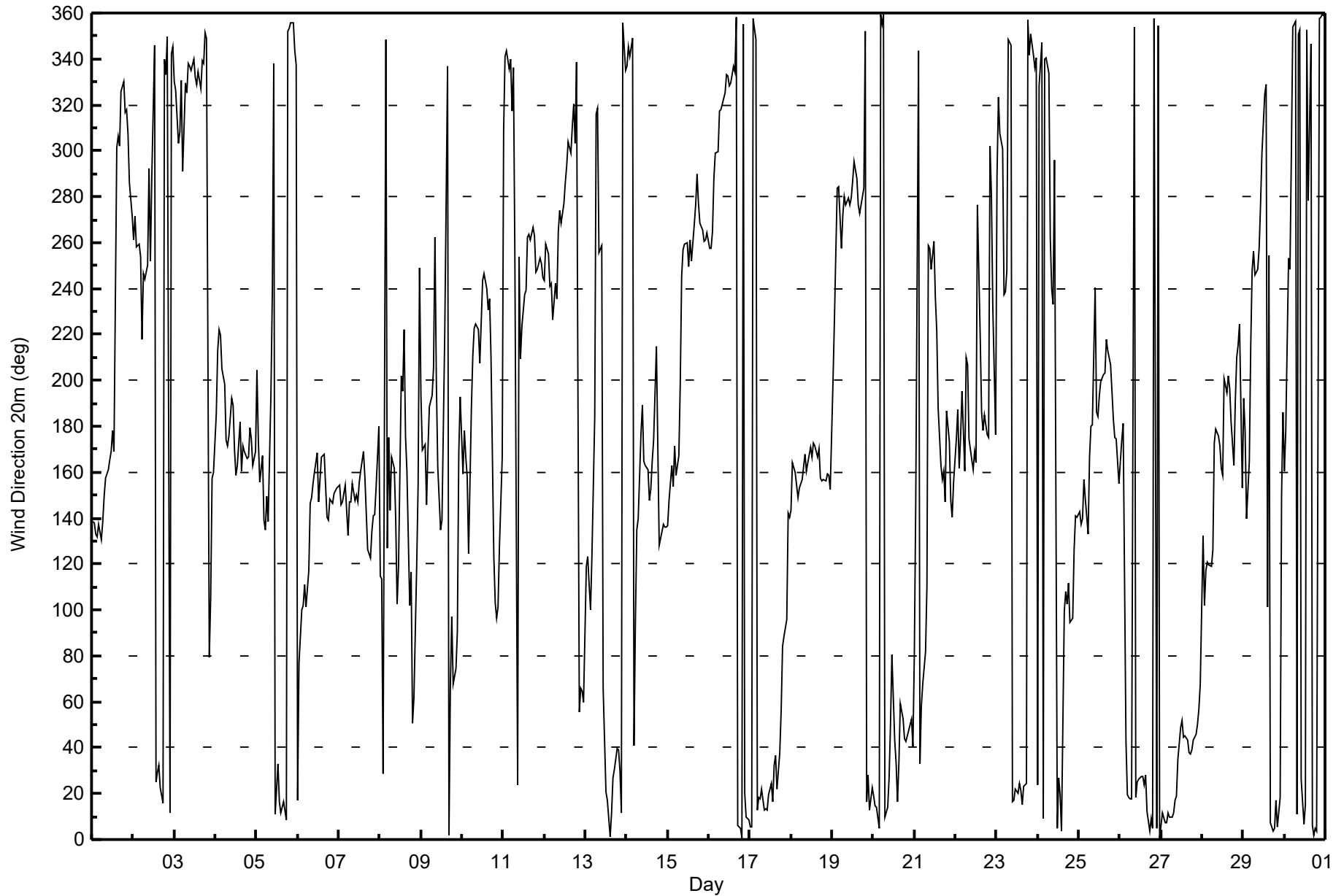
Barge Landing - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on Apr 29 15:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on Apr 10 21:00																									
Percentiles: P ₁ = 7 P ₁₀ = 11 Q ₁ = 14 Median = 18 Q ₃ = 26 P ₉₀ = 43 P ₉₉ = 77																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	8	9	7	7	9	7	12	13	14	13	15	16	23	22	64	14	16	19	15	14	16	15	14	13	64
2-Apr	12	14	12	12	8	47	15	16	22	26	26	58	27	16	18	14	14	16	23	14	18	12	16	15	58
3-Apr	15	16	16	14	15	48	13	18	15	16	16	24	27	21	22	20	14	14	24	16	31	44	20	15	48
4-Apr	12	29	16	28	10	14	12	21	25	22	24	32	30	29	42	29	21	15	10	7	8	8	9	17	42
5-Apr	19	20	10	11	13	16	17	25	41	37	60	25	21	14	15	14	11	14	17	14	14	13	8	15	60
6-Apr	33	13	6	11	26	9	14	18	18	23	19	19	19	19	16	17	15	14	12	11	12	12	12	12	33
7-Apr	12	11	11	10	13	8	12	17	17	21	25	29	28	20	18	22	19	14	9	10	14	13	51	32	51
8-Apr	20	7	75	13	55	15	13	16	24	39	50	38	45	31	25	28	41	30	61	24	8	22	33	7	75
9-Apr	53	26	18	8	15	18	21	67	49	56	30	27	24	38	75	35	42	19	13	10	12	28	40	66	75
10-Apr	69	33	19	15	9	25	18	21	22	23	29	39	22	27	25	30	21	33	35	4	4	12	11	78	78
11-Apr	19	50	39	11	10	15	16	63	78	66	46	30	33	38	17	19	19	17	15	10	12	15	15	14	78
12-Apr	13	14	16	14	13	9	12	15	21	17	17	20	15	18	17	16	18	23	15	22	23	12	18	18	23
13-Apr	24	9	13	14	14	70	52	46	62	83	76	63	25	47	29	21	15	16	16	11	10	15	13	9	83
14-Apr	6	9	10	8	28	21	15	23	29	28	32	21	20	18	16	22	21	16	28	8	8	9	9	10	32
15-Apr	8	12	12	12	23	17	28	18	17	18	17	18	19	19	18	18	17	18	20	16	15	14	13	14	28
16-Apr	14	15	14	23	17	20	15	15	15	16	15	15	16	18	15	14	19	19	16	17	17	14	16	16	23
17-Apr	16	17	17	16	20	15	15	12	16	15	16	18	15	16	21	24	20	20	17	11	7	17	18	8	24
18-Apr	9	10	8	10	9	11	13	13	17	15	17	18	18	18	17	16	16	13	12	12	12	12	12	14	18
19-Apr	17	17	13	16	18	18	17	17	18	18	22	21	23	23	22	21	20	20	20	36	21	15	15	13	36
20-Apr	13	14	14	17	17	16	18	17	27	37	50	43	43	39	70	31	27	27	13	12	11	12	15	75	75
21-Apr	18	42	34	28	18	26	13	34	22	40	49	29	43	55	48	45	37	21	12	28	23	26	9	10	55
22-Apr	48	58	10	19	41	40	30	25	19	18	17	19	18	76	70	29	16	56	31	16	46	60	17	37	76
23-Apr	23	17	14	30	13	16	36	18	21	19	18	19	17	18	17	16	17	21	17	12	11	18	9	13	36
24-Apr	40	17	47	36	74	55	74	99	30	72	47	44	61	66	77	97	77	46	20	6	8	8	7	8	99
25-Apr	5	6	9	7	8	10	36	28	38	46	27	22	24	24	22	27	24	17	17	15	11	8	8	16	46
26-Apr	12	9	44	29	27	16	19	19	31	20	17	17	15	15	16	16	18	17	16	16	18	18	14	14	44
27-Apr	14	16	16	17	16	16	18	19	22	33	25	22	29	27	25	26	23	20	18	13	12	11	11	24	33
28-Apr	27	14	10	18	12	18	19	30	28	26	25	32	33	33	26	28	22	18	13	26	19	19	17	23	33
29-Apr	18	16	13	21	18	14	17	15	15	15	20	19	21	46	99	46	17	21	18	15	13	60	67	16	99
30-Apr	18	22	29	31	37	16	16	18	25	34	20	19	28	45	60	32	18	18	17	17	16	15	17	16	60
69 58 75 36 74 70 74 99 78 83 76 63 61 76 99 97 77 56 61 36 46 60 67 78																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Barge Landing - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS11 LOWER CAMP APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
APRIL 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	684	34	36	99.72	30.3	0	3.9	0
H2S (ppb) Average	683	35	37	99.72	4.2	0	0.6	0
THC (ppm) Average	646	37	74	94.86	3.2	-	2.2	-
CH4(ppm) Average	646	37	74	94.86	3.1	-	2.2	-
NMHC(ppm) Average	646	37	74	94.86	0.661	-	0.053	-
Temperature (C) Average	720	0	0	100	23.6	-	15	-
Relative Humidity (%) Average	720	0	0	100	100	-	95	-
Barometric Pressure (inHg) Average	720	0	0	100	29.5	-	29.4	-
Wind Speed 10 m (km/h) Average	711	0	9	98.75	41	-	25	-
Wind Direction 10 m (deg) Average	711	0	9	98.75	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)

APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	0.74	2.2	-	0	0	0.1	0.2	0.4	1.5	30.3
H2S (ppb) Average	683	0.26	0.3	-	0	0	0.1	0.2	0.3	0.6	4.2
THC (ppm) Average	646	1.99	0.2	-	1.8	1.8	1.9	1.9	2.1	2.2	3.2
CH4(ppm) Average	646	1.98	0.2	-	1.8	1.8	1.9	1.9	2	2.2	3.1
NMHC(ppm) Average	646	0.009	0.043	-	0	0	0	0	0	0	0.661
Temperature 2 m (C) Average	720	4.63	6.4	-	-13	-3.2	0.1	4.4	8.9	13.1	23.6
Relative Humidity (%) Average	720	61.06	21.3	-	15.4	31.4	45.9	61.7	76.6	91.3	100
Barometric Pressure (inHg) Average	720	29.08	0.2	-	28.6	28.8	28.9	29.1	29.3	29.3	29.5
Wind Speed 10 m (km/h) Average	711	11.4	7	-	0	2	5	11	16	21	41
Wind Direction 10 m (deg) Average	711	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	24 Apr 2025 14:00	24 Apr 2025 15:00	2	Maintenance - reinitiated daily QA check
THC/NMHC/CH4	24 Apr 2025 02:00	24 Apr 2025 14:00	13	Unstable Operation - AMD non-compliance
THC/NMHC/CH4	24 Apr 2025 16:00	25 Apr 2025 14:00	23	Unstable Operation - AMD non-compliance
Wind Speed, Wind Direction	09 Apr 2025 18:00	09 Apr 2025 18:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 01:00	20 Apr 2025 08:00	8	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

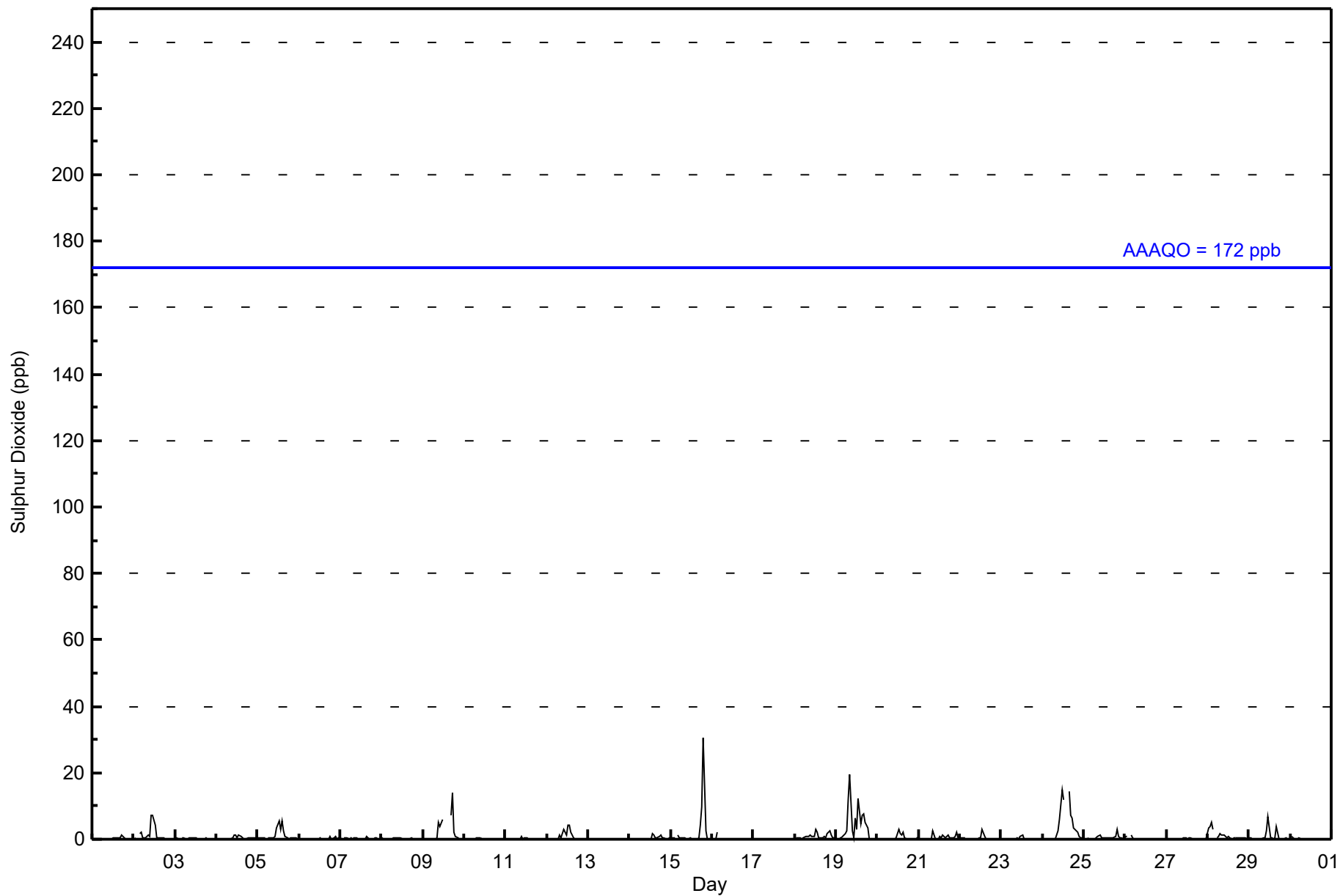
Lower Camp - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720											
Maximum Value: 30.3 ppb on Apr 15 20:00																			Maximum Daily Average: 3.9 ppb on Apr 19						Hours of Data: 684					
Minimum Value: 0.0 ppb on Apr 4 00:00																			Minimum Daily Average: 0.0 ppb on Apr 17						Hours of Missing Data: 36					
Maximum Diurnal Average: 1.8 ppb at hour 12																			Minimum Diurnal Average: 0.2 ppb at hour 24						Hours of Calibration: 34					
Monthly Average: 0.74 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.5 P ₉₉ = 11.9						Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.1	Z	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.4	0.4	1.3	0.2	0.1	0.2	0.2	0.1	0.1	0.2	1.3				
2-Apr	0.2	0.2	Z	1.5	2.1	0.3	0.3	0.3	1.2	1.0	7.3	7.4	4.4	0.4	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	1.3	7.4				
3-Apr	0.1	0.4	0.2	Z	0.3	0.3	0.1	0.2	0.4	0.5	0.2	0.3	0.3	0.1	0.1	0.0	0.1	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.2	0.5				
4-Apr	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.2	0.3	1.2	1.3	0.5	1.1	0.8	0.3	0.1	0.2	0.2	0.6	0.3	0.2	0.2	0.6	0.4	1.3				
5-Apr	0.6	0.6	0.3	0.4	0.3	Z	0.2	0.2	0.2	0.3	0.7	3.4	5.3	3.1	5.6	2.7	0.8	0.5	0.2	0.3	0.3	0.2	0.2	0.1	1.2	5.6				
6-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.7	0.1	0.2	1.0	0.1	0.4	0.1	1.0				
7-Apr	0.3	Z	0.2	0.4	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.7	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.7				
8-Apr	0.2	0.2	Z	0.2	0.1	0.2	0.1	0.2	0.5	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.5				
9-Apr	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.5	4.9	3.7	5.9	C	C	C	C	7.2	14.0	1.9	0.7	0.2	0.1	0.1	0.1	2.1	14.0				
10-Apr	0.1	0.1	0.2	0.2	Z	0.1	0.2	0.6	0.5	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6				
11-Apr	0.0	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.6	0.2	0.3	0.3	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.6				
12-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.2	1.1	0.5	1.8	3.1	1.5	4.0	4.2	2.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.9	4.2				
13-Apr	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2				
14-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	1.6	1.4	0.2	0.6	0.6	1.2	0.3	0.2	0.2	0.2	0.2	0.3	1.6				
15-Apr	0.2	0.3	0.3	Z	1.2	0.3	0.4	0.3	0.2	0.1	0.0	0.3	0.0	0.1	0.1	0.0	0.5	4.2	9.7	30.3	2.4	0.2	0.1	0.0	2.2	30.3				
16-Apr	0.0	0.0	0.0	2.2	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	0.1	2.2				
17-Apr	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	0.1	0.1	0.1	0.0	0.0	0.1				
18-Apr	Z	0.3	0.3	0.4	0.1	0.3	0.7	0.8	0.7	1.2	0.9	1.0	3.0	1.9	0.4	0.3	0.3	1.0	0.4	1.6	2.4	1.3	0.5	0.6	0.9	3.0				
19-Apr	0.5	Z	0.3	0.4	0.7	1.7	2.7	11.9	19.4	2.4	0.3	6.3	2.8	12.3	4.7	7.4	7.8	5.2	3.5	0.2	0.1	0.0	0.0	0.0	3.9	19.4				
20-Apr	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	2.8	1.5	1.4	2.1	0.6	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.4	2.8				
21-Apr	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.1	2.5	1.4	0.2	0.1	0.8	0.4	1.3	0.6	0.7	1.2	0.2	0.6	0.3	0.7	1.9	0.3	0.6	2.5				
22-Apr	0.2	0.5	0.5	0.6	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.4	3.2	1.0	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.4	3.2				
23-Apr	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.7	1.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.2				
24-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.1	2.5	6.1	14.8	11.9	M	M	14.4	7.3	6.2	3.6	3.1	2.1	0.9	0.5	0.3	3.6	14.8				
25-Apr	0.4	Z	0.3	0.2	0.2	0.1	0.2	0.5	0.7	1.2	0.3	0.2	0.3	0.4	0.4	0.4	0.5	0.3	0.6	2.8	0.7	0.5	0.4	0.2	0.5	2.8				
26-Apr	0.9	1.0	Z	1.3	0.5	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	1.3				
27-Apr	0.0	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1	0.3				
28-Apr	3.3	3.9	5.0	2.8	Z	0.2	0.9	1.6	1.2	1.4	0.9	0.5	1.0	0.5	0.2	0.2	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.2	1.1	5.0				
29-Apr	0.3	0.4	0.1	0.1	0.1	Z	0.1	0.1	0.6	0.3	2.3	6.9	0.5	0.5	0.2	0.2	3.8	0.1	0.1	0.2	0.2	0.3	0.1	0.2	0.8	6.9				
30-Apr	Z	0.7	0.1	0.1	0.1	0.5	0.1	0.0	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	0.0	0.0	0.1	0.7				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																														



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Lower Camp - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	676	98.83	98.83
11 - 20	7	1.02	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: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Lower Camp - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	72	21	10	7	3	45	154	36	24	12	9	42	58	59	57	60	669
11 - 20	1	0	0	1	0	1	0	0	0	0	0	0	1	2	0	0	6
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	73	21	10	8	3	46	154	36	24	12	9	42	59	62	57	60	676

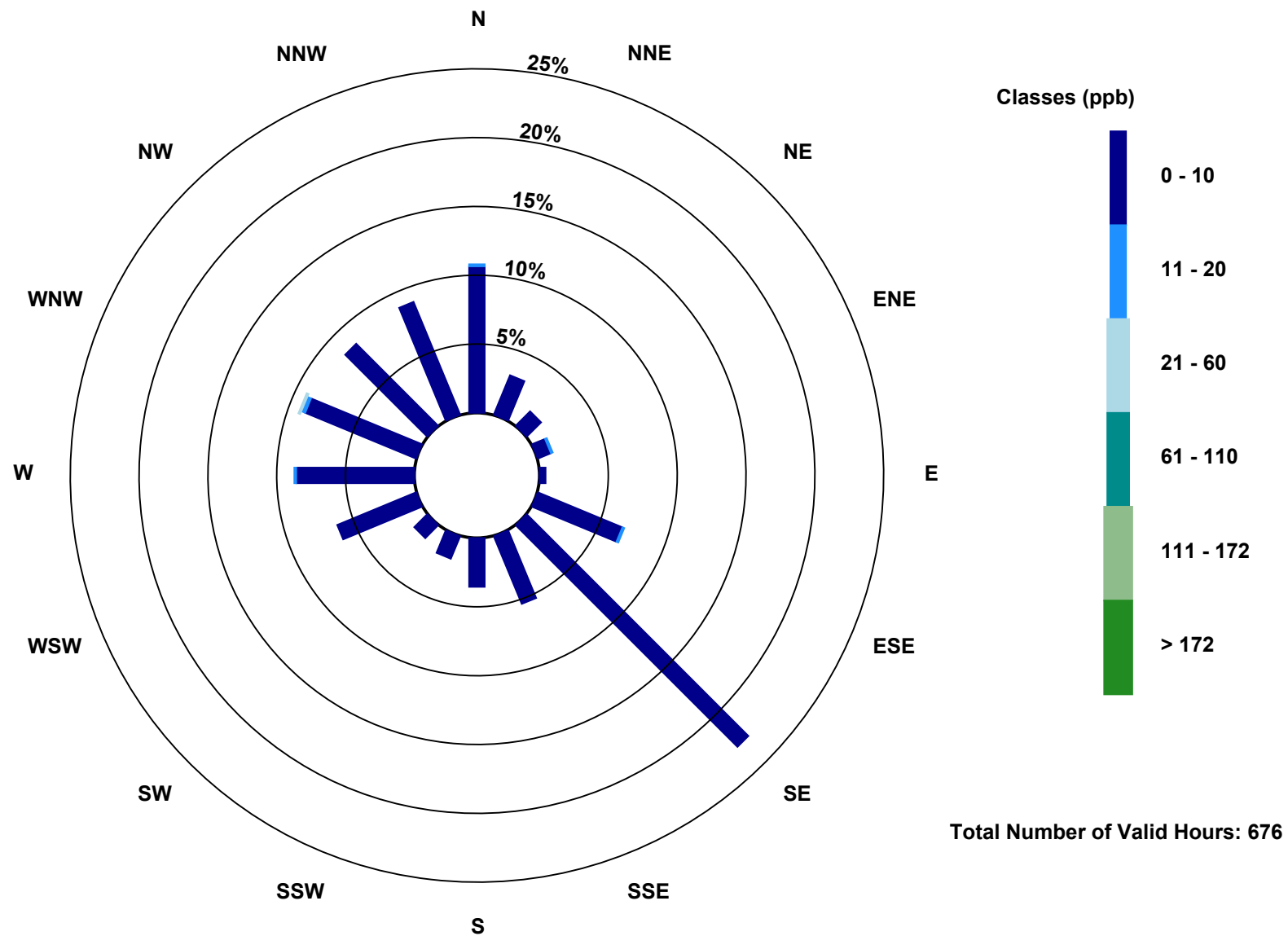
Total Number of Valid Hours: 676

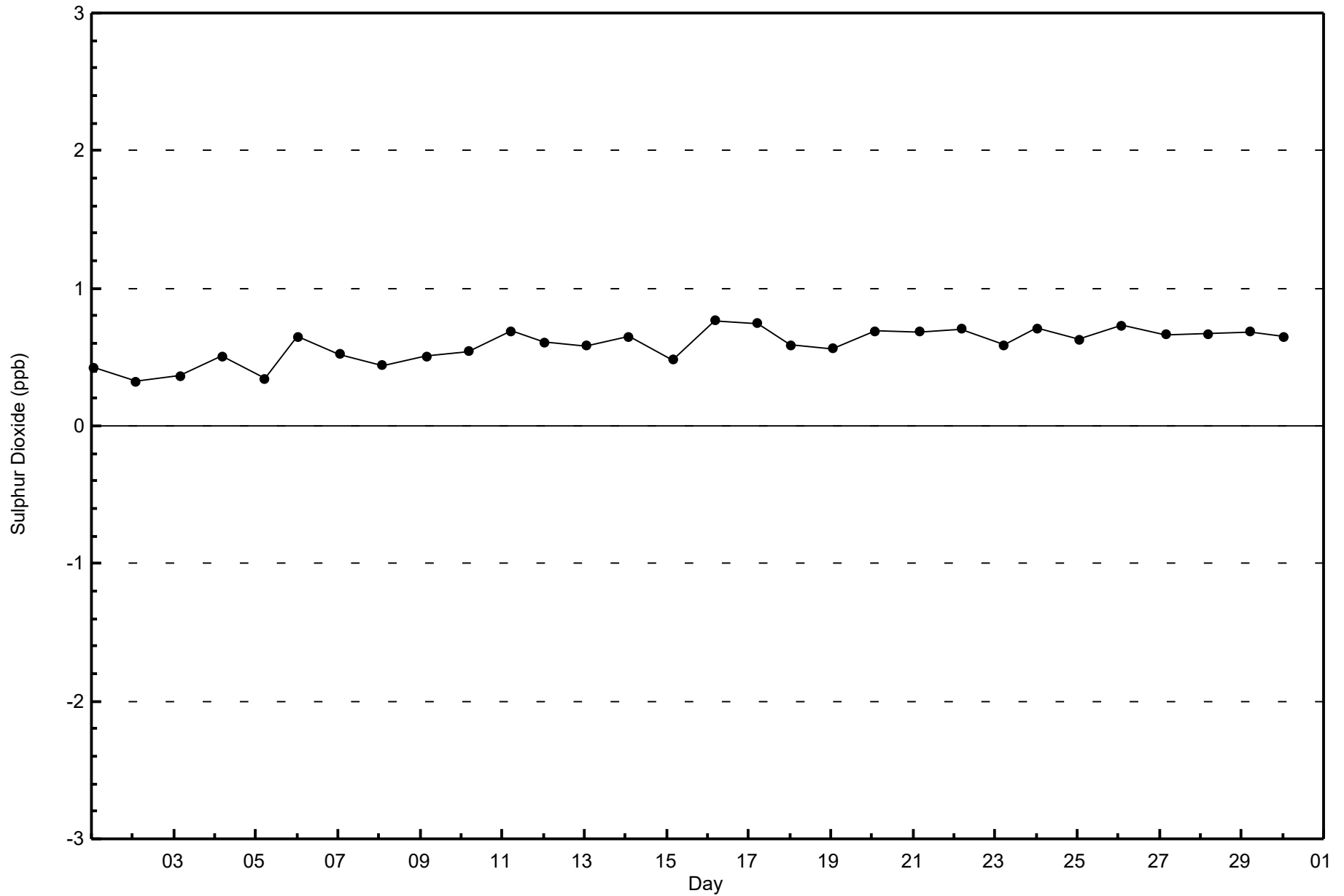
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Lower Camp

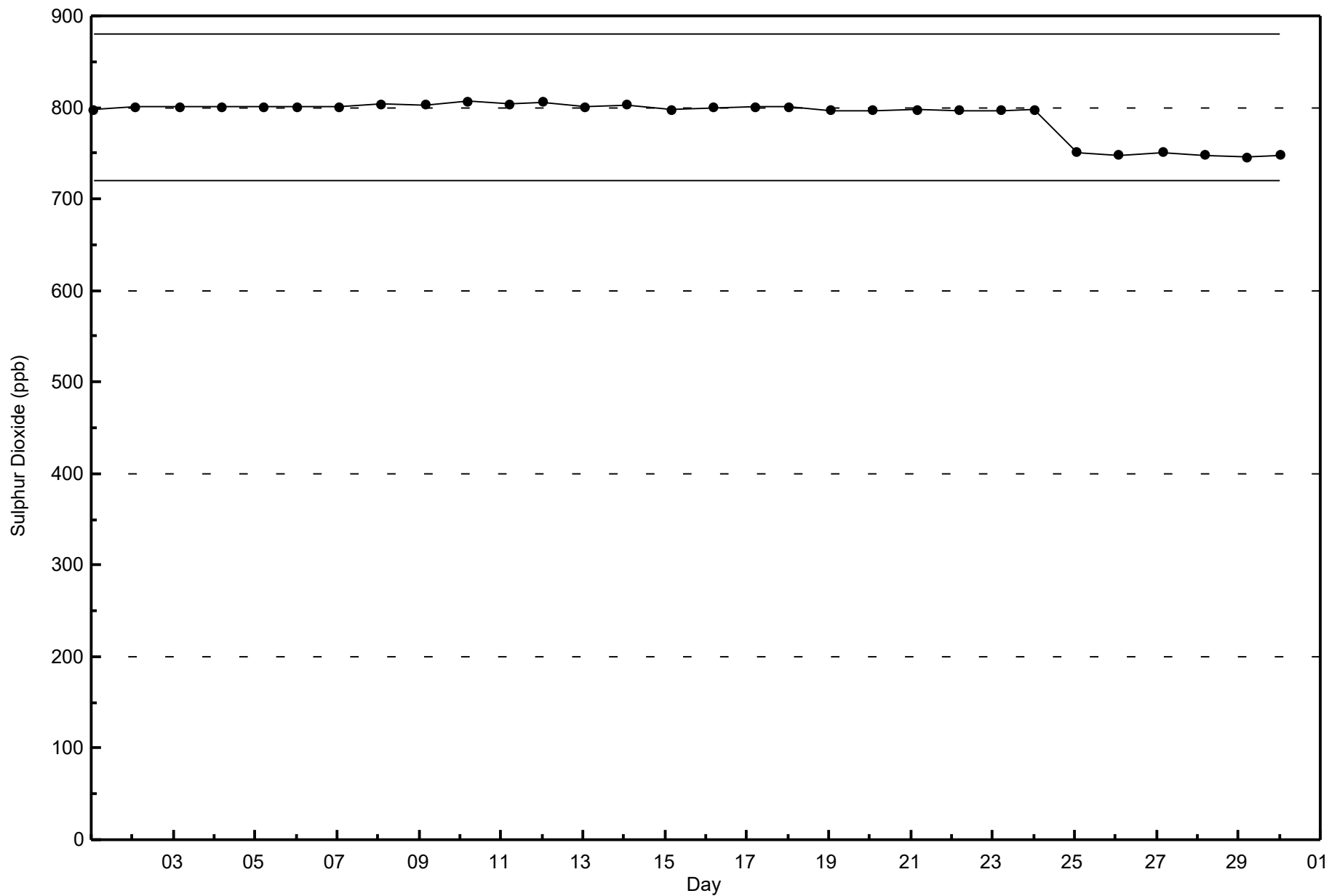






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Lower Camp - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

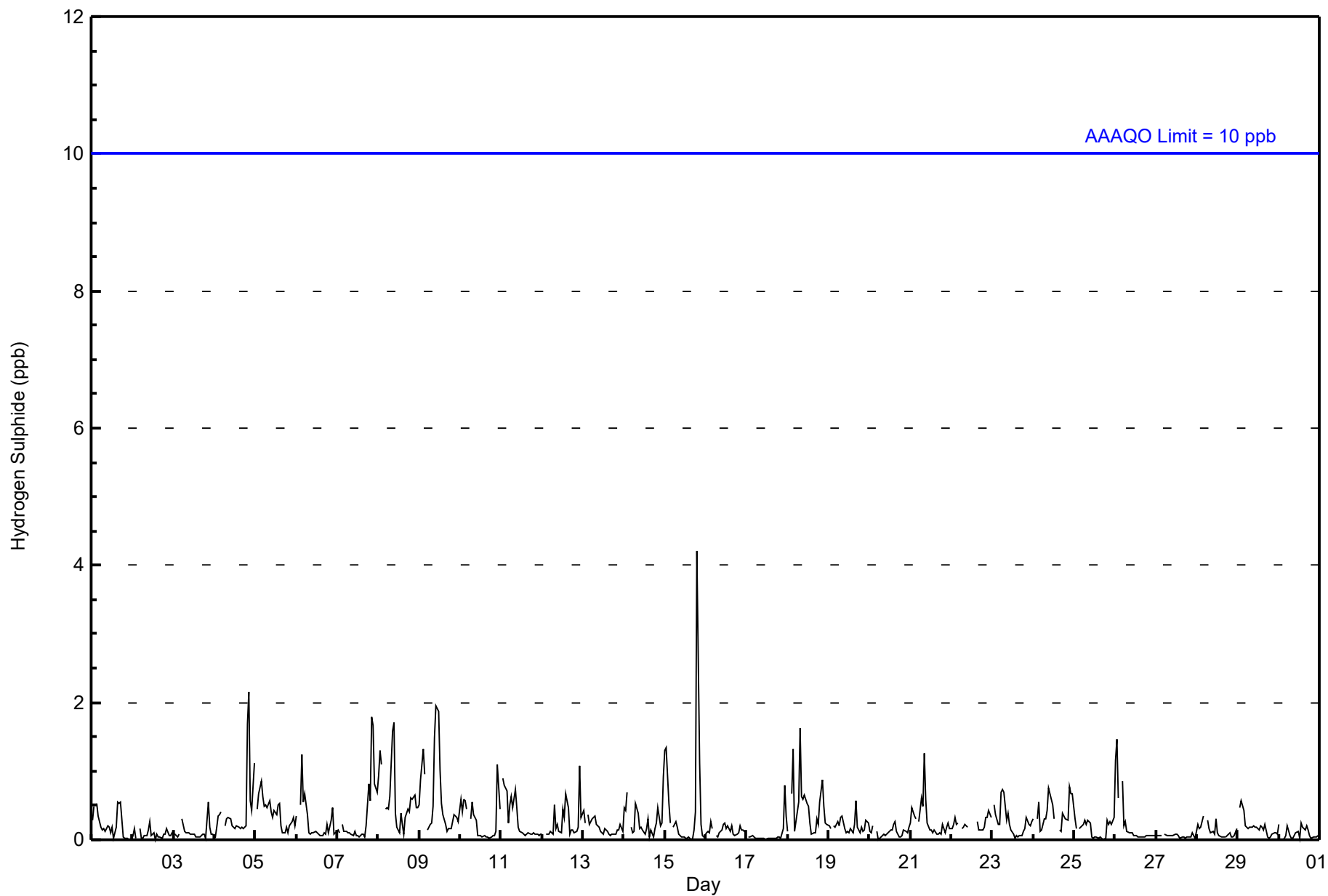
Lower Camp - April 2025

Number of Exceedences (AAAQO): Maximum Value: 4.2 ppb on Apr 15 20:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.6 ppb on Apr 9					Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 35 Percent Operational Time: 99.7				
Minimum Value: 0.0 ppb on Apr 20 06:00 Maximum Diurnal Average: 0.4 ppb at hour 2 Monthly Average: 0.26 ppb										Minimum Daily Average: 0.1 ppb on Apr 27 Minimum Diurnal Average: 0.1 ppb at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.6 P ₉₉ = 1.7																			
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-Apr	0.3	0.5	Z	0.5	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.0	0.2	0.6	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6			
2-Apr	0.1	0.2	0.0	Z	0.2	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3			
3-Apr	0.1	0.1	0.1	0.1	Z	0.3	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	0.0	0.5	0.2	0.1	0.1	0.1	0.5			
4-Apr	0.0	0.2	0.3	0.4	0.4	Z	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	1.7	2.2	0.6	0.4	1.1	0.4	2.2			
5-Apr	Z	0.4	0.7	0.9	0.6	0.5	0.5	0.5	0.6	0.4	0.3	0.4	0.4	0.5	0.5	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.4	0.9			
6-Apr	0.4	Z	0.5	1.2	0.5	0.7	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.1	0.1	0.3	1.2			
7-Apr	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.8	0.6	1.8	1.7	0.8	0.7	0.4	1.8			
8-Apr	0.9	1.3	1.1	Z	0.4	0.5	0.4	0.6	1.6	1.7	0.4	0.2	0.1	0.4	0.2	0.1	0.3	0.4	0.4	0.6	0.6	0.7	0.5	0.5	0.6	1.7			
9-Apr	0.5	0.9	1.3	1.0	Z	0.1	0.2	0.2	0.5	1.5	1.9	1.9	1.0	0.5	0.4	0.2	0.1	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.6	1.9			
10-Apr	0.6	0.4	0.6	0.6	0.4	Z	0.3	0.6	0.4	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.1	0.4	0.3	1.1			
11-Apr	Z	0.9	0.8	0.7	0.3	0.5	0.6	0.5	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.9			
12-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.2	0.1	0.1	0.4	0.3	0.7	0.5	0.1	0.1	0.2	0.1	0.1	0.2	1.1	0.3	0.2	1.1			
13-Apr	0.4	0.3	Z	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.4			
14-Apr	0.5	0.4	0.7	Z	0.2	0.1	0.1	0.5	0.4	0.2	0.2	0.1	0.1	0.2	0.3	0.0	0.1	0.0	0.2	0.2	0.5	0.2	0.2	0.9	0.3	0.9			
15-Apr	1.3	1.3	0.5	0.2	Z	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	4.2	1.1	0.2	0.1	0.0	0.5	4.2			
16-Apr	0.1	0.1	0.1	0.3	0.2	Z	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3			
17-Apr	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	0.2	0.8	0.3	0.1	0.8			
18-Apr	0.1	Z	0.7	1.3	0.1	0.3	0.6	1.6	0.6	0.6	0.7	0.5	0.5	0.2	0.1	0.1	0.1	0.3	0.2	0.6	0.9	0.5	0.2	0.2	0.5	1.6			
19-Apr	0.2	0.2	Z	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.6	0.2	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.6			
20-Apr	0.1	0.1	0.2	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.3			
21-Apr	0.2	0.5	0.3	0.3	Z	0.3	0.6	0.5	1.3	0.6	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	1.3			
22-Apr	0.2	0.2	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	C	C	C	C	C	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.2	0.4			
23-Apr	Z	0.5	0.4	0.2	0.2	0.7	0.7	0.7	0.3	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.7			
24-Apr	0.3	Z	0.3	0.5	0.1	0.1	0.3	0.3	0.4	0.8	0.7	0.5	0.3	M	M	0.1	0.1	0.4	0.3	0.3	0.3	0.8	0.7	0.7	0.4	0.8			
25-Apr	0.3	0.2	Z	0.2	0.2	0.2	0.3	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	0.2	0.3	0.2	0.3	0.2	0.3			
26-Apr	1.1	1.5	0.6	Z	0.9	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.5			
27-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1			
28-Apr	0.2	0.2	0.2	0.3	0.3	Z	0.3	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.3			
29-Apr	Z	0.5	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.6			
30-Apr	0.2	Z	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	682	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: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	73	21	10	10	2	48	153	35	22	11	9	42	57	64	58	59	674
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	73	21	10	10	2	48	153	35	22	11	9	42	57	65	58	59	675

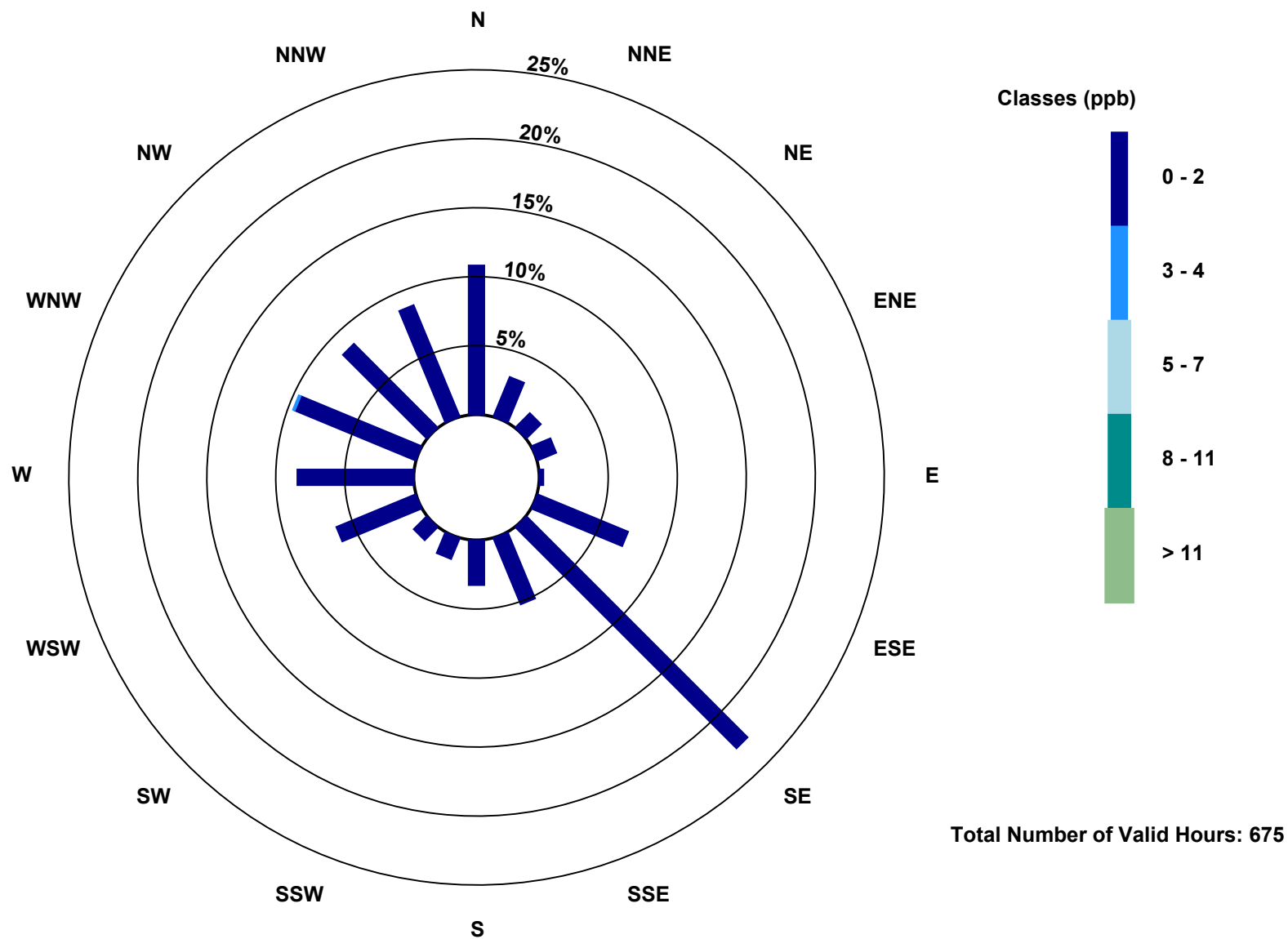
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

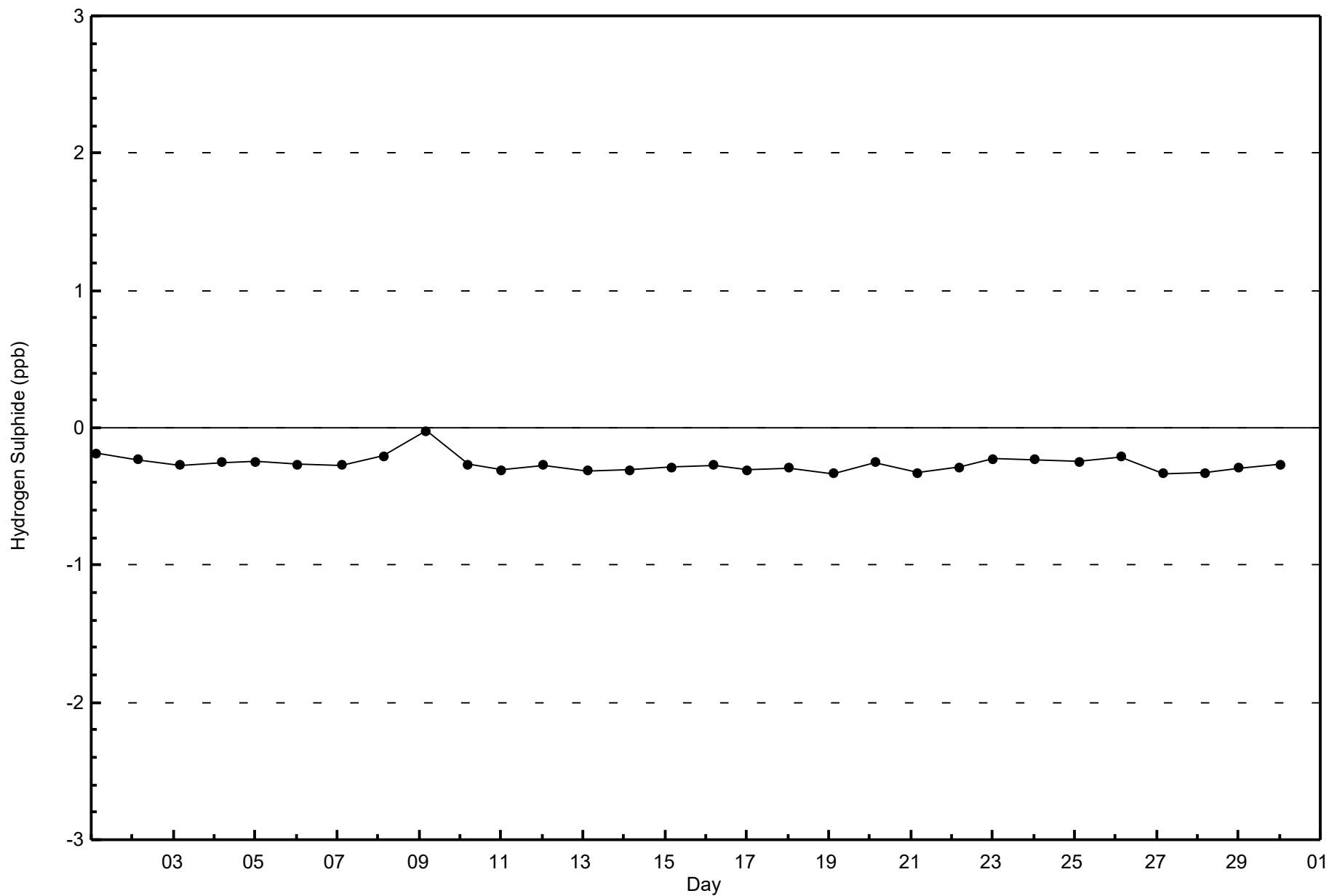
Hydrogen Sulphide (H₂S) - ppb
Lower Camp

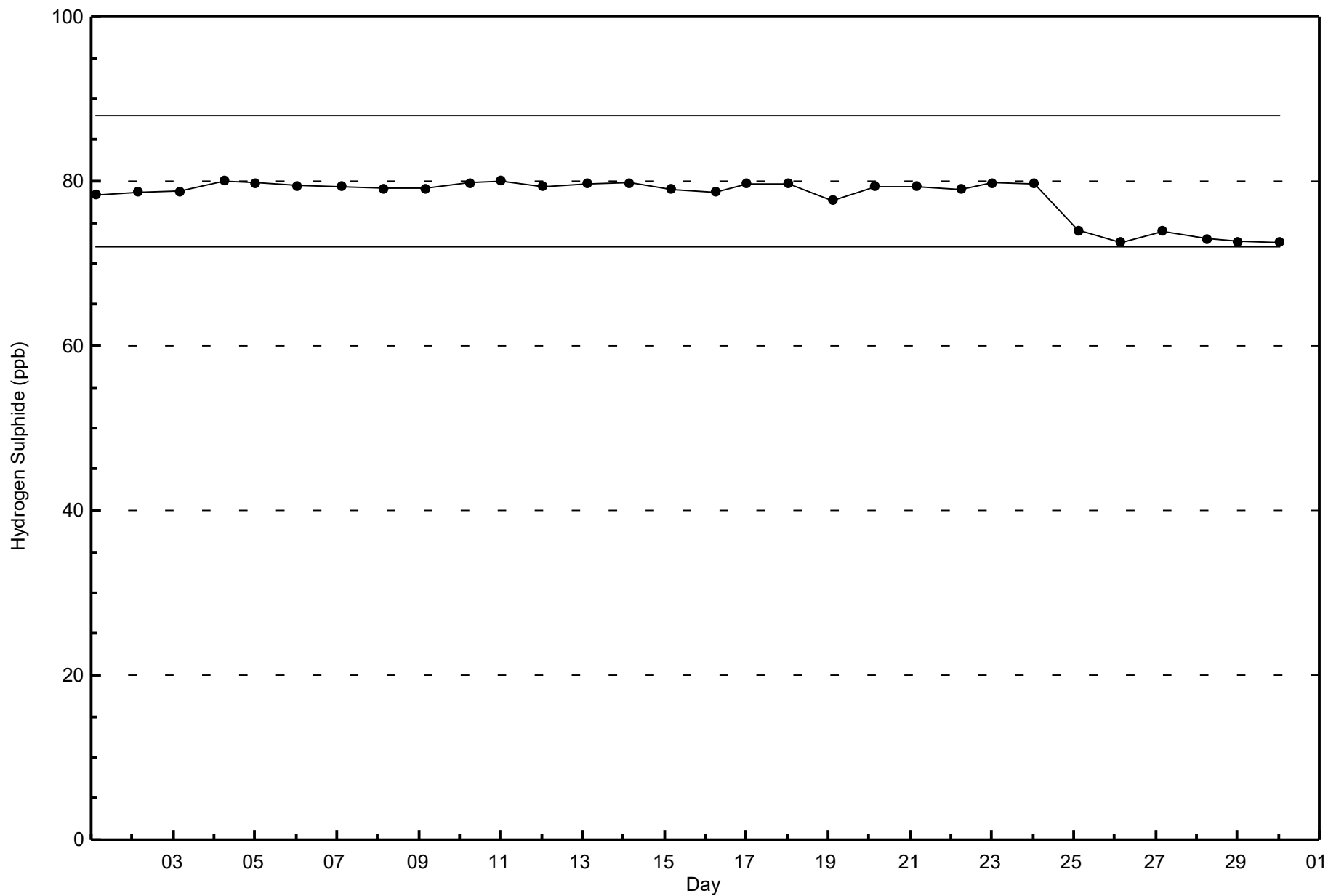




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Lower Camp - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

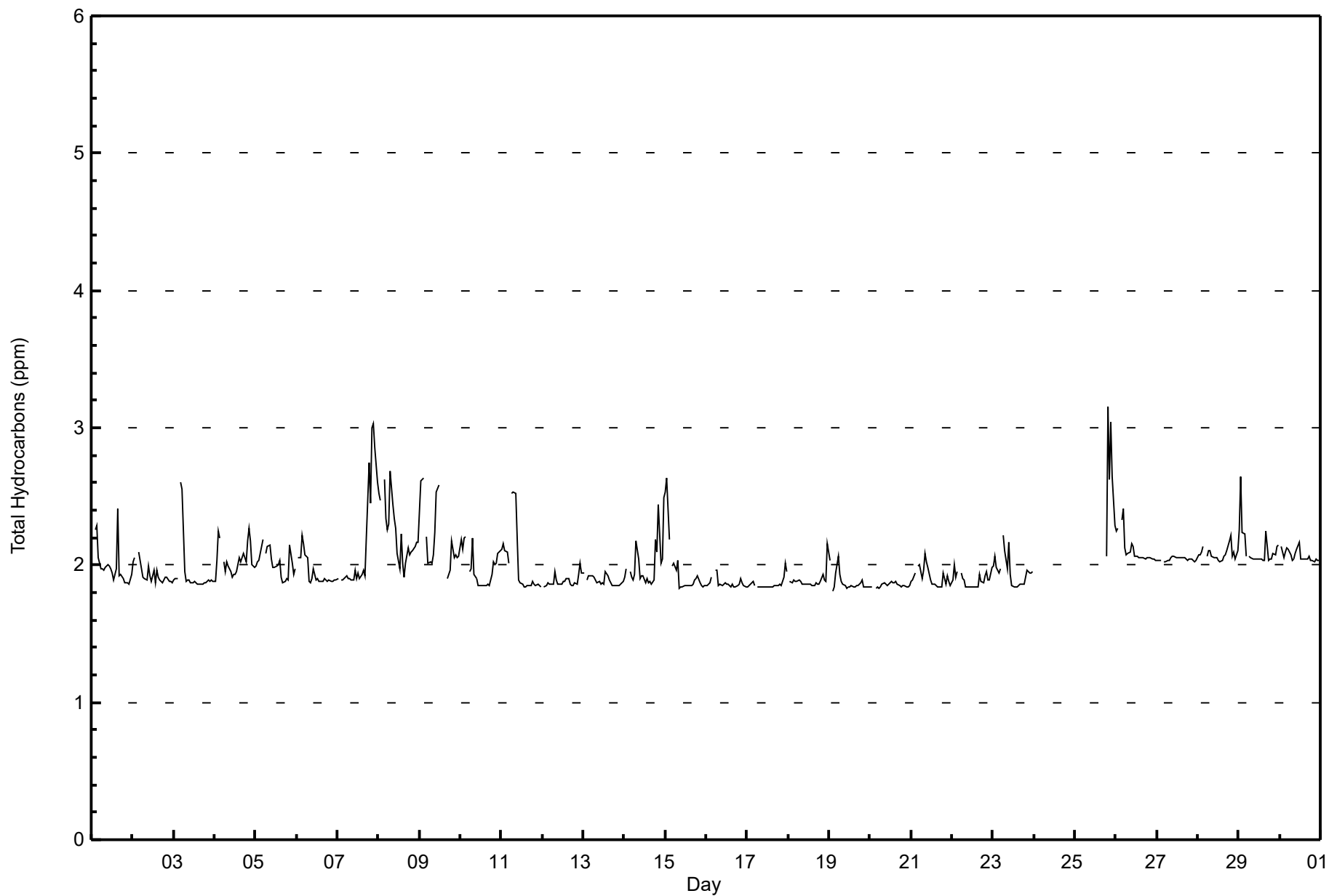
Lower Camp - April 2025

Maximum Value: 3.2 ppm on Apr 25 20:00										Maximum Daily Average: 2.2 ppm on Apr 8										Hours in Service: 720						
Minimum Value: 1.8 ppm on Apr 19 03:00										Minimum Daily Average: 1.9 ppm on Apr 20										Hours of Data: 646						
Maximum Diurnal Average: 2.1 ppm at hour 2										Minimum Diurnal Average: 1.9 ppm at hour 13										Hours of Missing Data: 74						
Monthly Average: 1.99 ppm										Percentiles: P ₁ = 1.8 P ₁₀ = 1.8 Q ₁ = 1.9 Median = 1.9 Q ₃ = 2.1 P ₉₀ = 2.2 P ₉₉ = 2.7										Hours of Calibration: 37						
																				Percent Operational Time: 94.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.1	Z	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4
2-Apr	2.0	2.1	Z	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1
3-Apr	1.9	1.9	1.9	Z	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6
4-Apr	1.9	2.0	2.3	2.2	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.1	2.1	2.0	2.2	2.3	2.2	2.0	2.0	2.0	2.3
5-Apr	2.0	2.0	2.0	2.1	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.9	2.0	2.0	2.2
6-Apr	Z	2.1	2.1	2.2	2.2	2.1	2.1	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2
7-Apr	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.2	2.8	2.5	3.0	3.0	2.9	2.6	2.2	3.0
8-Apr	2.5	2.5	Z	2.6	2.3	2.3	2.3	2.7	2.4	2.3	2.3	2.1	2.0	2.2	2.0	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.7
9-Apr	2.4	2.6	2.6	Z	2.2	2.0	2.0	2.0	2.1	2.2	2.5	2.6	C	C	C	C	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.1	2.1	2.6
10-Apr	2.2	2.1	2.2	2.2	Z	2.0	2.0	2.2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.2
11-Apr	2.1	2.2	2.1	2.1	2.0	Z	2.5	2.5	2.5	2.2	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	2.0	2.5
12-Apr	Z	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	2.0
13-Apr	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9
14-Apr	1.9	2.0	Z	2.0	1.9	1.9	1.9	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.4	2.0	2.0	2.5	2.0	2.5
15-Apr	2.5	2.6	2.2	Z	2.0	2.0	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.0	2.6
16-Apr	1.9	1.9	1.9	1.9	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.9	2.0
17-Apr	1.8	1.8	1.9	1.9	1.9	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
18-Apr	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	2.2
19-Apr	2.0	Z	1.8	1.8	1.9	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.1
20-Apr	1.8	1.8	Z	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9
21-Apr	1.9	1.9	1.9	Z	2.0	2.0	1.9	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.1
22-Apr	1.9	2.0	1.9	2.0	Z	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0
23-Apr	2.0	2.1	2.0	1.9	2.0	Z	2.2	2.1	2.0	2.2	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	2.2
24-Apr	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
25-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	3.2	2.6	3.0	2.6	2.3	--	3.2
26-Apr	2.2	2.3	Z	2.3	2.4	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.4
27-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
28-Apr	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	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.2
29-Apr	2.3	2.6	2.2	2.2	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.6
30-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan				C - Calibration				M - Maintenance				UO - Unstable Operation														



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	474	73.37	73.37
2.1 - 3.0	171	26.47	99.85
3.1 - 10.0	1	0.15	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 646

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	56	13	8	5	0	20	97	27	11	2	6	30	48	47	45	51	466
2.1 - 3.0	14	6	0	2	2	20	43	8	10	6	2	12	11	15	12	8	171
3.1 - 10.0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	19	8	7	2	40	140	35	22	8	8	42	59	62	57	59	638

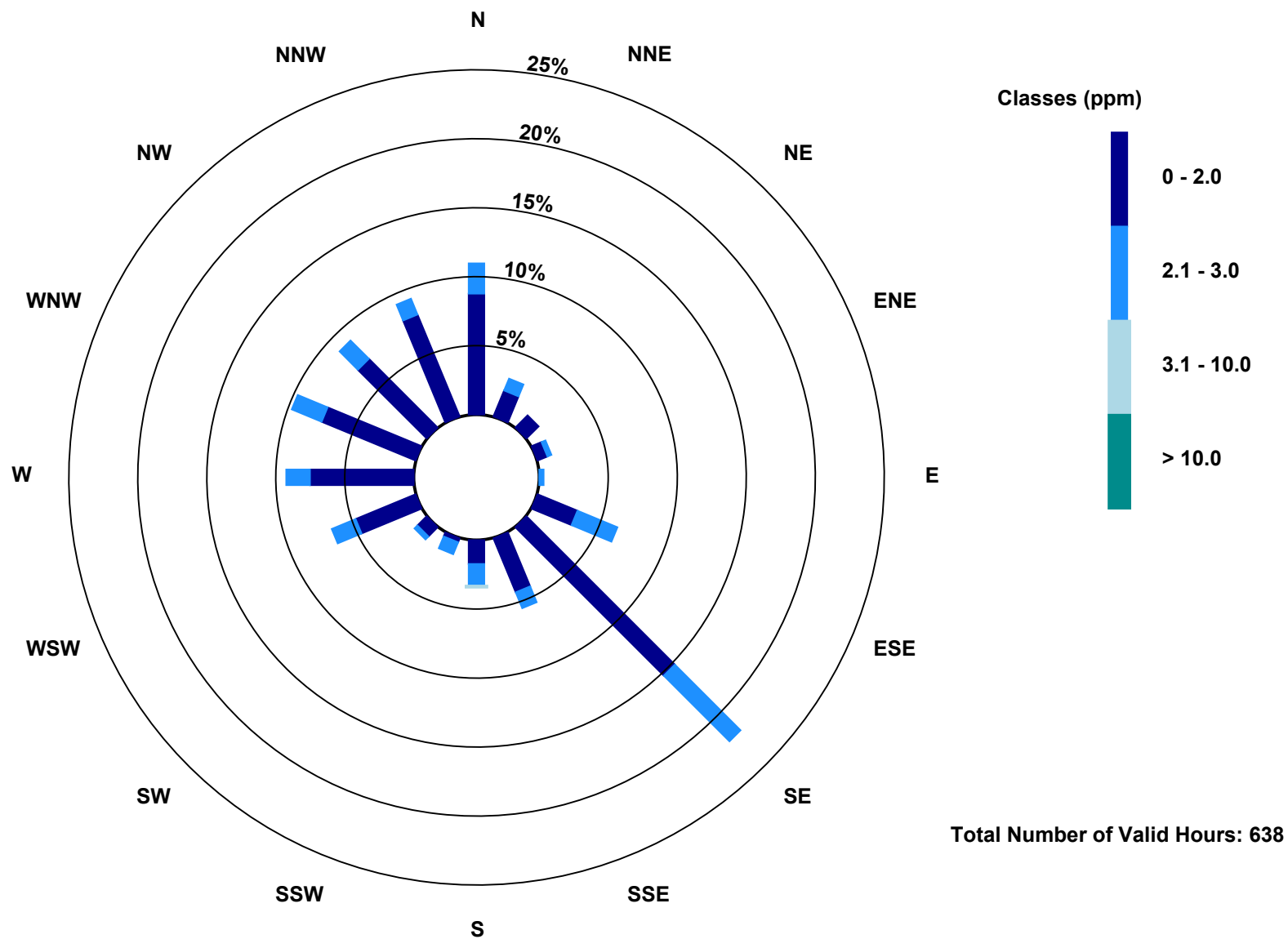
Total Number of Valid Hours: 638

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Lower Camp



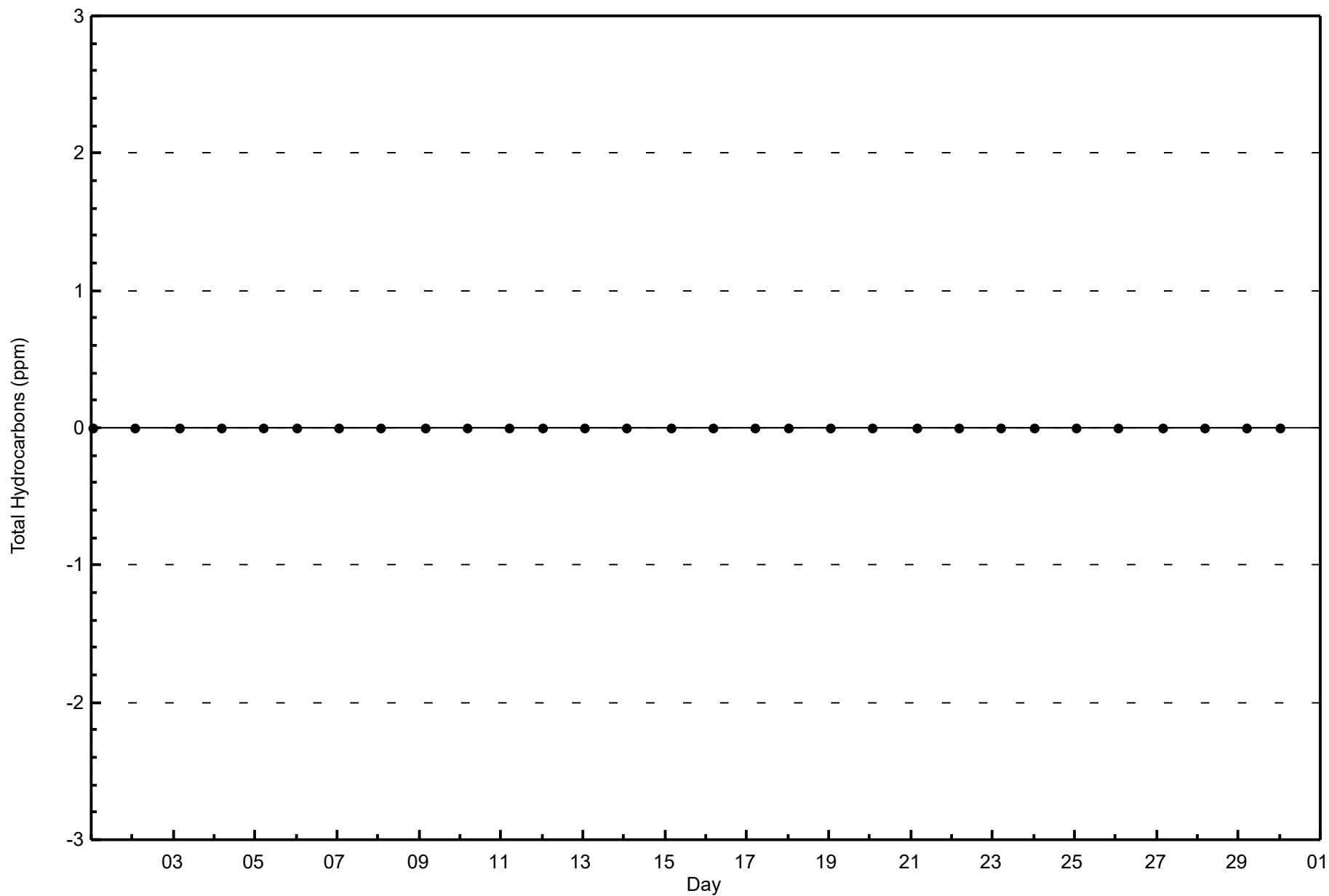


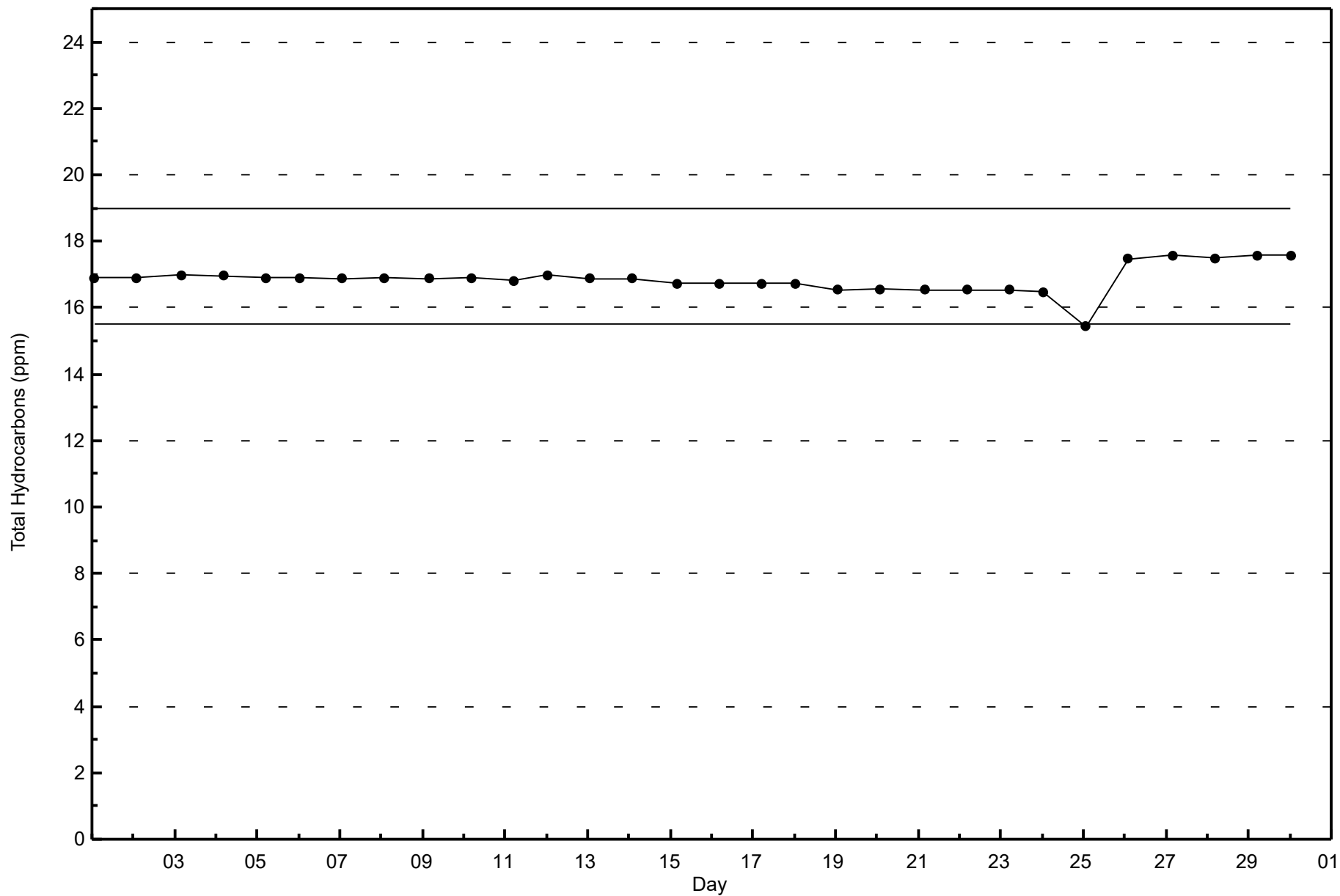
Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

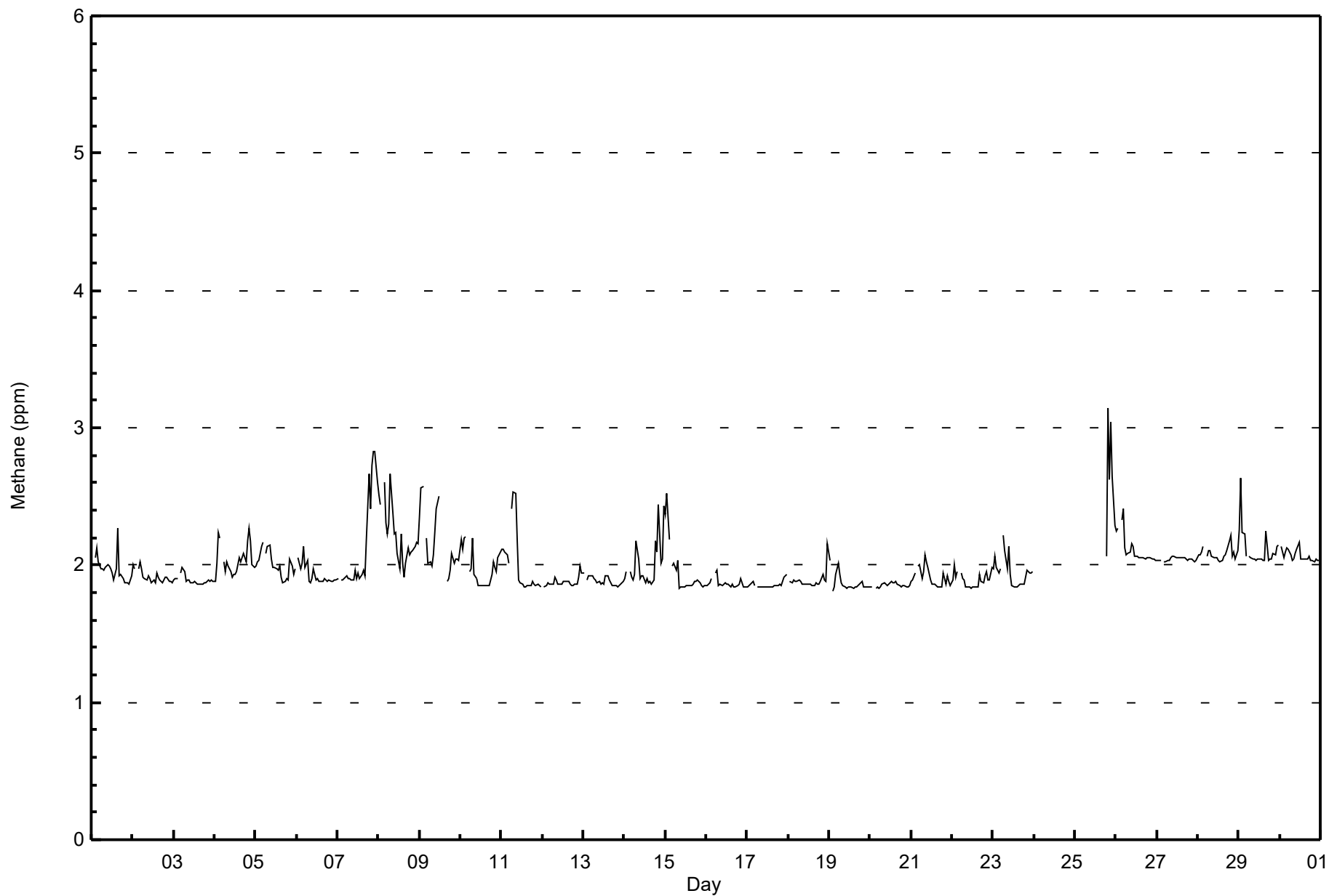
Lower Camp - April 2025

Number of Exceedences (AAAQO): Maximum Value: 3.1 ppm on Apr 25 20:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 2.2 ppm on Apr 8																		Hours in Service: 720 Hours of Data: 646 Hours of Missing Data: 74 Hours of Calibration: 37 Percent Operational Time: 94.9					
Minimum Value: 1.8 ppm on Apr 19 03:00 Maximum Diurnal Average: 2.1 ppm at hour 2 Monthly Average: 1.98 ppm																		Minimum Daily Average: 1.9 ppm on Apr 20 Minimum Diurnal Average: 1.9 ppm at hour 13 Percentiles: P ₁ = 1.8 P ₁₀ = 1.8 Q ₁ = 1.9 Median = 1.9 Q ₃ = 2.0 P ₉₀ = 2.2 P ₉₉ = 2.7																							
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-Apr	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3														
2-Apr	2.0	2.0	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0														
3-Apr	1.9	1.9	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	2.0														
4-Apr	1.9	2.0	2.2	2.2	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.1	2.1	2.0	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.3														
5-Apr	2.0	2.0	2.0	2.1	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.2															
6-Apr	Z	2.1	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1															
7-Apr	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.2	2.7	2.4	2.7	2.8	2.8	2.6	2.1	2.8															
8-Apr	2.5	2.4	Z	2.6	2.3	2.2	2.3	2.7	2.4	2.2	2.2	2.1	2.0	2.2	2.0	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.7															
9-Apr	2.4	2.6	2.6	Z	2.2	2.0	2.0	2.0	2.1	2.2	2.4	2.5	C	C	C	C	1.9	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.6															
10-Apr	2.2	2.1	2.2	2.2	Z	2.0	2.0	2.2	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.2															
11-Apr	2.1	2.1	2.1	2.1	2.0	Z	2.4	2.5	2.5	2.2	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	2.0	2.5															
12-Apr	Z	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	2.0															
13-Apr	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9															
14-Apr	1.9	2.0	Z	2.0	1.9	1.9	1.9	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.4	2.0	2.0	2.4	2.0	2.4															
15-Apr	2.4	2.5	2.2	Z	2.0	2.0	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.5															
16-Apr	1.9	1.9	1.9	1.9	Z	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.9	2.0															
17-Apr	1.8	1.8	1.9	1.9	1.9	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9															
18-Apr	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	1.9	2.2															
19-Apr	2.0	Z	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.0															
20-Apr	1.8	1.8	Z	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.9	1.9	1.9															
21-Apr	1.9	1.9	1.9	Z	2.0	2.0	1.9	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.1															
22-Apr	1.9	2.0	1.9	2.0	Z	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0															
23-Apr	2.0	2.1	2.0	1.9	2.0	Z	2.2	2.1	2.0	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	1.9	2.2															
24-Apr	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--															
25-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	3.1	2.6	3.0	2.6	2.3	--	3.1															
26-Apr	2.2	2.3	Z	2.3	2.4	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.4															
27-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1															
28-Apr	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	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.2															
29-Apr	2.3	2.6	2.2	2.2	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.6															
30-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2															
Diurnal Average																																									
Diurnal Maximum																																									
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation																																									



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	490	75.85	75.85
2.1 - 3.0	155	23.99	99.85
3.1 - 10.0	1	0.15	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 646

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	56	13	8	5	0	26	98	27	11	2	7	30	50	51	47	51	482
2.1 - 3.0	14	6	0	2	2	14	42	8	10	6	1	12	9	11	10	8	155
3.1 - 10.0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	70	19	8	7	2	40	140	35	22	8	8	42	59	62	57	59	638

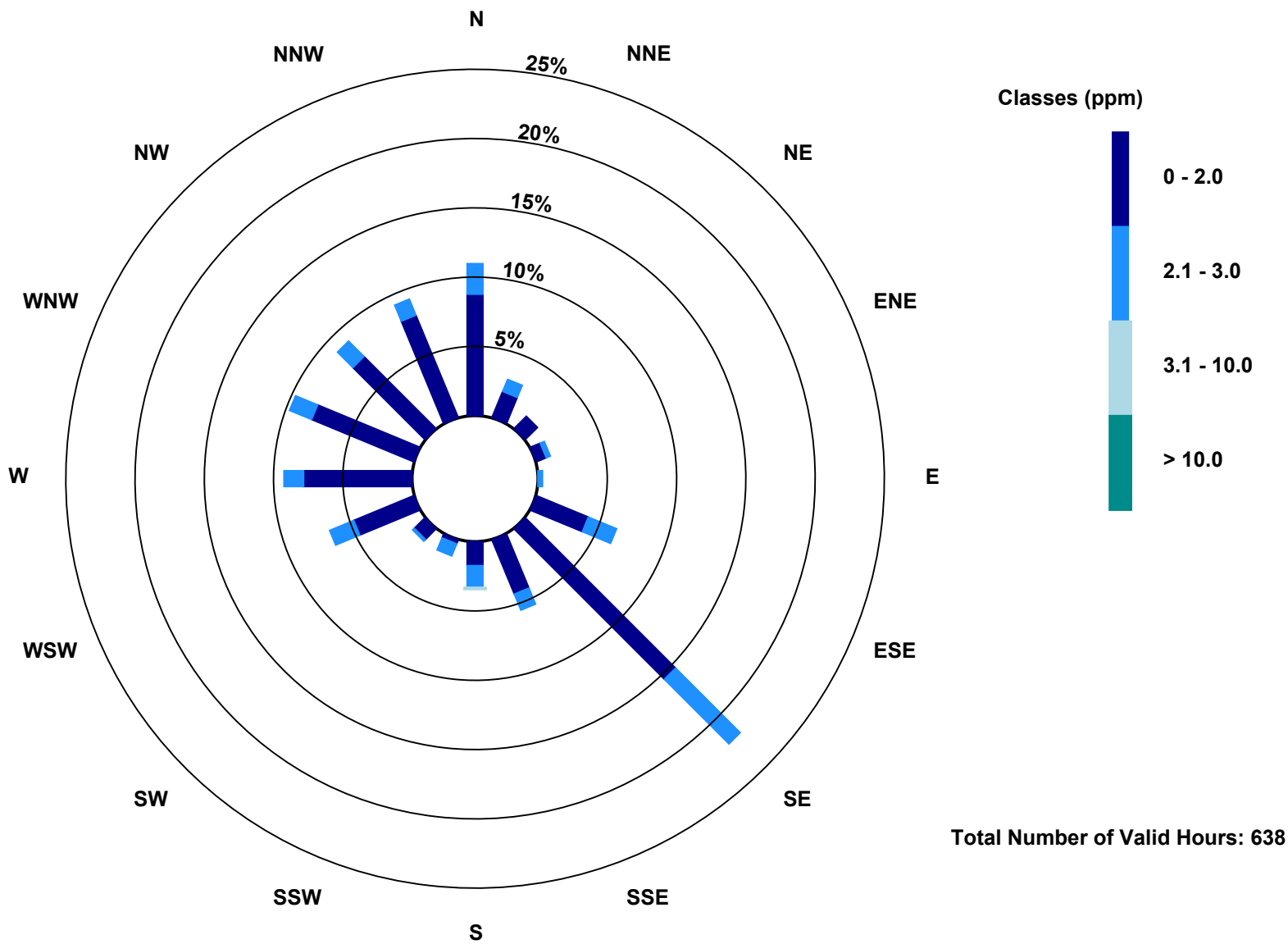
Total Number of Valid Hours: 638

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

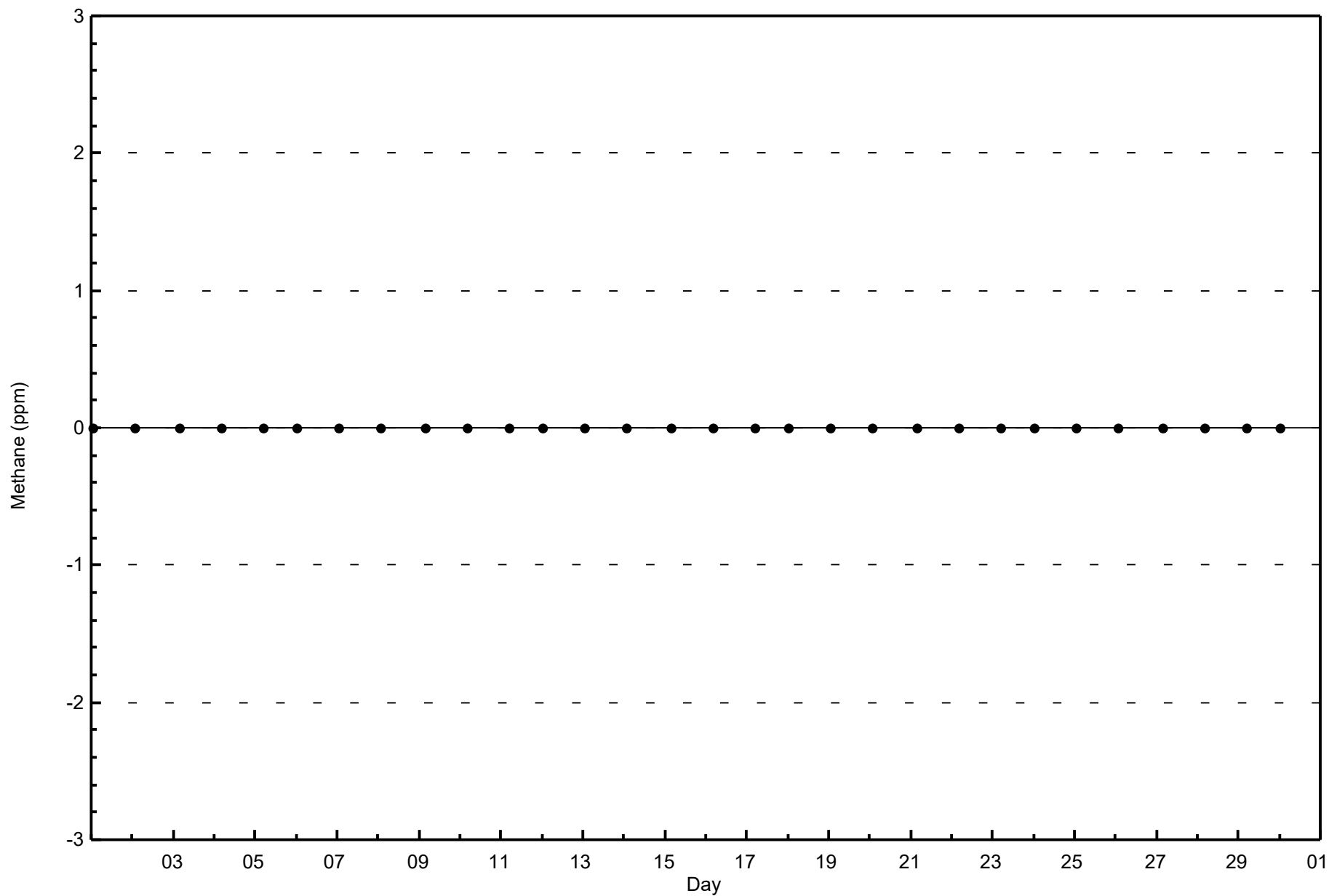
Methane (CH₄) - ppm
Lower Camp





Wood Buffalo Environmental Association
Zero Responses

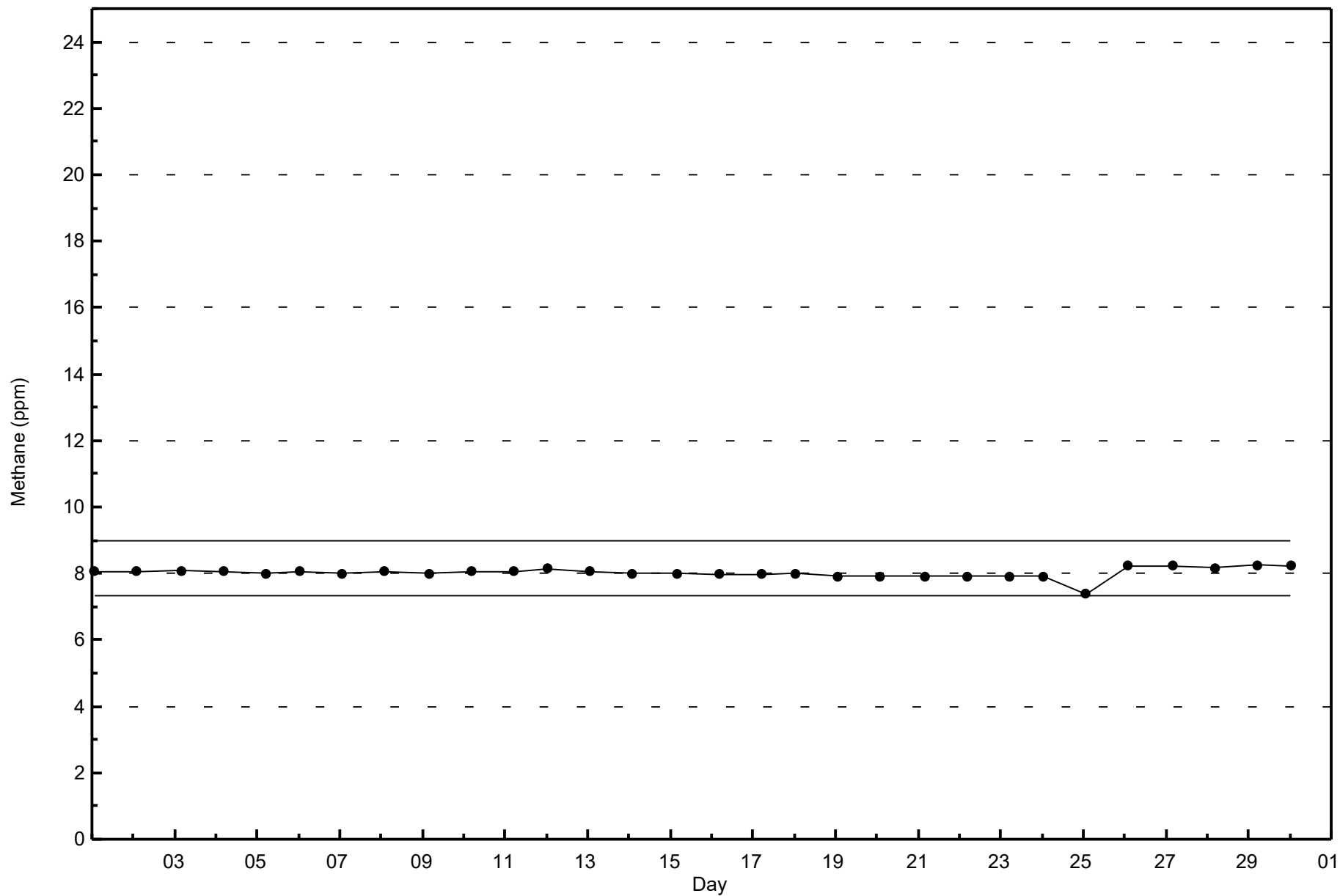
Methane (CH₄) - ppm
Lower Camp - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Lower Camp - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

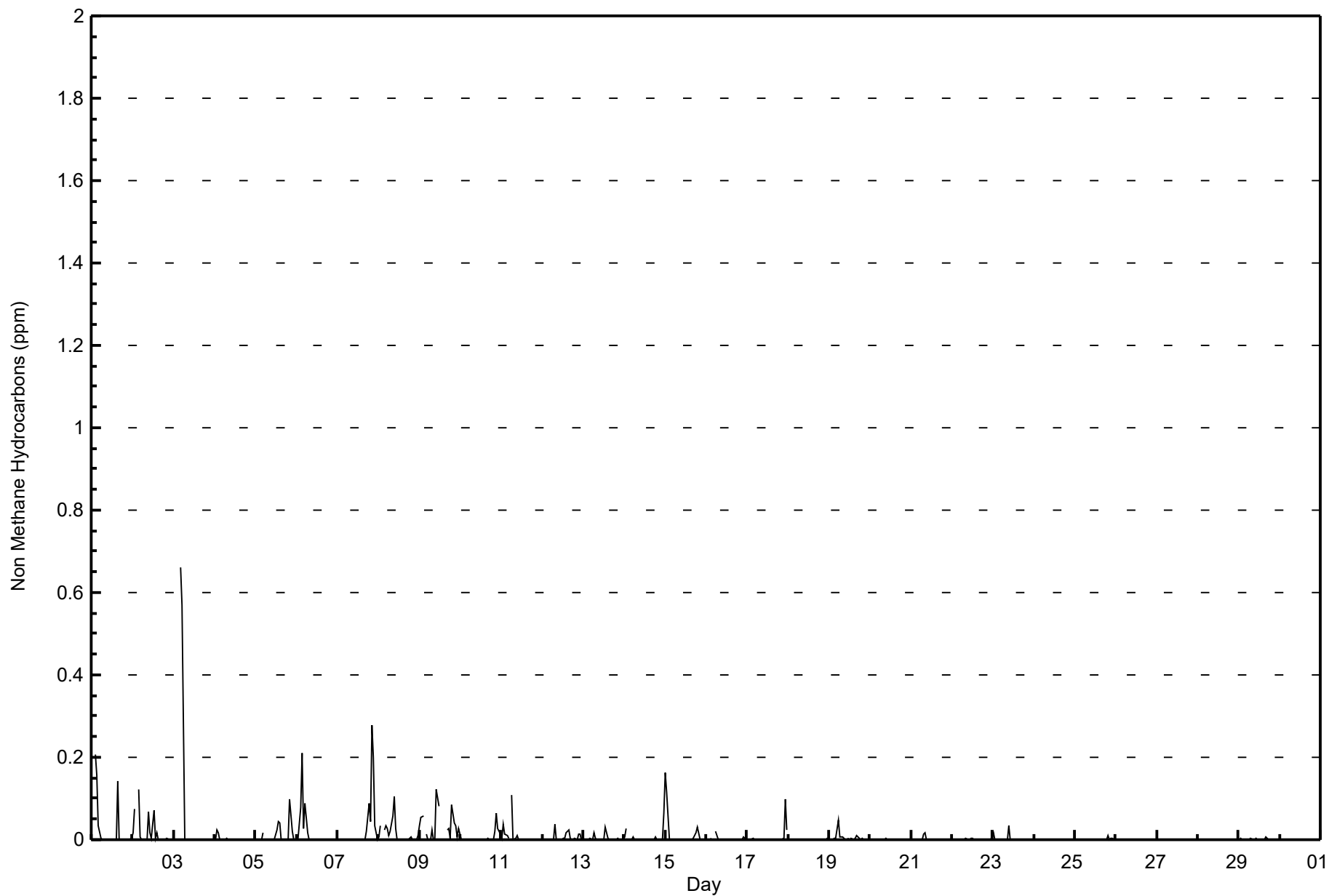
Lower Camp - April 2025

Maximum Value: 0.661 ppm on Apr 3 05:00																			Maximum Daily Average: 0.053 ppm on Apr 3										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 07:00																			Minimum Daily Average: 0.000 ppm on Apr 26										Hours of Data: 646	
Maximum Diurnal Average: 0.035 ppm at hour 5																			Minimum Diurnal Average: 0.002 ppm at hour 17										Hours of Missing Data: 74	
Monthly Average: 0.009 ppm																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.2										Hours of Calibration: 37	
																													Percent Operational Time: 94.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.057	Z	0.206	0.157	0.035	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.143	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.026	0.206				
2-Apr	0.016	0.074	Z	0.121	0.006	0.000	0.000	0.000	0.000	0.000	0.069	0.017	0.004	0.071	0.002	0.017	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.017	0.121			
3-Apr	0.000	0.000	0.000	Z	0.661	0.568	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	0.053	0.661				
4-Apr	0.000	0.022	0.018	0.000	Z	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.022				
5-Apr	0.000	0.000	0.000	0.000	0.017	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.045	0.041	0.000	0.000	0.000	0.000	0.000	0.097	0.020	0.000	0.011	0.097				
6-Apr	Z	0.000	0.078	0.211	0.028	0.090	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.211				
7-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.089	0.044	0.279	0.201	0.033	0.001	0.029	0.279				
8-Apr	0.007	0.033	Z	0.024	0.035	0.029	0.009	0.022	0.059	0.104	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.006	0.000	0.000	0.001	0.010	0.016	0.104				
9-Apr	0.033	0.054	0.057	Z	0.014	0.000	0.000	0.025	0.000	0.000	0.123	0.083	C	C	C	C	0.022	0.028	0.004	0.084	0.040	0.036	0.006	0.028	0.033	0.123				
10-Apr	0.000	0.000	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.021	0.065	0.027	0.014	0.006	0.065				
11-Apr	0.004	0.038	0.013	0.012	0.004	Z	0.109	0.001	0.003	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.109				
12-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.000	0.000	0.000	0.000	0.003	0.005	0.016	0.022	0.003	0.000	0.000	0.003	0.000	0.015	0.013	0.000	0.005	0.036				
13-Apr	0.003	Z	0.000	0.000	0.002	0.000	0.017	0.003	0.000	0.000	0.000	0.000	0.000	0.032	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.003	0.032				
14-Apr	0.007	0.027	Z	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	0.007	0.000	0.000	0.000	0.000	0.065	0.005	0.065				
15-Apr	0.163	0.114	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.011	0.017	0.030	0.002	0.000	0.000	0.000	0.015	0.163				
16-Apr	0.000	0.000	0.000	0.004	Z	0.022	0.009	0.000	0.000	0.000	0.000	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	0.002	0.022				
17-Apr	0.000	0.000	0.000	0.003	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.097	0.025	0.006	0.097				
18-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.003				
19-Apr	0.000	Z	0.000	0.003	0.002	0.047	0.007	0.007	0.007	0.001	0.000	0.003	0.000	0.004	0.000	0.002	0.011	0.006	0.000	0.005	0.000	0.000	0.000	0.000	0.005	0.047				
20-Apr	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002				
21-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.012	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	0.000	0.000	0.001	0.015				
22-Apr	0.000	0.000	0.000	0.000	Z	0.001	0.001	0.000	0.003	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.001	0.004				
23-Apr	0.016	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.002	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	0.000	0.002	0.032				
24-Apr	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	UO	UO	UO	UO	UO	UO	UO	UO	--	--				
25-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.000	0.011	0.002	0.005	0.003	0.000	--	0.011			
26-Apr	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				
27-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
28-Apr	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				
29-Apr	0.000	0.005	0.002	0.000	0.000	Z	0.000	0.004	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007				
30-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
		0.013	0.015	0.016	0.023	0.035	0.033	0.006	0.004	0.003	0.008	0.006	0.003	0.004	0.003	0.003	0.006	0.002	0.002	0.004	0.006	0.015	0.012	0.006	0.005	Diurnal Average				
		0.163	0.114	0.206	0.211	0.661	0.568	0.109	0.036	0.059	0.104	0.123	0.083	0.071	0.045	0.041	0.143	0.022	0.028	0.089	0.084	0.279	0.201	0.097	0.065	Diurnal Maximum				
Z - zerospan		C - Calibration						M - Maintenance						UO - Unstable Operation																



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	543	84.06	84.06
0.006 - 0.05	74	11.46	95.51
0.06 - 0.1	21	3.25	98.76
> 0.1	8	1.24	100.00

Total Number of Valid Hours: 646

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	68	17	7	5	1	27	119	32	19	7	7	39	46	40	48	54	536
0.006 - 0.05	2	2	1	2	1	6	12	2	3	1	1	2	11	16	6	5	73
0.06 - 0.1	0	0	0	0	0	4	6	1	0	0	0	1	2	5	2	0	21
> 0.1	0	0	0	0	0	3	3	0	0	0	0	0	0	1	1	0	8
Totals	70	19	8	7	2	40	140	35	22	8	8	42	59	62	57	59	638

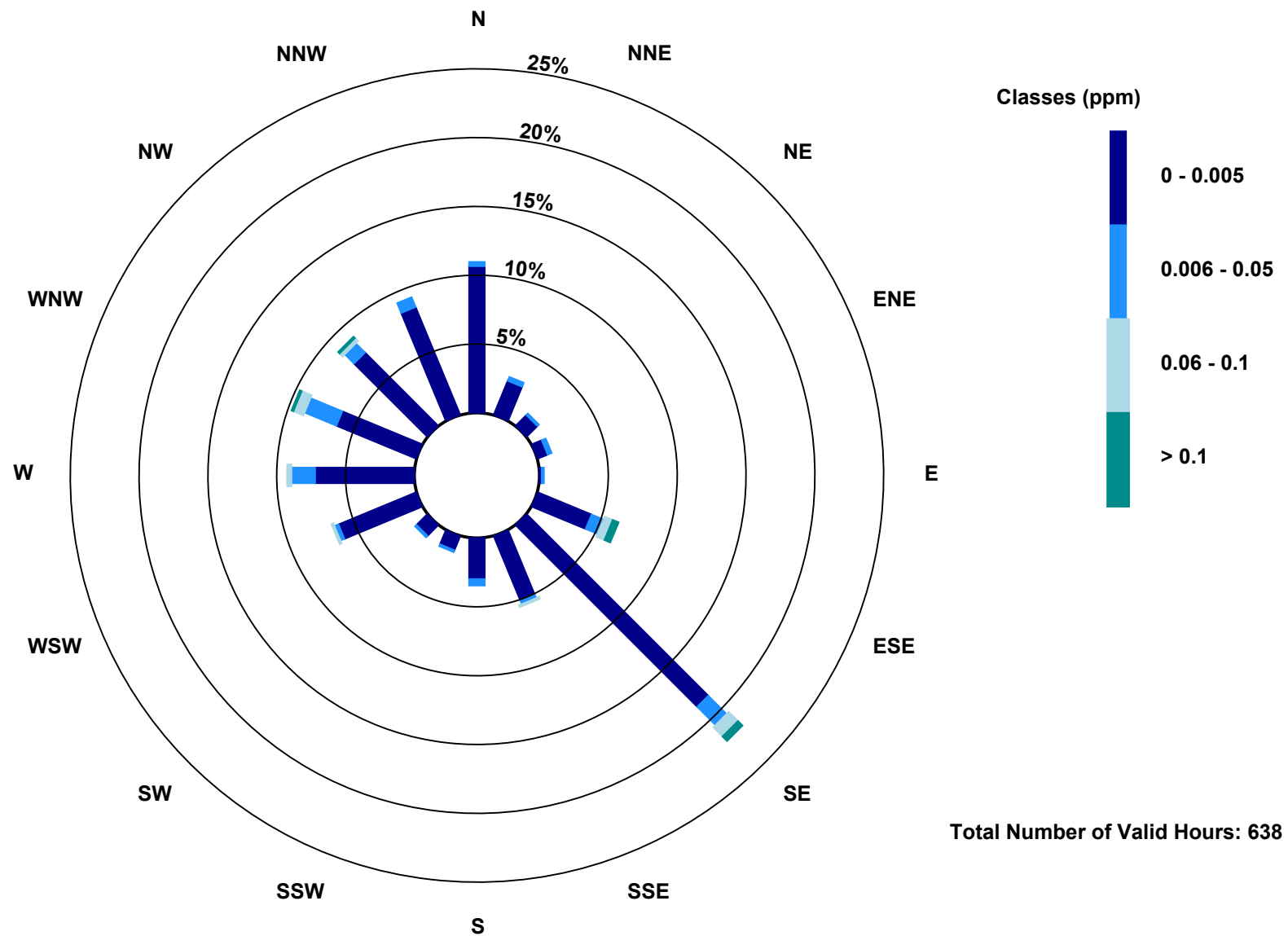
Total Number of Valid Hours: 638

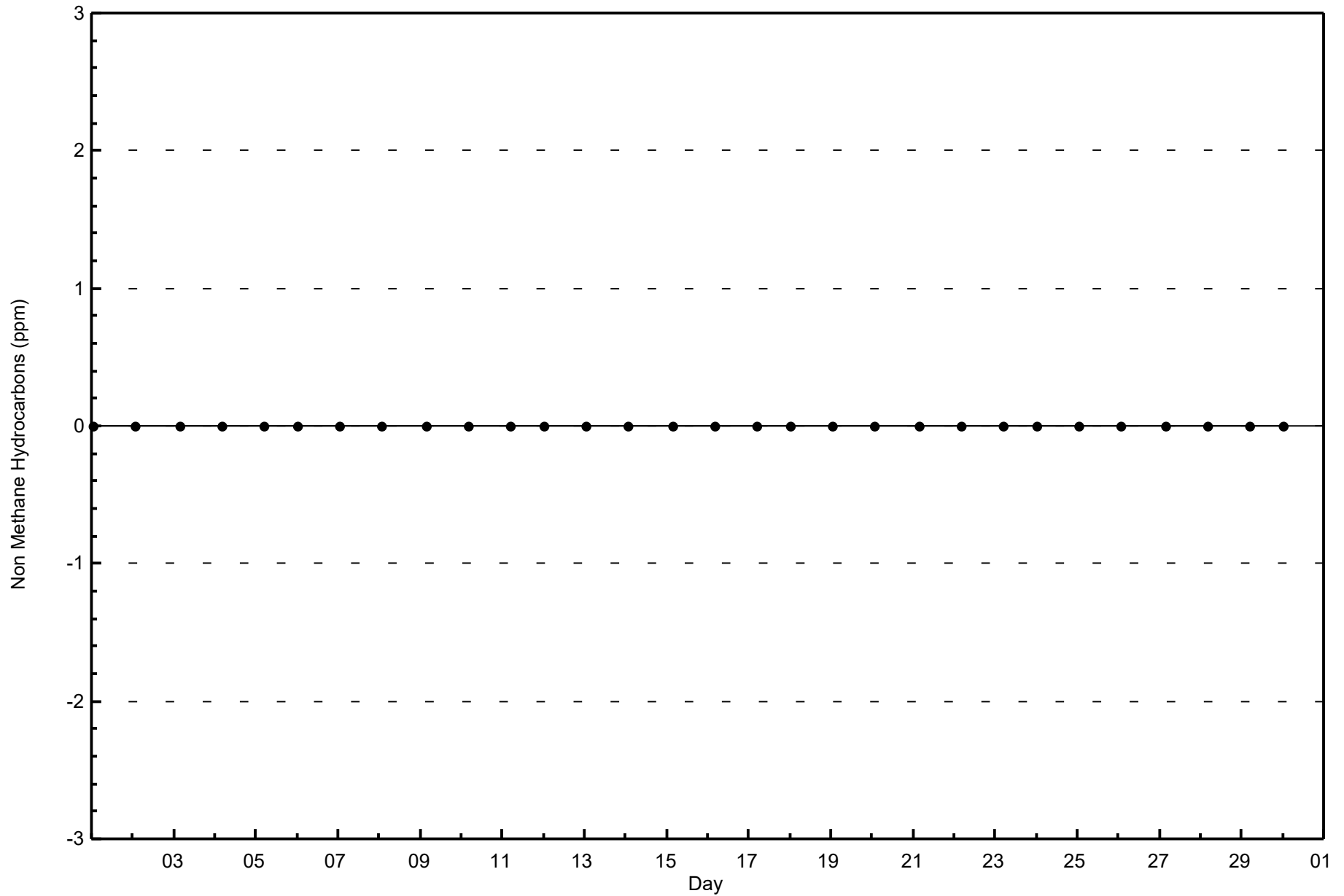
Total Number of Hours: 720

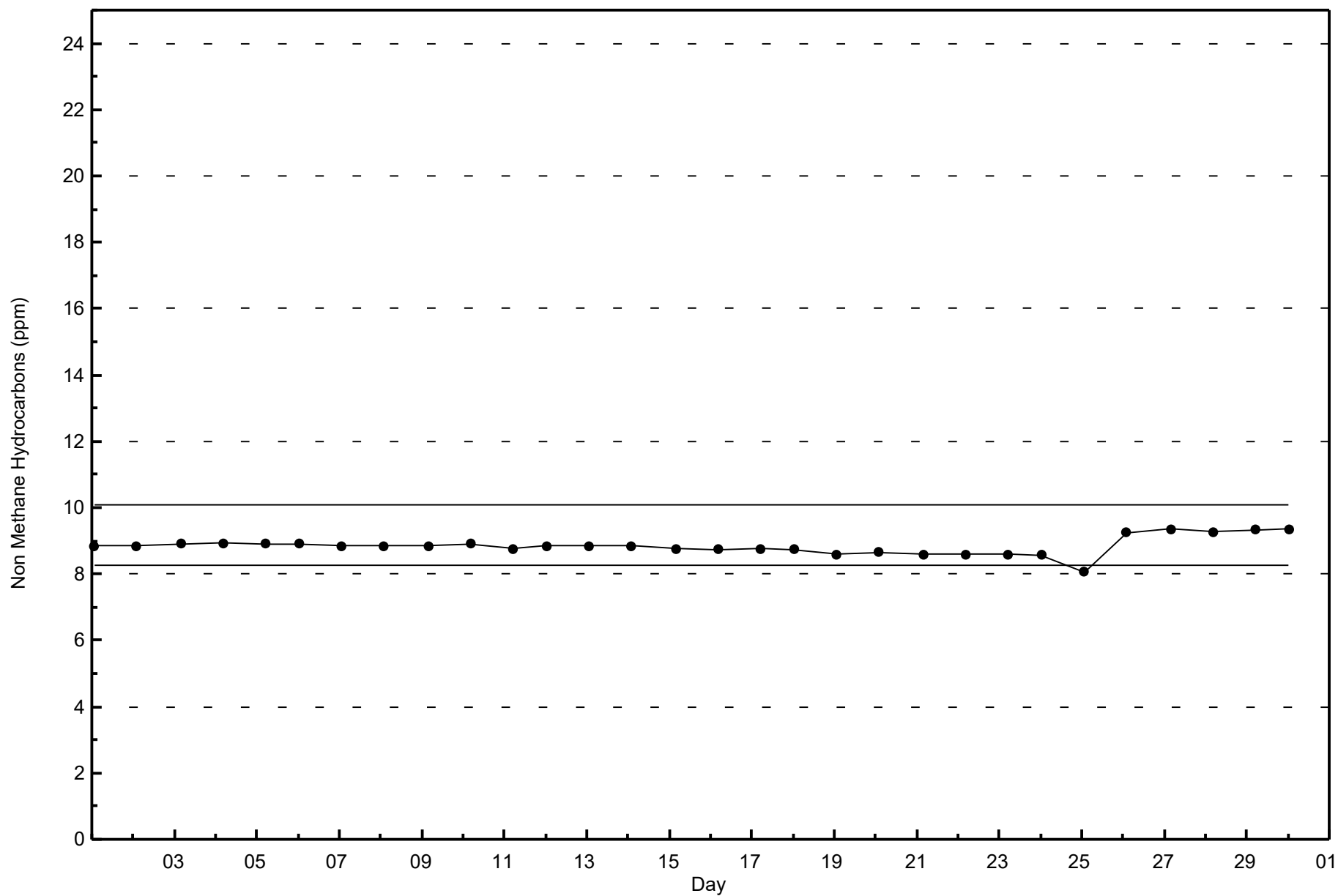


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp









Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

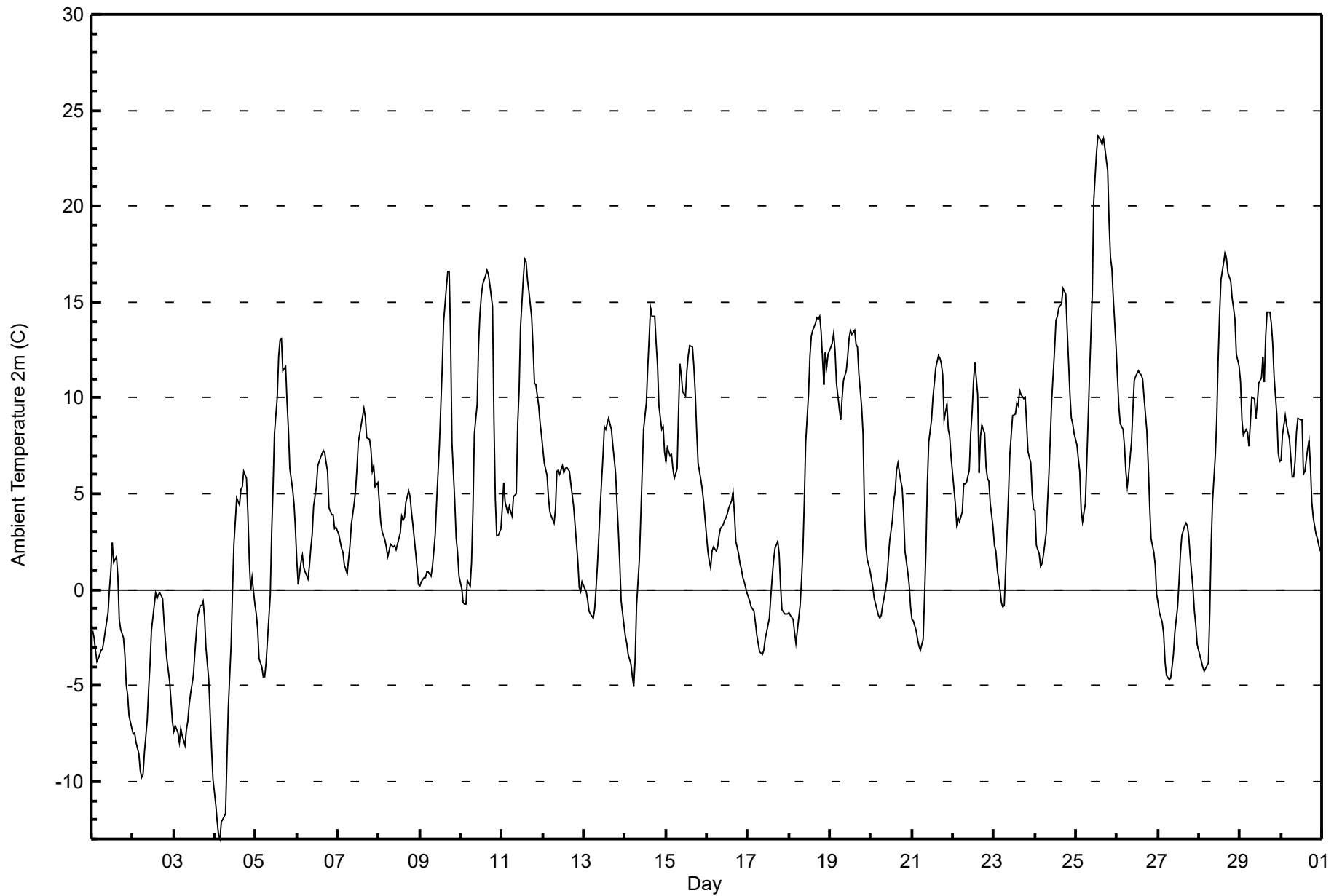
Lower Camp - April 2025

Maximum Value: 23.6 C on Apr 25 14:00																				Maximum Daily Average: 15.0 C on Apr 25					Hours in Service: 720			
Minimum Value: -13.0 C on Apr 4 04:00																				Minimum Daily Average: -5.3 C on Apr 3					Hours of Data: 720			
Maximum Diurnal Average: 9.6 C at hour 16																				Minimum Diurnal Average: 0.0 C at hour 6					Hours of Missing Data: 0			
Monthly Average: 4.63 C																				Percentiles: P ₁ = -9.9 P ₁₀ = -3.2 Q ₁ = 0.1 Median = 4.4 Q ₃ = 8.9 P ₉₀ = 13.1 P ₉₉ = 21.3					Hours of Calibration: 0			
																				Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	-2.1	-2.5	-3.2	-3.7	-3.6	-3.2	-3.1	-2.7	-2.1	-1.2	0.0	1.0	2.4	1.4	1.7	0.7	-1.5	-2.1	-2.5	-3.4	-5.0	-5.5	-6.6	-7.3	-2.2	2.4		
2-Apr	-7.5	-7.4	-8.0	-8.6	-9.4	-9.8	-9.7	-8.5	-6.8	-5.2	-3.9	-2.1	-0.8	-0.2	-0.5	-0.2	-0.2	-0.5	-1.6	-2.7	-3.6	-4.7	-5.8	-6.9	-4.8	-0.2		
3-Apr	-7.4	-7.1	-7.4	-8.0	-7.3	-7.6	-8.1	-7.3	-6.9	-6.0	-5.5	-4.5	-3.4	-2.3	-1.4	-0.9	-0.8	-0.6	-1.4	-3.0	-4.7	-6.5	-8.2	-9.9	-5.3	-0.6		
4-Apr	-11.2	-12.0	-12.8	-13.0	-12.1	-11.9	-11.7	-8.9	-6.1	-2.9	-0.1	2.4	3.5	4.8	4.4	5.2	5.3	6.1	5.8	4.0	1.6	0.0	0.6	-0.7	-2.5	6.1		
5-Apr	-1.3	-2.0	-3.6	-4.0	-4.5	-4.5	-3.8	-2.6	-0.3	3.0	5.3	8.2	10.1	12.1	13.0	13.1	11.4	11.6	9.8	8.3	6.3	5.2	4.5	3.1	4.1	13.1		
6-Apr	1.5	0.2	1.4	1.8	1.1	0.9	0.6	1.2	2.1	2.9	4.3	5.4	6.5	6.7	6.9	7.2	7.1	6.6	6.2	4.3	3.9	3.9	3.2	3.2	3.7	7.2		
7-Apr	2.9	2.6	2.2	2.0	1.3	0.9	1.6	2.3	3.4	4.5	5.2	6.3	7.7	8.2	9.0	9.5	9.0	7.9	7.9	7.3	6.2	6.4	5.4	5.6	5.2	9.5		
8-Apr	4.6	3.5	3.0	2.6	2.2	1.7	2.0	2.4	2.3	2.3	2.1	2.3	2.9	3.8	3.6	3.8	4.6	5.1	4.8	4.1	3.4	1.9	1.1	0.2	2.9	5.1		
9-Apr	0.2	0.4	0.6	0.6	0.9	0.9	0.7	1.2	2.0	2.9	4.6	7.6	9.6	11.5	14.0	15.8	16.6	16.6	13.1	7.6	4.6	2.7	1.9	0.7	5.7	16.6		
10-Apr	0.0	-0.7	-0.8	-0.8	0.5	0.2	1.4	4.2	8.1	9.7	12.7	14.4	15.4	15.9	16.4	16.7	16.4	16.0	14.8	8.9	4.7	2.8	2.8	3.2	7.6	16.7		
11-Apr	4.3	5.6	4.5	3.9	4.3	4.1	3.8	4.9	5.0	8.6	10.4	13.7	16.2	17.3	17.1	16.2	15.6	14.2	12.6	10.8	10.7	9.6	8.7	8.1	9.6	17.3		
12-Apr	7.3	6.6	5.9	4.8	4.1	3.9	3.5	4.2	6.2	6.2	6.0	6.5	6.1	6.3	6.4	6.2	5.5	4.9	4.4	3.4	1.5	0.1	-0.1	0.4	4.6	7.3		
13-Apr	0.0	-0.1	-0.6	-1.1	-1.3	-1.5	-1.0	0.1	1.3	4.3	5.6	7.0	8.5	8.3	8.9	8.6	8.3	7.5	6.1	4.5	3.0	1.4	-0.6	-1.8	3.1	8.9		
14-Apr	-2.5	-2.8	-3.4	-3.9	-4.5	-5.1	-3.6	-0.8	1.5	3.7	6.1	8.3	9.8	11.6	13.1	14.7	14.3	14.2	12.9	11.7	9.6	8.4	8.5	7.2	5.4	14.7		
15-Apr	6.7	7.4	7.0	7.0	6.3	5.8	6.3	9.2	11.8	11.2	10.3	10.1	11.4	12.2	12.8	12.7	11.6	10.2	8.3	6.6	5.7	5.2	4.6	3.7	8.5	12.8		
16-Apr	2.0	1.5	1.1	2.0	2.2	2.0	2.2	2.8	3.2	3.4	3.6	3.8	4.0	4.3	4.6	5.1	4.0	2.5	1.9	1.4	1.1	0.6	0.4	-0.2	2.5	5.1		
17-Apr	-0.4	-0.6	-0.9	-1.1	-1.7	-2.4	-2.8	-3.2	-3.4	-3.1	-2.6	-2.2	-1.5	-0.4	0.6	1.5	2.2	2.5	1.9	0.2	-1.0	-1.3	-1.3	-1.3	-0.9	2.5		
18-Apr	-1.2	-1.3	-1.6	-2.2	-2.8	-2.1	-0.9	0.5	2.1	4.6	7.7	10.2	12.1	13.2	13.5	13.9	14.2	14.1	14.3	13.4	10.7	12.4	11.6	12.3	7.0	14.3		
19-Apr	12.7	12.8	13.4	12.4	10.8	9.4	8.9	10.0	10.9	11.4	12.2	13.1	13.6	13.3	13.5	12.8	12.6	11.3	9.5	8.2	4.2	2.2	1.6	1.0	10.1	13.6		
20-Apr	0.5	0.1	-0.5	-1.0	-1.3	-1.5	-1.4	-0.8	0.0	0.5	1.5	2.5	3.6	4.6	5.2	6.3	6.6	5.7	5.3	4.0	2.0	0.9	0.2	-0.9	1.8	6.6		
21-Apr	-1.5	-1.6	-2.1	-2.6	-3.0	-3.2	-2.6	-0.3	2.1	5.5	7.7	8.9	10.0	10.8	11.6	12.2	12.1	11.8	11.2	8.8	9.7	8.3	8.0	6.9	5.4	12.2		
22-Apr	5.3	4.5	3.4	3.8	3.5	4.1	5.5	5.5	5.6	6.2	8.1	9.3	10.8	11.8	10.2	6.1	8.0	8.6	8.1	6.4	5.8	5.7	4.5	3.3	6.4	11.8		
23-Apr	2.3	2.0	1.0	0.0	-0.7	-0.9	-0.8	1.1	4.8	7.1	8.1	9.1	9.2	9.8	9.6	10.4	10.1	10.0	10.0	8.7	7.2	6.6	5.0	4.2	5.6	10.4		
24-Apr	4.1	2.3	1.9	1.2	1.4	1.8	2.9	4.5	6.1	8.1	10.0	12.5	14.0	14.2	14.7	14.9	15.7	15.6	15.4	13.6	10.2	8.9	8.7	8.1	8.8	15.7		
25-Apr	7.6	6.8	6.1	4.2	3.6	4.5	6.6	8.8	11.2	15.5	20.2	21.6	22.8	23.6	23.4	23.2	23.5	23.0	21.8	19.1	17.3	16.8	15.2	12.6	15.0	23.6		
26-Apr	11.1	9.6	8.7	8.4	7.5	6.2	5.3	6.0	7.7	9.4	10.9	11.1	11.4	11.3	11.2	11.0	10.0	8.3	6.5	4.4	2.7	1.9	1.3	-0.2	7.6	11.4		
27-Apr	-0.7	-1.2	-1.7	-2.3	-3.8	-4.4	-4.7	-4.6	-4.0	-3.3	-2.2	-0.9	0.4	1.9	2.8	3.4	3.5	3.3	2.8	1.7	0.1	-1.1	-1.8	-2.9	-0.8	3.5		
28-Apr	-3.4	-3.7	-4.0	-4.3	-4.1	-3.8	-1.2	2.4	4.7	7.0	9.0	12.0	14.3	16.2	17.1	17.6	17.3	16.5	16.1	15.2	14.7	14.1	12.3	11.6	8.1	17.6		
29-Apr	10.8	8.9	8.1	8.3	8.2	7.5	8.7	10.0	10.0	8.9	9.7	10.8	11.0	12.2	10.8	13.2	14.5	14.5	13.9	12.9	11.1	9.1	7.2	6.6	10.3	14.5		
30-Apr	6.8	8.1	9.1	8.6	8.2	7.8	5.9	5.9	6.6	8.2	8.9	8.9	8.9	6.0	6.2	7.4	7.8	6.4	4.6	3.7	2.9	2.6	2.3	2.0	6.4	9.1		
1.7 1.3 0.9 0.5 0.2 0.0 0.4 1.6 3.0 4.4 5.9 7.2 8.4 9.0 9.4 9.6 9.5 9.1 8.1 6.5 4.9 4.0 3.2 2.4																								Diurnal Average				
12.7 12.8 13.4 12.4 10.8 9.4 8.9 10.0 11.8 15.5 20.2 21.6 22.8 23.6 23.4 23.2 23.5 23.0 21.8 19.1 17.3 16.8 15.2 12.6																								Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Lower Camp - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	177	24.58	24.58
0 - 10	394	54.72	79.31
10 - 20	140	19.44	98.75
> 20	9	1.25	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) - %

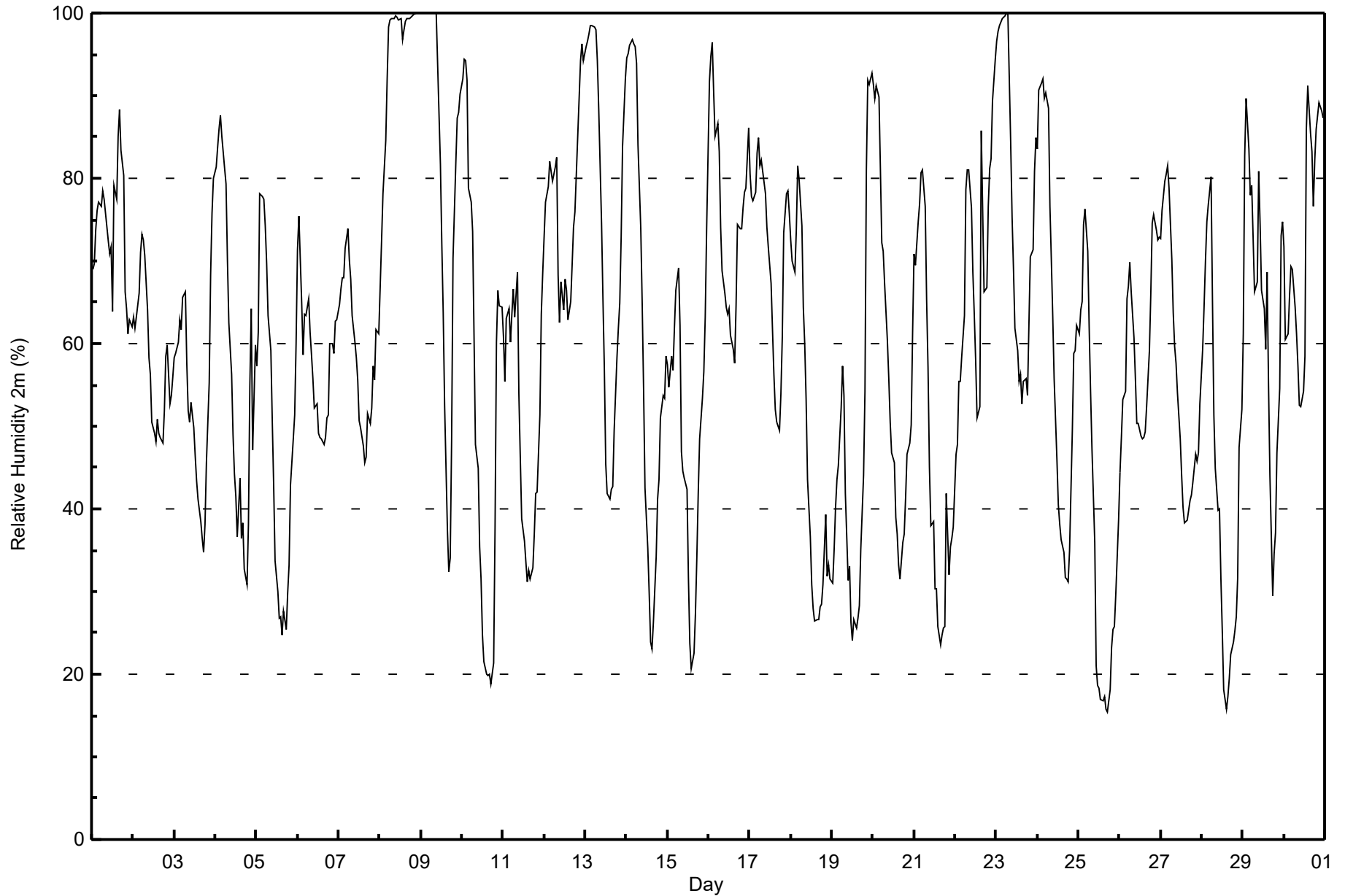
Lower Camp - April 2025

Maximum Value: 100.0 % on Apr 8 23:00																				Maximum Daily Average: 95.0 % on Apr 8					Hours in Service: 720	
Minimum Value: 15.4 % on Apr 25 18:00																				Minimum Daily Average: 38.0 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 78.1 % at hour 6																				Minimum Diurnal Average: 44.2 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 61.06 %																				Percentiles: P ₁ = 18.1 P ₁₀ = 31.4 Q ₁ = 45.9 Median = 61.7 Q ₃ = 76.6 P ₉₀ = 91.3 P ₉₉ = 100.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	68.9	69.7	73.8	76.1	77.1	76.5	78.4	77.5	75.8	72.4	70.8	71.6	63.9	79.2	77.5	85.1	88.3	83.5	80.4	66.2	64.2	61.2	62.9	62.0	73.5	88.3
2-Apr	63.1	61.9	63.2	66.1	70.9	73.2	72.6	70.7	64.0	58.4	56.3	50.6	49.1	48.2	50.9	49.2	48.7	48.0	51.9	58.4	59.9	52.7	53.7	55.9	58.2	73.2
3-Apr	58.3	58.8	60.1	62.9	61.6	65.6	66.3	57.6	51.9	50.5	52.9	49.9	46.5	43.5	41.1	38.5	36.4	34.7	38.1	45.5	55.3	68.3	75.8	79.9	54.2	79.9
4-Apr	81.4	83.8	85.9	87.6	85.1	81.2	79.3	70.1	62.5	56.2	49.0	44.2	41.6	36.6	43.8	36.5	38.3	32.7	30.9	38.1	54.9	64.2	47.1	59.8	57.9	87.6
5-Apr	57.3	61.3	78.1	77.8	77.5	74.3	69.7	63.4	59.2	50.7	42.9	33.7	29.9	26.7	27.0	24.7	27.6	25.4	29.9	33.1	42.9	48.5	51.4	60.1	48.9	78.1
6-Apr	71.3	75.4	64.9	58.6	63.5	63.4	65.4	61.4	58.6	55.8	52.2	52.8	49.1	48.7	48.5	47.8	48.6	51.1	51.3	60.1	60.0	58.8	62.7	62.9	58.0	75.4
7-Apr	64.8	66.6	68.0	68.0	71.4	73.9	70.2	67.8	63.4	60.2	58.4	55.6	50.8	49.8	47.6	45.6	46.2	51.5	50.3	52.2	57.3	55.6	61.7	61.2	59.1	73.9
8-Apr	66.8	72.4	78.1	84.5	92.1	98.3	99.2	99.4	99.3	99.6	99.5	99.2	99.2	96.8	98.0	98.9	99.3	99.3	99.6	99.6	99.9	100.0	100.0	100.0	95.0	100.0
9-Apr	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.8	81.7	72.1	63.7	52.6	37.5	32.3	34.1	48.2	70.3	81.9	87.3	88.0	90.1	80.6	100.0
10-Apr	92.0	94.4	94.3	91.8	78.8	77.1	73.6	60.8	47.9	44.9	35.4	31.5	24.8	21.6	20.1	19.8	19.9	18.8	21.4	37.7	60.1	66.5	64.6	64.5	52.6	94.4
11-Apr	60.9	55.5	63.1	64.2	60.2	63.5	66.6	63.3	68.7	53.9	46.2	38.9	36.1	33.5	31.2	32.6	31.4	33.0	37.0	41.9	42.1	51.4	63.5	68.5	50.3	68.7
12-Apr	72.8	77.2	79.1	82.0	80.8	79.7	81.4	82.6	68.3	62.6	67.4	64.1	67.8	66.5	62.8	65.0	69.5	74.1	76.0	80.6	89.7	94.2	96.2	94.2	76.4	96.2
13-Apr	96.0	96.7	97.4	98.4	98.5	98.4	98.0	94.3	88.3	74.6	65.4	56.9	45.4	41.8	41.2	42.4	42.7	49.5	58.2	61.9	64.9	72.9	83.9	92.1	73.3	98.5
14-Apr	94.5	95.1	96.1	96.7	96.3	95.9	93.9	84.0	73.9	64.9	54.6	42.5	35.3	29.8	23.9	23.0	26.3	34.2	41.2	43.5	51.1	53.8	53.5	58.5	60.9	96.7
15-Apr	57.4	54.8	58.6	56.8	61.8	66.4	69.2	62.2	47.0	44.6	43.7	42.4	31.6	23.7	20.7	22.5	27.2	34.0	41.9	48.5	53.3	56.5	63.2	73.9	48.4	73.9
16-Apr	91.6	94.8	96.4	90.6	85.1	86.5	83.2	74.1	68.8	66.1	64.4	63.6	64.3	61.0	59.3	57.6	64.6	74.5	74.0	73.8	76.4	78.2	78.9	86.1	75.6	96.4
17-Apr	80.5	77.9	77.3	78.3	83.1	85.0	81.6	82.2	79.4	78.1	74.0	71.7	67.3	61.7	56.3	52.1	50.5	49.5	53.8	60.9	73.4	78.1	78.5	75.8	71.1	85.0
18-Apr	72.5	70.0	68.6	73.8	81.5	79.9	74.2	64.5	60.1	53.3	43.6	36.6	30.8	28.0	26.5	26.5	26.7	28.1	28.5	30.8	39.4	31.9	33.3	31.6	47.5	81.5
19-Apr	31.0	35.1	40.1	43.5	45.3	52.2	57.4	53.7	41.9	31.3	33.1	26.3	24.1	26.6	25.5	26.7	28.3	35.0	44.1	54.3	81.0	91.9	91.3	92.8	46.4	92.8
20-Apr	91.4	89.7	91.2	89.9	81.3	72.1	71.2	67.2	60.4	55.8	50.6	46.8	45.7	39.0	36.9	33.3	31.5	35.9	36.9	41.4	46.6	48.0	50.1	61.3	57.3	91.4
21-Apr	70.9	69.4	74.8	76.9	80.7	81.1	76.7	65.2	57.1	45.0	37.9	38.4	30.3	30.4	25.8	23.5	24.8	25.7	25.8	41.8	32.1	35.4	36.5	37.9	47.7	81.1
22-Apr	46.6	47.7	55.4	55.4	58.3	63.4	78.6	81.0	81.0	76.5	68.6	63.6	57.9	51.0	52.3	85.8	76.1	66.3	66.8	76.6	81.2	82.4	89.3	94.3	69.0	94.3
23-Apr	96.6	97.7	98.4	99.3	99.5	99.7	100.0	99.9	84.2	75.3	69.0	61.9	59.1	55.4	56.2	52.7	55.5	55.7	53.8	62.3	70.5	71.3	80.8	84.9	76.7	100.0
24-Apr	83.6	90.8	91.6	92.1	89.6	90.4	88.5	76.6	70.1	63.5	55.7	45.9	40.5	38.2	36.2	34.8	31.7	31.4	31.2	34.9	49.4	58.8	59.2	62.2	60.3	92.1
25-Apr	61.2	64.1	65.1	74.4	76.3	71.2	62.1	54.2	47.3	36.0	21.0	18.7	18.2	17.0	16.8	17.2	15.8	15.4	18.2	23.3	25.4	25.7	29.7	38.6	38.0	76.3
26-Apr	44.5	48.7	53.2	54.3	65.4	66.9	69.9	66.4	60.7	55.7	50.3	50.3	48.8	48.5	48.6	49.3	52.4	59.1	66.1	74.6	75.6	73.7	72.6	72.8	59.5	75.6
27-Apr	72.7	76.2	79.6	80.5	81.6	78.8	70.1	63.7	59.6	57.7	54.0	48.4	44.1	40.1	38.3	38.6	39.9	41.0	41.7	43.3	46.6	45.8	46.9	52.7	55.9	81.6
28-Apr	59.3	64.4	70.0	74.7	76.8	80.2	65.2	51.4	44.8	39.9	40.0	31.7	25.2	18.1	15.7	17.3	19.5	22.3	23.9	25.2	26.9	31.8	47.5	52.0	42.7	80.2
29-Apr	61.1	82.8	89.6	83.6	77.9	79.1	72.9	66.3	67.4	80.8	74.4	66.4	64.3	59.3	68.7	55.0	44.1	29.4	34.5	37.1	46.7	54.5	73.0	74.8	64.3	89.6
30-Apr	71.7	60.5	61.2	65.7	69.4	69.1	64.4	61.1	57.3	52.6	52.3	54.2	58.5	85.9	91.3	85.4	83.2	76.6	82.3	85.9	89.2	88.6	88.1	87.3	72.6	91.3
71.4 73.1 75.8 76.8 77.6 78.1 76.7 71.4 65.6 60.6 55.9 51.3 47.4 45.7 44.7 44.2 44.2 45.0 47.9 53.5 59.9 62.9 66.1 69.6																										Diurnal Average
100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 99.5 99.2 99.2 96.8 98.0 98.9 99.3 99.3 99.6 99.6 99.9 100.0 100.0 100.0																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Lower Camp - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

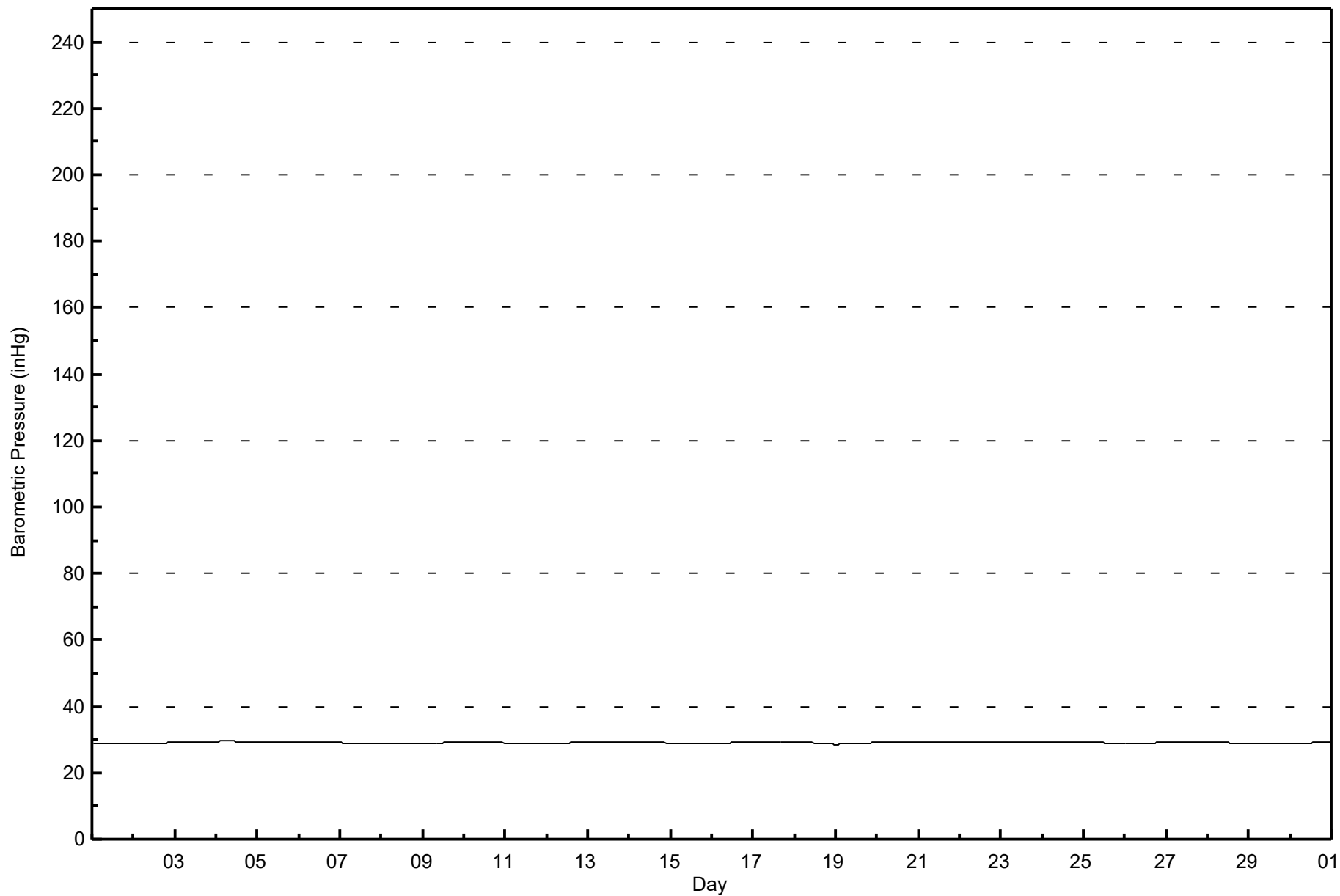
Lower Camp - April 2025

Maximum Value: 29.5 inHg on Apr 4 07:00																				Maximum Daily Average: 29.4 inHg on Apr 4					Hours in Service: 720	
Minimum Value: 28.6 inHg on Apr 19 01:00																				Minimum Daily Average: 28.7 inHg on Apr 8					Hours of Data: 720	
Maximum Diurnal Average: 29.1 inHg at hour 24																				Minimum Diurnal Average: 29.1 inHg at hour 16					Hours of Missing Data: 0	
Monthly Average: 29.08 inHg																				Percentiles: P ₁ = 28.7 P ₁₀ = 28.8 Q ₁ = 28.9 Median = 29.1 Q ₃ = 29.3 P ₉₀ = 29.3 P ₉₉ = 29.5					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	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	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.8	28.9	
2-Apr	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	29.1	29.1	29.1	29.0	29.1
3-Apr	29.1	29.1	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	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.4
4-Apr	29.4	29.4	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	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.4	29.5
5-Apr	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.2	29.3
6-Apr	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.2	29.3
7-Apr	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	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	29.0
8-Apr	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	28.8	28.8	28.8	28.9	28.7	28.9
9-Apr	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.0	29.2
10-Apr	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.2	29.2
11-Apr	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
12-Apr	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.0	29.2
13-Apr	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	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.3	29.4
14-Apr	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	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.2	29.4
15-Apr	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
16-Apr	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	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.0	29.2
17-Apr	29.2	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	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.4
18-Apr	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	28.9	28.9	28.8	28.8	28.8	28.7	28.7	28.7	28.6	28.6	28.6	29.0	29.3
19-Apr	28.6	28.6	28.6	28.6	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	28.9	28.9	28.9	29.0	29.0	29.1	29.1	28.8	29.1
20-Apr	29.1	29.1	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	29.3	29.3	29.3	29.3	29.3	29.2	29.3
21-Apr	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.3
22-Apr	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2
23-Apr	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	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.3
24-Apr	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	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4
25-Apr	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.1	29.1	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	29.0	29.3
26-Apr	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	29.0	29.0	29.1	29.1	29.1	29.1	29.2	29.2	28.9	29.2
27-Apr	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
28-Apr	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	29.0	29.0	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	29.1	29.3
29-Apr	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	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.9
30-Apr	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	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.3	29.3	29.1	29.3
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																										Diurnal Average
29.4 29.4 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 29.4 29.4 29.4 29.4 29.4 29.4 29.4 29.4																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Barometric Pressure (BP) - inHg
Lower Camp - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - April 2025

Maximum Speed: 41 km/h on Apr 15 20:00										Maximum Daily Speed Average: 23.9 km/h on Apr 6										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 23 01:00										Minimum Daily Speed Average: 1.0 km/h on Apr 5										Hours of Data: 711						
Maximum Diurnal Speed Average: 4.6 km/h at hour 18										Minimum Diurnal Speed Average: 0.6 km/h at hour 5										Hours of Missing Data: 9						
Monthly Average Velocity: 0.6 km/h 260.4 deg										Percentiles: P ₁ = 0 P ₁₀ = 2 Q ₁ = 5 Median = 11 Q ₃ = 16 P ₉₀ = 21 P ₉₉ = 31										Percent Operational Time: 98.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	ESE13	ESE17	ESE19	ESE18	ESE12	SE10	SE15	SE14	SE11	SE10	ESE11	ESE13	SE9	SE11	SE7	WNW13	WNW22	WNW18	NNW12	NW16	NW13	NW13	NW13	WNW13	SE2.4	WNW22
2-Apr	W14	WNW14	WNW13	W10	W8	WSW13	WSW18	W15	WSW16	WNW15	WNW14	WSW9	WNW10	NNW14	N16	NNW15	N15	NNW13	NW8	WNW5	NW6	NNW7	NNW7	NW7	WNW9.6	WSW18
3-Apr	WNW8	WNW15	WNW13	WNW10	NNW13	NW8	NNW8	NW14	NW17	NNW17	NNW19	NNW15	NNW14	NNW14	NNW14	NW15	NW17	NW16	NNW10	NW5	WNW2	WSW1	NW2	NW1	NW10.8	NNW19
4-Apr	NNE1	ENE1	ENE2	ESE5	SE8	SE11	SE13	SE16	SE15	SE14	SE13	SE12	ESE12	SE11	SE15	SE14	SE14	SE9	SE9	SE7	SE7	SE7	SE10	SE9	SE9.7	SE16
5-Apr	SE4	WSW1	NW2	WSW1	E2	SE9	SE12	SE9	SE11	SE10	SE7	SE5	NW2	NW5	NW7	NNW10	N13	NNW10	NW8	NW6	NW6	NW6	WNW5	WNW4	NNE1.0	N13
6-Apr	WNW3	WNW4	ESE14	ESE17	ESE17	ESE20	ESE23	SE27	SE26	ESE26	ESE29	SE30	SE30	SE31	SE32	SE31	SE30	SE26	SE27	SE27	SE30	SE32	SE30	SE28	SE23.9	SE32
7-Apr	SE27	SE26	SE25	SE26	ESE23	ESE21	SE26	SE24	SE26	SE27	ESE26	SE26	ESE25	SE26	ESE23	ESE19	ESE20	ESE16	SE6	SE7	SE11	SE7	SE13	SW3	SE19.7	SE27
8-Apr	WSW1	WSW0	WNW3	W4	W2	SE3	SE2	SSW2	NW3	SE5	SE10	ESE9	SE7	SE8	SE7	SSE3	ESE2	WNW4	WSW1	W2	WNW4	WNW2	WNW3	ESE2	SSE1.5	SE10
9-Apr	S1	N0	WSW1	SSE1	SE7	SE5	SSE5	SE7	SE8	SE5	SE8	SE11	SE15	SE15	ESE8	ENE2	SE2	UO	W2	W1	W1	WNW2	SW2	SE2	SE4.1	SE15
10-Apr	SE4	ESE2	SE8	SE8	SE12	SE11	SE11	SE11	S6	S6	WSW12	WSW16	WSW18	WSW16	WSW14	W10	WNW8	NNE2	SE1	SE3	SE1	SSE0	SE3	ESE2	SSW3.7	WSW18
11-Apr	SSW1	NNE0	SSE1	WNW5	WNW5	NW5	WNW3	WNW3	ENE1	SSE6	SE13	SW1	W12	WSW21	WSW22	W21	W23	W21	W13	WSW11	WSW15	WSW17	WSW17	WSW12	WSW8.7	W23
12-Apr	WSW11	WSW14	WSW15	WSW13	WSW14	SW9	W2	W5	WSW12	W18	W18	W16	WNW17	WNW15	WNW18	WNW18	NW21	NW18	NW12	NW3	SW1	WNW2	WNW4	W4	W10.5	NW21
13-Apr	NNW2	ENE1	NW1	WNW3	W3	WNW3	NW3	NW3	NNW4	N2	N5	N9	NNW12	NNW14	NNW16	N15	NNW16	N16	NNE15	NNE7	NNW6	WNW6	W2	W1	NNW6.2	NNW16
14-Apr	WNW3	WNW2	WNW4	WNW4	W1	NE1	N1	ESE5	SE10	SE12	SE14	SE14	SE14	SE18	SE13	SSE10	SSE9	SSW9	S5	SSE6	SE10	SE14	SE12	SE16	SE6.9	SE18
15-Apr	SE17	SE11	SE13	SE13	SE10	SE8	SE12	S9	WSW23	WSW33	W28	W29	W28	WSW30	WSW29	WSW27	W27	WNW31	WNW32	WNW41	W33	W31	W29	W25	WSW17.3	WNW41
16-Apr	W21	W20	W17	WNW17	WNW18	WNW18	WNW19	NW23	NW29	NW28	NW24	NW22	NNW21	NW25	NNW17	NW21	N16	N12	NNW13	NNW11	NNW6	NNW6	NNW7	NNW10	NW16.0	NW29
17-Apr	N13	N18	N16	NNW15	N15	NNE15	N16	N17	N17	N19	N19	N19	N17	NNW15	NNW14	N10	NNW8	NNW8	NE8	NE4	SE1	ESE5	ESE2	SE14	N11.0	N19
18-Apr	SE21	SE17	SSE9	SE11	SE17	SE20	SE23	SE17	SE17	SE15	SSE16	SSE15	SSE17	SSE17	SSE15	SSE16	SSE13	SSE16	SSE17	SSE20	SE19	SSE20	SSE16	SSE13	SE16.2	SE23
19-Apr	S12	SW14	WSW18	WSW19	WNW19	WNW13	W13	WNW21	W21	W24	W21	W23	W25	WNW24	W24	W27	W25	W23	NW20	NW19	NNE17	N13	NNW8	N11	W16.0	W27
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	N10	N9	N8	N5	WNW4	ENE2	NE4	ESE4	ENE3	NNE10	NE10	NE6	NW4	NW3	N2	NW1	---	NNE10
21-Apr	NW1	WNW3	W4	WSW5	W4	W5	WNW3	NNW4	NNE3	ESE6	SE12	SE12	SE9	SE11	SE7	SE8	SE9	SSE8	S6	SE13	S7	SSE9	SE14	SE12	SE4.8	SE14
22-Apr	ESE5	S3	SE10	ESE8	ESE10	SSE4	SSE12	S7	SSE10	SSE14	SSE14	SE15	SE15	SE15	SW20	SSW11	S9	SSE9	NE2	SE7	NW3	WNW3	SW1	WNW0	SSE6.9	SW20
23-Apr	NNW0	W4	SSE0	NE1	ENE1	WNW2	WNW2	NNW2	NW6	NNW11	NNW13	NNW14	N14	N15	N15	N12	N14	N10	NNW7	NW7	NW5	WNW5	NW3	WNW2	NNW6.3	N15
24-Apr	NW2	E1	SE1	NNE1	N0	ESE0	ESE4	NNW1	N5	NNE5	NE3	ENE4	ESE3	N6	N6	N5	NE2	SE7	SE8	SE5	SE3	SE4	ESE6	SE5	ENE2.1	SE8
25-Apr	SE8	SE9	SE6	SE11	SE9	SE5	SE6	ESE8	ESE16	SE14	SSE14	S15	S15	SSW15	SSW12	SSW14	SSW16	SW17	SSW10	S6	S7	S9	SSE7	ESE4	SSE8.7	SW17
26-Apr	SE6	SE8	SE7	SE4	NW7	NNW9	NW12	NW9	NW9	NW12	NNW13	N16	N19	N20	N23	NNE21	NNE21	N22	NNE19	NNE20	N13	N13	N13	N11	N11.2	N23
27-Apr	N10	N11	N11	N18	N22	NNE19	N19	N15	NNW13	N13	N12	N11	N10	N8	N9	N10	N12	NNE15	NNE15	NE11	N10	NNW7	NE4	ENE3	N11.6	NNE22
28-Apr	W3	WSW4	W4	W4	WNW4	WNW3	E5	SE18	ESE15	ESE15	SE20	SE16	SE14	S11	S13	S13	SSW11	S10	SSE8	S7	SSW11	SSW11	SW14	SSE9	SSE7.3	SE20
29-Apr	S8	S5	SE8	SSE8	WSW13	W12	WSW12	W15	W20	W16	W18	WNW19	WNW16	NNW13	WNW10	W4	NW11	N19	N14	NNW6	NW4	WSW2	SE1	ESE3	WNW6.8	W20
30-Apr	ESE4	S4	WSW15	WSW13	W9	NW10	NNW13	N10	NNW10	NNW8	NW9	N11	N16	NNW9	NNE2	NNW6	NNW9	NNW16	N20	N19	N16	N15	N15	N13	NNW8.8	N20
SSE1.9SSW1.4 S1.9 S1.5 S0.6 SE0.8 SE1.7 SSE1.4 SW0.8WSW0.8SSE0.9 S0.7 W0.7 W1.2WNW2.1WNW3.1 NW3.5 NW4.6NNW3.4NNW1.5WNW1.2WSW1.1SSW1.1 SSE1.0																									Diurnal Average	
SE27 SE26 SE25 SE26 ESE23 ESE21 SE26 SE27 NW29WSW33 ESE29 SE30 SE30 SE31 SE32 SE31 SE30WNW31WNW32WNW41 W33 SE32 SE30 SE28																									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

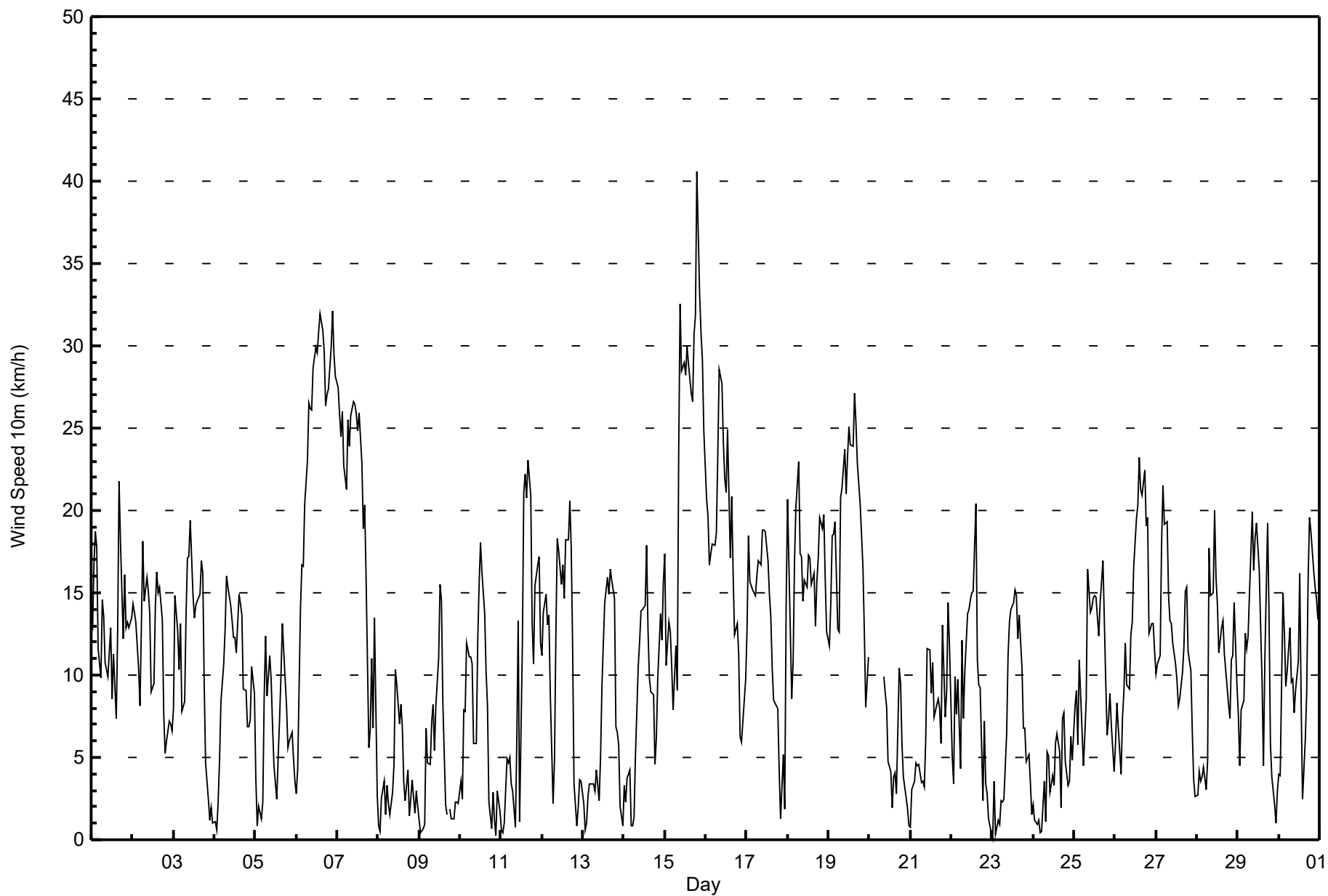
Lower Camp - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 13 km/h on Apr 22 15:00																		Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8								
Minimum Value: 1 km/h on Apr 14 04:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	4	2	3	3	3	3	3	4	2	2	2	1	3	3	2	8	4	5	3	3	3	3	2	2	2	8
2-Apr	3	2	2	3	2	5	3	3	3	3	3	3	4	4	4	4	4	3	2	1	1	2	2	1	5	
3-Apr	1	3	3	4	3	2	2	4	4	5	6	4	4	4	4	4	4	4	3	1	2	2	1	1	6	
4-Apr	1	1	2	1	3	2	3	2	1	1	2	2	2	2	1	1	1	1	2	1	2	3	2	2	3	
5-Apr	3	1	1	1	1	4	2	2	2	1	3	2	2	1	2	2	3	2	2	2	1	1	2	1	4	
6-Apr	2	1	7	2	3	4	5	3	4	3	4	3	4	3	3	4	4	3	4	3	3	5	3	3	7	
7-Apr	3	3	5	3	4	3	3	3	3	3	3	3	4	3	3	4	3	3	5	4	3	2	2	2	5	
8-Apr	1	1	1	1	2	1	1	1	2	3	1	2	1	2	2	2	2	1	2	2	1	1	1	1	3	
9-Apr	1	2	1	1	2	2	2	1	1	1	3	1	2	1	4	1	2	UO	1	1	1	3	2	3	4	
10-Apr	2	3	1	2	2	2	2	2	3	4	3	4	4	4	3	3	2	1	1	1	1	2	1	1	4	
11-Apr	2	2	2	3	2	2	2	2	2	4	3	3	4	5	5	5	5	5	3	2	3	4	6	3	6	
12-Apr	3	3	3	3	3	2	2	3	4	4	4	3	3	4	4	4	4	4	5	2	1	1	1	1	5	
13-Apr	1	1	1	1	1	1	1	1	1	1	1	2	8	5	4	3	4	4	4	2	1	2	1	1	8	
14-Apr	1	1	1	1	2	1	1	3	2	2	1	2	2	4	4	4	3	4	1	1	1	1	2	3	4	
15-Apr	5	3	3	4	3	3	4	4	6	7	7	7	7	7	7	6	6	7	8	9	8	7	7	5	9	
16-Apr	4	4	3	3	4	3	3	5	6	7	6	6	6	6	5	5	4	4	4	3	2	1	2	3	7	
17-Apr	4	5	4	4	3	3	4	4	4	4	4	5	4	4	3	3	2	2	2	2	3	1	8	8		
18-Apr	4	6	3	3	3	5	4	6	5	4	5	5	6	6	5	5	5	5	5	6	5	6	4	4	6	
19-Apr	4	5	4	4	4	3	4	5	5	5	5	6	6	5	6	7	5	6	5	5	5	3	2	3	7	
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	2	2	2	2	2	2	1	1	2	3	2	2	2	2	2	1	3	
21-Apr	1	1	1	1	1	1	1	1	1	3	1	2	3	4	3	4	5	3	2	5	5	4	4	4	5	
22-Apr	3	3	2	3	2	2	4	3	4	4	4	4	4	5	13	9	4	4	2	3	4	2	1	1	13	
23-Apr	2	1	1	1	1	2	2	1	2	2	3	3	4	4	3	3	3	3	1	2	1	1	1	1	4	
24-Apr	2	1	2	2	1	1	2	3	1	1	1	1	3	3	3	2	2	3	2	1	1	1	2	2	3	
25-Apr	2	3	2	2	2	1	3	5	2	4	5	6	6	6	5	6	6	6	4	2	2	2	3	1	6	
26-Apr	1	2	3	1	3	4	3	2	3	3	3	4	5	5	5	5	4	4	4	4	3	3	2	2	5	
27-Apr	2	2	3	4	4	3	4	3	4	4	3	3	3	3	4	3	3	3	3	2	2	2	2	2	4	
28-Apr	1	1	1	1	1	1	4	2	2	2	3	5	6	5	5	5	5	4	3	4	4	5	6	3	6	
29-Apr	3	3	2	3	4	3	3	4	4	4	4	4	4	4	9	3	5	4	3	2	2	1	1	1	9	
30-Apr	2	2	4	6	3	4	3	3	2	2	2	2	4	3	2	2	2	5	4	4	3	3	3	3	6	
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Lower Camp - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Lower Camp - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	188	26.44	26.44
6 - 11	188	26.44	52.88
12 - 19	239	33.61	86.50
20 - 28	75	10.55	97.05
29 - 38	20	2.81	99.86
> 38	1	0.14	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Lower Camp - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	7	8	10	3	17	22	7	5	2	5	11	20	35	20	7	188
6 - 11	21	4	2	0	0	8	64	13	14	6	1	3	4	7	16	25	188
12 - 19	42	7	0	0	0	15	49	15	5	4	3	23	13	22	14	27	239
20 - 28	4	4	0	0	0	9	20	2	0	0	1	4	19	3	8	1	75
29 - 38	0	0	0	0	0	1	9	0	0	0	0	3	4	2	1	0	20
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Totals	76	22	10	10	3	50	164	37	24	12	10	44	60	70	59	60	711

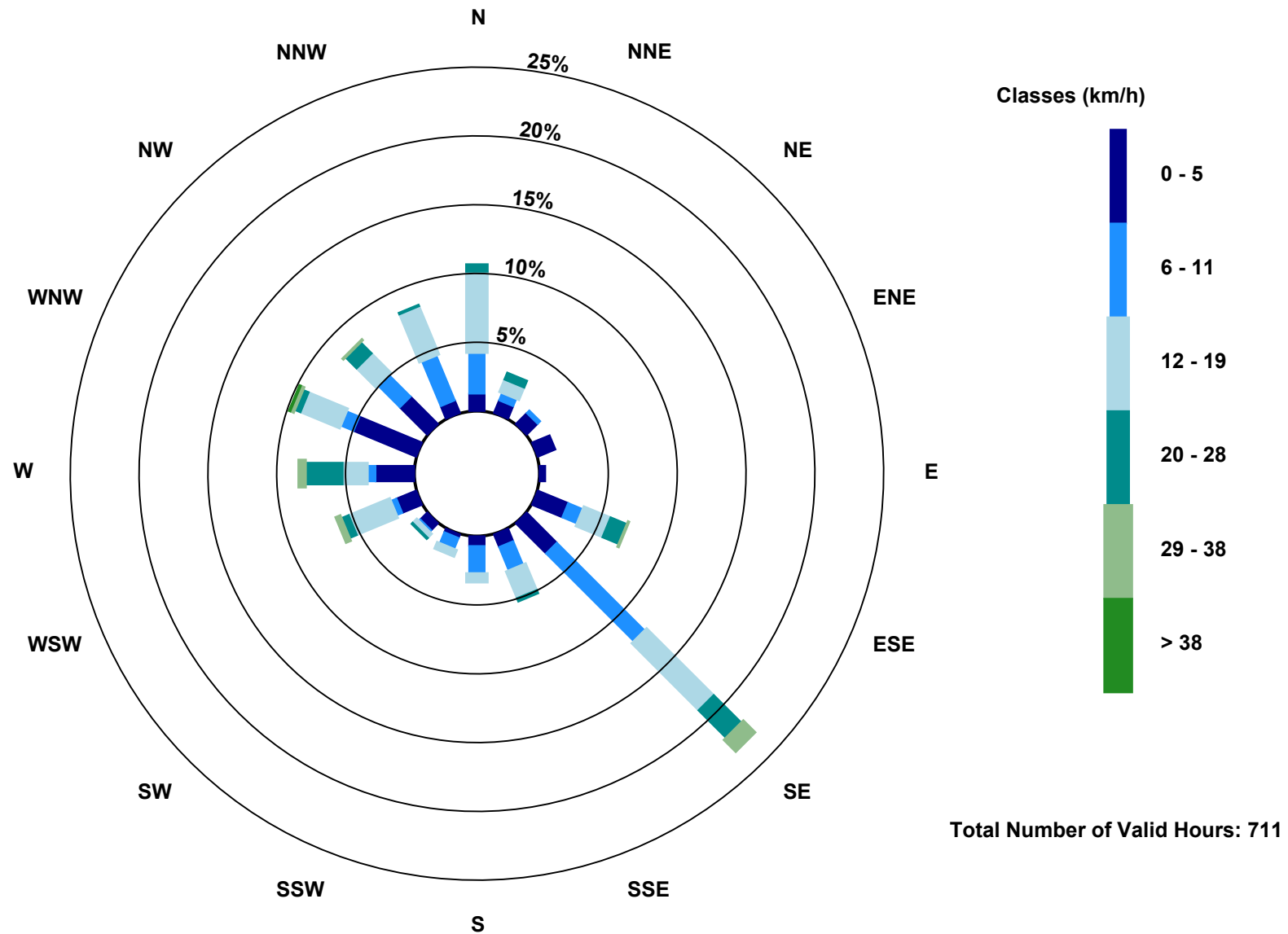
Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Lower Camp





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Lower Camp - April 2025

Direction of Maximum Speed: 282 deg on Apr 15 20:00																					Hours in Service:		720			
Direction of Maximum Daily Speed Average: 124.6 deg on Apr 6																					Hours of Data:		711			
Direction of Minimum Speed: 344 deg on Apr 23 01:00										Direction of Minimum Daily Speed Average: 1.0 deg on Apr 5											Hours of Missing Data:		9			
Monthly Average Direction: 260.4 deg																					Percent Operational Time:		98.8			
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	109	114	123	122	123	126	130	133	137	129	119	122	146	135	142	283	289	299	342	310	313	306	305	292		132.5
2-Apr	281	295	303	274	267	252	255	259	254	297	296	252	299	341	349	345	354	341	326	299	323	337	333	304		300.3
3-Apr	296	298	300	303	299	319	328	320	326	330	346	341	329	334	332	317	319	326	336	318	297	248	326	326		321.9
4-Apr	27	61	75	109	130	137	137	133	130	131	131	126	121	130	129	134	131	134	144	146	137	132	135	124		130.7
5-Apr	124	255	312	242	88	128	132	134	129	132	128	134	322	318	307	334	5	341	315	321	316	320	298	291		15.7
6-Apr	286	282	113	115	118	118	120	126	126	121	119	126	126	128	128	126	124	124	129	125	125	127	125	129		124.6
7-Apr	129	127	127	129	123	120	126	128	125	127	123	127	123	125	121	119	119	119	125	135	132	138	136	220		125.8
8-Apr	255	250	292	278	279	130	129	195	324	133	129	123	132	138	131	148	113	297	247	278	285	300	292	122		148.8
9-Apr	182	356	250	153	136	140	147	127	132	135	126	135	131	128	122	62	127	UO	275	279	277	294	223	145		134.7
10-Apr	140	118	131	127	136	136	133	138	179	186	240	246	255	255	258	269	285	33	124	131	144	155	132	108		201.9
11-Apr	212	29	162	299	290	315	295	288	60	166	126	227	266	256	257	264	272	267	259	237	243	254	256	246		256.8
12-Apr	244	241	244	254	248	232	277	280	256	277	267	265	285	284	302	297	308	313	316	304	222	300	290	277		276.6
13-Apr	346	61	320	284	274	284	322	325	344	358	11	358	344	335	348	349	346	5	20	14	331	289	266	265		345.6
14-Apr	293	301	297	300	270	43	358	120	131	126	134	126	128	134	144	161	164	210	186	150	136	133	137	133		141.3
15-Apr	129	140	136	136	134	133	141	179	250	257	262	264	261	256	258	256	264	293	288	282	273	269	269	270		258.0
16-Apr	269	272	268	283	291	291	297	305	312	315	321	321	327	322	336	322	351	352	345	340	335	347	335	342		312.9
17-Apr	354	352	351	348	6	14	358	3	359	355	356	5	358	343	346	355	346	338	34	48	126	123	114	127		1.3
18-Apr	129	138	155	139	126	128	133	143	138	146	149	154	152	150	158	154	156	147	151	149	139	147	147	165		144.5
19-Apr	187	218	246	254	297	285	270	283	272	275	269	272	271	285	269	271	272	277	306	310	14	0	327	349		279.8
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	351	6	3	350	294	73	36	115	58	15	39	46	317	319	355	326		--
21-Apr	319	282	273	256	280	271	296	347	28	117	131	130	130	124	126	136	137	150	175	130	183	152	146	146		145.2
22-Apr	121	184	127	123	120	166	155	170	165	159	148	139	140	144	233	195	175	156	34	132	320	288	221	287		157.5
23-Apr	344	278	166	37	61	286	289	329	312	344	341	335	7	358	357	350	356	353	334	316	305	286	316	293		341.0
24-Apr	312	83	142	21	351	120	118	342	11	25	46	70	103	9	5	5	39	127	136	132	143	126	114	124		78.4
25-Apr	125	128	144	129	131	125	129	122	122	144	168	172	181	199	197	207	201	224	208	177	187	191	162	111		168.5
26-Apr	126	132	138	144	311	332	315	322	318	324	329	351	2	2	8	13	13	358	17	12	2	8	4	0		359.3
27-Apr	352	3	352	10	11	13	357	354	346	352	1	360	359	357	5	356	6	13	28	34	5	329	55	67		4.7
28-Apr	271	257	259	267	292	301	80	124	123	123	124	132	143	181	183	189	195	172	166	177	211	202	220	151		165.6
29-Apr	187	176	142	154	248	262	257	260	272	264	270	288	302	337	296	273	311	358	5	343	307	245	141	104		283.4
30-Apr	119	184	240	251	263	309	343	354	341	330	323	353	8	341	33	344	327	340	356	359	351	351	355	356		338.4
160.8 200.7 191.2 183.1 191.2 142.7 135.1 146.6 219.8 236.9 156.5 176.8 272.7 278.6 282.1 286.3 308.8 325.3 346.8 335.2 289.6 246.7 203.1 156.9																										
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

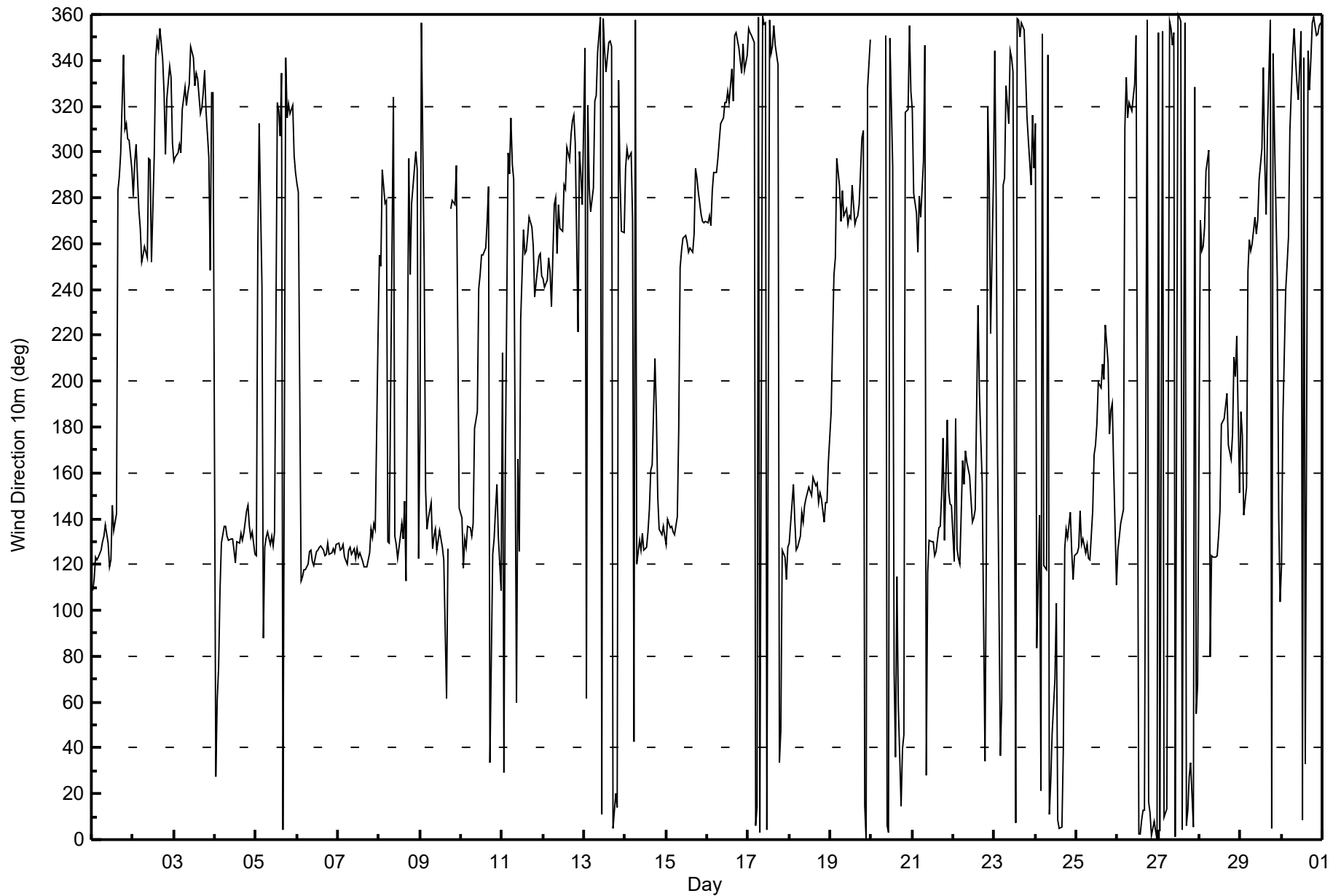
Lower Camp - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 103 deg on Apr 24 08:00																		Hours of Data: 711							
Minimum Value: 3 deg on Apr 9 12:00																		Hours of Missing Data: 9							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 4 P ₁₀ = 8 Q ₁ = 14 Median = 20 Q ₃ = 33 P ₉₀ = 64 P ₉₉ = 96																		Percent Operational Time: 98.8							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	12	8	7	8	13	20	10	11	13	12	10	6	34	19	28	41	11	17	19	10	10	15	10	10	41
2-Apr	9	11	10	15	14	15	12	12	15	15	17	24	45	26	19	21	21	21	18	21	32	25	27	19	45
3-Apr	15	10	15	18	12	24	21	15	16	21	22	24	25	28	30	26	17	17	19	42	43	68	34	40	68
4-Apr	71	97	57	25	15	10	12	5	3	3	4	6	9	6	4	3	5	9	17	16	15	19	12	12	97
5-Apr	90	86	39	51	68	25	7	11	7	4	54	41	70	23	30	21	17	19	14	24	15	14	30	40	90
6-Apr	25	21	66	7	8	7	6	6	6	6	7	5	5	5	5	5	5	5	7	5	6	7	5	6	66
7-Apr	6	6	8	7	8	7	6	5	5	5	5	5	6	5	7	9	7	10	82	44	17	28	8	62	82
8-Apr	77	70	24	19	57	29	54	57	41	54	6	17	8	7	13	73	81	24	82	70	33	41	14	65	82
9-Apr	64	95	83	85	22	57	31	8	5	12	31	3	4	5	42	63	88	UO	28	55	75	77	68	89	95
10-Apr	61	91	10	11	10	9	8	17	55	55	18	15	14	15	15	19	19	56	98	57	93	86	52	75	98
11-Apr	97	99	88	64	32	26	32	71	97	68	13	94	22	14	13	13	12	13	14	13	13	12	13	13	99
12-Apr	14	13	13	12	14	17	60	28	14	13	15	15	19	23	12	11	11	13	13	48	82	36	21	24	82
13-Apr	41	82	84	14	24	13	29	30	34	59	35	10	25	27	18	19	20	18	15	28	19	24	47	70	84
14-Apr	22	19	15	8	85	74	63	35	10	10	5	8	10	10	22	32	37	26	27	18	9	5	9	8	85
15-Apr	14	16	12	17	9	27	21	35	16	15	14	15	14	14	15	15	13	12	15	13	12	12	12	12	35
16-Apr	12	11	12	12	10	10	11	11	13	14	14	14	17	14	21	14	23	18	22	20	23	22	22	20	23
17-Apr	20	20	19	20	24	15	18	19	19	18	21	20	21	22	24	28	26	26	33	67	80	46	85	51	85
18-Apr	9	17	28	22	10	11	11	22	16	23	26	29	27	26	31	26	27	21	24	21	15	21	17	25	31
19-Apr	34	25	14	19	10	16	18	15	12	13	15	15	13	16	14	13	14	14	12	18	17	19	18	21	34
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	19	15	25	55	74	81	37	38	74	17	29	35	27	70	77	62	81
21-Apr	55	24	19	15	13	12	16	38	52	19	5	6	18	14	37	53	46	29	31	19	33	29	19	19	55
22-Apr	78	72	18	39	15	40	24	33	32	26	25	20	24	25	50	44	35	31	76	14	81	32	64	82	82
23-Apr	93	24	96	48	78	40	24	34	22	21	20	20	26	19	17	20	18	19	18	17	23	17	19	54	96
24-Apr	45	69	84	89	92	92	69	103	15	16	36	28	73	40	43	41	77	37	8	19	33	33	20	29	103
25-Apr	20	19	28	12	11	23	49	26	7	29	35	38	36	37	37	30	31	25	27	24	24	26	44	33	49
26-Apr	16	11	61	46	32	34	15	19	24	23	20	20	20	21	18	18	19	18	14	15	19	13	14	16	61
27-Apr	19	16	19	17	15	14	19	24	23	23	20	21	21	30	32	30	30	21	17	18	19	31	70	98	98
28-Apr	24	15	13	27	25	43	54	7	8	9	6	19	30	47	42	38	39	33	28	29	30	34	22	23	54
29-Apr	33	44	16	25	22	14	15	16	11	14	13	12	20	23	23	55	40	20	16	36	29	57	85	47	85
30-Apr	44	51	12	24	21	30	19	29	23	28	23	15	22	30	72	24	18	21	18	17	18	19	17	17	72
Diurnal Maximum																									
97 99 96 89 92 92 69 103 97 68 54 94 74 81 72 73 88 56 98 70 93 86 85 98																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Lower Camp - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS13 FORT MCKAY SOUTH APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT MCKAY SOUTH (AMS13)

APRIL 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	34	37	99.58	-	-	83.3	0	12.5	0
TRS(ppb) Average	685	35	35	100	6.8	1	5.4	0	1	0
THC(ppm) Average	686	34	34	100	-	-	3	-	2.5	-
NMHC(ppm) Average	686	34	34	100	-	-	0.269	-	0.107	-
CH4(ppm) Average	686	34	34	100	-	-	2.8	-	2.4	-
O3(ppb) Average	687	33	33	100	-	-	52.8	0	38.3	-
NO2(ppb) Average	683	37	37	100	-	-	27.2	0	14.3	-
NO(ppb) Average	683	37	37	100	-	-	54.7	-	6.6	-
NOX(ppb) Average	683	37	37	100	-	-	76.5	-	17.1	-
PM2.5(ug/m3) Average	718	2	2	100	-	-	32.2	0	13.5	0
ET(C) Average	720	0	0	100	-	-	23.6	-	12.8	-
RH(%) Average	720	0	0	100	-	-	99.9	-	94.5	-
WS(km/h) Average	711	0	9	98.75	-	-	28	-	18	-
WD(deg) Average	711	0	9	98.75	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT MCKAY SOUTH (AMS13)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	683	1.89	5.7	-	0	0.2	0.3	0.4	0.7	5	83.3
TRS(ppb) Average	685	0.57	0.3	-	0.3	0.4	0.4	0.5	0.6	0.8	5.4
THC(ppm) Average	686	2.18	0.2	-	2	2.1	2.1	2.1	2.2	2.4	3
NMHC(ppm) Average	686	0.015	0.038	-	0	0	0	0	0	0.1	0.269
CH4(ppm) Average	686	2.16	0.1	-	2	2.1	2.1	2.1	2.2	2.3	2.8
O3(ppb) Average	687	25.83	12.2	-	2.8	6.8	16.6	27.2	36.2	40.5	52.8
NO2(ppb) Average	683	5.51	5.1	-	0.2	0.4	1.4	4.3	7.8	12.8	27.2
NO(ppb) Average	683	1.55	3.7	-	0	0	0.1	0.3	1.6	4.1	54.7
NOX(ppb) Average	683	7.06	7.7	-	0.3	0.5	1.6	5.2	9.1	16.7	76.5
PM2.5(ug/m3) Average	718	5.57	4.6	-	0.2	1.7	2.6	4	7.2	11.1	32.2
Temperature 2 m (C) Average	720	3.73	6.9	-	-17.4	-4.8	-1	3.5	8.5	12.7	23.6
Relative Humidity (%) Average	720	61.33	22.3	-	16.1	29.7	43.6	62.2	77.9	93.4	99.9
Wind Speed 10 m (km/h) Average	711	9.1	6	-	1	2	4	9	13	17	28
Wind Direction 10 m (deg) Average	711	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT MCKAY SOUTH (AMS13)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	08 Apr 2025 07:00	08 Apr 2025 07:00	1	Station power failure
SO2	08 Apr 2025 08:00	08 Apr 2025 09:00	2	Analyzer Failure
WS/WD	08 Apr 2025 02:00	08 Apr 2025 02:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	14 Apr 2025 05:00	14 Apr 2025 05:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	20 Apr 2025 01:00	20 Apr 2025 07:00	7	Unstable Operation - flatline in analyzer output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

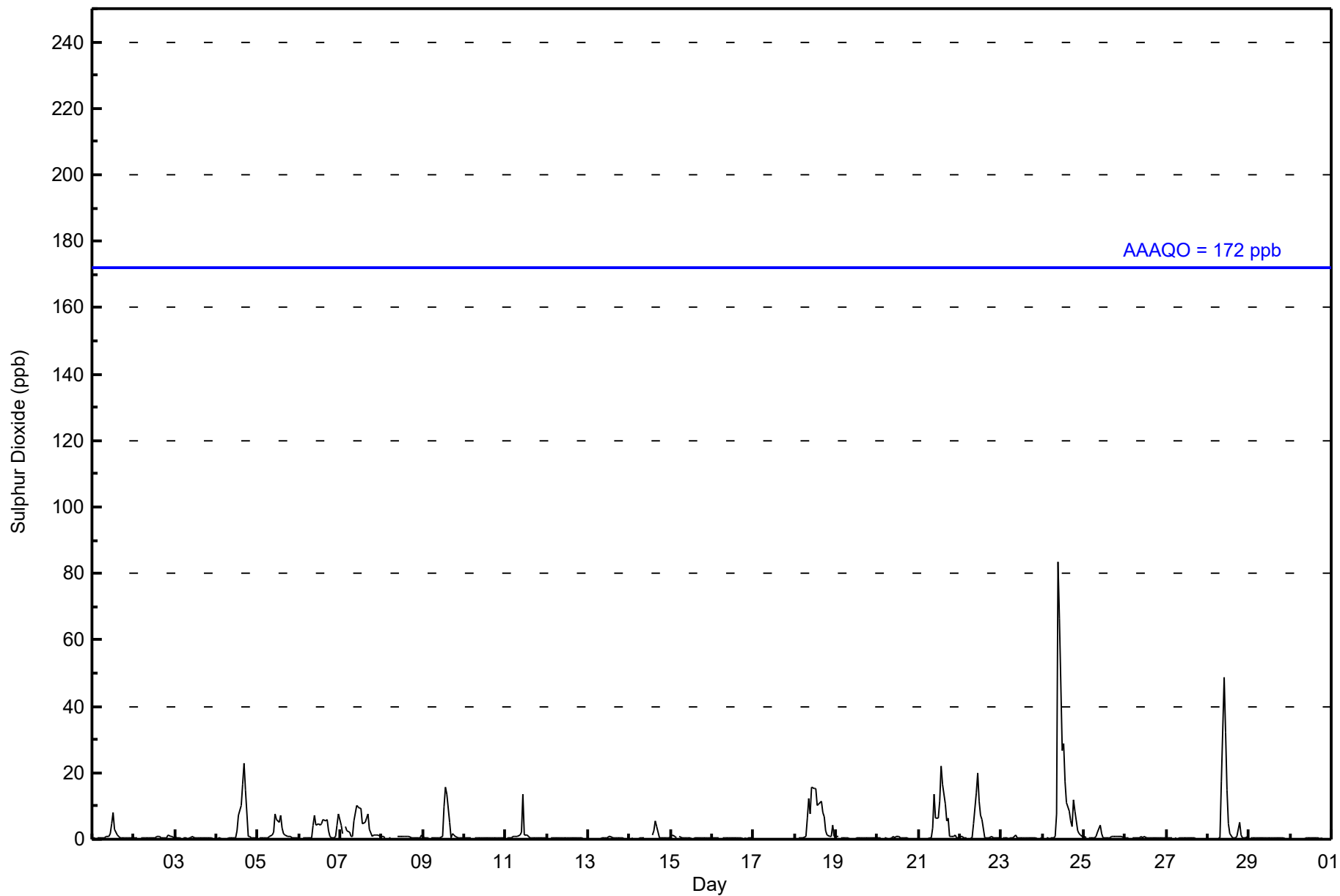
Fort McKay South - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 83.3 ppb on Apr 24 10:00 Maximum Daily Average: 12.5 ppb on Apr 24																				Hours in Service: 720						
Minimum Value: 0.0 ppb on Apr 17 11:00 Maximum Diurnal Average: 6.9 ppb at hour 10 Monthly Average: 1.89 ppb																				Hours of Data: 683						
Minimum Daily Average: 0.1 ppb on Apr 17 Minimum Diurnal Average: 0.3 ppb at hour 3 Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.4 Q ₃ = 0.7 P ₉₀ = 5.0 P ₉₉ = 22.4																				Hours of Missing Data: 37						
																				Hours of Calibration: 34						
																				Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.3	0.4	Z	0.3	0.3	0.4	0.4	0.5	0.9	0.7	1.8	4.5	8.0	2.9	1.1	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.4	1.2	8.0
2-Apr	0.3	0.4	0.4	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.8	0.9	0.9	0.6	0.5	0.5	0.5	1.2	1.0	0.7	0.5	0.6	1.2
3-Apr	0.8	0.4	0.4	0.4	Z	0.2	0.2	0.2	0.3	0.5	0.9	0.6	0.2	0.2	0.3	0.2	0.2	0.3	0.6	0.3	0.2	0.3	0.2	0.2	0.4	0.9
4-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.1	0.2	0.3	0.2	0.2	0.3	2.7	7.0	10.3	16.4	23.1	14.9	0.9	0.8	0.5	0.5	0.5	0.4	3.5	23.1
5-Apr	Z	0.4	0.3	0.4	0.4	0.4	0.4	0.7	1.2	2.1	7.8	6.1	5.2	7.1	3.2	1.7	1.2	0.7	0.7	0.7	0.6	0.6	0.5	0.4	1.9	7.8
6-Apr	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.5	4.1	7.0	4.1	4.8	4.0	4.7	5.9	5.6	6.1	2.7	0.7	0.6	0.4	1.0	4.2	7.8	2.9	7.8
7-Apr	4.2	1.7	Z	3.7	2.7	1.9	0.8	0.8	5.3	10.3	9.8	9.1	9.2	4.7	5.0	6.4	7.5	3.0	1.0	1.1	1.1	1.1	1.1	1.0	4.0	10.3
8-Apr	0.9	0.8	0.6	Z	0.3	0.4	PF	AF	AF	0.7	0.7	0.7	1.0	0.9	0.7	0.8	0.7	0.6	0.4	0.3	0.3	0.2	0.3	1.2	0.6	1.2
9-Apr	0.7	0.6	0.4	0.4	Z	0.5	0.6	0.4	0.5	0.5	0.5	1.1	9.9	15.5	13.7	5.1	0.6	1.5	1.2	0.7	0.5	0.4	0.3	0.3	2.4	15.5
10-Apr	0.3	0.3	0.4	0.4	0.4	Z	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.5
11-Apr	Z	0.4	0.5	0.5	0.8	0.8	0.7	0.8	1.1	2.3	13.5	1.4	1.1	0.8	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	1.3	13.5
12-Apr	0.4	Z	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.3	0.4
13-Apr	0.1	0.2	Z	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.4	1.0	0.7	0.6	0.3	0.3	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.3	1.0
14-Apr	0.2	0.2	0.3	Z	0.2	0.2	0.4	0.4	0.6	C	C	C	C	1.4	2.7	5.6	4.0	0.6	0.5	0.5	0.5	0.4	0.4	0.5	1.0	5.6
15-Apr	0.9	1.1	0.8	0.6	Z	0.7	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.1
16-Apr	0.4	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.4
17-Apr	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	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2
18-Apr	0.2	Z	0.3	0.3	0.3	0.3	1.0	6.4	12.1	7.8	15.7	15.3	15.3	10.1	10.5	11.6	8.0	6.7	2.7	1.4	0.8	1.0	4.0	0.8	5.8	15.7
19-Apr	0.7	0.8	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.8
20-Apr	0.3	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.6	0.7	0.5	0.7	0.8	0.6	0.5	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.8
21-Apr	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.4	3.6	13.5	6.5	6.2	11.5	22.2	16.6	10.7	5.4	6.4	0.9	0.9	0.8	1.3	0.6	0.5	4.7	22.2
22-Apr	1.0	0.7	0.6	0.5	0.4	Z	0.3	0.5	4.8	13.9	20.0	11.6	7.2	6.0	0.6	0.5	0.4	0.4	0.7	0.4	0.4	0.4	0.2	0.3	3.1	20.0
23-Apr	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	1.3
24-Apr	0.3	Z	0.2	0.2	0.2	0.2	0.4	0.8	7.7	83.3	66.4	26.6	29.0	17.2	11.0	8.7	5.6	3.6	12.0	8.4	2.6	1.7	1.1	0.9	12.5	83.3
25-Apr	0.7	0.5	Z	0.4	0.3	0.3	0.4	0.7	2.3	4.2	1.7	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.6	0.9	4.2
26-Apr	0.5	0.6	0.5	Z	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.7
27-Apr	0.3	0.3	0.3	0.3	Z	0.3	0.2	0.3	0.4	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.5
28-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.3	0.5	17.2	48.5	32.0	15.0	4.7	1.9	0.4	0.4	0.5	0.7	5.0	1.3	0.6	0.6	0.6	1.0	5.7	48.5
29-Apr	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.6	0.4	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.6
30-Apr	0.3	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.4
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration AF - Analyzer Failure PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	652	95.46	95.46
11 - 20	23	3.37	98.83
21 - 60	6	0.88	99.71
61 - 110	2	0.29	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 (SO₂) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	73	73	19	4	5	8	20	67	75	62	31	49	47	28	34	49	644
11 - 20	0	0	1	0	1	1	4	7	9	0	0	0	0	0	0	0	23
21 - 60	0	0	0	1	1	0	0	1	3	0	0	0	0	0	0	0	6
61 - 110	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
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	73	73	20	5	8	9	24	75	88	62	31	49	47	28	34	49	675

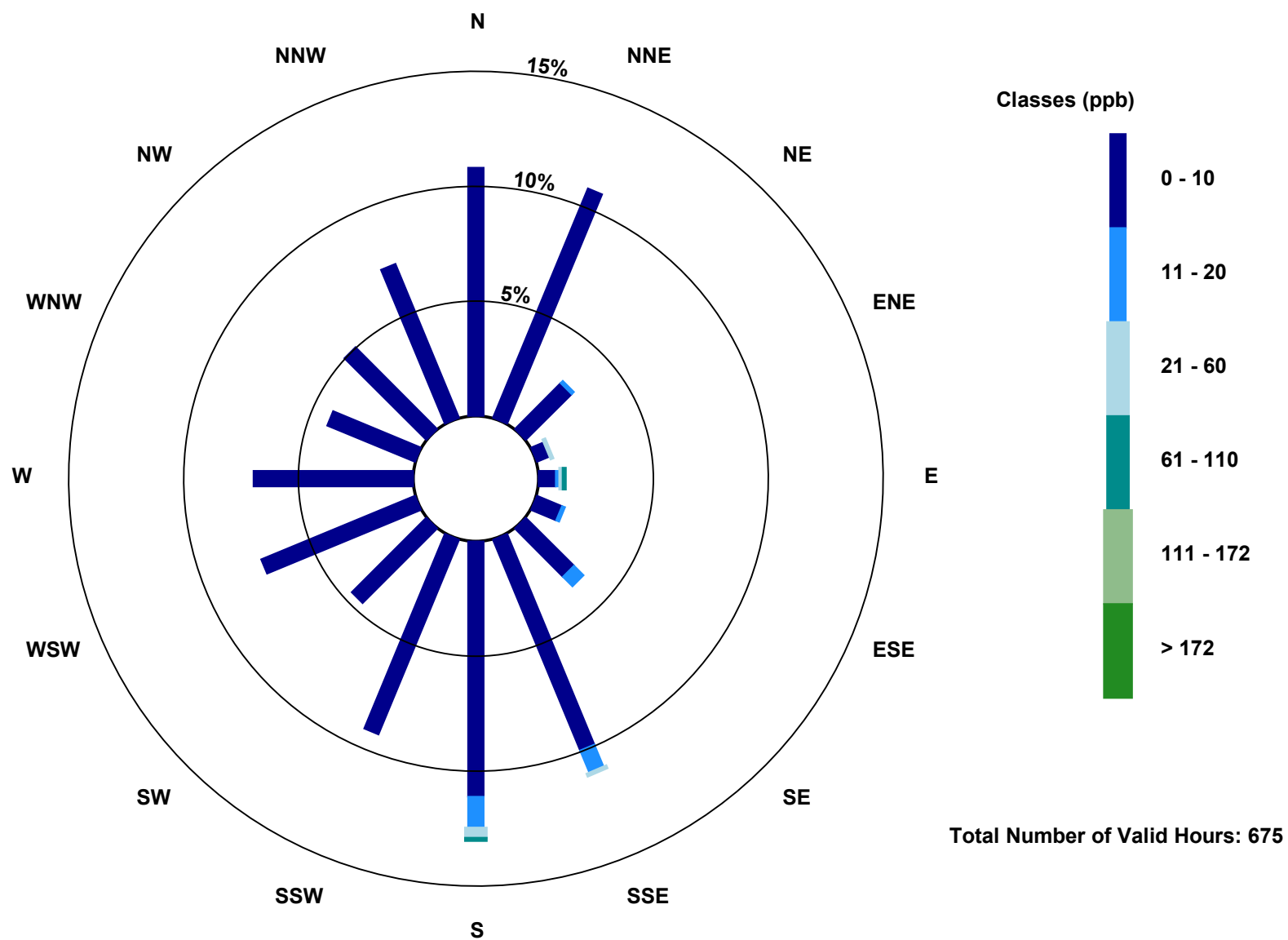
Total Number of Valid Hours: 675

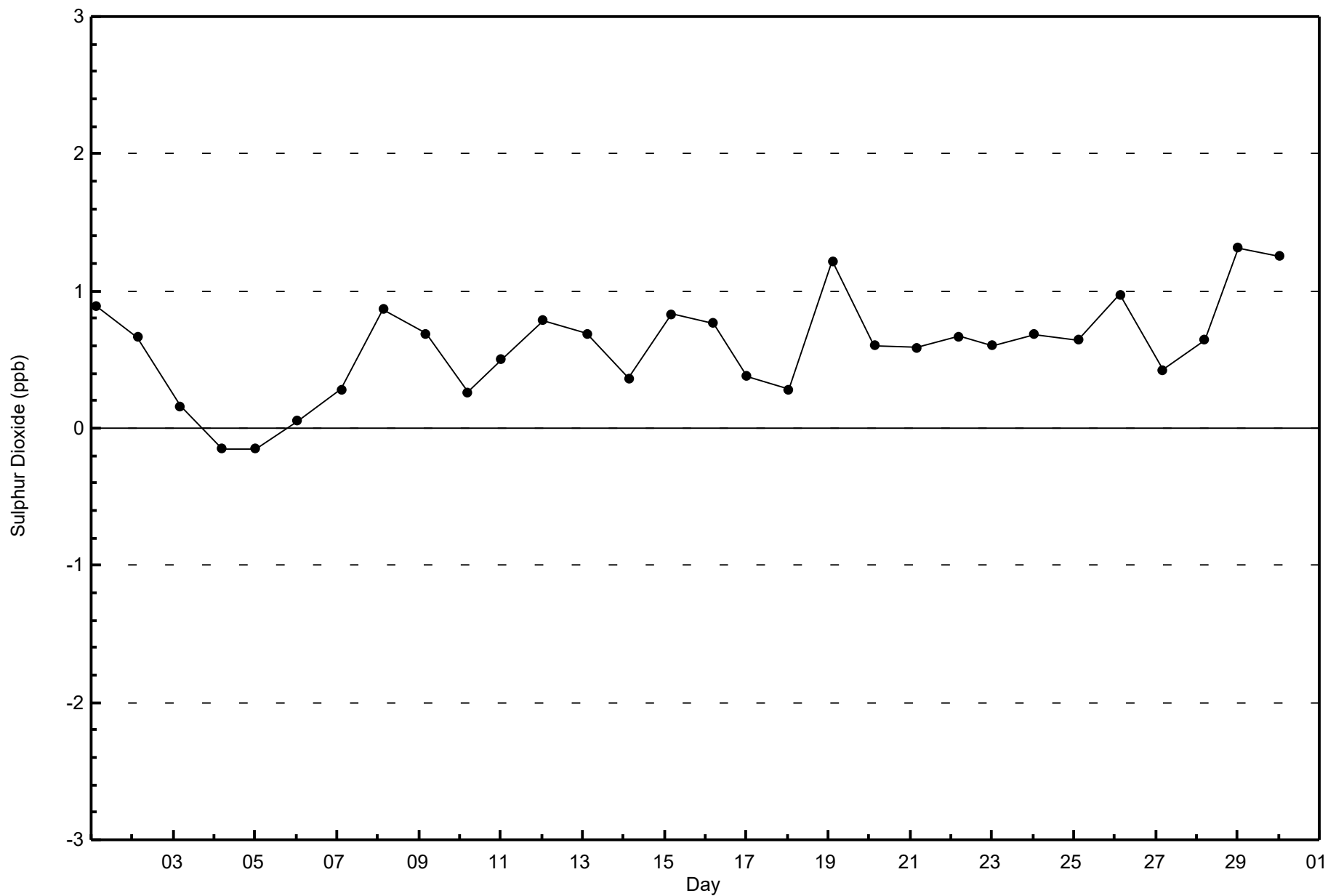
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Fort McKay South

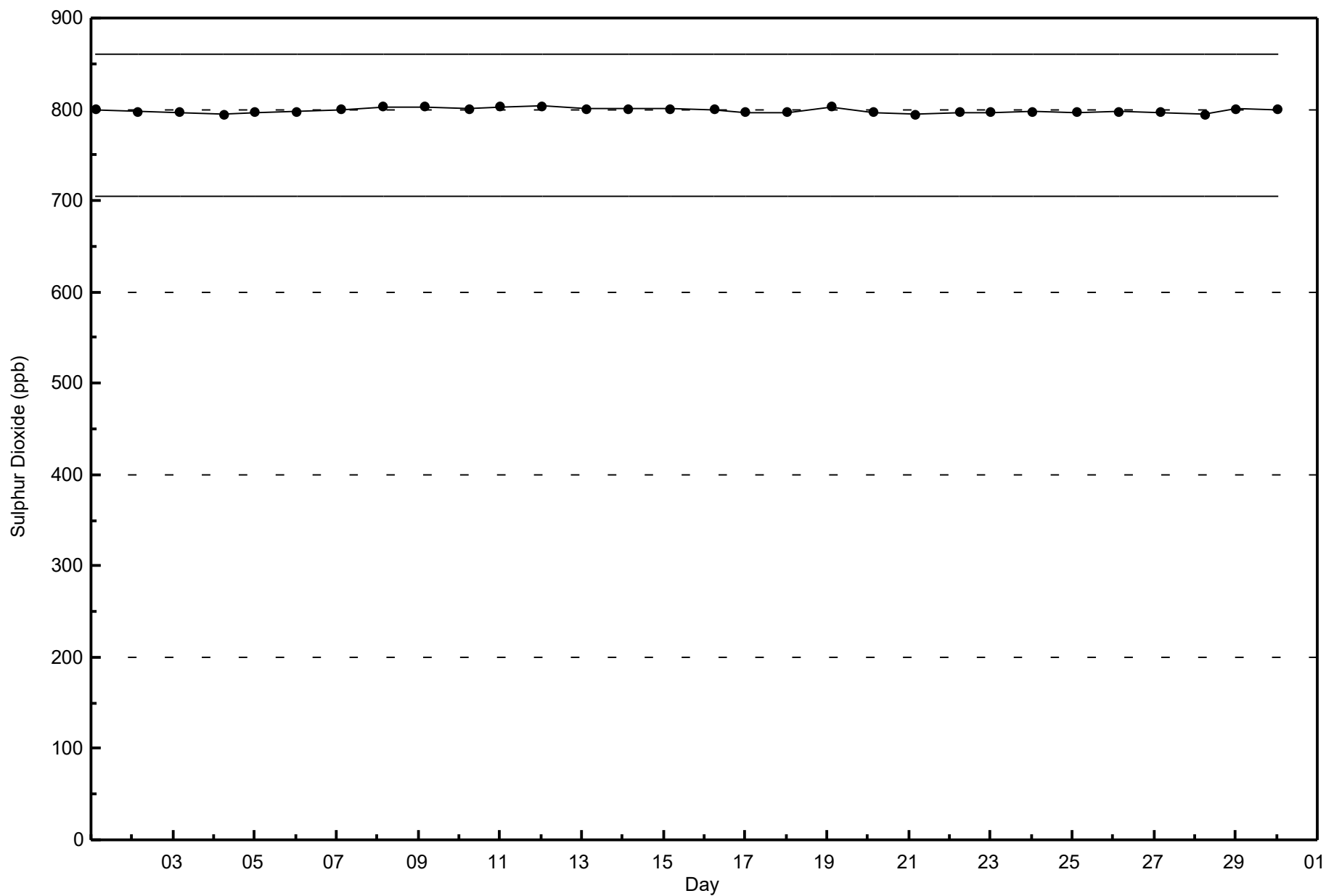






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - April 2025

Number of Exceedences (AAAQG): 30-Min: 1																		Periods in Service: 1440								
Maximum Value: 6.8 ppb on Apr 15 07:30 Maximum Daily Average: 1.0 ppb on Apr 8																		Periods of Valid Data: 1368								
Minimum Value: 0.3 ppb on Apr 23 04:30 Minimum Daily Average: 0.4 ppb on Apr 19																		Periods of Invalid Data: 72								
Maximum Diurnal Average: 0.7 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 24																		Periods of Calibration: 71								
Monthly Average: 0.57 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.5																		Percent Operational Time: 99.9								
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.4 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.6 0.6	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.8	0.6 0.5	0.5 0.8	1.1 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	1.1
2-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.5	0.6 0.5	0.4 0.4	0.4	0.6
3-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	C C	C C	C C	C C	C C	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	--	0.5
4-Apr	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.5 0.6	0.7 0.8	0.8 0.8	0.7 0.7	0.8 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.8 0.6	0.5 0.5	0.6 0.6	0.6 0.7	0.8 0.8	0.7 0.7	0.7 0.6	0.6	0.8	
5-Apr	0.6 0.6	Z SP	1.1 1.3	1.4 1.4	1.1 1.1	1.0 0.9	0.8 0.8	0.9 1.0	1.3 0.9	0.7 0.9	1.0 0.9	0.8 0.8	0.7 0.9	1.3 1.0	0.6 0.7	0.5 0.5	0.5 0.6	0.5 0.4	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.8	1.4
6-Apr	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.9	0.9 0.7	0.9 1.0	0.6 0.8	0.6 0.5	0.6 0.7	0.9 0.8	0.6 0.5	0.6 0.7	0.8 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.6 0.6	0.7 0.8	0.6	1.0	
7-Apr	0.8 0.7	0.6 0.6	0.6 0.7	Z SP	1.0 0.5	0.5 0.6	0.6 0.5	0.6 0.6	0.8 0.9	0.8 1.1	0.8 0.9	1.2 1.3	1.0 0.7	0.6 0.5	0.8 0.8	0.9 0.7	0.6 0.6	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.6	0.8 0.9	0.8	0.7	1.3
8-Apr	0.9 0.9	1.0 1.2	1.2 1.2	1.1 1.2	Z SP	1.1 1.0	0.9 1.0	0.8 0.8	0.9 1.0	1.1 1.0	0.9 1.1	1.1 1.2	1.3 1.3	1.4 1.0	1.2 1.3	1.4 1.3	1.4 1.3	1.3 1.3	1.2 1.0	0.8 0.7	0.6 0.5	0.5 0.5	0.5 0.5	0.7 0.5	1.0	1.4
9-Apr	0.6 0.8	0.8 0.7	0.7 0.7	0.8 0.9	1.2 1.3	Z SP	3.2 3.4	1.5 1.5	1.5 1.5	1.5 1.4	1.3 1.1	1.1 1.2	1.1 1.5	1.6 1.2	1.0 1.0	0.8 0.5	0.3 0.4	0.4 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	1.0	3.4
10-Apr	Z SP	0.7 0.6	0.5 0.5	0.5 0.5	0.7 0.7	0.8 0.8	1.0 0.9	0.9 0.8	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.6	0.7 0.7	0.9 0.8	0.7 0.6	0.6	0.6	1.0
11-Apr	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.6 0.7	0.7 0.7	0.6 0.6	0.7 0.8	0.8 0.9	1.5 1.6	1.7 1.2	0.8 0.8	0.6 0.6	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.6	1.7
12-Apr	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.4
13-Apr	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.3	0.3 0.4	0.4 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.7 0.8	0.7 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5	0.8
14-Apr	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.6	0.7 0.6	0.8 0.9	1.0 1.0	0.9 1.0	1.4 2.0	0.7 0.5	0.5 0.5	0.6 0.5	0.5 0.4	1.0 0.8	0.4 0.4	0.4 0.5	0.5 1.9	1.8 1.0	0.8 0.7	0.6 0.6	0.7 0.7	0.7	2.0
15-Apr	0.5 0.6	0.8 1.0	0.8 0.6	0.6 0.6	0.7 0.7	Z SP	0.7 0.5	6.8 4.0	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	6.8



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	Z SP	0.5 0.5	0.5 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.6 0.5	0.5 0.5	0.4	0.6
17-Apr	0.5 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	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
18-Apr	0.4 0.4	0.5 0.4	Z SP	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.6 0.6	0.6 0.5	0.6 1.1	0.8 0.7	0.7 0.7	0.6 1.4	0.7 0.8	0.9 0.7	0.7 1.1	1.0 0.5	0.4 0.6	0.5 0.4	0.4 0.5	0.4 0.5	1.1 0.8	0.5 0.5	0.6	1.4
19-Apr	0.5 0.5	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.3 0.4	0.4 0.4	0.3 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.5
20-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	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 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5	0.5
21-Apr	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.5 0.5	0.5 0.6	0.8 1.0	1.5 1.4	1.1 1.2	0.8 0.8	1.3 0.9	0.8 0.7	0.7 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	0.5 0.6	0.4 0.4	0.4 0.4	0.6	1.5
22-Apr	Z SP	0.8 0.8	0.8 0.8	0.7 0.6	0.6 0.6	0.6 0.6	0.5 0.5	0.6 0.7	0.7 1.7	2.9 0.8	0.6 0.7	0.9 0.8	0.7 0.6	0.6 0.5	0.6 0.5	0.6 0.7	0.6 0.6	0.5 0.6	0.5 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	2.9
23-Apr	0.3 0.3	Z SP	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.4	0.3 0.5	0.4 0.6	0.9 0.6	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.9
24-Apr	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.3 0.3	0.3 0.4	0.4 0.5	0.6 0.7	0.7 0.8	1.1 1.4	1.2 0.8	0.6 0.7	0.7 0.7	0.7 0.7	0.6 0.6	0.6 0.6	0.6 0.5	0.5 0.6	0.5 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.7	0.6 0.6	0.6	1.4
25-Apr	0.7 0.6	0.6 0.6	0.6 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.6 0.6	0.6 0.6	0.6 0.8	0.6 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	0.4 0.6	0.6 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.8
26-Apr	0.5 0.6	0.6 0.7	0.6 0.6	0.6 0.7	Z SP	0.6 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5	0.7
27-Apr	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5	0.5
28-Apr	Z SP	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 1.1	0.6 0.8	1.0 0.7	0.8 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	0.6 0.9	1.0 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5	1.1
29-Apr	0.6 0.7	Z SP	0.9 1.0	1.0 0.9	1.0 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 0.5	0.6 0.6	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.4	0.5 0.6	0.5	1.0
30-Apr	0.5 0.5	0.7 0.7	Z SP	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	0.7
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure SP - Span																										
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

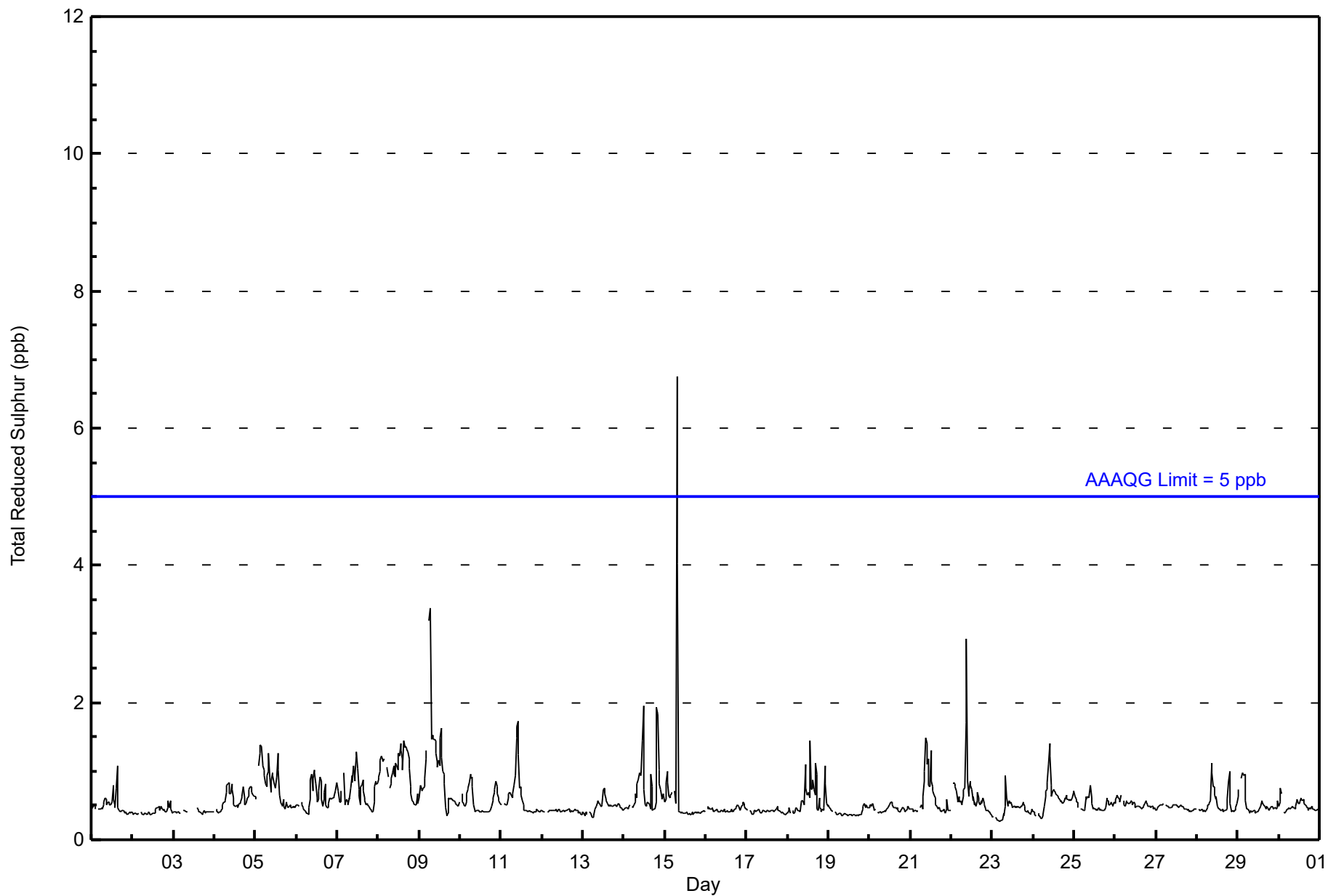
Fort McKay South - April 2025

Maximum Value: 5.4 ppb on Apr 15 08:00																			Maximum Daily Average: 1.0 ppb on Apr 9										Hours in Service: 720	
Minimum Value: 0.3 ppb on Apr 23 05:00																			Minimum Daily Average: 0.4 ppb on Apr 19										Hours of Data: 685	
Maximum Diurnal Average: 0.7 ppb at hour 10																			Minimum Diurnal Average: 0.5 ppb at hour 24										Hours of Missing Data: 35	
Monthly Average: 0.57 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.5										Hours of Calibration: 35	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.7	0.5	0.6	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8				
2-Apr	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5				
3-Apr	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	C	C	C	C	C	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
4-Apr	Z	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.7	0.8	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.5	0.6	0.7	0.8	0.7	0.6	0.6	0.8				
5-Apr	0.6	Z	1.2	1.4	1.1	1.0	0.8	1.0	1.1	0.8	1.0	0.8	0.8	1.1	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.4				
6-Apr	0.5	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.7	0.8	1.0	0.9	0.6	0.7	0.9	0.5	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.8	0.6	1.0				
7-Apr	0.8	0.6	0.6	Z	0.7	0.6	0.5	0.6	0.9	1.0	0.9	1.3	0.9	0.6	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.5	0.8	0.8	0.7	1.3				
8-Apr	0.9	1.1	1.2	1.2	Z	1.0	0.8	0.8	0.9	1.0	1.0	1.0	1.2	1.4	1.1	1.4	1.3	1.3	1.1	0.7	0.6	0.5	0.5	0.6	1.0	1.4				
9-Apr	0.7	0.8	0.7	0.8	1.2	Z	3.3	1.5	1.5	1.5	1.2	1.1	1.3	1.4	1.0	0.6	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.5	1.0	3.3				
10-Apr	Z	0.6	0.5	0.5	0.7	0.8	0.9	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.9				
11-Apr	0.5	Z	0.5	0.5	0.6	0.7	0.6	0.7	0.9	1.6	1.5	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	0.6	1.6				
12-Apr	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4				
13-Apr	0.4	0.4	0.4	Z	0.4	0.4	0.3	0.4	0.5	0.6	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.7				
14-Apr	0.4	0.5	0.5	0.5	Z	0.5	0.5	0.6	0.8	1.0	0.9	1.7	0.6	0.5	0.5	0.5	0.9	0.4	0.4	1.2	1.4	0.8	0.6	0.7	0.7	1.7				
15-Apr	0.6	0.9	0.7	0.6	0.7	Z	0.6	5.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	5.4				
16-Apr	Z	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5				
17-Apr	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
18-Apr	0.4	0.4	Z	0.4	0.4	0.5	0.4	0.4	0.6	0.5	0.8	0.7	0.7	1.0	0.7	0.8	0.9	0.7	0.5	0.5	0.4	0.4	0.9	0.5	0.6	1.0				
19-Apr	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5				
20-Apr	0.5	0.5	0.5	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5				
21-Apr	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.9	1.4	1.1	0.8	1.1	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.6	1.4				
22-Apr	Z	0.8	0.8	0.6	0.6	0.6	0.5	0.7	1.2	1.9	0.7	0.8	0.7	0.6	0.5	0.6	0.6	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.7	1.9				
23-Apr	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.8				
24-Apr	0.4	0.4	Z	0.4	0.3	0.3	0.4	0.7	0.8	1.2	1.0	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.6	1.2				
25-Apr	0.7	0.6	0.5	Z	0.4	0.4	0.4	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.7				
26-Apr	0.6	0.6	0.6	0.6	Z	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	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6				
27-Apr	0.4	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5				
28-Apr	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.8	0.9	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.7	0.8	0.4	0.4	0.4	0.5	0.5	0.9				
29-Apr	0.7	Z	0.9	1.0	0.8	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	0.4	0.5	0.5	0.5	0.5	0.5	0.5	1.0				
30-Apr	0.5	0.7	Z	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration																														
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																														



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	99.71	99.71
3 - 4	1	0.15	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 McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	71	73	19	5	8	9	29	79	88	59	31	50	47	28	34	46	676
3 - 4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	1	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	71	73	19	5	8	9	29	79	88	61	31	50	47	28	34	46	678

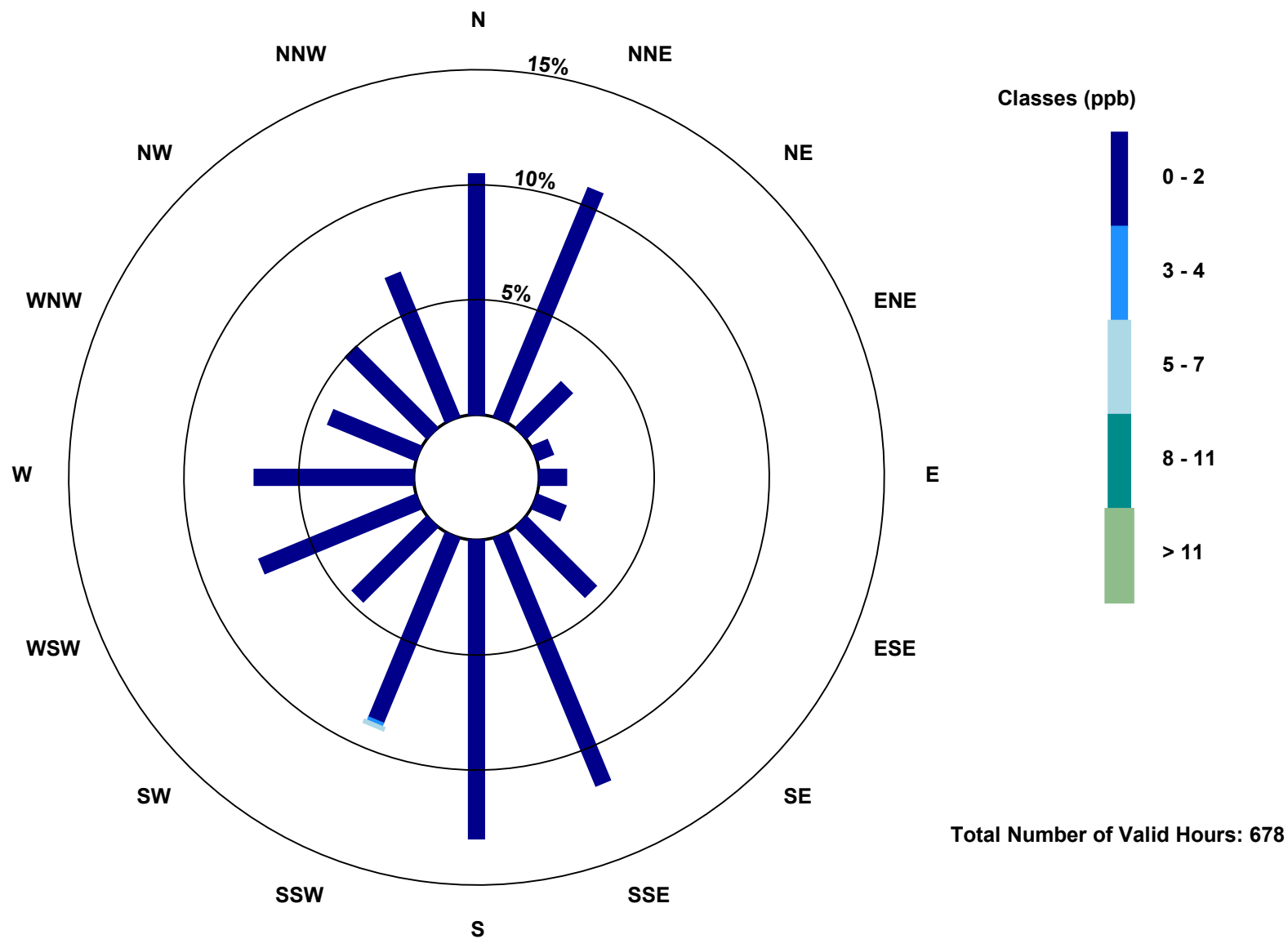
Total Number of Valid Hours: 678

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

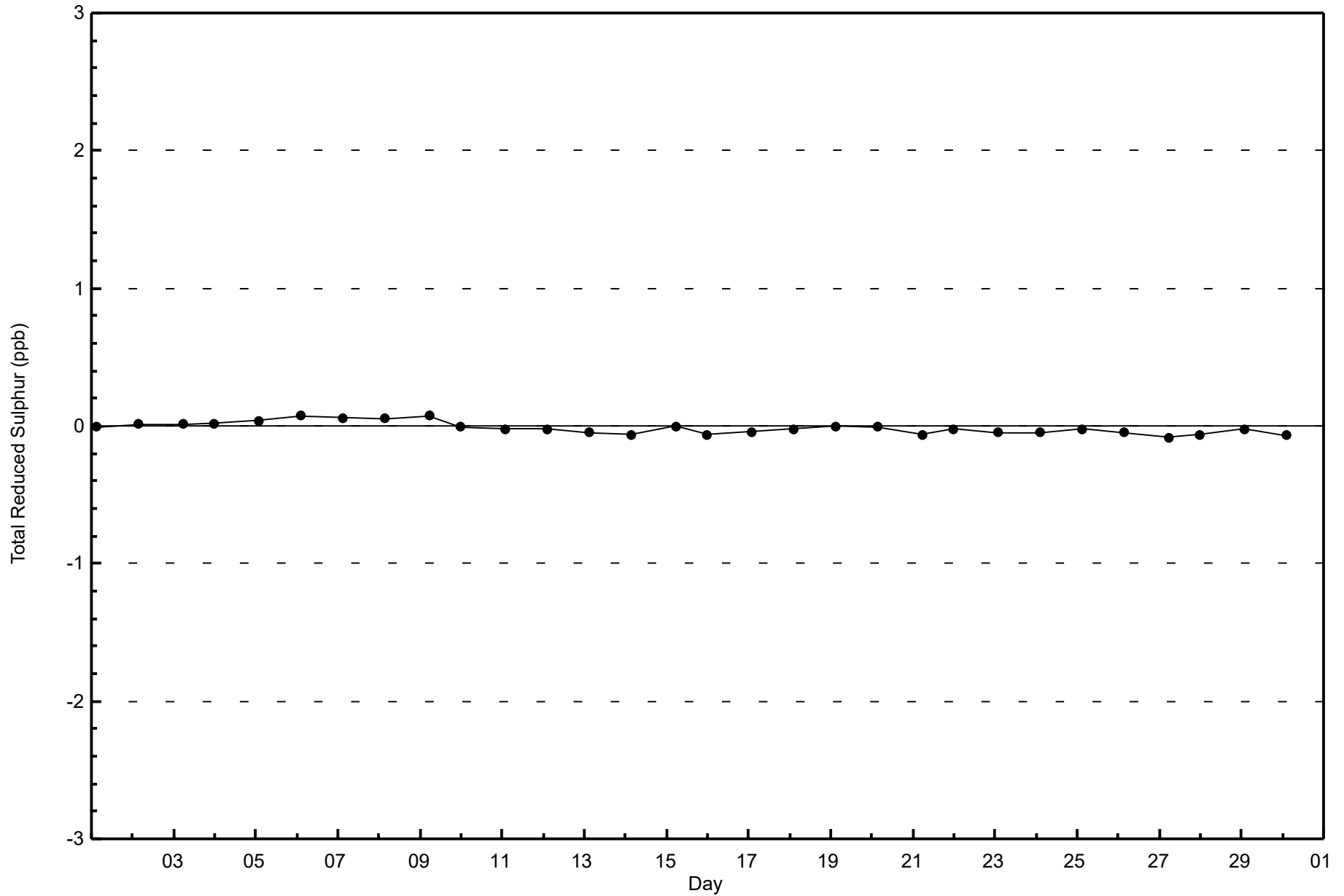
Total Reduced Sulphur (TRS) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

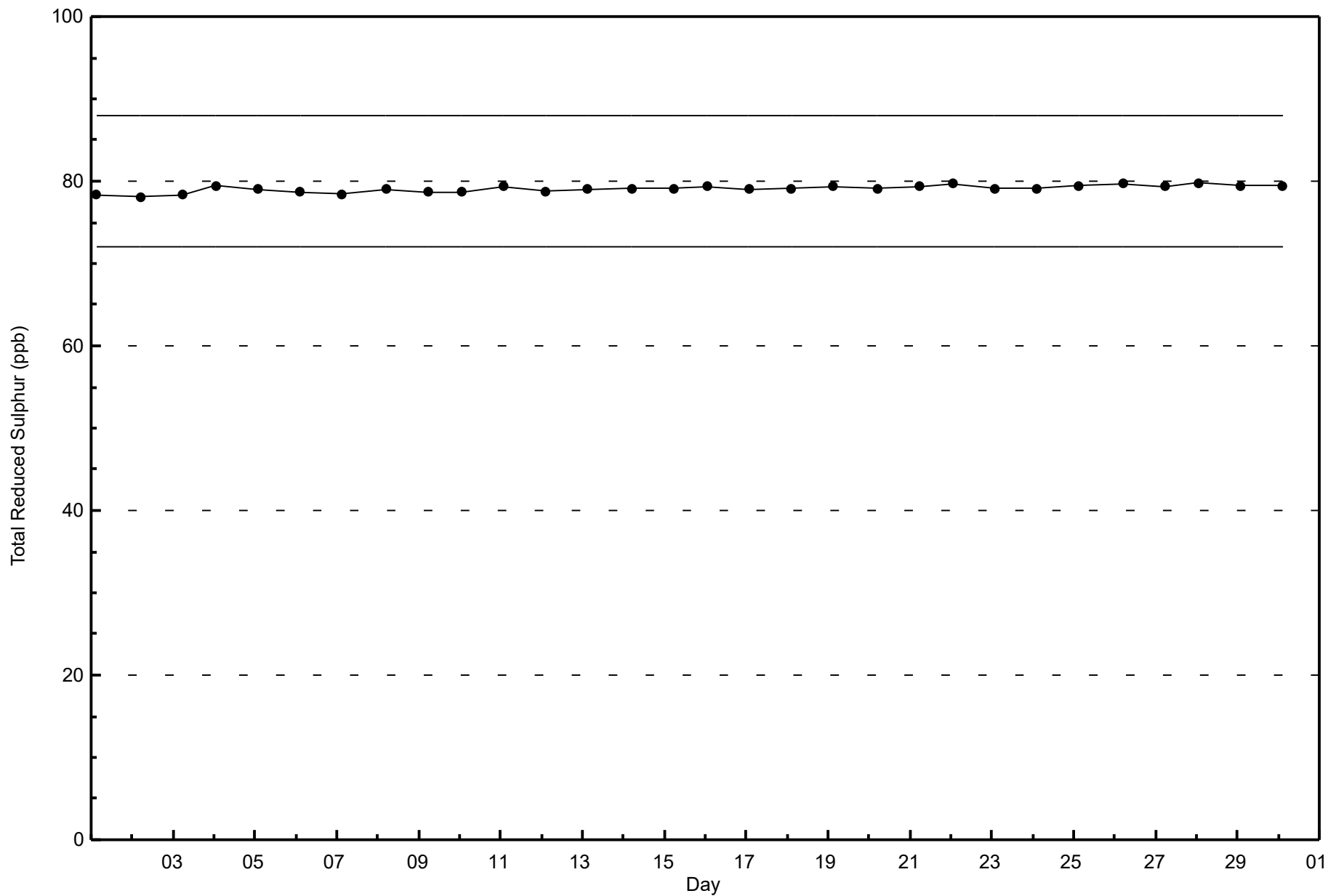
Total Reduced Sulphur (TRS) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

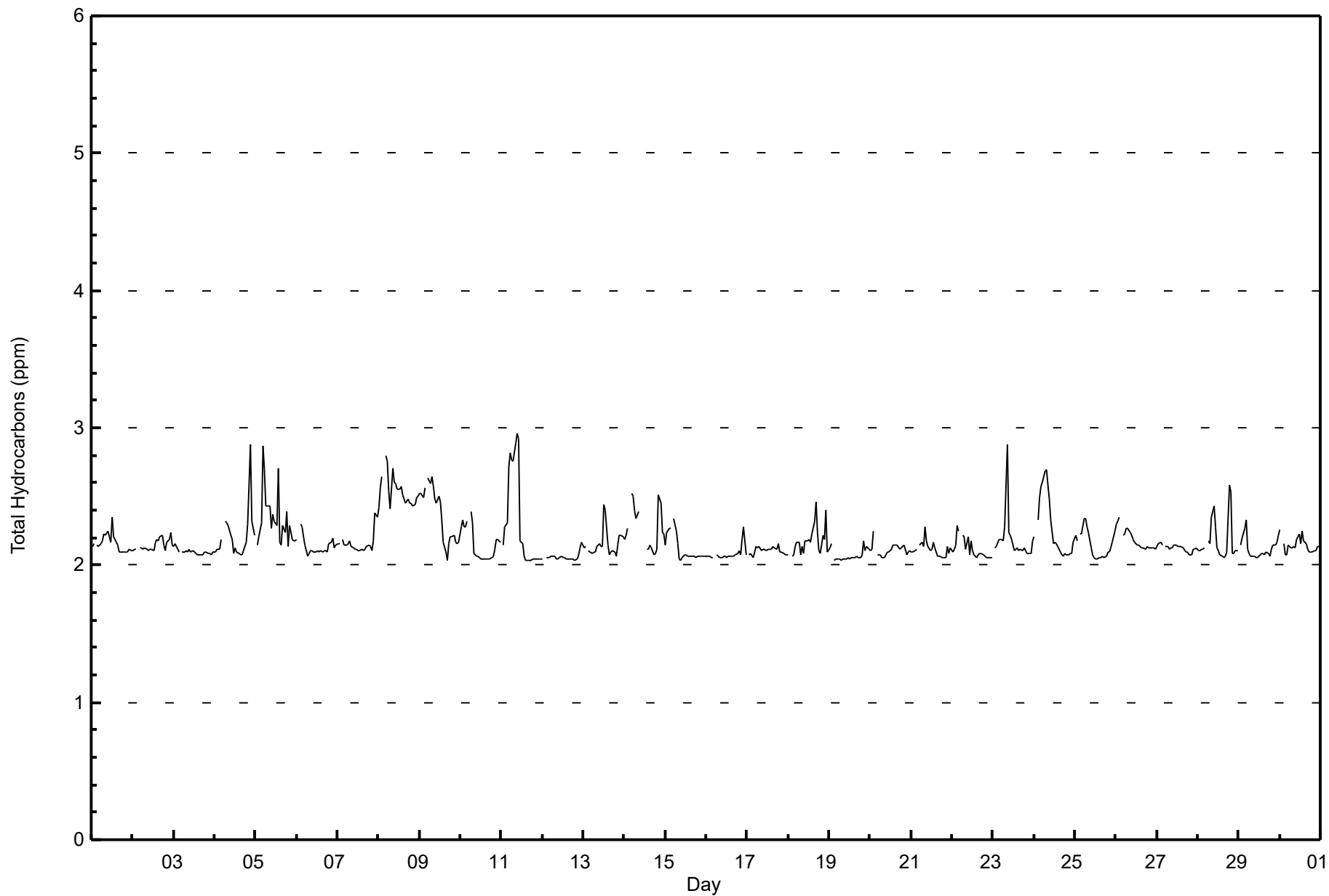
Total Reduced Sulphur (TRS) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort McKay South - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	44	6.41	6.41
2.1 - 3.0	642	93.59	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
Fort McKay South - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	1	4	4	11	10	6	7	1	44
2.1 - 3.0	73	73	20	5	8	9	25	76	88	58	27	38	37	22	27	48	634
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	73	73	20	5	8	9	25	76	89	62	31	49	47	28	34	49	678

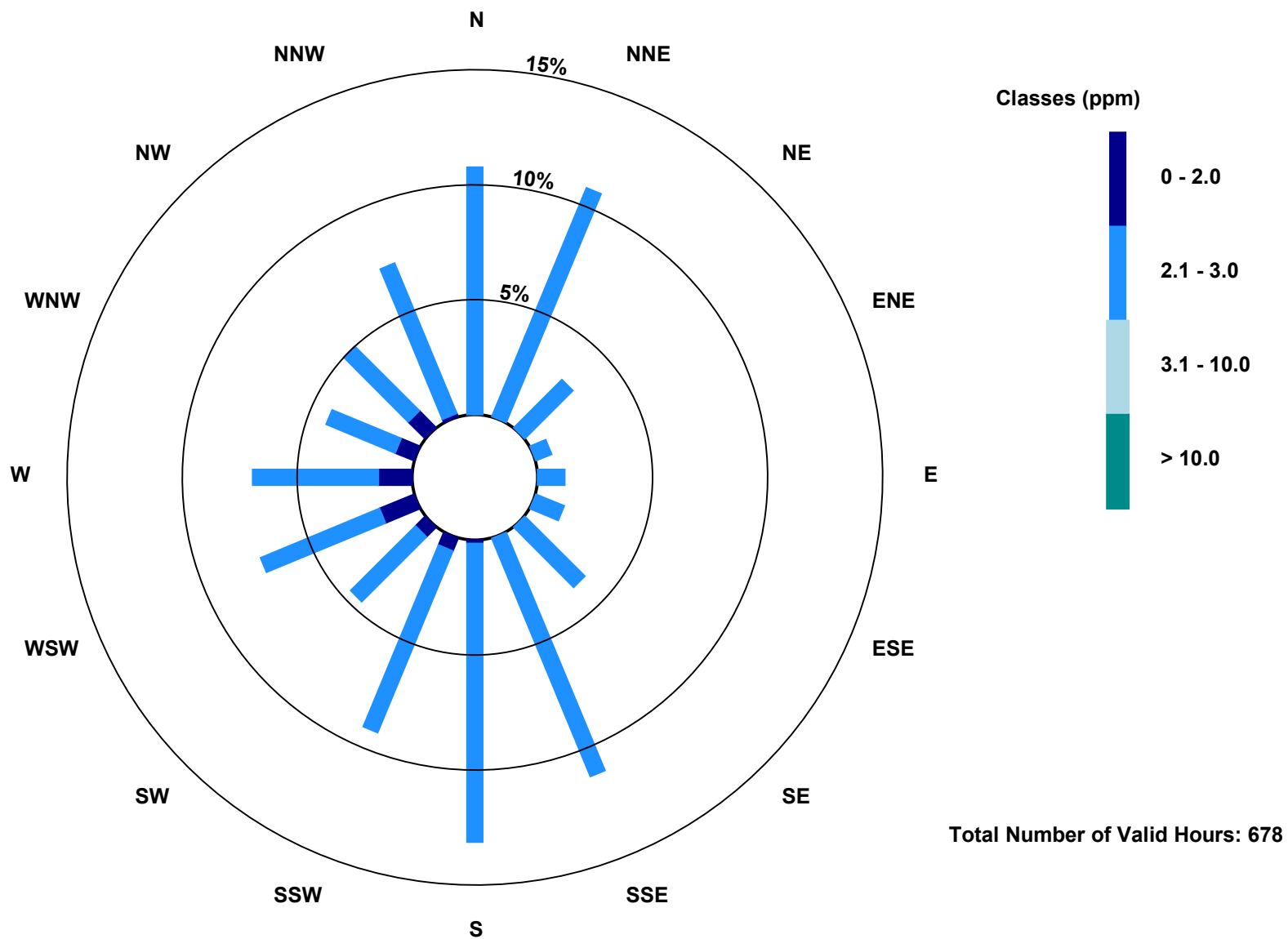
Total Number of Valid Hours: 678

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

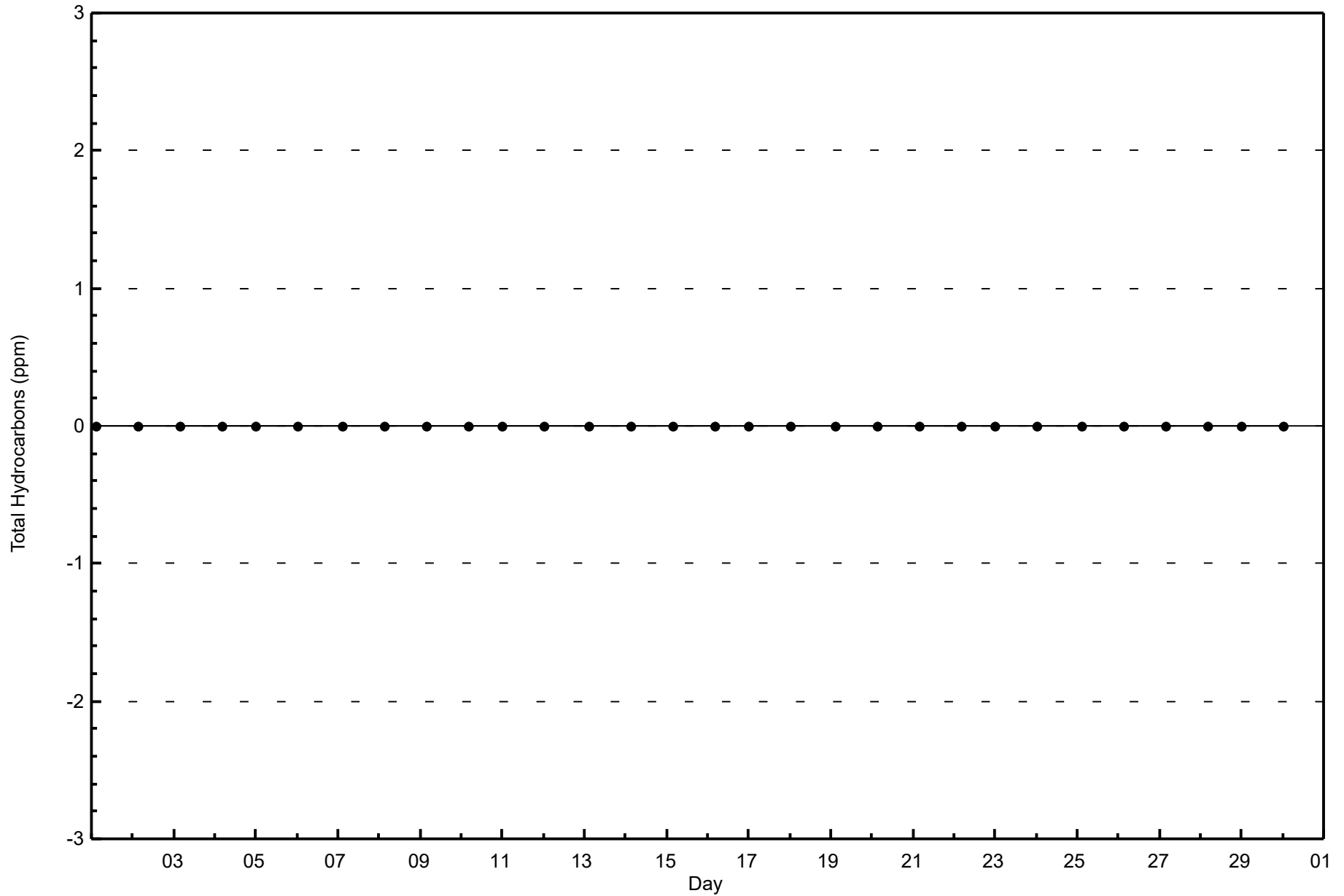
Total Hydrocarbons (THC) - ppm
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

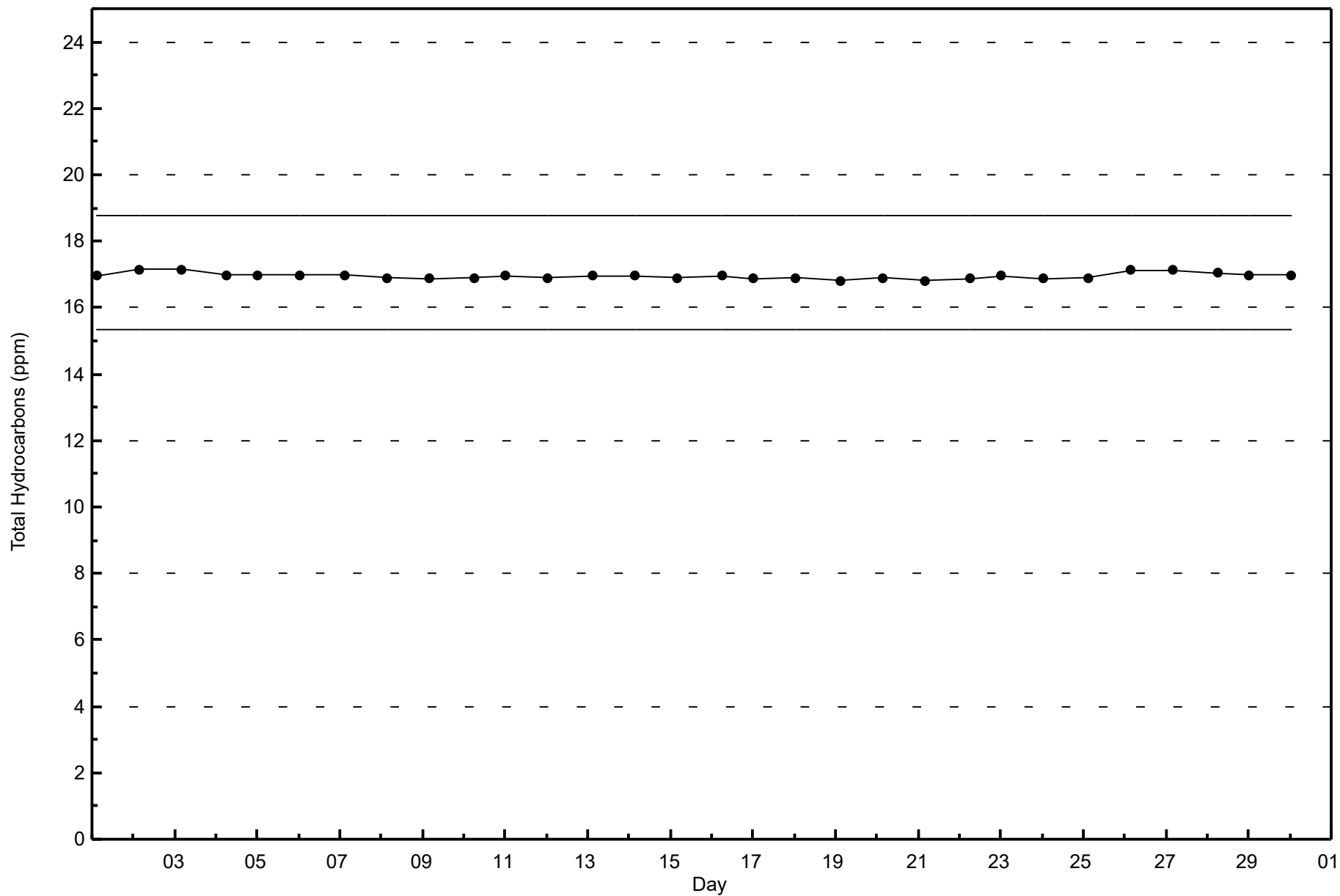
Total Hydrocarbons (THC) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

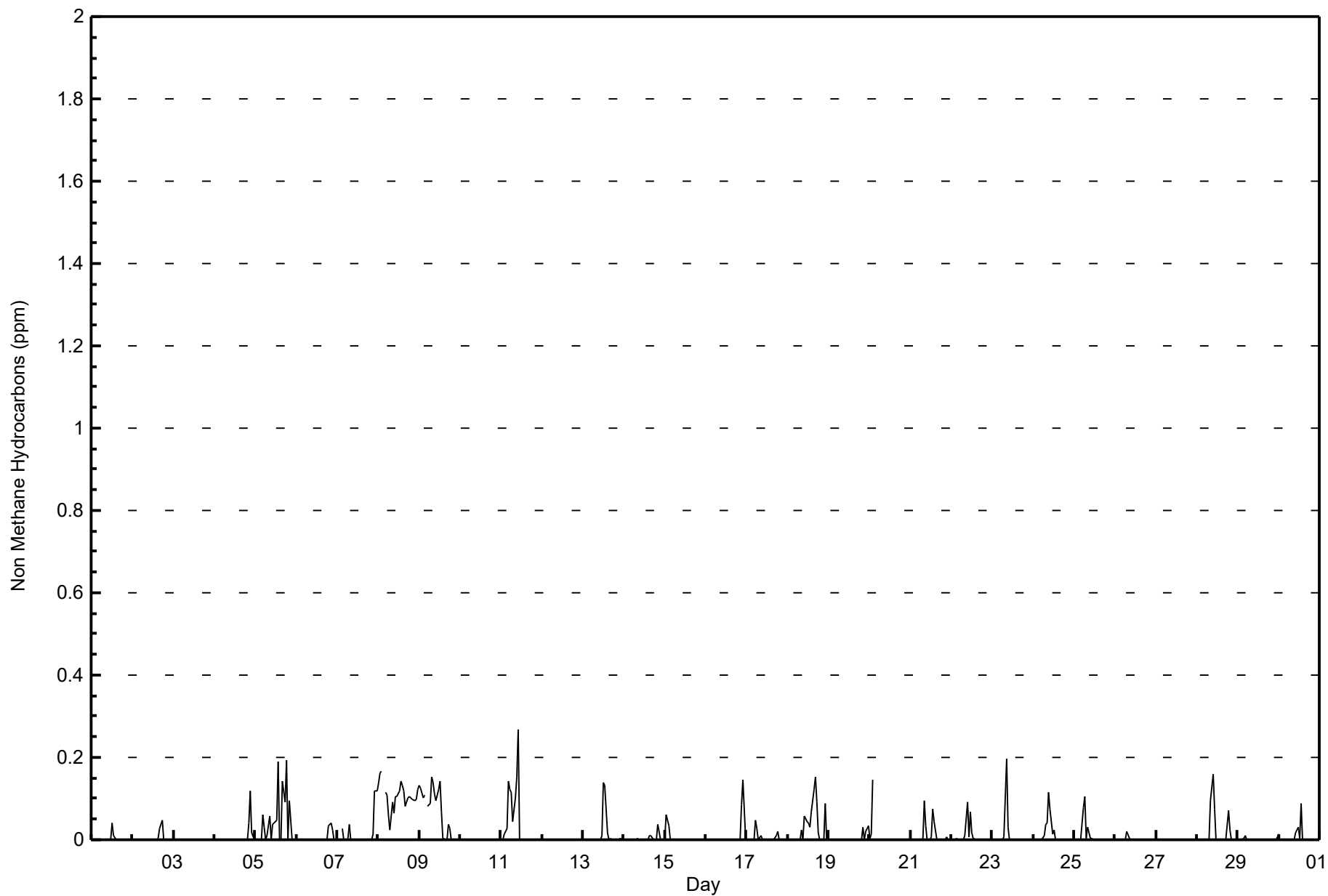
Fort McKay South - April 2025

Maximum Value: 0.269 ppm on Apr 11 11:00																				Maximum Daily Average: 0.107 ppm on Apr 8					Hours in Service: 720		
Minimum Value: 0.000 ppm on Apr 1 01:00																				Minimum Daily Average: 0.000 ppm on Apr 3					Hours of Data: 686		
Maximum Diurnal Average: 0.030 ppm at hour 9																				Minimum Diurnal Average: 0.005 ppm at hour 20					Hours of Missing Data: 34		
Monthly Average: 0.015 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 of Calibration: 34		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.040	
2-Apr	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	0.005	0.026	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.047	
3-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4-Apr	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	0.042	0.119	0.016	0.000	0.008	0.119
5-Apr	Z	0.000	0.000	0.000	0.060	0.031	0.000	0.009	0.059	0.000	0.038	0.040	0.048	0.189	0.000	0.000	0.142	0.092	0.194	0.000	0.095	0.000	0.000	0.000	0.043	0.194	
6-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.042	0.024	0.000	0.000	0.004	0.042	
7-Apr	0.000	0.000	Z	0.027	0.000	0.000	0.005	0.036	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	0.013	0.120	0.119	0.014	0.120	
8-Apr	0.138	0.162	0.167	Z	0.117	0.108	0.061	0.024	0.092	0.064	0.104	0.104	0.118	0.143	0.132	0.120	0.081	0.101	0.105	0.102	0.097	0.095	0.097	0.124	0.107	0.167	
9-Apr	0.133	0.127	0.101	0.108	Z	0.082	0.089	0.153	0.139	0.113	0.095	0.123	0.143	0.066	0.004	0.000	0.000	0.036	0.028	0.002	0.000	0.000	0.000	0.000	0.067	0.153	
10-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
11-Apr	Z	0.000	0.014	0.027	0.142	0.121	0.114	0.046	0.101	0.152	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.269	
12-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.139	0.134	0.016	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.013	0.139
14-Apr	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.004	C	C	C	C	0.000	0.000	0.010	0.009	0.000	0.000	0.000	0.036	0.000	0.000	0.000	0.003	0.036	
15-Apr	0.000	0.060	0.034	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.060	
16-Apr	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	0.084	0.146	0.000	0.010	0.146	
17-Apr	Z	0.000	0.000	0.000	0.000	0.048	0.026	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.005	0.048	
18-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.056	0.043	0.040	0.029	0.068	0.122	0.154	0.092	0.016	0.000	0.000	0.000	0.089	0.000	0.032	0.154	
19-Apr	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	0.029	0.000	0.021	0.035	0.004	0.035	
20-Apr	0.004	0.014	0.144	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	0.007	0.144	
21-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.004	0.096	0.032	0.000	0.000	0.008	0.075	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.012	0.096	
22-Apr	0.000	0.000	0.000	0.004	0.000	Z	0.000	0.000	0.010	0.091	0.008	0.066	0.017	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.091	
23-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.195	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	0.000	0.010	0.195	
24-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.010	0.038	0.041	0.115	0.073	0.015	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.115	
25-Apr	0.000	0.000	Z	0.000	0.000	0.077	0.105	0.003	0.030	0.003	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	0.010	0.105	
26-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.020	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.020	
27-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.096	0.159	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.025	0.000	0.000	0.000	0.000	0.018	0.159	
29-Apr	Z	0.000	0.000	0.004	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.001	0.010	
30-Apr	0.012	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.032	0.004	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.090	
		0.011	0.015	0.018	0.007	0.013	0.019	0.014	0.011	0.030	0.026	0.025	0.015	0.020	0.025	0.009	0.009	0.014	0.013	0.014	0.005	0.011	0.011	0.016	0.009	Diurnal Average	
		0.138	0.162	0.167	0.108	0.142	0.121	0.114	0.153	0.195	0.159	0.269	0.123	0.143	0.189	0.132	0.122	0.154	0.101	0.194	0.102	0.097	0.119	0.146	0.124	Diurnal Maximum	
Z - zerospan		C - Calibration																									



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	544	79.30	79.30
0.006 - 0.05	65	9.48	88.78
0.06 - 0.1	67	9.77	98.54
> 0.1	10	1.46	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	59	53	17	3	3	7	15	53	55	52	27	44	47	26	31	47	539
0.006 - 0.05	6	13	3	1	3	1	4	9	15	4	3	1	0	0	0	1	64
0.06 - 0.1	6	6	0	1	2	1	6	13	16	5	1	4	0	2	2	1	66
> 0.1	2	1	0	0	0	0	0	1	3	1	0	0	0	0	1	0	9
Totals	73	73	20	5	8	9	25	76	89	62	31	49	47	28	34	49	678

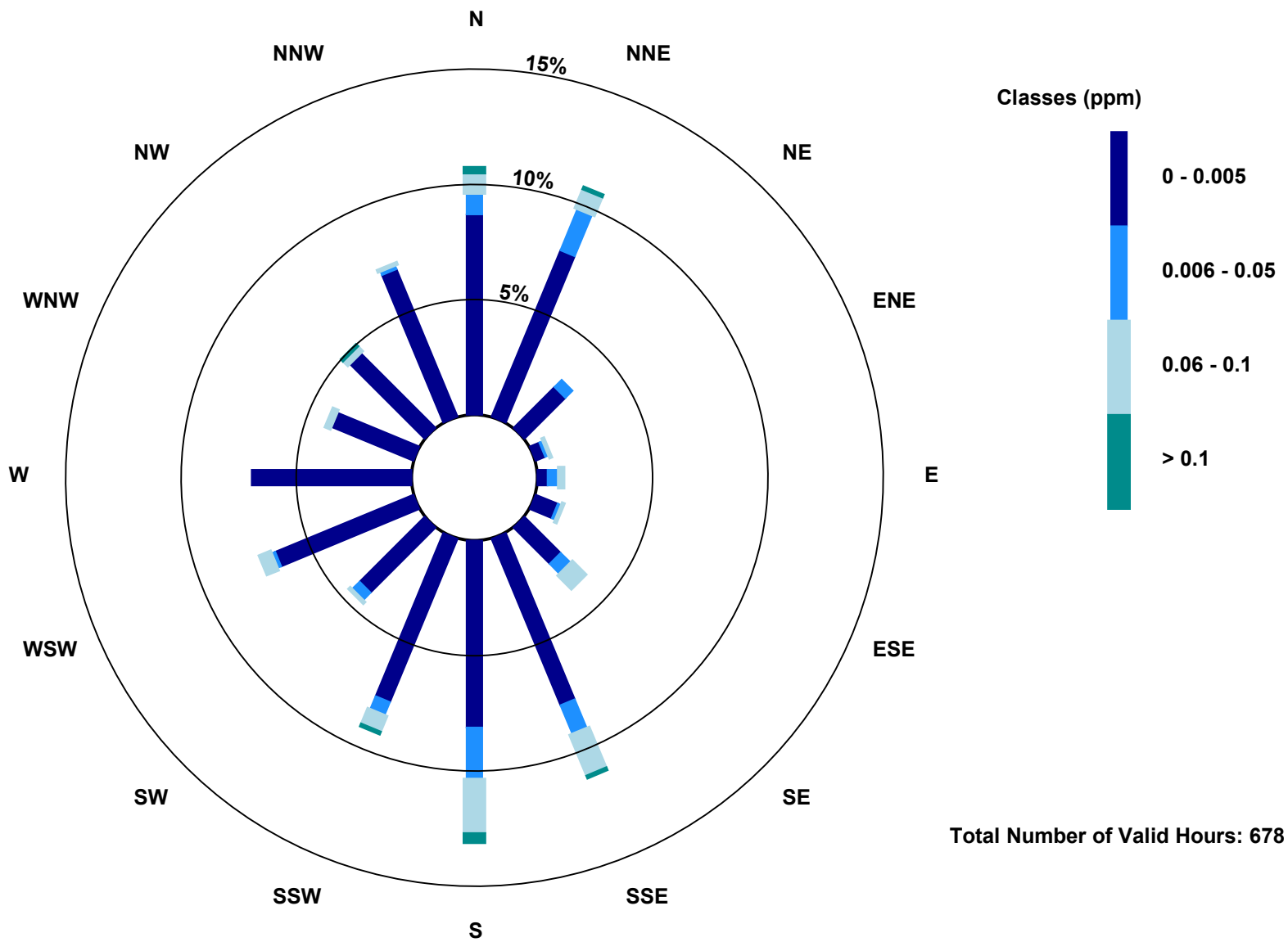
Total Number of Valid Hours: 678

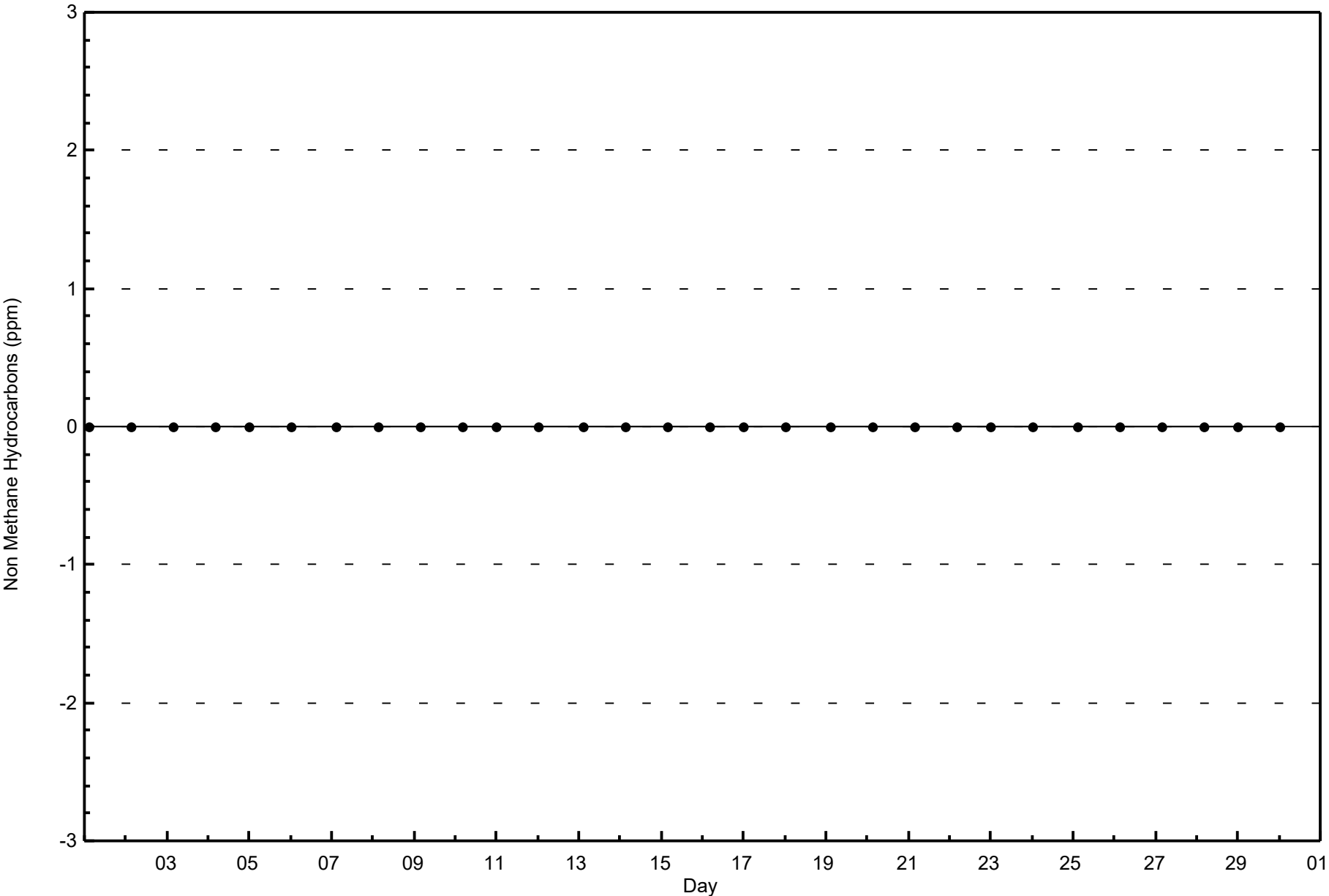
Total Number of Hours: 720

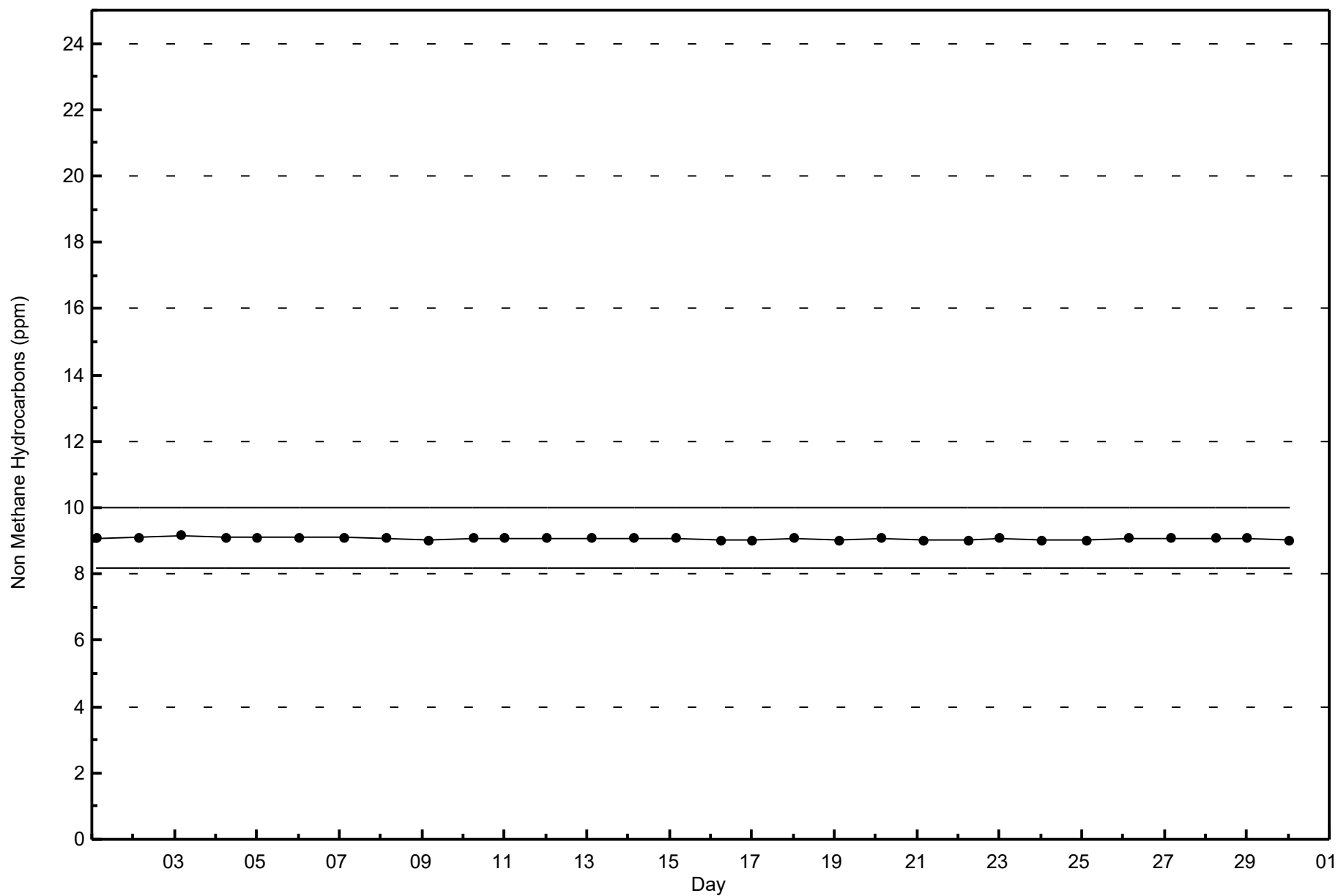


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South









Wood Buffalo Environmental Association

Summary of Hour Averages

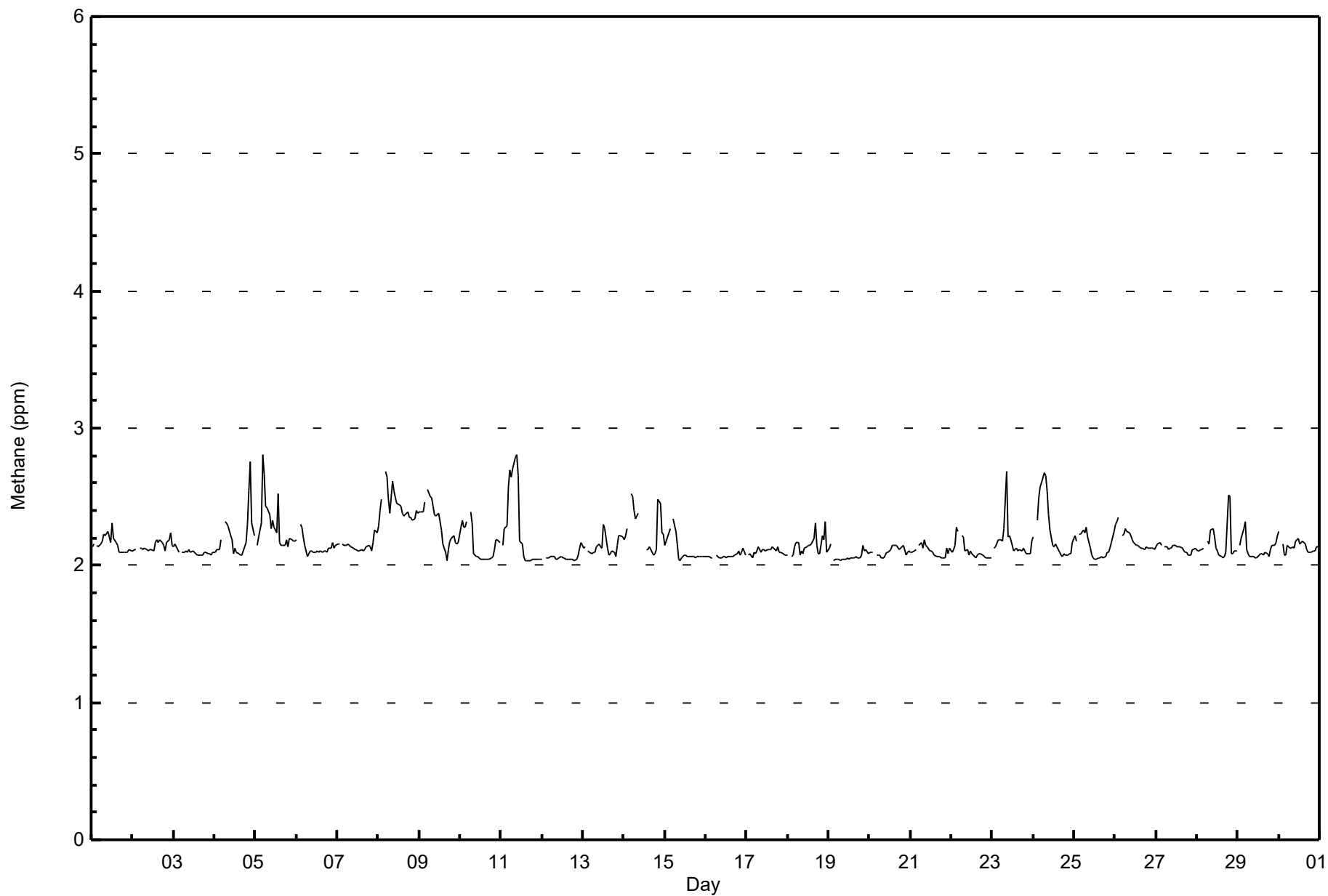
Methane (CH₄) - ppm Fort McKay South - April 2025

Number of Exceedences (AAAQO): Maximum Value: 2.8 ppm on Apr 5 05:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 2.4 ppm on Apr 8																		Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0			
Minimum Value: 2.0 ppm on Apr 11 16:00 Maximum Diurnal Average: 2.3 ppm at hour 6 Monthly Average: 2.16 ppm																		Minimum Daily Average: 2.1 ppm on Apr 12 Minimum Diurnal Average: 2.1 ppm at hour 18 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 = 2.7																					
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-Apr	2.1	2.2	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3													
2-Apr	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	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.2													
3-Apr	2.1	2.2	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	2.2													
4-Apr	2.1	2.1	2.1	2.1	2.2	Z	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	2.3	2.5	2.8	2.3	2.2	2.2	2.8													
5-Apr	Z	2.1	2.2	2.3	2.8	2.7	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.5	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.8													
6-Apr	2.2	Z	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	2.1	2.2	2.1	2.1	2.1	2.3													
7-Apr	2.2	2.2	Z	2.2	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	2.2	2.3	2.2	2.1	2.3													
8-Apr	2.3	2.4	2.5	Z	2.7	2.6	2.5	2.4	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.7													
9-Apr	2.4	2.4	2.4	2.5	Z	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5													
10-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.4	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4													
11-Apr	Z	2.1	2.3	2.3	2.6	2.7	2.6	2.7	2.8	2.8	2.7	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	2.3	2.8													
12-Apr	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.2													
13-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.3												
14-Apr	2.2	2.2	2.3	Z	2.5	2.5	2.4	2.3	2.4	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.4	2.2	2.2	2.3	2.5													
15-Apr	2.1	2.2	2.2	2.3	Z	2.3	2.2	2.2	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	2.3													
16-Apr	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													
17-Apr	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													
18-Apr	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.3													
19-Apr	2.1	2.2	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2													
20-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2													
21-Apr	2.1	2.1	2.1	2.1	Z	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	2.2													
22-Apr	2.1	2.1	2.1	2.3	2.2	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3													
23-Apr	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.7	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	2.7													
24-Apr	2.2	Z	2.3	2.5	2.6	2.6	2.7	2.7	2.5	2.4	2.3	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.7													
25-Apr	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.3													
26-Apr	2.3	2.3	2.3	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3													
27-Apr	2.1	2.2	2.2	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	2.2													
28-Apr	2.1	2.1	2.1	2.1	2.1	Z	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	2.5	2.5	2.1	2.1	2.1	2.1	2.5													
29-Apr	Z	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.3													
30-Apr	2.2	Z	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	2.2	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 2.2 2.3 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																										Diurnal Average													
2.4 2.4 2.5 2.5 2.8 2.7 2.7 2.7 2.8 2.8 2.7 2.4 2.4 2.5 2.4 2.4 2.4 2.4 2.4 2.5 2.5 2.5 2.8 2.4 2.4																										Diurnal Maximum													
Z - zerospan C - Calibration																																							



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Fort McKay South - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	44	6.41	6.41
2.1 - 3.0	642	93.59	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

Methane (CH₄) - ppm
Fort McKay South - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	1	4	4	11	10	6	7	1	44
2.1 - 3.0	73	73	20	5	8	9	25	76	88	58	27	38	37	22	27	48	634
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	73	73	20	5	8	9	25	76	89	62	31	49	47	28	34	49	678

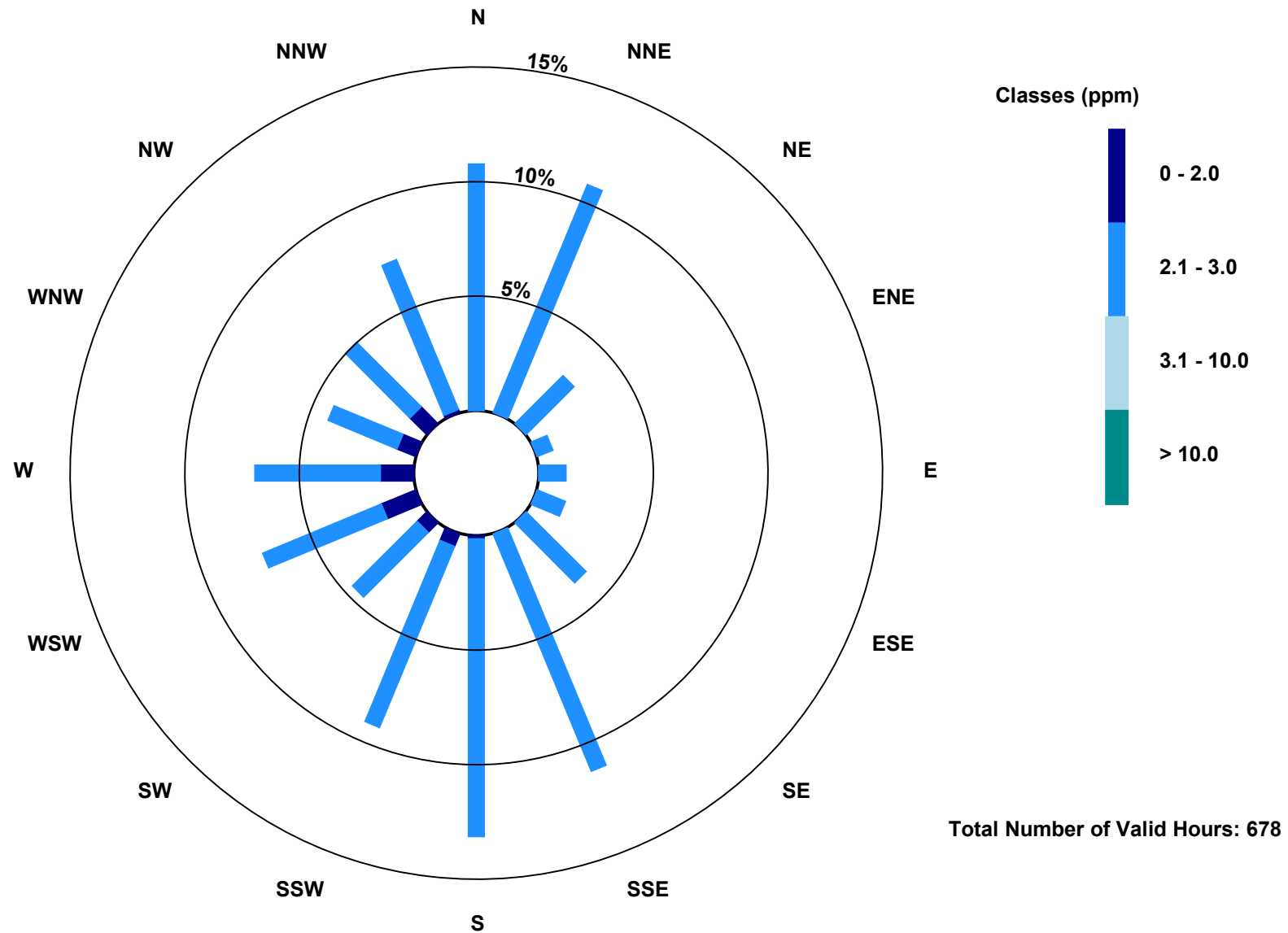
Total Number of Valid Hours: 678

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

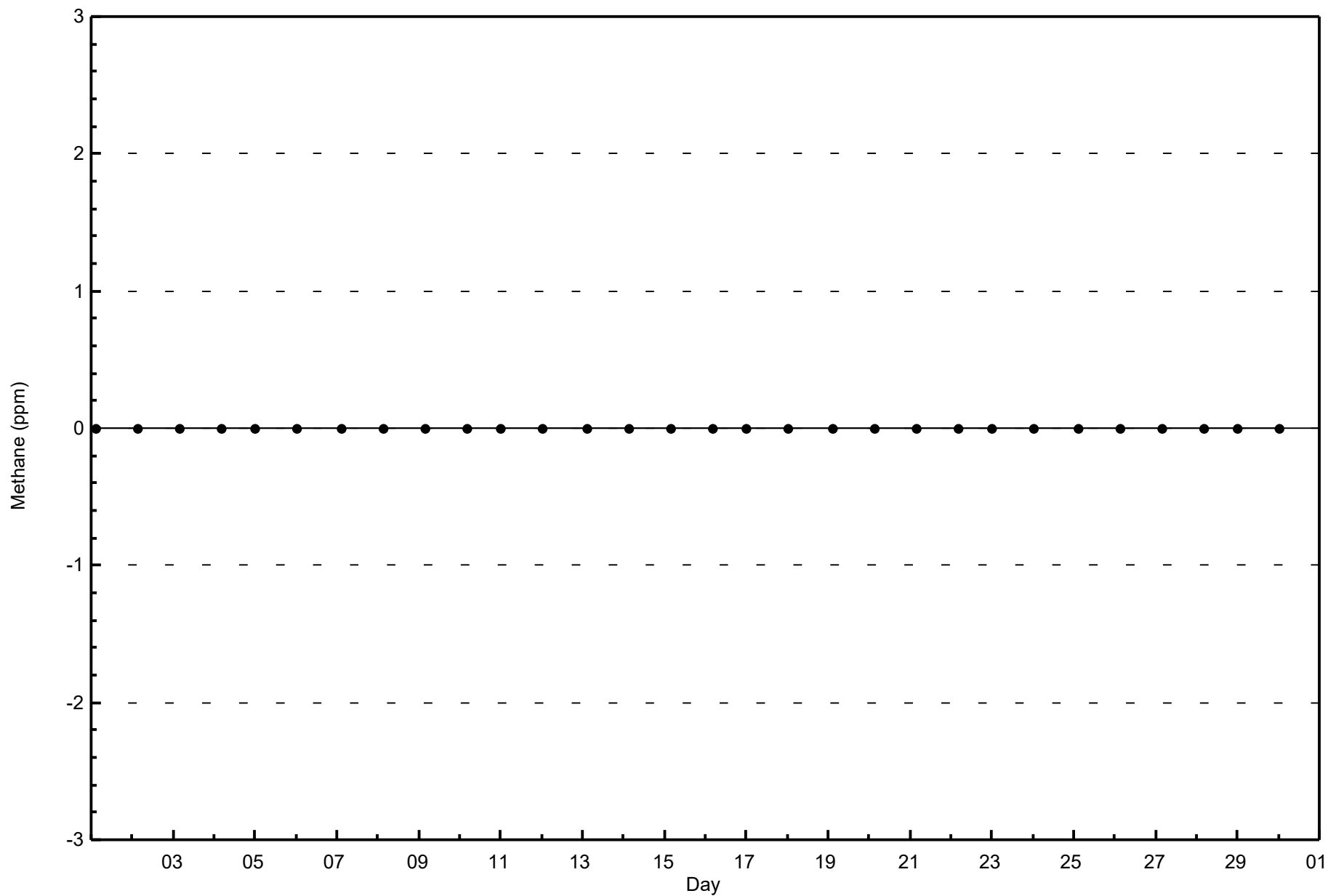
Methane (CH₄) - ppm
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

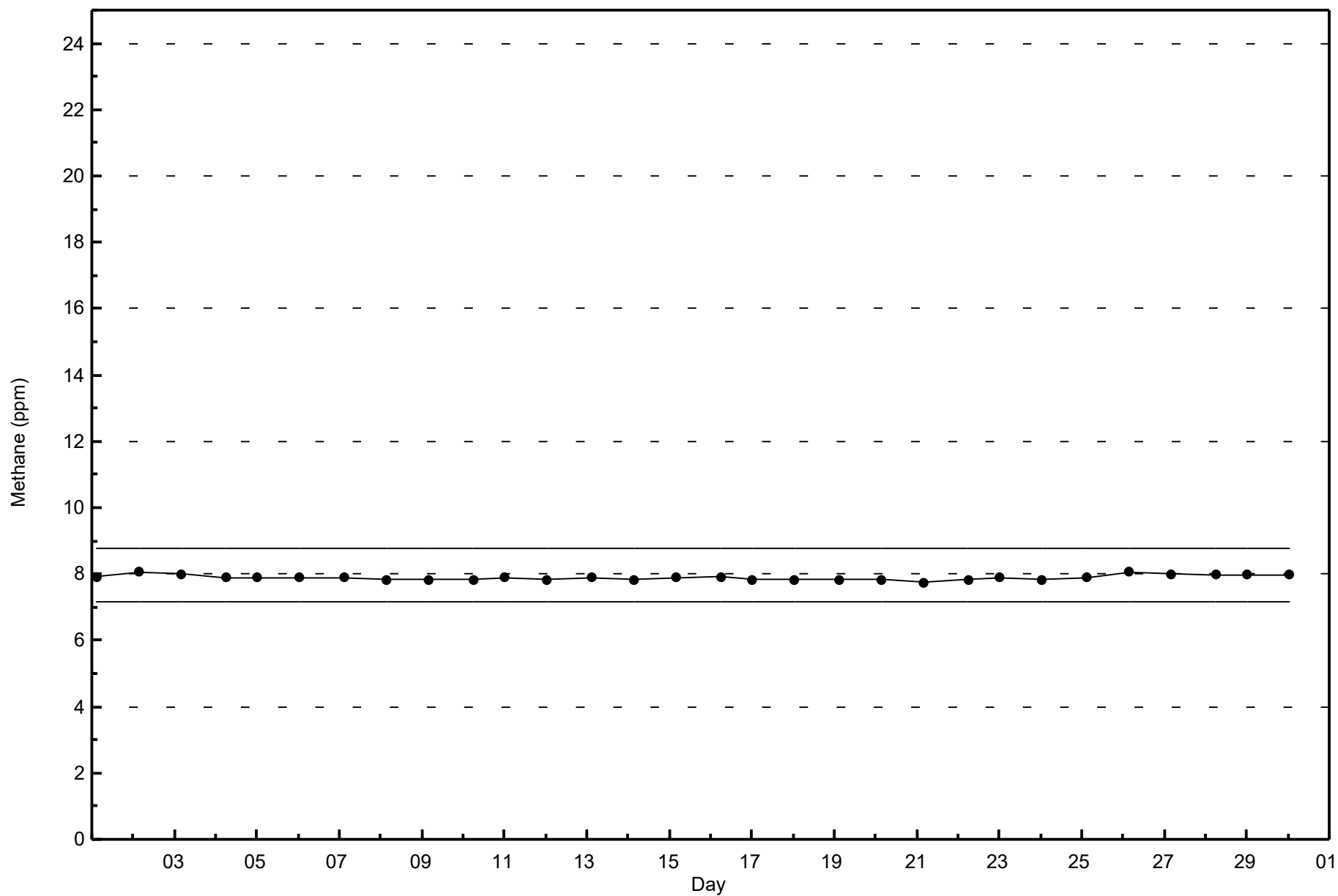
Methane (CH₄) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

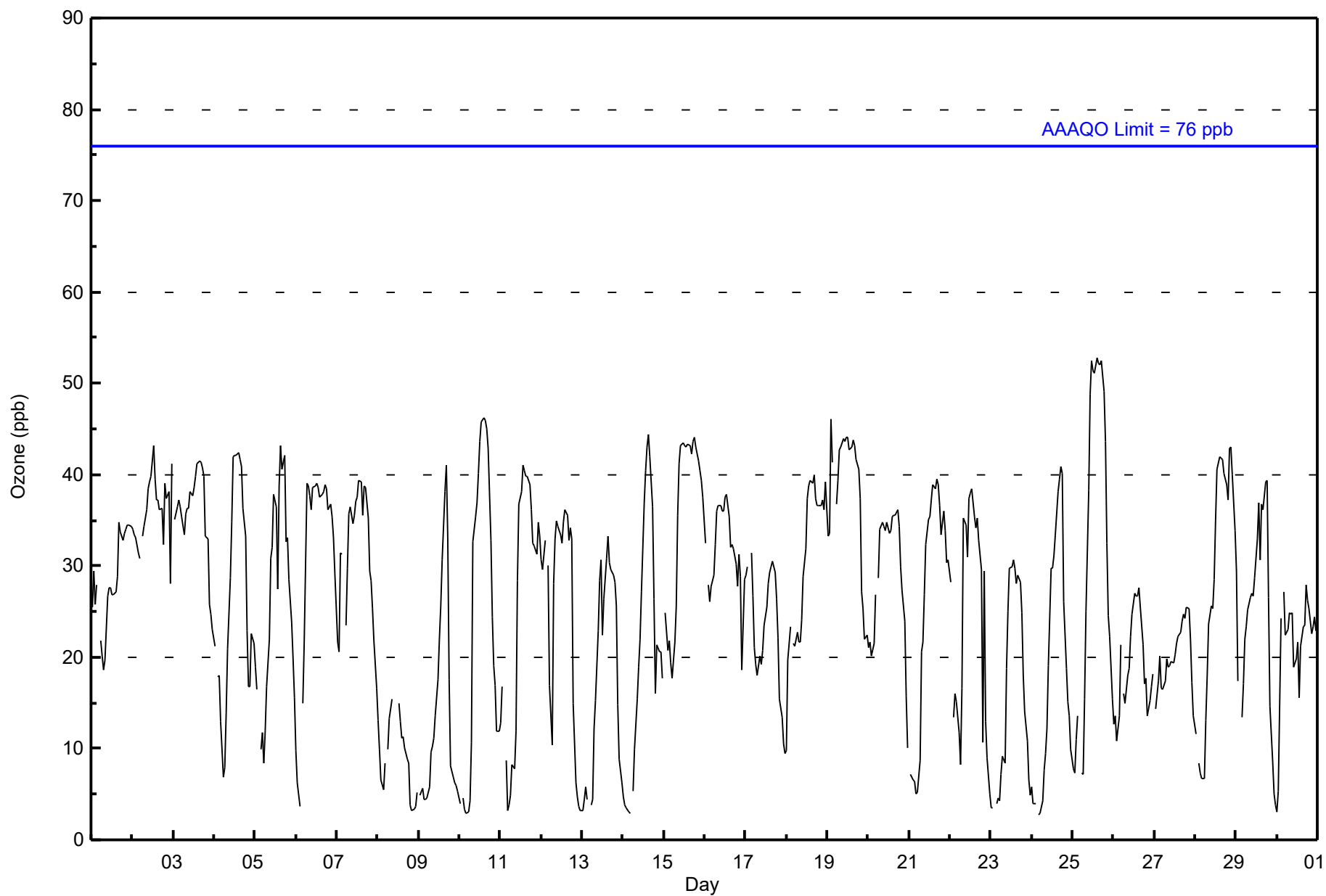
Methane (CH₄) - ppm
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	226	32.90	32.90
21 - 50	454	66.08	98.98
51 - 82	7	1.02	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 (O₃) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	23	19	6	1	4	2	8	14	26	27	18	22	9	13	15	16	223
21 - 50	51	54	14	3	4	7	19	62	58	30	14	29	35	17	20	32	449
51 - 82	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	7
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	74	73	20	4	8	9	27	76	85	63	32	51	44	30	35	48	679

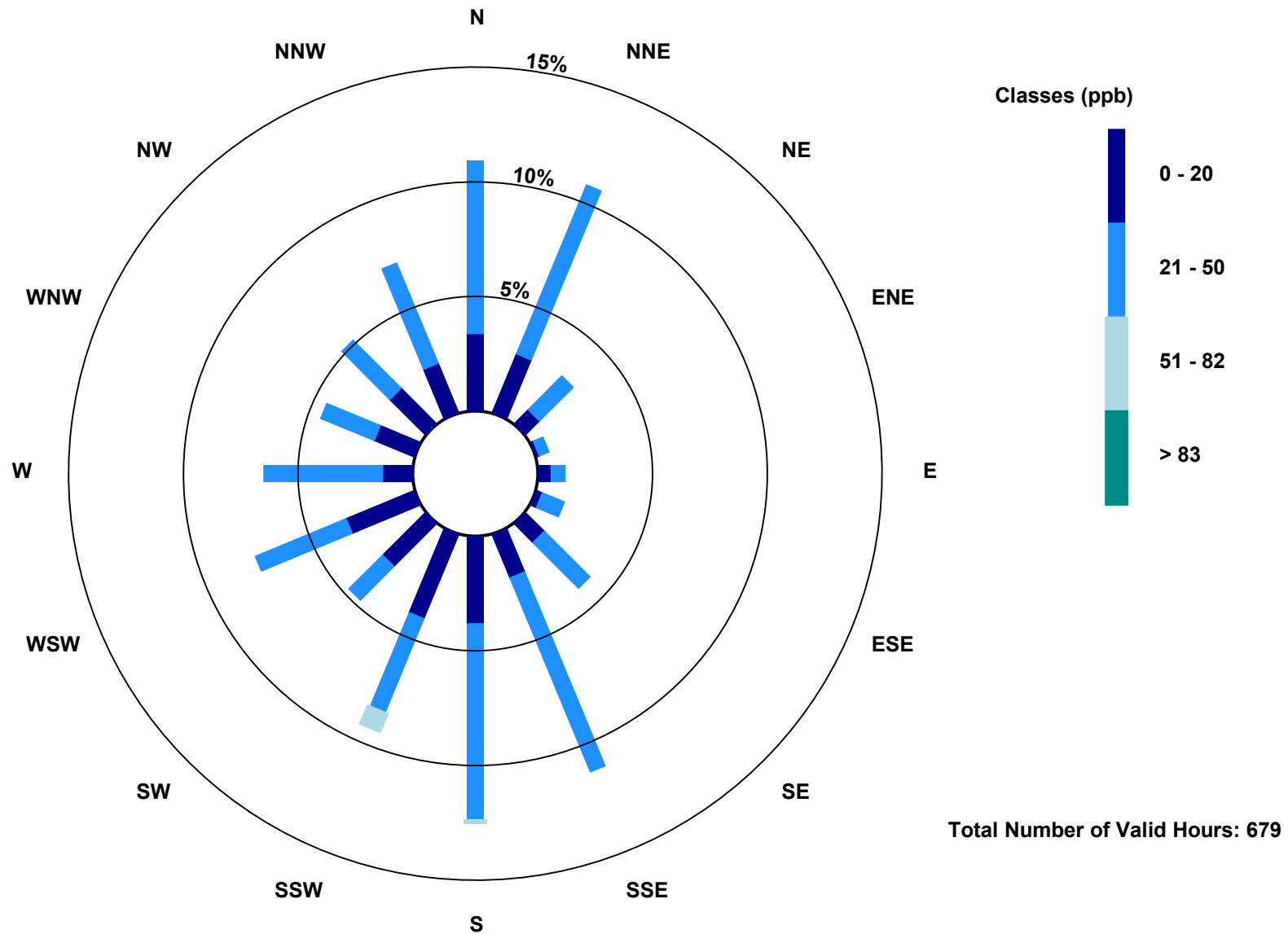
Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

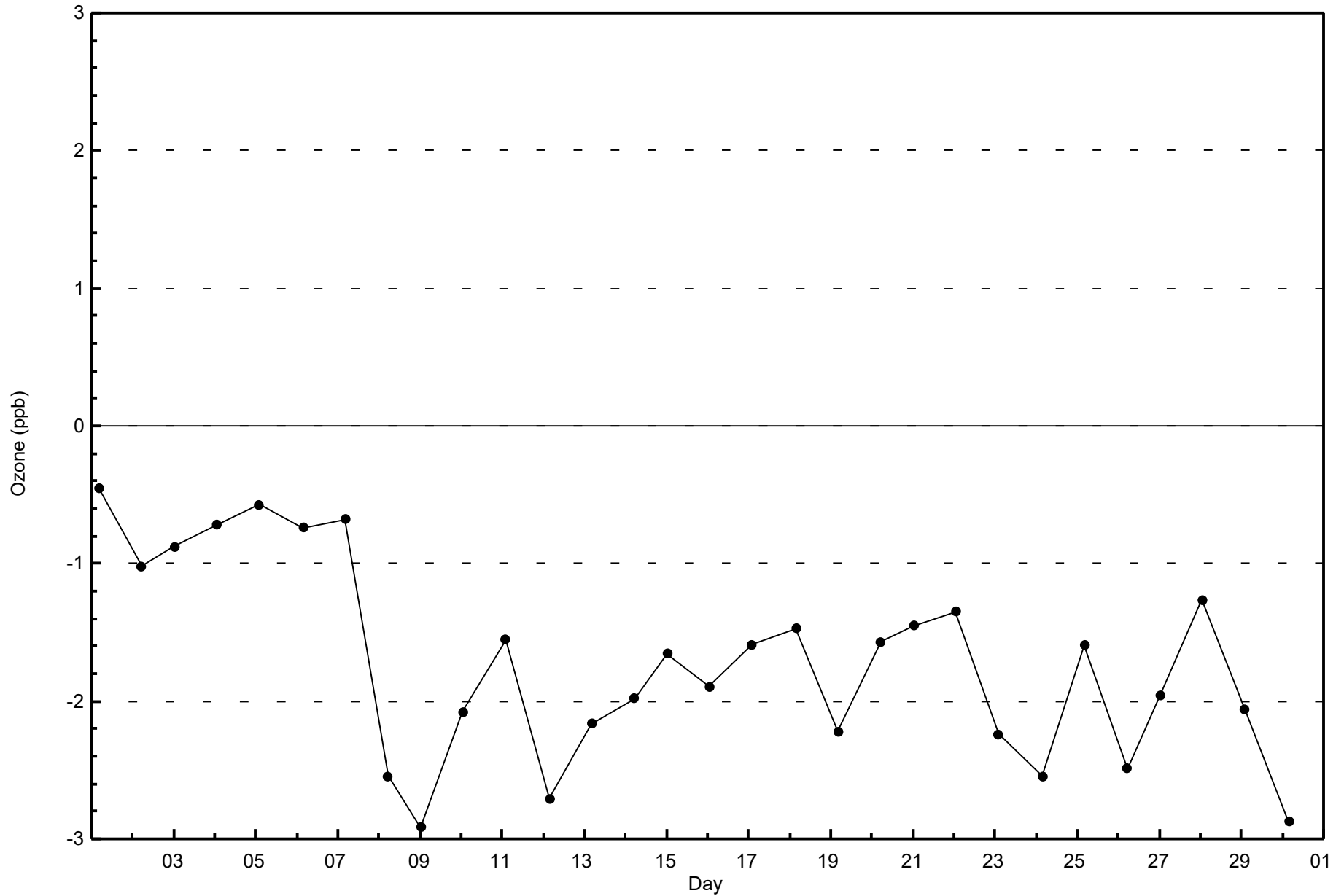
Ozone (O_3) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

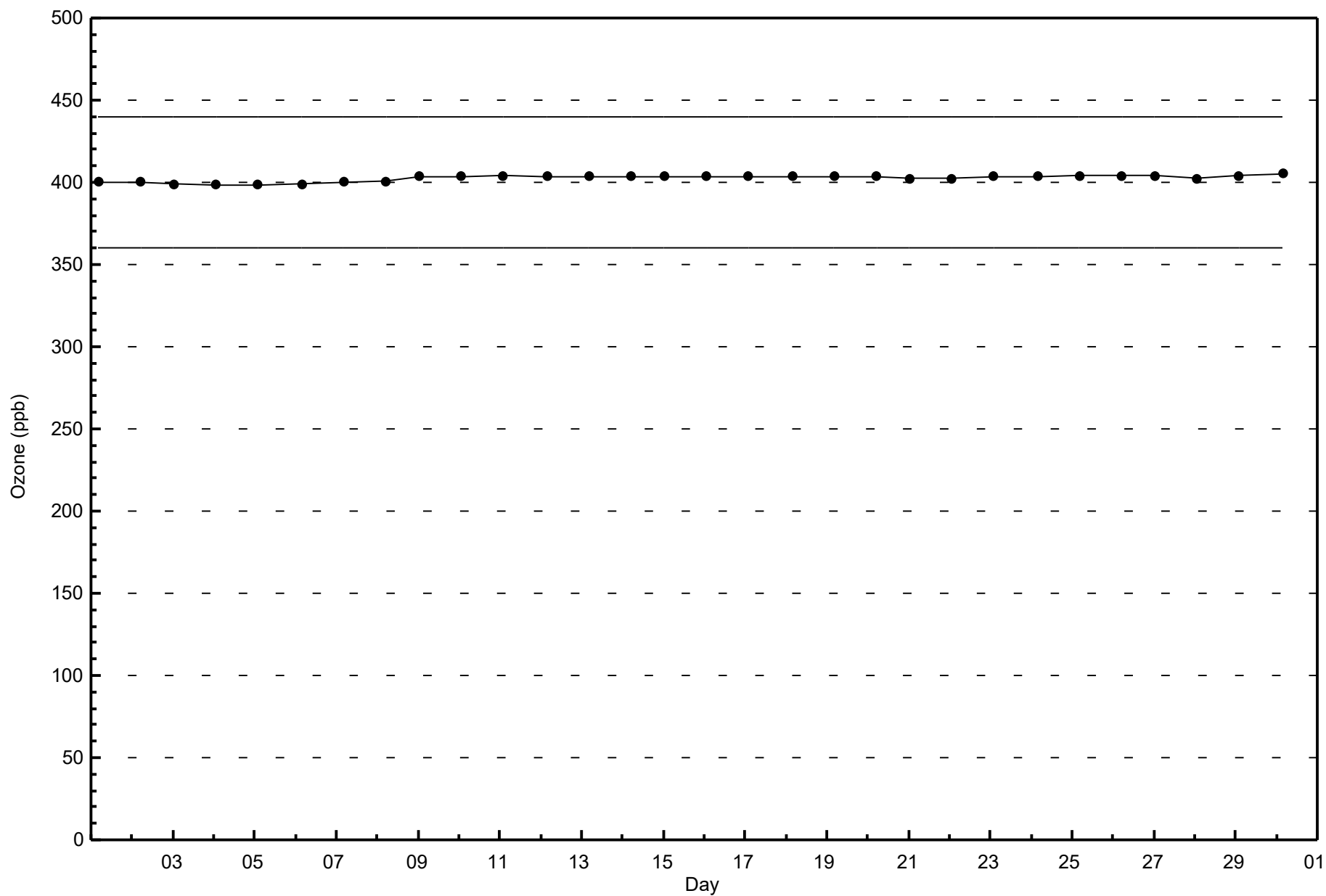
Ozone (O₃) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Fort McKay South - April 2025

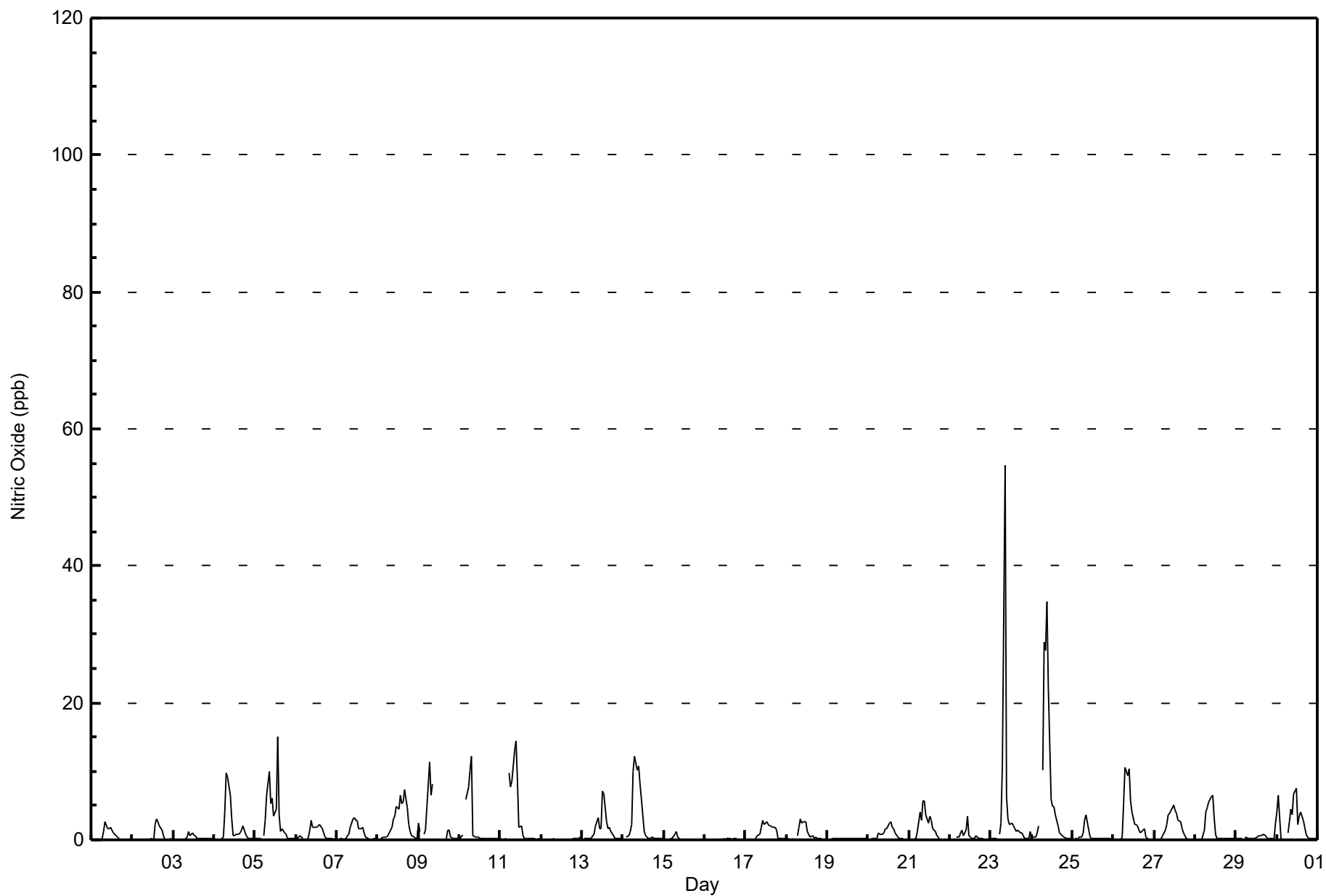


Maximum Value: 54.7 ppb on Apr 23 09:00										Maximum Daily Average: 6.6 ppb on Apr 24										Hours in Service: 720						
Minimum Value: 0.0 ppb on Apr 1 04:00										Minimum Daily Average: 0.1 ppb on Apr 16										Hours of Data: 683						
Maximum Diurnal Average: 6.1 ppb at hour 9										Minimum Diurnal Average: 0.1 ppb at hour 22										Hours of Missing Data: 37						
Monthly Average: 1.55 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.6 P ₉₀ = 4.1 P ₉₉ = 13.2										Hours of Calibration: 37						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.2	2.6	1.7	1.6	1.8	1.5	1.0	0.6	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.6
2-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.2	0.0	2.2	3.0	2.6	2.0	1.4	0.5	0.1	0.1	0.1	0.1	0.0	0.5	3.0
3-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.4	1.3	0.7	0.9	0.6	0.6	0.3	0.1	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.3	1.3
4-Apr	0.1	0.1	0.0	Z	0.1	0.3	4.0	9.7	9.1	6.4	3.0	0.5	0.6	0.9	0.9	1.1	1.5	1.9	0.8	0.4	0.3	0.3	0.2	0.2	1.8	9.7
5-Apr	0.1	0.2	0.2	0.2	Z	0.6	2.9	6.6	9.9	5.2	6.1	3.5	4.4	15.1	3.7	1.3	1.7	0.9	0.7	0.3	0.2	0.2	0.2	0.2	2.8	15.1
6-Apr	0.2	0.3	0.6	0.3	0.1	Z	0.0	0.5	1.4	2.8	1.9	1.8	1.7	2.0	2.2	1.6	1.1	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.9	2.8
7-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.6	0.8	1.8	3.1	3.3	2.9	2.9	1.7	1.6	1.8	0.9	0.3	0.1	0.1	0.0	0.0	0.1	0.1	1.0	3.3
8-Apr	0.1	Z	0.2	0.3	0.3	0.4	0.5	1.0	1.9	3.1	3.4	4.9	4.4	6.5	5.3	5.6	7.3	4.7	2.2	1.3	0.6	0.3	0.3	0.2	2.4	7.3
9-Apr	2.5	1.1	Z	0.7	1.4	4.7	11.4	6.5	8.2	C	C	C	C	C	C	C	0.3	1.3	1.4	0.5	0.3	0.2	0.2	0.2	--	11.4
10-Apr	0.3	0.6	0.6	Z	6.0	7.8	10.2	12.1	0.7	0.3	0.4	0.4	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	1.8	12.1
11-Apr	0.1	0.1	0.1	0.2	Z	9.7	7.8	8.5	13.0	14.4	8.7	1.8	2.0	0.5	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	3.0	14.4
12-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3
13-Apr	Z	0.3	0.2	0.2	0.2	0.2	0.6	0.8	2.0	3.3	1.7	1.6	7.2	6.7	2.6	1.6	1.8	1.2	0.7	0.3	0.2	0.2	0.1	0.1	1.5	7.2
14-Apr	0.2	Z	0.4	0.6	1.2	2.3	10.0	12.2	10.1	10.8	8.0	5.8	1.3	0.6	0.4	0.1	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	2.9	12.2
15-Apr	0.1	0.1	Z	0.1	0.1	0.3	0.8	1.1	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.1
16-Apr	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	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2
17-Apr	0.1	0.0	0.0	0.0	Z	0.1	0.3	0.6	0.7	1.9	2.9	2.3	2.6	2.2	2.1	2.1	1.8	1.8	1.3	0.3	0.1	0.1	0.1	0.1	1.0	2.9
18-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.7	1.8	3.1	2.5	2.5	2.7	1.3	0.9	0.4	0.5	0.2	0.5	0.3	0.2	0.1	0.0	0.1	0.1	0.8	3.1
19-Apr	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	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3
20-Apr	0.2	Z	0.2	0.2	0.1	0.3	0.9	0.8	0.9	1.1	1.7	1.7	2.4	2.7	1.8	1.6	1.1	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.8	2.7
21-Apr	0.1	0.1	Z	0.1	0.1	1.2	4.0	2.8	5.7	5.7	3.7	2.5	3.4	2.8	1.6	1.2	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.6	5.7
22-Apr	0.0	0.0	0.0	Z	0.5	0.4	1.0	1.5	0.5	1.4	3.5	0.5	0.4	0.2	0.1	0.6	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.5	3.5
23-Apr	0.2	0.1	0.1	0.1	Z	0.8	2.4	10.8	54.7	6.3	3.1	2.3	2.5	2.0	1.6	1.3	1.3	1.0	0.9	0.6	0.2	0.2	0.2	1.3	4.1	54.7
24-Apr	0.4	0.5	0.4	1.0	2.1	Z	10.2	28.8	27.7	34.7	22.3	5.9	4.8	4.9	3.6	2.1	1.1	0.7	0.6	0.3	0.2	0.2	0.2	0.2	6.6	34.7
25-Apr	Z	0.2	0.1	0.1	0.4	0.3	1.1	2.8	3.7	1.5	0.3	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.6	3.7
26-Apr	0.1	Z	0.1	0.0	0.1	0.5	5.3	10.6	9.3	10.3	5.7	4.0	2.2	2.3	2.0	1.3	1.0	1.5	1.6	0.5	0.2	0.1	0.0	0.0	2.6	10.6
27-Apr	0.1	0.1	Z	0.1	0.1	0.6	1.5	2.3	3.7	3.8	4.3	5.2	4.3	3.8	2.8	2.7	1.6	1.0	0.7	0.2	0.1	0.1	0.0	0.1	1.7	5.2
28-Apr	0.1	0.1	0.1	Z	0.1	1.4	4.1	4.7	5.4	6.3	6.6	3.3	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.5	6.6
29-Apr	0.2	0.3	0.3	0.3	Z	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.3	0.6	0.5	0.7	0.8	0.5	0.1	0.2	0.1	0.1	0.2	2.5	0.4	2.5
30-Apr	4.0	6.5	0.1	0.0	0.0	Z	1.1	2.6	4.4	3.7	6.6	7.6	2.1	3.5	4.2	2.9	1.8	0.7	0.5	0.3	0.2	0.2	0.2	0.2	2.3	7.6
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	678	99.27	99.27
21 - 40	4	0.59	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	71	73	19	4	6	8	27	77	82	61	32	53	46	28	34	50	671
21 - 40	0	0	1	0	2	0	0	0	1	0	0	0	0	0	0	0	4
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	73	20	4	8	8	27	77	83	61	32	53	46	28	34	50	676

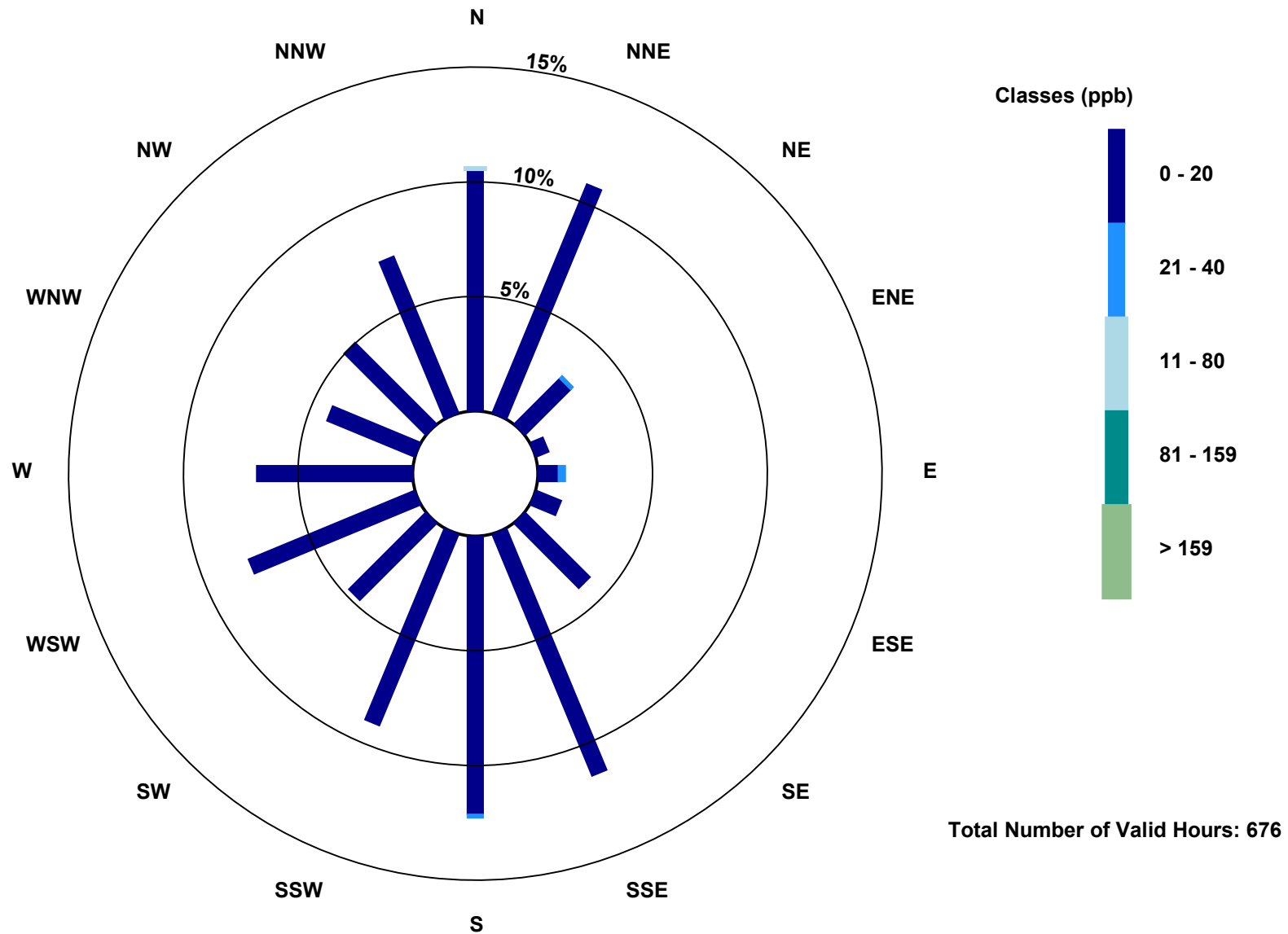
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

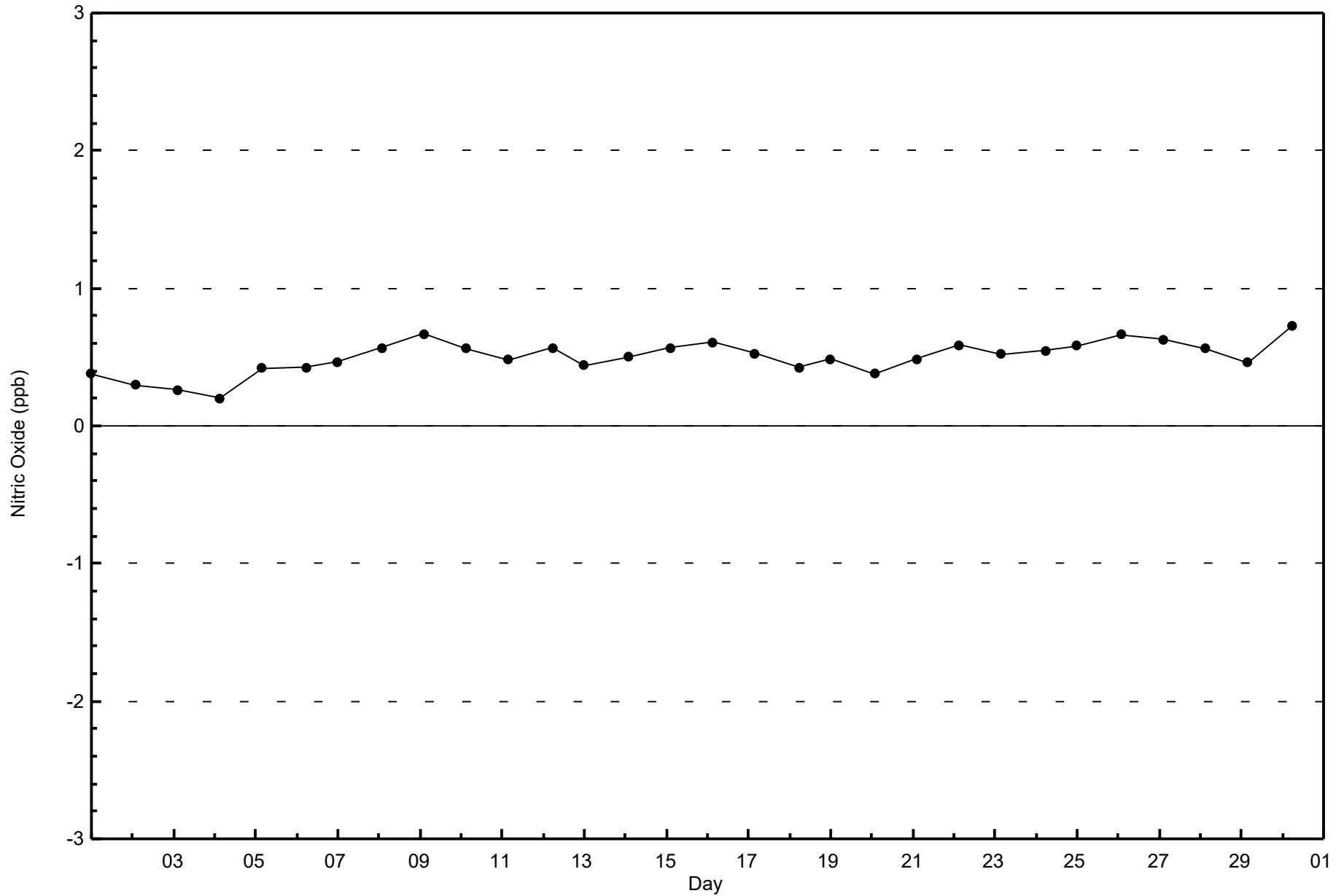
Nitric Oxide (NO) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

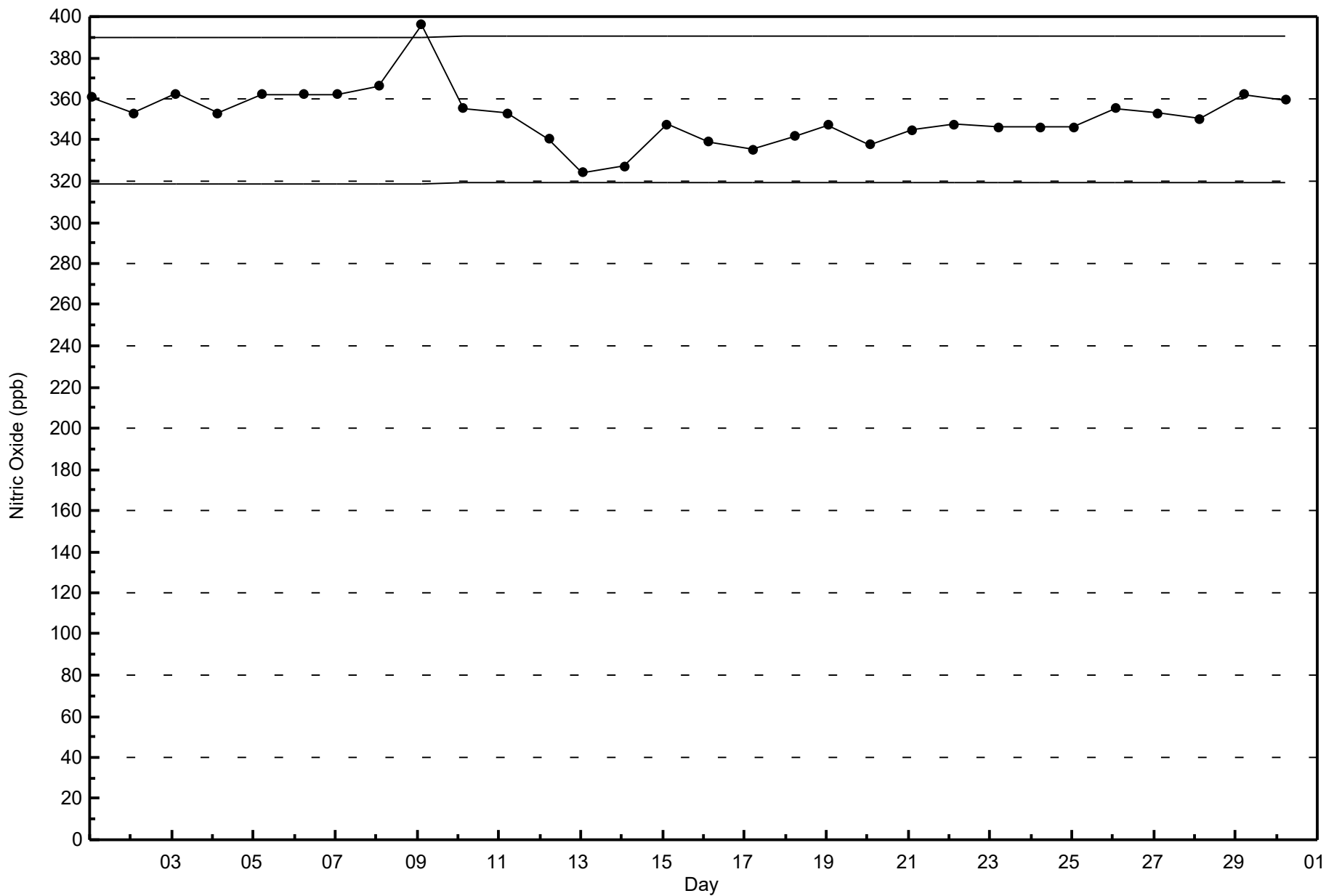
Nitric Oxide (NO) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

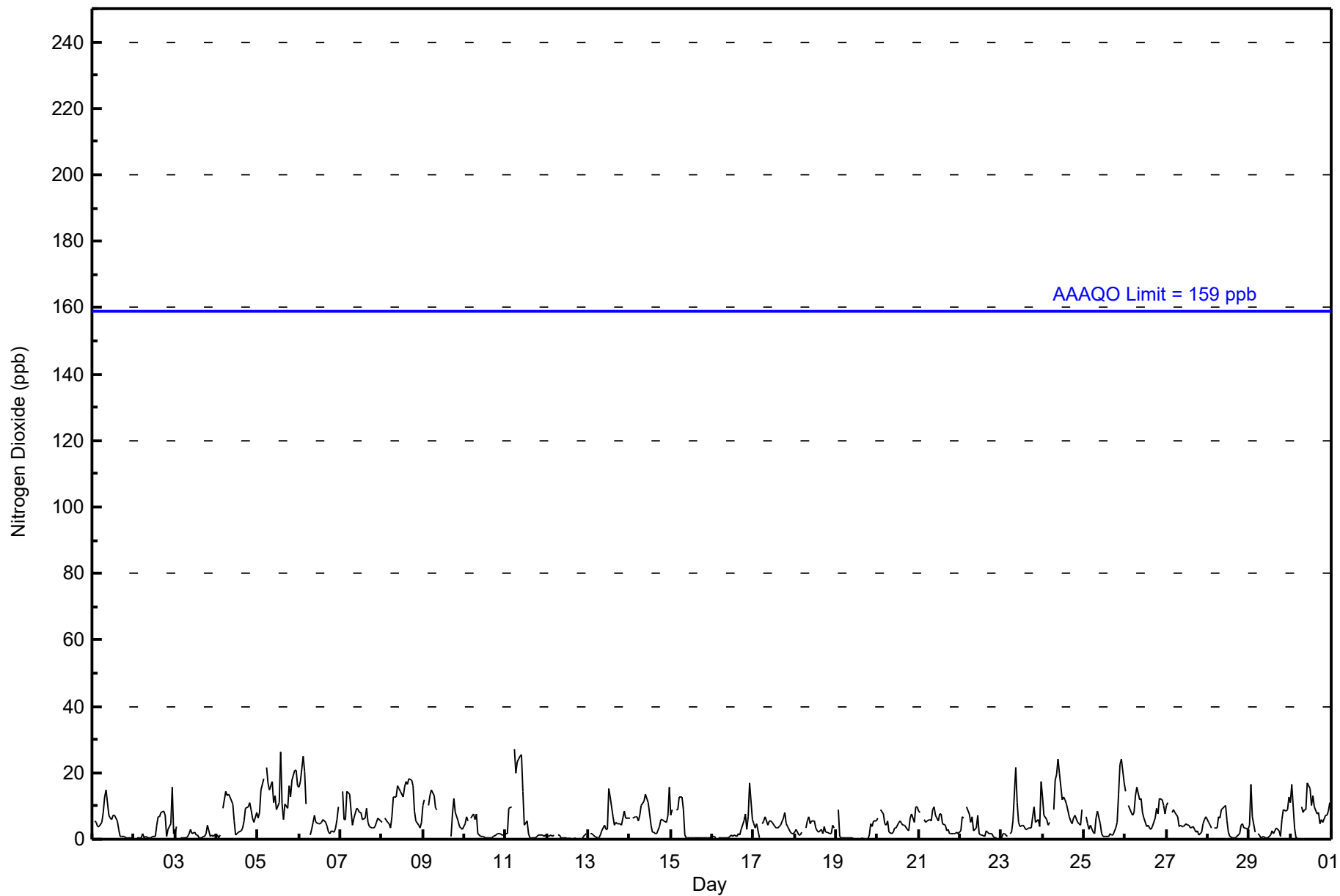
Fort McKay South - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 27.2 ppb on Apr 11 06:00 Maximum Daily Average: 14.3 ppb on Apr 5																			Hours of Data: 683							
Minimum Value: 0.2 ppb on Apr 12 13:00 Minimum Daily Average: 0.7 ppb on Apr 12																			Hours of Missing Data: 37							
Maximum Diurnal Average: 7.7 ppb at hour 9 Minimum Diurnal Average: 3.6 ppb at hour 17																			Hours of Calibration: 37							
Monthly Average: 5.51 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 1.4 Median = 4.3 Q ₃ = 7.8 P ₉₀ = 12.8 P ₉₉ = 23.5																			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-Apr	Z	5.5	5.0	3.8	3.7	5.0	7.9	12.8	15.0	7.3	6.3	6.1	7.4	7.0	5.7	3.0	0.8	0.9	1.0	0.6	0.5	0.5	0.5	0.4	4.6	15.0
2-Apr	0.4	Z	0.5	0.4	0.4	1.5	0.4	0.8	0.4	0.4	0.5	0.9	0.7	4.2	6.7	6.7	8.2	8.6	7.1	0.7	2.9	4.5	15.7	1.5	3.2	15.7
3-Apr	1.8	3.9	Z	0.5	0.5	0.3	0.4	0.7	1.5	2.9	1.6	2.0	1.3	1.2	0.5	0.4	0.7	1.0	1.7	4.1	0.9	1.1	1.0	1.2	1.4	4.1
4-Apr	1.1	0.6	1.2	Z	9.2	14.5	13.2	13.6	12.8	10.4	5.3	1.4	1.6	2.3	2.5	3.3	5.4	9.4	9.9	10.9	9.1	6.5	5.1	7.9	6.8	14.5
5-Apr	6.4	8.0	15.0	18.2	Z	21.8	17.0	15.0	17.3	11.2	13.0	8.9	11.0	26.1	10.8	6.0	10.7	9.2	16.0	12.6	17.8	20.7	20.6	16.2	14.3	26.1
6-Apr	15.5	17.3	24.9	20.4	10.8	Z	1.4	2.9	5.0	7.4	4.9	4.8	4.7	5.2	6.0	4.9	3.8	2.2	1.5	2.5	2.1	3.4	6.0	9.7	7.3	24.9
7-Apr	Z	14.2	5.8	5.9	14.2	13.4	8.3	4.3	6.2	9.5	8.9	8.2	8.1	6.1	6.3	9.5	5.0	4.0	3.4	3.4	3.7	5.0	6.5	5.3	7.2	14.2
8-Apr	5.0	Z	6.4	5.1	4.6	3.4	6.8	12.7	12.9	16.3	15.4	14.2	12.8	15.6	17.2	16.6	18.1	17.8	15.9	8.5	5.3	4.1	3.5	5.1	10.6	18.1
9-Apr	10.0	11.8	Z	10.0	13.2	14.9	13.2	9.5	9.0	C	C	C	C	C	C	C	1.0	7.8	12.1	8.1	5.7	3.8	3.2	2.8	--	14.9
10-Apr	4.8	6.7	5.3	Z	6.5	7.7	5.8	7.7	1.7	0.8	1.0	0.7	0.4	0.5	0.5	0.3	0.5	0.8	1.2	1.5	1.6	1.7	1.3	1.1	2.6	7.7
11-Apr	1.8	1.6	9.4	9.8	Z	27.2	20.0	23.3	25.2	25.3	14.6	4.2	5.3	1.6	0.4	0.3	0.3	0.3	0.9	1.3	1.3	1.4	0.7	1.1	7.7	27.2
12-Apr	1.0	0.9	1.3	0.9	1.2	Z	1.3	1.2	0.6	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	1.0	1.1	1.8	0.7	1.8
13-Apr	Z	1.7	1.5	1.2	1.0	0.4	0.4	1.4	2.7	4.4	2.9	2.9	15.4	12.7	6.6	4.1	5.2	4.6	4.8	4.1	6.5	8.4	6.4	6.5	4.6	15.4
14-Apr	6.5	Z	6.3	6.6	6.9	5.6	7.0	10.1	11.3	13.5	12.2	11.1	4.2	2.2	2.3	1.5	1.7	3.9	6.0	6.1	5.4	5.2	7.1	15.7	6.9	15.7
15-Apr	7.3	9.0	Z	8.8	8.7	12.8	12.5	8.7	1.4	0.5	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.4	3.2	12.8
16-Apr	1.0	0.7	0.3	Z	0.5	0.3	0.3	0.3	0.4	0.4	1.0	1.4	0.7	1.2	0.9	1.6	1.4	3.1	5.4	7.6	2.9	6.9	16.8	6.1	2.7	16.8
17-Apr	4.6	3.3	4.7	0.5	Z	4.7	5.6	6.6	4.2	5.4	5.3	4.9	3.9	3.3	3.5	3.9	4.3	6.2	7.9	4.7	3.7	2.3	1.8	1.5	4.2	7.9
18-Apr	2.3	2.8	1.2	1.2	2.0	Z	3.5	5.4	6.7	4.5	5.3	5.6	3.5	2.6	2.0	3.1	1.6	3.8	2.3	2.0	1.7	1.7	4.3	3.2	3.1	6.7
19-Apr	Z	9.0	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	1.1	4.6	3.9	5.3	5.3	1.5	9.0
20-Apr	6.2	Z	9.1	7.8	4.6	4.1	5.5	2.1	1.9	2.1	3.3	3.2	5.0	5.7	4.5	4.3	4.1	2.8	2.6	6.4	7.5	5.2	9.6	9.7	5.1	9.7
21-Apr	8.5	8.0	Z	6.1	5.1	5.5	5.8	5.4	8.8	9.7	7.4	5.7	7.7	7.5	4.8	4.4	2.6	2.9	1.6	1.6	1.6	1.6	2.1	1.7	5.0	9.7
22-Apr	2.5	6.6	6.4	Z	9.9	7.5	5.0	6.6	2.4	3.6	7.0	1.5	1.3	1.3	0.9	2.6	2.0	1.5	1.5	0.9	0.6	0.4	0.2	0.3	3.2	9.9
23-Apr	0.5	1.9	1.6	0.8	Z	1.7	2.1	5.3	21.8	10.9	5.2	4.0	4.2	3.7	2.8	2.8	3.5	3.6	6.9	9.7	4.9	6.0	4.0	17.4	5.4	21.8
24-Apr	12.5	7.3	5.9	4.3	4.9	Z	8.8	17.7	19.4	24.3	19.8	11.7	12.6	11.8	10.4	6.8	5.4	4.8	6.2	7.0	5.1	4.5	4.2	8.8	9.7	24.3
25-Apr	Z	6.7	4.7	3.0	4.2	2.0	1.7	6.2	8.4	4.8	1.6	0.8	0.8	0.7	0.8	1.7	1.3	1.2	3.6	5.2	13.6	22.4	24.3	16.8	5.9	24.3
26-Apr	14.5	Z	10.3	8.2	7.3	8.0	13.2	15.7	11.9	12.3	7.9	6.2	3.9	4.1	3.6	3.0	3.9	6.3	9.5	7.7	12.2	11.8	10.0	7.6	8.7	15.7
27-Apr	10.1	11.0	Z	7.9	8.7	8.0	6.7	3.7	4.1	3.7	4.0	4.8	4.4	4.2	3.5	3.8	2.8	2.3	2.5	1.2	2.2	4.6	6.1	6.7	5.1	11.0
28-Apr	4.9	4.2	3.5	Z	3.2	3.6	6.7	6.5	8.7	9.8	10.0	5.7	2.0	0.9	0.5	0.5	0.6	0.8	1.6	4.2	4.6	3.6	3.6	2.9	4.0	10.0
29-Apr	4.3	16.6	6.9	2.3	Z	1.9	1.1	0.5	0.7	0.6	0.4	0.4	1.4	2.7	1.9	2.4	3.2	2.5	0.7	6.0	9.1	8.4	8.8	12.8	4.2	16.6
30-Apr	11.2	16.4	3.6	0.5	0.4	Z	9.9	8.1	8.9	8.7	16.9	15.4	10.0	13.0	9.6	7.8	8.2	4.6	5.9	5.2	7.1	7.2	8.5	11.1	8.6	16.9



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	670	98.10	98.10
21 - 40	13	1.90	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	68	71	20	4	8	8	27	77	82	57	31	53	46	28	33	50	663
21 - 40	4	2	0	0	0	0	0	0	1	4	1	0	0	0	1	0	13
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	73	20	4	8	8	27	77	83	61	32	53	46	28	34	50	676

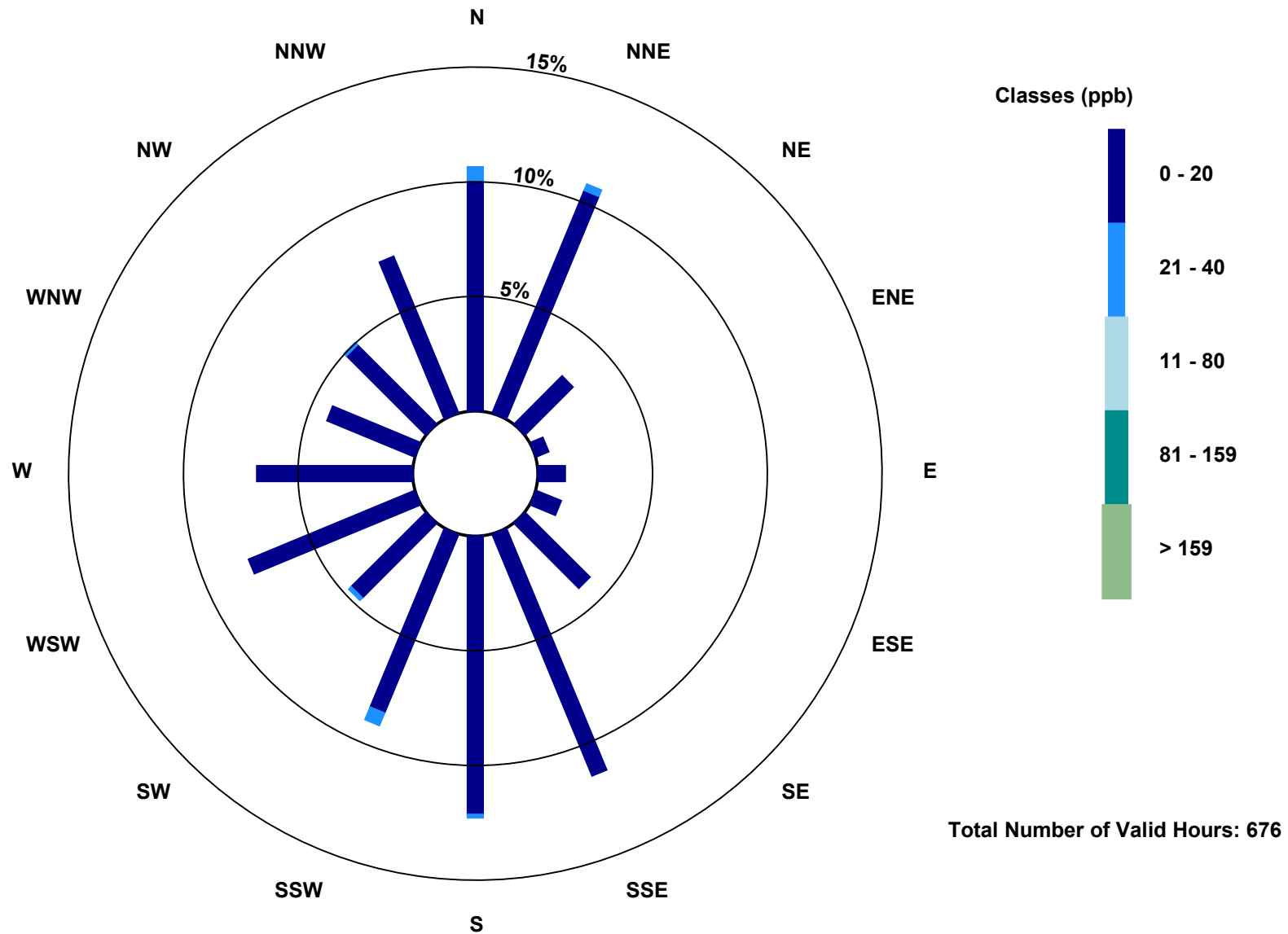
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

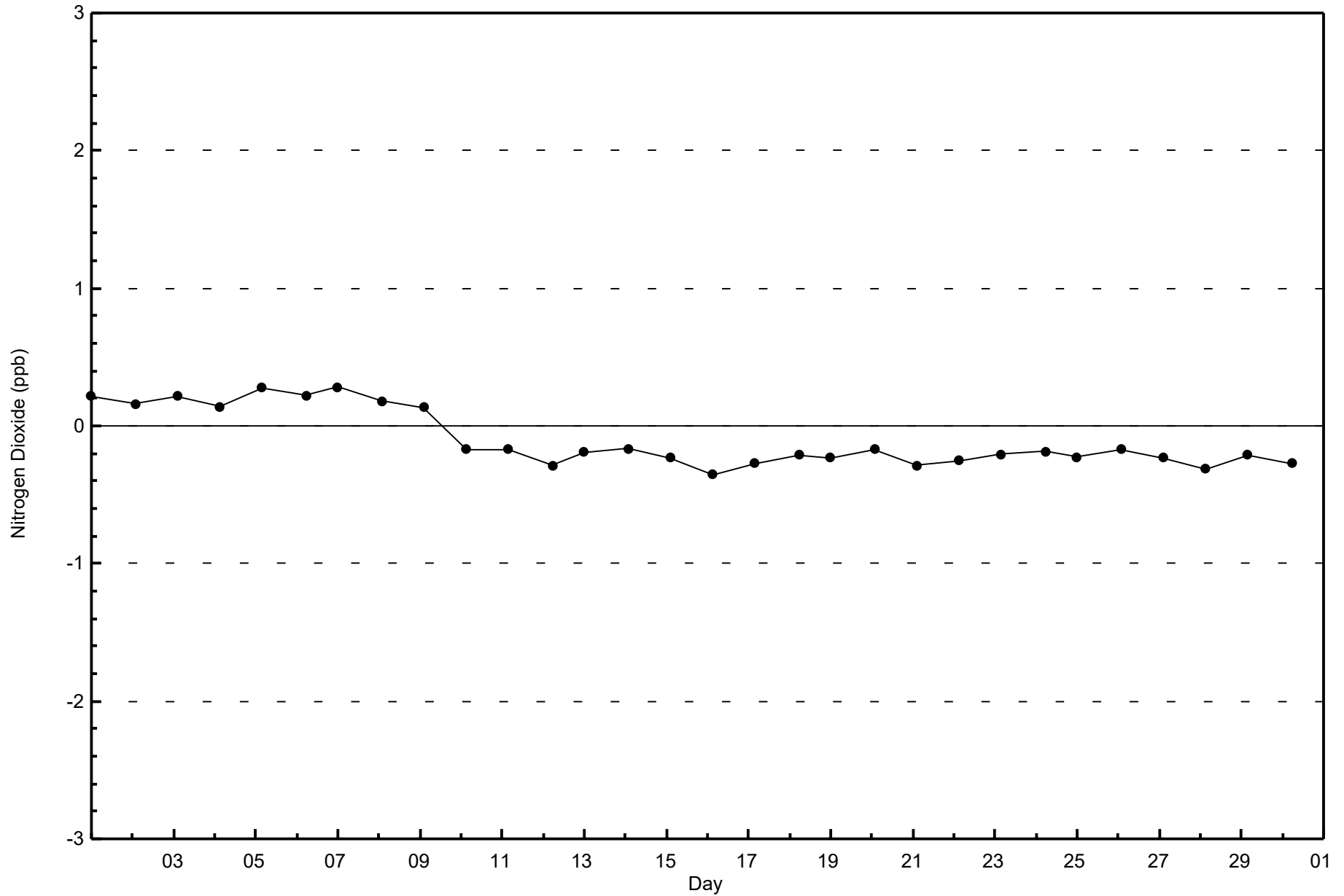
Nitrogen Dioxide (NO₂) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

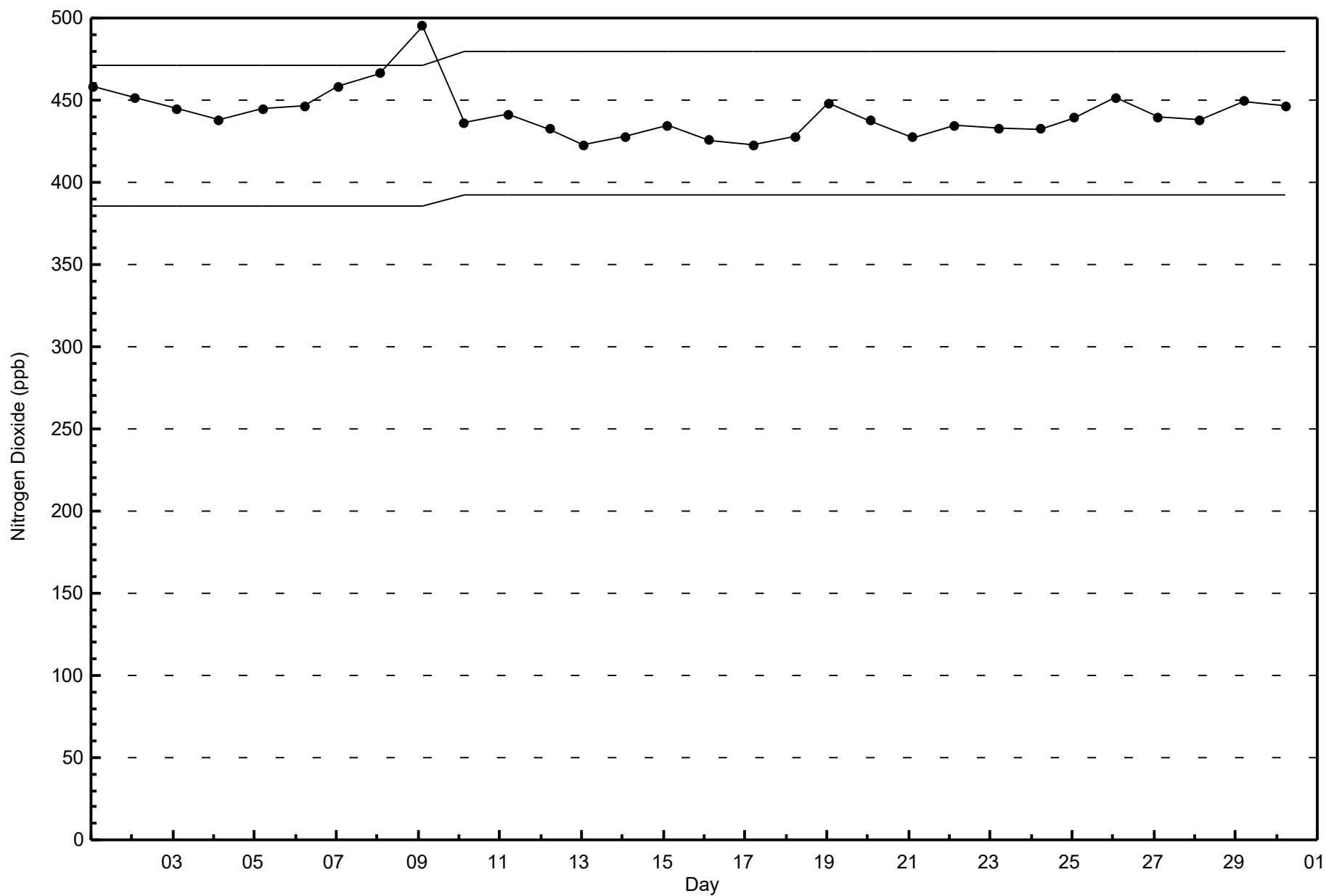
Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

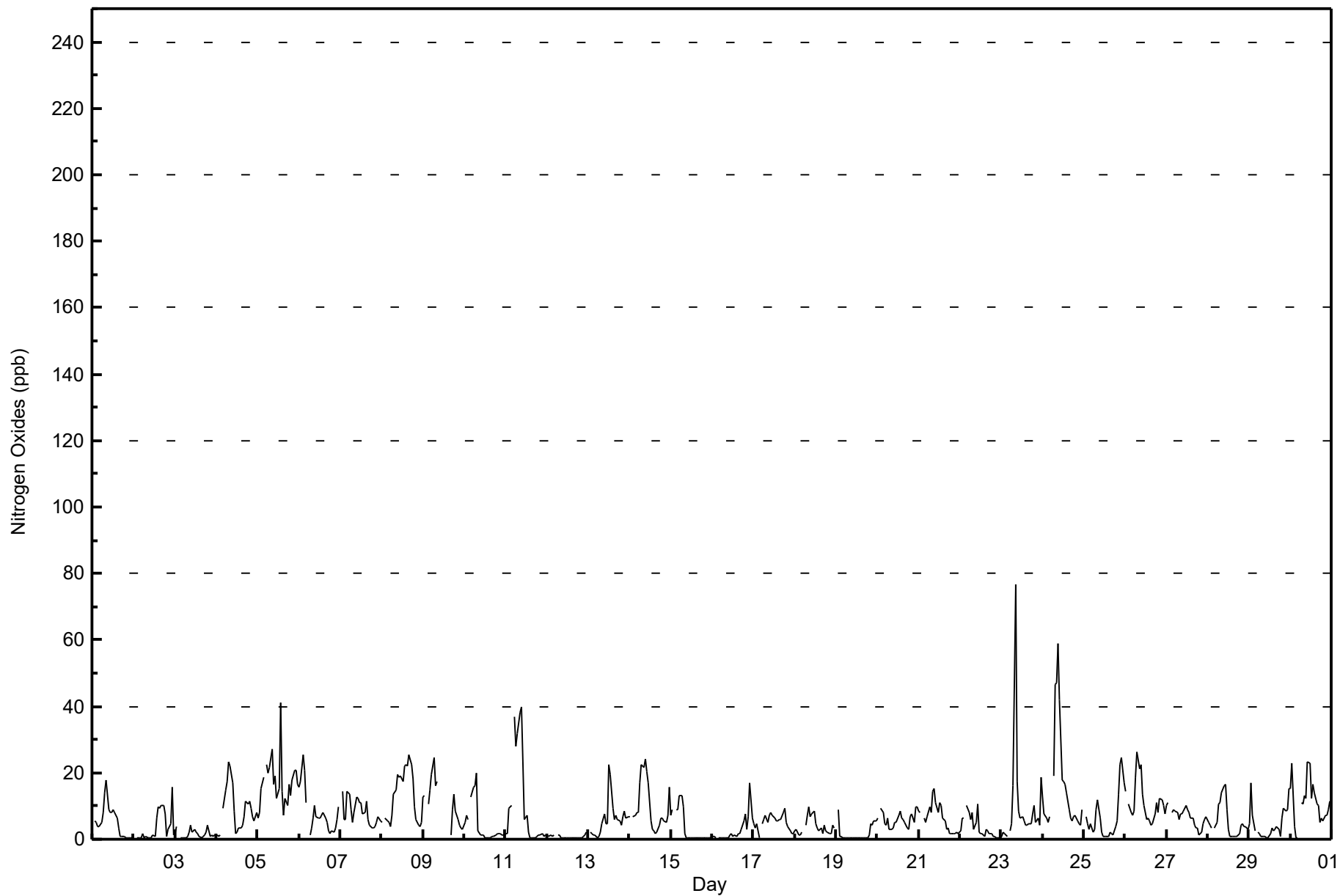
Fort McKay South - April 2025

Maximum Value: 76.5 ppb on Apr 23 09:00																			Maximum Daily Average: 17.1 ppb on Apr 5							Hours in Service: 720	
Minimum Value: 0.3 ppb on Apr 12 20:00																			Minimum Daily Average: 0.7 ppb on Apr 12							Hours of Data: 683	
Maximum Diurnal Average: 13.8 ppb at hour 9																			Minimum Diurnal Average: 4.6 ppb at hour 17							Hours of Missing Data: 37	
Monthly Average: 7.06 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 1.6 Median = 5.2 Q ₃ = 9.1 P ₉₀ = 16.7 P ₉₉ = 38.5							Hours of Calibration: 37	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	5.5	5.0	3.8	3.7	5.0	8.2	14.0	17.6	9.0	7.9	7.9	8.9	8.0	6.3	3.4	0.9	1.0	1.0	0.6	0.5	0.5	0.5	0.4	5.2	17.6	
2-Apr	0.4	Z	0.5	0.4	0.4	1.5	0.4	0.8	0.4	0.4	0.5	1.1	0.7	6.4	9.7	9.3	10.2	10.0	7.6	0.8	3.0	4.6	15.8	1.5	3.8	15.8	
3-Apr	1.8	3.9	Z	0.5	0.5	0.3	0.4	0.9	1.9	4.2	2.3	2.9	1.9	1.8	0.8	0.5	1.0	1.2	2.0	4.3	1.0	1.3	1.1	1.4	1.7	4.3	
4-Apr	1.2	0.7	1.2	Z	9.3	14.8	17.2	23.3	21.9	16.8	8.3	1.9	2.2	3.2	3.4	4.4	6.9	11.3	10.7	11.3	9.4	6.8	5.3	8.1	8.7	23.3	
5-Apr	6.5	8.2	15.2	18.4	Z	22.4	19.9	21.6	27.2	16.4	19.1	12.4	15.4	41.2	14.5	7.3	12.4	10.1	16.7	12.9	18.0	20.9	20.8	16.4	17.1	41.2	
6-Apr	15.7	17.6	25.5	20.7	10.9	Z	1.4	3.4	6.4	10.2	6.8	6.6	6.4	7.2	8.2	6.5	4.9	2.6	1.7	2.7	2.3	3.5	6.1	9.8	8.1	25.5	
7-Apr	Z	14.3	5.9	6.0	14.3	13.5	8.9	5.1	8.0	12.6	12.2	11.1	11.0	7.8	7.9	11.3	5.9	4.3	3.5	3.5	3.7	5.0	6.6	5.4	8.2	14.3	
8-Apr	5.1	Z	6.6	5.4	4.9	3.8	7.3	13.7	14.8	19.4	18.8	19.1	17.2	22.1	22.5	22.2	25.4	22.5	18.1	9.8	5.9	4.4	3.8	5.3	13.0	25.4	
9-Apr	12.5	12.9	Z	10.7	14.6	19.6	24.6	16.0	17.2	C	C	C	C	C	C	C	1.3	9.1	13.5	8.6	6.0	4.0	3.4	3.0	—	24.6	
10-Apr	5.1	7.3	5.9	Z	12.5	15.5	16.0	19.8	2.4	1.1	1.4	1.1	0.5	0.6	0.6	0.5	0.7	1.0	1.4	1.7	1.7	1.8	1.4	1.2	4.4	19.8	
11-Apr	1.9	1.7	9.5	10.0	Z	36.9	27.8	31.8	38.2	39.7	23.3	6.0	7.3	2.1	0.6	0.5	0.5	0.5	1.0	1.4	1.4	1.5	0.8	1.2	10.7	39.7	
12-Apr	1.1	0.9	1.3	0.9	1.2	Z	1.4	1.3	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	1.1	1.3	2.1	0.7	2.1	
13-Apr	Z	2.0	1.7	1.4	1.2	0.6	1.0	2.2	4.7	7.7	4.6	4.5	22.6	19.4	9.2	5.7	7.0	5.8	5.5	4.4	6.7	8.6	6.5	6.6	6.1	22.6	
14-Apr	6.7	Z	6.7	7.2	8.1	7.9	17.0	22.3	21.4	24.4	20.2	16.9	5.5	2.8	2.7	1.6	2.0	4.2	6.3	6.3	5.6	5.3	7.2	15.8	9.7	24.4	
15-Apr	7.4	9.1	Z	8.9	8.8	13.1	13.3	9.8	1.7	0.6	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	0.4	3.4	13.3	
16-Apr	1.0	0.7	0.3	Z	0.5	0.3	0.3	0.3	0.4	0.4	1.1	1.5	0.7	1.4	1.0	1.8	1.5	3.2	5.6	7.7	2.9	6.9	16.9	6.2	2.7	16.9	
17-Apr	4.7	3.3	4.7	0.5	Z	4.8	5.9	7.2	4.9	7.3	8.2	7.2	6.5	5.5	5.6	6.0	6.1	8.0	9.2	5.0	3.8	2.4	1.9	1.6	5.2	9.2	
18-Apr	2.4	2.9	1.3	1.3	2.1	Z	4.2	7.2	9.8	7.0	7.8	8.3	4.8	3.5	2.4	3.6	1.8	4.3	2.6	2.2	1.8	1.7	4.4	3.3	3.9	9.8	
19-Apr	Z	9.1	0.9	0.7	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	1.4	4.8	4.1	5.5	5.5	1.7	9.1	
20-Apr	6.4	Z	9.3	8.0	4.7	4.4	6.4	2.9	2.8	3.2	5.0	4.9	7.4	8.4	6.3	5.9	5.2	3.3	2.9	6.6	7.6	5.3	9.7	9.8	5.9	9.8	
21-Apr	8.6	8.1	Z	6.2	5.2	6.7	9.8	8.2	14.5	15.4	11.1	8.2	11.1	10.3	6.4	5.6	3.1	3.3	1.6	1.6	1.6	1.6	2.1	1.7	6.6	15.4	
22-Apr	2.5	6.6	6.4	Z	10.4	7.9	6.0	8.1	2.9	5.0	10.5	2.0	1.7	1.5	1.0	3.2	2.4	1.7	1.6	1.0	0.7	0.4	0.3	0.4	3.7	10.5	
23-Apr	0.7	2.0	1.7	0.9	Z	2.5	4.5	16.1	76.5	17.2	8.3	6.3	6.7	5.7	4.4	4.1	4.8	4.6	7.8	10.3	5.1	6.2	4.2	18.7	9.5	76.5	
24-Apr	12.9	7.8	6.3	5.3	7.0	Z	19.0	46.5	47.1	59.0	42.1	17.6	17.4	16.7	14.0	8.9	6.5	5.5	6.8	7.3	5.3	4.7	4.4	9.0	16.4	59.0	
25-Apr	Z	6.9	4.8	3.1	4.6	2.3	2.8	9.0	12.1	6.3	1.9	1.0	1.0	0.9	0.9	2.0	1.6	1.4	3.9	5.4	13.7	22.5	24.4	16.9	6.5	24.4	
26-Apr	14.6	Z	10.4	8.2	7.4	8.5	18.5	26.3	21.2	22.6	13.6	10.2	6.1	6.4	5.6	4.3	4.9	7.8	11.1	8.2	12.4	11.9	10.0	7.6	11.2	26.3	
27-Apr	10.2	11.1	Z	8.0	8.8	8.6	8.2	6.0	7.8	7.5	8.3	10.0	8.7	8.0	6.3	6.5	4.4	3.3	3.2	1.4	2.3	4.7	6.1	6.8	6.8	11.1	
28-Apr	5.0	4.3	3.6	Z	3.3	5.0	10.8	11.2	14.1	16.1	16.6	9.0	2.8	1.1	0.7	0.7	0.8	1.0	1.8	4.4	4.8	3.8	3.8	3.1	5.5	16.6	
29-Apr	4.5	16.9	7.2	2.6	Z	2.2	1.5	0.7	0.9	0.8	0.6	0.5	1.7	3.3	2.4	3.1	4.0	3.0	0.8	6.2	9.2	8.5	9.0	15.3	4.6	16.9	
30-Apr	15.2	22.9	3.7	0.5	0.4	Z	11.0	10.7	13.3	12.4	23.5	23.0	12.1	16.5	13.8	10.7	10.0	5.3	6.4	5.5	7.3	7.4	8.7	11.3	10.9	23.5	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	644	94.29	94.29
21 - 40	33	4.83	99.12
41 - 80	6	0.88	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
Fort McKay South - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	67	64	19	2	6	8	22	71	82	55	31	53	46	28	33	50	637
21 - 40	4	8	0	2	0	0	5	6	0	6	1	0	0	0	1	0	33
11 - 80	1	1	1	0	2	0	0	0	1	0	0	0	0	0	0	0	6
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	72	73	20	4	8	8	27	77	83	61	32	53	46	28	34	50	676

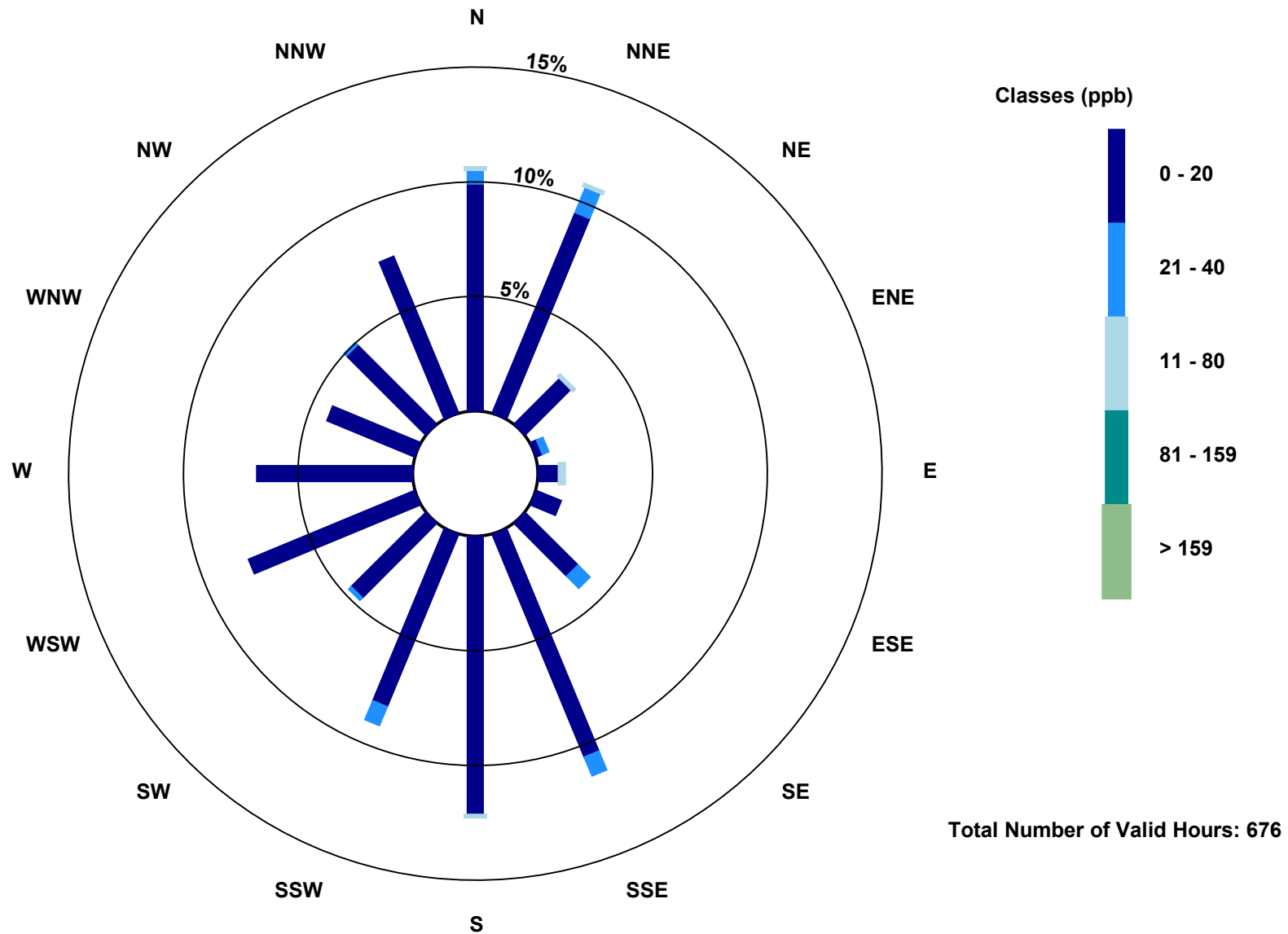
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

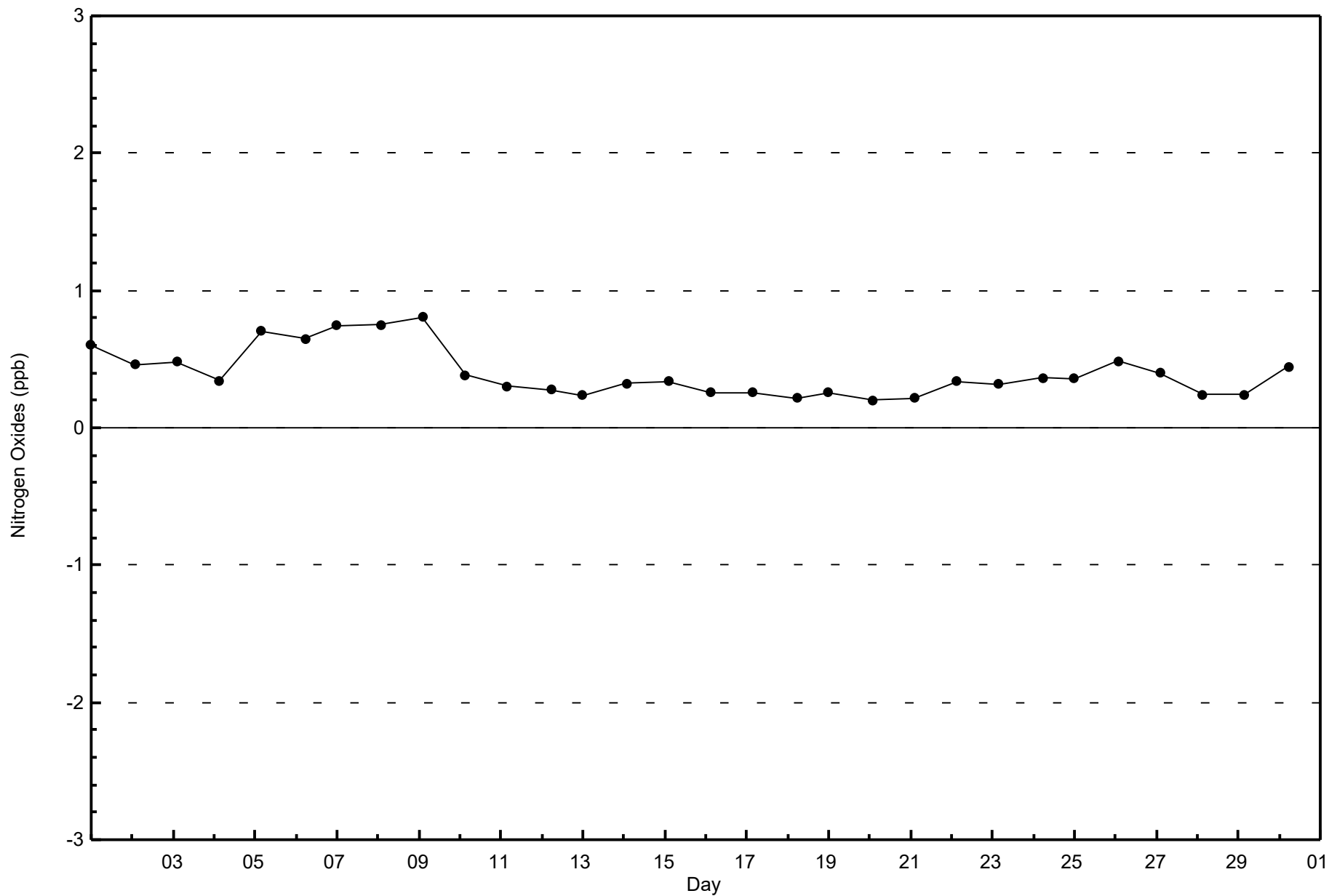
Nitrogen Oxides (NO_x) - ppb
Fort McKay South





Wood Buffalo Environmental Association
Zero Responses

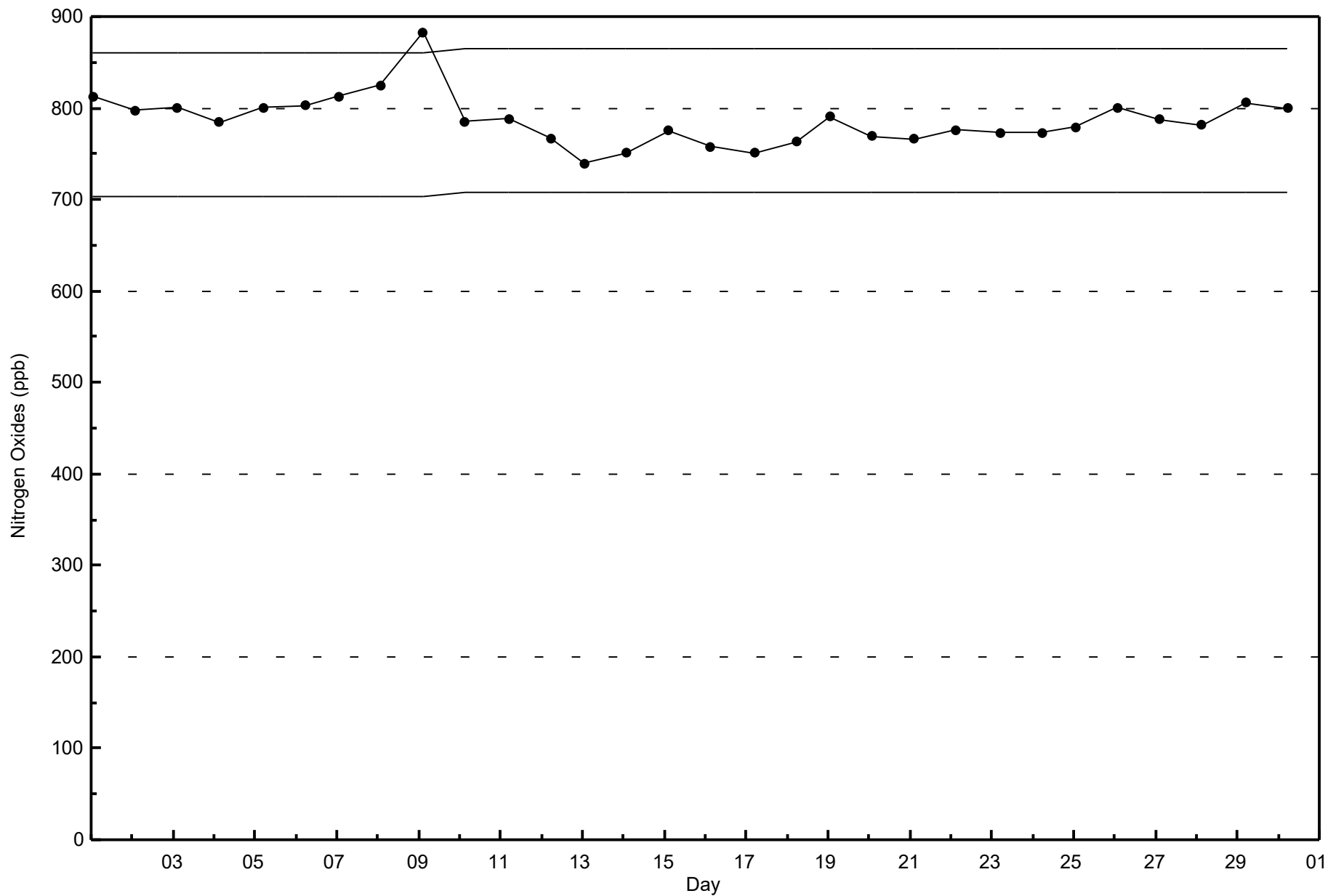
Nitrogen Oxides (NO_x) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

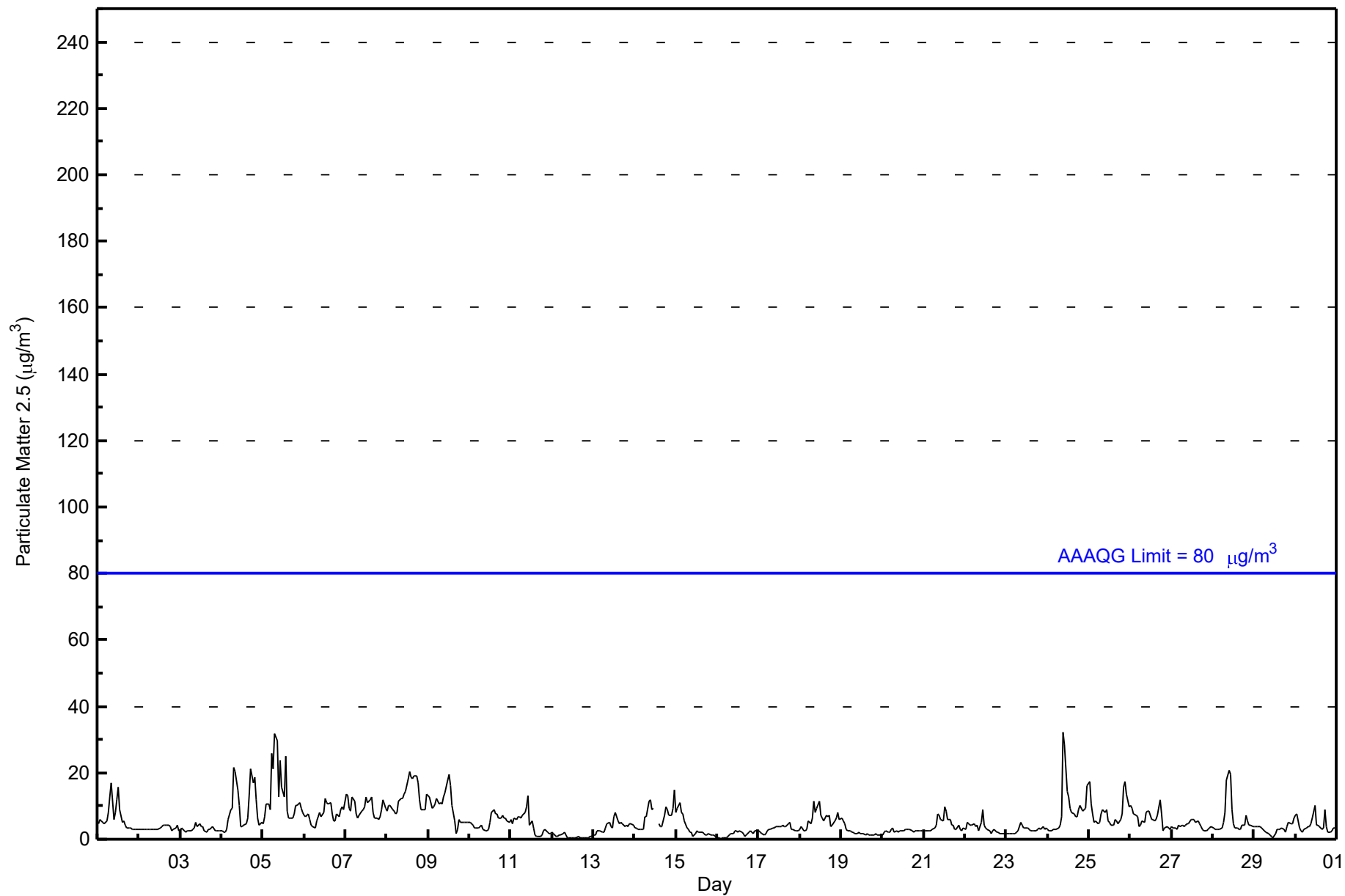
Fort McKay South - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 32.2 µg/m³ on Apr 24 10:00 Maximum Daily Average: 13.5 µg/m³ on Apr 5																					Hours in Service: 720 Hours of Data: 718					
Minimum Value: 0.2 µg/m³ on Apr 16 03:00 Maximum Diurnal Average: 7.9 µg/m³ at hour 11 Monthly Average: 5.57 µg/m³																					Minimum Daily Average: 0.8 µg/m³ on Apr 12 Minimum Diurnal Average: 4.2 µg/m³ at hour 4 Percentiles: P ₁ = 0.4 P ₁₀ = 1.7 Q ₁ = 2.6 Median = 4.0 Q ₃ = 7.2 P ₉₀ = 11.1 P ₉₉ = 21.4		Hours of Missing Data: 2 Hours of Calibration: 2 Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	4.5	6.1	5.6	4.9	4.8	5.4	8.0	12.7	17.1	6.0	8.2	12.0	15.7	9.0	5.1	5.6	4.1	3.5	3.5	3.3	3.1	3.1	3.0	3.0	6.6	17.1
2-Apr	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0	3.0	2.9	2.9	3.0	3.3	3.8	4.2	4.1	4.3	4.3	4.0	2.8	3.0	3.2	4.4	2.4	3.3	4.4
3-Apr	2.6	3.4	2.7	2.3	2.4	2.4	2.4	2.9	3.5	5.1	3.9	4.9	4.0	3.7	2.6	2.1	2.9	3.0	3.3	3.6	2.5	2.6	2.4	2.6	3.1	5.1
4-Apr	2.5	1.9	2.1	3.1	6.1	8.9	9.2	21.5	20.5	15.0	10.3	3.6	3.7	4.4	4.6	6.3	12.9	21.0	17.1	18.8	11.7	6.3	4.4	5.1	9.2	21.5
5-Apr	4.5	6.9	10.8	10.6	9.0	26.0	21.0	32.0	29.8	12.8	23.6	15.7	12.6	24.8	8.7	6.3	6.3	6.3	7.5	10.2	10.0	11.0	9.4	7.9	13.5	32.0
6-Apr	7.1	6.9	7.6	6.1	4.4	3.8	3.2	5.3	6.6	8.0	6.7	7.9	12.5	10.9	10.5	11.1	7.5	5.7	5.5	7.7	6.8	9.1	9.7	8.9	7.5	12.5
7-Apr	13.6	13.1	9.3	8.5	12.7	11.4	7.8	6.5	7.2	8.6	8.7	9.8	12.7	11.0	12.0	12.7	7.9	6.5	6.5	5.9	6.8	9.1	11.7	9.4	9.6	13.6
8-Apr	8.6	10.1	10.3	8.7	8.3	7.7	7.9	11.2	12.2	12.1	13.6	14.5	18.3	20.2	18.5	18.3	19.0	18.9	16.9	11.8	9.1	8.8	8.7	13.5	12.8	20.2
9-Apr	13.2	12.8	9.3	9.6	10.7	12.4	10.5	11.1	10.5	12.5	14.1	17.6	19.7	16.3	10.1	5.7	1.5	3.1	5.8	4.9	4.9	5.0	5.0	5.0	9.6	19.7
10-Apr	5.1	4.8	4.1	3.5	3.2	3.3	4.0	4.2	3.1	2.7	2.6	3.2	5.2	8.2	8.7	7.5	7.5	6.5	6.4	7.2	6.3	6.3	5.5	4.9	5.2	8.7
11-Apr	5.8	4.8	6.2	5.8	6.7	6.6	6.5	7.2	8.0	9.8	13.2	4.4	5.5	3.2	1.1	0.8	0.7	0.9	1.3	2.7	2.8	1.9	1.9	1.9	4.6	13.2
12-Apr	1.9	1.5	0.9	0.7	1.1	1.4	1.7	2.1	1.1	0.4	0.4	0.4	0.2	0.2	0.4	0.9	0.5	0.3	0.3	0.4	0.5	0.6	0.7	0.9	0.8	2.1
13-Apr	1.2	1.5	2.7	2.7	2.7	2.2	2.0	3.5	4.5	5.0	3.7	3.4	7.0	8.1	5.3	4.5	5.1	4.8	3.9	4.0	4.0	4.9	4.6	4.0	4.0	8.1
14-Apr	3.5	3.2	2.9	2.9	2.8	3.1	6.6	6.8	11.6	12.0	9.0	9.1	C	C	4.6	3.8	3.9	7.0	9.7	8.9	7.1	7.2	9.5	15.0	6.8	15.0
15-Apr	8.1	9.3	11.1	8.1	7.4	5.4	3.4	3.1	1.9	2.0	0.8	1.7	2.5	2.2	2.2	2.1	1.6	1.2	1.3	1.7	1.4	1.2	1.1	0.7	3.4	11.1
16-Apr	0.6	0.4	0.2	0.2	0.4	0.6	1.0	1.4	1.8	1.8	2.5	2.5	2.2	2.6	2.0	1.6	1.1	1.4	2.1	2.7	2.1	1.8	2.6	2.4	1.6	2.7
17-Apr	2.3	2.1	1.8	1.3	1.5	2.4	2.8	3.2	3.3	3.6	3.7	3.8	3.8	3.8	4.2	4.0	3.8	4.8	5.0	3.1	2.9	2.6	2.5	2.4	3.1	5.0
18-Apr	2.8	3.7	2.5	2.4	3.1	5.3	4.8	6.2	11.6	8.2	9.3	11.4	7.0	6.3	5.5	7.0	6.9	7.2	4.0	4.1	5.4	6.5	7.9	6.1	6.0	11.6
19-Apr	6.5	5.4	4.5	3.0	2.5	2.5	2.2	2.0	1.9	1.9	2.1	1.7	1.8	1.6	1.4	1.8	1.4	1.2	1.1	1.1	1.6	1.2	1.4	1.2	2.2	6.5
20-Apr	1.5	2.0	2.4	2.1	2.2	2.8	3.3	2.3	2.3	2.0	2.5	2.5	2.6	2.9	2.8	2.9	2.9	2.7	2.1	2.7	2.6	2.3	2.7	2.6	2.5	3.3
21-Apr	2.6	2.6	2.5	2.4	2.4	2.8	3.3	4.1	7.5	7.0	6.0	5.6	9.6	8.5	6.1	5.9	4.2	4.1	3.0	2.8	4.4	3.0	2.6	3.2	4.4	9.6
22-Apr	3.0	5.0	4.7	4.4	4.3	4.7	4.0	4.1	2.6	5.0	8.8	4.0	3.4	2.9	2.6	1.6	2.5	3.0	2.3	2.1	1.8	1.7	1.6	1.6	3.4	8.8
23-Apr	1.6	1.9	1.9	1.6	1.6	1.7	2.2	2.7	4.9	4.2	3.4	3.5	3.4	2.8	2.6	2.6	2.6	2.4	3.1	3.4	3.1	3.9	3.1	3.5	2.8	4.9
24-Apr	2.8	2.6	2.7	2.8	3.0	3.1	3.4	4.4	6.9	32.2	28.3	14.3	12.9	9.5	8.1	7.4	7.0	6.8	9.1	10.0	8.6	8.9	9.2	16.1	9.2	32.2
25-Apr	17.4	10.7	7.7	5.1	5.4	4.8	5.1	7.6	8.9	8.1	9.1	5.6	5.1	4.2	4.4	5.8	5.6	4.5	5.9	7.4	15.8	17.5	13.4	9.9	8.1	17.5
26-Apr	10.2	9.1	7.7	7.4	6.6	3.9	4.1	5.4	5.3	7.9	8.4	8.4	5.8	6.0	5.7	6.1	7.3	11.7	7.6	2.6	3.2	3.8	3.4	3.1	6.3	11.7
27-Apr	3.9	3.4	3.4	3.0	4.3	3.8	4.2	3.8	4.4	4.5	4.8	5.8	6.0	5.9	5.2	5.3	4.6	3.9	3.1	2.6	2.6	3.0	3.5	3.8	4.1	6.0
28-Apr	3.3	3.1	2.9	2.9	3.0	3.3	5.1	7.9	17.8	20.6	19.4	8.9	4.5	3.2	3.2	2.8	3.1	4.3	4.4	7.0	5.7	4.4	4.3	3.9	6.2	20.6
29-Apr	3.8	3.7	3.9	3.8	3.4	2.8	2.6	1.9	1.5	1.1	0.8	0.4	1.8	3.0	2.9	3.0	3.6	3.0	2.1	3.9	5.1	4.9	4.6	6.2	3.1	6.2
30-Apr	7.1	7.8	3.3	2.4	2.2	2.9	3.2	3.8	4.0	4.5	6.6	10.2	4.0	4.4	3.6	3.2	3.4	9.0	3.6	2.1	2.3	2.6	3.3	3.5	4.3	10.2
5.2 5.1 4.7 4.2 4.4 5.0 5.0 6.5 7.5 7.6 7.9 6.7 6.8 6.7 5.3 5.1 4.9 5.4 5.0 5.1 4.9 4.9 4.9 5.2																									Diurnal Average	
17.4 13.1 11.1 10.6 12.7 26.0 21.0 32.0 29.8 32.2 28.3 17.6 19.7 24.8 18.5 18.3 19.0 21.0 17.1 18.8 15.8 17.5 13.4 16.1																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

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





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

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

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	458	63.79	63.79
6 - 15	227	31.62	95.40
16 - 25	28	3.90	99.30
26 - 80	5	0.70	100.00
> 81.0	0	0.00	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}) - $\mu\text{g}/\text{m}^3$
Fort McKay South - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	57	54	16	2	2	4	5	19	36	34	21	46	48	30	29	47	450
6 - 15	18	18	4	2	5	3	19	50	50	25	13	9	0	1	6	3	226
16 - 25	1	2	0	1	0	2	3	9	4	6	0	0	0	0	0	0	28
26 - 80	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	0	5
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	76	74	20	5	8	9	28	79	91	66	34	55	48	31	35	50	709

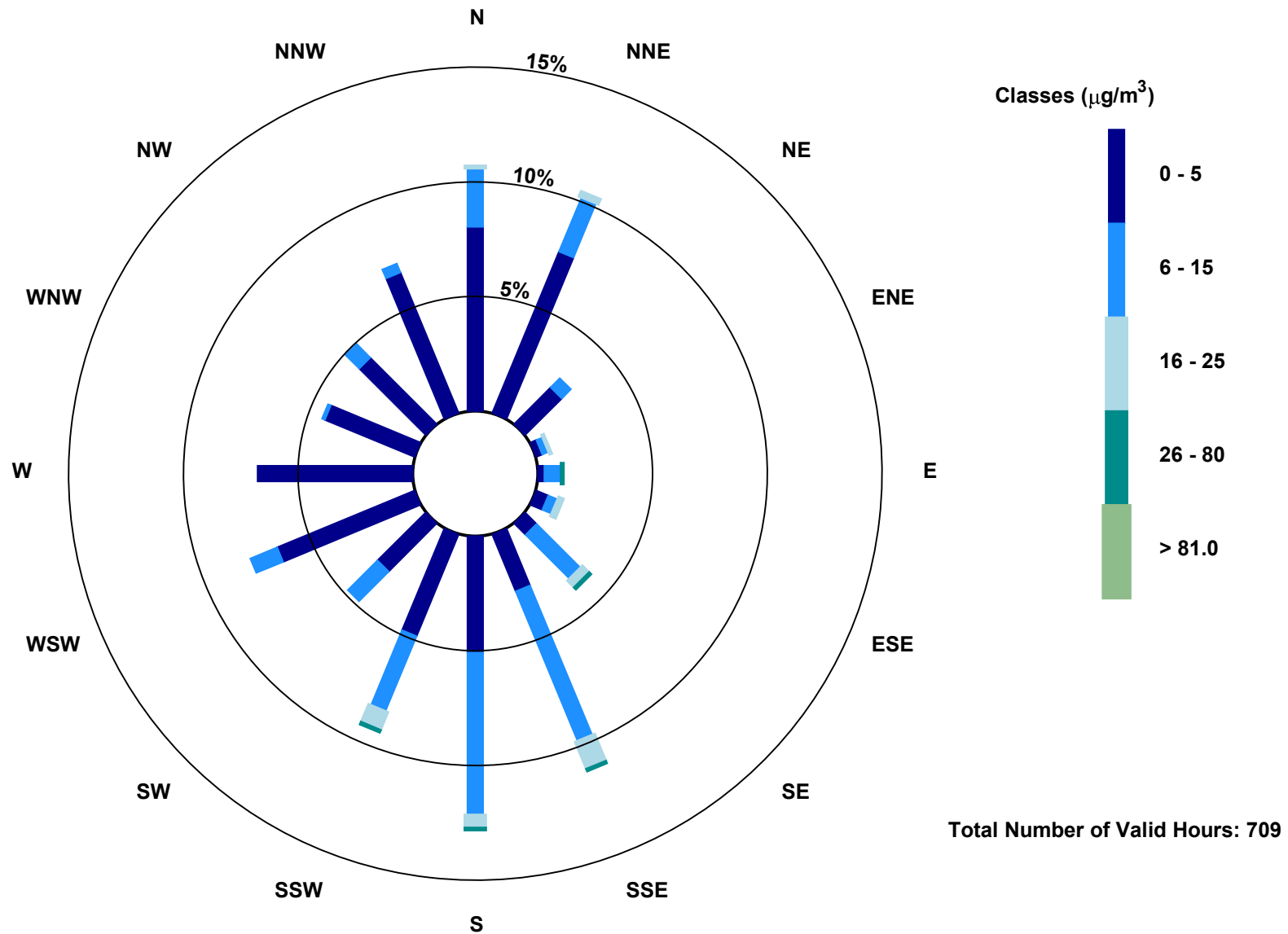
Total Number of Valid Hours: 709

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

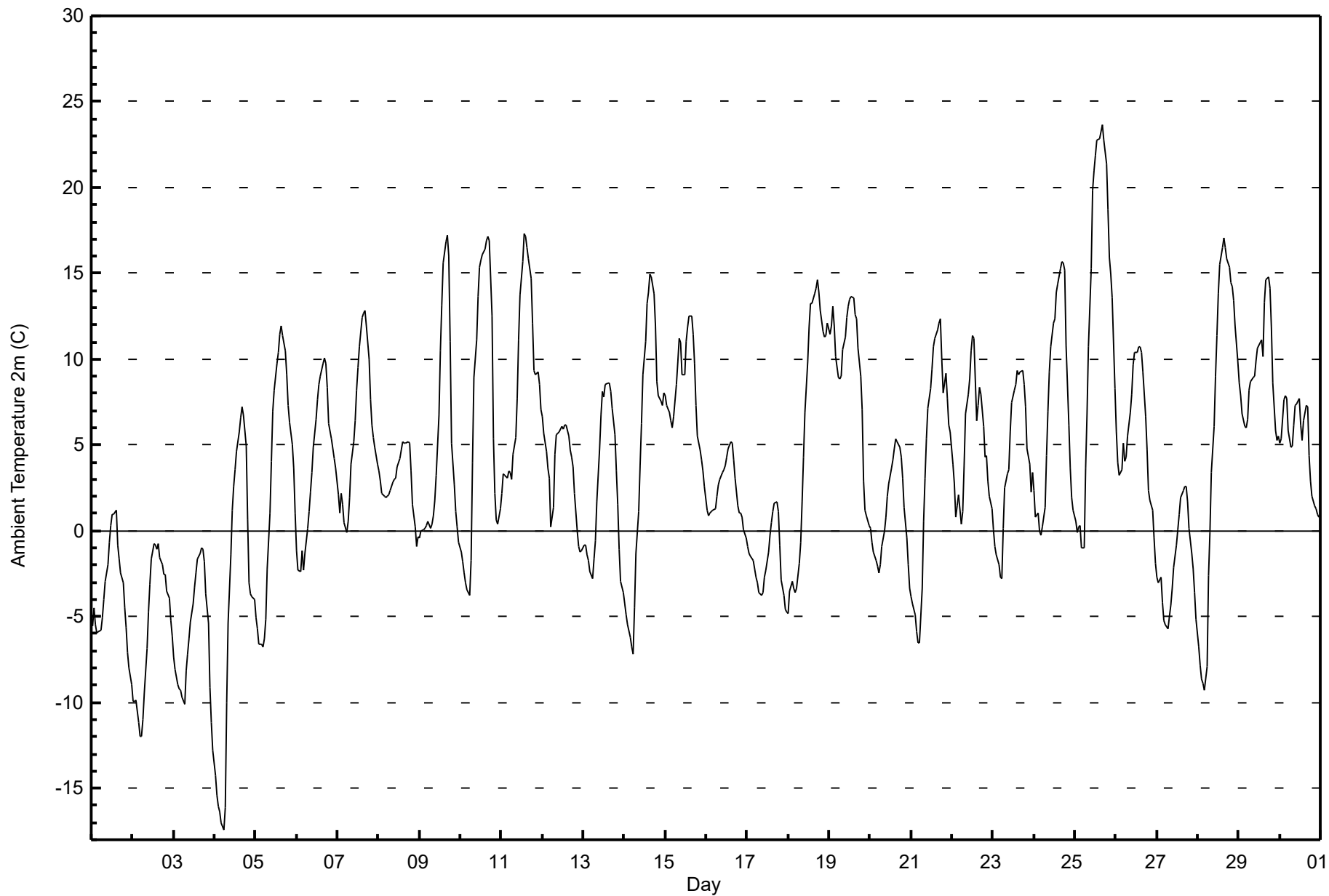
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay South





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort McKay South - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	214	29.72	29.72
0 - 10	368	51.11	80.83
10 - 20	130	18.06	98.89
> 20	8	1.11	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) - %

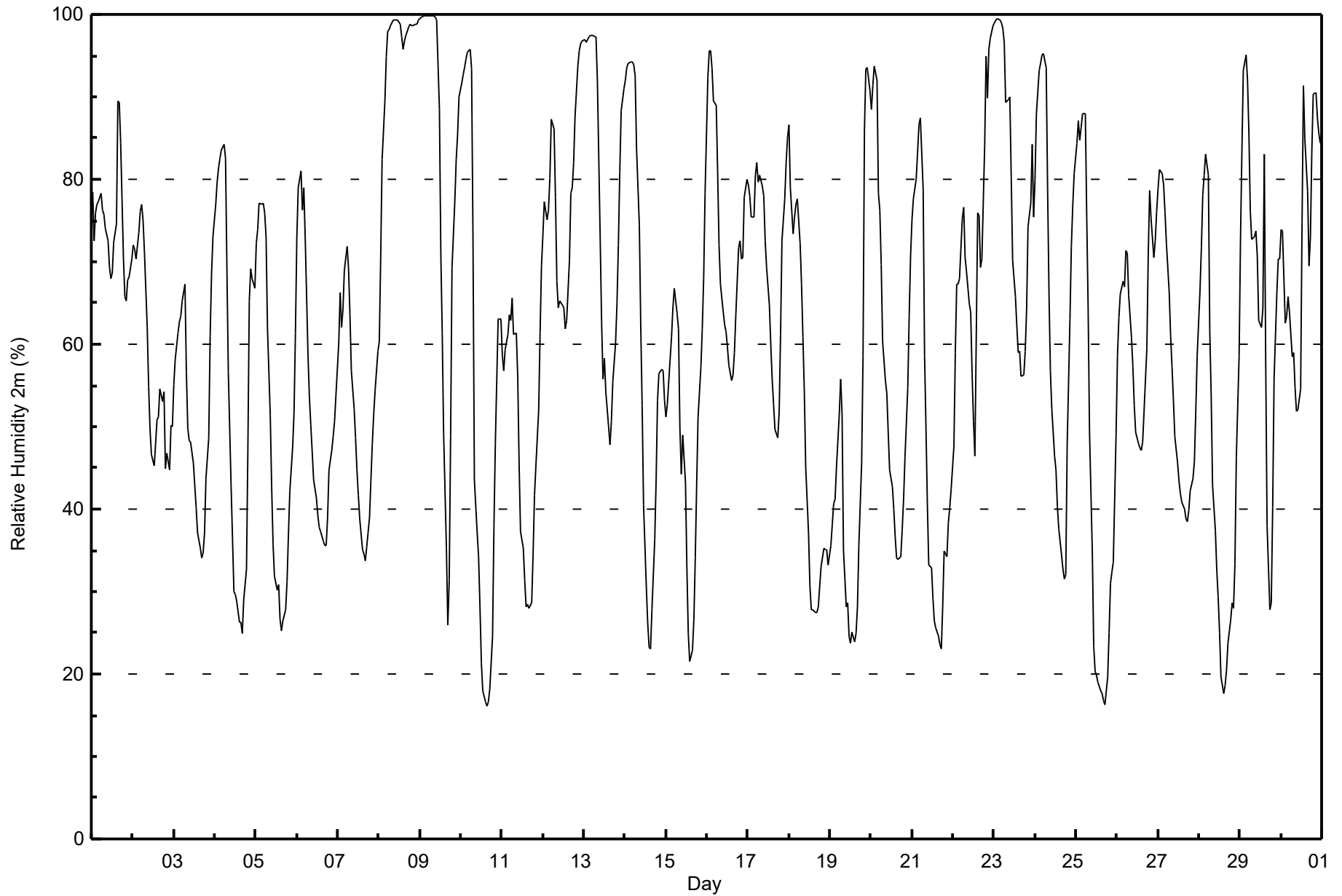
Fort McKay South - April 2025

Maximum Value: 99.9 % on Apr 9 06:00																				Maximum Daily Average: 94.5 % on Apr 8					Hours in Service: 720	
Minimum Value: 16.1 % on Apr 10 16:00																				Minimum Daily Average: 44.4 % on Apr 28					Hours of Data: 720	
Maximum Diurnal Average: 80.7 % at hour 6																				Minimum Diurnal Average: 42.2 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 61.33 %																				Percentiles: P ₁ = 17.9 P ₁₀ = 29.7 Q ₁ = 43.6 Median = 62.2 Q ₃ = 77.9 P ₉₀ = 93.4 P ₉₉ = 99.7					Hours of Calibration: 0	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	78.4	72.5	75.9	76.9	77.3	78.4	76.3	75.8	74.0	72.6	69.4	67.9	68.6	72.3	74.5	89.5	89.4	84.3	70.3	65.7	65.2	67.8	68.2	70.4	74.2	89.5
2-Apr	72.1	71.6	70.4	73.5	76.1	77.0	75.1	71.2	62.0	55.0	49.7	46.6	45.3	47.9	50.9	51.2	54.6	53.1	54.2	44.9	46.8	44.7	50.2	50.0	58.1	77.0
3-Apr	55.1	58.1	61.3	62.7	63.4	65.2	67.3	56.6	49.9	48.4	48.1	45.5	42.9	40.2	37.0	35.2	34.0	34.8	37.2	43.8	48.6	61.1	68.5	73.0	51.6	73.0
4-Apr	76.9	79.6	81.4	82.6	83.5	84.3	82.6	69.2	56.7	42.7	36.5	29.9	29.7	28.8	26.3	26.3	24.9	28.9	32.7	47.4	65.2	69.1	67.9	66.7	55.0	84.3
5-Apr	72.1	73.9	77.2	76.9	77.1	76.0	73.0	62.1	51.4	42.7	35.8	31.9	30.1	30.8	26.6	25.3	26.4	27.7	31.3	37.0	42.2	47.5	51.7	61.4	49.5	77.2
6-Apr	72.9	79.0	81.0	76.2	79.0	72.8	58.7	53.6	50.1	46.9	43.5	41.4	39.3	37.7	37.3	36.1	35.6	35.6	39.0	44.8	47.1	48.9	50.6	53.8	52.5	81.0
7-Apr	60.2	66.3	62.0	64.2	68.9	71.9	69.2	63.5	56.7	52.1	48.7	44.8	41.7	38.9	35.1	34.5	33.8	35.4	39.1	43.6	48.0	51.5	54.4	59.1	51.8	71.9
8-Apr	60.4	70.7	82.4	89.6	94.9	97.9	98.2	98.6	99.2	99.3	99.3	99.3	98.8	97.2	95.8	96.8	97.5	98.4	98.8	98.7	98.7	98.8	98.9	99.3	94.5	99.3
9-Apr	99.5	99.7	99.8	99.8	99.8	99.9	99.8	99.8	99.8	99.7	99.3	88.5	71.1	61.3	49.1	35.2	25.9	31.4	48.9	69.3	77.4	82.4	85.4	89.9	79.7	99.9
10-Apr	91.8	92.7	93.6	94.6	95.4	95.7	93.4	72.9	43.6	37.2	34.3	28.2	21.3	17.9	16.6	16.1	16.5	18.1	24.5	38.0	48.0	55.6	63.0	63.0	53.0	95.7
11-Apr	58.7	56.8	59.4	61.3	63.5	62.9	65.5	61.1	61.4	56.2	45.4	37.2	35.2	31.3	28.2	28.4	28.0	28.7	34.5	41.6	45.2	52.1	61.4	69.6	48.9	69.6
12-Apr	73.2	77.3	75.0	76.2	80.1	87.2	86.0	77.9	67.6	64.4	65.3	64.7	64.4	61.9	62.9	70.2	78.2	79.0	82.0	87.6	93.7	95.6	96.4	96.8	77.6	96.8
13-Apr	96.9	96.7	97.0	97.3	97.5	97.5	97.3	97.4	91.9	72.7	62.8	55.7	58.4	54.3	50.1	47.7	50.6	55.4	60.1	64.9	72.0	80.8	88.3	90.9	76.4	97.5
14-Apr	92.0	93.6	94.1	94.3	94.2	93.9	92.6	83.7	74.4	62.2	52.6	40.4	30.6	26.1	23.3	23.0	27.9	36.2	43.5	53.1	56.4	57.0	56.8	53.2	60.6	94.3
15-Apr	51.2	52.7	58.1	60.9	64.4	66.9	63.8	61.9	49.7	44.3	49.0	43.1	32.8	25.0	21.5	22.9	26.6	34.0	43.0	51.2	57.2	61.9	67.9	78.3	49.5	78.3
16-Apr	92.4	95.6	95.6	93.4	89.5	88.9	80.8	72.0	67.2	63.8	62.4	61.6	59.7	57.4	55.6	56.3	59.0	63.6	71.7	72.6	70.3	70.5	77.7	80.0	73.2	95.6
17-Apr	79.3	77.9	75.4	75.4	80.4	82.1	79.6	80.6	79.1	77.9	72.5	69.3	64.8	59.9	55.7	52.7	49.6	48.7	51.6	61.3	72.5	77.7	82.1	85.1	70.5	85.1
18-Apr	86.5	79.0	73.3	75.5	77.0	77.6	72.2	67.2	60.8	54.2	45.1	37.0	30.7	27.8	27.7	27.4	27.5	28.1	30.7	33.0	35.2	35.2	35.0	33.1	49.0	86.5
19-Apr	35.6	38.1	40.8	41.2	45.0	51.4	55.7	51.6	35.1	28.2	28.7	24.5	23.7	25.1	23.9	25.0	28.1	35.6	45.7	58.6	85.9	93.4	93.5	90.6	46.0	93.5
20-Apr	88.5	91.4	93.7	92.1	78.3	76.3	69.6	60.3	55.5	54.0	49.4	44.8	42.8	39.9	36.7	34.0	33.8	34.2	37.4	41.3	46.3	54.7	63.3	70.7	57.9	93.7
21-Apr	75.0	77.6	80.0	83.2	86.6	87.5	78.8	58.6	50.1	40.8	33.2	32.9	29.2	26.4	25.5	24.6	23.6	23.1	28.3	34.9	34.2	38.3	40.1	42.4	48.1	87.5
22-Apr	47.6	59.0	67.2	67.3	68.0	75.2	76.5	70.5	68.8	64.9	63.8	56.4	50.7	46.4	76.0	75.6	69.4	70.3	84.0	95.0	89.8	95.7	97.2	98.7	72.2	98.7
23-Apr	99.0	99.3	99.4	99.3	99.0	98.3	96.6	89.4	89.7	90.0	80.1	70.1	65.7	62.2	59.0	59.2	56.1	56.2	59.1	64.3	74.2	77.2	84.2	75.4	79.3	99.4
24-Apr	80.0	88.0	93.2	94.1	95.0	95.2	93.6	78.9	66.3	56.8	52.2	46.4	44.8	40.4	37.7	34.5	32.6	31.5	32.1	47.6	63.0	71.8	76.7	80.6	63.9	95.2
25-Apr	84.4	87.1	84.8	86.2	88.0	87.9	75.5	64.3	49.4	34.8	23.4	20.3	19.8	19.0	17.9	17.6	16.7	16.3	19.7	25.1	31.0	32.3	33.6	49.1	45.2	88.0
26-Apr	58.7	63.2	66.0	67.6	66.9	71.3	71.1	65.9	60.9	57.2	52.5	49.3	48.0	47.4	47.1	48.2	51.8	59.5	70.8	78.6	75.3	70.4	72.5	76.1	62.3	78.6
27-Apr	78.9	81.3	80.8	79.4	75.9	72.2	66.2	61.1	57.2	53.3	48.9	45.7	43.3	41.9	40.8	40.0	38.8	38.5	39.8	42.3	43.8	45.8	51.9	58.6	55.3	81.3
28-Apr	66.5	71.7	78.2	80.5	83.1	80.6	61.7	53.8	42.9	37.4	32.7	29.2	25.1	19.7	17.6	18.6	20.6	23.7	26.6	28.6	28.0	33.5	46.2	58.7	44.4	83.1
29-Apr	72.8	83.6	93.2	95.1	92.0	85.6	76.0	72.8	73.1	73.8	70.6	62.9	62.0	64.5	83.1	58.1	38.0	27.7	28.6	40.1	55.8	66.3	70.3	70.3	67.3	95.1
30-Apr	74.0	73.8	62.6	63.4	65.7	63.8	58.5	59.0	54.7	51.9	52.0	54.6	74.5	91.4	84.9	78.4	69.4	73.0	83.4	90.3	90.5	87.5	85.7	84.5	72.0	91.4
74.4 76.9 78.4 79.4 80.2 80.7 77.0 70.4 63.3 57.8 53.6 49.0 46.5 44.7 44.1 42.9 42.2 43.7 48.3 54.8 60.2 64.2 68.0 71.0																										Diurnal Average
99.5 99.7 99.8 99.8 99.8 99.9 99.8 99.8 99.8 99.8 99.7 99.3 99.3 98.8 97.2 95.8 96.8 97.5 98.4 98.8 98.7 98.7 98.8 98.9 99.3																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort McKay South - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - April 2025

Maximum Speed: 28 km/h on Apr 18 14:00										Maximum Daily Speed Average: 17.7 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 1 15:00										Minimum Daily Speed Average: 1.2 km/h on Apr 24										Hours of Data: 711						
Maximum Diurnal Speed Average: 2.4 km/h at hour 20										Minimum Diurnal Speed Average: 0.1 km/h at hour 14										Hours of Missing Data: 9						
Monthly Average Velocity: 0.9 km/h 265.0 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 9 Q ₃ = 13 P ₉₀ = 17 P ₉₉ = 23										Percent Operational Time: 98.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	S7	S9	SSE3	SSE6	SSE4	S2	SW1	SSE4	SSE6	S14	S13	SSE14	SSE11	SSE5	ESE1	NW11	NW10	NNW9	NNW11	NW10	NW9	NW7	NW6	W7	SSW1.9	SSE14
2-Apr	W7	W6	W5	W7	WSW7	WSW9	WSW10	W9	W10	NW9	SW8	ESE2	N14	N16	NNE12	NNE12	NNE13	N10	NNW4	NW8	NNW11	NNW13	N10	N13	NNW6.0	N16
3-Apr	NNW9	NW7	WNW7	WNW7	WNW6	WNW5	NW7	NNW11	NNW14	NNW16	N18	NNW13	NNW15	NNW15	N16	NW14	NNW15	NNW13	NNW10	NNW5	NNW2	WSW4	WSW2	WSW2	NNW9.1	N18
4-Apr	SW3	S1	S4	S3	SW1	SW2	SSW2	SSE5	SE7	S8	S10	SSE13	SSE12	SSE11	SSE10	SSE10	S12	SSE12	S10	SSW6	SSW5	S5	SSW4	SSW4	S6.3	SSE13
5-Apr	SW3	SW3	S5	S5	S4	SSW6	SSW3	SSE3	SE6	SE6	ESE4	N4	N7	NNE12	N13	N13	N11	NNE11	N9	N11	N10	N9	N6	N4	N3.3	N13
6-Apr	NNW4	NNW3	N3	ENE2	NNW1	ENE3	SE7	SSE11	SSE15	SSE18	SSE21	SSE19	SE19	SSE20	SSE23	SSE23	SSE21	SSE21	SSE15	SSE10	SSE13	SSE15	SSE16	S12	SSE11.9	SSE23
7-Apr	SSW7	S7	SSE10	S9	S9	S9	SSE8	SE11	SSE17	SSE19	SSE20	SSE18	SSE20	SSE17	SSE17	SSE15	SSE15	SSE10	SSE6	SSE2	SSE3	S4	S2	WSW1	SSE10.5	SSE20
8-Apr	NW1	UO	NW2	NW2	SSW4	SSW1	SSE4	S5	SE2	SE4	SE3	SSE4	SSE5	SSE5	SSE3	SSE4	ENE3	NNE2	S1	WNW2	WSW1	SW2	WSW1	WSW2	S1.5	S5
9-Apr	SSE5	SSW2	S4	S5	S5	SSW5	SSW3	S2	SSE1	SSE2	SSE5	ESE6	SE9	SE9	SSE8	NNE7	NNW11	N5	E2	W2	W2	WSW3	WNW1	SW2	SSE2.0	NNW11
10-Apr	SW2	SSW3	SSW3	WSW2	NW2	SW1	S3	ESE1	SSW3	SW8	SW9	SW11	WSW13	SW13	SW12	SW11	SW7	S6	SSE3	SW2	WSW2	WSW2	WSW2	WNW1	SW4.6	SW13
11-Apr	N2	N3	N5	NNW4	N5	NW4	N2	SW2	NNE3	SSW2	SSE8	SSW9	SW7	WSW12	WSW17	W14	W15	W15	WSW8	WSW6	WSW8	WSW10	WSW12	WSW8	WSW5.5	WSW17
12-Apr	WSW8	WSW7	WSW7	WSW7	WSW5	SSW4	WSW3	SW7	W9	W10	WNW9	W9	W7	NW10	NW10	NW10	NW9	NW10	NW6	NW4	NW3	WNW3	NW1	WSW1	WNW5.6	NW10
13-Apr	S3	S2	SSE1	NE1	SW2	W1	N2	NNE4	SE2	ESE3	E6	NE9	NNE10	NNE11	NNE12	NNE14	NNE15	NNE13	NNE10	NNE8	NNE7	N4	NW3	NW2	NNE4.7	NNE15
14-Apr	WNW2	SW1	WNW1	WSW1	UO	S2	S3	SE3	SE7	SE7	SE7	SE10	SE13	SE17	SSE17	S18	S14	SSW8	S4	S3	S5	SSW6	S7	S9	SSE6.5	S18
15-Apr	S10	S10	S10	S9	SSE3	S9	SSW7	SSW11	WSW15	W20	W17	W18	WSW19	W18	W19	WSW19	W16	WNW18	WNW18	W20	W18	W16	W14	W12	WSW12.0	W20
16-Apr	WSW9	WSW8	W8	WNW6	WNW7	WNW8	NW14	NNW21	NNW22	NNW23	NNW22	NNW21	NNW23	NNW26	NNW23	NNW20	N18	N15	NNE14	N11	N8	NNE9	N9	NNE15	NNW13.4	NNW26
17-Apr	N17	N18	N17	N18	N13	NNE12	NNE12	NNE12	NNE15	NNE17	NNE17	NNE16	NNE15	NNE16	NNE15	NNE11	N11	N9	NE6	ENE3	NE1	SW2	WSW1	SSW1	NNE11.1	N18
18-Apr	S4	S9	S12	S14	S15	S13	S17	S16	S17	SSE18	S23	S22	S27	S28	S27	S24	S21	SSE21	SSE19	SSE18	S18	S16	S11	S19	S17.7	S28
19-Apr	SSW14	SSW11	WSW12	WNW12	WNW7	WSW5	W10	WNW14	WNW14	WNW13	W14	W16	W17	W15	WNW15	W18	W15	WNW14	NW11	NNW15	NNE14	NNE10	N10	NNE11	WNW9.4	W18
20-Apr	UO	UO	UO	UO	UO	UO	UO	N10	NNE7	N5	NE7	NE7	NNE6	NNE10	NE9	NE7	NNE10	NE8	NNE7	NNE8	N8	NNW7	NNW5	WNW3	---	N10
21-Apr	W2	W2	WNW1	W2	W2	WSW2	NW1	SE2	E4	SE6	ESE9	ESE9	SE7	S8	S11	SE9	SE10	SSE10	SSE8	SSW7	S10	SSE10	S9	S9	SSE4.8	S11
22-Apr	SSW5	SW2	S5	SSW6	WSW1	SSW2	WNW2	S4	S13	S18	SSE21	SSE22	S22	SSE10	SW11	SSW14	S17	S9	SSW5	SW4	NW6	SW3	SSW4	SSW2	S7.6	SSE22
23-Apr	WSW2	NW2	WSW1	SW1	S1	S2	SE1	NNE6	N11	N12	N15	N16	N17	NNE17	NNE17	N17	N14	N11	N9	NNW7	NNW6	NW4	NNW5	NNW7	N7.5	N17
24-Apr	NNW3	WNW3	WNW2	W1	WSW2	NW1	WSW1	NE3	E1	S2	E6	E6	ENE5	NE9	E6	SE7	S7	SSE3	ESE5	SSE4	WSW3	SSW3	SSW3	SSW3	ESE1.2	NE9
25-Apr	SSW5	SSW6	SSW4	SSW5	SSW2	NNW1	N1	NE2	SE5	SE7	S18	S24	SSW21	SSW21	SSW20	SSW17	SSW17	SSW15	SSW12	SSW10	SSW8	SSW9	SSW7	SE3	SSW9.2	S24
26-Apr	NW1	WSW3	SSW3	N7	NNE12	NNE11	N10	NNE10	NNE10	NNE14	NNE15	NNE17	NNE18	NNE18	NNE18	NNE20	NNE20	N19	N18	N17	N11	N12	NNW10	NNW7	NNE11.7	NNE20
27-Apr	NNW6	NNW6	N12	N18	NNE15	N15	N16	N14	NNE13	NNE11	NE11	NNE12	NE10	NE11	NNE12	NE11	NE11	NNE12	NNE11	NE9	N7	NNW5	NNW1	NNE10.4	N18	
28-Apr	W2	W2	WSW3	W2	W3	WSW2	E2	SE6	S10	S11	SSE10	SSE12	SSE15	S15	SSW16	SSW16	SSW17	S15	S12	SSW10	SSW13	SSW11	SW13	S4	S8.3	SSW17
29-Apr	SSW7	SSW6	SSE3	SSW4	SW7	WSW7	W7	W8	WSW11	WSW11	W10	NW11	NNW14	NNW11	SSW5	SSW4	NNE15	NNE14	N10	NNW5	NNW3	W2	SW3	SW4	WNW3.6	NNE15
30-Apr	S3	SSW4	WSW9	W9	W8	N11	N14	N13	NNE9	NE10	NNE8	NNE10	NNE13	WNW3	NE3	N6	N15	N23	N20	N18	N15	N14	N13	N12	N8.9	N23
SW2.3 SW2.3WSW2.1WSW1.9 W1.7 W1.2WNW1.0NNW0.6WSW0.3SSW1.0 SSE2.2 SSE1.5 S1.2 ENE0.1SSW0.8WSW0.9 NW1.6NNW2.2 N1.7 NW2.4 NW1.8 W1.7 W2.0 W1.6																								Diurnal Average		
N17 N18 N17 N18 NNE15 N15 S17NNW21NNW22NNW23 S23 S24 S27 S28 S27 S24 S21 N23 N20 W20 W18 S16 SSE16 S19																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

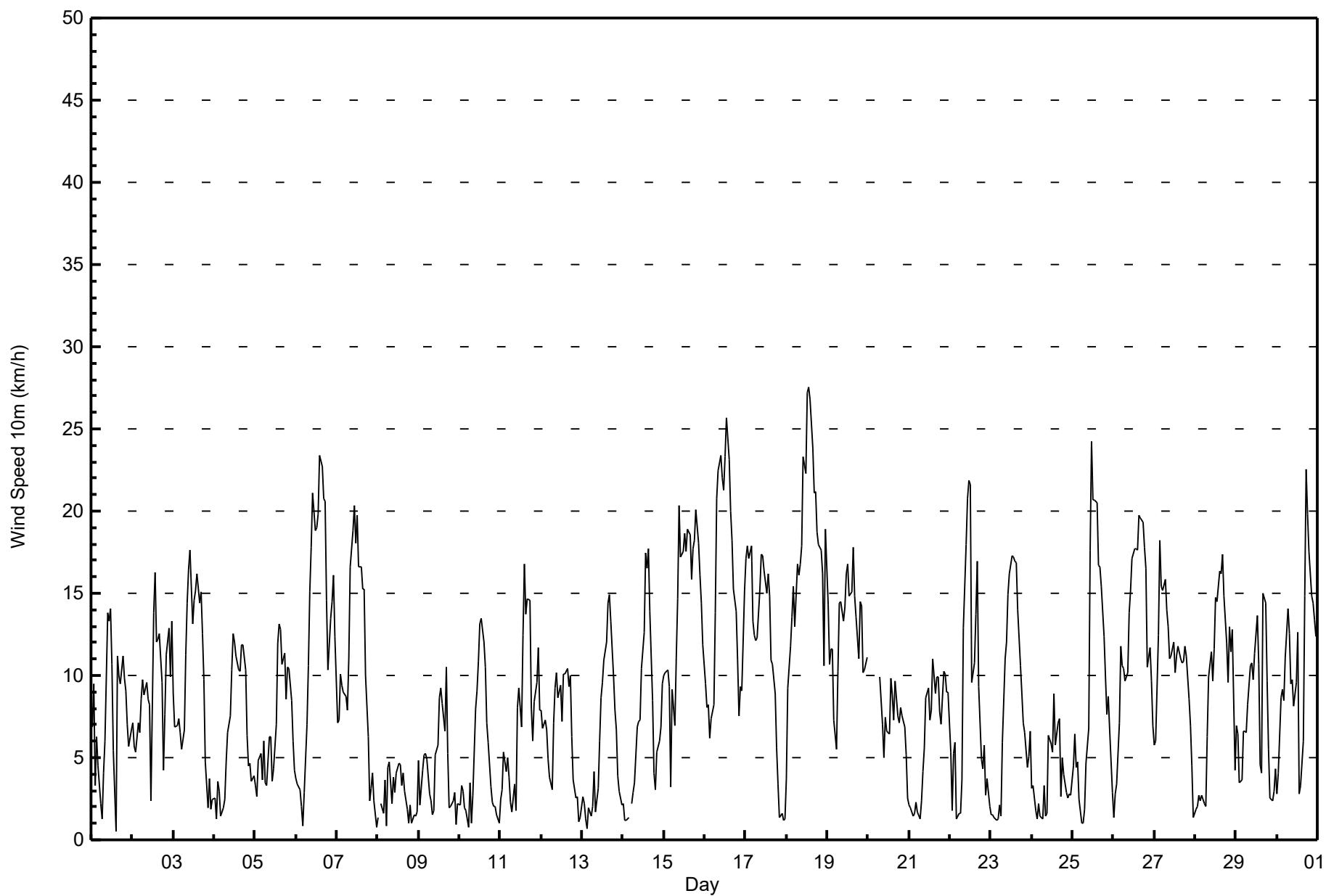
Wind Speed 10m (WS10) - km/h
Fort McKay South - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 30 17:00																	Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8								
Minimum Value: 1 km/h on Apr 5 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	2	2	1	1	1	1	1	3	3	2	2	3	2	4	4	4	3	4	3	3	2	2	2	4
2-Apr	1	1	1	1	1	2	3	3	4	3	3	4	5	5	3	3	3	2	3	2	3	3	4	3	5
3-Apr	3	2	2	2	2	1	2	4	5	4	5	5	5	5	5	4	5	4	3	2	2	1	1	1	5
4-Apr	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	2	2	2	2	2	1	1	1	2	3
5-Apr	1	1	1	1	2	2	1	1	1	2	1	2	2	2	3	3	2	2	2	2	2	2	2	1	3
6-Apr	1	1	1	1	1	1	2	3	3	4	4	4	4	4	4	5	4	4	4	3	4	3	4	3	5
7-Apr	2	3	3	2	2	2	2	2	4	4	4	3	4	3	4	3	4	4	1	2	2	1	1	1	4
8-Apr	1	UO	1	1	1	1	3	2	1	1	2	2	1	1	1	1	1	1	1	1	1	2	1	2	3
9-Apr	2	2	1	1	1	2	1	1	1	1	1	2	2	2	2	4	3	2	1	1	1	1	1	2	4
10-Apr	1	1	1	1	1	2	1	1	3	3	3	4	4	5	4	4	3	2	1	1	1	1	1	1	5
11-Apr	2	2	2	1	2	1	1	2	2	2	4	3	3	5	6	6	6	5	3	1	2	3	5	2	6
12-Apr	3	2	2	2	2	1	1	3	4	4	3	3	2	4	4	3	4	4	3	1	1	1	1	1	4
13-Apr	1	2	1	1	1	1	2	1	1	2	2	3	2	3	4	4	4	3	3	2	2	2	1	1	4
14-Apr	1	1	1	1	UO	2	1	1	2	2	2	3	3	4	4	4	5	3	2	1	1	1	1	2	5
15-Apr	2	3	2	2	2	2	2	3	7	8	7	7	7	6	7	6	6	7	8	8	7	6	6	4	8
16-Apr	3	3	3	3	2	2	5	7	7	7	7	6	7	7	6	6	5	5	4	3	3	4	4	4	7
17-Apr	5	4	4	4	4	3	4	3	4	4	4	4	4	4	4	3	3	3	2	1	1	1	1	1	5
18-Apr	1	3	2	2	3	3	4	4	3	4	5	6	6	5	5	5	4	5	4	4	3	4	4	4	6
19-Apr	4	3	4	4	2	2	5	6	6	6	6	6	6	6	6	7	7	6	5	5	4	4	4	4	7
20-Apr	UO	UO	UO	UO	UO	UO	UO	4	3	3	3	3	3	3	3	3	2	2	2	2	2	1	1	1	4
21-Apr	1	1	1	1	1	1	1	1	2	3	3	3	3	4	4	4	3	3	3	4	3	1	2	3	4
22-Apr	2	2	2	2	2	1	1	3	4	4	5	5	5	5	5	4	4	5	4	2	5	1	1	2	5
23-Apr	1	1	1	1	1	1	1	3	3	3	3	4	4	5	4	4	3	3	2	2	1	1	1	1	5
24-Apr	1	1	2	1	2	1	2	1	2	2	2	3	2	2	3	3	3	2	1	1	1	1	1	1	3
25-Apr	1	1	2	2	3	1	1	1	2	3	6	7	6	6	5	5	5	5	3	3	1	2	2	2	7
26-Apr	1	1	2	3	3	3	2	2	3	4	4	4	4	4	4	5	5	5	4	4	3	3	2	1	5
27-Apr	1	2	3	4	4	3	4	4	4	3	4	3	4	4	3	4	4	3	3	3	2	2	1	1	4
28-Apr	1	1	1	1	1	1	2	2	3	3	3	3	5	5	5	5	5	3	2	3	5	4	4	2	5
29-Apr	2	2	1	1	2	2	3	3	4	4	4	4	4	6	1	2	5	4	3	1	1	2	1	2	6
30-Apr	2	2	2	3	3	3	3	3	2	2	2	3	3	2	1	2	9	5	4	4	4	3	3	3	9
5 4 4 4 4 3 5 7 7 8 7 7 7 7 7 7 9 7 8 8 7 6 6 4																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Fort McKay South - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay South - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	240	33.76	33.76
6 - 11	249	35.02	68.78
12 - 19	184	25.88	94.66
20 - 28	38	5.34	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort McKay South - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	13	4	5	5	4	6	9	24	32	33	21	28	13	14	15	14	240
6 - 11	25	29	15	0	4	3	18	20	27	20	10	19	16	8	19	16	249
12 - 19	36	39	0	0	0	0	2	25	23	10	3	8	17	9	1	11	184
20 - 28	2	2	0	0	0	0	0	11	9	3	0	0	2	0	0	9	38
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	76	74	20	5	8	9	29	80	91	66	34	55	48	31	35	50	711

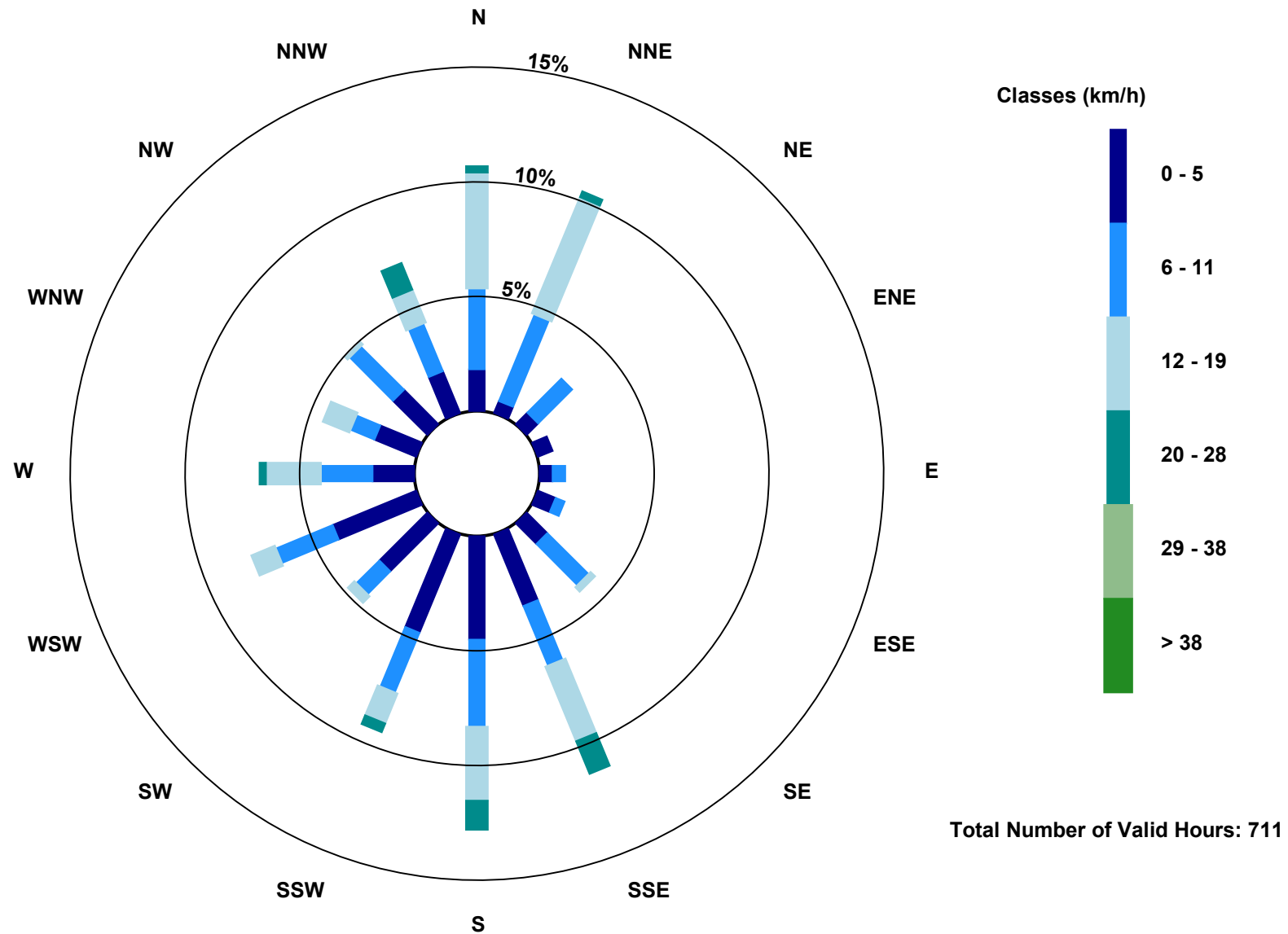
Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - April 2025

Direction of Maximum Speed: 178 deg on Apr 18 14:00 Direction of Maximum Daily Speed Average: 173.8 deg on Apr 18																				Hours in Service: 720					
Direction of Minimum Speed: 116 deg on Apr 1 15:00																				Direction of Minimum Daily Speed Average: 1.2 deg on Apr 24		Hours of Data: 711			
Monthly Average Direction: 265.0 deg																				Hours of Missing Data: 9		Percent Operational Time: 98.8			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	177	169	167	160	168	175	223	154	157	172	170	158	167	149	116	311	314	340	337	326	326	321	306	278	213.0
2-Apr	261	273	273	259	256	253	258	259	275	310	231	120	349	9	28	23	13	7	331	320	345	347	357	351	326.5
3-Apr	332	318	303	299	289	286	309	329	337	336	1	340	340	345	349	325	330	332	345	340	343	253	249	252	330.8
4-Apr	226	171	175	182	222	228	201	162	143	179	177	166	163	160	164	159	176	164	181	201	206	184	197	209	174.5
5-Apr	234	224	191	183	180	193	194	157	141	134	122	10	11	13	2	7	9	12	355	350	1	358	350	349	8.3
6-Apr	340	348	6	78	342	76	128	149	152	151	151	154	146	150	155	155	156	160	160	159	158	163	166	174	153.5
7-Apr	196	187	168	174	188	169	151	146	155	160	160	161	159	155	149	168	162	158	160	162	168	184	173	254	162.8
8-Apr	306	UO	307	314	208	202	162	174	145	136	135	148	160	149	166	160	62	13	176	301	244	231	244	248	169.5
9-Apr	164	196	173	179	185	193	195	170	157	150	156	115	146	144	149	22	343	360	88	264	271	238	285	223	161.7
10-Apr	215	193	204	250	307	236	173	116	211	227	214	228	246	234	223	217	218	186	154	216	249	242	245	302	221.9
11-Apr	1	356	6	340	351	317	1	234	29	210	168	209	225	239	244	263	265	265	255	240	245	253	250	240	255.6
12-Apr	237	244	251	241	255	206	242	226	275	277	283	272	275	309	306	318	324	323	312	314	326	303	318	253	281.7
13-Apr	175	173	147	36	214	273	357	16	136	118	95	50	21	16	23	19	12	22	30	14	15	355	312	305	23.8
14-Apr	296	235	283	254	UO	179	170	145	138	137	139	144	145	146	153	175	190	212	187	181	179	193	185	179	166.7
15-Apr	186	182	186	184	162	188	194	196	238	261	269	271	244	259	261	255	280	300	288	277	270	262	260	265	252.8
16-Apr	257	254	262	286	303	301	326	329	332	335	337	339	335	344	342	348	5	1	12	10	2	14	8	13	339.3
17-Apr	5	7	8	7	10	17	17	28	15	15	14	18	20	22	16	25	5	6	46	64	34	222	247	201	14.9
18-Apr	186	182	174	172	175	175	170	169	172	162	177	180	177	178	174	174	168	168	166	169	169	178	190		173.8
19-Apr	193	210	248	292	290	255	280	288	286	288	263	279	263	281	297	277	280	296	317	331	22	20	11	14	289.8
20-Apr	UO	UO	UO	UO	UO	UO	UO	4	15	354	39	38	32	27	37	44	28	45	27	24	11	348	337	284	--
21-Apr	272	272	290	281	264	242	322	145	94	127	122	103	143	191	181	134	129	165	167	210	183	166	178	186	163.0
22-Apr	206	227	190	203	257	204	294	184	180	175	161	167	175	168	232	193	187	191	192	217	319	230	204	210	186.7
23-Apr	255	320	246	214	184	176	143	31	3	4	8	10	11	15	13	4	8	9	0	341	337	322	332	347	3.3
24-Apr	341	294	297	273	247	315	245	38	93	189	81	79	61	34	86	128	172	159	122	151	238	213	194	204	111.5
25-Apr	198	194	208	211	195	340	351	43	137	133	191	190	194	193	192	204	211	212	196	194	203	206	211	145	195.3
26-Apr	307	244	208	357	21	14	9	24	27	16	12	12	25	24	27	29	13	9	8	4	355	351	345	346	12.0
27-Apr	343	345	6	10	14	4	9	11	22	29	43	31	41	44	25	39	46	35	29	25	29	8	332	27	21.2
28-Apr	260	265	255	272	267	246	99	137	178	172	153	150	165	189	195	200	194	181	179	200	206	206	214	180	188.5
29-Apr	200	195	153	212	232	252	264	262	258	256	266	315	337	347	196	201	14	12	2	345	343	271	226	217	290.6
30-Apr	174	204	255	263	274	5	2	5	22	36	26	14	17	302	38	3	8	9	3	5	357	358	357	354	359.9
234.9 229.7 236.8 256.1 265.9 265.2 303.0 338.1 241.8 205.3 164.1 160.7 175.3 59.3 204.5 253.6 325.5 344.7 352.6 322.0 312.6 277.4 266.2 265.1																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

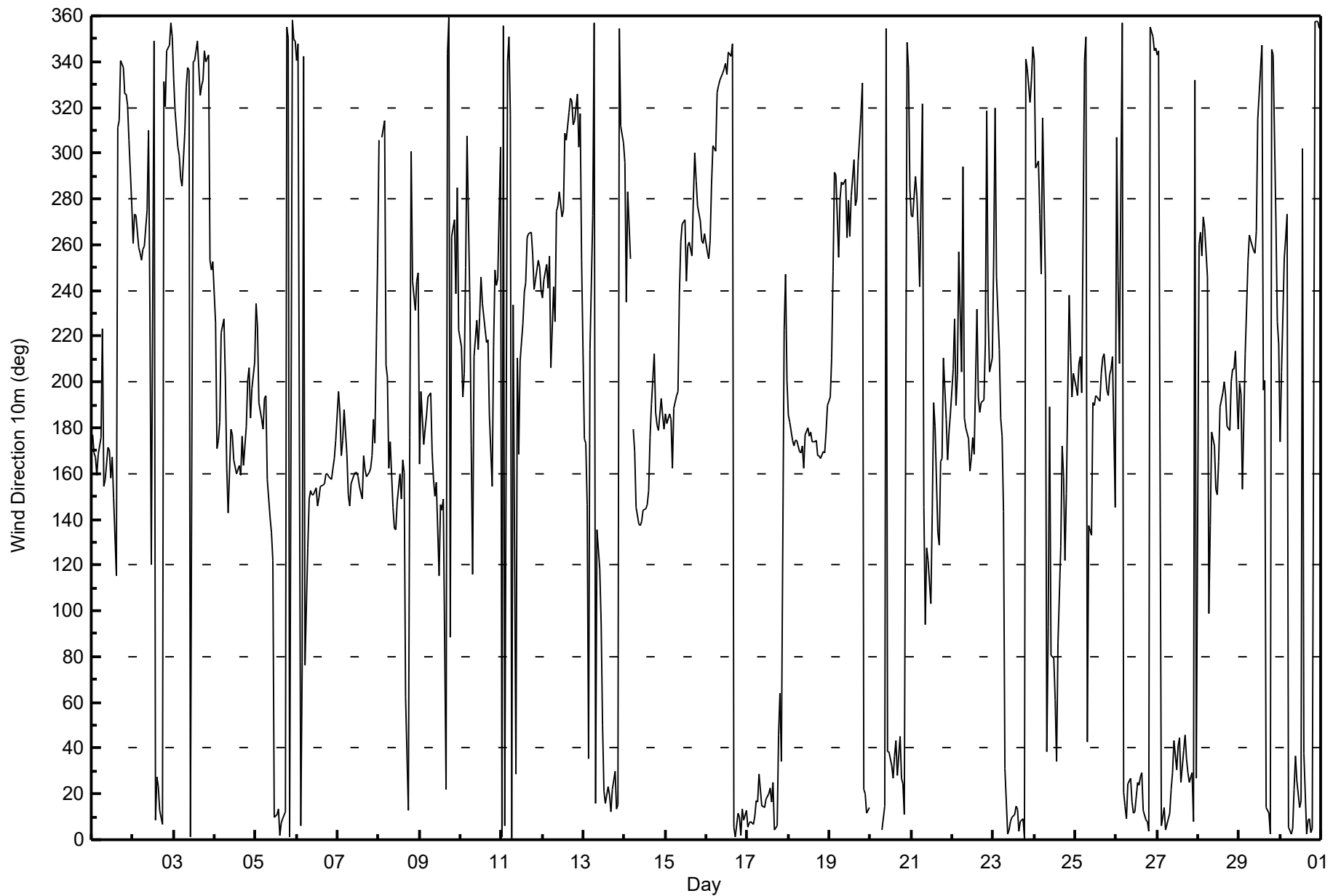
Fort McKay South - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 99 deg on Apr 2 12:00																		Hours of Data: 711							
Minimum Value: 7 deg on Apr 3 22:00																		Hours of Missing Data: 9							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 10 P ₁₀ = 13 Q ₁ = 17 Median = 23 Q ₃ = 36 P ₉₀ = 57 P ₉₉ = 88																		Percent Operational Time: 98.8							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	15	7	28	11	14	25	42	16	21	11	13	10	14	16	68	23	26	20	23	19	20	15	24	19	68
2-Apr	11	20	19	12	12	19	22	22	37	39	42	99	36	25	20	19	16	15	25	16	16	15	21	15	99
3-Apr	16	16	16	16	20	18	20	21	26	24	24	31	31	24	24	24	24	26	23	27	78	7	51	10	78
4-Apr	23	89	22	29	76	63	44	15	10	34	21	18	19	20	23	17	14	12	9	17	12	12	15	28	89
5-Apr	45	29	18	11	65	13	22	47	12	24	46	40	19	13	16	16	14	15	15	13	14	15	18	16	65
6-Apr	15	20	24	57	90	44	18	16	13	12	12	14	15	15	12	13	12	11	10	11	11	12	12	15	90
7-Apr	17	19	13	13	14	12	12	12	14	12	12	13	13	13	14	15	13	14	14	57	64	30	63	84	84
8-Apr	42	UO	37	65	35	76	45	26	79	34	62	31	22	18	26	38	34	47	73	47	60	56	41	83	83
9-Apr	16	75	13	11	14	23	45	26	64	81	33	37	21	20	23	59	25	44	65	32	34	27	85	65	85
10-Apr	81	49	54	59	56	75	22	86	88	40	31	37	33	29	34	32	35	29	32	54	32	38	52	63	88
11-Apr	55	78	21	39	44	27	46	94	72	90	38	34	49	34	30	36	32	28	24	14	18	22	26	23	94
12-Apr	26	25	27	22	26	17	19	23	35	31	31	31	29	28	28	22	23	22	18	10	29	26	27	35	35
13-Apr	20	49	51	80	38	48	54	23	73	55	43	37	23	24	23	18	19	19	19	18	16	27	17	18	80
14-Apr	29	49	41	49	UO	75	34	22	22	28	29	23	17	18	20	13	22	21	19	16	14	10	8	14	75
15-Apr	13	17	13	9	49	18	20	19	31	34	36	36	31	33	32	30	33	30	34	31	30	30	28	28	49
16-Apr	26	24	25	31	20	21	21	19	21	20	20	19	21	19	20	19	18	21	17	17	20	22	16	17	31
17-Apr	17	17	17	17	20	18	18	20	18	17	19	19	21	20	25	32	24	25	25	36	74	49	61	50	74
18-Apr	25	14	10	10	9	11	12	13	16	13	16	16	14	14	12	13	13	12	10	10	10	12	19	13	25
19-Apr	14	23	25	27	27	35	32	29	34	38	38	34	36	35	34	32	38	29	27	31	20	17	18	16	38
20-Apr	UO	UO	UO	UO	UO	UO	UO	20	38	71	45	56	55	37	36	54	21	25	19	16	17	13	15	33	71
21-Apr	36	37	52	36	22	37	51	54	45	49	36	33	55	53	34	38	29	32	24	32	15	10	13	17	55
22-Apr	45	77	29	23	82	78	70	57	18	19	15	16	20	77	44	17	15	28	63	20	81	51	30	64	82
23-Apr	78	69	62	61	82	45	50	25	20	17	15	20	18	24	24	16	19	22	17	16	12	21	13	13	82
24-Apr	55	25	77	51	39	72	83	68	89	92	47	67	45	27	57	51	38	76	31	15	11	26	20	17	92
25-Apr	9	12	21	32	85	37	58	40	39	36	26	18	20	23	19	25	24	22	17	13	10	11	16	38	85
26-Apr	83	32	56	34	18	19	18	23	25	21	20	20	20	20	20	19	20	18	21	18	20	15	15	13	83
27-Apr	13	22	21	18	21	18	19	21	22	26	30	27	43	32	26	33	32	27	21	17	18	22	20	74	74
28-Apr	47	19	11	17	13	37	60	25	34	23	32	27	32	30	26	23	18	14	12	17	20	20	24	29	60
29-Apr	19	29	36	33	23	26	34	30	28	28	35	27	21	52	27	58	21	20	17	16	30	38	28	20	58
30-Apr	55	39	20	23	26	27	18	18	24	23	24	20	16	58	58	30	23	18	17	16	17	16	15	15	58
83 89 77 80 90 78 83 94 89 92 62 99 55 77 68 59 38 76 73 57 81 56 85 84																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort McKay South - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS14
ANZAC
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
APRIL 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	685	35	35	100	-	-	10.8	0	1.5	0
TRS(ppb) Average	682	38	38	100	0.9	0	0.7	-	0.3	-
THC(ppm) Average	685	35	35	100	-	-	2.2	-	2	-
NMHC(ppm) Average	685	35	35	100	-	-	0.029	-	0.001	-
CH4(ppm) Average	685	35	35	100	-	-	2.2	-	2	-
NO2(ppb) Average	685	35	35	100	-	-	15.8	0	3.3	-
NO(ppb) Average	685	35	35	100	-	-	38.4	-	3.1	-
NOX(ppb) Average	685	35	35	100	-	-	54.2	-	6.4	-
O3(ppb) Average	686	34	34	100	-	-	56.4	0	49.9	-
PM2.5(ug/m3) Average	719	1	1	100	-	-	23	0	4.7	0
AT 2m(C) Average	720	0	0	100	-	-	20.8	-	13.4	-
RH(%) Average	720	0	0	100	-	-	100	-	90	-
WS(km/h) Average	720	0	0	100	-	-	30	-	21	-
WD(deg) Average	720	0	0	100	-	-	-	-	-	-
Leaf Wetness (% of range) Average	718	0	2	99.72	-	-	80.9	-	20.6	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	685	0.51	0.8	-	0	0	0.1	0.2	0.5	1.2	10.8
TRS(ppb) Average	682	0.17	0.1	-	0.1	0.1	0.1	0.2	0.2	0.3	0.7
THC(ppm) Average	685	1.99	0	-	1.9	2	2	2	2	2	2.2
NMHC (ppm) Average	685	0	0.002	-	0	0	0	0	0	0	0.029
CH4(ppm) Average	685	1.99	0	-	1.9	2	2	2	2	2	2.2
NO2(ppb) Average	685	1.59	1.7	-	0.2	0.4	0.6	1	2	3.7	15.8
NO(ppb) Average	685	0.49	2.1	-	0	0	0	0.1	0.3	1	38.4
NOX(ppb) Average	685	2.08	3.4	-	0.2	0.4	0.6	1.2	2.4	4.4	54.2
O3(ppb) Average	686	36.63	9.1	-	3	25.6	30.9	38	43	47.1	56.4
PM2.5(ug/m3) Average	719	2.54	1.6	-	0.1	1	1.8	2.3	2.9	4	23
Temperature 2 m (C) Average	720	3.91	6.6	-	-14.7	-4.7	-0.7	4.3	9	12.1	20.8
Relative Humidity (%) Average	720	56.66	22	-	15.9	28.4	37.8	55.2	74.5	88.5	100
Wind Speed 20 m (km/h) Average	720	12.8	6	-	0	5	8	12	17	21	30
Wind Direction 20 m (deg) Average	720	243.6	-	-	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	718	2.19	7.7	-	0	0	0	0	0	4.8	80.9

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
APRIL 2025

Parameter	OPERATIONAL NOTES			
	Period Start	Period End	Duration (Hours)	Notes
Surface Leaf Wetness	13 Apr 2025 02:00	13 Apr 2025 02:00	1	Sensor operated out of range
Surface Leaf Wetness	16 Apr 2025 11:00	16 Apr 2025 11:00	1	Sensor operated out of range



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

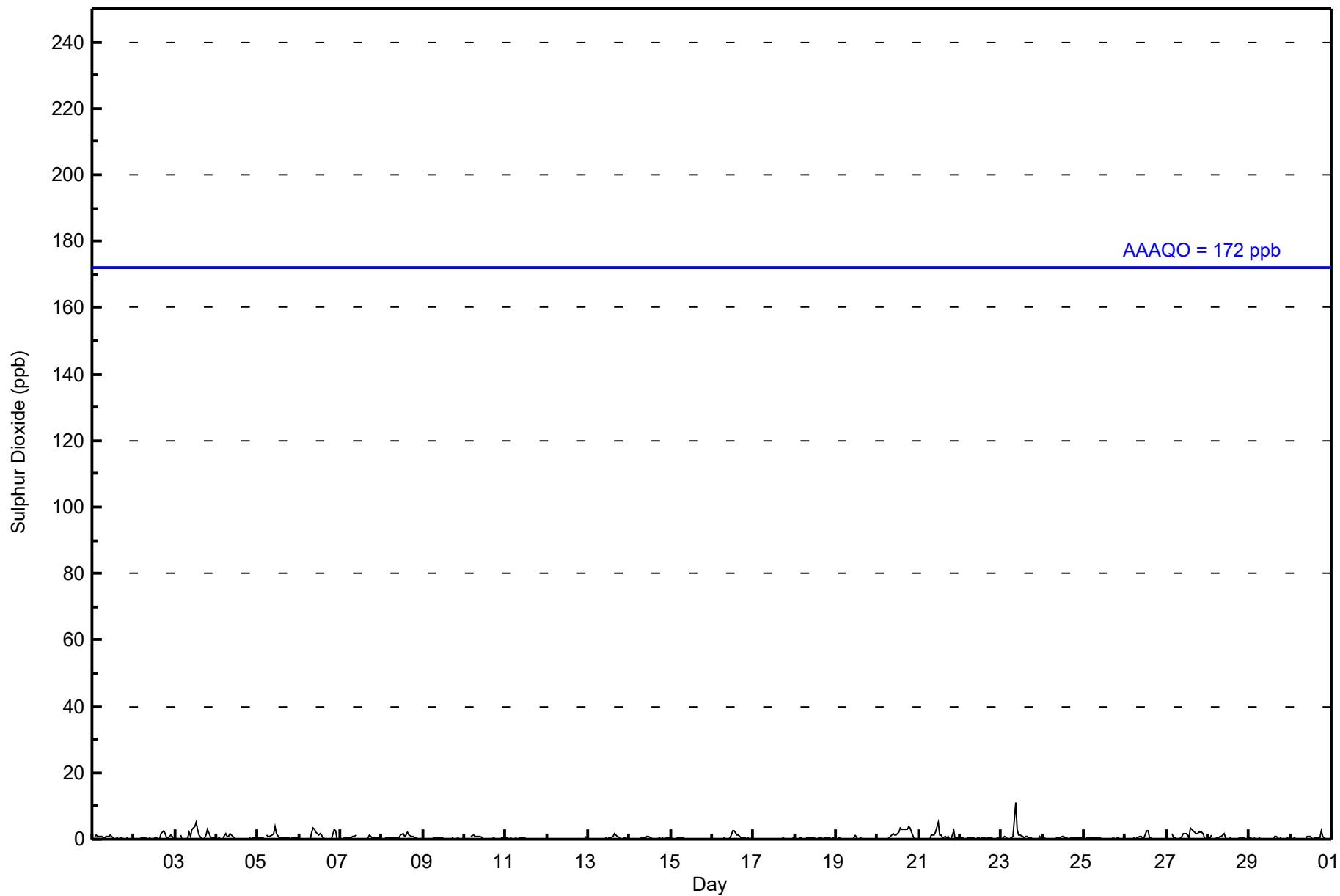
Anzac - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 10.8 ppb on Apr 23 09:00 Maximum Daily Average: 1.5 ppb on Apr 20																			Hours of Data: 685							
Minimum Value: 0.0 ppb on Apr 6 02:00 Minimum Daily Average: 0.1 ppb on Apr 12																			Hours of Missing Data: 35							
Maximum Diurnal Average: 1.0 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 1																			Hours of Calibration: 35							
Monthly Average: 0.51 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.2 P ₉₉ = 3.5																			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-Apr	Z	1.0	1.1	0.7	0.7	1.0	0.4	0.5	0.8	0.8	1.2	1.0	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.2
2-Apr	0.2	Z	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	1.7	2.4	1.6	0.5	0.5	1.1	1.0	0.1	0.5	2.4
3-Apr	0.0	0.0	Z	1.1	0.1	0.1	0.1	0.5	2.2	0.9	2.8	3.9	5.2	3.0	1.1	0.2	0.1	0.3	1.5	3.0	1.0	0.4	0.5	0.3	1.2	5.2
4-Apr	0.2	0.2	0.5	Z	0.6	1.7	0.9	1.0	1.7	0.7	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.3	0.4	0.5	0.5	1.7
5-Apr	0.5	0.5	0.4	0.6	Z	1.1	1.0	0.9	1.2	1.7	3.7	1.8	0.5	0.4	0.5	0.5	0.5	0.3	0.3	0.2	0.6	0.6	0.5	0.3	0.8	3.7
6-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	2.0	3.2	3.1	2.1	1.3	1.5	1.4	0.5	0.0	0.0	0.0	0.0	0.0	2.9	2.6	0.0	0.0	0.9	3.2
7-Apr	Z	0.1	0.2	0.4	0.6	0.5	0.5	1.0	0.7	1.1	C	C	C	C	C	0.2	0.3	1.3	0.3	0.4	0.4	0.3	0.3	0.3	0.5	1.3
8-Apr	0.5	Z	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	1.2	1.7	0.7	1.3	1.9	1.4	1.0	0.9	0.4	0.2	0.1	0.1	0.1	0.6	1.9
9-Apr	0.2	0.1	Z	0.1	0.1	0.1	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.4
10-Apr	0.0	0.1	0.2	Z	0.7	1.1	0.8	0.9	0.9	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.1	0.3	0.5	0.3	1.1
11-Apr	0.3	0.4	0.0	0.4	Z	0.0	0.3	0.1	0.5	0.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.5
12-Apr	0.1	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	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.7
13-Apr	Z	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.5	0.5	0.9	1.6	1.1	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.6
14-Apr	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.4	0.6	0.5	0.8	0.9	0.6	0.0	0.1	0.1	0.2	0.3	0.1	0.3	0.2	0.2	0.3	0.3	0.3	0.9
15-Apr	0.4	0.3	Z	0.2	0.3	0.5	0.4	0.3	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.5
16-Apr	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.1	0.3	1.3	2.6	2.7	1.3	1.2	0.7	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.6	2.7
17-Apr	0.0	0.0	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3
18-Apr	0.1	0.1	0.2	0.4	0.4	Z	0.5	0.5	0.5	0.6	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.6
19-Apr	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.1	0.4	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	1.1
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	1.4	1.8	1.2	1.5	2.2	3.6	3.1	3.0	2.9	2.9	4.0	3.5	2.1	0.1	0.0	0.0	1.5	4.0
21-Apr	0.0	0.6	Z	0.0	0.0	0.0	0.0	1.2	1.1	1.3	2.0	5.0	1.1	1.1	0.5	0.9	0.6	0.8	0.1	0.1	2.4	0.2	0.2	0.6	0.9	5.0
22-Apr	0.3	0.4	0.4	Z	0.4	0.3	0.6	0.4	0.3	0.2	0.4	0.4	0.2	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6
23-Apr	0.1	0.5	0.8	0.5	Z	0.2	0.4	0.7	10.8	3.0	1.1	1.2	0.7	0.4	0.8	0.7	0.4	0.2	0.1	0.2	0.1	0.1	0.9	0.4	1.1	10.8
24-Apr	0.6	0.4	0.2	0.2	0.0	Z	0.1	0.1	0.5	0.4	0.4	0.7	0.7	0.4	0.3	0.2	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.7
25-Apr	Z	0.5	0.5	0.4	0.5	0.5	0.4	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.5
26-Apr	0.6	Z	0.1	0.2	0.2	0.2	0.2	0.4	0.8	1.0	0.3	0.2	2.3	2.5	0.4	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.5	2.5
27-Apr	0.1	0.6	Z	1.7	0.6	0.3	0.1	0.1	0.5	0.9	1.5	1.9	1.1	0.6	3.4	2.6	2.0	1.7	1.6	2.0	2.1	1.5	0.5	0.2	1.2	3.4
28-Apr	0.1	0.2	1.1	Z	0.1	0.2	0.5	1.0	1.0	1.5	0.6	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.4	1.5
29-Apr	0.2	0.2	0.2	0.3	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0	0.8	0.2	0.3	0.1	0.1	0.1	0.3	0.2	0.2	1.0
30-Apr	0.1	0.2	0.2	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.8	0.8	0.5	0.1	0.5	0.3	0.3	0.3	2.5	0.6	0.1	0.0	0.0	0.1	0.3	2.5
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	684	99.85	99.85
11 - 20	1	0.15	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 (SO₂) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	46	7	2	12	20	31	65	57	37	43	25	25	76	104	57	77	684
11 - 20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	47	7	2	12	20	31	65	57	37	43	25	25	76	104	57	77	685

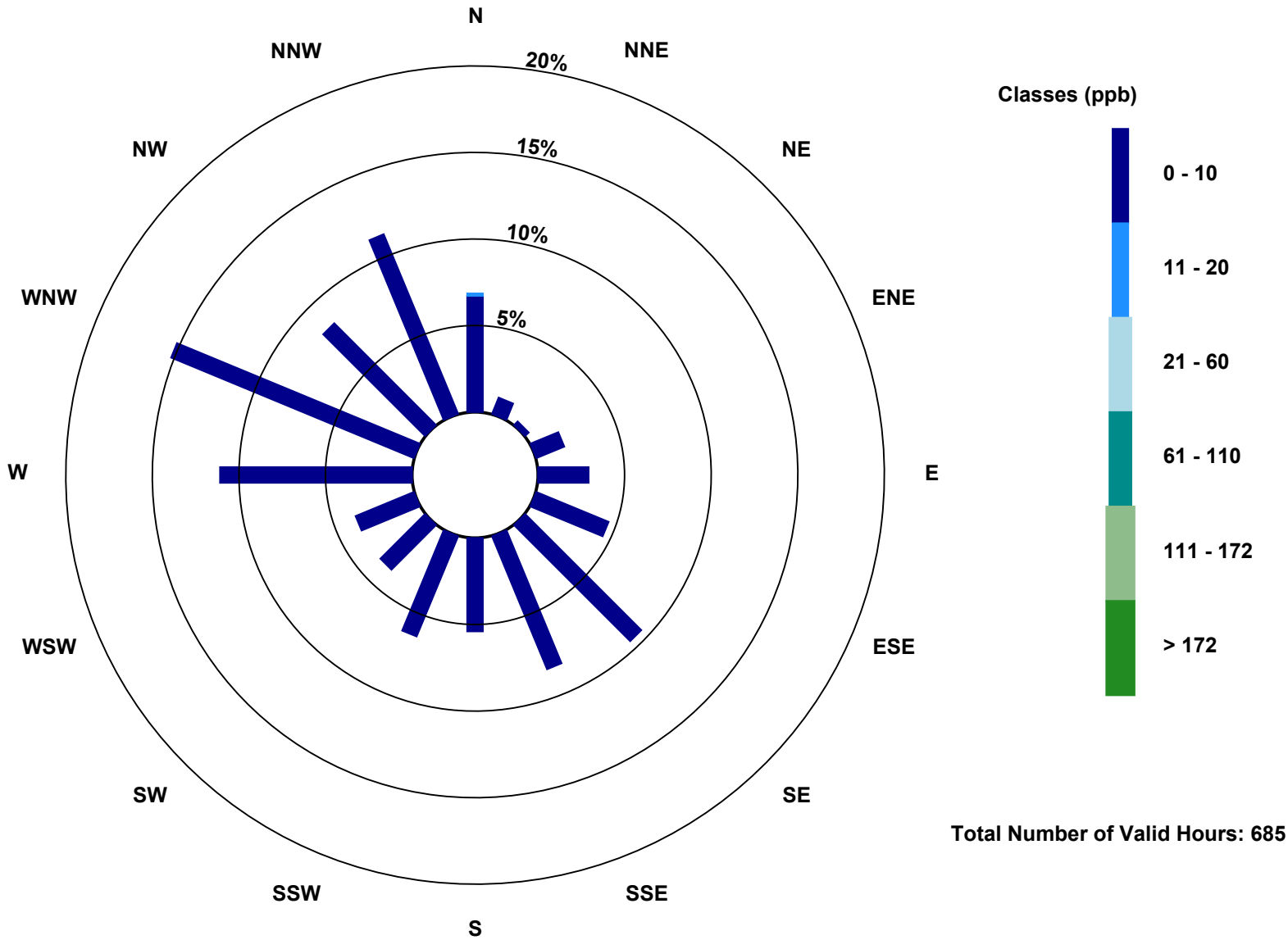
Total Number of Valid Hours: 685

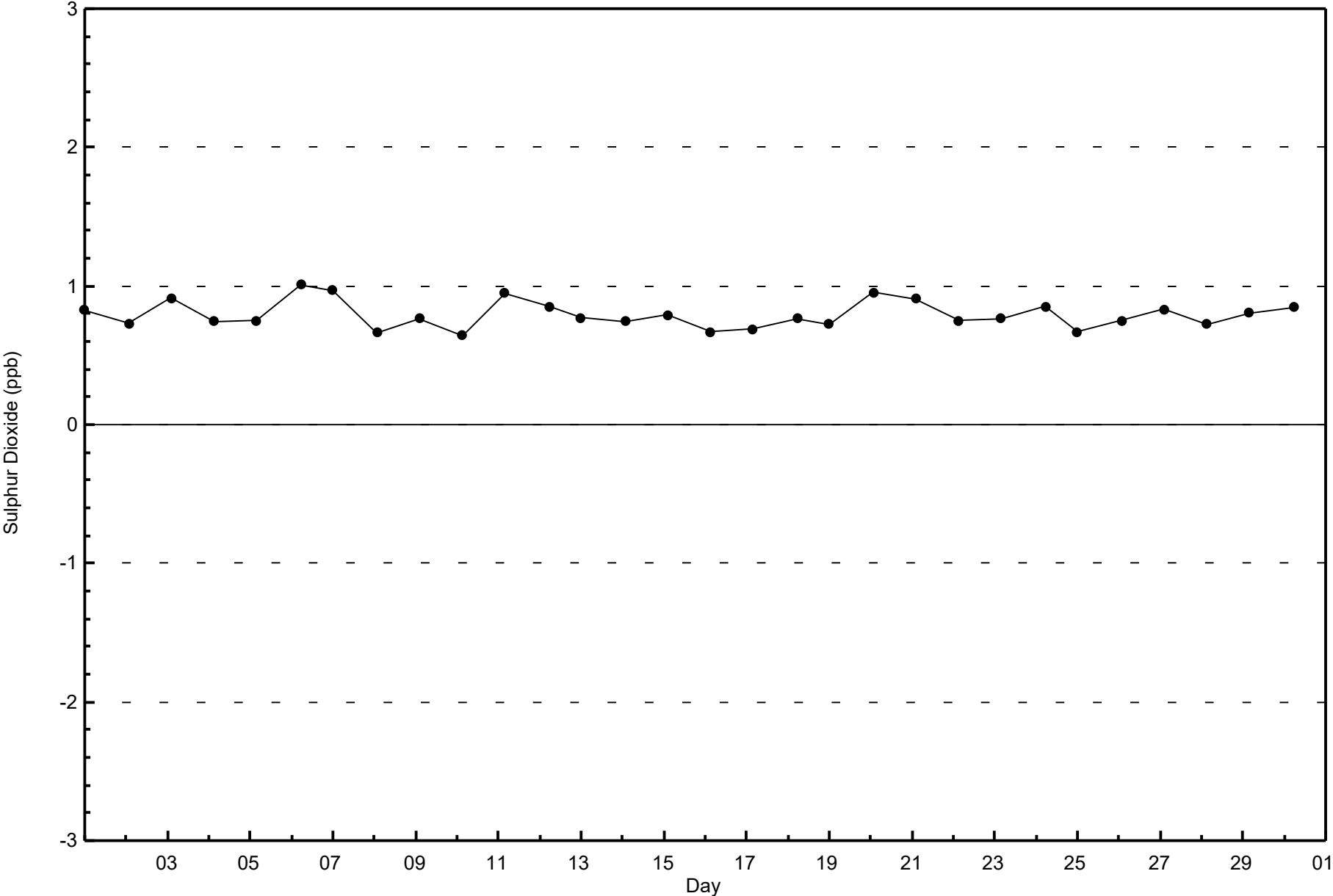
Total Number of Hours: 720

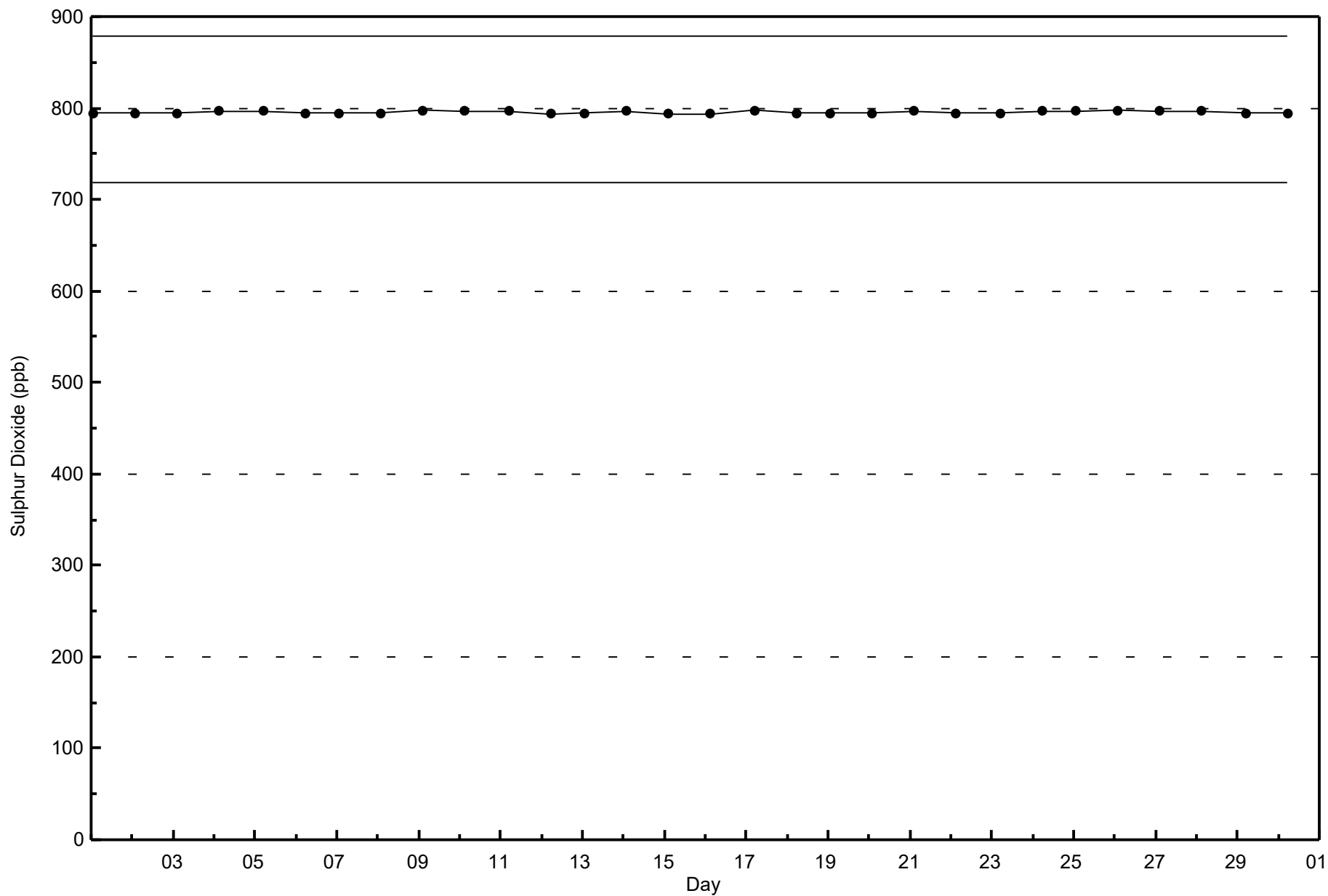


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Anzac









Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440								
Maximum Value: 0.9 ppb on Apr 24 08:30 Maximum Daily Average: 0.3 ppb on Apr 8																			Periods of Valid Data: 1363								
Minimum Value: 0.1 ppb on Apr 17 21:00 Minimum Daily Average: 0.1 ppb on Apr 17																			Periods of Invalid Data: 77								
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 14																			Periods of Calibration: 77								
Monthly Average: 0.17 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.6																			Percent Operational Time: 100.0								
Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
1-Apr	0.1 0.2	Z SP	0.4 0.3	0.4 0.3	0.4 0.4	0.5 0.4	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.2	0.5
2-Apr	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.4 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	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.2	0.1	0.4
3-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.2	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 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1	0.2
4-Apr	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.3	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
5-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.6 0.6	0.3 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.2	0.6
6-Apr	Z SP	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.3 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.3 0.2	0.3 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.1 0.7	0.7 0.3	0.1 0.1	0.2 0.1	0.2	0.7	
7-Apr	0.1 0.1	Z SP	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.4 0.3	0.2 0.2	0.2 0.3	0.4 0.3	0.3 0.3	0.4 0.3	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.7	0.2 0.1	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.7	
8-Apr	0.2 0.2	0.2 0.2	Z SP	0.5 0.5	0.3 0.2	0.2 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	0.2 0.3	0.2 0.2	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3	0.5	
9-Apr	0.2 0.2	0.3 0.2	0.3 0.3	Z SP	0.3 0.3	0.3 0.2	0.3 0.4	0.2 0.1	0.2 0.2	0.2 0.4	0.2 0.2	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 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.4	
10-Apr	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.3	Z SP	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.6	0.6 0.6	0.7 0.7	0.2	0.7	
11-Apr	0.8 0.5	0.3 0.2	0.1 0.2	0.1 0.4	0.3 0.3	Z SP	0.3 0.2	0.2 0.4	0.3 0.6	0.2 0.2	0.1 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.8	
12-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1	0.2	
13-Apr	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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 0.1	0.1 0.3	0.2 0.1	0.1 0.1	0.1 0.1	0.1	0.3	
14-Apr	0.1 0.1	0.1 0.2	Z SP	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	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-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.5 0.1	0.1 0.1	C C	C C	C C	C C	C C	C C	C C	C C	C C	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	--	0.5
17-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.1	0.2
18-Apr	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1	0.2
19-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1	0.2
20-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
21-Apr	0.2 0.2	0.2 0.4	0.4 0.4	Z SP	0.2 0.2	0.2 0.2	0.2 0.6	0.2 0.2	0.5 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 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	0.2 0.2	0.1 0.1	0.1 0.2	0.2	0.6
22-Apr	0.3 0.2	0.2 0.2	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.2	0.3
23-Apr	0.1 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
24-Apr	Z 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	0.9 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.9
25-Apr	0.1 0.1	Z SP	0.2 0.1	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.1	0.2
26-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.4	0.3 0.2	0.2 0.1	0.2 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.2 0.2	0.3 0.3	0.3 0.3	0.1 0.2	0.1 0.1	0.2	0.4
27-Apr	0.1 0.2	0.2 0.2	0.3 0.3	Z SP	0.5 0.3	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.1 0.1	0.2	0.5
28-Apr	0.1 0.1	0.1 0.2	0.2 0.3	0.3 0.1	Z SP	0.3 0.2	0.2 0.2	0.5 0.7	0.6 0.3	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	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2	0.7
29-Apr	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 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 0.1	0.1 0.2	0.1 0.1	0.1	0.2
30-Apr	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.6 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 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1	0.6
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 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 0.4 0.4 0.5 0.5 0.5 0.4 0.7 0.9 0.6 0.6 0.3 0.4 0.3 0.3 0.3 0.4 0.7 0.3 0.3 0.7 0.7 0.6 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

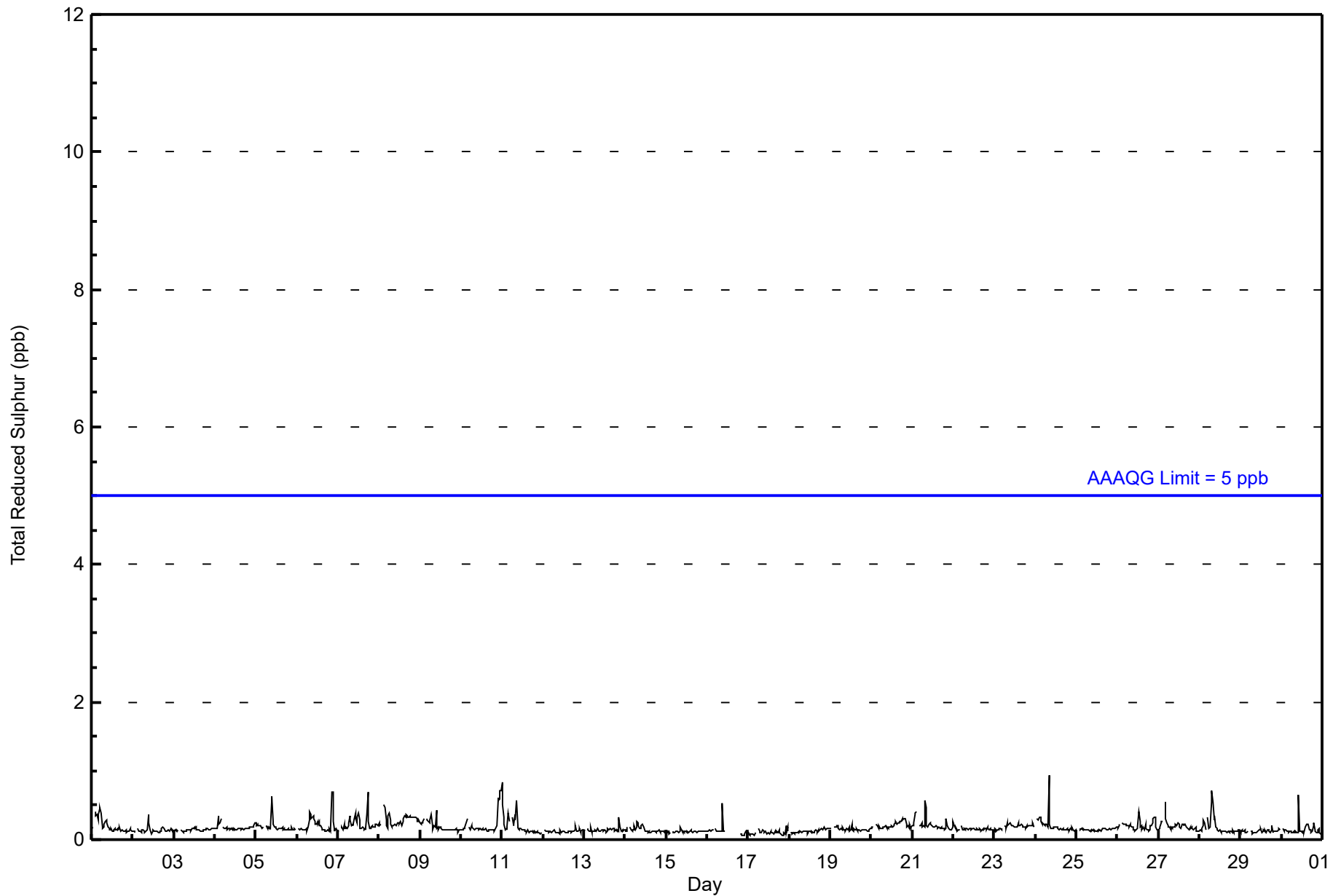
Anzac - April 2025

Maximum Value: 0.7 ppb on Apr 11 00:00																			Maximum Daily Average: 0.3 ppb on Apr 8										Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 17 21:00																			Minimum Daily Average: 0.1 ppb on Apr 17										Hours of Data: 682	
Maximum Diurnal Average: 0.2 ppb at hour 9																			Minimum Diurnal Average: 0.2 ppb at hour 14										Hours of Missing Data: 38	
Monthly Average: 0.17 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5										Hours of Calibration: 38	
																			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-Apr	0.2	Z	0.4	0.3	0.4	0.4	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4				
2-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	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	0.2	0.1	0.3				
3-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2				
4-Apr	0.2	0.2	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3				
5-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.6				
6-Apr	Z	0.2	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	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.1	0.1	0.2	0.5				
7-Apr	0.1	Z	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	0.1	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5				
8-Apr	0.2	0.2	Z	0.5	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5				
9-Apr	0.2	0.2	0.3	Z	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3				
10-Apr	0.1	0.1	0.2	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.7	0.2	0.7				
11-Apr	0.7	0.3	0.2	0.3	0.3	Z	0.3	0.3	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	0.1	0.1	0.2	0.7				
12-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2				
13-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2				
14-Apr	0.1	0.2	Z	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3				
15-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2				
16-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.1	C	C	C	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	--	0.3				
17-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2				
18-Apr	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	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2				
19-Apr	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2				
20-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3				
21-Apr	0.2	0.3	0.4	Z	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.4				
22-Apr	0.2	0.2	0.1	0.1	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	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2				
23-Apr	0.1	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2				
24-Apr	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.6				
25-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2				
26-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.1	0.2	0.3				
27-Apr	0.2	0.2	0.3	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.4				
28-Apr	0.1	0.1	0.2	0.2	Z	0.2	0.2	0.6	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	0.2	0.6				
29-Apr	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	0.1	0.1	0.1	0.2	0.1	0.1	0.2				
30-Apr	Z	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	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration																														
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																														



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Anzac - April 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
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	47	7	2	12	20	31	65	61	37	43	24	24	75	104	61	69	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	47	7	2	12	20	31	65	61	37	43	24	24	75	104	61	69	682

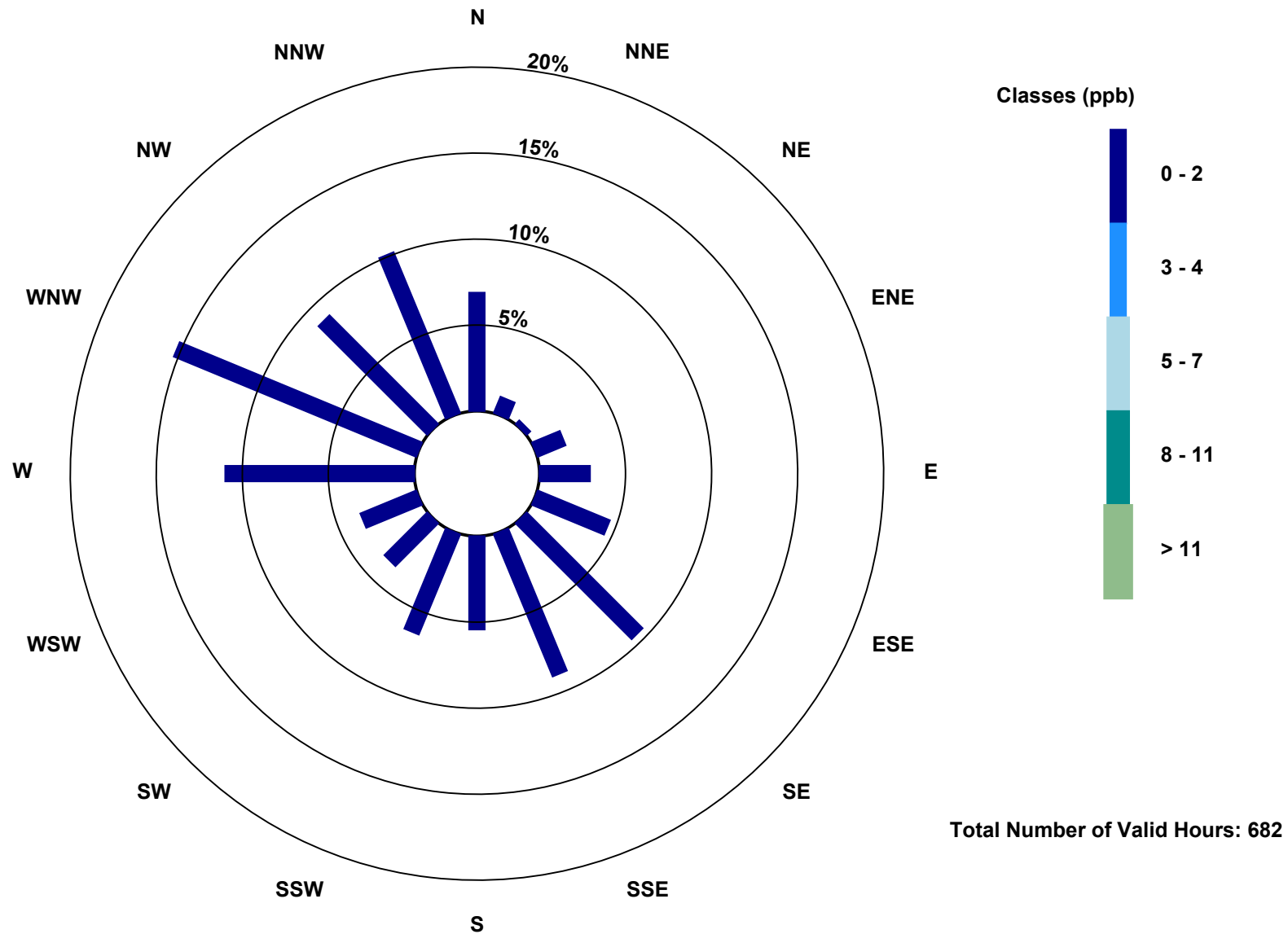
Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Anzac



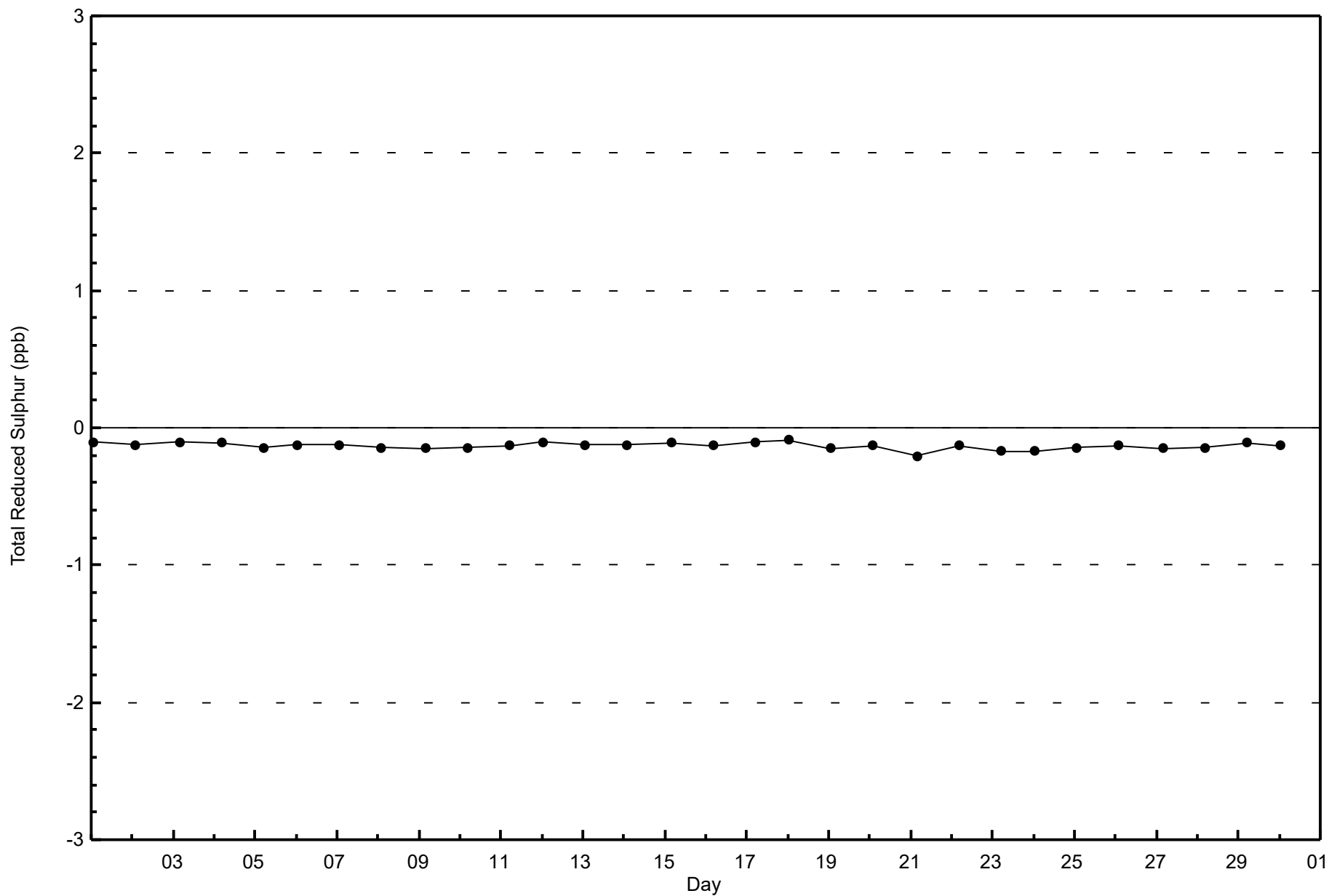


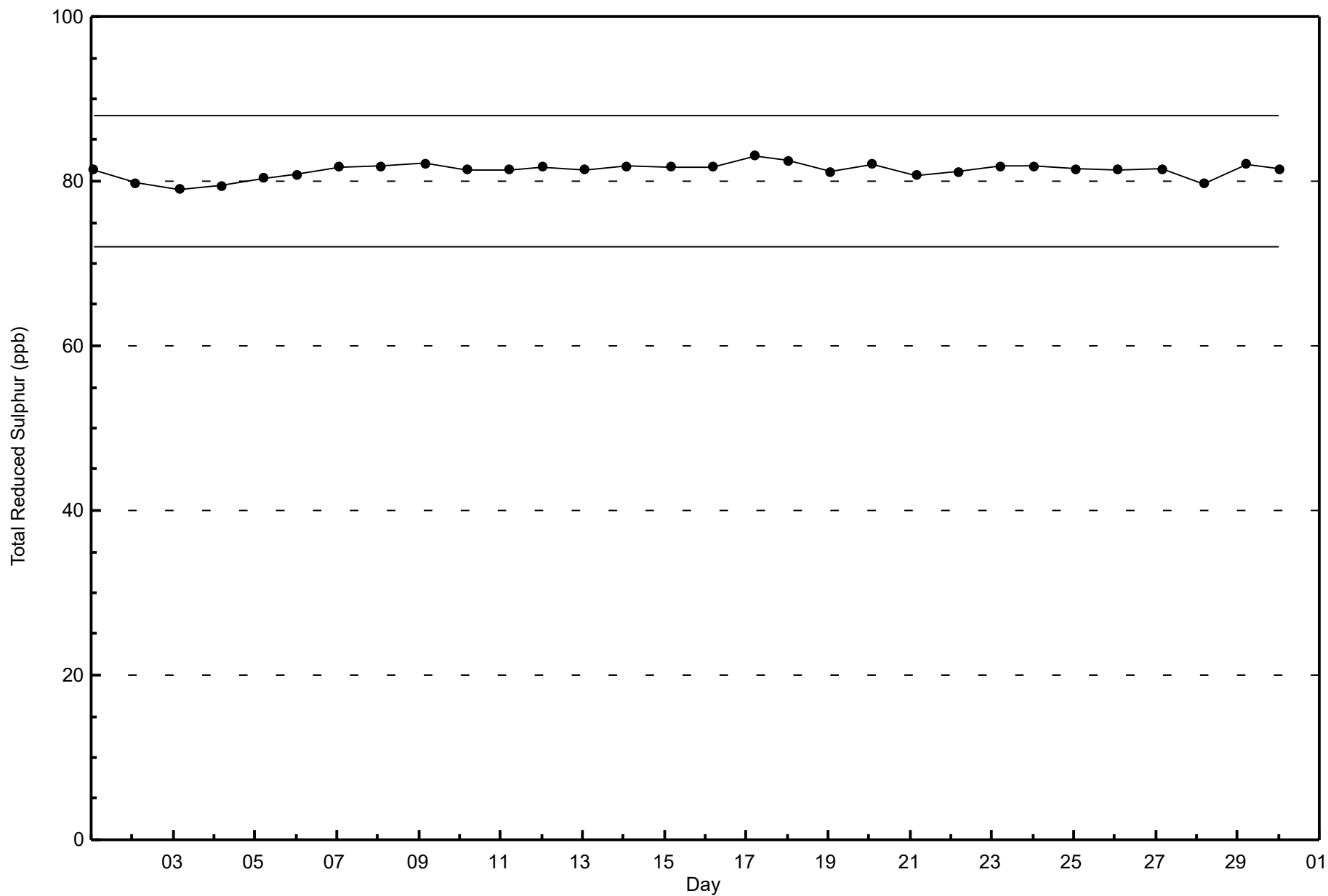
Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

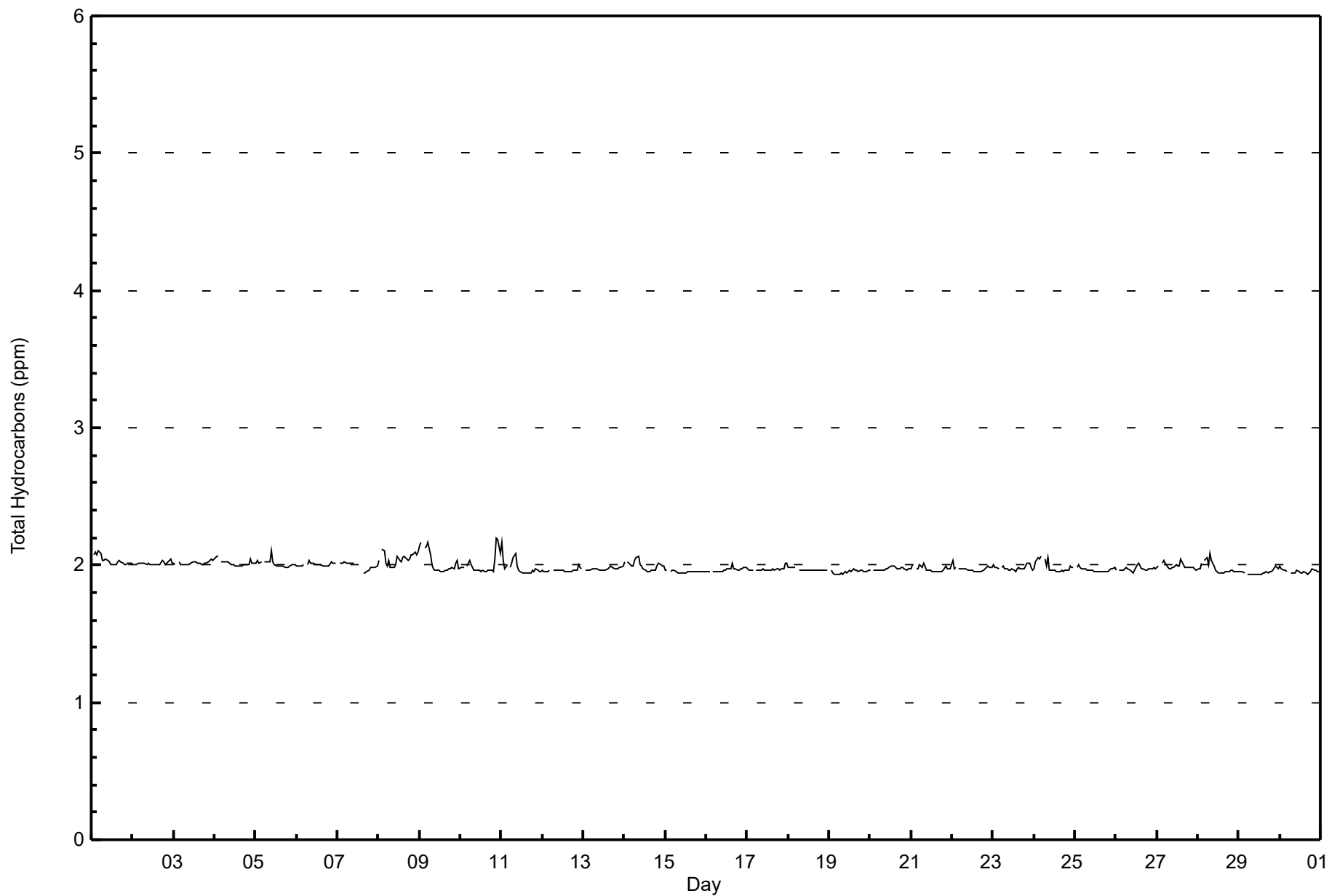
Anzac - April 2025

Maximum Value: 2.2 ppm on Apr 10 22:00										Maximum Daily Average: 2.0 ppm on Apr 8										Hours in Service: 720						
Minimum Value: 1.9 ppm on Apr 29 10:00										Minimum Daily Average: 1.9 ppm on Apr 29										Hours of Data: 685						
Maximum Diurnal Average: 2.0 ppm at hour 1										Minimum Diurnal Average: 2.0 ppm at hour 14										Hours of Missing Data: 35						
Monthly Average: 1.99 ppm										Percentiles: P ₁ = 1.9 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.1										Hours of Calibration: 35						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	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	2.0	2.0	2.0	2.0
2-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
3-Apr	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
4-Apr	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Apr	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
7-Apr	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
8-Apr	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
9-Apr	2.1	2.2	Z	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
10-Apr	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	2.2	2.2	2.1	2.0	2.2
11-Apr	2.2	2.0	2.0	2.0	Z	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.2
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
13-Apr	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
14-Apr	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
15-Apr	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-Apr	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
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
19-Apr	Z	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
21-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
24-Apr	2.0	2.0	2.1	2.0	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
25-Apr	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
26-Apr	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
28-Apr	2.0	2.0	2.0	Z	2.0	2.1	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
29-Apr	2.0	1.9	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
30-Apr	2.0	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Anzac - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	647	94.45	94.45
2.1 - 3.0	38	5.55	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
Anzac - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	46	7	2	12	20	28	52	53	34	40	25	22	73	102	56	75	647
2.1 - 3.0	1	0	0	0	0	3	13	4	3	3	0	3	3	2	1	2	38
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	47	7	2	12	20	31	65	57	37	43	25	25	76	104	57	77	685

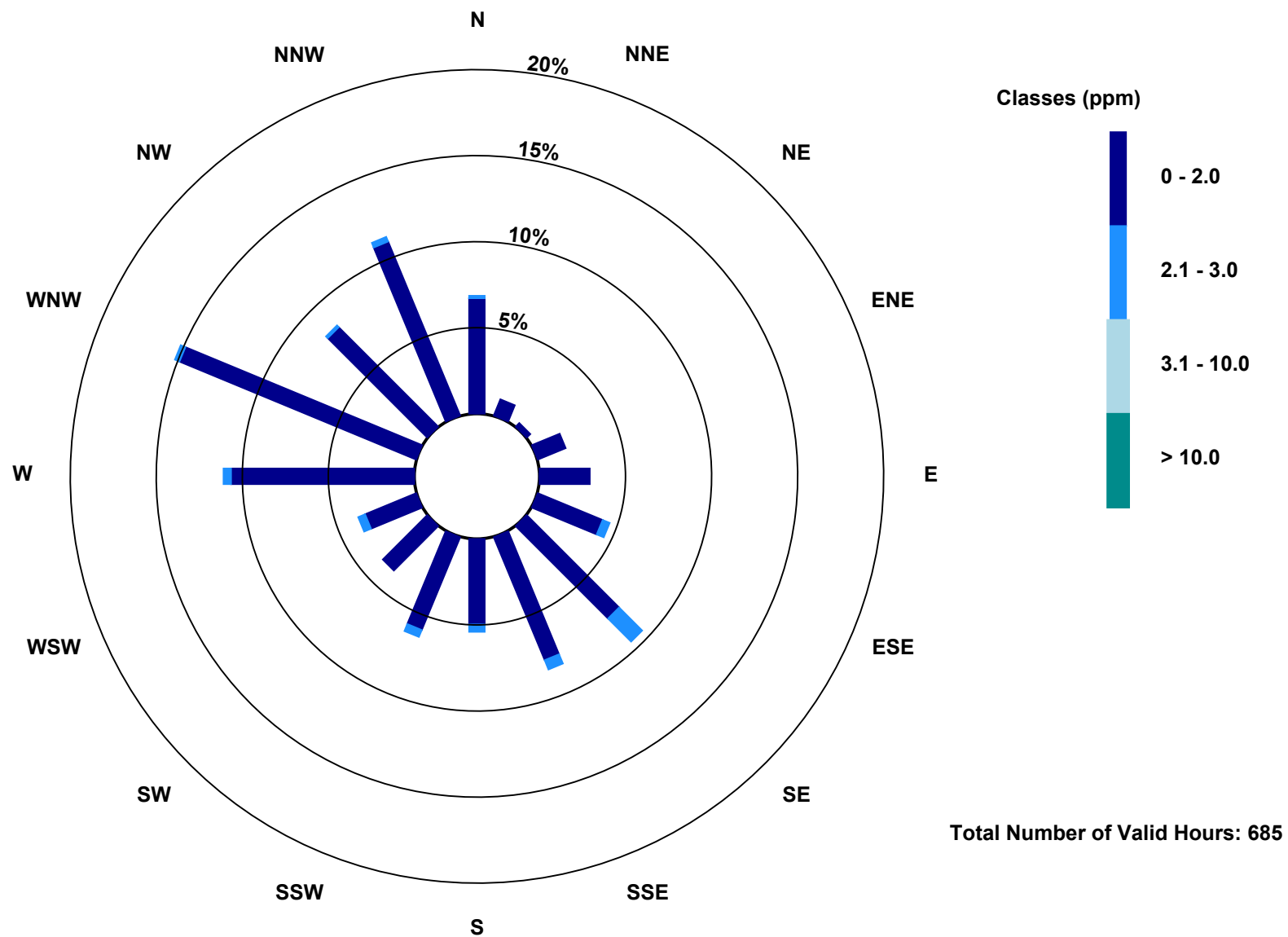
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Anzac



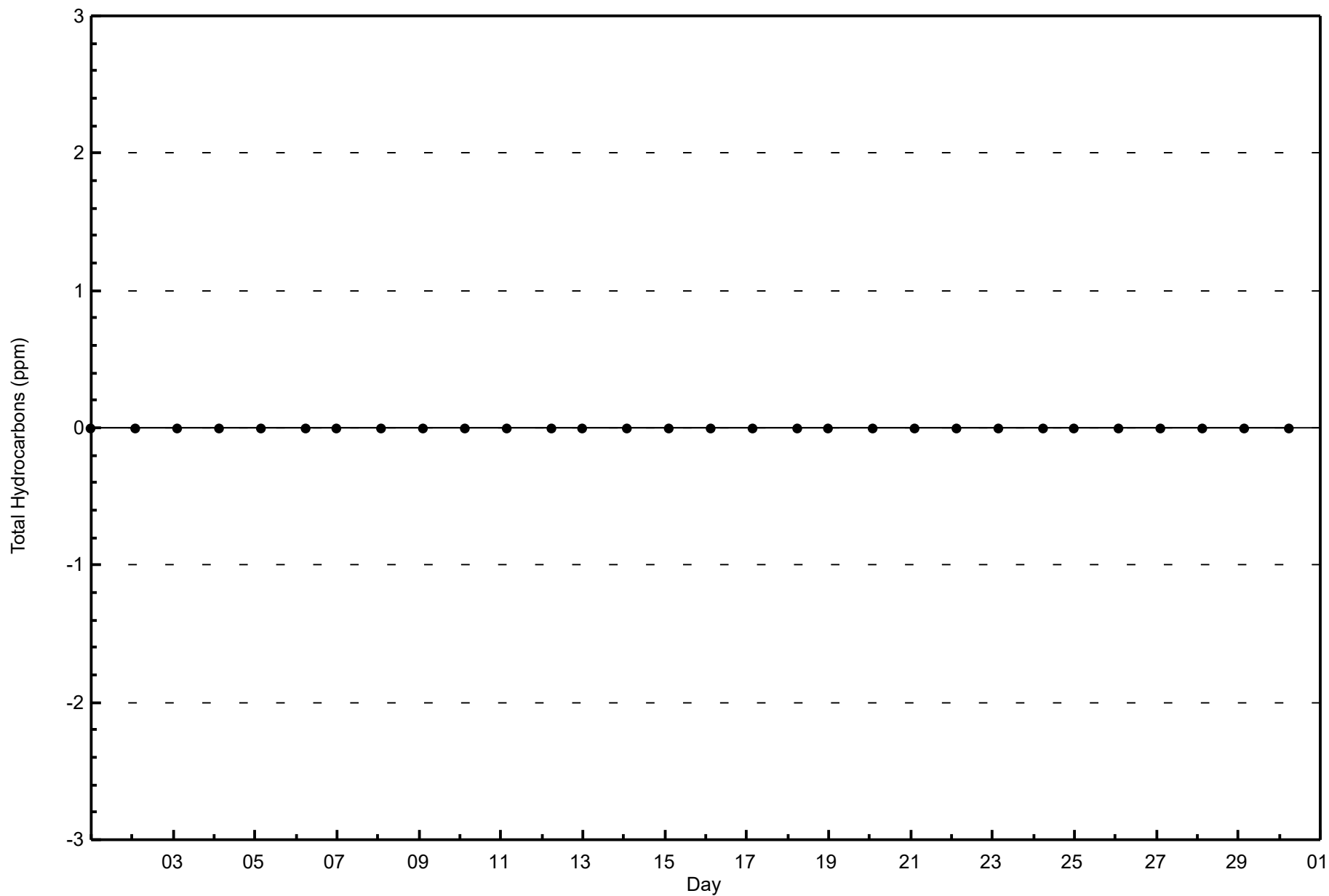


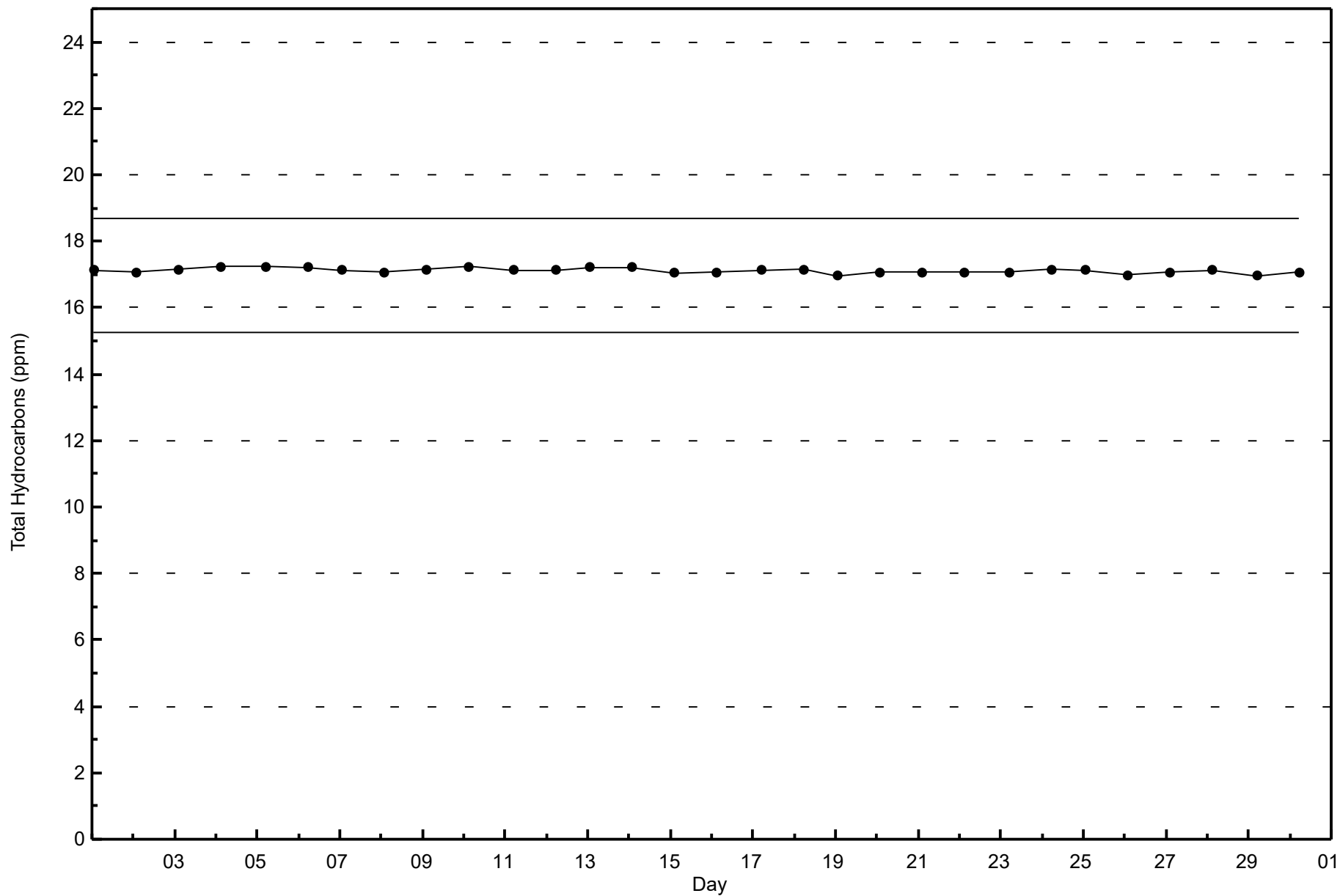
Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Anzac - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

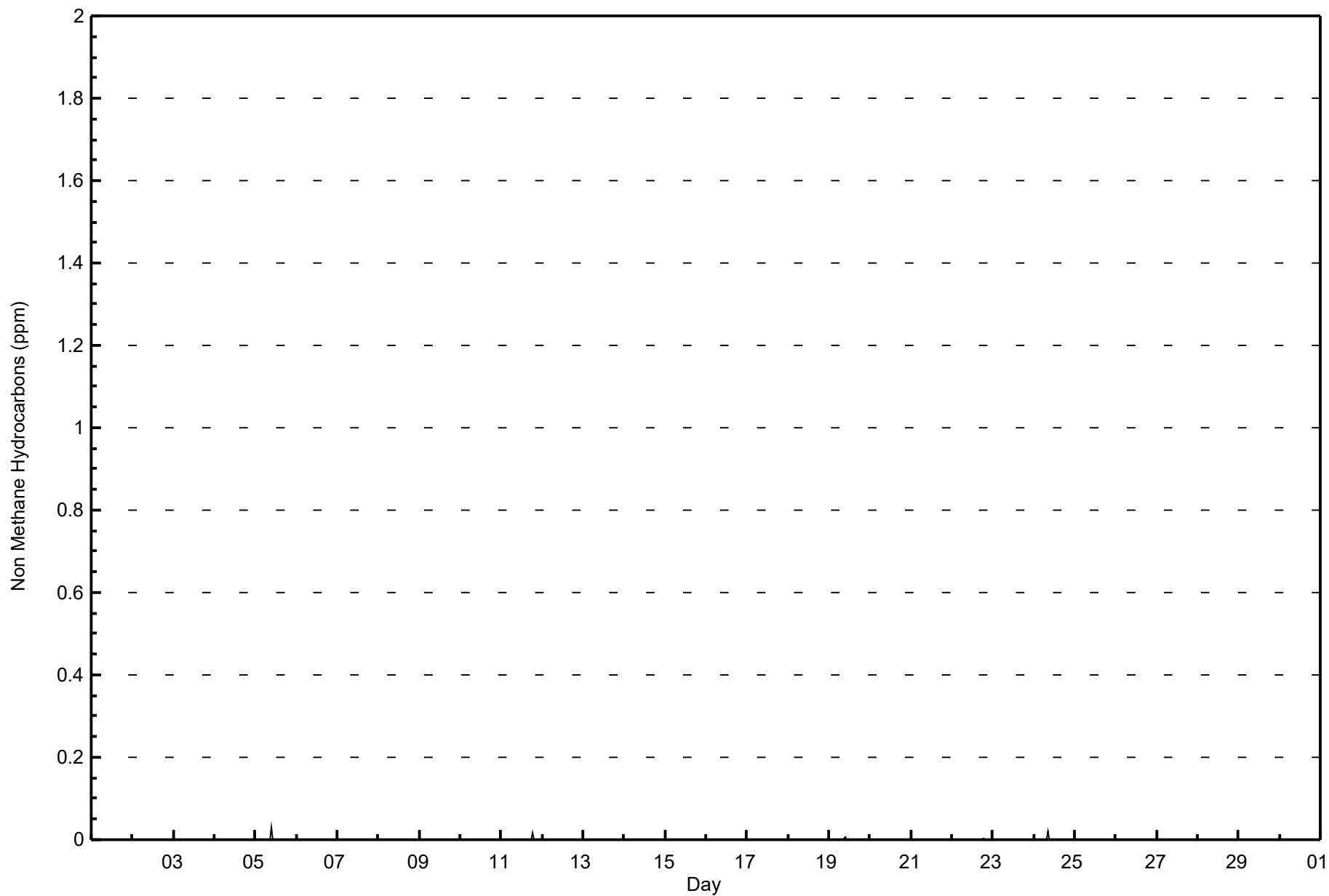
Anzac - April 2025

Maximum Value: 0.029 ppm on Apr 5 10:00																				Maximum Daily Average: 0.001 ppm on Apr 5						Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																				Minimum Daily Average: 0.000 ppm on Apr 1						Hours of Data: 685	
Maximum Diurnal Average: 0.001 ppm at hour 10																				Minimum Diurnal Average: 0.000 ppm at hour 1						Hours of Missing Data: 35	
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 of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
5-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.029	
6-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
7-Apr	Z	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	0.000	
8-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10-Apr	0.000	0.000	0.000	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	
11-Apr	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	0.017	0.000	0.000	0.000	0.000	0.000	0.001	0.017	
12-Apr	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	
13-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
17-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
18-Apr	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	
19-Apr	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	
20-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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	
22-Apr	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	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003	
23-Apr	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	
24-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.021	
25-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
28-Apr	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	
29-Apr	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	
30-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000 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 0.001 0.000 0.000 0.000 0.000 0.000																										Diurnal Average	
0.000 0.000 0.000 0.000 0.001 0.000 0.000 0.000 0.000 0.021 0.029 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.017 0.000 0.000 0.000 0.000 0.000																										Diurnal Maximum	
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Anzac - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	681	99.42	99.42
0.006 - 0.05	4	0.58	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
Anzac - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	47	7	2	12	20	30	64	57	37	43	25	25	74	104	57	77	681
0.006 - 0.05	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	4
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	47	7	2	12	20	31	65	57	37	43	25	25	76	104	57	77	685

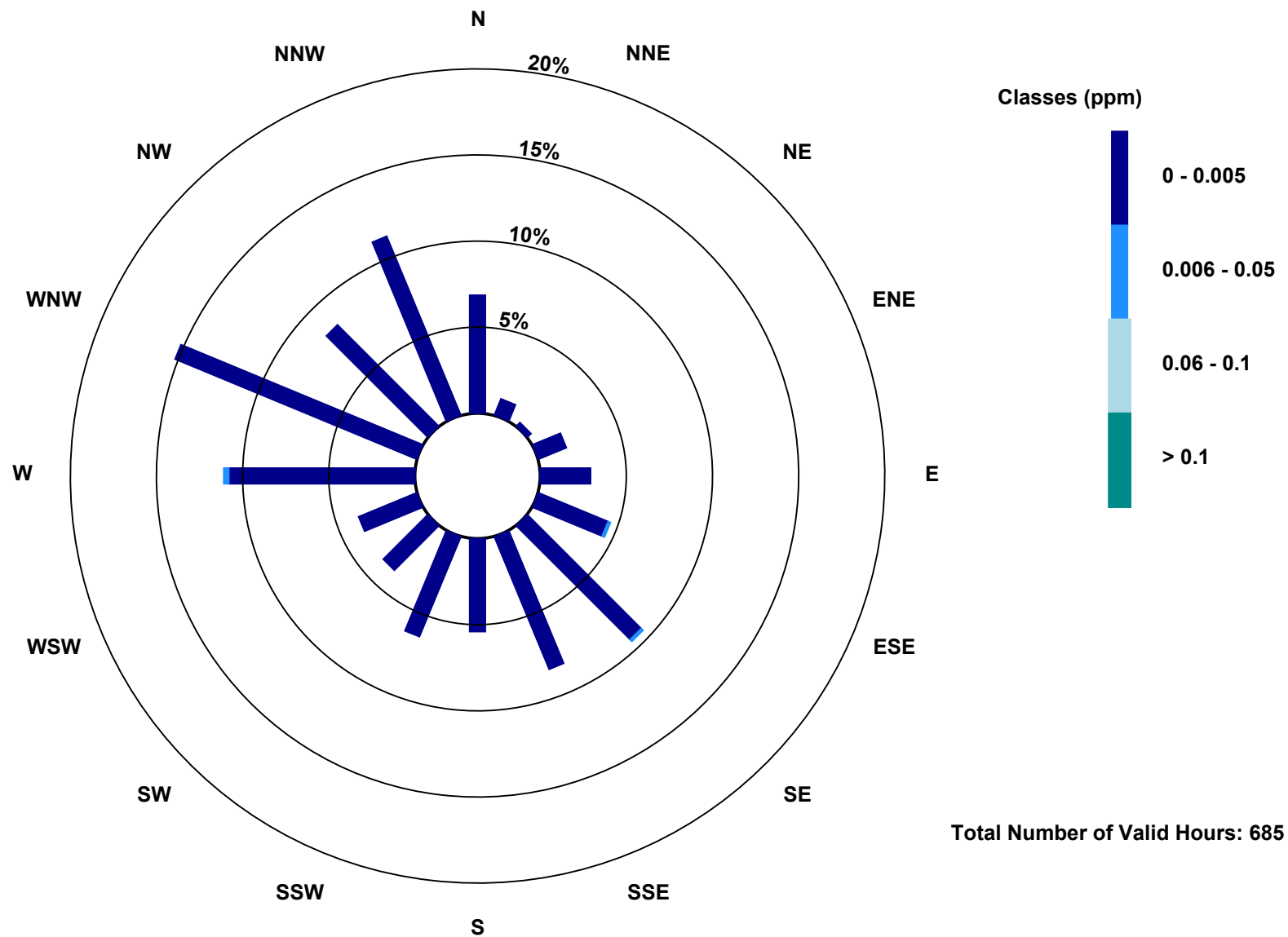
Total Number of Valid Hours: 685

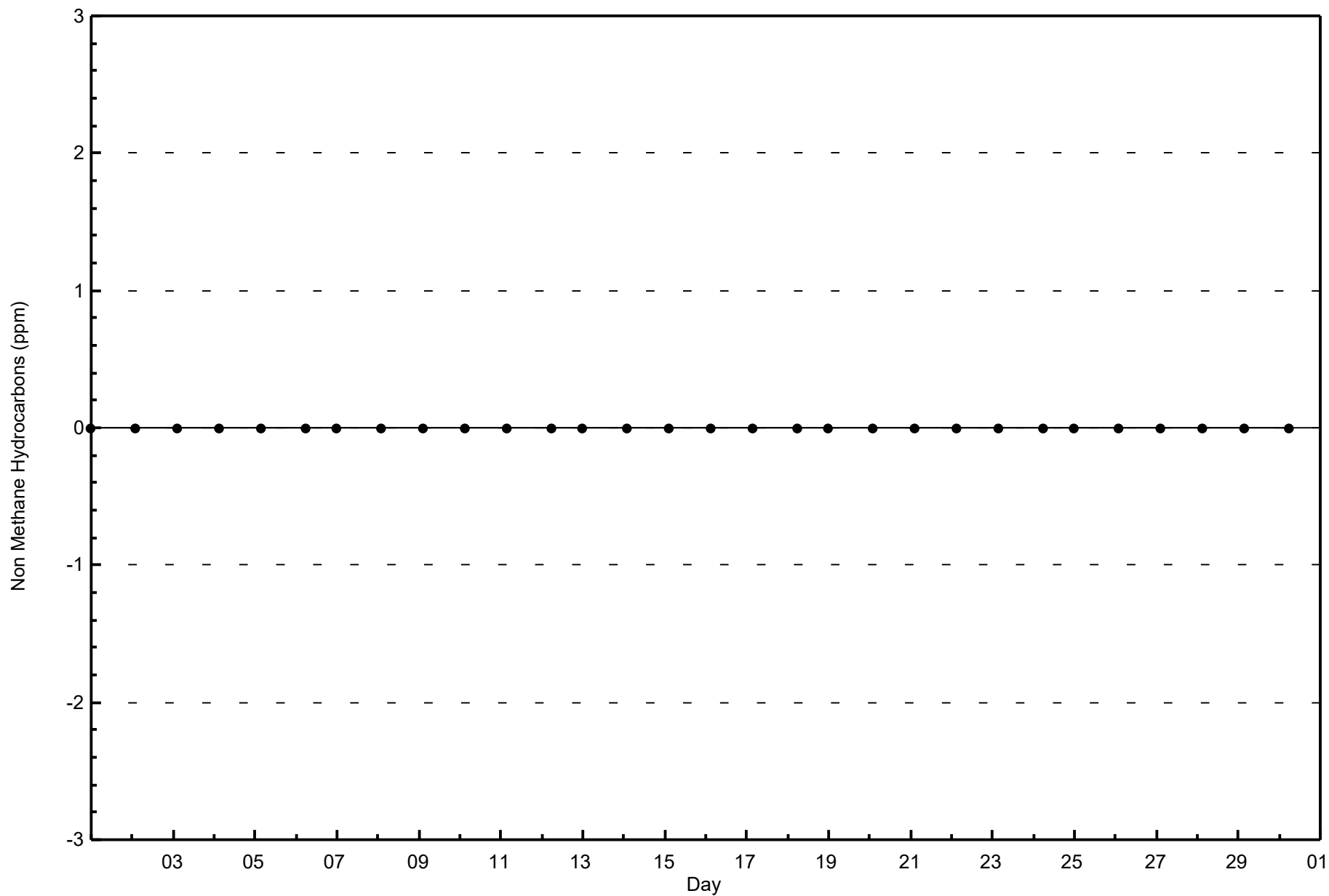
Total Number of Hours: 720

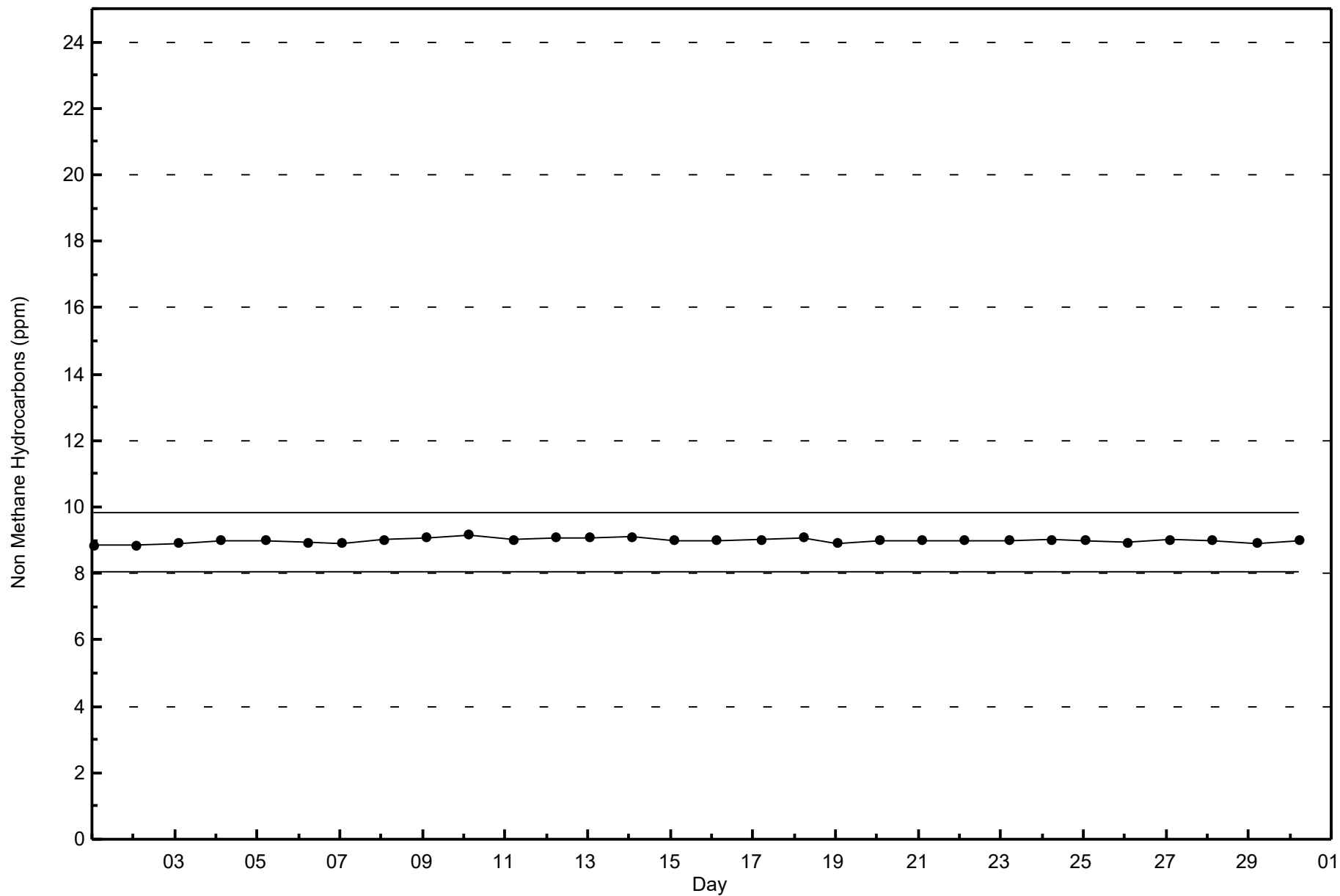


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Anzac





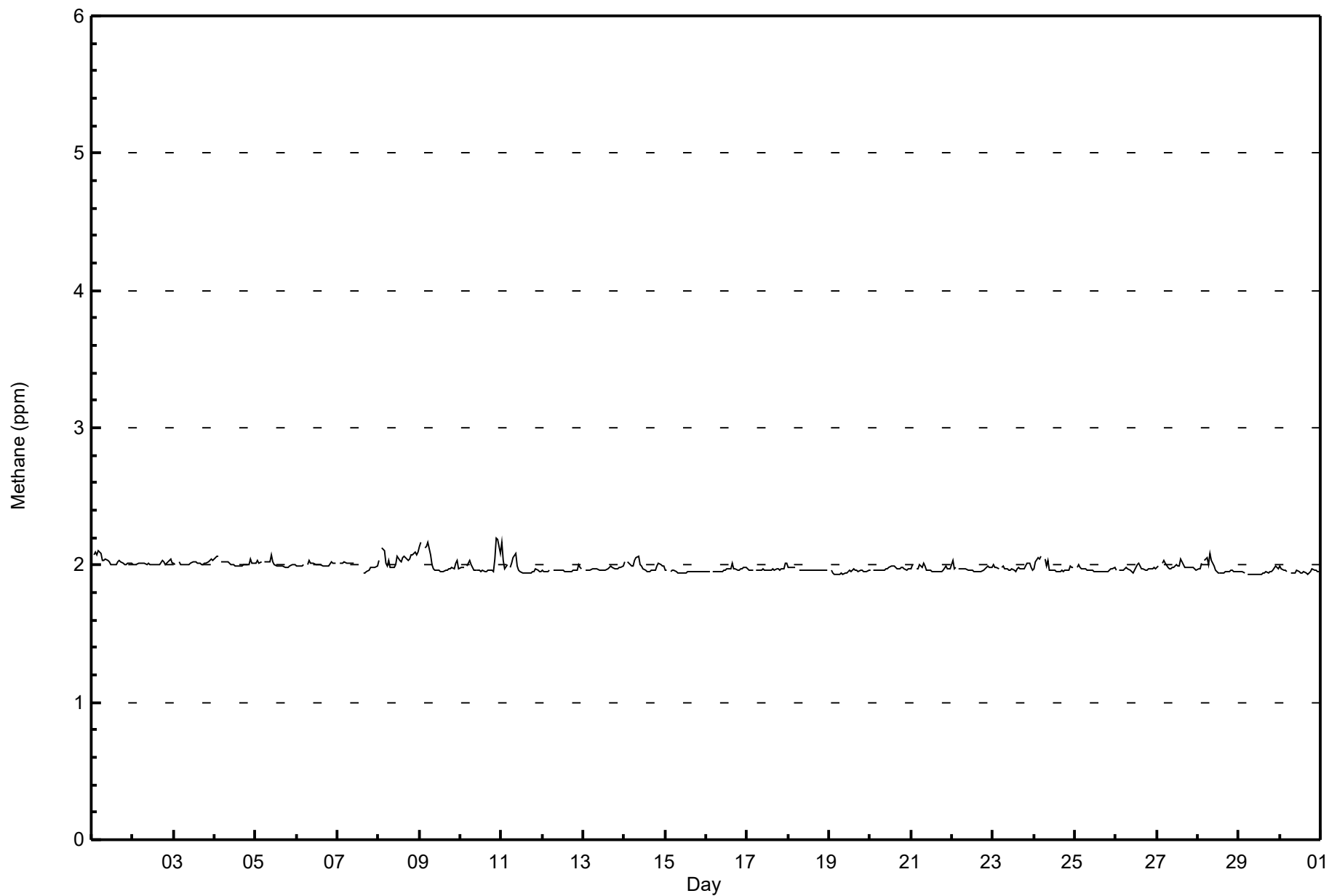


[illegible]



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Anzac - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	648	94.60	94.60
2.1 - 3.0	37	5.40	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 (CH₄) - ppm
Anzac - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	46	7	2	12	20	28	53	53	34	40	25	22	73	102	56	75	648
2.1 - 3.0	1	0	0	0	0	3	12	4	3	3	0	3	3	2	1	2	37
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	47	7	2	12	20	31	65	57	37	43	25	25	76	104	57	77	685

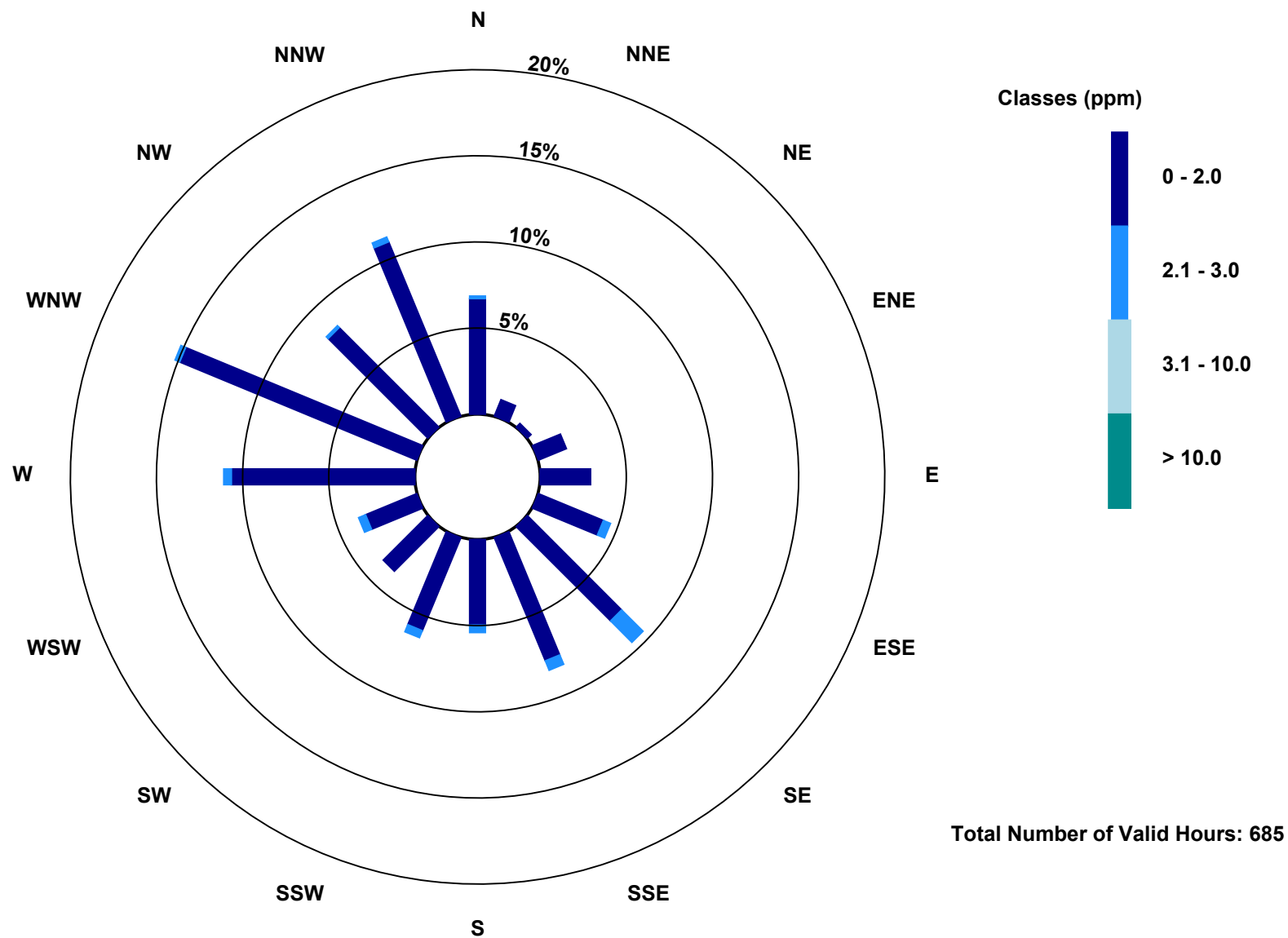
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

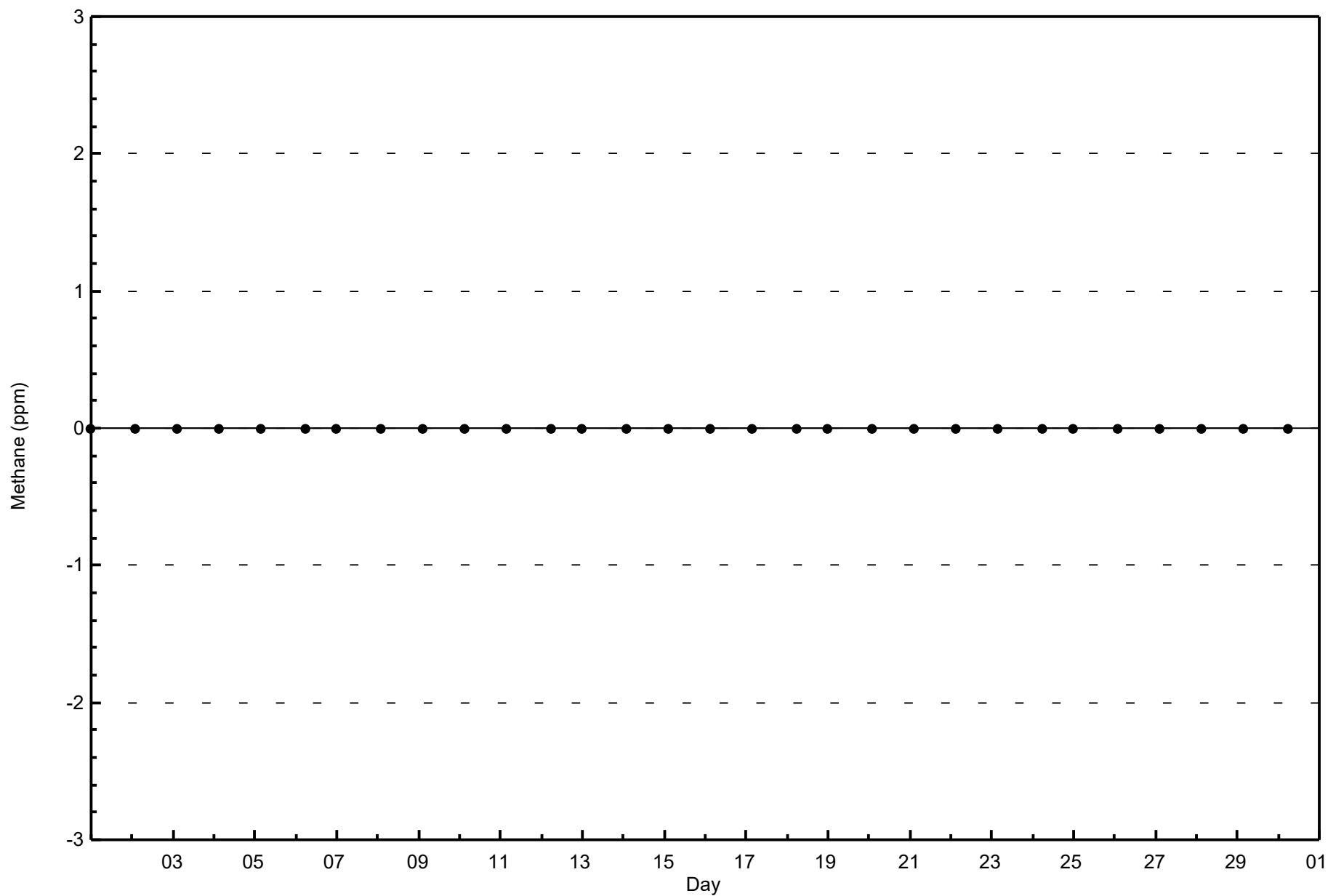
Methane (CH₄) - ppm
Anzac





Wood Buffalo Environmental Association
Zero Responses

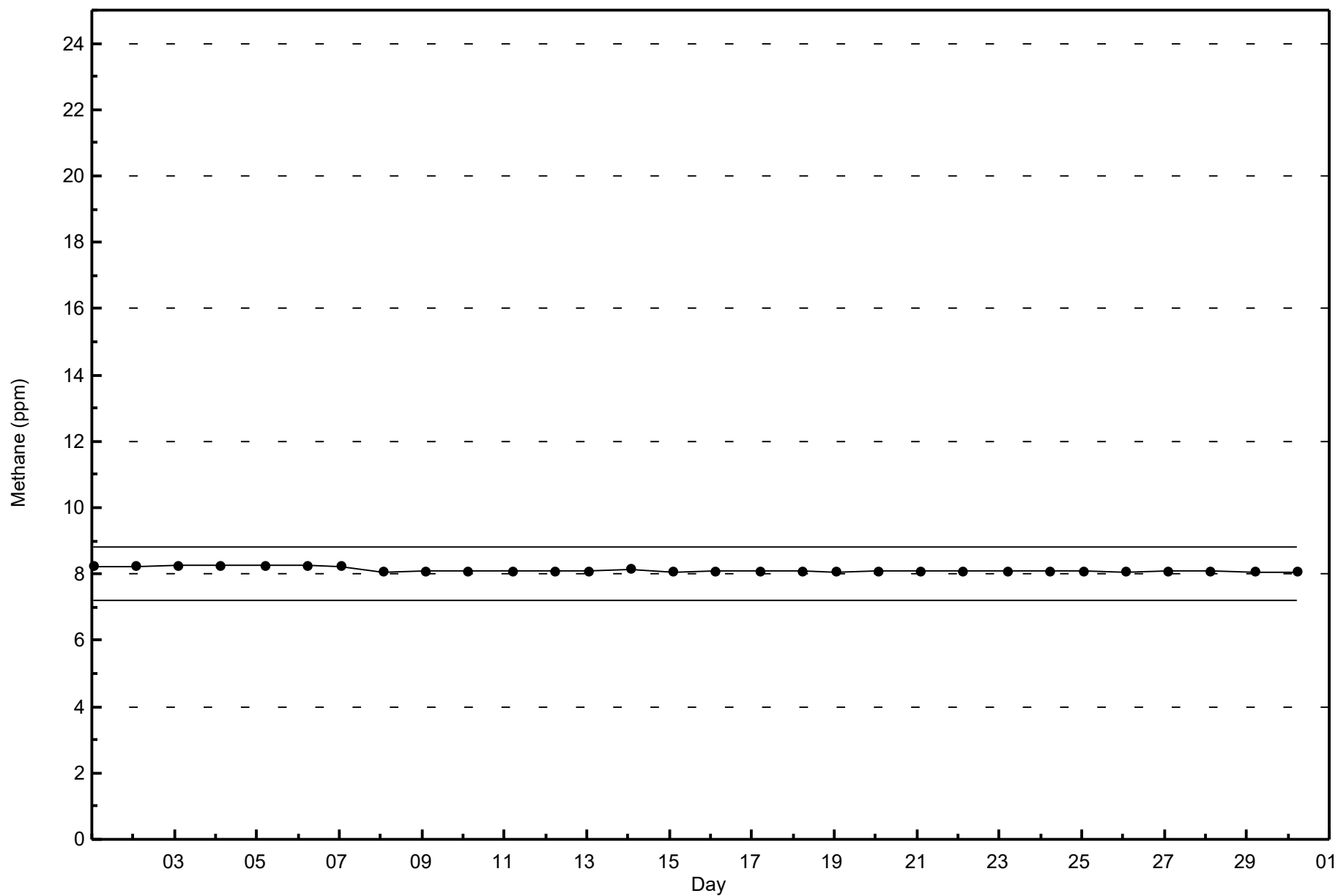
Methane (CH₄) - ppm
Anzac - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Anzac - April 2025

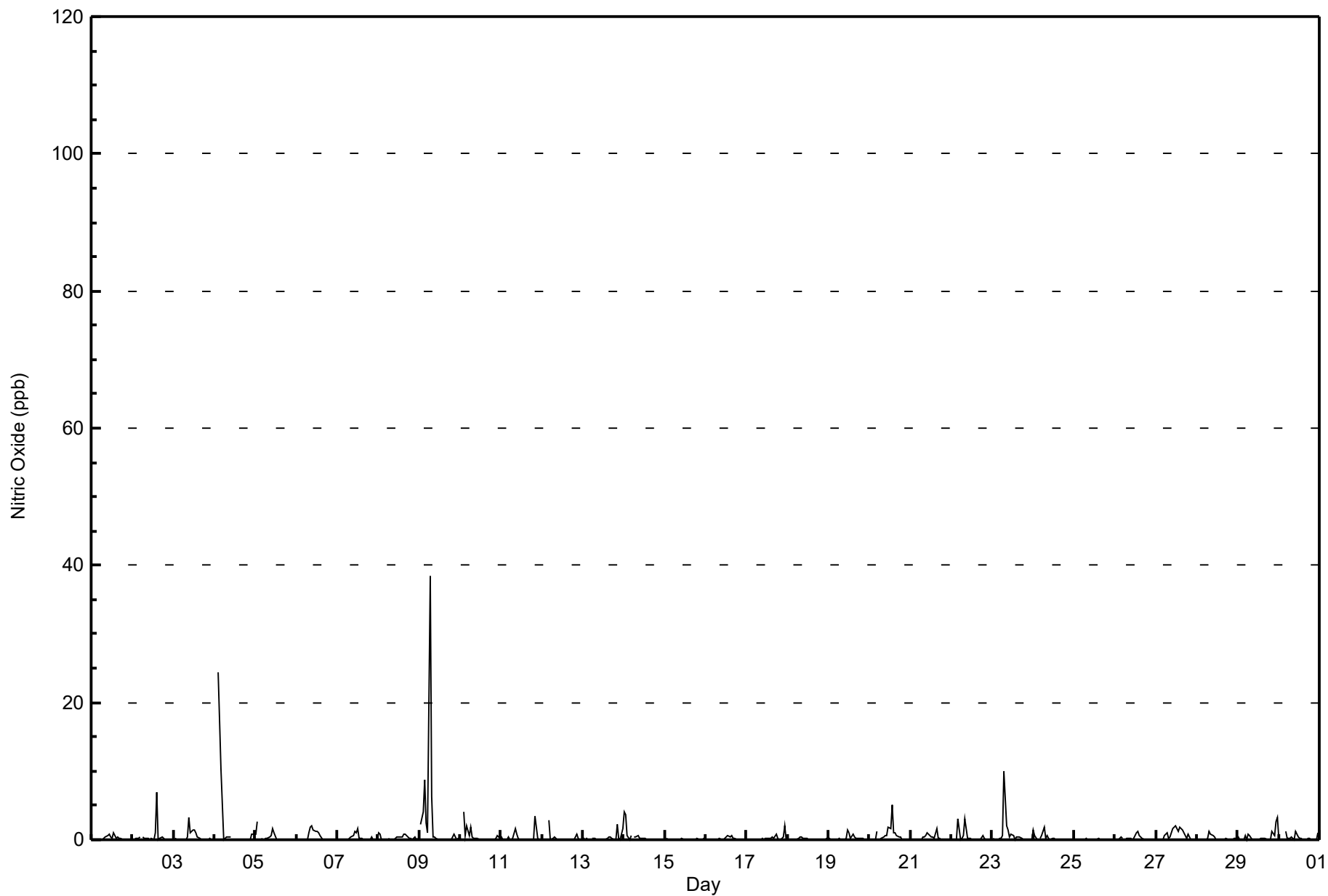


Maximum Value: 38.4 ppb on Apr 9 07:00																			Maximum Daily Average: 3.1 ppb on Apr 4										Hours in Service: 720			
Minimum Value: 0.0 ppb on Apr 3 20:00																			Minimum Daily Average: 0.0 ppb on Apr 25										Hours of Data: 685			
Maximum Diurnal Average: 1.6 ppb at hour 7																			Minimum Diurnal Average: 0.1 ppb at hour 20										Hours of Missing Data: 35			
Monthly Average: 0.49 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.0 P ₉₉ = 6.4										Hours of Calibration: 35			
																													Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.7	0.8	0.5	0.2	1.1	0.1	0.3	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.2	1.1						
2-Apr	0.0	0.1	0.2	0.3	0.4	Z	0.4	0.2	0.3	0.2	0.1	0.1	0.0	1.0	6.8	0.1	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.5	6.8						
3-Apr	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	3.3	1.1	1.4	1.4	0.9	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	3.3						
4-Apr	0.0	Z	24.4	17.5	10.3	0.1	0.2	0.4	0.5	0.3	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	3.1	24.4						
5-Apr	0.8	2.7	Z	0.1	0.0	0.0	0.3	0.2	0.3	0.5	1.6	0.9	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.7						
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.0	1.8	2.0	1.4	1.3	1.3	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.0						
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.6	1.3	0.9	1.6	0.1	0.3	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.3	1.6						
8-Apr	1.0	0.8	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.2	0.4	0.4	0.4	0.5	0.9	0.8	0.5	0.2	0.1	0.0	0.3	0.0	0.1	0.3	1.0						
9-Apr	Z	2.3	4.1	8.7	2.4	1.1	38.4	6.3	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.4	0.0	0.1	2.9	38.4						
10-Apr	0.2	Z	4.2	0.6	2.0	0.6	1.8	0.4	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.7	0.1	0.5	4.2						
11-Apr	0.4	0.0	Z	0.0	0.4	0.0	0.1	0.2	1.6	0.7	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	3.4	0.2	0.1	0.0	0.3	3.4						
12-Apr	0.0	0.0	0.0	Z	2.8	0.1	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.8	0.2	0.1	0.0	0.2	2.8						
13-Apr	0.1	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.3	0.0	0.0	2.2	0.1	0.0	1.6	0.3	2.2						
14-Apr	4.0	3.6	0.7	0.1	0.5	Z	0.3	0.3	0.5	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.0						
15-Apr	Z	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.2						
16-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.5	0.5	0.4	0.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6						
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.8	0.1	0.0	0.0	0.4	2.0	0.0	0.2	2.0						
18-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.4						
19-Apr	0.3	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.1	0.2	1.4	0.9	0.2	0.8	0.4	0.1	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.2	1.4						
20-Apr	0.0	0.0	0.0	0.0	1.2	Z	0.0	0.1	0.4	0.5	0.7	1.9	1.6	5.1	1.0	1.0	0.7	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.7	5.1						
21-Apr	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.5	0.5	0.6	1.0	0.6	0.3	0.3	0.1	1.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7						
22-Apr	0.0	Z	0.0	0.0	3.1	0.0	0.2	0.7	3.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.4	3.1						
23-Apr	0.0	0.1	Z	0.1	0.2	0.1	0.7	10.0	2.1	1.5	0.3	0.8	0.5	0.1	0.3	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.8	10.0						
24-Apr	1.4	0.6	0.1	Z	0.1	0.6	1.9	0.2	0.6	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	0.3	1.9						
25-Apr	0.0	0.1	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1						
26-Apr	0.0	0.0	0.0	0.4	0.3	Z	0.0	0.1	0.1	0.1	0.1	0.2	0.9	1.3	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.3						
27-Apr	Z	0.1	0.0	0.0	0.1	0.6	1.1	0.2	0.4	1.0	1.6	2.0	1.7	1.3	1.8	1.5	1.0	0.6	0.3	0.8	0.0	0.0	0.1	0.0	0.7	2.0						
28-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.2	1.1	0.7	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2	1.1						
29-Apr	0.3	0.0	Z	0.1	0.6	0.1	0.8	0.6	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.0	1.3	0.5	2.6	3.2	0.5	3.2						
30-Apr	0.2	0.0	0.0	Z	1.3	0.1	0.2	0.4	0.2	0.1	1.3	0.4	0.2	0.2	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	1.0	0.3	1.3						
																									Diurnal Average							
																									Diurnal Maximum							
Z - zerospan C - Calibration																																



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	99.71	99.71
21 - 40	2	0.29	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	46	7	2	12	20	32	64	62	33	44	25	27	72	100	61	76	683
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	1	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	46	7	2	12	20	32	64	62	33	44	25	28	73	100	61	76	685

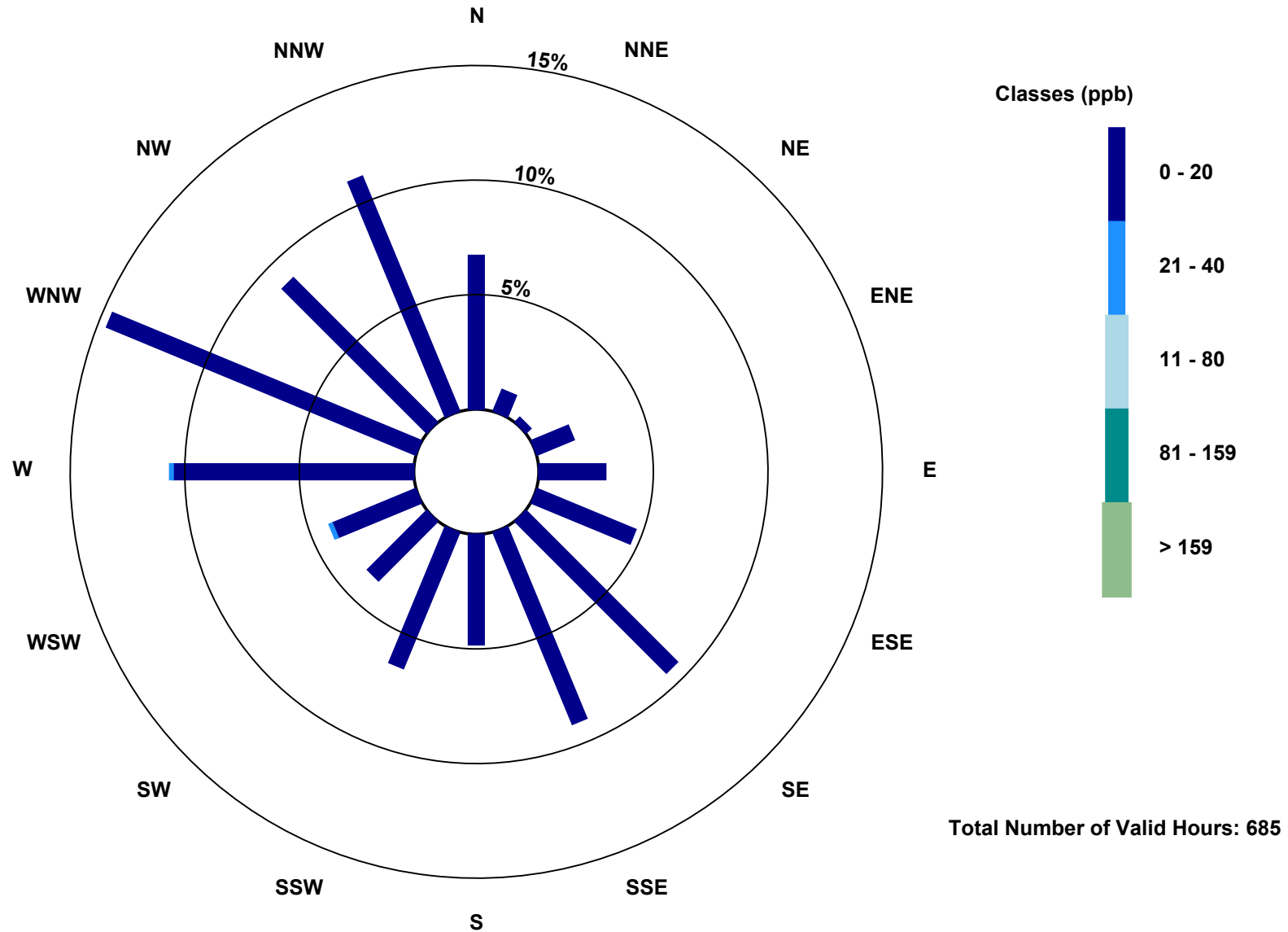
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

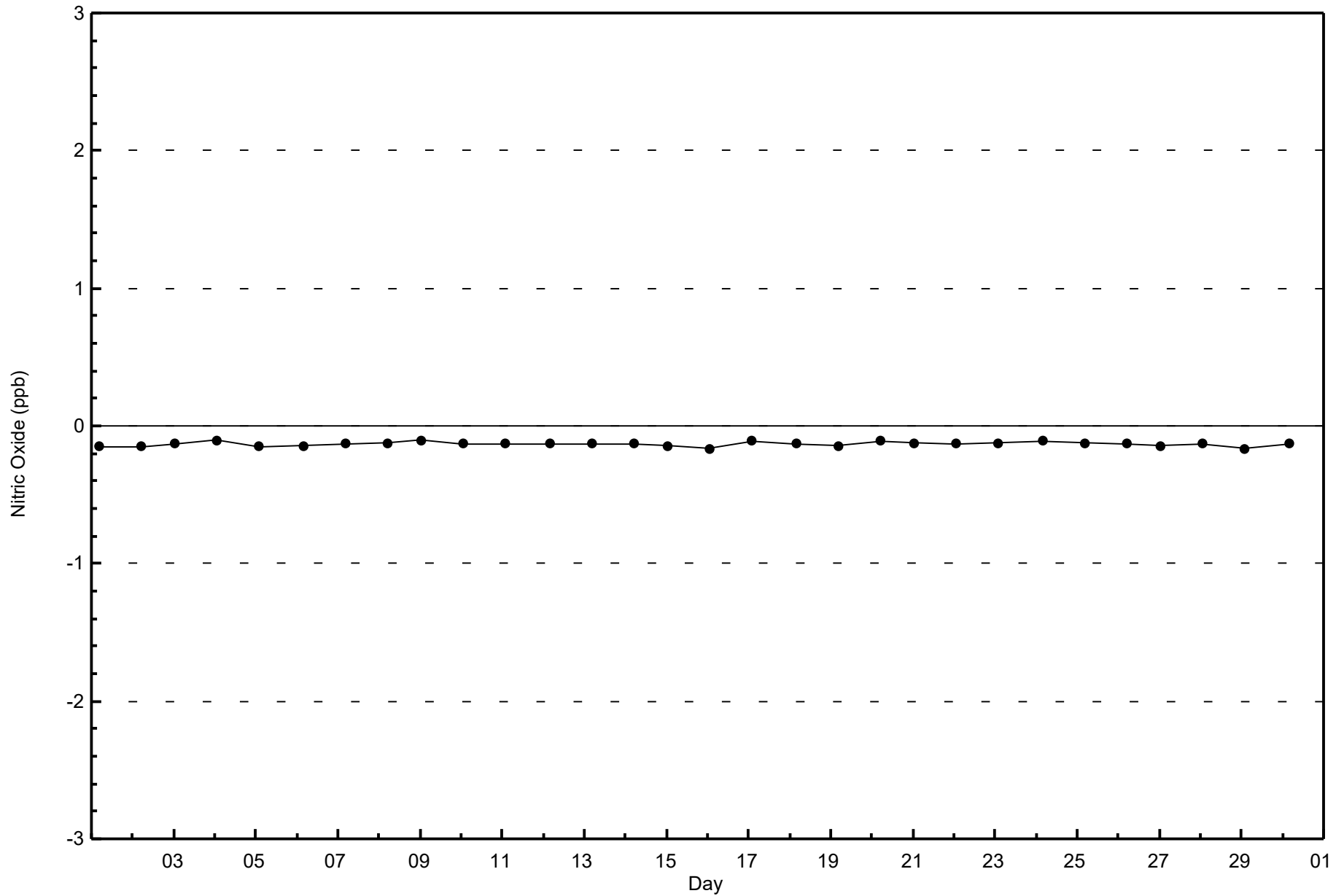
Nitric Oxide (NO) - ppb
Anzac

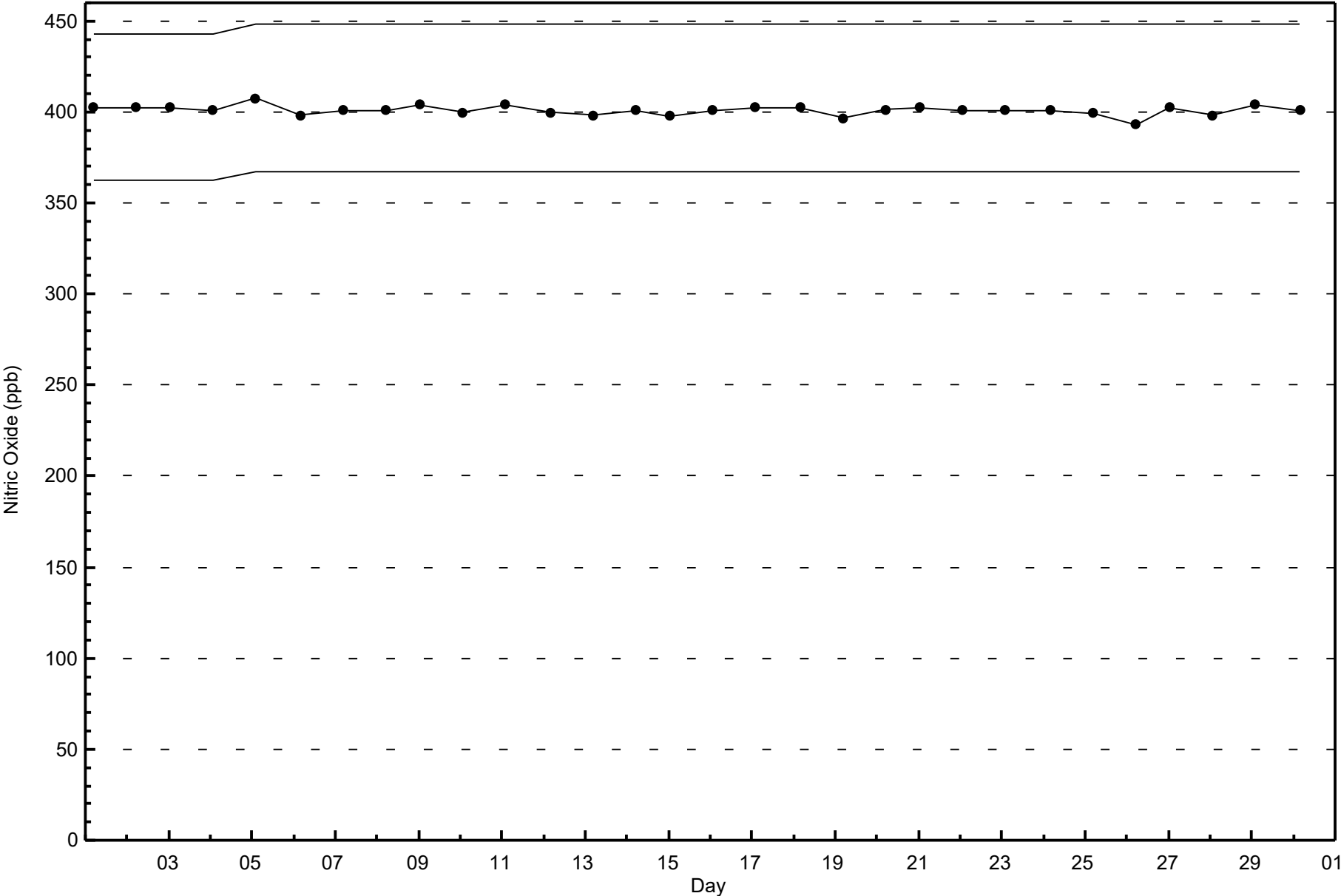




Wood Buffalo Environmental Association
Zero Responses

Nitric Oxide (NO) - ppb
Anzac - April 2025



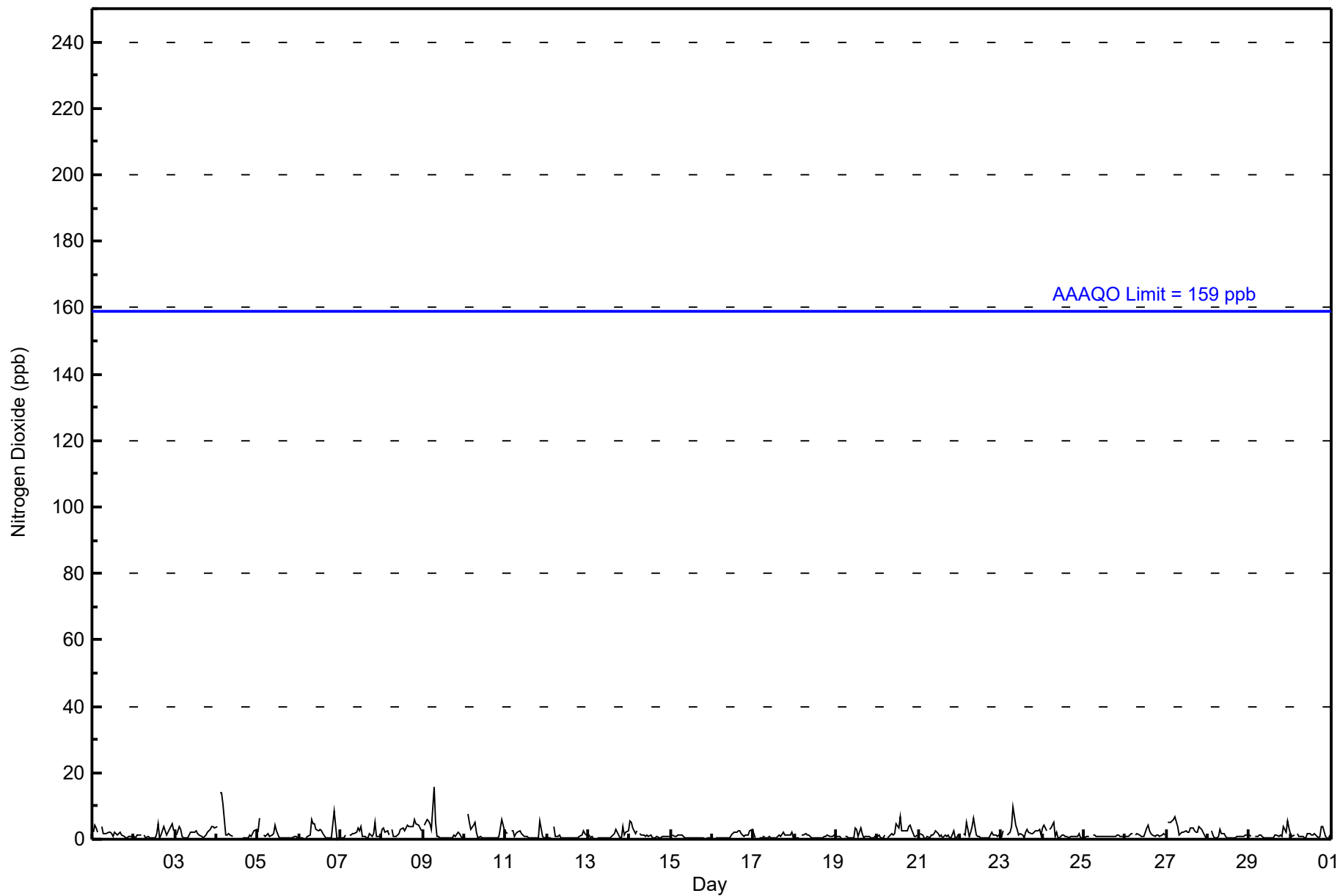


Number of Exceedences (AAAQO): Maximum Value: 15.8 ppb on Apr 9 07:00										1-hr: 0 24-hr: 0 Maximum Daily Average: 3.3 ppb on Apr 4										Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0									
Minimum Value: 0.2 ppb on Apr 6 23:00 Maximum Diurnal Average: 2.5 ppb at hour 3 Monthly Average: 1.59 ppb										Minimum Daily Average: 0.6 ppb on Apr 15 Minimum Diurnal Average: 1.1 ppb at hour 17 Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 2.0 P ₉₀ = 3.7 P ₉₉ = 6.8																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Apr	2.1	4.1	3.6	2.2	Z	4.0	1.6	1.9	1.9	2.1	2.2	1.8	1.0	2.2	1.3	1.6	2.0	1.2	0.7	0.5	0.5	0.8	0.7	0.8	1.8	4.1			
2-Apr	0.7	0.6	1.1	1.3	1.3	Z	1.2	0.5	0.7	0.6	0.4	0.5	0.5	1.7	4.8	0.5	1.2	3.8	2.7	1.3	2.1	3.9	4.5	2.4	1.7	4.8			
3-Apr	Z	1.3	3.9	2.8	0.8	0.6	0.6	0.6	1.2	2.0	2.0	2.3	2.5	1.9	1.2	0.7	0.6	0.7	1.2	2.3	2.9	3.9	4.0	3.4	1.9	4.0			
4-Apr	3.9	Z	13.9	13.8	10.4	1.3	1.3	1.8	1.4	1.0	C	C	C	C	C	0.3	0.4	0.3	0.3	1.1	1.0	1.7	2.6	2.8	3.3	13.9			
5-Apr	2.5	6.2	Z	1.3	0.9	1.1	1.7	0.9	1.3	1.9	4.1	2.7	0.6	0.5	0.6	0.6	0.6	0.5	0.4	0.6	0.6	0.7	0.8	0.5	1.4	6.2			
6-Apr	0.4	0.3	0.3	Z	0.6	0.9	1.3	5.8	4.7	4.5	3.1	2.7	2.8	2.6	1.5	0.4	0.3	0.4	0.4	0.4	8.6	4.4	0.2	0.3	2.0	8.6			
7-Apr	0.3	0.4	0.6	1.1	Z	1.4	1.4	1.9	1.5	2.0	3.5	2.7	3.9	0.9	0.8	0.5	0.5	1.7	0.7	1.9	5.0	0.8	0.9	0.7	1.5	5.0			
8-Apr	3.1	3.4	2.3	2.4	1.1	Z	3.0	0.9	0.9	1.1	1.9	3.1	3.3	2.4	3.3	4.2	3.9	3.7	3.9	6.0	4.8	4.4	3.5	2.6	3.0	6.0			
9-Apr	Z	4.1	5.9	5.7	4.5	3.1	15.8	5.1	1.0	1.0	0.6	0.5	0.4	0.3	0.3	0.4	0.3	0.3	1.2	0.9	2.0	1.6	1.0	0.6	2.5	15.8			
10-Apr	0.9	Z	7.6	5.0	3.0	4.1	5.1	2.1	0.6	0.7	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.5	0.8	3.5	5.8	2.7	2.0	7.6			
11-Apr	2.1	1.6	Z	2.5	2.6	0.9	1.5	2.1	2.7	1.8	1.1	0.8	0.7	0.5	0.5	0.3	0.4	0.4	0.5	0.5	5.3	0.8	0.4	0.5	1.3	5.3			
12-Apr	0.7	0.4	0.4	Z	3.9	0.7	1.0	1.1	0.6	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.5	0.9	1.2	2.5	1.5	1.4	0.9	3.9			
13-Apr	1.2	0.6	0.7	0.5	Z	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.5	0.6	1.2	1.9	2.8	2.2	0.6	0.4	4.0	1.4	2.2	2.7	1.1	4.0			
14-Apr	5.6	5.0	3.5	1.8	2.6	Z	1.5	1.3	1.3	0.7	1.1	0.9	1.1	0.4	0.5	0.5	0.7	0.6	0.6	0.8	0.8	0.7	1.0	0.9	1.5	5.6			
15-Apr	Z	1.1	0.7	0.8	1.1	1.1	1.2	0.7	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.5	0.2	0.3	0.4	0.4	0.6	1.2			
16-Apr	0.3	Z	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.3	0.3	1.2	1.9	2.0	2.0	2.5	2.4	1.9	0.8	1.2	1.3	1.2	2.7	3.0	1.2	3.0			
17-Apr	1.8	0.3	Z	0.4	0.3	0.6	0.7	0.5	0.5	1.0	0.4	0.4	0.6	0.6	0.8	1.1	0.9	2.1	1.3	1.1	1.2	1.3	2.0	0.5	0.9	2.1			
18-Apr	0.4	0.3	0.5	Z	1.2	1.2	1.5	1.3	1.1	0.8	0.6	0.6	0.4	0.5	0.6	0.6	0.6	0.7	0.7	1.2	0.8	0.7	0.8	1.1	0.8	1.5			
19-Apr	0.9	0.9	0.7	0.5	Z	0.7	0.9	0.5	0.4	0.4	0.6	3.5	3.0	0.8	3.6	1.7	0.6	0.7	0.8	0.9	0.5	0.4	0.4	1.3	1.1	3.6			
20-Apr	0.9	1.2	0.6	0.5	1.2	Z	0.5	1.0	1.5	1.4	1.5	4.5	3.5	6.6	2.5	2.6	2.5	2.7	4.0	4.1	2.8	0.8	0.8	1.2	2.1	6.6			
21-Apr	Z	1.9	1.3	0.4	0.2	1.0	0.3	1.3	1.4	1.6	2.4	1.7	1.0	1.2	0.5	1.2	0.9	1.1	0.3	0.5	2.4	0.3	0.6	1.4	1.1	2.4			
22-Apr	0.8	Z	1.6	1.1	5.0	0.7	2.1	3.9	6.5	1.1	1.0	0.7	0.6	0.5	0.5	0.5	0.5	0.6	2.0	1.4	1.3	1.3	0.9	1.5	1.6	6.5			
23-Apr	0.9	2.4	Z	1.2	1.8	2.2	4.0	9.8	4.3	3.0	1.3	1.6	1.4	0.5	2.2	2.9	2.1	1.7	1.7	2.1	2.4	2.6	2.8	1.3	2.4	9.8			
24-Apr	3.2	4.3	2.6	Z	3.1	3.5	5.2	1.0	2.0	0.6	0.6	1.1	1.2	0.8	0.7	0.6	0.9	0.7	0.8	0.7	0.9	1.6	0.6	0.5	1.6	5.2			
25-Apr	0.6	0.9	0.8	0.9	Z	1.2	1.1	1.0	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.9	1.1	1.1	0.8	0.8	0.9	0.9	1.2			
26-Apr	1.0	0.8	0.9	1.6	1.6	Z	1.4	1.5	1.1	1.0	0.8	1.0	3.5	4.4	2.4	1.6	1.1	0.9	1.1	1.2	0.9	1.3	1.5	1.4	1.5	4.4			
27-Apr	Z	5.0	5.1	5.4	5.9	6.7	3.7	1.3	1.5	2.0	2.0	2.4	2.3	2.0	3.4	3.2	2.7	2.3	2.1	3.7	3.1	2.3	1.3	0.4	3.0	6.7			
28-Apr	0.3	Z	2.7	1.1	0.3	0.4	1.0	2.8	1.8	1.6	0.9	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.7	0.8	0.8	0.9	1.3	1.2	0.9	2.8			
29-Apr	1.4	0.8	Z	0.7	0.8	0.7	1.3	1.2	0.4	0.4	0.3	0.4	0.3	0.5	0.4	1.1	1.3	0.7	1.2	0.7	4.0	2.1	5.5	3.4	1.3	5.5			
30-Apr	1.8	1.0	1.1	Z	1.7	0.7	0.8	0.9	0.4	0.3	1.9	1.6	1.1	1.2	1.6	0.8	0.5	1.0	3.9	3.7	0.8	0.4	0.2	1.1	1.2	3.9			
1.5 2.0 2.5 2.2 2.2 1.6 2.1 1.9 1.5 1.2 1.3 1.4 1.4 1.3 1.4 1.2 1.1 1.2 1.2 1.4 2.1 1.6 1.7 1.4																									Diurnal Average				
5.6 6.2 13.9 13.8 10.4 6.7 15.8 9.8 6.5 4.5 4.1 4.5 3.9 6.6 4.8 4.2 3.9 3.8 4.0 6.0 8.6 4.4 5.8 3.4																									Diurnal Maximum				
Z - zerospan C - Calibration																													
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	46	7	2	12	20	32	64	62	33	44	25	28	73	100	61	76	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	46	7	2	12	20	32	64	62	33	44	25	28	73	100	61	76	685

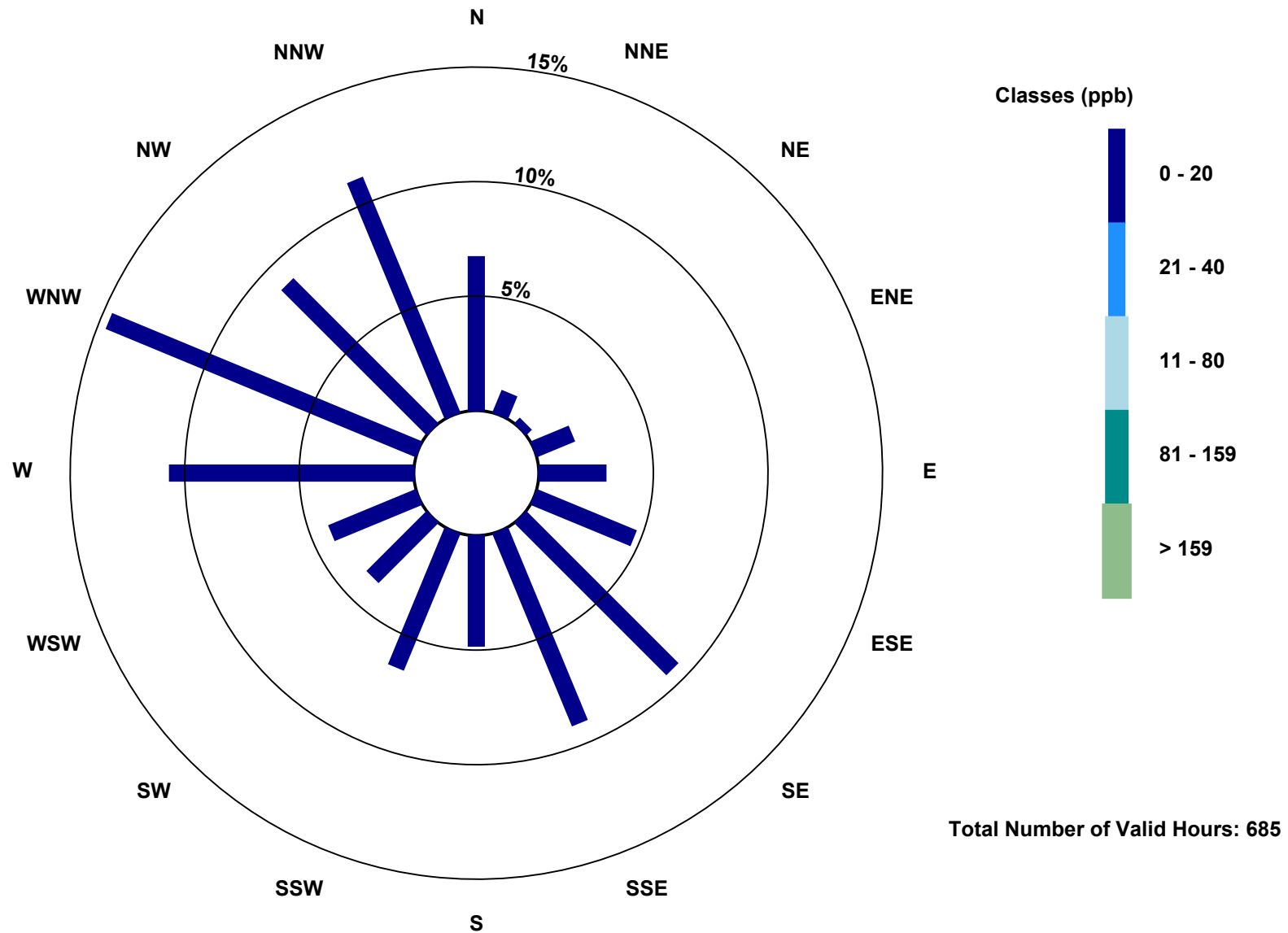
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Anzac



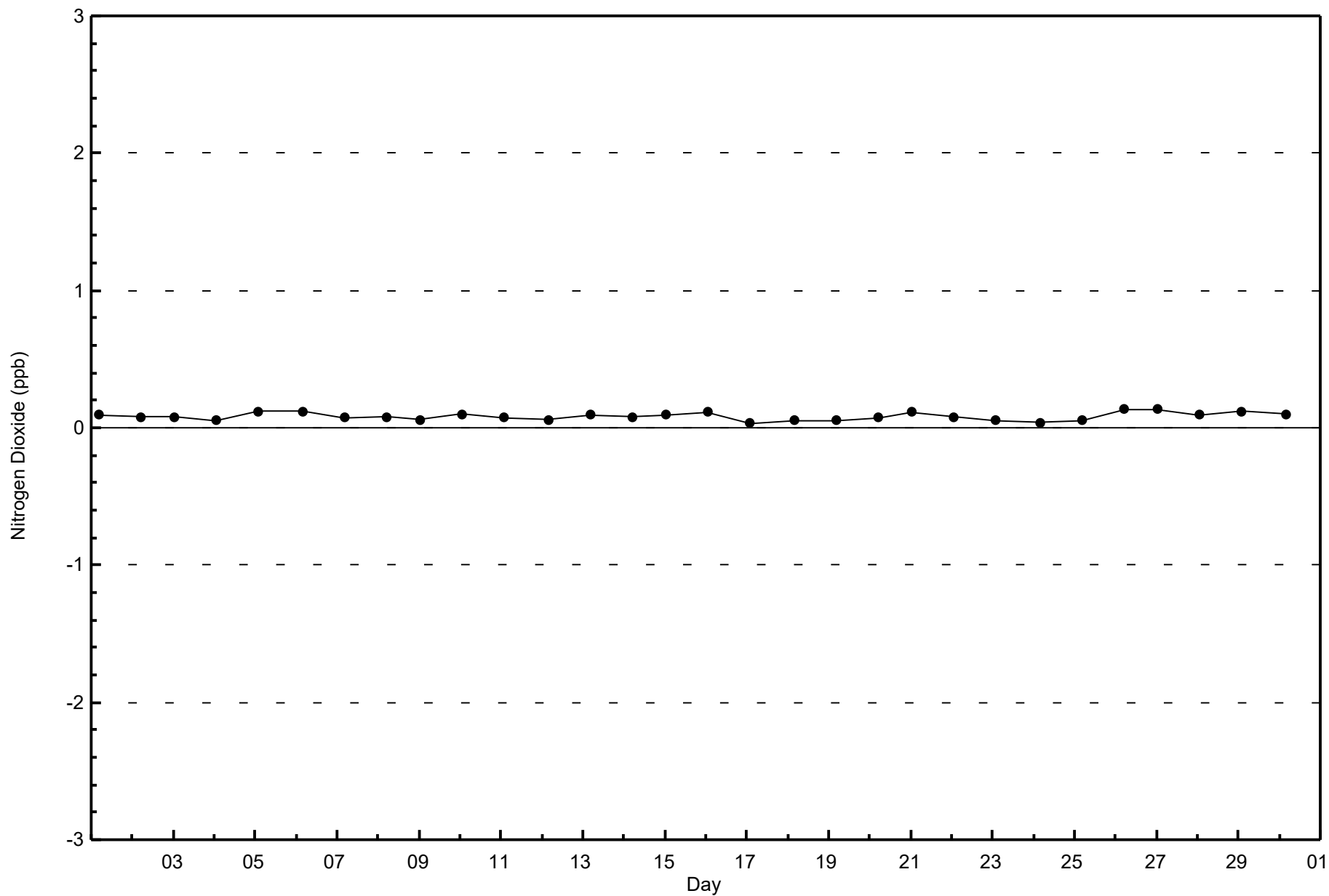


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO₂) - ppb

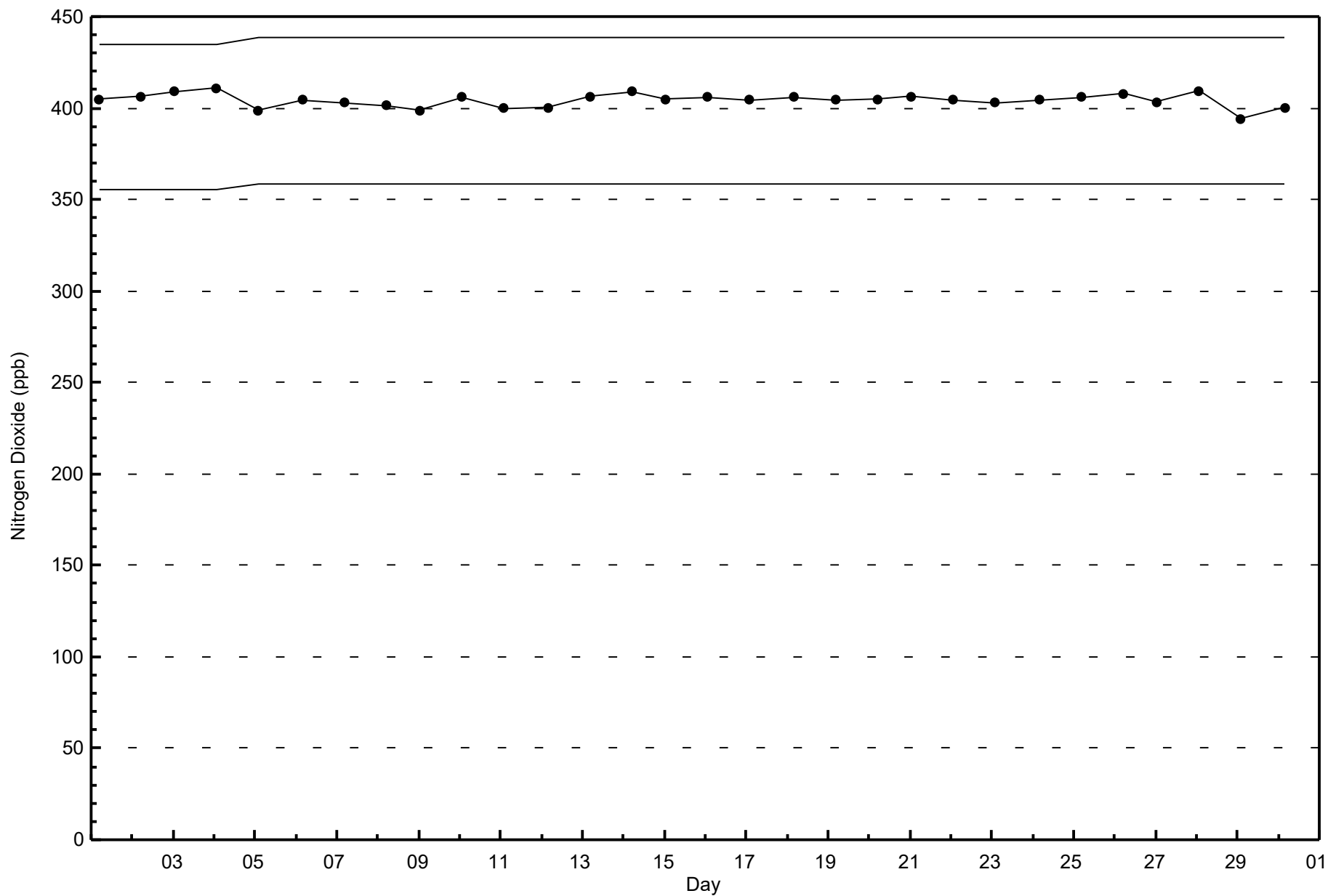
Anzac - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

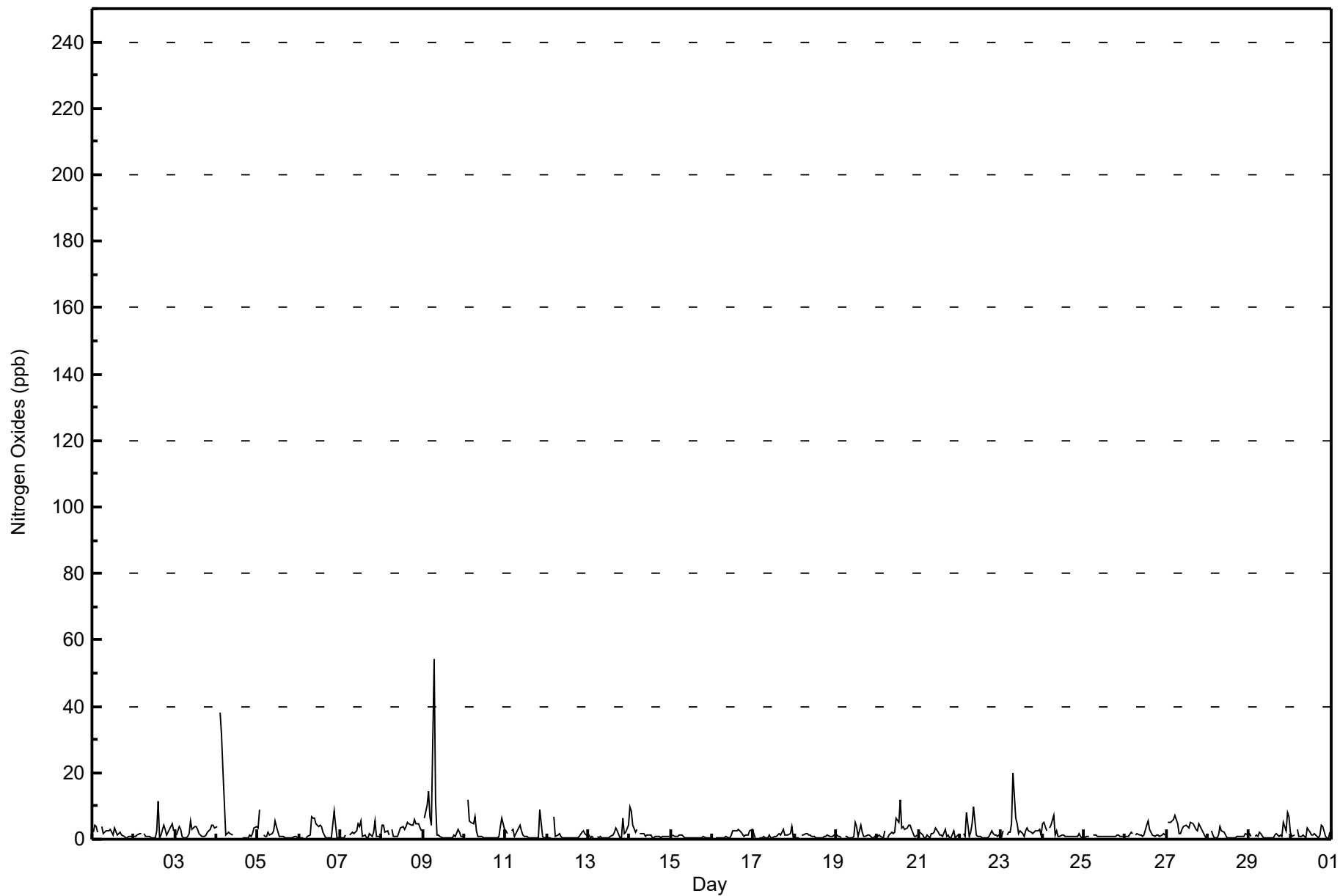
Anzac - April 2025

Maximum Value: 54.2 ppb on Apr 9 07:00																				Maximum Daily Average: 6.4 ppb on Apr 4					Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 30 23:00																				Minimum Daily Average: 0.6 ppb on Apr 15					Hours of Data: 685	
Maximum Diurnal Average: 3.9 ppb at hour 3																				Minimum Diurnal Average: 1.3 ppb at hour 17					Hours of Missing Data: 35	
Monthly Average: 2.08 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.2 Q ₃ = 2.4 P ₉₀ = 4.4 P ₉₉ = 11.7					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.1	4.1	3.6	2.2	Z	4.0	1.7	2.1	2.3	2.8	3.0	2.3	1.2	3.3	1.4	1.9	2.3	1.5	0.7	0.5	0.5	0.9	0.7	0.8	2.0	4.1
2-Apr	0.7	0.7	1.3	1.6	1.7	Z	1.6	0.7	1.0	0.8	0.5	0.6	0.5	2.7	11.6	0.6	1.4	4.3	2.8	1.3	2.1	3.9	4.5	2.4	2.2	11.6
3-Apr	Z	1.5	4.0	2.8	0.8	0.6	0.6	0.7	1.5	5.3	3.1	3.7	3.9	2.8	1.7	0.9	0.7	0.7	1.2	2.3	2.9	4.0	4.0	3.4	2.3	5.3
4-Apr	3.9	Z	38.3	31.3	20.7	1.4	1.5	2.2	1.9	1.3	C	C	C	C	C	0.3	0.4	0.3	0.3	1.1	1.0	1.7	3.3	3.7	6.4	38.3
5-Apr	3.3	8.9	Z	1.4	0.9	1.1	2.0	1.1	1.6	2.4	5.7	3.6	0.7	0.6	0.7	0.6	0.6	0.5	0.4	0.6	0.6	0.7	0.8	0.5	1.7	8.9
6-Apr	0.4	0.3	0.3	Z	0.6	0.9	1.4	6.8	6.5	6.5	4.5	4.0	4.1	3.7	2.0	0.4	0.3	0.4	0.4	0.4	8.6	4.4	0.2	0.3	2.5	8.6
7-Apr	0.3	0.4	0.6	1.1	Z	1.4	1.5	2.1	1.8	2.6	4.8	3.6	5.5	1.0	1.1	0.5	0.5	1.8	0.7	1.9	5.4	0.8	0.9	0.7	1.8	5.5
8-Apr	4.1	4.2	2.3	2.4	1.1	Z	3.1	0.9	1.0	1.1	2.1	3.5	3.7	2.8	3.8	5.1	4.7	4.2	4.1	6.1	4.8	4.7	3.5	2.7	3.3	6.1
9-Apr	Z	6.4	10.0	14.4	6.9	4.2	54.2	11.4	1.4	1.3	0.7	0.6	0.4	0.3	0.3	0.4	0.3	0.3	1.3	0.9	2.9	2.0	1.0	0.7	5.3	54.2
10-Apr	1.1	Z	11.8	5.6	5.0	4.7	6.9	2.5	0.7	0.9	0.7	0.6	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.5	0.8	3.7	6.5	2.8	2.5	11.8
11-Apr	2.5	1.6	Z	2.5	3.0	0.9	1.6	2.3	4.3	2.5	1.3	0.9	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.5	8.7	1.0	0.5	0.5	1.7	8.7
12-Apr	0.7	0.4	0.4	Z	6.7	0.8	1.3	1.5	0.7	0.6	0.5	0.5	0.4	0.3	0.4	0.5	0.3	0.3	0.5	0.9	2.0	2.7	1.6	1.4	1.1	6.7
13-Apr	1.3	0.6	0.8	0.6	Z	0.7	0.6	0.6	0.5	0.3	0.3	0.3	0.5	0.7	1.4	2.2	3.3	2.5	0.6	0.4	6.2	1.5	2.2	4.3	1.4	6.2
14-Apr	9.6	8.6	4.2	1.9	3.1	Z	1.8	1.6	1.8	0.9	1.3	1.1	1.3	0.5	0.5	0.6	0.7	0.7	0.6	0.8	0.8	0.7	1.0	0.9	2.0	9.6
15-Apr	Z	1.3	0.8	0.8	1.1	1.1	1.3	0.8	0.5	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.7	0.2	0.4	0.5	0.5	0.6	1.3
16-Apr	0.4	Z	0.5	0.4	0.4	0.4	0.5	0.5	0.7	0.3	0.4	1.4	2.4	2.5	2.4	3.1	2.6	2.1	0.8	1.2	1.3	1.2	2.7	3.0	1.3	3.1
17-Apr	1.8	0.3	Z	0.4	0.3	0.6	0.7	0.5	0.5	1.2	0.5	0.5	0.8	0.8	1.1	1.5	1.2	2.9	1.4	1.1	1.2	1.7	4.0	0.5	1.1	4.0
18-Apr	0.4	0.3	0.5	Z	1.2	1.2	1.7	1.7	1.5	1.1	0.7	0.7	0.5	0.6	0.6	0.6	0.6	0.7	0.7	1.2	0.8	0.7	0.9	1.4	0.9	1.7
19-Apr	1.2	0.9	0.7	0.5	Z	0.7	1.0	0.5	0.4	0.5	0.8	4.9	3.9	1.0	4.4	2.1	0.7	0.8	1.1	1.1	0.7	0.4	0.4	1.3	1.3	4.9
20-Apr	0.9	1.2	0.6	0.5	2.4	Z	0.5	1.1	1.9	1.9	2.2	6.4	5.1	11.7	3.5	3.6	3.2	3.2	4.4	4.2	2.8	0.8	0.8	1.2	2.8	11.7
21-Apr	Z	2.0	1.3	0.4	0.2	1.1	0.3	1.8	1.9	2.2	3.4	2.3	1.3	1.5	0.6	2.9	1.0	1.2	0.3	0.5	2.4	0.3	0.6	1.4	1.3	3.4
22-Apr	0.8	Z	1.6	1.1	8.1	0.7	2.3	4.6	9.6	1.3	1.1	0.8	0.7	0.6	0.6	0.6	0.5	0.6	2.5	1.7	1.3	1.3	0.9	1.5	1.9	9.6
23-Apr	0.9	2.5	Z	1.3	2.0	2.3	4.7	19.8	6.4	4.5	1.6	2.4	1.9	0.6	2.5	3.4	2.5	1.9	1.8	2.1	2.4	2.6	2.8	1.3	3.2	19.8
24-Apr	4.6	4.9	2.7	Z	3.2	4.1	7.1	1.2	2.6	0.7	0.7	1.4	1.4	0.9	0.8	0.7	1.0	0.7	0.8	0.7	0.9	1.6	0.6	0.5	1.9	7.1
25-Apr	0.6	1.0	0.8	0.9	Z	1.2	1.2	1.1	0.8	0.9	0.8	0.8	0.8	0.8	1.0	0.8	0.9	0.9	1.0	1.1	1.1	0.8	0.8	0.9	0.9	1.2
26-Apr	1.0	0.8	0.9	2.0	1.9	Z	1.4	1.6	1.2	1.1	0.9	1.2	4.4	5.7	2.9	1.9	1.3	1.0	1.2	1.2	0.9	1.3	1.5	1.4	1.7	5.7
27-Apr	Z	5.1	5.1	5.4	6.0	7.3	4.8	1.5	1.9	3.0	3.6	4.4	4.0	3.3	5.2	4.7	3.7	2.9	2.4	4.5	3.1	2.3	1.4	0.4	3.7	7.3
28-Apr	0.3	Z	2.7	1.1	0.3	0.4	1.2	3.9	2.5	2.3	1.2	0.3	0.3	0.3	0.3	0.4	0.5	0.9	0.7	0.8	0.8	0.9	1.5	1.4	1.1	3.9
29-Apr	1.7	0.8	Z	0.8	1.4	0.8	2.1	1.8	0.5	0.4	0.4	0.5	0.4	0.6	0.5	1.3	1.6	0.8	1.3	0.7	5.3	2.6	8.1	6.6	1.8	8.1
30-Apr	2.0	1.0	1.1	Z	3.0	0.8	1.0	1.3	0.6	0.4	3.2	2.0	1.3	1.4	1.7	0.9	0.5	1.2	4.1	3.8	0.8	0.4	0.2	2.1	1.5	4.1
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	99.42	99.42
21 - 40	3	0.44	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	46	7	2	12	20	32	64	62	33	44	25	25	72	100	61	76	681
21 - 40	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	1	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	46	7	2	12	20	32	64	62	33	44	25	28	73	100	61	76	685

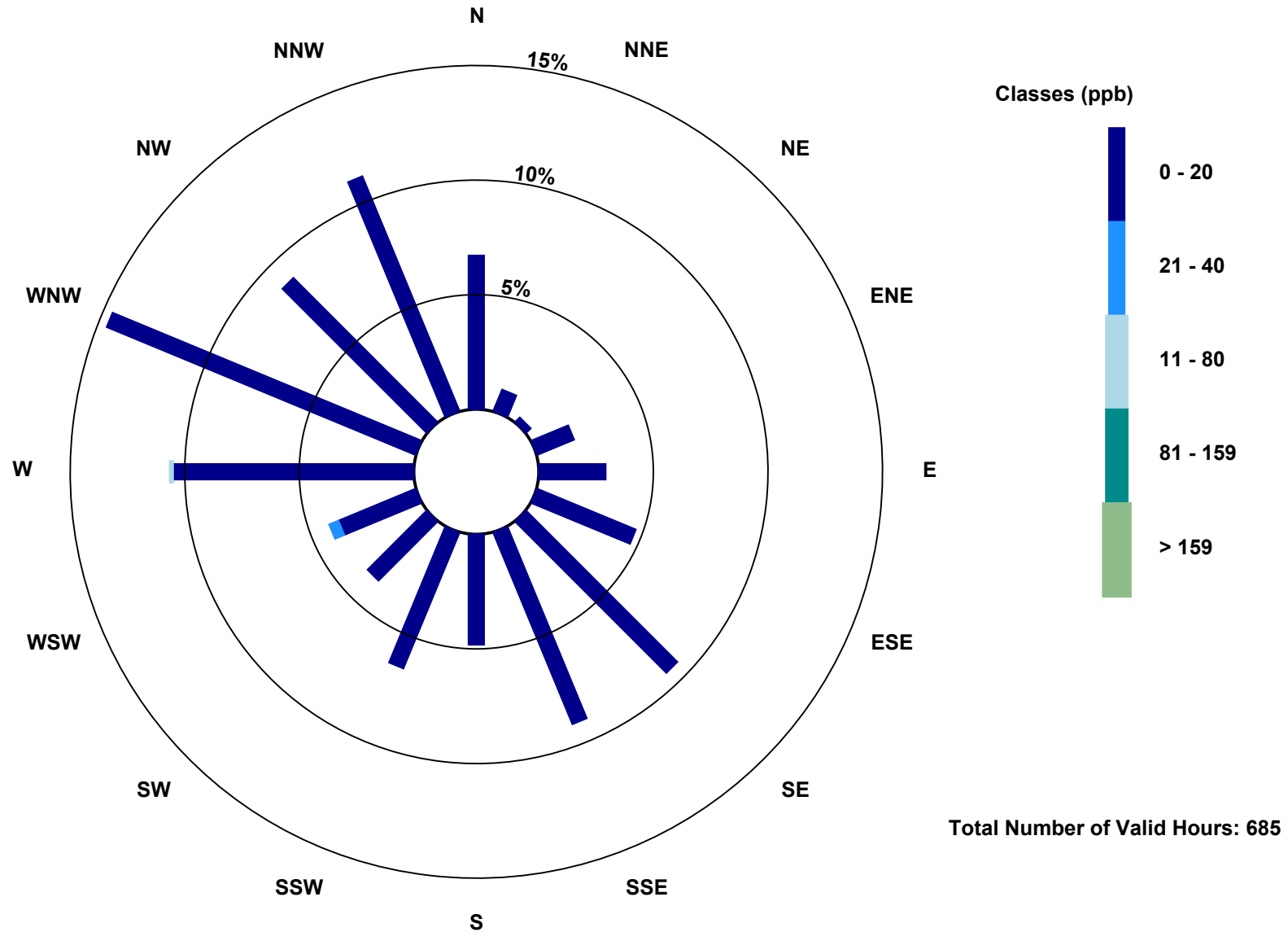
Total Number of Valid Hours: 685

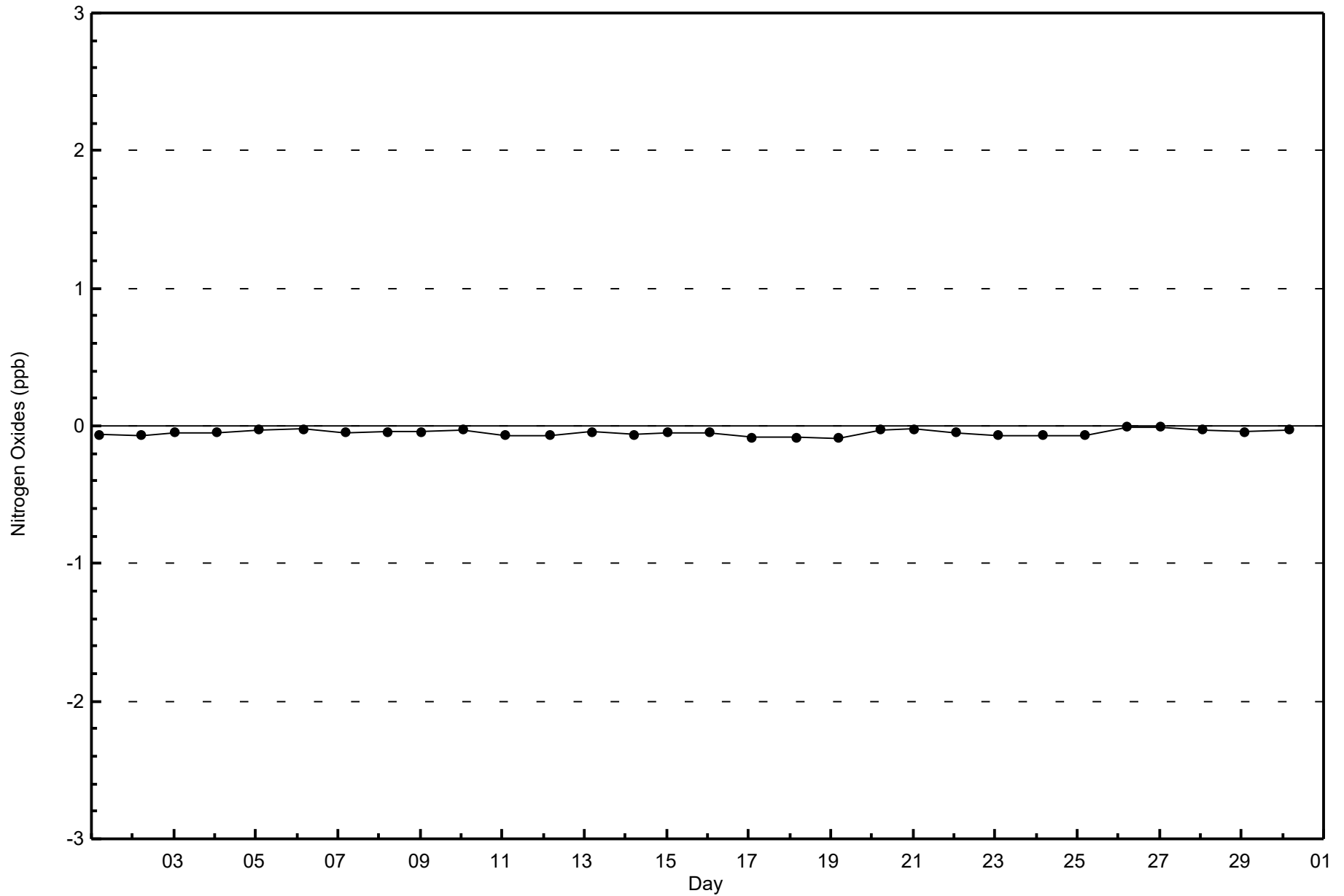
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Anzac

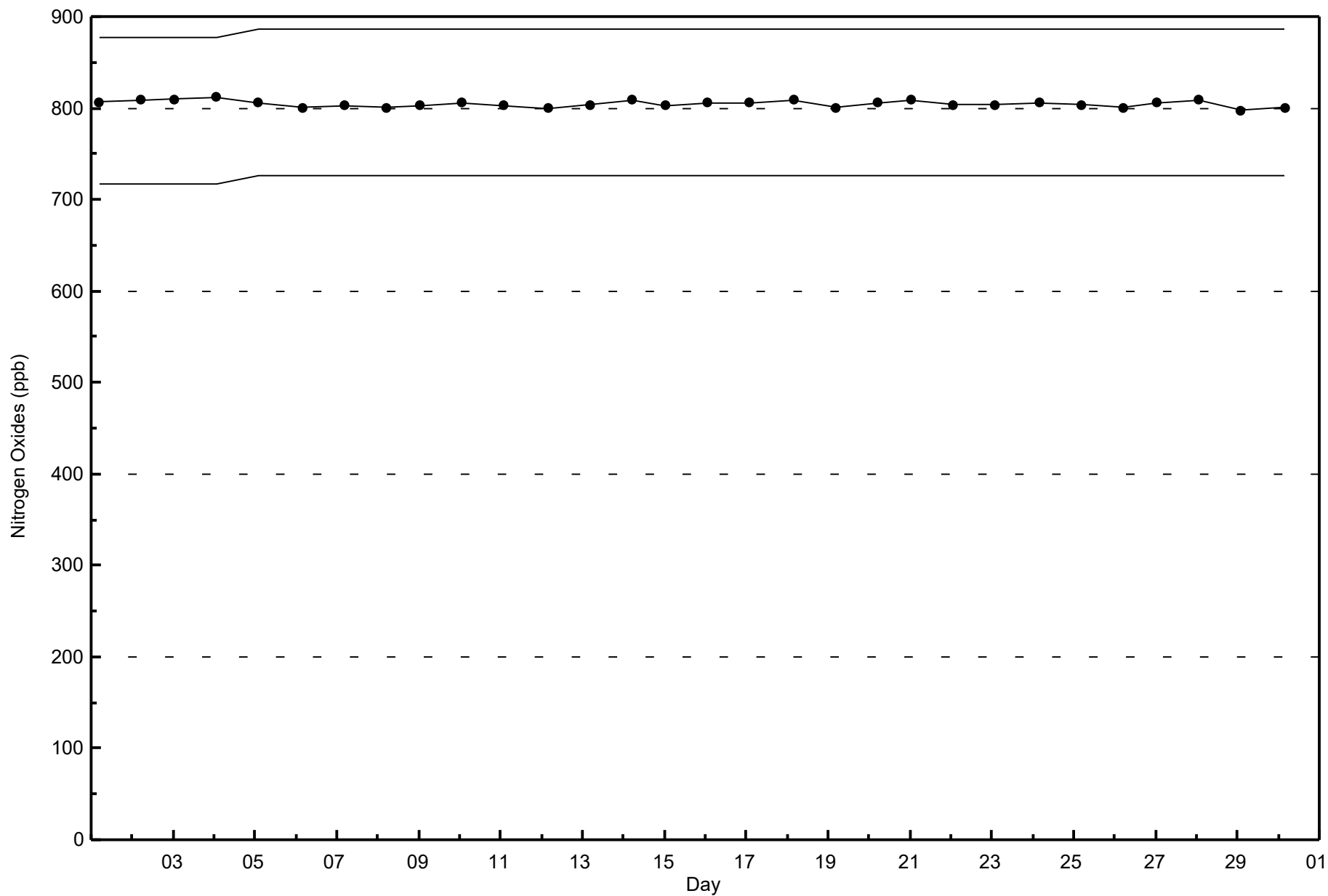






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

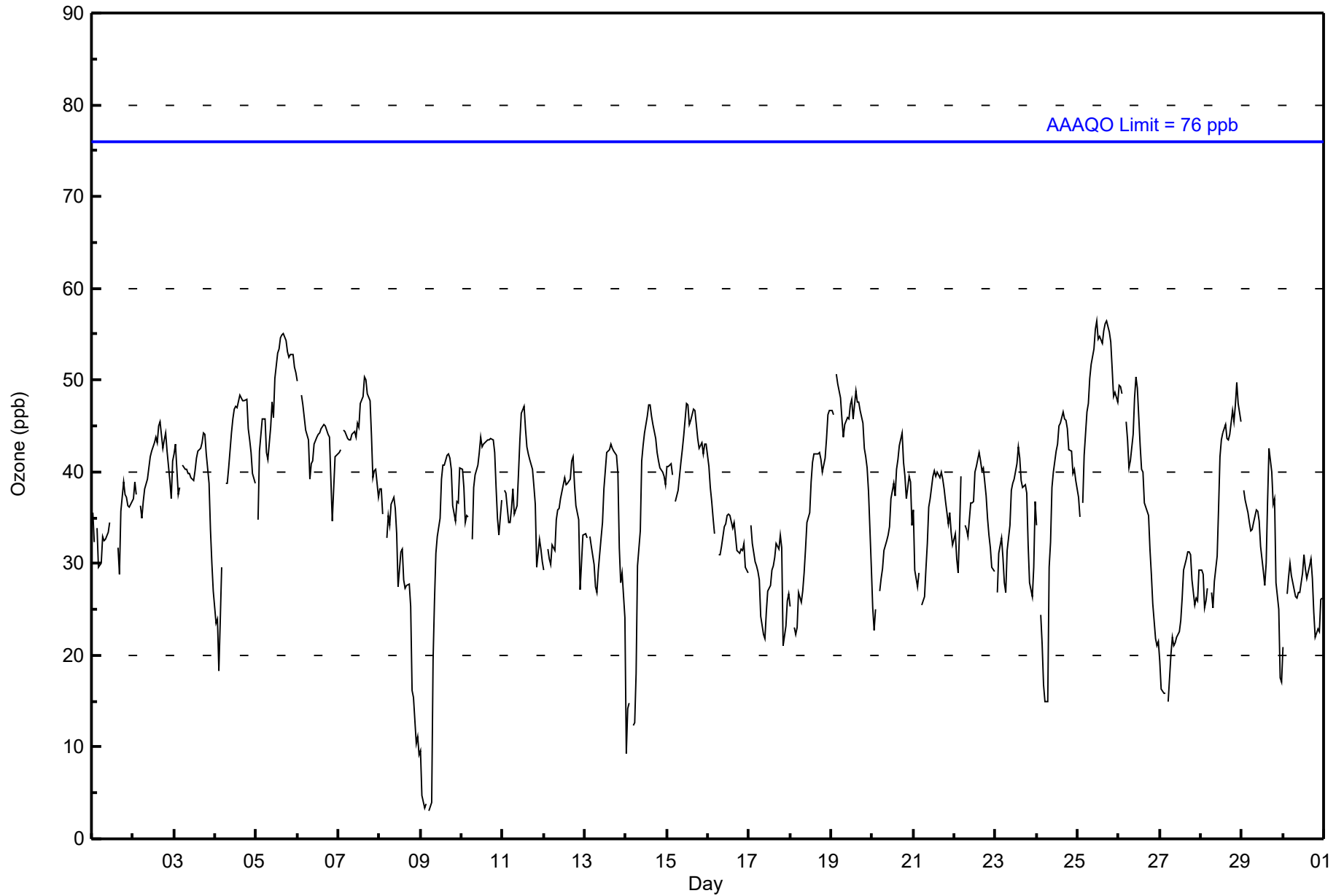
Anzac - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 56.4 ppb on Apr 25 12:00 Maximum Daily Average: 49.9 ppb on Apr 25																				Hours in Service: 720						
Minimum Value: 3.0 ppb on Apr 9 06:00 Minimum Daily Average: 23.9 ppb on Apr 27 Maximum Diurnal Average: 41.6 ppb at hour 17 Minimum Diurnal Average: 30.6 ppb at hour 3 Monthly Average: 36.63 ppb Percentiles: P ₁ = 9.6 P ₁₀ = 25.6 Q ₁ = 30.9 Median = 38.0 Q ₃ = 43.0 P ₉₀ = 47.1 P ₉₉ = 54.9																				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 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-Apr	35.5	32.3	Z	33.8	29.6	30.1	33.0	32.5	32.6	33.3	34.5	C	C	C	C	31.7	28.9	35.7	38.9	37.6	37.2	36.3	36.1	36.8	34.0	38.9
2-Apr	37.1	38.8	37.5	Z	36.3	34.9	36.8	38.1	39.2	40.4	41.6	42.3	43.2	43.7	43.1	44.9	45.4	42.6	43.5	44.2	42.2	39.0	37.1	41.2	40.6	45.4
3-Apr	42.0	43.0	37.6	38.3	Z	40.7	40.3	40.3	39.8	39.9	39.3	39.1	40.2	41.5	42.2	42.6	43.2	44.3	44.1	41.9	38.7	33.8	30.1	27.1	39.6	44.3
4-Apr	23.5	23.9	18.3	23.8	29.6	Z	38.7	38.7	40.5	44.2	45.8	46.9	47.1	47.0	48.3	48.1	47.8	47.8	47.9	44.6	43.5	42.1	39.8	38.8	39.9	48.3
5-Apr	Z	34.8	42.2	45.7	45.8	45.8	42.1	41.3	44.9	47.6	45.9	50.2	52.9	53.4	54.5	54.9	55.1	54.3	53.1	52.5	52.8	52.7	51.4	50.8	48.9	55.1
6-Apr	49.8	Z	48.4	47.2	45.8	44.6	43.5	39.2	40.8	41.1	43.0	43.8	44.0	44.3	44.7	45.2	45.0	44.6	44.1	43.8	34.6	38.2	41.6	41.8	43.4	49.8
7-Apr	42.2	42.4	Z	44.6	44.4	43.7	43.4	43.4	44.0	44.4	43.8	45.4	44.9	47.5	48.1	50.4	50.1	48.5	47.8	43.9	39.3	40.1	40.3	37.2	44.3	50.4
8-Apr	38.1	38.2	35.4	Z	32.9	35.2	34.1	36.5	37.2	35.9	33.2	27.4	31.3	31.5	28.3	27.4	27.6	27.8	25.3	16.2	15.5	10.4	11.2	9.1	28.1	38.2
9-Apr	9.6	4.7	3.4	3.7	Z	3.0	3.9	19.6	26.0	31.2	33.0	34.9	39.2	40.7	40.7	41.7	41.9	41.6	40.3	36.4	34.6	36.8	36.6	40.4	28.0	41.9
10-Apr	40.3	38.3	34.5	35.2	35.0	Z	32.7	38.3	39.7	40.7	42.1	43.7	42.8	43.0	43.4	43.5	43.5	43.7	43.5	42.1	38.3	35.0	33.1	37.0	39.5	43.7
11-Apr	Z	37.9	37.7	34.5	34.5	36.0	38.1	35.5	36.4	39.8	43.5	46.4	47.1	44.7	42.8	42.0	41.3	40.3	38.4	36.4	29.6	32.7	31.6	30.1	38.1	47.1
12-Apr	29.3	Z	31.5	30.5	29.9	32.0	31.4	34.8	35.9	35.9	37.1	38.6	39.4	38.6	38.7	39.2	41.2	41.6	38.5	36.4	34.8	27.2	30.0	33.1	35.0	41.6
13-Apr	33.3	32.8	Z	33.0	31.8	29.9	27.5	26.8	29.3	32.8	34.5	38.1	40.1	42.2	42.5	43.0	42.6	42.3	41.7	39.8	31.7	27.9	29.0	24.1	34.6	43.0
14-Apr	9.3	14.1	14.7	Z	12.3	12.7	18.0	29.8	33.5	41.2	42.8	44.3	46.1	47.3	47.2	46.0	45.2	43.6	42.2	41.2	40.4	40.0	39.5	38.6	34.3	47.3
15-Apr	40.5	40.6	40.8	39.6	Z	36.7	38.0	39.5	41.0	42.4	43.9	47.4	47.3	45.2	45.7	46.8	46.7	45.2	43.6	42.5	43.1	42.0	43.1	43.0	42.8	47.4
16-Apr	40.6	38.3	36.7	35.0	33.3	Z	31.0	30.9	31.9	34.0	34.4	35.2	35.4	35.2	33.9	34.5	33.0	31.4	31.1	31.5	31.4	32.1	29.5	29.0	33.5	40.6
17-Apr	Z	34.1	32.1	30.2	29.8	29.2	28.3	24.3	22.3	21.8	24.7	27.0	27.6	29.2	29.8	30.6	32.2	31.6	33.1	31.8	21.0	23.2	26.0	26.7	28.1	34.1
18-Apr	25.3	Z	23.0	22.2	23.1	26.8	25.8	27.0	29.0	31.6	34.4	35.6	38.9	41.0	41.9	41.9	41.9	42.2	41.3	39.9	41.5	43.6	46.2	46.7	35.3	46.7
19-Apr	46.7	46.2	Z	50.7	49.6	48.1	45.7	43.7	45.1	45.9	45.7	47.3	47.9	45.8	48.8	47.6	47.5	46.6	45.4	42.5	41.7	40.4	37.9	29.6	45.1	50.7
20-Apr	25.2	22.7	25.1	Z	26.9	28.4	29.4	31.4	32.5	33.1	34.1	37.1	38.7	37.4	40.3	41.3	42.8	44.3	41.1	39.6	37.1	39.5	38.9	34.2	34.8	44.3
21-Apr	35.9	29.3	27.5	29.0	Z	25.5	26.4	29.4	32.1	36.1	37.1	39.5	40.1	39.6	40.0	39.4	40.0	39.2	38.1	36.7	34.3	35.6	33.4	32.0	34.6	40.1
22-Apr	33.3	30.6	29.0	33.6	39.6	Z	34.2	33.8	32.9	36.7	36.7	36.7	39.9	40.6	42.0	41.1	40.1	40.5	37.3	34.9	33.1	31.7	29.7	29.1	35.5	42.0
23-Apr	Z	26.8	31.1	32.8	30.7	27.9	26.8	31.4	34.2	37.9	38.8	39.1	40.8	42.8	41.4	39.1	38.2	38.6	37.7	32.0	27.9	26.4	29.6	36.7	34.3	42.8
24-Apr	34.2	Z	24.4	21.2	16.7	14.9	14.9	29.6	32.4	38.3	40.0	42.2	43.0	45.1	45.3	46.6	45.8	45.7	44.7	42.4	42.3	39.8	40.3	39.1	36.0	46.6
25-Apr	37.2	35.0	Z	36.6	41.8	46.6	47.5	50.2	51.7	53.4	55.5	56.4	54.5	54.8	54.0	55.3	56.2	56.4	55.2	54.1	51.3	48.2	48.7	47.7	49.9	56.4
26-Apr	49.4	49.3	48.5	Z	45.5	43.5	40.4	41.1	44.1	48.0	50.4	49.1	42.9	40.3	39.9	36.6	36.2	35.3	31.5	28.8	25.6	21.8	21.1	21.5	38.7	50.4
27-Apr	19.4	16.3	15.8	15.8	Z	15.0	20.1	22.0	21.1	21.3	21.9	22.5	23.8	26.2	29.3	30.5	31.3	31.3	30.9	28.2	25.5	26.2	25.9	29.2	23.9	31.3
28-Apr	29.3	28.8	25.2	25.9	27.2	Z	26.9	25.2	28.1	30.9	36.0	41.6	43.5	44.2	45.2	43.6	43.5	44.1	46.7	45.4	47.3	49.7	47.5	45.5	37.9	49.7
29-Apr	Z	38.0	37.0	35.6	34.5	33.5	33.7	34.5	35.9	35.7	34.6	31.9	29.2	27.7	30.0	36.8	42.6	40.0	36.5	37.1	27.9	25.0	17.6	17.0	32.7	42.6
30-Apr	20.9	Z	26.7	28.6	30.1	28.6	27.1	26.4	26.3	26.9	26.8	28.9	30.9	29.4	28.4	29.7	30.5	28.4	24.8	21.9	22.8	22.5	26.2	26.3	26.9	30.9
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	30	4.37	4.37
21 - 50	630	91.84	96.21
51 - 82	26	3.79	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 (O₃) - ppb
Anzac - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	2	0	0	0	1	0	1	4	2	3	0	7	2	2	4	2	30
21 - 50	46	7	2	6	17	27	64	57	29	29	21	20	73	103	55	74	630
51 - 82	0	0	0	6	2	3	1	0	1	10	2	0	1	0	0	0	26
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	7	2	12	20	30	66	61	32	42	23	27	76	105	59	76	686

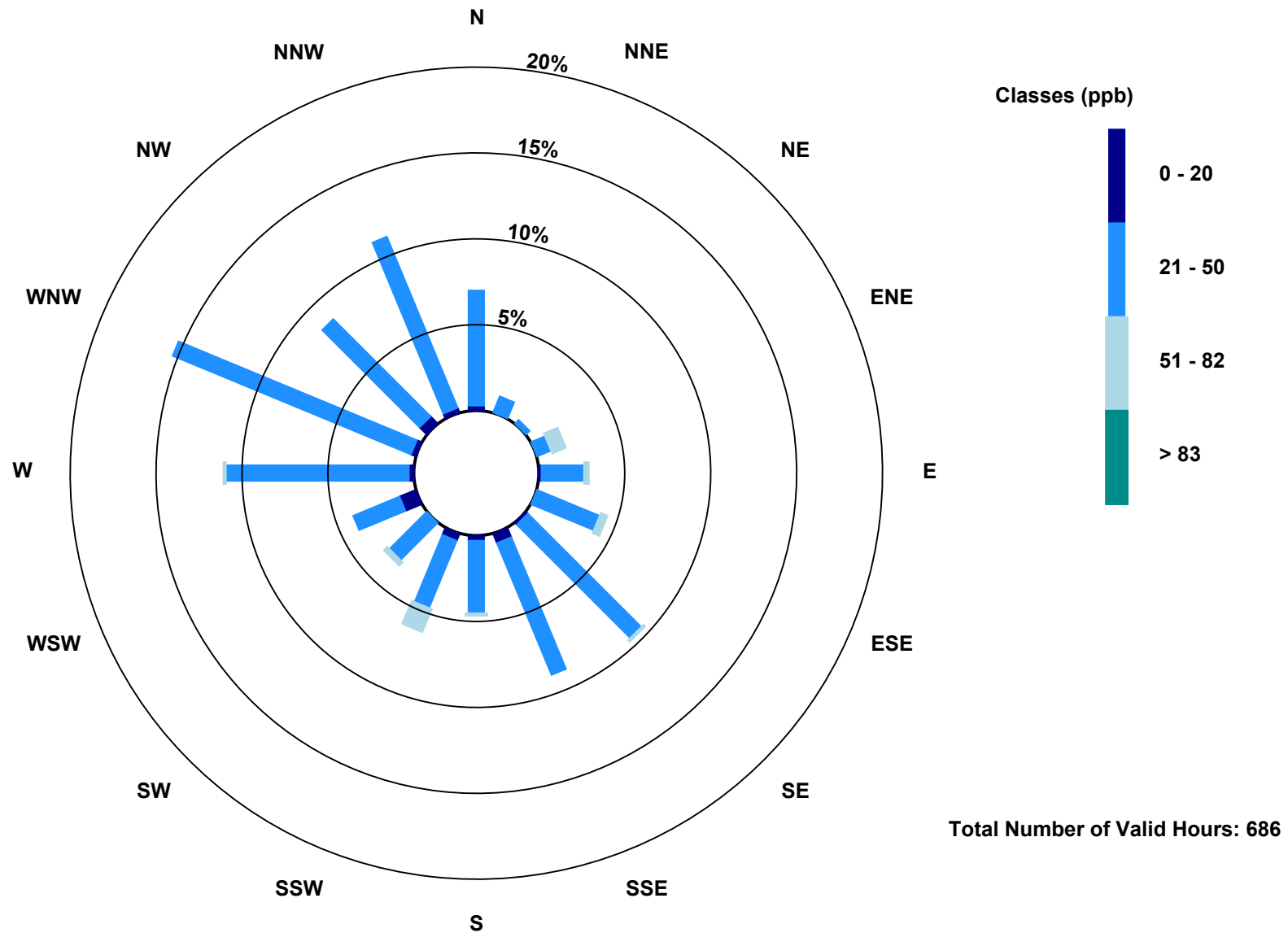
Total Number of Valid Hours: 686

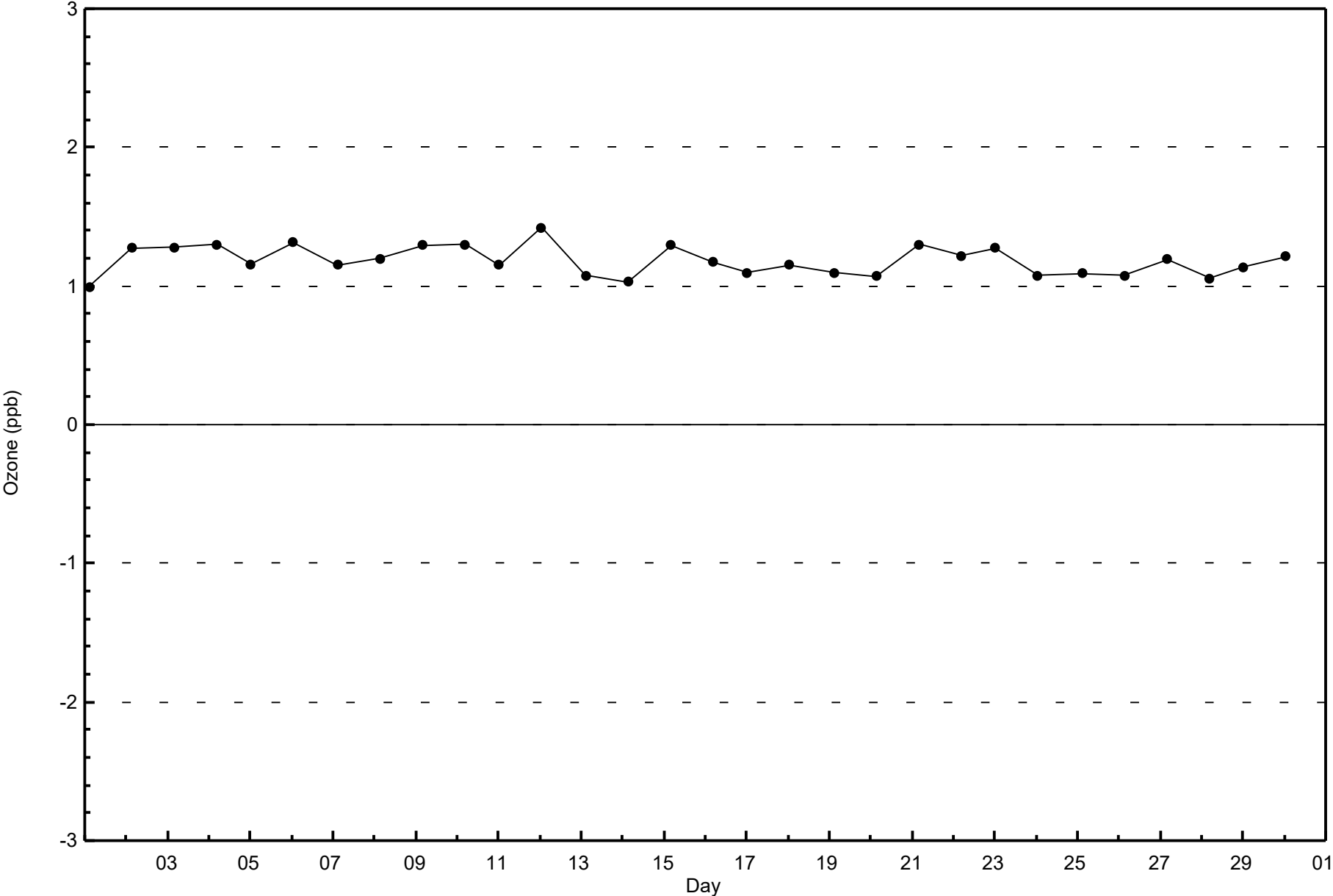
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ozone (O_3) - ppb
Anzac

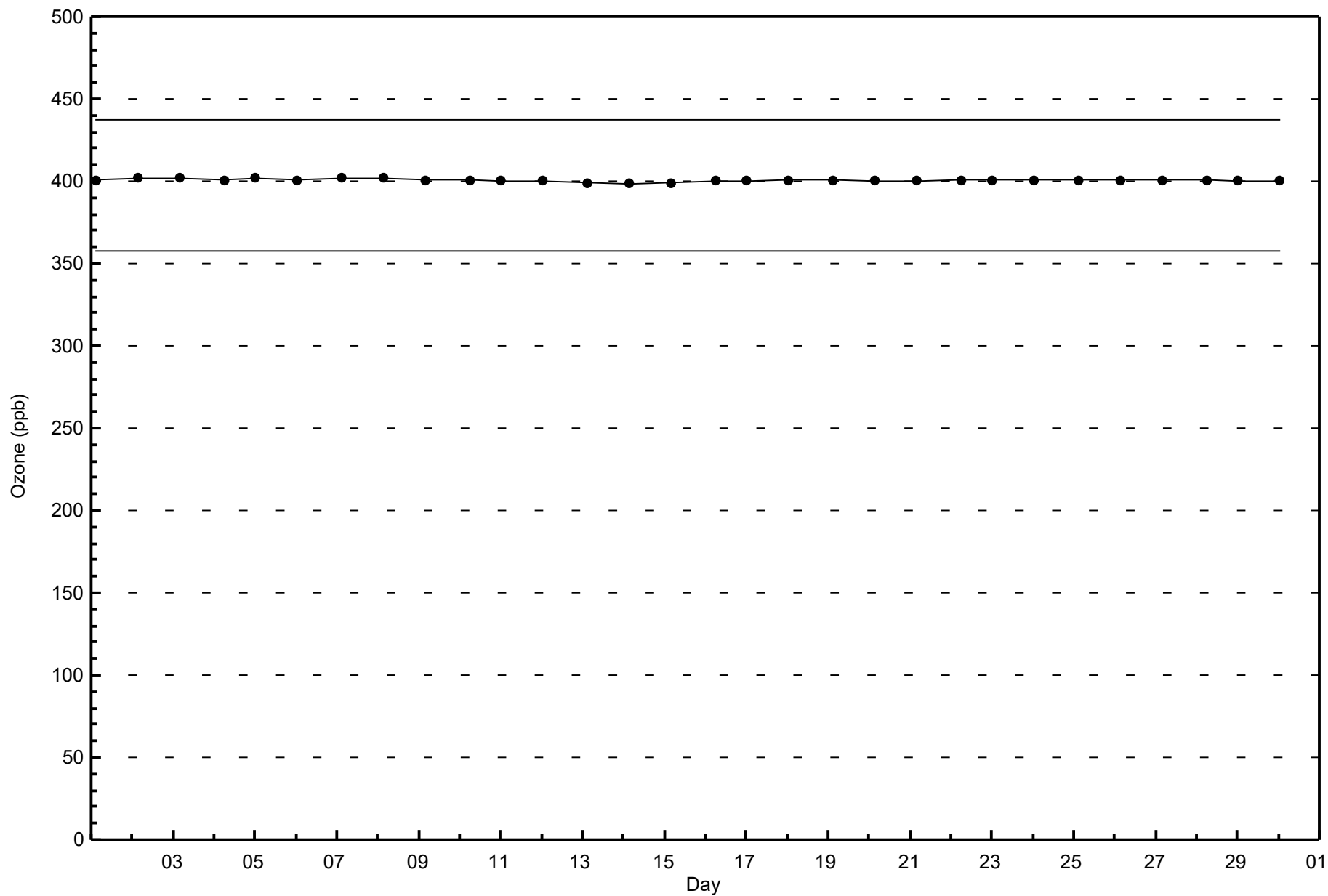






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Anzac - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

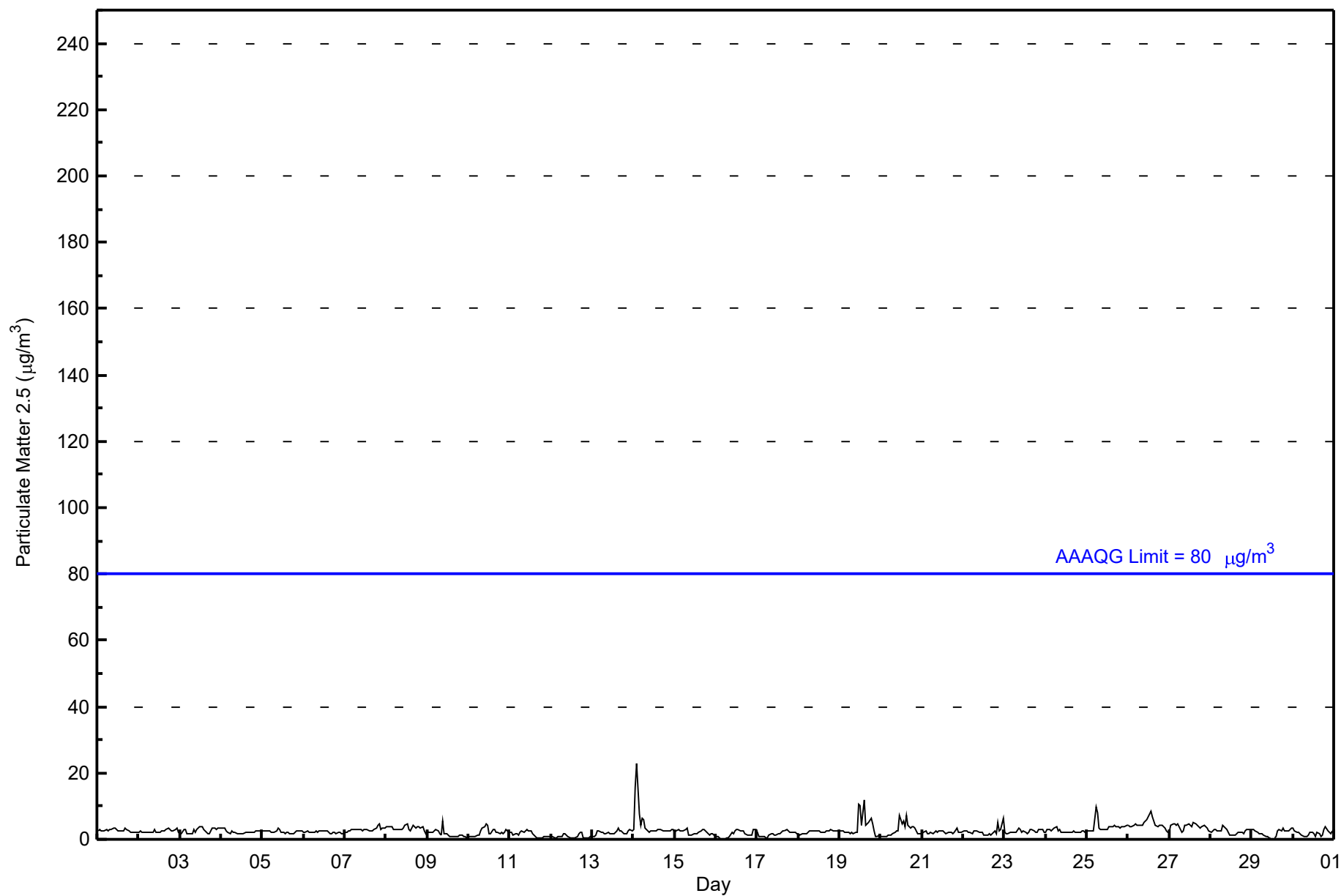
Anzac - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 23.0 µg/m³ on Apr 14 03:00 Maximum Daily Average: 4.7 µg/m³ on Apr 26																				Hours in Service: 720						
Minimum Value: 0.1 µg/m³ on Apr 16 05:00 Minimum Daily Average: 0.9 µg/m³ on Apr 12 Maximum Diurnal Average: 2.9 µg/m³ at hour 3 Minimum Diurnal Average: 2.2 µg/m³ at hour 5 Monthly Average: 2.54 µg/m³ Percentiles: P ₁ = 0.5 P ₁₀ = 1.0 Q ₁ = 1.8 Median = 2.3 Q ₃ = 2.9 P ₉₀ = 4.0 P ₉₉ = 8.0																				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 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-Apr	2.5	2.9	2.7	2.6	2.7	2.9	2.7	2.8	3.2	3.3	3.2	3.0	2.4	2.5	2.7	2.6	3.2	3.1	2.6	2.3	2.2	2.2	2.2	2.3	2.7	3.3
2-Apr	2.1	2.3	2.3	2.2	2.1	2.2	2.3	2.2	2.2	3.1	2.2	2.2	2.2	2.5	2.6	2.5	3.0	3.2	2.9	2.5	2.5	3.1	3.5	2.1	2.5	3.5
3-Apr	1.7	1.7	2.8	2.9	1.7	1.6	1.7	1.7	2.8	2.3	3.2	3.7	4.0	3.6	2.9	2.1	1.8	1.8	2.5	3.2	3.3	3.0	3.4	3.5	2.6	4.0
4-Apr	3.3	3.4	3.2	2.5	2.1	1.6	2.4	2.3	2.2	1.6	1.5	1.6	1.6	1.6	2.1	2.1	2.1	2.0	2.1	2.1	2.4	2.7	2.5	2.7	2.2	3.4
5-Apr	2.6	2.5	2.3	2.5	2.4	2.1	2.0	2.1	2.4	3.3	2.8	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.8	2.0	2.4	2.6	2.6	2.5	2.3	3.3
6-Apr	2.1	2.3	2.4	2.2	2.2	2.2	2.0	2.7	2.3	2.3	2.4	2.5	2.4	2.4	2.6	1.7	1.8	2.2	1.9	1.7	2.2	1.9	1.8	1.9	2.2	2.7
7-Apr	2.0	2.2	2.5	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.7	2.8	2.8	2.8	2.4	2.5	2.7	2.8	3.5	4.3	4.7	2.9	3.3	3.4	2.9	4.7
8-Apr	4.0	3.6	3.7	3.7	3.1	2.9	3.1	2.8	3.0	3.1	3.4	4.3	4.5	3.1	2.6	3.3	4.0	3.4	3.7	3.7	3.3	4.0	2.6	1.9	3.4	4.5
9-Apr	2.4	2.3	2.0	2.0	2.5	2.8	2.5	1.6	1.3	5.6	1.5	1.7	1.3	1.0	0.9	0.9	0.7	0.7	0.9	1.1	1.2	1.0	0.8	0.6	1.6	5.6
10-Apr	0.7	0.8	0.8	0.8	1.1	1.2	1.5	2.6	3.2	3.7	4.5	4.4	1.9	1.8	2.8	3.1	2.3	2.2	1.8	2.1	1.7	1.9	2.8	2.3	2.2	4.5
11-Apr	2.3	2.2	1.5	1.5	1.5	1.4	2.0	2.6	2.3	2.6	2.8	2.7	2.7	1.8	1.3	0.7	0.5	0.5	0.6	0.6	0.9	0.7	0.7	0.7	1.6	2.8
12-Apr	0.8	0.7	0.6	0.6	0.7	0.8	1.0	1.7	1.6	1.4	0.9	0.5	0.5	0.4	0.6	1.0	1.5	2.3	2.0	0.6	0.5	0.6	0.6	0.7	0.9	2.3
13-Apr	0.7	1.0	1.2	2.6	2.6	2.2	2.0	1.9	1.9	1.9	1.8	1.7	1.6	1.8	2.6	3.3	2.7	2.7	1.9	1.6	1.8	2.5	3.1	2.6	2.1	3.3
14-Apr	2.9	15.6	23.0	7.6	4.4	6.4	5.8	3.2	2.4	2.2	2.4	2.4	2.4	2.7	2.8	2.9	2.8	2.5	2.3	2.5	2.6	2.7	2.9	3.0	4.6	23.0
15-Apr	2.3	2.7	2.8	2.3	2.4	2.7	2.8	3.2	1.4	1.2	1.3	1.6	1.9	1.7	2.2	2.6	2.9	3.0	2.3	2.0	1.4	1.6	1.6	1.1	2.1	3.2
16-Apr	1.0	0.9	0.6	0.2	0.1	0.2	0.3	0.6	1.0	2.2	1.7	2.5	3.1	3.1	2.8	2.7	2.3	1.9	1.4	1.4	1.3	1.5	2.8	3.1	1.6	3.1
17-Apr	2.0	1.0	0.9	0.8	0.7	0.6	0.6	1.2	1.8	1.9	1.4	1.2	1.7	1.7	2.0	2.4	2.4	2.9	2.4	2.1	2.3	2.0	2.1	1.7	1.7	2.9
18-Apr	1.5	1.5	1.6	1.6	1.6	1.8	2.3	2.6	2.6	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.4	2.6	2.7	2.8	2.6	2.6	2.6	2.6	2.3	2.8
19-Apr	2.6	2.7	2.4	2.1	2.2	2.1	1.9	2.0	1.7	2.1	2.1	10.4	10.0	4.0	11.8	4.4	4.8	5.2	6.3	4.5	2.7	0.9	0.8	1.4	3.8	11.8
20-Apr	0.8	0.7	0.7	0.9	1.2	1.3	1.3	1.5	2.1	2.7	2.7	7.0	4.9	5.5	3.8	7.3	4.1	3.5	3.8	3.9	3.4	1.8	1.7	1.7	2.9	7.3
21-Apr	1.8	2.2	2.4	1.8	1.7	2.2	1.8	2.0	2.5	2.1	2.5	2.5	2.4	2.1	1.8	2.0	2.2	2.1	1.8	2.0	3.4	1.9	2.0	2.2	2.1	3.4
22-Apr	2.4	2.4	2.4	2.1	2.0	1.9	2.4	2.4	2.6	2.1	2.2	2.1	1.4	1.3	1.3	1.5	1.3	1.5	2.6	1.7	5.2	2.6	2.9	6.5	2.4	6.5
23-Apr	2.1	1.7	1.9	2.2	2.1	2.2	2.3	2.3	3.4	2.8	2.1	2.5	2.3	1.5	2.2	2.8	3.0	2.4	2.0	2.3	2.8	3.0	3.1	2.3	2.4	3.4
24-Apr	2.2	2.9	2.8	2.7	2.8	3.5	4.0	2.5	2.8	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.5	2.2	2.3	2.0	2.1	2.7	2.3	2.2	2.5	4.0
25-Apr	2.6	2.7	2.8	2.7	2.7	9.6	8.1	3.2	3.0	2.8	2.8	3.0	3.1	3.6	3.7	3.8	4.2	3.9	3.7	3.6	3.8	3.8	4.0	4.2	3.8	9.6
26-Apr	4.2	4.0	3.8	4.3	4.5	4.2	4.2	4.2	4.3	5.1	5.6	6.1	7.5	8.4	6.8	5.4	4.4	4.0	4.1	4.2	4.2	3.4	2.7	2.3	4.7	8.4
27-Apr	2.2	4.1	4.4	4.6	4.4	4.5	3.1	2.2	2.5	4.1	4.3	4.9	4.3	3.7	5.1	4.8	4.2	3.8	3.6	3.9	4.1	3.9	3.6	2.4	3.9	5.1
28-Apr	2.3	2.4	2.9	2.8	2.6	2.6	2.7	4.3	3.6	2.9	1.9	1.2	1.2	1.3	1.4	1.9	2.1	1.9	2.0	1.9	2.4	2.8	2.9	2.9	2.4	4.3
29-Apr	2.9	2.9	2.7	2.2	1.8	1.7	1.5	1.3	1.0	0.8	0.6	0.5	C	0.3	0.8	2.5	3.0	2.7	3.3	2.6	2.4	2.7	3.2	3.4	2.0	3.4
30-Apr	3.4	2.8	2.3	2.1	1.5	1.2	1.1	1.0	1.0	1.1	2.2	2.2	1.6	1.0	1.9	1.9	0.9	1.2	2.8	3.8	2.4	2.0	1.9	2.5	1.9	3.8
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Anzac - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	698	97.08	97.08
6 - 15	19	2.64	99.72
16 - 25	2	0.28	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Anzac - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	46	7	2	12	20	34	69	61	34	45	27	26	75	101	61	78	698
6 - 15	2	0	0	0	0	0	0	3	3	0	0	0	4	5	1	1	19
16 - 25	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	7	2	12	20	34	69	64	37	45	27	28	79	106	62	79	719

Total Number of Valid Hours: 719

Total Number of Hours: 720



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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

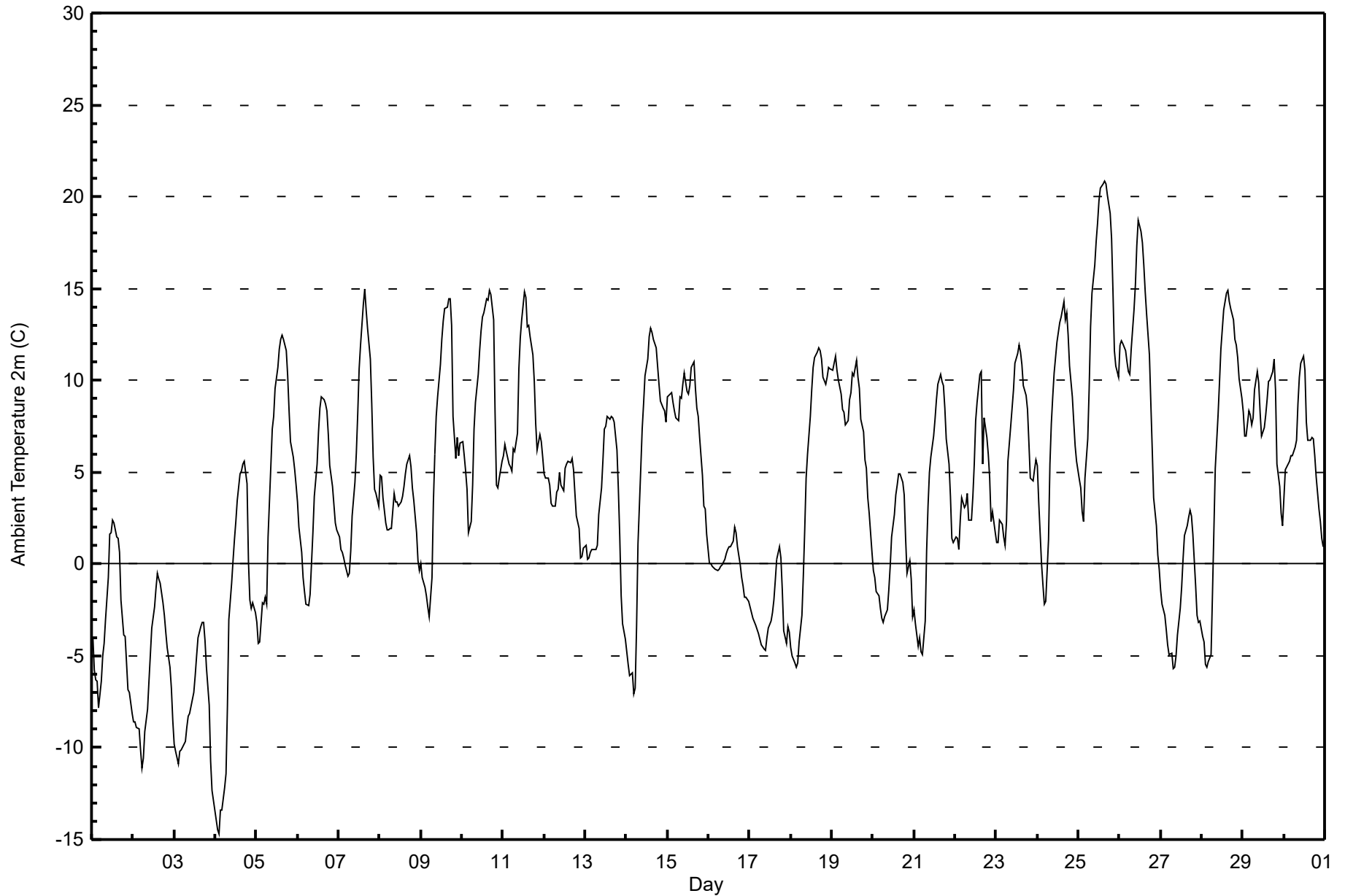
Anzac - April 2025

Maximum Value: 20.8 C on Apr 25 16:00																				Maximum Daily Average: 13.4 C on Apr 25					Hours in Service: 720	
Minimum Value: -14.7 C on Apr 4 03:00																				Minimum Daily Average: -7.9 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 8.8 C at hour 16																				Minimum Diurnal Average: -0.6 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 3.91 C																				Percentiles: P ₁ = -12.0 P ₁₀ = -4.7 Q ₁ = -0.7 Median = 4.3 Q ₃ = 9.0 P ₉₀ = 12.1 P ₉₉ = 18.7					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	-4.0	-5.8	-6.3	-6.4	-7.8	-6.4	-5.0	-4.3	-3.0	-0.7	1.6	1.7	2.4	2.2	1.4	1.4	0.6	-2.0	-3.9	-3.9	-5.4	-6.9	-7.0	-8.2	-3.2	2.4
2-Apr	-8.6	-8.6	-8.9	-9.0	-10.1	-11.1	-10.6	-9.1	-7.9	-6.4	-4.9	-3.5	-2.4	-1.4	-0.5	-0.8	-1.1	-2.1	-2.8	-3.7	-4.6	-5.6	-6.8	-8.5	-5.8	-0.5
3-Apr	-9.8	-10.2	-10.9	-10.2	-10.1	-10.0	-9.7	-8.9	-8.3	-8.1	-7.8	-7.0	-6.1	-5.0	-4.0	-3.4	-3.2	-3.2	-4.2	-5.6	-7.7	-10.7	-12.3	-12.8	-7.9	-3.2
4-Apr	-13.9	-14.5	-14.7	-13.4	-13.4	-12.2	-11.4	-7.8	-3.0	-1.1	0.2	1.3	2.3	3.5	4.9	5.1	5.4	5.6	4.3	0.2	-2.0	-2.4	-2.1	-2.6	-3.4	5.6
5-Apr	-3.1	-4.3	-4.2	-2.1	-2.2	-1.8	-2.2	1.5	5.4	7.3	8.0	9.6	10.7	11.7	12.2	12.5	12.2	11.6	10.2	8.4	6.7	5.8	5.1	4.3	5.1	12.5
6-Apr	3.4	2.0	0.6	-0.7	-1.5	-2.2	-2.3	-1.6	0.1	1.7	3.7	5.5	7.2	8.5	9.1	9.0	8.7	8.4	7.1	5.4	4.3	3.2	2.2	1.9	3.5	9.1
7-Apr	1.5	0.8	0.6	0.3	-0.1	-0.7	-0.5	0.7	2.6	4.5	6.0	8.2	10.6	11.9	14.1	15.0	13.8	12.8	11.2	8.7	5.8	4.1	3.9	3.2	5.8	15.0
8-Apr	4.9	4.8	3.6	2.3	1.8	1.8	1.9	2.0	3.8	3.4	3.4	3.1	3.4	3.7	4.2	4.9	5.4	5.9	5.3	4.2	3.4	1.7	0.2	-0.3	3.3	5.9
9-Apr	0.1	-0.8	-1.3	-1.8	-2.3	-2.9	-0.8	3.4	6.0	8.0	9.1	10.8	12.2	13.2	13.9	14.0	14.5	14.4	13.0	8.0	5.7	6.9	5.9	6.6	6.5	14.5
10-Apr	6.7	5.9	5.1	4.1	1.7	2.3	4.3	7.4	8.8	10.3	11.6	12.7	13.5	13.7	14.5	14.3	14.9	14.7	13.3	8.3	4.3	4.1	4.7	5.6	8.6	14.9
11-Apr	5.9	6.5	6.1	5.5	5.3	5.0	6.3	6.1	7.1	10.6	12.3	13.3	14.8	14.5	12.9	13.0	12.4	11.4	9.9	7.6	6.2	7.0	6.6	5.8	8.8	14.8
12-Apr	4.9	4.7	4.7	4.3	3.3	3.1	3.1	3.9	4.1	5.0	4.3	4.0	5.2	5.4	5.6	5.5	5.8	5.1	3.9	2.6	1.9	0.3	0.4	0.8	3.8	5.8
13-Apr	1.0	0.3	0.4	0.6	0.8	0.8	0.8	1.0	2.7	4.1	5.7	7.3	7.5	8.0	7.9	8.0	7.9	7.7	6.2	4.1	1.4	-1.7	-3.3	-4.1	3.1	8.0
14-Apr	-4.8	-5.5	-6.1	-5.9	-7.0	-6.8	-3.4	1.1	5.2	7.4	8.7	10.2	11.1	12.4	12.8	12.6	12.3	11.7	10.8	9.8	8.8	8.5	8.3	7.8	5.0	12.8
15-Apr	9.1	9.2	9.3	8.8	8.3	7.9	7.8	9.1	9.0	9.8	10.4	9.4	9.2	9.7	10.7	11.0	9.5	8.5	8.1	6.9	4.9	3.2	3.0	1.7	8.1	11.0
16-Apr	0.0	0.0	-0.1	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	0.3	0.5	0.8	0.9	0.9	1.3	2.0	1.7	0.9	0.0	-0.7	-1.2	-1.8	-1.8	-2.0	0.0	2.0
17-Apr	-2.3	-2.6	-2.9	-3.3	-3.6	-3.8	-4.1	-4.4	-4.6	-4.7	-4.0	-3.5	-3.1	-2.7	-2.0	-0.9	0.2	0.9	0.4	-1.5	-3.6	-4.3	-3.4	-3.7	-2.8	0.9
18-Apr	-4.5	-5.0	-5.4	-5.6	-5.4	-4.2	-2.8	-0.7	1.8	4.7	6.0	8.0	9.5	10.7	11.3	11.5	11.8	11.6	11.1	10.1	9.8	10.1	10.7	10.6	4.8	11.8
19-Apr	10.5	10.9	11.3	10.6	10.0	9.2	8.4	8.3	7.6	7.8	9.0	9.4	10.4	10.2	11.1	10.1	9.6	7.9	7.2	5.7	5.2	3.6	2.8	0.7	8.2	11.3
20-Apr	-0.4	-0.7	-1.5	-1.7	-2.4	-3.0	-3.2	-2.9	-2.5	-1.5	-0.2	1.5	2.7	3.7	4.3	4.9	4.9	4.5	3.8	1.4	-0.5	0.1	-0.8	-2.9	0.3	4.9
21-Apr	-2.5	-3.3	-4.5	-4.1	-4.7	-4.9	-3.1	0.7	3.2	5.0	5.8	7.0	7.9	9.0	9.8	10.3	9.9	9.7	8.5	6.8	5.4	3.7	1.4	1.2	3.3	10.3
22-Apr	1.5	1.4	0.8	2.4	3.6	3.1	3.3	3.8	2.4	2.4	3.7	5.5	7.8	8.8	10.3	10.5	5.5	7.9	6.9	6.0	4.7	2.3	2.8	1.7	4.5	10.5
23-Apr	1.1	1.2	2.4	2.1	1.5	1.0	2.3	5.6	7.5	8.5	9.5	11.0	11.5	11.9	11.6	10.9	9.7	9.2	8.4	6.6	4.7	4.5	5.1	5.7	6.4	11.9
24-Apr	5.4	3.4	0.0	-1.1	-2.2	-2.0	1.3	5.4	7.7	9.1	10.4	12.1	12.6	13.2	13.4	14.3	13.3	13.7	12.5	10.8	9.1	7.7	6.4	5.6	7.6	14.3
25-Apr	4.6	4.1	2.8	2.3	4.6	6.8	9.6	12.9	14.8	16.3	17.6	18.6	19.8	20.5	20.7	20.8	20.7	20.1	19.1	17.7	14.8	11.6	10.8	10.2	13.4	20.8
26-Apr	11.9	12.2	12.0	11.6	11.0	10.5	10.3	11.7	13.8	15.2	17.3	18.7	18.1	17.5	16.3	14.8	13.6	11.4	8.8	6.3	3.6	2.1	0.5	-0.3	11.2	18.7
27-Apr	-1.4	-2.2	-2.8	-3.6	-4.4	-5.0	-4.9	-5.7	-5.6	-5.0	-3.9	-2.4	-1.2	0.3	1.6	2.1	2.5	3.0	2.6	1.6	-1.2	-2.8	-3.2	-3.1	-1.9	3.0
28-Apr	-4.0	-4.2	-5.5	-5.6	-5.3	-4.9	-1.7	1.8	5.2	8.1	9.9	11.7	12.8	13.8	14.7	14.9	14.3	13.9	13.3	12.2	11.9	11.3	10.1	9.0	6.6	14.9
29-Apr	8.3	7.0	7.0	8.3	8.1	7.6	8.0	9.5	10.5	9.9	8.2	7.0	7.4	8.1	9.0	10.0	10.0	10.5	11.2	9.5	5.5	4.2	2.8	2.1	7.9	11.2
30-Apr	3.6	5.1	5.4	5.6	5.9	5.9	6.3	6.7	8.7	10.2	10.9	11.3	10.5	7.8	6.7	6.7	6.9	6.8	5.9	4.7	3.0	2.3	1.4	0.9	6.2	11.3
																									Diurnal Average	
																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Anzac - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	203	28.19	28.19
0 - 10	374	51.94	80.14
10 - 20	138	19.17	99.31
> 20	5	0.69	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) - %

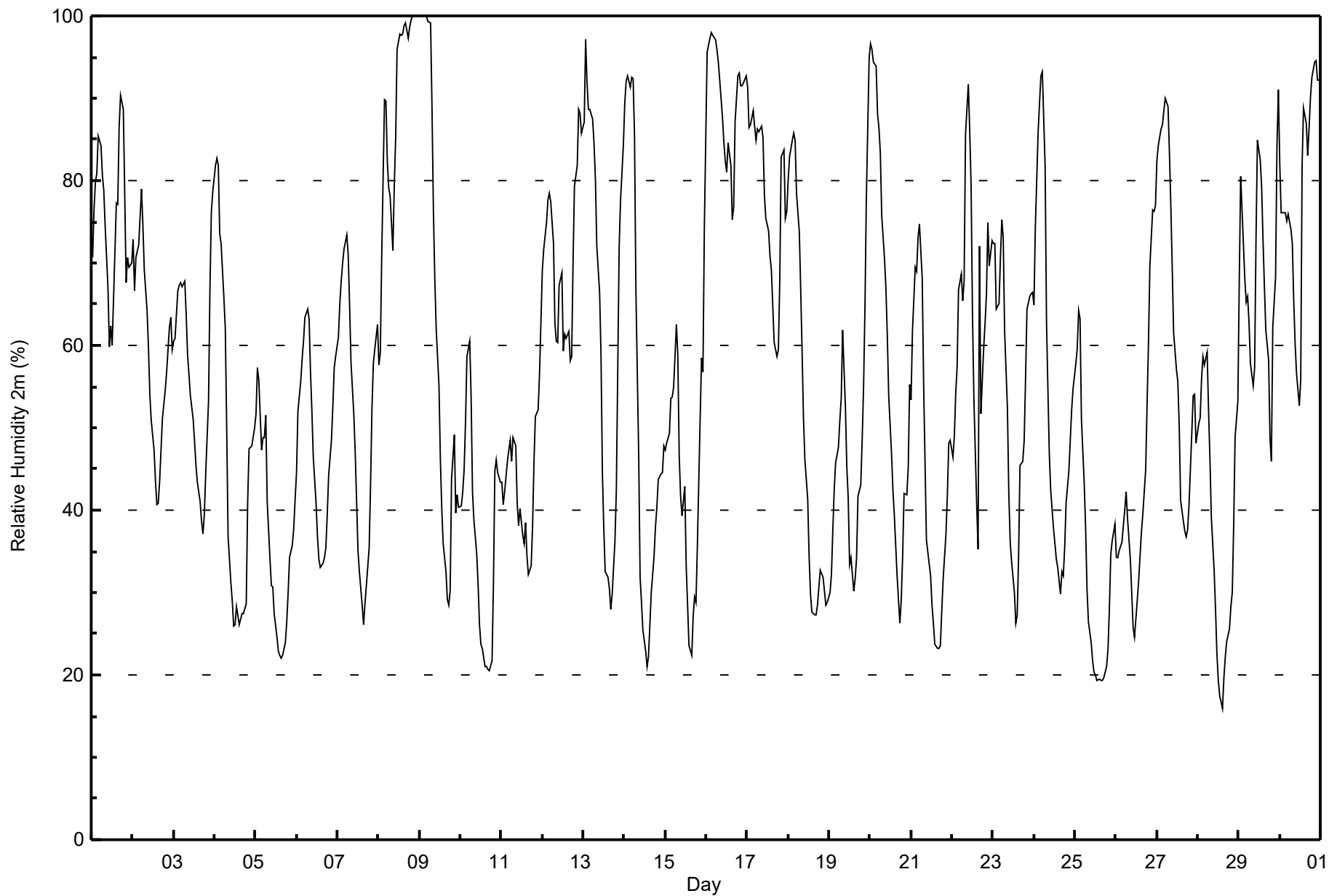
Anzac - April 2025

Maximum Value: 100.0 % on Apr 8 22:00																				Maximum Daily Average: 90.0 % on Apr 16					Hours in Service: 720	
Minimum Value: 15.9 % on Apr 28 15:00																				Minimum Daily Average: 33.2 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 72.4 % at hour 5																				Minimum Diurnal Average: 40.7 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 56.66 %																				Percentiles: P ₁ = 19.7 P ₁₀ = 28.4 Q ₁ = 37.8 Median = 55.2 Q ₃ = 74.5 P ₉₀ = 88.5 P ₉₉ = 100.0					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	70.7	76.5	79.8	80.9	85.4	84.3	80.6	78.8	74.5	67.0	59.8	62.4	60.1	65.8	77.3	77.1	86.6	90.4	88.7	78.4	67.7	70.7	69.5	70.1	75.1	90.4
2-Apr	72.9	66.6	70.8	72.2	75.6	79.0	74.6	69.2	64.2	59.6	53.9	50.9	47.3	43.5	40.8	40.9	43.5	51.2	52.8	54.6	56.9	62.2	63.4	59.5	59.4	79.0
3-Apr	60.6	60.9	66.5	67.2	67.6	67.2	67.8	63.7	58.7	56.5	53.9	51.0	48.3	45.4	43.3	41.0	38.6	37.1	39.4	44.6	53.3	66.7	76.0	78.6	56.4	78.6
4-Apr	81.9	82.8	81.9	73.6	72.4	65.8	62.0	50.1	36.8	31.1	28.9	25.9	26.1	28.3	26.1	26.7	27.5	27.5	28.7	40.9	47.5	47.6	47.9	50.0	46.6	82.8
5-Apr	51.7	57.4	55.8	47.3	48.7	48.7	51.6	41.1	34.0	30.9	30.7	27.5	24.6	23.0	22.3	22.1	22.4	23.9	26.5	29.9	34.3	35.8	37.8	41.3	36.2	57.4
6-Apr	44.6	52.1	55.6	58.4	60.5	63.4	64.5	63.2	56.8	52.1	46.4	40.9	36.9	34.0	33.1	33.6	34.3	35.4	39.5	44.3	48.4	52.5	57.3	58.6	48.6	64.5
7-Apr	61.0	65.1	67.8	70.0	71.7	73.3	71.1	64.9	57.9	51.7	47.1	41.2	35.1	32.5	28.5	26.1	28.6	30.9	35.4	43.0	52.3	57.8	59.5	62.5	51.5	73.3
8-Apr	57.6	59.1	70.9	89.8	89.6	82.4	79.1	78.2	71.6	79.5	85.2	95.9	97.8	97.6	97.8	98.8	99.1	97.2	98.6	99.5	100.0	100.0	100.0	100.0	88.6	100.0
9-Apr	100.0	100.0	100.0	100.0	100.0	99.2	99.1	88.8	76.4	68.1	62.0	55.1	46.2	40.2	35.9	32.5	29.2	28.5	30.2	43.7	49.1	39.7	41.8	40.3	62.7	100.0
10-Apr	40.4	42.2	44.9	50.7	58.6	60.5	53.8	42.2	38.8	34.7	31.0	26.1	23.7	23.2	21.0	21.0	20.7	20.6	21.6	31.1	44.8	46.1	44.6	43.5	36.9	60.5
11-Apr	43.4	40.7	42.2	45.9	47.3	48.4	46.0	48.8	47.7	40.8	38.2	40.1	37.0	36.0	38.4	34.4	32.1	33.2	38.0	45.8	51.4	52.2	56.5	62.9	43.6	62.9
12-Apr	69.1	71.7	74.9	77.6	78.5	77.5	72.3	62.6	60.6	60.3	67.3	68.9	59.2	61.3	60.9	61.6	58.2	58.6	70.1	79.3	81.9	88.7	88.2	85.8	70.6	88.7
13-Apr	87.2	97.1	91.8	88.7	88.7	87.5	84.6	80.1	72.0	66.4	59.1	44.5	37.8	32.5	31.8	30.5	27.9	29.9	36.2	42.6	57.1	71.9	77.7	84.2	62.8	97.1
14-Apr	89.4	92.0	92.7	91.3	92.5	92.4	85.4	66.6	46.7	31.9	28.8	25.5	23.0	21.0	22.3	26.1	30.0	34.3	38.0	40.4	43.7	44.4	44.6	47.9	52.1	92.7
15-Apr	47.3	48.1	49.3	53.5	53.8	54.9	62.6	58.8	46.6	41.6	39.3	42.9	33.3	28.4	23.6	22.4	27.1	29.5	28.9	35.7	51.1	58.5	56.8	74.2	44.5	74.2
16-Apr	95.5	96.4	97.3	98.0	97.6	97.2	96.0	94.4	92.1	87.7	84.6	82.4	81.0	84.5	81.9	75.2	76.8	87.1	92.7	93.0	91.5	91.5	91.8	92.7	90.0	98.0
17-Apr	91.3	86.5	86.8	88.5	86.6	84.9	86.3	85.9	86.6	85.2	78.4	75.4	73.9	70.9	69.1	64.8	60.3	58.7	59.5	67.8	83.0	83.7	75.4	76.3	77.7	91.3
18-Apr	79.9	82.9	85.0	85.7	84.9	78.6	73.7	66.8	59.1	51.0	46.0	41.3	34.4	29.7	27.7	27.3	27.4	28.5	30.7	32.7	31.9	30.2	28.4	28.8	49.7	85.7
19-Apr	30.0	32.2	37.7	42.6	45.7	47.7	50.9	53.6	61.9	52.5	45.3	41.5	33.3	34.2	30.2	31.7	34.2	41.7	43.1	48.5	54.9	64.6	78.0	94.9	47.1	94.9
20-Apr	96.6	96.0	94.4	93.9	88.2	86.5	83.5	75.8	70.4	66.9	61.1	53.8	47.0	42.6	39.4	35.7	32.0	26.2	29.2	34.6	42.0	41.9	45.3	55.2	59.9	96.6
21-Apr	53.4	61.7	69.4	69.0	73.0	74.8	68.1	55.4	45.9	36.5	35.0	32.0	28.4	26.3	23.7	23.2	23.2	23.5	27.7	31.6	37.2	41.8	48.1	48.4	44.0	74.8
22-Apr	46.4	49.0	54.3	57.4	66.7	68.6	65.4	67.8	85.7	91.7	86.1	79.3	63.6	53.6	40.7	35.3	72.1	51.6	59.6	62.7	66.3	74.9	69.6	72.7	64.2	91.7
23-Apr	72.4	72.4	64.4	65.0	70.7	75.2	73.0	61.7	52.3	42.1	36.1	33.8	30.0	26.2	27.3	34.4	45.4	46.0	48.4	56.1	64.4	65.9	66.2	66.4	54.0	75.2
24-Apr	65.0	74.4	85.9	89.5	92.7	93.2	81.8	62.7	54.6	46.7	42.4	37.8	36.0	34.0	33.0	29.9	32.5	32.0	35.5	40.9	44.8	48.6	52.2	54.7	54.2	93.2
25-Apr	57.8	59.7	64.3	63.2	51.0	43.1	37.7	30.4	26.4	23.9	21.6	20.3	20.0	19.3	19.4	19.3	19.4	19.7	21.0	23.0	28.0	34.5	36.3	38.3	33.2	64.3
26-Apr	34.3	34.2	35.1	36.1	38.1	40.0	42.2	39.0	34.1	30.0	25.8	24.6	29.1	31.6	34.6	37.4	39.7	44.9	53.0	60.3	69.6	76.4	76.3	76.9	43.5	76.9
27-Apr	82.4	84.3	86.3	86.8	88.5	90.0	89.0	83.4	76.9	69.5	61.5	57.1	55.6	50.3	41.2	38.7	37.4	36.8	37.6	40.6	49.4	54.0	54.1	48.2	62.5	90.0
28-Apr	50.5	51.1	55.9	58.7	57.6	59.2	52.2	46.3	39.1	32.8	28.0	22.5	19.4	17.5	15.9	19.7	22.2	24.1	25.5	28.3	30.1	38.2	48.9	53.2	37.4	59.2
29-Apr	67.7	80.5	76.4	67.9	65.2	65.9	62.7	57.8	55.0	57.3	73.1	84.9	82.6	79.3	72.9	67.0	61.8	58.3	48.8	46.0	62.1	68.2	84.3	91.1	68.2	91.1
30-Apr	82.1	76.0	76.2	76.0	75.1	75.9	74.1	72.4	65.3	60.2	56.6	52.7	55.7	81.9	88.8	87.0	83.1	86.4	90.1	92.5	94.4	94.6	92.2	92.3	78.4	94.6
66.1 68.3 70.5 71.5 72.4 72.2 69.7 63.7 58.3 53.5 50.4 47.9 44.2 43.2 41.6 40.7 42.4 43.1 45.8 50.4 56.3 60.1 62.3 65.0																										Diurnal Average
100.0 100.0 100.0 100.0 100.0 99.2 99.1 94.4 92.1 91.7 86.1 95.9 97.8 97.6 97.8 98.8 99.1 97.2 98.6 99.5 100.0 100.0 100.0 100.0																										Diurnal Maximum



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Anzac - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	10	1.39	1.39
20 - 40	190	26.39	27.78
40 - 60	209	29.03	56.81
60 - 80	177	24.58	81.39
80 - 100	126	17.50	98.89

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

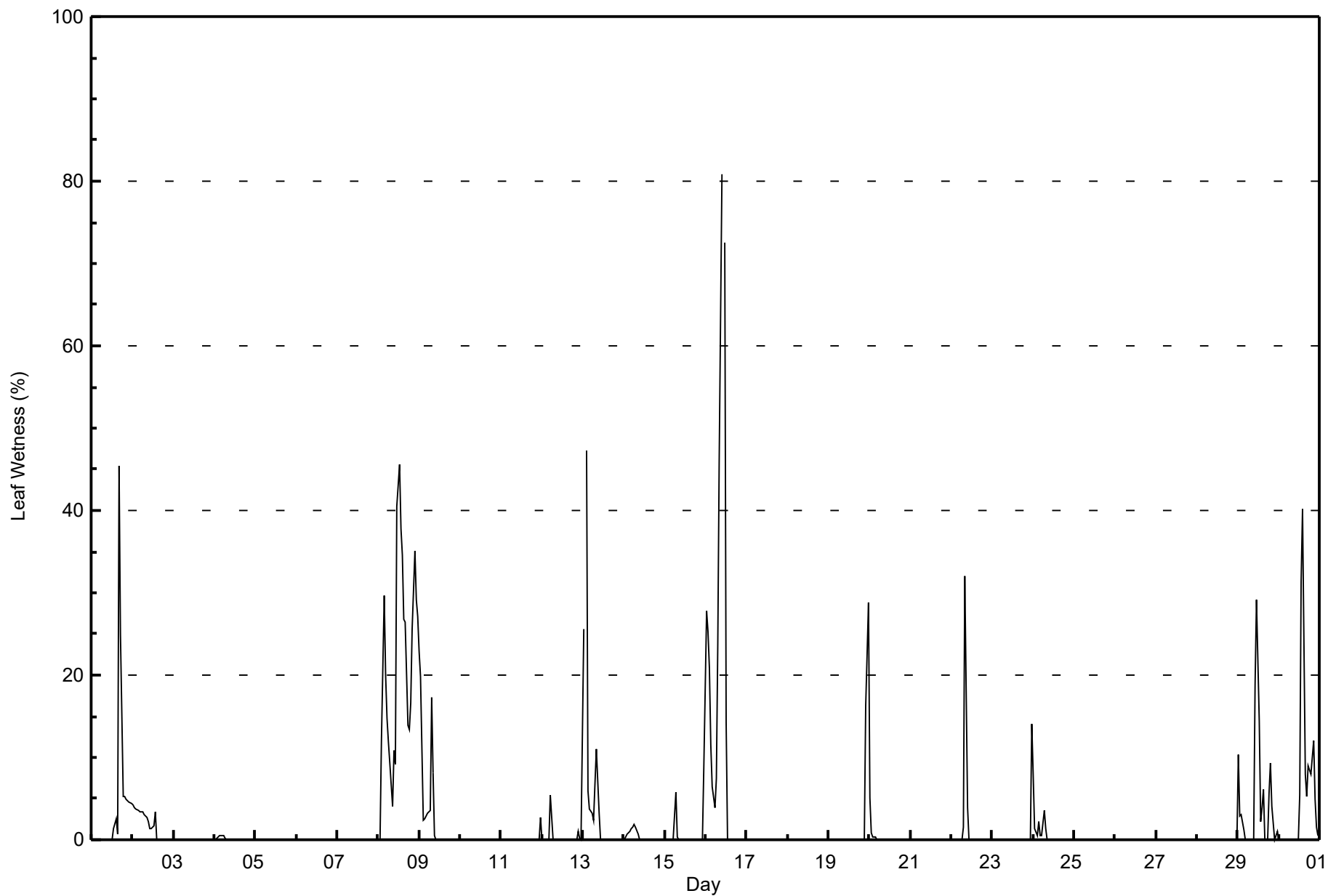
Anzac - April 2025

Maximum Value: 80.9 % on Apr 16 10:00																			Maximum Daily Average: 20.6 % on Apr 8																			Hours in Service: 720	
Minimum Value: 0.0 % on Apr 1 01:00																			Minimum Daily Average: 0.0 % on Apr 3																			Hours of Data: 718	
Maximum Diurnal Average: 4.8 % at hour 12																			Minimum Diurnal Average: 1.0 % at hour 11																			Hours of Missing Data: 2	
Monthly Average: 2.19 %																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 4.8 P ₉₉ = 39.7																			Hours of Calibration: 0	
																																						Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	0.0	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	2.6	0.7	45.4	24.9	5.3	5.2	4.9	4.7	4.6	4.4	4.3	45.4													
2-Apr	4.2	4.0	3.7	3.5	3.4	3.4	3.4	3.1	2.7	2.2	1.4	1.3	1.6	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.2													
3-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.1	0.3	0.5	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5													
5-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	12.1	29.6	20.0	14.7	11.8	9.3	4.1	10.9	9.2	40.4	45.7	37.8	34.6	26.8	26.4	13.8	13.4	16.6	25.5	35.1	29.1	27.2	20.6	45.7													
9-Apr	22.9	19.8	2.3	2.5	2.9	3.2	3.5	17.3	8.1	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	3.5	22.9													
10-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	2.7													
12-Apr	0.0	0.0	0.0	0.0	0.0	5.4	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	1.0	0.2	0.0	0.3	5.4													
13-Apr	25.6	OR	47.2	6.0	3.7	3.2	2.4	6.7	11.1	3.2	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	4.7	47.2													
14-Apr	0.0	0.3	0.7	1.0	1.3	1.6	1.8	1.5	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	0.0	0.4	1.8													
15-Apr	0.0	0.0	0.0	0.0	0.0	0.0	5.8	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	8.8	0.6	8.8														
16-Apr	27.8	25.3	20.8	11.5	6.4	4.0	7.4	23.5	45.7	80.9	OR	72.6	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.8	80.9													
17-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	28.9	1.9	28.9													
20-Apr	5.2	0.8	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	5.2													
21-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	32.1	3.9	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	1.6	32.1													
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.6	14.0														
24-Apr	7.9	1.4	0.4	2.1	0.5	0.5	3.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.9													
25-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	10.3	2.9	3.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	18.9	29.1	14.4	2.3	3.8	6.1	0.0	0.0	5.6	9.3	4.0	0.0	0.5	1.1	4.7	29.1													
30-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	31.4	40.1	8.0	5.3	9.1	8.6	8.0	12.1	4.9	1.5	0.6	5.6	40.1													
3.5 1.9 3.0 1.9 1.3 1.2 1.3 2.2 3.5 3.4 1.0 4.8 2.7 2.5 2.7 1.4 2.6 1.6 1.1 1.3 1.6 1.5 1.7 2.9																									Diurnal Average														
27.8 25.3 47.2 29.6 20.0 14.7 11.8 23.5 45.7 80.9 18.9 72.6 45.7 37.8 40.1 26.8 45.4 24.9 13.4 16.6 25.5 35.1 29.1 28.9																									Diurnal Maximum														
OR - Out of Range																																							



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Anzac - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	580	80.78	80.78
0.4 - 0.5	9	1.25	82.03
0.6 - 0.7	5	0.70	82.73
0.8 - 1.4	11	1.53	84.26
1.5 - 10	65	9.05	93.31
> 10	47	6.55	99.86

Total Number of Valid Hours: 718

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Anzac - April 2025

Maximum Speed: 30 km/h on Apr 15 11:00														Maximum Daily Speed Average: 19.6 km/h on Apr 16														Hours in Service: 720	
Minimum Speed Value: 0 km/h on Apr 24 12:00														Minimum Daily Speed Average: 1.0 km/h on Apr 8														Hours of Data: 720	
Maximum Diurnal Speed Average: 7.9 km/h at hour 14														Minimum Diurnal Speed Average: 1.1 km/h at hour 21														Hours of Missing Data: 0	
Monthly Average Velocity: 4.0 km/h 276.3 deg														Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 12 Q ₃ = 17 P ₉₀ = 21 P ₉₉ = 27														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	SSE13	SE10	SE10	SE10	SE8	SE10	SSE13	SSE13	SSE12	SE13	SSE16	SSE16	S13	SSW10	SSW9	SW10	WSW9	NW20	NW22	NW21	NW20	NW11	NW12	WNW10	SSW3.6	NW22			
2-Apr	WNW13	NW14	WNW9	WNW10	WNW12	WNW15	WNW16	WNW19	WNW19	WNW17	NW21	NW20	NW19	NW20	NW19	NNW17	N18	N17	N18	N17	NNW10	NW10	NNW14	N16	NW14.2	NW21			
3-Apr	N12	NW12	NW9	NW14	NW14	NW15	NW14	NW21	NW24	NW24	NNW26	NNW22	NNW23	NNW21	NNW15	NNW17	NNW17	NNW18	NNW16	NNW11	NNW9	WNW6	W8	W8	NNW15.1	NNW26			
4-Apr	W8	W8	WSW7	WSW8	WSW8	SW8	SW7	SW5	SW4	WNW8	W8	WNW6	N6	NNW11	WNW11	N11	N7	N6	E6	ESE7	SE8	S9	S11	S11	WSW3.0	WNW11			
5-Apr	S11	SSW7	SW7	SW8	SSW7	SSW7	SW2	ESE3	SSE4	ESE6	E8	E9	ENE9	ENE8	ENE8	ENE9	ENE8	ENE9	E7	E10	ESE11	ESE11	SE11	ESE13	ESE5.1	ESE13			
6-Apr	ESE14	ESE15	ESE15	ESE15	SE13	SE13	SE15	SE16	SE19	SE20	SE20	SE20	SE19	SE18	SE19	ESE20	SE20	SE20	SE17	SE18	SE18	SE20	SSE18	SE19	SE17.3	SE20			
7-Apr	SSE20	SE17	SE17	SE17	SE17	SE16	SE19	SE19	SE21	SE20	SE19	SE18	SE19	ESE18	ESE17	SE18	SSE16	SE13	SSE11	WSW5	ENE1	SE6	SE7	SSE6	SE14.3	SE21			
8-Apr	SSE8	SSE6	ESE3	ESE7	E7	SE6	SE1	ENE7	SE2	NNE2	NNW4	WNW8	WNW7	NW10	NW11	NNW7	N10	NNW7	N4	SSW2	WSW4	WSW3	SE2	SSE3	NNW1.0	NW11			
9-Apr	S4	S2	NW2	SSW4	S3	SSW5	W8	WNW10	WNW11	WNW13	WNW13	WNW11	NW13	NW12	WNW8	WNW9	WNW8	NW7	WNW4	SW4	WSW8	WSW9	W10	W8	W6.6	WNW13			
10-Apr	W9	W9	W8	W8	WSW9	W11	W10	WNW11	WNW10	WNW12	WNW13	W15	W15	W15	WNW14	WNW13	W9	WNW6	N2	ESE5	SSE7	SE8	SE8	SE9	W6.8	W15			
11-Apr	SE10	ESE13	SE11	SSE11	SSE8	SSE9	ESE11	SE3	SE10	SW4	WNW11	NW14	WNW11	WNW17	W18	W21	WNW25	W23	W17	W10	WSW10	W15	W12	W10	W6.5	WNW25			
12-Apr	W10	WNW17	WNW17	WNW12	WNW12	W13	WNW8	W12	W16	WNW18	WNW18	W16	W17	WNW19	WNW19	WNW18	NW20	NW21	NNW20	NNW17	WNW7	WNW7	W8	WNW8	WNW14.0	NW21			
13-Apr	NW9	W7	W8	WNW11	WNW12	WNW13	WNW16	WNW15	WNW14	NW15	NW15	NW17	N17	NNW17	NNW19	N21	NNW21	N18	N17	N11	N6	NW3	N4	N2	NW11.2	NNW21			
14-Apr	WSW5	WSW4	WSW3	S4	SSE3	SSE6	SSE5	SSE5	SSE4	SSE3	S4	ESE2	NNE2	SSW11	SSW16	SSW15	SSW15	SW13	SSE8	SSE10	SSE10	SSE11	SSE13	S13	S6.4	SSW16			
15-Apr	S13	SSW13	SW16	SW9	SW10	SW11	WSW12	WSW13	W27	W27	W30	W29	W25	W23	W24	W25	W25	WNW20	WNW22	NW17	NW25	WNW19	WNW24	WNW29	W18.2	W30			
16-Apr	W23	W24	WNW22	WNW21	WNW21	NW22	WNW22	NW23	NW24	NW26	NW27	NNW26	NNW25	NNW24	NNW20	NNW23	N18	NNW19	NNW17	NNW18	NNW18	NNW17	NNW13	NNW14	NW19.6	NW27			
17-Apr	NNW17	NNW19	NNW16	NNW17	NNW17	NNW17	NNW19	NNW24	N20	N20	N22	NNW22	NNW20	N17	NNW15	NNW15	NNW7	WNW7	N7	ENE5	E4	ESE6	SSE10	SE12	NNW12.0	NNW24			
18-Apr	SSE13	SSE12	SSE13	SSE14	SSE12	SSE12	SSE10	SSE15	SSE18	SSE19	S25	S23	S26	SSW21	S25	S23	SSW22	S20	S19	SSE20	S24	S25	SSW27	SSW25	S18.5	SSW27			
19-Apr	SSW23	SW18	W21	W19	W18	W17	W16	WNW16	WNW17	W18	WNW19	WNW20	WNW22	WNW18	WNW20	WNW21	W20	W13	WNW11	WNW16	WNW11	NW12	NNW16	W16.0	SSW23				
20-Apr	NNW10	NNW9	NNW11	NNW8	N12	NNW10	N11	N10	N12	NNW12	NW10	W13	W13	W14	WSW13	W10	NNW6	NNW8	NNE3	E4	E8	E10	E9	ESE6	NNW5.7	W14			
21-Apr	ESE10	SE8	ESE9	ESE10	ESE11	SSE8	SSE10	SE9	SSE10	SE12	SSE11	SSW7	SE5	SE8	ESE7	SE10	ESE9	SE8	ESE12	SE12	SSE14	SSE10	SSE6	SSE12	SE8.9	SSE14			
22-Apr	SSE13	S11	SSW6	WSW9	W8	ESE6	E4	WNW5	WNW5	WSW3	SSE4	S8	SW7	WNW6	WSW8	W16	NW18	W7	W4	S7	SSE6	S5	WSW4	SSE6	SW3.9	NW18			
23-Apr	NW5	W7	WNW9	WNW12	WNW10	WNW8	NW8	NW7	N7	NNE6	NNW7	W6	WNW7	NW7	N11	NNW18	NE14	ENE11	E4	WNW2	NW5	WNW5	W5	SSE8	NW4.7	NNW18			
24-Apr	SE7	SSW4	NNW4	WNW5	WNW6	N4	E3	SE7	SE7	E8	ENE6	SSW0	WNW8	W9	W8	W5	SW6	E5	E8	E9	ESE11	SE9	SSE11	SSE12	SE2.2	SSE12			
25-Apr	SSE12	SSE12	S11	S11	S13	S13	S13	SW19	SW24	SSW23	S24	SSW27	SSW25	SSW26	SW27	SW26	SSW23	SSW21	SSW15	SSW14	SSW10	SSW10	S13	SSW12	SSW17.0	SSW27			
26-Apr	SSW17	SW17	SW14	SW14	WSW13	SW7	S3	NW0	W8	WNW14	WNW14	NW16	N20	N23	NNW25	NNW25	N25	NNW25	NNW25	N21	N16	N16	N13	NNW10	NW10.1	NNW25			
27-Apr	NW10	NW9	NW11	NNW14	NNW15	NNW18	N18	N19	NNW18	NNW19	NNW18	WNW17	W15	NW12	NNW12	N9	N7	NNE6	NE7	ENE6	ESE7	E8	E10	NNW9.4	NNW19				
28-Apr	ESE10	SE11	SE8	SSE11	SE11	SSE9	SE6	SE7	SE9	SE10	SSE12	SSW13	SW15	SSW16	SSW20	SSW18	SSW18	S15	S13	SSW15	SSW14	SSW11	S6	S10.5	SSW20				
29-Apr	SW11	S8	SSW8	WSW15	W17	W15	WNW16	W15	WNW17	WNW20	WNW20	WNW18	WNW19	WNW21	NW18	NW21	WNW14	W11	N11	NNW9	W6	W6	W7	WSW6	WNW11.7	NNW21			
30-Apr	WSW7	WSW9	WSW8	W9	W14	WNW15	WNW16	WNW17	WNW15	WNW16	NW17	NW14	NNW14	WSW9	NNW9	N14	N7	NW10	NW15	NNW16	N16	N14	NNE10	NNE8	NW10.0	WNW17			
SSW4.1 SW3.7WSW3.7WSW4.2WSW4.4WSW3.9 W3.2 W4.2 W5.1WNW5.5WNW6.1WNW7.1WNW7.2WNW7.9WNW7.2WNW7.0WNW5.9 NW5.1NNW3.8NNW2.2WNW1.1 SW2.1 SW2.5SSW2.7																										Diurnal Average			
W23 W24WNW22WNW21WNW21 NW22WNW22NNW24 W27 W27 W30 W29 S26 SSW26 SSW27 SW26WNW25NNW25 NNW25 N21 NW25 S25 SSW27WNW29																										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

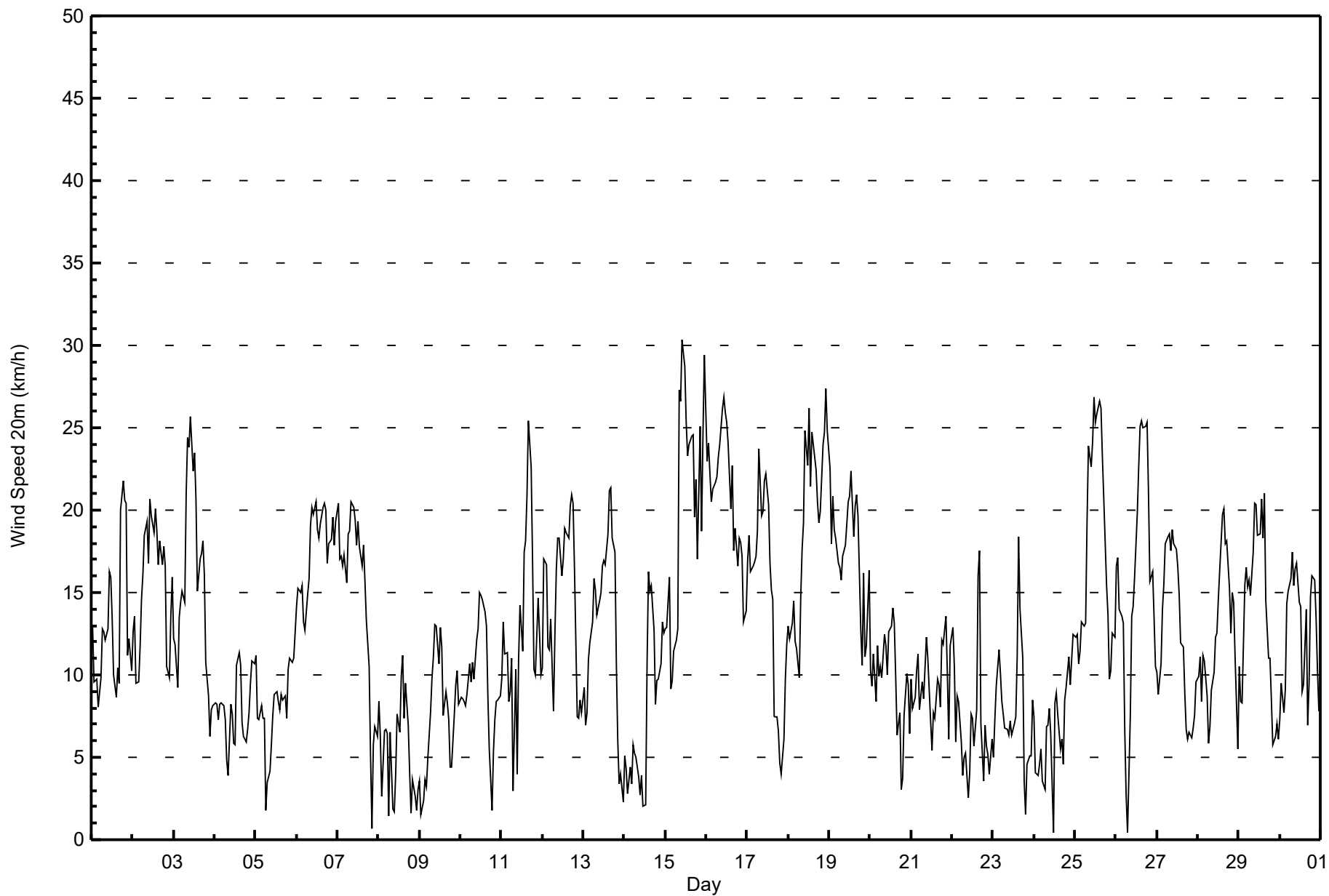
Anzac - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 16 00:00																	Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 1 km/h on Apr 20 20:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	2	2	2	1	2	2	2	2	3	4	3	3	3	3	3	3	6	5	5	6	3	3	3	6
2-Apr	3	3	2	2	2	4	4	4	5	4	5	6	5	5	6	3	4	4	3	4	2	2	2	3	6
3-Apr	3	3	2	3	3	3	3	6	5	5	6	5	6	5	4	4	5	4	4	2	1	1	1	1	6
4-Apr	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	2	2	1	1	1	2	1	1	3
5-Apr	1	2	1	1	1	1	2	1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	2	2	3
6-Apr	3	4	3	3	3	3	3	4	4	4	5	5	4	5	4	4	5	5	4	4	4	4	4	4	5
7-Apr	4	4	3	3	3	3	4	4	4	5	4	5	5	4	4	4	4	3	2	2	2	1	1	1	5
8-Apr	2	1	3	2	2	2	1	2	2	1	2	2	1	3	3	2	2	2	2	3	3	1	1	1	3
9-Apr	1	1	2	1	1	1	1	2	2	3	3	3	4	4	2	3	2	2	1	1	2	2	2	2	4
10-Apr	2	2	2	2	1	1	1	2	2	2	3	4	4	4	4	3	4	3	1	1	2	2	2	1	4
11-Apr	3	5	3	2	2	2	2	3	3	2	4	4	4	4	5	6	7	6	5	4	2	4	3	3	7
12-Apr	3	6	4	3	3	4	3	4	5	5	5	5	5	5	5	5	6	5	5	4	3	1	1	1	6
13-Apr	3	2	2	3	4	3	4	3	3	4	4	5	5	5	5	6	5	5	4	2	2	1	1	1	6
14-Apr	1	1	1	1	2	1	1	1	1	2	2	3	3	4	5	5	5	5	2	2	1	2	2	2	5
15-Apr	3	3	4	4	3	3	4	6	8	7	9	8	7	7	7	7	7	6	6	7	7	6	8	9	9
16-Apr	6	7	5	5	6	6	6	6	6	6	7	6	7	6	5	5	4	4	3	4	5	4	3	3	7
17-Apr	4	4	3	3	4	4	5	7	5	4	5	5	4	4	3	4	3	2	2	1	1	1	2	2	7
18-Apr	2	2	2	3	2	3	3	3	4	4	5	5	7	7	7	7	6	5	4	4	5	6	8	7	8
19-Apr	6	5	5	5	4	4	4	4	5	5	5	5	6	5	5	6	7	6	5	4	4	3	4	3	7
20-Apr	5	3	3	3	3	3	3	3	3	4	4	3	4	4	3	3	3	3	2	1	3	2	2	1	5
21-Apr	2	2	1	2	2	2	2	2	2	3	3	3	4	4	4	5	4	3	4	2	3	3	3	2	5
22-Apr	2	2	2	2	3	2	3	2	3	1	2	3	4	2	5	8	8	3	1	2	1	2	3	3	8
23-Apr	3	2	2	2	1	1	1	2	3	2	3	3	3	3	4	6	5	4	2	2	2	4	2	2	6
24-Apr	2	2	2	2	1	1	1	2	2	3	3	3	3	3	3	3	3	2	3	2	2	2	2	1	3
25-Apr	1	2	1	1	2	1	3	7	7	7	8	8	8	8	8	8	8	7	5	4	2	1	2	2	8
26-Apr	4	4	4	5	4	3	2	2	2	3	3	5	4	5	5	6	6	6	6	5	3	4	3	2	6
27-Apr	3	2	2	3	3	4	4	4	4	4	5	5	4	4	4	4	3	3	2	2	1	1	3	2	5
28-Apr	1	2	1	2	2	2	2	1	2	3	4	5	5	6	6	7	5	6	4	2	6	6	6	1	7
29-Apr	5	2	3	6	4	4	4	4	5	5	5	5	5	5	5	7	3	3	5	3	1	1	1	1	7
30-Apr	1	2	1	2	4	3	4	4	4	4	4	4	5	3	4	4	2	3	4	4	4	3	2	2	5
6 7 5 6 6 6 6 7 8 7 9 8 8 8 8 8 8 8 7 6 7 7 6 8 9																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Anzac - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Anzac - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	74	10.28	10.28
6 - 11	274	38.06	48.33
12 - 19	259	35.97	84.31
20 - 28	110	15.28	99.58
29 - 38	3	0.42	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 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	3	0	2	6	4	5	8	7	5	5	8	3	6	5	2	74
6 - 11	15	4	1	10	14	18	31	28	11	12	12	15	34	35	15	19	274
12 - 19	21	0	1	0	0	10	27	25	10	14	8	5	27	49	24	38	259
20 - 28	7	0	0	0	0	2	6	3	9	14	2	0	13	16	18	20	110
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	7	2	12	20	34	69	64	37	45	27	28	79	107	62	79	720

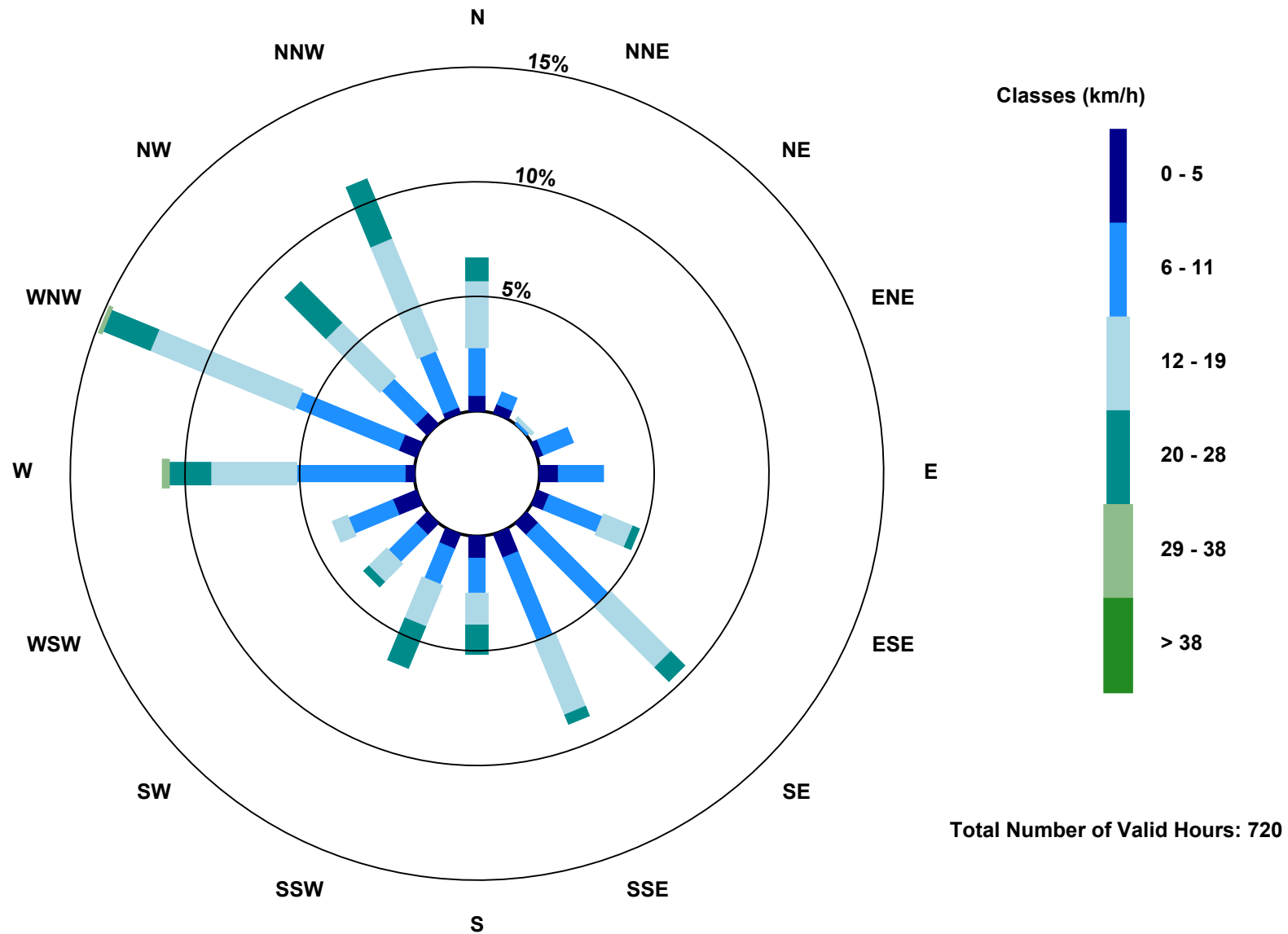
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Anzac - April 2025

Direction of Maximum Speed: 265 deg on Apr 15 11:00																					Hours in Service:		720		
Direction of Maximum Daily Speed Average: 319.5 deg on Apr 16																					Hours of Data:		720		
Direction of Minimum Speed: 197 deg on Apr 24 12:00										Direction of Minimum Daily Speed Average: 1.0 deg on Apr 8											Hours of Missing Data:		0		
Monthly Average Direction: 276.3 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	151	131	143	143	139	144	148	148	149	142	150	156	181	205	204	217	255	309	323	318	310	308	314	292	200.5
2-Apr	291	320	287	286	295	296	296	292	291	289	311	313	317	319	318	346	349	6	356	350	330	310	347	357	319.3
3-Apr	351	326	312	313	313	316	313	318	323	325	327	328	336	334	333	335	345	345	347	347	344	298	280	266	327.1
4-Apr	265	260	257	249	244	229	216	214	231	289	278	302	5	338	298	1	355	2	79	118	146	175	173	174	257.4
5-Apr	181	205	221	217	212	210	234	108	154	111	82	100	74	76	77	67	69	63	91	91	116	122	124	119	117.5
6-Apr	120	120	116	120	129	126	125	135	142	140	138	135	137	134	124	118	124	127	126	126	137	146	153	145	131.5
7-Apr	149	145	142	136	142	137	136	138	139	139	140	135	134	122	118	144	153	137	162	246	73	125	127	151	139.4
8-Apr	154	153	107	107	94	146	135	62	137	12	341	302	284	306	321	335	357	346	349	197	241	249	139	167	346.3
9-Apr	176	180	309	212	184	210	264	288	282	288	286	302	306	310	290	293	297	305	283	236	239	248	259	279	278.3
10-Apr	271	268	268	271	250	266	267	284	291	291	290	279	280	281	285	288	267	287	359	108	151	135	135	139	270.7
11-Apr	141	107	132	149	155	154	122	146	136	229	292	310	284	290	276	277	285	275	268	274	258	273	277	278	260.4
12-Apr	278	283	293	293	286	281	303	269	280	283	290	277	273	287	292	291	307	324	331	327	302	282	279	290	293.0
13-Apr	305	278	280	284	285	286	295	289	288	309	321	326	352	334	347	353	345	354	357	356	4	306	359	353	324.6
14-Apr	252	249	252	175	157	152	155	154	164	168	182	116	16	209	212	210	205	222	166	154	153	153	156	173	184.8
15-Apr	189	206	227	236	229	217	240	238	260	260	265	269	274	277	277	272	273	283	295	307	316	289	284	284	268.6
16-Apr	272	280	293	296	300	304	301	305	309	314	321	329	331	336	338	348	350	346	348	341	338	336	329	332	319.5
17-Apr	339	346	342	344	346	346	344	346	352	353	349	346	345	351	328	336	337	295	11	63	100	117	147	146	348.2
18-Apr	149	149	151	159	167	167	150	163	166	167	175	177	186	195	189	190	199	189	177	168	171	177	201	209	178.3
19-Apr	212	229	262	263	263	264	277	293	291	278	287	288	285	286	284	297	291	280	271	290	303	291	311	345	279.9
20-Apr	340	335	338	328	352	344	349	355	353	343	308	281	272	267	258	270	335	341	18	82	80	94	95	113	331.1
21-Apr	114	144	109	108	113	147	156	139	153	145	150	202	146	131	117	130	115	129	116	124	148	151	149	153	135.9
22-Apr	162	171	207	255	277	105	79	283	282	256	168	191	228	300	255	270	307	274	261	170	154	170	242	167	231.6
23-Apr	310	274	291	288	286	297	308	312	351	32	345	279	293	305	2	348	53	77	95	298	316	289	264	156	323.8
24-Apr	143	194	332	302	298	350	99	144	137	87	73	197	282	261	263	266	229	86	81	93	113	140	154	160	145.0
25-Apr	158	157	170	178	186	179	179	215	216	209	190	200	205	211	214	217	209	205	201	213	203	200	186	198	199.9
26-Apr	212	214	219	229	242	229	184	317	278	290	287	314	357	353	347	347	356	347	342	353	2	7	359	330	325.9
27-Apr	321	317	324	328	336	346	352	353	347	334	330	303	282	272	324	348	2	6	14	45	78	104	100	99	338.8
28-Apr	104	124	141	148	145	150	138	129	146	141	154	200	224	207	198	206	212	197	190	177	209	208	206	171	181.1
29-Apr	227	171	196	254	268	278	282	277	284	295	296	283	289	291	310	326	302	281	358	334	275	280	279	246	285.7
30-Apr	237	250	253	270	281	285	294	291	292	291	314	319	332	249	333	6	9	319	325	346	350	358	15	12	313.0
206.5 221.0 244.6 248.1 258.6 258.0 273.7 279.4 272.2 282.3 286.3 281.7 287.2 285.9 288.0 300.7 303.3 308.0 330.8 343.4 282.5 219.6 224.0 207.2																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

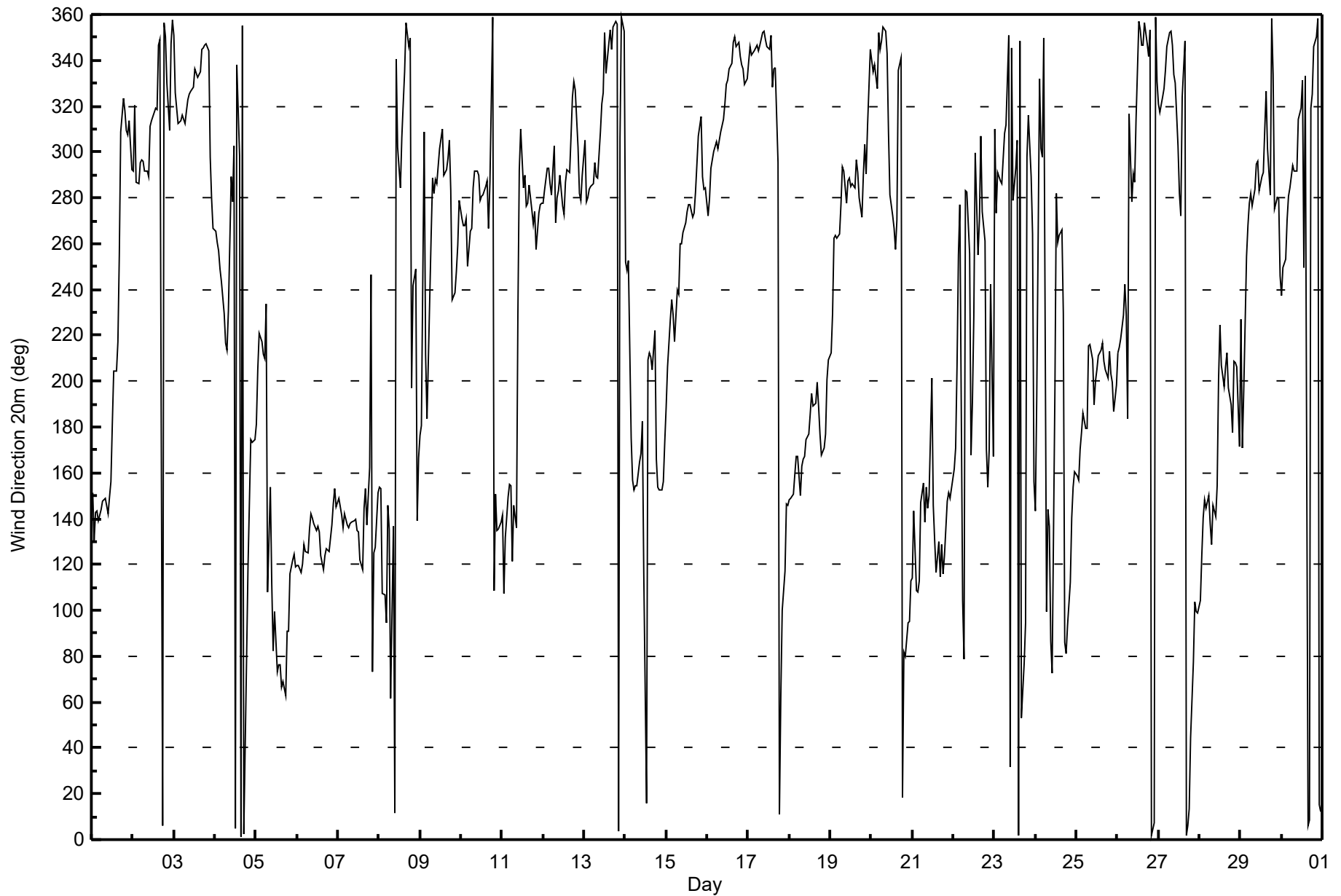
Anzac - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 109 deg on Apr 26 08:00																									Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0
Minimum Value: 3 deg on Apr 5 01:00																									
Percentiles: P ₁ = 6 P ₁₀ = 11 Q ₁ = 14 Median = 17 Q ₃ = 22 P ₉₀ = 37 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	11	13	13	12	12	12	10	10	11	15	14	14	18	22	21	26	20	18	13	13	14	14	13	19	26
2-Apr	16	12	18	18	14	13	15	15	15	16	19	19	18	19	22	20	16	15	14	14	12	13	16	14	22
3-Apr	13	17	14	14	15	12	14	15	15	13	15	17	18	19	24	17	19	16	14	9	8	19	9	7	24
4-Apr	6	7	7	5	6	9	11	11	36	23	26	39	49	23	20	27	31	25	15	11	16	5	4	6	49
5-Apr	3	20	13	10	10	8	85	31	30	27	21	17	23	26	23	21	19	15	19	13	15	12	14	13	85
6-Apr	14	14	13	13	14	14	14	15	14	14	15	16	17	17	16	13	14	15	14	14	14	13	11	11	17
7-Apr	11	13	12	13	13	14	13	14	14	15	14	17	16	14	18	15	14	13	15	36	87	14	11	14	87
8-Apr	10	13	72	11	23	20	80	30	84	64	48	18	14	19	18	17	15	21	24	85	21	19	63	45	85
9-Apr	41	53	78	32	23	14	12	12	13	14	14	23	21	23	25	19	22	22	23	30	19	10	9	17	78
10-Apr	16	12	12	11	7	11	10	14	15	15	16	19	20	21	20	18	29	53	71	22	11	10	12	11	71
11-Apr	22	28	33	14	30	18	13	88	27	55	21	21	24	17	19	18	17	16	16	19	10	17	18	17	88
12-Apr	20	15	15	15	15	16	25	19	16	16	17	18	19	17	16	16	19	14	17	14	16	8	9	13	25
13-Apr	13	20	15	16	14	16	15	14	16	22	21	23	21	25	20	19	16	21	15	12	26	16	30	58	58
14-Apr	4	13	21	19	27	18	13	21	28	76	76	95	96	40	22	21	20	20	15	11	11	10	10	13	96
15-Apr	16	15	19	21	17	16	30	30	16	17	17	20	18	19	20	18	18	17	17	23	16	17	17	18	30
16-Apr	16	15	16	16	16	15	16	14	15	14	13	13	14	13	14	15	14	13	13	14	13	12	13	13	16
17-Apr	14	14	13	13	14	16	14	16	17	15	18	17	19	19	23	23	45	36	33	20	10	18	12	13	45
18-Apr	12	12	12	10	11	13	19	11	13	14	13	16	17	20	17	17	19	16	14	11	11	13	17	17	20
19-Apr	16	17	14	16	15	15	17	16	17	18	19	18	18	17	19	21	23	18	18	23	14	15	16	19	23
20-Apr	15	15	12	12	15	14	12	16	17	26	39	24	24	23	23	33	65	47	72	11	14	11	16	14	72
21-Apr	10	15	18	19	17	17	8	17	17	20	22	46	80	57	58	44	37	40	15	14	14	11	51	10	80
22-Apr	8	8	24	26	14	52	64	38	42	73	52	42	37	46	42	28	29	38	46	13	16	18	66	32	73
23-Apr	30	13	14	10	8	10	11	19	47	47	41	74	67	49	31	21	30	17	39	66	30	47	47	14	74
24-Apr	15	46	28	36	18	29	41	28	32	35	51	109	34	21	32	62	41	78	21	12	12	16	8	8	109
25-Apr	7	9	7	5	8	8	18	18	18	20	21	21	21	22	22	22	21	19	19	18	11	9	8	13	22
26-Apr	15	17	18	28	17	44	75	109	43	15	16	28	19	17	18	17	17	17	15	16	16	16	16	16	109
27-Apr	13	13	11	11	14	13	14	15	19	17	21	21	23	24	34	30	37	47	34	19	13	16	23	10	47
28-Apr	9	11	10	10	12	13	17	20	19	24	37	40	30	29	24	23	22	20	16	9	20	22	25	14	40
29-Apr	23	16	28	23	17	17	17	17	17	16	16	18	16	16	20	17	19	18	26	15	13	9	11	7	28
30-Apr	10	11	10	14	17	15	15	14	17	18	24	25	27	24	36	20	25	25	17	14	14	20	14	18	36
41 53 78 36 30 52 85 109 84 76 76 109 96 57 58 62 65 78 72 85 87 47 66 58																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Anzac - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS17
WAPASU
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
APRIL 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	16.8	0	2.9	0
H2S (ppb) Average	684	36	36	100	0.9	0	0.2	0
THC (ppm) Average	686	34	34	100	3	-	2.3	-
O3 (ppb) Average	650	34	70	95	57	0	48.6	-
NO2 (ppb) Average	684	36	36	100	23.3	0	5.9	-
NO (ppb) Average	684	36	36	100	30.6	-	2.5	-
NOX (ppb) Average	684	36	36	100	53.9	-	6.5	-
PM2.5 (ug/m3) Average	718	2	2	100	18.6	0	5.7	0
Temperature 2 m (C) Average	720	0	0	100	20.4	-	13.6	-
Relative Humidity (%) Average	718	0	2	99.72	100	-	98.7	-
Wind Speed 10 m (km/h) Average	697	0	23	96.81	23	-	19	-
Wind Direction 10 m (deg) Average	697	0	23	96.81	-	-	-	-
Precipitation (mm) Total	720	0	0	100	3.7	-	11.7	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.44	1.4	-	0	0	0	0	0.2	1	16.8
H2S (ppb) Average	684	0.11	0.1	-	0	0	0	0.1	0.2	0.3	0.9
THC (ppm) Average	686	2.27	0.1	-	2.1	2.2	2.2	2.3	2.3	2.3	3
O3 (ppb) Average	650	35.56	9.5	-	2.5	23.7	29.1	36.3	42.9	47	57
NO2 (ppb) Average	684	2.4	2.8	-	0.2	0.4	0.7	1.4	2.9	5.7	23.3
NO (ppb) Average	684	0.43	1.6	-	0	0	0	0.1	0.3	0.9	30.6
NOX (ppb) Average	684	2.82	3.9	-	0.2	0.5	0.8	1.6	3.4	6.3	53.9
PM2.5 (ug/m3) Average	718	2.91	1.7	-	0.3	1.3	1.9	2.6	3.4	4.7	18.6
Temperature 2 m (C) Average	720	2.59	6.8	-	-21.5	-6.2	-1.8	3.1	7.5	10.7	20.4
Relative Humidity (%) Average	718	61.94	23.7	-	16.8	30.3	41	60.3	81.4	97	100
Wind Speed 10 m (km/h) Average	697	10.3	5	-	0	5	7	10	14	17	23
Wind Direction 10 m (deg) Average	697	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	39.26	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
O3	12 Apr 2025 03:00	13 Apr 2025 11:00	33	Unstable Operation - instrument unresponsive
O3	13 Apr 2025 12:00	13 Apr 2025 14:00	3	Maintenance - analyzer rebooted/recalibrated
Relative Humidity	16 Apr 2025 04:00	16 Apr 2025 05:00	2	Sensor operated out of range
Wind Speed, Wind Direction	09 Apr 2025 00:00	09 Apr 2025 06:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction	13 Apr 2025 05:00	13 Apr 2025 05:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	19 Apr 2025 22:00	20 Apr 2025 10:00	13	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Apr 2025 06:00	23 Apr 2025 07:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

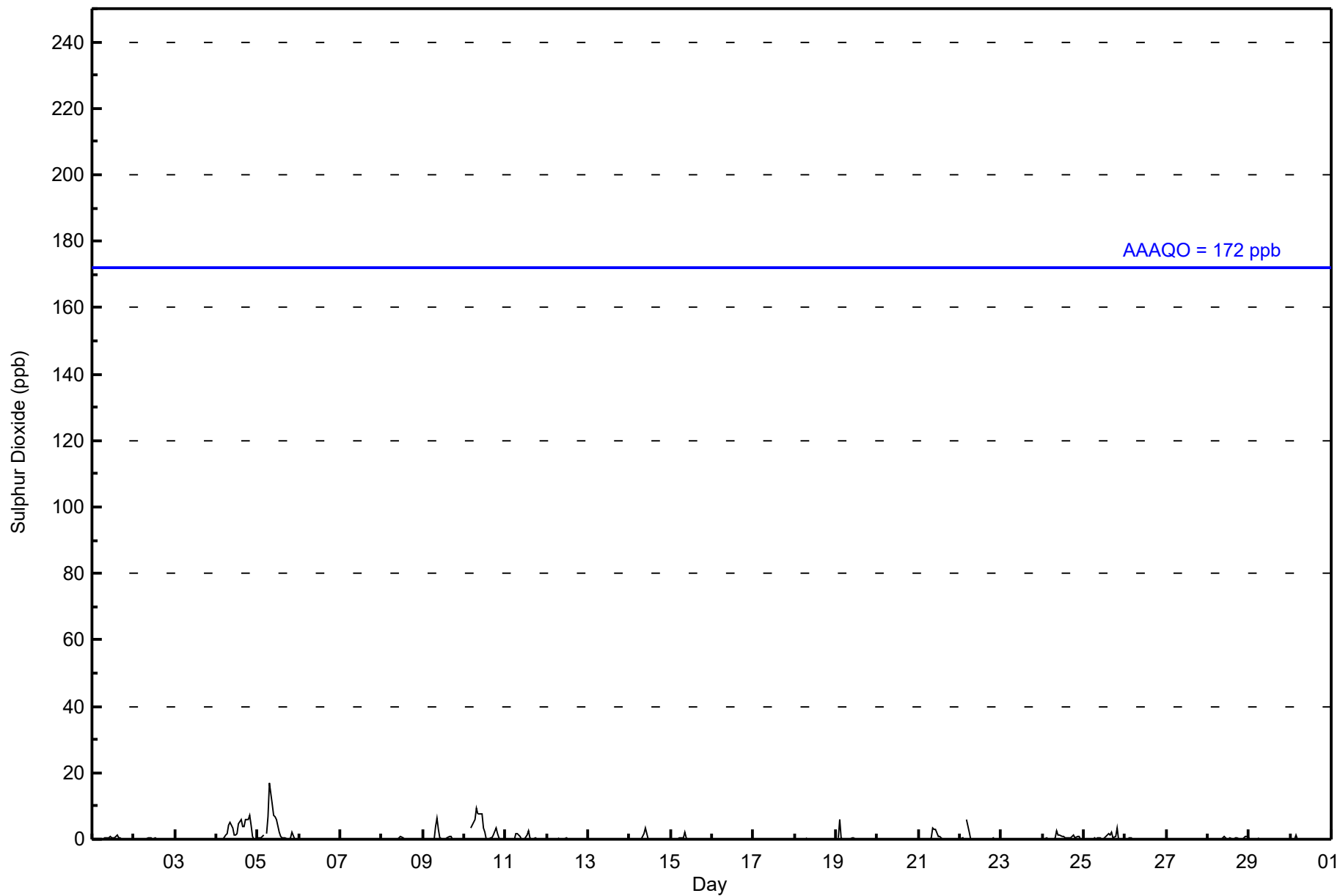
Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 16.8 ppb on Apr 5 08:00 Maximum Daily Average: 2.9 ppb on Apr 5																				Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0							
Minimum Value: 0.0 ppb on Apr 1 23:00 Minimum Daily Average: 0.0 ppb on Apr 6 Maximum Diurnal Average: 1.4 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 1 Monthly Average: 0.44 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.2 P ₉₀ = 1.0 P ₉₉ = 7.2																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.8	0.4	0.4	0.4	1.1	0.3	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3	1.1
2-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.4
3-Apr	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
4-Apr	0.0	0.0	0.0	Z	0.2	1.1	1.8	4.4	4.9	3.3	1.5	1.1	1.7	4.6	5.9	3.8	3.6	5.9	5.7	7.4	4.4	0.9	0.1	0.1	2.7	7.4	
5-Apr	0.2	0.4	0.6	1.4	Z	1.6	6.9	16.8	10.8	7.2	7.0	6.1	2.2	1.1	0.5	0.3	0.3	0.1	0.1	0.2	2.1	0.1	0.0	0.0	2.9	16.8	
6-Apr	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	
7-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.2	
8-Apr	0.1	Z	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.6	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	0.1	0.7	
9-Apr	0.0	0.0	Z	0.0	0.2	0.1	0.1	4.0	6.5	2.8	0.6	0.0	0.0	0.0	0.4	1.0	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	6.5	
10-Apr	0.0	0.0	0.1	Z	3.2	5.1	6.1	9.4	7.7	7.8	7.7	3.2	2.1	0.2	0.2	0.3	0.4	1.2	3.6	1.7	0.5	0.0	0.0	0.0	2.6	9.4	
11-Apr	0.0	0.0	0.0	0.0	Z	0.1	1.9	1.7	0.7	0.0	0.0	0.0	1.3	2.4	0.6	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.4	
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.5	0.2	0.0	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	0.0	0.0	0.0	0.5	
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.5	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.4	
15-Apr	0.0	0.2	Z	0.2	0.1	0.2	0.5	0.3	2.1	0.3	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	0.2	2.1	
16-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
17-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	
19-Apr	Z	0.4	5.8	0.3	0.0	0.0	0.1	0.2	0.1	0.4	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	0.3	5.8	
20-Apr	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	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
21-Apr	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.5	3.3	2.9	2.8	1.0	0.8	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.3	
22-Apr	0.0	0.2	0.3	Z	6.0	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.4	6.0	
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	
24-Apr	0.0	0.0	0.3	0.0	0.1	Z	0.1	0.6	2.7	1.1	1.3	0.9	0.8	0.2	0.3	0.3	0.4	0.8	1.1	0.6	0.7	0.7	0.1	0.1	0.6	2.7	
25-Apr	Z	0.0	0.0	0.2	0.2	0.1	0.3	0.2	0.6	0.2	0.1	0.2	0.4	0.6	1.6	1.3	2.0	0.3	0.7	3.5	0.0	0.0	0.0	0.0	0.5	3.5	
26-Apr	0.0	Z	0.4	0.6	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
27-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
28-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.9	0.3	0.0	0.2	0.3	0.2	0.2	0.5	0.4	0.0	0.0	0.1	0.5	0.9	1.0	0.2	1.0	
29-Apr	0.0	0.0	0.0	0.0	Z	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	0.5	
30-Apr	0.1	0.1	0.1	1.2	0.2	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	1.2	
Diurnal Average																									0.44		
Diurnal Maximum																									7.2		
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	684	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: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	77	19	16	12	10	17	82	110	48	37	31	38	31	17	24	94	663
11 - 20	0	0	0	0	1	0	0	1	0	0	0	0	0	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	77	19	16	12	11	17	82	111	48	37	31	38	31	17	24	94	665

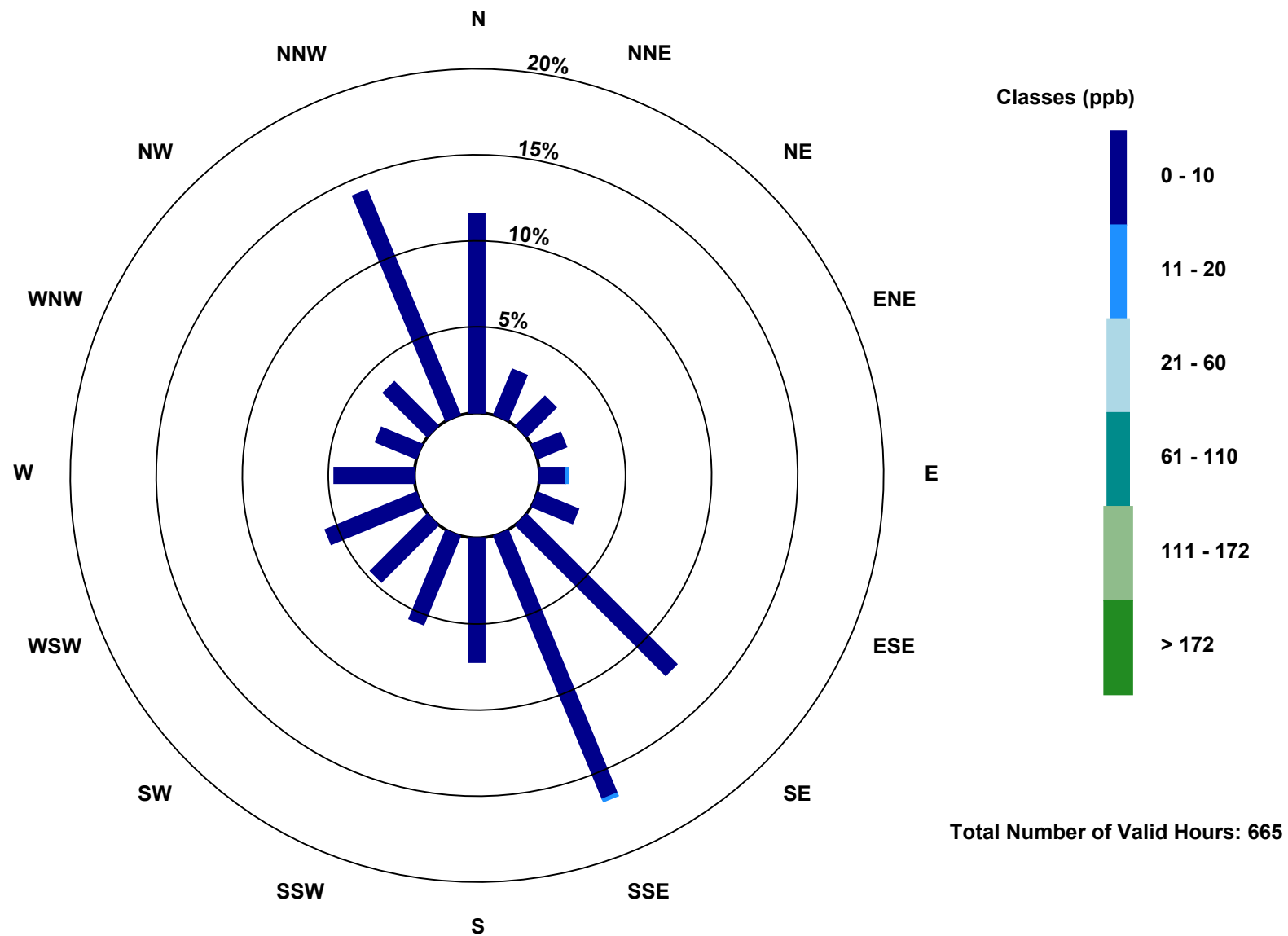
Total Number of Valid Hours: 665

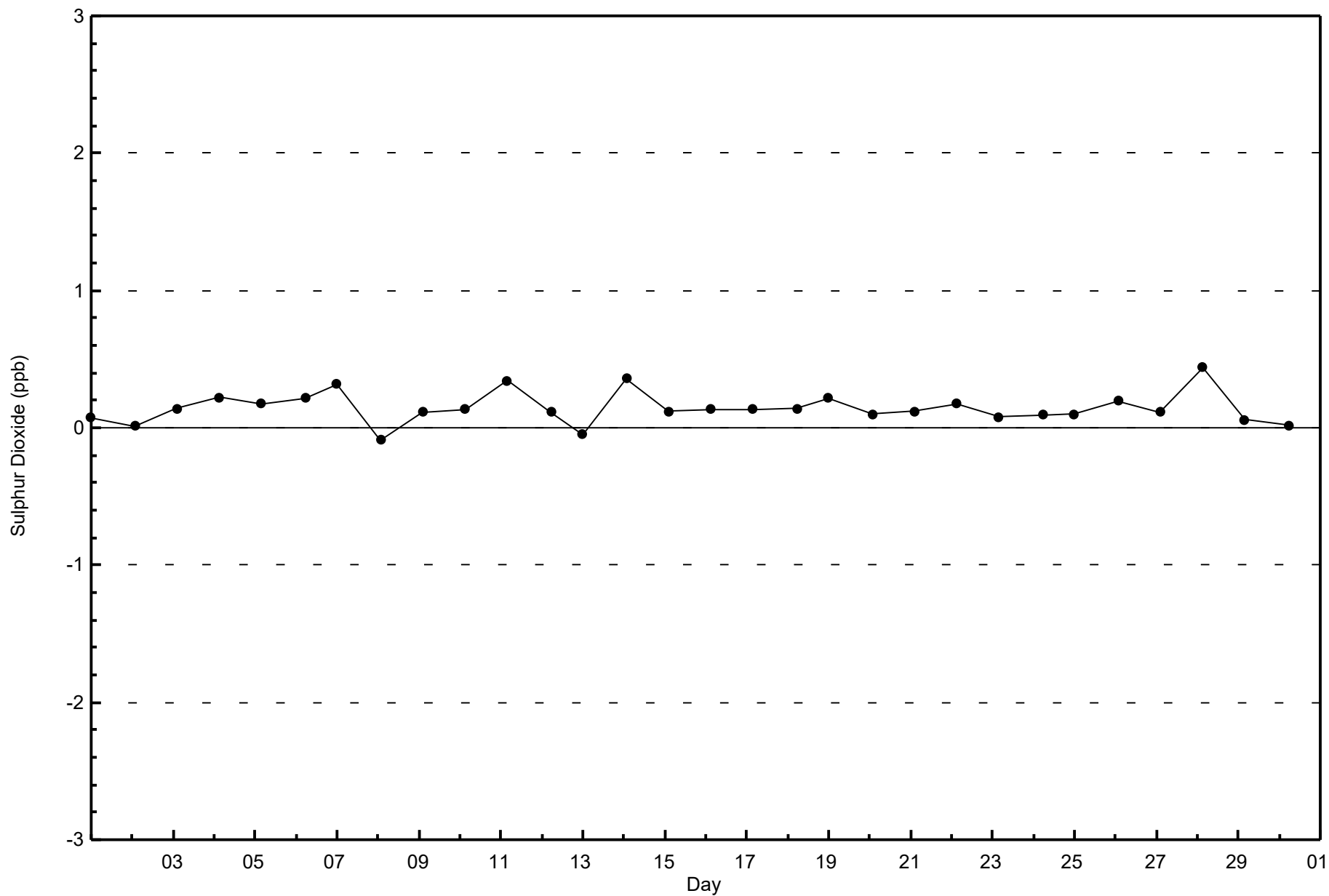
Total Number of Hours: 720

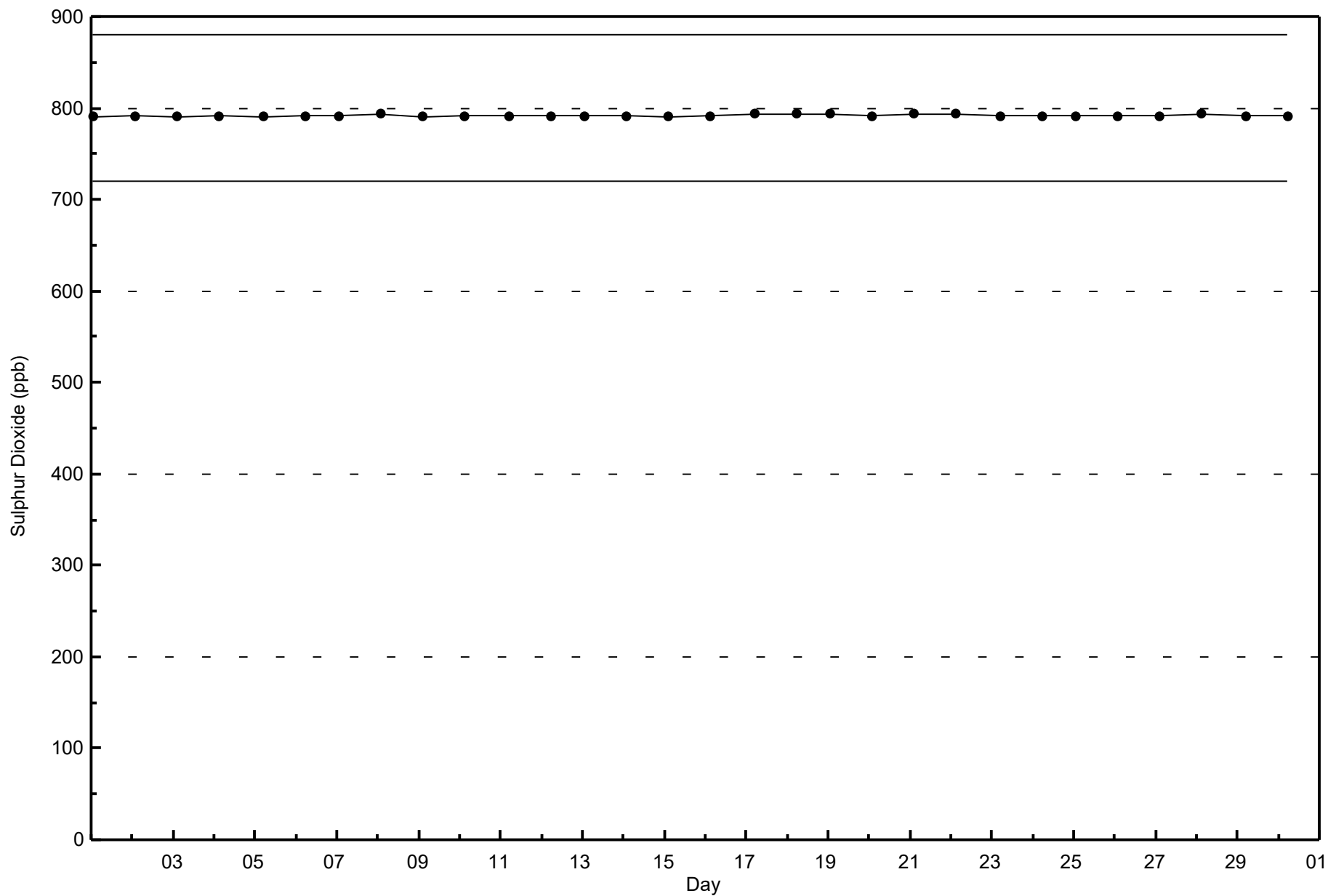


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Wapasu









Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

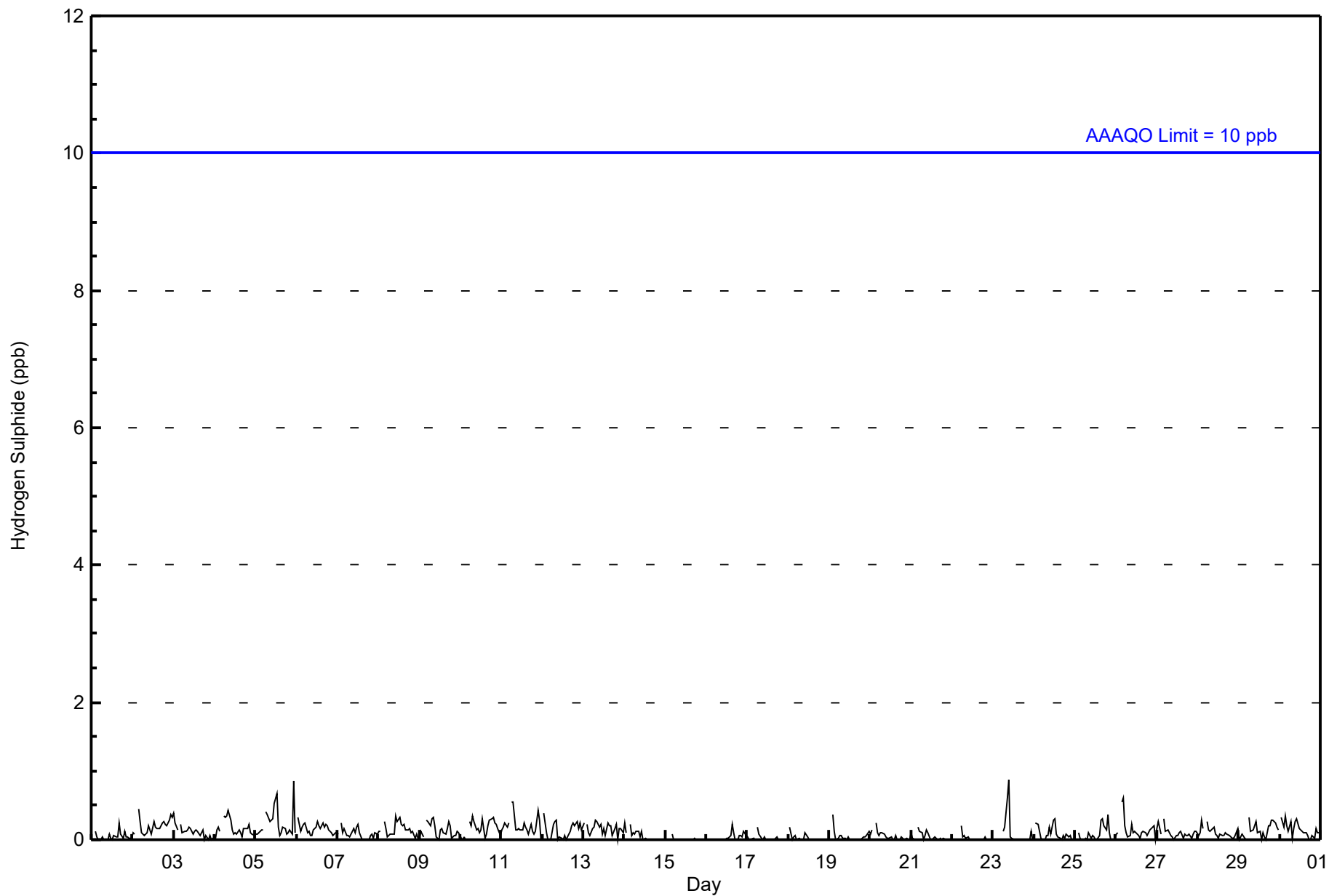
Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 0.9 ppb on Apr 23 10:00																				Maximum Daily Average: 0.2 ppb on Apr 5		Hours of Data: 684				
Minimum Value: 0.0 ppb on Apr 1 01:00																				Minimum Daily Average: 0.0 ppb on Apr 22		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.1 ppb at hour 7																				Minimum Diurnal Average: 0.1 ppb at hour 24		Hours of Calibration: 36				
Monthly Average: 0.11 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.5		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-Apr	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	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2-Apr	0.1	0.1	Z	0.5	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.5
3-Apr	0.4	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.4
4-Apr	0.0	0.2	0.2	0.1	Z	0.4	0.3	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4
5-Apr	0.1	0.1	0.1	0.2	0.1	Z	0.4	0.4	0.3	0.3	0.3	0.5	0.7	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.9	0.1	0.2	0.9
6-Apr	Z	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
7-Apr	0.1	Z	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.3
8-Apr	0.1	0.1	Z	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.3
9-Apr	0.0	0.1	0.0	Z	0.3	0.3	0.2	0.3	0.3	0.2	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.3
10-Apr	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.3	0.3	0.1	0.2	0.1	0.1	0.3	0.0	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3
11-Apr	0.1	0.2	0.3	0.2	0.2	Z	0.6	0.5	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.3	0.0	0.2	0.6
12-Apr	Z	0.4	0.1	0.0	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.4
13-Apr	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.2	0.2	0.1	0.2	0.3
14-Apr	0.2	0.1	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
15-Apr	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1
16-Apr	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	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.2
17-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
18-Apr	Z	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
19-Apr	0.0	Z	0.4	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4
20-Apr	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
21-Apr	0.1	0.0	0.0	Z	0.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
22-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.6	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	0.1	0.0	0.1	0.9
24-Apr	Z	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.3
25-Apr	0.0	Z	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	0.3	0.3	0.2	0.1	0.4	0.1	0.0	0.0	0.0	0.1	0.4
26-Apr	0.1	0.1	Z	0.6	0.6	0.2	0.1	0.0	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	0.2	0.2	0.0	0.1	0.6
27-Apr	0.2	0.3	0.1	Z	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3
28-Apr	0.1	0.1	0.3	0.2	Z	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.3
29-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.3	0.1	0.1	0.2	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.3
30-Apr	Z	0.3	0.2	0.4	0.2	0.1	0.3	0.0	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.1	0.4
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Wapasu - April 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

Hydrogen Sulphide (H₂S) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	78	19	16	11	11	18	82	115	51	35	31	33	29	17	23	95	664
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	78	19	16	11	11	18	82	115	51	35	31	33	29	17	23	95	664

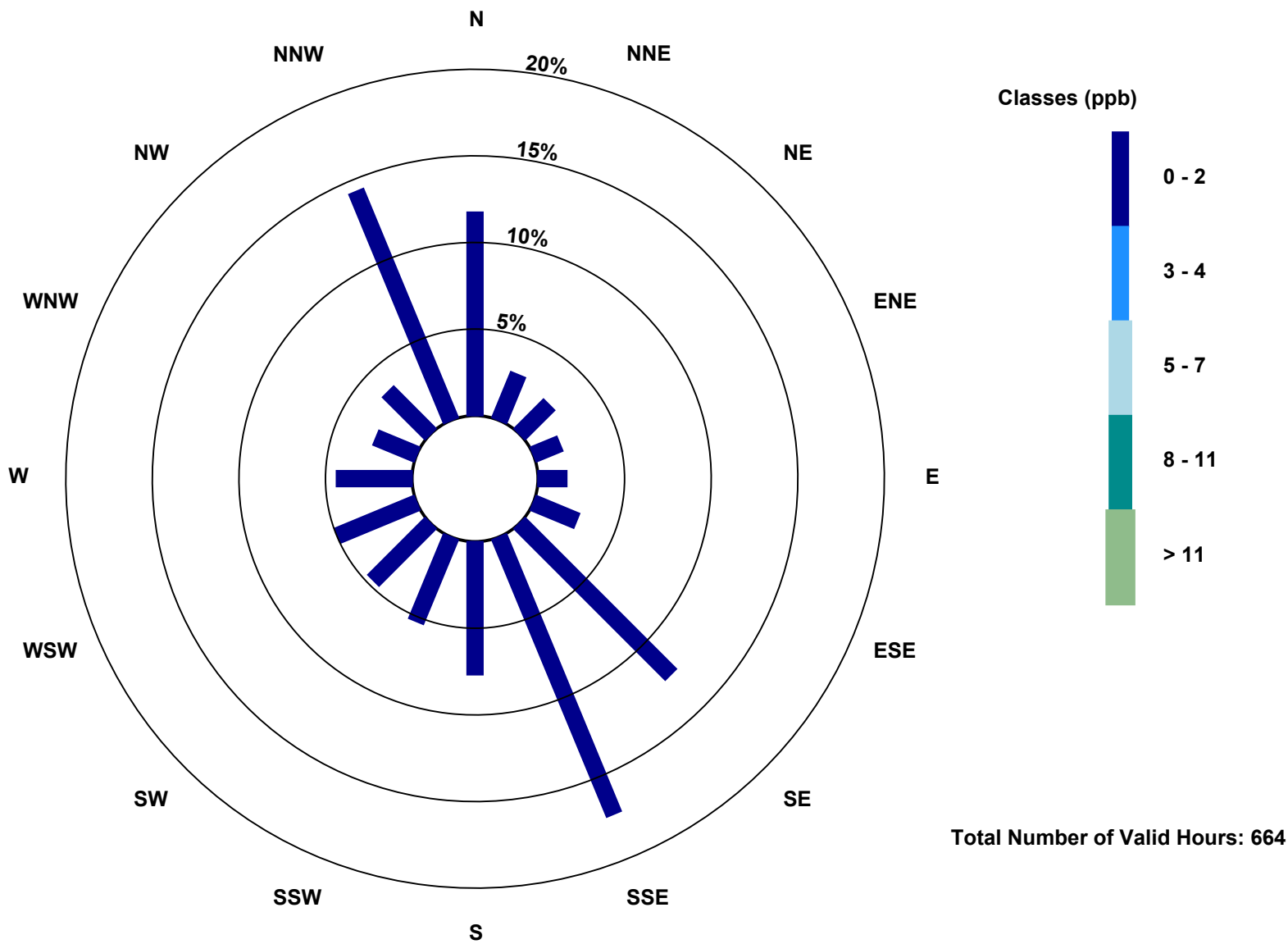
Total Number of Valid Hours: 664

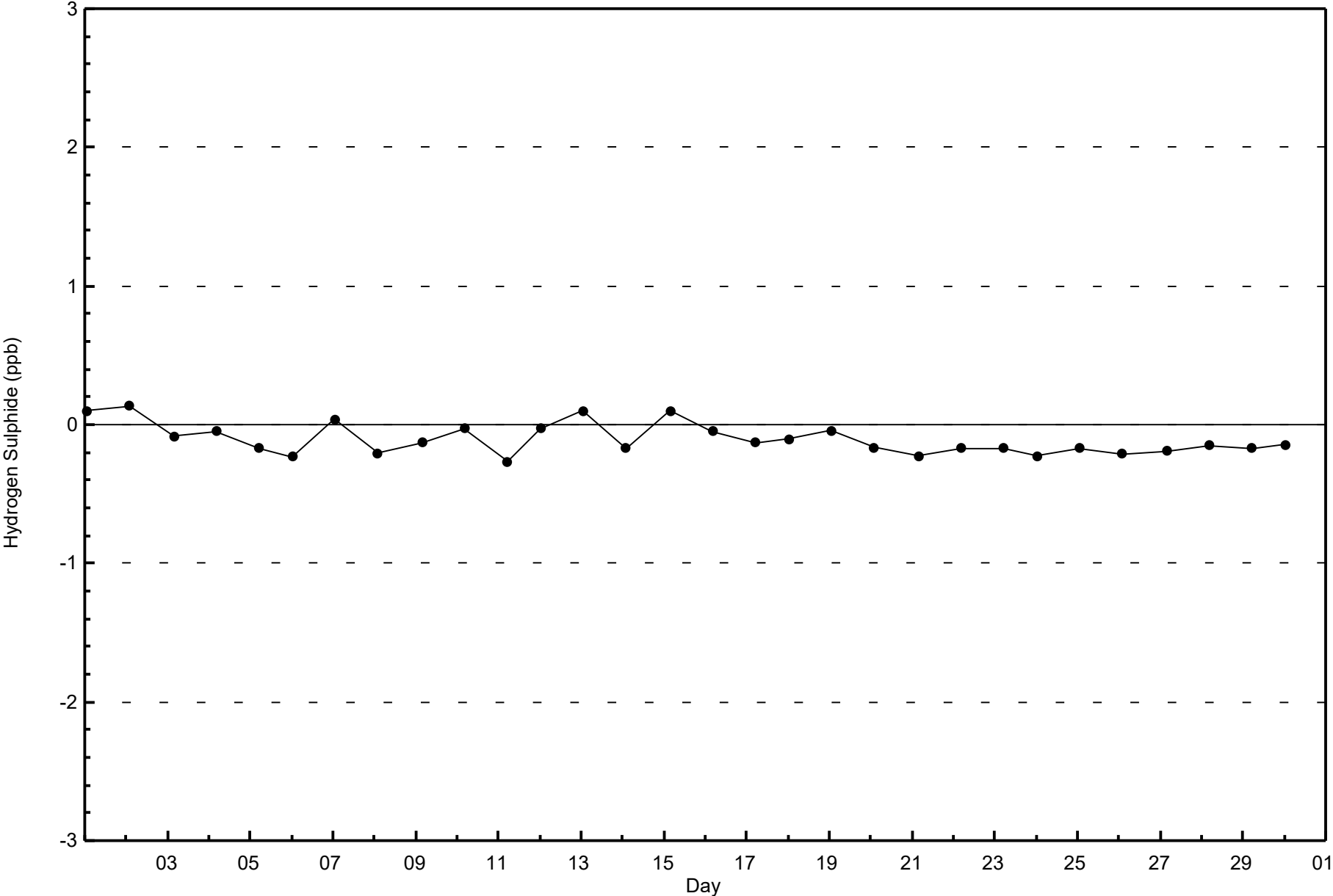
Total Number of Hours: 720

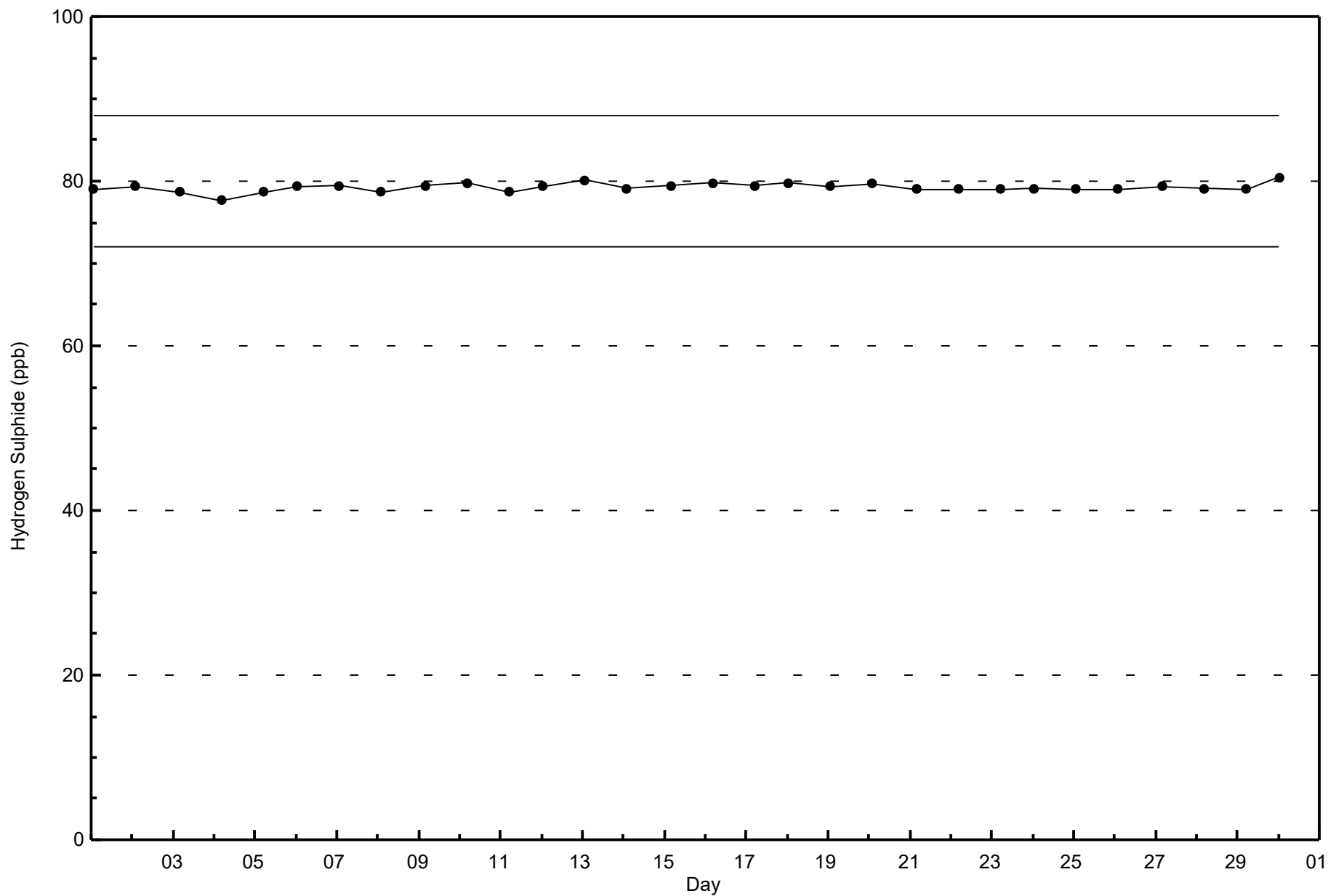


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Wapasu









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

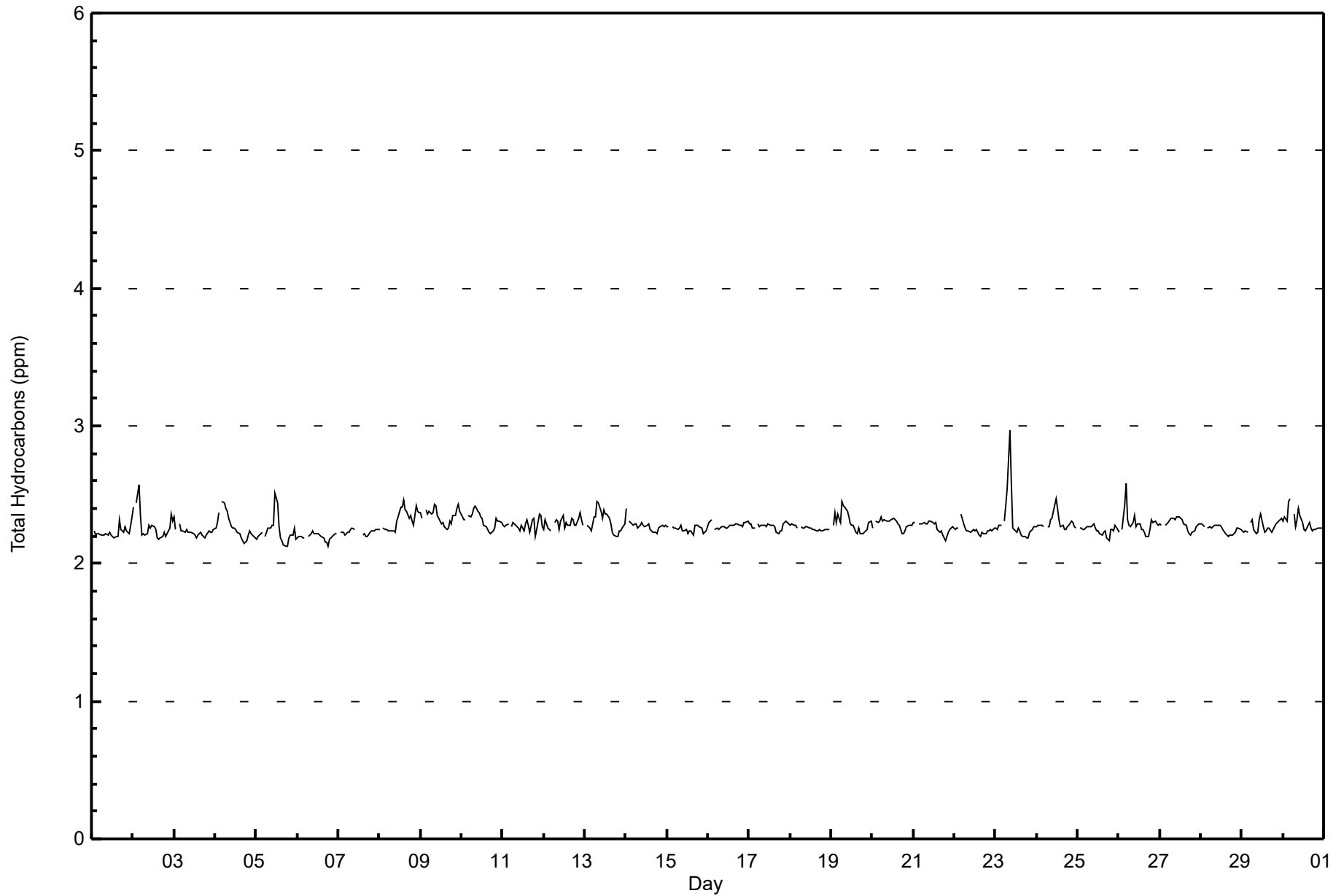
Wapasu - April 2025

Maximum Value: 3.0 ppm on Apr 23 09:00										Maximum Daily Average: 2.3 ppm on Apr 9										Hours in Service: 720						
Minimum Value: 2.1 ppm on Apr 5 18:00										Minimum Daily Average: 2.2 ppm on Apr 6										Hours of Data: 686						
Maximum Diurnal Average: 2.3 ppm at hour 9										Minimum Diurnal Average: 2.2 ppm at hour 18										Hours of Missing Data: 34						
Monthly Average: 2.27 ppm										Percentiles: P ₁ = 2.2 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.3 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.5										Hours of Calibration: 34						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.3
2-Apr	2.4	Z	2.4	2.6	2.4	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.6
3-Apr	2.3	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
4-Apr	2.3	2.3	2.4	Z	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5
5-Apr	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.5
6-Apr	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
7-Apr	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	C	C	C	C	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
8-Apr	2.3	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.4	2.4	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.5
9-Apr	2.4	2.3	Z	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	2.4	2.4	2.4	2.4	2.4	2.4
10-Apr	2.3	2.3	2.3	Z	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
11-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.4	2.3	2.3	2.3	2.4
12-Apr	2.2	2.3	2.3	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	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.4
13-Apr	Z	2.3	2.3	2.3	2.2	2.3	2.3	2.5	2.4	2.4	2.3	2.4	2.4	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
14-Apr	2.4	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	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4
15-Apr	2.3	2.3	Z	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3
16-Apr	2.3	2.3	2.3	Z	2.3	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	2.3
17-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
18-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3
19-Apr	Z	2.3	2.4	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4
20-Apr	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	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
21-Apr	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
22-Apr	2.2	2.3	2.3	Z	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.4
23-Apr	2.3	2.2	2.3	2.3	Z	2.3	2.4	2.5	3.0	2.6	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	3.0
24-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.4	2.5	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	2.5
25-Apr	Z	2.3	2.3	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	2.3	2.2	2.3	2.2	2.2	2.3
26-Apr	2.2	Z	2.3	2.4	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.6
27-Apr	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	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
28-Apr	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3
29-Apr	2.2	2.2	2.2	2.2	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4
30-Apr	2.3	2.3	2.3	2.4	2.5	Z	2.4	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.5
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Wapasu - April 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
Wapasu - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	77	19	16	12	11	17	82	111	48	37	31	38	31	17	24	94	665
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	77	19	16	12	11	17	82	111	48	37	31	38	31	17	24	94	665

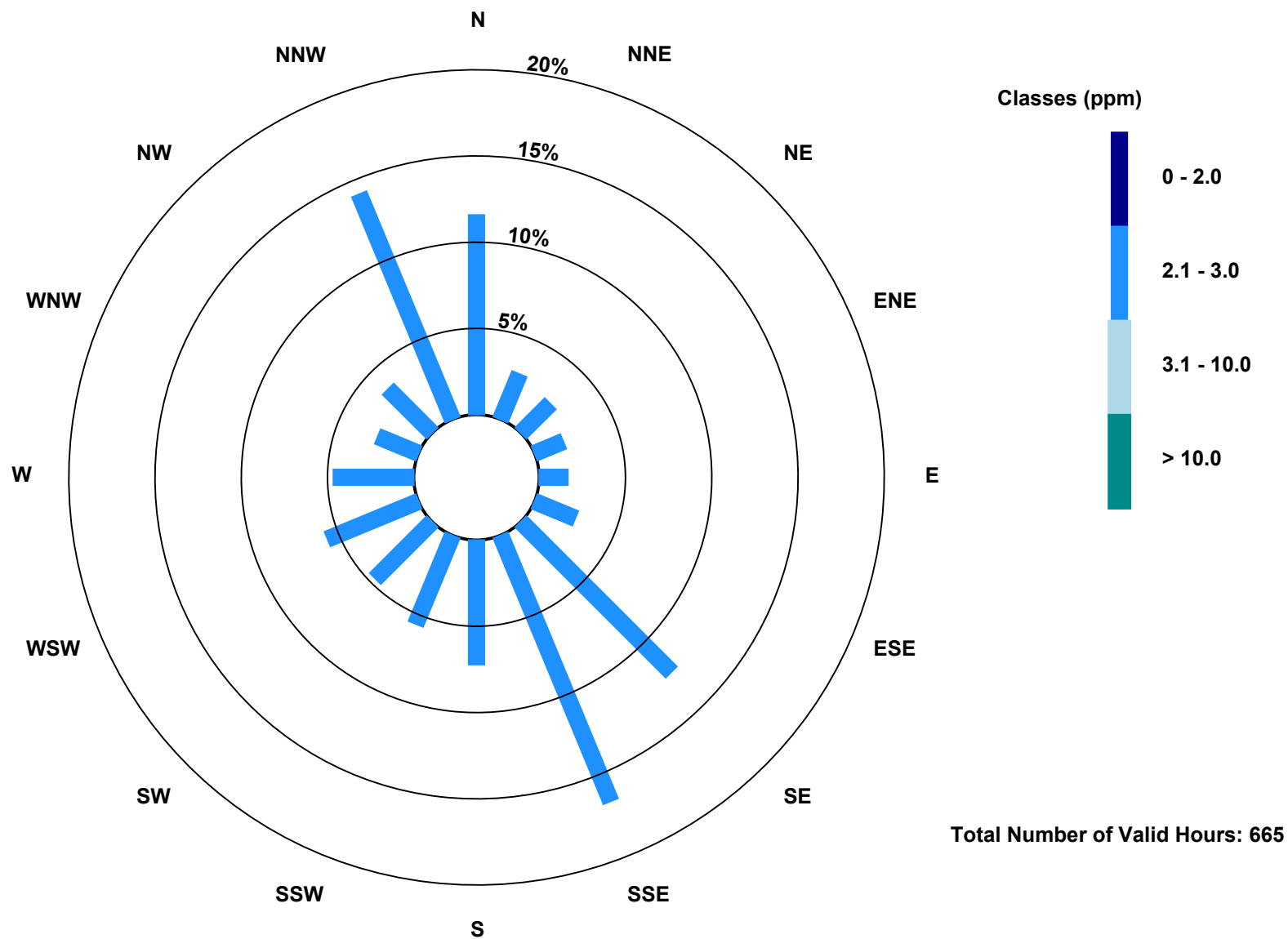
Total Number of Valid Hours: 665

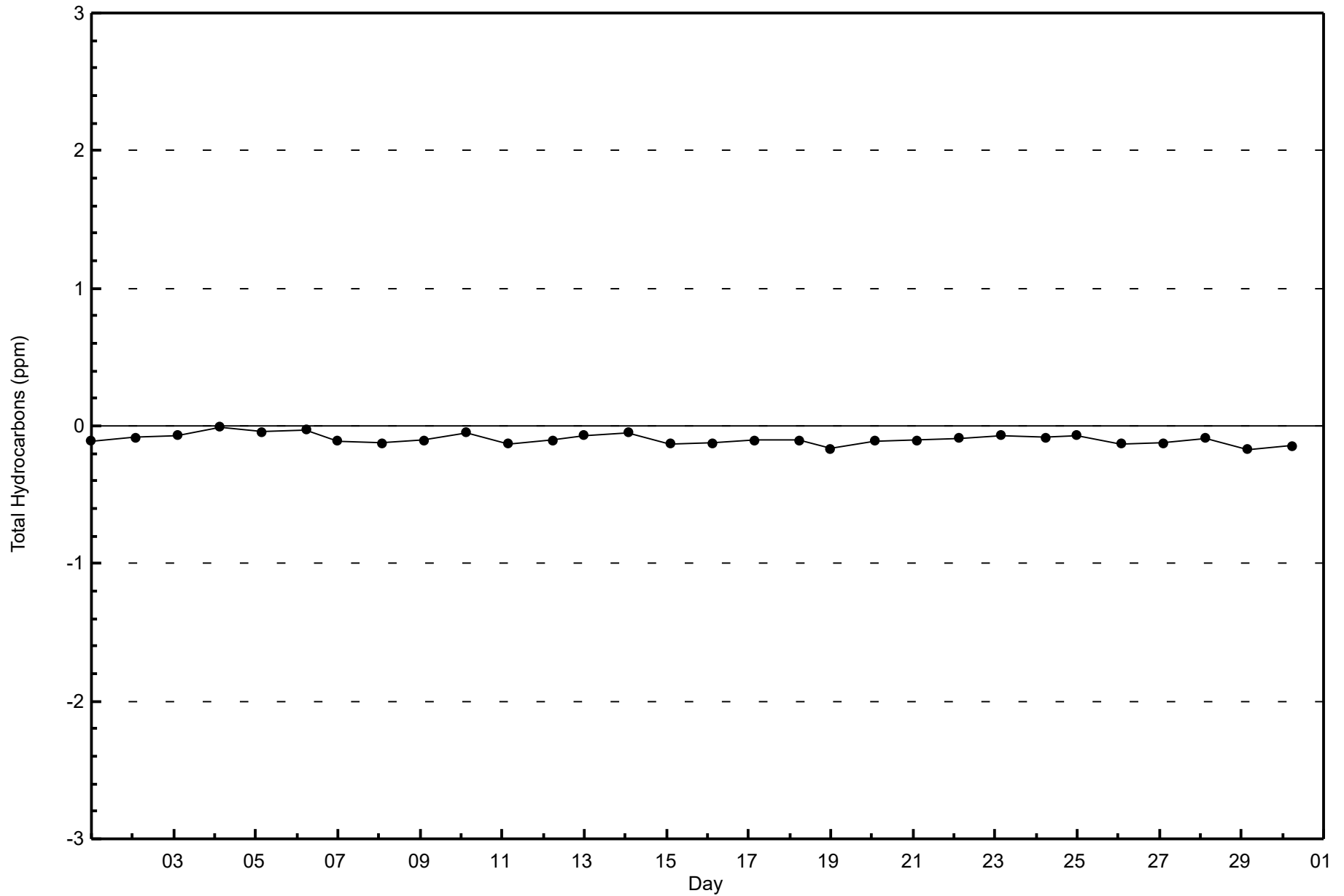
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Wapasu

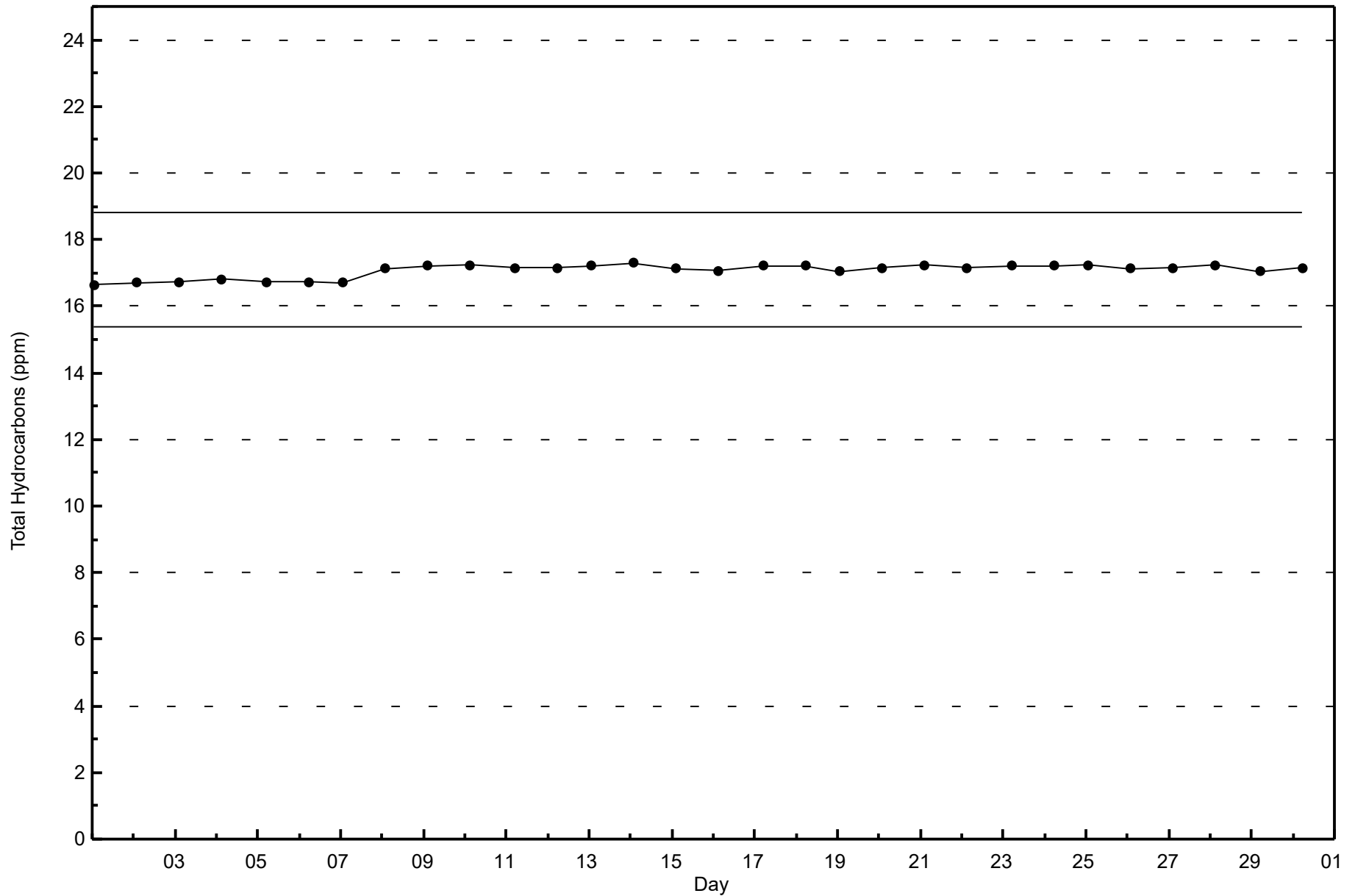






Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Wapasu - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

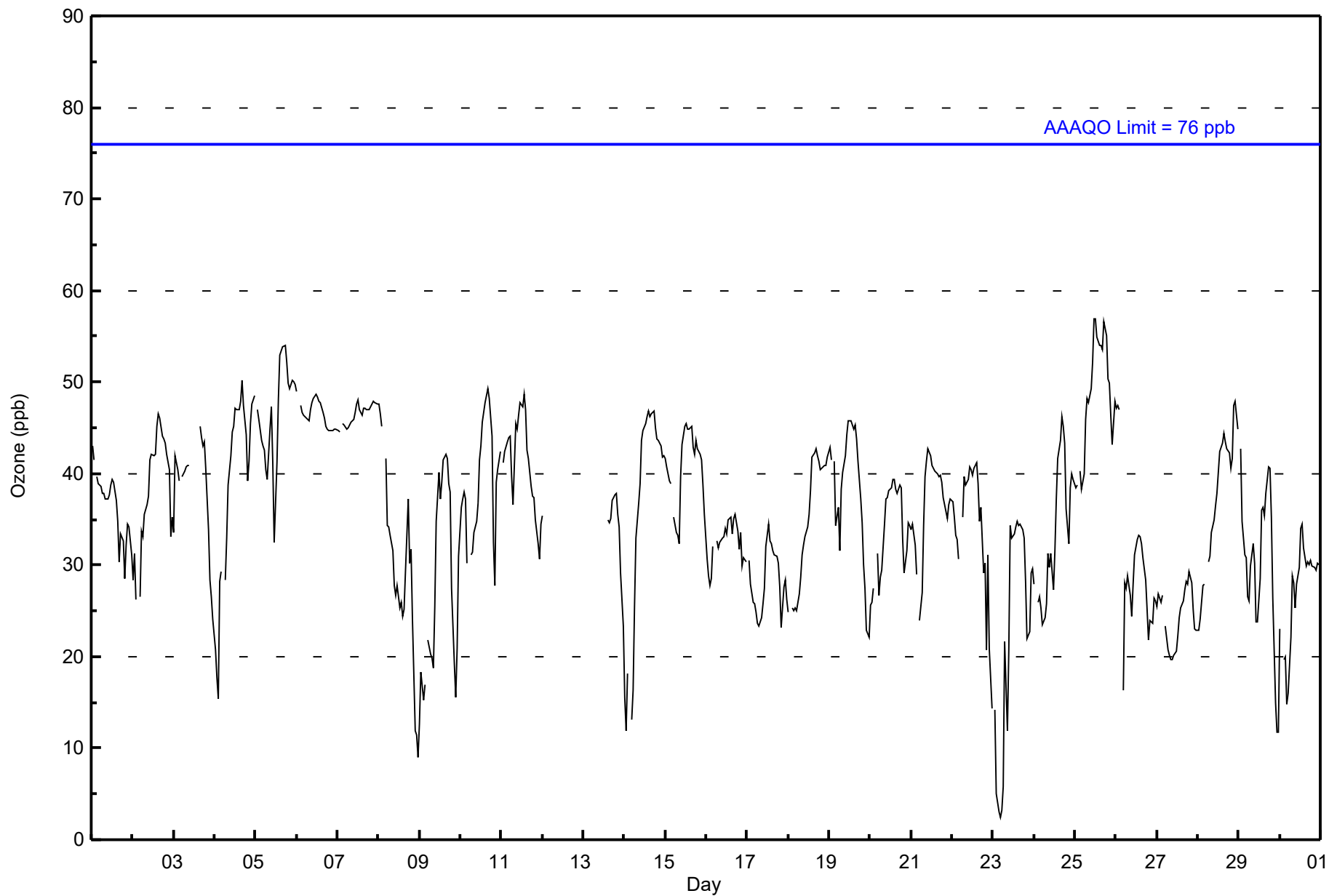
Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 57.0 ppb on Apr 25 12:00 Maximum Daily Average: 48.6 ppb on Apr 25																					Hours in Service: 720 Hours of Data: 650						
Minimum Value: 2.5 ppb on Apr 23 05:00 Minimum Daily Average: 22.8 ppb on Apr 23 Maximum Diurnal Average: 40.7 ppb at hour 15 Minimum Diurnal Average: 30.2 ppb at hour 5 Monthly Average: 35.56 ppb Percentiles: P ₁ = 11.5 P ₁₀ = 23.7 Q ₁ = 29.1 Median = 36.3 Q ₃ = 42.9 P ₉₀ = 47.0 P ₉₉ = 53.9																					Hours of Missing Data: 70 Hours of Calibration: 34 Percent Operational Time: 95.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Apr	43.0	41.5	Z	39.7	38.9	38.5	37.9	37.8	37.2	37.3	37.7	38.8	39.4	39.1	37.0	34.7	30.4	33.4	32.7	28.5	32.1	34.5	34.2	31.1	36.3	43.0	
2-Apr	28.3	31.2	26.3	Z	26.5	33.7	33.1	35.5	36.7	37.5	41.5	42.2	41.9	42.2	45.1	46.5	46.1	44.1	43.8	43.3	42.2	40.4	33.0	35.2	38.1	46.5	
3-Apr	33.6	41.9	40.4	39.1	Z	39.6	40.2	40.7	40.8	40.9	C	C	C	C	C	45.1	43.9	43.1	43.4	40.5	33.9	28.4	26.5	24.1	38.1	45.1	
4-Apr	20.7	17.7	15.4	28.3	29.3	Z	28.4	32.9	38.8	41.9	44.5	45.1	47.2	47.0	46.9	48.0	50.2	47.5	44.2	39.2	41.3	45.5	47.7	48.5	39.0	50.2	
5-Apr	Z	47.0	45.8	43.7	43.1	42.6	40.5	39.4	44.8	47.3	41.2	32.4	41.3	48.0	53.0	53.3	53.9	53.9	52.2	49.9	49.3	50.2	50.0	49.8	46.6	53.9	
6-Apr	48.9	Z	47.4	46.7	46.4	46.2	45.9	45.8	46.9	47.7	48.2	48.6	48.3	48.0	47.8	46.7	46.1	45.1	44.8	44.7	44.7	44.7	44.8	44.9	46.5	48.9	
7-Apr	44.7	44.6	Z	45.5	45.3	44.9	44.9	45.3	45.6	45.9	46.7	47.6	48.0	47.0	46.4	47.2	47.1	47.0	47.1	47.3	47.6	47.8	47.7	47.6	46.5	48.0	
8-Apr	47.5	46.6	45.2	Z	41.7	34.3	34.2	33.2	31.5	27.8	26.7	27.7	25.4	26.0	24.4	25.2	29.3	37.3	30.3	31.7	24.1	11.8	11.4	9.1	29.7	47.5	
9-Apr	12.7	18.4	15.2	17.0	Z	21.8	20.2	19.8	18.8	25.4	34.8	40.2	37.2	39.1	41.5	42.0	41.7	39.0	38.0	27.5	19.2	15.5	20.9	31.0	27.7	42.0	
10-Apr	36.2	37.2	38.0	37.3	30.2	Z	31.1	31.4	33.5	34.8	36.7	41.5	43.0	45.6	47.7	48.4	49.3	48.2	44.1	32.5	27.8	39.0	40.4	42.4	39.0	49.3	
11-Apr	Z	41.2	42.3	43.4	43.9	44.2	39.6	36.7	45.4	44.9	46.3	47.7	47.2	48.7	47.0	42.5	41.6	38.7	37.6	37.4	34.9	32.4	30.6	34.5	41.3	48.7	
12-Apr	35.4	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	35.4	
13-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	34.9	34.7	35.1	37.1	37.7	37.9	35.6	34.2	29.1	23.3	--	37.9	
14-Apr	15.5	11.9	18.1	Z	13.1	16.3	25.4	32.9	36.7	39.0	43.6	44.8	45.5	46.3	46.8	46.2	46.5	46.8	45.0	43.8	43.6	42.9	41.8	41.9	36.3	46.8	
15-Apr	41.7	40.8	39.2	38.9	Z	35.2	33.6	33.2	32.4	39.6	43.2	45.1	45.4	44.9	44.9	45.1	42.9	42.1	43.7	42.7	42.2	41.5	38.8	35.5	40.5	45.4	
16-Apr	30.7	28.9	27.7	28.6	32.0	Z	32.7	31.8	32.4	32.9	33.1	34.0	33.4	35.0	35.2	33.5	35.1	35.6	33.6	31.8	33.5	29.8	30.8	30.4	32.3	35.6	
17-Apr	Z	30.4	27.9	25.9	25.7	24.9	23.7	23.4	24.2	25.8	27.5	32.0	34.5	32.6	32.3	31.6	31.2	31.0	30.2	27.6	23.2	27.6	28.4	26.3	28.2	34.5	
18-Apr	24.9	Z	25.4	25.1	25.3	25.0	26.9	28.6	31.1	32.1	33.2	34.1	35.5	38.2	41.7	42.3	42.8	42.0	41.3	40.5	40.7	40.8	40.9	41.8	34.8	42.8	
19-Apr	42.9	41.4	Z	41.4	34.3	36.3	31.5	38.3	40.2	41.9	44.3	45.8	45.8	45.8	44.8	45.3	43.7	41.3	37.3	34.6	30.0	27.5	22.9	22.1	38.2	45.8	
20-Apr	25.7	25.9	27.5	Z	31.3	26.6	28.7	29.5	34.5	37.2	37.4	38.2	38.4	39.4	39.3	38.2	37.8	38.7	38.4	32.8	29.1	31.5	34.7	34.3	33.7	39.4	
21-Apr	33.9	34.5	32.2	28.9	Z	23.9	27.0	34.3	39.7	41.3	42.8	42.0	40.9	40.5	40.3	39.9	39.7	39.7	39.1	37.4	35.8	35.1	36.7	37.2	36.6	42.8	
22-Apr	36.9	35.3	33.3	32.9	30.6	Z	35.3	39.7	38.8	39.4	40.8	40.5	39.9	40.5	41.2	38.9	34.8	36.3	29.1	30.2	20.8	31.2	20.9	14.4	34.0	41.2	
23-Apr	Z	14.1	5.0	3.0	2.5	3.2	5.7	21.6	11.9	20.7	34.3	32.9	33.3	34.2	34.8	34.3	34.4	33.9	32.9	28.3	21.9	22.7	29.1	29.5	22.8	34.8	
24-Apr	27.9	Z	25.9	26.6	25.4	23.4	24.3	25.7	31.3	29.8	31.3	27.4	31.6	37.2	41.6	43.6	46.3	45.1	43.3	36.2	32.4	38.5	40.0	39.4	33.7	46.3	
25-Apr	38.4	38.7	Z	40.2	38.3	40.0	45.8	48.2	47.8	49.2	52.1	57.0	57.0	54.9	54.0	54.0	53.6	56.5	55.1	50.3	49.8	46.3	43.1	48.0	48.6	57.0	
26-Apr	47.1	47.4	47.0	Z	16.4	28.1	27.5	28.8	26.7	24.4	28.0	31.1	32.8	33.3	33.2	32.3	30.8	28.4	25.2	21.9	24.0	23.7	26.3	26.1	30.0	47.4	
27-Apr	25.5	26.9	25.9	26.7	Z	23.3	20.8	20.1	19.7	19.6	20.1	20.6	22.3	24.3	25.4	26.1	27.3	28.3	27.9	29.3	28.1	25.2	23.0	22.9	24.3	29.3	
28-Apr	22.9	24.1	25.9	27.8	28.0	Z	30.4	30.9	33.5	35.0	36.5	37.8	40.1	42.4	43.3	44.4	43.5	42.8	42.3	40.6	41.6	47.5	47.9	44.9	37.1	47.9	
29-Apr	Z	42.7	34.8	31.1	30.8	26.6	26.1	29.9	32.3	30.2	23.8	23.8	28.5	36.1	36.3	35.4	37.8	40.7	40.6	35.3	26.3	15.0	11.8	11.7	29.9	42.7	
30-Apr	23.1	Z	19.7	20.0	14.8	16.0	22.2	28.8	28.1	25.3	27.9	29.8	34.0	34.4	31.9	30.0	30.4	30.0	30.5	30.0	29.8	29.4	30.3	30.1	27.2	34.4	
32.8 33.8 30.5 32.1 30.2 30.2 30.8 33.0 34.3 35.5 37.2 38.1 39.2 40.4 40.7 40.5 40.5 40.5 39.0 36.3 34.0 33.8 33.2 33.0																										Diurnal Average	
48.9 47.4 47.4 46.7 46.4 46.2 45.9 48.2 47.8 49.2 52.1 57.0 57.0 54.9 54.0 54.0 53.9 56.5 55.1 50.3 49.8 50.2 50.0 49.8																										Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	39	6.00	6.00
21 - 50	597	91.85	97.85
51 - 82	14	2.15	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 650

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	2	0	1	0	1	3	10	5	2	0	1	2	1	0	0	4	32
21 - 50	73	18	12	10	10	15	70	111	47	30	25	29	28	16	20	70	584
51 - 82	0	1	3	1	0	0	0	0	0	7	2	0	0	0	0	0	14
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	75	19	16	11	11	18	80	116	49	37	28	31	29	16	20	74	630

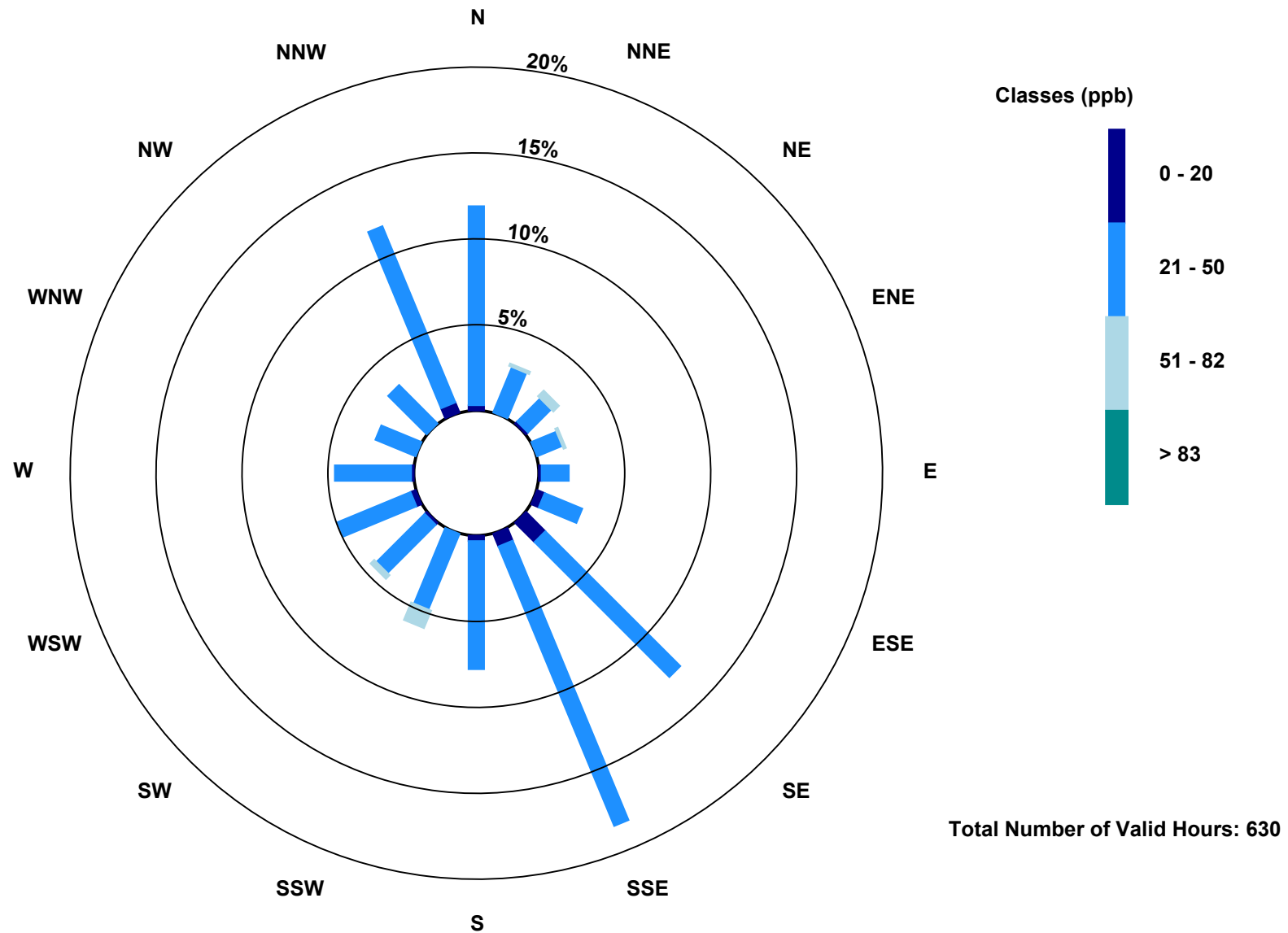
Total Number of Valid Hours: 630

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

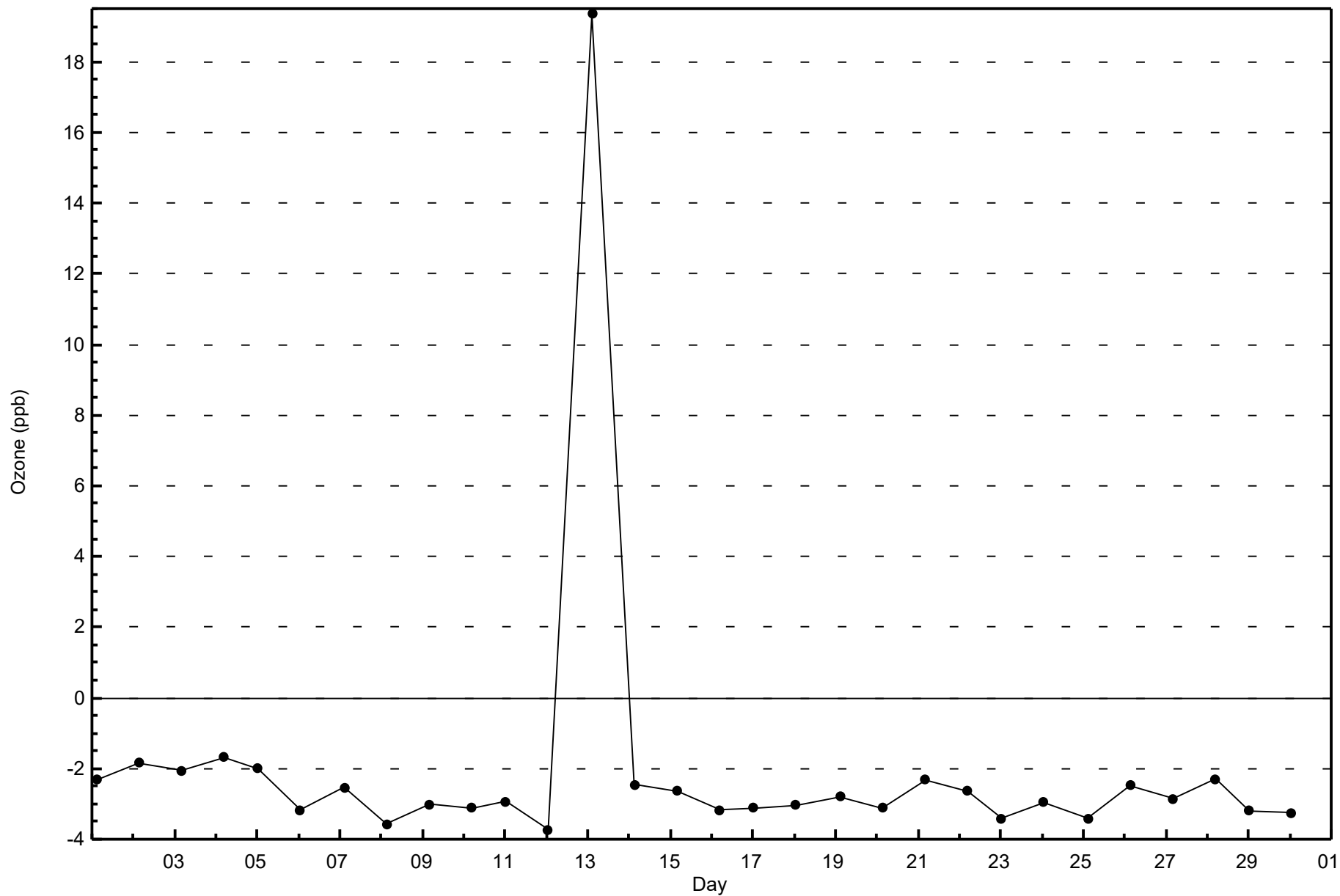
Ozone (O_3) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

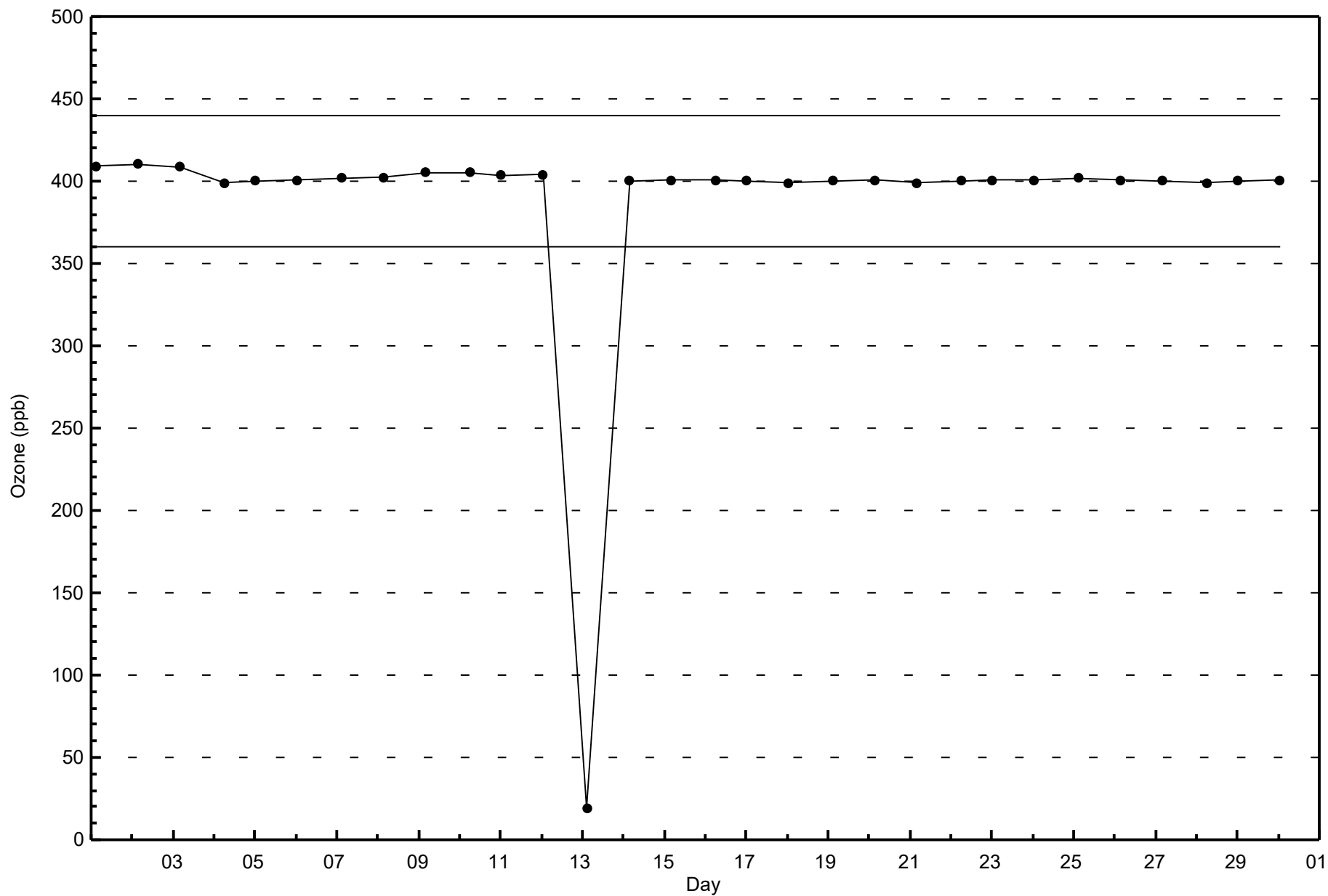
Ozone (O₃) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Wapasu - April 2025

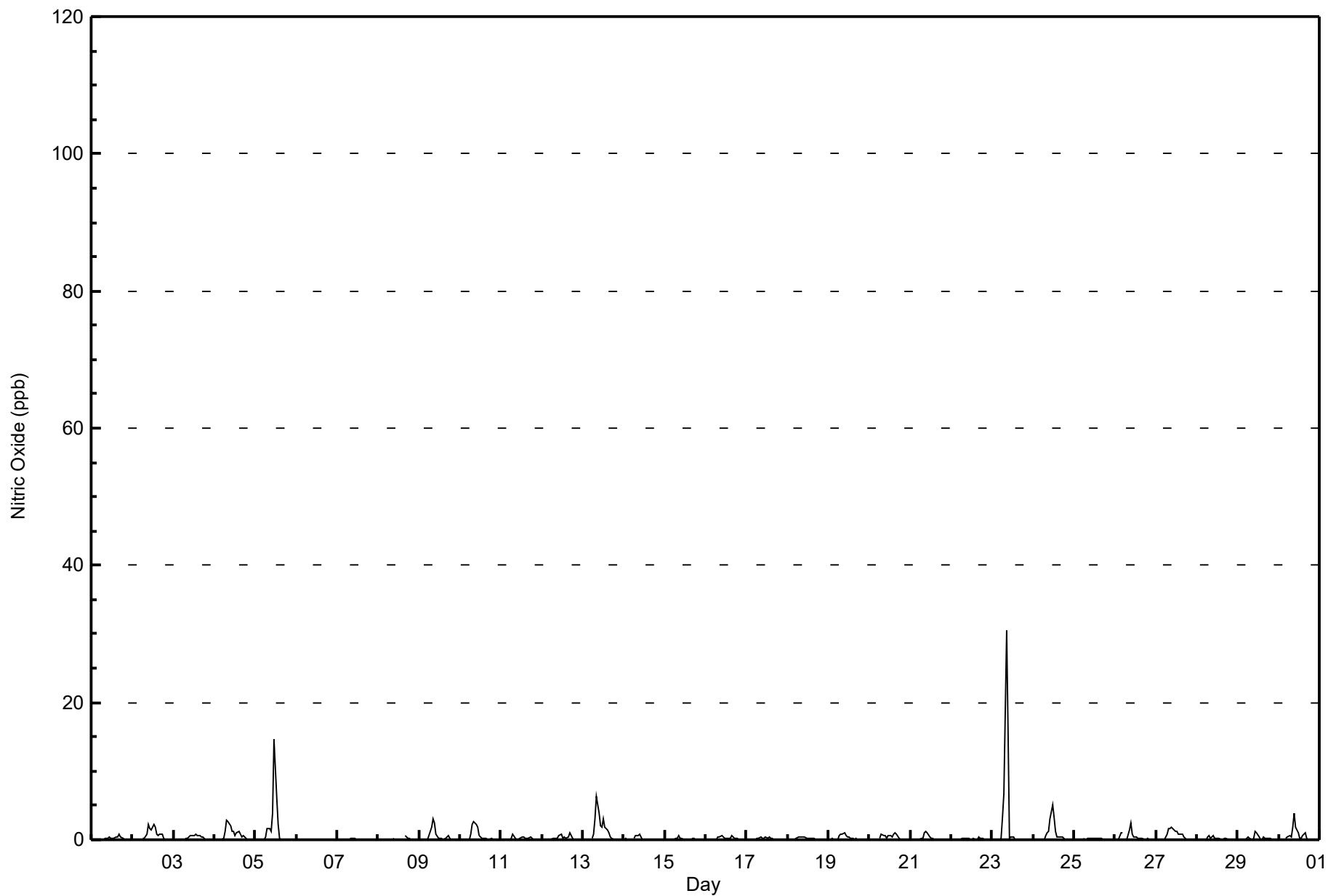


Maximum Value: 30.6 ppb on Apr 23 09:00										Maximum Daily Average: 2.5 ppb on Apr 23										Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 1 23:00										Minimum Daily Average: 0.0 ppb on Apr 6										Hours of Data: 684							
Maximum Diurnal Average: 2.0 ppb at hour 9										Minimum Diurnal Average: 0.0 ppb at hour 22										Hours of Missing Data: 36							
Monthly Average: 0.43 ppb										Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 4.1										Hours of Calibration: 36							
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7	
2-Apr	0.0	0.0	0.0	0.1	0.0	Z	0.2	0.3	0.7	2.2	1.7	1.5	2.2	1.9	0.7	0.5	0.8	0.8	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.6	2.2
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.4	0.6	0.7	0.6	0.8	0.6	0.6	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.8	
4-Apr	0.0	Z	0.0	0.0	0.0	0.1	1.2	2.9	2.7	2.0	1.3	1.1	0.7	1.0	1.1	0.9	0.5	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.7	2.9	
5-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.4	1.6	1.7	1.3	3.8	14.7	6.1	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	14.7	
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
7-Apr	0.1	0.1	0.1	0.1	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	0.1	
8-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	C	C	C	C	C	C	0.6	0.1	0.2	0.0	0.0	0.0	0.0	0.0	--	0.6	
9-Apr	Z	0.0	0.0	0.0	0.0	0.0	1.2	1.8	3.1	2.5	0.8	0.3	0.3	0.1	0.2	0.4	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.1	
10-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.8	2.3	2.7	2.3	1.9	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.7	
11-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.9	0.1	0.1	0.1	0.2	0.4	0.4	0.2	0.1	0.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.9	
12-Apr	0.0	0.1	0.1	Z	0.0	0.1	0.2	0.2	0.3	0.2	0.7	0.8	0.2	0.4	0.2	0.4	0.9	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.9	
13-Apr	0.1	0.1	0.1	0.0	Z	0.3	0.8	2.9	6.3	3.9	2.0	1.9	3.0	1.8	1.4	1.0	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.1	6.3	
14-Apr	0.0	0.1	0.0	0.0	0.0	Z	0.3	0.6	0.6	0.7	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	
15-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	
16-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.6	0.5	0.3	0.3	0.3	0.3	0.6	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.6	
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
18-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
19-Apr	0.0	0.0	0.1	0.0	Z	0.1	0.6	0.8	0.8	1.0	0.7	0.4	0.4	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.8	0.7	0.6	0.3	0.5	0.5	0.5	0.9	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	
21-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.0	1.3	1.1	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3	
22-Apr	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	
23-Apr	0.0	0.0	Z	0.0	0.1	0.3	3.2	6.8	30.6	16.0	0.2	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	30.6	
24-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.6	1.1	1.2	3.1	5.2	3.3	1.2	0.4	0.4	0.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.8	5.2	
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	
26-Apr	0.0	0.0	0.0	1.0	1.1	Z	0.0	0.1	1.5	2.5	0.8	0.5	0.4	0.2	0.2	0.1	0.2	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.4	2.5	
27-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.8	1.7	1.6	1.8	1.7	1.3	1.2	0.8	0.7	0.8	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.8	
28-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.6	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
29-Apr	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.2	0.1	0.2	1.1	1.0	0.3	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.2	1.1	
30-Apr	0.0	0.0	0.0	Z	0.1	0.5	0.6	0.4	1.7	3.9	1.8	0.9	0.1	0.2	0.7	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.9	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	99.85	99.85
21 - 40	1	0.15	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	73	19	15	12	11	17	78	120	49	37	31	36	31	16	26	92	663
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	74	19	15	12	11	17	78	120	49	37	31	36	31	16	26	92	664

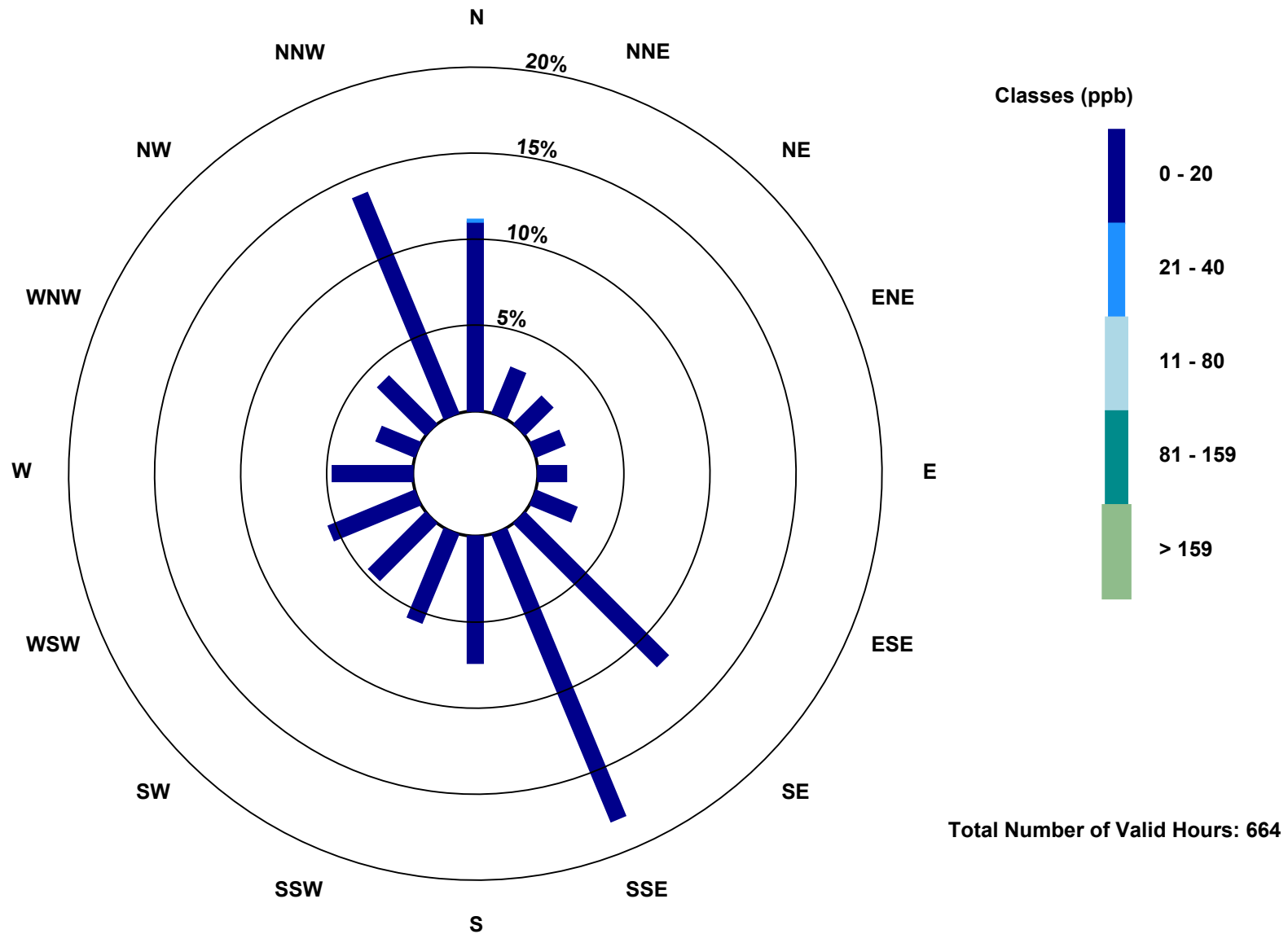
Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

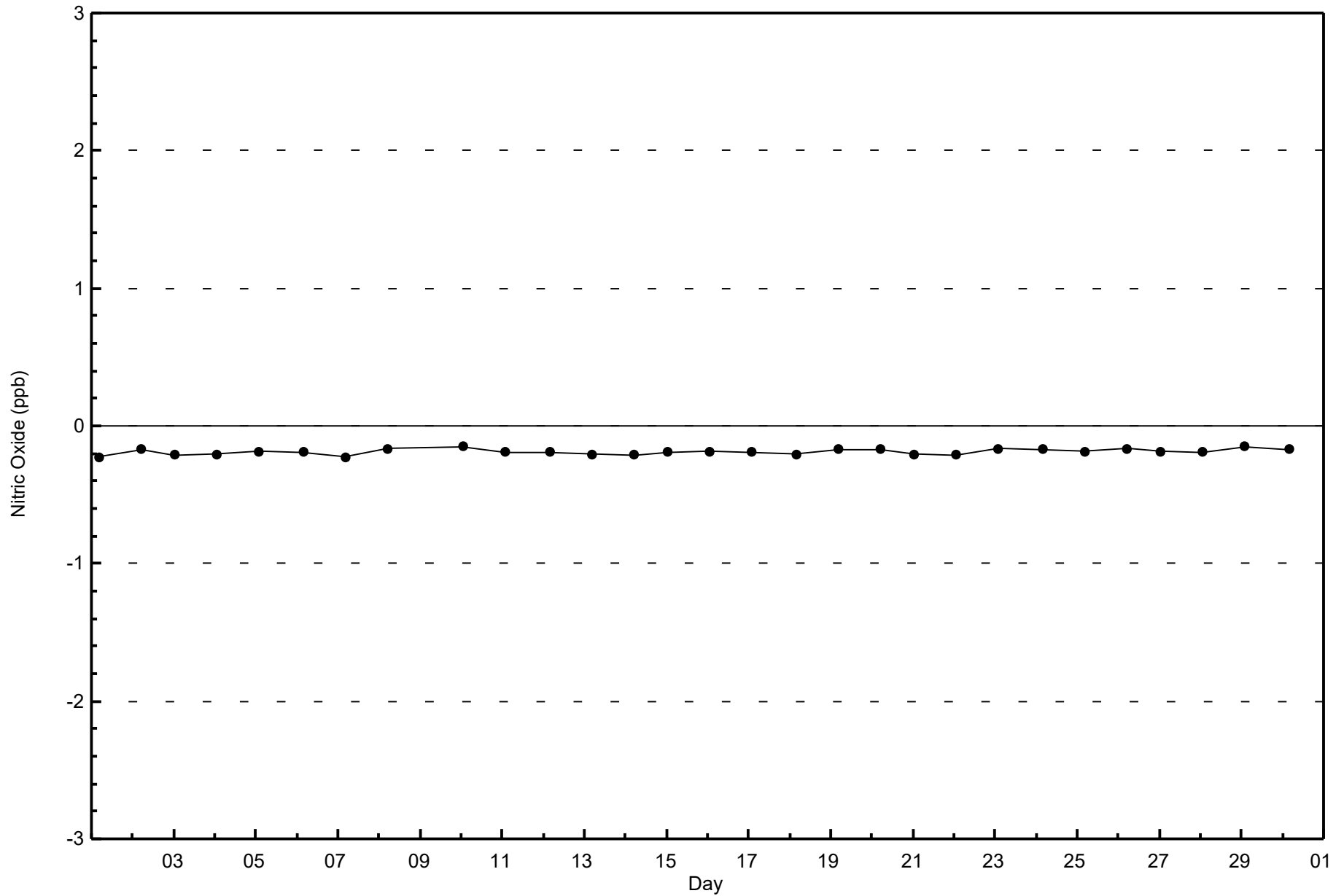
Nitric Oxide (NO) - ppb
Wapasu

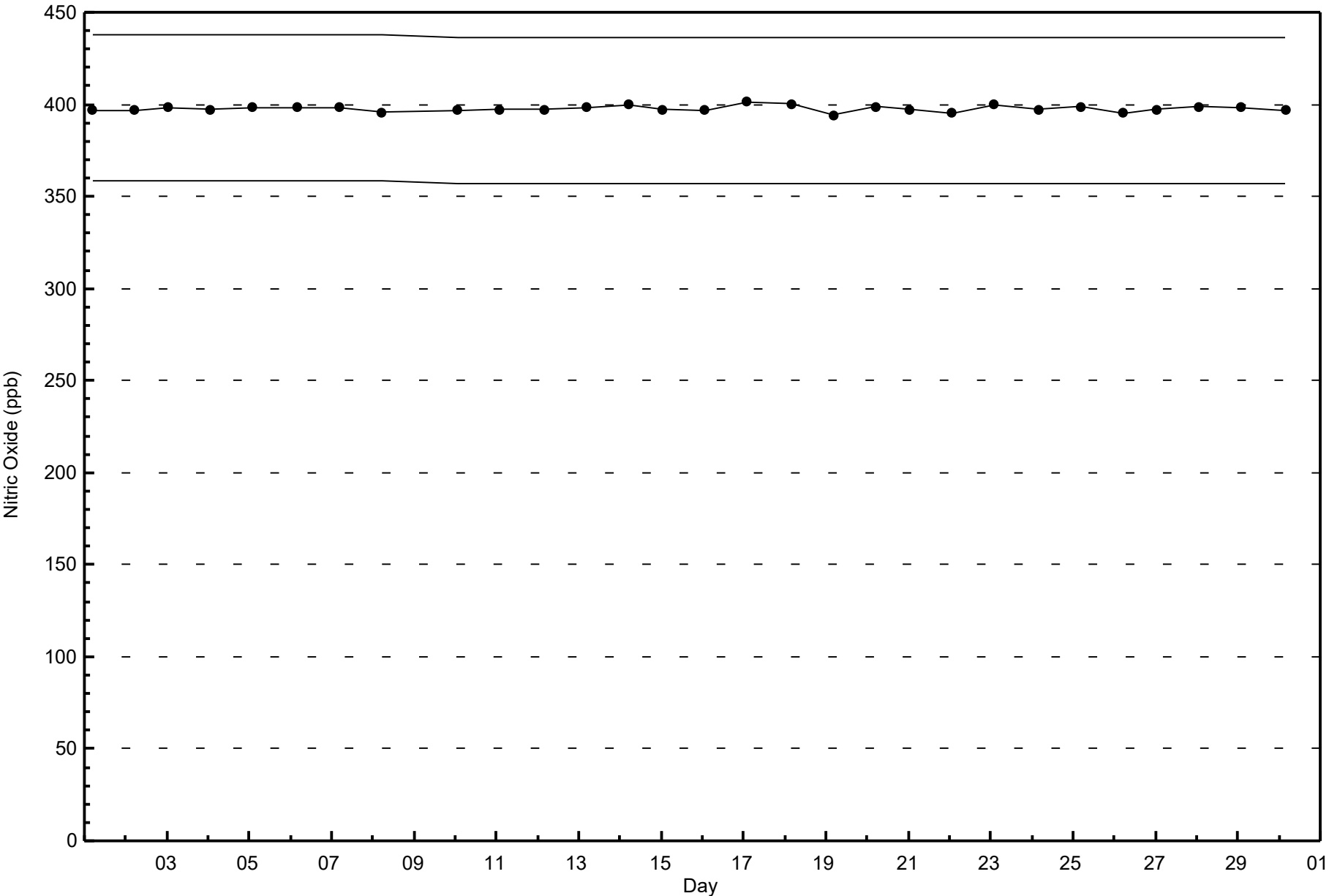




Wood Buffalo Environmental Association
Zero Responses

Nitric Oxide (NO) - ppb
Wapasu - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

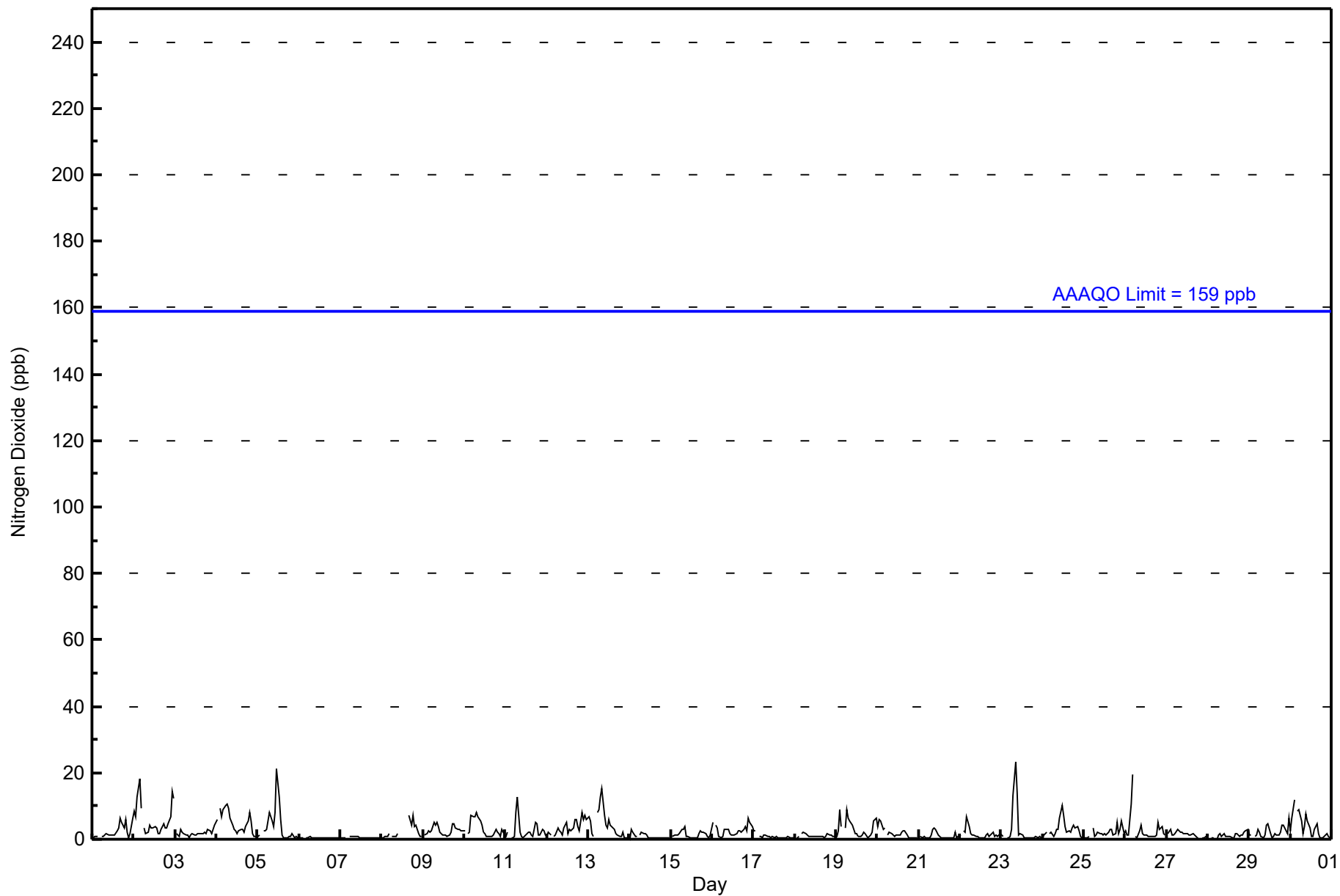
Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 23.3 ppb on Apr 23 09:00 Maximum Daily Average: 5.9 ppb on Apr 2																				Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0						
Minimum Value: 0.2 ppb on Apr 14 01:00 Maximum Diurnal Average: 3.7 ppb at hour 9 Monthly Average: 2.40 ppb										Minimum Daily Average: 0.4 ppb on Apr 6 Minimum Diurnal Average: 1.4 ppb at hour 15 Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.4 Q ₃ = 2.9 P ₉₀ = 5.7 P ₉₉ = 13.4																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.5	0.8	0.8	0.7	Z	0.8	0.8	1.2	1.5	1.4	1.3	1.3	1.3	1.3	2.7	3.4	6.5	5.2	3.2	6.1	2.0	0.5	1.6	6.5	2.2	6.5
2-Apr	8.6	6.8	12.9	18.3	9.5	Z	3.3	1.9	2.0	4.3	3.2	3.2	3.8	3.5	1.9	1.7	2.9	4.5	3.4	3.4	4.6	6.7	14.3	12.1	5.9	18.3
3-Apr	Z	1.9	0.8	3.1	2.2	1.7	1.2	1.1	0.6	1.3	1.8	1.3	1.2	1.6	1.5	1.6	1.8	2.2	1.9	2.8	2.4	1.9	2.8	4.2	1.9	4.2
4-Apr	5.9	Z	9.4	6.6	8.7	10.1	10.6	9.4	6.5	4.2	2.9	2.6	1.8	2.4	3.0	2.9	2.2	3.8	5.5	7.9	5.4	1.7	0.9	0.7	5.0	10.6
5-Apr	0.8	1.1	Z	2.7	2.6	2.9	5.5	8.0	5.7	3.7	8.0	21.1	12.6	6.0	1.2	0.6	0.6	0.5	0.7	1.0	1.8	0.6	0.7	0.6	3.9	21.1
6-Apr	0.6	0.5	0.4	Z	0.4	0.5	0.7	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7
7-Apr	0.3	0.4	0.4	0.5	Z	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8
8-Apr	0.6	0.6	1.0	0.9	1.5	Z	1.0	0.9	0.9	1.7	C	C	C	C	C	C	7.1	4.4	7.0	3.9	4.4	1.8	1.0	0.7	-	7.1
9-Apr	Z	1.3	1.7	2.4	2.3	2.4	5.0	4.2	5.2	3.7	2.0	1.1	1.1	1.1	0.9	1.3	2.1	4.7	4.6	3.2	2.8	3.0	2.5	2.4	2.7	5.2
10-Apr	2.4	Z	1.6	2.0	7.1	6.7	6.9	7.9	6.8	5.3	4.4	2.0	1.7	0.8	0.9	1.0	0.9	1.3	2.8	2.2	1.7	1.0	2.9	1.1	3.1	7.9
11-Apr	0.9	2.2	Z	0.5	0.5	0.7	8.2	12.5	2.1	1.0	0.6	0.8	1.9	2.0	2.3	1.4	0.9	5.1	4.5	1.3	1.3	2.9	2.7	1.2	2.5	12.5
12-Apr	0.8	2.2	1.2	Z	0.8	1.4	3.6	2.6	2.1	1.2	3.3	5.2	1.8	3.0	2.6	3.4	6.0	6.1	3.7	2.4	7.9	6.1	7.4	5.8	3.5	7.9
13-Apr	6.6	5.3	1.7	0.7	Z	7.9	9.1	12.6	15.3	7.2	4.1	3.4	5.9	4.1	3.5	2.8	1.6	1.1	0.7	1.0	2.0	0.3	0.5	0.3	4.2	15.3
14-Apr	0.2	3.1	2.0	0.7	0.8	Z	1.4	2.3	1.6	1.9	1.2	0.5	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.9	3.1
15-Apr	Z	0.7	1.3	1.1	1.1	1.5	2.8	2.8	4.0	0.9	0.9	0.4	0.5	0.4	0.4	0.4	1.9	2.5	2.1	2.0	1.5	0.8	0.6	1.2	1.4	4.0
16-Apr	5.0	Z	4.4	3.4	1.0	0.4	0.9	3.1	3.0	3.0	1.9	1.1	1.3	1.3	1.5	2.7	2.6	2.2	3.0	4.0	2.5	6.4	5.2	3.8	2.8	6.4
17-Apr	2.6	2.5	Z	0.7	0.7	0.6	1.2	1.2	0.9	0.7	0.6	0.8	0.5	0.8	0.5	0.5	0.3	0.3	0.3	0.5	0.9	0.6	0.3	0.3	0.8	2.6
18-Apr	0.2	0.2	0.7	Z	1.9	2.0	1.9	1.2	0.9	0.7	0.8	0.7	0.7	0.7	0.8	0.9	0.7	0.6	0.8	1.5	1.3	1.3	1.0	0.9	1.0	2.0
19-Apr	1.0	2.4	8.8	3.7	Z	3.4	9.1	6.3	5.3	4.2	2.9	1.5	1.5	1.0	1.0	1.1	2.0	1.5	0.4	0.8	1.4	2.0	5.3	6.2	3.2	9.1
20-Apr	4.0	5.8	5.5	2.8	3.5	Z	1.3	2.2	1.5	1.1	0.8	1.1	1.3	1.3	2.2	2.7	2.6	1.1	0.4	0.4	0.3	0.3	0.3	0.6	1.9	5.8
21-Apr	Z	0.7	0.4	0.7	0.4	0.4	0.6	1.1	3.0	3.5	3.0	1.3	1.0	0.6	0.4	0.5	0.5	0.5	0.5	0.3	0.6	2.0	0.4	1.0	1.0	3.5
22-Apr	1.4	Z	2.4	2.1	6.7	3.8	1.8	1.1	1.1	0.9	0.7	0.5	0.4	0.6	0.6	1.2	1.6	1.0	1.5	2.2	0.8	1.4	0.8	1.7	1.6	6.7
23-Apr	1.4	0.7	Z	0.5	0.6	0.7	3.1	13.3	23.3	14.0	1.1	1.5	1.4	0.6	0.5	0.4	0.3	0.3	0.5	0.5	1.0	0.5	1.0	0.4	2.9	23.3
24-Apr	0.5	1.3	2.0	Z	1.6	2.0	0.8	1.6	2.9	2.8	6.4	10.3	7.2	3.8	2.3	2.4	2.2	3.5	4.2	3.4	3.8	2.5	0.8	0.4	3.0	10.3
25-Apr	0.4	0.4	0.4	0.8	Z	3.6	0.9	1.1	2.0	1.7	1.8	1.3	1.5	1.4	2.2	2.8	2.9	1.1	1.6	4.9	1.7	2.9	5.4	1.7	1.9	5.4
26-Apr	2.5	1.2	1.4	10.7	19.5	Z	0.8	0.6	2.7	4.2	1.8	1.4	1.4	1.0	0.7	0.7	0.7	0.7	1.2	4.9	2.9	3.7	1.5	1.3	2.9	19.5
27-Apr	Z	1.6	3.0	1.4	1.3	1.5	3.1	2.5	2.0	2.0	1.8	1.5	1.5	1.3	1.3	1.5	1.2	1.0	0.4	0.2	0.2	0.3	0.3	0.9	1.4	3.1
28-Apr	1.1	Z	0.3	0.3	0.2	0.2	1.4	1.8	0.8	1.6	0.9	0.8	1.0	0.9	0.5	0.6	1.5	1.7	0.8	1.3	1.1	2.0	2.6	2.9	1.1	2.9
29-Apr	1.1	1.3	Z	1.0	1.4	3.0	2.0	0.7	0.6	1.3	4.3	4.6	1.8	0.5	0.7	1.7	1.2	1.3	2.2	4.4	4.2	2.4	1.9	6.4	2.2	6.4
30-Apr	2.4	6.3	11.7	Z	8.6	8.9	5.7	1.9	4.0	7.7	5.3	3.6	0.9	0.9	2.8	4.6	1.9	0.4	0.3	0.3	1.2	1.8	1.0	0.6	3.6	11.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.71	99.71
21 - 40	2	0.29	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	73	19	15	12	11	17	78	120	49	37	31	36	31	16	26	91	662
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	74	19	15	12	11	17	78	120	49	37	31	36	31	16	26	92	664

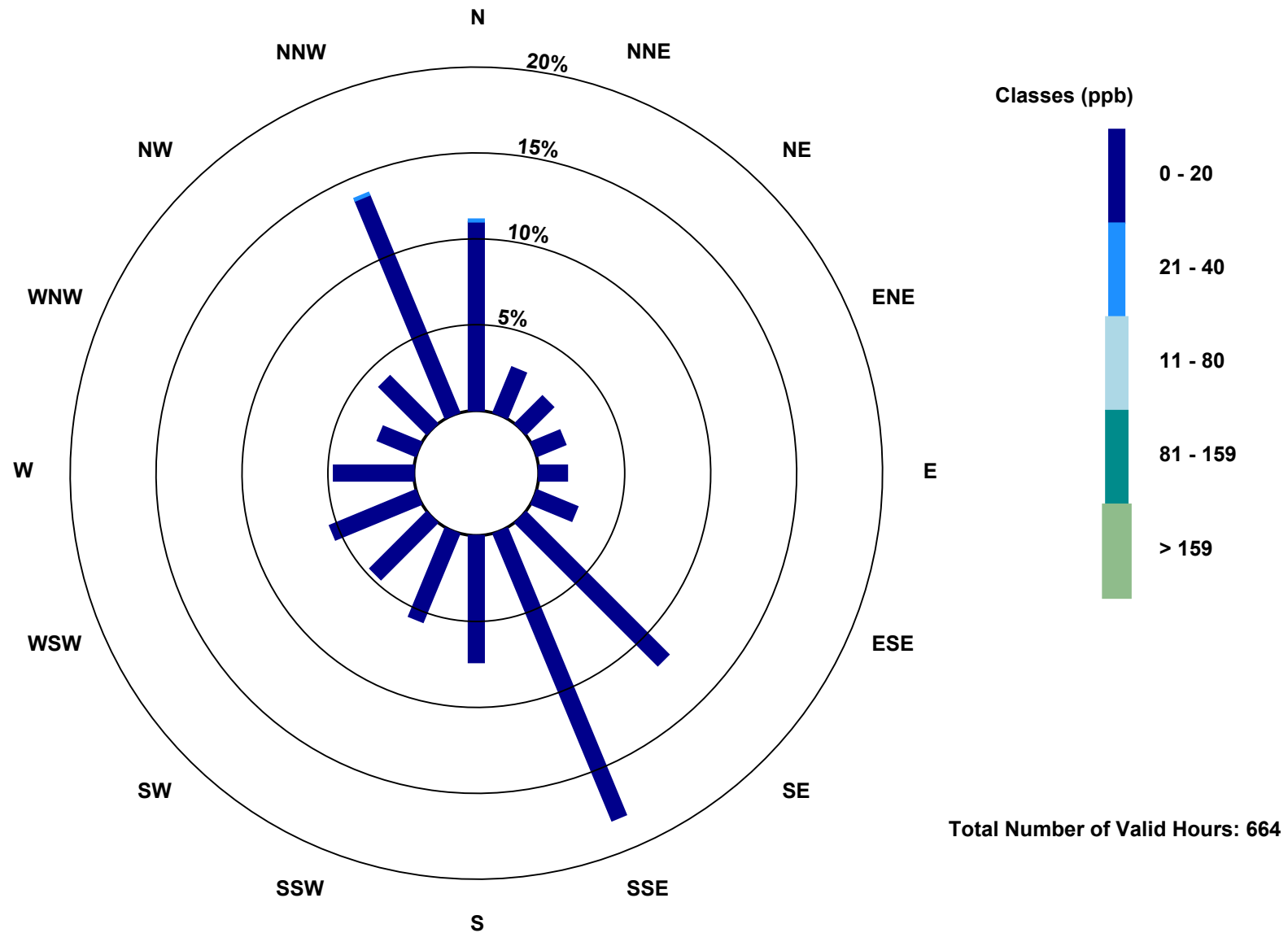
Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

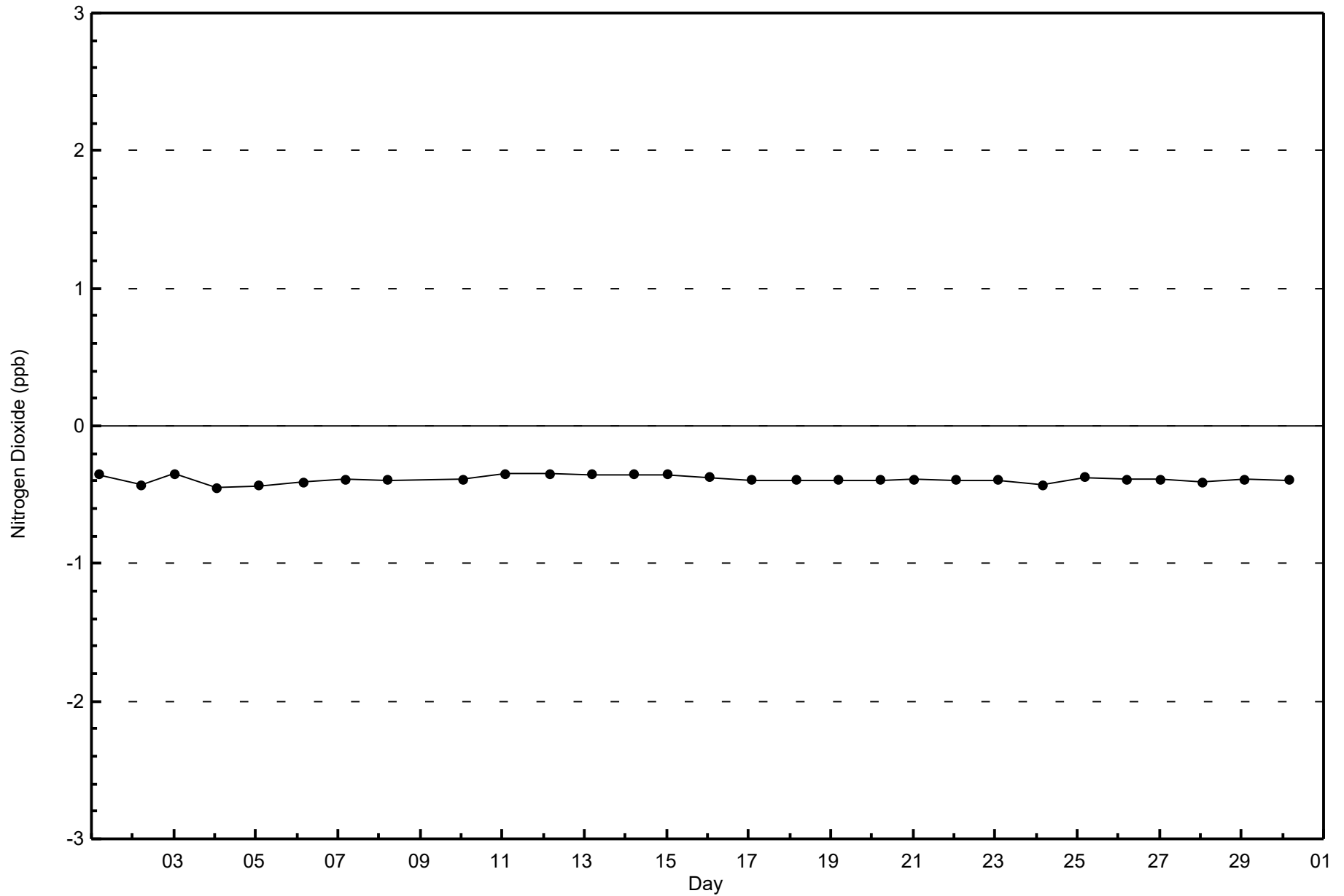
Nitrogen Dioxide (NO₂) - ppb
Wapasu





Wood Buffalo Environmental Association
Zero Responses

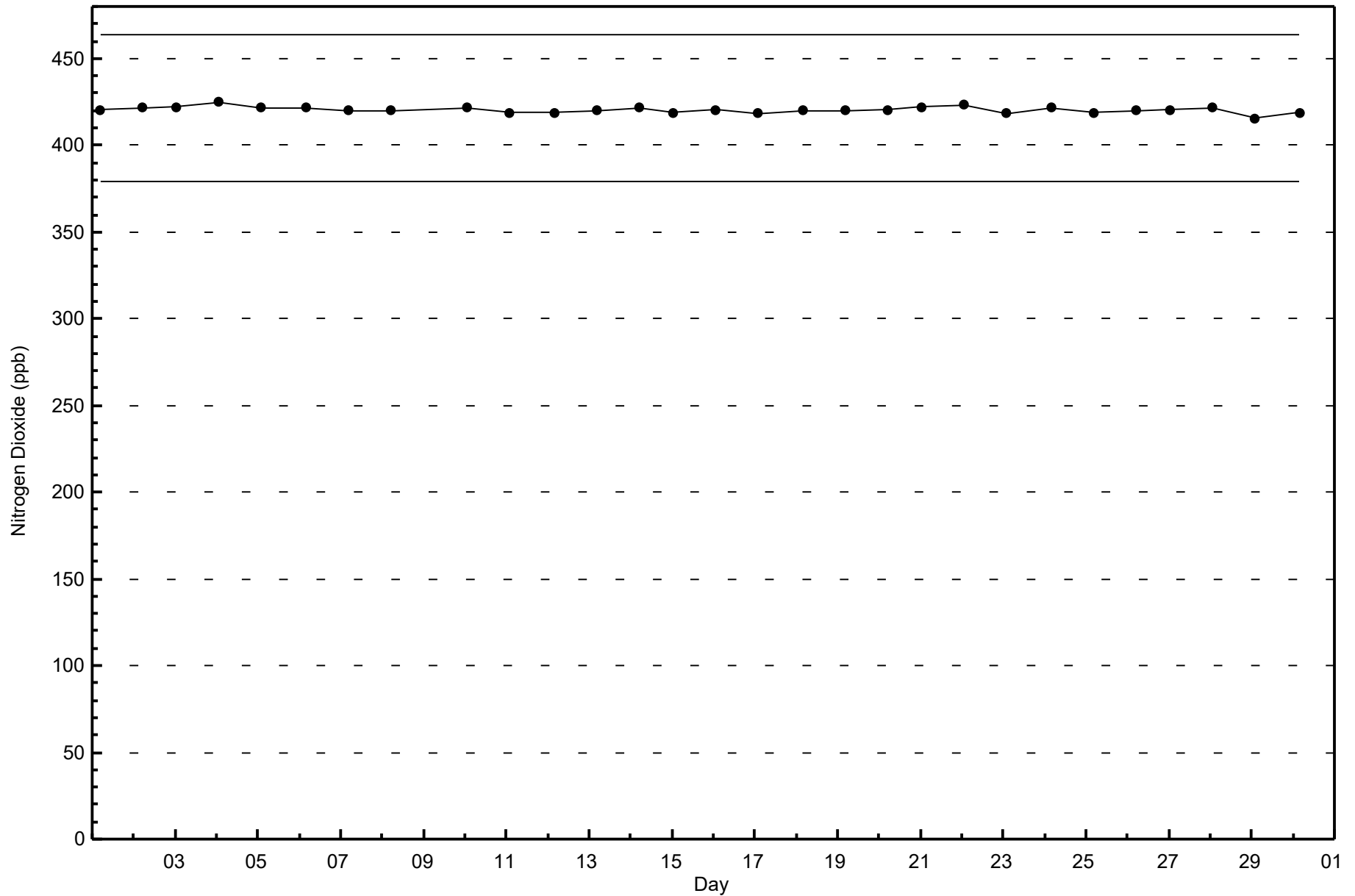
Nitrogen Dioxide (NO₂) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

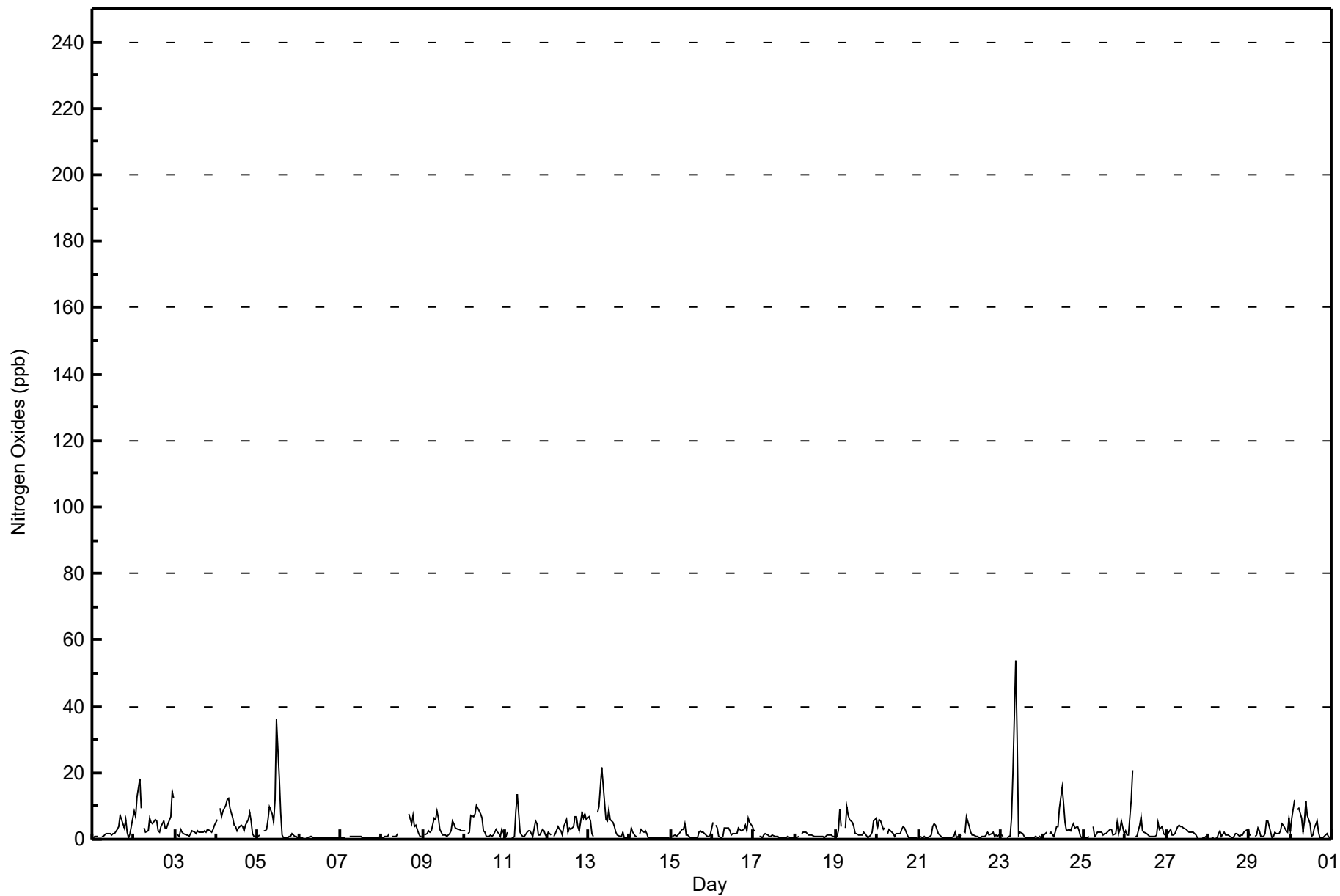
Wapasu - April 2025

Maximum Value: 53.9 ppb on Apr 23 09:00																				Maximum Daily Average: 6.5 ppb on Apr 2										Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 27 21:00																				Minimum Daily Average: 0.5 ppb on Apr 6										Hours of Data: 684	
Maximum Diurnal Average: 5.6 ppb at hour 9																				Minimum Diurnal Average: 1.7 ppb at hour 15										Hours of Missing Data: 36	
Monthly Average: 2.82 ppb																				Percentiles: P ₁ = 0.3 P ₁₀ = 0.5 Q ₁ = 0.8 Median = 1.6 Q ₃ = 3.4 P ₉₀ = 6.3 P ₉₉ = 18.4										Hours of Calibration: 36	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	0.5	0.8	0.8	0.7	Z	0.8	0.9	1.3	1.6	1.6	1.6	1.5	1.6	1.6	3.1	3.7	7.2	5.7	3.3	6.1	2.0	0.5	1.6	6.5	2.4	7.2					
2-Apr	8.6	6.8	12.9	18.4	9.5	Z	3.5	2.2	2.7	6.5	4.9	4.7	6.0	5.4	2.6	2.2	3.7	5.3	3.6	3.4	4.6	6.7	14.4	12.1	6.5	18.4					
3-Apr	Z	1.9	0.8	3.1	2.2	1.7	1.3	1.4	0.8	1.7	2.4	2.0	1.8	2.4	2.1	2.2	2.3	2.6	2.0	2.8	2.4	1.9	2.8	4.2	2.1	4.2					
4-Apr	5.9	Z	9.4	6.6	8.7	10.2	11.8	12.3	9.2	6.2	4.2	3.7	2.5	3.4	4.1	3.8	2.7	4.4	5.7	7.9	5.4	1.7	0.9	0.7	5.7	12.3					
5-Apr	0.8	1.1	Z	2.7	2.6	2.9	5.9	9.6	7.4	5.0	11.8	35.8	18.7	8.2	1.4	0.6	0.6	0.5	0.7	1.0	1.8	0.6	0.7	0.6	5.3	35.8					
6-Apr	0.6	0.5	0.4	Z	0.4	0.5	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7					
7-Apr	0.4	0.5	0.5	0.6	Z	0.7	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9					
8-Apr	0.6	0.6	1.0	0.9	1.5	Z	1.0	0.9	1.0	1.9	C	C	C	C	C	C	7.7	4.5	7.2	3.9	4.4	1.8	1.0	0.7	--	7.7					
9-Apr	Z	1.3	1.7	2.4	2.3	2.4	6.2	6.0	8.3	6.2	2.8	1.4	1.4	1.4	1.0	1.5	2.5	5.4	4.8	3.2	2.8	3.0	2.5	2.4	3.2	8.3					
10-Apr	2.4	Z	1.6	2.0	7.1	6.8	7.7	10.2	9.5	7.6	6.3	2.7	2.2	0.9	1.0	1.1	1.0	1.4	2.9	2.2	1.7	1.0	2.9	1.1	3.6	10.2					
11-Apr	0.9	2.2	Z	0.5	0.5	0.7	8.5	13.4	2.2	1.1	0.7	1.0	2.3	2.4	2.5	1.5	1.0	5.5	4.7	1.3	1.3	2.9	2.7	1.2	2.6	13.4					
12-Apr	0.8	2.3	1.3	Z	0.8	1.5	3.8	2.8	2.4	1.4	4.0	6.0	2.0	3.4	2.8	3.8	6.9	6.8	3.9	2.5	8.0	6.2	7.5	5.9	3.8	8.0					
13-Apr	6.7	5.4	1.8	0.7	Z	8.2	9.9	15.5	21.6	11.1	6.1	5.3	8.9	5.9	4.9	3.8	2.1	1.3	0.8	1.0	2.0	0.3	0.5	0.3	5.4	21.6					
14-Apr	0.2	3.2	2.0	0.7	0.8	Z	1.7	2.9	2.2	2.6	1.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.5	1.1	3.2					
15-Apr	Z	0.7	1.3	1.1	1.1	1.5	2.9	3.1	4.7	1.1	1.1	0.5	0.5	0.4	0.4	0.4	2.0	2.7	2.2	2.0	1.5	0.8	0.6	1.2	1.5	4.7					
16-Apr	5.0	Z	4.4	3.4	1.0	0.4	1.0	3.4	3.4	3.6	2.4	1.4	1.6	1.6	1.8	3.3	3.0	2.4	3.1	4.1	2.5	6.4	5.2	3.8	3.0	6.4					
17-Apr	2.6	2.5	Z	0.7	0.7	0.6	1.3	1.5	1.3	1.0	0.9	1.2	0.8	1.1	0.8	0.6	0.4	0.3	0.3	0.5	0.9	0.6	0.3	0.3	0.9	2.6					
18-Apr	0.2	0.2	0.7	Z	1.9	2.1	2.3	1.6	1.2	1.1	1.1	1.0	1.0	0.9	1.0	1.0	0.7	0.6	0.8	1.5	1.3	1.3	1.0	0.9	1.1	2.3					
19-Apr	1.0	2.4	8.9	3.7	Z	3.5	9.7	7.1	6.1	5.2	3.6	1.9	1.9	1.2	1.2	1.2	2.2	1.5	0.4	0.8	1.4	2.0	5.3	6.2	3.4	9.7					
20-Apr	4.0	5.8	5.5	2.8	3.5	Z	1.6	3.0	2.2	1.7	1.1	1.6	1.8	1.8	3.1	3.7	3.3	1.3	0.4	0.4	0.3	0.3	0.3	0.6	2.2	5.8					
21-Apr	Z	0.7	0.4	0.7	0.4	0.4	0.7	1.4	4.0	4.8	4.1	1.7	1.3	0.7	0.5	0.6	0.6	0.6	0.5	0.3	0.6	2.0	0.4	1.0	1.2	4.8					
22-Apr	1.4	Z	2.4	2.1	6.8	3.9	1.9	1.2	1.2	1.0	0.8	0.6	0.5	0.7	0.7	1.3	1.9	1.1	1.6	2.3	0.8	1.4	0.8	1.7	1.7	6.8					
23-Apr	1.4	0.7	Z	0.5	0.7	1.0	6.3	20.1	53.9	30.0	1.3	2.0	1.8	0.7	0.5	0.4	0.3	0.3	0.5	0.5	1.0	0.5	1.0	0.4	5.5	53.9					
24-Apr	0.5	1.3	2.0	Z	1.6	2.1	0.9	2.2	4.0	4.0	9.5	15.5	10.5	5.0	2.7	2.8	2.5	3.9	4.5	3.4	3.8	2.5	0.8	0.4	3.8	15.5					
25-Apr	0.4	0.4	0.4	0.8	Z	3.7	1.0	1.2	2.2	2.0	2.1	1.4	1.6	1.6	2.4	3.0	3.1	1.2	1.6	5.0	1.7	2.9	5.4	1.7	2.0	5.4					
26-Apr	2.5	1.2	1.4	11.7	20.6	Z	0.8	0.7	4.2	6.7	2.6	1.9	1.8	1.2	0.9	0.8	0.9	0.8	1.2	5.1	2.9	3.7	1.5	1.3	3.3	20.6					
27-Apr	Z	1.6	3.0	1.4	1.3	1.6	3.9	4.2	3.6	3.8	3.5	2.8	2.7	2.1	2.0	2.3	1.7	1.3	0.4	0.2	0.2	0.3	0.3	0.9	2.0	4.2					
28-Apr	1.1	Z	0.3	0.3	0.2	0.2	1.8	2.4	1.0	2.2	1.1	1.1	1.3	1.0	0.6	0.7	1.7	1.8	0.8	1.3	1.1	2.0	2.6	2.9	1.3	2.9					
29-Apr	1.1	1.3	Z	1.0	1.4	3.2	2.4	0.9	0.7	1.5	5.4	5.6	2.1	0.6	0.8	2.1	1.5	1.5	2.3	4.5	4.2	2.4	1.9	6.5	2.4	6.5					
30-Apr	2.4	6.3	11.7	Z	8.7	9.4	6.3	2.3	5.7	11.6	7.1	4.5	1.0	1.1	3.5	5.6	2.1	0.4	0.3	0.3	1.2	1.8	1.0	0.6	4.1	11.7					
Diurnal Average																															
Diurnal Maximum																															
Z - zerospan C - Calibration																															



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	679	99.27	99.27
21 - 40	4	0.58	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Wapasu - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	72	19	14	12	11	17	78	120	49	37	31	36	31	16	25	91	659
21 - 40	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	4
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	74	19	15	12	11	17	78	120	49	37	31	36	31	16	26	92	664

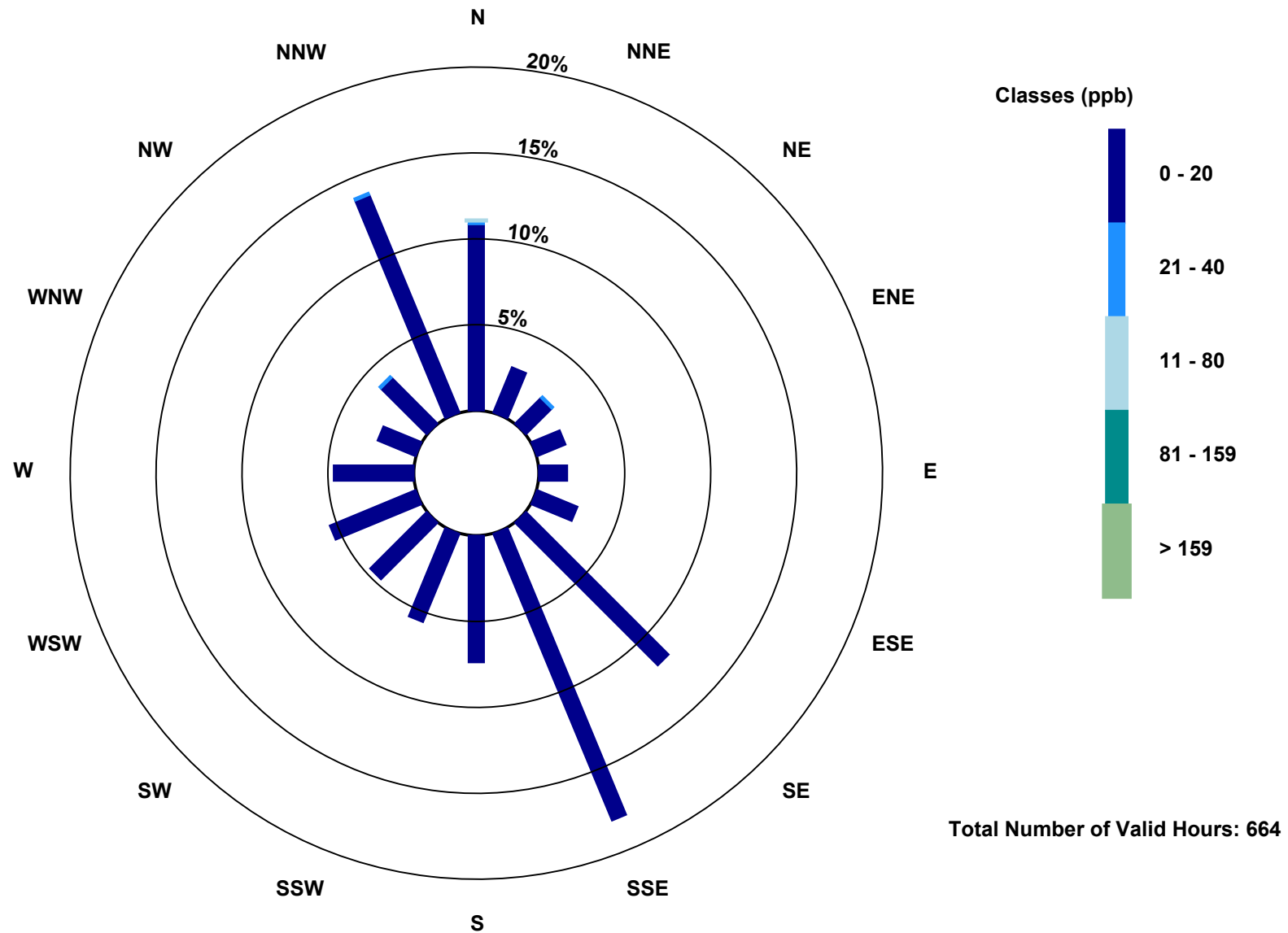
Total Number of Valid Hours: 664

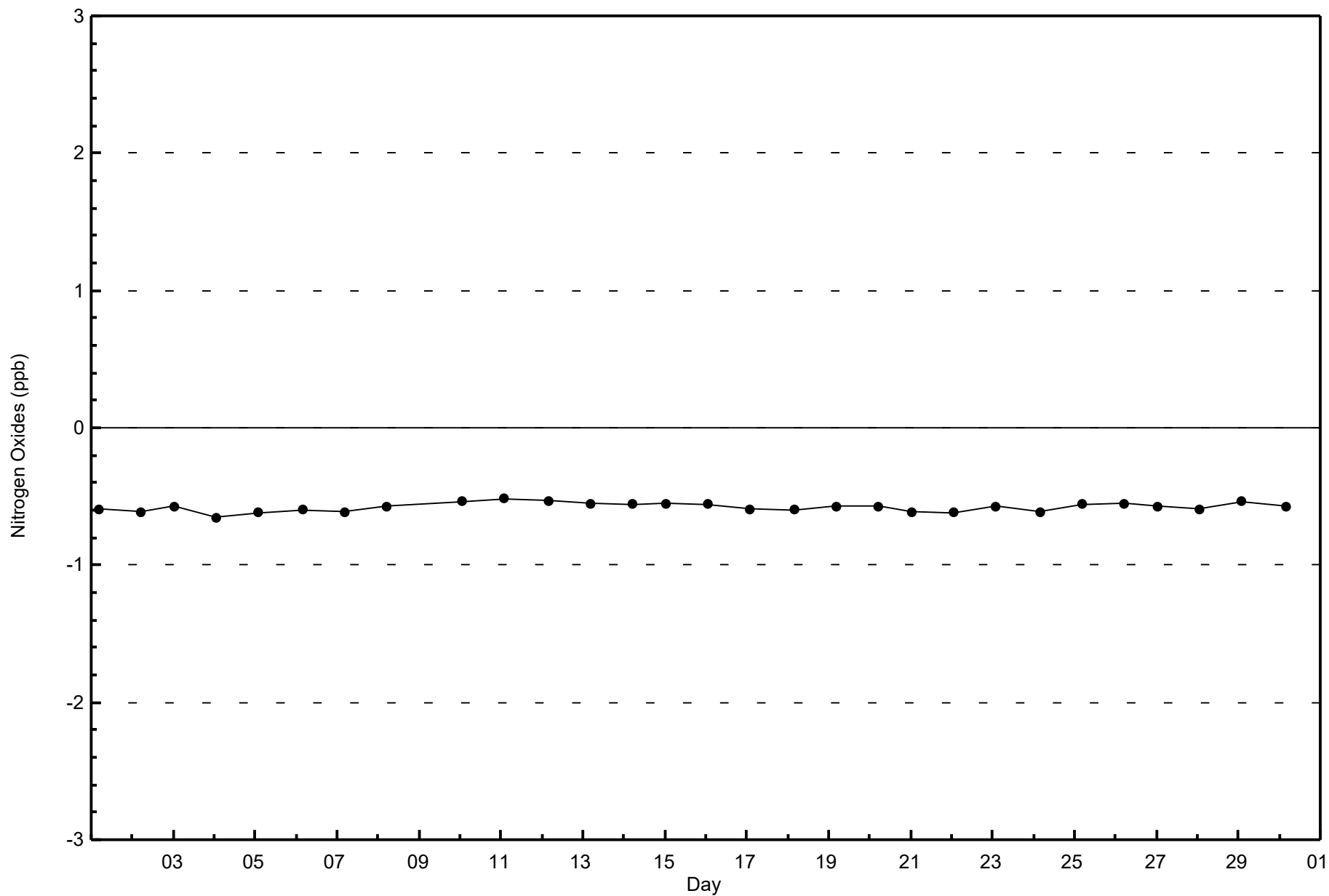
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Wapasu

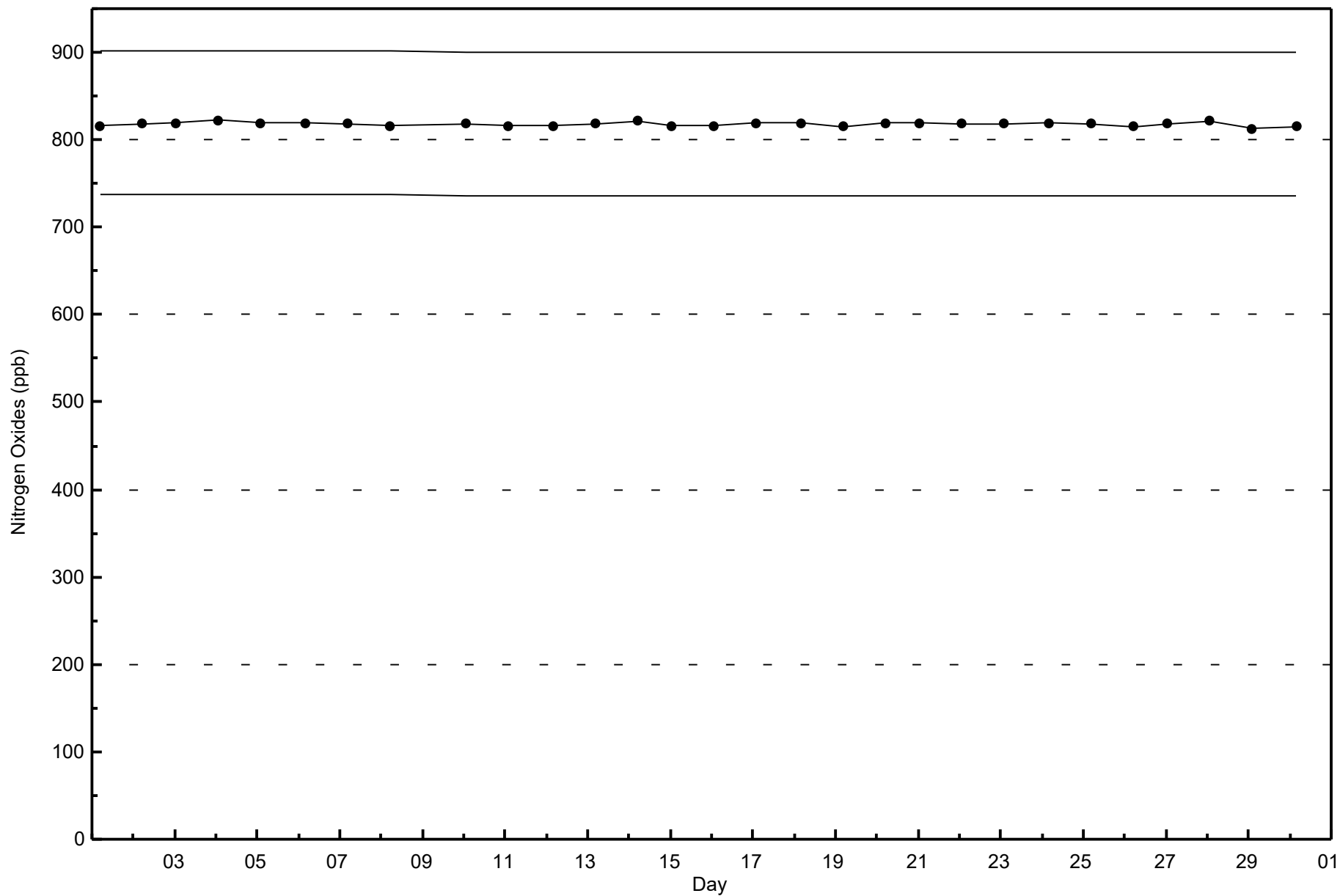






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Wapasu - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

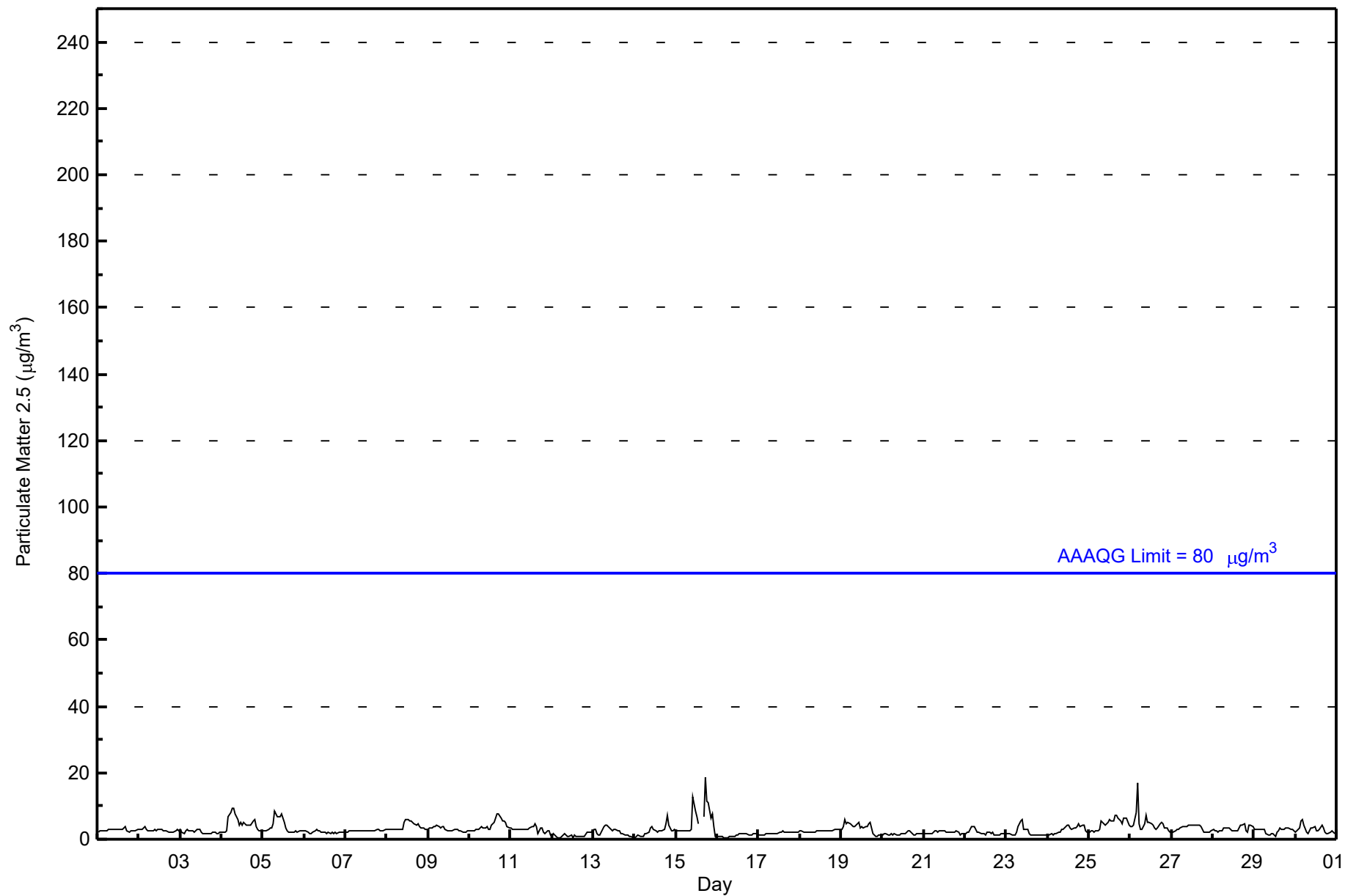
Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 18.6 µg/m³ on Apr 15 18:00										Maximum Daily Average: 5.7 µg/m³ on Apr 15										Hours of Data: 718						
Minimum Value: 0.3 µg/m³ on Apr 12 05:00										Minimum Daily Average: 1.2 µg/m³ on Apr 12										Hours of Missing Data: 2						
Maximum Diurnal Average: 3.5 µg/m³ at hour 18										Minimum Diurnal Average: 2.3 µg/m³ at hour 1										Hours of Calibration: 2						
Monthly Average: 2.91 µg/m³										Percentiles: P ₁ = 0.6 P ₁₀ = 1.3 Q ₁ = 1.9 Median = 2.6 Q ₃ = 3.4 P ₉₀ = 4.7 P ₉₉ = 8.6										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-Apr	2.1	2.3	2.4	2.5	2.6	2.6	2.8	2.9	3.0	3.0	2.9	3.1	3.0	3.0	3.0	3.5	4.0	2.7	2.3	2.3	2.4	2.4	2.4	2.9	2.8	4.0
2-Apr	3.1	2.9	3.0	3.9	3.1	2.4	2.5	2.4	2.5	2.9	2.6	2.9	2.9	3.1	2.5	2.5	2.7	2.3	2.0	2.1	2.2	2.6	2.9	2.7	2.7	3.9
3-Apr	2.9	2.0	1.8	2.7	2.9	2.5	2.3	2.5	2.2	2.4	3.1	2.9	2.0	1.8	1.6	1.7	1.7	1.7	1.8	2.0	2.0	1.7	1.8	2.0	2.2	3.1
4-Apr	2.1	2.2	2.1	2.4	6.8	8.2	9.5	9.3	7.7	5.8	4.2	4.9	4.1	5.2	4.3	4.2	4.2	4.3	5.7	5.7	4.0	2.8	2.5	2.5	4.8	9.5
5-Apr	2.6	2.5	2.6	3.0	3.2	3.2	4.5	8.7	6.7	6.6	6.8	7.4	5.0	3.4	2.4	2.2	2.0	2.0	2.0	2.4	2.3	2.4	2.5	2.6	3.7	8.7
6-Apr	2.5	2.3	2.0	1.9	1.9	2.2	2.5	2.8	2.4	2.6	2.3	2.2	2.0	1.8	1.9	1.9	1.9	1.8	2.0	1.9	1.9	1.9	2.0	2.2	2.1	2.8
7-Apr	2.2	2.3	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.5	2.5	2.6	2.6	2.8	2.8	2.7	2.7	2.6	2.8	2.6	2.8
8-Apr	2.8	2.9	3.0	3.0	3.0	3.0	3.0	3.0	2.9	3.2	5.1	5.8	5.9	5.6	5.4	5.1	4.8	4.2	4.5	3.9	3.5	3.3	3.0	2.9	3.9	5.9
9-Apr	2.9	3.2	3.4	3.8	3.8	4.3	3.9	3.2	3.9	3.8	3.2	2.4	2.6	2.7	2.5	2.8	3.0	3.0	2.5	2.4	2.1	2.1	2.2	2.7	3.0	4.3
10-Apr	2.5	2.6	2.6	2.6	3.1	3.1	3.6	3.9	3.4	3.4	3.9	3.1	3.1	4.1	4.9	6.5	7.6	7.6	6.2	5.6	5.4	5.0	3.7	3.6	4.2	7.6
11-Apr	3.3	3.1	2.9	3.1	3.1	3.0	2.8	3.0	3.1	2.9	2.8	3.2	3.9	4.0	4.4	3.7	1.6	3.5	3.4	2.2	1.7	2.6	2.7	1.2	3.0	4.4
12-Apr	1.0	1.5	1.0	0.6	0.3	0.4	1.2	1.8	1.4	0.9	1.0	1.1	0.5	1.4	0.9	0.7	0.6	1.0	0.9	0.9	2.1	2.2	2.2	2.0	1.2	2.2
13-Apr	2.8	2.8	1.6	1.4	1.3	2.9	3.8	4.2	4.3	3.6	3.0	2.6	2.9	2.9	2.7	2.6	1.9	1.7	1.2	1.3	1.2	0.7	0.7	0.6	2.3	4.3
14-Apr	0.6	0.9	1.3	1.0	0.9	1.0	1.7	1.8	2.1	3.5	3.8	3.0	2.4	2.2	2.6	2.6	2.7	3.1	4.8	7.3	4.2	2.7	2.6	2.8	2.6	7.3
15-Apr	2.6	2.7	2.6	2.6	2.6	2.7	2.6	2.6	2.5	3.0	12.6	8.3	6.9	4.8	C	C	6.8	18.6	11.6	11.0	6.2	7.6	3.8	1.0	5.7	18.6
16-Apr	0.9	0.7	0.8	0.9	0.4	0.5	0.5	0.8	1.0	1.0	0.8	1.3	1.3	1.7	1.7	1.6	1.6	1.5	1.3	1.4	1.3	1.6	1.7	1.6	1.2	1.7
17-Apr	1.2	1.3	1.2	1.4	1.9	1.8	1.7	1.8	1.7	1.9	1.8	1.8	2.1	2.3	2.4	2.3	2.1	1.9	1.9	2.0	2.2	2.1	2.0	2.1	1.9	2.4
18-Apr	2.3	2.4	2.3	2.1	2.2	2.1	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.5	2.4	2.4	2.5	2.6	2.5	2.6	2.8	2.9	3.0	2.9	2.4	3.0
19-Apr	2.9	3.7	6.0	4.6	5.2	4.6	4.2	3.7	3.6	4.6	5.1	3.4	3.8	3.3	3.8	3.9	4.8	4.9	1.7	1.2	0.9	0.8	1.1	1.2	3.5	6.0
20-Apr	1.2	1.6	1.7	1.4	1.4	1.5	1.4	1.6	1.4	1.3	1.2	1.5	1.5	1.7	2.2	2.6	2.4	1.9	1.4	1.4	1.5	1.6	1.6	1.6	1.6	2.6
21-Apr	1.9	1.8	1.7	1.7	1.7	1.9	2.5	2.4	2.1	2.5	2.5	2.5	2.5	2.3	2.0	2.2	2.3	2.2	2.1	2.4	2.3	1.5	1.7	1.7	2.1	2.5
22-Apr	1.8	2.1	2.3	2.9	3.6	3.7	2.8	2.2	1.9	1.7	1.7	1.8	1.4	1.9	2.2	1.7	2.1	1.3	1.3	1.3	1.3	1.6	1.5	1.5	2.0	3.7
23-Apr	1.6	1.6	1.5	1.4	1.3	1.5	2.1	3.7	5.4	5.8	2.9	3.0	3.0	1.6	1.3	1.2	1.1	1.1	1.2	1.2	1.3	1.1	1.3	1.2	2.0	5.8
24-Apr	1.2	1.3	1.7	1.4	1.5	1.8	1.9	2.2	2.8	2.8	3.3	4.2	4.2	3.3	2.8	3.2	3.2	3.9	4.6	4.0	4.4	4.1	2.5	2.2	2.9	4.6
25-Apr	2.3	2.4	2.4	2.3	2.3	2.6	3.0	5.6	5.0	4.0	4.7	5.0	5.8	5.7	5.4	7.4	7.2	6.5	5.4	4.6	6.4	6.2	6.5	4.4	4.7	7.4
26-Apr	3.9	3.9	4.3	7.9	16.8	4.8	3.0	3.0	4.7	7.2	5.1	5.1	4.6	4.0	3.4	2.9	3.4	4.5	4.9	4.7	3.5	3.4	2.6	2.3	4.7	16.8
27-Apr	2.6	2.0	2.7	3.1	3.0	3.5	3.6	3.8	3.8	4.0	4.1	4.2	4.0	4.2	4.2	4.2	4.2	3.7	2.8	2.1	2.0	2.0	2.0	2.6	3.3	4.2
28-Apr	2.8	2.5	2.5	2.3	2.4	2.6	3.3	3.4	3.2	3.5	2.8	2.4	2.7	2.4	2.7	3.2	4.2	4.4	4.5	2.6	2.2	4.1	4.4	3.8	3.1	4.5
29-Apr	3.0	3.1	3.1	2.9	2.8	3.1	2.9	1.8	1.3	1.5	1.8	1.5	0.9	2.3	2.7	3.2	3.1	2.9	3.3	3.3	3.4	2.9	2.8	2.6	2.6	3.4
30-Apr	2.2	2.6	3.4	5.7	5.8	4.4	2.3	1.8	2.5	3.3	3.3	3.7	2.4	2.4	3.1	4.1	3.4	2.2	1.8	1.6	2.1	2.4	2.1	1.9	2.9	5.8
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Wapasu - April 2025

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	671	93.45	93.45
6 - 15	45	6.27	99.72
16 - 25	2	0.28	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Wapasu - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	75	19	15	12	10	18	84	121	48	32	24	31	27	15	26	91	648
6 - 15	5	0	0	0	1	1	1	5	4	5	8	6	4	1	0	4	45
16 - 25	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	80	19	16	12	11	19	85	126	52	37	32	37	31	17	26	95	695

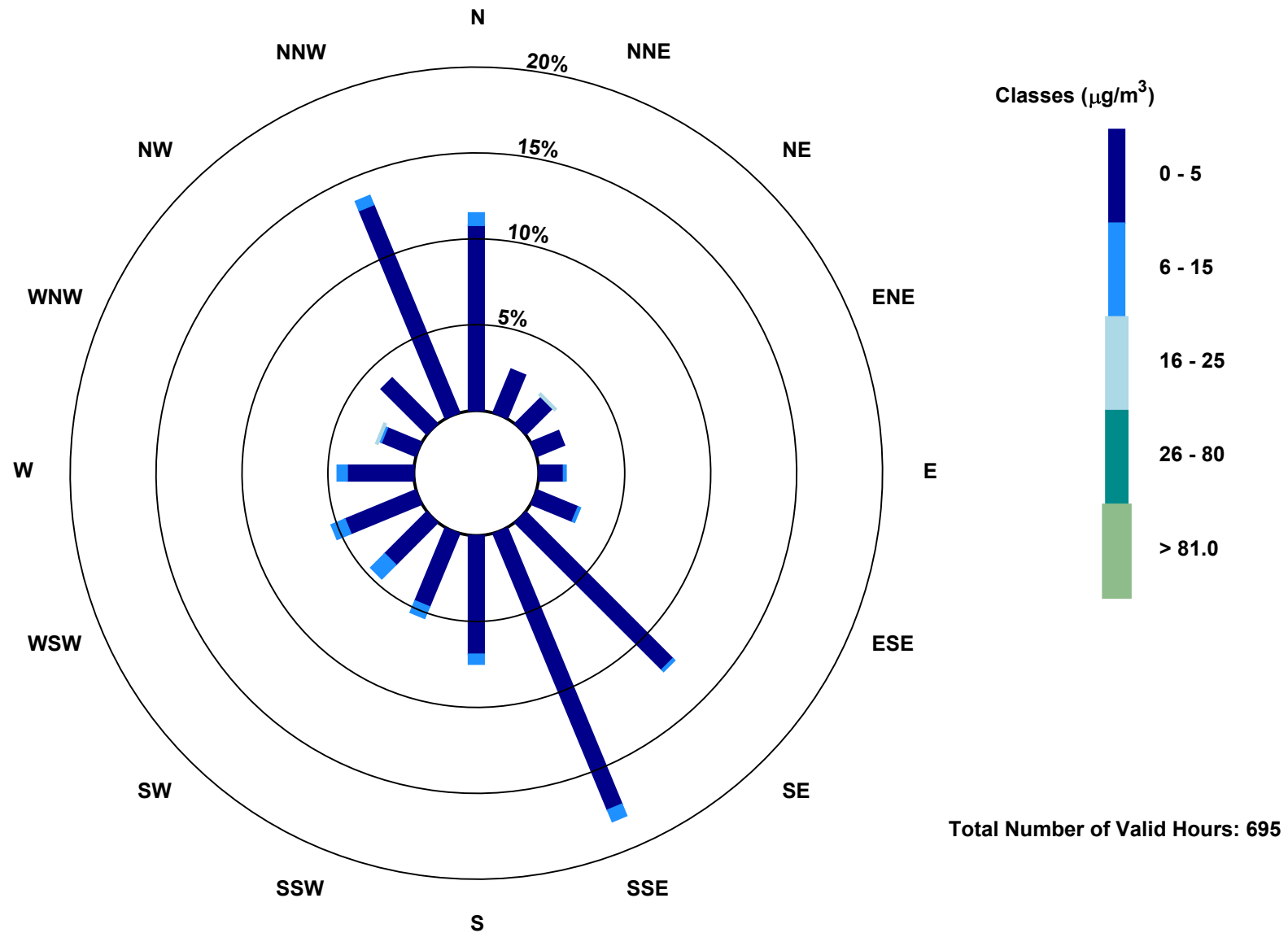
Total Number of Valid Hours: 695

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

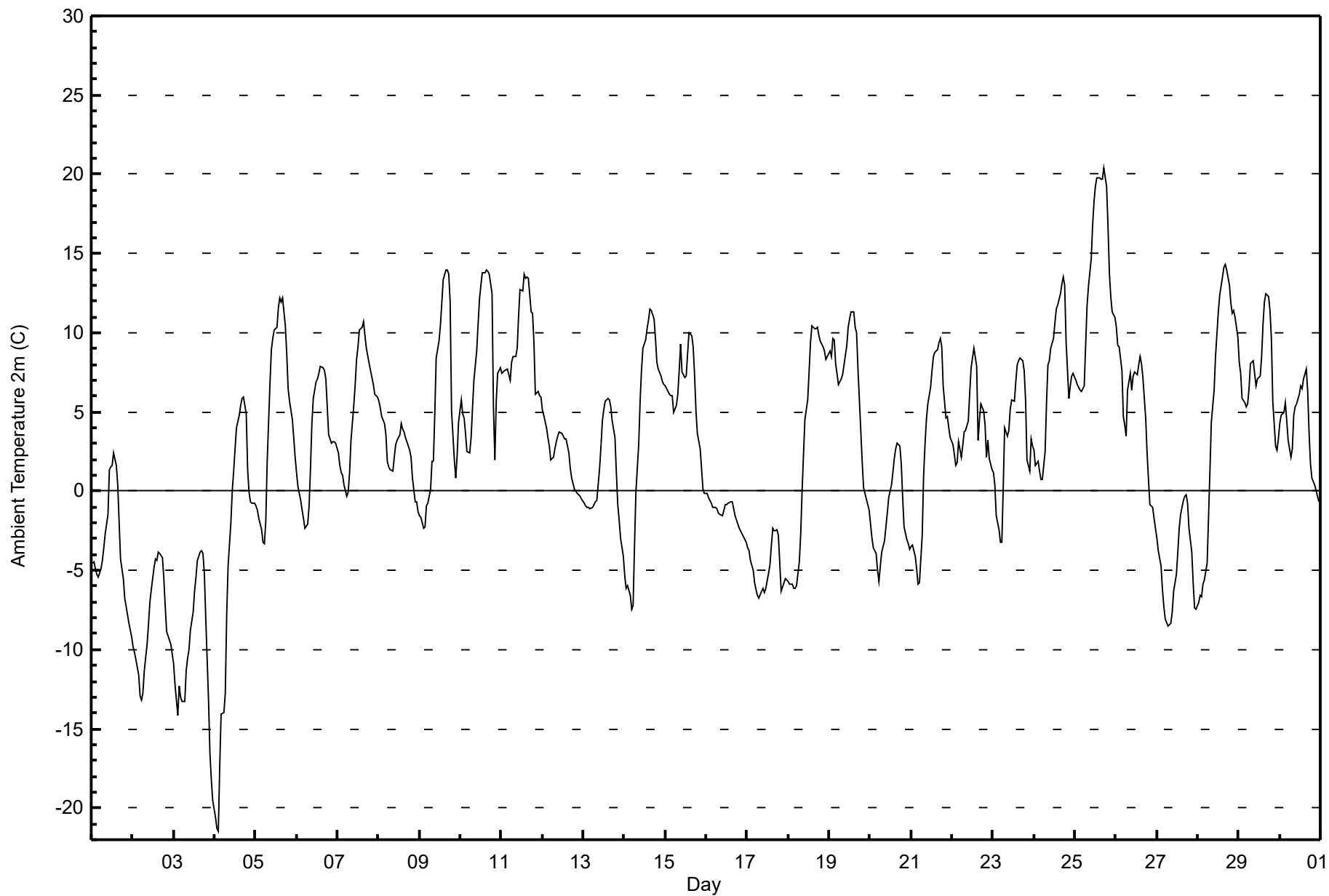
Wapasu - April 2025

Maximum Value: 20.4 C on Apr 25 18:00																				Maximum Daily Average: 13.6 C on Apr 25					Hours in Service: 720				Hours of Data: 720			
Minimum Value: -21.5 C on Apr 4 03:00																				Minimum Daily Average: -10.2 C on Apr 3					Hours of Missing Data: 0				Hours of Calibration: 0			
Maximum Diurnal Average: 7.2 C at hour 16																				Minimum Diurnal Average: -1.8 C at hour 6					Percent Operational Time: 100.0							
Monthly Average: 2.59 C																				Percentiles: P ₁ = -14.1 P ₁₀ = -6.2 Q ₁ = -1.8 Median = 3.1 Q ₃ = 7.5 P ₉₀ = 10.7 P ₉₉ = 18.0												
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-Apr	-4.5	-4.5	-4.9	-5.3	-5.4	-4.9	-4.4	-3.6	-2.7	-1.5	1.4	1.6	1.6	2.4	1.7	0.3	-2.0	-4.3	-5.5	-6.8	-7.3	-7.8	-8.4	-9.2	-3.5	2.4						
2-Apr	-9.8	-10.2	-10.6	-11.6	-12.9	-13.2	-12.8	-11.3	-9.6	-8.4	-7.0	-6.2	-4.8	-4.3	-4.4	-3.9	-3.9	-4.2	-5.5	-7.3	-8.9	-9.4	-9.7	-10.2	-8.3	-3.9						
3-Apr	-10.9	-12.2	-14.2	-12.3	-13.0	-13.3	-13.3	-11.4	-10.6	-10.0	-8.8	-7.6	-6.3	-5.4	-4.4	-3.9	-3.8	-4.0	-5.1	-8.0	-13.2	-16.5	-18.2	-19.5	-10.2	-3.8						
4-Apr	-20.6	-21.3	-21.5	-17.4	-14.0	-14.0	-12.7	-7.8	-4.7	-2.0	0.0	1.2	2.7	4.0	4.8	5.4	5.8	6.0	4.9	1.3	0.0	-0.6	-0.7	-0.7	-4.3	6.0						
5-Apr	-0.9	-1.2	-1.7	-2.5	-3.3	-3.3	-1.9	1.9	6.9	8.9	9.6	10.2	10.4	11.6	12.2	11.9	12.2	10.4	8.7	6.4	5.7	4.5	3.4	2.1	5.1	12.2						
6-Apr	1.2	0.3	-0.5	-1.2	-1.7	-2.4	-2.1	-1.0	1.4	4.2	5.9	6.9	7.1	7.4	7.8	7.8	7.6	7.0	5.3	3.5	3.0	3.1	3.1	3.0	3.2	7.8						
7-Apr	2.4	1.6	1.2	1.0	0.4	-0.4	0.0	1.2	3.2	5.4	6.7	8.3	9.1	10.2	10.4	10.7	9.8	9.0	8.1	7.6	7.1	6.7	6.1	5.9	5.5	10.7						
8-Apr	5.7	5.2	4.7	4.3	3.6	1.9	1.5	1.4	1.2	2.1	3.0	3.2	3.6	4.2	3.9	3.7	3.4	2.9	2.6	2.1	0.8	-0.7	-0.7	-1.3	2.6	5.7						
9-Apr	-1.6	-1.6	-2.3	-2.3	-0.9	-0.8	0.1	1.8	1.9	4.8	8.4	9.5	10.4	11.8	13.3	14.0	14.0	13.7	11.9	5.1	1.9	0.9	2.3	4.4	5.0	14.0						
10-Apr	5.7	4.9	4.6	3.7	2.5	2.4	3.4	5.2	7.0	8.8	10.5	12.1	13.0	13.8	13.8	14.0	13.9	13.7	12.5	5.3	2.0	5.6	7.4	7.8	8.1	14.0						
11-Apr	7.5	7.5	7.6	7.7	7.4	7.0	8.1	8.5	8.5	9.0	11.0	12.7	12.6	13.7	13.4	13.6	13.4	11.4	11.2	9.4	6.1	6.3	6.0	6.0	9.4	13.7						
12-Apr	5.2	4.8	4.0	3.4	2.8	2.0	2.2	2.7	3.1	3.4	3.8	3.6	3.5	3.3	3.3	2.4	1.4	0.8	0.5	0.1	-0.1	-0.2	-0.3	-0.5	2.3	5.2						
13-Apr	-0.7	-0.9	-1.0	-1.0	-1.1	-1.0	-0.8	-0.7	-0.6	1.5	2.8	4.4	5.1	5.7	5.8	5.7	5.3	4.5	3.4	1.2	-0.9	-1.8	-3.0	-4.1	1.2	5.8						
14-Apr	-5.3	-6.2	-6.0	-6.5	-7.5	-7.2	-3.4	0.0	3.0	5.7	7.6	9.0	9.6	10.2	10.8	11.5	11.4	10.9	9.7	8.2	7.7	7.3	6.9	6.7	3.9	11.5						
15-Apr	6.7	6.5	6.1	6.0	6.0	5.0	5.4	6.1	7.6	9.3	7.5	7.2	7.3	8.7	10.0	9.8	9.1	7.4	5.0	3.6	2.7	1.5	0.1	-0.1	6.0	10.0						
16-Apr	-0.2	-0.4	-0.6	-0.8	-1.0	-1.0	-1.1	-1.4	-1.4	-1.6	-1.2	-0.9	-0.8	-0.8	-0.7	-0.7	-1.1	-1.5	-2.1	-2.3	-2.5	-2.7	-2.9	-3.2	-1.4	-0.2						
17-Apr	-3.5	-3.8	-4.4	-5.0	-5.8	-6.3	-6.6	-6.7	-6.3	-6.2	-6.4	-6.1	-5.1	-4.7	-3.4	-2.4	-2.5	-2.4	-2.8	-4.5	-6.3	-5.8	-5.5	-5.6	-4.9	-2.4						
18-Apr	-5.7	-5.9	-5.9	-6.2	-6.1	-6.0	-4.5	-2.7	0.0	2.4	4.6	5.7	7.6	9.4	10.5	10.2	10.2	10.4	9.8	9.5	9.1	8.9	8.3	8.5	3.4	10.5						
19-Apr	8.9	8.5	9.7	9.6	8.0	6.7	6.9	7.1	7.3	8.6	9.2	10.4	10.9	11.3	11.3	10.4	10.0	7.7	3.8	1.9	0.2	-0.1	-0.5	-1.2	6.9	11.3						
20-Apr	-2.1	-2.9	-3.5	-4.0	-5.0	-5.7	-4.7	-3.9	-3.1	-2.2	-1.4	-0.4	0.4	1.2	2.1	2.7	3.1	2.9	1.8	-0.4	-2.3	-3.1	-3.3	-3.7	-1.6	3.1						
21-Apr	-3.5	-3.4	-4.1	-4.9	-5.9	-5.8	-2.8	1.0	2.9	4.5	5.5	6.5	7.6	8.5	8.7	8.9	9.4	9.7	9.1	6.6	4.6	4.7	4.0	3.3	3.1	9.7						
22-Apr	2.9	2.3	1.6	1.8	3.1	2.2	2.8	3.7	3.8	4.4	6.2	7.8	8.4	9.0	7.8	3.2	4.5	5.5	5.1	4.2	2.1	3.2	2.1	1.3	4.1	9.0						
23-Apr	1.1	0.4	-1.6	-2.4	-3.3	-3.3	0.2	4.0	3.5	3.8	5.2	5.7	5.7	6.9	7.9	8.3	8.4	8.2	7.6	5.7	2.0	1.3	3.3	2.9	3.4	8.4						
24-Apr	2.6	1.6	1.9	1.3	0.8	0.7	2.5	5.6	8.0	8.2	9.1	9.7	10.6	11.5	11.8	12.5	13.1	13.5	13.0	9.5	5.8	6.6	7.3	7.4	7.3	13.5						
25-Apr	7.0	6.7	6.5	6.4	6.3	6.6	9.2	11.6	12.9	14.7	16.8	18.3	19.2	19.8	19.8	19.7	19.7	20.4	19.3	16.8	13.8	12.3	11.3	11.0	13.6	20.4						
26-Apr	10.4	9.2	9.1	7.6	4.7	4.2	3.5	6.4	7.5	6.4	7.2	7.5	7.4	8.0	8.5	8.1	7.2	4.6	2.4	0.8	-0.8	-1.0	-1.8	-2.4	5.2	10.4						
27-Apr	-2.9	-3.8	-4.7	-6.3	-7.3	-8.1	-8.6	-8.4	-8.3	-7.6	-6.4	-5.3	-3.8	-2.4	-1.5	-0.6	-0.3	-0.2	-0.8	-2.4	-3.8	-5.8	-7.4	-7.5	-4.7	-0.2						
28-Apr	-7.0	-6.6	-6.7	-5.9	-5.6	-4.5	-1.7	1.2	4.3	6.4	8.5	9.9	11.3	12.4	13.5	14.2	14.3	14.0	13.0	11.9	11.2	11.4	11.0	9.7	5.8	14.3						
29-Apr	8.1	7.5	5.9	5.6	5.3	5.5	6.5	8.0	8.2	7.4	6.6	7.1	7.2	8.5	10.6	11.9	12.5	12.3	11.4	9.6	5.7	2.9	2.6	3.3	7.5	12.5						
30-Apr	4.3	4.8	5.0	5.6	4.4	3.2	2.2	2.7	4.8	5.3	5.5	6.1	6.6	6.5	7.1	7.7	6.3	3.7	1.7	0.8	0.3	0.0	-0.3	-0.7	3.9	7.7						
0.0 -0.4 -0.9 -1.1 -1.5 -1.8 -0.9 0.7 2.0 3.2 4.4 5.3 5.9 6.7 7.2 7.2 7.1 6.5 5.3 3.3 1.5 1.1 0.7 0.5																									Diurnal Average							
10.4 9.2 9.7 9.6 8.0 7.0 9.2 11.6 12.9 14.7 16.8 18.3 19.2 19.8 19.8 19.7 19.7 19.7 20.4 19.3 16.8 13.8 12.3 11.3 11.0																									Diurnal Maximum							



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Wapasu - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	3	0.42	0.42
-20 - 0	251	34.86	35.28
0 - 10	376	52.22	87.50
10 - 20	89	12.36	99.86
> 20	1	0.14	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) - %

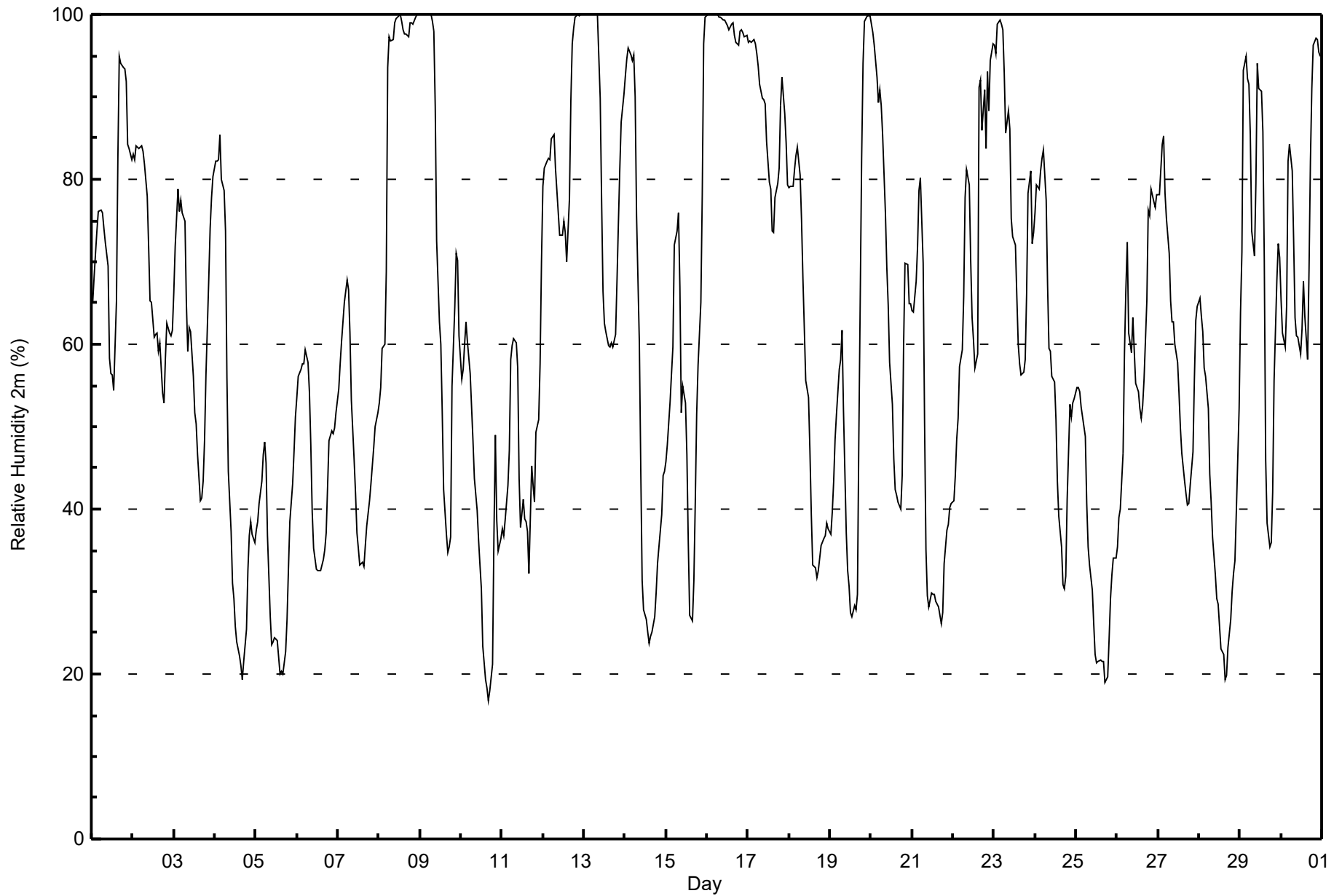
Wapasu - April 2025

Maximum Value: 100.0 % on Apr 8 23:00																					Maximum Daily Average: 98.7 % on Apr 16				Hours in Service: 720	
Minimum Value: 16.8 % on Apr 10 17:00																					Minimum Daily Average: 33.5 % on Apr 5				Hours of Data: 718	
Maximum Diurnal Average: 77.2 % at hour 6																					Minimum Diurnal Average: 46.6 % at hour 16				Hours of Missing Data: 2	
Monthly Average: 61.94 %																					Percentiles: P ₁ = 19.7 P ₁₀ = 30.3 Q ₁ = 41.0 Median = 60.3 Q ₃ = 81.4 P ₉₀ = 97.0 P ₉₉ = 100.0				Hours of Calibration: 0	
																									Percent Operational Time: 99.7	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	65.1	68.1	71.1	73.8	76.0	76.3	76.0	74.1	72.3	69.5	58.2	56.5	56.3	54.5	65.3	82.5	94.9	94.0	93.6	93.4	91.8	84.2	83.8	82.4	75.6	94.9
2-Apr	83.1	82.3	84.0	83.7	84.0	84.0	83.4	81.9	77.9	71.8	65.3	65.0	60.9	61.2	61.4	59.1	60.2	54.1	52.8	58.3	62.6	61.4	61.1	61.7	69.2	84.0
3-Apr	66.3	71.8	78.8	76.1	77.5	75.9	74.8	64.9	59.1	62.0	61.5	56.2	51.7	50.4	46.7	41.1	41.3	43.4	48.2	56.2	67.8	74.0	77.8	80.3	62.7	80.3
4-Apr	82.2	82.2	82.4	85.4	79.9	78.7	73.7	55.9	44.6	37.2	30.9	29.1	25.8	23.8	22.2	21.1	19.3	21.5	25.5	32.6	36.8	38.4	36.9	36.0	45.9	85.4
5-Apr	37.5	38.5	40.6	43.5	46.6	48.1	45.6	36.8	27.0	23.5	23.9	24.3	24.1	22.0	19.9	20.3	20.0	22.7	26.6	32.8	38.4	43.0	47.0	51.1	33.5	51.1
6-Apr	53.5	56.1	57.0	57.5	57.7	59.3	57.8	54.3	47.7	39.7	35.2	32.6	32.5	32.5	32.6	33.8	35.0	37.1	42.7	48.3	49.5	49.2	49.9	51.8	46.0	59.3
7-Apr	54.6	57.7	60.3	62.8	65.1	67.9	66.6	61.3	53.3	46.0	41.8	37.1	35.3	33.3	33.5	33.1	35.5	37.9	41.0	43.0	45.3	47.4	50.1	51.7	48.4	67.9
8-Apr	52.9	54.7	59.5	60.0	68.7	93.6	97.3	96.7	97.0	98.9	99.4	99.7	100.0	99.2	98.1	97.6	97.7	97.3	99.1	98.9	98.8	99.7	100.0	100.0	90.2	100.0
9-Apr	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.2	98.0	88.8	72.6	62.6	60.0	51.9	42.4	36.9	34.8	35.4	36.6	55.0	64.6	71.0	70.3	61.0	72.5	100.0
10-Apr	55.8	57.0	59.9	62.6	60.3	56.5	52.4	48.3	43.8	39.9	36.2	33.2	30.4	23.3	19.4	18.3	16.8	18.0	21.2	36.9	49.0	38.6	34.9	36.4	39.5	62.6
11-Apr	37.7	36.8	38.6	42.8	47.2	58.2	59.8	60.6	60.2	57.2	43.7	37.8	41.1	38.7	38.4	37.3	32.2	45.2	42.9	40.8	49.3	50.9	57.7	70.0	46.9	70.0
12-Apr	79.1	81.3	82.2	82.5	82.4	85.0	85.4	81.4	78.7	76.0	73.2	73.3	75.0	73.6	70.0	77.6	89.6	96.5	98.4	99.7	100.0	99.9	100.0	100.0	85.0	100.0
13-Apr	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	89.8	77.5	66.4	62.6	61.5	59.8	59.6	60.2	59.7	61.2	67.7	74.5	81.2	86.9	90.3	81.6	100.0
14-Apr	92.6	94.5	96.0	95.1	94.4	95.2	90.1	75.6	60.1	45.1	31.4	27.8	26.5	25.1	23.7	24.5	25.2	27.0	29.8	33.4	35.5	39.4	44.0	44.7	53.2	96.0
15-Apr	45.8	47.9	53.0	56.4	59.7	72.0	73.7	75.9	66.9	51.8	55.0	52.9	46.7	36.0	27.1	26.5	31.4	40.8	51.6	57.5	65.0	78.2	96.5	99.7	57.0	99.7
16-Apr	100.0	100.0	100.0	OR	OR	100.0	100.0	99.7	99.7	99.3	99.3	98.9	98.7	98.1	98.8	98.9	97.5	96.7	96.3	97.9	98.2	97.9	97.3	97.5	98.7	100.0
17-Apr	96.6	96.9	96.7	97.0	96.4	95.2	93.7	91.5	89.9	89.7	89.2	84.5	79.7	78.9	73.8	73.5	77.8	79.5	81.4	89.0	92.3	87.9	84.5	79.3	87.3	97.0
18-Apr	79.0	79.2	79.1	81.2	82.8	83.9	80.4	75.1	68.0	61.9	55.5	53.5	47.1	39.3	33.2	32.9	31.8	32.5	34.1	35.6	36.5	36.7	38.3	37.6	54.8	83.9
19-Apr	37.0	39.6	43.3	48.5	51.5	57.0	58.1	61.6	52.1	37.1	32.6	30.7	27.4	27.0	28.3	27.8	29.6	48.8	82.5	94.1	99.2	99.5	99.8	99.8	54.7	99.8
20-Apr	98.8	97.9	96.3	92.4	89.3	90.8	89.0	85.5	76.0	69.4	64.8	57.8	52.8	46.1	42.4	41.7	40.8	40.0	44.1	59.7	69.8	69.6	64.9	64.9	68.5	98.8
21-Apr	64.0	63.9	67.7	71.9	78.7	80.2	69.9	50.6	35.2	29.5	28.2	29.9	29.7	29.7	28.7	28.2	27.1	26.1	27.4	33.3	37.5	38.1	40.2	40.6	44.0	80.2
22-Apr	41.0	44.1	48.5	51.0	57.3	59.4	65.7	77.7	81.1	79.3	70.2	63.2	60.5	57.2	58.9	91.3	92.1	85.9	90.8	83.7	93.0	88.3	94.4	96.5	72.1	96.5
23-Apr	96.3	95.3	98.8	99.4	98.9	98.1	92.9	85.6	88.4	86.1	75.3	73.1	72.1	65.7	60.1	57.7	56.3	56.6	58.1	66.2	78.3	80.9	72.2	73.6	78.6	99.4
24-Apr	75.9	79.4	78.8	81.0	82.5	83.6	77.4	67.1	59.5	59.2	56.1	55.4	50.9	43.4	39.1	35.4	30.9	30.3	31.9	41.2	52.7	51.2	52.8	53.4	57.0	83.6
25-Apr	54.8	54.8	54.2	52.4	51.2	48.7	40.6	35.4	33.2	30.1	26.2	22.4	21.4	21.6	21.6	21.6	21.5	19.0	19.6	24.3	29.1	32.0	34.0	34.1	33.5	54.8
26-Apr	35.4	39.0	40.0	46.9	58.9	66.5	72.4	61.4	59.0	63.3	59.2	55.3	54.2	52.1	50.9	52.5	55.7	65.2	76.3	75.6	78.9	77.3	76.6	78.1	60.5	78.9
27-Apr	78.2	78.1	84.2	85.2	78.3	75.2	71.0	65.3	62.7	62.7	60.0	57.9	54.0	49.8	46.8	43.4	41.9	40.4	40.7	42.8	47.0	55.8	62.8	64.6	60.4	85.2
28-Apr	65.5	63.4	61.5	57.1	56.0	52.2	44.2	40.9	36.5	32.1	29.2	28.4	25.8	23.1	22.4	19.4	19.8	23.2	26.6	29.9	32.1	33.7	39.7	52.2	38.1	65.5
29-Apr	63.9	71.1	93.2	94.9	92.3	91.6	85.3	73.8	70.6	79.5	94.0	91.0	90.8	85.8	70.1	46.0	38.2	35.4	36.0	42.1	55.5	67.8	72.2	70.5	71.3	94.9
30-Apr	65.4	61.4	59.7	64.8	82.2	84.2	81.1	72.6	63.3	61.0	60.8	58.7	61.9	67.6	63.3	58.1	69.0	82.1	91.0	96.3	97.1	96.9	95.5	95.0	74.5	97.1
Diurnal Average																										
Diurnal Maximum																										
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Wapasu - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Wapasu - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	11	1.53	1.53
20 - 40	156	21.73	23.26
40 - 60	185	25.77	49.03
60 - 80	175	24.37	73.40
80 - 100	166	23.12	96.52

Total Number of Valid Hours: 718

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

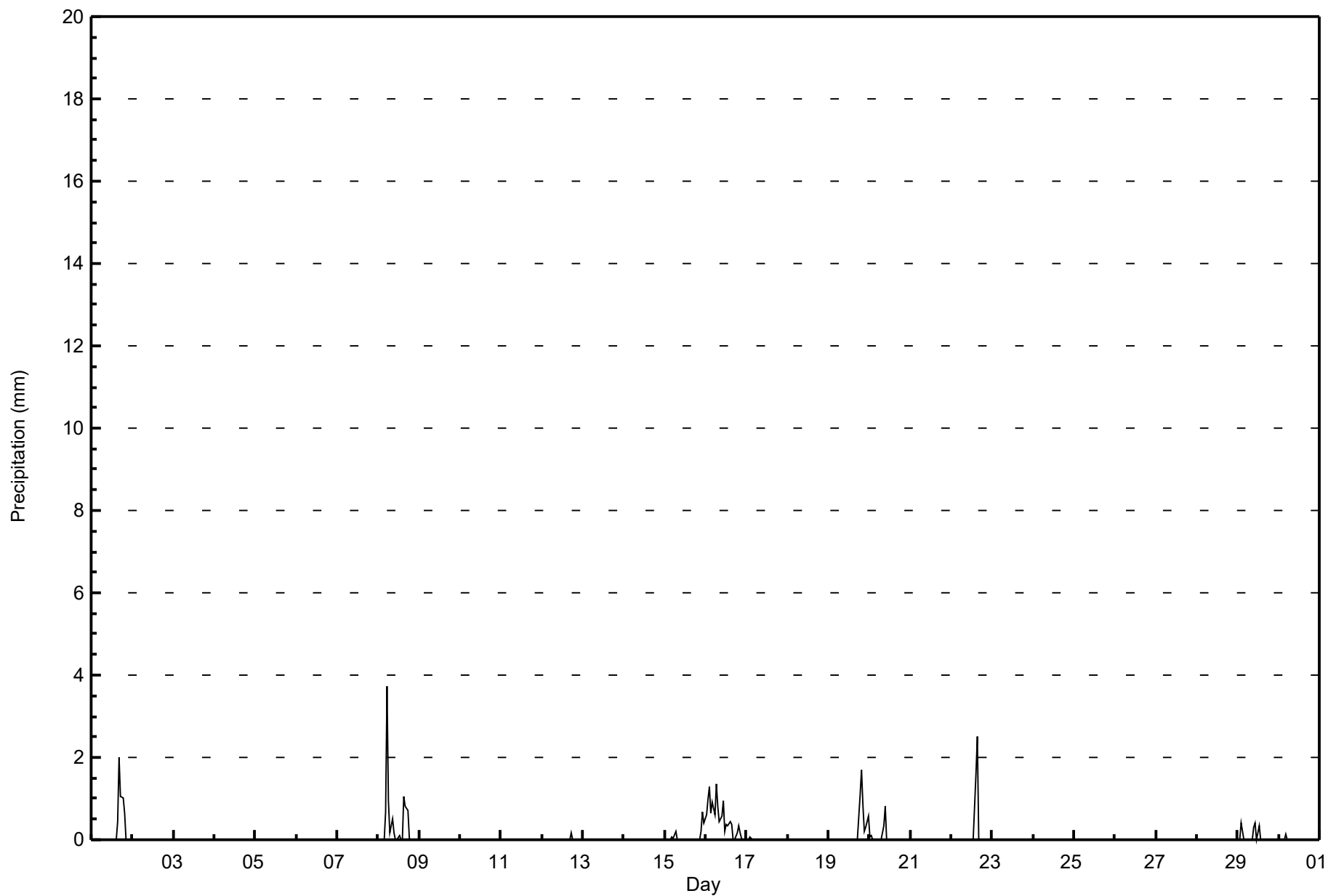
Wapasu - April 2025

Maximum Value: 3.7 mm on Apr 8 06:00																	Maximum Daily Total: 11.7 mm on Apr 16										Hours in Service: 720	
Minimum Value: 0.0 mm on Apr 1 01:00																	Minimum Daily Total: 0.0 mm on Apr 2										Hours of Data: 720	
Maximum Diurnal Total: 4.4 mm at hour 16																	Minimum Diurnal Total: 0.2 mm at hour 12										Hours of Missing Data: 0	
Monthly Total: 39.26 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 = 1.1										Hours of Calibration: 0	
																	Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0	1.1	1.0	0.6	0.0	0.0	0.0	0.0	5.1	2.0		
2-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.7	3.7	1.0	0.2	0.5	0.2	0.0	0.0	0.1	0.0	0.0	1.1	0.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	8.9	3.7		
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2	0.2		
13-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.4	1.6	0.7		
16-Apr	0.6	1.0	1.3	0.7	0.9	0.6	1.3	0.8	0.5	0.6	1.0	0.2	0.4	0.3	0.4	0.4	0.0	0.0	0.2	0.3	0.2	0.1	0.0	0.0	11.7	1.3		
17-Apr	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	0.1		
18-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	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	1.7	0.8	0.2	0.3	0.6	4.7	1.7		
20-Apr	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.8		
21-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	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	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	2.5		
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.4		
30-Apr	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1		
		0.7	1.1	1.8	0.7	1.8	4.4	2.5	1.0	1.3	1.9	1.4	0.2	0.8	0.3	2.0	4.4	2.8	1.9	2.3	2.7	1.0	0.5	1.0	1.0	Diurnal Average		
		0.6	1.0	1.3	0.7	0.9	3.7	1.3	0.8	0.5	0.8	1.0	0.2	0.4	0.3	1.6	2.5	2.0	1.1	1.1	1.7	0.8	0.2	0.7	0.6	Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Wapasu - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

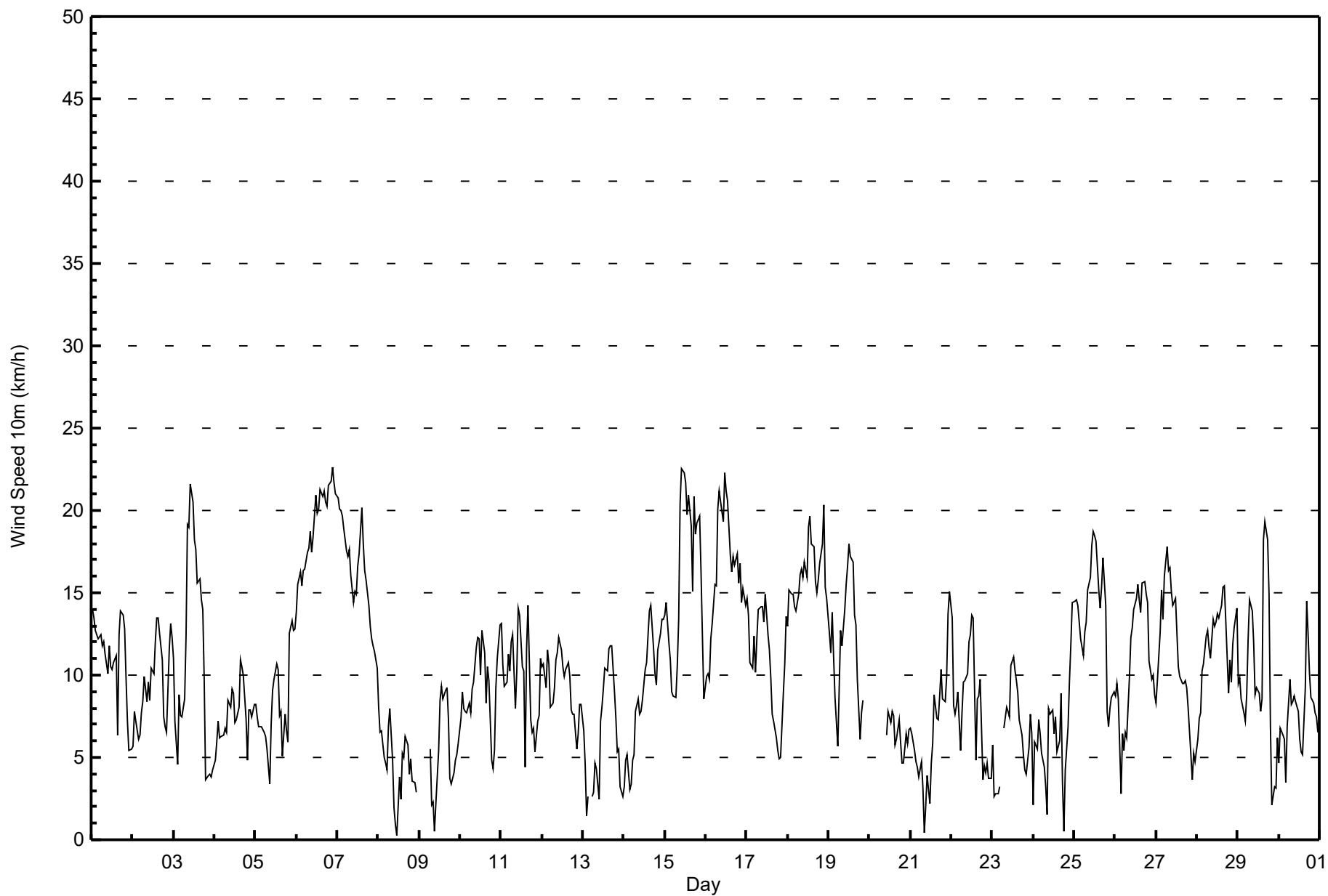
Wapasu - April 2025

Maximum Speed: 23 km/h on Apr 6 22:00										Maximum Daily Speed Average: 18.8 km/h on Apr 6										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 8 12:00										Minimum Daily Speed Average: 1.2 km/h on Apr 24										Hours of Data: 697						
Maximum Diurnal Speed Average: 5.5 km/h at hour 2										Minimum Diurnal Speed Average: 1.2 km/h at hour 20										Hours of Missing Data: 23						
Monthly Average Velocity: 1.5 km/h 197.8 deg										Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 7 Median = 10 Q ₃ = 14 P ₉₀ = 17 P ₉₉ = 22										Percent Operational Time: 96.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SSE14	SSE13	SSE13	SSE12	SE12	SSE12	SSE12	SSE12	SSE11	SSE10	S12	SSW10	SSW10	SSW11	SW11	SSW6	NW12	NNW14	NNW14	NNW13	NW10	NW7	WNW5	W6	S4.1	SSE14
2-Apr	W6	W8	W7	WSW6	WSW6	WSW8	WSW8	WSW10	W8	NW10	NW8	NNW10	NNW12	NNW13	NNW13	N13	NNW11	NNW7	N7	N6	N12	NNW13	NNW12	NW7.2	NNW13	
3-Apr	NNW11	NNW7	NW5	NW9	NNW8	NNW7	NNW9	NNW12	NNW19	NNW19	NNW22	NNW21	NNW18	NNW18	NNW16	N16	NNW15	NNW14	N10	NNE4	SSE4	SE4	SE4	NNW10.0	NNW22	
4-Apr	SE5	SE6	SE7	SSE6	S6	SSE6	SSE7	S7	SW8	SW8	SW9	WSW9	W7	SW7	SW8	SW11	SW11	SW10	SW7	S5	SSE8	SSE8	SSE7	S8	SSW6.2	SW11
5-Apr	SSE8	SSE7	S7	SSE7	SSE7	SSE6	SSE6	SSE6	E3	NNW7	NNW9	NNW10	NNW11	N10	NE8	NE8	NNE5	ENE8	NE7	ENE6	ESE13	ESE13	SE13	SE13	E3.3	ESE13
6-Apr	SE14	SE16	SE16	SE15	SE16	SE16	SE17	SE18	SE19	SE17	SSE18	SSE21	SSE20	SSE20	SSE21	SSE21	SSE21	SSE20	SE20	SE22	SE22	SE23	SSE22	SSE21	SE18.8	SE23
7-Apr	SSE21	SSE20	SSE20	SSE20	SSE19	SSE18	SSE17	SSE18	SSE16	SE14	SSE15	SSE15	SSE17	SSE17	SSE20	SSE18	SE16	SE16	SE14	SE13	SE12	SE12	SE11	SE10	SSE16.2	SSE21
8-Apr	SSE8	SSE7	SE7	SE5	SSE5	SSE4	SSE7	SSE8	SE5	SE2	NNW1	N0	N4	NNW2	N5	N5	N6	N6	NE4	ENE5	ENE4	SE4	SE3	UO	ESE1.9	SSE8
9-Apr	UO	UO	UO	UO	UO	UO	S6	WSW2	W2	NNW1	NNW2	WNW5	WSW8	WSW9	W9	WNW9	NNW9	N7	NE4	SE3	E4	SE5	SE5	SE6	W1.5	WSW9
10-Apr	SE7	SE9	SSE8	S8	SSE8	S8	S8	SSW9	SW10	SW12	SW12	WSW12	SW10	WSW13	WSW11	SW8	WSW11	WSW10	SW5	ESE4	ESE5	ESE9	SE11	SE13	SSW6.5	SE13
11-Apr	SE13	SE11	SE9	ESE10	ESE11	ESE10	ESE12	ESE12	SSE8	SE10	SSE14	S14	WSW11	W10	W4	W12	W14	NNW7	WNW7	WSW7	SW5	SW7	SW8	SW11	S4.3	W14
12-Apr	WSW11	WSW11	WSW9	WSW12	WSW11	SW8	SW8	SW9	WSW11	WSW11	W12	W12	W11	NNW10	NNW10	NNW11	NNW10	NNW8	NNW8	NNW8	N5	N6	NNW8	NNW8	W6.7	W12
13-Apr	N7	NW5	NW1	NNW3	UO	ENE3	NNW3	NNW5	NW4	NW2	NNW7	NNW8	NW9	NNW10	NNW10	N12	N12	N12	N9	N7	NNE5	NE6	E3	ESE3	N5.6	N12
14-Apr	SSE3	SSE5	SSE5	SE3	ESE3	SE5	SSE5	SSE8	S9	S8	SSW8	SSW8	S10	S11	SSE12	SSE14	SSE14	SSE12	SSE10	SE9	SE12	SE13	SE13	SE13	SSE8.4	SSE14
15-Apr	SSE14	SSE14	SSE12	SSE11	S9	SSE9	S9	S11	SW13	WSW20	W23	WSW22	WSW22	WSW20	WSW21	W19	W15	WNW21	WNW19	W19	W20	WSW16	WSW12	WSW9	WSW11.8	W23
16-Apr	W10	W10	NNW10	NW12	NW13	NNW15	NNW15	NNW20	NNW21	NNW20	NNW19	NNW22	NNW21	NNW21	NNW17	NNW16	NNW17	N17	NNW17	NNW16	NNW17	NNW14	NNW15	NNW14	NNW15.6	NNW22
17-Apr	NNW15	NNW14	N11	N10	N12	N10	N12	N14	N14	N14	N13	N15	N12	N12	N10	NNE8	ENE7	NE6	ENE5	ESE5	SE5	SE9	SE11	SSE14	NNE7.3	N15
18-Apr	SSE13	SSE15	SSE15	SSE15	SSE14	SSE14	SSE15	SSE16	S16	S16	S17	S16	S19	S20	S18	S18	S16	S15	SSE16	SSE17	SSE18	SSE20	S15	S15	S16.1	SSE20
19-Apr	S13	SSW11	SW14	WSW11	WNW9	W6	WSW9	W13	W12	NNW14	W16	W17	NNW18	NNW17	NNW17	NNW14	W13	NNW10	NE6	NNE8	N8	UO	UO	UO	W9.1	WNW18
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	NNW6	N8	NNW7	NNW8	N8	N6	NNE6	NE7	NE6	ENE5	E5	E6	E6	E7	----	N8
21-Apr	ESE7	SE6	SE5	SE5	SE4	SE4	SE5	SE3	SW0	NNW2	W4	SSW2	SSE5	SSE6	SE9	S7	SSE7	SE9	SSE10	SSE9	SSE8	SSE10	SSE14	SSE15	SSE5.9	SSE15
22-Apr	SSE13	S8	SSE8	S8	SSW9	S5	S8	S10	S10	S10	SSW12	S12	S14	S13	WSW5	SW9	SSE9	SSW10	SW4	SSW4	S4	WNW5	SE4	SSE4	S7.5	S14
23-Apr	SSE6	SE3	ESE3	SE3	SE3	UO	UO	N7	N8	N8	NNE7	N11	N11	NNE10	NNE10	NE9	NNE7	NE6	E5	ENE4	ENE4	E6	ESE8	SE6	NE4.5	N11
24-Apr	ENE2	ESE6	SE5	SE7	SE6	ESE5	SE4	SSE3	NW2	NNW8	NNW8	NNW8	N6	NW7	NW5	W6	NNW9	NW3	ENE1	SE4	SE7	SE10	SSE12	SSE14	ESE1.2	SSE14
25-Apr	SSE14	SSE15	SSE14	SSE13	SSE12	S11	S13	SSW13	SSW15	SSW16	SSW18	SSW19	SSW19	SSW18	SSW15	SSW14	SSW15	SW17	SW14	SSW8	S7	SSE8	SSE9	SSE9	S12.4	SSW19
26-Apr	SSE9	SSE9	SSE9	N3	NE6	NE5	NNE7	N6	NNW10	N12	N13	N14	N15	N15	N15	NNE14	N16	N16	N15	NNW14	N11	N10	N10	N9	N8.4	N16
27-Apr	N8	N10	N13	N15	N13	N16	NNW18	NNW16	NNW17	N15	NNW14	NNW15	N13	N11	N10	N9	NNE9	N10	NNE9	NE8	NE5	E4	E5	SE5	N10.1	NNW18
28-Apr	SE6	SSE7	SE8	SSE10	SSE11	SSE12	SSE13	S12	SSW11	SW13	SSW13	SSW13	SSW14	SSW13	SSW14	SSW15	SSW15	SSW13	S9	SSE11	S10	SSW12	SSW13	SSW14	S10.8	SSW15
29-Apr	SSE9	S10	S9	SSE8	S7	SW9	WSW12	WSW15	WSW14	W12	W9	W9	NW9	NW8	NNW9	NNW18	NNW19	NNW18	NNW15	N7	NNE2	ESE3	SE3	SSE6	WNW4.2	NNW19
30-Apr	SSE5	SSE7	S6	SW6	WSW3	NNW7	NNW10	N8	NNW8	NW9	N8	N8	NNW6	NNW5	NW5	NNW9	NNW15	N12	NNE10	NNE9	NNE8	N8	N7	NNE7	N5.3	NNW15
SSE5.4 SSE5.5 SSE5.3 SSE4.0 SSE3.8 SSE3.2 S3.2SSW2.5WSW2.7 W2.9 W3.6 W4.3 W4.1 W3.7 W2.8WNW2.6 NW2.9NNW2.8 N1.5 ENE1.2 SE2.2 SE3.4 SE4.1 SSE4.8																								Diurnal Average		
SSE21 SSE20 SSE20 SSE20 SSE19 SSE18 NNW18 NNW20 NNW21 WSW20 W23NNW22 WSW22NNW21 SSE21 SSE21 SSE21WNW21 SE20 SE22 SE22 SE23 SSE22 SSE21																								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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Wapasu - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	115	16.50	16.50
6 - 11	314	45.05	61.55
12 - 19	232	33.29	94.84
20 - 28	36	5.16	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 697

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Wapasu - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	6	4	4	9	7	8	30	11	3	2	4	3	3	3	9	9	115
6 - 11	42	14	12	3	4	7	25	50	29	12	22	22	15	6	14	37	314
12 - 19	32	1	0	0	0	4	26	50	19	23	6	8	12	7	3	41	232
20 - 28	0	0	0	0	0	0	4	15	1	0	0	5	2	1	0	8	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	80	19	16	12	11	19	85	126	52	37	32	38	32	17	26	95	697

Total Number of Valid Hours: 697

Total Number of Hours: 720



Wind Speed 10m (WS10) - km/h





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 18:00																	Hours in Service: 720 Hours of Data: 697 Hours of Missing Data: 23 Hours of Calibration: 0 Percent Operational Time: 96.8								
Minimum Value: 0 km/h on Apr 23 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	3	3	3	3	3	3	3	3	3	4	4	4	4	3	2	5	4	3	3	3	3	2	2	5
2-Apr	2	3	2	2	2	2	2	3	3	3	2	3	3	3	4	4	3	3	2	2	2	3	3	3	4
3-Apr	4	1	1	2	2	1	2	3	5	5	5	6	5	5	4	4	4	4	4	1	1	1	1	1	6
4-Apr	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	2	2	1	1	2	1	2	3
5-Apr	2	2	2	1	1	1	1	1	1	2	2	2	3	3	3	3	3	2	2	1	4	4	3	3	4
6-Apr	4	4	4	4	4	4	5	5	5	6	6	7	6	7	7	7	6	6	6	6	6	6	6	6	7
7-Apr	6	5	5	5	5	5	5	5	5	4	5	5	5	5	6	6	5	4	4	3	3	3	2	3	6
8-Apr	2	2	2	1	1	1	2	2	1	1	2	2	1	2	2	1	2	3	1	2	1	1	1	UO	3
9-Apr	UO	UO	UO	UO	UO	UO	2	1	1	1	2	2	3	3	3	3	3	3	2	1	1	1	1	2	3
10-Apr	2	2	2	2	2	2	2	3	3	3	3	3	4	5	5	4	3	3	2	1	1	2	3	3	5
11-Apr	3	3	2	2	3	3	3	3	5	3	5	5	4	4	3	7	5	4	4	2	1	2	2	3	7
12-Apr	3	3	2	3	3	2	2	2	3	3	4	4	4	3	3	3	3	2	2	2	1	2	2	2	4
13-Apr	2	2	1	2	UO	1	2	2	2	2	2	3	3	3	3	4	4	4	3	2	2	1	1	1	4
14-Apr	1	1	1	2	1	1	1	3	2	2	3	3	4	4	4	5	4	3	3	2	3	3	3	3	5
15-Apr	3	4	4	4	3	2	3	3	5	7	8	7	7	6	7	7	5	8	7	8	7	5	4	3	8
16-Apr	3	4	3	4	3	4	4	6	7	5	5	6	6	6	5	5	5	4	5	4	4	3	4	4	7
17-Apr	4	3	5	3	4	3	4	4	4	4	4	4	4	3	3	3	3	2	2	1	2	2	3	3	5
18-Apr	3	4	4	4	4	4	5	5	6	6	6	6	6	7	6	6	6	5	5	5	6	6	5	5	7
19-Apr	4	4	4	4	3	2	3	5	4	5	6	6	6	6	6	5	5	5	2	3	3	UO	UO	UO	6
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	3	3	3	4	3	3	3	2	2	1	1	2	2	1	4
21-Apr	2	2	1	1	1	1	1	1	1	2	2	3	3	3	3	3	3	4	3	2	2	3	4	4	4
22-Apr	4	4	2	2	3	2	2	3	3	3	4	4	5	5	6	4	3	4	3	4	2	3	1	1	6
23-Apr	2	1	1	0	1	UO	UO	2	2	3	2	3	4	3	4	3	3	2	2	1	1	1	2	2	4
24-Apr	2	1	1	2	2	1	1	2	3	2	3	3	3	3	3	3	3	2	1	1	1	2	3	4	4
25-Apr	3	3	4	3	3	3	4	5	5	5	6	7	6	6	6	5	6	6	5	3	2	1	2	2	7
26-Apr	2	2	2	2	2	3	3	2	5	3	4	4	4	5	5	5	5	4	5	4	3	3	3	2	5
27-Apr	3	3	4	5	4	5	5	5	4	5	5	4	4	4	4	4	3	3	3	3	1	1	1	1	5
28-Apr	1	2	2	2	2	3	4	4	4	4	4	5	6	5	5	5	5	4	3	3	3	5	6	6	6
29-Apr	2	3	2	2	2	4	3	4	5	4	3	3	3	3	5	6	5	5	4	3	1	1	1	1	6
30-Apr	2	1	1	2	2	2	3	3	3	3	2	3	2	2	2	3	4	4	4	3	3	3	2	3	4
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

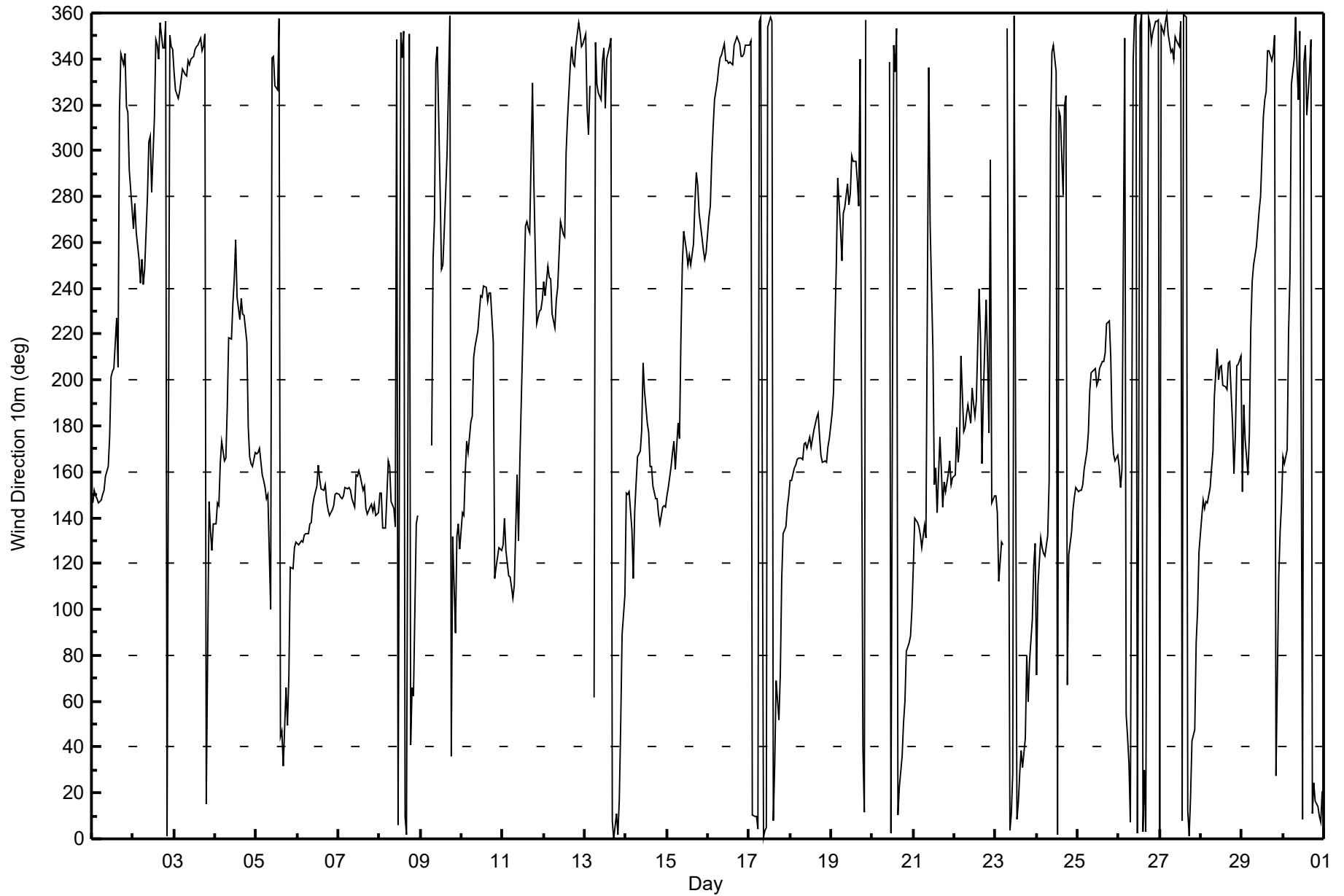
Wapasu - April 2025

Direction of Maximum Speed: 145 deg on Apr 6 22:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 144.2 deg on Apr 6																				Hours of Data:		697			
Direction of Minimum Speed: 6 deg on Apr 8 12:00										Direction of Minimum Daily Speed Average: 1.2 deg on Apr 24										Hours of Missing Data:		23			
Monthly Average Direction: 197.8 deg																				Percent Operational Time:		96.8			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	147	152	149	149	146	148	150	152	158	162	175	202	204	205	227	205	317	342	338	343	319	317	291	275	184.0
2-Apr	266	277	264	253	242	252	241	249	280	304	306	282	315	348	346	340	355	345	345	357	1	350	345	344	315.5
3-Apr	335	327	323	326	330	335	333	332	339	337	340	341	344	346	346	349	343	345	351	15	147	134	126	137	341.9
4-Apr	138	146	145	164	174	165	166	188	219	218	233	244	261	236	227	235	229	228	216	180	166	163	162	169	199.6
5-Apr	168	168	170	159	156	153	148	150	100	341	341	328	327	357	45	47	32	66	50	71	118	118	127	130	98.6
6-Apr	128	128	130	130	133	133	133	137	138	145	149	154	163	157	153	152	154	147	144	141	143	145	150	150	144.2
7-Apr	150	149	148	150	153	152	153	152	149	145	158	158	160	158	152	154	144	142	145	146	143	146	141	142	150.0
8-Apr	151	151	136	136	149	164	162	147	144	136	348	6	351	341	352	9	2	351	41	66	62	137	141	UC	111.7
9-Apr	UC	UC	UC	UC	UC	UC	171	253	270	339	346	284	249	250	266	299	328	359	36	132	90	132	137	126	271.6
10-Apr	142	141	160	174	168	182	184	210	215	221	229	237	236	241	241	234	238	238	217	114	119	123	127	126	195.8
11-Apr	128	140	126	115	114	110	105	111	158	130	165	191	241	267	269	266	264	329	285	255	224	230	231	235	181.0
12-Apr	243	237	249	245	244	229	223	235	241	255	269	263	262	299	313	338	345	338	337	346	356	352	345	346	280.7
13-Apr	351	319	307	328	UC	62	347	329	325	322	339	345	319	340	346	349	8	0	11	2	17	50	89	106	353.2
14-Apr	151	150	151	135	113	143	155	167	169	178	208	195	181	177	162	162	154	148	148	142	137	145	145	144	157.7
15-Apr	150	153	162	168	174	161	181	175	218	250	265	256	250	254	250	259	277	290	285	272	262	257	253	256	243.0
16-Apr	271	276	296	310	322	330	336	340	342	346	339	339	338	339	338	346	348	350	347	341	341	342	346	346	336.2
17-Apr	346	348	10	9	10	4	356	358	1	4	5	354	358	356	8	33	69	52	72	113	133	136	145	149	15.8
18-Apr	156	157	162	163	165	166	166	165	172	173	171	175	171	174	178	184	186	176	167	164	165	164	171	174	169.6
19-Apr	185	195	224	251	288	266	252	273	275	286	276	281	298	295	296	287	276	340	39	12	357	UC	UC	UC	279.3
20-Apr	UC	UC	UC	UC	UC	UC	UC	UC	UC	UC	339	2	346	334	353	10	23	36	51	60	82	85	88	100	--
21-Apr	119	140	138	136	132	127	137	131	233	336	268	213	154	162	142	175	161	144	156	152	159	165	154	157	152.3
22-Apr	159	179	164	172	210	178	179	185	189	181	196	190	184	191	240	218	164	193	235	210	177	296	146	149	187.0
23-Apr	149	142	112	129	128	UC	UC	353	4	11	29	359	8	16	29	39	31	44	80	60	78	96	119	129	44.6
24-Apr	71	110	131	127	125	123	133	156	310	343	346	334	2	317	315	280	320	324	67	124	133	143	149	153	109.7
25-Apr	151	152	152	154	161	169	177	195	203	205	205	198	200	205	208	208	212	225	226	210	179	168	165	167	190.1
26-Apr	163	153	161	349	54	45	33	8	339	358	359	3	355	360	3	30	3	358	355	347	351	357	356	357	5.0
27-Apr	3	355	351	356	360	351	343	344	340	350	348	346	356	8	360	358	12	1	18	43	47	86	100	125	359.2
28-Apr	141	148	144	147	147	153	161	169	193	214	200	205	206	198	197	196	208	208	181	159	176	206	207	211	186.7
29-Apr	152	189	174	159	176	222	243	250	258	266	274	280	315	322	326	343	344	340	342	351	27	115	134	147	285.9
30-Apr	166	163	169	221	246	329	340	358	338	322	352	8	339	346	316	335	348	11	25	17	14	10	7	21	352.4
153.9 160.7 159.9 162.1 157.8 158.8 171.6 193.5 237.0 264.3 268.8 270.1 271.7 276.2 279.7 287.7 311.7 336.7 6.0 74.4 126.9 142.4 145.9 151.8																									
Diurnal Average																									
UC - 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 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Wapasu - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 104 deg on Apr 21 09:00																		Hours in Service: 720 Hours of Data: 697 Hours of Missing Data: 23 Hours of Calibration: 0 Percent Operational Time: 96.8							
Minimum Value: 4 deg on Apr 4 03:00																									
Percentiles: P ₁ = 8 P ₁₀ = 17 Q ₁ = 19 Median = 25 Q ₃ = 30 P ₉₀ = 39 P ₉₉ = 84																									
Day	Hourly Period Ending At (MST)																							Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
1-Apr	19	18	18	17	18	18	19	20	22	24	29	30	29	29	23	32	37	19	18	20	21	24	29	30	37
2-Apr	28	29	26	23	18	23	18	24	33	27	37	32	39	26	21	21	26	21	18	26	29	19	17	17	39
3-Apr	17	14	19	17	15	12	14	17	19	20	18	22	24	22	24	24	24	24	23	38	10	12	12	13	38
4-Apr	7	5	4	15	17	10	18	26	20	28	32	30	49	45	43	26	23	17	22	19	15	15	16	19	49
5-Apr	21	21	17	11	8	8	10	16	46	28	23	27	23	34	41	39	67	23	21	22	21	20	19	17	67
6-Apr	19	19	19	19	20	18	20	18	20	23	21	22	26	25	22	23	21	20	19	18	20	19	19	20	26
7-Apr	19	19	20	20	20	19	20	20	21	22	25	25	26	26	22	22	20	19	19	19	18	19	17	18	26
8-Apr	19	20	27	16	24	32	24	18	29	51	83	98	30	60	36	31	28	23	28	28	13	29	30	UO	98
9-Apr	UO	UO	UO	UO	UO	UO	18	66	52	102	65	47	32	29	39	36	30	30	38	15	29	26	14	22	102
10-Apr	26	13	31	25	20	26	28	30	23	21	22	21	38	30	36	45	27	23	38	10	8	14	16	18	45
11-Apr	17	19	18	18	18	20	20	21	39	20	27	33	31	35	52	32	28	42	51	24	15	16	19	16	52
12-Apr	19	19	23	19	20	19	18	18	23	25	28	27	31	29	25	19	22	18	16	19	23	22	22	19	31
13-Apr	23	27	27	27	UO	33	47	35	46	76	46	41	34	31	35	29	32	28	31	28	27	19	31	25	76
14-Apr	22	8	8	39	16	11	14	26	26	34	32	39	33	33	26	26	24	21	20	18	16	18	17	17	39
15-Apr	18	19	25	27	30	20	28	26	27	25	28	27	25	27	26	29	29	29	29	30	28	26	24	25	30
16-Apr	28	28	29	27	21	20	18	18	19	20	17	19	18	18	18	20	22	20	19	18	17	19	19	18	29
17-Apr	18	19	30	30	30	27	24	26	27	27	28	27	30	28	32	39	34	30	31	14	15	15	17	18	39
18-Apr	21	19	22	21	25	25	24	24	28	27	29	31	28	31	30	29	30	28	24	24	25	24	27	28	31
19-Apr	31	28	18	27	30	33	24	29	29	34	30	30	31	29	31	31	31	47	28	29	24	UO	UO	UO	47
20-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	43	39	42	45	41	53	61	35	20	17	20	16	18	19	61
21-Apr	20	14	10	13	11	10	13	65	104	86	68	101	68	68	33	36	35	29	23	16	21	25	20	21	104
22-Apr	23	35	20	25	24	25	29	32	30	28	29	32	33	31	72	45	28	30	52	66	21	78	21	29	78
23-Apr	23	30	22	15	11	UO	UO	22	26	31	40	30	36	35	37	37	43	39	27	16	20	12	16	19	43
24-Apr	81	17	22	20	16	17	21	46	92	36	46	43	52	47	52	50	33	77	88	10	9	13	17	19	92
25-Apr	19	18	19	17	23	26	29	29	26	27	26	30	32	29	29	26	26	26	20	21	19	13	16	17	32
26-Apr	18	15	22	71	31	56	42	33	47	28	30	31	26	29	31	33	30	28	25	20	23	25	26	25	71
27-Apr	29	25	23	25	27	22	21	22	25	29	29	27	31	34	44	42	37	30	32	23	24	28	14	28	44
28-Apr	17	18	16	16	18	19	22	27	31	23	31	31	33	33	34	34	29	27	28	21	30	28	29	32	34
29-Apr	18	30	25	21	26	28	21	22	27	27	32	32	27	28	44	20	24	19	20	27	43	14	30	6	44
30-Apr	31	19	24	28	44	19	21	32	36	33	35	35	46	45	53	27	23	31	32	33	32	30	27	32	53
81 35 31 71 44 56 47 66 104 102 83 101 68 68 72 53 67 77 88 66 43 78 31 32																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS18 STONY MOUNTAIN APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)

APRIL 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	685	35	35	100	-	-	3.3	0	1	0
TRS(ppb) Average	684	36	36	100	0.7	0	0.7	-	0.5	-
THC(ppm) Average	683	34	37	99.58	-	-	2.1	-	2.1	-
NMHC(ppm) Average	683	34	37	99.58	-	-	0.017	-	0.001	-
CH4(ppm) Average	683	34	37	99.58	-	-	2.1	-	2.1	-
O3 (ppb) Average	686	34	34	100	-	-	54.7	0	49.2	-
NO2 (ppb) Average	684	36	36	100	-	-	3.8	0	1.2	-
NO (ppb) Average	684	36	36	100	-	-	2.1	-	0.9	-
NOX (ppb) Average	684	36	36	100	-	-	3.8	-	1.8	-
PM2.5 (ug/m3) Average	719	1	1	100	-	-	7.4	0	5	0
CO(ppm) Average	687	33	33	100	-	-	0.2	0	0.2	0
CO2(ppm) Average	686	34	34	100	-	-	455.3	-	445.5	-
Temperature 2 m (C) Average	720	0	0	100	-	-	21	-	12.7	-
Relative Humidity (%) Average	720	0	0	100	-	-	92.8	-	78.7	-
Wind Speed 10 m (km/h) Average	720	0	0	100	-	-	21	-	14	-
Wind Speed 20 m (km/h) Average	720	0	0	100	-	-	29	-	20	-
Wind Direction 10 m (deg) Average	720	0	0	100	-	-	-	-	0	-
Wind Direction 20 m (deg) Average	720	0	0	100	-	-	-	-	0	-
Precipitation (mm) Total	720	0	0	100	-	-	1.3	-	2	-
Leaf Wetness (% of range) Average	720	0	0	100	-	-	40.3	-	4.2	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	931.1	-	300	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	0.29	0.4	-	0	0	0.1	0.2	0.3	0.7	3.3
TRS (ppb) Average	684	0.48	0	-	0.4	0.4	0.4	0.5	0.5	0.5	0.7
THC (ppm) Average	683	2.01	0	-	2	2	2	2	2	2	2.1
NMHC(ppm) Average	683	0	0.001	-	0	0	0	0	0	0	0.017
CH4(ppm) Average	683	2.01	0	-	2	2	2	2	2	2	2.1
O3 (ppb) Average	686	40.42	6.4	-	20.7	32	36.2	41	44.8	48.3	54.7
NO2 (ppb) Average	684	0.54	0.6	-	0	0	0.1	0.4	0.8	1.4	3.8
NO (ppb) Average	684	0.37	0.4	-	0	0	0	0.3	0.7	1	2.1
NOX (ppb) Average	684	0.92	0.7	-	0	0	0.3	0.8	1.4	1.8	3.8
PM2.5 (ug/m3) Average	719	2.35	1.2	-	0.3	0.9	1.5	2.3	3	3.8	7.4
CO(ppm) Average	687	0.18	0	-	0.1	0.2	0.2	0.2	0.2	0.2	0.2
CO2(ppm) Average	686	441.69	2.6	-	437.3	439.1	439.8	441.1	443	444.9	455.3
Temperature 2 m (C) Average	720	4.92	6.2	-	-11.6	-2.8	0.4	5.4	9.4	12.7	21
Relative Humidity (%) Average	720	49.86	19.6	-	16.5	25.2	33.2	47.2	65.7	78.9	92.8
Wind Speed 10 m (km/h) Average	720	8.8	4	-	0	4	6	9	11	14	21
Wind Speed 20 m (km/h) Average	720	13.2	5	-	1	7	10	13	16	20	29
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	5.06	-	-	-	-	-	-	-
Surface Wetness (% of range) Average	720	1.59	2.5	-	0	0.6	0.9	1.2	1.5	2.1	40.3
Global Solar Radiation (W/m2) Average	720	203.25	256.8	-	0	0.1	0.3	53.6	411.7	617.1	931.1

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
APRIL 2025

MONTHLY SUMMARY

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	17 Apr 2025 12:00	17 Apr 2025 14:00	3	Maintenance - replaced support gas cylinder



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

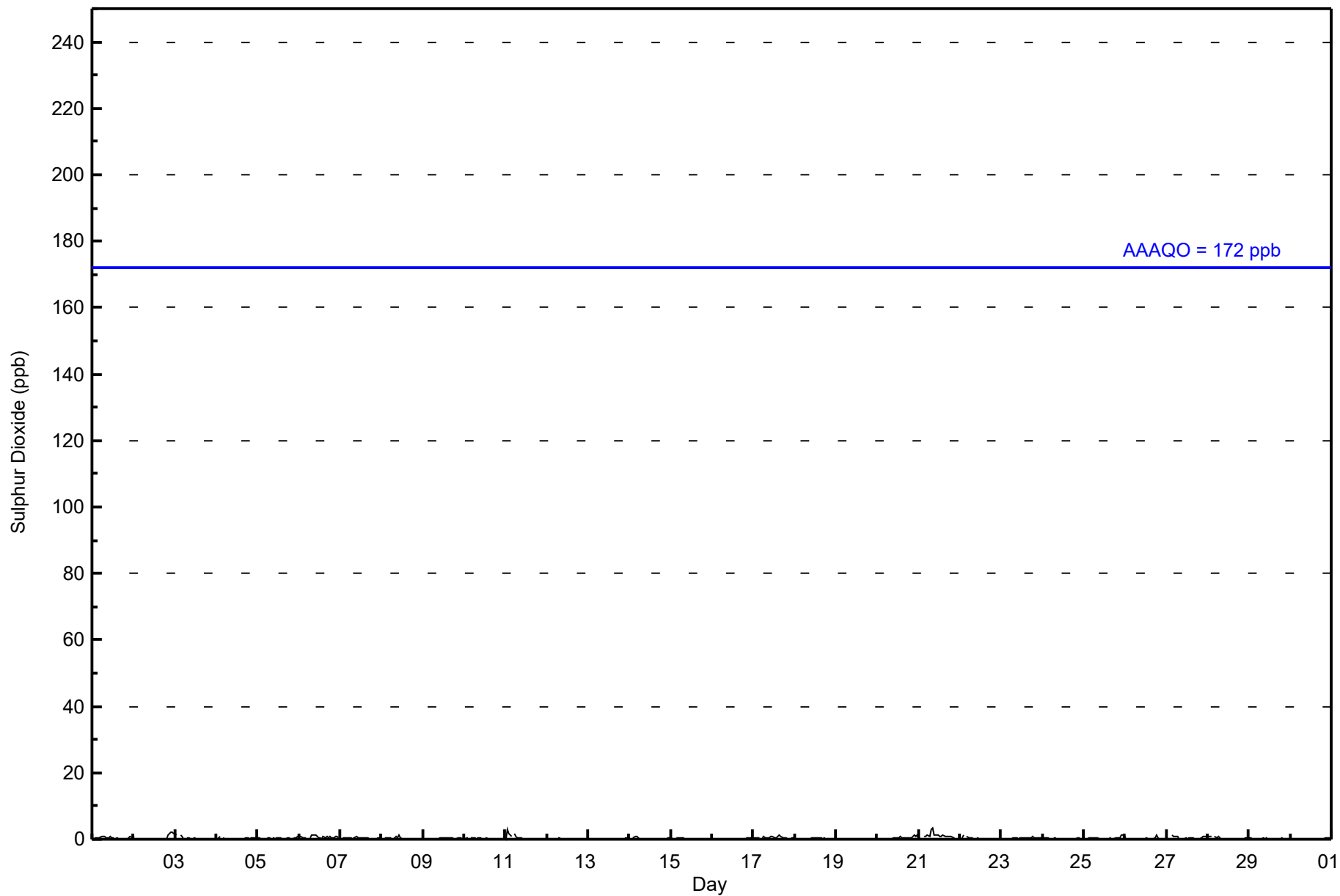
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 3.3 ppb on Apr 21 09:00																				Maximum Daily Average: 1.0 ppb on Apr 21		Hours of Data: 685				
Minimum Value: 0.0 ppb on Apr 3 20:00																				Minimum Daily Average: 0.0 ppb on Apr 19		Hours of Missing Data: 35				
Maximum Diurnal Average: 0.4 ppb at hour 2																				Minimum Diurnal Average: 0.2 ppb at hour 18		Hours of Calibration: 35				
Monthly Average: 0.29 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 1.7		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-Apr	Z	0.4	0.3	0.3	0.6	0.7	1.0	0.9	0.5	0.4	0.7	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.7	0.6	0.4	1.0
2-Apr	0.6	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	1.2	2.0	2.1	1.6	0.4	2.1
3-Apr	1.7	1.4	Z	1.3	0.7	0.1	0.2	0.3	0.4	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.3	1.7
4-Apr	0.2	0.3	1.0	Z	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.2	1.0
5-Apr	0.4	0.2	0.1	0.2	Z	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.3	0.2	0.1	0.2	0.4	0.6	1.0	0.3	1.0
6-Apr	0.8	0.9	0.4	0.4	0.4	Z	0.4	1.1	1.2	1.3	1.3	0.3	0.3	0.2	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.9	0.7	0.4	0.7	1.3
7-Apr	Z	0.4	0.4	0.3	0.4	0.3	0.3	0.2	0.5	0.7	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.4	0.3	0.7
8-Apr	0.6	Z	0.3	0.5	0.4	0.2	0.1	0.2	0.7	0.5	1.3	0.5	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.3	1.3
9-Apr	0.1	0.1	Z	0.0	0.0	0.1	0.2	0.0	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3
10-Apr	0.2	0.3	0.3	Z	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.3	0.2	0.3
11-Apr	0.1	3.1	1.6	0.8	Z	1.7	0.7	0.2	0.6	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.5	3.1
12-Apr	0.2	0.1	0.2	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.5	0.0	0.5
14-Apr	0.6	Z	0.6	0.9	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.6	0.3	0.2	0.9
15-Apr	0.1	0.3	Z	0.4	0.3	0.3	0.3	0.6	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
16-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.3	0.3	0.4	0.4	0.1	0.4
17-Apr	0.3	0.4	0.5	0.3	Z	0.6	0.9	0.3	0.2	0.3	1.0	0.7	0.6	0.6	0.7	1.2	0.8	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.5	1.2
18-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.4
19-Apr	Z	0.1	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	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
20-Apr	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.5	0.7	0.5	0.5	0.6	0.4	0.5	0.4	0.6	1.1	0.9	1.1	0.4	1.1
21-Apr	0.6	0.3	Z	1.0	0.9	1.4	0.9	3.0	3.3	1.1	1.4	1.1	1.0	1.0	1.1	0.9	0.9	0.8	0.9	0.9	0.3	0.2	0.1	0.2	1.0	3.3
22-Apr	0.2	0.4	1.1	Z	0.9	0.6	0.4	0.2	0.1	0.1	0.3	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	0.2	1.1
23-Apr	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.5	0.2	0.4	0.2	0.2	0.3	0.3	0.6	0.3	0.3	0.6	0.8	0.4	0.3	0.4	0.4	0.3	0.3	0.8
24-Apr	0.2	0.3	0.3	0.2	0.2	Z	0.2	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.4	0.5	0.2	0.2	0.2	0.5
25-Apr	Z	0.1	0.2	0.3	0.3	0.3	0.6	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.3	0.3	1.1	1.2	0.3	1.2
26-Apr	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	0.1	0.0	0.1	0.1	0.3	1.5	0.3	0.1	0.0	0.0	0.0	0.2	1.5
27-Apr	0.0	0.3	Z	1.3	0.7	0.7	0.7	0.1	0.0	0.1	0.2	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.2	0.2	0.5	0.8	0.9	0.9	0.4	1.3
28-Apr	1.0	0.8	0.9	Z	0.6	0.6	0.7	0.5	0.2	0.1	0.1	C	C	C	C	C	0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.5	0.4	1.0
29-Apr	0.2	0.3	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3
30-Apr	0.1	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.3	0.2	0.2	0.1	0.4
0.3 0.4 0.4 0.4 0.3 0.4 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.3 0.4 0.4																									Diurnal Average	
1.7 3.1 1.6 1.3 0.9 1.7 1.0 3.0 3.3 1.3 1.4 1.1 1.0 1.0 1.1 1.2 0.9 0.8 1.5 0.9 1.2 2.0 2.1 1.6																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - April 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 (SO₂) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	26	11	8	9	18	13	23	23	63	81	41	31	105	79	79	75	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	26	11	8	9	18	13	23	23	63	81	41	31	105	79	79	75	685

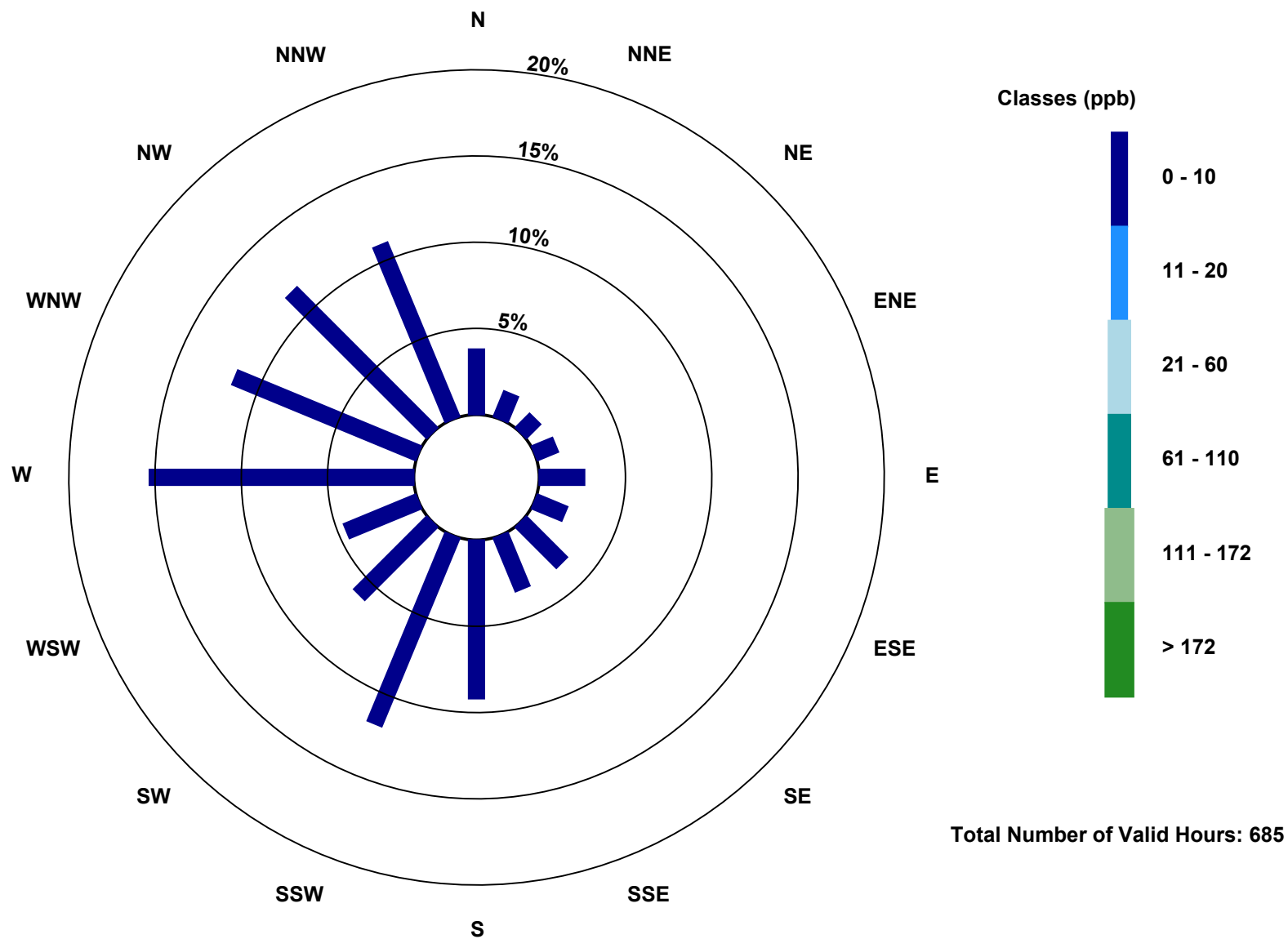
Total Number of Valid Hours: 685

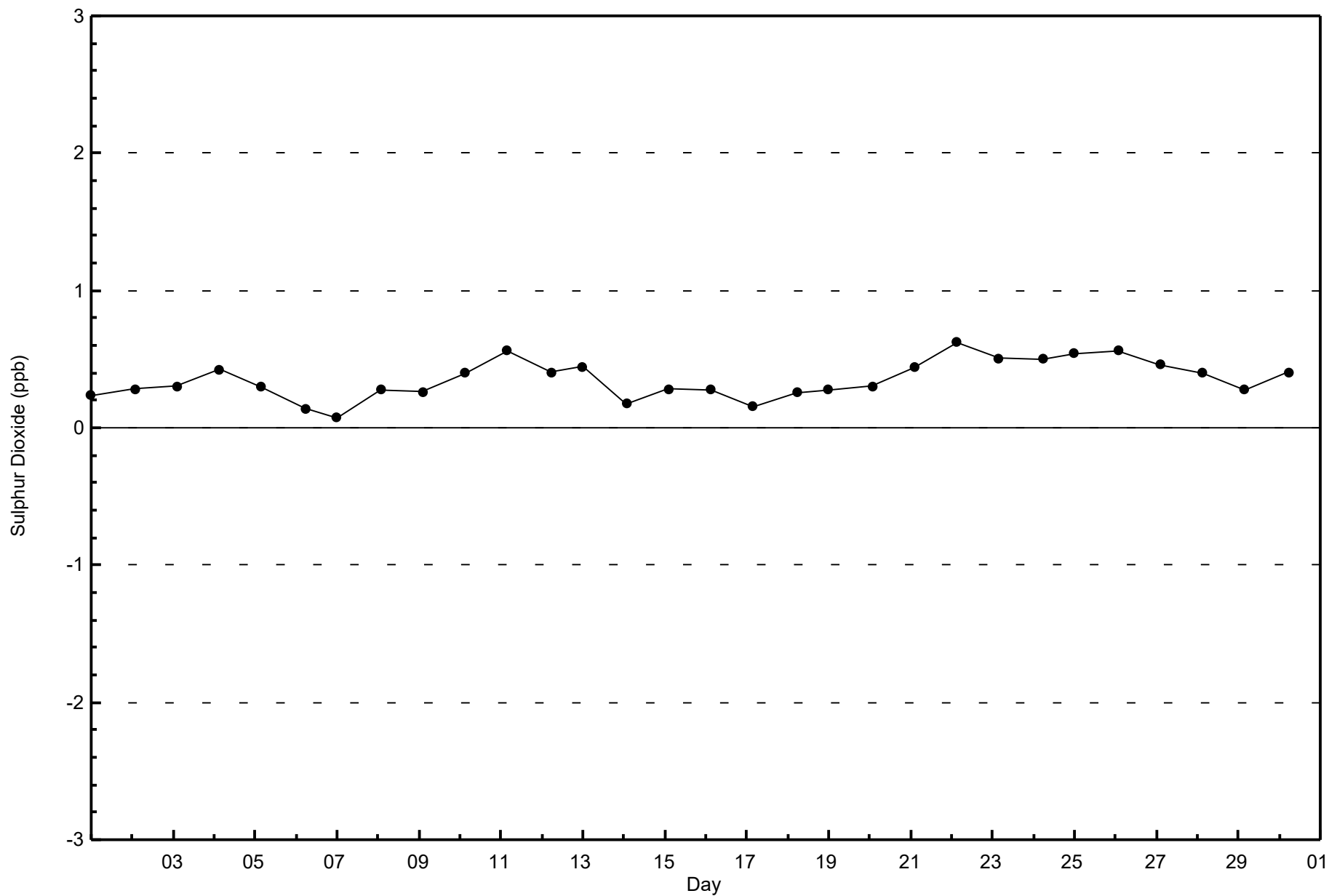
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Stony Mountain

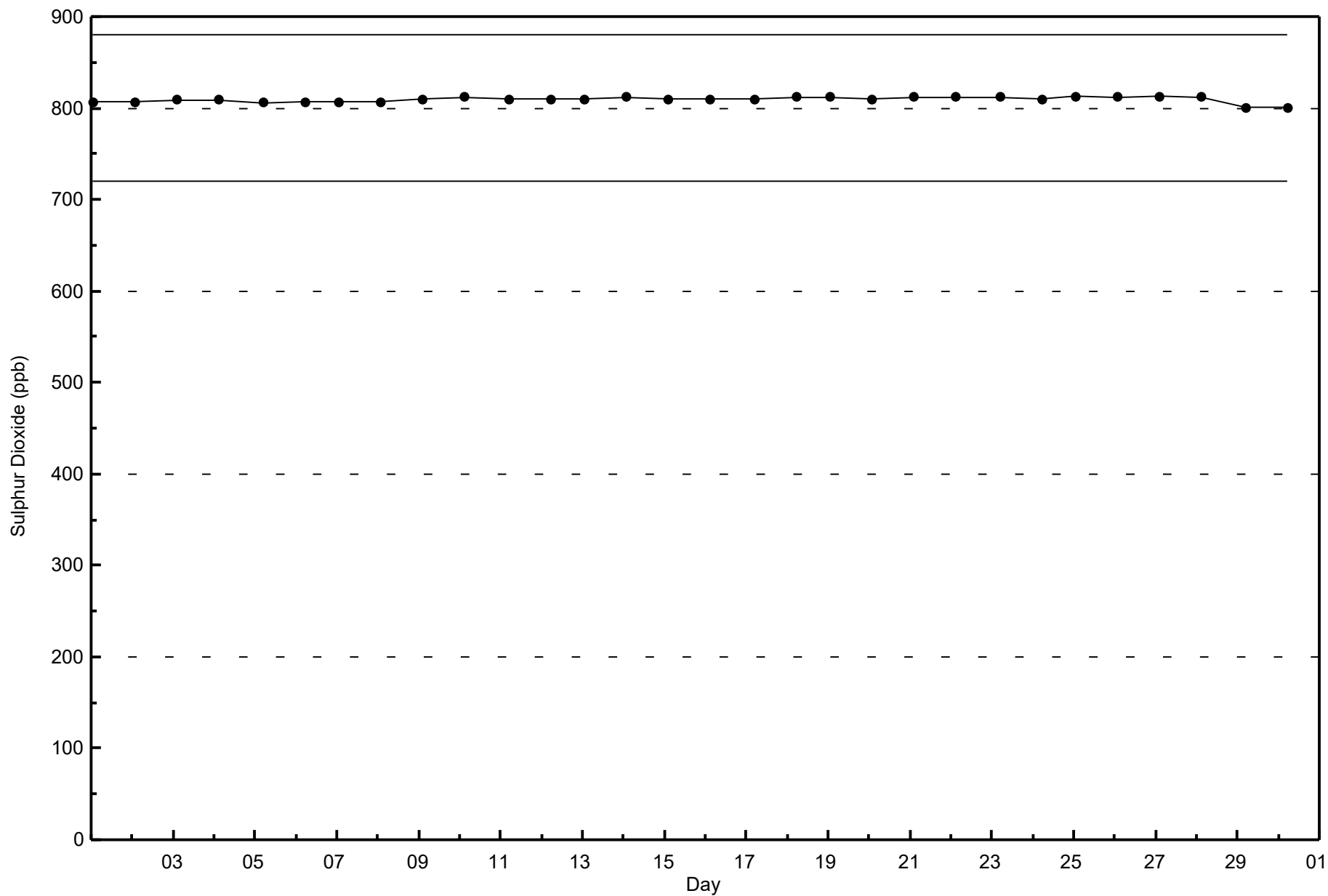






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440							
Maximum Value: 0.7 ppb on Apr 11 02:00 Maximum Daily Average: 0.5 ppb on Apr 11																			Periods of Valid Data: 1367							
Minimum Value: 0.4 ppb on Apr 4 06:00 Minimum Daily Average: 0.4 ppb on Apr 23																			Periods of Invalid Data: 73							
Maximum Diurnal Average: 0.5 ppb at hour 5 Minimum Diurnal Average: 0.5 ppb at hour 17																			Periods of Calibration: 73							
Monthly Average: 0.48 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.5 P ₉₀ = 0.5 P ₉₉ = 0.6																			Percent Operational Time: 100.0							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.5 0.5	Z SP	0.4 0.5	0.4 0.4	0.4 0.5	0.4 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.4 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
2-Apr	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
3-Apr	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.4	0.5 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 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.5
4-Apr	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.5
5-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
6-Apr	Z SP	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	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
7-Apr	0.5 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
8-Apr	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.4	0.6
9-Apr	0.4 0.4	0.4 0.5	0.4 0.5	Z SP	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.5
10-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5	0.6
11-Apr	0.5 0.5	0.6 0.7	0.6 0.6	0.5 0.5	0.6 0.6	Z SP	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.7
12-Apr	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
13-Apr	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
14-Apr	0.5 0.5	0.5 0.6	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
15-Apr	0.5 0.4	0.4 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	0.5

Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
16-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
17-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	Z SP	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 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5	0.6
18-Apr	Z SP	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.5	0.6
19-Apr	0.6 0.6	Z SP	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	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
20-Apr	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.5	0.5 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	0.5
21-Apr	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.5 0.4	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	0.4	0.5
22-Apr	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.6	Z SP	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.7 0.7	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	0.7
23-Apr	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.4	0.5
24-Apr	Z SP	0.4 0.5	0.4 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.4 0.4	0.5 0.4	0.4 0.4	0.4 C	C C	C C	C C	C C	C C	C C	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.5	--	0.5	
25-Apr	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.6 0.6	0.5 0.6	0.6 0.6	0.5	0.6
26-Apr	0.6 0.6	0.6 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
27-Apr	0.5 0.5	0.5 0.5	0.5 0.6	Z SP	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 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
28-Apr	0.5 0.6	0.6 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.6
29-Apr	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 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
30-Apr	Z SP	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.5
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

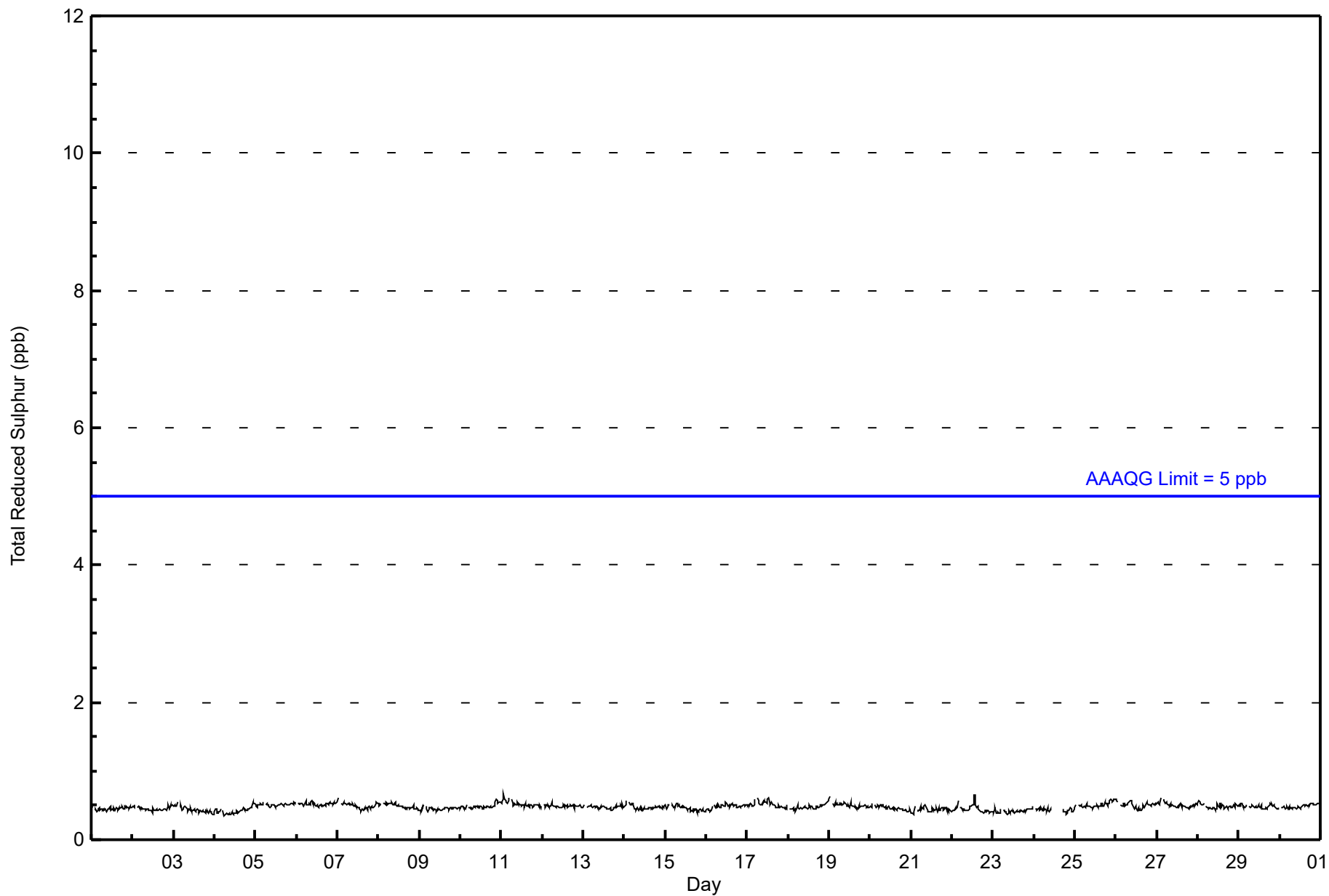
Stony Mountain - April 2025

Maximum Value: 0.7 ppb on Apr 22 14:00																			Maximum Daily Average: 0.5 ppb on Apr 11										Hours in Service: 720	
Minimum Value: 0.4 ppb on Apr 4 10:00																			Minimum Daily Average: 0.4 ppb on Apr 23										Hours of Data: 684	
Maximum Diurnal Average: 0.5 ppb at hour 5																			Minimum Diurnal Average: 0.5 ppb at hour 17										Hours of Missing Data: 36	
Monthly Average: 0.48 ppb																			Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.5 P ₉₀ = 0.5 P ₉₉ = 0.6										Hours of Calibration: 36	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.5	Z	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	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	0.5	0.5	0.5				
2-Apr	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5				
3-Apr	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
4-Apr	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5				
5-Apr	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	0.5	0.5	0.5	0.5	0.5	0.5				
6-Apr	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
7-Apr	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6				
8-Apr	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5				
9-Apr	0.4	0.4	0.5	Z	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5				
10-Apr	0.5	0.5	0.5	0.5	Z	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	0.6	0.5	0.5	0.5	0.6				
11-Apr	0.5	0.6	0.6	0.5	0.6	Z	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	0.6				
12-Apr	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
13-Apr	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
14-Apr	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
15-Apr	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
16-Apr	0.4	0.4	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
17-Apr	0.5	0.5	0.5	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6				
18-Apr	Z	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	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6				
19-Apr	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6				
20-Apr	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	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5				
21-Apr	0.4	0.4	0.4	Z	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5				
22-Apr	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7				
23-Apr	0.4	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5				
24-Apr	Z	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	C	C	C	C	C	C	C	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5				
25-Apr	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.6				
26-Apr	0.6	0.6	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6				
27-Apr	0.5	0.5	0.6	Z	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	0.6				
28-Apr	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
29-Apr	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	0.5	0.5	0.5	0.5	0.5	0.5				
30-Apr	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration																														
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																														



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Stony Mountain - April 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 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	26	10	8	9	18	14	23	23	66	81	41	34	103	77	77	74	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	26	10	8	9	18	14	23	23	66	81	41	34	103	77	77	74	684

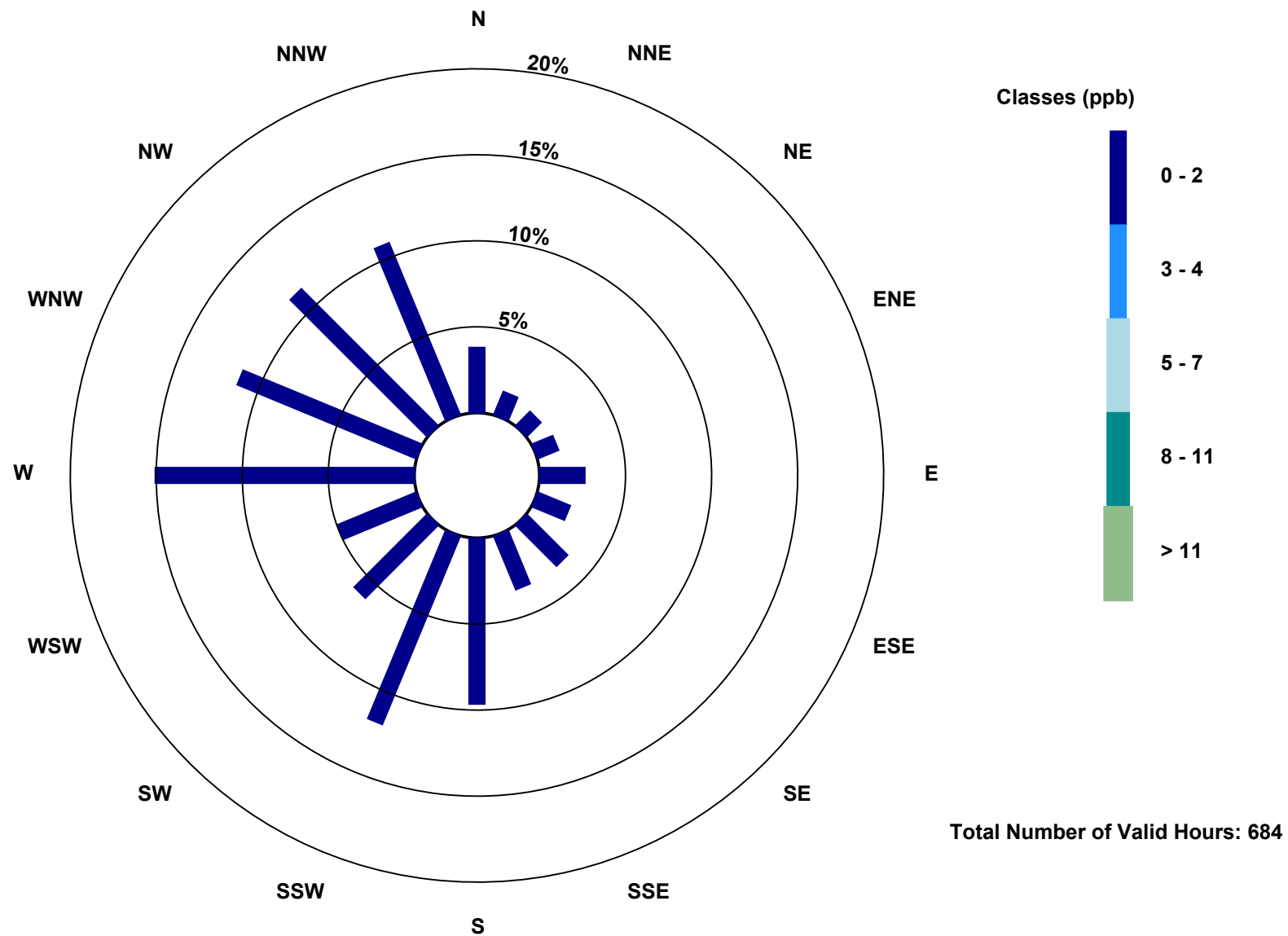
Total Number of Valid Hours: 684

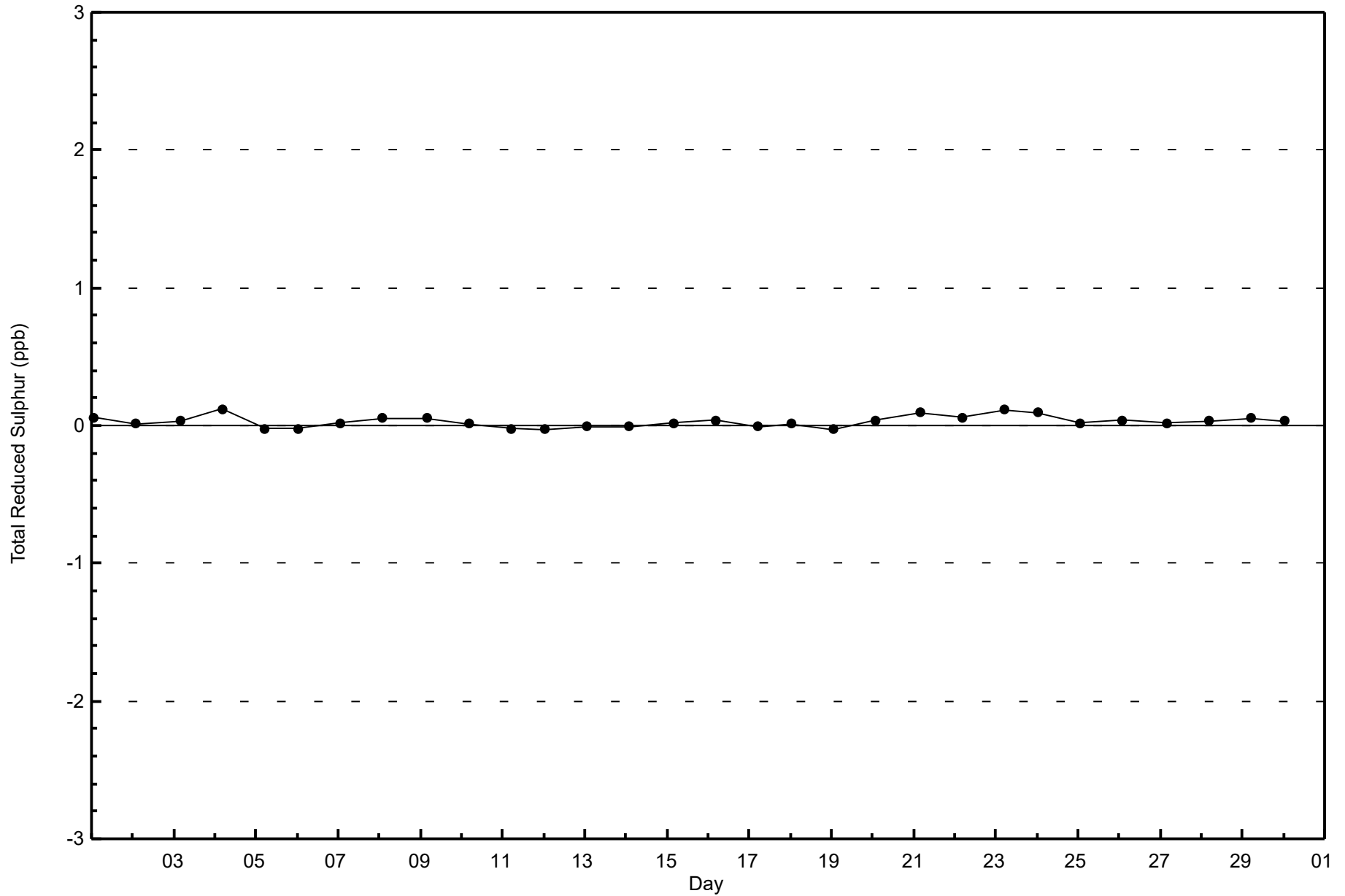
Total Number of Hours: 720

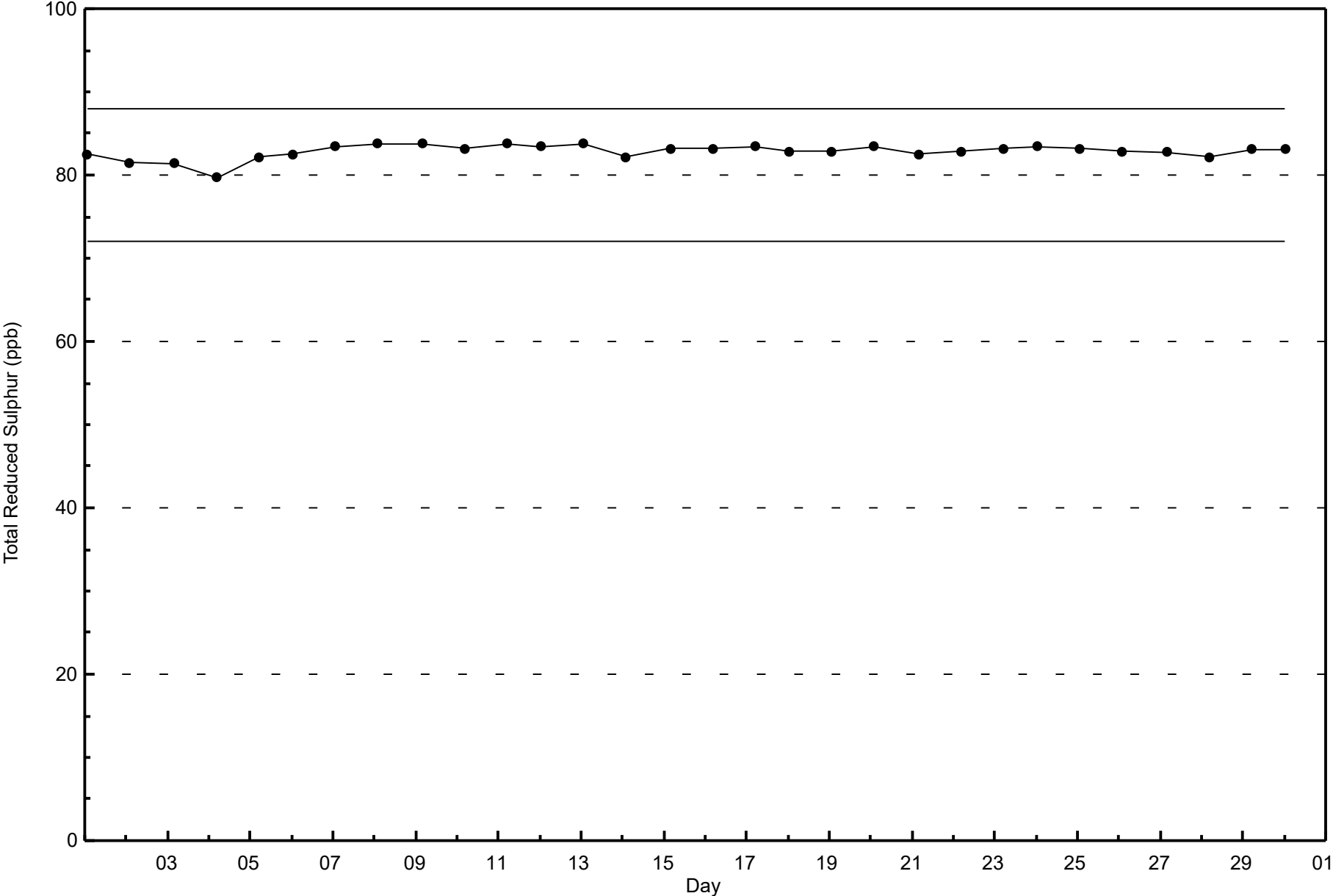


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Stony Mountain









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

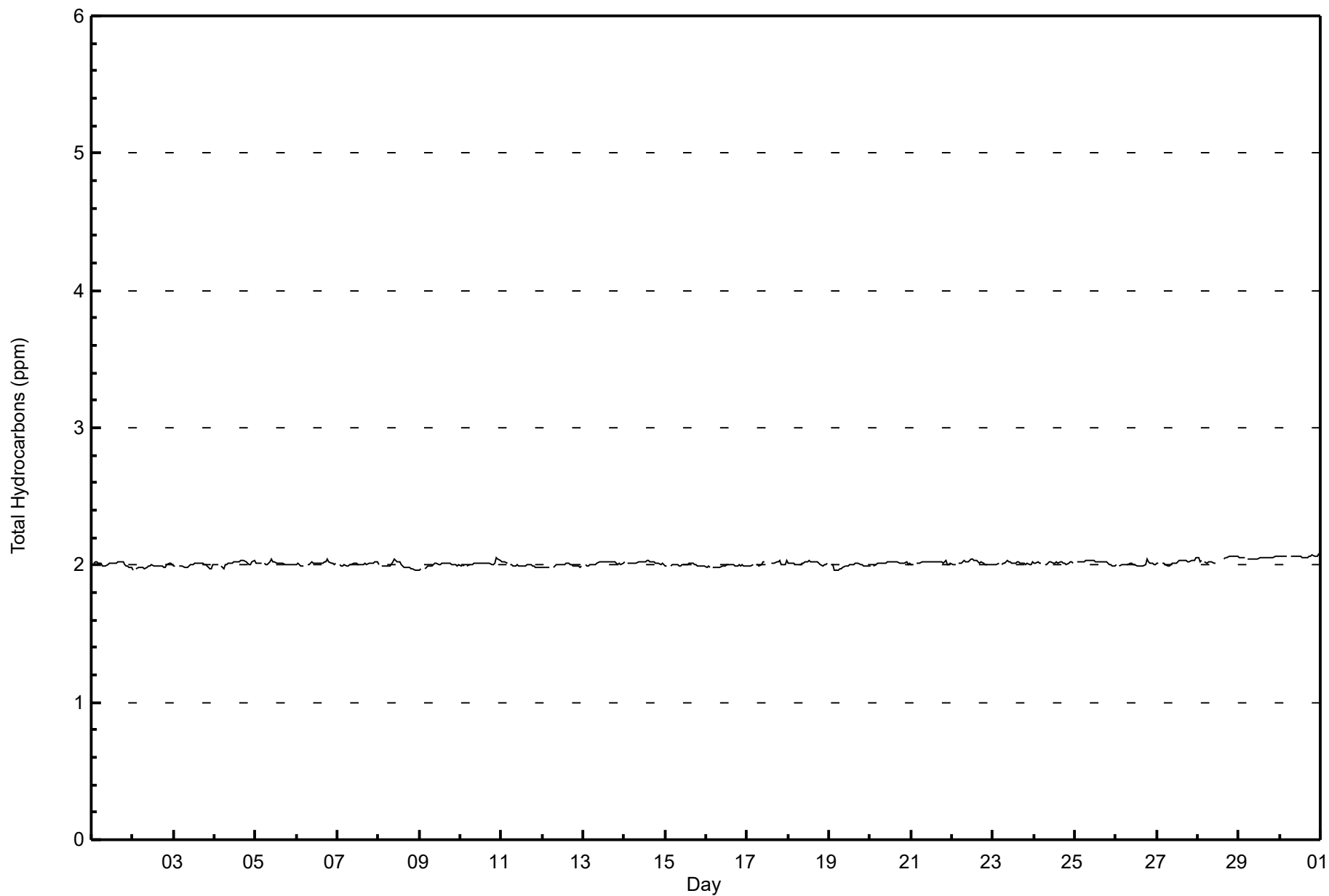
Stony Mountain - April 2025

Maximum Value: 2.1 ppm on May 1 00:00																				Maximum Daily Average: 2.1 ppm on Apr 30										Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 8 23:00																				Minimum Daily Average: 2.0 ppm on Apr 2										Hours of Data: 683	
Maximum Diurnal Average: 2.0 ppm at hour 17																				Minimum Diurnal Average: 2.0 ppm at hour 5										Hours of Missing Data: 37	
Monthly Average: 2.01 ppm																				Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.1										Hours of Calibration: 34	
																				Percent Operational Time: 99.6											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
2-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
3-Apr	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					
4-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
5-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
6-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
8-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
9-Apr	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					
10-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1					
11-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
13-Apr	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					
14-Apr	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					
15-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
16-Apr	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					
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
19-Apr	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					
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
21-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
23-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
24-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0					
25-Apr	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					
26-Apr	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					
27-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1					
28-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1					
29-Apr	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	2.1	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-Apr	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					
																									Diurnal Average						
																									Diurnal Maximum						
Z - zerospan C - Calibration M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	635	92.97	92.97
2.1 - 3.0	48	7.03	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	25	9	8	9	18	13	23	21	61	75	40	29	88	76	74	66	635
2.1 - 3.0	1	2	0	0	0	0	0	2	3	6	1	2	17	3	5	6	48
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	26	11	8	9	18	13	23	23	64	81	41	31	105	79	79	72	683

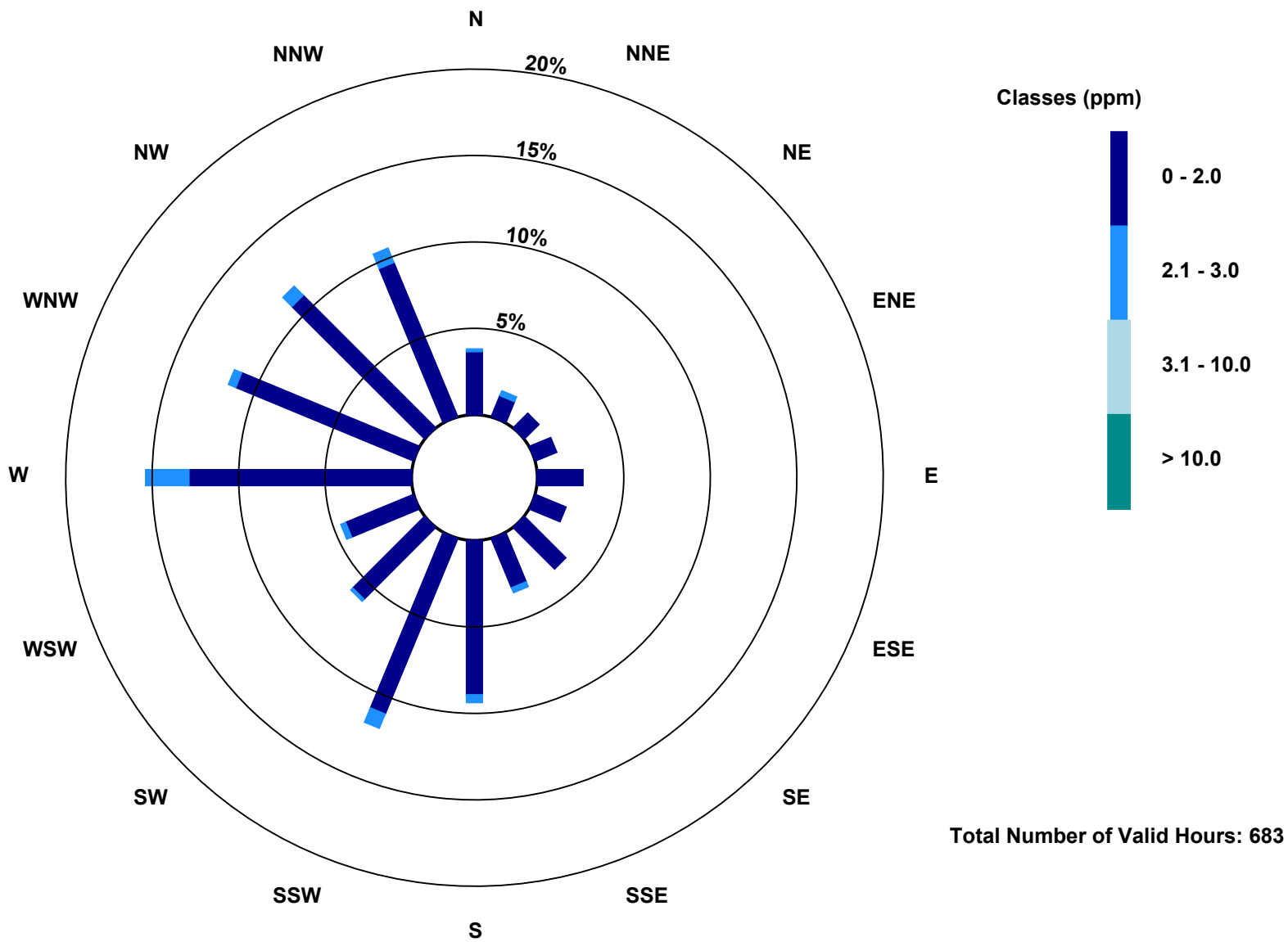
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

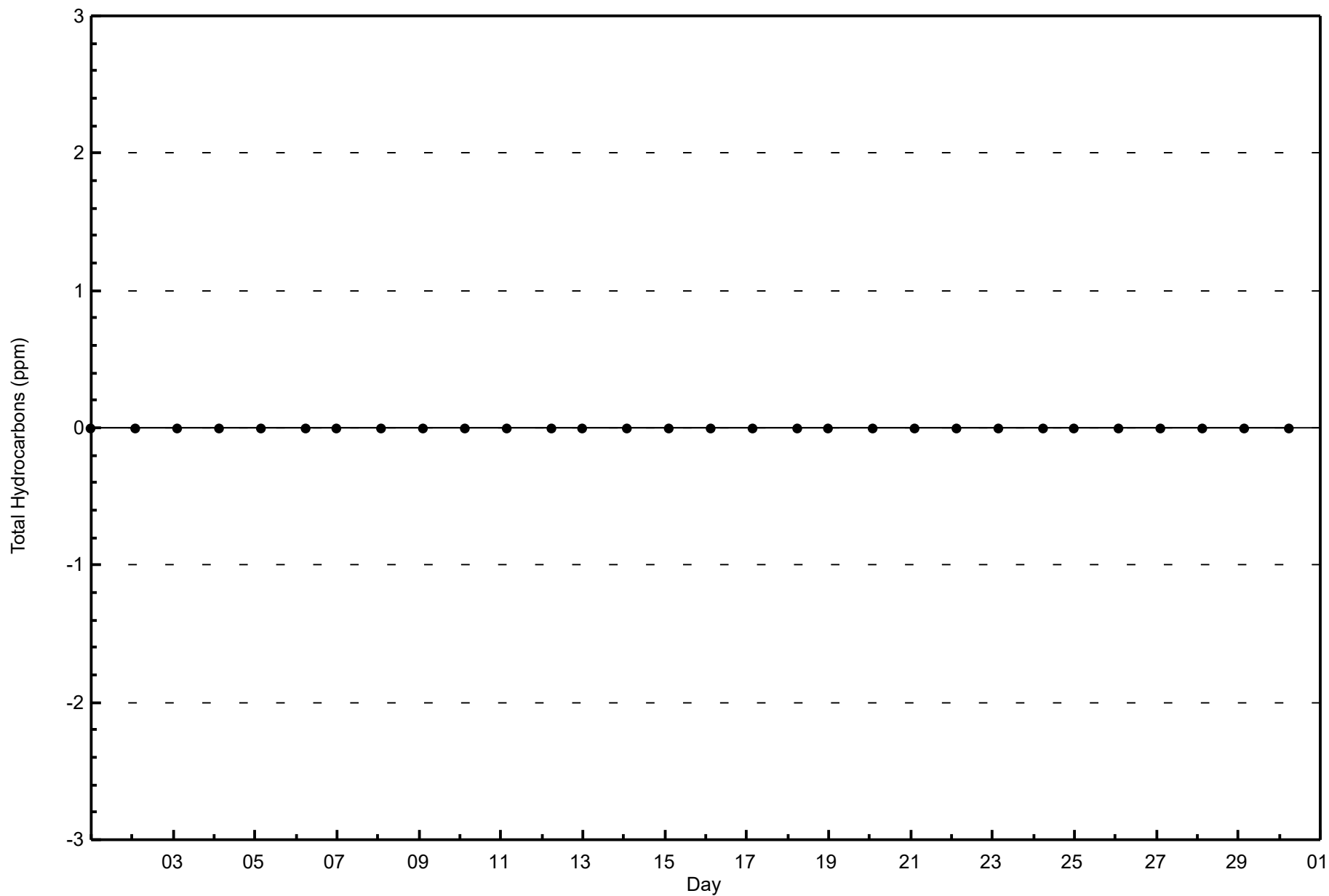
Total Hydrocarbons (THC) - ppm
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

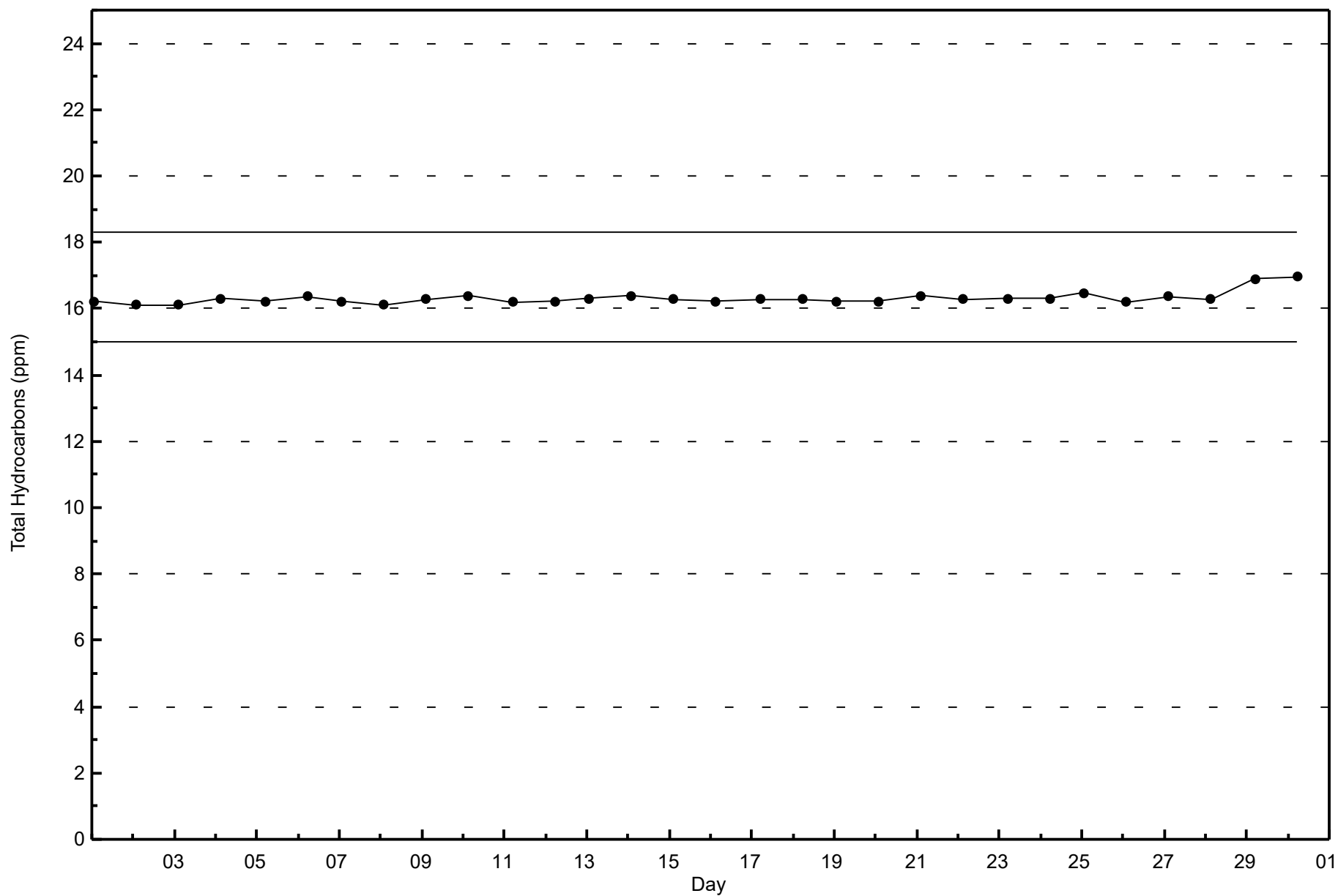
Total Hydrocarbons (THC) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Stony Mountain - April 2025

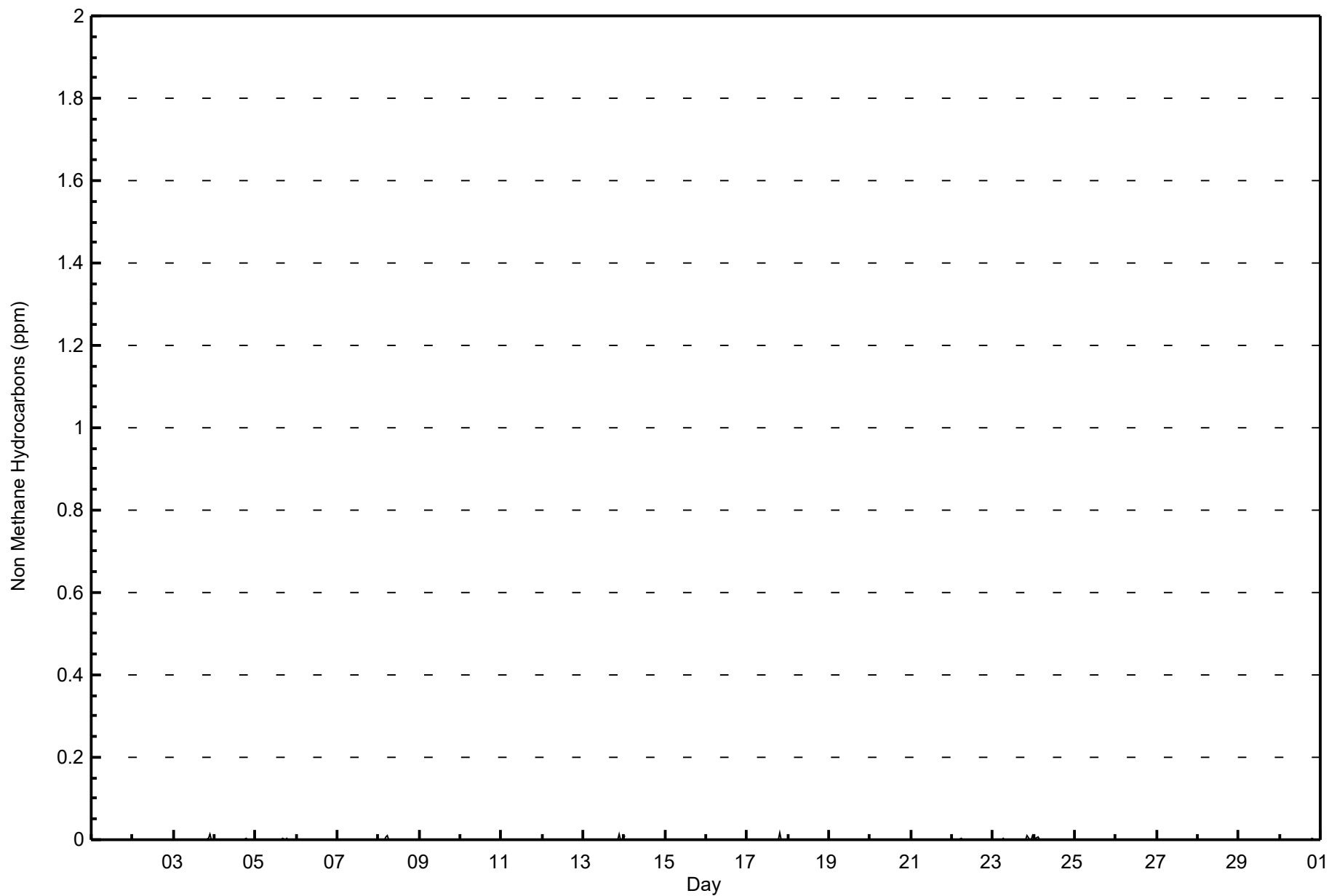


Maximum Value: 0.017 ppm on Apr 17 20:00																	Maximum Daily Average: 0.001 ppm on Apr 23										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																	Minimum Daily Average: 0.000 ppm on Apr 1										Hours of Data: 683	
Maximum Diurnal Average: 0.001 ppm at hour 22																	Minimum Diurnal Average: 0.000 ppm at hour 4										Hours of Missing Data: 37	
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 of Calibration: 34	
																											Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.003	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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	0.002	0.014	0.000	0.000	0.001	0.014		
4-Apr	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	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004		
5-Apr	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	0.003	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.003		
6-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
7-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.011		
9-Apr	0.000	0.000	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	0.002		
10-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
11-Apr	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		
12-Apr	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		
13-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.001	0.012		
14-Apr	0.010	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010		
15-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
17-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	M	M	M	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.001	0.017		
18-Apr	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		
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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		
22-Apr	0.000	0.000	0.000	Z	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003		
23-Apr	0.000	0.000	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	0.001	0.010	0.000	0.000	0.012	0.001	0.012		
24-Apr	0.005	0.003	0.008	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	0.008		
25-Apr	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	0.000	0.001		
26-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
28-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
29-Apr	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		
30-Apr	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	0.003	0.000	0.000	0.001	0.000	0.000	0.003		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan		C - Calibration				M - Maintenance																						



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	674	98.68	98.68
0.006 - 0.05	9	1.32	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	24	10	7	9	18	13	23	23	64	81	41	30	105	79	75	72	674
0.006 - 0.05	2	1	1	0	0	0	0	0	0	0	0	1	0	0	4	0	9
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	26	11	8	9	18	13	23	23	64	81	41	31	105	79	79	72	683

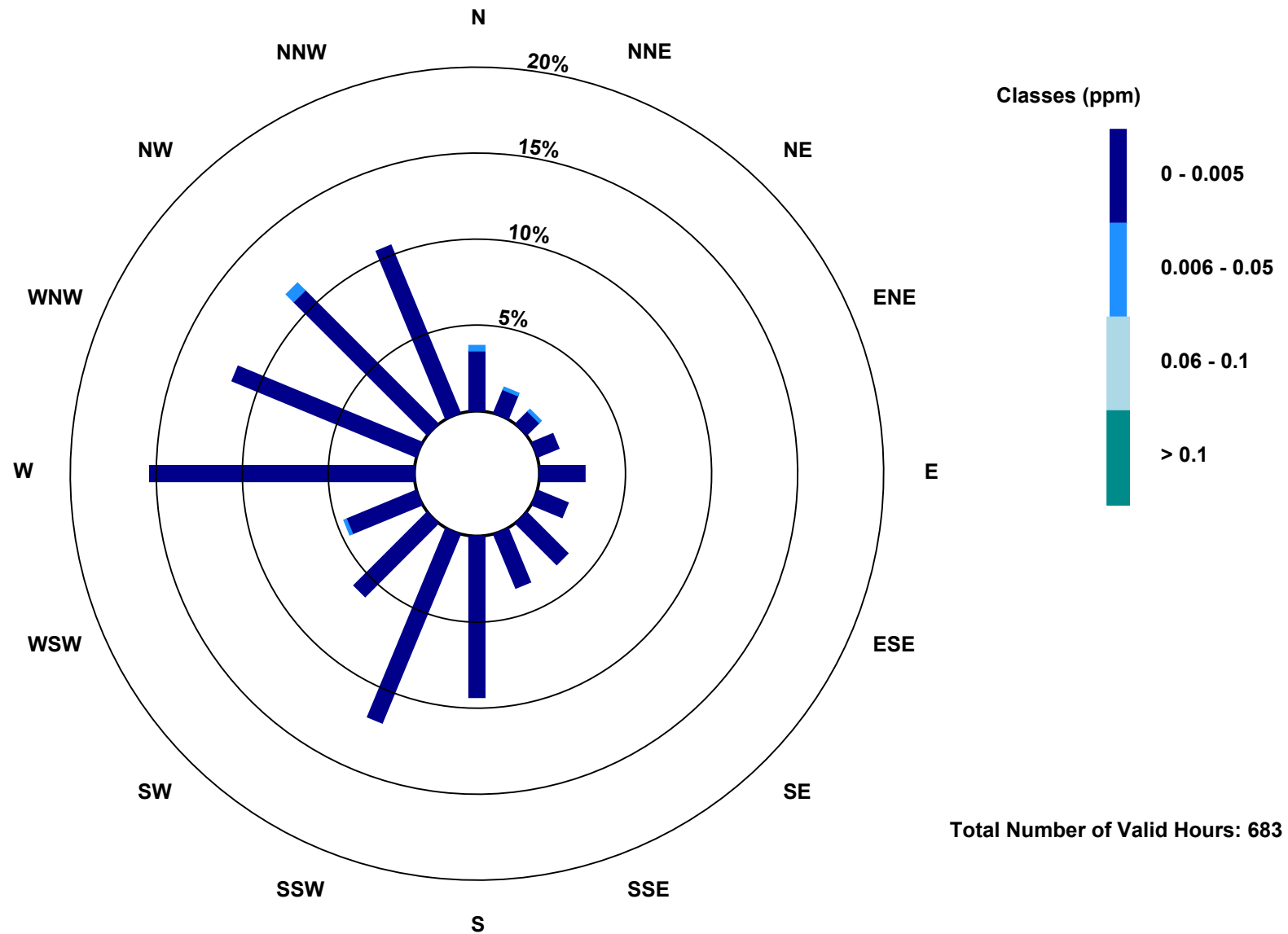
Total Number of Valid Hours: 683

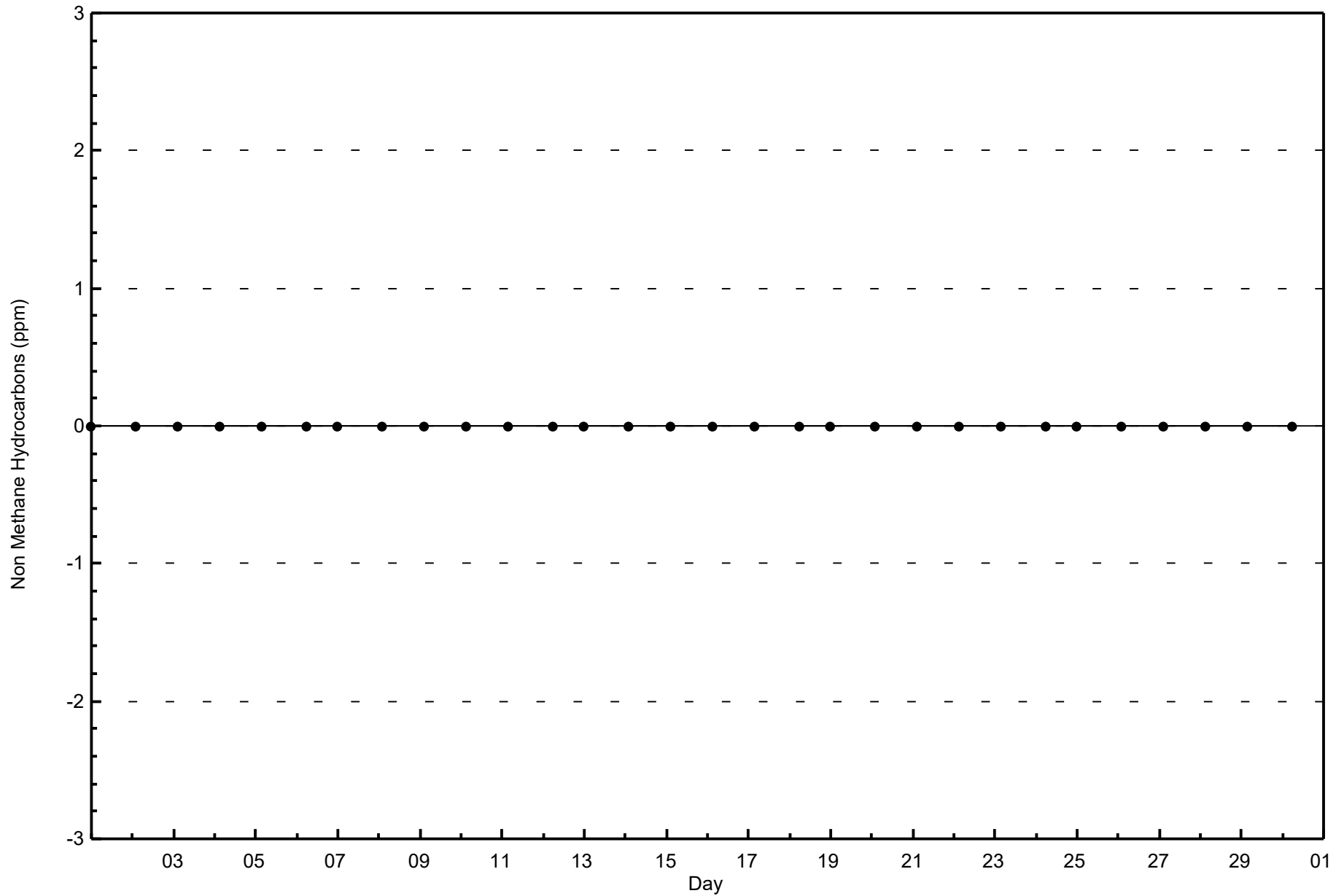
Total Number of Hours: 720

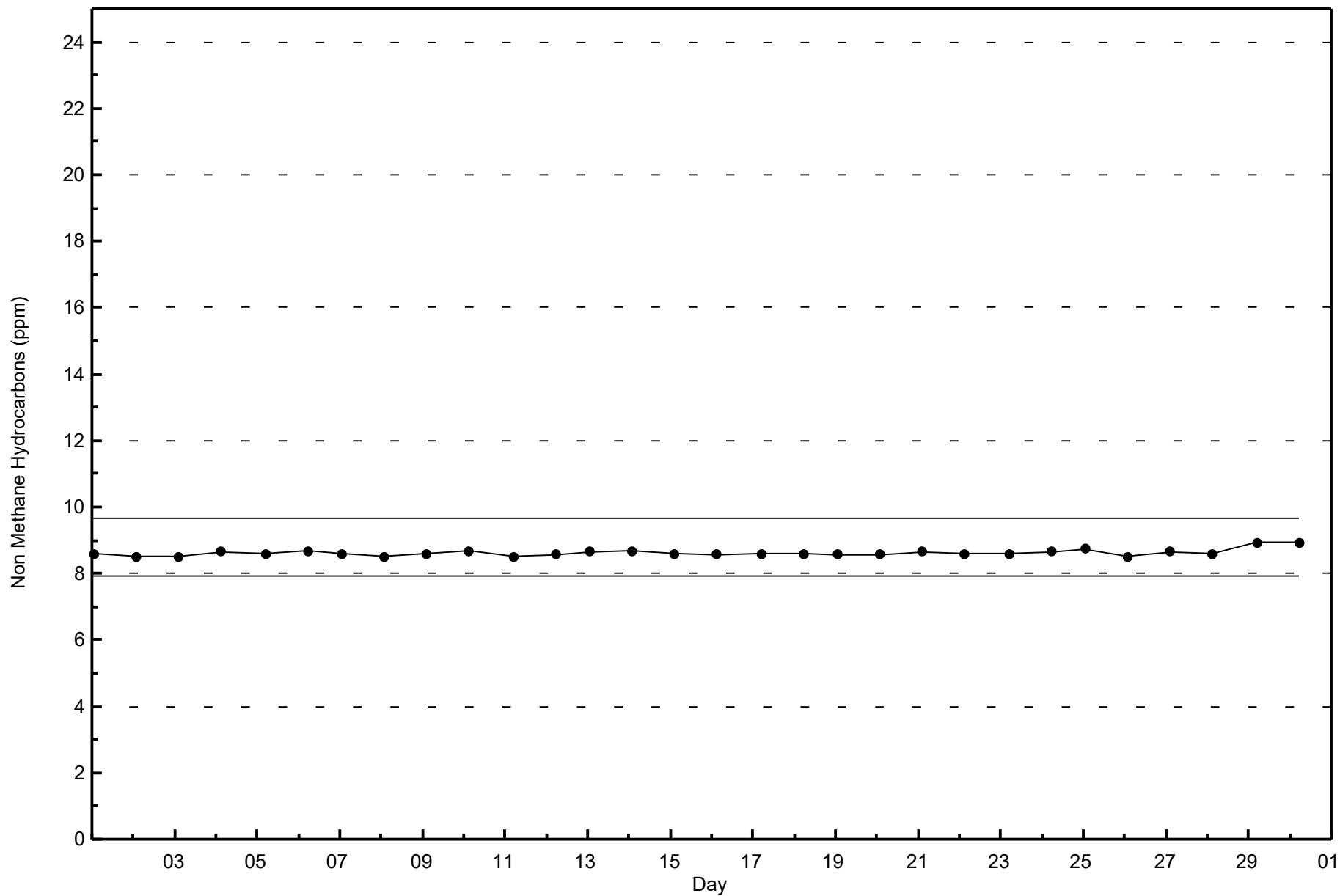


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Stony Mountain





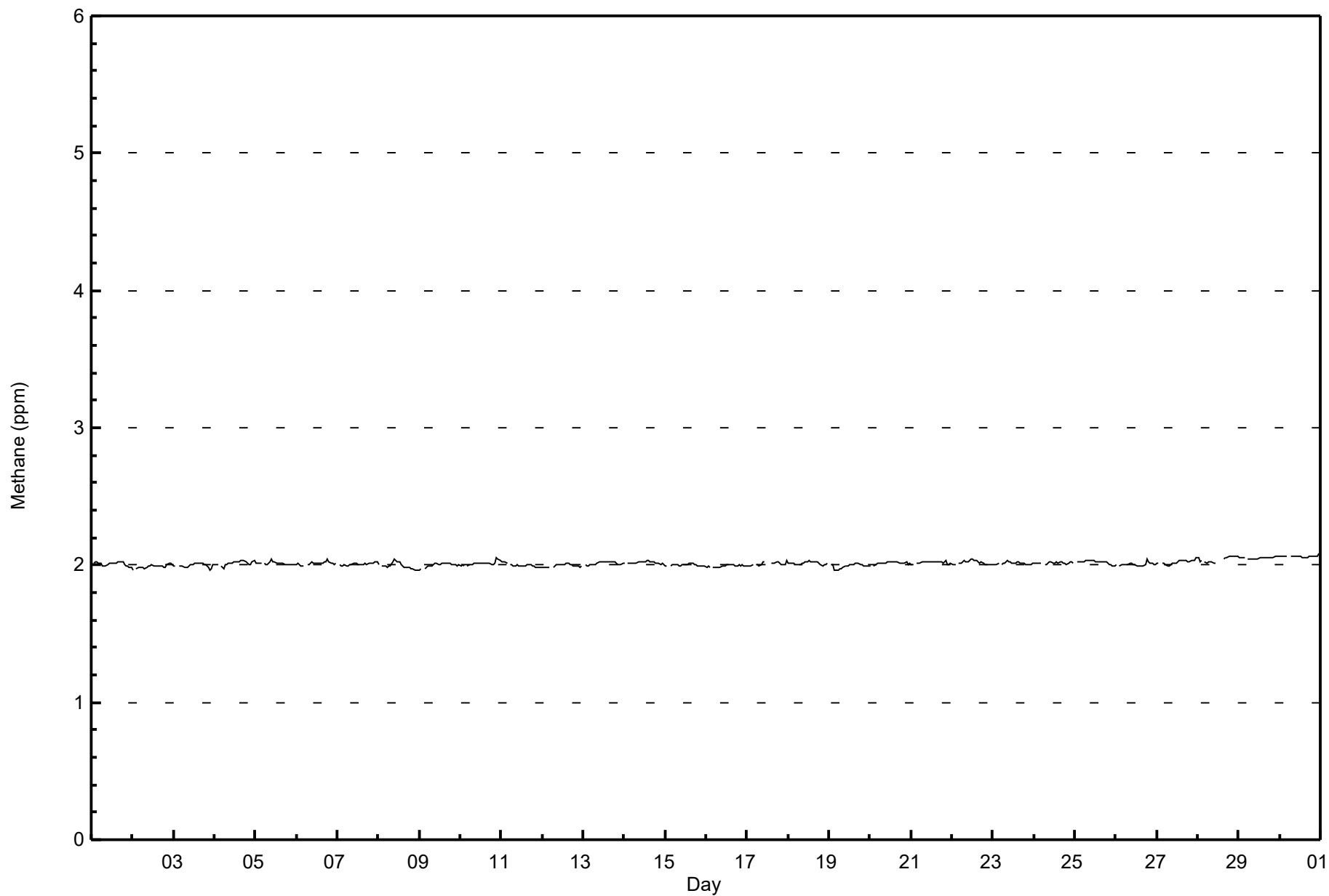


Number of Exceedences (AAAQO):										1-hr: 0 24-hr: 0										Hours in Service: 720									
Maximum Value: 2.1 ppm on May 1 00:00										Maximum Daily Average: 2.1 ppm on Apr 30										Hours of Data: 683									
Minimum Value: 2.0 ppm on Apr 8 23:00										Minimum Daily Average: 2.0 ppm on Apr 2										Hours of Missing Data: 37									
Maximum Diurnal Average: 2.0 ppm at hour 16										Minimum Diurnal Average: 2.0 ppm at hour 6										Hours of Calibration: 34									
Monthly Average: 2.01 ppm										Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.0 P ₉₉ = 2.1										Percent Operational Time: 99.6									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
3-Apr	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			
4-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
5-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
6-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
8-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
9-Apr	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			
10-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0			
11-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
13-Apr	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			
14-Apr	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			
15-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
16-Apr	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			
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
19-Apr	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			
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
21-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
23-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
24-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
25-Apr	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			
26-Apr	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			
27-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1			
28-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
29-Apr	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	2.1	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-Apr	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
2.0 2.0																									Diurnal Average				
2.1 2.1 2.1 2.1 2.1 2.0 2.1																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	635	92.97	92.97
2.1 - 3.0	48	7.03	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	25	9	8	9	18	13	23	21	61	75	40	29	88	76	74	66	635
2.1 - 3.0	1	2	0	0	0	0	0	2	3	6	1	2	17	3	5	6	48
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	26	11	8	9	18	13	23	23	64	81	41	31	105	79	79	72	683

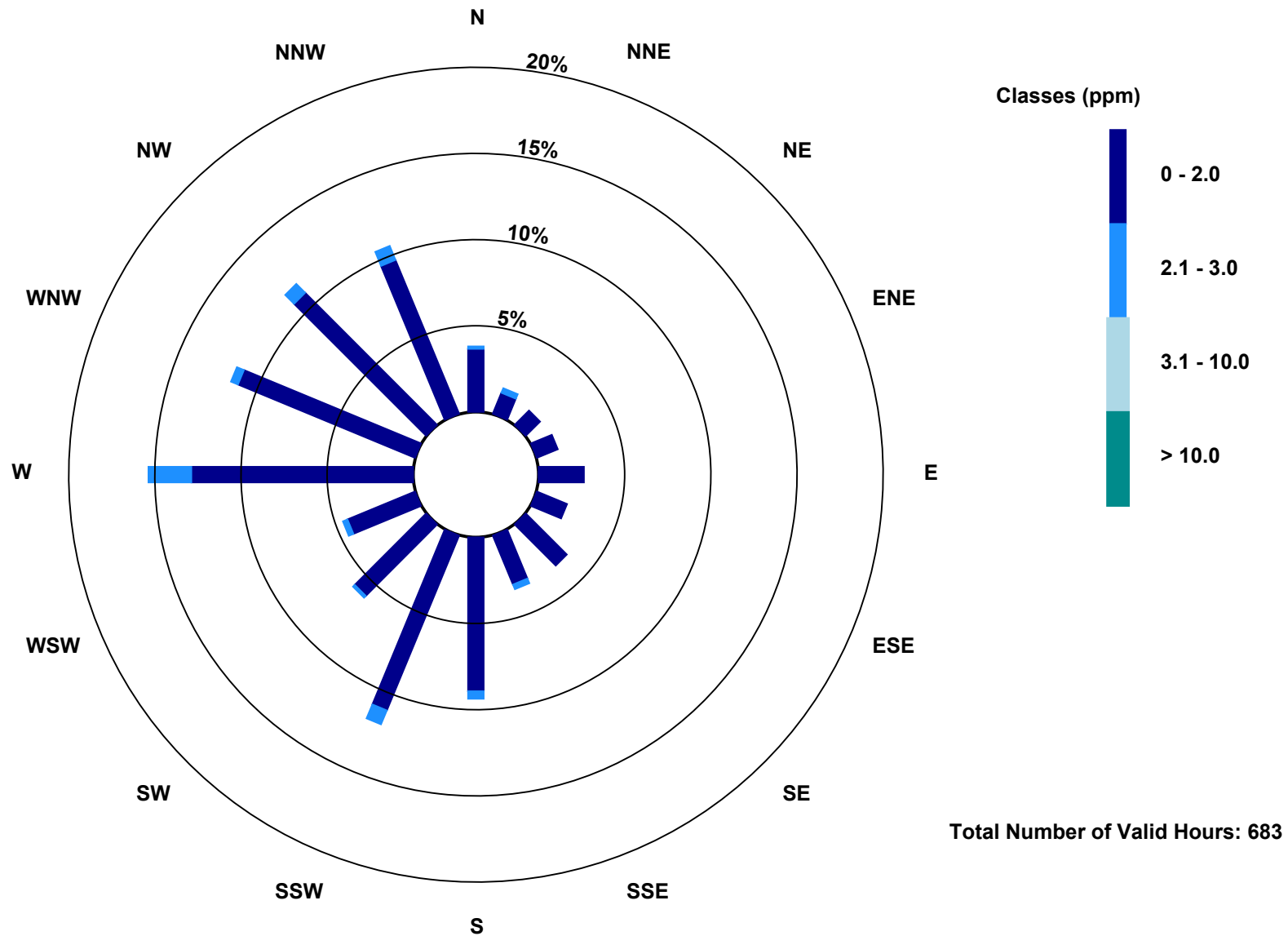
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

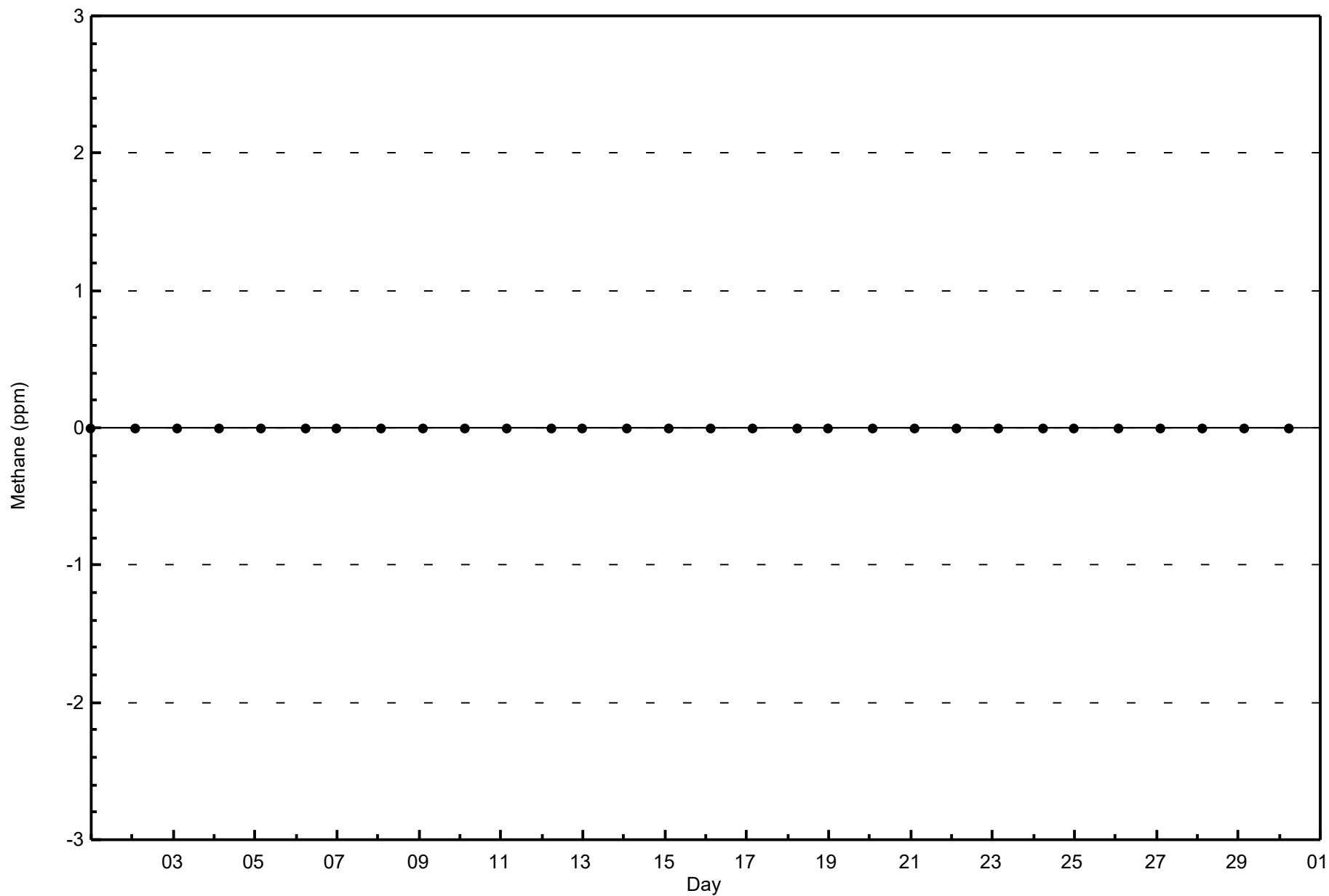
Methane (CH₄) - ppm
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

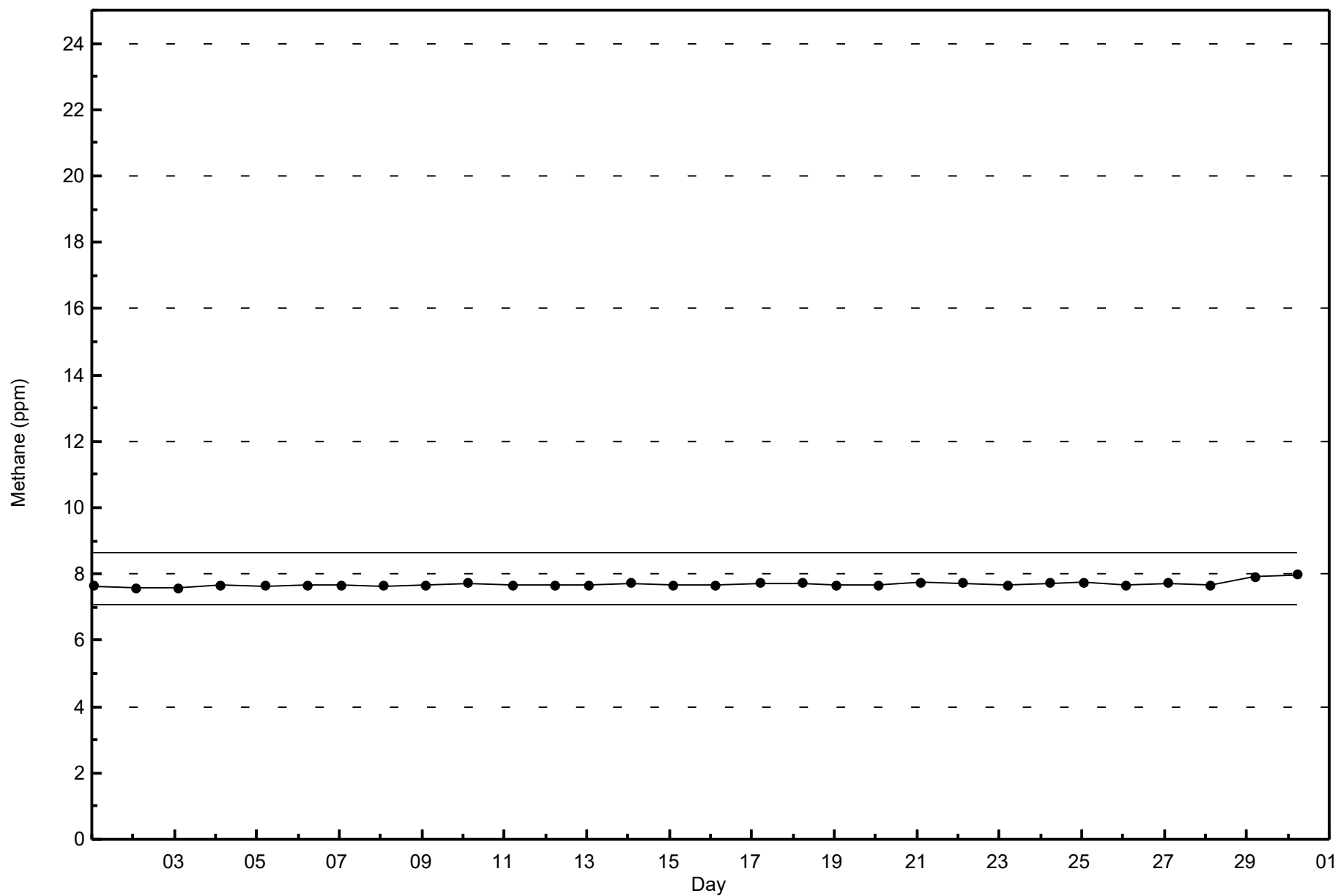
Methane (CH₄) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

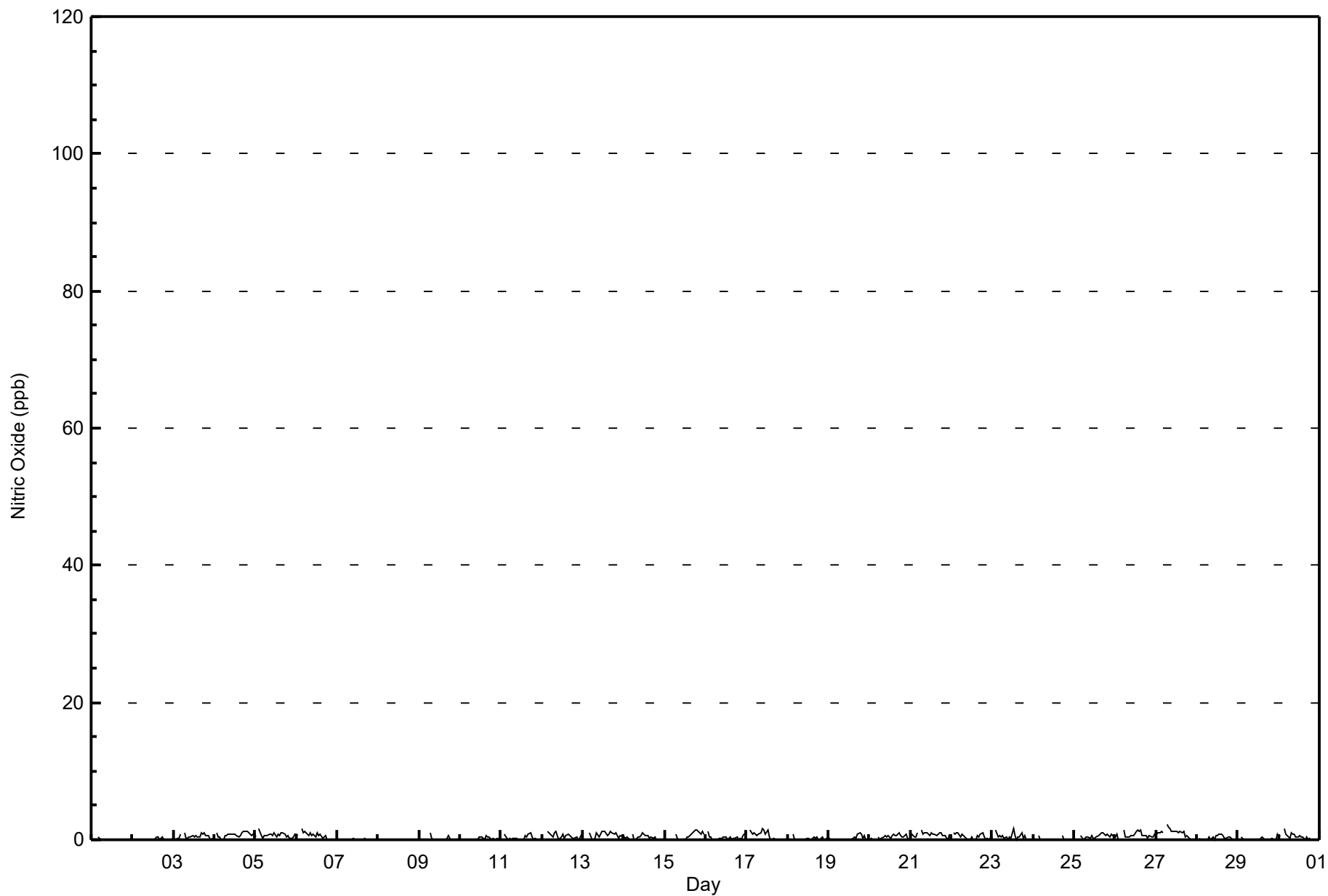
Stony Mountain - April 2025

Maximum Value: 2.1 ppb on Apr 27 07:00																	Maximum Daily Average: 0.9 ppb on Apr 27										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00																	Minimum Daily Average: 0.0 ppb on Apr 8										Hours of Data: 684	
Maximum Diurnal Average: 0.6 ppb at hour 18																	Minimum Diurnal Average: 0.2 ppb at hour 22										Hours of Missing Data: 36	
Monthly Average: 0.37 ppb																	Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 1.0 P ₉₉ = 1.6										Hours of Calibration: 36	
																											Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	0.0	0.0	0.0	Z	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	0.4		
2-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		
3-Apr	0.5	0.0	0.3	0.3	0.8	Z	1.1	0.1	0.3	0.4	0.3	0.7	0.3	0.7	0.4	0.5	1.0	0.9	1.0	0.7	0.6	0.3	0.1	0.2	0.5	1.1		
4-Apr	Z	1.1	0.4	0.4	0.0	0.0	0.6	0.6	0.8	0.8	0.9	0.8	0.7	0.7	0.5	0.6	1.1	1.2	1.1	1.2	1.1	0.7	0.7	1.0	0.7	1.2		
5-Apr	0.3	Z	1.6	0.5	0.2	0.5	0.5	0.6	0.9	0.9	0.7	1.0	0.4	0.8	0.5	1.0	1.1	0.8	0.4	0.6	0.1	0.3	0.4	0.7	0.7	1.6		
6-Apr	0.8	0.6	Z	1.6	1.1	1.3	0.7	0.5	0.9	0.6	0.7	0.5	1.0	0.7	0.8	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.6		
7-Apr	0.0	0.0	0.0	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		
8-Apr	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-Apr	0.0	0.0	0.0	0.0	0.0	Z	1.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.1	1.0		
10-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.4	0.0	0.5	0.3	0.4	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.5		
11-Apr	0.2	Z	0.9	0.3	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.4	0.8	1.0	0.4	0.0	0.3	0.0	0.0	0.0	0.2	1.0		
12-Apr	0.2	0.0	Z	1.2	1.1	0.8	0.4	0.9	1.2	0.6	0.0	0.4	0.8	0.3	0.6	0.7	0.6	0.3	0.2	0.2	0.5	0.1	0.3	0.6	0.5	1.2		
13-Apr	0.1	0.0	0.0	Z	1.0	0.0	0.0	0.2	1.0	0.5	0.9	1.2	1.3	1.3	0.7	0.8	1.2	1.0	0.9	0.9	0.7	0.2	0.7	0.5	0.7	1.3		
14-Apr	0.4	0.3	0.4	0.0	Z	0.8	0.1	0.0	0.3	0.3	0.5	1.1	0.7	0.6	0.5	0.2	0.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.3	1.1		
15-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.8	1.0	1.2	1.5	1.4	1.0	0.9	1.2	0.9	0.5	1.5		
16-Apr	Z	1.3	0.4	0.3	0.0	0.0	0.0	0.0	0.2	0.1	0.4	0.3	0.4	0.0	0.4	0.0	0.1	0.1	0.5	0.0	0.3	0.0	0.6	1.0	0.3	1.3		
17-Apr	1.0	Z	1.5	0.8	1.0	0.7	0.7	0.8	1.0	1.6	1.5	0.7	1.5	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.6		
18-Apr	0.0	0.0	Z	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.4	0.2	0.3	0.0	0.1	0.3	0.0	0.0	0.3	0.1	0.7		
19-Apr	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	0.3	0.4	0.2	0.8	1.0	0.7	0.2	0.6	0.0	0.1	0.2	1.0		
20-Apr	0.0	0.2	0.0	0.0	Z	0.5	0.0	0.2	0.4	0.6	0.4	0.6	0.3	0.5	0.7	0.7	0.6	1.0	0.7	0.4	0.4	0.8	0.3	0.1	0.4	1.0		
21-Apr	0.0	0.8	0.5	0.4	1.0	Z	1.3	0.9	1.0	1.0	1.0	0.7	1.0	0.7	0.7	0.7	0.9	1.1	0.9	0.6	0.7	0.2	0.0	0.7	0.7	1.3		
22-Apr	Z	1.1	0.8	1.0	0.9	0.5	0.7	0.6	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.4	0.8	1.0	0.4	0.0	0.1	0.0	0.3	0.4	1.1		
23-Apr	0.4	Z	1.3	0.5	0.6	0.5	0.7	0.1	0.4	0.0	0.5	0.2	1.6	0.7	0.0	0.4	0.3	1.0	0.3	0.6	0.0	0.0	0.0	0.0	0.4	1.6		
24-Apr	0.0	0.0	Z	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.6	0.0	0.0	0.0	0.0	0.0	0.0	-	0.6		
25-Apr	0.0	0.0	0.1	Z	0.7	0.0	0.1	0.4	0.4	0.2	0.5	0.2	0.2	0.4	0.6	0.7	1.1	0.9	0.7	0.8	0.7	0.4	0.9	0.4	0.5	1.1		
26-Apr	0.4	0.9	0.0	0.0	Z	1.4	0.5	0.3	0.4	0.6	0.6	0.7	1.3	1.3	1.2	1.4	0.7	0.6	0.5	0.3	0.7	0.5	0.4	0.8	0.7	1.4		
27-Apr	0.5	1.1	1.0	1.2	1.1	Z	2.1	1.8	1.6	1.1	1.2	1.2	1.1	1.0	1.1	1.1	1.2	0.3	0.7	0.4	0.0	0.0	0.0	0.0	0.9	2.1		
28-Apr	Z	0.2	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.4	0.0	0.6	0.7	0.8	0.8	0.6	0.3	0.3	0.4	0.5	0.2	0.0	0.0	0.0	0.3	0.8		
29-Apr	0.0	Z	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.9	0.1	0.9		
30-Apr	0.4	0.6	Z	1.7	0.8	0.7	0.3	1.0	0.9	0.8	0.4	0.3	0.7	0.5	0.4	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.4	1.7		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan C - Calibration																												



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	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	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	684

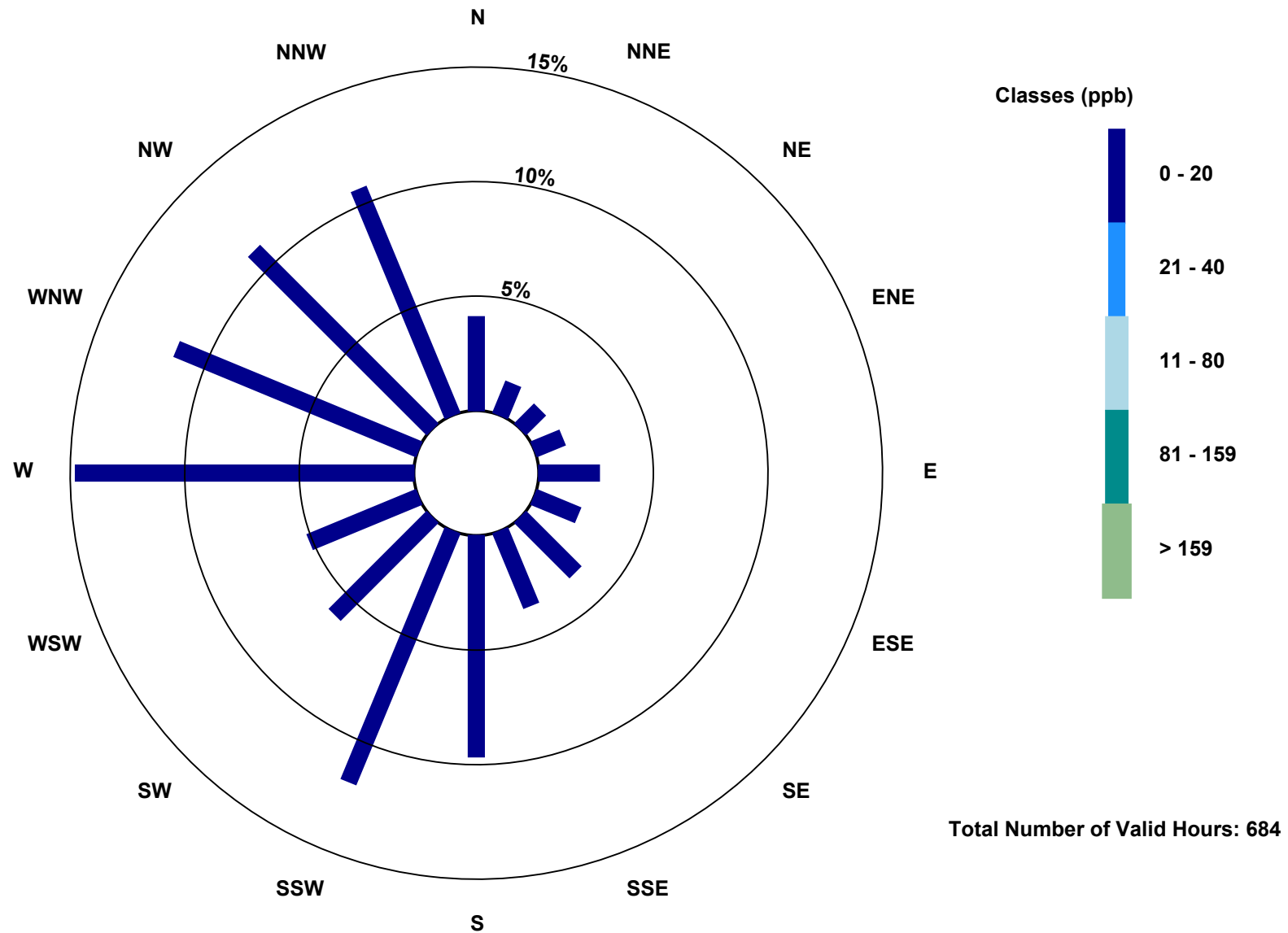
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

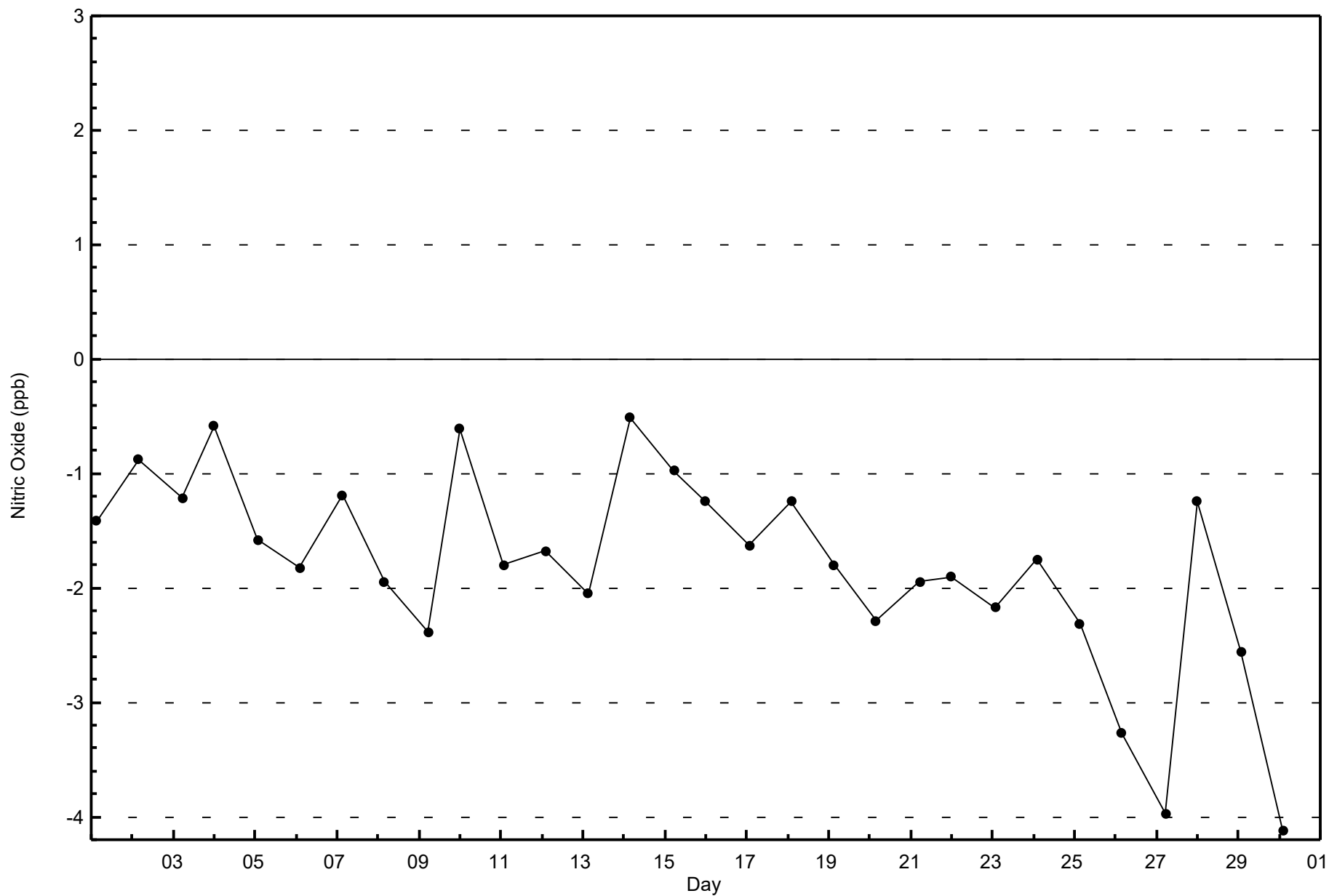
Nitric Oxide (NO) - ppb
Stony Mountain





Wood Buffalo Environmental Association
Zero Responses

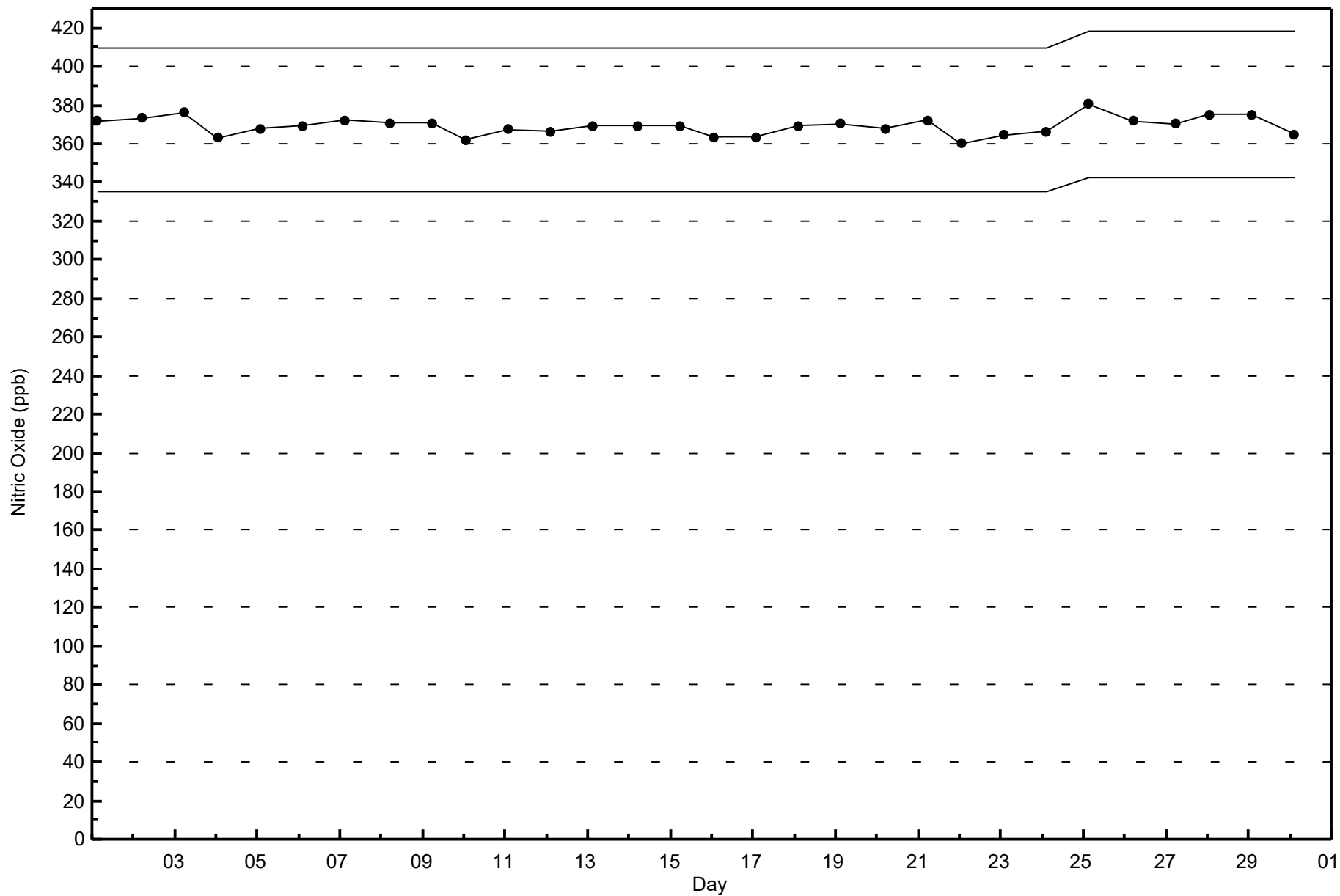
Nitric Oxide (NO) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

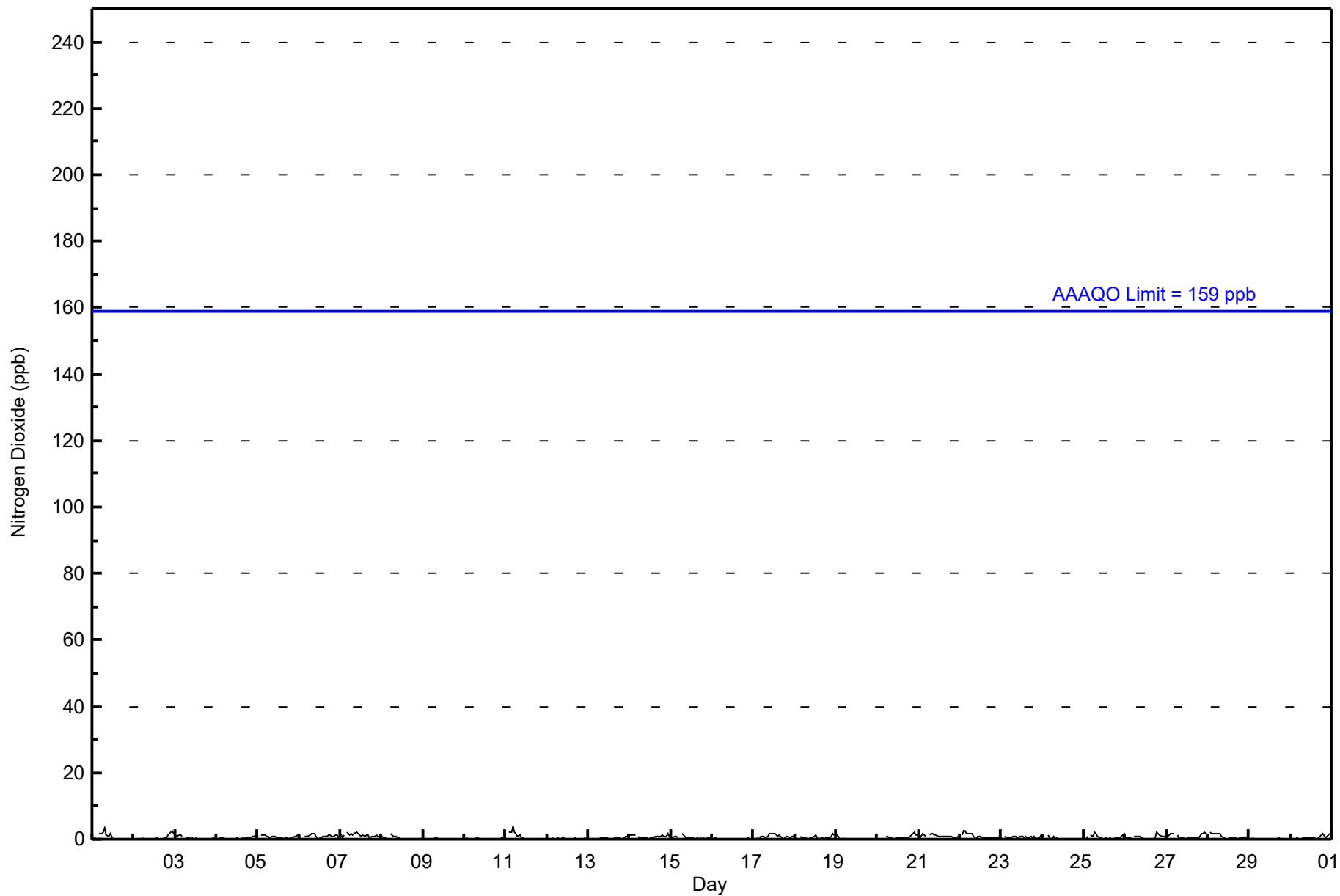
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 3.8 ppb on Apr 11 05:00																				Maximum Daily Average: 1.2 ppb on Apr 7		Hours of Data: 684				
Minimum Value: 0.0 ppb on Apr 1 13:00																				Minimum Daily Average: 0.1 ppb on Apr 29		Hours of Missing Data: 36				
Maximum Diurnal Average: 0.9 ppb at hour 5																				Minimum Diurnal Average: 0.3 ppb at hour 15		Hours of Calibration: 36				
Monthly Average: 0.54 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.4 Q ₃ = 0.8 P ₉₀ = 1.4 P ₉₉ = 2.3		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-Apr	0.2	0.6	0.2	Z	1.8	1.7	2.3	3.3	1.4	0.9	1.6	0.8	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.3
2-Apr	0.0	0.0	0.0	0.0	Z	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.2	0.2	0.3	0.3	1.3	2.3	2.7	1.6	0.5	2.7
3-Apr	1.4	1.0	1.3	1.1	0.9	Z	0.6	0.4	0.4	0.2	0.3	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.3	0.3	0.4	1.4
4-Apr	Z	0.4	0.6	0.6	0.5	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.4	0.2	0.5	0.4	0.6	0.6	0.9	0.8	1.2	0.4	1.2
5-Apr	0.8	Z	1.1	1.1	1.1	0.9	0.9	0.6	0.7	0.9	0.7	0.5	0.5	0.3	0.3	0.1	0.3	0.3	0.2	0.3	0.6	0.8	0.9	1.3	0.7	1.3
6-Apr	1.0	0.6	Z	0.8	0.9	0.7	1.1	1.8	1.8	1.6	1.0	0.2	0.5	0.4	0.7	1.0	0.9	1.1	1.4	0.9	0.7	1.4	1.1	0.6	1.0	1.8
7-Apr	1.1	0.6	1.4	Z	2.0	1.3	1.6	1.1	1.8	2.0	1.6	1.2	0.8	1.2	0.9	1.2	1.1	0.6	0.8	0.8	0.8	1.1	1.0	0.7	1.2	2.0
8-Apr	0.8	0.6	0.4	0.2	Z	1.7	1.4	0.8	0.8	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	0.3	1.7
9-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.4	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
10-Apr	Z	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.3	0.9	0.1	0.9
11-Apr	0.7	Z	2.0	2.0	3.8	2.2	1.7	0.7	1.1	0.5	0.3	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	0.7	3.8
12-Apr	0.0	0.2	Z	0.4	0.2	0.2	0.3	0.2	0.1	0.3	0.3	0.2	0.1	0.1	0.0	0.2	0.3	0.1	0.0	0.1	0.0	0.2	0.3	0.0	0.2	0.4
13-Apr	0.1	0.2	0.2	Z	0.2	0.2	0.1	0.6	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.8	1.0	0.3	1.0
14-Apr	1.2	1.1	1.1	1.2	Z	0.8	0.2	0.6	0.6	0.3	0.5	0.2	0.5	0.6	0.5	0.8	1.0	0.9	0.8	1.1	0.7	0.7	1.7	0.8	0.8	1.7
15-Apr	0.3	0.3	0.8	0.8	0.4	Z	1.5	1.3	0.7	0.1	0.4	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.4	0.1	0.4	0.3	0.3	0.5	1.5
16-Apr	Z	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.1	0.5
17-Apr	0.0	Z	0.3	0.0	0.7	0.8	0.8	0.5	0.8	1.5	1.7	1.8	1.5	1.2	1.0	1.4	1.0	0.1	0.6	0.7	1.0	0.5	0.7	1.0	0.9	1.8
18-Apr	0.6	0.1	Z	1.0	0.5	0.5	0.4	0.0	0.0	0.5	0.6	1.0	1.1	0.5	0.0	0.4	0.4	0.2	0.3	0.3	0.5	0.9	1.5	1.3	0.5	1.5
19-Apr	1.1	1.0	0.3	Z	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	1.1
20-Apr	0.0	0.0	0.0	0.0	Z	0.7	0.7	0.3	0.3	0.1	0.2	0.4	0.3	0.5	0.5	0.4	0.3	0.5	0.5	0.9	1.2	2.2	1.2	1.4	0.5	2.2
21-Apr	0.6	0.4	1.9	1.2	0.9	Z	1.3	1.9	1.7	1.1	1.4	1.0	1.0	0.9	1.0	0.7	0.7	0.7	0.9	0.9	0.4	0.5	0.5	0.8	1.0	1.9
22-Apr	Z	1.4	2.4	2.6	1.9	1.7	1.9	1.9	0.8	0.2	0.7	1.0	0.7	0.5	0.3	0.3	0.4	0.4	0.3	0.3	0.5	0.5	0.4	0.7	0.9	2.6
23-Apr	0.5	Z	0.8	0.6	0.6	0.6	0.5	1.0	0.7	0.6	0.6	0.7	0.9	0.6	0.7	0.5	0.5	0.7	0.6	0.7	0.2	0.3	0.4	1.1	0.6	1.1
24-Apr	1.0	0.8	Z	1.1	0.5	0.2	0.9	0.0	0.3	0.0	0.0	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	1.1
25-Apr	0.0	0.1	0.7	Z	1.2	1.0	2.2	1.6	0.7	0.5	0.5	0.2	0.1	0.3	0.0	0.4	0.2	0.2	0.4	0.6	0.3	0.3	1.0	1.6	0.6	2.2
26-Apr	0.5	0.4	0.3	0.4	Z	0.9	0.8	1.0	0.8	0.6	0.3	0.2	0.0	0.0	0.2	0.2	0.0	0.4	2.0	1.5	1.2	0.9	1.0	0.8	0.6	2.0
27-Apr	0.6	0.9	1.7	1.8	1.6	Z	1.1	0.1	0.3	0.4	0.3	0.2	0.3	0.4	0.5	0.6	0.3	0.5	0.3	0.4	1.7	1.7	2.2	1.8	0.9	2.2
28-Apr	Z	2.3	1.6	1.6	1.6	1.8	1.9	1.8	0.8	0.5	0.0	0.1	0.2	0.3	0.5	0.3	0.3	0.2	0.5	0.6	0.6	0.6	0.6	1.0	0.9	2.3
29-Apr	0.2	Z	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.6
30-Apr	0.3	0.2	Z	0.5	0.3	0.2	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.5	0.1	0.3	0.9	1.4	1.5	0.5	0.8	1.2	1.6	0.6	1.6
Diurnal Average																									Diurnal Maximum	
1.4 2.3 2.4 2.6 3.8 2.2 2.3 3.3 1.8 2.0 1.7 1.8 1.5 1.2 1.0 1.4 1.1 1.1 2.0 1.5 1.7 2.3 2.7 1.8																										
Z - zerospan C - Calibration																									Diurnal Maximum	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	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	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	684

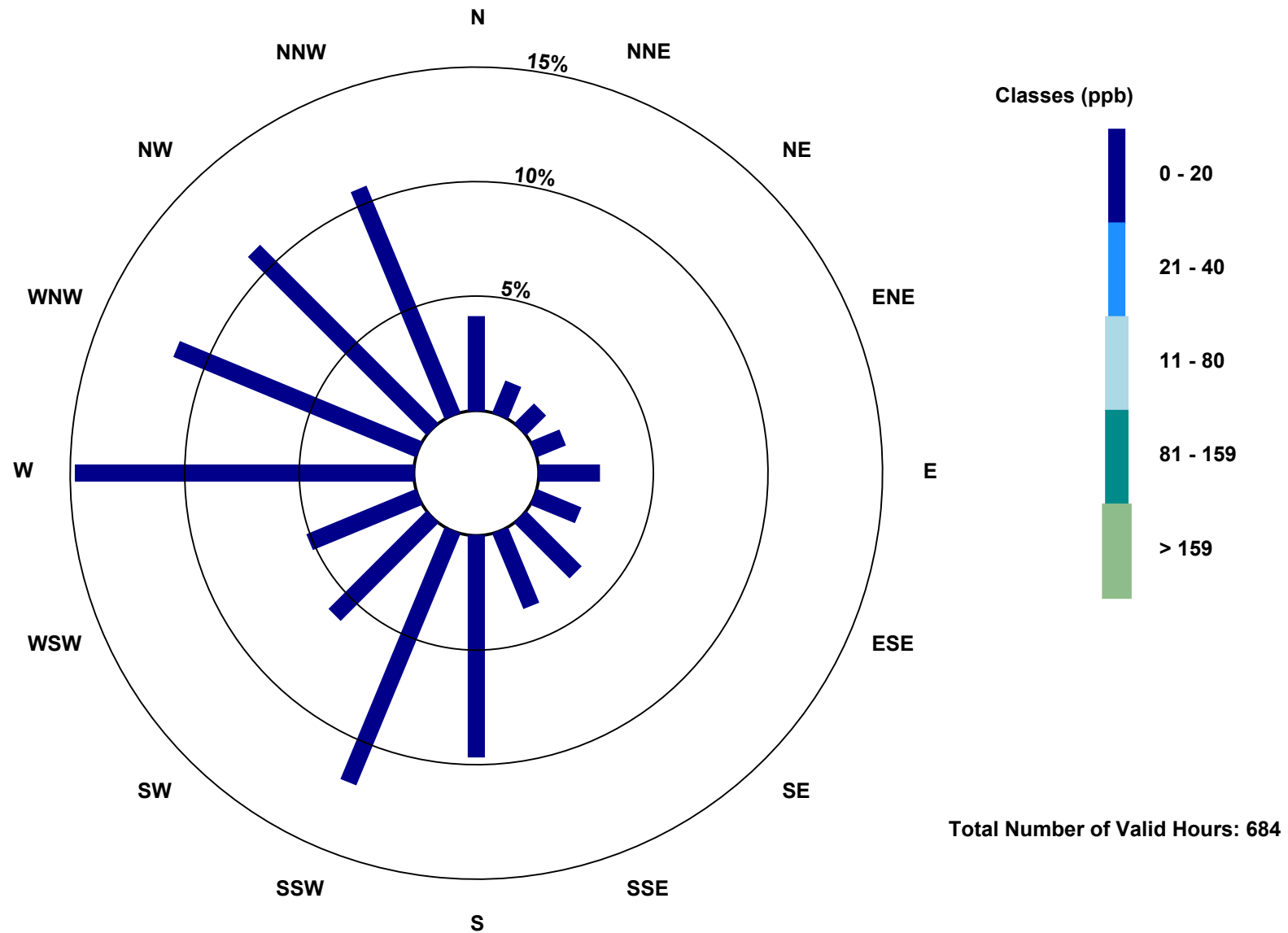
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

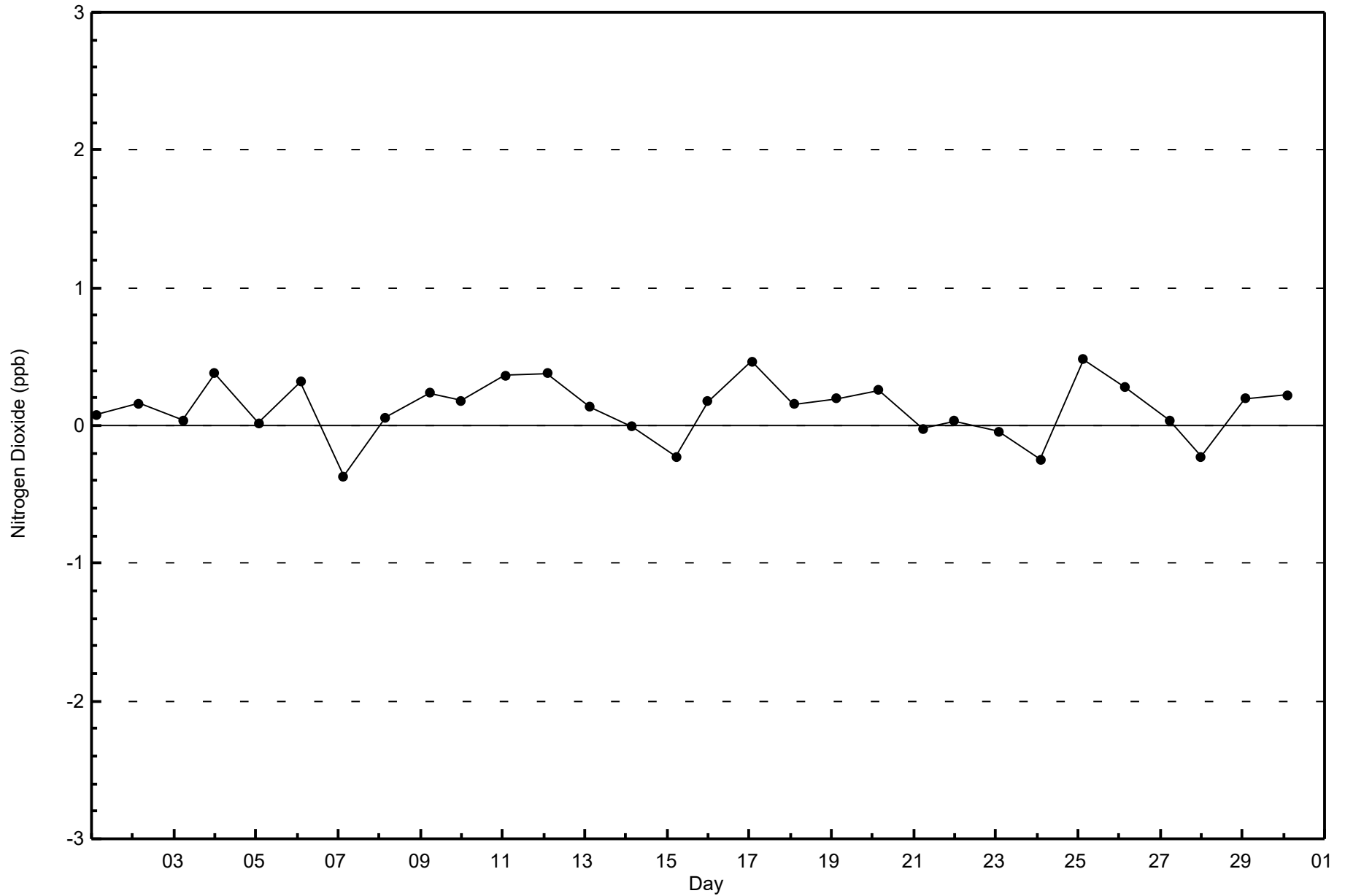
Nitrogen Dioxide (NO₂) - ppb
Stony Mountain

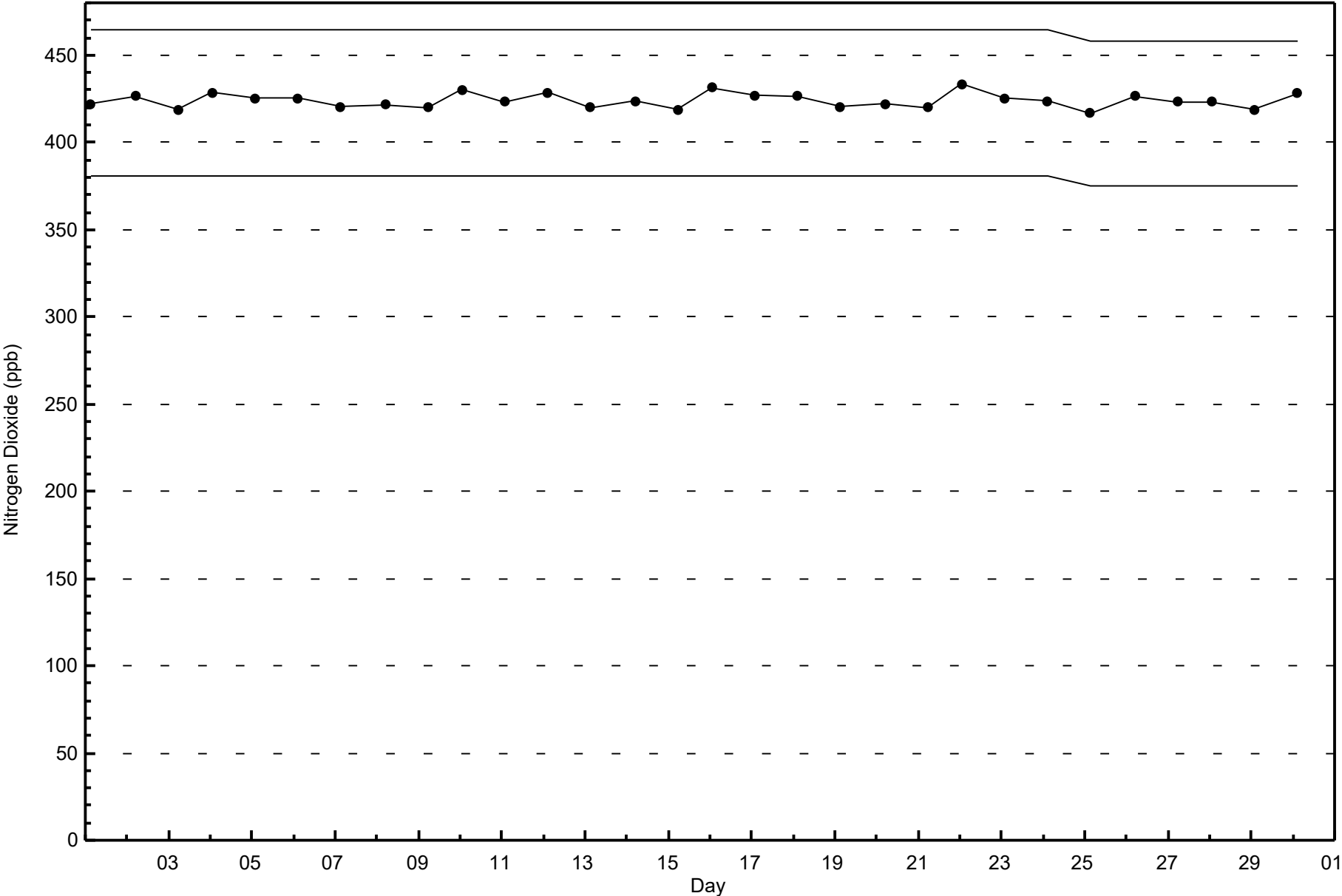




Wood Buffalo Environmental Association
Zero Responses

Nitrogen Dioxide (NO₂) - ppb
Stony Mountain - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

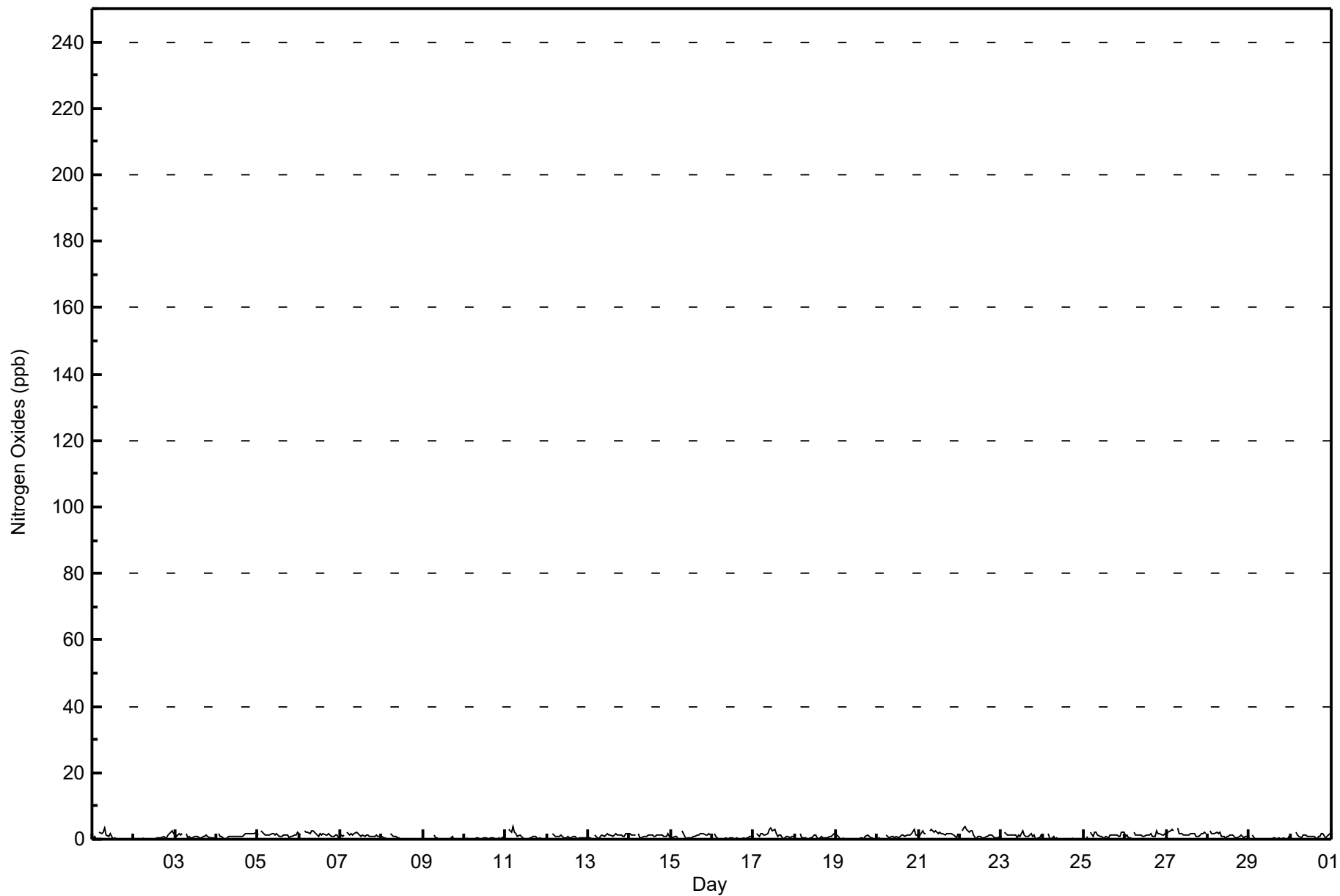
Stony Mountain - April 2025

Maximum Value: 3.8 ppb on Apr 11 05:00																		Maximum Daily Average: 1.8 ppb on Apr 27										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 13:00																		Minimum Daily Average: 0.2 ppb on Apr 29										Hours of Data: 684	
Maximum Diurnal Average: 1.3 ppb at hour 5																		Minimum Diurnal Average: 0.7 ppb at hour 15										Hours of Missing Data: 36	
Monthly Average: 0.92 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.3 Median = 0.8 Q ₃ = 1.4 P ₉₀ = 1.8 P ₉₉ = 3.0										Hours of Calibration: 36	
																		Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.2	0.6	0.2	Z	2.2	1.7	2.3	3.3	1.4	0.9	1.6	0.8	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.3			
2-Apr	0.0	0.0	0.0	0.0	Z	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.5	0.2	0.6	0.3	0.3	1.3	2.3	2.7	1.6	0.5	2.7			
3-Apr	1.9	1.0	1.6	1.4	1.7	Z	1.7	0.5	0.7	0.6	0.6	0.8	0.7	0.8	0.5	0.5	1.0	0.9	1.2	0.9	0.6	0.5	0.4	0.5	0.9	1.9			
4-Apr	Z	1.5	1.0	1.0	0.5	0.0	0.6	0.7	1.0	0.9	1.0	0.9	1.0	0.9	0.7	1.0	1.3	1.7	1.5	1.8	1.7	1.6	1.5	2.2	1.1	2.2			
5-Apr	1.1	Z	2.7	1.6	1.3	1.4	1.4	1.2	1.6	1.8	1.4	1.5	0.9	1.1	0.8	1.1	1.4	1.1	0.6	0.9	0.7	1.1	1.3	2.0	1.3	2.7			
6-Apr	1.8	1.2	Z	2.4	2.0	2.0	1.8	2.3	2.7	2.2	1.7	0.7	1.5	1.1	1.5	1.1	1.4	1.6	1.4	0.9	0.7	1.4	1.1	0.6	1.5	2.7			
7-Apr	1.1	0.6	1.4	Z	2.0	1.3	1.6	1.1	1.8	2.2	1.6	1.2	0.8	1.2	0.9	1.2	1.2	0.6	0.8	0.8	0.8	1.1	1.0	0.7	1.2	2.2			
8-Apr	0.8	0.6	0.4	0.2	Z	1.7	1.4	0.8	0.8	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	0.3	1.7			
9-Apr	0.0	0.0	0.0	0.0	0.0	Z	1.4	0.5	0.3	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.4			
10-Apr	Z	0.5	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.5	0.5	0.4	0.0	0.5	0.4	0.4	0.0	0.1	0.2	0.2	0.5	0.9	0.3	0.9			
11-Apr	0.9	Z	2.9	2.3	3.8	2.3	1.7	0.9	1.2	0.6	0.3	0.0	0.0	0.0	0.6	0.4	0.8	1.0	0.4	0.0	0.4	0.0	0.0	0.0	0.9	3.8			
12-Apr	0.2	0.2	Z	1.6	1.3	1.0	0.7	1.1	1.3	0.9	0.3	0.6	0.9	0.4	0.6	0.9	0.9	0.4	0.2	0.3	0.5	0.3	0.6	0.6	0.7	1.6			
13-Apr	0.2	0.2	0.2	Z	1.2	0.2	0.1	0.8	1.4	0.8	1.2	1.6	1.5	1.5	0.9	1.1	1.5	1.3	1.2	1.1	0.9	0.7	1.5	1.5	1.0	1.6			
14-Apr	1.6	1.4	1.5	1.2	Z	1.6	0.3	0.6	0.9	0.6	1.0	1.3	1.2	1.2	1.0	1.0	1.4	1.1	1.2	1.1	0.7	0.7	1.7	0.8	1.1	1.7			
15-Apr	0.3	0.3	0.8	0.8	0.4	Z	2.3	1.5	0.7	0.1	0.4	0.3	0.4	0.8	0.7	1.1	1.2	1.5	1.7	1.8	1.1	1.3	1.5	1.2	1.0	2.3			
16-Apr	Z	1.7	0.7	0.4	0.0	0.0	0.0	0.0	0.2	0.1	0.5	0.5	0.6	0.1	0.4	0.0	0.1	0.1	0.5	0.0	0.3	0.5	0.7	1.0	0.4	1.7			
17-Apr	1.0	Z	1.8	0.8	1.7	1.5	1.5	1.3	1.8	3.1	3.2	2.5	3.0	1.7	1.0	1.4	1.3	0.1	0.6	0.7	1.0	0.5	0.7	1.0	1.4	3.2			
18-Apr	0.6	0.1	Z	1.7	0.5	0.5	0.4	0.0	0.0	0.5	0.6	1.2	1.2	0.6	0.0	0.8	0.6	0.5	0.3	0.4	0.8	0.9	1.5	1.6	0.7	1.7			
19-Apr	1.2	1.0	0.3	Z	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.9	1.1	0.8	0.3	0.6	0.1	0.2	0.4	1.2			
20-Apr	0.0	0.2	0.0	0.0	Z	1.2	0.7	0.5	0.7	0.7	0.6	1.0	0.6	1.0	1.2	1.1	0.9	1.5	1.2	1.3	1.6	3.0	1.5	1.5	1.0	3.0			
21-Apr	0.6	1.2	2.4	1.6	1.9	Z	2.6	2.8	2.7	2.1	2.4	1.7	2.0	1.6	1.7	1.4	1.6	1.8	1.8	1.5	1.1	0.7	0.5	1.5	1.7	2.8			
22-Apr	Z	2.5	3.2	3.6	2.8	2.2	2.6	2.5	1.3	0.2	0.7	1.0	1.0	0.5	0.3	0.9	0.8	1.2	1.3	0.7	0.5	0.6	0.4	1.0	1.4	3.6			
23-Apr	0.9	Z	2.1	1.1	1.2	1.1	1.2	1.1	1.1	0.6	1.1	0.9	2.5	1.3	0.7	0.9	0.8	1.7	0.9	1.3	0.2	0.3	0.4	1.1	1.1	2.5			
24-Apr	1.0	0.8	Z	1.7	0.5	0.2	0.9	0.0	0.3	0.0	0.0	C	C	C	C	C	C	0.6	0.0	0.0	0.0	0.0	0.0	0.0	-	1.7			
25-Apr	0.0	0.1	0.8	Z	1.9	1.0	2.3	2.0	1.1	0.7	1.0	0.4	0.3	0.7	0.6	1.1	1.3	1.1	1.1	1.4	1.0	0.7	1.9	2.0	1.1	2.3			
26-Apr	0.9	1.3	0.3	0.4	Z	2.3	1.3	1.3	1.2	1.2	0.9	0.9	1.3	1.3	1.4	1.6	0.7	1.0	2.5	1.8	1.9	1.4	1.4	1.6	1.3	2.5			
27-Apr	1.1	2.0	2.7	3.0	2.7	Z	3.2	1.9	1.9	1.5	1.5	1.4	1.4	1.4	1.6	1.7	1.5	0.8	1.0	0.8	1.7	1.7	2.2	1.8	1.8	3.2			
28-Apr	Z	2.5	1.6	1.6	1.6	1.9	1.9	2.1	0.8	0.9	0.0	0.7	0.9	1.1	1.3	0.9	0.6	0.5	0.9	1.1	0.8	0.6	0.6	1.0	1.1	2.5			
29-Apr	0.2	Z	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.0	0.3	0.0	0.1	0.3	0.0	0.0	0.9	0.2	1.1			
30-Apr	0.7	0.8	Z	2.2	1.1	0.9	0.5	1.3	1.4	1.3	0.8	0.7	1.0	0.8	0.9	0.1	0.7	0.9	1.6	1.5	0.5	0.8	1.2	1.7	1.0	2.2			
Diurnal Average																													
Diurnal Maximum																													
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	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	28	10	8	9	18	14	23	24	66	81	41	35	101	78	75	73	684

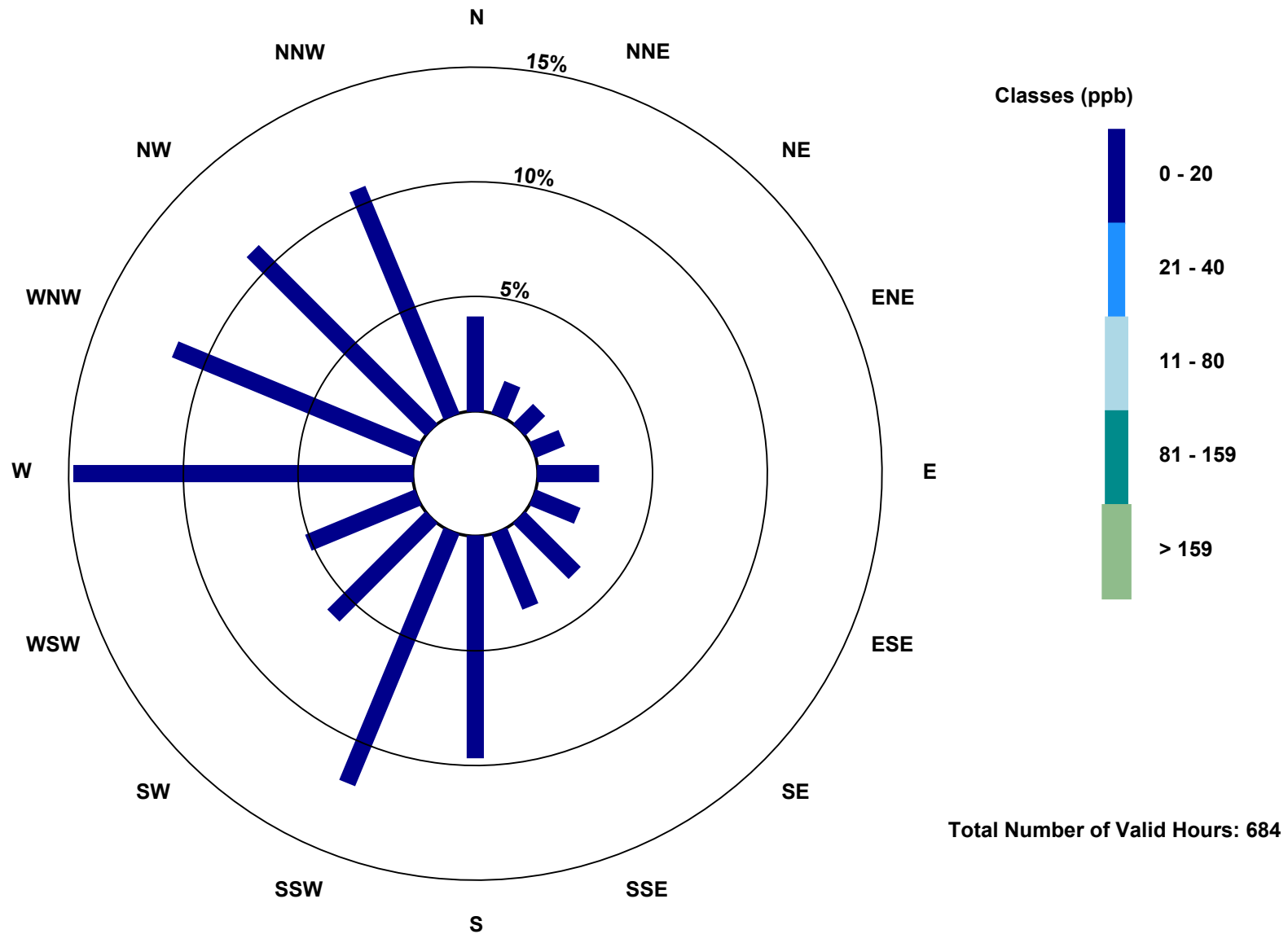
Total Number of Valid Hours: 684

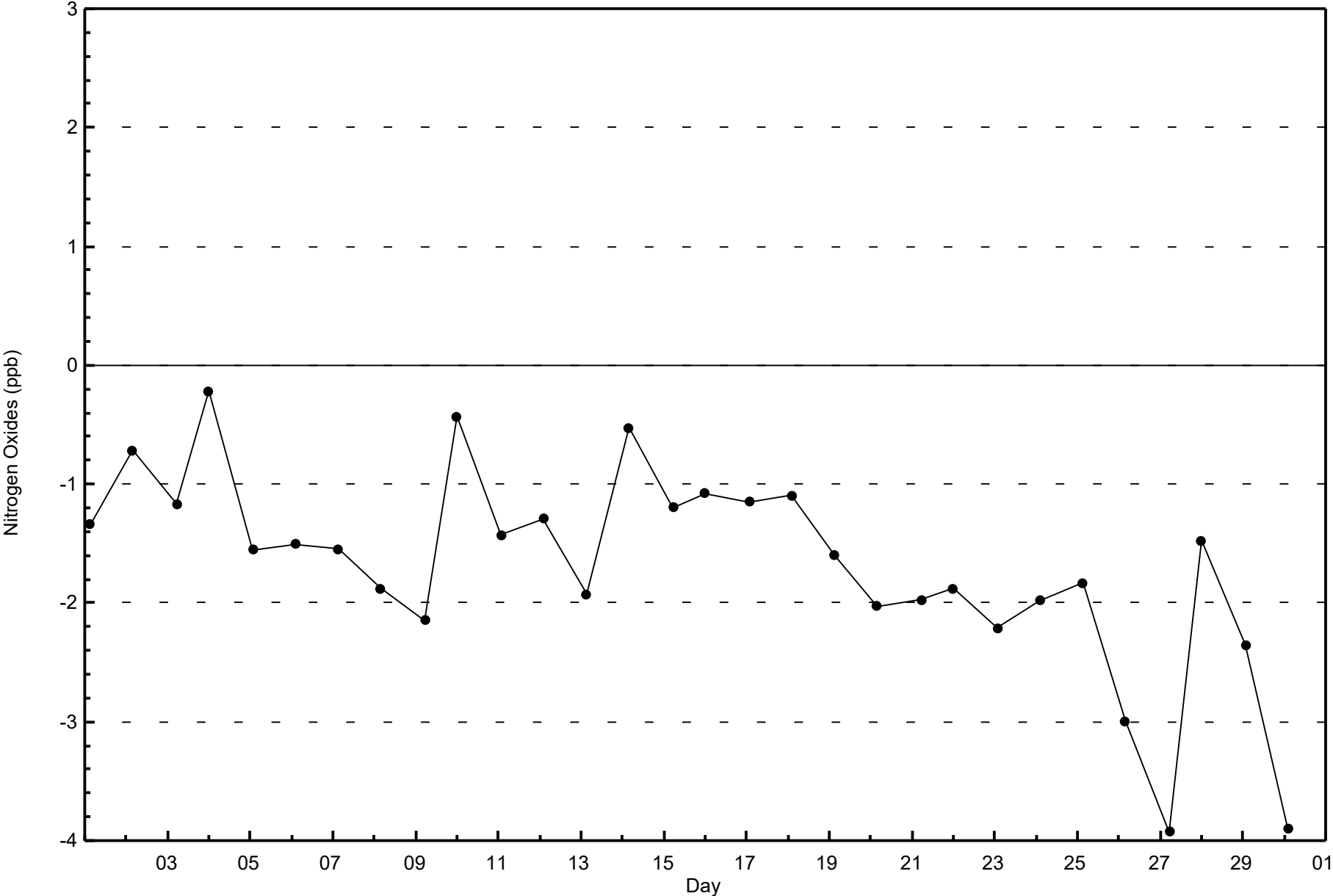
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Stony Mountain

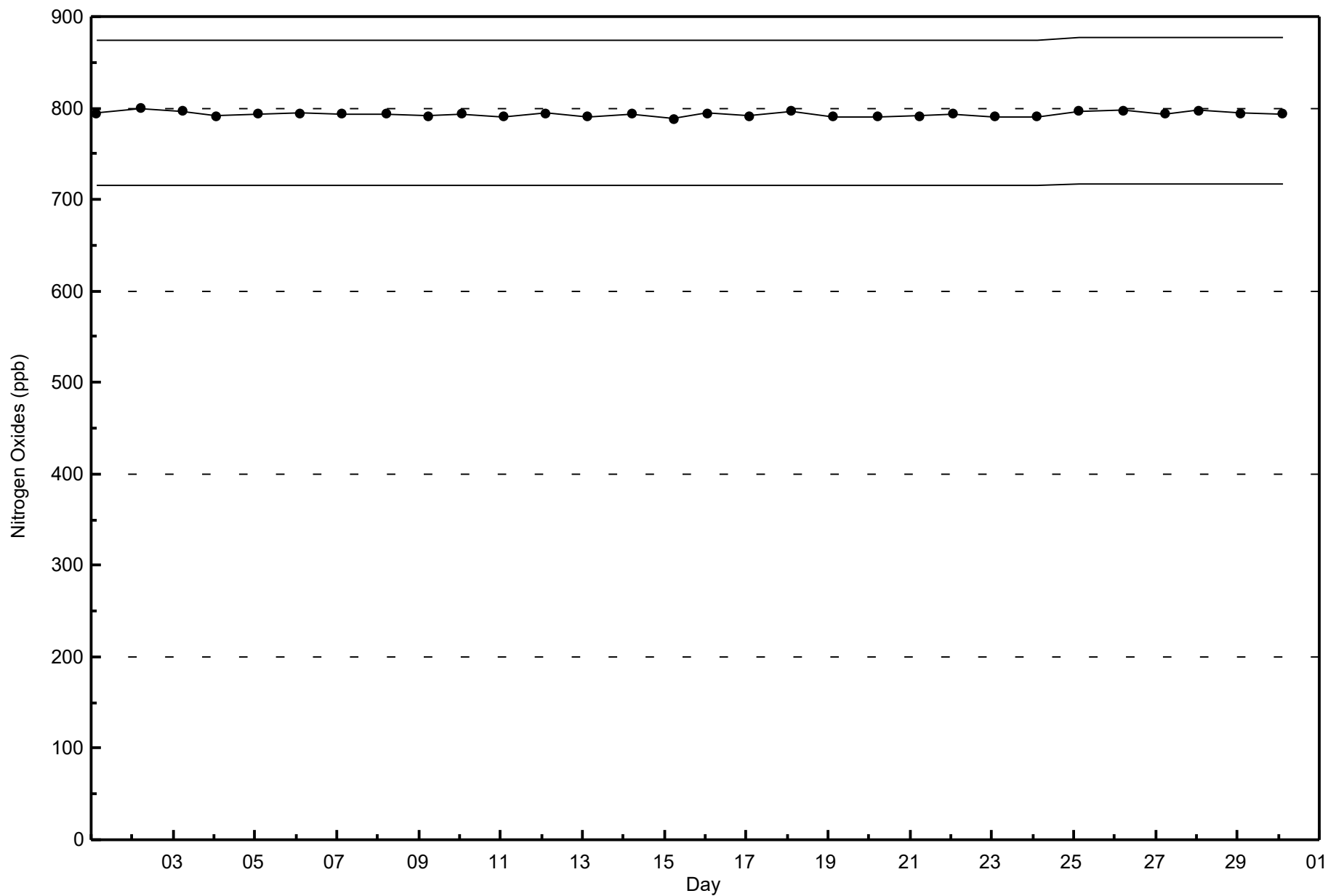






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

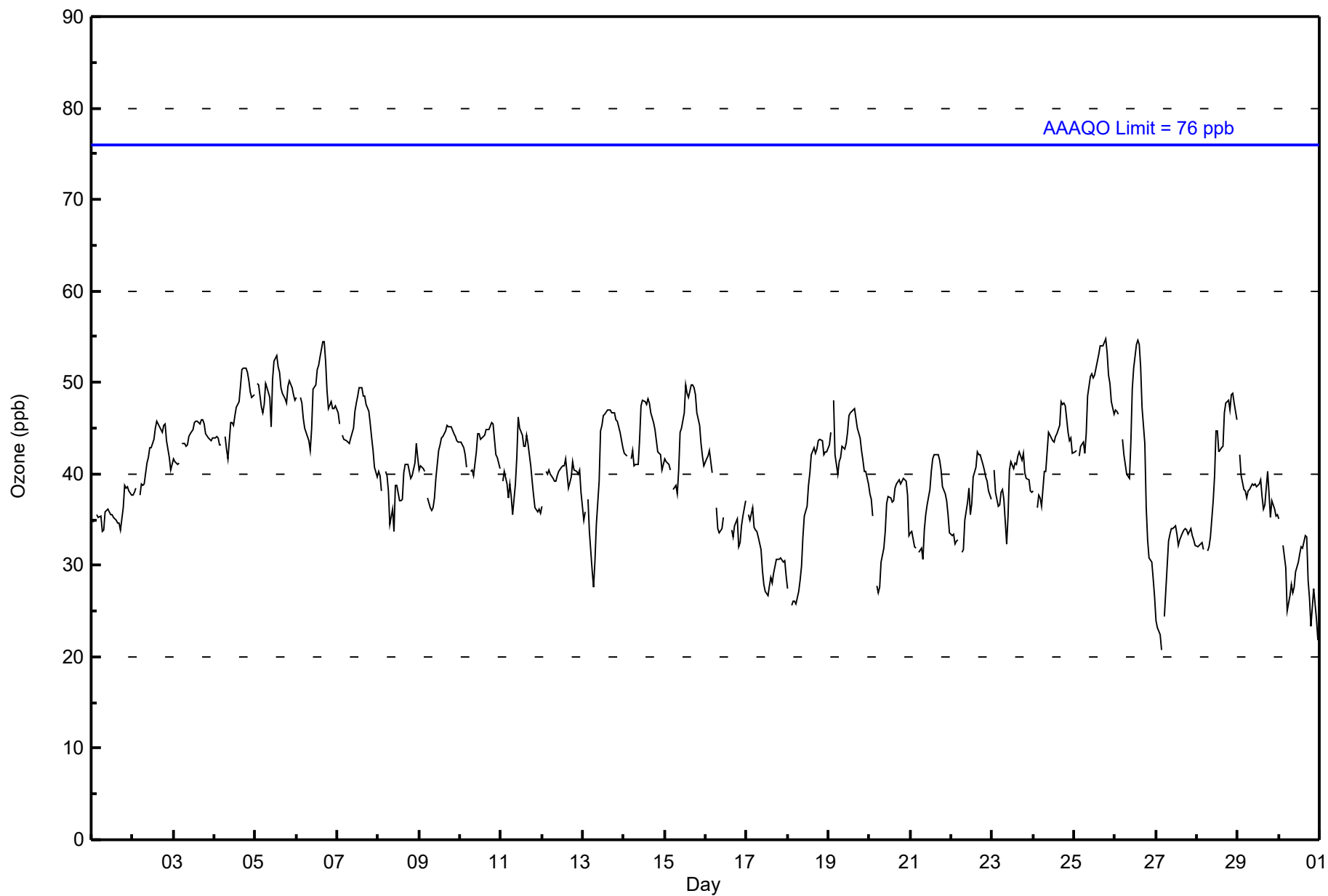
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 54.7 ppb on Apr 25 19:00 Maximum Daily Average: 49.2 ppb on Apr 5																								Hours in Service: 720			
Minimum Value: 20.7 ppb on Apr 27 04:00 Minimum Daily Average: 28.7 ppb on Apr 30 Maximum Diurnal Average: 43.4 ppb at hour 17 Minimum Diurnal Average: 37.0 ppb at hour 6																								Hours of Data: 686			
Monthly Average: 40.42 ppb Percentiles: P ₁ = 24.4 P ₁₀ = 32.0 Q ₁ = 36.2 Median = 41.0 Q ₃ = 44.8 P ₉₀ = 48.3 P ₉₉ = 54.0																								Hours of Missing Data: 34			
																								Hours of Calibration: 34			
																								Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	34.8	34.7	Z	35.5	35.2	35.4	33.8	33.9	35.8	36.1	35.8	35.5	35.5	35.2	35.0	34.6	34.6	33.9	36.2	38.8	38.5	38.5	38.1	37.7	35.8	38.8	
2-Apr	37.7	38.0	38.4	Z	37.7	39.0	38.7	38.9	41.2	41.9	42.9	42.9	43.8	45.0	45.8	45.5	45.2	44.5	45.3	45.5	43.7	41.7	40.4	41.0	41.9	45.8	
3-Apr	41.7	41.3	41.0	41.1	Z	43.3	43.4	43.0	43.2	44.0	44.4	44.8	45.6	45.7	45.8	45.5	45.9	45.9	45.5	44.4	43.9	43.8	43.7	43.9	43.9	45.9	
4-Apr	44.0	44.1	44.0	43.1	43.1	Z	44.2	42.7	41.7	45.6	45.7	45.3	46.4	47.3	48.0	49.5	51.5	51.6	51.5	51.1	50.2	49.0	48.3	48.6	46.8	51.6	
5-Apr	Z	49.8	49.8	47.2	46.7	47.6	49.9	49.5	48.4	45.1	50.3	52.3	52.9	51.7	51.1	49.5	48.8	48.2	47.8	49.6	50.2	49.3	48.7	48.1	49.2	52.9	
6-Apr	48.3	Z	48.3	47.8	46.1	45.0	44.0	43.6	42.5	45.0	49.3	49.8	51.4	51.8	52.8	54.5	54.4	52.3	49.2	47.1	47.8	47.1	47.2	47.5	48.4	54.5	
7-Apr	46.6	45.4	Z	44.3	43.8	43.6	43.5	43.3	43.9	45.1	46.8	47.8	48.5	49.4	49.4	48.5	48.5	47.6	46.8	45.4	43.9	42.6	40.8	39.6	45.4	49.4	
8-Apr	40.2	39.9	38.2	Z	40.3	39.8	38.1	34.5	36.1	33.6	38.7	38.8	37.1	37.1	37.2	40.2	41.0	41.0	40.3	39.5	39.8	41.2	43.3	41.7	39.0	43.3	
9-Apr	40.4	40.8	40.5	40.3	Z	37.4	36.4	36.0	36.3	37.4	39.5	42.6	43.1	44.0	44.1	44.7	45.2	45.2	45.2	45.1	44.3	44.1	43.6	43.5	41.7	45.2	
10-Apr	43.4	43.1	42.8	42.1	40.8	Z	40.3	40.4	39.8	42.4	44.4	44.3	43.7	44.0	44.2	44.9	44.8	44.9	45.6	45.5	43.8	42.2	41.7	40.6	43.0	45.6	
11-Apr	Z	39.2	40.2	38.9	37.3	39.0	37.5	35.5	39.0	41.7	46.2	45.1	44.2	43.1	43.0	44.2	43.3	40.9	39.2	37.7	36.3	35.9	36.2	35.7	40.0	46.2	
12-Apr	36.5	Z	40.3	40.0	40.4	40.0	39.5	39.3	39.2	39.8	40.3	40.7	40.9	40.8	41.6	38.4	39.0	39.6	41.4	40.4	40.3	39.9	40.4	37.9	39.9	41.6	
13-Apr	34.9	35.9	Z	37.2	33.7	29.5	27.6	30.6	34.5	39.2	44.6	45.4	46.4	46.5	46.9	47.0	47.0	46.7	46.7	45.9	45.7	45.2	44.5	42.9	41.1	47.0	
14-Apr	42.2	42.0	41.9	Z	41.6	42.5	40.9	41.1	41.1	43.8	47.4	48.1	47.8	47.5	48.1	47.7	46.6	45.5	44.8	43.6	42.5	42.2	40.4	41.1	43.9	48.1	
15-Apr	41.6	41.4	41.0	40.4	Z	38.3	38.7	37.9	40.4	44.5	45.0	46.7	49.8	48.9	48.4	49.8	49.7	49.4	48.7	46.7	45.2	43.4	42.0	40.9	44.3	49.8	
16-Apr	41.6	41.9	42.5	41.3	40.1	Z	36.2	34.1	33.5	34.1	35.3	C	C	C	C	33.8	33.1	34.4	35.1	32.1	32.4	34.4	35.4	37.1	36.2	42.5	
17-Apr	Z	35.5	34.9	36.4	34.1	33.8	33.7	33.1	31.8	29.5	27.9	27.2	26.7	27.8	28.6	28.1	29.2	30.7	30.7	30.7	30.8	30.4	30.5	28.8	30.9	36.4	
18-Apr	27.4	Z	25.7	26.0	26.0	25.7	27.2	28.3	29.8	33.1	35.4	36.4	38.8	40.1	42.0	42.8	42.3	42.7	43.7	43.8	43.6	42.1	42.4	42.5	36.0	43.8	
19-Apr	43.2	44.5	Z	48.0	42.2	40.0	41.4	41.7	43.1	42.7	43.3	44.6	46.4	46.6	47.0	47.2	46.0	45.1	44.0	42.6	41.5	40.2	40.2	38.9	43.5	48.0	
20-Apr	37.8	37.2	35.4	Z	27.8	27.1	27.6	30.3	31.9	33.7	36.8	37.5	37.3	37.0	37.1	38.5	39.0	39.4	39.0	39.2	39.5	39.1	37.7	33.3	35.6	39.5	
21-Apr	33.6	33.7	32.1	31.9	Z	31.4	31.9	30.7	33.9	35.5	36.7	38.2	40.3	41.6	42.1	42.1	42.0	41.5	40.4	38.5	37.8	37.1	35.6	33.6	36.6	42.1	
22-Apr	33.3	33.4	32.3	32.6	32.7	Z	31.5	31.7	35.0	36.9	38.5	35.6	36.8	39.7	40.8	42.4	42.0	42.1	41.0	40.4	39.7	39.2	38.2	37.3	37.1	42.4	
23-Apr	Z	40.4	38.0	36.5	36.6	38.0	38.3	37.2	32.3	35.4	40.4	41.3	40.5	41.2	41.0	41.9	42.4	41.5	42.2	40.1	39.5	39.3	38.2	38.0	39.1	42.4	
24-Apr	38.1	Z	36.3	37.7	37.4	36.4	40.2	40.2	42.4	44.5	44.3	43.7	43.5	44.1	44.3	45.3	47.9	47.6	47.7	47.4	44.6	43.7	44.0	42.2	42.8	47.9	
25-Apr	42.4	42.5	Z	42.0	43.0	43.4	42.2	44.4	48.6	50.7	50.9	50.5	50.8	51.6	53.0	54.0	54.0	54.0	54.7	53.3	50.8	49.9	47.8	46.5	48.7	54.7	
26-Apr	47.0	46.8	46.6	Z	43.8	42.2	41.0	39.9	39.4	43.5	49.3	51.5	54.1	54.6	54.1	51.8	47.2	43.3	36.3	32.7	30.8	30.4	28.6	26.5	42.7	54.6	
27-Apr	23.9	23.2	22.4	20.7	Z	24.4	29.8	32.6	33.4	34.0	34.0	34.3	33.4	32.2	32.8	33.5	33.8	34.1	33.8	33.4	34.0	33.3	32.8	32.2	31.0	34.3	
28-Apr	32.0	32.3	32.4	32.5	31.8	Z	31.6	32.0	33.2	37.0	39.8	44.7	44.7	42.4	42.8	43.0	46.7	47.7	48.0	47.0	48.7	48.8	47.8	46.0	40.5	48.8	
29-Apr	Z	42.1	39.8	38.2	38.1	37.4	38.1	38.3	38.8	38.8	38.8	38.6	38.9	39.4	37.5	36.2	36.5	40.3	37.8	35.3	37.1	36.2	35.4	35.5	38.0	42.1	
30-Apr	35.2	Z	32.1	31.0	29.8	25.0	26.7	28.0	27.0	27.5	29.3	30.3	31.2	32.0	31.8	33.3	33.1	28.3	26.4	23.3	27.4	25.7	24.1	21.8	28.7	35.2	
																										Diurnal Average	
																										Diurnal Maximum	
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
21 - 50	656	95.63	95.63
51 - 82	30	4.37	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 (O₃) - ppb
Stony Mountain - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 50	27	11	7	9	19	12	22	20	59	79	37	34	102	76	70	72	656
51 - 82	1	0	1	0	0	0	2	4	8	4	0	0	2	4	3	1	30
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	11	8	9	19	12	24	24	67	83	37	34	104	80	73	73	686

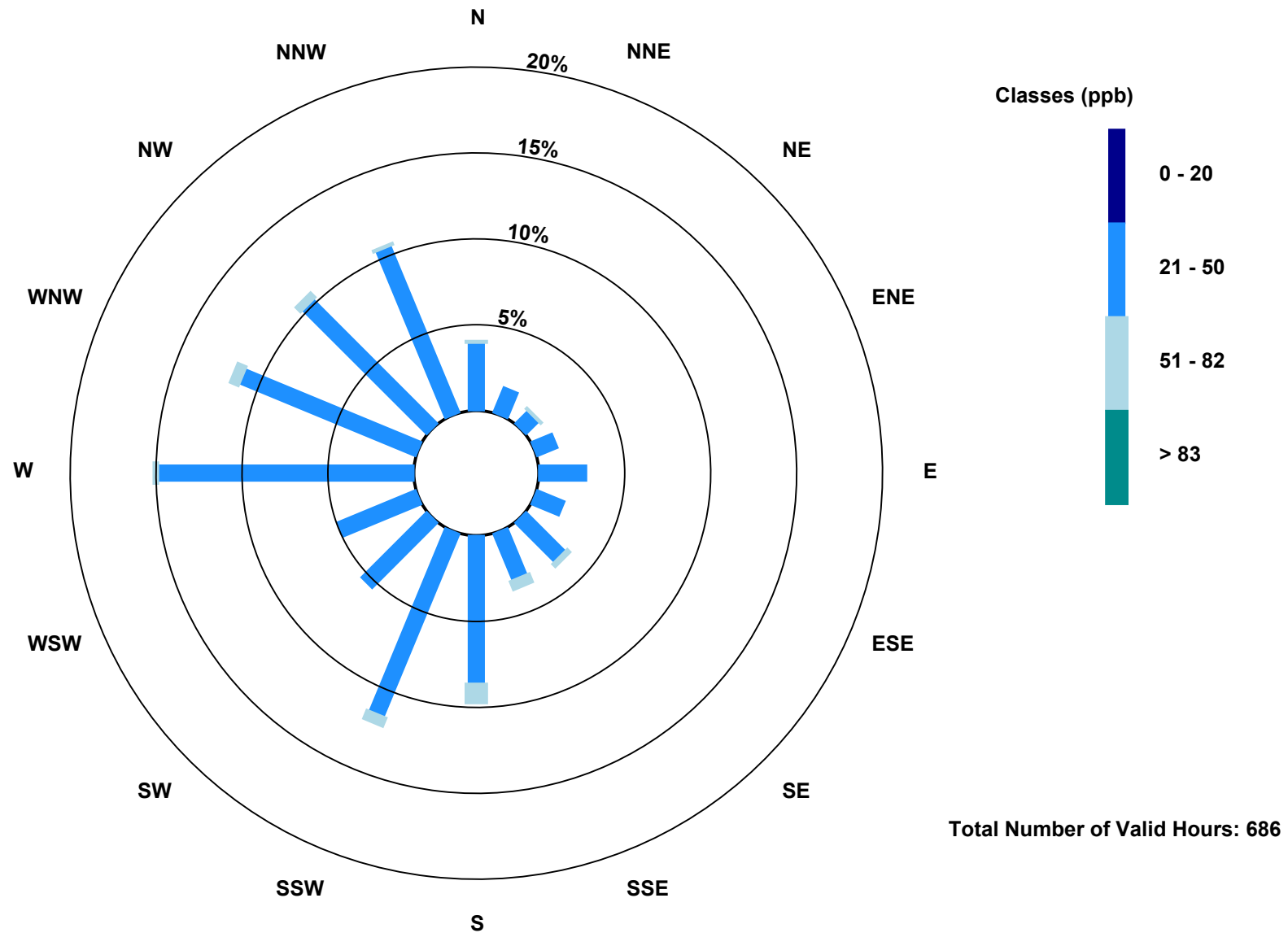
Total Number of Valid Hours: 686

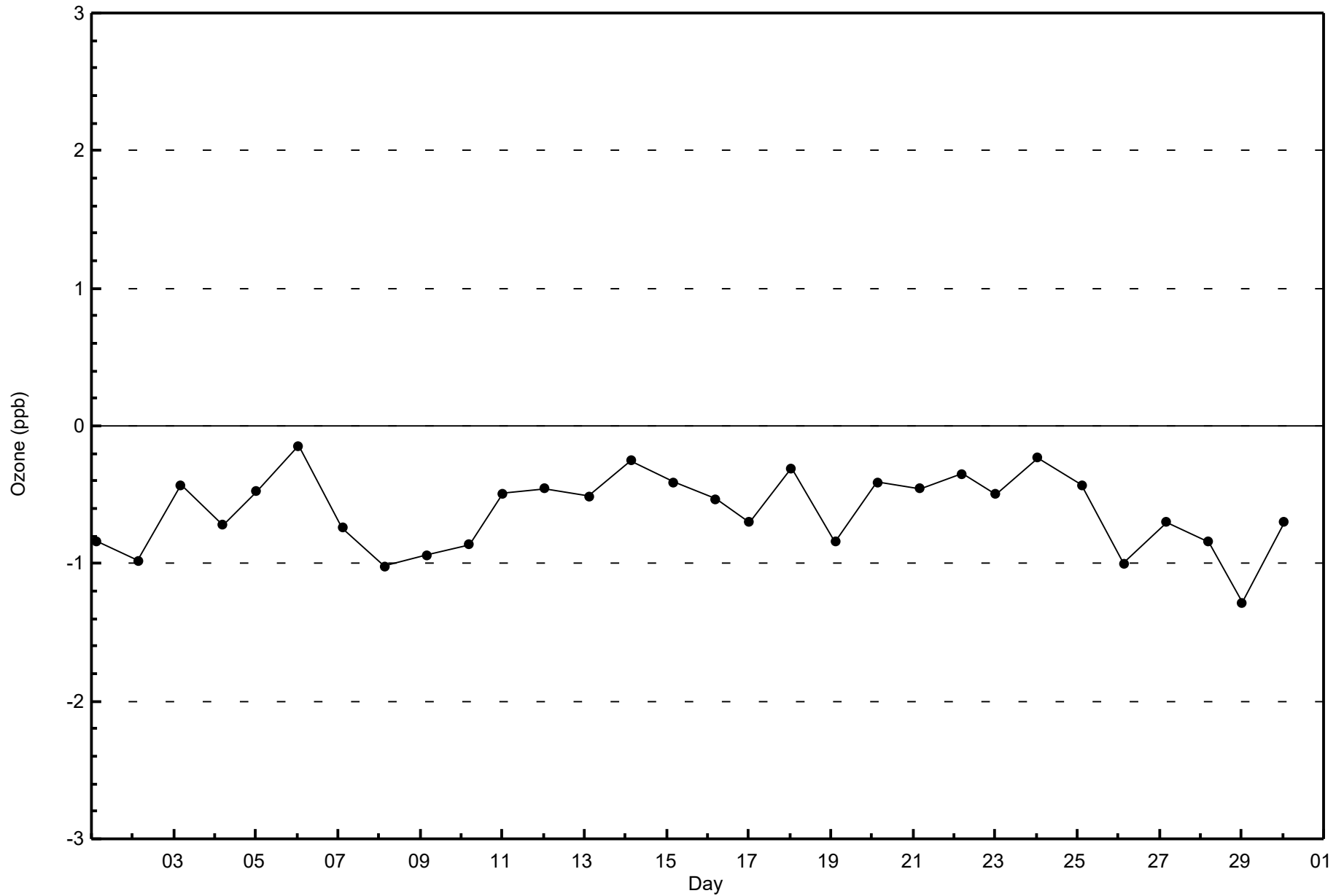
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Ozone (O₃) - ppb
Stony Mountain

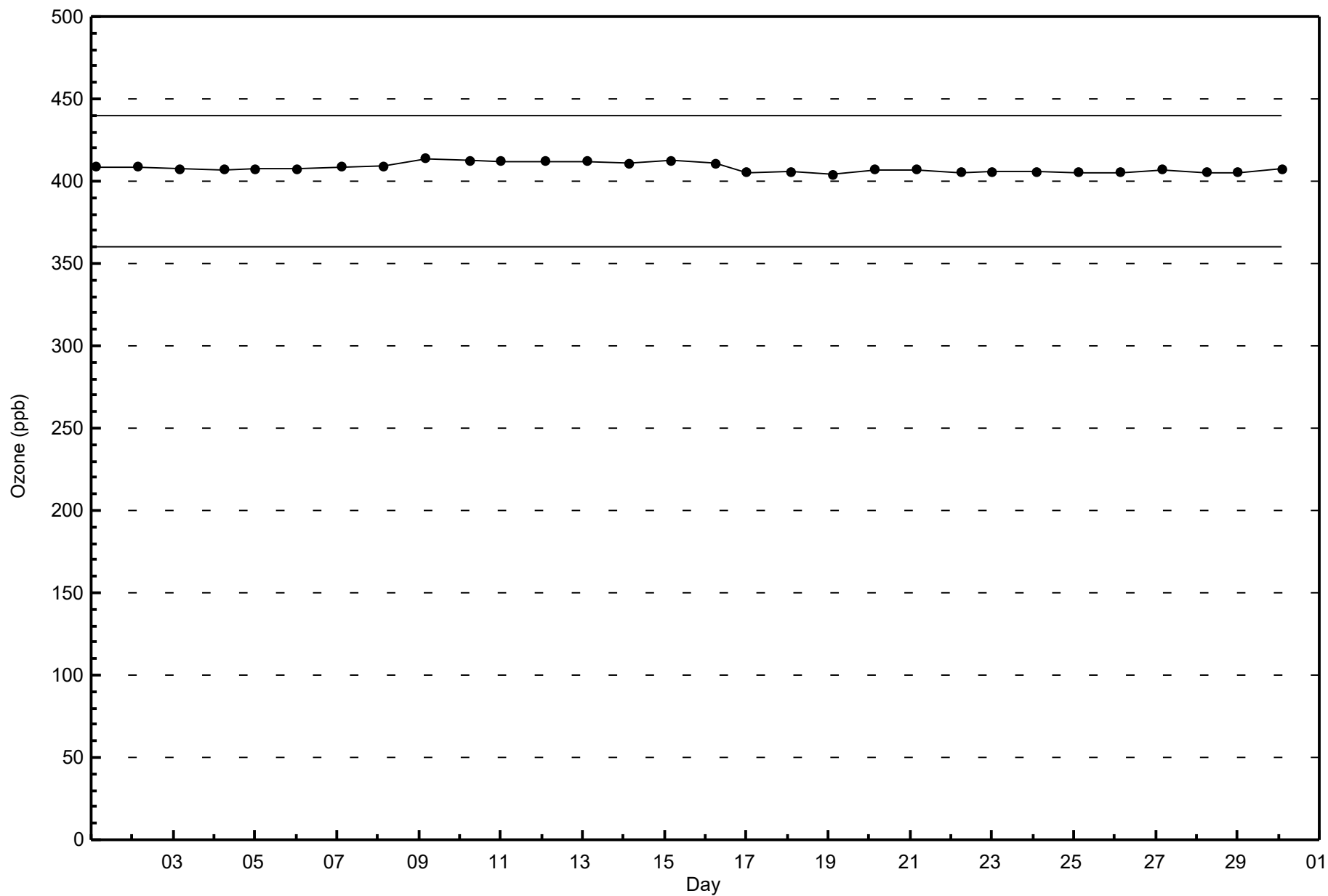






Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Stony Mountain - April 2025

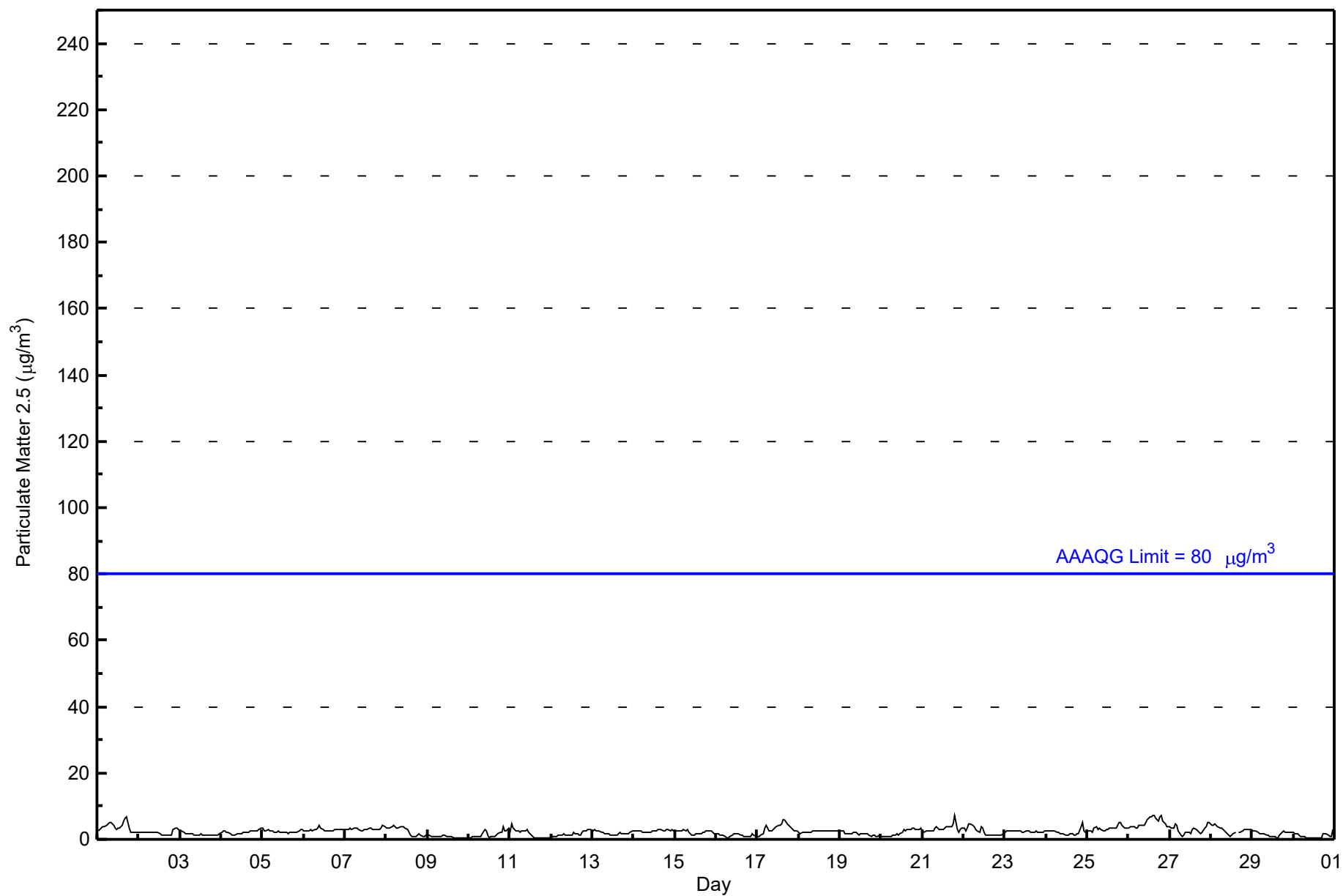


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 7.4 µg/m³ on Apr 21 20:00 Maximum Daily Average: 5.0 µg/m³ on Apr 26																			Hours of Data: 719							
Minimum Value: 0.3 µg/m³ on Apr 11 16:00 Minimum Daily Average: 0.8 µg/m³ on Apr 9																			Hours of Missing Data: 1							
Maximum Diurnal Average: 2.5 µg/m³ at hour 24 Minimum Diurnal Average: 2.1 µg/m³ at hour 12																			Hours of Calibration: 1							
Monthly Average: 2.35 µg/m³ Percentiles: P ₁ = 0.4 P ₁₀ = 0.9 Q ₁ = 1.5 Median = 2.3 Q ₃ = 3.0 P ₉₀ = 3.8 P ₉₉ = 6.8																			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-Apr	2.6	3.0	3.4	3.6	3.9	4.3	4.7	4.9	5.0	4.1	3.3	3.0	3.2	3.3	4.1	5.3	6.4	6.9	3.5	2.1	1.9	1.9	2.1	2.2	3.7	6.9
2-Apr	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	1.9	1.7	1.4	1.3	1.3	1.3	1.5	1.4	1.4	2.8	3.2	3.4	3.1	2.1	3.4
3-Apr	2.7	2.4	2.3	1.8	1.8	1.6	1.5	1.5	1.4	1.3	1.4	1.4	1.5	1.4	1.3	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.3	1.7	1.6	2.7
4-Apr	2.2	2.4	2.5	2.0	2.0	1.5	1.3	1.3	1.4	1.6	1.6	1.7	1.8	2.0	1.9	2.1	2.3	2.4	2.5	2.4	2.5	2.6	2.8	3.3	2.1	3.3
5-Apr	3.2	2.5	2.5	2.8	2.7	2.6	2.4	2.3	2.2	2.3	2.0	2.1	1.9	1.9	2.0	1.9	1.9	2.2	2.3	2.1	2.3	2.7	2.8	2.9	2.4	3.2
6-Apr	2.7	2.7	2.7	2.6	2.8	2.7	3.0	3.0	3.4	4.0	3.3	2.8	2.6	2.5	2.5	2.4	2.5	2.6	2.9	2.8	2.8	3.0	3.1	3.2	2.9	4.0
7-Apr	3.1	3.1	3.1	3.2	3.2	3.3	3.6	3.2	3.0	2.7	2.7	2.8	3.0	3.0	3.2	3.4	3.2	3.1	3.2	3.1	3.1	3.6	4.0	3.9	3.2	4.0
8-Apr	3.4	3.4	3.4	3.9	4.2	3.9	3.6	3.5	3.6	3.7	4.0	3.5	3.0	2.2	1.1	0.9	1.1	1.0	1.2	1.5	1.5	1.0	1.0	1.1	2.5	4.2
9-Apr	1.2	1.2	1.1	0.9	0.9	0.8	0.9	0.9	1.0	1.2	1.1	0.8	0.8	0.8	0.8	0.5	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.5	0.8	1.2
10-Apr	0.6	0.6	0.7	0.7	0.7	0.8	0.8	1.0	1.6	2.8	2.7	1.3	0.6	0.7	0.7	0.9	1.1	1.6	2.2	2.3	3.6	2.7	2.4	3.5	1.5	3.6
11-Apr	2.6	4.7	3.5	2.6	2.4	2.4	2.3	2.5	2.6	2.7	2.9	2.2	1.3	0.8	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.6	0.5	0.4	1.7	4.7
12-Apr	0.6	0.9	1.0	1.0	1.2	1.3	1.5	1.6	1.5	1.5	1.5	1.3	1.5	2.0	1.6	1.8	1.5	1.4	2.3	2.4	2.6	2.8	2.8	2.8	1.7	2.8
13-Apr	2.7	2.8	2.8	2.5	2.4	2.3	2.2	1.9	1.8	1.5	1.3	1.2	1.3	1.4	1.4	1.7	1.9	1.8	1.8	1.8	1.7	1.7	2.2	2.5	1.9	2.8
14-Apr	2.5	2.6	2.6	2.6	2.5	2.3	2.0	2.1	2.1	2.1	2.3	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.7	2.8	3.0	2.7	2.8	2.5	2.6	3.0
15-Apr	2.4	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.1	1.7	1.2	1.1	1.7	1.5	1.7	1.7	2.1	2.2	2.5	2.4	2.5	2.3	2.1	1.8	2.2	2.8
16-Apr	1.5	1.5	1.4	1.4	1.2	0.7	0.3	0.4	0.7	1.3	1.7	1.8	1.7	1.6	1.5	1.2	0.7	0.8	0.9	0.8	0.8	1.5	1.2	1.0	1.2	1.8
17-Apr	0.9	0.9	1.1	1.6	3.3	4.4	3.5	2.5	2.7	2.9	3.5	4.0	4.1	4.2	4.8	6.0	6.0	4.5	4.3	4.0	3.3	2.6	2.5	2.5	3.3	6.0
18-Apr	2.3	1.8	2.2	2.1	2.3	2.3	2.1	2.3	2.7	2.6	2.6	2.7	2.6	2.4	2.4	2.5	2.6	2.7	2.7	2.5	2.6	2.6	2.6	2.6	2.4	2.7
19-Apr	2.6	2.7	2.6	1.8	1.6	1.8	1.6	1.5	2.0	2.3	1.8	1.4	1.8	1.8	1.8	1.6	1.5	1.4	1.0	1.3	1.3	1.0	1.0	1.1	1.7	2.7
20-Apr	1.0	0.9	0.8	0.6	0.7	0.7	0.9	1.1	1.4	1.9	1.5	1.8	2.3	2.8	2.7	2.9	3.1	3.2	3.2	3.3	3.1	3.0	2.9	3.4	2.0	3.4
21-Apr	2.4	2.3	2.6	2.6	2.7	2.7	2.6	3.3	3.8	3.6	3.0	3.1	3.1	3.5	4.0	4.0	3.9	3.8	4.8	7.4	3.2	2.3	2.8	3.4	3.4	7.4
22-Apr	3.2	2.4	3.5	4.5	4.6	4.4	3.8	3.1	2.5	2.3	3.9	3.2	2.3	1.3	1.5	1.4	1.2	1.2	1.1	1.2	1.3	1.4	1.4	1.5	2.4	4.6
23-Apr	2.0	2.6	2.4	2.4	2.6	2.7	2.7	2.7	2.5	2.5	2.1	1.9	2.5	2.4	2.4	2.3	2.2	2.3	2.4	2.3	2.3	2.0	2.2	2.6	2.4	2.7
24-Apr	2.5	2.5	2.4	2.5	2.5	2.5	2.3	2.0	1.8	1.6	1.7	1.4	1.4	1.3	1.8	1.7	1.4	1.5	1.5	1.7	3.6	5.0	2.4	2.0	2.1	5.0
25-Apr	2.5	2.6	2.5	2.3	3.4	3.7	3.0	3.4	3.0	2.7	2.6	2.9	3.2	3.4	3.4	3.4	3.4	3.5	5.0	4.9	4.2	3.7	3.5	3.4	3.3	5.0
26-Apr	3.5	3.7	3.8	3.6	3.6	3.5	4.0	4.1	4.0	4.1	4.9	5.8	6.9	6.9	7.2	7.2	6.5	5.5	6.9	7.2	5.4	4.6	4.0	3.8	5.0	7.2
27-Apr	3.8	3.2	3.3	4.7	4.1	2.4	1.1	1.0	1.3	2.3	2.3	2.2	1.8	3.1	3.5	3.1	2.4	2.1	1.8	2.3	3.4	3.9	5.1	4.9	2.9	5.1
28-Apr	4.4	4.1	4.5	4.2	3.7	3.4	3.2	3.1	2.4	1.6	1.2	1.0	1.2	1.9	2.1	C	2.1	2.3	2.8	2.9	2.9	2.9	3.0	3.1	2.8	4.5
29-Apr	2.7	2.7	2.6	2.3	1.9	1.8	1.7	1.6	1.4	1.1	0.7	0.7	0.8	0.9	0.5	0.4	1.2	2.3	2.4	2.2	2.3	2.3	2.2	2.0	1.7	2.7
30-Apr	2.0	1.9	1.6	1.4	1.0	1.0	0.8	0.5	0.6	0.6	0.5	0.6	0.4	0.4	0.4	0.3	0.5	1.5	1.6	1.6	1.5	0.9	1.0	3.1	1.1	3.1
2.4 2.4 2.5 2.4 2.5 2.4 2.3 2.2 2.3 2.3 2.2 2.1 2.2 2.2 2.2 2.3 2.3 2.3 2.4 2.5 2.5 2.4 2.4 2.5																									Diurnal Average	
4.4 4.7 4.5 4.7 4.6 4.4 4.7 4.9 5.0 4.1 4.9 5.8 6.9 6.9 7.2 7.2 6.5 6.9 6.9 7.4 5.4 5.0 5.1 4.9																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Stony Mountain - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	705	98.05	98.05
6 - 15	14	1.95	100.00
16 - 25	0	0.00	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Stony Mountain - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	26	11	8	9	19	14	25	23	69	88	40	37	108	79	78	71	705
6 - 15	2	0	0	0	0	0	0	1	0	0	2	0	0	3	2	4	14
16 - 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	11	8	9	19	14	25	24	69	88	42	37	108	82	80	75	719

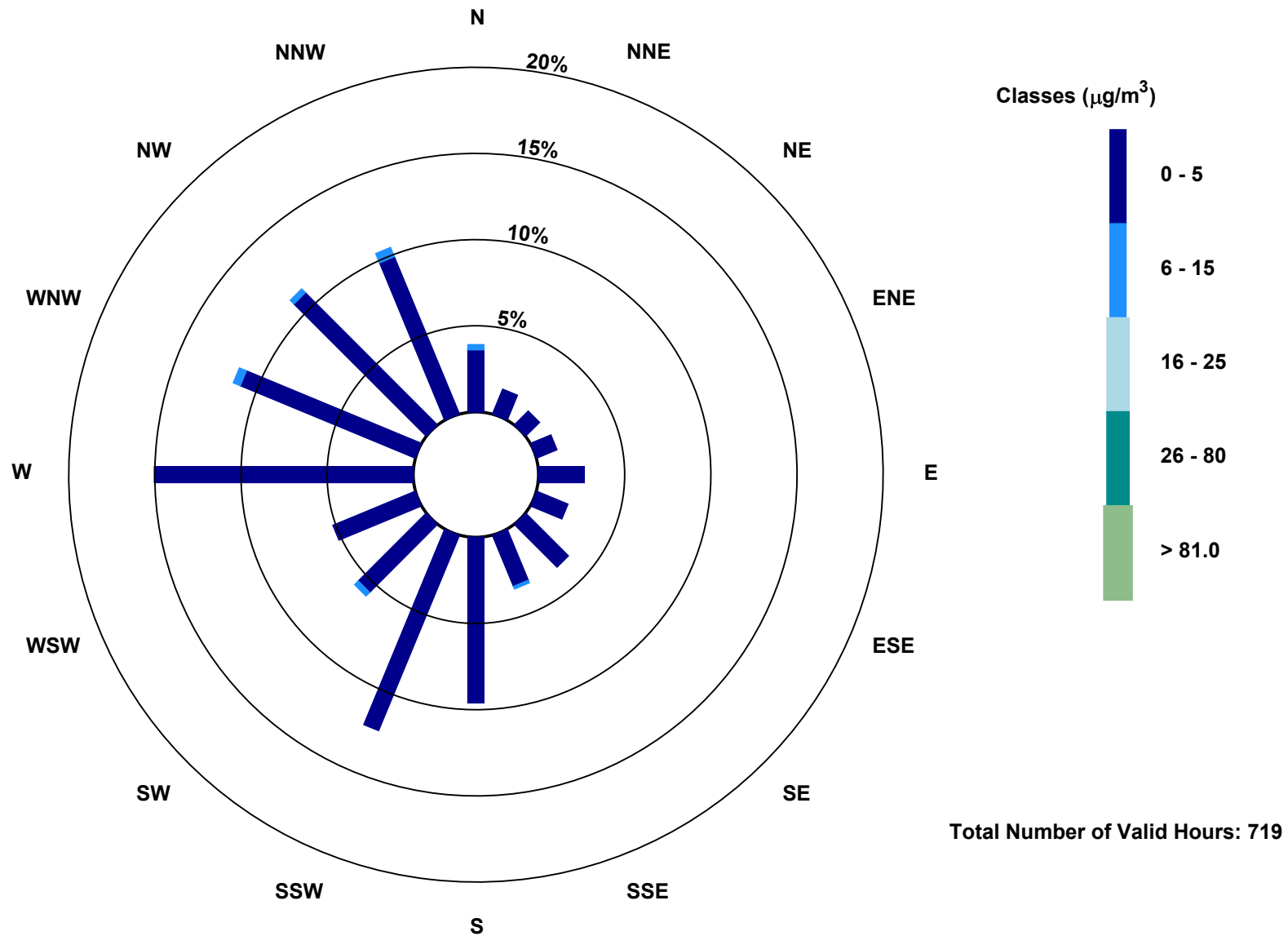
Total Number of Valid Hours: 719

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

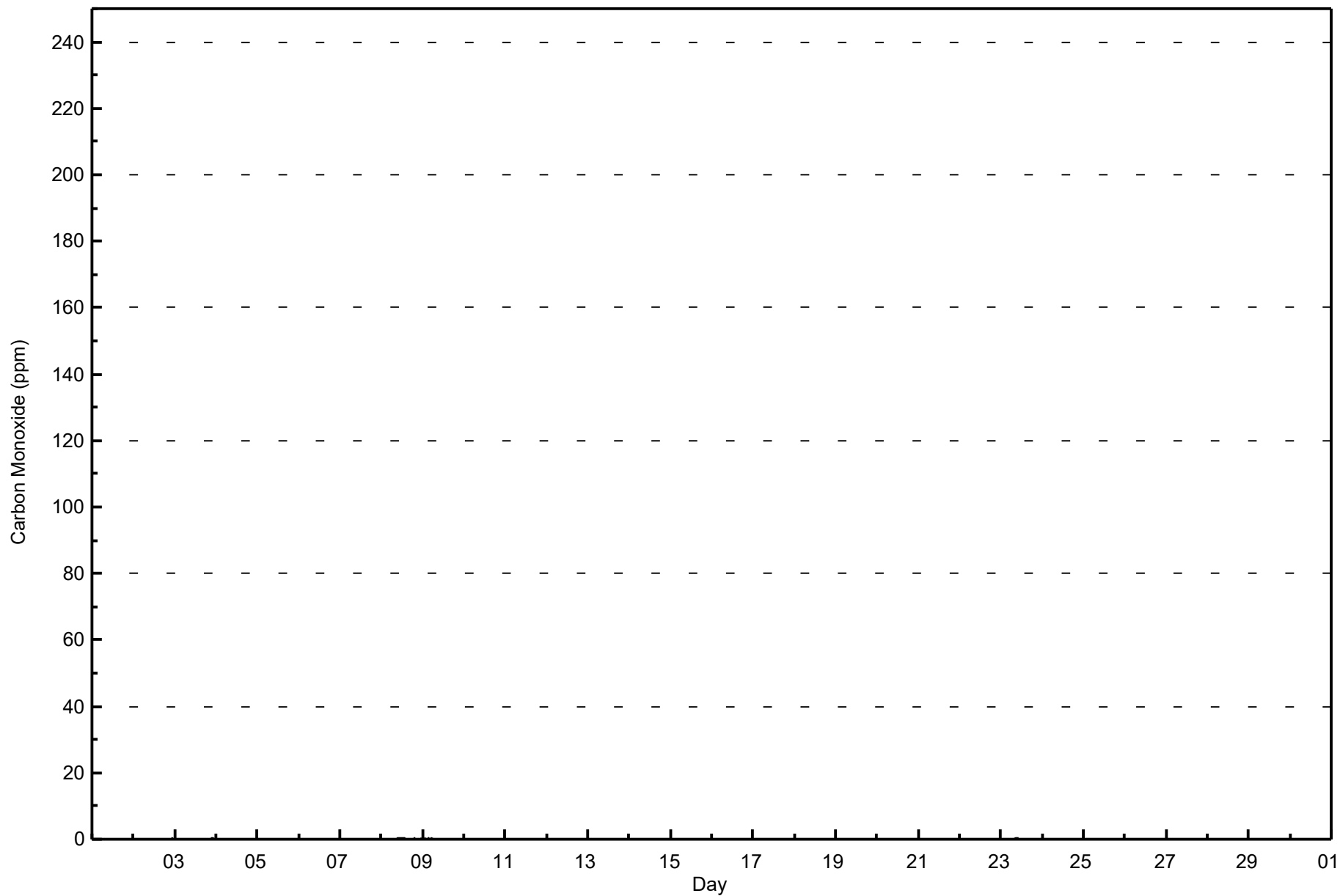
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 0.2 ppm on Apr 23 10:00																			Maximum Daily Average: 0.2 ppm on Apr 8		Hours of Data: 687					
Minimum Value: 0.1 ppm on Apr 23 17:00																			Minimum Daily Average: 0.2 ppm on Apr 13		Hours of Missing Data: 33					
Maximum Diurnal Average: 0.2 ppm at hour 5																			Minimum Diurnal Average: 0.2 ppm at hour 16		Hours of Calibration: 33					
Monthly Average: 0.18 ppm																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.2		Percent Operational Time: 100.0					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	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
2-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
4-Apr	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Apr	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-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7-Apr	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
8-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
9-Apr	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
10-Apr	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
11-Apr	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
12-Apr	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
13-Apr	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	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
14-Apr	0.1	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
15-Apr	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
16-Apr	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
17-Apr	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
18-Apr	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
19-Apr	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
20-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
21-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
22-Apr	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
23-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
24-Apr	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
25-Apr	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-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
27-Apr	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	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28-Apr	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
29-Apr	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
30-Apr	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
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm																										



Wood Buffalo Environmental Association
Hourly Averages

Carbon Monoxide (CO) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Monoxide (CO) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	687	100.00	100.00
0.4 - 0.5	0	0.00	100.00
0.6 - 0.7	0	0.00	100.00
0.8 - 1.4	0	0.00	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 687

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Monoxide (CO) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.3	27	11	8	8	18	13	24	24	67	83	39	33	104	79	78	71	687
0.4 - 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	11	8	8	18	13	24	24	67	83	39	33	104	79	78	71	687

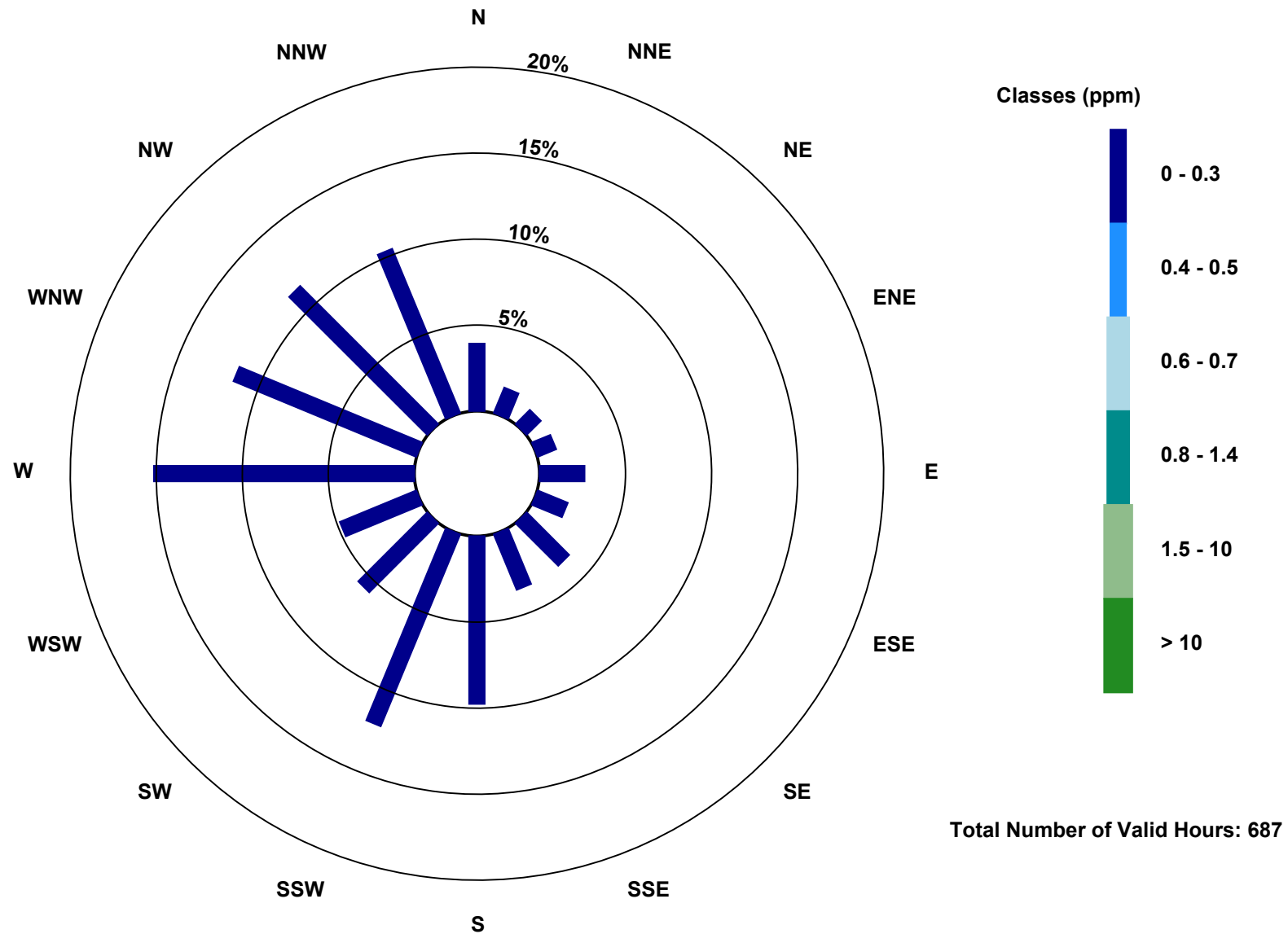
Total Number of Valid Hours: 687

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Carbon Monoxide (CO) - ppm
Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO₂) - ppm

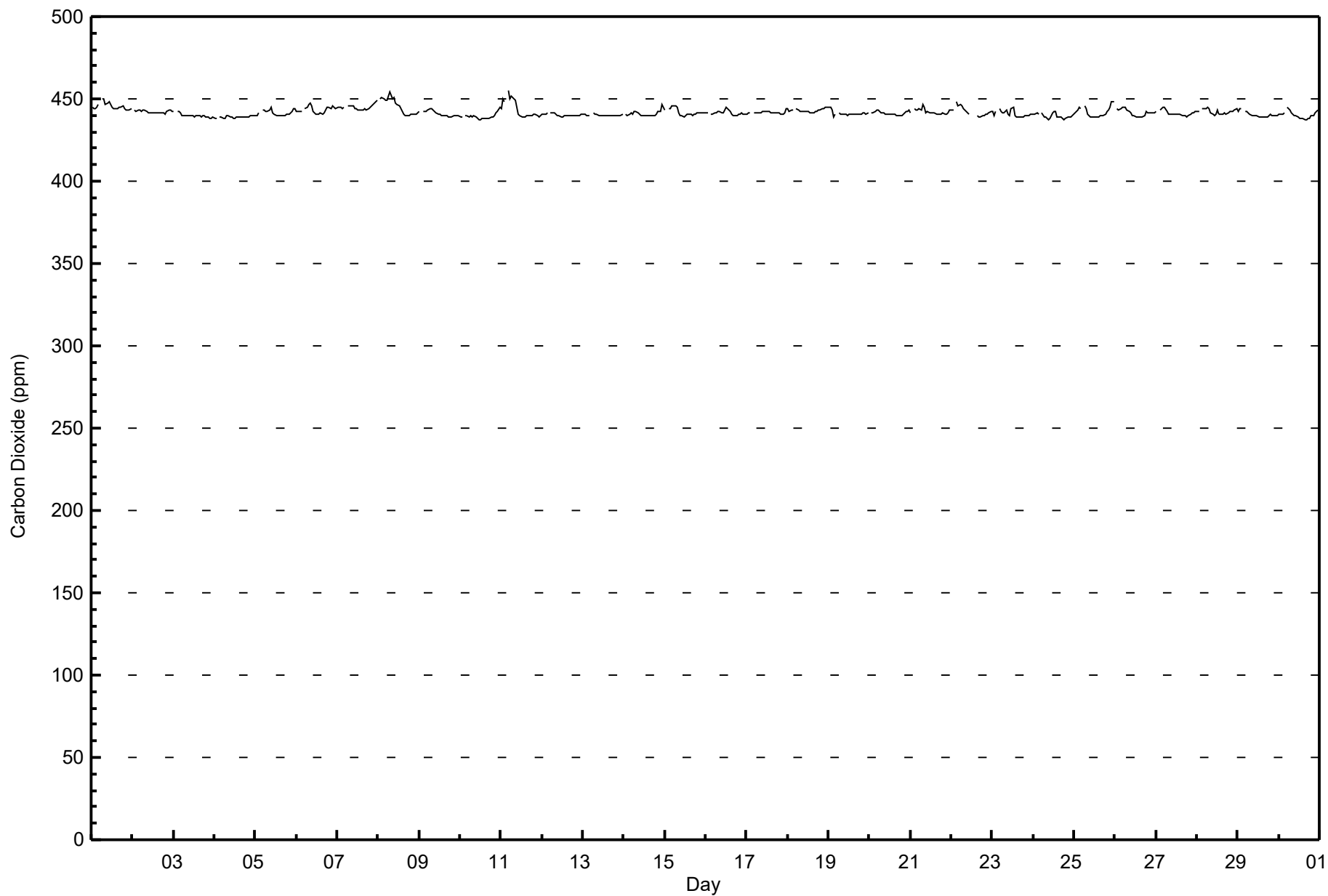
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 455.3 ppm on Apr 11 05:00 Maximum Daily Average: 445.5 ppm on Apr 8																						Hours in Service: 720					
Minimum Value: 437.3 ppm on Apr 30 17:00 Minimum Daily Average: 439.0 ppm on Apr 4 Maximum Diurnal Average: 443.6 ppm at hour 5 Minimum Diurnal Average: 440.2 ppm at hour 17 Monthly Average: 441.69 ppm Percentiles: P ₁ = 437.8 P ₁₀ = 439.1 Q ₁ = 439.8 Median = 441.1 Q ₃ = 443.0 P ₉₀ = 444.9 P ₉₉ = 450.4																						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 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-Apr	445.3	444.2	444.4	444.8	446.3	Z	449.8	449.8	446.9	447.2	448.0	446.5	444.8	444.4	444.3	444.5	444.7	445.3	445.4	444.2	443.1	443.3	443.6	443.7	445.4	449.8	
2-Apr	Z	443.2	442.6	443.2	443.2	442.7	443.1	443.1	442.1	441.6	441.7	441.6	441.4	441.2	441.1	441.2	441.2	441.6	441.3	441.0	442.6	443.0	442.8	442.3	442.1	443.2	
3-Apr	442.2	Z	442.7	442.2	441.2	439.6	439.7	439.8	440.0	439.7	439.4	439.5	439.3	439.7	439.5	439.5	439.3	439.5	439.5	439.4	439.1	438.3	438.1	438.7	439.8	442.7	
4-Apr	438.5	438.2	Z	439.2	439.2	438.2	438.5	439.6	440.0	438.7	438.7	438.5	438.6	438.7	438.7	438.9	438.8	439.0	439.3	439.3	439.1	439.7	440.0	440.2	439.0	440.2	
5-Apr	439.7	440.1	441.4	Z	443.1	442.8	442.0	442.4	442.8	444.6	441.6	440.7	440.1	440.0	439.8	439.5	439.7	440.2	440.5	440.7	441.1	442.5	443.7	444.0	441.4	444.6	
6-Apr	442.7	442.5	442.3	442.2	Z	444.0	445.1	446.3	447.7	445.4	442.0	440.7	440.8	440.8	441.9	440.9	441.6	443.0	445.2	445.0	444.4	445.7	445.0	444.4	443.5	447.7	
7-Apr	444.9	444.8	444.5	444.4	444.5	Z	445.6	445.4	445.6	445.4	444.4	443.7	443.2	443.1	443.4	443.6	444.0	443.6	444.3	444.6	445.4	446.3	447.4	448.9	444.8	448.9	
8-Apr	Z	449.8	450.9	450.0	449.3	449.3	451.4	454.0	450.0	450.6	447.5	446.2	446.1	444.4	442.6	440.7	440.0	439.9	440.2	440.3	440.5	440.9	440.9	441.7	445.5	454.0	
9-Apr	442.6	Z	442.3	442.0	442.4	443.1	443.9	444.0	443.3	442.8	441.9	440.8	440.3	440.0	439.9	439.6	439.6	439.2	439.1	439.1	439.5	439.8	439.6	439.7	441.1	444.0	
10-Apr	439.4	439.1	Z	439.6	439.5	439.4	439.5	439.4	439.7	438.7	437.8	437.4	437.5	437.8	437.8	438.1	438.4	438.5	438.7	439.0	439.9	441.3	442.4	445.0	439.3	445.0	
11-Apr	444.4	450.2	448.6	Z	455.3	450.4	451.9	450.7	449.0	445.2	440.6	439.8	439.1	438.9	439.4	439.7	439.7	439.7	440.1	440.4	440.5	440.0	439.3	440.1	443.6	455.3	
12-Apr	440.9	440.9	440.8	441.1	Z	441.4	441.8	441.5	440.8	440.2	439.8	439.3	439.2	439.7	440.2	440.1	440.2	439.9	439.6	439.9	440.2	440.2	439.7	440.7	440.4	441.8	
13-Apr	441.1	440.6	440.2	439.8	440.0	Z	441.4	441.1	440.6	440.1	439.9	439.8	439.7	439.5	439.5	439.6	439.6	439.5	439.6	439.8	439.7	439.9	439.9	440.7	440.1	441.4	
14-Apr	Z	440.5	440.2	440.7	441.4	440.7	442.4	442.1	441.7	440.6	439.7	439.6	439.9	440.0	439.8	439.4	439.7	439.6	440.0	441.0	442.6	442.7	446.7	445.0	441.1	446.7	
15-Apr	443.0	Z	444.0	444.4	445.6	446.1	445.9	445.2	441.6	439.7	439.5	439.3	439.8	440.3	440.4	440.4	440.2	440.4	440.8	441.2	441.5	441.8	441.7	441.7	441.9	446.1	
16-Apr	441.2	441.2	Z	440.8	440.9	441.2	441.8	442.1	442.0	441.8	441.6	443.2	444.6	444.1	442.1	440.5	440.0	439.9	439.6	440.4	440.8	441.2	441.0	440.8	441.4	444.6	
17-Apr	440.7	441.5	441.7	Z	441.4	441.3	441.9	441.4	441.3	442.0	442.2	442.5	442.7	442.0	441.8	441.9	441.6	441.3	441.3	441.3	440.9	441.1	441.6	444.0	441.7	444.0	
18-Apr	444.1	442.4	443.1	443.6	Z	444.0	443.4	442.8	442.6	442.0	442.1	442.6	442.0	441.8	441.7	441.8	442.1	442.4	443.2	443.1	443.7	444.3	445.1	445.1	443.0	445.1	
19-Apr	445.1	444.9	443.6	439.4	440.7	Z	441.3	440.6	440.7	440.8	440.4	439.9	440.5	440.5	440.8	440.7	440.9	441.0	441.0	441.0	441.2	441.7	440.9	441.7	441.3	445.1	
20-Apr	Z	441.4	441.5	442.1	443.1	442.9	442.5	441.7	441.1	440.3	440.3	440.6	440.3	440.4	440.4	440.3	440.2	440.0	439.8	440.0	440.9	442.0	442.4	443.4	441.2	443.4	
21-Apr	441.7	Z	444.3	443.2	443.0	443.6	443.4	446.4	445.2	441.8	442.7	441.7	441.6	441.3	441.4	440.9	440.9	440.9	441.0	441.2	440.8	440.9	441.9	443.4	442.3	446.4	
22-Apr	443.3	443.6	Z	448.0	445.9	446.3	445.5	444.5	443.2	441.4	441.1	C	C	C	C	439.7	439.1	439.3	439.8	440.0	440.6	440.8	441.4	442.5	442.4	448.0	
23-Apr	442.1	440.1	442.5	Z	443.7	442.2	441.6	441.8	443.0	440.8	439.5	444.0	444.7	440.0	439.0	438.8	438.7	439.2	439.1	439.7	439.5	439.7	440.5	440.8	440.9	444.7	
24-Apr	440.7	440.6	441.9	440.4	Z	441.2	439.2	439.0	438.0	437.6	438.3	441.2	442.5	442.2	438.8	439.3	438.6	438.2	437.6	437.9	439.1	438.9	438.6	440.2	439.6	442.5	
25-Apr	441.6	442.0	442.9	444.5	444.2	Z	446.1	443.9	440.6	439.2	438.9	438.6	438.8	439.0	439.3	439.5	439.7	440.0	440.9	442.4	443.3	444.6	448.0	448.4	442.0	448.4	
26-Apr	Z	443.9	443.6	444.2	444.6	445.0	444.7	443.6	442.7	441.1	440.0	439.5	438.7	438.6	438.7	438.9	439.3	439.5	442.2	441.2	441.3	441.1	441.4	441.8	441.6	445.0	
27-Apr	442.2	Z	443.1	444.3	445.0	444.8	442.7	440.7	440.6	440.6	440.3	440.3	440.7	440.4	440.0	439.6	439.5	439.4	439.5	440.9	441.2	441.8	442.4		441.3	445.0	
28-Apr	442.7	442.8	Z	443.9	444.2	444.4	444.8	443.7	441.9	440.6	440.0	440.6	443.1	441.0	440.6	441.1	441.4	440.7	441.8	442.4	442.1	442.3	443.4	444.4	442.3	444.8	
29-Apr	442.6	443.9	443.8	Z	442.3	442.5	441.5	440.3	439.7	439.7	439.7	439.6	439.1	439.0	439.3	439.4	438.9	438.8	439.5	440.7	439.8	439.9	440.0	440.0	440.4	443.9	
30-Apr	440.4	440.7	440.9	441.2	Z	444.9	442.9	441.4	440.9	440.2	439.5	438.9	438.3	438.3	437.7	437.5	437.3	437.9	438.0	439.8	440.0	441.4	442.0	442.8	440.1	444.9	
																										Diurnal Average	
																										Diurnal Maximum	
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Carbon Dioxide (CO₂) - ppm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	257	37.46	37.46
440 - 460	429	62.54	100.00
460 - 480	0	0.00	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Carbon Dioxide (CO₂) - ppm
Stony Mountain - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	9	7	6	5	2	2	2	2	9	15	14	12	58	42	40	32	257
440 - 460	19	3	2	4	16	10	23	22	58	67	23	21	43	39	38	41	429
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	10	8	9	18	12	25	24	67	82	37	33	101	81	78	73	686

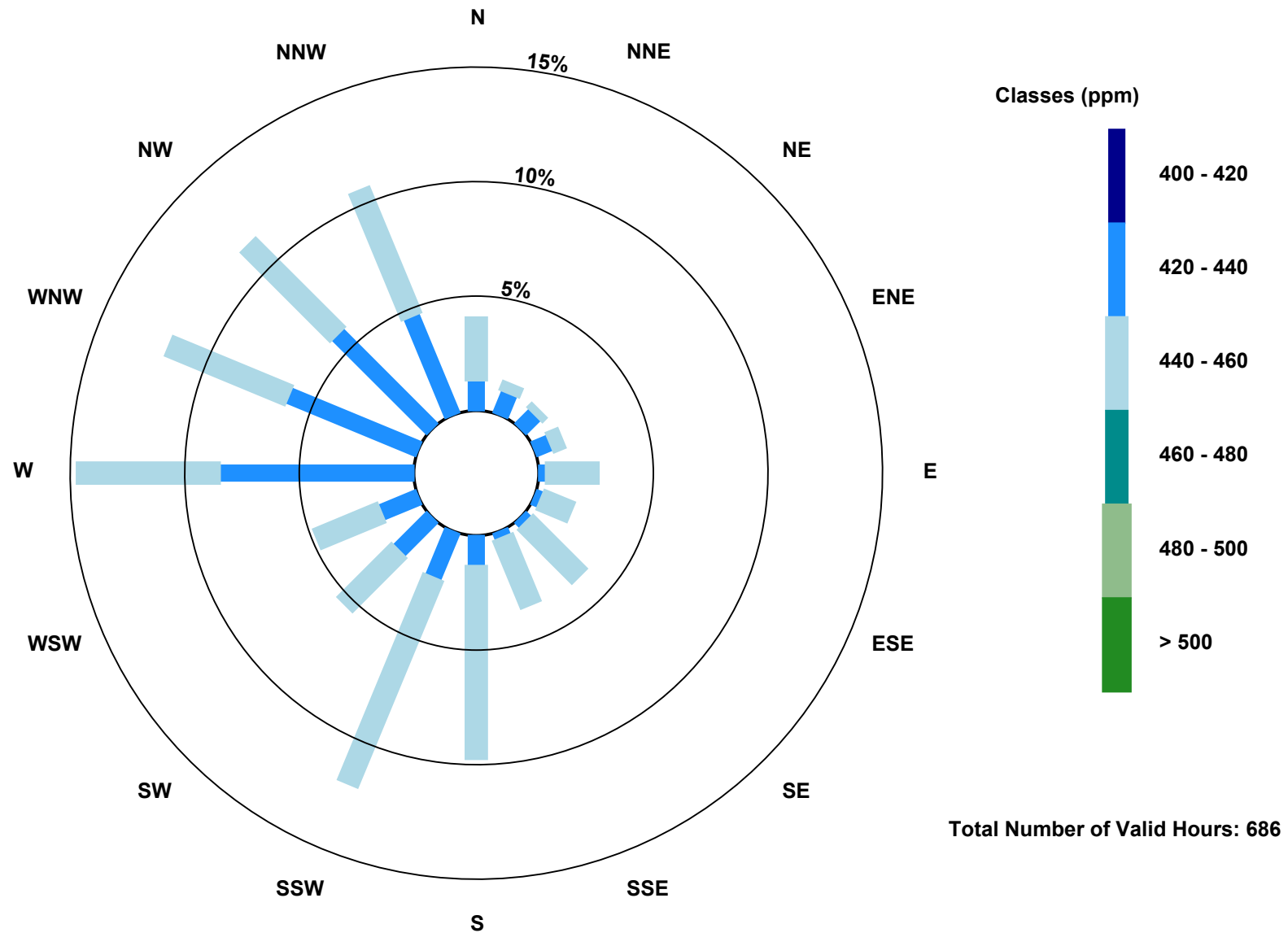
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Carbon Dioxide (CO₂) - ppm
Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

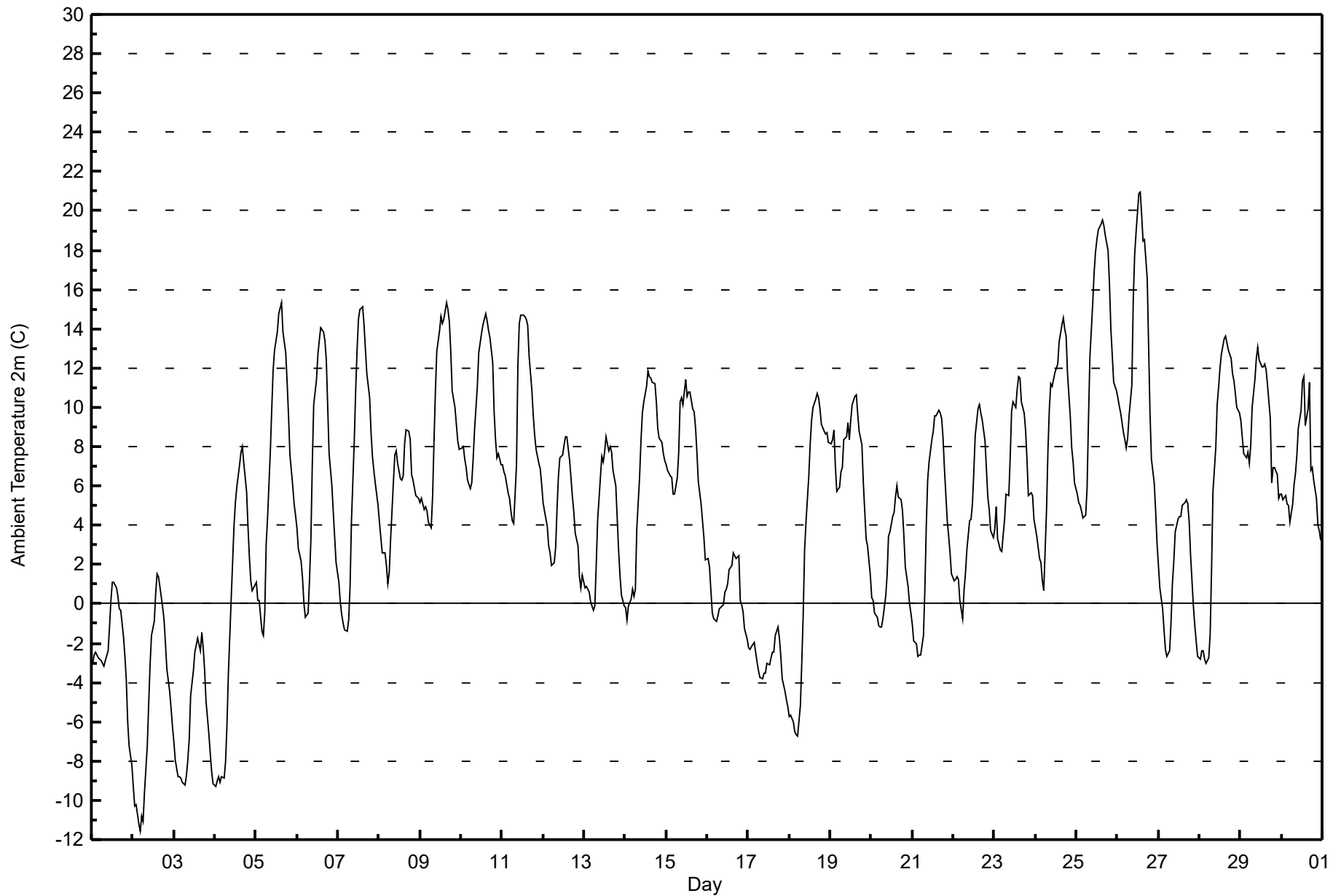
Stony Mountain - April 2025

Maximum Value: 21.0 C on Apr 26 14:00																				Maximum Daily Average: 12.7 C on Apr 25					Hours in Service: 720				
Minimum Value: -11.6 C on Apr 2 05:00																				Minimum Daily Average: -6.0 C on Apr 3					Hours of Data: 720				
Maximum Diurnal Average: 9.7 C at hour 16																				Minimum Diurnal Average: 0.1 C at hour 6					Hours of Missing Data: 0				
Monthly Average: 4.92 C																				Percentiles: P ₁ = -9.3 P ₁₀ = -2.8 Q ₁ = 0.4 Median = 5.4 Q ₃ = 9.4 P ₉₀ = 12.7 P ₉₉ = 18.9					Hours of Calibration: 0				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	-3.0	-2.6	-2.5	-2.6	-2.8	-2.9	-3.0	-3.1	-2.9	-2.4	-1.1	0.2	1.1	1.1	0.8	0.4	-0.2	-0.3	-1.7	-2.7	-3.9	-6.0	-7.2	-8.2	-2.3	1.1			
2-Apr	-9.3	-10.3	-10.3	-11.2	-11.6	-10.8	-11.0	-9.6	-7.2	-5.1	-3.1	-1.6	-0.9	0.5	1.5	1.4	0.9	-0.2	-0.8	-2.0	-3.3	-4.5	-5.3	-6.2	-5.0	1.5			
3-Apr	-7.0	-7.9	-8.8	-8.8	-8.9	-9.1	-9.2	-8.8	-7.9	-6.9	-4.7	-3.4	-2.5	-2.1	-1.8	-2.4	-1.5	-2.3	-3.4	-5.0	-6.6	-7.6	-8.5	-9.1	-6.0	-1.5			
4-Apr	-9.3	-9.0	-8.8	-9.1	-8.8	-8.9	-8.0	-6.1	-3.5	0.2	2.1	4.0	5.1	5.9	7.1	7.7	8.0	7.2	5.7	4.0	2.4	1.1	0.7	0.9	-0.4	8.0			
5-Apr	1.1	0.2	0.2	-1.4	-1.6	-0.5	3.0	4.4	7.8	9.9	11.9	12.9	13.8	14.8	15.0	15.3	13.8	12.8	11.3	9.5	7.5	6.0	5.1	4.5	7.4	15.3			
6-Apr	3.9	2.8	2.2	1.3	0.0	-0.7	-0.5	1.2	3.3	7.1	10.1	11.4	12.7	13.4	14.1	13.9	13.4	12.4	10.1	7.6	6.0	4.7	3.4	2.1	6.5	14.1			
7-Apr	1.1	0.1	-0.5	-1.0	-1.3	-1.4	-0.8	0.9	4.3	8.3	10.8	12.9	14.5	15.0	15.1	14.2	12.9	11.7	10.5	8.7	7.5	6.8	6.1	5.0	6.7	15.1			
8-Apr	4.2	3.4	2.6	2.6	1.9	1.0	1.6	3.3	6.2	7.6	7.8	7.2	6.3	6.3	6.5	8.2	8.9	8.8	8.3	6.6	6.3	5.5	5.4	5.4	5.5	8.9			
9-Apr	5.1	5.4	4.8	5.0	4.7	4.2	3.9	5.5	8.2	10.8	12.8	13.9	14.6	14.3	14.5	15.3	15.0	14.3	12.9	10.9	10.0	9.1	8.3	7.9	9.6	15.3			
10-Apr	7.9	8.0	7.4	7.0	6.3	5.9	6.1	7.3	8.9	11.1	12.8	13.3	13.8	14.2	14.8	14.4	13.9	13.6	12.3	9.8	8.4	7.5	7.6	7.1	10.0	14.8			
11-Apr	7.1	6.7	6.5	5.7	5.4	4.7	4.2	4.1	7.1	12.2	14.2	14.7	14.7	14.6	14.5	14.2	12.6	10.8	9.6	8.5	7.9	7.1	6.9	6.1	9.2	14.7			
12-Apr	5.1	4.7	4.0	3.0	2.6	2.0	2.1	2.9	4.9	6.5	7.4	7.6	8.1	8.5	8.5	7.3	6.4	5.4	4.6	3.6	3.0	1.4	0.8	1.4	4.7	8.5			
13-Apr	0.8	0.9	0.8	0.6	0.1	-0.3	-0.1	2.0	4.2	6.4	7.5	7.2	7.7	8.5	7.8	8.0	7.7	6.8	6.0	4.4	2.7	1.5	0.4	-0.1	3.8	8.5			
14-Apr	-0.2	-0.8	-0.1	0.3	0.7	0.4	0.7	3.8	6.4	8.3	9.7	10.3	11.1	11.8	11.5	11.5	11.3	11.2	10.3	8.9	8.5	8.2	7.7	7.3	6.6	11.8			
15-Apr	7.1	6.8	6.5	6.4	5.6	5.6	6.4	7.7	10.3	10.5	10.2	11.4	10.6	10.8	10.8	9.9	9.8	9.0	7.7	6.2	5.1	4.2	3.4	2.3	7.7	11.4			
16-Apr	2.3	1.9	0.7	-0.5	-0.8	-0.9	-0.6	-0.3	-0.2	0.0	0.6	0.8	1.1	1.8	2.0	2.6	2.4	2.3	2.5	0.2	0.0	-0.4	-1.3	-1.8	0.6	2.6			
17-Apr	-2.2	-2.3	-2.1	-2.0	-2.5	-3.0	-3.4	-3.8	-3.8	-3.6	-3.5	-3.0	-3.1	-2.8	-2.5	-2.5	-1.6	-1.2	-1.7	-2.7	-3.8	-4.4	-4.9	-5.2	-3.0	-1.2			
18-Apr	-5.7	-5.6	-6.0	-6.5	-6.6	-6.7	-5.2	-3.0	-0.6	2.8	4.2	6.5	8.1	9.4	10.0	10.4	10.7	10.5	9.9	9.1	8.8	8.7	8.7	8.2	3.3	10.7			
19-Apr	8.1	8.3	8.9	7.0	5.8	6.0	6.7	6.9	8.3	8.5	9.2	8.4	9.4	10.1	10.6	10.7	9.6	8.8	8.0	6.2	4.7	3.3	2.9	1.4	7.4	10.7			
20-Apr	0.3	0.2	-0.4	-0.7	-1.1	-1.2	-1.2	-0.7	0.4	1.4	3.4	3.7	4.4	4.6	5.5	6.0	5.5	5.3	4.7	3.5	1.8	0.9	0.0	-0.4	1.9	6.0			
21-Apr	-1.0	-1.9	-2.1	-2.7	-2.6	-2.6	-1.6	0.8	3.9	6.3	7.2	8.4	8.8	9.5	9.5	9.9	9.7	9.5	8.5	6.8	4.2	3.4	2.6	1.5	4.0	9.9			
22-Apr	1.2	1.2	1.4	1.2	0.2	-0.8	0.7	1.5	2.7	4.2	4.3	5.1	6.7	8.6	10.0	10.1	9.7	9.4	8.3	6.9	5.5	4.8	3.7	3.3	4.6	10.1			
23-Apr	3.8	4.9	3.3	2.8	2.7	3.5	4.3	5.6	5.5	7.4	9.8	10.3	10.0	10.9	11.6	11.5	10.3	9.7	8.9	7.4	5.5	5.6	5.5	4.3	6.9	11.6			
24-Apr	3.9	3.4	2.3	2.1	1.2	0.7	4.8	7.8	9.9	11.2	11.1	11.7	12.0	12.2	13.3	14.2	14.6	14.0	13.6	11.7	9.5	7.9	7.2	6.2	8.6	14.6			
25-Apr	5.6	5.2	5.0	4.7	4.4	4.5	5.9	9.4	12.6	15.3	16.8	17.9	18.5	19.0	19.3	19.6	19.3	18.8	18.0	16.2	14.0	12.6	11.3	10.9	12.7	19.6			
26-Apr	10.5	10.0	9.7	8.7	8.4	7.9	8.4	9.6	11.2	15.5	17.8	18.9	20.9	21.0	19.8	18.5	18.5	16.5	13.1	9.6	7.3	6.1	4.7	3.1	12.3	21.0			
27-Apr	2.0	0.8	-0.3	-1.3	-2.3	-2.7	-2.4	-0.9	1.1	2.1	3.7	4.3	4.5	4.5	5.0	5.1	5.3	5.1	4.1	2.4	-0.1	-1.1	-1.9	-2.6	1.4	5.3			
28-Apr	-2.8	-2.4	-2.4	-2.8	-3.0	-2.7	-1.5	1.8	5.7	7.9	10.1	11.0	12.0	12.7	13.5	13.6	13.3	12.9	12.5	11.7	11.4	10.7	10.0	9.7	6.8	13.6			
29-Apr	9.3	8.4	7.6	7.4	7.7	7.1	8.1	10.0	11.4	12.5	13.1	12.4	12.0	12.1	12.2	11.9	11.1	9.4	6.1	6.9	7.0	6.6	5.4	5.6	9.2	13.1			
30-Apr	5.6	5.3	5.5	5.1	5.0	4.1	5.1	6.1	6.7	7.6	8.9	9.9	11.4	11.5	9.1	10.0	11.3	6.8	6.9	6.3	5.4	4.0	3.7	3.3	6.9	11.5			
																									Diurnal Average				
																									Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Stony Mountain - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	165	22.92	22.92
0 - 10	405	56.25	79.17
10 - 20	148	20.56	99.72
> 20	2	0.28	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) - %

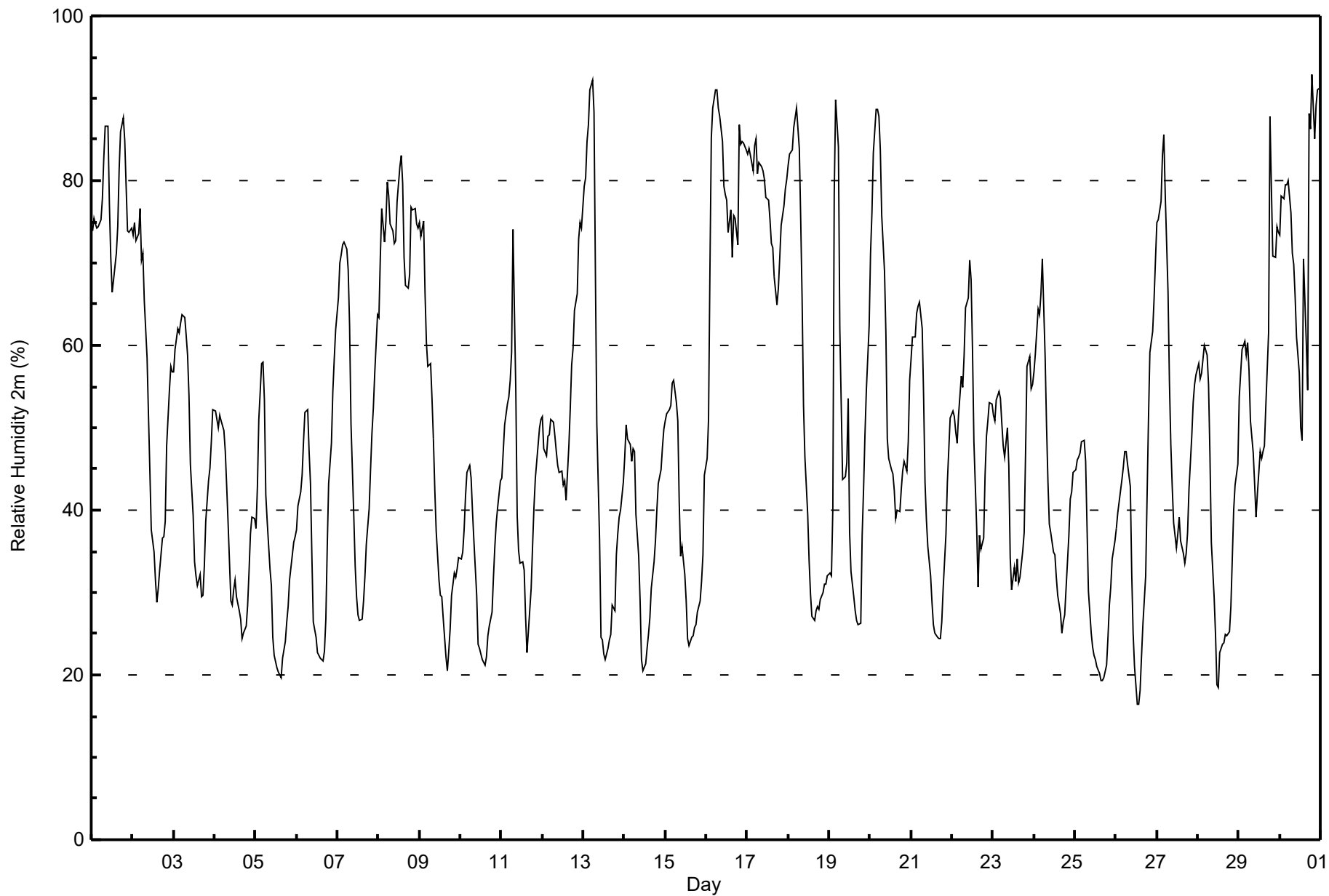
Stony Mountain - April 2025

Maximum Value: 92.8 % on Apr 30 20:00																				Maximum Daily Average: 78.7 % on Apr 16					Hours in Service: 720				
Minimum Value: 16.5 % on Apr 26 14:00																				Minimum Daily Average: 31.8 % on Apr 25					Hours of Data: 720				
Maximum Diurnal Average: 65.8 % at hour 6																				Minimum Diurnal Average: 35.1 % at hour 16					Hours of Missing Data: 0				
Monthly Average: 49.86 %																				Percentiles: P ₁ = 19.6 P ₁₀ = 25.2 Q ₁ = 33.2 Median = 47.2 Q ₃ = 65.7 P ₉₀ = 78.9 P ₉₉ = 89.7					Hours of Calibration: 0				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	73.9	75.4	74.8	74.2	74.5	75.3	77.7	82.7	86.6	86.6	77.3	70.6	66.4	67.9	71.2	74.4	81.3	86.0	87.7	84.9	79.3	73.9	73.7	74.2	77.1	87.7			
2-Apr	73.4	74.9	72.8	73.5	76.5	70.3	71.2	65.5	58.5	51.6	44.7	37.6	34.8	31.5	28.9	30.5	32.7	36.7	36.8	38.6	47.8	54.7	57.5	56.8	52.4	76.5			
3-Apr	56.9	59.4	62.1	61.6	62.6	63.7	63.4	61.2	58.8	53.8	45.6	39.3	33.7	32.1	30.9	32.3	29.4	29.6	33.2	38.6	43.6	45.1	48.3	52.2	47.4	63.7			
4-Apr	52.0	51.0	50.1	51.5	50.9	49.7	47.2	42.8	38.5	28.9	28.5	30.4	31.5	29.4	27.8	26.8	24.5	25.1	25.9	28.4	32.5	37.1	39.2	38.9	37.0	52.0			
5-Apr	37.8	42.8	51.1	57.7	58.0	53.5	41.9	38.6	32.9	30.8	24.6	22.5	20.9	20.3	20.0	19.6	22.0	24.0	26.5	28.3	31.5	34.6	36.2	36.7	33.9	58.0			
6-Apr	37.7	40.5	42.2	44.3	48.4	51.9	52.1	47.2	43.2	34.4	26.4	24.6	22.7	22.3	22.1	21.7	22.8	26.8	35.6	43.2	48.1	54.4	58.3	61.9	38.9	61.9			
7-Apr	65.8	70.0	71.1	72.3	72.5	71.6	69.2	62.4	50.5	39.3	33.1	29.4	27.3	26.7	26.7	29.0	32.1	36.0	40.2	44.9	49.4	52.4	56.6	63.7	49.7	72.5			
8-Apr	63.5	70.6	76.6	72.5	75.0	79.9	78.1	74.8	74.0	72.3	72.7	77.5	81.6	83.1	79.6	70.7	67.2	67.0	68.7	76.7	76.5	76.5	74.8	74.3	74.3	83.1			
9-Apr	74.9	73.3	75.0	66.4	60.3	57.5	57.7	53.6	48.6	42.5	37.4	31.6	29.7	29.4	26.9	22.1	20.5	22.8	25.7	29.7	32.4	31.9	32.8	34.2	42.4	75.0			
10-Apr	34.1	35.0	37.7	41.6	44.5	45.4	43.8	39.8	36.3	29.7	23.8	23.3	22.6	21.8	21.2	22.2	24.7	25.9	27.6	31.9	35.6	38.5	40.4	43.5	32.9	45.4			
11-Apr	44.0	47.1	50.3	52.9	53.6	55.8	59.2	74.0	54.5	39.3	35.0	33.6	33.7	32.7	27.1	22.8	25.3	30.5	35.7	40.3	43.8	48.0	50.1	51.0	43.3	74.0			
12-Apr	51.4	47.4	46.6	48.9	49.1	51.0	50.7	49.0	47.2	45.5	44.6	44.7	43.0	43.5	41.2	47.8	52.4	57.6	59.6	64.3	66.3	72.9	74.9	74.2	53.1	74.9			
13-Apr	79.3	80.3	84.8	86.7	91.1	92.3	88.2	68.8	50.4	36.2	24.6	24.2	22.5	21.9	23.2	24.2	25.0	28.4	27.8	34.6	37.1	39.1	39.9	43.5	48.9	92.3			
14-Apr	46.5	50.3	48.6	48.0	45.9	47.4	47.2	39.5	34.5	29.0	21.9	20.5	21.3	23.3	24.9	27.0	30.5	33.7	36.2	39.9	43.2	44.9	47.6	49.8	37.6	50.3			
15-Apr	50.9	51.7	52.2	52.6	55.4	55.7	53.0	50.8	40.9	34.4	35.6	32.1	29.0	24.5	23.5	24.6	24.7	25.7	26.2	27.6	28.9	31.4	34.6	44.2	37.9	55.7			
16-Apr	46.3	51.0	69.2	85.3	88.9	90.9	91.1	88.8	87.7	84.7	79.3	78.3	77.7	73.8	76.5	70.7	75.8	75.5	72.1	86.8	84.5	84.7	84.6	83.8	78.7	91.1			
17-Apr	83.1	84.0	83.1	81.1	84.3	85.1	80.8	82.2	81.7	81.2	80.2	78.0	77.6	75.2	72.4	71.9	68.4	64.9	67.0	70.7	74.6	76.9	78.9	80.2	77.6	85.1			
18-Apr	81.8	83.2	83.8	86.5	87.7	88.9	83.8	75.2	65.6	52.8	46.5	39.5	33.9	29.8	27.1	26.6	27.7	28.3	27.9	29.1	29.9	31.1	31.0	32.0	51.2	88.9			
19-Apr	32.4	32.0	40.1	78.5	89.8	84.0	62.1	52.9	43.7	44.1	45.8	53.6	37.3	32.5	29.6	27.8	26.7	26.2	26.2	37.0	42.6	49.1	54.6	62.3	46.3	89.8			
20-Apr	71.1	76.1	83.4	88.7	88.6	87.7	83.7	75.8	69.0	61.4	48.7	46.3	44.8	44.4	42.4	38.9	40.1	39.8	42.5	44.7	46.0	44.7	48.2	55.8	58.9	88.7			
21-Apr	58.3	61.0	61.1	63.9	64.8	65.3	62.0	53.7	43.4	38.8	35.7	32.0	28.8	26.2	25.2	24.6	24.4	24.4	26.5	30.4	37.0	43.3	47.3	51.1	42.9	65.3			
22-Apr	52.0	51.4	49.4	48.1	51.6	56.2	54.9	58.9	64.6	65.8	70.4	68.0	59.5	48.3	37.8	30.7	36.9	35.2	36.6	44.3	49.0	50.9	53.0	52.8	51.1	70.4			
23-Apr	51.5	50.8	53.4	54.4	53.6	50.5	47.9	46.4	50.0	45.4	34.2	30.4	33.0	31.4	34.0	31.1	31.8	35.1	37.3	46.9	57.5	58.6	54.7	55.3	44.8	58.6			
24-Apr	56.8	59.0	64.3	63.7	66.3	70.6	58.6	50.3	43.6	38.3	37.4	34.9	34.5	31.9	29.6	27.5	25.1	26.5	27.3	30.5	37.0	41.4	42.2	44.5	43.4	70.6			
25-Apr	44.9	46.1	46.4	47.0	48.3	48.5	45.8	37.9	30.2	25.1	23.4	22.4	21.8	21.0	20.2	19.3	19.3	19.7	21.2	24.6	28.5	30.7	34.0	36.2	31.8	48.5			
26-Apr	37.8	39.6	41.0	43.8	45.2	47.0	47.1	45.5	42.8	32.4	25.0	21.1	16.5	16.5	18.1	22.1	26.1	32.0	41.6	51.0	59.2	61.7	65.6	70.4	39.5	70.4			
27-Apr	74.8	75.2	77.5	83.0	85.6	78.3	66.5	55.6	48.0	42.9	38.5	35.5	37.1	39.2	36.2	34.7	33.6	34.7	37.3	42.6	48.9	53.1	55.3	56.4	52.9	85.6			
28-Apr	57.7	56.0	56.5	58.3	60.0	58.8	55.3	46.7	36.1	29.4	24.9	18.9	18.5	22.7	23.8	23.9	24.9	24.7	25.3	28.3	34.0	39.9	43.1	45.5	38.1	60.0			
29-Apr	53.7	56.6	59.5	60.6	58.8	60.4	56.9	50.9	46.9	43.3	39.2	42.0	47.0	46.3	47.2	47.8	52.5	61.5	87.8	79.2	70.8	70.6	74.5	73.6	57.8	87.8			
30-Apr	73.4	78.1	77.8	79.5	79.5	79.9	76.2	71.2	69.8	65.9	61.0	56.6	50.0	48.4	70.5	60.4	54.6	88.1	86.3	92.8	85.0	89.1	91.0	91.3	74.0	92.8			
57.3 59.0 61.4 64.2 65.7 65.8 62.4 58.1 52.6 46.9 42.2 40.0 38.0 36.6 36.2 35.1 36.1 39.1 41.9 46.4 49.4 52.0 54.1 56.3																													
83.1 84.0 84.8 88.7 91.1 92.3 91.1 88.8 87.7 86.6 80.2 78.3 81.6 83.1 79.6 74.4 81.3 88.1 87.8 92.8 85.0 89.1 91.0 91.3																													
Diurnal Average																													
Diurnal Maximum																													



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

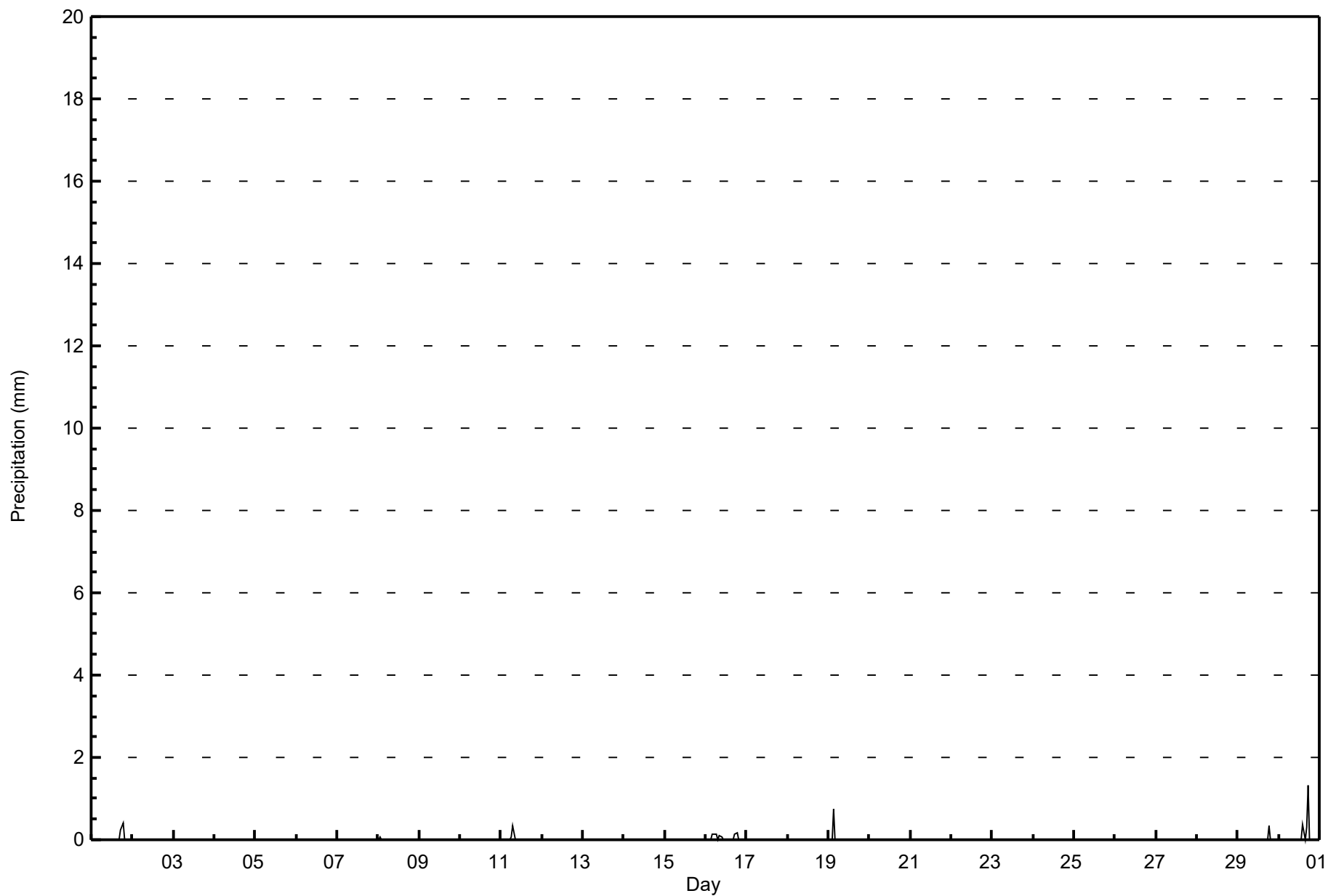
Stony Mountain - April 2025

Maximum Value: 1.3 mm on Apr 30 18:00																			Maximum Daily Total: 2.0 mm on Apr 30							Hours in Service: 720	
Minimum Value: 0.0 mm on Apr 1 01:00																			Minimum Daily Total: 0.0 mm on Apr 2							Hours of Data: 720	
Maximum Diurnal Total: 1.7 mm at hour 18																			Minimum Diurnal Total: 0.0 mm at hour 1							Hours of Missing Data: 0	
Monthly Total: 5.06 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 of Calibration: 0	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.7	0.4	
2-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	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	0.0	0.1	0.1	
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	
12-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.9	0.2	
17-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	
20-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	
30-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.3	
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Stony Mountain - April 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	716	99.44	99.44
0.4 - 0.5	2	0.28	99.72
0.6 - 0.7	1	0.14	99.86
0.8 - 1.4	1	0.14	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) - %

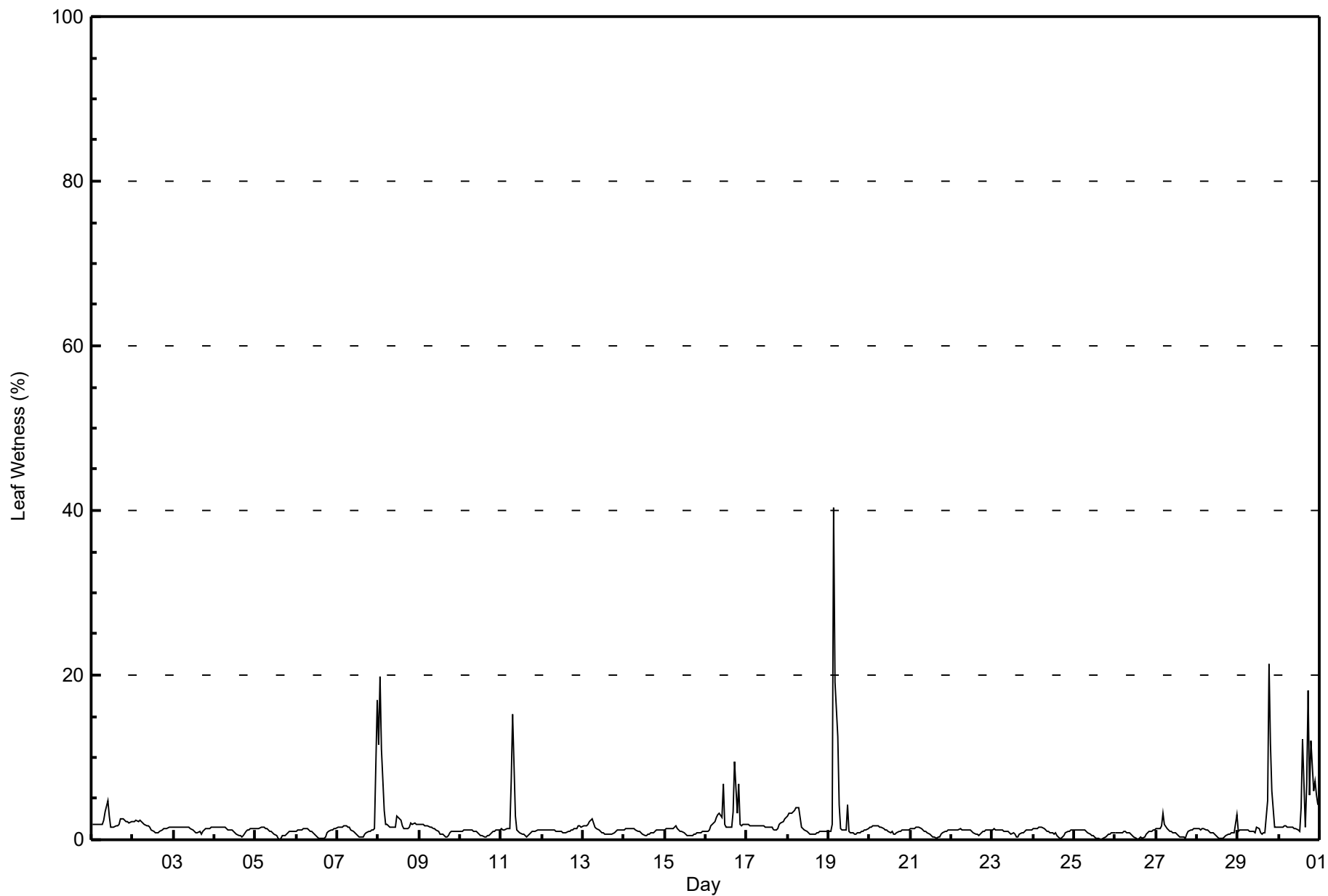
Stony Mountain - April 2025

Maximum Value: 40.3 % on Apr 19 04:00																			Maximum Daily Average: 4.2 % on Apr 30																			Hours in Service: 720	
Minimum Value: 0.0 % on Apr 26 14:00																			Minimum Daily Average: 0.7 % on Apr 25																			Hours of Data: 720	
Maximum Diurnal Average: 2.9 % at hour 4																			Minimum Diurnal Average: 0.7 % at hour 16																			Hours of Missing Data: 0	
Monthly Average: 1.59 %																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.6 Q ₁ = 0.9 Median = 1.2 Q ₃ = 1.5 P ₉₀ = 2.1 P ₉₉ = 12.4																			Hours of Calibration: 0	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
1-Apr	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.4	3.5	4.8	2.8	1.6	1.5	1.6	1.7	1.7	1.9	2.5	2.6	2.4	2.2	2.1	2.1	2.1	2.2	4.8													
2-Apr	2.2	2.3	2.3	2.2	2.3	2.1	2.0	1.9	1.7	1.6	1.5	1.3	1.1	0.9	0.8	0.9	1.0	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.6	2.3													
3-Apr	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.2	1.0	0.8	0.8	1.0	0.7	1.0	1.2	1.3	1.4	1.4	1.5	1.5	1.3	1.6													
4-Apr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.2	1.2	1.1	1.0	0.8	0.6	0.5	0.4	0.4	0.6	1.0	1.1	1.2	1.3	1.3	1.3	1.1	1.5													
5-Apr	1.3	1.3	1.4	1.5	1.5	1.5	1.4	1.3	1.0	1.0	0.8	0.7	0.4	0.2	0.1	0.2	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.0	0.9	1.5													
6-Apr	1.1	1.2	1.2	1.2	1.3	1.4	1.3	1.2	1.1	1.0	0.8	0.6	0.4	0.2	0.1	0.1	0.1	0.3	0.8	1.0	1.1	1.2	1.3	1.4	0.9	1.4													
7-Apr	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.2	1.1	0.9	0.7	0.5	0.4	0.3	0.4	0.7	0.9	1.0	1.1	1.2	1.2	1.4	17.0	1.8	17.0													
8-Apr	11.5	19.8	11.0	3.6	1.9	1.8	1.7	1.6	1.5	1.5	1.5	2.9	2.6	2.4	1.7	1.4	1.4	1.4	1.6	2.0	1.8	2.0	1.9	1.8	3.4	19.8													
9-Apr	1.8	1.8	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.2	0.9	0.7	0.7	0.6	0.4	0.3	0.5	0.8	1.0	1.0	1.0	1.0	1.1	1.2	1.9													
10-Apr	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.0	1.0	0.9	0.7	0.6	0.4	0.4	0.4	0.4	0.5	0.8	1.0	1.1	1.1	1.1	1.2	0.9	1.2													
11-Apr	1.4	1.2	1.3	1.3	1.3	1.4	7.2	15.2	3.0	1.1	1.0	0.9	0.7	0.6	0.6	0.4	0.6	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.9	15.2													
12-Apr	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.8	1.0	1.0	1.2	1.2	1.3	1.4	1.7	1.6	1.6	1.2	1.7													
13-Apr	1.6	1.6	1.7	1.8	2.2	2.5	2.0	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.8	0.6	0.6	0.7	0.9	1.0	1.1	1.2	1.2	1.2	1.3	2.5													
14-Apr	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.0	1.0	0.8	0.7	0.6	0.5	0.7	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.0	1.3													
15-Apr	1.3	1.3	1.3	1.3	1.3	1.3	1.7	1.3	1.1	1.1	1.0	0.8	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.7													
16-Apr	1.0	1.1	1.3	1.7	1.9	2.2	2.7	3.0	3.2	2.8	6.7	1.9	1.6	1.5	1.6	1.5	3.4	9.5	3.2	6.9	1.9	1.7	1.8	1.8	2.7	9.5													
17-Apr	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.2	1.1	1.4	1.8	2.1	2.2	2.5	2.7	1.7	2.7													
18-Apr	2.9	3.2	3.2	3.4	3.6	3.9	3.8	2.7	1.5	1.4	1.2	1.0	0.9	0.7	0.7	0.6	0.6	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.7	3.9													
19-Apr	1.0	1.0	1.9	40.3	19.1	12.5	4.2	1.4	1.2	1.2	1.2	4.3	1.1	0.9	0.8	0.6	0.7	0.8	0.8	1.0	1.1	1.1	1.2	1.3	4.2	40.3													
20-Apr	1.5	1.5	1.6	1.7	1.7	1.7	1.6	1.5	1.3	1.2	1.1	1.1	0.9	0.9	0.7	0.6	0.9	1.0	1.0	1.1	1.2	1.3	1.2	1.3	1.2	1.7													
21-Apr	1.3	1.4	1.4	1.5	1.5	1.5	1.4	1.3	1.1	1.1	0.9	0.7	0.5	0.3	0.4	0.2	0.3	0.4	0.7	0.9	1.0	1.1	1.1	1.2	1.0	1.5													
22-Apr	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.0	0.8	0.7	0.6	0.6	0.7	0.9	1.0	1.1	1.2	1.2	1.2	1.1	1.3													
23-Apr	1.2	1.4	1.2	1.2	1.3	1.2	1.2	1.1	1.1	0.9	0.8	0.7	0.9	0.6	0.3	0.3	0.7	0.8	0.9	1.0	1.2	1.2	1.2	1.2	1.0	1.4													
24-Apr	1.3	1.3	1.4	1.5	1.6	1.6	1.4	1.2	1.0	1.0	0.9	0.8	0.7	0.8	0.5	0.2	0.2	0.4	0.6	0.8	1.0	1.1	1.1	1.2	1.0	1.6													
25-Apr	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.0	0.8	0.7	0.6	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.4	0.6	0.7	0.7	0.8	0.8	0.7	1.2													
26-Apr	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.9	0.7	0.5	0.3	0.1	0.0	0.2	0.4	0.2	0.4	0.8	0.9	1.1	1.1	1.1	1.2	0.7	1.2													
27-Apr	1.3	1.3	1.4	1.6	3.2	1.8	1.4	1.2	1.1	1.1	0.9	0.8	0.6	0.6	0.4	0.3	0.3	0.2	0.6	1.0	1.1	1.2	1.3	1.3	1.1	3.2													
28-Apr	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1	0.9	0.8	0.6	0.5	0.3	0.2	0.2	0.2	0.4	0.6	0.6	0.7	0.9	0.8	0.9	3.0	0.9	3.0													
29-Apr	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.0	1.0	0.9	1.6	1.3	0.9	0.8	0.8	0.9	4.7	21.4	11.8	5.9	1.5	1.5	1.5	2.8	21.4													
30-Apr	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.3	1.2	1.1	3.9	12.2	1.6	6.7	18.1	5.4	12.1	5.9	7.1	5.4	4.3	4.2	18.1													
1.8 2.1 1.8 2.9 2.2 2.0 1.9 1.9 1.4 1.3 1.3 1.1 0.9 0.8 1.0 0.7 0.9 1.8 1.9 2.0 1.5 1.5 1.5 2.0																									Diurnal Average														
11.5 19.8 11.0 40.3 19.1 12.5 7.2 15.2 3.5 4.8 6.7 4.3 2.6 3.9 12.2 1.7 6.7 18.1 21.4 12.1 5.9 7.1 5.4 17.0																									Diurnal Maximum														



Wood Buffalo Environmental Association
Hourly Averages

Leaf Wetness (LW) - %
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Leaf Wetness (LW) - %
Stony Mountain - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	35	4.86	4.86
0.4 - 0.5	34	4.72	9.58
0.6 - 0.7	62	8.61	18.19
0.8 - 1.4	373	51.81	70.00
1.5 - 10	185	25.69	95.69
> 10	13	1.81	97.50

Total Number of Valid Hours: 720

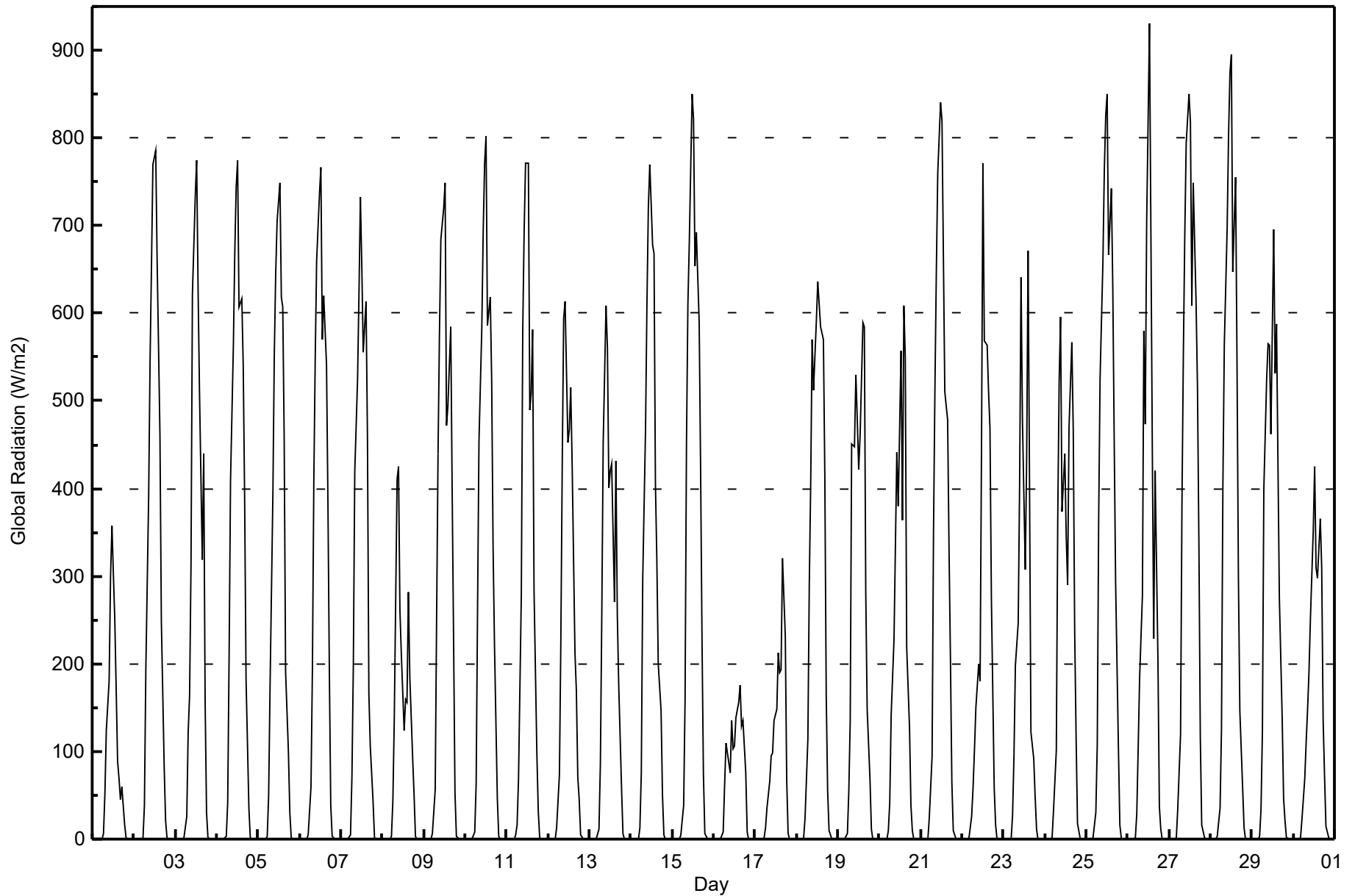
Total Number of Hours: 720

Maximum Value: 931.1 W/m2 on Apr 26 13:00																				Maximum Daily Average: 300.0 W/m2 on Apr 27										Hours in Service: 720	
Minimum Value: 0.0 W/m2 on Apr 2 21:00																				Minimum Daily Average: 63.2 W/m2 on Apr 16										Hours of Data: 720	
Maximum Diurnal Average: 612.2 W/m2 at hour 13																				Minimum Diurnal Average: 0.2 W/m2 at hour 1										Hours of Missing Data: 0	
Monthly Average: 203.25 W/m2																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 53.6 Q ₃ = 411.7 P ₉₀ = 617.1 P ₉₉ = 825.2										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	0.0	0.0	0.0	0.0	0.0	0.3	7.0	51.2	124.6	180.6	299.0	357.1	302.1	251.5	89.1	69.0	44.9	59.1	16.0	1.4	0.6	0.0	0.0	0.0	77.2	357.1					
2-Apr	0.1	0.2	0.1	0.4	0.3	1.8	38.6	193.5	390.8	545.9	654.5	769.4	786.4	659.4	561.5	460.5	247.9	82.0	20.6	1.1	0.0	0.0	0.0	0.0	225.6	786.4					
3-Apr	0.0	0.0	0.0	0.0	0.0	1.4	25.2	121.9	164.6	312.3	622.2	732.9	774.5	630.0	512.1	319.2	438.9	158.3	31.3	1.6	0.2	0.2	0.3	0.1	202.0	774.5					
4-Apr	0.2	0.7	0.8	0.8	0.6	3.2	42.1	210.4	409.3	561.5	668.8	743.2	773.8	607.0	617.1	539.1	386.5	182.6	35.3	1.8	0.2	0.7	0.8	0.8	241.1	773.8					
5-Apr	0.7	0.4	0.6	0.5	0.5	3.6	49.8	174.1	392.7	551.6	645.3	704.7	749.1	617.6	606.5	459.0	192.1	99.4	31.1	2.0	0.0	0.0	0.1	0.0	220.1	749.1					
6-Apr	0.0	0.1	0.1	0.0	0.1	4.5	58.9	193.5	407.8	549.7	660.3	735.2	765.8	569.8	620.3	541.0	385.6	191.4	38.3	2.7	0.1	0.3	0.2	0.2	238.6	765.8					
7-Apr	0.1	0.1	0.0	0.1	0.1	5.4	70.9	197.3	418.7	525.7	622.9	732.5	653.2	556.0	612.9	458.2	166.2	106.5	42.6	1.7	0.1	0.1	0.1	0.0	215.5	732.5					
8-Apr	0.1	0.0	0.1	0.2	0.5	3.4	42.9	137.1	410.7	425.6	260.4	211.6	123.7	160.1	156.4	282.2	184.9	92.9	51.8	2.5	0.1	0.3	0.4	0.2	106.2	425.6					
9-Apr	0.1	0.2	0.5	0.2	0.1	6.0	56.6	254.5	439.6	576.6	684.1	720.3	749.3	471.5	495.0	584.5	399.6	230.7	52.9	4.0	0.2	0.2	0.2	0.1	238.6	749.3					
10-Apr	0.1	0.1	0.1	0.0	0.1	8.4	62.2	264.1	453.5	583.6	694.0	771.9	801.5	586.1	618.5	522.7	332.5	221.0	46.7	3.8	0.3	0.1	0.0	0.1	248.8	801.5					
11-Apr	0.0	0.0	0.0	0.0	0.1	5.0	15.9	67.4	278.3	579.2	693.4	770.6	771.5	489.2	508.2	582.0	285.3	97.5	31.5	1.8	0.1	0.1	0.1	0.3	215.7	771.5					
12-Apr	0.3	0.2	0.1	0.3	0.2	12.9	74.3	227.7	430.3	594.5	612.8	452.4	466.2	515.6	427.8	212.6	168.9	70.4	45.3	5.1	0.1	0.3	0.3	0.2	179.9	612.8					
13-Apr	0.0	0.0	0.1	0.1	0.2	11.1	84.7	253.9	452.1	608.2	560.8	401.1	420.3	428.1	270.6	430.8	256.3	175.1	57.9	6.7	0.3	0.1	0.1	0.0	184.1	608.2					
14-Apr	0.2	0.4	0.8	0.7	0.7	13.2	75.5	295.8	469.3	611.6	721.4	769.7	678.2	668.7	405.6	318.4	199.2	145.8	49.5	5.3	0.1	0.1	0.2	0.3	226.3	769.7					
15-Apr	0.2	0.2	0.0	0.1	0.1	4.8	38.2	159.6	450.3	610.3	681.8	850.6	820.9	653.2	692.6	590.1	422.8	229.0	74.5	7.0	0.3	0.3	0.1	0.2	262.0	850.6					
16-Apr	0.1	0.1	0.0	0.1	0.3	8.4	61.5	110.1	98.2	76.2	134.7	102.3	106.1	138.1	155.8	175.8	129.2	135.7	75.5	8.2	0.4	0.3	0.1	0.1	63.2	175.8					
17-Apr	0.1	0.2	0.1	0.1	0.1	2.3	13.6	35.4	66.6	95.1	98.3	135.5	148.7	212.5	190.0	193.2	319.7	232.5	68.0	7.2	0.4	0.6	0.5	0.5	75.9	319.7					
18-Apr	0.6	0.4	0.5	0.6	0.8	23.7	114.8	291.9	405.5	570.1	511.9	591.5	635.8	609.6	585.3	570.5	414.8	163.6	54.4	8.9	0.3	0.3	0.3	0.2	231.5	635.8					
19-Apr	0.1	0.3	0.1	0.1	0.5	7.0	55.3	135.5	450.4	448.2	529.2	478.9	421.7	459.9	589.1	584.0	282.2	147.7	67.6	11.9	0.3	0.1	0.0	0.0	194.6	589.1					
20-Apr	0.1	0.0	0.0	0.0	0.4	8.9	42.7	142.0	227.4	332.6	441.5	380.7	557.2	363.7	608.7	549.5	218.5	127.7	39.0	10.1	0.1	0.0	0.0	0.0	168.8	608.7					
21-Apr	0.1	0.1	0.1	0.1	0.7	23.5	94.7	351.1	513.1	646.8	759.9	841.0	819.7	665.2	509.9	478.2	330.6	205.2	64.6	9.9	0.7	0.7	0.7	0.4	263.2	841.0					
22-Apr	0.5	0.4	0.1	0.1	0.7	25.6	58.1	101.2	150.4	199.3	180.1	445.9	771.8	568.6	562.9	510.8	468.2	275.0	58.2	15.5	0.6	0.5	0.4	0.3	183.1	771.8					
23-Apr	0.1	0.3	0.2	0.2	0.8	27.3	94.5	197.9	246.3	406.6	640.1	477.6	307.6	435.9	671.6	408.3	122.9	91.3	48.1	10.7	0.2	0.0	0.0	0.1	174.5	671.6					
24-Apr	0.0	0.1	0.1	0.3	1.7	31.8	102.2	363.3	522.4	595.6	372.9	440.2	346.5	290.2	470.5	567.5	464.7	239.0	117.3	17.3	0.8	0.6	0.6	0.7	206.1	595.6					
25-Apr	0.7	0.7	0.7	0.7	2.0	30.0	108.2	366.3	526.4	658.4	762.8	826.2	849.5	667.0	742.8	629.1	455.7	293.4	102.9	15.4	0.9	0.7	0.7	0.7	293.4	849.5					
26-Apr	0.7	0.6	0.6	0.4	1.5	28.2	105.2	184.3	278.2	578.9	472.8	703.1	931.1	690.8	446.0	228.8	419.7	203.3	36.9	11.1	0.3	0.0	0.0	0.0	221.8	931.1					
27-Apr	0.0	0.0	0.0	0.1	2.0	34.0	119.6	381.5	553.8	688.8	793.9	850.1	818.0	607.9	748.7	612.4	515.5	338.0	116.7	16.5	0.9	0.3	0.5	0.7	300.0	850.1					
28-Apr	0.8	0.8	0.8	0.7	3.2	35.9	126.2	404.0	562.9	695.1	801.7	874.7	895.7	646.7	755.1	544.2	298.7	146.9	58.6	13.1	0.5	0.2	0.2	0.2	286.1	895.7					
29-Apr	0.2	0.4	0.6	0.4	2.7	34.5	123.9	399.4	524.5	564.9	563.7	462.0	695.7	531.5	588.0	429.5	275.8	137.9	47.3	21.6	1.0	0.3	0.1	0.1	225.3	695.7					
30-Apr	0.1	0.2	0.2	0.2	2.0	22.9	69.8	110.6	147.6	192.0	252.0	350.9	424.9	309.4	298.4	366.1	309.7	136.4	72.2	15.2	0.9	0.2	0.2	0.2	128.4	424.9					
																									Diurnal Average						
																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Global Radiation (GR) - W/m2
Stony Mountain - April 2025

Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	322	44.72	44.72
21 - 100	76	10.56	55.28
101 - 300	104	14.44	69.72
301 - 600	134	18.61	88.33
601 - 900	83	11.53	99.86
> 900	1	0.14	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

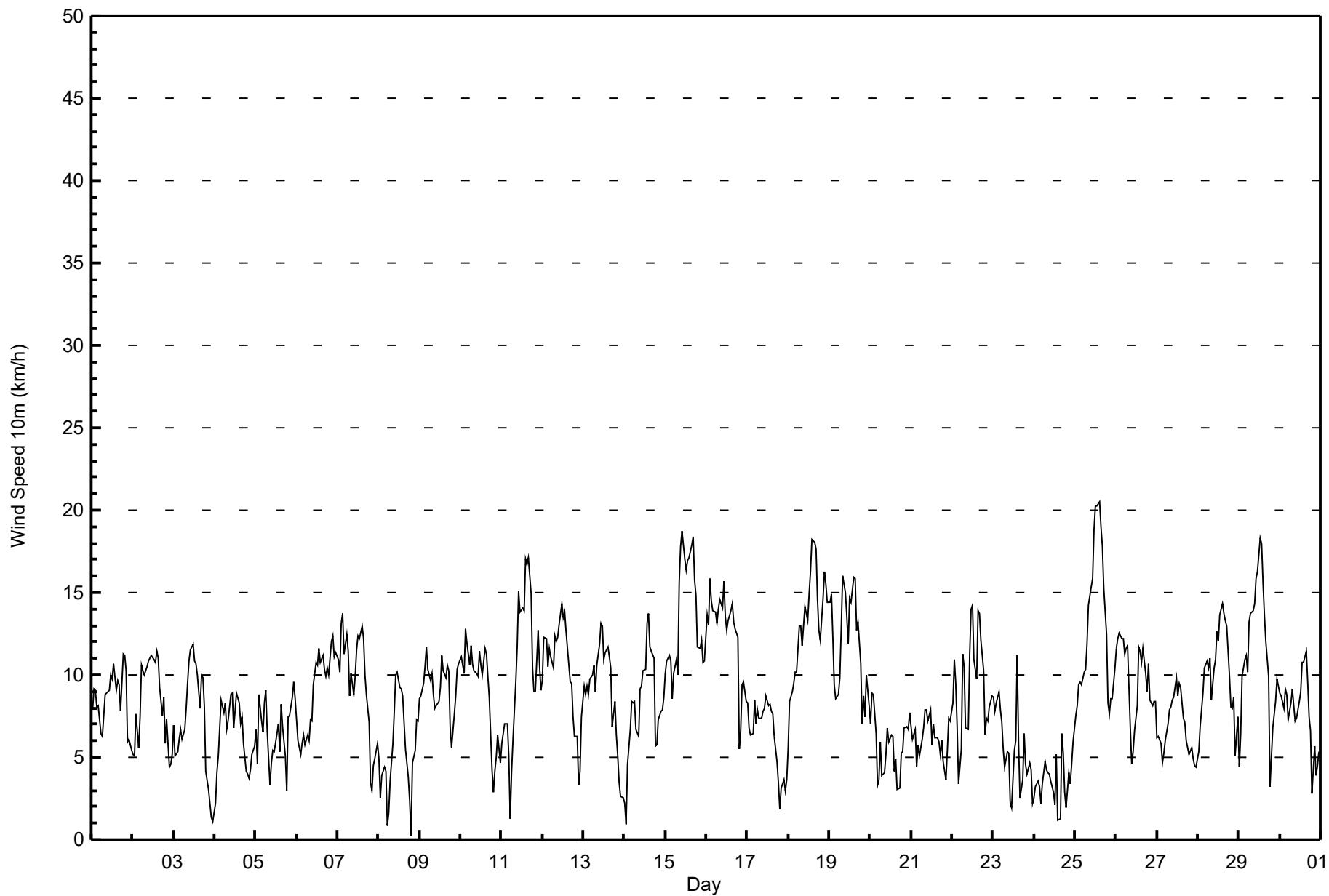
Stony Mountain - April 2025

Maximum Speed: 21 km/h on Apr 25 15:00										Maximum Daily Speed Average: 13.1 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 8 20:00										Minimum Daily Speed Average: 1.2 km/h on Apr 23										Hours of Data: 720						
Maximum Diurnal Speed Average: 6.0 km/h at hour 15										Minimum Diurnal Speed Average: 1.6 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 4.2 km/h 250.4 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 6 Median = 9 Q ₃ = 11 P ₉₀ = 14 P ₉₉ = 18										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	S8	S9	S9	S8	S8	SSE6	S6	S8	SSE9	S9	SSE9	S10	SSW10	S11	SSW9	SSW10	SSW9	SSW8	WNW11	NW11	NW10	NW6	NW6	NW5	SSW5.2	WNW11
2-Apr	WNW5	W5	W8	WSW6	WSW7	W11	W10	W10	WNW10	WNW11	WNW11	W11	W11	WNW11	WNW11	NW11	NW9	NW8	NW9	NNW6	NNE7	NNW4	NNW5	NW5	WNW7.5	WNW11
3-Apr	NW7	NW5	WNW5	NW6	NW7	NW6	NW7	NW8	NW10	NW11	NW12	NW12	NNW11	NNW11	NNW10	NNW8	NW10	NW10	NW8	NNW4	NW3	NNW2	NNE1	NNW1	NW7.2	NW12
4-Apr	W2	SW4	SW5	SW7	SSW8	SW8	SW8	SW7	SW7	W9	W9	WNW7	WNW8	W9	W8	W7	NW7	NNW6	N4	NNE4	E4	SE4	S5	SSW6	WSW4.0	W9
5-Apr	SW7	SW5	SW9	SSW7	SW7	WSW8	WSW9	W7	W3	SSE5	SSE5	SSW5	W6	W7	WNW5	WNW8	NW7	NW5	NNW3	NNE7	ENE8	E9	ESE10	ESE9	SW2.2	ESE10
6-Apr	ESE7	E6	E5	ENE6	E6	E6	E6	E6	E7	E7	SE9	SE11	SE11	SE12	SSE11	SSE11	SSE10	SSE10	SE10	SSE10	SSE12	SSE12	SSE11	SSE11	SE8.0	SSE12
7-Apr	SSE11	SSE10	SSE13	SSE14	SSE11	SSE12	SSE11	SSE9	SE10	ESE9	SE10	SE12	SE12	SE12	SSE13	SSE12	S10	SSW9	SW7	SW3	SSW3	SSW4	S5	SE6	SSE8.9	SSE14
8-Apr	SSE5	SSE3	S4	SSW4	SW4	N1	SSW2	SW4	NW6	W8	W10	WNW10	WNW9	WNW9	NW9	NNW7	NNE6	NE4	ENE2	SSE0	WSW5	W5	W7	W7	WNW3.4	WNW10
9-Apr	W9	WSW9	WSW10	W11	W12	W10	W10	WNW10	WNW9	WNW8	WNW8	NW8	WNW9	WNW11	WNW10	W10	WNW11	WNW10	WNW7	W6	W8	W9	W10	W11	W9.0	W12
10-Apr	W11	W11	W10	W13	W12	W11	W12	WSW11	W10	W10	W10	WSW11	SW11	WSW10	WSW12	SW11	SSW10	SSW9	SSW4	SE3	SE4	SE5	SE6	SSE5	WSW7.3	W13
11-Apr	SE6	SE6	ESE7	ESE7	SE5	ENE1	WNW4	WNW6	WNW10	WNW12	WNW15	WNW14	WNW14	W14	W17	W17	W17	W15	W10	W9	W9	W13	W11	WSW9	W7.6	W17
12-Apr	WSW10	WSW12	W12	WSW10	W12	WSW11	WSW10	W12	W12	W12	W13	W14	W13	WNW14	WNW13	NW11	NW10	NW10	WNW7	WNW6	WNW6	WNW3	W4	W7	W9.7	W14
13-Apr	WNW9	WNW9	W9	WNW9	W10	W10	W11	W9	WNW11	WNW12	NW13	NW13	NW11	NW11	WNW12	NW11	NW10	NNW7	WNW8	W6	W5	NW3	NNW3	NW3	WNW8.6	NW13
14-Apr	NNW2	SW1	SSW5	SSW7	SW8	SW8	SW8	SW7	SW6	SW9	WSW9	SW10	SSW10	SSW13	SSW14	SSW12	SSW11	SSW11	S6	S6	S7	S8	S8	S9	SSW7.6	SSW14
15-Apr	SSW10	SSW11	SSW11	SSW11	SSW9	SSW10	SW11	SW10	WSW16	W18	W19	W17	W16	WNW17	W17	W18	W18	WNW16	W15	W12	WSW12	WSW12	W11	W11	WSW11.7	W19
16-Apr	W14	WNW13	WNW16	W14	W14	WNW14	WNW13	WNW14	NW15	NW14	NW16	NW14	NW13	NW13	NW14	NW14	NW13	NW13	NW12	NNW6	NNW7	NW9	NW10	NW8	NW12.1	WNW16
17-Apr	NW8	NW7	NW6	NNW6	N8	N7	NNW8	NNW7	NNW7	N8	N8	NNW9	NNW8	NNW8	NNW8	NNW8	N6	NNW5	N3	NE2	ESE3	SE4	SSE3	S4	NNW5.1	NNW9
18-Apr	SSE6	SSE8	S9	S10	S10	S10	S13	S13	S12	S13	S14	S13	S15	SSW16	S18	S18	S18	S15	S13	S12	S15	S16	S16	S14	S13.1	S18
19-Apr	S14	SSW15	WSW12	W9	SSW9	SW9	WSW10	W13	W16	WNW15	WNW14	WNW12	WNW15	W14	WNW16	WNW16	W13	W13	W11	WNW7	W9	W7	W10	W8	W10.4	WNW16
20-Apr	W7	W9	W9	NW6	NNW3	NW4	NNE6	N4	N4	NW5	NW7	NNW6	N6	NNW6	WNW4	WNW5	NNE3	NNE3	ENE5	NE5	NE7	NE7	E7	ESE8	NNW3.1	W9
21-Apr	ESE7	E6	ESE7	ESE4	ESE6	SE5	ESE6	ESE7	ESE8	E8	E7	ENE8	ENE6	ENE7	ENE6	ENE6	ESE6	ESE5	ESE6	SE5	SSE4	S5	S7	S7	ESE5.2	ESE8
22-Apr	S8	SSW11	S10	SSW7	S3	S6	SSW11	SSW11	WSW7	SSW7	SSW11	SW14	SW14	WSW11	WSW10	SSW14	SSW14	SW12	SW10	SSW6	SSW7	SSW7	SSW8	SSW9	SSW9.1	SW14
23-Apr	SW9	SSW8	SSW8	SSW9	SW8	WSW7	WNW6	NW4	S5	SSE5	SW2	ENE2	NNW5	NNW6	ENE11	ENE6	N3	NE4	NE6	NW5	NW4	NW5	N4	NW2	W1.2	ENE11
24-Apr	NNW3	NW3	WNW4	W3	WSW2	SW3	WSW5	W4	NW4	NW4	NW4	WNW3	N2	SSW5	NW1	W1	WSW6	W5	SW3	E2	ESE4	SE3	S5	S6	WSW1.9	WSW6
25-Apr	S8	S8	S9	S10	S9	S10	S10	S12	S14	S15	S16	SSW19	S20	S20	S21	S19	S18	S15	S12	S8	S8	S9	S9	S10	S12.8	S21
26-Apr	S12	S12	S13	SSW12	SSW12	SSW11	SSW12	SSW12	SSW7	WSW5	NW5	WNW7	WNW8	WNW12	WNW11	NW11	NW12	NNW10	NNW9	N11	N8	N8	N8	N8	W4.0	S13
27-Apr	NNW6	NNW6	NNW6	NNW5	NW5	NW6	NNW7	NNW8	NNW8	NNW8	NNW9	NNW10	NNW9	NNW10	NNW9	NNW7	NNW7	N6	NNE6	NE5	E6	E5	SE5	SSE4	NNW5.3	NW10
28-Apr	S5	S7	SSW8	SSW9	SSW10	SSW11	SSW10	SSW11	SSW8	S10	SSE11	SSW13	S12	SSE14	S14	S14	S13	S13	S10	SSW8	SSW8	SSW9	S5	SSW7	S9.8	S14
29-Apr	SW4	SSW6	SW10	SW11	WSW11	SW10	WSW13	W14	WNW14	W14	W16	W16	W18	WNW18	WNW16	NW14	NW12	NNW10	NNW3	W5	W7	W8	W10	W9	W9.8	W18
30-Apr	W9	W9	W8	W9	WSW9	SW7	WSW8	W9	W8	W7	W7	WSW8	W9	WNW11	W11	W11	NW10	NNE7	NNE7	N3	NW6	NW4	NW4	NNW5	WNW6.4	W11
SW3.9 SW4.3 SW5.1 SW5.1 SW5.0 SW5.1WSW5.3WSW5.2 W5.0 W5.0 W5.3 W5.6 W5.6 W5.8 W6.0 W5.6 W4.9 W3.8 W2.7 W1.6WSW1.6 SW2.3 SW2.4 SW3.2																								Diurnal Average		
S14 SSW15WNW16 W14 W14WNW14WSW13WNW14WNW16 W18 W19 SSW19 S20 S20 S21 S19 W18WNW16 W15 S12 S15 S16 S16 S14																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Stony Mountain - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	141	19.58	19.58
6 - 11	424	58.89	78.47
12 - 19	152	21.11	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: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Stony Mountain - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	4	5	4	4	4	10	10	10	10	9	4	11	9	22	16	141
6 - 11	11	7	3	9	13	15	10	18	42	52	26	25	71	39	44	39	424
12 - 19	0	0	0	0	0	0	4	8	34	13	3	7	39	26	18	0	152
20 - 28	0	0	0	0	0	0	0	0	3	0	0	0	0	0	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	20	11	8	13	17	19	24	36	89	75	38	36	121	74	84	55	720

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wind Speed 10m (WS10) - km/h

Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 12:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 0 km/h on Apr 14 00:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	3	3	3	3	2	2	3	3	3	3	3	4	4	3	4	3	2	4	4	4	3	2	2	4
2-Apr	2	2	3	2	3	4	4	4	4	4	5	5	5	5	5	4	4	3	4	3	3	2	2	2	5
3-Apr	2	2	2	2	2	3	3	3	4	4	5	5	5	4	4	4	5	4	3	2	1	1	1	1	5
4-Apr	1	1	1	2	2	2	2	2	2	3	3	3	4	4	4	4	3	2	1	1	1	1	1	1	4
5-Apr	2	3	2	2	2	3	3	2	2	2	3	3	4	4	3	3	3	2	1	3	2	3	3	3	4
6-Apr	2	2	1	2	2	2	2	2	3	3	4	4	5	5	4	4	4	4	4	4	4	4	4	4	5
7-Apr	3	4	5	5	4	4	4	3	4	3	3	5	5	5	5	5	4	3	3	1	1	1	2	2	5
8-Apr	2	1	1	1	2	1	1	1	2	3	4	4	3	3	3	3	2	2	1	1	2	2	2	2	4
9-Apr	3	3	3	4	4	4	3	3	3	3	3	3	4	4	4	4	4	4	3	2	3	3	4	3	4
10-Apr	4	4	4	5	4	4	4	4	4	4	4	5	4	4	5	5	4	3	2	1	1	2	2	2	5
11-Apr	3	2	2	3	2	1	3	2	3	5	6	6	5	5	7	7	7	6	5	4	3	5	4	3	7
12-Apr	3	5	5	4	5	4	4	5	5	5	5	6	5	5	6	4	4	4	3	2	2	2	1	3	6
13-Apr	3	3	3	3	3	3	4	3	4	5	5	5	5	5	5	5	5	3	3	2	1	1	1	0	5
14-Apr	1	2	1	2	2	3	3	2	2	3	4	4	4	5	5	4	4	4	2	2	2	2	2	2	5
15-Apr	3	3	3	4	2	3	4	3	7	8	7	8	7	7	7	7	8	6	6	4	5	5	4	5	8
16-Apr	6	6	6	6	5	5	5	5	5	5	6	5	5	5	5	5	6	6	6	2	3	4	4	3	6
17-Apr	3	2	3	3	3	3	4	4	3	3	4	4	4	3	3	3	3	2	1	1	1	1	1	1	4
18-Apr	2	3	2	3	3	3	4	4	4	5	5	5	5	6	6	7	6	6	5	4	5	6	5	4	7
19-Apr	5	4	5	5	3	3	4	5	7	6	5	5	6	6	6	6	5	5	4	3	4	3	4	3	7
20-Apr	3	3	3	3	1	1	3	1	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	3	3
21-Apr	3	2	2	1	1	1	2	2	3	3	3	3	4	4	3	3	2	2	2	2	1	2	2	2	4
22-Apr	2	3	3	2	2	3	3	3	3	3	5	5	5	5	5	5	5	4	4	2	2	2	2	2	5
23-Apr	3	3	2	2	2	3	2	1	2	2	3	2	2	3	4	3	2	4	2	2	1	1	2	1	4
24-Apr	1	1	1	1	1	1	2	2	2	2	2	3	2	2	3	2	3	2	2	1	1	1	1	1	3
25-Apr	2	2	3	2	2	3	3	4	5	6	6	7	8	7	7	7	7	6	5	3	2	2	2	3	8
26-Apr	3	3	3	3	4	3	4	4	3	3	2	3	4	5	5	5	5	4	4	4	4	3	3	4	5
27-Apr	3	3	2	2	2	2	3	3	3	3	3	4	4	4	4	3	3	3	2	2	2	1	1	1	4
28-Apr	2	2	2	2	3	3	3	3	3	4	4	5	5	5	6	5	5	5	4	4	4	5	2	3	6
29-Apr	2	4	3	4	4	4	5	5	6	6	7	7	7	8	6	5	5	5	3	2	2	3	3	3	8
30-Apr	3	3	3	3	3	2	3	3	3	3	3	3	4	4	4	4	4	3	2	2	2	1	2	3	4
6 6 6 6 5 5 5 5 7 8 7 8 8 8 7 7 8 6 6 4 5 6 5 5																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

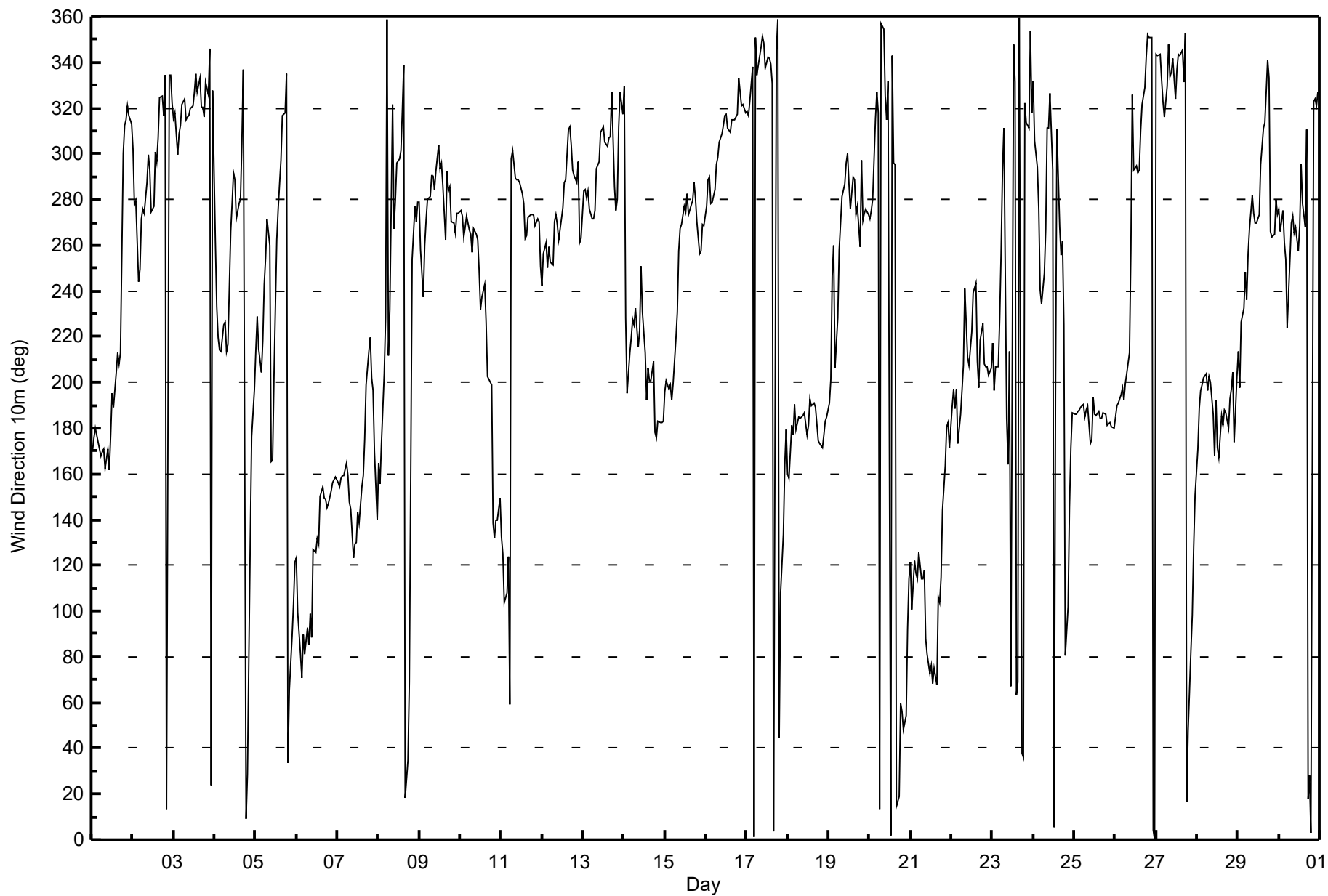
Stony Mountain - April 2025

Direction of Maximum Speed: 187 deg on Apr 25 15:00																				Hours in Service:		720				
Direction of Maximum Daily Speed Average: 182.2 deg on Apr 18																				Hours of Data:		720				
Direction of Minimum Speed: 159 deg on Apr 8 20:00										Direction of Minimum Daily Speed Average: 1.2 deg on Apr 23										Hours of Missing Data:		0				
Monthly Average Direction: 250.4 deg																				Percent Operational Time:		100.0				
Day	Hourly Period Ending At (MST)																							Daily Average		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	171	176	180	177	174	168	170	171	162	171	162	177	195	189	205	213	208	213	300	313	315	321	316	313		201.1
2-Apr	302	278	279	244	249	272	276	274	288	299	293	274	277	301	297	307	325	325	317	334	13	334	334	322		295.7
3-Apr	315	318	299	309	313	321	324	315	316	316	320	321	327	335	327	333	321	320	316	332	326	346	24	328		321.4
4-Apr	262	233	219	214	213	225	226	214	217	266	278	291	288	271	278	280	304	337	9	29	80	131	176	197		252.5
5-Apr	214	229	215	204	218	243	254	272	260	165	166	203	262	276	287	297	317	318	335	33	65	89	103	122		236.1
6-Apr	123	99	81	71	90	81	93	86	99	89	127	126	132	130	150	154	149	149	145	147	152	156	157	158		130.6
7-Apr	156	155	158	159	159	164	159	148	144	123	129	130	144	138	154	159	175	199	214	219	202	196	170	140		156.9
8-Apr	165	156	173	204	228	359	212	232	322	267	280	296	298	301	319	339	19	35	69	159	254	277	270	279		285.5
9-Apr	279	258	238	260	271	280	281	290	290	284	292	304	294	296	286	262	292	284	285	270	270	265	274	274		278.4
10-Apr	275	273	264	268	273	267	265	257	267	265	262	249	232	237	243	226	203	202	199	138	132	139	140	149		244.9
11-Apr	132	125	104	108	124	59	298	301	289	289	289	287	282	278	263	264	272	274	274	273	269	271	270	251		272.6
12-Apr	242	256	261	250	259	253	251	270	273	269	263	271	277	287	289	311	312	304	293	290	288	297	261	263		273.2
13-Apr	284	284	281	284	276	272	272	275	293	297	309	311	312	305	303	307	307	327	285	275	280	312	327	318		294.5
14-Apr	330	228	195	213	220	228	225	232	215	223	251	230	213	192	206	201	201	209	178	175	183	183	182	183		207.9
15-Apr	196	201	197	199	192	200	219	231	258	267	269	277	275	282	273	278	279	287	281	270	257	258	269	269		257.1
16-Apr	277	289	290	279	279	284	296	299	305	309	313	317	317	311	309	315	315	315	318	333	327	321	321	318		304.5
17-Apr	319	316	323	338	1	351	334	338	347	352	349	338	342	342	339	331	4	346	359	44	108	134	164	179		343.1
18-Apr	160	158	182	177	190	179	185	184	185	186	187	177	181	193	190	191	189	182	175	173	172	177	183	185		182.2
19-Apr	191	201	247	260	206	228	258	270	281	287	296	300	287	276	290	288	273	277	259	297	271	274	276	273		268.0
20-Apr	272	275	280	316	327	318	14	357	355	325	315	332	2	343	296	295	15	19	60	56	48	54	92	114		346.4
21-Apr	122	101	122	116	114	126	114	114	118	88	81	73	76	68	75	68	106	103	115	144	163	181	182	171		111.4
22-Apr	190	197	189	197	173	186	196	207	241	211	208	215	222	239	244	210	197	218	226	208	207	207	203	206		209.8
23-Apr	217	197	207	207	228	256	292	311	184	164	214	67	348	331	64	69	360	38	36	322	314	311	354	318		270.7
24-Apr	332	306	294	276	240	234	248	267	311	311	326	293	5	194	311	268	256	262	225	80	102	145	172	187		256.6
25-Apr	186	186	187	188	189	190	185	188	190	173	175	194	186	185	187	184	184	187	186	181	182	182	180	180		185.0
26-Apr	185	190	191	195	198	192	199	204	213	257	326	293	295	292	293	310	321	329	342	352	351	351	4	0		268.5
27-Apr	343	343	343	333	323	316	329	348	334	335	342	324	337	344	343	345	331	353	16	47	82	98	128	151		346.7
28-Apr	171	188	197	199	202	204	197	203	200	186	168	192	171	167	185	181	188	187	180	193	197	204	174	203		188.6
29-Apr	214	198	226	232	249	236	256	267	282	274	270	269	273	295	303	311	313	341	333	266	263	265	280	273		273.5
30-Apr	276	266	275	261	254	224	254	270	273	265	268	258	268	295	278	268	311	18	28	3	323	324	321	327		281.5
223.9 222.8 226.6 227.1 229.2 233.7 241.9 250.6 261.1 263.2 267.6 264.5 264.1 268.1 265.4 262.6 266.0 271.2 274.6 276.9 246.0 230.6 225.3 222.3																										
Diurnal Average																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Stony Mountain - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 101 deg on Apr 24 16:00																			Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 11 deg on Apr 4 02:00																									
Percentiles: P ₁ = 15 P ₁₀ = 20 Q ₁ = 24 Median = 29 Q ₃ = 34 P ₉₀ = 43 P ₉₉ = 86																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	23	23	23	24	24	26	24	27	29	30	31	34	33	30	31	29	26	24	25	24	25	23	19	23	34
2-Apr	22	19	24	36	29	26	24	28	28	29	34	36	42	37	35	33	30	32	30	33	23	29	29	24	42
3-Apr	20	20	20	23	21	28	29	28	30	29	31	29	35	38	38	38	37	31	28	26	16	23	44	36	44
4-Apr	18	11	15	16	19	19	21	28	34	35	38	48	49	42	42	50	40	41	27	18	28	19	20	17	50
5-Apr	19	52	19	18	22	26	28	29	71	34	57	72	57	51	69	33	27	23	25	23	18	18	19	21	72
6-Apr	19	19	14	16	15	14	17	19	23	24	36	32	38	36	40	36	34	34	29	25	25	24	26	25	40
7-Apr	24	28	28	27	27	27	27	27	27	28	30	33	31	33	36	33	31	31	28	28	39	21	24	20	39
8-Apr	24	40	22	25	31	92	72	40	36	33	29	25	28	28	28	36	37	34	47	91	29	20	23	21	92
9-Apr	23	28	25	28	26	25	23	22	27	32	44	36	41	33	33	43	32	31	24	19	24	24	24	23	44
10-Apr	25	25	28	28	26	28	29	29	31	30	38	39	37	43	37	41	36	32	22	23	19	21	22	25	43
11-Apr	37	20	18	22	35	87	27	19	22	28	32	30	31	33	31	36	32	27	29	27	29	27	28	29	87
12-Apr	28	30	30	33	31	31	32	28	31	34	34	33	32	31	34	30	30	29	27	19	21	32	16	27	34
13-Apr	24	24	24	24	26	24	26	30	29	29	34	29	34	34	35	36	31	38	29	22	20	17	11	17	38
14-Apr	22	65	14	19	20	22	24	30	40	39	43	43	41	38	36	35	31	28	29	22	24	20	18	20	65
15-Apr	20	20	21	23	20	21	26	28	32	33	31	35	34	35	33	31	30	28	27	27	29	31	32	27	35
16-Apr	31	30	27	30	27	26	25	26	26	25	26	28	26	27	28	27	29	27	33	31	28	26	25	24	33
17-Apr	23	21	27	30	29	35	34	36	33	32	35	34	34	35	35	34	48	51	37	34	29	22	26	25	51
18-Apr	23	24	23	22	23	23	25	27	30	32	29	35	31	31	27	29	30	29	29	28	26	25	23	22	35
19-Apr	23	23	38	39	21	29	29	26	30	29	33	34	29	34	31	30	35	29	32	28	30	24	25	28	39
20-Apr	24	26	24	27	27	23	26	42	48	44	50	43	63	52	75	59	62	55	25	19	17	24	23	22	75
21-Apr	32	20	19	22	18	18	23	26	35	35	49	53	74	57	51	53	44	35	25	31	22	25	20	23	74
22-Apr	25	21	23	25	31	25	21	26	39	39	31	32	34	41	48	33	35	34	31	23	21	21	20	19	48
23-Apr	27	24	22	19	27	31	26	31	41	54	96	92	45	54	27	54	57	76	20	31	13	18	32	29	96
24-Apr	25	21	13	21	54	22	32	57	61	73	69	92	83	42	95	101	58	46	65	49	19	25	23	19	101
25-Apr	19	19	20	20	20	19	22	28	29	34	35	33	32	33	30	30	32	30	30	25	24	22	21	23	35
26-Apr	22	21	21	21	22	22	23	24	43	62	51	61	51	38	34	32	31	33	35	31	31	31	29	30	62
27-Apr	33	29	25	25	19	21	28	33	38	37	42	43	48	41	46	49	45	42	42	26	16	18	17	19	49
28-Apr	20	19	20	21	20	21	21	24	37	36	38	39	37	35	37	35	32	29	29	34	35	33	27	28	39
29-Apr	33	27	25	27	31	29	32	32	32	32	35	33	35	31	30	32	31	38	65	27	24	27	22	23	65
30-Apr	22	27	26	29	30	27	30	26	28	32	39	36	41	32	31	29	44	31	26	42	30	22	21	30	44
37 65 38 39 54 92 72 57 71 73 96 92 83 57 95 101 62 76 65 91 39 33 44 36																									
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - April 2025

Maximum Speed: 29 km/h on Apr 25 14:00										Maximum Daily Speed Average: 19.5 km/h on Apr 16										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 8 20:00										Minimum Daily Speed Average: 2.4 km/h on Apr 23										Hours of Data: 720						
Maximum Diurnal Speed Average: 8.7 km/h at hour 15										Minimum Diurnal Speed Average: 2.6 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 6.2 km/h 259.7 deg										Percentiles: P ₁ = 3 P ₁₀ = 7 Q ₁ = 10 Median = 13 Q ₃ = 16 P ₉₀ = 20 P ₉₉ = 26										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	S13	S14	S13	S12	S12	S10	S10	S11	S13	S13	S13	S14	SSW13	SSW14	SSW12	SW13	SW12	SW10	NW17	NW18	NW17	NNW11	NW11	NW9	SSW7.2	NW18
2-Apr	NW9	WNW8	WNW11	WSW9	W12	W16	WNW15	WNW13	WNW15	NW16	WNW15	WNW15	WNW15	NW16	NW17	NW16	NNW17	NNW14	NW15	NNW11	NNE10	NNW9	NNW9	NNW10	NW11.7	NW17
3-Apr	NW12	NW9	NW9	NW10	NW11	NNW11	NNW12	NW13	NW16	NNW18	NNW19	NNW19	NNW19	NNW17	NNW17	NNW14	NNW16	NNW17	NW14	NNW9	NNW7	N6	NE5	N4	NNW12.4	NNW19
4-Apr	WNW4	WSW7	SW9	SW11	SW13	WSW12	WSW13	SW10	SW9	W12	WNW12	WNW10	WNW10	W12	WNW11	WNW10	NW11	NNW10	N7	NE7	E7	SE8	S10	SSW10	W6.0	WSW13
5-Apr	SW11	WSW10	SW14	SW12	WSW11	WSW13	W13	W10	W5	S6	S7	SSW7	W8	W10	WNW8	NW11	NW11	NNW9	NNW7	NE10	ENE12	E13	ESE14	SE13	WSW3.6	ESE14
6-Apr	SE12	ESE10	E9	E10	E11	E10	E10	E9	ESE10	E10	SE14	SE15	SE14	SE16	SSE15	SSE16	SSE15	SSE15	SSE16	SSE16	SSE20	S20	S19	S19	SE12.1	S20
7-Apr	S18	SSE17	S21	S23	S18	S20	S18	SSE13	SSE15	SE12	SE13	SE17	SSE17	SSE17	SSE18	SSE18	S15	SSW12	SW10	SW6	SSW5	SSW8	S9	SSE10	S13.8	S23
8-Apr	S8	SSE5	S7	SW7	WSW7	NW3	W2	WSW5	NNW8	W10	WNW14	NW15	NW14	NW14	NNW15	NNW12	NNE8	NE5	ENE3	NNE1	W7	WNW9	W11	WNW11	WNW5.5	NNW15
9-Apr	WNW13	W14	WSW14	W16	W17	W15	WNW14	WNW14	WNW12	WNW11	NW12	WNW14	NW16	WNW14	W13	WNW15	WNW14	WNW10	WNW9	W12	W13	W15	W15	WNW13.0	W17	
10-Apr	W17	W16	W15	W19	W17	W16	W17	W15	W14	W13	W13	WSW15	WSW13	WSW13	WSW15	SW15	SSW13	SSW12	SSW6	SSE7	SE9	SSE10	SSE11	SSE10	WSW10.2	W19
11-Apr	SE10	SE11	ESE11	ESE11	SE9	E2	NW6	NW11	WNW14	WNW16	WNW22	WNW19	WNW19	WNW19	W24	W24	W24	W20	W15	W13	W13	W18	W15	W14	W10.5	W24
12-Apr	WSW14	W18	W18	WSW16	W17	W16	WSW15	W17	W16	W16	W18	W19	W18	WNW19	WNW18	NW17	NW16	NW15	WNW11	WNW10	WNW10	NW7	W8	W11	W14.1	WNW19
13-Apr	WNW14	WNW13	WNW13	WNW13	WNW14	W14	W15	WNW13	WNW15	NW17	NW21	NW21	NW18	NW18	NW19	NW17	NW17	NNW12	WNW13	W10	WNW9	NW7	N6	NNW5	NW13.0	NW21
14-Apr	NNE4	ESE1	SSW8	SW11	SW13	WSW13	WSW13	WSW9	SW8	SW11	WSW12	WSW13	SW13	SSW17	SW17	SSW16	SSW15	SW15	S9	S10	S12	SSW12	SSW13	SSW14	SW10.6	SW17
15-Apr	SSW15	SSW16	SSW16	SSW15	SSW13	SSW15	SW16	WSW14	W21	W25	W26	WNW23	WNW23	WNW24	W23	WNW25	WNW25	WNW22	WNW21	W17	W16	W18	W16	W15	W16.6	W26
16-Apr	WNW20	WNW20	WNW23	WNW20	WNW20	WNW20	WNW19	NW22	NW24	NW23	NW26	NW23	NW21	NW22	NW23	NW24	NW22	NW21	NW21	NNW12	NNW14	NNW18	NNW17	NW15	NW19.5	NW26
17-Apr	NW15	NW12	NNW12	NNW13	N13	N12	NNW15	NNW13	N13	N13	N14	NNW15	NNW14	NNW14	NNW14	NNW13	N9	NNW7	N5	NE3	ESE6	SE7	SSE6	S7	NNW8.8	NNW15
18-Apr	S11	S15	S14	S15	SSW15	S16	SSW19	S18	SSW16	SSW18	SSW19	S19	S21	SSW21	SSW25	SSW25	SSW24	S21	S19	S19	S23	S24	S23	SSW21	S19.0	SSW25
19-Apr	SSW21	SSW20	WSW18	W14	SW13	WSW13	W15	W18	WNW22	WNW21	NW20	NW17	WNW21	W19	WNW23	WNW22	W18	WNW18	W15	NW11	W13	W11	WNW15	W12	W14.9	WNW23
20-Apr	W11	W13	WNW13	NW11	NNW6	NNW6	NNE8	N5	N6	NNW8	NW10	NNW9	N9	NNW9	WNW6	NW6	NNE4	NNE4	ENE8	ENE8	ENE10	ENE10	ESE11	SE11	N4.5	W13
21-Apr	SE11	ESE9	SE11	SE8	ESE9	SE9	SE9	SE9	SE11	E11	E10	E10	E8	E9	E8	E8	ESE8	ESE7	SE8	SSE8	S8	S11	SSW13	S13	SE7.7	S13
22-Apr	SSW14	SSW16	SSW15	SSW10	S7	SSW10	SSW16	SW14	WSW9	SW9	SW15	SW18	SW18	WSW14	WSW13	SW18	SSW19	SW16	SW14	SW9	SW11	SW12	SSW13	SW13	SW12.9	SSW19
23-Apr	SW13	SSW12	SW13	SW13	WSW12	W11	WNW8	NW6	SSW6	S6	SW3	ENE2	N8	NNW8	ENE16	ENE7	N3	NE5	NE9	NNW8	NW8	NW9	N8	N5	WNW2.4	ENE16
24-Apr	N5	NW6	NW7	W6	W6	WSW7	WSW7	W6	NW6	NW5	NW4	NW3	NNE2	SSW6	NW2	WNW2	W8	W7	WSW3	E3	ESE7	SSE8	S10	SSW11	W2.8	SSW11
25-Apr	SSW13	SSW14	SSW16	SSW16	SSW15	SSW16	SSW15	SSW17	SSW20	S22	S23	SSW26	S28	S29	SSW28	S26	S25	SSW22	S18	S13	S13	SSW14	S15	S17	SSW19.1	S29
26-Apr	SSW18	SSW18	SSW19	SSW18	SSW18	SSW17	SSW16	SSW15	SW9	W6	NNW7	WNW10	NW11	WNW16	WNW17	NW17	NNW19	NNW19	NNW18	N20	N15	N15	N13	N14	WNW6.5	N20
27-Apr	NNW12	N12	N11	NNW10	NNW10	NW11	NNW12	N13	NNW13	NNW13	NNW13	NNW15	NNW13	NNW15	NNW14	NNW11	NNW10	N9	NNE8	NE7	E9	ESE9	SE9	SSE10	N8.4	NNW15
28-Apr	S10	SSW11	SSW12	SSW14	SSW15	SSW15	SSW14	SSW14	SSW11	SSW13	S14	SSW16	S16	S19	S20	S19	SSW18	SSW18	S14	SSW12	SSW11	SSW12	S9	SSW11	SSW13.9	S20
29-Apr	SW7	SSW10	WSW14	WSW15	WSW16	WSW14	W18	W18	WNW18	W20	W22	W22	W25	NW26	NW23	NW22	NW20	NNW17	NNW6	W8	W11	W12	WNW14	W14	WNW14.3	NW26
30-Apr	W13	W13	W12	W13	W13	WSW11	W12	W13	W11	W9	W10	W11	W12	WNW16	WNW15	W15	NW14	NNE10	NNE8	N5	NNW11	NNW8	NNW9	NNW10	WNW9.5	WNW16
SW6.2 SW6.8 SW7.9WSW7.9WSW7.8WSW7.8WSW8.0 W7.5 W7.1 W7.0 W7.7 W7.9 W8.1 W8.4 W8.7 W8.1 W7.4WNW5.8WNW4.3WNW2.6WSW2.6WSW3.5 SW3.9 SW5.0																								Diurnal Average		
SSW21 SSW20WNW23 S23WNW20 S20WNW19 NW22 NW24 W25 NW26 SSW26 S28 S29 SSW28 SSW26 S25WNW22WNW21 N20 S23 S24 S23 SSW21																								Diurnal Maximum		
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

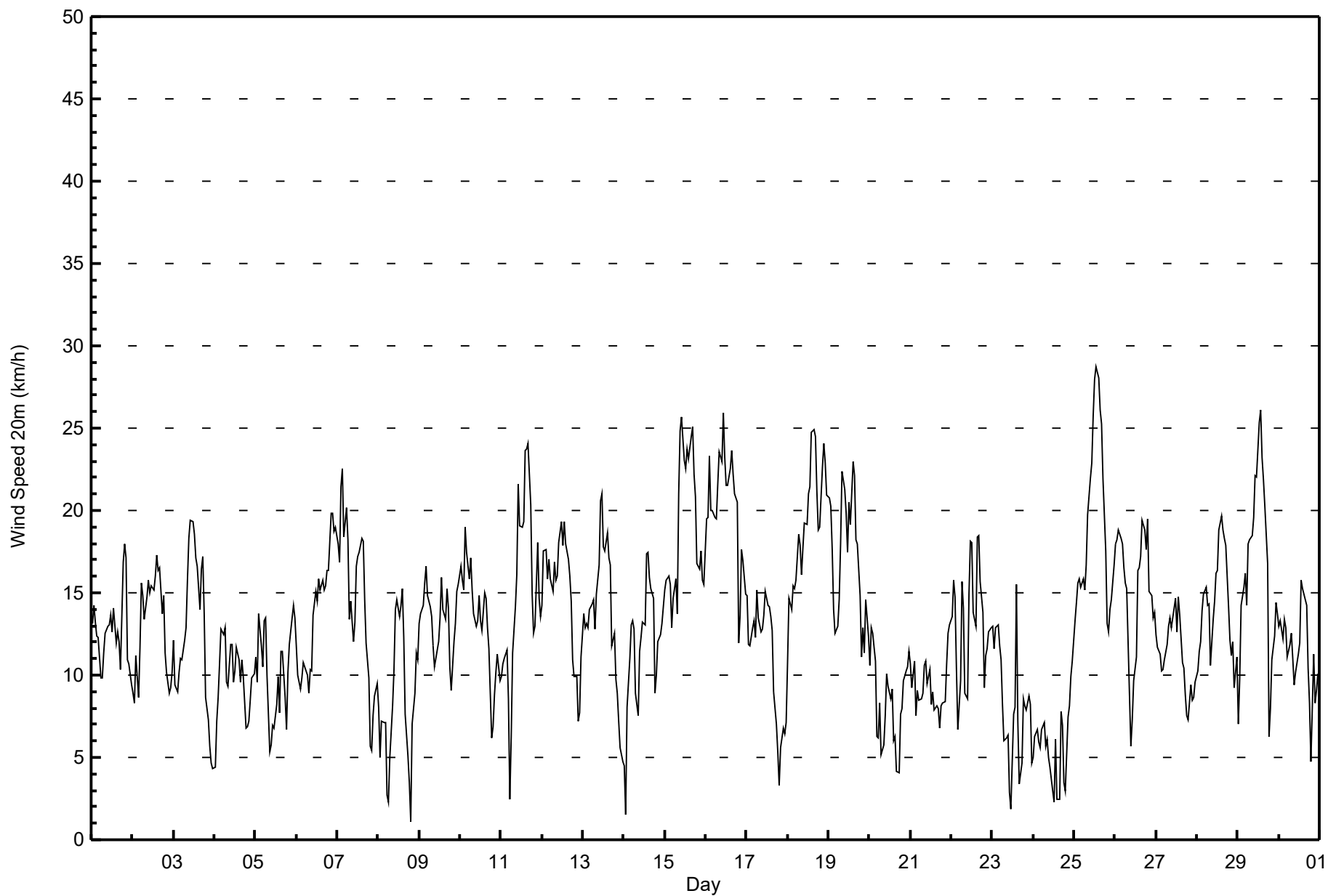
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 25 13:00																	Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0								
Minimum Value: 0 km/h on Apr 4 01:00																									
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 4 Q ₃ = 5 P ₉₀ = 7 P ₉₉ = 9																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	3	3	3	3	3	2	2	3	3	4	4	4	4	4	3	4	4	3	5	5	6	4	3	3	6
2-Apr	2	2	3	3	3	4	4	4	5	5	6	5	6	6	6	6	5	5	5	4	3	2	3	3	6
3-Apr	4	3	2	3	3	3	4	4	5	6	6	6	6	6	6	5	6	6	5	3	2	1	1	1	6
4-Apr	0	1	1	2	2	2	3	3	3	4	4	4	5	4	4	5	4	4	2	1	1	1	1	1	5
5-Apr	2	5	3	2	2	4	4	3	3	2	3	3	4	4	4	4	3	3	2	3	3	3	3	3	5
6-Apr	2	2	1	2	2	2	2	2	2	3	5	4	5	5	5	5	5	5	4	4	5	4	4	4	5
7-Apr	4	5	5	6	4	5	5	4	4	4	4	5	5	6	5	5	4	3	4	1	1	2	2	2	6
8-Apr	2	2	1	2	2	2	1	2	3	3	5	4	4	4	5	4	3	2	1	2	3	2	3	3	5
9-Apr	3	3	3	4	4	4	4	4	3	3	4	4	5	5	4	5	5	5	3	2	3	3	4	4	5
10-Apr	4	4	4	5	5	4	5	4	4	4	5	6	5	5	5	5	5	4	2	1	1	2	2	2	6
11-Apr	3	2	2	3	2	2	4	2	3	5	7	7	6	6	8	8	8	7	5	4	4	6	5	4	8
12-Apr	4	5	6	5	5	5	5	5	5	6	6	7	6	6	6	6	5	5	3	2	3	2	1	3	7
13-Apr	4	3	4	4	4	4	4	4	5	6	7	7	6	7	7	6	6	5	4	2	2	2	1	1	7
14-Apr	1	1	1	2	2	3	3	3	2	3	5	5	5	6	6	5	4	5	2	2	2	2	2	3	6
15-Apr	3	3	4	4	3	3	4	4	8	9	8	9	8	9	9	9	9	7	7	5	5	5	5	5	9
16-Apr	7	8	8	7	6	6	6	6	7	7	7	7	7	7	8	7	7	7	7	4	5	6	5	4	8
17-Apr	4	3	3	4	4	5	5	5	4	4	5	5	5	5	4	4	3	3	2	1	1	1	1	1	5
18-Apr	3	3	3	3	3	4	5	5	5	6	6	6	6	7	7	8	8	7	5	5	6	6	5	5	8
19-Apr	5	5	6	7	3	3	5	5	7	7	7	7	7	7	8	8	7	6	5	4	5	3	4	4	8
20-Apr	3	3	4	4	2	2	3	2	2	3	5	3	4	4	3	3	2	2	2	2	3	2	3	3	5
21-Apr	4	2	3	1	2	2	2	2	3	3	4	4	4	5	4	4	3	2	2	2	1	2	2	2	5
22-Apr	3	3	3	3	2	4	4	4	3	3	5	6	5	5	5	6	7	5	5	3	2	2	3	3	7
23-Apr	4	3	3	3	3	3	2	2	2	3	4	3	3	4	5	4	2	5	2	3	1	1	3	1	5
24-Apr	1	1	1	1	1	1	2	2	2	3	2	3	2	2	3	3	4	3	2	1	1	1	2	2	4
25-Apr	2	2	3	3	3	3	4	5	6	7	8	9	9	9	8	8	8	7	6	3	3	3	3	4	9
26-Apr	4	4	4	4	4	4	4	4	4	3	3	4	5	7	6	6	7	6	6	7	5	5	4	5	7
27-Apr	4	4	3	3	3	3	4	4	4	5	5	5	5	5	5	5	4	4	3	3	2	1	1	1	5
28-Apr	2	2	2	3	3	4	3	4	3	4	5	6	6	6	7	6	6	5	5	4	5	6	2	4	7
29-Apr	2	4	4	4	5	4	6	6	6	6	8	8	8	9	7	7	7	6	5	2	3	4	4	3	9
30-Apr	3	3	3	4	4	3	3	4	4	3	3	4	4	6	5	5	6	4	3	3	4	2	2	3	6
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Stony Mountain - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Stony Mountain - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	36	5.00	5.00
6 - 11	240	33.33	38.33
12 - 19	365	50.69	89.03
20 - 28	78	10.83	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 20m (WS20) - km/h
Stony Mountain - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	5	4	2	2	1	0	1	0	1	1	2	2	2	5	1	36
6 - 11	10	6	4	5	16	12	16	9	20	15	17	10	24	20	26	30	240
12 - 19	10	0	0	2	1	1	9	13	35	60	24	25	70	41	30	44	365
20 - 28	1	0	0	0	0	0	0	1	14	12	0	0	12	19	19	0	78
29 - 38	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	11	8	9	19	14	25	24	70	88	42	37	108	82	80	75	720

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wind Speed 20m (WS20) - km/h

Stony Mountain





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - April 2025

Direction of Maximum Speed: 190 deg on Apr 25 14:00																				Hours in Service:		720				
Direction of Maximum Daily Speed Average: 313.4 deg on Apr 16																				Hours of Data:		720				
Direction of Minimum Speed: 28 deg on Apr 8 20:00										Direction of Minimum Daily Speed Average: 2.4 deg on Apr 23										Hours of Missing Data:		0				
Monthly Average Direction: 259.7 deg																				Percent Operational Time:				100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	179	184	188	185	183	177	178	180	172	178	171	186	202	195	212	224	217	219	307	320	322	331	325	323		211.7
2-Apr	309	285	285	257	259	280	282	283	296	305	300	285	285	308	307	314	332	333	326	342	13	343	343	332		305.6
3-Apr	324	325	308	317	323	331	332	322	324	327	328	327	333	339	335	336	329	329	326	342	338	1	37	3		330.6
4-Apr	287	244	232	224	223	239	241	233	233	274	285	300	294	279	282	289	313	341	9	42	90	141	184	205		259.8
5-Apr	227	238	230	223	243	257	261	276	261	176	176	204	272	281	290	304	323	330	347	40	74	97	113	131		250.3
6-Apr	132	109	90	79	97	88	99	94	108	98	136	137	145	140	158	163	161	161	159	160	165	169	171	173		141.4
7-Apr	169	168	170	170	173	174	172	162	158	138	142	145	156	150	165	168	184	203	221	227	211	205	180	150		169.0
8-Apr	175	161	183	221	244	318	268	244	329	276	289	304	305	310	327	344	13	35	74	28	269	285	274	283		293.6
9-Apr	285	263	247	263	274	281	285	293	294	291	298	311	299	304	292	272	299	291	295	282	275	270	278	279		283.8
10-Apr	280	278	270	273	276	270	270	264	271	271	269	252	240	242	251	236	209	204	207	154	146	152	153	158		247.8
11-Apr	144	133	113	115	131	98	315	305	295	296	295	296	288	284	269	269	279	280	280	280	275	278	275	259		278.0
12-Apr	253	260	267	258	264	260	257	276	279	271	269	278	281	292	294	318	320	314	302	299	294	310	271	268		280.1
13-Apr	289	291	289	290	282	274	275	283	303	305	317	320	320	314	314	317	318	333	295	280	288	325	3	348		304.1
14-Apr	12	118	205	220	228	241	240	248	224	233	257	237	220	196	214	207	208	218	188	185	190	193	194	194		215.0
15-Apr	206	207	208	208	203	208	229	240	263	271	274	282	282	290	278	284	284	291	288	278	263	264	274	276		262.8
16-Apr	284	298	297	284	284	291	301	306	313	317	321	325	324	319	317	322	322	324	324	339	336	332	330	326		313.4
17-Apr	326	325	330	341	1	351	337	342	350	354	350	342	346	344	343	337	2	346	356	50	113	139	164	181		345.9
18-Apr	170	170	191	189	201	189	196	190	192	192	192	183	187	198	195	196	195	188	183	180	182	187	191	194		189.4
19-Apr	198	208	254	268	216	238	264	275	288	291	304	308	293	281	298	293	279	282	264	305	276	280	283	278		274.4
20-Apr	275	279	286	325	338	329	14	4	353	334	319	335	7	345	302	305	14	22	67	63	58	63	102	126		350.6
21-Apr	134	111	129	126	122	131	124	127	128	98	92	80	92	82	81	85	116	115	127	157	174	190	194	184		126.3
22-Apr	199	206	198	203	191	195	207	217	250	222	214	222	232	247	248	219	203	224	233	219	217	216	212	216		217.2
23-Apr	228	206	220	218	240	264	294	321	192	173	218	67	351	333	72	73	1	43	39	329	322	317	0	349		285.8
24-Apr	354	316	304	276	271	256	257	280	319	316	320	310	12	197	317	285	271	274	238	95	111	156	179	196		263.1
25-Apr	195	195	197	196	197	198	195	193	197	179	182	198	191	190	195	191	191	192	190	185	188	192	191	190		191.9
26-Apr	195	197	199	202	206	202	209	210	224	262	329	303	305	297	302	319	330	336	346	356	355	354	6	2		284.9
27-Apr	347	349	350	341	333	325	338	350	341	341	344	329	341	344	344	345	334	353	16	51	88	105	134	159		350.5
28-Apr	182	200	206	209	211	212	208	211	206	195	177	197	182	178	188	185	193	192	187	196	206	211	186	212		196.3
29-Apr	224	205	238	247	257	248	260	276	284	280	275	276	281	304	309	321	323	345	340	275	271	269	286	281		281.9
30-Apr	281	271	278	267	260	242	263	275	277	273	274	266	277	302	286	274	318	15	28	10	335	336	330	334		290.5
231.7 229.7 235.2 236.3 238.5 243.5 252.1 260.7 270.5 272.2 276.3 274.9 274.0 277.4 275.9 274.1 278.9 284.3 287.1 288.7 256.3 241.1 231.0 230.1																										
Diurnal Average																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

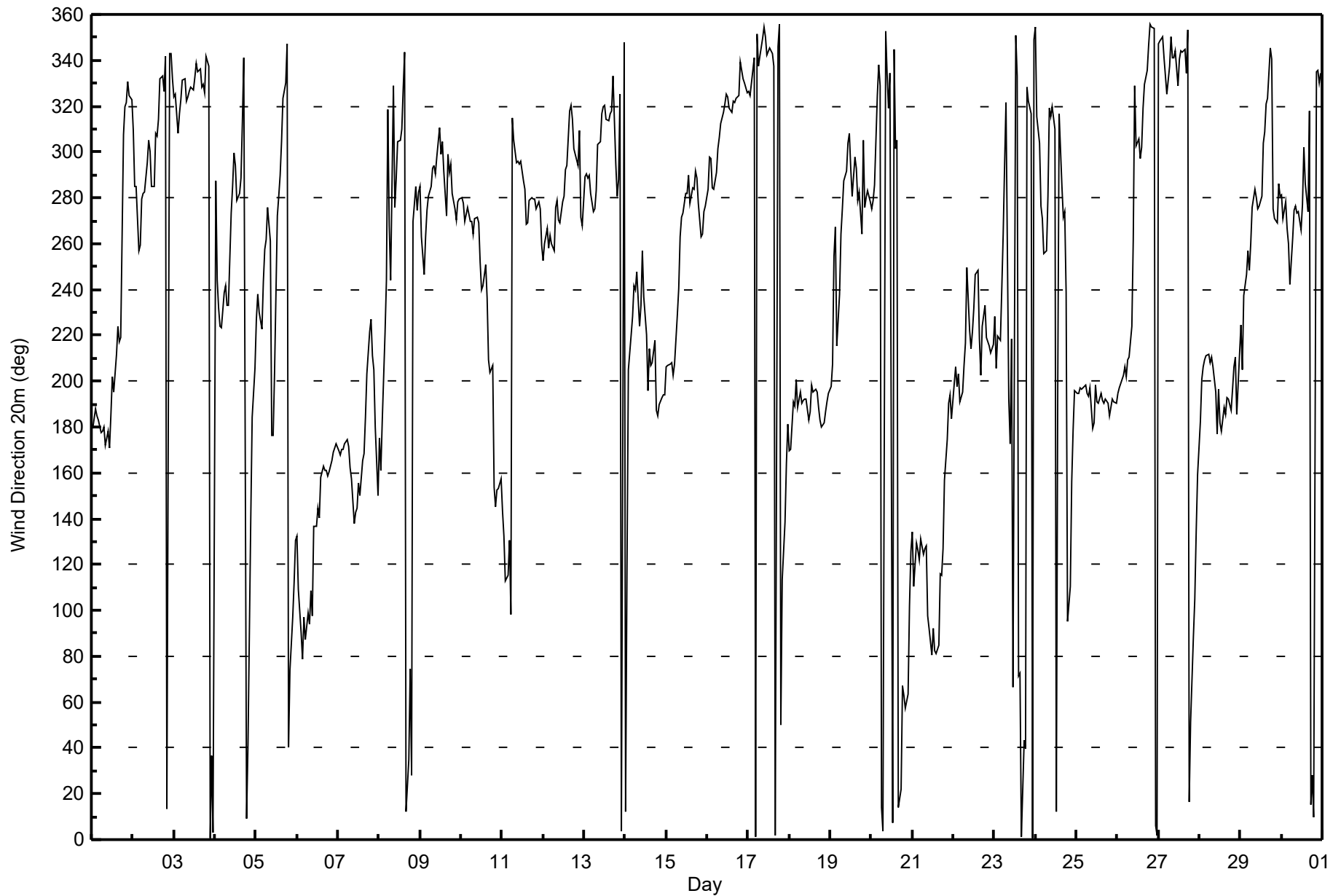
Stony Mountain - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 97 deg on Apr 23 12:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 6 deg on Apr 4 02:00																									
Percentiles: P ₁ = 12 P ₁₀ = 15 Q ₁ = 18 Median = 22 Q ₃ = 26 P ₉₀ = 34 P ₉₉ = 74																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	16	17	16	18	18	18	17	20	22	21	24	24	27	25	24	24	22	21	23	18	18	17	17	18	27
2-Apr	17	15	19	29	21	20	19	21	22	24	29	30	32	29	28	26	20	20	22	23	21	19	20	18	32
3-Apr	17	17	18	18	17	19	19	21	21	21	23	22	25	28	27	26	28	21	22	19	16	18	27	22	28
4-Apr	21	6	9	11	15	13	16	23	27	27	29	37	40	37	32	38	29	25	22	16	26	15	15	13	40
5-Apr	14	27	14	14	17	19	20	21	54	28	45	67	49	39	54	27	19	19	17	22	16	16	14	16	67
6-Apr	13	15	12	14	12	12	14	16	17	18	29	26	29	24	28	26	26	22	18	15	16	16	16	15	29
7-Apr	15	17	16	17	17	18	17	18	22	23	24	25	22	25	27	22	22	24	19	22	35	14	16	14	35
8-Apr	18	23	15	18	23	63	48	34	26	27	23	21	21	22	19	24	30	27	43	86	32	15	16	17	86
9-Apr	18	20	18	20	21	19	19	19	20	26	33	28	29	26	26	33	28	24	20	15	17	18	19	18	33
10-Apr	20	19	20	20	19	20	21	22	24	24	30	31	30	35	28	33	29	28	18	19	11	11	14	13	35
11-Apr	29	15	15	17	27	73	30	16	16	22	25	24	26	25	23	28	24	22	22	21	21	21	21	22	73
12-Apr	20	21	22	21	23	22	23	20	24	28	27	27	27	25	26	23	22	22	21	16	18	20	12	21	28
13-Apr	20	20	19	19	20	18	19	22	23	23	28	21	27	26	28	29	25	23	25	18	15	19	16	19	29
14-Apr	13	61	10	13	14	15	18	24	35	33	33	32	36	32	29	26	26	24	18	14	16	14	14	14	61
15-Apr	15	15	17	18	15	16	21	21	25	25	24	29	28	27	28	25	25	24	22	20	21	22	26	21	29
16-Apr	24	23	21	22	21	22	21	20	21	20	19	19	19	20	21	21	20	21	25	19	19	19	18	19	25
17-Apr	17	17	20	20	22	24	21	24	24	23	25	23	24	24	23	23	38	38	25	29	25	13	16	14	38
18-Apr	15	16	17	15	16	17	19	21	23	25	23	25	23	24	22	22	24	22	21	19	17	18	18	17	25
19-Apr	17	19	32	34	18	22	21	20	23	24	24	26	23	27	24	25	28	23	24	26	21	19	20	20	34
20-Apr	20	20	20	24	18	19	20	33	35	33	39	30	49	42	66	51	51	54	23	18	15	23	20	17	66
21-Apr	27	16	13	17	13	12	16	19	27	28	43	57	63	54	44	50	34	33	19	21	15	15	13	15	63
22-Apr	17	17	17	19	16	16	17	21	30	31	25	25	26	35	40	27	28	29	25	18	16	15	15	15	40
23-Apr	18	19	17	15	21	22	20	24	48	45	94	97	41	46	23	57	47	59	19	27	13	17	21	20	97
24-Apr	20	16	8	19	20	13	23	46	45	69	68	92	81	38	86	94	51	39	74	46	17	19	13	12	94
25-Apr	12	13	14	14	14	15	16	21	24	24	26	26	25	24	23	24	24	23	22	18	16	15	14	16	26
26-Apr	16	16	16	16	16	17	19	19	37	61	36	43	44	33	26	23	23	21	23	22	22	22	21	23	61
27-Apr	22	20	19	17	16	16	21	23	25	29	31	31	35	32	33	40	37	36	37	26	13	15	11	12	40
28-Apr	13	13	14	14	16	16	17	19	29	28	31	31	29	26	27	26	25	23	22	25	26	26	16	23	31
29-Apr	25	23	18	20	23	22	23	24	24	26	27	27	28	26	23	24	23	29	51	22	17	21	18	18	51
30-Apr	17	18	20	22	21	19	21	20	23	24	28	28	31	26	24	24	38	24	27	31	20	17	17	22	38
29 61 32 34 27 73 48 46 54 69 94 97 81 54 86 94 51 59 74 86 35 26 27 23																									
Diurnal Maximum																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Stony Mountain - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS19
FIREBAG
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
APRIL 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	684	34	36	99.72	26.2	0	3.8	0
H2S (ppb) Average	684	35	36	99.86	1.4	0	0.2	0
THC (ppm) Average	685	33	35	99.72	2.6	-	2.2	-
NO2 (ppb) Average	682	35	38	99.58	29.8	0	5.6	-
NO (ppb) Average	682	35	38	99.58	50	-	3.3	-
NOX (ppb) Average	682	35	38	99.58	62.7	-	7.4	-
Temperature 2 m (C) Average	720	0	0	100	19.2	-	12.6	-
Relative Humidity (%) Average	720	0	0	100	97.5	-	93.1	-
Wind Speed 10 m (km/h) Average	720	0	0	100	36	-	27	-
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 - FIREBAG (AMS19)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	0.52	1.8	-	0	0	0	0.1	0.2	1	26.2
H2S (ppb) Average	684	0.09	0.1	-	0	0	0	0	0.1	0.2	1.4
THC (ppm) Average	685	2.16	0.1	-	2.1	2.1	2.1	2.1	2.2	2.2	2.6
NO2 (ppb) Average	682	2.34	2.9	-	0	0.3	0.7	1.3	2.9	5.3	29.8
NO (ppb) Average	682	0.57	2.3	-	0	0	0	0.1	0.4	1.2	50
NOX (ppb) Average	682	2.91	4.4	-	0.1	0.4	0.8	1.6	3.5	6.2	62.7
Temperature 2 m (C) Average	720	2	6.4	-	-16.4	-6.5	-2	2.7	6.5	9.6	19.2
Relative Humidity (%) Average	720	61.65	21.9	-	19.2	31.1	43.5	59.9	80.3	92.4	97.5
Wind Speed 10 m (km/h) Average	720	14.6	7	-	2	6	10	14	19	24	36
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	25 Apr 2025 09:00	25 Apr 2025 09:00	1-2	Maintenance - reinitiated daily QA check
ALL GASEOUS ANALYZERS	29 Apr 2025 15:00	29 Apr 2025 15:00	1	Maintenance - sample manifold cleaned



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

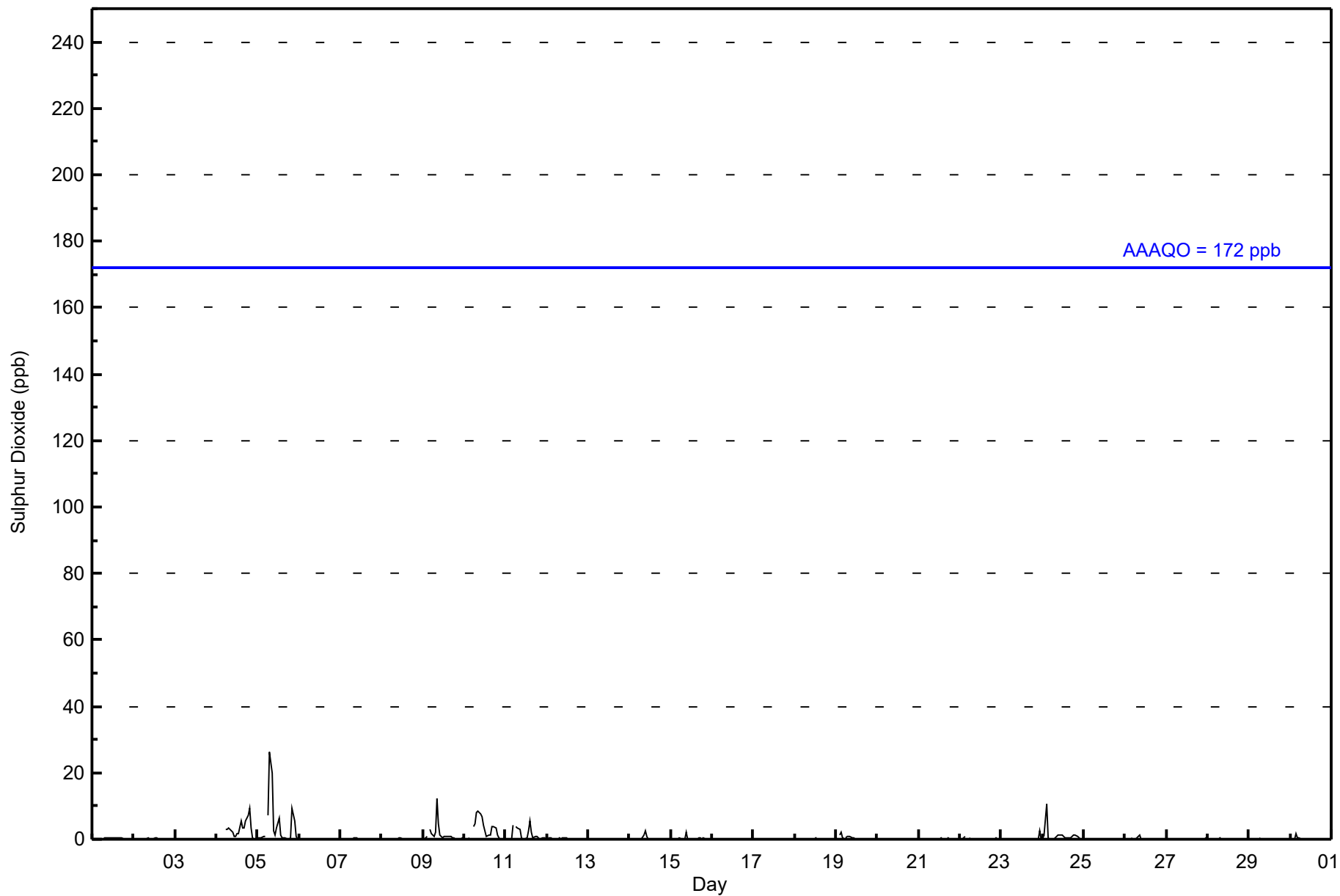
Firebag - April 2025

Number of Exceedences (AAAQO): Maximum Value: 26.2 ppb on Apr 5 08:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 3.8 ppb on Apr 5				Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 34 Percent Operational Time: 99.7			
Minimum Value: 0.0 ppb on Apr 1 21:00 Maximum Diurnal Average: 1.9 ppb at hour 9 Monthly Average: 0.52 ppb																				Minimum Daily Average: 0.0 ppb on Apr 6 Minimum Diurnal Average: 0.1 ppb at hour 24 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 1.0 P ₉₉ = 8.3							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.2	Z	0.1	0.2	0.1	0.1	0.1	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	
2-Apr	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.1	0.5	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.5
3-Apr	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2
4-Apr	0.0	0.0	0.0	0.0	Z	2.8	3.1	3.4	3.0	2.1	1.0	1.0	1.5	1.9	5.6	3.5	3.4	5.3	7.1	9.4	3.3	0.4	0.2	0.1	2.5	9.4	
5-Apr	0.4	0.5	0.5	0.7	0.8	Z	7.3	26.2	20.1	2.5	1.4	3.2	6.2	1.1	0.4	0.4	0.3	0.1	0.2	0.6	9.2	5.6	0.6	0.1	3.8	26.2	
6-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7-Apr	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Apr	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.3	0.4	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4
9-Apr	0.2	0.2	0.6	Z	3.0	1.6	0.8	2.0	12.3	4.6	1.4	0.4	0.7	0.9	0.7	0.8	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.3	1.4	12.3	
10-Apr	0.2	0.2	0.1	0.4	Z	3.7	4.6	8.2	8.7	7.7	6.7	4.1	2.7	1.0	1.2	1.5	4.0	3.9	3.4	1.2	0.2	0.1	0.1	0.1	2.8	8.7	
11-Apr	0.1	0.1	0.1	0.1	4.2	Z	3.7	3.3	2.9	0.2	0.1	0.1	0.5	2.4	5.7	2.0	0.5	0.8	0.8	0.6	0.2	0.3	0.3	0.3	1.3	5.7	
12-Apr	Z	0.4	0.4	0.2	0.2	0.1	0.2	0.3	0.2	0.5	0.5	0.4	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	
13-Apr	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	
14-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	1.3	2.7	0.9	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	2.7	
15-Apr	0.1	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	1.9	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.2	1.9	
16-Apr	0.1	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	
17-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	
18-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	
19-Apr	0.2	Z	1.3	2.0	0.3	0.0	0.8	0.8	0.7	0.5	0.4	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	0.3	2.0	
20-Apr	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
21-Apr	0.5	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.3	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5	
22-Apr	0.1	0.1	0.3	0.7	Z	0.6	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.7	
23-Apr	0.1	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	0.1	2.6	0.1	0.1	2.6	
24-Apr	Z	0.7	10.8	0.3	0.1	0.0	0.2	0.6	0.9	1.3	1.3	1.1	0.7	0.4	0.4	0.6	0.6	0.8	1.3	1.1	1.1	0.6	0.2	0.1	1.1	10.8	
25-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	M	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
26-Apr	0.0	0.1	Z	0.4	0.2	0.1	0.1	0.3	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	
27-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2
28-Apr	0.2	0.1	0.1	0.2	Z	0.1	0.1	0.3	0.2	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.3	
29-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	M	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.3	
30-Apr	Z	0.1	0.1	1.6	0.6	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	99.42	99.42
11 - 20	3	0.44	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: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	97	33	14	16	15	16	41	71	64	60	32	33	39	41	30	78	680
11 - 20	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	3
21 - 60	0	0	0	0	0	0	0	0	0	0	1	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	97	33	14	16	15	18	41	71	64	60	33	33	39	41	31	78	684

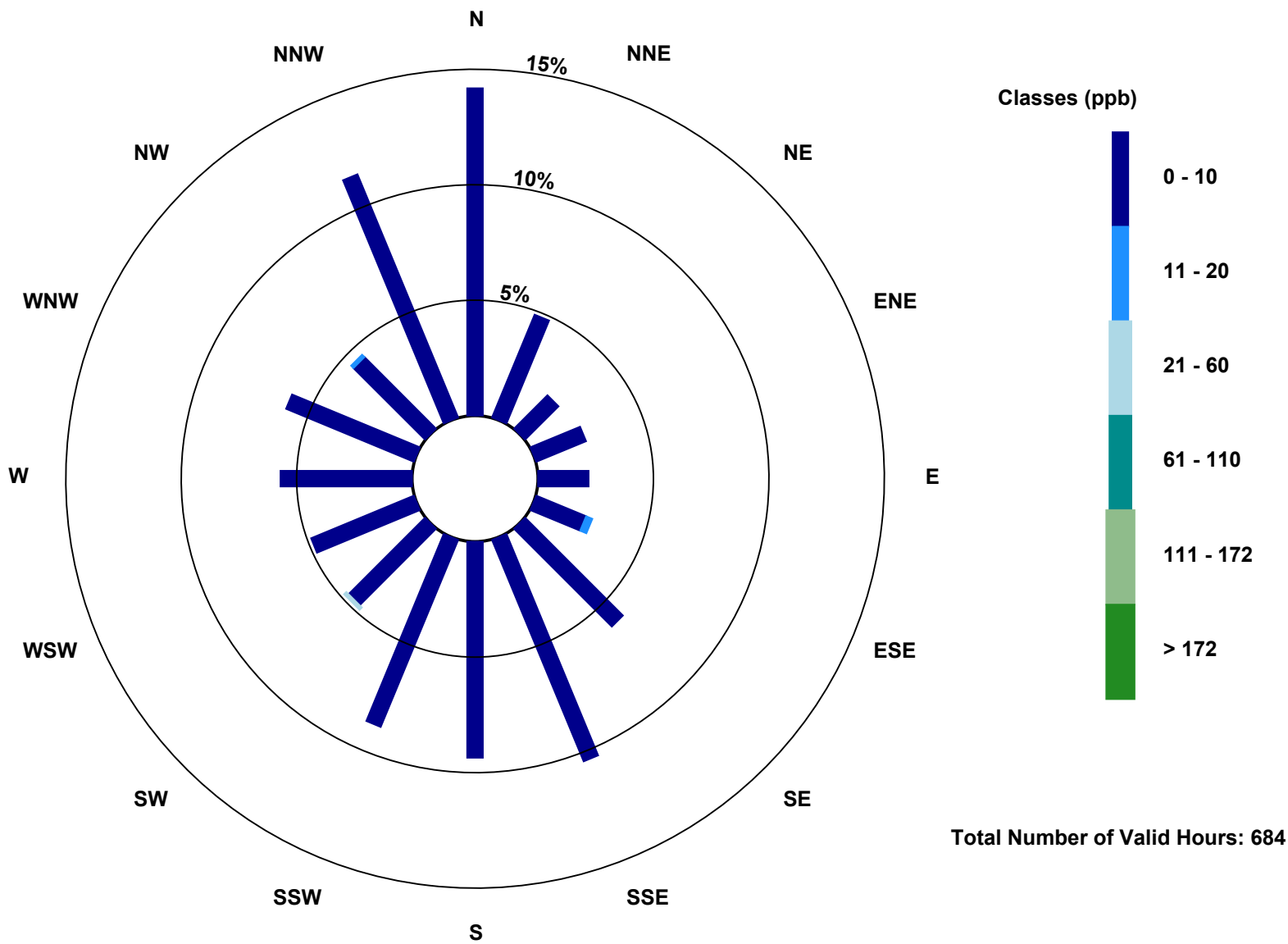
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Firebag



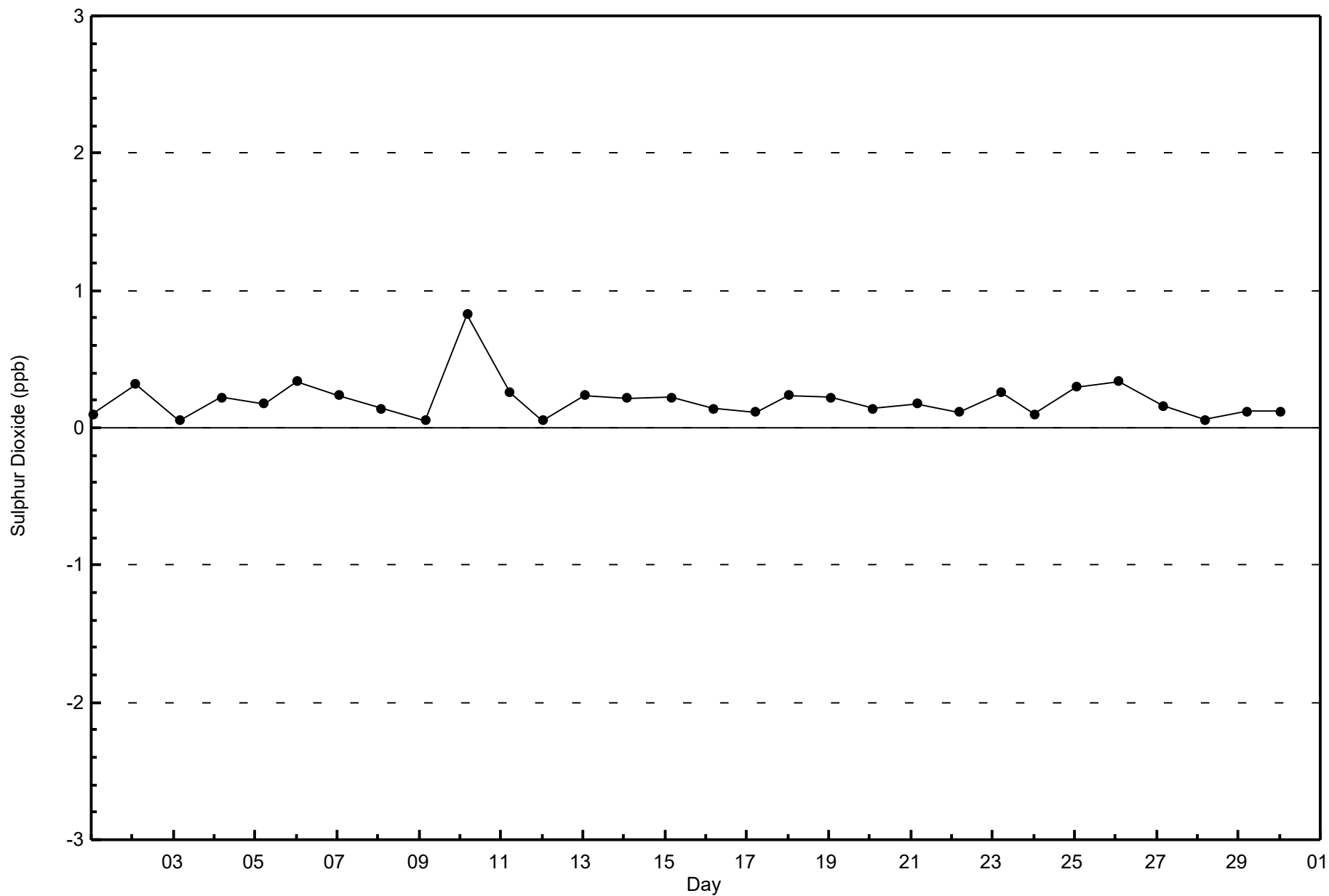


Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

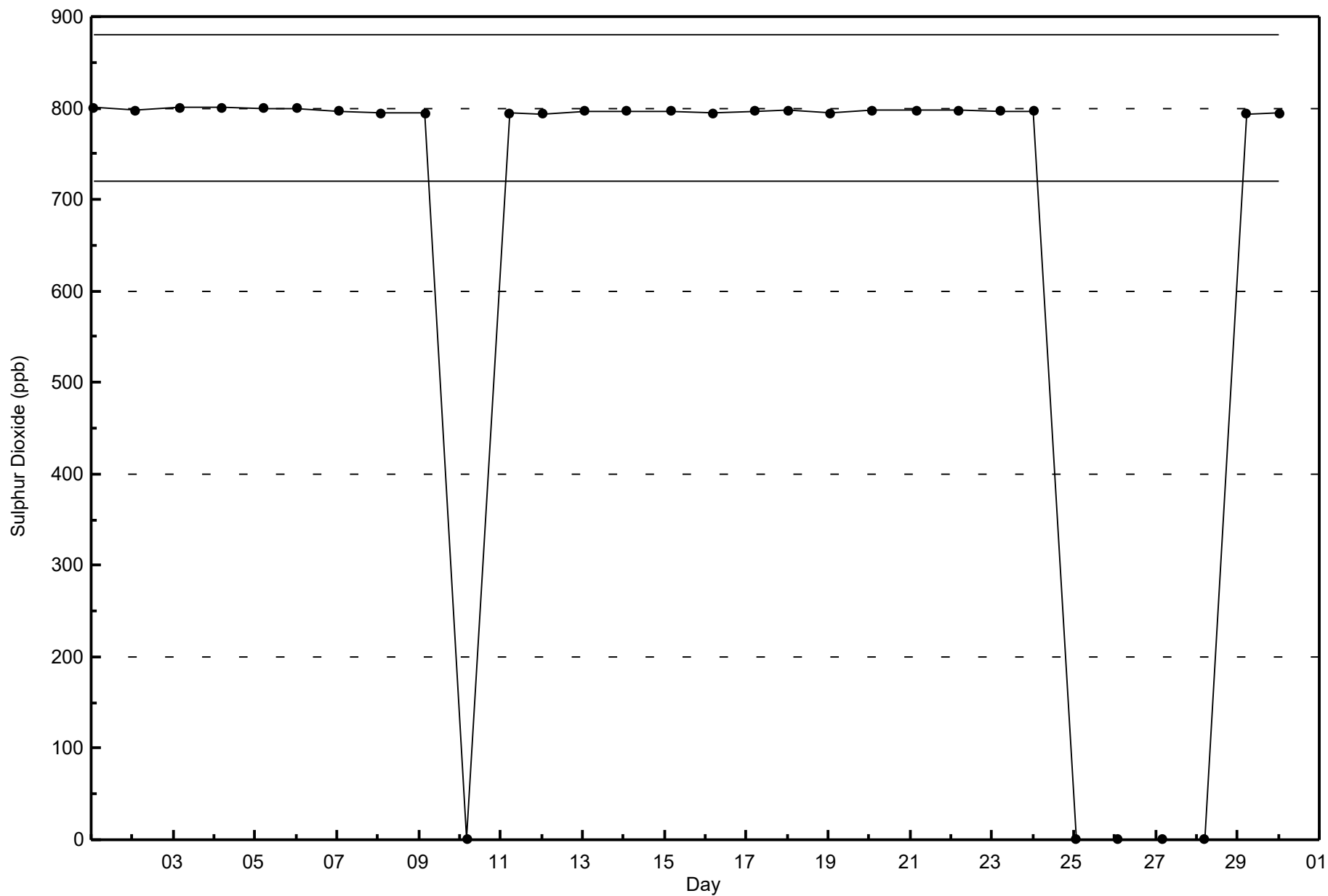
Firebag - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

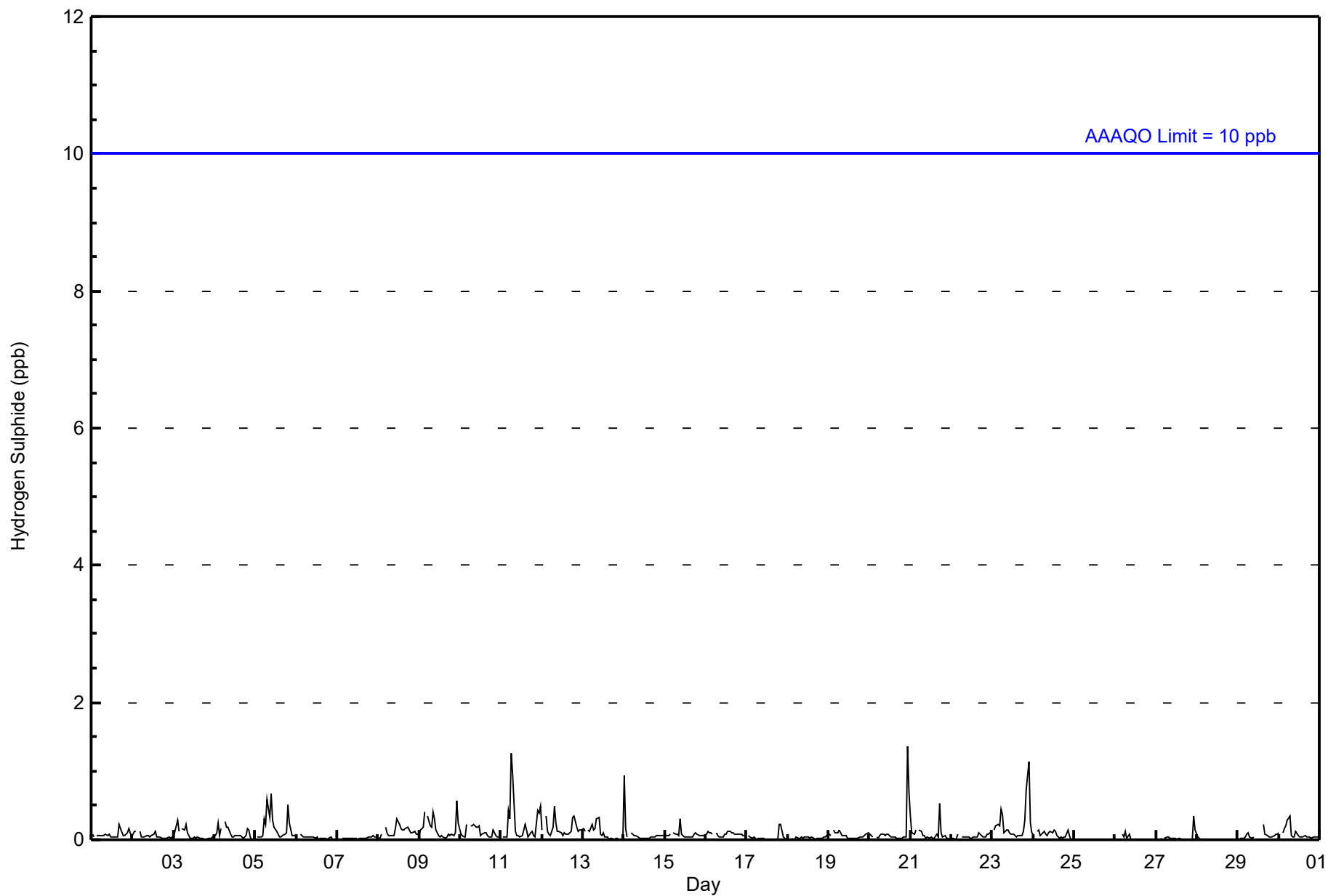
Firebag - April 2025

Number of Exceedences (AAAQO): Maximum Value: 1.4 ppb on Apr 20 23:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.2 ppb on Apr 11					Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9				
Minimum Value: 0.0 ppb on Apr 6 22:00 Maximum Diurnal Average: 0.2 ppb at hour 7 Monthly Average: 0.09 ppb																				Minimum Daily Average: 0.0 ppb on Apr 25 Minimum Diurnal Average: 0.0 ppb at hour 15 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.7									
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-Apr	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2			
2-Apr	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	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	0.0	0.0	0.0	0.1	0.1			
3-Apr	0.0	0.1	0.3	0.1	Z	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3			
4-Apr	0.1	0.1	0.3	0.1	0.2	Z	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.3			
5-Apr	Z	0.1	0.0	0.0	0.1	0.3	0.2	0.6	0.3	0.7	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.5	0.3	0.1	0.1	0.1	0.2	0.7			
6-Apr	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			
7-Apr	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	0.0	0.0	0.0	0.1			
8-Apr	0.0	0.0	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3			
9-Apr	0.1	0.1	0.2	0.4	Z	0.3	0.2	0.2	0.4	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.2	0.6			
10-Apr	0.1	0.1	0.0	0.0	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	0.1	0.1	0.1	0.0	0.0	0.1	0.2			
11-Apr	Z	0.1	0.0	0.0	0.4	0.3	1.3	1.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.4	0.4	0.5	0.2	1.3			
12-Apr	0.1	Z	0.3	0.1	0.1	0.1	0.2	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.5			
13-Apr	0.2	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3			
14-Apr	0.9	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.9			
15-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3			
16-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
17-Apr	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	0.2	0.2	0.0	0.0	0.0	0.0	0.2			
18-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1			
19-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1			
20-Apr	0.1	0.1	0.0	Z	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	1.4	0.7	0.1	1.4			
21-Apr	0.3	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.5			
22-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1			
23-Apr	Z	0.1	0.2	0.2	0.2	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.3	0.7	1.1	0.3	0.1	0.2	1.1			
24-Apr	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	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2			
25-Apr	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0			
26-Apr	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1			
27-Apr	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	0.4	0.2	0.0	0.4			
28-Apr	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-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	C	C	C	C	C	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2			
30-Apr	0.1	Z	0.1	0.2	0.2	0.3	0.4	0.1	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	0.1	0.4			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Firebag - April 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

Hydrogen Sulphide (H₂S) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	97	33	14	16	14	20	38	73	63	63	36	31	39	40	30	77	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	97	33	14	16	14	20	38	73	63	63	36	31	39	40	30	77	684

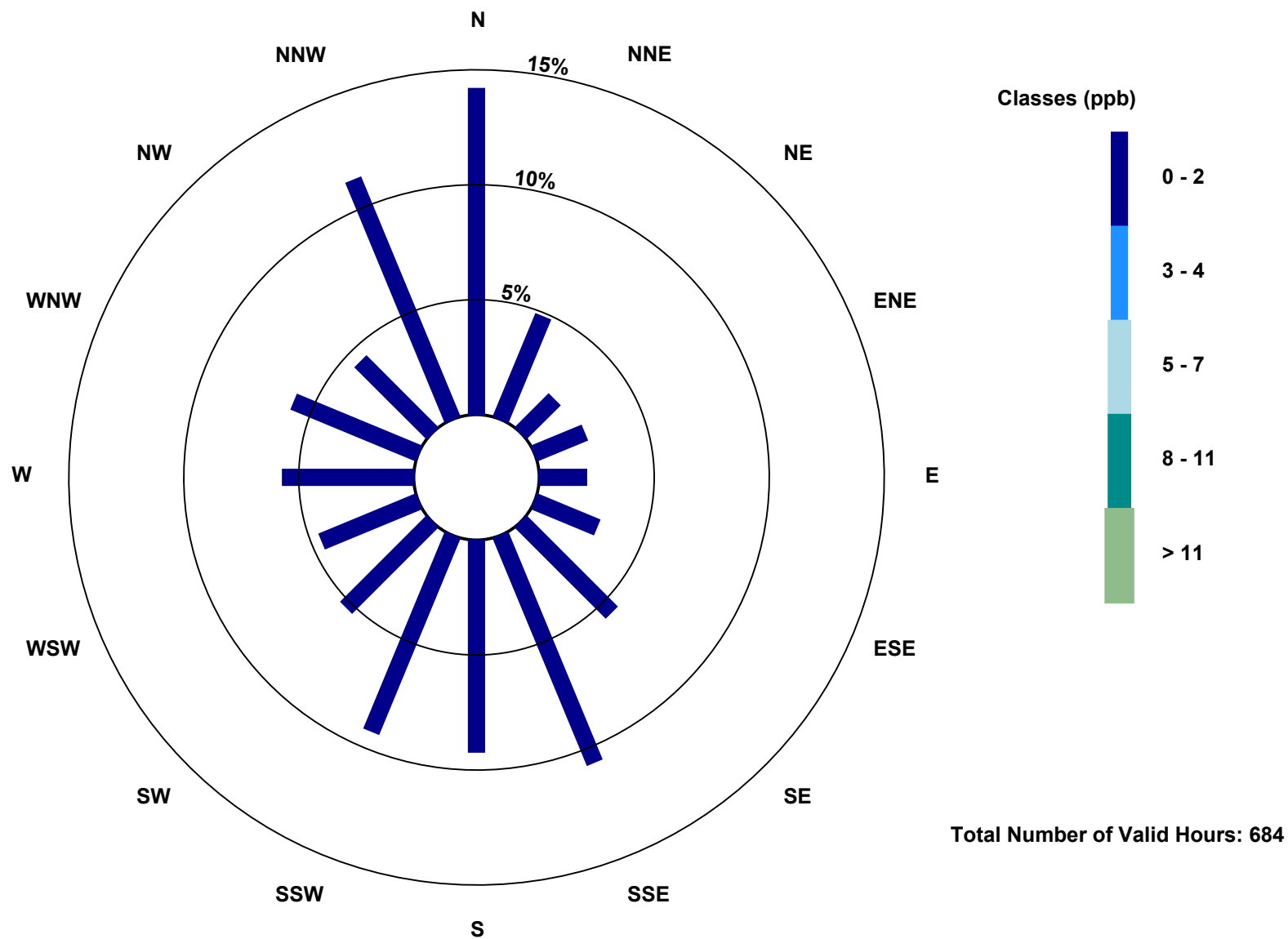
Total Number of Valid Hours: 684

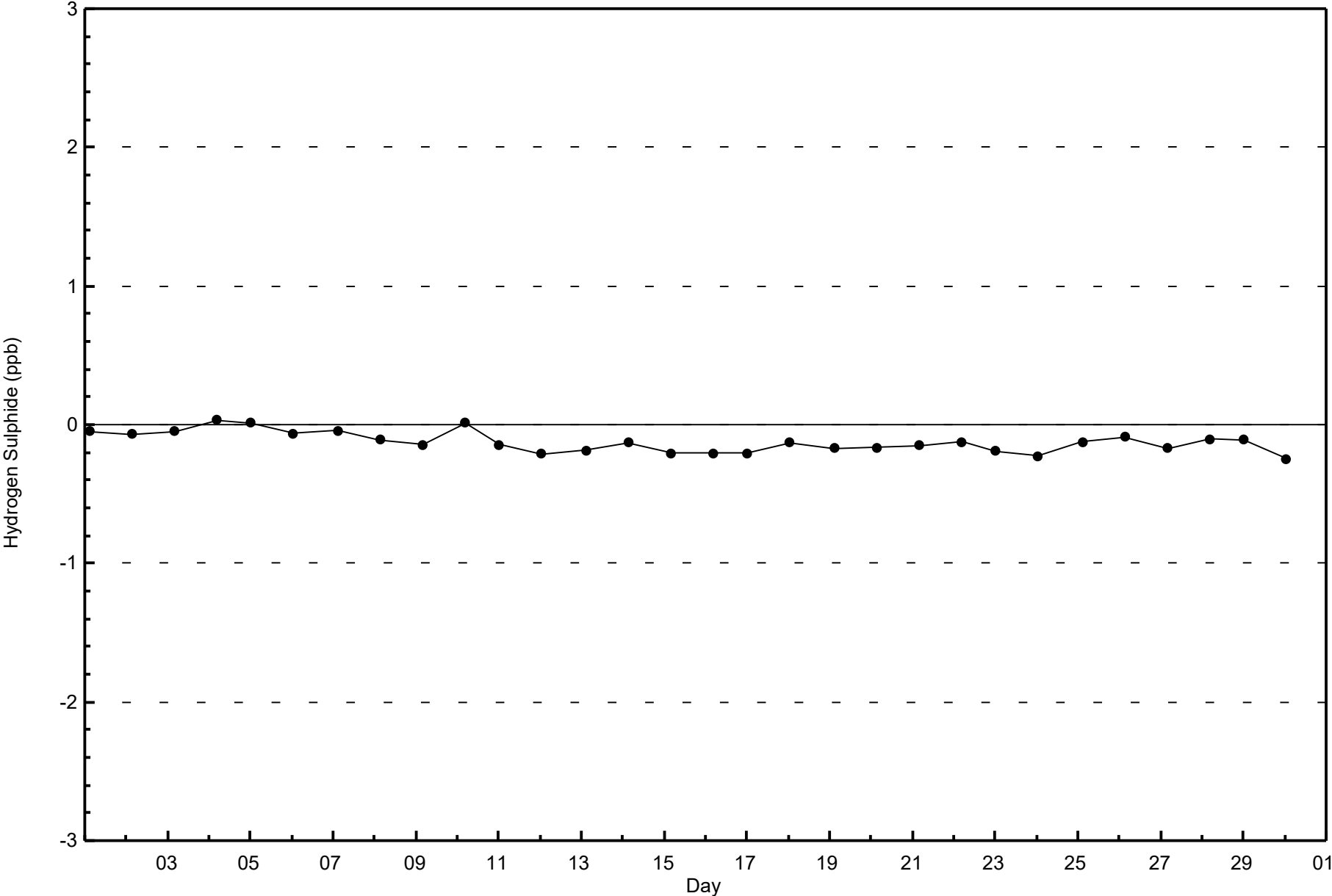
Total Number of Hours: 720

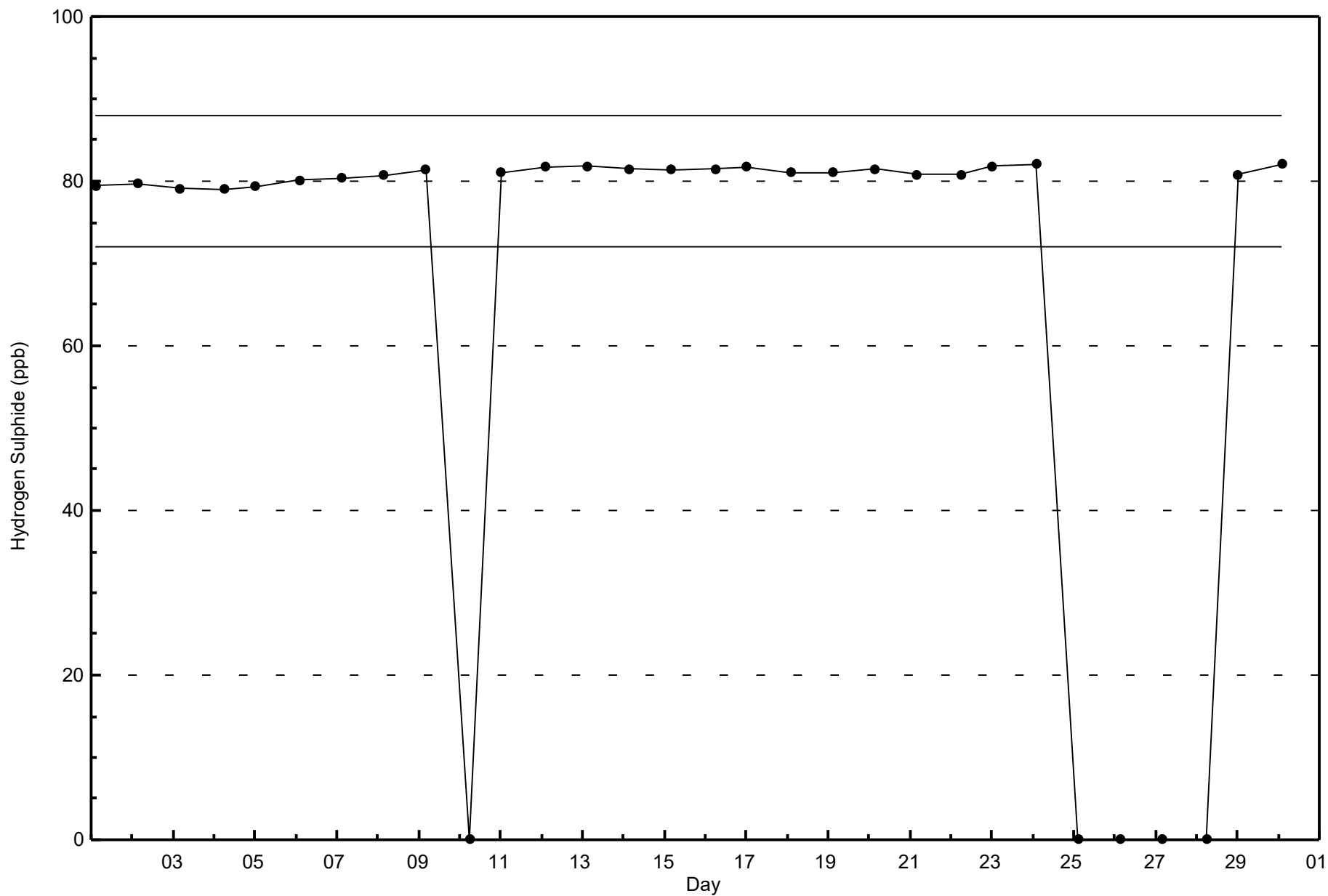


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Firebag









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

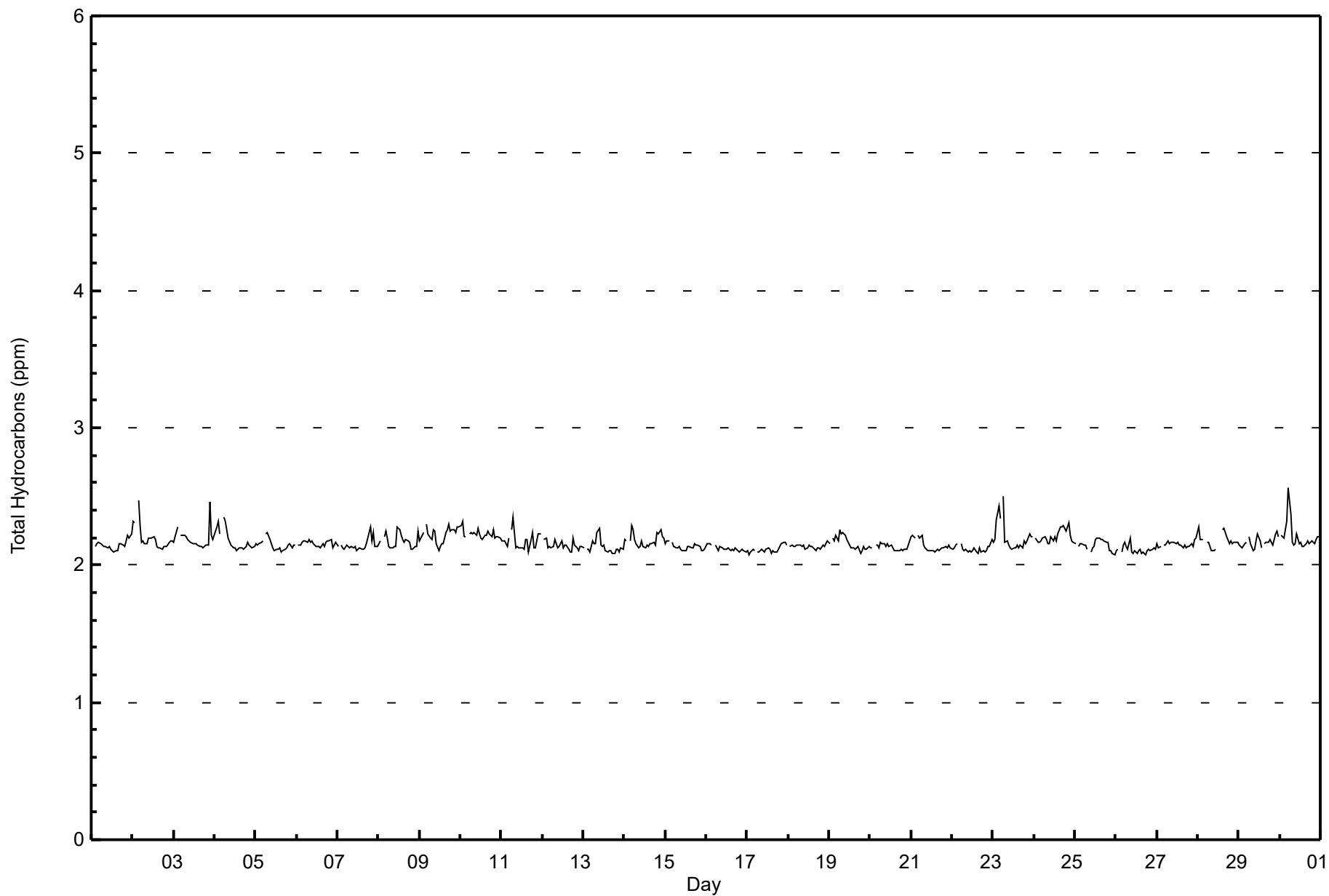
Firebag - April 2025

Maximum Value: 2.6 ppm on Apr 30 06:00										Maximum Daily Average: 2.2 ppm on Apr 10										Hours in Service: 720						
Minimum Value: 2.1 ppm on Apr 26 00:00										Minimum Daily Average: 2.1 ppm on Apr 26										Hours of Data: 685						
Maximum Diurnal Average: 2.2 ppm at hour 6										Minimum Diurnal Average: 2.1 ppm at hour 14										Hours of Missing Data: 35						
Monthly Average: 2.16 ppm										Percentiles: P ₁ = 2.1 P ₁₀ = 2.1 Q ₁ = 2.1 Median = 2.1 Q ₃ = 2.2 P ₉₀ = 2.2 P ₉₉ = 2.3										Hours of Calibration: 33						
																				Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.2	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	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
2-Apr	2.3	2.3	Z	2.5	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	2.1	2.2	2.2	2.2	2.2	2.2
3-Apr	2.2	2.2	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.2	2.2	2.2	2.2
4-Apr	2.2	2.3	2.3	2.2	Z	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	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2
5-Apr	2.2	2.1	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
6-Apr	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2
7-Apr	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	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.1
8-Apr	2.2	2.2	Z	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.2
9-Apr	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2
10-Apr	2.3	2.3	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2
11-Apr	2.2	2.2	2.2	2.1	2.2	Z	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2
12-Apr	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1
13-Apr	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	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	2.1	2.1	2.1
14-Apr	2.2	2.2	Z	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.2
15-Apr	2.2	2.2	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
16-Apr	2.2	2.2	2.2	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
17-Apr	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	2.2	2.2	2.2	2.1	2.1
18-Apr	Z	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	2.2	2.2	2.2	2.2
19-Apr	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	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-Apr	2.1	2.1	Z	2.2	2.1	2.1	2.2	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
21-Apr	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Apr	2.1	2.1	2.1	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
23-Apr	2.2	2.2	2.3	2.4	2.3	Z	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
24-Apr	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2
25-Apr	2.2	Z	2.1	2.2	2.2	2.1	2.1	2.1	M	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1
26-Apr	2.1	2.1	Z	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
27-Apr	2.2	2.1	2.1	Z	2.1	2.1	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	2.2	2.1	2.2	2.2	2.2
28-Apr	2.3	2.2	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.1	2.1	C	C	C	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
29-Apr	2.1	2.1	2.1	2.2	2.2	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.1	M	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.3	2.2	2.2
30-Apr	Z	2.2	2.2	2.3	2.3	2.6	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2.2																									Diurnal Average	
2.3																									Diurnal Maximum	
Z - zerospan																										
C - Calibration																										
M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Firebag - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	685	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: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Firebag - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	97	33	14	16	15	18	41	71	64	61	33	33	39	41	31	78	685
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	97	33	14	16	15	18	41	71	64	61	33	33	39	41	31	78	685

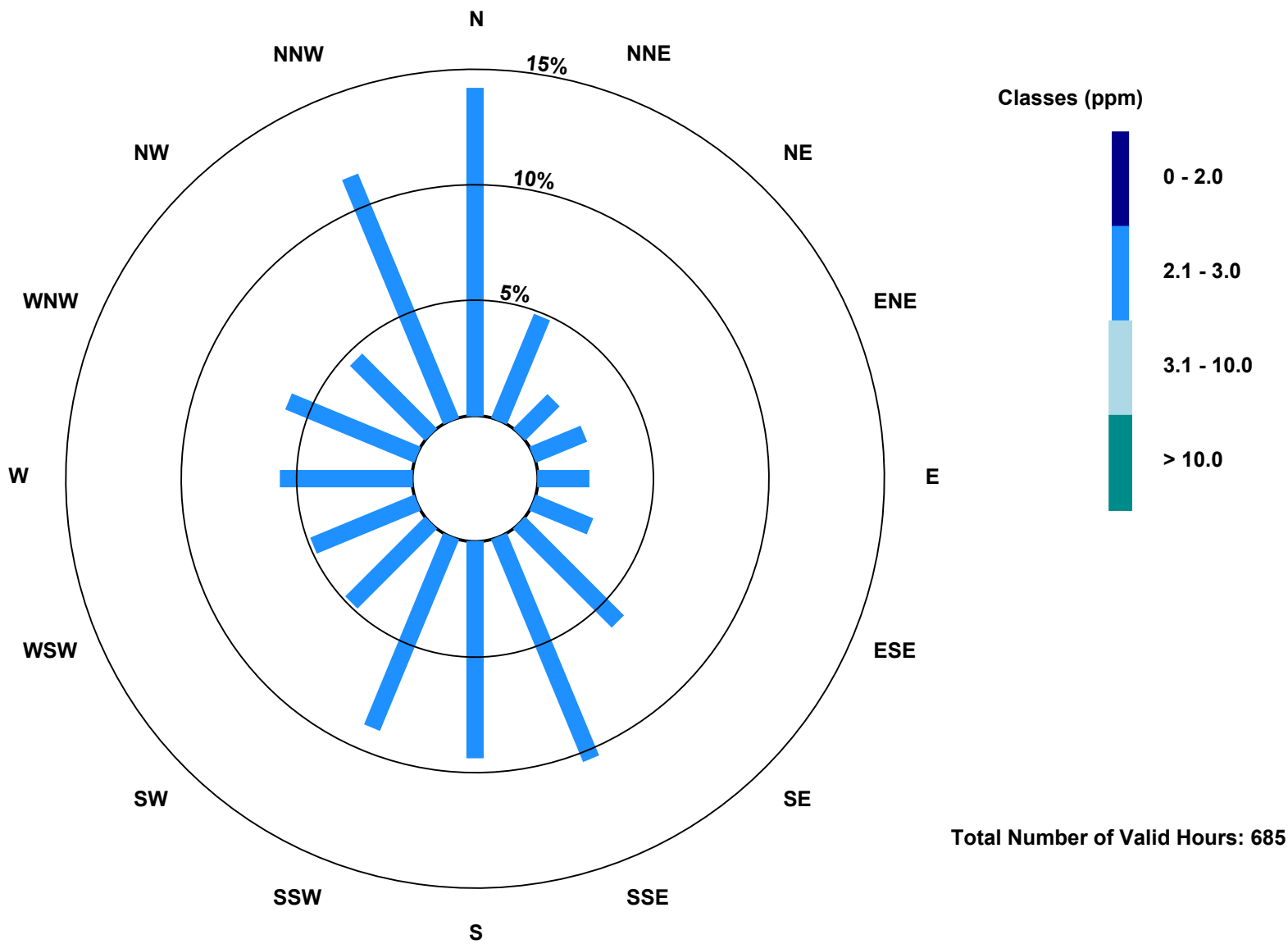
Total Number of Valid Hours: 685

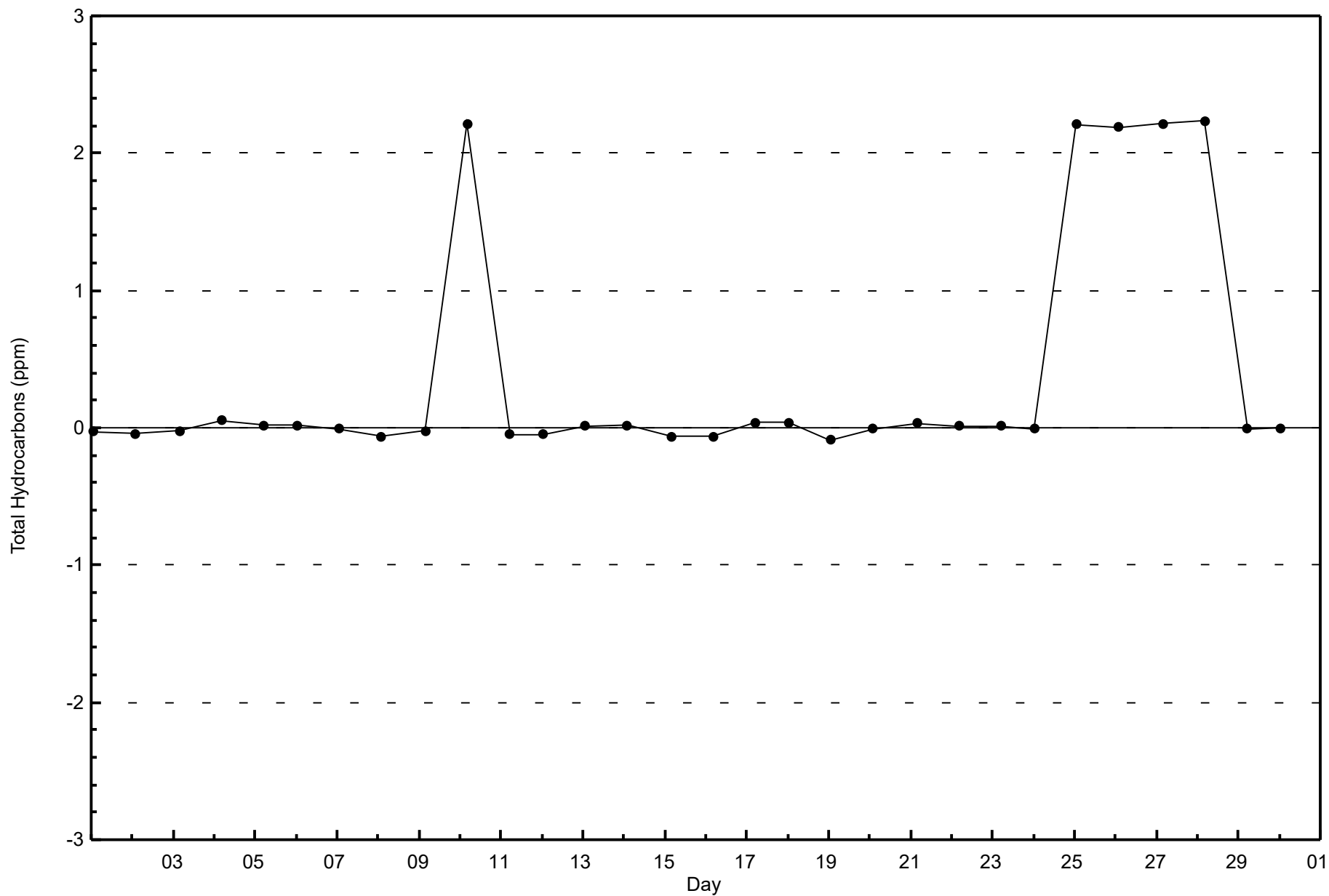
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Firebag

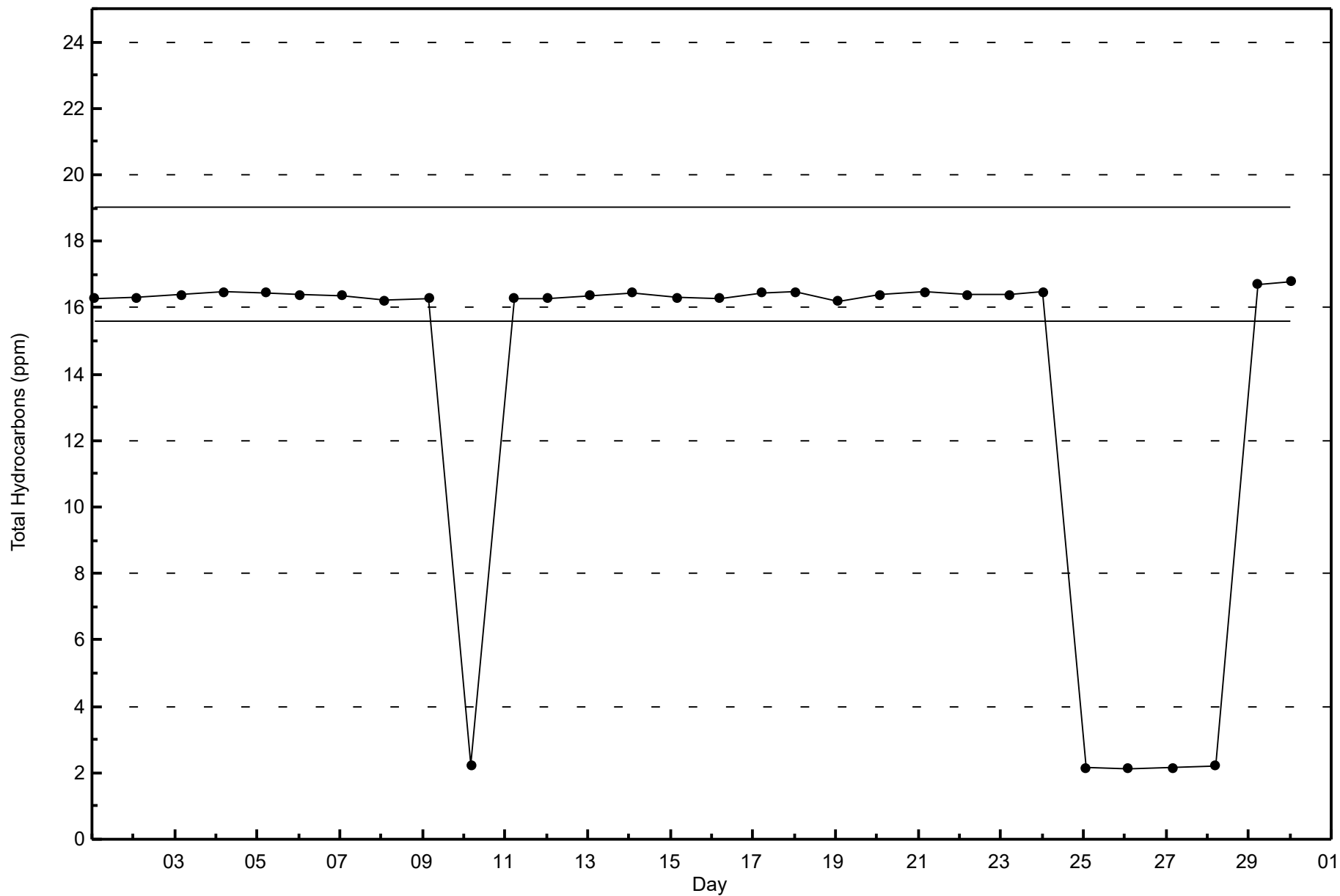






Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Firebag - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

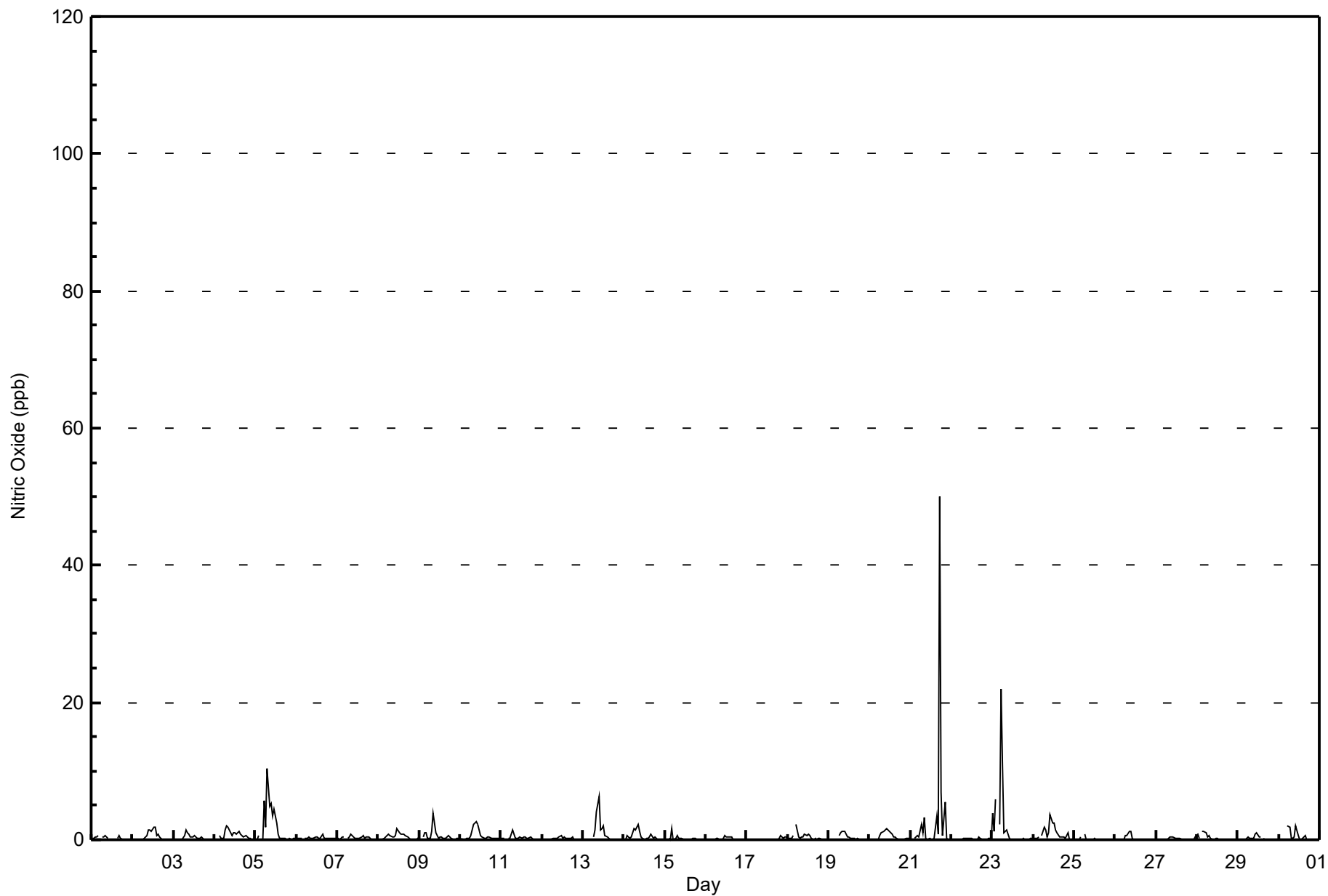
Firebag - April 2025

Maximum Value: 50.0 ppb on Apr 21 18:00																		Maximum Daily Average: 3.3 ppb on Apr 21								Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 19:00																		Minimum Daily Average: 0.1 ppb on Apr 22								Hours of Data: 682	
Maximum Diurnal Average: 1.8 ppb at hour 18																		Minimum Diurnal Average: 0.1 ppb at hour 22								Hours of Missing Data: 38	
Monthly Average: 0.57 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.2 P ₉₉ = 5.7								Hours of Calibration: 35	
																										Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.2	0.3	0.4	0.3	0.6	Z	0.5	0.5	0.5	0.3	C	C	C	C	C	0.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	
2-Apr	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.6	1.4	1.4	1.2	1.8	1.9	0.6	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.9	
3-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.6	1.5	0.9	0.8	0.4	0.4	0.6	0.4	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.5	
4-Apr	0.0	0.0	Z	0.6	0.2	0.3	1.4	2.1	1.8	1.1	0.7	1.0	1.1	0.8	1.2	0.9	0.6	0.4	0.6	0.4	0.2	0.2	0.0	0.0	0.7	2.1	
5-Apr	0.1	0.0	0.6	Z	0.0	5.7	1.9	10.4	4.9	5.4	3.5	4.4	2.4	0.8	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	1.8	10.4	
6-Apr	0.2	0.2	0.2	0.3	Z	0.3	0.3	0.4	0.3	0.2	0.1	0.4	0.3	0.2	0.2	0.8	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.8	
7-Apr	0.1	0.1	0.1	0.4	0.4	Z	0.2	0.4	0.8	0.4	0.2	0.2	0.2	0.2	0.4	0.5	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.2	0.8	
8-Apr	Z	0.0	0.1	0.1	0.3	0.7	0.7	0.5	0.4	0.4	0.6	1.6	1.0	0.9	0.7	0.8	0.5	0.5	0.2	0.0	0.1	0.0	0.0	0.1	0.5	1.6	
9-Apr	0.1	Z	0.4	1.0	1.1	0.1	0.3	1.2	3.9	2.5	0.9	0.3	0.4	0.5	0.3	0.3	0.4	0.7	0.3	0.2	0.1	0.1	0.1	0.1	0.7	3.9	
10-Apr	0.1	0.1	Z	0.1	0.2	0.1	0.5	1.5	2.3	2.6	2.2	1.5	0.6	0.3	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.6	2.6	
11-Apr	0.2	0.1	0.1	Z	0.1	0.1	0.9	1.4	0.2	0.2	0.2	0.4	0.2	0.4	0.4	0.3	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.3	1.4	
12-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.2	0.4	0.6	0.1	0.3	0.2	0.2	0.2	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.6	
13-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.4	1.5	4.1	6.3	1.5	1.6	2.1	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	6.3	
14-Apr	Z	0.0	0.6	0.2	0.4	1.1	1.7	1.5	2.2	1.3	0.3	0.2	0.1	0.3	0.2	0.4	0.9	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.5	2.2	
15-Apr	0.1	Z	0.3	0.1	1.6	0.0	0.1	0.7	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.6	
16-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
17-Apr	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	0.2	0.7	0.2	0.3	0.3	0.1	0.7	
18-Apr	0.2	0.1	0.1	0.5	Z	2.2	0.4	0.3	0.4	0.4	0.8	0.7	0.8	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.4	2.2	
19-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.6	1.0	1.1	1.2	0.9	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	
20-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.7	1.0	1.3	1.4	1.6	1.5	1.1	0.7	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5	1.6	
21-Apr	0.2	Z	0.2	0.4	0.7	0.5	2.2	1.1	3.3	0.3	0.1	0.1	0.1	0.1	0.1	3.5	0.7	50.0	6.9	0.7	5.5	0.1	0.1	0.1	3.3	50.0	
22-Apr	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	
23-Apr	4.0	1.3	6.0	Z	2.1	22.0	11.0	1.1	1.4	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.3	2.2	22.0	
24-Apr	0.2	0.1	0.3	0.3	Z	0.7	1.8	1.4	0.4	1.0	3.8	2.4	2.5	1.4	1.0	0.5	0.4	0.3	0.3	0.2	1.0	0.1	0.1	0.0	0.9	3.8	
25-Apr	0.1	0.1	0.0	0.1	0.4	Z	0.7	0.1	0.1	M	M	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	0.1	0.7	
26-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.5	0.6	1.3	1.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3	
27-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.5	
28-Apr	0.7	0.3	Z	1.1	1.3	0.9	0.4	0.6	0.2	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	
29-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.5	0.3	0.1	0.1	0.7	1.1	0.5	0.3	M	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.1	
30-Apr	0.0	0.0	0.0	0.0	Z	2.0	1.8	0.1	0.1	0.5	1.9	0.5	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan																											
C - Calibration																											
M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	99.71	99.71
21 - 40	1	0.15	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	97	32	14	16	15	19	40	71	58	62	36	32	38	40	31	79	680
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
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	97	32	14	16	15	19	40	72	58	62	36	32	39	40	31	79	682

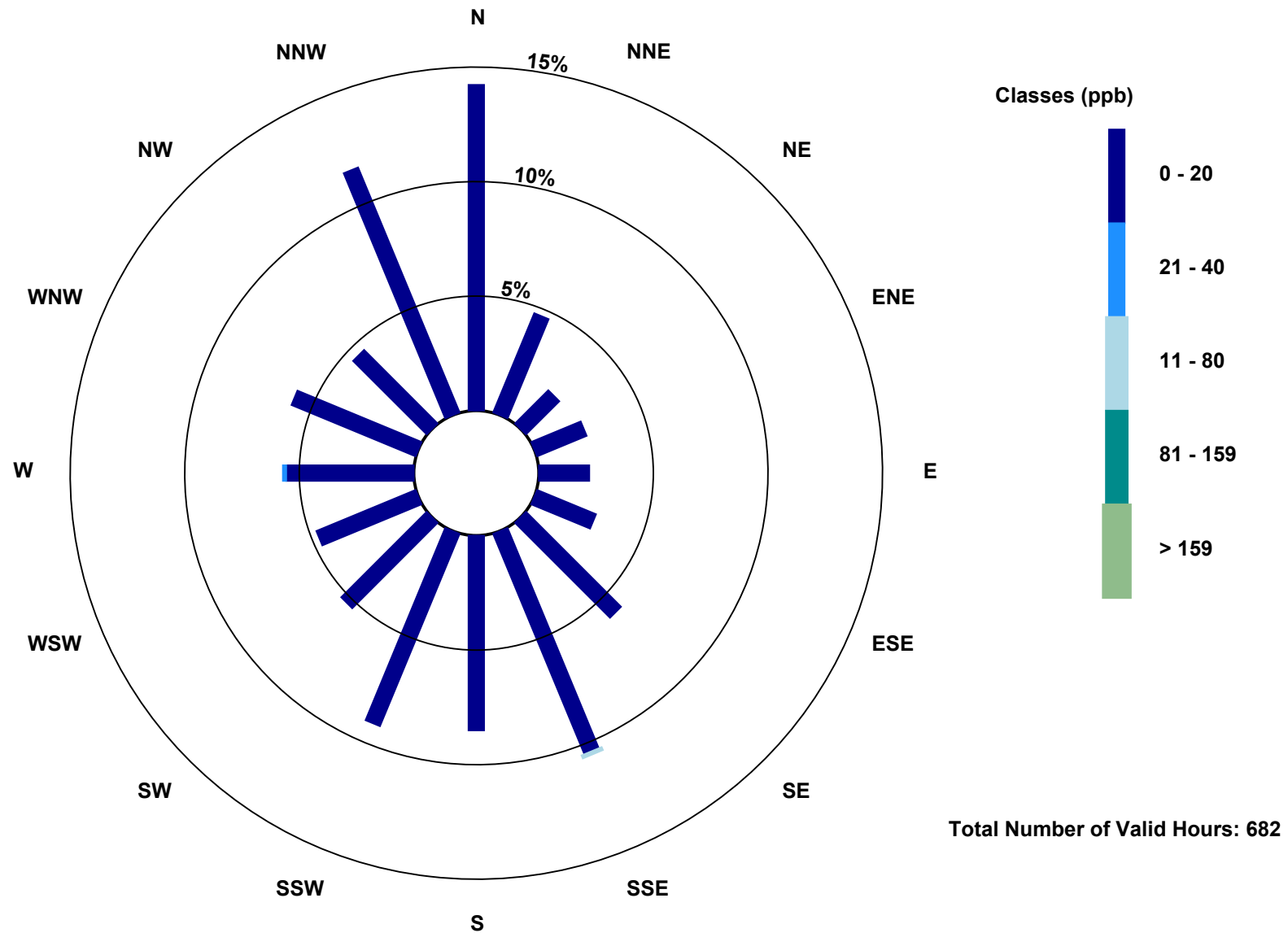
Total Number of Valid Hours: 682

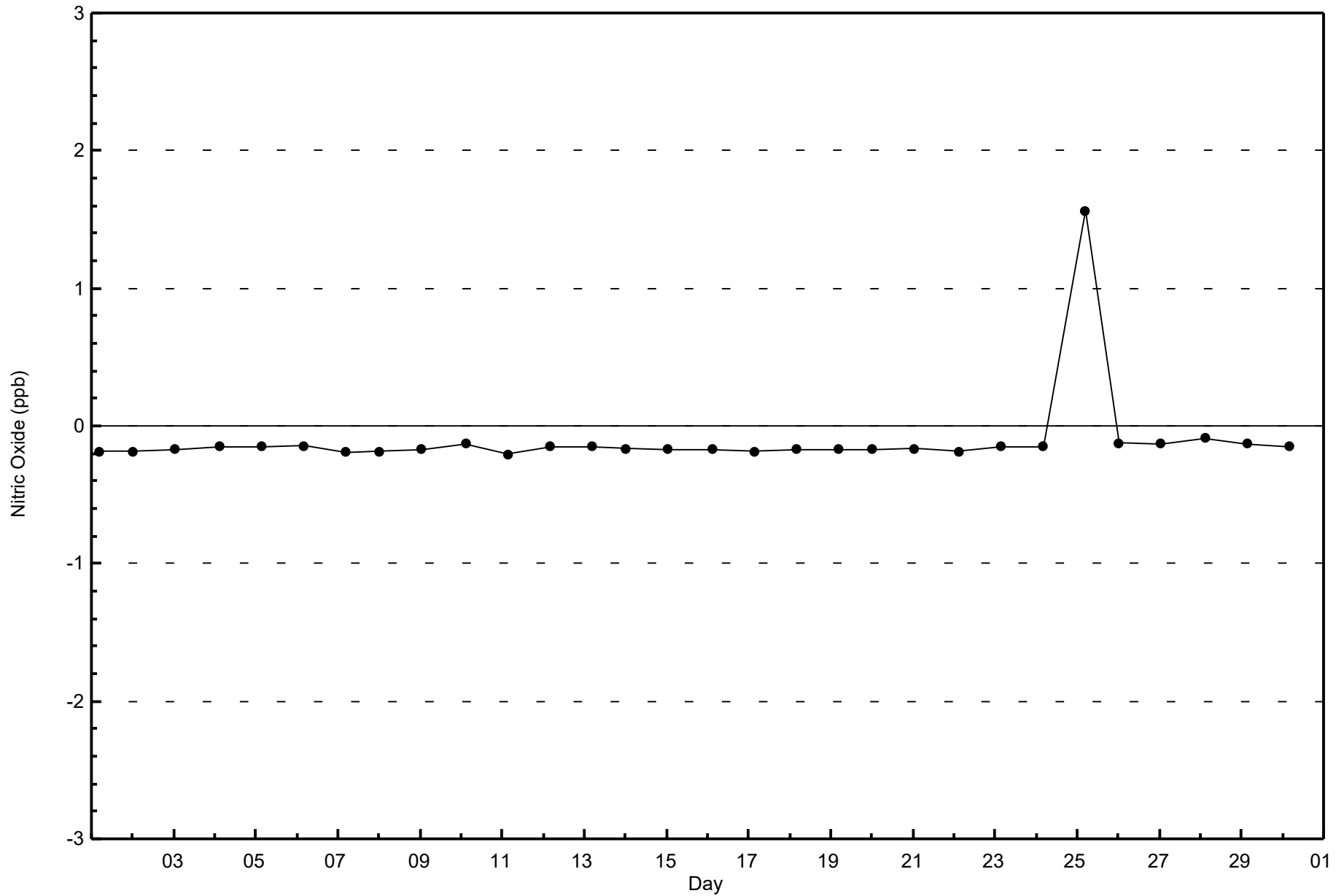
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitric Oxide (NO) - ppb
Firebag

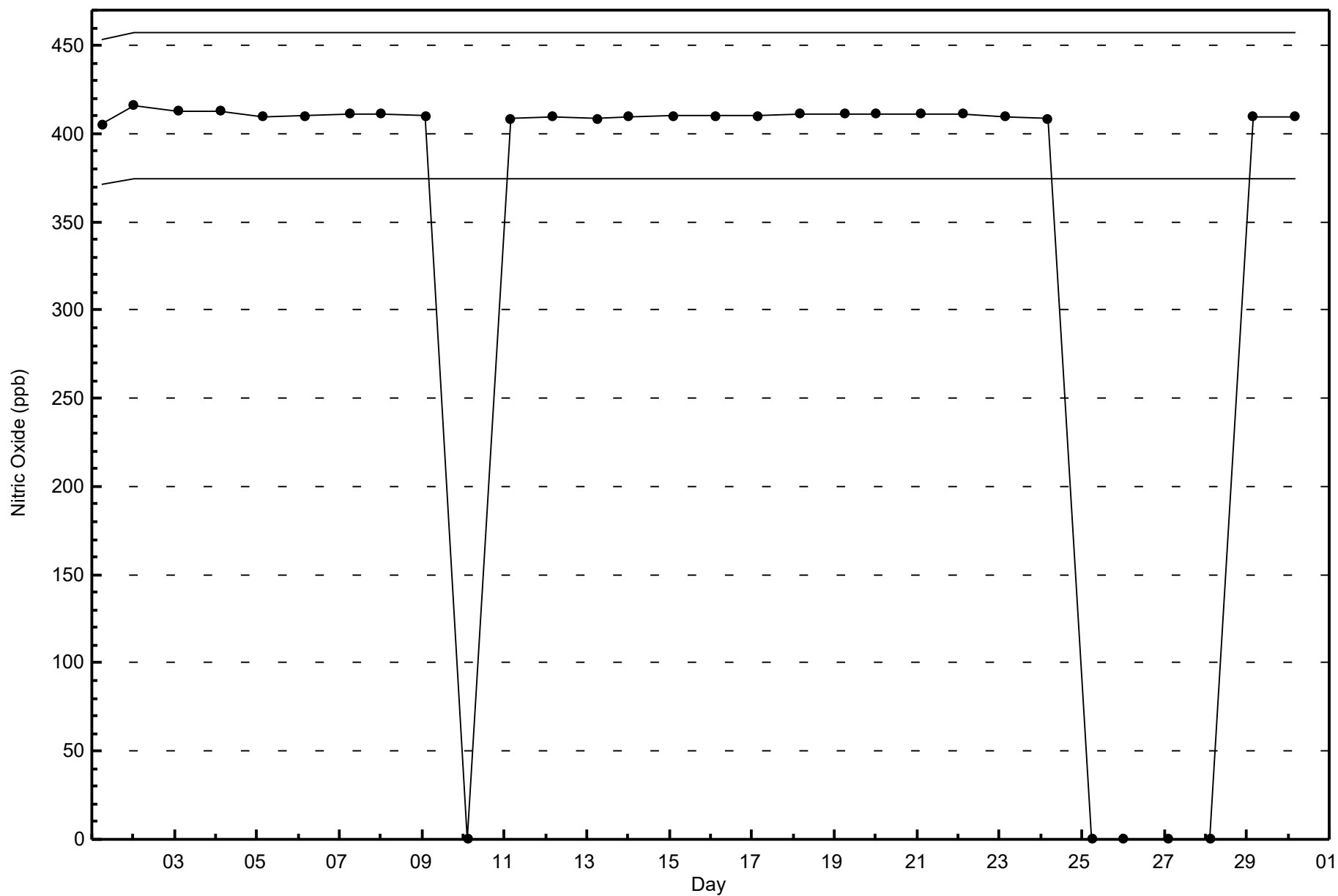






Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

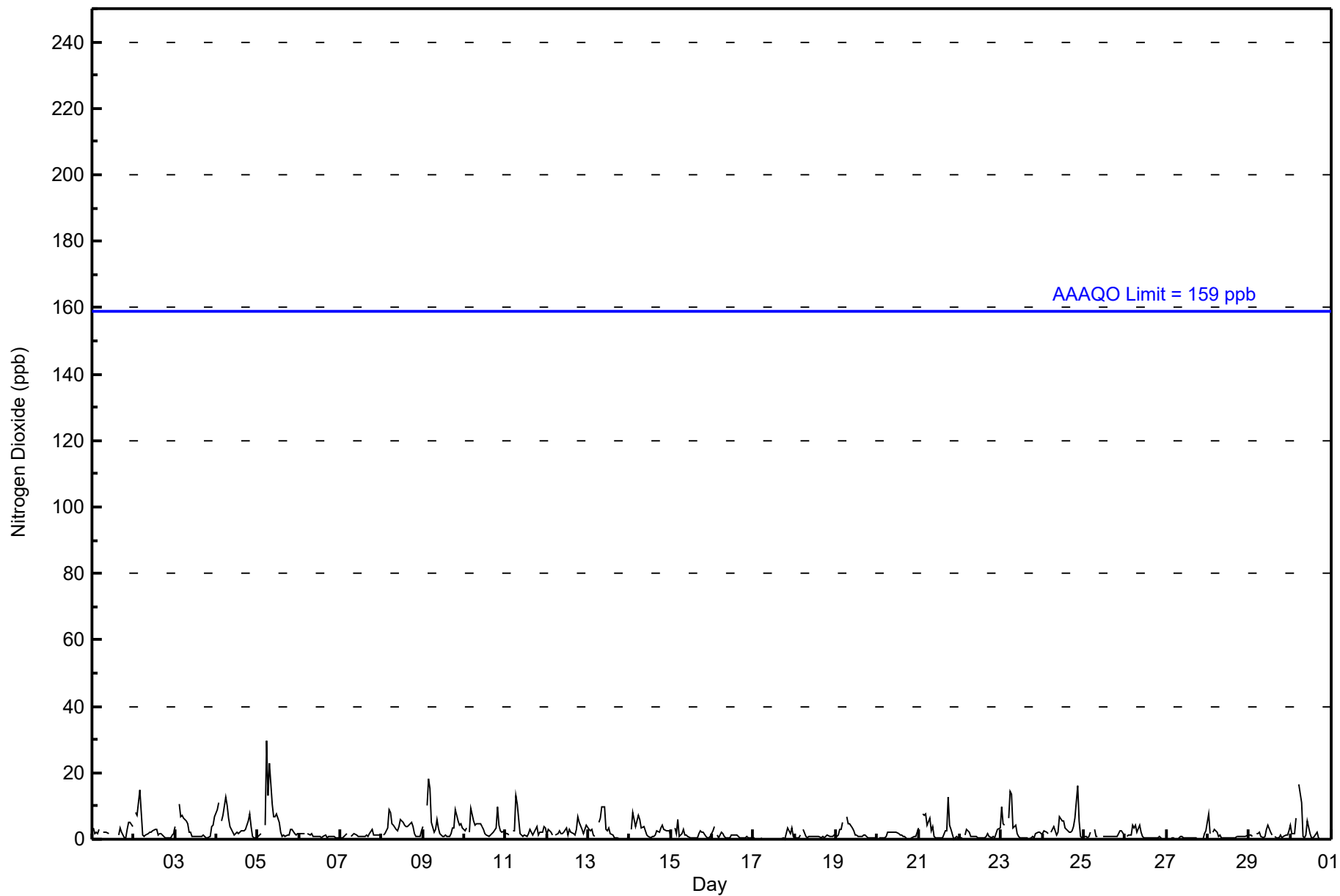
Firebag - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 29.8 ppb on Apr 5 06:00 Maximum Daily Average: 5.6 ppb on Apr 5																			Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 21 21:00 Minimum Daily Average: 0.5 ppb on Apr 27 Maximum Diurnal Average: 5.5 ppb at hour 6 Minimum Diurnal Average: 1.1 ppb at hour 15 Monthly Average: 2.34 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 1.3 Q ₃ = 2.9 P ₉₀ = 5.3 P ₉₉ = 14.4																			Hours of Data: 682							
																			Hours of Missing Data: 38							
																			Hours of Calibration: 35							
																			Percent Operational Time: 99.6							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	3.4	1.7	2.2	1.6	3.1	Z	2.0	2.1	2.2	1.6	C	C	C	C	C	1.2	3.2	2.1	0.4	0.6	3.1	5.0	5.0	3.8	2.5	5.0
2-Apr	Z	8.1	7.0	15.0	8.0	1.3	0.8	1.3	1.7	2.2	2.3	2.4	3.0	2.8	1.3	1.8	1.5	0.7	0.4	0.3	0.3	0.6	1.3	1.5	2.9	15.0
3-Apr	4.0	Z	10.5	6.7	7.2	6.4	5.4	4.6	2.0	2.0	1.0	0.8	1.0	0.8	0.8	0.9	1.1	0.8	0.5	0.3	1.0	3.9	4.2	6.6	3.2	10.5
4-Apr	8.9	11.2	Z	5.4	7.2	12.7	10.1	6.3	3.9	2.2	1.4	1.8	2.1	1.8	2.7	2.5	2.4	2.9	5.4	7.7	3.9	1.0	0.6	0.6	4.6	12.7
5-Apr	1.0	1.4	1.9	Z	4.4	29.8	13.2	22.8	10.5	6.8	6.6	7.7	4.9	2.1	0.9	1.1	1.0	1.2	1.1	3.0	3.0	1.6	1.4	1.7	5.6	29.8
6-Apr	1.6	1.5	1.5	1.7	Z	1.9	1.4	1.6	0.9	0.7	0.7	0.9	0.9	0.6	0.7	1.4	0.6	0.7	0.7	0.8	0.7	0.6	0.6	0.6	1.0	1.9
7-Apr	0.6	0.6	0.7	1.4	1.6	Z	1.0	1.3	1.9	1.3	0.9	0.8	0.8	0.7	0.9	1.3	0.9	1.6	2.8	1.4	1.1	1.2	1.1	1.2	1.2	2.8
8-Apr	Z	1.2	1.8	3.4	9.1	8.0	4.5	4.1	3.0	2.4	4.0	5.9	5.1	4.1	3.7	3.8	4.2	5.0	3.8	1.9	0.8	0.7	0.7	2.7	3.6	9.1
9-Apr	3.9	Z	10.0	18.1	15.3	5.2	2.2	2.8	5.8	3.5	1.9	0.9	1.0	1.3	1.0	1.0	1.7	3.6	3.6	8.9	5.7	4.4	4.7	3.6	4.8	18.1
10-Apr	2.6	3.2	Z	2.2	9.5	5.5	4.4	4.5	4.8	4.6	3.9	2.9	1.6	1.1	1.0	1.1	1.9	2.2	3.5	9.8	4.4	2.7	2.2	2.5	3.6	9.8
11-Apr	1.8	1.7	1.4	Z	2.4	2.4	13.1	10.6	1.5	1.2	0.9	1.1	1.0	1.8	3.0	2.1	1.1	3.1	3.7	1.3	2.1	2.3	3.7	3.2	2.9	13.1
12-Apr	1.4	3.0	2.2	1.4	Z	1.3	1.8	2.5	1.6	1.5	2.1	3.4	1.1	2.8	2.0	1.7	1.4	3.0	6.9	5.1	2.9	1.9	2.8	4.3	2.5	6.9
13-Apr	2.8	2.6	2.9	1.4	1.0	Z	4.9	6.4	9.9	9.9	2.9	2.6	3.5	1.5	1.1	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.5	2.4	9.9
14-Apr	Z	3.0	8.2	4.0	5.6	7.3	5.8	3.4	3.8	2.7	1.1	0.8	0.5	0.9	0.7	1.1	2.4	2.0	3.4	4.4	2.9	2.4	2.5	2.7	3.1	8.2
15-Apr	0.9	Z	3.2	1.9	6.1	1.0	1.6	3.1	1.3	1.2	0.8	0.4	0.4	0.4	0.3	0.4	1.5	2.4	2.1	2.0	1.0	0.5	0.6	0.7	1.5	6.1
16-Apr	2.6	3.8	Z	1.4	0.6	2.2	1.7	0.7	0.4	0.3	0.4	1.3	1.2	1.2	1.2	1.0	0.3	0.4	0.4	0.5	0.8	0.4	0.5	0.4	1.0	3.8
17-Apr	0.4	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	0.3	0.2	1.7	3.3	1.5	3.6	0.9	0.7	3.6
18-Apr	0.5	0.4	0.4	1.1	Z	3.0	0.9	0.6	0.8	0.8	1.0	1.0	1.0	1.0	0.8	0.6	0.7	0.6	0.9	1.1	0.9	0.9	1.0	1.4	0.9	3.0
19-Apr	1.0	1.3	3.0	2.9	4.9	Z	6.6	4.7	4.7	3.2	2.4	1.4	1.3	0.9	1.0	1.0	1.3	1.2	0.3	0.3	0.4	0.4	0.4	0.3	2.0	6.6
20-Apr	Z	0.4	0.5	0.4	0.6	0.9	2.3	2.3	2.2	2.1	2.2	2.0	1.8	1.4	1.3	1.0	0.8	0.2	0.2	0.2	0.4	0.7	0.8	2.1	1.2	2.3
21-Apr	3.6	Z	7.7	7.2	7.6	4.4	6.5	2.5	3.8	0.7	0.4	0.5	0.4	0.5	0.6	2.4	2.6	12.7	4.1	3.0	0.0	0.4	0.7	0.4	3.2	12.7
22-Apr	0.3	0.6	Z	1.3	2.8	2.3	0.9	0.8	0.7	0.7	0.5	0.4	0.4	0.4	0.4	0.7	1.7	0.8	0.4	0.7	0.5	1.8	2.8	3.3	1.1	3.3
23-Apr	9.7	4.5	4.1	Z	6.2	14.3	13.7	3.3	4.4	1.9	0.7	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.9	0.6	1.8	2.3	2.1	1.8	3.2	14.3
24-Apr	1.7	2.6	2.0	1.6	Z	2.2	3.8	2.7	1.1	2.1	6.6	5.6	5.3	3.4	2.8	2.0	2.2	2.4	3.8	6.3	16.1	5.3	1.0	0.6	3.6	16.1
25-Apr	0.7	0.8	0.6	0.9	2.3	Z	3.0	0.8	0.8	M	M	0.9	1.0	0.7	0.8	0.7	0.8	1.0	0.8	1.0	1.5	2.6	2.4	1.1	1.2	3.0
26-Apr	Z	1.0	1.3	1.1	4.1	3.3	4.1	2.1	4.2	2.2	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.8	0.2	0.2	0.2	1.3	4.2
27-Apr	0.2	Z	0.2	0.3	0.4	0.2	0.2	0.5	0.7	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.2	1.5	2.6	0.5	2.6
28-Apr	7.6	1.7	Z	2.0	3.0	2.0	0.9	1.4	0.5	0.4	0.3	0.5	0.5	0.5	0.5	0.4	0.4	0.7	1.0	0.8	0.9	1.0	1.0	1.1	1.3	7.6
29-Apr	1.2	1.1	0.7	Z	1.7	1.8	2.0	0.8	0.6	0.9	2.8	4.2	2.1	1.2	M	1.0	0.5	0.5	1.1	0.5	1.0	1.3	1.2	2.7	1.4	4.2
30-Apr	4.3	1.8	1.7	6.3	Z	16.7	11.0	0.8	0.4	1.3	5.4	1.6	0.3	0.3	0.8	2.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.5	16.7
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	680	99.71	99.71
21 - 40	2	0.29	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	97	32	14	16	15	19	40	72	58	61	35	32	39	40	31	79	680
21 - 40	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	32	14	16	15	19	40	72	58	62	36	32	39	40	31	79	682

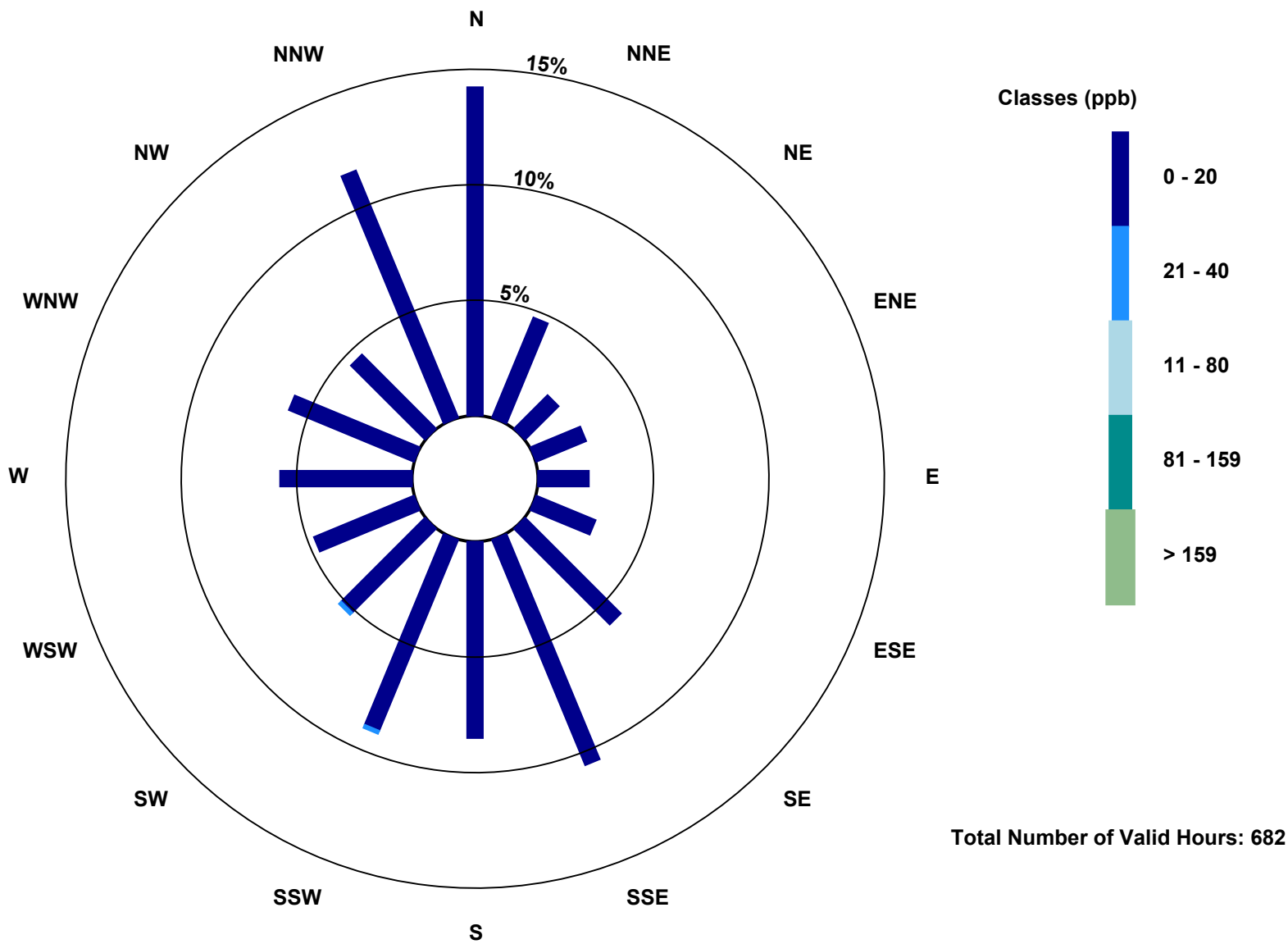
Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Firebag



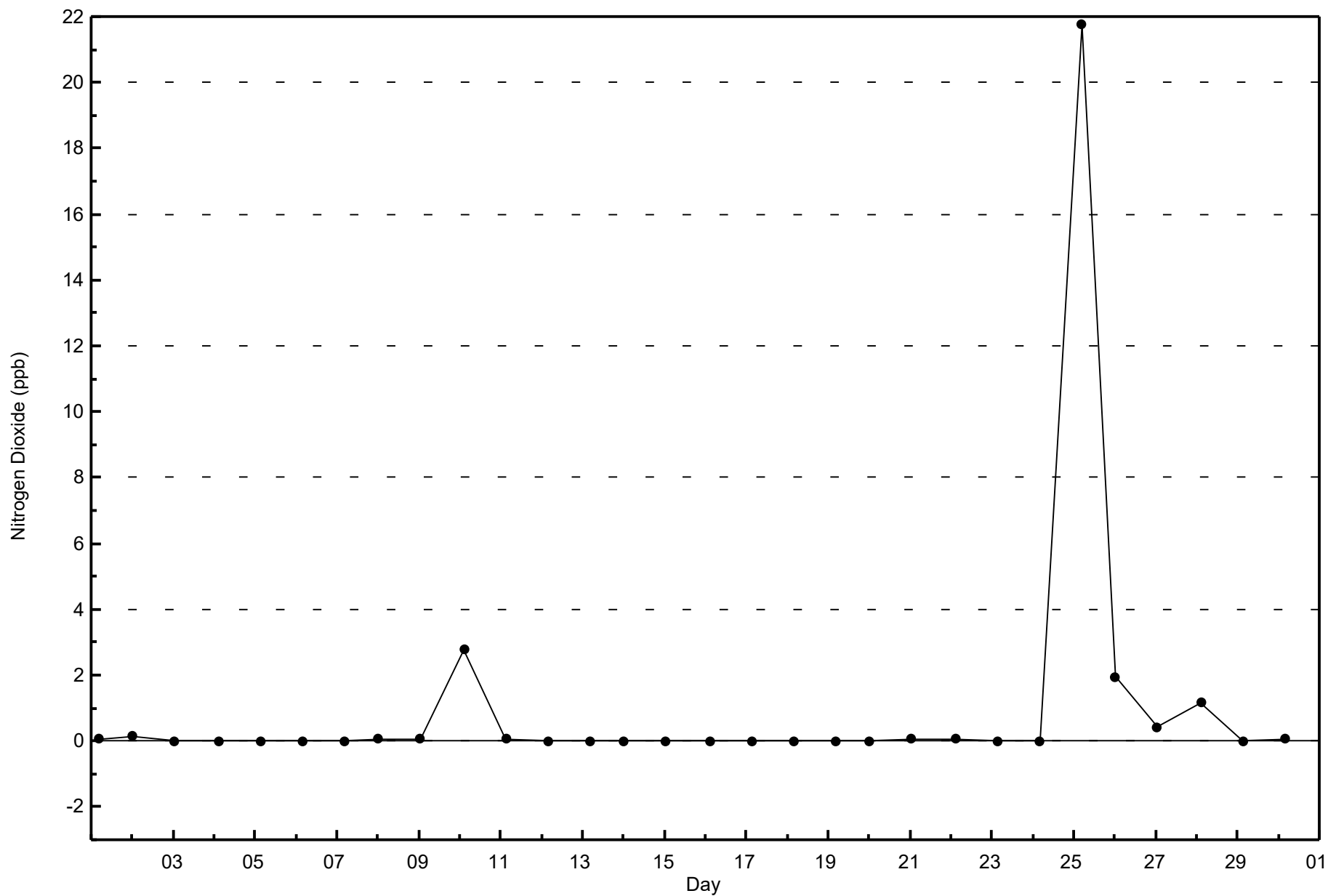


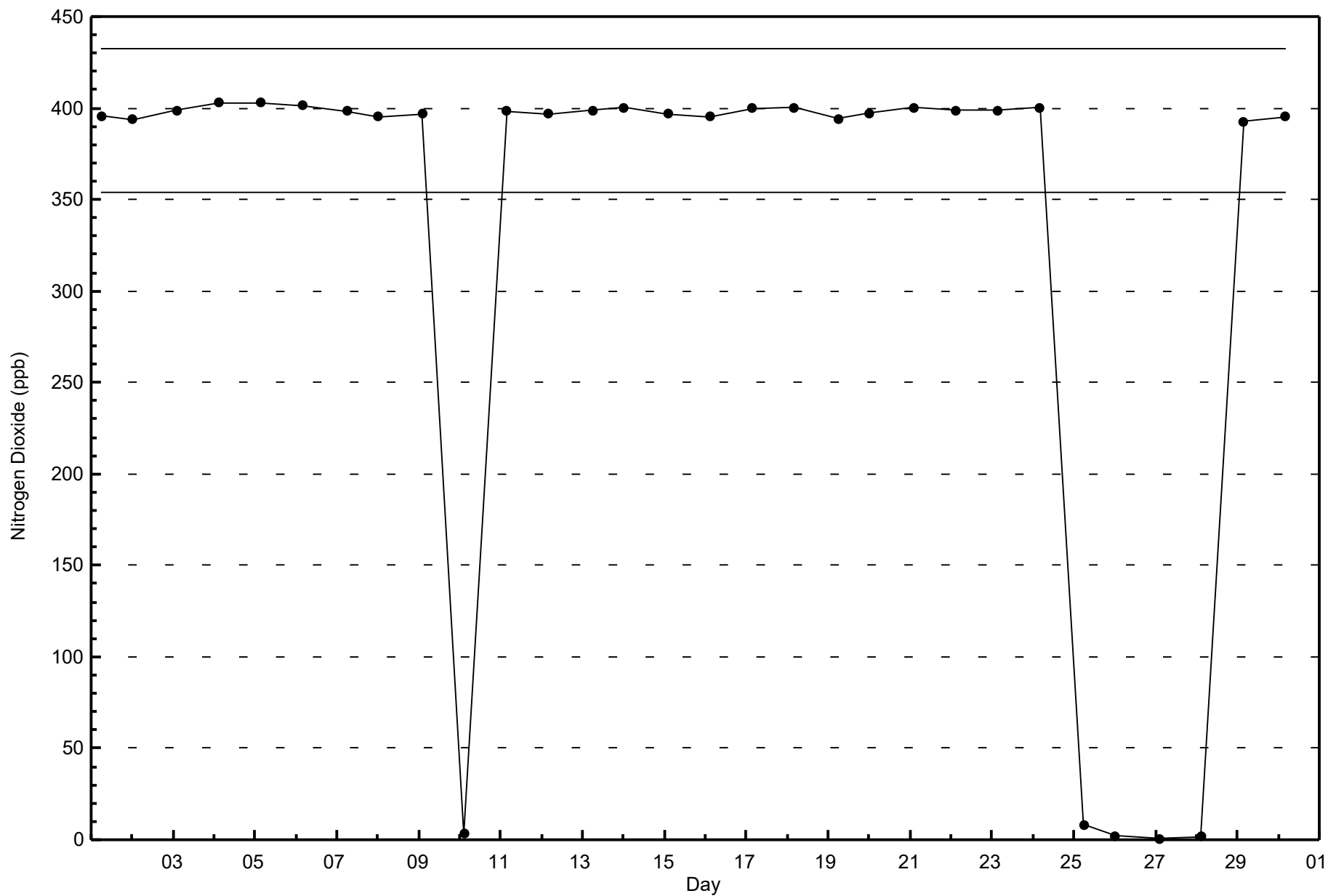
Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO₂) - ppb

Firebag - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

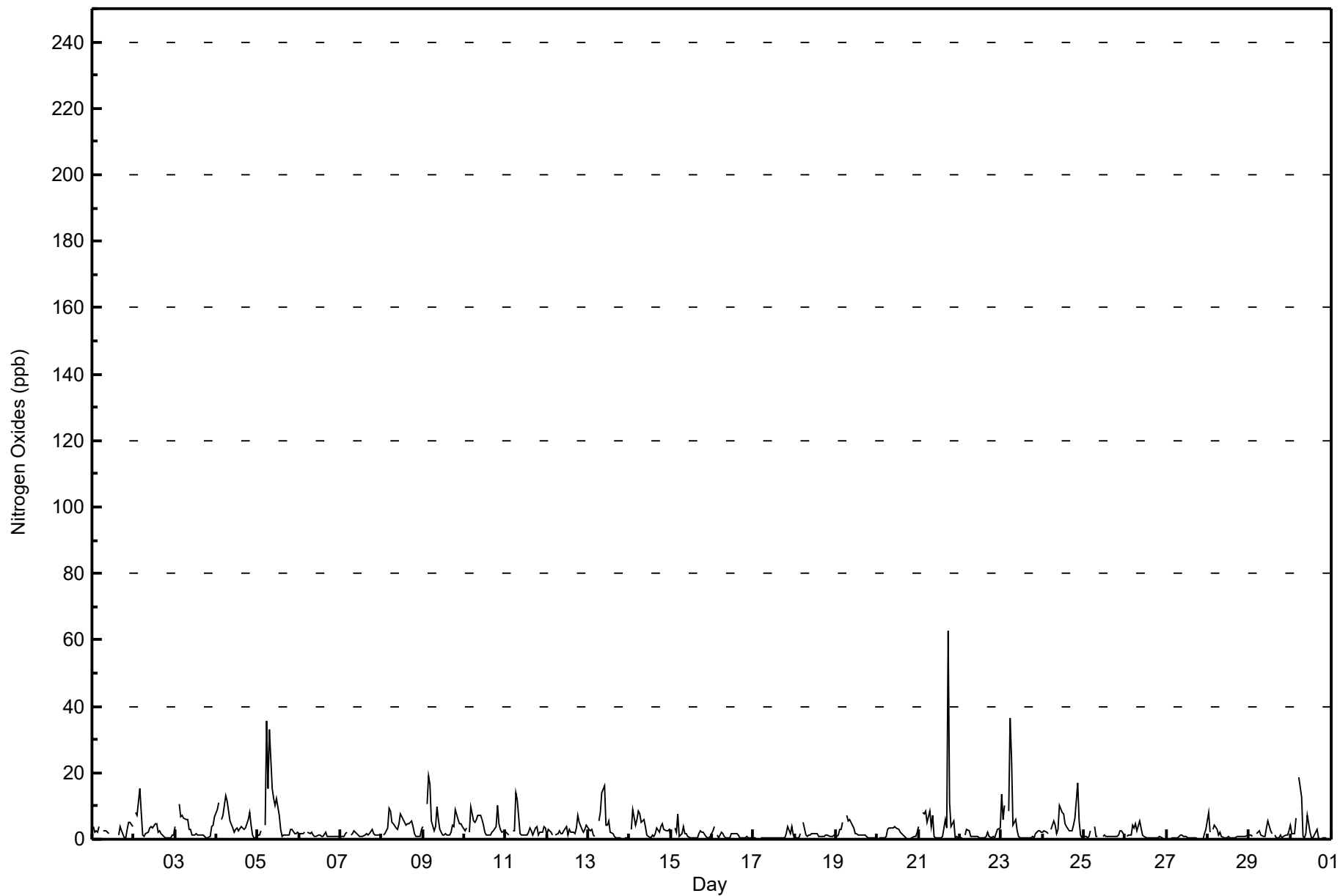
Firebag - April 2025

Maximum Value: 62.7 ppb on Apr 21 18:00																				Maximum Daily Average: 7.4 ppb on Apr 5					Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 27 21:00																				Minimum Daily Average: 0.6 ppb on Apr 27					Hours of Data: 682	
Maximum Diurnal Average: 6.9 ppb at hour 6																				Minimum Diurnal Average: 1.4 ppb at hour 15					Hours of Missing Data: 38	
Monthly Average: 2.91 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 1.6 Q ₃ = 3.5 P ₉₀ = 6.2 P ₉₉ = 17.4					Hours of Calibration: 35	
																									Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	3.6	2.0	2.6	1.9	3.7	Z	2.5	2.6	2.7	1.9	C	C	C	C	C	1.4	3.7	2.4	0.4	0.6	3.1	5.0	5.0	3.8	2.7	5.0
2-Apr	Z	8.1	7.0	15.1	8.0	1.3	0.9	1.6	2.3	3.6	3.7	3.6	4.8	4.7	1.9	2.5	1.9	0.8	0.4	0.3	0.3	0.6	1.3	1.5	3.3	15.1
3-Apr	4.0	Z	10.5	6.7	7.2	6.4	6.0	6.1	2.9	2.8	1.4	1.2	1.6	1.2	1.1	1.2	1.4	1.0	0.5	0.3	1.0	3.9	4.2	6.7	3.5	10.5
4-Apr	8.9	11.2	Z	6.0	7.4	13.0	11.5	8.4	5.7	3.3	2.1	2.8	3.2	2.6	3.9	3.4	3.0	3.3	6.0	8.1	4.1	1.2	0.6	0.6	5.2	13.0
5-Apr	1.1	1.4	2.5	Z	4.4	35.5	15.1	33.2	15.4	12.2	10.1	12.1	7.3	2.9	1.0	1.3	1.1	1.4	1.2	3.1	3.1	1.7	1.5	1.9	7.4	35.5
6-Apr	1.8	1.7	1.7	2.0	Z	2.2	1.7	2.0	1.2	0.9	0.8	1.3	1.2	0.8	0.9	2.2	0.7	0.9	0.9	0.9	0.8	0.7	0.7	0.7	1.3	2.2
7-Apr	0.7	0.7	0.8	1.8	2.0	Z	1.2	1.7	2.7	1.7	1.1	1.0	1.0	0.9	1.3	1.8	1.1	1.9	3.2	1.5	1.2	1.3	1.2	1.3	1.4	3.2
8-Apr	Z	1.2	1.9	3.5	9.4	8.7	5.2	4.6	3.4	2.8	4.6	7.5	6.1	5.0	4.4	4.6	4.7	5.5	4.0	1.9	0.9	0.7	0.7	2.8	4.1	9.4
9-Apr	4.0	Z	10.4	19.1	16.4	5.3	2.5	4.0	9.7	6.0	2.8	1.2	1.4	1.8	1.3	1.3	2.1	4.3	3.9	9.1	5.8	4.5	4.8	3.7	5.5	19.1
10-Apr	2.7	3.3	Z	2.3	9.7	5.6	4.9	6.0	7.1	7.2	6.1	4.4	2.2	1.4	1.2	1.4	2.3	2.5	3.7	10.1	4.6	2.9	2.3	2.7	4.2	10.1
11-Apr	2.0	1.8	1.5	Z	2.5	2.5	14.0	12.0	1.7	1.4	1.1	1.5	1.2	2.2	3.4	2.4	1.2	3.4	3.9	1.3	2.1	2.3	3.7	3.2	3.1	14.0
12-Apr	1.4	3.0	2.2	1.4	Z	1.3	1.9	2.7	1.9	1.7	2.5	4.0	1.2	3.1	2.2	1.9	1.6	3.3	7.3	5.2	2.9	1.9	2.8	4.3	2.7	7.3
13-Apr	2.8	2.6	2.9	1.4	1.0	Z	5.3	7.9	14.0	16.2	4.4	4.2	5.6	2.1	1.5	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	3.3	16.2
14-Apr	Z	3.0	8.8	4.2	6.0	8.4	7.5	4.9	6.0	4.0	1.4	1.0	0.6	1.2	0.9	1.5	3.3	2.3	3.8	4.5	3.0	2.4	2.6	2.8	3.7	8.8
15-Apr	1.0	Z	3.5	2.0	7.7	1.0	1.7	3.8	1.5	1.5	0.9	0.4	0.4	0.4	0.3	0.4	1.6	2.6	2.2	2.0	1.0	0.5	0.6	0.7	1.6	7.7
16-Apr	2.6	3.8	Z	1.4	0.6	2.3	1.8	0.8	0.5	0.4	0.5	1.8	1.7	1.7	1.6	1.4	0.4	0.4	0.4	0.5	0.8	0.4	0.5	0.4	1.2	3.8
17-Apr	0.4	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	0.3	0.2	1.9	4.0	1.7	3.9	1.2	0.7	4.0
18-Apr	0.7	0.5	0.5	1.6	Z	5.2	1.3	0.9	1.2	1.2	1.8	1.7	1.8	1.5	1.0	0.7	0.9	0.7	1.1	1.2	1.0	0.9	1.0	1.4	1.3	5.2
19-Apr	1.0	1.3	3.0	2.9	5.0	Z	7.2	5.7	5.8	4.4	3.3	1.9	1.7	1.1	1.2	1.1	1.4	1.3	0.3	0.3	0.4	0.4	0.4	0.3	2.2	7.2
20-Apr	Z	0.4	0.5	0.4	0.6	1.0	3.0	3.3	3.5	3.5	3.8	3.5	2.9	2.1	1.8	1.3	1.0	0.2	0.2	0.2	0.4	0.8	0.9	2.2	1.6	3.8
21-Apr	3.8	Z	7.9	7.6	8.3	4.9	8.7	3.6	7.1	1.0	0.5	0.6	0.5	0.6	0.7	5.9	3.3	62.7	11.0	3.7	5.5	0.5	0.8	0.5	6.5	62.7
22-Apr	0.3	0.6	Z	1.3	2.9	2.4	1.0	0.9	0.8	0.9	0.7	0.5	0.5	0.5	0.5	0.7	2.0	0.9	0.5	0.7	0.5	1.8	2.9	3.4	1.2	3.4
23-Apr	13.7	5.8	10.1	Z	8.3	36.3	24.7	4.4	5.8	2.6	0.9	0.5	0.4	0.3	0.3	0.3	0.2	0.3	1.0	0.6	1.9	2.4	2.4	2.1	5.4	36.3
24-Apr	1.9	2.7	2.3	1.9	Z	2.9	5.6	4.1	1.5	3.1	10.4	8.0	7.8	4.8	3.8	2.5	2.6	2.7	4.1	6.5	17.1	5.4	1.1	0.6	4.5	17.1
25-Apr	0.8	0.9	0.6	1.0	2.7	Z	3.7	0.9	0.9	M	M	1.0	1.1	0.8	0.8	0.8	0.9	1.0	0.8	1.0	1.5	2.6	2.4	1.1	1.3	3.7
26-Apr	Z	1.0	1.3	1.1	4.1	3.4	4.6	2.7	5.5	3.3	1.1	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.8	0.2	0.2	0.2	1.4	5.5
27-Apr	0.2	Z	0.2	0.3	0.4	0.2	0.2	0.7	1.1	1.2	0.9	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.2	1.6	3.1	0.6	3.1
28-Apr	8.3	2.0	Z	3.1	4.3	2.9	1.3	2.0	0.7	0.4	0.3	0.6	0.7	0.6	0.6	0.5	0.4	0.8	1.0	0.8	0.9	1.0	1.0	1.1	1.5	8.3
29-Apr	1.2	1.1	0.7	Z	1.7	1.9	2.5	1.1	0.7	1.0	3.5	5.3	2.6	1.5	M	1.3	0.6	0.6	1.2	0.5	1.0	1.3	1.2	2.7	1.6	5.3
30-Apr	4.3	1.8	1.7	6.3	Z	18.7	12.8	0.9	0.5	1.8	7.3	2.1	0.3	0.3	1.1	2.9	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.8	18.7
2.9 2.5 3.4 3.8 5.0 6.9 5.4 4.5 3.8 3.2 2.8 2.6 2.1 1.6 1.4 1.6 1.5 3.6 2.1 2.2 2.3 1.7 1.8 1.9																									Diurnal Average	
13.7 11.2 10.5 19.1 16.4 36.3 24.7 33.2 15.4 16.2 10.4 12.1 7.8 5.0 4.4 5.9 4.7 62.7 11.0 10.1 17.1 5.4 5.0 6.7																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	99.27	99.27
21 - 40	4	0.59	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Firebag - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	96	32	14	16	15	19	40	71	58	61	35	32	38	40	31	79	677
21 - 40	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	4
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	97	32	14	16	15	19	40	72	58	62	36	32	39	40	31	79	682

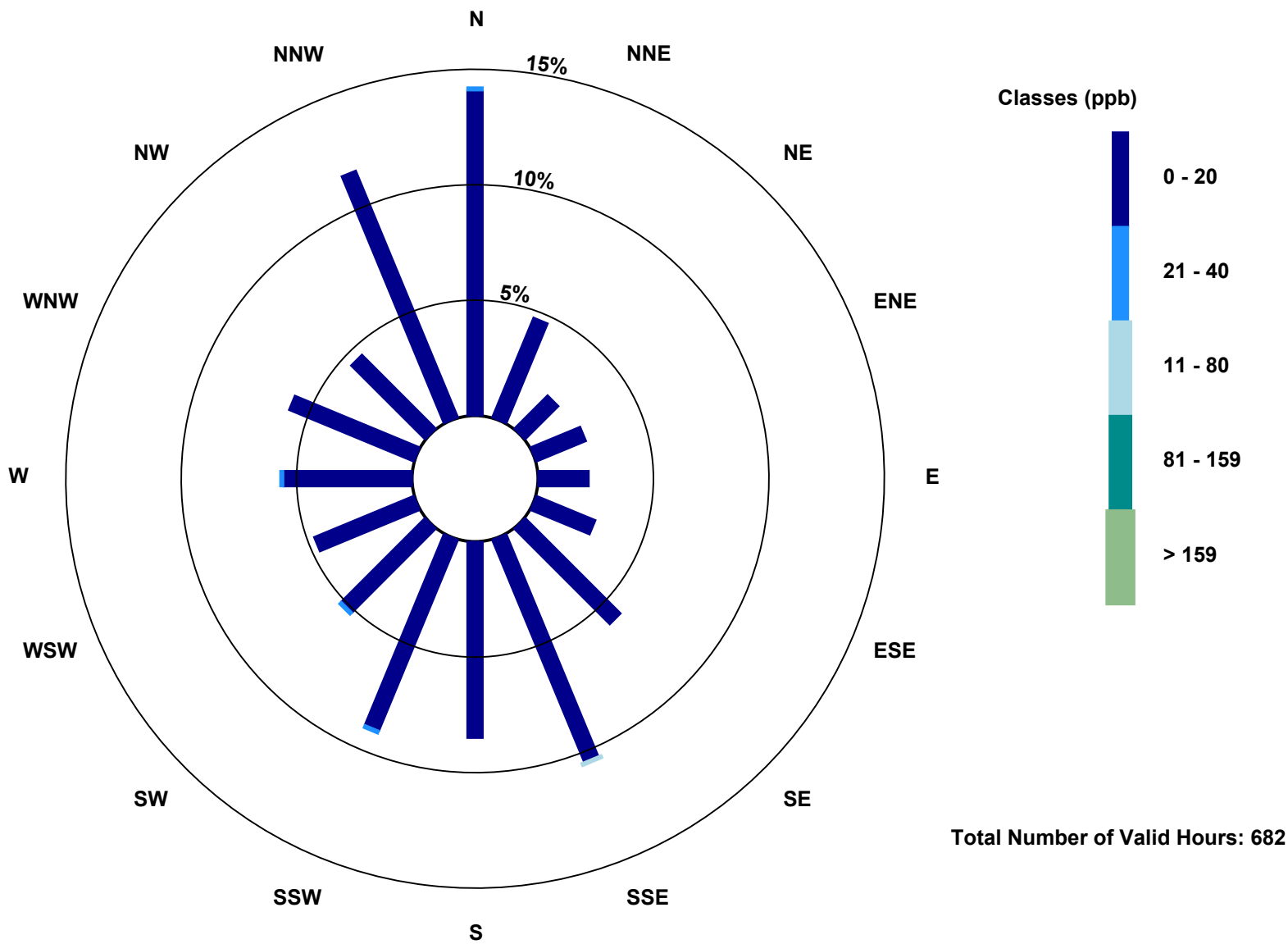
Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Firebag



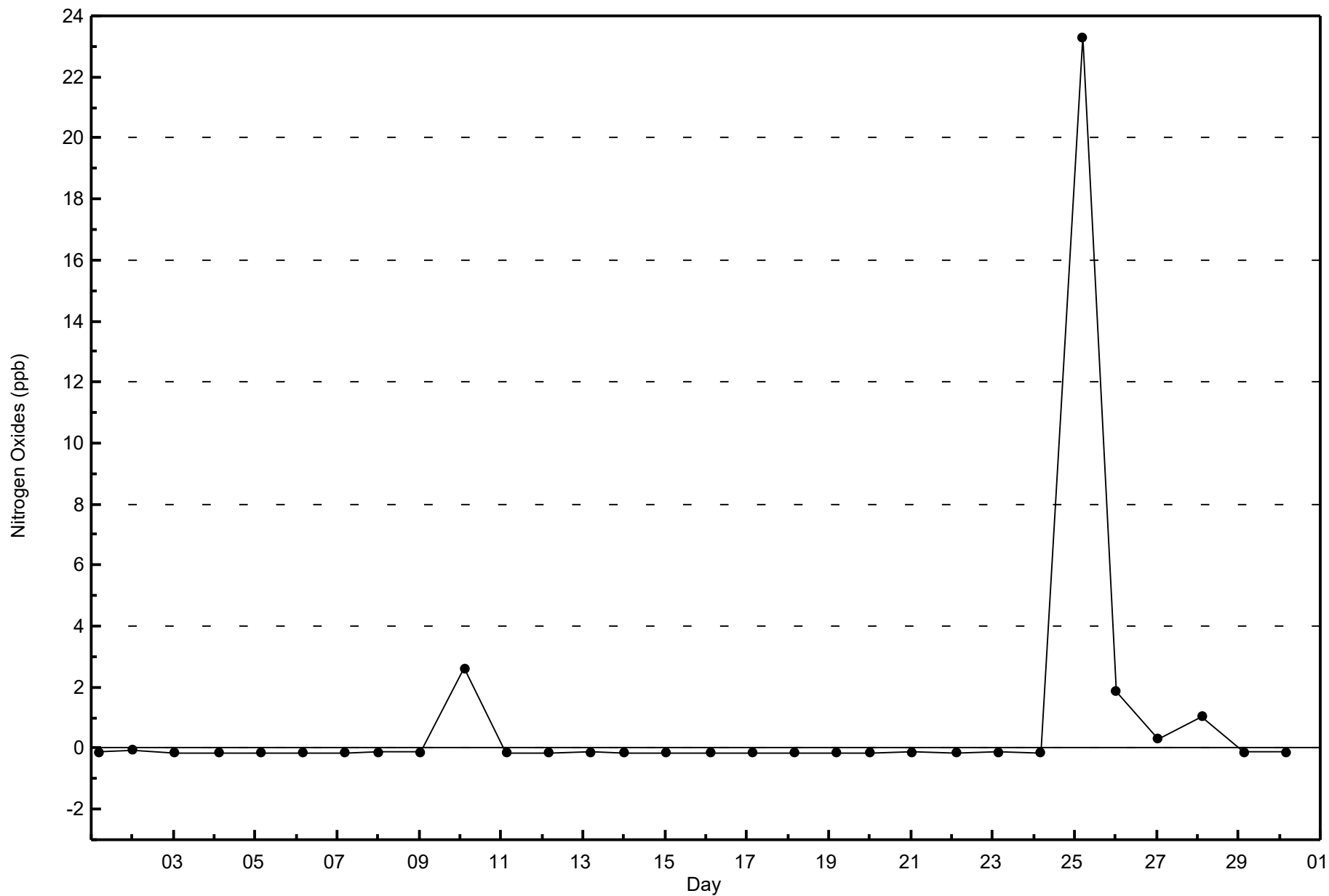


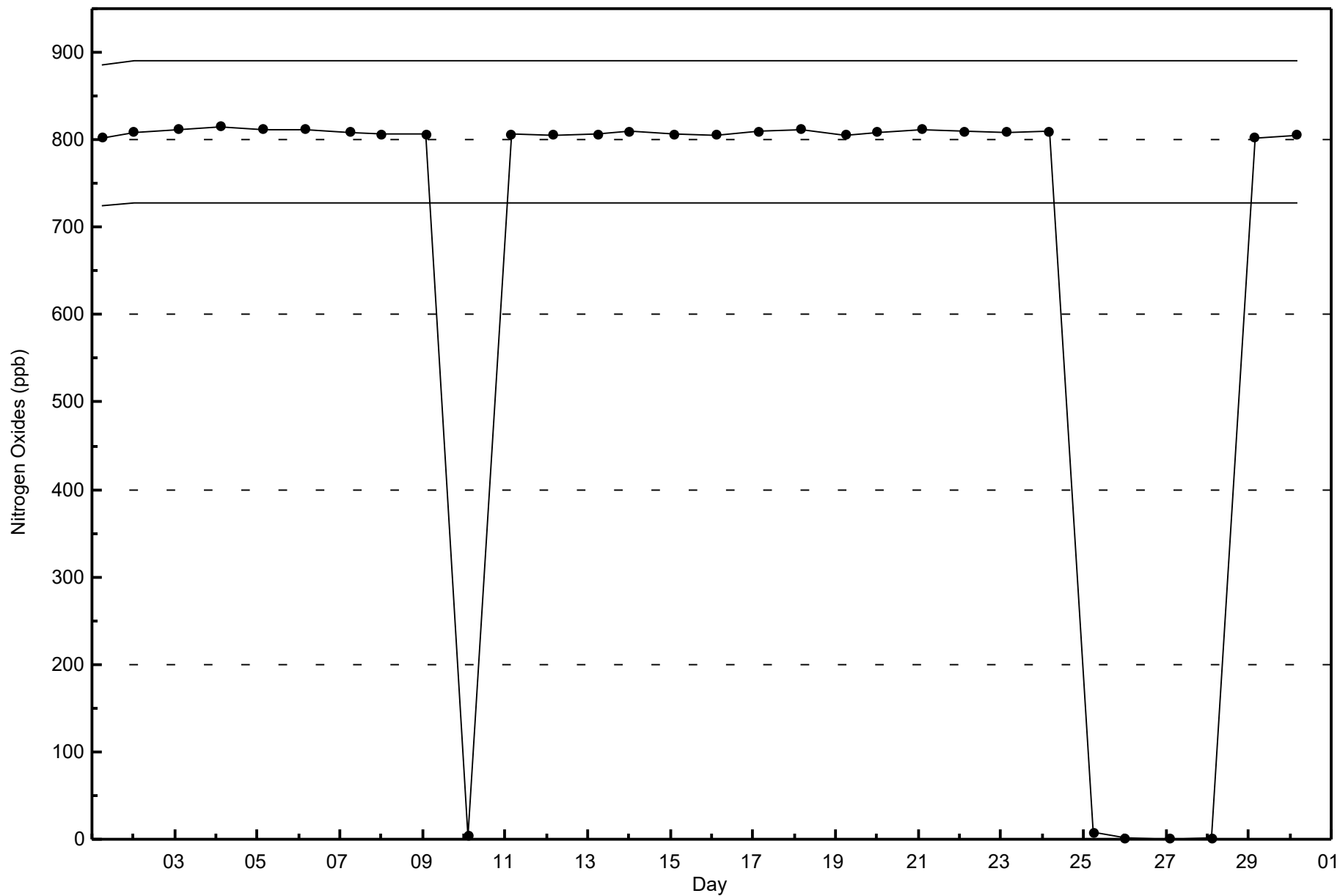
Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_x) - ppb

Firebag - April 2025



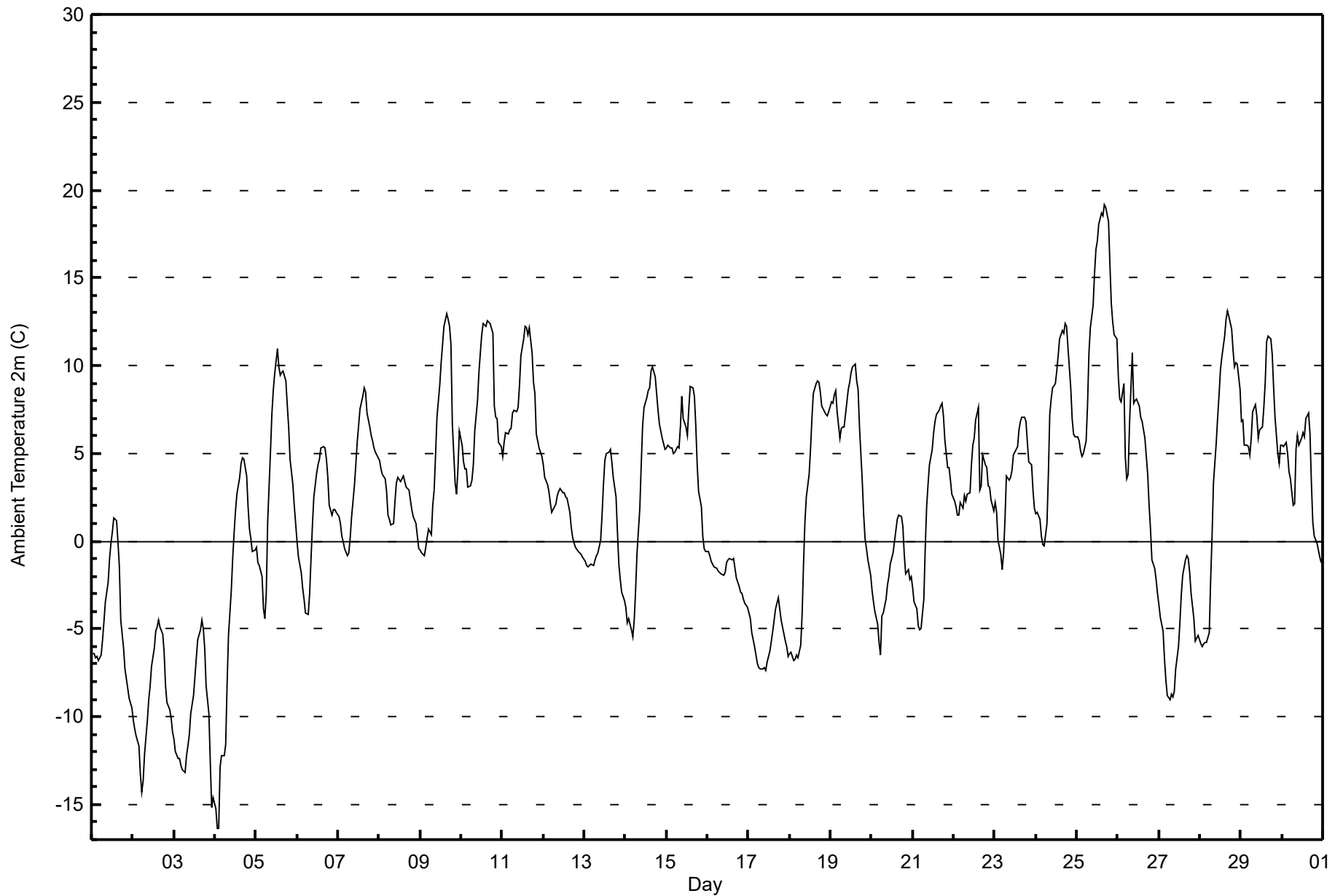


Maximum Value: 19.2 C on Apr 25 17:00																			Maximum Daily Average: 12.6 C on Apr 25										Hours in Service: 720			
Minimum Value: -16.4 C on Apr 4 02:00																			Minimum Daily Average: -10.1 C on Apr 3										Hours of Data: 720			
Maximum Diurnal Average: 6.1 C at hour 16																			Minimum Diurnal Average: -2.0 C at hour 6										Hours of Missing Data: 0			
Monthly Average: 2.00 C																			Percentiles: P ₁ = -13.3 P ₁₀ = -6.5 Q ₁ = -2.0 Median = 2.7 Q ₃ = 6.5 P ₉₀ = 9.6 P ₉₉ = 16.5										Hours of Calibration: 0			
																													Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	-6.4	-6.4	-6.6	-6.6	-6.8	-6.5	-5.6	-4.6	-3.4	-2.4	-1.0	-0.1	0.5	1.3	1.2	-0.1	-1.5	-4.5	-6.0	-7.3	-7.9	-8.4	-8.9	-9.5	-4.5	1.3						
2-Apr	-10.3	-10.7	-11.1	-11.7	-13.3	-14.3	-13.7	-12.1	-10.2	-9.0	-8.2	-7.1	-6.1	-5.2	-4.9	-4.5	-4.9	-5.3	-6.3	-8.2	-9.2	-9.6	-10.0	-10.8	-9.0	-4.5						
3-Apr	-11.3	-11.9	-12.4	-12.4	-12.8	-13.0	-13.2	-12.2	-11.7	-11.0	-9.9	-8.8	-7.7	-6.7	-5.6	-5.1	-4.5	-4.9	-6.1	-8.2	-9.8	-12.6	-15.1	-14.6	-10.1	-4.5						
4-Apr	-15.2	-16.4	-16.4	-12.9	-12.2	-12.2	-11.6	-8.2	-5.3	-2.8	-1.0	0.4	1.7	2.7	3.6	4.4	4.8	4.7	3.7	1.9	0.7	0.1	-0.6	-0.5	-3.6	4.8						
5-Apr	-0.3	-1.2	-1.4	-2.0	-3.8	-4.4	-3.0	1.1	5.0	7.2	8.5	9.5	11.0	9.9	9.5	9.6	9.7	9.1	7.8	6.5	4.7	3.2	2.1	1.0	4.1	11.0						
6-Apr	0.0	-0.9	-1.8	-2.7	-3.3	-4.1	-4.2	-3.0	-1.0	0.9	2.5	3.9	4.4	4.7	5.3	5.4	5.3	4.6	3.6	2.0	1.5	1.8	1.8	1.6	1.2	5.4						
7-Apr	1.4	1.0	0.3	0.0	-0.4	-0.8	-0.7	0.2	1.4	3.1	4.3	5.6	6.6	7.5	8.2	8.7	8.5	7.3	6.5	6.0	5.7	5.3	5.1	4.7	4.0	8.7						
8-Apr	4.6	4.1	3.8	3.6	2.8	1.5	1.2	0.9	1.0	2.3	3.3	3.6	3.4	3.5	3.7	3.4	3.1	2.9	2.4	1.8	1.4	1.0	0.3	-0.5	2.5	4.6						
9-Apr	-0.5	-0.7	-0.9	-0.3	0.2	0.7	0.3	2.1	2.9	4.9	7.1	8.9	10.2	11.2	12.3	13.0	12.6	12.2	11.2	6.7	3.3	2.7	4.1	6.3	5.4	13.0						
10-Apr	5.5	4.5	4.1	4.1	3.1	3.2	3.5	4.4	6.2	8.0	9.6	10.7	11.8	12.4	12.2	12.5	12.5	12.4	11.9	7.7	7.0	7.0	5.7	5.4	7.7	12.5						
11-Apr	4.8	5.6	6.2	6.1	6.4	6.5	7.3	7.5	7.4	7.6	8.9	10.6	11.5	12.3	12.2	11.8	12.1	10.7	9.0	8.4	6.1	5.3	5.1	4.8	8.1	12.3						
12-Apr	4.3	3.6	3.2	2.8	2.2	1.6	2.0	2.1	2.6	2.8	3.0	2.8	2.8	2.5	2.4	1.6	0.8	0.2	-0.1	-0.4	-0.6	-0.6	-0.7	-0.9	1.7	4.3						
13-Apr	-1.2	-1.4	-1.4	-1.4	-1.3	-1.4	-1.1	-0.8	-0.7	0.0	1.5	3.2	4.6	4.9	5.0	5.2	4.5	3.6	2.5	0.5	-1.3	-2.2	-2.9	-3.3	0.6	5.2						
14-Apr	-3.8	-4.6	-4.4	-5.1	-5.4	-4.5	-2.7	-0.7	1.9	4.3	6.6	7.6	8.2	8.6	8.8	9.7	9.9	9.4	8.4	7.5	6.7	5.9	5.5	5.2	3.5	9.9						
15-Apr	5.3	5.5	5.3	5.3	5.0	5.1	5.4	5.3	6.5	8.3	7.0	6.5	6.1	7.6	8.8	8.8	8.3	6.6	4.3	2.8	2.0	0.3	-0.4	-0.6	5.2	8.8						
16-Apr	-0.6	-0.8	-1.1	-1.3	-1.5	-1.5	-1.7	-1.8	-1.8	-1.9	-1.8	-1.2	-1.1	-1.0	-1.1	-1.0	-1.5	-2.1	-2.6	-2.9	-3.0	-3.3	-3.5	-3.7	-1.8	-0.6						
17-Apr	-4.1	-4.4	-5.2	-6.0	-6.5	-7.0	-7.2	-7.3	-7.3	-7.2	-7.4	-6.9	-6.3	-5.7	-5.1	-4.5	-3.8	-3.2	-3.8	-4.5	-4.9	-5.7	-6.0	-6.5	-5.7	-3.2						
18-Apr	-6.4	-6.3	-6.8	-6.8	-6.5	-6.7	-5.9	-4.2	-1.3	1.1	2.5	3.8	5.3	7.0	8.4	9.0	9.1	9.0	8.5	7.7	7.4	7.2	7.2	7.4	2.1	9.1						
19-Apr	8.0	7.9	8.3	8.6	7.4	5.9	6.4	6.5	6.5	7.9	8.6	9.1	9.6	9.9	10.1	9.1	8.6	6.5	3.4	1.5	0.1	-0.5	-1.1	-1.9	6.1	10.1						
20-Apr	-2.8	-3.4	-4.0	-4.7	-5.8	-6.5	-4.3	-4.1	-3.3	-2.5	-2.1	-1.3	-0.7	0.0	0.6	1.2	1.5	1.4	0.9	-0.7	-1.9	-1.7	-2.2	-2.1	-2.0	1.5						
21-Apr	-2.7	-3.5	-3.8	-4.8	-5.1	-5.0	-3.3	-0.3	2.0	3.3	4.3	5.2	6.2	6.8	7.3	7.5	7.7	7.9	7.2	5.8	4.2	4.2	3.5	2.6	2.4	7.9						
22-Apr	2.3	2.0	1.5	1.5	2.2	1.9	2.6	2.3	2.7	2.8	4.3	5.4	5.9	6.9	7.6	2.9	3.2	4.9	4.4	4.2	3.1	3.0	2.4	1.7	3.4	7.6						
23-Apr	2.2	1.6	0.0	-0.8	-1.6	-0.7	1.3	3.7	3.4	3.6	4.0	4.9	5.2	5.4	6.3	6.8	7.1	7.1	6.8	5.7	4.5	4.3	2.9	1.9	3.6	7.1						
24-Apr	1.6	1.7	1.2	0.3	-0.2	-0.3	1.0	3.8	7.2	8.1	8.7	8.9	9.6	10.6	11.6	12.0	11.8	12.4	12.2	11.0	8.8	7.0	6.1	5.9	6.7	12.4						
25-Apr	5.9	5.7	5.1	4.9	5.0	5.7	7.8	10.7	12.1	13.5	15.3	16.6	17.1	18.1	18.7	18.5	19.2	19.0	18.2	15.7	13.5	12.4	11.8	11.5	12.6	19.2						
26-Apr	9.3	8.1	7.9	9.0	4.8	3.5	3.8	6.6	10.7	7.9	8.0	8.1	7.7	7.0	6.9	6.4	5.9	3.8	2.0	0.7	-1.1	-1.6	-2.2	-3.0	5.0	10.7						
27-Apr	-3.6	-4.3	-5.1	-6.7	-8.0	-8.8	-9.0	-8.8	-8.8	-8.6	-7.3	-6.0	-4.6	-3.1	-1.9	-1.1	-0.8	-1.0	-1.8	-3.0	-4.4	-5.7	-5.5	-5.4	-5.1	-0.8						
28-Apr	-5.9	-6.0	-5.9	-5.8	-5.7	-5.2	-2.2	0.3	3.3	5.6	7.1	8.3	9.8	10.5	11.7	12.6	13.1	12.8	12.1	10.9	9.9	10.2	10.1	8.7	5.0	13.1						
29-Apr	6.8	6.9	5.5	5.5	5.4	4.9	5.8	7.4	7.8	7.1	5.9	6.4	6.5	7.6	9.0	11.4	11.6	11.5	10.7	8.7	7.1	5.0	4.4	5.4	7.3	11.6						
30-Apr	5.5	5.4	5.6	5.0	4.0	3.6	2.1	2.1	5.2	6.0	5.4	5.9	6.2	5.9	7.0	7.3	6.1	3.3	1.1	0.3	-0.1	-0.5	-0.9	-1.2	3.8	7.3						
																			Diurnal Average													
																			Diurnal Maximum													



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Firebag - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	267	37.08	37.08
0 - 10	391	54.31	91.39
10 - 20	62	8.61	100.00
> 20	0	0.00	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) - %

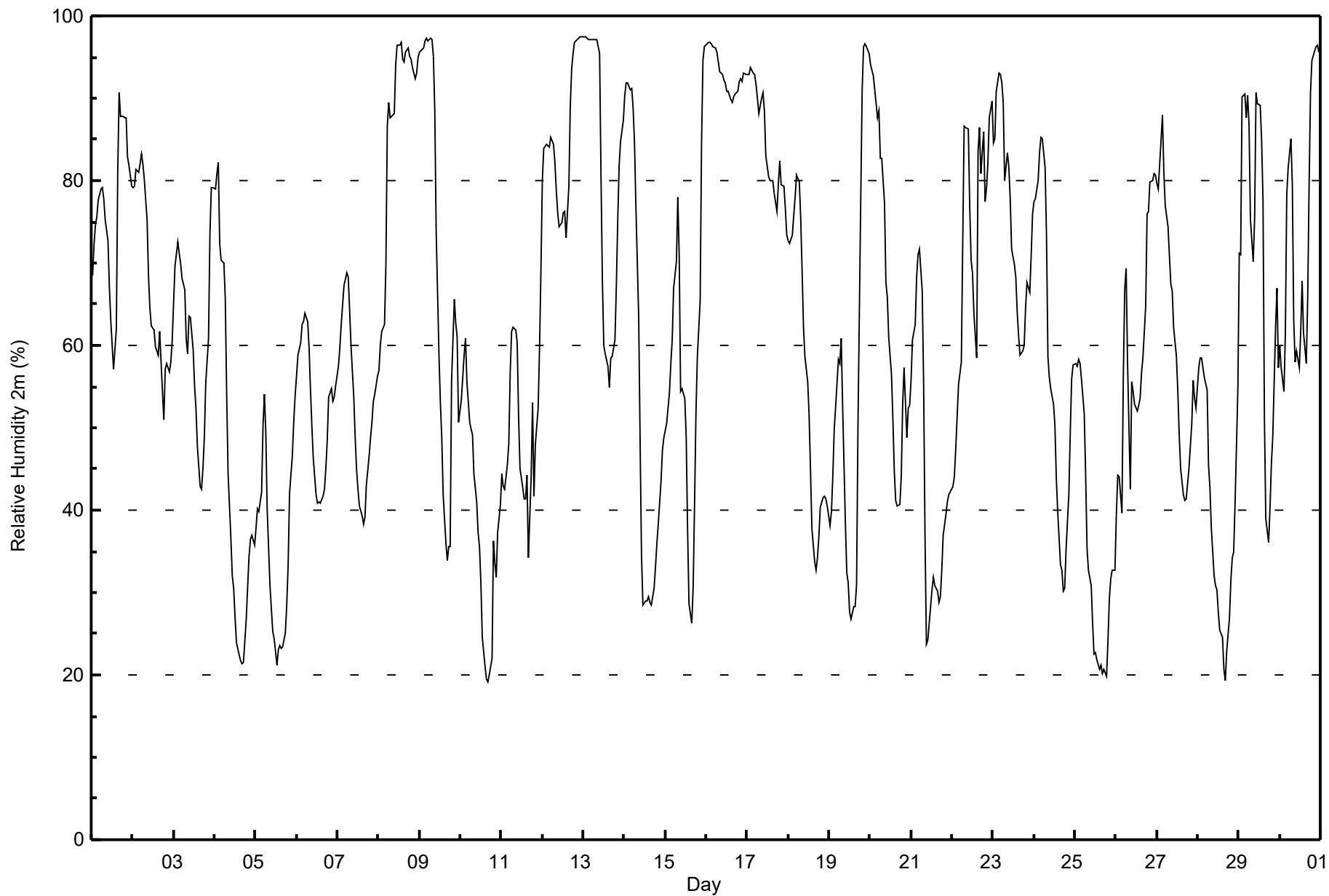
Firebag - April 2025

Maximum Value: 97.5 % on Apr 13 00:00																				Maximum Daily Average: 93.1 % on Apr 16					Hours in Service: 720	
Minimum Value: 19.2 % on Apr 10 17:00																				Minimum Daily Average: 34.5 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 75.4 % at hour 6																				Minimum Diurnal Average: 47.4 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 61.65 %																				Percentiles: P ₁ = 20.7 P ₁₀ = 31.1 Q ₁ = 43.5 Median = 59.9 Q ₃ = 80.3 P ₉₀ = 92.4 P ₉₉ = 97.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	68.5	72.2	74.6	75.7	77.6	78.9	79.2	77.7	75.3	72.7	67.2	63.1	59.9	57.2	62.0	81.1	90.6	87.8	87.8	87.6	87.7	83.0	81.8	79.3	76.2	90.6
2-Apr	79.1	79.3	81.4	81.1	82.0	83.3	82.0	80.2	75.2	68.4	64.6	62.4	61.8	59.9	59.4	58.8	61.7	54.4	51.1	57.1	57.8	56.7	57.9	60.6	67.4	83.3
3-Apr	65.3	69.7	72.6	71.1	70.0	68.2	66.8	60.8	58.9	63.5	63.4	59.6	55.1	52.4	47.8	42.8	42.5	45.0	48.8	55.4	60.9	73.5	79.2	79.1	61.4	79.2
4-Apr	78.9	80.9	82.3	72.3	70.4	70.1	65.6	53.8	44.4	36.6	32.0	30.5	26.9	23.9	22.3	21.6	21.3	21.6	26.8	30.6	34.5	36.5	37.0	35.8	44.0	82.3
5-Apr	37.8	40.1	39.8	42.2	50.2	54.1	49.4	40.0	30.9	28.0	25.2	24.4	21.3	23.1	23.6	23.2	23.3	25.1	28.6	33.4	42.0	46.6	50.7	53.9	35.7	54.1
6-Apr	56.3	58.9	60.4	62.6	62.9	64.0	62.9	59.7	54.5	50.2	46.3	41.9	40.9	41.1	40.8	41.7	42.5	45.1	48.5	53.7	54.7	53.3	53.7	55.2	52.1	64.0
7-Apr	57.5	59.6	62.6	64.9	67.3	68.8	68.3	64.3	60.0	53.8	48.9	45.0	42.6	40.6	39.3	38.2	39.2	43.1	46.6	48.9	50.6	53.2	54.1	56.3	53.1	68.8
8-Apr	57.0	59.9	61.6	62.6	69.8	86.6	89.5	87.7	87.9	88.2	94.1	96.5	96.5	96.7	94.7	94.3	95.7	96.2	95.2	94.8	93.8	92.4	93.1	94.9	86.6	96.7
9-Apr	95.6	95.7	96.1	97.0	97.3	96.9	97.4	97.1	95.0	88.5	73.7	58.8	53.1	48.7	41.9	36.0	34.0	35.6	35.6	55.6	65.6	62.8	61.1	50.6	69.6	97.4
10-Apr	53.4	56.1	58.8	60.9	55.6	50.7	49.9	49.2	44.4	41.0	37.3	35.7	31.2	24.6	21.1	19.5	19.2	20.0	22.0	36.2	33.6	31.8	37.2	40.8	38.8	60.9
11-Apr	44.4	42.9	42.6	45.5	48.1	56.9	61.7	62.3	61.9	60.4	51.4	45.1	42.7	41.3	41.3	44.2	34.2	44.0	53.1	41.7	47.9	52.3	59.6	69.2	49.8	69.2
12-Apr	79.9	84.0	84.4	84.2	84.0	85.2	84.4	82.1	78.8	76.0	74.5	75.0	76.0	76.3	73.0	79.3	89.0	93.6	95.4	96.8	97.2	97.3	97.4	97.5	85.1	97.5
13-Apr	97.5	97.4	97.3	97.2	97.1	97.1	97.2	97.1	97.1	95.4	80.7	67.7	60.0	58.9	57.5	54.9	58.4	58.7	60.7	67.4	75.2	81.8	84.8	87.2	80.2	97.5
14-Apr	90.4	91.9	91.9	90.9	91.2	88.8	84.7	76.8	63.4	48.5	34.5	28.5	29.0	29.0	29.6	28.8	28.5	30.5	33.0	36.0	38.3	43.6	47.3	48.8	54.3	91.9
15-Apr	49.7	50.6	54.3	57.8	60.8	66.9	70.2	78.0	70.9	54.4	54.7	53.5	49.0	37.7	28.7	26.2	30.6	40.9	51.8	58.6	65.4	84.6	94.6	96.2	57.7	96.2
16-Apr	96.7	96.8	96.7	96.5	96.3	96.1	95.7	94.3	93.2	92.9	92.2	91.9	90.8	90.8	89.9	89.6	90.1	90.4	90.8	92.0	92.4	92.1	93.0	92.8	93.1	96.8
17-Apr	92.9	92.9	93.7	93.1	92.9	91.8	89.9	88.1	89.9	90.7	88.5	83.1	80.6	80.0	80.0	79.9	78.4	76.3	79.7	82.3	79.5	79.3	76.6	73.3	84.7	93.7
18-Apr	72.8	72.4	73.4	75.8	78.0	80.6	79.9	75.5	68.9	62.3	58.7	55.5	51.6	45.0	37.9	33.8	32.7	34.2	36.8	40.3	41.5	41.7	41.4	40.5	55.5	80.6
19-Apr	38.1	39.8	44.2	49.9	52.5	58.3	57.8	60.9	52.8	38.3	32.4	31.2	27.6	26.9	28.2	28.4	30.9	50.4	78.0	91.1	96.3	96.7	96.2	95.4	54.3	96.7
20-Apr	94.0	93.5	92.7	89.4	87.7	88.5	82.7	82.7	77.2	67.6	66.0	60.9	56.4	51.0	44.8	41.2	40.6	40.7	44.1	52.9	57.2	48.9	52.4	52.7	65.2	94.0
21-Apr	55.7	60.7	62.6	68.2	71.1	71.7	66.6	55.5	36.7	23.8	24.3	28.3	30.3	31.9	30.8	30.2	28.9	29.5	32.8	37.0	39.6	41.0	41.8	42.2	43.4	71.7
22-Apr	42.8	44.1	47.4	51.4	55.3	58.0	72.3	86.6	86.4	86.3	77.0	70.4	68.7	63.8	58.4	83.5	86.5	80.8	86.0	77.5	78.9	82.0	87.6	89.7	71.7	89.7
23-Apr	84.5	85.1	90.8	93.1	92.9	91.9	89.6	80.1	83.4	81.7	77.7	71.7	69.9	68.3	64.0	61.2	58.7	59.3	59.9	64.5	67.6	66.4	70.8	75.9	75.4	93.1
24-Apr	77.4	77.8	80.0	83.4	85.3	85.1	81.5	73.1	58.7	56.1	54.7	52.8	50.4	43.9	39.8	33.4	32.7	30.1	30.5	35.2	42.1	49.6	56.0	57.7	57.0	85.3
25-Apr	57.8	57.5	58.4	57.8	56.0	51.7	44.4	35.4	32.7	30.9	26.2	22.5	22.7	21.9	20.6	21.2	20.2	20.7	19.8	24.3	29.3	31.8	32.7	32.7	34.5	58.4
26-Apr	39.5	44.3	44.0	39.7	56.5	66.9	69.3	57.9	42.5	55.6	54.4	52.9	52.1	52.8	53.6	56.6	58.5	64.7	76.0	76.2	79.8	80.0	80.9	80.7	59.8	80.9
27-Apr	79.6	79.0	85.0	88.0	81.0	77.0	74.4	70.9	67.4	66.7	62.2	58.7	54.4	49.1	45.0	41.9	41.1	41.3	43.1	45.0	50.5	55.8	53.6	52.3	61.0	88.0
28-Apr	57.3	58.5	58.4	57.4	56.0	54.6	45.5	42.6	37.7	32.0	30.8	30.4	27.7	25.4	24.6	20.7	19.3	22.9	26.9	31.5	34.3	34.9	40.8	54.8	38.5	58.5
29-Apr	71.3	71.1	90.2	90.4	87.6	90.3	86.7	75.3	70.1	75.4	90.6	89.3	89.2	84.9	77.7	51.4	39.0	36.1	40.2	45.5	49.0	62.2	67.0	57.2	70.3	90.6
30-Apr	60.0	57.3	54.4	61.3	78.2	81.6	85.1	79.4	63.0	58.0	59.2	57.4	61.6	67.8	61.4	57.8	65.7	79.3	90.6	94.5	95.7	96.3	96.4	95.5	73.2	96.4
Diurnal Average																										
97.5 97.4 97.3 97.2 97.3 97.1 97.4 97.1 97.1 95.4 94.1 96.5 96.5 96.7 94.7 94.3 95.7 96.2 95.4 96.8 97.2 97.3 97.4 97.5 Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Firebag - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	4	0.56	0.56
20 - 40	131	18.19	18.75
40 - 60	229	31.81	50.56
60 - 80	171	23.75	74.31
80 - 100	185	25.69	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

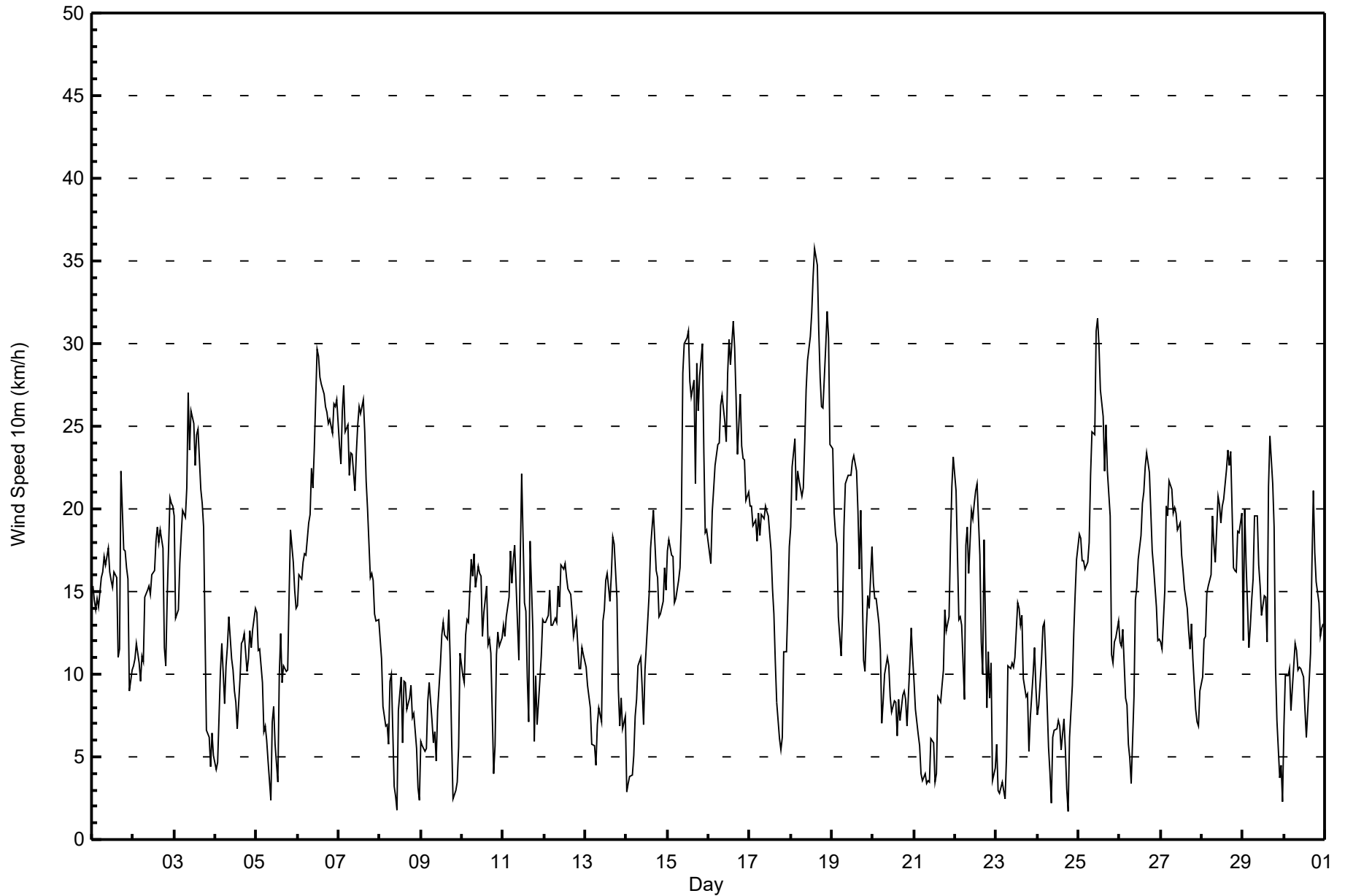
Firebag - April 2025

Maximum Speed: 36 km/h on Apr 18 15:00										Maximum Daily Speed Average: 26.8 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 2 km/h on Apr 24 19:00										Minimum Daily Speed Average: 1.2 km/h on Apr 8										Hours of Data: 720						
Maximum Diurnal Speed Average: 5.6 km/h at hour 2										Minimum Diurnal Speed Average: 1.3 km/h at hour 21										Hours of Missing Data: 0						
Monthly Average Velocity: 2.4 km/h 247.0 deg										Percentiles: P ₁ = 2 P ₁₀ = 6 Q ₁ = 10 Median = 14 Q ₃ = 19 P ₉₀ = 24 P ₉₉ = 31										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SSE15	SSE15	SSE14	SSE15	SSE14	SSE16	S16	S17	S17	S18	S16	S16	S15	SSW16	SW16	WSW11	NW12	N22	N18	N17	NNW16	NNW16	NW9	WNNW10	SSW5.5	N22
2-Apr	WNNW10	WNNW11	WNNW12	W11	W10	W11	W11	W15	WNNW15	NW15	NW15	WNNW16	NW16	NNW18	NNW19	NNW18	NNW19	NNW18	N12	N10	N15	N21	N20	N20	NW13.0	N21
3-Apr	NNW20	NNW13	NNW14	NNW17	NNW18	NNW20	NNW19	NNW21	NNW27	NNW24	N26	NNW25	NNW23	NNW24	NNW25	NNW21	NNW20	NNW19	N13	NNW7	NNW6	NNW4	NNW6	NNW5	NNW17.3	NNW27
4-Apr	WNNW4	WSW5	WSW7	WSW10	SW12	SW8	SW10	WSW12	WSW13	W11	WSW10	WSW9	WNNW8	WNNW7	W10	W12	W12	WSW12	SW10	SW11	SSW13	SSW12	SSW13	SSW14	WSW9.3	SSW14
5-Apr	SSW14	SSW11	SW11	SW9	SSW7	SSW7	SW6	SW5	ESE2	SE7	SE8	S6	SSE3	ENE10	NE12	ENE9	ENE11	E10	ENE10	E15	ESE19	ESE17	ESE15	SE14	SE5.8	ESE19
6-Apr	SE14	SE16	SE16	SE17	SE17	SE17	SE19	SE20	SE22	SE21	SSE24	SSE30	SSE29	SSE28	SSE28	SSE27	SSE26	SSE26	SSE25	SE25	SSE25	SSE26	SSE26	SSE27	SSE22.6	SSE30
7-Apr	SSE24	SSE23	SSE26	SSE27	SSE25	S25	S22	SSE23	SSE23	SSE21	SSE23	SSE25	SSE26	SSE26	SSE27	SSE25	SSE22	SSE20	SSE16	SSE16	SSE16	SSE14	SSE13	SSE13	SSE21.6	SSE27
8-Apr	SSE12	S11	SSE8	SE7	SSE7	S6	S10	SSE10	SSW3	NE3	WNNW2	N8	N10	N6	N10	N9	N8	N9	N9	NNE7	NNE8	N5	NW3	WSW2	NE1.2	SSE12
9-Apr	WSW6	SW6	SW5	SW6	SW8	SW9	SW7	W6	NW7	NNW5	NNW8	NW11	NW12	WNNW13	WNNW12	NW12	NNW14	N11	N6	E2	E3	E3	ESE6	SE11	WNNW3.8	NNW14
10-Apr	SE10	SSE9	S12	SSW13	SW13	SW17	SW16	WSW17	WSW15	SW17	WSW16	WSW16	WNNW12	W14	WSW15	WSW12	WSW12	WSW11	SW4	SE6	SE11	SE13	SE12	SE12	SW8.7	WSW17
11-Apr	SE13	SE12	ESE13	ESE15	ESE17	ESE16	ESE17	ESE18	SSE13	SSE11	S17	S22	SW14	W14	W10	WNNW7	WNNW18	NNW13	NW6	WNNW10	WSW7	WSW10	W11	WSW13	S4.1	S22
12-Apr	W13	W13	W14	W15	W13	W13	WSW13	W13	W15	WNNW14	WNNW17	WNNW16	W17	NW16	NW15	NNW15	N14	NNW12	NNW13	NNW13	NNW10	NNW10	NNW12	NNW11	WNNW11.3	W17
13-Apr	NNW10	NW9	NW9	NNW8	NNW6	N6	NNW5	NNW7	NW8	NW7	NNW13	NNW14	NW16	NNW16	NNW14	NNW16	N18	N18	N15	NNE9	N7	NE9	ENE7	ENE7	N9.5	N18
14-Apr	SE3	S3	S4	SE4	SSE5	SSE7	SSE9	S11	S11	SSE9	S7	SSW10	SW13	SSW15	SSE18	SSE19	S20	SSE16	SSE16	SE13	SE14	SE14	SSE16	SSE15	SSE10.7	S20
15-Apr	SSE17	S18	S17	SSW17	SSW14	SSW15	SSW16	SSW16	SW20	W28	W30	W30	W31	W28	W27	W28	WNNW22	WNNW29	WNNW26	WNNW28	WNNW30	W23	W19	W19	W17.7	W31
16-Apr	WNNW17	WNNW17	NW20	NNW21	NNW23	NNW24	NNW24	N26	N27	N25	N24	NNW28	N30	NNW29	NNW31	N30	N27	N23	N27	N24	N23	N23	N21	N21	NNW23.4	NNW31
17-Apr	N20	N20	NNE19	N19	N18	N20	N18	N20	N19	N20	N20	NNE17	NNE15	NNE14	NNE11	NE8	N6	NE5	E6	ESE11	SE11	SSE14	SSE18	NNE11.4	N20	
18-Apr	S19	S23	S24	S20	S22	S22	S21	S21	S24	S27	S29	S30	S32	S34	S36	SSW35	SSW31	SSW28	S26	S26	S30	S32	S30	SSW24	S26.8	S36
19-Apr	SSW24	SW20	WSW19	W18	NW13	WNNW11	WNNW14	WNNW19	WNNW22	WNNW22	WNNW22	WNNW22	NW23	NW23	WNNW22	NW20	WNNW16	N20	NNE11	NNE10	N13	N15	N14	N18	WNNW12.9	SSW24
20-Apr	N16	N15	N15	N13	N11	NNW7	NNW8	NNW10	NNW11	NNW10	NNW9	NW8	NNW8	NW8	NNW6	NNW8	NNW7	NE9	ENE9	ENE8	ENE7	E11	E13	E11	N7.4	N16
21-Apr	ESE10	SE8	SE6	SE6	SE4	ESE4	SSE4	S3	ESE4	E3	ENE6	ESE6	SE3	SE4	S9	SSW8	SSW9	SSE10	S14	S13	SSE13	S18	S21	S23	SSE7.6	S23
22-Apr	S21	SSW17	SSW13	SSW13	SW13	WSW9	SSW18	SSW19	SSW16	SSW20	SSW19	SSW20	SSW21	SSW22	SSW17	WNNW12	SSW10	SW18	WSW8	WSW11	WSW9	NW11	SW4	S4	SSW12.9	SSW22
23-Apr	S6	WSW3	W3	WSW3	WNNW3	W2	N5	N10	NNE10	NE11	NNE10	NNE11	NNE14	NE14	NE13	NE14	ENE10	ENE9	E9	E5	E7	E10	ESE12	SE9	NE5.5	NNE14
24-Apr	SE8	E8	ESE11	SE13	SE13	SE11	SE6	SSE4	SSW2	NNE6	N7	NE7	NNE7	NNW7	NNW5	WNNW7	NW5	W3	NW2	SE6	SE9	SSE12	SSE15	SSE17	SE3.6	SSE17
25-Apr	S18	S18	S17	S17	S16	S17	S18	SSW22	SW25	SSW24	SSW31	SW31	SSW30	SSW27	SW26	SW22	SW25	SW22	WSW20	SW11	SSW11	SSW12	SSW12	SSW13	SSW19.2	SW31
26-Apr	S12	S12	SSW13	WSW9	ENE8	ENE6	NE5	NNE3	WNNW9	N15	N15	N17	N18	NNE20	N21	NNE23	NNE23	N22	N20	N17	N16	N14	N12	NNE12	N10.1	NNE23
27-Apr	N12	N12	N15	N20	N20	N22	N21	N20	NNW20	NNW20	N19	N19	N17	N16	N15	N14	N13	N12	NNE13	NNE11	NE8	ENE7	E7	ESE9	N13.7	N22
28-Apr	SE10	SSE12	S12	SSE15	SSE15	S16	S20	S18	SSW17	SW21	SW20	SSW19	SSW20	SSW21	SSW22	SSW24	SW23	SSW24	SSW16	S16	S16	SSW19	SW19	SW20	SSW16.9	SSW24
29-Apr	S12	SSW20	SSW17	SSW12	SSW13	WSW14	W16	W20	W20	WNNW17	WNNW15	WNNW14	NW15	NW15	NNW12	N21	N24	N21	NNW19	N10	N7	N4	NE4	SE2	WNNW7.7	N24
30-Apr	S7	SSW10	SSW10	WSW10	W8	NW9	NNW12	N11	NNW10	NNW10	NNW10	NNE10	N8	NNW6	NW8	NNW11	N17	NNE21	NNE17	NNE16	NNE14	NNE12	NNE13	NNE13	N7.7	NNE21
S5.0 SSW5.6 SSW5.3 SSW4.3 SSW3.2 SW3.5 SW3.8 WSW3.9 WSW5.1 W4.4 W4.6 W4.9 W5.3 WNNW5.1 WNNW5.3 NW4.9 NW4.6 NNW4.3 N3.0 NE1.4 ESE1.3 SSE1.5 SSE2.9 S3.7																										Diurnal Average
SSE24 SSE23 SSE26 SSE27 SSE25 S25 NNW24 N26 NNW27 W28 SSW31 SW31 S32 S34 S36 SSW35 SSW31 WNNW29 N27 WNNW28 WNNW30 S32 S30 SSE27																										Diurnal Maximum
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Firebag - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Firebag - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	54	7.50	7.50
6 - 11	205	28.47	35.97
12 - 19	282	39.17	75.14
20 - 28	155	21.53	96.67
29 - 38	24	3.33	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
Firebag - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3	1	4	0	5	3	6	5	3	2	4	4	3	3	3	5	54
6 - 11	21	13	6	16	8	7	16	10	10	10	13	15	10	10	12	28	205
12 - 19	39	14	4	0	2	10	17	31	28	35	10	14	18	19	12	29	282
20 - 28	35	5	0	0	0	0	4	27	19	16	11	1	7	8	5	17	155
29 - 38	2	0	0	0	0	0	0	2	8	4	1	0	3	2	0	2	24
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	100	33	14	16	15	20	43	75	68	67	39	34	41	42	32	81	720

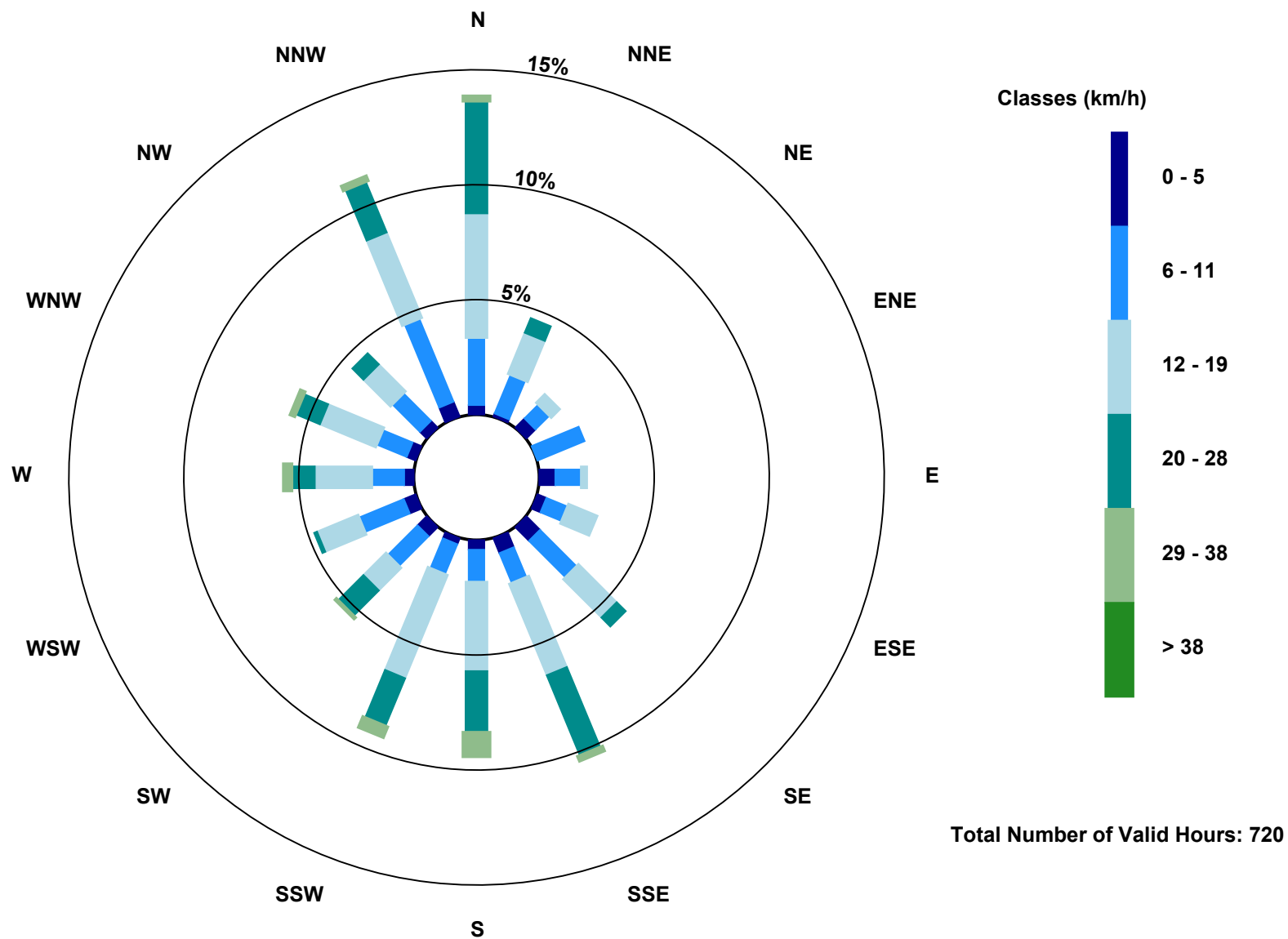
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Firebag





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Firebag - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 15 18:00																	Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 1 km/h on Apr 4 00:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	7	5	4	5	4	4	2	3	7	
2-Apr	3	3	3	2	2	2	2	3	4	4	4	5	4	4	4	5	4	4	4	2	2	4	4	4	5	
3-Apr	5	3	3	5	4	4	4	5	6	5	6	6	6	6	6	5	5	4	4	1	2	1	1	1	6	
4-Apr	1	1	1	1	1	2	2	2	2	2	3	3	3	3	4	3	3	2	2	1	1	1	1	1	4	
5-Apr	2	1	2	2	1	1	1	3	1	1	1	2	1	4	3	2	2	2	2	3	3	3	3	2	4	
6-Apr	3	3	3	3	3	3	4	4	5	4	4	6	5	5	5	5	5	5	4	4	4	5	4	4	6	
7-Apr	4	4	4	4	4	4	3	4	4	4	3	5	5	4	4	5	5	4	3	3	2	2	2	2	5	
8-Apr	2	3	1	3	2	2	2	3	2	1	2	2	2	2	2	2	1	2	2	2	1	1	1	1	3	
9-Apr	2	2	1	1	2	1	1	2	2	1	3	3	3	3	3	4	4	3	2	1	1	1	3	4	4	
10-Apr	2	4	2	2	1	2	2	3	3	2	3	3	4	5	4	4	3	4	2	2	3	2	2	2	5	
11-Apr	2	3	2	3	3	4	2	3	4	3	5	4	5	4	5	6	5	6	3	2	1	2	2	3	6	
12-Apr	4	3	3	3	3	3	3	3	3	4	4	4	4	4	4	3	3	3	3	3	2	2	2	3	4	
13-Apr	3	2	2	2	1	1	2	2	2	2	3	3	5	4	4	4	4	4	3	2	1	2	1	1	5	
14-Apr	1	1	1	1	1	1	2	1	2	2	3	3	4	4	3	3	3	3	3	2	2	2	3	3	4	
15-Apr	3	2	2	3	2	2	4	3	3	7	8	7	8	7	7	8	6	9	9	9	8	6	4	4	9	
16-Apr	4	5	5	6	5	6	6	7	6	6	6	8	7	7	7	6	7	6	6	6	6	5	5	5	8	
17-Apr	5	4	4	5	4	4	4	5	4	4	4	4	4	3	3	3	2	2	1	2	2	3	3	3	5	
18-Apr	3	3	3	3	3	3	3	3	4	4	5	5	5	6	6	5	5	4	4	4	4	5	5	4	6	
19-Apr	3	3	3	4	4	3	4	6	6	6	7	6	7	7	6	7	5	5	4	2	3	3	3	4	7	
20-Apr	3	3	4	2	2	2	2	2	2	3	2	3	3	4	3	4	2	2	2	1	1	3	2	2	4	
21-Apr	2	1	2	2	1	1	1	1	1	1	2	3	4	3	4	4	3	3	2	1	2	3	5	3	5	
22-Apr	3	4	2	2	2	2	4	3	3	3	3	3	3	4	5	4	3	4	3	5	2	4	3	3	5	
23-Apr	3	1	1	1	1	1	2	2	2	2	3	4	4	4	4	4	3	2	2	1	2	3	3	2	4	
24-Apr	3	2	2	3	2	2	2	2	1	3	3	3	3	3	3	4	2	3	2	1	1	2	2	2	4	
25-Apr	2	2	2	2	2	2	3	4	5	5	6	7	6	6	6	5	5	5	5	2	1	1	1	1	7	
26-Apr	1	1	2	4	2	4	4	3	4	3	3	3	4	4	5	5	5	5	4	4	3	3	3	3	5	
27-Apr	3	3	4	4	5	5	4	4	4	5	5	5	4	5	5	4	3	3	3	3	2	1	1	2	5	
28-Apr	2	2	1	2	2	2	3	3	3	4	4	5	5	6	6	7	6	5	3	2	3	5	4	5	7	
29-Apr	1	4	2	3	3	2	3	5	5	5	4	4	4	3	4	7	6	6	5	3	1	1	3	2	7	
30-Apr	2	3	2	2	2	2	4	3	3	3	3	2	3	3	3	4	4	4	4	3	3	3	2	3	4	
Diurnal Maximum																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

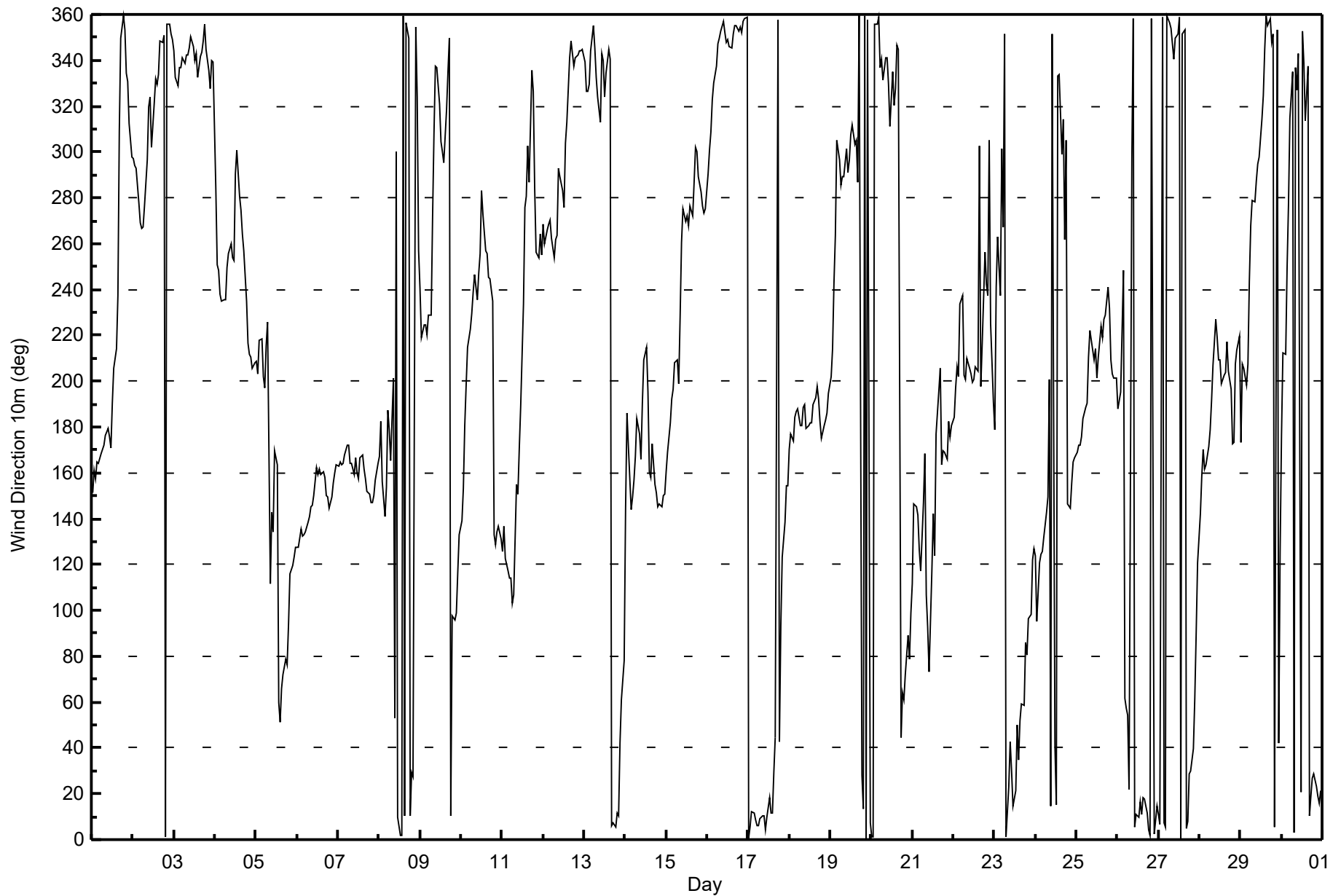
Firebag - April 2025

Direction of Maximum Speed: 190 deg on Apr 18 15:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 184.5 deg on Apr 18																				Hours of Data:		720			
Direction of Minimum Speed: 305 deg on Apr 24 19:00										Direction of Minimum Daily Speed Average: 1.2 deg on Apr 8										Hours of Missing Data:		0			
Monthly Average Direction: 247.0 deg																				Percent Operational Time:		100.0			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	151	161	158	165	164	168	170	172	177	179	176	171	191	205	214	237	309	349	360	353	335	331	313	298	195.6
2-Apr	297	294	293	277	269	267	267	276	297	320	324	302	322	332	330	334	348	348	351	1	356	356	351	349	322.9
3-Apr	344	333	329	337	337	341	339	342	342	346	350	346	340	343	333	342	344	348	355	345	336	328	340	339	341.6
4-Apr	284	251	248	238	235	236	235	250	256	260	254	253	291	301	281	275	264	257	235	217	212	211	205	208	244.7
5-Apr	209	203	218	218	202	197	216	226	112	143	134	169	163	60	51	66	72	79	76	94	116	119	123	128	130.8
6-Apr	128	127	135	132	133	134	139	141	145	146	150	163	159	161	159	160	158	150	150	145	149	155	160	164	149.9
7-Apr	163	165	164	164	168	172	172	164	164	159	167	160	157	166	168	162	158	152	151	147	147	150	157	164	161.8
8-Apr	167	182	156	141	154	187	179	166	202	53	300	10	2	2	360	10	357	350	11	29	28	355	324	257	43.1
9-Apr	240	219	225	225	220	229	229	271	308	337	337	321	305	300	295	318	335	350	10	98	96	99	117	133	294.3
10-Apr	139	153	181	198	215	222	229	238	247	236	247	256	283	272	257	256	246	245	235	133	129	134	137	131	220.0
11-Apr	126	137	122	117	114	114	103	107	155	151	171	189	234	276	281	303	287	336	326	284	256	254	264	255	179.7
12-Apr	269	260	266	268	270	262	254	262	263	293	289	283	276	304	313	341	349	343	338	341	343	344	344	345	298.2
13-Apr	339	326	326	329	344	355	345	332	324	313	343	340	324	335	345	340	6	8	6	12	10	42	61	78	349.8
14-Apr	145	186	172	144	149	157	167	183	177	166	190	209	215	195	161	158	173	155	151	145	146	145	150	151	165.3
15-Apr	161	169	182	192	197	208	210	199	228	261	275	270	272	268	276	272	287	302	300	289	282	277	274	275	259.3
16-Apr	290	301	308	323	330	337	347	350	353	357	352	348	349	346	346	352	355	355	353	355	352	357	358	359	345.2
17-Apr	1	5	12	11	9	6	6	9	10	11	4	10	18	12	12	29	44	357	43	93	123	138	154	154	20.2
18-Apr	170	177	174	185	187	188	180	181	188	190	179	181	182	182	190	193	198	192	183	175	181	183	186	194	184.5
19-Apr	202	214	243	264	305	296	286	289	289	302	291	297	307	312	303	305	287	360	28	13	360	0	357	8	302.4
20-Apr	1	1	356	355	359	337	340	331	341	341	330	311	335	320	328	347	345	45	64	61	72	89	79	99	5.4
21-Apr	112	146	145	142	126	117	147	169	107	93	73	117	142	124	177	196	206	164	169	169	166	182	176	181	161.3
22-Apr	185	197	206	202	234	237	203	201	210	206	203	200	201	206	204	302	197	217	256	243	237	305	225	191	212.3
23-Apr	179	241	263	237	301	267	352	1	23	43	30	15	21	50	35	52	59	59	86	81	97	98	122	127	51.5
24-Apr	124	95	121	124	126	132	143	149	201	15	351	41	15	333	333	299	314	262	305	146	145	156	165	167	129.4
25-Apr	169	172	172	176	183	188	190	210	222	213	210	214	201	211	224	219	227	229	241	232	209	203	201	201	206.9
26-Apr	188	191	195	248	61	58	54	22	297	358	6	11	10	17	11	18	18	11	4	2	358	2	9	14	8.7
27-Apr	11	7	359	7	6	359	356	354	347	341	350	352	359	0	351	353	5	8	29	30	40	61	91	121	4.0
28-Apr	142	159	170	162	164	171	178	191	207	227	219	209	209	199	203	204	217	205	197	172	173	207	214	220	196.4
29-Apr	173	207	205	198	207	243	268	279	278	287	294	298	314	324	345	360	355	358	348	352	5	353	42	125	299.9
30-Apr	176	212	212	250	277	315	335	3	337	327	343	21	353	339	314	338	10	19	27	29	23	19	16	21	354.5
176.3 191.6 198.4 205.0 204.3 218.8 221.3 239.0 258.4 271.5 272.3 265.6 279.0 284.8 283.7 304.2 309.9 337.5 0.8 42.8 114.6 148.0 160.3 169.3																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Firebag - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Firebag - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 91 deg on Apr 24 19:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on Apr 4 23:00																									
Percentiles: P ₁ = 6 P ₁₀ = 9 Q ₁ = 11 Median = 14 Q ₃ = 18 P ₉₀ = 29 P ₉₉ = 73																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	10	9	8	10	9	9	8	8	10	7	9	11	16	19	17	15	41	13	15	13	12	12	17	16	41
2-Apr	16	16	17	13	11	11	12	14	18	18	21	20	17	16	15	20	14	13	13	13	12	11	12	12	21
3-Apr	10	11	11	12	11	11	10	12	13	14	15	15	16	16	14	17	17	16	13	8	16	17	10	17	17
4-Apr	15	14	5	6	7	9	7	12	11	16	19	33	36	44	35	23	20	14	11	6	7	7	4	6	44
5-Apr	6	7	9	8	10	9	12	48	55	21	14	26	38	36	14	16	15	14	9	13	9	10	11	11	55
6-Apr	11	11	11	11	11	11	11	12	10	10	12	11	10	10	11	11	11	11	11	10	10	10	10	9	12
7-Apr	10	10	9	9	11	8	9	10	10	11	11	11	10	11	10	11	11	11	10	10	10	10	9	11	11
8-Apr	11	24	15	16	17	29	12	14	56	37	81	17	13	16	12	14	16	12	12	14	12	14	25	37	81
9-Apr	15	9	16	9	8	10	10	36	21	30	23	18	22	20	22	23	17	13	29	27	43	44	26	20	44
10-Apr	29	16	15	14	7	7	9	12	14	12	16	20	29	27	22	29	22	16	40	6	6	9	10	11	40
11-Apr	10	15	13	10	11	12	8	10	30	22	17	13	28	24	28	52	17	31	39	14	11	11	13	11	52
12-Apr	14	13	13	13	14	15	11	14	15	20	17	17	15	19	15	15	14	12	12	13	12	13	13	13	20
13-Apr	13	17	14	13	16	12	16	17	17	24	18	19	18	22	19	18	16	15	14	12	16	11	18	12	24
14-Apr	44	25	16	17	10	9	11	10	13	18	34	27	24	22	14	13	12	14	9	9	10	10	9	11	44
15-Apr	10	9	11	9	15	9	13	10	15	15	18	16	16	17	18	17	17	18	17	18	16	15	14	15	18
16-Apr	17	16	16	15	12	13	14	13	13	14	13	13	14	13	12	13	15	14	14	13	13	14	13	14	17
17-Apr	14	15	14	14	14	14	14	15	15	13	15	15	18	16	17	22	25	32	21	24	9	11	13	9	32
18-Apr	9	8	8	9	9	9	8	8	10	9	10	10	10	11	11	10	9	9	9	9	9	11	11	11	11
19-Apr	9	10	13	16	18	17	16	17	18	19	20	20	21	20	21	21	26	21	13	18	15	13	12	16	26
20-Apr	15	13	13	12	11	12	13	20	18	22	27	40	40	42	49	32	38	17	11	8	13	11	8	11	49
21-Apr	12	15	12	16	23	27	39	20	45	59	30	44	75	73	45	47	35	20	11	9	10	11	9	9	75
22-Apr	8	12	9	8	12	16	10	9	16	10	11	16	14	16	22	37	14	11	19	14	10	38	64	43	64
23-Apr	33	40	28	11	23	23	20	14	23	20	21	23	20	22	22	20	25	23	16	16	17	12	12	13	40
24-Apr	17	33	10	15	11	12	26	34	80	58	45	43	57	57	67	78	41	73	91	13	9	11	8	8	91
25-Apr	8	8	7	8	8	7	10	13	12	13	13	16	13	18	18	14	14	21	15	11	8	6	6	7	21
26-Apr	9	6	9	55	23	50	73	78	40	15	17	17	16	15	16	16	16	15	15	14	12	15	14	13	78
27-Apr	14	14	13	15	16	15	13	17	18	17	18	18	20	20	24	22	20	20	15	14	15	10	22	12	24
28-Apr	13	14	9	9	10	10	8	11	12	14	19	19	24	21	22	21	18	14	14	8	12	13	14	17	24
29-Apr	9	17	8	9	13	16	16	16	17	20	18	18	18	15	20	17	16	17	14	11	9	14	29	65	65
30-Apr	10	11	11	17	15	18	15	15	21	23	24	21	37	41	38	24	15	13	13	12	12	13	11	12	41
44 40 28 55 23 50 73 78 80 59 81 44 75 73 67 78 41 73 91 27 43 44 64 65																									
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS20 MACKAY RIVER APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)

APRIL 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	16.9	0	2.9	0
H2S (ppb) Average	686	34	34	100	1	0	0.2	0
THC (ppm) Average	686	34	34	100	3	-	2.4	-
NO2 (ppb) Average	686	34	34	100	17.7	0	4	-
NO (ppb) Average	686	34	34	100	7.8	-	1	-
NOX (ppb) Average	686	34	34	100	23.4	-	4.1	-
Temperature 2 m (C) Average	720	0	0	100	21.1	-	12.2	-
Relative Humidity (%) Average	720	0	0	100	99.7	-	93.4	-
Wind Speed 10 m (km/h) Average	692	0	28	96.11	21	-	15	-
Wind Direction 10 m (deg) Average	692	0	28	96.11	-	-	-	-
Precipitation (mm) Total	720	0	0	100	2.9	-	10.4	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.69	1.7	-	0	0	0	0.1	0.4	1.8	16.9
H2S (ppb) Average	686	0.09	0.1	-	0	0	0	0.1	0.1	0.2	1
THC (ppm) Average	686	2.24	0.1	-	2.1	2.2	2.2	2.2	2.3	2.3	3
NO2 (ppb) Average	686	1.17	1.9	-	0.1	0.2	0.3	0.6	1.1	2.9	17.7
NO (ppb) Average	686	0.15	0.5	-	0	0	0	0	0.1	0.4	7.8
NOX (ppb) Average	686	1.32	2.2	-	0.1	0.2	0.3	0.6	1.2	3.3	23.4
Temperature 2 m (C) Average	720	3.72	6.9	-	-18.6	-4.9	-0.9	4	8.6	12.6	21.1
Relative Humidity (%) Average	720	58.39	23.3	-	17	26.7	38.3	58.4	77.6	92	99.7
Wind Speed 10 m (km/h) Average	692	7.9	4	-	0	2	5	7	11	14	21
Wind Direction 10 m (deg) Average	692	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	720	-	-	27.89	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION -MACKAY RIVER (AMS20)
APRIL 2025

OPERATIONAL NOTES

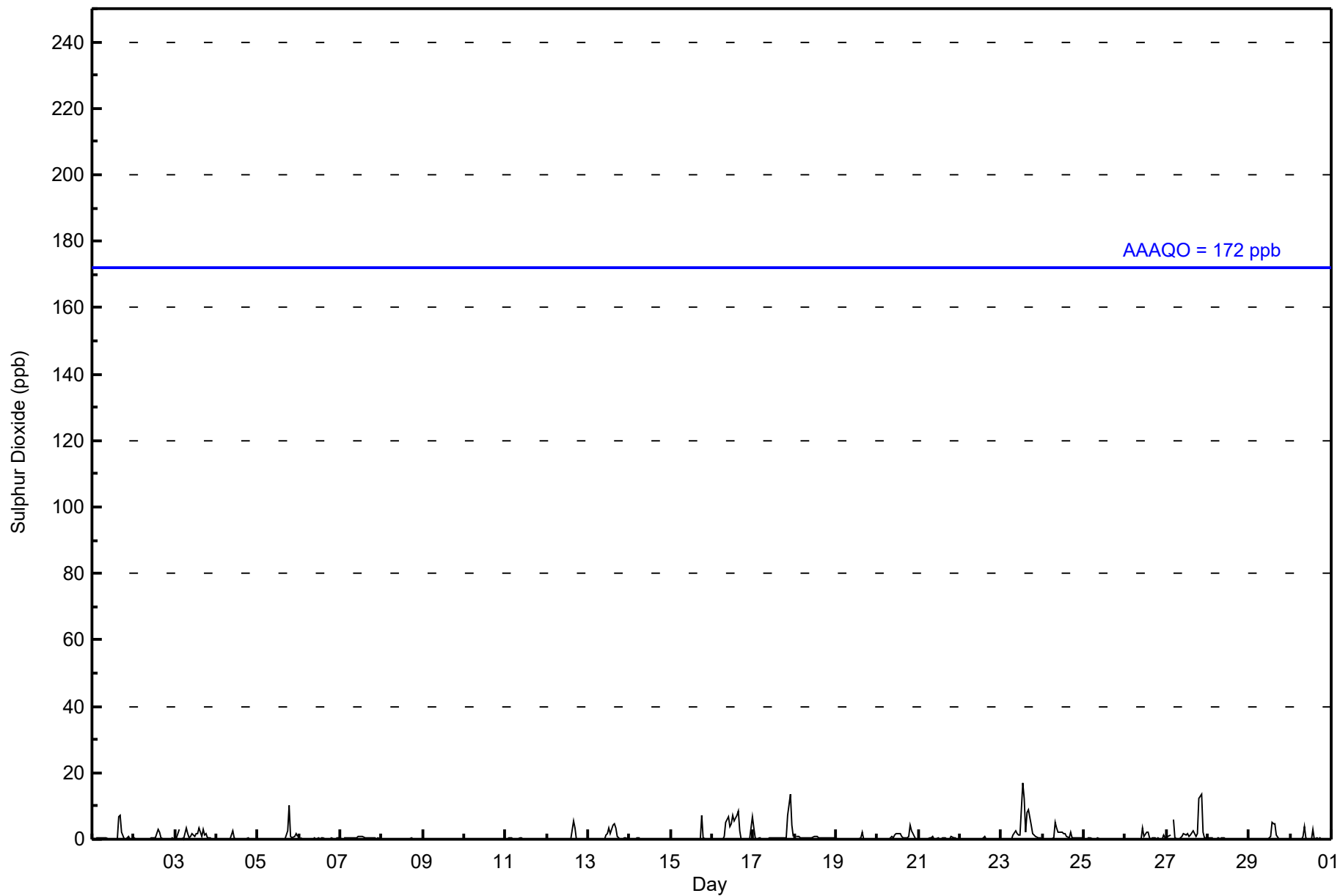
Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	03 Apr 2025 21:00	03 Apr 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	07 Apr 2025 19:00	07 Apr 2025 19:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Apr 2025 17:00	08 Apr 2025 17:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Apr 2025 02:00	09 Apr 2025 07:00	6	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Apr 2025 23:00	10 Apr 2025 00:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	12 Apr 2025 20:00	12 Apr 2025 21:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	13 Apr 2025 21:00	13 Apr 2025 22:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Apr 2025 02:00	14 Apr 2025 03:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Apr 2025 05:00	14 Apr 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 07:00	20 Apr 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Apr 2025 01:00	23 Apr 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Apr 2025 03:00	23 Apr 2025 07:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Apr 2025 02:00	24 Apr 2025 03:00	2	Flat line in sensor output signal

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 16.9 ppb on Apr 23 13:00 Maximum Daily Average: 2.9 ppb on Apr 23																	Hours in Service: 720									
Minimum Value: 0.0 ppb on Apr 4 12:00 Minimum Daily Average: 0.0 ppb on Apr 9 Maximum Diurnal Average: 1.7 ppb at hour 16 Minimum Diurnal Average: 0.1 ppb at hour 6																	Hours of Data: 686									
Monthly Average: 0.69 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.8 P ₉₉ = 8.7																	Hours of Missing Data: 34									
																	Hours of Calibration: 34									
																	Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.3	Z	0.3	0.2	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	6.8	7.3	1.9	0.1	0.2	0.4	0.9	0.2	0.2	0.9	7.3
2-Apr	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.6	0.6	0.6	1.8	3.1	2.0	0.4	0.1	0.1	0.1	0.2	0.1	0.5	0.1	0.5	3.1
3-Apr	0.1	0.5	2.9	Z	0.4	0.1	3.5	1.7	0.5	0.8	1.6	0.9	1.8	1.5	3.5	0.9	3.1	1.4	1.8	0.2	0.2	0.1	0.2	0.2	1.2	3.5
4-Apr	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	2.4	0.5	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.2	2.4
5-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	2.6	10.2	1.0	0.3	0.8	1.6	1.0	0.8	10.2
6-Apr	Z	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.3
7-Apr	0.3	Z	0.6	0.5	0.4	0.2	0.2	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.6	0.6	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.1	0.4	0.7
8-Apr	0.2	0.2	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	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
9-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-Apr	0.0	0.0	0.3	0.2	0.1	Z	0.1	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
12-Apr	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	0.2	5.4	3.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	5.4
13-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.9	3.5	1.8	4.3	4.7	3.6	0.9	0.1	0.2	0.2	0.3	0.2	0.1	1.0	4.7
14-Apr	0.0	0.1	Z	0.1	0.2	0.2	0.4	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	0.1	0.4
15-Apr	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	7.4	0.4	0.0	0.0	0.0	0.0	0.3	7.4
16-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.7	5.3	6.7	3.7	4.5	7.3	5.4	7.0	8.6	2.7	0.1	0.1	0.2	0.1	0.1	0.1	6.7	2.6	8.6
17-Apr	3.5	0.2	0.2	0.3	0.6	Z	0.1	0.0	0.1	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	7.3	13.4	4.3	0.9	1.5	13.4
18-Apr	Z	0.8	0.7	0.5	0.5	0.4	0.4	0.3	0.5	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.8
19-Apr	0.4	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	0.2	2.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	2.3
20-Apr	0.1	0.2	Z	0.1	0.1	0.1	0.2	0.2	1.0	0.6	1.2	1.6	1.7	1.7	0.8	0.3	0.3	0.2	0.8	4.3	2.5	0.7	0.2	0.1	0.8	4.3
21-Apr	0.2	0.1	0.1	Z	0.0	0.0	0.2	0.5	0.7	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.9	0.6	0.2	0.1	0.0	0.2	0.9
22-Apr	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	0.1	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	1.5	2.6	1.8	1.1	1.5	16.9	12.1	2.1	8.1	8.9	4.3	1.7	1.2	0.9	0.5	0.2	0.2	2.9	16.9
24-Apr	Z	0.2	0.1	0.1	0.2	0.2	0.2	5.2	3.5	2.2	1.9	2.2	1.8	1.8	0.8	0.6	2.0	0.6	0.4	0.3	0.3	0.3	0.5	0.5	1.1	5.2
25-Apr	0.4	Z	0.6	0.5	0.3	0.2	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6
26-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.0	3.6	0.7	2.3	1.9	0.6	0.2	0.3	0.4	0.0	0.4	0.1	0.2	1.3	0.5	0.6	3.6
27-Apr	0.3	0.6	1.2	Z	5.9	0.6	0.1	0.2	0.3	0.8	1.8	1.4	1.8	0.7	1.4	2.5	1.6	0.7	1.6	12.5	13.5	2.0	0.3	0.4	2.3	13.5
28-Apr	0.4	0.3	0.2	0.3	Z	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.4
29-Apr	0.1	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.7	5.3	4.7	4.5	1.5	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.8	5.3
30-Apr	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.6	3.6	0.4	0.1	0.1	0.1	3.0	0.1	0.5	0.1	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.4	3.6
0.3 0.2 0.3 0.1 0.4 0.1 0.2 0.4 0.7 0.6 0.7 0.6 1.4 1.3 1.1 1.7 1.2 0.5 0.9 0.8 0.9 0.7 0.4 0.4																									Diurnal Average	
3.5 0.8 2.9 0.5 5.9 0.6 3.5 5.2 5.3 6.7 3.7 4.5 16.9 12.1 7.0 8.6 8.9 4.3 10.2 12.5 13.5 13.4 4.3 6.7																									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 (SO₂) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	681	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: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	25	29	25	14	13	57	56	42	68	39	17	44	75	61	57	34	656
11 - 20	0	1	2	0	0	1	1	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	25	30	27	14	13	58	57	42	68	39	17	44	75	61	57	34	661

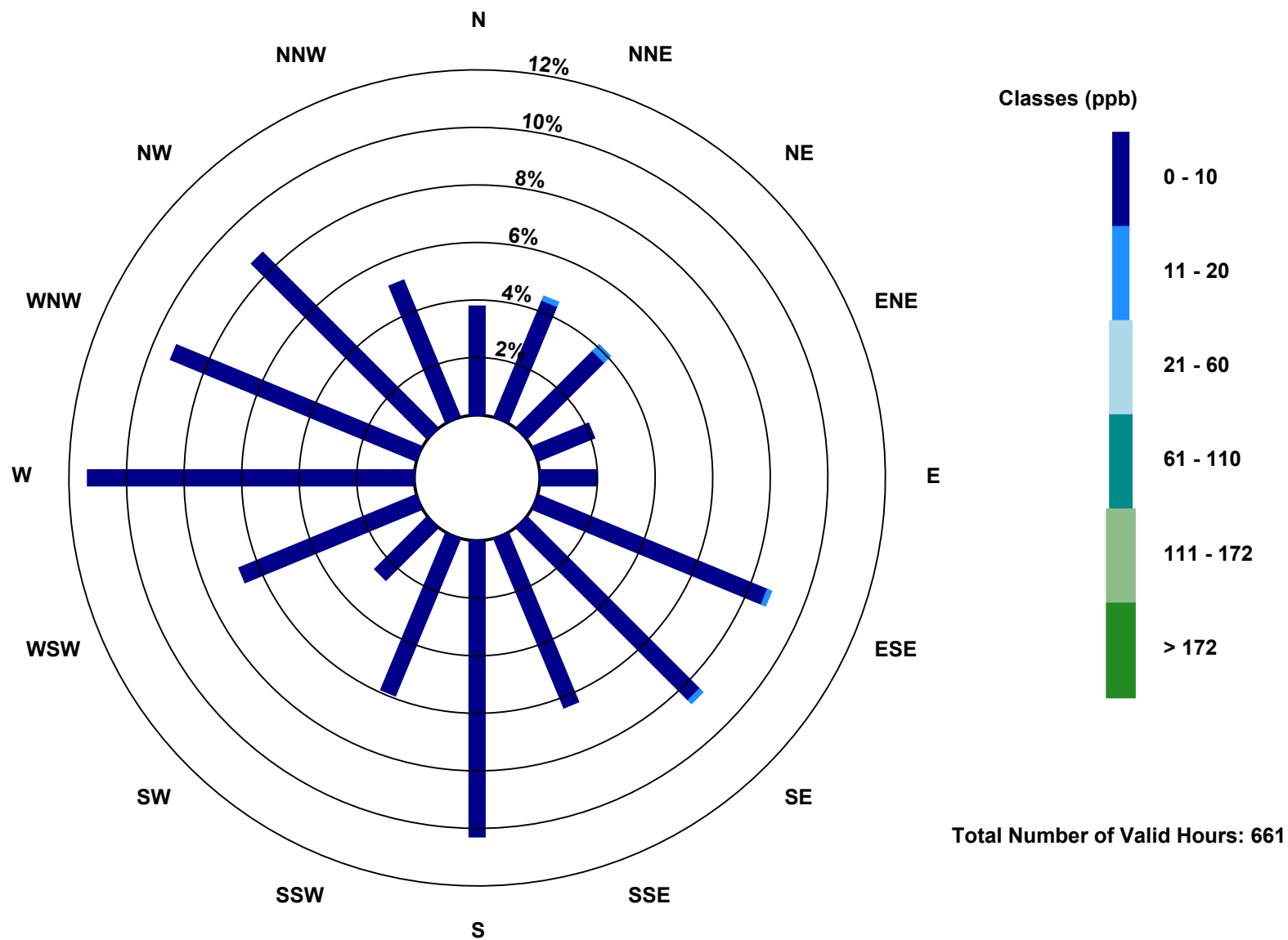
Total Number of Valid Hours: 661

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

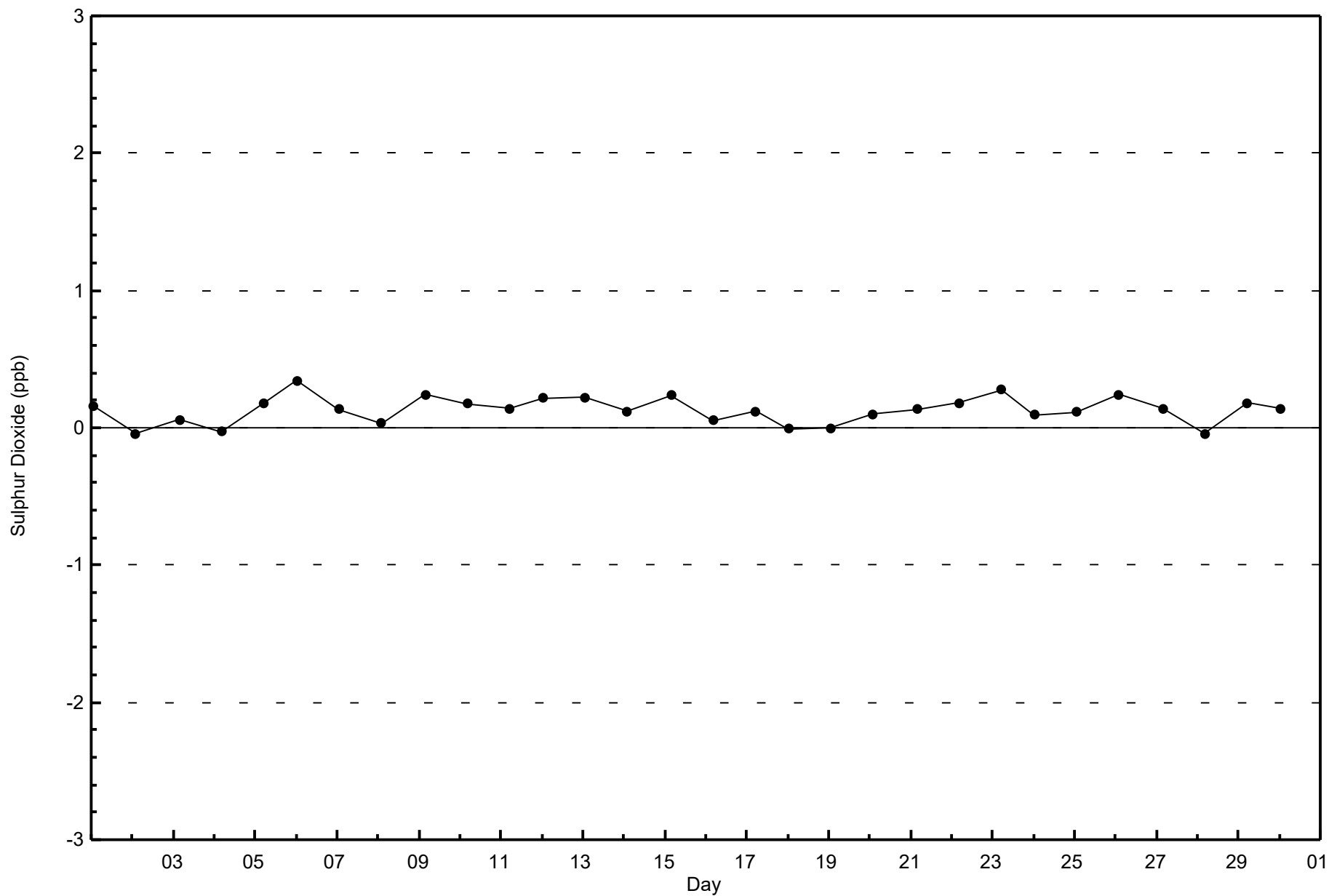
Sulphur Dioxide (SO₂) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

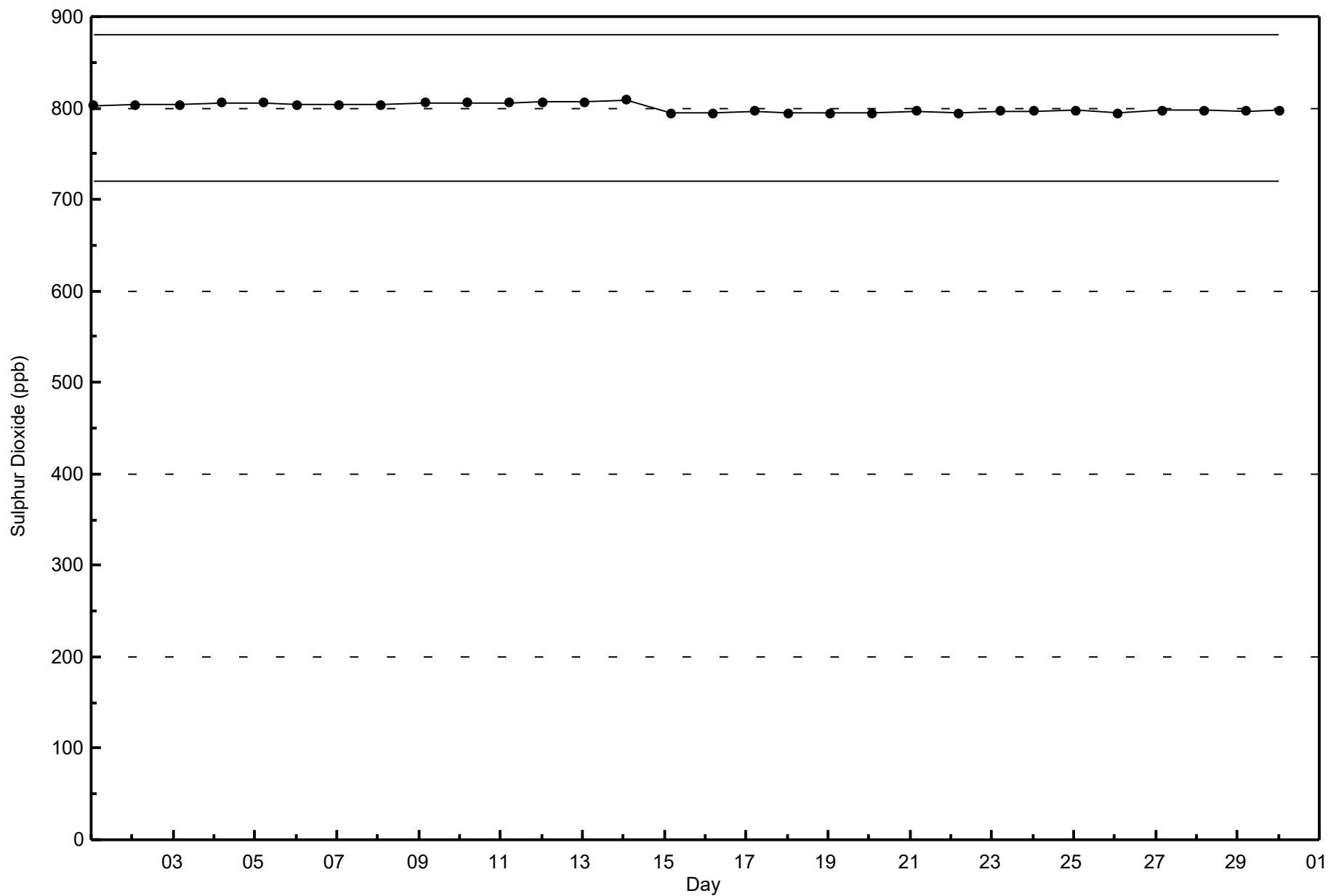
Sulphur Dioxide (SO₂) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Mackay River - April 2025

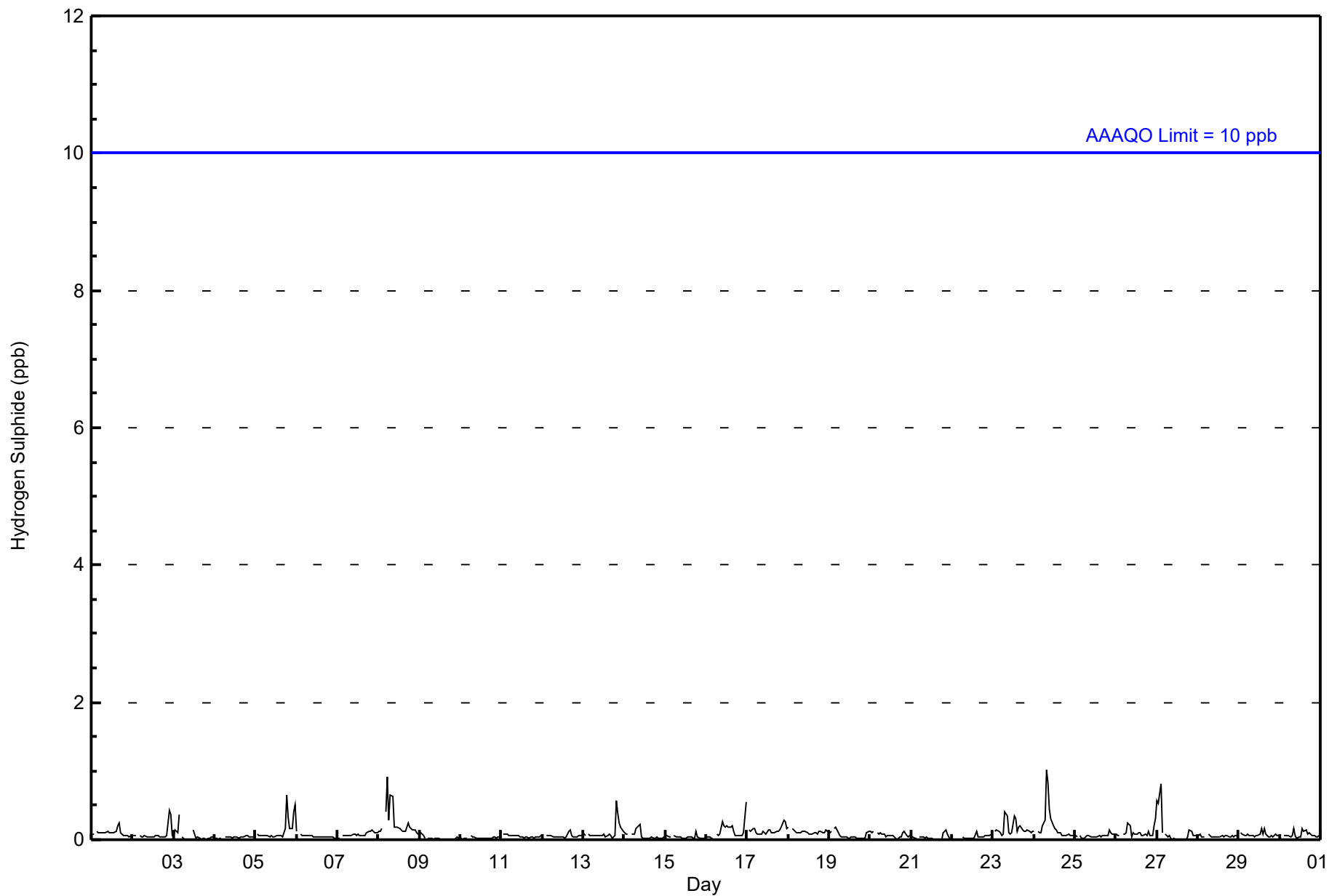


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 1.0 ppb on Apr 24 08:00 Maximum Daily Average: 0.2 ppb on Apr 8																	Hours in Service: 720										
Minimum Value: 0.0 ppb on Apr 9 13:00 Minimum Daily Average: 0.0 ppb on Apr 9 Maximum Diurnal Average: 0.1 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 18 Monthly Average: 0.09 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6																	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 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-Apr	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	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3	
2-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.1	0.1	0.4
3-Apr	0.0	0.1	0.1	0.4	Z	0.0	0.0	C	C	C	C	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4
4-Apr	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	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	
5-Apr	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	0.1	0.1	0.1	0.0	0.2	0.6	0.3	0.2	0.2	0.4	0.5	0.1	0.6	
6-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
7-Apr	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
8-Apr	0.1	0.1	0.2	Z	0.4	0.9	0.3	0.7	0.6	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	0.1	0.1	0.1	0.2	0.9
9-Apr	0.1	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
10-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
11-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	
12-Apr	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	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	
13-Apr	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	0.0	0.1	0.6	0.4	0.2	0.2	0.1	0.1	0.6	
14-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	
15-Apr	0.0	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
16-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	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	0.5	0.1	0.5	
17-Apr	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.3
18-Apr	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	0.1	
19-Apr	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	
20-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	
21-Apr	0.1	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	0.1	0.1	0.1	0.0	0.0	0.0	0.1	
22-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
23-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.1	0.1	0.1	0.4	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
24-Apr	0.1	Z	0.1	0.1	0.1	0.2	0.3	1.0	0.8	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	0.1	0.1	0.1	0.2	1.0
25-Apr	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
26-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.3	
27-Apr	0.6	0.5	0.8	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
28-Apr	0.1	0.1	0.0	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	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	
29-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	
30-Apr	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	
0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1																									Diurnal Average		
0.6 0.5 0.8 0.4 0.4 0.9 0.3 1.0 0.8 0.5 0.3 0.2 0.4 0.3 0.2 0.2 0.3 0.2 0.6 0.6 0.4 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 (H₂S) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Mackay River - April 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 (H₂S) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	25	31	27	14	14	56	61	41	70	39	17	42	76	61	55	32	661
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	25	31	27	14	14	56	61	41	70	39	17	42	76	61	55	32	661

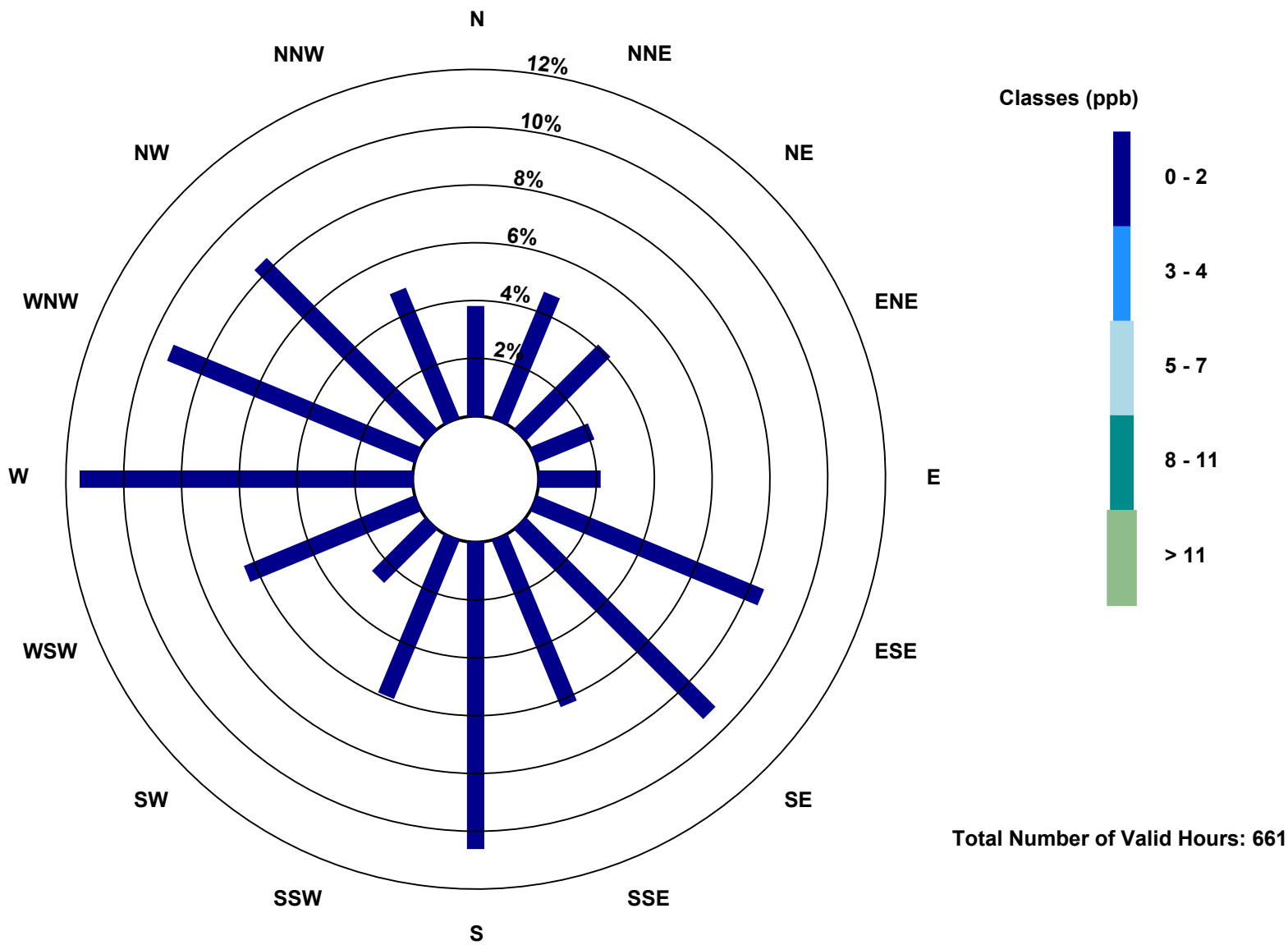
Total Number of Valid Hours: 661

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

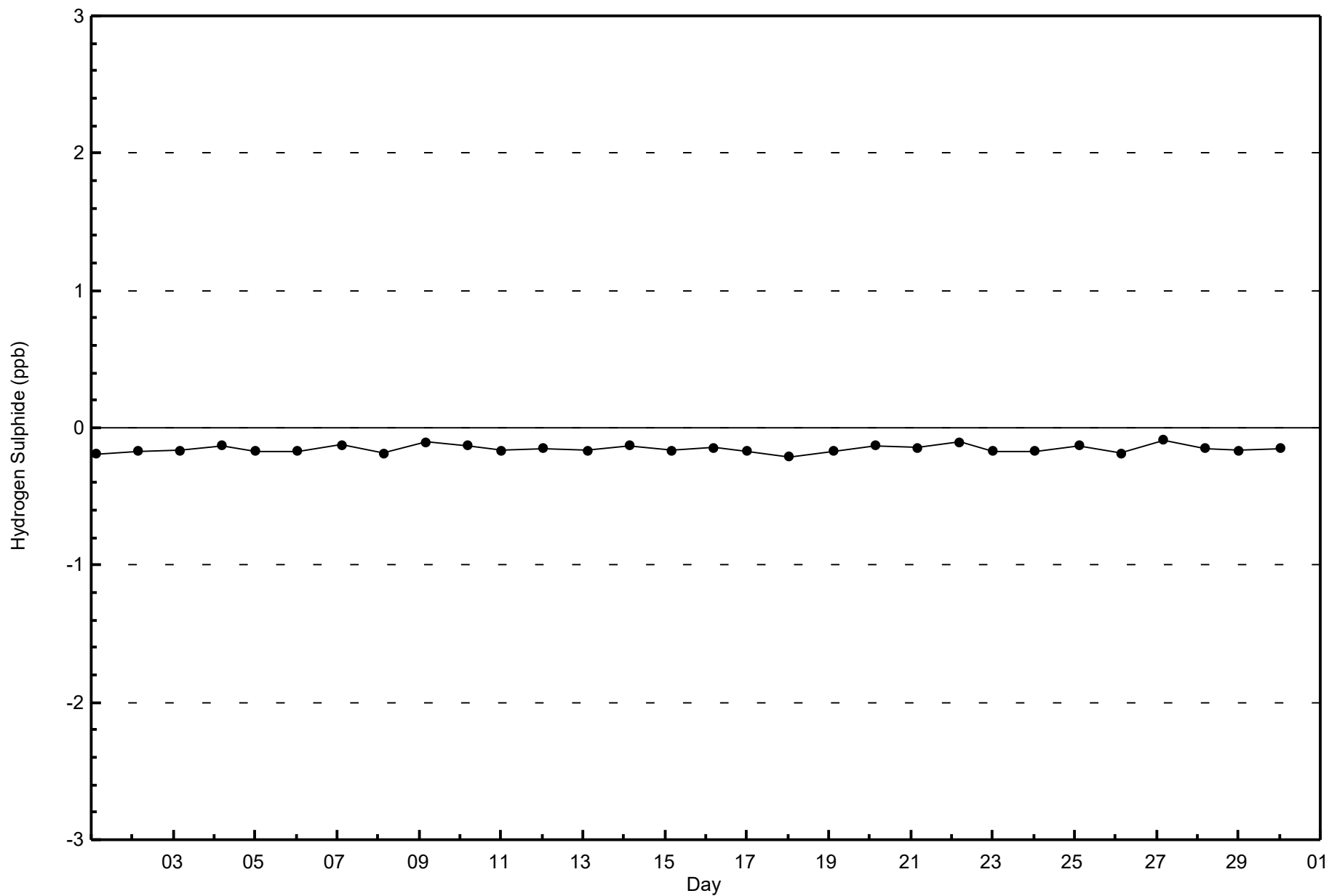
Hydrogen Sulphide (H₂S) - ppb
Mackay River

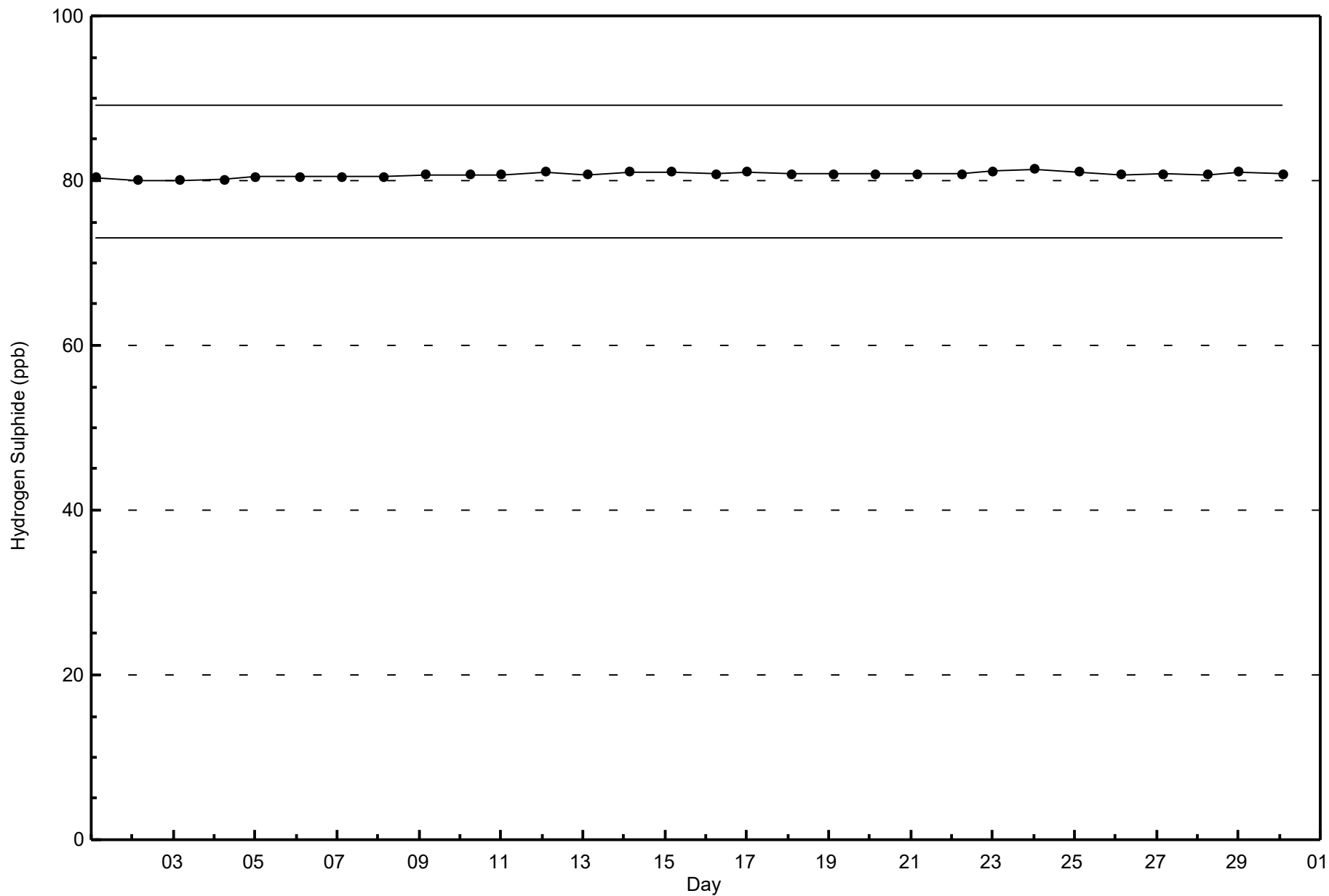




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Mackay River - April 2025



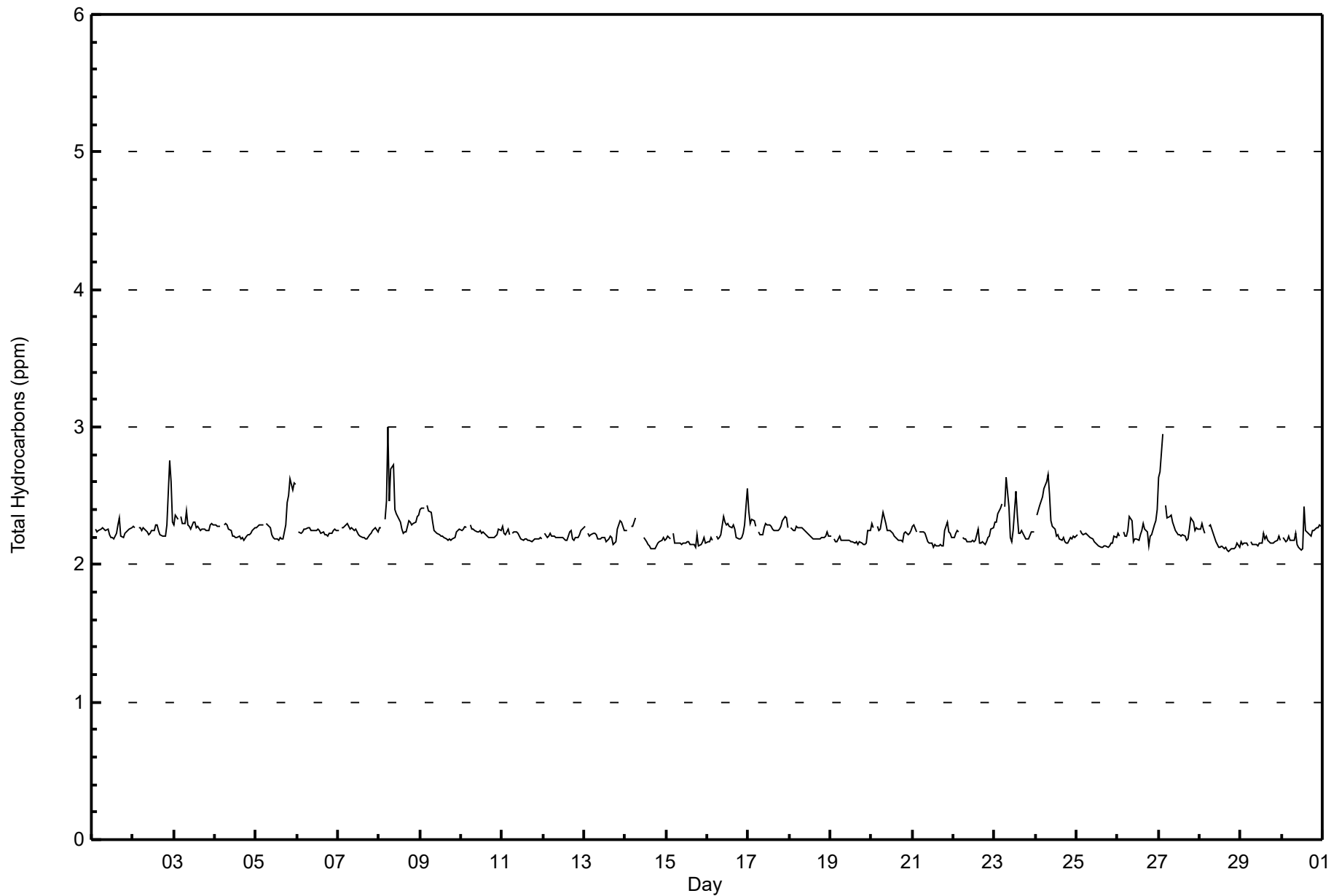


Maximum Value: 3.0 ppm on Apr 8 06:00																	Maximum Daily Average: 2.4 ppm on Apr 8																	Hours in Service: 720	
Minimum Value: 2.1 ppm on Apr 28 18:00																	Minimum Daily Average: 2.2 ppm on Apr 15																	Hours of Data: 686	
Maximum Diurnal Average: 2.3 ppm at hour 6																	Minimum Diurnal Average: 2.2 ppm at hour 18																	Hours of Missing Data: 34	
Monthly Average: 2.24 ppm																	Percentiles: P ₁ = 2.1 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.2 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.6																	Hours of Calibration: 34	
																																		Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
1-Apr	2.2	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3									
2-Apr	2.3	2.3	Z	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.8	2.6	2.3	2.2	2.8								
3-Apr	2.3	2.4	2.3	Z	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	2.2	2.2	2.3	2.3	2.3	2.2	2.4									
4-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3								
5-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.6	2.5	2.6	2.6	2.2	2.6									
6-Apr	Z	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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3									
7-Apr	2.2	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3									
8-Apr	2.3	2.3	Z	2.3	2.5	3.0	2.5	2.7	2.7	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	3.0									
9-Apr	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4									
10-Apr	2.2	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3									
11-Apr	2.3	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3									
12-Apr	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3									
13-Apr	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2									
14-Apr	2.2	2.2	Z	2.3	2.3	2.3	2.3	C	C	C	C	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	2.2									
15-Apr	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2									
16-Apr	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.6	2.2	2.6									
17-Apr	2.4	2.3	2.3	2.3	2.3	Z	2.2	2.2	2.2	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	2.3	2.3	2.3	2.3									
18-Apr	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2									
19-Apr	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.3									
20-Apr	2.3	2.3	Z	2.3	2.2	2.3	2.3	2.4	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2									
21-Apr	2.3	2.3	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	2.2	2.3	2.2	2.2	2.2	2.2	2.3									
22-Apr	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3									
23-Apr	2.3	2.3	2.4	2.4	2.4	Z	2.4	2.6	2.4	2.2	2.2	2.2	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3									
24-Apr	Z	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.5	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	2.3									
25-Apr	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2									
26-Apr	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.2	2.2	2.3	2.3	2.4	2.2	2.4									
27-Apr	2.6	2.7	2.9	Z	2.4	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.9									
28-Apr	2.3	2.3	2.3	2.2	Z	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	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.3									
29-Apr	2.2	2.1	2.2	2.2	2.1	Z	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2									
30-Apr	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	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.4									
2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.3 2.3 2.3																									Diurnal Average										
2.6 2.7 2.9 2.5 2.5 3.0 2.6 2.7 2.7 2.4 2.4 2.4 2.5 2.4 2.3 2.3 2.3 2.3 2.4 2.5 2.6 2.8 2.6 2.6																									Diurnal Maximum										
Z - zerospan C - Calibration																																			



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Mackay River - April 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
Mackay River - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	25	30	27	14	13	58	57	42	68	39	17	44	75	61	57	34	661
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	25	30	27	14	13	58	57	42	68	39	17	44	75	61	57	34	661

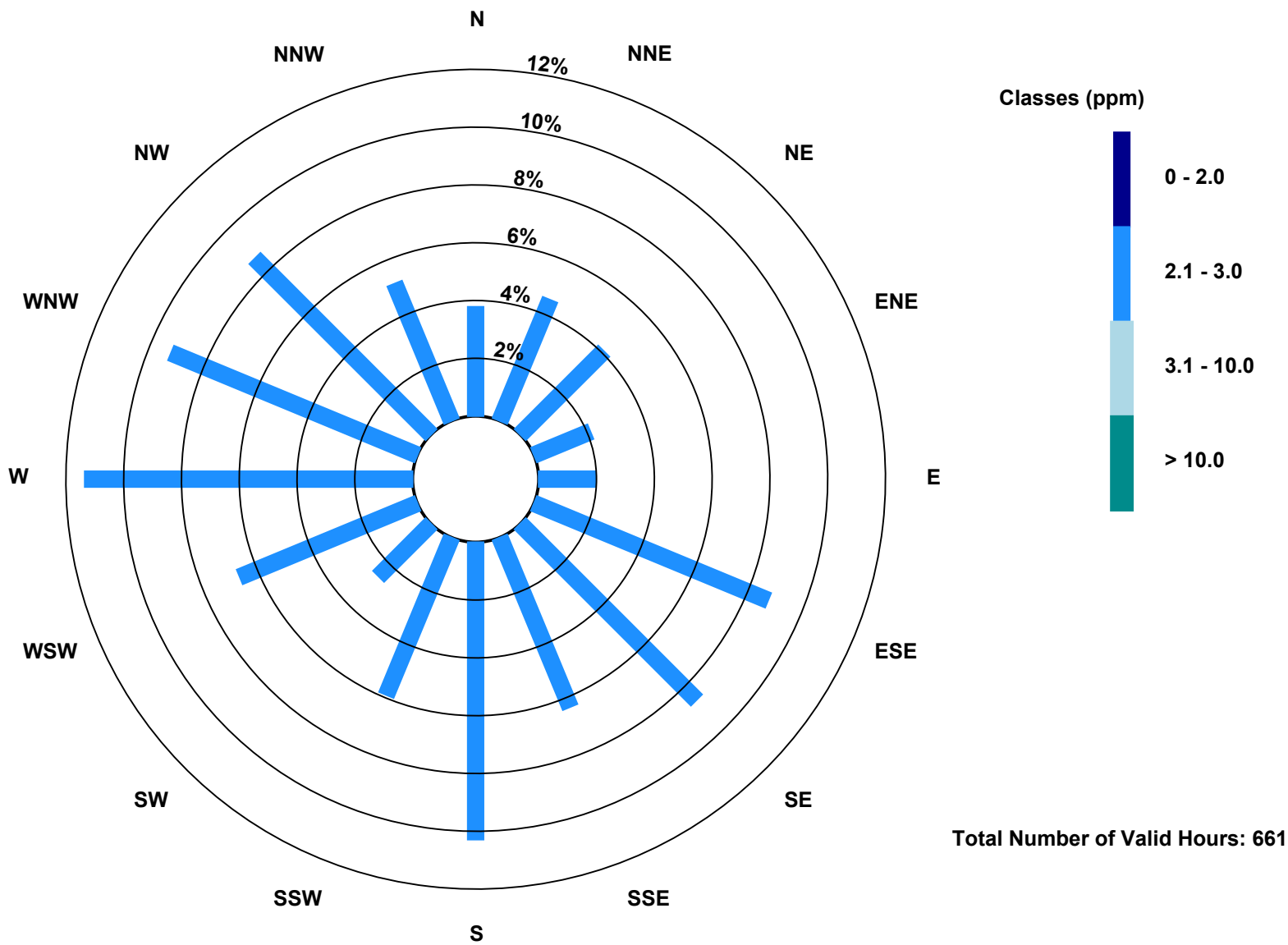
Total Number of Valid Hours: 661

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

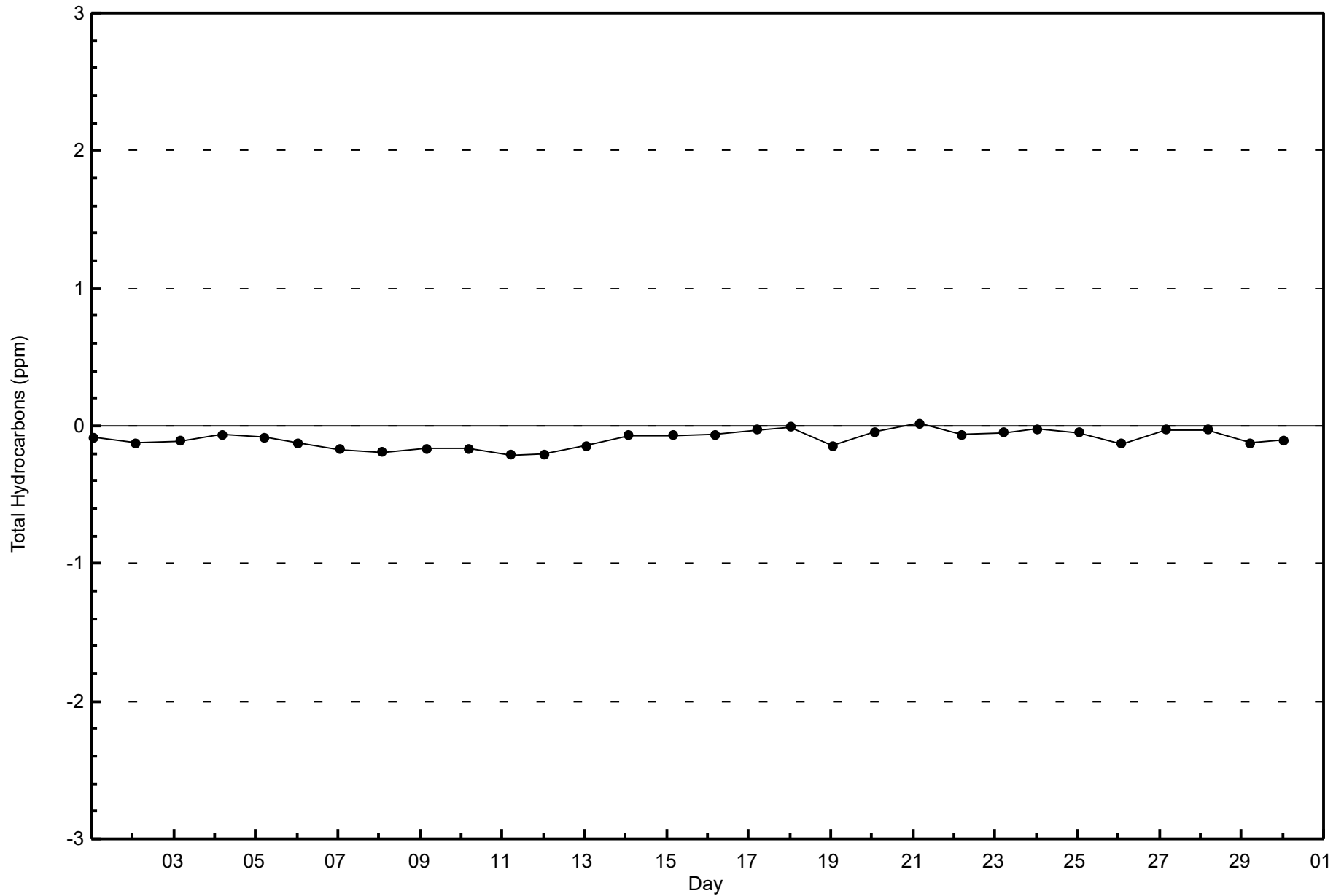
Total Hydrocarbons (THC) - ppm
Mackay River





Wood Buffalo Environmental Association
Zero Responses

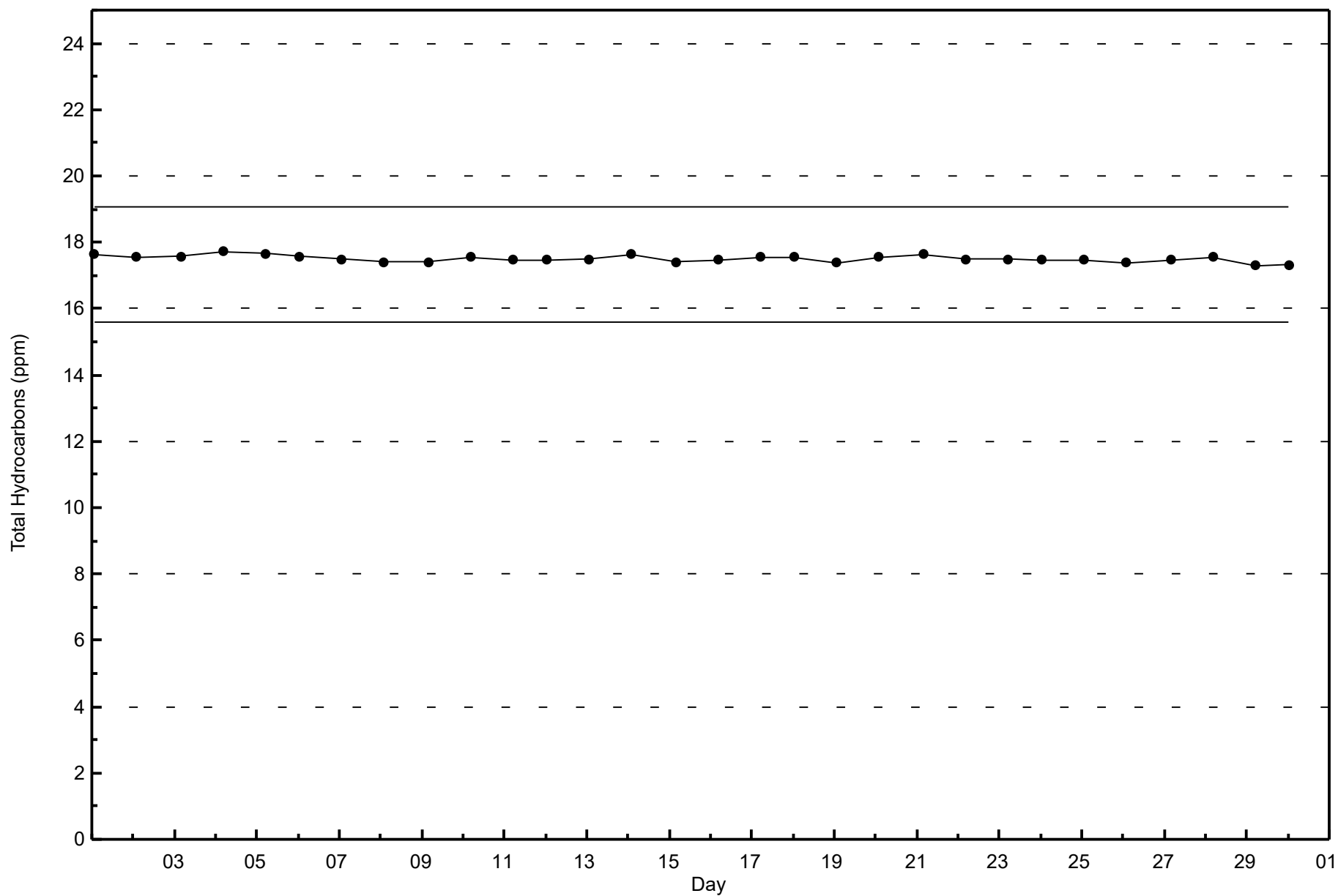
Total Hydrocarbons (THC) - ppm
Mackay River - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Mackay River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

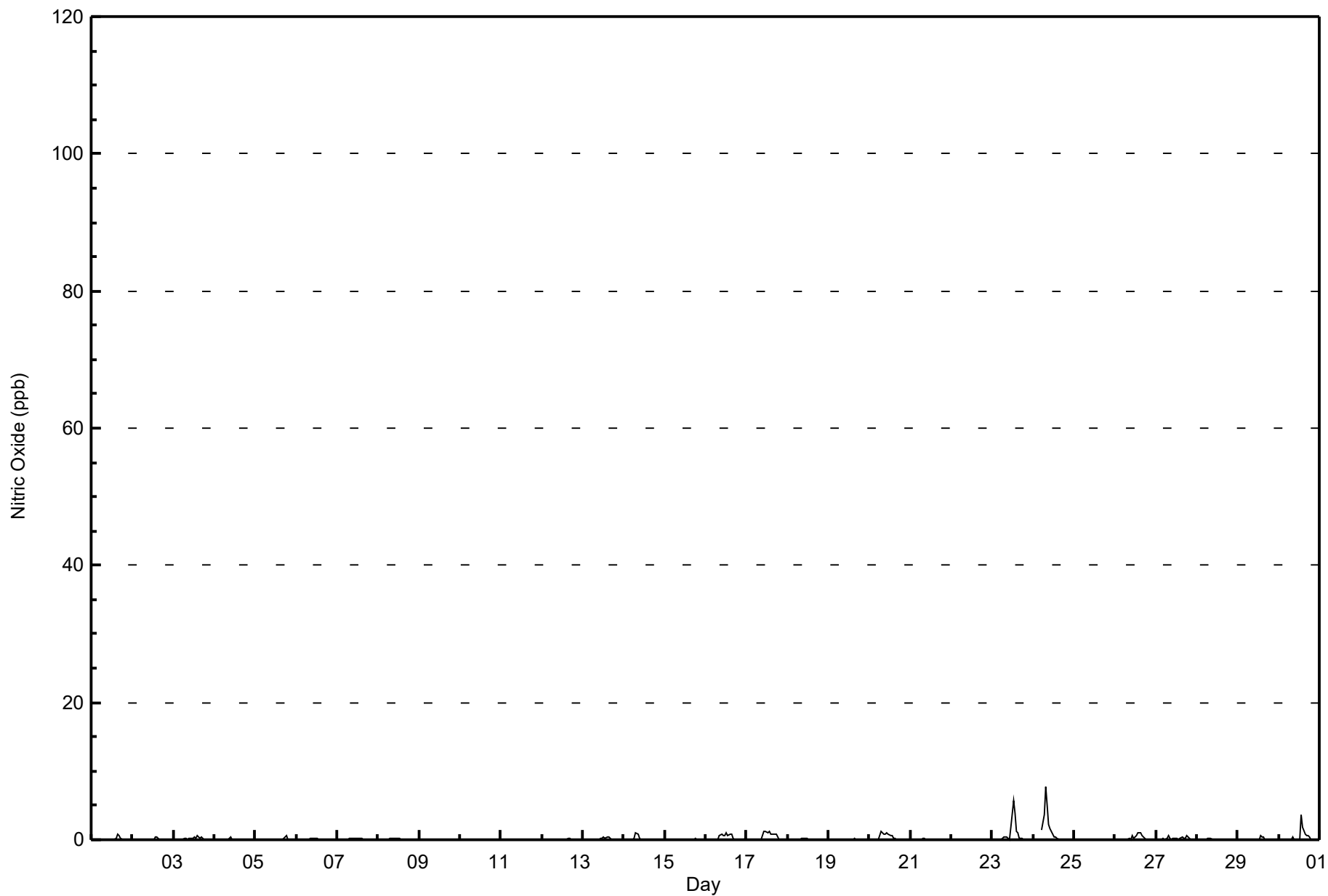
Mackay River - April 2025

Maximum Value: 7.8 ppb on Apr 24 08:00																		Maximum Daily Average: 1.0 ppb on Apr 24										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00																		Minimum Daily Average: 0.0 ppb on Apr 9										Hours of Data: 686	
Maximum Diurnal Average: 0.4 ppb at hour 14																		Minimum Diurnal Average: 0.0 ppb at hour 22										Hours of Missing Data: 34	
Monthly Average: 0.15 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 = 1.9										Hours of Calibration: 34	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8		
2-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	0.1	0.1	0.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5		
3-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5		
4-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		
5-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5		
6-Apr	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		
7-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3		
8-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3		
9-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10-Apr	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	0.0		
11-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
12-Apr	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	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		
13-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.4	0.4	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4		
14-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.0	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	0.1	1.0		
15-Apr	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		
16-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.6	0.8	0.5	0.6	1.1	0.6	0.8	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	1.1		
17-Apr	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	1.2	1.2	1.1	1.1	0.9	0.8	0.9	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.2		
18-Apr	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	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		
20-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.7	1.3	0.8	0.9	1.0	0.9	0.7	0.5	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.3		
21-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	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-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
23-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.5	0.2	0.1	1.8	5.7	3.8	1.2	0.9	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	5.7		
24-Apr	0.0	0.0	0.0	0.1	Z	1.4	3.6	7.8	5.1	2.3	1.5	0.8	0.5	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	7.8			
25-Apr	0.0	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		
26-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.5	0.3	0.6	1.0	1.0	1.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0			
27-Apr	0.0	Z	0.0	0.0	0.2	0.1	0.2	0.6	0.1	0.1	0.3	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.6	0.4	0.1	0.0	0.0	0.0	0.2	0.6			
28-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
29-Apr	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	0.5	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5			
30-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	3.7	1.7	0.9	0.7	0.6	0.3	0.1	0.0	0.0	0.0	0.4	3.7			
0.0 0.0 0.0 0.0 0.0 0.1 0.2 0.4 0.3 0.2 0.2 0.2 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 0.0																									Diurnal Average				
0.1 0.0 0.0 0.1 0.2 1.4 3.6 7.8 5.1 2.3 1.5 1.8 5.7 3.8 1.7 1.0 0.9 0.9 0.6 0.4 0.1 0.0 0.0 0.2																									Diurnal Maximum				
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	686	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	30	27	13	13	56	62	42	70	40	14	45	72	60	57	34	660
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	30	27	13	13	56	62	42	70	40	14	45	72	60	57	34	660

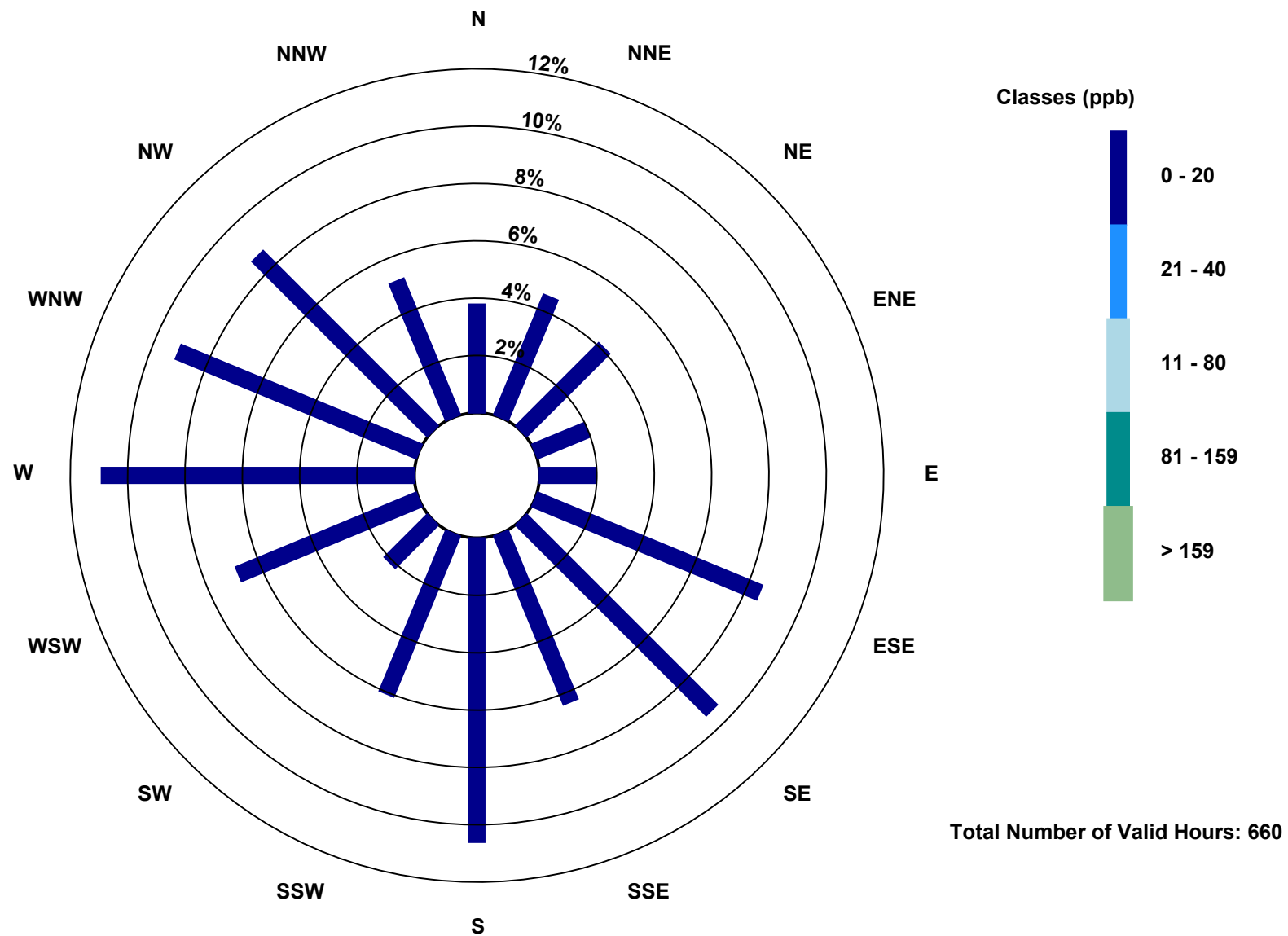
Total Number of Valid Hours: 660

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

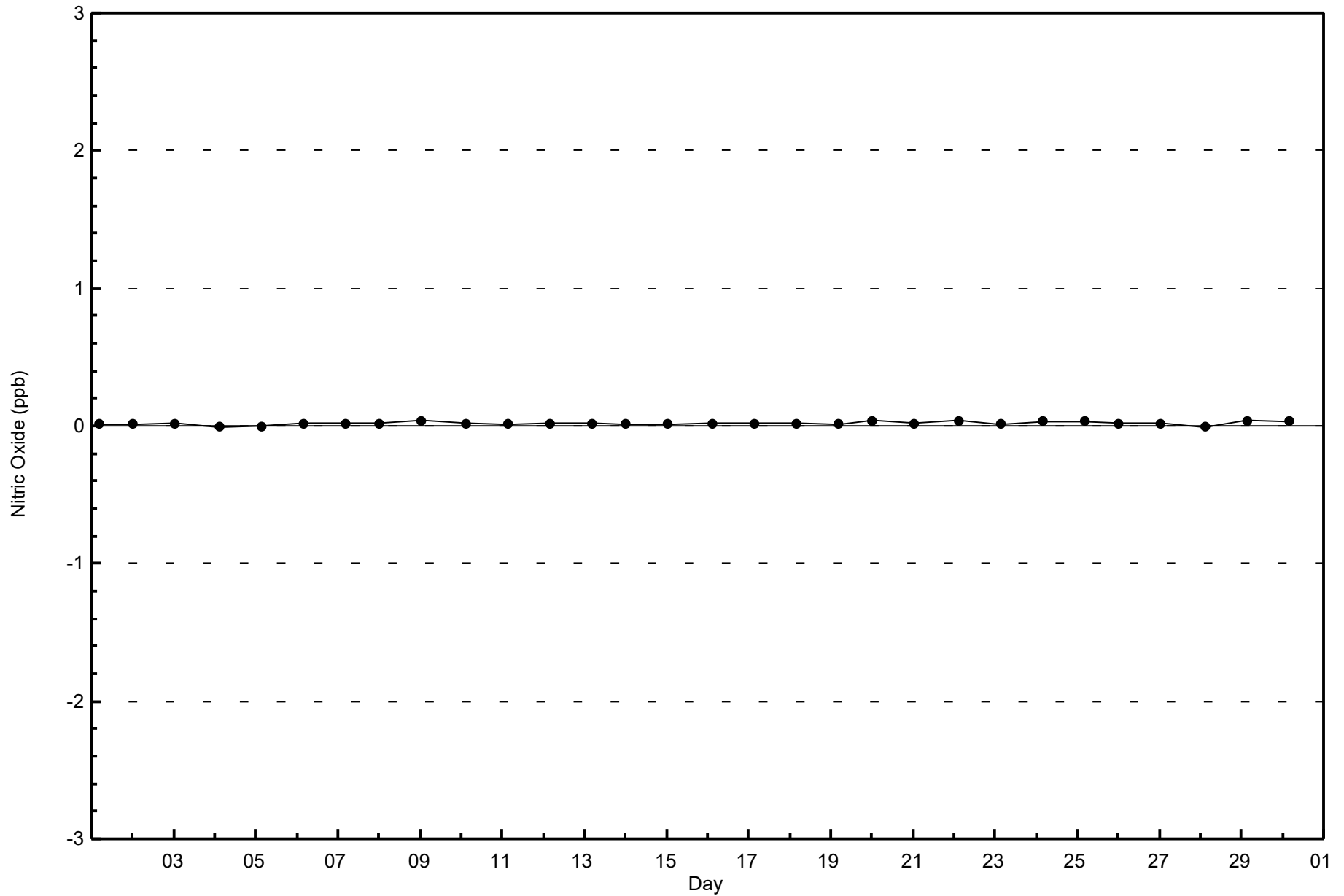
Nitric Oxide (NO) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

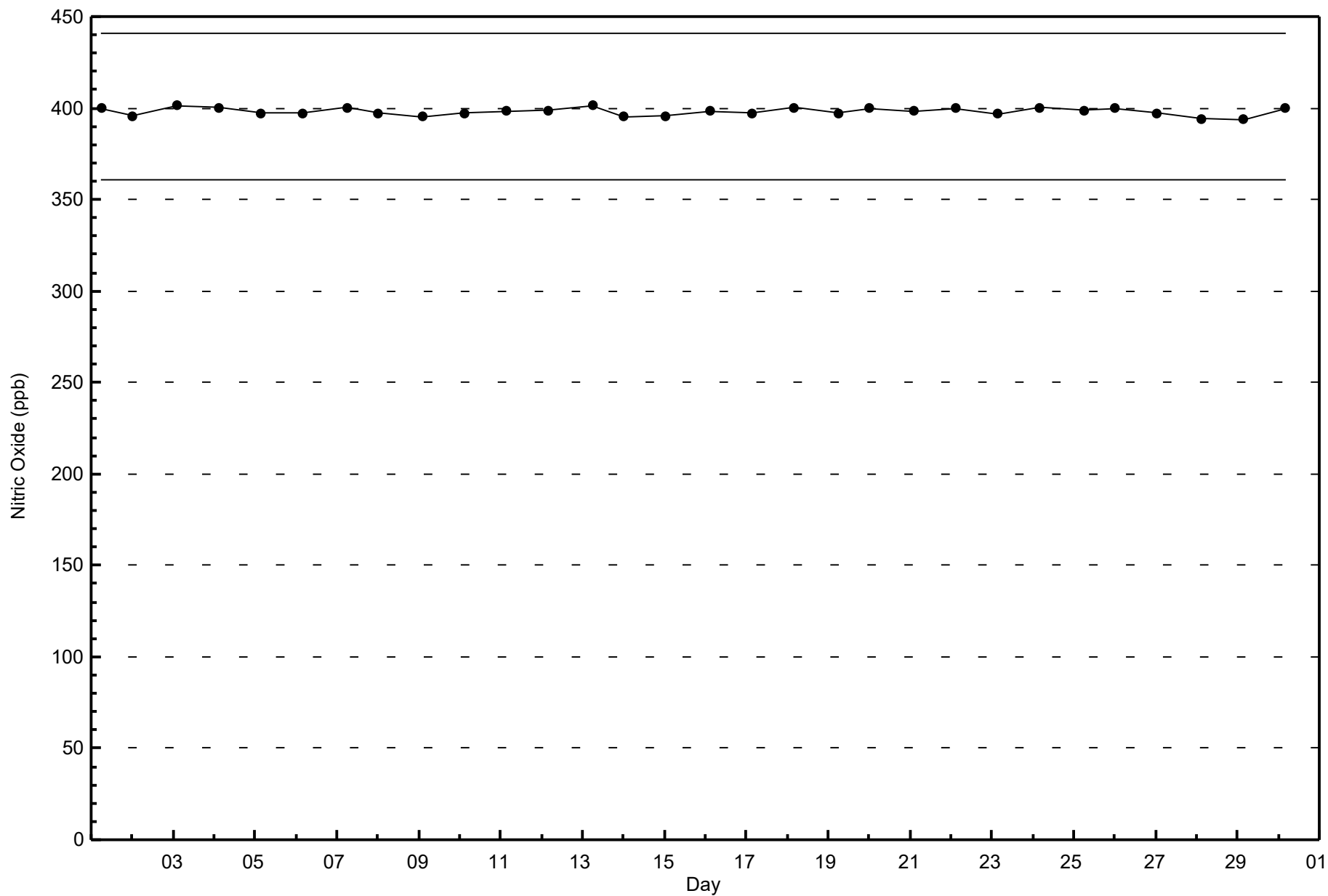
Nitric Oxide (NO) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

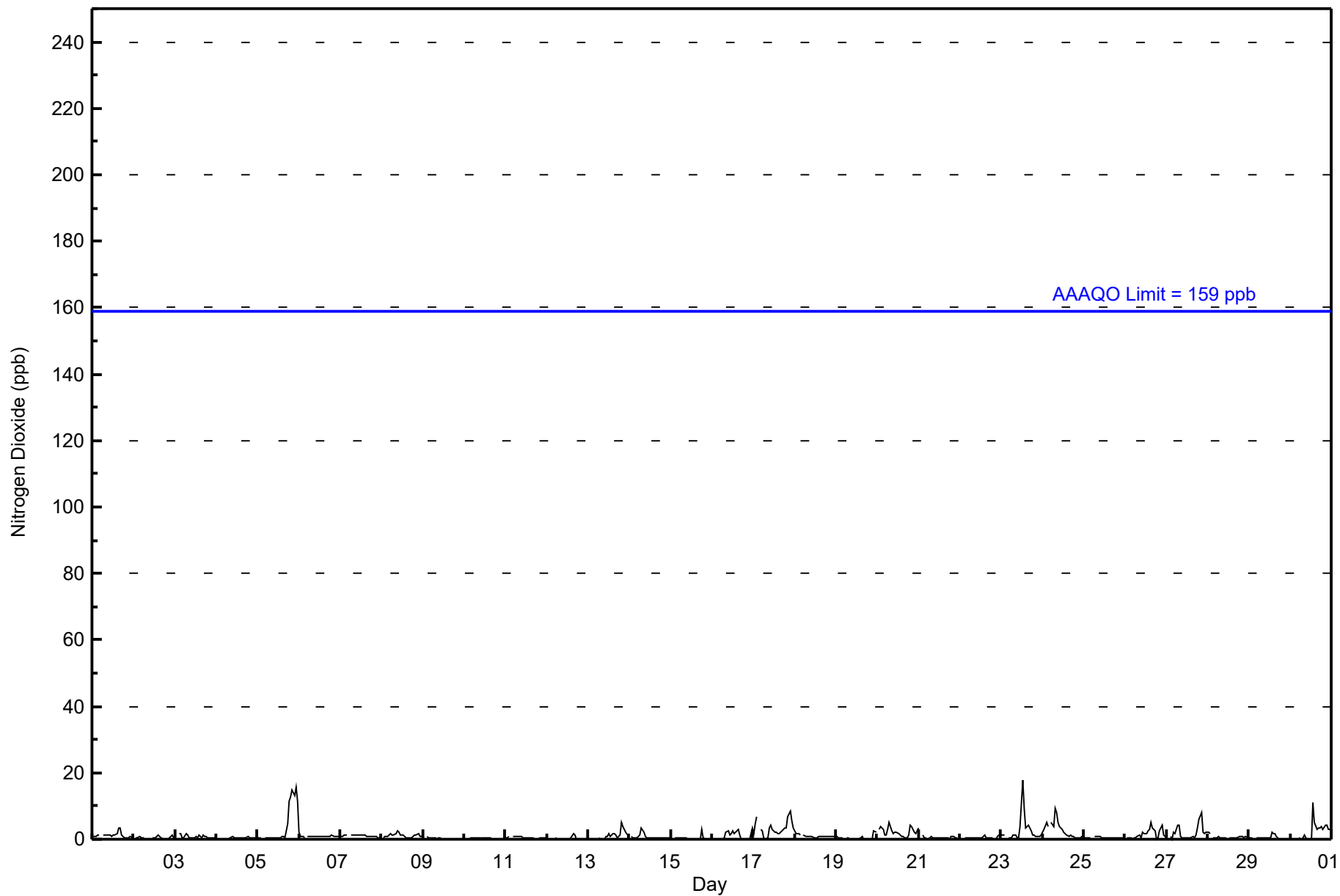
Mackay River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 17.7 ppb on Apr 23 13:00 Maximum Daily Average: 4.0 ppb on Apr 5																				Hours in Service: 720 Hours of Data: 686						
Minimum Value: 0.1 ppb on Apr 4 05:00 Minimum Daily Average: 0.3 ppb on Apr 10 Maximum Diurnal Average: 1.8 ppb at hour 21 Minimum Diurnal Average: 0.7 ppb at hour 5 Monthly Average: 1.17 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.6 Q ₃ = 1.1 P ₉₀ = 2.9 P ₉₉ = 11.0																				Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.0	1.0	1.0	1.1	1.3	Z	1.3	1.3	1.2	1.2	1.1	1.0	1.1	1.4	1.6	3.3	3.6	1.2	0.4	0.3	0.5	0.6	1.0	0.6	1.2	3.6
2-Apr	Z	0.5	0.6	0.9	0.3	0.3	0.3	C	C	C	C	0.3	0.3	0.9	1.1	0.9	0.3	0.2	0.2	0.2	0.2	1.0	1.2	0.4	0.5	1.2
3-Apr	0.2	Z	1.7	1.5	0.6	0.4	1.6	1.1	0.4	0.5	0.6	0.5	0.8	0.6	1.2	0.5	1.1	0.7	0.9	0.4	0.5	0.4	0.3	0.3	0.7	1.7
4-Apr	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.3	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.9
5-Apr	0.3	0.4	0.4	Z	0.4	0.3	0.4	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.7	0.6	4.6	11.4	12.5	14.9	13.1	15.8	11.3	4.0	15.8
6-Apr	2.1	0.8	0.7	0.6	Z	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	1.1	1.0	0.8	0.8	0.8	0.8	2.1
7-Apr	0.8	0.9	1.1	1.1	1.1	Z	1.1	1.3	1.3	1.2	1.4	1.3	1.4	1.4	1.1	1.0	0.8	0.9	1.0	0.8	0.7	0.7	0.6	0.6	1.0	1.4
8-Apr	Z	0.6	0.8	0.8	1.1	1.6	1.4	1.3	1.6	2.5	2.1	1.4	1.1	0.8	0.6	0.6	0.6	0.6	1.0	1.2	1.3	1.5	0.9	0.8	1.1	2.5
9-Apr	1.1	Z	0.8	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.1
10-Apr	0.1	0.2	Z	0.2	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.5
11-Apr	0.3	0.4	0.7	Z	0.7	0.8	0.7	1.0	0.8	0.7	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.5	1.0
12-Apr	0.2	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	0.3	1.9	1.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	1.9
13-Apr	0.2	0.1	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.8	0.8	1.5	0.9	1.6	1.8	1.4	0.6	1.4	4.9	4.0	3.0	2.1	1.0	1.2	4.9
14-Apr	Z	0.8	0.6	0.5	0.6	0.9	1.2	3.2	2.3	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.7	3.2
15-Apr	0.4	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	0.2	3.1	0.4	0.2	0.2	0.2	0.2	0.4	3.1
16-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.5	2.0	2.6	1.4	1.8	2.5	1.9	2.4	3.0	1.1	0.2	0.1	0.2	0.2	0.1	0.1	3.6	1.1	3.6
17-Apr	1.8	4.8	6.9	Z	3.1	2.6	0.6	0.2	0.6	3.2	4.4	3.0	2.2	2.2	1.6	1.7	2.3	3.0	3.4	3.5	6.6	8.5	5.7	3.6	3.3	8.5
18-Apr	2.4	1.8	1.5	1.1	Z	1.1	0.9	0.9	1.0	0.8	0.8	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.7	0.8	0.9	0.9	2.4
19-Apr	0.8	0.3	0.3	0.3	0.3	Z	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9	0.2	0.2	0.2	0.2	0.2	0.2	2.4	2.1	0.5	2.4
20-Apr	Z	2.9	3.7	2.9	1.2	1.1	2.9	4.9	2.5	1.9	2.0	2.1	1.7	1.4	0.8	0.8	0.6	0.6	1.1	4.4	3.9	2.0	1.7	2.7	2.2	4.9
21-Apr	3.3	Z	1.1	0.6	0.3	0.2	0.6	0.7	0.6	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.7	0.7	0.5	0.3	0.2	0.6	3.3
22-Apr	0.2	0.2	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	1.1	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.8	1.7	0.4	1.7
23-Apr	1.3	1.1	1.2	Z	0.5	0.3	0.3	1.1	1.4	0.6	0.4	4.0	17.7	9.5	3.6	3.7	4.4	2.6	1.3	1.1	1.0	0.8	0.7	1.1	2.6	17.7
24-Apr	2.3	3.0	5.2	3.8	Z	4.9	3.7	9.4	8.2	5.0	3.7	3.0	2.2	1.5	1.1	0.9	1.3	0.8	0.7	0.6	0.6	0.5	0.6	0.7	2.8	9.4
25-Apr	0.6	0.5	0.5	0.6	0.5	Z	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.3	0.6	0.8
26-Apr	Z	0.4	0.4	0.3	0.2	0.3	0.4	0.7	1.1	0.6	2.1	1.5	1.6	2.6	3.1	4.9	3.6	2.4	0.2	0.4	2.7	4.3	1.1	0.8	1.6	4.9
27-Apr	0.5	Z	0.8	0.2	2.2	1.8	4.2	4.1	0.9	0.3	0.5	0.5	0.5	0.3	0.5	0.9	0.6	1.1	3.3	6.0	8.0	2.3	1.8	2.1	1.9	8.0
28-Apr	2.0	1.7	Z	0.4	0.4	0.5	0.8	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.9	0.9	0.7	0.6	0.7	0.6	0.6	2.0
29-Apr	0.6	0.5	0.5	Z	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.5	2.0	1.7	1.7	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	2.0
30-Apr	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.4	1.3	0.3	0.2	0.1	0.2	10.9	5.1	3.1	3.3	3.5	3.8	2.8	4.4	4.3	2.9	3.1	2.2	10.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	686	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	30	27	13	13	56	62	42	70	40	14	45	72	60	57	34	660
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	30	27	13	13	56	62	42	70	40	14	45	72	60	57	34	660

Total Number of Valid Hours: 660

Total Number of Hours: 720



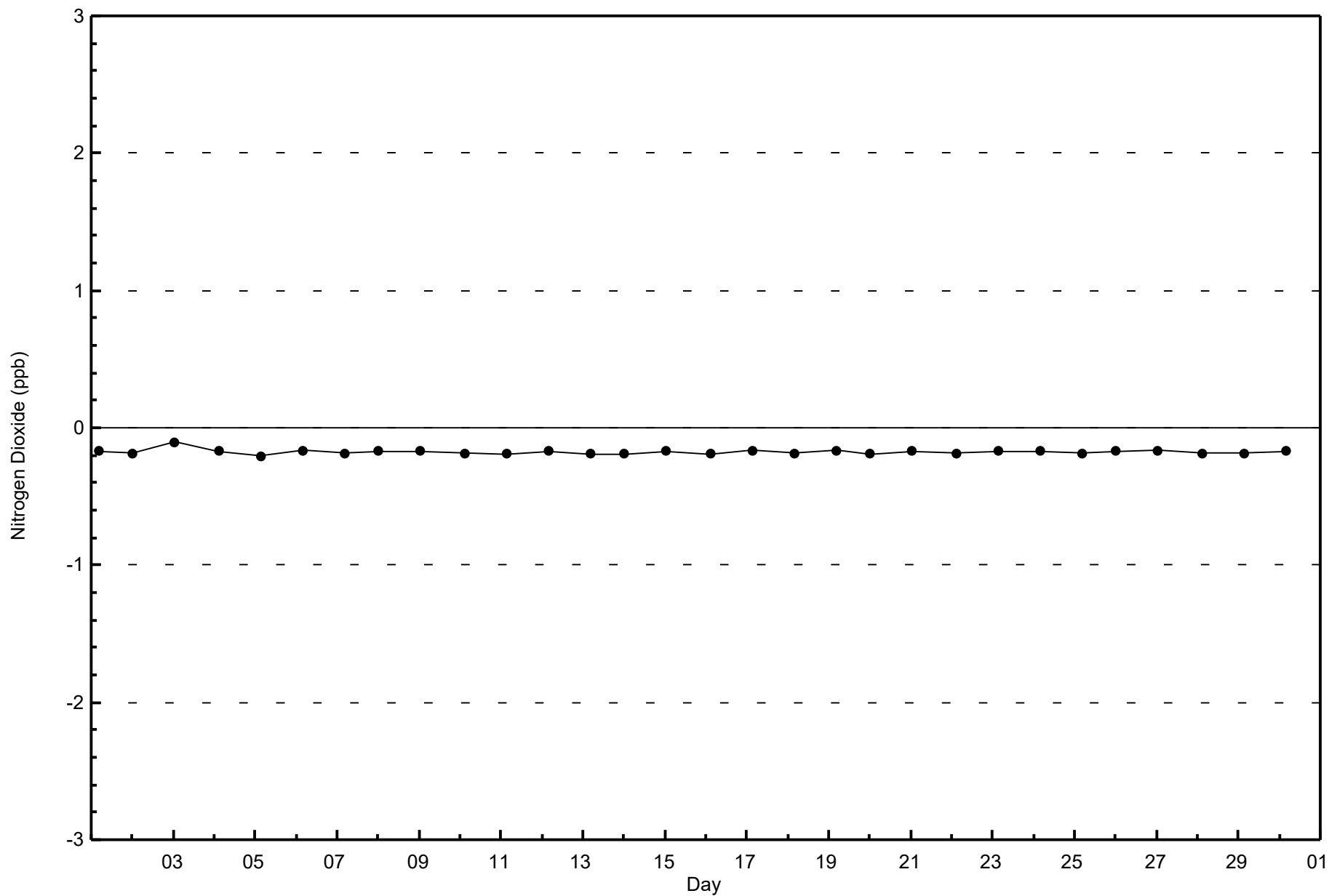
Nitrogen Dioxide (NO₂) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

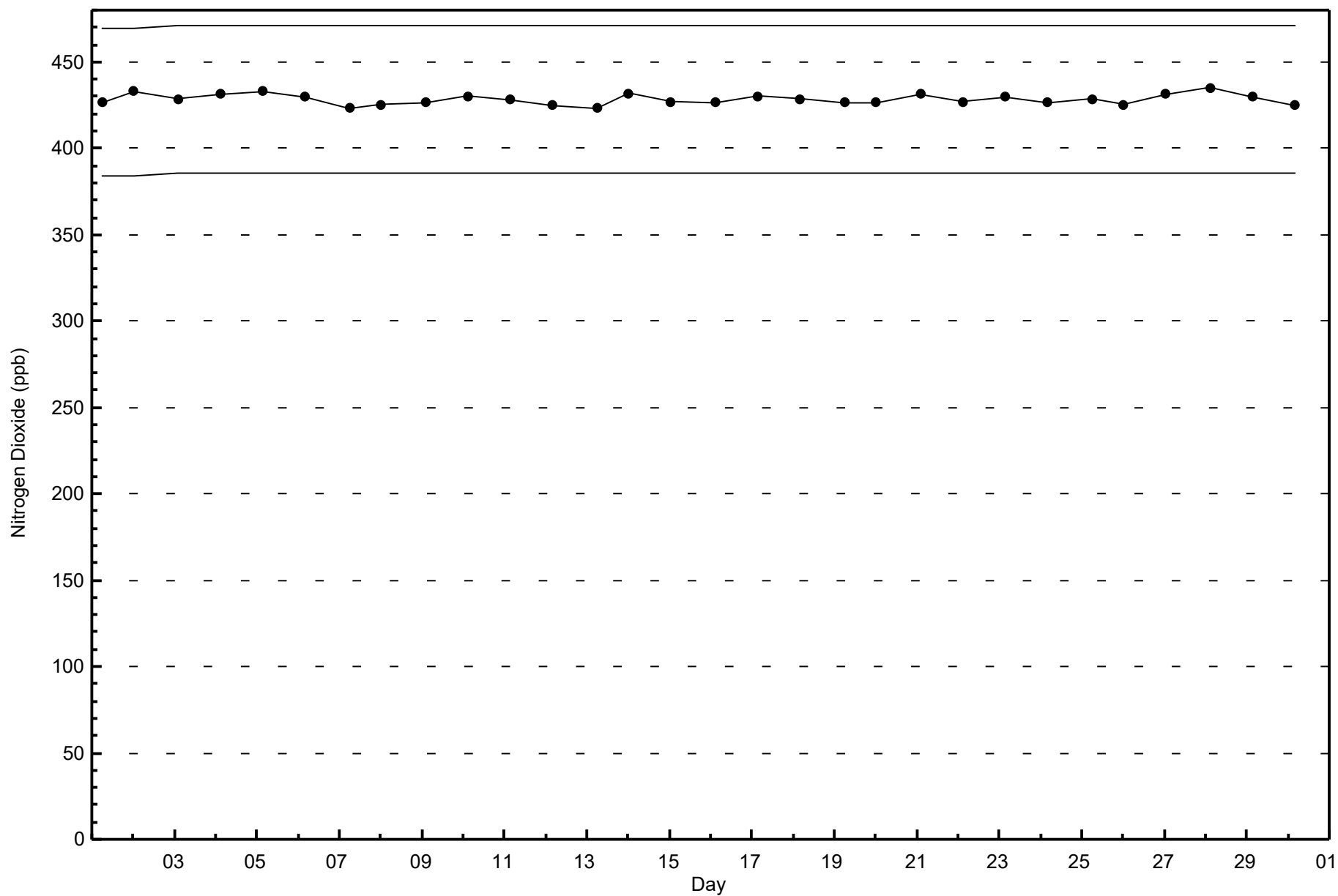
Nitrogen Dioxide (NO₂) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

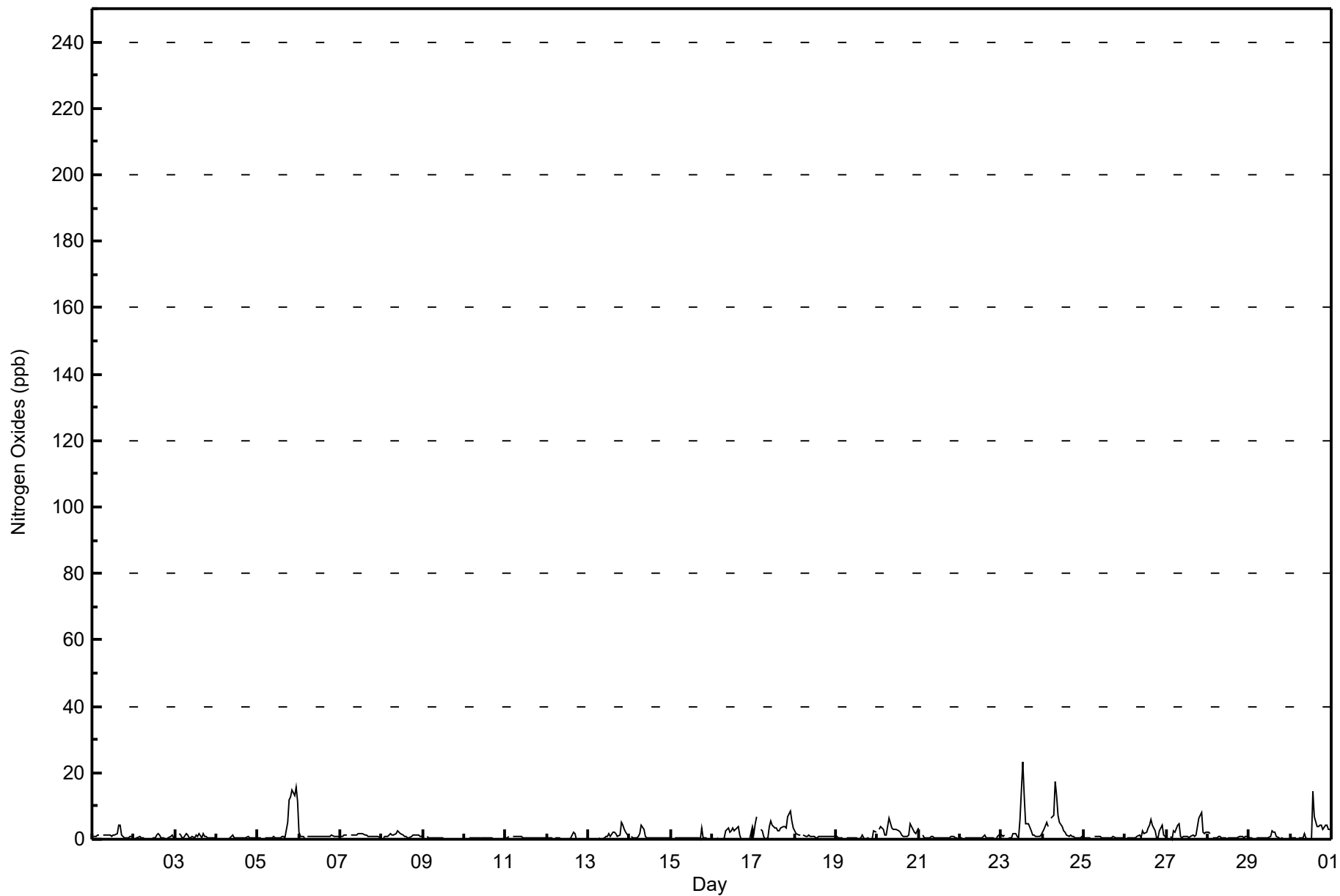
Mackay River - April 2025

Maximum Value: 23.4 ppb on Apr 23 13:00																		Maximum Daily Average: 4.1 ppb on Apr 5										Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 12 23:00																		Minimum Daily Average: 0.3 ppb on Apr 10										Hours of Data: 686	
Maximum Diurnal Average: 1.9 ppb at hour 14																		Minimum Diurnal Average: 0.7 ppb at hour 5										Hours of Missing Data: 34	
Monthly Average: 1.32 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.6 Q ₃ = 1.2 P ₉₀ = 3.3 P ₉₉ = 13.2										Hours of Calibration: 34	
																												Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	1.0	1.0	1.0	1.1	1.3	Z	1.3	1.3	1.3	1.3	1.2	1.0	1.2	1.5	1.7	4.2	4.3	1.3	0.4	0.3	0.5	0.6	1.0	0.6	1.3	4.3			
2-Apr	Z	0.5	0.6	0.9	0.3	0.3	0.3	C	C	C	C	0.4	0.4	1.2	1.6	1.1	0.3	0.2	0.2	0.2	0.2	1.0	1.2	0.4	0.6	1.6			
3-Apr	0.2	Z	1.7	1.5	0.6	0.4	1.8	1.2	0.5	0.6	0.8	0.6	1.1	0.8	1.7	0.6	1.5	0.8	1.0	0.4	0.5	0.4	0.3	0.3	0.8	1.8			
4-Apr	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.3	1.3	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.4	0.3	0.3	0.3	0.3	0.4	1.3			
5-Apr	0.3	0.4	0.4	Z	0.4	0.3	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.8	0.6	5.0	11.9	12.6	14.9	13.1	15.8	11.3	4.1	15.8			
6-Apr	2.1	0.8	0.7	0.6	Z	0.7	0.7	0.8	0.8	0.9	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.7	0.7	1.1	1.0	0.8	0.8	0.8	0.9	2.1			
7-Apr	0.8	0.9	1.1	1.1	1.1	Z	1.1	1.4	1.5	1.4	1.7	1.6	1.7	1.6	1.2	1.1	0.8	0.9	1.0	0.8	0.7	0.7	0.6	0.6	1.1	1.7			
8-Apr	Z	0.6	0.8	0.8	1.1	1.6	1.4	1.4	1.7	2.7	2.2	1.7	1.2	0.9	0.6	0.6	0.6	0.7	1.1	1.2	1.3	1.5	0.9	0.8	1.2	2.7			
9-Apr	1.1	Z	0.8	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.1			
10-Apr	0.1	0.2	Z	0.2	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.3	0.5			
11-Apr	0.3	0.4	0.7	Z	0.7	0.8	0.7	1.0	0.9	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.5	1.0			
12-Apr	0.2	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	0.3	2.2	1.5	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	2.2			
13-Apr	0.2	0.1	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	1.0	1.0	1.8	1.0	2.0	2.2	1.7	0.7	1.4	5.0	4.0	3.0	2.1	1.0	1.3	5.0			
14-Apr	Z	0.8	0.6	0.5	0.6	0.9	1.5	4.2	3.0	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.8	4.2			
15-Apr	0.4	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	0.2	3.4	0.4	0.2	0.2	0.2	0.2	0.4	3.4			
16-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.6	2.6	3.4	1.9	2.4	3.6	2.5	3.2	3.9	1.2	0.2	0.1	0.2	0.2	0.1	0.1	3.8	1.4	3.9			
17-Apr	1.9	4.8	6.9	Z	3.1	2.6	0.6	0.2	0.6	3.7	5.6	4.2	3.3	3.3	2.5	2.5	3.2	3.9	3.8	3.6	6.6	8.5	5.7	3.6	3.7	8.5			
18-Apr	2.4	1.8	1.5	1.1	Z	1.1	1.0	1.0	1.1	1.0	0.9	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.7	0.8	0.9	1.0	2.4			
19-Apr	0.8	0.3	0.3	0.3	0.3	Z	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.1	0.2	0.2	0.2	0.2	0.2	0.2	2.4	2.1	0.5	2.4			
20-Apr	Z	2.9	3.7	2.9	1.2	1.1	3.6	6.2	3.3	2.8	3.0	3.0	2.4	1.9	1.1	0.9	0.7	0.6	1.1	4.5	3.9	2.0	1.7	2.7	2.5	6.2			
21-Apr	3.3	Z	1.1	0.6	0.3	0.2	0.6	0.9	0.7	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.7	0.7	0.5	0.3	0.2	0.6	3.3			
22-Apr	0.2	0.2	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	1.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.8	1.7	0.4	1.7			
23-Apr	1.3	1.1	1.2	Z	0.5	0.4	0.4	1.5	1.9	0.8	0.5	5.8	23.4	13.3	4.8	4.6	4.6	2.7	1.4	1.1	1.0	0.8	0.7	1.1	3.3	23.4			
24-Apr	2.3	3.0	5.2	3.9	Z	6.3	7.3	17.2	13.3	7.3	5.2	3.8	2.7	1.9	1.2	1.0	1.4	0.8	0.7	0.6	0.6	0.5	0.6	0.7	3.8	17.2			
25-Apr	0.6	0.5	0.5	0.6	0.5	Z	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.3	0.6	0.8			
26-Apr	Z	0.4	0.4	0.3	0.2	0.3	0.4	0.8	1.3	0.6	2.6	1.8	2.2	3.6	4.1	5.9	4.1	2.7	0.2	0.4	2.7	4.3	1.1	0.8	1.8	5.9			
27-Apr	0.5	Z	0.8	0.2	2.4	1.9	4.4	4.7	1.0	0.4	0.8	0.7	0.8	0.4	0.7	1.2	0.8	1.3	3.9	6.4	8.1	2.3	1.8	2.1	2.1	8.1			
28-Apr	2.0	1.7	Z	0.4	0.4	0.5	0.9	0.7	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.9	0.9	0.7	0.6	0.7	0.6	0.6	2.0			
29-Apr	0.6	0.5	0.5	Z	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.6	2.5	2.1	2.1	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	2.5			
30-Apr	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.5	1.6	0.3	0.2	0.1	0.2	14.6	6.8	4.0	4.0	4.1	4.1	2.9	4.4	4.3	2.9	3.1	2.6	14.6			
0.9 0.9 1.3 0.8 0.7 0.9 1.1 1.7 1.4 1.2 1.2 1.2 1.7 1.9 1.4 1.5 1.2 1.0 1.4 1.6 1.8 1.6 1.5 1.4																										Diurnal Average			
3.3 4.8 6.9 3.9 3.1 6.3 7.3 17.2 13.3 7.3 5.6 5.8 23.4 14.6 6.8 5.9 4.6 5.0 11.9 12.6 14.9 13.1 15.8 11.3																										Diurnal Maximum			
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	99.85	99.85
21 - 40	1	0.15	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Mackay River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	25	29	27	13	13	56	62	42	70	40	14	45	72	60	57	34	659
21 - 40	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	30	27	13	13	56	62	42	70	40	14	45	72	60	57	34	660

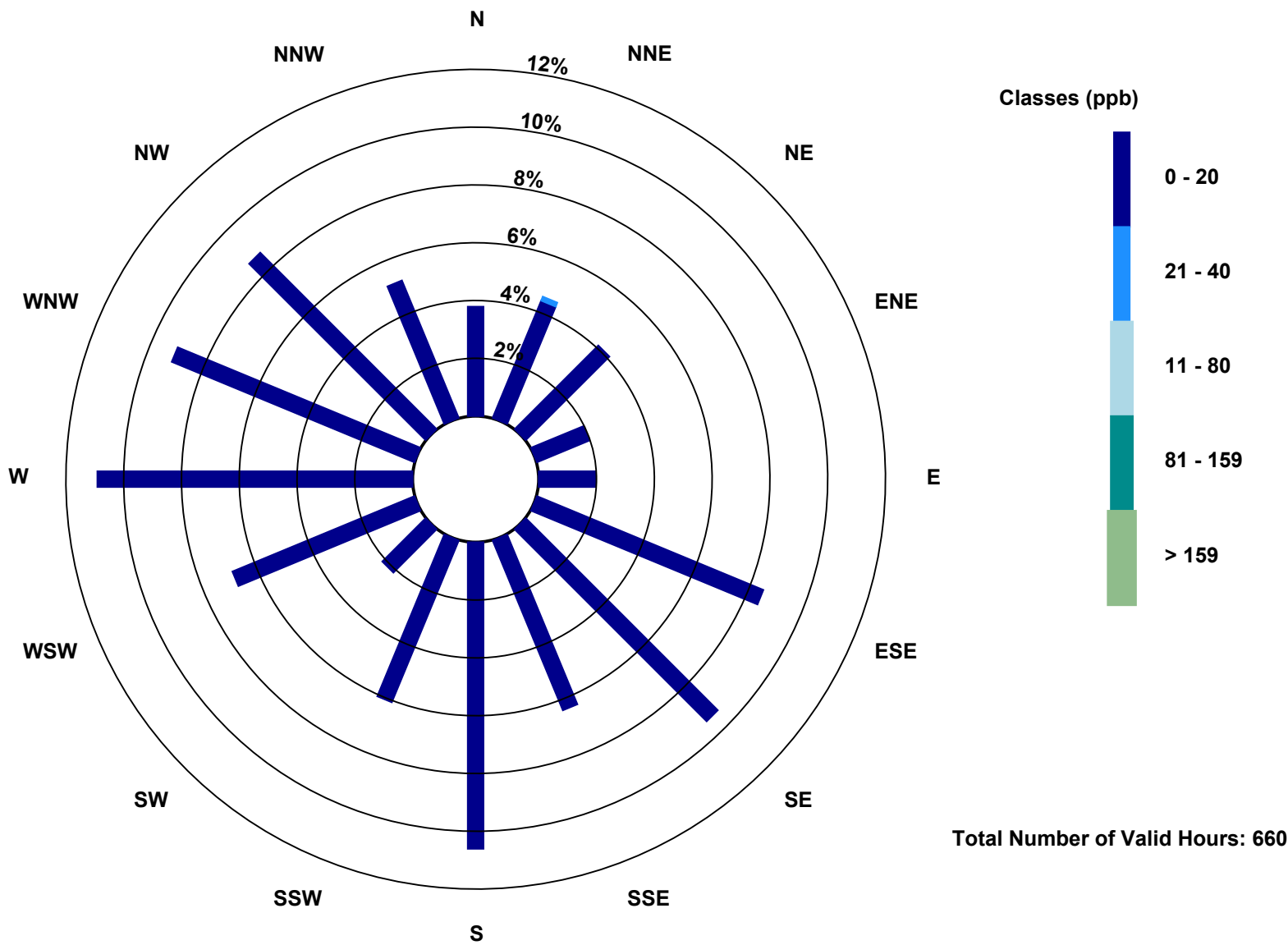
Total Number of Valid Hours: 660

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

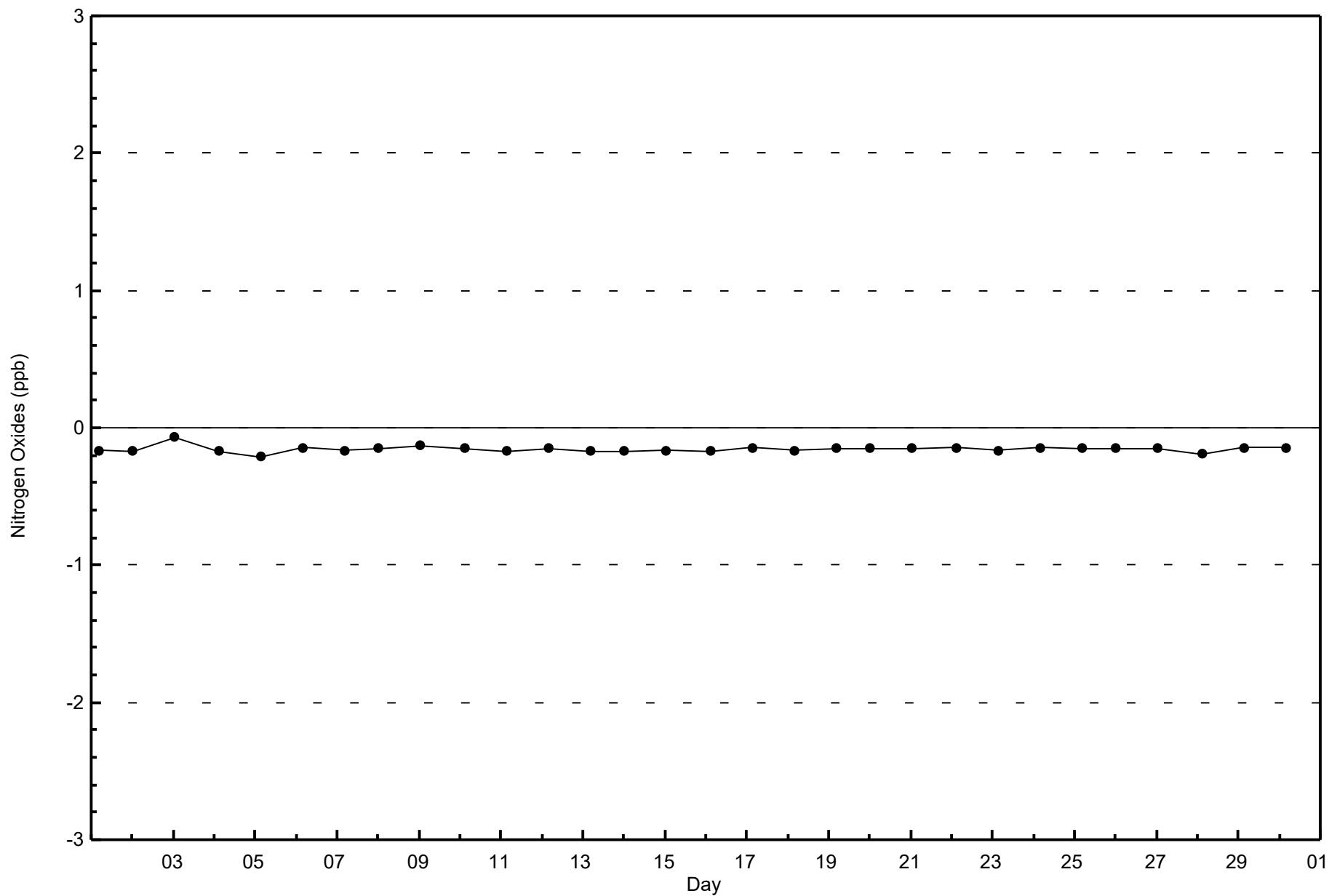
Nitrogen Oxides (NO_x) - ppb
Mackay River





Wood Buffalo Environmental Association
Zero Responses

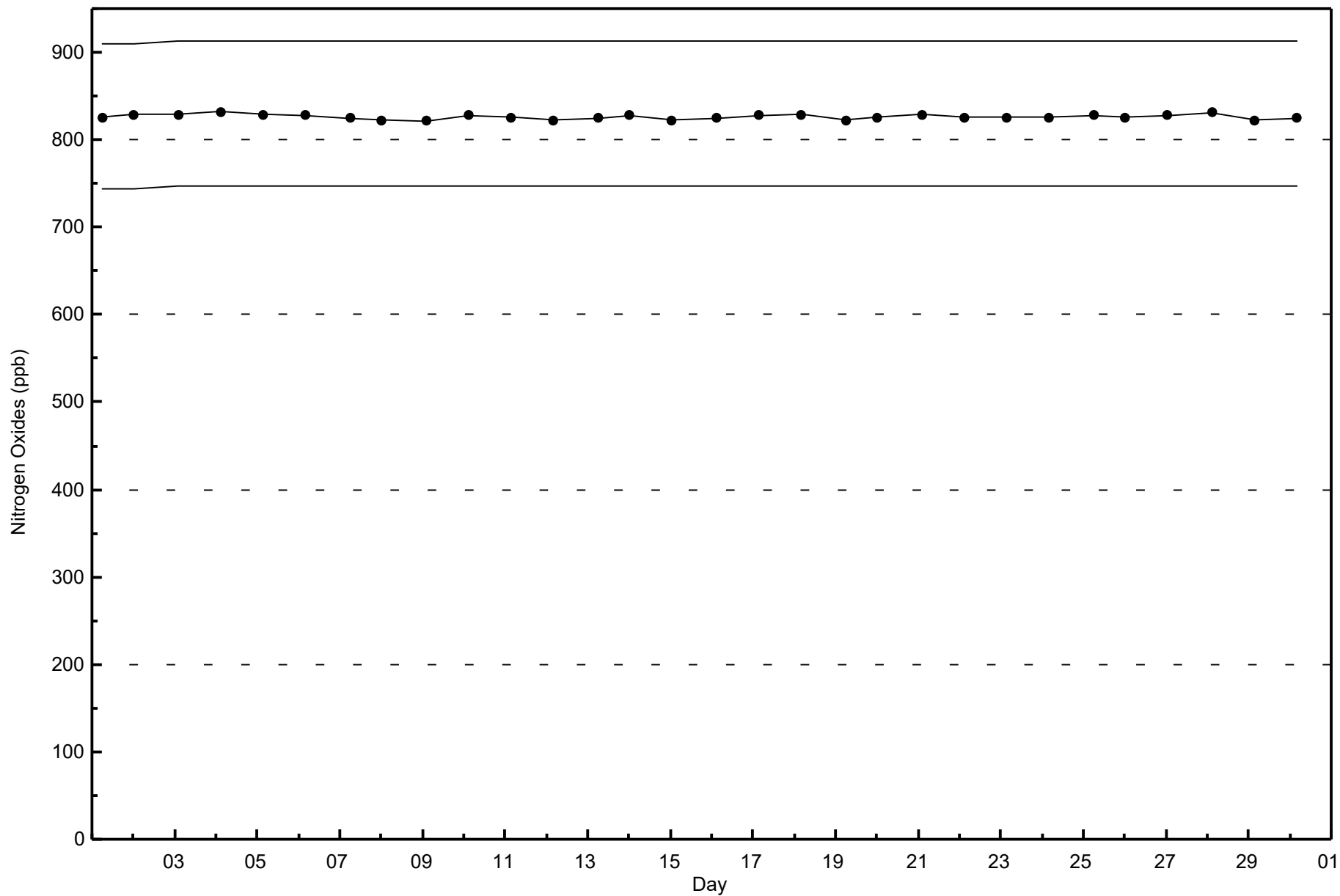
Nitrogen Oxides (NO_x) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Span Responses

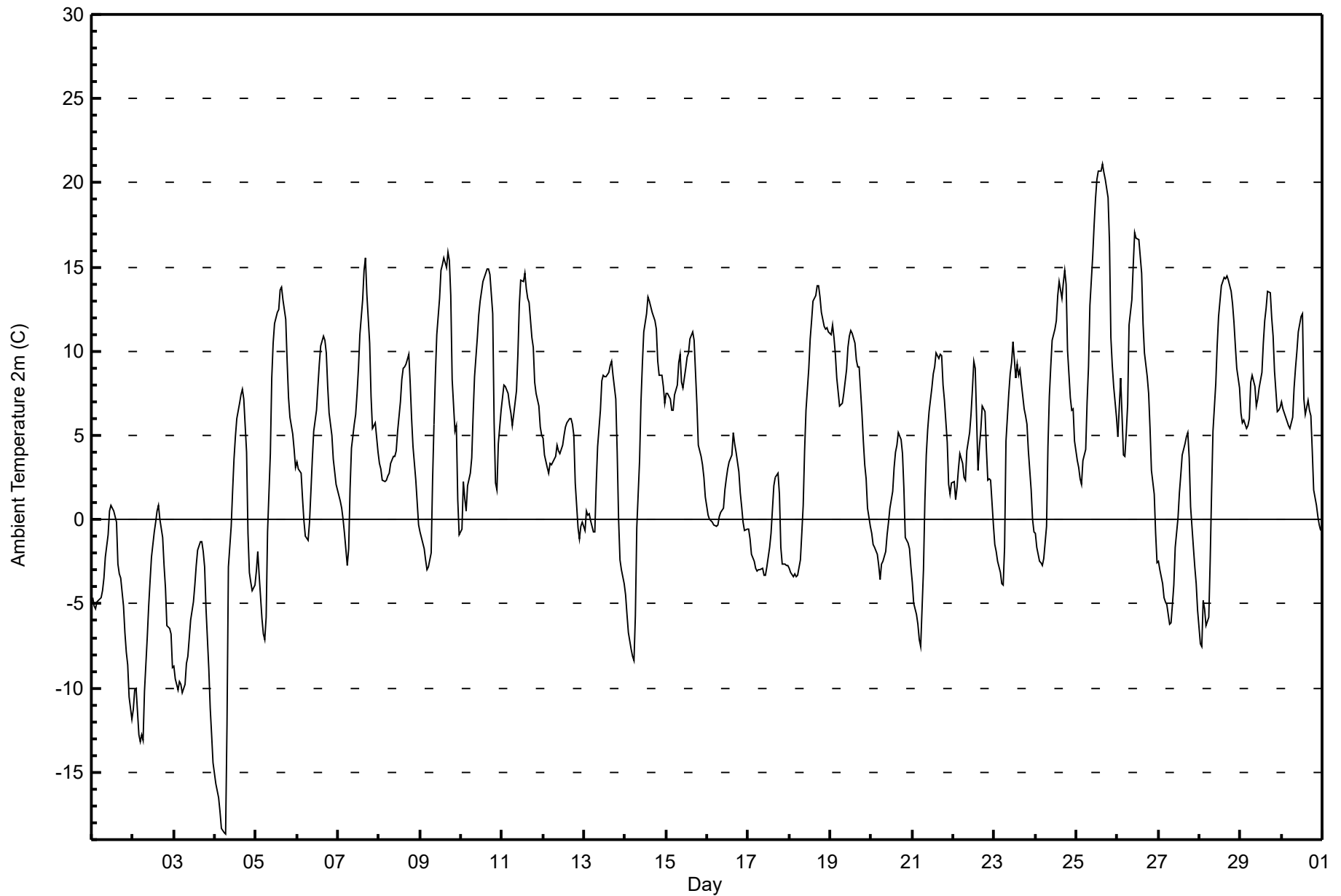
Nitrogen Oxides (NO_x) - ppb
Mackay River - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Mackay River - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	224	31.11	31.11
0 - 10	364	50.56	81.67
10 - 20	126	17.50	99.17
> 20	6	0.83	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) - %

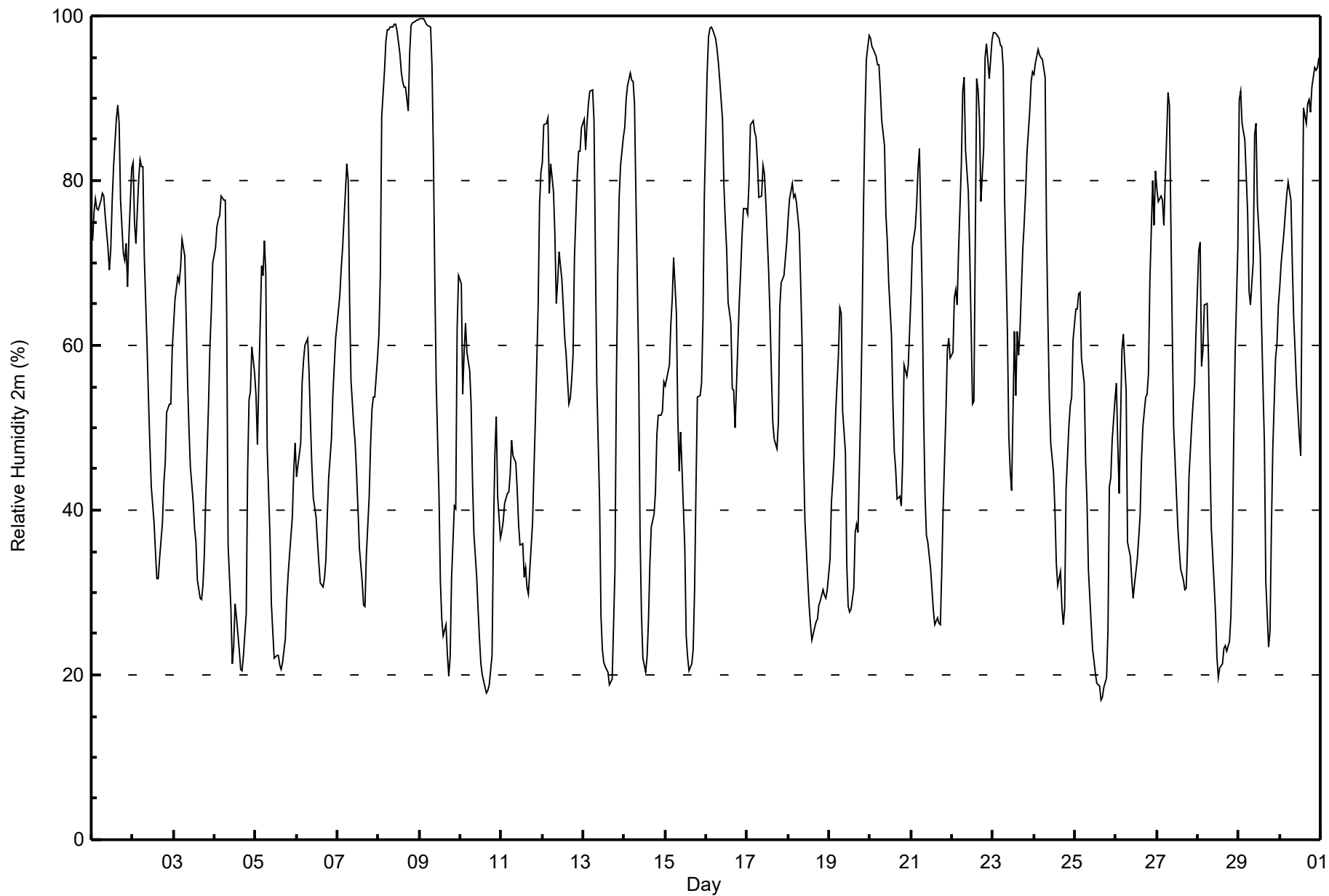
Mackay River - April 2025

Maximum Value: 99.7 % on Apr 9 02:00																				Maximum Daily Average: 93.4 % on Apr 8					Hours in Service: 720	
Minimum Value: 17.0 % on Apr 25 16:00																				Minimum Daily Average: 37.9 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 78.1 % at hour 6																				Minimum Diurnal Average: 40.1 % at hour 17					Hours of Missing Data: 0	
Monthly Average: 58.39 %																				Percentiles: P ₁ = 18.8 P ₁₀ = 26.7 Q ₁ = 38.3 Median = 58.4 Q ₃ = 77.6 P ₉₀ = 92.0 P ₉₉ = 99.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	72.6	76.1	77.8	76.6	76.5	77.6	78.5	78.1	75.7	71.8	69.1	71.8	77.5	81.7	87.4	89.1	86.9	77.6	71.1	70.4	72.4	67.1	73.3	81.5	76.6	89.1
2-Apr	82.2	75.0	72.3	80.1	82.5	81.7	81.7	70.9	59.8	53.6	48.0	42.9	38.5	35.0	31.7	31.8	34.2	38.4	43.2	45.8	51.8	52.9	52.9	59.5	56.1	82.5
3-Apr	62.5	65.5	68.4	67.6	69.4	72.9	70.8	63.3	55.6	49.9	45.3	41.1	37.8	36.1	31.6	29.3	29.2	30.8	34.6	41.5	52.8	59.9	64.2	69.9	52.1	72.9
4-Apr	71.9	74.4	75.2	75.8	78.1	77.6	77.6	63.7	35.8	28.2	21.3	23.4	28.7	27.0	23.0	20.6	20.5	22.3	27.5	44.7	53.4	54.4	59.7	56.6	47.6	78.1
5-Apr	53.9	47.9	55.5	69.7	68.4	72.6	68.9	47.7	36.8	28.6	25.2	22.0	22.3	22.4	21.3	20.6	21.5	24.4	29.1	32.3	34.5	39.1	44.7	48.2	39.9	72.6
6-Apr	44.0	45.4	48.2	55.3	58.2	60.0	60.9	56.7	50.5	45.3	41.6	39.1	36.2	33.6	31.2	30.6	31.7	33.8	39.1	43.9	48.6	54.0	57.5	60.8	46.1	60.9
7-Apr	64.2	66.2	69.3	71.9	75.3	82.0	80.0	65.4	55.7	50.2	48.1	44.4	40.2	35.4	31.3	28.5	28.2	34.5	41.5	47.8	52.2	53.7	53.7	58.6	53.3	82.0
8-Apr	61.3	68.5	87.9	93.4	96.9	98.2	98.4	98.6	98.7	98.9	99.0	98.2	95.5	93.2	92.0	91.4	91.3	88.5	95.4	98.7	99.2	99.3	99.5	99.5	93.4	99.5
9-Apr	99.6	99.7	99.6	99.4	98.9	98.8	98.7	94.0	83.2	68.1	55.5	41.9	31.3	26.7	24.7	26.2	22.5	19.8	22.2	31.6	40.4	40.1	62.1	68.4	60.6	99.7
10-Apr	67.5	54.0	59.2	62.7	59.2	56.9	52.9	43.5	37.1	31.8	28.0	24.4	21.3	20.0	18.4	17.9	18.2	18.8	22.4	37.0	46.7	51.4	41.6	36.5	38.6	67.5
11-Apr	37.5	38.6	40.9	42.0	42.1	44.5	48.5	46.7	45.7	42.6	38.3	35.8	35.9	31.9	33.1	30.7	29.9	35.7	38.4	45.0	50.9	64.7	77.2	81.1	44.1	81.1
12-Apr	82.3	86.7	86.9	87.6	78.5	82.0	78.7	73.5	65.0	67.7	71.4	68.0	64.8	61.1	58.9	52.8	53.6	55.7	58.8	70.7	80.7	83.6	83.6	86.4	72.5	87.6
13-Apr	87.5	83.8	87.0	89.4	90.9	91.0	87.4	70.9	55.4	41.1	27.1	23.1	21.5	21.0	20.4	18.9	19.1	19.4	32.7	55.4	68.8	78.0	81.8	85.3	56.5	91.0
14-Apr	86.5	89.9	91.4	93.0	92.2	92.0	89.3	78.4	57.5	36.5	27.3	22.0	20.4	22.2	26.6	33.4	37.9	39.5	42.2	49.2	51.6	51.5	52.0	55.6	55.8	93.0
15-Apr	55.0	55.9	57.6	62.6	65.6	70.7	63.9	51.3	44.7	49.5	45.1	35.5	24.7	22.1	20.5	21.4	23.1	30.1	42.5	53.8	53.9	55.4	63.0	78.1	47.7	78.1
16-Apr	93.1	97.5	98.5	98.7	98.3	97.2	96.2	94.4	92.2	87.5	79.6	75.1	71.5	65.2	62.7	54.7	54.5	50.1	60.2	65.3	69.0	73.4	76.6	76.6	78.7	98.7
17-Apr	75.9	79.8	86.7	87.3	86.0	85.3	82.4	78.0	78.1	81.9	80.8	77.4	69.1	63.7	56.6	50.7	48.6	47.4	50.6	64.7	67.7	68.4	70.4	72.5	71.3	87.3
18-Apr	75.4	77.8	79.7	78.0	78.2	77.3	73.7	67.3	60.2	46.9	38.8	31.6	28.5	26.2	24.3	25.7	26.5	26.8	28.5	28.9	30.3	29.7	29.4	30.3	46.7	79.7
19-Apr	34.1	41.1	43.6	46.6	51.8	58.8	64.5	63.8	52.0	47.1	33.2	28.4	27.6	27.9	30.5	37.3	38.3	37.4	52.8	63.0	77.4	87.7	94.8	97.6	51.5	97.6
20-Apr	97.3	96.3	95.9	95.0	94.0	94.2	91.0	87.4	84.3	75.9	72.6	67.7	61.3	53.0	47.1	44.9	41.4	41.6	40.5	46.1	57.6	56.2	57.6	61.9	69.2	97.3
21-Apr	66.2	72.1	74.2	77.1	81.4	84.0	66.1	51.8	41.9	36.9	36.1	32.8	30.4	27.8	26.0	27.0	26.3	26.1	32.7	40.4	52.0	59.4	60.8	58.5	49.5	84.0
22-Apr	59.1	65.7	66.8	65.0	71.4	81.8	90.8	92.5	83.8	78.6	71.3	62.4	52.9	53.2	92.3	91.0	87.4	77.5	84.0	94.9	96.6	94.6	92.3	97.2	79.3	97.2
23-Apr	98.0	98.0	97.9	97.3	96.4	96.3	93.7	77.5	61.6	49.0	44.7	42.4	61.7	54.0	61.7	58.8	61.8	71.7	74.8	78.5	83.4	88.5	92.0	93.3	76.4	98.0
24-Apr	92.9	94.2	95.9	95.3	94.9	94.7	92.5	73.9	63.0	53.7	48.2	44.5	40.2	33.6	30.8	32.5	28.3	26.2	28.2	42.6	50.2	52.8	53.8	60.7	59.3	95.9
25-Apr	64.4	64.3	66.3	66.5	58.5	55.4	46.0	40.8	32.7	26.1	23.1	21.7	20.1	19.0	18.6	17.0	17.3	18.4	19.6	25.4	42.9	43.8	48.5	53.4	37.9	66.5
26-Apr	55.5	48.1	42.0	59.5	61.4	57.7	54.6	36.1	34.4	31.7	29.2	31.0	34.0	36.5	39.2	46.1	50.1	53.8	54.1	56.5	67.7	80.0	74.6	81.3	50.6	81.3
27-Apr	78.9	77.4	78.2	77.7	74.6	80.0	90.7	89.2	75.4	62.0	50.1	42.1	38.0	35.3	33.0	31.4	30.4	30.4	35.7	44.1	50.6	53.2	55.3	61.6	57.3	90.7
28-Apr	71.6	72.6	57.4	59.5	64.9	65.1	58.4	46.9	37.8	31.0	27.4	22.1	19.7	20.9	21.4	23.2	23.5	22.9	24.1	27.2	34.6	48.3	58.7	72.0	42.1	72.6
29-Apr	89.8	90.8	87.0	84.9	80.6	76.2	66.6	64.9	70.2	85.6	87.0	77.2	71.2	62.4	54.9	48.1	31.3	23.3	25.2	37.7	47.4	58.5	60.2	64.9	64.4	90.8
30-Apr	67.1	70.0	73.7	76.1	78.3	79.9	77.6	69.9	63.3	59.4	55.0	49.0	46.6	68.4	88.8	87.0	89.3	89.8	88.3	91.4	93.8	93.4	93.8	94.8	76.9	94.8
Diurnal Average																										Diurnal Maximum
99.6																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Mackay River - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	16	2.22	2.22
20 - 40	175	24.31	26.53
40 - 60	190	26.39	52.92
60 - 80	189	26.25	79.17
80 - 100	150	20.83	100.00

Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

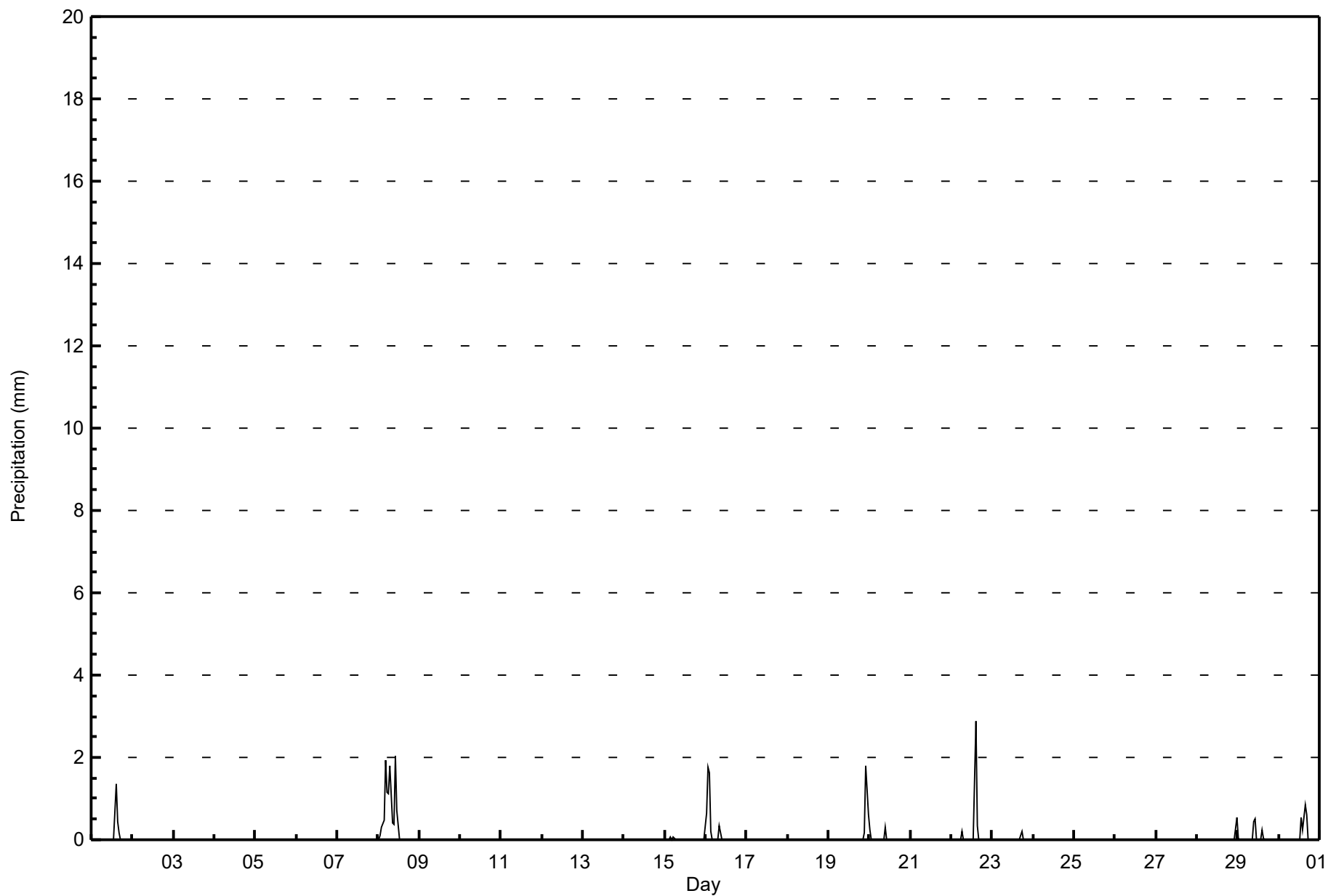
Mackay River - April 2025

Maximum Value: 2.9 mm on Apr 22 15:00																			Maximum Daily Total: 10.4 mm on Apr 8							Hours in Service: 720			
Minimum Value: 0.0 mm on Apr 1 01:00																			Minimum Daily Total: 0.0 mm on Apr 2							Hours of Data: 720			
Maximum Diurnal Total: 4.7 mm at hour 15																			Minimum Diurnal Total: 0.0 mm at hour 13							Hours of Missing Data: 0			
Monthly Total: 27.89 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 = 1.3							Hours of Calibration: 0			
																										Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.4			
2-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.1	0.3	0.5	1.9	1.2	1.1	1.8	0.4	0.4	2.0	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	10.4	2.0			
9-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1			
16-Apr	0.7	1.8	1.6	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	1.8			
17-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8	0.6	2.6	1.8			
20-Apr	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3			
21-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	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	2.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.9			
23-Apr	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2	0.2			
24-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5			
29-Apr	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	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.5			
30-Apr	0.0	0.0	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	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.8			
0.9 1.9 1.9 0.8 1.9 1.2 1.3 1.8 0.7 1.1 2.6 0.7 0.0 0.6 4.7 1.7 0.8 0.2 0.0 0.0 0.0 0.2 1.8 1.2																									Diurnal Average				
0.7 1.8 1.6 0.5 1.9 1.2 1.1 1.8 0.4 0.5 2.0 0.7 0.0 0.6 2.9 0.8 0.6 0.2 0.0 0.0 0.0 0.2 1.8 0.6																									Diurnal Maximum				



Wood Buffalo Environmental Association
Hourly Averages

Precipitation (PC) - mm
Mackay River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Precipitation (PC) - mm
Mackay River - April 2025

Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	696	96.67	96.67
0.4 - 0.5	8	1.11	97.78
0.6 - 0.7	5	0.69	98.47
0.8 - 1.4	4	0.56	99.03
1.5 - 10	7	0.97	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

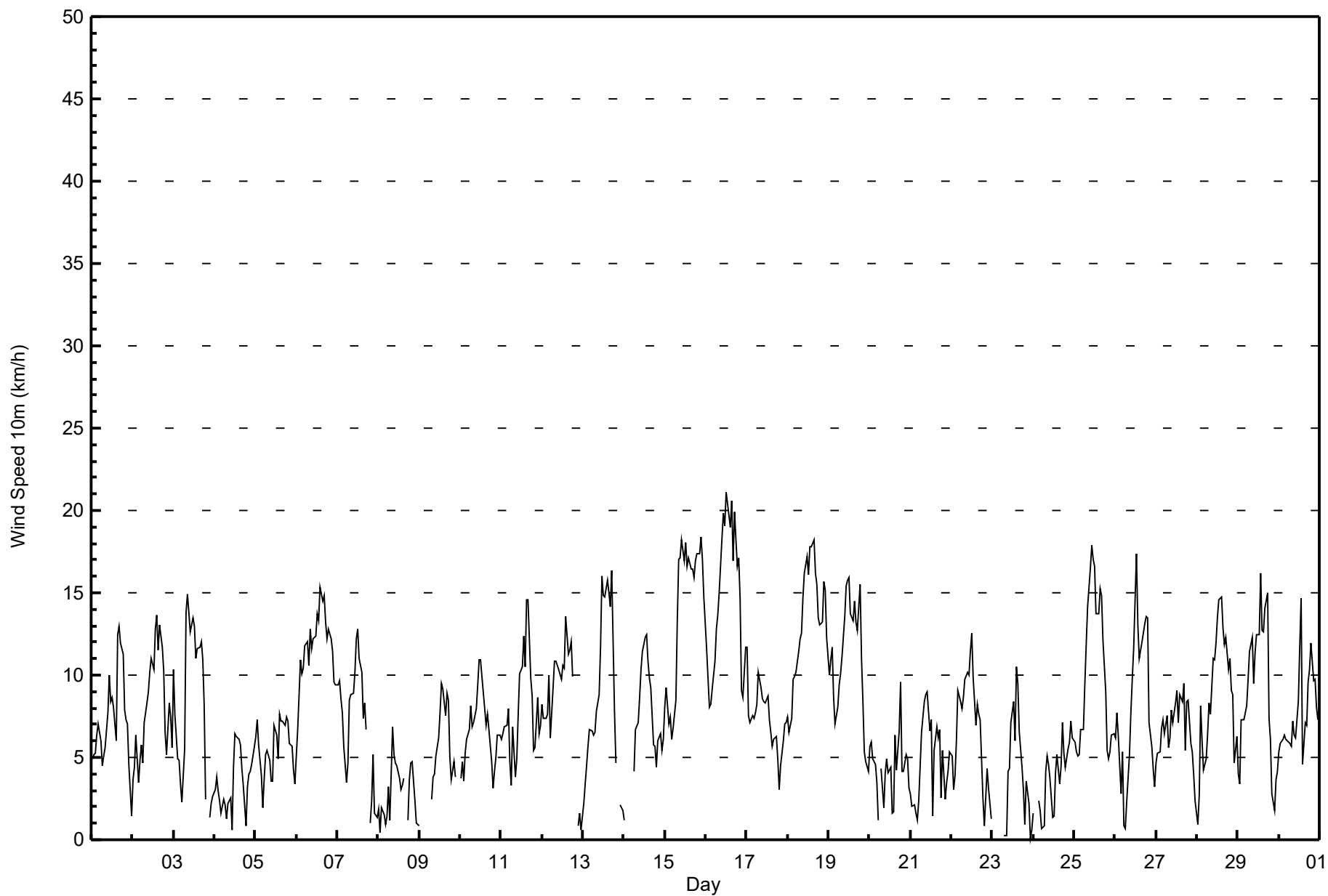
Mackay River - April 2025

Maximum Speed: 21 km/h on Apr 16 13:00										Maximum Daily Speed Average: 14.0 km/h on Apr 16										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 23 23:00										Minimum Daily Speed Average: 0.9 km/h on Apr 8										Hours of Data: 692						
Maximum Diurnal Speed Average: 4.3 km/h at hour 15										Minimum Diurnal Speed Average: 0.4 km/h at hour 21										Hours of Missing Data: 28						
Monthly Average Velocity: 2.0 km/h 255.0 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 5 Median = 7 Q ₃ = 11 P ₉₀ = 14 P ₉₉ = 18										Percent Operational Time: 96.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE5	SE5	SE5	SE6	SE7	SE6	SSE5	SE5	SSE6	S8	S10	SSW8	SSW9	SSW8	WSW6	NW12	NW13WNW12WNW11	WNW8	WNW7	WNW7	WNW5	SSW1		SW3.0	NW13	
2-Apr	SW4	W4	WNW6	WSW3	W5	WSW6	WSW5	W7	W8	WNW9WNW10WNW11WNW10	NW13	NW14	NW11	NW13	NNW12	N10	NNW7	NW5	NW8	NW7	NW6		NW7.1	NW14		
3-Apr	NNW10	NW8	WNW5	NW5	WNW3	W2	WNW6	NNW14	NNW15	NW14	NW13	NNW13	NNW13	NW11	NW12	NNW12	NW12WNW11	NW8	N2	UO	S1	SSE2	SSE3	NW7.7	NNW15	
4-Apr	SSE3	SSW4	SW3	SSE2	SSE2	SSE2	SE2	ESE1	WNW2	W3	WSW1	W4	WNW6	WNW6	W6	WNW6	WNW4	WSW3	NE1	SSE3	SSE4	SSE4	S5	S6	SW1.8	WNW6
5-Apr	S6	S7	S6	SSE4	SSE2	SE4	SSE5	SSE5	SSE5	SSE4	ESE4	ESE7	ESE6	SE5	N8	NE7	ENE7	ENE7	NE7	NE7	NNE6	NE6	NE4	ENE3	E3.0	N8
6-Apr	E5	ESE7	ESE11	ESE10	ESE10	ESE12	ESE12	ESE11	ESE13	ESE12	ESE12	ESE12	ESE14	ESE13	ESE15	ESE14	ESE15	ESE13	ESE12	SE13	SE12	SE11	SE10	SE9	ESE11.5	ESE15
7-Apr	SE9	SE10	SE9	SE8	SE6	ESE3	ESE5	SE9	ESE9	SE9	ESE10	ESE12	ESE13	ESE11	ESE10	SE7	SW8	W7	UO	S1	SE2	SE5	S2	SSE1	SE6.1	ESE13
8-Apr	SSE2	N0	S2	W2	NW1	NE1	ESE3	NW1	WNW7	WNW5	W5	WNW5	WNW4	WSW3	SW3	WSW4	UO	NNE1	NE4	SE5	SE5	SE2	SE1	ESE1	WSW0.9	WNW7
9-Apr	NE1	UO	UO	UO	UO	UO	UO	W2	WSW4	W4	W5	W6	W8	W9	W9	W8	WNW9	WSW9	WSW5	WSW4	SW5	W4	UO	UO	---	W9
10-Apr	WSW4	WSW5	SW4	SW5	SW6	SW7	WSW8	WSW7	WSW7	WSW8	W9WNW11	W11	W10	W8	W7	SW8	SSW7	S5	SE3	ESE4	ESE5	ESE6	ESE6	WSW4.5	WNW11	
11-Apr	ESE6	ESE6	E7	E7	ESE8	SE5	SE3	SE7	SSW4	W5	W8	W10	W11	W12WSW11	W15WSW15	W10	WSW9	WSW5	WSW6	W9	WSW6	WSW7		WSW4.3	W15	
12-Apr	W8	WSW7	WSW7	W8	W10	WSW6	W9	W11WNW11	W11WNW10	W10WNW11WNW10WNW14	NW11	NW11	NNW12	N10	UO	UO	SSE1	S2	ENE1					WNW7.7	WNW14	
13-Apr	WSW2	W3	WSW4	WSW6	WSW7	W7	W6	W7	WNW8	WNW9WNW12	NW16WNW15	NW15	NW16	NW15	NW14	NNW16	N8	NE5	UO	UO	ESE2	ESE2		WNW7.2	NNW16	
14-Apr	ESE1	UO	UO	SE1	UO	UO	SSE4	SE7	SSE7	S9	S10	S11	S12	S12	SSW11	SSW10	SW9	SSW6	S6	SE4	SE6	SE6	SSE5	SSE6	S6.6	S12
15-Apr	S8	S9	S7	S7	SSW6	SW7	SSW9WSW13WSW17	W17	W18	W17	W18	W17	W17	W16	W16WNW16	NW17WNW17WNW17	W18	W17	W15					W12.1	W18	
16-Apr	W12	W10	W8	WNW8	WNW9WNW11WNW13WNW14	NW15	NW18	NW20	NW19	NW21	NW20	NW19	NW21	NW17	NNW20	NNW17	NNW17	NNW15	NW9	NW9	NW12			NW14.0	NW21	
17-Apr	NW12	N8	NNE7	NNE8	NNE7	NNE8	N8	NNW10	N9	NNE9	NE8	NNE8	NNE9	NNE7	N7	NE6	N6	NE6	ENE5	ESE3	ESE5	SE6	SE7	SE7	NNE5.3	NW12
18-Apr	SSE7	S7	S7	S10	S10	SSE10	SSE11	S12	S13	S15	S16	S17	S16	S18	S18	S18	S16	S16	S13	S13	S13	S16	SSW15	SSW12	S13.2	S18
19-Apr	SW10WSW11WSW12	WSW9	W7	WNW8	WNW9WNW10	W11	W14	W15	W16	W16WNW14	W13WNW15	W13	W13WNW16WNW11	WNW8	W5	N5	NNE4							W10.1	W16	
20-Apr	NNE6	NNE6	NNE5	NNE5	NNE3	NNE1	UO	ENE4	ENE2	N4	N5	N4	N4	NNE2	E2	ESE6	S4	SE7	ESE10	E4	NE4	NE5	NE5	ENE3	NE3.1	ESE10
21-Apr	E3	ENE2	E2	ESE2	ESE1	ESE2	SE7	ESE7	SE8	ESE9	SE9	ESE7	E7	SE1	SSW5	SE7	SE6	SE7	SSE3	WNW5	SE2	SSE3	S4	SSW5	SE3.8	SE9
22-Apr	SW5	W3	WSW4	SSW6	S9	S8	S8	S9	S10	S10	SSW10	SSW11	SSW13	SW10	WNW7	S8	SSE8	SSW7	S3	ESE1	E3	N4	NE3	SE1	SSW5.2	SSW13
23-Apr	UO	SSE3	UO	UO	UO	UO	UO	NNW0	NNW0	NE4	N4	NE7	NNE8	ESE6	ENE10	E10	NNE7	SE4	ESE3	SSW1	S4	NE2	NNE0	ENE1	ENE2.9	ENE10
24-Apr	SE2	UO	UO	SSE2	SE2	ESE1	SSE1	SSE4	SE5	ENE5	E4	E1	NE1	WNW4	NNW5	NE3	NNE5	ENE7	E5	SE4	SE6	SE6	SE7	SE6	ESE2.5	SE7
25-Apr	SE6	SE5	SSE5	SSE5	SSE7	SSE7	S9	S12	S14	S17	S18	S17	S17	SSW14	SSW14	SSW15	SSW15	SSW12	SSW9	SSW5	S5	S5	S6	S6	S9.7	S18
26-Apr	S6	S8	SSW6	SSE3	SSE5	ESE1	N1	WNW2	W5	WNW8	NW10	NW12	NNW17	NNW13	N11	NNE12	N12	NNW13	NNW14	NW14	NNW7	NNW6	NW4	NNW3	NNW5.2	NNW17
27-Apr	NW5	NW5	NW5	NW7	NW7	N6	NE8	NNE6	NNW6	NNW8	NW7	NNW8	NNW9	NNW7	NNW9	NW8	NW9	N5	NE8	NE8	NE6	NE5	ENE4	E2	NNW5.3	NW9
28-Apr	E1	ESE3	SE8	SE6	SE4	SE5	SSE6	S8	S8	SSW11	S11	SSW12	S13	S15	SSW15	SSW13	SSW12	SSW12	SSW10	SSW11	SW9	SSW9	SSE5	S6	S8.2	SSW15
29-Apr	SSE4	SSE3	SSW7	SW7	WSW8	WSW8WSW10	W11	W12	W9WNW11WNW12WNW12	NW16	NW13	NW13	NW14	NNW15	NNW7	WNW6	WNW3	S2	WSW4	SW4					WNW6.9	NW16
30-Apr	WSW5	WSW6	WSW6	WSW6	W6	W6	W6	WNW6	NW7	NW6	WNW6	W8	W12	N15	NE5	N7	NNW7	NNE10	NE10	NNE12	NNE10	NNE10	NNE8	NNE7	NNW4.3	N15
SSW1.7SSW2.0SSW2.2SSW1.9SSW2.0SSW1.8SSW2.4 SW2.1WSW3.0WSW3.2 W3.6 W3.8 W4.3 W4.1WNW4.3WNW3.7WNW4.3WNW3.2NNW2.0 NW1.0 SW0.4SSW0.7 S0.9 S1.4																								Diurnal Average		
NW12WSW11WSW12 ESE10 ESE10 ESE12WNW13NNW14 WSW17 NW18 NW20 NW19 NW21 NW20 NW19 NW21 NW17NNW20 NW17WNW17WNW17 W18 W17 W15																								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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mackay River - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	227	32.80	32.80
6 - 11	316	45.66	78.47
12 - 19	144	20.81	99.28
20 - 28	5	0.72	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 692

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Mackay River - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	11	9	16	10	11	21	28	35	14	7	8	17	16	12	8	4	227
6 - 11	12	21	11	4	3	23	35	10	34	20	10	26	38	37	19	13	316
12 - 19	2	2	0	0	0	15	2	0	25	13	0	4	23	14	28	16	144
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	32	27	14	14	59	65	45	73	40	18	47	77	63	59	34	692

Total Number of Valid Hours: 692

Total Number of Hours: 720



Wind Speed 10m (WS10) - km/h

Mackay River





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Mackay River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 13:00																		Hours in Service: 720 Hours of Data: 692 Hours of Missing Data: 28 Hours of Calibration: 0 Percent Operational Time: 96.1							
Minimum Value: 0 km/h on Apr 4 04:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	1	1	2	2	2	2	1	2	2	3	3	4	3	4	4	4	4	4	3	3	3	2	1	4
2-Apr	1	2	2	1	2	2	2	3	3	4	4	4	4	4	5	4	4	3	3	2	1	2	2	1	5
3-Apr	4	2	1	1	1	1	3	4	4	4	4	4	4	4	4	3	4	4	3	2	UO	1	1	0	4
4-Apr	1	1	1	0	1	1	1	1	1	1	1	2	3	3	3	3	2	2	1	1	1	1	1	1	3
5-Apr	1	1	1	1	2	1	2	1	2	2	2	2	3	3	3	3	3	3	2	2	2	2	1	1	3
6-Apr	2	2	3	3	2	3	3	3	4	3	3	3	4	4	4	4	4	3	3	3	3	3	2	2	4
7-Apr	2	2	2	2	2	1	1	2	2	3	3	3	3	3	3	3	3	3	UO	1	1	1	2	1	3
8-Apr	1	1	2	1	1	2	2	1	3	2	2	2	2	2	2	2	UO	1	2	1	1	2	1	1	3
9-Apr	1	UO	UO	UO	UO	UO	UO	1	2	2	2	3	4	4	4	3	4	3	2	1	1	2	UO	UO	4
10-Apr	1	2	1	1	2	2	3	3	3	3	4	4	5	4	3	4	4	3	2	1	1	1	1	1	5
11-Apr	2	2	2	2	2	3	2	2	2	2	3	4	5	5	5	6	6	4	4	2	2	4	3	3	6
12-Apr	3	3	3	4	4	2	4	4	4	5	4	4	4	4	5	4	4	4	4	UO	UO	1	2	2	5
13-Apr	2	2	2	2	3	3	3	3	3	3	5	6	5	5	6	5	5	5	4	2	UO	UO	1	1	6
14-Apr	1	UO	UO	1	UO	UO	2	2	2	3	3	4	4	4	4	4	4	2	2	1	1	1	1	2	4
15-Apr	2	3	2	2	2	3	3	6	7	7	7	8	8	7	7	7	7	6	6	7	7	8	7	7	8
16-Apr	5	4	3	3	3	3	4	4	5	6	6	7	7	7	6	6	5	7	6	6	4	3	3	3	7
17-Apr	3	3	2	3	2	2	2	3	3	2	3	3	3	3	3	3	3	2	2	1	1	2	2	2	3
18-Apr	2	2	2	3	3	3	4	4	4	5	6	6	5	6	6	5	5	6	4	4	4	5	5	4	6
19-Apr	3	5	5	4	3	3	4	4	5	6	6	7	7	6	6	6	6	6	6	4	3	2	4	2	7
20-Apr	2	2	2	2	2	2	UO	2	1	2	2	2	2	2	2	3	2	3	3	2	1	1	1	1	3
21-Apr	1	1	1	1	1	2	2	2	3	3	3	3	3	3	4	3	2	2	1	4	1	1	1	1	4
22-Apr	1	1	2	2	3	3	2	3	3	3	4	4	5	6	6	4	2	3	1	1	1	2	2	1	6
23-Apr	UO	2	UO	UO	UO	UO	UO	1	1	2	2	4	4	3	3	4	3	2	2	1	1	2	1	1	4
24-Apr	1	UO	UO	1	1	1	1	3	2	2	3	3	2	2	3	1	2	2	2	1	1	1	1	1	3
25-Apr	1	1	1	1	2	2	3	4	6	6	6	6	6	5	5	6	6	4	4	2	1	1	1	1	6
26-Apr	1	1	3	1	2	2	1	2	2	4	3	4	5	4	4	4	4	4	4	4	3	2	1	2	5
27-Apr	1	2	1	2	2	2	3	2	2	3	3	3	4	4	4	4	4	4	4	3	2	2	2	1	4
28-Apr	1	2	2	1	1	1	2	2	2	4	4	4	5	5	5	5	4	4	4	5	4	4	2	2	5
29-Apr	1	2	2	3	3	3	4	5	5	4	5	5	4	5	5	5	5	5	3	2	1	1	1	1	5
30-Apr	2	2	2	2	2	2	2	2	2	3	3	4	5	7	3	3	2	3	4	4	4	3	3	2	7
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

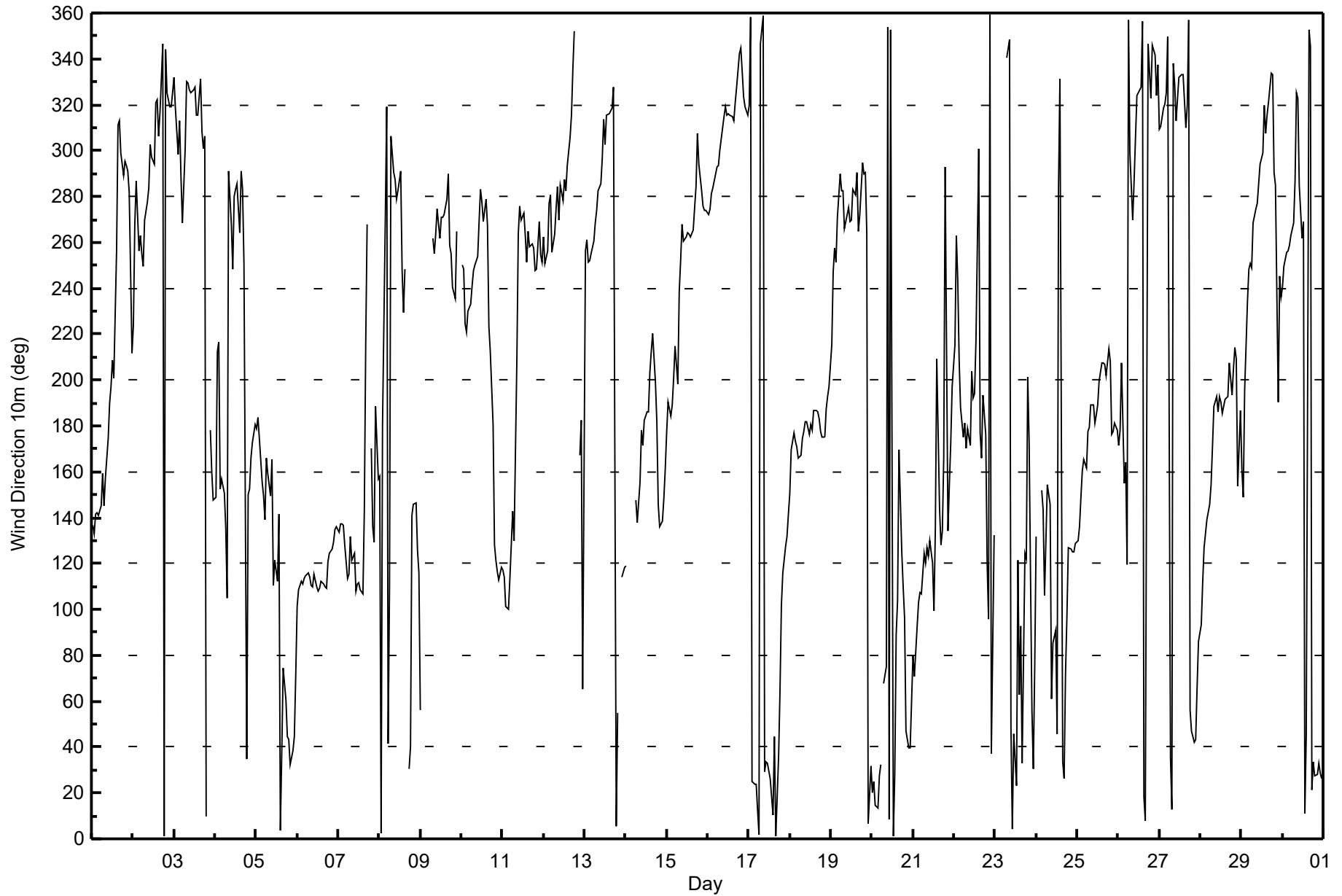
Mackay River - April 2025

Direction of Maximum Speed: 316 deg on Apr 16 13:00 Direction of Maximum Daily Speed Average: 313.0 deg on Apr 16																				Hours in Service:		720			
Direction of Minimum Speed: 31 deg on Apr 23 23:00 Direction of Minimum Daily Speed Average: 0.9 deg on Apr 8																				Hours of Data:		692			
																				Hours of Missing Data:		28			
Monthly Average Direction: 255.0 deg																				Percent Operational Time:		96.1			
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	137	133	141	142	141	146	159	145	157	175	190	197	209	201	257	311	313	299	289	295	293	291	282	212	228.3
2-Apr	224	268	287	256	263	255	250	269	278	284	303	297	294	321	322	306	317	346	1	344	325	319	319	325	305.4
3-Apr	332	318	298	313	289	268	301	330	329	326	325	327	328	316	316	331	308	301	306	10	UO	178	160	148	319.1
4-Apr	149	212	217	153	157	151	135	105	291	268	248	280	283	286	264	291	283	251	35	150	153	166	173	181	226.7
5-Apr	179	183	175	155	149	139	166	159	150	165	110	121	112	142	4	37	74	60	45	43	32	39	44	71	100.8
6-Apr	101	109	112	111	113	115	116	114	110	110	115	110	108	109	112	111	110	109	121	124	126	129	135	136	115.2
7-Apr	134	137	138	137	128	113	115	132	122	125	108	111	112	109	107	143	216	268	UO	170	136	129	188	157	128.9
8-Apr	158	3	181	271	319	41	110	306	290	287	279	283	291	248	229	248	UO	31	40	141	146	146	126	116	252.5
9-Apr	56	UO	UO	UO	UO	UO	UO	262	255	263	275	262	271	271	272	279	290	258	255	240	236	265	UO	UO	--
10-Apr	250	248	225	221	230	233	241	248	250	254	269	283	277	269	279	267	223	213	181	128	121	117	113	118	241.1
11-Apr	117	114	101	100	114	128	143	130	209	263	276	270	273	263	251	265	258	259	257	248	248	269	254	252	244.1
12-Apr	263	251	256	277	280	256	264	274	284	270	285	278	288	283	294	306	315	336	352	UO	UO	167	183	65	286.1
13-Apr	256	261	251	252	255	261	268	274	282	285	296	314	303	315	316	317	319	328	6	55	UO	UO	114	118	303.3
14-Apr	119	UO	UO	142	UO	UO	147	138	156	178	172	182	186	186	203	212	220	199	182	146	136	138	148	161	176.3
15-Apr	177	190	184	189	201	215	198	239	252	268	261	262	264	264	262	265	275	284	308	294	282	276	274	274	261.0
16-Apr	272	275	281	284	287	293	293	300	305	315	319	315	316	315	315	313	321	328	342	345	335	324	319	315	313.0
17-Apr	319	358	25	24	24	12	2	347	359	29	34	33	26	18	11	44	1	36	65	102	116	128	132	141	25.6
18-Apr	151	170	177	173	171	166	167	174	178	182	182	176	181	178	187	187	186	183	178	175	175	187	193	197	179.6
19-Apr	215	247	258	252	271	290	283	282	266	272	275	269	270	283	281	291	265	272	295	290	291	264	7	32	275.0
20-Apr	20	25	14	13	27	33	UO	68	75	354	9	353	1	28	89	104	170	125	110	96	47	40	39	60	51.4
21-Apr	80	70	93	103	107	107	125	120	127	123	130	120	100	135	210	144	128	134	167	293	134	155	172	197	132.8
22-Apr	215	263	243	209	188	175	181	170	179	171	204	192	194	216	301	177	166	194	177	120	96	359	37	133	191.3
23-Apr	UO	156	UO	UO	UO	UO	UO	340	348	49	4	46	23	122	63	93	33	125	122	202	173	56	31	75	71.1
24-Apr	132	UO	UO	152	144	106	155	150	146	61	85	91	46	284	332	34	26	72	97	127	126	125	125	129	104.1
25-Apr	130	136	149	161	165	162	177	180	189	189	181	185	189	199	207	207	207	202	213	208	176	177	181	178	187.0
26-Apr	171	178	208	155	164	119	357	299	270	287	306	324	327	328	356	18	8	346	334	323	346	342	324	337	328.8
27-Apr	309	311	319	320	325	349	36	13	338	329	313	332	332	333	333	310	320	357	56	47	42	44	66	86	347.4
28-Apr	93	112	127	133	139	146	154	171	189	193	186	193	190	185	192	192	193	208	194	205	214	209	154	187	184.8
29-Apr	161	149	196	234	248	251	249	268	274	277	286	294	299	320	308	315	321	334	333	290	285	190	245	236	286.2
30-Apr	240	249	256	256	259	263	268	287	325	323	285	262	269	11	45	353	345	22	34	28	28	33	29	26	334.6
197.5 206.3 202.2 198.9 206.6 207.4 205.5 225.9 245.3 253.9 259.8 263.8 271.6 274.5 284.4 283.8 285.3 298.0 332.2 316.6 215.9 205.7 176.1 180.8																									
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 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Mackay River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 106 deg on Apr 23 09:00																			Hours in Service: 720 Hours of Data: 692 Hours of Missing Data: 28 Hours of Calibration: 0 Percent Operational Time: 96.1						
Minimum Value: 7 deg on Apr 4 21:00																									
Percentiles: P ₁ = 11 P ₁₀ = 19 Q ₁ = 23 Median = 30 Q ₃ = 42 P ₉₀ = 54 P ₉₉ = 91																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	22	21	23	22	25	24	29	21	26	26	27	26	31	25	52	22	22	26	29	22	21	23	33	67	67
2-Apr	23	36	26	27	34	44	38	45	40	39	32	37	37	28	29	29	30	25	25	21	14	16	17	12	45
3-Apr	20	22	23	23	27	37	20	22	24	24	28	25	28	38	30	28	27	27	32	23	UO	75	24	13	75
4-Apr	18	21	23	14	24	17	23	36	65	70	102	68	54	55	61	53	59	60	70	8	7	18	16	13	102
5-Apr	13	12	14	25	49	19	20	22	31	46	57	43	47	66	42	47	37	30	20	21	25	23	27	31	66
6-Apr	25	19	17	18	18	18	18	19	20	21	23	22	20	22	19	18	19	18	18	18	17	18	18	19	25
7-Apr	18	20	21	22	21	16	15	19	25	25	23	20	20	21	22	41	36	41	UO	87	40	17	86	42	87
8-Apr	37	83	42	33	51	75	30	75	26	34	39	40	59	44	38	45	UO	58	25	21	15	50	42	74	83
9-Apr	74	UO	UO	UO	UO	UO	UO	49	48	56	48	49	52	47	45	36	41	44	48	29	24	37	UO	UO	74
10-Apr	32	31	27	21	28	36	34	48	48	44	43	39	42	48	49	53	51	42	32	16	12	11	12	15	53
11-Apr	27	38	26	28	18	59	59	29	41	43	44	45	46	45	49	42	44	41	50	42	43	43	47	48	59
12-Apr	42	39	48	39	36	49	47	41	38	41	36	41	33	38	31	25	24	23	25	UO	UO	74	54	83	83
13-Apr	31	34	39	46	43	45	40	41	42	41	34	29	28	30	26	24	25	22	34	23	UO	UO	23	48	48
14-Apr	63	UO	UO	41	UO	UO	15	17	28	25	30	34	31	33	35	35	35	27	22	21	18	19	20	22	63
15-Apr	24	18	20	18	22	40	22	41	45	41	44	47	44	44	45	42	39	31	25	30	35	38	39	40	47
16-Apr	39	38	34	35	28	25	24	27	24	22	21	23	21	22	24	23	20	23	23	25	22	20	19	18	39
17-Apr	20	40	23	26	25	27	26	27	30	26	27	32	34	47	60	76	58	35	26	21	21	18	20	23	76
18-Apr	25	26	23	24	26	24	24	24	24	26	27	28	27	26	27	25	26	25	25	25	26	22	21	24	28
19-Apr	28	46	44	47	39	24	32	35	45	42	40	45	44	40	40	32	44	41	26	28	28	36	49	24	49
20-Apr	28	26	25	25	24	47	UO	27	59	42	47	65	57	102	94	49	73	47	21	28	22	18	19	30	102
21-Apr	34	46	31	42	53	40	18	22	30	37	34	65	62	105	62	41	29	30	38	65	30	21	15	15	105
22-Apr	24	28	36	31	21	24	23	25	25	28	34	30	36	53	68	46	25	23	23	59	40	42	52	22	68
23-Apr	UO	14	UO	UO	UO	UO	UO	74	106	63	57	56	42	55	33	31	38	60	40	93	36	41	80	65	106
24-Apr	41	UO	UO	9	20	69	76	44	34	54	85	98	91	75	76	42	40	31	30	14	13	13	13	14	98
25-Apr	14	18	19	20	22	24	27	24	26	27	28	29	32	31	32	32	29	27	31	23	10	9	11	12	32
26-Apr	11	12	33	40	28	89	83	68	44	41	38	27	25	30	37	29	29	32	23	20	38	36	29	30	89
27-Apr	20	19	19	17	31	43	25	36	48	42	60	48	50	54	48	43	42	70	46	22	22	24	31	25	70
28-Apr	48	43	18	16	18	19	22	25	32	33	35	39	35	32	32	33	32	29	23	31	30	31	29	28	48
29-Apr	25	49	28	38	42	48	40	45	39	37	35	31	28	26	29	28	29	24	32	26	60	43	32	32	60
30-Apr	36	49	48	42	44	48	44	41	31	51	47	49	40	33	49	31	28	26	30	25	27	26	26	27	51
74 83 48 47 53 89 83 75 106 70 102 98 91 105 94 76 73 70 70 93 60 75 86 83																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS21
CONKLIN
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)

APRIL 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	680	34	40	99.17	-	-	4.3	0	0.9	0
TRS(ppb) Average	679	35	41	99.17	0.5	0	0.4	0	0.3	0
THC(ppm) Average	680	34	40	99.17	-	-	2.4	-	2.1	-
NMHC(ppm) Average	680	34	40	99.17	-	-	0.083	-	0.005	-
CH4(ppm) Average	680	34	40	99.17	-	-	2.4	-	2.1	-
O3 (ppb) Average	680	34	40	99.17	-	-	60.2	0	46.8	-
NO2 (ppb) Average	679	35	41	99.17	-	-	21.5	0	2.8	-
NO (ppb) Average	679	35	41	99.17	-	-	23.8	-	1.3	-
NOX (ppb) Average	679	35	41	99.17	-	-	45.3	-	4.1	-
PM2.5 (ug/m3) Average	713	1	7	99.17	-	-	40.2	0	6.8	0
Temperature 2 m (C) Average	720	0	0	100	-	-	21.6	-	12.8	-
Relative Humidity (%) Average	717	0	3	99.58	-	-	99.2	-	80.1	-
Wind Speed 10 m (km/h) Average	717	0	3	99.58	-	-	24	-	13	-
Wind Direction 10 m (deg) Average	717	0	3	99.58	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	680	0.23	0.4	-	0	0	0.1	0.1	0.2	0.5	4.3
TRS (ppb) Average	679	0.21	0	-	0.1	0.2	0.2	0.2	0.2	0.2	0.4
THC (ppm) Average	680	2.06	0	-	2	2	2	2	2.1	2.1	2.4
NMHC(ppm) Average	680	0.001	0.005	-	0	0	0	0	0	0	0.083
CH4(ppm) Average	680	2.06	0	-	2	2	2	2	2.1	2.1	2.4
O3 (ppb) Average	680	37.93	11.6	-	4.4	20.6	30.8	39.9	46.5	51	60.2
NO2 (ppb) Average	679	1.22	1.4	-	0.2	0.4	0.5	0.9	1.5	2.2	21.5
NO (ppb) Average	679	0.25	1.1	-	0	0	0	0.1	0.2	0.4	23.8
NOX (ppb) Average	679	1.47	2.3	-	0.2	0.4	0.6	1	1.7	2.7	45.3
PM2.5 (ug/m3) Average	713	4.15	4.4	-	0.3	1.3	2.1	3.1	4.6	7.1	40.2
Temperature 2 m (C) Average	720	4.43	7.1	-	-16	-4.7	-0.7	4.5	9.8	13.4	21.6
Relative Humidity (%) Average	717	54.32	22.2	-	16.1	24.5	34	54	73.8	84.3	99.2
Wind Speed 10 m (km/h) Average	717	8.2	5	-	0	2	4	8	12	15	24
Wind Direction 10 m (deg) Average	717	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS 21)
APRIL 2025

OPERATIONAL NOTES

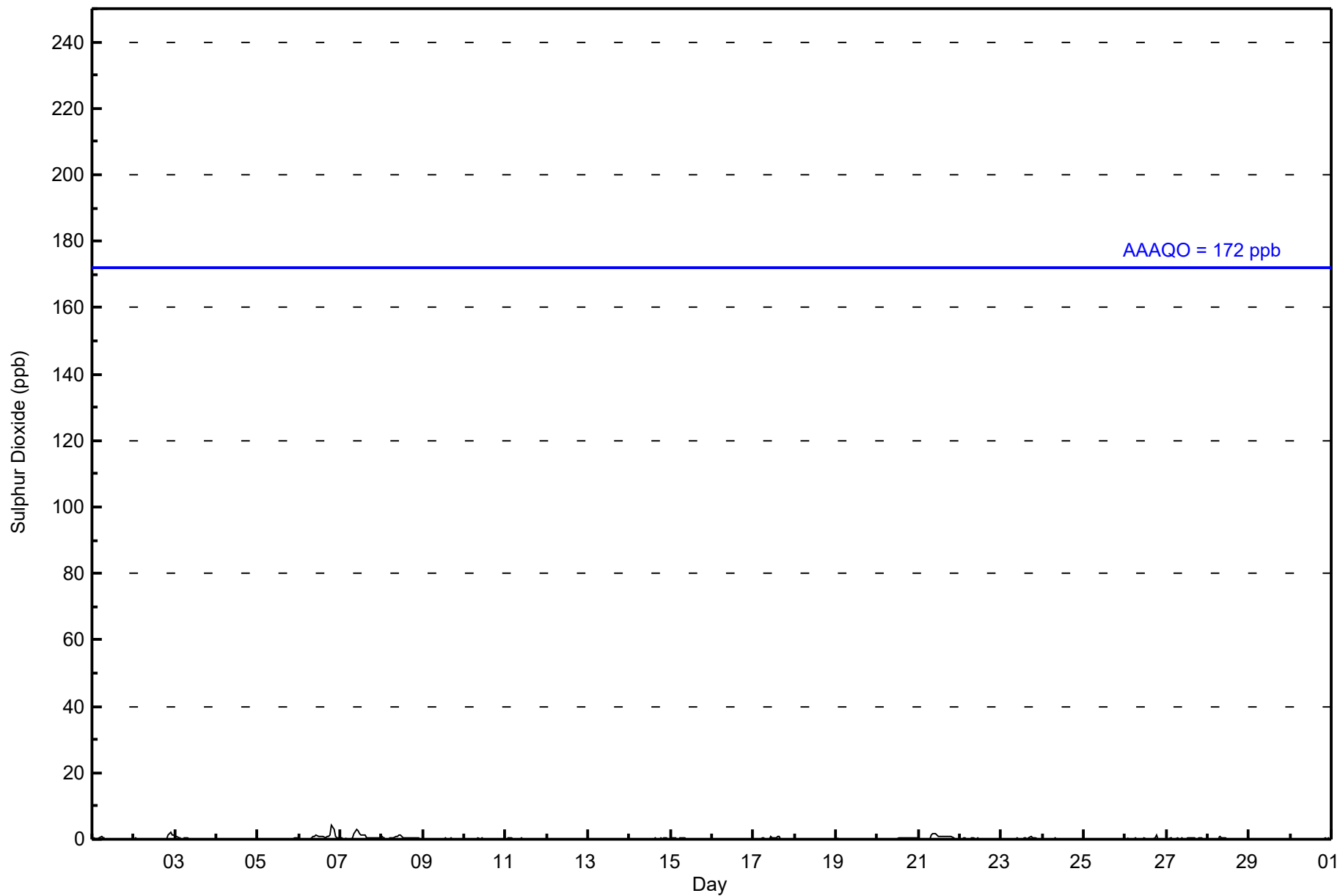
Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	01 Apr 2025 09:00	01 Apr 2025 14:00	6	Station power failure
Relative Humidity	16 Apr 2025 21:00	16 Apr 2025 21:00	1	Sensor operated out of range
Relative Humidity	29 Apr 2025 21:00	29 Apr 2025 22:00	2	Sensor operated out of range
Wind Speed, Wind Direction	06 Apr 2025 01:00	06 Apr 2025 01:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	06 Apr 2025 03:00	06 Apr 2025 03:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	16 Apr 2025 21:00	16 Apr 2025 21:00	1	Flat line in sensor output signal - Sensor frozen

Number of Exceedences (AAAQO): Maximum Value: 4.3 ppb on Apr 6 20:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 0.9 ppb on Apr 6																		Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 2 07:00 Maximum Diurnal Average: 0.4 ppb at hour 10 Monthly Average: 0.23 ppb																		Minimum Daily Average: 0.0 ppb on Apr 18 Minimum Diurnal Average: 0.1 ppb at hour 5 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.7																		Hours of Data: 680	
																																				Hours of Missing Data: 40	
																																				Hours of Calibration: 34	
																																				Percent Operational Time: 99.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	0.2	0.2	Z	0.2	0.4	0.7	0.4	0.5	PF	PF	PF	PF	PF	PF	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	--	0.7										
2-Apr	0.2	0.2	0.1	Z	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	1.4	2.1	1.4	1.4	0.3	2.1										
3-Apr	0.9	0.7	0.5	0.6	Z	0.3	0.2	0.2	0.1	0.2	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.9											
4-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	C	C	C	C	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2											
5-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.4											
6-Apr	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.3	0.8	1.0	1.2	0.8	0.8	1.0	0.8	0.6	1.0	1.0	1.3	4.3	2.9	0.8	0.5	0.5	0.9	4.3											
7-Apr	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.5	1.6	3.1	2.4	1.9	1.2	1.1	1.3	0.6	0.5	0.5	0.3	0.3	0.3	0.5	0.3	0.6	0.8	3.1											
8-Apr	0.7	0.5	0.5	Z	0.3	0.2	0.3	0.5	0.9	0.9	1.5	1.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.5	1.5											
9-Apr	0.2	0.1	0.2	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.2											
10-Apr	0.2	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3											
11-Apr	Z	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3											
12-Apr	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2											
13-Apr	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.2											
14-Apr	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3	0.2	0.3	0.5	0.2	0.2	0.2	0.5											
15-Apr	0.3	0.4	0.6	0.5	Z	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.6											
16-Apr	0.1	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2											
17-Apr	Z	0.1	0.1	0.0	0.1	0.3	0.3	0.1	0.1	0.1	0.7	0.3	0.3	0.3	0.7	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7											
18-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1											
19-Apr	0.0	0.3	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1											
20-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.4	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.5	0.3	0.6											
21-Apr	0.2	0.1	0.2	0.1	Z	0.0	0.0	1.2	1.6	1.8	1.7	1.1	0.9	0.9	1.0	0.9	0.8	0.8	1.0	0.7	0.4	0.2	0.2	0.1	0.7	1.8											
22-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.3											
23-Apr	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.1	0.3	0.4	0.2	0.3	0.6	0.5	0.4	0.2	0.1	0.1	0.2	0.2	0.6											
24-Apr	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2											
25-Apr	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2											
26-Apr	0.1	0.1	0.2	Z	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.4	0.2	0.1	0.0	0.1	0.0	0.4	1.2	0.2	0.0	0.0	0.1	0.2	0.2	1.2											
27-Apr	0.1	0.1	0.3	0.4	Z	0.1	0.3	0.0	0.2	0.3	0.2	0.1	0.2	0.5	0.5	0.3	0.2	0.2	0.2	0.3	0.4	0.2	0.1	0.1	0.2	0.5											
28-Apr	0.2	0.1	0.1	0.1	0.1	Z	0.4	0.7	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.7											
29-Apr	Z	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2											
30-Apr	0.2	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.1	0.4											
																									Diurnal Average												
																									Diurnal Maximum												
Z - zerospan C - Calibration PF - Power Failure																																					
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																																					



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	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: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	28	13	4	7	9	22	31	53	81	83	47	20	53	87	75	64	677
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	28	13	4	7	9	22	31	53	81	83	47	20	53	87	75	64	677

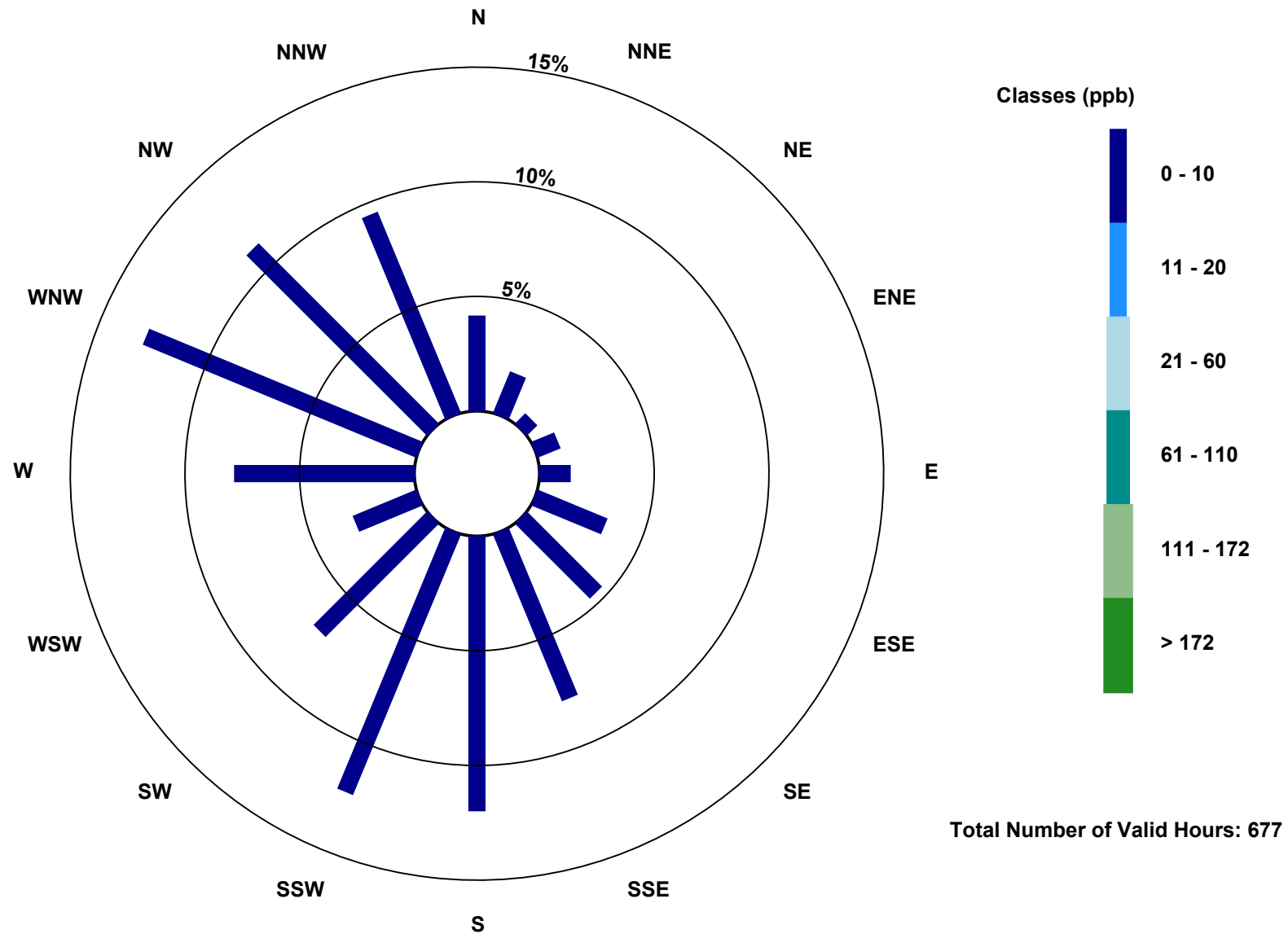
Total Number of Valid Hours: 677

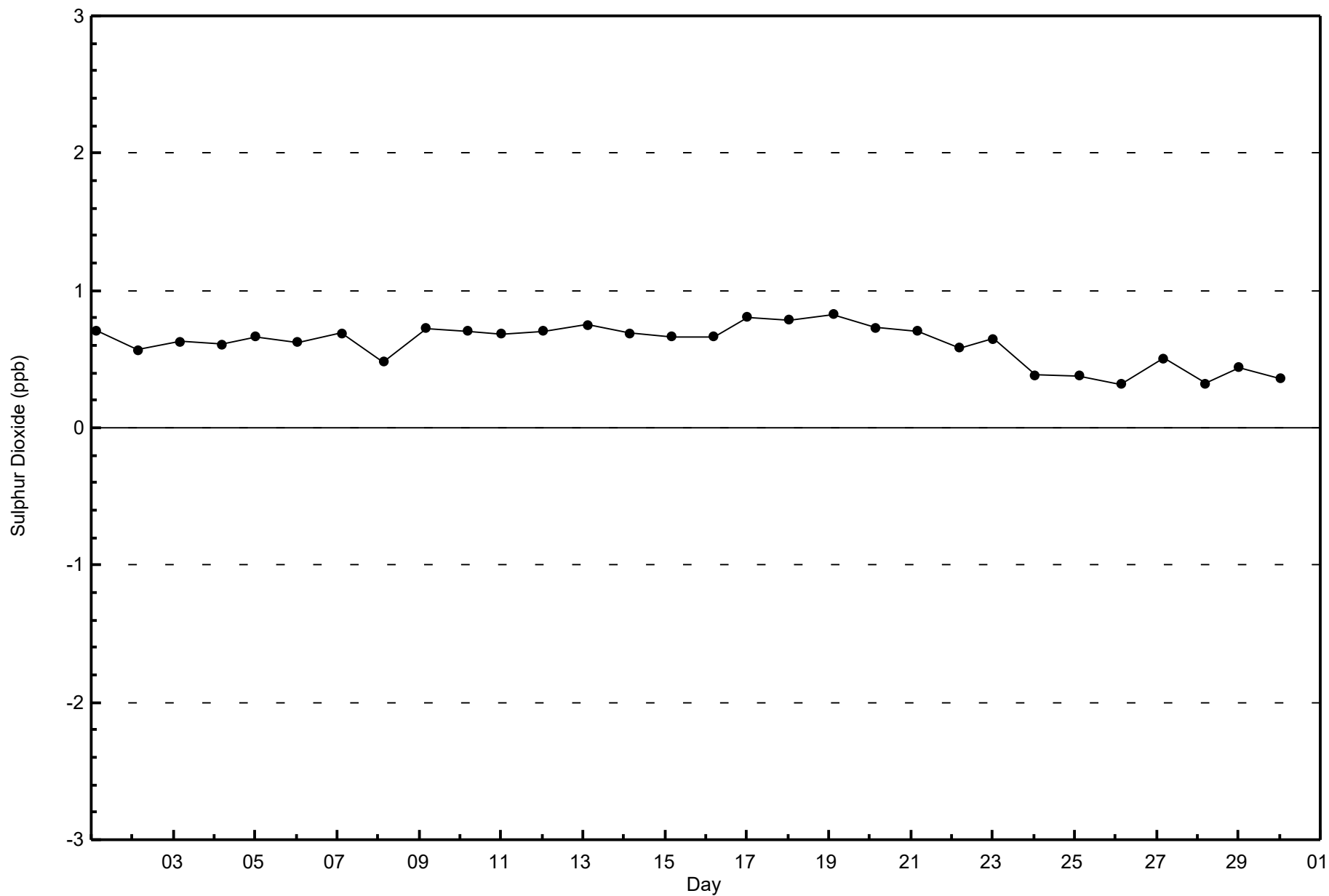
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Conklin

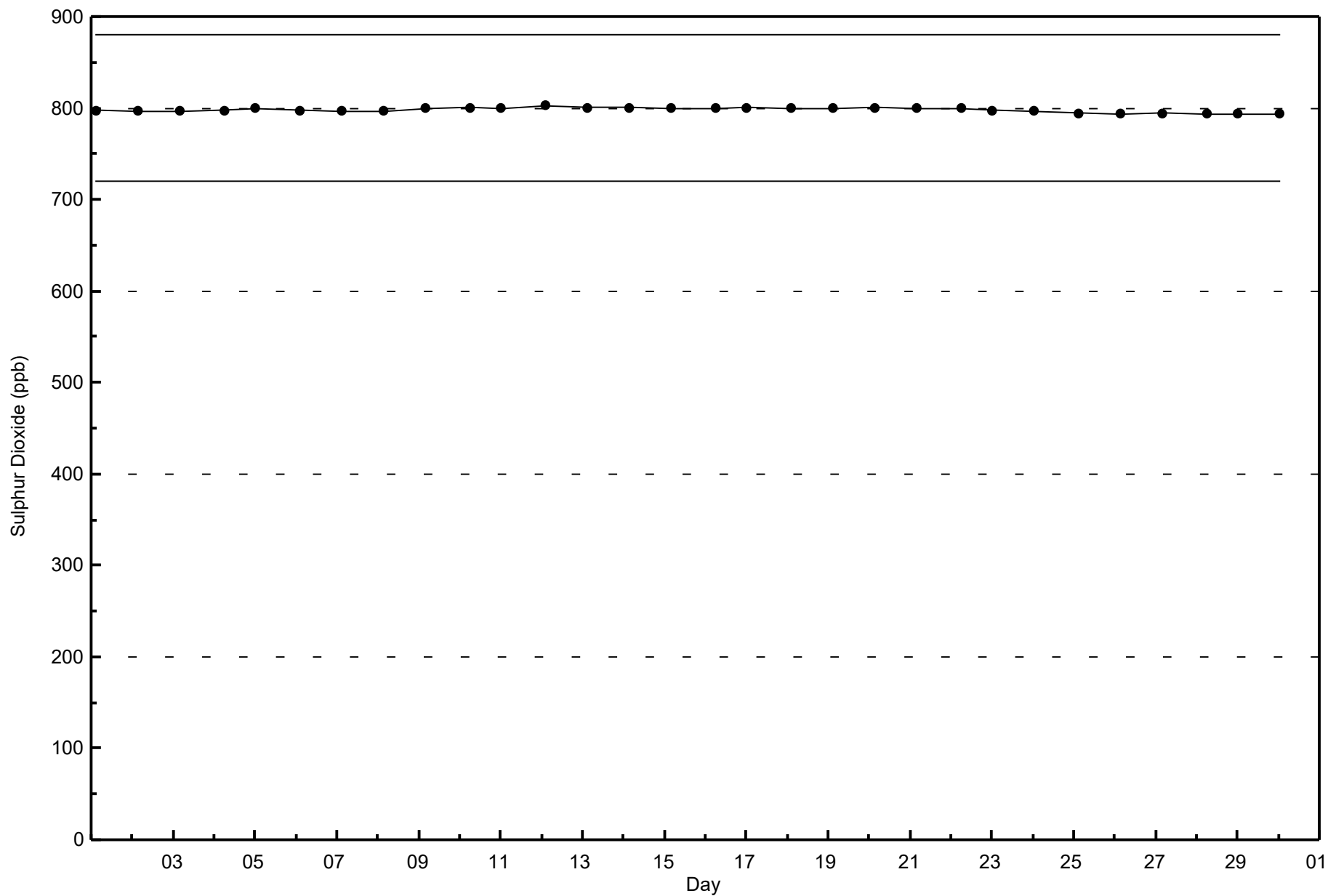






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440											
Maximum Value: 0.5 ppb on Apr 3 22:30																			Maximum Daily Average: 0.3 ppb on Apr 18						Periods of Valid Data: 1359					
Minimum Value: 0.1 ppb on Apr 9 16:30																			Minimum Daily Average: 0.2 ppb on Apr 23						Periods of Invalid Data: 81					
Maximum Diurnal Average: 0.2 ppb at hour 23																			Minimum Diurnal Average: 0.2 ppb at hour 17						Periods of Calibration: 69					
Monthly Average: 0.21 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.3						Percent Operational Time: 99.2					
Day	Period Ending At (MST)																								Daily Average	Daily Maximum				
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00						
1-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	PF PF	PF PF	PF PF	PF PF	PF PF	PF PF	0.2 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	0.2 0.2	0.2 0.2	--	0.3				
2-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.2	0.3				
3-Apr	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.3	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 0.2	0.2 0.2	0.5 0.4	0.3 0.2	0.2	0.5				
4-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 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				
5-Apr	0.2 0.2	Z 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	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.1 0.2	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	0.2				
6-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3				
7-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.2	0.3				
8-Apr	0.3 0.3	0.3 0.3	0.3 0.2	0.3 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 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 0.3	0.2 0.2	0.2 0.3	0.2 0.2	0.2	0.3				
9-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.2	0.2 C	C C	C C	C C	C C	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 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2				
10-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2				
11-Apr	0.2 0.2	Z SP	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3				
12-Apr	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3 0.2	0.2 0.2	0.2	0.3				
14-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3				
15-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2				



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.3 0.2	0.2 0.2	0.2	0.3
17-Apr	0.2 0.3	Z 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 0.3	0.3 0.3	0.3 0.3	0.2 0.3	0.2 0.2	0.2 0.3	0.3 0.3	0.2 0.3	0.3 0.3	0.2 0.2	0.3 0.3	0.2 0.2	0.3 0.3	0.3 0.3	0.2 0.3	0.2	0.3
18-Apr	0.2 0.3	0.3 0.3	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.3	0.2 0.3	0.3 0.3	0.4 0.4	0.4 0.3	0.3	0.4
19-Apr	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.2	0.2 0.2	0.2 0.3	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
20-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
21-Apr	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.2 0.1	Z 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	0.2 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	0.3
22-Apr	Z SP	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	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.3
23-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2	0.2
24-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.3 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 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	0.3 0.3	0.3 0.3	0.3 0.4	0.4 0.4	0.3 0.3	0.4 0.3	0.3	0.4
26-Apr	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.3	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 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
27-Apr	0.3 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.2	0.3
28-Apr	Z SP	0.2 0.2	0.2 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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-Apr	0.2 0.3	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.2	0.3 0.3	0.3 0.2	0.3 0.2	0.2 0.2	0.2	0.3
30-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
0.2 0.3																								Diurnal Average Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure SP - Span Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

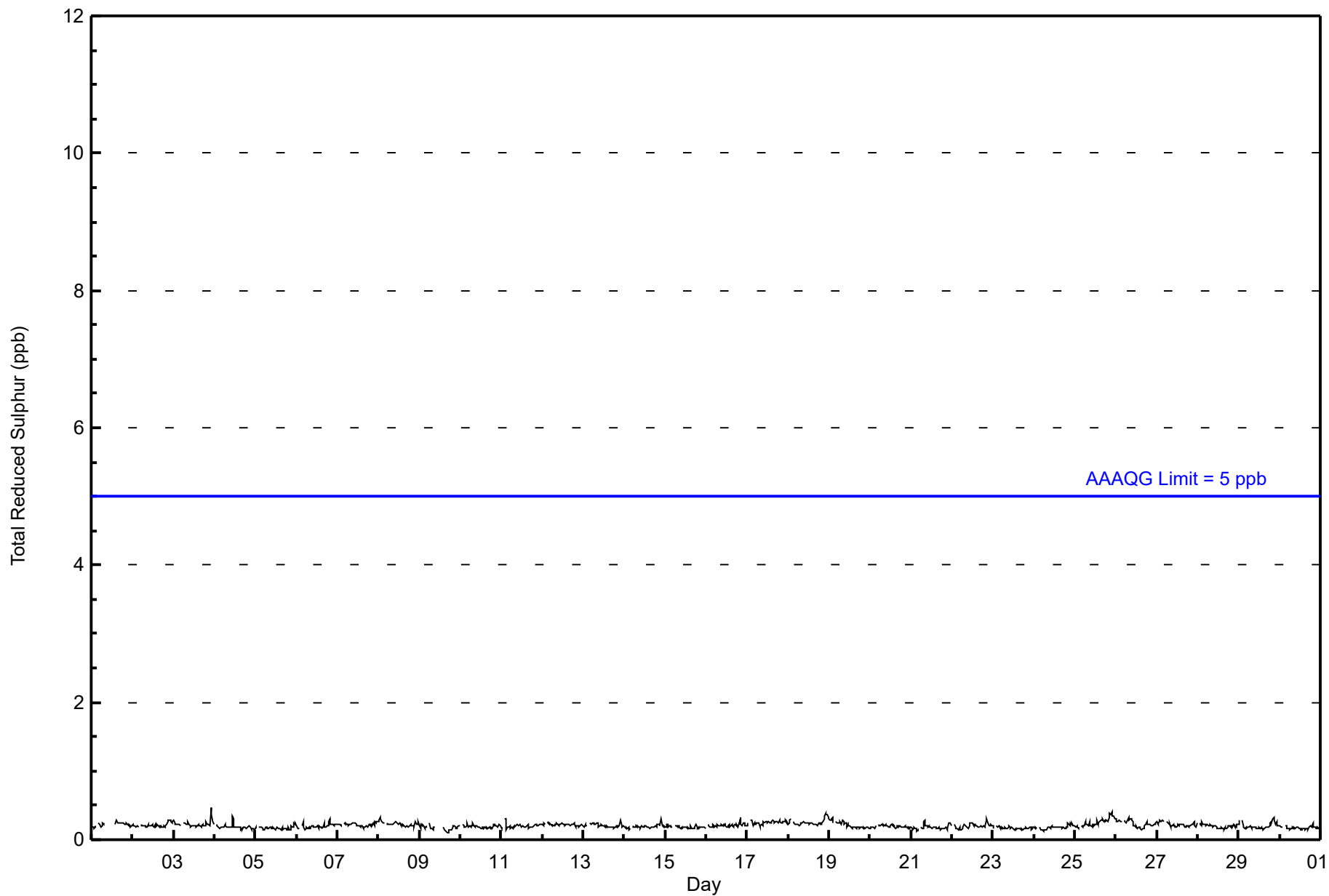
Conklin - April 2025

Maximum Value: 0.4 ppb on Apr 3 23:00										Maximum Daily Average: 0.3 ppb on Apr 18										Hours in Service: 720						
Minimum Value: 0.1 ppb on Apr 9 17:00										Minimum Daily Average: 0.2 ppb on Apr 23										Hours of Data: 679						
Maximum Diurnal Average: 0.2 ppb at hour 23										Minimum Diurnal Average: 0.2 ppb at hour 17										Hours of Missing Data: 41						
Monthly Average: 0.21 ppb										Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3										Hours of Calibration: 35						
																				Percent Operational Time: 99.2						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	PF	PF	PF	PF	PF	PF	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	--	0.3
2-Apr	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	0.3	0.3	0.3	0.2	0.3
3-Apr	0.3	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	0.4	0.3	0.2	0.4
4-Apr	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
5-Apr	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
6-Apr	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	0.2	0.2	0.2	0.3
7-Apr	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	0.3	0.3	0.2	0.3
8-Apr	0.3	0.3	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	0.2	0.2	0.2	0.3
9-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10-Apr	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
11-Apr	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
12-Apr	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
13-Apr	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
14-Apr	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	0.3	0.2	0.2	0.2	0.3
15-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
16-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3
17-Apr	0.2	Z	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	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3
18-Apr	0.2	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	0.3	0.4	0.3	0.3	0.4
19-Apr	0.3	0.3	0.3	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
20-Apr	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
21-Apr	0.2	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
22-Apr	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3
23-Apr	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
24-Apr	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
25-Apr	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	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4
26-Apr	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	0.3
27-Apr	0.2	0.3	0.3	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
28-Apr	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
29-Apr	0.3	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	0.3	0.3	0.2	0.2	0.2	0.3
30-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.2																								Diurnal Average		
0.3																								Diurnal Maximum		
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																										



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	679	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: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	28	13	4	6	10	24	31	52	76	86	51	21	51	85	76	63	677
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	13	4	6	10	24	31	52	76	86	51	21	51	85	76	63	677

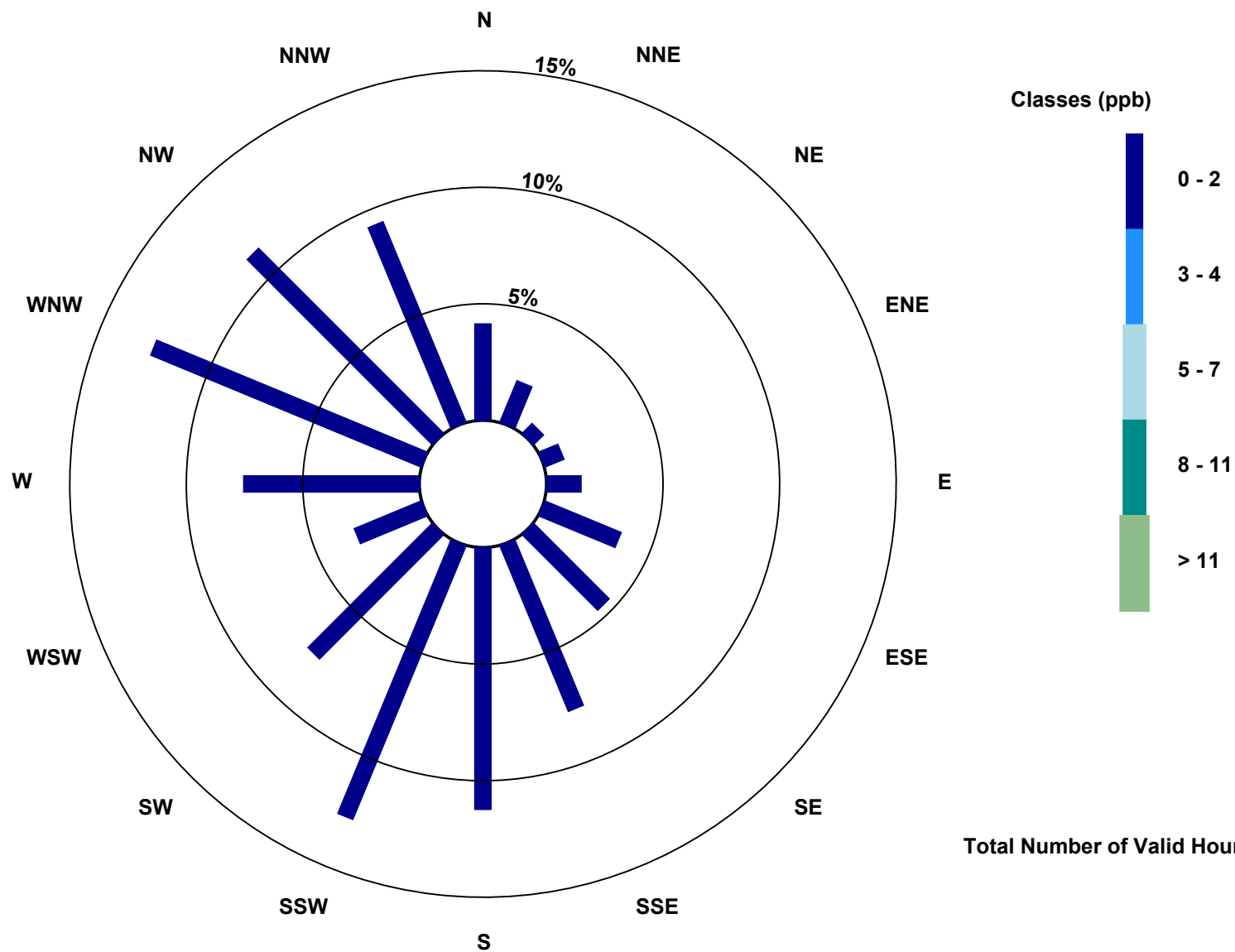
Total Number of Valid Hours: 677

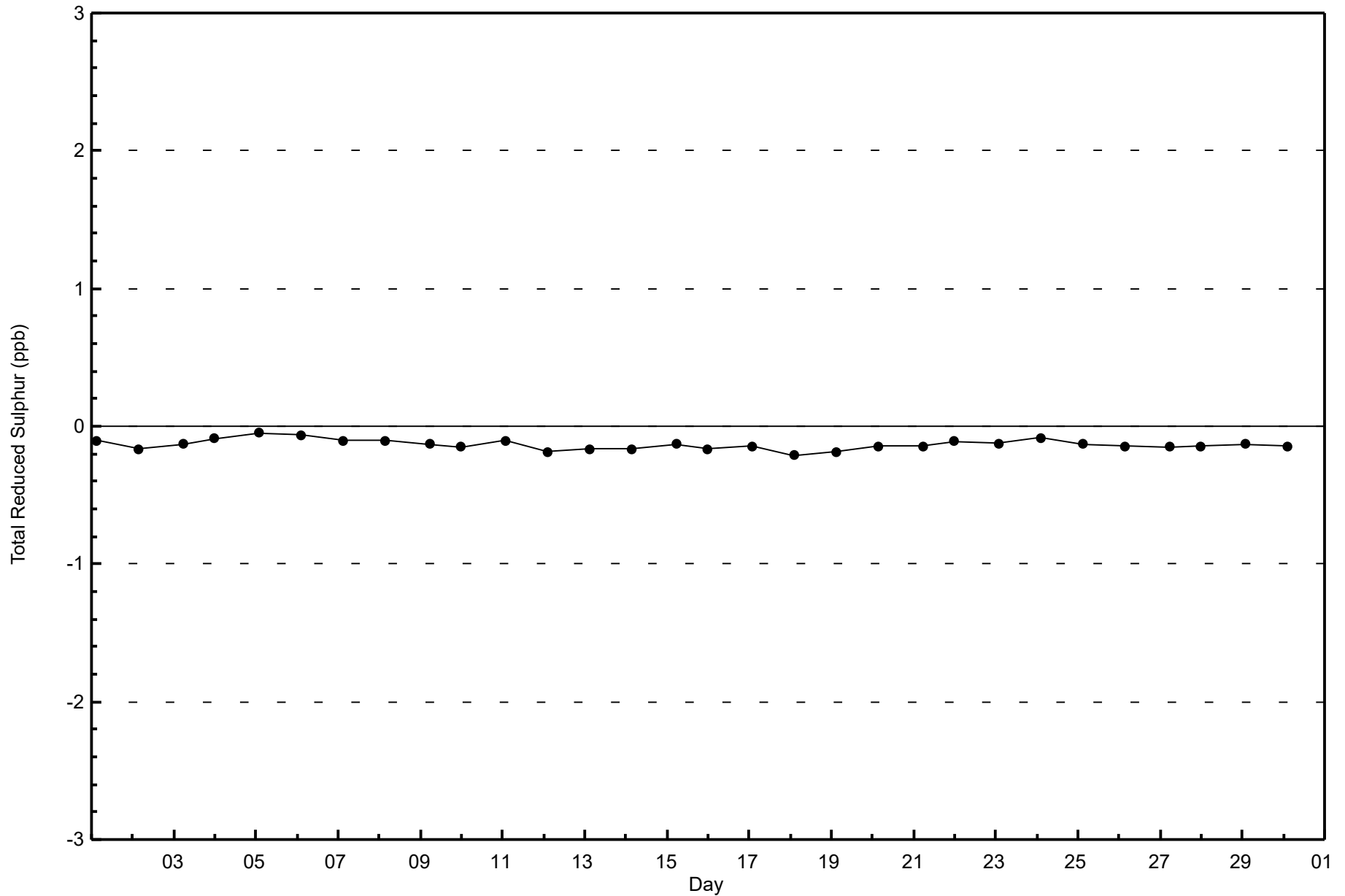
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Conklin

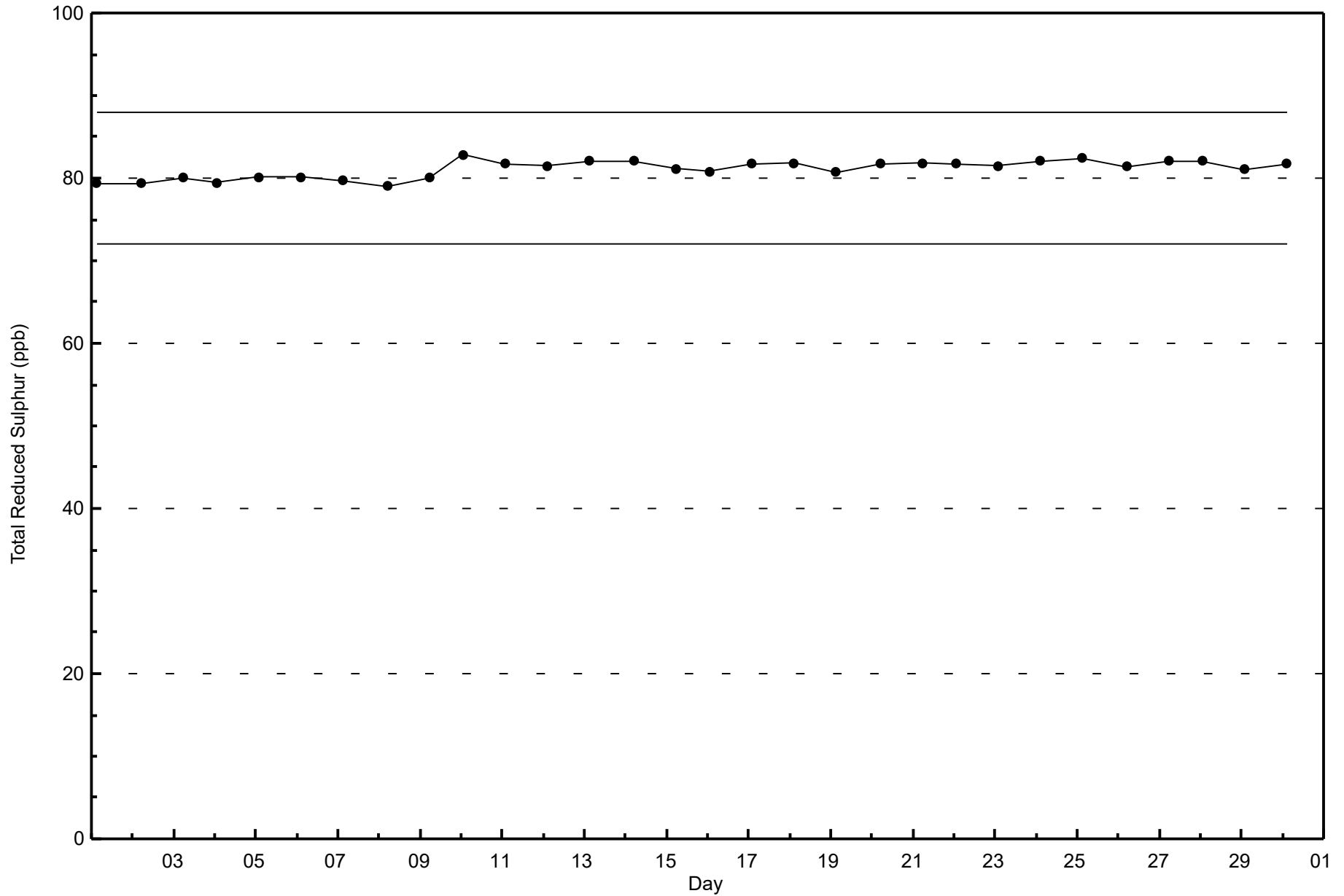






Wood Buffalo Environmental Association
Span Responses

Total Reduced Sulphur (TRS) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

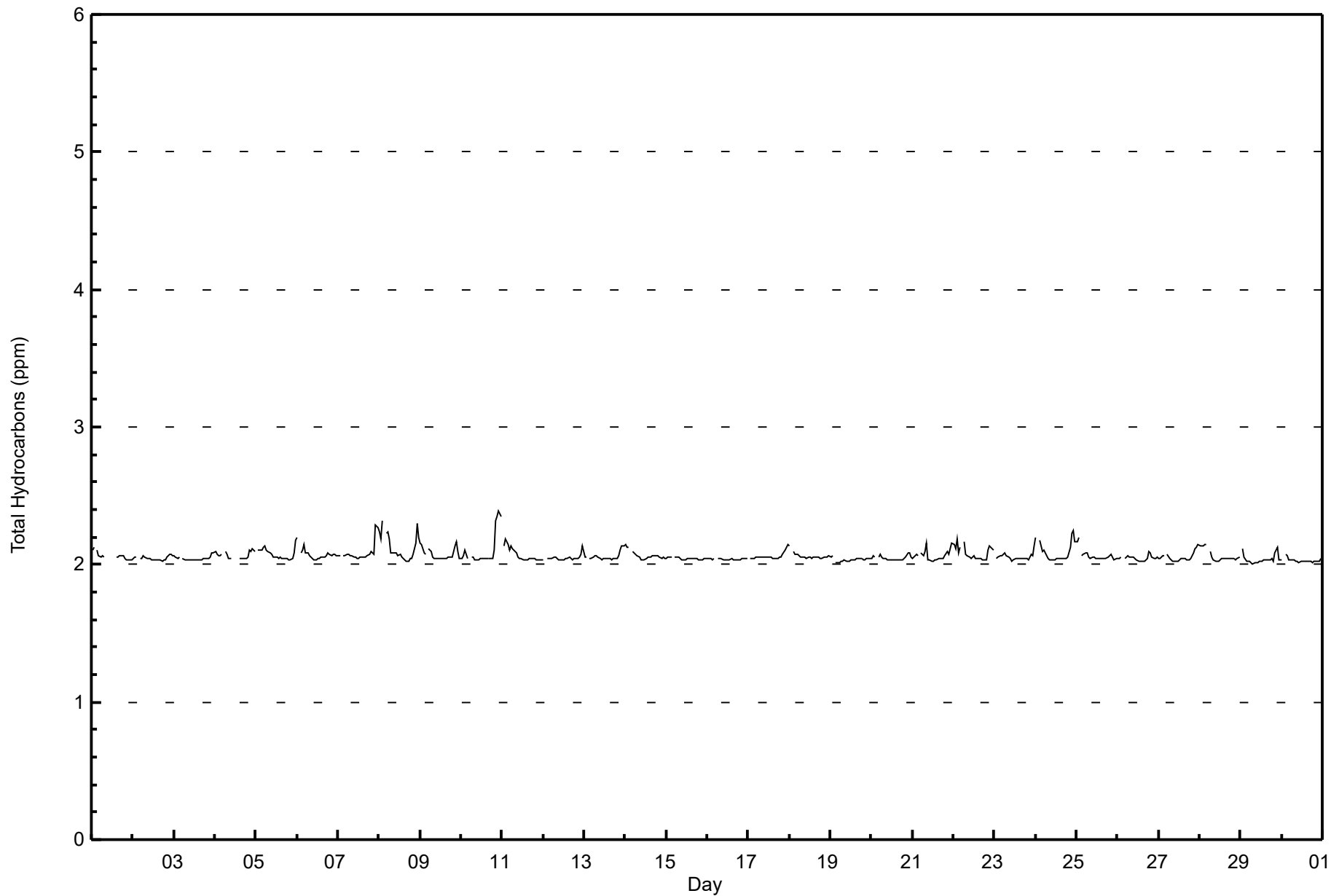
Conklin - April 2025

Maximum Value: 2.4 ppm on Apr 10 23:00																		Maximum Daily Average: 2.1 ppm on Apr 8										Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 29 08:00																		Minimum Daily Average: 2.0 ppm on Apr 30										Hours of Data: 680	
Maximum Diurnal Average: 2.1 ppm at hour 23																		Minimum Diurnal Average: 2.0 ppm at hour 11										Hours of Missing Data: 40	
Monthly Average: 2.06 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3										Hours of Calibration: 34	
																		Percent Operational Time: 99.2											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	--	2.1			
2-Apr	2.0	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1			
3-Apr	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1			
4-Apr	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
5-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2			
6-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2			
7-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.1	2.3			
8-Apr	2.2	2.2	2.3	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.3			
9-Apr	2.2	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.2			
10-Apr	2.0	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.4	2.4	2.1	2.4			
11-Apr	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2			
12-Apr	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	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1			
13-Apr	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1			
14-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1			
15-Apr	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
16-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
17-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
18-Apr	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1			
19-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
20-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1			
21-Apr	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.2			
22-Apr	2.1	2.1	2.2	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2			
23-Apr	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	2.0	2.1	2.1	2.1	2.1	2.1			
24-Apr	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.2			
25-Apr	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.2			
26-Apr	2.0	2.0	2.1	Z	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1			
27-Apr	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
28-Apr	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1			
29-Apr	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1			
30-Apr	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
Diurnal Average																													
Diurnal Maximum																													
Z - zerospan C - Calibration PF - Power Failure																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	380	55.88	55.88
2.1 - 3.0	300	44.12	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	16	9	3	3	5	13	6	4	19	33	25	13	48	69	66	47	379
2.1 - 3.0	12	4	1	4	4	9	25	49	62	50	22	7	5	18	9	17	298
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	28	13	4	7	9	22	31	53	81	83	47	20	53	87	75	64	677

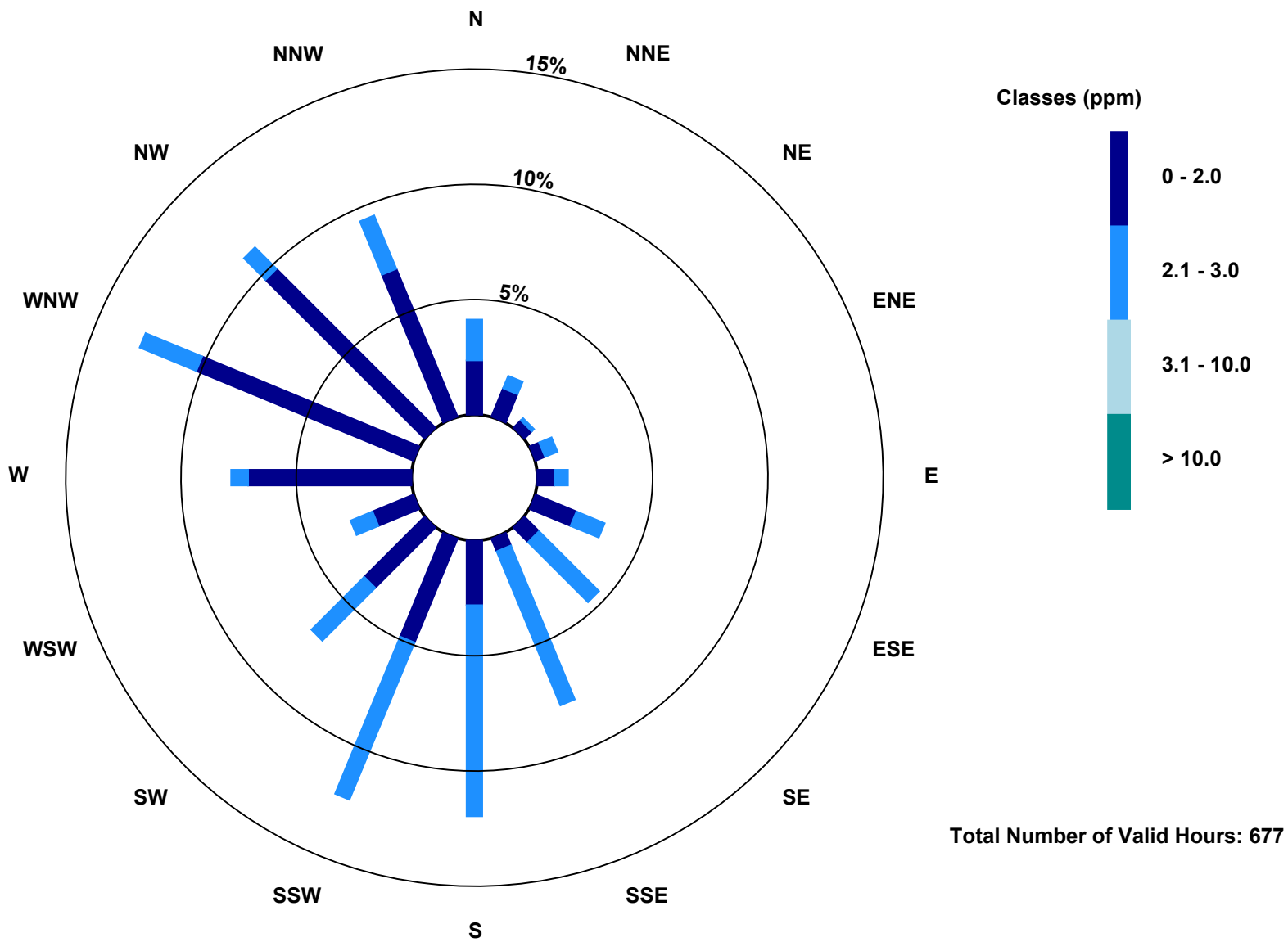
Total Number of Valid Hours: 677

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

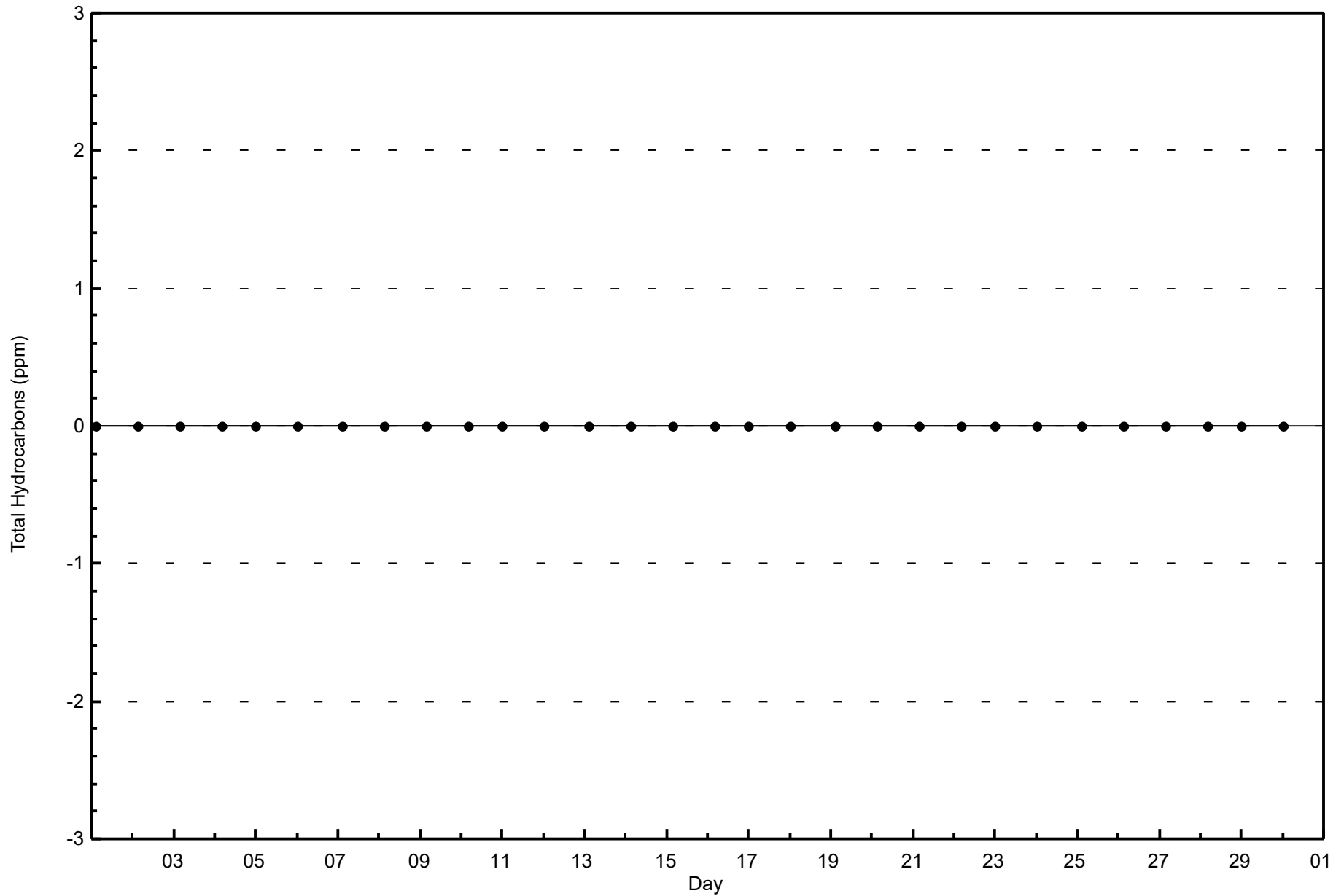
Total Hydrocarbons (THC) - ppm
Conklin





Wood Buffalo Environmental Association
Zero Responses

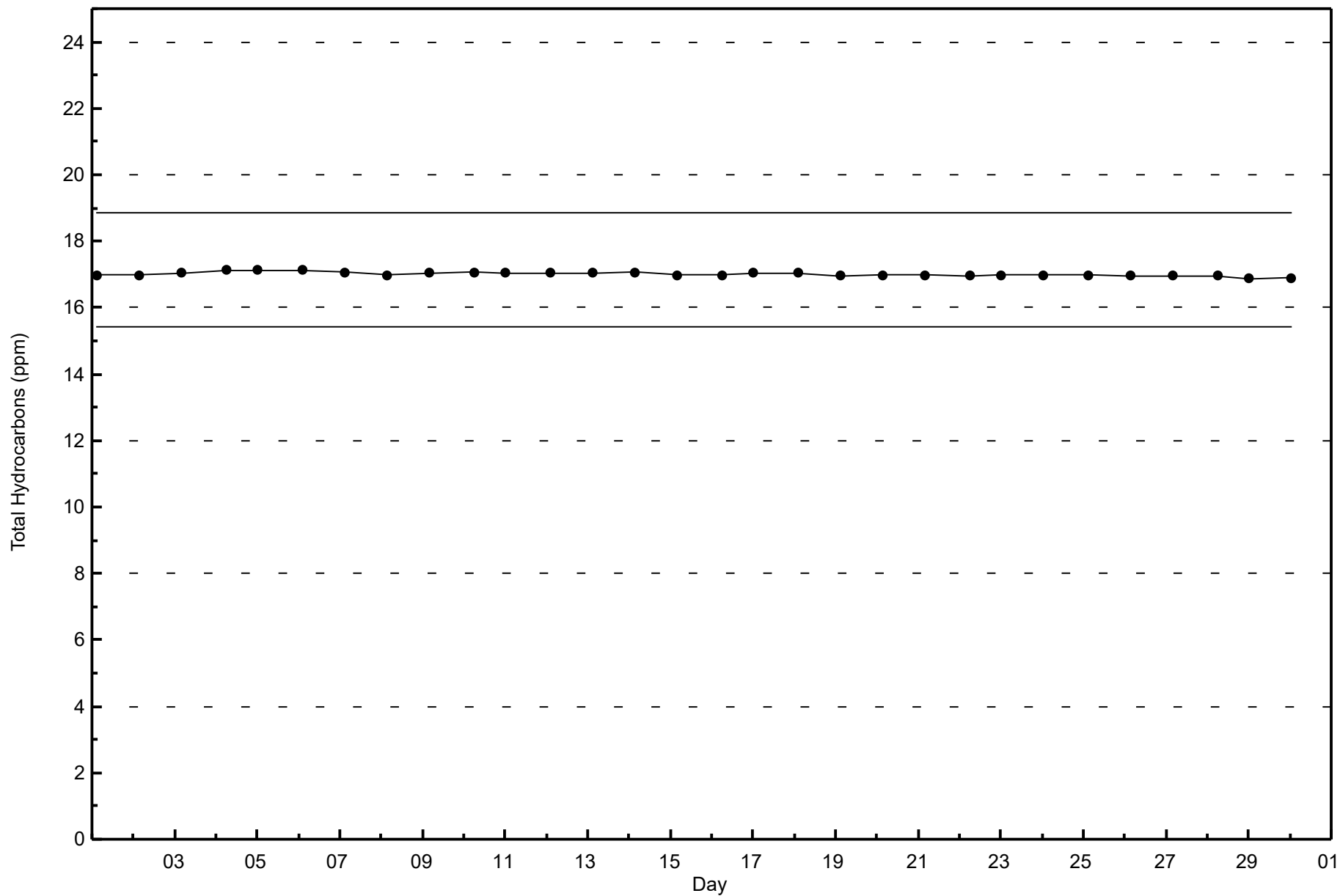
Total Hydrocarbons (THC) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Conklin - April 2025

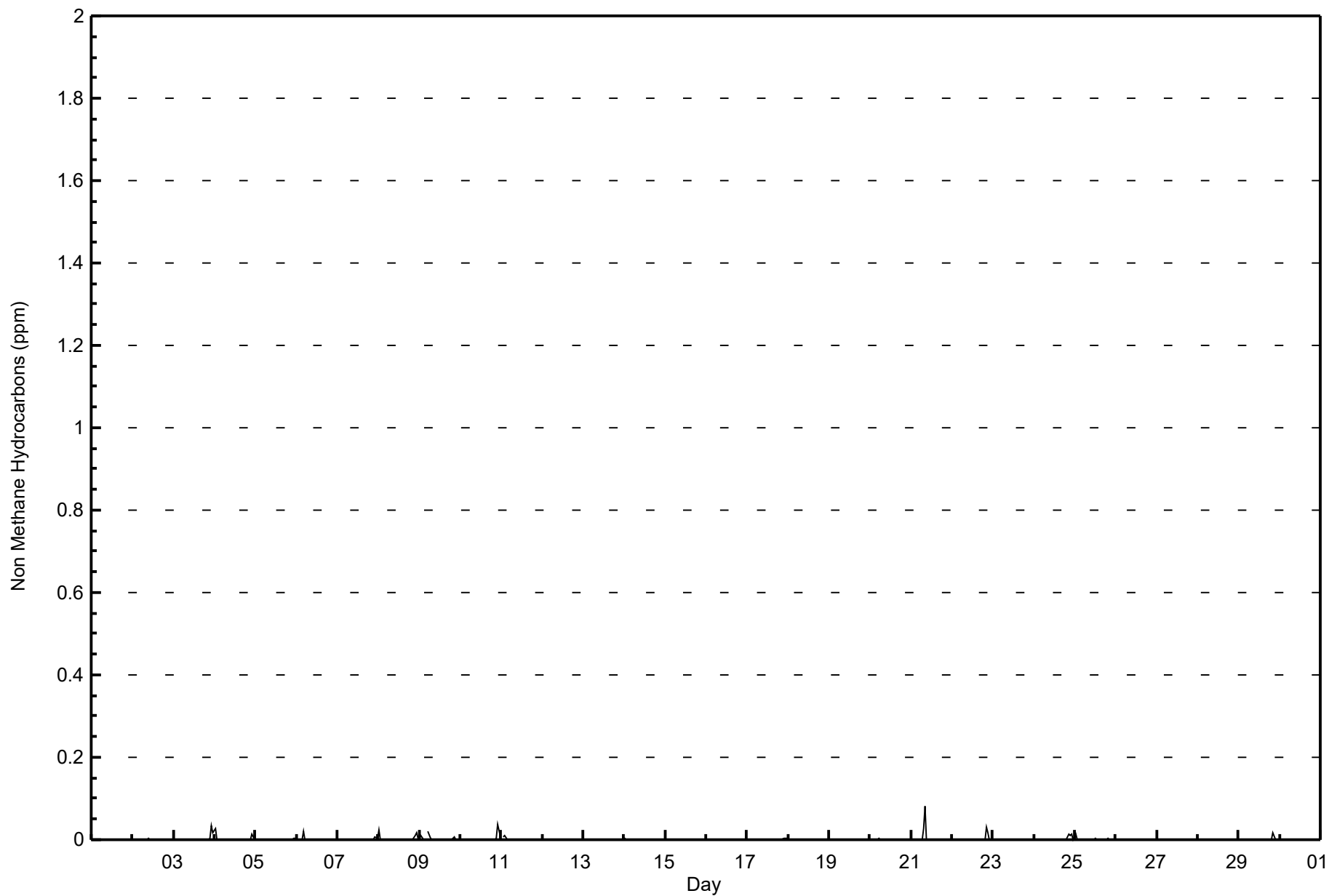


Maximum Value: 0.083 ppm on Apr 21 09:00																			Maximum Daily Average: 0.005 ppm on Apr 21										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 01:00																			Minimum Daily Average: 0.000 ppm on Apr 12										Hours of Data: 680	
Maximum Diurnal Average: 0.004 ppm at hour 23																			Minimum Diurnal Average: 0.000 ppm at hour 4										Hours of Missing Data: 40	
Monthly Average: 0.001 ppm																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.0 P ₉₀ = 0.0 P ₉₉ = 0.0										Hours of Calibration: 34	
																													Percent Operational Time: 99.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	PF	PF	PF	PF	PF	PF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000				
2-Apr	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
3-Apr	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	0.003	0.035	0.017	0.002					
4-Apr	0.026	0.000	0.000	0.000	0.000	Z	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	0.012	0.000	0.002					
5-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.004	0.000					
6-Apr	0.000	Z	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001					
7-Apr	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	0.008	0.002	0.000					
8-Apr	0.023	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.019	0.004	0.002					
9-Apr	0.002	0.010	0.000	0.000	Z	0.021	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	0.005	0.000	0.000	0.000	0.002					
10-Apr	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	0.003	0.037	0.006	0.002					
11-Apr	Z	0.008	0.009	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	0.001					
12-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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	0.001	0.000	0.000					
14-Apr	0.002	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
15-Apr	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-Apr	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					
17-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.002	0.004	0.000					
18-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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-Apr	0.000	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					
21-Apr	0.000	0.000	0.001	0.000	Z	0.001	0.001	0.027	0.083	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	0.005					
22-Apr	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	0.030	0.018	0.000	0.000	0.002					
23-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.012	0.014	0.000	0.002					
25-Apr	0.012	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.001					
26-Apr	0.000	0.000	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					
27-Apr	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	0.001	0.001	0.000					
28-Apr	0.001	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001					
29-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.001					
30-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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					
																									Diurnal Maximum					
Z - zerospan			C - Calibration				PF - Power Failure																							



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	656	96.47	96.47
0.006 - 0.05	23	3.38	99.85
0.06 - 0.1	1	0.15	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	28	13	4	7	8	21	27	46	74	80	47	20	53	87	75	63	653
0.006 - 0.05	0	0	0	0	0	1	4	7	7	3	0	0	0	0	0	1	23
0.06 - 0.1	0	0	0	0	1	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
Totals	28	13	4	7	9	22	31	53	81	83	47	20	53	87	75	64	677

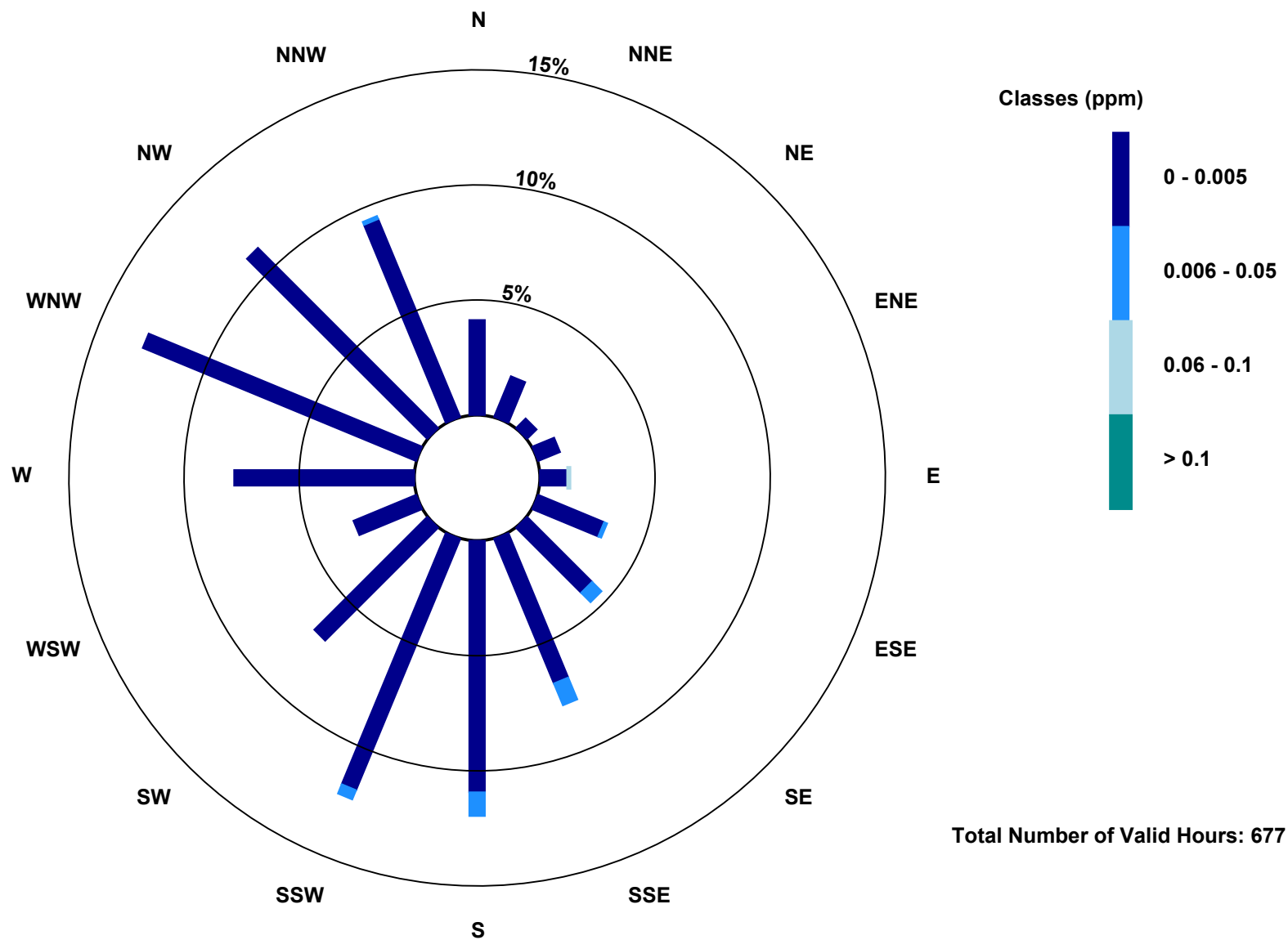
Total Number of Valid Hours: 677

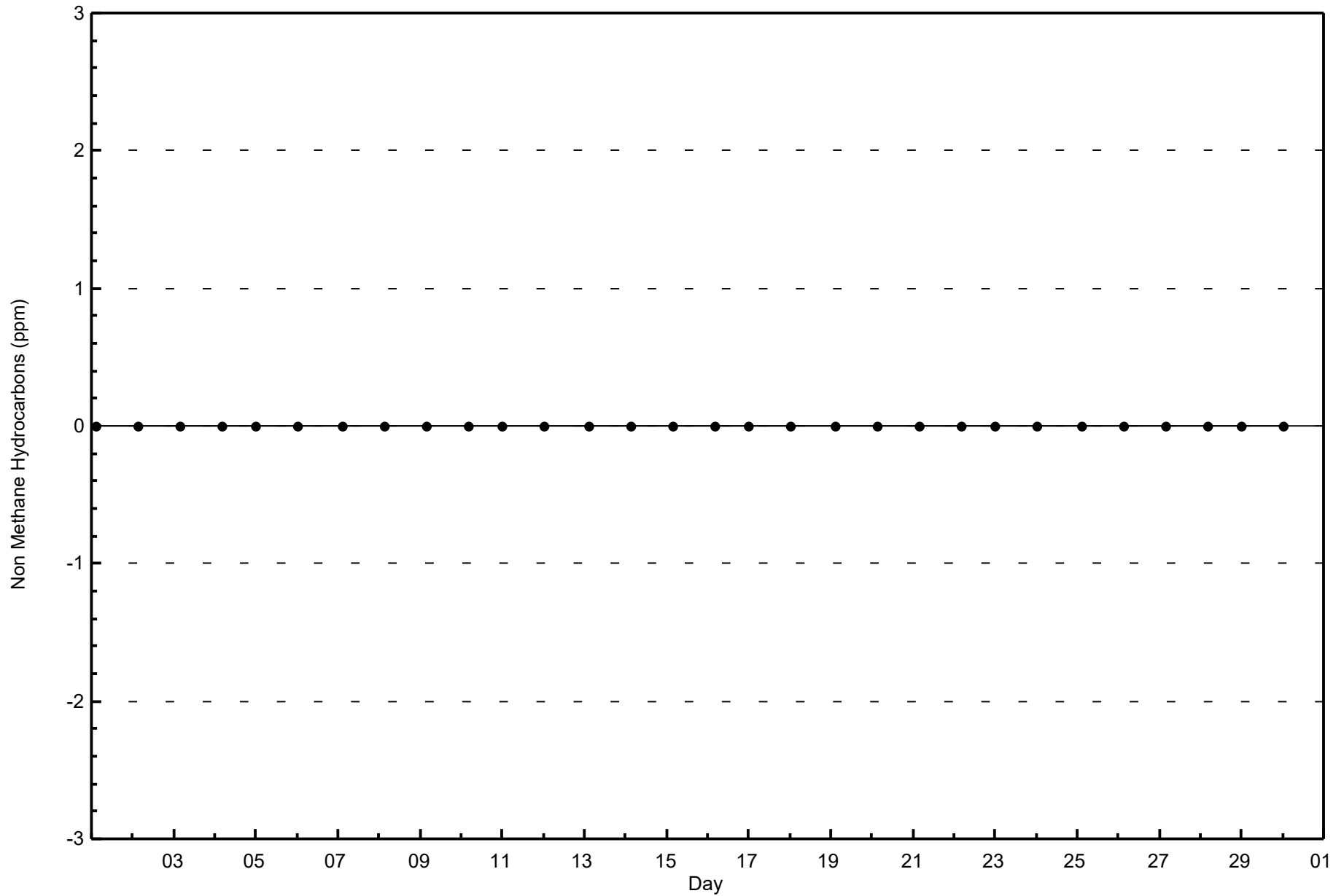
Total Number of Hours: 720

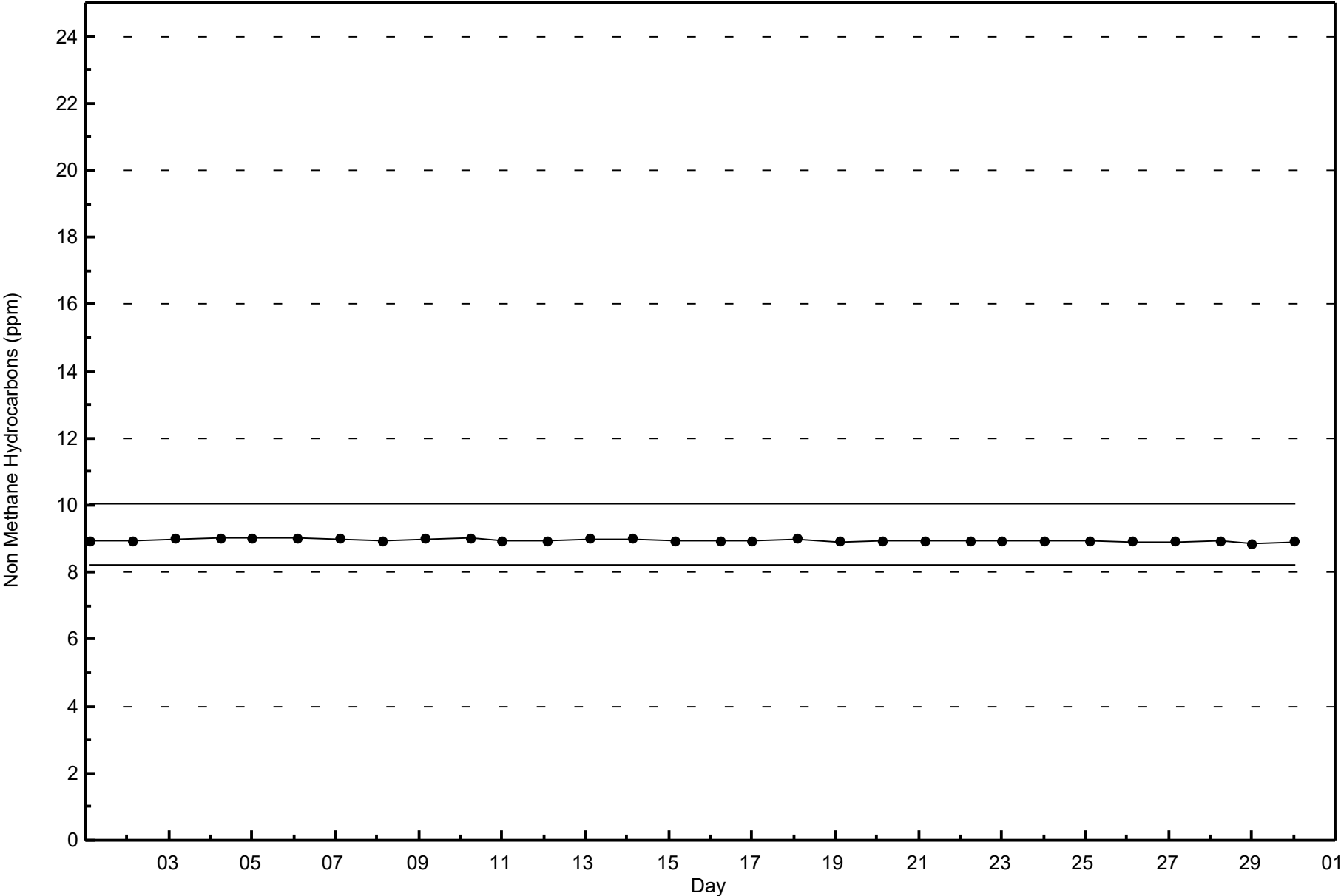


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Conklin









Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

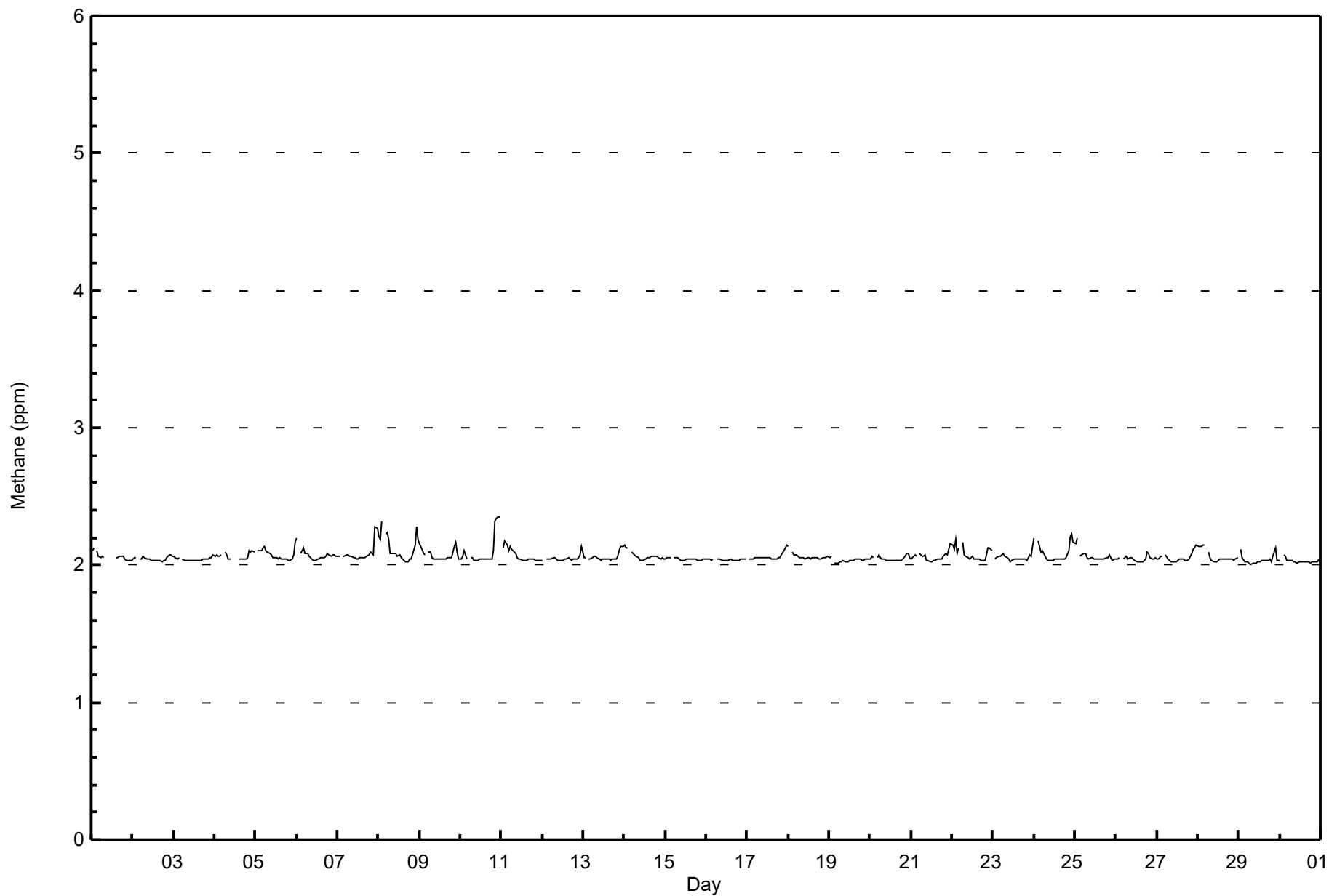
Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 2.4 ppm on Apr 10 23:00 Maximum Daily Average: 2.1 ppm on Apr 8																			Hours in Service: 720 Hours of Data: 680 Hours of Missing Data: 40 Hours of Calibration: 34 Percent Operational Time: 99.2							
Minimum Value: 2.0 ppm on Apr 29 08:00 Minimum Daily Average: 2.0 ppm on Apr 30 Maximum Diurnal Average: 2.1 ppm at hour 24 Minimum Diurnal Average: 2.0 ppm at hour 11 Monthly Average: 2.06 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.1 P ₉₀ = 2.1 P ₉₉ = 2.3																										
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-Apr	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	--	2.1
2-Apr	2.0	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
3-Apr	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
4-Apr	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2
6-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
7-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.1	2.3
8-Apr	2.2	2.2	2.3	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.1	2.3
9-Apr	2.2	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.2
10-Apr	2.0	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.4	2.3	2.1	2.4
11-Apr	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
12-Apr	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	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
13-Apr	2.1	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
14-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1
15-Apr	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
16-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
17-Apr	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18-Apr	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
19-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Apr	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1
21-Apr	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.2
22-Apr	2.1	2.1	2.2	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2
23-Apr	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	2.0	2.1	2.1	2.1	2.1	2.1
24-Apr	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.2
25-Apr	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.2
26-Apr	2.0	2.0	2.1	Z	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1
27-Apr	2.0	2.0	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
28-Apr	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
29-Apr	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
30-Apr	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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 2.1 2.1 2.1 2.1																									Diurnal Average	
2.2 2.2 2.3 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 2.3 2.3 2.4 2.3																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	380	55.88	55.88
2.1 - 3.0	300	44.12	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Methane (CH₄) - ppm
Conklin - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	16	9	3	3	5	13	6	4	19	33	25	13	48	69	66	47	379
2.1 - 3.0	12	4	1	4	4	9	25	49	62	50	22	7	5	18	9	17	298
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	28	13	4	7	9	22	31	53	81	83	47	20	53	87	75	64	677

Total Number of Valid Hours: 677

Total Number of Hours: 720



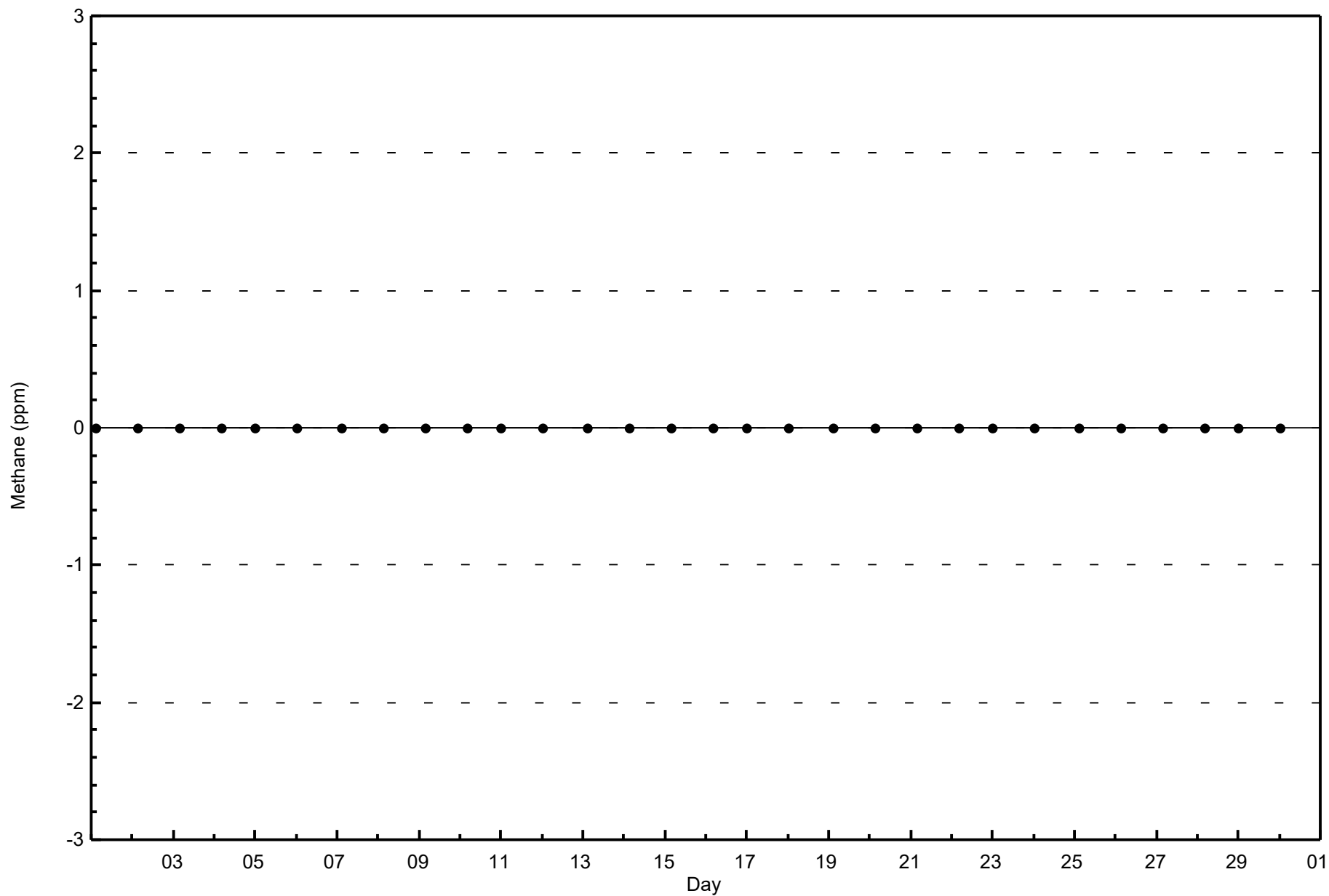
Methane (CH₄) - ppm
Conklin





Wood Buffalo Environmental Association
Zero Responses

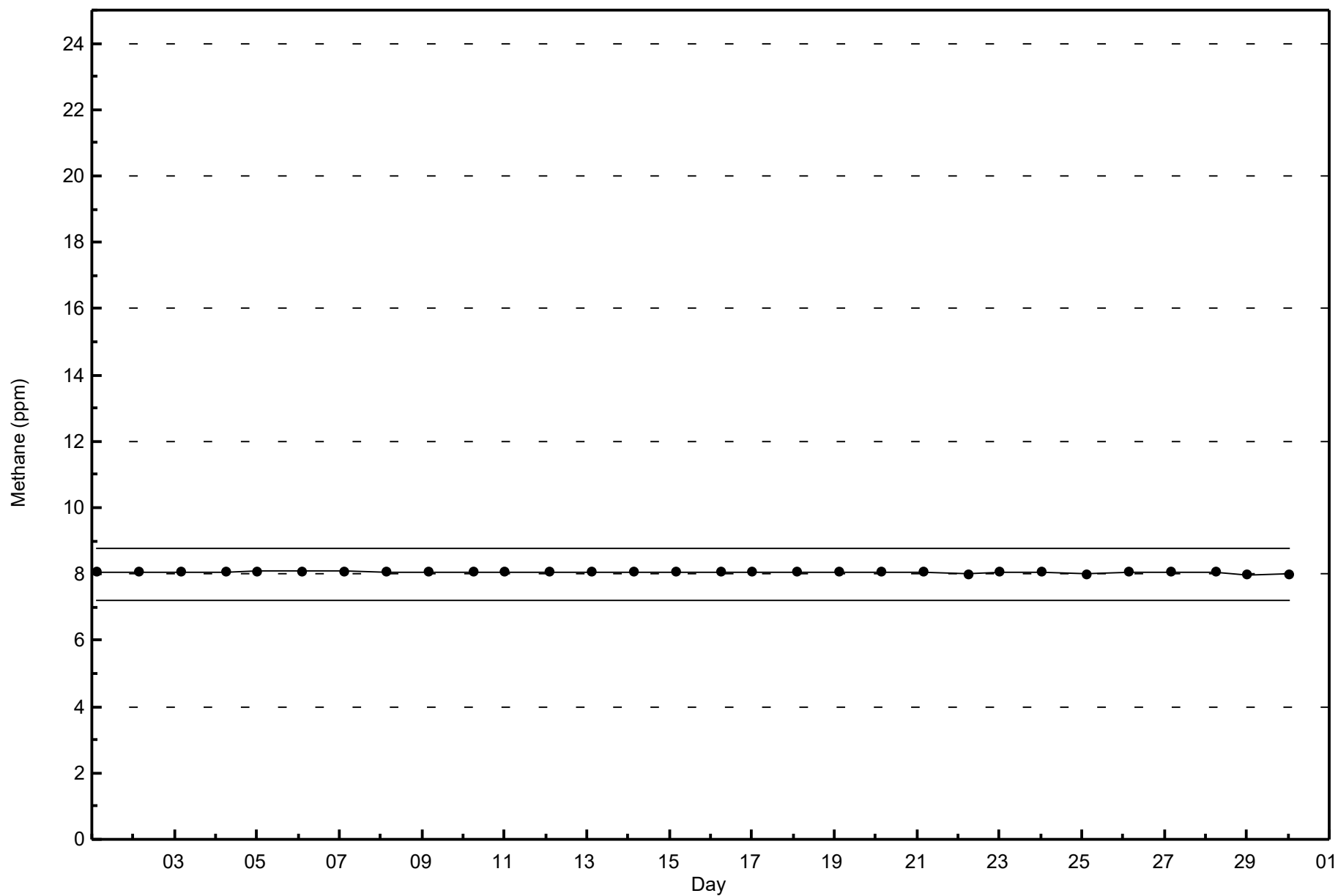
Methane (CH₄) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

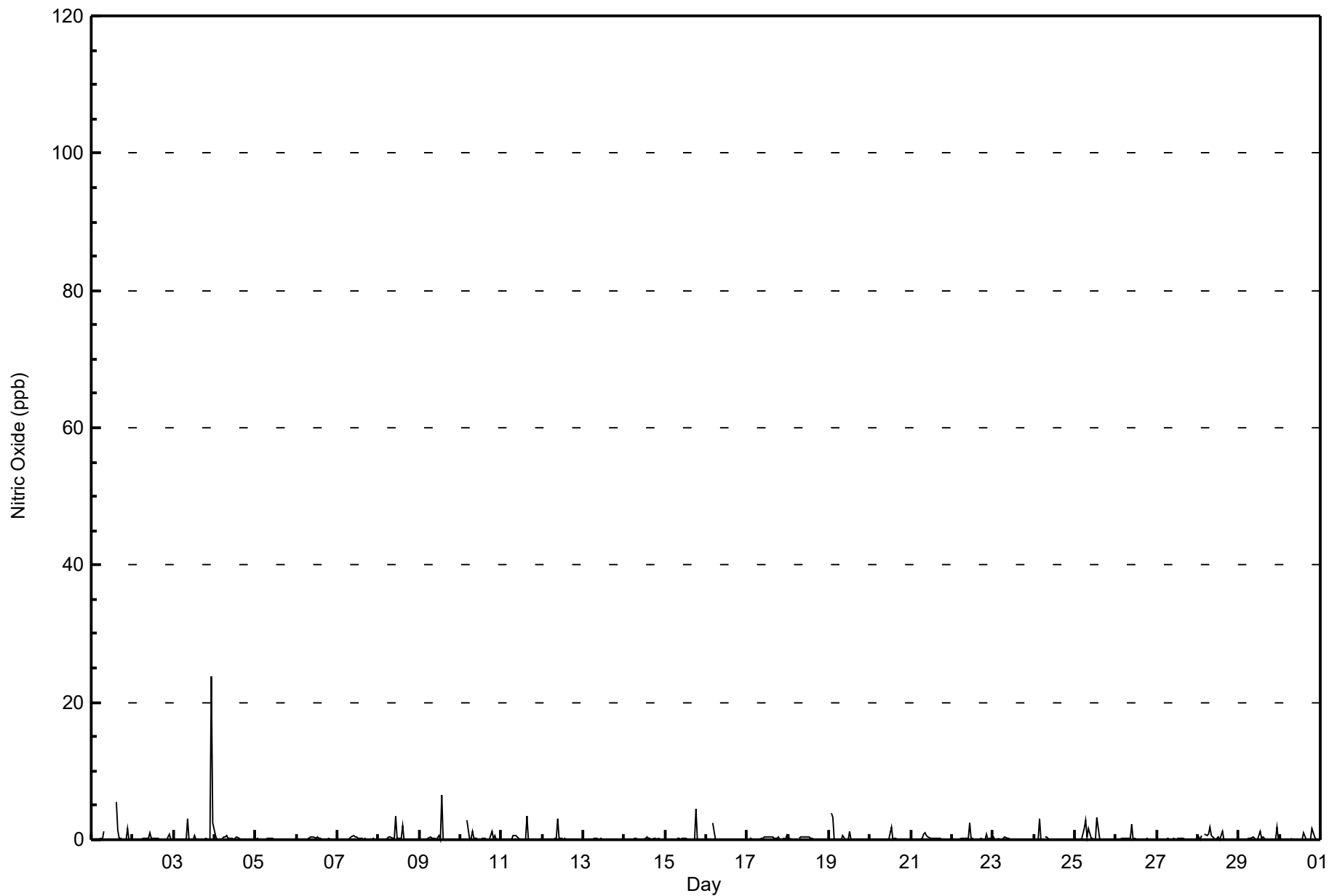
Conklin - April 2025

Maximum Value: 23.8 ppb on Apr 3 23:00																			Maximum Daily Average: 1.3 ppb on Apr 3							Hours in Service: 720		
Minimum Value: 0.0 ppb on Apr 1 03:00																			Minimum Daily Average: 0.1 ppb on Apr 13							Hours of Data: 679		
Maximum Diurnal Average: 0.9 ppb at hour 23																			Minimum Diurnal Average: 0.0 ppb at hour 18							Hours of Missing Data: 41		
Monthly Average: 0.25 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 = 3.3							Hours of Calibration: 35		
																										Percent Operational Time: 99.2		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	Z	0.0	0.0	0.0	0.0	0.2	0.1	1.2	PF	PF	PF	PF	PF	PF	5.5	1.4	0.1	0.2	0.0	0.0	0.0	1.7	0.0	0.0	--	5.5		
2-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	1.0	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.2	1.0		
3-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	3.1	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	23.8	2.4	1.3	23.8		
4-Apr	0.7	0.0	0.0	Z	0.0	0.4	0.4	0.6	0.3	0.1	0.2	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.7		
5-Apr	0.0	0.2	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3		
6-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.4	0.4	0.4	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4		
7-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.6		
8-Apr	0.1	Z	0.0	0.0	0.0	0.2	0.3	0.4	0.3	0.3	3.4	0.2	0.1	0.1	2.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.4		
9-Apr	0.0	0.3	Z	0.1	0.0	0.1	0.3	0.2	0.2	0.2	0.1	0.7	0.1	6.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	6.5		
10-Apr	0.0	0.0	0.0	Z	2.8	0.1	0.1	1.2	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	1.2	0.3	0.5	0.0	0.0	0.0	0.3	2.8		
11-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.6	0.6	0.4	0.1	0.1	0.1	0.1	0.1	3.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.4		
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	3.1	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	0.2	3.1		
13-Apr	Z	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2		
14-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3		
15-Apr	0.1	0.0	Z	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.3	4.4		
16-Apr	0.0	0.0	0.0	Z	2.4	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	2.4		
17-Apr	0.0	0.0	0.2	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.5	0.0	0.0	0.1	0.1	0.5	0.2	0.5		
18-Apr	0.0	0.2	0.0	0.0	0.0	Z	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.5		
19-Apr	Z	3.8	3.3	0.0	0.1	0.0	0.1	0.0	0.7	0.1	0.1	0.1	1.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.8		
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	1.8	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8		
21-Apr	0.0	0.1	Z	0.0	0.1	0.1	0.1	0.7	0.9	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.9		
22-Apr	0.0	0.0	0.0	Z	0.0	0.2	0.3	0.3	0.2	0.2	2.5	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.8	0.0	0.2	0.2	0.3	2.5		
23-Apr	0.4	0.1	0.1	0.1	Z	0.0	0.2	0.4	0.2	0.2	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	0.1	0.4		
24-Apr	0.0	0.0	0.1	3.1	0.0	Z	0.3	0.4	0.2	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	0.2	3.1		
25-Apr	Z	0.0	0.0	0.1	0.0	1.7	2.9	0.3	1.6	0.1	0.1	0.1	0.1	3.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	3.3		
26-Apr	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	2.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	2.2		
27-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3		
28-Apr	0.4	0.0	0.7	Z	0.7	0.7	0.8	1.8	0.7	0.3	0.1	0.1	0.4	0.1	1.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8		
29-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.2	0.4	0.1	0.1	0.1	1.2	0.2	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.2	1.9		
30-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	1.1	0.1	0.0	0.1	0.1	1.6	0.5	0.0	0.0	0.0	0.2	1.6		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan																									C - Calibration		PF - Power Failure	



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	678	99.85	99.85
21 - 40	1	0.15	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	11	4	7	10	24	29	53	78	83	49	18	51	91	76	64	675
21 - 40	0	0	0	0	0	0	0	0	0	1	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	27	11	4	7	10	24	29	53	78	84	49	18	51	91	76	64	676

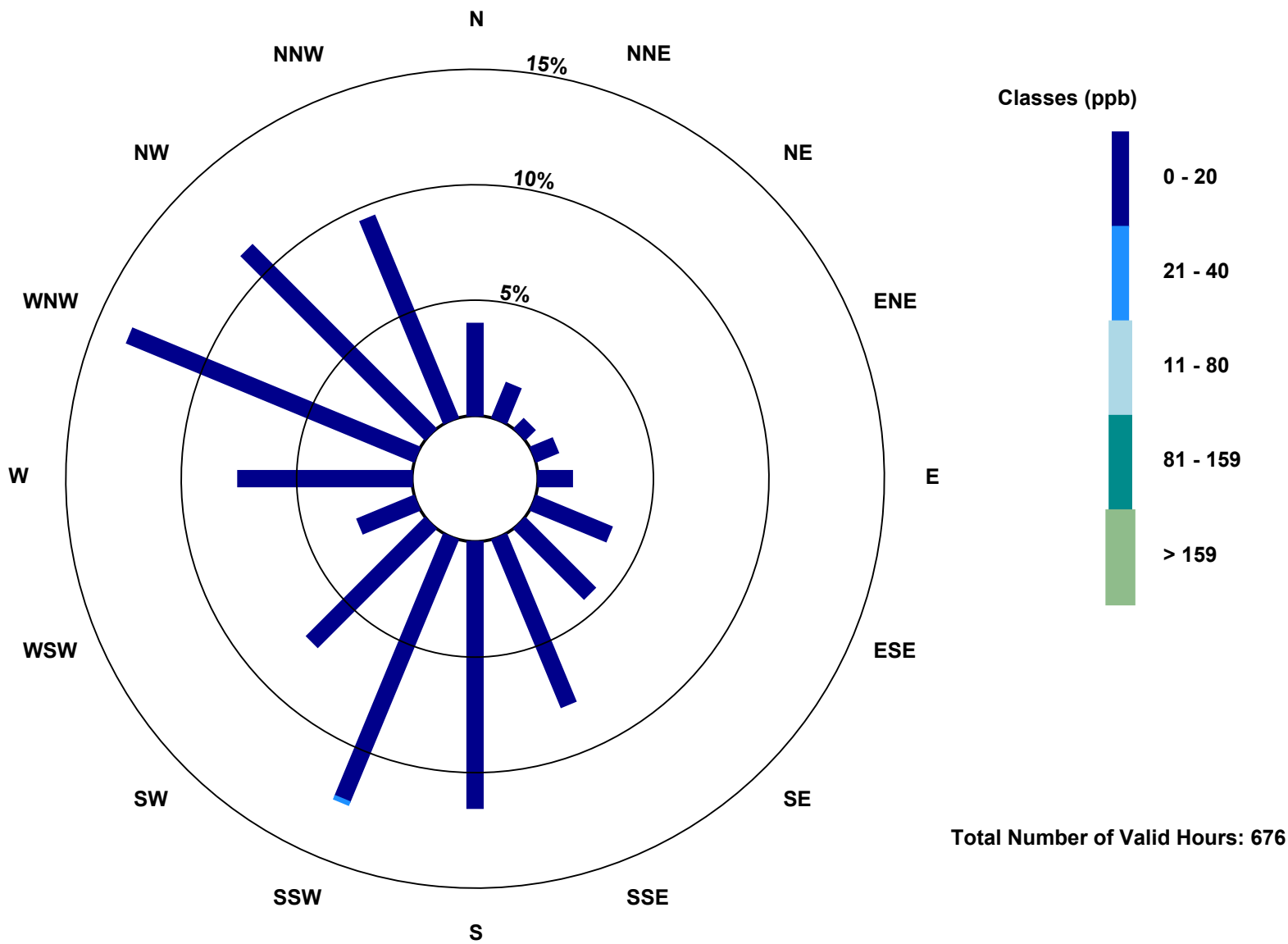
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

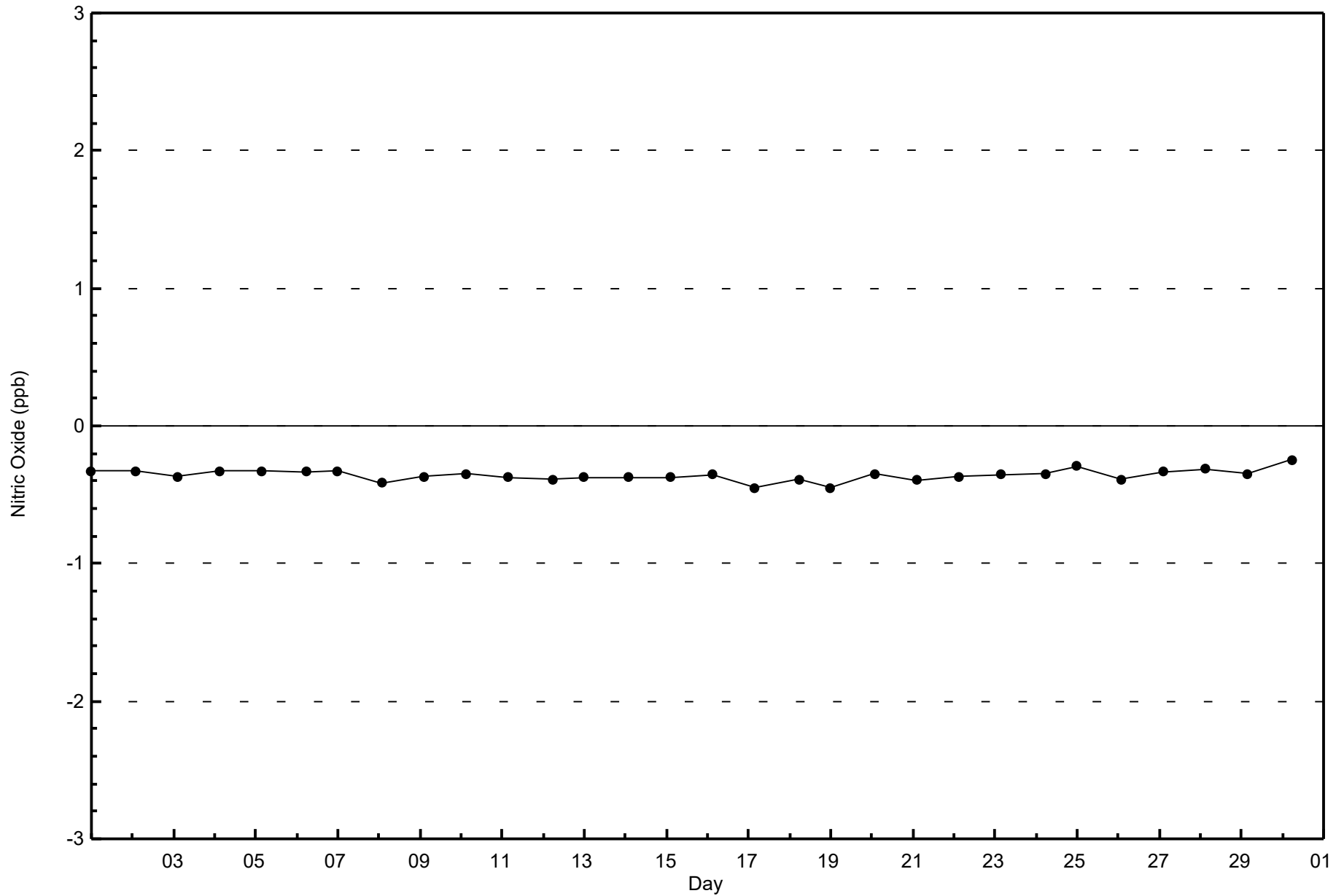
Nitric Oxide (NO) - ppb
Conklin





Wood Buffalo Environmental Association
Zero Responses

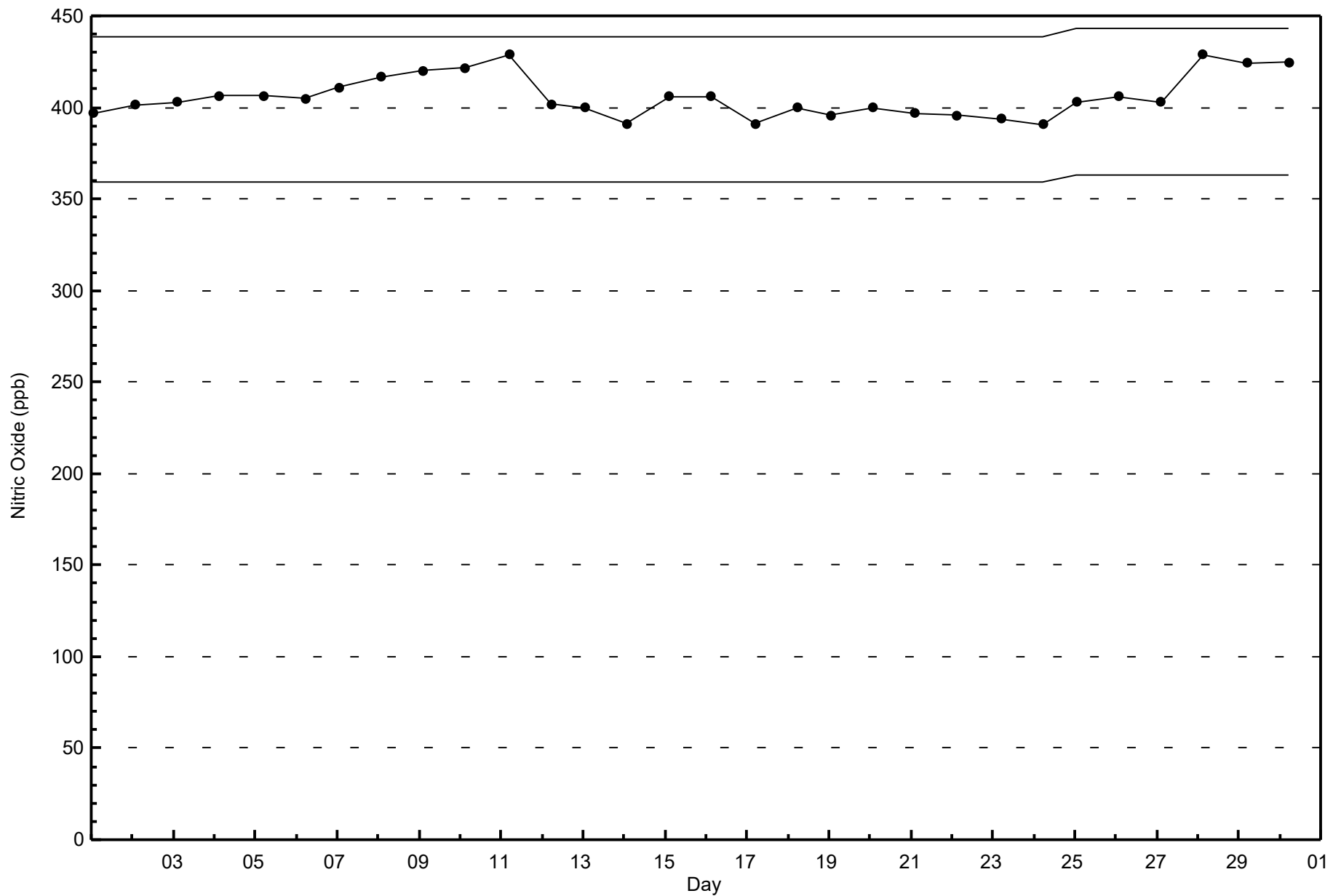
Nitric Oxide (NO) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

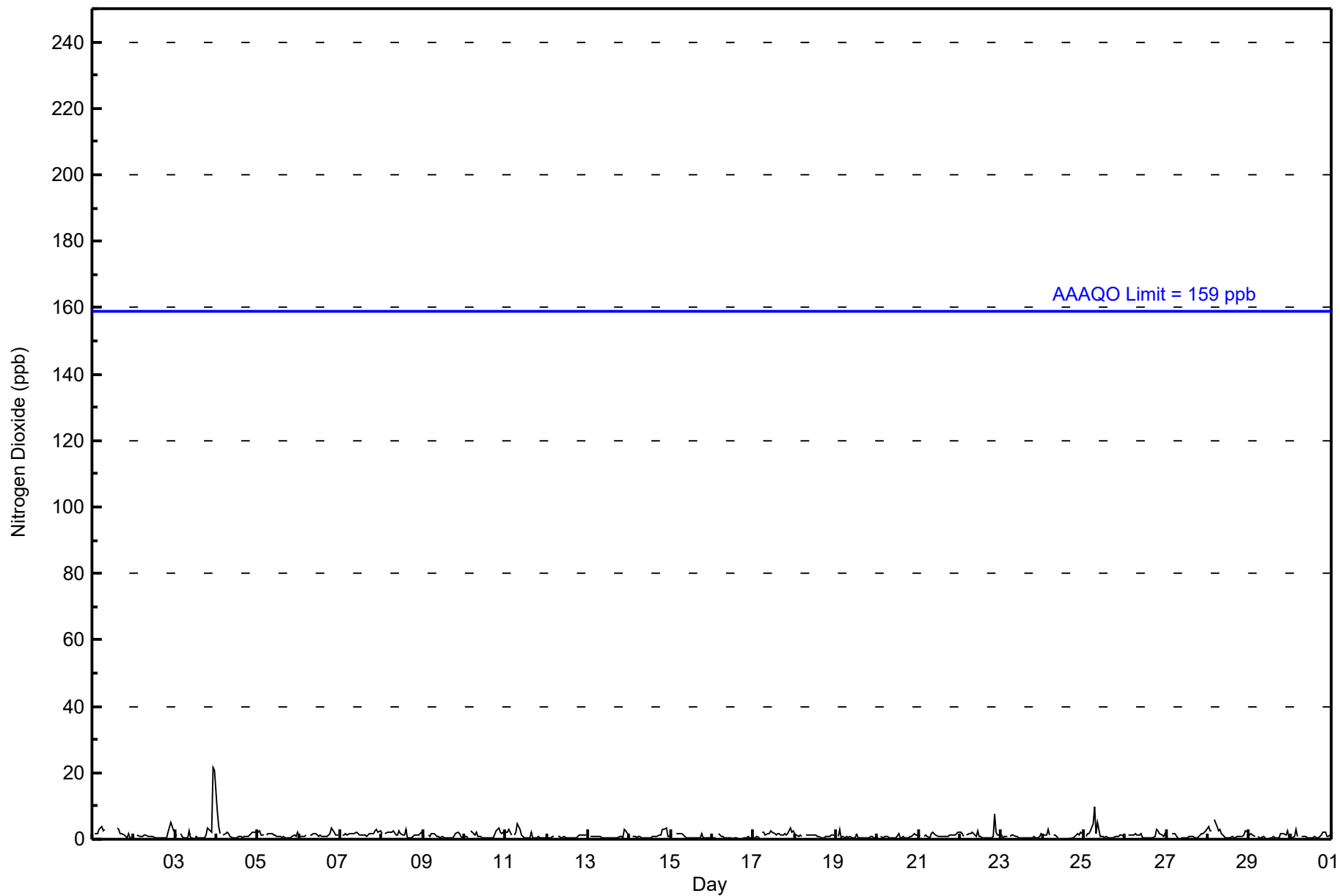
Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 21.5 ppb on Apr 3 23:00 Maximum Daily Average: 2.8 ppb on Apr 3																			Hours in Service: 720 Hours of Data: 679 Hours of Missing Data: 41 Hours of Calibration: 35 Percent Operational Time: 99.2							
Minimum Value: 0.2 ppb on Apr 3 12:00 Minimum Daily Average: 0.5 ppb on Apr 16 Maximum Diurnal Average: 2.2 ppb at hour 23 Minimum Diurnal Average: 0.6 ppb at hour 17 Monthly Average: 1.22 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.2 P ₉₉ = 5.0																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	1.8	1.5	1.7	2.8	3.9	2.6	3.0	PF	PF	PF	PF	PF	PF	3.2	3.0	1.7	1.6	1.2	0.9	0.6	1.7	0.4	0.4	--	3.9
2-Apr	0.8	Z	1.1	0.9	0.9	1.0	1.3	1.2	0.9	0.7	0.9	0.8	0.6	0.6	0.6	0.6	0.5	0.3	0.4	0.6	2.2	5.0	3.7	2.7	1.2	5.0
3-Apr	2.0	1.0	Z	1.5	0.8	0.5	0.3	0.3	2.4	0.4	0.4	0.2	0.7	0.4	0.4	0.4	0.5	0.5	1.1	3.2	2.7	2.0	21.5	20.7	2.8	21.5
4-Apr	8.6	4.0	1.9	Z	1.3	1.7	2.2	1.8	0.7	0.6	0.6	0.5	0.6	0.9	0.7	0.6	0.7	0.9	1.0	1.3	1.7	2.1	2.3	2.1	1.7	8.6
5-Apr	2.1	2.6	1.3	1.2	Z	1.1	1.7	1.7	1.6	1.4	1.1	0.8	0.7	0.7	0.6	0.9	0.6	0.4	0.5	0.4	0.7	1.3	1.0	2.1	1.2	2.6
6-Apr	0.9	0.7	0.7	1.0	1.4	Z	1.1	1.4	1.8	1.6	1.7	0.8	1.3	1.0	0.9	0.8	0.9	1.1	1.5	3.6	2.2	1.2	1.1	1.2	1.3	3.6
7-Apr	Z	1.4	1.4	1.5	1.4	1.5	1.5	1.6	1.8	2.2	1.8	1.4	1.3	1.1	1.1	0.9	1.3	1.5	1.7	1.9	2.5	3.0	2.1	2.4	1.7	3.0
8-Apr	1.9	Z	1.9	2.0	2.3	2.1	2.3	2.4	1.4	1.4	2.6	1.5	1.4	1.1	3.0	0.3	0.5	0.3	0.7	1.2	1.3	1.2	1.6	2.0	1.6	3.0
9-Apr	1.3	1.0	Z	1.1	1.0	1.5	1.7	1.1	0.8	0.7	0.5	0.8	0.3	0.3	0.4	0.3	0.3	0.5	1.0	1.6	2.2	1.9	0.9	0.6	0.9	2.2
10-Apr	0.7	0.7	0.5	Z	2.4	1.9	1.3	2.0	0.9	0.7	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	2.7	3.0	3.2	2.0	1.8	2.6	1.3	3.2
11-Apr	2.1	2.0	2.9	1.4	Z	1.4	2.0	4.6	3.0	1.4	0.8	0.6	0.5	0.5	0.4	2.1	0.5	0.6	0.6	0.7	0.6	0.6	0.5	0.5	1.3	4.6
12-Apr	0.5	0.6	0.5	0.8	0.7	Z	0.8	0.9	0.6	0.5	0.7	0.5	0.5	0.6	0.4	0.5	0.4	0.4	0.8	1.1	1.1	1.1	1.2	1.4	0.7	1.4
13-Apr	Z	0.9	0.8	0.9	0.9	0.8	1.0	0.7	0.6	0.5	0.6	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.8	0.7	0.5	3.0	2.7	1.3	0.9	3.0
14-Apr	1.0	Z	0.7	0.8	0.6	0.7	0.8	0.5	0.5	0.4	0.5	0.4	0.5	0.9	0.8	0.9	0.9	1.1	1.4	2.8	3.1	3.5	0.9	0.7	1.1	3.5
15-Apr	1.1	1.3	Z	1.6	1.7	1.9	1.6	1.2	0.8	0.5	0.4	0.4	0.6	0.4	0.4	0.4	0.5	0.5	1.8	0.5	0.4	0.3	0.5	0.5	0.8	1.9
16-Apr	0.4	0.4	0.4	Z	1.8	0.7	1.0	0.5	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.4	0.9	0.6	0.3	0.5	1.8
17-Apr	0.3	0.3	0.8	0.6	Z	2.0	2.0	1.4	1.7	1.6	2.6	2.0	1.6	1.4	1.6	1.8	1.3	1.2	1.8	1.4	1.7	3.5	2.3	2.6	1.6	3.5
18-Apr	1.7	1.3	0.9	1.2	0.8	Z	1.4	1.1	1.1	1.1	1.1	1.1	1.2	0.8	0.7	0.5	0.5	0.5	0.9	0.8	0.8	1.4	1.3	1.4	1.0	1.7
19-Apr	Z	0.8	2.9	0.6	0.7	0.6	0.7	0.6	0.7	0.5	0.4	0.4	1.8	0.3	0.5	0.4	0.4	0.5	0.3	0.5	0.7	0.8	0.5	0.5	0.7	2.9
20-Apr	0.7	Z	0.8	0.5	0.9	0.9	0.9	0.5	0.5	0.4	0.3	0.3	1.8	0.6	0.6	0.8	0.6	0.5	0.6	0.7	0.7	1.6	1.3	1.2	0.8	1.8
21-Apr	0.7	1.1	Z	0.9	1.2	0.8	0.6	1.9	2.3	1.6	1.3	0.8	0.9	0.7	0.8	0.7	0.8	0.9	1.1	1.3	1.2	1.1	1.9	2.0	1.2	2.3
22-Apr	2.0	1.5	0.9	Z	1.3	1.7	1.6	2.1	1.6	1.0	2.5	1.0	0.8	0.6	0.4	0.4	0.3	0.5	0.4	0.8	7.7	2.2	1.4	1.3	1.5	7.7
23-Apr	1.2	0.6	0.7	1.0	Z	0.8	1.4	1.4	0.9	0.9	0.5	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.5	0.8	0.5	0.6	0.9	1.9	0.7	1.9
24-Apr	1.4	1.3	1.1	2.9	1.4	Z	1.1	1.3	1.0	0.5	C	C	C	C	C	0.3	0.2	0.3	0.3	0.8	1.5	1.1	2.0	1.9	1.1	2.9
25-Apr	Z	0.8	1.9	1.7	2.5	4.7	9.8	1.8	5.2	0.9	0.8	0.7	0.6	0.8	0.6	0.5	0.5	0.5	0.8	1.0	0.9	1.1	1.3	1.0	1.8	9.8
26-Apr	0.9	Z	1.1	1.2	1.3	1.3	1.8	1.2	1.2	1.9	0.6	0.6	0.3	0.3	0.5	0.4	0.4	1.0	3.0	2.5	1.8	1.3	1.0	1.5	1.2	3.0
27-Apr	0.8	1.0	Z	1.8	1.9	1.5	0.6	0.2	0.2	0.3	0.5	0.3	0.5	0.9	0.8	0.8	0.6	0.5	0.4	1.0	1.6	1.5	2.0	2.5	1.0	2.5
28-Apr	3.7	2.4	2.6	Z	6.1	4.0	2.7	3.0	1.7	0.9	0.4	0.6	0.5	0.5	0.9	0.4	0.6	0.7	0.8	0.7	1.0	1.1	2.7	2.2	1.7	6.1
29-Apr	1.3	1.7	1.1	0.7	Z	0.8	0.6	0.5	0.9	0.5	0.2	0.2	0.6	0.5	0.8	0.5	0.4	0.6	1.6	1.6	1.7	1.2	2.7	0.5	0.9	2.7
30-Apr	0.4	0.4	0.9	2.8	0.9	Z	0.8	0.8	0.7	0.7	0.4	0.5	0.4	0.3	0.9	0.3	0.5	1.0	1.2	2.1	2.2	0.8	0.9	1.3	0.9	2.8
1.5 1.3 1.3 1.3 1.6 1.6 1.6 1.4 1.3 0.9 0.9 0.7 0.8 0.6 0.8 0.7 0.6 0.7 1.0 1.3 1.6 1.7 2.2 2.1																									Diurnal Average	
8.6 4.0 2.9 2.9 6.1 4.7 9.8 4.6 5.2 2.2 2.6 2.0 1.8 1.4 3.2 3.0 1.7 1.6 3.0 3.6 7.7 5.0 21.5 20.7																									Diurnal Maximum	
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	99.71	99.71
21 - 40	2	0.29	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	11	4	7	10	24	29	53	77	83	49	18	51	91	76	64	674
21 - 40	0	0	0	0	0	0	0	0	1	1	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	27	11	4	7	10	24	29	53	78	84	49	18	51	91	76	64	676

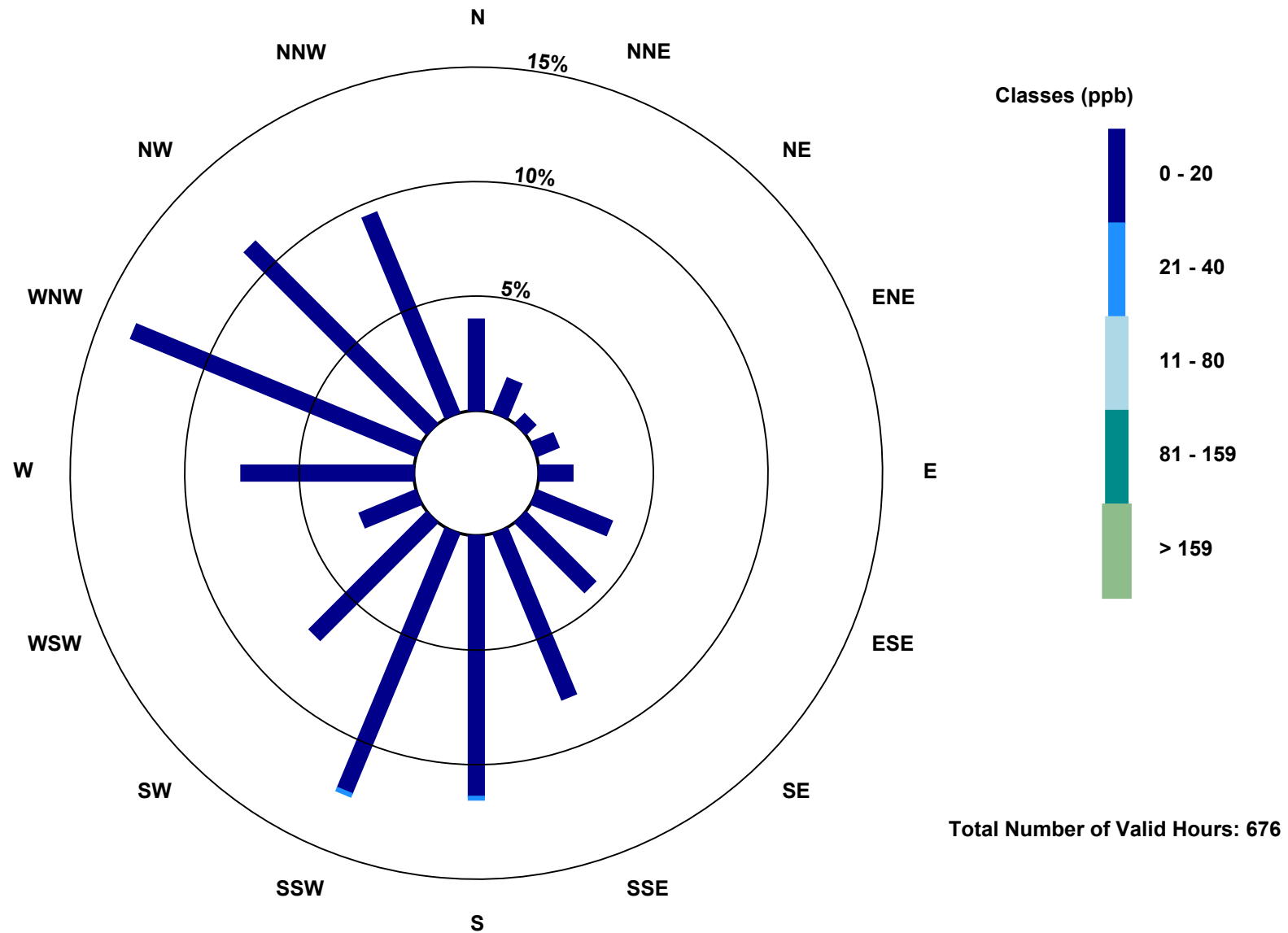
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

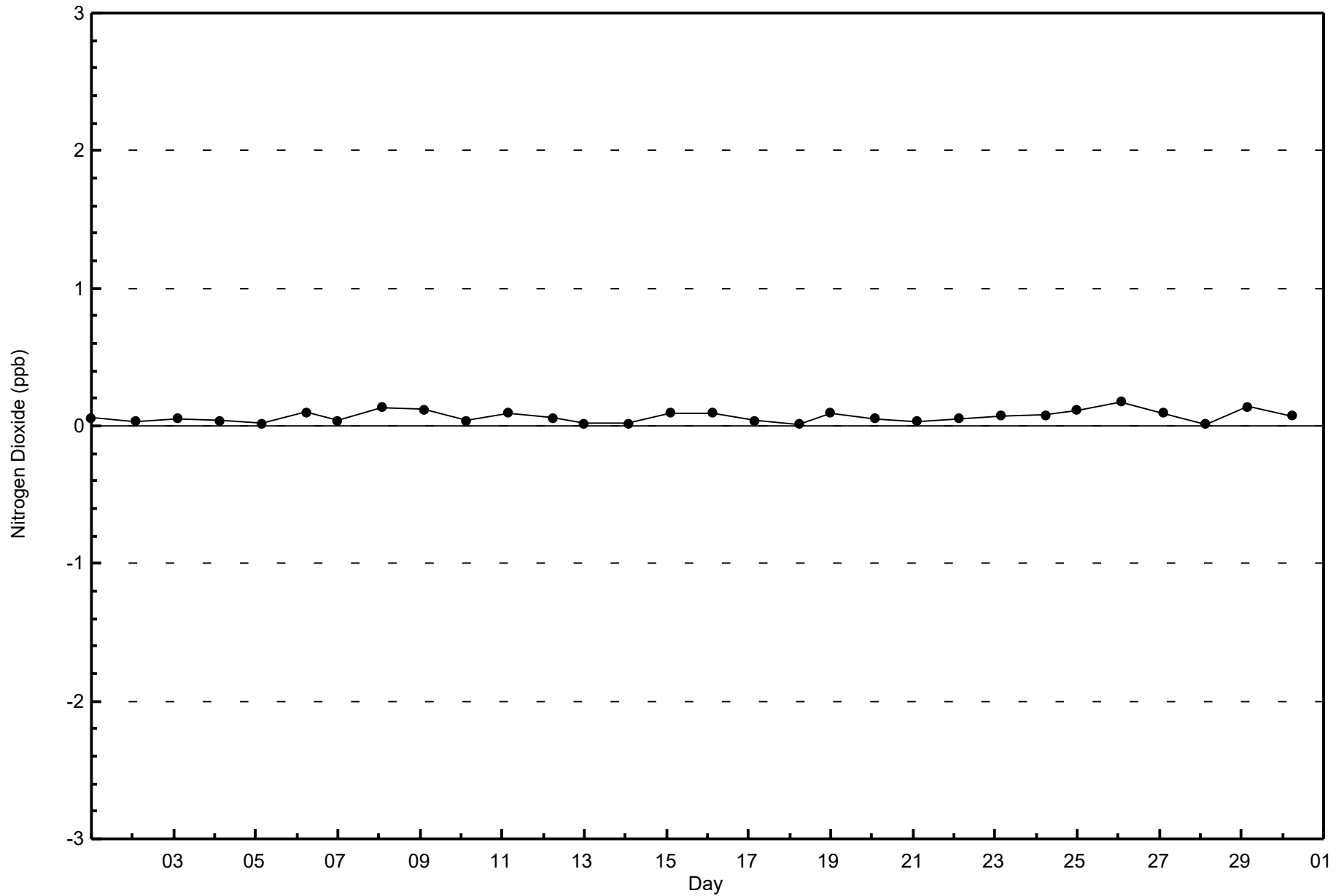
Nitrogen Dioxide (NO₂) - ppb
Conklin





Wood Buffalo Environmental Association
Zero Responses

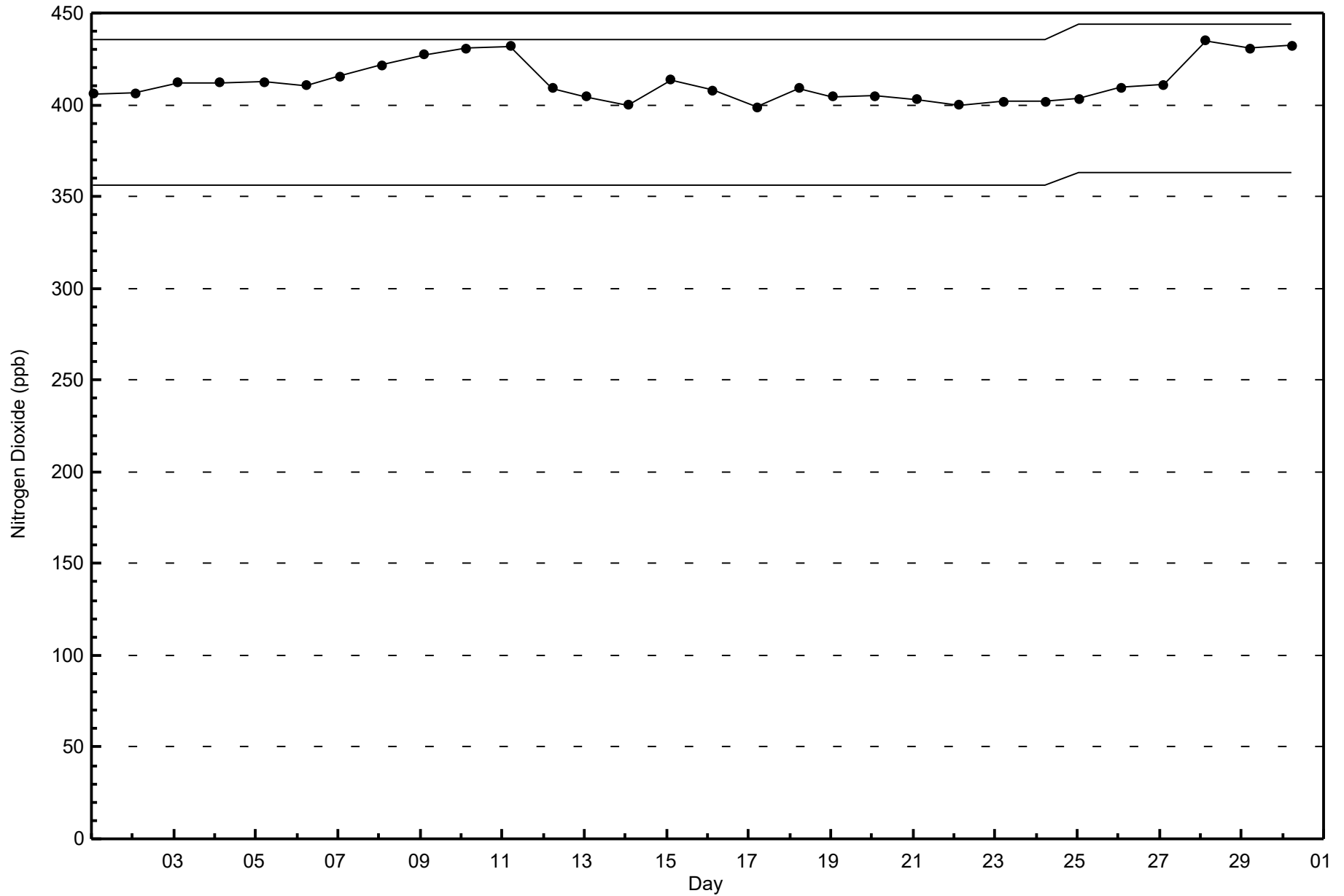
Nitrogen Dioxide (NO₂) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

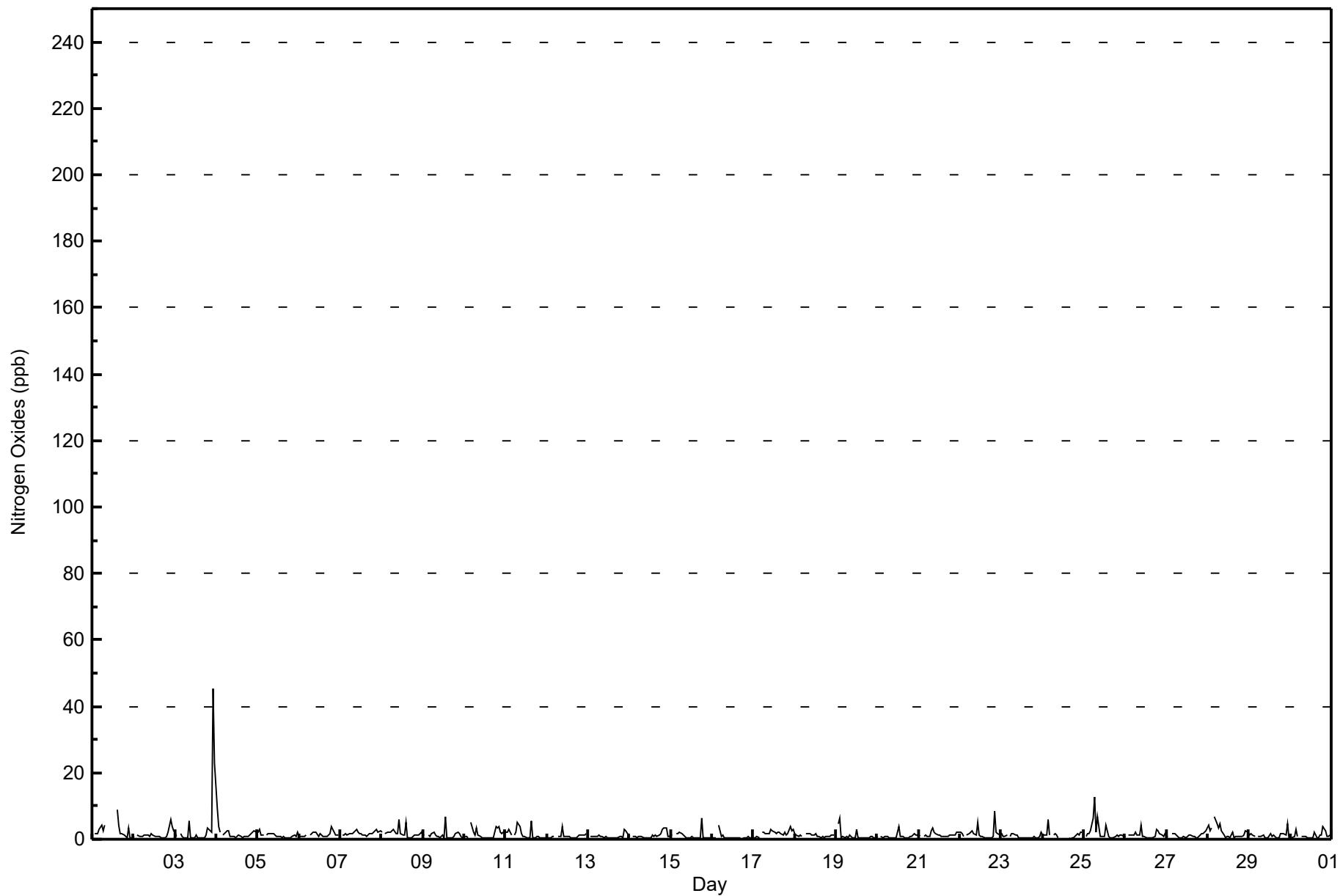
Conklin - April 2025

Maximum Value: 45.3 ppb on Apr 3 23:00																			Maximum Daily Average: 4.1 ppb on Apr 3							Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 16 18:00																			Minimum Daily Average: 0.6 ppb on Apr 16							Hours of Data: 679	
Maximum Diurnal Average: 3.0 ppb at hour 23																			Minimum Diurnal Average: 0.7 ppb at hour 17							Hours of Missing Data: 41	
Monthly Average: 1.47 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 2.7 P ₉₉ = 6.8							Hours of Calibration: 35	
																										Percent Operational Time: 99.2	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	1.8	1.5	1.7	2.8	4.1	2.7	4.2	PF	PF	PF	PF	PF	PF	8.7	4.4	1.8	1.8	1.2	0.9	0.6	3.4	0.4	0.4	--	8.7	
2-Apr	0.8	Z	1.1	0.9	0.9	1.0	1.4	1.4	1.1	0.9	1.9	1.1	0.7	0.7	0.8	0.7	0.5	0.3	0.4	0.6	2.2	5.9	3.7	2.7	1.4	5.9	
3-Apr	2.0	1.0	Z	1.5	0.8	0.5	0.4	0.3	5.5	0.4	0.4	0.3	1.3	0.4	0.4	0.4	0.5	0.5	1.1	3.3	2.7	2.0	45.3	23.1	4.1	45.3	
4-Apr	9.3	4.0	1.9	Z	1.3	2.1	2.6	2.4	1.0	0.7	0.8	0.6	0.7	1.2	0.8	0.6	0.7	0.9	1.0	1.3	1.7	2.1	2.4	2.1	1.8	9.3	
5-Apr	2.1	2.8	1.3	1.2	Z	1.1	1.8	1.9	1.9	1.6	1.2	0.9	0.7	0.7	0.6	1.0	0.6	0.4	0.5	0.4	0.7	1.3	1.0	2.1	1.2	2.8	
6-Apr	0.9	0.7	0.7	1.0	1.4	Z	1.2	1.6	2.2	2.0	2.1	0.9	1.7	1.1	1.0	0.9	0.9	1.1	1.5	3.7	2.2	1.2	1.1	1.2	1.4	3.7	
7-Apr	Z	1.4	1.4	1.5	1.4	1.5	1.6	1.8	2.2	2.8	2.2	1.7	1.5	1.3	1.3	1.0	1.4	1.6	1.8	2.0	2.5	3.1	2.1	2.4	1.8	3.1	
8-Apr	2.0	Z	1.9	2.0	2.3	2.3	2.6	2.8	1.7	1.7	6.0	1.7	1.5	1.2	5.0	0.4	0.6	0.3	0.7	1.2	1.3	1.2	1.6	2.0	1.9	6.0	
9-Apr	1.3	1.3	Z	1.2	1.0	1.6	2.0	1.3	1.0	0.9	0.6	1.5	0.4	6.8	0.4	0.3	0.4	0.5	1.0	1.6	2.2	1.9	0.9	0.6	1.3	6.8	
10-Apr	0.7	0.7	0.5	Z	5.2	2.0	1.4	3.2	1.1	0.8	0.4	0.3	0.3	0.6	0.5	0.4	0.4	0.3	3.9	3.3	3.7	2.0	1.8	2.6	1.6	5.2	
11-Apr	2.1	2.0	2.9	1.4	Z	1.4	2.1	5.2	3.6	1.8	0.9	0.7	0.6	0.6	0.5	5.5	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.5	1.6	5.5	
12-Apr	0.5	0.6	0.5	0.8	0.7	Z	0.9	1.0	0.8	3.6	0.8	0.6	0.6	0.7	0.5	0.5	0.4	0.4	0.8	1.1	1.1	1.1	1.2	1.5	0.9	3.6	
13-Apr	Z	1.0	0.9	1.0	0.9	0.9	1.2	0.9	0.7	0.6	0.7	0.4	0.4	0.6	0.6	0.4	0.4	0.4	0.8	0.7	0.5	3.0	2.7	1.3	0.9	3.0	
14-Apr	1.0	Z	0.7	0.8	0.6	0.8	1.0	0.6	0.6	0.5	0.5	0.4	0.6	1.2	1.0	1.1	1.0	1.2	1.6	2.9	3.2	3.6	0.9	0.7	1.2	3.6	
15-Apr	1.2	1.3	Z	1.6	1.8	1.9	1.6	1.3	1.0	0.6	0.5	0.5	0.8	0.5	0.5	0.5	0.5	0.5	6.2	0.5	0.4	0.3	0.5	0.5	1.1	6.2	
16-Apr	0.4	0.4	0.4	Z	4.2	0.7	1.1	0.6	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.4	0.9	0.6	0.3	0.6	4.2	
17-Apr	0.3	0.3	1.0	0.6	Z	2.0	2.1	1.5	1.8	1.8	3.0	2.3	1.9	1.7	2.0	2.2	1.6	1.4	2.3	1.4	1.7	3.6	2.4	3.1	1.8	3.6	
18-Apr	1.7	1.5	0.9	1.2	0.8	Z	1.7	1.5	1.5	1.6	1.4	1.4	1.5	1.0	0.8	0.6	0.6	0.6	1.0	0.8	0.9	1.5	1.3	1.4	1.2	1.7	
19-Apr	Z	4.6	6.2	0.6	0.8	0.6	0.8	0.6	1.4	0.6	0.5	0.5	3.1	0.3	0.5	0.5	0.4	0.5	0.3	0.5	0.7	0.8	0.5	0.5	1.1	6.2	
20-Apr	0.7	Z	0.8	0.5	0.9	0.9	0.9	0.5	0.5	0.5	0.3	0.4	3.6	0.7	0.8	0.9	0.6	0.5	0.6	0.7	0.7	1.6	1.3	1.2	0.9	3.6	
21-Apr	0.7	1.2	Z	0.9	1.3	0.9	0.7	2.6	3.2	2.2	1.8	1.1	1.1	0.9	1.0	0.9	0.9	1.0	1.2	1.3	1.2	1.1	1.9	2.0	1.3	3.2	
22-Apr	2.0	1.5	0.9	Z	1.3	1.9	1.9	2.4	1.8	1.2	5.0	1.3	1.0	0.7	0.5	0.4	0.4	0.6	0.4	0.8	8.5	2.2	1.6	1.5	1.7	8.5	
23-Apr	1.6	0.7	0.8	1.1	Z	0.8	1.6	1.8	1.1	1.1	0.6	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.8	0.5	0.6	0.9	1.9	0.8	1.9	
24-Apr	1.4	1.3	1.2	6.0	1.4	Z	1.4	1.7	1.2	0.5	C	C	C	C	C	0.3	0.2	0.3	0.3	0.8	1.5	1.1	2.0	1.9	1.4	6.0	
25-Apr	Z	0.8	1.9	1.8	2.5	6.4	12.7	2.1	6.8	1.0	0.9	0.8	0.7	4.1	0.7	0.6	0.6	0.6	0.9	1.1	1.0	1.1	1.3	1.0	2.2	12.7	
26-Apr	0.9	Z	1.2	1.3	1.4	1.4	2.0	1.4	1.4	4.1	0.7	0.7	0.4	0.4	0.5	0.4	0.4	1.0	3.1	2.6	1.8	1.3	1.0	1.5	1.4	4.1	
27-Apr	0.8	1.0	Z	1.8	1.9	1.6	0.7	0.3	0.3	0.3	0.7	0.4	0.7	1.2	1.1	0.9	0.7	0.5	0.4	1.0	1.6	1.5	2.0	2.6	1.0	2.6	
28-Apr	4.1	2.4	3.3	Z	6.8	4.7	3.5	4.8	2.4	1.2	0.5	0.7	0.9	0.6	2.1	0.5	0.7	0.8	0.8	0.7	1.0	1.1	2.7	2.2	2.1	6.8	
29-Apr	1.3	1.7	1.1	0.7	Z	1.0	0.7	0.7	1.3	0.6	0.3	0.3	1.8	0.7	1.1	0.7	0.5	0.6	1.7	1.6	1.7	1.2	4.6	0.5	1.1	4.6	
30-Apr	0.4	0.4	0.9	2.8	0.9	Z	0.9	0.9	0.8	0.8	0.5	0.6	0.5	0.3	2.0	0.4	0.5	1.1	1.3	3.7	2.7	0.8	0.9	1.3	1.1	3.7	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan		C - Calibration				PF - Power Failure																					



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	99.71	99.71
21 - 40	1	0.15	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	11	4	7	10	24	29	53	77	83	49	18	51	91	76	64	674
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	1	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	27	11	4	7	10	24	29	53	78	84	49	18	51	91	76	64	676

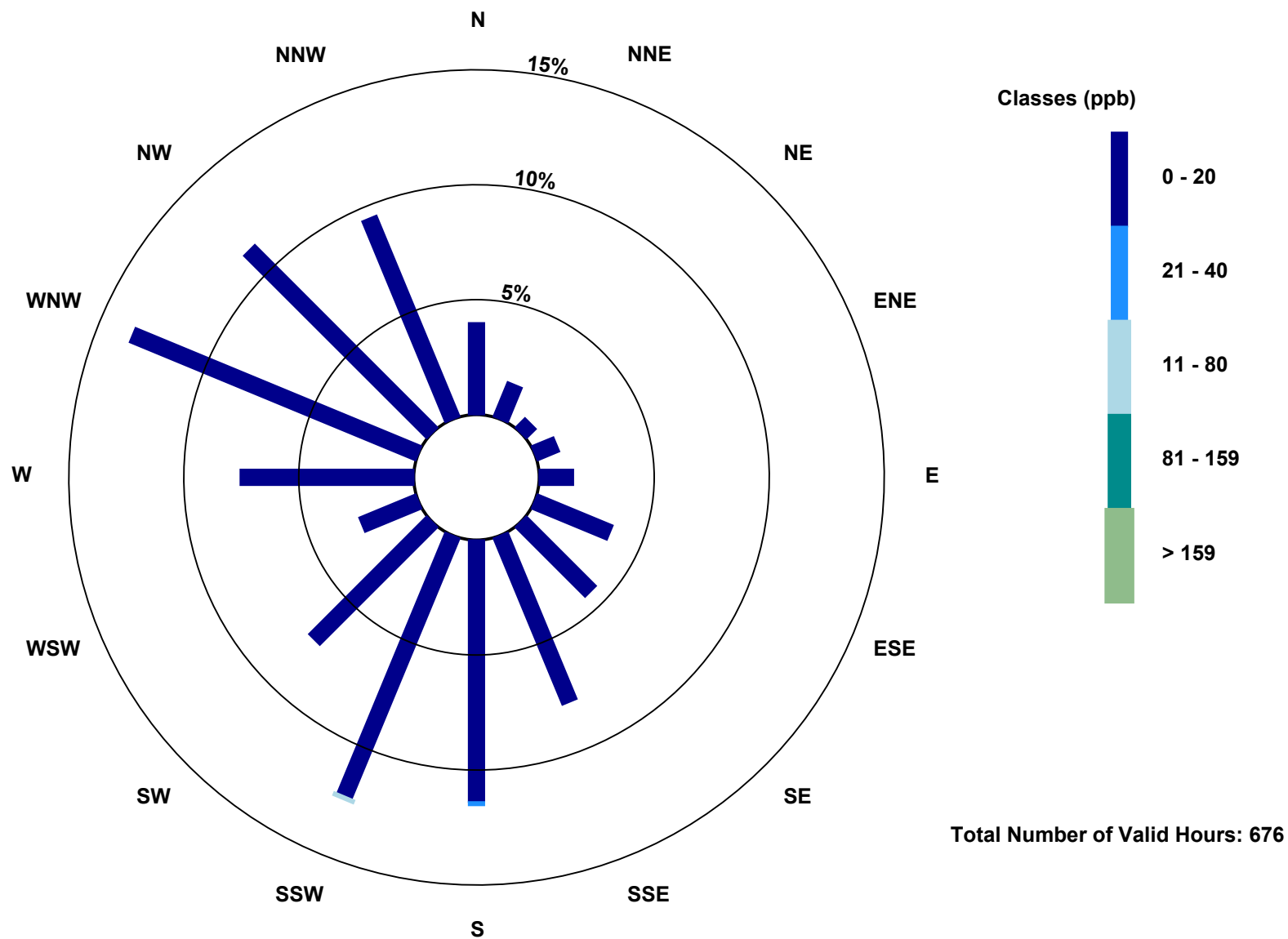
Total Number of Valid Hours: 676

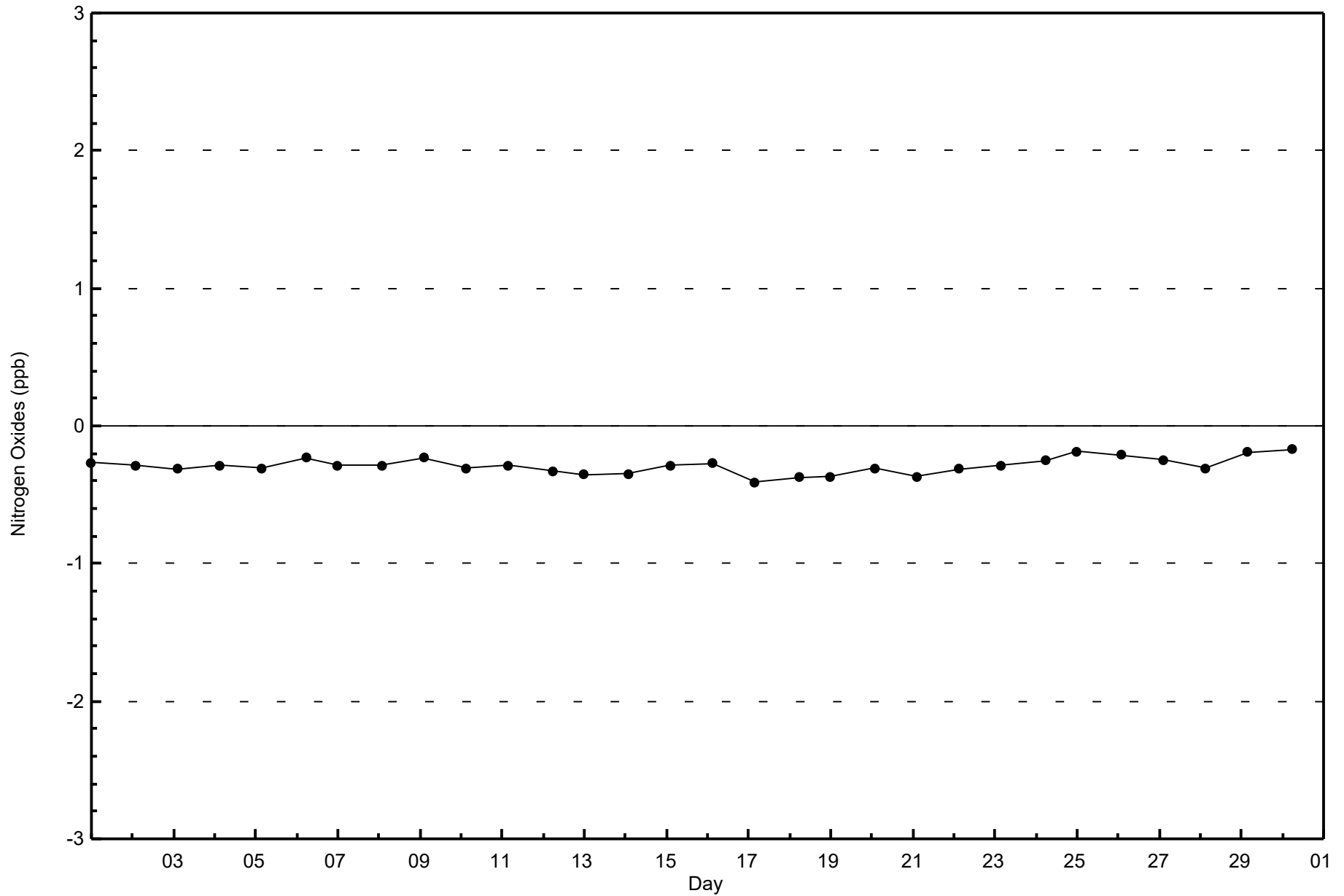
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Conklin

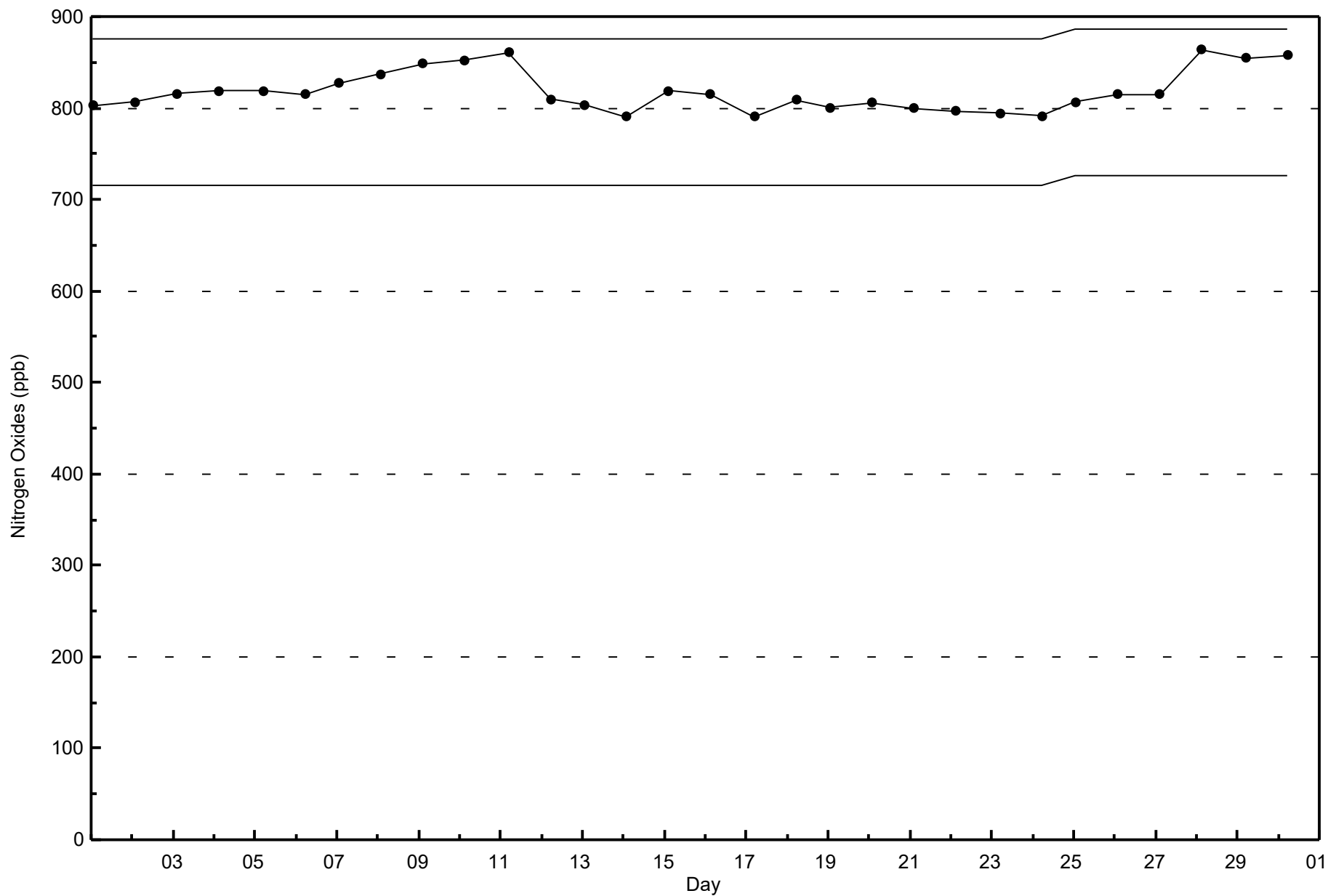






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

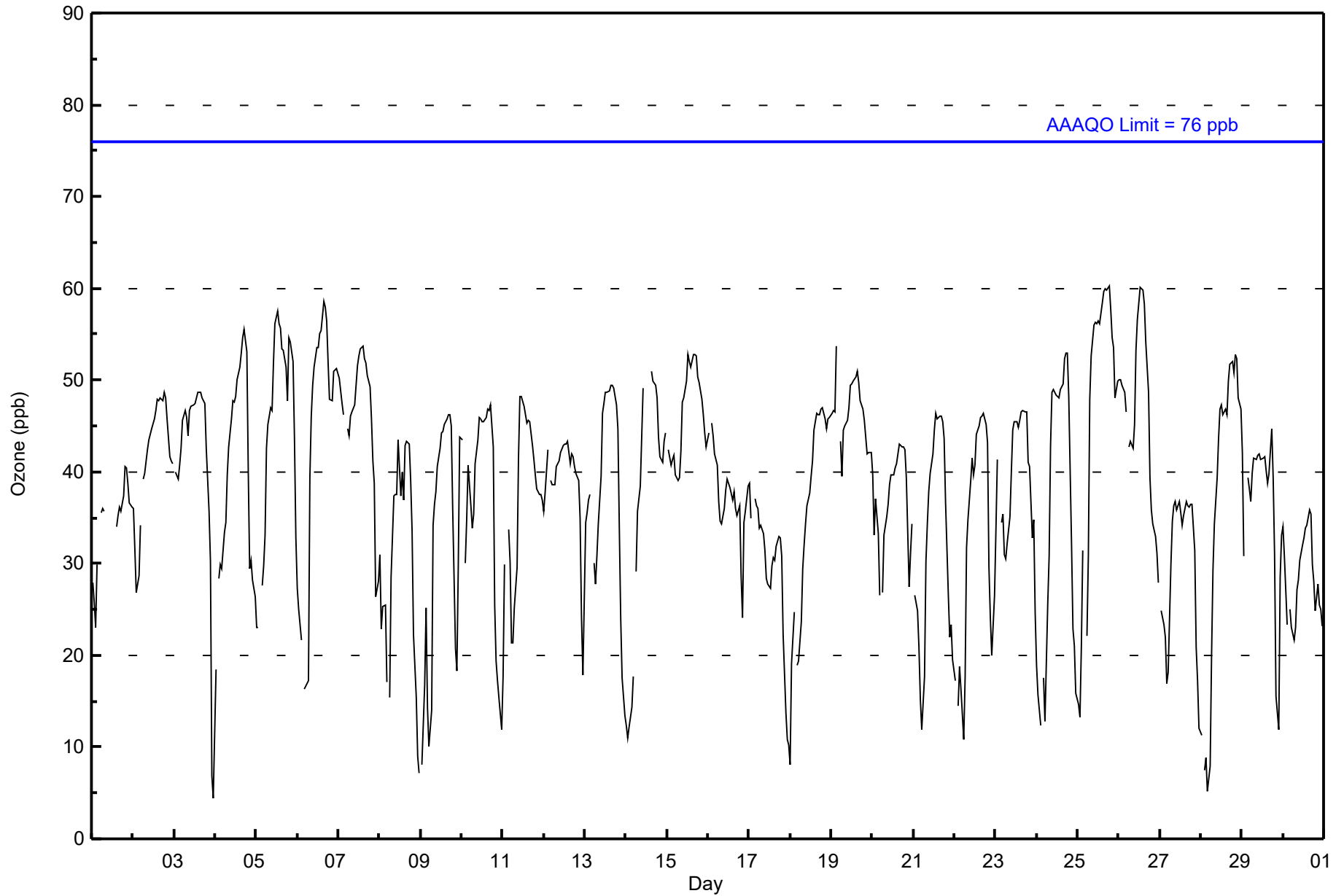
Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 60.2 ppb on Apr 25 19:00 Maximum Daily Average: 46.8 ppb on Apr 25																					Hours in Service: 720					
Minimum Value: 4.4 ppb on Apr 4 00:00 Minimum Daily Average: 28.5 ppb on Apr 30 Maximum Diurnal Average: 46.6 ppb at hour 17 Minimum Diurnal Average: 27.7 ppb at hour 5 Monthly Average: 37.93 ppb Percentiles: P ₁ = 8.1 P ₁₀ = 20.6 Q ₁ = 30.8 Median = 39.9 Q ₃ = 46.5 P ₉₀ = 51.0 P ₉₉ = 58.8																					Hours of Data: 680					
																					Hours of Missing Data: 40					
																					Hours of Calibration: 34					
																					Percent Operational Time: 99.2					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	27.9	25.8	23.0	29.9	Z	35.5	36.1	35.7	PF	PF	PF	PF	PF	PF	34.1	35.3	36.2	35.6	37.3	40.5	40.4	38.7	36.6	36.1	--	40.5
2-Apr	36.0	31.6	26.8	28.7	34.2	Z	39.2	39.9	42.5	43.4	44.1	44.8	45.7	46.7	47.9	47.7	48.0	47.8	48.6	48.0	45.7	41.7	41.2	40.8	41.8	48.6
3-Apr	Z	39.9	39.2	40.7	42.6	45.6	46.6	45.9	44.0	46.6	47.1	47.3	47.4	48.1	48.7	48.6	48.0	47.8	47.4	42.5	35.7	30.2	6.8	4.4	40.9	48.7
4-Apr	18.4	Z	28.4	29.9	29.4	33.3	34.5	39.6	42.8	45.7	47.7	47.5	48.2	50.1	51.4	53.0	54.7	55.5	53.1	40.1	29.5	30.3	28.3	26.4	39.9	55.5
5-Apr	23.0	23.0	Z	27.6	29.7	33.1	42.5	45.1	47.0	46.7	51.9	56.1	57.5	56.1	55.6	53.5	53.2	51.3	47.8	54.6	54.1	52.0	43.7	32.8	45.1	57.5
6-Apr	27.2	25.1	21.6	Z	16.3	16.6	17.3	39.4	46.1	49.5	51.4	53.5	53.6	55.1	55.3	58.6	58.0	56.4	52.1	48.0	47.7	50.9	51.0	51.3	43.6	58.6
7-Apr	50.1	48.8	47.4	46.1	Z	44.6	43.9	46.1	46.6	47.2	49.5	51.5	52.7	53.4	53.7	52.4	51.9	50.4	49.2	45.8	41.2	38.8	26.4	28.0	46.3	53.7
8-Apr	30.9	22.8	25.4	25.5	17.1	Z	15.4	28.5	37.3	37.5	37.6	43.4	37.3	39.9	36.9	42.9	43.3	43.0	39.1	33.6	22.2	15.4	9.0	7.2	30.1	43.4
9-Apr	Z	8.1	16.8	25.1	14.4	10.1	14.0	34.1	36.4	37.8	40.6	42.6	44.3	44.3	45.2	45.8	46.2	46.3	45.0	35.9	20.7	18.4	29.8	43.7	32.4	46.3
10-Apr	43.4	Z	30.0	34.8	40.7	36.4	33.8	35.4	40.9	43.4	45.9	45.8	45.5	45.5	45.9	46.8	46.7	47.2	42.7	25.4	19.4	17.2	15.5	11.9	36.5	47.2
11-Apr	17.7	29.9	Z	33.7	30.2	21.3	21.3	25.2	29.5	41.6	48.3	48.2	47.1	46.2	45.3	45.5	45.5	42.9	41.3	39.7	38.1	37.5	37.5	37.0	37.0	48.3
12-Apr	35.7	37.6	42.3	Z	39.1	38.6	38.6	40.6	40.8	41.3	42.1	42.9	42.9	43.0	43.3	40.8	41.9	41.6	40.6	39.8	39.0	34.9	24.1	17.9	38.7	43.3
13-Apr	34.5	35.6	36.9	37.5	Z	30.1	27.8	30.9	34.3	39.5	46.3	47.4	48.7	48.7	48.8	49.4	49.4	49.1	47.3	44.6	34.0	24.1	17.5	13.5	38.1	49.4
14-Apr	12.4	11.0	12.2	14.4	17.7	Z	29.1	35.7	38.4	43.7	49.1	C	C	C	C	51.0	49.9	49.5	48.0	43.8	41.7	41.0	43.3	44.3	35.6	51.0
15-Apr	Z	42.4	40.8	41.3	41.8	39.6	39.1	39.3	42.2	47.7	48.0	49.9	52.8	52.0	51.5	52.7	52.7	52.6	50.4	49.7	47.9	46.2	44.2	42.7	46.4	52.8
16-Apr	44.2	Z	45.4	44.0	41.9	40.7	36.7	34.6	34.4	36.1	38.0	39.2	38.8	38.3	36.9	37.8	36.0	35.3	36.4	28.7	24.1	34.4	35.7	38.5	37.2	45.4
17-Apr	38.7	35.0	Z	37.1	36.3	36.0	33.8	34.2	33.3	31.5	28.4	27.8	27.4	29.7	30.6	30.3	31.9	33.0	32.8	30.8	22.3	13.8	10.8	10.2	29.4	38.7
18-Apr	8.0	19.1	24.7	Z	18.9	19.4	23.6	29.5	32.0	34.3	36.3	37.7	39.5	41.2	44.5	46.3	46.2	46.2	46.9	47.0	45.8	44.7	45.8	45.9	35.8	47.0
19-Apr	46.4	46.7	46.5	53.7	Z	43.3	39.6	44.6	45.1	45.5	46.9	49.5	49.5	49.9	50.3	51.0	49.8	47.8	46.9	45.7	43.8	41.9	42.1	42.0	46.4	53.7
20-Apr	39.7	33.0	37.1	33.2	26.5	Z	26.9	33.1	35.0	36.4	38.6	39.7	39.6	40.4	40.9	42.0	43.0	42.7	42.7	42.4	39.4	27.4	31.1	34.3	36.8	43.0
21-Apr	Z	26.5	24.9	21.0	15.3	11.9	17.6	30.2	34.3	37.8	39.9	41.9	44.6	46.4	45.8	46.0	46.0	45.4	43.6	36.8	26.6	22.0	23.4	19.6	32.5	46.4
22-Apr	17.3	Z	14.5	18.7	16.3	10.9	17.7	31.8	34.8	39.1	41.5	39.7	40.8	44.1	45.0	45.9	46.1	46.4	45.1	43.2	29.5	24.0	20.0	26.6	32.1	46.4
23-Apr	33.8	41.4	Z	34.4	35.4	31.0	30.6	32.2	35.2	39.9	44.5	45.4	45.5	44.9	45.6	46.5	46.7	46.5	46.5	41.0	40.6	32.8	34.8	24.7	39.1	46.7
24-Apr	18.9	15.6	12.4	Z	17.5	12.9	25.6	30.8	42.8	48.7	49.0	48.3	48.1	48.1	48.9	49.6	52.2	52.9	52.9	48.2	32.1	22.8	21.1	15.9	35.4	52.9
25-Apr	14.6	13.2	21.0	31.5	Z	22.2	30.8	47.9	52.7	56.0	56.3	56.1	56.5	56.2	58.4	59.6	60.0	59.8	60.2	57.7	54.6	53.5	48.1	49.9	46.8	60.2
26-Apr	50.1	50.0	49.4	48.7	46.5	Z	42.8	43.3	42.6	45.1	53.3	56.7	60.1	59.9	59.8	58.3	54.1	48.6	39.4	35.9	34.3	33.0	31.1	28.0	46.6	60.1
27-Apr	Z	24.8	23.3	22.0	17.0	18.1	30.0	34.7	36.3	36.7	35.8	36.8	35.6	34.2	35.2	36.8	36.3	36.2	36.5	36.5	31.4	20.8	17.3	12.1	29.8	36.8
28-Apr	11.3	Z	7.5	8.8	5.2	8.0	20.0	29.3	34.4	39.4	43.6	46.8	47.3	46.1	46.8	46.3	49.9	51.7	52.1	50.7	52.7	52.4	48.1	46.9	36.7	52.7
29-Apr	42.1	30.8	Z	39.4	38.2	36.8	39.9	41.5	41.4	41.8	42.0	41.4	41.5	41.7	40.1	38.7	39.8	44.7	39.3	31.0	15.6	11.9	28.5	33.2	36.6	44.7
30-Apr	34.0	30.8	23.4	Z	25.0	23.0	21.7	23.0	27.2	28.2	30.4	32.0	32.8	33.8	34.2	35.9	35.4	30.0	28.1	24.9	27.7	25.4	25.1	23.2	28.5	35.9
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O_3) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	68	10.00	10.00
21 - 50	540	79.41	89.41
51 - 82	72	10.59	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Ozone (O₃) - ppb
Conklin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	1	0	2	1	2	9	15	20	7	3	0	2	0	1	5	68
21 - 50	25	11	4	4	8	16	18	25	46	66	44	18	49	77	68	58	537
51 - 82	1	1	0	1	1	4	3	12	11	9	1	2	2	14	8	2	72
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	13	4	7	10	22	30	52	77	82	48	20	53	91	77	65	677

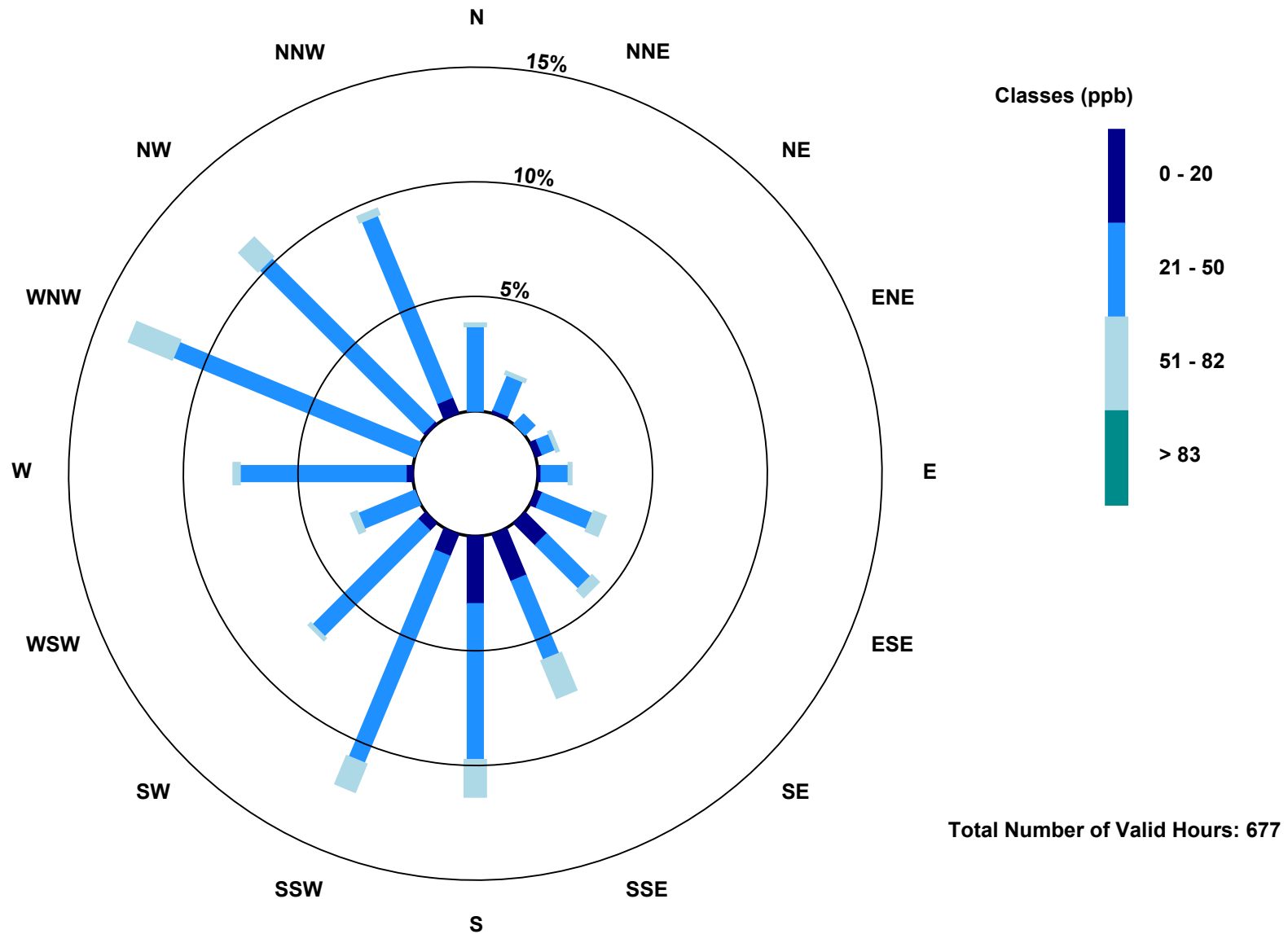
Total Number of Valid Hours: 677

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

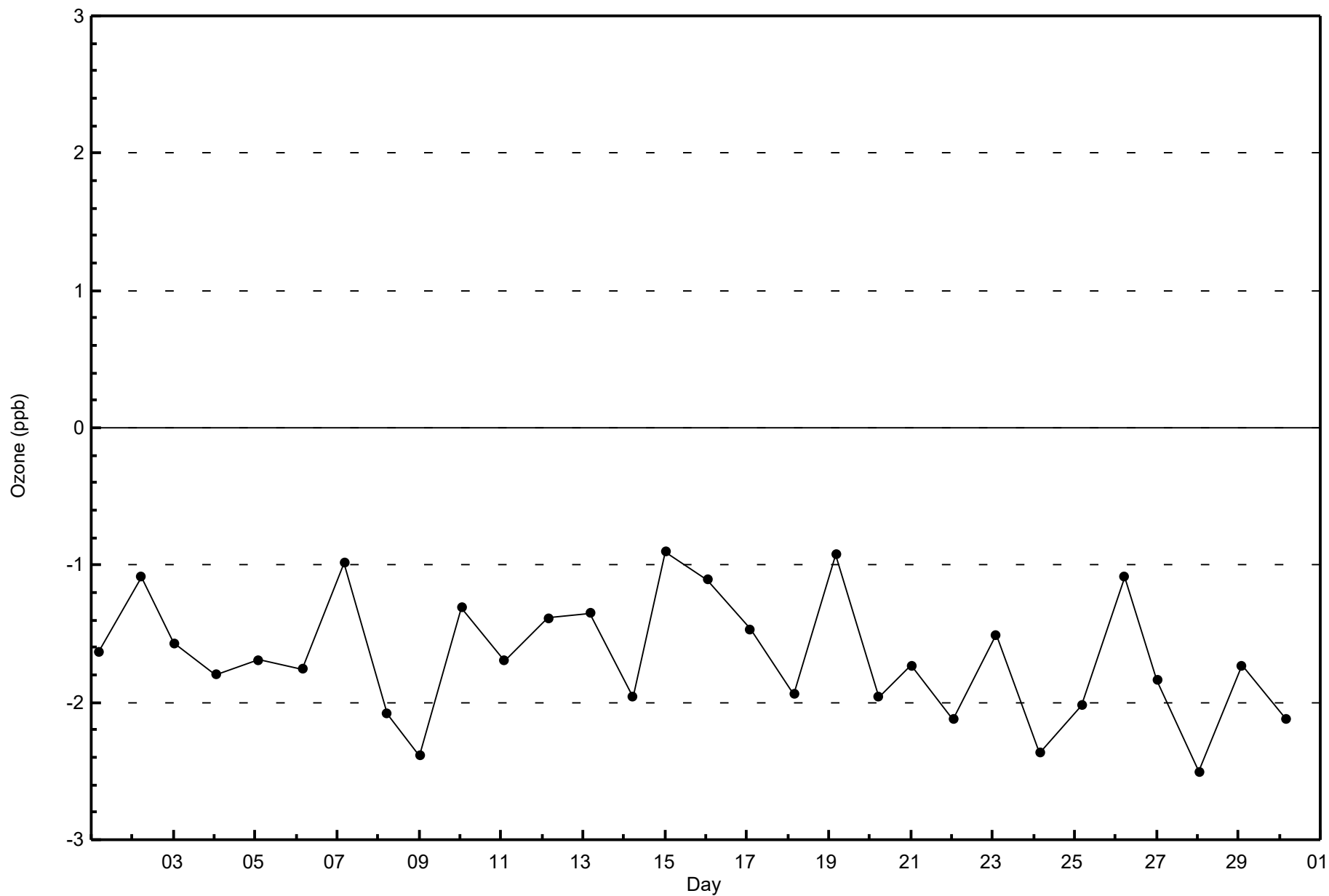
Ozone (O₃) - ppb
Conklin





Wood Buffalo Environmental Association
Zero Responses

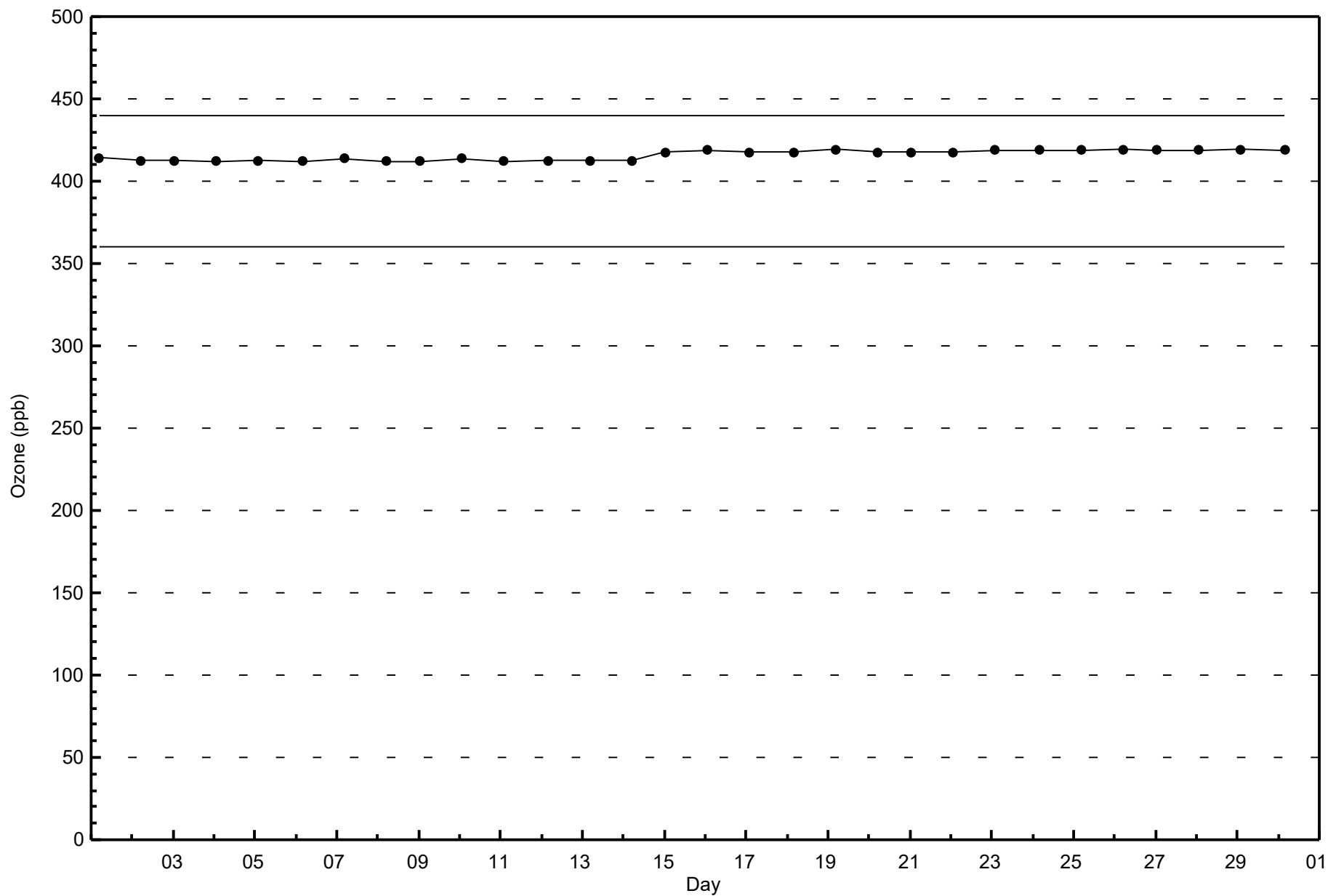
Ozone (O₃) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

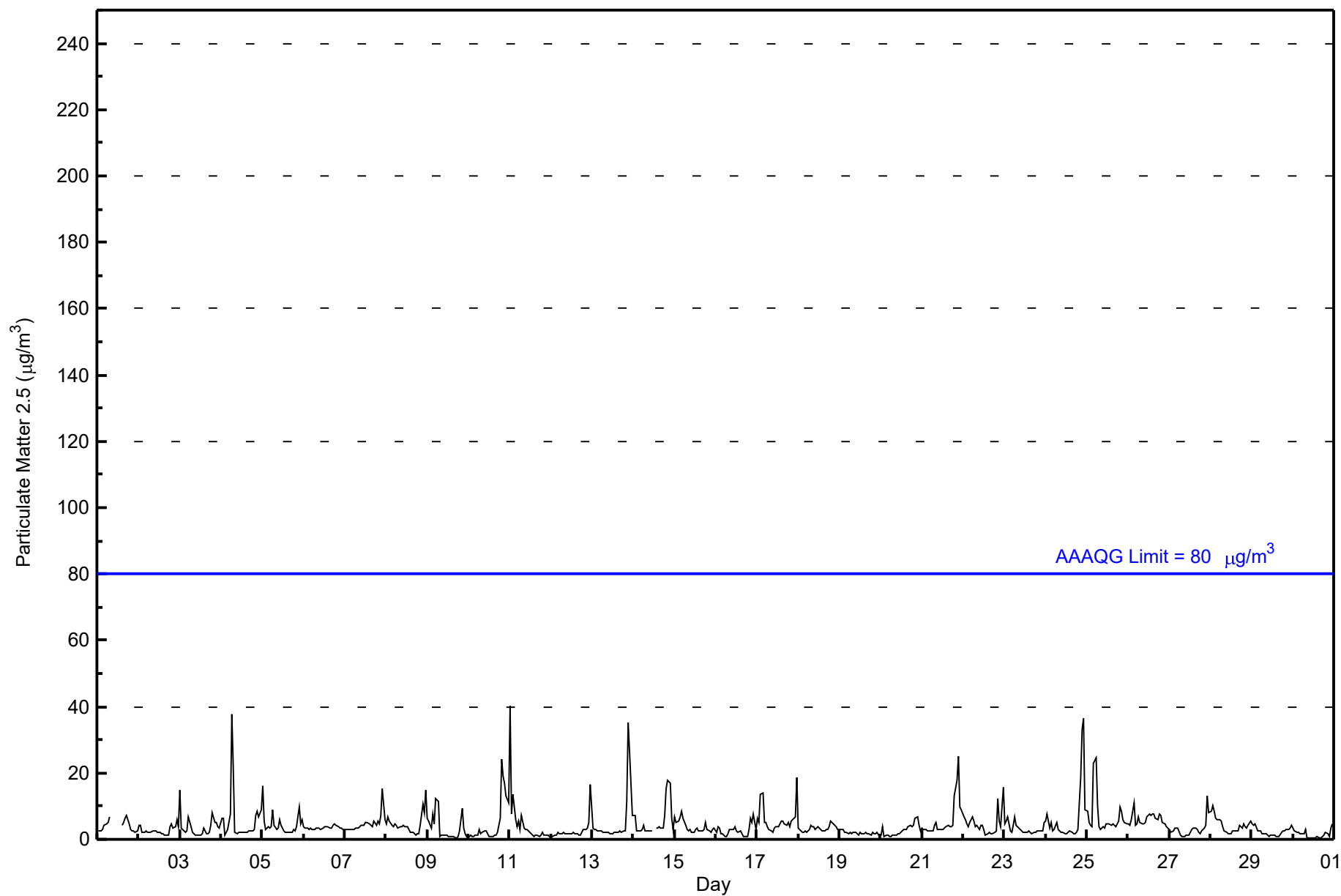
Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 40.2 µg/m³ on Apr 11 01:00 Minimum Value: 0.3 µg/m³ on Apr 30 16:00 Maximum Diurnal Average: 8.1 µg/m³ at hour 22 Monthly Average: 4.15 µg/m³																								Hours in Service: 720 Hours of Data: 713 Hours of Missing Data: 7 Hours of Calibration: 1 Percent Operational Time: 99.2		
Maximum Daily Average: 6.8 µg/m³ on Apr 25 Minimum Daily Average: 1.6 µg/m³ on Apr 30 Minimum Diurnal Average: 2.5 µg/m³ at hour 10 Percentiles: P ₁ = 0.6 P ₁₀ = 1.3 Q ₁ = 2.1 Median = 3.1 Q ₃ = 4.6 P ₉₀ = 7.1 P ₉₉ = 24.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.6	2.5	2.6	3.1	4.1	4.6	4.9	6.6	PF	PF	PF	PF	PF	PF	4.2	5.0	6.4	7.1	4.6	3.0	2.4	2.4	2.2	2.4	3.9	7.1
2-Apr	4.1	4.2	2.3	2.3	2.4	2.2	2.2	2.2	2.3	2.5	2.6	2.2	2.0	1.8	1.5	1.5	1.4	1.4	4.0	4.5	3.4	3.9	6.0	3.7	2.8	6.0
3-Apr	14.7	3.4	2.4	2.3	2.7	6.9	3.7	2.1	1.5	1.3	1.3	1.3	1.4	1.5	3.6	1.9	1.7	2.1	4.2	8.0	4.9	5.1	4.0	3.4	3.6	14.7
4-Apr	6.4	6.5	1.4	2.1	3.1	7.6	37.9	22.1	2.1	1.9	2.0	2.3	2.1	2.1	2.1	2.2	2.3	2.5	2.5	3.1	7.1	8.6	6.9	9.0	6.1	37.9
5-Apr	16.0	5.6	2.8	3.6	3.4	3.6	8.9	4.2	3.1	3.5	5.8	4.1	2.4	2.2	2.1	2.2	2.2	2.0	2.8	2.5	3.7	9.8	4.6	5.8	4.5	16.0
6-Apr	4.0	3.3	3.2	3.1	3.3	2.9	3.0	3.2	3.6	3.3	3.2	3.5	3.6	3.9	3.7	3.4	3.5	4.1	4.7	4.2	3.7	3.4	3.4	3.1	3.5	4.7
7-Apr	3.0	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.6	4.1	4.0	4.4	4.9	5.0	4.7	4.2	3.9	5.7	4.4	5.6	4.7	7.2	15.4	5.7	4.7	15.4
8-Apr	4.9	6.8	5.4	4.1	3.7	4.6	4.2	3.6	3.8	3.7	4.2	3.7	3.6	2.8	2.3	2.1	2.0	1.4	1.7	1.6	4.1	10.8	8.0	14.8	4.5	14.8
9-Apr	6.4	5.6	3.6	7.4	4.7	12.1	11.6	1.0	1.2	1.4	1.4	1.2	1.0	0.9	1.0	0.8	0.5	0.4	0.9	2.4	9.4	3.5	1.9	0.8	3.4	12.1
10-Apr	0.9	1.4	1.0	0.8	1.1	1.2	3.0	1.9	2.0	2.7	2.4	1.7	0.8	0.9	0.9	1.2	1.3	2.3	6.4	24.1	19.1	16.7	13.3	10.9	4.9	24.1
11-Apr	40.2	7.7	13.4	5.8	3.7	5.6	2.9	7.2	3.3	2.8	2.9	2.5	1.5	1.1	0.8	1.1	1.4	0.9	1.5	2.3	1.1	1.5	1.1	0.7	4.7	40.2
12-Apr	0.7	0.9	1.1	1.4	2.0	1.9	1.8	2.0	1.8	1.8	1.6	1.6	1.5	2.3	1.9	1.8	1.4	1.4	2.2	2.9	2.9	3.3	5.1	16.5	2.6	16.5
13-Apr	3.2	2.9	2.8	2.6	2.5	2.5	2.2	2.0	2.2	2.1	1.6	1.6	1.5	2.3	1.9	2.1	2.5	2.0	2.5	2.4	11.6	35.3	26.4	7.1	5.2	35.3
14-Apr	7.4	7.3	2.7	2.7	2.5	3.1	4.4	2.5	2.7	2.5	2.6	2.7	C	3.3	3.5	3.7	3.5	3.5	7.2	15.3	17.7	17.0	6.2	3.2	5.5	17.7
15-Apr	6.8	5.1	5.4	6.7	8.3	6.2	4.3	3.1	2.7	3.0	2.3	2.2	3.0	3.3	2.7	2.7	2.8	2.9	5.0	3.1	2.6	2.3	3.0	3.2	3.9	8.3
16-Apr	2.2	3.8	3.6	1.7	1.6	1.0	1.0	1.6	3.1	3.1	2.8	3.8	2.7	2.2	2.4	1.8	0.8	0.9	0.9	3.2	6.2	5.1	7.6	3.0	2.8	7.6
17-Apr	6.3	4.9	13.7	13.8	4.9	4.9	3.7	2.9	2.7	2.1	3.5	3.9	4.0	4.6	5.3	5.5	4.7	4.0	5.1	4.0	5.3	6.5	6.6	18.7	5.9	18.7
18-Apr	3.4	2.9	2.2	2.3	2.5	2.2	2.8	4.1	3.7	3.7	2.9	3.9	3.6	3.1	2.7	2.7	2.8	3.1	3.9	5.5	4.7	4.4	3.8	2.9	3.3	5.5
19-Apr	2.8	2.8	3.0	2.2	1.9	1.9	2.0	1.5	2.0	2.2	1.8	1.5	2.1	1.9	1.8	1.9	1.6	1.5	1.4	2.1	1.7	1.5	2.2	1.0	1.9	3.0
20-Apr	1.1	3.7	0.8	1.1	1.4	0.7	0.8	1.2	1.4	1.4	1.5	1.8	2.7	2.9	3.2	3.1	4.0	4.1	3.6	4.2	6.4	6.7	4.4	2.7	2.7	6.7
21-Apr	3.3	3.1	2.8	2.4	2.6	2.6	2.6	4.0	5.1	3.0	2.8	2.8	3.0	3.3	3.8	4.4	3.8	4.0	4.0	13.1	18.0	24.8	9.9	8.8	5.7	24.8
22-Apr	6.7	5.9	4.8	3.9	5.0	6.8	5.5	4.0	4.0	2.9	4.2	4.0	2.8	1.4	1.6	1.9	1.8	1.7	2.1	2.6	12.1	5.3	4.0	15.8	4.6	15.8
23-Apr	4.6	5.5	6.6	2.7	2.3	4.3	6.8	4.3	3.3	2.8	2.7	2.2	2.2	2.3	2.4	2.3	1.8	2.2	2.2	2.6	2.5	2.5	2.6	5.2	3.3	6.8
24-Apr	5.3	7.5	3.4	4.9	2.6	3.1	5.0	2.9	2.7	2.2	1.9	1.8	1.7	2.2	2.3	1.9	1.6	1.7	1.9	2.8	18.8	33.1	36.4	8.9	6.5	36.4
25-Apr	8.3	5.0	4.4	3.6	22.9	24.5	10.4	3.7	3.2	3.7	3.6	4.6	4.8	4.7	4.1	4.6	4.0	3.9	5.7	9.7	8.4	6.1	4.9	4.5	6.8	24.5
26-Apr	4.6	4.1	5.8	10.8	4.1	4.8	6.7	5.1	4.6	4.5	5.1	6.6	7.4	7.0	7.8	7.7	6.6	5.7	7.6	7.1	4.9	4.5	3.7	3.6	5.9	10.8
27-Apr	2.9	2.2	2.7	3.2	3.6	3.4	1.1	0.8	0.9	1.0	1.2	1.2	2.1	3.1	3.5	3.3	2.8	2.1	1.9	2.7	3.5	4.4	13.2	8.2	3.1	13.2
28-Apr	8.4	10.3	8.5	6.5	5.9	5.9	5.5	3.8	2.7	2.0	1.6	1.5	1.7	2.4	2.7	2.7	2.6	4.3	3.5	4.8	4.0	3.4	4.1	5.5	4.4	10.3
29-Apr	4.5	4.0	4.7	2.6	2.4	2.5	1.9	1.8	1.7	1.2	1.0	1.1	1.1	1.3	1.0	0.7	0.9	2.0	2.7	2.6	2.8	3.0	3.3	4.2	2.3	4.7
30-Apr	3.2	2.6	2.0	1.9	1.6	1.5	1.6	3.2	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.3	0.5	0.9	1.2	2.2	1.6	1.0	3.4	4.8	1.6	4.8
																								Diurnal Average		
																								Diurnal Maximum		
C - Calibration PF - Power Failure																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	590	82.75	82.75
6 - 15	102	14.31	97.05
16 - 25	15	2.10	99.16
26 - 80	6	0.84	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 713

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Conklin - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	26	12	4	6	8	20	23	34	57	60	46	21	52	91	69	59	588
6 - 15	2	1	0	1	1	4	8	14	25	21	4	0	2	2	9	7	101
16 - 25	0	0	0	0	0	0	1	6	1	6	1	0	0	0	0	0	15
26 - 80	0	0	0	0	1	0	0	2	1	2	0	0	0	0	0	0	6
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	13	4	7	10	24	32	56	84	89	51	21	54	93	78	66	710

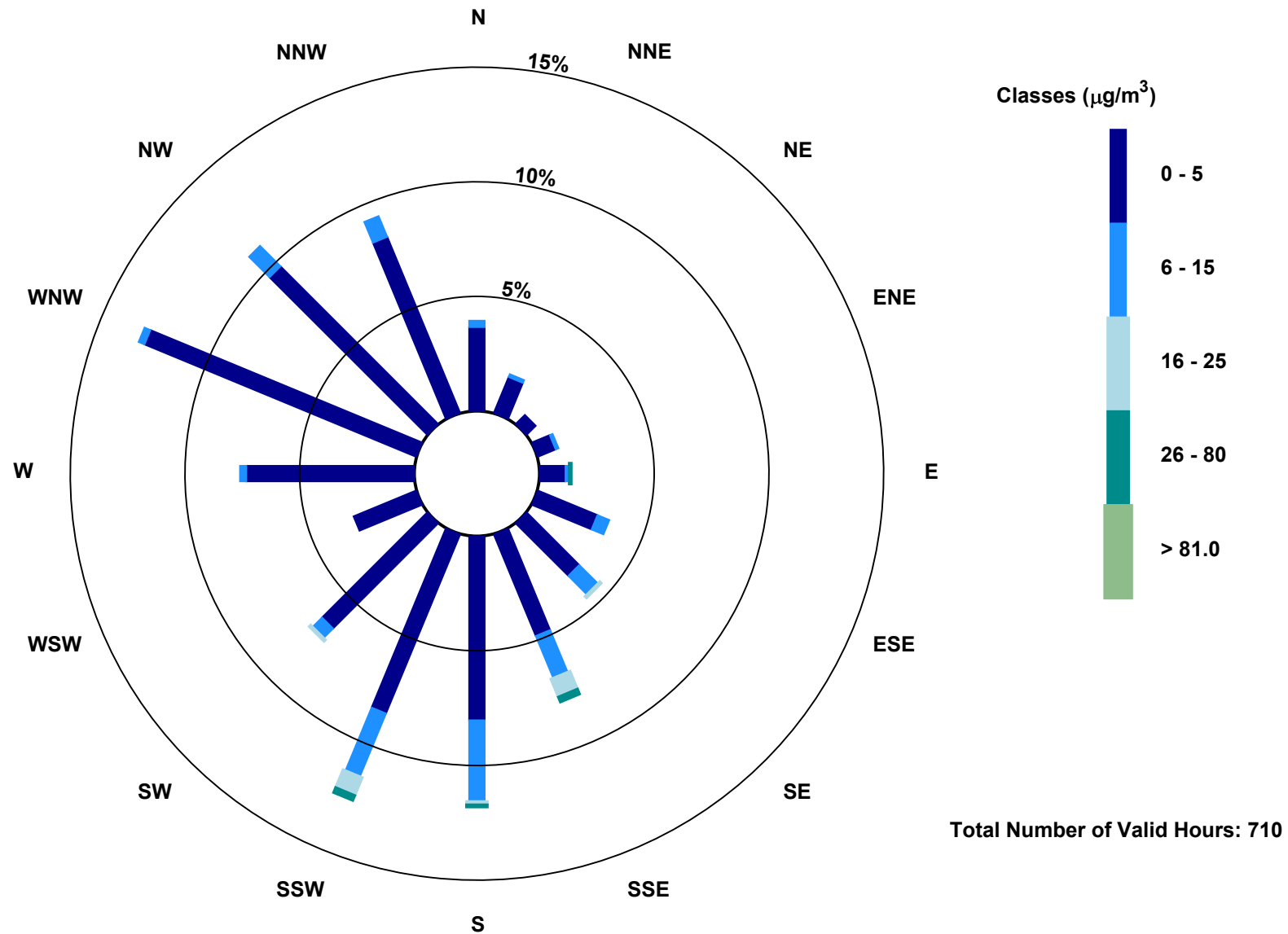
Total Number of Valid Hours: 710

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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

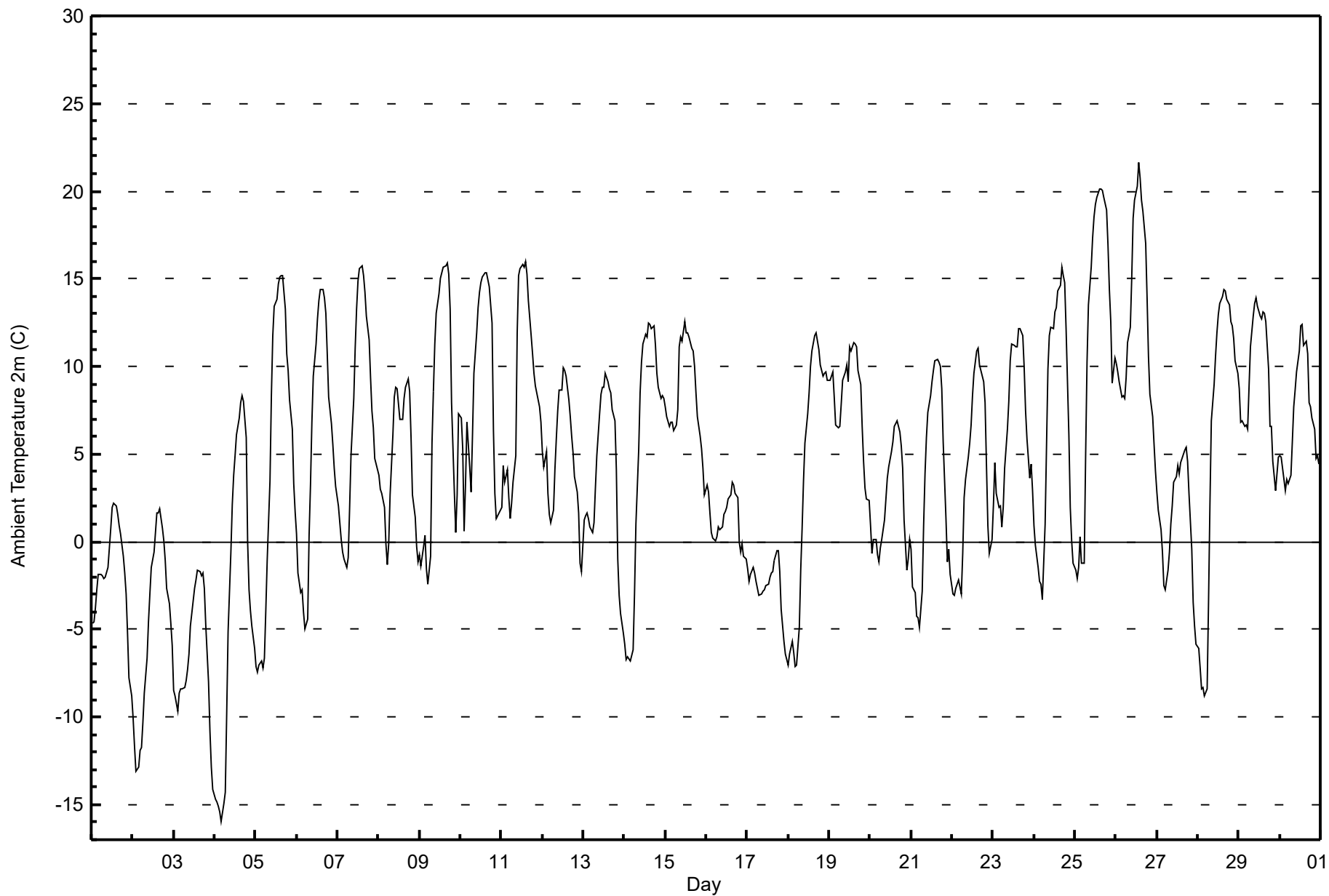


Maximum Value: 21.6 C on Apr 26 14:00																			Maximum Daily Average: 12.8 C on Apr 26										Hours in Service: 720			
Minimum Value: -16.0 C on Apr 4 05:00																			Minimum Daily Average: -6.5 C on Apr 3										Hours of Data: 720			
Maximum Diurnal Average: 10.4 C at hour 16																			Minimum Diurnal Average: -1.8 C at hour 6										Hours of Missing Data: 0			
Monthly Average: 4.43 C																			Percentiles: P ₁ = -13.9 P ₁₀ = -4.7 Q ₁ = -0.7 Median = 4.5 Q ₃ = 9.8 P ₉₀ = 13.4 P ₉₉ = 19.6										Hours of Calibration: 0			
																													Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	-4.6	-4.5	-3.8	-2.7	-1.9	-1.9	-2.0	-2.1	-2.0	-1.5	-0.3	0.8	2.0	2.2	2.0	1.5	0.9	0.5	-0.8	-1.8	-3.0	-5.2	-7.7	-8.8	-1.9	2.2						
2-Apr	-10.0	-11.7	-13.1	-12.9	-11.9	-11.7	-10.3	-8.7	-6.6	-4.5	-3.0	-1.5	-0.6	0.5	1.7	1.6	1.9	0.7	0.1	-1.1	-2.7	-3.6	-4.7	-5.9	-4.9	1.9						
3-Apr	-8.5	-8.8	-9.7	-8.6	-8.4	-8.4	-8.3	-7.9	-7.3	-6.4	-4.8	-3.4	-2.7	-2.2	-1.6	-1.7	-1.9	-1.8	-2.7	-4.7	-8.0	-10.8	-12.8	-14.1	-6.5	-1.6						
4-Apr	-14.7	-14.9	-15.1	-15.4	-16.0	-14.9	-14.3	-9.8	-5.2	-0.6	2.1	3.8	4.9	6.1	7.1	7.9	8.4	8.0	5.9	0.0	-2.8	-3.9	-4.8	-6.1	-3.5	8.4						
5-Apr	-7.1	-7.4	-7.0	-6.8	-7.2	-6.7	-4.0	-1.1	3.5	8.4	11.8	13.4	13.8	14.7	15.1	15.2	15.2	13.3	10.7	9.8	8.1	6.4	3.3	1.7	4.9	15.2						
6-Apr	0.4	-1.8	-2.9	-2.7	-4.0	-5.0	-4.4	0.3	3.2	6.8	9.5	11.3	12.7	13.8	14.4	14.4	13.9	13.0	10.7	8.3	6.7	5.5	4.2	3.2	5.5	14.4						
7-Apr	2.0	1.1	0.1	-0.6	-1.0	-1.5	-0.9	1.9	4.9	8.1	11.0	13.2	14.8	15.6	15.7	15.2	14.2	12.8	11.5	9.4	7.5	6.5	4.8	4.1	7.1	15.7						
8-Apr	3.8	3.0	2.8	1.9	-0.1	-1.3	-0.1	2.7	6.1	8.2	8.8	8.7	7.0	7.0	7.0	8.2	8.8	9.3	8.5	5.9	2.7	1.4	-0.3	-1.1	4.5	9.3						
9-Apr	-0.7	-1.4	-0.3	0.4	-1.5	-2.4	-0.8	5.6	8.6	11.2	13.0	14.1	15.0	15.3	15.7	15.9	15.3	13.3	7.9	2.9	0.5	2.7	7.3	7.2	15.9							
10-Apr	7.0	5.3	0.6	3.3	6.9	4.2	2.8	6.1	9.6	11.9	13.4	14.2	14.8	15.1	15.4	15.3	15.0	14.6	12.5	6.3	2.8	1.3	1.5	1.8	8.4	15.4						
11-Apr	2.0	4.4	3.4	4.1	2.5	1.3	2.2	3.4	4.9	11.9	15.2	15.6	15.8	15.6	16.0	15.3	13.7	11.8	10.7	9.6	8.9	8.1	7.7	6.8	8.8	16.0						
12-Apr	5.1	4.3	5.1	2.7	1.6	1.1	1.8	4.1	5.9	7.5	8.7	8.7	9.9	9.8	9.5	8.1	7.2	6.0	5.1	3.7	2.9	1.6	-1.2	-1.7	4.9	9.9						
13-Apr	1.2	1.5	1.7	1.3	0.9	0.5	1.1	3.0	4.9	7.3	8.4	8.8	8.8	9.6	9.2	8.7	8.5	7.5	6.9	4.1	-1.0	-3.1	-4.1	-5.2	3.8	9.6						
14-Apr	-5.8	-6.7	-6.6	-6.8	-6.5	-6.1	-3.0	1.0	5.2	8.5	10.2	11.3	11.9	11.7	12.5	12.4	12.2	12.3	11.2	9.6	8.8	8.2	8.3	8.2	5.1	12.5						
15-Apr	7.7	7.1	6.6	6.8	6.8	6.4	6.7	7.5	11.1	11.7	11.5	12.6	11.9	11.9	11.7	11.0	10.9	10.0	8.5	7.1	6.0	5.3	4.2	2.7	8.5	12.6						
16-Apr	3.3	2.8	1.6	0.5	0.2	0.0	0.3	0.8	0.7	0.9	1.6	1.7	1.9	2.5	2.7	3.4	3.3	2.8	2.5	0.0	-0.6	-0.1	-0.8	-1.0	1.3	3.4						
17-Apr	-1.5	-2.2	-1.8	-1.5	-1.8	-2.3	-2.7	-3.0	-3.0	-2.8	-2.7	-2.5	-2.4	-2.0	-1.8	-1.7	-1.1	-0.5	-0.5	-1.7	-3.9	-5.7	-6.4	-6.7	-2.6	-0.5						
18-Apr	-7.1	-6.4	-5.7	-6.3	-7.1	-7.0	-4.9	-1.6	0.8	3.5	5.6	7.3	8.5	10.0	10.9	11.7	11.9	11.4	10.9	10.1	9.5	9.6	9.7	9.2	3.9	11.9						
19-Apr	9.2	9.5	9.7	8.2	6.6	6.5	6.6	7.9	9.2	9.7	10.1	9.2	11.1	10.9	11.3	11.3	11.1	9.8	8.9	6.6	4.6	3.1	2.4	2.4	8.2	11.3						
20-Apr	0.9	-0.7	0.1	0.1	-0.7	-1.1	-0.4	0.2	1.2	2.4	3.7	4.2	5.1	5.7	6.6	6.7	6.9	6.3	5.5	4.2	1.2	-1.6	-1.0	0.1	2.3	6.9						
21-Apr	-0.4	-2.6	-2.9	-4.3	-4.4	-4.9	-2.8	0.9	3.9	5.9	7.3	8.4	9.2	9.8	10.3	10.4	10.3	10.0	8.7	5.7	1.3	-1.1	-0.4	-1.9	3.2	10.4						
22-Apr	-3.0	-3.1	-2.6	-2.4	-2.2	-3.0	-0.7	2.5	3.5	4.8	5.6	6.7	8.3	9.6	10.9	11.0	10.1	9.8	9.1	7.9	4.4	0.9	-0.7	0.2	3.7	11.0						
23-Apr	2.1	4.5	2.8	2.0	2.0	0.9	1.9	4.2	6.5	8.0	10.4	11.3	11.2	11.1	11.1	12.1	12.1	11.7	10.0	7.5	5.9	3.7	4.4	2.9	6.7	12.1						
24-Apr	0.9	-0.2	-1.5	-2.3	-2.4	-3.3	1.0	5.4	9.9	11.7	12.3	12.2	13.1	13.4	14.3	14.7	15.6	15.2	14.8	12.2	6.1	1.9	0.1	-1.2	6.8	15.6						
25-Apr	-1.6	-2.1	-1.4	0.3	-1.2	-1.2	4.9	10.2	13.5	15.7	17.4	18.6	19.2	19.7	20.1	20.2	20.1	19.6	18.9	17.0	14.4	12.6	9.0	10.5	11.4	20.2						
26-Apr	10.1	9.7	9.1	8.3	8.3	8.2	9.3	11.3	12.3	15.0	18.4	19.5	20.3	21.6	20.7	19.5	18.8	17.0	13.9	10.5	8.4	7.1	5.5	4.0	12.8	21.6						
27-Apr	2.9	1.8	0.7	-0.6	-2.5	-2.7	-1.6	-0.6	1.0	2.0	3.4	3.7	4.4	3.8	4.5	5.0	5.2	5.4	4.6	2.7	-0.4	-3.4	-4.8	-5.8	1.2	5.4						
28-Apr	-6.1	-7.2	-8.4	-8.3	-8.8	-8.4	-3.5	2.1	6.9	8.9	10.6	11.9	12.9	13.6	14.0	14.4	14.3	13.8	13.5	12.6	12.3	11.6	10.3	9.6	5.9	14.4						
29-Apr	8.7	6.9	6.9	6.6	6.7	6.4	8.8	11.2	12.8	13.6	13.9	13.4	12.9	12.7	13.1	13.1	12.6	9.8	6.6	6.6	4.6	2.9	3.9	4.8	9.1	13.9						
30-Apr	4.9	4.8	3.5	2.9	3.5	3.3	3.8	5.7	7.7	8.6	9.7	10.8	12.3	12.4	11.2	11.5	10.7	7.9	7.7	7.0	6.4	4.8	4.9	4.4	7.1	12.4						
																									Diurnal Average							
																									Diurnal Maximum							



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Conklin - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	204	28.33	28.33
0 - 10	345	47.92	76.25
10 - 20	165	22.92	99.17
> 20	6	0.83	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) - %

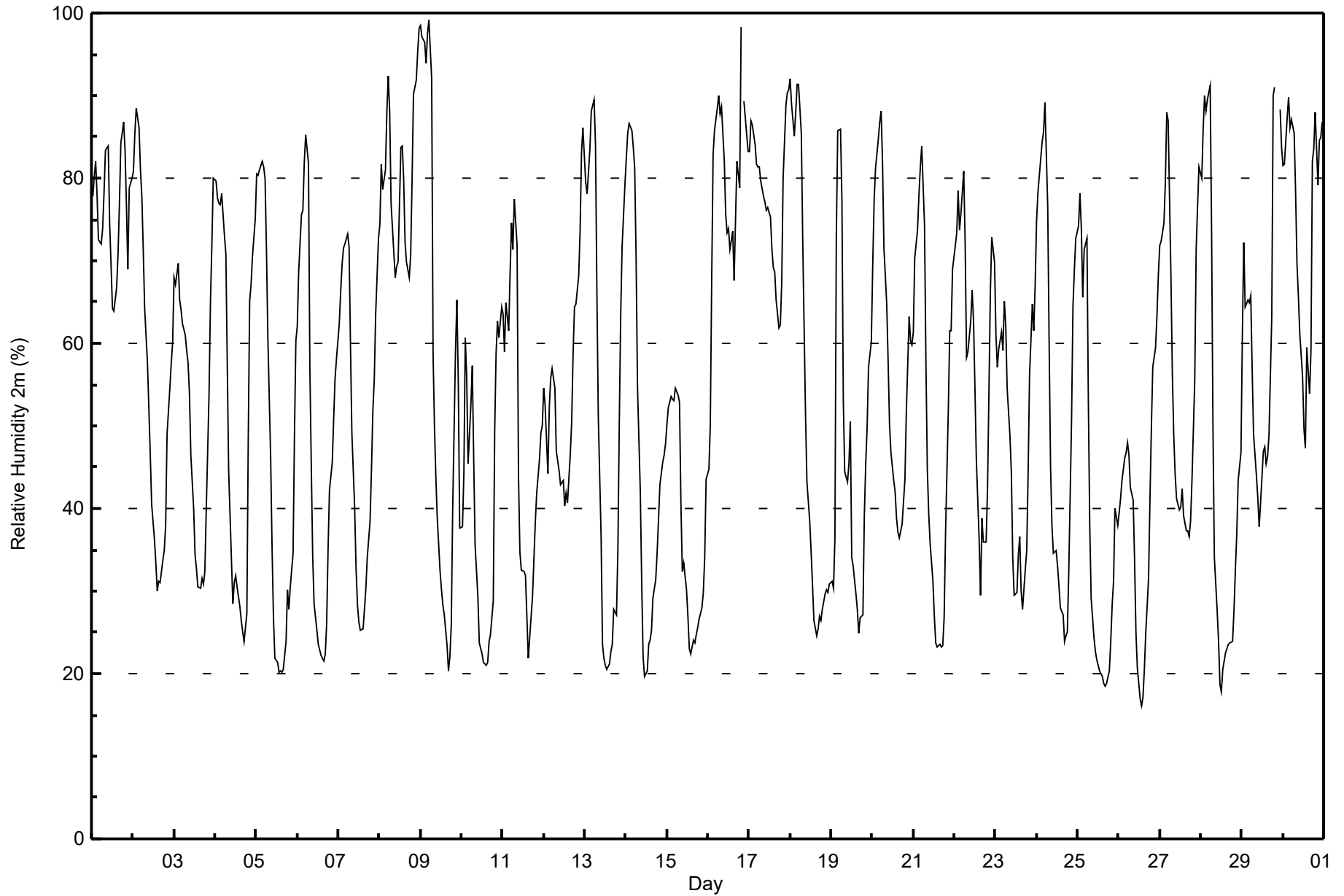
Conklin - April 2025

Maximum Value: 99.2 % on Apr 9 06:00																				Maximum Daily Average: 80.1 % on Apr 8					Hours in Service: 720	
Minimum Value: 16.1 % on Apr 26 14:00																				Minimum Daily Average: 37.2 % on Apr 15					Hours of Data: 717	
Maximum Diurnal Average: 77.7 % at hour 6																				Minimum Diurnal Average: 34.0 % at hour 16					Hours of Missing Data: 3	
Monthly Average: 54.32 %																				Percentiles: P ₁ = 19.0 P ₁₀ = 24.5 Q ₁ = 34.0 Median = 54.0 Q ₃ = 73.8 P ₉₀ = 84.3 P ₉₉ = 95.1					Hours of Calibration: 0	
																									Percent Operational Time: 99.6	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	77.8	80.2	82.0	77.9	72.5	72.1	73.9	78.2	83.4	83.8	74.6	69.4	64.3	64.0	66.8	70.8	77.0	84.3	86.8	83.3	76.6	69.1	78.8	80.0	76.1	86.8
2-Apr	80.8	85.4	88.4	86.1	80.9	77.8	71.3	64.2	57.6	52.1	46.6	40.5	36.3	33.5	30.0	31.2	31.1	33.7	34.9	38.0	49.0	54.6	57.6	60.1	55.1	88.4
3-Apr	68.0	67.1	69.7	65.3	64.0	62.4	61.0	59.2	57.6	54.0	46.5	40.0	34.4	32.7	30.5	30.3	31.6	30.8	32.3	39.8	54.0	65.1	71.8	80.0	52.0	80.0
4-Apr	79.7	77.6	77.0	76.8	78.2	73.1	70.9	57.7	44.5	33.7	28.5	31.0	31.9	30.5	28.1	26.4	25.2	23.9	27.3	48.6	65.1	67.1	70.5	75.0	52.0	79.7
5-Apr	80.5	80.3	81.0	82.1	81.4	80.1	71.3	60.6	46.1	35.2	26.8	21.8	21.3	20.2	20.3	20.2	20.5	23.9	30.2	27.8	30.5	34.6	48.8	60.3	46.1	82.1
6-Apr	62.0	68.6	75.6	76.1	81.8	85.2	81.8	57.1	45.2	34.5	28.5	25.3	23.6	22.8	22.1	21.5	22.3	26.1	35.1	42.3	45.6	50.8	55.7	58.1	47.8	85.2
7-Apr	62.5	66.2	69.5	71.6	72.0	73.1	71.7	59.9	49.2	39.9	32.8	28.3	26.3	25.3	25.5	27.8	30.3	34.1	38.5	44.8	51.9	55.6	63.6	72.7	49.7	73.1
8-Apr	74.4	81.6	78.6	81.1	88.2	92.3	87.9	76.9	70.8	68.0	69.2	69.8	83.7	83.9	79.9	72.3	69.9	68.0	70.6	79.8	90.3	91.9	95.3	98.2	80.1	98.2
9-Apr	98.4	97.0	96.5	93.9	97.4	99.2	92.1	58.7	49.8	43.7	38.8	32.4	30.1	28.4	27.2	23.4	20.4	22.0	25.9	39.9	59.0	65.3	55.4	37.5	55.5	99.2
10-Apr	37.8	44.2	60.7	55.9	45.4	52.6	57.2	46.2	35.5	29.4	23.7	23.1	22.4	21.4	21.0	21.3	23.9	24.7	28.9	49.3	58.8	62.8	60.7	64.4	40.5	64.4
11-Apr	63.5	58.9	65.0	61.6	68.5	74.5	71.4	77.5	71.8	43.8	34.7	32.6	32.4	31.9	26.7	21.8	24.5	29.4	33.8	38.3	41.8	45.9	49.2	50.0	47.9	77.5
12-Apr	54.5	52.6	44.2	52.2	55.7	56.9	54.6	46.9	45.8	44.5	42.9	43.5	40.3	41.8	40.7	46.6	50.4	58.7	64.5	64.7	68.1	73.6	83.0	86.1	54.7	86.1
13-Apr	79.4	78.1	80.7	83.5	88.2	89.6	84.0	66.2	51.2	36.6	23.5	21.8	20.9	20.4	21.2	22.6	23.6	27.7	27.1	35.0	50.5	63.4	71.6	79.2	51.9	89.6
14-Apr	82.4	85.5	86.6	85.8	83.7	81.2	70.4	54.7	42.0	31.1	22.0	19.7	20.3	23.5	24.1	25.2	29.1	31.4	34.6	38.6	42.9	45.6	46.5	47.8	48.1	86.6
15-Apr	50.1	52.2	53.6	53.3	53.0	54.6	53.8	52.8	40.6	32.3	33.5	30.2	26.9	23.0	22.4	24.0	23.7	24.7	25.6	26.7	28.0	29.9	34.0	43.6	37.2	54.6
16-Apr	44.7	50.1	67.8	82.8	85.7	88.6	90.0	87.9	88.7	82.0	75.6	73.3	73.8	71.3	73.5	67.6	74.9	82.0	78.9	98.4	OR	89.3	87.2	83.1	78.1	98.4
17-Apr	83.2	86.9	86.4	84.1	81.7	81.3	81.3	79.6	77.8	77.2	76.1	76.4	75.2	71.3	69.2	68.6	65.3	61.9	62.2	67.3	80.0	88.9	90.3	90.7	77.6	90.7
18-Apr	92.0	89.0	85.1	87.9	91.4	91.4	85.4	72.5	61.9	51.4	43.2	38.5	34.7	30.6	26.5	24.5	25.4	26.9	26.4	27.7	29.6	30.1	29.9	30.8	51.4	92.0
19-Apr	31.1	30.3	36.5	72.8	85.8	86.0	77.3	53.1	44.5	43.3	45.5	50.5	34.1	33.1	29.6	27.8	25.0	26.7	27.1	39.1	45.5	49.8	57.1	60.1	46.3	86.0
20-Apr	69.5	77.4	81.1	84.8	86.7	88.1	81.9	71.6	64.8	57.8	50.1	46.7	43.5	42.0	38.9	37.2	36.4	38.2	40.9	43.6	51.7	63.2	60.4	59.9	59.0	88.1
21-Apr	61.3	70.4	73.7	78.0	81.3	84.0	74.2	57.4	44.8	39.3	35.8	31.2	26.9	23.7	23.3	23.6	23.2	23.5	26.8	37.0	52.0	61.6	61.5	69.0	49.3	84.0
22-Apr	71.9	73.4	78.5	73.8	75.8	80.8	72.3	58.4	58.9	62.6	66.4	62.7	54.6	46.0	36.2	29.5	38.7	36.0	35.9	42.5	54.1	66.1	72.8	69.9	59.1	80.8
23-Apr	61.1	57.2	59.3	61.3	59.1	65.1	62.1	54.6	48.8	44.5	34.1	29.5	29.8	34.4	36.5	30.0	27.8	32.7	34.9	44.5	56.2	64.8	61.5	66.9	48.2	66.9
24-Apr	74.7	78.4	82.3	84.5	85.6	89.2	76.4	59.9	45.1	38.0	34.6	35.0	33.0	30.7	28.0	27.1	23.9	24.5	25.0	32.2	50.7	64.4	68.8	72.7	52.7	89.2
25-Apr	74.2	78.1	73.9	65.6	71.4	72.8	53.1	37.9	29.1	24.5	22.8	21.7	21.0	20.3	19.6	18.9	18.5	18.8	20.3	24.0	28.3	31.3	40.0	38.0	38.5	78.1
26-Apr	39.5	41.2	43.4	46.1	46.7	48.0	46.5	42.6	41.1	34.0	25.0	20.7	16.9	16.1	17.1	20.5	25.0	31.4	41.1	49.6	57.2	59.5	63.4	68.2	39.2	68.2
27-Apr	71.8	72.5	74.6	79.6	88.0	86.9	68.0	56.3	48.8	44.1	41.2	39.7	40.2	42.4	39.1	37.2	37.3	36.6	38.5	43.4	55.6	71.4	76.7	81.3	57.1	88.0
28-Apr	79.9	85.9	90.0	88.2	89.5	91.2	73.9	49.8	34.0	27.7	23.9	18.7	17.7	20.6	22.5	23.1	23.5	23.7	23.9	27.6	32.6	37.0	43.4	46.7	45.6	91.2
29-Apr	61.1	72.3	64.4	65.2	64.9	65.7	56.8	49.0	44.1	41.3	37.8	40.6	46.9	47.4	45.5	46.3	48.8	63.2	89.9	91.1	OR	OR	88.3	83.8	59.7	91.1
30-Apr	81.6	81.7	87.2	89.8	86.1	87.1	85.5	78.5	69.7	65.8	61.3	55.9	49.6	47.3	59.6	53.9	59.1	82.0	83.6	87.9	79.2	84.6	84.9	86.7	74.5	89.8
Diurnal Average																										
Diurnal Maximum																										
OR - Out of Range																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

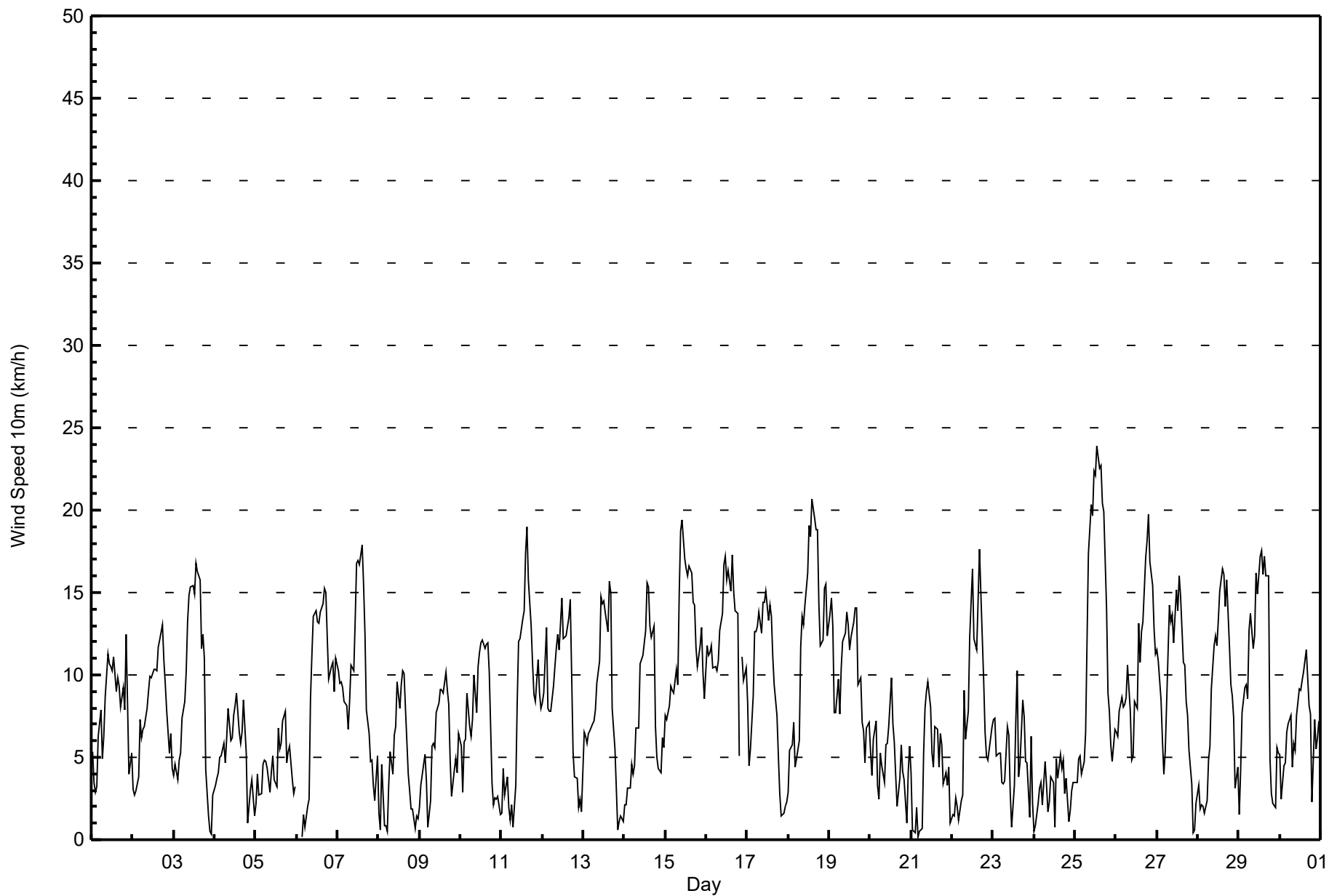
Conklin - April 2025

Maximum Speed: 24 km/h on Apr 25 14:00										Maximum Daily Speed Average: 12.5 km/h on Apr 25										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 21 05:00										Minimum Daily Speed Average: 0.5 km/h on Apr 23										Hours of Data: 717						
Maximum Diurnal Speed Average: 6.1 km/h at hour 16										Minimum Diurnal Speed Average: 1.2 km/h at hour 20										Hours of Missing Data: 3						
Monthly Average Velocity: 3.2 km/h 260.2 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 8 Q ₃ = 12 P ₉₀ = 15 P ₉₉ = 20										Percent Operational Time: 99.6						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	SSE5	SE3	ESE3	SSE3	SSW6	S8	SSW5	S6	S9	SSE11	S11	S11	S10	SSW11	SSW9	SW10	SW9	SW8	WNW9	NW8	NW12	NW8	NW4	NW5	SSW4.4	NW12
2-Apr	WNW3	WSW3	SW3	SSW4	SW7	WSW6	WNW7	WNW7	WNW8	WNW9	WNW10	WNW10	WNW10	WNW10	WNW10	NW12	NW12	NNW13	NNW11	N9	N8	N5	NNW6	NW4	NW6.6	NNW13
3-Apr	NW4	NW5	NW4	NW5	NW5	NNW7	NW8	NW10	NNW13	NNW15	NW15	NNW15	NNW15	NNW17	NNW16	NNW16	NNW12	NNW12	NNW11	NNW4	NW1	S1	SSW0	S3	NNW8.6	NNW17
4-Apr	S3	S4	S4	S5	S5	S6	S5	SSW6	SW8	W6	WNW6	WNW8	WNW8	WNW9	WNW7	WNW6	WNW7	NNW8	N5	NW1	S2	SSE3	SSE4	SE1	WSW2.7	WNW9
5-Apr	SSE2	S4	SSE3	SE3	S5	S5	S5	SSW4	S3	ESE4	ESE5	SE4	WSW3	WNW7	WNW6	NW6	NW7	NNW8	NNW5	NNE5	ENE6	E4	SE3	SSE3	SSW0.6	NNW8
6-Apr	UO	NNW2	UO	S0	NNW1	NNW1	NNW2	E2	ESE9	ESE11	ESE14	ESE14	ESE13	SE13	SSE14	SSE14	SSE15	SSE15	SE12	SSE10	SSE11	SSE11	SSE9	SSE11	SE8.2	SSE15
7-Apr	SSE10	SSE9	SSE10	SSE9	SSE8	SE8	SE7	SE8	SE11	ESE10	SE13	SSE17	SSE17	SSE17	SSE18	SSE15	S13	SSW8	SW6	SSW5	SSW5	SSW3	SE2	SSE5	SSE9.2	SSE18
8-Apr	SE2	W1	SE5	SW1	ENE1	SSW1	S3	SSW5	WNW4	WNW6	WNW7	WNW10	NW8	NW9	NW10	NNW10	N8	NNE4	SE3	W2	SE2	S1	SSE1	SSW1	WNW2.3	NW10
9-Apr	S2	S3	S5	S5	S4	S1	SW2	WNW6	WNW6	WNW8	WNW8	WNW9	WNW9	WNW9	WNW9	NW10	W9	WNW8	WNW5	WSW3	SSW4	S5	WSW4	WNW6	W4.2	NW10
10-Apr	WNW6	W3	SSE6	WSW6	WNW9	SSW7	S6	SW7	W10	W8	W11	W11	WSW12	WSW12	WSW12	WSW12	SSW12	SSW10	SSW3	SSE2	SE3	SSE2	SSE3	SSW2	WSW5.9	WSW12
11-Apr	E2	SE4	SSE3	SE4	NW2	NW1	NNW2	WNW1	E3	WNW8	WNW12	WNW12	WNW13	W14	W17	W19	WNW16	WNW13	W11	W9	W8	W11	W9	WSW8	W7.1	W19
12-Apr	SW8	SW9	W13	SW8	SW8	SW8	SW9	W11	W12	W12	WNW11	W15	WNW12	WNW12	NW12	NW14	NW15	NW10	WNW5	WNW4	WNW4	WNW2	SSW2	SW2	W7.6	W15
13-Apr	WNW7	WNW6	WNW6	WNW6	WNW7	WNW7	WNW7	WNW8	NW9	NW11	NW15	NW14	NW14	NW14	NW13	NW16	NW15	NW8	WNW6	NW3	N1	SSW1	SSW1	SSE1	NW7.8	NW16
14-Apr	SSE2	S2	SSE3	SE3	SSE5	SSE4	SSE4	SW7	SW7	SW11	SW11	SW11	SW13	SSW16	SSW15	SW13	SW12	SW13	S7	S5	S4	SSW4	SSW6	SW6	SSW7.2	SSW16
15-Apr	SSW8	SSW7	SSW8	SSW9	SSW9	SSW9	SW10	SW9	W15	W19	W19	WNW17	WNW16	WNW16	WNW17	WNW16	WNW14	WNW14	WNW12	W11	W12	W13	W10	W9	W10.6	W19
16-Apr	WNW12	WNW11	WNW11	WNW12	WNW10	WNW11	WNW10	NW11	NW13	NW14	NW17	NW17	NW16	NW16	NW15	NW17	NW15	NNW14	NNW14	NW5	UO	NW11	NW10	NW10	NW12.2	NW17
17-Apr	NW8	NW4	NNW6	NNW9	N13	N13	N13	NNW14	NNW13	NNW14	N14	NNW15	NNW13	NNW14	NNW14	NNW11	N9	NNW8	NNW5	NE3	SSE1	S2	SSE2	SSE2	NNW8.4	NNW15
18-Apr	SSE3	S5	S6	SE7	SE4	SE5	SSE6	S12	SSW14	S13	S14	S16	S19	S18	S21	SSW20	SSW19	S19	S14	SSE12	S12	S15	SSW15	SSW12	S12.2	S21
19-Apr	SSW14	SSW15	WSW13	W8	SSW8	SW10	SW8	W10	WNW12	WNW13	NW14	WNW13	WNW12	NW12	WNW13	WNW14	W14	WNW9	W10	NW7	W7	W5	W7	W7	W8.8	SSW15
20-Apr	W5	WSW4	WNW6	NW7	NNW3	N2	NNE5	NNE4	NNW3	NW6	NW6	NNW7	NNW10	NNW7	WNW6	N4	N2	ENE4	ENE6	NE4	NNE4	ENE1	ESE4	ESE6	NNW2.9	NNW10
21-Apr	SE4	S1	NNE0	NNW2	W0	NNW0	ENE1	ESE5	E8	ESE9	ESE10	ESE8	E5	E4	ESE7	ESE7	ESE4	SE6	ESE6	SE3	SSE4	SSW3	SSW4	S1	ESE3.6	ESE10
22-Apr	W1	ESE1	ESE3	NNE2	SE1	SSE2	S3	SSW9	SW6	SSW8	WSW12	SW14	WSW16	WSW12	SW11	SW15	SSW18	SW15	SW10	SW7	S5	SSW5	SSW5	SSW7	SW7.0	SSW18
23-Apr	SSW7	SSW7	SSW5	SSW5	SW5	S3	SSW3	S4	S7	S6	SW3	ESE1	N3	NE7	E10	E4	NNW5	NNE8	NNE7	NNW5	NNW5	N1	N6	SW2	SSE0.5	E10
24-Apr	SSW1	SW1	S2	S3	SSE3	S2	S5	S3	WSW2	W2	W4	W3	SSE1	S5	SSW4	WNW5	WSW4	WNW5	W3	E4	SSE1	SSE2	SSE3	SSE3	SSW1.8	WNW5
25-Apr	SE3	S3	SSW5	SSW5	S4	SSW5	SSW7	SSW12	S17	S20	S20	S22	SSW22	SSW24	SSW23	SSW23	S20	SSW20	S14	S9	S8	SSW6	S5	SSW7	S12.5	SSW24
26-Apr	SSW7	SSW6	SSW8	SSW9	S8	S8	S9	SSW11	SW8	SSW5	NW5	NW8	NW8	NW13	WNW11	NW13	NW13	NNW17	N18	NNW20	N17	N15	N13	N11	NW5.3	NNW20
27-Apr	N11	NNW11	NNW8	NNW6	NNW4	NW5	NNW11	NNW14	NNW13	NNW14	NNW12	NNW15	N14	N16	NNW15	N11	N11	N8	NNE8	NE5	ENE3	W0	S1	S2	NNW8.5	N16
28-Apr	S3	ESE2	SE2	SE2	ESE2	SE5	S6	SSW9	SSW12	SSW12	SSW12	SSW13	SSW15	SSW16	S16	SSW14	SSW16	S12	S9	SSW9	SSW7	S3	SSW4	SSW8.1	SSW16	
29-Apr	SW2	S4	SW8	SW9	SW9	SW9	WSW13	W14	W12	W12	W16	WNW15	WNW17	NW18	NW16	NW17	NW16	NNW16	NW5	SW3	S2	SSE2	NW6	NW5	WNW8.2	NW18
30-Apr	NW5	SW2	SSE5	S5	SW7	SSW7	SW8	WSW4	WNW6	W5	W8	W9	W9	WNW10	WNW10	W11	NNW10	NNE8	NNE8	NNE2	NW7	NW6	NW6	NNW7	WNW4.4	W11
SW2.3 SW2.5 SW2.7 SW2.6 SW2.7 SW2.8WSW2.8WSW3.7WSW4.1 W4.1 W5.3 W5.5 W5.7 W5.7 W5.8 W6.1 W5.3WNW3.9WNW2.4WNW1.2WSW1.2WSW1.8WSW1.8WSW2.1																										Diurnal Average
SSW14 SSW15WSW13WNW12 N13 N13 N13 NNW14 S17 S20 S20 S22 SSW22 SSW24 SSW23 SSW23 S20 SSW20 N18 NNW20 N17 N15 SSW15 SSW12																										Diurnal Maximum
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Conklin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Conklin - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	260	36.26	36.26
6 - 11	268	37.38	73.64
12 - 19	177	24.69	98.33
20 - 28	12	1.67	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
Conklin - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	8	8	3	5	8	11	23	34	49	33	11	8	13	10	19	17	260
6 - 11	10	5	1	2	2	10	6	13	19	32	34	4	24	57	28	21	268
12 - 19	10	0	0	0	0	3	3	10	15	19	7	9	17	26	31	27	177
20 - 28	0	0	0	0	0	0	0	0	5	6	0	0	0	0	0	1	12
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	28	13	4	7	10	24	32	57	88	90	52	21	54	93	78	66	717

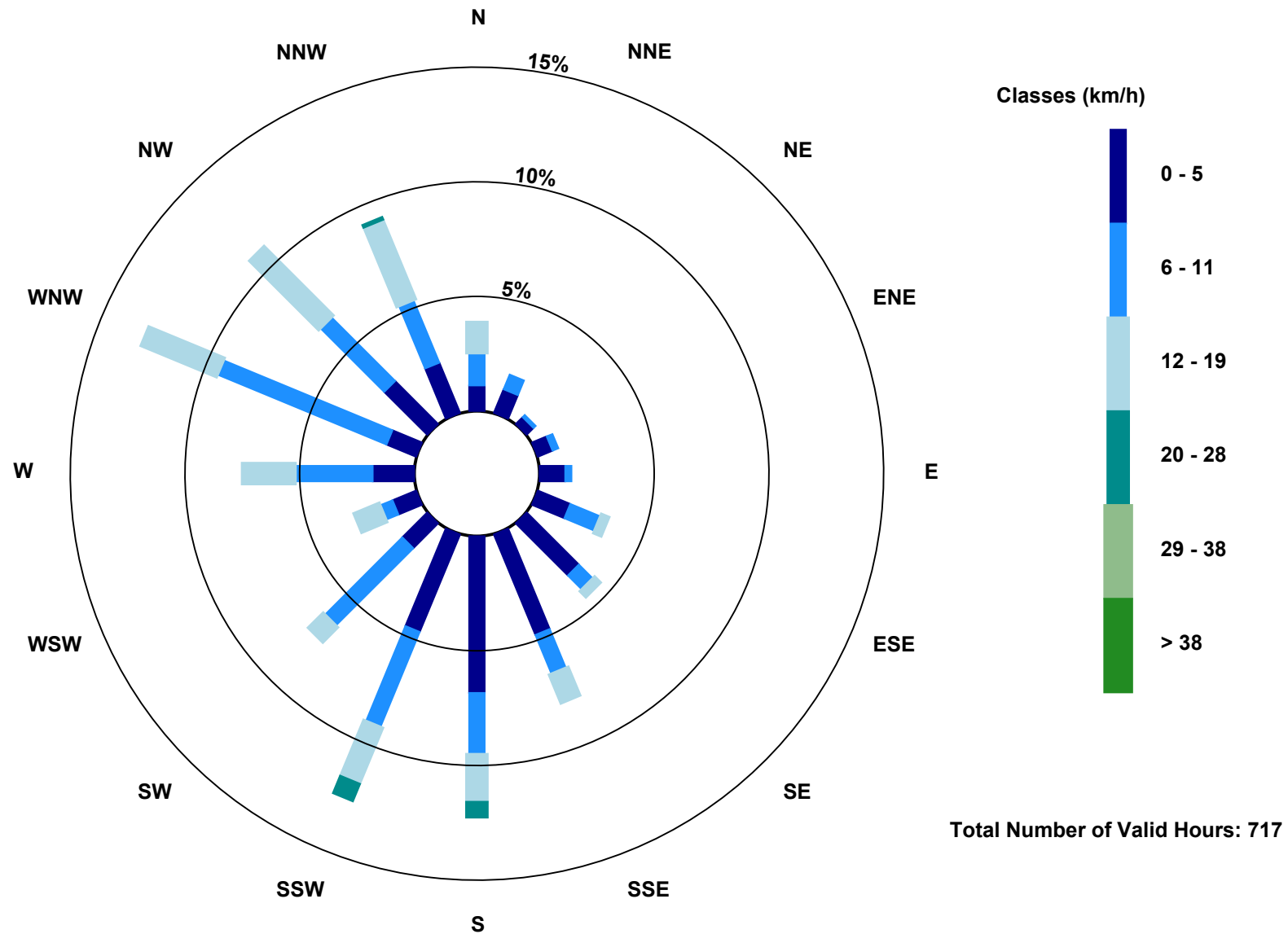
Total Number of Valid Hours: 717

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Conklin





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 11 16:00																	Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6								
Minimum Value: 0 km/h on Apr 25 01:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	2	1	2	2	2	1	2	2	3	3	3	3	3	3	3	3	2	4	3	5	3	1	2	5
2-Apr	1	1	1	1	2	2	3	3	3	4	4	4	4	4	5	6	5	4	4	3	2	1	2	1	6
3-Apr	1	1	1	2	2	3	3	4	4	5	6	6	5	6	5	5	4	4	5	3	1	1	1	1	6
4-Apr	1	1	1	1	1	2	1	2	2	2	3	3	3	4	3	3	3	3	2	1	1	1	1	2	4
5-Apr	2	2	1	1	1	1	1	1	1	1	2	2	3	3	3	4	3	3	2	2	2	1	1	1	4
6-Apr	UO	1	UO	1	1	1	1	2	2	3	4	4	4	4	4	4	4	4	3	3	2	3	2	2	4
7-Apr	2	2	2	2	2	1	1	2	2	3	4	5	5	5	4	5	4	2	2	1	1	1	1	1	5
8-Apr	1	1	1	1	1	2	1	2	2	3	3	4	3	4	4	3	3	2	1	3	2	1	1	1	4
9-Apr	1	1	2	1	1	1	1	2	2	2	3	4	4	4	4	4	4	4	2	1	1	2	2	3	4
10-Apr	2	2	1	5	4	2	2	2	4	3	5	5	5	5	4	5	4	4	3	1	1	0	1	1	5
11-Apr	3	2	1	2	1	2	2	1	2	4	5	5	5	6	7	8	7	5	5	3	3	5	3	3	8
12-Apr	2	4	5	2	2	2	3	5	4	5	5	6	5	5	5	5	5	4	2	1	1	2	1	3	6
13-Apr	2	3	2	2	3	3	3	3	4	4	7	6	6	6	5	7	6	5	2	2	1	1	1	1	7
14-Apr	1	1	1	1	1	1	2	2	2	3	4	4	5	4	5	4	4	4	3	1	1	2	1	1	5
15-Apr	2	2	2	3	2	2	3	3	6	8	8	7	7	7	7	7	6	6	5	4	4	4	5	4	8
16-Apr	5	6	5	5	4	5	4	5	5	6	6	6	5	6	6	6	6	5	5	3	UO	4	3	4	6
17-Apr	3	2	2	3	4	4	4	4	4	4	4	5	4	4	4	3	3	3	2	1	1	1	1	1	5
18-Apr	1	2	2	2	2	1	2	4	3	4	4	4	5	5	6	6	6	5	4	3	4	5	4	3	6
19-Apr	3	4	5	5	2	3	2	4	5	5	6	6	5	5	6	6	6	4	4	5	3	2	3	3	6
20-Apr	2	2	2	2	2	1	2	2	2	2	3	3	3	3	3	3	3	2	2	1	1	1	2	2	3
21-Apr	3	1	2	1	1	1	1	1	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1	2	3
22-Apr	2	2	1	1	1	1	1	3	3	3	4	5	5	5	5	6	5	4	3	4	1	1	1	1	6
23-Apr	2	3	3	2	2	1	1	1	2	2	2	3	3	4	4	3	3	5	3	2	2	1	3	1	5
24-Apr	1	1	1	2	1	2	1	1	2	3	3	2	3	2	3	3	3	3	2	1	1	1	1	1	3
25-Apr	0	1	1	1	1	1	1	4	5	6	6	7	7	7	7	7	7	6	5	2	2	2	1	2	7
26-Apr	2	2	2	2	2	2	2	3	3	2	3	4	4	5	5	4	5	6	6	6	5	4	4	3	6
27-Apr	3	3	2	1	1	2	4	4	4	5	5	5	5	5	5	5	4	4	3	2	1	1	1	1	5
28-Apr	1	1	2	1	1	1	1	2	3	3	4	5	5	5	5	5	5	4	4	5	4	4	2	3	5
29-Apr	2	1	3	2	3	2	5	6	5	5	7	7	8	7	7	7	6	7	6	2	1	1	2	2	8
30-Apr	2	2	1	1	2	2	3	2	3	3	3	3	4	4	5	4	5	3	2	2	2	1	2	2	5
5 6 5 5 4 5 5 6 6 8 8 7 8 7 7 8 7 7 6 6 5 5 5 4																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

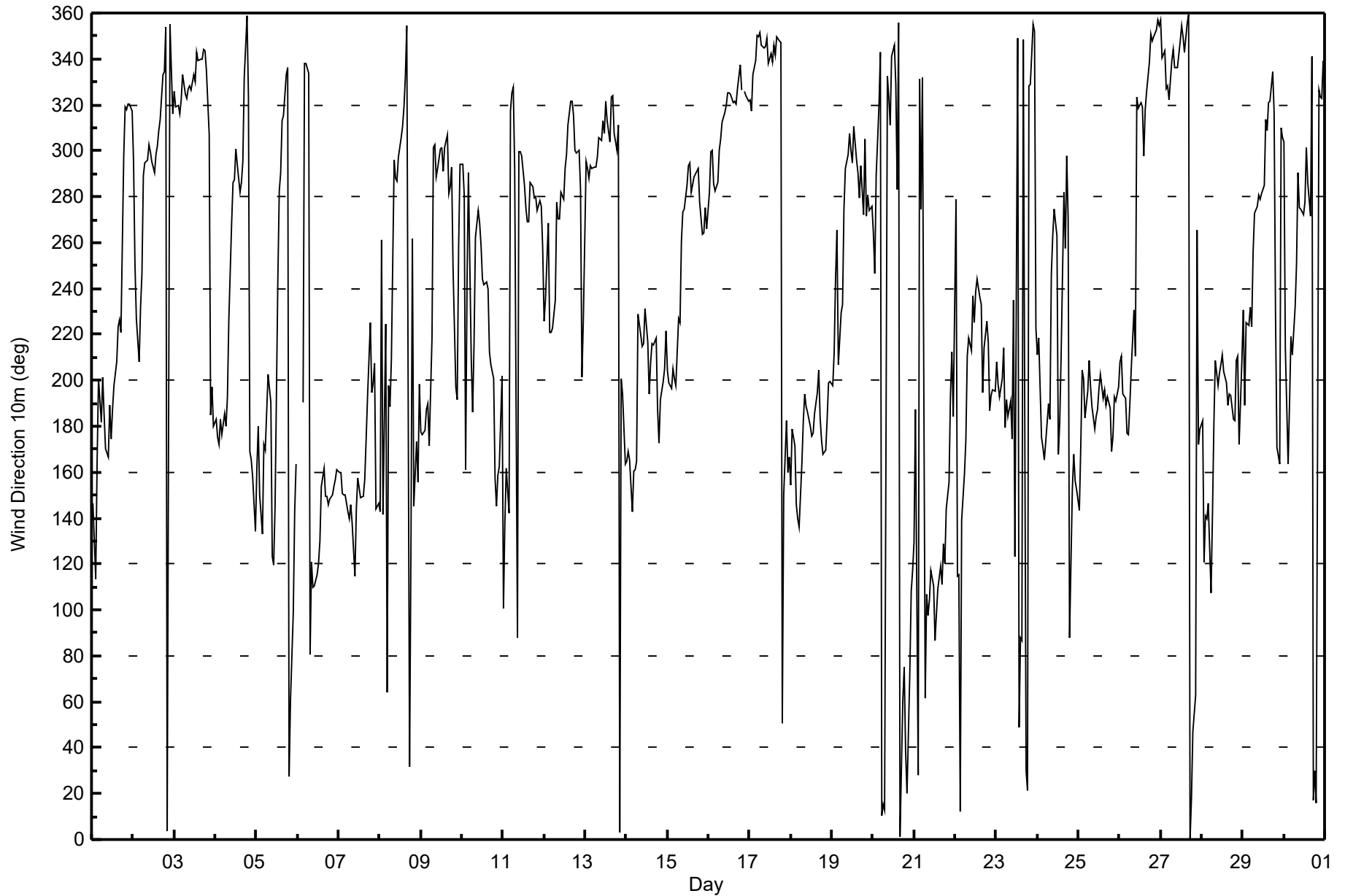
Conklin - April 2025

Direction of Maximum Speed: 203 deg on Apr 25 14:00																				Hours in Service:		720				
Direction of Maximum Daily Speed Average: 190.4 deg on Apr 25																				Hours of Data:		717				
Direction of Minimum Speed: 274 deg on Apr 21 05:00										Direction of Minimum Daily Speed Average: 0.5 deg on Apr 23										Hours of Missing Data:		3				
Monthly Average Direction: 260.2 deg																				Percent Operational Time:		99.6				
Day	Hourly Period Ending At (MST)																							Daily Average		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	147	131	113	165	200	182	201	185	170	167	189	174	187	198	208	223	227	221	298	319	318	321	320	317		210.1
2-Apr	295	251	227	208	232	246	289	295	296	302	299	296	290	298	302	309	314	333	334	354	4	355	335	316		305.9
3-Apr	326	319	319	316	322	333	325	323	327	329	326	333	330	343	339	340	340	344	344	335	307	185	197	180		332.2
4-Apr	183	175	172	183	176	185	180	193	226	269	286	287	301	294	282	286	296	332	359	323	169	165	158	134		250.5
5-Apr	162	180	150	133	172	170	186	202	190	123	120	145	245	283	290	313	316	333	336	27	60	99	143	164		191.5
6-Apr	UO	338	UO	190	338	338	334	81	121	110	111	116	120	130	154	162	150	149	146	149	150	154	157	161		138.7
7-Apr	160	160	151	150	150	143	140	146	138	115	144	158	153	149	149	157	174	193	225	195	199	208	144	147		155.6
8-Apr	143	261	142	225	64	198	189	209	296	288	287	297	305	311	319	333	355	32	130	262	145	173	155	198		301.5
9-Apr	178	177	178	187	190	171	218	302	303	288	293	301	301	291	301	307	281	284	293	250	197	191	258	294		276.0
10-Apr	294	281	161	242	290	210	186	216	263	274	268	259	244	242	243	240	212	207	201	157	145	159	162	202		236.3
11-Apr	100	138	162	142	318	325	327	292	88	300	300	298	285	275	269	269	286	284	280	280	274	278	276	258		279.4
12-Apr	226	235	269	221	221	223	235	278	270	270	282	279	292	298	311	321	321	315	301	299	300	283	201	226		277.3
13-Apr	296	292	288	294	293	293	293	297	306	305	313	307	321	313	304	324	324	308	300	311	3	201	194	164		306.6
14-Apr	165	169	166	143	160	161	165	229	220	215	216	231	217	194	208	216	215	219	187	173	191	200	205	221		205.2
15-Apr	205	199	196	205	201	198	227	225	260	273	274	285	293	294	282	289	290	291	293	278	264	264	275	266		265.4
16-Apr	282	300	300	285	283	286	300	305	312	317	319	325	325	324	321	321	320	327	337	326	UO	326	324	321		314.0
17-Apr	322	317	333	339	350	350	351	346	345	345	349	338	342	339	346	342	349	348	347	50	150	182	160	167		344.1
18-Apr	154	179	171	146	139	136	164	183	194	189	186	180	176	177	185	194	205	183	174	168	169	183	199	200		182.0
19-Apr	197	212	244	265	207	229	233	274	292	298	308	300	294	311	296	290	279	294	272	305	271	281	274	276		273.4
20-Apr	264	247	289	320	343	10	16	13	333	323	311	341	346	329	283	356	2	60	75	38	20	72	108	117		344.7
21-Apr	130	187	28	331	274	332	62	107	97	104	117	110	87	98	110	119	111	129	121	144	155	193	212	184		118.1
22-Apr	279	115	115	12	139	159	174	210	218	213	237	225	238	244	236	233	194	214	226	217	186	194	196	195		217.8
23-Apr	208	198	193	201	214	180	192	184	191	175	235	123	349	49	88	87	348	30	21	328	329	355	352	223		167.9
24-Apr	211	218	175	171	165	173	190	183	246	263	274	263	168	182	211	282	258	298	270	88	153	168	156	152		211.5
25-Apr	143	171	204	201	184	195	209	197	189	179	184	187	196	203	192	196	189	193	188	169	176	193	191	197		190.4
26-Apr	208	211	194	192	177	176	189	204	231	211	324	318	321	319	298	318	326	339	351	348	350	353	357	354		314.8
27-Apr	357	341	344	327	328	322	339	344	336	336	336	348	355	349	343	356	359	0	18	47	63	265	172	179		348.0
28-Apr	182	121	141	139	146	107	141	180	208	198	203	207	211	204	199	189	194	194	183	182	208	210	172	209		193.9
29-Apr	231	189	225	224	232	223	256	273	276	281	279	282	285	313	309	321	322	335	316	229	171	164	310	306		284.3
30-Apr	304	214	163	190	219	211	232	251	290	275	274	272	278	302	286	272	341	17	30	16	326	324	323	339		289.8
228.7 219.8 216.1 221.8 224.4 217.5 238.3 247.5 258.0 264.9 272.1 273.0 275.2 279.3 268.2 275.8 277.3 284.4 297.3 293.5 247.3 241.6 246.1 236.4																										
Diurnal Average																										
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Conklin - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Conklin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 106 deg on Apr 24 13:00																			Hours in Service: 720 Hours of Data: 717 Hours of Missing Data: 3 Hours of Calibration: 0 Percent Operational Time: 99.6						
Minimum Value: 7 deg on Apr 22 23:00																									
Percentiles: P ₁ = 12 P ₁₀ = 17 Q ₁ = 20 Median = 27 Q ₃ = 35 P ₉₀ = 63 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	11	20	16	37	18	19	26	23	18	22	27	24	28	25	28	23	22	20	34	23	20	17	16	18	37
2-Apr	34	32	24	32	18	32	31	32	33	33	33	35	36	33	35	30	29	22	20	24	18	16	18	17	36
3-Apr	19	14	17	19	16	19	17	20	22	23	25	27	25	23	24	23	23	21	18	31	51	84	87	20	87
4-Apr	18	18	15	17	15	15	13	21	22	42	43	39	39	38	55	48	40	31	17	81	33	25	21	90	90
5-Apr	31	40	32	27	24	20	25	23	46	21	35	67	93	42	52	58	35	18	21	37	33	45	28	16	93
6-Apr	UO	45	UO	89	66	75	64	62	20	19	18	19	24	25	26	25	18	18	14	13	14	15	14	14	89
7-Apr	14	14	13	12	11	10	12	18	19	26	21	20	22	21	21	23	21	28	25	21	13	19	26	15	28
8-Apr	72	73	13	78	93	88	29	27	50	38	36	32	29	27	20	22	20	39	33	58	49	82	46	43	93
9-Apr	28	21	25	27	20	82	70	38	33	37	34	37	36	36	36	34	33	32	27	35	14	23	57	29	82
10-Apr	29	72	22	56	33	28	26	25	29	37	35	42	37	33	36	33	30	24	39	24	16	14	19	41	72
11-Apr	100	33	37	47	67	89	71	97	62	55	32	32	33	34	33	33	31	31	29	29	26	30	30	27	100
12-Apr	18	23	28	20	20	20	20	36	28	32	37	33	35	33	30	23	23	26	30	21	27	62	17	79	79
13-Apr	29	29	31	31	33	31	31	35	29	31	31	30	27	29	32	31	28	29	26	38	86	67	70	69	86
14-Apr	25	33	18	22	21	30	34	24	23	22	36	35	39	20	29	27	25	25	20	12	16	17	15	20	39
15-Apr	19	16	15	19	17	15	23	21	28	32	29	34	33	34	35	33	31	31	31	29	23	24	32	25	35
16-Apr	30	30	30	32	33	30	31	29	25	23	20	21	21	20	22	19	23	20	22	17	UO	17	18	19	33
17-Apr	17	19	19	19	18	18	20	20	21	20	20	20	23	21	22	23	32	30	29	46	45	26	29	32	46
18-Apr	29	18	18	14	23	16	26	22	18	23	23	22	22	23	22	22	23	19	17	16	19	19	18	17	29
19-Apr	17	19	32	47	21	19	24	30	34	31	32	32	35	32	34	32	31	33	31	32	25	26	27	26	47
20-Apr	29	46	31	21	26	24	23	40	63	51	58	45	37	46	54	84	100	58	28	24	22	85	35	20	100
21-Apr	69	92	86	28	88	91	73	25	30	34	27	43	66	76	54	45	68	24	17	14	23	34	17	71	92
22-Apr	65	63	42	78	69	30	33	21	30	25	24	32	26	32	40	31	20	26	22	21	12	8	7	10	78
23-Apr	20	26	66	35	44	35	22	17	20	31	93	101	89	60	38	77	68	61	21	27	18	73	17	49	101
24-Apr	94	38	22	28	20	43	18	67	102	92	62	70	106	58	90	62	67	76	57	41	65	51	16	13	106
25-Apr	11	17	14	15	13	15	15	19	20	22	24	24	26	25	24	23	22	22	21	16	16	16	15	16	26
26-Apr	16	19	17	16	20	16	20	23	40	61	65	35	38	35	38	22	25	21	19	18	18	18	19	17	65
27-Apr	19	20	19	15	14	15	20	20	24	26	32	27	30	22	34	37	36	48	27	27	29	79	85	19	85
28-Apr	14	31	38	43	70	27	26	28	27	27	34	41	32	30	26	30	28	19	20	28	29	28	65	39	70
29-Apr	88	22	22	18	18	19	30	29	33	33	32	33	35	27	30	26	25	22	73	47	32	61	27	25	88
30-Apr	27	72	17	18	21	26	23	48	37	37	33	32	36	34	34	31	46	34	20	50	19	15	17	24	72
100 92 86 89 93 91 73 97 102 92 93 101 106 76 90 84 100 76 73 81 86 85 87 90																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS22
JANVIER
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)

APRIL 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	-	-	2.6	0	0.9	0
TRS(ppb) Average	684	36	36	100	0.6	0	0.5	-	0.2	-
THC(ppm) Average	686	34	34	100	-	-	2.3	-	2.1	-
NMHC(ppm) Average	686	34	34	100	-	-	0.006	-	0	-
CH4(ppm) Average	686	34	34	100	-	-	2.3	-	2.1	-
O3 (ppb) Average	687	33	33	100	-	-	61.3	0	51.8	-
NO2 (ppb) Average	684	36	36	100	-	-	5	0	2.1	-
NO (ppb) Average	684	36	36	100	-	-	1.6	-	0.5	-
NOX (ppb) Average	684	36	36	100	-	-	5.9	-	2.6	-
PM2.5 (ug/m3) Average	717	3	3	100	-	-	24.9	0	5.3	0
Temperature 2 m (C) Average	720	0	0	100	-	-	21.4	-	12.5	-
Relative Humidity (%) Average	720	0	0	100	-	-	100	-	85.4	-
Wind Speed 10 m (km/h) Average	715	0	5	99.31	-	-	21	-	12	-
Wind Speed 20 m (km/h) Average	711	0	9	98.75	-	-	27	-	17	-
Wind Direction 10 m (deg) Average	715	0	5	99.31	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	711	0	9	98.75	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.27	0.4	-	0	0	0	0.1	0.3	0.7	2.6
TRS (ppb) Average	684	0.17	0	-	0.1	0.1	0.2	0.2	0.2	0.2	0.5
THC (ppm) Average	686	2.03	0	-	2	2	2	2	2	2.1	2.3
NMHC(ppm) Average	686	0	0	-	0	0	0	0	0	0	0.006
CH4(ppm) Average	686	2.03	0	-	2	2	2	2	2	2.1	2.3
O3 (ppb) Average	687	42.08	8.9	-	12.4	29	36.5	43.5	48.3	52.3	61.3
NO2 (ppb) Average	684	1.05	0.8	-	0.2	0.3	0.5	0.8	1.3	2.3	5
NO (ppb) Average	684	0.14	0.2	-	0	0	0	0	0.2	0.4	1.6
NOX (ppb) Average	684	1.18	0.9	-	0.2	0.3	0.5	0.9	1.5	2.5	5.9
PM2.5 (ug/m3) Average	717	2.65	1.7	-	0.2	1.2	1.8	2.5	3.1	4	24.9
Temperature 2 m (C) Average	720	4.94	6.8	-	-12.4	-3.7	0.2	5.1	10.1	13.4	21.4
Relative Humidity (%) Average	720	53.7	21.6	-	17.8	26.4	34.7	52.4	71.1	83.5	100
Wind Speed 10 m (km/h) Average	715	7.5	4	-	0	2	5	7	10	13	21
Wind Speed 20 m (km/h) Average	711	10.1	5	-	0	4	7	9	13	17	27
Wind Direction 10 m (deg) Average	715	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	711	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction 10m	16 Apr 2025 22:00	17 Apr 2025 02:00	5	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 20m	16 Apr 2025 22:00	17 Apr 2025 06:00	9	Flat line in sensor output signal - Sensor frozen



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

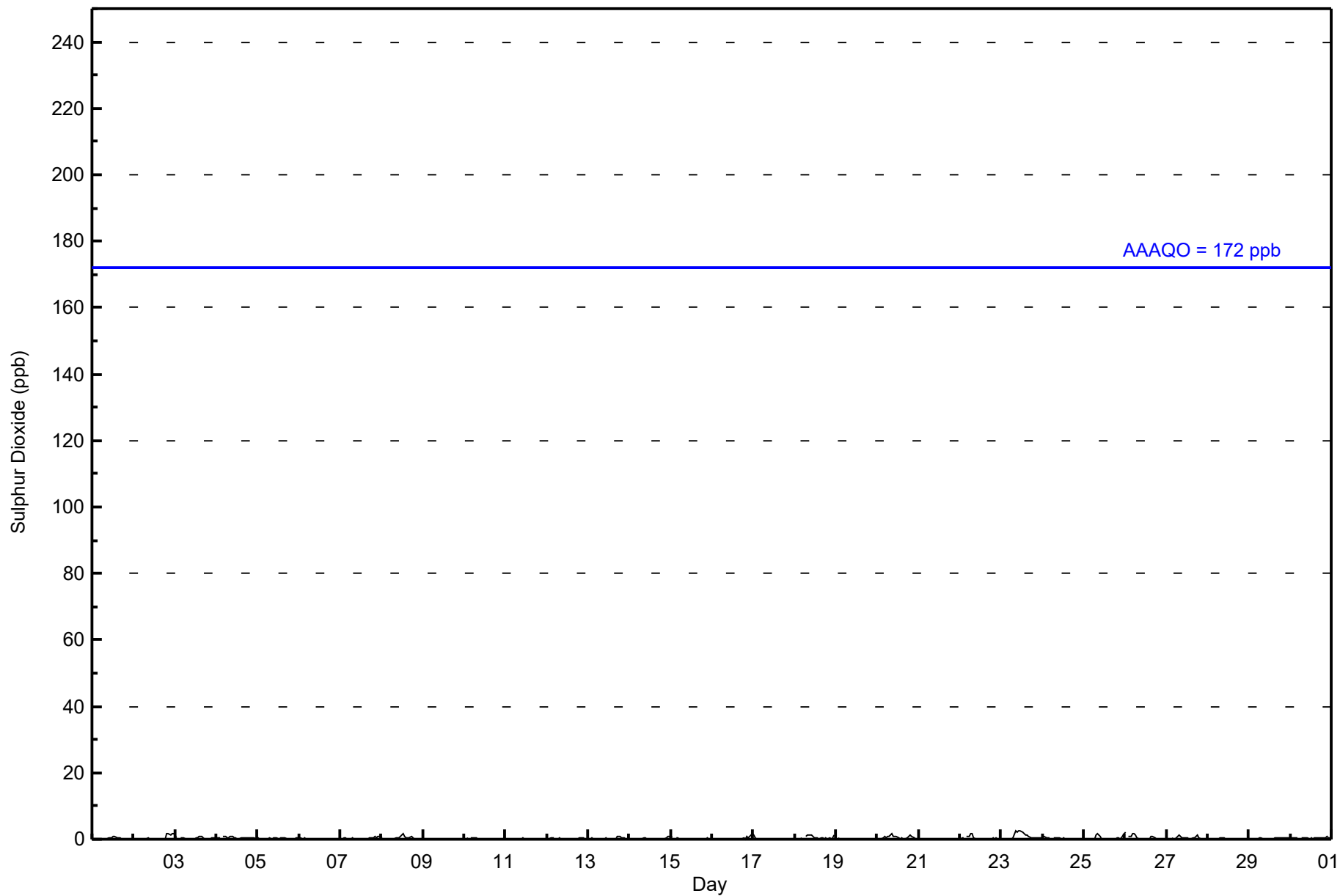
Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 2.6 ppb on Apr 23 12:00																			Maximum Daily Average: 0.9 ppb on Apr 23		Hours of Data: 686					
Minimum Value: 0.0 ppb on Apr 1 02:00																			Minimum Daily Average: 0.0 ppb on Apr 21		Hours of Missing Data: 34					
Maximum Diurnal Average: 0.4 ppb at hour 9																			Minimum Diurnal Average: 0.2 ppb at hour 15		Hours of Calibration: 34					
Monthly Average: 0.27 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 = 1.8		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-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.6	0.8	0.7	0.6	0.5	0.3	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.2	0.8
2-Apr	0.0	Z	0.1	0.2	0.2	0.0	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	1.5	1.7	1.2	1.5	1.5	0.4	1.7
3-Apr	1.4	0.4	Z	0.4	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.4	0.6	0.7	0.8	0.5	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.3	1.4
4-Apr	0.3	0.3	0.6	Z	1.0	0.8	0.4	0.6	0.8	1.0	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.1	0.4	1.0
5-Apr	0.2	0.1	0.2	0.1	Z	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3
6-Apr	0.3	0.4	0.2	0.2	0.1	Z	0.1	0.1	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	0.1	0.4
7-Apr	Z	0.2	0.5	0.5	0.2	0.1	0.1	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.3	0.3	0.5	0.7	0.6	1.1	0.6	0.3	1.1
8-Apr	0.3	Z	0.2	0.1	0.1	0.1	0.0	0.1	0.3	0.3	0.5	0.8	1.5	0.6	0.2	0.4	0.5	0.8	0.5	0.2	0.2	0.1	0.0	0.0	0.3	1.5
9-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
10-Apr	0.0	0.0	0.2	Z	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
11-Apr	0.0	0.1	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.2	0.2	C	C	C	C	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
12-Apr	0.1	0.2	0.3	0.3	0.2	Z	0.2	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	0.3	0.2	0.1	0.1	0.1	0.3
13-Apr	Z	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.1	0.7	0.9	0.6	0.4	0.2	0.1	0.0	0.2	0.9
14-Apr	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.7	0.1	0.8
15-Apr	0.6	0.9	Z	0.3	0.4	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	0.1	0.3	0.0	0.0	0.1	0.9
16-Apr	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	0.2	0.1	0.1	0.2	0.1	0.7	0.6	0.9	1.8	0.2	1.8
17-Apr	1.2	0.5	0.2	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2
18-Apr	0.0	0.0	0.0	0.0	0.3	Z	0.8	1.2	1.2	1.1	1.1	0.6	0.5	0.4	0.1	0.3	0.2	0.0	0.5	0.0	0.6	0.0	0.3	1.2	0.5	1.2
19-Apr	Z	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.5
20-Apr	0.1	Z	0.2	0.4	0.8	0.6	0.7	0.9	1.5	0.9	1.1	0.7	0.2	0.2	0.4	0.2	0.2	0.5	0.8	1.2	1.0	0.3	0.0	0.0	0.6	1.5
21-Apr	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.1
22-Apr	0.2	0.4	0.6	Z	0.8	0.7	1.9	1.6	0.6	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.4	1.9
23-Apr	0.1	0.2	0.0	0.1	Z	0.2	0.2	0.3	2.5	2.3	2.3	2.6	2.2	1.8	1.4	1.1	0.8	0.5	0.6	0.4	0.3	0.3	0.4	0.6	0.9	2.6
24-Apr	0.5	0.6	0.5	0.2	0.2	Z	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.2	0.6
25-Apr	Z	0.1	0.2	0.1	0.1	0.2	0.1	1.3	1.8	0.7	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.5	0.3	0.1	0.3	1.6	0.4	1.8
26-Apr	1.9	Z	0.8	0.8	1.5	1.5	1.3	0.5	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.9	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.5	1.9
27-Apr	0.0	0.0	Z	0.3	0.0	0.0	0.8	1.1	0.9	0.5	0.5	0.3	0.4	0.2	0.2	0.5	0.5	0.7	1.3	0.6	0.1	0.0	0.1	0.0	0.4	1.3
28-Apr	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.6	0.5	0.3	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.6
29-Apr	0.2	0.2	0.1	0.1	Z	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.6
30-Apr	0.4	0.4	0.4	0.3	0.4	Z	0.4	0.3	0.3	0.3	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.4	1.0	0.4	0.2	0.4	1.0



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Janvier - April 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 (SO₂) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	60	54	20	22	15	16	27	29	43	106	90	30	41	52	42	31	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	60	54	20	22	15	16	27	29	43	106	90	30	41	52	42	31	678

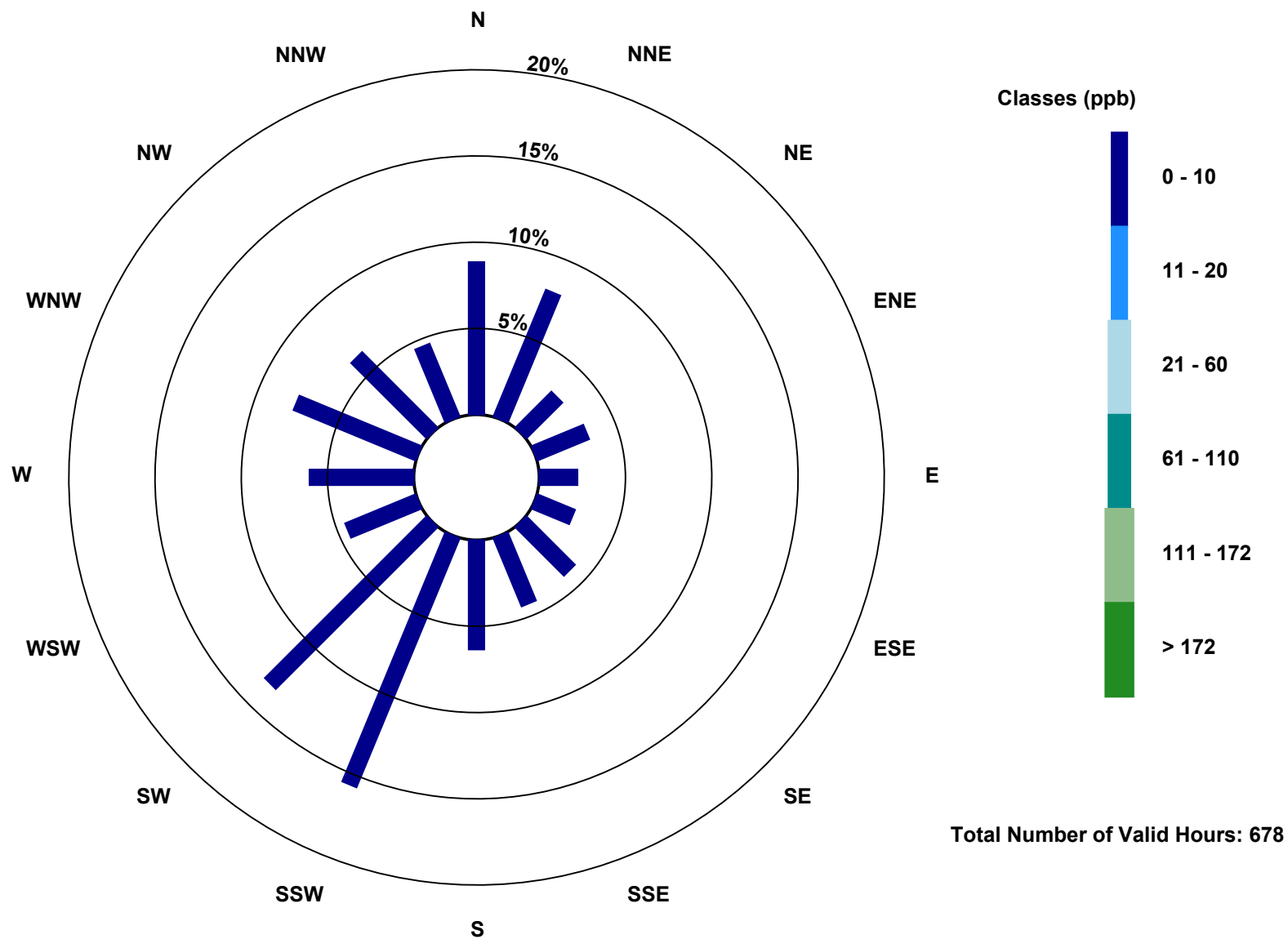
Total Number of Valid Hours: 678

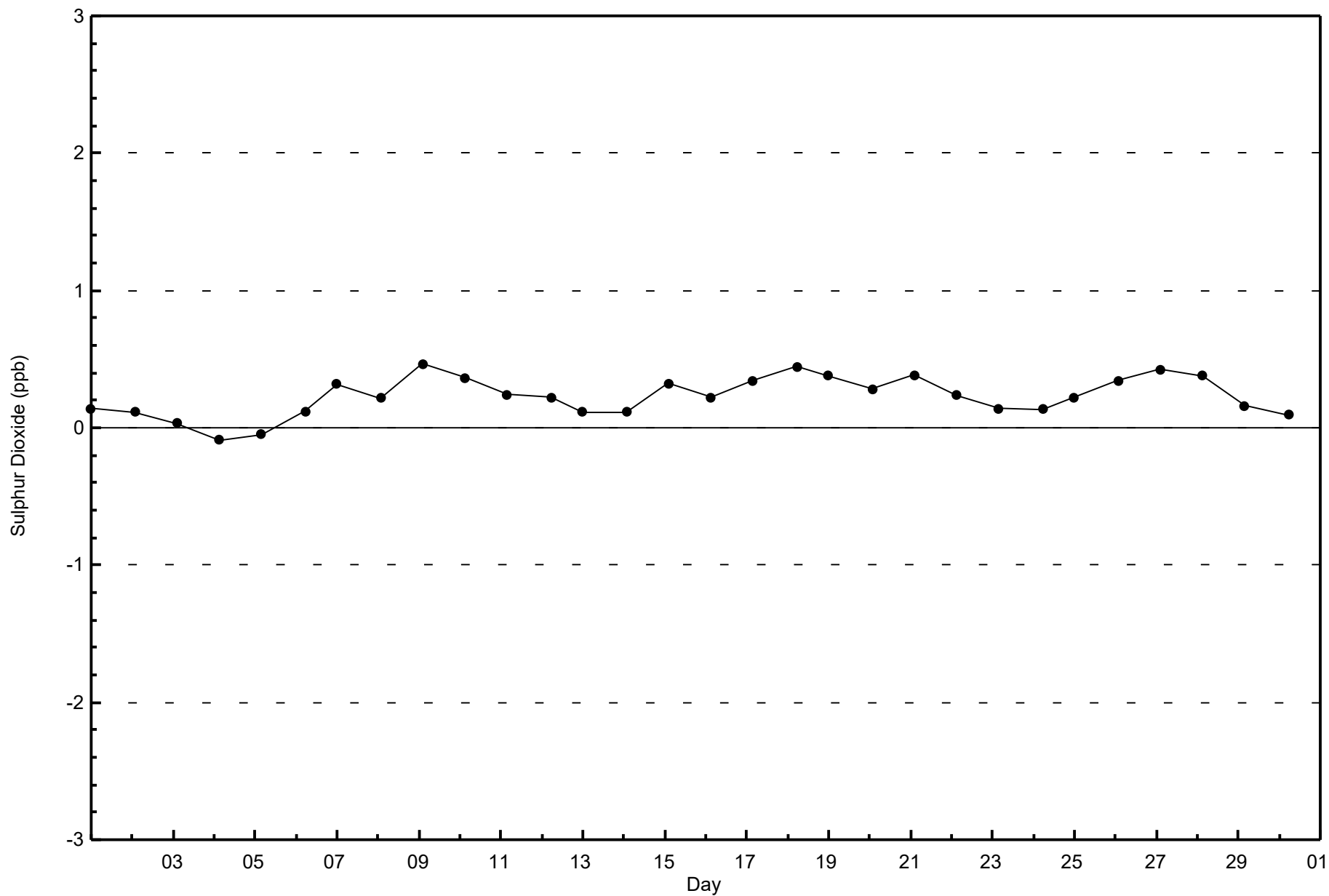
Total Number of Hours: 720

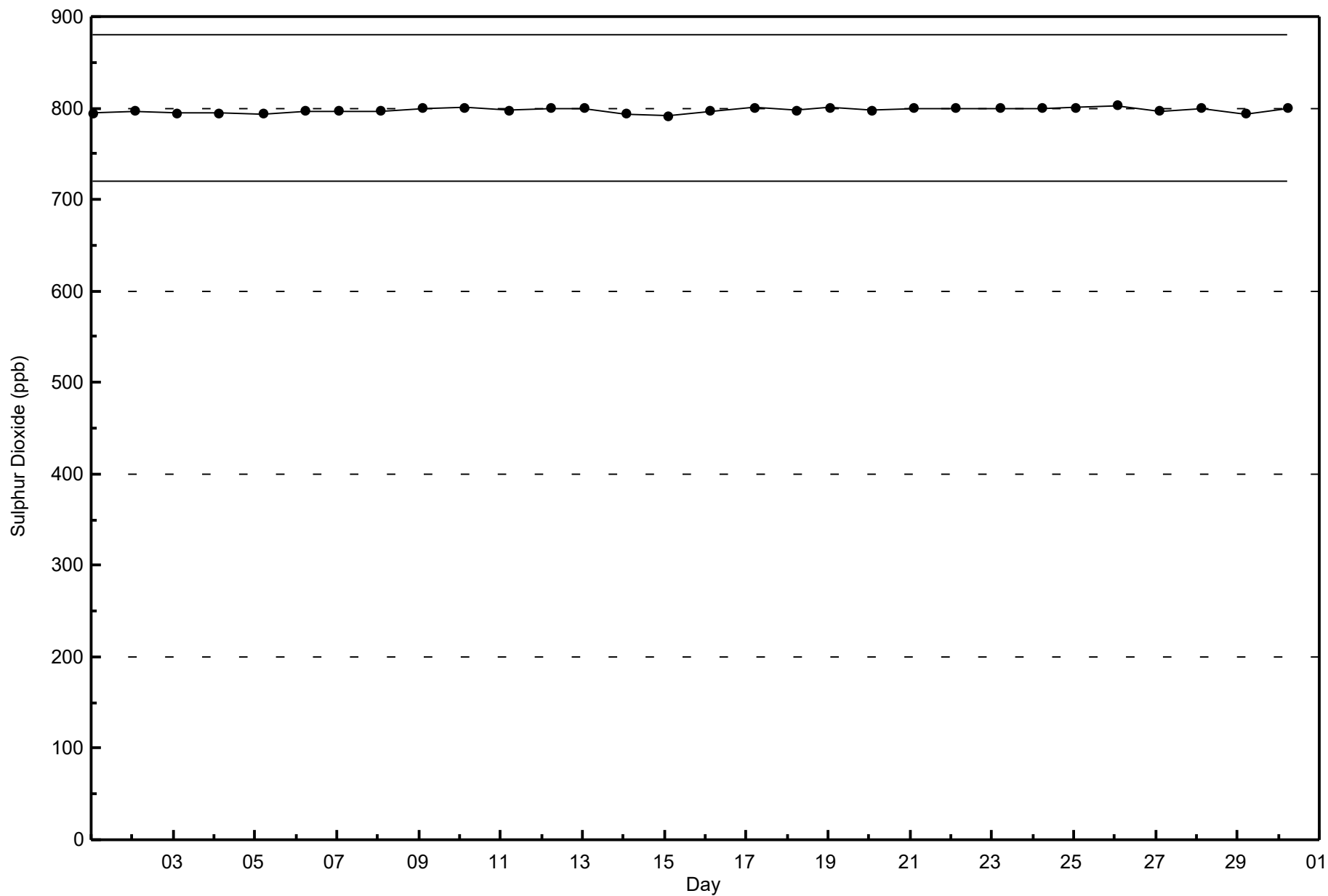


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Janvier









Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																		Periods in Service: 1440									
Maximum Value: 0.6 ppb on Apr 25 05:00 Maximum Daily Average: 0.2 ppb on Apr 8																		Periods of Valid Data: 1364									
Minimum Value: 0.1 ppb on Apr 21 06:30 Minimum Daily Average: 0.1 ppb on Apr 21																		Periods of Invalid Data: 76									
Maximum Diurnal Average: 0.2 ppb at hour 5 Minimum Diurnal Average: 0.2 ppb at hour 15																		Periods of Calibration: 73									
Monthly Average: 0.17 ppb Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3																		Percent Operational Time: 99.8									
Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
1-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.1	0.2 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
2-Apr	0.1 0.1	0.1 0.2	Z SP	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
3-Apr	0.2 0.2	0.1 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 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
5-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 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	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
6-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.1	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 0.2	0.1 0.2	0.1 0.2	0.2 0.2	0.2 0.2
7-Apr	0.1 0.2	Z SP	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 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
8-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 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	0.3 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 0.2	0.2 0.2	0.2 0.2	0.3 0.2
9-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	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	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
10-Apr	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
11-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 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	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	0.3 0.2
12-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.2 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	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 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
13-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2
14-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.2	0.2 0.2	0.1 0.2	0.1 0.2	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 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	0.2 0.2	0.2 0.2
15-Apr	0.2 0.2	0.2 0.2	0.1 0.1	Z SP	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	M 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	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 M	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
17-Apr	0.3 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 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 0.1	0.1	0.3
18-Apr	Z SP	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.2	0.1 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	0.2 0.2	0.2	0.2
19-Apr	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.1	0.1 0.1	0.2 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
20-Apr	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 0.2	0.3 0.3	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	0.2 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2	0.3
21-Apr	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
22-Apr	0.2 0.1	0.1 0.2	0.1 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 M	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 0.2	0.2 0.2	0.2 0.2	0.3 0.4	0.2	0.4
23-Apr	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.1	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
24-Apr	Z SP	0.3 0.2	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	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	0.3
25-Apr	0.2 0.2	Z SP	0.3 0.3	0.3 0.2	0.4 0.6	0.5 0.3	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.3 0.3	0.3 0.3	0.3 0.3	0.2 0.2	0.2	0.6
26-Apr	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	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	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2	0.2
27-Apr	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.3 0.5	0.4 0.3	0.3 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.5
28-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.1 0.2	Z SP	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.1 0.1	0.1 0.1	0.1 0.2	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
29-Apr	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 C	C C	C C	C C	C C	C C	C C	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
30-Apr	Z SP	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	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	0.3
0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2																										Diurnal Average
0.3 0.3 0.3 0.3 0.6 0.5 0.5 0.4 0.3 0.3 0.2 0.2 0.3 0.3 0.2 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4																										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

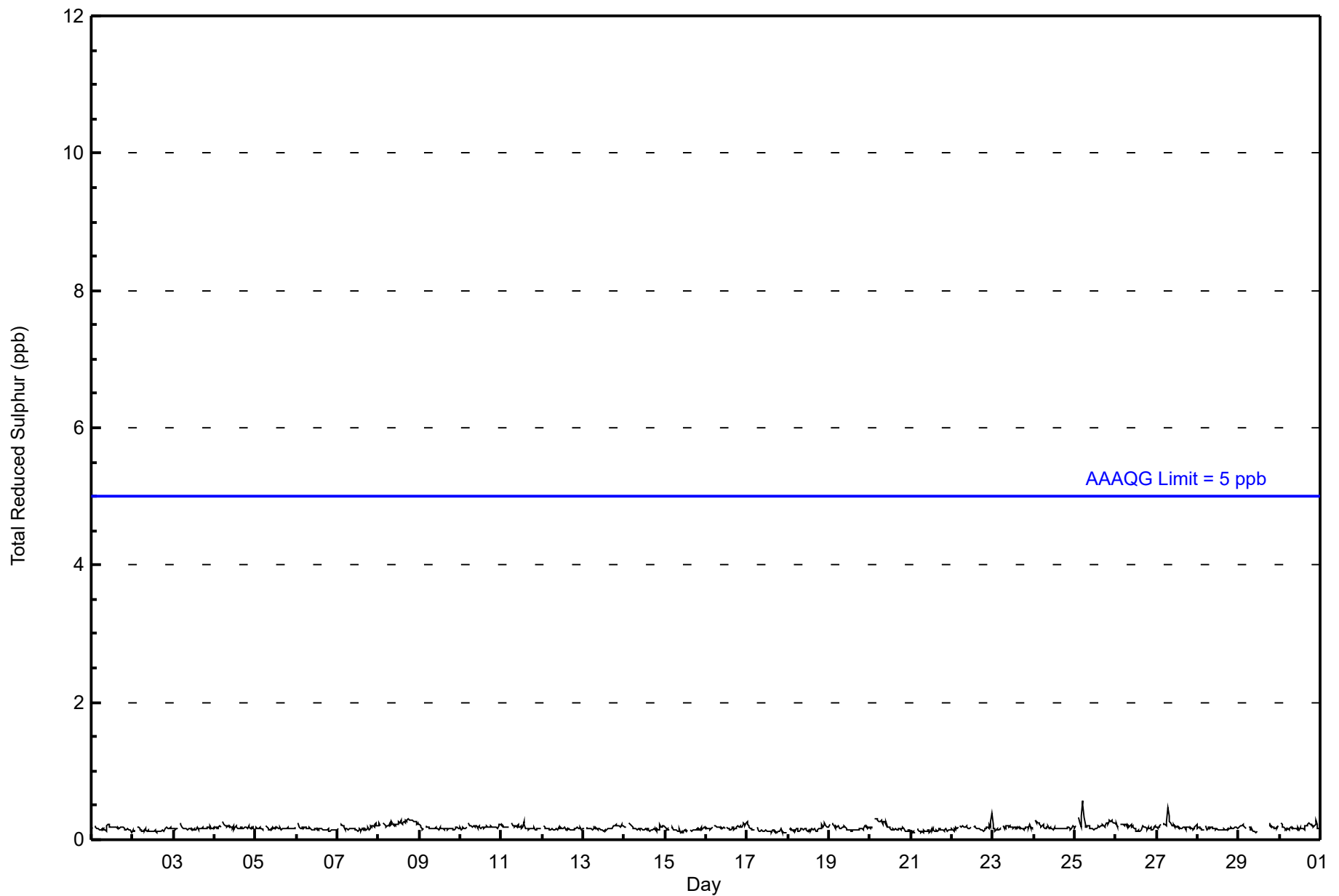
Janvier - April 2025

Maximum Value: 0.5 ppb on Apr 25 05:00																		Maximum Daily Average: 0.2 ppb on Apr 8																		Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 21 03:00																		Minimum Daily Average: 0.1 ppb on Apr 21																		Hours of Data: 684	
Maximum Diurnal Average: 0.2 ppb at hour 5																		Minimum Diurnal Average: 0.2 ppb at hour 15																		Hours of Missing Data: 36	
Monthly Average: 0.17 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.2 Q ₃ = 0.2 P ₉₀ = 0.2 P ₉₉ = 0.3																		Hours of Calibration: 36	
																																				Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	0.2	Z	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2											
2-Apr	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
3-Apr	0.2	0.2	0.2	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
4-Apr	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											
5-Apr	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	0.2	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-Apr	Z	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	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2											
7-Apr	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
8-Apr	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	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3											
9-Apr	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	0.1	0.2	0.2	0.2	0.2	0.2											
10-Apr	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											
11-Apr	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	0.1	0.2	0.2	0.2	0.2	0.2											
12-Apr	Z	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	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
13-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
14-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2											
15-Apr	0.2	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2											
16-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
17-Apr	0.2	0.2	0.2	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2											
18-Apr	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
19-Apr	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
20-Apr	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3											
21-Apr	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	0.2	0.1	0.1	0.1	0.1	0.2											
22-Apr	0.1	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	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3											
23-Apr	0.2	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
24-Apr	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	0.2	0.2	0.3											
25-Apr	0.2	Z	0.3	0.2	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.5											
26-Apr	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2											
27-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4											
28-Apr	0.2	0.2	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	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
29-Apr	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2											
30-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3											
																									Diurnal Average												
																									Diurnal Maximum												
Z - zerospan C - Calibration																																					
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Janvier - April 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
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	60	54	21	22	15	17	26	28	43	109	88	31	43	51	39	29	676
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	60	54	21	22	15	17	26	28	43	109	88	31	43	51	39	29	676

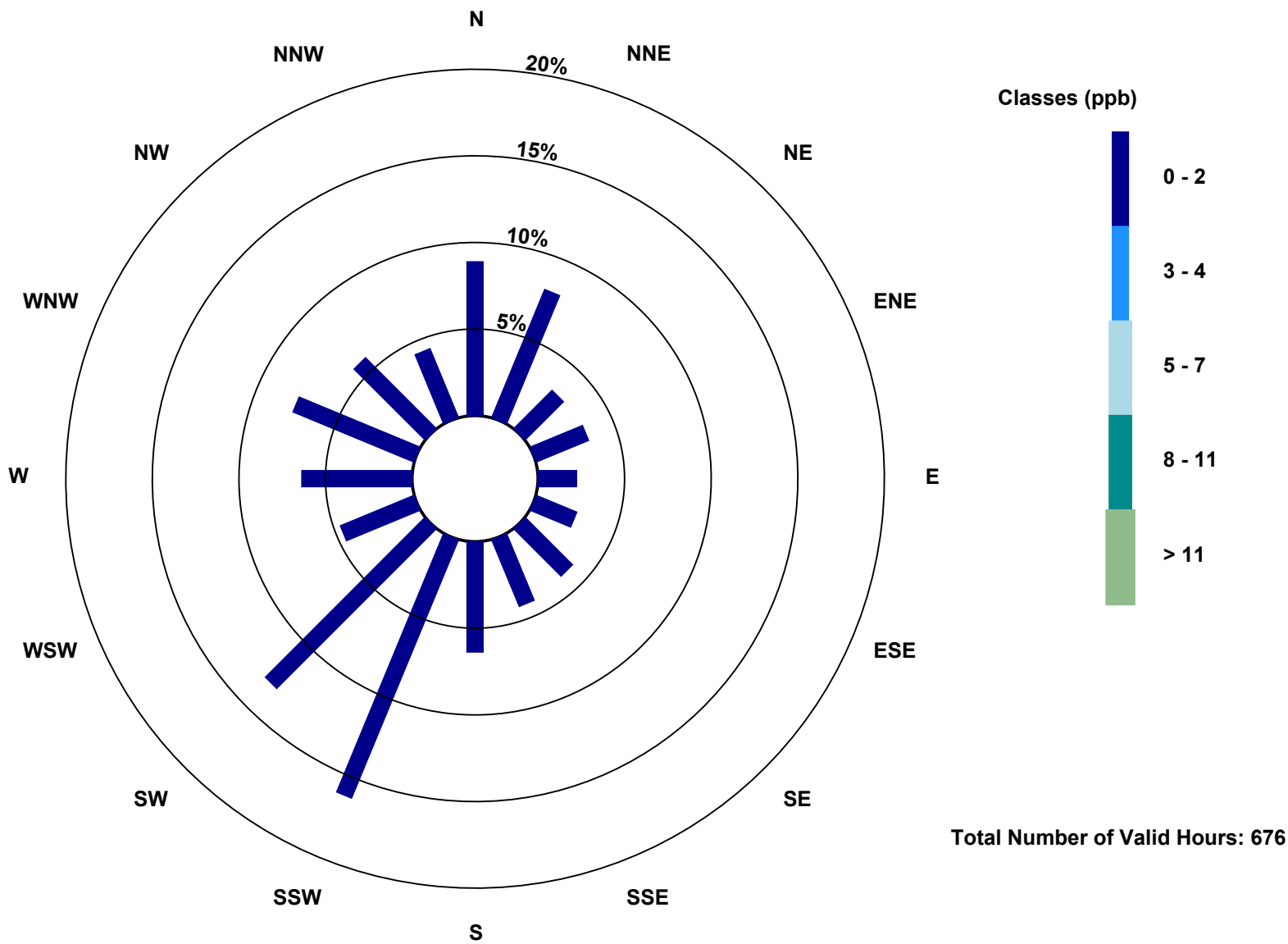
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Janvier



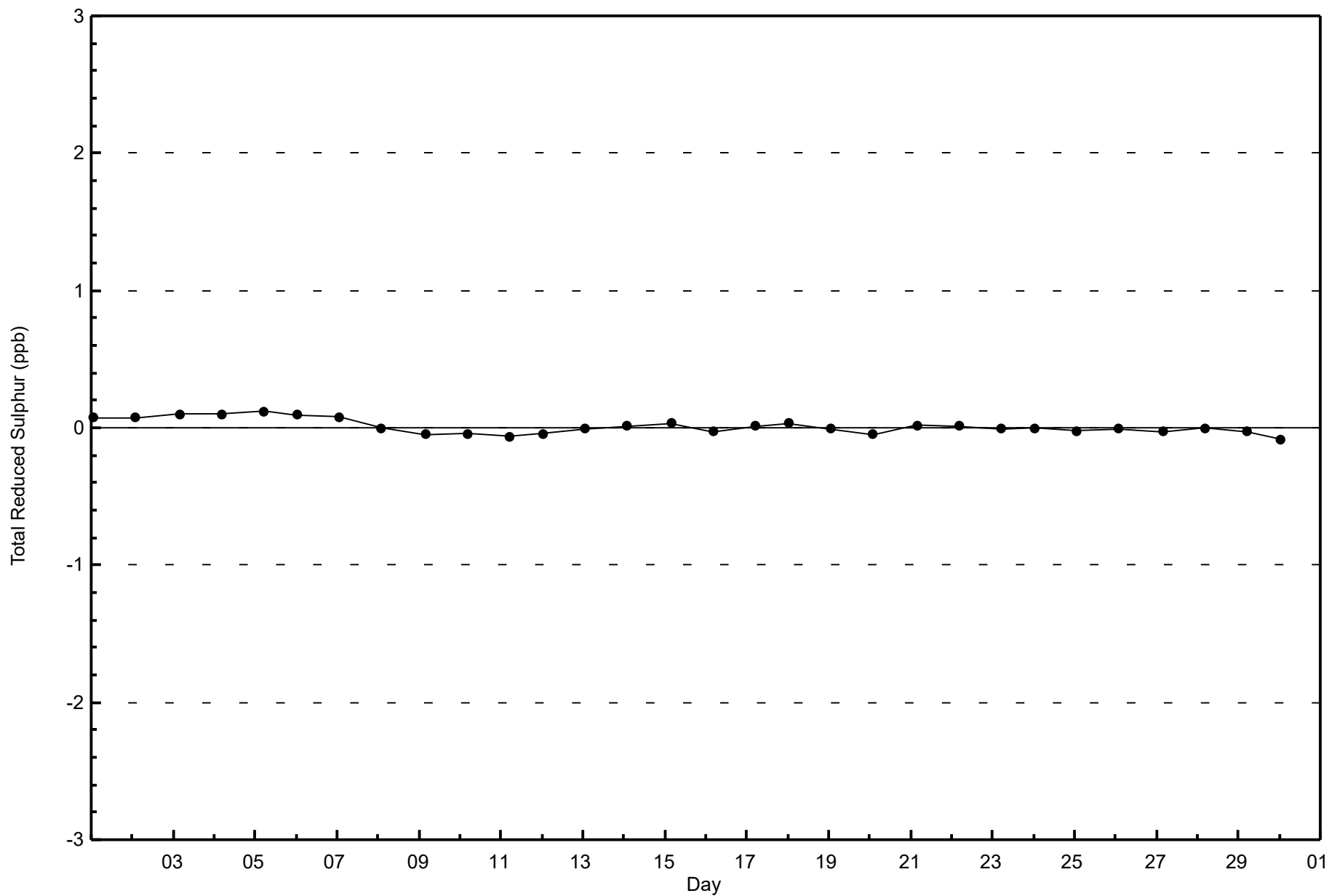


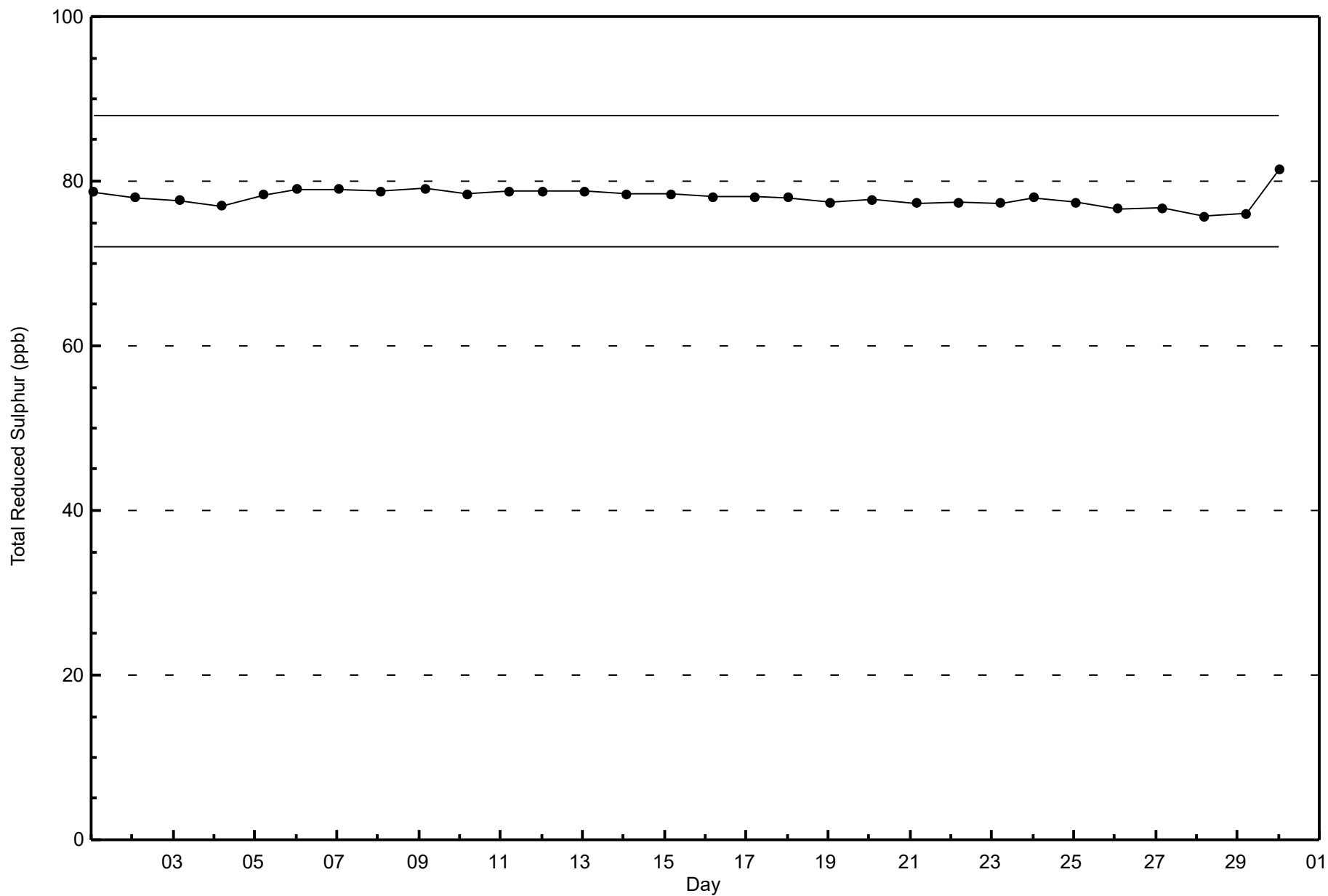
Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

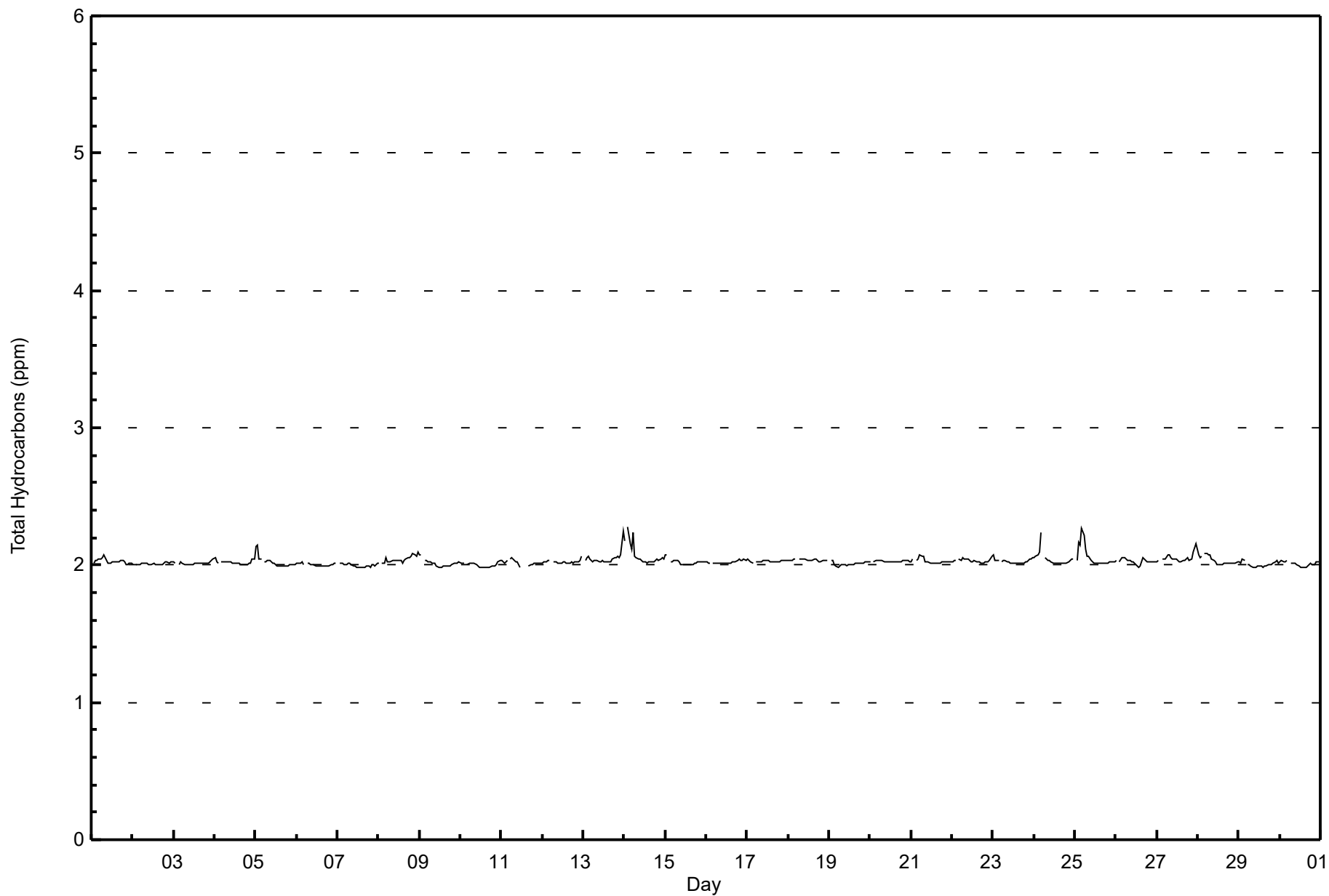
Janvier - April 2025

Maximum Value: 2.3 ppm on Apr 14 03:00																		Maximum Daily Average: 2.1 ppm on Apr 14																		Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 30 14:00																		Minimum Daily Average: 2.0 ppm on Apr 7																		Hours of Data: 686	
Maximum Diurnal Average: 2.1 ppm at hour 5																		Minimum Diurnal Average: 2.0 ppm at hour 15																		Hours of Missing Data: 34	
Monthly Average: 2.03 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.2																		Hours of Calibration: 34	
																																				Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
2-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
3-Apr	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											
4-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
5-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
6-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
8-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1											
9-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
10-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
11-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1											
13-Apr	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.2											
14-Apr	2.2	Z	2.3	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.3											
15-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
16-Apr	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											
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
19-Apr	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											
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
21-Apr	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1											
23-Apr	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1											
24-Apr	2.1	2.1	2.1	2.1	2.2	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2											
25-Apr	Z	2.0	2.2	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3											
26-Apr	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
27-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.2											
28-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1											
29-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
30-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0											
Diurnal Average																																					
Diurnal Maximum																																					
Z - zerospan C - Calibration																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Janvier - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	614	89.50	89.50
2.1 - 3.0	72	10.50	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
Janvier - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	52	47	18	20	15	14	27	27	38	80	80	26	39	52	40	31	606
2.1 - 3.0	8	7	2	2	0	2	0	2	5	26	10	4	2	0	2	0	72
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	60	54	20	22	15	16	27	29	43	106	90	30	41	52	42	31	678

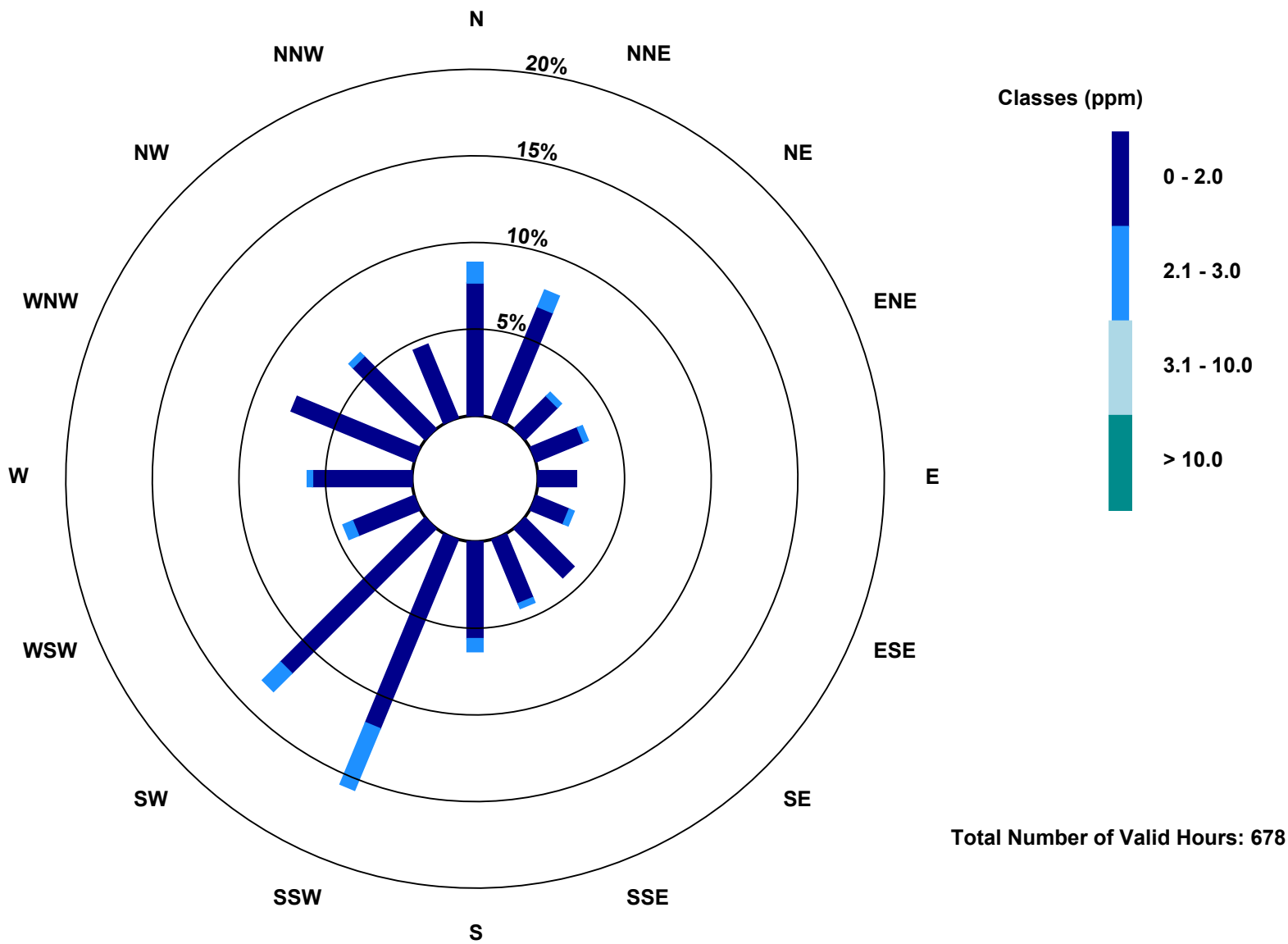
Total Number of Valid Hours: 678

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Janvier



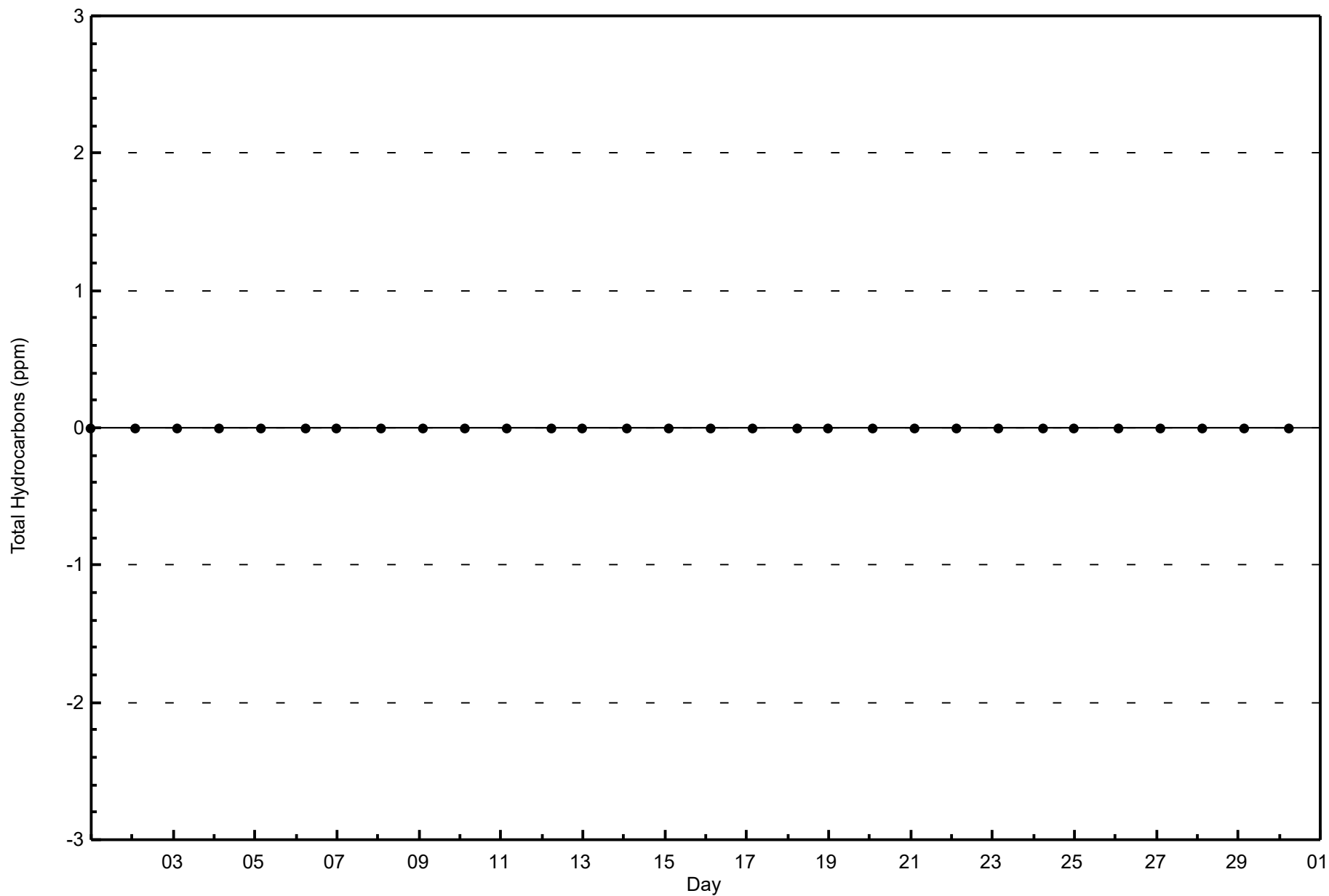


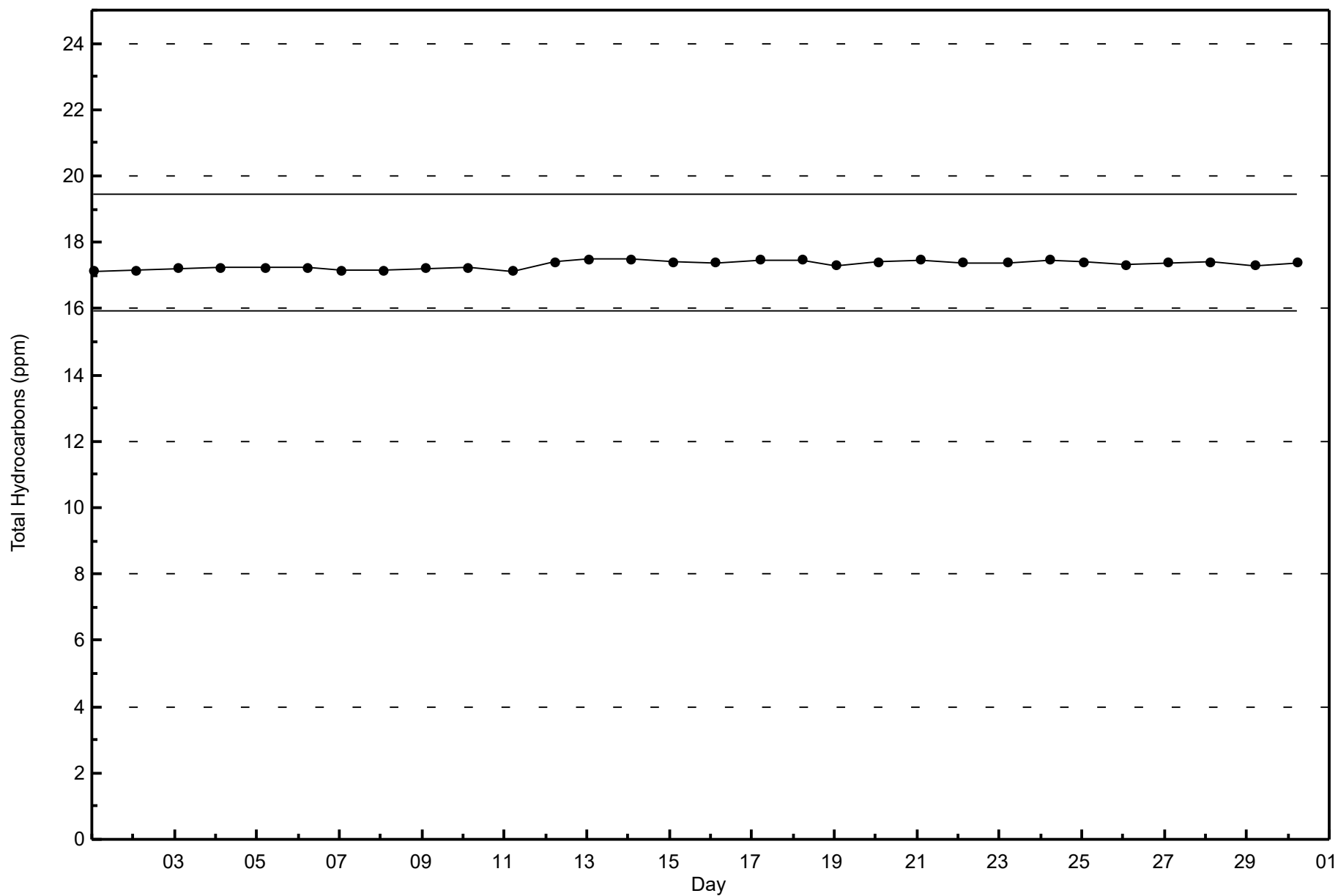
Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Janvier - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

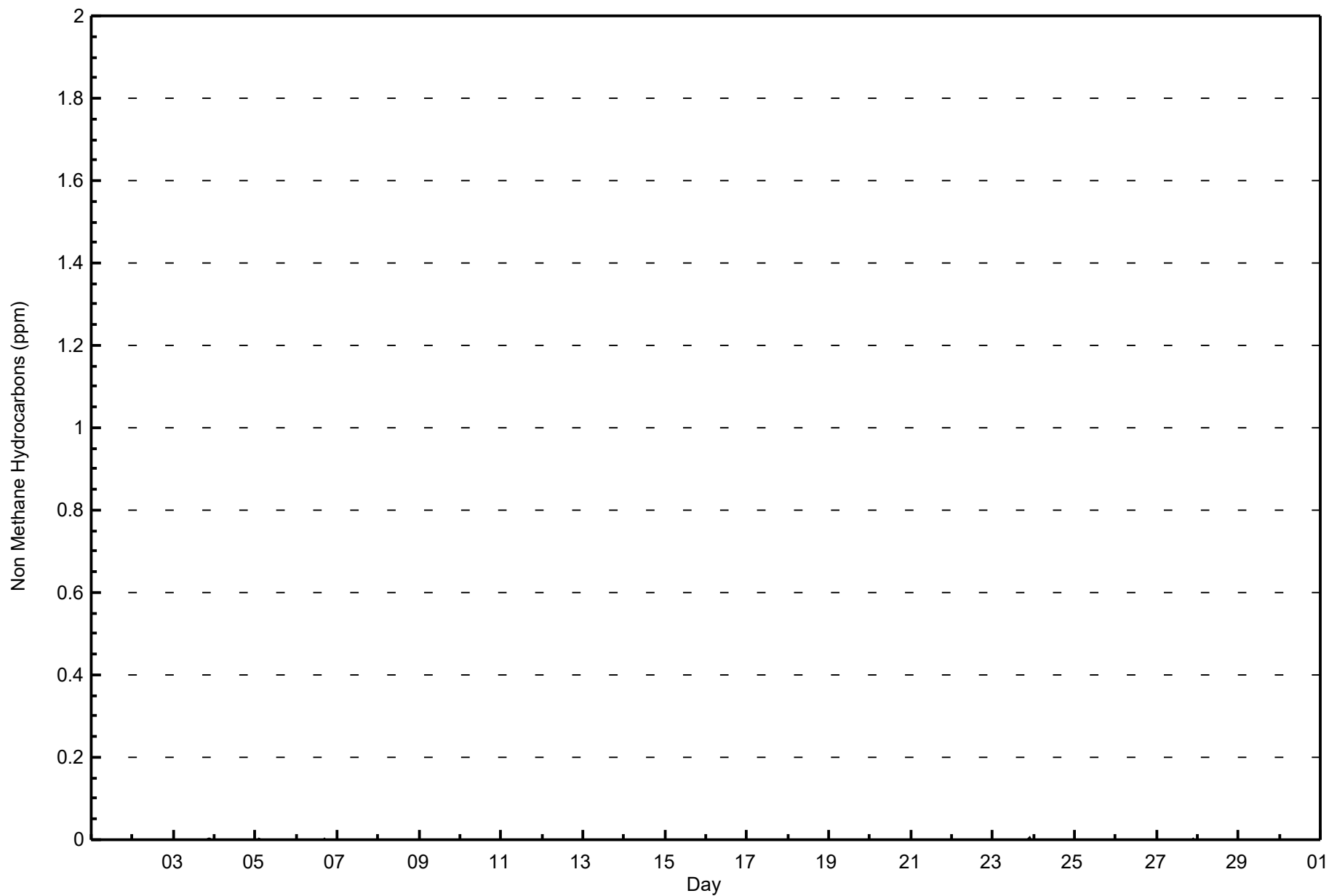
Janvier - April 2025

Maximum Value: 0.006 ppm on Apr 23 22:00																		Maximum Daily Average: 0.000 ppm on Apr 23								Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																		Minimum Daily Average: 0.000 ppm on Apr 1								Hours of Data: 686	
Maximum Diurnal Average: 0.000 ppm at hour 22																		Minimum Diurnal Average: 0.000 ppm at hour 1								Hours of Missing Data: 34	
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 of Calibration: 34	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.002
4-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Apr	0.000	0.000	0.003	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
6-Apr	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
7-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23-Apr	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	0.006	0.000	0.000	0.000	0.006	0.000
24-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	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	0.004	0.000	0.000	0.000	0.004	0.000
28-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30-Apr	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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 0.002 0.000 0.000 0.000 0.002 0.006 0.000 0.000																											
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	685	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: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Janvier - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	60	53	20	22	15	16	27	29	43	106	90	30	41	52	42	31	677
0.006 - 0.05	0	1	0	0	0	0	0	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	60	54	20	22	15	16	27	29	43	106	90	30	41	52	42	31	678

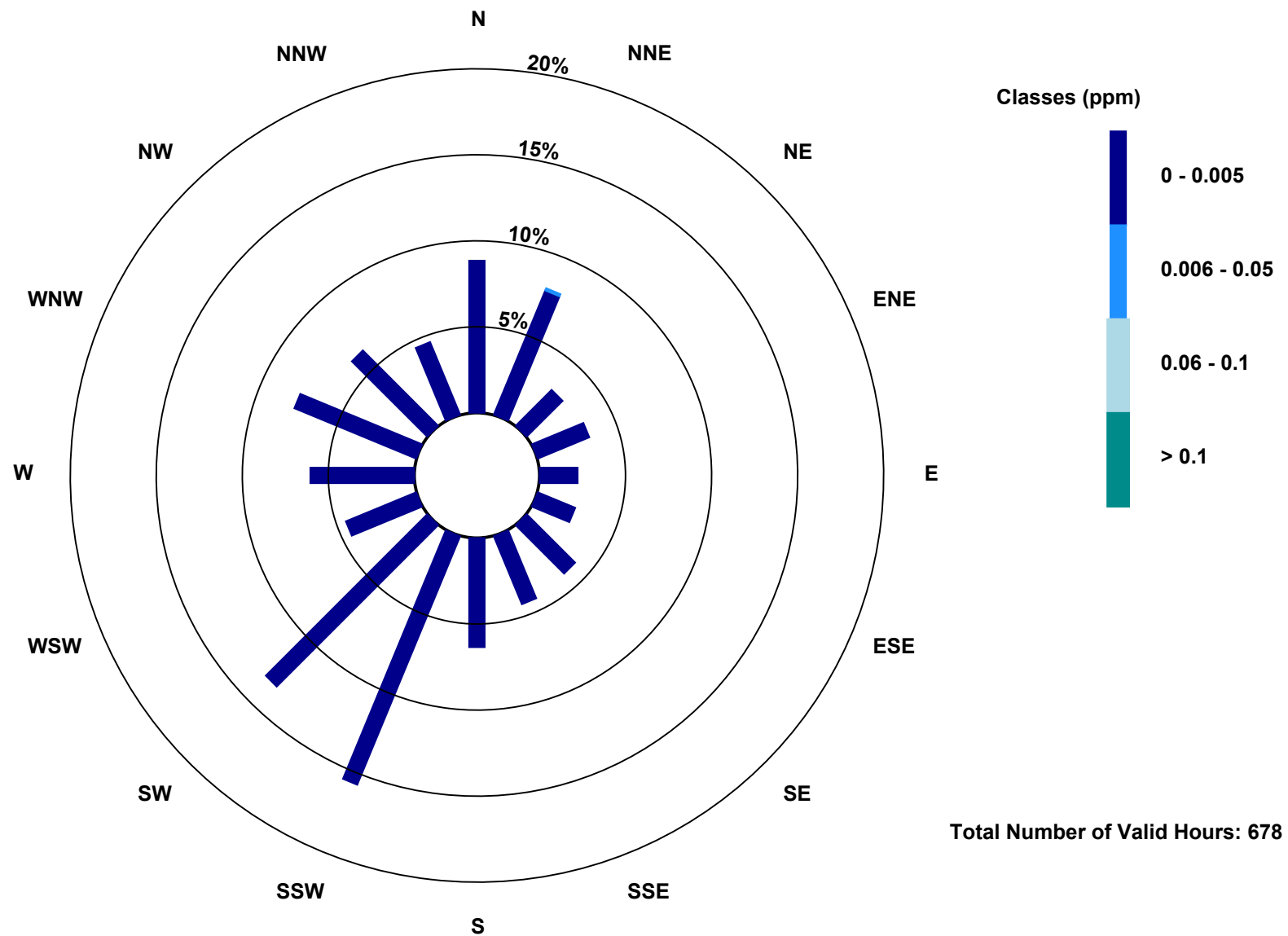
Total Number of Valid Hours: 678

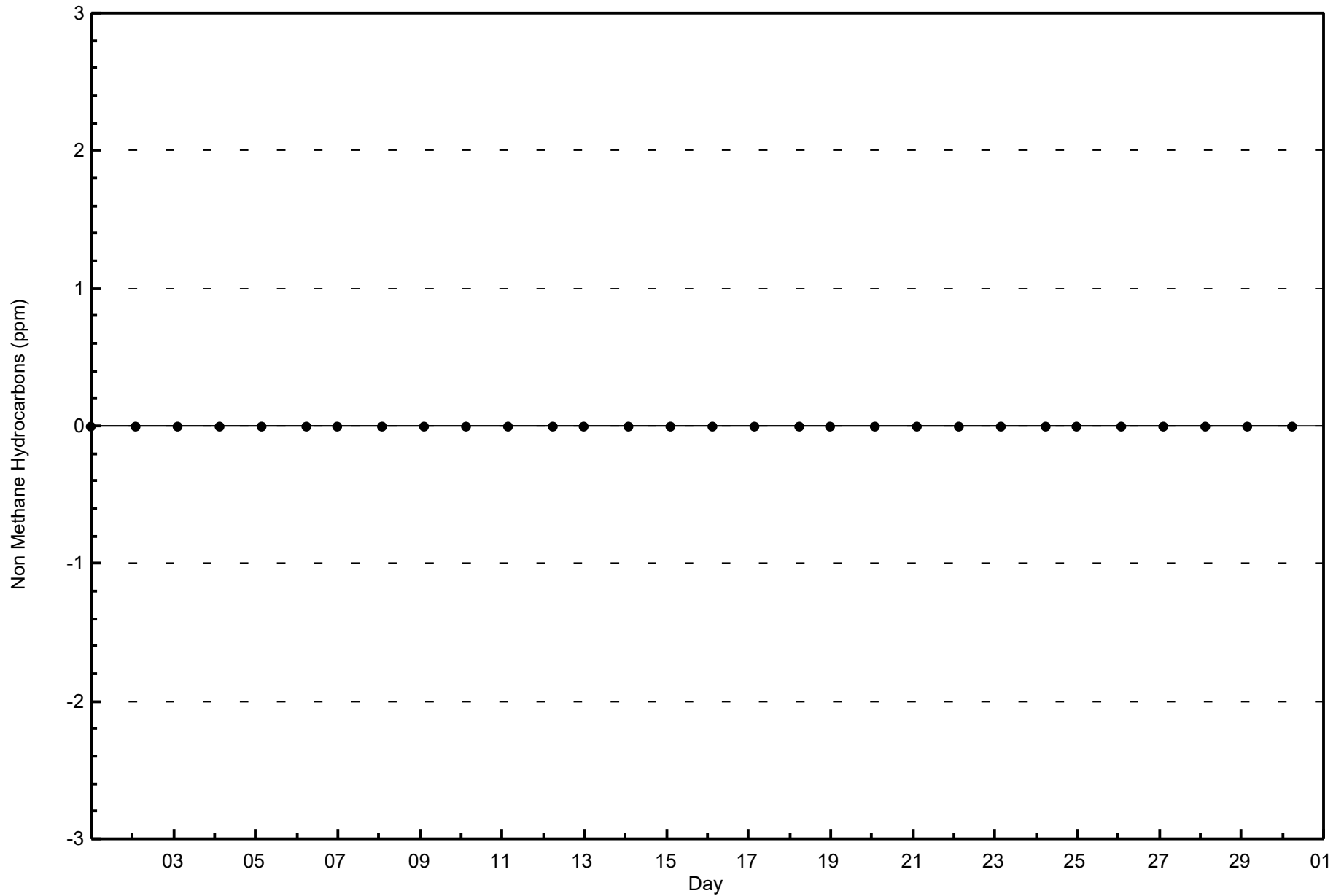
Total Number of Hours: 720

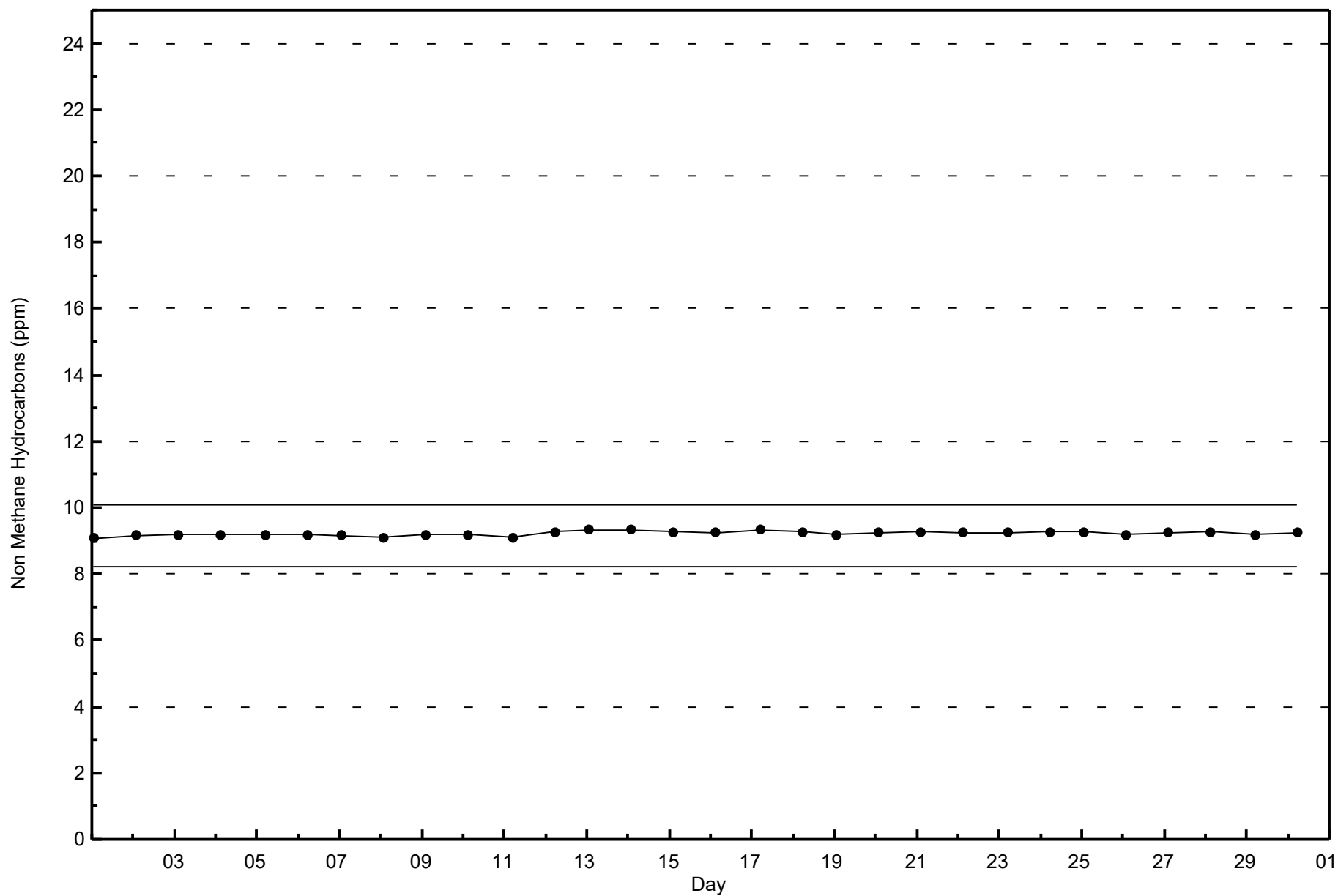


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Janvier





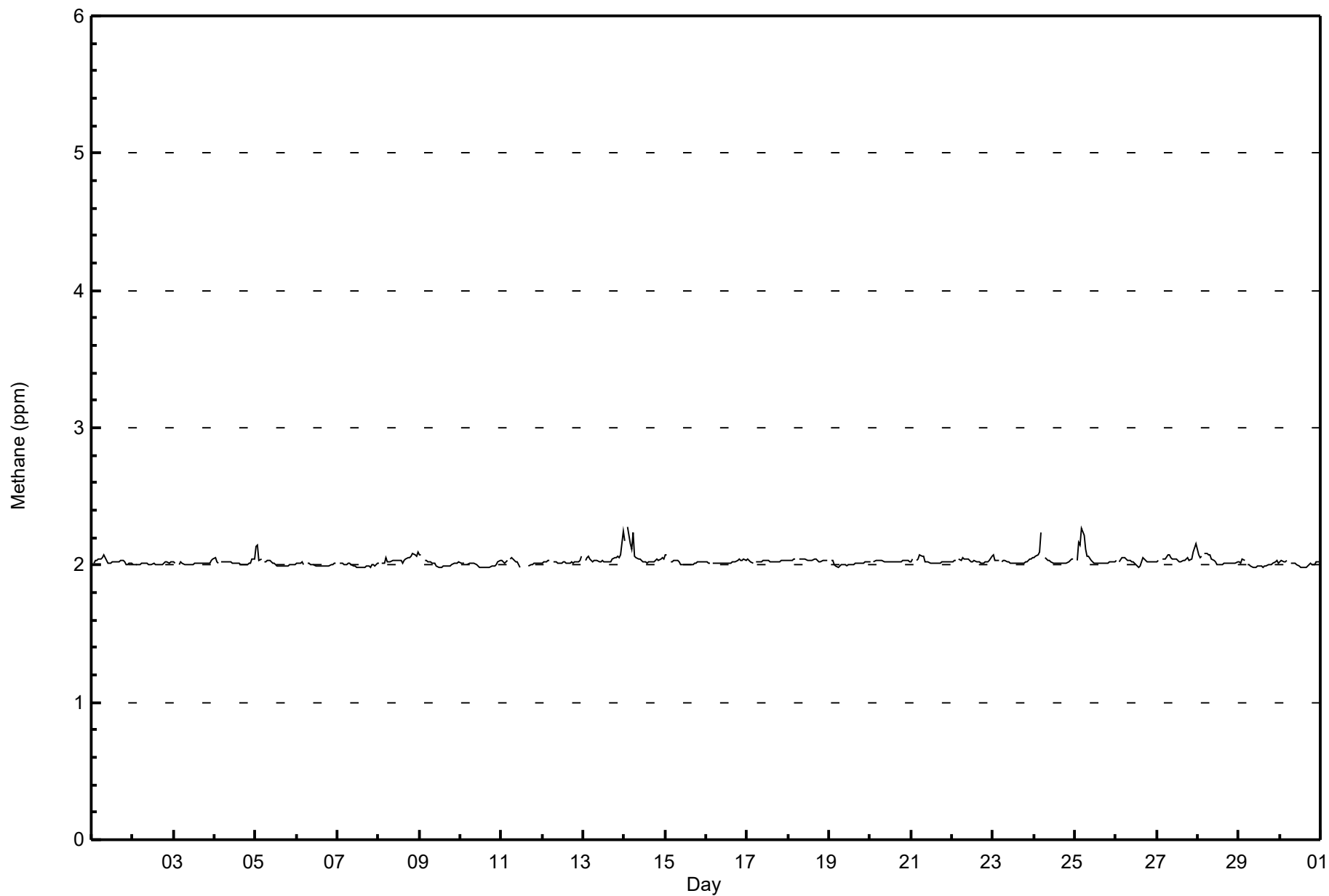


Number of Exceedences (AAAQO): Maximum Value: 2.3 ppm on Apr 14 03:00										1-hr: 0 24-hr: 0 Maximum Daily Average: 2.1 ppm on Apr 14										Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0									
Minimum Value: 2.0 ppm on Apr 30 14:00 Maximum Diurnal Average: 2.1 ppm at hour 5 Monthly Average: 2.03 ppm										Minimum Daily Average: 2.0 ppm on Apr 7 Minimum Diurnal Average: 2.0 ppm at hour 15 Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.0 Q ₃ = 2.0 P ₉₀ = 2.1 P ₉₉ = 2.2																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
3-Apr	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			
4-Apr	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
5-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
6-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
7-Apr	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
8-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1			
9-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
10-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
11-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1			
13-Apr	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.0	2.2			
14-Apr	2.2	Z	2.3	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.3			
15-Apr	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
16-Apr	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			
17-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
18-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
19-Apr	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			
20-Apr	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
21-Apr	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
22-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1			
23-Apr	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1			
24-Apr	2.1	2.1	2.1	2.1	2.2	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2			
25-Apr	Z	2.0	2.2	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3			
26-Apr	2.0	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
27-Apr	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.2			
28-Apr	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1			
29-Apr	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
30-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2.0 2.0 2.0 2.0 2.1 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0																									Diurnal Average				
2.2 2.1 2.3 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 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.2																									Diurnal Maximum				
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Janvier - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	614	89.50	89.50
2.1 - 3.0	72	10.50	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

Methane (CH₄) - ppm
Janvier - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	52	47	18	20	15	14	27	27	38	80	80	26	39	52	40	31	606
2.1 - 3.0	8	7	2	2	0	2	0	2	5	26	10	4	2	0	2	0	72
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	60	54	20	22	15	16	27	29	43	106	90	30	41	52	42	31	678

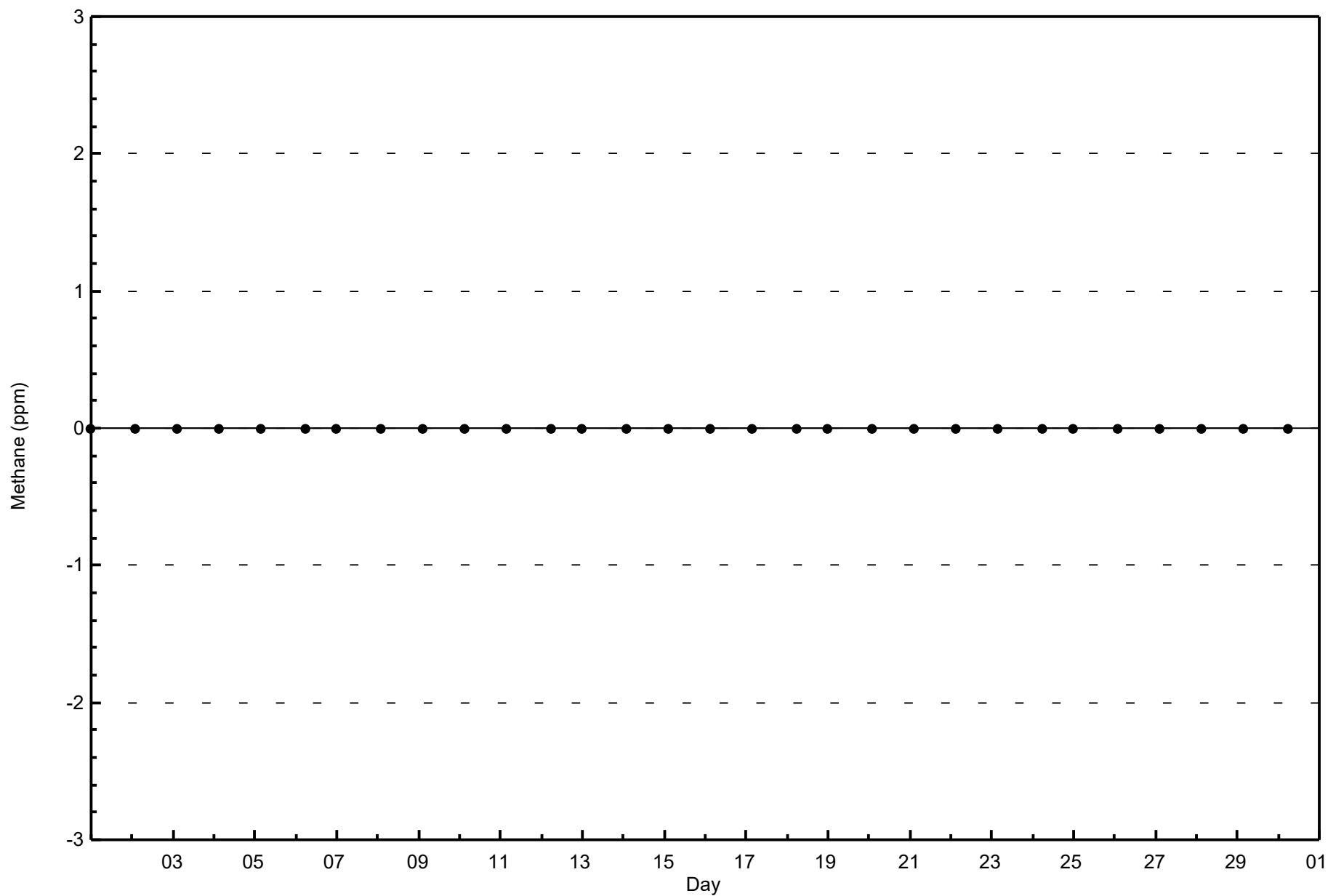
Total Number of Valid Hours: 678

Total Number of Hours: 720



Methane (CH₄) - ppm
Janvier

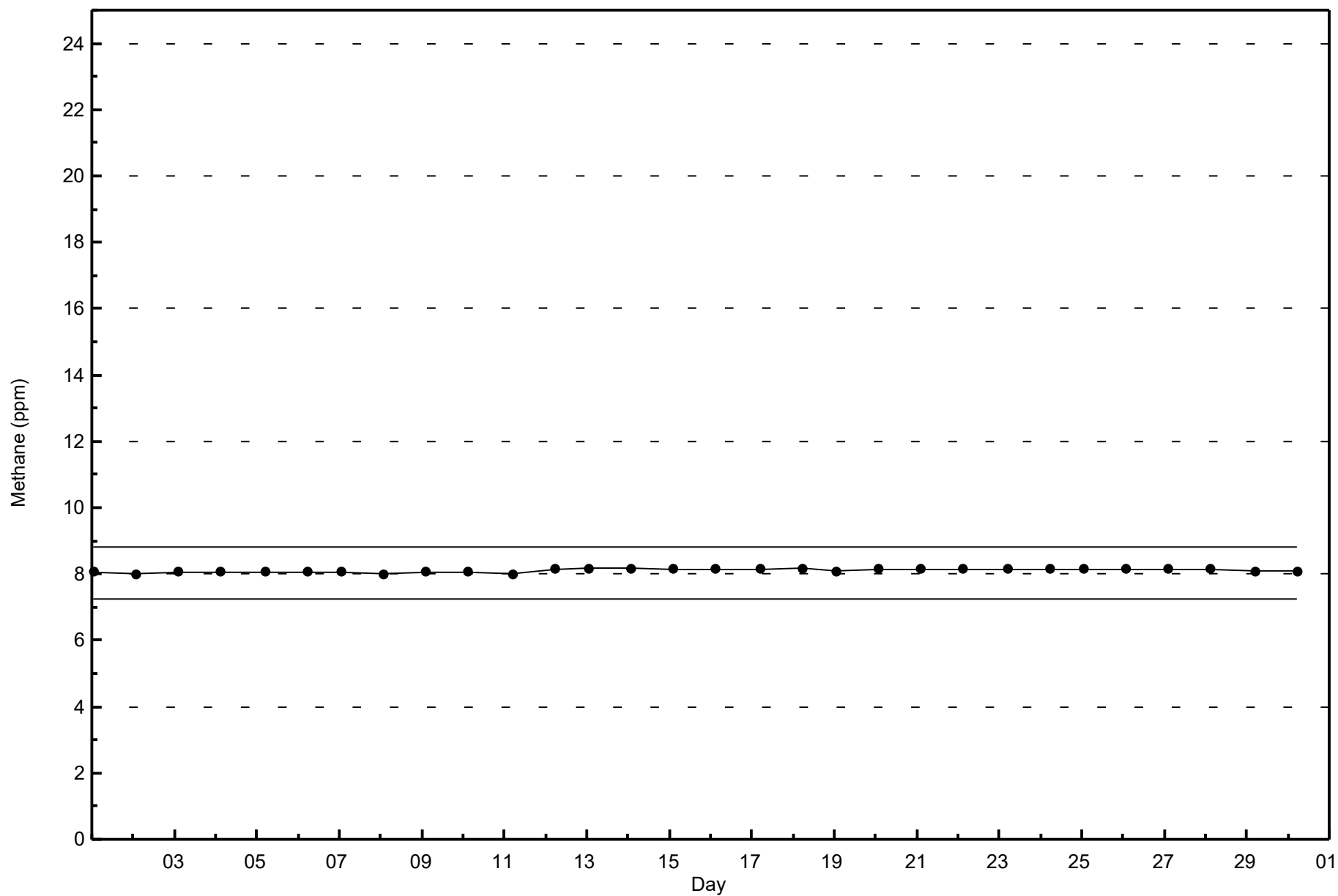






Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

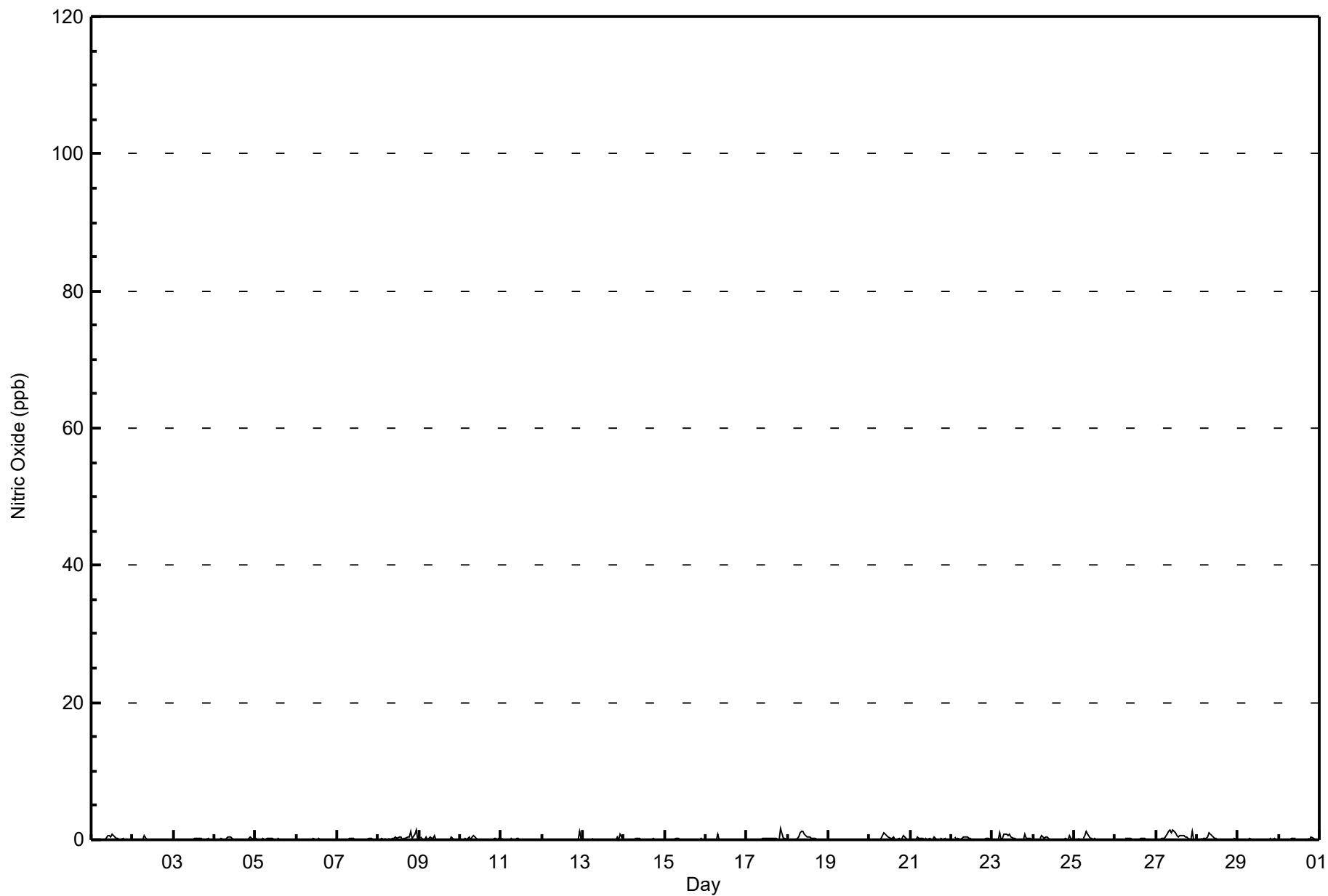
Janvier - April 2025

Maximum Value: 1.6 ppb on Apr 17 21:00																			Maximum Daily Average: 0.5 ppb on Apr 27																			Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00																			Minimum Daily Average: 0.0 ppb on Apr 19																			Hours of Data: 684	
Maximum Diurnal Average: 0.4 ppb at hour 8																			Minimum Diurnal Average: 0.0 ppb at hour 1																			Hours of Missing Data: 36	
Monthly Average: 0.14 ppb																			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 of Calibration: 36	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.7	0.6	0.5	0.7	0.5	0.3	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.7												
2-Apr	0.0	0.1	0.0	0.0	0.0	Z	0.0	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	0.0	0.0	0.7												
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.1	0.3													
4-Apr	0.0	Z	0.0	0.0	0.2	0.0	0.0	0.2	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.2	0.0	0.1	0.4													
5-Apr	0.1	0.0	Z	0.0	0.2	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.2													
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2													
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.2													
8-Apr	0.0	0.0	0.3	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.4	0.1	0.4	0.3	0.1	0.2	0.3	0.4	0.4	1.3	0.1	0.9	1.4	0.1	0.3	1.4													
9-Apr	Z	0.5	0.0	0.0	0.5	0.1	0.3	0.2	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.0	0.0	0.1	0.5													
10-Apr	0.0	Z	0.0	0.3	0.1	0.5	0.1	0.4	0.6	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.5	0.1	0.6													
11-Apr	0.0	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.1	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	0.3													
12-Apr	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.1	0.1	1.2													
13-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.8	0.0	0.1	0.8													
14-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2													
15-Apr	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.2													
16-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8													
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.1	1.6	0.1	0.2	0.0	0.2	1.6													
18-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.4	1.1	1.2	1.2	0.9	0.5	0.4	0.3	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2													
19-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1													
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	1.0	0.8	0.6	0.3	0.1	0.1	0.4	0.1	0.1	0.2	0.1	0.2	0.6	0.2	0.1	0.0	0.2	1.0													
21-Apr	Z	0.0	0.0	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.5	0.0	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.1	0.5													
22-Apr	0.0	Z	0.4	0.0	0.1	0.0	0.3	0.4	0.3	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.4													
23-Apr	0.0	0.0	Z	0.0	1.1	0.1	0.1	0.9	0.7	0.6	0.8	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.8	0.2	0.2	0.1	0.1	0.3	1.1													
24-Apr	0.2	0.0	0.0	Z	0.2	0.6	0.2	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.6	0.3	0.1	0.2	0.6													
25-Apr	0.0	0.1	0.0	0.2	Z	0.2	0.5	1.3	0.9	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.2	1.3													
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.3	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3													
27-Apr	Z	0.0	0.0	0.1	0.1	0.1	0.8	1.2	1.5	0.9	1.4	1.1	0.7	0.5	0.5	0.6	0.5	0.4	0.3	0.1	0.0	1.1	0.0	0.0	0.5	1.5													
28-Apr	0.0	Z	0.2	0.0	0.1	0.2	0.5	1.1	0.8	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.2	1.1													
29-Apr	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.1	0.2													
30-Apr	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.2	0.3	0.2	0.2	C	C	C	C	C	C	C	0.3	0.0	0.4	0.2	0.0	0.0	--	0.4													
Diurnal Average																									Diurnal Average														
Diurnal Maximum																									Diurnal Maximum														
Z - zerospan C - Calibration																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
> 200	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
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	58	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676
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	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676

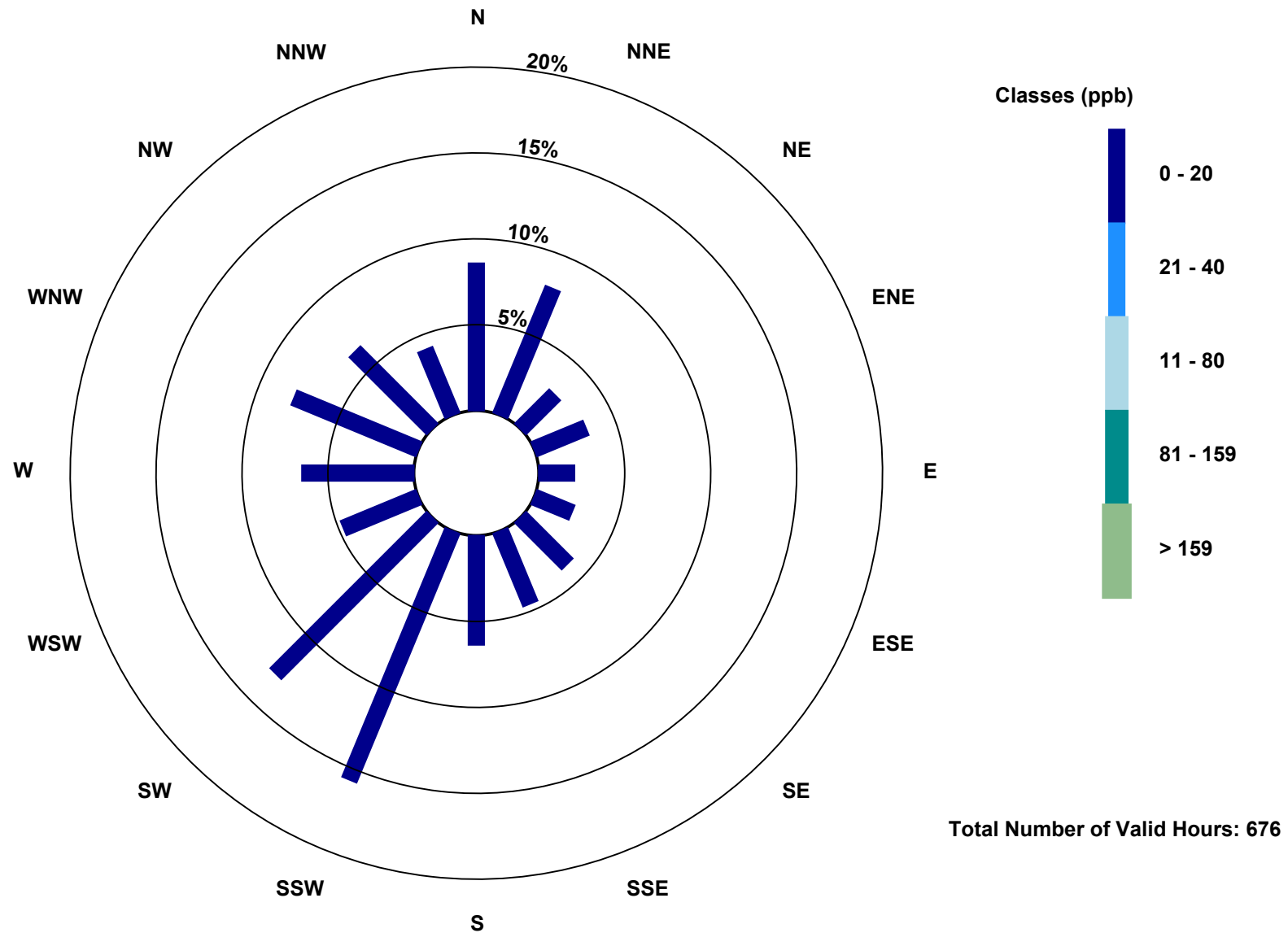
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

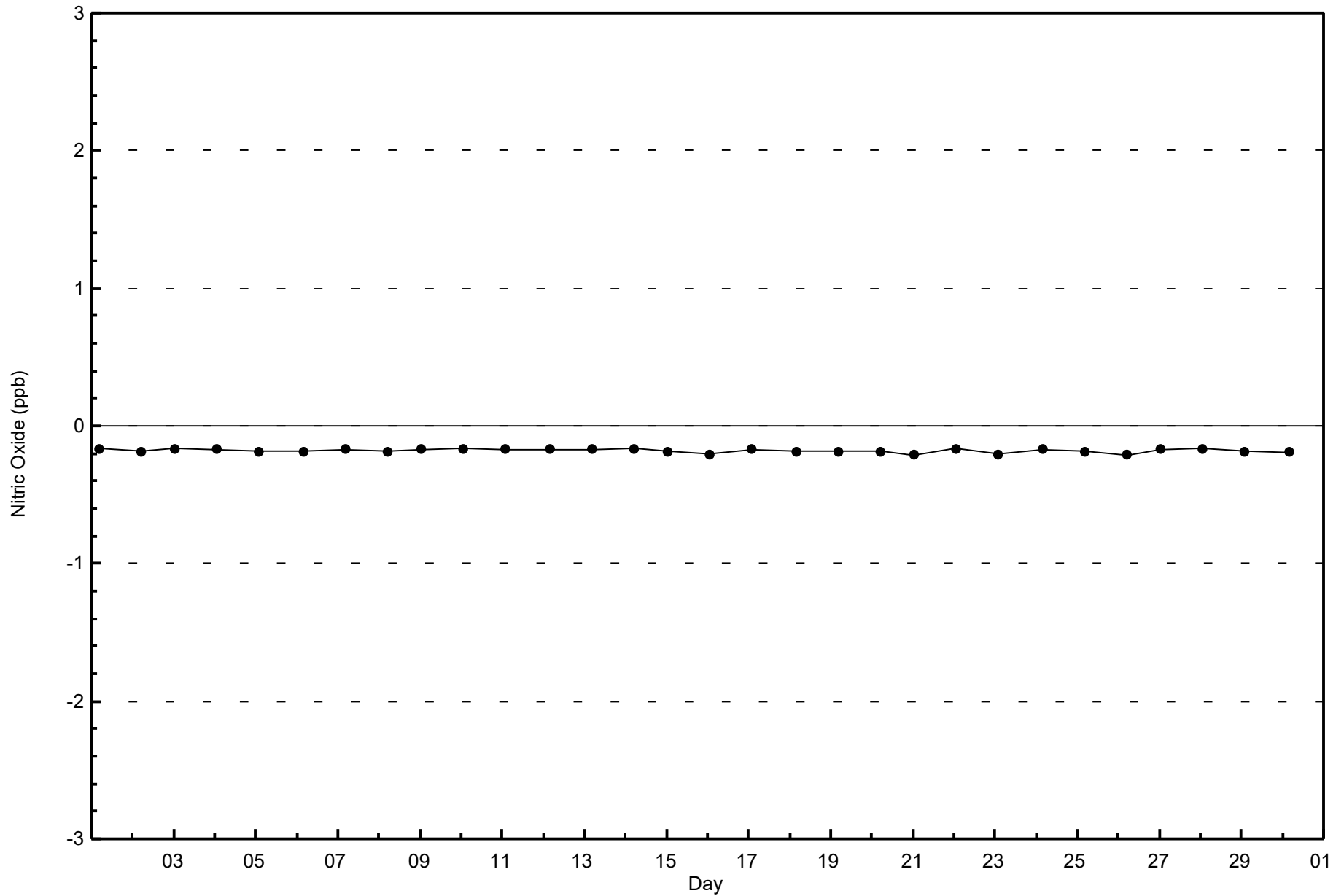
Nitric Oxide (NO) - ppb
Janvier





Wood Buffalo Environmental Association
Zero Responses

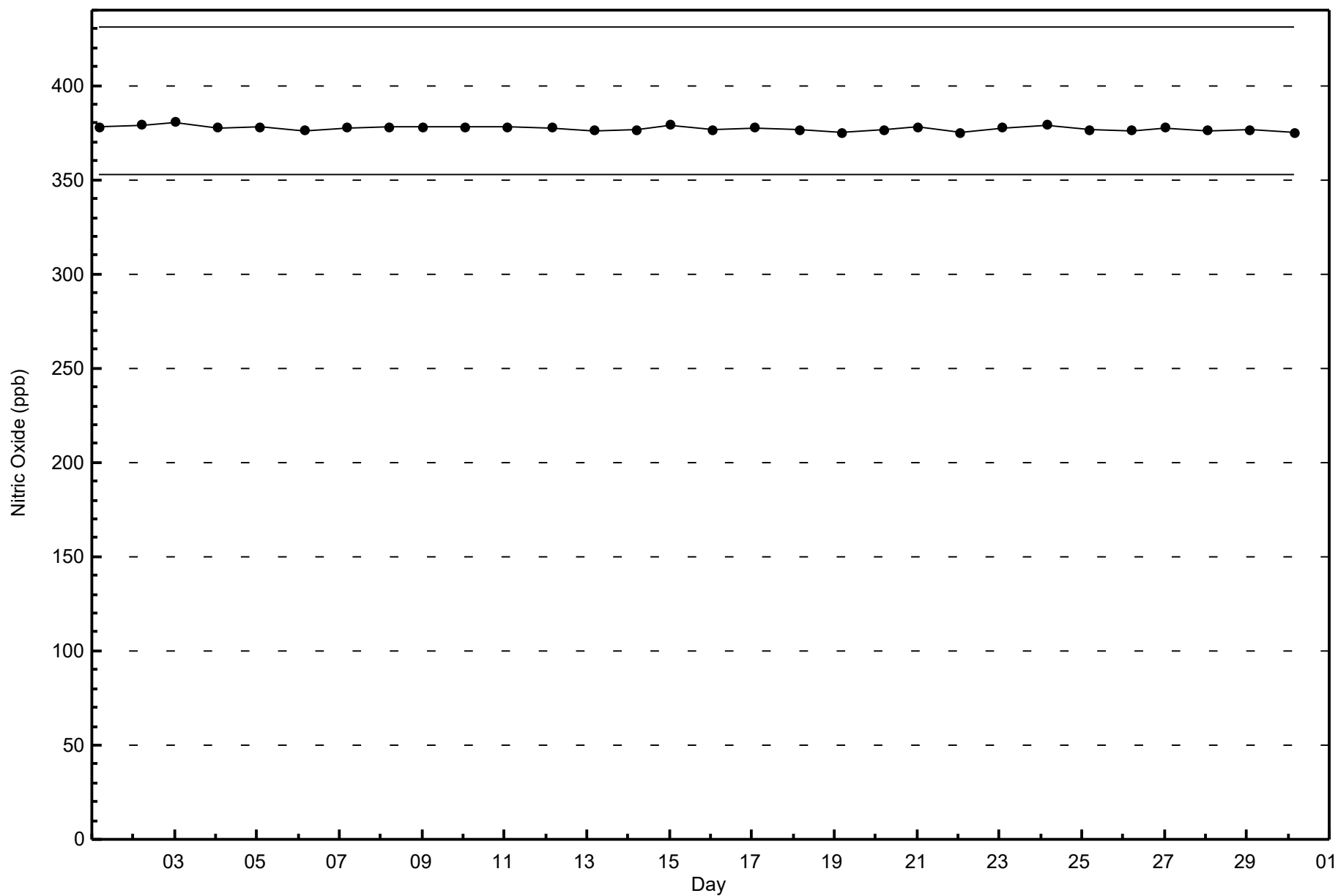
Nitric Oxide (NO) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

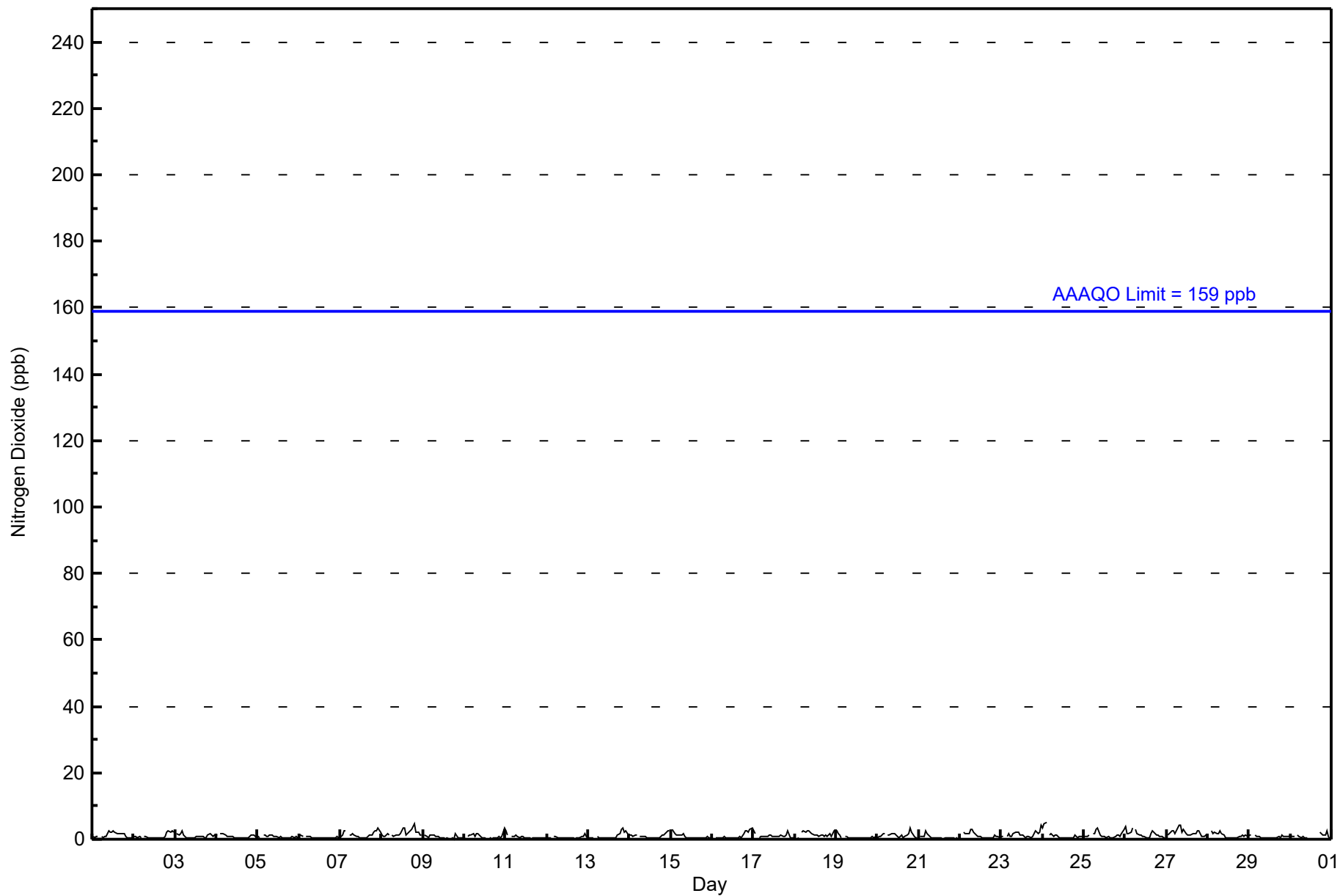
Janvier - April 2025

Number of Exceedences (AAAQO): Maximum Value: 5.0 ppb on Apr 24 03:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 2.1 ppb on Apr 27					Hours in Service: 720 Hours of Data: 684 Hours of Missing Data: 36 Hours of Calibration: 36 Percent Operational Time: 100.0				
Minimum Value: 0.2 ppb on Apr 21 15:00 Maximum Diurnal Average: 1.5 ppb at hour 5 Monthly Average: 1.05 ppb										Minimum Daily Average: 0.5 ppb on Apr 6 Minimum Diurnal Average: 0.6 ppb at hour 15 Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.8 Q ₃ = 1.3 P ₉₀ = 2.3 P ₉₉ = 3.9																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.9	0.6	0.8	0.9	Z	0.8	0.6	0.7	0.7	2.4	2.3	2.1	2.4	2.1	1.8	1.7	1.7	1.5	1.5	0.8	0.5	0.5	0.4	0.5	1.2	2.4			
2-Apr	0.8	0.7	0.5	0.7	0.5	Z	0.9	1.0	0.6	0.5	0.4	0.5	0.5	0.5	0.3	0.3	0.4	0.4	0.7	2.2	2.7	2.3	2.5	2.3	1.0	2.7			
3-Apr	Z	1.7	1.4	1.8	2.4	1.1	0.5	0.4	0.4	0.3	0.3	0.4	0.7	0.9	0.8	0.9	0.7	0.3	0.4	1.1	1.6	1.2	0.8	1.1	0.9	2.4			
4-Apr	1.4	Z	1.7	1.5	1.6	1.2	0.8	0.8	1.0	1.0	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.8	1.1	1.1	1.2	0.6	0.9	1.7			
5-Apr	1.0	0.6	Z	1.1	1.3	0.9	1.0	1.2	1.1	1.0	0.9	0.7	0.6	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.9	0.5	0.8	1.3			
6-Apr	0.8	1.1	0.9	Z	0.7	0.8	0.8	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.3	0.5	0.3	0.3	0.5	0.5	0.6	0.7	0.5	0.5	1.1			
7-Apr	0.7	1.3	2.4	2.4	Z	1.2	1.2	1.6	1.1	1.0	0.7	0.6	0.5	0.5	0.6	0.6	0.7	1.2	1.4	2.0	2.5	2.4	3.2	2.2	1.4	3.2			
8-Apr	1.3	1.0	0.9	1.5	1.4	Z	1.3	0.8	1.2	1.3	1.3	1.8	3.6	3.2	1.3	1.9	2.0	3.1	3.9	4.6	2.2	2.3	1.4	1.3	1.9	4.6			
9-Apr	Z	1.1	0.7	0.5	1.1	1.2	1.1	0.7	0.7	1.0	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.4	0.2	1.9	0.6	0.6	0.4	0.5	0.6	1.9			
10-Apr	0.4	Z	0.9	1.2	1.3	1.9	1.0	1.5	1.5	0.7	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.5	0.8	0.6	1.0	3.5	0.8	3.5			
11-Apr	2.5	1.1	Z	0.9	0.7	0.9	1.2	0.8	0.6	0.8	0.9	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.6	2.5			
12-Apr	0.6	0.5	0.5	Z	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.6	0.9	1.0	1.9	0.9	0.6	1.9			
13-Apr	0.3	0.3	0.6	0.5	Z	0.8	0.5	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.1	1.9	3.1	3.5	2.0	2.4	1.2	0.9	3.5			
14-Apr	1.1	1.1	0.9	1.1	1.1	Z	0.9	0.8	0.9	0.8	0.4	0.5	0.4	0.5	0.4	0.5	0.6	0.6	0.9	1.1	1.3	2.2	2.5	2.4	1.0	2.5			
15-Apr	Z	3.0	1.9	1.3	1.4	1.3	1.4	1.5	0.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.8	0.4	0.3	0.8	3.0			
16-Apr	0.3	Z	0.5	0.3	0.3	0.3	0.3	0.8	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.6	0.7	0.6	1.8	2.4	2.5	2.3	3.0	3.6	1.0	3.6			
17-Apr	2.6	1.9	Z	0.6	0.9	1.0	0.8	0.7	0.7	1.2	1.1	0.8	0.7	0.7	0.8	1.0	1.1	0.9	0.8	1.1	2.7	0.6	0.4	0.3	1.0	2.7			
18-Apr	0.2	0.2	0.5	Z	2.0	2.4	2.0	2.5	2.4	2.2	1.9	1.3	1.2	1.3	1.0	1.2	1.2	0.7	1.2	0.7	1.8	0.9	1.5	2.5	1.4	2.5			
19-Apr	2.6	1.5	1.4	0.6	Z	0.7	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.7	0.6	0.7	0.6	2.6			
20-Apr	0.4	0.7	1.0	1.5	1.7	Z	1.3	1.1	1.9	1.7	1.6	1.2	0.6	0.7	1.3	0.6	0.7	1.2	1.5	3.3	2.3	0.9	0.4	0.3	1.2	3.3			
21-Apr	Z	0.7	0.7	0.9	2.7	1.7	0.7	0.5	0.3	0.3	0.3	0.6	0.4	0.4	0.2	0.3	0.4	0.3	0.5	0.3	0.6	0.2	0.3	0.2	0.6	2.7			
22-Apr	0.6	Z	2.0	1.7	1.9	1.7	2.9	2.9	2.0	1.4	0.9	1.0	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.6	1.1	1.0	1.0	0.6	1.2	2.9			
23-Apr	0.7	0.7	Z	0.9	1.7	0.8	0.7	1.7	2.1	2.1	2.0	1.3	1.2	0.9	0.6	0.7	0.7	0.6	0.8	1.8	2.6	1.8	2.1	4.1	1.4	4.1			
24-Apr	3.5	4.6	5.0	Z	1.3	1.7	1.0	1.2	1.4	1.0	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	1.2	0.5	0.9	0.9	0.9	1.3	5.0			
25-Apr	0.8	0.9	0.9	1.1	Z	1.6	1.5	3.1	3.2	1.4	0.9	0.8	0.9	0.6	0.7	0.6	0.6	0.6	0.7	1.4	1.1	1.0	1.5	3.1	1.3	3.2			
26-Apr	3.9	1.9	1.6	2.1	3.2	Z	3.1	1.9	1.3	1.2	0.9	0.7	0.4	0.4	0.4	1.9	2.5	1.7	1.1	1.2	0.7	0.7	0.6	0.6	1.5	3.9			
27-Apr	Z	1.3	2.3	2.5	2.6	1.9	3.4	4.4	4.4	2.0	3.1	1.8	1.4	1.3	1.4	1.8	1.8	1.8	2.6	2.4	0.9	0.8	1.0	1.2	2.1	4.4			
28-Apr	1.4	Z	2.4	1.8	2.3	1.7	1.6	2.4	1.8	1.1	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.9	1.0	1.1	0.9	1.2	1.0	1.1	2.4			
29-Apr	1.2	1.1	Z	1.3	0.9	0.8	0.7	0.6	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.9	0.6	1.1	0.8	0.8	0.8	1.0	0.7	1.3			
30-Apr	1.1	0.7	0.8	Z	1.2	0.7	0.6	0.8	0.4	0.4	0.3	C	C	C	C	C	C	C	2.1	1.8	1.2	1.2	2.5	1.0	--	2.5			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration																													
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	58	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676
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	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676

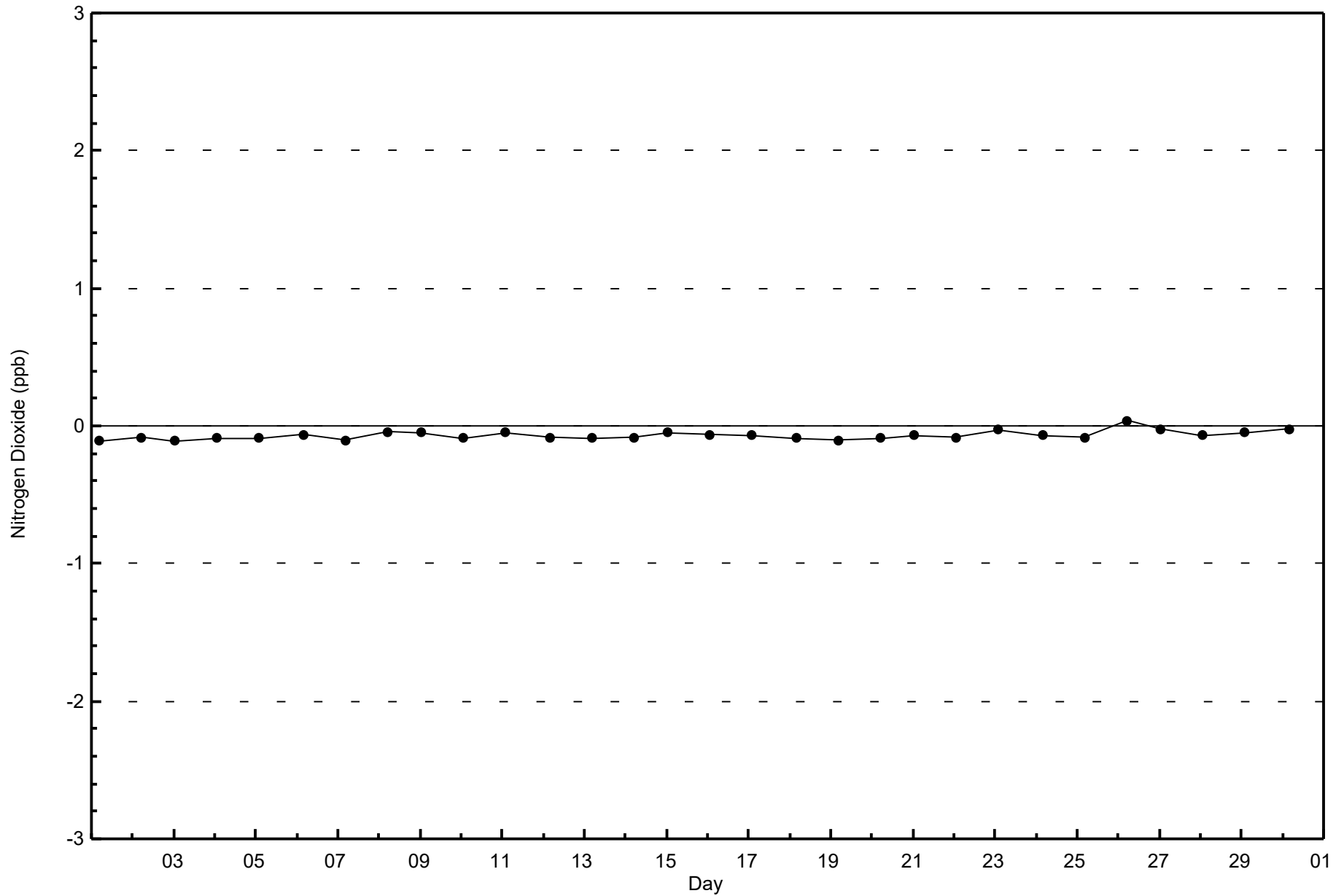
Total Number of Valid Hours: 676

Total Number of Hours: 720



Nitrogen Dioxide (NO₂) - ppb
Janvier

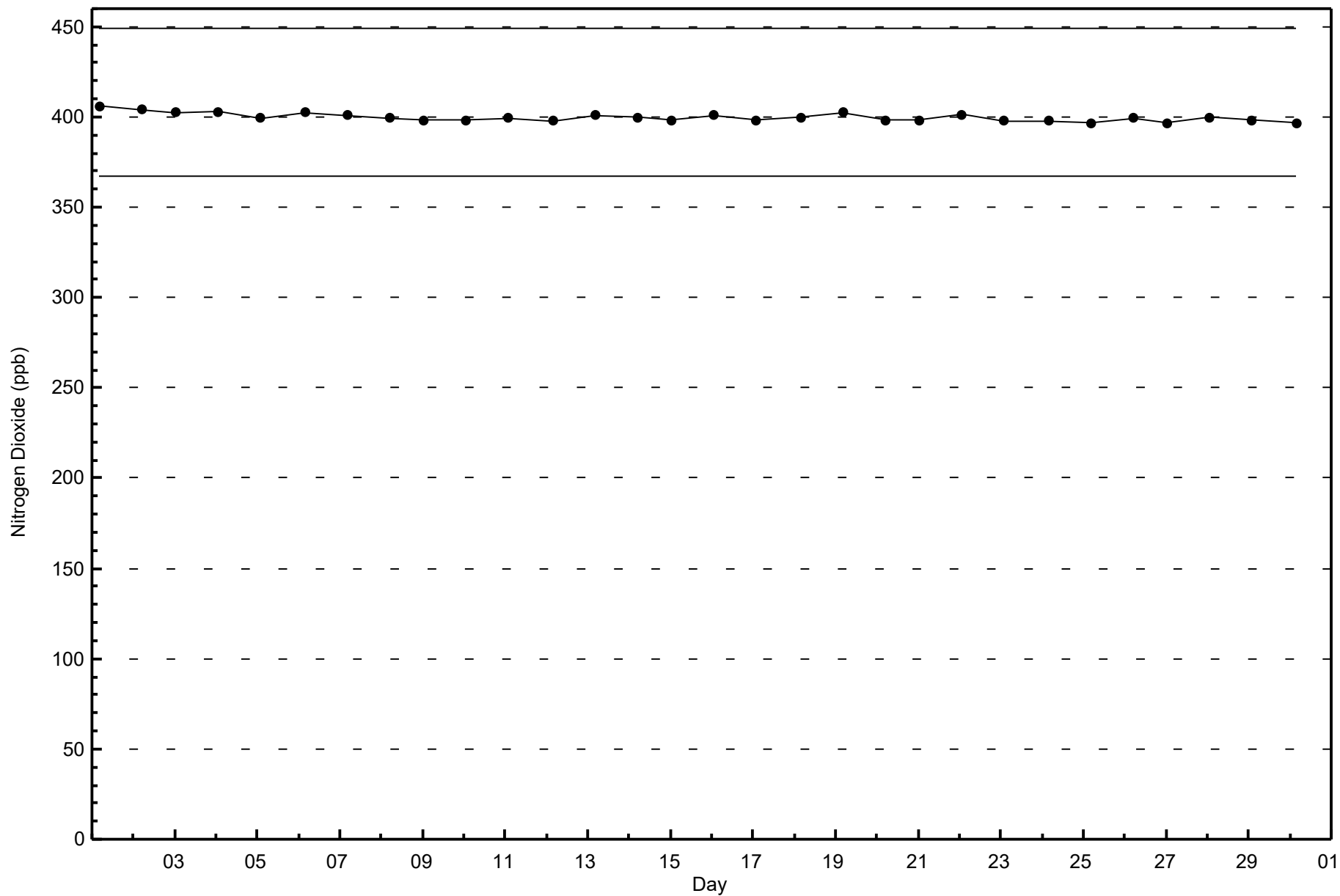






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

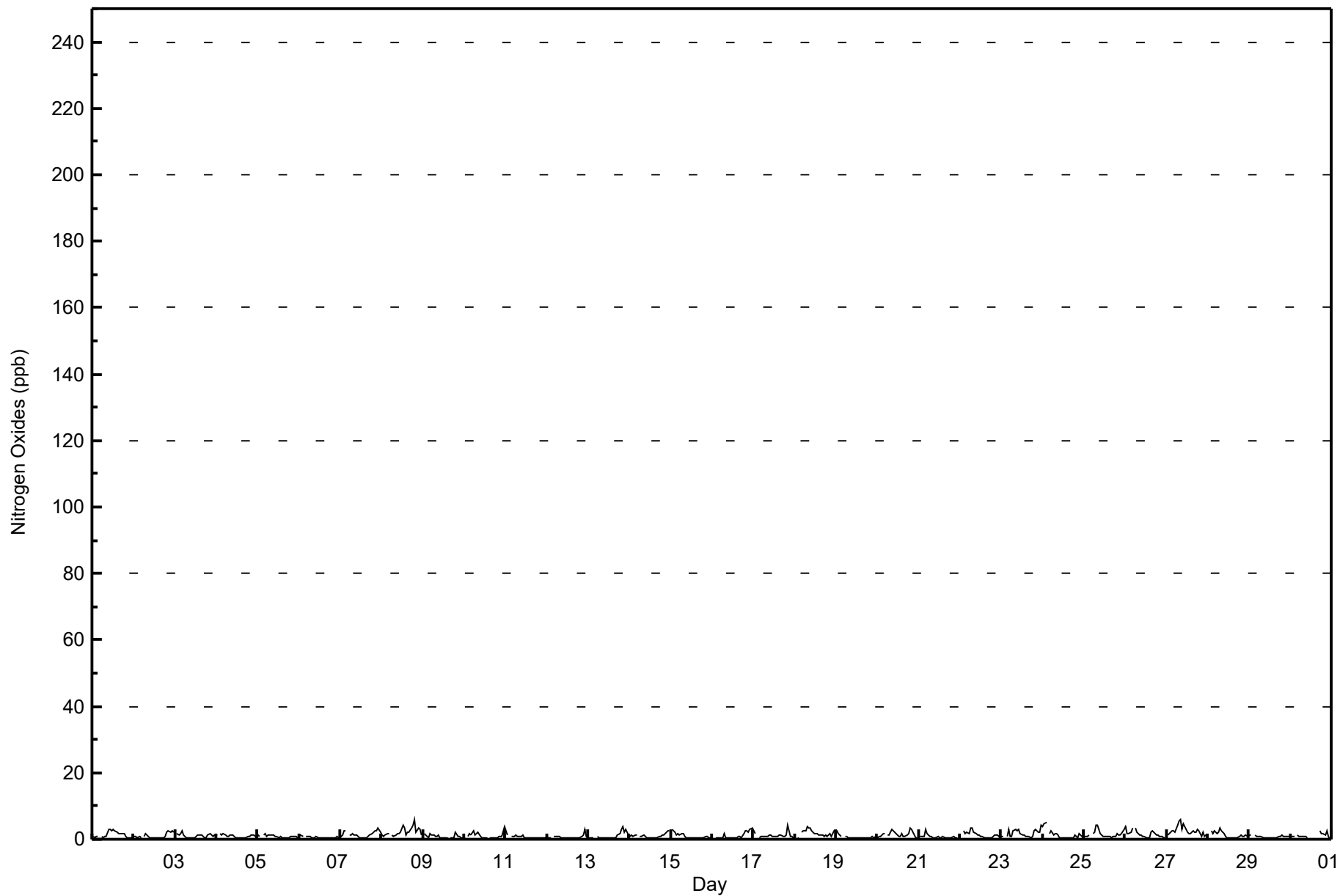
Janvier - April 2025

Maximum Value: 5.9 ppb on Apr 8 20:00										Maximum Daily Average: 2.6 ppb on Apr 27										Hours in Service: 720							
Minimum Value: 0.2 ppb on Apr 22 00:00										Minimum Daily Average: 0.6 ppb on Apr 6										Hours of Data: 684							
Maximum Diurnal Average: 1.6 ppb at hour 8										Minimum Diurnal Average: 0.7 ppb at hour 15										Hours of Missing Data: 36							
Monthly Average: 1.18 ppb										Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.5 P ₉₉ = 4.3										Hours of Calibration: 36							
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.9	0.6	0.8	0.9	Z	0.8	0.6	0.7	0.8	3.1	2.9	2.6	3.1	2.6	2.1	1.8	1.8	1.6	1.7	0.8	0.5	0.5	0.4	0.5	1.4	3.1	
2-Apr	0.8	0.8	0.5	0.7	0.5	Z	0.9	1.7	0.7	0.5	0.4	0.5	0.5	0.5	0.3	0.3	0.4	0.4	0.7	2.2	2.7	2.3	2.5	2.3	1.0	2.7	
3-Apr	Z	1.7	1.4	1.8	2.4	1.1	0.5	0.4	0.4	0.3	0.4	0.4	1.0	1.2	1.1	1.1	0.9	0.3	0.4	1.1	1.9	1.3	0.8	1.1	1.0	2.4	
4-Apr	1.4	Z	1.7	1.5	1.8	1.2	0.8	1.0	1.3	1.4	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	1.3	1.4	1.4	0.6	1.0	1.8	
5-Apr	1.1	0.6	Z	1.1	1.5	0.9	1.1	1.4	1.3	1.2	1.0	0.8	0.6	0.9	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	1.0	0.5	0.9	1.5	
6-Apr	0.8	1.1	0.9	Z	0.7	0.8	0.8	0.4	0.4	0.4	0.7	0.4	0.4	0.5	0.4	0.4	0.5	0.3	0.3	0.5	0.5	0.6	0.8	0.5	0.6	1.1	
7-Apr	0.7	1.3	2.4	2.4	Z	1.2	1.3	1.8	1.3	1.2	0.8	0.6	0.6	0.5	0.6	0.6	0.8	1.2	1.5	2.2	2.7	2.5	3.2	2.2	1.5	3.2	
8-Apr	1.3	1.0	1.2	1.6	1.6	Z	1.4	0.9	1.4	1.5	1.7	1.9	4.0	3.5	1.4	2.1	2.3	3.5	4.3	5.9	2.3	3.2	2.8	1.4	2.3	5.9	
9-Apr	Z	1.6	0.7	0.5	1.6	1.3	1.4	0.9	1.0	1.5	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.4	0.2	2.3	0.7	0.7	0.4	0.5	0.8	2.3	
10-Apr	0.4	Z	0.9	1.5	1.4	2.4	1.1	1.9	2.1	0.8	0.6	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.5	0.6	1.0	0.7	1.0	4.0	1.0	4.0	
11-Apr	2.5	1.2	Z	0.9	0.7	0.9	1.3	0.9	0.7	1.1	1.1	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.7	2.5	
12-Apr	0.7	0.5	0.5	Z	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.6	0.9	1.1	3.1	1.0	0.7	3.1	
13-Apr	0.3	0.3	0.6	0.5	Z	1.0	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.2	1.9	3.1	3.8	2.0	3.2	1.2	1.0	3.8	
14-Apr	1.1	1.1	0.9	1.1	1.1	Z	1.0	1.0	1.1	1.0	0.5	0.5	0.4	0.5	0.4	0.5	0.6	0.7	0.9	1.1	1.3	2.3	2.5	2.4	1.0	2.5	
15-Apr	Z	3.0	1.9	1.3	1.5	1.3	1.5	1.7	1.0	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.7	0.9	0.4	0.3	0.8	3.0	
16-Apr	0.3	Z	0.5	0.3	0.3	0.3	0.3	1.6	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.7	0.8	0.6	1.8	2.4	2.5	2.3	3.0	3.6	1.0	3.6	
17-Apr	2.6	1.9	Z	0.6	0.9	1.0	0.8	0.7	0.8	1.3	1.3	0.9	0.9	0.8	1.0	1.2	1.3	1.0	0.8	1.2	4.3	0.7	0.6	0.3	1.2	4.3	
18-Apr	0.2	0.2	0.5	Z	2.1	2.5	2.4	3.6	3.6	3.4	2.8	1.8	1.6	1.6	1.2	1.5	1.3	0.8	1.2	0.7	1.8	0.9	1.5	2.5	1.7	3.6	
19-Apr	2.6	1.5	1.4	0.6	Z	0.7	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.8	0.6	0.7	0.6	2.6	
20-Apr	0.4	0.7	1.0	1.5	1.7	Z	1.4	1.3	2.9	2.5	2.2	1.5	0.7	0.8	1.7	0.7	0.8	1.4	1.6	3.5	2.9	1.1	0.5	0.3	1.4	3.5	
21-Apr	Z	0.7	0.7	1.0	3.0	1.8	0.9	0.7	0.4	0.5	0.4	0.7	0.4	0.5	0.7	0.3	0.5	0.4	0.6	0.4	0.9	0.2	0.3	0.2	0.7	3.0	
22-Apr	0.6	Z	2.4	1.7	2.0	1.7	3.2	3.3	2.3	1.8	1.1	1.2	0.9	0.7	0.6	0.5	0.4	0.4	0.4	0.7	1.2	1.2	1.1	0.6	1.3	3.3	
23-Apr	0.7	0.7	Z	0.9	2.8	0.9	0.8	2.6	2.8	2.7	2.8	1.6	1.4	1.1	0.7	0.8	0.7	0.6	0.8	2.6	2.8	2.0	2.2	4.2	1.7	4.2	
24-Apr	3.7	4.6	5.0	Z	1.5	2.3	1.2	1.5	1.8	1.2	0.6	0.6	0.5	0.4	0.5	0.4	0.4	0.6	0.6	1.4	0.6	1.5	1.2	1.0	1.4	5.0	
25-Apr	0.8	1.0	0.9	1.3	Z	1.8	2.0	4.4	4.1	1.7	1.1	0.9	1.0	0.7	0.8	0.6	0.6	0.6	0.7	1.5	1.1	1.1	1.5	3.2	1.5	4.4	
26-Apr	3.9	1.9	1.6	2.1	3.2	Z	3.4	2.2	1.4	1.4	1.0	0.8	0.4	0.4	0.4	2.0	2.7	1.8	1.1	1.2	0.7	0.7	0.6	0.6	1.5	3.9	
27-Apr	Z	1.3	2.3	2.6	2.7	2.0	4.2	5.6	5.9	2.9	4.5	2.9	2.1	1.8	1.9	2.4	2.3	2.2	2.9	2.5	0.9	1.9	1.0	1.2	2.6	5.9	
28-Apr	1.4	Z	2.6	1.8	2.4	1.9	2.1	3.5	2.6	1.6	0.7	0.5	0.4	0.4	0.4	0.5	0.5	0.6	1.0	1.1	1.1	0.9	1.3	1.0	1.3	3.5	
29-Apr	1.2	1.1	Z	1.4	1.0	0.9	0.8	0.8	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	1.0	0.6	1.2	0.8	1.0	0.9	1.0	0.7	1.4	
30-Apr	1.1	0.7	0.9	Z	1.2	0.7	0.7	1.0	0.7	0.6	0.5	C	C	C	C	C	C	C	2.4	1.8	1.6	1.4	2.5	1.0	0.2	--	2.5
		1.3	1.2	1.4	1.3	1.6	1.3	1.6	1.5	1.3	1.1	0.9	0.8	0.8	0.7	0.7	0.8	0.9	1.0	1.5	1.5	1.3	1.4	1.3	Diurnal Average		
		3.9	4.6	5.0	2.6	3.2	2.5	4.2	5.6	5.9	3.4	4.5	2.9	4.0	3.5	2.1	2.4	2.7	3.5	4.3	5.9	4.3	3.2	3.2	4.2	Diurnal Maximum	
Z - zerospan		C - Calibration																									



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	58	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676
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	54	19	22	14	16	26	31	43	106	87	32	44	53	43	28	676

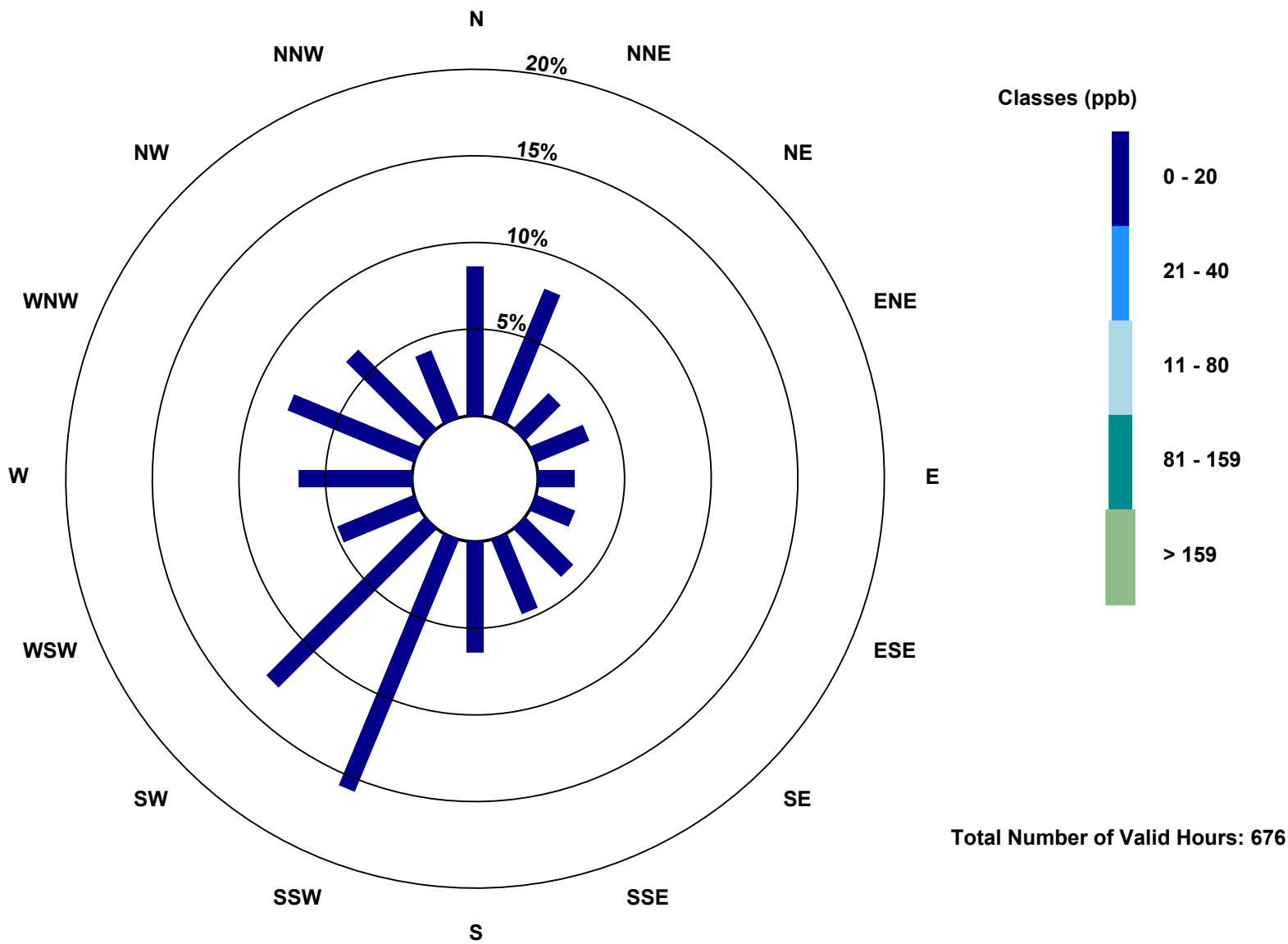
Total Number of Valid Hours: 676

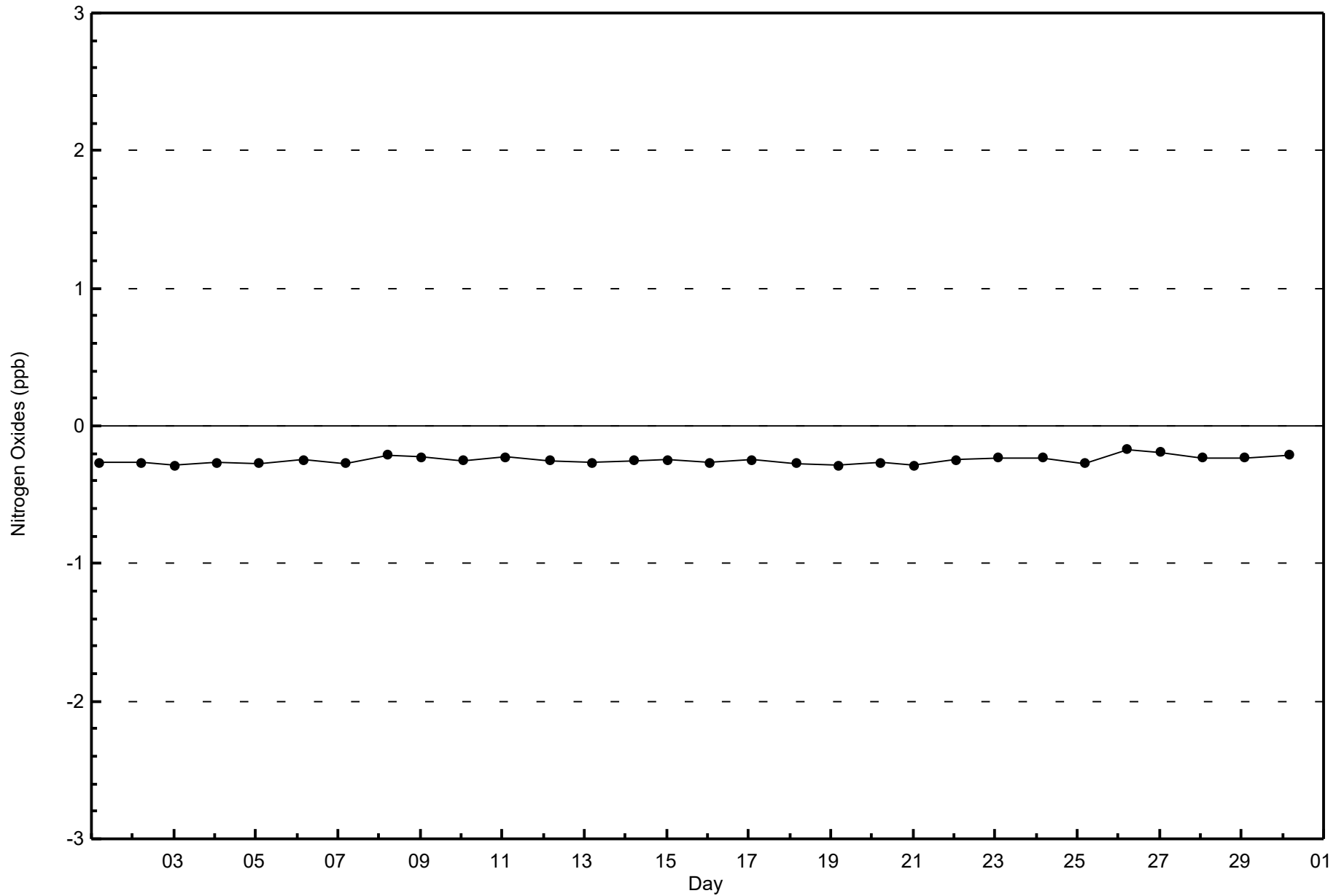
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Janvier

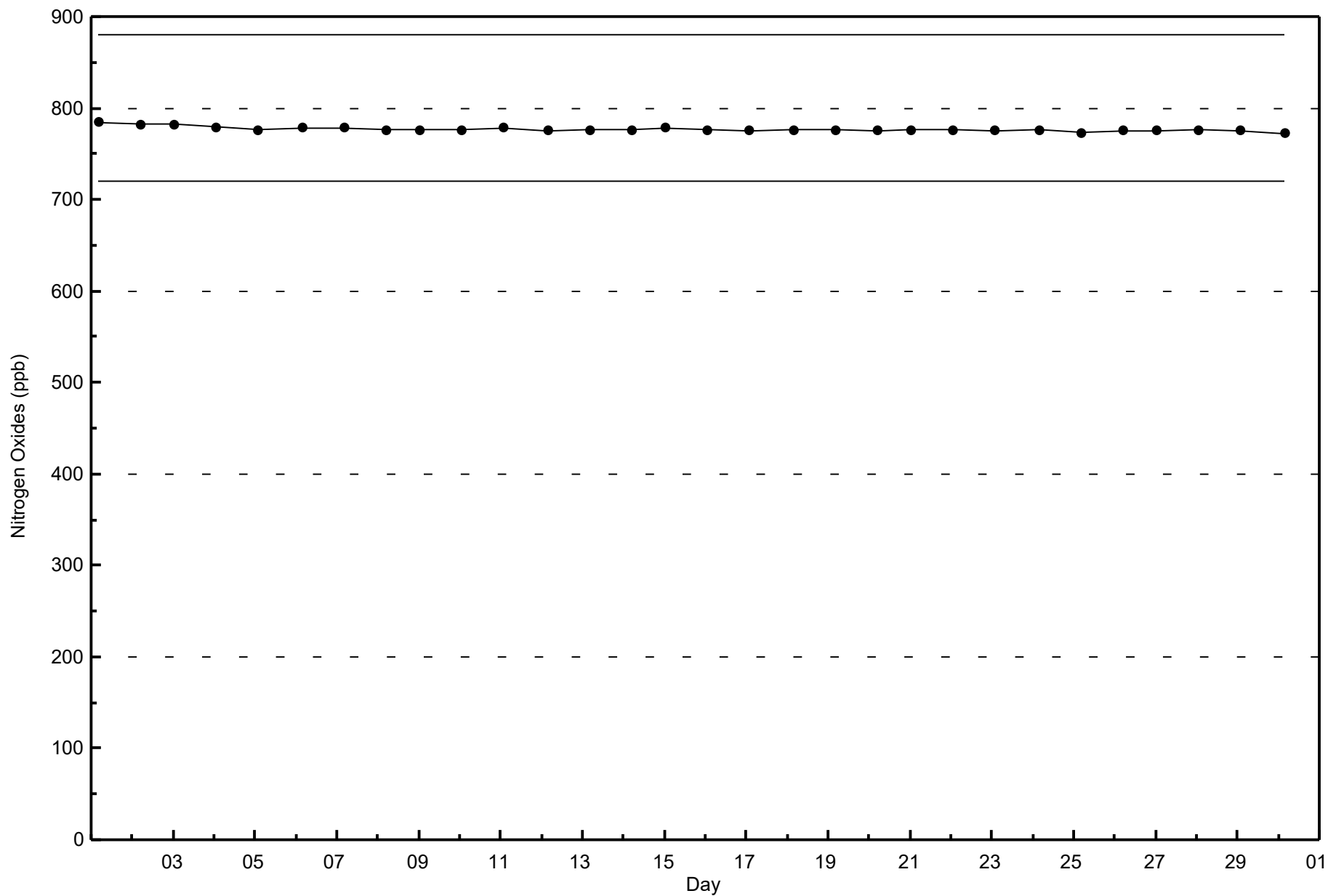






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O₃) - ppb

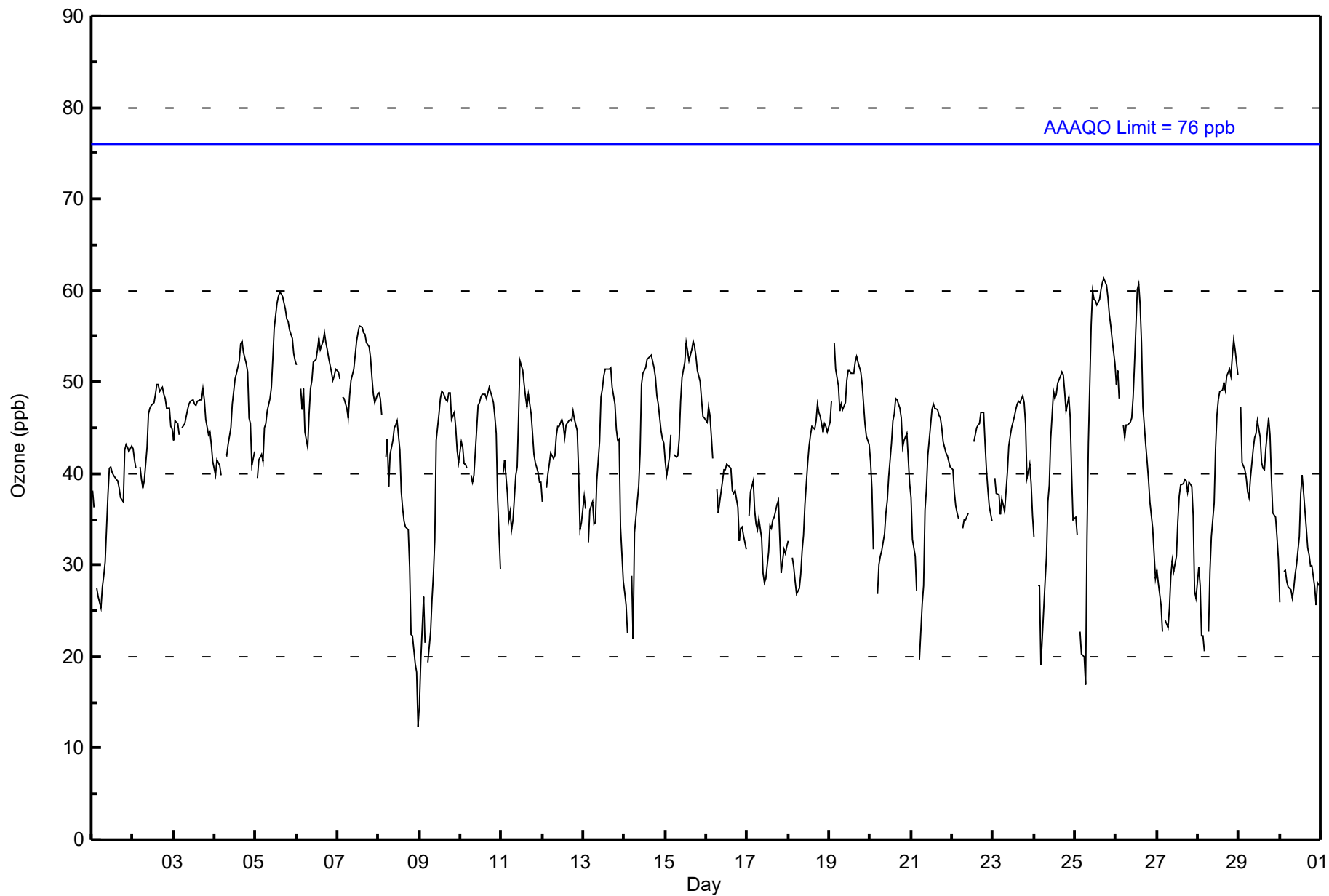
Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 61.3 ppb on Apr 25 18:00 Maximum Daily Average: 51.8 ppb on Apr 5																								Hours in Service: 720 Hours of Data: 687		
Minimum Value: 12.4 ppb on Apr 9 00:00 Minimum Daily Average: 30.2 ppb on Apr 30 Maximum Diurnal Average: 47.8 ppb at hour 14 Minimum Diurnal Average: 34.5 ppb at hour 6 Monthly Average: 42.08 ppb Percentiles: P ₁ = 19.7 P ₁₀ = 29.0 Q ₁ = 36.5 Median = 43.5 Q ₃ = 48.3 P ₉₀ = 52.3 P ₉₉ = 59.8																								Hours of Missing Data: 33 Hours of Calibration: 33 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-Apr	38.1	36.3	Z	27.5	26.6	25.4	27.7	28.8	30.4	37.7	40.6	40.7	40.2	39.8	39.3	39.2	38.5	37.4	36.9	42.6	43.2	42.9	42.3	43.0	36.7	43.2
2-Apr	42.7	41.5	40.6	Z	40.8	39.4	38.5	39.2	42.9	46.6	47.2	47.4	47.7	48.6	49.7	49.8	49.0	49.5	48.6	48.3	47.2	47.2	45.2	44.8	45.3	49.8
3-Apr	43.7	45.8	45.5	44.2	Z	45.0	45.4	46.2	46.9	47.5	47.8	48.1	47.6	47.4	47.9	48.1	48.1	49.3	48.1	45.9	44.2	44.6	43.1	41.3	46.2	49.3
4-Apr	39.8	41.5	41.2	40.8	39.8	Z	42.1	42.0	43.1	45.0	47.6	48.9	50.4	50.9	52.3	54.1	54.5	53.3	52.0	51.1	46.0	45.4	40.9	42.3	46.3	54.5
5-Apr	Z	39.6	41.5	42.1	41.3	45.0	45.5	46.8	48.3	49.4	52.5	55.9	58.6	59.3	59.7	59.6	59.4	57.9	56.9	56.5	55.6	54.8	53.1	52.4	51.8	59.7
6-Apr	51.8	Z	49.2	47.0	49.3	44.5	42.9	46.5	49.2	50.3	52.1	52.5	53.6	54.7	53.6	54.4	55.3	54.2	53.5	52.6	51.0	50.1	50.7	51.4	50.9	55.3
7-Apr	51.1	50.3	Z	48.3	48.3	47.1	46.1	48.5	50.2	51.3	53.0	54.5	55.3	56.1	56.0	55.4	55.2	54.3	53.8	52.7	50.5	48.7	47.8	48.7	51.4	56.1
8-Apr	48.8	48.1	46.4	Z	41.7	43.8	38.6	42.1	43.6	45.0	45.3	45.8	42.5	38.0	36.1	34.7	34.1	33.8	29.8	22.4	22.3	19.2	18.3	12.4	36.2	48.8
9-Apr	14.7	19.7	26.6	21.5	Z	19.4	22.8	26.2	29.0	32.8	43.6	46.5	48.2	49.0	48.8	48.1	47.9	48.9	48.7	45.9	46.7	44.9	42.5	41.1	37.5	49.0
10-Apr	43.5	42.9	41.0	41.0	40.5	Z	39.8	39.1	39.8	44.8	47.4	47.8	48.4	48.7	48.6	48.2	48.8	49.4	48.4	47.7	46.2	44.5	37.3	29.6	44.1	49.4
11-Apr	Z	40.2	41.5	37.9	34.9	35.8	33.8	35.0	39.8	40.8	46.2	52.3	51.2	49.7	48.3	47.3	48.6	46.5	44.4	42.2	41.2	40.1	39.1	39.0	42.4	52.3
12-Apr	37.0	Z	38.5	39.9	41.0	42.3	41.6	41.9	44.1	45.2	45.1	46.0	45.2	43.9	45.2	45.7	45.8	45.8	46.9	45.9	44.6	40.2	33.9	34.7	42.6	46.9
13-Apr	37.6	36.1	Z	32.5	36.0	36.9	34.5	34.6	39.2	43.5	48.4	49.3	50.6	51.5	51.4	51.5	51.5	49.4	47.6	44.8	43.7	43.8	34.1	28.2	42.5	51.5
14-Apr	27.0	25.7	22.6	Z	28.8	21.9	33.6	35.2	38.6	42.2	49.8	50.9	51.6	52.5	52.6	52.7	52.9	51.6	50.4	48.5	47.6	44.7	43.8	43.3	42.1	52.9
15-Apr	41.4	39.9	41.8	44.2	Z	42.1	41.8	42.0	43.8	47.9	50.6	52.1	54.2	53.3	52.3	53.5	54.4	53.9	52.8	51.3	50.0	48.0	46.2	46.1	48.0	54.4
16-Apr	45.6	47.3	46.3	44.0	41.6	Z	38.3	35.7	36.9	39.3	40.3	40.5	41.0	40.9	40.6	38.2	37.8	38.1	36.3	32.7	34.0	34.1	33.3	31.8	38.9	47.3
17-Apr	Z	35.4	38.0	39.2	35.9	34.5	33.9	35.1	32.9	29.1	28.1	28.6	31.3	34.3	34.0	35.0	35.3	36.6	37.0	32.9	29.2	31.7	31.3	32.0	33.5	39.2
18-Apr	32.7	Z	30.8	29.7	28.2	26.9	27.5	28.9	31.6	33.2	36.7	41.2	43.1	44.2	45.1	44.9	45.7	47.6	46.7	46.2	44.5	45.5	45.2	44.6	38.7	47.6
19-Apr	45.6	48.0	Z	54.3	51.5	49.6	46.8	47.6	46.9	47.7	50.1	51.3	51.3	50.9	51.0	52.1	52.8	52.2	51.0	49.8	47.6	45.5	44.1	43.1	49.2	54.3
20-Apr	41.3	38.3	31.7	Z	26.8	30.0	30.9	31.5	33.4	35.7	37.1	39.6	43.4	45.8	46.5	48.2	48.0	47.1	46.1	42.8	43.7	44.4	41.6	38.9	39.7	48.2
21-Apr	37.3	32.7	31.0	27.2	Z	19.7	25.7	27.8	36.1	38.4	41.9	45.3	46.9	47.6	47.2	47.0	46.4	46.0	45.0	43.5	42.2	42.0	41.4	40.7	39.1	47.6
22-Apr	40.4	38.0	36.4	35.6	35.1	Z	34.1	34.9	34.9	35.7	C	C	C	43.5	45.0	45.4	45.4	46.7	46.6	43.3	40.4	38.3	36.5	34.8	39.5	46.7
23-Apr	Z	39.5	37.9	37.7	35.6	37.2	36.6	35.9	40.2	43.1	44.1	45.0	46.2	47.0	47.6	47.8	47.7	48.4	47.7	45.5	39.6	41.1	38.9	35.4	42.0	48.4
24-Apr	33.1	Z	27.7	27.7	19.1	22.2	28.2	31.0	37.0	38.7	43.8	48.9	48.2	48.7	49.9	50.7	51.1	50.9	48.9	46.8	48.3	46.1	40.0	34.9	40.1	51.1
25-Apr	35.2	33.2	Z	22.7	20.3	20.0	16.9	33.1	43.4	56.3	60.0	59.0	58.8	58.4	59.0	60.1	60.9	61.3	60.6	59.2	57.4	56.1	54.6	52.0	47.8	61.3
26-Apr	49.8	51.3	48.2	Z	45.3	44.0	45.2	45.3	45.6	46.1	48.4	52.0	60.2	60.7	58.4	54.3	47.3	43.2	41.4	39.4	37.0	34.0	31.2	28.5	45.9	60.7
27-Apr	29.5	28.1	25.6	22.7	Z	24.0	23.2	25.4	28.9	30.6	29.3	30.9	34.7	37.5	38.7	38.9	39.4	39.2	38.0	39.0	38.6	35.4	27.2	26.4	31.8	39.4
28-Apr	29.8	27.7	22.2	22.3	20.5	Z	22.8	29.3	33.1	36.8	42.7	46.3	48.0	49.0	49.1	49.9	49.1	50.7	51.4	50.7	52.7	54.6	53.5	50.7	41.0	54.6
29-Apr	Z	47.4	41.1	40.4	39.6	38.0	37.3	39.5	42.8	44.0	44.4	45.8	44.0	41.1	40.6	40.5	42.7	46.0	44.3	39.6	35.7	35.3	33.1	30.7	40.6	47.4
30-Apr	25.9	Z	29.2	29.4	28.3	27.5	27.2	26.5	27.4	29.0	30.0	33.1	37.8	39.9	38.0	34.0	31.9	31.1	29.9	30.0	27.7	25.7	28.1	27.7	30.2	39.9
																										Diurnal Average
																										Diurnal Maximum
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Ozone (O₃) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ozone (O₃) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	11	1.60	1.60
21 - 50	564	82.10	83.70
51 - 82	112	16.30	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 (O₃) - ppb
Janvier - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	0	1	0	0	0	0	0	0	1	7	2	0	0	0	0	0	11
21 - 50	58	49	17	14	12	14	18	20	29	84	73	30	35	40	35	28	556
51 - 82	3	4	4	6	3	3	8	9	13	17	10	1	9	12	7	3	112
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	54	21	20	15	17	26	29	43	108	85	31	44	52	42	31	679

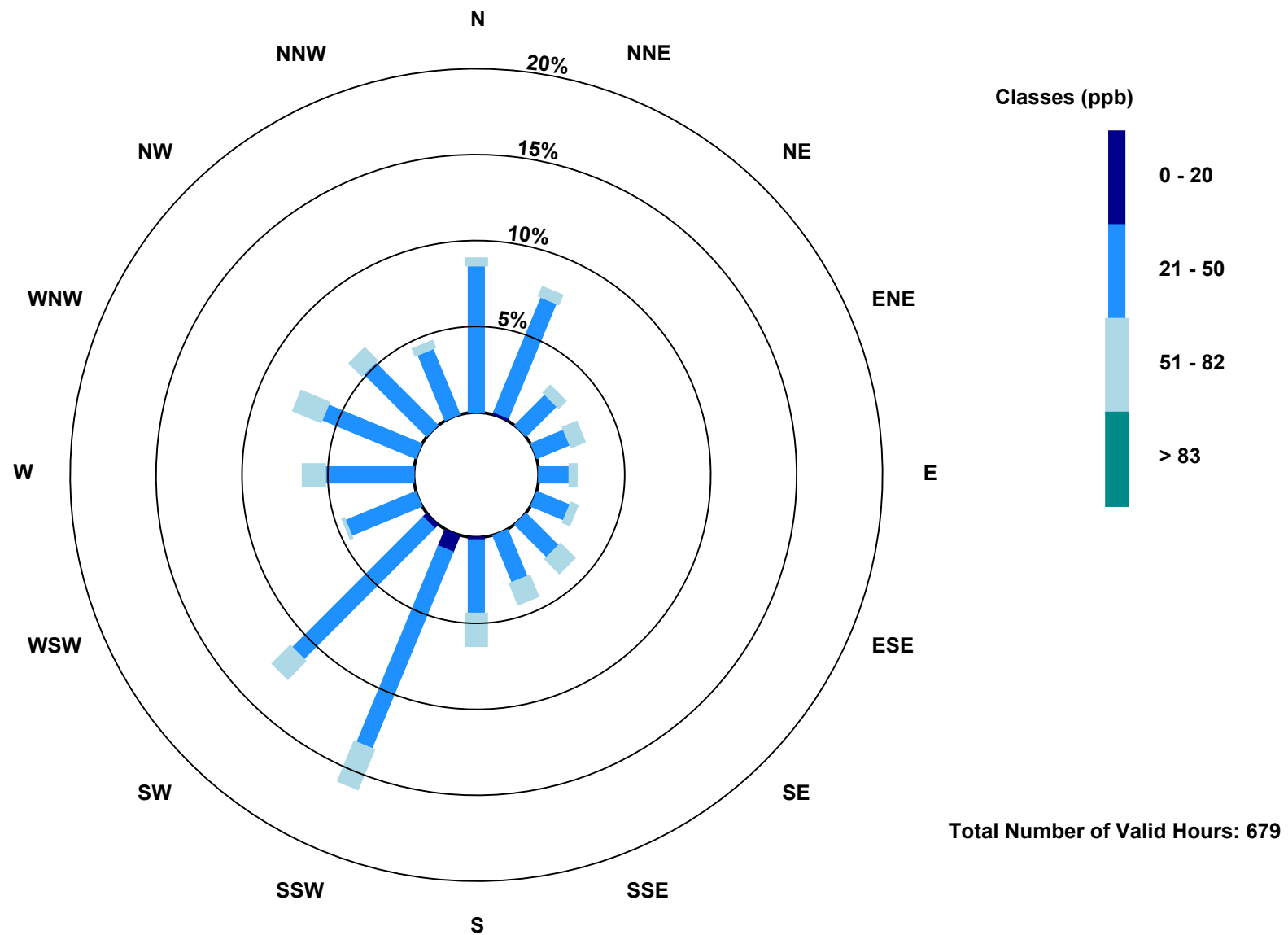
Total Number of Valid Hours: 679

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

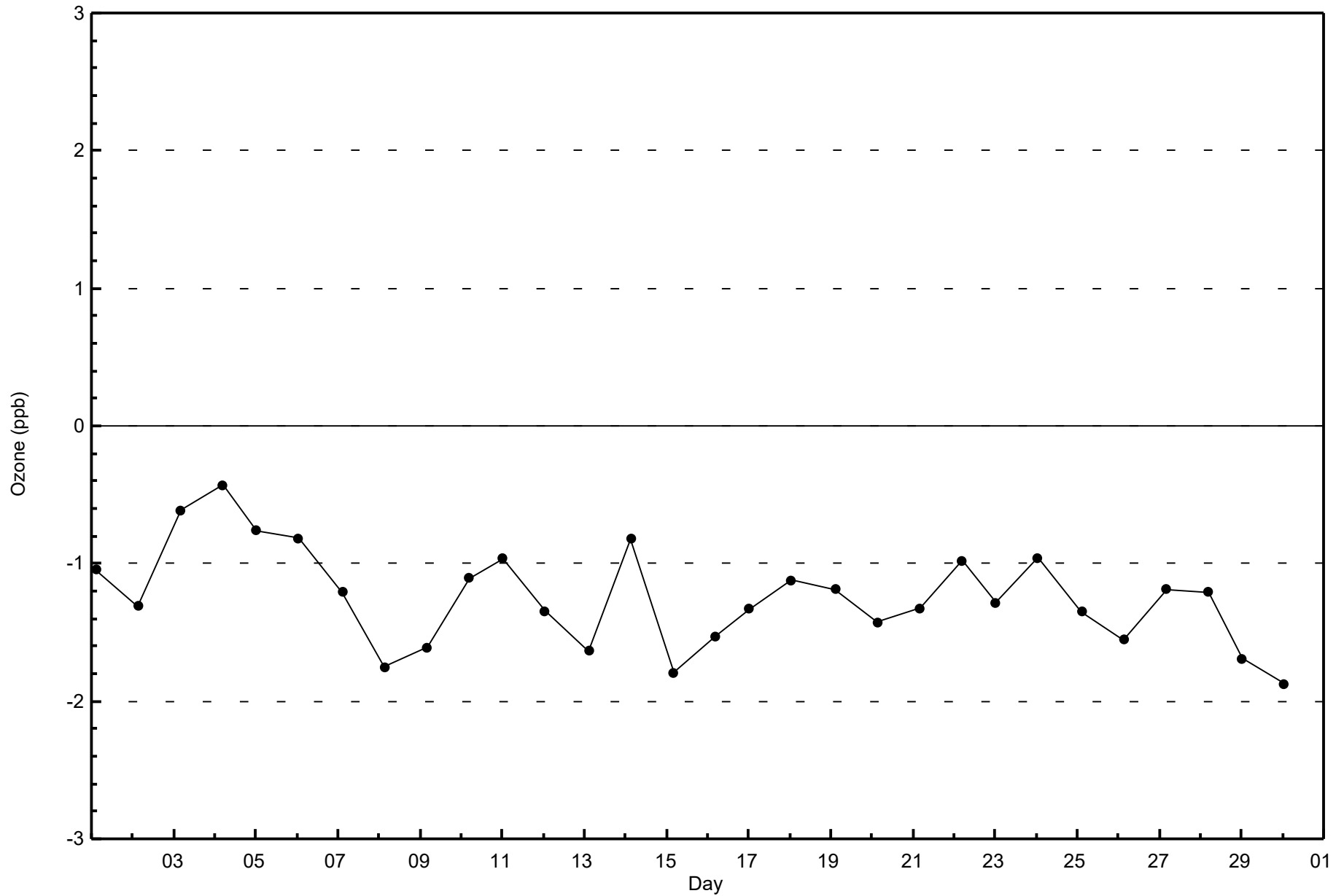
Ozone (O_3) - ppb
Janvier





Wood Buffalo Environmental Association
Zero Responses

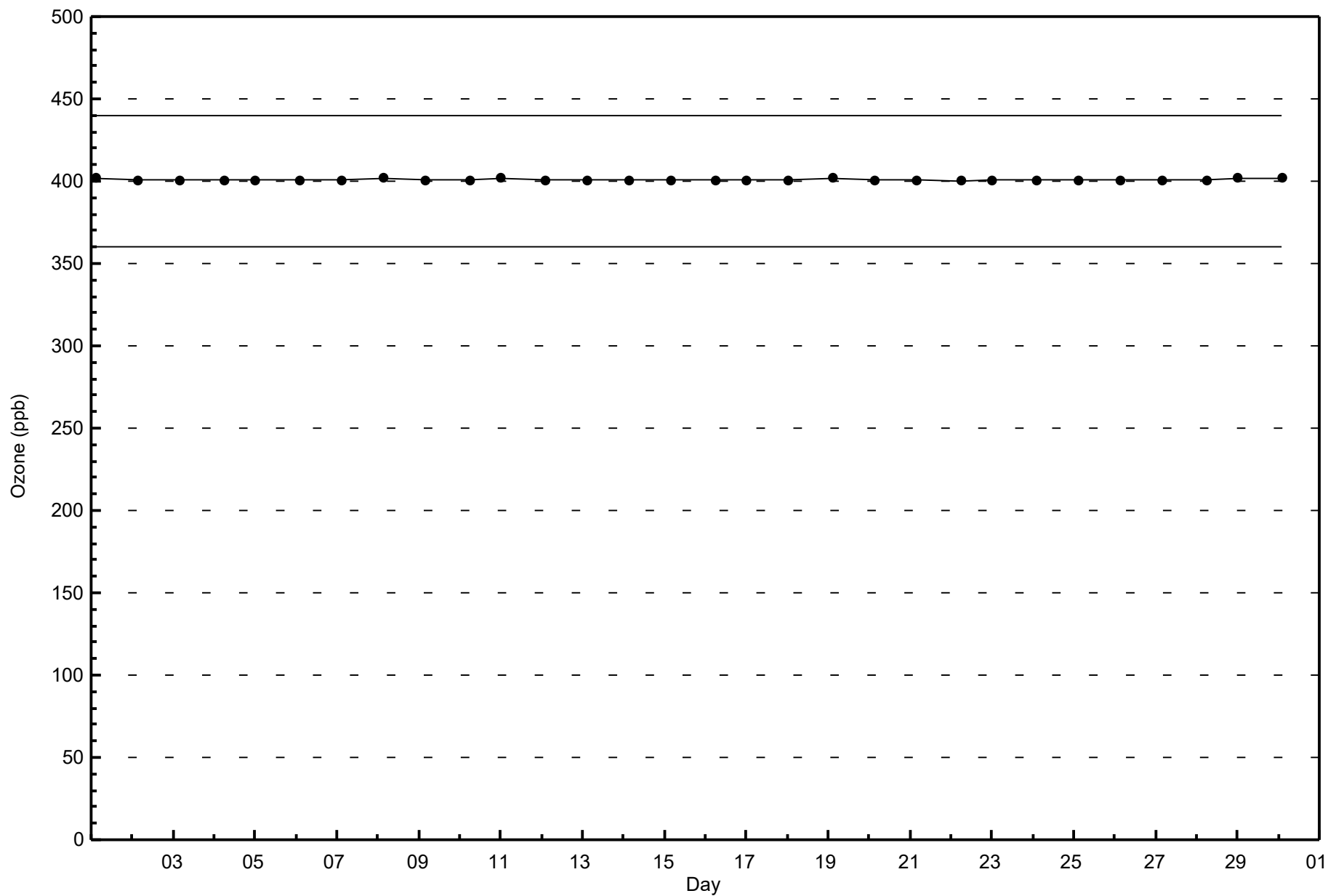
Ozone (O₃) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association
Span Responses

Ozone (O₃) - ppb
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

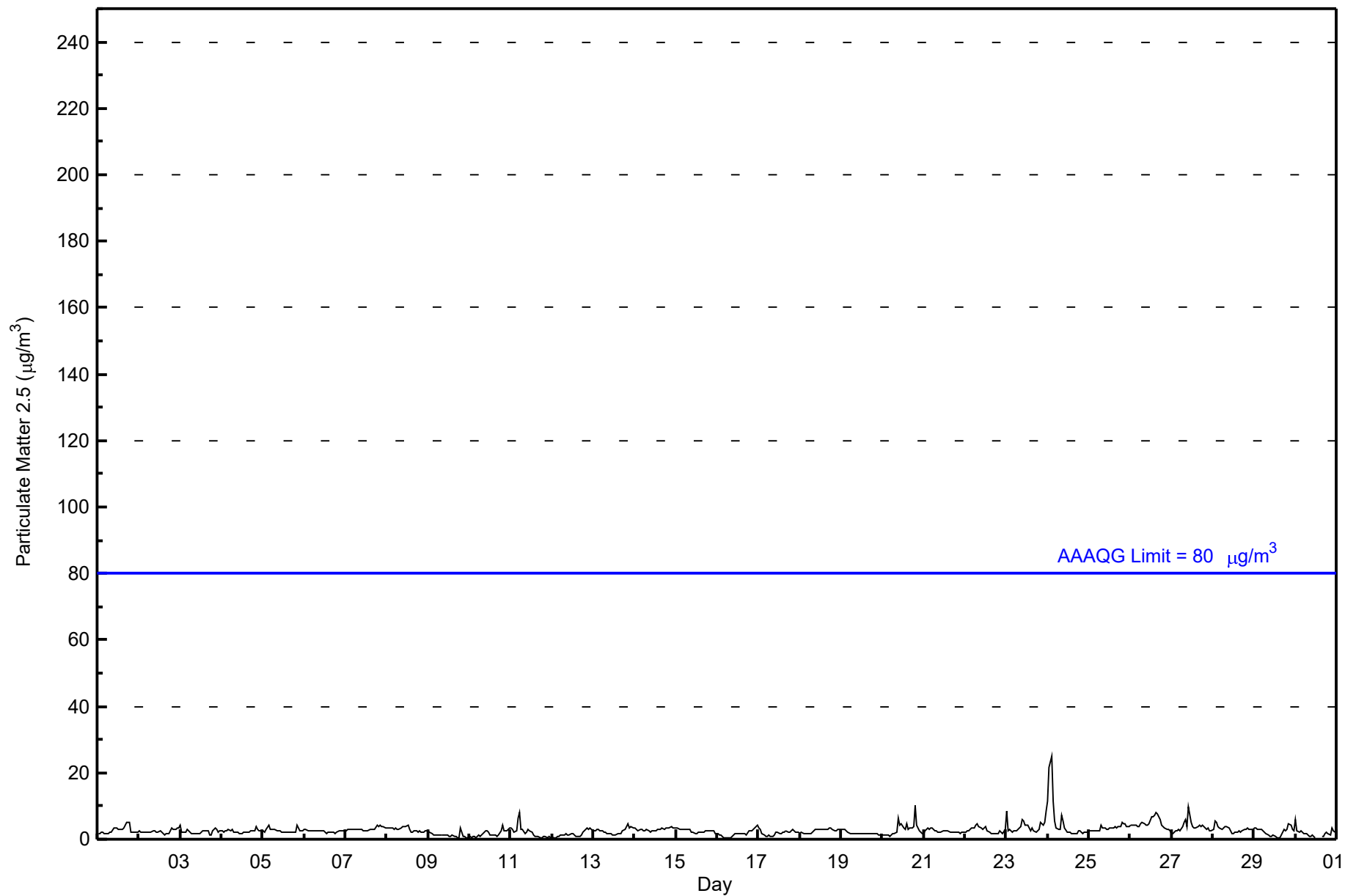
Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 24.9 µg/m³ on Apr 24 03:00 Maximum Daily Average: 5.3 µg/m³ on Apr 24																				Hours in Service: 720 Hours of Data: 717						
Minimum Value: 0.2 µg/m³ on Apr 16 06:00 Minimum Daily Average: 1.2 µg/m³ on Apr 9 Maximum Diurnal Average: 3.2 µg/m³ at hour 3 Minimum Diurnal Average: 2.3 µg/m³ at hour 16 Monthly Average: 2.65 µg/m³ Percentiles: P ₁ = 0.5 P ₁₀ = 1.2 Q ₁ = 1.8 Median = 2.5 Q ₃ = 3.1 P ₉₀ = 4.0 P ₉₉ = 8.4																				Hours of Missing Data: 3 Hours of Calibration: 3 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.9	1.8	2.0	1.9	1.7	1.7	1.7	2.0	2.3	3.4	3.5	3.4	3.1	3.0	3.0	3.6	4.0	5.2	5.0	2.1	1.9	2.0	2.2	2.3	2.7	5.2
2-Apr	2.6	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.3	2.7	2.3	2.3	2.5	2.3	1.6	1.2	1.8	1.9	2.5	3.2	3.0	3.0	3.4	3.4	2.4	3.4
3-Apr	4.1	2.3	2.0	2.0	2.8	2.6	1.6	1.8	1.8	1.5	1.6	1.7	2.1	2.4	2.5	2.7	2.5	1.2	1.4	2.5	3.3	3.0	2.3	2.3	2.2	4.1
4-Apr	2.6	2.3	2.4	2.6	2.8	2.4	2.8	2.0	2.1	1.9	1.7	1.7	1.7	1.9	2.1	2.3	2.3	2.6	2.8	2.5	3.6	2.8	2.5	2.4	2.4	3.6
5-Apr	2.4	2.2	2.9	4.1	3.1	2.8	2.8	2.8	2.6	2.5	2.4	2.1	2.2	2.2	2.3	2.0	2.3	2.2	2.3	2.2	4.1	2.5	2.5	2.5	2.6	4.1
6-Apr	2.8	2.8	2.6	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.2	1.9	2.0	2.1	2.2	2.0	1.8	2.2	2.5	2.6	2.6	2.5	2.4	2.8
7-Apr	2.7	2.8	2.8	2.9	2.9	2.8	2.8	2.9	3.0	3.0	2.7	2.6	2.6	2.6	3.0	2.9	3.0	3.2	4.3	3.8	4.1	3.7	3.6	3.4	3.1	4.3
8-Apr	3.3	3.2	3.3	3.4	3.2	3.2	3.2	3.1	3.4	3.8	3.7	3.8	4.2	3.1	1.9	2.3	2.4	2.4	2.3	2.7	2.2	2.3	2.3	2.4	3.0	4.2
9-Apr	2.4	2.1	1.5	1.3	1.3	1.3	1.3	1.3	1.1	1.3	1.3	1.1	0.8	0.7	1.1	0.7	0.7	0.5	0.4	3.5	0.9	0.8	0.6	0.6	1.2	3.5
10-Apr	0.8	0.6	1.0	0.9	0.6	1.1	0.8	1.2	1.8	2.6	2.7	2.1	1.5	1.4	1.1	1.3	1.0	1.4	2.4	4.2	2.5	2.6	2.6	3.4	1.7	4.2
11-Apr	3.3	3.0	2.0	2.6	6.4	8.0	2.9	2.9	1.7	1.9	2.9	2.5	2.2	1.5	1.1	0.7	0.9	0.4	0.5	0.8	0.9	0.6	0.7	0.6	2.1	8.0
12-Apr	0.7	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.7	1.5	1.5	1.8	1.8	1.3	0.8	0.7	1.0	1.4	2.3	2.6	3.3	3.1	3.2	3.0	1.6	3.3
13-Apr	2.7	2.6	2.8	2.8	2.6	2.5	2.3	2.0	1.8	1.6	1.6	1.4	1.3	1.3	1.5	1.6	1.5	2.7	3.0	3.6	4.6	3.2	3.9	3.2	2.4	4.6
14-Apr	3.4	2.9	2.7	2.8	2.8	2.6	2.7	3.0	2.6	2.3	2.4	2.6	2.7	2.8	2.9	2.8	3.3	3.0	3.3	3.4	3.3	3.6	3.2	3.3	2.9	3.6
15-Apr	3.6	3.5	3.1	3.0	2.8	2.8	2.9	3.0	2.8	2.0	2.2	1.5	1.7	1.9	2.0	2.2	2.3	2.4	2.4	2.4	2.5	2.5	2.3	1.7	2.5	3.6
16-Apr	1.5	1.3	1.3	1.0	0.6	0.2	0.2	0.4	0.6	1.2	1.8	1.7	1.8	1.7	1.5	1.8	1.7	1.5	2.4	2.5	2.7	2.9	3.2	4.0	1.6	4.0
17-Apr	3.6	2.8	1.7	1.3	1.0	1.0	1.1	0.6	0.7	1.4	2.2	2.0	1.5	1.7	2.0	2.3	2.4	2.0	2.0	2.4	3.1	2.0	1.9	2.0	1.9	3.6
18-Apr	1.5	1.9	1.8	1.6	1.5	1.6	1.8	2.2	2.7	2.9	3.0	2.9	3.1	2.9	2.9	3.0	3.1	3.2	3.2	2.8	2.7	2.7	2.8	2.9	2.5	3.2
19-Apr	2.9	3.0	2.8	2.4	2.0	1.8	1.6	1.5	1.6	1.8	1.6	1.7	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.8	1.8	1.6	1.5	1.3	1.9	3.0
20-Apr	1.1	1.1	1.2	1.3	1.1	1.3	1.6	1.8	2.2	6.3	4.1	4.5	3.2	3.1	4.8	3.1	3.2	3.3	4.0	10.3	4.4	2.5	2.1	1.9	3.1	10.3
21-Apr	1.8	2.6	3.4	3.0	3.2	3.5	2.7	2.6	1.9	2.1	2.2	2.4	2.5	2.6	2.4	2.2	2.2	2.3	2.0	2.0	2.0	1.9	2.0	1.9	2.4	3.5
22-Apr	2.1	2.4	2.6	2.8	3.2	3.3	4.1	4.7	4.0	3.2	2.8	3.6	4.0	2.4	2.1	1.6	1.6	1.9	1.8	1.8	2.7	2.1	1.8	2.8	2.7	4.7
23-Apr	8.4	2.6	2.8	2.3	2.4	2.5	2.5	2.8	3.7	6.0	5.3	4.1	4.3	3.4	2.7	3.3	2.5	2.3	2.4	2.8	5.2	4.2	5.2	8.6	3.8	8.6
24-Apr	11.5	21.7	24.9	11.2	5.6	3.3	3.1	2.9	7.3	5.7	3.3	2.1	2.3	2.0	1.8	1.6	1.5	1.8	2.4	2.4	1.8	2.1	2.1	2.2	5.3	24.9
25-Apr	2.4	2.5	2.6	2.6	2.6	2.7	2.6	4.2	3.5	3.2	3.0	3.0	3.4	3.6	3.6	3.7	3.6	3.6	3.9	5.2	4.8	4.5	3.8	3.8	3.4	5.2
26-Apr	4.1	4.3	4.4	4.3	3.8	3.9	4.6	5.1	4.4	4.1	4.4	4.8	6.8	7.0	7.3	8.3	7.8	5.9	4.3	4.0	3.3	3.0	2.9	2.5	4.8	8.3
27-Apr	1.5	1.9	2.4	2.7	2.8	2.7	3.9	5.0	6.0	3.8	9.6	5.1	3.9	3.5	3.4	3.8	4.1	4.0	4.1	3.8	2.9	3.2	2.7	2.6	3.7	9.6
28-Apr	2.9	5.3	5.3	3.7	3.3	3.0	3.3	4.0	3.6	3.3	2.6	1.8	1.8	2.0	2.1	2.5	2.3	2.4	2.8	3.0	3.2	3.0	3.0	3.0	3.0	5.3
29-Apr	3.2	3.2	3.1	3.1	2.8	2.5	2.1	1.7	1.4	1.0	0.8	1.1	0.8	0.3	0.3	0.5	1.3	2.9	2.7	3.0	4.6	4.2	2.9	2.7	2.2	4.6
30-Apr	6.1	2.7	2.3	2.4	2.2	1.8	1.5	1.3	1.0	0.9	1.2	0.6	C	C	C	0.8	1.0	1.9	2.1	1.7	1.3	3.5	2.6	1.9	1.9	6.1
																									Diurnal Average	
																									Diurnal Maximum	
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr: 80 µg/m³ 24-hr: 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Janvier - April 2025

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	694	96.79	96.79
6 - 15	21	2.93	99.72
16 - 25	2	0.28	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	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}) - µg/m³
Janvier - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	56	48	21	20	15	17	27	32	45	114	92	32	43	54	41	28	685
6 - 15	5	8	0	1	0	0	0	0	0	2	2	0	0	0	2	1	21
16 - 25	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	56	21	22	15	17	27	32	45	116	94	32	44	54	43	29	708

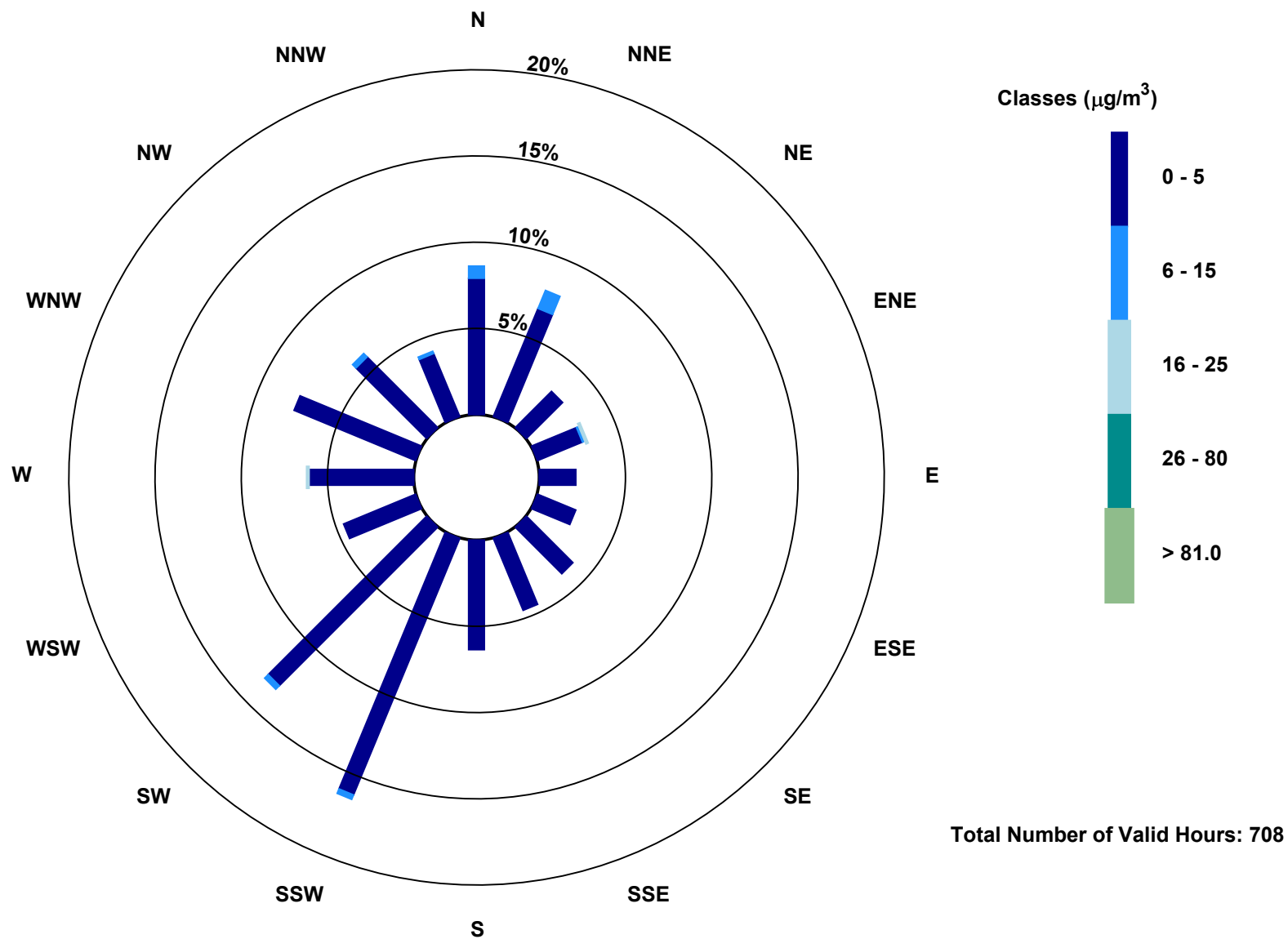
Total Number of Valid Hours: 708

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

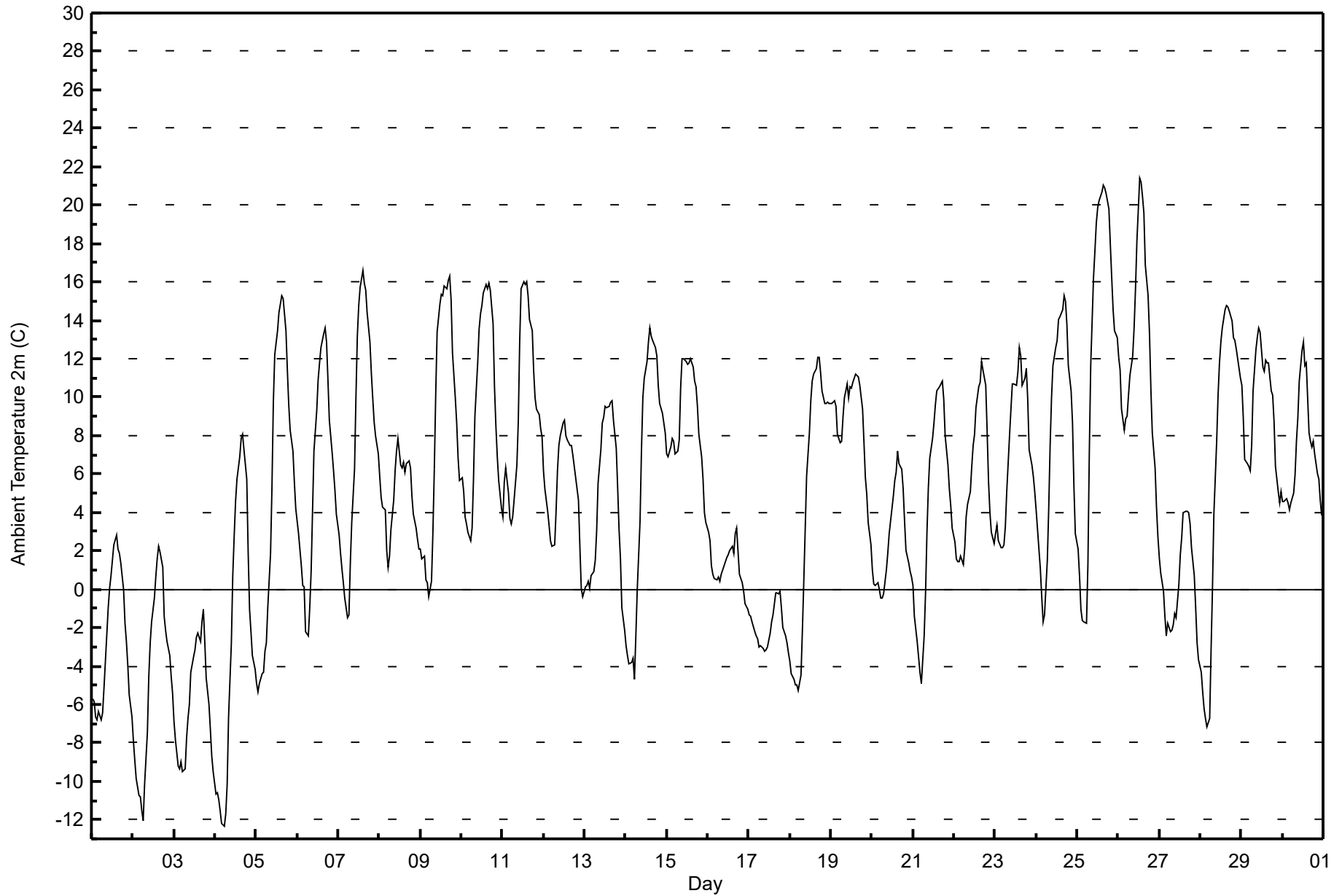
Janvier - April 2025

Maximum Value: 21.4 C on Apr 26 13:00																				Maximum Daily Average: 12.5 C on Apr 26					Hours in Service: 720	
Minimum Value: -12.4 C on Apr 4 06:00																				Minimum Daily Average: -5.9 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 10.4 C at hour 15																				Minimum Diurnal Average: -1.0 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 4.94 C																				Percentiles: P ₁ = -10.8 P ₁₀ = -3.7 Q ₁ = 0.2 Median = 5.1 Q ₃ = 10.1 P ₉₀ = 13.4 P ₉₉ = 20.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	-5.7	-5.9	-6.6	-6.8	-6.4	-6.8	-6.4	-5.1	-3.7	-1.0	0.0	0.7	1.5	2.3	2.8	2.1	1.9	1.4	0.0	-1.7	-2.7	-4.0	-5.5	-6.6	-2.6	2.8
2-Apr	-7.9	-8.9	-9.9	-10.7	-10.8	-11.5	-12.0	-10.2	-7.5	-4.5	-2.8	-1.7	-0.5	0.6	1.6	2.2	2.0	1.1	-1.4	-2.2	-2.7	-3.5	-4.5	-5.4	-4.6	2.2
3-Apr	-6.9	-7.9	-9.2	-9.4	-9.0	-9.5	-9.3	-7.7	-6.7	-6.0	-4.3	-3.5	-3.2	-2.5	-2.3	-2.7	-1.7	-1.1	-2.7	-4.6	-6.0	-7.3	-8.7	-9.5	-5.9	-1.1
4-Apr	-10.7	-10.6	-11.0	-11.5	-12.2	-12.4	-11.7	-10.2	-6.7	-2.8	0.7	2.8	4.6	5.7	6.9	7.8	8.1	7.3	5.7	1.9	-1.0	-2.2	-3.4	-4.2	-2.5	8.1
5-Apr	-4.9	-5.3	-4.9	-4.4	-4.3	-3.2	-2.8	-1.0	1.8	5.3	9.7	12.2	13.4	14.4	14.8	15.3	15.1	13.4	11.4	9.6	8.3	7.2	5.6	4.2	5.5	15.3
6-Apr	3.5	2.9	1.2	0.2	0.1	-2.2	-2.4	-1.0	0.9	4.0	7.2	9.3	10.9	11.8	12.5	13.3	13.6	12.8	10.9	8.8	7.1	6.2	5.2	3.9	5.9	13.6
7-Apr	2.8	1.9	1.1	0.3	-0.5	-1.5	-1.3	1.4	3.4	6.2	10.0	13.2	14.8	15.7	16.6	16.0	15.6	14.4	12.9	11.3	9.9	8.7	8.0	7.0	7.8	16.6
8-Apr	5.9	4.8	4.3	4.1	2.0	1.1	1.7	3.1	4.6	6.2	7.2	7.8	6.5	6.3	6.6	6.1	6.5	6.7	6.3	4.9	3.9	3.2	2.6	2.1	4.8	7.8
9-Apr	2.1	1.5	1.7	0.5	0.3	-0.4	0.4	2.9	6.2	10.1	13.3	14.8	15.4	15.3	15.8	15.6	16.0	16.3	15.1	12.3	10.0	8.7	6.8	5.6	8.6	16.3
10-Apr	5.8	5.1	3.8	3.4	3.0	2.5	3.2	5.7	9.0	11.8	13.5	14.4	14.7	15.4	15.8	15.7	16.0	15.6	13.8	10.6	8.5	6.9	5.6	4.2	9.3	16.0
11-Apr	3.8	5.6	6.3	5.0	3.7	3.4	3.8	4.6	6.4	8.8	12.9	15.6	16.0	15.8	16.0	15.3	14.0	13.5	11.4	9.9	9.4	9.1	8.4	7.9	9.4	16.0
12-Apr	6.1	5.2	4.1	3.3	2.5	2.2	2.3	4.1	6.2	7.5	8.0	8.6	8.8	8.0	7.7	7.5	7.5	7.0	6.4	5.8	4.6	2.2	0.0	-0.4	5.2	8.8
13-Apr	0.1	0.2	0.4	0.1	0.7	0.9	1.5	3.1	5.5	7.3	8.6	8.9	9.5	9.5	9.6	9.7	9.8	8.8	7.3	5.3	3.1	1.6	-1.0	-2.1	4.5	9.8
14-Apr	-2.9	-3.4	-3.9	-3.8	-3.6	-4.7	-2.4	0.0	3.5	7.2	10.0	11.0	11.8	12.9	13.6	13.2	13.0	12.6	12.1	10.6	9.7	9.2	8.6	8.1	5.9	13.6
15-Apr	7.0	6.9	7.4	7.9	7.7	7.0	7.2	7.7	10.5	12.0	12.0	11.9	11.7	11.8	12.0	11.5	10.8	10.5	9.5	8.1	6.9	5.7	4.0	3.5	8.8	12.0
16-Apr	3.0	2.5	1.2	0.8	0.5	0.5	0.6	0.4	0.8	1.2	1.5	1.7	1.8	2.0	2.2	1.9	2.9	3.2	0.7	0.5	0.3	-0.1	-0.7	-1.1	1.2	3.2
17-Apr	-1.3	-1.4	-1.7	-2.2	-2.4	-2.6	-3.0	-2.9	-3.1	-3.2	-3.2	-3.0	-2.3	-1.7	-1.3	-0.8	-0.1	-0.3	-0.1	-0.9	-2.0	-2.4	-2.8	-3.3	-2.0	-0.1
18-Apr	-3.8	-4.4	-4.7	-5.0	-5.0	-5.3	-4.4	-2.1	0.4	3.1	5.9	8.1	9.8	10.8	11.2	11.5	12.1	12.1	11.3	10.4	9.7	9.7	9.8	9.7	4.6	12.1
19-Apr	9.7	9.8	9.8	9.5	8.1	7.6	7.7	9.0	9.9	10.7	9.9	10.6	10.5	10.8	11.2	11.2	11.0	10.6	9.4	7.6	5.8	4.9	3.5	2.3	8.8	11.2
20-Apr	1.0	0.2	0.2	0.4	0.0	-0.5	-0.5	-0.2	1.0	1.9	2.9	3.6	4.8	5.7	6.1	7.2	6.5	6.2	5.2	3.5	2.0	1.4	0.9	0.6	2.5	7.2
21-Apr	0.2	-1.4	-2.7	-3.5	-4.3	-4.9	-2.4	-0.2	3.0	5.3	6.9	7.8	8.7	9.6	10.3	10.5	10.7	10.8	9.9	8.0	6.4	5.2	4.3	3.2	4.2	10.8
22-Apr	2.5	1.6	1.4	1.5	1.7	1.3	2.2	3.8	4.4	5.1	6.4	7.5	8.1	9.5	10.5	10.7	11.8	11.4	10.6	8.2	5.6	4.0	3.0	2.4	5.6	11.8
23-Apr	2.9	3.3	2.5	2.1	2.1	2.3	3.3	5.1	8.0	9.4	10.7	10.7	10.6	11.3	12.6	12.1	10.6	11.0	11.5	9.8	7.3	6.5	5.9	5.1	7.4	12.6
24-Apr	4.1	3.1	1.1	-0.4	-1.7	-1.4	1.5	4.2	7.5	10.0	11.6	12.6	12.9	14.1	14.2	14.6	15.3	15.0	13.7	11.7	10.4	8.7	5.3	2.9	8.0	15.3
25-Apr	2.1	0.7	-1.0	-1.7	-1.7	-1.8	1.2	7.1	11.6	16.3	17.6	19.0	19.9	20.3	20.7	21.0	20.9	20.6	19.8	18.0	16.2	14.5	13.5	13.1	12.0	21.0
26-Apr	12.1	11.4	9.3	8.3	8.8	9.0	10.1	11.1	12.2	13.6	15.7	18.1	21.4	21.2	20.5	19.6	16.9	15.2	13.3	10.4	8.2	6.3	4.3	2.7	12.5	21.4
27-Apr	1.7	0.8	-0.1	-1.4	-2.5	-1.8	-2.2	-2.2	-1.8	-1.2	-1.5	0.3	1.8	2.7	4.0	4.0	4.0	4.0	3.4	2.2	0.7	-1.0	-2.8	-3.7	0.3	4.0
28-Apr	-4.3	-5.3	-6.2	-6.7	-7.1	-6.8	-3.2	0.1	3.9	7.7	10.1	11.8	12.9	13.6	14.5	14.8	14.7	14.5	13.9	13.1	12.9	12.5	12.0	11.0	6.4	14.8
29-Apr	10.6	8.9	6.8	6.6	6.4	6.2	7.5	10.4	12.4	13.1	13.6	13.4	11.6	11.3	11.9	11.8	11.8	10.3	10.1	8.7	6.4	5.1	4.5	5.1	9.3	13.6
30-Apr	4.6	4.6	4.7	4.5	4.1	4.5	5.0	6.0	7.7	8.9	10.8	12.4	12.9	11.6	11.8	8.1	7.7	7.4	7.7	7.0	6.0	5.7	4.6	3.9	7.2	12.9
																									Diurnal Average	
																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Janvier - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	170	23.61	23.61
0 - 10	368	51.11	74.72
10 - 20	174	24.17	98.89
> 20	8	1.11	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) - %

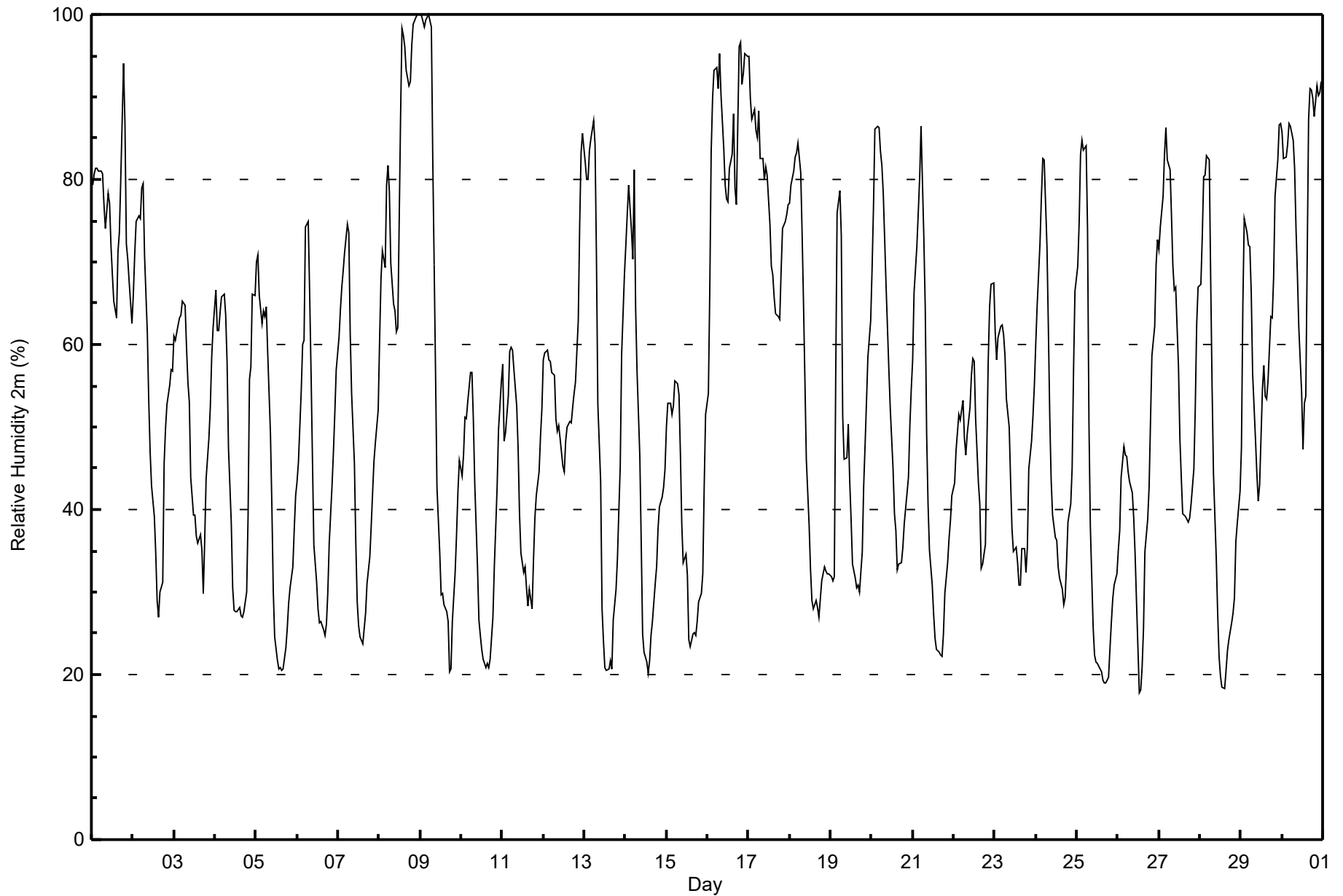
Janvier - April 2025

Maximum Value: 100.0 % on Apr 8 23:00																				Maximum Daily Average: 85.4 % on Apr 16										Hours in Service: 720	
Minimum Value: 17.8 % on Apr 26 13:00																				Minimum Daily Average: 38.0 % on Apr 10										Hours of Data: 720	
Maximum Diurnal Average: 74.8 % at hour 6																				Minimum Diurnal Average: 36.8 % at hour 15										Hours of Missing Data: 0	
Monthly Average: 53.70 %																				Percentiles: P ₁ = 19.7 P ₁₀ = 26.4 Q ₁ = 34.7 Median = 52.4 Q ₃ = 71.1 P ₉₀ = 83.5 P ₉₉ = 99.2										Hours of Calibration: 0	
																				Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	79.2	80.6	81.4	81.4	81.0	81.1	80.7	77.0	74.0	78.4	77.1	72.0	68.4	65.2	63.3	71.2	73.5	80.0	94.1	86.8	72.2	70.3	67.6	62.5	75.8	94.1					
2-Apr	66.1	71.0	74.9	75.7	75.2	78.9	79.5	70.8	61.4	53.2	46.9	42.9	39.2	34.7	29.0	26.9	29.9	31.1	45.6	49.8	52.8	55.1	57.0	56.9	54.4	79.5					
3-Apr	61.1	60.5	62.3	63.2	63.6	65.3	64.7	59.7	55.5	53.1	43.9	39.3	39.2	36.9	35.9	37.0	35.1	29.8	36.3	43.7	48.6	52.4	58.5	62.1	50.3	65.3					
4-Apr	66.5	61.7	61.7	63.9	65.8	66.2	63.5	57.9	47.5	38.3	30.5	27.8	27.7	27.6	28.1	27.1	27.0	27.6	30.0	39.2	55.8	57.3	66.1	65.9	47.1	66.5					
5-Apr	69.9	70.9	65.9	62.5	64.0	63.3	64.6	59.1	49.1	40.5	30.2	24.6	21.7	20.7	20.8	20.4	20.7	23.2	25.5	28.6	30.6	33.0	37.6	41.7	41.2	70.9					
6-Apr	43.3	45.8	54.5	60.0	60.5	74.2	75.0	66.3	56.8	46.3	35.7	31.1	28.0	26.3	26.4	25.4	24.7	26.1	30.1	36.0	42.9	46.9	51.8	56.9	44.6	75.0					
7-Apr	60.9	64.2	67.0	68.9	71.2	74.6	73.5	61.3	54.1	45.6	36.0	28.8	25.9	24.5	23.8	25.5	27.4	30.9	34.3	38.0	42.0	45.9	48.1	52.1	46.9	74.6					
8-Apr	60.6	67.9	71.4	69.4	79.3	81.7	78.4	69.8	64.9	64.0	61.6	62.0	87.6	98.2	97.5	96.2	93.3	91.4	91.9	96.3	98.8	99.7	100.0	100.0	82.6	100.0					
9-Apr	100.0	99.9	98.5	99.3	99.6	100.0	98.5	82.5	69.6	56.4	42.7	34.7	29.6	29.8	28.4	27.6	26.4	20.3	20.7	26.5	32.3	37.0	42.2	46.0	56.2	100.0					
10-Apr	44.1	46.6	51.1	51.0	53.0	56.6	56.6	50.9	43.2	32.9	26.6	24.8	23.1	21.8	20.8	21.4	20.9	21.9	26.9	33.0	37.8	42.8	49.7	55.4	38.0	56.6					
11-Apr	57.6	48.3	49.3	53.7	59.1	59.6	59.3	56.9	52.5	47.4	39.5	34.7	32.4	33.0	30.6	28.4	30.4	27.9	33.9	39.0	41.7	44.6	48.8	52.2	44.2	59.6					
12-Apr	58.2	59.0	59.4	58.1	57.9	56.6	56.3	51.0	49.5	50.2	48.6	45.2	44.6	48.3	49.9	50.6	50.5	52.4	54.1	55.4	62.8	74.4	83.3	85.6	56.7	85.6					
13-Apr	82.0	80.0	79.9	83.5	85.0	87.1	84.2	70.6	52.7	43.4	28.0	24.0	20.8	20.6	20.7	21.7	20.7	26.7	30.4	34.1	39.9	45.2	58.8	68.5	50.4	87.1					
14-Apr	72.0	75.8	79.3	73.9	70.3	81.1	64.4	56.7	46.5	35.9	24.8	22.8	21.5	20.2	21.6	24.8	26.5	31.0	33.1	37.7	40.4	41.5	42.7	44.8	45.4	81.1					
15-Apr	50.0	52.9	53.0	51.6	52.5	55.6	55.2	54.0	46.8	38.2	33.5	34.6	32.0	24.3	23.4	24.9	25.1	24.8	26.4	28.8	29.9	32.2	42.7	51.5	39.3	55.6					
16-Apr	54.1	66.6	83.5	89.8	93.2	93.6	90.9	95.3	90.3	83.7	79.2	77.6	77.2	81.3	83.0	88.0	79.0	76.9	96.1	96.6	91.6	92.9	95.3	94.9	85.4	96.6					
17-Apr	94.9	89.8	87.2	88.4	85.9	85.0	88.3	82.6	82.6	80.0	81.5	80.5	74.5	69.4	68.4	65.7	63.7	63.5	63.0	68.9	74.1	75.0	75.7	76.9	77.7	94.9					
18-Apr	77.2	79.4	80.9	82.8	83.2	84.5	80.9	73.3	65.0	55.6	46.2	38.1	32.6	29.0	28.0	28.9	28.2	27.0	29.1	31.3	33.1	32.6	32.2	32.1	50.5	84.5					
19-Apr	31.8	31.4	31.9	55.9	75.9	78.7	73.3	51.4	46.1	46.3	50.4	43.6	38.9	33.4	31.7	30.5	30.8	30.0	34.8	42.9	47.8	53.0	58.5	62.9	46.3	78.7					
20-Apr	69.2	76.6	86.2	86.5	86.2	83.3	81.6	78.4	67.1	62.0	57.0	52.1	44.9	39.6	37.4	32.6	33.4	33.6	35.5	38.3	40.2	44.0	50.1	54.6	57.1	86.5					
21-Apr	58.2	66.2	71.9	76.0	80.2	86.4	72.9	64.3	49.2	40.7	35.0	30.9	27.2	24.5	23.1	22.8	22.3	22.3	24.8	29.8	33.6	36.4	38.7	41.7	45.0	86.4					
22-Apr	43.3	47.1	49.4	51.6	50.9	53.2	48.7	46.5	49.2	52.4	56.3	58.3	58.0	51.0	43.1	40.7	32.8	33.4	35.7	47.1	57.9	64.6	67.3	67.4	50.3	67.4					
23-Apr	61.5	58.1	60.8	62.1	62.4	61.2	58.7	53.5	50.0	43.6	37.6	34.9	35.4	33.5	30.8	30.8	35.3	35.3	32.3	35.4	44.9	48.2	51.4	55.1	46.4	62.4					
24-Apr	60.2	64.8	72.1	77.8	82.5	82.4	71.8	62.0	51.1	43.6	39.3	36.6	36.3	33.0	31.6	30.3	28.5	29.2	33.6	38.5	40.7	45.2	56.9	66.4	50.6	82.5					
25-Apr	69.5	74.8	83.0	84.8	83.5	84.1	73.9	50.6	38.0	25.8	22.3	21.5	21.4	20.9	20.3	19.3	18.9	19.0	19.6	23.0	26.3	29.1	30.9	32.2	41.4	84.8					
26-Apr	35.0	37.5	43.8	47.6	46.6	46.5	44.5	43.5	42.0	39.0	34.6	28.8	17.8	18.1	20.8	25.6	34.8	38.8	42.7	50.7	58.6	62.1	69.7	72.8	41.8	72.8					
27-Apr	71.6	74.3	78.0	83.0	86.2	82.3	81.1	75.5	69.4	66.6	66.9	57.3	48.6	43.8	39.4	39.1	38.9	38.4	38.9	40.6	45.0	52.4	62.4	67.0	60.3	86.2					
28-Apr	67.3	73.0	80.4	80.5	82.9	82.4	68.1	55.1	44.4	34.1	27.4	22.3	19.8	18.5	18.4	20.6	22.9	24.2	26.2	27.5	29.4	36.1	38.3	42.3	43.4	82.9					
29-Apr	47.4	64.8	75.3	73.6	72.1	71.9	66.2	56.5	48.6	44.4	41.0	43.0	54.6	57.5	53.8	53.3	55.5	63.4	63.3	68.1	78.0	82.4	86.7	86.9	62.9	86.9					
30-Apr	85.7	82.6	82.8	84.3	86.8	86.5	84.8	81.3	74.1	68.4	62.0	54.2	47.3	52.9	53.8	87.3	91.0	90.9	89.9	87.7	91.3	90.2	90.5	91.8	79.1	91.8					
63.3 65.7 69.2 71.4 73.2 74.8 71.3 63.8 56.4 50.3 44.7 41.0 39.2 38.0 36.8 38.2 38.3 39.0 42.6 46.7 50.7 54.1 58.6 61.6																															
100.0 99.9 98.5 99.3 99.6 100.0 98.5 95.3 90.3 83.7 81.5 80.5 87.6 98.2 97.5 96.2 93.3 91.4 96.1 96.6 98.8 99.7 100.0 100.0																															



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

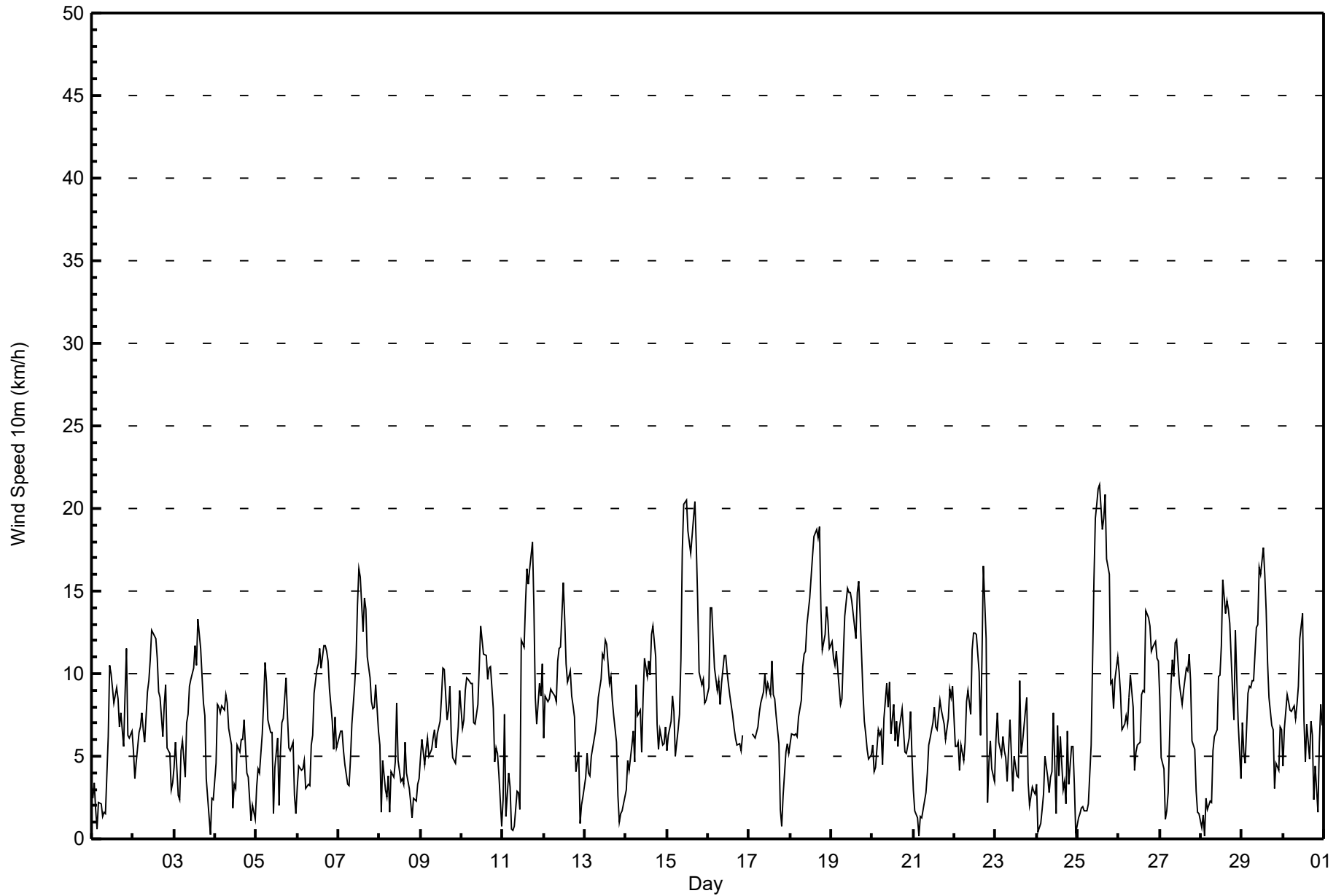
Janvier - April 2025

Maximum Speed: 21 km/h on Apr 25 14:00										Maximum Daily Speed Average: 12.0 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 28 03:00										Minimum Daily Speed Average: 0.3 km/h on Apr 23										Hours of Data: 715						
Maximum Diurnal Speed Average: 4.7 km/h at hour 14										Minimum Diurnal Speed Average: 0.1 km/h at hour 20										Hours of Missing Data: 5						
Monthly Average Velocity: 2.6 km/h 236.1 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 5 Median = 7 Q ₃ = 10 P ₉₀ = 13 P ₉₉ = 19										Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE2	SE3	E2	ESE1	E2	NNE2	NNW1	NW2	W2	S6	S11	SSW10	S9	S8	SSW9	SSW8	SW7	SW8	WSW6	WNW9	WNW11	NW6	WNW6	WNW6	SW3.2	WNW11
2-Apr	W5	WSW4	SW5	SSW6	SSW7	SSW8	SW7	SW6	W9	WNW10	W11	WNW13	W12	W12	NW11	NW9	N9	NNW6	NNE8	N9	N6	N5	NW3	NW3	WNW5.0	WNW13
3-Apr	NNE4	N6	N3	W2	WNW5	WNW6	WNW4	WNW7	NW8	NW9	NNW10	N10	NNE12	NNE11	NNE13	NNE11	NNE10	NW8	N7	NNE4	N1	SE0	S2	S2	N5.0	NNE13
4-Apr	SSW5	SSW8	SSW8	SSW8	SSW8	SSW8	SSW9	SSW8	SSW7	SW6	SW2	NE3	N3	NE6	NNE5	NW6	N6	NNE7	ENE4	ESE4	SSE2	ESE1	SSE2	SSW1	SSW1.8	SSW9
5-Apr	S3	S4	S4	SSW6	SSW8	SSW11	SSW9	SSW7	S6	SSW6	WSW2	NE4	NE6	ESE2	ENE5	NE7	NE7	NE10	NE7	ENE6	ENE5	ENE6	NE3	N2	ESE1.9	SSW11
6-Apr	N3	NE4	NNE4	NNE4	NE5	N3	N3	NNW3	NE6	NE6	ESE9	ESE10	ESE11	SE12	SE10	SE12	SE12	SE11	SE11	SE9	SSE7	SSE5	SSE7	SSE6	ESE5.1	SE12
7-Apr	SSE6	S7	SSE7	SSE5	SSE5	SE3	SE3	SE5	SE7	SSE9	SSE11	S14	SSE16	S16	SSE13	SSE15	S14	S11	S10	S8	S8	S8	S9	SSE7	SSE8.8	SSE16
8-Apr	SSE6	ESE2	SE5	SSE3	SSE3	ESE4	E2	SE4	W4	NE5	NE8	NNE5	NW3	WNW4	NNW3	NNE6	NE4	NNE3	ESE2	SSW1	S2	SSE2	S3	SSW4	E0.9	NE8
9-Apr	SSW5	SSW6	SSW4	SSW5	SSW6	SSW5	SSW5	SSW6	SSW7	SSW6	W6	WNW7	NW9	WNW10	W10	NW7	WNW8	W9	W6	WSW5	SW5	SW6	SSW7	S9	WSW4.8	WNW10
10-Apr	SSW7	SSW7	SSW9	SSW10	SSW10	SSW9	SSW9	SSW7	SW7	SW8	WSW11	W13	WSW12	WSW11	WSW11	SW10	SW10	SSW10	S8	SE5	SE5	ESE5	ESE4	NNW1	SSW6.8	W13
11-Apr	NNE2	ENE8	NNW1	NNE4	N3	NNE1	E0	WNW1	ESE3	WSW3	WSW2	WNW12	WNW12	W14	W16	W15	W16	W18	W14	W9	W7	W9	WSW9	W11	W6.4	W18
12-Apr	SSW6	SSW9	SSW8	SW9	SW9	SW9	SW9	SW8	W11	W12	W12	W16	W13	WNW11	WNW10	WNW10	WNW9	WNW8	WNW7	NW4	N5	E1	SSE2	SW3	W6.5	W16
13-Apr	SSW4	SSW5	S4	SSW4	SW5	WSW6	W6	W7	WNW9	NW10	NW11	WNW11	WNW12	WNW12	NW9	NW10	NW8	N7	N6	N3	NE1	E2	S2	S3	WNW4.5	WNW12
14-Apr	SSW3	SSW5	S4	SSW6	SSW6	SSW5	SSW9	SSW7	SSW8	S5	SSW9	SSW11	SW10	SSW11	SW10	SW12	SW13	SW11	S7	SSE5	SE7	SSE6	S6	S7	SSW7.1	SW13
15-Apr	S5	SSW6	SSW7	SSW9	SSW8	SSW5	SW7	SSW8	WSW11	W17	W20	W21	W19	W18	W17	W19	W20	W18	W14	W10	WSW9	W10	W8	WSW8	WSW11.1	W21
16-Apr	W9	W14	W14	W12	W10	W9	WNW10	WNW8	WNW9	WNW11	NW11	NW10	NW9	NW9	NNW7	N7	NNW6	NNW6	N6	NNW5	N6	UO	UO	UO	WNW7.9	W14
17-Apr	UO	UO	N6	N6	N6	N7	N8	N8	N9	N10	N9	N9	N9	N11	N9	N8	N7	NNE6	NNW2	SSE1	ESE3	ESE5	SE6	SSE5	N5.4	N11
18-Apr	SSE6	S6	S6	S6	S6	S7	S8	S10	S11	S11	S13	S15	SSW16	SSW17	SSW18	S19	S18	SSW19	S14	S11	S12	S14	SSW13	SSW11	S12.0	SSW19
19-Apr	SSW12	SSW11	SW11	WSW11	SSW10	SSW8	SW8	W11	W13	WNW15	W15	WNW15	W14	W14	WNW12	W15	W16	W14	WNW9	W7	W6	W5	WSW5	WSW5	W9.5	W16
20-Apr	WSW6	W4	N4	N7	N6	N7	N4	NNE7	NNE9	NNE8	NNE9	N6	N8	NNW6	N7	NW6	NNE7	NNE8	NNE6	NNE5	NE5	E6	ESE8	ESE5	NNE4.8	NNE9
21-Apr	ENE3	NE2	ENE1	NNE0	N1	NNE1	NNE2	N3	E4	E6	ENE6	E7	E8	ENE7	ESE7	ENE8	ENE8	E7	E7	ESE6	ESE7	SE9	SSE9	S9	E4.2	S9
22-Apr	SSW6	SSW6	SSW6	SSE4	SE6	SSE5	S6	SSW8	SW9	SSW8	SSW11	SW12	SW12	SW12	SW10	WSW6	SW11	SSW17	SW12	NNE2	SE5	SE6	SSE4	S3	SSW6.5	SSW17
23-Apr	SSW6	SSW8	SSW6	SSW5	SSW6	SSW5	SSW5	SW4	NNE7	NNE5	NNE3	SE5	NNE4	SSE4	SW10	N5	WNW6	N8	NNE9	NE3	NNW2	NNE3	N3	NNE3	W0.3	SW10
24-Apr	NNE3	E0	SE1	S2	S3	S5	SSW4	N3	NNE4	ENE4	ENE8	E2	NNE7	WNW4	SW6	WNW3	SW3	N2	NNE6	ENE3	E6	E6	E3	SSE0	ENE1.0	ENE8
25-Apr	SE1	SE2	S2	SSW2	SE2	SSW2	WSW2	WSW4	WSW6	SSW16	S19	SSW20	SSW21	SSW21	SSW19	SSW19	SSW21	SSW17	SSW16	S9	S10	S8	SSW10	S11	SSW10.4	SSW21
26-Apr	SSW10	SSW9	SSW7	SSW7	S7	S7	SSW9	SSW10	SW8	SW4	SW5	SW6	NW6	WNW9	NNW9	N9	N14	NNE13	N13	N11	N12	N12	N11	N11	NW2.3	N14
27-Apr	N9	N5	NNE4	NNW1	SW2	NNW3	NNE9	N11	N10	NNE12	NNE12	N9	NNW9	NNW8	N9	NNE10	NNE10	NNE11	NNE10	NE6	ENE5	E3	SSW2	SSW2	NNE6.3	NNE12
28-Apr	ESE1	NNE1	WSW0	SSW2	S2	SW2	SW2	SW5	SW6	SSW7	S10	SSW10	S12	SSW16	SSW14	SSW14	SSW14	SSW13	S9	SSE7	SSW13	SSW10	SSW7	S4	SSW7.2	SSW16
29-Apr	SSW7	SSW5	SSW5	SSW9	SSW9	SSW9	SW10	WSW10	W13	W13	W16	WNW16	WNW18	WNW16	WNW14	NW11	NNW9	WNW7	W7	SW3	SSW5	SSW4	SSW7	SSW7	WSW7.3	WNW18
30-Apr	S4	S7	SSW9	SSW8	SSW8	SSW8	SW8	SW7	SW8	SW9	SW12	SW14	NNW7	N5	NW7	NE5	NNE7	NNE6	N2	N4	WNW2	N6	N8	N7	WSW2.5	SW14
SSW2.8SSW3.2SSW3.1SSW3.5SSW3.6SSW3.3 SW3.5 SW3.5WSW3.4WSW3.3WSW3.4WSW4.7 W4.3 W4.7 W4.4 W3.5 W3.1 W2.6 W1.1WSW0.1 S1.2 SSE1.7 S2.4SSW2.6																									Diurnal Average	
SSW12 W14 W14 W12 W10 SSW11 SW10 W11 W13 W17 W20 W21 SSW21 SSW21 SSW19 SSW19 SSW21 SSW19 SSW16 S11 SSW13 S14 SSW13 SSW11																									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
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Janvier - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	228	31.89	31.89
6 - 11	381	53.29	85.17
12 - 19	99	13.85	99.02
20 - 28	7	0.98	100.00
29 - 38	0	0.00	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
Janvier - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	23	25	12	8	11	14	16	17	20	30	14	10	6	7	5	10	228
6 - 11	45	26	10	8	8	7	10	13	38	86	34	15	22	28	20	11	381
12 - 19	4	5	0	0	0	0	3	3	12	18	8	1	33	12	0	0	99
20 - 28	0	0	0	0	0	0	0	0	0	4	0	0	3	0	0	0	7
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	72	56	22	16	19	21	29	33	70	138	56	26	64	47	25	21	715

Total Number of Valid Hours: 715

Total Number of Hours: 720



Wind Speed 10m (WS10) - km/h





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 11:00																	Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3								
Minimum Value: 0 km/h on Apr 8 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	2	3	4	5	3	3	3	5
2-Apr	1	1	1	2	2	2	2	2	3	4	4	4	4	5	5	4	4	3	3	3	2	2	2	2	5
3-Apr	2	2	2	2	3	2	1	3	4	4	5	5	4	4	4	4	4	5	3	1	1	1	1	1	5
4-Apr	1	2	1	1	1	1	2	2	2	2	2	2	3	2	3	3	3	2	1	1	1	1	1	1	3
5-Apr	1	1	1	1	2	2	2	2	1	2	1	2	2	2	3	3	2	3	2	2	2	2	1	1	3
6-Apr	1	2	1	2	2	1	1	1	2	2	3	3	4	4	3	4	4	4	3	3	2	2	3	2	4
7-Apr	2	2	2	2	1	1	1	2	3	3	4	5	6	5	4	5	4	4	3	3	3	2	3	2	6
8-Apr	2	1	1	2	1	1	2	2	2	3	2	2	2	1	2	2	1	2	1	1	1	0	1	1	3
9-Apr	2	1	1	1	1	1	1	1	2	2	3	3	4	5	5	3	3	4	3	1	1	1	1	1	5
10-Apr	2	2	1	2	2	1	2	2	3	3	4	5	5	5	5	4	4	4	3	1	1	2	2	1	5
11-Apr	1	3	3	1	1	2	1	2	3	2	3	5	5	5	6	6	7	7	6	3	2	3	3	5	7
12-Apr	1	2	2	3	3	3	3	3	4	4	4	6	5	5	4	4	4	4	4	2	2	1	1	1	6
13-Apr	1	1	1	1	1	2	2	3	3	4	5	5	5	5	5	5	5	5	2	2	1	0	0	1	5
14-Apr	1	1	1	2	1	2	2	2	2	2	4	5	4	5	4	4	5	4	3	1	1	2	1	2	5
15-Apr	1	2	2	2	2	2	2	2	6	7	8	8	7	7	7	8	7	7	5	4	3	3	3	3	8
16-Apr	4	7	5	4	3	3	3	3	4	5	5	5	5	4	4	3	3	3	3	3	UO	UO	UO		7
17-Apr	UO	UO	3	3	3	3	4	4	4	4	4	4	4	4	4	4	3	3	1	1	1	2	2	2	4
18-Apr	2	2	2	2	2	2	2	3	4	4	4	4	5	6	6	6	6	6	4	3	4	4	4	3	6
19-Apr	3	3	3	5	3	3	3	5	5	5	6	5	5	6	5	6	6	5	4	3	3	3	1	1	6
20-Apr	1	2	2	2	2	3	2	2	4	3	4	3	4	4	4	3	3	2	2	2	1	2	2	2	4
21-Apr	1	1	1	1	1	1	2	1	2	2	3	3	3	4	3	3	2	3	2	2	2	3	3	3	4
22-Apr	4	1	2	1	1	1	2	3	3	2	4	5	5	4	5	4	4	6	5	2	1	1	1	1	6
23-Apr	1	2	1	2	1	2	1	2	3	3	3	2	4	3	4	3	3	3	3	1	1	1	1	2	4
24-Apr	2	1	1	1	1	1	2	1	2	2	3	3	4	3	3	2	3	3	1	1	1	1	1	1	4
25-Apr	1	1	1	0	1	1	1	1	2	6	7	7	7	7	7	7	6	6	5	3	3	2	3	3	7
26-Apr	3	3	1	2	2	2	3	3	3	2	3	2	4	4	4	4	5	5	5	5	4	4	4	4	5
27-Apr	3	2	1	1	1	2	4	3	4	4	4	4	4	4	4	4	4	3	3	2	2	1	1	1	4
28-Apr	1	1	1	1	1	1	1	2	2	2	4	5	6	6	6	6	5	5	3	2	4	4	2	2	6
29-Apr	3	3	1	3	3	2	3	4	5	5	6	6	7	7	6	5	5	4	3	1	1	1	2	2	7
30-Apr	2	2	1	2	2	2	2	2	2	3	4	5	4	3	3	3	3	3	1	2	1	3	3	3	5
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

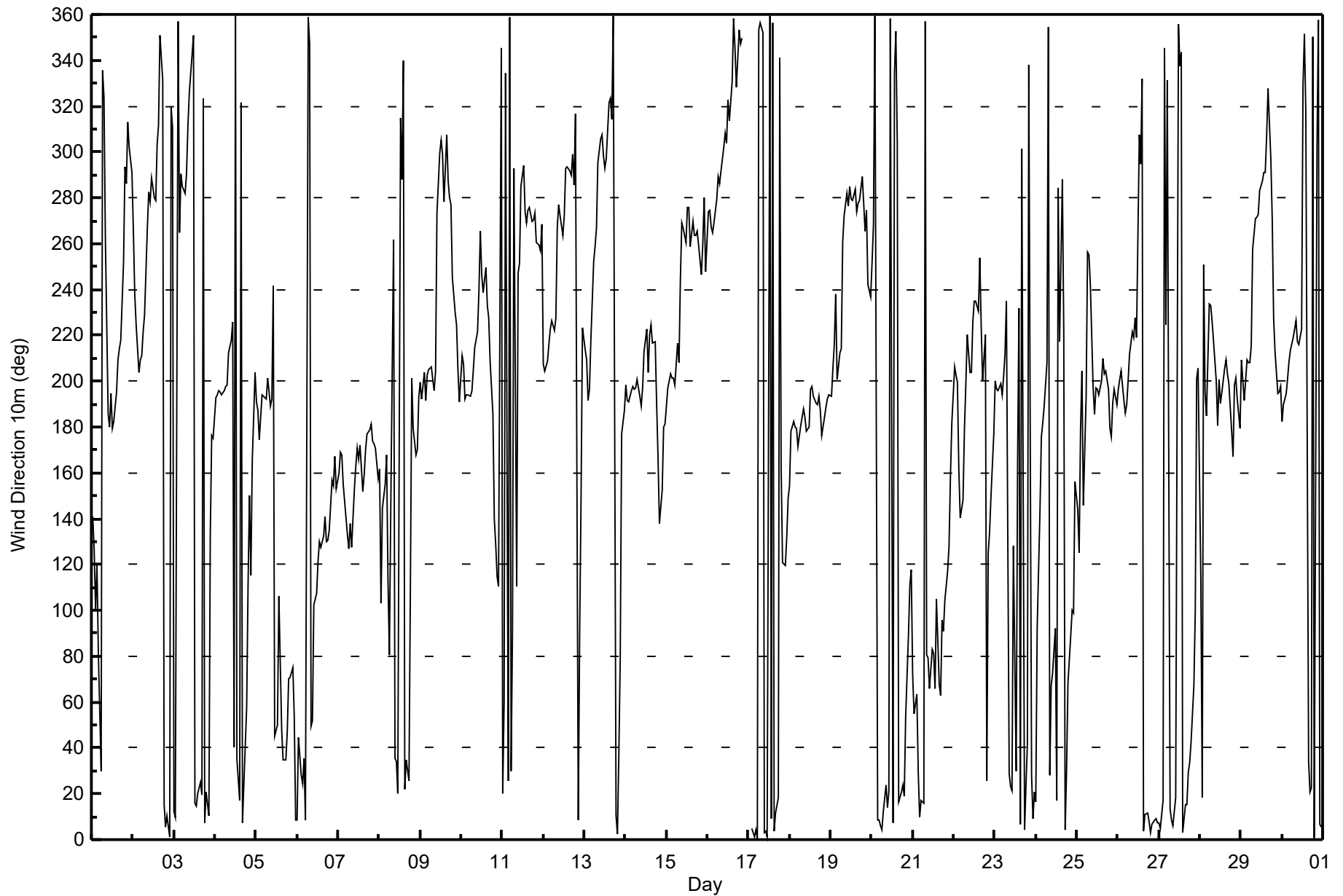
Janvier - April 2025

Direction of Maximum Speed: 194 deg on Apr 25 14:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 186.7 deg on Apr 18																				Hours of Data:		715			
Direction of Minimum Speed: 251 deg on Apr 28 03:00										Direction of Minimum Daily Speed Average: 0.3 deg on Apr 23										Hours of Missing Data:		5			
Monthly Average Direction: 236.1 deg																				Percent Operational Time:		99.3			
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	141	126	101	120	81	30	336	324	262	185	180	195	180	182	195	210	214	218	252	293	286	313	302	291	222.4
2-Apr	266	238	224	204	209	211	221	229	267	283	278	288	280	279	304	312	351	332	15	6	11	1	320	310	287.5
3-Apr	12	10	357	265	291	285	282	291	311	326	335	351	16	15	20	25	19	324	7	21	11	134	176	175	349.7
4-Apr	193	194	196	195	194	196	197	198	213	218	226	40	360	36	17	322	7	24	58	112	150	115	165	204	191.6
5-Apr	191	188	175	194	194	193	192	201	189	192	242	45	50	106	78	48	35	35	47	70	71	75	54	8	123.6
6-Apr	8	44	28	24	35	9	359	347	49	52	102	108	122	130	128	132	141	130	131	135	157	154	167	153	114.4
7-Apr	160	169	168	155	148	133	127	138	127	153	163	171	166	172	152	160	170	177	179	182	174	173	171	157	163.8
8-Apr	162	103	145	155	168	113	80	145	262	35	34	20	315	288	340	22	35	26	109	202	179	168	170	193	90.4
9-Apr	200	192	204	192	202	205	206	201	196	205	273	300	305	299	278	308	288	280	277	245	230	225	205	191	243.3
10-Apr	211	208	192	194	194	193	196	205	215	221	239	265	246	238	250	233	227	209	186	139	129	115	110	345	213.1
11-Apr	20	60	334	26	359	30	92	293	110	247	251	285	294	274	269	275	276	269	270	274	261	259	257	268	277.0
12-Apr	208	204	208	216	222	226	222	228	267	277	272	263	272	293	293	292	290	299	286	317	8	91	150	223	260.0
13-Apr	213	209	191	197	218	252	259	266	295	306	307	298	293	297	322	323	314	359	10	2	37	79	177	187	293.2
14-Apr	198	192	191	196	198	196	197	201	193	189	197	213	223	204	220	224	217	217	190	167	138	153	180	182	199.7
15-Apr	189	197	203	202	201	198	217	208	245	269	267	260	276	276	259	270	264	263	265	259	246	260	280	248	254.0
16-Apr	274	274	267	265	269	279	290	286	292	302	308	304	323	314	330	358	345	328	353	347	350	UO	UO	UO	300.0
17-Apr	UO	UO	5	1	4	1	353	356	352	3	4	1	360	9	356	3	11	19	341	162	121	120	132	149	8.9
18-Apr	154	178	183	180	180	171	181	184	188	184	178	180	197	197	193	190	190	193	187	177	185	189	193	194	186.7
19-Apr	193	205	216	238	201	212	214	261	272	282	276	285	279	279	284	274	278	279	289	278	265	275	243	237	259.7
20-Apr	252	268	359	9	9	6	4	12	24	14	20	358	7	334	353	304	17	21	24	19	54	89	111	118	14.0
21-Apr	72	55	63	30	10	17	16	357	80	80	66	83	81	66	105	68	63	96	91	104	117	128	158	182	92.5
22-Apr	206	203	200	161	140	148	179	198	220	204	204	226	235	235	230	254	224	200	220	26	125	135	150	177	205.6
23-Apr	200	196	196	199	194	202	211	235	29	23	21	128	30	165	232	7	301	4	24	42	338	28	9	20	272.4
24-Apr	17	92	144	175	182	189	208	354	28	67	73	92	17	285	217	288	222	4	30	68	89	100	99	156	71.8
25-Apr	144	125	179	205	146	193	256	255	242	197	185	197	196	194	200	210	203	204	197	180	176	190	197	190	197.2
26-Apr	197	201	204	192	186	190	200	212	221	219	227	219	308	294	332	4	11	12	8	3	7	9	9	7	317.2
27-Apr	7	5	17	345	224	331	13	8	6	12	18	356	337	344	3	15	15	29	33	43	67	99	201	206	12.1
28-Apr	112	19	251	195	185	234	233	226	218	200	181	201	191	195	206	209	203	199	178	167	199	201	192	179	197.9
29-Apr	209	200	192	210	208	208	216	257	271	271	273	283	287	291	291	307	327	297	271	228	213	195	195	197	258.7
30-Apr	182	190	195	201	208	213	219	223	227	217	216	223	329	351	317	34	21	22	351	0	302	357	7	6	245.8
202.0 200.2 203.1 206.0 203.1 210.2 219.1 236.2 254.9 256.9 249.9 255.1 271.4 259.5 263.2 277.2 271.9 267.7 272.7 248.2 174.3 164.0 184.5 201.9																									
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
Janvier - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 102 deg on Apr 24 12:00																			Hours in Service: 720						
Minimum Value: 5 deg on Apr 14 02:00																			Hours of Data: 715						
Percentiles: P ₁ = 9 P ₁₀ = 16 Q ₁ = 21 Median = 27 Q ₃ = 40 P ₉₀ = 56 P ₉₉ = 92																			Hours of Missing Data: 5						
																			Hours of Calibration: 0						
																			Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	34	23	27	76	46	30	38	54	62	30	22	22	26	28	22	24	23	23	51	33	31	50	47	29	76
2-Apr	21	22	18	15	17	16	19	25	22	27	29	25	28	28	44	49	48	58	19	23	29	33	59	50	59
3-Apr	47	24	49	59	27	22	28	27	50	48	49	47	26	31	21	18	35	52	36	17	48	86	16	27	86
4-Apr	16	9	10	9	9	10	11	17	28	31	98	73	93	52	66	58	43	16	28	20	30	69	26	58	98
5-Apr	14	14	21	11	10	9	13	20	12	19	93	37	31	90	74	25	21	25	16	19	22	22	53	72	93
6-Apr	22	27	17	32	27	26	26	29	30	27	34	27	33	30	33	31	30	23	20	22	24	31	25	23	34
7-Apr	23	23	20	21	20	21	23	30	28	31	31	25	27	24	32	32	25	20	18	23	19	18	19	23	32
8-Apr	24	54	27	66	36	14	89	56	59	72	17	46	52	29	51	25	31	35	50	45	22	29	22	22	89
9-Apr	32	9	16	10	10	17	15	19	22	31	46	43	45	38	35	46	33	34	25	18	19	18	16	8	46
10-Apr	19	15	8	9	10	9	12	20	27	29	31	31	33	35	32	41	30	29	22	14	9	14	41	67	67
11-Apr	61	31	77	31	34	88	89	94	74	82	99	32	40	23	25	27	26	23	21	18	20	19	25	21	99
12-Apr	21	16	17	18	20	20	21	22	25	27	25	26	28	36	36	27	31	39	28	55	25	77	41	30	77
13-Apr	24	19	24	24	18	18	21	27	33	40	45	49	39	39	53	48	55	46	22	46	55	37	38	12	55
14-Apr	15	5	7	11	9	13	14	21	19	40	44	40	39	45	40	30	26	30	21	21	15	25	19	17	45
15-Apr	10	10	13	17	17	37	31	19	39	26	26	26	26	27	29	25	25	25	22	21	21	22	21	22	39
16-Apr	24	24	21	20	19	20	25	23	31	33	44	47	53	49	53	40	50	56	45	49	50	UO	UO	UO	56
17-Apr	UO	UO	27	33	33	34	43	43	43	35	34	37	45	30	41	36	37	36	70	68	44	15	17	23	70
18-Apr	25	18	19	18	19	19	18	17	21	26	26	27	25	24	22	21	21	19	18	19	17	17	16	17	27
19-Apr	15	18	22	32	17	20	20	24	23	26	28	27	25	26	30	27	23	32	43	26	22	21	20	21	43
20-Apr	15	53	52	27	28	29	36	24	33	43	34	53	40	63	49	61	36	24	19	14	21	20	18	31	63
21-Apr	36	59	64	87	43	39	46	58	64	42	49	48	50	53	58	39	34	39	24	18	19	20	25	16	87
22-Apr	42	19	26	35	17	19	18	21	27	28	24	30	28	34	47	57	36	22	29	67	12	12	20	20	67
23-Apr	17	14	13	25	14	20	22	49	30	61	94	53	76	78	55	57	52	42	20	25	45	23	39	53	94
24-Apr	42	84	74	33	23	9	40	57	59	62	33	102	50	80	52	81	74	81	19	24	13	16	28	96	102
25-Apr	40	54	37	18	23	33	19	23	29	25	22	25	28	24	25	29	23	23	22	21	20	21	15	14	54
26-Apr	14	13	10	13	15	14	19	22	39	59	58	48	74	42	46	44	27	26	30	40	28	25	26	28	74
27-Apr	27	30	19	60	39	62	25	26	35	24	25	44	49	49	49	35	35	19	22	21	17	42	29	37	62
28-Apr	73	74	84	30	45	15	37	30	34	43	40	45	48	27	39	31	29	26	20	22	23	24	28	46	84
29-Apr	31	31	18	17	16	17	21	30	26	27	24	27	26	33	29	47	52	46	18	42	32	15	16	12	52
30-Apr	16	12	11	15	17	20	20	25	24	25	25	30	55	71	49	72	44	31	35	36	63	43	27	29	72
73 84 84 87 46 88 89 94 74 82 99 102 93 90 74 81 74 81 70 68 63 86 59 96																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Janvier - April 2025

Maximum Speed: 27 km/h on Apr 15 11:00										Maximum Daily Speed Average: 15.0 km/h on Apr 15										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 28 03:00										Minimum Daily Speed Average: 0.8 km/h on Apr 8										Hours of Data: 711						
Maximum Diurnal Speed Average: 6.5 km/h at hour 14										Minimum Diurnal Speed Average: 0.7 km/h at hour 20										Hours of Missing Data: 9						
Monthly Average Velocity: 3.6 km/h 251.8 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 7 Median = 9 Q ₃ = 13 P ₉₀ = 17 P ₉₉ = 25										Percent Operational Time: 98.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SSE5	SE6	SE5	SE4	ESE5	E4	ENE3	N1	WSW2	S8	S12	SSW12	S11	S9	SSW11	SW10	SW9	SW10	W8	NW13	WNW17	NW10	NW10	NW10	SW3.6	WNW17
2-Apr	WNW8	WSW6	WSW7	SW9	SW10	SW11	SW9	WSW8	W11	WNW13	WNW15	WNW18	WNW17	WNW16	NW15	NW13	NNW12	NNW10	NNE11	N13	N7	N8	NNW6	NNW6	WNW7.7	WNW18
3-Apr	N7	NNE9	N5	WNW4	NW9	WNW9	NW6	NW10	NW12	NNW14	NNW14	NNW15	NNE13	NNE13	NNE15	NNE13	NNE11	NNW12	N10	NNE6	N4	NNW2	WSW3	SW4	N7.6	NNE15
4-Apr	SSW7	SSW10	SSW10	SSW10	SSW11	SSW10	SSW11	SSW10	SW8	SW7	SW3	NE3	N4	NE6	NNE6	NW8	N7	NNE8	ENE5	ESE6	SSE2	ENE1	S2	SSW1	SW2.3	SSW11
5-Apr	SSW5	SSW7	SSW7	SSW9	SSW11	SSW13	SSW12	SW9	SSW7	SSW7	W2	NE5	ENE7	SE2	ENE7	ENE8	NE8	NE12	ENE9	ENE8	E8	E8	E4	NNE3	SE2.3	SSW13
6-Apr	NNE5	ENE7	NE6	NE7	ENE6	NNE5	NNE5	NNE4	ENE7	ENE7	ESE11	ESE12	SE13	SE14	SE12	SE14	SE14	SE14	SE14	SE12	SSE10	SSE8	S10	SSE8	ESE7.0	SSE14
7-Apr	SSE8	S9	S9	SSE7	SSE7	SE5	SE5	SE6	SE8	SSE11	SSE13	S16	SSE19	S19	SSE15	SSE18	S17	S13	S12	S11	S11	S11	S12	SSE9	SSE11.1	S19
8-Apr	SSE8	ESE2	SSE7	SSE5	S4	SE5	ESE3	SSE5	W5	NE5	NE9	NNE6	NW6	WNW6	NNW6	NNE7	NE4	NE4	ESE3	SW2	SSW5	SSW4	SSW6	SSW6	SE0.8	NE9
9-Apr	SSW8	SSW9	SW7	SSW8	SW9	SW8	SW8	SW7	SSW7	SW6	WNW8	NW10	NW13	NW15	WNW14	NW11	WNW11	WNW13	WNW9	W8	WSW7	WSW9	WSW9	SSW11	W7.0	NW15
10-Apr	SW10	SW10	SSW11	SSW12	SSW12	SSW12	SSW11	SW8	SW8	SW10	WSW13	W17	WSW16	WSW14	WSW14	WSW12	WSW13	SW13	SSW10	SSE7	SE8	SE8	ESE7	ENE2	SW8.6	W17
11-Apr	NNE4	ENE11	NNW2	NE6	N5	N3	NW1	W2	ESE4	WSW3	W3	WNW16	NW17	WNW19	W21	WNW21	WNW22	W24	W19	WNW12	W10	W13	W12	W14	WNW8.8	W24
12-Apr	SW9	SW11	SW11	SW12	SW13	SW13	SW12	SW10	W14	WNW16	W15	W20	WNW18	NW15	NW14	NW14	NW13	NW12	WNW11	NNW7	N8	NE2	WSW3	W5	W9.3	W20
13-Apr	WSW6	SW8	SSW6	SW6	SW8	W8	W9	W9	NW12	NW14	NW17	NW17	NW18	NW17	NNW15	NNW15	NW13	N10	NNE8	N5	N4	N4	NW1	SSW3	NW7.4	NW18
14-Apr	SSW4	SSW7	SSW6	SSW8	SSW9	SSW8	SSW11	SW8	SSW9	SSW6	SSW10	SW13	SW12	SW13	SW12	SW15	SW16	SW13	SSW9	S8	SSE9	SSE8	S8	S9	SSW9.1	SW16
15-Apr	SSW8	SSW9	SSW10	SW12	SW10	SSW8	SW9	SW10	WSW14	W24	W27	W26	WNW25	WNW24	W23	W26	W27	W24	W18	W14	WSW13	W13	WNW13	WSW12	W15.0	W27
16-Apr	WNW13	WNW19	W18	W15	W14	WNW13	WNW15	WNW12	NW15	NW17	NW17	NW16	NNW14	NW13	NNW11	N9	NNW9	NNW9	N9	NNW9	NNW10	UO	UO	UO	NW11.9	WNW19
17-Apr	UO	UO	UO	UO	UO	UO	N6	N12	N14	N14	N11	N12	N12	N13	N12	N11	NNE9	NNE7	NNW2	SW1	SE3	SE7	SE8	SSE7	N6.4	N14
18-Apr	SSE8	S8	S8	S9	S8	S10	S10	SSW12	SSW13	SSW14	S15	S18	SSW19	SSW20	SSW22	SSW22	SSW22	SSW23	SSW17	S14	S15	SSW17	SSW16	SSW15	SSW14.7	SSW23
19-Apr	SSW15	SW14	SW14	WSW15	SSW13	SW11	SW12	W15	W18	WNW21	WNW20	WNW21	WNW20	WNW18	WNW17	WNW20	WNW22	WNW19	WNW13	WNW11	W9	WNW9	W7	WSW8	W13.1	WNW22
20-Apr	W8	W7	N7	N8	N8	N8	N6	NNE9	NNE11	NNE10	NNE11	N8	N10	NNW8	N9	NW8	NNE8	NNE9	NNE8	NNE8	ENE8	E9	ESE10	SE7	NNE6.0	NNE11
21-Apr	E4	NE3	NE3	NW1	NNE3	NNE4	NNE3	N3	E5	E7	ENE7	E8	E9	ENE8	ESE8	E10	ENE9	ESE9	E9	ESE9	SE10	SE12	SSE11	S12	E5.3	SE12
22-Apr	SW8	SW8	SSW9	S7	SSE8	SSE7	S8	SSW10	SW11	SW9	SSW13	SW16	WSW16	WSW16	WSW12	W7	SW14	SSW20	SW15	NNE4	ESE7	SE9	S7	SSW6	SSW8.5	SSW20
23-Apr	SW8	SSW10	SSW8	SSW8	SSW8	SW7	SW6	WSW4	NNE8	NNE6	NNE4	SE6	NNE4	SSE5	WSW12	N7	NW9	N10	NNE10	NE5	N5	NNE5	NNE5	NNE5	WNW0.9	WSW12
24-Apr	NNE6	ENE1	W1	SW3	SSW5	SSW7	SW5	N3	NNE4	ENE4	E9	E2	NNE8	WNW5	SW7	WNW4	SW4	N2	NE8	ENE5	E8	ESE9	ESE6	SE3	E1.2	ESE9
25-Apr	SSE2	SSE3	SSE4	S4	S2	SSW5	SW6	WSW5	WSW7	SSW18	S23	SSW24	SSW25	SSW25	SSW23	SW24	SSW25	SSW21	SSW20	S13	S13	SSW11	SSW13	SSW14	SSW13.3	SSW25
26-Apr	SSW13	SSW12	SSW10	SSW11	SSW11	SSW9	SSW11	SW12	SW10	SW5	SW6	SW6	NW8	NW12	NNW13	N12	N17	NNE18	N17	N17	N15	N16	N14	N14	NW3.8	NNE18
27-Apr	N11	N7	NNE6	NNW4	WNW3	NNW6	NNE12	N13	N12	NNE14	NNE14	N11	NNW12	NNW11	N11	NNE12	NNE12	NE13	NE11	NE8	ENE8	ESE6	SSE3	SSW2	NNE7.9	NNE14
28-Apr	WSW1	NE3	NNE0	SSW4	S3	SW4	SW3	SW6	SW7	SSW7	S12	SSW11	SSW14	SSW18	SW17	SW17	SSW17	SSW16	S11	S10	SSW16	SSW12	SSW9	S5	SSW8.8	SSW18
29-Apr	SW10	SW8	SSW8	SW12	SW12	SW12	SW13	W12	WNW17	W17	WNW22	WNW23	WNW26	NW24	NW20	NW15	NNW13	NW11	W9	WSW5	SW7	SW6	SW9	SW9	W10.5	WNW26
30-Apr	SSW7	SSW9	SSW11	SSW11	SW10	SW11	SW10	SW9	SW10	SW11	SW14	SW17	NNW11	N6	NNW10	NNE6	NNE9	NNE7	N3	N7	NW4	N8	N11	N9	W3.8	SW17
SW3.9SSW4.4 SW4.7 SW5.4 SW5.1 SW4.8WSW4.6 W4.7 W4.6 W4.8 W6.4WNW6.4 W6.5 W6.1WNW5.1WNW4.7WNW3.8WNW1.7 NW0.7SSW1.2 S1.8SSW2.9 SW3.5																								Diurnal Average		
SSW15WNW19 W18WSW15 W14 SSW13WNW15 W15 W18 W24 W27 W26WNW26 SSW25 SSW23 W26 W27 W24 SSW20 N17WNW17 SSW17 SSW16 SSW15																								Diurnal Maximum		
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

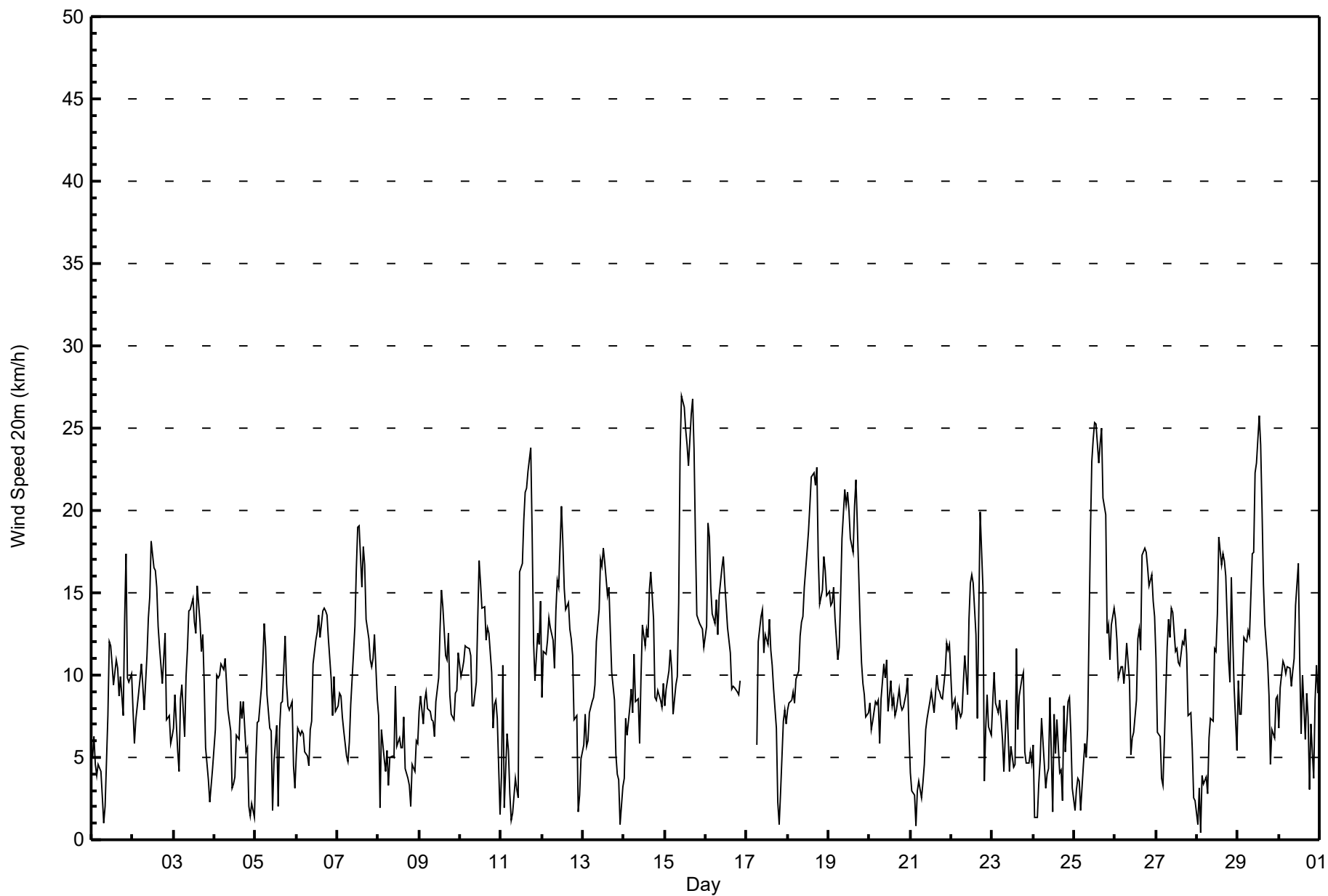
Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 15 11:00																	Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8								
Minimum Value: 0 km/h on Apr 8 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	1	1	1	1	1	1	2	1	3	4	4	3	3	3	3	4	3	5	5	6	4	4	4	6
2-Apr	2	1	1	2	2	2	2	2	3	5	5	5	5	5	5	5	5	4	3	4	3	2	2	2	5
3-Apr	3	2	2	2	3	2	2	3	5	6	5	5	4	4	5	4	4	6	3	2	1	1	1	1	6
4-Apr	1	2	1	1	2	1	2	2	2	2	2	2	3	2	3	3	3	2	1	1	1	2	1	1	3
5-Apr	1	2	2	1	3	2	2	2	1	2	1	2	2	2	3	3	2	3	2	2	2	2	2	1	3
6-Apr	1	2	1	2	2	1	1	1	2	2	4	3	4	4	4	4	4	4	4	3	3	3	3	2	4
7-Apr	2	2	2	2	2	1	1	2	3	4	4	5	6	6	5	6	5	5	3	3	3	2	3	2	6
8-Apr	2	1	2	2	2	2	2	2	2	3	2	2	2	2	2	3	2	2	2	1	0	1	1	1	3
9-Apr	2	1	2	1	1	1	2	2	2	2	4	4	5	5	5	4	4	5	4	1	1	2	2	1	5
10-Apr	2	2	1	2	2	2	2	2	2	3	4	5	6	5	5	4	5	4	3	1	1	2	2	1	6
11-Apr	2	4	3	2	1	2	3	3	3	2	4	6	6	6	6	7	8	7	6	3	3	3	4	6	8
12-Apr	2	2	2	3	3	3	3	3	4	4	4	7	6	5	4	4	4	5	4	3	3	1	1	1	7
13-Apr	2	1	1	1	1	2	2	3	4	5	7	6	7	6	6	7	6	5	2	2	1	1	1	1	7
14-Apr	2	1	1	2	1	2	2	2	2	2	4	5	4	5	5	5	5	4	3	2	2	2	2	2	5
15-Apr	1	2	2	2	2	2	3	3	8	8	9	9	8	8	7	9	8	8	6	4	3	3	4	3	9
16-Apr	5	7	5	4	4	4	4	3	5	6	7	6	6	5	5	3	3	4	4	4	4	UO	UO	UO	7
17-Apr	UO	UO	UO	UO	UO	UO	6	5	5	5	4	5	5	4	4	4	3	3	1	1	2	2	2	2	6
18-Apr	3	2	2	2	2	3	2	3	4	4	5	5	6	6	6	6	7	7	5	4	4	4	4	3	7
19-Apr	4	3	4	6	3	3	3	5	5	6	7	6	6	6	6	6	7	7	5	5	4	3	1	2	7
20-Apr	2	2	3	3	3	3	2	2	4	3	4	3	4	4	4	3	3	3	2	2	2	2	3	3	4
21-Apr	1	2	1	2	2	1	2	1	2	2	3	3	4	4	3	3	2	2	2	2	2	3	3	3	4
22-Apr	4	2	2	1	2	2	2	3	4	2	4	6	5	5	5	5	5	6	5	3	1	1	1	1	6
23-Apr	1	2	1	2	2	2	1	2	3	3	3	2	5	3	5	4	5	3	3	1	1	1	2	2	5
24-Apr	2	2	1	1	1	1	3	1	2	2	2	3	4	3	3	2	3	3	1	1	1	2	2	2	4
25-Apr	1	2	1	1	1	2	1	1	2	7	7	7	8	8	8	8	7	7	6	3	3	3	3	3	8
26-Apr	3	3	1	2	2	2	2	4	4	3	3	2	5	5	5	4	6	6	6	6	5	5	5	5	6
27-Apr	4	2	1	1	2	2	4	4	4	4	4	4	4	4	3	4	4	3	3	2	2	1	1	1	4
28-Apr	1	2	1	2	2	1	1	2	2	3	4	6	6	6	7	6	5	5	3	3	5	4	2	2	7
29-Apr	4	3	1	3	3	3	3	4	5	5	7	7	8	8	7	6	6	5	3	1	1	1	2	2	8
30-Apr	2	2	2	2	2	2	3	2	3	3	4	6	5	3	4	4	4	3	1	2	1	4	4	3	6
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 20m (WS20) - km/h
Janvier - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h
Janvier - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	127	17.86	17.86
6 - 11	337	47.40	65.26
12 - 19	207	29.11	94.37
20 - 28	40	5.63	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 20m (WS20) - km/h
Janvier - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	14	17	10	7	5	5	8	9	6	10	10	8	6	4	3	5	127
6 - 11	31	28	9	15	10	11	11	18	23	64	56	10	12	11	13	15	337
12 - 19	17	11	2	0	0	1	8	5	15	29	27	14	16	25	26	11	207
20 - 28	0	0	0	0	0	0	0	0	1	13	1	0	10	14	1	0	40
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	62	56	21	22	15	17	27	32	45	116	94	32	44	54	43	31	711

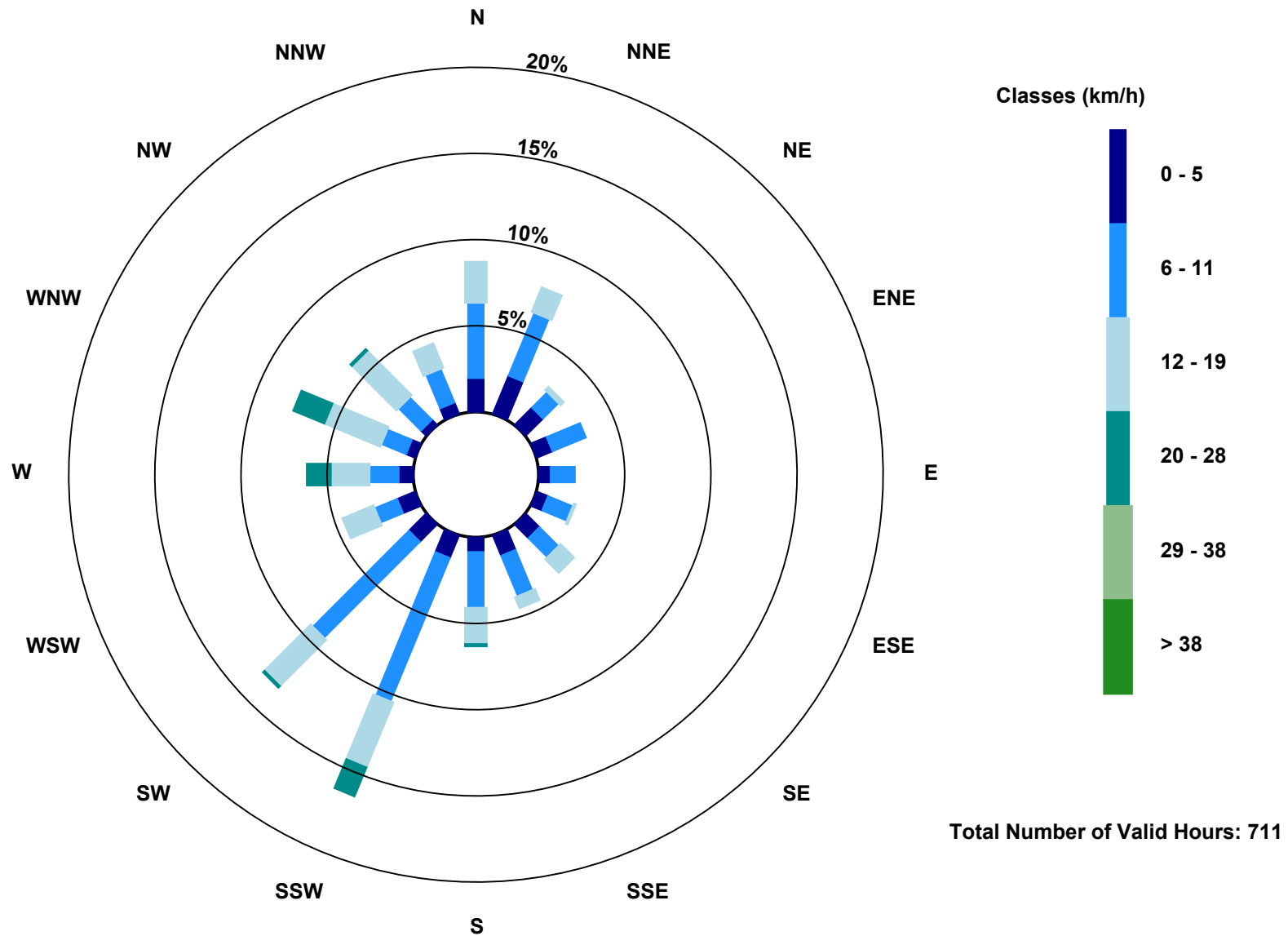
Total Number of Valid Hours: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Janvier - April 2025

Direction of Maximum Speed: 275 deg on Apr 15 11:00 Direction of Maximum Daily Speed Average: 262.8 deg on Apr 15																				Hours in Service: 720					
Direction of Minimum Speed: 31 deg on Apr 28 03:00 Direction of Minimum Daily Speed Average: 0.8 deg on Apr 8																				Hours of Data: 711					
																				Hours of Missing Data: 9					
Monthly Average Direction: 251.8 deg																				Percent Operational Time: 98.8					
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	157	137	132	128	104	91	69	354	248	186	186	200	187	188	203	220	224	227	270	310	302	323	317	310	228.3
2-Apr	282	253	240	218	223	224	232	238	275	296	293	299	293	291	311	321	346	336	21	6	9	360	333	327	298.1
3-Apr	3	16	4	298	309	302	304	305	323	333	338	347	15	14	23	29	21	331	10	25	5	334	249	214	348.8
4-Apr	212	208	213	206	206	209	212	212	224	224	229	46	349	40	19	324	1	32	70	102	158	72	171	207	213.9
5-Apr	206	195	196	207	210	206	206	216	200	204	263	49	63	125	78	59	44	43	59	78	83	88	85	22	136.1
6-Apr	22	66	55	52	59	28	19	16	64	67	111	117	128	138	134	138	146	136	139	141	156	158	170	157	119.4
7-Apr	166	176	174	162	154	142	142	143	134	155	168	173	168	176	158	163	174	180	184	187	181	179	174	162	168.4
8-Apr	163	118	153	162	190	131	105	151	269	41	41	19	317	302	336	27	41	42	117	229	210	205	194	210	130.5
9-Apr	209	211	222	201	217	220	222	219	211	218	285	311	316	311	291	315	303	293	291	264	251	242	237	213	259.6
10-Apr	230	226	211	209	211	208	211	222	226	231	248	275	256	249	256	243	237	218	192	164	137	124	122	66	223.8
11-Apr	29	66	340	41	5	357	318	267	111	257	275	299	307	284	279	286	285	278	277	282	268	267	264	277	288.6
12-Apr	224	219	223	227	232	234	231	236	276	287	281	269	283	307	307	307	305	312	302	330	4	40	244	262	273.2
13-Apr	242	230	213	224	235	261	265	278	309	316	319	310	307	310	331	327	324	357	14	1	3	10	318	211	306.4
14-Apr	201	202	207	210	208	208	209	216	207	197	207	222	231	214	228	233	226	227	200	179	152	158	179	189	208.4
15-Apr	194	205	211	214	215	209	227	222	257	279	275	270	287	287	267	278	271	271	272	266	254	268	295	256	262.8
16-Apr	285	286	274	272	276	289	302	299	308	315	319	321	329	325	333	355	344	333	351	346	346	UO	UO	UO	310.1
17-Apr	UO	UO	UO	UO	UO	UO	350	352	351	357	358	359	355	6	360	4	13	19	347	223	143	128	139	153	6.9
18-Apr	158	182	188	186	188	175	185	192	196	193	185	187	204	205	199	196	195	199	192	179	187	193	200	201	192.5
19-Apr	198	214	224	249	209	223	226	268	278	293	285	296	291	291	295	285	287	290	303	290	274	290	262	248	270.9
20-Apr	265	274	352	5	6	2	4	14	26	19	23	0	4	336	352	314	18	29	32	28	60	94	118	125	14.7
21-Apr	89	52	55	306	21	15	20	1	93	84	75	90	86	77	108	79	74	103	100	114	125	134	160	184	99.3
22-Apr	215	218	206	179	154	154	183	208	230	215	213	231	242	244	240	262	233	209	227	18	123	140	176	198	213.1
23-Apr	215	210	211	213	212	219	226	243	32	31	25	131	26	164	241	7	314	2	30	52	5	18	23	23	301.2
24-Apr	27	67	263	230	201	204	227	2	22	66	80	93	26	289	232	298	232	9	37	67	99	109	114	127	80.5
25-Apr	159	148	160	181	185	204	226	249	245	204	190	203	202	200	207	216	210	211	202	185	181	194	201	194	202.1
26-Apr	204	207	211	197	192	196	205	220	229	233	236	227	313	307	337	358	10	14	5	355	4	11	8	8	316.5
27-Apr	8	6	20	346	294	330	15	11	8	15	21	357	343	347	6	19	21	36	41	51	78	102	166	207	15.1
28-Apr	237	43	31	210	177	221	225	233	229	211	191	213	198	203	214	214	208	206	183	172	204	208	201	183	204.6
29-Apr	218	214	200	221	222	220	226	265	282	279	282	295	299	304	304	317	330	311	281	253	234	220	214	214	271.4
30-Apr	199	202	208	212	222	226	228	233	236	230	227	233	327	349	328	33	24	29	5	355	326	350	4	7	264.3
216.0 212.4 214.2 215.6 215.9 221.1 229.8 250.5 270.4 274.6 267.0 271.0 286.0 276.2 278.3 289.7 284.5 283.2 290.9 319.8 195.3 176.2 200.4 215.3																									
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 20m (WD20) - deg

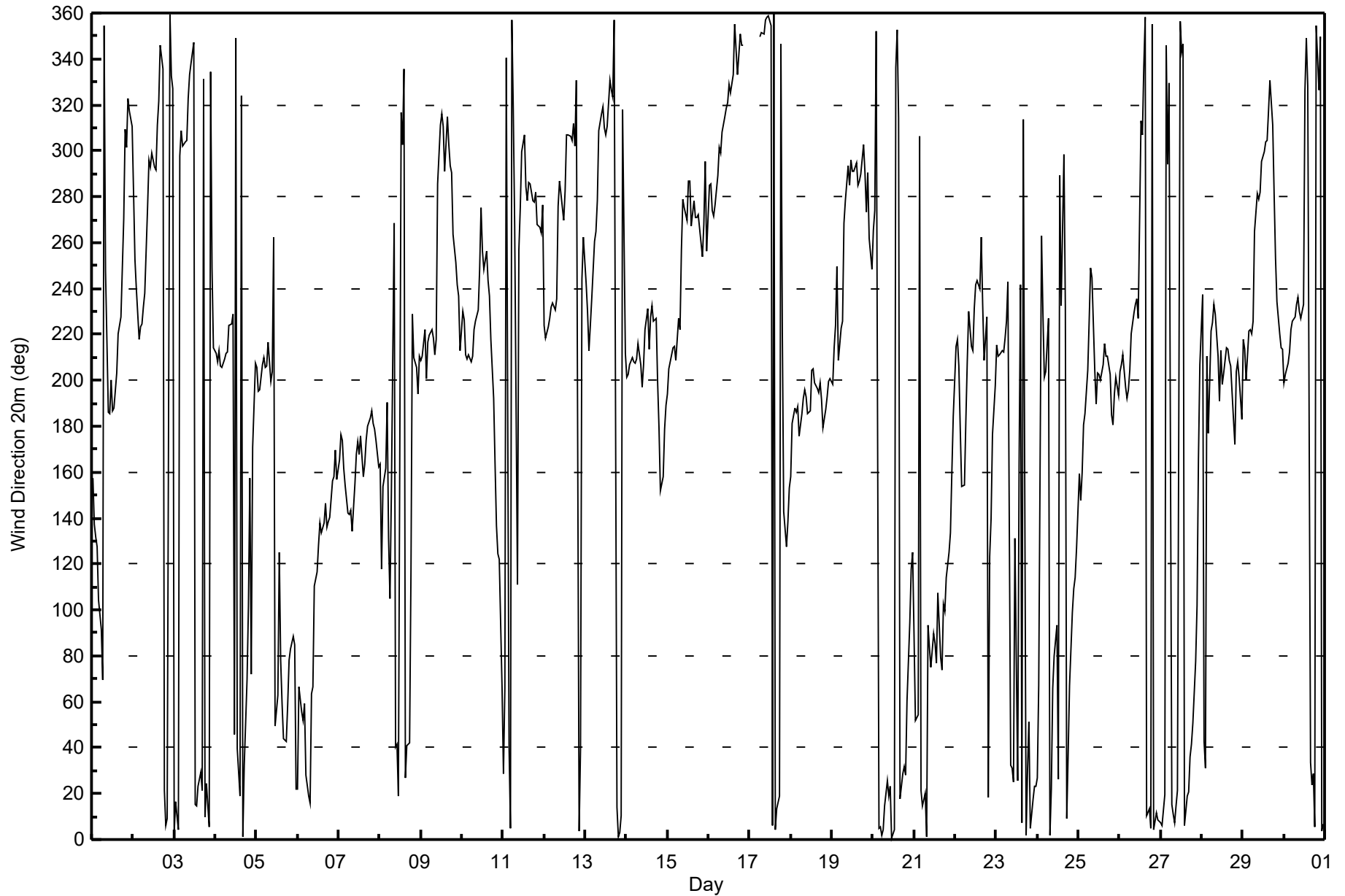
Janvier - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on Apr 11 11:00																		Hours in Service: 720							
Minimum Value: 6 deg on Apr 14 02:00																		Hours of Data: 711							
Percentiles: P ₁ = 8 P ₁₀ = 13 Q ₁ = 17 Median = 22 Q ₃ = 32 P ₉₀ = 45 P ₉₉ = 85																		Hours of Missing Data: 9							
																		Hours of Calibration: 0							
																		Percent Operational Time: 98.8							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	17	14	12	13	11	11	21	71	47	25	20	21	28	29	22	22	21	19	51	25	23	32	28	21	71
2-Apr	19	17	15	14	14	14	15	21	20	22	22	20	23	23	30	38	36	39	17	20	23	25	30	27	39
3-Apr	28	18	22	38	18	17	19	21	38	36	36	36	25	31	20	16	30	38	32	14	28	36	30	21	38
4-Apr	9	7	10	9	8	9	11	16	22	27	81	81	87	44	59	43	37	15	24	13	49	69	43	46	87
5-Apr	11	8	10	9	10	8	12	18	14	21	84	35	30	96	60	24	23	24	14	15	17	17	30	27	96
6-Apr	12	17	13	21	20	16	20	20	27	23	28	22	30	27	30	28	26	20	18	19	21	26	22	20	30
7-Apr	19	18	17	18	17	15	19	25	25	26	28	22	24	23	29	28	24	19	17	22	16	14	17	21	29
8-Apr	22	44	24	34	28	15	55	44	36	69	13	39	36	24	35	22	37	27	31	40	13	15	12	15	69
9-Apr	22	10	14	7	9	11	12	19	22	29	37	36	33	26	29	32	26	31	21	15	16	15	16	10	37
10-Apr	14	13	8	9	11	8	12	19	26	24	29	28	27	31	30	36	25	25	18	13	10	10	13	71	71
11-Apr	55	30	71	16	18	64	61	90	74	85	99	26	34	21	23	22	22	20	18	15	18	17	20	19	99
12-Apr	18	14	16	15	15	16	16	20	23	23	22	22	23	27	26	23	24	28	20	36	20	65	42	20	65
13-Apr	17	15	19	20	14	15	20	23	25	29	32	35	29	30	35	35	39	39	18	25	14	12	73	19	73
14-Apr	26	6	7	9	8	10	12	21	19	40	39	35	36	43	36	27	23	28	16	15	15	20	16	13	43
15-Apr	8	8	12	14	15	29	26	17	36	22	24	23	21	24	26	21	22	22	19	18	16	19	17	19	36
16-Apr	23	20	18	19	17	16	17	18	24	24	29	30	37	36	37	30	35	40	28	33	35	UO	UO	UO	40
17-Apr	UO	UO	UO	UO	UO	UO	18	32	32	27	30	30	34	27	32	30	34	35	64	76	56	13	14	20	76
18-Apr	22	17	16	15	15	17	18	18	19	23	25	23	23	22	22	19	20	17	17	18	16	15	15	14	25
19-Apr	14	16	18	29	15	17	18	21	18	20	22	22	21	22	23	22	19	28	32	21	18	14	20	18	32
20-Apr	14	43	33	24	23	27	30	22	28	34	30	48	36	49	42	56	34	23	17	12	18	16	16	25	56
21-Apr	28	38	47	77	13	11	48	50	57	35	41	43	43	45	50	33	30	32	20	15	15	16	22	15	77
22-Apr	35	17	18	25	15	16	17	22	23	25	20	26	24	28	40	56	31	21	26	60	7	14	15	14	60
23-Apr	14	13	12	18	13	17	18	42	27	47	85	51	78	72	49	47	42	37	18	18	28	16	16	43	85
24-Apr	27	70	57	23	15	8	36	51	54	55	28	99	51	79	49	69	69	80	18	17	11	13	15	24	99
25-Apr	65	31	19	20	49	13	11	16	27	24	21	24	26	23	24	25	23	21	20	18	16	19	13	12	65
26-Apr	12	12	9	11	12	13	16	22	36	56	45	42	65	32	36	35	25	22	26	30	25	21	25	23	65
27-Apr	24	24	16	19	31	34	22	21	28	22	22	36	40	38	42	33	32	18	20	16	15	14	48	42	48
28-Apr	89	34	74	32	27	24	32	25	31	41	38	45	43	24	34	28	26	23	19	18	21	21	24	37	89
29-Apr	24	20	13	16	16	15	17	26	22	21	21	21	21	22	24	36	38	32	16	30	17	13	12	12	38
30-Apr	11	10	10	14	15	17	16	21	20	21	21	27	45	62	42	68	48	25	27	24	29	32	22	23	68
89 70 74 77 49 64 61 90 74 85 99 99 87 96 60 69 69 80 64 76 56 69 73 71																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 20m (WD20) - deg
Janvier - April 2025





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS23
FORT HILLS
APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
APRIL 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	-	-	19.1	0	3.5	0
TRS(ppb) Average	685	35	35	100	2.8	0	2.7	0	0.9	0
THC(ppm) Average	687	33	33	100	-	-	8	-	3.2	-
NMHC(ppm) Average	687	33	33	100	-	-	4.257	-	0.555	-
CH4(ppm) Average	687	33	33	100	-	-	4.2	-	2.6	-
NO2 (ppb) Average	685	35	35	100	-	-	47.6	0	25.2	-
NO (ppb) Average	685	35	35	100	-	-	179.2	-	33.4	-
NOX (ppb) Average	685	35	35	100	-	-	211.2	-	56.6	-
PM2.5 (ug/m3) Average	719	1	1	100	-	-	115.5	1	18.7	0
Temperature 2 m (C) Average	720	0	0	100	-	-	20.9	-	12.6	-
Relative Humidity (%) Average	720	0	0	100	-	-	99.4	-	92.2	-
Wind Speed 10 m (km/h) Average	715	0	5	99.31	-	-	38	-	23	-
Wind Direction 10 m (deg) Average	715	0	5	99.31	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.66	1.7	-	0	0	0	0.1	0.4	1.7	19.1
TRS (ppb) Average	685	0.58	0.2	-	0.3	0.4	0.4	0.5	0.6	0.9	2.7
THC (ppm) Average	687	2.34	0.5	-	2	2	2	2.1	2.5	2.9	8
NMHC(ppm) Average	687	0.147	0.29	-	0	0	0	0	0.2	0.5	4.257
CH4(ppm) Average	687	2.2	0.3	-	2	2	2	2.1	2.2	2.5	4.2
NO2 (ppb) Average	685	10.85	11	-	0.1	0.6	2.1	6.5	17.4	27.9	47.6
NO (ppb) Average	685	7.14	18.1	-	0	0	0.1	1	4.9	20.1	179.2
NOX (ppb) Average	685	17.99	26.3	-	0.1	0.6	2.7	8.3	22.1	47.1	211.2
PM2.5 (ug/m3) Average	719	6.78	8.1	-	0.2	1.9	2.9	4.5	7.7	13.2	115.5
Temperature 2 m (C) Average	720	3.88	6.1	-	-11.9	-3.7	-0.1	3.8	8.2	12	20.9
Relative Humidity (%) Average	720	59.99	20.6	-	17.2	32.3	43.2	60.3	74.2	88.9	99.4
Wind Speed 10 m (km/h) Average	715	12.3	7	-	1	4	7	11	17	22	38
Wind Direction 10 m (deg) Average	715	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
APRIL 2025

OPERATIONAL NOTES

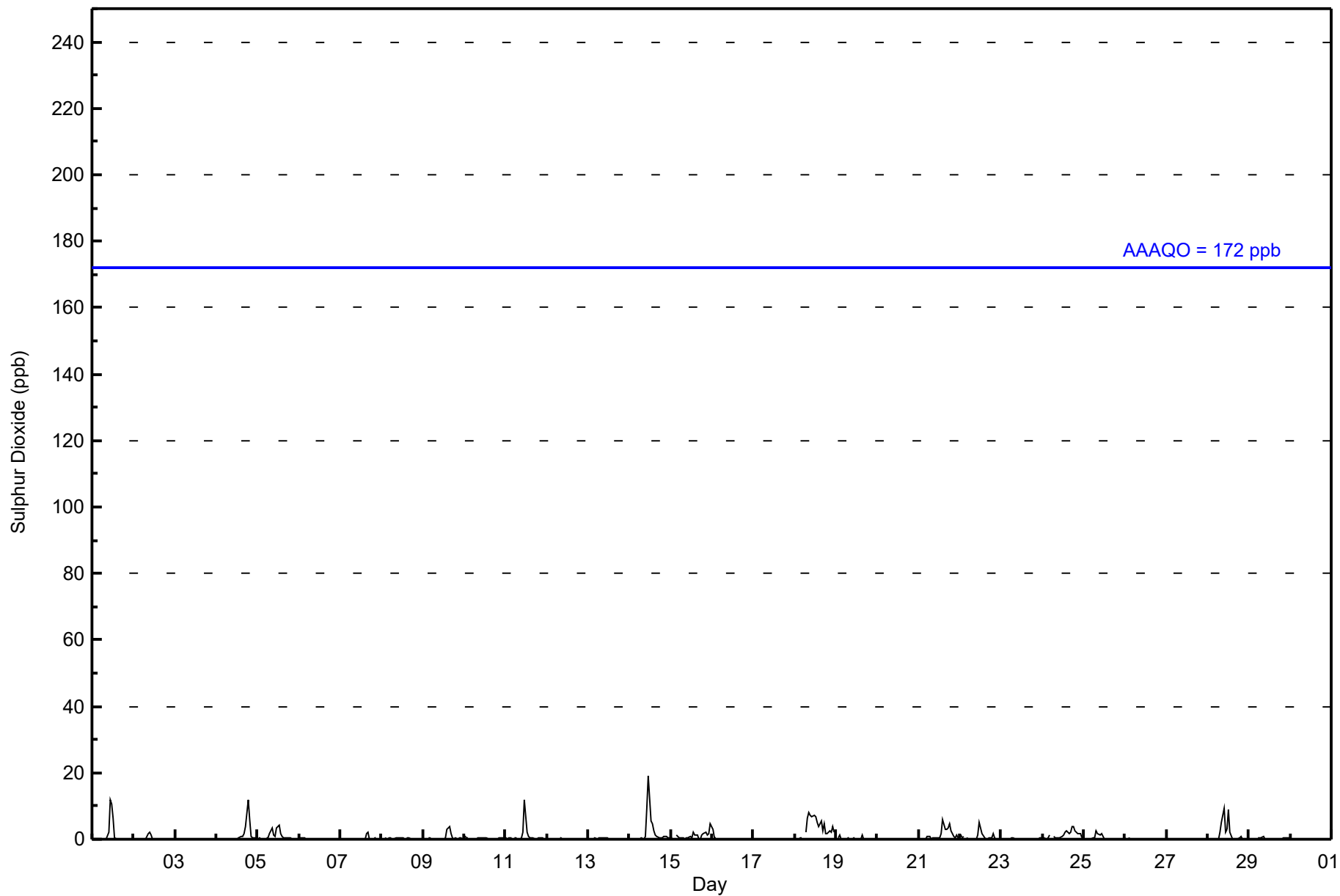
Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	14 Apr 2025 05:00	14 Apr 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Apr 2025 05:00	23 Apr 2025 05:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Apr 2025 02:00	25 Apr 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	28 Apr 2025 03:00	28 Apr 2025 03:00	1	Flat line in sensor output signal

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 19.1 ppb on Apr 14 12:00 Maximum Daily Average: 3.5 ppb on Apr 18																	Hours in Service: 720									
Minimum Value: 0.0 ppb on Apr 1 05:00 Minimum Daily Average: 0.0 ppb on Apr 17 Maximum Diurnal Average: 2.2 ppb at hour 12 Minimum Diurnal Average: 0.2 ppb at hour 4																	Hours of Data: 687									
Monthly Average: 0.66 ppb 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 = 9.0																	Hours of Missing Data: 33									
																	Hours of Calibration: 33									
																	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-Apr	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.0	11.9	10.6	6.2	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.9
2-Apr	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.0	1.5	2.2	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	0.2	2.2
3-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.2
4-Apr	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	0.7	0.8	1.5	4.0	12.0	6.0	1.0	0.5	0.3	0.3	1.3	12.0
5-Apr	0.1	0.3	0.1	0.2	Z	0.5	0.6	1.7	3.2	1.4	1.0	3.4	4.2	1.5	0.8	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.9	4.2
6-Apr	0.4	0.5	0.3	0.3	0.2	Z	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
7-Apr	Z	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	0.2	1.7	2.0	0.2	0.1	0.1	0.3	0.1	0.2	0.1	0.3	2.0
8-Apr	0.1	Z	0.5	0.1	0.2	0.3	0.1	0.2	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
9-Apr	0.0	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.5	2.9	4.0	1.6	0.3	0.1	0.3	0.2	0.2	0.4	0.2	0.5	4.0
10-Apr	0.8	0.5	0.2	Z	0.1	0.1	0.1	0.1	0.3	0.4	0.6	0.3	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.5	0.5	0.3	0.8
11-Apr	0.3	0.2	0.3	0.5	Z	0.2	0.4	0.1	0.2	0.6	2.0	12.0	2.3	0.9	0.3	0.5	0.3	0.0	0.0	0.2	0.2	0.3	0.0	0.0	1.0	12.0
12-Apr	0.0	0.0	0.2	0.2	0.2	Z	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
13-Apr	Z	0.1	0.1	0.2	0.3	0.1	0.3	0.4	0.4	0.3	0.4	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.9	9.3	19.1	5.3	4.6	2.6	1.1	1.0	0.5	0.4	0.5	1.0	0.8	0.5	0.5	2.1	19.1
15-Apr	0.3	0.4	Z	1.3	0.8	0.5	0.5	0.3	0.2	0.3	0.3	0.8	0.3	2.0	1.3	1.1	0.2	0.1	1.4	1.9	2.3	1.3	1.6	4.5	1.0	4.5
16-Apr	2.8	0.5	0.3	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.8
17-Apr	0.0	0.0	0.0	0.0	Z	0.1	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	0.1	0.2	0.0	0.2	
18-Apr	0.0	0.0	0.1	0.3	0.6	Z	2.0	6.2	7.9	7.2	6.8	7.2	6.8	5.1	3.8	5.3	2.6	4.7	1.6	1.7	2.6	2.2	3.6	2.3	3.5	7.9
19-Apr	Z	0.4	1.3	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.4	0.1	0.1	0.0	0.0	1.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	1.3
20-Apr	0.1	Z	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
21-Apr	0.0	0.0	Z	0.0	0.2	1.0	1.0	0.2	0.3	0.3	0.4	0.6	0.6	1.6	5.8	2.9	2.8	3.6	4.6	2.5	0.8	0.4	1.4	0.3	1.4	5.8
22-Apr	1.2	0.5	0.7	Z	0.2	0.2	0.2	0.1	0.2	0.2	1.3	5.1	3.6	1.8	0.3	0.2	0.2	0.5	0.4	1.7	0.3	0.2	0.1	0.1	0.8	5.1
23-Apr	0.1	0.1	0.1	0.0	Z	0.2	0.4	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.4
24-Apr	0.2	0.2	0.2	0.5	1.1	Z	0.7	0.4	0.3	0.5	0.5	0.9	1.2	2.1	2.3	1.9	2.0	3.9	3.7	2.6	1.6	1.7	1.5	0.6	1.3	3.9
25-Apr	Z	0.2	0.2	0.1	0.1	0.2	0.3	2.3	1.7	1.2	1.8	1.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	2.3
26-Apr	0.2	Z	0.5	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
27-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1
28-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	2.2	5.3	9.1	2.3	2.8	9.0	2.2	0.1	0.1	0.1	0.1	0.6	1.0	0.1	0.1	0.2	0.1	1.5	9.1
29-Apr	0.2	0.1	0.2	0.1	Z	0.2	0.5	0.3	1.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.3	0.2	1.0
30-Apr	0.1	0.1	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2
0.3 0.2 0.2 0.2 0.2 0.2 0.3 0.6 0.8 0.9 1.4 2.2 1.4 0.8 0.7 0.7 0.5 0.6 0.9 0.7 0.4 0.3 0.4 0.4																									Diurnal Average	
2.8 0.5 1.3 1.3 1.1 1.0 2.0 6.2 7.9 9.1 11.9 19.1 9.0 5.1 5.8 5.3 2.8 4.7 12.0 6.0 2.6 2.2 3.6 4.5																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	682	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: 687

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	97	67	22	5	8	33	52	114	66	35	19	30	33	21	38	38	678
11 - 20	0	0	0	0	0	0	1	0	2	2	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	97	67	22	5	8	33	53	114	68	37	19	30	33	21	38	38	683

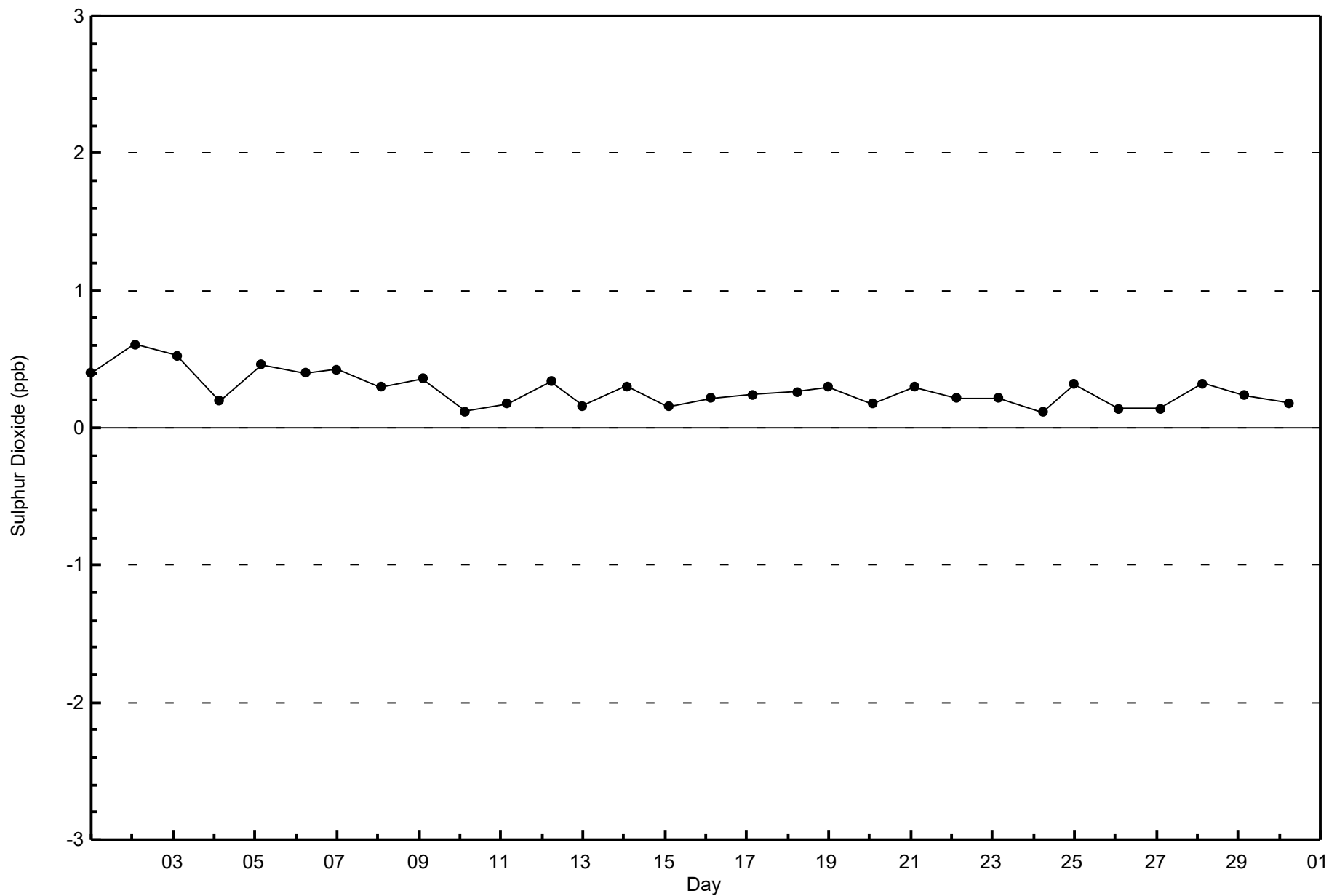
Total Number of Valid Hours: 683

Total Number of Hours: 720



Sulphur Dioxide (SO₂) - ppb
Fort Hills

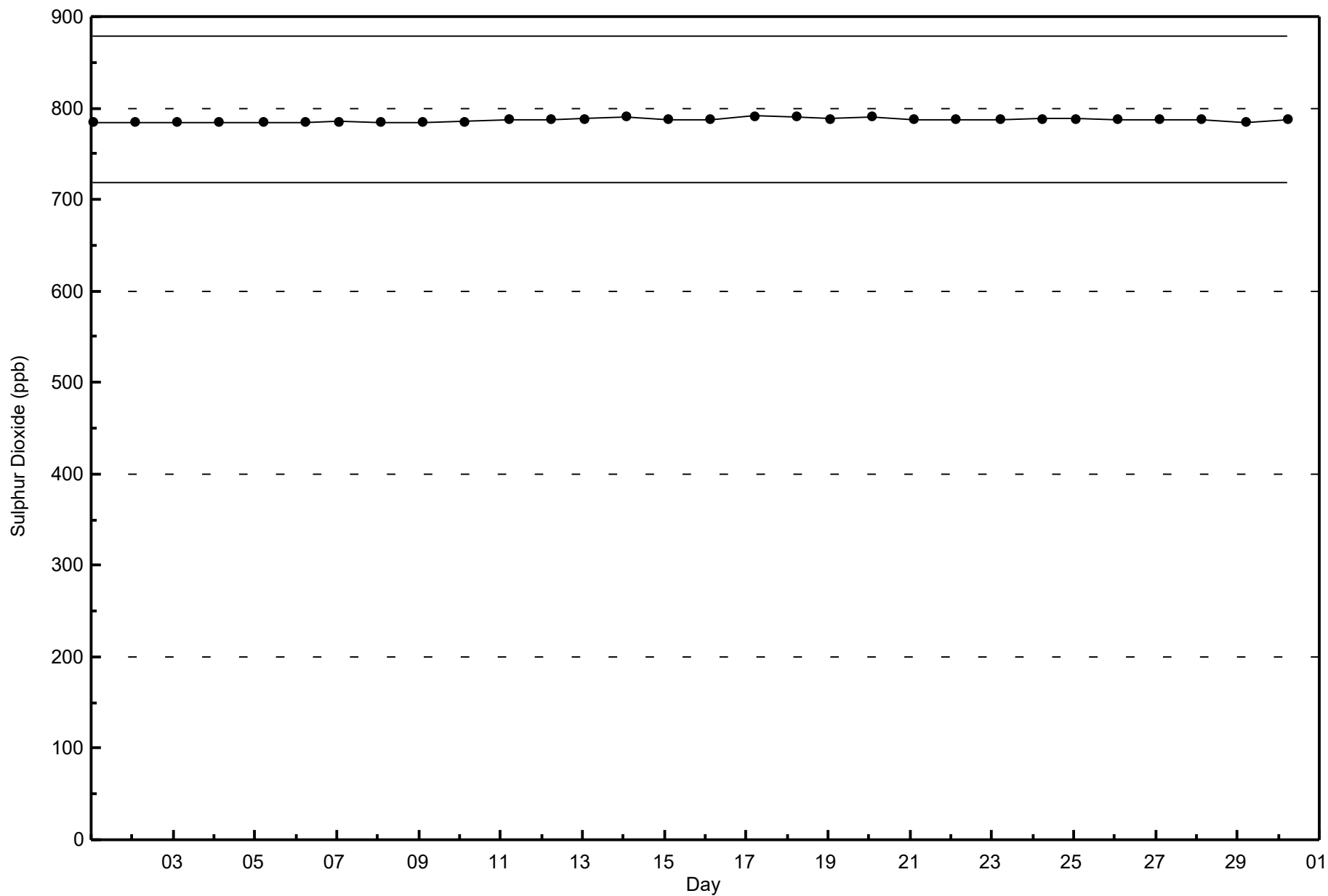






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																		Periods in Service: 1440									
Maximum Value: 2.8 ppb on Apr 1 13:30 Maximum Daily Average: 0.9 ppb on Apr 8																		Periods of Valid Data: 1370									
Minimum Value: 0.3 ppb on Apr 16 12:00 Minimum Daily Average: 0.4 ppb on Apr 16																		Periods of Invalid Data: 70									
Maximum Diurnal Average: 0.7 ppb at hour 5 Minimum Diurnal Average: 0.5 ppb at hour 18																		Periods of Calibration: 68									
Monthly Average: 0.58 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.6																		Percent Operational Time: 99.9									
Day	Period Ending At (MST)																								Daily Average	Daily Maximum	
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00			
1-Apr	0.7 0.6	Z SP	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.8	1.1 0.8	0.7 0.7	0.8 1.9	2.8 2.6	2.1 1.0	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	2.8	
2-Apr	0.4 0.4	0.4 0.5	Z SP	0.4 0.4	0.4 0.7	0.7 0.5	0.5 0.5	0.4 0.5	0.5 2.8	0.8 0.7	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.4	0.5 0.3	0.4 0.3	0.3 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5	2.8	
3-Apr	0.3 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.3 0.3	0.3 0.4	0.3 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.3 0.4	0.3 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.7	0.6 0.7	0.6 0.7	0.4	0.7	
4-Apr	0.7 0.6	0.5 0.5	0.4 0.5	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.6 0.6	0.7 0.7	0.7 0.7	0.7 0.8	0.9 0.9	0.7 0.7	0.5	0.9	
5-Apr	0.7 0.6	0.9 1.0	1.0 1.0	0.8 0.7	0.8 0.9	Z SP	1.8 1.4	1.2 1.6	1.9 2.3	1.7 1.1	0.8 1.0	0.8 0.9	1.0 1.2	0.9 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.7	0.7 0.5	0.5 0.7	0.6 0.5	0.5 0.5	0.6 0.6	0.9	2.3	
6-Apr	Z SP	0.7 0.8	0.9 0.9	1.0 1.0	0.7 0.6	0.7 0.9	0.7 0.5	0.6 0.5	0.4 0.4	0.4 0.5	0.7 0.5	0.4 0.4	0.4 0.4	0.4 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7 0.6	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.4	0.5	1.0	
7-Apr	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.7 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	1.0 1.0	0.6 0.6	0.9 1.1	0.5 0.5	0.5	1.1	
8-Apr	0.5 0.5	0.5 1.1	Z SP	0.6 1.0	1.3 1.0	1.0 0.7	0.6 0.6	0.7 0.7	1.2 0.9	1.0 1.1	1.1 1.1	1.2 1.2	1.1 1.1	1.1 1.1	1.1 1.1	1.0 1.1	1.0 1.0	1.0 0.7	0.7 0.7	0.6 0.6	0.8 0.9	0.9 0.9	0.8 0.8	0.8 0.8	0.9	1.3	
9-Apr	0.8 0.8	0.8 0.8	0.8 0.8	Z SP	0.9 0.9	0.9 0.9	0.9 0.8	0.9 0.8	1.1 1.4	1.3 1.6	1.8 1.6	1.2 1.0	1.3 1.1	1.1 1.1	0.9 0.8	0.7 0.7	0.5 0.4	0.4 0.5	0.7 0.6	0.6 0.6	0.8 0.7	0.8 0.9	1.2 0.9	0.7 0.7	0.9	1.8	
10-Apr	1.1 1.2	1.3 1.0	0.8 0.6	0.6 0.6	Z SP	0.5 0.6	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.8 0.8	0.8 0.7	0.8 0.7	0.8 0.9	0.9 0.8	0.6	1.3	
11-Apr	0.7 0.8	0.7 0.7	0.6 0.8	0.8 0.8	0.8 1.0	Z SP	1.0 1.1	1.0 0.8	0.7 0.6	1.0 0.8	0.8 1.0	1.1 1.1	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 0.6	0.6 0.7	0.8 0.5	0.6 0.5	0.5 0.5	0.5 0.5	0.7	1.1	
12-Apr	Z SP	0.6 0.5	0.5 0.6	0.5 0.5	0.5 0.7	0.7 0.5	0.6 0.5	0.6 0.6	0.5 0.6	0.5 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.7 0.6	0.6 0.6	0.6 0.7	0.6 0.5	0.6 0.6	0.5	0.7	
13-Apr	0.6 0.6	Z SP	0.6 0.6	0.6 0.7	0.9 0.7	0.6 0.7	0.9 1.1	1.2 1.2	1.0 0.9	0.8 0.8	0.8 0.6	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.5 0.6	0.5 0.5	0.6	1.2	
14-Apr	0.5 0.6	0.5 0.5	Z SP	0.5 0.6	0.5 0.4	0.4 0.4	0.4 0.5	0.8 0.8	0.5 0.6	1.1 1.4	1.2 1.0	1.0 0.9	0.7 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	1.5 1.7	1.3 0.9	0.9 0.8	0.8 0.7	0.7 0.7	0.7	1.7	
15-Apr	0.7 0.8	0.6 0.8	0.5 0.6	Z SP	0.9 2.6	1.7 1.1	1.2 1.0	1.0 0.6	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.4 0.4	0.5 0.7	0.5 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.6 0.6	0.5 0.5	0.7 1.0	0.6 0.5	0.7 0.5	0.6 0.6	0.7	2.6	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.5 0.5	0.4 0.4	0.4 0.5	0.4 0.4	Z SP	0.5 0.4	0.4 C	C C	C C	C C	C 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.5 0.5	0.4 0.4	0.4	0.6
17-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 M	M 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 0.5	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.6 0.7	1.0 0.6	0.4	1.0
18-Apr	Z SP	0.4 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.7 0.8	0.8 1.0	0.9 0.6	0.6 0.6	0.6 0.6	0.6 0.5	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.6	0.6 0.5	0.5 0.6	0.6 0.5	0.5 0.6	0.7 0.6	0.9 0.8	0.7 0.7	0.6 0.6	0.7 0.6	0.6	1.0
19-Apr	0.6 0.5	Z SP	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 0.4	0.5 0.4	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	0.4 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	0.6
20-Apr	0.5 0.6	0.5 0.5	Z SP	0.4 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.5 0.8	0.5	0.8
21-Apr	0.7 0.6	0.6 0.6	0.6 0.6	Z SP	0.6 0.7	1.2 1.1	1.2 1.2	0.8 0.8	0.6 0.7	0.7 0.7	0.8 0.7	0.7 0.7	0.6 0.7	0.7 0.7	0.7 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.7	1.2
22-Apr	0.6 0.7	0.5 0.7	1.0 1.1	0.8 0.7	Z SP	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.7 0.6	0.6 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.7	0.8 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.6	1.1
23-Apr	0.5 0.5	0.5 0.6	0.6 0.6	0.6 0.6	0.6 0.5	Z SP	0.6 0.9	0.7 0.4	0.4 0.4	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 0.5	0.4 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.5	0.6 0.6	0.5	0.9
24-Apr	Z SP	0.5 0.5	0.5 0.6	0.6 0.7	1.0 0.9	0.7 0.7	0.8 0.7	0.7 0.6	0.6 0.6	0.7 0.7	0.6 0.6	0.5 0.5	0.6 0.6	0.6 0.7	0.7 0.7	0.6 0.7	0.6 0.7	0.7 0.7	0.7 0.7	0.7 0.7	0.7 0.6	1.1 1.1	0.8 0.6	0.7	1.1	
25-Apr	0.5 0.6	Z SP	0.9 0.8	0.6 0.4	0.4 1.1	1.1 0.6	0.6 0.6	0.6 0.5	0.6 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.5 0.5	0.5	1.1
26-Apr	0.7 1.0	1.4 1.6	Z SP	0.6 0.5	0.5 0.4	0.4 0.4	0.5 0.4	0.4 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5	1.6
27-Apr	0.5 0.5	0.5 0.5	0.5 0.5	Z SP	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.6 0.6	0.6 0.5	0.5	0.6
28-Apr	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.6	Z SP	0.5 0.4	0.5 0.5	0.9 0.8	0.6 0.6	0.6 0.8	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	0.4 0.5	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.5	0.5 0.4	0.5	0.9
29-Apr	0.5 0.5	0.7 0.6	0.6 0.6	0.6 0.6	0.7 1.0	Z SP	0.6 0.6	0.5 0.5	0.7 0.8	0.5 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.6 0.7	0.7 0.7	0.7 0.6	0.7 0.7	0.7 0.7	0.6	1.0
30-Apr	Z SP	0.6 0.6	0.6 0.7	0.6 0.7	0.7 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.5 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5	0.7
																								Diurnal Average		
																								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

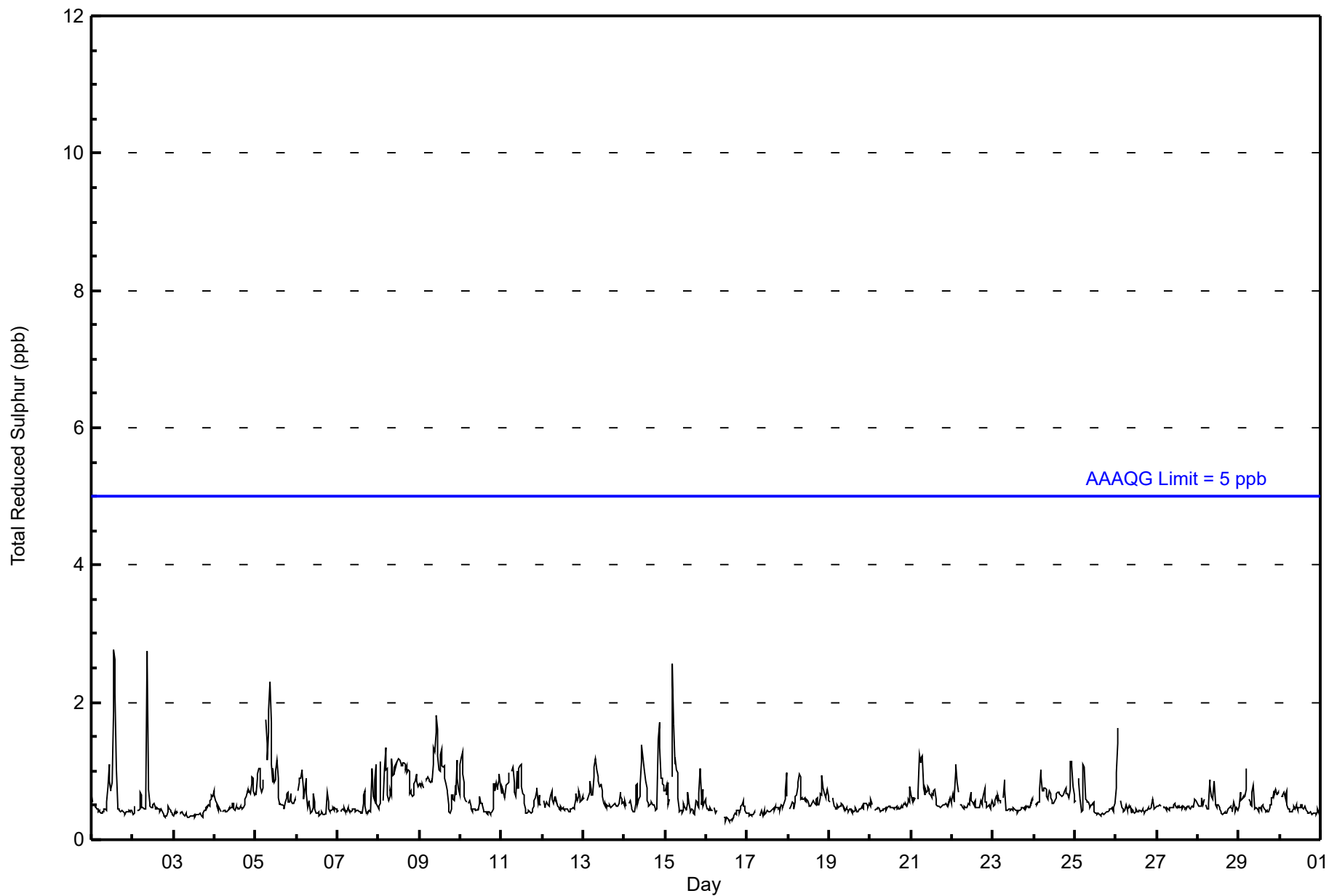
Fort Hills - April 2025

Maximum Value: 2.7 ppb on Apr 1 14:00																			Maximum Daily Average: 0.9 ppb on Apr 8							Hours in Service: 720	
Minimum Value: 0.3 ppb on Apr 16 15:00																			Minimum Daily Average: 0.4 ppb on Apr 16							Hours of Data: 685	
Maximum Diurnal Average: 0.7 ppb at hour 5																			Minimum Diurnal Average: 0.5 ppb at hour 18							Hours of Missing Data: 35	
Monthly Average: 0.58 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.9 P ₉₉ = 1.6							Hours of Calibration: 35	
																			Percent Operational Time: 100.0								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.6	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.7	1.0	0.7	1.4	2.7	1.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	2.7	
2-Apr	0.4	0.4	Z	0.4	0.6	0.6	0.5	0.4	1.6	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.5	0.4	0.4	0.5	1.6	
3-Apr	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.4	0.7	
4-Apr	0.6	0.5	0.5	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.9	0.7	0.5	0.9	
5-Apr	0.7	0.9	1.0	0.7	0.8	Z	1.6	1.4	2.1	1.4	0.9	0.9	1.1	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.9	2.1	
6-Apr	Z	0.8	0.9	1.0	0.7	0.8	0.6	0.6	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.4	0.4	0.5	0.4	0.4	0.5	1.0	
7-Apr	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.4	0.4	0.4	1.0	0.6	1.0	0.5	0.5	1.0		
8-Apr	0.5	0.8	Z	0.8	1.2	0.8	0.6	0.7	1.1	1.0	1.1	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.8	0.7	0.6	0.8	0.9	0.8	0.9	1.2	
9-Apr	0.8	0.8	0.8	Z	0.9	0.9	0.8	0.9	1.2	1.4	1.7	1.1	1.1	1.2	1.1	0.9	0.7	0.5	0.4	0.7	0.6	0.7	1.0	0.7	0.9	1.7	
10-Apr	1.2	1.1	0.7	0.6	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.8	0.8	0.8	0.9	0.6	1.2	
11-Apr	0.7	0.7	0.7	0.8	0.9	Z	1.0	0.9	0.7	0.9	0.9	1.1	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.6	0.5	0.7	1.1	
12-Apr	Z	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.6	0.6	0.5	0.7	
13-Apr	0.6	Z	0.6	0.7	0.8	0.7	1.0	1.2	1.0	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	1.2	
14-Apr	0.5	0.5	Z	0.5	0.5	0.4	0.5	0.8	0.5	0.7	1.3	1.1	0.9	0.7	0.5	0.5	0.5	0.5	0.4	0.5	1.6	1.1	0.9	0.7	0.7	1.6	
15-Apr	0.8	0.7	0.5	Z	1.7	1.4	1.1	0.8	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.4	0.4	0.4	0.6	0.5	0.9	0.6	0.6	0.6	0.7	1.7	
16-Apr	0.5	0.4	0.4	0.4	Z	0.4	C	C	C	C	C	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5		
17-Apr	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	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.8	0.4	0.8	
18-Apr	Z	0.5	0.5	0.5	0.6	0.7	0.9	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.7	0.9	0.7	0.6	0.7	0.6	0.9	
19-Apr	0.6	Z	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	
20-Apr	0.5	0.5	Z	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	0.5	0.5	0.5	0.5	0.6	0.7	0.5	0.7	
21-Apr	0.6	0.6	0.6	Z	0.6	1.2	1.2	0.8	0.7	0.7	0.8	0.7	0.6	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	1.2	
22-Apr	0.6	0.6	1.0	0.8	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	1.0	
23-Apr	0.5	0.5	0.6	0.6	0.5	Z	0.7	0.6	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7		
24-Apr	Z	0.5	0.5	0.6	1.0	0.7	0.7	0.7	0.6	0.7	0.6	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.9	1.1	0.7	0.7	1.1	
25-Apr	0.6	Z	0.9	0.5	0.4	1.1	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	1.1	
26-Apr	0.9	1.5	Z	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	1.5	
27-Apr	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	
28-Apr	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.8	0.6	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.8	
29-Apr	0.5	0.6	0.6	0.6	0.9	Z	0.6	0.5	0.7	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.9	
30-Apr	Z	0.6	0.7	0.6	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	
Diurnal Average																									Diurnal Maximum		
0.6 1.2 0.6 1.5 0.6 1.0 0.6 1.0 0.7 1.7 0.6 1.4 0.6 1.6 0.6 1.4 0.7 2.1 0.6 1.4 0.6 1.7 0.6 1.2 0.6 1.4 0.5 1.6 0.5 1.1 0.5 1.0 0.5 1.0 0.5 0.8 0.7 1.6 0.6 1.1 0.6 1.1 0.6 0.9																											
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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	684	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: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	95	70	22	5	8	33	58	113	67	35	18	30	33	20	33	40	680
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	95	70	22	5	8	33	58	113	67	35	18	30	33	21	33	40	681

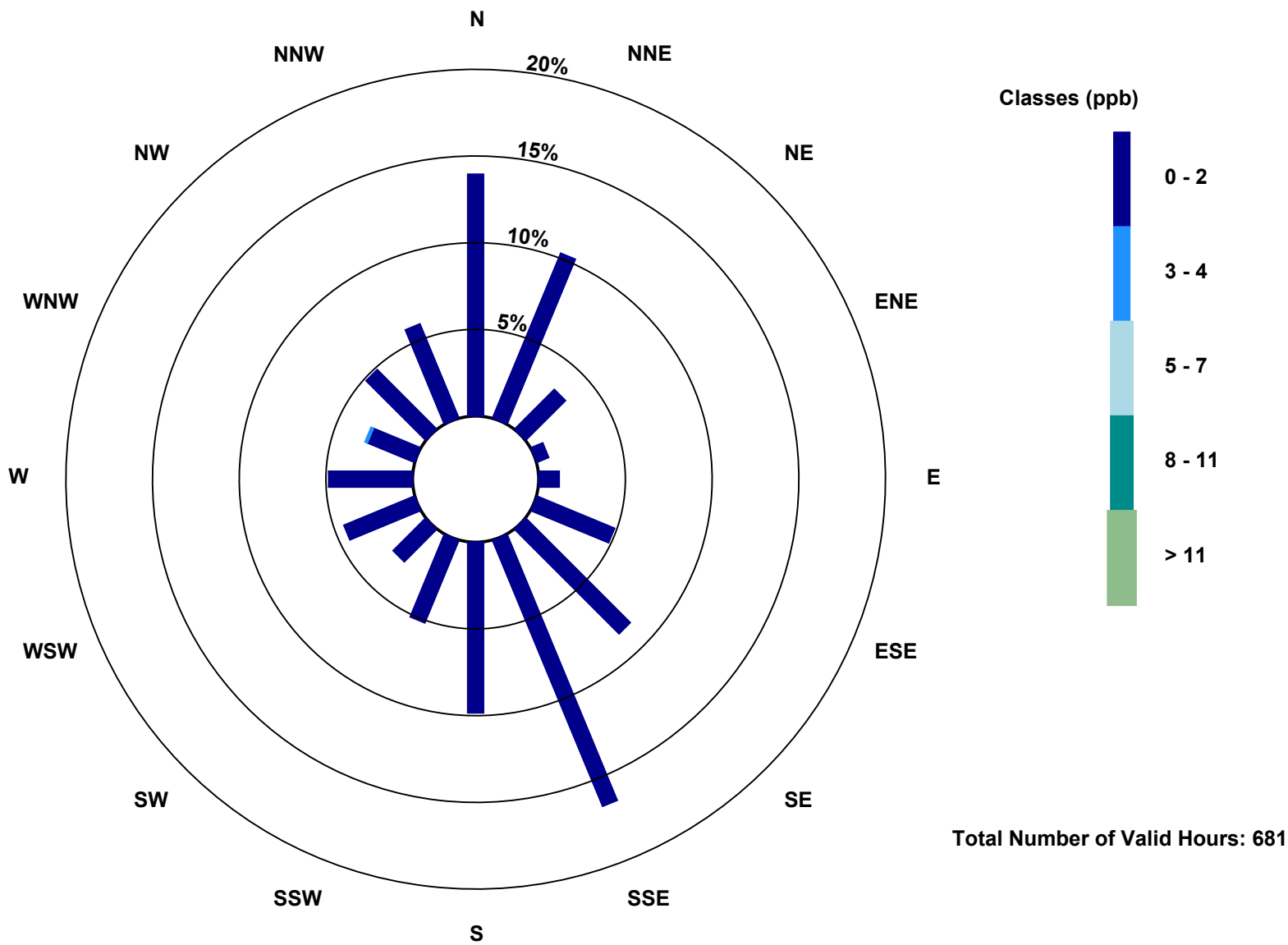
Total Number of Valid Hours: 681

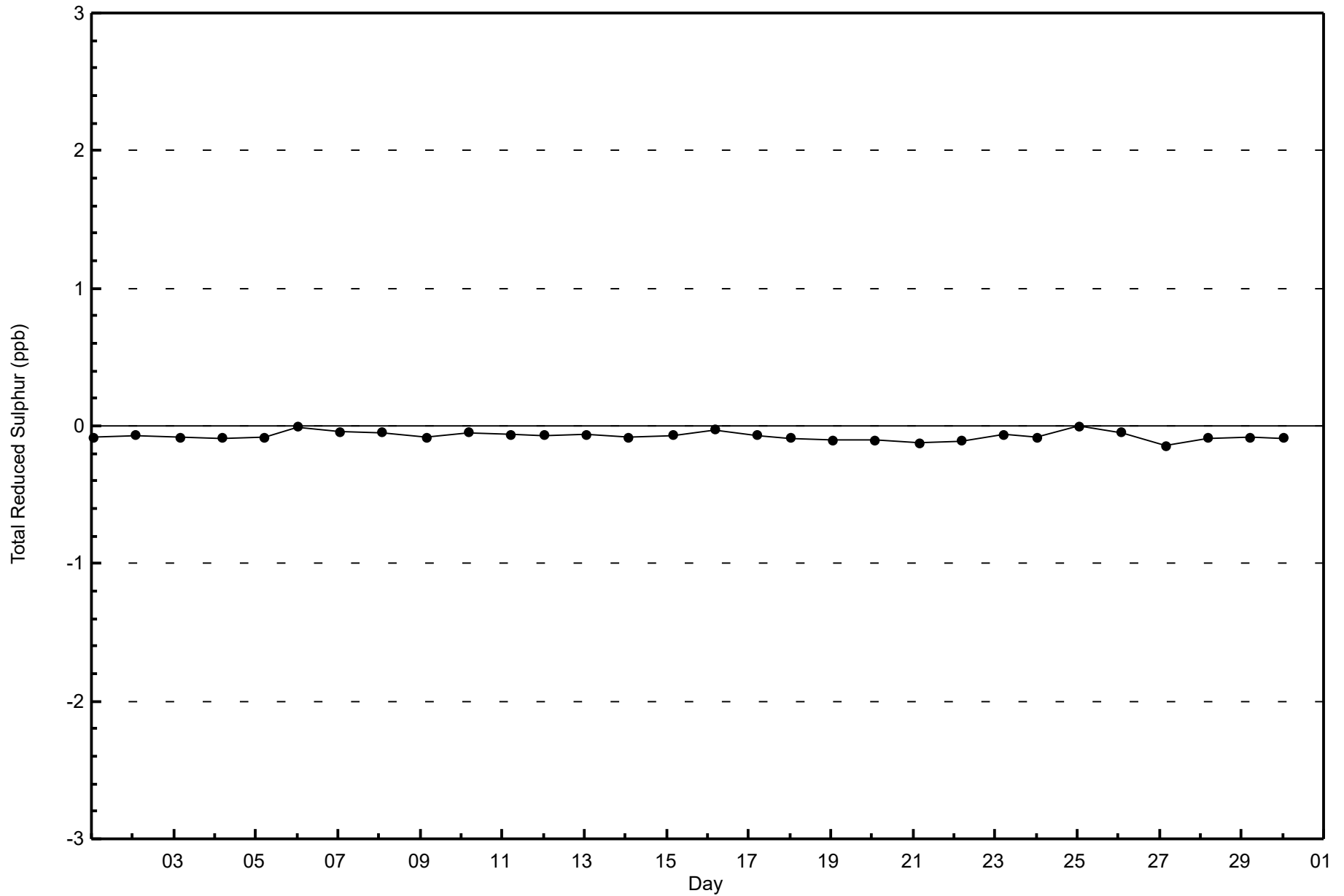
Total Number of Hours: 720

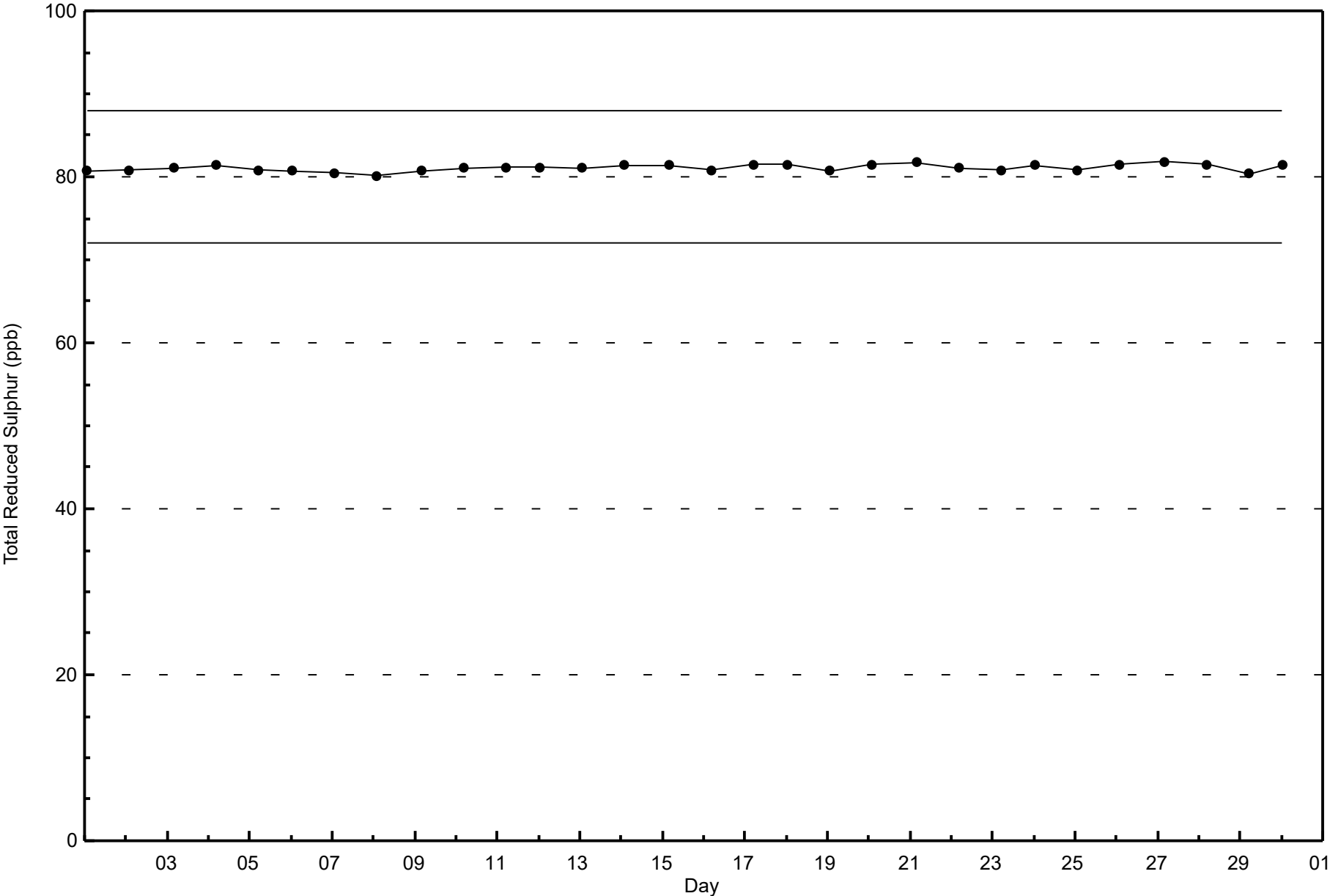


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Fort Hills









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

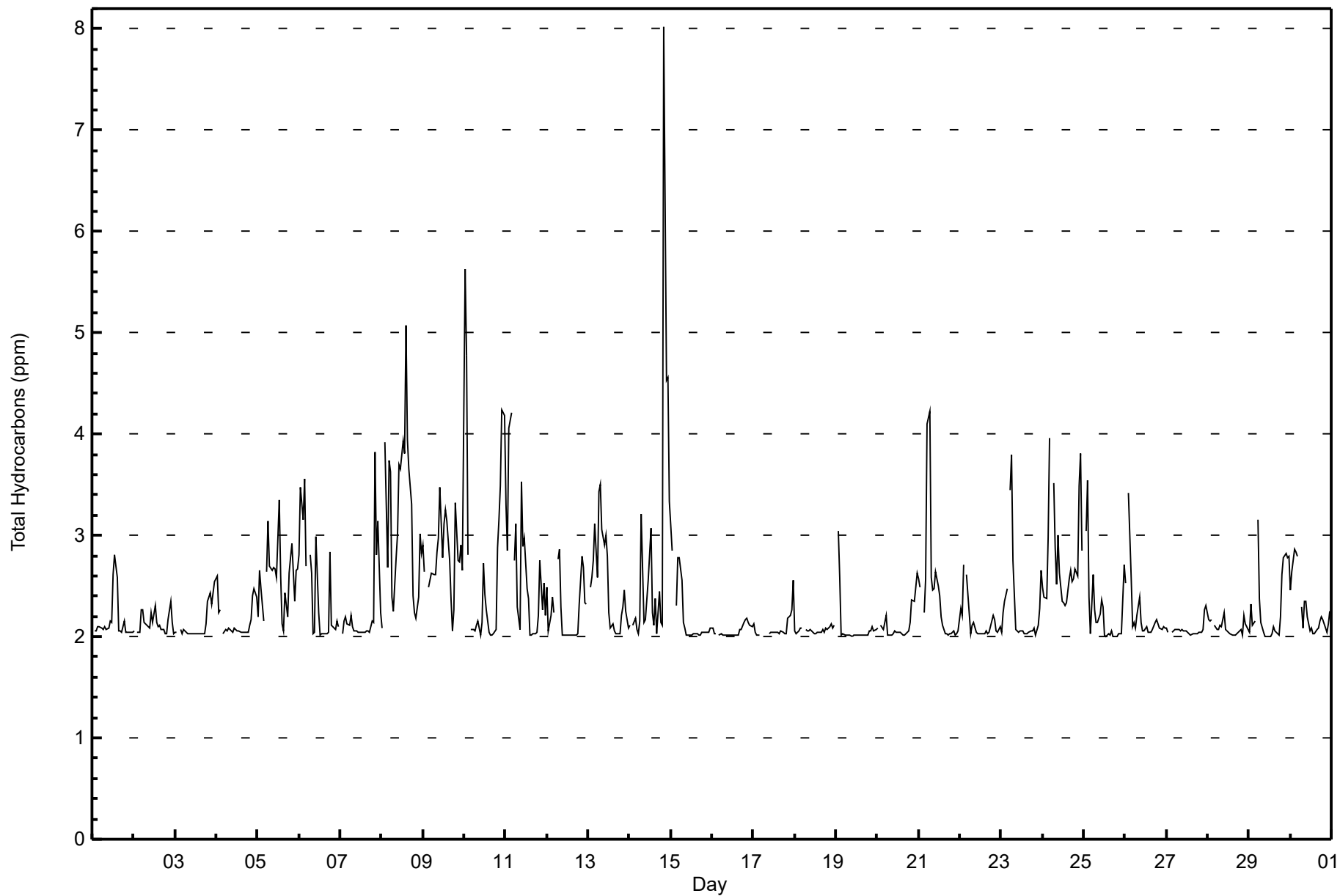
Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8.0 ppm on Apr 14 21:00 Maximum Daily Average: 3.2 ppm on Apr 8																		Hours in Service: 720								
Minimum Value: 2.0 ppm on Apr 29 11:00 Minimum Daily Average: 2.1 ppm on Apr 16 Maximum Diurnal Average: 2.6 ppm at hour 3 Minimum Diurnal Average: 2.1 ppm at hour 18 Monthly Average: 2.34 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.5 P ₉₀ = 2.9 P ₉₉ = 4.2																		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 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-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.6	2.8	2.6	2.1	2.1	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.2	2.8
2-Apr	2.1	Z	2.0	2.0	2.3	2.3	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.2	2.4	2.1	2.0	2.1	2.4
3-Apr	2.0	2.0	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.4	2.3	2.4	2.5	2.1	2.5
4-Apr	2.6	2.2	2.3	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.5	2.4	2.2	2.6
5-Apr	2.2	2.6	2.5	2.2	Z	2.6	3.1	2.7	2.7	2.7	2.7	2.6	3.4	2.6	2.1	2.1	2.4	2.2	2.6	2.8	2.9	2.3	2.6	2.7	2.6	3.4
6-Apr	2.8	3.5	3.2	3.6	2.7	Z	2.8	2.6	2.0	2.0	3.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.8	2.1	2.1	2.1	2.2	2.1	2.4	3.6
7-Apr	Z	2.0	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	3.8	2.8	3.1	2.2	2.2	3.8
8-Apr	2.1	Z	3.9	2.7	3.7	3.6	2.4	2.2	2.8	3.0	3.7	3.7	3.9	3.8	5.1	3.9	3.6	3.3	2.4	2.2	2.2	2.4	3.0	2.8	3.2	5.1
9-Apr	2.9	2.6	Z	2.5	2.6	2.6	2.6	2.6	2.8	3.0	3.5	2.8	3.1	3.3	3.1	2.8	2.4	2.1	2.3	3.3	2.8	2.7	2.9	2.7	2.8	3.5
10-Apr	5.6	4.8	2.8	Z	2.1	2.1	2.1	2.1	2.2	2.0	2.1	2.7	2.4	2.3	2.0	2.0	2.0	2.0	2.1	2.9	3.2	3.5	4.2	4.2	2.8	5.6
11-Apr	3.3	2.8	4.1	4.2	Z	2.8	3.1	2.3	2.1	3.5	2.9	3.0	2.5	2.4	2.0	2.0	2.0	2.0	2.0	2.2	2.8	2.3	2.5	2.2	2.7	4.2
12-Apr	2.5	2.1	2.2	2.4	2.2	Z	2.8	2.9	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.8	2.7	2.3	2.3	2.3	2.9
13-Apr	Z	2.5	2.6	2.8	3.1	2.6	3.4	3.5	3.1	2.9	3.0	2.8	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.5	2.3	2.1	2.5	3.5
14-Apr	2.1	Z	2.1	2.2	2.1	2.0	2.2	3.2	2.1	2.2	2.4	2.6	3.1	2.2	2.1	2.4	2.0	2.4	2.1	2.1	8.0	4.5	4.6	3.3	2.8	8.0
15-Apr	3.1	2.9	Z	2.3	2.8	2.8	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	3.1
16-Apr	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	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
17-Apr	2.1	2.0	2.0	2.0	Z	2.1	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.2	2.2	2.3	2.6	2.1	2.6
18-Apr	2.1	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Apr	Z	3.0	2.6	2.0	2.0	2.0	2.0	2.0	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	3.0
20-Apr	2.1	Z	2.1	2.1	2.1	2.2	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	2.4	2.3	2.5	2.6	2.1	2.6
21-Apr	2.6	2.5	Z	2.2	2.6	4.1	4.2	2.6	2.5	2.5	2.6	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.4	4.2
22-Apr	2.3	2.2	2.7	Z	2.6	2.2	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.2	2.2	2.2	2.1	2.0	2.1	2.1	2.7
23-Apr	2.0	2.2	2.3	2.5	Z	3.5	3.8	2.8	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.3	2.7	2.3	3.8
24-Apr	2.5	2.4	2.4	3.0	4.0	Z	3.5	2.9	2.5	3.0	2.6	2.4	2.3	2.3	2.3	2.6	2.6	2.5	2.6	2.7	2.6	3.5	3.8	2.8	2.8	4.0
25-Apr	Z	3.0	3.6	2.4	2.0	2.6	2.3	2.1	2.1	2.2	2.4	2.3	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.7	2.3	3.6
26-Apr	2.5	Z	3.4	2.6	2.1	2.1	2.1	2.2	2.4	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	3.4
27-Apr	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.1	2.3
28-Apr	2.2	2.2	2.2	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	2.1	2.1	2.0	2.2	2.1	2.1	2.1	2.2
29-Apr	2.0	2.3	2.1	2.1	Z	3.1	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.6	2.8	2.8	2.8	2.8	2.3	3.1
30-Apr	2.5	2.6	2.9	2.8	2.8	Z	2.3	2.1	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.0	2.1	2.3	2.3	2.9
2.5 2.5 2.6 2.4 2.4 2.5 2.5 2.3 2.2 2.3 2.3 2.3 2.3 2.2 2.2 2.2 2.1 2.1 2.2 2.2 2.5 2.4 2.5 2.4																									Diurnal Average	
5.6 4.8 4.1 4.2 4.0 4.1 4.2 3.5 3.1 3.5 3.7 3.7 3.9 3.8 5.1 3.9 3.6 3.3 2.8 3.3 8.0 4.5 4.6 4.2																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Fort Hills - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	216	31.44	31.44
2.1 - 3.0	415	60.41	91.85
3.1 - 10.0	56	8.15	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	10	21	9	2	2	2	5	31	27	9	3	18	26	10	24	16	215
2.1 - 3.0	78	42	12	3	4	22	37	75	41	24	16	12	6	8	13	19	412
3.1 - 10.0	9	4	1	0	2	9	11	8	0	4	0	0	1	3	1	3	56
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	67	22	5	8	33	53	114	68	37	19	30	33	21	38	38	683

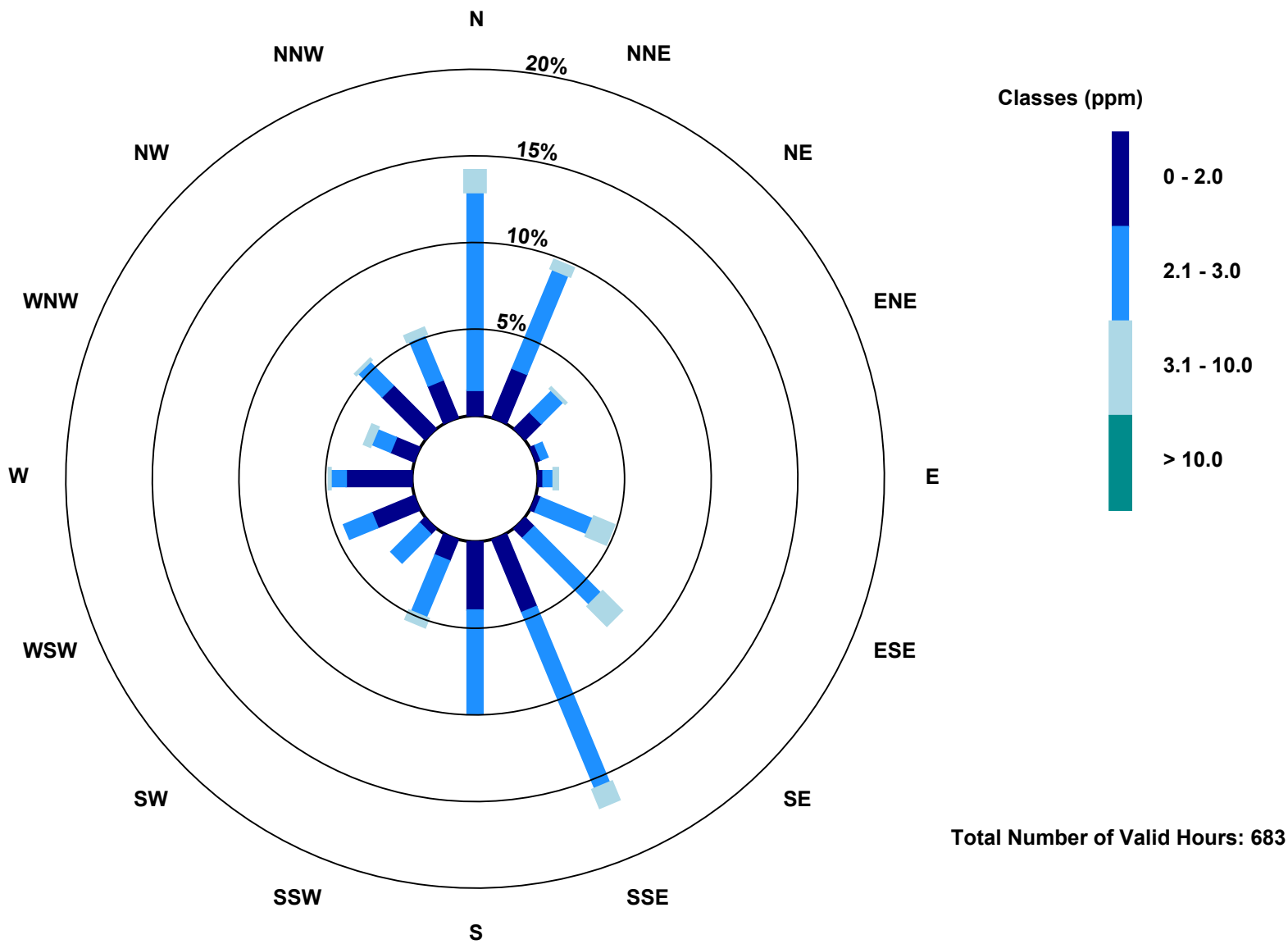
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

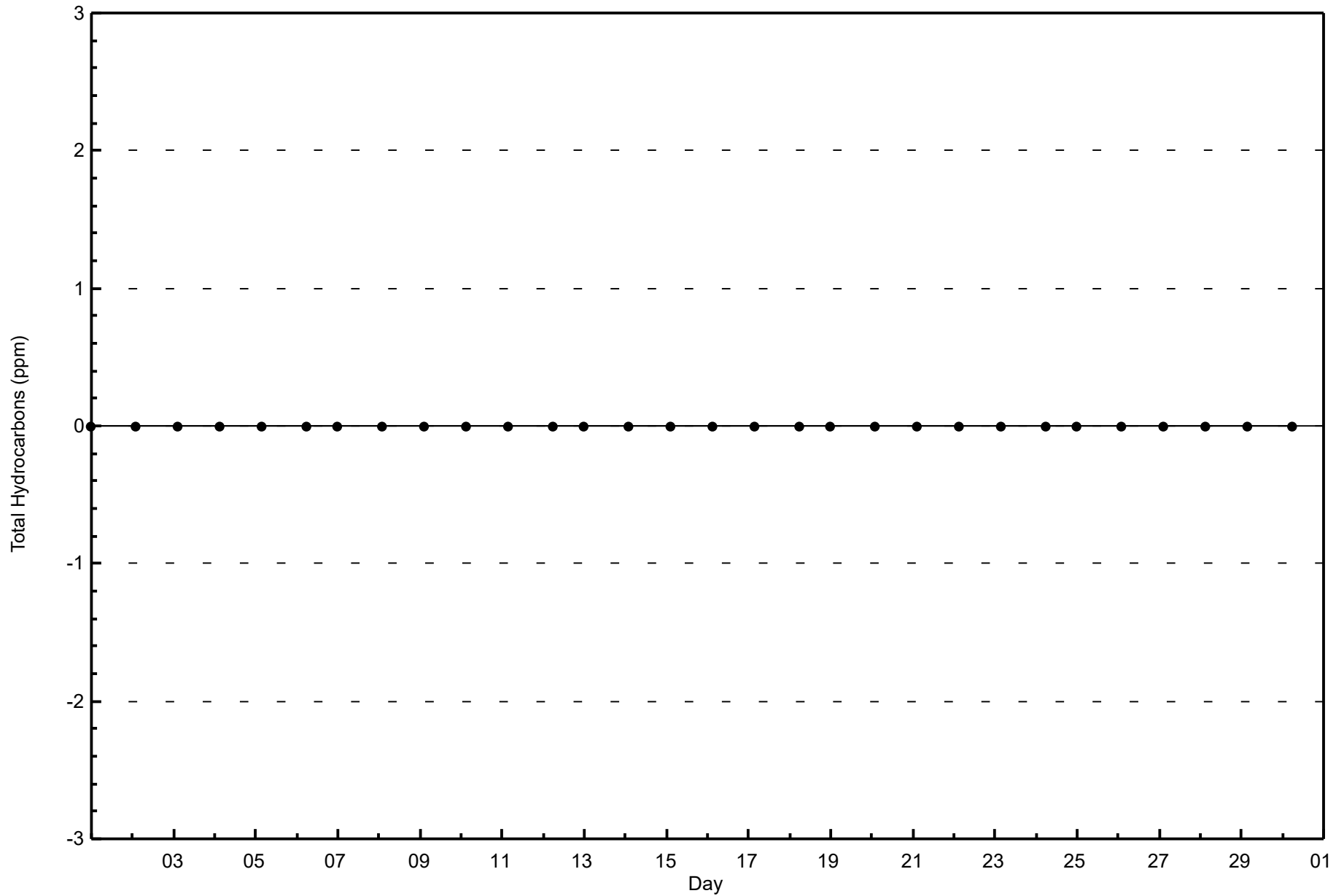
Total Hydrocarbons (THC) - ppm
Fort Hills

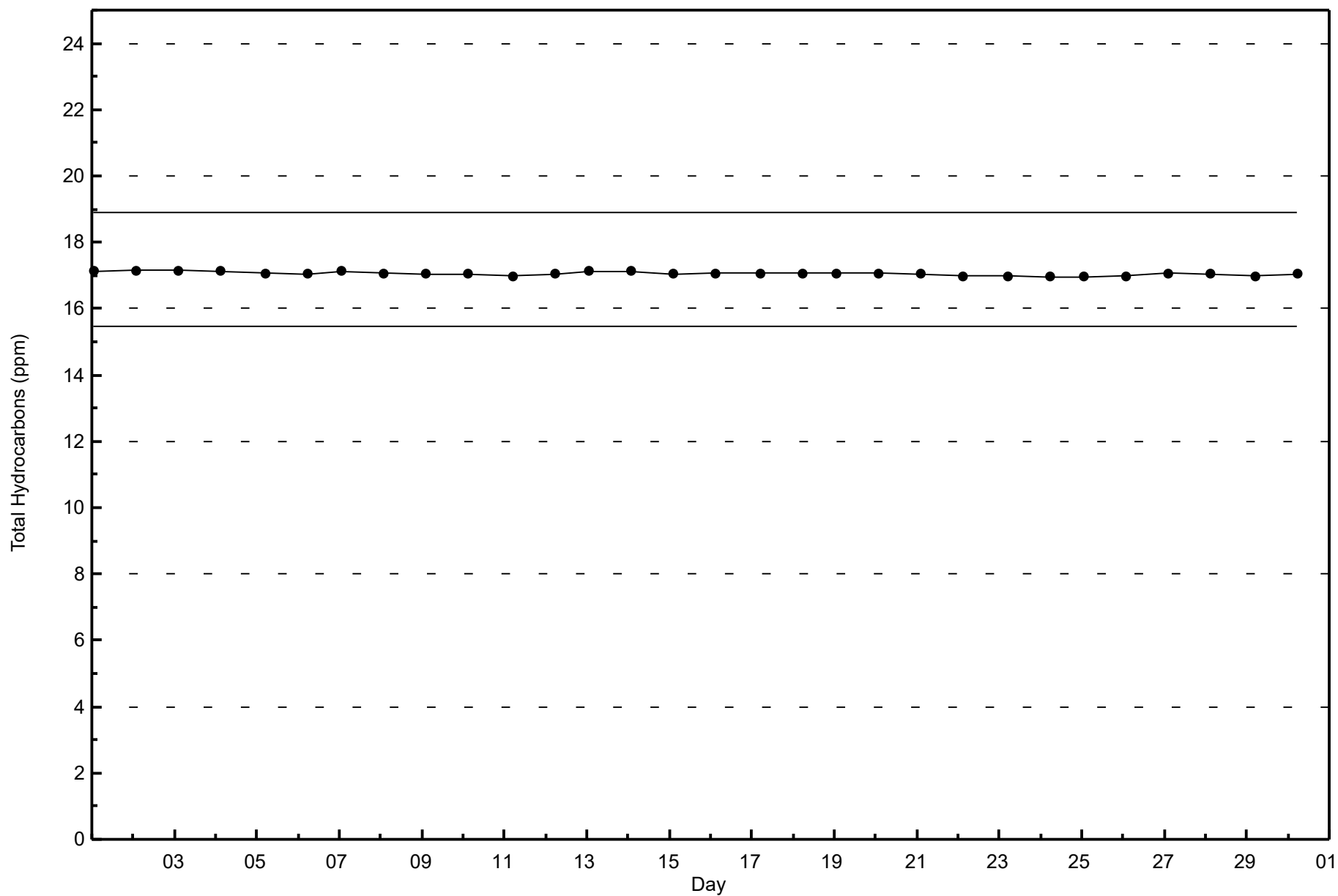




Wood Buffalo Environmental Association
Zero Responses

Total Hydrocarbons (THC) - ppm
Fort Hills - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

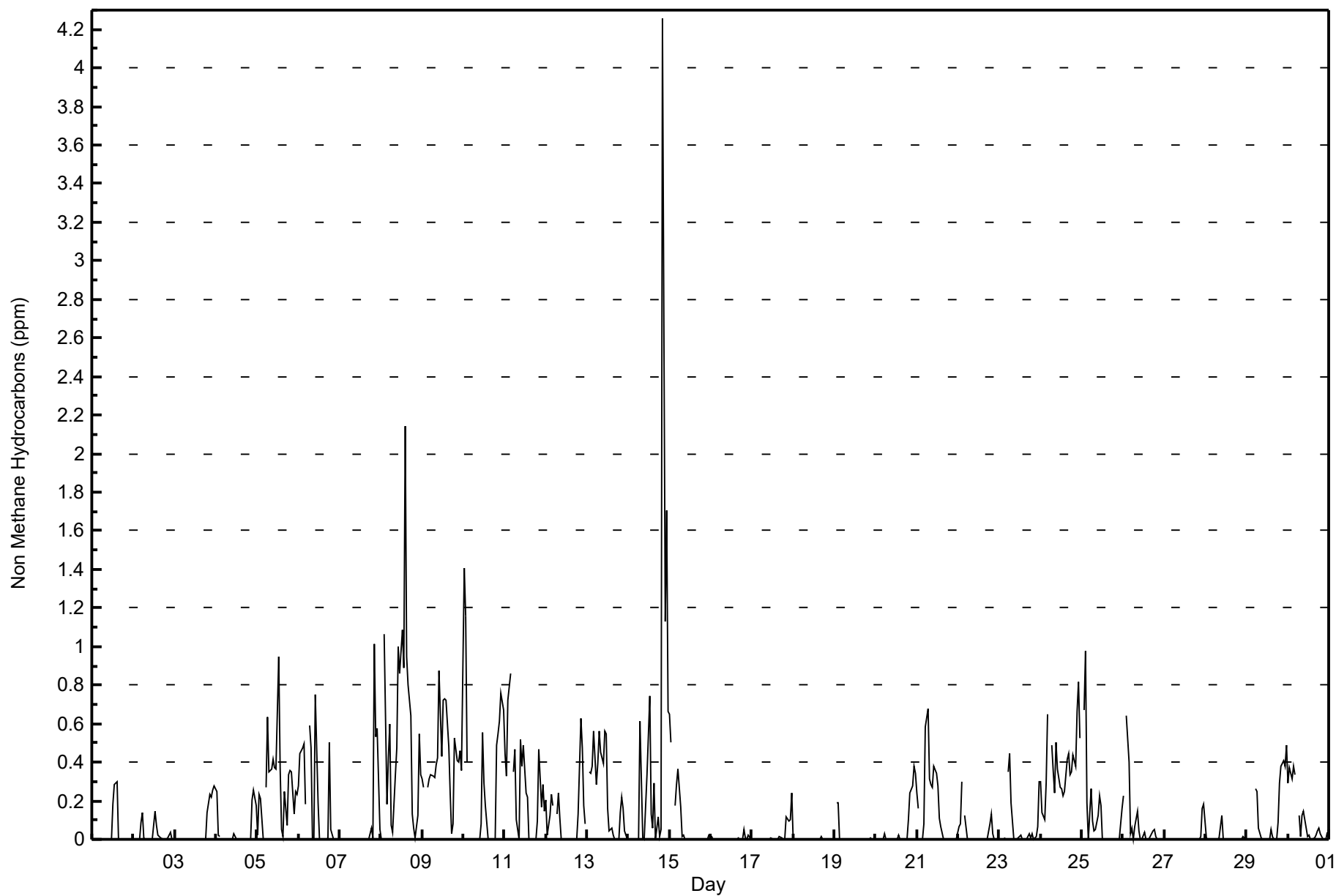
Fort Hills - April 2025

Maximum Value: 4.257 ppm on Apr 14 21:00																		Maximum Daily Average: 0.555 ppm on Apr 8										Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																		Minimum Daily Average: 0.001 ppm on Apr 18										Hours of Data: 687	
Maximum Diurnal Average: 0.310 ppm at hour 21																		Minimum Diurnal Average: 0.045 ppm at hour 18										Hours of Missing Data: 33	
Monthly Average: 0.147 ppm																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.1										Hours of Calibration: 33	
																												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-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.179	0.285	0.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.302			
2-Apr	0.000	Z	0.000	0.000	0.086	0.140	0.008	0.000	0.000	0.000	0.000	0.000	0.145	0.069	0.022	0.014	0.009	0.000	0.000	0.000	0.008	0.038	0.000	0.000	0.023	0.145			
3-Apr	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	0.140	0.234	0.217	0.258	0.274	0.049	0.274			
4-Apr	0.251	0.025	0.011	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.203	0.257	0.172	0.042	0.257			
5-Apr	0.022	0.237	0.210	0.000	Z	0.268	0.637	0.351	0.368	0.418	0.375	0.366	0.951	0.370	0.052	0.014	0.245	0.074	0.333	0.356	0.347	0.128	0.245	0.232	0.287	0.951			
6-Apr	0.278	0.445	0.475	0.495	0.185	Z	0.592	0.475	0.000	0.001	0.749	0.192	0.000	0.000	0.000	0.000	0.000	0.008	0.505	0.050	0.000	0.000	0.000	0.000	0.193	0.749			
7-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.006	1.012	0.535	0.577	0.054	0.097	1.012			
8-Apr	0.000	Z	1.067	0.184	0.425	0.601	0.073	0.036	0.335	0.471	0.996	0.863	1.086	0.887	2.141	0.951	0.802	0.641	0.128	0.056	0.009	0.123	0.548	0.336	0.555	2.141			
9-Apr	0.316	0.271	Z	0.266	0.313	0.339	0.325	0.319	0.387	0.423	0.876	0.428	0.721	0.732	0.722	0.481	0.231	0.031	0.078	0.528	0.410	0.399	0.456	0.355	0.409	0.876			
10-Apr	1.403	1.161	0.404	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.083	0.551	0.290	0.177	0.000	0.000	0.000	0.000	0.000	0.489	0.546	0.613	0.759	0.671	0.311	1.403			
11-Apr	0.444	0.327	0.724	0.861	Z	0.353	0.468	0.101	0.003	0.516	0.382	0.487	0.239	0.216	0.000	0.000	0.000	0.000	0.000	0.093	0.468	0.170	0.285	0.144	0.273	0.861			
12-Apr	0.201	0.021	0.122	0.231	0.172	Z	0.128	0.239	0.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.134	0.628	0.476	0.178	0.079	0.118	0.628			
13-Apr	Z	0.348	0.345	0.377	0.558	0.285	0.396	0.560	0.451	0.393	0.560	0.550	0.163	0.043	0.060	0.025	0.000	0.000	0.000	0.136	0.217	0.157	0.043	0.000	0.246	0.560			
14-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.609	0.007	0.003	0.170	0.334	0.746	0.132	0.056	0.293	0.000	0.115	0.013	0.049	4.257	1.131	1.706	0.661	0.447	4.257			
15-Apr	0.650	0.505	Z	0.174	0.283	0.367	0.170	0.015	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.096	0.650			
16-Apr	0.017	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	0.006	0.000	0.003	0.048	0.005	0.003	0.024	0.000	0.005	0.048			
17-Apr	0.000	0.000	0.000	0.000	Z	0.018	C	C	C	0.000	0.000	0.004	0.000	0.000	0.003	0.000	0.017	0.009	0.000	0.000	0.116	0.096	0.104	0.237	0.030	0.237			
18-Apr	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	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.013			
19-Apr	Z	0.191	0.189	0.000	0.000	0.000	0.000	0.000	0.000	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	0.017	0.191			
20-Apr	0.000	Z	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.023	0.000	0.000	0.000	0.000	0.000	0.101	0.237	0.278	0.382	0.341	0.060	0.382			
21-Apr	0.241	0.158	Z	0.000	0.083	0.581	0.675	0.313	0.281	0.269	0.377	0.344	0.275	0.107	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.164	0.675			
22-Apr	0.065	0.083	0.298	Z	0.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.135	0.029	0.000	0.000	0.000	0.035	0.298			
23-Apr	0.000	0.000	0.000	0.009	Z	0.349	0.446	0.189	0.003	0.000	0.000	0.007	0.021	0.000	0.000	0.000	0.000	0.030	0.011	0.030	0.000	0.013	0.067	0.298	0.064	0.446			
24-Apr	0.296	0.137	0.106	0.289	0.651	Z	0.490	0.359	0.239	0.503	0.366	0.269	0.266	0.229	0.247	0.413	0.444	0.335	0.350	0.440	0.382	0.661	0.816	0.524	0.383	0.816			
25-Apr	Z	0.667	0.974	0.187	0.000	0.259	0.092	0.044	0.048	0.123	0.224	0.175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.159	0.128	0.974			
26-Apr	0.225	Z	0.644	0.399	0.028	0.062	0.002	0.063	0.148	0.042	0.003	0.000	0.038	0.000	0.003	0.000	0.016	0.047	0.049	0.017	0.000	0.003	0.000	0.000	0.078	0.644			
27-Apr	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	0.014	0.164	0.181	0.016	0.181			
28-Apr	0.010	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.005	0.123	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.003	0.007	0.123			
29-Apr	0.000	0.000	0.000	0.000	Z	0.260	0.247	0.056	0.006	0.000	0.000	0.000	0.000	0.000	0.049	0.012	0.003	0.000	0.085	0.290	0.382	0.412	0.377	0.487	0.116	0.487			
30-Apr	0.290	0.374	0.315	0.382	0.337	Z	0.127	0.012	0.127	0.147	0.103	0.018	0.021	0.000	0.000	0.009	0.024	0.045	0.058	0.029	0.000	0.000	0.003	0.037	0.107	0.382			
Diurnal Average																													
Diurnal Maximum																													
Z - zerospan C - Calibration																													



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	354	51.53	51.53
0.006 - 0.05	72	10.48	62.01
0.06 - 0.1	55	8.01	70.01
> 0.1	206	29.99	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	33	35	8	2	4	2	12	71	49	17	6	18	28	14	30	22	351
0.006 - 0.05	20	13	4	0	0	0	5	7	6	3	1	3	2	0	2	6	72
0.06 - 0.1	10	7	3	0	1	4	7	5	2	3	5	3	0	0	1	4	55
> 0.1	34	12	7	3	3	27	29	31	11	14	7	6	3	7	5	6	205
Totals	97	67	22	5	8	33	53	114	68	37	19	30	33	21	38	38	683

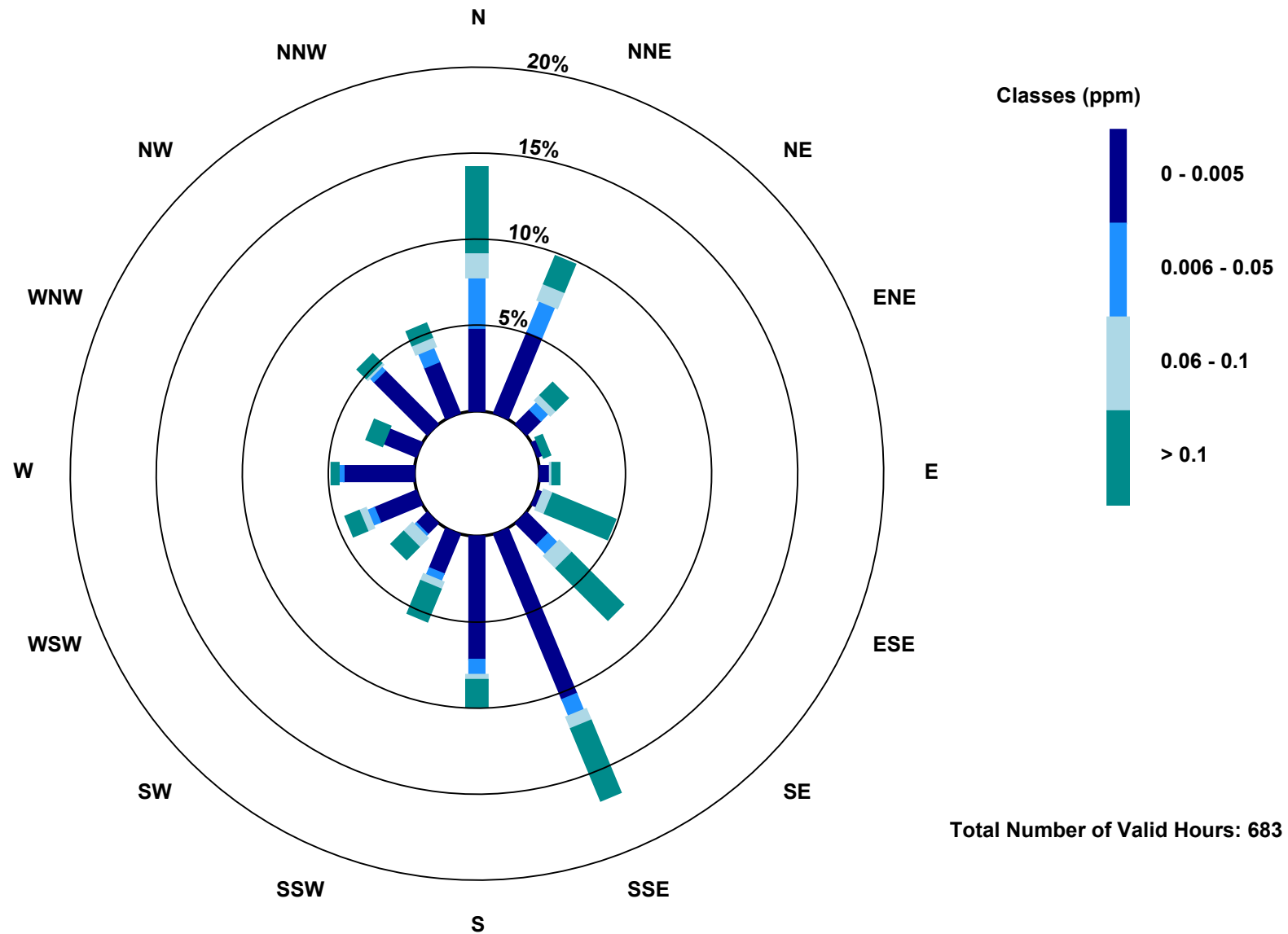
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Fort Hills



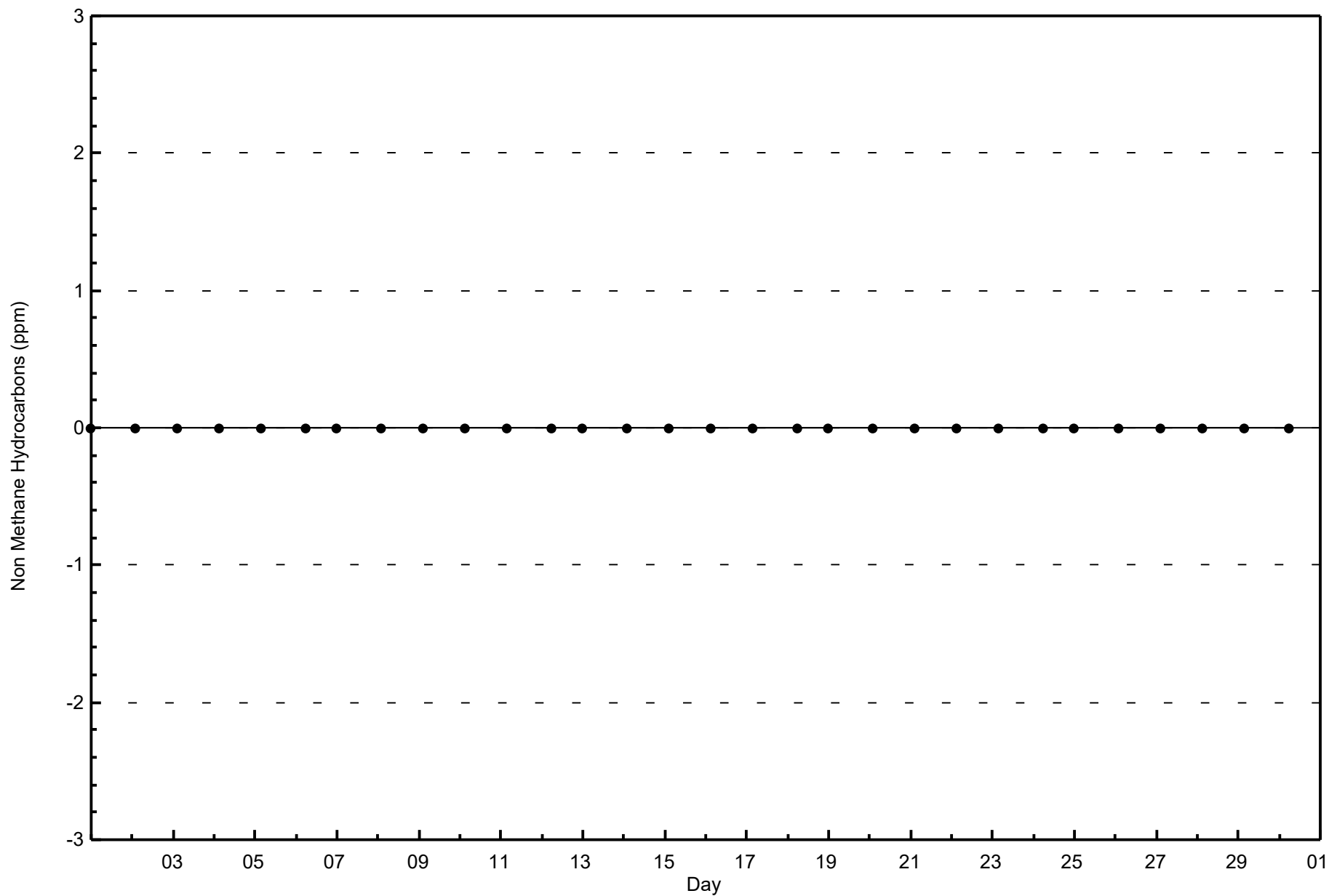


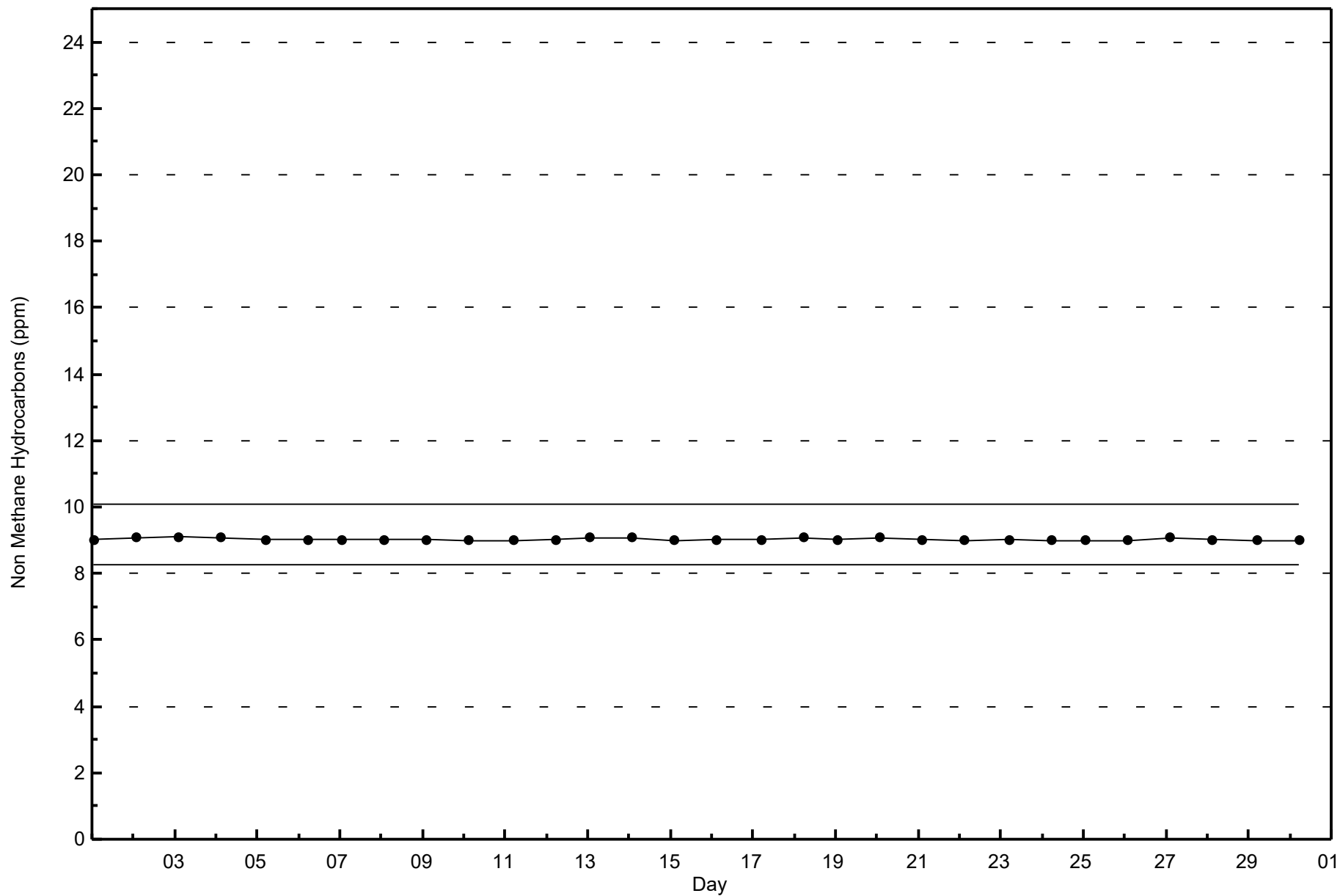
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH₄) - ppm

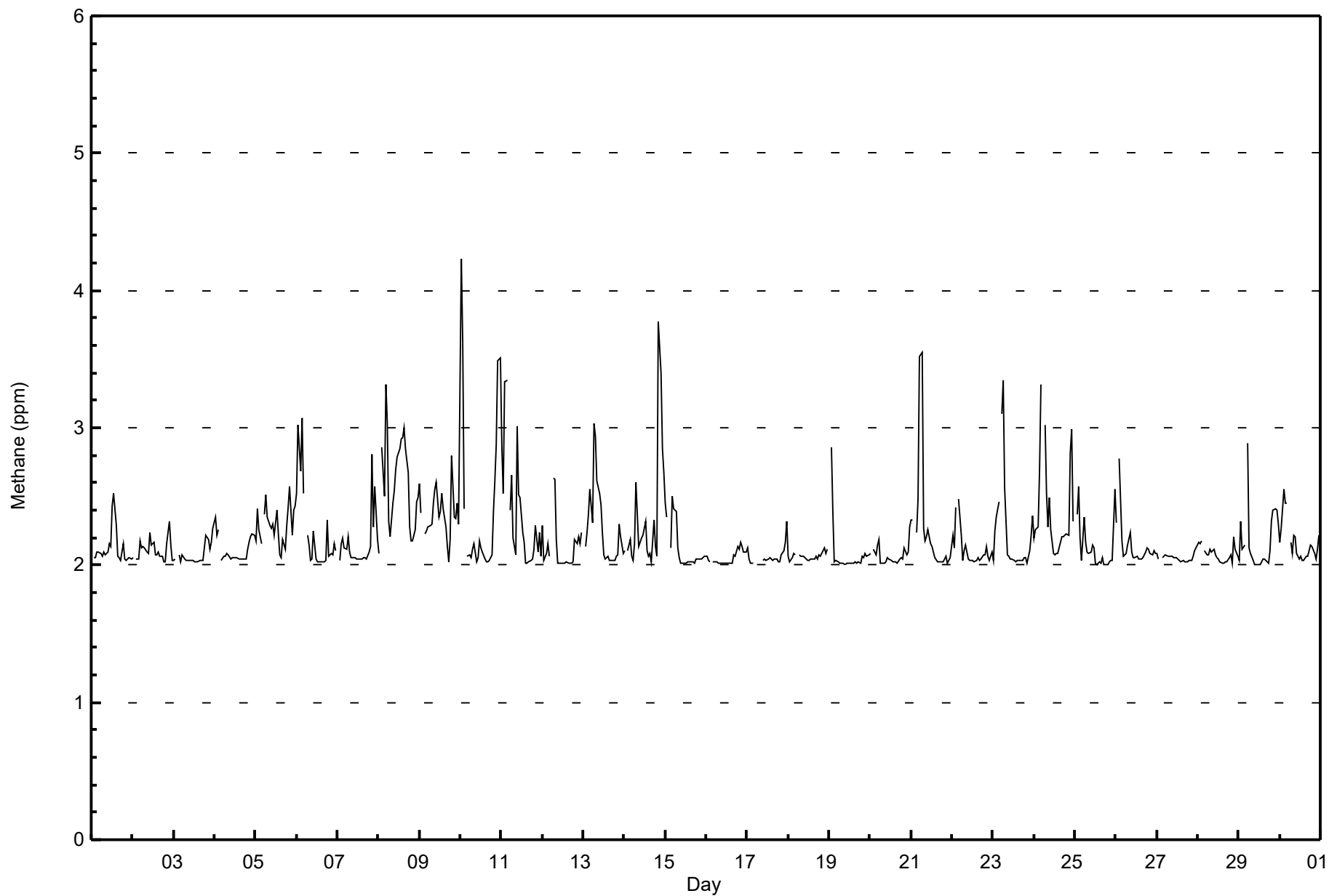
Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 4.2 ppm on Apr 10 01:00 Maximum Daily Average: 2.6 ppm on Apr 8																		Hours in Service: 720								
Minimum Value: 2.0 ppm on Apr 29 11:00 Minimum Daily Average: 2.1 ppm on Apr 16 Maximum Diurnal Average: 2.3 ppm at hour 3 Minimum Diurnal Average: 2.1 ppm at hour 18 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 = 2.5 P ₉₉ = 3.4																		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 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-Apr	Z	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	2.3	2.1	2.1	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.5
2-Apr	2.1	Z	2.0	2.0	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	2.0	2.0	2.2	2.3	2.1	2.0	2.1	2.3
3-Apr	2.0	2.0	Z	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.3	2.1	2.3
4-Apr	2.4	2.2	2.3	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.4
5-Apr	2.2	2.4	2.3	2.2	Z	2.4	2.5	2.3	2.3	2.3	2.3	2.2	2.4	2.2	2.1	2.0	2.2	2.1	2.3	2.4	2.6	2.2	2.4	2.4	2.3	2.6
6-Apr	2.5	3.0	2.7	3.1	2.5	Z	2.2	2.1	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.1	2.1	2.1	2.2	2.1	2.2	3.1
7-Apr	Z	2.0	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.8	2.3	2.6	2.2	2.2	2.8
8-Apr	2.1	Z	2.9	2.5	3.3	3.0	2.3	2.2	2.5	2.5	2.7	2.8	2.9	2.9	2.9	3.0	2.8	2.7	2.3	2.2	2.2	2.3	2.5	2.5	2.6	3.3
9-Apr	2.6	2.4	Z	2.2	2.2	2.3	2.3	2.3	2.4	2.6	2.6	2.3	2.4	2.5	2.4	2.3	2.1	2.0	2.2	2.8	2.3	2.3	2.4	2.3	2.4	2.8
10-Apr	4.2	3.6	2.4	Z	2.1	2.1	2.1	2.1	2.2	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.4	2.6	2.9	3.5	3.5	2.4	4.2
11-Apr	2.9	2.5	3.3	3.3	Z	2.4	2.7	2.2	2.1	3.0	2.5	2.5	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.2	2.1	2.4	3.3
12-Apr	2.3	2.0	2.1	2.2	2.1	Z	2.6	2.6	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.2	2.2	2.1	2.6
13-Apr	Z	2.1	2.2	2.4	2.6	2.3	3.0	2.9	2.6	2.5	2.4	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.1	2.3	3.0
14-Apr	2.1	Z	2.1	2.2	2.1	2.0	2.2	2.6	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.3	2.1	2.1	3.8	3.4	2.8	2.7	2.3	3.8
15-Apr	2.5	2.4	Z	2.1	2.5	2.4	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	2.0	2.0	2.0	2.1	2.1	2.1	2.5
16-Apr	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	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
17-Apr	2.1	2.0	2.0	2.0	Z	2.1	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.1	2.3
18-Apr	2.1	2.0	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Apr	Z	2.9	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.9
20-Apr	2.1	Z	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.3	2.1	2.3
21-Apr	2.3	2.3	Z	2.2	2.5	3.5	3.5	2.3	2.2	2.2	2.3	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	2.3	3.5
22-Apr	2.2	2.1	2.4	Z	2.5	2.2	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.5
23-Apr	2.0	2.2	2.3	2.5	Z	3.1	3.3	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.4	2.2	3.3
24-Apr	2.2	2.3	2.3	2.7	3.3	Z	3.0	2.5	2.3	2.5	2.3	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.8	3.0	2.3	2.4	3.3
25-Apr	Z	2.4	2.6	2.2	2.0	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.6	2.1	2.6
26-Apr	2.3	Z	2.8	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8
27-Apr	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
28-Apr	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.2	2.1	2.1	2.1	2.2
29-Apr	2.0	2.3	2.1	2.1	Z	2.9	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	2.3	2.4	2.4	2.4	2.3	2.2	2.9
30-Apr	2.2	2.3	2.5	2.5	2.5	Z	2.2	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.2	2.5
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Fort Hills - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	230	33.48	33.48
2.1 - 3.0	442	64.34	97.82
3.1 - 10.0	15	2.18	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 (CH₄) - ppm
Fort Hills - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	14	24	12	2	2	2	5	32	27	9	3	18	27	10	24	18	229
2.1 - 3.0	77	43	10	3	5	28	47	81	41	27	16	12	6	11	14	18	439
3.1 - 10.0	6	0	0	0	1	3	1	1	0	1	0	0	0	0	0	2	15
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	67	22	5	8	33	53	114	68	37	19	30	33	21	38	38	683

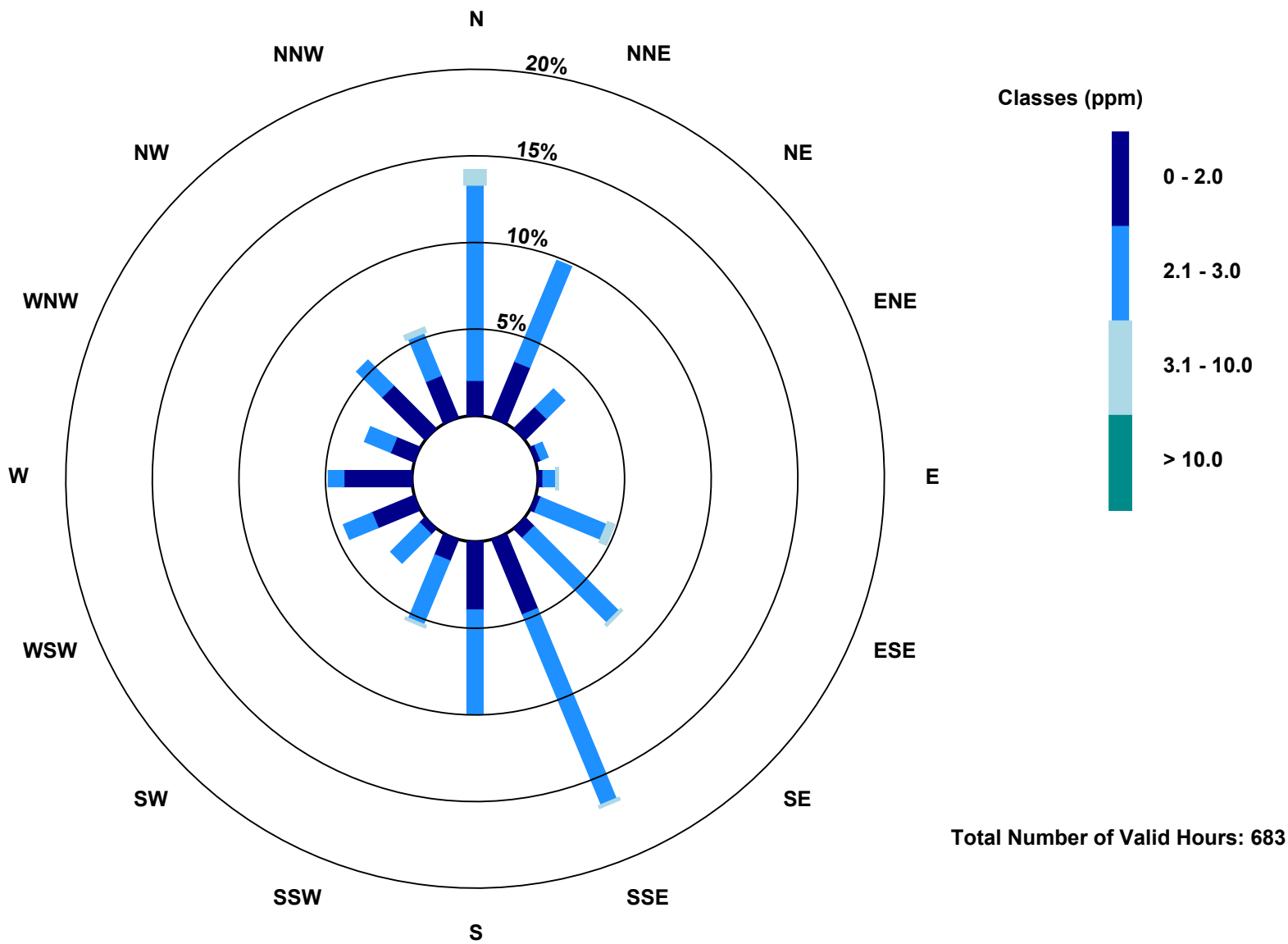
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

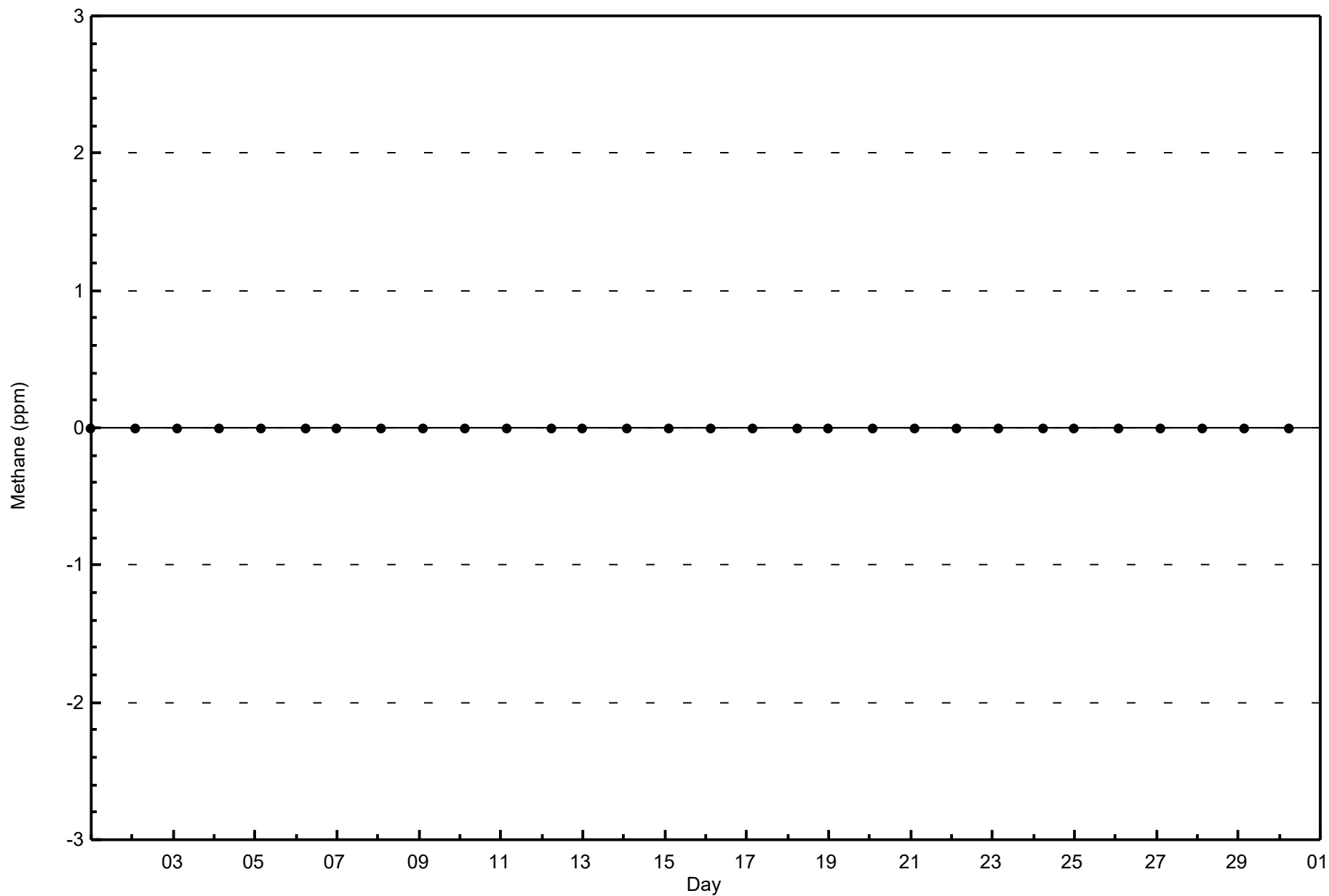
Methane (CH₄) - ppm
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

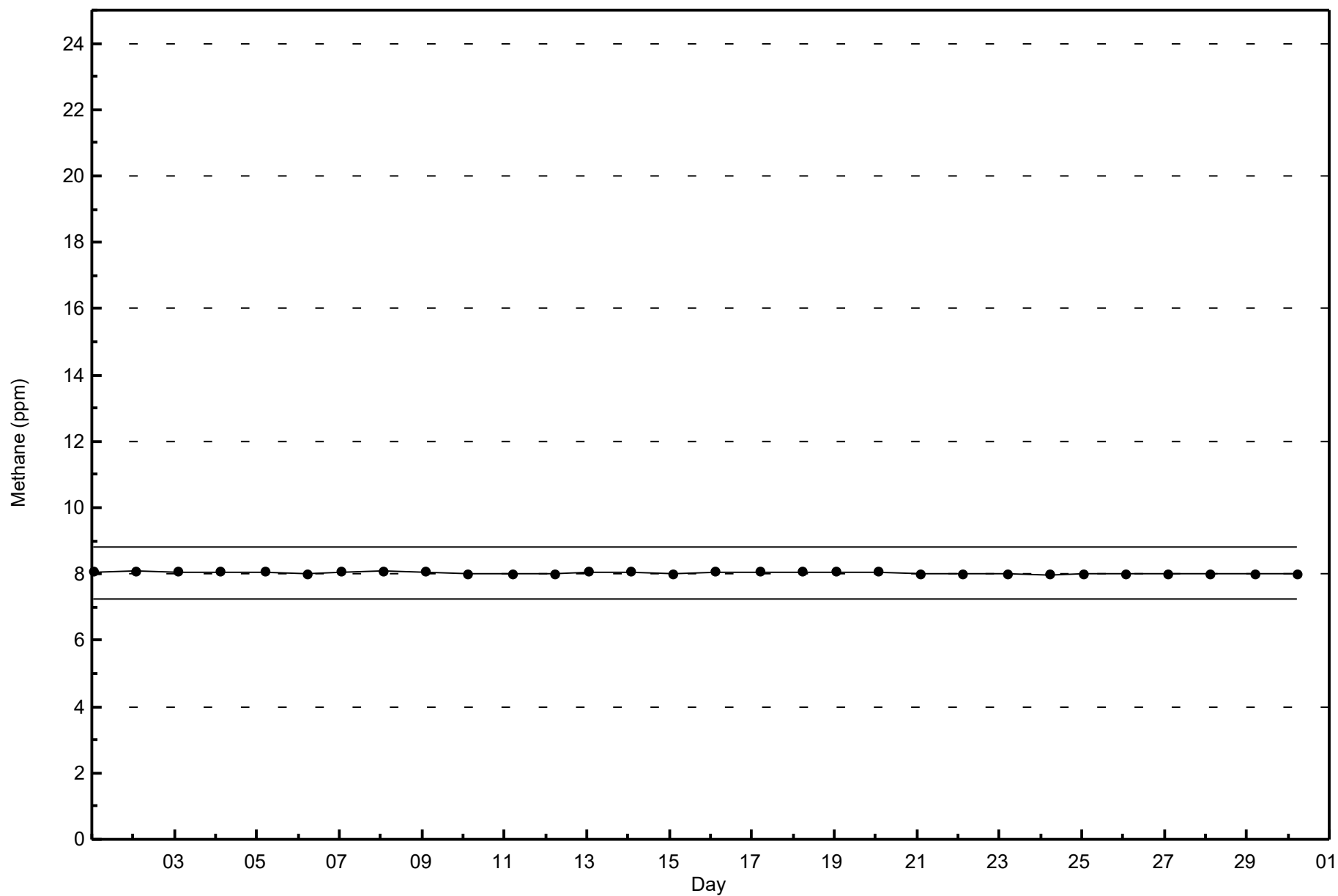
Methane (CH₄) - ppm
Fort Hills - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Fort Hills - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

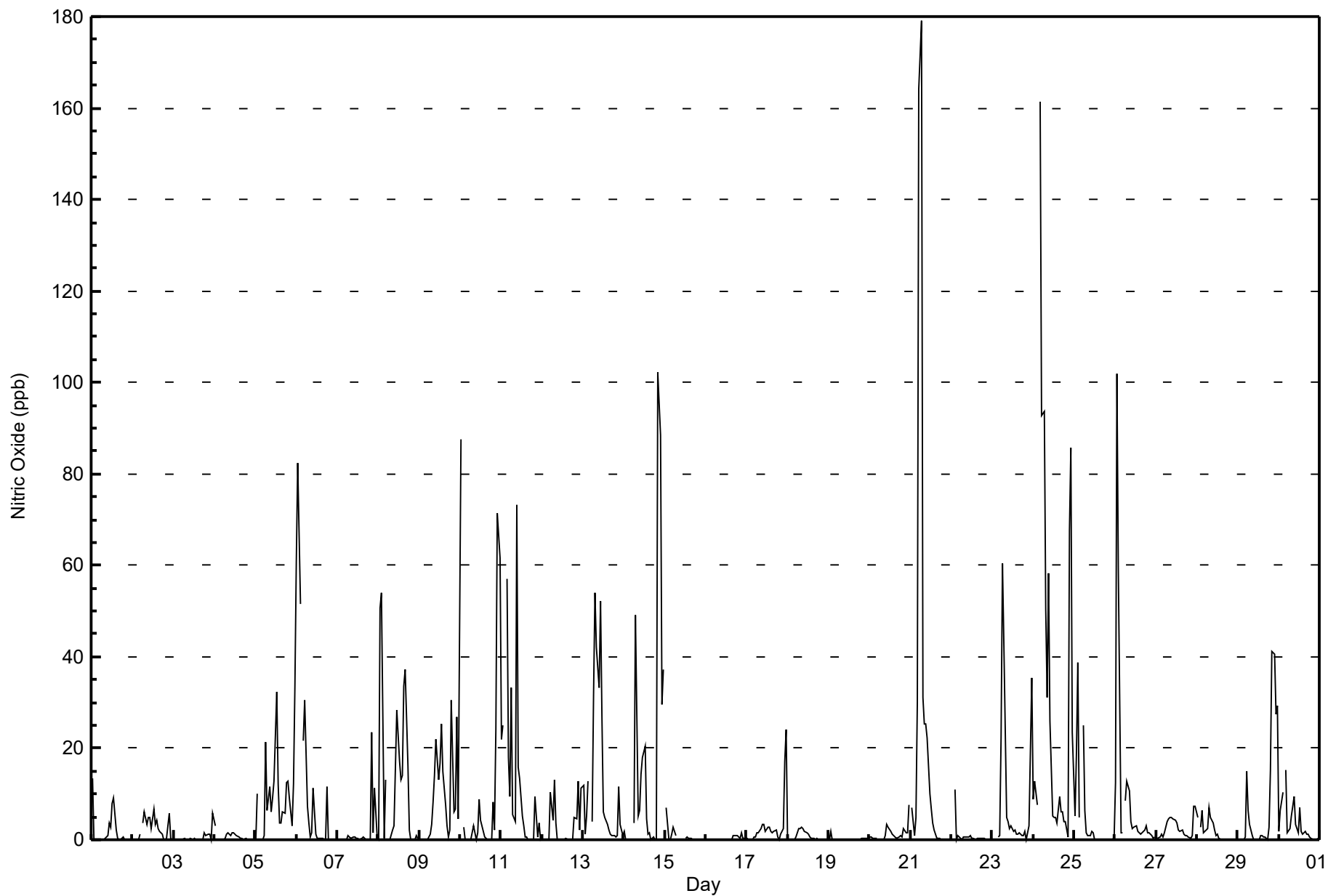
Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 179.2 ppb on Apr 21 07:00 Maximum Daily Average: 33.4 ppb on Apr 24																				Hours in Service: 720						
Minimum Value: 0.0 ppb on Apr 1 02:00 Minimum Daily Average: 0.2 ppb on Apr 19 Maximum Diurnal Average: 15.9 ppb at hour 7 Minimum Diurnal Average: 1.4 ppb at hour 18 Monthly Average: 7.14 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 1.0 Q ₃ = 4.9 P ₉₀ = 20.1 P ₉₉ = 89.3																				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 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-Apr	13.5	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.3	0.8	3.5	2.8	7.9	9.2	2.1	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.8	13.5
2-Apr	0.0	0.0	0.0	0.0	1.3	Z	3.7	6.2	3.4	4.8	4.9	2.5	6.6	3.5	4.3	2.5	1.7	1.2	0.0	0.0	0.3	5.9	0.3	0.0	2.3	6.6
3-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.1	0.0	0.1	1.5	0.9	1.2	1.2	0.1	5.7	0.5	5.7
4-Apr	2.9	Z	0.1	0.0	0.0	0.0	0.3	1.2	1.6	0.8	1.5	1.5	1.2	1.1	0.5	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.6	2.9
5-Apr	0.0	10.0	Z	0.0	0.0	0.8	21.2	6.4	11.6	6.0	9.1	13.0	32.5	12.2	3.6	3.5	6.1	5.9	12.5	12.9	9.2	3.0	12.2	33.4	9.8	33.4
6-Apr	60.6	82.4	51.7	Z	21.7	30.4	7.3	3.6	0.6	1.5	11.2	1.2	0.3	0.3	0.2	0.3	0.1	0.4	11.6	0.1	0.0	0.0	0.0	0.0	12.4	82.4
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.9	0.5	0.3	0.5	0.5	0.2	0.2	0.1	0.2	0.5	0.4	0.0	0.0	0.0	23.5	1.5	11.3	0.4	1.8	23.5
8-Apr	0.0	50.8	54.1	0.4	13.1	Z	0.0	0.1	2.2	3.1	15.5	28.3	17.2	13.2	13.9	33.6	37.2	16.2	2.0	0.0	0.0	0.0	0.8	0.3	13.1	54.1
9-Apr	Z	0.0	0.0	0.0	0.0	0.1	1.3	3.5	8.2	14.1	21.8	13.1	16.8	25.3	14.9	7.6	3.0	0.6	2.1	30.4	6.2	6.6	26.7	4.7	9.0	30.4
10-Apr	87.6	Z	2.9	0.0	0.0	0.0	0.0	1.6	3.2	0.1	1.6	8.9	4.4	3.1	0.6	0.2	0.1	0.1	0.1	8.3	2.0	24.2	71.5	61.8	12.3	87.6
11-Apr	21.9	24.9	Z	57.0	18.1	9.4	33.4	5.6	4.1	73.2	15.8	13.4	5.3	3.1	0.5	0.5	0.0	0.0	0.0	0.0	9.3	0.5	3.8	0.1	13.0	73.2
12-Apr	0.3	0.0	0.1	Z	0.0	10.3	4.1	13.0	3.8	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	5.0	4.5	12.7	2.2	11.2	3.0	13.0
13-Apr	11.8	1.3	5.1	12.8	Z	4.1	31.7	53.9	42.2	33.4	52.3	26.8	6.1	4.8	3.3	2.0	1.3	1.1	0.9	0.6	0.8	11.7	3.4	1.0	13.6	53.9
14-Apr	1.8	0.0	0.0	0.1	0.0	Z	3.6	49.1	5.1	6.5	14.4	18.0	20.6	4.6	1.2	1.6	0.0	0.6	0.0	0.4	102.2	88.6	29.5	37.1	16.7	102.2
15-Apr	Z	7.2	0.0	0.0	1.2	2.7	0.8	C	C	C	C	C	0.3	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.2
16-Apr	0.0	Z	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	0.0	0.8	1.0	1.0	0.5	0.3	1.4	0.4	0.2	0.3	1.4
17-Apr	0.2	0.1	Z	0.1	0.6	0.8	1.6	1.7	2.5	3.3	3.4	1.9	2.9	2.7	1.9	1.6	1.9	2.1	0.6	0.1	1.3	2.3	17.2	24.2	3.3	24.2
18-Apr	0.0	0.0	0.0	Z	0.0	0.7	2.5	2.4	2.6	2.4	1.8	1.6	1.3	0.6	0.2	0.4	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.6
19-Apr	0.0	1.8	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	0.1	0.0	0.0	0.0	0.2	0.3	0.4	0.3	0.2	0.2	1.8
20-Apr	0.6	0.5	0.4	0.3	0.3	Z	0.1	0.1	0.0	1.0	3.4	2.7	1.9	1.1	1.0	0.5	0.2	0.7	0.8	0.5	2.4	1.7	1.4	7.6	1.3	7.6
21-Apr	Z	6.9	0.8	4.9	30.2	164.2	179.2	31.1	25.4	25.4	22.2	10.2	6.7	3.6	2.2	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	22.3	179.2
22-Apr	0.1	Z	11.0	0.1	0.9	0.3	0.0	0.5	0.6	0.5	0.6	0.8	0.2	0.4	0.1	0.2	0.2	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.7	11.0
23-Apr	0.1	0.0	Z	0.5	0.9	22.3	60.3	42.7	5.0	3.9	2.4	3.0	1.8	2.1	1.2	1.1	1.6	0.9	0.8	1.8	0.0	3.1	19.3	35.3	9.1	60.3
24-Apr	8.9	12.7	7.7	Z	161.4	92.8	93.7	50.2	31.1	58.3	25.8	5.1	5.0	5.0	3.6	9.5	6.0	6.0	4.1	4.0	0.7	67.8	85.8	23.5	33.4	161.4
25-Apr	5.2	18.9	38.6	4.8	Z	25.0	6.3	1.4	1.0	0.9	1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.6	38.6
26-Apr	12.5	101.8	59.3	1.5	1.5	Z	8.6	12.9	10.6	3.9	2.5	2.8	3.0	1.7	1.6	1.1	1.4	2.2	3.1	1.5	1.5	0.9	0.5	0.6	10.3	101.8
27-Apr	Z	0.3	0.7	1.1	0.6	1.4	4.0	4.7	5.0	5.0	4.6	4.4	3.5	2.2	1.9	2.0	1.3	1.0	1.0	0.7	0.2	0.8	7.3	7.2	2.6	7.3
28-Apr	4.7	Z	2.6	6.3	1.6	2.2	2.6	7.1	4.9	3.6	2.0	1.0	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.1
29-Apr	0.0	0.0	Z	0.0	0.7	14.8	6.5	3.3	1.0	0.0	0.0	0.0	0.0	0.9	0.9	0.7	0.5	0.0	2.7	15.2	41.2	40.7	27.4	29.4	8.1	41.2
30-Apr	1.9	6.5	10.5	Z	15.3	1.5	2.3	5.3	7.3	9.5	3.5	1.7	7.0	1.8	1.2	1.7	1.2	1.1	0.7	0.4	0.1	0.0	0.1	0.2	3.5	15.3
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	616	89.93	89.93
21 - 40	38	5.55	95.47
41 - 80	20	2.92	98.39
81 - 159	8	1.17	99.56
> 159	3	0.44	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	81	65	22	5	6	24	44	108	67	34	16	27	29	14	37	33	612
21 - 40	6	3	0	0	0	4	9	6	1	2	0	0	2	0	1	4	38
11 - 80	7	2	0	0	0	1	1	2	0	1	0	0	0	3	2	1	20
81 - 159	2	0	0	0	0	3	2	0	0	0	0	0	0	0	0	1	8
> 159	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Totals	97	70	22	5	7	32	56	116	68	37	16	27	31	17	40	40	681

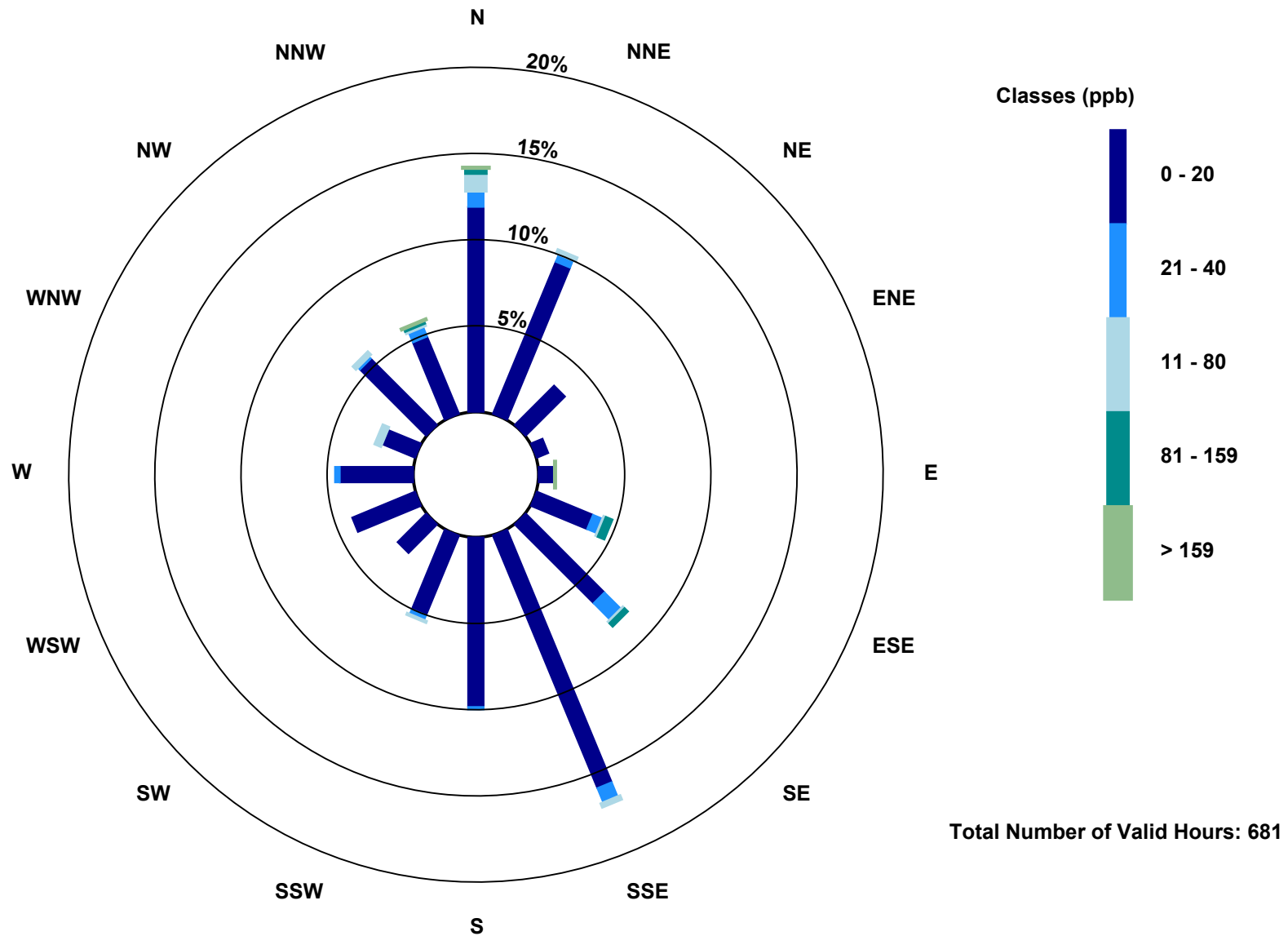
Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

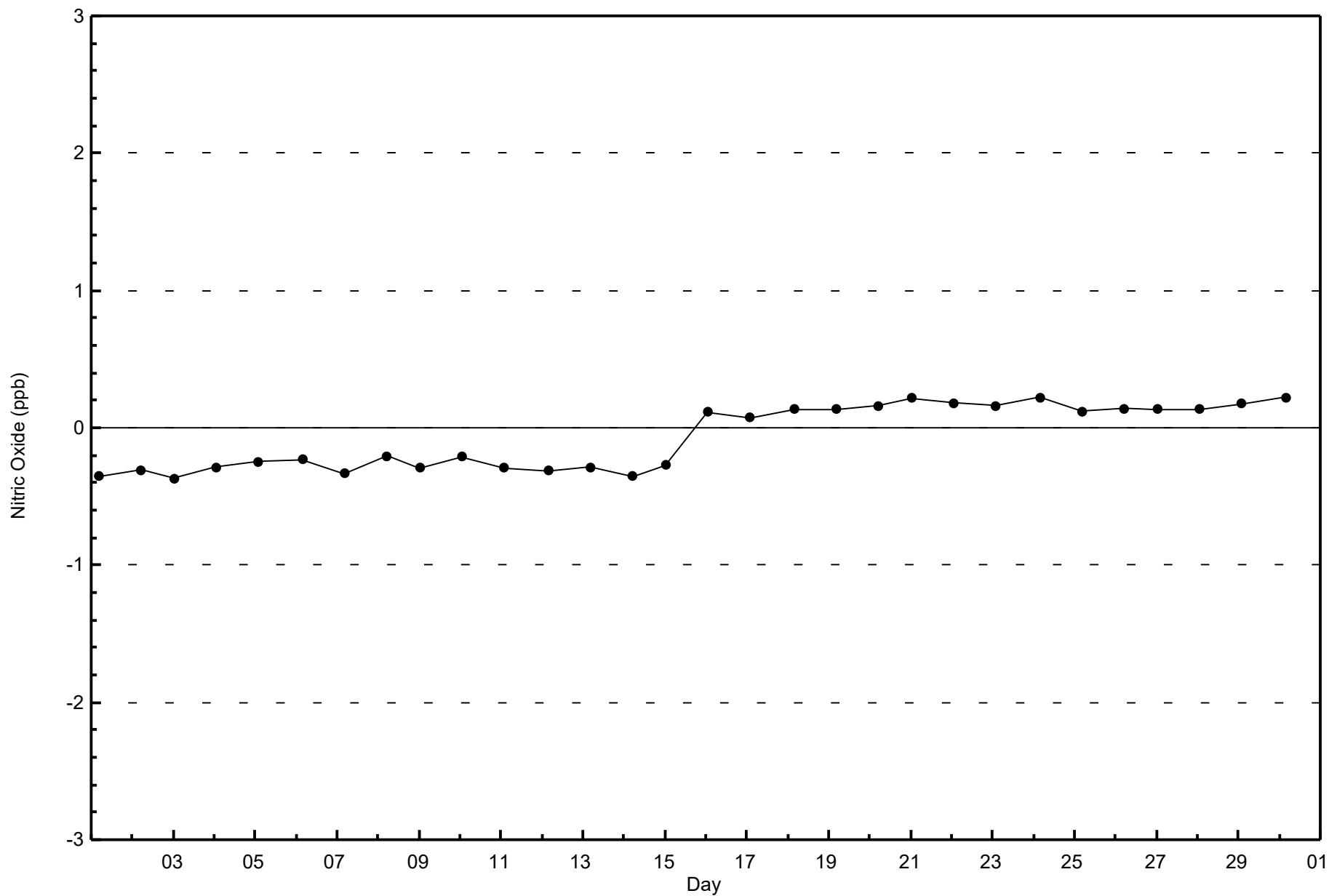
Nitric Oxide (NO) - ppb
Fort Hills





Wood Buffalo Environmental Association
Zero Responses

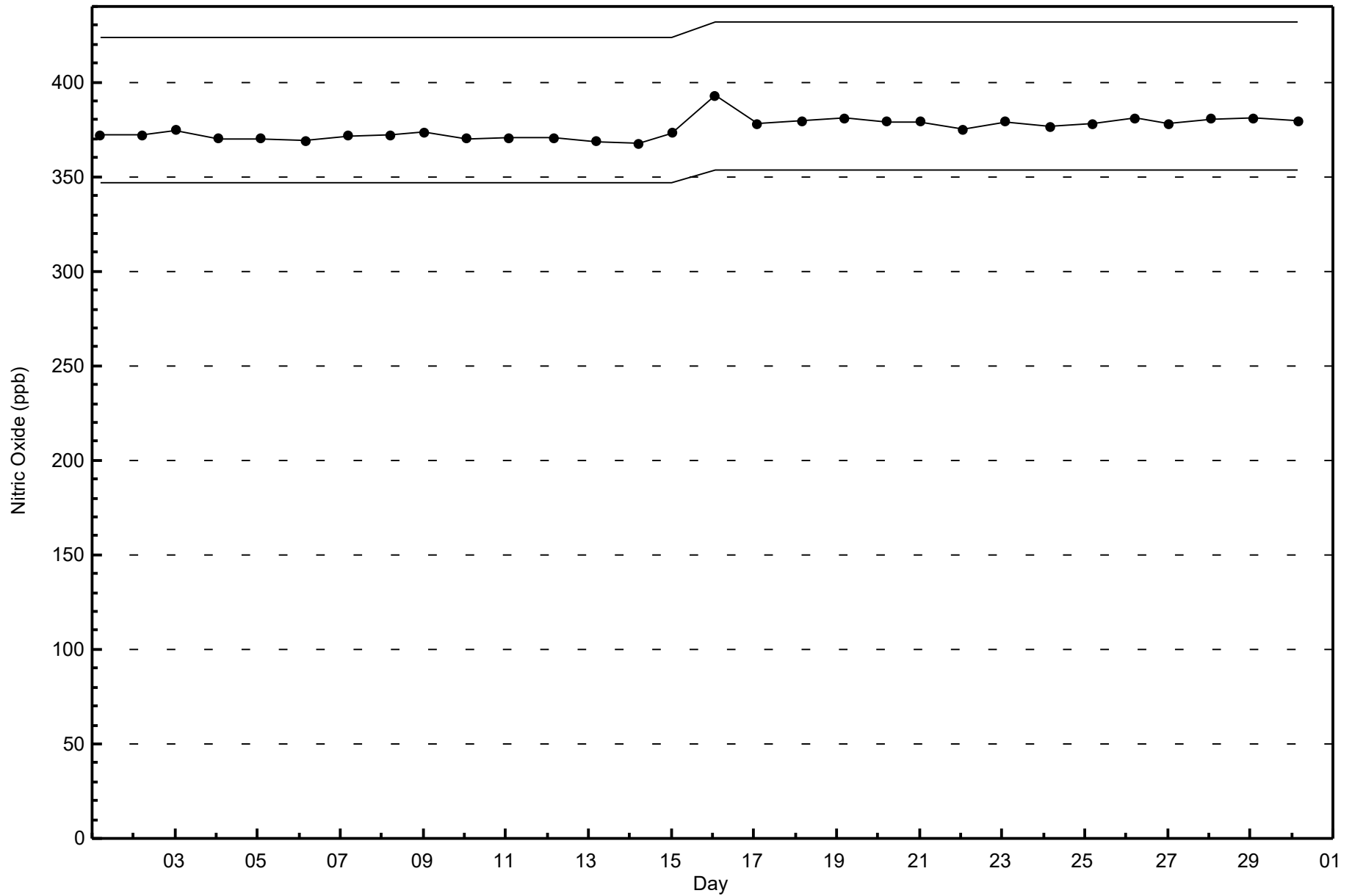
Nitric Oxide (NO) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Fort Hills - April 2025

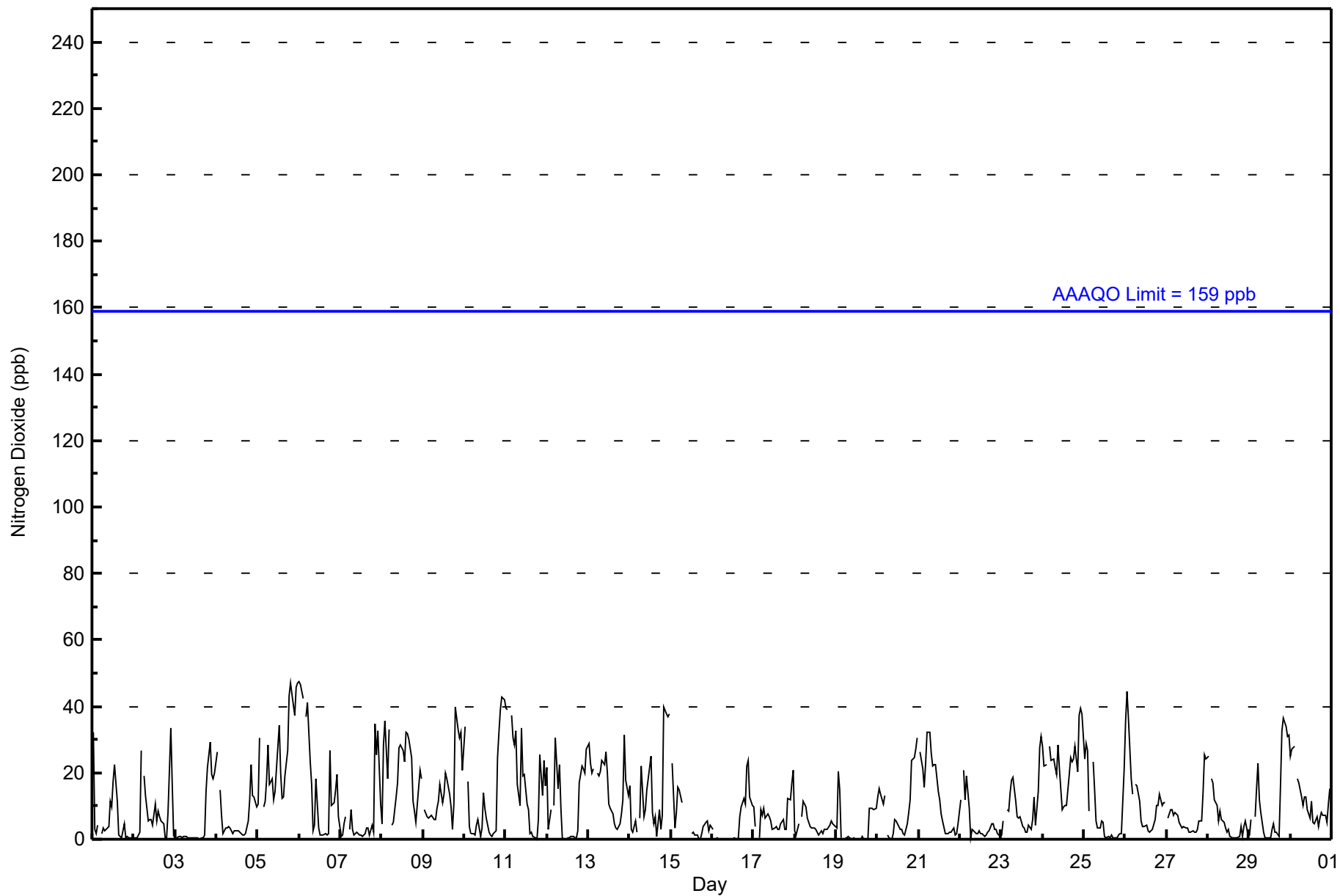


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 47.6 ppb on Apr 6 01:00																			Maximum Daily Average: 25.2 ppb on Apr 5		Hours of Data: 685					
Minimum Value: 0.1 ppb on Apr 15 17:00																			Minimum Daily Average: 3.9 ppb on Apr 19		Hours of Missing Data: 35					
Maximum Diurnal Average: 19.0 ppb at hour 23																			Minimum Diurnal Average: 4.6 ppb at hour 17		Hours of Calibration: 35					
Monthly Average: 10.85 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 2.1 Median = 6.5 Q ₃ = 17.4 P ₉₀ = 27.9 P ₉₉ = 43.3		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-Apr	32.3	3.0	1.6	4.1	Z	1.8	3.3	2.5	3.0	4.0	11.4	9.7	17.4	22.3	11.4	1.3	0.8	0.4	4.6	0.6	0.7	0.3	0.4	0.4	6.0	32.3
2-Apr	0.3	0.6	0.4	2.3	26.6	Z	19.1	13.0	5.5	6.0	5.9	4.1	10.8	5.7	8.3	6.8	5.4	4.7	0.5	0.5	8.1	33.5	16.5	0.8	8.1	33.5
3-Apr	Z	0.3	0.7	0.7	0.5	0.8	0.9	0.4	0.4	0.4	0.6	0.5	0.5	0.3	0.2	0.6	0.4	1.2	14.5	21.8	29.1	19.4	18.2	20.1	5.8	29.1
4-Apr	26.3	Z	14.8	7.0	1.9	3.5	3.4	3.7	3.2	1.6	2.7	2.6	2.4	2.5	1.6	1.1	1.4	1.9	5.5	11.8	22.3	13.2	12.8	9.9	6.8	26.3
5-Apr	10.5	30.7	Z	9.6	11.3	17.9	28.3	16.5	18.1	11.9	14.3	21.0	34.2	19.8	12.1	12.6	18.9	26.8	43.3	47.1	43.6	37.4	45.8	47.0	25.2	47.1
6-Apr	47.6	46.8	42.2	Z	37.0	41.2	23.3	16.4	2.6	4.3	18.4	3.2	1.2	1.3	1.3	1.7	1.1	1.8	26.8	10.2	11.0	14.8	19.3	6.6	16.5	47.6
7-Apr	0.9	1.2	4.6	6.6	Z	2.9	8.9	3.1	1.4	2.0	1.9	1.1	1.3	1.0	1.5	3.5	3.2	1.1	4.3	2.3	34.8	25.3	32.6	10.5	6.8	34.8
8-Apr	4.6	28.2	35.4	18.3	33.2	Z	4.2	5.0	12.5	17.1	27.4	28.5	26.6	23.1	32.0	31.9	30.1	24.6	11.6	8.3	5.2	15.5	20.6	18.2	20.1	35.4
9-Apr	Z	9.0	6.7	6.5	6.6	7.3	5.8	6.1	9.2	11.3	16.5	11.2	13.7	20.1	18.4	13.7	9.7	3.0	10.4	40.0	33.0	30.6	32.2	20.8	14.9	40.0
10-Apr	34.1	Z	17.4	4.0	1.5	1.8	1.2	4.2	6.1	0.8	3.3	14.0	9.3	6.5	2.3	1.2	1.0	1.7	2.6	24.5	32.3	39.1	42.6	41.8	12.8	42.6
11-Apr	39.5	38.9	Z	37.1	30.4	28.2	32.6	16.7	10.1	33.5	19.1	19.3	10.4	9.0	1.7	2.0	0.8	0.3	0.2	5.8	25.4	13.1	23.9	15.9	18.0	39.5
12-Apr	21.4	3.1	8.7	Z	10.2	30.5	15.3	22.4	9.5	0.6	0.2	0.2	0.3	0.5	0.9	0.8	0.6	0.6	2.7	17.1	22.2	21.3	20.0	27.0	10.3	30.5
13-Apr	28.7	22.9	19.8	21.1	Z	19.8	19.2	20.2	23.8	22.4	26.1	19.8	10.8	9.5	7.5	4.8	3.2	3.0	4.7	7.7	11.9	31.5	17.7	13.1	16.1	31.5
14-Apr	16.2	3.0	2.0	5.5	2.3	Z	6.4	22.0	6.6	8.7	14.8	18.2	24.9	8.0	4.7	6.8	0.9	8.8	2.9	7.4	39.9	37.7	36.8	37.7	14.0	39.9
15-Apr	Z	22.9	3.4	8.1	15.6	14.9	11.2	C	C	C	C	C	1.7	2.3	1.4	1.3	0.1	0.1	1.8	3.8	5.2	5.4	2.7	4.4	5.9	22.9
16-Apr	3.1	Z	0.2	0.4	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	6.7	9.9	12.3	10.5	22.2	23.7	12.5	10.3	5.0	23.7
17-Apr	9.6	3.9	Z	0.6	8.7	7.4	9.3	6.3	7.6	6.7	5.3	3.0	3.6	3.7	2.9	3.0	4.5	6.0	3.1	3.0	12.3	11.8	17.0	20.7	7.0	20.7
18-Apr	2.4	1.1	4.5	Z	6.7	11.6	9.8	6.5	5.2	3.8	3.2	3.3	3.0	2.1	1.4	2.7	1.5	2.8	2.8	3.1	4.3	5.5	4.8	4.1	4.2	11.6
19-Apr	3.6	20.2	14.9	0.5	Z	0.5	0.5	0.7	0.3	0.2	0.4	0.2	0.2	0.2	0.1	0.7	0.1	0.2	0.2	9.4	9.3	9.4	9.0	9.3	3.9	20.2
20-Apr	12.7	15.1	13.4	10.6	13.1	Z	1.3	0.6	0.2	1.9	6.1	5.3	3.9	2.8	3.1	1.8	1.2	4.7	8.1	11.9	23.6	24.6	27.1	30.3	9.7	30.3
21-Apr	Z	26.2	21.3	15.7	22.8	32.2	32.0	25.7	21.9	22.5	22.5	14.4	11.8	7.8	5.6	1.8	1.6	1.6	2.2	2.0	3.6	1.2	1.9	4.6	13.2	32.2
22-Apr	11.7	Z	20.9	12.0	19.0	9.4	0.6	2.8	2.6	1.5	1.9	2.5	1.5	1.6	1.0	1.3	2.3	2.6	4.8	4.7	3.1	3.1	1.5	0.7	4.9	20.9
23-Apr	1.2	5.4	Z	9.0	8.5	13.8	18.0	18.7	11.3	6.9	6.3	6.7	3.8	3.2	2.2	2.3	4.2	3.0	5.8	12.9	4.2	14.3	27.6	31.0	9.6	31.0
24-Apr	27.9	22.1	22.4	Z	28.1	23.9	24.3	21.8	19.4	28.3	21.0	9.0	9.9	10.3	10.1	19.5	24.7	23.3	24.1	27.9	20.4	37.4	39.6	37.7	23.2	39.6
25-Apr	24.0	28.7	26.5	8.6	Z	23.1	14.7	5.4	3.5	3.2	5.6	5.2	0.8	0.6	0.7	0.5	1.1	0.4	0.4	0.4	1.2	1.7	1.9	21.3	7.8	28.7
26-Apr	35.8	44.5	36.5	18.3	13.7	Z	16.7	16.0	11.3	5.3	3.7	3.8	4.3	2.7	2.0	2.4	3.0	6.0	10.3	10.2	13.7	10.0	11.2	11.1	12.7	44.5
27-Apr	Z	6.5	9.0	8.8	7.1	7.9	7.0	5.0	4.3	3.6	3.7	3.6	3.2	2.2	2.0	2.4	2.0	2.1	2.9	5.4	5.7	14.0	25.4	24.0	6.9	25.4
28-Apr	25.1	Z	18.4	17.0	11.8	10.2	5.5	8.6	6.1	5.2	3.2	2.1	2.8	1.0	0.4	0.4	0.3	0.4	0.7	3.7	0.7	3.9	5.5	1.2	5.8	25.1
29-Apr	1.1	5.9	Z	6.6	15.4	22.7	11.8	8.0	2.1	0.4	0.4	0.4	0.6	3.1	4.5	2.2	2.1	0.8	16.3	32.7	36.6	34.1	30.9	31.3	11.7	36.6
30-Apr	24.9	27.2	28.0	Z	18.1	17.0	12.7	10.3	12.6	12.9	8.7	6.5	11.4	5.1	4.6	6.6	3.8	6.5	8.0	7.0	7.0	4.9	10.5	15.2	11.7	28.0
																								Diurnal Average		
																								Diurnal Maximum		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	549	80.15	80.15
21 - 40	124	18.10	98.25
41 - 80	12	1.75	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 (NO₂) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	73	59	17	3	5	17	38	98	63	32	12	25	30	13	34	27	546
21 - 40	16	11	5	2	2	14	16	18	5	5	4	2	1	4	6	12	123
11 - 80	8	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	12
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	70	22	5	7	32	56	116	68	37	16	27	31	17	40	40	681

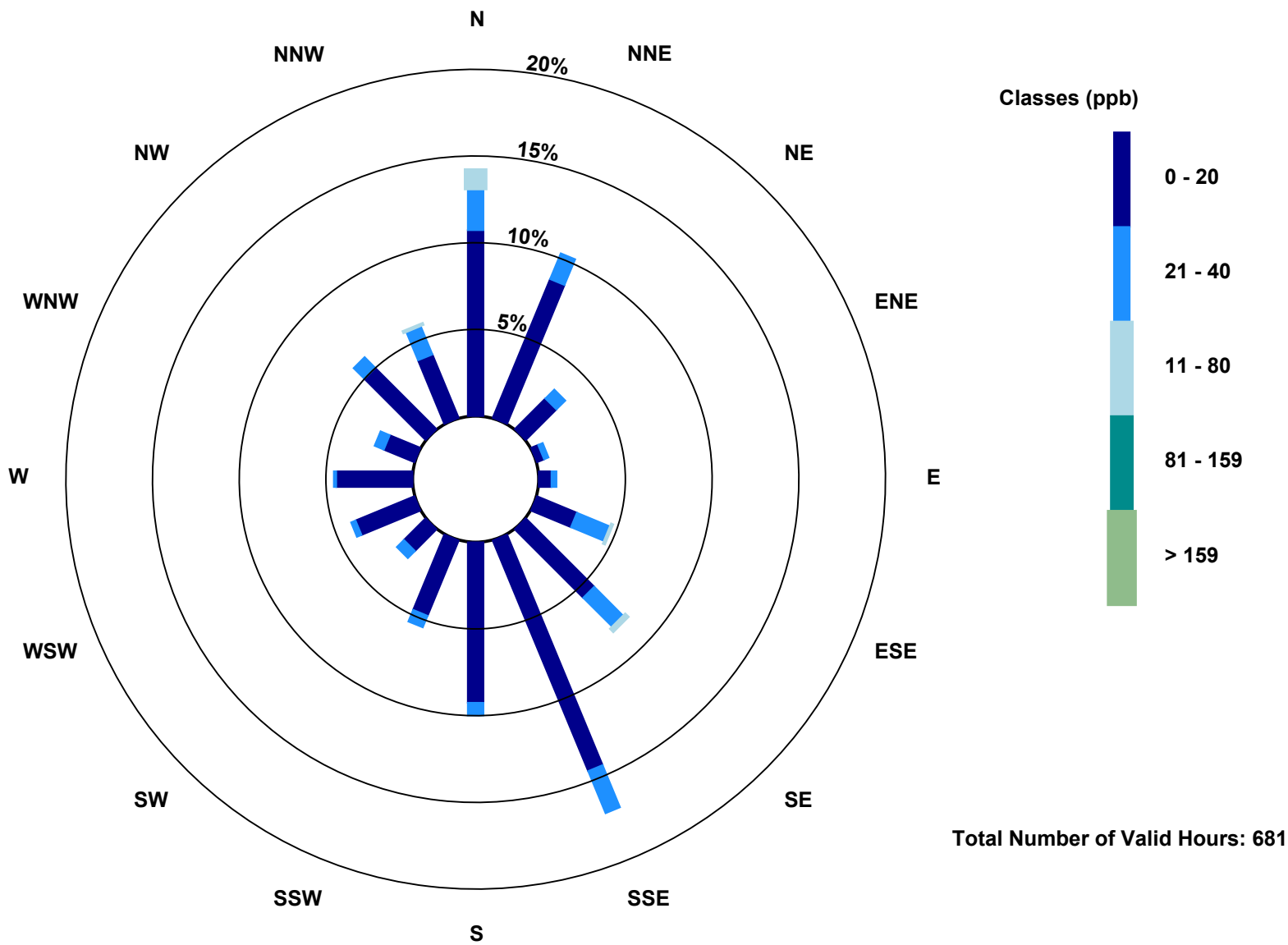
Total Number of Valid Hours: 681

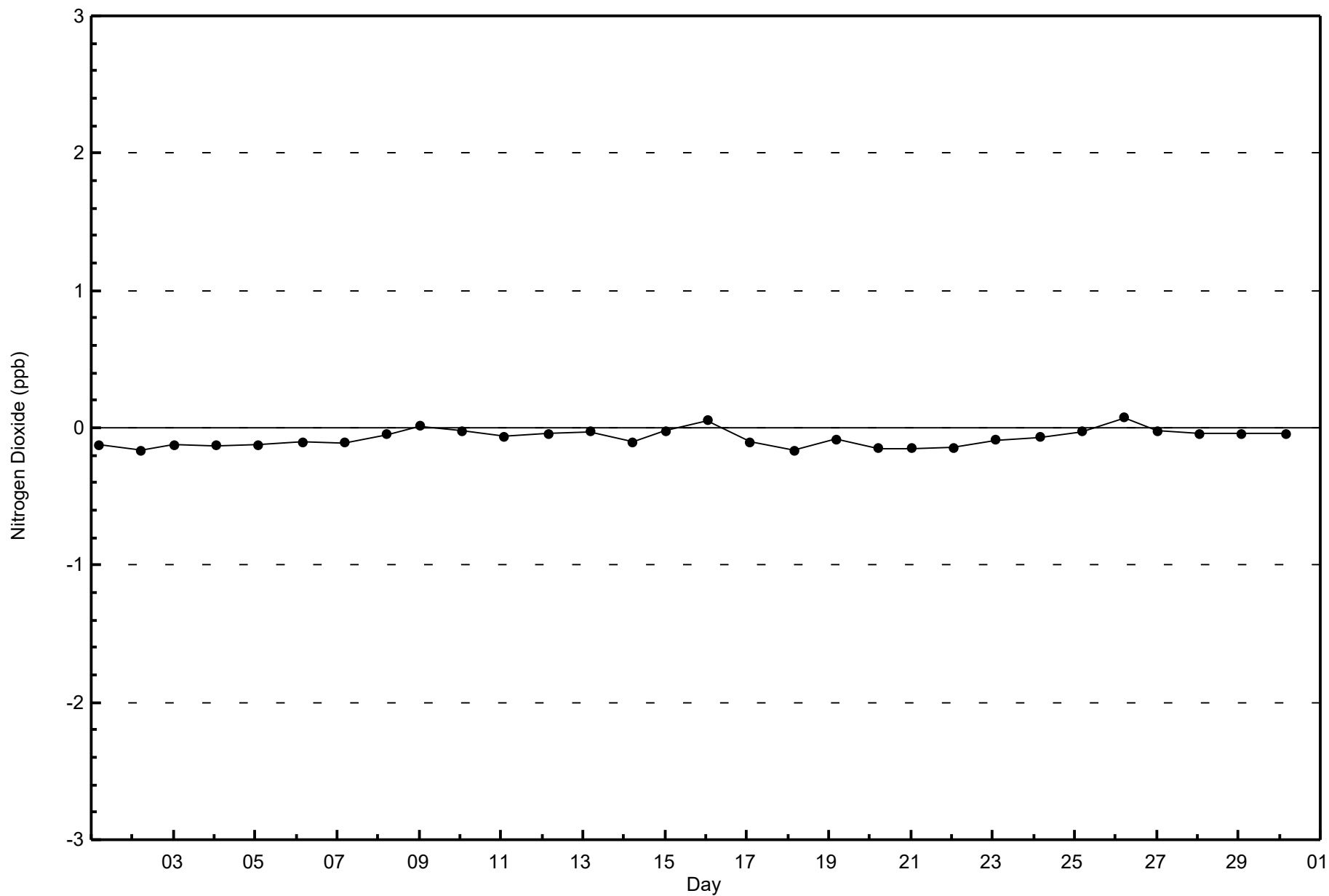
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Fort Hills

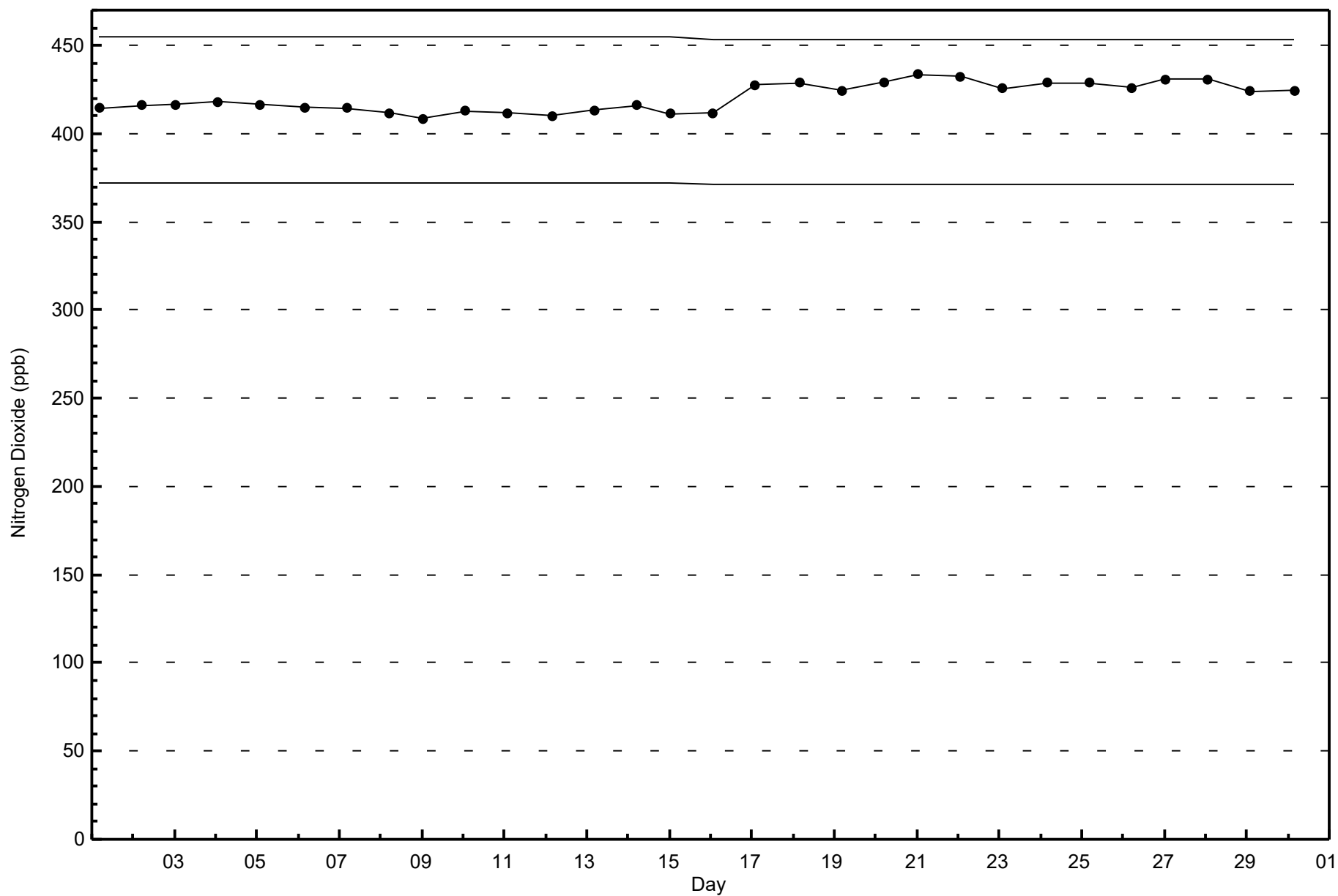






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

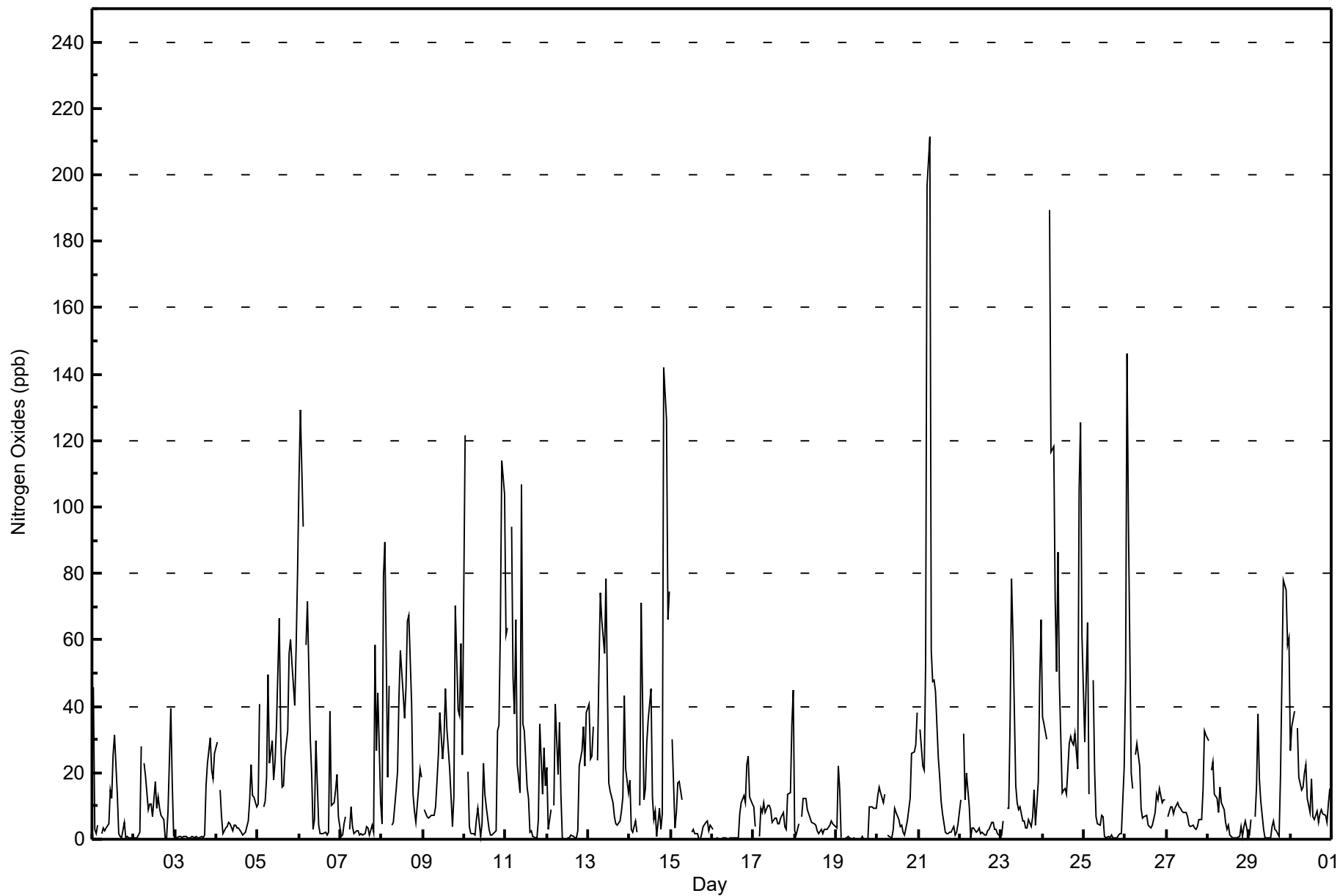
Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 211.2 ppb on Apr 21 07:00 Maximum Daily Average: 56.6 ppb on Apr 24																					Hours in Service: 720						
Minimum Value: 0.1 ppb on Apr 15 18:00 Minimum Daily Average: 4.1 ppb on Apr 19 Maximum Diurnal Average: 29.7 ppb at hour 2 Minimum Diurnal Average: 6.4 ppb at hour 18 Monthly Average: 17.99 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.6 Q ₁ = 2.7 Median = 8.3 Q ₃ = 22.1 P ₉₀ = 47.1 P ₉₉ = 125.6																					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 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-Apr	45.8	3.0	1.6	4.1	Z	1.8	3.4	2.6	3.3	4.8	14.9	12.5	25.3	31.5	13.5	1.6	0.8	0.4	5.2	0.6	0.7	0.3	0.4	0.4	7.8	45.8	
2-Apr	0.3	0.6	0.4	2.3	27.9	Z	22.8	19.2	8.9	10.8	10.8	6.6	17.4	9.2	12.6	9.3	7.1	5.9	0.5	0.5	8.4	39.4	16.8	0.8	10.4	39.4	
3-Apr	Z	0.3	0.7	0.7	0.5	0.8	1.1	0.5	0.4	0.4	0.8	0.6	0.7	0.3	0.2	0.7	0.4	1.3	16.0	22.7	30.3	20.6	18.3	25.8	6.3	30.3	
4-Apr	29.2	Z	14.9	7.0	1.9	3.5	3.7	4.9	4.8	2.4	4.2	4.1	3.6	3.6	2.1	1.3	1.6	2.1	5.7	11.8	22.3	13.2	12.8	9.9	7.4	29.2	
5-Apr	10.5	40.7	Z	9.6	11.3	18.7	49.5	22.9	29.7	17.9	23.4	34.0	66.7	32.0	15.7	16.1	25.0	32.7	55.8	60.0	52.8	40.4	58.0	80.4	34.9	80.4	
6-Apr	108.2	129.2	93.9	Z	58.7	71.6	30.6	20.0	3.2	5.8	29.6	4.4	1.5	1.6	1.5	2.0	1.2	2.2	38.4	10.3	11.0	14.8	19.3	6.6	29.0	129.2	
7-Apr	0.9	1.2	4.6	6.6	Z	2.9	9.8	3.6	1.7	2.5	2.4	1.3	1.5	1.1	1.7	4.0	3.6	1.1	4.3	2.3	58.3	26.8	43.9	10.9	8.6	58.3	
8-Apr	4.6	79.0	89.5	18.7	46.3	Z	4.2	5.1	14.7	20.2	42.9	56.8	43.8	36.3	45.9	65.5	67.3	40.8	13.6	8.3	5.2	15.5	21.4	18.5	33.2	89.5	
9-Apr	Z	9.0	6.7	6.5	6.6	7.4	7.1	9.6	17.4	25.4	38.3	24.3	30.5	45.4	33.3	21.3	12.7	3.6	12.5	70.4	39.2	37.2	58.9	25.5	23.9	70.4	
10-Apr	121.7	Z	20.3	4.0	1.5	1.8	1.2	5.8	9.3	0.9	4.9	22.9	13.7	9.6	2.9	1.4	1.1	1.8	2.7	32.8	34.3	63.3	114.1	103.6	25.0	121.7	
11-Apr	61.4	63.8	Z	94.1	48.5	37.6	66.0	22.3	14.2	106.7	34.9	32.7	15.7	12.1	2.2	2.5	0.8	0.3	0.2	5.8	34.7	13.6	27.7	16.0	31.0	106.7	
12-Apr	21.7	3.1	8.8	Z	10.2	40.8	19.4	35.4	13.3	0.6	0.2	0.2	0.3	0.6	1.1	0.9	0.6	0.6	2.7	22.1	26.7	34.0	22.2	38.2	13.2	40.8	
13-Apr	40.5	24.2	24.9	33.9	Z	23.9	50.9	74.1	66.0	55.8	78.4	46.6	16.9	14.3	10.8	6.8	4.5	4.1	5.6	8.3	12.7	43.2	21.1	14.1	29.6	78.4	
14-Apr	18.0	3.0	2.0	5.6	2.3	Z	10.0	71.1	11.7	15.2	29.2	36.2	45.5	12.6	5.9	8.4	0.9	9.4	2.9	7.8	142.1	126.3	66.3	74.8	30.7	142.1	
15-Apr	Z	30.1	3.4	8.1	16.8	17.6	12.0	C	C	C	C	C	2.0	2.8	1.7	1.5	0.1	0.1	1.8	3.8	5.2	5.4	2.7	4.4	6.6	30.1	
16-Apr	3.1	Z	0.2	0.4	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	7.5	10.9	13.3	11.0	22.5	25.1	12.9	10.5	5.2	25.1	
17-Apr	9.8	4.0	Z	0.7	9.3	8.2	10.9	8.0	10.1	10.0	8.7	4.9	6.5	6.4	4.8	4.6	6.4	8.1	3.7	3.1	13.6	14.1	34.2	44.9	10.2	44.9	
18-Apr	2.4	1.1	4.5	Z	6.7	12.3	12.3	8.9	7.8	6.2	5.0	4.9	4.3	2.7	1.6	3.1	1.6	3.1	2.8	3.1	4.3	5.5	4.8	4.1	4.9	12.3	
19-Apr	3.6	22.0	15.0	0.5	Z	0.5	0.5	0.7	0.3	0.2	0.4	0.2	0.2	0.2	0.1	0.8	0.1	0.2	0.2	9.6	9.6	9.8	9.3	9.5	4.1	22.0	
20-Apr	13.3	15.6	13.8	10.9	13.4	Z	1.4	0.7	0.2	2.9	9.5	8.0	5.8	3.9	4.1	2.3	1.4	5.4	8.9	12.4	26.0	26.3	28.5	37.9	11.0	37.9	
21-Apr	Z	33.1	22.1	20.6	53.0	196.4	211.2	56.8	47.3	47.9	44.7	24.6	18.5	11.4	7.8	2.2	1.8	1.8	2.3	2.0	3.6	1.2	1.9	4.6	35.5	211.2	
22-Apr	11.8	Z	31.9	12.1	19.9	9.7	0.6	3.3	3.2	2.0	2.5	3.3	1.7	2.0	1.1	1.5	2.5	2.8	5.1	4.9	3.1	3.1	1.5	0.7	5.7	31.9	
23-Apr	1.3	5.4	Z	9.5	9.4	36.1	78.3	61.4	16.3	10.8	8.7	9.7	5.6	5.3	3.4	3.4	5.8	3.9	6.6	14.7	4.2	17.4	46.9	66.3	18.7	78.3	
24-Apr	36.8	34.8	30.1	Z	189.5	116.7	118.0	72.0	50.5	86.6	46.8	14.1	14.9	15.3	13.7	29.0	30.7	29.3	28.2	31.9	21.1	105.2	125.4	61.2	56.6	189.5	
25-Apr	29.2	47.6	65.1	13.4	Z	48.1	21.0	6.8	4.5	4.1	7.4	6.8	0.8	0.6	0.7	0.5	1.1	0.4	0.4	0.4	1.2	1.7	1.9	21.5	12.4	65.1	
26-Apr	48.3	146.3	95.8	19.8	15.2	Z	25.3	28.9	21.9	9.2	6.2	6.6	7.3	4.4	3.6	3.5	4.4	8.2	13.4	11.7	15.2	10.9	11.7	11.7	23.0	146.3	
27-Apr	Z	6.8	9.7	9.9	7.7	9.3	11.0	9.7	9.3	8.6	8.3	8.0	6.7	4.4	3.9	4.4	3.3	3.1	3.9	6.1	5.9	14.8	32.7	31.2	9.5	32.7	
28-Apr	29.8	Z	21.0	23.3	13.4	12.4	8.1	15.7	11.0	8.8	5.2	3.1	4.1	1.3	0.4	0.4	0.3	0.4	0.7	3.7	0.7	3.9	5.5	1.2	7.6	29.8	
29-Apr	1.1	5.9	Z	6.6	16.1	37.5	18.3	11.3	3.1	0.4	0.4	0.4	0.6	4.0	5.4	2.9	2.6	0.8	19.0	47.9	77.8	74.8	58.3	60.7	19.8	77.8	
30-Apr	26.8	33.7	38.5	Z	33.4	18.5	15.0	15.6	19.9	22.4	12.2	8.2	18.4	6.9	5.8	8.3	5.0	7.6	8.7	7.4	7.1	4.9	10.6	15.4	15.2	38.5	
27.2 29.7 24.8 13.2 24.8 29.4 27.5 20.6 13.9 16.9 16.6 13.3 12.7 9.4 6.9 7.0 6.7 6.4 9.5 14.6 23.3 27.1 29.7 27.0																										Diurnal Average	
121.7 146.3 95.8 94.1 189.5 196.4 211.2 74.1 66.0 106.7 78.4 56.8 66.7 45.4 45.9 65.5 67.3 40.8 55.8 70.4 142.1 126.3 125.4 103.6																										Diurnal Maximum	
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	500	72.99	72.99
21 - 40	98	14.31	87.30
41 - 80	66	9.64	96.93
81 - 159	18	2.63	99.56
> 159	3	0.44	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Fort Hills - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	61	56	17	2	5	10	31	92	63	28	11	23	29	12	33	25	498
21 - 40	15	7	4	3	1	11	10	15	4	6	5	4	0	2	4	6	97
11 - 80	14	6	1	0	0	7	12	9	1	2	0	0	2	2	3	6	65
81 - 159	6	1	0	0	0	4	3	0	0	1	0	0	0	1	0	2	18
> 159	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
Totals	97	70	22	5	7	32	56	116	68	37	16	27	31	17	40	40	681

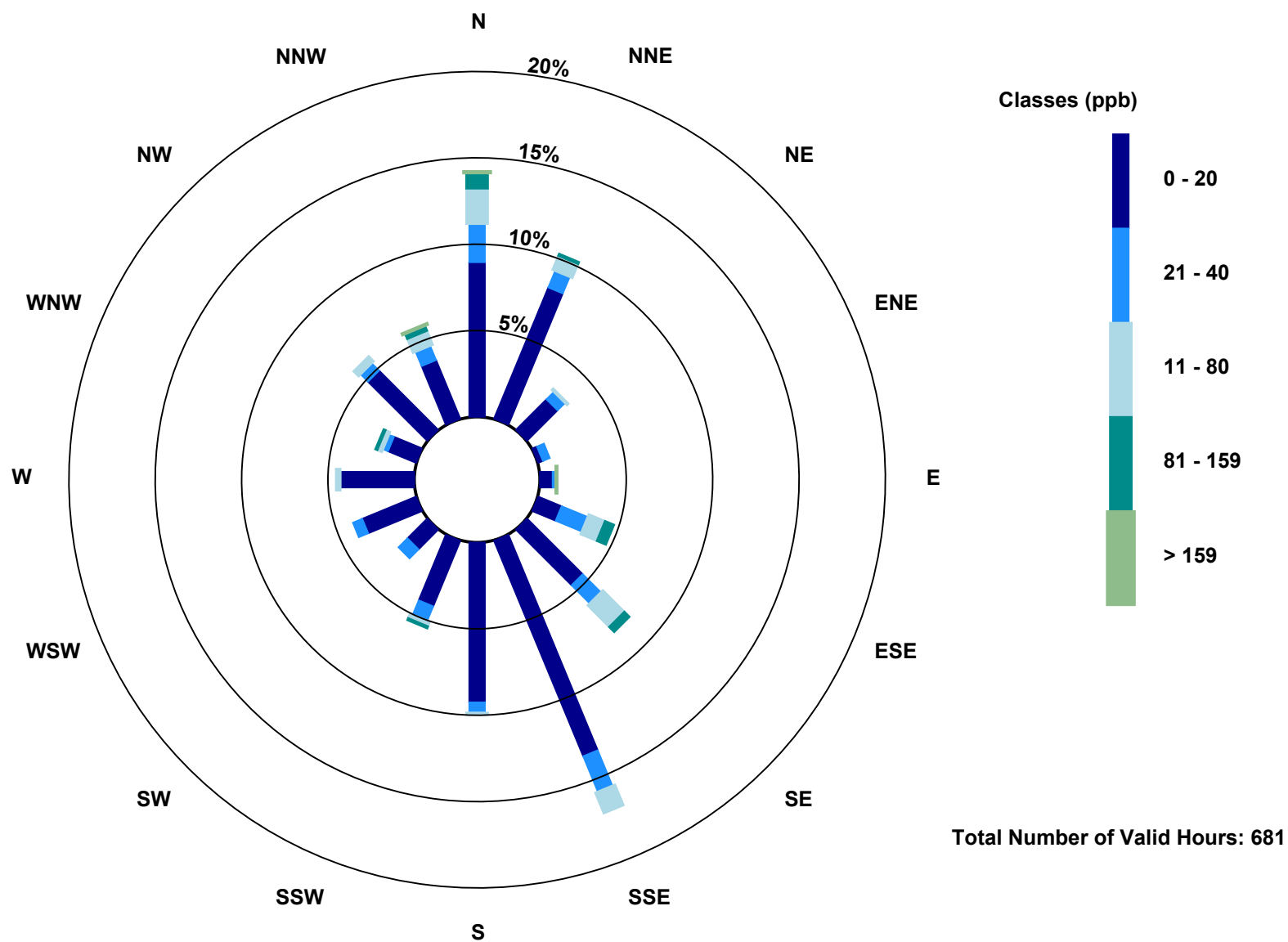
Total Number of Valid Hours: 681

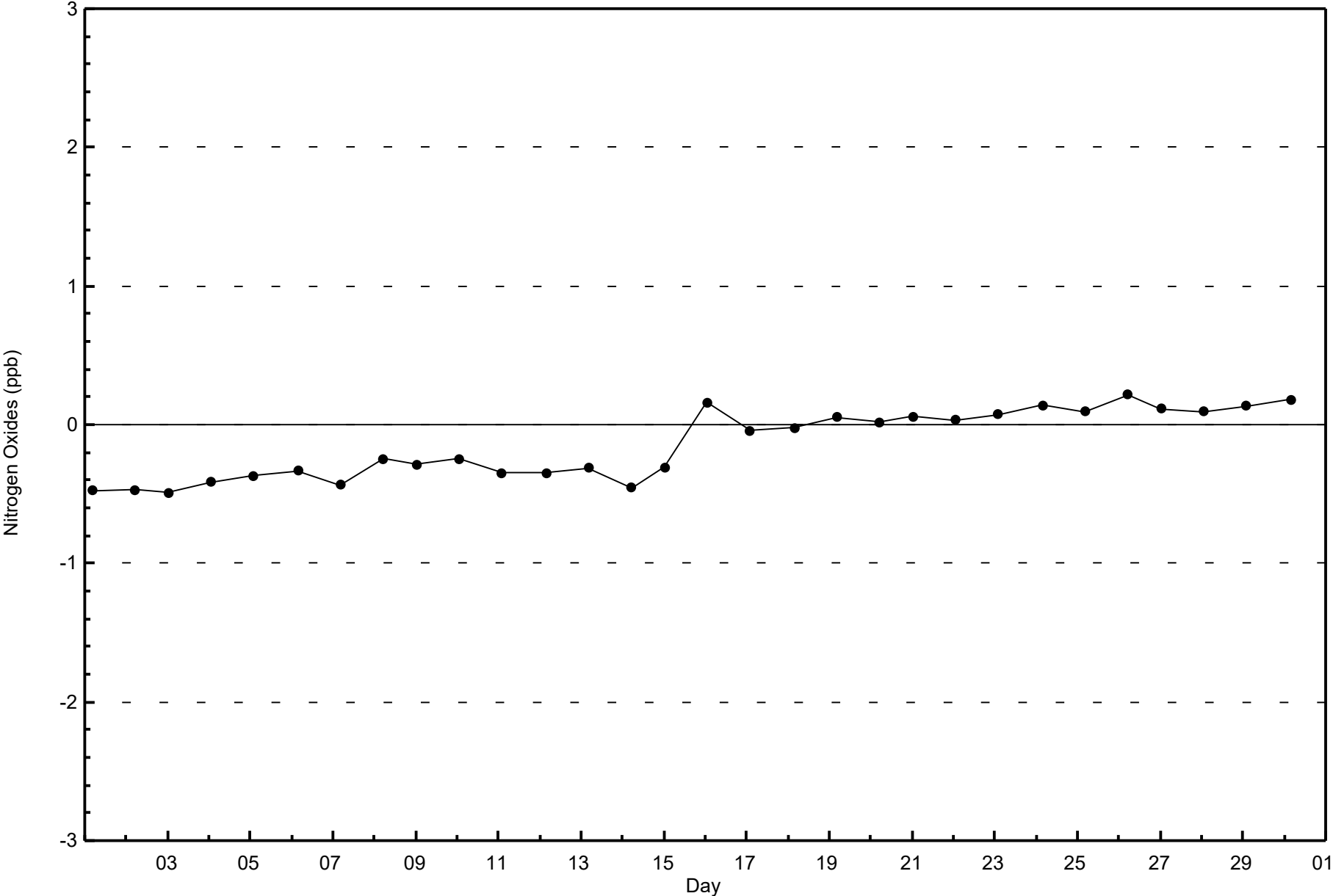
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Fort Hills

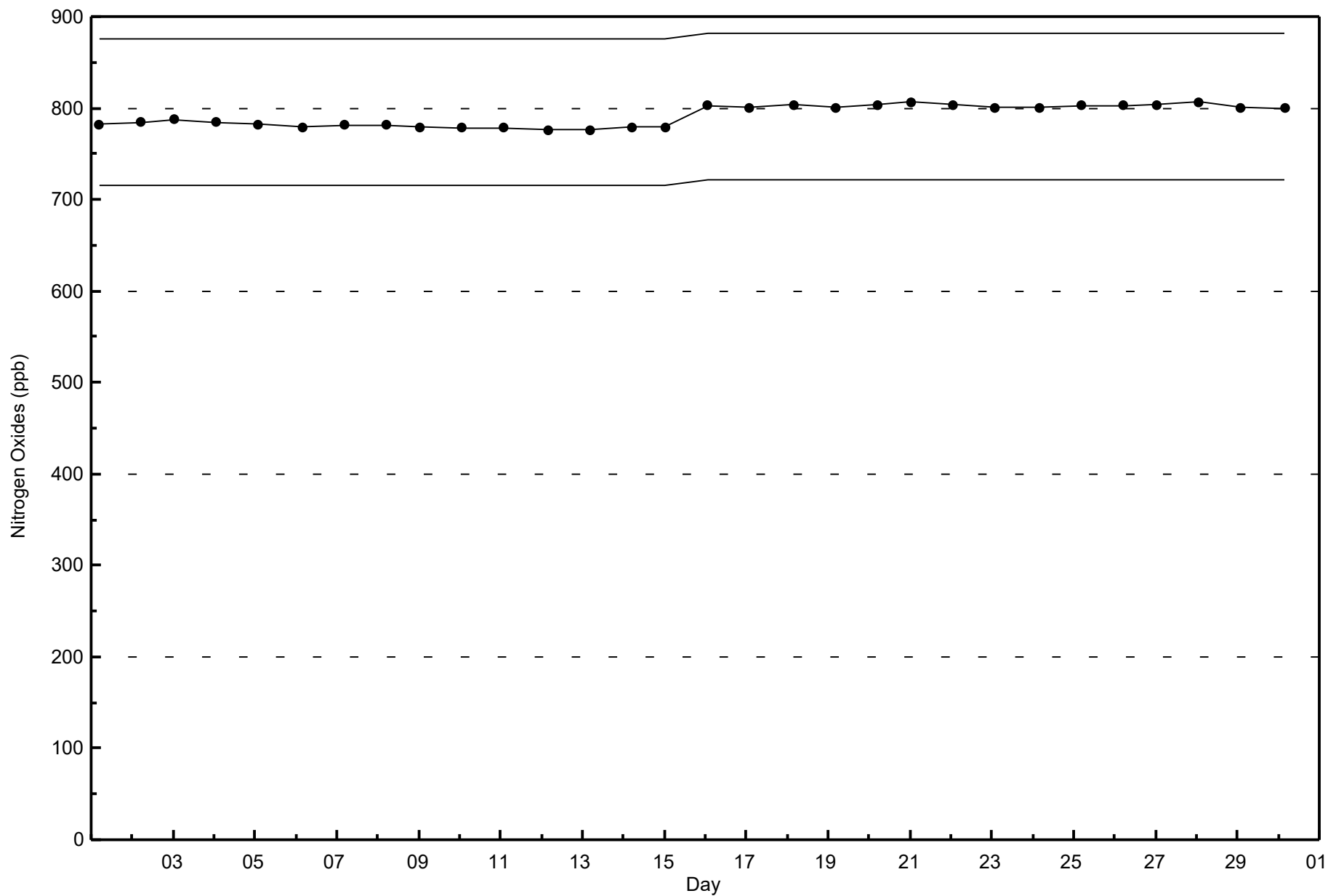






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Fort Hills - April 2025

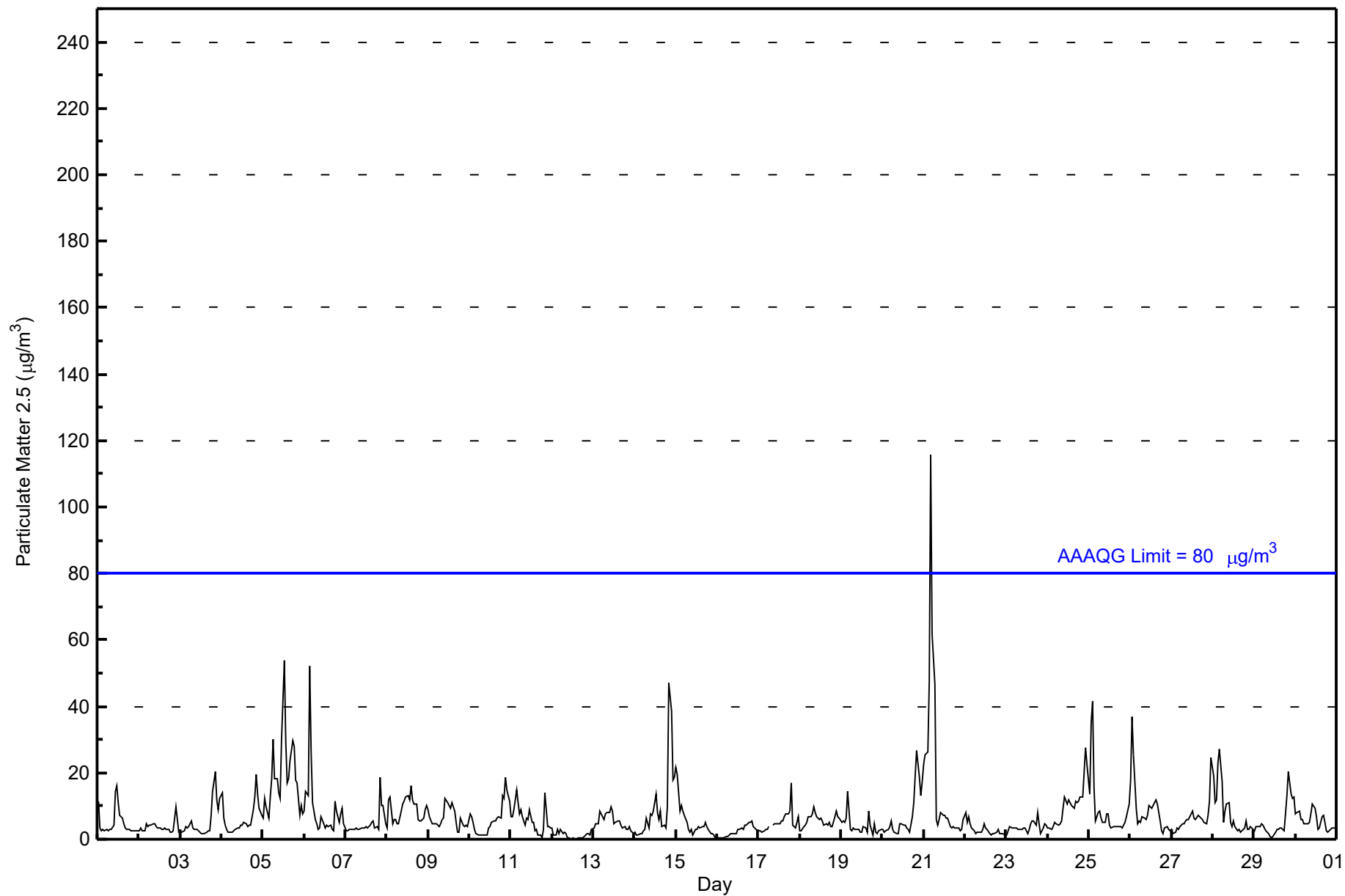


Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0																				Hours in Service: 720							
Maximum Value: 115.5 µg/m³ on Apr 21 05:00																				Maximum Daily Average: 18.7 µg/m³ on Apr 5				Hours of Data: 719			
Minimum Value: 0.2 µg/m³ on Apr 12 12:00																				Minimum Daily Average: 1.2 µg/m³ on Apr 12				Hours of Missing Data: 1			
Maximum Diurnal Average: 10.1 µg/m³ at hour 5																				Minimum Diurnal Average: 4.7 µg/m³ at hour 9				Hours of Calibration: 1			
Monthly Average: 6.78 µg/m³																				Percentiles: P ₁ = 0.3 P ₁₀ = 1.9 Q ₁ = 2.9 Median = 4.5 Q ₃ = 7.7 P ₉₀ = 13.2 P ₉₉ = 41.0				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-Apr	11.2	3.3	2.4	2.9	2.7	2.9	2.7	2.9	3.1	4.1	14.3	16.1	11.0	7.3	6.5	4.5	3.3	2.9	2.8	2.6	2.5	2.5	2.6	2.5	5.0	16.1	
2-Apr	2.4	3.2	2.7	2.5	4.5	3.9	4.4	4.4	4.5	4.5	3.7	3.4	3.4	2.9	3.1	3.5	3.0	2.9	2.2	2.1	2.7	9.6	5.8	2.2	3.7	9.6	
3-Apr	2.2	2.1	2.7	3.6	3.5	3.8	5.6	3.4	3.0	2.9	2.9	2.3	1.8	1.5	1.6	2.2	2.5	2.7	7.0	14.4	20.2	11.8	9.1	12.3	5.2	20.2	
4-Apr	14.2	6.2	4.4	2.9	1.9	2.3	2.2	2.6	3.1	3.3	3.5	4.4	4.3	5.2	4.5	3.8	4.2	4.4	9.0	12.8	19.3	13.7	9.3	7.2	6.2	19.3	
5-Apr	6.5	12.1	9.8	6.5	12.7	18.4	29.9	18.2	18.3	13.8	12.4	30.0	53.6	29.4	17.0	18.2	23.8	29.7	27.9	18.0	16.8	7.0	10.0	7.8	18.7	53.6	
6-Apr	8.6	14.5	13.2	52.0	26.3	11.1	6.0	4.6	2.8	3.5	7.0	4.8	3.6	4.1	3.7	4.2	3.1	2.6	11.2	8.5	5.3	7.6	9.4	4.7	9.3	52.0	
7-Apr	2.6	2.5	2.8	3.0	2.9	2.8	3.5	3.0	2.9	3.2	3.5	3.3	3.7	3.6	4.2	5.3	5.4	3.4	3.7	3.2	18.5	10.2	10.1	4.5	4.7	18.5	
8-Apr	3.4	12.0	12.6	4.5	5.8	6.0	4.6	4.8	8.3	10.8	11.6	12.5	13.2	11.8	16.3	11.9	10.6	10.4	5.8	5.6	5.6	6.2	8.8	10.0	8.9	16.3	
9-Apr	8.9	6.6	4.5	4.5	4.6	4.5	4.0	4.5	6.0	6.2	12.4	11.0	10.0	9.1	10.9	8.4	5.0	1.9	2.3	6.3	4.2	3.7	4.0	3.6	6.1	12.4	
10-Apr	7.5	7.0	5.2	3.0	1.6	1.3	1.2	1.2	1.5	1.2	1.4	3.5	3.7	5.1	5.5	5.5	6.3	6.7	6.2	13.2	12.2	18.7	14.8	11.2	6.0	18.7	
11-Apr	6.9	6.8	9.0	14.9	11.2	7.6	9.0	6.7	4.2	6.3	5.8	9.1	5.2	5.3	2.7	2.9	1.5	1.2	0.6	3.1	14.0	3.8	3.9	3.4	6.0	14.9	
12-Apr	3.2	1.1	1.2	3.0	1.8	2.8	1.6	2.2	1.6	0.5	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.9	1.8	1.8	1.4	2.9	1.2	3.2	
13-Apr	3.4	4.5	4.8	4.6	8.6	6.7	5.8	7.5	8.2	8.2	9.7	8.7	4.8	5.0	5.4	5.4	4.1	3.5	3.7	3.1	3.1	4.0	2.4	1.7	5.3	9.7	
14-Apr	2.1	1.2	1.3	1.7	1.6	2.3	3.0	6.2	3.3	7.8	7.4	8.4	13.7	8.1	5.9	8.4	4.0	4.4	3.5	9.8	47.0	38.5	17.9	18.5	9.4	47.0	
15-Apr	21.7	19.3	8.4	10.0	8.5	7.2	5.2	2.8	2.2	2.9	1.4	3.0	3.1	3.9	3.5	4.0	3.7	5.2	4.0	3.0	1.9	1.6	1.2	0.6	5.3	21.7	
16-Apr	0.3	0.2	0.2	0.3	0.5	0.7	0.9	1.2	1.6	1.5	1.8	1.7	3.0	3.2	3.2	3.2	4.1	4.2	5.0	5.3	5.5	3.7	3.2	2.6	2.4	5.5	
17-Apr	2.5	2.6	2.1	2.6	2.8	3.2	3.7	C	4.2	4.7	4.8	4.6	4.7	5.3	5.6	6.7	7.7	7.6	8.6	16.8	4.1	3.4	5.1	6.8	5.2	16.8	
18-Apr	2.6	2.4	3.7	4.2	4.9	6.7	7.0	7.6	9.7	8.0	6.8	6.1	6.2	5.6	4.2	4.7	4.2	4.9	4.0	3.6	6.6	8.5	6.6	6.2	5.6	9.7	
19-Apr	4.9	5.7	5.1	6.2	14.5	2.9	2.7	3.2	3.0	3.0	3.0	2.1	2.2	3.6	3.2	2.3	8.6	4.1	1.4	4.5	2.2	1.5	2.5	3.0	4.0	14.5	
20-Apr	2.9	2.2	2.6	3.1	3.7	5.6	2.9	2.0	1.5	1.9	4.8	4.5	4.2	4.1	3.6	2.8	2.2	6.8	11.1	18.9	26.8	18.7	13.3	17.4	7.0	26.8	
21-Apr	22.3	25.2	26.3	47.4	115.5	61.8	46.8	5.9	4.2	5.9	8.1	7.4	7.4	6.2	6.4	3.8	3.5	3.7	3.4	3.5	3.5	2.7	3.1	5.7	17.9	115.5	
22-Apr	8.2	5.0	6.9	4.5	3.3	2.4	1.9	2.1	2.3	2.1	2.9	4.5	3.4	3.0	1.8	1.5	1.6	1.8	2.1	3.0	1.7	1.8	1.5	1.4	2.9	8.2	
23-Apr	1.4	2.6	3.8	3.4	3.3	3.5	3.5	2.9	3.0	3.0	3.4	3.3	1.9	2.9	4.7	5.4	5.6	4.4	7.9	4.8	1.9	3.5	4.5	4.0	3.7	7.9	
24-Apr	3.2	3.3	2.8	3.9	5.0	4.5	4.1	4.5	5.5	9.1	12.9	10.7	11.8	10.9	10.2	9.5	11.4	11.1	11.3	12.9	12.8	20.3	27.5	22.6	10.1	27.5	
25-Apr	13.6	35.4	41.5	15.8	5.6	7.9	8.6	6.4	5.0	5.1	7.8	7.7	4.4	3.5	3.6	3.9	3.9	3.7	3.7	3.5	4.4	5.2	7.0	10.6	9.1	41.5	
26-Apr	17.8	36.8	25.2	9.4	4.8	5.6	5.2	7.0	6.3	6.1	7.1	10.2	9.4	10.2	10.9	12.0	10.8	5.7	2.4	1.5	3.4	3.7	3.1	2.6	9.0	36.8	
27-Apr	2.9	1.5	2.1	3.2	3.0	3.9	4.6	4.7	5.5	6.1	6.0	7.8	8.5	6.3	6.0	7.4	6.8	6.4	5.9	4.9	4.9	7.1	11.6	24.5	6.3	24.5	
28-Apr	19.2	10.9	12.0	23.0	27.0	17.2	5.1	8.5	10.4	11.1	5.1	3.8	5.4	3.7	2.7	2.8	2.3	2.5	3.5	5.7	2.9	3.2	4.0	3.0	8.1	27.0	
29-Apr	2.7	4.0	4.0	3.9	4.5	4.0	3.2	2.7	1.6	0.7	0.4	1.0	2.0	3.0	2.9	3.2	3.3	2.6	7.7	13.3	20.2	13.5	12.1	12.6	5.4	20.2	
30-Apr	7.5	8.2	8.5	6.0	5.9	4.5	4.5	4.6	5.2	7.8	10.7	9.4	6.7	2.8	3.4	6.6	7.2	4.9	2.3	2.2	3.1	3.4	3.4	3.3	5.5	10.7	
7.2 8.3 7.7 8.6 10.1 7.3 6.4 4.8 4.7 5.2 6.1 6.8 7.2 5.9 5.4 5.5 5.5 5.2 5.7 7.0 9.3 8.0 7.3 7.3																									Diurnal Average		
22.3 36.8 41.5 52.0 115.5 61.8 46.8 18.2 18.3 13.8 14.3 30.0 53.6 29.4 17.0 18.2 23.8 29.7 27.9 18.9 47.0 38.5 27.5 24.5																									Diurnal Maximum		
C - Calibration																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																											



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort Hills - April 2025

Concentration Ranges ($\mu\text{g}/\text{m}^3$)	Number of Hours	%	Cumulative %
0 - 5	441	61.34	61.34
6 - 15	223	31.02	92.35
16 - 25	34	4.73	97.08
26 - 80	20	2.78	99.86
> 81.0	1	0.14	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}) - µg/m³
Fort Hills - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	63	37	7	1	5	6	14	75	53	26	14	29	31	13	33	31	438
6 - 15	25	31	12	2	1	24	34	39	16	12	5	1	3	7	4	6	222
16 - 25	8	1	2	2	1	1	10	3	1	1	0	0	0	1	3	0	34
26 - 80	4	2	1	0	1	2	2	3	0	0	0	0	0	0	0	4	19
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Totals	100	71	22	5	8	33	60	120	70	39	19	30	34	21	40	42	714

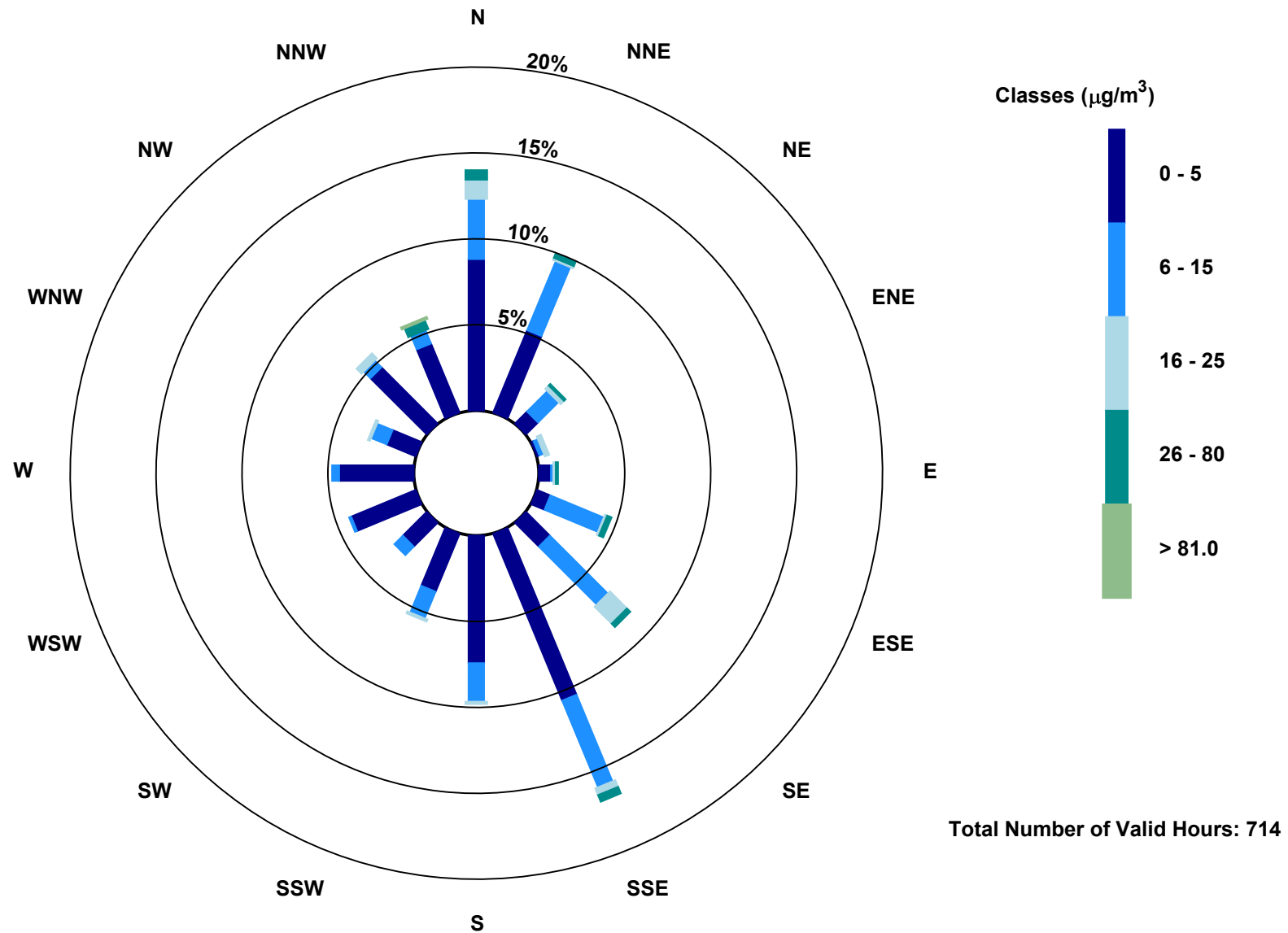
Total Number of Valid Hours: 714

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

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





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

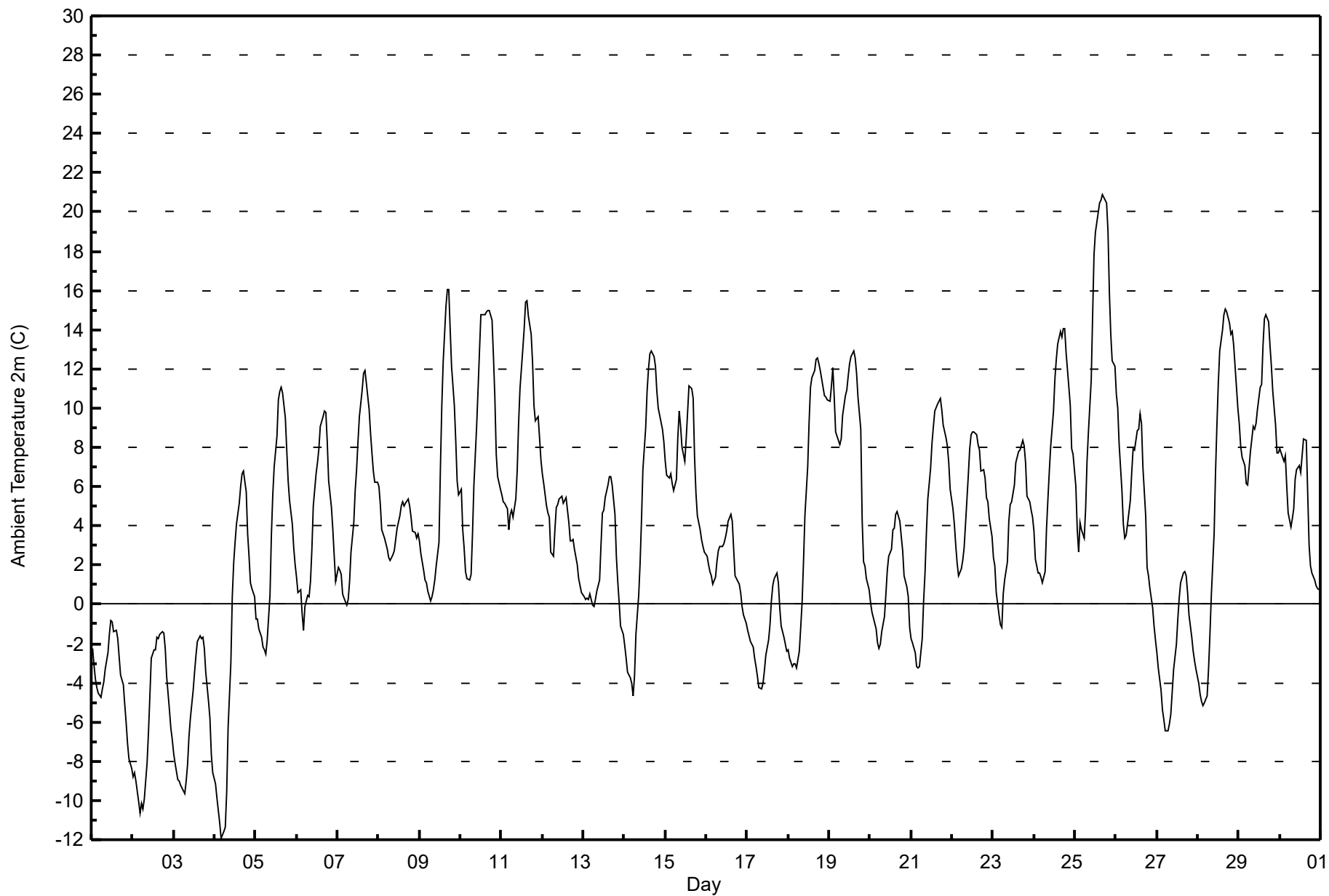
Fort Hills - April 2025

Maximum Value: 20.9 C on Apr 25 17:00																				Maximum Daily Average: 12.6 C on Apr 25					Hours in Service: 720	
Minimum Value: -11.9 C on Apr 4 05:00																				Minimum Daily Average: -5.9 C on Apr 3					Hours of Data: 720	
Maximum Diurnal Average: 8.7 C at hour 16																				Minimum Diurnal Average: -0.6 C at hour 6					Hours of Missing Data: 0	
Monthly Average: 3.88 C																				Percentiles: P ₁ = -10.1 P ₁₀ = -3.7 Q ₁ = -0.1 Median = 3.8 Q ₃ = 8.2 P ₉₀ = 12.0 P ₉₉ = 18.8					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	-2.2	-3.1	-3.8	-4.3	-4.5	-4.7	-4.3	-3.9	-3.3	-2.5	-1.6	-0.8	-0.9	-1.4	-1.3	-1.7	-2.7	-3.6	-4.1	-5.1	-6.0	-7.1	-7.9	-8.4	-3.7	-0.8
2-Apr	-8.8	-8.6	-9.0	-10.1	-10.7	-10.1	-10.4	-9.9	-8.1	-6.5	-4.7	-2.7	-2.3	-2.3	-1.7	-1.8	-1.6	-1.4	-1.5	-2.3	-3.7	-5.4	-6.3	-6.9	-5.7	-1.4
3-Apr	-7.6	-8.1	-8.9	-9.0	-9.2	-9.3	-9.6	-9.0	-8.1	-6.7	-5.8	-4.4	-3.4	-2.6	-1.9	-1.6	-1.7	-1.7	-2.3	-3.5	-4.9	-5.8	-7.7	-8.6	-5.9	-1.6
4-Apr	-9.1	-9.9	-10.5	-11.2	-11.9	-11.6	-11.4	-9.6	-6.3	-2.9	0.4	2.1	3.1	4.1	5.1	6.0	6.6	6.8	5.7	3.6	2.4	1.1	0.8	0.4	-1.9	6.8
5-Apr	-0.7	-0.7	-1.2	-1.7	-2.2	-2.3	-2.5	-1.8	0.4	3.5	5.6	7.0	8.6	10.4	10.8	11.1	10.7	9.5	7.8	6.3	5.3	4.1	2.9	2.0	3.9	11.1
6-Apr	1.4	0.6	0.7	-0.5	-1.3	-0.1	0.4	0.4	1.2	2.8	5.0	6.7	7.3	8.0	9.1	9.6	9.9	9.8	8.3	6.3	5.0	3.8	2.4	1.2	4.1	9.9
7-Apr	1.9	1.7	1.5	0.5	0.3	-0.1	0.3	1.1	2.7	4.2	5.8	6.9	8.3	9.6	11.0	11.8	11.9	11.3	9.9	8.7	7.7	6.8	6.3	6.2	5.7	11.9
8-Apr	6.0	5.1	3.8	3.4	3.1	2.8	2.4	2.3	2.5	2.7	3.3	3.9	4.5	5.0	5.2	5.0	5.1	5.3	5.0	4.4	3.7	3.7	3.4	3.6	4.0	6.0
9-Apr	3.2	2.6	1.8	1.3	1.1	0.7	0.2	0.4	0.8	1.2	1.9	3.1	6.9	10.1	12.3	15.2	16.0	16.1	14.1	12.2	10.1	8.3	6.3	5.6	6.3	16.1
10-Apr	5.9	3.8	2.9	1.7	1.3	1.3	1.5	3.6	6.1	9.1	11.0	12.9	14.8	14.8	14.8	14.9	15.0	15.0	14.4	12.6	10.6	7.6	6.5	5.9	8.7	15.0
11-Apr	5.6	5.2	5.2	4.9	3.8	4.6	4.8	4.4	5.4	6.8	9.2	11.0	13.0	14.1	15.4	15.5	14.7	13.8	12.4	10.1	9.3	9.6	8.5	7.4	8.9	15.5
12-Apr	6.7	6.1	5.0	4.7	4.4	2.7	2.5	3.8	4.9	5.1	5.4	5.5	5.2	5.3	5.4	4.2	3.2	3.2	3.3	2.8	2.0	1.3	0.9	0.6	3.9	6.7
13-Apr	0.4	0.2	0.3	0.3	0.5	0.0	-0.1	0.2	0.7	1.3	3.0	4.6	4.8	5.4	6.1	6.5	6.5	6.1	4.6	2.4	1.2	0.1	-1.1	-1.6	2.2	6.5
14-Apr	-2.1	-2.8	-3.4	-3.8	-4.0	-4.7	-3.7	-1.5	0.5	2.1	4.3	6.8	9.0	10.8	12.0	12.8	12.9	12.6	12.1	10.9	10.0	9.3	8.9	8.3	4.9	12.9
15-Apr	7.3	6.6	6.5	6.7	6.2	5.8	6.3	8.5	9.8	9.1	8.0	7.3	8.5	9.8	11.1	11.0	10.5	7.5	5.7	4.5	3.8	3.3	2.9	2.6	7.1	11.1
16-Apr	2.5	2.0	1.7	1.5	1.0	1.4	2.2	2.7	2.9	3.0	3.1	3.4	3.7	4.2	4.6	4.2	2.8	1.5	1.2	1.1	0.6	-0.1	-0.5	-1.0	2.1	4.6
17-Apr	-1.3	-1.6	-1.9	-2.1	-2.8	-3.1	-3.7	-4.2	-4.3	-4.0	-3.4	-2.6	-1.8	-1.0	0.2	1.0	1.3	1.6	1.1	-0.2	-1.1	-1.6	-2.1	-2.4	-1.7	1.6
18-Apr	-2.3	-2.8	-3.1	-3.0	-3.1	-3.3	-2.4	-1.2	0.1	2.1	4.5	7.0	9.3	11.1	11.5	11.9	12.5	12.6	12.3	12.0	11.0	10.7	10.6	10.4	5.3	12.6
19-Apr	10.3	11.2	12.1	10.5	8.8	8.4	8.1	8.4	9.7	10.7	11.0	11.7	12.3	12.6	12.9	12.5	11.8	10.6	8.9	4.3	2.2	2.0	1.3	0.7	8.9	12.9
20-Apr	0.1	-0.4	-0.7	-1.3	-2.0	-2.3	-2.0	-1.4	-0.6	0.5	1.7	2.5	2.8	3.8	3.9	4.6	4.7	4.2	3.4	2.7	1.5	0.9	0.4	-1.2	1.1	4.7
21-Apr	-1.7	-2.0	-2.5	-3.2	-3.3	-3.2	-1.8	0.2	1.6	3.7	5.4	7.0	8.2	9.1	9.9	10.2	10.4	10.5	10.0	9.1	8.5	8.1	7.2	5.9	4.5	10.5
22-Apr	4.8	4.1	3.0	2.1	1.5	1.8	2.3	2.9	4.1	6.6	7.9	8.7	8.8	8.8	8.7	8.1	7.9	6.8	6.9	6.4	5.4	5.2	4.4	3.4	5.4	8.8
23-Apr	2.4	1.9	0.6	-0.5	-1.0	-1.2	0.6	1.2	2.1	4.3	5.1	5.2	6.1	7.2	7.5	7.8	7.9	8.4	8.1	7.2	5.5	5.3	4.8	4.4	4.2	8.4
24-Apr	3.7	2.3	1.6	1.6	1.4	1.1	1.6	3.9	5.4	6.8	8.0	9.8	11.5	12.5	13.3	13.9	13.6	14.1	14.1	12.9	11.1	10.1	7.9	7.7	7.9	14.1
25-Apr	6.0	3.8	2.7	4.2	3.8	3.3	4.9	7.3	8.8	11.4	14.7	17.8	19.0	19.5	20.5	20.6	20.9	20.7	20.5	19.0	15.9	13.8	12.4	12.1	12.6	20.9
26-Apr	10.7	10.0	8.2	5.8	4.1	3.4	3.5	4.1	5.3	6.7	7.9	7.9	8.9	9.0	9.7	9.2	7.0	4.5	1.9	1.4	0.8	-0.2	-1.1	-1.8	5.3	10.7
27-Apr	-2.5	-3.3	-4.4	-5.4	-5.9	-6.5	-6.5	-6.1	-5.6	-4.4	-3.3	-2.0	-0.7	0.3	1.1	1.6	1.7	1.5	0.6	-0.5	-1.6	-2.4	-2.9	-3.3	-2.5	1.7
28-Apr	-4.0	-4.6	-4.9	-5.2	-5.0	-4.6	-3.3	-1.5	0.5	3.6	6.7	9.1	11.3	12.9	14.0	14.8	15.1	14.9	14.4	13.8	13.9	13.2	12.1	10.0	6.1	15.1
29-Apr	9.2	8.0	7.5	7.0	6.2	6.1	6.9	7.8	9.1	8.9	9.2	10.0	11.1	11.2	13.2	14.6	14.7	14.4	13.2	12.1	10.8	9.2	7.7	7.7	9.8	14.7
30-Apr	7.9	7.7	7.3	7.6	6.0	4.7	4.0	4.3	4.9	6.4	6.9	7.1	6.7	7.6	8.4	8.3	5.7	3.0	2.0	1.6	1.2	1.0	0.8	0.8	5.1	8.4
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Fort Hills - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	184	25.56	25.56
0 - 10	414	57.50	83.06
10 - 20	117	16.25	99.31
> 20	5	0.69	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) - %

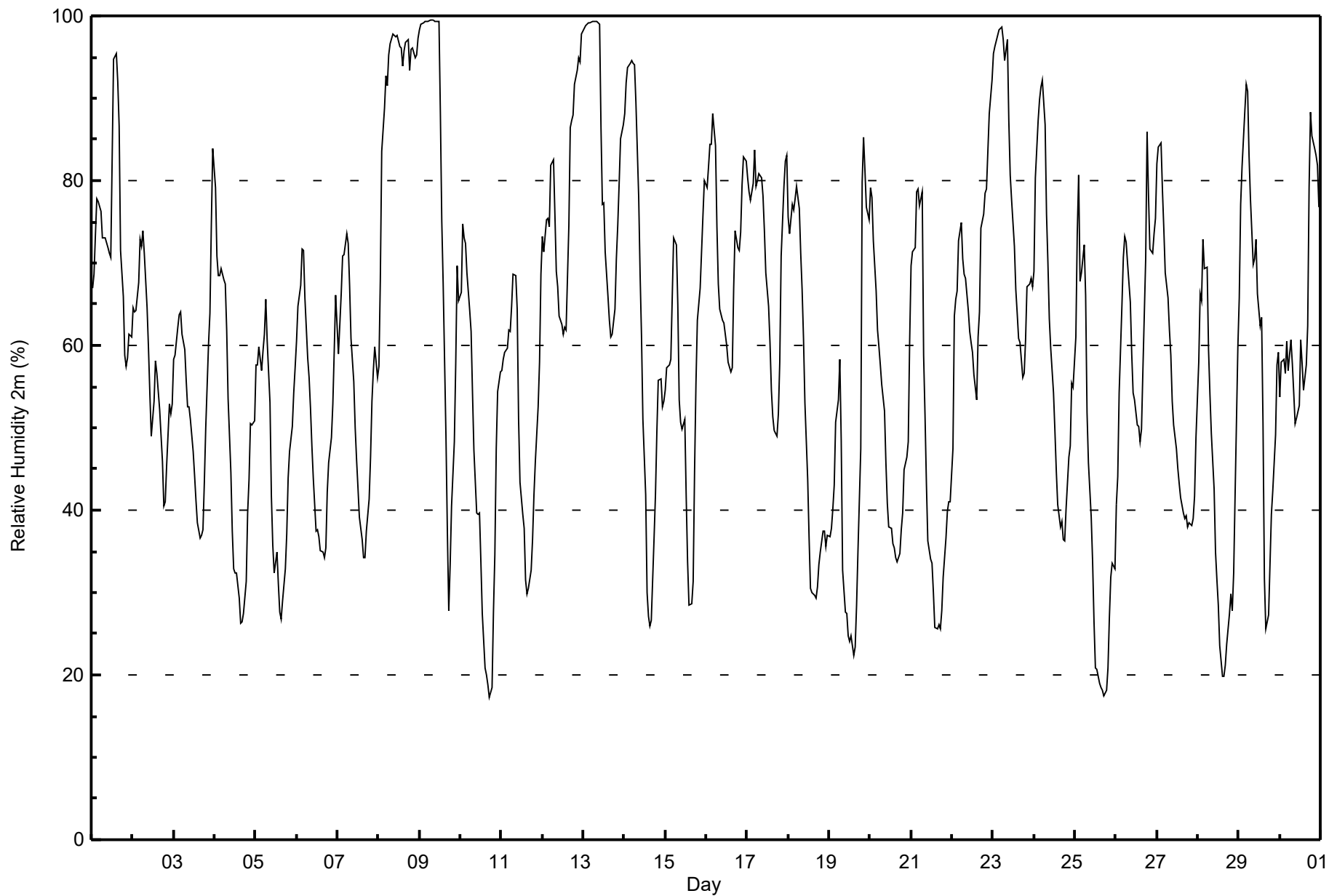
Fort Hills - April 2025

Maximum Value: 99.4 % on Apr 9 08:00																				Maximum Daily Average: 92.2 % on Apr 8					Hours in Service: 720	
Minimum Value: 17.2 % on Apr 10 18:00																				Minimum Daily Average: 40.2 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 76.0 % at hour 5																				Minimum Diurnal Average: 43.0 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 59.99 %																				Percentiles: P ₁ = 19.2 P ₁₀ = 32.3 Q ₁ = 43.2 Median = 60.3 Q ₃ = 74.2 P ₉₀ = 88.9 P ₉₉ = 99.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	66.9	68.7	73.3	77.7	77.4	76.3	73.0	73.0	73.0	71.9	71.1	70.7	82.7	94.8	95.4	92.0	86.6	71.4	65.8	58.8	57.4	58.6	61.4	61.1	73.3	95.4
2-Apr	64.6	64.0	64.3	67.6	72.9	72.1	73.9	71.2	64.7	59.6	54.1	49.0	53.3	58.1	56.5	54.3	52.3	46.0	40.5	40.9	45.5	52.9	51.7	53.0	57.6	73.9
3-Apr	58.2	58.8	62.2	63.7	64.0	61.3	59.6	55.8	52.6	52.6	51.0	47.1	44.2	41.2	38.5	36.6	37.0	37.6	43.5	50.0	60.2	63.8	74.7	83.9	54.1	83.9
4-Apr	79.2	70.8	68.5	68.4	69.3	67.9	67.4	61.8	53.5	44.6	37.5	32.8	32.4	32.3	29.4	26.4	26.5	27.4	31.3	39.7	43.7	50.5	50.4	50.8	48.4	79.2
5-Apr	57.6	57.6	59.8	57.0	59.4	61.3	65.6	60.6	53.0	41.7	35.8	32.3	34.9	31.0	27.6	26.8	29.0	32.8	37.1	44.0	47.1	50.2	54.2	57.3	46.4	65.6
6-Apr	60.6	64.7	67.4	71.7	71.5	65.8	58.6	56.1	52.4	47.8	43.8	37.5	37.5	36.7	35.1	34.9	34.3	35.4	42.2	45.8	48.9	52.9	59.3	66.0	51.1	71.7
7-Apr	59.0	62.6	66.3	70.8	71.1	73.6	72.3	67.3	60.8	55.6	49.9	46.1	42.6	39.2	36.4	34.3	34.2	37.5	41.3	46.4	53.2	56.9	59.9	56.0	53.9	73.6
8-Apr	57.5	67.9	83.5	88.8	92.7	91.5	95.3	96.7	97.7	97.6	97.5	97.6	96.3	96.0	93.9	95.7	96.7	97.1	93.5	96.0	96.2	94.9	95.2	97.3	92.2	97.7
9-Apr	98.2	98.9	99.1	99.3	99.3	99.4	99.4	99.4	99.4	99.4	99.4	99.3	88.1	75.0	67.5	49.0	37.5	27.7	33.4	40.6	48.2	57.8	69.6	65.5	77.1	99.4
10-Apr	66.5	74.7	73.0	72.4	68.8	64.2	61.8	54.2	47.2	39.7	39.5	39.6	33.8	27.5	20.9	20.0	18.8	17.2	18.5	27.7	34.6	47.4	54.4	56.8	45.0	74.7
11-Apr	56.9	58.3	59.1	59.6	61.8	61.8	64.8	68.7	68.5	64.4	51.1	43.4	39.6	37.9	31.6	29.8	30.6	32.7	36.4	41.8	46.0	52.5	57.9	68.7	51.0	68.7
12-Apr	73.3	71.4	75.3	75.5	74.4	81.9	82.6	75.9	69.0	67.1	63.5	62.6	61.3	62.3	61.9	74.5	86.4	87.3	88.0	91.6	93.3	94.9	94.4	97.8	77.8	97.8
13-Apr	98.5	98.9	99.1	99.2	99.2	99.3	99.3	99.4	99.3	99.0	86.4	77.2	77.4	71.4	66.0	63.1	61.0	61.3	64.4	70.5	74.6	79.6	85.0	86.7	84.0	99.4
14-Apr	88.2	91.9	93.7	94.2	94.5	94.3	94.1	89.4	77.9	68.7	61.1	51.1	41.8	30.1	27.2	25.9	26.7	36.6	41.9	49.5	55.7	56.0	52.5	53.2	62.3	94.5
15-Apr	54.7	57.3	57.6	58.3	65.8	73.1	72.2	64.9	53.3	50.6	49.9	50.9	41.6	33.7	28.4	28.7	31.3	44.8	55.4	63.0	67.0	71.3	75.7	80.0	55.4	80.0
16-Apr	79.2	81.8	84.4	84.4	88.2	84.2	74.4	67.4	64.4	63.0	62.7	61.4	60.0	58.0	56.8	57.3	67.0	73.9	71.9	71.6	73.7	79.5	82.8	82.4	72.1	88.2
17-Apr	80.4	78.7	77.7	79.6	83.7	79.4	80.0	80.9	80.3	78.1	73.9	68.7	64.8	60.4	54.6	51.4	49.7	49.0	51.7	58.0	70.8	79.3	82.4	83.0	70.7	83.7
18-Apr	75.6	73.5	77.1	76.5	77.8	79.3	76.7	71.2	66.8	60.8	53.1	43.8	36.6	30.5	30.0	29.7	29.3	30.6	33.4	34.9	37.4	37.4	35.5	36.9	51.4	79.3
19-Apr	36.8	37.7	40.1	43.0	50.8	53.4	58.3	48.5	32.6	27.7	27.5	24.7	24.0	24.8	22.4	23.3	28.5	35.0	47.4	79.9	85.3	81.2	76.7	75.3	45.2	85.3
20-Apr	79.1	78.0	72.7	66.7	61.8	59.9	57.6	55.3	52.0	45.8	40.9	38.0	37.9	36.0	35.4	34.3	33.8	34.8	37.6	39.6	44.8	46.4	48.2	60.5	49.9	79.1
21-Apr	69.7	71.4	71.8	78.7	79.0	76.9	78.7	58.9	51.6	43.2	36.3	34.1	33.6	30.0	25.8	25.6	26.1	25.5	27.8	31.9	36.5	39.9	40.9	41.0	47.3	79.0
22-Apr	47.5	63.6	65.7	66.6	72.7	74.9	70.4	68.7	68.2	64.2	61.7	60.3	59.2	56.5	53.4	61.0	64.0	74.3	76.0	78.4	79.0	83.6	88.1	92.2	68.8	92.2
23-Apr	95.5	96.3	97.0	98.3	98.6	98.7	97.2	94.5	97.1	87.2	80.7	77.6	72.0	66.8	63.9	60.8	60.4	56.2	56.6	60.7	67.1	67.4	68.2	67.1	78.6	98.7
24-Apr	68.9	80.3	87.3	89.8	91.3	92.2	86.8	75.9	70.0	63.1	59.7	54.2	49.6	44.8	40.7	38.0	38.6	36.4	36.2	40.1	46.4	47.8	55.5	54.9	60.4	92.2
25-Apr	61.1	73.5	80.7	67.8	68.8	72.2	66.2	51.8	45.8	39.2	33.7	26.4	20.9	20.7	19.1	18.4	18.1	17.5	18.2	20.8	26.9	31.8	33.6	32.8	40.2	80.7
26-Apr	40.7	44.0	54.2	64.9	70.7	73.2	72.5	69.9	65.2	59.0	54.2	53.4	50.4	50.1	48.3	49.8	57.0	70.4	86.0	78.3	71.7	71.2	73.6	75.5	62.7	86.0
27-Apr	82.0	84.0	84.5	78.8	74.2	68.8	65.8	61.9	58.8	53.2	50.4	47.5	45.1	43.3	41.6	39.7	39.0	39.3	38.0	38.4	38.1	39.1	41.6	48.9	54.2	84.5
28-Apr	58.0	66.3	65.4	72.9	69.4	69.5	59.5	54.1	49.3	42.5	35.0	31.5	28.4	23.6	19.7	19.8	21.2	23.7	27.4	29.9	27.8	32.5	41.7	59.8	42.9	72.9
29-Apr	65.7	77.1	81.7	88.5	91.7	90.9	83.1	77.8	69.7	70.5	72.9	66.3	62.4	63.3	50.5	31.8	25.6	27.4	33.3	39.4	42.3	49.2	57.6	59.1	61.6	91.7
30-Apr	53.7	58.0	58.4	56.7	60.6	57.0	60.7	57.8	54.3	50.5	51.2	52.8	60.7	57.8	54.5	57.6	62.3	79.1	88.2	85.5	83.9	83.1	81.9	76.9	64.3	88.2
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Fort Hills - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Fort Hills - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	10	1.39	1.39
20 - 40	144	20.00	21.39
40 - 60	203	28.19	49.58
60 - 80	239	33.19	82.78
80 - 100	124	17.22	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

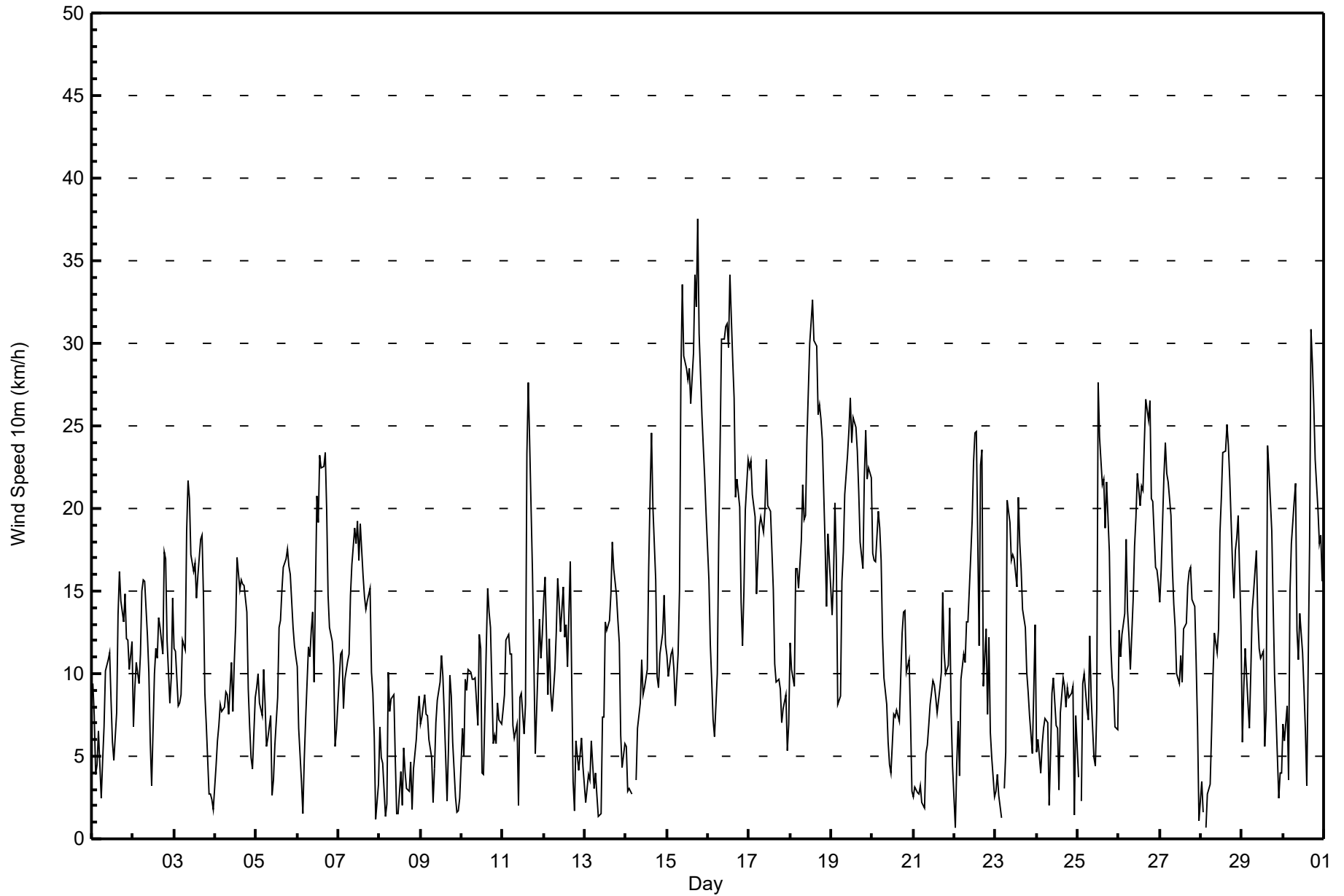
Fort Hills - April 2025

Maximum Speed: 38 km/h on Apr 15 19:00										Maximum Daily Speed Average: 20.9 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 22 01:00										Minimum Daily Speed Average: 2.9 km/h on Apr 9										Hours of Data: 715						
Maximum Diurnal Speed Average: 2.7 km/h at hour 20										Minimum Diurnal Speed Average: 0.3 km/h at hour 6										Hours of Missing Data: 5						
Monthly Average Velocity: 0.3 km/h 269.3 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 7 Median = 11 Q ₃ = 17 P ₉₀ = 22 P ₉₉ = 31										Percent Operational Time: 99.3						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	SE9	SSE7	SSE4	SSE4	SSE7	SW2	SSW5	S7	SSE10	S11	S11	SSW8	WSW6	WNW5	WNW8	WNW14	NW16	WNW14	NW13	WNW15	WNW12	W12	W10	W12	WSW4.9	NW16
2-Apr	WNW7	W9	W11	WSW9	SW11	WSW15	WSW16	SW16	WSW12	SW10	SSW6	E3	NE10	NE12	NNE11	NNE13	NE13	NNW11	NW17	NNW17	NNW12	N8	NNW10	NW15	NW5.6	NW17
3-Apr	WNW12	WNW11	NW8	NW8	NW9	NW12	NW11	NW19	NW22	NW21	NNW17	NNW16	NNW17	NW15	NW16	NW18	NW18	NNW15	N9	NNE7	ENE3	ESE3	SSW2	SSE2	NW11.0	NW22
4-Apr	S4	S6	SSE7	SSE8	SSE8	SSE8	SE9	SSE9	SSE8	SSE11	S8	SSE11	SSE13	SE17	SSE15	SSE16	S15	S15	S14	SE9	SE7	SE5	SE4	SE9	SSE9.4	SE17
5-Apr	SE9	ESE10	SE8	SE7	SE10	SE8	SSE6	SSE6	SE7	SSE3	N4	NE6	NNE9	N13	N13	N15	N16	N17	N18	N17	N16	N13	N12	N11	NNE5.6	N18
6-Apr	N10	N7	ESE3	N2	NNW5	SE7	SSE12	SSE11	SSE13	SE14	ESE10	SSE21	SSE19	SSE23	SSE22	SSE23	SSE23	SSE20	SE15	SSE13	SSE12	SSE10	SSE6	S7	SSE10.7	SSE23
7-Apr	S10	SSE11	SSE11	SSE8	SSE10	SSE11	SSE11	SSE15	SSE17	SSE19	SSE18	SSE19	SSE17	SSE19	SSE16	S15	S14	SSE14	SSE15	SE10	SE9	SSE6	NE1	S3	SSE12.2	SSE19
8-Apr	SE7	SSE5	SSW5	SSW1	ESE2	SE10	SE8	SSE9	SSE9	ESE5	NNE2	S2	SSE4	SSE2	ESE5	ESE4	SSE3	SE3	ESE5	SE2	SE4	SSE6	SSE8	SSW9	SSE4.3	SE10
9-Apr	SSW7	SSW7	S9	S8	S7	S6	SSW5	E2	SE4	SE7	SSE8	SSE10	SE11	ESE10	SE8	ENE2	N6	NNW10	N9	NNE6	SSE3	WSW2	W2	WNW2	SSE2.9	SE11
10-Apr	ESE7	SSE5	SSE10	SE9	SE10	SSE10	SSE10	S10	S10	S7	ESE12	ESE12	NE4	W4	SSW12	SW15	SSW14	SSW13	S6	ESE6	E6	N8	NNW7	N7	SSE4.9	SW15
11-Apr	NNW8	N9	N12	N12	NNW11	N11	NW7	NW6	NNE7	WNW2	SSW9	SSW9	S6	S8	SW23	WSW28	W24	W16	W11	SW5	SW8	WSW13	WSW11	SW12	W6.4	WSW28
12-Apr	SW14	W16	WSW9	SW12	WSW9	SSW8	SSW10	SW13	WSW16	WSW14	W13	W15	NW12	WNW13	NW10	NNW17	NNW10	NW3	N2	N6	NNE4	N5	NNE6	NNE4	W6.6	NNW17
13-Apr	SSE2	S3	SSE4	SSE4	ESE6	SW3	W4	WNW3	WNW1	NNW2	NNE7	NNE7	N13	N13	N13	NNE15	NNE18	NNE16	NNE15	NNE13	NNE12	N6	NNW4	NNW6	NNE5.9	NNE18
14-Apr	NNW6	NNW3	NW3	NNW3	UO	UO	S4	SSE7	SE8	SE11	SE9	SE9	SE10	SE16	SE21	SE25	S20	SSW16	S10	SE9	SE11	ESE12	SE15	SE12	SE8.7	SE25
15-Apr	SE11	SSE10	SE11	SSE11	SSE10	SE8	S11	SSW15	SW28	WSW34	W29	WSW28	WSW28	WSW28	W26	W29	W34	W32	WSW38	WSW31	WSW26	WSW24	WSW22	WSW20	WSW18.8	WSW38
16-Apr	W16	W12	W10	NW7	NW6	NW10	NW18	NW24	NW30	NW30	NNW31	NW31	NW30	NNW34	NNW29	NNW27	N21	N22	N20	N14	N12	NNE15	NNE20	N23	NNW18.5	NNW34
17-Apr	N22	N23	NNW21	NNW20	NNE15	NNE17	NNE19	NNE20	NNE19	NNE20	N23	NNE20	NNE20	NNE17	NNE15	NE11	NE10	NE10	ENE9	E7	ESE8	ESE9	SE5	SSE7	NNE12.8	N23
18-Apr	SSE12	SSE10	SSE9	SSE16	SSE16	SSE15	SSE18	S21	SSE19	SSE20	SSE24	SSE30	SSE31	S33	S30	SSE30	SSE26	SSE26	SSE25	SSE24	SSE18	SSE14	SSE18	SSE17	SSE20.9	S33
19-Apr	SSE14	SSW16	WSW20	W17	WNW8	WSW9	WSW16	WSW17	W21	W23	WSW25	WSW27	W24	W26	W25	W23	WNW21	W18	WNW16	N22	N25	N22	N22	N22	W13.2	WSW27
20-Apr	NNE17	N17	N17	N20	N19	N17	N12	NNW10	NW8	N6	E4	ESE4	SE8	SE7	SE8	ESE7	E7	NNE12	NNE14	NE14	NNE10	NE11	NE7	NW3	NNE8.1	N20
21-Apr	WNW3	NW3	NNW3	NNW3	NNW3	NNW2	E2	SE5	SE6	ESE7	ESE8	ESE10	ESE9	SE9	S8	S9	S10	S15	SSE11	SSW10	S10	SSE14	S8	SSE4	SSE5.0	S15
22-Apr	SW1	E5	SSE7	SSE4	SSE10	S11	S11	SSW13	S13	S17	S19	S23	SSE25	SSE25	S12	S23	S24	S9	SE13	SSE8	SSW12	NW6	NW5	WNW3	S10.8	SSE25
23-Apr	SW3	W4	W3	NW1	UO	SSW3	N5	N20	NNE19	NNE17	NNE17	NNE17	NNE15	NNE21	NNE18	NNE16	NNE14	NE13	NNE10	N9	NNW7	NNW5	NNW9	N13	N10.2	NNE21
24-Apr	N5	NNW6	NNW4	NNW6	N7	NNW7	N7	NW2	N5	N9	N10	N7	NE7	ESE3	ESE8	ESE10	ESE9	ESE8	ESE9	ESE9	ESE9	SE9	ESE1	SE7	ENE3.2	N10
25-Apr	SE4	UO	SSE2	SSE9	SE10	SE8	SSE7	S12	S9	SSW5	N4	SSE8	S28	S24	SSW21	SSW22	SSW19	S22	SSW17	S12	SSE10	S9	S7	S7	S11.1	S28
26-Apr	SE13	SE11	NNE12	NNE14	NNE18	NNE14	N12	N10	N15	NNE18	NNE19	NNE22	NNE20	NNE21	NNE21	NNE24	N27	N25	N27	N21	N20	NNE16	N16	N15	NNE16.4	N27
27-Apr	NNE14	NNE16	NNE22	N24	N22	N22	N20	N16	NNE14	NNE13	NNE10	NNE9	NNE11	NE10	NE13	NNE13	NNE15	NE16	NE16	NE14	NE14	NE11	NE7	ENE1	NNE13.9	N24
28-Apr	NW3	W2	UO	N1	SSE3	S3	S6	S10	S12	S11	S13	S19	SSE21	SSE23	S24	S25	S24	S22	SSE17	SSE15	SSW17	SSW18	SSW20	SSW13	S13.1	S25
29-Apr	SSW6	S9	S12	SSW8	SSW7	SSW10	SW14	SW15	WSW17	W13	W12	NW11	NNW11	N6	NNW8	N24	N22	N19	NNE14	NNE10	N8	NW2	SSE4	S4	WNW3.9	N24
30-Apr	S7	SSE6	SSW8	SW4	N15	N18	N20	N21	N13	NNE11	NNE14	N11	NNE9	NE7	ENE3	N18	N31	N29	N26	N23	N20	N18	N18	N16	N13.1	N31
S0.8 SW0.9WSW1.0NNW0.6 ENE0.9 E0.3 SW1.2 SW2.0WSW2.5WSW1.9NNW0.8 S1.3 SSE1.3 SSE1.7 S1.7WSW1.3 NW1.6 NW1.7NNE2.0 NNE2.7 NE1.8NNE1.1NNW1.5 NW1.3																										Diurnal Average
N22 N23 NNE22 N24 N22 N22 N20 NW24 NW30WSW34NNW31 NW31 SSE31NNW34 SSE30 SSE30 W34 W32WSW38WSW31WSW26WSW24 N22 N23																										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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Fort Hills - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	114	15.94	15.94
6 - 11	265	37.06	53.01
12 - 19	212	29.65	82.66
20 - 28	103	14.41	97.06
29 - 38	21	2.94	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 Hills - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	3	2	4	5	10	9	18	6	8	6	1	5	8	9	11	114
6 - 11	23	16	12	1	3	20	41	50	35	15	3	6	5	4	13	18	265
12 - 19	36	41	8	0	0	3	8	32	16	13	8	9	12	8	11	7	212
20 - 28	30	12	0	0	0	0	2	16	12	3	2	11	8	1	3	3	103
29 - 38	2	0	0	0	0	0	0	4	1	0	0	3	4	0	4	3	21
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	100	72	22	5	8	33	60	120	70	39	19	30	34	21	40	42	715

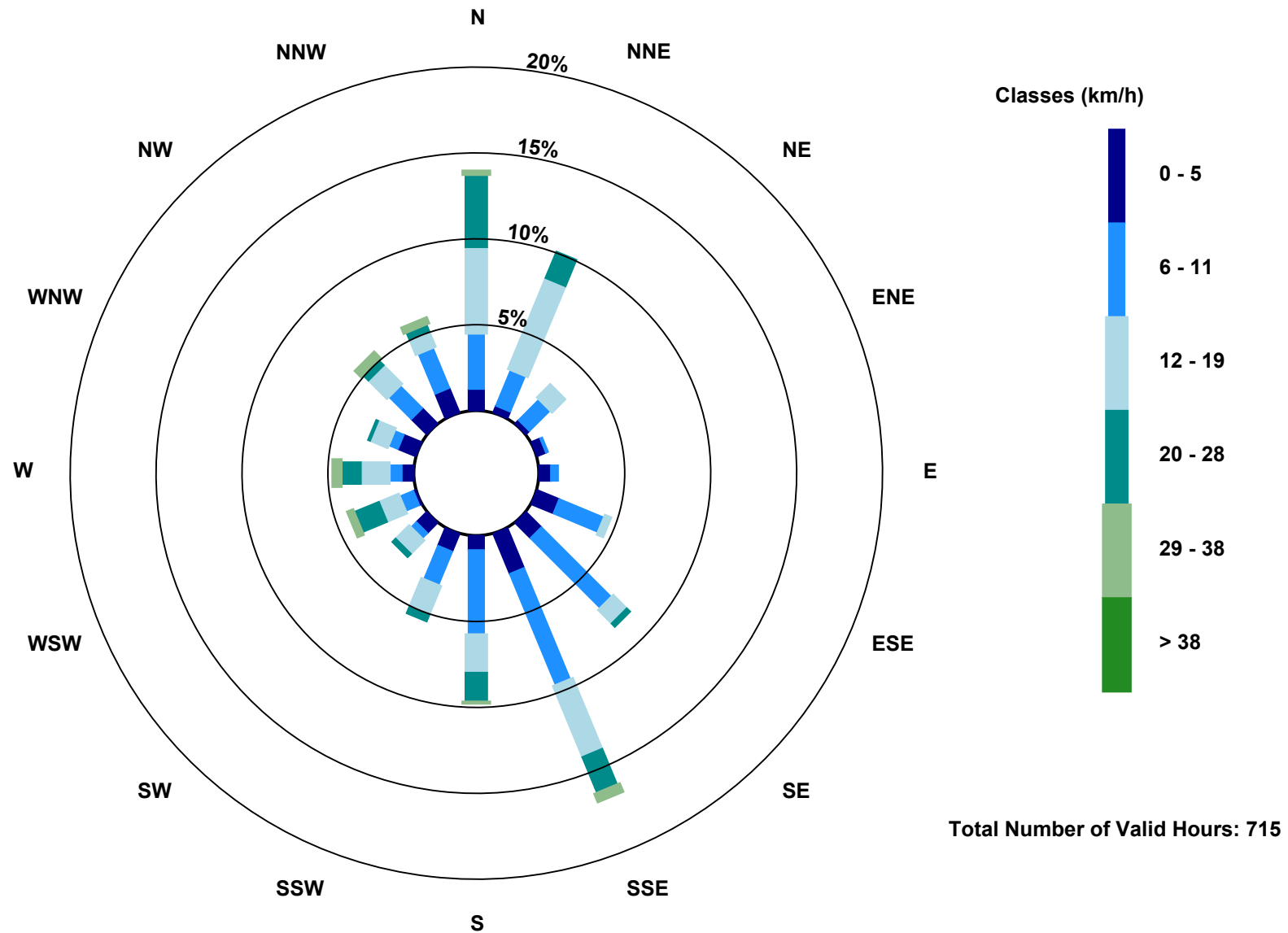
Total Number of Valid Hours: 715

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Fort Hills





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11 km/h on Apr 25 12:00																		Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3							
Minimum Value: 1 km/h on Apr 25 21:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	2	3	1	2	1	1	1	2	2	2	1	2	1	4	3	4	3	4	3	3	2	3	3	4
2-Apr	2	3	2	2	2	3	2	3	2	3	3	2	3	2	2	3	2	4	4	3	3	2	2	3	4
3-Apr	2	3	2	2	2	3	2	5	4	5	5	4	5	5	5	4	4	3	3	3	2	1	2	1	5
4-Apr	2	1	1	1	1	1	1	1	1	1	2	3	4	3	3	2	3	2	3	3	1	1	1	2	4
5-Apr	2	2	2	2	1	3	1	2	2	2	1	2	2	3	2	2	3	2	2	3	3	4	3	2	4
6-Apr	2	1	2	2	2	4	4	1	2	2	2	6	3	3	3	3	3	4	2	2	2	2	1	2	6
7-Apr	1	2	2	1	1	2	2	3	2	3	3	3	4	4	3	2	2	2	3	1	1	3	1	1	4
8-Apr	2	1	1	1	3	1	1	4	2	2	1	1	2	1	1	2	1	2	2	1	1	1	1	1	4
9-Apr	2	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	3	1	3	2	1	2	3	3
10-Apr	3	3	2	2	1	1	1	2	2	3	3	3	4	4	4	4	4	3	1	2	1	1	1	2	4
11-Apr	1	2	2	3	3	4	2	2	3	4	4	4	3	4	6	5	6	4	3	1	2	5	3	2	6
12-Apr	2	4	2	3	4	2	2	2	3	4	3	3	3	3	3	4	2	2	1	1	1	1	2	2	4
13-Apr	1	1	1	2	2	2	1	1	1	1	3	3	3	3	3	3	4	3	3	3	3	2	1	1	4
14-Apr	1	2	1	1	UO	UO	1	1	2	3	2	2	2	4	4	4	4	3	3	1	1	1	2	1	4
15-Apr	2	1	2	4	3	2	2	4	8	8	6	7	6	6	7	7	8	8	9	7	6	4	5	4	9
16-Apr	3	2	2	3	2	3	5	5	7	7	7	6	7	7	6	6	5	7	4	4	3	3	4	4	7
17-Apr	5	4	5	4	3	4	4	3	3	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	5
18-Apr	3	1	2	2	3	2	3	3	3	4	4	5	5	6	5	4	4	4	3	3	3	3	2	2	6
19-Apr	2	5	4	5	3	2	4	4	6	5	5	6	6	6	7	5	5	5	5	6	5	4	5	4	7
20-Apr	4	3	4	4	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	2	2	3	1	4
21-Apr	1	2	2	2	1	1	1	2	2	2	3	3	4	4	5	5	5	5	2	3	3	4	2	1	5
22-Apr	3	1	2	3	2	1	1	2	2	3	5	4	4	4	7	7	4	5	2	2	8	2	3	2	8
23-Apr	2	2	1	1	UO	2	3	4	3	3	3	3	4	3	4	3	3	3	2	2	1	1	2	3	4
24-Apr	3	2	2	1	2	2	2	1	1	2	2	3	3	3	3	3	3	2	2	1	1	2	2	3	3
25-Apr	2	UO	2	2	1	2	2	2	2	2	3	11	6	7	7	5	4	3	3	2	1	1	1	2	11
26-Apr	2	1	6	3	4	3	2	2	3	3	4	4	4	4	4	5	5	5	5	4	4	3	3	3	6
27-Apr	3	3	4	4	4	4	3	3	4	3	4	3	4	4	4	5	4	3	3	3	2	2	1	1	5
28-Apr	1	1	UO	2	1	1	1	3	2	3	4	4	5	7	7	6	4	4	2	2	5	6	5	7	7
29-Apr	2	2	2	1	1	2	2	3	4	3	4	4	4	4	6	5	5	4	3	2	2	2	1	1	6
30-Apr	2	3	2	2	6	4	4	4	3	3	2	3	3	3	3	8	5	6	5	4	4	4	3	3	8
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

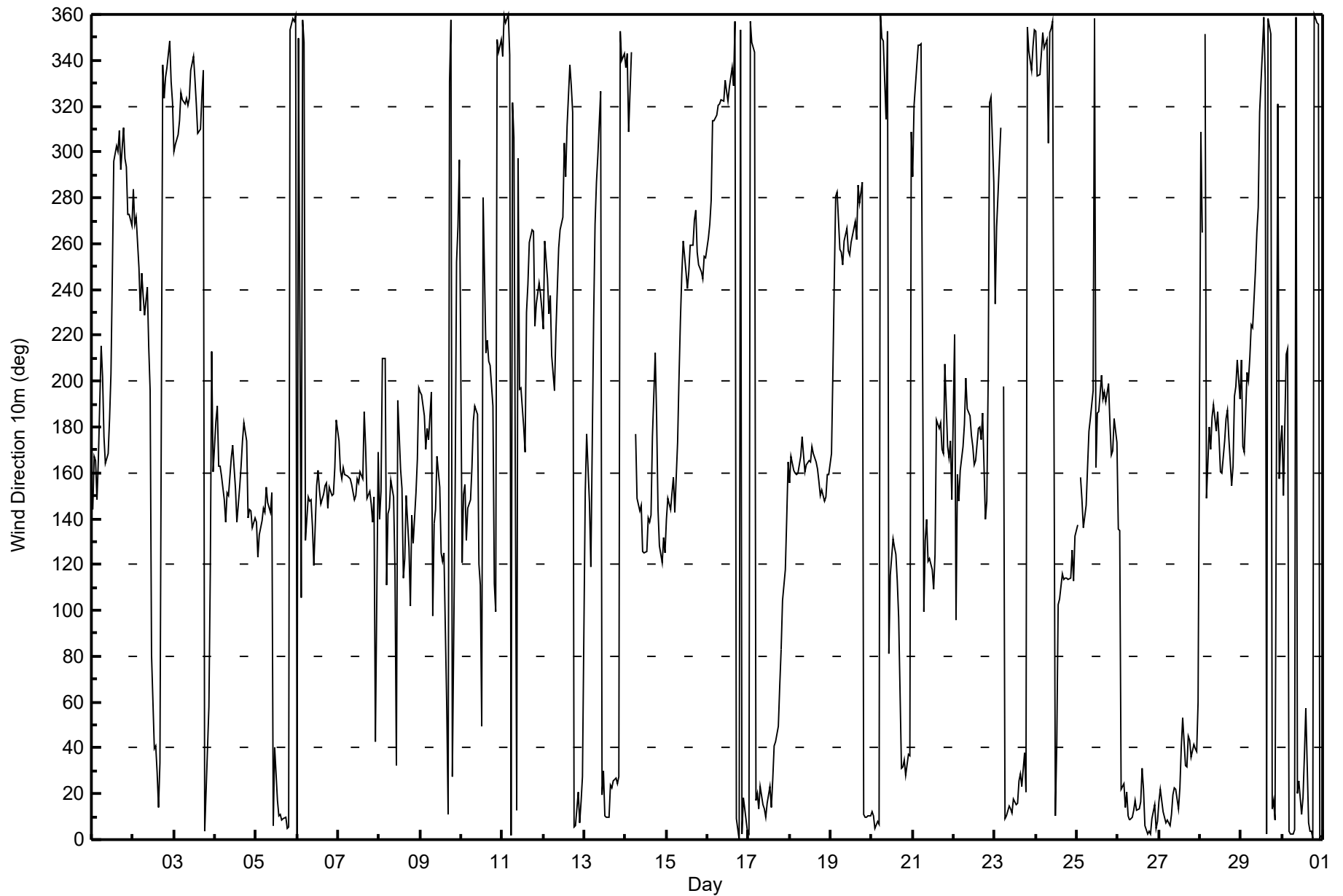
Fort Hills - April 2025

Direction of Maximum Speed: 256 deg on Apr 15 19:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 161.8 deg on Apr 18																				Hours of Data:		715			
Direction of Minimum Speed: 220 deg on Apr 22 01:00										Direction of Minimum Daily Speed Average: 2.9 deg on Apr 9										Hours of Missing Data:		5			
Monthly Average Direction: 269.3 deg																				Percent Operational Time:		99.3			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	144	167	165	148	166	215	202	176	164	169	183	203	247	296	303	300	309	292	310	297	293	273	273	268	253.0
2-Apr	284	269	271	250	231	247	237	229	241	215	196	81	39	41	29	14	34	338	324	332	337	349	331	321	304.4
3-Apr	300	303	308	313	326	323	321	324	320	323	336	342	332	321	308	310	325	336	4	21	58	117	213	161	324.5
4-Apr	182	189	163	163	159	148	139	151	150	167	172	162	153	138	154	163	174	182	174	140	144	144	136	140	158.5
5-Apr	138	123	133	139	145	143	154	147	143	151	6	40	17	10	11	8	9	10	5	5	353	358	357	359	29.6
6-Apr	1	350	106	357	348	130	149	147	149	137	119	154	161	152	147	151	154	156	145	154	150	151	162	183	147.8
7-Apr	174	161	158	162	159	158	158	158	155	148	150	157	156	161	158	186	171	149	152	146	138	149	43	169	157.5
8-Apr	140	152	210	210	111	142	144	157	150	118	32	191	161	153	114	123	150	128	102	142	130	151	166	197	148.2
9-Apr	196	194	185	171	179	174	195	98	138	144	167	154	125	122	125	58	11	331	358	28	151	252	268	297	153.4
10-Apr	121	151	155	131	144	148	162	182	189	186	120	111	49	280	212	218	209	207	189	112	99	349	344	349	165.7
11-Apr	342	359	356	360	343	2	322	306	13	297	196	197	180	169	230	242	260	266	265	224	234	243	238	232	264.8
12-Apr	223	261	245	229	237	211	196	221	240	258	266	271	304	289	311	338	329	318	5	6	20	7	16	28	271.3
13-Apr	152	177	162	147	119	228	268	287	298	327	19	30	10	10	10	24	23	26	27	25	28	352	340	343	18.8
14-Apr	337	343	309	344	UO	UO	177	149	144	146	126	125	126	141	138	141	176	212	184	144	128	121	132	125	145.2
15-Apr	140	149	144	151	158	143	173	202	227	246	261	248	240	248	259	259	270	274	256	251	248	245	254	254	242.5
16-Apr	262	269	279	314	314	316	320	321	323	322	331	326	322	328	337	329	357	9	0	353	2	19	14	3	333.4
17-Apr	2	357	348	344	17	20	14	23	15	14	10	16	23	14	26	41	43	49	67	83	104	118	140	165	20.4
18-Apr	156	167	161	160	159	160	167	176	168	160	163	165	165	171	169	165	161	156	150	152	148	149	160	159	161.8
19-Apr	168	205	245	280	283	257	256	251	261	267	257	255	261	264	270	262	285	277	287	11	10	10	11	10	279.7
20-Apr	12	10	5	8	7	360	349	348	314	353	81	115	131	128	124	113	97	31	32	35	28	37	37	309	23.3
21-Apr	289	320	338	347	347	347	100	131	139	121	123	118	109	125	183	179	182	170	168	207	172	166	174	148	157.2
22-Apr	220	96	159	148	161	171	181	201	188	185	176	171	163	165	179	180	175	186	140	148	202	322	324	287	174.9
23-Apr	234	267	281	310	UO	198	9	10	15	14	12	18	15	16	25	29	23	38	21	355	344	336	346	353	11.0
24-Apr	353	333	334	343	352	345	349	304	352	354	357	10	41	102	105	116	114	114	114	114	114	126	113	132	57.4
25-Apr	137	UO	158	148	136	146	162	178	184	196	358	163	186	187	203	192	195	191	199	182	168	170	184	173	181.6
26-Apr	135	135	22	24	14	21	10	9	10	13	17	13	14	17	31	22	6	2	4	3	9	15	5	8	15.5
27-Apr	17	22	12	10	7	9	6	11	20	23	22	13	23	40	53	32	32	45	43	36	41	40	38	60	23.7
28-Apr	308	265	UO	352	149	180	171	184	189	178	187	175	161	160	174	184	187	175	154	163	193	197	209	192	180.0
29-Apr	209	172	169	204	200	210	225	223	248	265	276	317	344	359	332	2	358	352	13	17	8	321	157	174	299.6
30-Apr	181	150	212	214	3	2	3	4	359	20	26	11	18	37	58	8	4	3	1	360	356	356	0	2	4.8
183.1 221.2 244.1 327.2 56.6 89.6 230.9 226.3 238.6 245.9 288.8 183.9 147.3 157.1 185.0 236.6 306.9 324.5 14.2 29.1 42.6 28.1 339.9 322.6																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Fort Hills - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg
Fort Hills - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on Apr 22 01:00																		Hours in Service: 720 Hours of Data: 715 Hours of Missing Data: 5 Hours of Calibration: 0 Percent Operational Time: 99.3							
Minimum Value: 3 deg on Apr 25 21:00																									
Percentiles: P ₁ = 6 P ₁₀ = 9 Q ₁ = 12 Median = 15 Q ₃ = 22 P ₉₀ = 46 P ₉₉ = 81																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	12	6	22	12	14	51	24	15	14	12	11	10	30	25	20	11	13	13	31	13	12	11	16	12	51
2-Apr	17	14	11	13	8	9	9	9	14	17	49	66	20	16	17	12	14	35	12	11	18	23	13	11	66
3-Apr	15	12	13	12	11	11	11	12	13	13	20	23	18	22	24	19	14	18	17	19	66	51	35	46	66
4-Apr	31	14	8	9	7	10	8	10	11	11	38	32	22	13	12	10	12	9	7	23	9	21	18	13	38
5-Apr	13	9	18	21	15	18	18	10	21	62	45	36	22	16	13	11	11	10	10	10	14	18	15	11	62
6-Apr	11	17	45	56	26	24	13	9	10	12	21	16	15	9	9	9	8	9	9	9	8	6	16	9	56
7-Apr	7	11	5	7	6	7	9	8	10	9	12	10	14	11	13	14	16	6	9	12	8	48	48	28	48
8-Apr	12	11	22	57	72	7	12	17	18	60	80	77	41	64	12	36	32	61	38	57	18	16	15	13	80
9-Apr	14	12	14	9	17	18	26	65	36	20	21	20	16	19	25	82	35	18	19	29	65	60	75	94	94
10-Apr	23	77	19	15	9	10	14	15	11	30	14	21	75	75	31	22	19	19	30	21	23	14	6	14	77
11-Apr	17	17	19	18	20	30	28	30	46	94	26	24	51	48	15	12	12	14	17	14	11	13	13	12	94
12-Apr	14	11	19	10	33	18	12	10	14	14	23	22	12	13	16	12	18	40	65	26	25	32	16	18	65
13-Apr	59	24	23	30	22	57	22	47	78	74	40	30	17	21	15	16	12	13	11	10	10	19	16	12	78
14-Apr	9	22	21	22	UO	UO	21	15	16	16	22	21	16	15	11	10	14	11	22	9	5	8	7	6	22
15-Apr	7	11	12	13	36	23	17	18	12	18	15	14	13	15	16	15	15	14	14	13	12	11	11	11	36
16-Apr	17	13	13	20	18	12	13	12	12	12	13	13	14	15	14	14	19	14	15	15	14	10	13	13	20
17-Apr	15	16	14	14	13	12	17	12	13	14	14	16	16	18	19	25	27	20	18	21	24	11	34	18	34
18-Apr	10	10	6	6	7	6	8	9	9	14	13	11	12	12	11	9	11	9	6	7	8	14	8	7	14
19-Apr	11	11	17	17	28	14	12	12	13	15	16	14	17	20	18	17	17	18	22	17	13	13	13	11	28
20-Apr	11	11	13	13	12	13	15	20	36	53	67	77	48	58	44	34	34	14	12	9	9	9	10	55	77
21-Apr	47	46	17	21	14	47	56	22	19	21	23	26	40	45	58	47	25	21	10	35	26	9	20	27	58
22-Apr	100	55	32	59	14	9	8	9	16	16	15	13	12	13	62	13	17	36	9	15	24	42	57	70	100
23-Apr	63	43	29	64	UO	27	27	12	14	15	14	16	19	15	15	17	18	16	14	14	8	29	12	21	64
24-Apr	44	36	42	20	12	11	15	76	25	18	19	60	53	79	34	29	20	16	12	8	7	7	82	10	82
25-Apr	26	UO	70	9	6	18	14	8	15	60	75	100	17	20	23	15	16	11	9	11	3	5	10	31	100
26-Apr	7	11	43	17	12	14	12	18	15	15	16	15	16	15	15	15	16	15	15	15	13	13	13	13	43
27-Apr	17	14	13	13	14	13	15	17	18	18	33	33	27	44	26	26	15	14	14	12	9	8	8	82	82
28-Apr	20	63	UO	77	56	37	11	20	15	20	20	17	16	20	18	19	13	16	6	16	9	17	13	17	77
29-Apr	22	11	9	16	15	16	7	9	24	17	19	17	23	51	81	18	17	17	11	9	17	72	15	17	81
30-Apr	23	43	13	30	48	15	16	14	16	21	13	22	27	35	73	23	15	15	16	16	15	13	14	13	73
100 77 70 77 72 57 56 76 78 94 80 100 75 79 81 82 35 61 65 57 66 72 82 94																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS25 WASKŌW OHCI PIMÂTISIWIN APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
APRIL 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	27.7	0	6.2	0
H2S(ppb) Average	685	35	35	100	2.9	0	0.8	0
Temperature 2 m (C) Average	720	0	0	100	22.9	0	12.7	0
Relative Humidity (%) Average	682	0	38	94.72	100	-	76.7	-
Wind Speed 10 m (km/h) Average	698	0	22	96.94	25	0	14	0
Wind Direction 10 m (deg) Average	698	0	22	96.94	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMĀTISIWIN (AMS25)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	1.1	3.3	-	0	0	0	0.1	0.3	3.2	27.7
H2S (ppb) Average	685	0.19	0.3	-	0	0	0.1	0.1	0.2	0.4	2.9
Temperature 2 m (C) Average	720	4.01	6.6	-	-14.9	-4.3	-0.7	4	8.8	12.7	22.9
Relative Humidity (%) Average	682	58.49	20.6	-	15.3	29.8	42.4	59.2	73.7	85.5	100
Wind Speed 10 m (km/h) Average	698	6.5	4	-	0	2	3	6	9	12	25
Wind Direction 10 m (deg) Average	698	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)

APRIL 2025

OPERATIONAL NOTES				
Parameter	Period Start	Period End	Duration (Hours)	Notes
Relative Humidity	08 Apr 2025 07:00	09 Apr 2025 12:00	30	Sensor operated out of range
Relative Humidity	13 Apr 2025 04:00	13 Apr 2025 09:00	6	Sensor operated out of range
Relative Humidity	23 Apr 2025 07:00	23 Apr 2025 08:00	2	Sensor operated out of range
Wind Speed, Wind Direction	08 Apr 2025 01:00	08 Apr 2025 02:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	08 Apr 2025 21:00	08 Apr 2025 22:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Apr 2025 20:00	09 Apr 2025 20:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	10 Apr 2025 20:00	10 Apr 2025 21:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	12 Apr 2025 22:00	13 Apr 2025 00:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 01:00	20 Apr 2025 07:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction	21 Apr 2025 07:00	21 Apr 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	22 Apr 2025 07:00	22 Apr 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Apr 2025 07:00	23 Apr 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Apr 2025 00:00	25 Apr 2025 01:00	2	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

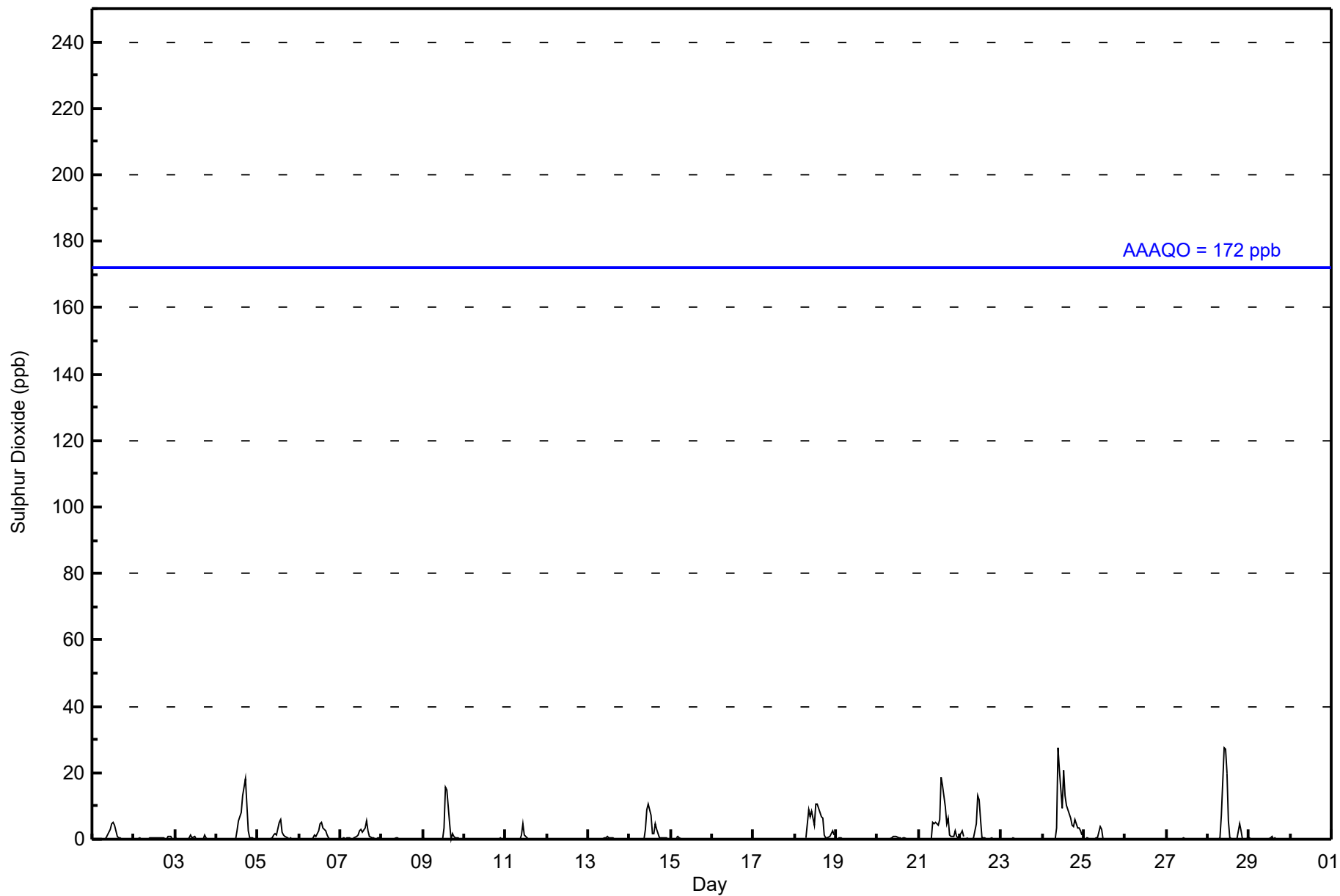
Waskow ohci Pimatisiwin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 27.7 ppb on Apr 24 10:00 Maximum Daily Average: 6.2 ppb on Apr 24																				Hours in Service: 720 Hours of Data: 687							
Minimum Value: 0.0 ppb on Apr 1 03:00 Minimum Daily Average: 0.0 ppb on Apr 17 Maximum Diurnal Average: 3.3 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 4 Monthly Average: 1.10 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 3.2 P ₉₉ = 18.2																				Hours of Missing Data: 33 Hours of Calibration: 33 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-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.2	3.0	4.8	5.0	4.4	1.0	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	1.0	5.0	
2-Apr	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	1.0	1.1	0.2	0.1	0.3	1.1	
3-Apr	0.4	0.5	Z	0.2	0.1	0.1	0.1	0.1	0.3	1.2	0.5	0.7	0.2	0.1	0.2	0.0	0.0	1.4	0.4	0.0	0.1	0.0	0.0	0.0	0.3	1.4	
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.6	5.7	7.9	13.2	15.5	18.2	2.5	0.3	0.4	0.3	0.1	0.1	2.9	18.2	
5-Apr	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.5	1.2	1.5	1.1	5.1	5.8	2.2	1.1	0.7	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.9	5.8	
6-Apr	0.1	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.3	1.3	0.9	2.5	4.8	5.0	3.3	2.5	1.3	0.3	0.1	0.2	0.2	0.1	0.1	0.1	1.0	5.0	
7-Apr	Z	0.2	0.3	0.1	0.2	0.4	0.2	0.2	0.3	1.0	1.3	2.4	3.2	1.9	3.3	5.5	2.7	0.7	0.5	0.3	0.2	0.2	0.2	0.2	1.1	5.5	
8-Apr	0.2	Z	0.2	0.0	0.1	0.0	0.1	0.2	0.3	0.4	0.2	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
9-Apr	0.2	0.3	Z	0.0	0.0	0.0	0.0	C	C	C	0.0	0.2	3.3	15.6	14.8	4.8	0.1	1.6	0.9	0.6	0.3	0.1	0.0	0.0	2.1	15.6	
10-Apr	0.0	0.0	0.0	Z	0.1	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	0.2	0.3	0.2	0.0	0.1	0.3	
11-Apr	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	1.5	4.7	1.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	4.7	
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.5	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.7	
14-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.2	2.9	8.9	10.7	7.4	1.7	1.5	4.6	3.1	0.2	0.2	0.4	0.3	0.2	0.1	0.1	1.9	10.7	
15-Apr	0.0	0.2	Z	0.5	1.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	
16-Apr	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	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
17-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.4	4.7	9.0	6.6	8.4	4.4	10.7	10.5	9.3	6.7	6.5	1.3	0.4	0.5	1.0	1.7	2.4	1.3	3.7	10.7	
19-Apr	Z	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
20-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.8	0.8	0.5	0.3	0.2	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.8	
21-Apr	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	5.0	4.5	5.1	4.1	5.9	18.7	16.2	9.6	4.7	6.2	1.3	0.9	0.7	2.4	0.8	0.4	3.8	18.7	
22-Apr	1.6	2.7	0.7	Z	0.3	0.2	0.1	0.1	0.3	4.8	13.1	11.7	6.1	0.4	0.2	0.1	0.0	0.1	0.3	0.2	0.0	0.0	0.1	0.0	1.9	13.1	
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
24-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	3.5	27.7	20.6	9.4	20.7	13.0	10.2	7.7	6.5	4.1	3.7	6.1	3.3	3.4	2.6	1.1	6.2	27.7	
25-Apr	Z	0.3	0.3	0.1	0.1	0.1	0.2	0.3	0.6	3.6	3.0	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	0.4	3.6	
26-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	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	0.1	0.2	
27-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
28-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	7.0	27.4	27.3	20.0	5.7	0.4	0.1	0.0	0.1	0.1	4.9	2.3	0.2	0.1	0.1	0.4	4.2	27.4	
29-Apr	0.6	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.9	
30-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	668	97.23	97.23
11 - 20	14	2.04	99.27
21 - 60	5	0.73	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 (SO₂) - ppb
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	52	58	32	14	12	12	52	121	42	25	22	35	52	38	44	38	649
11 - 20	0	0	0	0	1	0	7	6	0	0	0	0	0	0	0	0	14
21 - 60	0	0	0	0	2	1	1	1	0	0	0	0	0	0	0	0	5
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	58	32	14	15	13	60	128	42	25	22	35	52	38	44	38	668

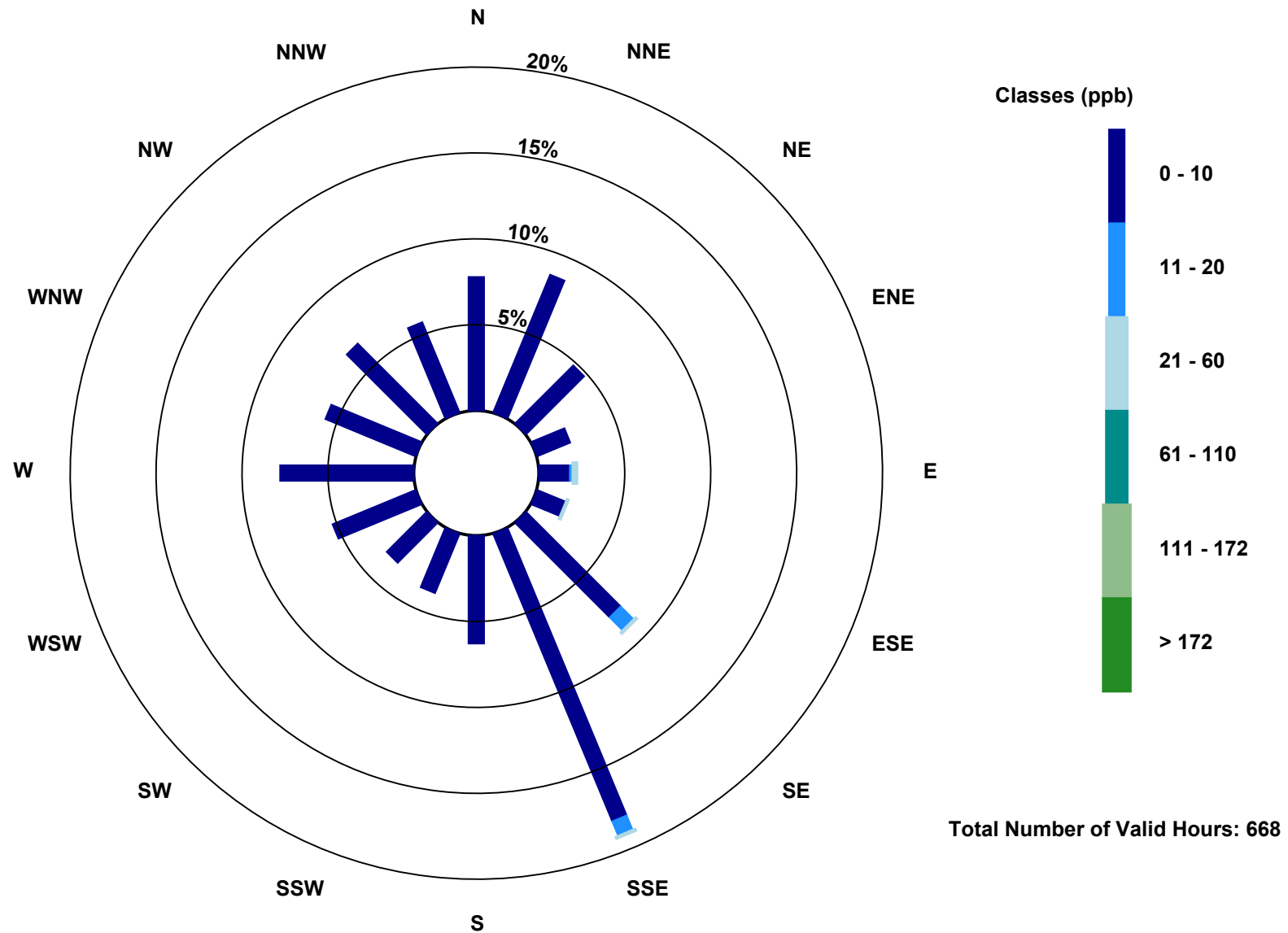
Total Number of Valid Hours: 668

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin



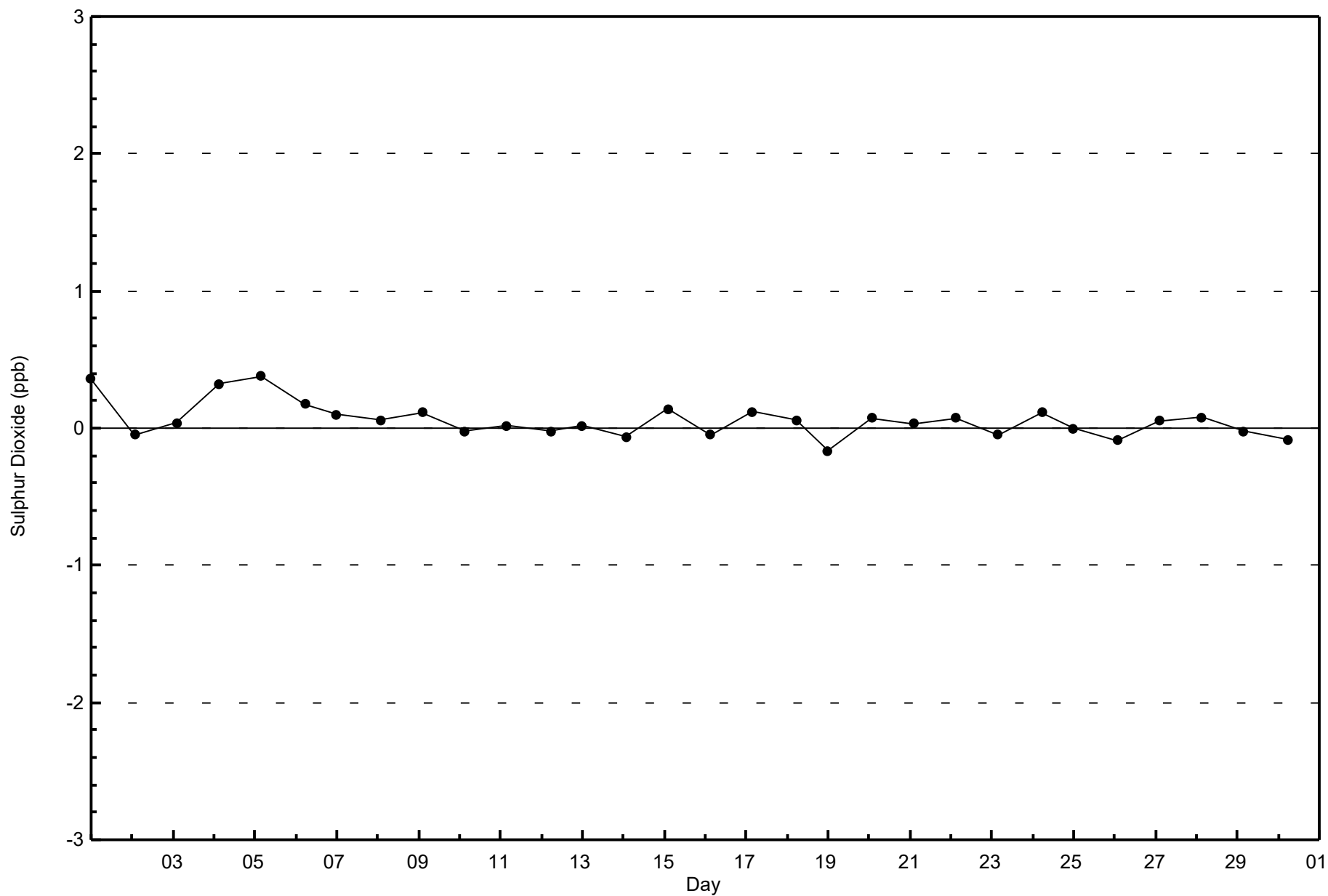


Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

Waskow ohci Pimatisiwin - April 2025



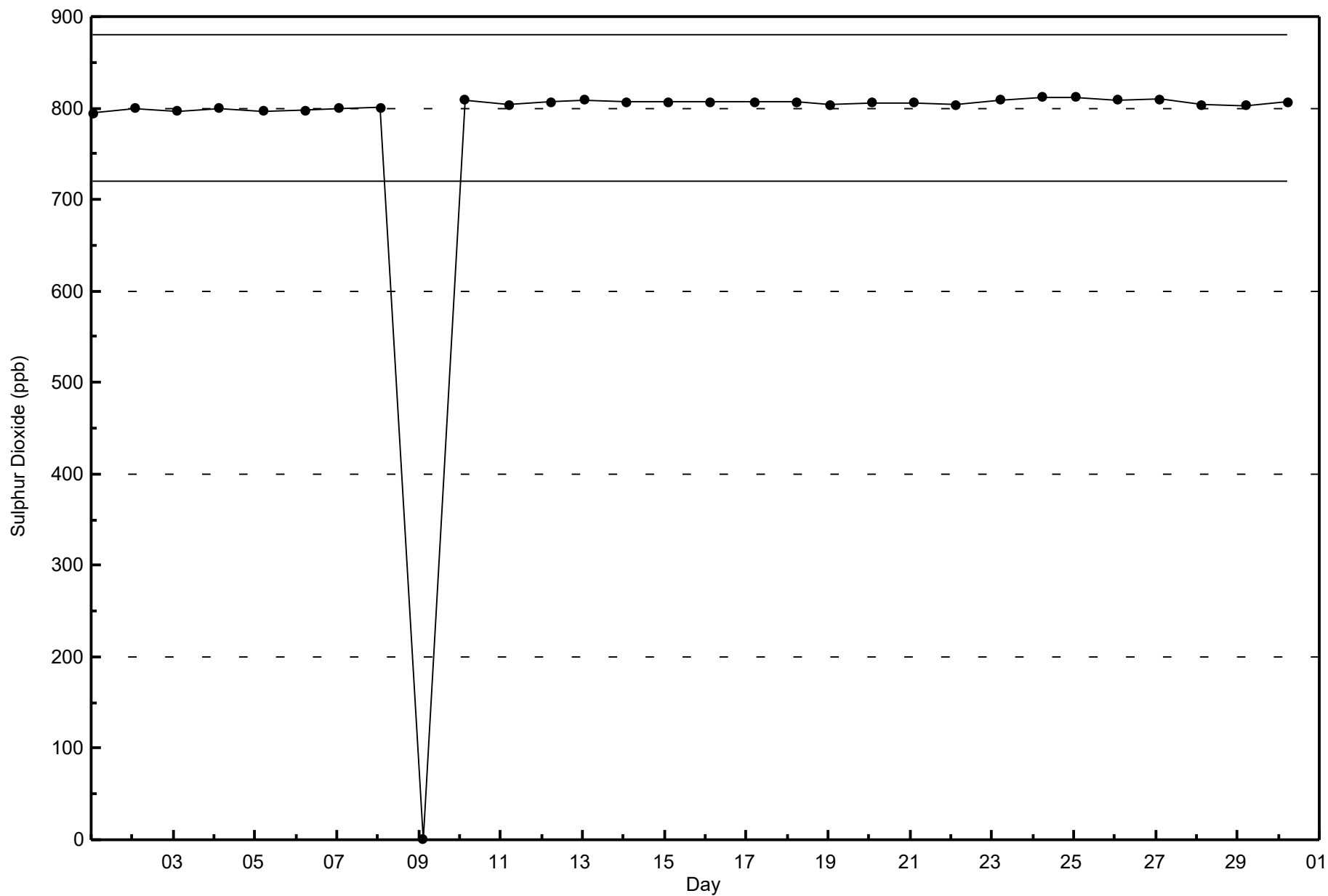


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO₂) - ppb

Waskow ohci Pimatisiwin - April 2025

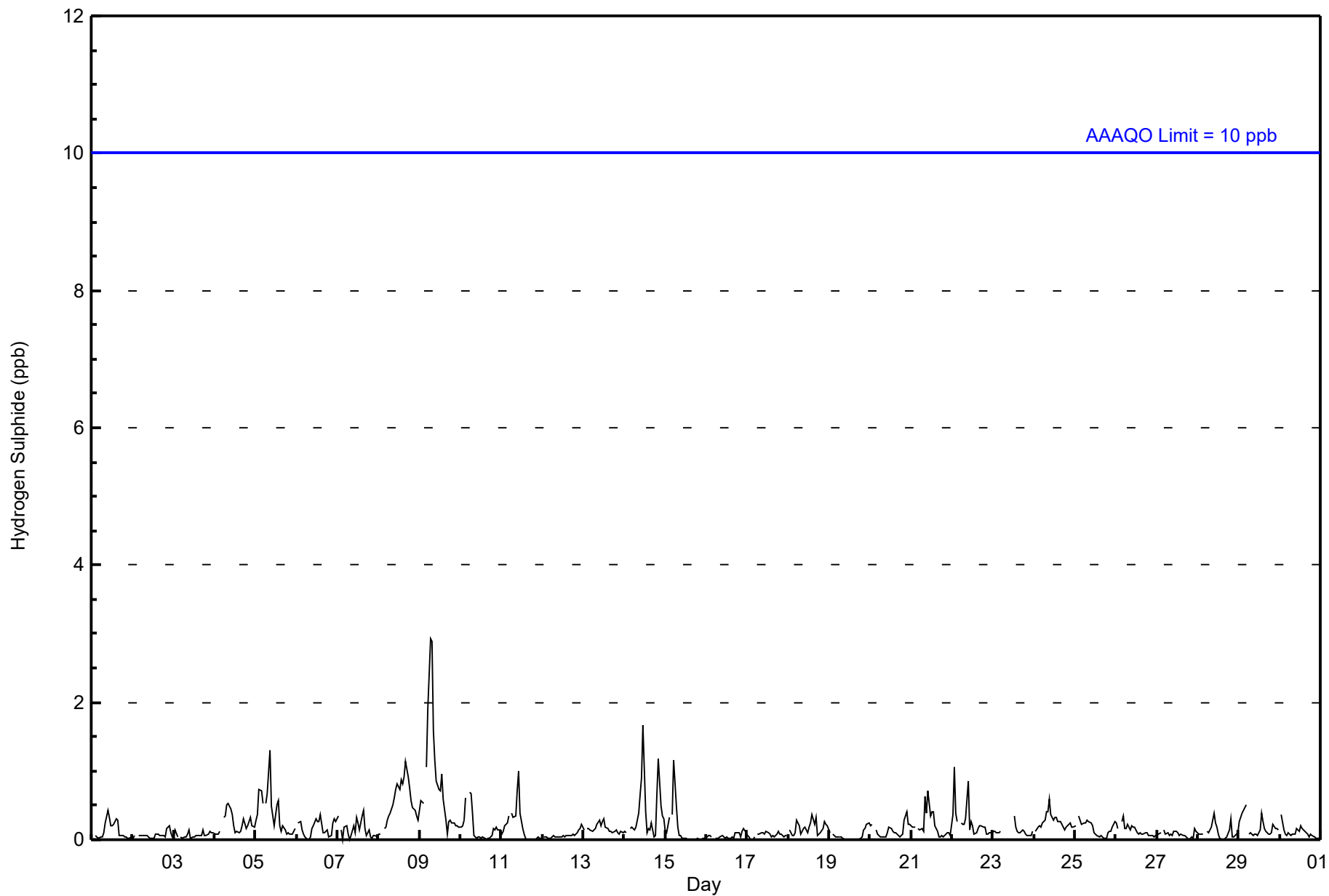


Number of Exceedences (AAAQO): Maximum Value: 2.9 ppb on Apr 9 07:00																	1-hr: 0 24-hr: 0 Maximum Daily Average: 0.8 ppb on Apr 9										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 6 08:00 Maximum Diurnal Average: 0.3 ppb at hour 10 Monthly Average: 0.19 ppb																	Minimum Daily Average: 0.1 ppb on Apr 19 Minimum Diurnal Average: 0.1 ppb at hour 19 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.4 P ₉₉ = 1.2										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 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-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
2-Apr	0.0	0.1	Z	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	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.2	
3-Apr	0.0	0.2	0.0	Z	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	0.1	0.1	0.1	0.1	0.2	
4-Apr	0.1	0.1	0.1	0.1	Z	0.3	0.4	0.5	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.5	
5-Apr	0.3	0.4	0.7	0.7	0.5	Z	0.5	0.7	1.3	0.5	0.3	0.2	0.5	0.6	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	1.3		
6-Apr	Z	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.4		
7-Apr	0.4	Z	0.2	0.0	0.2	0.2	0.1	0.0	0.1	0.2	0.1	0.3	0.2	0.1	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4		
8-Apr	0.1	0.1	Z	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.7	0.9	0.8	0.9	1.1	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.5	1.1		
9-Apr	0.4	0.6	0.5	Z	1.1	1.9	2.9	2.9	1.6	1.2	0.9	0.7	0.7	0.9	0.6	0.3	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.8	2.9		
10-Apr	0.2	0.2	0.3	0.6	Z	0.7	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.7		
11-Apr	0.1	0.1	0.2	0.3	0.3	Z	0.4	0.3	0.4	0.7	1.0	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	0.2	1.0		
12-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2		
13-Apr	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	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		
14-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.9	1.7	0.4	0.1	0.2	0.1	0.2	0.0	0.1	0.7	1.2	0.5	0.3	0.3	0.4	1.7		
15-Apr	0.1	0.1	0.3	Z	0.4	1.2	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2		
16-Apr	0.0	0.1	0.1	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	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.2		
17-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1		
18-Apr	Z	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.3	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.4		
19-Apr	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.2		
20-Apr	0.2	0.2	Z	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	0.1	0.0	0.1	0.1	0.3	0.4	0.2	0.2	0.1	0.4		
21-Apr	0.2	0.2	0.2	Z	0.2	0.1	0.2	0.1	0.6	0.4	0.7	0.4	0.4	0.4	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.7		
22-Apr	0.4	1.1	0.4	0.3	Z	0.2	0.2	0.2	0.3	0.9	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	1.1		
23-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	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	0.1	0.1	0.3		
24-Apr	Z	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.6		
25-Apr	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.3		
26-Apr	0.2	0.2	Z	0.3	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4		
27-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2		
28-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.1	0.1	0.1	0.4		
29-Apr	0.3	0.3	0.4	0.5	0.5	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.5		
30-Apr	Z	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan C - Calibration																												
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																												



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	99.71	99.71
3 - 4	2	0.29	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
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	50	56	32	14	16	12	59	129	44	24	22	34	51	38	43	38	662
3 - 4	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	56	32	14	16	12	59	130	44	25	22	34	51	38	43	38	664

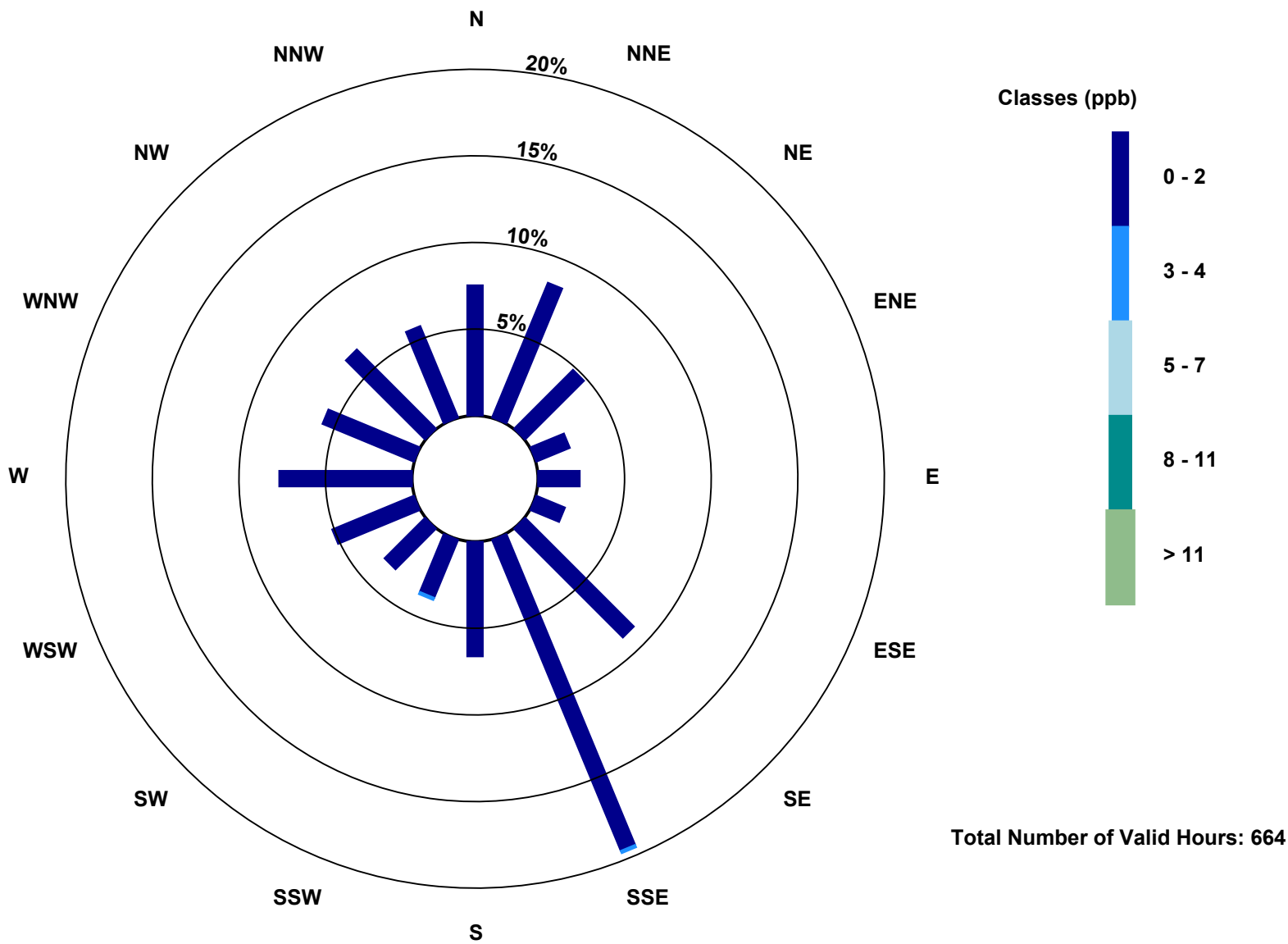
Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin



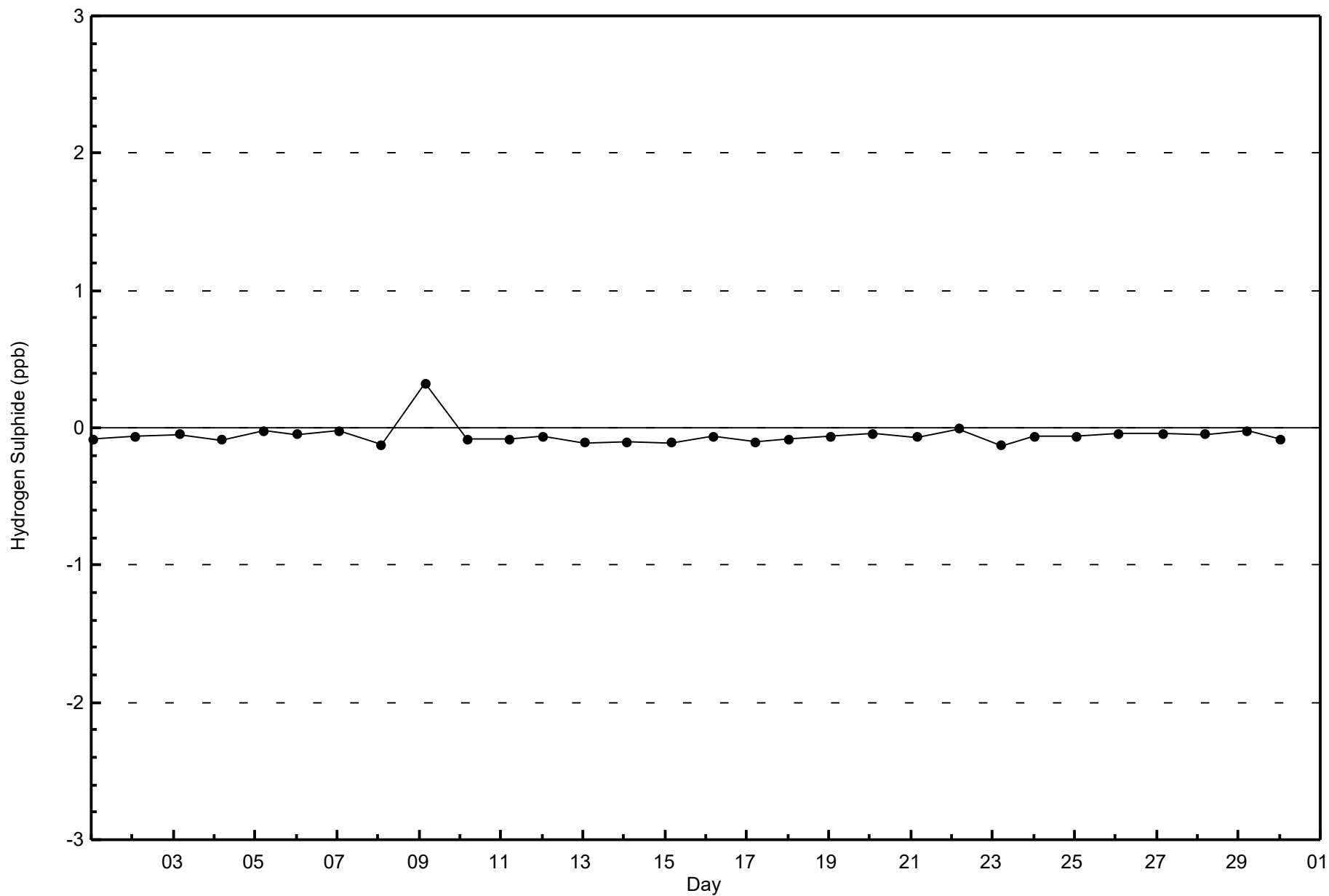


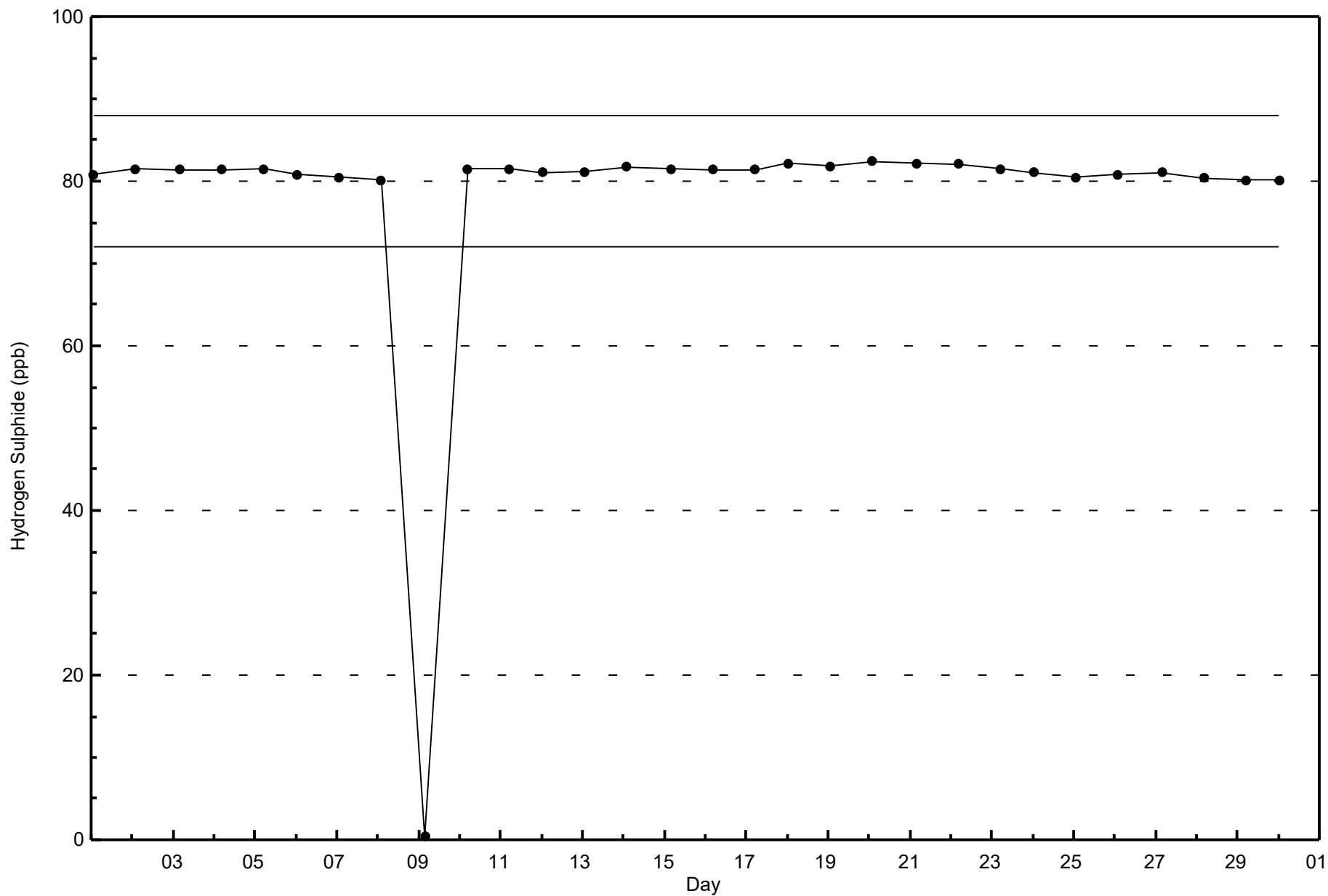
Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H₂S) - ppb

Waskow ohci Pimatisiwin - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

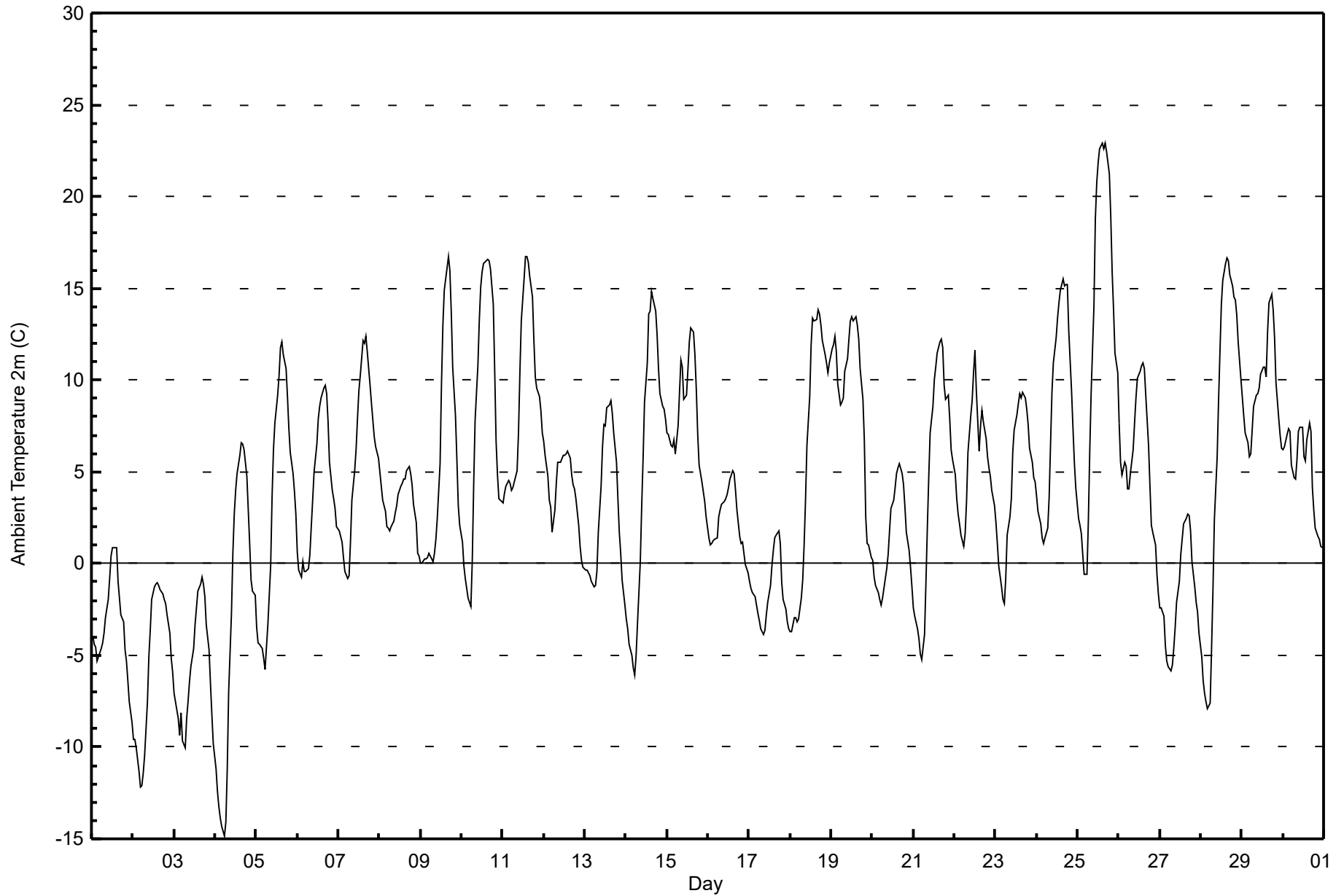
Waskow ohci Pimatisiwin - April 2025

Maximum Value: 22.9 C on Apr 25 17:00																				Maximum Daily Average: 12.7 C on Apr 25					Hours in Service: 720		
Minimum Value: -14.9 C on Apr 4 06:00																				Minimum Daily Average: -5.7 C on Apr 3					Hours of Data: 720		
Maximum Diurnal Average: 9.6 C at hour 16																				Minimum Diurnal Average: -1.5 C at hour 6					Hours of Missing Data: 0		
Monthly Average: 4.01 C																				Percentiles: P ₁ = -12.0 P ₁₀ = -4.3 Q ₁ = -0.7 Median = 4.0 Q ₃ = 8.8 P ₉₀ = 12.7 P ₉₉ = 20.4					Hours of Calibration: 0		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	-4.0	-4.4	-4.5	-5.3	-5.1	-4.6	-4.3	-3.8	-3.0	-1.9	-0.8	0.4	0.9	0.9	0.8	-1.0	-1.9	-2.8	-3.1	-4.7	-5.3	-6.4	-7.5	-8.7	-3.3	0.9	
2-Apr	-9.6	-9.6	-10.0	-11.3	-12.2	-12.1	-11.5	-10.4	-7.5	-5.1	-3.7	-1.9	-1.2	-1.1	-1.0	-1.2	-1.4	-1.6	-1.9	-2.2	-2.8	-3.8	-5.1	-6.0	-5.6	-1.0	
3-Apr	-7.1	-7.5	-8.5	-9.4	-8.2	-9.6	-10.1	-8.4	-7.5	-6.4	-5.6	-4.6	-3.3	-2.4	-1.5	-1.1	-0.7	-1.1	-1.8	-3.3	-4.7	-6.6	-8.2	-9.8	-5.7	-0.7	
4-Apr	-11.2	-12.4	-13.2	-13.9	-14.3	-14.9	-14.1	-11.2	-7.0	-2.7	0.6	2.7	4.0	4.9	5.9	6.6	6.5	6.2	4.7	2.9	1.1	-0.9	-1.5	-1.8	-3.0	6.6	
5-Apr	-3.5	-4.3	-4.4	-4.7	-5.2	-5.8	-4.6	-3.3	-0.1	3.6	6.2	7.7	9.2	10.3	11.8	12.1	11.4	10.6	9.1	7.4	6.1	4.9	3.9	2.7	3.4	12.1	
6-Apr	0.7	-0.4	-0.7	0.1	-0.4	-0.4	-0.3	0.5	2.0	3.4	4.9	6.5	7.9	8.6	9.0	9.6	9.7	9.2	7.7	5.5	4.0	3.6	3.0	2.0	4.0	9.7	
7-Apr	1.8	1.5	1.2	0.3	-0.4	-0.8	-0.7	1.2	3.4	5.1	6.2	7.9	9.4	10.2	12.2	12.0	12.4	11.6	9.7	8.7	7.8	6.9	6.4	5.7	5.8	12.4	
8-Apr	5.0	4.2	3.5	2.9	2.0	1.9	1.8	2.0	2.3	2.7	3.1	3.8	4.2	4.4	4.6	4.6	5.0	5.3	4.9	4.3	3.2	2.3	0.6	0.4	3.3	5.3	
9-Apr	0.0	0.0	0.3	0.2	0.3	0.5	0.2	0.1	0.5	1.3	2.5	5.4	9.8	13.0	14.9	16.1	16.8	16.0	13.7	10.7	8.0	5.7	3.2	2.1	5.9	16.8	
10-Apr	1.2	-0.1	-0.8	-1.4	-1.9	-2.3	0.2	4.3	7.8	10.8	13.2	15.1	15.9	16.4	16.5	16.6	16.5	16.0	14.2	10.6	6.6	4.8	3.5	3.4	7.8	16.6	
11-Apr	3.3	3.9	4.2	4.5	4.4	4.0	4.1	4.5	5.0	7.1	10.4	13.2	15.5	16.8	16.7	16.4	15.7	14.5	12.2	10.2	9.5	9.1	8.4	7.2	9.2	16.8	
12-Apr	6.6	5.9	4.8	3.5	3.1	1.7	3.0	4.4	5.5	5.6	5.6	5.9	5.9	6.0	6.1	5.7	4.8	4.3	4.0	3.5	2.1	1.0	0.2	-0.2	4.1	6.6	
13-Apr	-0.3	-0.4	-0.5	-0.7	-1.0	-1.2	-1.2	-0.4	1.7	4.2	6.4	7.6	7.5	8.5	8.7	8.8	8.2	7.1	5.5	3.6	1.7	0.6	-0.9	-2.3	3.0	8.8	
14-Apr	-3.0	-3.5	-4.4	-5.0	-5.7	-6.1	-5.0	-3.3	0.1	3.2	5.7	8.8	11.0	13.6	13.8	14.8	14.4	13.8	12.5	10.6	9.3	8.6	8.4	7.9	5.0	14.8	
15-Apr	7.1	7.1	6.4	6.3	6.8	6.0	7.5	9.3	11.1	10.7	9.0	9.2	10.5	12.1	12.9	12.6	11.4	9.5	7.0	5.4	4.5	3.9	3.4	2.6	8.0	12.9	
16-Apr	1.4	1.0	1.1	1.2	1.3	1.4	2.5	3.0	3.2	3.4	3.6	3.8	4.2	4.6	5.1	4.9	4.0	2.9	1.5	1.1	1.1	0.6	0.0	-0.5	2.3	5.1	
17-Apr	-1.0	-1.3	-1.6	-1.8	-2.2	-2.7	-3.1	-3.6	-3.9	-3.6	-2.8	-2.1	-1.2	-0.2	0.7	1.4	1.6	1.8	1.1	-1.1	-2.0	-2.5	-3.2	-3.6	-1.5	1.8	
18-Apr	-3.7	-3.7	-3.0	-2.9	-3.2	-3.0	-1.9	-0.9	1.0	3.5	6.5	9.1	11.9	13.3	13.2	13.3	13.8	13.6	13.0	12.2	11.4	10.9	10.4	10.9	6.1	13.8	
19-Apr	11.7	11.9	12.4	11.5	9.8	8.6	8.8	9.0	10.5	11.1	12.3	13.2	13.4	13.2	13.4	13.0	12.2	10.6	8.9	6.8	2.6	1.1	1.0	0.3	9.5	13.4	
20-Apr	0.2	-0.8	-1.2	-1.6	-1.9	-2.3	-1.9	-1.4	-0.3	0.5	1.8	3.0	3.5	4.2	4.9	5.2	5.4	4.9	4.3	3.0	1.7	0.7	-0.2	-1.3	1.3	5.4	
21-Apr	-2.4	-2.9	-3.5	-4.1	-4.9	-5.2	-3.9	-1.0	2.0	4.7	7.1	8.6	10.0	10.7	11.5	12.1	12.2	11.8	9.7	8.9	9.1	7.9	6.2	5.7	4.6	12.2	
22-Apr	4.8	3.6	2.7	2.1	1.5	1.0	1.7	3.4	6.0	8.1	8.8	10.4	11.6	9.4	6.1	7.5	8.3	7.7	6.8	5.8	5.2	4.7	4.0	3.2	5.6	11.6	
23-Apr	2.3	1.1	-0.1	-1.3	-2.0	-2.2	-0.8	1.6	2.5	3.5	6.1	7.3	8.1	8.7	9.3	9.0	9.3	9.1	8.4	7.6	6.3	5.5	4.6	4.5	4.5	9.3	
24-Apr	3.7	2.8	2.2	1.4	1.1	1.4	1.9	3.6	6.5	9.3	10.9	12.3	13.4	14.2	14.9	15.5	15.1	15.2	15.2	12.7	9.4	7.4	5.5	4.1	8.3	15.5	
25-Apr	2.5	2.1	1.6	0.5	-0.6	-0.6	2.3	6.1	9.3	14.1	18.8	20.8	21.8	22.6	22.9	22.6	22.9	22.4	21.2	18.9	15.9	13.8	11.5	10.4	12.7	22.9	
26-Apr	7.7	5.5	4.9	5.5	5.3	4.1	4.0	4.9	6.2	7.7	9.0	10.1	10.5	10.8	10.9	10.6	9.2	6.4	4.2	2.1	1.7	1.0	-0.6	-1.7	5.8	10.9	
27-Apr	-2.4	-2.4	-2.9	-4.5	-5.3	-5.6	-5.8	-5.5	-4.7	-3.5	-2.1	-1.0	0.5	1.3	2.2	2.5	2.7	2.6	1.8	0.1	-1.3	-2.1	-2.7	-3.8	-1.7	2.7	
28-Apr	-5.1	-6.3	-7.1	-7.5	-7.9	-7.6	-4.6	-1.4	2.4	5.9	8.9	11.5	14.1	15.4	16.4	16.6	16.5	15.8	15.1	14.5	14.4	13.5	12.1	10.0	6.5	16.6	
29-Apr	9.0	8.0	7.1	6.6	5.8	6.0	7.3	8.6	9.2	9.2	9.5	10.3	10.7	10.7	10.1	12.6	14.2	14.7	13.8	12.3	9.9	7.9	7.0	6.3	9.5	14.7	
30-Apr	6.2	6.4	7.0	7.4	7.2	5.4	4.7	4.6	5.7	7.2	7.5	7.4	5.8	5.6	6.7	7.6	7.2	4.2	2.9	1.9	1.5	1.3	1.0	0.8	5.1	7.6	
																									Diurnal Average		
																									Diurnal Maximum		



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Waskow ohci Pimatisiwin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	202	28.06	28.06
0 - 10	379	52.64	80.69
10 - 20	131	18.19	98.89
> 20	8	1.11	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) - %

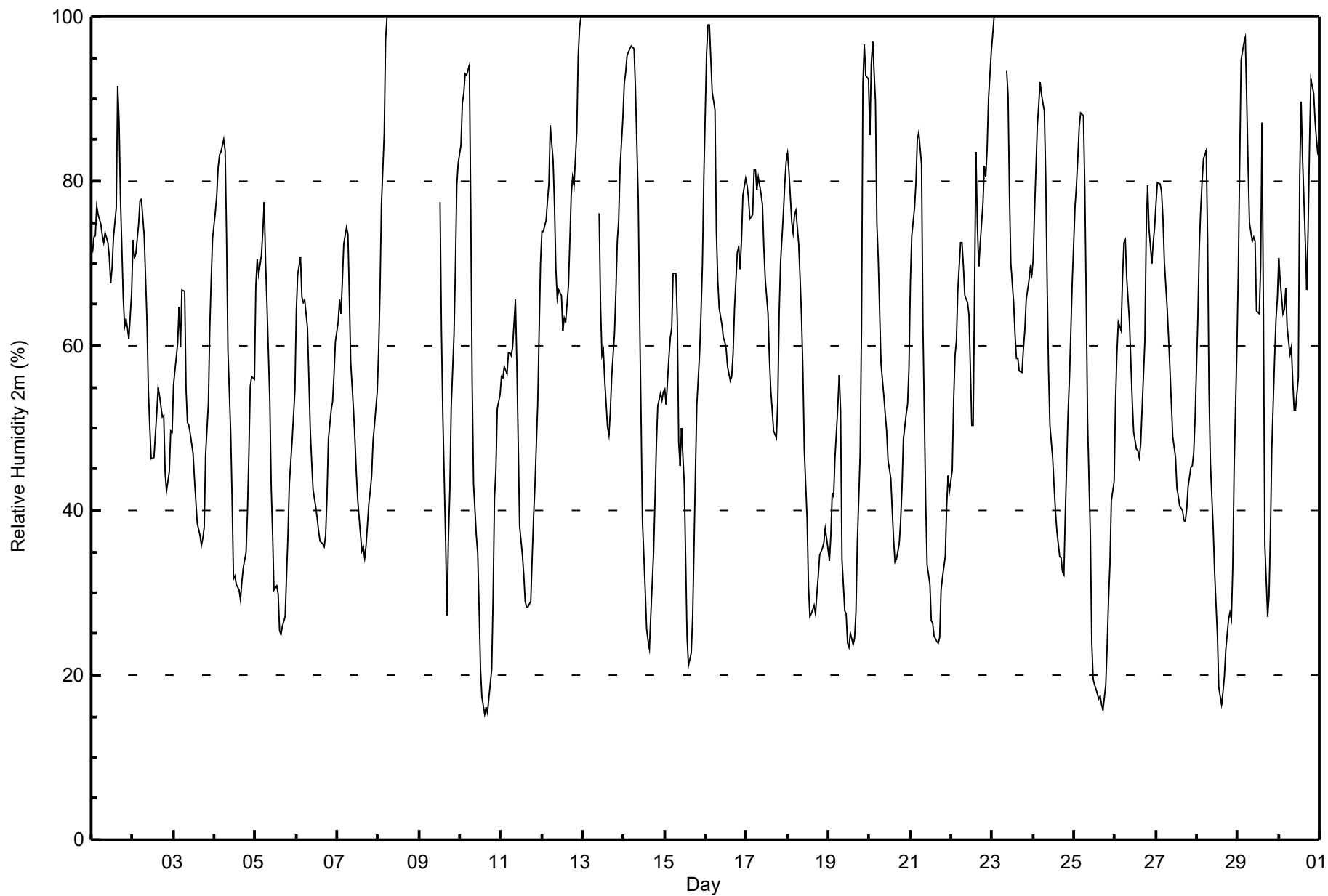
Waskow ohci Pimatisiwin - April 2025

Maximum Value: 100.0 % on Apr 8 06:00																				Maximum Daily Average: 76.7 % on Apr 12				Hours in Service: 720				
Minimum Value: 15.3 % on Apr 10 15:00																				Minimum Daily Average: 44.6 % on Apr 28				Hours of Data: 682				
Maximum Diurnal Average: 79.0 % at hour 6																				Minimum Diurnal Average: 40.2 % at hour 17				Hours of Missing Data: 38				
Monthly Average: 58.49 %																				Percentiles: P ₁ = 17.2 P ₁₀ = 29.8 Q ₁ = 42.4 Median = 59.2 Q ₃ = 73.7 P ₉₀ = 85.5 P ₉₉ = 100.0				Hours of Calibration: 0				
																								Percent Operational Time: 94.7				
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-Apr	71.4	73.3	73.4	77.0	76.0	74.8	73.4	72.5	73.7	72.5	70.9	67.6	69.5	73.3	76.8	91.6	87.3	77.9	65.8	62.3	63.1	62.2	60.8	66.5	72.2	91.6		
2-Apr	72.8	70.6	71.1	74.7	77.6	77.7	75.7	73.5	63.0	54.5	50.1	46.3	46.4	49.2	51.8	54.9	53.9	51.4	51.6	44.5	42.4	44.8	49.7	49.6	58.2	77.7		
3-Apr	55.2	57.0	60.3	64.7	59.9	66.8	66.6	54.8	50.7	50.3	49.3	46.9	43.9	41.2	38.4	37.0	35.8	36.7	38.0	46.7	53.0	62.2	67.9	73.0	52.4	73.0		
4-Apr	76.2	78.3	81.7	83.3	83.6	85.1	83.7	73.6	59.5	49.4	41.3	31.8	32.1	31.0	30.3	29.1	31.3	33.0	34.9	39.8	46.8	55.0	56.3	56.0	54.3	85.1		
5-Apr	67.3	70.5	68.7	71.0	73.9	77.4	70.1	65.0	53.4	43.1	37.3	30.4	30.8	29.8	25.4	25.0	25.9	27.0	32.1	37.0	43.2	48.4	51.6	54.5	48.3	77.4		
6-Apr	64.3	68.7	70.9	65.9	65.2	65.7	62.3	56.0	49.9	45.9	42.6	40.4	39.0	37.4	36.3	36.0	35.7	37.0	41.7	48.6	52.2	53.2	56.4	60.6	51.3	70.9		
7-Apr	62.9	65.6	63.9	67.7	72.3	74.4	73.5	66.1	58.0	52.2	48.6	44.6	41.4	39.2	35.1	35.6	34.2	35.8	40.8	42.3	44.3	48.4	50.4	54.5	52.2	74.4		
8-Apr	59.5	66.8	77.1	85.7	97.3	100.0	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	--	100.0		
9-Apr	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	77.4	61.9	51.5	36.3	27.3	36.7	42.4	52.5	61.3	69.4	79.4	82.3	--	82.3
10-Apr	84.5	89.6	90.7	93.1	92.9	94.1	76.8	55.6	43.2	37.0	34.7	28.0	20.8	17.3	15.3	16.2	15.5	17.3	20.7	29.2	41.5	44.9	52.4	54.2	48.6	94.1		
11-Apr	56.2	56.2	57.5	56.7	59.2	59.2	58.7	59.9	65.6	58.2	48.2	38.1	34.6	32.2	29.0	28.4	28.3	29.0	34.2	39.2	43.1	53.0	61.6	70.2	48.2	70.2		
12-Apr	73.9	73.9	75.3	77.7	79.7	86.7	82.6	77.1	69.3	65.7	66.8	66.1	61.9	63.3	62.9	67.3	72.7	78.4	80.6	79.4	86.1	95.2	98.7	100.0	76.7	100.0		
13-Apr	100.0	100.0	100.0	OR	OR	OR	OR	OR	OR	76.0	64.9	58.9	59.5	55.7	50.2	49.2	52.1	56.3	61.5	66.6	72.7	75.3	81.6	87.6	70.5	100.0		
14-Apr	91.9	93.3	95.2	96.1	96.4	96.2	96.1	91.4	78.0	63.7	51.9	38.8	30.4	25.6	24.2	23.3	27.4	34.9	41.1	47.9	52.7	54.3	53.5	54.4	60.8	96.4		
15-Apr	54.7	52.9	58.6	61.0	62.2	68.8	68.9	63.3	48.3	45.4	50.1	43.3	33.8	24.5	21.1	22.7	27.2	35.7	44.8	52.9	59.2	64.0	69.8	80.3	50.6	80.3		
16-Apr	95.6	99.0	98.9	94.9	90.9	88.7	73.9	68.0	64.5	62.6	61.0	60.5	59.7	57.4	55.8	56.3	59.1	64.6	71.3	72.0	69.3	72.9	78.3	80.4	73.1	99.0		
17-Apr	79.4	78.0	75.4	75.9	81.4	81.4	78.9	80.5	78.5	77.1	72.0	68.2	63.9	58.5	54.6	52.2	49.7	48.9	53.2	64.0	70.2	76.1	79.7	82.4	70.0	82.4		
18-Apr	83.3	81.3	75.1	73.7	76.0	76.4	72.5	68.2	63.5	56.9	47.3	38.9	30.8	27.2	27.5	28.4	27.5	29.8	32.1	34.6	35.4	36.0	37.7	36.5	49.9	83.3		
19-Apr	34.0	36.9	42.1	41.7	46.5	52.5	56.5	52.2	34.1	27.8	27.5	23.9	23.5	25.2	23.7	24.5	27.7	36.1	46.7	62.2	91.9	96.7	92.9	92.4	46.6	96.7		
20-Apr	85.6	94.2	97.0	89.7	74.9	70.4	64.1	57.8	53.9	51.6	49.7	46.1	44.0	40.0	36.5	33.7	34.1	35.9	38.6	42.7	48.6	51.6	52.9	57.3	56.3	97.0		
21-Apr	67.6	73.4	76.8	79.8	85.1	85.9	82.0	62.6	51.7	40.9	33.4	31.0	26.6	26.2	24.7	24.1	23.9	24.6	30.4	31.9	34.4	40.5	44.3	42.4	47.7	85.9		
22-Apr	44.9	53.5	58.7	60.7	66.8	72.5	72.5	69.7	66.2	65.3	63.8	57.3	50.3	50.3	83.5	74.8	69.6	72.4	77.3	81.8	80.6	84.0	90.0	95.8	69.3	95.8		
23-Apr	97.8	100.0	100.0	100.0	100.0	100.0	OR	OR	93.5	90.6	78.5	70.0	65.3	61.3	58.5	58.4	56.9	56.8	59.6	61.8	65.6	68.0	69.5	68.6	76.4	100.0		
24-Apr	70.5	76.4	86.8	89.3	92.1	90.5	88.4	80.4	67.7	57.1	50.4	46.2	42.9	39.8	37.4	34.5	34.2	32.6	32.1	39.5	51.9	56.2	61.9	67.8	59.4	92.1		
25-Apr	76.9	79.5	82.9	86.6	88.3	88.0	79.1	65.7	50.8	36.7	23.9	19.5	18.7	18.4	17.1	17.5	16.4	15.8	18.8	23.5	29.2	33.6	41.1	43.5	44.6	88.3		
26-Apr	53.2	59.1	62.8	61.9	68.1	72.5	72.9	68.4	62.9	58.0	53.2	49.5	47.4	47.3	46.5	47.9	52.2	60.5	73.9	79.5	74.3	69.9	72.6	74.4	62.0	79.5		
27-Apr	77.3	79.9	79.7	78.7	75.4	70.1	64.5	61.0	57.1	53.1	49.0	46.5	42.8	41.6	40.5	40.0	38.9	38.7	40.1	42.9	45.3	45.4	46.9	51.2	54.4	79.9		
28-Apr	63.4	71.9	76.5	79.8	82.7	83.7	72.8	54.4	45.8	37.8	32.5	28.6	24.8	18.4	16.4	17.9	19.7	23.1	26.8	27.7	26.8	33.0	45.3	60.0	44.6	83.7		
29-Apr	69.3	82.5	94.7	96.8	97.4	89.9	81.9	74.9	72.8	73.2	72.7	64.2	63.9	69.6	87.1	63.6	35.7	27.0	29.6	37.4	47.6	58.4	63.3	65.7	67.5	97.4		
30-Apr	70.7	67.9	64.0	64.5	66.9	62.1	59.0	59.8	55.7	52.2	52.2	56.2	80.6	89.6	82.9	72.8	66.8	74.0	84.2	92.3	90.6	87.3	85.0	83.2	71.7	92.3		
Diurnal Average																												
Diurnal Maximum																												
OR - Out of Range																												



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Waskow ohci Pimatisiwin - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Waskow ohci Pimatisiwin - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	17	2.49	2.49
20 - 40	134	19.65	22.14
40 - 60	200	29.33	51.47
60 - 80	227	33.28	84.75
80 - 100	94	13.78	98.53

Total Number of Valid Hours: 682

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

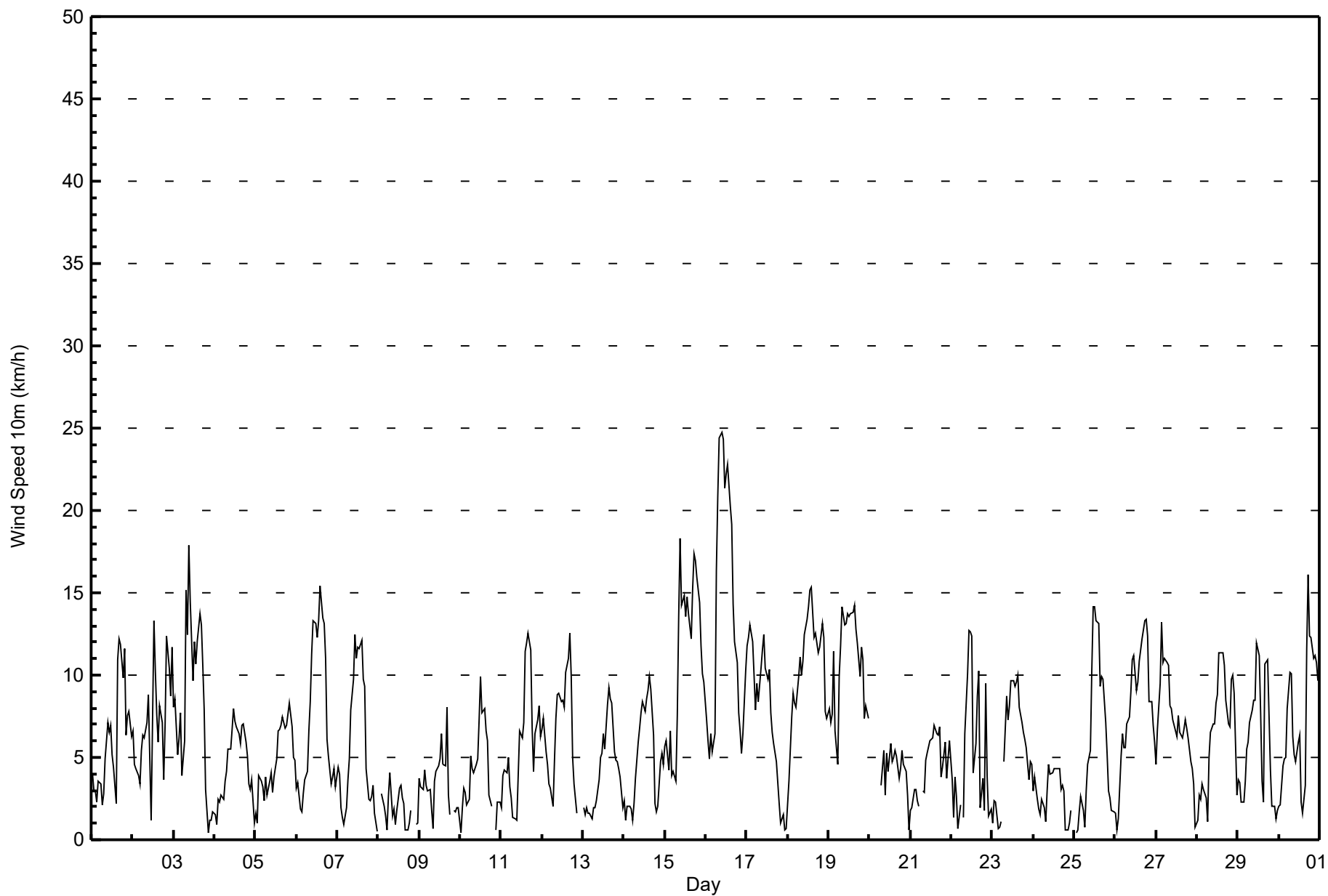
Waskow ohci Pimatisiwin - April 2025

Maximum Speed: 25 km/h on Apr 16 10:00														Maximum Daily Speed Average: 12.4 km/h on Apr 16														Hours in Service: 720	
Minimum Speed Value: 0 km/h on Apr 10 01:00														Minimum Daily Speed Average: 1.1 km/h on Apr 8														Hours of Data: 698	
Maximum Diurnal Speed Average: 1.9 km/h at hour 18														Minimum Diurnal Speed Average: 0.2 km/h at hour 13														Hours of Missing Data: 22	
Monthly Average Velocity: 0.6 km/h 301.8 deg														Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 3 Median = 6 Q ₃ = 9 P ₉₀ = 12 P ₉₉ = 20														Percent Operational Time: 96.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	SSE4	SSE3	SE3	ESE2	SE4	SE3	SE2	SE3	SSE5	SSE7	SSE7	SSE7	SSE5	SSE4	W2WNW11	NW12	NNW12	NNW10	NW12	NW6	NW8	WNW8	W6						
2-Apr	WSW7	W5	W4	W4	W3	W5	W6	WSW6	W7	WNW9	NW5	NNW1	NNW13	NNE10	NE8	NE6	NNE8	N7	NNW4	NW7	NNW12	NNW10	NNW9	NNW12					
3-Apr	NNW8	NW9	WNW5	WNW6	NW8	W4	WNW6	NW15	NW12	NNW18	NNW14	NNW10	NW12	NW11	NW12	NW14	NW13	N11	NNW8	NW3	NE0	WSW1	WSW1	WSW2					
4-Apr	SW2	SW1	SSE2	SSE2	SSE3	SSE2	SSE4	SSE4	SSE6	SE5	SE7	SE8	SE7	SE7	SE6	SE6	SE7	SSE7	SSE6	S5	S3	SSE3	S4	SW1					
5-Apr	WSW2	SSE1	S4	SSE4	SSE3	SSE2	SSE4	SE3	SE4	SE4	E3	N4	NNE5	NNE7	NNE7	NNE7	NNE7	NNE7	N7	N8	N8	N7	NNW5	NNW5					
6-Apr	NNW3	NNW3	N2	E2	E3	E4	ESE4	SE7	SSE8	SSE11	SSE13	SSE13	SSE12	SSE13	SSE15	SSE14	SSE13	SSE11	SSE6	SE5	SE3	SSE4	SSE4	SE3					
7-Apr	SE4	SE4	SE2	ENE1	SW1	SE2	SE4	SSE5	SSE8	SSE10	SSE12	SSE11	SSE12	SSE12	SSE12	SSE10	SSE9	S4	SE2	ESE2	SE3	SSE3	SE2	SSW1					
8-Apr	UO	UO	WNW3	NW2	SSW1	ESE1	SSE3	S4	SE1	SSE2	SSW1	SE2	SSE3	SSE3	SSE3	SSE2	ESE1	NE1	S1	WNW2	UO	UO	SW1	W1					
9-Apr	SSE4	S3	SSE3	SSE4	SSE3	S3	SSW3	SSE2	SSW1	SSE4	SSE4	SE5	SE5	SSE6	SE5	NNW4	NNW8	NE3	ESE2	UO	WNW2	SW2	W2	SSW2					
10-Apr	SE0	S2	SSE3	S3	S2	SSE2	SSE5	SSW4	SSW4	SSW5	SSE5	SW7	WSW10	SW8	SW8	SW7	SW6	SSE3	ESE2	UO	UO	SW1	WNW2	NNW2					
11-Apr	WNW2	NNW4	NNW4	NW4	NNW5	WNW3	NNW3	SW1	N1	WNW1	SE4	S7	SW6	WSW7	W11	W12	W13	WSW12	WSW7	SW4	WSW6	WSW7	WSW8	WSW6					
12-Apr	SW7	WSW7	WSW5	WSW5	SW3	S3	SW2	SW5	W7	W9	W9	W8	WNW8	WNW8	NW10	NW11	NW13	NW10	WNW5	NW3	N2	UO	UO	UO					
13-Apr	SE2	SE2	SE2	SE2	S2	S1	NNW2	NNW2	ESE2	ESE4	E5	NE5	NNE6	NE6	NNE8	NNE9	NNE9	NNE8	NE5	NE5	NE5	N4	NW4	WNW2					
14-Apr	WNW2	WNW1	W2	W2	W2	SW1	S2	SSE4	SSE6	SSE7	SSE8	SSE8	SSE8	SE9	SE9	SSE10	S9	SSW6	SSE2	SE2	SSE2	SSE5	SSE5	SSE5					
15-Apr	SSE6	SSE6	SSE4	SSE7	SSE4	SSE4	SSE4	S8	WSW14	W18	W14	W15	WSW14	W15	WSW14	WSW12	W15	WNW17	W17	W16	W14	WSW12	W10	W10					
16-Apr	WSW7	WSW6	W5	WNW6	WNW5	WNW6	NW16	NW21	NW24	NW25	NNW24	NNW21	NW22	NNW23	NW20	NNW19	N14	N12	N11	N8	N7	NNE5	N6	NNE10					
17-Apr	N12	N12	N13	N12	N10	NNE8	NNE10	NNE8	NNE10	NNE12	NNE12	NNE10	NNE10	NNE10	NE8	ENE7	NE6	NE5	ENE3	ENE2	E1	SSE2	S1	SE1					
18-Apr	SSE2	SSE4	SSE7	SSE9	SSE8	SSE8	SSE10	SSE11	SSE10	SSE11	SSE12	SSE13	SSE14	SSE15	SSE15	SSE12	SSE13	SSE12	SSE11	SSE12	SSE13	SSE12	SSE8	SSE7					
19-Apr	S8	SSW7	WSW8	WNW11	W7	WSW5	W10	W12	W14	WNW13	W13	WNW14	WNW14	W14	WNW14	W14	W13	W12	WNW10	NNW12	NNE11	NNE7	NNE8	NNE7					
20-Apr	UO	UO	UO	UO	UO	UO	UO	N3	NNE5	NNE3	E5	E4	NE6	NE5	ENE5	NE5	NE5	ENE4	NE4	NE5	NE5	NNE4	NNE3	NNE1					
21-Apr	WSW2	W2	WNW3	NW3	W2	W2	UO	SE3	SE3	SE5	SE5	SSE6	SE6	SE6	SSE7	SE6	SE6	SSE7	SE4	SSW4	S6	SSE4	SSE5	SSE6					
22-Apr	S4	SSW1	SSE4	SSE3	ESE1	NW2	UO	S1	SSE6	SSE10	SE13	SE13	SE12	WNW4	SW6	S9	SSE10	SSE2	SSW4	SSW2	NW9	W4	SSW1	SW2					
23-Apr	WNW1	NW2	WNW2	S1	SW1	SE1	UO	N5	N9	N7	NNE8	NNE10	NNE10	NE9	NE10	NNE10	NNE8	NNE7	N7	NNW6	NNW6	NW4	NW5	NW5					
24-Apr	NNW3	WNW4	NW2	WNW2	WNW2	NNW2	NW2	NNE1	NNE3	ESE5	E4	ESE4	E4	E4	E4	E4	ESE3	SSE3	SE3	E1	W1	SE1	SSE2	UO					
25-Apr	UO	S0	NW1	NW2	WNW3	NW2	ENE1	SSE3	SE5	SE5	S10	S14	S14	S13	S13	SSW9	SSW10	SSW10	SSW7	S5	S3	S3	SSE2	S2					
26-Apr	WSW2	S1	SW1	N5	NNE6	NNE6	N6	N7	NNE9	N11	NNE11	NE9	NE10	NE11	NNE12	NNE12	NNE13	N13	N12	N8	N8	NNW7	N6						
27-Apr	NNW5	N7	NNE9	N13	NNE11	N11	NNE11	NNE8	NE8	NE7	ENE7	E6	ENE8	ENE7	ENE6	NE7	NE7	NE7	NE6	ENE5	ENE4	NNE3	NNW1						
28-Apr	WSW1	W3	W2	W3	W3	W3	S1	SE5	SSE7	SSE7	SE7	SE8	SE9	S11	S11	S11	S11	SSE8	SSE7	S7	SSW10	SSW10	SSW9	SSE3					
29-Apr	SSW4	SSE3	SE2	SSW2	SW4	WSW6	W6	WSW7	WSW8	WSW9	WNW8	NW12	NW11	NNW8	S4	S2	NNE11	N11	N8	N4	WNW2	WSW2	SSW1	S2					
30-Apr	SSE2	S2	W5	W5	WNW5	N8	N10	N10	NNE6	NE5	NE5	NNE6	NNE6	NW2	E2	NNE3	N12	N16	N12	N12	N11	N11	N11	N10					
WSW1.2 W1.1 W1.0WNW1.2WNW0.9WNW0.5 NW1.0WNW0.7 W0.9WSW0.5 SE0.6 SSE1.0 SSE0.2 S0.3 S0.8 W0.5NNW1.4 N1.9 N1.6NNW1.9NNW1.6 NW0.9WNW1.2 NW1.1																								Diurnal Average					
N12 N12 N13 N13 NNE11 N11 NW16 NW21 NW24 NW25NNW24NNW21 NW22NNW23 NW20NNW19 W15WNW17 W17 W16 W14 SSE12 N11NNW12																								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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	341	48.85	48.85
6 - 11	255	36.53	85.39
12 - 19	94	13.47	98.85
20 - 28	8	1.15	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 698

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	11	15	9	15	13	43	67	30	17	16	12	25	24	17	18	341
6 - 11	32	43	17	5	1	0	17	47	12	9	8	17	13	12	11	11	255
12 - 19	13	5	0	0	0	0	2	23	4	0	0	6	16	6	11	8	94
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	59	32	14	16	13	62	137	46	26	24	35	54	42	44	40	698

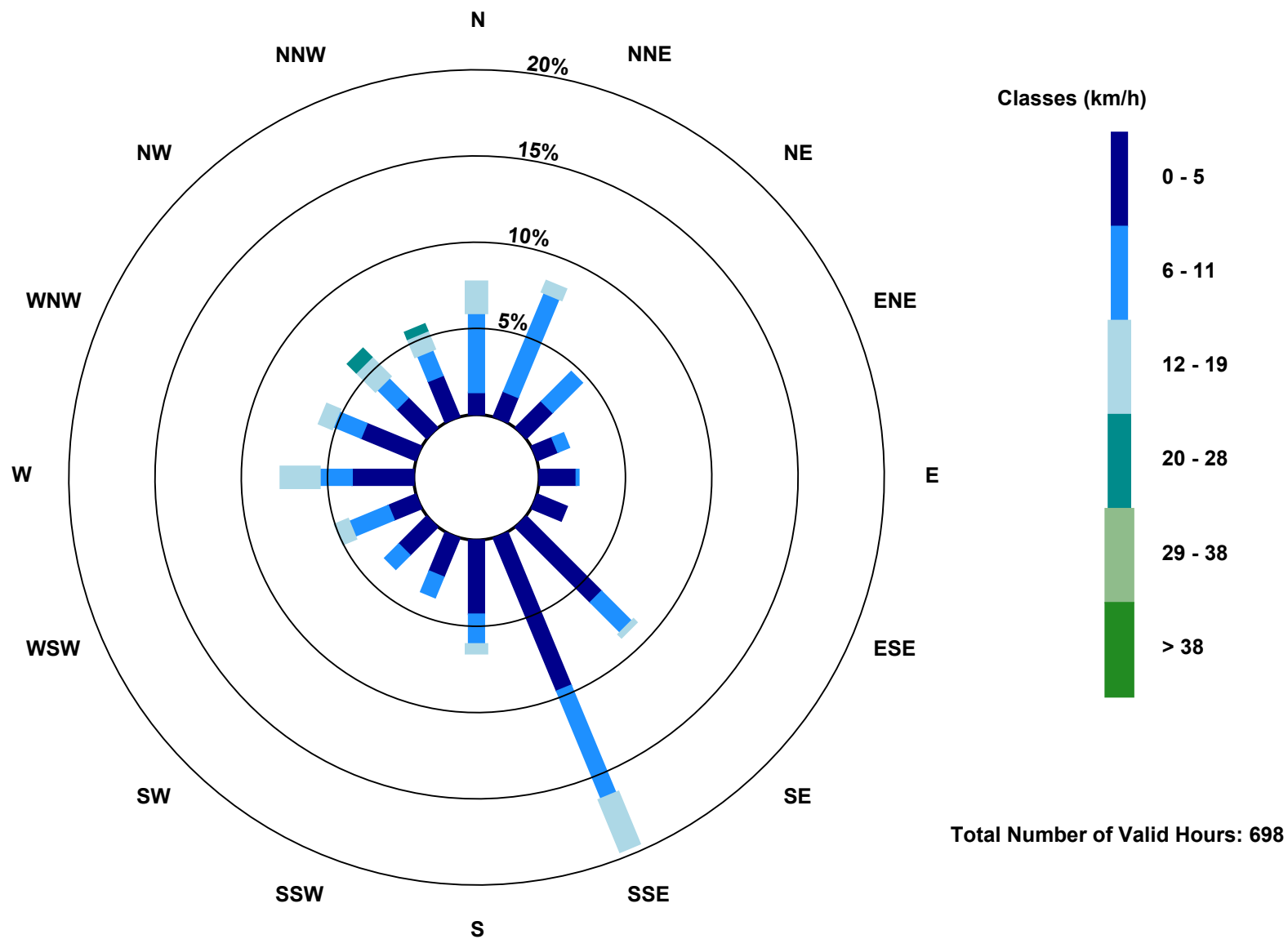
Total Number of Valid Hours: 698

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 18:00																	Hours in Service: 720 Hours of Data: 698 Hours of Missing Data: 22 Hours of Calibration: 0 Percent Operational Time: 96.9								
Minimum Value: 0 km/h on Apr 28 06:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 2 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 7																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	1	1	1	1	1	1	1	2	2	2	2	2	1	4	4	4	4	4	5	2	3	3	2	5
2-Apr	2	2	1	1	1	2	2	2	3	3	2	3	4	4	3	2	3	2	3	2	4	4	3	4	4
3-Apr	3	2	2	3	4	1	3	4	3	6	5	4	4	4	4	5	5	3	3	1	1	1	1	1	6
4-Apr	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2
5-Apr	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	2	3	1	3
6-Apr	1	1	1	1	1	1	2	3	3	3	4	4	4	4	5	4	4	4	3	2	1	2	2	2	5
7-Apr	2	2	2	1	1	1	1	2	3	3	4	4	4	4	4	3	3	2	1	1	2	1	1	1	4
8-Apr	UO	UO	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	UO	UO	1	1	2
9-Apr	1	1	1	1	1	1	2	1	1	1	2	1	2	2	2	5	3	2	2	UO	1	1	1	1	5
10-Apr	2	1	1	1	1	1	2	2	2	2	2	4	4	4	3	3	3	2	1	UO	UO	1	1	1	4
11-Apr	1	1	2	2	2	1	1	1	1	2	3	2	3	4	5	5	5	5	4	1	2	3	4	2	5
12-Apr	3	3	2	2	1	1	1	2	3	3	3	4	3	3	4	4	4	3	2	1	1	UO	UO	UO	4
13-Apr	1	1	1	1	1	1	1	1	2	1	1	2	2	2	3	4	3	3	2	2	2	1	1	1	4
14-Apr	1	1	1	0	1	1	1	1	2	2	2	3	3	3	3	4	4	3	1	1	1	1	1	1	4
15-Apr	2	2	2	2	2	2	1	4	7	8	6	7	6	6	6	5	7	8	8	8	6	5	5	4	8
16-Apr	3	2	2	3	2	3	6	6	7	7	7	6	6	7	6	6	5	4	3	3	2	2	2	4	7
17-Apr	4	5	4	4	4	3	4	3	3	4	4	4	4	4	3	2	2	2	1	1	1	1	1	1	5
18-Apr	1	2	3	3	3	2	4	4	3	3	4	5	6	6	6	5	5	4	4	4	4	4	3	3	6
19-Apr	3	3	4	4	2	2	6	5	6	6	5	5	5	6	6	7	5	5	5	6	5	4	3	3	7
20-Apr	UO	UO	UO	UO	UO	UO	UO	4	3	2	1	2	2	2	2	2	2	1	1	2	2	1	2	1	4
21-Apr	1	0	1	1	1	1	UO	1	1	2	2	2	2	2	2	2	2	3	2	3	3	1	2	2	3
22-Apr	2	1	1	1	1	1	UO	1	3	4	4	5	4	6	4	4	4	2	3	1	6	2	1	1	6
23-Apr	1	2	2	1	1	1	UO	2	3	2	3	4	4	4	4	3	3	2	2	2	1	1	1	1	4
24-Apr	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1	1	1	1	1	1	1	UO	2
25-Apr	UO	1	1	1	1	1	1	1	2	2	5	6	5	5	5	4	4	4	3	2	1	1	1	1	6
26-Apr	1	1	2	2	3	2	2	2	2	3	4	4	4	4	4	5	5	5	5	4	2	2	2	2	5
27-Apr	2	2	3	5	4	4	4	4	3	3	3	2	2	3	2	2	2	3	3	2	2	1	1	1	5
28-Apr	1	0	0	1	1	0	1	2	2	2	2	2	3	5	4	5	5	3	3	3	4	4	4	1	5
29-Apr	2	2	1	1	2	3	2	3	3	3	4	4	3	5	1	1	4	4	3	2	1	1	1	1	5
30-Apr	1	1	2	2	2	3	3	3	3	2	2	2	2	2	1	2	6	6	4	4	3	3	3	3	6
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

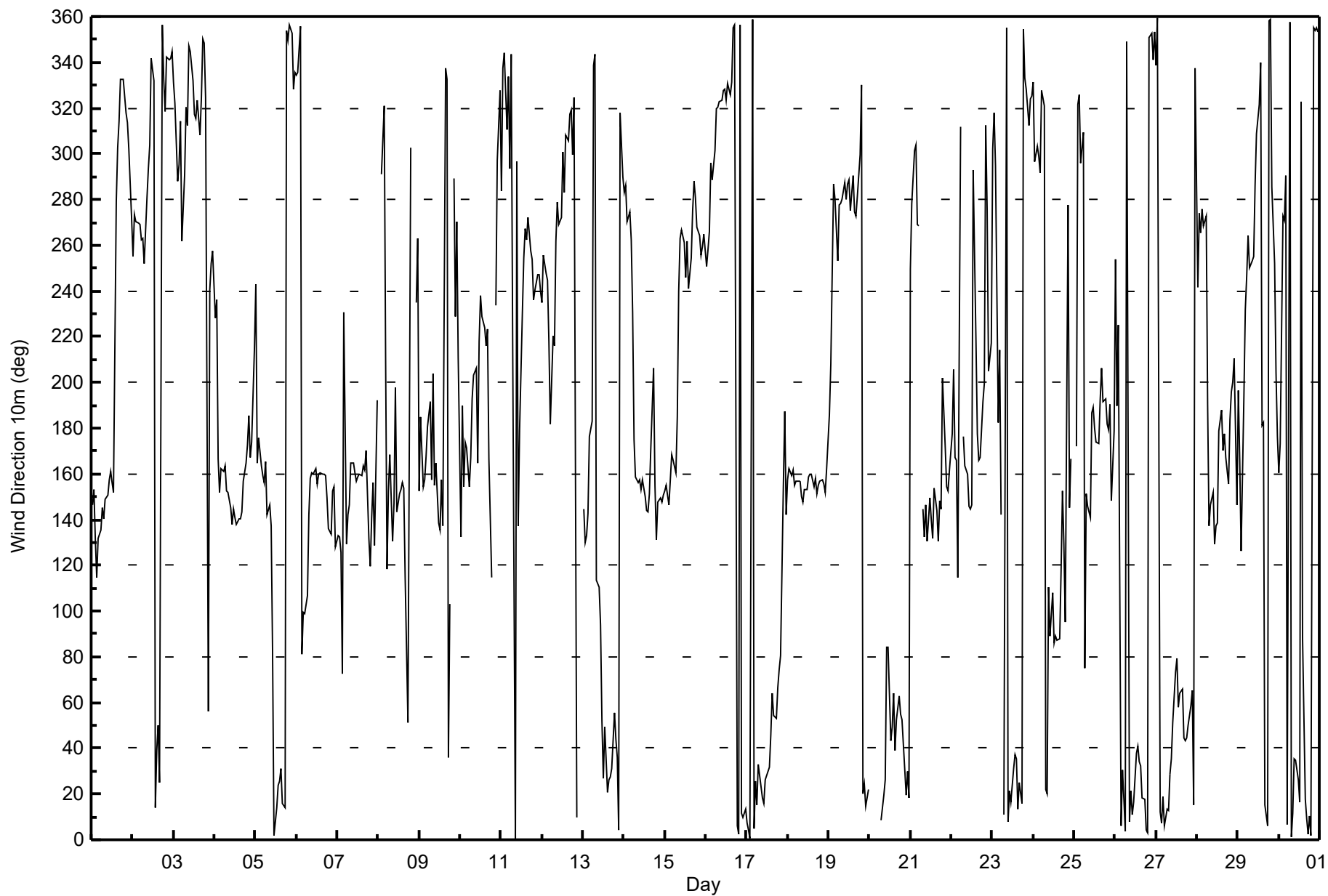
Waskow ohci Pimatisiwin - April 2025

Direction of Maximum Speed: 324 deg on Apr 16 10:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 329.0 deg on Apr 16																				Hours of Data:		698			
Direction of Minimum Speed: 132 deg on Apr 10 01:00										Direction of Minimum Daily Speed Average: 1.1 deg on Apr 8										Hours of Missing Data:		22			
Monthly Average Direction: 301.8 deg																				Percent Operational Time:		96.9			
Day	Hourly Period Ending At (MST)																							Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	147	153	131	114	132	136	145	140	149	151	157	161	156	152	279	303	314	332	333	325	318	313	302	272	286.7
2-Apr	255	273	271	270	269	262	263	252	281	294	304	342	332	14	39	50	25	356	333	318	342	341	342	345	324.8
3-Apr	331	322	288	295	314	262	291	321	313	347	345	332	318	316	324	308	325	350	348	324	56	240	252	258	322.4
4-Apr	228	236	167	152	162	161	163	152	152	145	138	145	141	138	140	140	144	157	165	173	186	167	174	215	153.9
5-Apr	243	165	176	163	159	156	166	142	146	137	82	2	14	24	26	31	16	14	354	350	357	353	328	336	19.3
6-Apr	334	336	356	81	99	99	106	142	158	161	160	163	155	160	160	160	160	159	149	136	133	153	155	128	152.3
7-Apr	133	132	125	73	231	129	142	147	165	165	160	157	158	160	159	164	162	170	132	120	141	156	129	192	155.2
8-Apr	UO	UO	291	321	211	119	152	169	130	147	198	143	152	153	156	154	115	51	176	303	UO	UO	235	263	170.0
9-Apr	152	185	155	157	168	181	192	158	204	155	165	139	135	157	137	337	333	36	103	UO	289	229	270	211	163.3
10-Apr	132	190	154	174	172	154	167	193	203	206	165	218	238	229	224	216	223	167	115	UO	UO	233	297	328	206.1
11-Apr	284	338	344	311	334	294	343	222	1	296	137	180	230	255	267	263	272	257	254	236	241	247	247	240	261.4
12-Apr	235	256	248	245	218	182	220	216	262	279	269	272	301	283	308	306	318	319	300	325	10	UO	UO	UO	280.9
13-Apr	145	130	133	143	176	183	339	343	114	111	94	52	27	50	21	26	27	31	56	44	36	4	318	290	40.7
14-Apr	283	286	270	275	262	230	175	158	156	158	153	157	150	144	143	151	171	206	155	131	148	149	148	151	161.4
15-Apr	153	155	147	157	168	166	160	185	240	263	267	261	246	262	241	254	275	288	280	268	264	255	259	265	252.1
16-Apr	251	258	266	296	289	301	320	321	323	324	328	328	324	331	326	331	355	356	6	2	356	12	10	14	329.0
17-Apr	8	4	1	359	5	25	15	33	23	18	16	26	30	32	46	64	54	53	66	74	81	155	188	142	23.2
18-Apr	158	162	159	162	155	157	157	157	150	147	153	153	159	160	160	154	158	151	155	157	157	156	152	162	156.2
19-Apr	186	208	247	287	280	253	277	278	280	287	280	287	289	275	290	274	273	281	299	330	20	24	15	22	288.4
20-Apr	UO	UO	UO	UO	UO	UO	UO	9	19	26	84	84	43	50	64	39	52	63	55	52	41	19	30	18	--
21-Apr	249	278	302	304	269	269	UO	145	132	146	131	150	140	132	154	144	130	148	144	202	171	155	152	162	156.0
22-Apr	178	206	167	166	115	312	UO	176	163	160	146	144	146	293	218	178	166	167	192	200	313	276	205	217	174.0
23-Apr	302	318	295	183	214	142	UO	11	355	8	21	16	31	37	36	13	25	16	355	333	328	313	324	325	6.1
24-Apr	331	297	304	299	291	328	321	22	20	110	89	108	86	89	87	88	118	152	129	95	278	145	166	UO	82.0
25-Apr	UO	172	321	326	296	310	75	151	146	141	187	189	180	174	174	192	206	192	193	182	179	190	148	179	183.4
26-Apr	254	189	225	6	31	18	4	349	8	22	11	17	38	41	34	32	18	18	5	3	351	353	341	353	12.8
27-Apr	339	359	12	7	19	6	14	13	29	35	51	73	79	58	64	66	44	43	44	50	59	65	15	338	32.2
28-Apr	241	274	266	276	269	273	191	137	147	152	130	137	138	179	188	170	178	167	156	184	196	200	211	147	176.3
29-Apr	197	166	126	194	232	246	264	250	253	255	286	309	322	340	181	182	15	6	358	359	286	252	204	176	293.7
30-Apr	160	173	273	271	290	7	358	1	12	36	35	26	17	323	89	18	9	3	10	2	355	354	355	353	0.5
237.7 266.3 264.6 290.2 286.7 286.6 307.0 289.9 279.0 258.2 136.4 164.1 160.7 169.7 177.2 263.0 338.7 349.9 354.4 337.7 331.5 306.2 299.9 313.2																									
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 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720						
Maximum Value: 100 deg on Apr 3 21:00																			Hours of Data: 698						
Minimum Value: 10 deg on Apr 28 02:00																			Hours of Missing Data: 22						
Percentiles: P ₁ = 14 P ₁₀ = 21 Q ₁ = 24 Median = 32 Q ₃ = 43 P ₉₀ = 63 P ₉₉ = 90																			Hours of Calibration: 0						
																			Percent Operational Time: 96.9						
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	19	31	27	32	26	24	29	26	25	24	22	25	26	25	74	25	22	19	22	16	19	19	24	23	74
2-Apr	15	24	21	17	18	21	29	36	44	31	58	99	27	34	31	25	25	22	37	19	18	19	20	20	99
3-Apr	21	17	23	21	42	27	24	17	24	23	28	33	32	33	30	29	29	27	23	35	100	56	49	55	100
4-Apr	27	76	26	29	18	31	18	22	21	26	25	23	24	26	25	24	24	21	16	20	27	21	26	85	85
5-Apr	70	47	17	19	30	45	31	47	33	31	48	48	32	25	30	28	21	22	19	18	18	20	61	21	70
6-Apr	64	41	32	59	25	25	23	27	24	22	22	23	23	22	20	21	21	21	28	26	33	38	40	41	64
7-Apr	38	35	38	59	78	26	27	32	22	24	22	22	24	23	22	24	23	38	33	45	35	36	59	85	85
8-Apr	UO	UO	32	57	77	80	55	31	70	43	86	50	28	37	27	49	82	55	72	47	UO	UO	39	81	86
9-Apr	24	16	23	23	26	36	44	68	93	39	39	37	38	31	39	92	38	58	70	UO	55	59	66	73	93
10-Apr	92	70	30	30	53	38	24	55	79	60	55	54	46	55	48	55	55	67	27	UO	UO	76	44	34	92
11-Apr	79	53	51	46	40	46	46	87	90	99	57	47	63	60	43	42	35	41	42	29	30	35	41	38	99
12-Apr	40	38	38	40	46	19	49	44	38	35	35	37	31	34	27	25	21	23	24	23	55	UO	UO	UO	55
13-Apr	26	40	26	34	58	74	62	73	63	53	32	36	33	44	34	31	31	28	22	19	22	20	16	72	74
14-Apr	23	45	16	13	11	56	36	21	30	31	27	27	26	31	26	29	36	43	46	29	20	19	18	17	56
15-Apr	19	19	28	19	35	39	34	33	42	39	41	45	42	41	46	45	35	30	37	39	41	42	43	37	46
16-Apr	35	40	44	26	23	25	18	17	19	18	18	18	20	22	22	23	23	27	23	24	23	29	25	25	44
17-Apr	23	24	22	23	27	25	28	26	25	29	28	29	33	32	36	30	35	40	23	31	72	58	81	80	81
18-Apr	37	32	22	23	21	22	25	24	26	23	24	25	28	27	24	27	24	23	21	20	20	21	33	34	37
19-Apr	33	35	37	27	26	42	35	35	32	36	40	36	40	36	36	36	36	32	32	44	25	27	25	27	44
20-Apr	UO	UO	UO	UO	UO	UO	UO	24	45	82	31	59	49	41	42	52	34	26	23	20	20	22	48	84	84
21-Apr	41	32	24	21	21	18	UO	52	64	37	42	48	44	45	43	44	34	31	31	41	39	38	23	23	64
22-Apr	60	86	24	55	63	66	UO	68	32	26	24	24	27	85	63	33	30	82	65	48	25	78	70	57	86
23-Apr	83	73	63	90	72	63	UO	39	26	31	34	33	34	35	31	30	33	27	24	18	17	35	14	30	90
24-Apr	40	20	65	29	53	35	78	81	53	41	52	56	53	54	45	43	50	44	34	59	62	44	38	UO	81
25-Apr	UO	89	79	52	14	37	80	26	26	34	43	37	33	33	33	43	39	37	37	29	32	52	21	23	89
26-Apr	50	82	79	38	31	33	32	22	31	29	31	32	34	31	30	30	29	26	25	23	22	23	20	23	82
27-Apr	31	22	23	22	25	24	26	28	35	34	35	33	42	33	40	34	33	32	30	27	25	23	34	94	94
28-Apr	60	10	18	11	11	14	84	27	31	33	26	29	32	45	42	38	34	29	25	33	38	35	38	34	84
29-Apr	41	44	45	50	37	38	43	40	43	40	42	25	25	62	36	82	33	29	24	26	33	46	53	49	82
30-Apr	41	64	36	27	30	25	23	24	39	39	35	29	28	67	73	62	29	23	25	22	20	20	20	19	73
92 89 79 90 78 80 84 87 93 99 86 99 63 85 74 92 82 82 72 59 100 78 81 94																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS27
JACKFISH 2/3
APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
APRIL 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	15.2	0	2	0
H2S (ppb) Average	683	37	37	100	1	0	0.2	0
NO2 (ppb) Average	684	36	36	100	8.7	0	1.8	-
NO (ppb) Average	684	36	36	100	4.3	-	0.3	-
NOX (ppb) Average	684	36	36	100	13	-	2.1	-
Temperature 2 m (C) Average	720	0	0	100	19.9	-	12.5	-
Relative Humidity (%) Average	720	0	0	100	95.8	-	79.2	-
Wind Speed 10 m (km/h) Average	720	0	0	100	20	-	12	-
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 - JACKFISH 2/3 (AMS27)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.59	1.3	-	0	0	0	0.2	0.5	1.6	15.2
H2S (ppb) Average	683	0.11	0.1	-	0	0	0	0.1	0.1	0.2	1
NO2 (ppb) Average	684	1.15	0.9	-	0.1	0.3	0.5	0.9	1.5	2.1	8.7
NO (ppb) Average	684	0.13	0.3	-	0	0	0	0	0.2	0.4	4.3
NOX (ppb) Average	684	1.29	1.1	-	0.1	0.3	0.6	1	1.7	2.5	13
Temperature 2 m (C) Average	720	4.42	6.3	-	-12.3	-3.1	0	4.6	8.9	12.4	19.9
Relative Humidity (%) Average	720	51.67	20.3	-	16.3	26	34.2	50.2	66.3	82.4	95.8
Wind Speed 10 m (km/h) Average	720	8	3	-	1	4	6	8	10	13	20
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
APRIL 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 (SO₂) - ppb

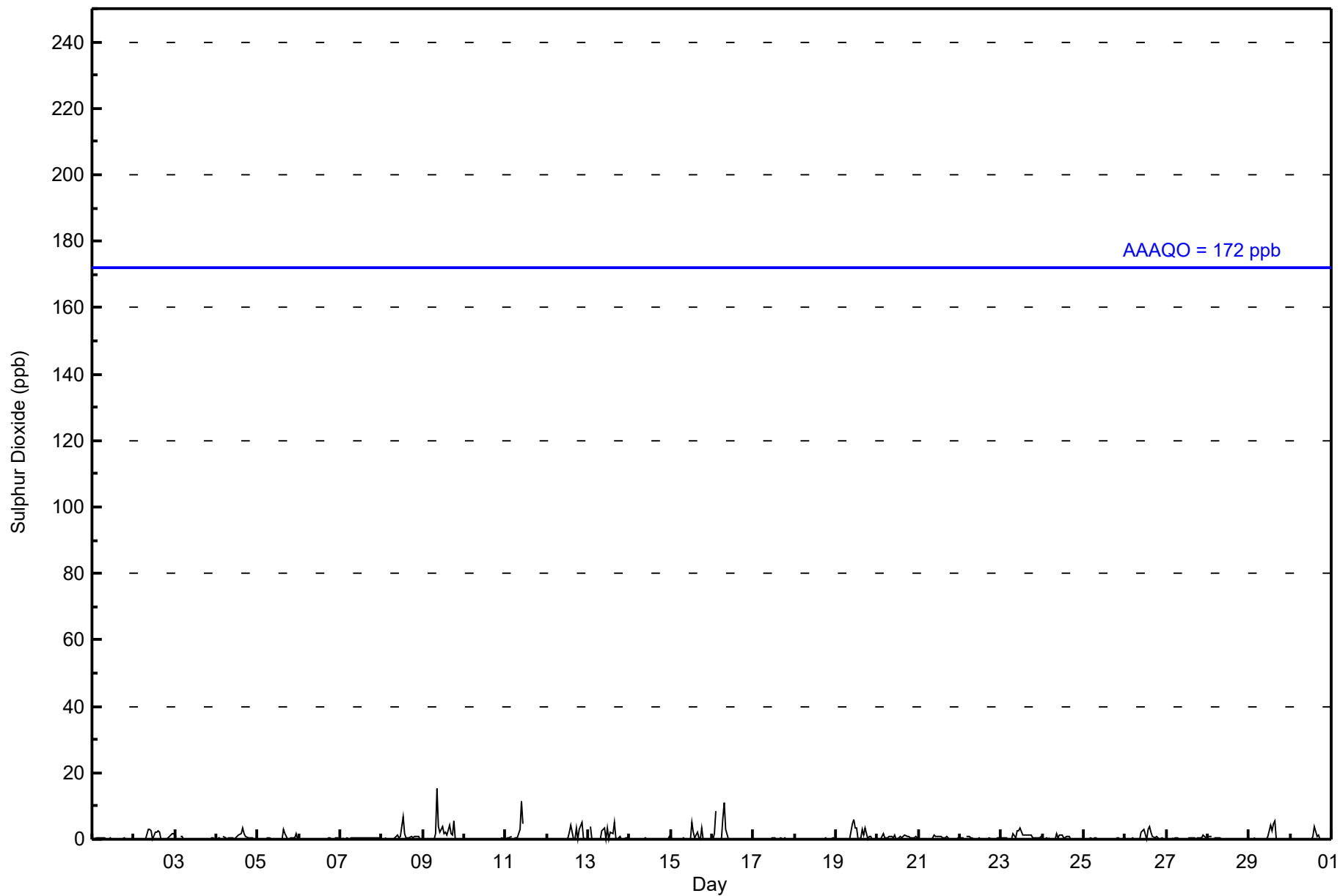
Jackfish 2/3 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 15.2 ppb on Apr 9 09:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 2.0 ppb on Apr 9																			Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0				
Minimum Value: 0.0 ppb on Apr 1 15:00 Maximum Diurnal Average: 1.2 ppb at hour 10 Monthly Average: 0.59 ppb																			Minimum Daily Average: 0.0 ppb on Apr 10 Minimum Diurnal Average: 0.2 ppb at hour 6 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.5 P ₉₀ = 1.6 P ₉₉ = 5.6																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																		
1-Apr	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.3																
2-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.1	2.6	0.0	2.1	2.3	2.7	2.1	0.0	0.0	0.0	0.0	0.6	1.4	1.7	1.5	1.0	3.1																
3-Apr	0.9	0.8	Z	0.7	0.7	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6	0.2	0.2	0.2	0.9																
4-Apr	0.2	0.2	0.4	Z	1.0	0.3	0.1	0.2	0.3	0.3	0.1	0.4	0.7	1.1	1.7	3.4	1.6	1.0	0.3	0.5	0.2	0.2	0.2	0.2	0.6	3.4																
5-Apr	0.1	0.0	0.1	0.0	Z	0.3	0.2	0.3	0.2	0.0	0.0	0.1	0.0	0.2	0.1	3.0	1.6	0.0	0.0	0.6	0.5	0.6	1.8	0.0	0.4	3.0																
6-Apr	0.0	0.0	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.3	0.2	0.1	0.2	0.3	0.2	0.4	0.1	0.4																
7-Apr	Z	0.4	0.1	0.0	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.5	0.5	0.3	0.5																
8-Apr	0.6	Z	0.3	0.1	0.0	0.0	0.1	0.2	0.7	1.3	0.4	0.9	6.6	1.6	0.3	0.2	0.3	0.9	0.4	0.7	0.7	0.9	0.1	0.1	0.8	6.6																
9-Apr	0.2	0.2	Z	0.0	0.0	0.0	0.1	1.9	15.2	3.7	2.2	3.8	1.9	1.9	1.1	4.3	1.8	1.3	5.3	0.1	0.0	0.0	0.0	0.0	2.0	15.2																
10-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2																
11-Apr	0.2	0.2	0.5	0.9	Z	0.2	0.2	0.3	2.9	11.2	4.7	C	C	C	C	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	11.2																
12-Apr	0.1	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	4.1	0.1	0.0	3.5	0.0	3.1	5.0	0.6	0.2	0.1	0.9	5.0																
13-Apr	Z	3.6	0.1	0.1	0.0	0.0	0.0	0.2	2.4	3.3	0.0	3.2	0.1	1.9	1.9	5.0	0.4	0.1	0.9	0.1	0.0	0.1	0.5	0.4	1.1	5.0																
14-Apr	0.2	Z	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.7	0.1	0.7																
15-Apr	0.3	0.4	Z	0.1	0.0	0.1	0.0	0.4	0.1	0.0	0.0	0.0	4.9	2.1	0.4	2.2	0.2	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.6	4.9																
16-Apr	0.0	1.5	8.6	Z	0.0	0.0	6.3	10.9	3.2	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	1.3	10.9																
17-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.4	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.4																
18-Apr	0.0	0.0	0.1	0.0	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.3																
19-Apr	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	4.7	5.9	3.4	3.5	0.2	0.6	2.9	1.3	3.5	0.1	0.8	0.9	0.1	0.1	0.1	1.2	5.9																
20-Apr	0.1	Z	0.0	1.5	0.3	0.6	0.5	0.7	1.0	0.6	1.1	0.2	0.4	0.7	0.6	0.7	1.3	0.9	0.8	0.5	0.4	0.5	1.0	0.2	0.6	1.5																
21-Apr	0.2	0.2	Z	0.0	0.0	0.1	0.0	0.1	0.2	1.3	0.9	0.8	0.9	1.0	0.4	0.4	0.6	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.4	1.3																
22-Apr	0.3	0.4	0.5	Z	0.7	0.8	0.6	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.8																
23-Apr	0.2	0.3	0.2	0.2	Z	0.0	0.1	1.8	0.3	2.6	2.6	3.2	1.2	1.4	1.3	1.1	1.3	1.1	0.5	0.5	0.4	0.4	0.3	0.6	0.9	3.2																
24-Apr	0.4	0.2	0.2	0.2	0.3	Z	0.2	0.2	1.7	0.6	1.1	1.2	0.6	0.5	1.0	0.9	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	1.7																
25-Apr	Z	0.0	0.1	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.4	0.1	0.1	0.4	0.2	0.5																
26-Apr	0.2	Z	0.1	0.1	0.3	0.2	0.1	0.1	0.1	2.3	2.7	2.9	0.2	3.0	4.0	1.9	0.9	0.6	0.8	0.3	0.1	0.3	0.2	0.2	0.9	4.0																
27-Apr	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.1	0.0	0.2	0.2	0.1	0.2	0.3	0.5	0.3	0.2	0.1	0.2	0.4	0.6	1.3	0.7	0.5	0.3	1.3																
28-Apr	0.7	0.7	0.8	Z	0.5	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.8																
29-Apr	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.0	0.0	0.0	0.0	1.0	4.1	2.5	4.7	5.6	0.2	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.8	5.6																
30-Apr	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	0.8	3.8	1.0	1.3	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.3	3.8																
																									Diurnal Average																	
																									Diurnal Maximum																	
Z - zerospan C - Calibration																																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	683	99.56	99.56
11 - 20	3	0.44	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 (SO₂) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	31	22	13	10	11	14	18	27	70	90	55	94	81	48	56	43	683
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
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	31	22	13	10	11	14	18	27	70	90	55	94	82	50	56	43	686

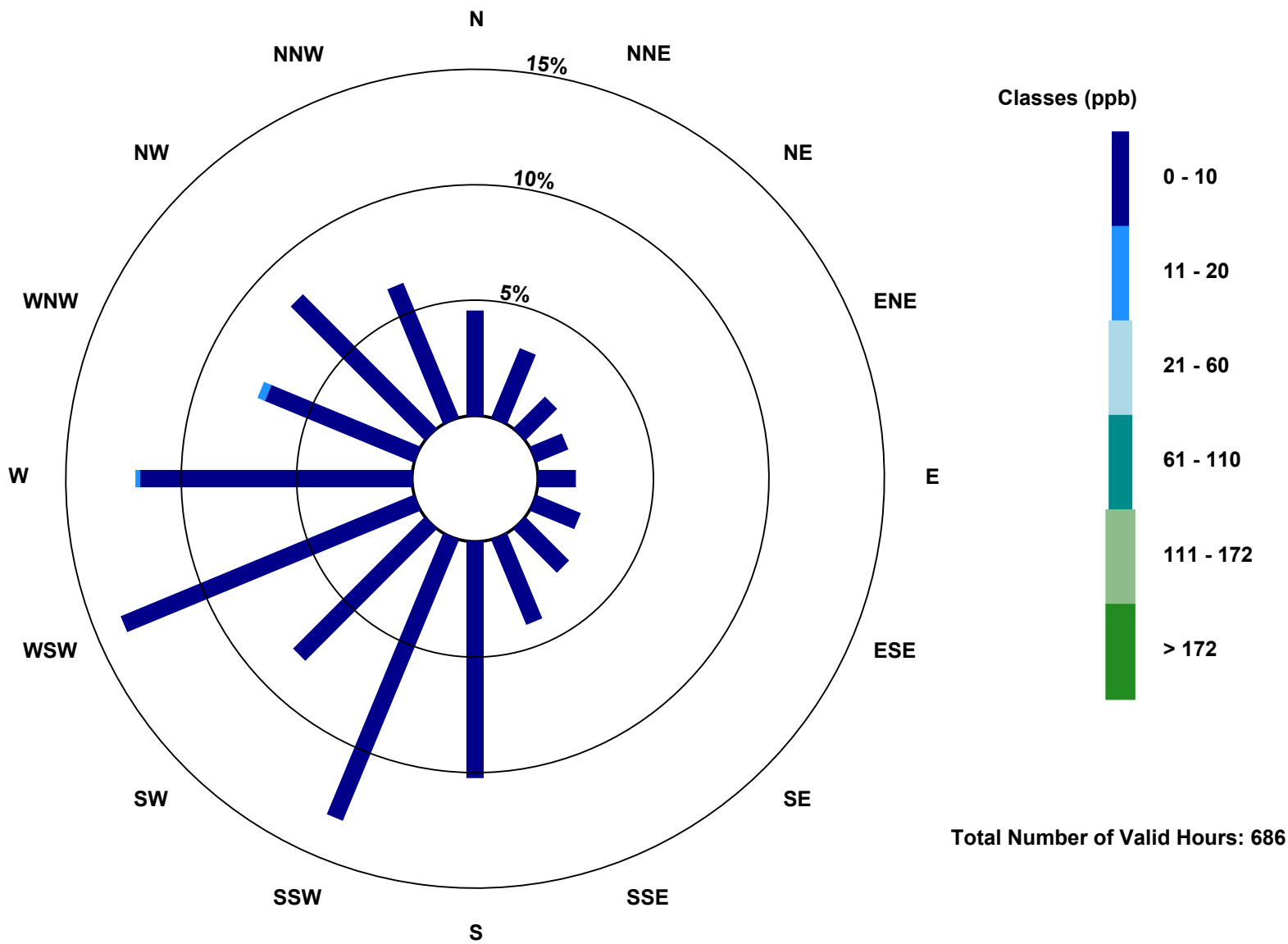
Total Number of Valid Hours: 686

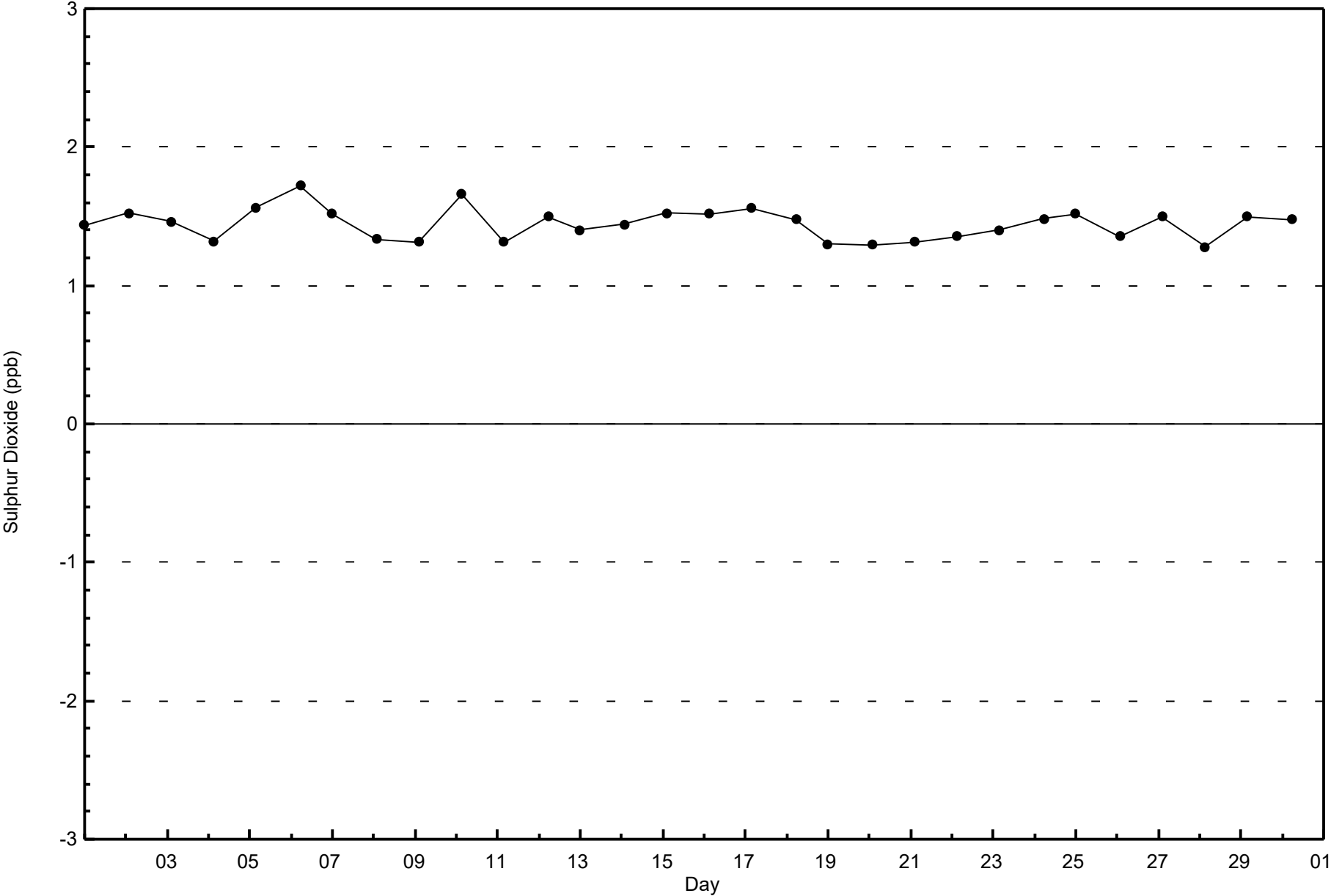
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3

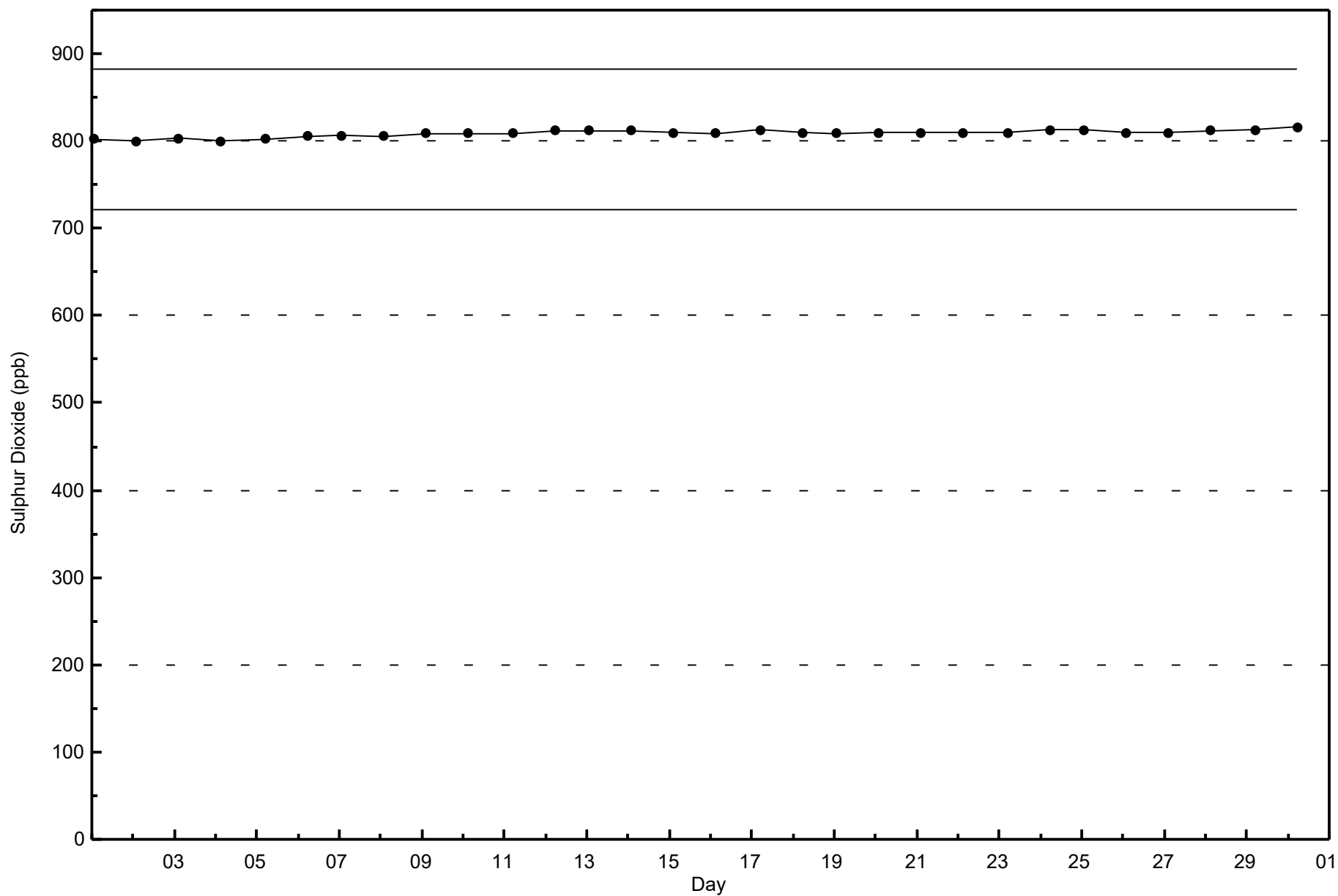






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

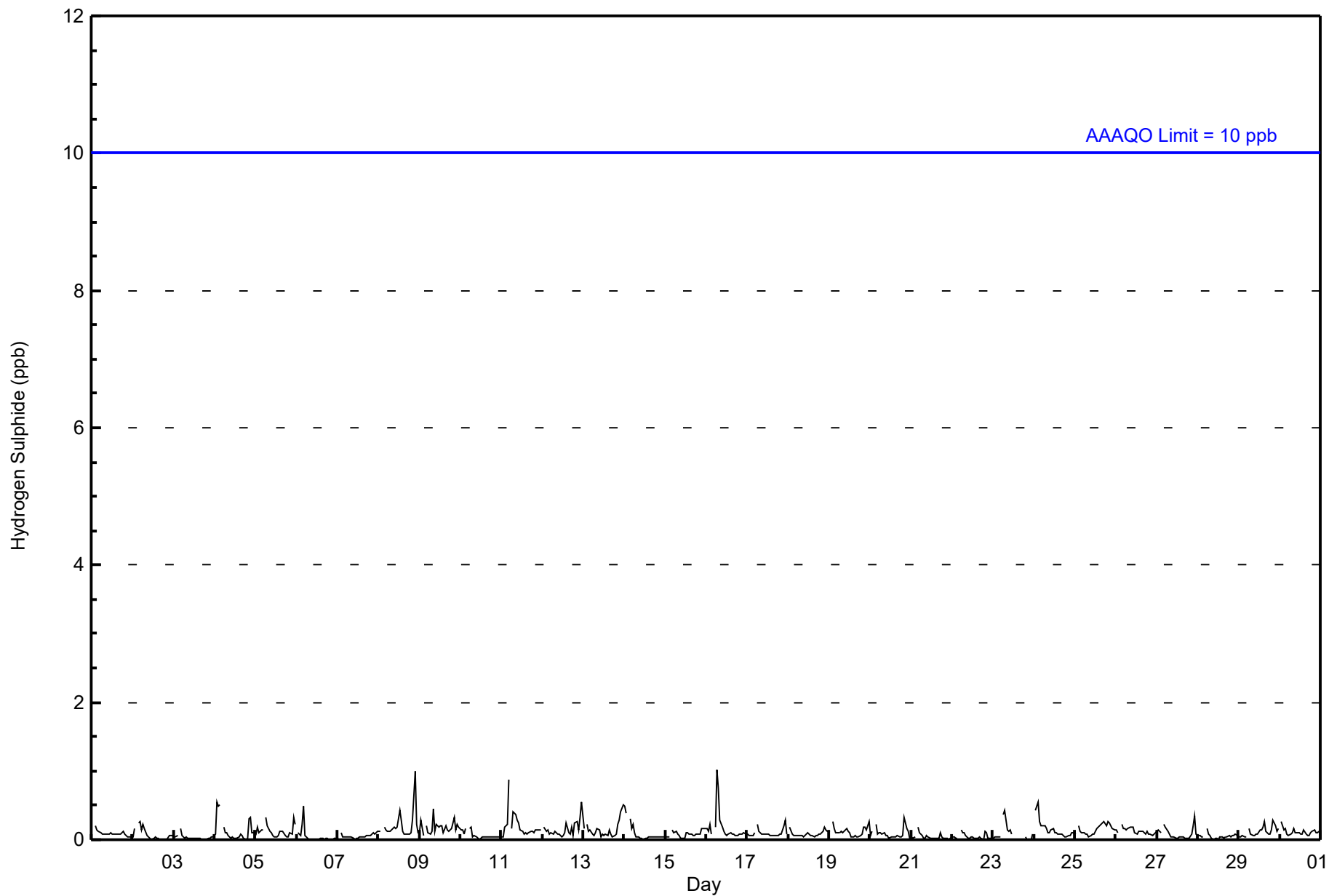
Jackfish 2/3 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 1.0 ppb on Apr 16 07:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.2 ppb on Apr 8					Hours in Service: 720 Hours of Data: 683 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0				
Minimum Value: 0.0 ppb on Apr 2 17:00 Maximum Diurnal Average: 0.2 ppb at hour 5 Monthly Average: 0.11 ppb																				Minimum Daily Average: 0.0 ppb on Apr 3 Minimum Diurnal Average: 0.1 ppb at hour 19 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 = 0.5									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2			
2-Apr	0.0	0.2	Z	0.2	0.3	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	0.1	0.1	0.1	0.1	0.3			
3-Apr	0.0	0.0	0.1	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
4-Apr	0.1	0.6	0.5	0.5	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.1	0.6			
5-Apr	0.1	0.2	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.2	0.3			
6-Apr	Z	0.1	0.1	0.2	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	0.5			
7-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
8-Apr	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.0	0.2	0.1	0.2	1.0			
9-Apr	0.1	0.3	0.1	Z	0.2	0.1	0.1	0.1	0.4	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.2	0.2	0.4			
10-Apr	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2			
11-Apr	0.0	0.0	0.2	0.2	0.9	Z	0.2	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.9			
12-Apr	Z	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	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.1	0.3	0.6	0.2	0.6			
13-Apr	0.2	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.1	0.5			
14-Apr	0.5	0.4	Z	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5			
15-Apr	0.0	0.0	0.0	Z	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	0.2	0.2	0.2	0.1	0.2			
16-Apr	0.2	0.1	0.2	0.1	Z	0.2	1.0	0.7	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	1.0			
17-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.1	0.3			
18-Apr	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2			
19-Apr	0.1	Z	0.3	0.2	0.1	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	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.3			
20-Apr	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.1	0.3			
21-Apr	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	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2			
22-Apr	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	0.1	0.1	0.0	0.0	0.0	0.0	0.1			
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.4	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.1	-	0.4			
24-Apr	Z	0.4	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.6			
25-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.3			
26-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2			
27-Apr	0.1	0.1	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	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.1	0.4			
28-Apr	0.1	0.1	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2			
29-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	0.3			
30-Apr	Z	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3			
																									Diurnal Average	Diurnal Maximum			
Z - zerospan C - Calibration																													
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - April 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 (H₂S) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	31	18	12	10	9	14	19	26	70	89	57	95	83	51	56	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	31	18	12	10	9	14	19	26	70	89	57	95	83	51	56	43	683

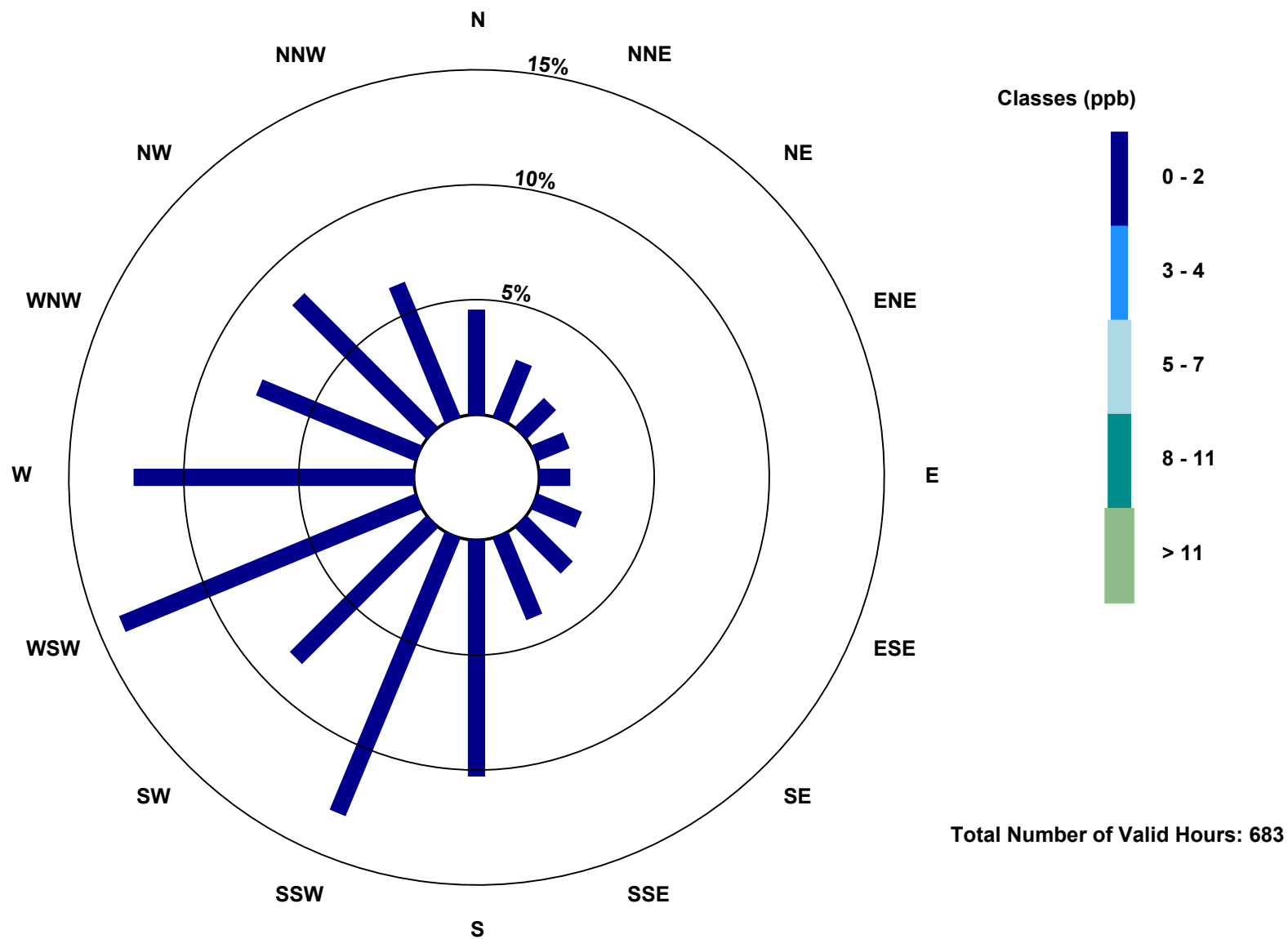
Total Number of Valid Hours: 683

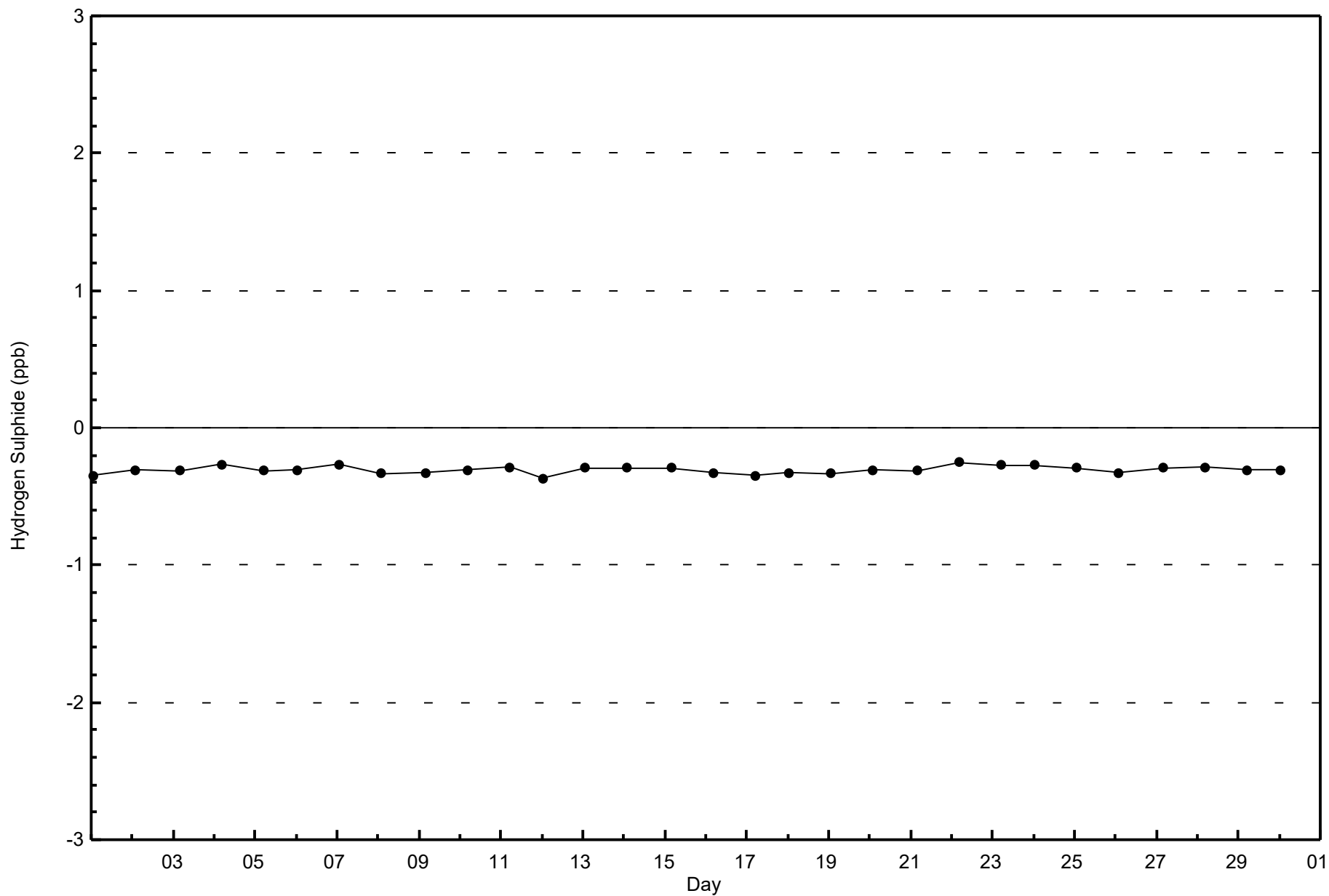
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3

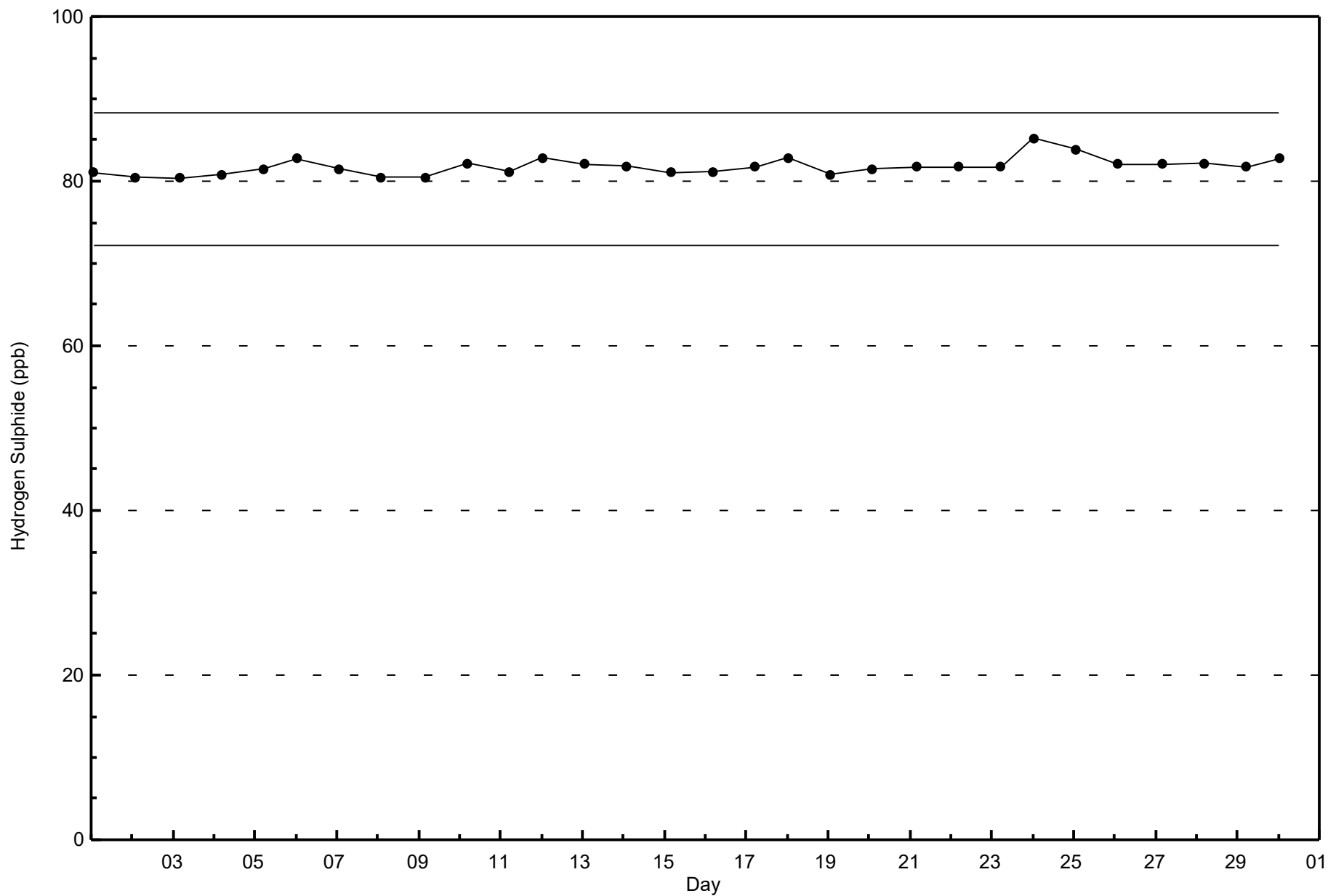






Wood Buffalo Environmental Association
Span Responses

Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 - April 2025

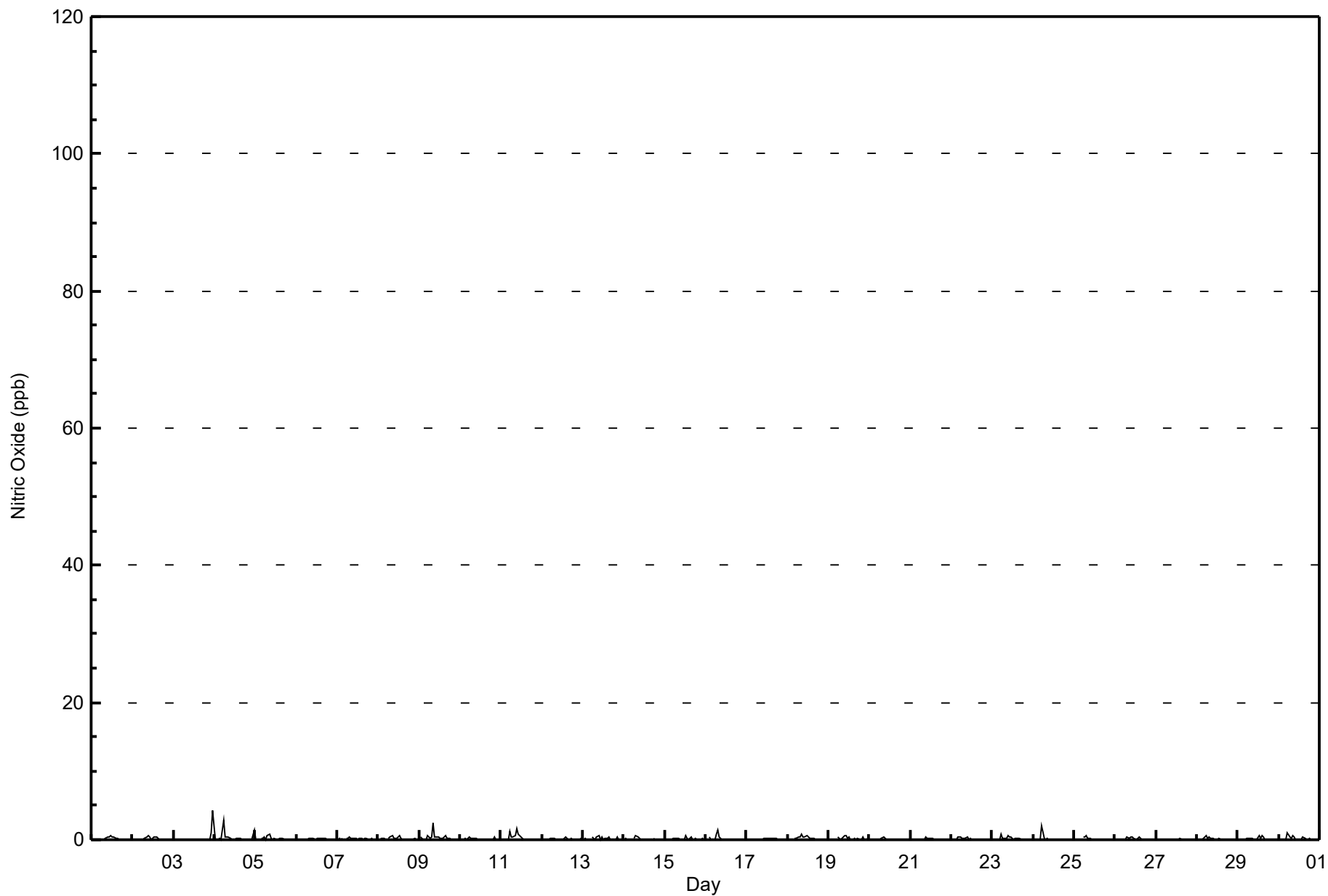


Maximum Value: 4.3 ppb on Apr 4 00:00										Maximum Daily Average: 0.3 ppb on Apr 9										Hours in Service: 720							
Minimum Value: 0.0 ppb on Apr 1 01:00										Minimum Daily Average: 0.0 ppb on Apr 27										Hours of Data: 684							
Maximum Diurnal Average: 0.5 ppb at hour 6										Minimum Diurnal Average: 0.0 ppb at hour 20										Hours of Missing Data: 36							
Monthly Average: 0.13 ppb										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 of Calibration: 36							
																				Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.2	0.4	0.5	0.6	0.4	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
2-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.5	0.5	0.4	0.0	0.3	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
3-Apr	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	1.1	4.3	0.2	4.3	
4-Apr	0.0	Z	0.0	0.2	0.0	2.8	0.3	0.4	0.4	0.2	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.3	2.8	
5-Apr	0.1	0.0	Z	0.2	0.2	0.4	0.1	0.5	0.8	0.3	0.1	0.3	0.1	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	
7-Apr	0.1	0.2	0.0	0.1	Z	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	
8-Apr	0.1	0.0	0.2	0.2	0.0	Z	0.3	0.4	0.6	0.2	0.1	0.2	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.6	
9-Apr	Z	0.3	0.0	0.0	0.0	0.6	0.3	0.4	2.4	0.4	0.4	0.2	0.2	0.2	0.5	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.4	
10-Apr	0.0	Z	0.0	0.2	0.0	0.4	0.2	0.3	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.4	
11-Apr	0.0	0.0	Z	0.0	0.1	1.2	0.4	0.4	0.6	1.7	0.8	0.7	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.7	
12-Apr	0.0	0.0	0.0	Z	0.0	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5	
13-Apr	0.0	0.1	0.0	0.0	Z	0.3	0.1	0.1	0.4	0.5	0.0	0.4	0.0	0.2	0.1	0.4	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.5	
14-Apr	0.0	0.2	0.0	0.0	0.0	Z	0.2	0.6	0.4	0.2	0.0	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	0.6	
15-Apr	Z	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.3	0.0	0.1	0.1	0.6	0.3	0.1	0.4	0.1	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.6	
16-Apr	0.0	Z	0.4	0.0	0.0	0.1	0.8	1.4	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	1.4	
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
18-Apr	0.1	0.0	0.0	Z	0.2	0.2	0.4	0.3	0.7	0.5	0.5	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	
19-Apr	0.0	0.0	0.0	0.0	Z	0.5	0.1	0.0	0.2	0.6	0.6	0.2	0.4	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.6	
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
21-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	
22-Apr	0.0	Z	0.0	0.0	0.3	0.3	0.3	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
23-Apr	0.0	0.0	Z	0.0	0.0	0.8	0.3	0.2	0.2	0.6	0.5	0.4	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	
24-Apr	0.0	0.0	0.0	Z	0.0	2.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.1	
25-Apr	0.0	0.0	0.0	0.0	Z	0.4	0.3	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.4	0.2	0.4	0.3	0.2	0.0	0.2	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
27-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
28-Apr	0.0	Z	0.0	0.0	0.3	0.6	0.3	0.3	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
29-Apr	0.0	0.0	Z	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.6	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
30-Apr	0.0	0.0	0.0	Z	0.0	1.1	0.3	0.2	0.7	0.4	0.0	0.1	0.0	0.0	0.4	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.1	
0.0 0.0 0.0 0.0 0.0 0.5 0.2 0.3 0.4 0.3 0.2 0.2 0.2 0.1 0.2 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.2																								Diurnal Average			
0.1 0.3 0.4 0.2 0.3 2.8 0.8 1.4 2.4 1.7 0.8 0.7 0.6 0.4 0.5 0.5 0.2 0.2 0.3 0.1 0.4 0.2 1.1 4.3																								Diurnal Maximum			
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	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	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	42	684

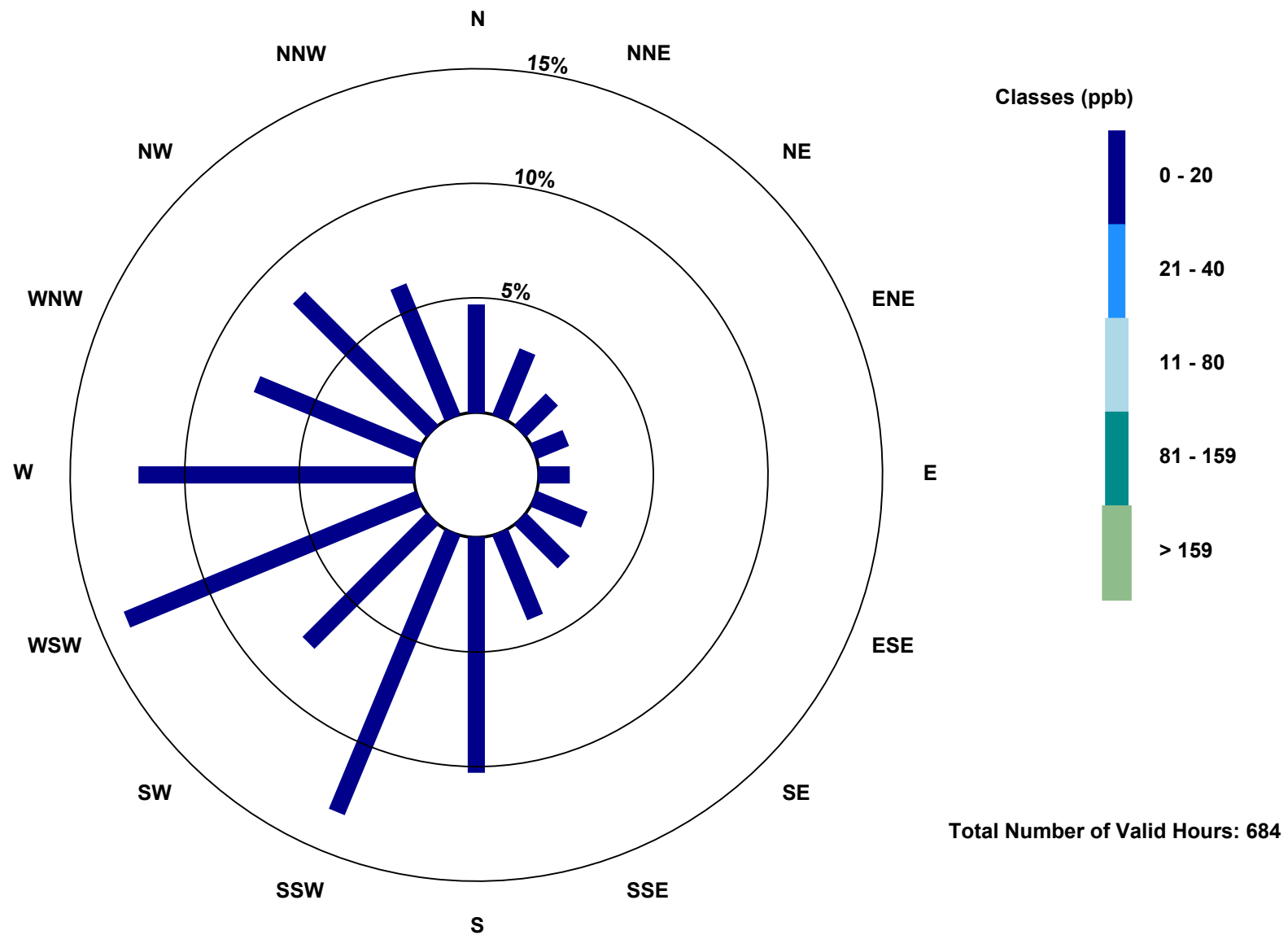
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

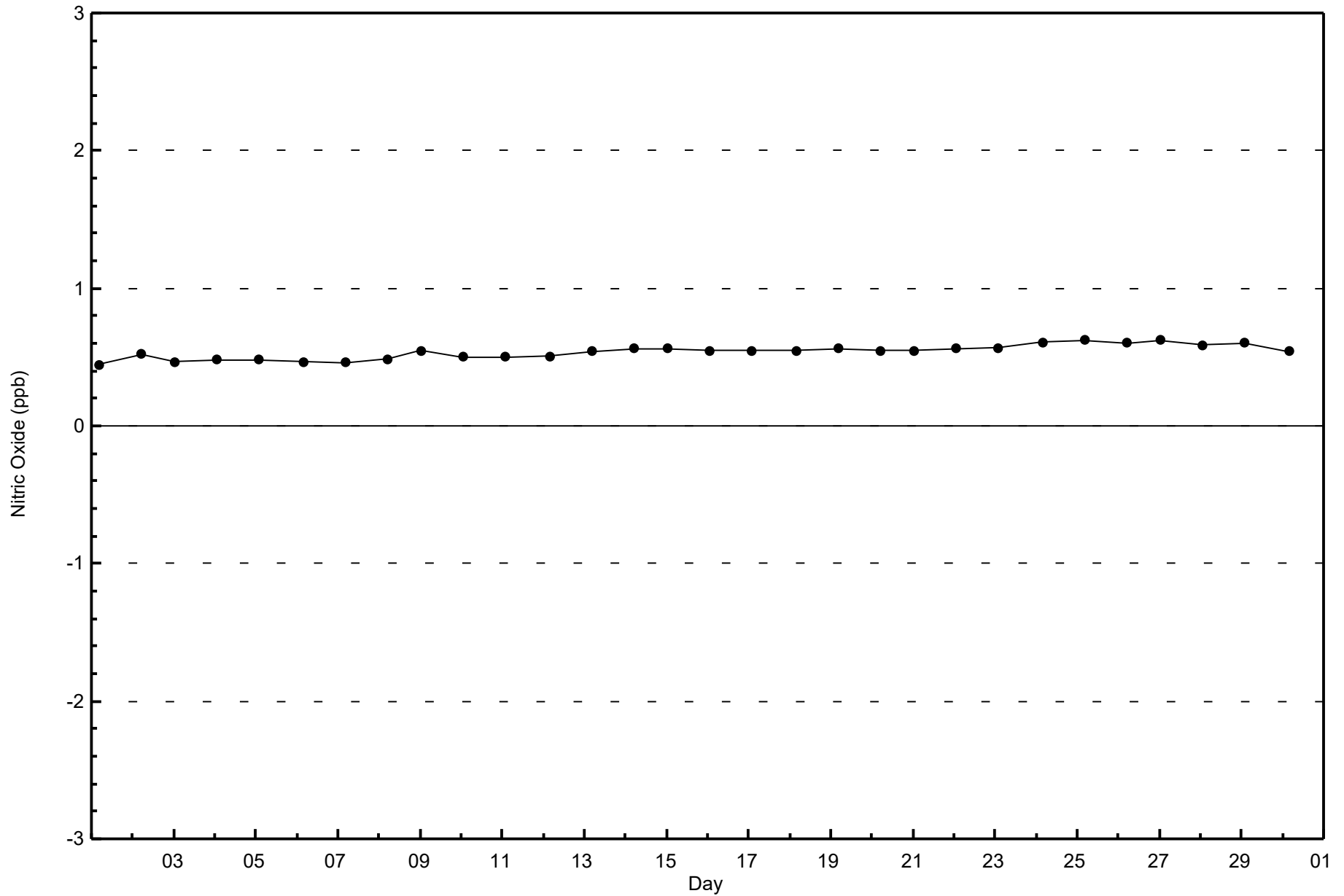
Nitric Oxide (NO) - ppb
Jackfish 2/3





Wood Buffalo Environmental Association
Zero Responses

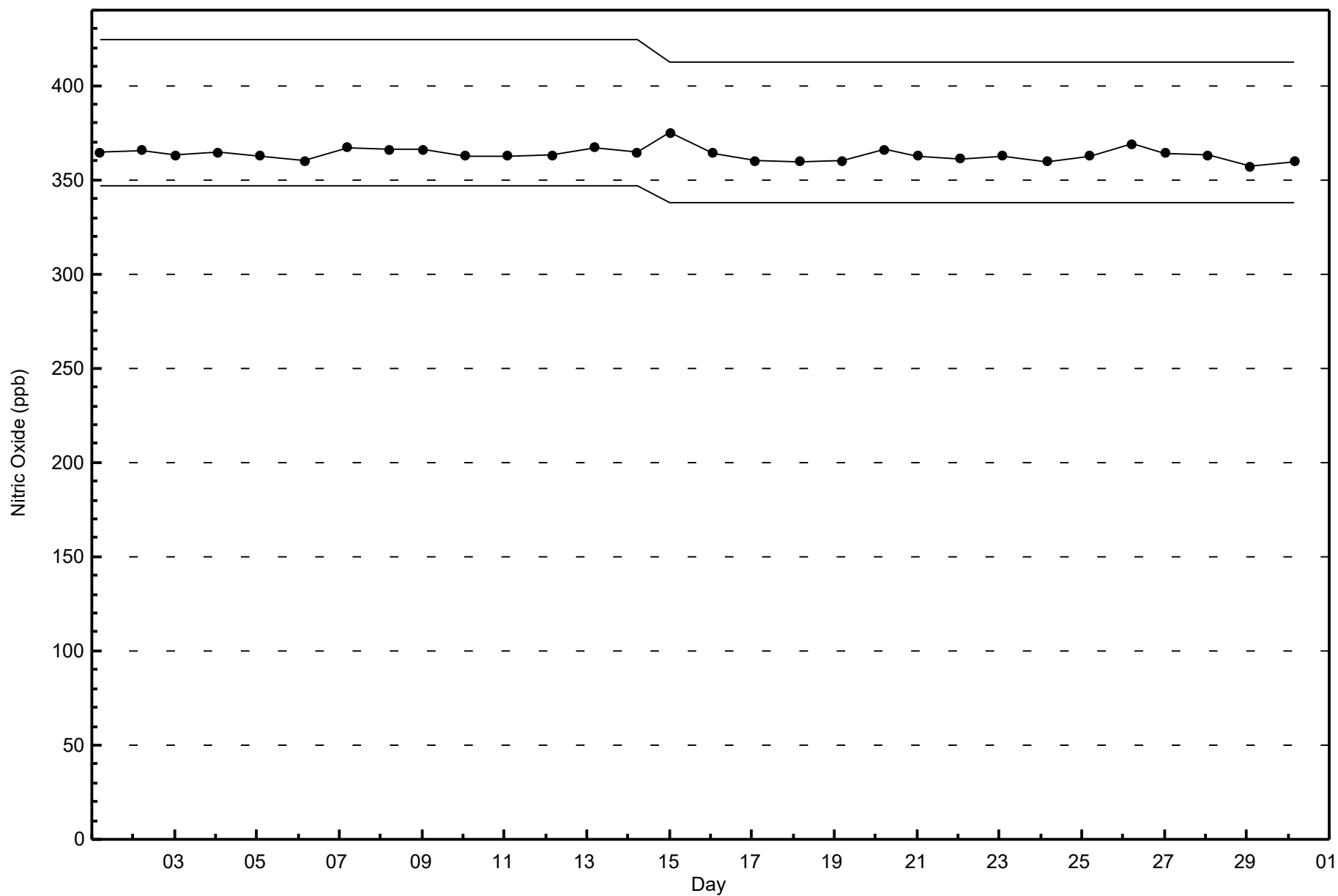
Nitric Oxide (NO) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

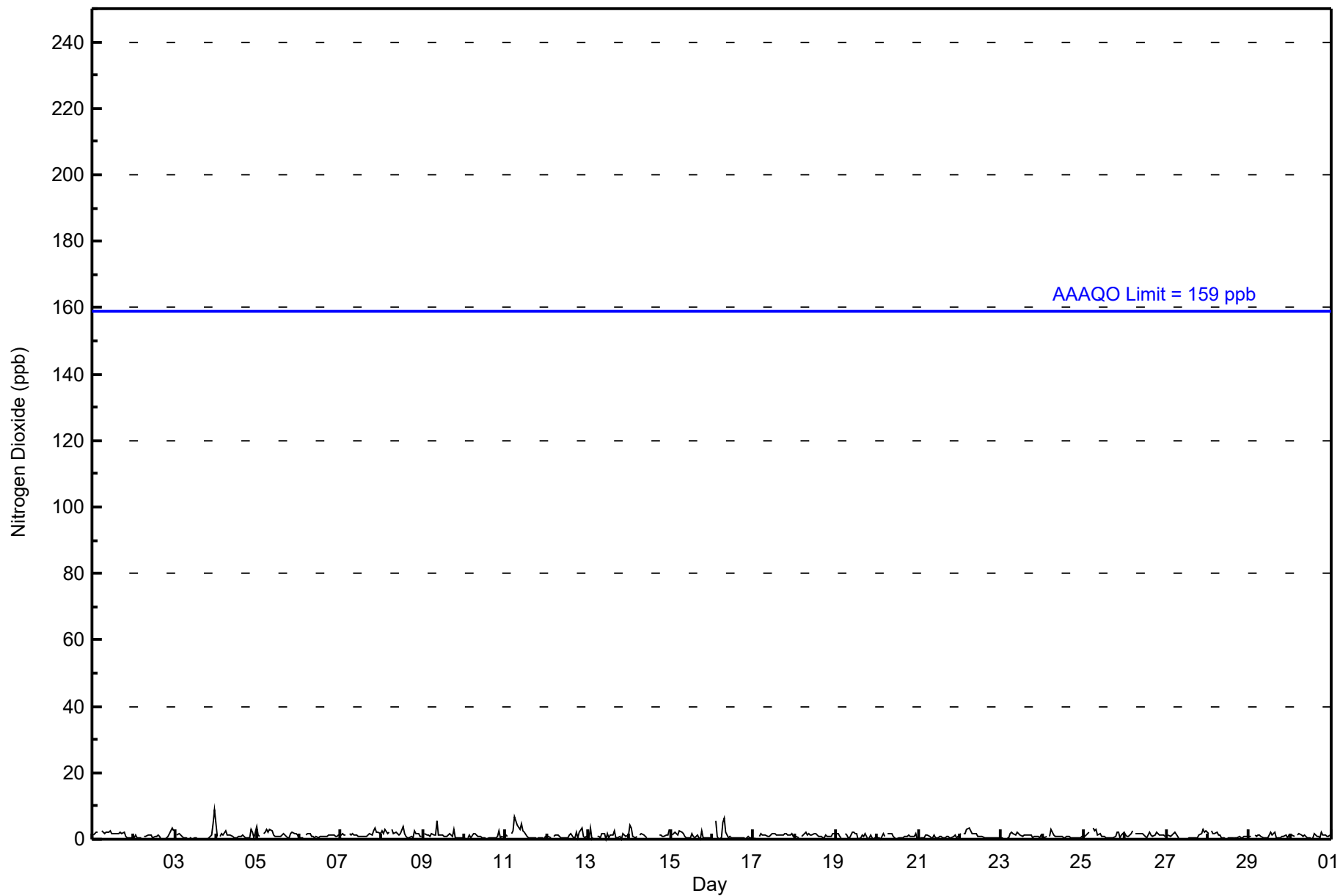
Jackfish 2/3 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 8.7 ppb on Apr 4 00:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 1.8 ppb on Apr 11																			Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 27 09:00 Maximum Diurnal Average: 2.1 ppb at hour 6 Monthly Average: 1.15 ppb																			Minimum Daily Average: 0.7 ppb on Apr 21 Minimum Diurnal Average: 0.7 ppb at hour 17 Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.5 Median = 0.9 Q ₃ = 1.5 P ₉₀ = 2.1 P ₉₉ = 4.7																			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 Average	Daily Maximum													
1-Apr	1.4	1.7	2.0	2.3	Z	2.4	2.0	1.8	2.0	2.1	2.4	1.9	1.6	1.7	1.6	1.8	2.0	1.8	2.0	0.9	0.6	0.3	0.4	0.3	1.6	2.4													
2-Apr	0.5	1.2	0.4	0.4	0.3	Z	0.9	0.8	1.4	1.4	1.2	0.3	0.9	0.9	1.1	1.0	0.2	0.2	0.2	0.3	1.0	2.5	3.2	2.5	1.0	3.2													
3-Apr	Z	1.2	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.5	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	1.3	4.5	8.7	1.0	8.7													
4-Apr	0.9	Z	1.0	1.5	1.2	2.7	1.3	1.3	1.1	0.7	0.4	0.5	0.5	0.7	0.8	1.2	0.9	0.6	0.5	0.6	3.0	2.0	0.6	3.7	1.2	3.7													
5-Apr	1.3	1.0	Z	1.9	2.1	3.0	2.3	3.0	2.5	1.3	0.7	1.0	0.7	0.7	1.1	1.6	1.1	0.6	0.6	1.7	2.3	1.5	1.5	1.2	1.5	3.0													
6-Apr	0.6	0.6	0.6	Z	1.1	1.8	1.6	0.9	0.7	0.6	0.7	0.5	0.9	0.8	0.7	0.7	0.9	1.2	1.1	1.4	1.1	0.9	1.0	1.1	0.9	1.8													
7-Apr	1.2	1.5	1.1	1.3	Z	1.6	1.4	1.6	1.2	1.2	1.0	0.9	0.8	0.8	0.8	0.7	1.1	1.6	1.2	2.5	3.4	2.3	2.0	1.7	1.4	3.4													
8-Apr	2.4	1.9	2.8	1.9	2.1	Z	3.0	1.6	2.2	1.7	1.3	1.7	3.7	1.6	0.8	0.5	0.4	0.9	0.5	2.5	1.8	1.9	1.0	0.7	1.7	3.7													
9-Apr	Z	1.6	1.3	1.3	0.9	1.7	1.1	1.4	5.3	1.4	1.1	1.4	0.9	0.9	0.7	1.7	1.1	1.0	2.8	0.4	0.5	0.6	0.5	0.6	1.3	5.3													
10-Apr	0.6	Z	0.6	1.3	0.6	1.7	1.5	1.2	1.0	0.7	0.4	0.3	0.3	0.2	0.4	0.3	0.4	0.3	0.5	1.0	2.4	0.4	0.8	0.6	0.8	2.4													
11-Apr	1.1	0.9	Z	1.9	2.6	6.9	5.6	4.4	2.8	4.6	2.5	2.1	0.8	0.5	0.3	0.3	0.4	0.4	0.2	0.4	0.5	0.3	0.2	0.9	1.8	6.9													
12-Apr	0.9	1.0	0.5	Z	1.0	1.2	1.1	0.9	0.6	0.5	0.5	0.5	0.6	1.2	1.9	0.5	0.5	2.1	0.3	2.0	3.2	0.9	0.5	0.8	1.0	3.2													
13-Apr	0.3	3.2	0.2	0.3	Z	1.0	0.7	0.6	1.5	1.5	0.2	1.6	0.3	1.1	1.1	2.4	0.4	0.3	0.8	0.2	1.6	1.2	0.8	1.2	1.0	3.2													
14-Apr	4.1	3.5	0.7	0.6	0.9	Z	1.1	1.6	1.2	1.0	0.6	C	C	C	C	C	C	1.2	1.1	0.9	0.7	1.3	1.2	3.0	-	4.1													
15-Apr	Z	1.3	2.2	1.7	1.4	2.6	2.1	1.7	0.9	0.3	0.3	1.9	1.0	0.4	1.4	0.3	0.2	0.2	2.4	0.5	0.5	0.3	0.5	0.5	1.1	2.6													
16-Apr	0.2	Z	5.4	0.7	0.2	0.6	5.0	6.3	2.1	0.4	0.7	0.4	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.4	0.8	0.6	0.4	1.2	6.3													
17-Apr	0.2	0.3	Z	0.7	1.6	1.3	1.3	1.3	0.9	0.9	1.3	1.9	1.8	1.3	1.2	1.3	1.4	1.3	1.6	1.6	1.1	1.4	1.8	0.8	1.2	1.9													
18-Apr	0.8	1.0	0.5	Z	1.0	1.4	2.2	1.4	1.9	1.3	1.4	1.7	1.6	1.1	1.0	1.0	0.5	0.6	1.1	1.0	1.0	0.8	1.6	1.8	1.2	2.2													
19-Apr	1.6	1.5	1.0	0.5	Z	1.5	1.1	0.5	0.6	2.1	2.3	1.5	1.6	0.2	0.4	1.3	0.8	1.7	0.2	0.5	1.4	0.6	0.2	0.7	1.0	2.3													
20-Apr	0.6	0.4	0.2	1.7	0.9	Z	1.6	1.6	1.6	0.7	0.6	0.2	0.5	0.6	0.6	0.6	0.9	0.9	1.1	0.8	0.8	0.9	1.8	0.2	0.9	1.8													
21-Apr	Z	0.5	0.3	0.4	1.3	1.2	0.7	0.3	0.4	1.1	0.6	0.6	0.7	0.7	0.5	0.4	0.8	1.0	0.6	0.3	0.7	1.3	0.5	1.0	0.7	1.3													
22-Apr	1.9	Z	1.8	1.8	3.0	3.5	2.7	1.8	1.5	1.5	0.9	1.0	0.9	0.7	0.5	0.5	0.6	0.5	0.3	0.4	0.5	0.4	0.4	0.4	1.2	3.5													
23-Apr	0.4	0.4	Z	0.6	0.6	1.9	2.3	1.9	1.3	2.2	1.7	1.3	0.8	1.1	1.2	1.1	1.1	1.2	0.5	0.7	0.9	0.8	0.5	1.3	1.1	2.3													
24-Apr	1.1	0.6	0.8	Z	0.7	3.0	1.2	0.7	1.0	0.7	0.8	0.9	0.6	0.5	0.7	0.7	0.5	0.4	0.3	0.4	0.5	0.4	0.5	0.7	0.8	3.0													
25-Apr	0.9	1.1	1.6	2.0	Z	3.5	2.7	3.0	1.4	1.5	0.9	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.8	2.1	2.1	0.6	1.1	2.0	1.4	3.5													
26-Apr	1.1	0.7	0.8	1.6	2.5	Z	1.8	1.8	1.5	1.9	1.6	1.3	0.4	1.3	2.0	1.2	0.7	1.4	2.2	1.5	1.1	1.3	1.2	0.8	1.4	2.5													
27-Apr	Z	1.3	1.0	1.2	1.7	2.3	0.8	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.5	0.5	0.4	0.6	1.1	1.7	2.8	2.2	2.5	1.0	2.8													
28-Apr	1.7	Z	2.5	1.9	1.9	2.0	1.4	1.2	0.5	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.5	0.5	0.7	0.5	0.6	0.8	0.9	1.0	0.9	2.5													
29-Apr	0.8	0.8	Z	1.1	0.9	1.3	1.1	0.7	0.6	0.4	0.3	0.5	2.1	1.2	1.7	2.1	0.4	0.5	0.4	0.8	1.0	1.4	0.3	1.1	0.9	2.1													
30-Apr	0.9	1.1	0.8	Z	1.1	1.9	1.4	0.9	1.4	1.0	0.4	0.4	0.2	0.5	1.7	0.7	0.7	0.5	2.3	1.3	1.2	0.9	0.8	1.1	1.0	2.3													
1.1 1.2 1.3 1.3 1.3 2.1 1.8 1.6 1.4 1.2 0.9 0.9 0.9 0.8 0.9 0.9 0.7 0.8 0.9 1.0 1.3 1.1 1.1 1.4																									Diurnal Average														
4.1 3.5 5.4 2.3 3.0 6.9 5.6 6.3 5.3 4.6 2.5 2.1 3.7 1.7 2.0 2.4 2.0 2.1 2.8 2.5 3.4 2.8 4.5 8.7																									Diurnal Maximum														
Z - zerospan C - Calibration																																							
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	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	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	42	684

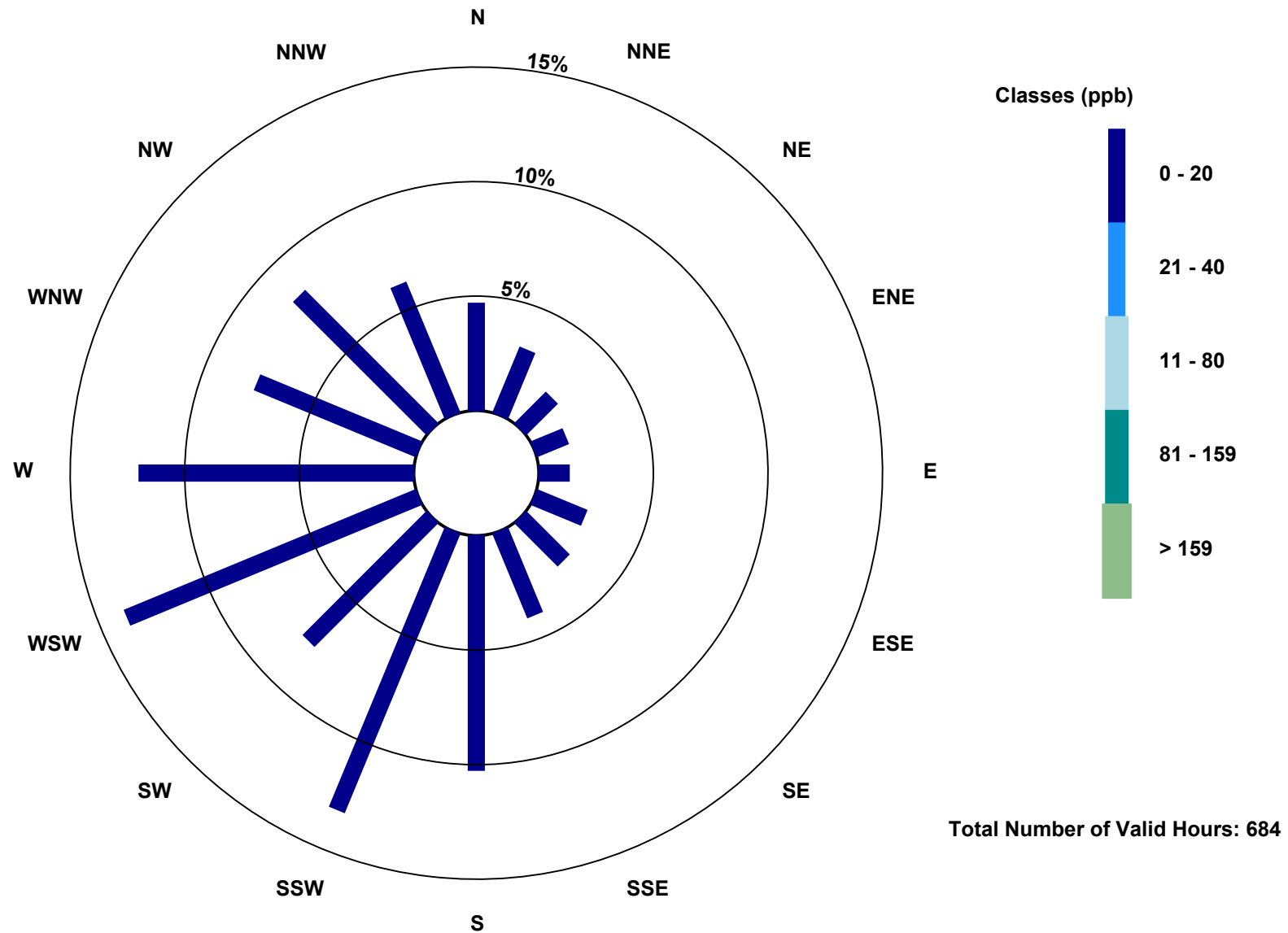
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

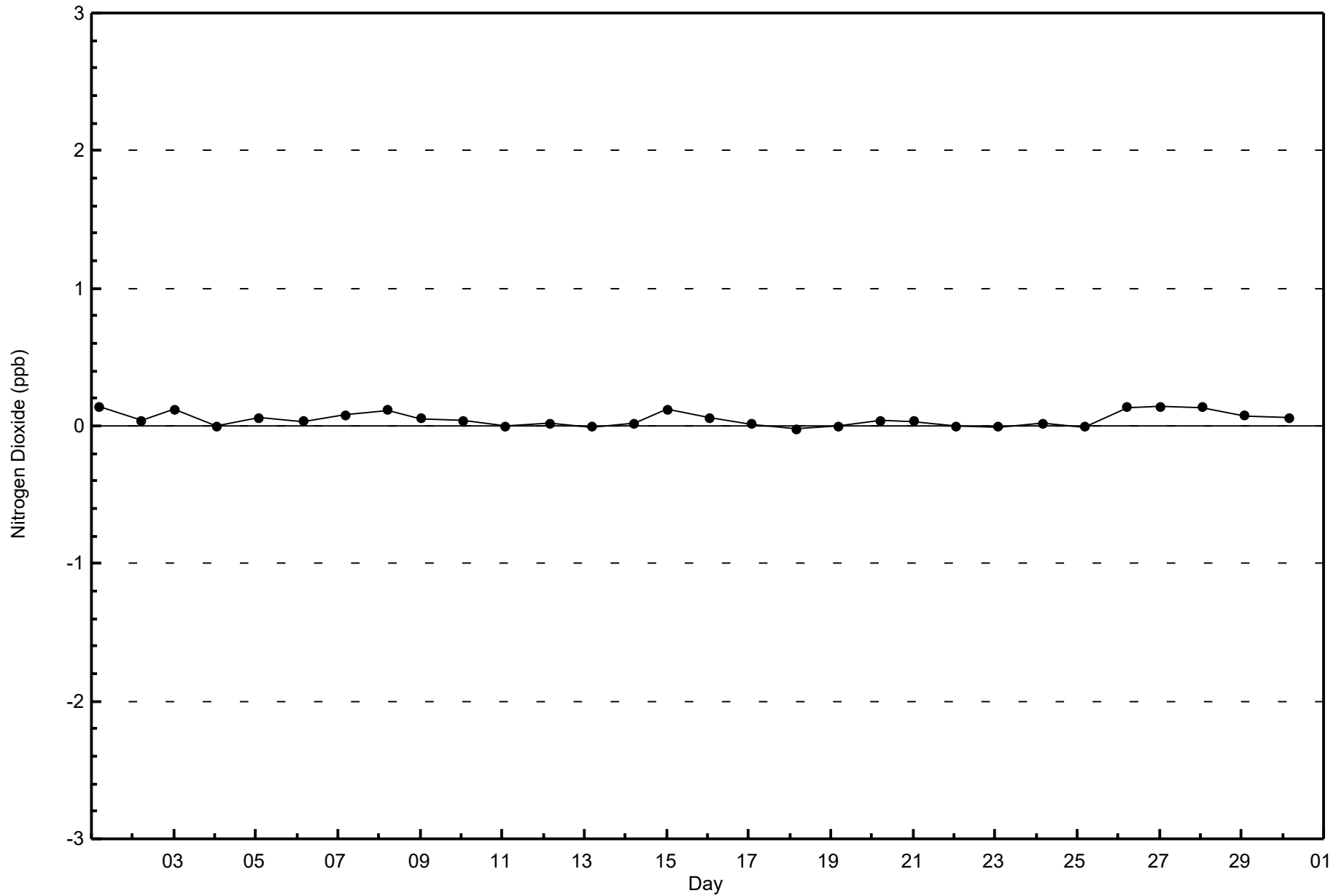
Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3





Wood Buffalo Environmental Association
Zero Responses

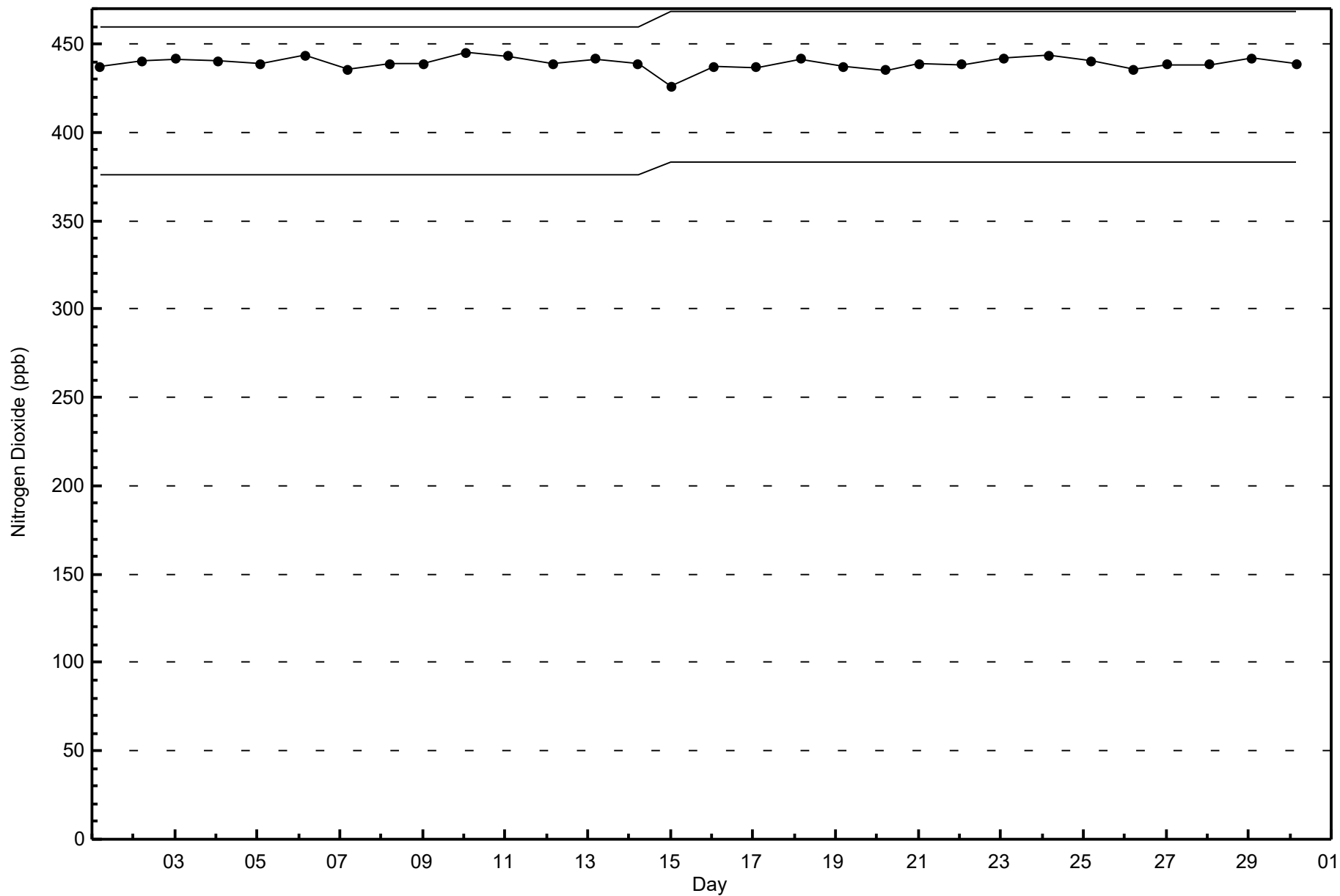
Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

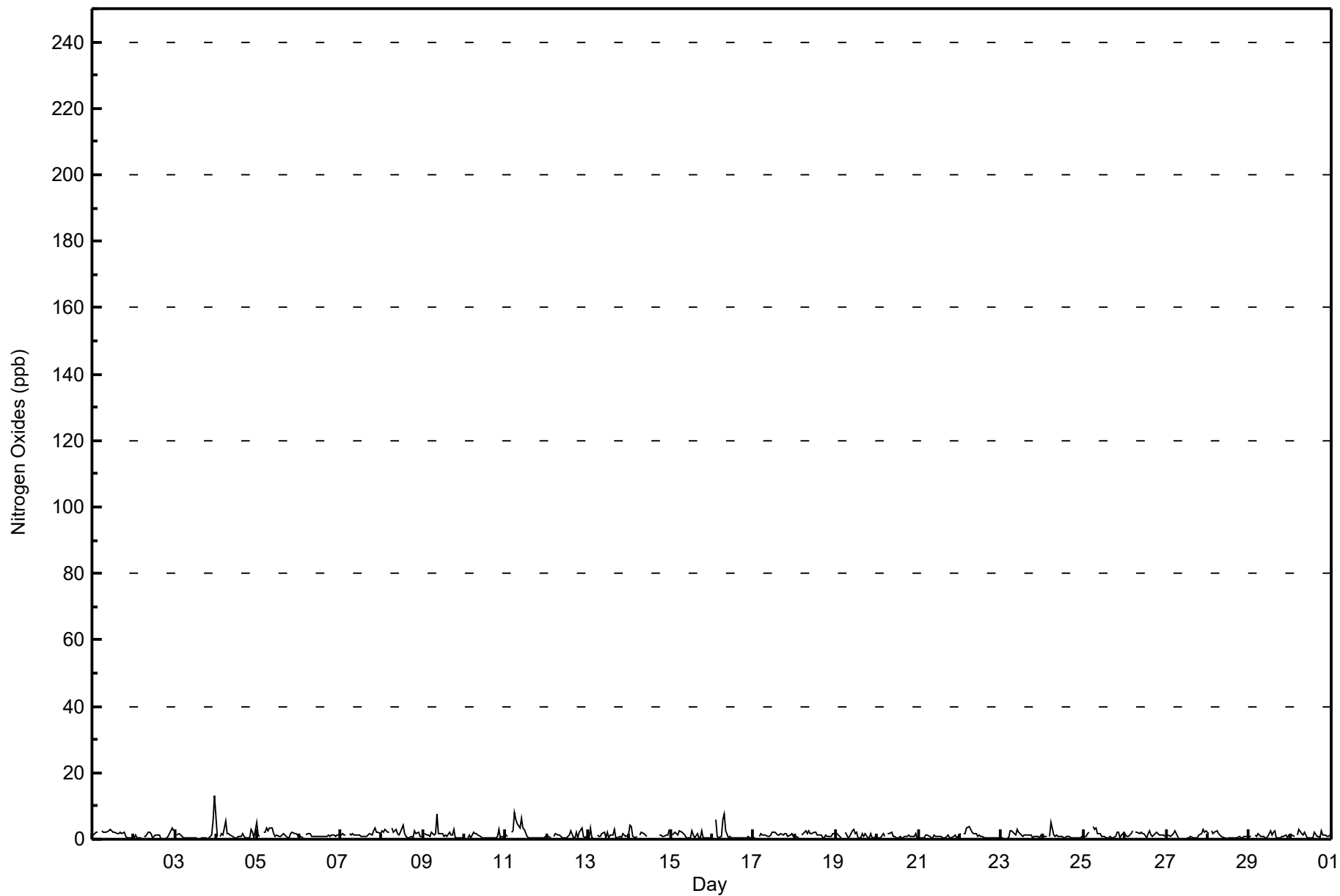
Jackfish 2/3 - April 2025

Maximum Value: 13.0 ppb on Apr 4 00:00																			Maximum Daily Average: 2.1 ppb on Apr 11							Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 27 11:00																			Minimum Daily Average: 0.8 ppb on Apr 21							Hours of Data: 684	
Maximum Diurnal Average: 2.6 ppb at hour 6																			Minimum Diurnal Average: 0.8 ppb at hour 17							Hours of Missing Data: 36	
Monthly Average: 1.29 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 2.5 P ₉₉ = 5.8							Hours of Calibration: 36	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	1.4	1.7	2.0	2.3	Z	2.5	2.0	1.9	2.2	2.5	2.9	2.5	2.0	2.1	1.7	1.9	2.1	1.8	2.0	0.9	0.6	0.3	0.4	0.3	1.7	2.9	
2-Apr	0.5	1.2	0.4	0.4	0.3	Z	0.9	0.9	1.9	1.9	1.6	0.3	1.2	1.2	1.5	1.2	0.2	0.2	0.2	0.3	1.0	2.5	3.2	2.5	1.1	3.2	
3-Apr	Z	1.2	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.5	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	1.3	5.6	13.0	1.3	13.0	
4-Apr	0.9	Z	1.0	1.7	1.2	5.5	1.6	1.7	1.5	0.9	0.4	0.5	0.6	0.8	1.0	1.5	1.0	0.6	0.5	0.6	3.0	2.0	0.6	5.2	1.5	5.5	
5-Apr	1.4	1.0	Z	2.1	2.3	3.4	2.4	3.5	3.3	1.6	0.8	1.3	0.8	0.8	1.4	1.8	1.3	0.6	0.6	1.7	2.3	1.5	1.5	1.2	1.7	3.5	
6-Apr	0.6	0.6	0.6	Z	1.1	1.8	1.7	1.0	0.8	0.7	0.9	0.6	1.0	0.9	0.9	0.8	1.0	1.3	1.1	1.5	1.1	0.9	1.1	1.2	1.0	1.8	
7-Apr	1.3	1.7	1.1	1.4	Z	1.8	1.5	1.9	1.4	1.4	1.2	1.1	0.9	1.0	1.0	0.8	1.2	1.8	1.2	2.6	3.5	2.3	2.0	1.7	1.6	3.5	
8-Apr	2.5	1.9	3.0	2.1	2.1	Z	3.3	2.0	2.8	1.9	1.4	1.9	4.3	1.7	0.8	0.5	0.4	0.9	0.5	2.5	1.8	2.1	1.0	0.7	1.8	4.3	
9-Apr	Z	1.9	1.3	1.3	0.9	2.3	1.4	1.8	7.7	1.8	1.5	1.8	1.1	1.1	0.9	2.2	1.3	1.1	3.1	0.4	0.5	0.6	0.5	0.6	1.6	7.7	
10-Apr	0.6	Z	0.6	1.5	0.6	2.1	1.7	1.5	1.3	0.8	0.4	0.4	0.3	0.2	0.5	0.3	0.4	0.3	0.5	1.0	2.8	0.4	0.8	0.6	0.8	2.8	
11-Apr	1.1	0.9	Z	1.9	2.7	8.1	6.0	4.8	3.4	6.3	3.3	2.8	1.0	0.6	0.3	0.4	0.5	0.4	0.2	0.4	0.5	0.3	0.2	1.0	2.1	8.1	
12-Apr	0.9	1.0	0.5	Z	1.0	1.5	1.3	1.1	0.7	0.6	0.5	0.5	0.7	1.5	2.4	0.5	0.5	2.3	0.3	2.0	3.2	0.9	0.5	1.0	1.1	3.2	
13-Apr	0.3	3.3	0.2	0.3	Z	1.3	0.8	0.7	1.9	2.0	0.2	2.0	0.3	1.3	1.2	2.8	0.4	0.3	0.8	0.2	1.9	1.2	0.8	1.2	1.1	3.3	
14-Apr	4.1	3.7	0.7	0.6	0.9	Z	1.3	2.2	1.6	1.2	0.6	C	C	C	C	C	C	1.3	1.1	0.9	0.7	1.3	1.2	3.0	-	4.1	
15-Apr	Z	1.3	2.3	1.7	1.4	2.7	2.2	1.9	1.2	0.3	0.4	0.4	2.5	1.3	0.5	1.8	0.4	0.2	2.6	0.5	0.5	0.3	0.6	0.5	1.2	2.7	
16-Apr	0.2	Z	5.8	0.7	0.2	0.7	5.8	7.7	2.5	0.4	0.8	0.4	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.4	0.8	0.6	0.4	1.3	7.7	
17-Apr	0.2	0.3	Z	0.7	1.6	1.3	1.3	1.3	0.9	0.9	1.4	2.2	2.1	1.5	1.4	1.5	1.6	1.5	1.6	1.6	1.1	1.4	1.8	0.8	1.3	2.2	
18-Apr	0.9	1.0	0.5	Z	1.2	1.6	2.6	1.7	2.6	1.8	1.9	2.2	2.1	1.4	1.2	1.1	0.5	0.6	1.1	1.0	1.0	0.8	1.6	1.8	1.4	2.6	
19-Apr	1.6	1.5	1.0	0.5	Z	2.0	1.2	0.5	0.8	2.7	2.9	1.7	2.0	0.2	0.4	1.5	0.8	1.9	0.2	0.5	1.7	0.6	0.2	0.9	1.2	2.9	
20-Apr	0.6	0.4	0.2	1.7	0.9	Z	1.7	1.8	1.9	0.8	0.7	0.2	0.5	0.7	0.6	0.6	0.9	0.9	1.1	0.8	0.8	0.9	1.8	0.2	0.9	1.9	
21-Apr	Z	0.5	0.3	0.4	1.3	1.3	0.8	0.3	0.4	1.4	0.8	0.7	0.8	0.8	0.5	0.4	0.9	1.1	0.6	0.3	0.7	1.3	0.5	1.0	0.8	1.4	
22-Apr	1.9	Z	1.8	1.8	3.3	3.8	3.0	2.0	1.7	1.9	1.0	1.1	1.0	0.8	0.5	0.6	0.6	0.5	0.3	0.4	0.5	0.4	0.4	0.4	1.3	3.8	
23-Apr	0.4	0.4	Z	0.6	0.6	2.7	2.6	2.1	1.5	2.8	2.2	1.7	0.8	1.3	1.4	1.3	1.3	1.2	0.5	0.7	0.9	0.8	0.5	1.3	1.3	2.8	
24-Apr	1.1	0.6	0.8	Z	0.7	5.1	1.4	0.8	1.2	0.7	0.8	0.9	0.6	0.5	0.7	0.7	0.5	0.4	0.3	0.4	0.5	0.4	0.5	0.7	0.9	5.1	
25-Apr	0.9	1.1	1.6	2.0	Z	3.9	3.0	3.5	1.6	1.7	1.0	0.9	0.7	0.6	0.6	0.7	0.6	0.6	0.8	2.1	2.1	0.6	1.1	2.0	1.5	3.9	
26-Apr	1.1	0.7	0.8	1.6	2.5	Z	1.9	2.2	1.7	2.3	1.9	1.5	0.4	1.5	2.3	1.3	0.7	1.5	2.3	1.5	1.1	1.3	1.2	0.8	1.5	2.5	
27-Apr	Z	1.3	1.0	1.2	1.7	2.4	0.9	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.7	0.6	0.5	0.4	0.6	1.1	1.7	2.8	2.2	2.5	1.0	2.8	
28-Apr	1.7	Z	2.5	1.9	2.2	2.6	1.7	1.5	0.6	0.5	0.2	0.2	0.3	0.5	0.5	0.4	0.5	0.5	0.7	0.5	0.6	0.8	0.9	1.0	1.0	2.6	
29-Apr	0.8	0.8	Z	1.1	0.9	1.5	1.2	0.9	0.7	0.5	0.3	0.6	2.7	1.4	2.2	2.6	0.4	0.5	0.4	0.8	1.0	1.4	0.3	1.1	1.0	2.7	
30-Apr	0.9	1.1	0.8	Z	1.1	3.0	1.7	1.1	2.1	1.4	0.4	0.5	0.2	0.5	2.1	0.8	0.8	0.5	2.5	1.3	1.2	0.9	0.8	1.1	1.2	3.0	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	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	32	21	13	10	9	16	18	27	70	90	52	94	82	52	56	42	684

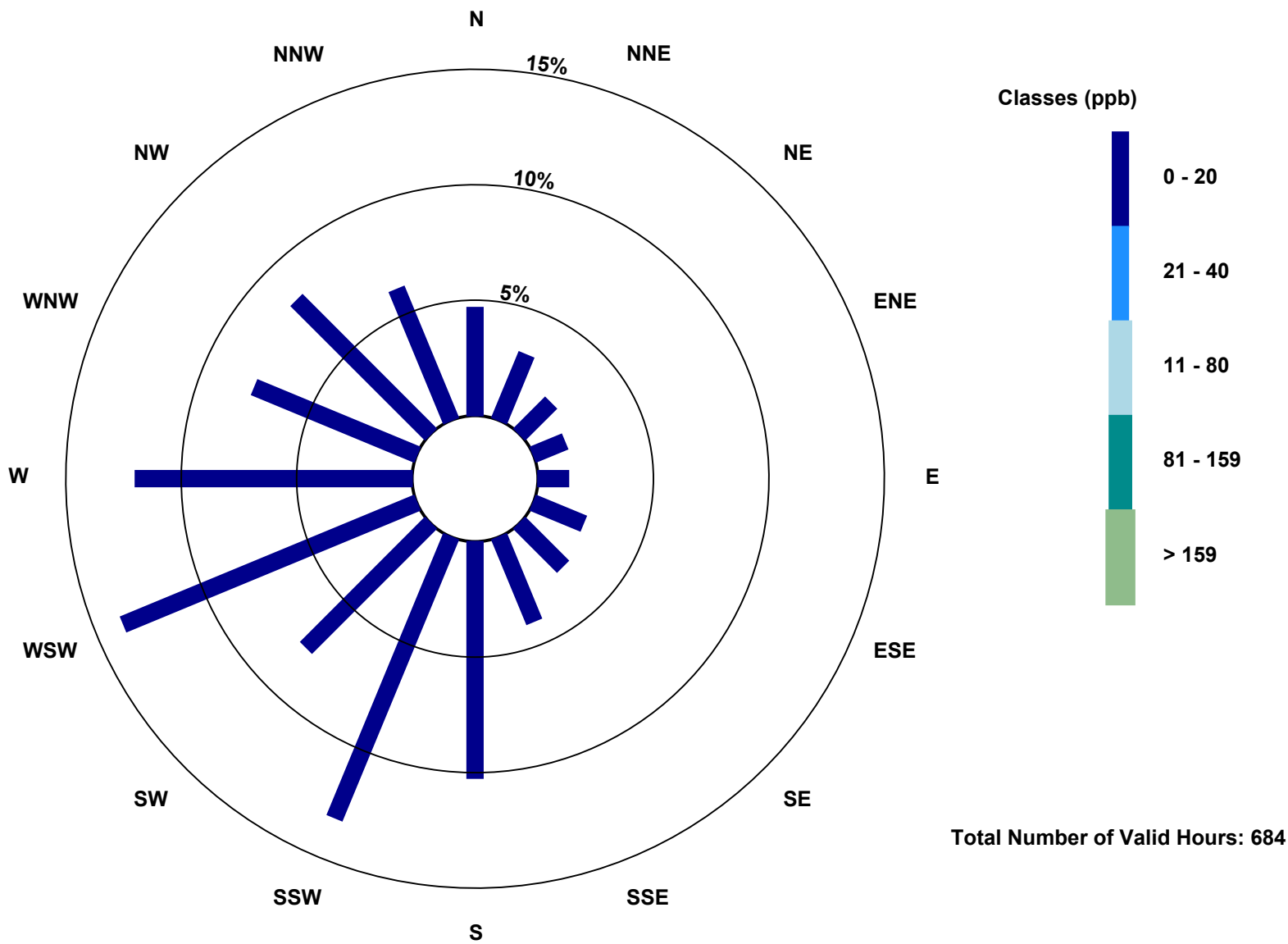
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3



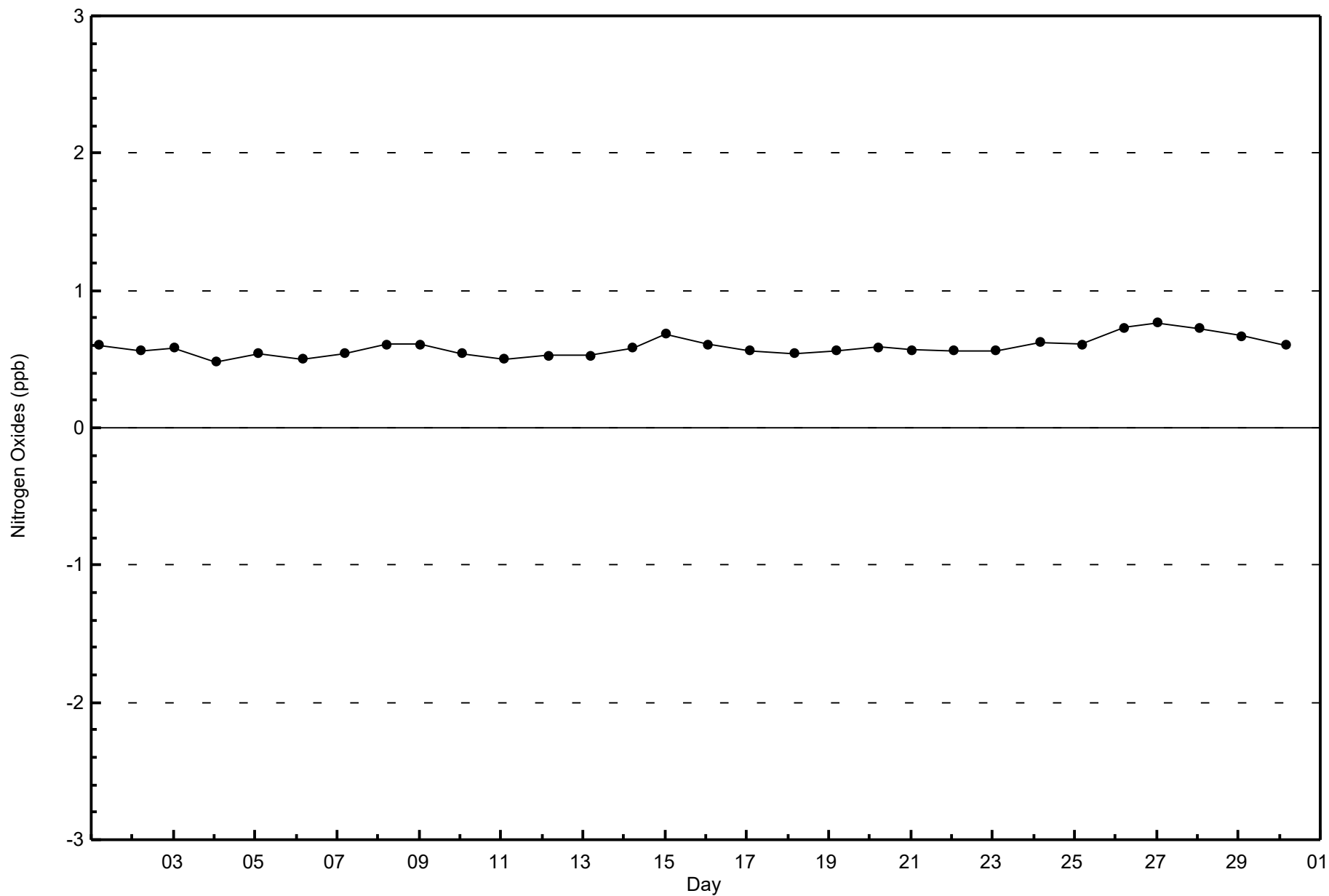


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_x) - ppb

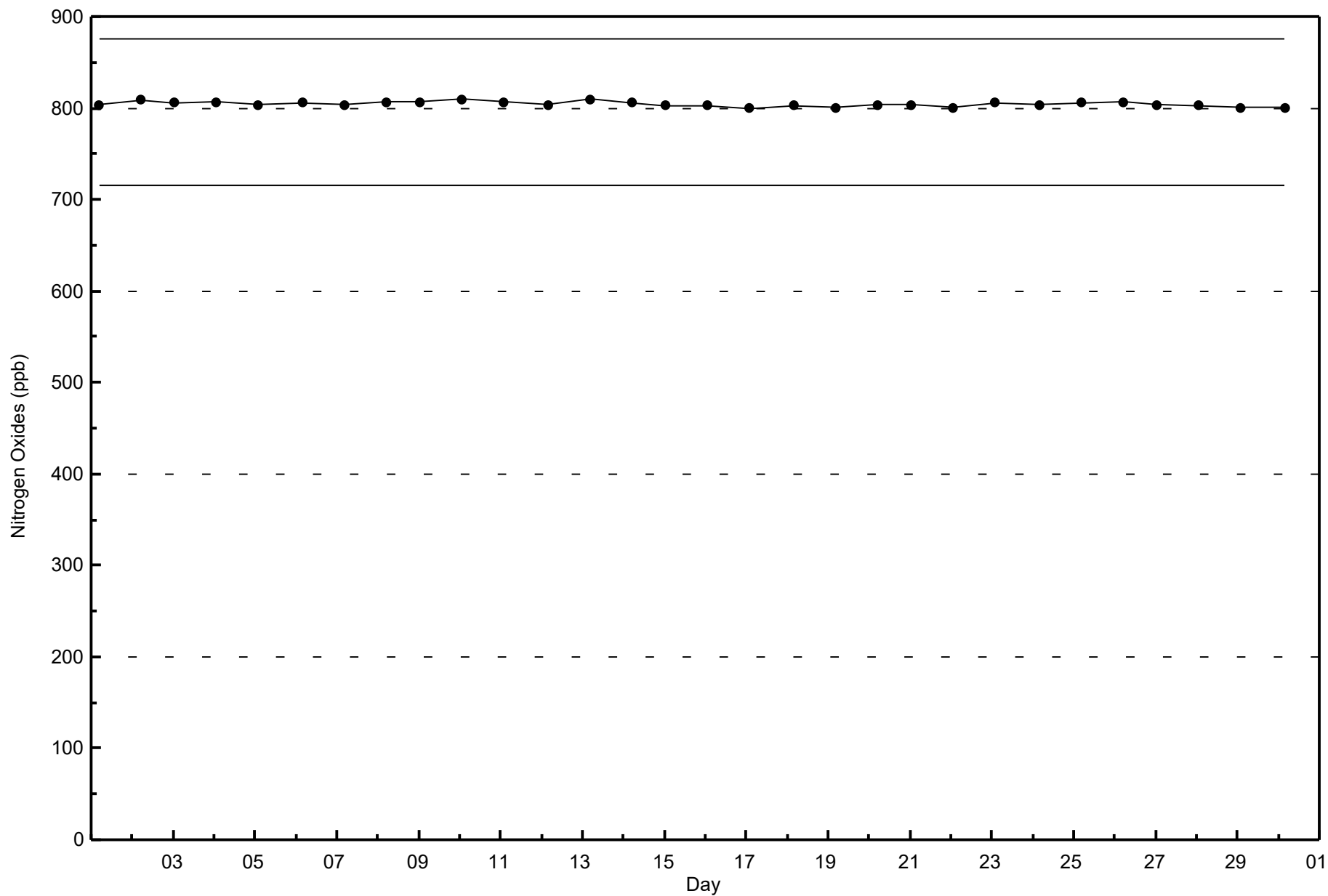
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Span Responses

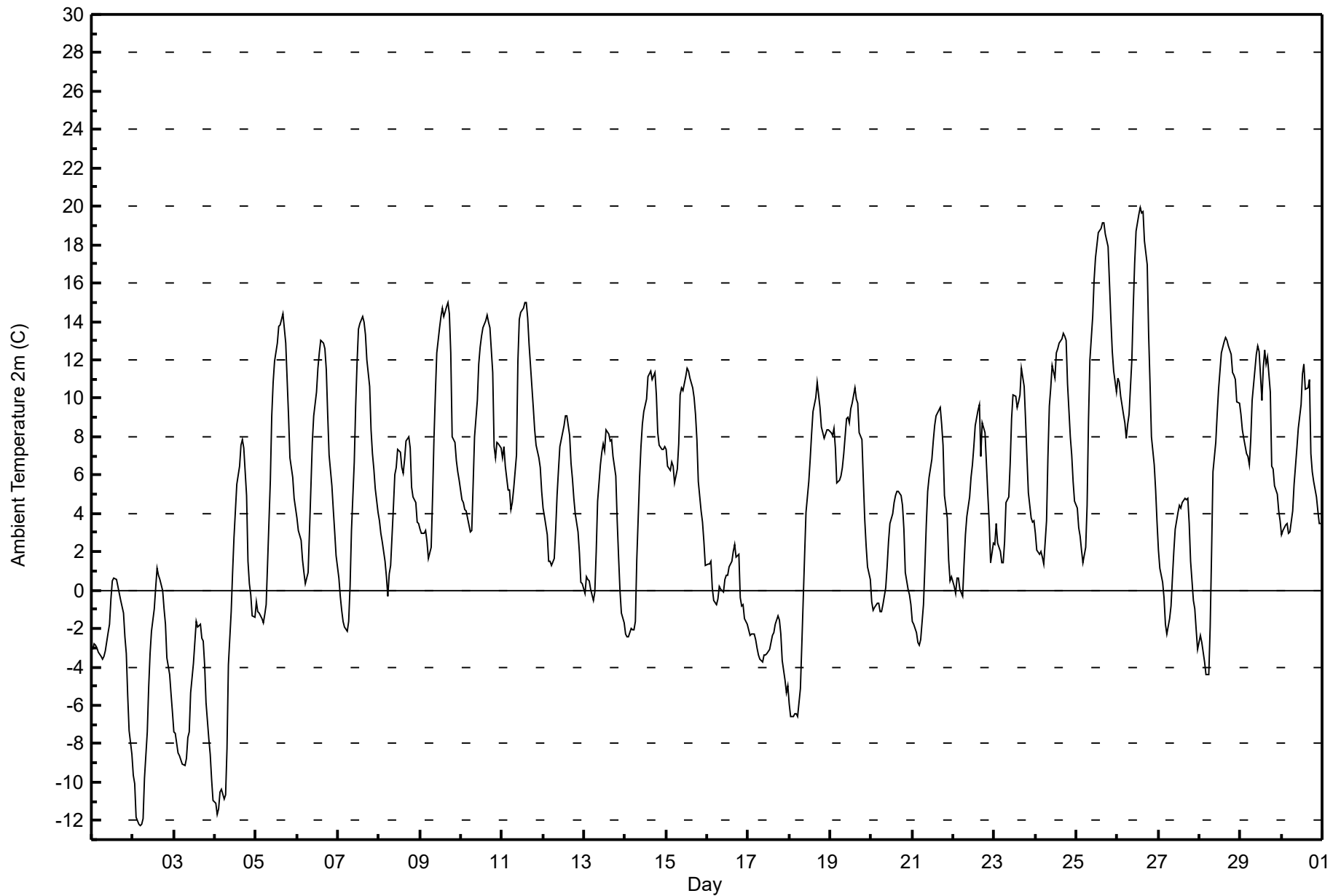
Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Jackfish 2/3 - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	181	25.14	25.14
0 - 10	396	55.00	80.14
10 - 20	143	19.86	100.00
> 20	0	0.00	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) - %

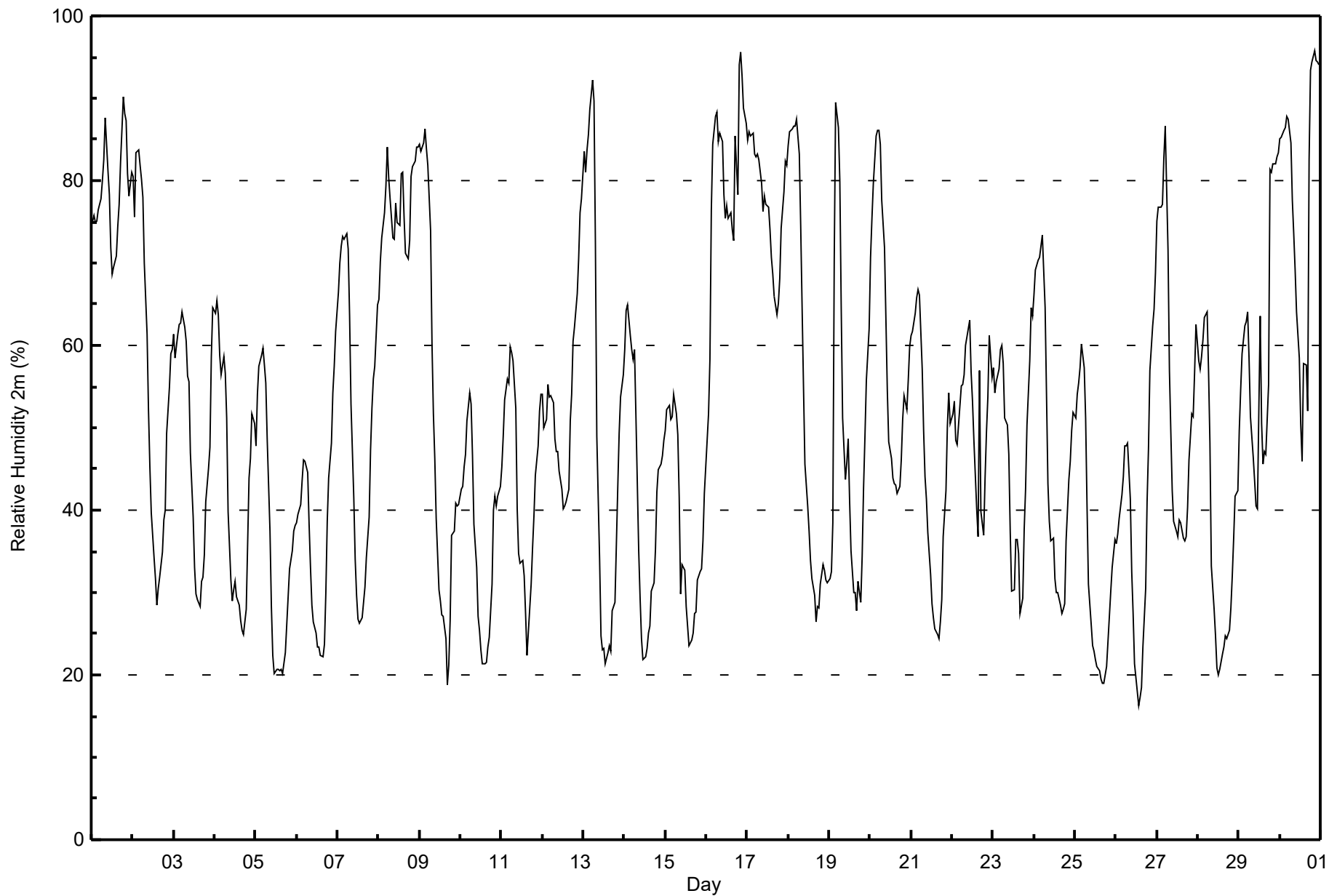
Jackfish 2/3 - April 2025

Maximum Value: 95.8 % on Apr 30 21:00																				Maximum Daily Average: 79.2 % on Apr 16					Hours in Service: 720	
Minimum Value: 16.3 % on Apr 26 14:00																				Minimum Daily Average: 34.3 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 69.6 % at hour 6																				Minimum Diurnal Average: 35.5 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 51.67 %																				Percentiles: P ₁ = 19.6 P ₁₀ = 26.0 Q ₁ = 34.2 Median = 50.2 Q ₃ = 66.3 P ₉₀ = 82.4 P ₉₉ = 93.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	75.1	75.7	74.9	75.1	76.5	77.8	80.0	82.5	87.6	81.2	78.3	71.8	68.7	69.6	70.8	74.4	77.1	82.2	90.3	88.1	87.3	80.8	78.2	81.0	78.5	90.3
2-Apr	80.4	75.6	83.4	83.7	81.9	80.2	78.0	70.0	61.3	52.3	45.3	39.6	34.3	31.7	28.5	30.6	31.9	34.9	38.8	40.0	49.3	55.0	59.0	59.6	55.2	83.7
3-Apr	61.4	58.4	61.3	62.5	62.7	64.1	62.2	60.6	56.3	55.6	46.9	39.2	33.0	29.8	29.1	28.3	31.4	31.9	34.6	41.0	45.1	47.7	58.6	64.6	48.6	64.6
4-Apr	63.9	65.4	63.7	58.9	56.5	58.7	56.6	51.1	39.8	31.6	29.0	30.3	31.3	29.4	28.4	26.6	25.5	24.9	28.0	36.0	43.8	46.2	51.7	50.4	42.8	65.4
5-Apr	47.7	54.0	57.5	58.8	59.6	57.7	55.3	48.7	37.5	28.3	22.4	20.1	20.7	20.7	20.6	20.7	20.2	22.8	26.1	29.5	33.0	35.1	37.4	38.1	36.4	59.6
6-Apr	38.4	39.6	40.8	43.5	46.1	45.9	44.5	38.3	33.1	28.5	26.4	25.1	23.5	23.3	22.4	22.2	23.8	30.0	38.6	43.8	48.2	54.2	57.5	61.6	37.5	61.6
7-Apr	66.5	69.9	72.0	73.3	72.8	73.6	71.6	63.6	52.9	41.6	34.0	29.6	26.9	26.3	26.9	28.9	30.7	34.3	39.2	47.2	52.4	56.0	57.4	65.0	50.5	73.6
8-Apr	65.6	70.2	73.0	76.2	79.4	84.1	80.3	77.9	73.1	72.8	77.3	74.9	74.6	80.8	81.0	75.6	71.3	70.4	72.7	80.5	81.7	82.4	84.1	84.1	76.8	84.1
9-Apr	84.4	83.6	84.6	86.3	83.9	81.8	73.9	60.1	51.7	46.2	39.0	30.3	29.0	27.3	27.1	24.3	18.9	21.1	26.7	37.0	37.4	40.9	40.6	40.7	49.0	86.3
10-Apr	42.5	42.9	45.2	46.8	50.9	54.2	52.9	46.5	38.3	33.1	27.2	25.4	23.1	21.4	21.4	21.5	23.4	24.6	30.9	40.1	41.7	40.6	41.6	42.9	36.6	54.2
11-Apr	45.2	48.9	53.3	55.9	55.3	59.8	59.2	58.1	52.3	40.2	34.7	33.6	33.9	32.1	27.5	22.3	25.2	31.0	35.4	39.3	44.2	47.8	52.0	54.1	43.4	59.8
12-Apr	54.1	50.0	51.0	55.3	53.7	53.9	53.1	48.7	47.1	47.2	44.8	42.5	40.2	40.4	41.1	42.6	50.9	54.1	60.6	62.2	66.3	70.4	76.1	77.8	53.5	77.8
13-Apr	83.6	81.0	83.7	85.6	88.6	92.2	89.7	72.3	49.0	34.1	24.7	23.0	23.3	21.3	22.7	23.6	22.9	27.8	28.8	35.8	42.7	49.3	53.8	56.5	50.7	92.2
14-Apr	59.5	64.2	64.9	61.3	59.5	58.4	59.6	51.6	35.1	29.3	24.5	21.8	22.2	23.3	25.2	26.0	30.1	31.2	35.2	42.1	44.9	45.6	46.5	48.5	42.1	64.9
15-Apr	49.7	52.2	52.7	51.1	51.3	54.1	51.7	49.2	41.4	29.9	33.4	32.7	28.3	25.9	23.5	24.2	25.0	27.5	27.6	31.4	32.5	32.8	36.2	42.1	37.8	54.1
16-Apr	48.5	51.6	58.2	76.5	84.4	87.8	88.4	84.8	85.7	84.8	78.3	75.3	77.0	75.4	76.1	74.0	72.6	85.5	78.3	94.1	95.5	92.7	88.8	86.9	79.2	95.5
17-Apr	85.0	85.9	85.4	85.7	83.2	83.0	83.3	82.6	79.6	76.2	78.1	77.2	76.7	74.0	70.6	68.7	65.9	63.7	65.0	68.2	74.3	78.6	82.3	81.9	77.3	85.9
18-Apr	84.2	85.9	86.3	86.6	86.7	87.5	83.2	74.5	64.5	55.0	45.5	40.6	37.5	33.9	31.7	29.7	26.5	28.3	28.2	31.0	33.4	32.6	31.6	31.1	52.3	87.5
19-Apr	31.7	32.5	38.4	70.3	89.5	86.4	80.0	64.5	51.1	43.8	45.7	48.7	41.2	35.0	30.0	30.0	27.8	31.3	28.8	34.4	42.7	48.9	55.8	62.0	47.9	89.5
20-Apr	70.6	75.4	79.7	85.5	86.1	86.2	84.3	77.6	71.9	63.3	54.6	48.3	46.3	43.9	43.2	43.0	42.1	42.8	46.1	51.1	53.9	52.2	55.7	59.8	61.0	86.2
21-Apr	61.2	61.7	63.9	65.8	66.9	66.1	57.2	49.7	44.1	41.3	37.3	32.3	28.7	27.0	25.6	24.9	24.4	26.5	29.2	36.8	42.3	50.1	54.3	50.6	44.5	66.9
22-Apr	51.7	53.2	48.4	47.9	50.4	55.0	55.3	56.4	60.1	62.0	63.1	56.7	53.2	48.4	40.1	36.7	57.0	39.9	37.0	43.9	49.6	53.8	61.2	56.2	51.5	63.1
23-Apr	57.3	54.3	55.5	57.1	59.5	60.1	57.7	51.1	50.3	46.8	37.5	30.1	30.3	36.5	36.5	34.7	27.4	29.3	37.7	42.6	50.3	58.2	64.7	63.6	47.0	64.7
24-Apr	66.1	69.1	70.3	70.6	72.0	73.4	64.5	54.0	43.2	38.7	36.3	36.5	31.6	30.0	30.1	28.6	27.5	28.0	28.7	36.3	43.8	45.9	49.7	51.8	46.9	73.4
25-Apr	51.1	54.1	55.4	57.3	60.1	57.3	51.2	40.5	31.1	26.0	23.6	22.8	21.9	21.0	20.5	19.5	19.1	19.0	21.0	24.1	27.1	30.2	33.0	36.4	34.3	60.1
26-Apr	36.0	37.1	39.0	41.9	44.1	47.9	47.8	48.1	41.4	32.6	27.5	21.4	18.0	16.3	17.2	18.5	23.4	30.5	41.0	47.5	56.9	62.3	64.4	68.8	38.7	68.8
27-Apr	75.1	76.8	76.8	77.1	82.7	86.6	71.5	56.9	49.4	42.5	38.7	37.4	36.8	38.9	38.4	36.5	36.3	36.7	40.3	46.1	51.6	51.4	56.6	62.6	54.3	86.6
28-Apr	58.1	57.1	58.7	60.7	63.4	64.0	56.9	48.2	33.2	28.0	24.7	20.9	20.1	20.7	22.5	23.3	24.7	24.5	25.4	28.1	32.0	36.6	41.8	42.3	38.1	64.0
29-Apr	49.7	54.5	59.0	62.4	63.0	64.0	58.5	51.3	46.5	43.5	40.5	40.2	63.6	50.5	45.6	47.2	46.9	55.3	81.3	81.0	82.1	82.1	83.0	83.4	59.8	83.4
30-Apr	85.1	85.2	86.2	86.4	87.8	87.5	84.7	77.7	73.6	69.2	64.1	58.4	50.5	46.0	57.8	57.7	52.1	82.6	93.4	94.4	95.8	94.6	94.4	94.2	77.5	95.8
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Jackfish 2/3 - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	8	1.11	1.11
20 - 40	233	32.36	33.47
40 - 60	243	33.75	67.22
60 - 80	142	19.72	86.94
80 - 100	94	13.06	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

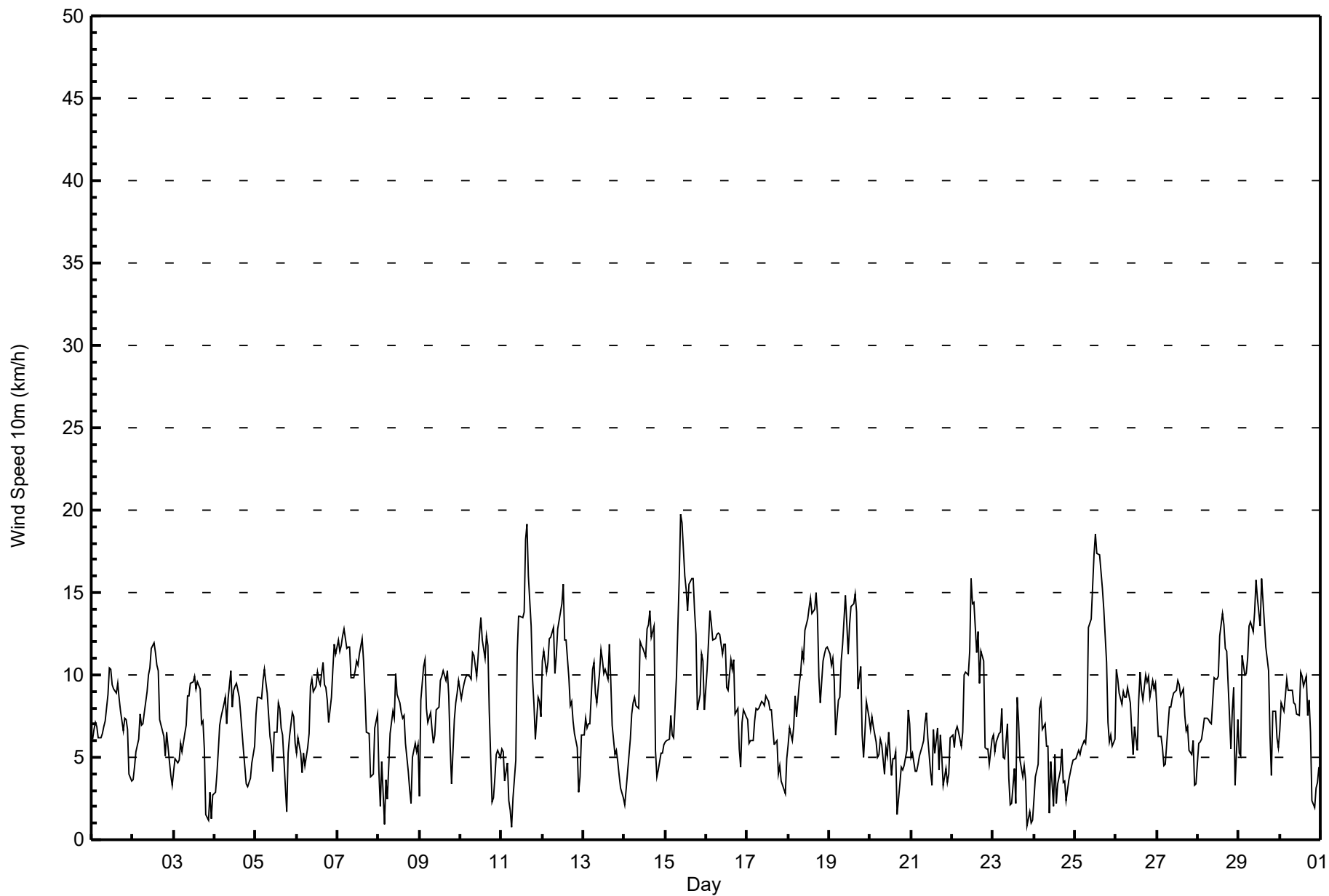
Jackfish 2/3 - April 2025

Maximum Speed: 20 km/h on Apr 15 10:00										Maximum Daily Speed Average: 10.7 km/h on Apr 18										Hours in Service: 720						
Minimum Speed Value: 1 km/h on Apr 11 07:00										Minimum Daily Speed Average: 1.1 km/h on Apr 23										Hours of Data: 720						
Maximum Diurnal Speed Average: 6.6 km/h at hour 14										Minimum Diurnal Speed Average: 1.1 km/h at hour 20										Hours of Missing Data: 0						
Monthly Average Velocity: 4.3 km/h 249.5 deg										Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 6 Median = 8 Q ₃ = 10 P ₉₀ = 13 P ₉₉ = 17										Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	S6	S7	S7	S7	S6	S6	S6	S7	S7	SSW9	SSW10	SSW10	SSW9	SSW9	SSW9	SSW9	SW9	SW8	W7	NW7	NW7	NNW7	NNW4	NW4	SSW5.1	SSW10
2-Apr	NW4	WNW4	W5	WSW6	WSW8	W7	W7	W8	WNW9	WNW10	WNW10	W12	W12	WNW11	WNW11	NW10	NNW7	NNW7	NNW6	NNW5	NNE7	NNE5	N4	NNW3	WNW6.2	W12
3-Apr	NW4	NNW5	NW5	NW5	NNW6	NNW5	NNW6	NW7	NW9	NW9	NW10	NNW10	NNW10	NNW9	NNW10	NNW9	N7	N7	N6	WNW1	NE1	ENE3	SSE1	SSW3	NNW5.5	NNW10
4-Apr	SSW3	SSW4	SSW5	SSW7	SSW7	SSW8	SW9	SW7	SW9	WSW10	W8	W9	W9	W9	W9	WNW8	WNW7	NW5	N3	ENE3	ESE3	SE4	S5	S6	WSW4.6	WSW10
5-Apr	SW8	SW9	SW9	SW9	SW10	SW10	SW10	SW9	WSW6	WSW6	WSW4	WSW7	WSW7	W8	W8	WNW7	NW6	NNW3	N2	NNE5	NE6	E8	E7	ESE6	WSW3.8	SW10
6-Apr	ESE5	ESE6	ESE5	E4	ESE5	ESE5	SE6	SE6	SE9	SE10	SE9	SE9	SE10	SSE10	SSE9	SSE11	SSE9	SSE9	SSE8	SSE7	S9	S10	S12	S11	SSE7.5	S12
7-Apr	S12	S11	S12	S12	S13	S12	S12	S12	S10	SSE10	SSE10	SSE11	SSE11	SSE11	S12	S11	SSW9	SSW7	SW6	SSW4	SSW4	S4	S7	S8	S9.3	S13
8-Apr	SSE4	S2	S5	SW1	SSW4	S2	SSW4	SSW6	WSW8	W7	W10	WNW9	WNW8	NW8	NW7	NNW8	N6	N4	NE3	SW2	WSW5	WSW6	WSW5	WSW6	W3.3	W10
9-Apr	W3	WSW9	WSW10	WSW11	WSW8	WSW7	W8	W7	W6	WNW8	WNW8	WNW10	WNW10	W10	WNW10	WNW10	WNW9	W6	WSW3	WSW7	WSW8	WSW9	WSW10	W7.5	WSW11	
10-Apr	WSW9	WSW9	WSW10	WSW10	WSW10	SW10	SW10	WSW11	WSW11	WSW10	WSW11	WSW12	WSW13	WSW12	SW11	SW12	WSW12	WSW8	S2	SE3	SE4	SE5	SSE5	SSE5	SW7.9	WSW13
11-Apr	SSE5	SE5	E4	NE5	SE2	SSE2	SW1	WSW3	W5	WNW11	WNW14	WNW14	W13	W14	WSW18	W19	W16	W13	W10	W8	W6	W9	W8	WSW7	W7.0	W19
12-Apr	WSW11	WSW11	WSW10	WSW11	WSW12	WSW12	WSW13	W10	W11	WSW13	W13	W14	W16	WNW12	WNW12	NW10	NW8	NW8	NW7	NW6	WNW6	NW3	WSW4	WSW6	W9.0	W16
13-Apr	W6	WNW7	W7	W7	W7	WSW10	WSW11	W9	WNW8	NW10	NW12	NW11	NW10	NW10	NW10	WNW12	NW10	NW7	WNW5	W5	W5	WSW4	SW3	SW3	WNW7.2	WNW12
14-Apr	S2	SSW3	SSW4	SSW6	SW8	SW8	SW9	SW8	WSW8	WSW12	WSW12	SW12	SW11	WSW13	WSW13	WSW14	SW12	WSW13	SSW5	S4	S4	S5	S5	S6	SW7.7	WSW14
15-Apr	S6	S6	S6	SSW8	SSW6	S6	SW10	WSW13	WSW16	W20	W19	W16	WNW15	WNW14	W16	W16	W16	W14	WNW12	W8	W9	WSW11	WSW11	W8	W10.3	W20
16-Apr	W10	W12	WNW14	W13	W12	W12	WNW12	WNW13	NW12	NW11	NW12	NW12	NW9	NW9	NW11	NW10	NW11	NW8	NW8	NNW6	NW4	NNW7	NNW8	NW7	NW9.6	WNW14
17-Apr	NNW7	NW6	NNW6	NNW6	N7	N8	N8	NNW8	NNW8	N8	NNW8	N9	N8	NNW8	NNW8	NNW7	N6	NNE6	N4	ENE5	E4	SE3	S3	SSE5	N5.1	N9
18-Apr	S6	S7	SSW6	SSW7	SSW9	SSW7	SSW9	SSW10	SSW11	SSW11	SSW13	SSW13	SSW14	SSW15	SSW14	SSW14	SSW15	SSW14	SSW10	S8	S11	S11	SSW12	SSW12	SSW10.7	SSW15
19-Apr	SSW11	SSW11	WSW11	W10	SSW6	SW8	WSW9	W11	W12	W15	WNW13	NW11	WNW13	W14	W14	WNW15	WNW14	WNW9	W10	W6	W5	W7	WSW8	W7	W9.3	WNW15
20-Apr	WSW7	WSW7	W7	WNW6	N5	N5	NNE6	NNE6	NE4	N6	NW5	NNW7	NNW4	NW5	NE5	NNE5	NNE2	NNE3	ENE4	ENE4	ENE5	ENE5	E8	ESE7	N2.5	E8
21-Apr	SE5	SSE5	ESE4	ESE4	ESE5	SE5	SSE6	SSE6	SE7	ESE8	ESE6	ESE4	E3	NE7	NE5	NE7	ENE4	ESE6	ESE5	SE3	SSE4	SSE3	S4	S6	ESE4.0	ESE8
22-Apr	S6	S6	S7	S7	S6	S6	SSW7	SW10	WSW10	WSW10	WSW11	SW16	SW14	WSW14	WSW11	WSW13	WSW10	WSW11	WSW11	WSW6	SW5	SSW6	S5	SSW6	SW7.9	SW16
23-Apr	SSW6	SW5	SW6	SSW6	SW7	SW8	WSW5	WSW5	SW7	WSW4	NNW2	SSW2	NE4	E2	NNE9	E7	NNE5	NNE4	NNE4	NE4	E1	W2	WSW1	WNW1	SW1.1	NNE9
24-Apr	SSW2	SW4	WSW5	SW8	SW8	SW7	SW7	WSW6	WNW6	N2	NNE5	N2	SW5	W2	NNW3	SW4	SW6	SW3	SSW4	S2	SSE4	SSE4	S4	S5	SW3.0	SW8
25-Apr	S5	S5	S5	S5	S6	S6	S6	S7	SSW13	SSW13	SSW15	SSW17	SSW19	SSW17	SSW17	SSW16	SSW15	SSW14	SSW11	SSW7	SSW6	S6	S6	SSW6	SSW10.1	SSW19
26-Apr	SSW10	SSW10	SSW9	SSW8	SSW9	SSW9	SSW9	SSW9	SW8	WSW7	W5	NNW7	NW5	NW8	WNW10	NW9	NW8	N10	NNE10	N10	N9	N10	NNE9	NNE9	WNW3.0	SSW10
27-Apr	NNE8	NNE6	N6	N6	NNW5	NNW5	NW7	NNW8	NNW8	NNW9	NNW9	NNW9	N10	N9	N9	N9	NNE8	N7	NE7	ENE5	E5	E6	SE3	S3	N5.5	N10
28-Apr	S6	S6	S6	S7	S7	S7	SSW7	SSW7	SSW10	SSW10	SSW10	SSW10	SW12	SW14	SSW13	SSW12	SSW11	SSW8	SSW5	SSW8	SW9	S3	SSW7	SSW8.2	SW14	
29-Apr	SW5	SW5	SW11	SW10	WSW10	WSW11	WSW13	W13	W13	W14	W16	WNW15	WNW13	WNW16	WNW15	NW13	NW12	NW10	NNW6	W4	WSW8	WSW8	W6	WSW6	W9.3	WNW16
30-Apr	WSW7	WSW8	WSW8	WSW9	SW10	SW9	WSW9	W9	W8	W8	W8	W8	W10	WNW10	WNW9	W10	WNW8	NNE9	NE7	NNE2	NW2	NW3	NW3	N4	W5.6	W10
SSW3.9 SW4.4 SW4.7 SW4.8 SW5.0 SW5.1 SW5.5WSW5.5WSW5.8 W6.0 W6.3 W6.3 W6.3 W6.6 W6.4 W6.2 W5.3 W3.7WNW2.2 W1.1 SW1.6 SW1.9SSW2.5SSW3.2																										Diurnal Average
S12 W12WNW14 W13 S13 WSW12WSW13 W13WSW16 W20 W19 SSW17 SSW19 SSW17WSW18 W19 W16 SSW14WNW12 N10 S11 WSW11 S12 SSW12																										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
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 2/3 - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	179	24.86	24.86
6 - 11	429	59.58	84.44
12 - 19	111	15.42	99.86
20 - 28	1	0.14	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
Jackfish 2/3 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	10	10	8	9	7	10	11	12	23	15	13	13	9	5	13	11	179
6 - 11	23	12	5	1	4	6	8	15	45	58	39	67	48	28	38	32	429
12 - 19	0	0	0	0	0	0	0	0	9	22	7	20	28	19	6	0	111
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	1	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	33	22	13	10	11	16	19	27	77	95	59	100	86	52	57	43	720

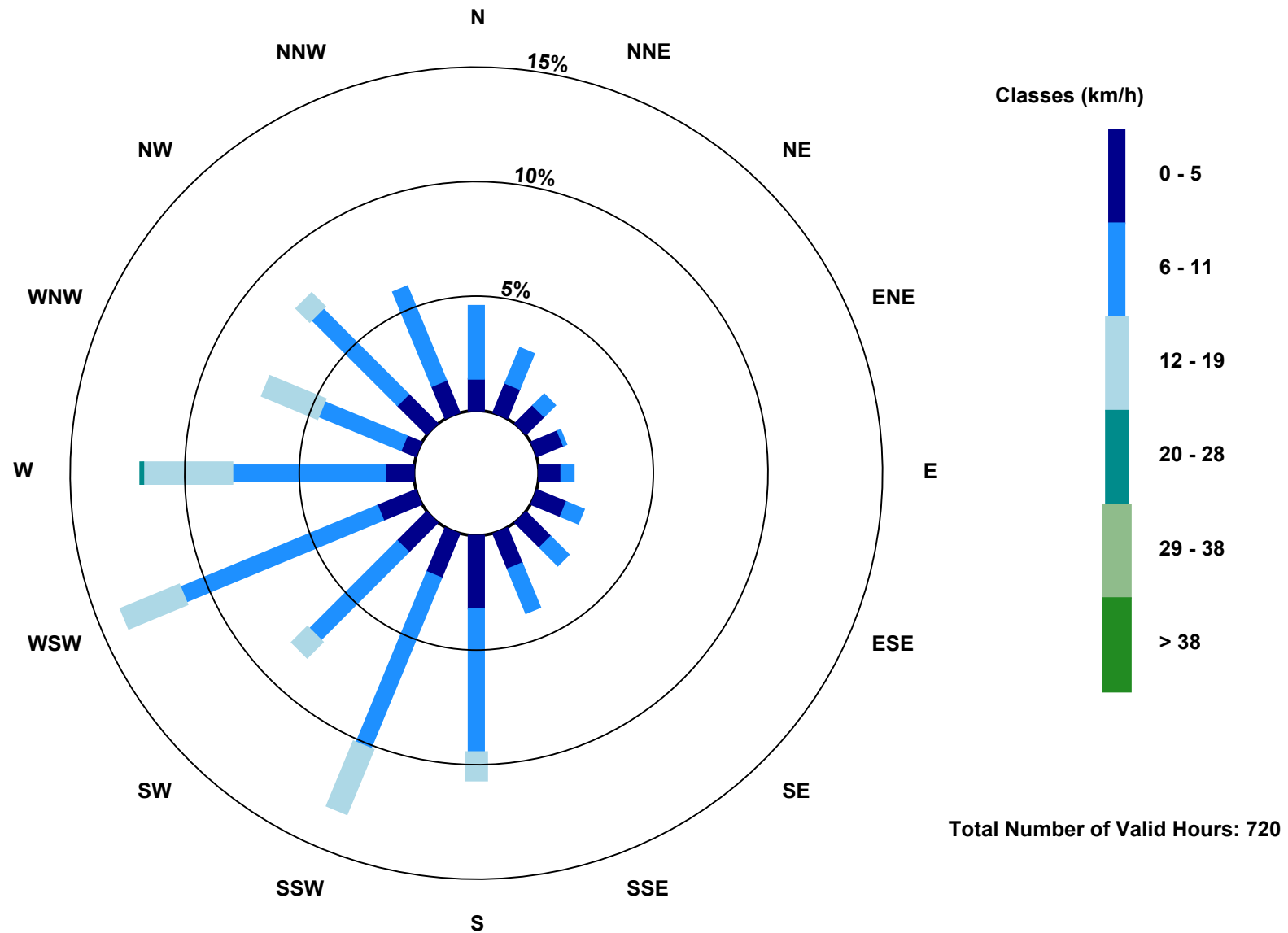
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Jackfish 2/3





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on Apr 15 11:00																	Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 0 km/h on Apr 14 02:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2	2	2	2	2	2	2	2	3	4	3	4	4	3	3	3	3	2	3	3	3	4	2	1	4	
2-Apr	2	2	2	2	1	2	2	3	3	4	5	5	5	4	4	4	3	3	3	3	3	2	2	2	5	
3-Apr	2	2	2	2	2	2	3	3	4	4	5	4	4	4	4	4	3	3	3	1	1	1	1	0	5	
4-Apr	0	1	1	2	2	2	2	2	2	3	3	4	4	4	3	3	3	3	1	1	1	1	1	1	4	
5-Apr	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	1	2	2	3	2	2	3	
6-Apr	2	2	1	1	2	1	2	3	4	4	3	4	5	4	4	4	4	4	3	3	3	4	4	4	5	
7-Apr	4	4	4	4	4	4	4	5	4	4	4	4	5	5	5	4	4	3	2	1	1	2	2	3	5	
8-Apr	2	1	2	1	2	2	2	2	2	2	4	3	4	4	3	3	2	2	1	1	1	2	1	1	4	
9-Apr	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	4	3	3	1	2	1	2	2	4	
10-Apr	2	2	2	2	2	2	2	3	4	3	4	4	4	4	4	5	4	3	1	1	1	2	2	2	5	
11-Apr	3	3	2	2	2	1	1	1	2	5	6	5	5	6	6	7	6	5	4	3	2	4	4	2	7	
12-Apr	3	3	3	2	3	3	3	4	4	4	5	5	5	5	5	4	3	4	3	3	2	2	1	2	5	
13-Apr	2	3	2	3	2	2	3	3	4	4	5	5	4	4	4	5	4	4	2	2	1	1	1	0	5	
14-Apr	0	0	1	2	1	2	2	2	3	4	5	4	4	4	4	5	4	4	3	1	1	2	2	2	5	
15-Apr	2	2	2	2	2	2	4	4	6	7	7	6	6	6	6	6	6	6	5	4	3	3	3	3	7	
16-Apr	3	6	6	5	5	5	5	5	5	5	5	6	4	4	5	5	5	3	4	3	2	3	3	4	6	
17-Apr	3	2	2	3	3	4	3	3	4	3	3	4	4	3	3	3	2	2	2	2	1	1	1	2	4	
18-Apr	2	2	2	2	2	2	3	4	4	4	4	5	5	5	5	5	5	5	3	3	4	4	4	4	5	
19-Apr	4	3	4	4	2	3	3	4	5	5	5	5	6	6	6	6	6	4	4	3	2	2	2	2	6	
20-Apr	2	2	2	2	2	2	2	2	2	2	3	3	3	2	3	3	2	2	1	1	1	2	3	3	3	
21-Apr	2	2	2	1	1	2	2	2	3	3	3	3	3	3	3	3	3	2	2	2	2	1	2	2	3	
22-Apr	2	2	2	2	2	2	2	3	3	3	3	5	5	5	4	4	4	4	4	1	2	2	2	2	5	
23-Apr	2	2	2	2	1	2	2	2	2	2	2	3	3	2	4	3	3	2	2	2	1	1	1	1	4	
24-Apr	1	1	1	1	2	1	1	2	2	2	2	2	5	3	2	3	2	2	1	1	1	1	2	1	5	
25-Apr	2	2	1	1	1	2	2	3	4	5	6	7	7	7	7	6	6	6	4	3	3	2	2	3	7	
26-Apr	4	3	3	2	3	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	
27-Apr	3	3	3	2	1	2	3	3	3	4	4	4	4	4	4	4	4	3	2	2	2	2	1	1	4	
28-Apr	2	2	2	2	1	1	1	2	3	3	4	4	4	4	5	5	5	4	4	2	3	4	1	5	5	
29-Apr	2	2	3	3	2	3	4	4	5	5	6	6	6	6	6	6	5	5	4	1	2	2	2	2	6	
30-Apr	2	2	2	2	2	2	2	3	3	3	2	3	4	4	4	4	4	4	2	2	1	1	2	2	4	
Diurnal Maximum																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

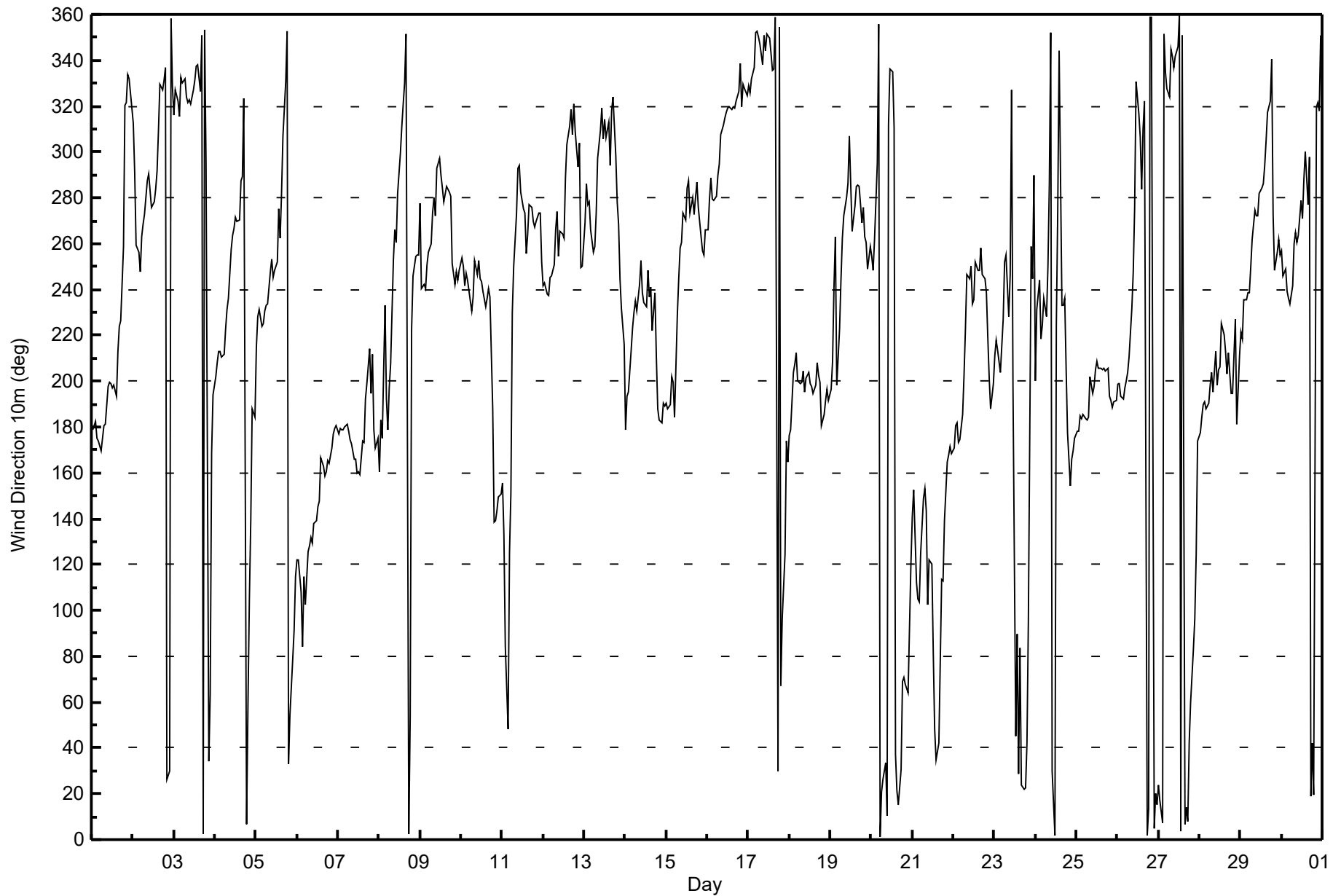
Jackfish 2/3 - April 2025

Direction of Maximum Speed: 260 deg on Apr 15 10:00																					Hours in Service:		720		
Direction of Maximum Daily Speed Average: 197.7 deg on Apr 18																					Hours of Data:		720		
Direction of Minimum Speed: 230 deg on Apr 11 07:00											Direction of Minimum Daily Speed Average: 1.1 deg on Apr 23										Hours of Missing Data:		0		
Monthly Average Direction: 249.5 deg																					Percent Operational Time:		100.0		
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	179	180	182	175	174	169	175	181	182	198	200	199	197	198	194	213	224	227	259	321	321	334	332	319	206.1
2-Apr	312	291	259	256	248	263	269	273	287	291	283	276	278	284	292	309	329	327	331	337	26	30	358	328	294.3
3-Apr	316	327	322	315	332	330	332	324	322	323	321	327	332	337	338	327	351	2	353	296	34	63	168	194	331.7
4-Apr	202	208	213	213	211	211	223	231	236	258	263	267	271	270	270	288	289	323	7	59	105	139	188	184	243.8
5-Apr	215	228	231	224	225	230	233	234	248	253	245	248	252	275	262	282	307	331	353	33	54	79	91	115	242.9
6-Apr	122	122	108	84	115	103	126	128	132	129	138	139	145	148	167	163	159	161	165	164	171	177	179	181	149.0
7-Apr	177	179	179	179	180	181	178	175	172	166	166	160	161	159	174	174	192	199	214	195	212	179	171	175	176.6
8-Apr	160	183	175	233	192	179	197	207	253	266	260	282	300	311	321	330	351	2	53	223	246	254	255	255	266.7
9-Apr	278	240	242	241	251	256	260	273	280	272	293	297	290	284	278	285	284	283	281	251	242	248	244	248	266.3
10-Apr	254	250	242	247	244	235	231	237	252	246	252	245	244	239	233	236	240	237	188	138	139	143	149	151	235.2
11-Apr	155	133	84	48	125	151	230	250	272	293	294	283	275	273	256	264	277	276	270	267	270	273	274	252	270.3
12-Apr	242	243	238	237	245	246	251	266	274	254	265	264	263	289	303	311	319	308	321	309	294	304	250	250	268.5
13-Apr	269	286	277	279	266	256	258	274	297	309	319	306	315	306	313	294	318	324	299	278	268	245	232	216	290.3
14-Apr	179	193	195	213	223	230	235	231	242	253	239	235	232	248	237	241	222	238	210	188	183	182	191	189	227.5
15-Apr	190	188	190	202	200	184	229	245	258	260	273	270	285	287	273	280	273	280	287	276	263	257	255	266	260.2
16-Apr	266	279	289	279	279	281	290	295	307	312	315	317	319	320	319	320	319	322	326	339	320	330	328	325	304.9
17-Apr	329	326	332	337	352	353	350	347	338	351	344	351	350	343	335	336	359	30	355	67	96	125	174	165	350.2
18-Apr	177	179	204	207	212	200	199	199	204	195	201	204	199	198	195	198	208	202	199	180	186	191	196	192	197.7
19-Apr	197	208	241	263	198	223	244	262	272	280	286	307	285	265	277	285	285	285	269	276	263	260	249	259	264.3
20-Apr	254	248	261	295	356	1	21	26	34	10	312	336	335	310	37	21	15	31	69	71	67	64	92	120	8.2
21-Apr	141	152	112	105	104	125	149	153	143	103	122	120	82	48	35	42	77	113	113	139	165	168	172	169	119.3
22-Apr	171	181	182	173	175	185	203	223	247	244	250	234	235	252	248	248	258	246	245	239	219	201	188	199	227.6
23-Apr	211	218	214	204	215	227	252	255	228	247	327	198	45	90	29	83	24	22	22	42	95	259	245	290	234.7
24-Apr	200	231	244	218	225	236	228	250	286	352	30	2	224	274	344	233	233	236	205	178	154	166	170	175	226.7
25-Apr	178	178	185	184	186	183	183	184	202	195	198	205	209	205	206	205	206	204	206	193	192	188	191	192	198.4
26-Apr	199	199	193	192	197	200	204	210	232	248	276	331	317	306	284	310	322	2	14	359	359	5	20	15	285.9
27-Apr	24	17	7	351	335	328	324	345	342	337	342	346	360	3	351	7	14	8	42	60	83	96	125	174	4.3
28-Apr	177	184	190	191	188	191	198	204	195	213	198	205	206	225	221	213	203	212	194	195	211	227	181	211	204.5
29-Apr	222	218	236	236	239	239	250	262	274	272	272	282	285	286	294	305	318	322	341	273	248	256	261	255	271.2
30-Apr	257	246	249	239	236	234	241	260	265	260	264	279	271	288	300	277	298	19	42	19	320	322	318	351	273.3
212.6 219.8 226.7 229.0 223.9 227.2 235.0 243.1 254.2 260.3 264.4 264.4 263.5 268.8 269.8 270.8 274.5 279.2 282.1 273.0 229.6 224.2 213.4 212.2																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Jackfish 2/3 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 108 deg on Apr 23 23:00																			Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Minimum Value: 8 deg on Apr 14 02:00																									
Percentiles: P ₁ = 12 P ₁₀ = 18 Q ₁ = 26 Median = 35 Q ₃ = 44 P ₉₀ = 53 P ₉₉ = 93																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	29	31	26	30	29	29	27	27	35	34	28	33	37	36	35	26	27	23	47	42	41	45	54	54	54
2-Apr	51	36	20	14	12	22	28	35	38	40	43	41	41	40	41	44	52	48	53	56	39	36	51	59	59
3-Apr	44	41	31	36	36	50	44	49	47	49	54	51	53	54	51	47	53	49	55	88	90	17	51	10	90
4-Apr	9	13	14	15	18	18	17	16	22	31	37	38	40	42	40	47	51	58	40	21	30	27	12	11	58
5-Apr	23	15	14	14	15	15	16	16	25	34	69	43	47	40	35	51	48	72	92	51	20	24	27	30	92
6-Apr	35	32	27	22	27	19	36	38	40	45	42	47	43	44	46	36	43	42	43	43	36	33	30	30	47
7-Apr	27	30	26	26	27	26	28	31	36	44	40	43	41	41	38	43	39	39	30	35	30	33	28	25	44
8-Apr	56	74	46	81	29	50	19	23	28	32	29	36	38	43	49	48	50	47	26	44	19	20	13	14	81
9-Apr	41	14	14	15	15	17	24	34	36	40	42	44	41	44	35	40	38	40	34	26	12	12	12	13	44
10-Apr	12	12	13	13	14	14	16	18	26	28	34	30	31	32	33	33	27	33	36	45	34	39	45	45	45
11-Apr	41	46	59	59	76	64	98	61	47	38	37	40	39	38	28	32	34	36	35	30	35	33	33	22	98
12-Apr	17	17	19	17	17	18	18	33	34	30	34	33	28	40	42	42	45	43	41	35	33	63	18	15	63
13-Apr	25	36	33	34	29	18	22	32	45	41	47	47	47	44	49	40	48	46	48	25	22	19	26	26	49
14-Apr	28	8	11	18	15	16	15	15	26	29	34	33	37	28	28	28	29	23	32	31	27	29	27	32	37
15-Apr	26	22	26	30	26	24	24	20	27	30	35	37	40	41	37	38	35	36	37	33	25	19	19	27	41
16-Apr	31	35	37	39	34	33	37	37	40	38	43	43	46	47	40	45	45	45	48	45	38	41	41	40	48
17-Apr	43	38	44	42	51	53	45	42	45	46	48	51	51	49	46	54	58	49	54	36	26	30	26	37	58
18-Apr	26	30	29	24	23	27	26	27	29	34	33	31	34	31	36	37	31	32	32	35	32	31	30	30	37
19-Apr	27	27	30	35	23	23	27	29	34	36	40	43	43	34	36	39	37	37	32	38	20	17	12	17	43
20-Apr	19	15	22	43	48	40	41	41	64	52	65	59	84	66	76	58	98	65	27	23	24	21	37	38	98
21-Apr	40	46	35	36	22	31	46	44	42	46	65	85	91	59	72	46	71	36	28	36	43	46	32	30	91
22-Apr	40	35	29	31	23	27	27	26	26	25	27	27	27	25	36	30	37	25	20	22	20	23	23	23	40
23-Apr	25	36	27	17	20	16	21	31	24	75	93	98	67	92	51	43	66	54	42	33	103	59	108	78	108
24-Apr	42	22	17	15	16	13	16	33	58	96	75	95	93	88	78	61	45	76	37	25	27	25	25	23	96
25-Apr	29	28	21	23	20	22	24	30	31	35	36	36	32	35	37	35	35	33	34	36	39	37	36	39	39
26-Apr	29	27	29	28	25	23	20	19	33	44	60	53	68	55	38	46	42	50	46	49	53	45	42	47	68
27-Apr	45	48	43	48	30	33	41	50	50	54	54	53	53	50	54	53	53	53	32	27	22	21	31	23	54
28-Apr	20	19	20	16	15	13	15	24	42	34	37	43	49	44	33	33	34	32	42	45	36	26	50	35	50
29-Apr	28	34	20	18	19	20	21	32	38	36	36	40	39	37	42	43	46	46	68	26	12	13	20	21	68
30-Apr	14	15	15	16	15	16	16	24	32	32	30	37	36	43	44	36	57	46	28	62	62	44	47	52	62
56 74 59 81 76 64 98 61 64 96 93 98 93 92 78 61 98 76 92 88 103 63 108 78																									
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS29
SURMONT 2
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT2 (AMS29)
APRIL 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	684	35	36	99.86	11.8	0	1.6	0
H2S (ppb) Average	681	36	39	99.58	1	0	0.2	0
THC(ppm) Average	683	35	37	99.72	2.4	-	2.4	-
NO2 (ppb) Average	681	35	39	99.44	11.9	0	3	-
NO (ppb) Average	681	35	39	99.44	1.8	-	0.4	-
NOX (ppb) Average	681	35	39	99.44	11.9	-	3.1	-
PM2.5 (ug/m3) Average	691	8	29	97.08	263.7	0	25.3	0
Temperature 2 m (C) Average	720	0	0	100	20.9	-	12.1	-
Relative Humidity (%) Average	720	0	0	100	100.1	-	89.6	-
Wind Speed 10 m (km/h) Average	711	0	9	98.75	19	-	12	-
Wind Direction 10 m (deg) Average	711	0	9	98.75	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	684	0.41	0.9	-	0	0	0	0.2	0.4	0.9	11.8
H2S (ppb) Average	681	0.06	0.1	-	0	0	0	0	0.1	0.1	1
THC (ppm) Average	683	2.29	0	-	2.2	2.2	2.3	2.3	2.3	2.3	2.4
NO2 (ppb) Average	681	1.3	1.2	-	0.2	0.4	0.6	1	1.7	2.5	11.9
NO (ppb) Average	681	0.09	0.2	-	0	0	0	0	0.1	0.3	1.8
NOX (ppb) Average	681	1.39	1.3	-	0.2	0.4	0.6	1	1.8	2.8	11.9
PM2.5 (ug/m3) Average	691	4.48	13.8	-	0.1	1.4	2	2.7	3.7	5.7	263.7
Temperature 2 m (C) Average	720	3.93	6.9	-	-17.3	-4.9	-1.1	4.3	9.3	12.3	20.9
Relative Humidity (%) Average	720	56.9	22.4	-	16.8	26	37.5	57	76.3	87.3	100.1
Wind Speed 10 m (km/h) Average	711	6.9	4	-	0	2	4	7	10	12	19
Wind Direction 10 m (deg) Average	711	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	17 Apr 2025 12:00	17 Apr 2025 12:00	1	Maintenance - WBEA internal audit
H2S	17 Apr 2025 11:00	17 Apr 2025 12:00	2	Maintenance - WBEA internal audit
THC	17 Apr 2025 13:00	17 Apr 2025 14:00	2	Maintenance - WBEA internal audit
NO2	17 Apr 2025 11:00	17 Apr 2025 13:00	3	Maintenance - WBEA internal audit
PM2.5	17 Apr 2025 12:00	17 Apr 2025 13:00	2	Maintenance - WBEA internal audit
H2S, NO2	14 Apr 2025 14:00	14 Apr 2025 14:00	1	Maintenance - sample manifold cleaned
PM2.5	14 Apr 2025 16:00	15 Apr 2025 10:00	19	Maintenance - analyzer replaced
Wind Speed, Wind Direction	04 Apr 2025 04:00	04 Apr 2025 04:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	09 Apr 2025 01:00	09 Apr 2025 07:00	7	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	14 Apr 2025 07:00	14 Apr 2025 07:00	1	Flat line in sensor output signal - Sensor frozen



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

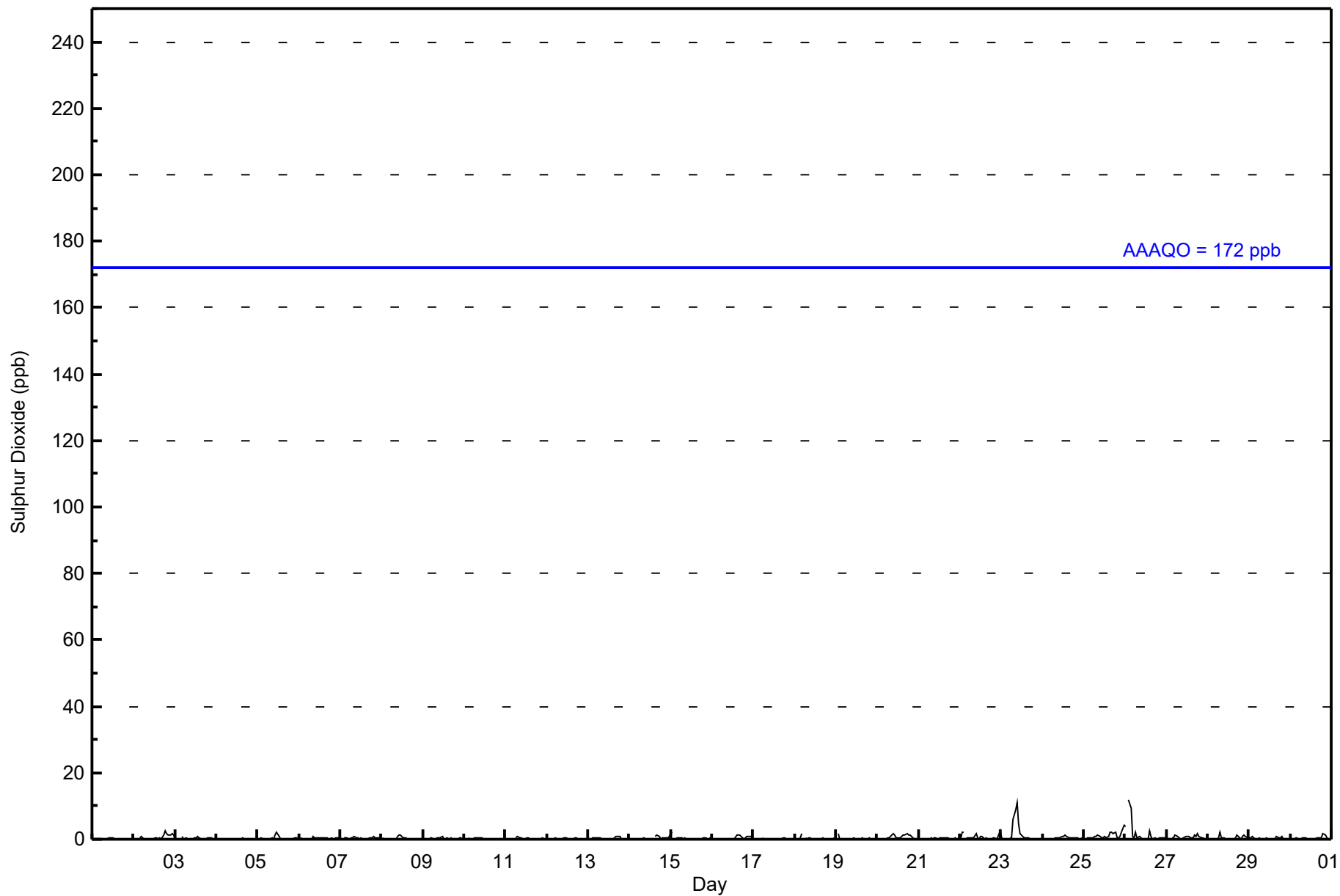
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 11.8 ppb on Apr 26 03:00 Maximum Daily Average: 1.6 ppb on Apr 23																			Hours of Data: 684							
Minimum Value: 0.0 ppb on Apr 1 03:00 Minimum Daily Average: 0.0 ppb on Apr 4																			Hours of Missing Data: 36							
Maximum Diurnal Average: 0.7 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 6																			Hours of Calibration: 35							
Monthly Average: 0.41 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.9 P ₉₉ = 4.0																			Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
2-Apr	0.0	0.0	Z	0.3	0.8	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.1	0.2	0.2	1.3	2.5	1.8	1.1	1.4	1.8	1.3	0.6	2.5
3-Apr	0.2	0.0	0.0	Z	0.9	0.2	0.3	0.0	0.0	0.0	0.0	0.6	0.5	0.8	0.3	0.0	0.0	0.0	0.0	0.4	0.5	0.3	0.1	0.0	0.2	0.9
4-Apr	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.0	0.0	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	0.1	0.0	0.2
5-Apr	0.2	0.1	0.2	0.1	0.1	Z	0.0	0.0	0.4	0.1	1.3	2.2	0.8	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.3	0.2	0.5	0.3	2.2
6-Apr	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.5	0.4	0.2	0.3	0.3	0.2	0.3	0.1	0.2	0.2	0.1	0.4	0.5	0.3	0.3	0.9
7-Apr	0.2	Z	0.4	0.4	0.3	0.2	0.2	0.3	0.7	0.6	0.4	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.5	0.7	0.6	0.4	0.5	0.3	0.4	0.7
8-Apr	0.1	0.3	Z	0.1	0.0	0.0	0.0	0.1	0.2	0.7	1.1	1.3	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	1.3
9-Apr	0.0	0.0	0.0	Z	0.2	0.4	0.1	0.0	0.3	0.3	0.6	0.7	0.1	0.1	0.3	0.1	0.3	0.2	0.0	0.0	0.0	0.5	0.4	0.2	0.2	0.7
10-Apr	0.1	0.1	0.1	0.2	Z	0.5	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5
11-Apr	0.0	0.1	0.2	0.2	0.1	Z	0.6	0.7	0.4	0.2	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.7
12-Apr	Z	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.4	0.2	0.1	0.0	0.2	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.4
13-Apr	0.1	Z	0.3	0.3	0.3	0.2	0.3	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.9	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.2	0.9
14-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.2	C	C	C	C	C	0.8	1.1	0.9	0.2	0.2	0.4	0.4	0.3	0.8	0.3	1.1
15-Apr	1.9	2.0	Z	0.6	0.4	0.3	0.4	0.2	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.5	0.4	2.0
16-Apr	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.1	1.2	1.2	1.4	0.7	0.1	0.6	0.7	0.8	0.9	0.9	0.4	1.4
17-Apr	0.2	0.0	0.0	0.1	Z	0.3	0.2	0.1	0.0	0.0	0.1	M	0.1	0.0	0.2	0.1	0.1	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.3
18-Apr	0.0	0.2	0.2	0.4	1.7	Z	0.5	0.1	0.2	0.3	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.4	0.1	0.0	0.1	0.0	0.2	0.1	0.6	1.7
19-Apr	Z	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.2	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	1.6
20-Apr	0.0	Z	0.1	0.1	0.2	0.2	0.3	0.4	1.1	1.8	1.1	0.5	0.3	0.6	0.6	1.1	1.4	1.5	1.4	1.3	0.7	0.2	0.0	0.0	0.7	1.8
21-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.1	0.5	0.3	0.0	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.5	0.1	0.0	0.2	0.5
22-Apr	0.5	2.2	2.0	Z	0.6	0.5	0.6	0.3	0.3	1.5	0.3	0.0	0.8	0.7	0.2	0.5	0.2	0.2	0.2	0.5	0.2	0.0	0.3	2.5	0.7	2.5
23-Apr	0.3	0.1	0.1	0.1	Z	0.2	0.3	6.0	9.0	10.9	4.7	1.8	0.7	0.3	0.3	0.5	0.5	0.1	0.0	0.1	0.1	0.0	0.0	0.0	1.6	10.9
24-Apr	0.0	0.1	0.0	0.0	0.0	Z	0.2	0.4	0.4	0.5	0.4	0.9	1.0	1.1	0.7	0.5	0.6	0.6	0.5	0.3	0.3	0.1	0.1	0.2	0.4	1.1
25-Apr	Z	0.2	0.3	0.3	0.2	0.5	0.7	0.7	1.3	0.9	0.3	0.5	0.8	0.5	1.0	2.2	1.9	1.5	2.0	0.3	0.5	0.9	2.0	4.3	1.0	4.3
26-Apr	4.0	Z	11.8	9.5	1.0	0.5	2.1	0.3	1.0	0.3	0.1	0.1	0.0	0.1	2.6	0.7	0.2	0.2	0.1	0.1	0.3	0.3	0.5	0.4	1.6	11.8
27-Apr	0.2	0.3	Z	0.4	0.3	1.1	0.9	0.4	0.1	0.1	0.5	0.8	0.7	0.8	0.4	0.6	1.2	1.0	1.5	1.0	0.4	0.4	0.2	0.0	0.6	1.5
28-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.3	2.1	0.5	0.3	0.0	0.1	0.1	0.1	0.2	0.2	0.4	1.1	0.4	0.1	0.8	1.3	0.7	0.5	0.4	2.1
29-Apr	0.6	0.4	1.0	0.2	Z	0.1	0.2	0.1	0.1	0.1	0.4	0.2	0.0	0.0	0.0	0.1	1.0	0.4	0.5	0.7	0.2	0.0	0.0	0.0	0.3	1.0
30-Apr	0.0	0.0	0.1	0.3	0.3	Z	0.3	0.6	0.6	0.3	0.2	0.1	0.0	0.1	0.1	0.6	0.4	0.3	0.3	1.9	1.1	0.3	0.2	0.1	0.4	1.9
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	682	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: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	29	16	15	9	6	33	56	38	38	31	56	78	90	58	42	79	674
11 - 20	0	1	0	0	0	0	0	0	0	0	0	1	0	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	17	15	9	6	33	56	38	38	31	56	79	90	58	42	79	676

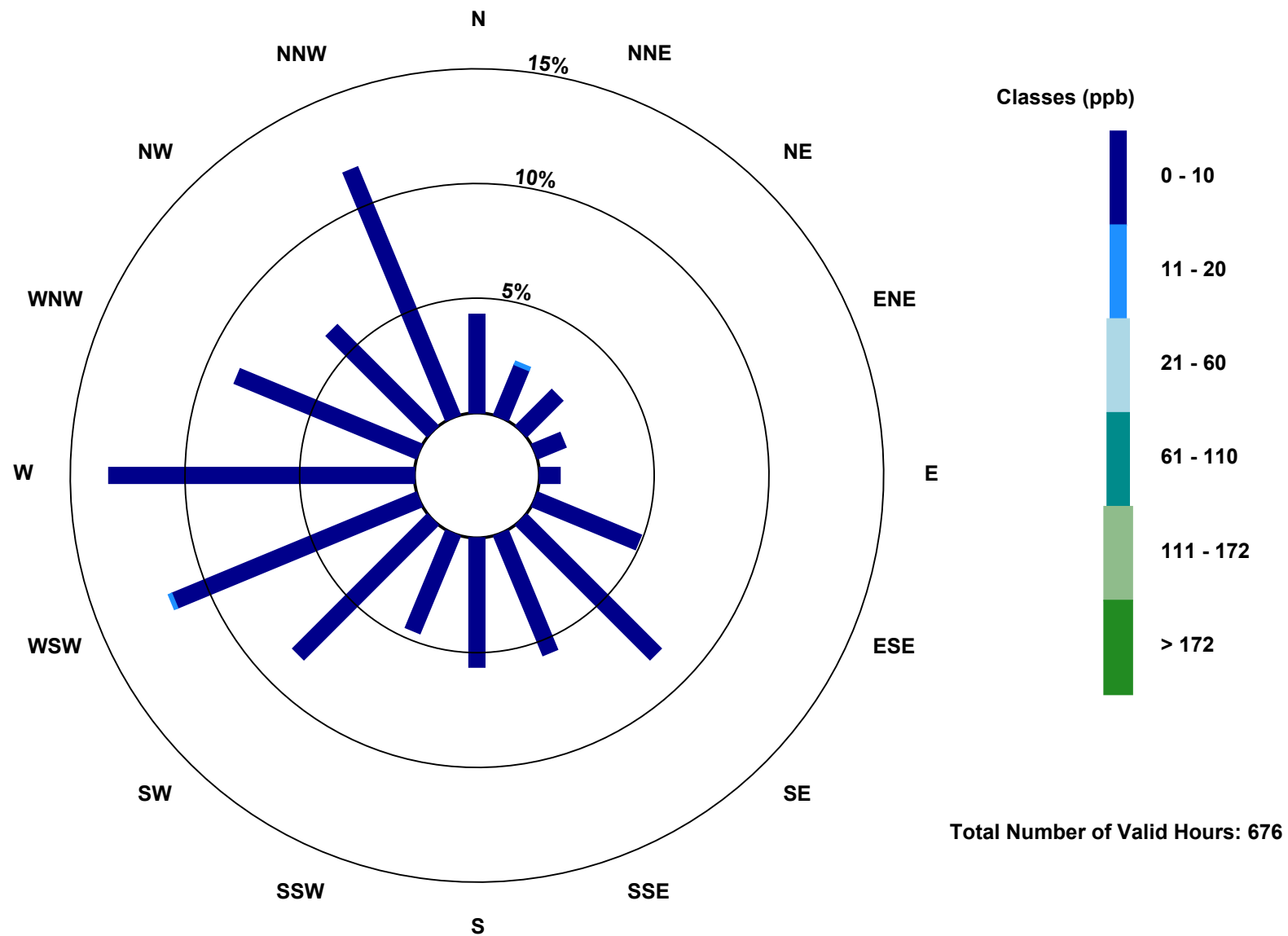
Total Number of Valid Hours: 676

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

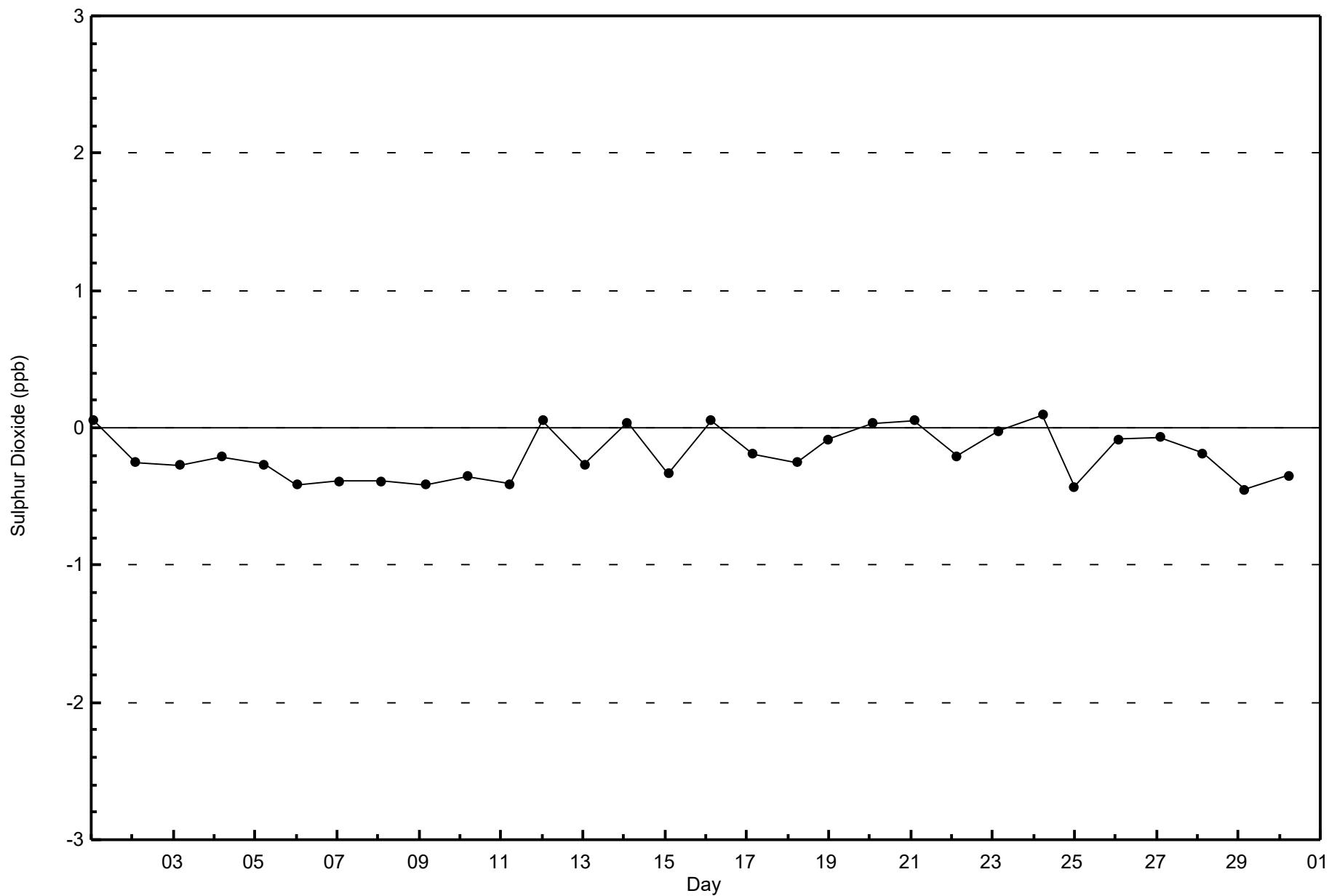
Sulphur Dioxide (SO₂) - ppb
Surmont 2





Wood Buffalo Environmental Association
Zero Responses

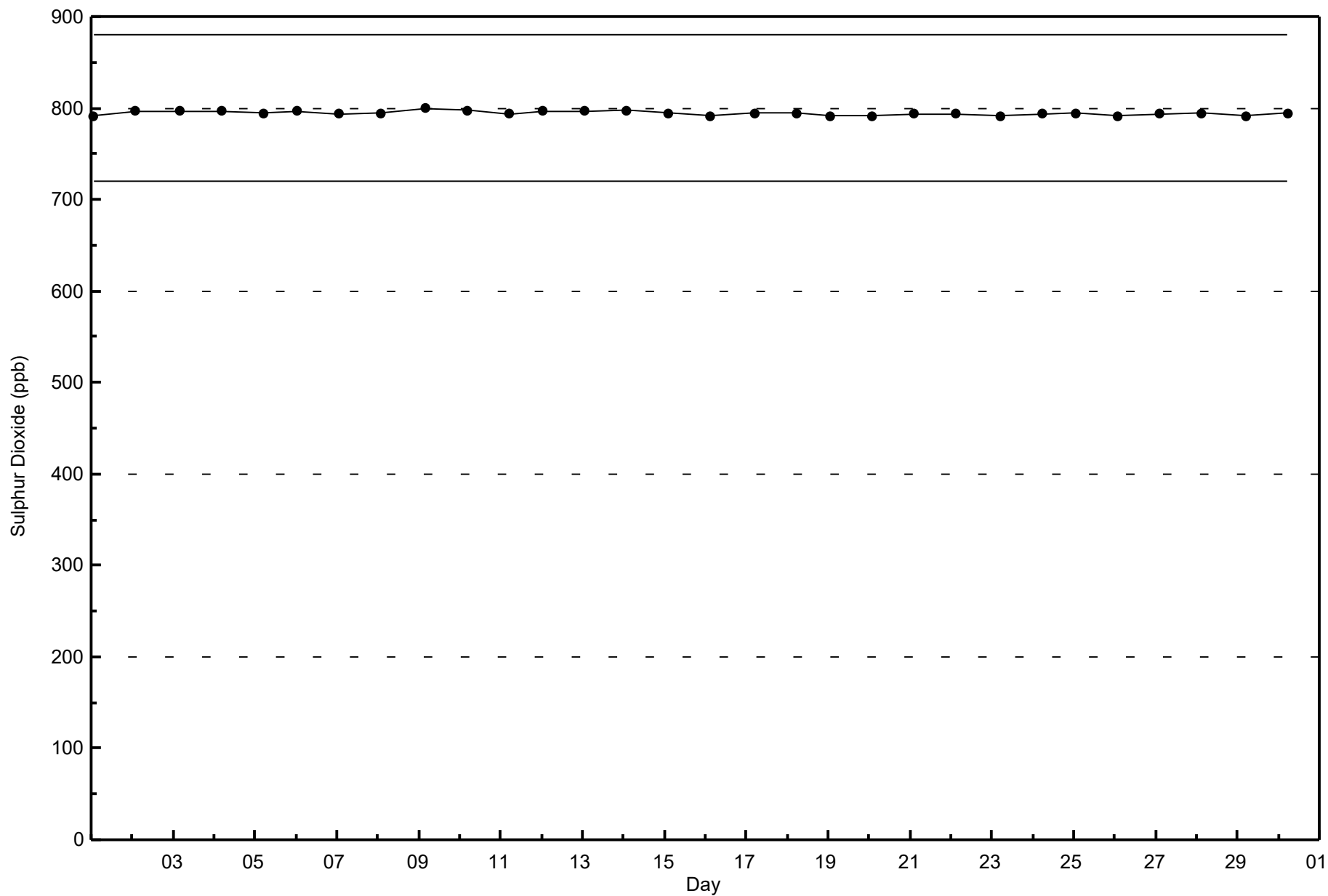
Sulphur Dioxide (SO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

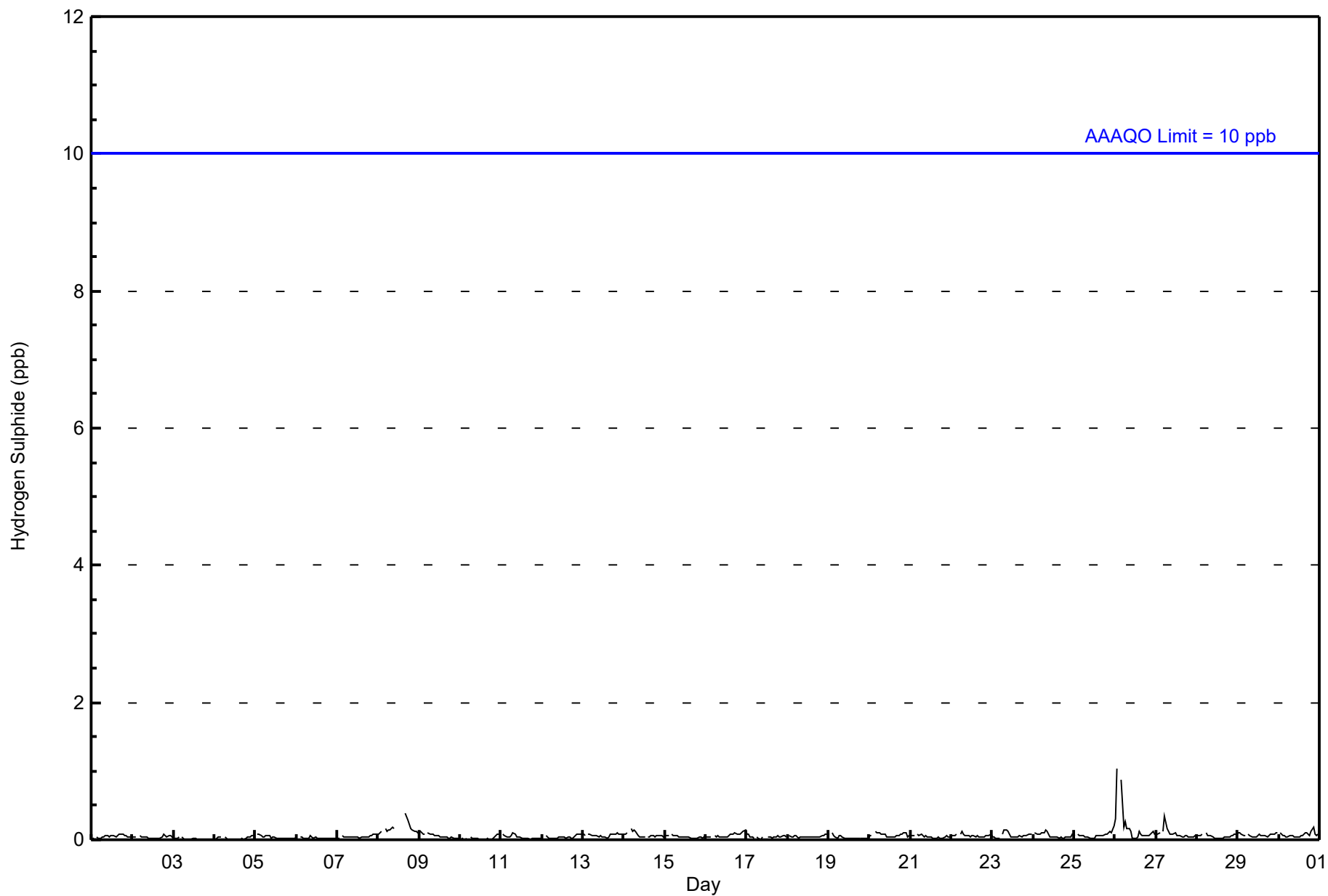
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720							
Maximum Value: 1.0 ppb on Apr 26 02:00																				Maximum Daily Average: 0.2 ppb on Apr 26		Hours of Data: 681					
Minimum Value: 0.0 ppb on Apr 3 11:00																				Minimum Daily Average: 0.0 ppb on Apr 3		Hours of Missing Data: 39					
Maximum Diurnal Average: 0.1 ppb at hour 2																				Minimum Diurnal Average: 0.0 ppb at hour 13		Hours of Calibration: 36					
Monthly Average: 0.06 ppb																				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 = 0.3		Percent Operational Time: 99.6					
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.1
2-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1
3-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-Apr	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	0.1	0.1	0.0	0.1
5-Apr	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6-Apr	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	0.0	0.1
7-Apr	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
8-Apr	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	C	C	C	C	C	C	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	-	0.4	
9-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
10-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	
11-Apr	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
12-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	
13-Apr	0.1	0.1	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
14-Apr	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	M	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	
15-Apr	0.1	0.1	0.1	Z	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	0.0	0.0	0.0	0.1	
16-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
17-Apr	0.1	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	
18-Apr	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	
19-Apr	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
20-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	
21-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	
22-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
24-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	
25-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	
26-Apr	0.3	1.0	Z	0.9	0.5	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.0	
27-Apr	0.1	0.1	0.1	Z	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	
28-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	
29-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
30-Apr	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Surmont 2 - April 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
Surmont 2 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	27	17	15	9	6	33	55	38	38	29	61	79	92	58	40	76	673
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	27	17	15	9	6	33	55	38	38	29	61	79	92	58	40	76	673

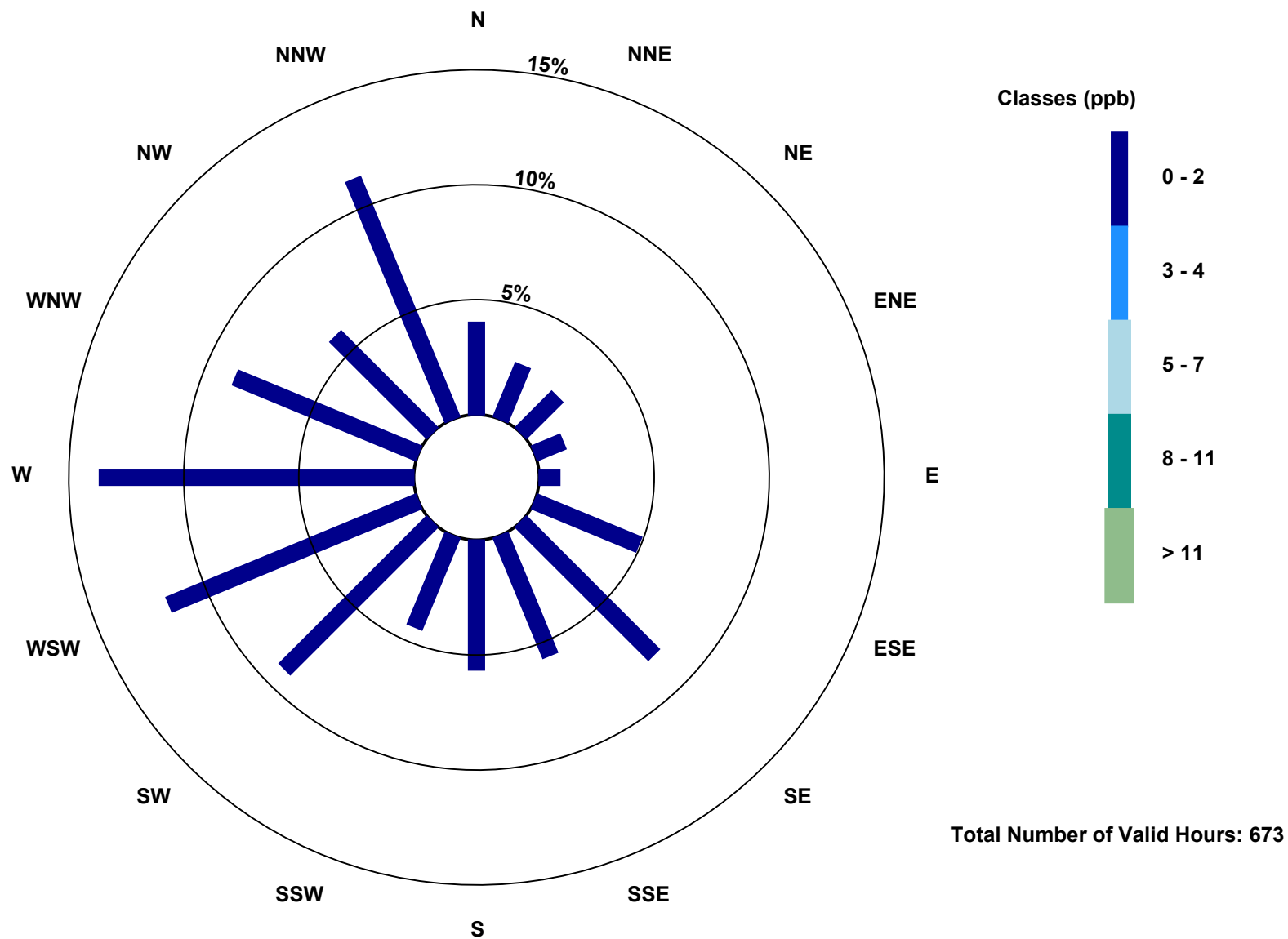
Total Number of Valid Hours: 673

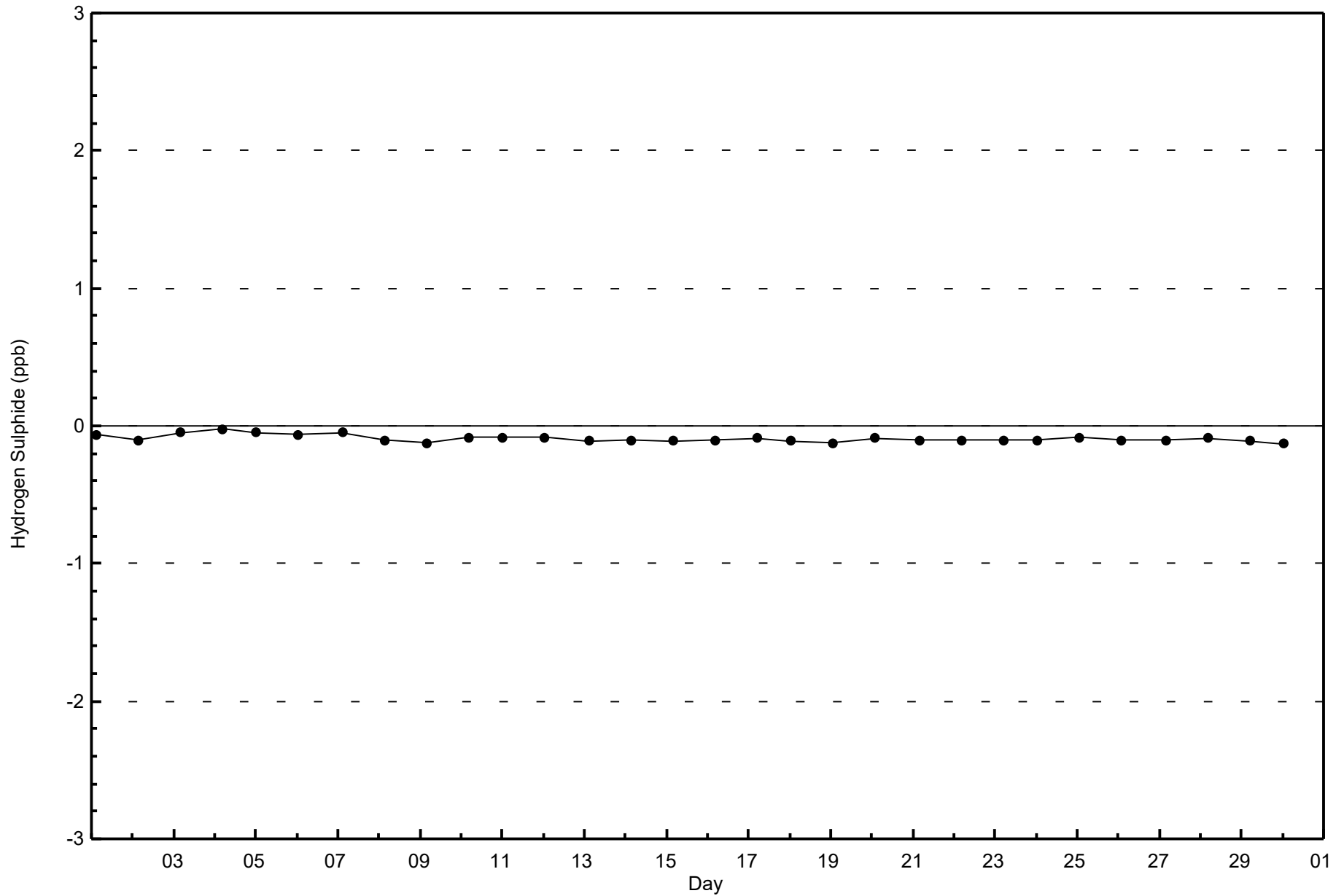
Total Number of Hours: 720

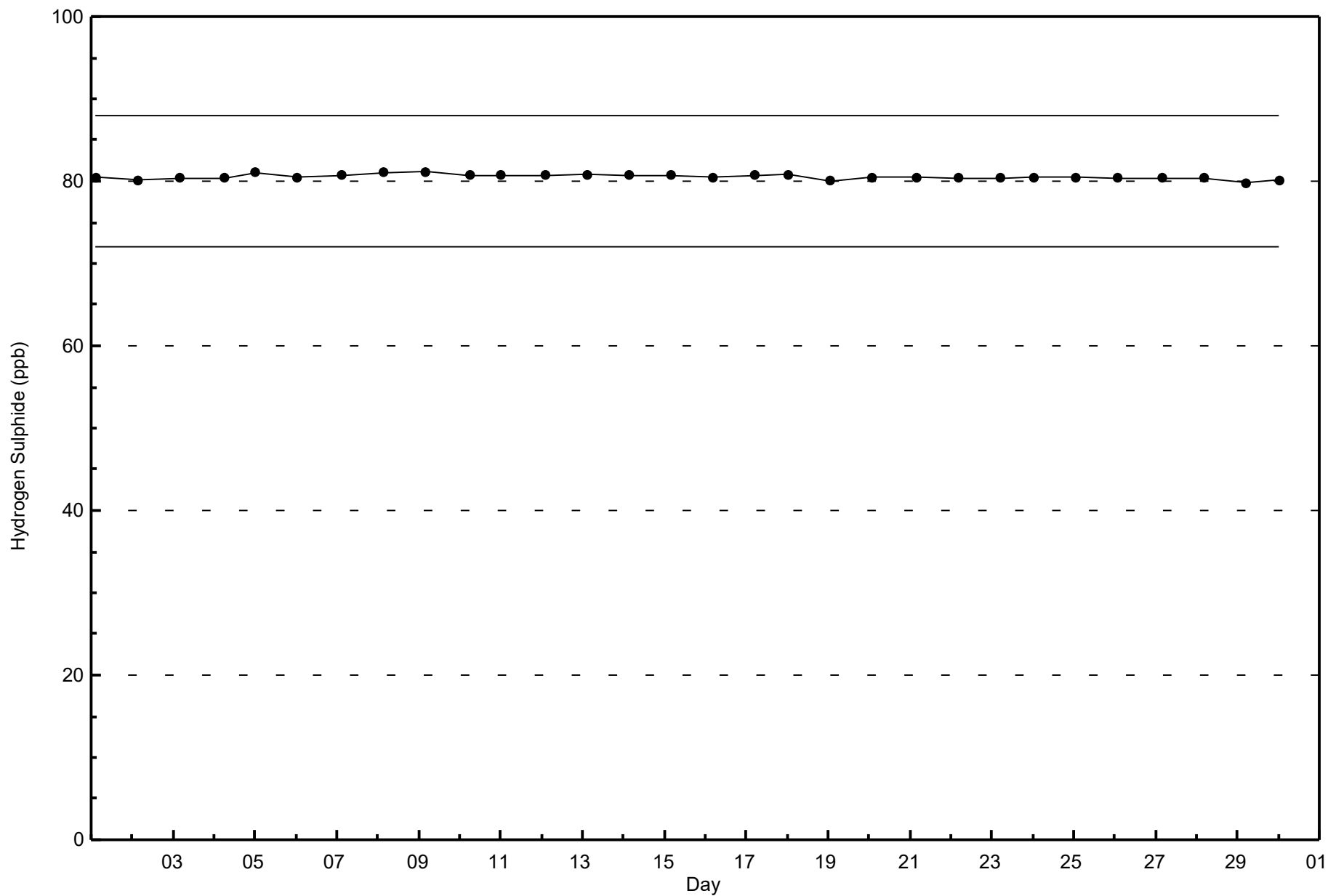


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H_2S) - ppb
Surmont 2









Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

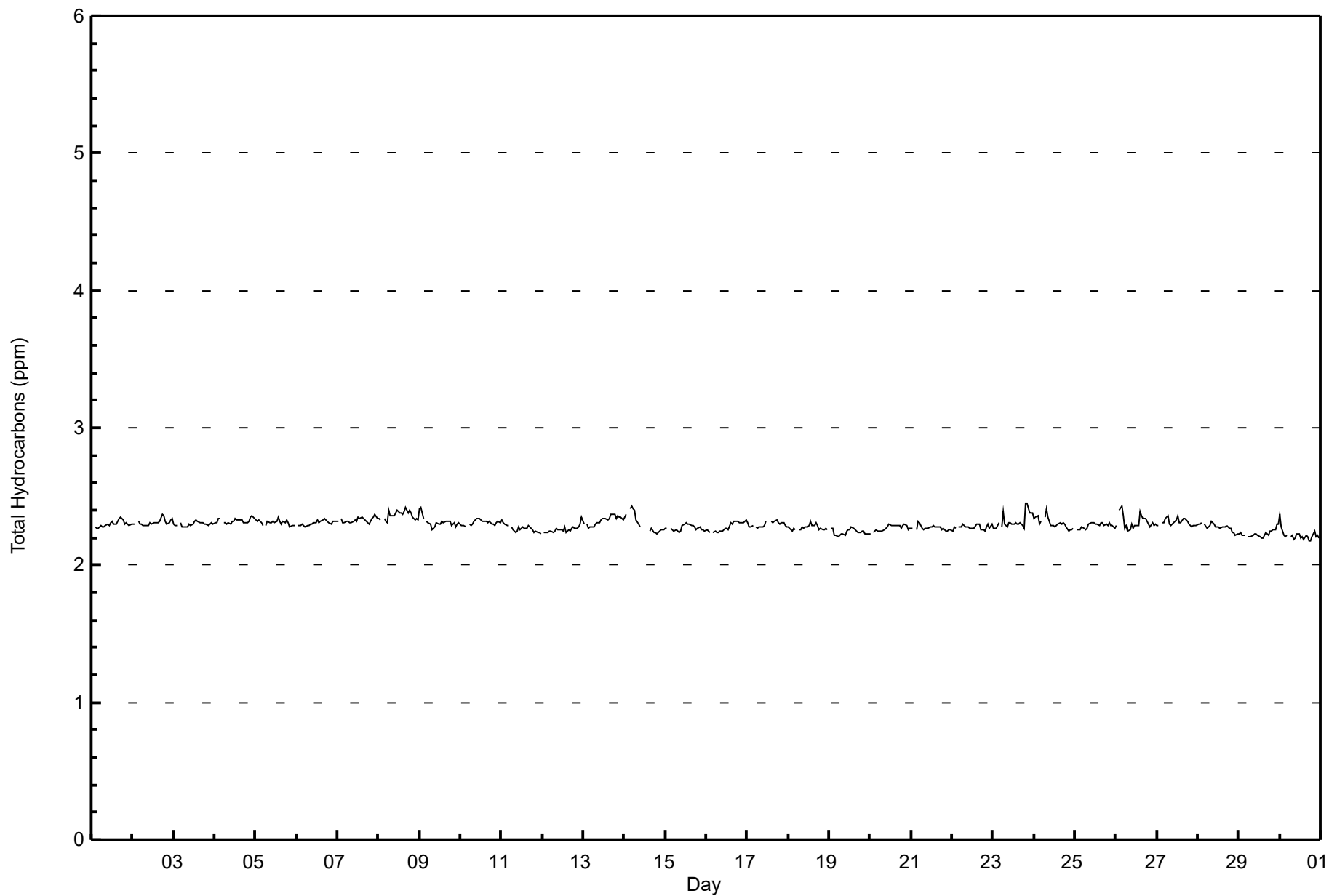
Surmont 2 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 2.4 ppm on Apr 23 20:00																		1-hr: 0 Maximum Daily Average: 2.4 ppm on Apr 8						24-hr: 0 Maximum Daily Average: 2.4 ppm on Apr 8						Hours in Service: 720	
Minimum Value: 2.2 ppm on Apr 30 18:00 Maximum Diurnal Average: 2.3 ppm at hour 17 Monthly Average: 2.29 ppm																		Minimum Daily Average: 2.2 ppm on Apr 30 Minimum Diurnal Average: 2.3 ppm at hour 8 Percentiles: P ₁ = 2.2 P ₁₀ = 2.2 Q ₁ = 2.3 Median = 2.3 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.4						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 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-Apr	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
2-Apr	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	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3						
3-Apr	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
4-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3						
5-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
6-Apr	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
7-Apr	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	2.4	2.4	2.3	2.3						
8-Apr	2.3	2.3	Z	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3						
9-Apr	2.4	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
10-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
11-Apr	2.3	2.3	2.3	2.3	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	2.2	2.2	2.2	2.2	2.2						
12-Apr	Z	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
13-Apr	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	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3						
14-Apr	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.3	2.3	2.3	C	C	C	C	C	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3						
15-Apr	2.3	2.3	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
16-Apr	2.3	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	2.3	2.3	2.3	2.3	2.3						
17-Apr	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	M	M	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
18-Apr	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
19-Apr	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2						
20-Apr	2.2	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
21-Apr	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3						
22-Apr	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
23-Apr	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	2.4	2.4	2.4	2.4	2.4	2.4						
24-Apr	2.3	2.3	2.4	2.3	2.3	Z	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	2.3						
25-Apr	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
26-Apr	2.3	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3						
27-Apr	2.3	2.3	Z	2.3	2.3	2.3	2.4	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	2.3	2.3						
28-Apr	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2						
29-Apr	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3						
30-Apr	2.4	2.3	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2						
2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 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							
2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4 2.4																								Diurnal Maximum							
Z - zerospan C - Calibration M - Maintenance																															



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Surmont 2 - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	683	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: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Total Hydrocarbons (THC) - ppm
Surmont 2 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	29	17	15	9	6	33	56	38	38	31	56	79	90	58	42	78	675
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	29	17	15	9	6	33	56	38	38	31	56	79	90	58	42	78	675

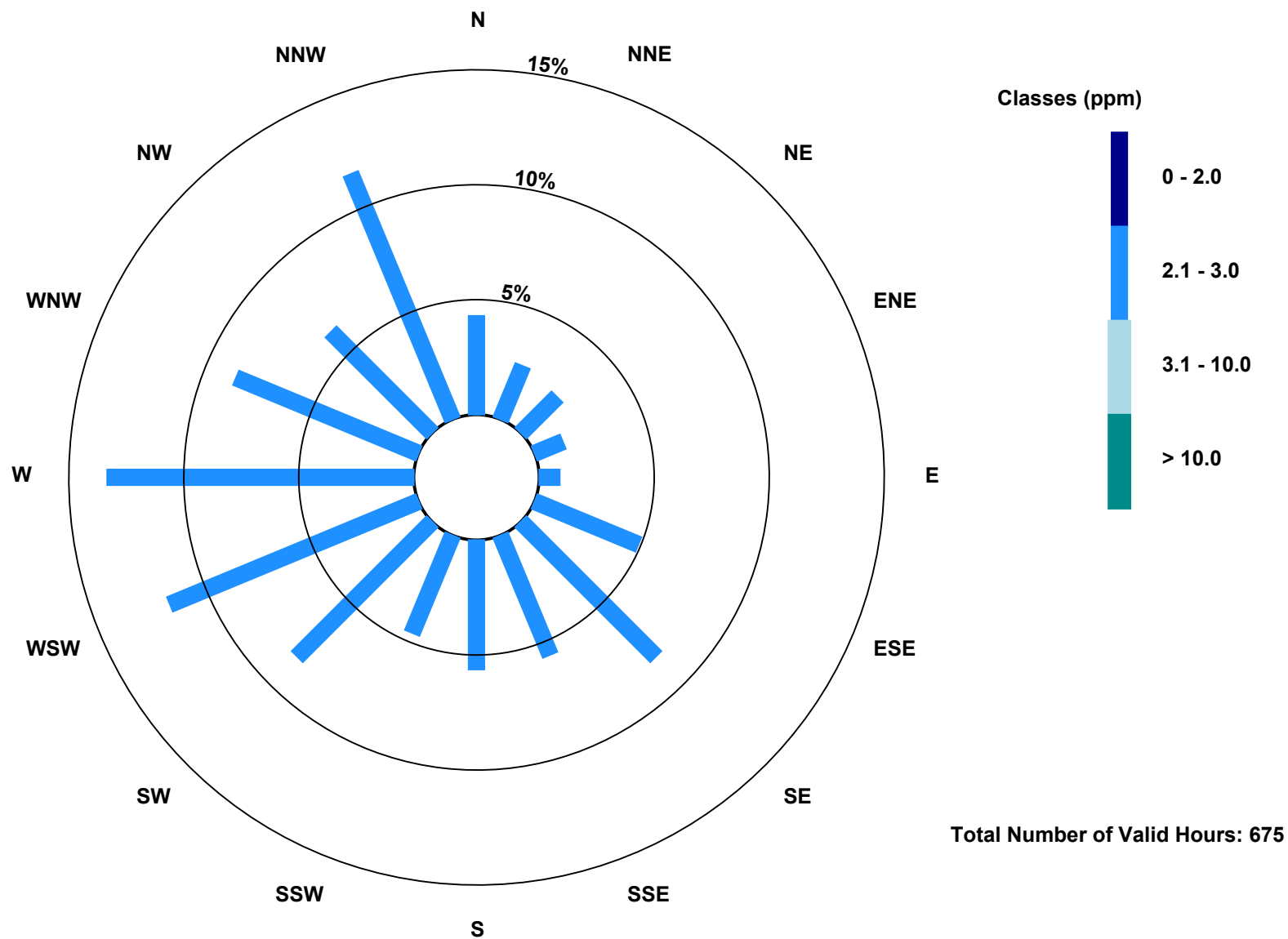
Total Number of Valid Hours: 675

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

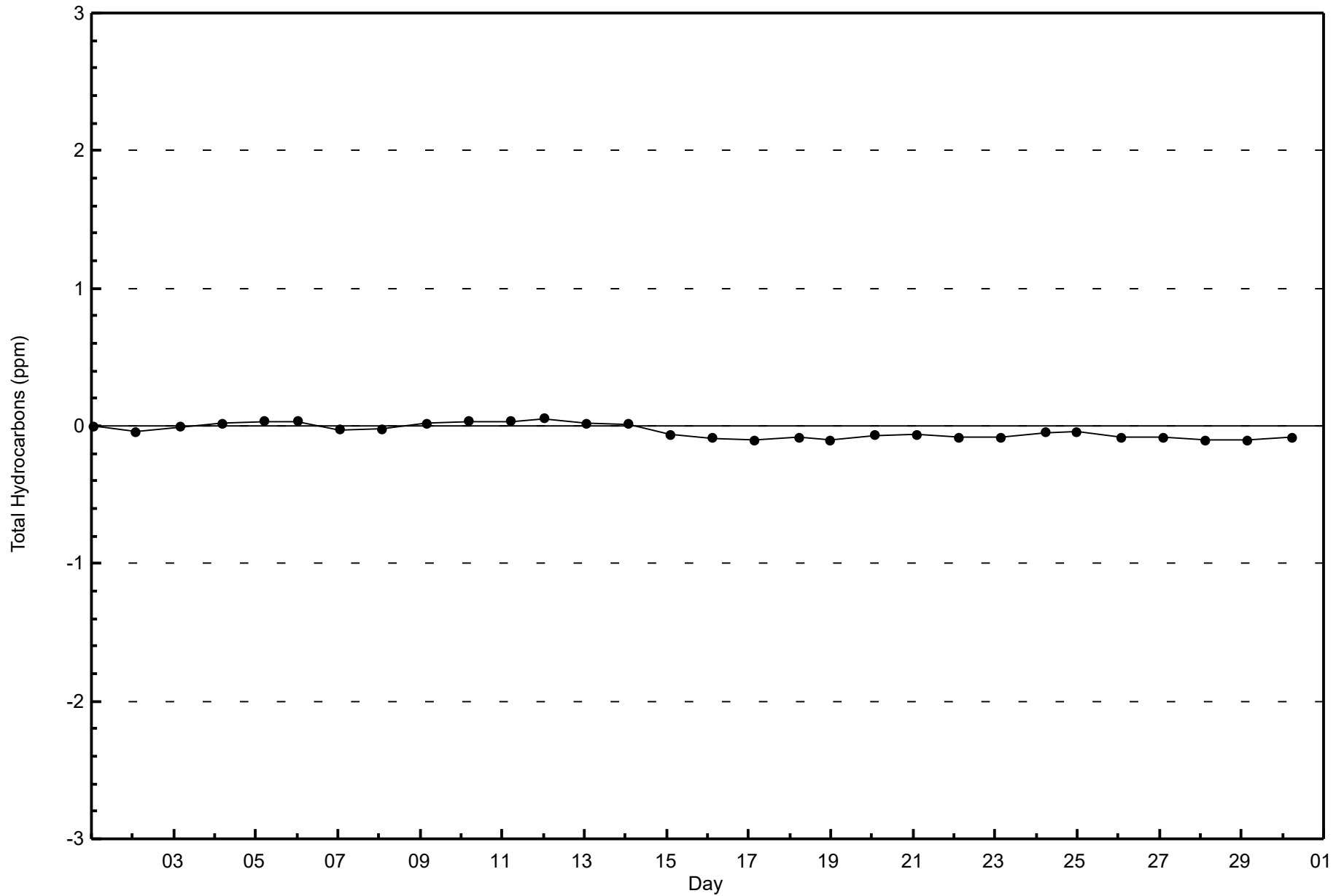
Total Hydrocarbons (THC) - ppm
Surmont 2

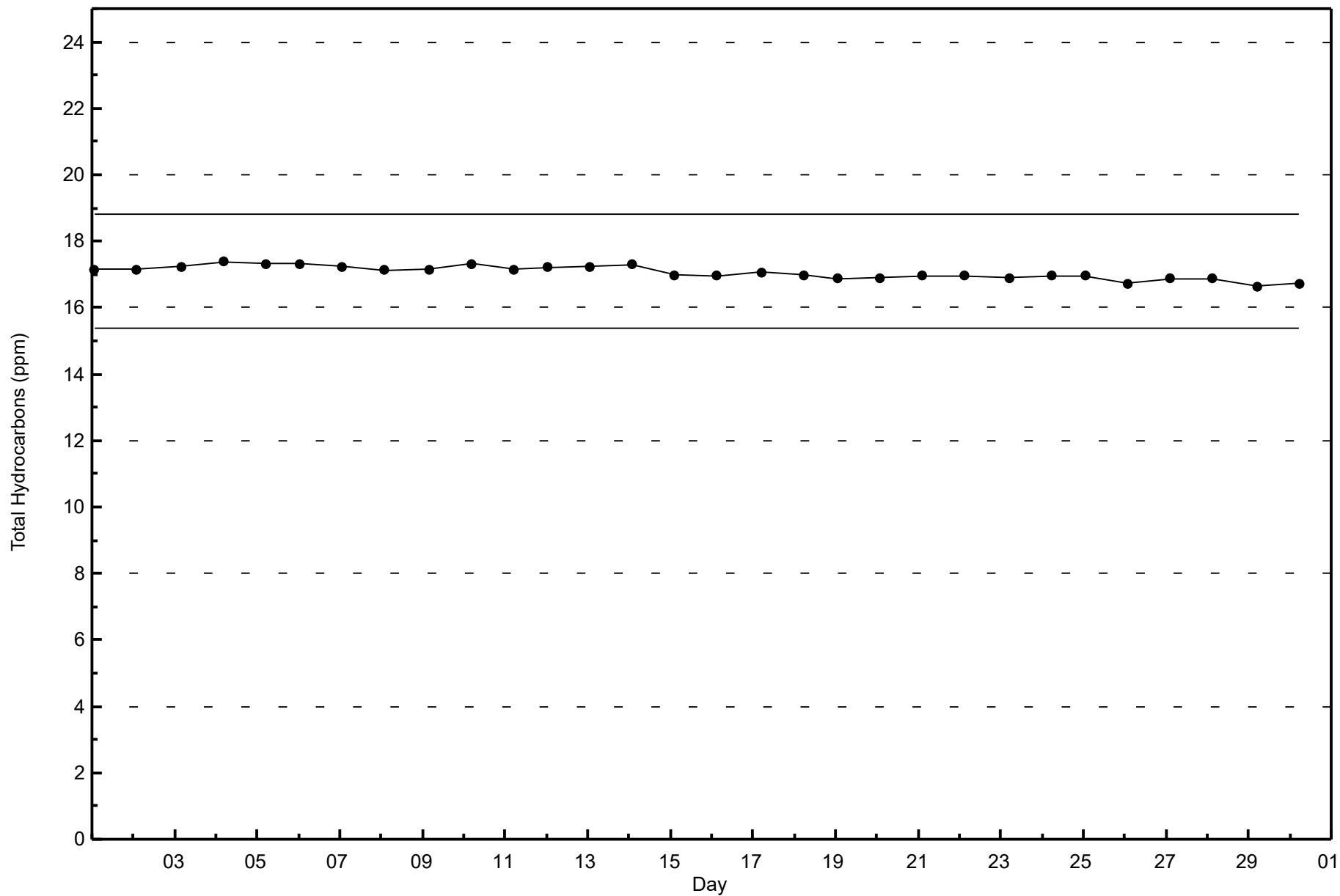




Wood Buffalo Environmental Association
Zero Responses

Total Hydrocarbons (THC) - ppm
Surmont 2 - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

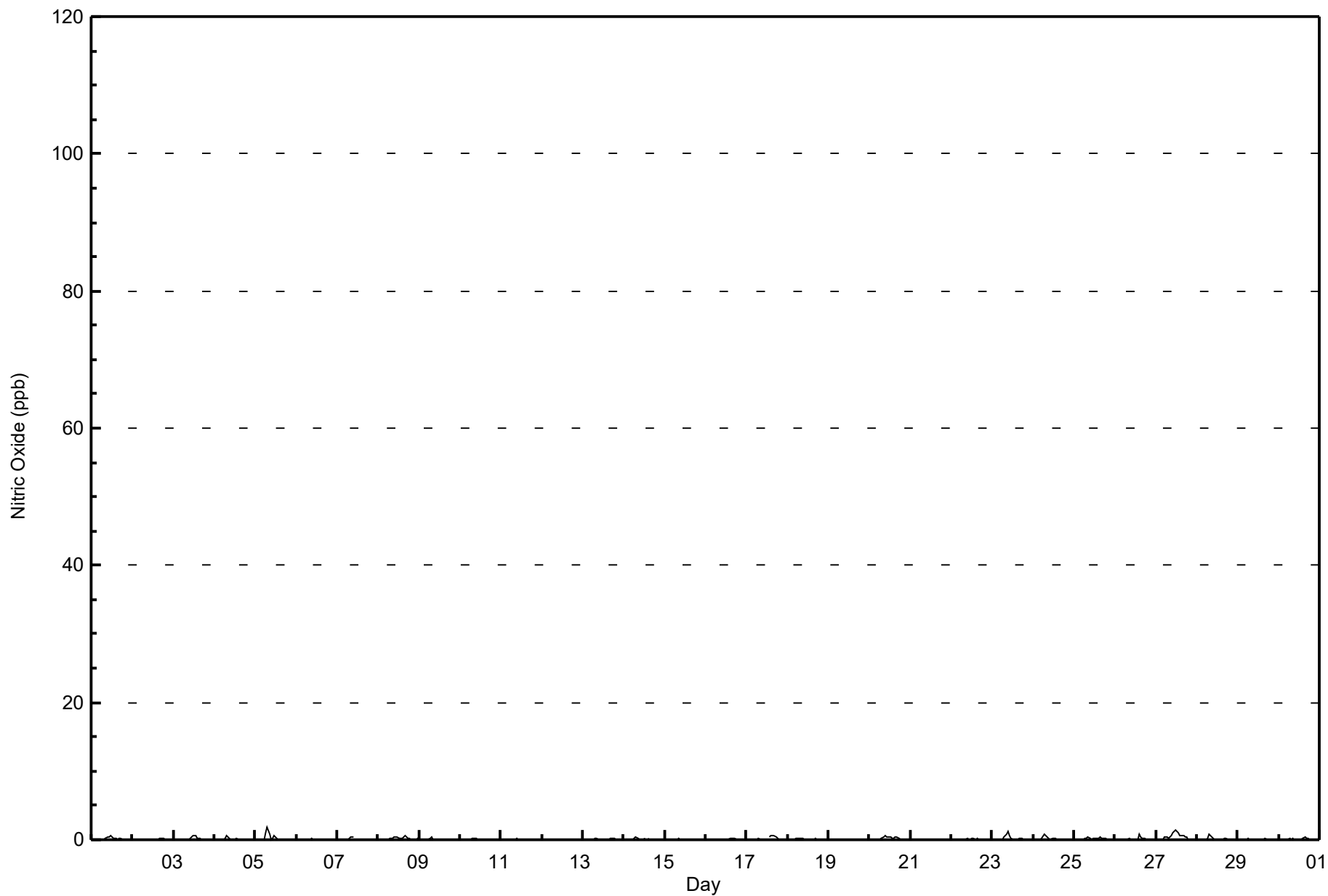
Surmont 2 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 1.8 ppb on Apr 5 08:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 0.4 ppb on Apr 27																		Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00 Maximum Diurnal Average: 0.2 ppb at hour 8 Monthly Average: 0.09 ppb																		Minimum Daily Average: 0.0 ppb on Apr 19 Minimum Diurnal Average: 0.0 ppb at hour 23 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 of Data: 681	
																																				Hours of Missing Data: 39	
																																				Hours of Calibration: 35	
																																				Percent Operational Time: 99.4	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.4	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6											
2-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1											
3-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.6	0.5	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6											
4-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	0.4	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	0.1	0.6											
5-Apr	0.0	0.0	0.0	Z	0.0	0.0	1.1	1.8	0.8	0.1	0.3	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8											
6-Apr	0.0	0.0	0.0	0.0	Z	0.0	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	0.0	0.0	0.0	0.2											
7-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.3	0.4	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	0.4											
8-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.4	0.3	0.3	0.2	0.4	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5											
9-Apr	0.1	Z	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4											
10-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
11-Apr	0.0	0.0	0.0	Z	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											
12-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											
13-Apr	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	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
14-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.2	0.0	0.0	0.0	0.1	M	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4											
15-Apr	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	0.0	0.0	0.1											
16-Apr	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	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	M	M	M	0.4	0.5	0.6	0.6	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.6											
18-Apr	0.0	0.0	0.0	Z	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2											
19-Apr	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											
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.5											
21-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1											
22-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2											
23-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.9	1.2	0.7	0.3	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2											
24-Apr	0.0	0.0	0.0	Z	0.0	0.2	0.7	0.7	0.3	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7											
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.5	0.3	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.5											
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.7	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7											
27-Apr	Z	0.0	0.1	0.0	0.0	0.4	0.4	0.2	0.3	0.7	1.1	1.4	1.2	0.9	0.7	0.5	0.6	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.4	1.4											
28-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.8	0.6	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8											
29-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2											
30-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4											
Diurnal Average																										Diurnal Maximum											
0.1																																					
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00
> 720	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
Surmont 2 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	29	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673
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	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673

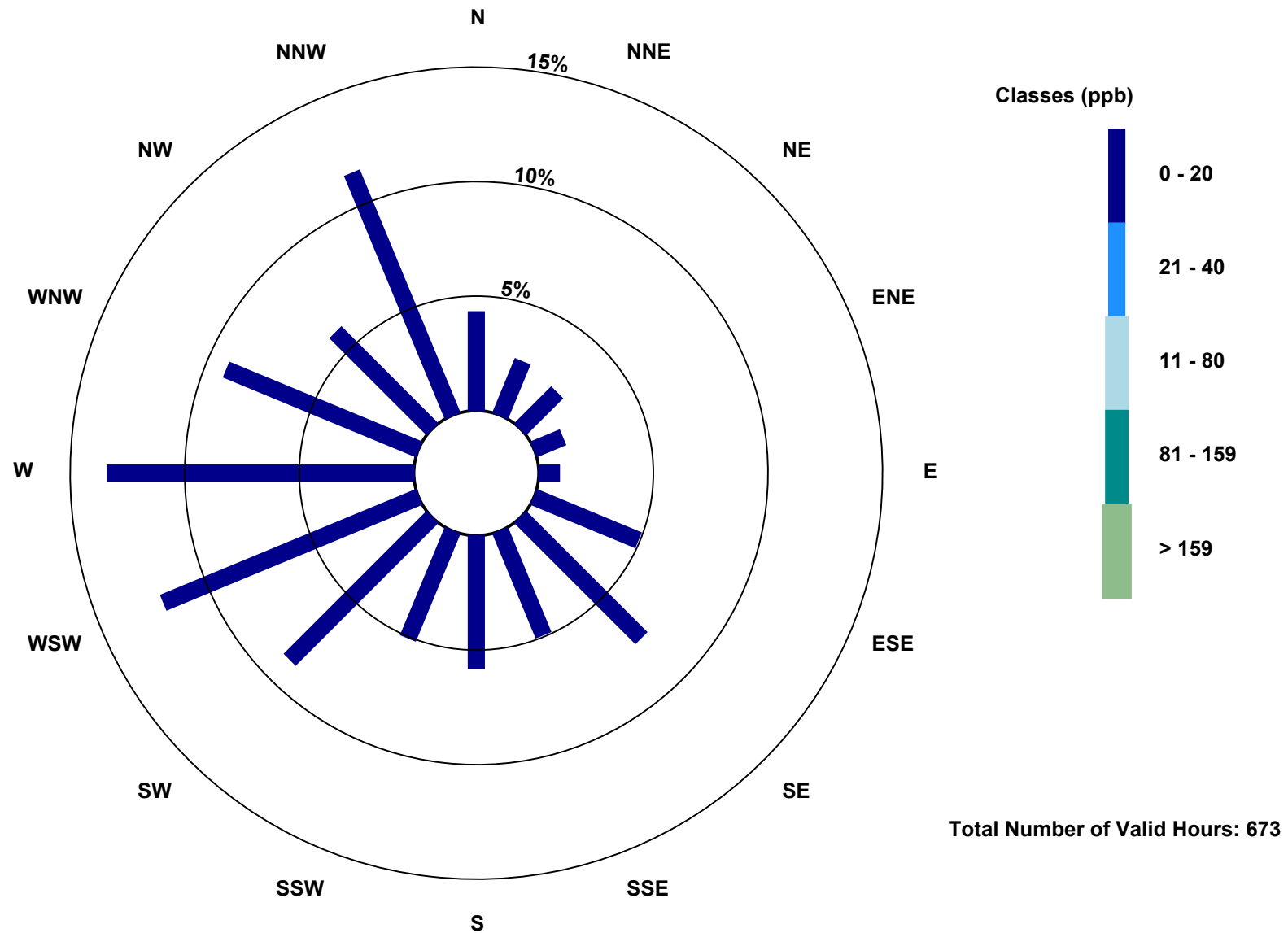
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

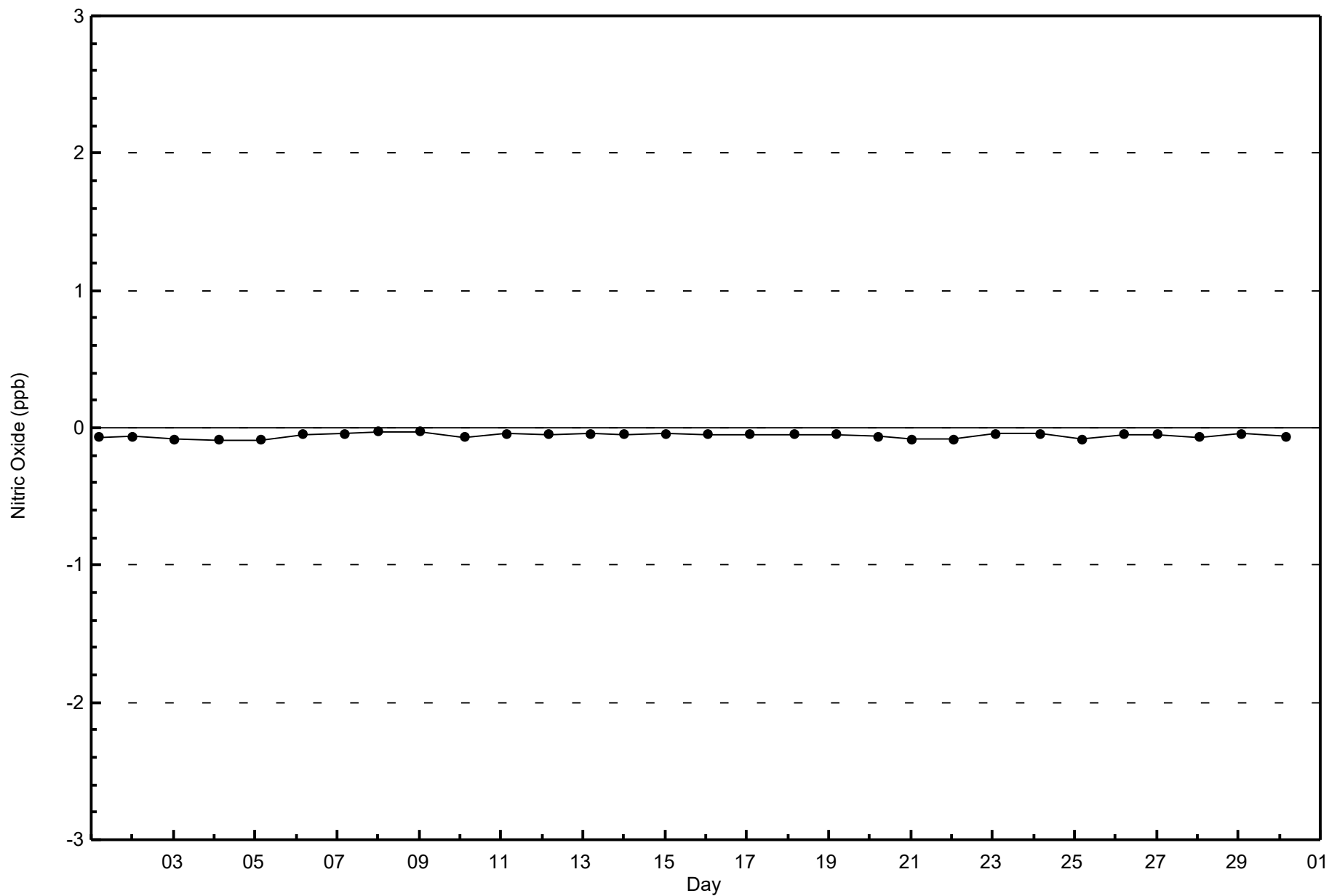
Nitric Oxide (NO) - ppb
Surmont 2





Wood Buffalo Environmental Association
Zero Responses

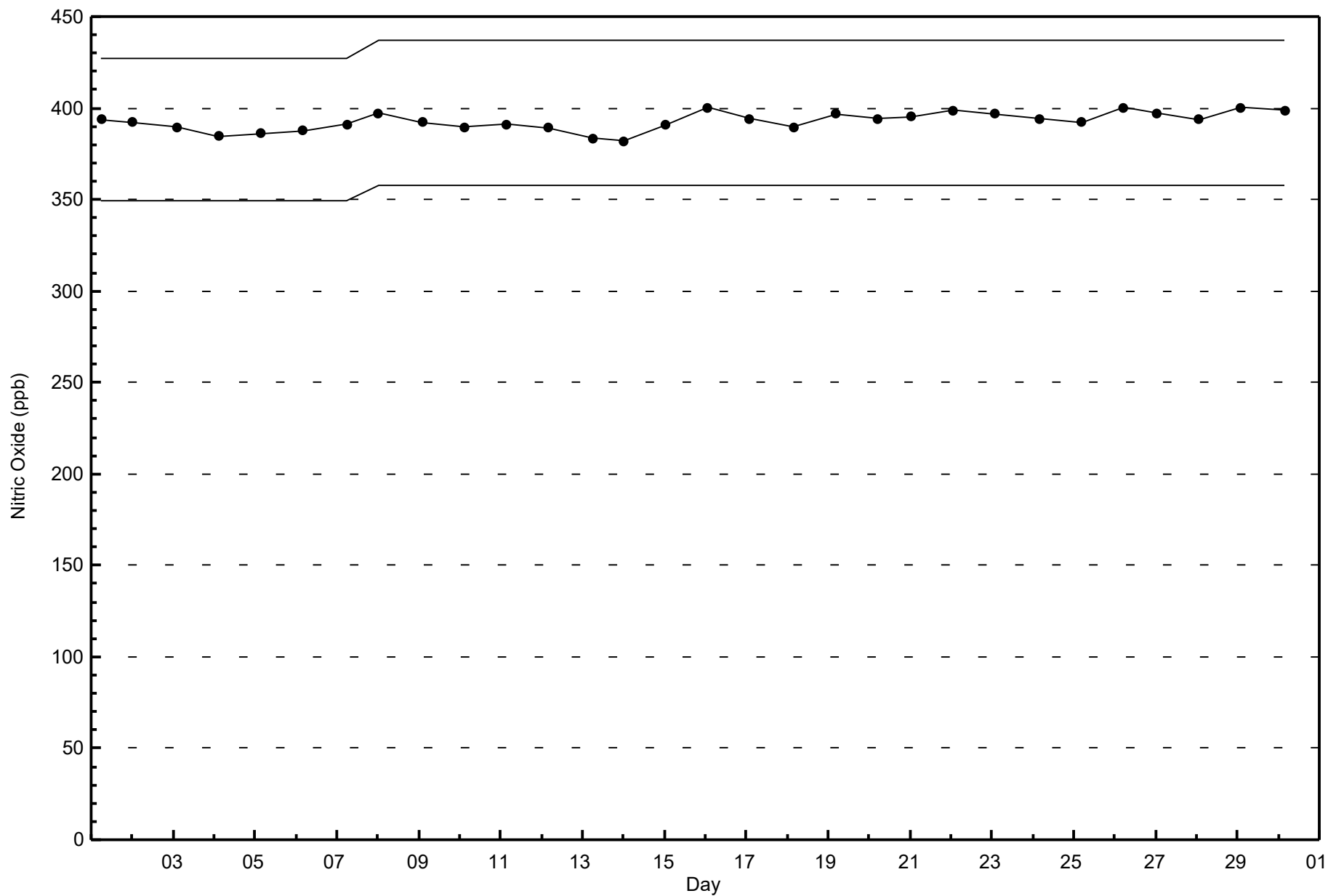
Nitric Oxide (NO) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

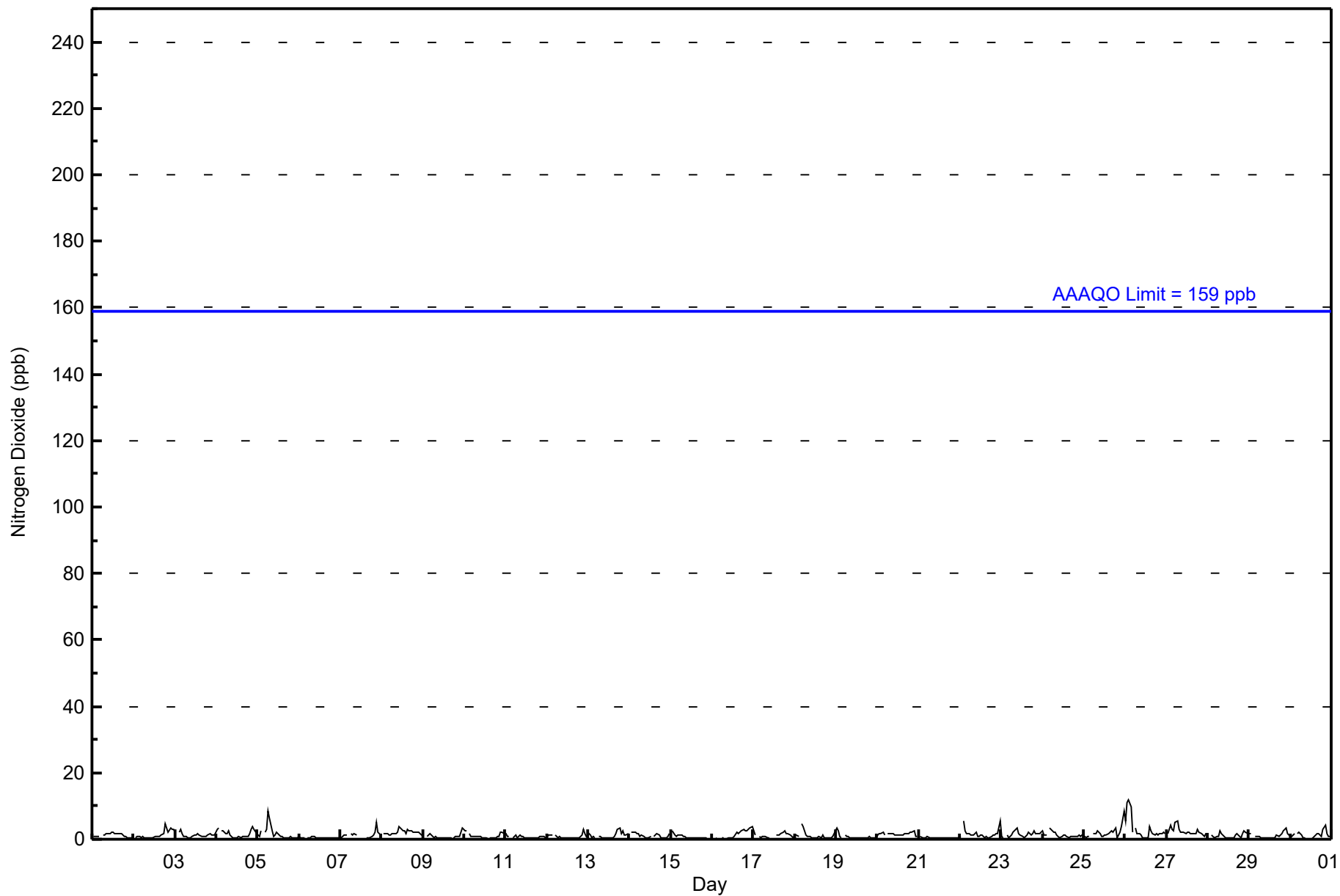
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 11.9 ppb on Apr 26 03:00 Maximum Daily Average: 3.0 ppb on Apr 26																			Hours in Service: 720 Hours of Data: 681 Hours of Missing Data: 39 Hours of Calibration: 35 Percent Operational Time: 99.4							
Minimum Value: 0.2 ppb on Apr 9 18:00 Minimum Daily Average: 0.4 ppb on Apr 21 Maximum Diurnal Average: 1.9 ppb at hour 3 Minimum Diurnal Average: 0.8 ppb at hour 13 Monthly Average: 1.30 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.7 P ₉₀ = 2.5 P ₉₉ = 5.5																										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.0	1.0	0.8	0.8	0.8	Z	1.1	1.4	1.6	1.9	1.8	2.2	2.0	1.6	1.7	1.7	1.6	0.9	0.7	0.5	0.4	0.5	0.4	1.2	2.2	
2-Apr	Z	0.4	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	1.2	1.7	4.7	3.4	2.2	3.3	2.9	3.1	1.4	4.7	
3-Apr	2.2	Z	2.0	2.9	1.6	0.7	0.7	0.6	0.5	0.5	0.7	1.3	1.3	1.5	1.2	0.9	0.8	0.7	0.9	1.4	1.9	1.2	1.2	1.4	1.2	2.9
4-Apr	2.8	3.6	Z	2.7	2.4	1.8	1.8	2.5	1.3	0.5	0.5	0.6	0.5	0.7	0.6	0.8	0.8	0.9	1.0	1.9	3.0	3.7	3.0	1.5	1.7	3.7
5-Apr	1.3	1.0	2.6	Z	2.2	2.9	8.5	6.5	2.4	0.8	1.1	2.0	1.2	0.8	0.7	0.6	0.5	0.5	0.6	0.8	0.6	0.6	0.6	0.6	1.7	8.5
6-Apr	0.8	0.6	0.5	0.5	Z	0.6	0.5	0.8	0.7	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.8
7-Apr	0.6	0.8	1.2	1.4	1.4	Z	1.6	1.4	1.5	1.3	C	C	C	C	C	0.4	0.4	0.6	0.7	1.3	2.0	4.9	2.1	1.1	1.4	4.9
8-Apr	Z	1.7	1.9	1.8	1.4	1.4	1.5	1.5	1.6	2.1	3.9	3.2	2.6	2.5	1.8	2.8	2.6	2.4	2.3	2.1	2.2	2.2	1.7	1.1	2.1	3.9
9-Apr	1.2	Z	0.8	1.1	1.6	1.1	0.6	0.7	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.9	0.7	0.9	2.0	3.4	0.8	3.4
10-Apr	2.5	2.4	Z	1.6	0.9	1.0	1.0	1.0	0.9	0.8	0.5	0.5	0.3	0.3	0.2	0.3	0.3	0.5	0.3	0.8	1.0	2.3	2.1	1.8	1.0	2.5
11-Apr	1.5	0.9	0.7	Z	0.5	1.0	1.2	0.6	1.1	0.9	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.8	1.0	0.7	0.5	0.7	1.5
12-Apr	0.4	1.1	1.2	1.1	Z	1.4	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6	1.1	2.9	1.7	0.9	0.8	2.9
13-Apr	1.9	1.2	0.6	0.7	0.6	Z	0.8	0.8	0.6	0.4	0.4	0.4	0.3	0.4	0.4	0.7	1.5	2.8	3.3	1.7	2.4	1.3	1.2	1.8	1.1	3.3
14-Apr	Z	2.2	2.0	2.0	1.8	1.6	1.0	1.1	0.8	0.4	0.3	0.3	0.8	M	0.9	1.2	1.5	1.3	0.6	0.6	0.6	0.6	0.7	1.6	1.1	2.2
15-Apr	Z	2.7	1.1	1.0	1.2	1.3	1.4	0.9	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.3	0.3	0.2	0.2	0.2	0.7	2.7
16-Apr	0.2	Z	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.7	2.1	1.7	2.0	2.5	3.0	2.5	2.7	3.1	3.3	3.8	1.3	3.8
17-Apr	2.7	1.2	Z	0.9	0.6	0.7	0.9	1.0	0.6	0.6	M	M	M	1.1	1.4	1.4	1.6	2.0	2.4	1.9	1.7	1.4	1.0	0.5	1.3	2.7
18-Apr	1.2	1.2	0.9	Z	4.8	4.0	1.2	0.9	0.8	0.7	0.6	0.6	0.6	0.7	0.6	1.2	0.5	0.5	0.6	0.5	0.6	0.8	1.7	1.1	4.8	
19-Apr	3.3	2.4	0.8	0.6	Z	1.1	0.7	0.8	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.7	0.6	0.3	0.3	0.3	0.7	3.3
20-Apr	1.2	1.5	1.9	2.0	1.4	Z	1.6	1.7	1.8	1.7	1.1	1.2	1.1	1.1	1.2	1.4	1.5	1.6	1.6	2.0	2.1	2.6	1.0	0.8	1.5	2.6
21-Apr	Z	0.7	0.5	0.5	0.6	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.4	0.7
22-Apr	1.0	Z	5.4	2.4	1.8	1.7	1.2	1.1	1.2	2.2	0.8	0.7	1.2	1.1	0.6	0.9	0.6	0.5	0.7	1.3	1.4	1.8	1.6	5.5	1.6	5.5
23-Apr	1.0	0.5	Z	1.2	0.6	0.8	1.3	2.2	2.9	3.2	1.8	1.2	0.7	0.6	0.7	1.1	2.1	1.4	1.6	2.5	1.6	1.5	1.5	2.3	1.5	3.2
24-Apr	2.6	1.3	1.3	Z	3.3	2.9	2.0	2.1	1.3	0.8	0.6	1.0	1.1	1.1	0.8	0.5	0.8	0.9	1.0	1.0	1.0	1.1	0.7	1.1	1.3	3.3
25-Apr	0.8	0.6	0.7	0.8	Z	1.8	1.7	1.6	2.4	1.5	0.7	1.0	1.3	1.1	1.5	2.1	2.5	2.3	3.3	0.6	1.3	2.1	4.0	8.5	1.9	8.5
26-Apr	5.5	11.1	11.9	9.6	2.3	Z	3.2	1.5	1.8	1.1	0.6	0.4	0.4	0.5	4.0	2.5	1.8	1.2	1.6	1.4	1.5	1.7	2.2	1.9	3.0	11.9
27-Apr	Z	1.9	4.3	3.1	2.5	5.0	5.5	3.0	2.2	2.1	2.2	1.9	2.1	2.0	1.6	1.6	1.9	1.8	2.8	2.2	1.8	1.3	1.0	1.7	2.4	5.5
28-Apr	1.7	Z	1.1	0.9	0.6	0.8	1.0	2.5	1.5	0.9	0.5	0.5	0.3	0.3	0.4	0.6	1.1	1.8	0.9	0.6	1.8	2.4	2.1	1.9	1.1	2.5
29-Apr	1.6	1.6	Z	0.7	0.9	0.9	0.8	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.4	1.4	0.7	1.1	1.8	2.7	3.2	1.7	1.4	1.1	3.2
30-Apr	0.8	1.0	1.8	Z	1.6	2.0	1.3	0.5	0.5	0.2	0.2	0.2	0.2	0.5	0.9	1.7	1.5	1.1	0.9	2.8	4.2	1.8	0.7	0.9	1.2	4.2
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	29	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673
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	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673

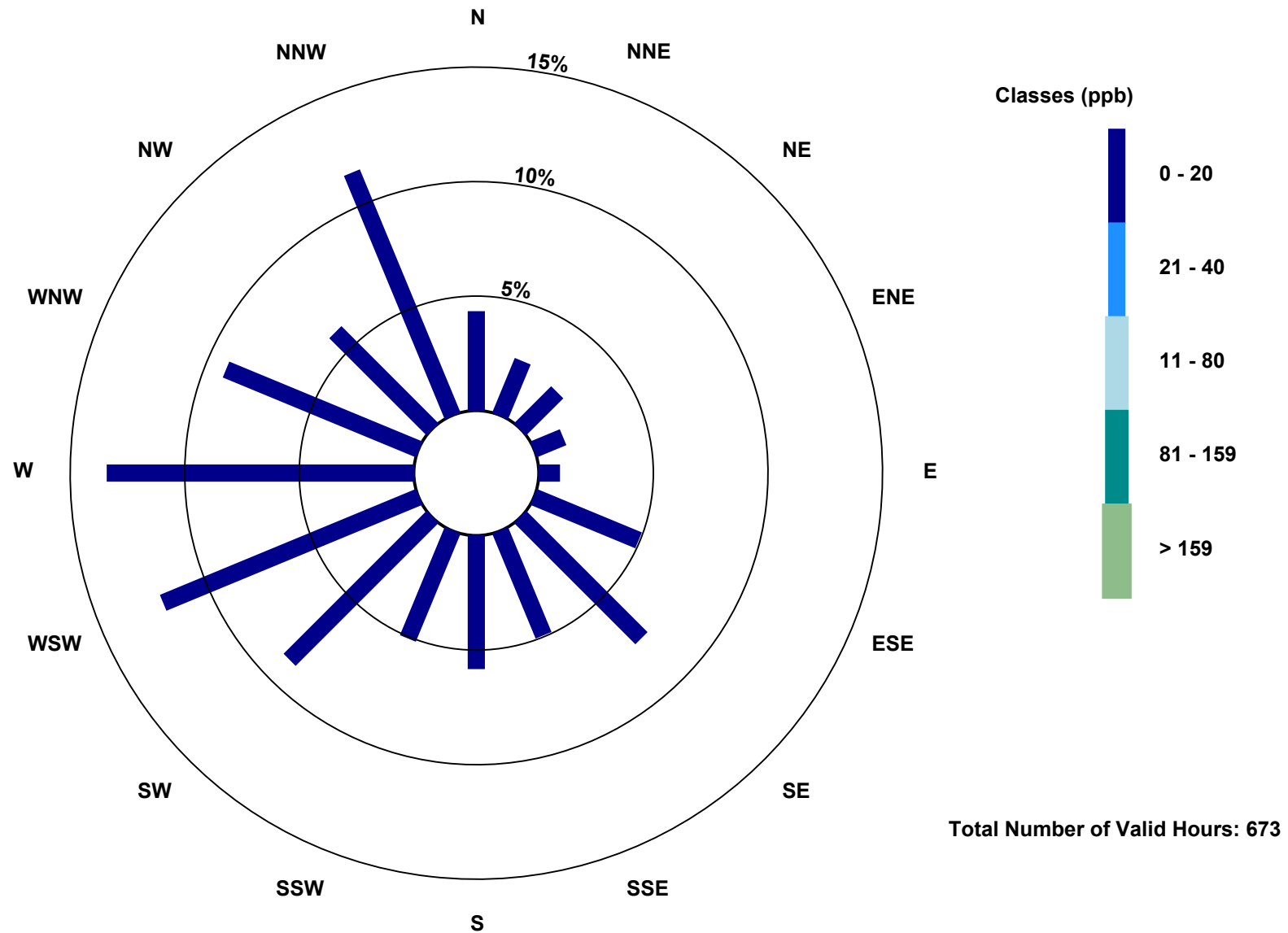
Total Number of Valid Hours: 673

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

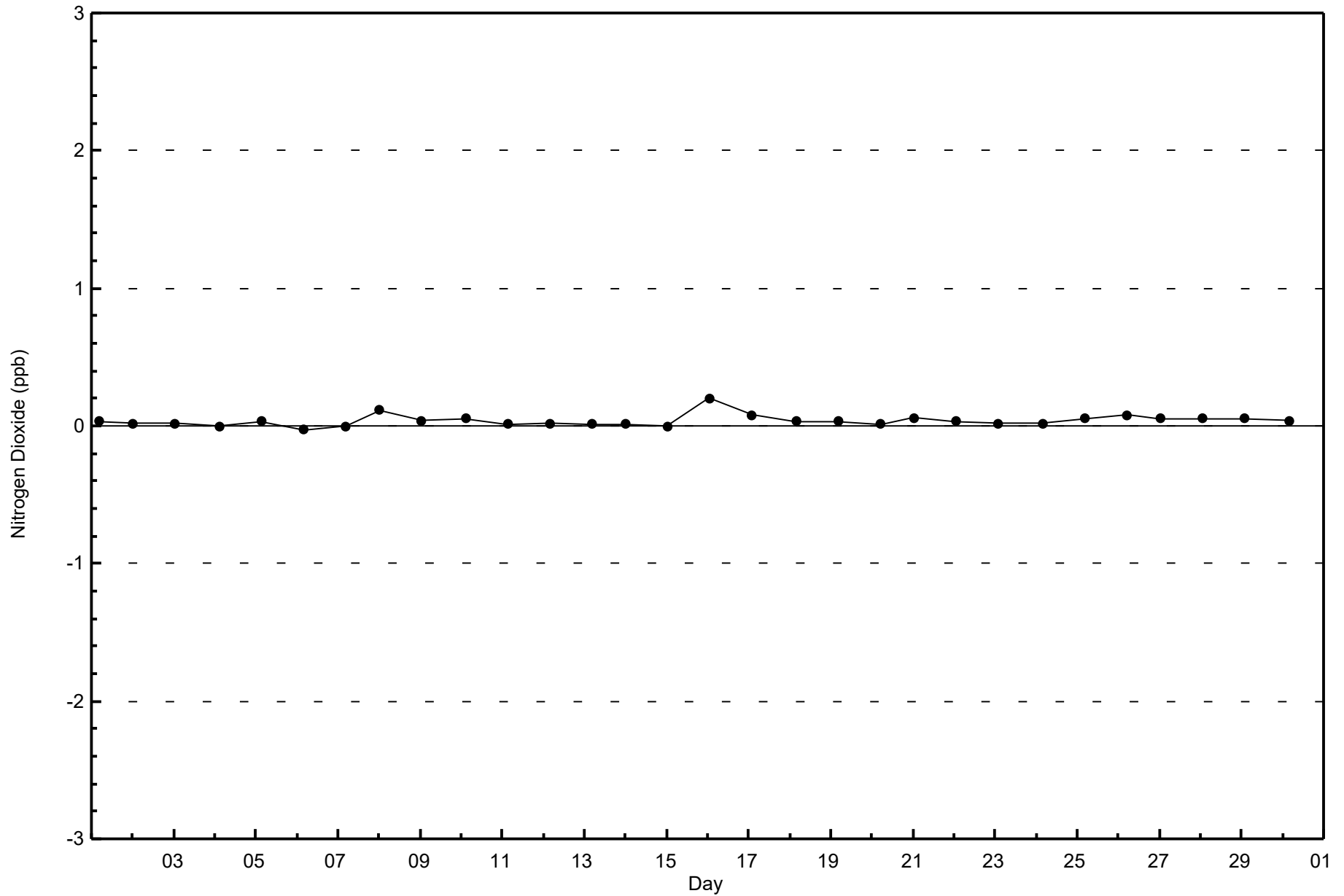
Nitrogen Dioxide (NO₂) - ppb
Surmont 2





Wood Buffalo Environmental Association
Zero Responses

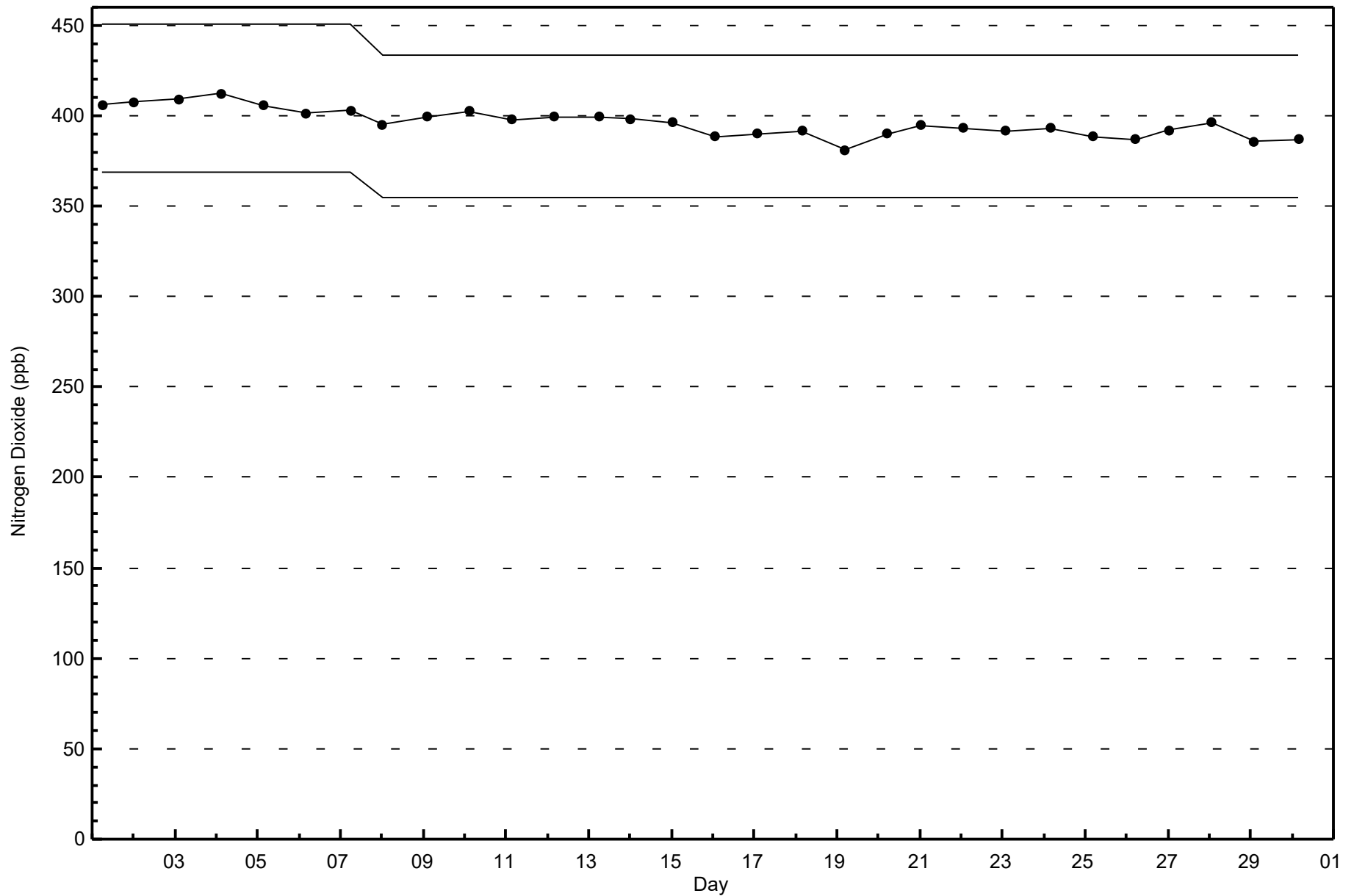
Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

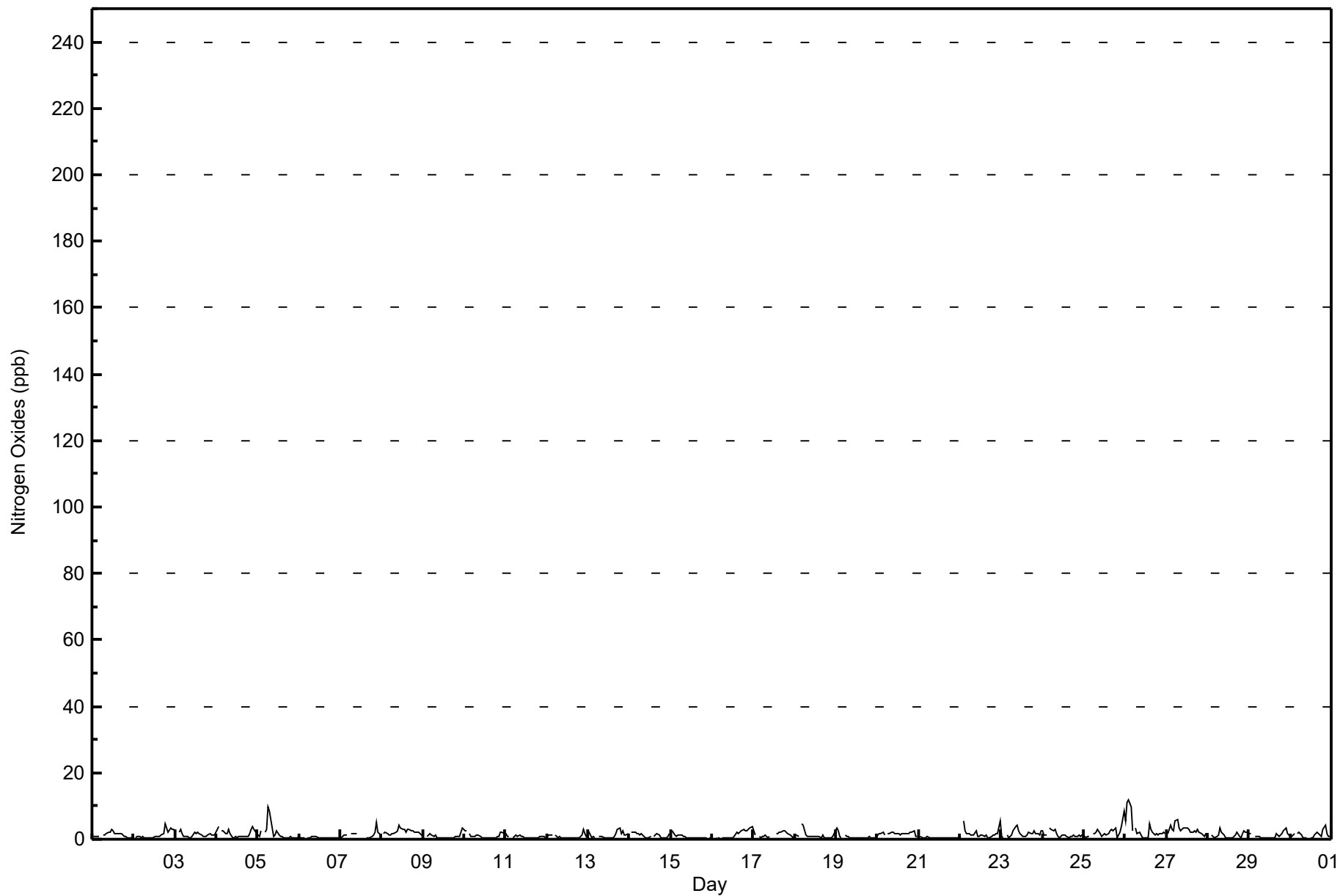
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720							
Maximum Value: 11.9 ppb on Apr 26 03:00 Maximum Daily Average: 3.1 ppb on Apr 26																			Hours of Data: 681							
Minimum Value: 0.2 ppb on Apr 15 22:00 Minimum Daily Average: 0.5 ppb on Apr 21																			Hours of Missing Data: 39							
Maximum Diurnal Average: 1.9 ppb at hour 3 Minimum Diurnal Average: 0.9 ppb at hour 14																			Hours of Calibration: 35							
Monthly Average: 1.39 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.0 Q ₃ = 1.8 P ₉₀ = 2.8 P ₉₉ = 5.6																			Percent Operational Time: 99.4							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.0	1.0	0.8	0.8	0.8	Z	1.1	1.4	1.8	2.3	2.2	2.8	2.4	1.8	1.8	1.8	1.7	0.9	0.7	0.5	0.4	0.5	0.4	1.3	2.8	
2-Apr	Z	0.4	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.9	1.3	1.8	4.8	3.4	2.2	3.3	2.9	3.1	1.4	4.8
3-Apr	2.2	Z	2.0	2.9	1.6	0.7	0.7	0.7	0.5	0.5	0.9	1.9	1.8	2.0	1.5	1.1	0.8	0.7	0.9	1.4	1.9	1.2	1.2	1.4	1.3	2.9
4-Apr	2.8	3.6	Z	2.7	2.4	1.8	1.9	3.1	1.7	0.6	0.5	0.7	0.5	0.8	0.7	0.9	0.9	1.0	1.0	1.9	3.0	3.7	3.0	1.5	1.8	3.7
5-Apr	1.3	1.0	2.6	Z	2.2	2.9	9.6	8.3	3.2	0.9	1.4	2.6	1.5	0.9	0.7	0.6	0.5	0.5	0.6	0.8	0.6	0.6	0.6	0.6	1.9	9.6
6-Apr	0.8	0.6	0.5	0.5	Z	0.6	0.5	0.8	0.7	1.0	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.5	1.0
7-Apr	0.6	0.8	1.2	1.4	1.4	Z	1.6	1.6	1.8	1.7	C	C	C	C	C	0.4	0.4	0.6	0.7	1.3	2.0	4.9	2.1	1.1	1.4	4.9
8-Apr	Z	1.7	1.9	1.8	1.4	1.4	1.5	1.7	1.9	2.5	4.4	3.6	2.9	2.8	2.0	3.2	3.1	2.6	2.4	2.1	2.2	2.2	1.7	1.2	2.3	4.4
9-Apr	1.3	Z	0.8	1.1	1.6	1.2	0.8	1.1	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.4	0.9	0.7	0.9	2.0	3.4	0.9	3.4
10-Apr	2.5	2.4	Z	1.6	0.9	1.0	1.1	1.1	1.1	1.0	0.6	0.5	0.4	0.3	0.2	0.3	0.3	0.5	0.3	0.8	1.0	2.3	2.1	1.8	1.0	2.5
11-Apr	1.5	0.9	0.7	Z	0.5	1.0	1.2	0.6	1.2	1.0	0.9	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.8	1.0	0.7	0.5	0.7	1.5
12-Apr	0.4	1.1	1.2	1.1	Z	1.4	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.6	1.1	2.9	1.7	0.9	0.8	2.9
13-Apr	1.9	1.2	0.6	0.7	0.6	Z	0.8	0.9	0.7	0.4	0.4	0.4	0.3	0.4	0.4	0.8	1.7	3.0	3.4	1.7	2.4	1.3	1.2	1.8	1.2	3.4
14-Apr	Z	2.2	2.0	2.0	1.8	1.6	1.3	1.5	1.0	0.4	0.3	0.3	0.9	M	1.0	1.3	1.6	1.3	0.6	0.6	0.6	0.6	0.7	1.6	1.2	2.2
15-Apr	Z	2.7	1.1	1.0	1.2	1.3	1.4	0.9	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.3	0.3	0.2	0.2	0.2	0.7	2.7
16-Apr	0.2	Z	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.8	2.3	1.9	2.2	2.7	3.1	2.5	2.7	3.1	3.3	3.8	1.4	3.8
17-Apr	2.7	1.2	Z	0.9	0.6	0.7	0.9	1.1	0.6	0.7	M	M	M	1.5	1.9	2.0	2.2	2.4	2.6	1.9	1.7	1.4	1.0	0.5	1.4	2.7
18-Apr	1.2	1.2	0.9	Z	4.8	4.2	1.3	1.0	1.0	0.9	0.7	0.7	0.7	0.6	0.8	0.6	1.3	0.5	0.5	0.6	0.5	0.6	0.8	1.7	1.2	4.8
19-Apr	3.3	2.4	0.8	0.6	Z	1.1	0.7	0.8	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.7	0.6	0.3	0.3	0.3	0.7	3.3
20-Apr	1.2	1.5	1.9	2.0	1.4	Z	1.7	1.9	2.1	2.2	1.5	1.6	1.5	1.4	1.5	1.8	1.8	1.8	1.7	2.0	2.1	2.6	1.0	0.8	1.7	2.6
21-Apr	Z	0.7	0.5	0.5	0.6	0.7	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.5	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.5	0.7
22-Apr	1.0	Z	5.4	2.4	1.8	1.7	1.3	1.2	1.3	2.4	0.9	0.7	1.4	1.3	0.7	1.1	0.6	0.5	0.7	1.3	1.4	1.8	1.6	5.5	1.6	5.5
23-Apr	1.0	0.5	Z	1.2	0.6	0.8	1.4	2.6	3.8	4.4	2.5	1.5	0.8	0.7	0.8	1.1	2.2	1.6	1.6	2.5	1.6	1.5	1.5	2.3	1.7	4.4
24-Apr	2.6	1.3	1.3	Z	3.3	3.1	2.7	2.8	1.6	0.9	0.6	1.2	1.2	1.2	0.9	0.6	0.9	1.0	1.1	1.0	1.0	1.1	0.7	1.1	1.4	3.3
25-Apr	0.8	0.6	0.7	0.8	Z	1.9	1.9	1.9	2.9	1.8	0.8	1.1	1.5	1.3	1.7	2.4	2.8	2.5	3.5	0.6	1.3	2.1	4.0	8.5	2.1	8.5
26-Apr	5.5	11.1	11.9	9.6	2.3	Z	3.3	1.5	2.0	1.2	0.6	0.4	0.4	0.5	4.7	2.9	2.0	1.3	1.7	1.4	1.5	1.7	2.2	1.9	3.1	11.9
27-Apr	Z	1.9	4.4	3.1	2.5	5.4	5.9	3.2	2.5	2.8	3.3	3.3	3.3	2.9	2.3	2.1	2.5	2.2	3.1	2.2	1.8	1.3	1.0	1.7	2.8	5.9
28-Apr	1.7	Z	1.1	0.9	0.6	0.8	1.2	3.3	2.1	1.2	0.5	0.5	0.3	0.3	0.5	0.7	1.2	1.9	0.9	0.6	1.8	2.4	2.1	1.9	1.2	3.3
29-Apr	1.6	1.6	Z	0.7	0.9	0.9	0.9	0.6	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.5	1.6	0.8	1.2	1.8	2.7	3.2	1.7	1.4	1.1	3.2
30-Apr	0.8	1.0	1.8	Z	1.6	2.1	1.5	0.5	0.6	0.2	0.2	0.2	0.2	0.5	1.1	2.1	1.7	1.2	0.9	2.8	4.3	1.8	0.7	0.9	1.2	4.3
1.7 1.8 1.9 1.6 1.5 1.6 1.7 1.6 1.3 1.2 1.0 1.0 0.9 0.9 1.1 1.1 1.3 1.2 1.4 1.3 1.5 1.7 1.5 1.8																									Diurnal Average	
5.5 11.1 11.9 9.6 4.8 5.4 9.6 8.3 3.8 4.4 4.4 3.6 3.3 2.9 4.7 3.2 3.1 3.0 4.8 3.4 4.3 4.9 4.0 8.5																									Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	29	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673
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	17	15	9	6	33	50	33	39	34	59	81	90	61	40	77	673

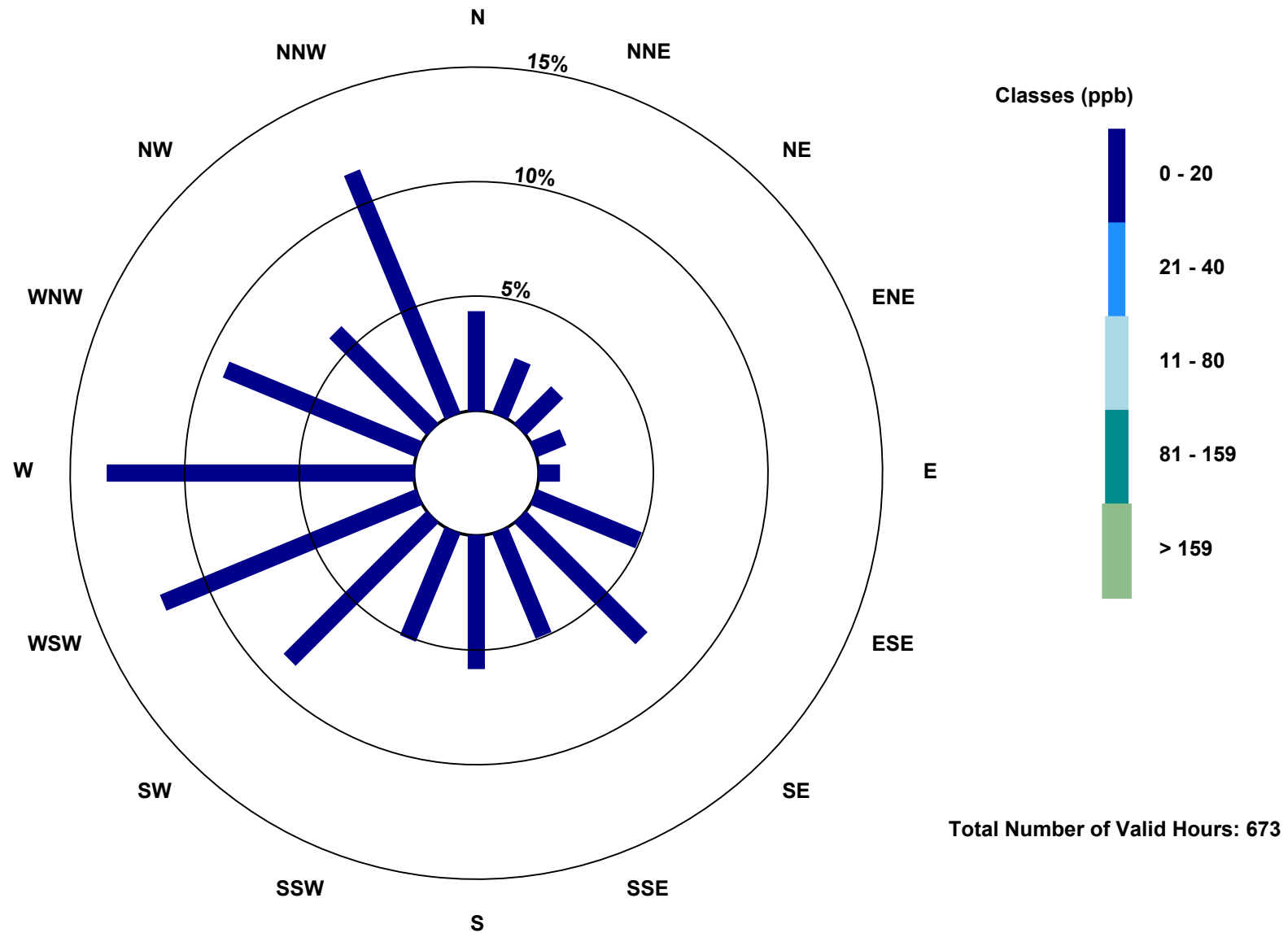
Total Number of Valid Hours: 673

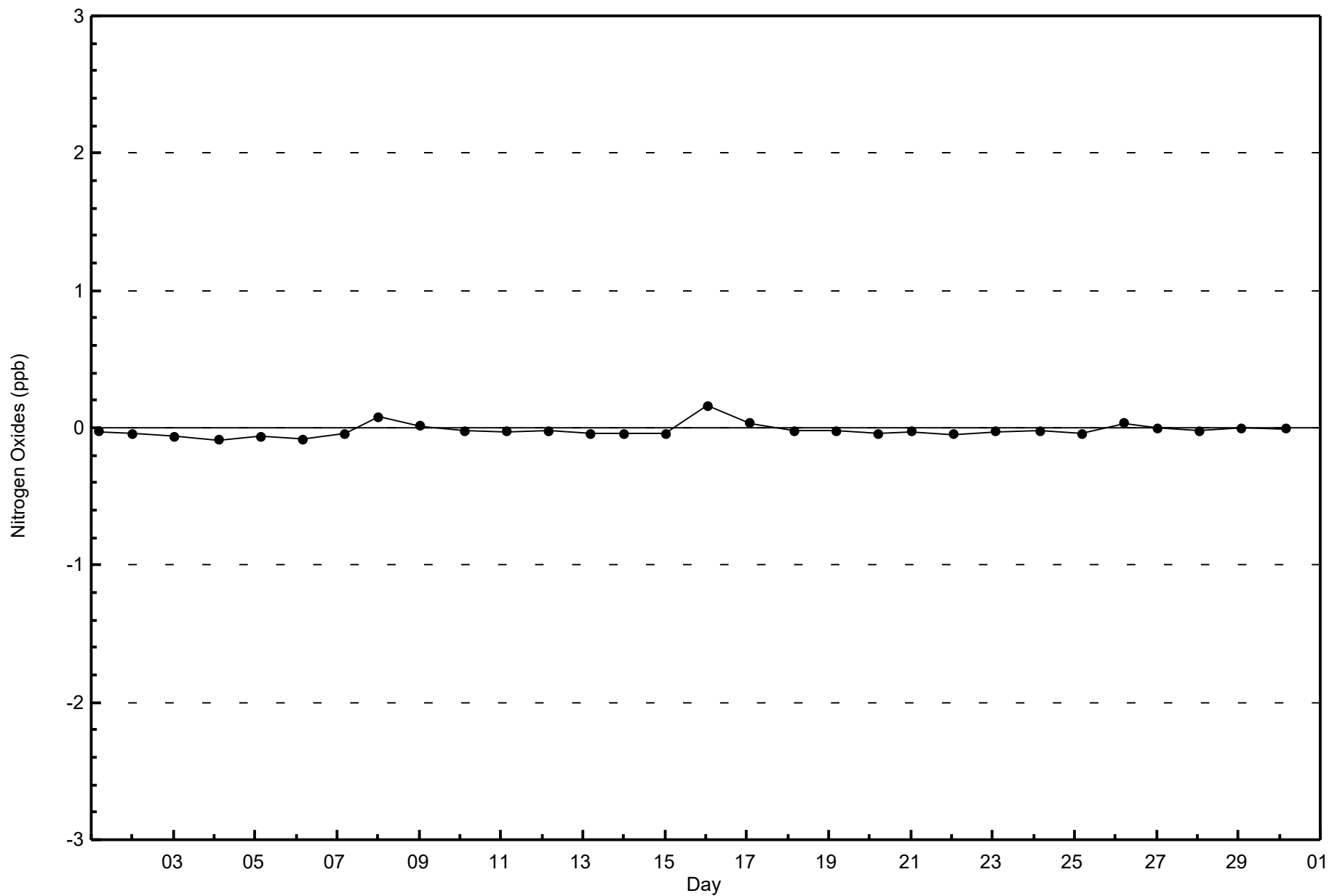
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Surmont 2

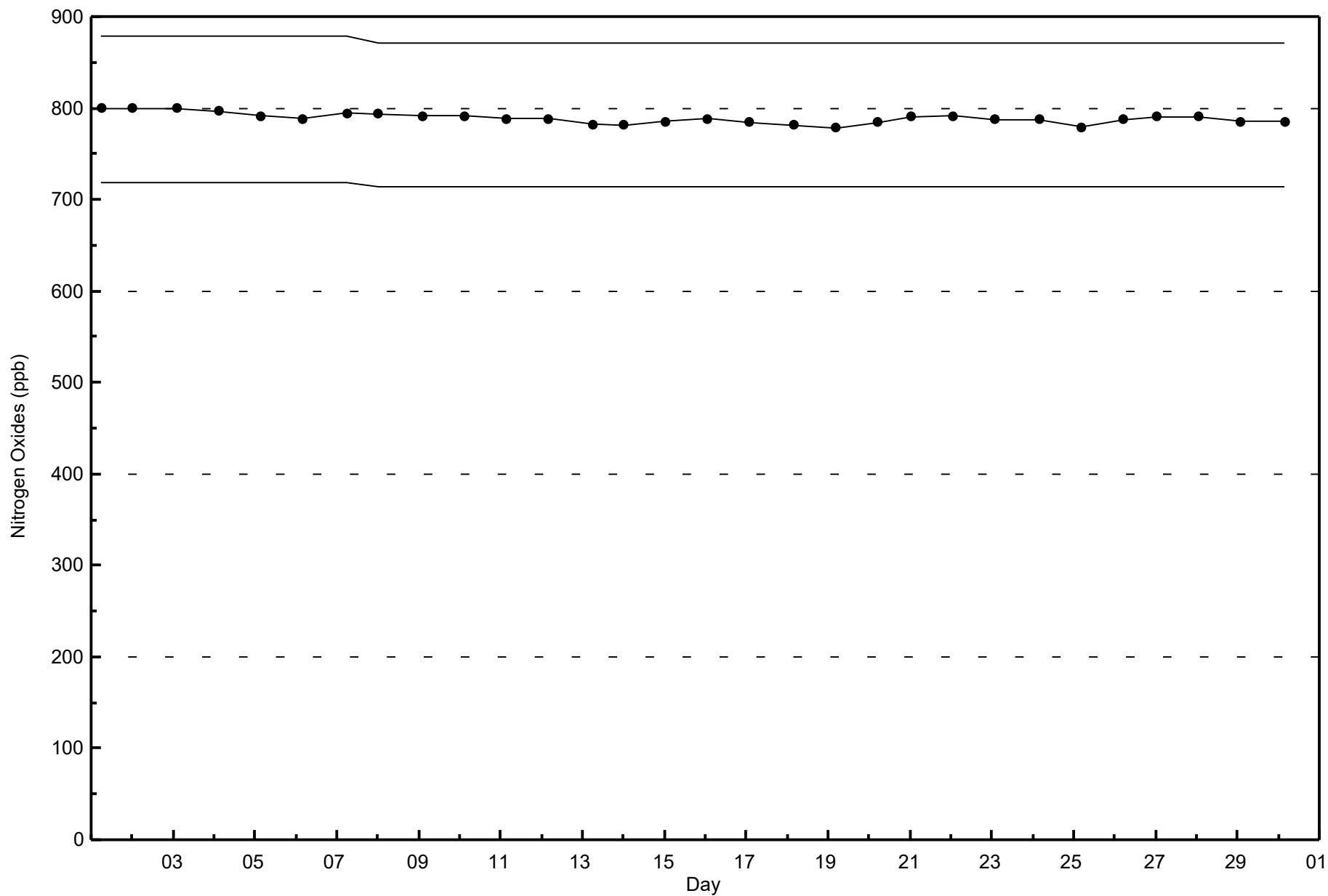






Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Surmont 2 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

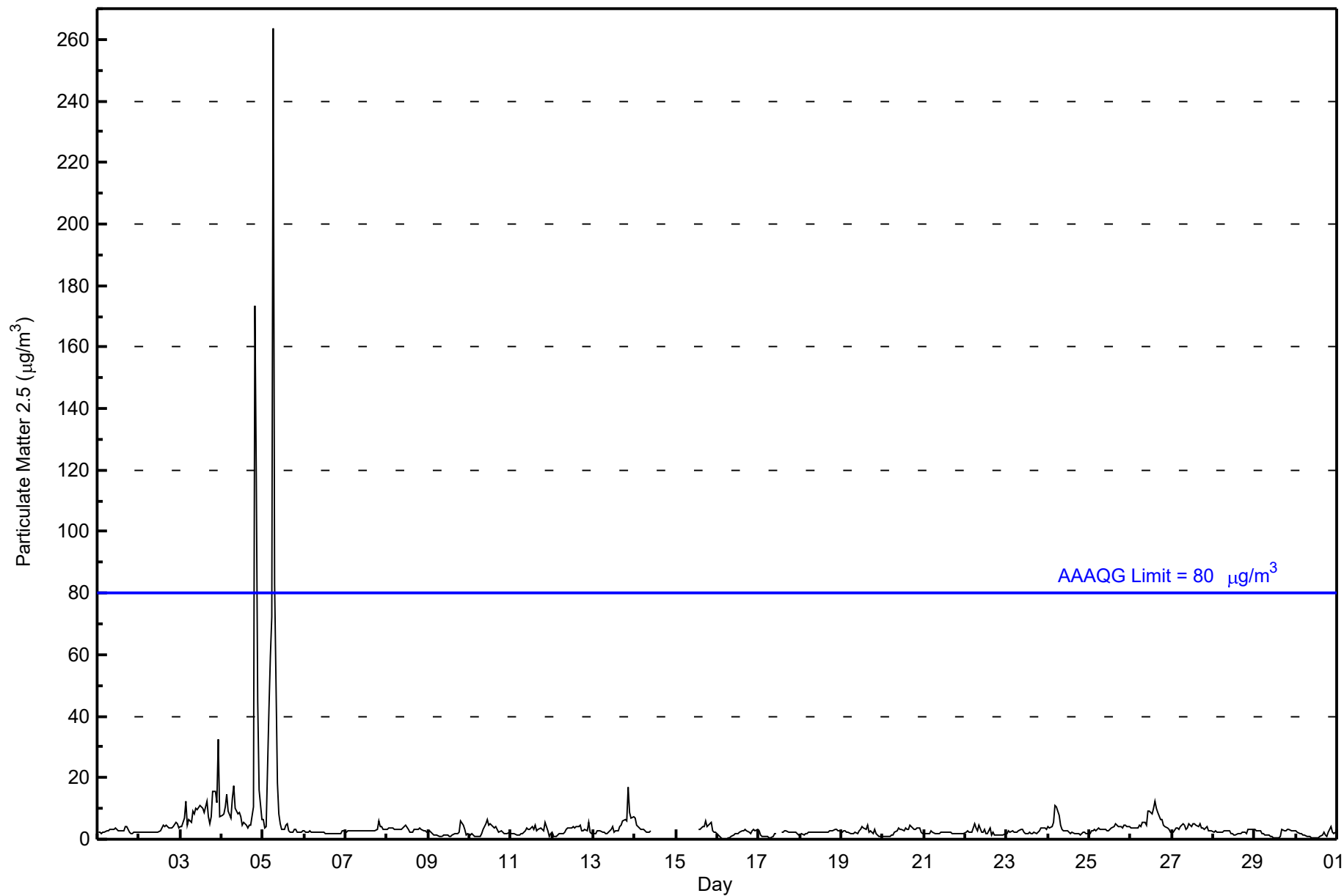
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 4 24-hr: 0 Maximum Value: 263.7 µg/m³ on Apr 5 07:00 Minimum Value: 0.1 µg/m³ on Apr 16 05:00 Maximum Diurnal Average: 11.9 µg/m³ at hour 7 Monthly Average: 4.48 µg/m³																				Hours in Service: 720 Hours of Data: 691 Hours of Missing Data: 29 Hours of Calibration: 8 Percent Operational Time: 97.1							
Maximum Daily Average: 25.3 µg/m³ on Apr 5 Minimum Daily Average: 1.5 µg/m³ on Apr 30 Minimum Diurnal Average: 2.7 µg/m³ at hour 2 Percentiles: P ₁ = 0.4 P ₁₀ = 1.4 Q ₁ = 2.0 Median = 2.7 Q ₃ = 3.7 P ₉₀ = 5.7 P ₉₉ = 42.9																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	2.2	2.1	2.0	2.1	2.3	2.5	2.8	3.0	3.4	3.3	3.4	3.2	2.9	2.9	2.6	2.7	3.9	4.1	2.5	2.0	2.0	2.1	2.2	2.1	2.7	4.1	
2-Apr	2.1	2.2	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.5	2.8	3.4	4.5	4.0	4.8	3.8	3.9	3.6	4.1	5.7	5.0	3.6	3.2	5.7	
3-Apr	4.2	4.2	6.8	12.6	4.6	6.4	5.5	9.0	8.3	9.9	9.4	11.0	10.7	10.3	8.5	12.2	7.4	4.9	7.1	15.4	15.6	11.7	32.7	7.4	9.8	32.7	
4-Apr	7.8	8.4	10.3	14.6	9.3	7.1	13.5	17.5	9.9	8.3	8.8	7.1	4.6	5.4	4.6	3.8	4.7	4.6	10.7	173.4	118.2	44.7	16.1	6.2	21.7	173.4	
5-Apr	6.5	3.6	4.3	42.7	59.3	72.2	263.7	82.7	18.2	8.4	4.9	3.3	3.4	4.7	5.1	2.5	2.3	2.5	3.4	3.2	2.4	2.5	2.5	2.6	25.3	263.7	
6-Apr	2.6	2.5	2.5	2.5	2.5	2.4	2.2	2.3	2.5	2.3	2.4	2.2	2.0	1.9	1.9	1.9	2.0	1.7	1.7	1.7	1.7	1.8	2.6	2.8	2.2	2.8	
7-Apr	2.4	2.6	2.8	2.9	2.9	2.9	2.8	2.9	3.0	2.8	2.7	2.7	2.7	2.6	2.5	2.7	2.8	2.9	3.1	5.9	4.2	4.3	3.4	3.1	3.1	5.9	
8-Apr	3.3	3.9	3.7	3.5	3.4	3.3	3.2	3.2	3.4	3.5	3.9	4.4	3.3	2.1	2.3	2.2	3.4	3.4	3.1	3.5	3.1	2.9	2.7	2.4	3.2	4.4	
9-Apr	2.5	2.6	1.7	1.4	1.3	1.2	1.0	1.0	1.1	1.4	1.4	1.3	0.9	0.9	1.4	2.0	1.9	1.6	2.4	5.9	4.4	3.4	1.3	1.7	1.9	5.9	
10-Apr	1.6	1.7	1.2	1.1	0.8	0.9	1.1	2.0	3.2	4.9	6.6	4.8	4.9	4.4	3.7	4.1	3.3	2.2	2.6	2.3	1.8	1.9	2.0	2.2	2.7	6.6	
11-Apr	2.0	1.9	1.9	1.4	1.3	1.4	1.6	1.6	2.7	3.8	3.3	3.2	3.9	3.4	4.6	2.7	3.1	3.7	3.3	2.8	5.4	2.8	1.0	2.0	2.7	5.4	
12-Apr	2.3	1.1	1.0	1.2	2.0	1.8	1.6	2.2	3.0	3.6	3.6	3.4	4.2	3.7	4.3	4.3	4.4	2.8	2.8	3.2	2.8	5.3	2.3	1.7	2.9	5.3	
13-Apr	1.7	2.0	2.8	2.8	2.6	2.3	2.1	1.9	2.0	2.8	3.2	4.3	2.3	2.8	2.8	4.0	4.6	5.9	6.5	6.1	16.8	8.8	7.1	7.1	4.4	16.8	
14-Apr	6.9	4.7	3.9	3.2	3.0	3.4	2.6	2.3	2.2	2.8	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	6.9	
15-Apr	M	M	M	M	M	M	M	M	M	M	C	C	C	C	3.0	3.4	4.0	4.1	6.1	4.3	4.7	5.6	2.8	2.3	2.5	--	6.1
16-Apr	1.4	0.8	0.5	0.2	0.1	0.1	0.3	0.6	1.0	1.5	1.7	2.0	1.9	2.2	3.0	2.8	3.0	2.7	2.2	2.1	2.7	3.0	3.0	3.3	1.8	3.3	
17-Apr	2.8	1.5	1.1	1.0	0.7	0.7	0.5	0.7	0.9	1.7	2.0	M	M	2.1	2.4	2.5	2.6	2.3	2.4	2.3	2.3	2.1	1.8	1.5	1.7	2.8	
18-Apr	1.6	1.7	1.5	1.6	1.8	2.1	2.2	2.4	2.5	2.4	2.4	2.5	2.4	2.3	2.2	2.3	2.4	2.5	2.7	2.7	3.2	3.3	3.0	2.5	2.3	3.3	
19-Apr	2.5	2.8	2.8	2.5	2.1	2.0	1.7	1.8	2.1	2.0	2.8	3.1	3.9	3.6	3.2	4.4	2.5	2.9	1.9	3.2	1.8	1.2	0.9	0.8	2.4	4.4	
20-Apr	0.7	0.7	0.8	0.7	1.1	1.2	1.3	2.2	2.5	3.6	3.0	3.3	2.7	3.4	3.3	3.3	4.6	3.5	3.0	3.3	3.7	3.5	2.3	2.0	2.5	4.6	
21-Apr	1.9	1.9	1.7	1.8	2.5	2.4	1.9	1.8	1.9	2.0	2.2	2.3	2.2	2.2	2.2	2.3	2.0	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.5	
22-Apr	2.4	2.8	2.4	2.5	2.3	5.0	3.5	2.7	4.4	2.5	2.2	3.3	2.0	1.9	3.5	1.5	2.2	1.2	1.2	1.2	1.2	1.5	1.3	1.6	2.4	5.0	
23-Apr	1.9	2.6	2.5	2.8	2.3	2.1	2.1	2.8	3.2	3.0	2.5	2.0	1.8	2.1	1.9	1.8	2.2	2.0	2.2	2.9	3.6	3.6	3.7	3.1	2.5	3.7	
24-Apr	4.1	3.8	3.9	5.3	10.8	10.7	7.8	4.4	3.1	2.7	2.7	2.6	2.2	2.0	2.3	1.9	1.9	1.7	1.6	1.5	2.2	2.1	2.0	1.9	3.5	10.8	
25-Apr	2.0	2.6	2.8	3.0	2.6	3.6	3.3	3.2	3.0	3.1	2.6	2.9	3.4	3.7	4.0	4.9	4.6	4.0	3.9	3.5	4.4	4.4	4.3	3.9	3.5	4.9	
26-Apr	3.7	3.8	3.8	3.7	3.9	4.7	4.0	5.6	5.3	4.7	9.0	9.1	8.1	10.1	12.5	10.0	8.6	6.2	6.5	4.5	4.0	3.6	3.0	2.4	5.9	12.5	
27-Apr	2.3	2.3	3.9	3.4	3.0	4.1	5.0	4.4	3.3	3.7	5.0	4.3	5.2	4.8	4.7	4.1	4.8	3.6	3.7	3.3	4.2	2.8	2.7	2.7	3.8	5.2	
28-Apr	2.4	2.5	2.2	2.2	2.2	2.5	2.8	2.9	2.7	2.7	1.9	1.6	1.5	1.5	1.9	1.9	2.0	2.3	2.1	1.9	3.1	3.1	3.4	3.2	2.4	3.4	
29-Apr	3.0	2.9	2.6	2.5	2.0	1.7	1.6	1.5	1.2	1.0	0.8	0.5	0.3	0.3	0.3	1.1	3.2	2.9	2.8	3.1	3.3	2.7	2.7	2.7	2.0	3.3	
30-Apr	2.6	2.2	1.8	1.7	1.5	1.2	1.0	0.8	0.8	0.5	0.4	0.4	0.5	0.4	0.7	1.4	2.2	1.6	1.1	2.1	4.3	2.5	2.0	2.1	1.5	4.3	
2.9 2.7 2.8 4.4 4.7 5.3 11.9 5.9 3.6 3.4 3.5 3.5 3.2 3.2 3.5 3.4 3.5 3.2 3.3 9.4 8.1 4.9 4.2 2.9																								Diurnal Average			
7.8 8.4 10.3 42.7 59.3 72.2 263.7 82.7 18.2 9.9 9.4 11.0 10.7 10.3 12.5 12.2 8.6 6.2 10.7 173.4 118.2 44.7 32.7 7.4																								Diurnal Maximum			
C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																											



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Surmont 2 - April 2025

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	619	89.58	89.58
6 - 15	58	8.39	97.97
16 - 25	5	0.72	98.70
26 - 80	5	0.72	99.42
> 81.0	4	0.58	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}) - µg/m³
Surmont 2 - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	24	17	15	9	6	31	56	33	34	29	50	69	83	54	33	68	611
6 - 15	5	0	0	0	0	1	0	2	4	1	4	9	3	7	9	12	57
16 - 25	0	0	0	0	0	2	0	0	0	0	1	1	0	1	0	0	5
26 - 80	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	5
> 81.0	0	0	0	0	0	0	1	0	0	0	2	1	0	0	0	0	4
Totals	29	17	15	9	6	34	57	35	38	31	60	81	86	62	42	80	682

Total Number of Valid Hours: 682

Total Number of Hours: 720



Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Surmont 2





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

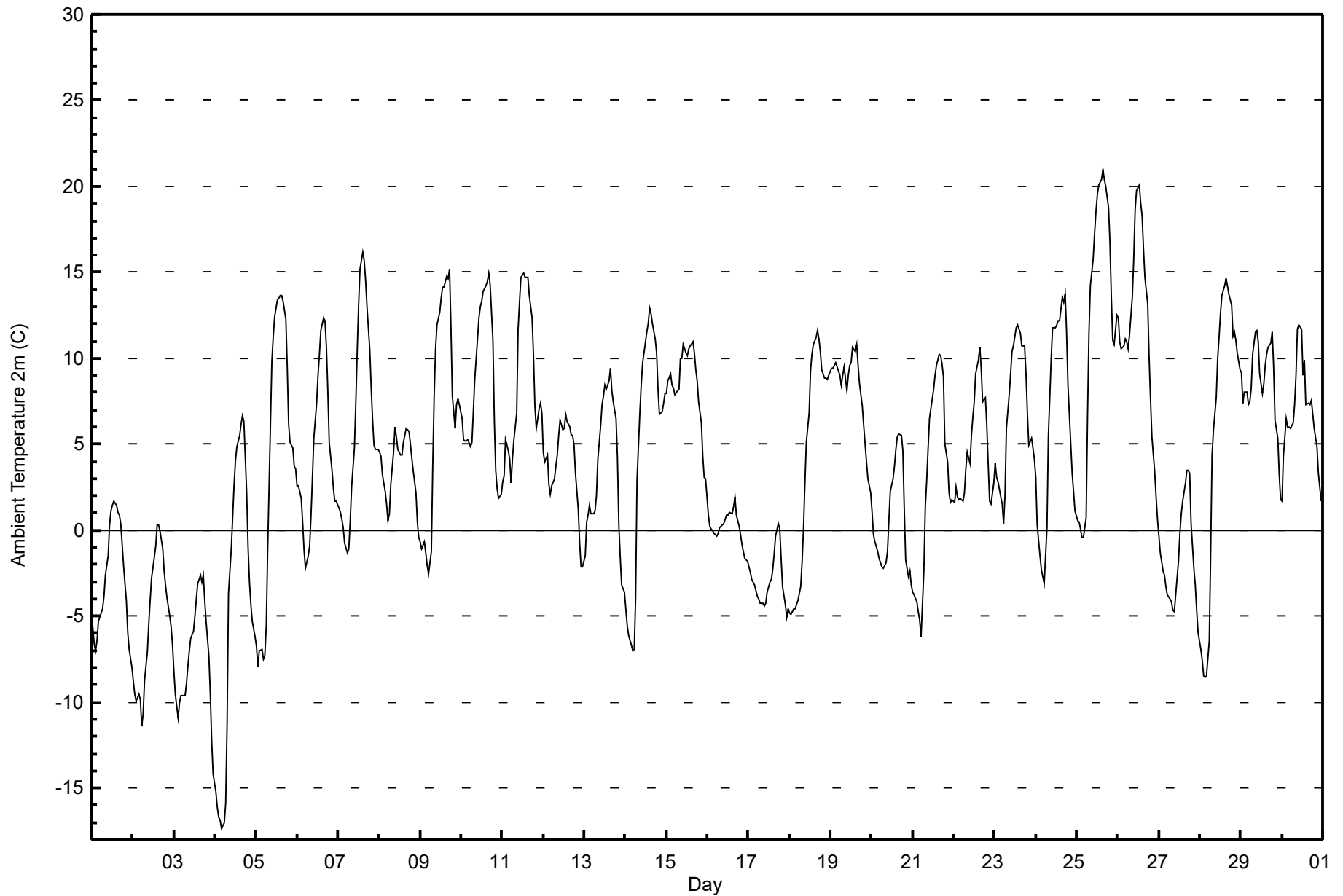
Surmont 2 - April 2025

Maximum Value: 20.9 C on Apr 25 16:00																				Maximum Daily Average: 12.1 C on Apr 25										Hours in Service: 720	
Minimum Value: -17.3 C on Apr 4 05:00																				Minimum Daily Average: -7.4 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 9.3 C at hour 16																				Minimum Diurnal Average: -1.2 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 3.93 C																				Percentiles: P ₁ = -13.8 P ₁₀ = -4.9 Q ₁ = -1.1 Median = 4.3 Q ₃ = 9.3 P ₉₀ = 12.3 P ₉₉ = 19.4										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	-5.6	-6.6	-7.0	-6.4	-5.3	-4.8	-4.5	-3.8	-2.6	-1.5	0.3	1.1	1.5	1.7	1.5	1.1	0.9	0.4	-2.0	-3.1	-4.1	-6.0	-6.9	-8.0	-2.9	1.7					
2-Apr	-8.8	-9.6	-10.0	-9.5	-9.9	-11.4	-10.7	-8.7	-7.1	-5.5	-4.1	-2.8	-1.6	-1.0	0.3	0.3	-0.1	-1.1	-2.4	-3.2	-3.9	-5.0	-5.6	-6.7	-5.3	0.3					
3-Apr	-8.3	-9.5	-10.9	-10.1	-9.6	-9.6	-9.6	-8.9	-7.9	-7.1	-6.3	-5.9	-5.0	-4.0	-3.1	-2.6	-3.0	-2.7	-4.1	-5.3	-7.3	-9.5	-12.3	-14.2	-7.4	-2.6					
4-Apr	-15.3	-16.1	-16.7	-16.9	-17.3	-17.1	-15.9	-11.3	-3.7	-1.1	0.8	2.7	4.0	4.9	5.5	6.2	6.7	6.4	2.2	-1.0	-3.0	-4.3	-5.3	-6.2	-4.7	6.7					
5-Apr	-6.7	-7.9	-7.0	-7.0	-7.5	-7.3	-5.5	-1.2	6.2	9.8	11.3	12.4	13.4	13.4	13.6	13.7	13.3	12.3	9.5	6.2	5.1	4.8	3.7	3.6	4.3	13.7					
6-Apr	2.6	2.5	1.9	0.4	-1.2	-2.2	-1.5	-0.9	0.9	3.1	5.3	7.4	9.0	10.2	11.6	12.4	12.2	10.7	8.1	5.1	3.5	2.4	1.7	1.7	4.5	12.4					
7-Apr	1.3	1.0	0.6	0.2	-0.7	-1.3	-1.1	0.6	2.5	4.8	7.4	10.4	13.0	15.2	16.1	15.7	14.5	13.0	10.5	8.3	6.4	4.9	4.7	4.7	6.4	16.1					
8-Apr	4.6	4.3	3.2	2.2	1.6	0.5	1.0	2.7	4.6	6.0	5.5	4.7	4.4	4.4	5.1	5.5	5.9	5.7	5.0	4.2	3.4	2.2	0.5	-0.4	3.6	6.0					
9-Apr	-0.7	-1.1	-0.7	-1.3	-2.0	-2.5	-1.3	3.8	7.8	10.6	11.9	12.7	13.5	14.1	14.1	14.8	14.6	15.2	11.9	7.8	5.9	7.3	7.7	7.3	7.1	15.2					
10-Apr	6.5	5.2	5.2	5.2	5.2	4.8	5.1	6.9	8.8	11.2	12.4	13.0	13.4	13.9	14.2	14.5	15.0	14.3	11.1	6.4	3.5	2.4	1.9	2.1	8.4	15.0					
11-Apr	2.9	3.1	5.3	4.6	4.1	2.8	4.2	5.3	6.8	11.7	13.2	14.7	15.0	14.7	14.7	14.7	13.6	12.3	10.1	7.2	6.0	7.0	7.3	6.8	8.7	15.0					
12-Apr	4.5	4.0	4.4	2.7	2.1	2.6	3.0	3.7	4.4	5.5	6.4	5.8	5.9	6.7	6.3	6.0	5.6	5.5	5.0	3.3	1.2	-0.8	-2.1	-2.1	3.7	6.7					
13-Apr	-1.5	0.5	0.9	1.4	1.0	1.0	1.1	2.0	4.1	6.1	7.3	7.8	8.4	8.2	8.7	9.4	8.1	7.5	6.5	4.2	0.3	-1.6	-3.2	-3.6	3.5	9.4					
14-Apr	-4.6	-5.6	-6.1	-6.7	-7.0	-6.9	-4.0	2.9	6.8	8.5	9.7	10.3	11.5	12.0	12.9	12.6	12.0	11.1	10.3	8.2	6.7	6.9	7.4	7.9	4.9	12.9					
15-Apr	8.0	8.7	9.1	8.4	8.3	7.8	8.1	8.2	10.0	10.0	10.8	10.3	10.2	10.5	10.7	11.0	10.3	9.4	8.7	7.4	6.2	4.3	3.1	3.0	8.4	11.0					
16-Apr	0.9	0.2	0.1	0.0	-0.2	-0.3	-0.2	0.2	0.2	0.4	0.6	0.9	0.9	1.0	0.9	1.4	1.9	0.9	0.2	-0.3	-0.8	-1.3	-1.7	-1.8	0.2	1.9					
17-Apr	-2.1	-2.5	-2.8	-3.2	-3.5	-3.9	-4.0	-4.3	-4.3	-4.5	-4.3	-3.6	-3.0	-2.8	-2.3	-1.4	-0.4	0.4	0.1	-1.6	-3.3	-4.4	-5.1	-4.6	-3.0	0.4					
18-Apr	-4.8	-4.9	-4.6	-4.6	-4.3	-4.1	-3.3	-1.8	0.1	2.7	5.1	6.8	9.3	10.2	10.8	11.2	11.6	11.1	10.4	9.4	8.9	8.8	8.8	9.0	4.2	11.6					
19-Apr	9.4	9.4	9.6	9.8	9.5	9.0	8.5	9.0	9.5	8.1	9.0	9.6	9.7	10.7	10.4	10.8	9.6	8.5	7.2	6.1	5.0	4.0	3.0	2.1	8.2	10.8					
20-Apr	1.0	-0.3	-0.7	-1.2	-1.6	-1.9	-2.2	-2.2	-1.9	-1.3	0.6	2.2	3.0	3.7	4.7	5.4	5.6	5.5	4.6	1.2	-1.7	-2.7	-2.3	-3.2	0.6	5.6					
21-Apr	-3.6	-3.8	-4.2	-4.8	-5.2	-6.2	-2.4	1.2	2.9	4.7	6.5	7.6	8.2	9.0	9.6	10.2	10.2	9.6	8.9	5.0	4.0	2.2	1.6	1.8	3.0	10.2					
22-Apr	1.6	2.5	1.9	1.8	1.9	1.6	2.2	3.5	4.5	3.9	5.5	6.5	7.5	9.1	9.9	10.7	9.4	7.4	7.7	6.1	3.8	1.7	1.6	2.8	4.8	10.7					
23-Apr	3.9	3.1	2.8	2.0	1.5	0.4	2.0	5.9	7.9	9.1	10.4	10.7	11.8	11.9	11.7	11.4	10.7	10.7	9.1	6.9	4.9	5.4	4.8	4.1	6.8	11.9					
24-Apr	3.1	0.3	-1.5	-2.3	-2.7	-3.1	0.1	5.5	7.7	10.0	11.7	11.7	11.9	12.2	12.2	13.6	13.3	13.7	11.5	8.5	5.0	3.3	2.3	1.1	6.2	13.7					
25-Apr	0.6	0.5	0.1	-0.5	-0.4	0.7	6.7	11.4	14.2	15.7	17.2	18.5	19.5	20.0	20.4	20.9	20.4	20.0	18.8	16.8	13.6	11.0	10.8	12.5	12.1	20.9					
26-Apr	12.4	11.0	10.5	10.7	11.1	10.9	10.6	11.4	13.6	15.8	18.6	19.7	20.1	19.0	18.3	16.3	14.7	13.1	10.0	7.7	5.5	3.4	1.9	0.6	12.0	20.1					
27-Apr	-0.3	-1.3	-2.4	-2.6	-3.2	-3.8	-4.0	-4.2	-4.7	-4.8	-3.8	-1.8	-0.1	1.0	1.7	2.7	3.5	3.5	3.3	0.4	-2.3	-3.2	-4.7	-5.9	-1.5	3.5					
28-Apr	-7.0	-7.6	-8.5	-8.6	-8.5	-6.4	-1.3	4.4	5.8	7.7	10.0	11.2	12.6	13.6	14.3	14.6	14.2	13.8	13.1	11.3	11.5	11.1	10.4	9.3	5.9	14.6					
29-Apr	9.2	7.4	8.1	8.1	7.3	7.5	8.2	10.3	11.5	11.6	11.0	9.1	7.9	8.5	9.6	10.3	10.6	10.9	11.6	9.5	6.4	5.3	3.2	1.8	8.5	11.6					
30-Apr	1.7	4.3	6.5	6.0	6.0	5.9	6.3	7.3	9.0	11.7	11.9	11.7	9.0	9.9	7.3	7.4	7.3	7.5	6.7	5.9	4.8	3.3	2.5	1.7	6.7	11.9					
																									Diurnal Average						
																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Surmont 2 - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	203	28.19	28.19
0 - 10	362	50.28	78.47
10 - 20	150	20.83	99.31
> 20	5	0.69	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) - %

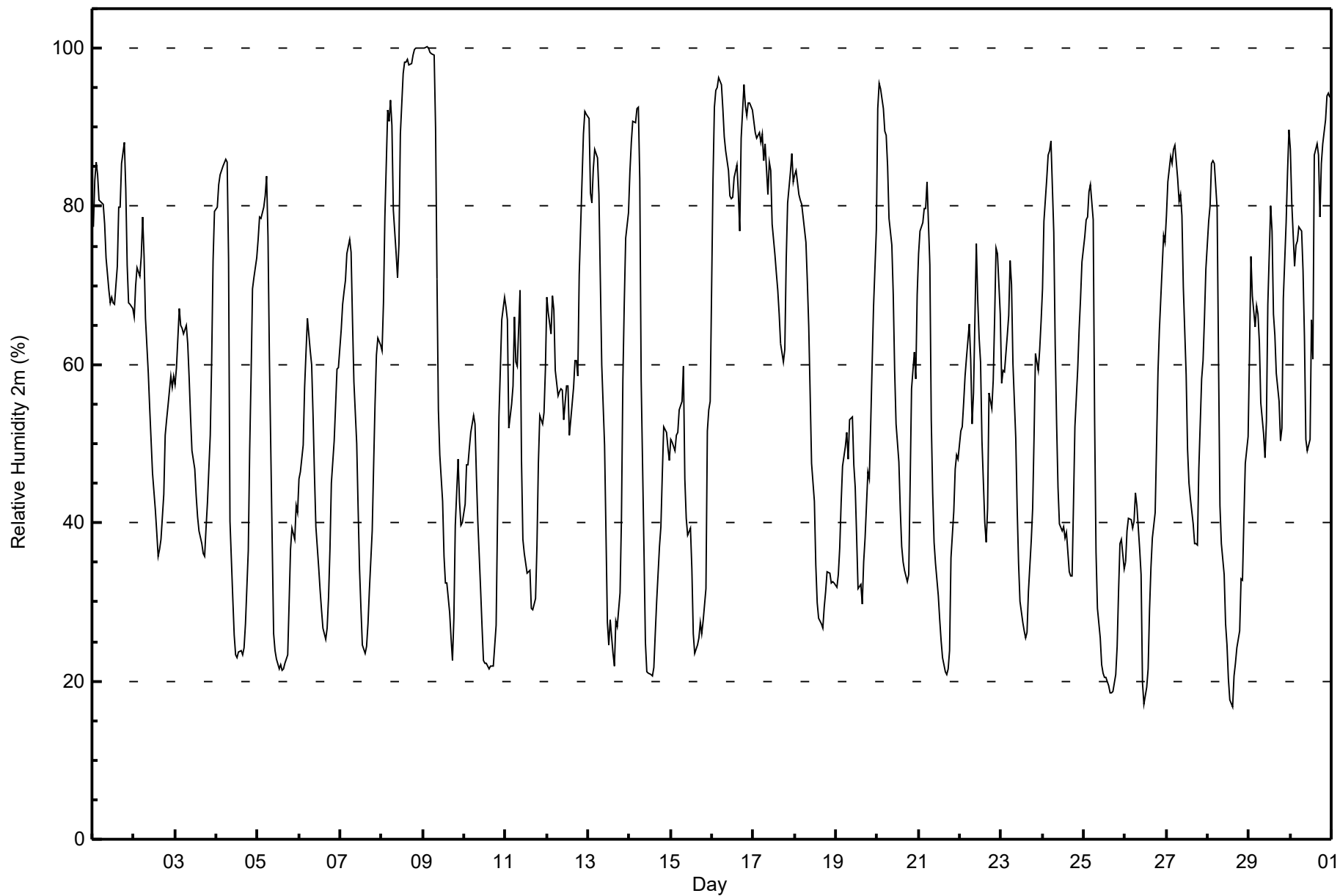
Surmont 2 - April 2025

Maximum Value: 100.1 % on Apr 9 03:00																				Maximum Daily Average: 89.6 % on Apr 8					Hours in Service: 720	
Minimum Value: 16.8 % on Apr 28 15:00																				Minimum Daily Average: 39.9 % on Apr 10					Hours of Data: 720	
Maximum Diurnal Average: 76.0 % at hour 6																				Minimum Diurnal Average: 39.3 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 56.90 %																				Percentiles: P ₁ = 19.5 P ₁₀ = 26.0 Q ₁ = 37.5 Median = 57.0 Q ₃ = 76.3 P ₉₀ = 87.3 P ₉₉ = 99.9					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	77.4	83.3	85.7	84.1	80.9	80.4	80.2	77.8	73.5	69.5	67.7	68.5	67.9	67.7	72.4	80.0	79.9	85.5	88.1	82.2	72.6	67.8	67.6	67.1	76.2	88.1
2-Apr	66.0	69.9	72.3	71.2	73.7	78.7	73.7	65.9	58.9	54.5	50.4	46.2	41.7	38.8	35.7	36.6	37.9	43.6	51.1	52.9	54.9	58.5	57.1	58.6	56.2	78.7
3-Apr	57.5	59.5	67.1	64.9	64.5	64.0	64.9	62.7	58.4	53.4	49.1	46.9	43.3	40.7	39.0	37.5	36.1	35.8	39.3	42.5	51.1	60.5	73.1	79.4	53.8	79.4
4-Apr	79.8	82.7	84.0	84.5	85.1	86.0	85.6	73.3	40.3	30.4	25.8	23.3	23.0	23.7	23.9	23.3	24.1	27.2	36.6	49.4	58.7	69.7	71.0	73.6	53.5	86.0
5-Apr	75.8	78.7	78.5	79.9	81.3	83.8	76.2	60.8	37.4	26.0	23.8	22.8	21.6	22.1	21.4	21.5	22.2	23.4	29.9	36.6	39.4	37.9	42.2	41.3	45.2	83.8
6-Apr	45.5	46.4	49.9	57.2	61.6	65.8	61.8	60.0	53.5	46.2	39.5	34.4	31.5	29.1	26.8	25.3	26.7	30.5	36.6	45.1	50.3	54.8	59.5	59.7	45.7	65.8
7-Apr	64.4	67.7	69.3	70.6	74.0	75.8	74.1	65.8	57.9	50.0	41.9	34.2	29.1	24.6	23.5	24.4	27.1	31.5	38.9	47.2	55.1	61.2	63.4	62.4	51.4	75.8
8-Apr	61.8	67.7	78.6	92.3	90.8	93.4	90.3	79.5	74.0	71.1	75.2	89.2	96.8	98.3	98.3	98.5	97.9	98.1	99.1	99.9	100.1	100.1	100.0	100.0	89.6	100.1
9-Apr	100.0	100.1	100.1	99.9	99.6	99.2	99.2	89.9	70.8	54.2	48.5	42.7	35.8	32.4	32.4	28.7	25.4	22.7	28.0	39.7	48.1	42.8	39.6	40.0	59.2	100.1
10-Apr	42.3	47.3	47.3	49.5	51.5	53.6	52.5	46.0	40.2	31.5	26.8	22.6	22.3	22.2	21.6	21.8	21.8	22.0	27.0	40.8	53.4	59.5	65.6	68.5	39.9	68.5
11-Apr	67.3	65.7	51.9	54.9	57.3	66.0	60.4	59.8	69.4	48.0	37.8	36.1	33.6	33.8	33.9	29.2	29.0	30.4	37.2	47.6	53.6	52.5	53.9	59.5	48.7	69.4
12-Apr	68.5	66.5	63.9	68.7	66.9	59.2	56.1	56.6	56.9	56.7	53.1	57.3	57.3	51.1	53.1	57.1	60.6	60.5	58.5	71.4	83.3	89.1	92.1	91.7	64.8	92.1
13-Apr	91.2	81.6	80.5	84.7	87.1	86.1	81.5	70.8	60.0	49.8	38.7	27.5	24.6	27.8	23.5	21.9	27.6	26.8	31.1	40.5	58.1	67.8	75.9	79.2	56.0	91.2
14-Apr	84.4	88.0	90.7	90.5	92.4	92.5	83.4	58.1	36.5	24.9	21.1	20.9	20.8	20.6	21.7	26.0	30.0	37.0	39.5	46.1	52.2	51.4	49.5	48.0	51.1	92.5
15-Apr	50.6	50.1	49.1	51.1	51.3	54.2	55.3	59.8	45.6	40.6	38.5	39.3	34.2	26.1	23.4	24.6	25.5	27.4	25.9	27.5	31.6	51.6	54.3	55.3	41.4	59.8
16-Apr	83.3	92.6	94.7	95.1	96.3	95.4	92.4	88.8	87.1	84.5	81.4	80.9	81.2	83.6	85.3	81.6	77.0	88.6	95.4	92.7	91.5	93.0	93.1	92.2	88.7	96.3
17-Apr	90.8	89.4	88.6	89.3	88.0	89.1	85.8	87.9	81.6	85.6	84.5	77.8	73.9	71.5	69.4	66.4	62.6	60.3	62.0	73.3	80.5	84.3	86.8	83.1	79.7	90.8
18-Apr	83.9	84.5	81.6	80.8	80.2	78.7	75.4	70.5	64.8	56.3	47.4	42.6	34.8	29.9	27.9	27.2	26.7	29.4	31.3	33.9	33.7	32.5	32.5	32.4	50.8	84.5
19-Apr	31.8	33.5	36.9	42.5	47.1	49.6	51.5	48.0	53.0	53.4	47.4	44.6	38.3	31.7	32.3	29.8	35.1	38.1	46.5	45.6	52.5	60.0	67.3	77.0	45.6	77.0
20-Apr	92.4	95.6	94.9	92.4	89.5	88.9	85.0	78.5	75.1	68.9	59.3	52.6	47.8	41.6	37.1	35.0	34.0	32.6	33.5	44.9	56.9	61.7	58.2	69.0	63.6	95.6
21-Apr	74.1	76.9	77.9	79.8	79.7	83.1	72.7	53.0	43.9	37.5	34.9	30.8	27.7	25.0	23.0	21.2	20.9	21.6	23.9	35.5	41.5	46.7	48.6	48.1	47.0	83.1
22-Apr	51.5	52.1	55.2	58.6	60.9	65.2	60.7	52.5	56.5	75.3	68.2	63.4	60.3	50.3	40.0	37.5	41.8	56.4	54.4	57.9	65.8	74.8	74.1	66.4	58.3	75.3
23-Apr	57.7	59.3	59.1	63.6	66.2	73.1	70.2	60.1	50.8	41.8	34.8	30.1	27.5	26.3	25.5	26.2	31.3	37.8	41.8	50.9	61.3	59.3	61.9	65.4	49.2	73.1
24-Apr	69.5	78.1	83.5	86.5	87.0	88.3	76.7	62.6	52.7	44.5	39.8	39.1	39.6	38.2	38.8	33.9	33.2	33.2	42.3	52.1	59.4	64.3	68.3	72.9	57.7	88.3
25-Apr	76.2	78.2	78.7	81.8	82.8	78.4	53.0	36.4	29.2	25.4	22.0	20.9	20.5	20.5	19.5	18.6	18.5	18.7	20.7	24.4	31.4	37.3	37.8	34.1	40.2	82.8
26-Apr	35.0	39.1	40.6	40.5	39.4	40.2	43.7	42.2	36.6	33.4	19.8	17.1	19.3	21.5	29.0	34.3	38.1	41.3	50.0	59.2	64.4	72.4	76.3	75.4	42.0	76.3
27-Apr	78.9	83.2	86.4	85.4	87.3	87.8	83.6	80.6	81.5	78.9	69.8	58.7	49.4	45.1	43.1	39.9	37.4	37.5	37.2	46.7	58.2	60.5	65.9	72.1	64.8	87.8
28-Apr	78.1	80.2	85.4	85.7	85.3	79.8	60.5	42.2	37.4	33.4	27.3	24.6	20.3	17.6	16.8	20.6	22.2	24.2	26.4	33.0	32.7	40.4	47.6	50.9	44.7	85.7
29-Apr	61.5	73.8	68.7	64.8	67.4	66.5	62.9	55.2	51.3	48.3	52.9	67.6	80.0	76.9	66.4	63.7	58.9	55.3	50.4	51.9	68.3	78.0	84.4	89.7	65.2	89.7
30-Apr	87.3	80.5	72.4	75.1	75.7	77.4	76.8	72.0	63.5	50.6	49.2	50.5	65.7	60.7	86.4	87.9	86.5	78.7	85.4	87.9	90.9	94.0	94.2	93.9	76.8	94.2
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Surmont 2 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Surmont 2 - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	9	1.25	1.25
20 - 40	201	27.92	29.17
40 - 60	188	26.11	55.28
60 - 80	179	24.86	80.14
80 - 100	136	18.89	99.03

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

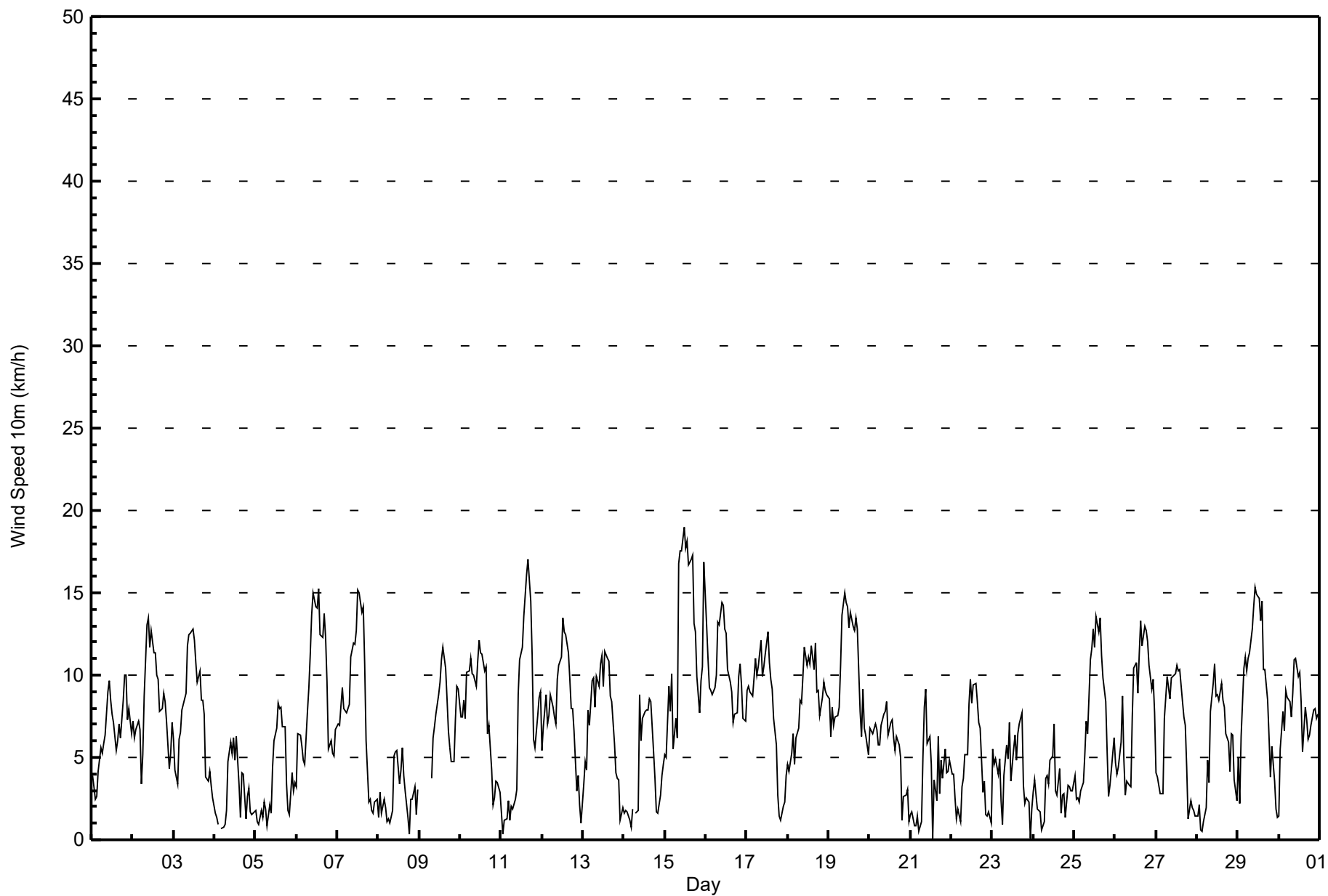
Surmont 2 - April 2025

Maximum Speed: 19 km/h on Apr 15 12:00										Maximum Daily Speed Average: 11.8 km/h on Apr 15										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 21 14:00										Minimum Daily Speed Average: 0.9 km/h on Apr 4										Hours of Data: 711						
Maximum Diurnal Speed Average: 4.1 km/h at hour 15										Minimum Diurnal Speed Average: 1.9 km/h at hour 20										Hours of Missing Data: 9						
Monthly Average Velocity: 2.6 km/h 277.7 deg										Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 7 Q ₃ = 10 P ₉₀ = 12 P ₉₉ = 17										Percent Operational Time: 98.8						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE4	SE3	SE2	SE3	SE4	SE6	ESE5	SE6	SE6	SE9	SE10	SSE8	SSE8	SE7	SSW5	SW6	WSW7	W6	NW9	NW10	NW10	WNW7	WNW8	WNW6	S1.8	NW10
2-Apr	WNW7	W6	W7	W7	W7	W3	WNW5	WNW9	WNW13	WNW13	WNW12	W13	WNW11	WNW11	NW10	N10	N8	N8	N9	N8	NNW7	NW4	NW5	NNW7	NW7.1	WNW13
3-Apr	NNW6	NW4	W3	WNW6	NW6	NW8	NW9	NW9	NW12	NNW12	NNW13	N13	NNW12	N11	N10	NNW10	NNW8	N8	N8	NW4	WNW4	WSW4	WSW3	WSW3	NNW6.9	N13
4-Apr	SSW2	S1	SSE1	UO	S1	S1	S1	ESE2	W5	WNW6	NW5	NNW6	N5	NNE6	ENE3	NNE1	NNE4	NE4	NW1	WSW3	SW3	SSW2	SW1	SW2	NW0.9	NNE6
5-Apr	SW2	SSE1	WSW1	SW2	SW1	SW2	SW2	SE1	ESE2	SSE2	E4	ESE6	ENE7	ENE8	ENE8	ENE8	NE7	ENE7	NE3	ESE2	SSE2	SE4	ESE3	ESE3	E2.4	ENE8
6-Apr	ESE3	ESE6	ESE6	ESE6	SE5	ESE5	ESE8	ESE9	ESE11	ESE14	ESE15	ESE14	ESE14	ESE15	SE12	SE12	ESE14	ESE12	ESE10	ESE6	ESE6	SE5	SSE5	SE7	ESE9.1	ESE15
7-Apr	SE7	SE7	SE8	SE9	SE8	SE8	SE8	SE8	SE11	SE12	SE12	SE13	ESE15	SE15	SE14	SE14	SE11	SE6	S2	WSW2	WSW2	SSW2	SSW2	SSW2	SE7.8	ESE15
8-Apr	S1	SSE3	SSW2	SSW2	SW2	WSW1	E1	E1	NE2	N5	NNW5	NW3	WNW4	NNW6	N4	NE3	NNE1	NNE0	WSW2	WSW2	SW3	SW2	WSW3	NW1.1	NNW6	
9-Apr	UO	UO	UO	UO	UO	UO	UO	WSW4	W6	NW7	NNW8	WNW9	WNW10	WNW11	W12	W10	W9	WNW7	W6	WSW5	W5	WSW7	WSW9	WSW9	---	W12
10-Apr	W7	WSW7	WSW8	WSW7	WSW10	WSW10	WSW11	WSW10	WSW10	WSW9	WSW11	WSW12	W11	W11	W10	W11	WSW6	WSW7	WSW4	SW2	SW3	SW4	SW3	SW3	WSW7.8	WSW12
11-Apr	SW2	E0	S1	SE1	WSW2	SW1	SW2	SSW2	SE2	NW3	NW9	WNW11	WNW12	W14	W15	W16	W17	W14	W11	WSW6	WSW6	W8	W9	W9	W6.5	W17
12-Apr	WSW5	WSW7	W9	WSW7	WSW8	W9	W8	W7	W7	WNW10	W11	WNW11	WNW13	WNW13	WNW12	WNW11	WNW10	WNW8	NNW8	NNW7	WNW3	WSW4	W2	W1	WNW7.4	WNW13
13-Apr	WSW3	W5	WNW4	W8	W7	W10	W10	WNW8	WNW10	NNW9	NW11	NNW11	NW9	NNW11	NW11	NW11	NNE9	N8	NNW6	WNW4	WSW4	WSW4	WSW1	SW2	NW6.1	NNW11
14-Apr	SW2	SW2	SW2	SW1	SW1	WSW2	UO	E2	WNW2	W9	W6	WSW7	SW8	WSW8	SW8	SW9	SW8	SSW5	SSE4	S2	SSW2	SSE3	SE4	S5	SW3.4	W9
15-Apr	SSE5	SSW5	WSW9	WSW8	WSW10	W6	W7	WSW6	W17	W18	W18	W19	W18	W18	W17	W17	W17	W13	W13	W10	WNW8	WNW10	W11	W17	W11.8	W19
16-Apr	W13	W11	W9	WNW9	WNW9	WNW9	WNW10	WNW13	NW13	NW14	NW14	NW13	NNW13	NNW10	NNW10	NNW9	NW7	NNW8	NNW8	NNW10	NNW11	NNW9	NNW7	NNW7	NW9.5	NW14
17-Apr	NNW9	NNW9	NNW9	NNW9	NNW10	NNW11	NNW10	NNW11	NNW12	NNW10	NNW11	NNW11	NNW13	NNW11	NNW10	NNW9	NNW7	NNE6	N3	WSW1	SW1	SSW2	S2	SE4	NNW7.1	NNW13
18-Apr	SE5	SE4	SSE5	SSE6	S5	SSW6	SSE7	SSE8	SSE8	SSE10	SSE12	SSE11	S11	S11	S12	S10	S12	S9	S9	SE8	SE9	SSE10	SSE9	SSE9	SSE8.2	S12
19-Apr	S9	SW6	WSW8	WSW7	WSW7	WSW8	WSW8	W11	WNW14	WNW15	W14	W14	W13	W14	W13	W13	W13	W13	WNW8	W6	W9	W7	W6	WNW5	W9.4	WNW15
20-Apr	NNW7	NNW7	NNW6	NNW7	NNW7	NNW6	NNW6	N7	NNW8	NNW8	NNW8	NNW6	NNW7	NNW7	NNW6	N5	N6	NE6	NE5	NW1	WSW3	WSW3	SW3	SSW1	NNW4.8	NNW8
21-Apr	SW2	SSW2	SW1	WSW1	SSW1	S0	SE1	SE5	SE8	ESE9	SE6	ESE6	S5	NW0	SW4	S2	ESE6	SSE3	SE5	SE4	SE6	SSE4	SSE4	SSE5	SE3.2	ESE9
22-Apr	SE4	SSE4	S3	SSW1	S2	WSW1	SE3	SE4	WSW5	WSW5	WSW8	WSW10	SW8	SW9	WSW10	WSW8	WNW7	WNW7	SW3	S4	SW2	S1	SSE2	S1	SW3.3	WSW10
23-Apr	W6	W5	W5	NW4	WSW5	W2	SW1	NNW4	NE6	NNE5	NE7	N4	NE6	NNE6	NNW5	NNE6	NNE7	NNE8	NNE3	WNW2	WSW3	W2	ENE0	W2	N2.3	NNE8
24-Apr	WSW3	WSW4	SW2	SW2	WSW2	WNW1	ESE1	NE4	E4	ENE3	NE5	SSE5	SSE7	WSW3	W3	SW4	SW2	ENE3	ESE3	SW1	WSW3	SW3	SW3	SW3	SSW1.0	SSE7
25-Apr	SW4	SSW2	SSW3	S2	SSE3	SSE3	SE5	SE7	S6	S11	S12	S13	SSW12	S14	SSW13	SW13	SSW11	SSW10	S8	SSE5	SW3	SW3	SSW4	S6	S6.6	S14
26-Apr	SSW5	WSW4	WSW4	SW6	WSW9	WSW5	SSW3	WSW4	SSW3	ESE3	NW7	WNW10	WNW11	NW9	NNW11	NNW13	NNW12	NNW13	NNW13	N12	N11	N9	N10	NNW8	NW5.7	NNW13
27-Apr	NW4	NW4	WNW3	WNW3	NW3	NNW7	NNW10	NNW9	NNW9	N10	NNW10	NNW10	N11	N10	N10	N8	NNE7	NE7	NE4	NE1	SW2	SW2	SW2	WSW1	NNW5.3	N11
28-Apr	SW1	WSW2	SW1	SW0	SSW1	SE2	ESE5	SE4	SE8	SE10	SE11	SSE9	SSE9	S8	SSE10	S8	S8	SSW6	S6	SE4	SW6	SSW6	SW4	S2	S4.7	SE11
29-Apr	WSW5	SSW2	SW6	WSW10	WSW11	WSW10	W11	W11	W13	W14	WNW15	W15	W15	WNW13	WNW14	NW10	NW10	WNW9	NNW6	NW4	WSW6	WSW4	SW2	SW1	W8.3	WNW15
30-Apr	SSW1	W6	W8	W7	W9	W9	W8	W7	WNW9	NW11	NW11	NNW10	W10	NNE8	WNW5	NNW8	N7	NNW6	NW6	NNW7	NNW8	NNW8	N7	NNW8	NW6.2	NW11
WSW1.9WSW2.1WSW2.8WSW2.9WSW3.3 W2.8 W2.1 W1.9WNW2.7WNW3.0WNW3.3WNW3.8 W3.7WNW3.6WNW4.1WNW4.0WNW3.1 NW2.5 NW1.9WNW1.9 W2.3WSW2.4WSW2.1WSW2.0 W13 W11 WSW9WSW10WSW11NNW11 W11WNW13 W17 W18 W18 W19 W18 W18 W17 W17 W17 W17 W14NNW13 N12 NNW11WNW10 W11 W17																								Diurnal Average	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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Surmont 2 - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	278	39.10	39.10
6 - 11	345	48.52	87.62
12 - 19	88	12.38	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: 711

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Surmont 2 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	6	7	9	4	6	12	26	20	21	27	52	44	13	13	15	3	278
6 - 11	21	10	6	5	0	13	25	17	14	5	11	42	50	35	22	69	345
12 - 19	2	0	0	0	0	9	7	1	5	2	1	1	31	14	5	10	88
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	29	17	15	9	6	34	58	38	40	34	64	87	94	62	42	82	711

Total Number of Valid Hours: 711

Total Number of Hours: 720



Surmont 2





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h
Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 7 km/h on Apr 16 00:00																		Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8							
Minimum Value: 0 km/h on Apr 4 02:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 6																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	1	1	1	2	2	1	2	2	2	4	3	3	3	3	3	3	3	4	5	4	3	3	2	5
2-Apr	2	2	2	2	2	1	2	4	5	5	5	5	5	4	4	4	4	3	3	3	3	2	2	3	5
3-Apr	2	2	1	2	3	3	3	4	5	5	5	5	5	4	4	4	3	4	3	2	1	1	2	1	5
4-Apr	2	0	1	UO	1	1	1	1	3	3	3	3	3	3	3	2	2	2	1	1	1	1	1	1	3
5-Apr	1	1	1	1	1	1	1	1	1	1	3	2	4	3	3	2	2	2	2	1	1	1	1	1	4
6-Apr	1	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	4	3	3	2	2	2	2	3	4
7-Apr	2	3	3	4	3	2	3	3	4	4	4	4	5	5	5	5	4	3	1	1	1	1	1	1	5
8-Apr	1	1	1	1	1	1	1	1	2	2	2	2	1	2	2	1	2	1	1	1	1	2	1	2	2
9-Apr	UO	UO	UO	UO	UO	UO	UO	UO	1	2	2	3	4	4	4	3	3	3	2	1	1	2	2	2	4
10-Apr	2	3	2	2	3	3	3	3	3	3	4	5	3	4	4	4	3	3	2	1	2	2	1	1	5
11-Apr	2	1	2	1	2	1	1	2	2	2	5	4	4	5	5	6	6	5	4	2	2	2	3	5	6
12-Apr	1	2	3	2	2	3	3	3	2	4	4	4	5	5	5	4	4	4	3	3	2	2	1	1	5
13-Apr	1	2	2	2	2	3	3	3	4	4	4	5	5	5	5	5	4	4	3	1	1	1	1	1	5
14-Apr	1	1	1	1	1	1	UO	1	3	3	3	4	3	4	4	4	4	4	1	2	1	1	2	2	4
15-Apr	3	3	4	3	3	2	3	4	6	7	7	7	6	6	6	6	7	5	5	4	3	5	4	7	7
16-Apr	5	4	3	3	3	3	4	6	5	6	7	5	5	5	4	4	3	3	3	4	4	4	3	3	7
17-Apr	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	3	3	3	2	2	2	1	1	1	5
18-Apr	2	2	3	3	2	3	3	3	3	4	5	4	6	5	5	5	5	4	4	3	3	4	4	4	6
19-Apr	4	3	4	3	3	3	3	3	5	5	4	5	5	5	4	5	5	5	4	2	3	2	2	2	5
20-Apr	3	3	3	3	3	2	2	3	3	4	3	4	4	4	3	3	3	2	2	1	1	1	1	1	4
21-Apr	1	1	1	1	1	1	1	2	3	3	3	4	3	3	3	2	2	2	2	2	2	2	2	2	4
22-Apr	2	2	2	2	1	1	2	1	3	2	3	3	4	4	4	3	3	2	2	2	1	1	1	1	4
23-Apr	2	1	1	1	1	1	1	2	2	3	3	4	3	3	3	3	4	3	2	1	1	3	1	1	4
24-Apr	1	1	2	1	1	1	1	2	1	2	3	2	3	2	2	2	2	1	1	1	1	1	1	1	3
25-Apr	1	1	1	1	1	1	2	3	4	5	5	5	6	6	6	6	5	5	4	2	1	1	2	3	6
26-Apr	3	2	2	3	3	4	2	2	3	2	3	4	4	4	5	5	5	5	6	5	4	4	4	3	6
27-Apr	2	1	1	1	1	4	4	4	3	4	4	4	4	4	4	3	4	3	2	1	1	1	1	1	4
28-Apr	1	1	1	1	1	1	1	2	2	3	4	4	4	4	5	5	4	3	3	1	4	4	4	2	5
29-Apr	4	1	3	4	3	3	4	3	5	5	5	6	5	5	5	4	4	4	3	2	2	2	1	2	6
30-Apr	1	3	2	2	3	3	3	2	3	5	5	4	5	3	3	4	3	2	2	3	3	3	3	3	5
5 4 4 4 4 4 4 6 6 7 7 7 6 6 6 6 7 5 6 5 4 5 4 7																									
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

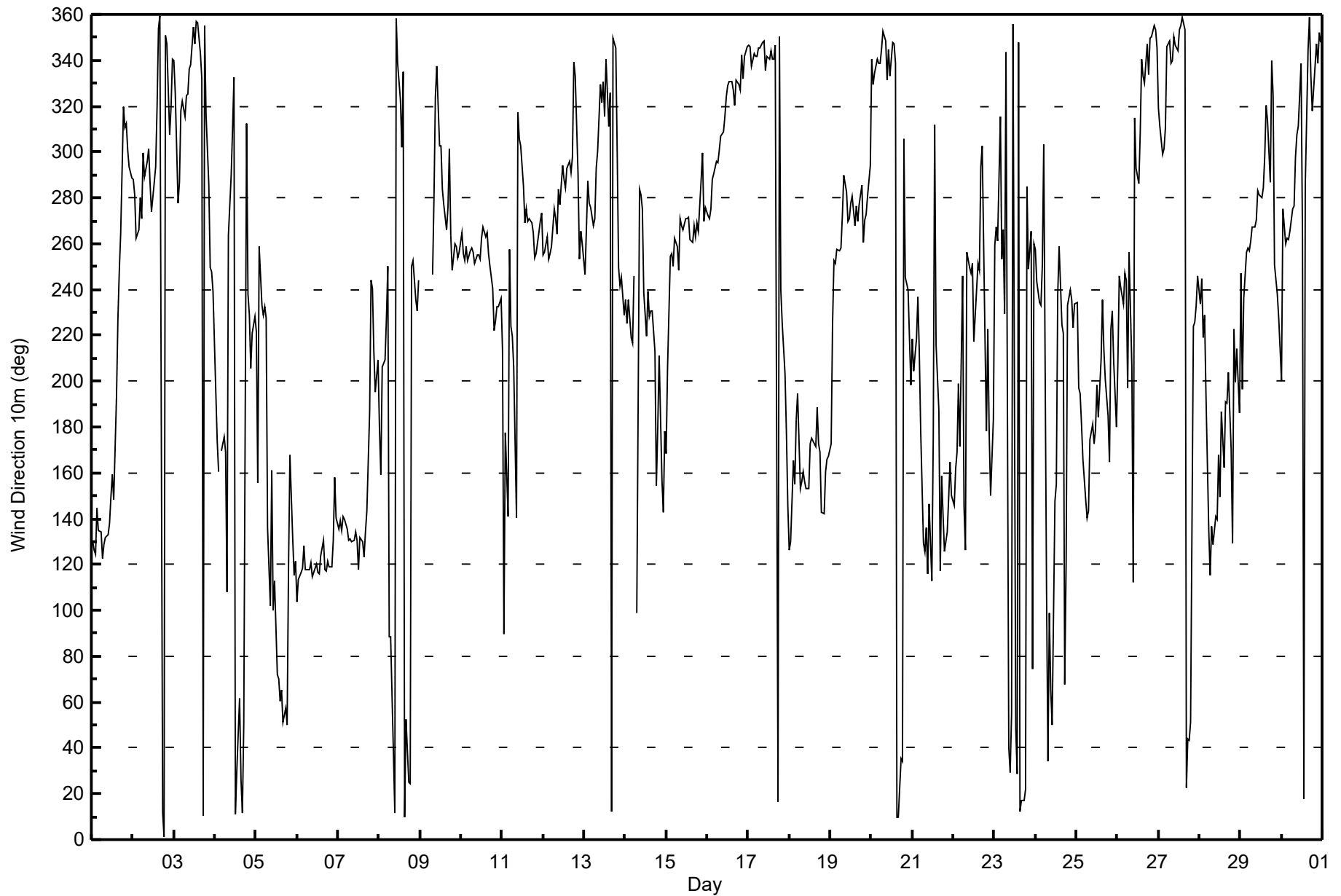
Surmont 2 - April 2025

Direction of Maximum Speed: 271 deg on Apr 15 12:00 Direction of Maximum Daily Speed Average: 265.5 deg on Apr 15																				Hours in Service: 720					
Direction of Minimum Speed: 312 deg on Apr 21 14:00 Direction of Minimum Daily Speed Average: 0.9 deg on Apr 4																				Hours of Data: 711					
Monthly Average Direction: 277.7 deg																				Hours of Missing Data: 9					
																				Percent Operational Time: 98.8					
Day	Hourly Period Ending At (MST)																				Daily Average				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	130	126	124	144	135	134	122	129	132	133	138	150	159	148	194	227	248	265	320	311	312	301	293	289	186.5
2-Apr	288	281	262	266	280	271	300	289	296	301	286	274	287	294	320	354	359	11	1	351	347	308	320	340	307.3
3-Apr	340	326	278	287	318	322	316	325	325	336	338	355	347	357	357	343	332	10	355	317	286	250	248	239	332.3
4-Apr	195	174	160	UO	170	176	169	108	264	290	310	333	11	30	62	26	12	51	312	238	229	206	221	228	324.5
5-Apr	222	155	258	233	229	232	228	136	102	161	100	113	72	70	61	65	51	57	50	119	168	131	116	121	88.7
6-Apr	104	114	117	118	128	118	118	118	121	115	117	120	117	116	124	130	118	117	121	119	119	131	158	141	120.6
7-Apr	135	139	135	141	140	135	130	131	130	131	134	130	118	132	130	124	134	144	187	244	241	213	195	209	135.4
8-Apr	180	159	206	210	228	250	89	88	38	11	358	339	323	302	335	10	53	25	24	250	252	236	231	244	318.7
9-Apr	UO	UO	UO	UO	UO	UO	UO	247	280	324	337	303	302	284	277	266	276	301	264	248	260	258	254	256	--
10-Apr	265	255	253	258	252	257	258	256	251	255	255	253	262	267	263	265	256	250	241	222	227	233	232	236	255.2
11-Apr	214	90	178	141	258	224	219	206	140	318	306	303	285	269	275	270	271	269	265	254	256	265	270	274	271.3
12-Apr	255	256	263	253	256	259	275	271	264	284	277	294	288	285	293	296	291	298	340	333	290	253	265	260	281.6
13-Apr	247	267	288	277	276	268	271	293	300	329	322	331	316	340	311	326	12	349	345	301	249	242	245	229	307.1
14-Apr	235	225	235	219	216	246	UO	99	284	281	275	239	219	239	228	231	230	213	154	180	211	157	143	178	226.6
15-Apr	168	205	255	255	250	262	259	248	271	268	266	271	271	272	262	261	268	263	269	265	287	299	269	276	265.5
16-Apr	272	271	275	288	291	296	295	301	307	309	315	324	329	331	330	327	320	332	330	327	342	332	341	346	312.6
17-Apr	347	346	337	343	342	342	345	345	348	348	335	342	340	344	341	340	346	17	351	240	225	203	177	146	343.2
18-Apr	126	130	166	155	183	194	153	156	161	156	153	153	173	175	174	171	189	173	169	143	142	160	166	167	163.6
19-Apr	173	225	253	252	257	257	258	272	290	283	270	271	277	281	268	277	270	277	286	261	270	273	280	294	269.3
20-Apr	340	329	334	340	338	339	345	353	348	331	345	333	348	347	338	10	10	35	34	306	245	240	219	198	343.3
21-Apr	218	204	218	237	213	179	129	126	136	116	146	113	176	312	216	187	117	159	142	126	134	149	165	150	145.0
22-Apr	146	161	169	199	172	246	145	126	256	250	247	252	217	229	251	248	294	303	218	178	223	177	150	184	230.7
23-Apr	259	268	261	315	253	266	229	343	40	29	55	356	48	29	348	12	17	17	22	285	249	266	74	260	349.5
24-Apr	258	244	234	233	251	303	108	34	99	65	50	148	155	238	259	225	221	68	121	233	240	235	223	234	196.6
25-Apr	234	197	195	181	166	148	140	144	175	181	172	179	199	184	209	235	213	201	185	165	223	230	209	180	190.8
26-Apr	208	246	241	234	247	244	197	256	206	112	315	293	286	309	340	333	330	347	334	350	350	355	353	346	316.5
27-Apr	319	311	299	301	311	346	348	339	340	350	346	344	353	355	359	353	23	44	43	51	224	226	233	246	347.8
28-Apr	233	245	219	229	194	135	116	137	128	141	140	168	150	187	162	191	191	204	170	129	223	199	214	186	169.2
29-Apr	247	196	236	256	258	257	261	268	267	270	283	281	280	284	298	321	314	287	340	324	251	238	227	214	276.5
30-Apr	200	275	260	263	262	265	275	277	297	308	311	339	263	18	286	345	359	333	318	328	347	339	352	348	309.0
244.0 247.7 251.4 257.0 258.4 266.3 268.1 278.5 282.4 294.4 294.3 286.8 279.6 290.1 284.4 290.8 296.3 311.5 311.4 291.5 274.3 256.9 253.5 252.8																									
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 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Surmont 2 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 109 deg on Apr 21 14:00																			Hours in Service: 720 Hours of Data: 711 Hours of Missing Data: 9 Hours of Calibration: 0 Percent Operational Time: 98.8						
Minimum Value: 11 deg on Apr 9 20:00																									
Percentiles: P ₁ = 17 P ₁₀ = 25 Q ₁ = 33 Median = 43 Q ₃ = 55 P ₉₀ = 71 P ₉₉ = 92																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	38	39	57	62	41	40	28	35	37	30	37	47	51	46	63	53	30	45	41	43	41	37	32	32	63
2-Apr	30	25	21	23	25	39	41	36	34	37	32	36	39	42	47	49	46	43	43	39	39	44	49	40	49
3-Apr	43	48	31	31	43	47	42	48	46	44	44	44	44	45	44	47	42	41	38	40	20	15	20	34	48
4-Apr	50	43	47	UO	52	76	70	47	75	57	67	58	72	60	77	101	59	48	63	36	33	33	44	59	101
5-Apr	51	76	73	30	51	19	42	79	44	76	80	47	47	40	41	35	38	35	51	73	69	33	37	40	80
6-Apr	29	18	18	19	36	24	19	21	24	17	19	30	22	21	30	29	21	18	18	25	24	42	51	49	51
7-Apr	38	46	43	47	48	40	41	45	34	33	35	33	25	36	36	31	40	44	69	49	35	58	47	69	69
8-Apr	80	56	61	46	65	77	72	91	74	58	43	42	54	41	41	37	48	81	84	23	53	24	52	17	91
9-Apr	UO	UO	UO	UO	UO	UO	UO	24	31	45	49	45	41	36	39	33	35	44	25	11	14	19	19	20	49
10-Apr	20	20	18	22	20	22	25	25	23	33	35	35	31	38	40	37	62	41	38	33	28	27	19	30	62
11-Apr	61	102	90	73	68	82	73	76	91	76	49	47	36	32	32	29	28	28	26	19	22	28	26	27	102
12-Apr	20	19	22	18	20	23	26	31	35	32	31	31	34	34	34	34	39	39	43	46	42	17	65	76	76
13-Apr	27	26	47	26	26	28	30	38	39	44	43	45	52	41	49	58	49	47	44	47	17	18	61	22	61
14-Apr	38	27	33	59	81	30	UO	26	97	35	71	54	54	56	56	52	51	66	39	64	61	57	45	58	97
15-Apr	60	67	33	25	23	32	30	44	30	30	31	32	31	30	33	29	30	29	29	26	41	42	29	29	67
16-Apr	28	28	29	33	34	34	37	39	45	44	45	44	44	45	42	43	41	42	41	44	41	39	42	42	45
17-Apr	41	39	41	39	40	36	42	41	40	43	41	41	39	44	46	45	47	56	67	69	74	44	47	46	74
18-Apr	44	47	58	53	62	51	45	42	47	45	42	44	57	53	56	57	56	59	55	51	50	48	52	57	62
19-Apr	50	66	39	30	25	26	28	31	33	31	31	30	33	32	31	34	31	34	37	22	25	26	30	37	66
20-Apr	45	39	42	44	38	41	45	46	38	48	48	71	69	59	63	72	57	50	36	66	21	49	39	50	72
21-Apr	33	37	83	91	68	77	80	35	40	30	77	68	72	109	85	87	52	60	41	30	34	47	53	44	109
22-Apr	51	51	75	81	66	90	53	38	60	50	38	32	55	51	38	47	51	31	66	58	75	60	89	108	108
23-Apr	39	21	19	40	25	42	70	66	54	77	57	94	71	59	67	48	50	44	55	42	46	82	102	56	102
24-Apr	27	27	45	40	70	78	71	63	59	85	75	55	46	89	89	64	86	55	25	53	23	25	32	23	89
25-Apr	26	28	28	37	39	32	35	42	70	60	58	55	59	57	56	55	58	61	51	53	60	40	52	57	70
26-Apr	82	80	82	66	42	85	66	75	73	77	65	46	44	45	45	44	45	45	43	40	45	43	46	42	85
27-Apr	41	36	35	40	34	40	41	42	42	42	47	43	43	45	45	59	51	44	45	92	40	24	19	49	92
28-Apr	67	20	56	76	52	74	16	43	34	39	43	56	68	65	59	60	62	64	60	34	65	61	79	81	81
29-Apr	58	72	53	25	25	24	27	29	31	31	33	31	30	32	34	45	45	42	54	65	18	19	44	52	72
30-Apr	71	38	21	23	23	26	24	29	33	43	43	46	43	44	51	50	40	43	43	42	38	38	36	40	71
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS30 ELLS RIVER APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
APRIL 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	685	34	35	99.86	-	-	30.9	0	3.4	0
TRS (ppb) Average	684	35	36	99.86	2.6	0	2.2	0	1	0
THC (ppm) Average	685	34	35	99.86	-	-	5.1	-	2.8	-
NMHC (ppm) Average	685	34	35	99.86	-	-	1.811	-	0.41	-
CH4 (ppm) Average	685	34	35	99.86	-	-	4	-	2.5	-
NO2 (ppb) Average	685	35	35	100	-	-	46.3	0	15.5	-
NO (ppb) Average	685	35	35	100	-	-	87.3	-	12.5	-
NOX (ppb) Average	685	35	35	100	-	-	122.6	-	26.6	-
PM2.5 (ug/m3) Average	719	1	1	100	-	-	30.1	0	12.1	0
Temperature 2 m (C) Average	720	0	0	100	-	-	22.2	-	12.2	-
Relative Humidity (%) Average	720	0	0	100	-	-	96.7	-	90.7	-
Wind Speed 10 m (km/h) Average	699	0	21	97.08	-	-	34	-	21	-
Wind Direction 10 m (deg) Average	699	0	21	97.08	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	720	0	0	100	-	-	876.1	-	303.1	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	685	0.81	2.2	-	0	0	0	0.1	0.4	2.3	30.9
TRS (ppb) Average	684	0.55	0.2	-	0.3	0.4	0.4	0.5	0.6	0.8	2.2
THC (ppm) Average	685	2.21	0.4	-	2	2	2	2.1	2.2	2.6	5.1
NMHC(ppm) Average	685	0.079	0.169	-	0	0	0	0	0.1	0.3	1.811
CH4(ppm) Average	685	2.13	0.2	-	2	2	2	2.1	2.1	2.3	4
NO2 (ppb) Average	685	6.24	6.9	-	0.2	0.4	1.3	4	8.4	15.1	46.3
NO (ppb) Average	685	2.19	6.6	-	0	0	0	0.2	1.7	4.1	87.3
NOX (ppb) Average	685	8.43	11.9	-	0.2	0.4	1.4	5.1	10.4	19.7	122.6
PM2.5 (ug/m3) Average	719	5.06	4	-	0.1	1.5	2.6	3.9	6.5	10.3	30.1
Temperature 2 m (C) Average	720	3.92	6.5	-	-13.2	-4.2	-0.3	3.8	8.3	12.4	22.2
Relative Humidity (%) Average	720	58.21	20.8	-	15.3	28.6	42.8	58.9	73.9	87.8	96.7
Wind Speed 10 m (km/h) Average	699	11.4	7	-	0	3	6	10	16	21	34
Wind Direction 10 m (deg) Average	699	258	-	-	-	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	720	203.76	262.1	-	0	0	0	58.3	364.2	674.2	876.1

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	16 Apr 2025 13:00	16 Apr 2025 13:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	01 Apr 2025 06:00	01 Apr 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	05 Apr 2025 00:00	05 Apr 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Apr 2025 02:00	14 Apr 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	14 Apr 2025 05:00	14 Apr 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Apr 2025 02:00	20 Apr 2025 08:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction	21 Apr 2025 04:00	21 Apr 2025 07:00	4	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Apr 2025 01:00	25 Apr 2025 02:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Apr 2025 04:00	25 Apr 2025 04:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Apr 2025 06:00	25 Apr 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Apr 2025 22:00	29 Apr 2025 22:00	1	Flat line in sensor output signal



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

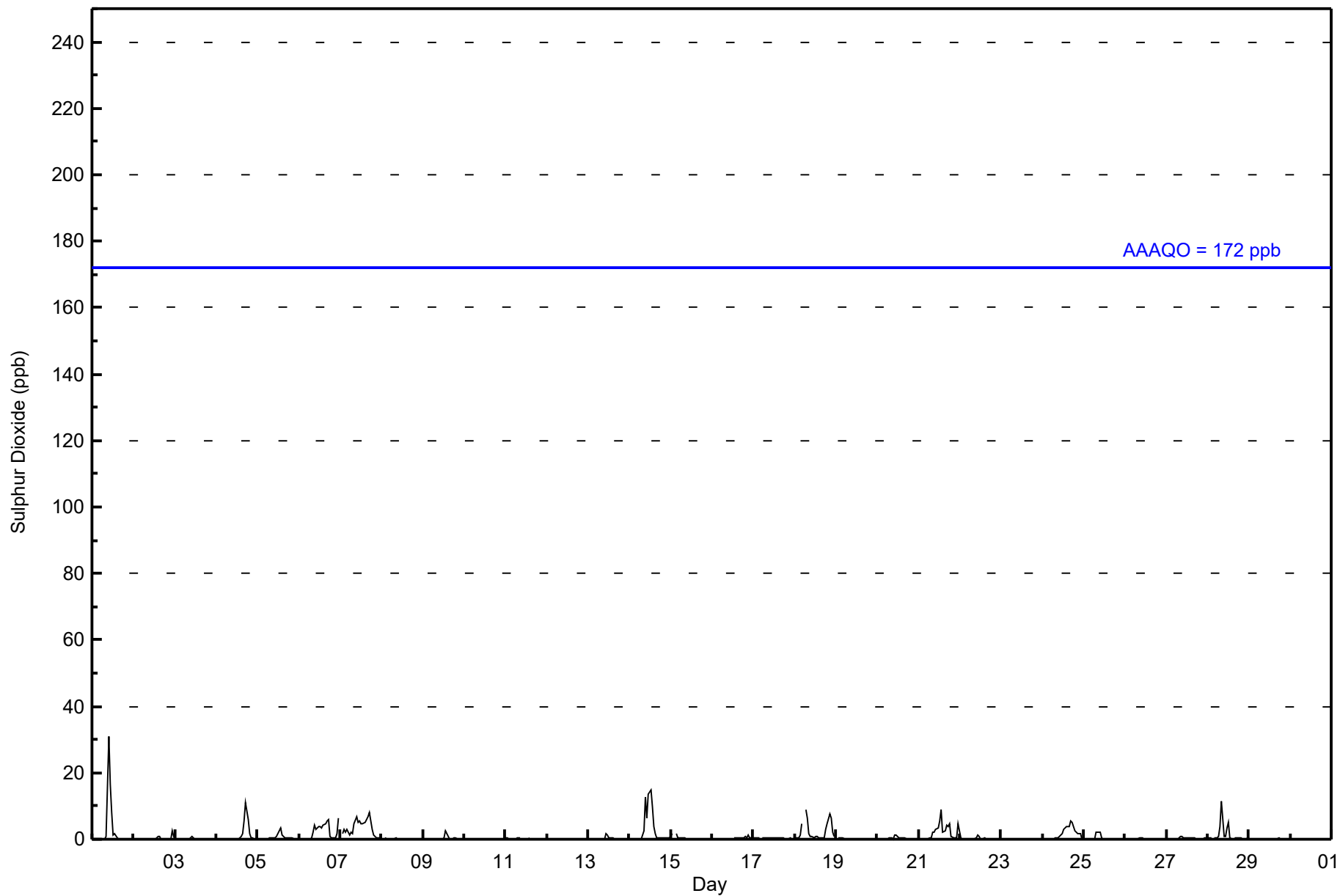
Ells River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720										
Maximum Value: 30.9 ppb on Apr 1 10:00 Maximum Daily Average: 3.4 ppb on Apr 7																		Hours of Data: 685										
Minimum Value: 0.0 ppb on Apr 1 04:00 Minimum Daily Average: 0.0 ppb on Apr 30																		Hours of Missing Data: 35										
Maximum Diurnal Average: 2.2 ppb at hour 10 Minimum Diurnal Average: 0.1 ppb at hour 6																		Hours of Calibration: 34										
Monthly Average: 0.81 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 2.3 P ₉₉ = 10.1																		Percent Operational Time: 99.9										
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	30.9	16.5	8.0	1.4	1.5	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	2.6	30.9		
2-Apr	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.8	0.7	0.1	0.1	0.1	0.1	0.1	0.1	2.4	0.7	0.3	2.4		
3-Apr	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	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	0.1	0.7		
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	1.9	5.6	11.1	5.7	1.7	0.4	0.2	0.1	0.1	1.2	11.1		
5-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.6	0.4	0.5	0.8	2.5	3.5	1.4	1.0	0.6	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.6	3.5		
6-Apr	0.1	0.1	0.2	0.1	0.1	Z	0.1	0.3	2.2	4.0	2.9	3.8	3.8	3.2	4.3	4.5	5.5	5.9	0.7	0.4	0.4	0.3	1.9	6.5	2.2	6.5		
7-Apr	Z	1.7	3.1	2.3	3.1	1.2	2.0	1.8	4.8	6.8	5.3	5.7	4.7	4.7	4.9	5.9	6.8	7.9	3.0	1.2	0.7	0.5	0.4	0.5	3.4	7.9		
8-Apr	0.4	Z	0.2	0.2	0.1	0.0	0.0	0.2	0.2	0.2	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4		
9-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4	1.9	0.2	0.1	0.1	0.6	0.4	0.1	0.1	0.1	0.1	0.3	2.4		
10-Apr	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	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
11-Apr	0.3	0.5	0.2	0.1	Z	0.2	0.2	0.2	0.3	C	C	C	C	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5		
12-Apr	0.0	0.0	0.1	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	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1		
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.6	1.2	0.4	0.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6		
14-Apr	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	2.3	12.9	6.5	13.7	14.7	9.9	3.7	1.5	0.4	0.5	0.5	0.5	0.5	0.5	0.3	0.4	3.0	14.7		
15-Apr	0.9	1.9	Z	1.8	0.6	0.3	0.3	0.2	0.2	0.1	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	0.1	0.3	1.9		
16-Apr	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	M	0.2	0.2	0.3	0.6	0.4	0.2	0.8	0.4	1.2	0.3	0.3	0.3	1.2		
17-Apr	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.3	0.3		
18-Apr	0.2	0.5	0.5	1.1	4.7	Z	8.8	6.5	1.6	0.8	0.8	0.6	0.7	0.6	0.5	0.4	0.3	0.6	3.2	4.8	7.7	6.6	2.0	0.9	2.4	8.8		
19-Apr	Z	0.5	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	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.5		
20-Apr	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.2	1.2	1.2	0.5	0.4	0.4	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3	1.2		
21-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	2.2	2.3	3.0	3.5	5.3	9.0	2.2	2.7	4.4	3.8	4.7	0.8	0.3	0.3	0.6	4.6	2.2	9.0		
22-Apr	0.6	0.2	0.2	Z	0.1	0.0	0.1	0.1	0.2	0.2	1.2	0.7	0.2	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2		
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2		
24-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.1	0.3	0.5	0.4	0.7	1.7	2.8	3.3	3.6	3.9	5.7	5.1	3.8	2.5	1.6	1.8	1.6	0.2	1.7	5.7		
25-Apr	Z	0.1	0.0	0.0	0.1	0.1	0.2	2.2	2.3	2.1	0.6	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.4	2.3		
26-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3		
27-Apr	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.5	0.8	0.7	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.8		
28-Apr	0.2	0.2	0.2	Z	0.2	0.2	0.8	4.0	11.6	1.0	0.8	3.2	4.9	0.5	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	1.3	11.6		
29-Apr	0.2	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4		
30-Apr	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	0.1	0.0	0.1	0.1	0.1	0.0	0.1		
		0.2	0.3	0.2	0.3	0.4	0.1	0.5	0.6	1.1	2.2	1.5	1.6	1.6	1.4	0.9	0.8	1.0	1.3	0.8	0.5	0.5	0.4	0.4	0.5	Diurnal Average		
		0.9	1.9	3.1	2.3	4.7	1.2	8.8	6.5	11.6	30.9	16.5	13.7	14.7	9.9	4.9	5.9	6.8	11.1	5.7	4.8	7.7	6.6	2.4	6.5	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 (SO₂) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	678	98.98	98.98
11 - 20	6	0.88	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: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	52	95	28	10	4	25	52	88	58	37	38	38	34	32	41	28	660
11 - 20	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	6
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	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	52	95	28	10	4	25	54	90	61	37	38	38	34	32	41	28	667

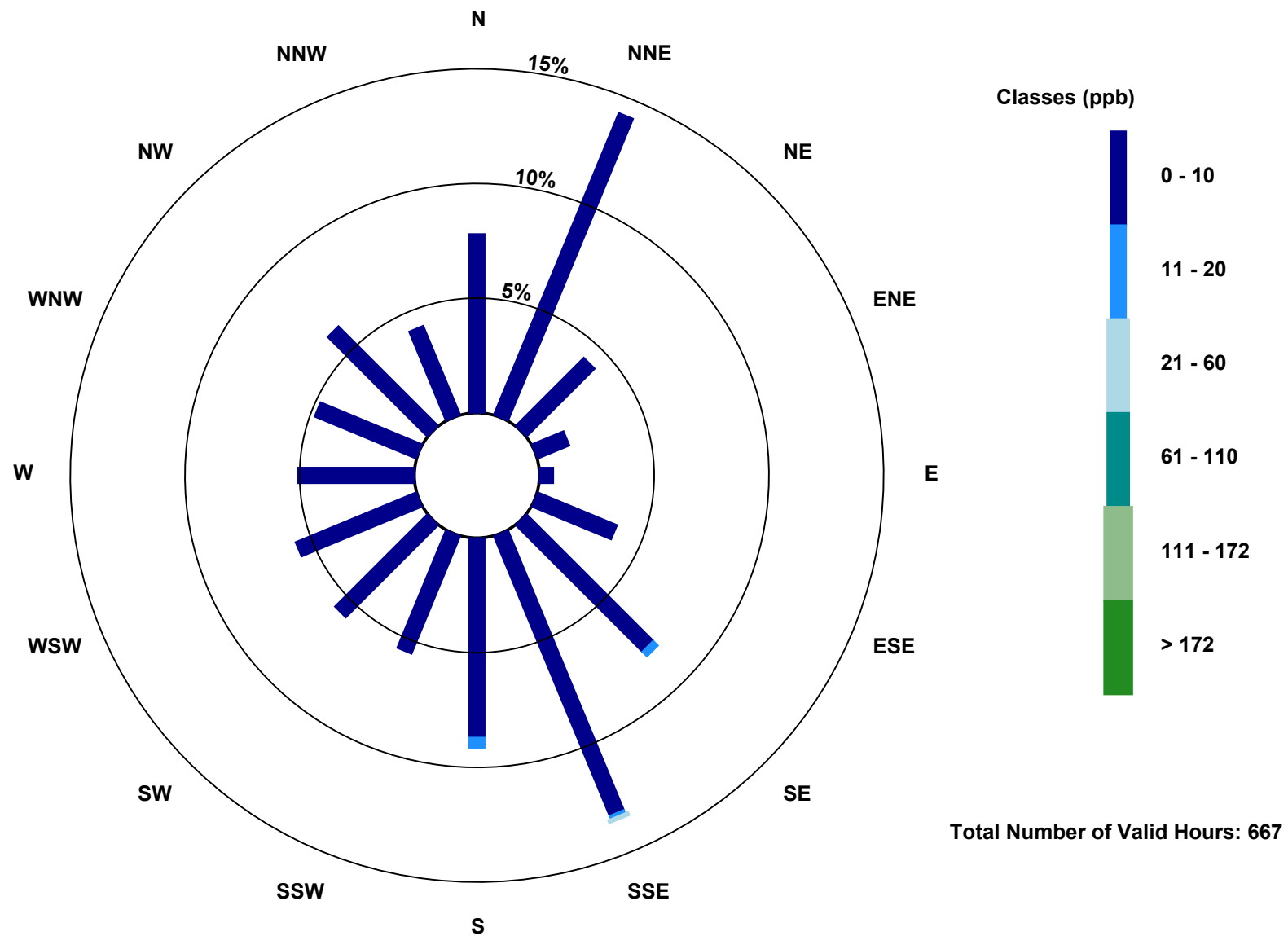
Total Number of Valid Hours: 667

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

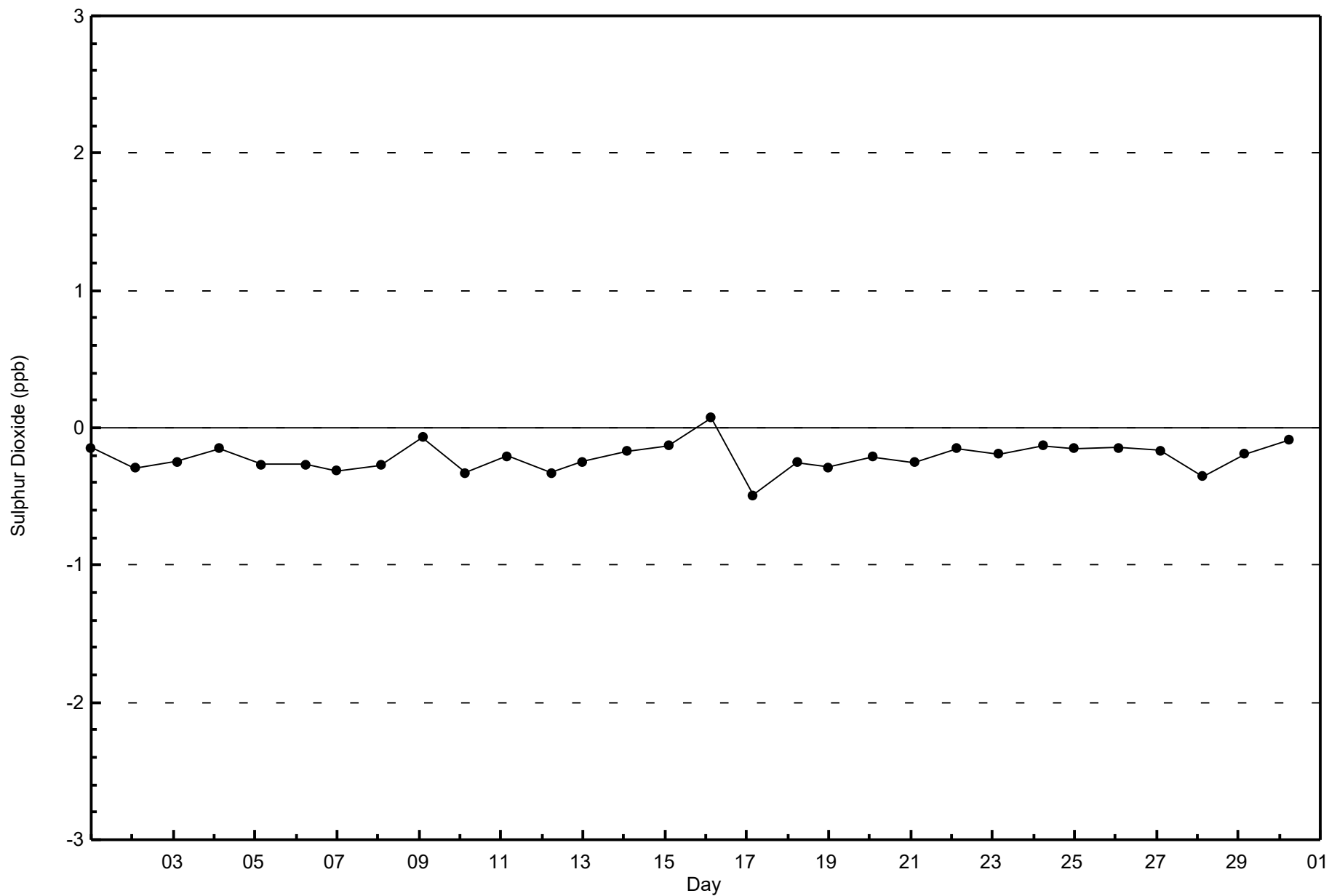
Sulphur Dioxide (SO₂) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

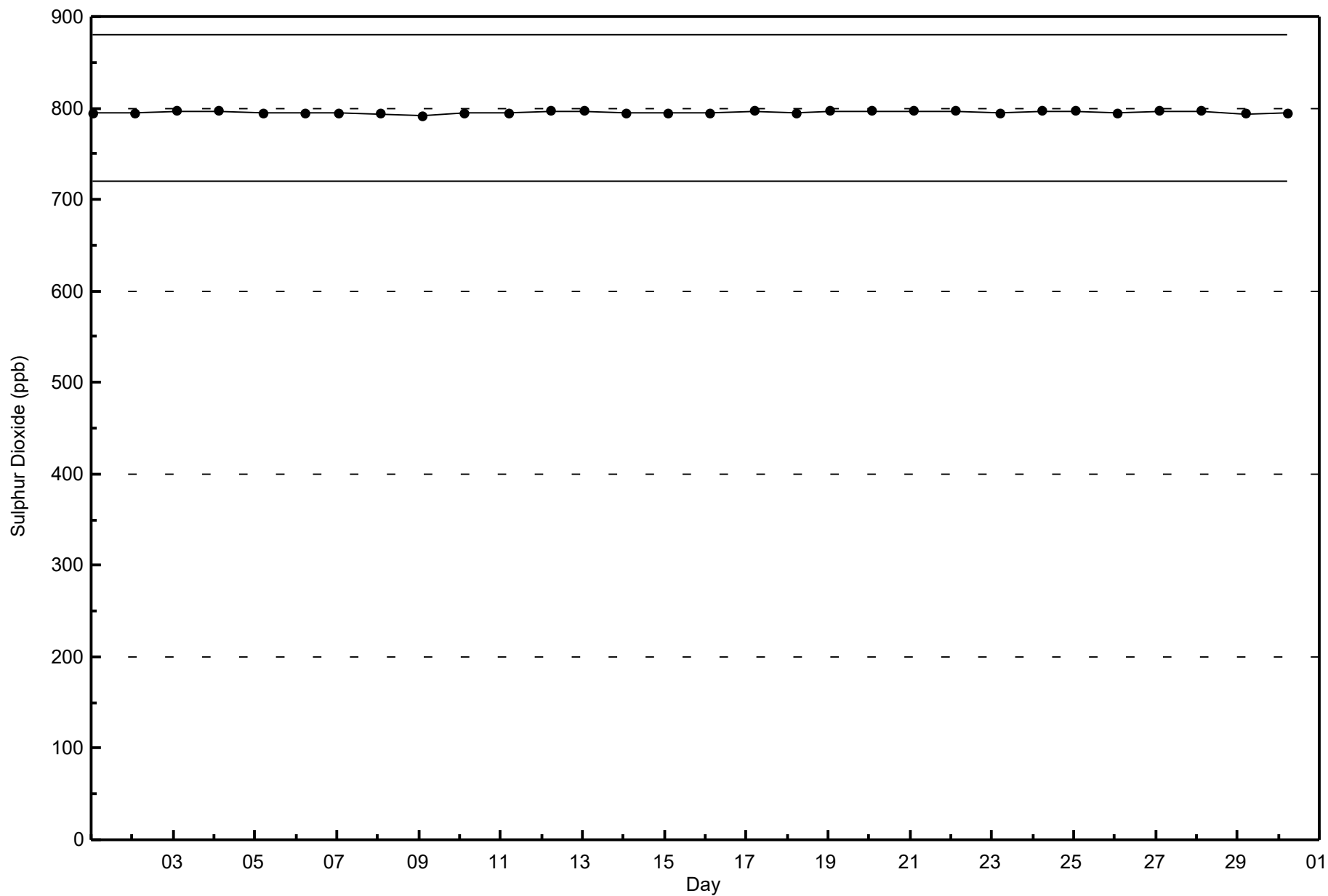
Sulphur Dioxide (SO₂) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - April 2025

Number of Exceedences (AAAQG): 30-Min: 0																			Periods in Service: 1440							
Maximum Value: 2.6 ppb on Apr 15 05:00 Maximum Daily Average: 1.0 ppb on Apr 8																			Periods of Valid Data: 1369							
Minimum Value: 0.3 ppb on Apr 10 18:30 Minimum Daily Average: 0.4 ppb on Apr 10																			Periods of Invalid Data: 71							
Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 17																			Periods of Calibration: 69							
Monthly Average: 0.55 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.5																			Percent Operational Time: 99.9							
Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
1-Apr	0.4 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.7 0.7	0.7 0.6	0.4 0.5	0.5 C	C C	C C	C C	0.8 1.0	2.5 0.7	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	2.5
2-Apr	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	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	0.5 0.4	0.5 0.5	0.4 0.4	0.4	0.5
3-Apr	0.5 0.4	0.4 0.4	0.4 0.4	Z SP	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 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4	0.5
4-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.7	0.6 0.7	0.7 0.6	0.6 1.0	1.0 1.0	1.0 1.0	1.0 1.0	1.0 1.0	0.5	1.0
5-Apr	0.9 1.0	1.1 1.0	0.9 0.9	1.0 0.7	0.6 0.7	Z SP	0.9 0.9	0.8 0.8	1.4 1.2	1.2 1.2	0.9 1.0	0.8 0.7	1.0 0.8	0.7 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	0.5 0.6	0.5 0.5	0.5 0.4	0.5 0.4	0.8	1.4
6-Apr	Z SP	0.5 0.5	0.6 0.6	0.6 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.5	0.7 0.8	0.8 0.8	1.2 1.0	0.8 0.7	0.6 0.6	0.8 0.9	0.8 0.6	0.6 0.7	1.1 1.0	0.6 0.6	0.6 0.6	0.5 0.5	0.6 0.6	0.8 0.7	0.9 1.0	0.7	1.2	
7-Apr	0.8 0.7	Z SP	0.7 0.7	0.7 0.8	0.9 0.7	0.5 0.6	0.7 0.7	0.7 1.0	1.0 1.2	1.0 0.9	0.8 0.7	0.9 1.1	1.0 0.7	0.7 0.7	0.7 0.9	0.9 0.7	0.6 0.7	0.8 0.7	0.7 0.6	0.6 0.6	0.5 0.4	0.4 0.5	0.5 0.4	0.4 0.5	0.7	1.2
8-Apr	0.5 0.5	0.5 0.5	Z SP	0.7 0.9	0.9 0.9	0.8 0.8	0.9 1.1	1.6 2.1	2.1 1.9	2.0 2.0	1.6 1.4	1.4 1.3	1.2 1.1	1.1 1.0	1.1 1.0	1.0 1.0	1.0 1.0	0.9 0.9	0.9 0.9	0.9 0.9	0.8 0.8	0.8 0.8	0.8 0.7	0.7 0.8	1.0	2.1
9-Apr	0.8 0.7	0.7 0.8	1.0 1.0	Z SP	0.8 0.8	0.8 0.8	0.8 0.7	0.7 0.7	0.7 0.7	0.7 0.7	1.1 1.0	0.9 0.9	1.0 1.2	0.9 1.0	0.5 0.6	0.5 0.4	0.4 0.4	0.7 0.8	0.8 0.8	0.8 0.7	0.7 0.7	0.7 0.7	0.6 0.6	0.7	1.2	
10-Apr	0.6 0.5	0.6 0.5	0.5 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.3	0.3 0.3	0.3 0.3	0.4 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.4 0.4	0.4 0.4	0.5 0.5	0.6 0.7	0.4	0.7	
11-Apr	0.8 0.9	1.0 1.1	0.9 0.7	0.8 0.8	0.6 0.6	Z SP	0.6 0.6	0.7 0.7	0.8 0.9	1.0 1.1	1.3 1.3	0.9 0.6	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.5	0.6	1.3
12-Apr	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.5	0.4	0.5	
13-Apr	0.5 0.5	Z SP	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.6 0.6	0.6 0.6	0.8 1.7	1.2 0.7	0.8 0.6	0.6 0.7	0.6 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.6 0.5	0.6	1.7	
14-Apr	0.7 0.6	0.6 0.5	Z SP	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.7 1.1	1.5 1.4	0.9 0.7	1.0 0.8	0.5 0.9	0.5 0.5	0.5 0.4	0.5 0.4	0.7 0.4	0.4 0.4	0.5 0.5	0.8 1.2	0.7 0.6	0.6 0.7	0.7 0.7	0.6	1.5	
15-Apr	0.6 0.6	0.6 0.7	1.0 1.1	Z SP	1.9 2.6	2.3 1.9	0.6 1.1	0.7 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.4 0.6	0.4 0.5	0.6 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.7	2.6	



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - April 2025

Day	Period Ending At (MST)																								Daily Average	Daily Maximum
	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00		
16-Apr	0.4 0.4	0.5 0.5	0.4 0.5	0.4 0.4	Z SP	0.4 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	M M	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.9 0.5	0.5 0.5	0.5 0.5	0.5	0.9
17-Apr	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.6	Z SP	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.5 0.5	0.5 0.6	0.5 1.1	1.8 1.4	0.8 0.6	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5	1.8
18-Apr	Z SP	0.5 0.6	0.5 0.4	0.4 0.5	0.7 0.6	0.6 0.8	1.1 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 0.4	0.4 0.4	0.5 0.5	0.9 0.7	0.5 0.9	0.8 0.6	0.6 1.2	0.9 0.5	0.5 0.5	0.5 0.5	0.6	1.2
19-Apr	0.5 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.5
20-Apr	0.5 0.5	0.5 0.5	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.7	0.6 0.6	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4	0.7
21-Apr	0.5 0.5	0.5 0.5	0.5 0.6	Z SP	0.6 0.5	0.5 0.5	0.5 0.6	0.6 0.6	0.7 1.0	0.8 0.7	0.5 0.8	0.8 0.8	0.6 0.7	0.4 0.5	0.4 0.5	0.5 0.4	0.4 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.5 0.7	0.5 0.7	0.6	1.0
22-Apr	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.4	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.5	0.6 0.8	0.7 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5	0.8
23-Apr	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.3 0.4	Z SP	0.3 0.3	0.6 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.6	0.7 0.7	0.6 0.7	0.8 0.6	0.5 0.6	0.5	0.8
24-Apr	Z SP	0.6 0.5	0.6 0.6	0.5 0.6	0.6 0.6	0.6 0.6	0.9 0.8	1.0 0.9	0.7 0.8	0.6 0.7	0.7 0.7	0.7 0.7	0.7 0.7	0.7 0.7	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.6 0.6	0.5 0.6	0.6 0.5	0.6 0.5	0.6	1.0
25-Apr	0.5 0.5	Z SP	0.5 0.6	0.5 0.5	0.5 0.4	0.5 0.5	0.5 1.0	0.7 0.7	0.9 0.6	0.7 0.5	0.6 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 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	0.5	1.0
26-Apr	0.4 0.4	0.4 0.4	Z SP	0.5 0.5	0.5 0.4	0.5 0.4	0.4 0.4	0.4 0.4	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.5	0.4 0.4	0.5 0.4	0.4 0.5	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.5
27-Apr	0.4 0.4	0.4 0.4	0.4 0.4	Z SP	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.5 0.5	0.5 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.5
28-Apr	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	Z SP	0.4 0.4	0.5 0.7	0.6 0.6	0.8 0.7	0.5 0.5	0.5 0.5	0.4 0.5	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	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	0.8
29-Apr	0.5 0.5	0.6 0.6	0.7 0.7	0.7 0.7	0.7 0.6	Z SP	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.5	0.5 0.6	0.5 0.5	0.5 0.5	0.5 0.5	0.5 0.4	0.4 0.4	0.5 0.5	0.4 0.5	0.5 0.4	0.4 0.5	0.4 0.5	0.5	0.7
30-Apr	Z SP	0.5 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.5 0.4	0.4 0.4	0.4 0.5	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4 0.4	0.4	0.5
																								Diurnal Average		
																								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

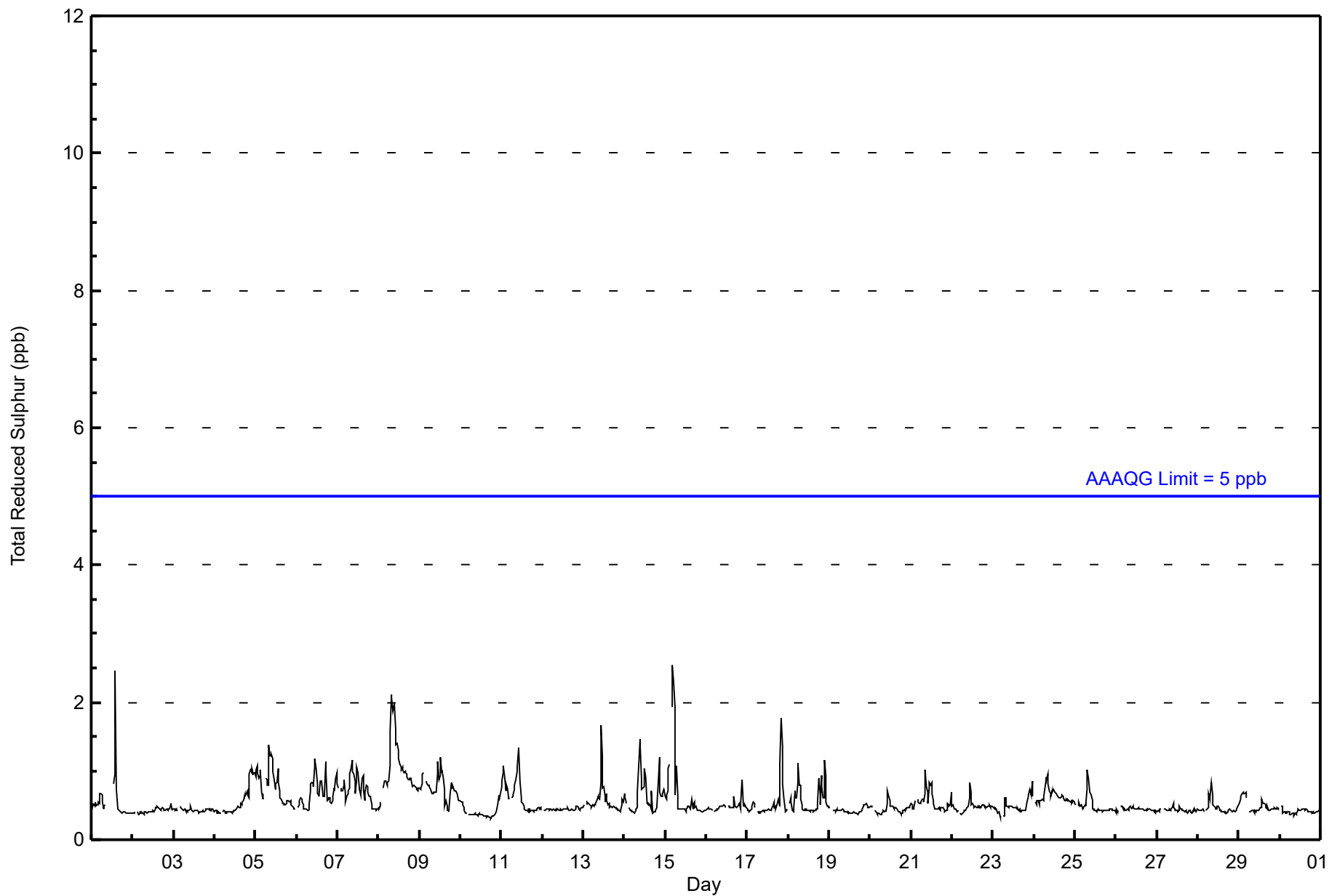
Ells River - April 2025

Maximum Value: 2.2 ppb on Apr 15 05:00															Maximum Daily Average: 1.0 ppb on Apr 8										Hours in Service: 720		
Minimum Value: 0.3 ppb on Apr 10 19:00															Minimum Daily Average: 0.4 ppb on Apr 10										Hours of Data: 684		
Maximum Diurnal Average: 0.6 ppb at hour 10															Minimum Diurnal Average: 0.5 ppb at hour 17										Hours of Missing Data: 36		
Monthly Average: 0.55 ppb															Percentiles: P ₁ = 0.4 P ₁₀ = 0.4 Q ₁ = 0.4 Median = 0.5 Q ₃ = 0.6 P ₉₀ = 0.8 P ₉₉ = 1.5										Hours of Calibration: 35		
																									Percent Operational Time: 99.9		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.4	Z	0.5	0.5	0.5	0.7	0.6	0.5	C	C	C	C	C	0.9	1.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	1.6
2-Apr	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5
3-Apr	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
4-Apr	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	1.0	1.0	1.0	0.5	1.0
5-Apr	1.0	1.0	0.9	0.8	0.6	Z	0.9	0.8	1.3	1.2	1.1	0.8	0.8	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.8	1.3	
6-Apr	Z	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.8	0.8	0.9	1.1	0.7	0.6	0.9	0.7	0.7	1.1	0.6	0.6	0.5	0.6	0.7	0.9	0.7	1.1	
7-Apr	0.8	Z	0.7	0.7	0.8	0.6	0.7	0.9	1.1	1.0	0.8	1.0	0.9	0.7	0.8	0.8	0.6	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.7	1.1	
8-Apr	0.5	0.5	Z	0.8	0.9	0.8	1.0	1.8	2.0	2.0	1.5	1.4	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	1.0	2.0	
9-Apr	0.7	0.8	1.0	Z	0.8	0.8	0.8	0.7	0.7	0.7	0.8	1.0	1.1	1.0	0.8	0.5	0.5	0.4	0.8	0.8	0.7	0.7	0.7	0.6	0.7	1.1	
10-Apr	0.6	0.5	0.5	0.4	Z	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	0.3	0.3	0.4	0.5	0.6	0.6	0.4	0.6	
11-Apr	0.8	1.0	0.8	0.8	0.6	Z	0.6	0.7	0.8	1.0	1.3	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	1.3	
12-Apr	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.5	
13-Apr	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.3	1.0	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.6	1.3	
14-Apr	0.6	0.5	Z	0.4	0.4	0.4	0.4	0.5	0.9	1.4	0.8	0.8	1.0	0.5	0.5	0.5	0.6	0.4	0.4	0.5	1.0	0.7	0.7	0.7	0.6	1.4	
15-Apr	0.6	0.7	1.1	Z	2.2	2.1	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.7	2.2	
16-Apr	0.4	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.5	0.5	0.5	M	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.7	
17-Apr	0.4	0.4	0.4	0.5	0.5	Z	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	0.8	1.6	0.7	0.4	0.4	0.5	1.6	
18-Apr	Z	0.6	0.5	0.4	0.7	0.7	1.0	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8	0.7	0.7	0.9	0.7	0.5	0.6	1.0	
19-Apr	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	0.5	0.5	0.5	0.5	0.4	0.5	
20-Apr	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	
21-Apr	0.5	0.5	0.5	Z	0.6	0.5	0.6	0.6	0.8	0.7	0.6	0.8	0.8	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.8	
22-Apr	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	
23-Apr	0.5	0.5	0.4	0.4	0.3	Z	0.3	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	0.6	0.7	0.7	0.7	0.5	0.7	
24-Apr	Z	0.5	0.6	0.5	0.6	0.6	0.7	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.9	
25-Apr	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.9	0.8	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9	
26-Apr	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	
27-Apr	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	
28-Apr	0.4	0.4	0.4	0.4	Z	0.4	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	
29-Apr	0.5	0.6	0.7	0.7	0.7	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.7	
30-Apr	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA																											



Wood Buffalo Environmental Association
Hourly Averages

Total Reduced Sulphur (TRS) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Reduced Sulphur (TRS) - ppb
Ells River - April 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
Ells River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	53	94	28	10	4	27	53	86	61	38	38	36	37	33	40	28	666
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	53	94	28	10	4	27	53	86	61	38	38	36	37	33	40	28	666

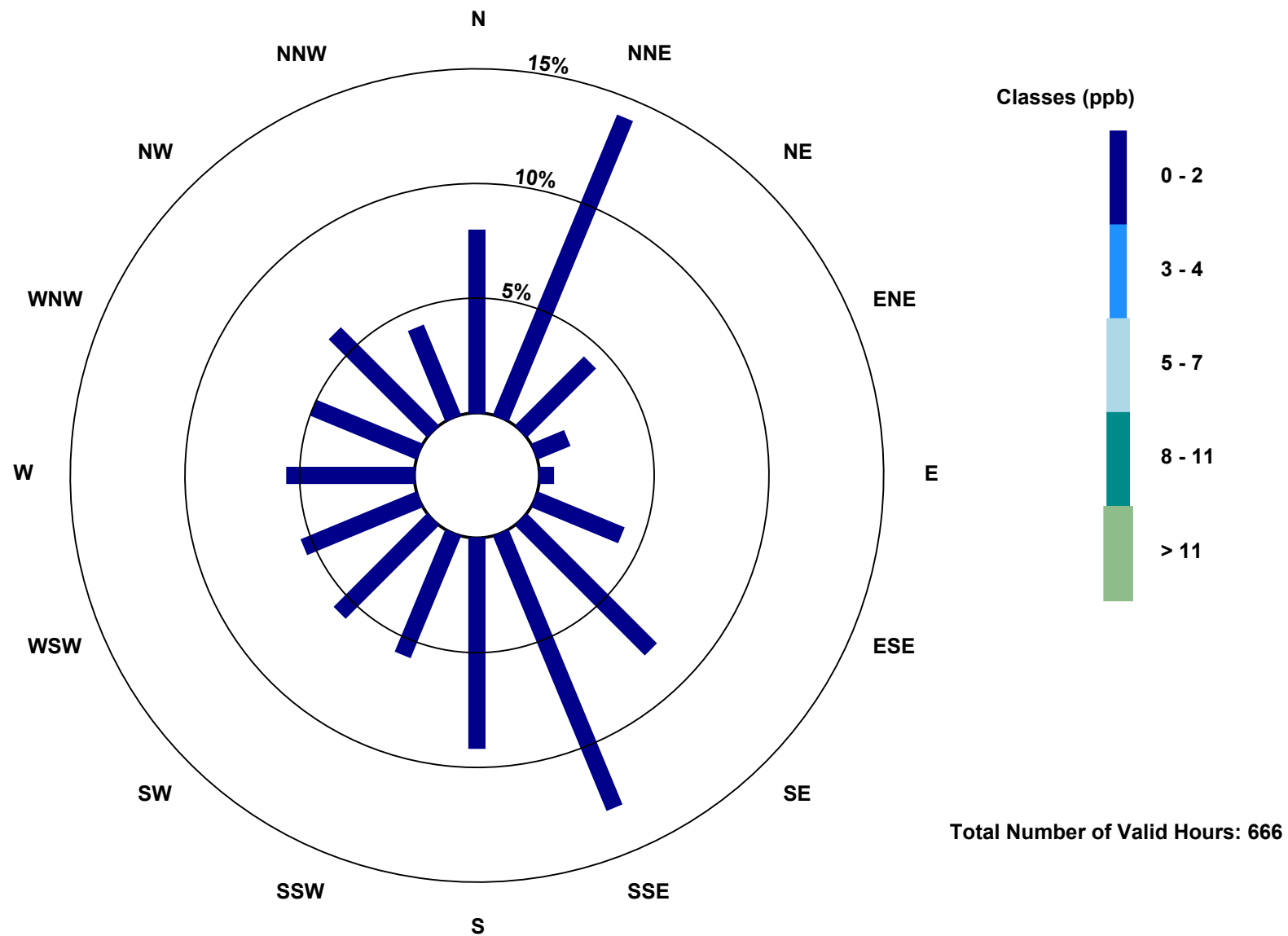
Total Number of Valid Hours: 666

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Reduced Sulphur (TRS) - ppb
Ells River



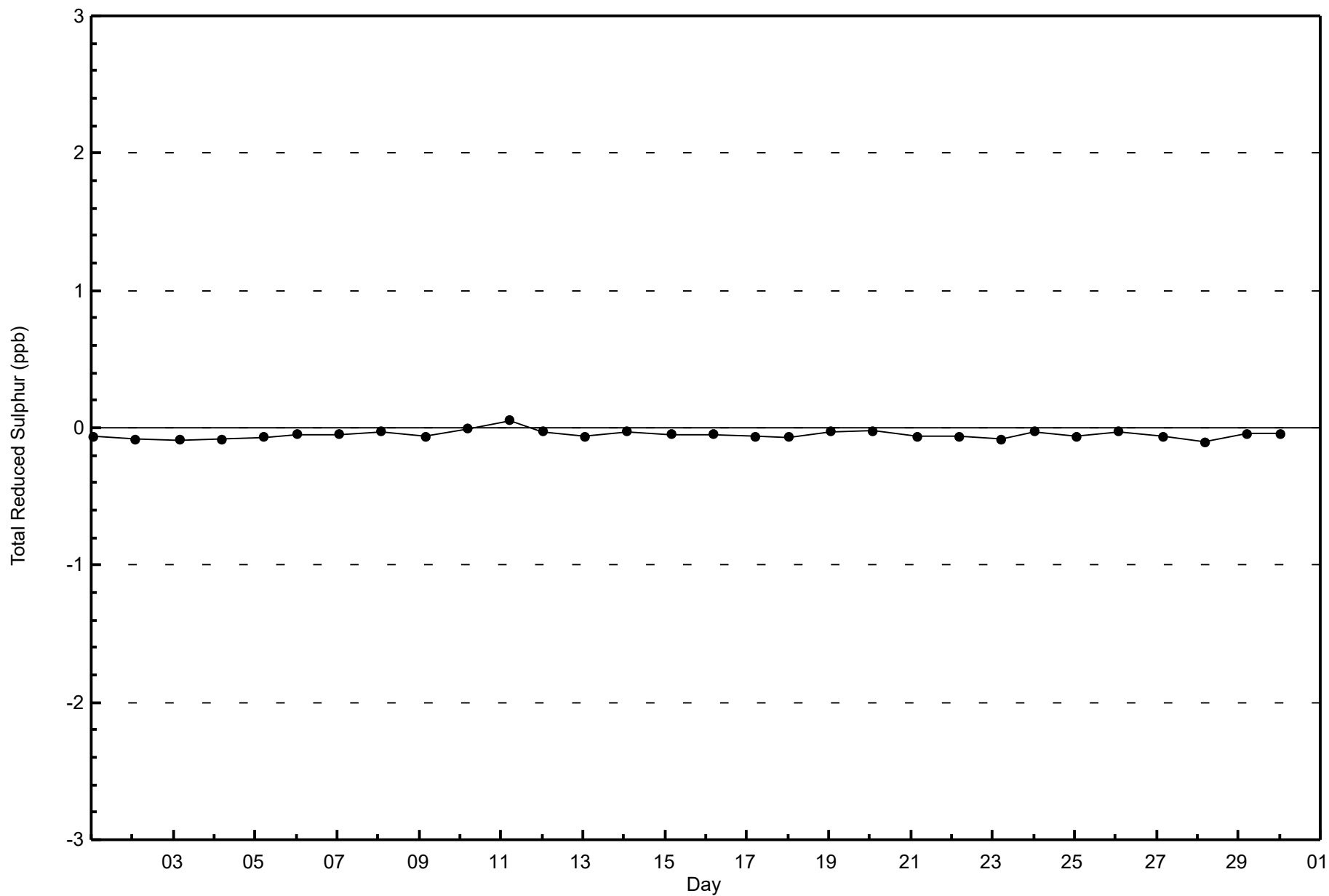


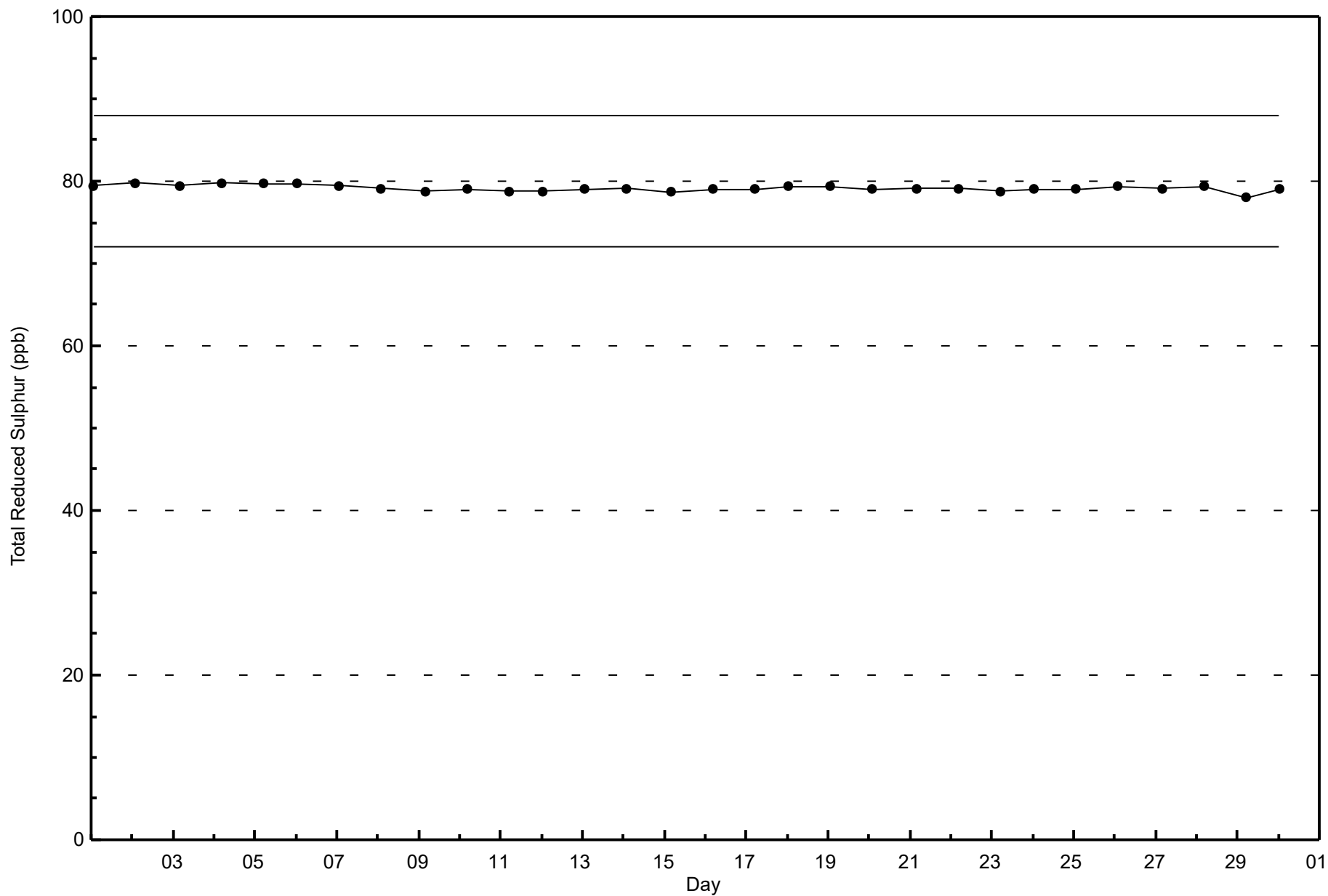
Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

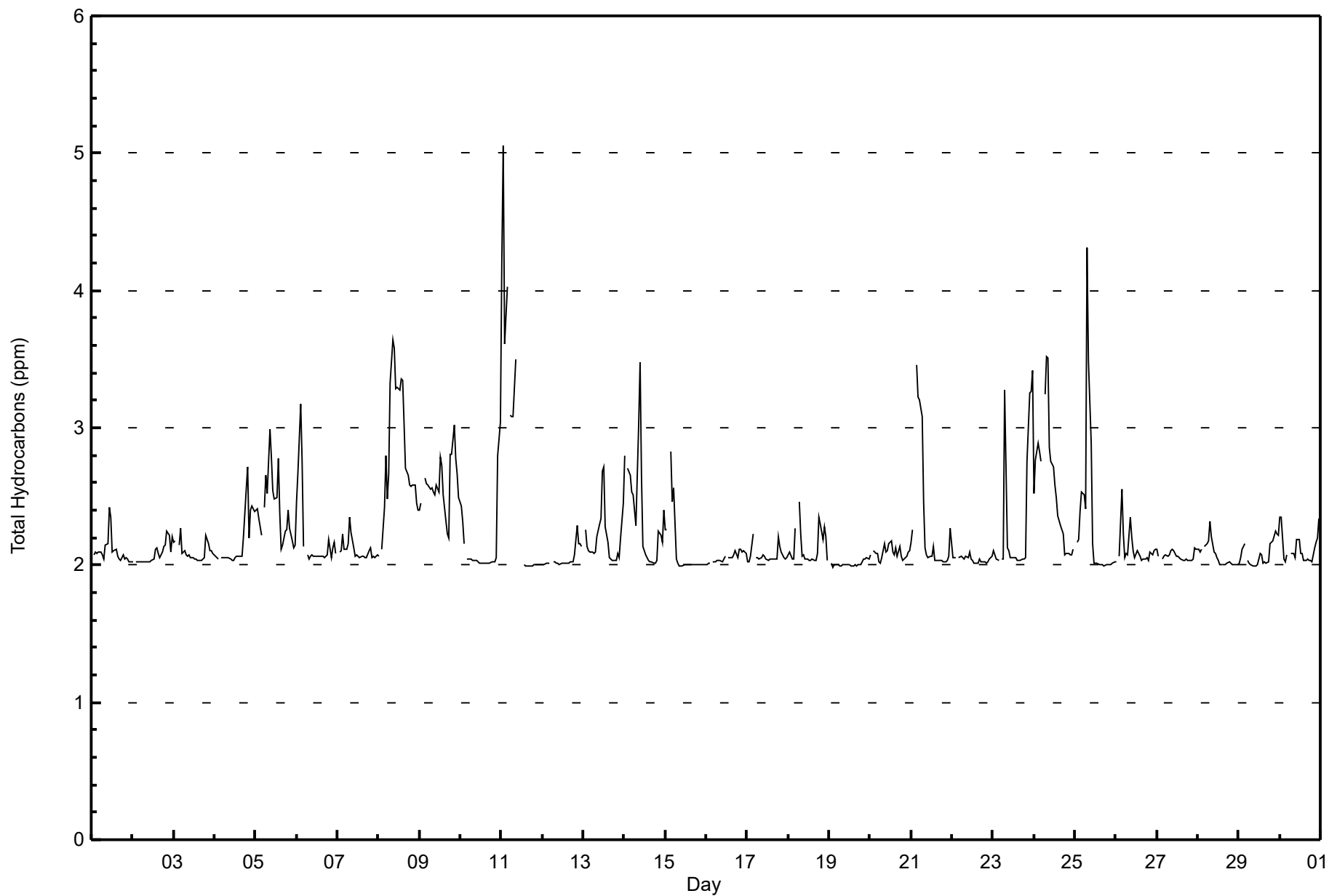
Ells River - April 2025

Maximum Value: 5.1 ppm on Apr 11 02:00																		Maximum Daily Average: 2.8 ppm on Apr 8																		Hours in Service: 720	
Minimum Value: 2.0 ppm on Apr 19 03:00																		Minimum Daily Average: 2.0 ppm on Apr 19																		Hours of Data: 685	
Maximum Diurnal Average: 2.4 ppm at hour 4																		Minimum Diurnal Average: 2.1 ppm at hour 17																		Hours of Missing Data: 35	
Monthly Average: 2.21 ppm																		Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.2 P ₉₀ = 2.6 P ₉₉ = 3.5																		Hours of Calibration: 34	
																																				Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
1-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.4	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.1												
2-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.1												
3-Apr	2.2	2.2	Z	2.1	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	2.1	2.2	2.2	2.1	2.1	2.1	2.1												
4-Apr	2.1	2.1	2.0	Z	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.6	2.7	2.2	2.4	2.4	2.4	2.2												
5-Apr	2.4	2.4	2.3	2.2	Z	2.4	2.7	2.5	3.0	2.8	2.5	2.5	2.5	2.8	2.4	2.1	2.1	2.2	2.3	2.4	2.3	2.2	2.1	2.1	2.4												
6-Apr	2.5	2.7	3.2	2.8	2.1	Z	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	2.2	2.1	2.1	2.2	2.1	2.2												
7-Apr	Z	2.1	2.1	2.2	2.1	2.1	2.2	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1												
8-Apr	2.1	Z	2.1	2.4	2.8	2.5	2.7	3.3	3.6	3.6	3.3	3.3	3.3	3.4	3.3	3.0	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.4	2.8												
9-Apr	2.4	2.4	Z	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.6	2.5	2.8	2.7	2.5	2.3	2.2	2.2	2.8	2.8	3.0	2.8	2.7	2.5												
10-Apr	2.4	2.3	2.2	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	2.8	3.0	2.1												
11-Apr	4.2	5.1	3.6	4.0	Z	3.1	3.1	3.1	3.5	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7												
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.2	2.1	2.0												
13-Apr	Z	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.7	2.7	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.5	2.2												
14-Apr	2.8	Z	2.7	2.7	2.5	2.5	2.4	2.3	3.0	3.5	2.6	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.4	2.4												
15-Apr	2.3	2.3	Z	2.8	2.5	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	M	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1												
17-Apr	2.0	2.0	2.1	2.2	Z	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.0	2.1	2.1												
18-Apr	2.1	2.1	2.0	2.0	2.3	Z	2.5	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.3	2.2	2.0	2.1												
19-Apr	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	2.0												
20-Apr	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1												
21-Apr	2.2	2.3	Z	3.5	3.2	3.2	3.1	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.3												
22-Apr	2.1	2.1	2.0	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0												
23-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	3.3	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.8	3.3	3.3	3.4	2.3												
24-Apr	2.5	2.8	2.9	2.8	2.8	Z	3.2	3.5	3.5	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.6												
25-Apr	Z	2.2	2.2	2.4	2.5	2.5	2.4	4.3	3.5	2.9	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	2.3												
26-Apr	2.0	Z	2.1	2.6	2.2	2.1	2.1	2.1	2.3	2.2	2.1	2.1	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												
27-Apr	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1												
28-Apr	2.1	2.1	2.1	Z	2.1	2.2	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												
29-Apr	2.0	2.1	2.1	2.2	Z	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	2.2	2.2	2.2	2.2	2.2	2.2	2.1												
30-Apr	2.4	2.4	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.1												
2.3 2.3 2.2 2.4 2.3 2.3 2.3 2.4 2.4 2.3 2.2 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.1 2.2 2.2 2.2 2.2																								Diurnal Average													
4.2 5.1 3.6 4.0 3.2 3.2 3.2 4.3 3.6 3.6 3.3 3.3 3.3 3.4 3.3 3.0 2.7 2.7 2.8 2.8 3.0 3.3 3.3 3.4																								Diurnal Maximum													
Z - zerospan C - Calibration M - Maintenance																																					



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Ells River - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	259	37.81	37.81
2.1 - 3.0	395	57.66	95.47
3.1 - 10.0	31	4.53	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	6	34	11	1	0	1	6	25	26	18	31	33	26	19	17	3	257
2.1 - 3.0	43	57	16	8	4	23	44	63	34	19	7	5	8	11	21	20	383
3.1 - 10.0	3	4	1	1	0	1	4	2	1	0	0	0	0	2	3	5	27
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	95	28	10	4	25	54	90	61	37	38	38	34	32	41	28	667

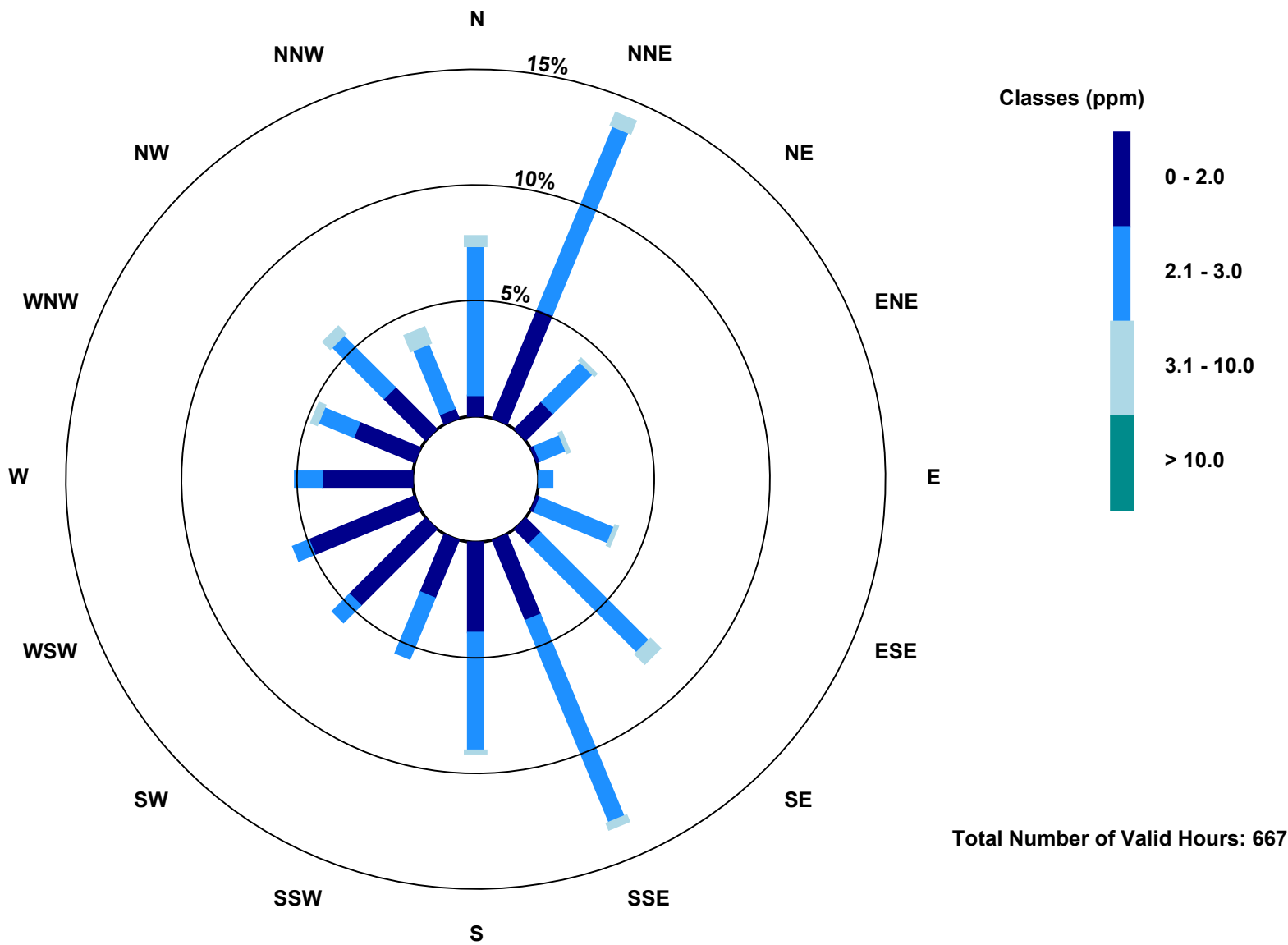
Total Number of Valid Hours: 667

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Total Hydrocarbons (THC) - ppm
Ells River

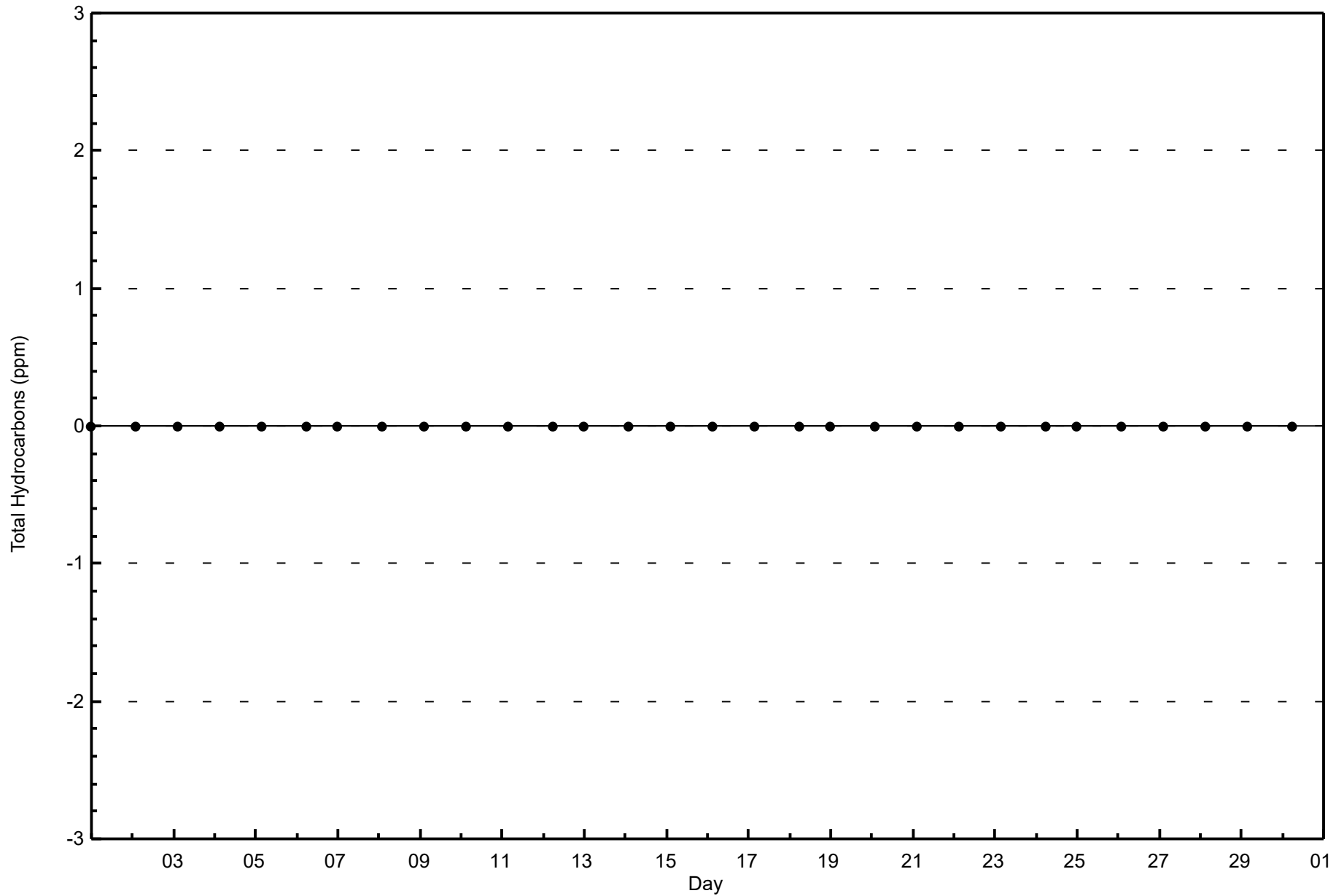


Total Number of Valid Hours: 667



Wood Buffalo Environmental Association
Zero Responses

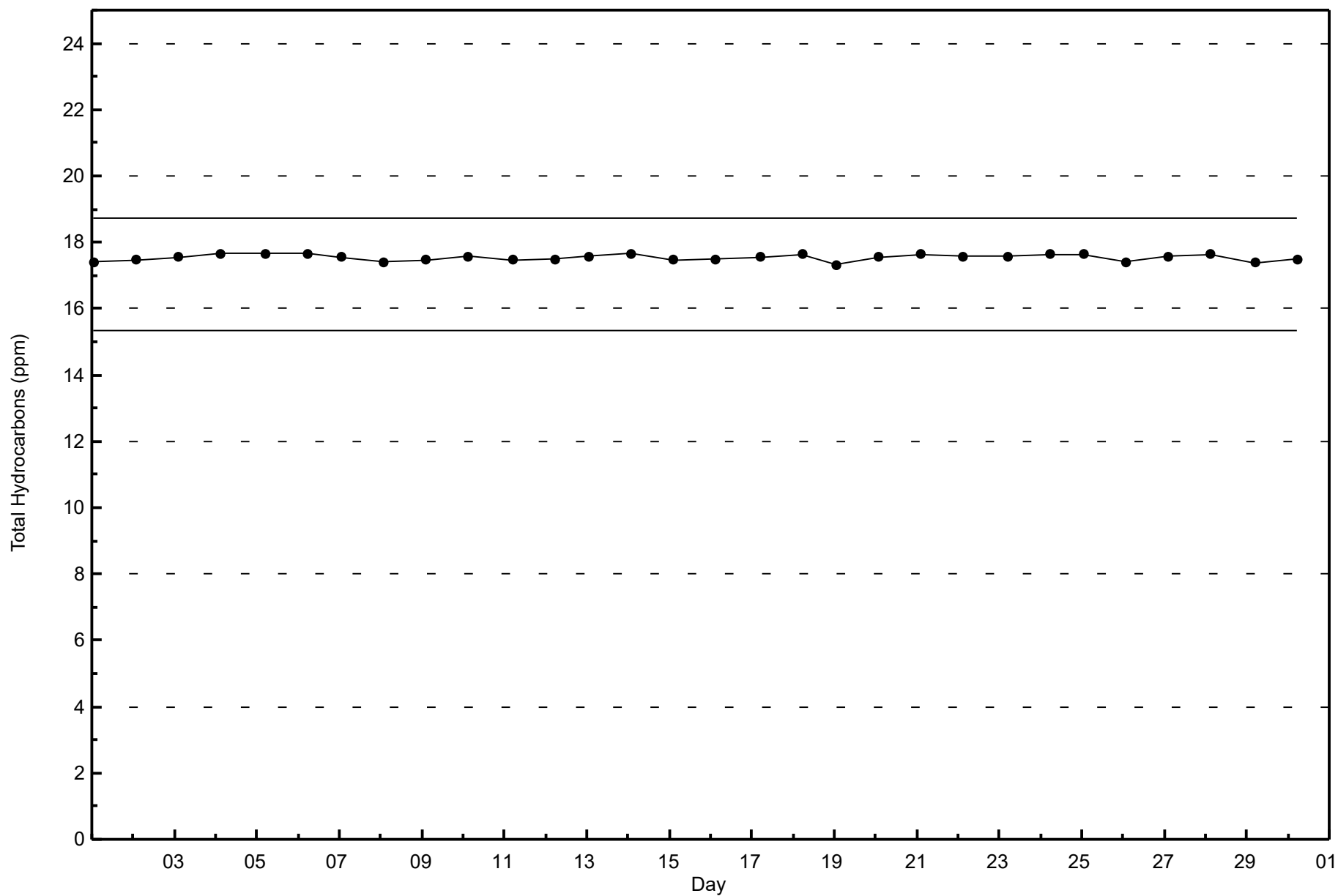
Total Hydrocarbons (THC) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

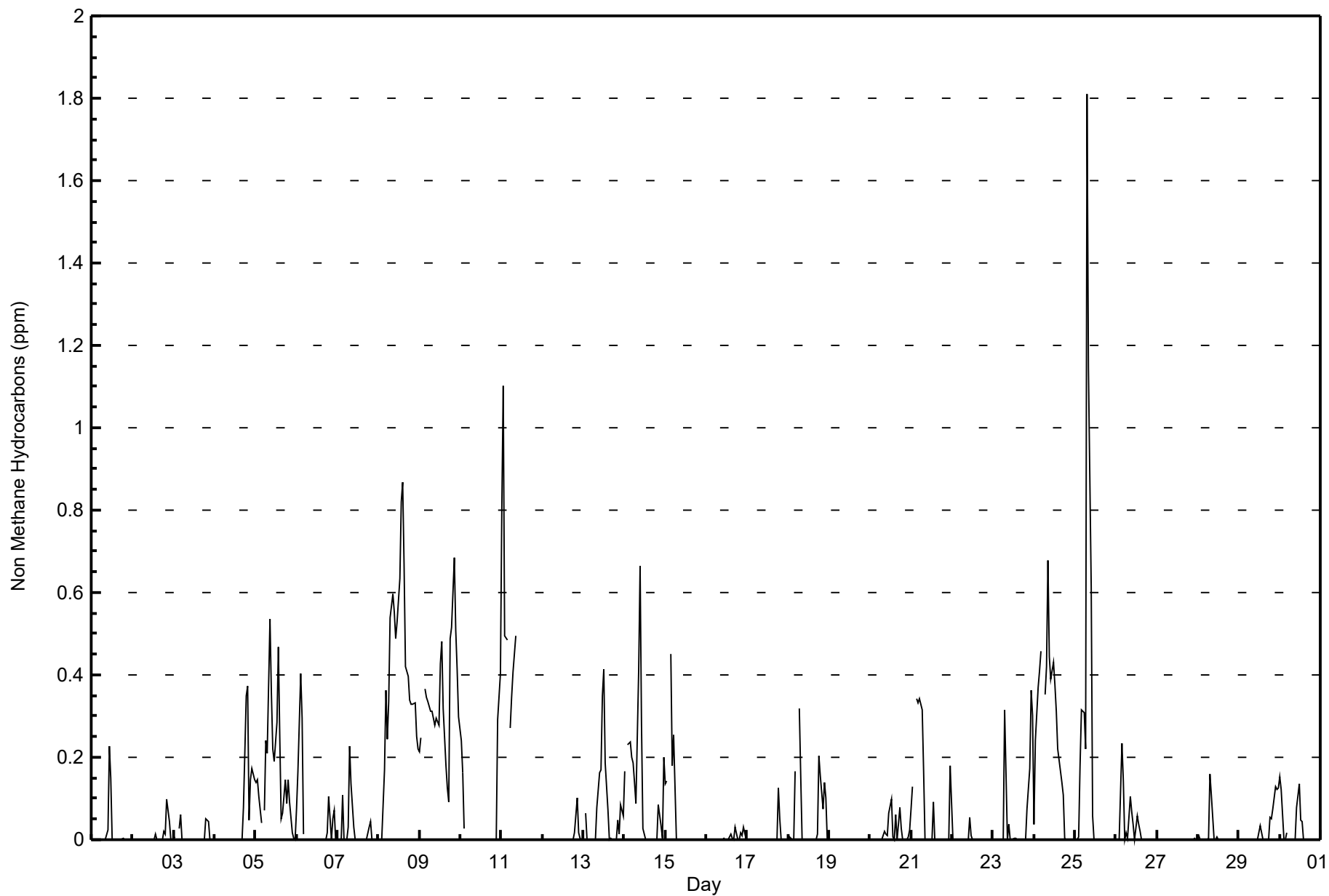
Ells River - April 2025

Maximum Value: 1.811 ppm on Apr 25 08:00																				Maximum Daily Average: 0.410 ppm on Apr 8					Hours in Service: 720	
Minimum Value: 0.000 ppm on Apr 1 02:00																				Minimum Daily Average: 0.000 ppm on Apr 19					Hours of Data: 685	
Maximum Diurnal Average: 0.160 ppm at hour 8																				Minimum Diurnal Average: 0.025 ppm at hour 17					Hours of Missing Data: 35	
Monthly Average: 0.079 ppm																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 0.7					Hours of Calibration: 34	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.228	0.148	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.018	0.228
2-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.022	0.013	0.098	0.046	0.000	0.000	0.008	0.098
3-Apr	0.003	0.008	Z	0.028	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.044	0.000	0.000	0.000	0.008	0.061
4-Apr	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	0.078	0.350	0.374	0.048	0.147	0.171	0.145	0.057	0.374
5-Apr	0.139	0.145	0.106	0.039	Z	0.073	0.240	0.212	0.534	0.358	0.219	0.191	0.286	0.468	0.251	0.052	0.064	0.145	0.087	0.147	0.091	0.016	0.004	0.000	0.168	0.534
6-Apr	0.073	0.166	0.404	0.296	0.012	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.106	0.000	0.051	0.072	0.000	0.052	0.404
7-Apr	Z	0.000	0.000	0.107	0.000	0.000	0.030	0.226	0.135	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.044	0.000	0.000	0.000	0.000	0.026	0.226
8-Apr	0.000	Z	0.002	0.171	0.363	0.245	0.335	0.538	0.597	0.552	0.489	0.529	0.635	0.822	0.868	0.666	0.422	0.397	0.340	0.328	0.330	0.331	0.250	0.220	0.410	0.868
9-Apr	0.213	0.248	Z	0.368	0.346	0.337	0.313	0.311	0.295	0.277	0.295	0.279	0.428	0.483	0.317	0.181	0.124	0.093	0.489	0.516	0.686	0.507	0.412	0.298	0.340	0.686
10-Apr	0.239	0.161	0.028	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292	0.403	0.049	0.403	
11-Apr	0.805	1.101	0.494	0.486	Z	0.272	0.345	0.407	0.495	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	0.232	1.101
12-Apr	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	0.017	0.101	0.017	0.005	0.000	0.006	0.101
13-Apr	Z	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.164	0.170	0.348	0.413	0.187	0.073	0.000	0.005	0.000	0.000	0.001	0.049	0.015	0.086	0.059	0.074	0.413
14-Apr	0.166	Z	0.229	0.236	0.202	0.185	0.137	0.087	0.414	0.665	0.281	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.086	0.035	0.003	0.199	0.128	0.665
15-Apr	0.136	0.143	Z	0.452	0.180	0.253	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.452
16-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	M	0.000	0.012	0.004	0.000	0.029	0.000	0.000	0.018	0.011	0.029	0.000	0.005	0.029
17-Apr	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	0.125	0.050	0.000	0.000	0.000	0.000	0.008	0.125
18-Apr	0.000	0.006	0.000	0.001	0.166	Z	0.317	0.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.203	0.156	0.075	0.139	0.101	0.000	0.058	0.317
19-Apr	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Apr	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.014	0.009	0.065	0.100	0.005	0.000	0.059	0.000	0.079	0.026	0.000	0.000	0.000	0.008	0.023	0.018	0.100
21-Apr	0.074	0.128	Z	0.341	0.333	0.341	0.316	0.166	0.000	0.000	0.000	0.000	0.000	0.090	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.181	0.086	0.341
22-Apr	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.054
23-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.314	0.000	0.037	0.000	0.000	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.002	0.076	0.174	0.362	0.301	0.055	0.362
24-Apr	0.038	0.241	0.369	0.411	0.457	Z	0.351	0.420	0.677	0.445	0.390	0.431	0.375	0.311	0.222	0.166	0.139	0.107	0.003	0.000	0.000	0.000	0.000	0.000	0.241	0.677
25-Apr	Z	0.000	0.008	0.181	0.315	0.307	0.220	1.811	1.145	0.613	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.202	1.811
26-Apr	0.000	Z	0.000	0.233	0.142	0.000	0.017	0.004	0.105	0.068	0.036	0.001	0.056	0.037	0.020	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.031	0.233
27-Apr	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	0.005	0.002	0.000	0.005
28-Apr	0.011	0.000	0.000	Z	0.000	0.002	0.004	0.158	0.108	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	0.013	0.158
29-Apr	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.016	0.000	0.000	0.000	0.000	0.053	0.052	0.074	0.129	0.123	0.126	0.026	0.129
30-Apr	0.154	0.121	0.000	0.000	0.018	Z	0.000	0.000	0.000	0.000	0.079	0.136	0.048	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.154
0.082 0.101 0.066 0.134 0.104 0.081 0.087 0.160 0.153 0.112 0.080 0.075 0.085 0.083 0.059 0.038 0.025 0.031 0.058 0.062 0.059 0.054 0.064 0.065																										
0.805 1.101 0.494 0.486 0.457 0.341 0.351 1.811 1.145 0.665 0.489 0.529 0.635 0.822 0.868 0.666 0.422 0.397 0.489 0.516 0.686 0.507 0.412 0.403																										
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm
Ells River - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	439	64.09	64.09
0.006 - 0.05	59	8.61	72.70
0.06 - 0.1	60	8.76	81.46
> 0.1	127	18.54	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 - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 0.005	29	64	19	1	1	15	31	52	34	26	36	36	28	24	26	9	431
0.006 - 0.05	4	11	3	1	1	2	4	8	3	1	0	1	2	1	6	11	59
0.06 - 0.1	7	6	3	6	1	1	2	12	10	2	0	1	0	0	4	3	58
> 0.1	12	14	3	2	1	7	17	18	14	8	2	0	4	7	5	5	119
Totals	52	95	28	10	4	25	54	90	61	37	38	38	34	32	41	28	667

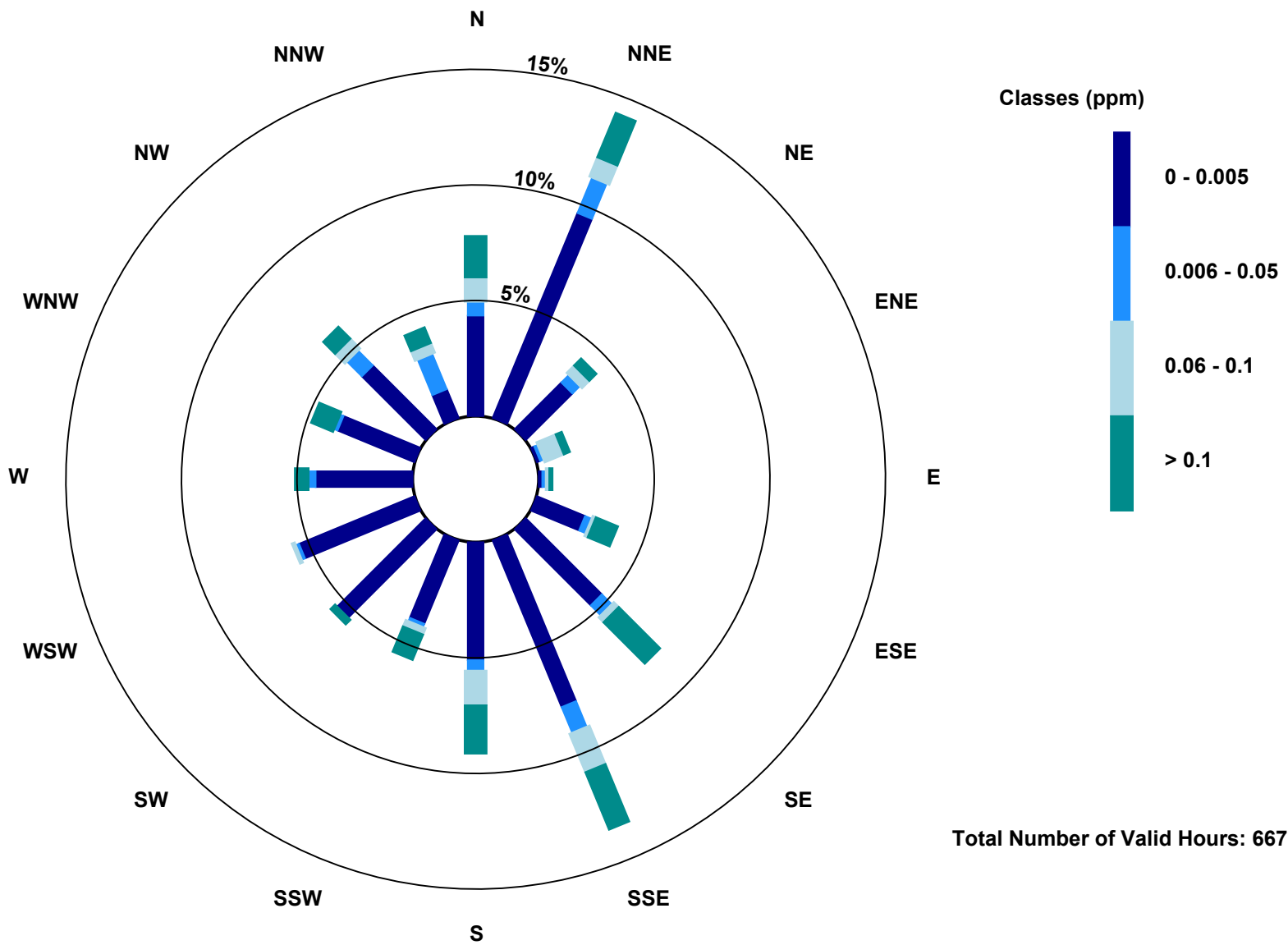
Total Number of Valid Hours: 667

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Non Methane Hydrocarbons (NMHC) - ppm
Ells River



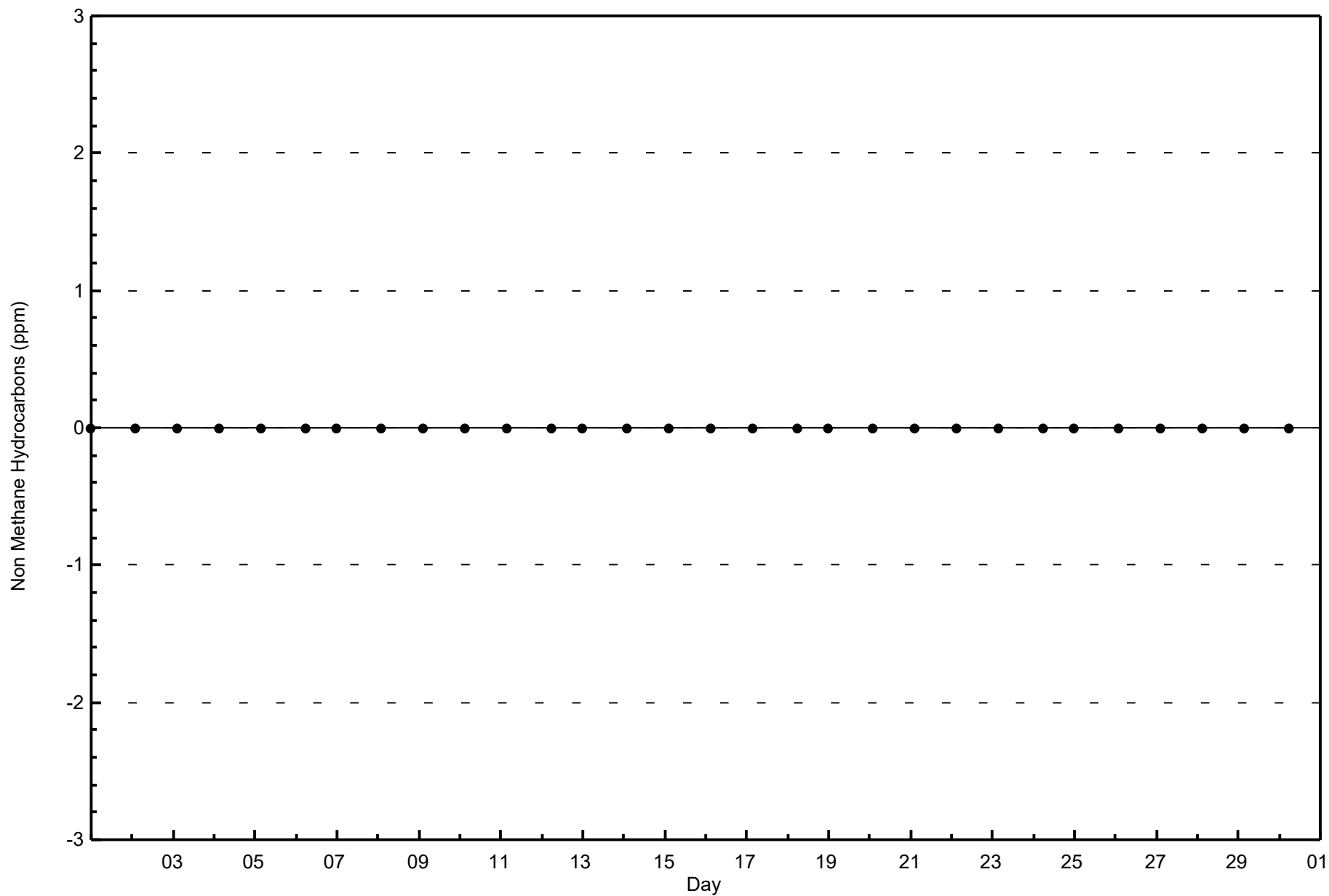


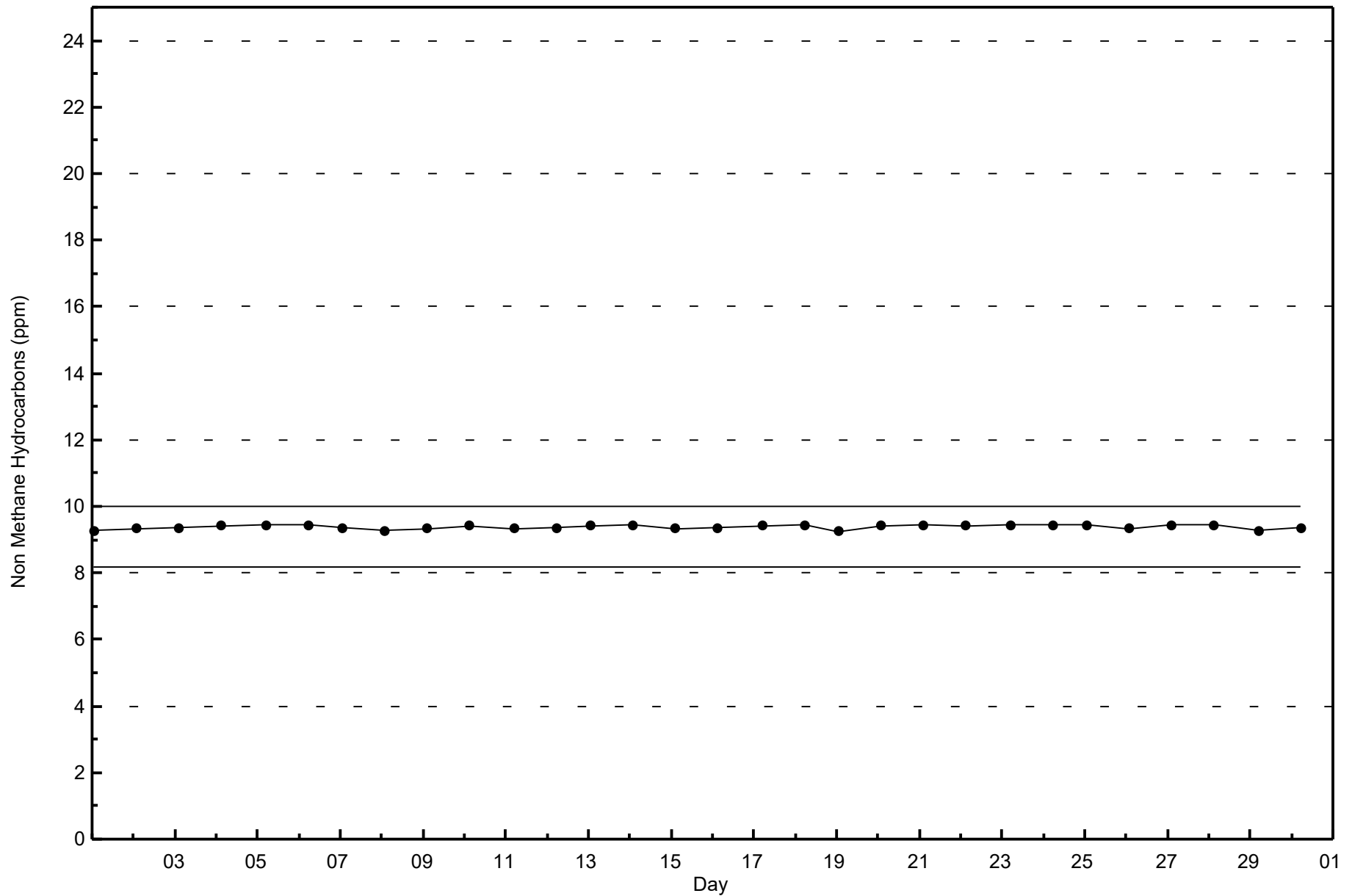
Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - April 2025



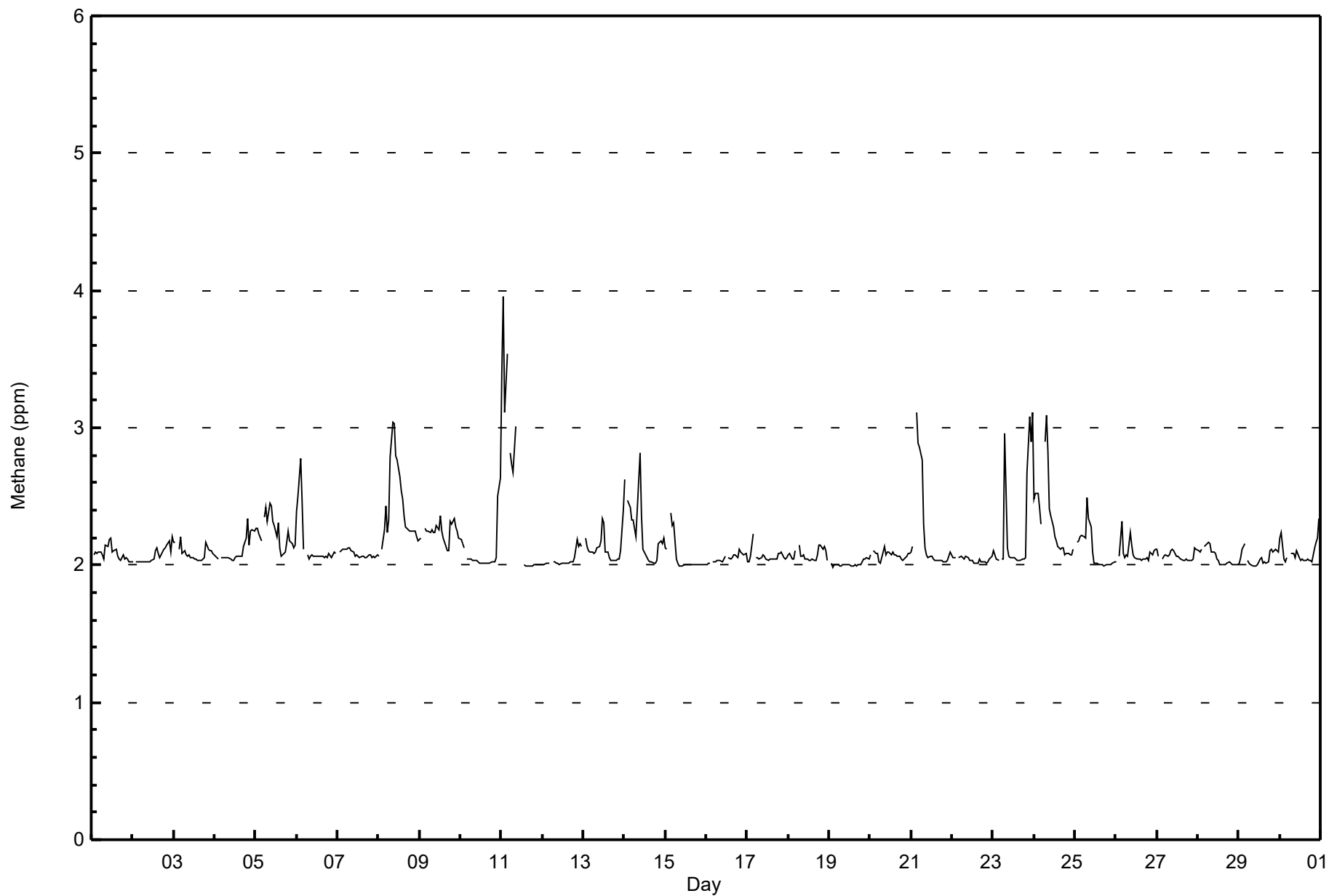


Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																	Hours in Service: 720									
Maximum Value: 4.0 ppm on Apr 11 02:00 Maximum Daily Average: 2.5 ppm on Apr 11																	Hours of Data: 685									
Minimum Value: 2.0 ppm on Apr 19 03:00 Minimum Daily Average: 2.0 ppm on Apr 19																	Hours of Missing Data: 35									
Maximum Diurnal Average: 2.3 ppm at hour 4 Minimum Diurnal Average: 2.0 ppm at hour 17																	Hours of Calibration: 34									
Monthly Average: 2.13 ppm Percentiles: P ₁ = 2.0 P ₁₀ = 2.0 Q ₁ = 2.0 Median = 2.1 Q ₃ = 2.1 P ₉₀ = 2.3 P ₉₉ = 3.1																	Percent Operational Time: 99.9									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.2
2-Apr	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2
3-Apr	2.2	2.2	Z	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	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2
4-Apr	2.1	2.1	2.0	Z	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.3	2.2	2.1	2.3
5-Apr	2.3	2.3	2.2	2.2	Z	2.3	2.4	2.3	2.5	2.4	2.3	2.3	2.2	2.3	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.5
6-Apr	2.4	2.5	2.8	2.5	2.1	Z	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	2.8
7-Apr	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
8-Apr	2.1	Z	2.1	2.3	2.4	2.2	2.3	2.8	3.0	3.0	2.8	2.8	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.3	2.2	2.3	2.2	2.2	2.4	3.0
9-Apr	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.4	2.2	2.2	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.4
10-Apr	2.2	2.2	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.6	2.1	2.6
11-Apr	3.4	4.0	3.1	3.5	Z	2.8	2.7	2.7	3.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	4.0
12-Apr	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.0	2.2
13-Apr	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	2.1	2.4
14-Apr	2.6	Z	2.5	2.4	2.3	2.3	2.3	2.2	2.6	2.8	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.2	2.2	2.2
15-Apr	2.1	2.1	Z	2.4	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
16-Apr	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	M	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
17-Apr	2.0	2.0	2.1	2.2	Z	2.0	2.1	2.0	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	2.0	2.1	2.1	2.2
18-Apr	2.1	2.1	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1
19-Apr	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	2.0	2.1
20-Apr	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
21-Apr	2.1	2.1	Z	3.1	2.9	2.9	2.8	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	2.2	3.1
22-Apr	2.1	2.1	2.0	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
23-Apr	2.1	2.1	2.0	2.0	Z	2.0	2.0	3.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.7	3.1	2.9	3.1	2.2	3.1
24-Apr	2.5	2.5	2.5	2.4	2.3	Z	2.9	3.1	2.8	2.4	2.4	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	2.3	3.1
25-Apr	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5
26-Apr	2.0	Z	2.1	2.3	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	2.0	2.1	2.1	2.1	2.1	2.1	2.3
27-Apr	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
28-Apr	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
29-Apr	2.0	2.1	2.1	2.2	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
30-Apr	2.2	2.2	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.1	2.3
2.2 2.2 2.2 2.3 2.2 2.2 2.2 2.2 2.2 2.2 2.1 2.1 2.1 2.1 2.1 2.1 2.0 2.1 2.1 2.1 2.1 2.1 2.1 2.2																								Diurnal Average		
3.4 4.0 3.1 3.5 2.9 2.9 2.9 3.1 3.0 3.0 2.8 2.8 2.6 2.5 2.5 2.4 2.3 2.3 2.3 2.3 2.7 3.1 2.9 3.1																								Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Methane (CH₄) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Methane (CH₄) - ppm
Ells River - April 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	274	40.00	40.00
2.1 - 3.0	403	58.83	98.83
3.1 - 10.0	8	1.17	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 (CH₄) - ppm
Ells River - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	6	42	12	2	0	1	6	27	27	18	31	33	26	19	18	4	272
2.1 - 3.0	45	52	16	8	4	24	48	63	34	19	7	5	8	12	23	20	388
3.1 - 10.0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	4	7
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	95	28	10	4	25	54	90	61	37	38	38	34	32	41	28	667

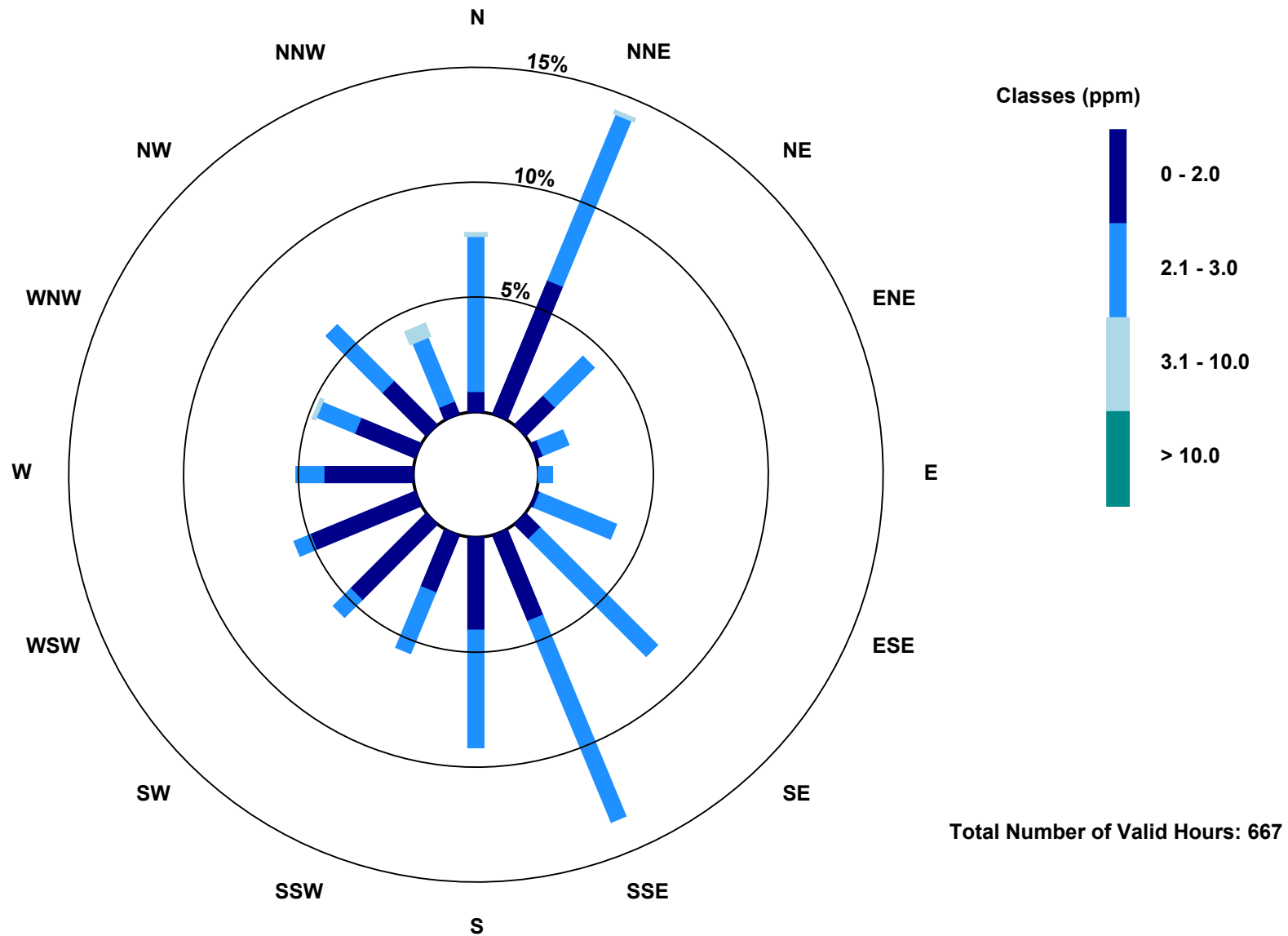
Total Number of Valid Hours: 667

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

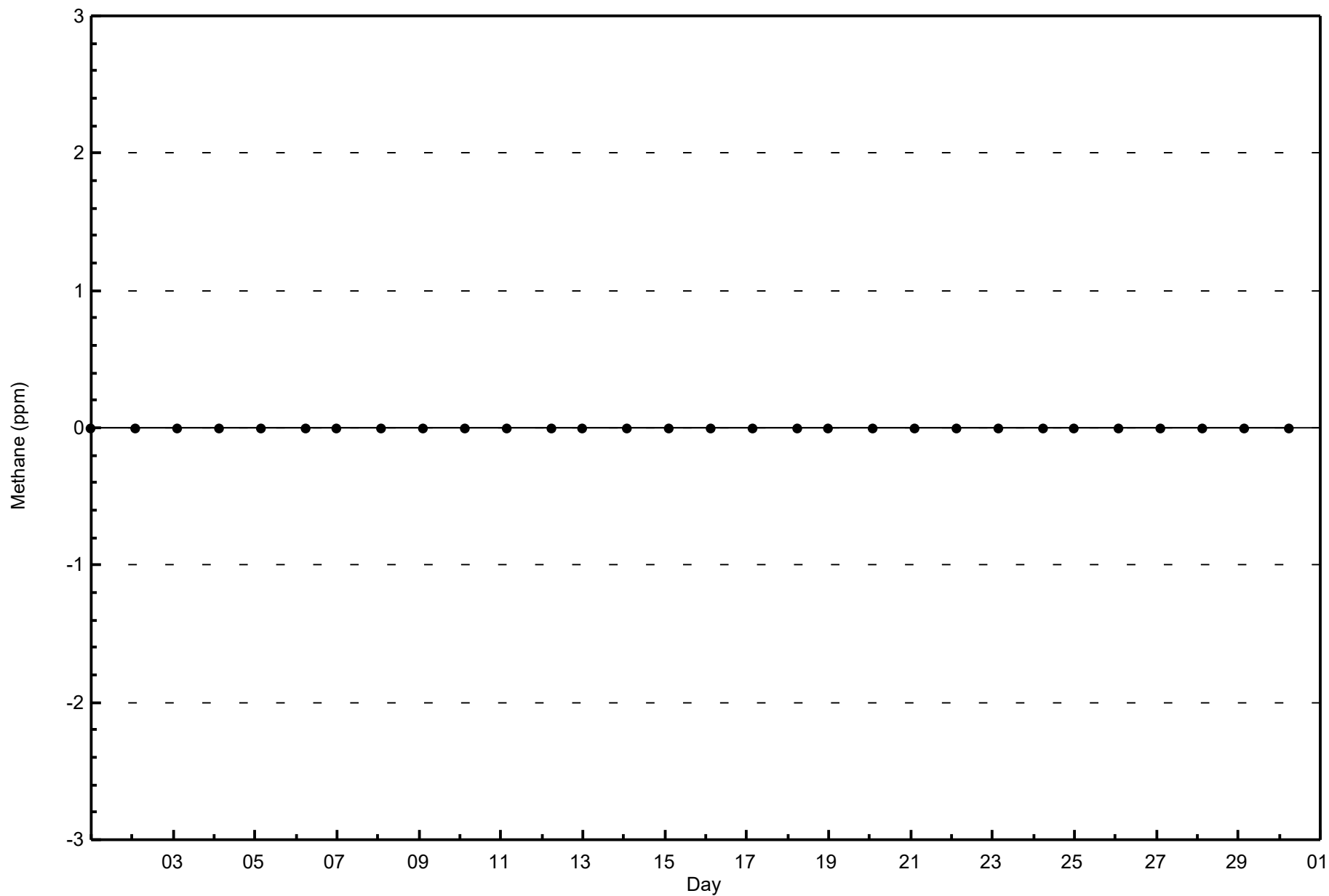
Methane (CH₄) - ppm
Ells River





Wood Buffalo Environmental Association
Zero Responses

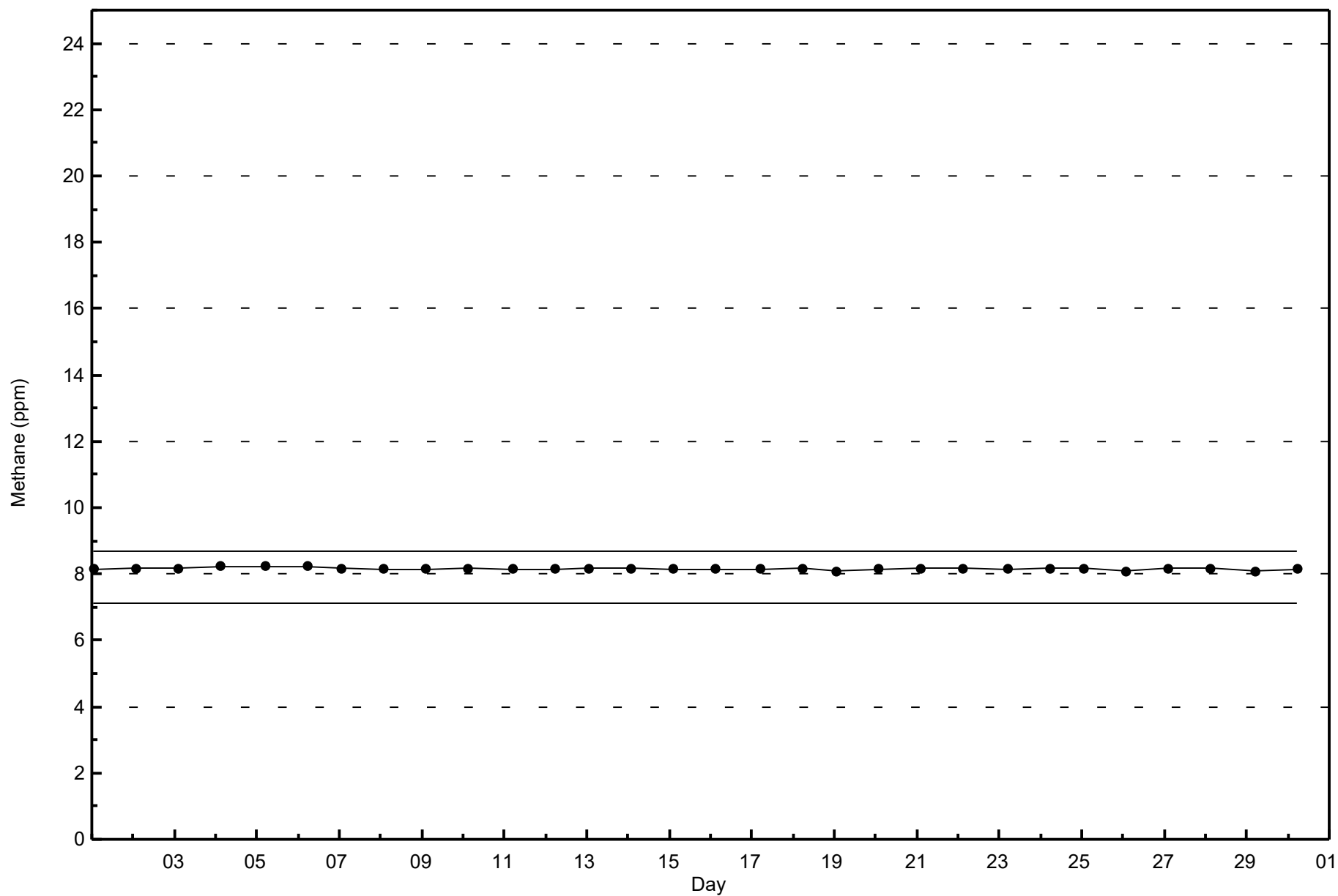
Methane (CH₄) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association
Span Responses

Methane (CH₄) - ppm
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

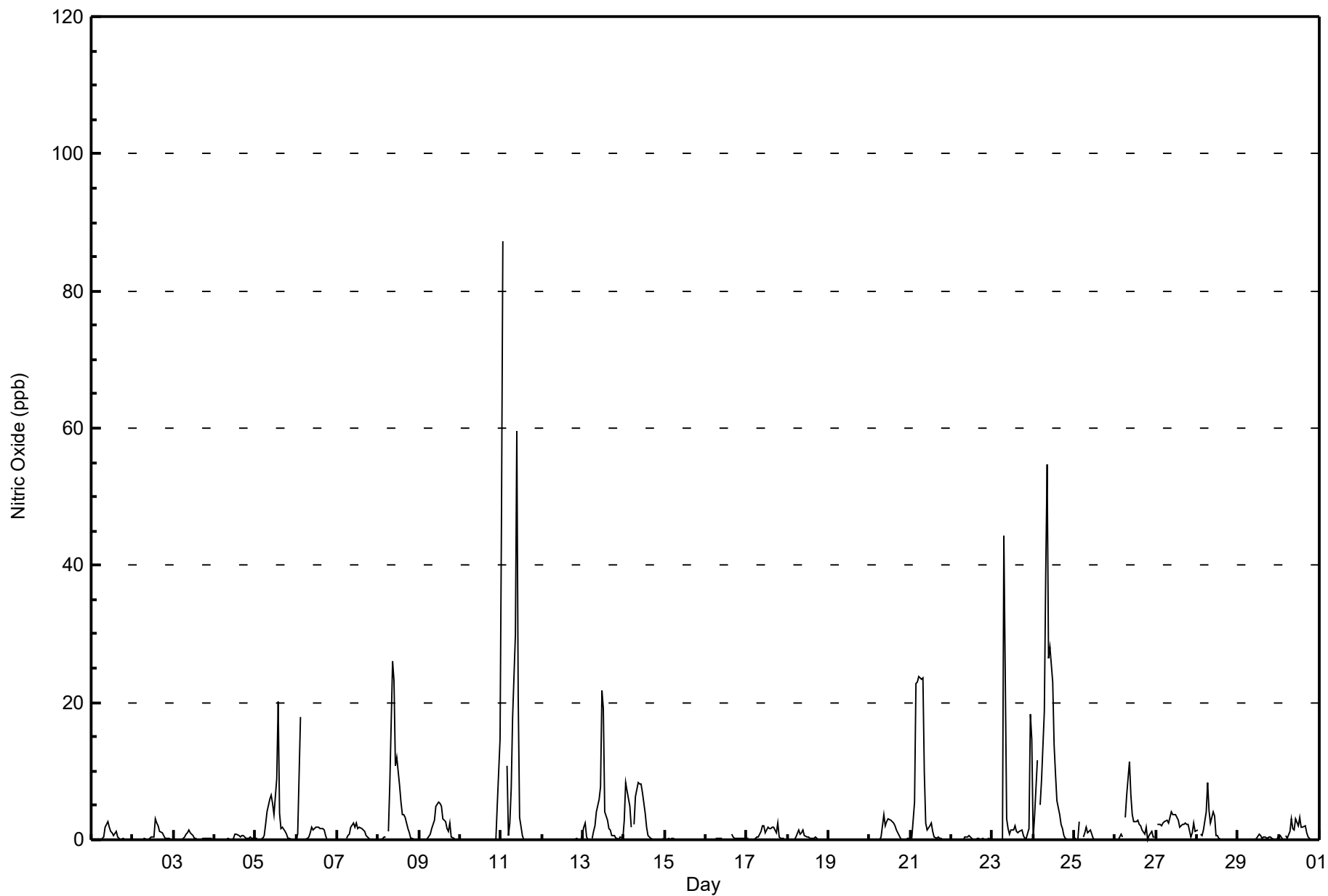
Ells River - April 2025

Maximum Value: 87.3 ppb on Apr 11 02:00																				Maximum Daily Average: 12.5 ppb on Apr 11					Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00																				Minimum Daily Average: 0.0 ppb on Apr 19					Hours of Data: 685	
Maximum Diurnal Average: 5.9 ppb at hour 9																				Minimum Diurnal Average: 0.1 ppb at hour 21					Hours of Missing Data: 35	
Monthly Average: 2.19 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.2 Q ₃ = 1.7 P ₉₀ = 4.1 P ₉₉ = 28.4					Hours of Calibration: 35	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	1.8	2.6	1.8	1.3	1.0	0.6	1.2	0.5	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.5	2.6
2-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.0	0.1	0.1	0.3	0.4	3.0	2.4	2.0	1.2	1.1	0.6	0.2	0.2	0.2	0.0	0.0	0.5	3.0
3-Apr	Z	0.1	0.0	0.1	0.1	0.1	0.5	0.8	1.1	1.4	1.1	0.7	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	1.4
4-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.7	0.9	0.5	0.5	0.5	0.6	0.3	0.2	0.1	0.3	0.2	0.2	0.2	0.9
5-Apr	0.2	0.2	Z	0.1	0.2	0.6	2.2	4.1	5.9	6.5	5.2	3.6	8.9	20.2	3.9	1.7	1.8	1.3	0.8	0.2	0.1	0.1	0.0	0.0	2.9	20.2
6-Apr	0.1	0.8	17.8	Z	0.1	0.0	0.3	0.3	0.9	1.9	1.5	1.8	1.9	1.8	1.7	1.7	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.5	17.8
7-Apr	0.0	0.1	0.0	0.0	Z	0.1	0.5	0.7	1.8	2.4	1.9	2.4	1.6	1.8	1.6	1.3	1.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.8	2.4
8-Apr	0.0	0.0	0.1	0.4	0.4	Z	1.2	8.2	26.1	23.1	10.7	12.0	8.0	5.5	3.6	3.7	3.2	1.6	1.1	0.3	0.1	0.1	0.1	0.0	4.8	26.1
9-Apr	Z	0.1	0.1	0.0	0.0	0.1	0.9	1.6	2.2	2.8	4.9	5.4	5.3	5.0	3.0	2.6	1.7	1.2	2.4	0.4	0.1	0.1	0.1	0.0	1.7	5.4
10-Apr	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	5.1	14.7	0.9	14.7
11-Apr	46.2	87.3	Z	10.9	0.5	2.5	7.5	18.0	30.0	59.5	20.9	3.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	87.3
12-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
13-Apr	1.8	2.5	0.5	0.1	Z	0.3	1.2	2.0	4.0	5.9	7.7	21.9	19.1	4.1	2.8	1.7	1.3	0.6	0.5	0.1	0.1	0.1	0.3	0.2	3.4	21.9
14-Apr	2.9	8.4	7.2	4.9	1.9	Z	2.2	6.3	8.4	8.2	8.1	6.9	3.9	1.8	0.6	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	3.2	8.4
15-Apr	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
16-Apr	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	C	C	C	C	C	0.8	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.8
17-Apr	0.2	0.1	Z	0.1	0.1	0.1	0.3	0.5	1.3	2.1	2.1	1.0	1.7	1.6	1.6	1.7	1.8	1.0	2.4	0.4	0.2	0.1	0.1	0.1	0.9	2.4
18-Apr	0.1	0.1	0.0	Z	0.1	0.5	1.5	0.8	1.1	1.5	0.6	0.4	0.3	0.3	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	1.5
19-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1
20-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.4	3.7	2.1	2.6	3.0	2.8	2.7	2.3	2.0	1.4	0.6	0.3	0.1	0.0	0.1	0.1	0.1	1.1	3.7
21-Apr	Z	0.2	5.5	22.8	23.1	23.8	23.3	23.5	9.7	2.4	1.4	2.1	2.4	1.3	0.4	0.3	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	6.2	23.8
22-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.5
23-Apr	0.1	0.0	Z	0.1	0.1	0.1	0.1	44.3	3.0	1.7	0.7	1.4	1.4	2.0	1.2	0.9	1.3	1.4	0.6	0.2	0.1	1.7	18.4	14.6	4.1	44.3
24-Apr	0.2	3.4	11.6	Z	5.0	8.8	18.7	38.9	54.8	26.4	28.0	22.9	13.9	9.6	5.7	3.7	2.2	1.5	0.7	0.2	0.1	0.0	0.0	0.1	11.2	54.8
25-Apr	0.2	0.1	0.1	2.7	Z	0.4	1.0	1.8	1.1	1.4	0.8	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	0.4	2.7
26-Apr	0.0	0.0	0.1	0.7	0.4	Z	3.3	6.6	11.3	6.5	3.6	2.7	2.6	2.8	2.2	2.0	1.4	0.9	1.8	0.1	0.5	1.3	0.5	0.3	2.2	11.3
27-Apr	Z	2.2	2.2	2.0	2.4	2.6	2.8	2.3	3.2	4.0	3.6	3.7	3.2	2.9	1.8	2.2	2.3	2.5	2.2	2.1	0.5	1.0	2.5	1.2	2.4	4.0
28-Apr	1.4	Z	0.8	0.6	1.5	4.1	8.3	4.3	2.5	4.0	3.4	0.7	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	8.3
29-Apr	0.1	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.7	0.3	0.5	0.3	0.2	0.5	0.4	0.1	0.1	0.1	0.2	0.2	0.9
30-Apr	0.6	0.7	0.0	Z	0.7	0.2	1.3	3.1	1.6	1.5	3.0	2.1	3.4	1.9	1.8	2.0	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	1.1	3.4
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	666	97.23	97.23
21 - 40	14	2.04	99.27
41 - 80	4	0.58	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

Nitric Oxide (NO) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	49	89	27	10	4	26	51	88	61	41	38	37	34	32	37	27	651
21 - 40	2	4	0	0	0	0	2	0	2	0	0	0	0	0	0	0	10
11 - 80	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	4
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	52	94	27	10	4	26	53	88	63	41	38	37	35	33	37	28	666

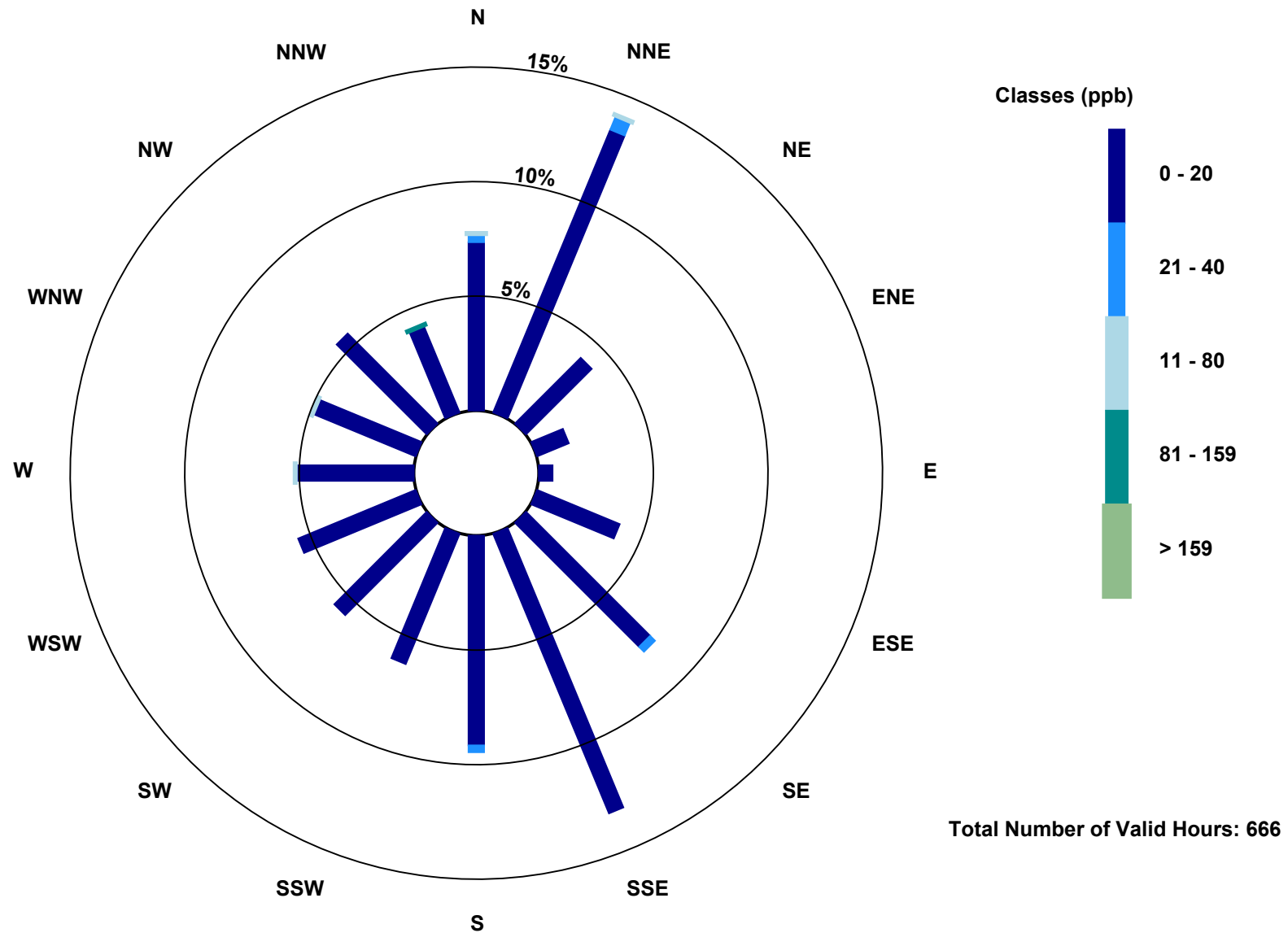
Total Number of Valid Hours: 666

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

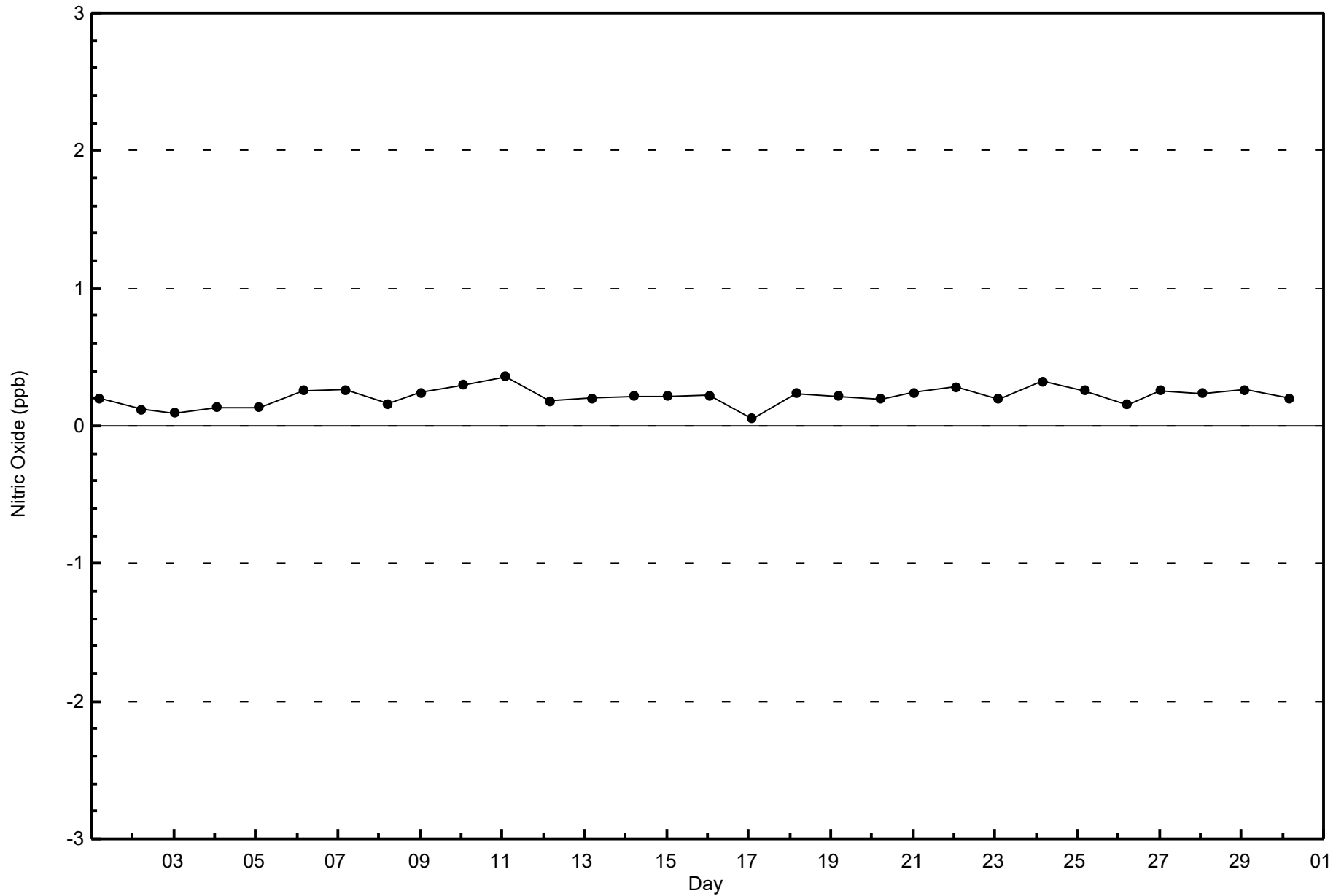
Nitric Oxide (NO) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

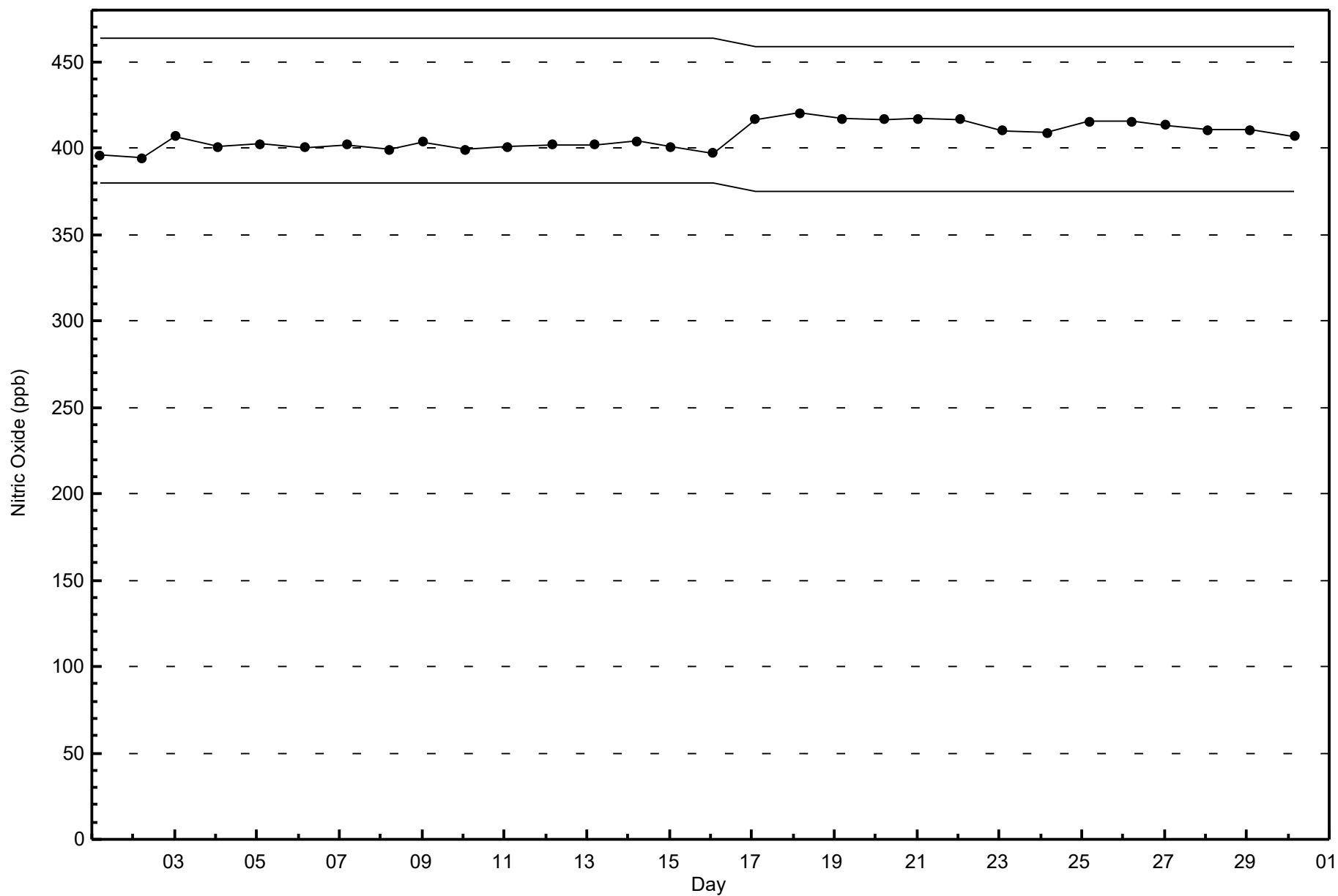
Nitric Oxide (NO) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

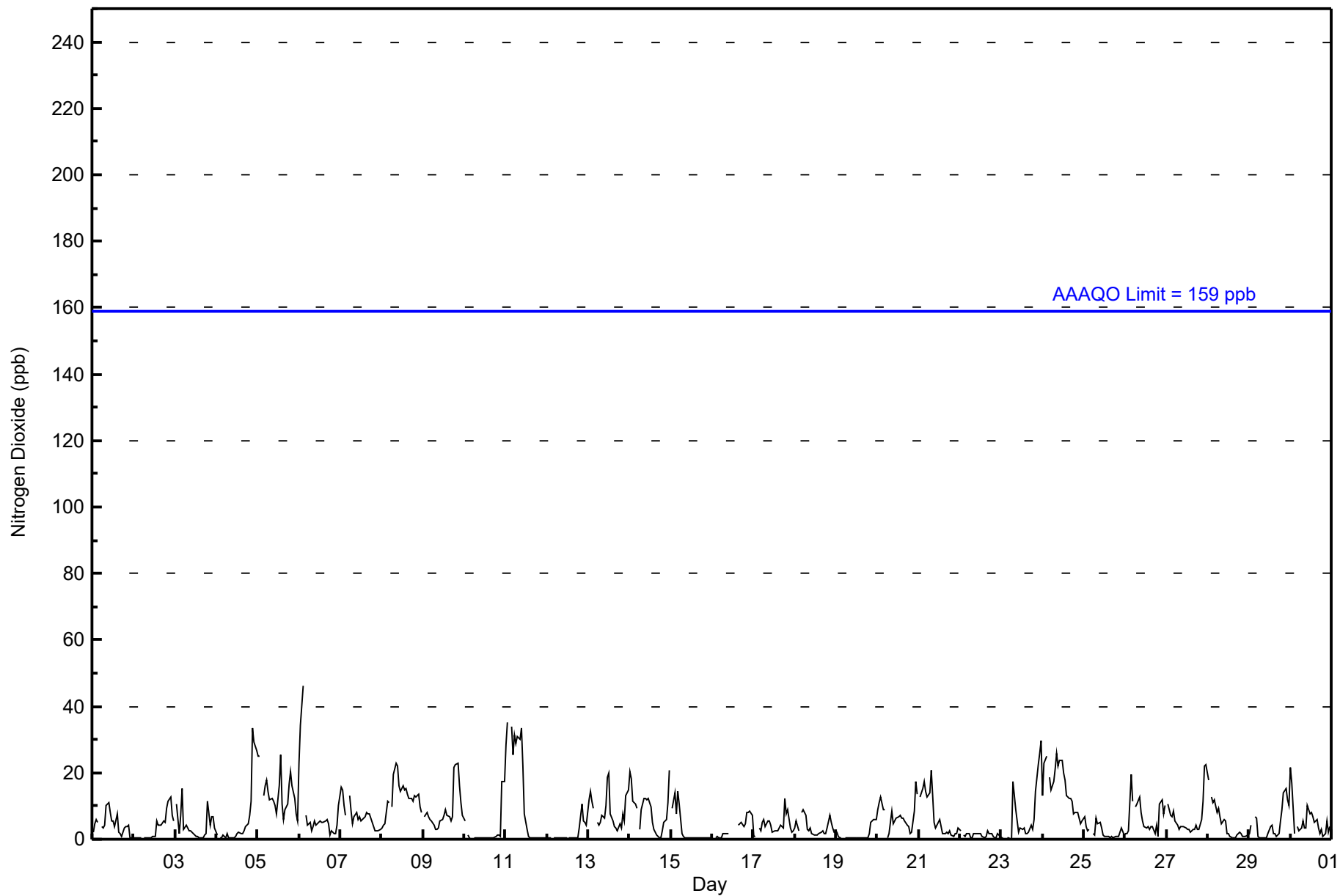
Ells River - April 2025

Number of Exceedences (AAAQO): Maximum Value: 46.3 ppb on Apr 6 03:00																			1-hr: 0 24-hr: 0 Maximum Daily Average: 15.5 ppb on Apr 24						Hours in Service: 720 Hours of Data: 685			
Minimum Value: 0.2 ppb on Apr 12 13:00 Maximum Diurnal Average: 10.8 ppb at hour 2 Monthly Average: 6.24 ppb																			Minimum Daily Average: 1.3 ppb on Apr 22 Minimum Diurnal Average: 3.4 ppb at hour 18 Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 1.3 Median = 4.0 Q ₃ = 8.4 P ₉₀ = 15.1 P ₉₉ = 30.9						Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1-Apr	2.0	4.8	6.0	4.9	Z	3.8	3.4	4.3	10.2	10.9	8.0	5.6	5.4	3.9	7.6	2.3	1.7	1.0	3.6	3.9	3.8	4.4	0.4	0.4	4.4	10.9		
2-Apr	0.4	0.4	0.4	0.4	0.3	Z	0.5	0.6	0.5	0.5	0.5	0.9	1.0	5.5	4.2	4.4	4.2	5.7	5.0	9.5	11.6	12.7	7.3	5.5	3.6	12.7		
3-Apr	Z	10.6	1.6	7.2	15.1	3.0	4.4	3.2	2.7	2.7	2.1	1.4	0.9	0.7	0.4	0.4	0.4	1.1	1.6	11.6	4.3	6.8	6.6	3.3	4.0	15.1		
4-Apr	1.1	Z	0.4	0.3	1.1	0.4	1.5	0.3	0.6	0.4	0.4	0.7	1.9	2.3	1.8	1.9	2.4	3.8	4.8	7.1	11.4	33.3	29.1	26.9	5.8	33.3		
5-Apr	25.1	25.2	Z	13.3	15.9	17.7	14.6	11.9	12.1	11.4	10.0	7.7	16.1	25.4	10.4	6.1	8.7	10.8	16.5	20.5	15.9	12.2	7.8	5.6	14.0	25.4		
6-Apr	22.9	34.4	46.3	Z	7.4	4.2	4.9	2.4	3.8	5.6	4.2	5.1	5.3	5.1	5.1	5.6	5.8	4.7	1.4	2.4	1.6	1.5	4.3	10.1	8.4	46.3		
7-Apr	15.7	14.8	10.1	7.4	Z	13.3	8.4	4.8	6.6	7.9	5.8	6.6	5.3	6.0	6.7	7.9	7.7	7.8	5.2	3.9	2.7	2.7	2.5	2.8	7.1	15.7		
8-Apr	3.4	4.1	4.7	11.3	11.2	Z	9.8	19.3	22.7	22.1	16.1	14.3	15.9	14.9	15.2	13.7	12.1	12.3	11.4	13.0	12.6	13.7	9.7	8.2	12.7	22.7		
9-Apr	Z	6.9	8.0	6.6	5.9	5.7	4.2	2.9	2.9	3.6	5.6	6.0	7.2	8.7	7.4	6.9	5.5	6.8	21.8	22.4	22.8	15.9	11.1	7.4	8.8	22.8		
10-Apr	5.7	Z	1.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.7	1.2	1.2	1.0	17.3	17.5	2.2	17.5		
11-Apr	28.3	35.3	Z	33.8	25.6	31.2	28.9	30.9	30.1	33.3	21.9	7.7	2.8	0.9	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	13.7	35.3		
12-Apr	0.5	0.5	0.5	Z	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.4	0.4	0.6	0.5	0.4	3.6	10.6	5.5	5.2	4.4	1.6	10.6		
13-Apr	11.7	14.4	11.4	9.3	Z	5.2	4.4	4.9	7.0	6.4	10.0	18.8	20.1	7.5	5.7	3.7	3.5	2.6	4.5	3.3	7.7	5.4	13.1	14.7	8.5	20.1		
14-Apr	20.2	18.1	11.6	10.8	9.5	Z	3.1	9.0	12.3	12.4	11.9	12.3	9.9	5.1	2.9	2.0	1.3	0.4	0.6	2.4	5.1	6.1	10.9	20.8	8.6	20.8		
15-Apr	Z	9.2	13.8	7.5	14.4	10.7	1.8	0.9	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.8	14.4		
16-Apr	0.3	Z	0.4	0.9	0.6	0.3	1.9	1.5	1.7	1.7	C	C	C	C	C	4.1	4.6	5.1	3.9	4.6	8.2	8.2	8.4	7.3	3.5	8.4		
17-Apr	0.9	0.9	Z	3.2	2.4	4.9	6.0	4.0	5.5	5.5	4.3	2.1	2.6	2.4	2.7	3.4	4.2	3.3	12.3	7.5	9.1	3.6	2.2	2.6	4.2	12.3		
18-Apr	3.4	5.3	2.4	Z	8.1	9.1	7.2	3.1	2.6	3.3	1.7	1.4	1.3	1.2	1.5	2.0	2.6	1.5	1.6	3.6	7.1	5.1	3.4	2.2	3.5	9.1		
19-Apr	2.0	0.8	0.4	0.5	Z	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.6	4.9	5.6	6.1	5.9	1.4	6.1		
20-Apr	9.1	11.2	12.9	9.0	9.1	Z	0.4	1.8	8.3	4.6	5.3	6.2	6.6	7.0	6.2	6.2	5.3	4.1	3.7	1.9	2.0	8.5	17.4	13.7	7.0	17.4		
21-Apr	Z	12.9	15.2	17.5	14.4	12.9	13.8	20.9	13.2	5.2	3.6	5.0	5.8	4.0	1.8	1.6	2.0	1.5	2.5	1.4	0.7	1.9	1.7	3.2	7.1	20.9		
22-Apr	2.7	Z	1.3	1.0	1.7	1.5	0.5	0.5	1.5	1.7	1.9	1.8	1.9	0.9	0.6	0.7	2.5	1.6	1.7	0.8	0.5	0.6	1.5	0.8	1.3	2.7		
23-Apr	0.6	0.3	Z	0.3	0.3	0.2	0.2	17.4	9.0	5.5	2.3	3.4	3.1	3.2	1.7	1.6	2.0	4.1	3.0	5.8	14.5	22.4	26.0	29.5	6.8	29.5		
24-Apr	13.0	22.9	24.9	Z	18.6	14.9	17.5	21.3	26.0	21.9	23.8	23.9	20.0	17.7	13.3	12.2	12.2	11.4	7.7	8.2	8.2	6.2	4.5	5.6	15.5	26.0		
25-Apr	6.7	3.7	2.6	2.9	Z	1.5	1.1	6.5	4.8	4.9	3.4	1.2	0.8	0.8	0.9	0.6	0.7	0.6	0.7	0.8	0.7	2.0	3.5	1.3	2.3	6.7		
26-Apr	1.5	1.6	2.5	19.7	11.5	Z	9.7	10.8	12.8	8.2	5.3	3.7	3.4	4.0	3.1	3.7	3.8	1.9	4.4	0.9	10.8	11.8	7.8	10.1	6.7	19.7		
27-Apr	Z	10.4	7.2	6.7	8.5	5.4	4.4	2.8	3.9	4.0	3.7	3.5	3.1	3.0	2.2	2.8	2.9	4.2	3.1	3.1	5.9	11.4	22.2	22.6	6.4	22.6		
28-Apr	17.6	Z	12.9	11.1	12.0	8.1	9.4	6.7	4.6	6.0	5.3	1.8	1.7	0.8	0.6	0.5	0.5	1.2	2.3	1.8	1.0	1.0	0.7	1.3	4.7	17.6		
29-Apr	1.7	4.1	Z	6.9	6.2	0.8	0.6	0.5	0.4	0.4	0.4	1.5	3.7	4.2	1.6	1.9	0.9	1.6	5.5	8.9	13.8	15.1	11.8	10.3	4.5	15.1		
30-Apr	21.7	16.8	1.5	Z	4.0	2.4	3.5	5.6	3.6	3.6	10.1	7.5	7.9	6.7	5.1	6.0	3.6	1.7	2.8	0.8	1.5	5.5	2.1	3.9	5.6	21.7		
																									Diurnal Average			
																									Diurnal Maximum			
Z - zerospan C - Calibration																												
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																												



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	645	94.16	94.16
21 - 40	39	5.69	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	86	26	10	3	25	51	86	57	41	38	37	33	30	34	22	627
21 - 40	4	7	1	0	1	1	2	2	6	0	0	0	2	3	3	6	38
11 - 80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	94	27	10	4	26	53	88	63	41	38	37	35	33	37	28	666

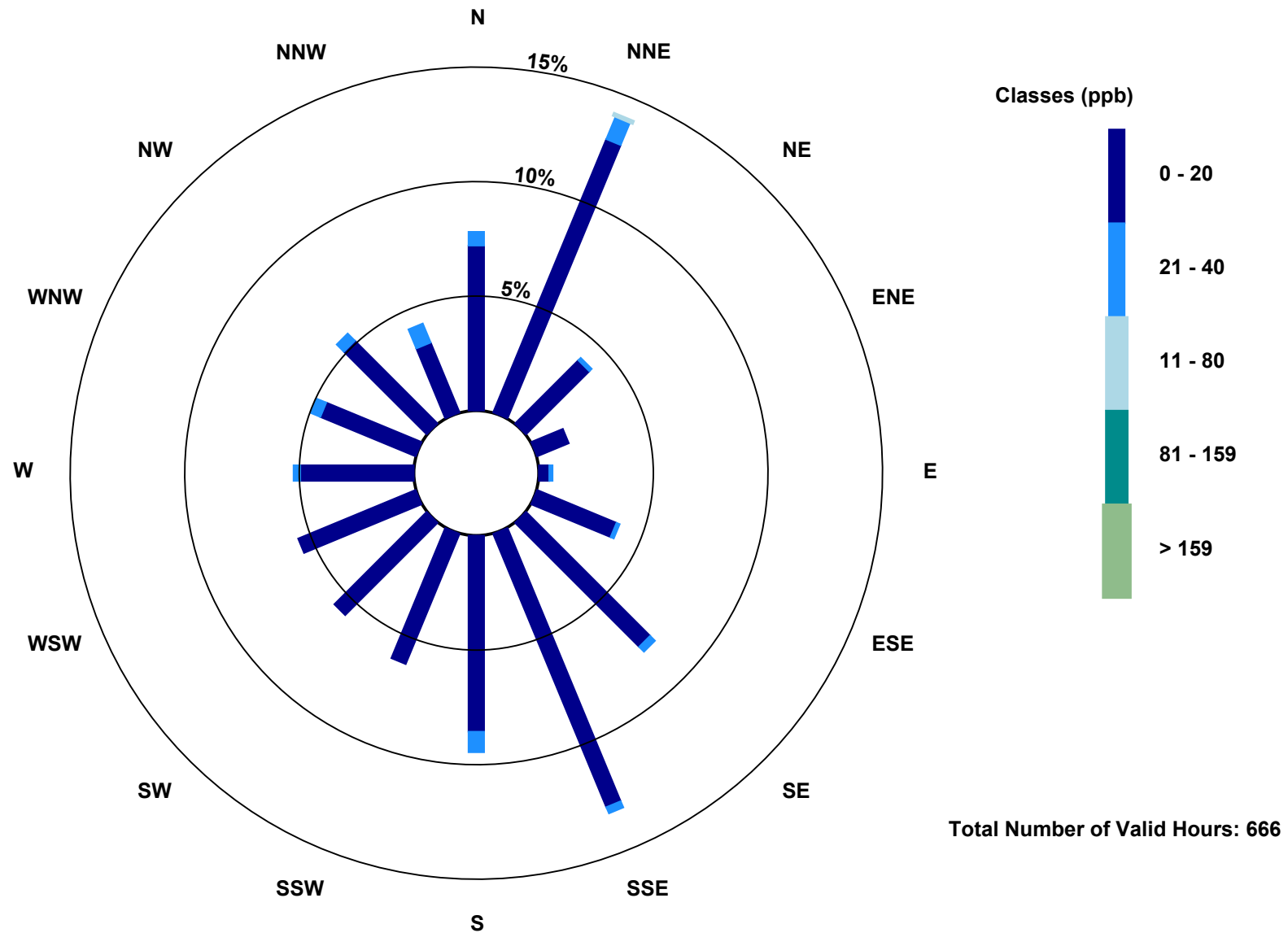
Total Number of Valid Hours: 666

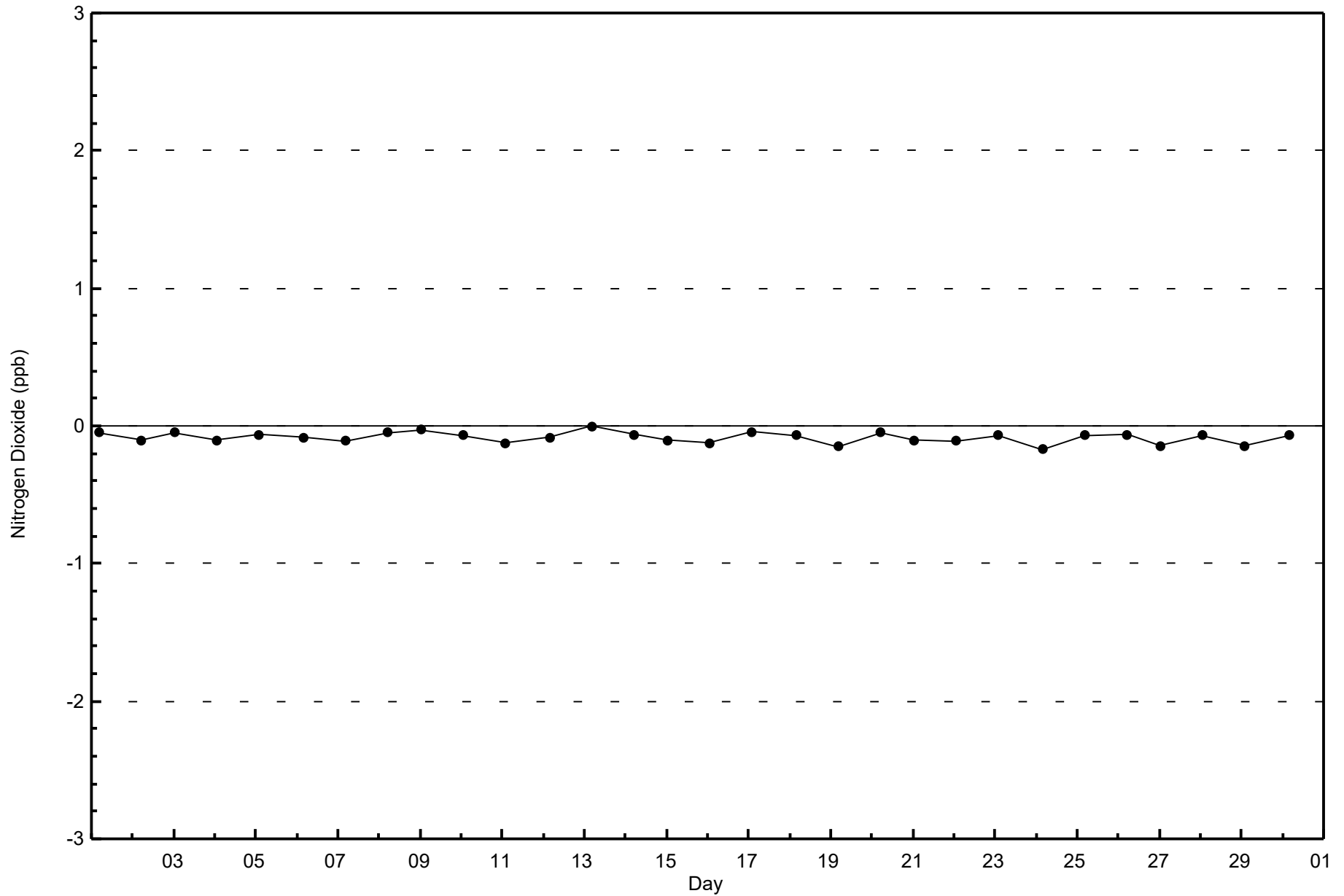
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Ells River

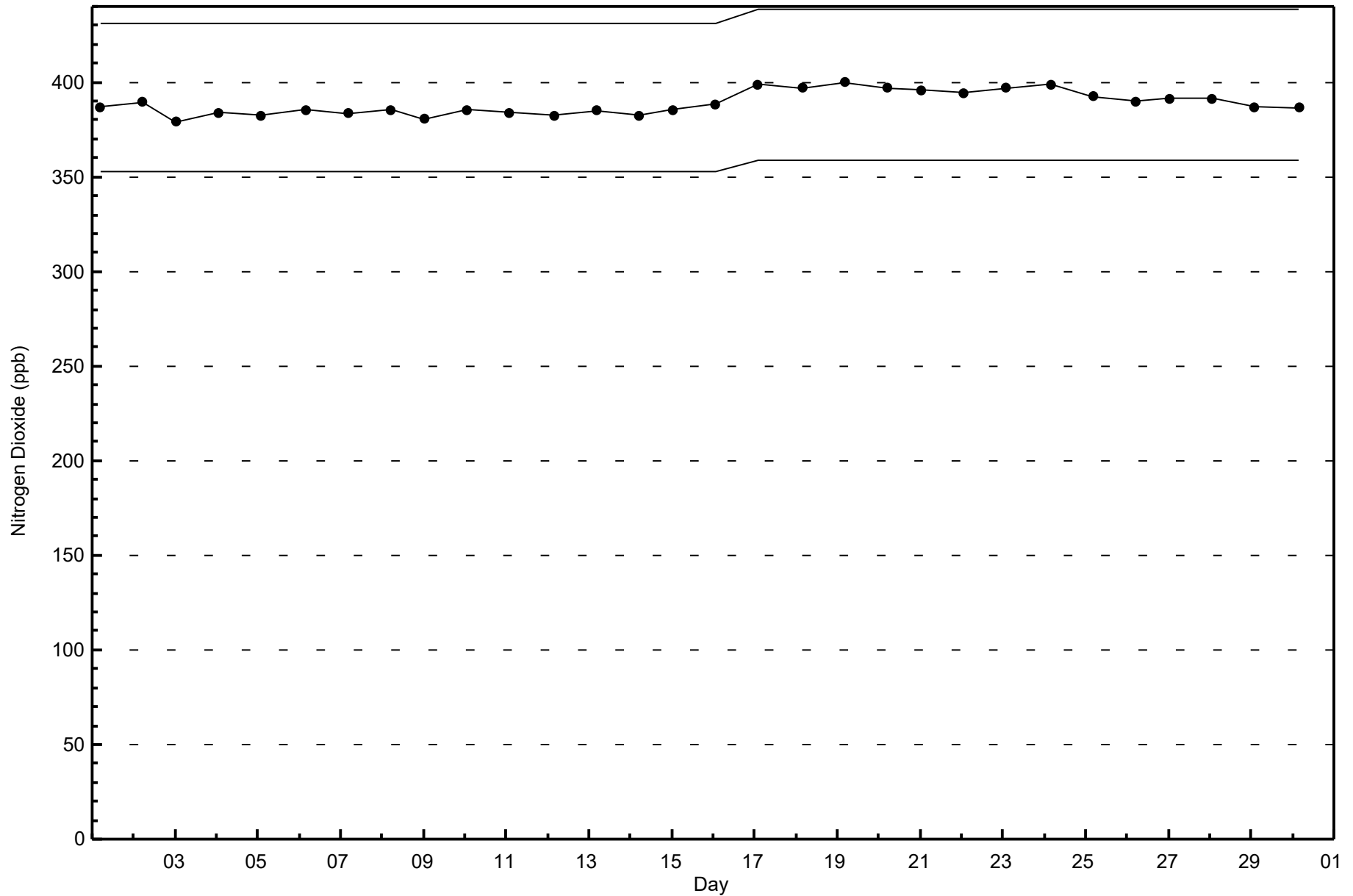






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

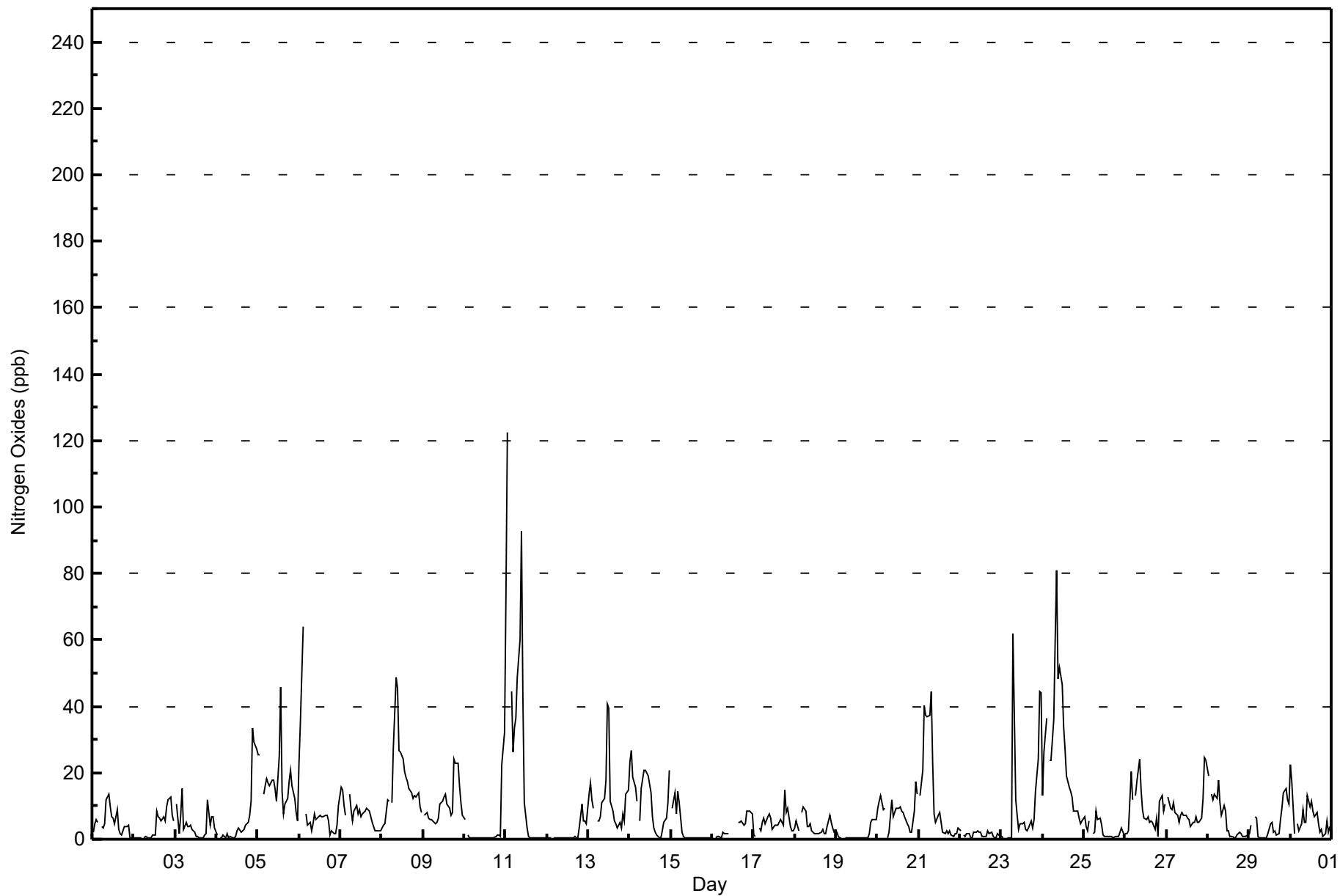
Ells River - April 2025

Maximum Value: 122.6 ppb on Apr 11 02:00																Maximum Daily Average: 26.6 ppb on Apr 24										Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 10 06:00																Minimum Daily Average: 1.4 ppb on Apr 22										Hours of Data: 685	
Maximum Diurnal Average: 15.0 ppb at hour 2																Minimum Diurnal Average: 4.0 ppb at hour 18										Hours of Missing Data: 35	
Monthly Average: 8.43 ppb																Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 1.4 Median = 5.1 Q ₃ = 10.4 P ₉₀ = 19.7 P ₉₉ = 60.1										Hours of Calibration: 35	
																										Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	2.0	4.8	6.0	4.9	Z	3.9	3.6	4.6	12.0	13.5	9.8	6.9	6.4	4.5	8.8	2.8	1.9	1.1	3.9	3.9	3.8	4.4	0.4	0.4	5.0	13.5	
2-Apr	0.4	0.4	0.4	0.4	0.3	Z	0.5	0.8	0.5	0.6	0.6	1.2	1.4	8.5	6.6	6.4	5.4	6.8	5.6	9.7	11.8	12.9	7.3	5.5	4.1	12.9	
3-Apr	Z	10.7	1.6	7.3	15.2	3.1	4.9	4.0	3.8	4.1	3.2	2.1	1.1	0.9	0.5	0.5	0.5	1.3	1.7	11.8	4.4	6.9	6.7	3.4	4.3	15.2	
4-Apr	1.2	Z	0.4	0.3	1.1	0.4	1.6	0.3	0.7	0.5	0.5	0.9	2.6	3.2	2.3	2.4	2.9	4.4	5.1	7.3	11.5	33.6	29.3	27.1	6.1	33.6	
5-Apr	25.3	25.4	Z	13.4	16.1	18.3	16.8	16.0	18.0	17.9	15.2	11.3	25.0	45.6	14.3	7.8	10.5	12.1	17.3	20.7	16.0	12.3	7.8	5.6	16.9	45.6	
6-Apr	23.0	35.2	64.1	Z	7.5	4.2	5.2	2.7	4.7	7.5	5.7	6.9	7.2	6.9	6.8	7.3	7.2	5.4	1.4	2.4	1.6	1.5	4.3	10.1	9.9	64.1	
7-Apr	15.7	14.9	10.1	7.4	Z	13.4	8.9	5.5	8.4	10.3	7.7	9.0	6.9	7.8	8.3	9.2	9.0	8.3	5.3	3.9	2.7	2.7	2.5	2.8	7.8	15.7	
8-Apr	3.4	4.1	4.8	11.7	11.6	Z	11.0	27.5	48.8	45.2	26.8	26.3	23.9	20.4	18.8	17.4	15.3	13.9	12.5	13.3	12.7	13.8	9.8	8.2	17.4	48.8	
9-Apr	Z	7.0	8.1	6.6	5.9	5.8	5.1	4.5	5.1	6.4	10.5	11.4	12.5	13.7	10.4	9.5	7.2	8.0	24.2	22.8	22.9	16.0	11.2	7.4	10.5	24.2	
10-Apr	5.7	Z	1.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.7	1.2	1.2	1.0	22.4	32.2	3.1	32.2	
11-Apr	74.5	122.6	Z	44.7	26.1	33.7	36.4	48.9	60.1	92.8	42.8	10.9	3.4	0.9	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	26.2	122.6	
12-Apr	0.5	0.5	0.5	Z	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.4	0.7	0.5	0.4	3.6	10.7	5.6	5.3	4.5	1.6	10.7	
13-Apr	13.5	16.9	11.9	9.4	Z	5.5	5.6	6.9	11.0	12.3	17.7	40.7	39.2	11.6	8.5	5.4	4.8	3.2	5.0	3.4	7.8	5.5	13.4	14.9	11.9	40.7	
14-Apr	23.1	26.5	18.8	15.7	11.4	Z	5.3	15.3	20.7	20.6	20.0	19.2	13.8	6.9	3.5	2.3	1.4	0.5	0.6	2.4	5.2	6.2	11.0	20.9	11.8	26.5	
15-Apr	Z	9.3	13.9	7.6	14.6	10.9	1.9	1.0	0.6	0.5	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	2.8	14.6	
16-Apr	0.3	Z	0.4	0.9	0.7	0.4	2.1	1.7	1.9	1.9	C	C	C	C	C	4.9	5.0	5.4	4.1	4.7	8.4	8.3	8.6	7.5	3.7	8.6	
17-Apr	1.1	1.0	Z	3.3	2.5	5.0	6.3	4.5	6.8	7.6	6.4	3.1	4.3	4.0	4.3	5.1	6.0	4.3	14.7	7.9	9.3	3.7	2.3	2.7	5.0	14.7	
18-Apr	3.5	5.4	2.4	Z	8.2	9.6	8.7	3.9	3.7	4.8	2.3	1.8	1.6	1.5	1.7	2.3	2.9	1.6	1.7	3.7	7.2	5.1	3.4	2.2	3.9	9.6	
19-Apr	2.0	0.8	0.4	0.5	Z	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.6	5.0	5.7	6.1	6.0	1.5	6.1	
20-Apr	9.2	11.3	13.0	9.1	9.2	Z	0.5	2.2	12.0	6.7	7.9	9.2	9.4	9.7	8.5	8.2	6.7	4.7	4.0	2.0	2.0	8.6	17.5	13.8	8.1	17.5	
21-Apr	Z	13.1	20.7	40.3	37.5	36.7	37.1	44.4	22.9	7.6	5.0	7.1	8.2	5.3	2.2	1.9	2.4	1.6	2.6	1.4	0.7	1.9	1.7	3.2	13.3	44.4	
22-Apr	2.7	Z	1.3	1.0	1.7	1.5	0.5	0.5	1.9	2.2	2.4	2.1	2.1	1.0	0.7	0.8	2.7	1.7	1.9	0.8	0.5	0.6	1.6	0.8	1.4	2.7	
23-Apr	0.7	0.3	Z	0.4	0.4	0.3	0.3	61.7	12.0	7.2	3.0	4.8	4.5	5.2	2.9	2.5	3.3	5.5	3.6	6.0	14.6	24.1	44.4	44.1	10.9	61.7	
24-Apr	13.2	26.3	36.5	Z	23.6	23.7	36.2	60.2	80.8	48.3	51.8	46.8	33.9	27.3	19.0	15.9	14.4	12.9	8.4	8.4	8.3	6.2	4.5	5.7	26.6	80.8	
25-Apr	6.9	3.8	2.7	5.6	Z	1.9	2.1	8.3	5.9	6.3	4.2	1.3	0.9	0.9	0.9	0.7	0.7	0.6	0.7	0.8	0.7	2.0	3.6	1.4	2.7	8.3	
26-Apr	1.5	1.6	2.6	20.4	11.9	Z	13.0	17.4	24.1	14.7	8.9	6.4	6.0	6.8	5.3	5.7	5.2	2.8	6.2	1.0	11.3	13.1	8.3	10.4	8.9	24.1	
27-Apr	Z	12.6	9.4	8.7	10.9	8.0	7.2	5.1	7.1	8.0	7.3	7.2	6.3	5.9	4.0	5.0	5.2	6.7	5.3	5.2	6.4	12.4	24.7	23.8	8.8	24.7	
28-Apr	19.0	Z	13.7	11.7	13.5	12.2	17.7	11.0	7.1	10.0	8.7	2.5	2.3	1.0	0.7	0.5	0.5	1.2	2.3	1.8	1.0	1.0	0.7	1.3	6.1	19.0	
29-Apr	1.8	4.1	Z	6.9	6.3	0.8	0.6	0.5	0.4	0.4	0.4	1.7	4.6	4.9	1.9	2.4	1.2	1.8	6.0	9.3	13.9	15.2	11.9	10.5	4.7	15.2	
30-Apr	22.3	17.5	1.5	Z	4.7	2.6	4.8	8.7	5.2	5.1	13.1	9.6	11.3	8.6	6.9	8.0	4.5	2.1	2.9	0.8	1.5	5.5	2.1	3.9	6.7	22.3	
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	619	90.36	90.37
21 - 40	45	6.57	96.93
41 - 80	18	2.63	99.56
81 - 159	2	0.29	99.85
> 159	0	0.00	99.85

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Ells River - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	44	81	25	10	3	23	50	84	57	41	38	37	33	26	33	21	606
21 - 40	5	6	2	0	1	3	1	4	4	0	0	0	1	5	3	4	39
11 - 80	3	6	0	0	0	0	2	0	2	0	0	0	0	2	1	2	18
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	93	27	10	4	26	53	88	63	41	38	37	35	33	37	28	665

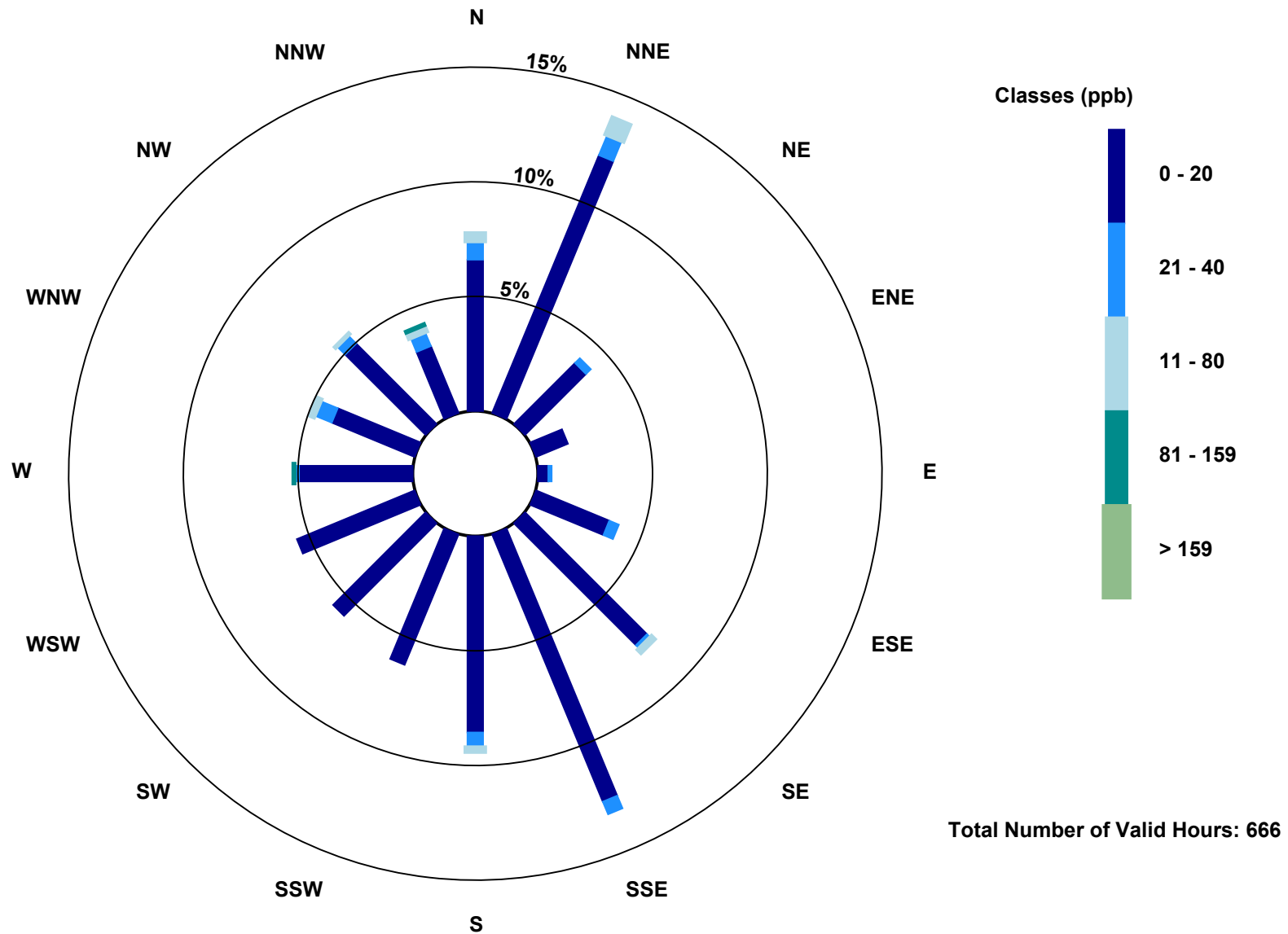
Total Number of Valid Hours: 666

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

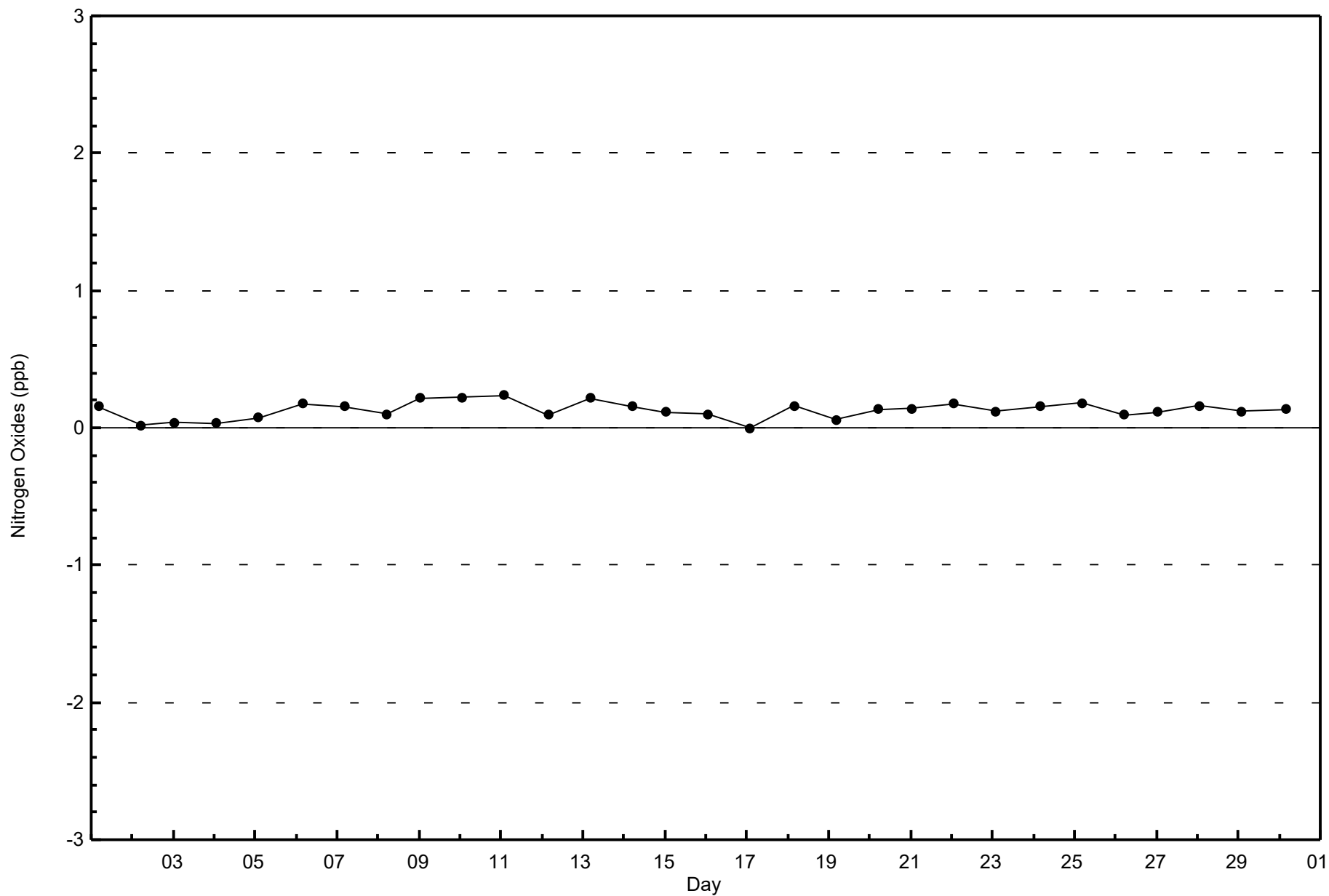
Nitrogen Oxides (NO_x) - ppb
Ells River





Wood Buffalo Environmental Association
Zero Responses

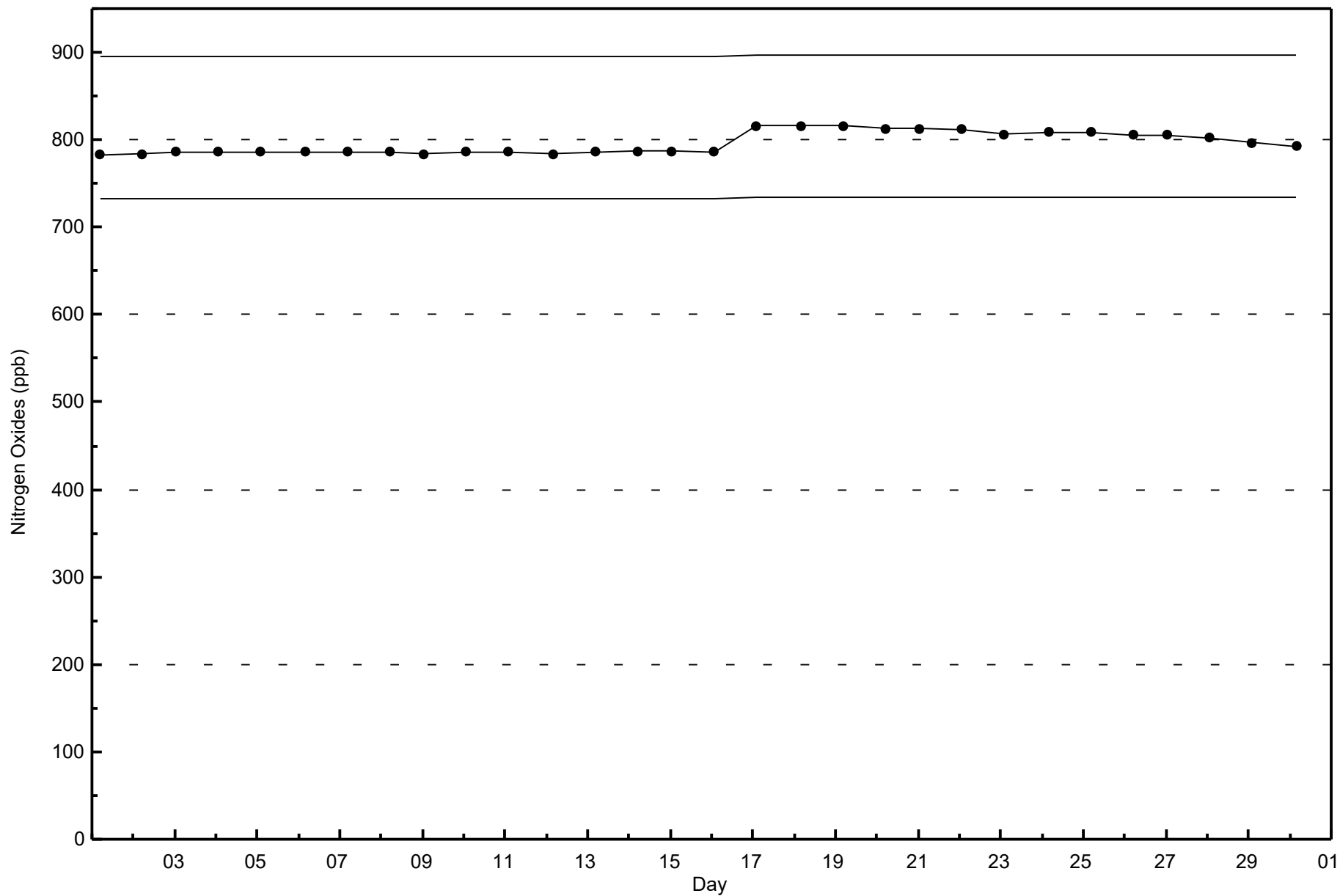
Nitrogen Oxides (NO_x) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

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

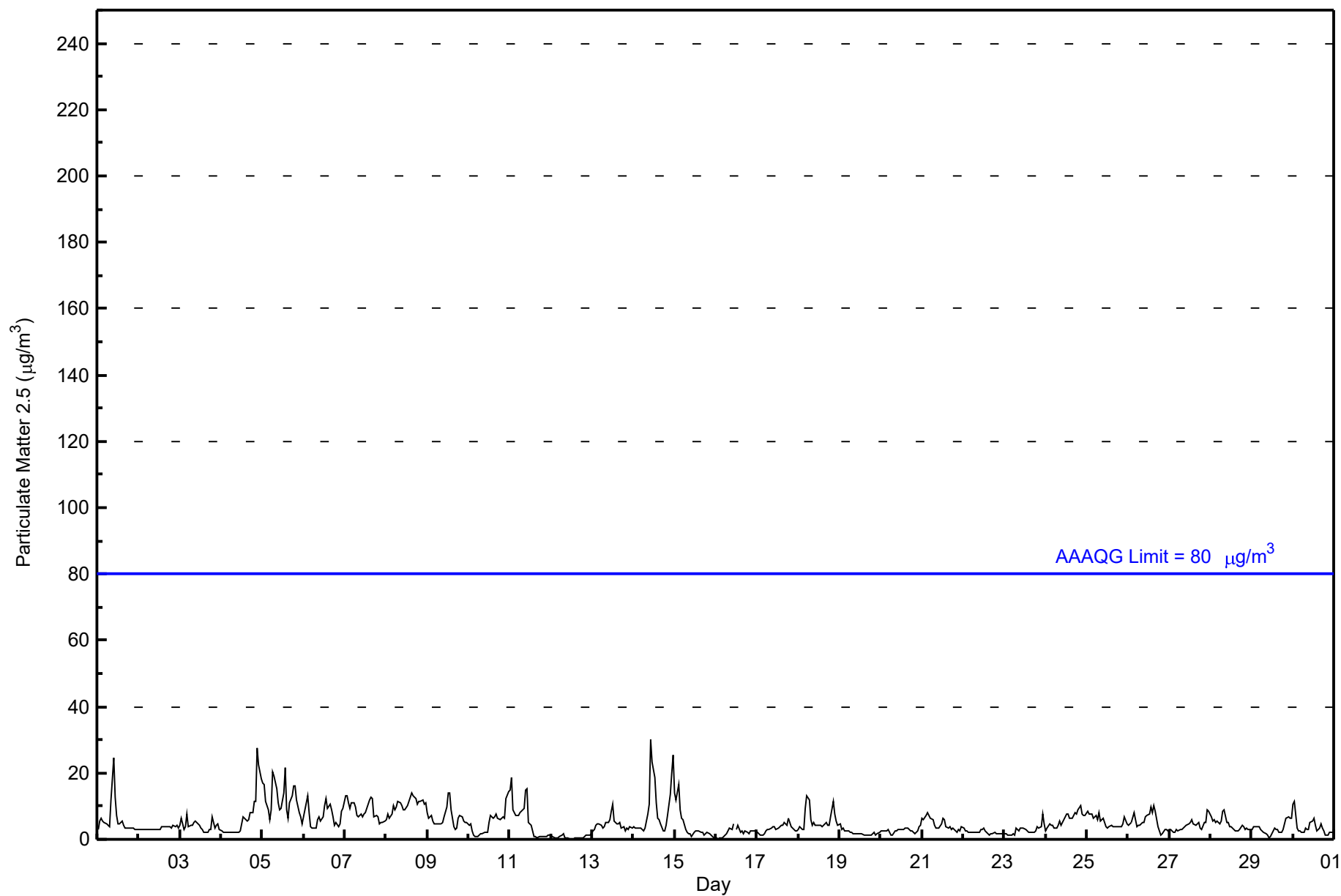
Ells River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																								Hours in Service: 720		
Maximum Value: 30.1 µg/m³ on Apr 14 11:00 Maximum Daily Average: 12.1 µg/m³ on Apr 5																								Hours of Data: 719		
Minimum Value: 0.1 µg/m³ on Apr 12 13:00 Minimum Daily Average: 0.7 µg/m³ on Apr 12																								Hours of Missing Data: 1		
Maximum Diurnal Average: 6.1 µg/m³ at hour 14 Minimum Diurnal Average: 4.3 µg/m³ at hour 18																								Hours of Calibration: 1		
Monthly Average: 5.06 µg/m³ Percentiles: P ₁ = 0.3 P ₁₀ = 1.5 Q ₁ = 2.6 Median = 3.9 Q ₃ = 6.5 P ₉₀ = 10.3 P ₉₉ = 20.2																								Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	2.9	5.5	6.3	5.4	4.9	4.5	4.3	4.0	11.7	24.8	12.8	7.1	4.7	4.5	5.4	4.2	3.3	3.4	3.5	3.3	3.3	3.2	3.0	3.0	5.8	24.8
2-Apr	2.9	3.0	3.0	2.9	2.9	2.9	2.8	2.9	2.9	2.9	2.8	2.9	3.1	3.6	3.7	3.9	3.8	3.6	3.8	3.5	4.4	3.7	4.3	3.4	3.3	4.4
3-Apr	4.3	6.2	2.8	3.9	7.6	3.8	4.1	4.4	5.1	5.4	5.0	4.4	3.2	2.9	2.1	2.3	2.3	3.2	2.9	6.8	3.2	4.3	4.5	3.2	4.1	7.6
4-Apr	2.5	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.6	4.7	6.6	5.8	5.7	5.9	8.0	8.0	11.6	11.5	27.6	22.6	18.0	6.7	27.6
5-Apr	16.8	16.5	11.4	8.8	5.9	8.9	20.3	19.1	15.2	10.9	8.7	9.3	14.0	21.8	8.8	6.2	11.0	13.3	16.3	16.3	11.8	7.9	6.6	4.7	12.1	21.8
6-Apr	6.7	8.8	13.0	8.2	3.9	3.4	3.3	3.4	6.0	6.8	5.6	6.6	10.3	12.5	9.2	10.8	9.0	6.7	4.4	5.0	3.8	4.8	8.3	9.3	7.1	13.0
7-Apr	13.1	13.1	11.1	9.5	11.0	11.1	9.6	7.2	6.6	7.5	6.8	7.4	7.9	9.3	11.7	12.9	12.2	6.7	7.2	6.7	4.6	4.9	5.2	5.7	8.7	13.1
8-Apr	6.1	7.5	6.3	7.6	10.2	8.7	9.9	11.3	10.9	10.3	8.8	9.1	10.1	11.5	12.8	13.8	13.0	12.3	10.6	11.3	11.4	11.7	10.4	11.1	10.3	13.8
9-Apr	8.1	6.5	7.0	5.6	4.5	4.5	4.7	4.5	4.6	5.1	7.0	9.8	13.8	14.1	8.8	3.7	2.9	3.5	6.3	7.1	6.8	5.7	5.2	5.0	6.5	14.1
10-Apr	4.4	4.5	2.4	1.1	1.0	1.1	1.3	1.6	1.8	2.0	2.0	2.3	5.1	7.1	6.5	7.0	7.6	6.5	6.0	6.3	6.8	6.3	12.3	14.6	4.9	14.6
11-Apr	14.8	18.8	9.0	7.0	7.2	7.2	8.0	8.4	9.2	14.9	15.1	5.0	4.3	2.7	0.8	0.6	0.6	0.7	0.7	0.8	0.8	1.0	1.2	1.4	5.8	18.8
12-Apr	1.3	0.9	0.5	0.4	0.6	0.9	1.3	1.5	0.6	0.3	0.3	0.2	0.1	0.2	0.5	0.4	0.3	0.2	0.3	0.5	1.4	1.1	1.4	1.5	0.7	1.5
13-Apr	2.5	3.0	4.1	4.7	4.5	4.4	3.6	3.7	4.9	4.9	6.1	8.4	10.6	5.5	4.6	4.5	5.2	3.5	3.7	2.5	3.5	3.1	3.8	3.3	4.5	10.6
14-Apr	3.8	3.6	3.4	3.3	3.3	2.9	2.7	3.5	7.5	10.4	30.1	23.1	18.5	11.1	6.2	5.9	4.7	2.7	2.6	4.1	7.4	13.4	19.8	25.5	9.2	30.1
15-Apr	14.2	11.8	16.7	8.7	6.2	5.9	2.8	2.0	1.8	1.7	0.8	2.1	2.7	2.7	2.6	2.3	1.9	1.3	1.8	2.0	1.5	1.3	0.9	0.4	4.0	16.7
16-Apr	0.3	0.2	0.2	0.4	0.6	1.1	1.8	2.4	3.6	3.1	4.6	C	2.9	4.2	2.2	2.7	1.8	2.4	2.3	1.7	2.5	2.4	2.6	2.6	2.1	4.6
17-Apr	2.1	1.6	1.3	1.4	1.5	2.5	2.8	2.8	3.6	3.8	3.8	3.2	3.3	3.6	4.2	4.4	5.0	4.4	6.3	5.3	4.0	2.9	2.6	2.6	3.3	6.3
18-Apr	2.8	3.9	2.9	2.8	9.2	13.3	11.7	6.1	4.3	5.0	4.2	4.4	4.3	4.4	4.0	4.6	5.1	4.3	4.4	6.7	11.6	7.6	5.4	4.1	5.7	13.3
19-Apr	4.7	3.1	3.4	2.6	2.5	2.5	2.2	2.0	1.7	1.9	1.8	1.5	1.6	1.6	1.4	1.3	1.4	1.2	1.2	1.5	2.0	1.2	1.5	2.1	2.0	4.7
20-Apr	2.5	2.6	2.6	2.4	2.9	2.1	1.2	1.5	2.7	2.7	3.1	3.0	3.0	3.1	3.3	3.5	3.4	2.7	2.6	1.9	1.9	2.7	3.7	4.1	2.7	4.1
21-Apr	6.2	6.0	7.1	8.1	7.2	6.4	5.9	4.3	3.3	3.4	3.6	4.7	6.3	5.8	3.6	3.5	3.7	3.1	3.4	2.8	2.2	2.9	2.7	4.0	4.6	8.1
22-Apr	3.4	2.6	2.4	2.1	2.0	2.0	2.2	2.1	2.1	2.3	2.9	3.1	3.4	2.4	1.7	1.3	1.9	1.7	2.0	1.6	1.7	1.7	1.6	1.6	2.2	3.4
23-Apr	1.7	1.5	1.5	1.5	1.5	1.5	1.4	3.3	2.8	3.3	3.5	3.2	2.9	2.4	2.3	2.0	2.1	2.3	2.6	3.7	3.6	4.0	7.8	4.6	2.8	7.8
24-Apr	2.5	3.4	4.8	4.4	4.1	3.5	3.4	4.2	5.4	4.4	5.1	6.9	7.5	7.4	6.4	6.4	7.3	8.2	7.4	8.9	10.1	7.6	7.2	7.4	6.0	10.1
25-Apr	8.4	7.6	7.6	7.8	6.3	7.4	5.8	8.1	5.7	6.2	5.1	4.0	3.5	3.7	4.1	4.0	4.0	4.0	3.6	3.8	3.9	4.8	6.8	4.6	5.4	8.4
26-Apr	4.4	4.5	4.9	8.2	6.1	4.0	4.2	4.3	5.1	5.3	6.7	7.2	7.6	9.6	7.9	10.0	8.5	3.9	2.7	1.1	1.9	3.0	3.1	2.4	5.3	10.0
27-Apr	2.8	3.0	2.3	2.0	2.8	2.7	2.8	2.8	3.3	3.9	4.4	4.7	4.9	5.8	4.7	4.3	4.7	5.1	3.6	3.1	5.0	5.1	8.8	8.3	4.2	8.8
28-Apr	6.7	5.7	5.9	5.2	5.7	4.8	5.6	8.3	8.8	5.0	5.0	3.7	3.9	3.5	2.5	2.6	2.3	2.8	4.4	3.7	3.1	3.3	3.0	3.0	4.5	8.8
29-Apr	3.1	3.6	3.8	3.8	4.0	2.9	2.7	2.3	1.5	1.1	0.5	0.6	2.4	3.5	3.1	3.0	2.3	2.3	2.8	4.7	6.5	6.7	6.3	6.2	3.3	6.7
30-Apr	10.8	11.4	3.2	2.3	2.4	2.2	2.0	3.5	2.9	2.9	5.3	5.7	6.3	4.4	2.7	3.3	4.6	3.5	2.5	1.2	1.5	2.0	2.3	2.3	3.8	11.4
5.6 5.7 5.1 4.5 4.5 4.4 4.5 4.6 4.9 5.5 5.8 5.4 5.9 6.1 4.8 4.7 4.7 4.3 4.3 4.7 4.8 5.3 5.8 5.7																								Diurnal Average		
16.8 18.8 16.7 9.5 11.0 13.3 20.3 19.1 15.2 24.8 30.1 23.1 18.5 21.8 12.8 13.8 13.0 13.3 16.3 16.3 11.8 27.6 22.6 25.5																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 µg/m³ 24-hr 29 µg/m³																										



Wood Buffalo Environmental Association
Hourly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Particulate Matter 2.5 (PM_{2.5}) - µg/m³
Ells River - April 2025

Concentration Ranges (µg/m³)	Number of Hours	%	Cumulative %
0 - 5	491	68.29	68.29
6 - 15	210	29.21	97.50
16 - 25	15	2.09	99.58
26 - 80	3	0.42	100.00
> 81.0	0	0.00	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}) - µg/m³
Ells River - April 2025

Concentration Ranges (µg/m³)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	37	75	21	5	2	12	15	47	42	32	36	33	35	28	35	25	480
6 - 15	15	20	7	5	2	15	35	40	21	11	5	5	3	7	7	3	201
16 - 25	2	1	0	0	0	0	3	5	2	0	0	0	0	0	0	1	14
26 - 80	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	96	28	10	4	27	54	93	66	43	41	38	38	35	42	29	698

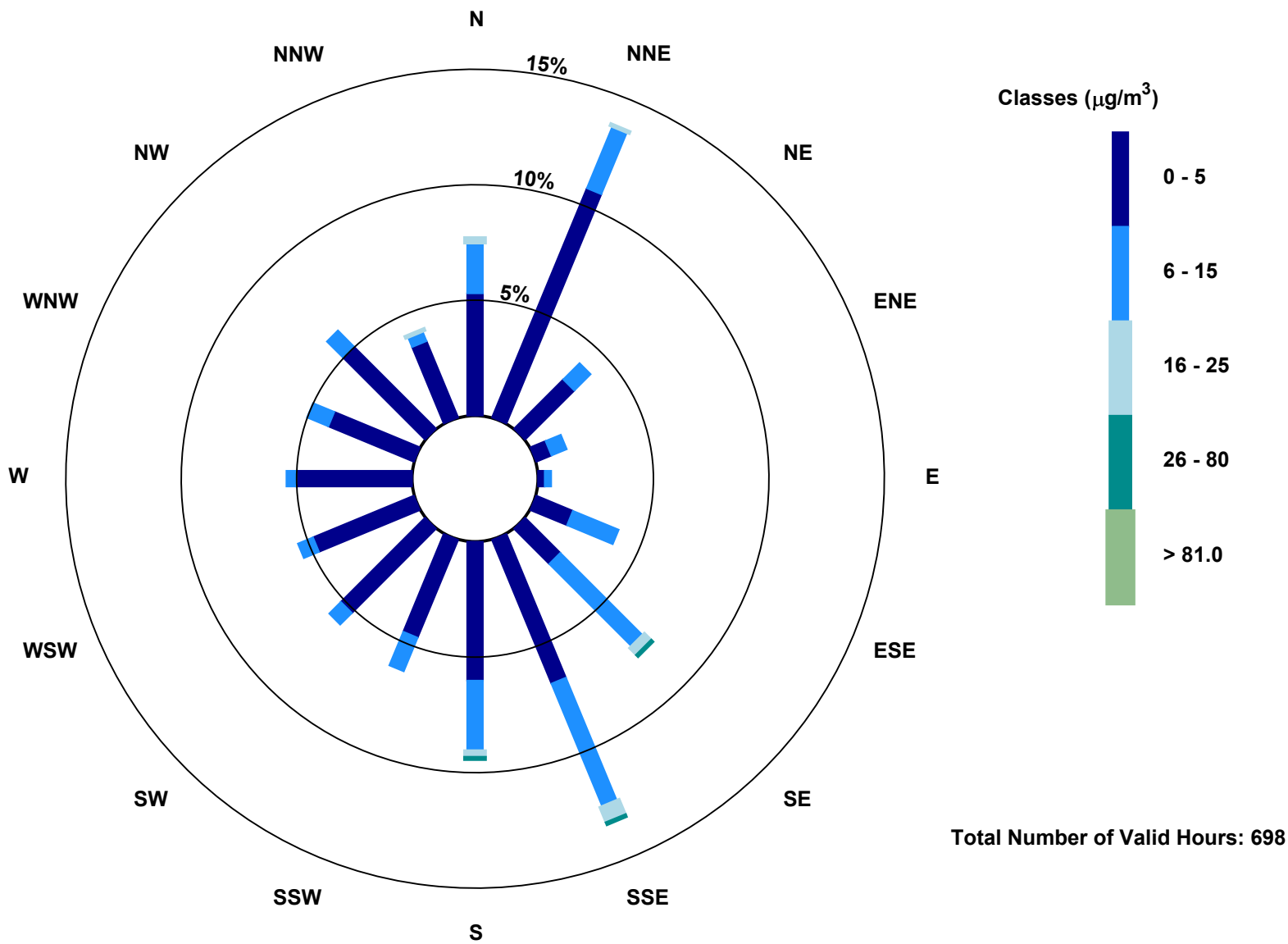
Total Number of Valid Hours: 698

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

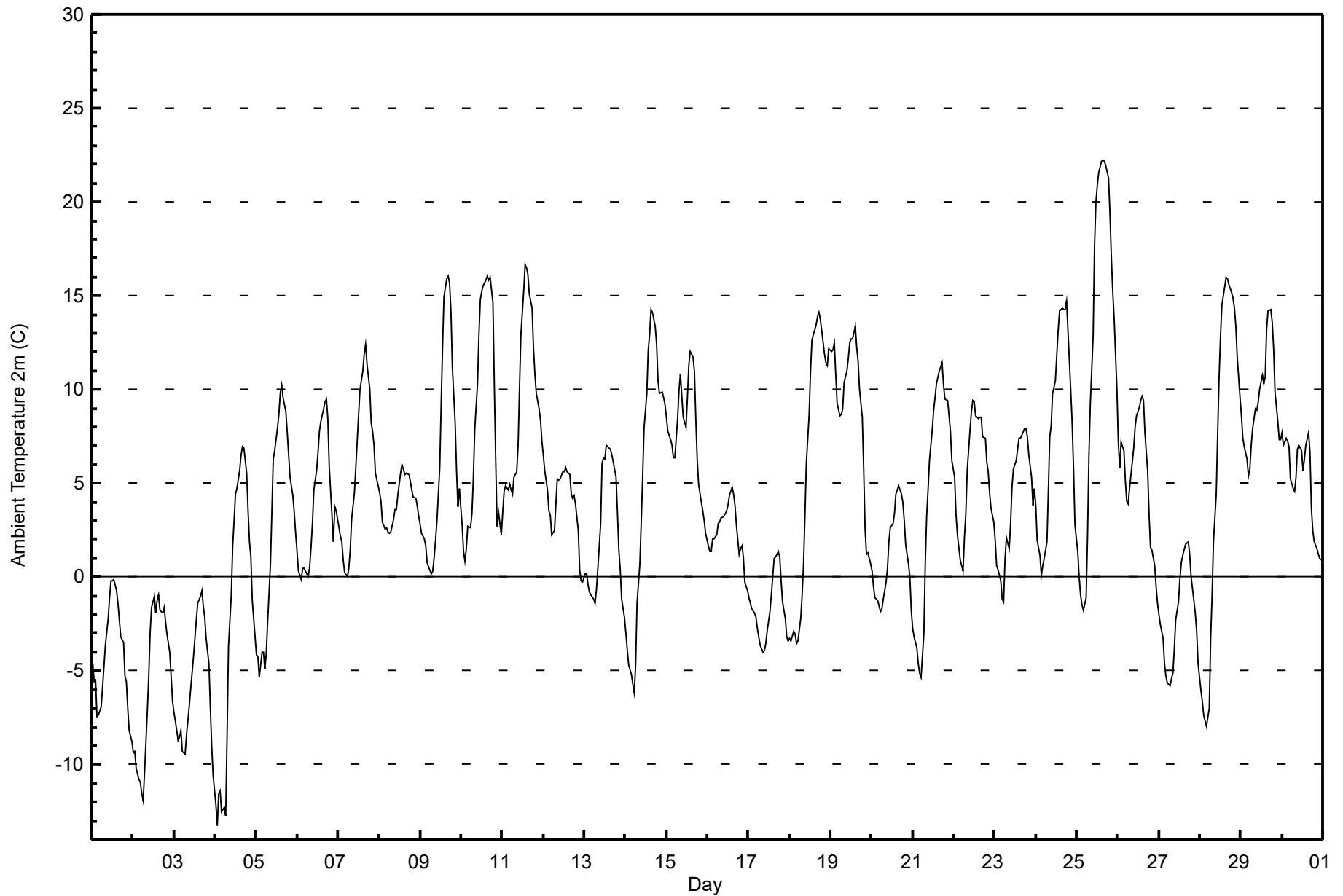
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Ells River





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Ells River - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	192	26.67	26.67
0 - 10	406	56.39	83.06
10 - 20	115	15.97	99.03
> 20	7	0.97	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) - %

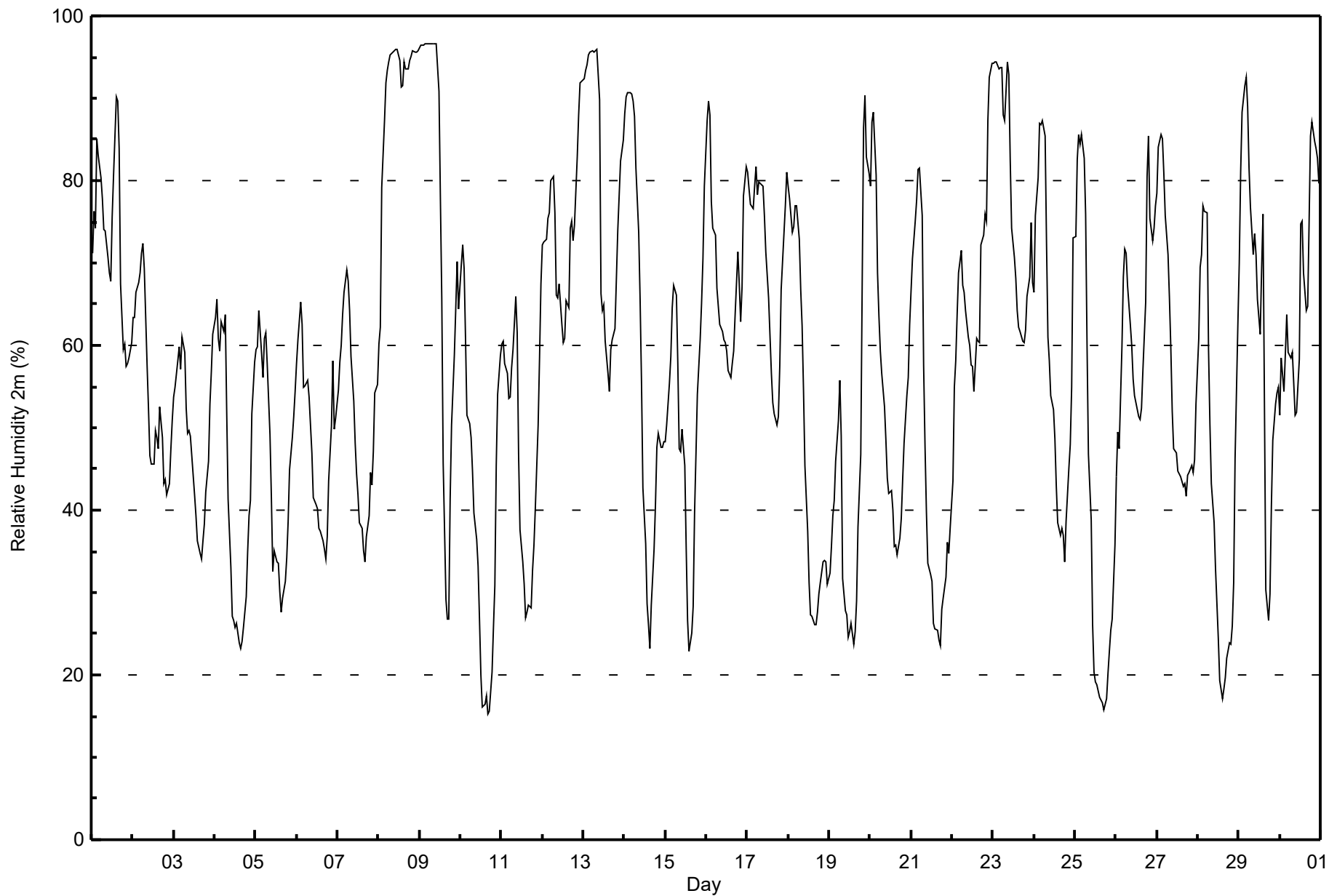
Ells River - April 2025

Maximum Value: 96.7 % on Apr 9 10:00																				Maximum Daily Average: 90.7 % on Apr 8					Hours in Service: 720					Hours of Data: 720				
Minimum Value: 15.3 % on Apr 10 17:00										Minimum Daily Average: 39.2 % on Apr 10										Hours of Missing Data: 0					Hours of Calibration: 0									
Maximum Diurnal Average: 74.0 % at hour 6										Minimum Diurnal Average: 42.0 % at hour 16										Percent Operational Time: 100.0														
Monthly Average: 58.21 %										Percentiles: P ₁ = 17.1 P ₁₀ = 28.6 Q ₁ = 42.8 Median = 58.9 Q ₃ = 73.9 P ₉₀ = 87.8 P ₉₉ = 96.6																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1-Apr	71.1	76.2	74.2	85.2	83.1	80.4	77.9	74.0	73.9	70.7	68.9	67.9	75.6	80.7	90.2	89.6	83.9	67.4	59.5	60.1	57.4	57.7	58.6	60.4	72.7	90.2								
2-Apr	63.4	63.5	66.4	67.7	68.8	71.2	72.4	69.4	57.7	52.3	46.7	45.6	45.5	49.6	48.7	47.5	52.5	48.9	43.2	43.7	41.9	43.3	47.2	50.8	54.5	72.4								
3-Apr	53.7	54.9	58.2	59.8	57.2	61.0	59.1	52.3	49.3	49.6	49.0	44.2	41.9	39.4	36.3	34.7	34.1	36.2	38.4	42.3	45.8	52.9	56.8	61.3	48.7	61.3								
4-Apr	63.4	65.6	60.9	59.3	62.8	61.7	63.7	52.1	41.3	33.0	27.1	26.5	25.8	26.2	24.0	23.3	24.0	25.8	29.5	34.9	39.4	41.2	51.6	57.9	42.5	65.6								
5-Apr	59.6	59.9	64.2	58.9	56.1	60.9	61.6	57.7	49.2	41.6	32.5	35.1	33.7	33.6	30.2	27.6	29.4	31.3	34.3	38.7	44.9	48.8	51.4	54.5	45.6	64.2								
6-Apr	57.8	60.7	65.2	62.5	55.0	55.0	55.7	53.8	50.3	47.0	41.6	40.7	40.1	37.8	37.4	36.3	35.3	34.1	36.8	43.6	50.2	58.2	49.9	51.2	48.2	65.2								
7-Apr	54.6	57.9	60.0	63.8	66.4	69.1	67.7	64.3	58.6	53.2	48.1	44.3	41.8	38.5	37.8	35.1	33.7	36.7	39.3	44.7	43.1	47.0	54.3	55.2	50.6	69.1								
8-Apr	60.2	62.2	79.1	87.2	91.9	93.3	94.5	95.2	95.6	95.7	95.9	95.9	94.6	91.4	91.6	94.3	93.6	93.5	94.5	95.1	95.7	95.6	95.6	95.8	90.7	95.9								
9-Apr	96.1	96.4	96.5	96.6	96.6	96.6	96.6	96.6	96.6	96.7	96.7	96.7	90.8	77.9	65.8	45.8	29.2	26.8	26.8	41.4	50.4	58.9	64.5	70.2	64.4	73.9	96.7							
10-Apr	69.8	72.2	69.3	60.8	51.5	50.5	48.8	44.8	39.6	36.4	33.2	26.7	19.9	16.2	16.4	17.4	15.3	15.6	20.4	25.8	30.9	45.4	54.1	58.9	39.2	72.2								
11-Apr	60.2	60.5	57.8	56.6	53.6	53.7	57.3	59.5	66.0	61.5	46.8	37.6	33.8	31.0	26.9	27.6	28.4	28.1	32.7	35.8	40.4	50.3	58.5	67.4	47.2	67.4								
12-Apr	72.1	72.6	72.9	75.5	76.0	79.9	80.5	76.1	66.2	65.8	67.5	62.6	60.4	60.9	65.5	64.5	74.3	75.1	72.8	74.5	82.8	87.9	91.8	92.1	73.8	92.1								
13-Apr	92.4	93.3	94.0	95.2	95.6	95.8	95.7	95.7	95.9	89.8	66.3	64.3	64.9	60.5	56.5	54.5	59.5	60.7	62.0	68.0	73.8	78.2	82.4	84.9	78.3	95.9								
14-Apr	88.1	90.2	90.6	90.6	90.5	89.6	87.8	81.5	73.8	65.6	55.6	42.6	35.9	28.6	26.1	23.3	28.4	35.3	40.7	47.7	49.3	47.7	47.6	48.4	58.6	90.6								
15-Apr	48.3	50.3	55.5	58.7	64.5	67.3	66.1	57.8	47.4	47.1	49.8	45.4	35.4	26.6	22.9	25.2	28.3	39.6	46.9	54.1	60.7	65.0	70.5	79.3	50.5	79.3								
16-Apr	87.3	89.6	88.0	77.5	74.2	73.4	67.0	64.8	62.6	61.6	60.6	60.3	59.4	56.9	56.0	57.7	59.3	63.5	71.4	67.5	63.0	67.1	78.2	81.6	68.7	89.6								
17-Apr	81.0	79.0	77.0	76.6	79.3	81.7	78.2	79.8	79.5	79.3	75.8	71.4	65.7	61.2	56.6	53.0	51.6	50.4	51.4	57.5	66.8	73.6	77.0	80.9	70.2	81.7								
18-Apr	79.4	77.9	73.8	74.5	77.0	76.9	72.9	66.8	62.3	54.6	45.5	37.5	31.2	27.3	27.1	26.0	26.0	27.6	29.9	31.1	33.8	33.8	33.7	31.0	48.2	79.4								
19-Apr	32.3	35.6	39.3	41.2	45.9	50.9	55.8	49.1	31.7	27.8	27.3	24.6	25.2	26.2	23.7	25.2	29.0	37.9	46.9	67.2	86.4	90.3	82.8	80.9	45.1	90.3								
20-Apr	79.4	87.2	88.3	80.7	68.8	63.6	59.3	56.6	52.6	48.5	44.0	42.0	42.4	40.1	35.6	35.7	34.5	36.7	38.9	43.7	48.1	53.8	56.1	62.5	54.1	88.3								
21-Apr	66.6	70.5	75.1	77.6	81.4	81.4	75.7	57.5	47.9	39.8	33.5	32.3	31.4	26.3	25.6	25.3	24.3	23.6	28.0	29.3	31.8	36.1	34.7	37.9	45.6	81.4								
22-Apr	43.5	54.9	58.1	63.8	68.8	71.5	67.3	66.4	64.2	61.0	60.0	57.6	57.4	54.3	60.8	60.5	60.4	72.1	73.3	75.9	75.2	87.3	92.5	94.2	66.7	94.2								
23-Apr	94.2	94.4	94.4	93.5	93.7	93.8	87.9	87.3	94.4	92.9	82.5	74.2	70.7	68.2	64.3	62.1	61.7	60.5	60.4	61.9	65.8	68.4	74.9	67.6	77.9	94.4								
24-Apr	66.5	75.8	80.3	86.9	86.7	87.4	85.5	72.4	60.9	58.1	54.0	52.3	48.6	42.9	38.5	37.0	37.7	37.0	33.8	38.7	45.0	48.0	54.9	73.0	58.4	87.4								
25-Apr	73.2	82.5	85.6	84.3	85.5	82.8	75.9	60.2	46.8	38.9	26.2	20.3	19.2	18.8	17.3	16.9	16.7	15.7	17.2	20.2	22.9	25.4	26.7	35.7	42.3	85.6								
26-Apr	44.1	49.4	47.4	59.8	68.4	71.7	71.2	67.3	62.5	60.0	56.0	53.9	52.2	51.3	50.9	52.4	56.9	65.3	80.5	85.5	75.4	72.7	74.2	77.0	62.7	85.5								
27-Apr	78.5	84.0	85.5	85.1	80.9	75.7	71.0	65.7	59.6	52.0	47.5	46.9	44.8	44.5	44.0	42.9	43.2	41.7	44.2	44.6	45.5	44.6	46.2	52.9	57.1	85.5								
28-Apr	60.9	69.5	71.0	77.0	76.3	76.0	59.6	50.4	43.2	38.5	32.8	28.7	24.4	19.4	17.0	18.4	19.7	22.0	24.0	23.7	25.9	31.2	46.3	62.6	42.4	77.0								
29-Apr	70.0	81.1	88.2	91.6	92.6	88.9	81.5	76.9	71.1	73.5	71.0	65.6	61.4	69.2	76.0	53.5	30.3	26.7	29.9	40.5	48.4	52.8	54.2	54.8	64.6	92.6								
30-Apr	51.5	58.4	54.3	58.9	63.7	59.1	58.4	59.2	55.4	51.5	51.8	58.4	74.7	75.0	68.9	64.3	64.7	74.9	85.4	87.1	84.7	83.9	82.7	79.7	66.9	87.1								
Diurnal Average																																		
96.1 96.4 96.5 96.6 96.6 96.6 96.6 96.6 96.6 96.7 96.7 96.7 95.9 94.6 91.4 91.6 94.3 93.6 93.5 94.5 95.1 95.7 95.6 95.6 95.8 Diurnal Maximum																																		



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Ells River - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	17	2.36	2.36
20 - 40	143	19.86	22.22
40 - 60	221	30.69	52.92
60 - 80	217	30.14	83.06
80 - 100	122	16.94	100.00

Total Number of Valid Hours: 720

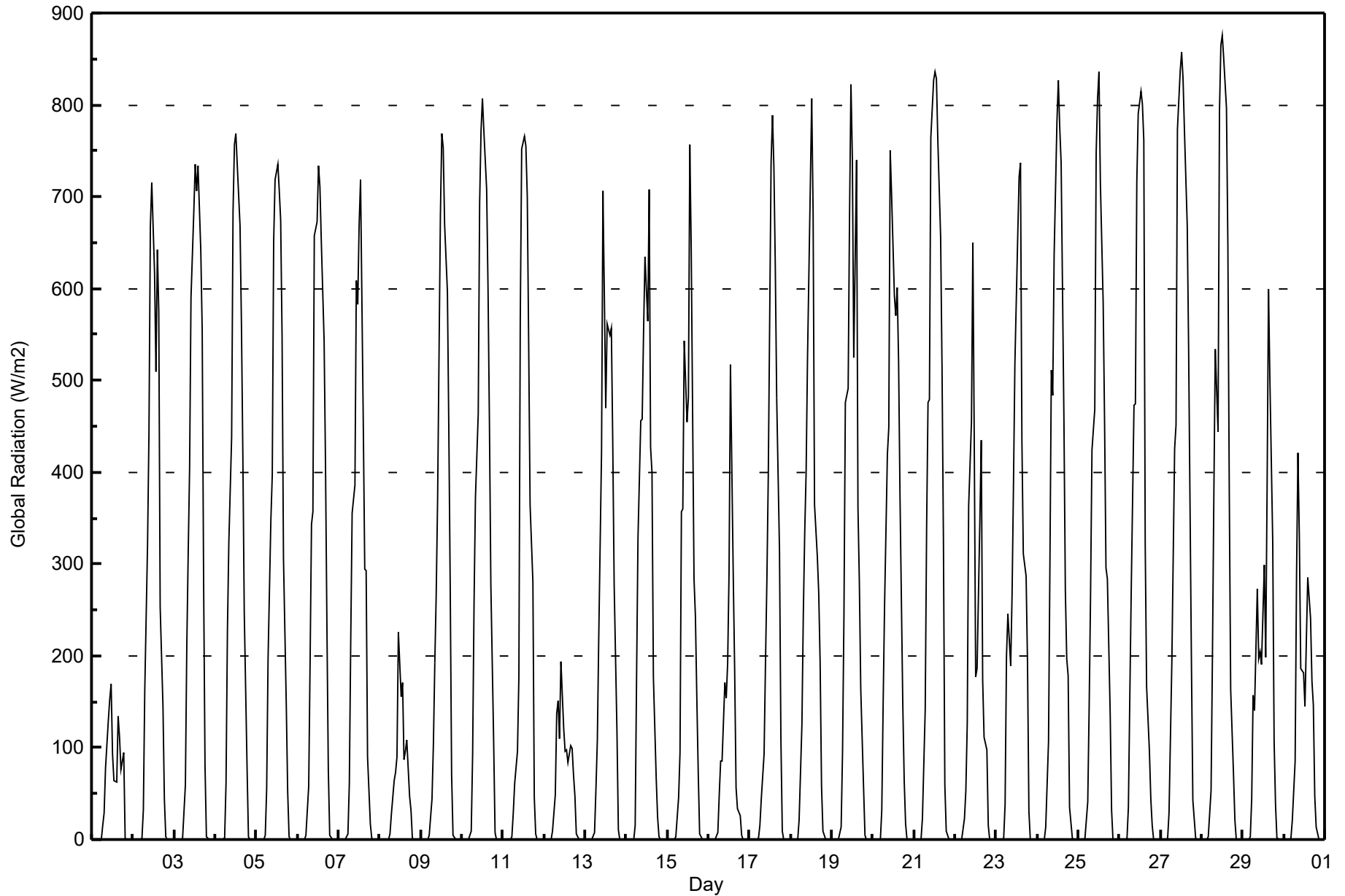
Total Number of Hours: 720

Maximum Value: 876.1 W/m2 on Apr 28 13:00																				Maximum Daily Average: 303.1 W/m2 on Apr 27										Hours in Service: 720	
Minimum Value: 0.0 W/m2 on Apr 1 04:00																				Minimum Daily Average: 49.3 W/m2 on Apr 8										Hours of Data: 720	
Maximum Diurnal Average: 598.4 W/m2 at hour 13																				Minimum Diurnal Average: 0.0 W/m2 at hour 3										Hours of Missing Data: 0	
Monthly Average: 203.76 W/m2																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 58.3 Q ₃ = 364.2 P ₉₀ = 674.2 P ₉₉ = 828.0										Hours of Calibration: 0	
																														Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	0.4	0.1	0.1	0.0	0.0	0.2	15.6	29.0	77.0	129.0	152.6	169.5	92.9	64.2	62.3	134.7	111.4	76.6	94.9	1.7	0.0	0.0	0.0	0.0	50.5	169.5					
2-Apr	0.0	0.0	0.0	0.0	0.0	1.8	32.1	161.2	322.5	442.4	668.7	715.4	616.0	509.3	642.6	575.7	252.8	145.5	44.7	2.5	0.0	0.0	0.0	0.1	213.9	715.4					
3-Apr	0.0	0.0	0.0	0.0	0.0	1.9	59.0	210.2	310.6	404.6	591.0	683.3	735.4	706.5	733.3	641.0	553.2	281.9	80.4	3.0	0.0	0.0	0.1	0.0	249.8	735.4					
4-Apr	0.0	0.0	0.0	0.0	0.0	2.3	60.9	227.6	324.1	438.1	683.5	756.8	768.6	735.8	668.5	561.8	419.4	248.6	79.5	3.4	0.0	0.1	0.0	0.0	249.1	768.6					
5-Apr	0.1	0.0	0.0	0.0	0.0	4.6	55.6	197.2	348.3	396.6	651.8	718.1	735.7	706.9	673.6	547.0	306.4	146.7	52.5	2.5	0.0	0.0	0.0	0.0	231.0	735.7					
6-Apr	0.0	0.0	0.0	0.0	0.1	4.7	58.2	194.3	342.7	357.4	657.8	672.4	734.0	710.5	651.8	543.0	407.6	233.9	76.6	3.9	0.0	0.0	0.1	0.0	235.4	734.0					
7-Apr	0.0	0.0	0.0	0.0	0.0	5.4	61.6	216.4	356.2	386.6	609.1	582.1	669.0	719.1	447.2	294.9	292.2	89.5	16.7	1.1	0.0	0.0	0.0	0.0	197.8	719.1					
8-Apr	0.0	0.0	0.0	0.0	0.0	0.1	5.5	27.1	64.2	72.6	89.9	225.2	155.1	171.0	86.8	95.9	107.7	47.8	32.7	1.8	0.0	0.0	0.0	0.0	49.3	225.2					
9-Apr	0.0	0.0	0.0	0.0	0.0	3.8	44.8	103.4	192.2	266.6	371.3	679.6	768.5	754.0	669.3	596.9	447.3	274.8	69.6	4.2	0.0	0.0	0.0	0.0	218.6	768.5					
10-Apr	0.0	0.0	0.0	0.0	0.0	9.0	92.7	255.6	372.9	463.0	694.4	772.0	806.8	771.7	707.2	597.5	452.1	277.3	107.4	7.5	0.1	0.0	0.0	0.0	266.1	806.8					
11-Apr	0.0	0.0	0.0	0.0	0.0	3.0	29.3	60.9	96.3	177.6	568.1	752.5	765.8	755.7	700.4	538.6	365.0	280.8	46.3	6.7	0.0	0.0	0.0	0.0	214.4	765.8					
12-Apr	0.0	0.0	0.0	0.0	0.0	9.7	48.2	137.9	150.8	109.8	193.7	119.9	96.1	97.7	83.2	102.9	99.7	70.7	47.2	5.8	0.0	0.0	0.0	0.0	57.2	193.7					
13-Apr	0.0	0.0	0.0	0.0	0.0	7.5	55.0	109.0	219.0	422.3	706.0	591.3	469.4	561.3	549.7	556.5	431.1	278.1	117.1	10.0	0.0	0.1	0.0	0.0	211.8	706.0					
14-Apr	0.0	0.0	0.0	0.1	0.2	15.8	176.9	328.2	455.6	457.9	554.4	634.2	564.9	707.1	427.1	400.4	177.7	66.7	25.1	3.1	0.0	0.0	0.0	0.0	208.1	707.1					
15-Apr	0.0	0.0	0.0	0.0	0.0	3.3	46.1	95.1	357.0	360.5	542.4	454.1	481.6	756.6	641.5	283.1	242.6	154.8	73.2	6.4	0.0	0.0	0.0	0.0	187.4	756.6					
16-Apr	0.0	0.0	0.0	0.0	0.0	7.1	48.4	85.7	84.9	170.4	154.7	191.8	292.0	517.0	286.0	184.1	55.8	34.1	25.4	4.3	0.0	0.0	0.0	0.0	89.2	517.0					
17-Apr	0.0	0.0	0.0	0.0	0.0	2.1	14.7	44.0	93.4	192.3	282.3	397.0	736.2	788.2	732.5	624.0	481.3	314.7	110.0	8.9	0.2	0.1	0.0	0.0	200.9	788.2					
18-Apr	0.0	0.0	0.0	0.0	0.4	20.9	124.8	245.1	333.9	399.4	524.1	713.0	807.1	680.3	364.0	307.8	268.4	191.8	58.4	9.1	0.0	0.0	0.0	0.0	210.3	807.1					
19-Apr	0.0	0.0	0.0	0.0	0.0	13.4	96.3	244.4	476.3	490.6	681.1	821.8	740.8	524.8	740.1	360.8	279.2	162.7	57.2	4.9	0.0	0.0	0.0	0.0	237.3	821.8					
20-Apr	0.0	0.0	0.0	0.0	0.2	32.7	150.6	255.5	419.0	448.4	750.3	701.8	591.4	570.7	601.3	520.7	373.6	146.8	63.9	17.0	0.2	0.1	0.0	0.0	235.2	750.3					
21-Apr	0.0	0.0	0.0	0.0	0.5	22.3	141.6	340.4	476.6	478.5	765.0	826.1	836.4	828.0	761.7	656.3	512.2	325.6	59.5	8.5	0.1	0.0	0.0	0.0	293.3	836.4					
22-Apr	0.0	0.0	0.0	0.0	0.6	22.2	53.3	125.9	363.7	454.5	649.3	432.2	177.2	186.0	347.8	434.2	174.5	111.4	98.1	15.9	0.0	0.0	0.0	0.0	152.0	649.3					
23-Apr	0.0	0.0	0.0	0.0	1.1	38.0	200.6	245.9	189.5	269.2	387.6	519.3	656.2	722.0	737.2	435.2	310.7	286.9	191.5	31.1	0.5	0.0	0.0	0.0	217.6	737.2					
24-Apr	0.0	0.0	0.0	0.0	0.3	13.4	106.7	300.4	510.5	482.9	636.8	781.6	827.5	774.8	737.1	456.6	270.8	196.4	178.2	35.2	0.9	0.2	0.0	0.0	262.9	827.5					
25-Apr	0.0	0.0	0.0	0.0	1.7	40.4	144.9	267.5	424.6	468.7	748.1	807.4	835.2	714.7	584.1	455.2	296.1	283.6	137.2	32.0	0.7	0.0	0.0	0.0	260.1	835.2					
26-Apr	0.0	0.0	0.0	0.0	1.3	35.3	154.2	268.6	473.1	475.0	714.7	790.2	814.2	800.3	761.3	321.2	166.7	96.0	44.6	15.4	0.4	0.0	0.0	0.1	247.2	814.2					
27-Apr	0.1	0.0	0.0	0.0	1.1	28.5	192.3	310.1	426.2	450.8	772.8	837.4	857.2	828.0	772.3	668.6	532.3	361.5	190.9	42.6	1.5	0.0	0.0	0.0	303.1	857.2					
28-Apr	0.0	0.0	0.0	0.0	3.4	52.7	203.0	377.4	534.5	443.7	793.6	864.2	876.1	850.5	796.6	646.4	377.7	163.1	71.7	21.0	0.3	0.0	0.0	0.0	294.8	876.1					
29-Apr	0.0	0.0	0.0	0.0	2.9	44.4	157.6	139.9	273.0	196.8	204.5	190.7	299.5	197.7	383.7	599.0	499.0	325.1	106.9	38.5	1.2	0.0	0.0	0.0	152.5	599.0					
30-Apr	0.0	0.0	0.0	0.0	1.6	21.4	85.2	286.1	421.4	330.2	186.4	181.5	145.5	216.3	284.6	240.6	172.0	146.8	47.5	13.7	0.6	0.0	0.0	0.0	115.9	421.4					
0.0 0.0 0.0 0.0 0.5 15.6 90.5 196.3 316.3 354.5 532.9 586.1 598.4 597.6 554.5 446.0 314.5 194.0 80.2 12.1 0.2 0.0 0.0 0.0																									Diurnal Average						
0.4 0.1 0.1 0.1 3.4 52.7 203.0 377.4 534.5 490.6 793.6 864.2 876.1 850.5 796.6 668.6 553.2 361.5 191.5 42.6 1.5 0.2 0.1 0.1																									Diurnal Maximum						



Wood Buffalo Environmental Association
Hourly Averages

Global Radiation (GR) - W/m²
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

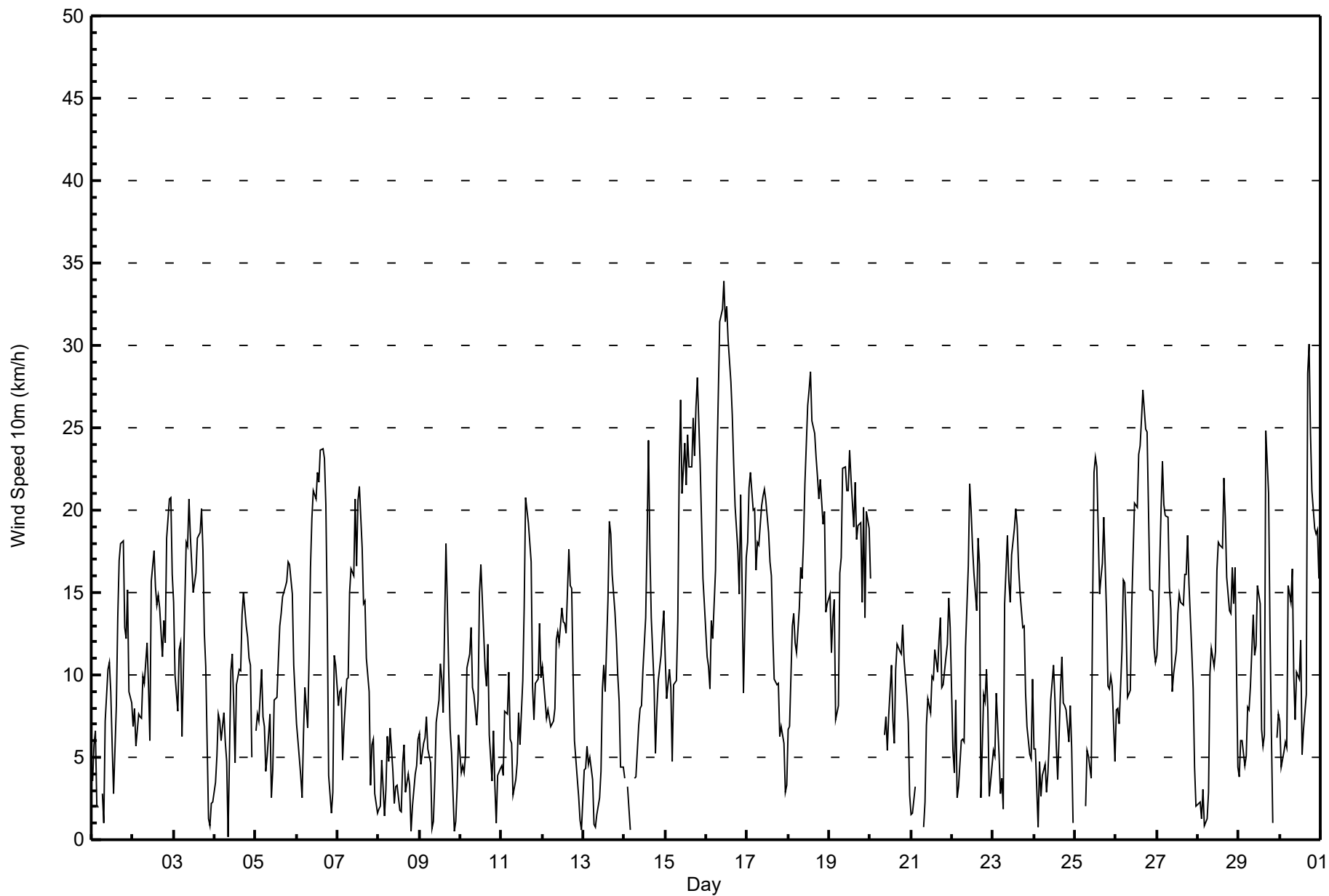
Ells River - April 2025

Maximum Speed: 34 km/h on Apr 16 11:00										Maximum Daily Speed Average: 18.9 km/h on Apr 16										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 4 09:00										Minimum Daily Speed Average: 1.1 km/h on Apr 9										Hours of Data: 699						
Maximum Diurnal Speed Average: 3.4 km/h at hour 18										Minimum Diurnal Speed Average: 0.2 km/h at hour 15										Hours of Missing Data: 21						
Monthly Average Velocity: 0.8 km/h 304.1 deg										Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 6 Median = 10 Q ₃ = 16 P ₉₀ = 21 P ₉₉ = 28										Percent Operational Time: 97.1						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	SSW4	SSE6	SSE7	ESE2	ESE2	UO	N3	NE1	SE7	SSE10	S11	S9	SSW6	SSE3	WNW8	WNW14	NW17	NW18	NW18	NW13	NW12	NW15	WNW9	W8	WNW3.9	NW18
2-Apr	WSW7	W8	WSW6	WSW8	WSW7	WSW7	SW10	SW10	W12	W9	W6	NW16	NW18	N15	N14	N15	NE14	N11	NW13	NW12	NNW18	NNW21	N21	N16	NW8.3	N21
3-Apr	NW14	NW10	WNW8	NW12	NW12	WNW6	NW14	NW18	NW18	NNW21	NNW18	NW15	NW16	NW16	NW18	WNW19	NNW20	NNW18	NW13	NW10	W1	SSW1	SW2	SSW2	NW12.0	NNW21
4-Apr	SW3	SW5	SW8	SSW7	SSW6	SW8	SSW6	SW5	SW0	SSW10	SSW11	S8	SSE5	SSE9	SSE10	SSE10	SSE14	S15	S13	S12	S11	S11	S5	UO	S7.7	S15
5-Apr	S7	SSE8	S7	S10	S7	SSE7	SSE4	SE5	SSE8	ENE3	N4	N9	NNE9	NNE11	NNE13	NNE14	NNE15	NNE15	N16	N17	N17	N15	N11	N9	NNE4.9	N17
6-Apr	N7	NNE6	NNE4	NE3	ESE6	ESE9	ESE7	SE11	SE17	SE20	SE21	SE21	SE22	SE22	SE24	SE24	SE23	SSE20	SSE14	ESE4	SE2	SE3	SSE11	SSE11	SE11.4	SE24
7-Apr	S8	SSE9	SSE9	SSE5	SSE7	SSE10	SSE10	SE15	SE16	SE16	SSE21	SSE17	SE21	SSE21	SE18	SE14	SSE14	SE11	SE9	ESE3	SE6	SE6	N3	E2	SSE10.9	SSE21
8-Apr	ESE2	ESE2	WNW5	W1	SSW3	SSE6	SSE5	SSE7	S4	SE2	NE3	N3	ESE2	ENE2	SE5	SE6	ESE3	ESE4	SE3	SSE0	S2	S4	SSW4	SW6	SSE2.2	SSE7
9-Apr	SSW6	SSW5	SSW6	SSW6	S7	S6	SSE5	SE1	NW1	SE4	SE7	SE8	SE11	ESE10	N8	NW18	NW14	NNW10	ESE7	E5	NNE0	SW1	W3	SSW6	S1.1	NW18
10-Apr	SSW4	S4	SSW4	SSW5	SSW10	SW11	SW13	SW9	SW9	SSW7	SSE9	SW15	SW17	SW15	SW10	WSW9	SSW12	SW6	SSE4	ESE7	SE3	WSW1	N4	WNW4	SSW6.7	SW17
11-Apr	WNW4	NNW4	N8	NNW8	NNW10	NW6	NW6	WNW3	NNE4	W5	S8	SW6	SW10	WSW14	WSW21	WSW20	W19	WSW17	WSW9	SW7	SW9	SW10	WSW13	SW10	WSW7.1	WSW21
12-Apr	SW10	WSW10	SW7	SW8	SW7	SSW7	SSW7	SW8	W12	W13	W12	WNW14	WNW13	WNW13	WNW13	WNW18	NW15	NW15	WNW10	NNW6	NNE4	W3	NE1	SE1	W7.4	WNW18
13-Apr	SSW4	SSE4	SE6	SE5	SSE5	S4	NE1	NE1	S2	N3	N4	NNE9	NNE11	NNE9	NNE15	NNE19	NNE19	NE16	NE14	NNE12	NNE10	NNE8	NNW4	NW4	NNE5.6	NNE19
14-Apr	WNW4	UO	W3	SSE1	UO	UO	SSE4	SSE4	SE7	SSE8	SE8	SE10	SE13	SE18	SE24	SSE18	S13	SW9	SSE5	SE8	SE10	SSE11	SSE13	SSE14	SSE8.7	SE24
15-Apr	SSE11	SSE9	SSE10	SSE9	S5	S9	S10	SSW13	SW22	W27	WSW21	WSW24	WSW22	WSW25	WSW23	W23	W26	WNW23	W26	W28	WSW23	WSW19	WSW16	WSW14	WSW15.3	W28
16-Apr	WSW11	W11	W9	WNW13	WNW12	NW16	NW23	NW27	NW31	NW32	NW34	NW31	NW32	NW30	NW28	NNW26	NNW23	NNW20	NNE18	N15	NNW21	N16	NE9	NNE17	NNW18.9	NW34
17-Apr	N18	N21	N22	N20	N20	NNE16	NNE18	NNE18	NNE20	NNE21	NNE21	NNE21	NNE19	NNE17	NNE16	ENE12	NNE10	NE9	ENE9	E6	ESE7	ESE6	S3	SE3	NNE13.2	N22
18-Apr	SSE7	S7	SSE13	SSE14	SSE12	SSE11	SSE14	SSE17	SSE16	SSE18	SSE22	SSE26	SSE27	SSE28	SSE25	SSE25	SSE23	SSE22	SSE21	SSE22	SSE19	SSE20	SSE14	S14	SSE18.1	SSE28
19-Apr	S15	SSW11	WSW13	W15	W7	W8	W16	W17	W23	W23	W21	W21	WNW24	WNW22	WNW19	W22	W18	W19	WNW19	NNW14	NNE20	NNE13	NNE20	NNE19	WNW12.4	WNW24
20-Apr	NNE16	UO	UO	UO	UO	UO	UO	UO	NNW6	NNW7	N5	ENE8	E11	ESE7	NE6	ENE10	NE12	ENE11	NE11	NNE13	NNE11	NNE9	NNE7	NNW3	---	NNE16
21-Apr	NW2	WSW2	WNW3	UO	UO	UO	UO	SE1	NNE2	SE7	ESE9	ESE8	ESE10	S10	SSE12	SSE10	SSE12	SSE13	SSE9	SSW9	S11	SSE12	SSE15	SSE13	SSE7.2	SSE15
22-Apr	SW5	S4	SSW8	W3	S3	SSE6	S6	SSW6	S12	S17	SSE22	SSE20	SSE18	S16	SSW14	S18	S17	NE3	SSE9	S8	WSW10	WNW8	SW3	SSW5	S8.4	SSE22
23-Apr	WSW5	W5	W9	WSW5	S3	SW4	W2	N14	NNE18	NNE16	NE14	NNE17	NNE19	NNE20	NNE19	NNE17	NNE15	NNE13	NNE13	N9	N7	NNW5	NNW5	NNW10	N8.6	NNE20
24-Apr	NNW6	WNW6	W1	WNW5	WNW3	NW4	NNW5	NNE3	NNE4	N6	NNE8	N11	NNE9	ESE6	ESE4	NE9	ENE11	ENE8	ESE8	ESE8	ESE6	SE8	SSE6	N1	NE2.8	ENE11
25-Apr	UO	UO	WNW4	UO	SSW2	UO	S2	SE5	SE5	SE4	S14	S22	S23	S23	S15	S16	SSW17	S20	SSW14	S9	S9	S10	SSW9	WSW5	S10.7	S23
26-Apr	SSE8	SSE8	S7	N11	N16	NNE16	NNE13	NNE9	N9	NNE14	NNE17	NNE20	NNE23	NNE24	NNE26	NNE27	NNE25	NNE25	N20	N15	N15	N12	NNE11	NNE14.4	NNE27	
27-Apr	NNE11	NNE13	NNE20	NNE23	NNE20	NNE20	NNE20	NNE15	N14	NNE9	NNE10	NE11	NE14	NE15	NE14	NE14	NE16	NE16	NNE18	NNE16	NE11	NE9	NE4	NNW2	NNE13.8	NNE23
28-Apr	WSW2	WNW2	W1	W3	WSW1	WSW1	SE3	SSE10	S12	SSE11	SSE11	SSE16	SSE18	S18	S18	S22	S20	S16	SSE14	S14	SSW17	SSW14	SW16	S4	S10.2	S22
29-Apr	SSW4	S6	SE6	SSW5	SW5	SW8	SW8	SW9	WSW14	WSW11	WNW12	WNW15	NNW14	NE7	SE6	NNE6	NNE25	NNW21	NNW13	NNE7	NE1	UO	S6	SSW8	WNW3.3	NNE25
30-Apr	S7	SSW4	WSW5	SW6	NW6	N15	NNE14	NNE16	N10	NNE7	NE10	NE10	NNE12	ENE5	NNE7	NNE9	NNE28	N30	N25	N21	N19	N19	N19	N16	N11.2	N30
SW1.8 SW2.0 SW2.2 W2.1 W1.2WSW0.8WNW1.2 W1.0WNW1.8 W1.6 SSE0.6 W0.6 E0.5 SE1.4 SSE0.2 NW1.3 N2.6 N3.4 N2.7 N2.4 N1.6NNW1.0WNW0.7WNW0.8																									Diurnal Average	
N18 N21 N22 NNE23 NNE20 NNE20 NW23 NW27 NW31 NW32 NW34 NW31 NW32NNW30 NW28NNW26 NNE28 N30 W26 W28WSW23NNW21 N21 NNE19																									Diurnal Maximum	
UO - Unstable Operation																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Ells River - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Ells River - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	152	21.75	21.75
6 - 11	243	34.76	56.51
12 - 19	202	28.90	85.41
20 - 28	95	13.59	99.00
29 - 38	7	1.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 699

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Ells River - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	9	7	9	3	2	11	16	14	14	16	9	9	12	10	5	6	152
6 - 11	14	24	11	6	2	16	20	37	27	20	26	11	9	7	5	8	243
12 - 19	22	43	8	1	0	0	8	26	19	7	5	9	9	13	25	7	202
20 - 28	8	22	0	0	0	0	10	16	6	0	1	9	8	5	3	7	95
29 - 38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	7
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	96	28	10	4	27	54	93	66	43	41	38	38	35	43	29	699

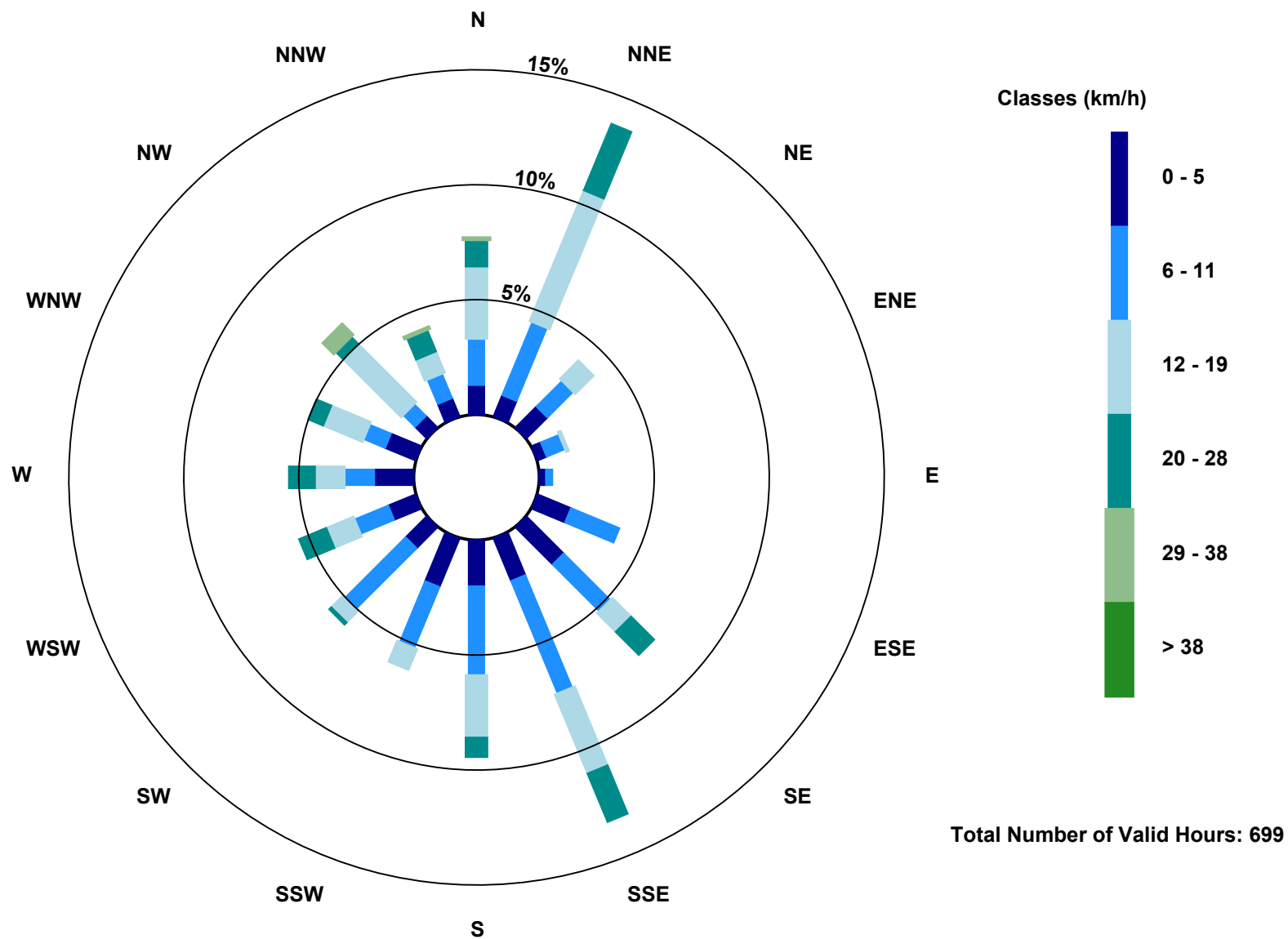
Total Number of Valid Hours: 699

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Ells River





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Ells River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 10 km/h on Apr 15 20:00																		Hours in Service: 720 Hours of Data: 699 Hours of Missing Data: 21 Hours of Calibration: 0 Percent Operational Time: 97.1							
Minimum Value: 0 km/h on Apr 24 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 5 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	2	2	1	2	UO	1	1	2	2	2	2	3	2	4	3	4	4	4	3	3	3	3	2	4
2-Apr	1	3	2	2	2	2	2	3	3	3	3	4	4	3	3	4	3	4	3	4	3	4	5	3	5
3-Apr	4	3	2	4	3	2	6	4	3	5	5	4	4	4	5	5	4	3	4	2	2	2	2	2	6
4-Apr	2	1	2	2	2	2	1	3	2	3	4	4	3	4	4	3	3	2	2	1	1	1	3	UO	4
5-Apr	2	2	2	1	1	1	3	2	1	1	2	2	2	3	3	3	2	2	2	2	2	2	2	1	3
6-Apr	1	1	1	2	2	2	2	4	3	4	4	4	3	4	4	5	5	4	5	2	2	2	4	2	5
7-Apr	2	2	2	1	2	1	2	3	3	3	4	3	4	5	3	3	3	2	3	2	1	4	2	2	5
8-Apr	2	2	1	2	2	1	2	2	2	2	3	1	1	2	1	1	1	2	2	1	1	1	1	2	3
9-Apr	2	1	1	1	2	1	1	2	1	2	2	2	2	3	6	5	3	3	2	2	2	2	4	3	6
10-Apr	4	2	2	1	3	3	3	5	3	3	3	5	5	4	5	4	4	3	2	1	1	2	2	1	5
11-Apr	2	2	3	2	2	2	1	2	3	3	5	3	4	6	6	6	6	6	4	1	2	3	4	3	6
12-Apr	3	3	2	2	2	1	1	2	3	4	4	4	3	3	3	5	4	4	3	1	2	1	1	1	5
13-Apr	1	1	1	1	1	2	1	1	1	1	2	3	4	4	4	4	4	3	3	2	3	2	1	1	4
14-Apr	1	UO	1	1	UO	UO	2	1	1	2	2	3	3	5	4	5	4	4	1	1	1	1	2	2	5
15-Apr	2	1	1	2	3	2	2	4	9	9	7	8	7	8	7	8	8	8	9	10	7	6	5	4	10
16-Apr	3	3	2	4	2	5	5	6	7	7	8	6	6	6	6	5	4	4	3	4	4	6	4	3	8
17-Apr	3	4	3	3	3	3	3	3	3	3	3	4	5	5	5	5	3	3	2	1	1	2	1	1	5
18-Apr	1	2	2	2	2	2	3	3	3	4	5	6	7	5	6	5	5	4	4	4	3	3	3	3	7
19-Apr	3	3	5	5	2	3	5	6	6	6	6	5	6	6	6	8	6	6	7	5	5	3	4	3	8
20-Apr	3	UO	UO	UO	UO	UO	UO	UO	3	3	3	4	3	4	4	4	4	2	2	2	2	1	1	1	4
21-Apr	1	2	1	UO	UO	UO	UO	2	2	3	4	4	4	5	6	5	5	3	2	5	4	2	2	3	6
22-Apr	4	2	2	2	2	1	2	2	4	4	5	5	5	5	5	4	6	2	2	3	6	3	2	2	6
23-Apr	1	2	2	2	2	1	1	5	3	3	2	4	4	4	4	3	2	3	2	2	2	2	2	2	5
24-Apr	2	2	2	1	1	2	2	1	2	1	4	4	3	3	3	3	2	2	2	1	1	0	2	2	4
25-Apr	UO	UO	2	UO	2	UO	1	3	2	3	6	6	7	7	5	5	5	5	4	2	1	1	1	1	7
26-Apr	2	2	4	4	4	2	2	2	3	3	4	4	4	4	4	4	4	4	4	4	3	3	1	1	4
27-Apr	1	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	4	3	3	3	2	2	1	1	5
28-Apr	1	1	1	1	1	1	3	2	3	3	4	4	5	6	6	7	5	5	3	5	5	4	5	2	7
29-Apr	2	2	2	1	2	2	2	3	4	3	4	3	4	5	3	9	4	4	3	1	2	UO	3	3	9
30-Apr	1	3	2	2	6	4	3	3	2	3	2	2	3	2	3	4	6	4	4	3	2	3	3	2	6
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

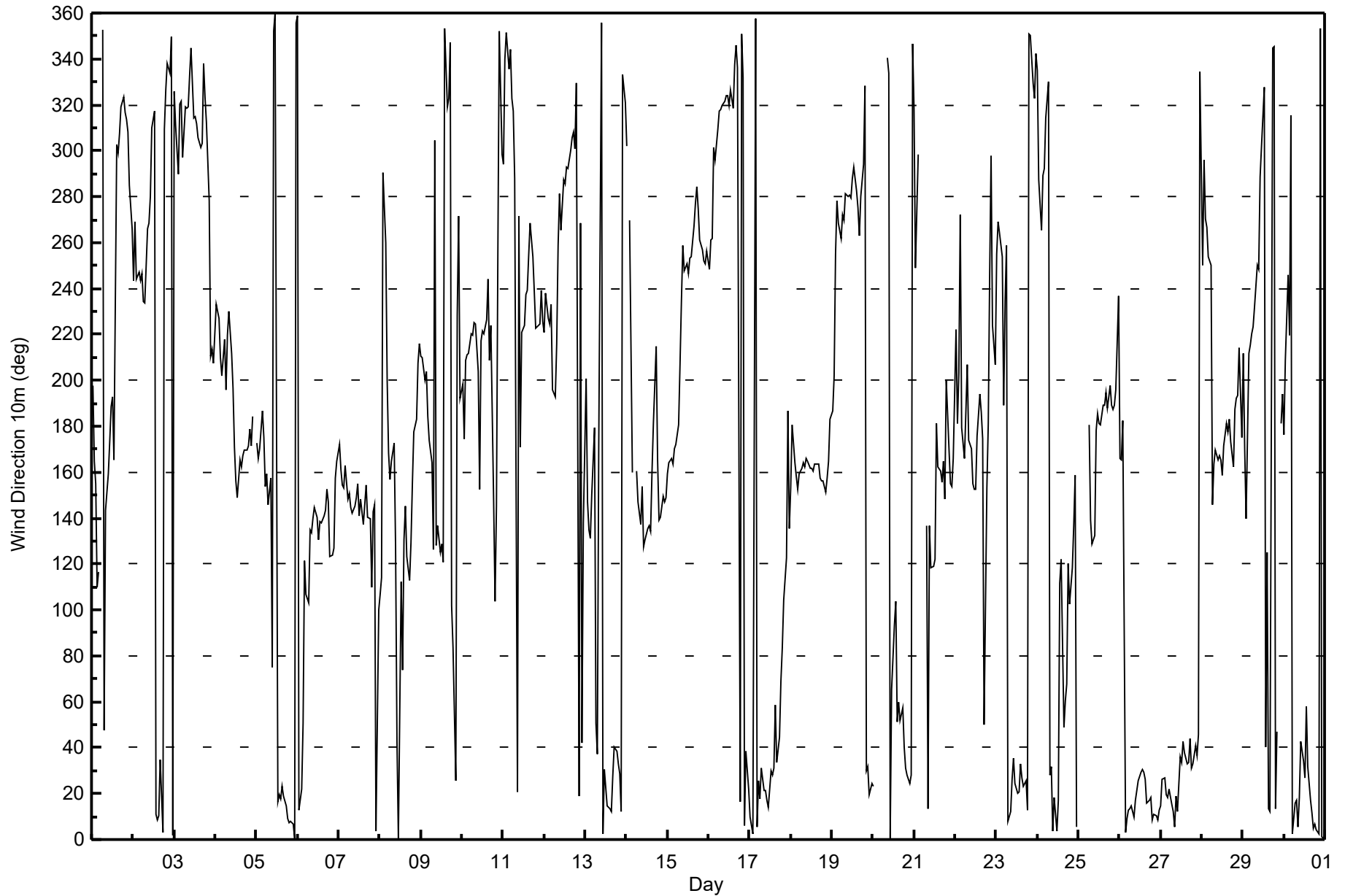
Ells River - April 2025

Direction of Maximum Speed: 324 deg on Apr 16 11:00 Direction of Maximum Daily Speed Average: 326.5 deg on Apr 16																				Hours in Service: 720					
Direction of Minimum Speed: 230 deg on Apr 4 09:00 Direction of Minimum Daily Speed Average: 1.1 deg on Apr 9																				Hours of Data: 699					
Monthly Average Direction: 304.1 deg																				Hours of Missing Data: 21					
																				Percent Operational Time: 97.1					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	197	165	155	110	116	UO	353	48	144	159	173	188	193	165	303	299	308	319	323	316	314	308	285	266	284.3
2-Apr	244	269	244	247	243	247	235	234	266	269	280	310	317	11	9	11	35	3	310	326	338	334	350	2	320.6
3-Apr	326	311	290	320	322	297	319	318	319	333	345	314	315	312	306	301	303	338	323	312	278	210	214	207	316.5
4-Apr	233	230	227	210	202	218	196	220	230	212	196	171	156	149	165	162	167	170	169	171	179	171	184	UO	183.6
5-Apr	173	166	170	187	175	154	159	146	157	75	352	360	17	19	18	23	19	14	9	7	8	7	0	356	23.6
6-Apr	359	13	22	51	121	107	103	135	134	140	145	141	130	138	138	141	144	153	147	123	124	127	157	165	136.0
7-Apr	172	161	154	153	163	148	151	145	142	145	149	155	141	148	137	146	154	140	140	110	143	146	3	100	146.9
8-Apr	107	114	290	260	200	168	157	165	173	128	42	0	112	74	131	145	123	113	129	155	178	183	207	216	158.1
9-Apr	211	210	200	204	184	174	164	126	305	128	137	125	129	121	353	319	323	347	102	84	26	228	272	192	168.8
10-Apr	198	175	209	211	212	220	219	225	225	204	152	217	222	220	227	244	209	224	147	104	145	255	352	298	213.5
11-Apr	294	340	352	335	344	323	317	288	21	271	171	221	224	237	239	254	268	254	239	223	223	224	239	226	255.7
12-Apr	221	238	227	224	233	196	193	216	259	281	265	287	286	293	292	300	306	308	301	330	19	269	42	138	273.2
13-Apr	201	147	135	131	150	179	51	37	171	356	3	30	22	15	14	12	28	40	39	33	29	12	333	321	29.6
14-Apr	302	UO	270	160	UO	UO	160	147	137	153	127	131	135	136	134	160	181	215	165	139	140	150	147	149	149.7
15-Apr	159	164	166	163	170	172	181	207	234	259	248	251	247	253	254	268	277	284	275	261	257	252	251	256	247.0
16-Apr	249	261	262	302	296	310	317	318	320	321	324	324	320	326	318	338	346	336	16	351	332	6	39	22	326.5
17-Apr	10	6	3	358	6	26	17	31	21	21	17	14	30	28	31	59	33	45	69	84	104	123	187	136	24.7
18-Apr	153	181	164	158	152	159	162	164	163	166	165	162	162	160	164	164	164	157	156	156	151	158	165	183	161.5
19-Apr	187	202	255	278	268	262	272	270	281	280	281	279	288	293	283	275	263	280	294	329	30	32	20	25	288.9
20-Apr	23	UO	UO	UO	UO	UO	UO	UO	341	334	0	65	93	103	51	60	52	58	40	31	28	25	28	346	--
21-Apr	319	249	298	UO	UO	UO	UO	137	14	137	118	119	122	181	163	160	155	164	148	200	169	155	154	166	156.8
22-Apr	222	181	203	272	179	166	186	207	174	170	155	152	153	176	194	186	174	50	153	181	247	297	224	207	179.4
23-Apr	255	269	264	254	189	234	259	8	12	26	35	24	20	21	33	27	23	26	13	351	350	330	323	342	9.4
24-Apr	335	287	266	289	292	314	330	28	32	4	18	4	17	112	122	49	60	68	120	102	118	137	159	6	46.6
25-Apr	UO	UO	298	UO	208	UO	181	139	129	132	178	186	181	180	189	189	194	188	197	189	187	189	196	237	186.2
26-Apr	166	165	182	3	9	13	13	14	10	17	21	25	30	31	29	27	16	17	18	8	11	10	9	13	19.7
27-Apr	14	26	27	19	18	22	15	12	6	19	12	36	34	43	38	33	34	44	31	33	41	37	46	335	26.6
28-Apr	250	296	270	267	254	250	146	163	170	165	167	165	159	171	181	178	183	173	162	187	193	194	214	175	179.3
29-Apr	212	170	140	212	215	220	224	232	250	249	289	302	327	41	125	14	12	345	345	14	47	UO	181	194	296.7
30-Apr	177	209	246	219	316	2	16	17	6	19	43	34	27	58	32	17	12	5	7	4	2	353	1	0	8.3
232.3 222.1 233.1 275.6 273.1 247.5 283.5 263.6 281.5 274.5 168.4 264.0 94.7 135.9 163.0 321.4 350.2 353.3 10.9 0.9 1.1 344.0 284.2 296.2																									
Diurnal Average																									
UO - Unstable Operation																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Ells River - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Ells River - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on Apr 9 21:00																		Hours in Service: 720 Hours of Data: 699 Hours of Missing Data: 21 Hours of Calibration: 0 Percent Operational Time: 97.1							
Minimum Value: 4 deg on Apr 14 20:00																									
Percentiles: P ₁ = 6 P ₁₀ = 10 Q ₁ = 13 Median = 19 Q ₃ = 28 P ₉₀ = 52 P ₉₉ = 90																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	28	19	11	57	65	UO	18	57	14	15	15	17	27	60	24	14	13	11	11	11	13	14	17	21	65
2-Apr	20	21	20	17	17	17	17	21	21	27	54	22	17	22	20	24	15	31	12	12	10	10	13	11	54
3-Apr	16	18	14	18	13	19	16	13	14	19	21	22	22	20	18	20	14	18	17	13	90	99	35	58	99
4-Apr	41	16	16	17	32	19	25	65	95	22	27	43	73	32	25	22	14	12	8	6	5	6	33	UO	95
5-Apr	17	12	14	9	26	11	47	18	12	63	20	14	17	14	14	13	12	7	7	7	6	10	11	12	63
6-Apr	14	13	38	66	17	10	17	11	9	11	13	13	8	12	11	10	12	11	10	31	93	39	13	15	93
7-Apr	11	14	7	20	13	10	12	10	10	13	13	15	14	13	12	18	17	8	18	39	11	50	31	60	60
8-Apr	39	65	10	81	64	15	25	29	47	51	66	26	50	59	22	35	18	30	41	94	64	37	30	25	94
9-Apr	23	25	20	16	13	17	19	88	62	46	18	16	13	23	57	23	22	22	22	21	103	53	56	57	103
10-Apr	61	44	45	30	17	21	18	52	21	38	32	26	29	29	52	50	31	34	48	7	16	74	33	22	74
11-Apr	37	53	36	30	11	39	33	75	73	57	69	58	42	33	22	23	20	23	20	14	17	19	20	20	75
12-Apr	18	17	19	17	18	15	12	26	21	20	23	17	19	15	21	15	14	13	13	11	30	35	74	76	76
13-Apr	16	27	18	25	23	28	76	93	83	60	53	28	20	32	14	14	13	16	12	11	10	9	15	12	93
14-Apr	19	UO	16	93	UO	UO	19	28	19	27	20	19	13	14	10	22	29	18	19	4	5	6	7	9	93
15-Apr	10	12	10	25	60	24	19	25	22	24	23	24	24	25	25	23	20	18	20	21	20	20	19	19	60
16-Apr	18	21	26	16	12	15	12	13	13	13	12	12	12	12	14	14	14	24	8	17	11	31	15	12	31
17-Apr	12	11	12	14	16	10	13	15	12	11	14	16	14	17	19	26	25	26	13	20	9	15	35	24	35
18-Apr	21	24	10	10	9	10	11	14	14	15	15	14	14	13	13	13	12	12	10	10	8	10	13	13	24
19-Apr	11	17	25	17	21	21	20	20	19	22	20	23	21	20	27	26	24	25	22	46	12	8	9	8	46
20-Apr	8	UO	UO	UO	UO	UO	UO	UO	34	28	47	52	25	49	83	38	19	13	17	7	7	7	8	35	83
21-Apr	58	50	14	UO	UO	UO	UO	86	33	39	32	41	40	45	38	52	41	20	14	31	25	10	8	9	86
22-Apr	59	50	13	55	54	19	11	24	21	21	15	15	20	21	37	14	23	74	23	20	66	24	64	41	74
23-Apr	34	36	11	27	25	35	57	11	12	13	15	13	18	17	14	15	13	14	13	13	18	28	15	18	57
24-Apr	27	34	87	15	28	16	35	19	24	15	42	30	36	54	75	26	16	14	17	6	11	5	25	57	87
25-Apr	UO	UO	14	UO	54	UO	45	18	31	69	32	22	22	24	34	27	21	18	16	10	9	8	12	17	69
26-Apr	15	9	71	15	13	9	10	25	19	16	18	14	16	12	15	15	12	8	12	12	12	12	13	10	71
27-Apr	8	10	10	8	8	9	12	17	17	36	26	27	19	25	26	21	17	17	11	10	9	7	18	45	45
28-Apr	36	47	35	20	45	58	43	16	19	24	30	22	20	29	24	22	17	16	14	18	18	18	22	30	58
29-Apr	38	16	11	34	17	18	19	22	21	24	22	14	20	64	31	76	11	16	23	16	70	UO	10	9	76
30-Apr	10	70	33	29	51	13	15	14	17	24	13	16	13	31	27	29	16	14	11	13	12	13	12	13	70
61 70 87 93 65 58 76 93 95 69 69 58 73 64 83 76 41 74 48 94 103 99 74 76																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

**AMS31
BLACKROD
APRIL 2025**

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)

APRIL 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	1.5	0	0.5	0
H2S (ppb) Average	685	35	35	100	3.7	0	0.3	0
NO2 (ppb) Average	685	35	35	100	25	0	10	-
NO (ppb) Average	685	35	35	100	31.1	-	11	-
NOX (ppb) Average	685	35	35	100	54.8	-	20.8	-
Temperature 2 m (C) Average	720	0	0	100	20	-	13.7	-
Relative Humidity (%) Average	720	0	0	100	99.4	-	92.1	-
Wind Speed 10 m (km/h) Average	720	0	0	100	31	-	24	-
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)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.11	0.2	-	0	0	0	0.1	0.2	0.3	1.5
H2S (ppb) Average	685	0.11	0.2	-	0	0	0.1	0.1	0.1	0.2	3.7
NO2 (ppb) Average	685	5.16	4.7	-	0.3	0.7	1.2	3.4	8.2	11.9	25
NO (ppb) Average	685	5.14	5.9	-	0	0	0.2	2.4	9.2	13.6	31.1
NOX (ppb) Average	685	10.3	10.2	-	0.3	0.8	1.5	6.6	17.5	25.5	54.8
Temperature 2 m (C) Average	720	5.11	6.2	-	-13.7	-2.2	0.6	5.5	9.7	12.8	20
Relative Humidity (%) Average	720	53.39	21.2	-	17.3	27	35.8	50.4	70.1	86	99.4
Wind Speed 10 m (km/h) Average	720	12.2	7	-	0	4	7	12	17	22	31
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD 2/3 (AMS31)
APRIL 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 (SO₂) - ppb

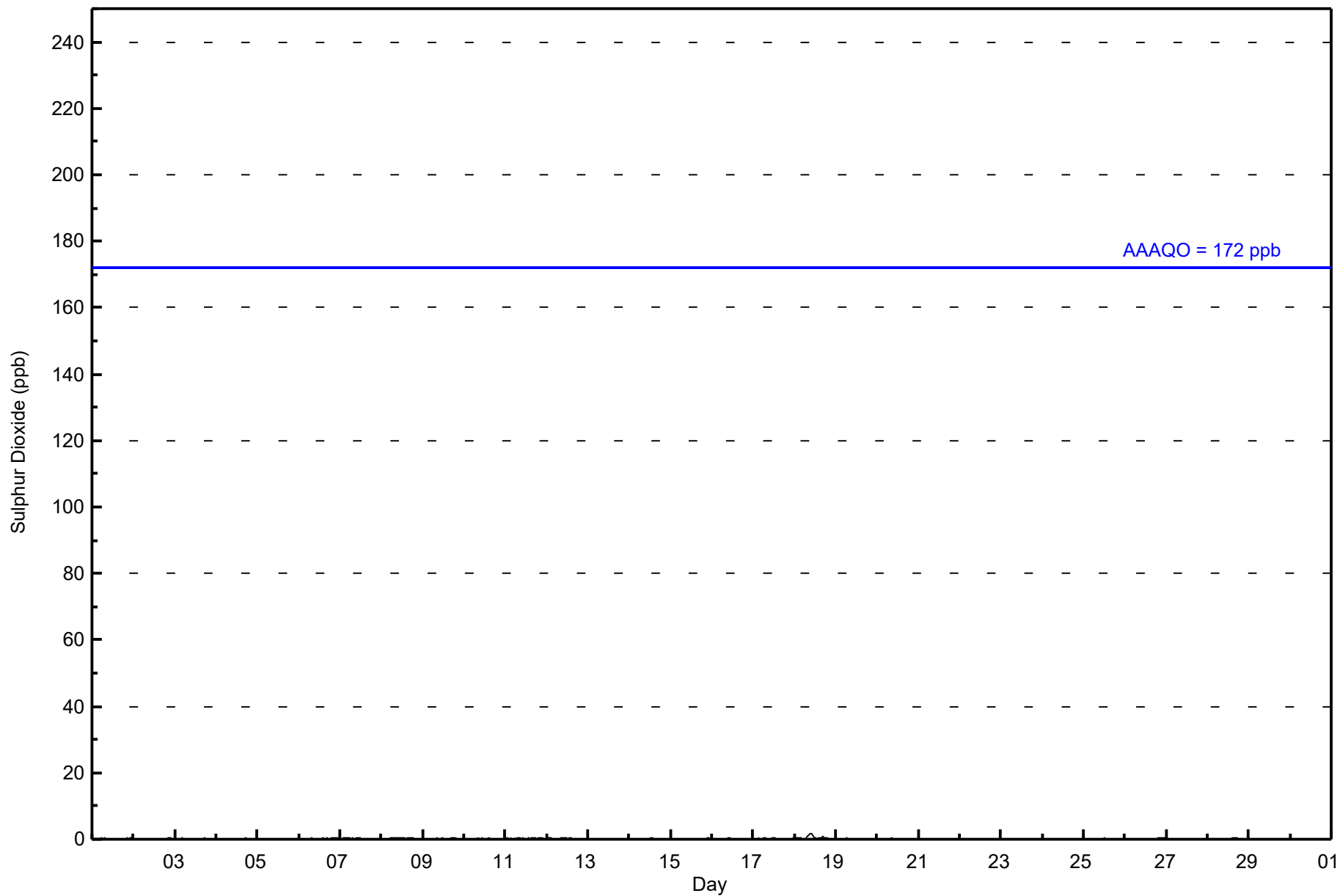
Blackrod - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720							
Maximum Value: 1.5 ppb on Apr 18 11:00 Maximum Daily Average: 0.5 ppb on Apr 18																				Hours of Data: 686							
Minimum Value: 0.0 ppb on Apr 2 13:00 Minimum Daily Average: 0.0 ppb on Apr 24																				Hours of Missing Data: 34							
Maximum Diurnal Average: 0.1 ppb at hour 11 Minimum Diurnal Average: 0.1 ppb at hour 24																				Hours of Calibration: 34							
Monthly Average: 0.11 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.3 P ₉₉ = 0.6																				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-Apr	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.5	0.3	0.2	0.5
2-Apr	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.3	0.1	0.0	0.1	0.5
3-Apr	0.0	0.0	Z	0.0	0.6	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.6
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.3
5-Apr	0.1	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1
6-Apr	0.2	0.0	0.0	0.0	0.1	Z	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.6	0.2	0.3	0.0	0.1	0.3	0.5	0.4	0.5	0.3	0.2	0.2	0.6
7-Apr	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	C	C	C	C	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.3
8-Apr	0.0	Z	0.1	0.1	0.1	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.4
9-Apr	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.3
10-Apr	0.2	0.2	0.2	Z	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3
11-Apr	0.1	0.2	0.2	0.3	Z	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
12-Apr	0.2	0.2	0.3	0.2	0.2	Z	0.1	0.2	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.2	0.4
13-Apr	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.2
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	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	0.3
15-Apr	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	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.3
16-Apr	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.3
17-Apr	0.0	0.0	0.1	0.3	Z	0.1	0.3	0.2	0.1	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.3
18-Apr	0.4	0.4	0.3	0.2	0.3	Z	0.3	0.8	1.4	1.5	1.5	0.6	0.3	0.2	0.3	0.6	0.7	0.4	0.4	0.4	0.1	0.0	0.0	0.1	0.5	1.5	1.5
19-Apr	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
20-Apr	0.0	Z	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
21-Apr	0.5	0.2	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.5
22-Apr	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	0.0	0.0	0.1
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1
24-Apr	0.0	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
25-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
26-Apr	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	0.4	0.5	0.4	0.4	0.3	0.1	0.1	0.5
27-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
28-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.4
29-Apr	0.1	0.0	0.0	0.0	Z	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
30-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Blackrod - April 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 (SO₂) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	48	18	10	7	10	13	24	77	156	50	30	14	40	81	61	47	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	48	18	10	7	10	13	24	77	156	50	30	14	40	81	61	47	686

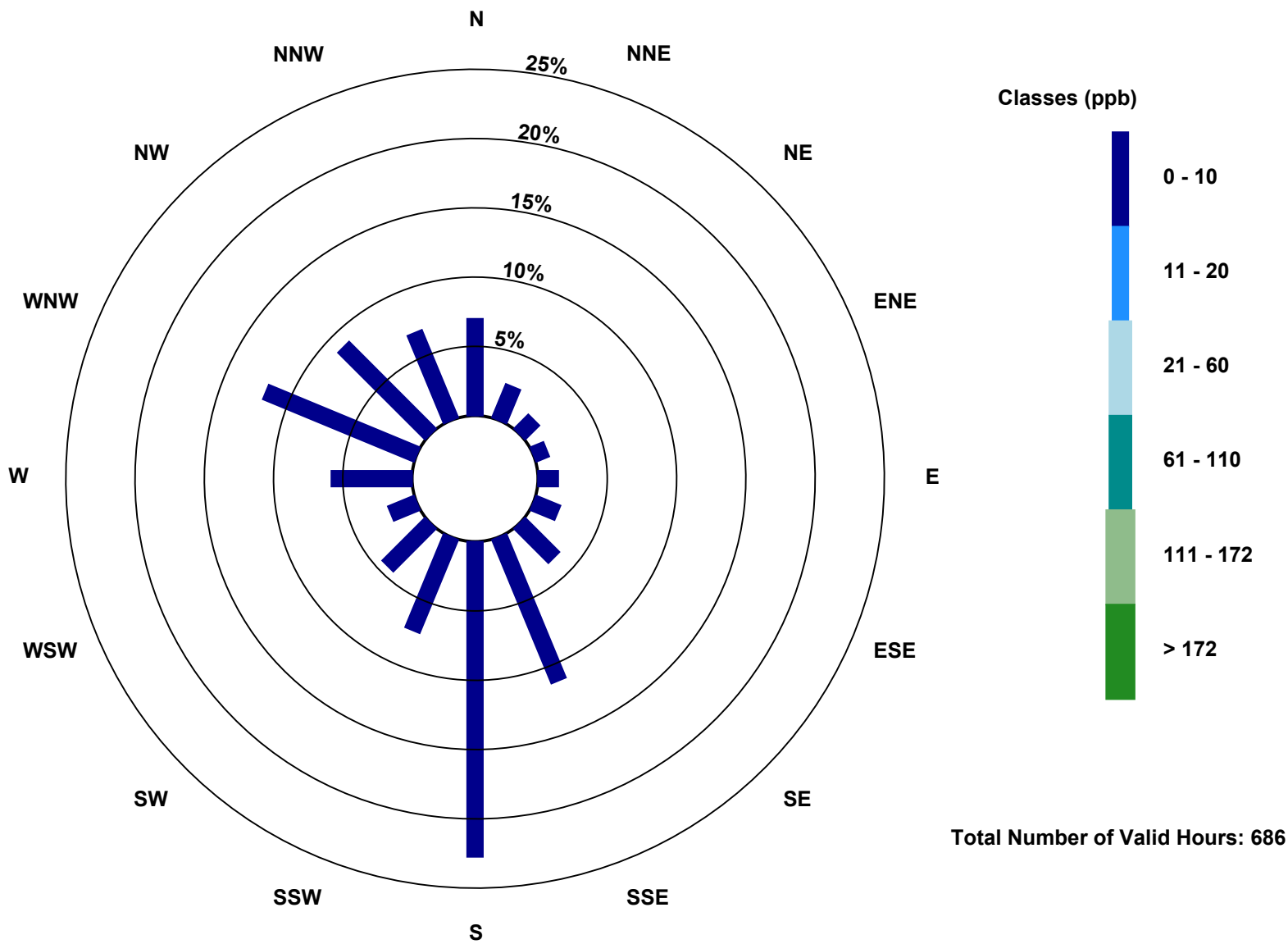
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Blackrod



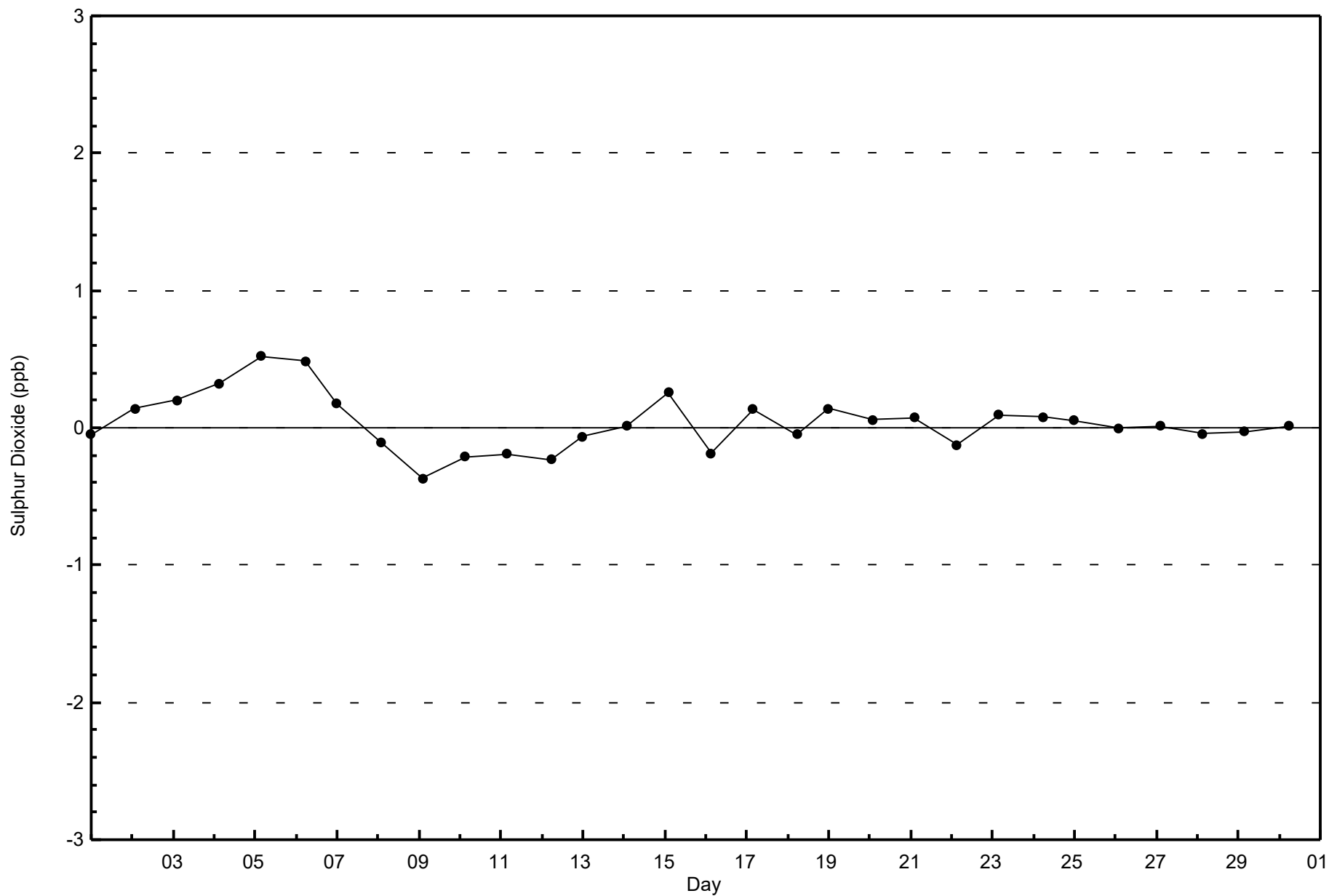


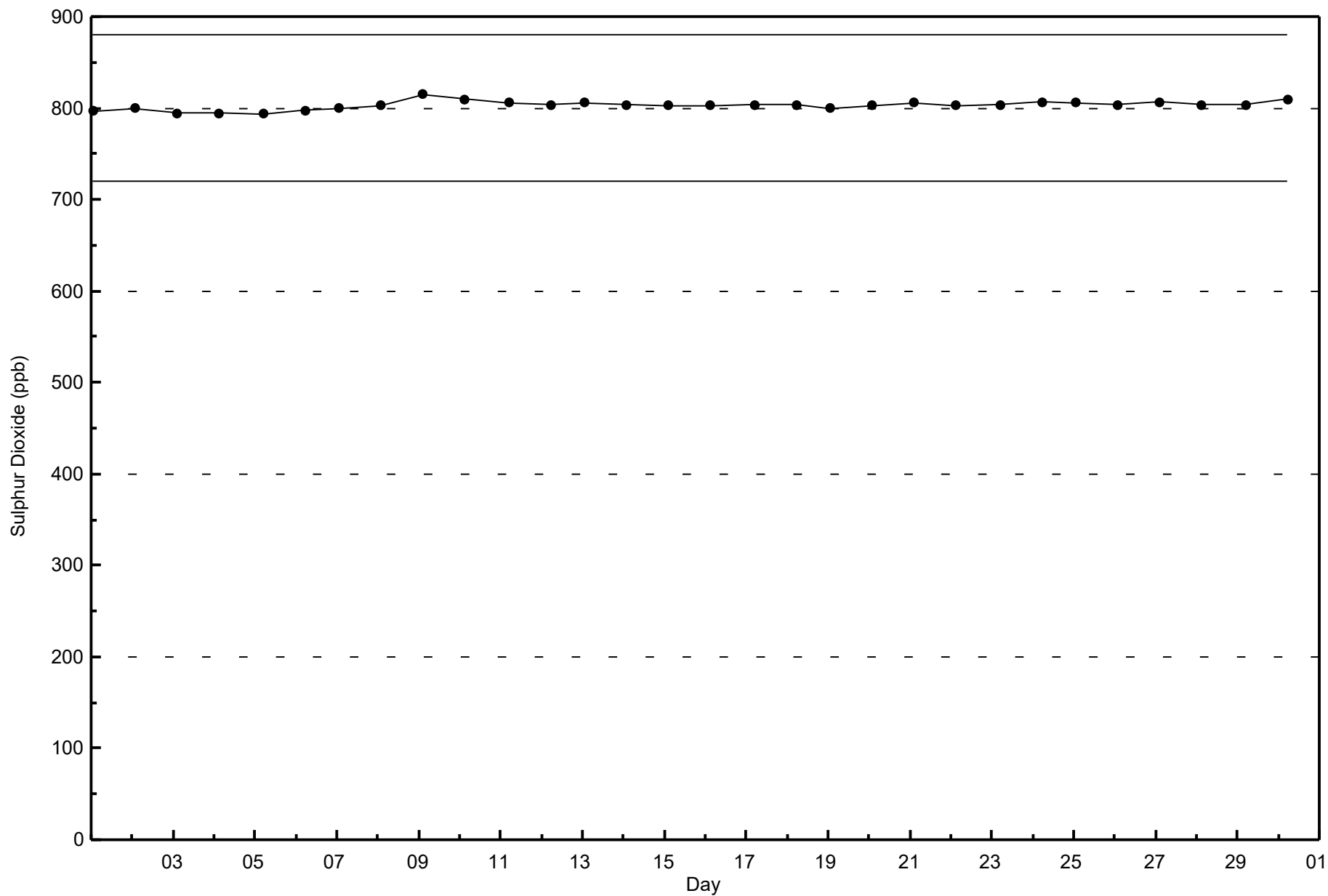
Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO₂) - ppb

Blackrod - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

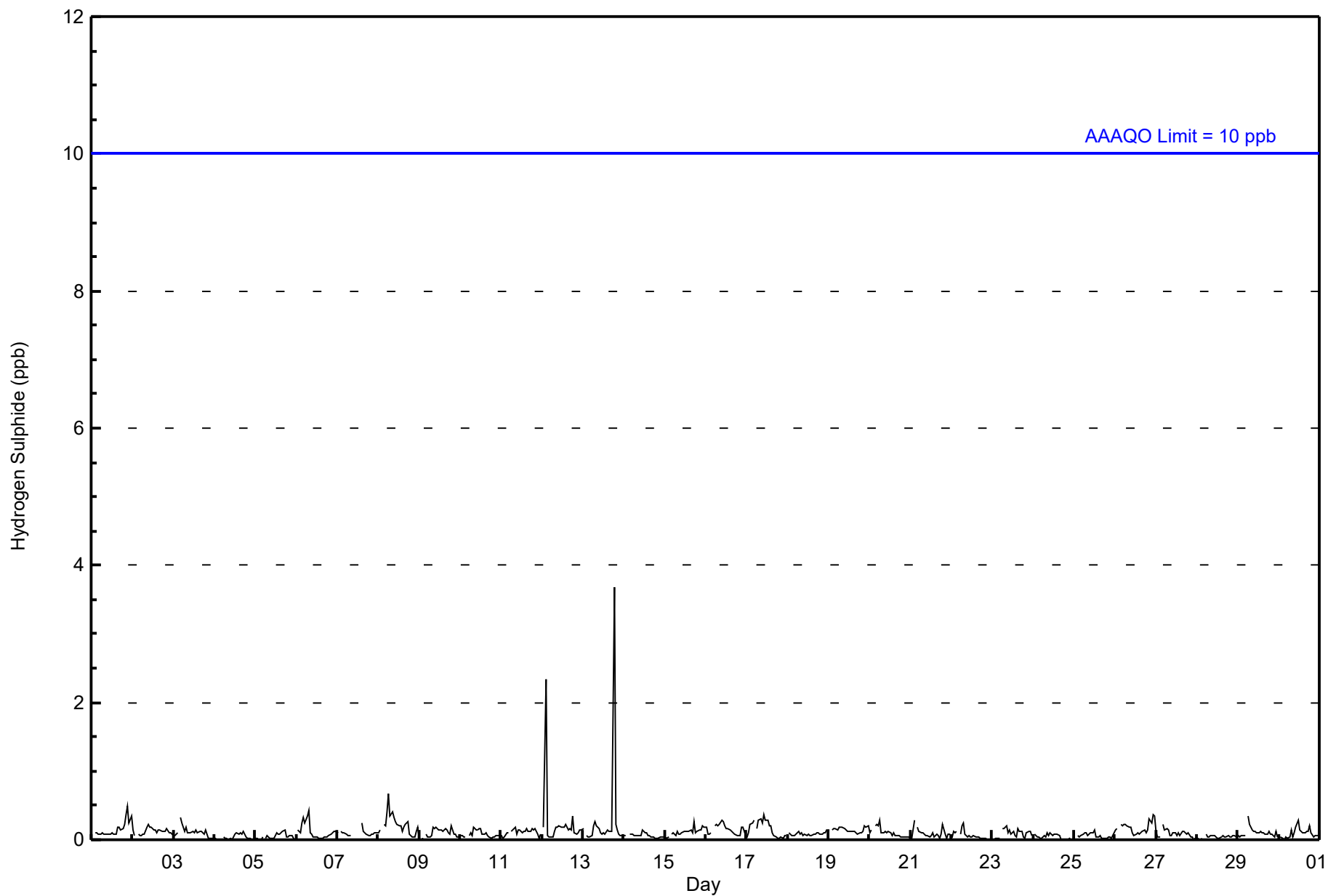
Blackrod - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 3.7 ppb on Apr 13 19:00																				Maximum Daily Average: 0.3 ppb on Apr 13		Hours of Data: 685				
Minimum Value: 0.0 ppb on Apr 5 00:00																				Minimum Daily Average: 0.0 ppb on Apr 4		Hours of Missing Data: 35				
Maximum Diurnal Average: 0.2 ppb at hour 19																				Minimum Diurnal Average: 0.1 ppb at hour 2		Hours of Calibration: 35				
Monthly Average: 0.11 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.4		Percent Operational Time: 100.0				
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.4	0.5	0.2	0.4	0.2	0.5
2-Apr	0.1	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	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
3-Apr	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
4-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Apr	0.0	0.0	0.0	0.0	0.0	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	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1
6-Apr	Z	0.1	0.1	0.3	0.3	0.2	0.3	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	0.1	0.1	0.1	0.1	0.1	0.4
7-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Apr	0.1	0.1	Z	0.2	0.2	0.4	0.7	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.2	0.7	
9-Apr	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.2
10-Apr	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	
11-Apr	0.1	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.2
12-Apr	Z	0.2	2.3	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.2	2.3
13-Apr	0.2	Z	0.1	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3.7	0.2	0.1	0.1	0.1	0.1	0.3	3.7
14-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
15-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3
16-Apr	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.3
17-Apr	0.0	0.1	0.2	0.2	0.3	Z	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4
18-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
19-Apr	0.1	Z	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
20-Apr	0.1	0.1	Z	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
21-Apr	0.0	0.0	0.3	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.3
22-Apr	0.0	0.1	0.1	0.1	Z	0.1	0.2	0.3	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	0.0	0.0	0.1	0.3
23-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
24-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25-Apr	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
26-Apr	0.1	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	0.3	0.3	0.4	0.4	0.2	0.4
27-Apr	0.1	0.0	0.0	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	0.0	0.0	0.0	0.0	0.1	0.2
28-Apr	0.0	0.0	0.0	0.0	Z	0.1	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	0.0	0.1	0.1	0.0	0.0	0.1
29-Apr	0.1	0.0	0.1	0.1	0.1	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.3
30-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.3
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	684	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: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	47	18	10	7	10	15	25	75	153	53	30	12	40	82	61	46	684
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	47	18	10	7	10	15	25	75	153	53	30	12	40	83	61	46	685

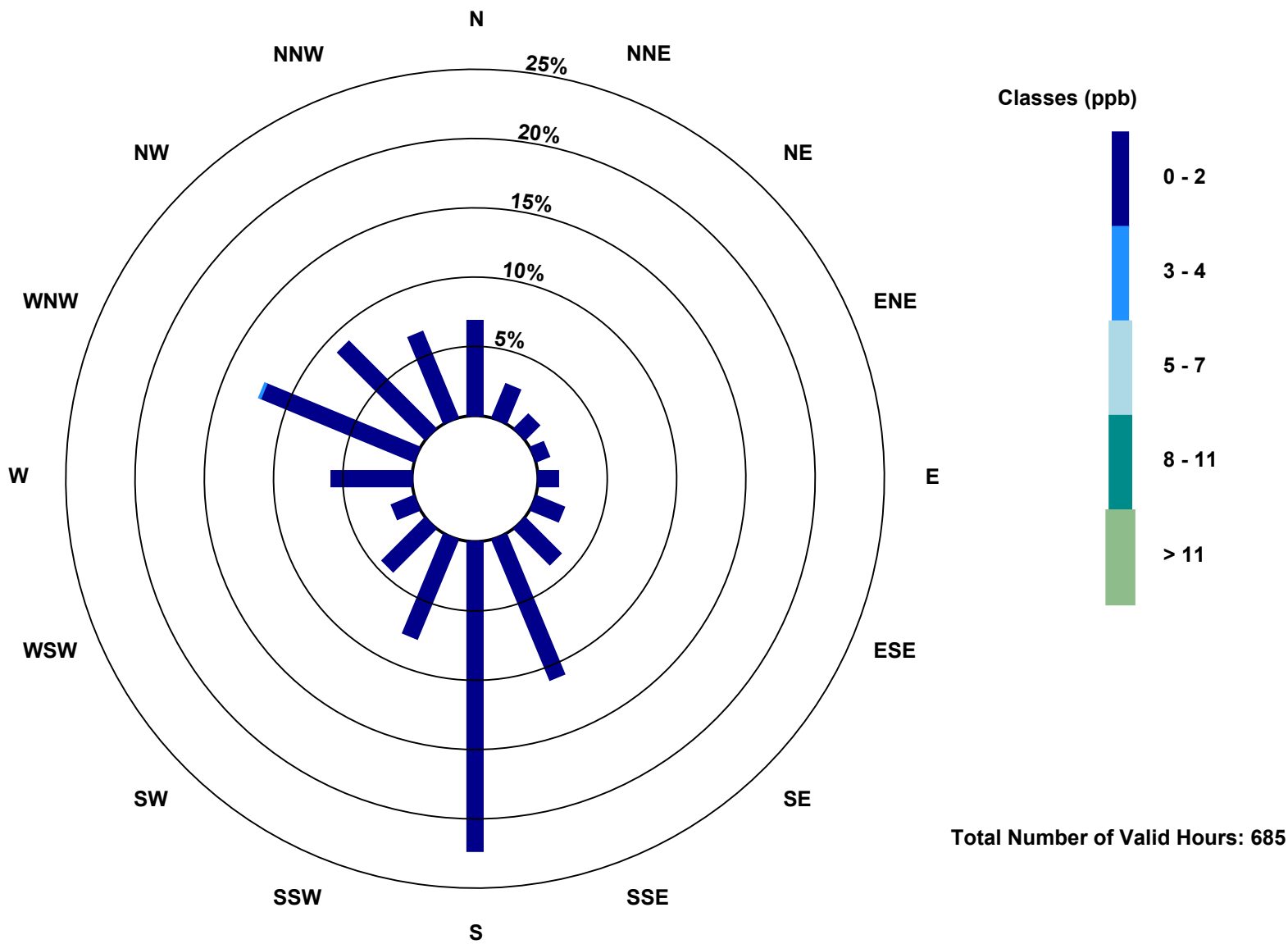
Total Number of Valid Hours: 685

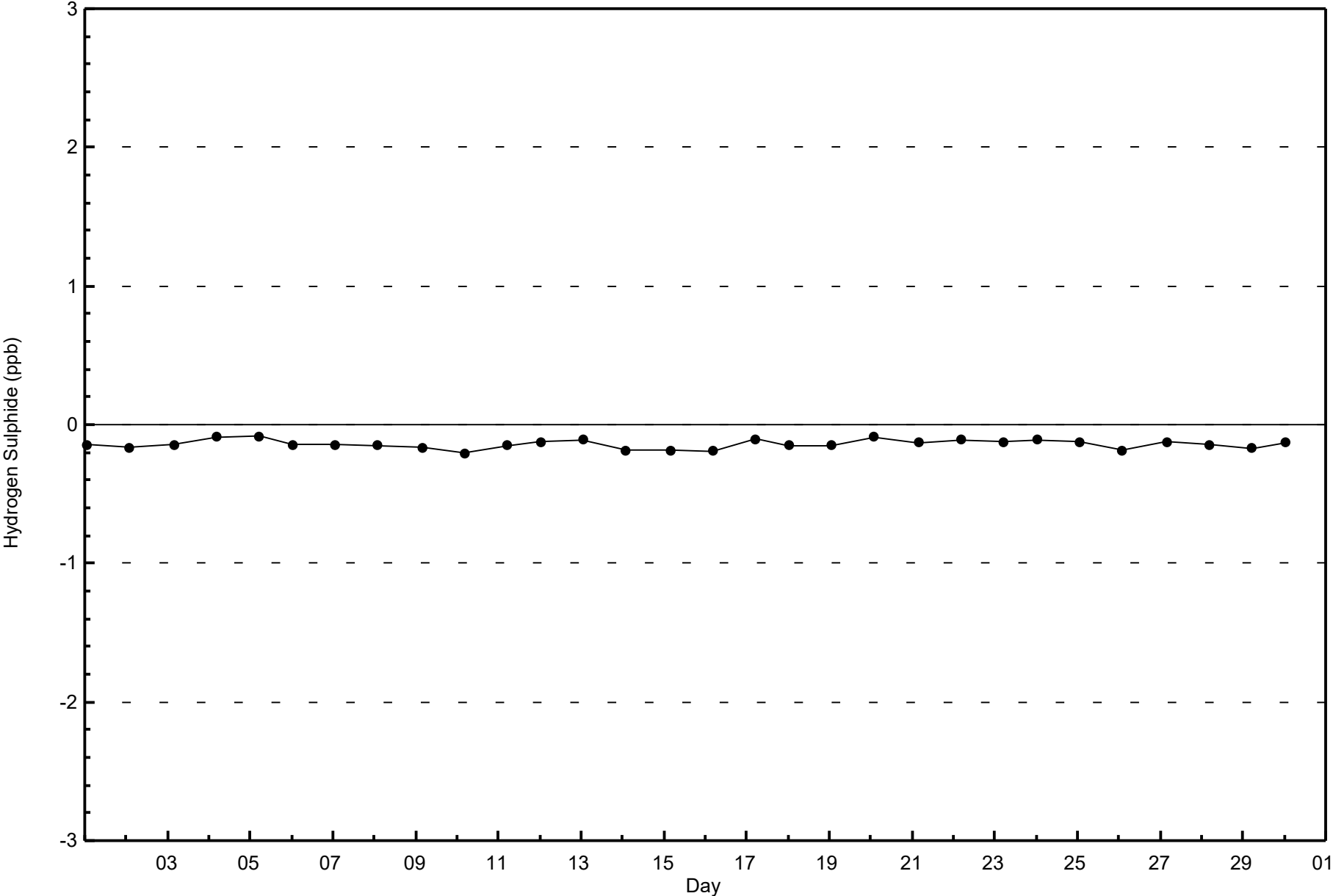
Total Number of Hours: 720

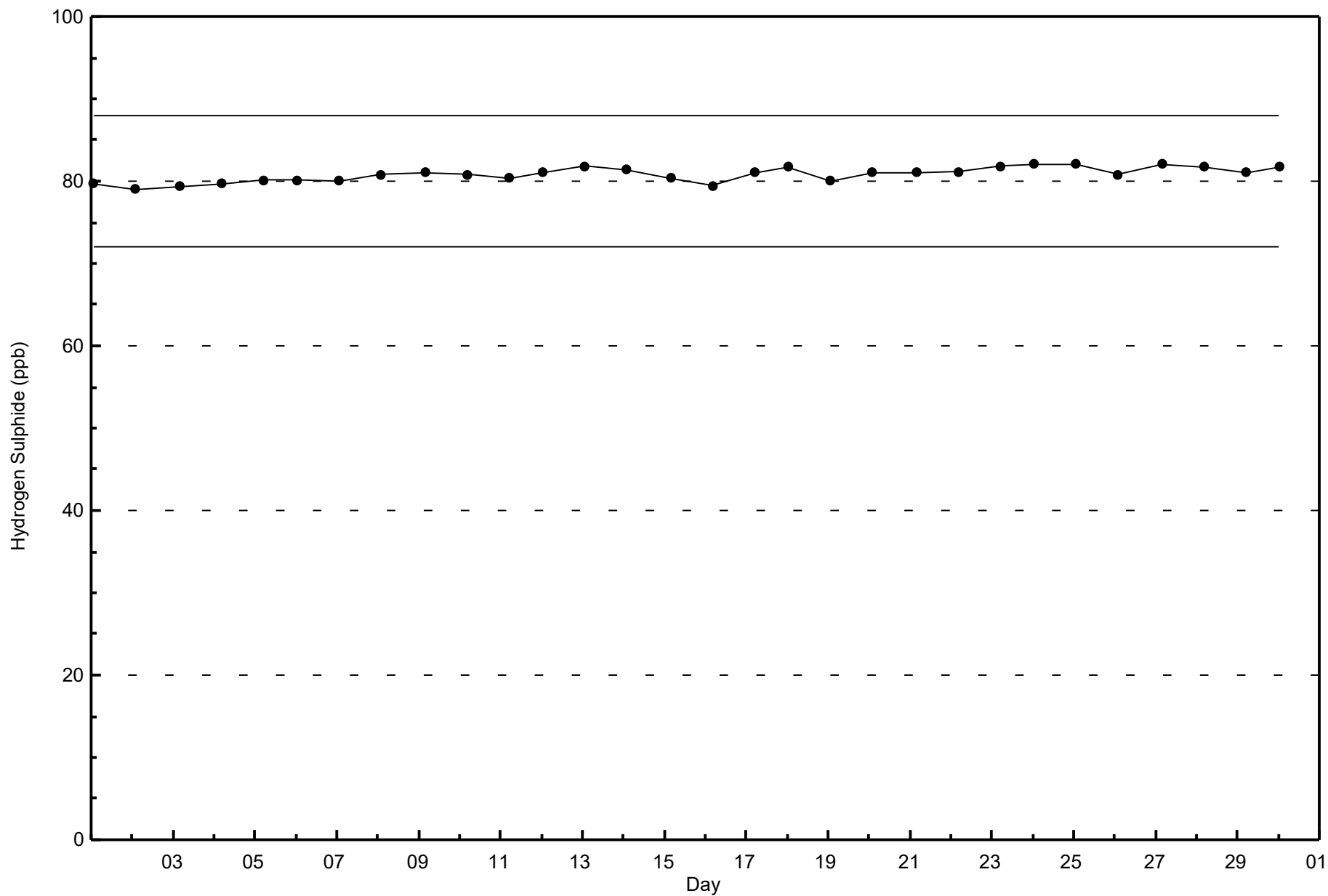


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Blackrod









Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxide (NO) - ppb

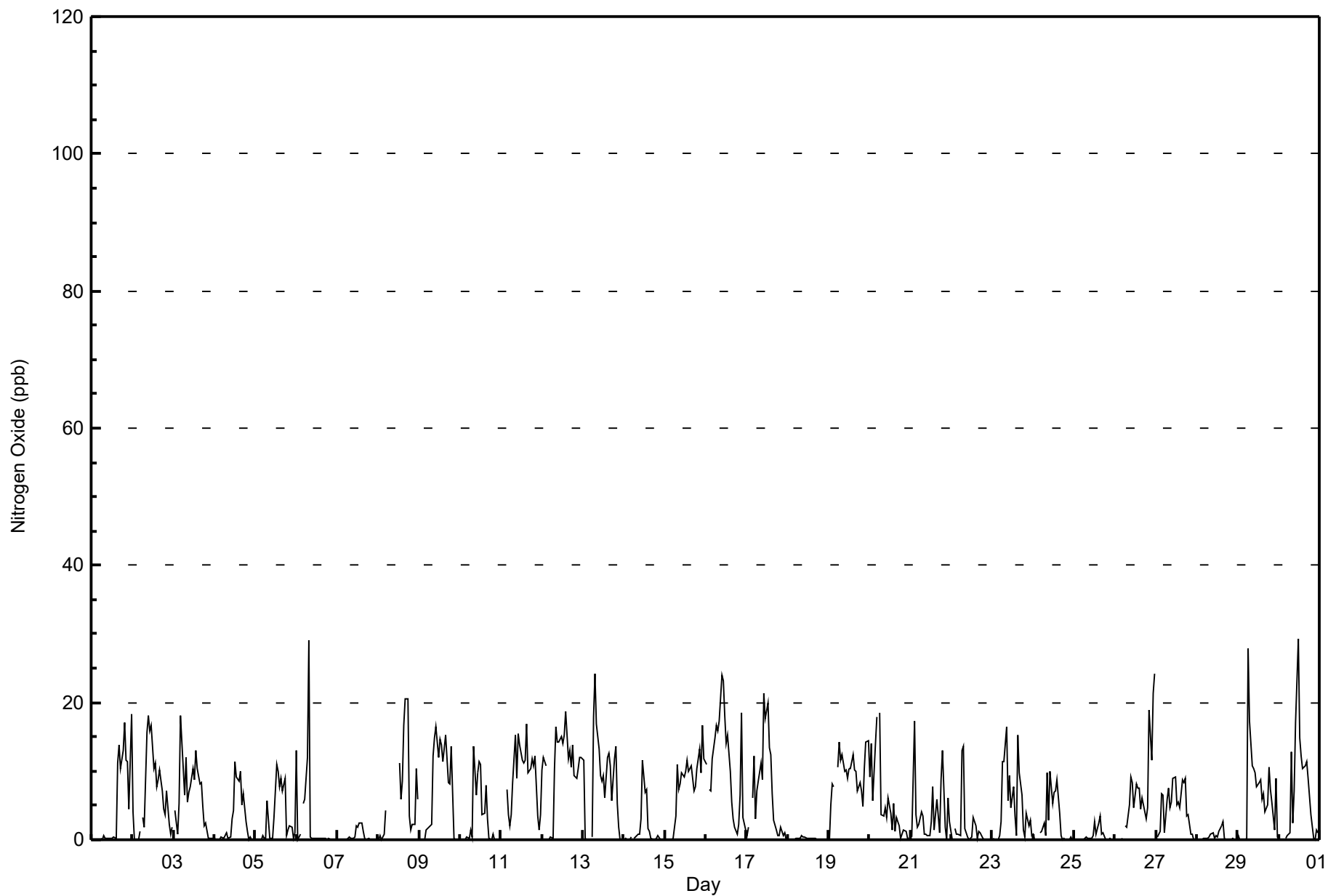
Blackrod - April 2025

Maximum Value: 31.1 ppb on Apr 8 07:00																				Maximum Daily Average: 11.0 ppb on Apr 12										Hours in Service: 720			
Minimum Value: 0.0 ppb on Apr 1 04:00																				Minimum Daily Average: 0.2 ppb on Apr 18										Hours of Data: 685			
Maximum Diurnal Average: 8.0 ppb at hour 12																				Minimum Diurnal Average: 1.6 ppb at hour 2										Hours of Missing Data: 35			
Monthly Average: 5.14 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.2 Median = 2.4 Q ₃ = 9.2 P ₉₀ = 13.6 P ₉₉ = 23.4										Hours of Calibration: 35			
																								Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Apr	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.6	0.2	0.3	0.2	0.2	0.3	0.3	0.2	11.2	13.8	10.4	12.9	17.1	11.5	11.4	4.5	18.3	4.9	18.3							
2-Apr	4.0	0.0	0.0	0.0	1.3	Z	3.2	1.9	15.6	18.2	15.8	16.6	10.3	11.1	7.7	8.8	10.3	7.1	4.4	3.7	7.1	2.2	0.8	1.8	6.6	18.2							
3-Apr	Z	4.3	0.7	5.2	18.0	14.3	6.5	12.1	5.5	7.0	7.7	10.3	8.8	13.0	10.3	8.1	8.4	4.9	2.0	2.5	0.2	0.2	0.2	0.2	6.5	18.0							
4-Apr	0.2	Z	0.0	0.0	0.5	0.3	0.6	0.9	0.1	0.5	3.1	4.4	11.4	9.2	8.6	10.0	5.2	6.8	2.7	1.3	0.0	0.5	0.0	0.0	2.9	11.4							
5-Apr	0.0	0.0	Z	0.0	0.7	0.1	0.1	5.7	0.1	0.2	0.2	3.3	11.0	10.1	7.7	9.0	7.2	9.0	0.5	1.4	2.1	1.8	0.2	0.9	3.1	11.0							
6-Apr	13.1	0.1	0.8	Z	5.4	6.0	12.0	29.0	0.4	0.3	0.2	0.3	0.3	2.1	1.8	2.4	2.4	1.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	3.0	29.0						
7-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.2	0.3	0.3	2.1	1.8	2.4	2.4	1.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.4							
8-Apr	0.0	0.7	0.1	0.8	4.4	Z	31.1	C	C	C	C	C	11.1	5.8	8.4	16.7	20.5	20.5	3.4	1.4	2.2	2.3	10.4	5.9	8.1	31.1							
9-Apr	Z	0.1	0.0	0.0	1.4	1.7	2.1	2.1	12.2	14.9	16.5	12.0	14.7	13.7	11.4	15.3	11.8	8.4	8.2	13.7	0.2	0.1	0.0	0.0	7.0	16.5							
10-Apr	0.0	Z	0.0	0.0	0.4	0.2	1.3	0.5	13.6	6.6	9.7	11.3	11.0	3.7	3.9	7.8	3.1	0.1	0.0	0.9	0.0	0.1	0.1	0.0	3.2	13.6							
11-Apr	0.0	0.0	Z	7.4	3.7	1.9	3.7	8.3	15.2	8.9	15.5	13.8	11.7	11.2	11.6	16.8	9.8	10.3	11.8	10.9	12.2	3.5	1.5	3.6	8.4	16.8							
12-Apr	10.2	12.1	10.7	Z	0.0	0.4	0.2	10.4	16.5	14.2	14.2	15.1	13.9	15.2	18.7	11.7	12.9	10.7	13.8	9.4	8.9	10.4	12.0	12.1	11.0	18.7							
13-Apr	11.5	0.1	0.0	0.0	Z	0.5	17.9	24.2	16.9	13.3	9.4	8.5	9.3	6.1	12.0	12.6	10.8	5.7	11.9	13.7	5.2	1.8	0.0	0.0	8.3	24.2							
14-Apr	0.1	0.1	0.0	0.0	0.3	Z	0.3	0.4	0.7	0.7	3.1	11.6	6.9	7.4	1.6	1.3	0.3	0.1	0.0	0.1	0.6	0.0	0.0	0.0	1.6	11.6							
15-Apr	Z	0.0	0.0	0.0	0.1	0.3	3.5	10.9	7.3	8.1	9.7	9.2	10.0	11.6	9.9	10.7	8.9	7.1	7.7	10.3	13.2	9.7	16.7	11.7	7.7	16.7							
16-Apr	11.0	Z	7.3	7.1	11.8	14.9	16.7	15.9	17.4	23.9	23.2	18.1	14.1	15.2	9.9	5.4	3.1	1.9	0.8	2.2	6.6	18.5	3.3	1.4	10.9	23.9							
17-Apr	0.5	1.8	Z	6.1	12.3	3.0	7.1	8.6	11.2	8.7	21.3	17.7	20.0	13.4	12.5	6.7	2.7	1.4	0.6	0.6	1.9	0.5	1.0	0.0	6.9	21.3							
18-Apr	0.0	0.0	0.0	Z	0.0	0.2	0.2	0.3	0.6	0.4	0.4	0.3	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.6							
19-Apr	0.0	5.0	8.1	7.8	Z	10.6	14.3	11.7	12.4	9.9	10.1	9.0	10.4	10.3	12.5	10.2	9.9	7.2	8.4	7.1	4.9	10.5	14.1	14.4	9.5	14.4							
20-Apr	9.1	14.0	5.6	14.1	18.0	Z	18.6	3.6	3.4	4.7	3.2	6.2	3.8	1.3	5.3	1.3	3.2	2.0	0.2	0.8	1.4	1.1	0.3	0.1	5.3	18.6							
21-Apr	Z	0.4	17.3	3.7	1.8	2.2	4.1	3.4	0.9	0.9	0.6	0.7	2.7	7.8	1.4	5.9	3.6	1.0	8.8	12.9	1.8	0.0	6.2	2.6	3.9	17.3							
22-Apr	0.0	Z	1.7	0.9	0.8	0.6	13.1	13.7	1.6	0.3	0.1	0.2	0.4	3.2	2.1	0.2	1.3	1.0	0.3	0.1	0.0	0.0	0.0	0.0	1.8	13.7							
23-Apr	0.0	0.1	Z	0.1	0.6	2.7	11.3	11.5	16.4	5.7	9.3	4.7	7.6	3.5	0.6	15.3	9.7	6.5	1.4	0.3	3.8	2.0	2.8	0.6	5.1	16.4							
24-Apr	0.9	0.0	0.0	Z	1.1	1.2	2.3	0.6	9.7	2.8	9.9	5.3	7.0	7.2	8.7	3.8	0.5	0.1	0.1	0.0	0.0	0.0	0.5	0.0	2.7	9.9							
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.4	0.1	0.1	0.2	0.7	2.7	0.7	2.4	3.4	0.7	1.1	0.1	0.0	0.0	0.2	0.0	0.0	0.6	3.4							
26-Apr	0.0	0.0	0.0	0.0	0.2	Z	2.0	1.8	5.1	9.1	8.4	4.7	8.2	7.6	7.5	4.5	6.1	4.2	3.1	4.6	18.8	11.7	21.4	24.2	6.7	24.2							
27-Apr	Z	0.5	1.2	6.6	6.6	1.1	5.9	7.5	4.7	5.5	8.9	9.2	5.2	5.5	4.6	8.8	8.4	8.9	3.5	3.6	0.8	0.8	0.1	0.1	4.7	9.2							
28-Apr	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.4	0.7	1.1	0.3	0.7	0.5	1.3	2.1	2.6	0.2	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.5	2.6							
29-Apr	0.7	0.0	Z	0.1	0.1	0.1	27.9	17.4	10.7	10.5	9.7	7.8	8.3	8.8	5.9	6.8	4.0	5.2	10.5	7.2	5.5	1.4	9.0	0.4	6.9	27.9							
30-Apr	0.1	0.0	0.0	Z	0.1	0.7	1.0	12.7	2.5	7.1	17.1	29.3	14.8	12.2	10.3	10.8	11.3	8.9	6.4	3.7	0.1	0.1	1.4	0.9	6.6	29.3							
																									Diurnal Average								
																									Diurnal Maximum								
Z - zerospan C - Calibration																																	



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxide (NO) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxide (NO) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	674	98.39	98.39
21 - 40	11	1.61	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
201 - 220	0	0.00	100.00
221 - 240	0	0.00	100.00
241 - 260	0	0.00	100.00
261 - 280	0	0.00	100.00
281 - 300	0	0.00	100.00
301 - 320	0	0.00	100.00
321 - 340	0	0.00	100.00
341 - 360	0	0.00	100.00
361 - 380	0	0.00	100.00
381 - 400	0	0.00	100.00
401 - 420	0	0.00	100.00
421 - 440	0	0.00	100.00
441 - 460	0	0.00	100.00
461 - 480	0	0.00	100.00
481 - 500	0	0.00	100.00
501 - 520	0	0.00	100.00
521 - 540	0	0.00	100.00
541 - 560	0	0.00	100.00
561 - 580	0	0.00	100.00
581 - 600	0	0.00	100.00
601 - 620	0	0.00	100.00
621 - 640	0	0.00	100.00
641 - 660	0	0.00	100.00
661 - 680	0	0.00	100.00
681 - 700	0	0.00	100.00
701 - 720	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxide (NO) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	46	17	9	7	10	14	26	75	156	53	28	14	36	80	57	46	674
21 - 40	2	1	0	0	0	0	0	1	0	1	1	0	2	1	2	0	11
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	18	9	7	10	14	26	76	156	54	29	14	38	81	59	46	685

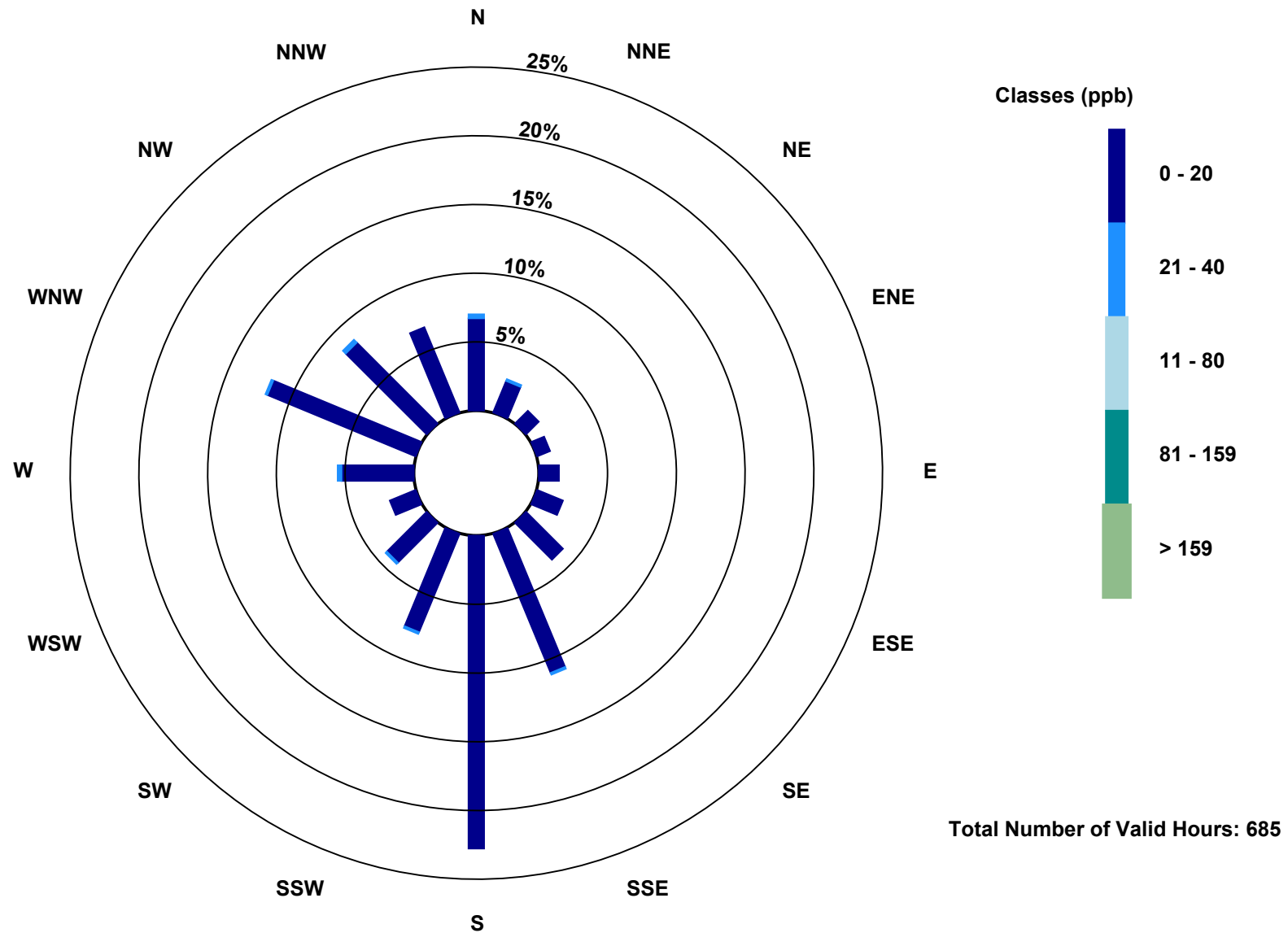
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

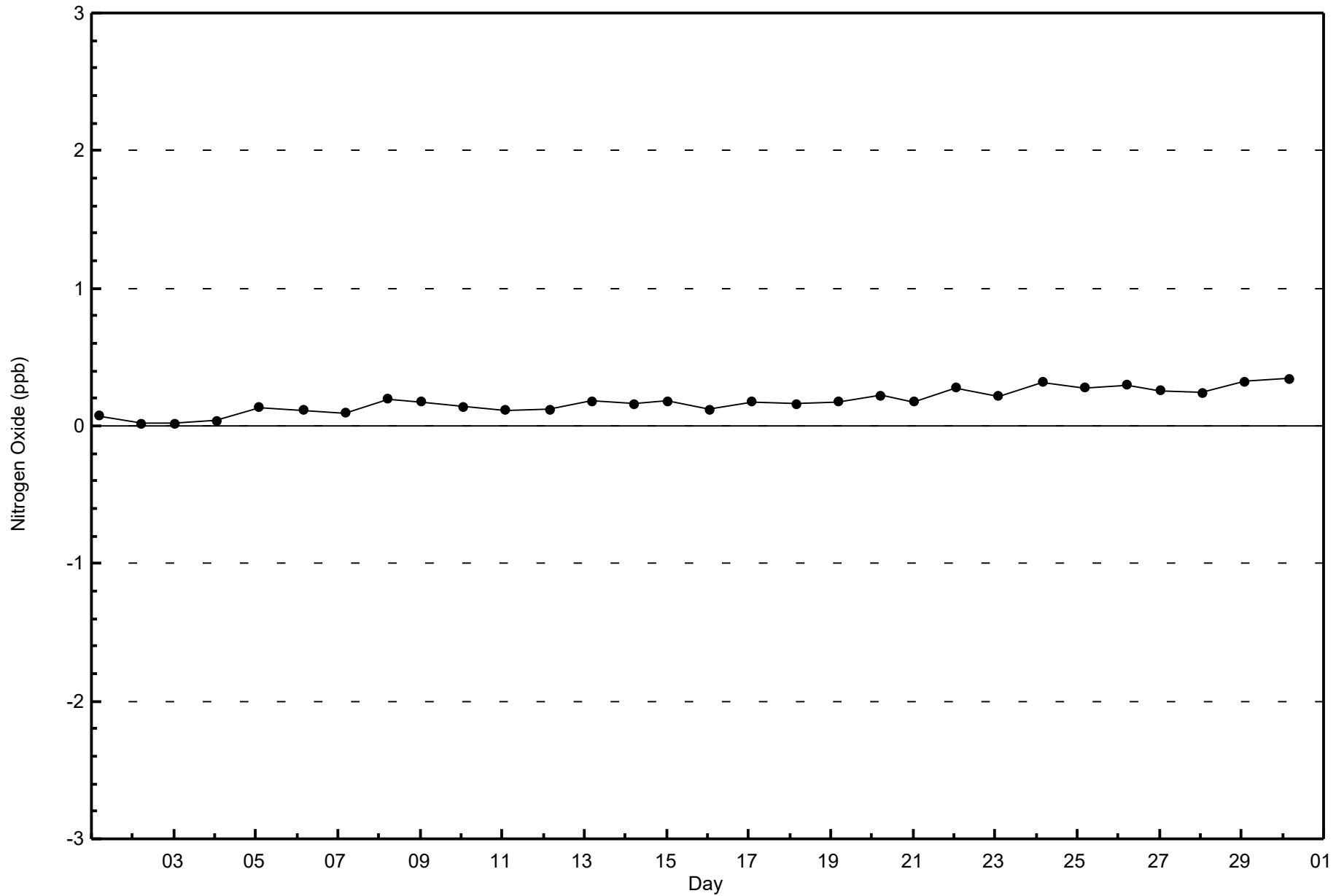
Nitrogen Oxide (NO) - ppb
Blackrod





Wood Buffalo Environmental Association
Zero Responses

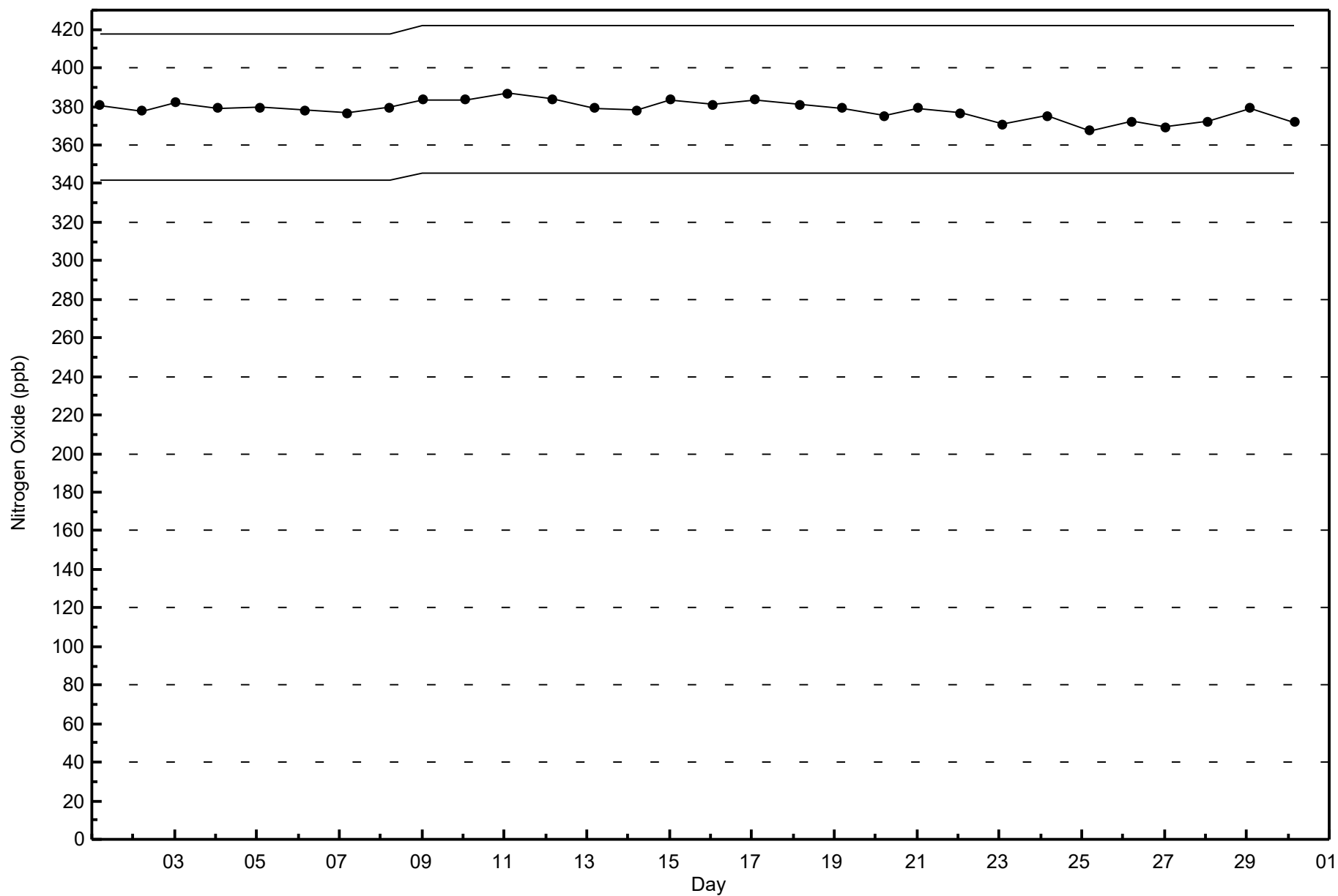
Nitrogen Oxide (NO) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxide (NO) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

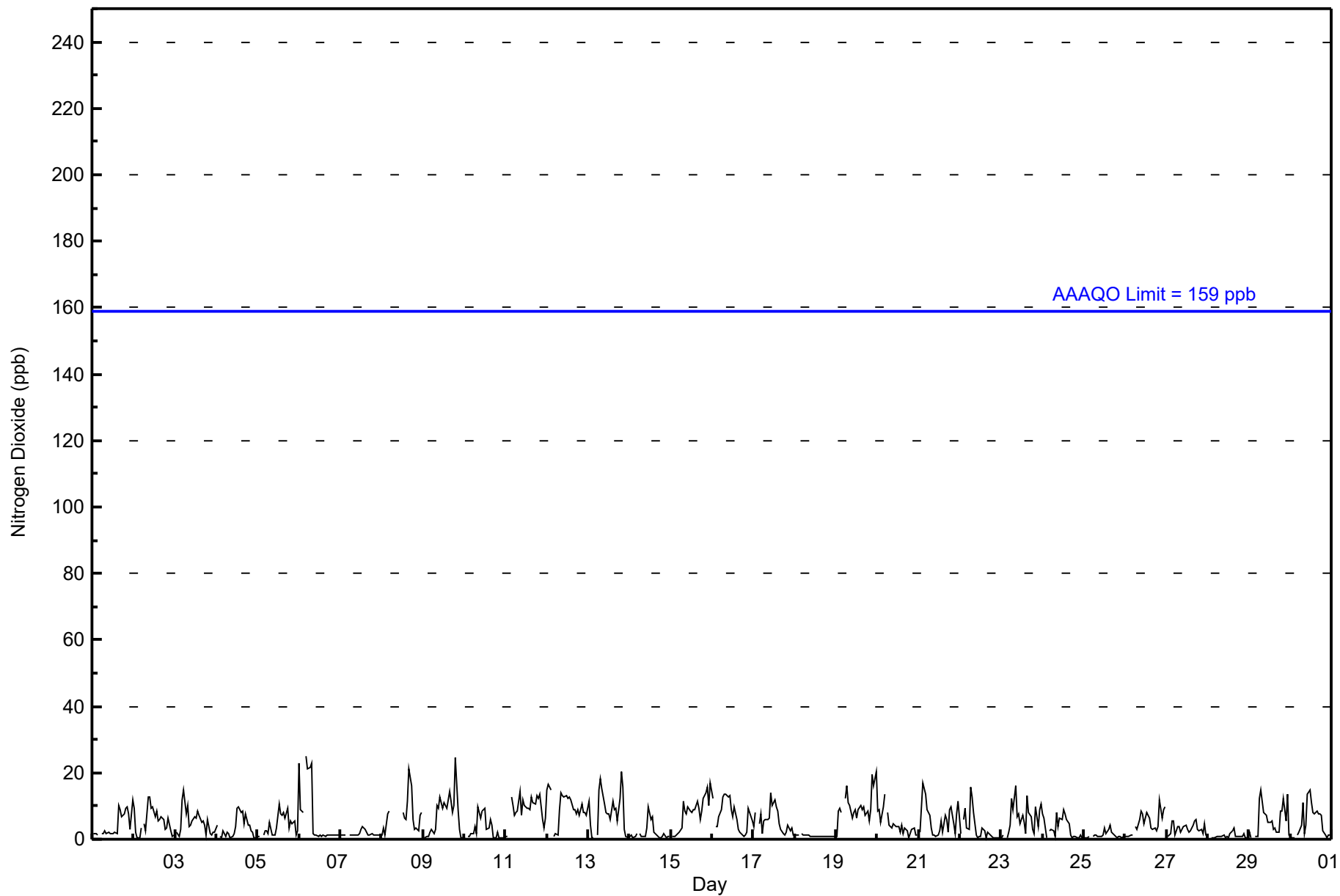
Blackrod - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 25.0 ppb on Apr 6 05:00 Maximum Daily Average: 10.0 ppb on Apr 19																				Hours in Service: 720 Hours of Data: 685						
Minimum Value: 0.3 ppb on Apr 2 04:00 Minimum Daily Average: 1.0 ppb on Apr 28 Maximum Diurnal Average: 6.9 ppb at hour 7 Minimum Diurnal Average: 3.2 ppb at hour 3 Monthly Average: 5.16 ppb Percentiles: P ₁ = 0.4 P ₁₀ = 0.7 Q ₁ = 1.2 Median = 3.4 Q ₃ = 8.2 P ₉₀ = 11.9 P ₉₉ = 21.0																				Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.5	1.6	1.5	1.4	Z	1.6	1.6	2.4	1.8	2.0	1.9	1.6	1.7	2.1	1.8	10.2	9.1	6.7	7.7	9.2	9.6	7.6	2.9	11.9	4.3	11.9
2-Apr	9.3	2.1	0.4	0.3	3.4	Z	4.7	2.7	12.6	12.6	9.2	9.6	6.8	8.4	5.3	5.8	6.9	5.9	2.9	3.3	6.3	2.6	1.0	1.4	5.4	12.6
3-Apr	Z	2.0	0.8	2.8	12.0	14.9	7.8	10.1	3.7	4.2	5.4	6.7	6.2	8.6	7.3	4.9	5.6	4.1	1.4	5.9	1.9	1.3	2.1	2.1	5.3	14.9
4-Apr	4.4	Z	1.0	0.4	2.4	0.9	2.1	1.8	0.6	0.7	1.5	3.8	9.3	9.9	7.9	8.6	4.7	7.7	4.1	4.3	2.7	2.2	0.6	0.6	3.6	9.9
5-Apr	0.7	0.9	Z	1.4	2.6	2.4	1.8	5.1	1.1	1.3	1.1	3.3	10.5	7.5	7.2	7.9	6.3	9.3	3.3	5.4	4.7	5.5	1.1	2.5	4.0	10.5
6-Apr	22.8	8.7	8.0	Z	25.0	21.2	21.6	22.7	1.8	1.3	1.1	1.0	1.2	1.0	1.2	1.0	1.2	1.3	1.1	1.1	1.2	1.2	1.3	1.3	6.5	25.0
7-Apr	1.3	1.4	1.3	1.2	Z	1.3	1.3	1.4	1.3	1.3	1.4	1.7	2.9	3.7	3.0	2.3	1.2	1.2	1.5	1.2	1.2	1.3	1.3	1.3	1.6	3.7
8-Apr	1.2	3.5	1.4	7.6	8.3	Z	23.7	C	C	C	C	C	7.9	6.2	5.8	11.4	21.0	16.2	6.0	3.1	3.5	2.5	7.1	8.2	8.0	23.7
9-Apr	Z	0.4	0.7	1.0	2.3	3.1	1.6	2.9	10.1	9.4	12.8	9.4	10.9	10.3	9.2	14.3	11.5	8.0	10.1	24.4	8.9	2.8	0.5	0.4	7.2	24.4
10-Apr	0.5	Z	0.7	0.8	1.8	1.9	4.0	1.7	9.6	6.3	8.3	9.0	9.2	3.1	3.5	5.8	4.3	0.5	0.3	2.1	0.6	0.4	0.4	0.5	3.3	9.6
11-Apr	0.7	0.8	Z	12.8	10.3	7.2	7.9	8.4	14.3	7.1	11.7	10.2	9.4	9.5	8.8	12.7	10.9	10.6	13.2	12.1	13.7	5.9	3.4	6.3	9.0	14.3
12-Apr	15.0	16.4	14.8	Z	0.8	1.8	1.2	9.0	13.8	13.2	12.6	13.0	12.1	12.5	11.9	9.0	9.1	7.5	9.1	7.4	10.7	8.2	8.1	7.1	9.8	16.4
13-Apr	11.6	4.3	0.5	0.4	Z	1.4	14.8	18.4	15.1	10.5	7.9	7.8	7.7	5.9	11.4	9.0	9.5	5.6	12.1	20.3	15.6	3.1	0.9	0.5	8.4	20.3
14-Apr	0.7	1.2	0.5	0.8	1.7	Z	1.5	0.9	0.9	0.9	3.5	9.6	5.8	6.7	2.2	1.6	1.1	0.4	0.4	0.9	1.7	0.6	0.8	0.8	2.0	9.6
15-Apr	Z	1.0	1.0	1.2	1.6	2.1	3.6	11.3	8.3	7.5	9.6	8.3	8.0	9.0	8.7	11.3	9.5	6.0	8.6	12.2	13.8	15.7	10.0	17.0	8.1	17.0
16-Apr	12.2	Z	3.8	4.0	6.9	9.0	12.8	13.6	13.4	12.5	13.3	9.0	6.8	9.6	5.9	3.1	2.0	1.8	0.7	1.3	2.1	9.4	7.9	5.5	7.2	13.6
17-Apr	3.9	8.0	Z	4.6	7.7	1.9	5.3	5.9	5.9	6.2	13.8	10.3	11.7	9.7	8.3	4.8	2.9	1.5	1.3	2.1	4.4	2.7	3.3	1.3	5.5	13.8
18-Apr	1.2	1.2	1.2	Z	1.6	1.3	1.4	1.4	1.4	1.0	0.9	0.7	0.8	0.7	0.7	0.9	0.9	0.9	0.9	1.0	0.8	0.9	0.9	1.0	1.0	1.6
19-Apr	1.0	8.5	9.2	8.1	Z	12.3	16.2	10.9	10.0	6.3	7.9	8.8	6.5	8.9	10.2	8.8	9.6	7.3	8.4	5.5	8.9	19.7	16.3	20.4	10.0	20.4
20-Apr	8.6	9.0	5.2	9.8	13.4	Z	7.9	4.1	3.6	4.6	4.2	4.0	3.7	2.0	4.2	1.8	3.3	2.5	0.6	1.9	3.0	3.2	1.1	1.1	4.5	13.4
21-Apr	Z	2.0	17.1	15.2	13.6	9.0	7.4	3.6	1.2	1.1	0.8	1.4	2.6	5.5	2.2	7.2	5.8	2.1	8.8	9.6	4.5	1.7	7.6	11.4	6.1	17.1
22-Apr	1.9	Z	6.0	9.3	3.6	3.1	15.8	12.5	7.9	1.1	0.5	0.7	0.9	3.2	2.7	0.6	2.0	1.8	0.9	0.4	0.5	0.3	0.3	0.5	3.3	15.8
23-Apr	0.4	1.1	Z	0.5	2.0	4.3	12.1	8.9	16.3	6.6	7.5	4.6	7.4	5.2	1.5	13.1	8.1	6.6	2.9	1.9	9.9	4.0	9.0	10.8	6.3	16.3
24-Apr	7.7	6.2	0.5	Z	2.7	2.8	2.5	0.8	7.9	3.7	6.5	6.0	8.8	7.7	6.1	4.6	1.3	0.5	0.9	0.8	0.5	0.6	1.2	0.5	3.5	8.8
25-Apr	0.5	0.6	0.6	0.8	Z	1.0	1.2	1.2	0.8	0.7	0.8	1.2	3.3	1.5	2.9	4.4	2.0	1.9	0.9	0.6	0.7	1.0	0.6	1.0	1.3	4.4
26-Apr	0.9	1.0	1.0	1.2	1.3	Z	3.9	2.9	6.1	8.4	7.7	4.6	7.9	7.1	6.4	3.4	3.0	3.6	2.7	3.8	12.0	6.3	9.1	9.6	5.0	12.0
27-Apr	Z	0.7	1.8	5.3	5.7	1.3	4.0	3.8	2.0	3.0	3.7	4.4	2.9	2.2	2.6	4.1	5.6	5.8	3.0	2.6	2.8	1.9	4.8	1.1	3.3	5.8
28-Apr	0.9	Z	0.4	0.4	0.5	0.9	1.0	1.0	0.9	1.1	0.5	0.7	0.6	1.6	2.7	3.3	1.0	1.0	0.9	0.7	0.7	1.5	0.5	0.4	1.0	3.3
29-Apr	2.0	0.6	Z	0.8	0.8	0.8	12.4	15.0	8.2	7.6	7.2	5.0	5.1	5.3	3.0	3.3	2.0	2.2	8.3	8.3	12.3	5.5	13.6	1.3	5.7	15.0
30-Apr	0.7	0.4	0.4	Z	1.4	2.0	4.2	11.0	1.8	4.3	13.5	14.8	11.0	8.1	7.5	8.6	7.8	7.8	7.3	2.7	1.3	0.4	1.1	1.4	5.2	14.8
4.5 3.3 3.2 3.7 5.3 4.4 6.9 6.7 6.3 5.1 6.1 5.9 6.3 6.1 5.4 6.3 5.6 4.6 4.3 5.2 5.4 4.0 4.0 4.3																									Diurnal Average	
22.8 16.4 17.1 15.2 25.0 21.2 23.7 22.7 16.3 13.2 13.8 14.8 12.1 12.5 11.9 14.3 21.0 16.2 13.2 24.4 15.6 19.7 16.3 20.4																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	677	98.83	98.83
21 - 40	8	1.17	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	18	9	6	10	12	26	75	156	53	29	14	38	79	58	46	677
21 - 40	0	0	0	1	0	2	0	1	0	1	0	0	0	2	1	0	8
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	18	9	7	10	14	26	76	156	54	29	14	38	81	59	46	685

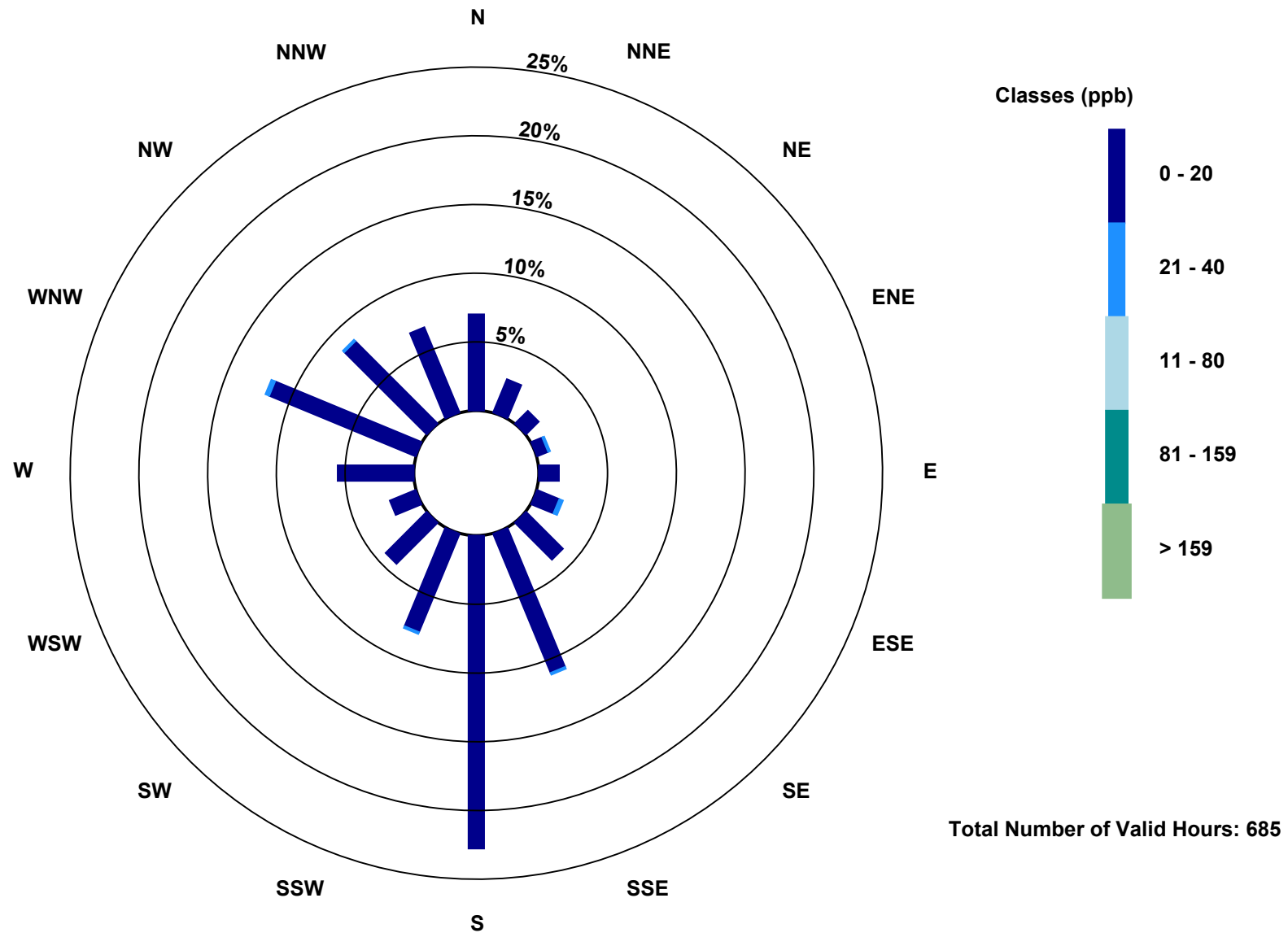
Total Number of Valid Hours: 685

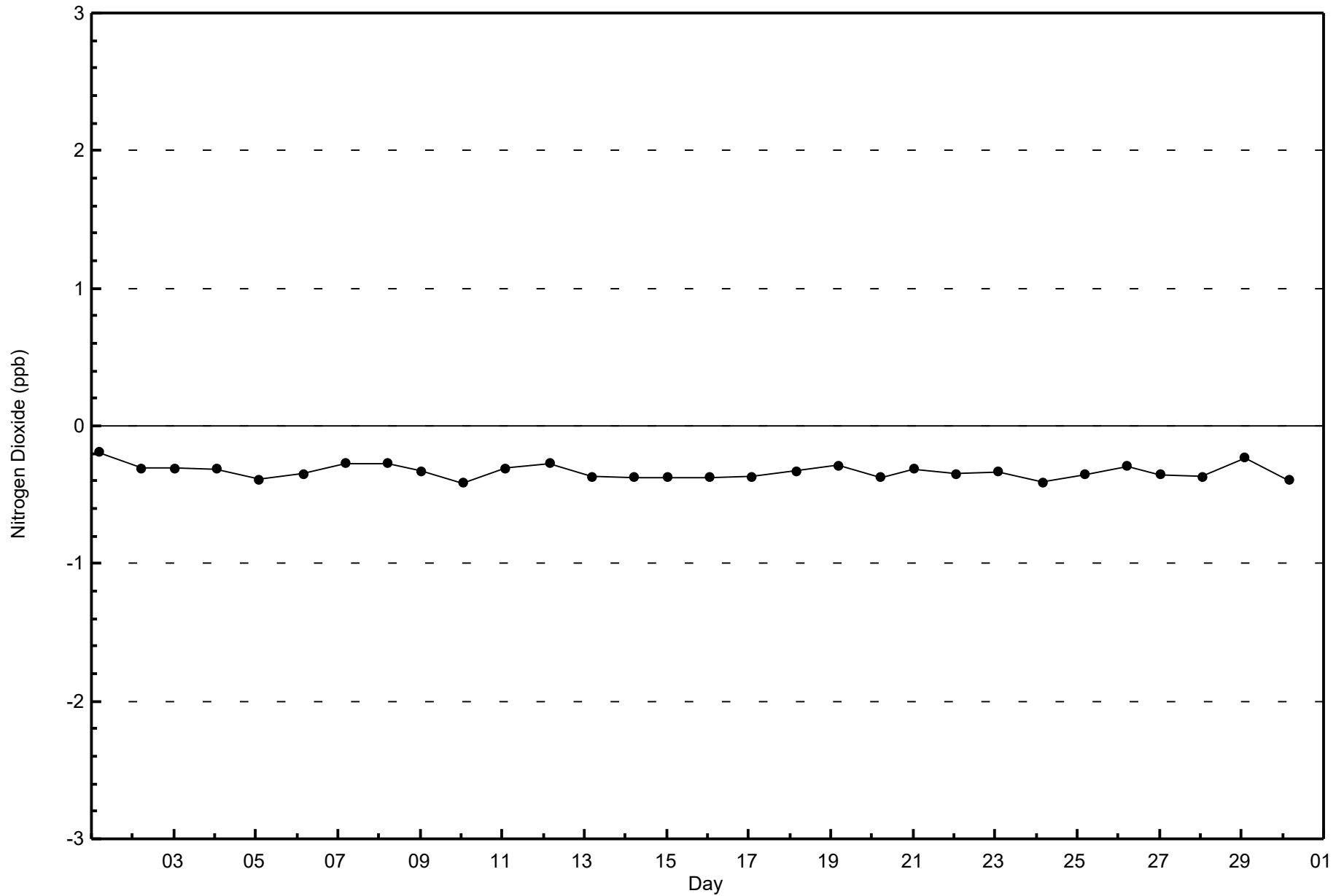
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Blackrod

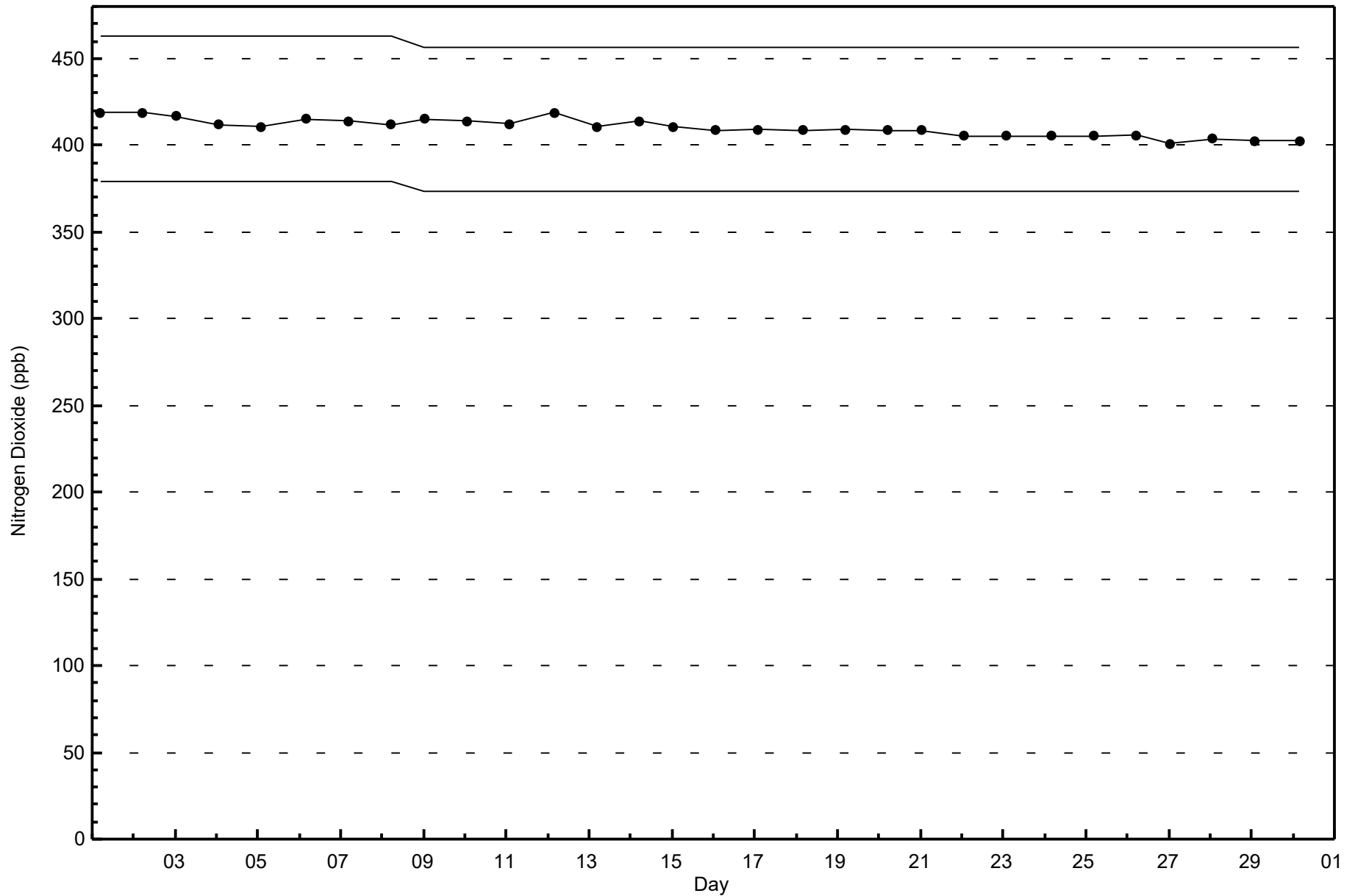






Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

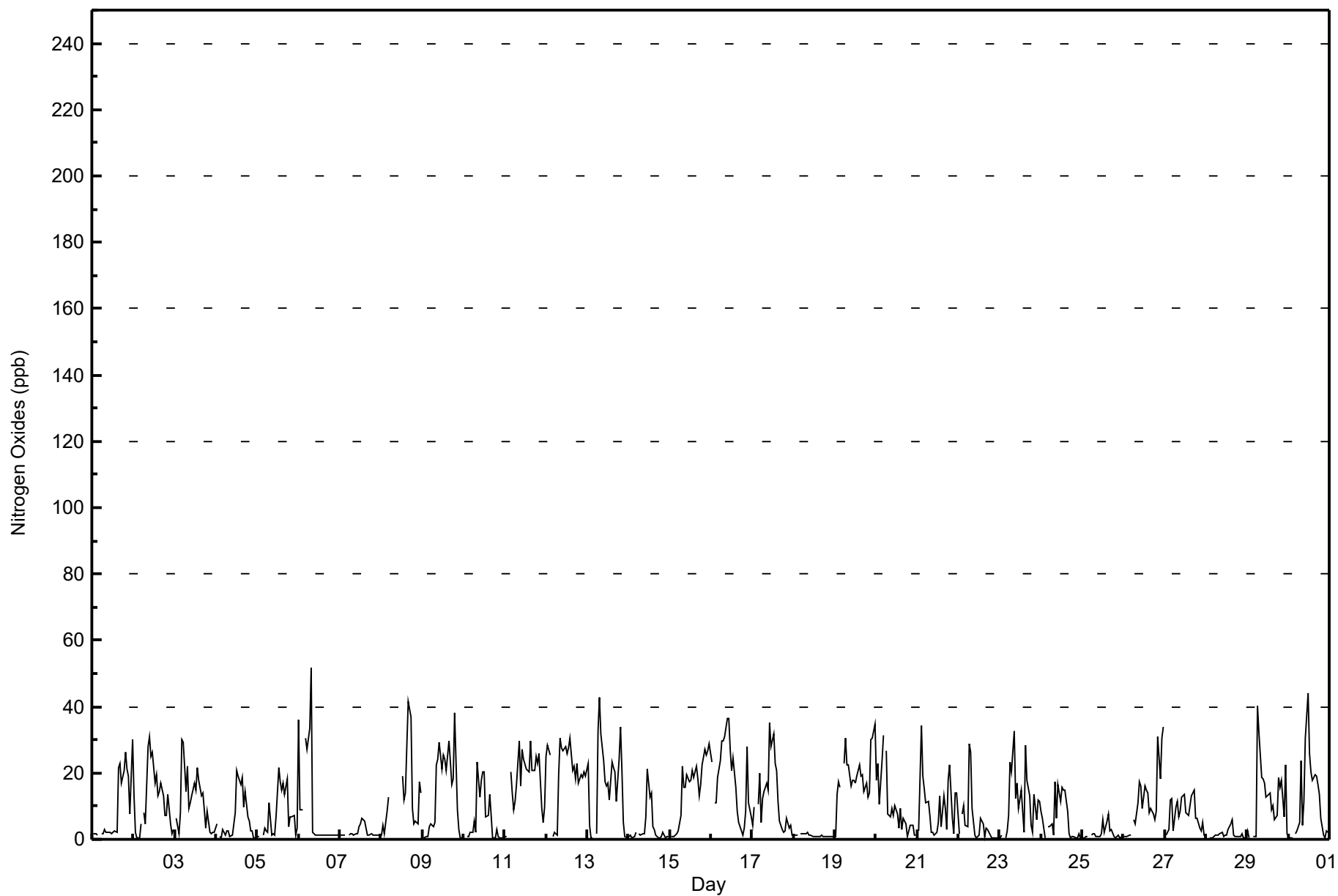
Blackrod - April 2025

Maximum Value: 54.8 ppb on Apr 8 07:00																				Maximum Daily Average: 20.8 ppb on Apr 12					Hours in Service: 720	
Minimum Value: 0.3 ppb on Apr 10 19:00																				Minimum Daily Average: 1.2 ppb on Apr 18					Hours of Data: 685	
Maximum Diurnal Average: 14.3 ppb at hour 13																				Minimum Diurnal Average: 4.9 ppb at hour 2					Hours of Missing Data: 35	
Monthly Average: 10.30 ppb																				Percentiles: P ₁ = 0.4 P ₁₀ = 0.8 Q ₁ = 1.5 Median = 6.6 Q ₃ = 17.5 P ₉₀ = 25.5 P ₉₉ = 36.9					Hours of Calibration: 35	
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.5	1.6	1.5	1.4	Z	1.8	1.6	3.0	2.0	2.3	2.1	1.8	2.0	2.4	2.0	21.4	22.9	17.1	20.6	26.3	21.1	19.0	7.4	30.2	9.3	30.2
2-Apr	13.3	2.1	0.4	0.3	4.7	Z	7.9	4.6	28.2	30.8	25.0	26.2	17.1	19.5	13.0	14.6	17.2	13.0	7.3	7.0	13.4	4.8	1.8	3.2	12.0	30.8
3-Apr	Z	6.3	1.5	8.0	30.0	29.2	14.3	22.2	9.2	11.2	13.1	17.0	15.0	21.6	17.6	13.0	14.0	9.0	3.4	8.4	2.1	1.5	2.3	2.3	11.8	30.0
4-Apr	4.6	Z	1.0	0.4	2.9	1.2	2.7	2.7	0.7	1.2	4.6	8.2	20.7	19.1	16.5	18.6	9.9	14.5	6.8	5.6	2.7	2.7	0.6	0.6	6.4	20.7
5-Apr	0.7	0.9	Z	1.4	3.3	2.5	1.9	10.8	1.2	1.5	1.3	6.6	21.5	17.6	14.9	16.9	13.5	18.3	3.8	6.8	6.8	7.3	1.3	3.4	7.1	21.5
6-Apr	35.9	8.8	8.8	Z	30.4	27.2	33.6	51.7	2.2	1.6	1.3	1.3	1.4	1.1	1.4	1.2	1.3	1.5	1.2	1.3	1.2	1.3	1.3	1.3	9.5	51.7
7-Apr	1.3	1.4	1.3	1.2	Z	1.4	1.5	1.7	1.5	1.6	1.7	3.8	4.7	6.1	5.4	3.6	1.3	1.3	1.6	1.2	1.2	1.3	1.3	1.3	2.1	6.1
8-Apr	1.2	4.2	1.5	8.4	12.7	Z	54.8	C	C	C	C	C	19.0	12.0	14.2	28.1	41.5	36.7	9.4	4.5	5.7	4.8	17.5	14.1	16.1	54.8
9-Apr	Z	0.5	0.7	1.0	3.7	4.8	3.7	5.0	22.3	24.3	29.3	21.4	25.6	24.0	20.6	29.6	23.3	16.4	18.3	38.1	9.1	2.9	0.5	0.4	14.2	38.1
10-Apr	0.5	Z	0.7	0.8	2.2	2.1	5.3	2.2	23.2	12.9	18.0	20.3	20.2	6.8	7.4	13.6	7.4	0.6	0.3	3.0	0.6	0.5	0.5	0.5	6.5	23.2
11-Apr	0.7	0.8	Z	20.2	14.0	9.1	11.6	16.7	29.5	16.0	27.2	24.0	21.1	20.7	20.4	29.5	20.7	20.9	25.0	23.0	25.9	9.4	4.9	9.9	17.4	29.5
12-Apr	25.2	28.5	25.5	Z	0.8	2.2	1.4	19.4	30.3	27.4	26.8	28.1	26.0	27.7	30.6	20.7	22.0	18.2	22.9	16.8	19.6	18.6	20.1	19.2	20.8	30.6
13-Apr	23.1	4.4	0.5	0.4	Z	1.9	32.7	42.6	32.0	23.8	17.3	16.3	17.0	12.0	23.4	21.6	20.3	11.3	24.0	34.0	20.8	4.9	0.9	0.5	16.8	42.6
14-Apr	0.8	1.3	0.5	0.8	2.0	Z	1.8	1.3	1.6	1.6	6.6	21.2	12.7	14.1	3.8	2.9	1.4	0.5	0.4	1.0	2.3	0.6	0.8	0.8	3.5	21.2
15-Apr	Z	1.0	1.0	1.2	1.7	2.4	7.1	22.2	15.6	15.6	19.3	17.5	18.0	20.6	18.6	22.0	18.4	13.1	16.3	22.5	27.0	25.4	26.7	28.7	15.7	28.7
16-Apr	23.2	Z	11.1	11.1	18.7	23.9	29.5	29.5	30.8	36.4	36.5	27.1	20.9	24.8	15.8	8.5	5.1	3.7	1.5	3.5	8.7	27.9	11.2	6.9	18.1	36.5
17-Apr	4.4	9.8	Z	10.7	20.0	4.9	12.4	14.5	17.1	14.9	35.1	28.0	31.7	23.1	20.8	11.5	5.6	2.9	1.9	2.7	6.3	3.2	4.3	1.3	12.5	35.1
18-Apr	1.2	1.2	1.2	Z	1.6	1.5	1.6	1.7	2.0	1.4	1.3	1.0	1.0	1.0	0.9	1.0	1.1	1.0	1.0	1.0	0.8	0.9	0.9	1.0	1.2	2.0
19-Apr	1.0	13.5	17.3	15.9	Z	22.9	30.5	22.6	22.4	16.2	18.0	17.8	16.9	19.2	22.7	19.0	19.5	14.5	16.8	12.6	13.8	30.2	30.4	34.8	19.5	34.8
20-Apr	17.7	23.0	10.8	23.9	31.4	Z	26.5	7.7	7.0	9.3	7.4	10.2	7.5	3.3	9.5	3.1	6.5	4.5	0.8	2.7	4.4	4.3	1.4	1.2	9.7	31.4
21-Apr	Z	2.4	34.4	18.9	15.4	11.2	11.5	7.0	2.1	2.0	1.4	2.1	5.3	13.3	3.6	13.1	9.4	3.1	17.6	22.5	6.3	1.7	13.8	14.0	10.1	34.4
22-Apr	1.9	Z	7.7	10.2	4.4	3.7	28.9	26.2	9.5	1.4	0.6	0.9	1.3	6.4	4.8	0.8	3.3	2.8	1.2	0.5	0.5	0.3	0.3	0.5	5.1	28.9
23-Apr	0.4	1.2	Z	0.6	2.6	7.0	23.4	20.4	32.7	12.3	16.8	9.3	15.0	8.7	2.1	28.4	17.8	13.1	4.3	2.2	13.7	6.0	11.8	11.4	11.4	32.7
24-Apr	8.6	6.2	0.5	Z	3.8	4.0	4.8	1.4	17.6	6.5	16.4	11.3	15.8	14.9	14.8	8.4	1.8	0.6	1.0	0.8	0.5	0.6	1.7	0.5	6.2	17.6
25-Apr	0.5	0.6	0.6	0.8	Z	1.1	1.5	1.6	0.9	0.8	1.0	1.9	6.0	2.2	5.3	7.8	2.7	3.0	1.0	0.6	0.7	1.2	0.6	1.0	1.9	7.8
26-Apr	0.9	1.0	1.0	1.2	1.5	Z	5.9	4.7	11.2	17.5	16.1	9.3	16.1	14.7	13.9	7.9	9.1	7.8	5.8	8.4	30.8	18.0	30.5	33.8	11.6	33.8
27-Apr	Z	1.2	3.0	11.9	12.3	2.4	9.9	11.3	6.7	8.5	12.6	13.6	8.1	7.7	7.2	12.9	14.0	14.7	6.5	6.2	3.6	2.7	4.9	1.2	8.0	14.7
28-Apr	0.9	Z	0.4	0.4	0.6	1.1	1.3	1.4	1.6	2.2	0.8	1.4	1.1	2.9	4.8	5.9	1.2	1.0	1.0	0.7	0.7	1.8	0.5	0.4	1.5	5.9
29-Apr	2.7	0.6	Z	0.9	0.9	0.9	40.3	32.4	18.9	18.1	16.9	12.8	13.4	14.1	8.9	10.1	6.0	7.4	18.8	15.5	17.8	6.9	22.6	1.7	12.5	40.3
30-Apr	0.8	0.4	0.4	Z	1.5	2.7	5.2	23.7	4.3	11.4	30.6	44.1	25.8	20.3	17.8	19.4	19.1	16.7	13.7	6.4	1.4	0.5	2.5	2.3	11.8	44.1
Diurnal Average																										
Diurnal Maximum																										
Z - zerospan C - Calibration																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Blackrod - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	561	81.90	81.90
21 - 40	119	17.37	99.27
41 - 80	5	0.73	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
Blackrod - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	40	16	9	6	10	12	26	74	156	52	25	8	9	42	37	39	561
21 - 40	8	2	0	1	0	2	0	1	0	1	4	6	27	38	22	7	119
11 - 80	0	0	0	0	0	0	0	1	0	1	0	0	2	1	0	0	5
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	18	9	7	10	14	26	76	156	54	29	14	38	81	59	46	685

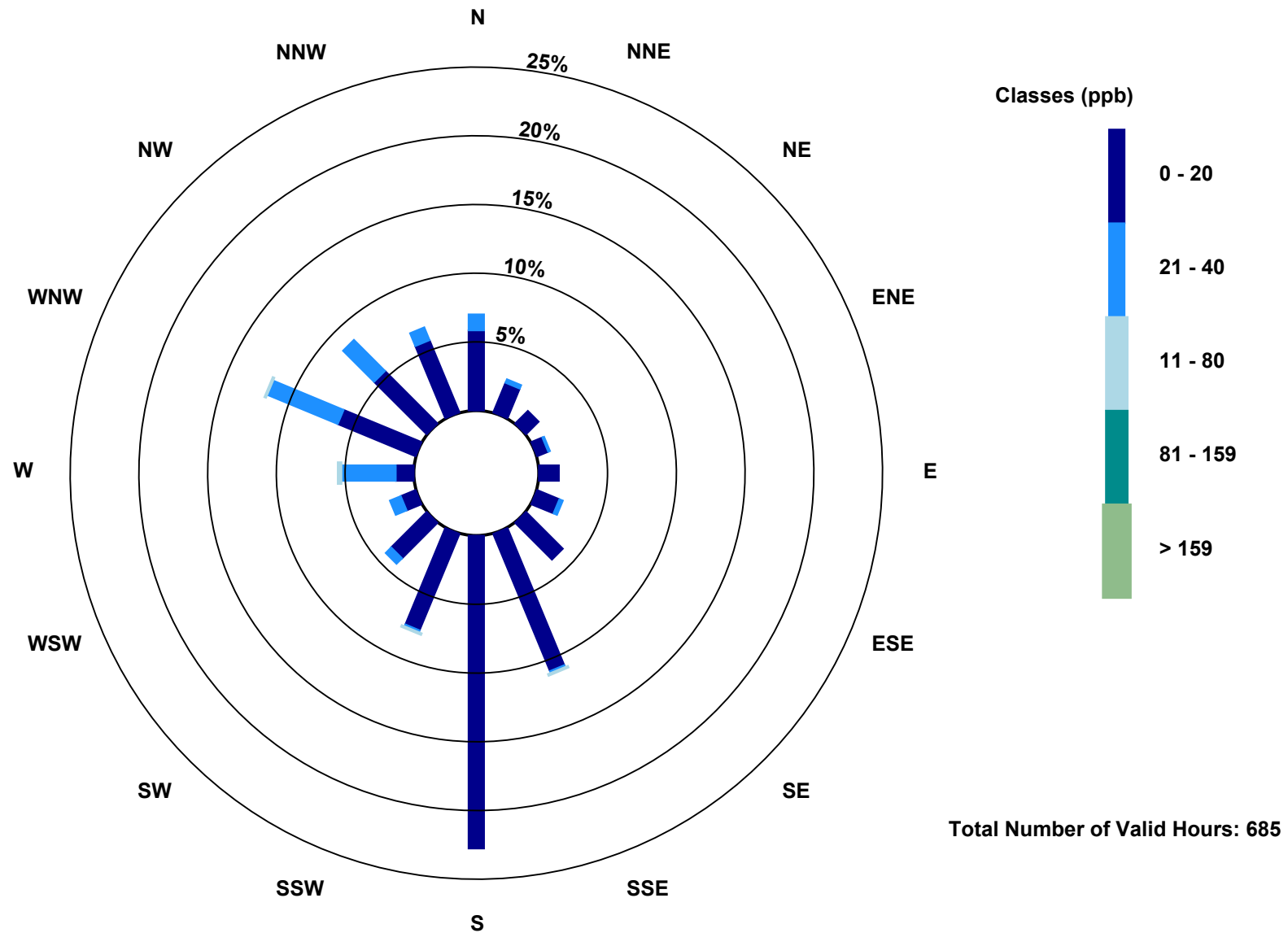
Total Number of Valid Hours: 685

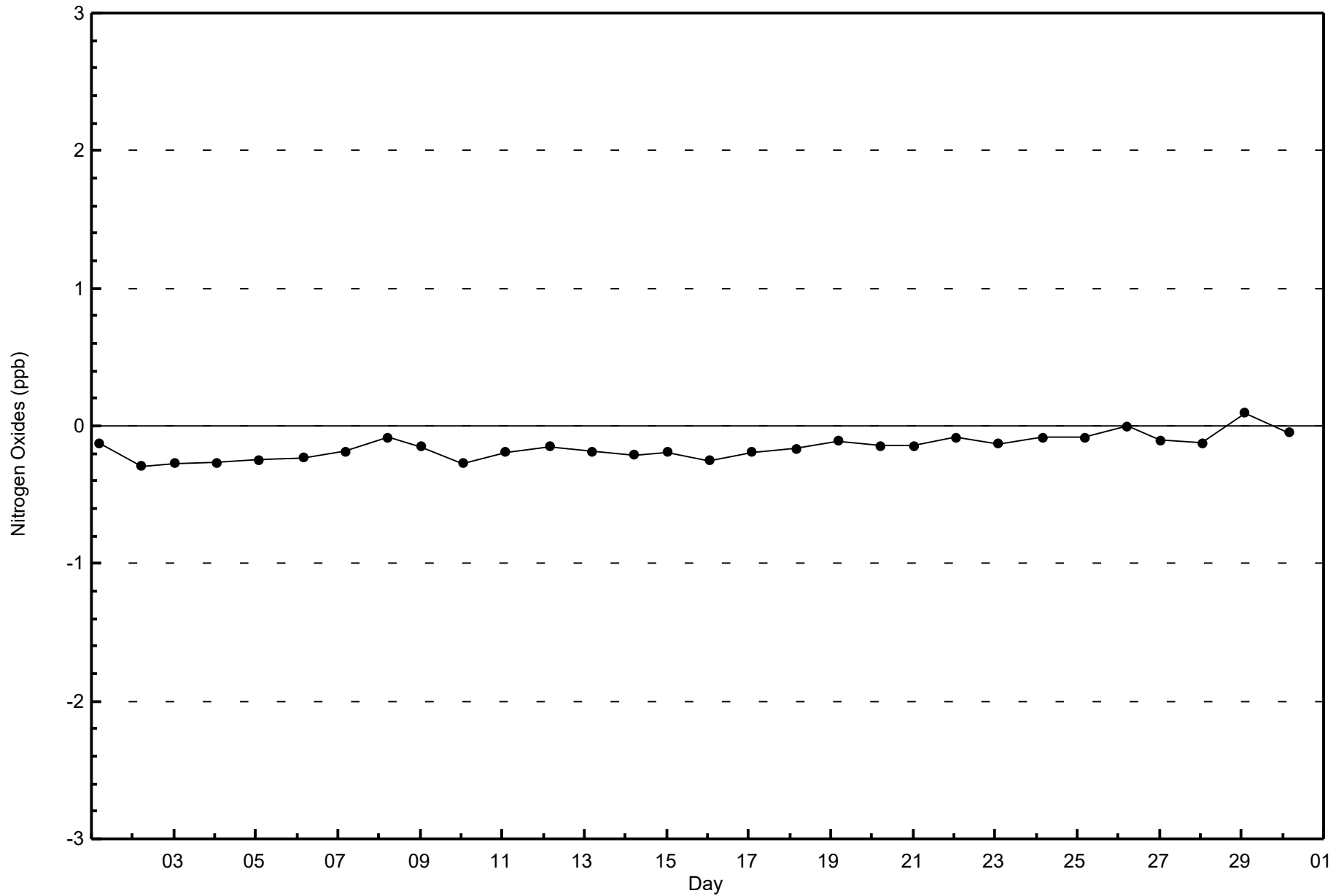
Total Number of Hours: 720

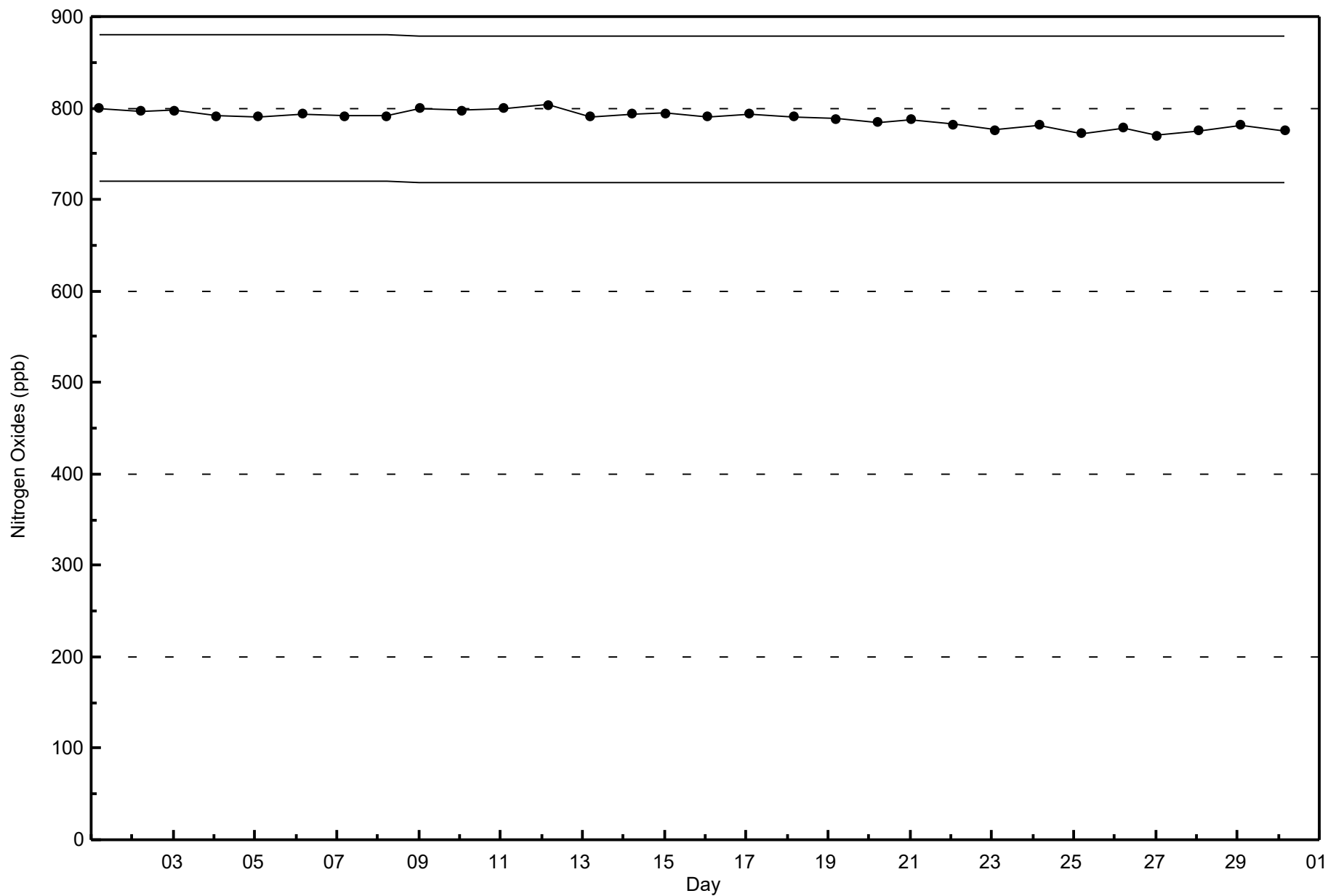


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Blackrod









Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

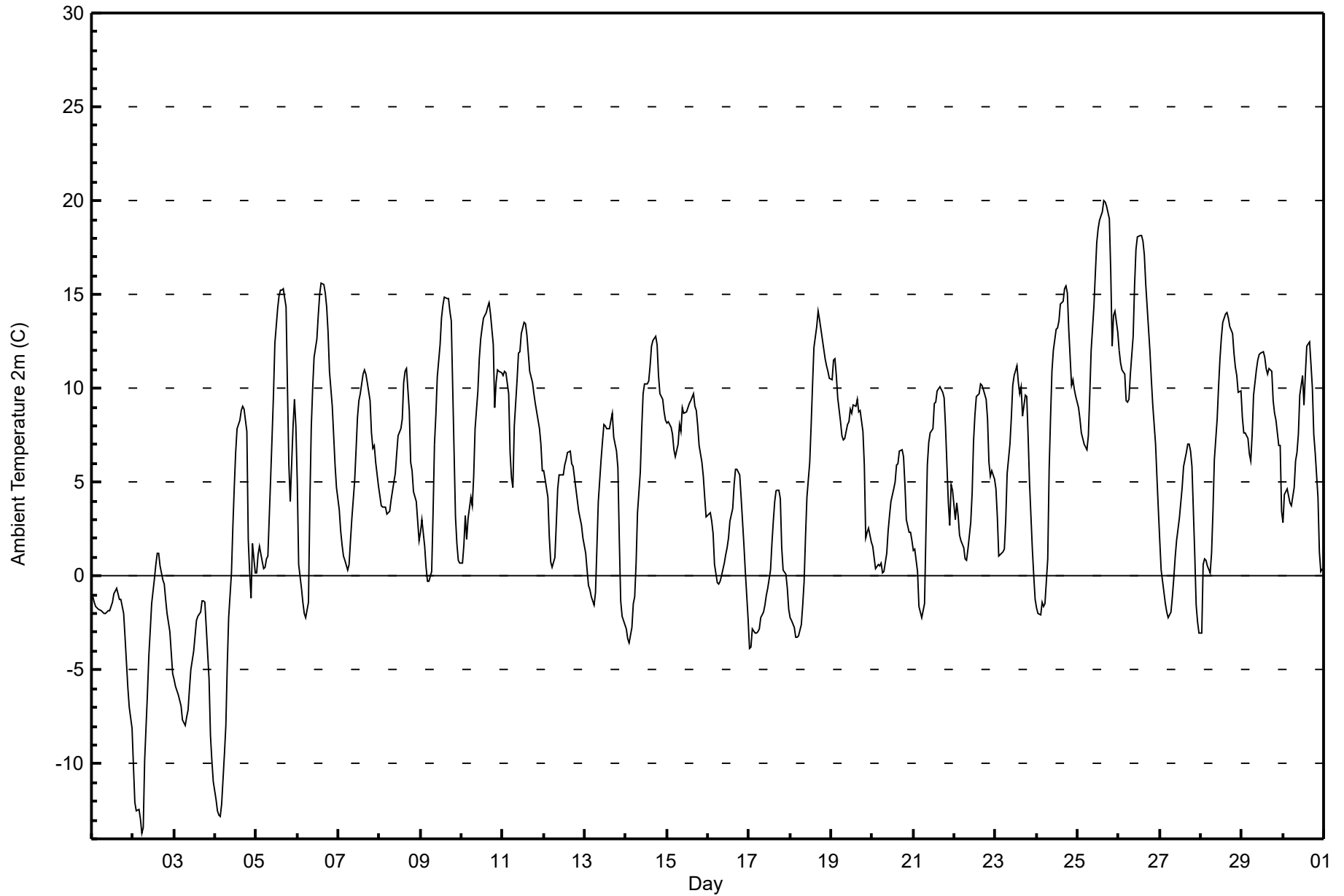
Blackrod - April 2025

Maximum Value: 20.0 C on Apr 25 16:00																			Maximum Daily Average: 13.7 C on Apr 25										Hours in Service: 720	
Minimum Value: -13.7 C on Apr 2 06:00																			Minimum Daily Average: -5.3 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 10.0 C at hour 16																			Minimum Diurnal Average: 0.3 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 5.11 C																			Percentiles: P ₁ = -12.4 P ₁₀ = -2.2 Q ₁ = 0.6 Median = 5.5 Q ₃ = 9.7 P ₉₀ = 12.8 P ₉₉ = 18.1										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	-1.1	-1.4	-1.6	-1.7	-1.8	-1.9	-1.9	-2.0	-2.0	-1.9	-1.8	-1.6	-1.4	-1.0	-0.6	-0.9	-1.3	-1.3	-2.0	-3.2	-4.6	-5.9	-7.0	-8.1	-2.4	-0.6				
2-Apr	-10.1	-12.1	-12.5	-12.4	-12.9	-13.7	-13.4	-9.8	-6.3	-4.2	-2.9	-1.5	-0.1	0.6	1.2	1.2	0.6	-0.2	-0.4	-1.3	-2.0	-2.9	-4.1	-5.2	-5.2	1.2				
3-Apr	-5.5	-5.8	-6.3	-6.6	-6.9	-7.7	-8.0	-7.5	-7.1	-6.0	-5.0	-4.0	-3.2	-2.3	-2.2	-1.9	-1.3	-1.3	-1.4	-2.7	-5.5	-8.5	-9.8	-10.9	-5.3	-1.3				
4-Apr	-11.9	-12.5	-12.8	-12.8	-12.1	-9.5	-8.0	-4.7	-2.2	0.2	2.6	4.8	6.6	7.9	8.3	8.8	9.0	8.9	7.7	2.0	0.2	-1.2	1.7	0.2	-0.8	9.0				
5-Apr	0.2	1.1	1.6	0.8	0.4	0.5	0.9	1.0	5.3	7.4	9.7	12.4	14.2	14.9	15.2	15.2	15.3	14.4	10.0	5.9	3.9	8.0	9.4	8.0	7.3	15.3				
6-Apr	5.0	0.6	-0.6	-1.4	-2.0	-2.2	-1.4	3.9	7.9	10.0	11.6	12.7	13.9	15.0	15.6	15.6	15.1	14.3	13.0	10.9	9.1	7.5	5.9	4.8	7.7	15.6				
7-Apr	3.5	2.4	1.6	1.0	0.9	0.3	0.6	1.9	3.1	5.1	6.8	8.5	9.3	9.7	10.7	11.0	10.7	10.3	9.3	7.6	6.8	7.0	6.1	4.8	5.8	11.0				
8-Apr	4.2	3.7	3.7	3.6	3.3	3.4	3.4	4.1	5.0	5.5	6.5	7.5	7.8	8.4	10.3	10.9	11.0	8.8	6.1	5.6	4.5	4.0	2.9	1.9	5.7	11.0				
9-Apr	2.3	3.0	1.6	0.5	-0.3	-0.3	0.3	3.4	7.0	8.6	10.6	12.3	13.7	14.4	14.8	14.8	14.8	14.2	13.6	10.1	3.1	1.8	0.8	0.7	6.9	14.8				
10-Apr	0.7	1.6	3.2	2.0	3.1	4.2	3.8	5.3	7.8	9.9	11.6	12.7	13.2	13.7	14.0	14.3	14.6	13.9	12.3	9.0	10.3	11.0	10.9	10.8	8.9	14.6				
11-Apr	10.7	10.9	10.9	9.7	6.6	5.3	4.8	8.0	10.5	11.9	12.0	12.9	13.6	13.5	12.9	11.9	10.9	10.3	9.7	9.2	8.7	7.8	7.0	5.6	9.8	13.6				
12-Apr	5.6	5.2	4.2	2.1	0.8	0.5	1.0	2.8	4.7	5.4	5.4	5.4	5.9	6.2	6.6	6.7	6.0	5.8	5.3	4.7	3.5	3.1	2.7	2.0	4.2	6.7				
13-Apr	1.2	0.3	-0.5	-0.7	-1.1	-1.6	-0.9	1.5	4.0	6.2	7.2	8.1	8.0	7.8	7.9	8.3	8.7	7.4	6.7	5.8	2.0	-1.3	-2.2	-2.6	3.3	8.7				
14-Apr	-2.8	-3.3	-3.5	-2.7	-1.5	-1.1	0.7	3.4	5.6	7.8	9.7	10.2	10.2	10.4	11.2	12.3	12.5	12.8	12.3	10.7	9.7	9.4	8.8	8.3	6.3	12.8				
15-Apr	8.2	8.3	7.9	7.5	6.7	6.4	7.0	8.0	7.7	9.0	8.7	8.7	9.0	9.2	9.3	9.7	9.1	8.8	8.0	6.9	6.1	5.3	4.2	3.2	7.6	9.7				
16-Apr	3.3	3.3	2.9	2.3	0.6	-0.3	-0.5	-0.3	0.0	0.7	1.1	1.5	2.0	2.9	3.6	4.9	5.7	5.7	5.4	4.2	2.9	1.7	0.2	-2.3	2.2	5.7				
17-Apr	-3.9	-3.8	-2.8	-3.0	-3.0	-2.9	-2.8	-2.2	-1.9	-1.6	-1.0	-0.7	0.3	1.8	3.0	3.9	4.5	4.6	4.2	1.5	0.3	0.1	-0.6	-1.8	-0.3	4.6				
18-Apr	-2.2	-2.4	-2.8	-3.2	-3.3	-3.2	-2.6	-1.5	-0.3	2.1	4.2	6.0	8.0	10.2	12.2	13.3	14.1	13.7	13.1	12.6	11.6	11.2	10.9	10.5	5.5	14.1				
19-Apr	10.5	11.5	11.6	10.7	9.5	8.2	7.5	7.2	7.3	8.1	8.2	8.9	8.7	9.1	9.0	9.4	8.7	8.8	7.7	5.9	2.0	2.3	2.6	1.8	7.7	11.6				
20-Apr	1.6	1.0	0.4	0.6	0.6	0.7	0.1	0.2	1.2	2.4	3.3	4.0	4.7	5.0	5.9	6.0	6.7	6.7	6.4	4.9	3.0	2.4	2.3	1.9	3.0	6.7				
21-Apr	1.4	1.5	0.2	-1.6	-1.9	-2.2	-1.4	2.3	5.9	7.1	7.6	7.8	9.2	9.3	9.9	10.1	9.9	9.8	9.5	7.9	3.9	2.7	4.9	4.6	4.9	10.1				
22-Apr	3.0	3.9	3.2	2.2	1.9	1.5	0.9	0.8	1.4	2.8	4.4	7.2	8.6	9.6	9.7	10.3	10.2	10.0	9.4	8.4	6.1	5.4	5.7	5.2	5.5	10.3				
23-Apr	4.7	3.2	1.0	1.2	1.3	1.4	3.0	5.4	7.0	8.5	10.2	10.7	11.2	10.3	9.7	10.1	8.5	9.6	9.6	7.4	4.9	1.4	0.0	-1.3	5.8	11.2				
24-Apr	-1.7	-2.0	-2.1	-1.4	-1.6	-1.5	0.9	5.7	8.5	10.9	12.0	13.2	13.2	13.6	14.5	14.7	15.3	15.5	15.1	13.1	10.1	10.4	10.0	9.6	8.2	15.5				
25-Apr	9.0	8.3	7.7	7.3	7.0	6.7	7.5	9.6	12.0	14.4	16.1	17.7	18.5	19.0	19.4	20.0	19.9	19.7	19.1	16.2	12.3	13.9	14.1	13.0	13.7	20.0				
26-Apr	12.0	11.3	11.0	10.8	9.4	9.3	9.4	10.8	12.8	15.5	17.4	18.1	18.1	18.1	17.9	17.1	15.5	13.1	12.0	10.5	9.1	7.0	5.3	3.6	12.3	18.1				
27-Apr	1.9	0.3	-0.9	-1.4	-1.9	-2.2	-1.9	-1.1	-0.1	1.0	1.9	3.1	3.9	4.8	5.8	6.6	7.0	7.1	6.7	5.8	1.1	-1.6	-2.4	-3.0	1.7	7.1				
28-Apr	-3.0	0.7	0.9	0.8	0.5	0.2	1.2	3.5	6.2	8.4	10.1	11.6	12.7	13.5	14.0	14.0	13.7	13.3	12.9	11.9	11.2	10.7	9.8	9.9	7.9	14.0				
29-Apr	8.4	7.7	7.6	7.3	6.5	6.1	7.5	9.7	11.0	11.5	11.8	11.9	11.9	11.7	11.1	10.8	11.1	10.9	9.3	8.7	8.3	7.0	7.0	3.5	9.1	11.9				
30-Apr	2.9	4.3	4.6	4.2	3.9	3.7	4.7	6.1	6.6	7.5	9.7	10.7	9.1	10.7	12.3	12.4	11.3	10.0	7.6	6.6	4.2	1.3	0.3	0.4	6.5	12.4				
																									Diurnal Average					
																									Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Blackrod - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	149	20.69	20.69
0 - 10	404	56.11	76.81
10 - 20	167	23.19	100.00
> 20	0	0.00	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) - %

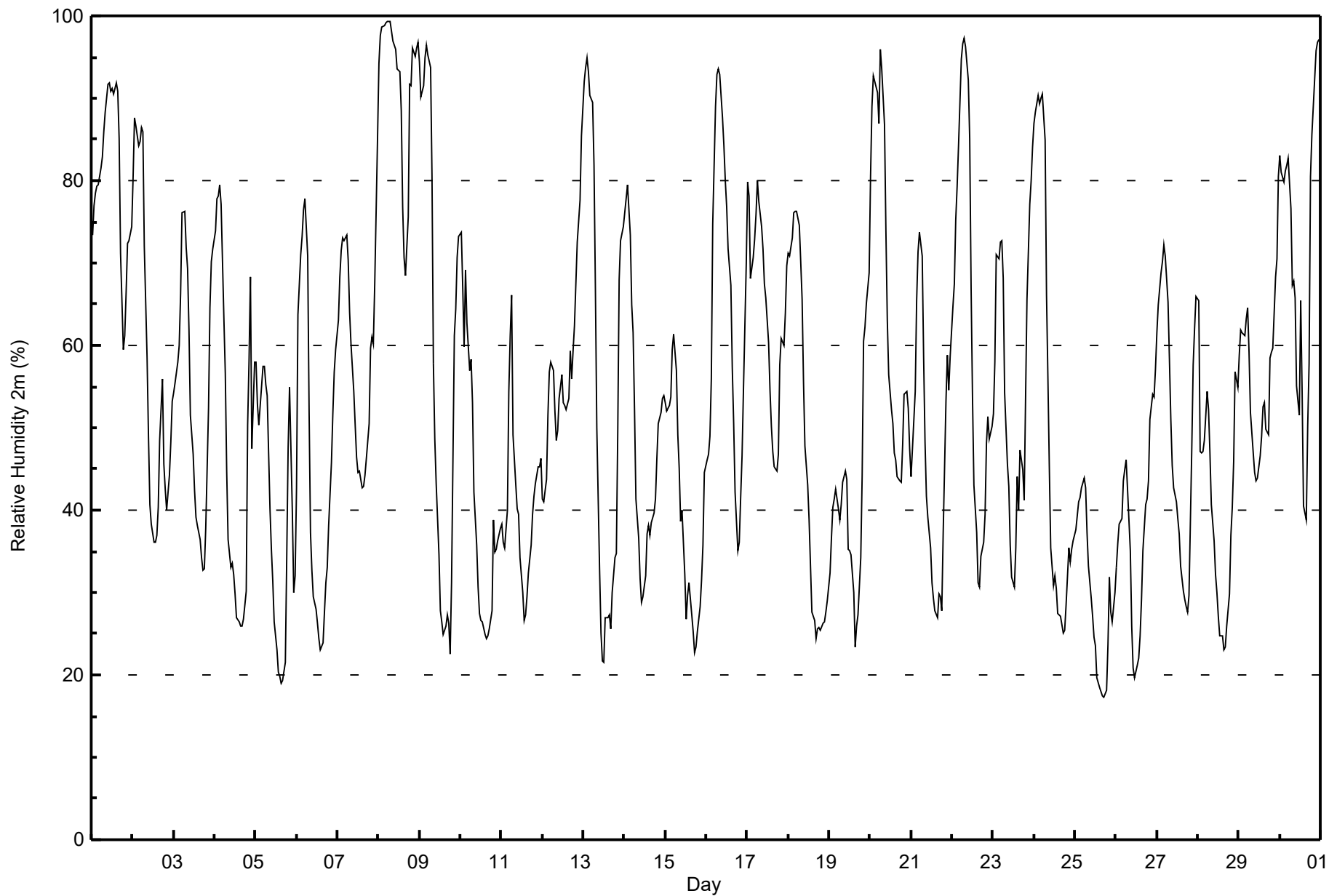
Blackrod - April 2025

Maximum Value: 99.4 % on Apr 8 08:00																				Maximum Daily Average: 92.1 % on Apr 8					Hours in Service: 720	
Minimum Value: 17.3 % on Apr 25 18:00																				Minimum Daily Average: 29.7 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 72.0 % at hour 6																				Minimum Diurnal Average: 36.4 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 53.39 %																				Percentiles: P ₁ = 19.6 P ₁₀ = 27.0 Q ₁ = 35.8 Median = 50.4 Q ₃ = 70.1 P ₉₀ = 86.0 P ₉₉ = 97.2					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	73.4	77.0	78.4	79.3	79.5	81.5	82.9	86.0	88.3	91.8	91.9	90.9	91.3	90.5	91.9	90.9	85.1	71.2	59.5	61.1	66.4	72.4	72.7	74.5	80.4	91.9
2-Apr	80.5	87.6	86.6	84.2	84.8	86.4	86.0	72.0	58.4	49.0	40.8	38.3	36.1	36.2	37.0	40.3	48.5	55.9	45.5	42.6	40.0	44.2	48.4	53.2	57.6	87.6
3-Apr	54.2	55.4	57.9	60.1	66.4	76.1	76.4	71.9	69.3	61.9	51.4	46.7	42.3	39.2	38.2	36.4	34.2	32.6	32.9	37.8	52.3	64.6	70.1	71.7	54.2	76.4
4-Apr	73.8	77.7	78.1	79.5	77.1	63.2	56.5	44.7	36.5	33.1	33.6	32.3	29.9	27.0	26.5	25.9	26.0	26.8	30.1	50.3	58.1	68.3	47.5	58.0	48.4	79.5
5-Apr	58.0	52.8	50.4	55.2	57.4	57.5	55.3	53.9	40.2	35.3	31.3	26.4	23.1	20.3	19.8	19.0	19.3	21.5	34.4	47.6	54.9	39.8	29.9	32.1	39.0	58.0
6-Apr	42.8	63.8	71.0	73.2	76.5	77.7	70.8	52.0	37.3	32.7	29.6	27.9	26.3	24.4	23.0	23.9	27.7	31.2	33.0	38.2	45.8	51.8	56.7	59.5	45.7	77.7
7-Apr	63.0	68.3	71.6	73.1	72.7	73.3	70.4	64.1	60.2	54.4	50.3	46.5	44.6	44.7	42.8	42.8	44.2	46.3	50.6	59.6	61.1	60.1	67.5	85.1	59.0	85.1
8-Apr	94.2	97.6	98.7	98.8	99.1	99.3	99.3	99.4	96.9	96.5	95.9	93.5	93.2	88.4	76.9	70.8	68.5	75.6	91.7	91.6	96.1	95.1	96.1	96.8	92.1	99.4
9-Apr	94.5	90.2	91.5	94.9	96.4	95.3	93.8	80.6	57.7	48.6	43.2	34.5	27.7	26.4	24.9	26.0	27.2	26.3	22.5	31.1	61.3	64.5	70.7	73.3	58.5	96.4
10-Apr	73.8	67.1	59.9	69.1	62.6	56.9	58.3	53.1	42.2	35.8	30.7	27.5	26.6	26.5	25.0	24.4	24.7	25.7	27.9	38.8	35.0	35.3	36.3	37.8	41.7	73.8
11-Apr	38.4	36.1	35.5	40.0	54.4	61.1	66.1	49.1	43.0	40.2	39.6	34.2	29.9	26.7	27.2	29.5	32.4	35.8	39.5	41.8	43.3	45.3	45.2	46.3	40.9	66.1
12-Apr	41.4	41.0	43.7	51.6	56.7	58.0	56.9	52.1	48.4	49.6	53.6	56.4	53.0	52.8	52.2	53.6	59.4	56.0	59.3	62.4	72.5	75.1	77.6	85.4	57.0	85.4
13-Apr	92.1	93.8	94.9	93.2	90.3	89.5	81.8	66.7	50.1	32.8	25.0	21.7	21.5	26.9	26.9	27.3	25.6	30.0	34.2	34.8	49.5	67.9	72.7	74.4	55.1	94.9
14-Apr	76.1	77.9	79.5	73.3	64.9	61.6	52.2	41.3	36.6	31.7	28.7	29.5	32.1	37.1	38.2	36.9	38.5	39.6	41.4	46.3	50.4	51.8	53.5	53.9	48.9	79.5
15-Apr	53.1	52.0	52.7	53.7	59.4	61.4	56.9	49.1	45.1	38.6	40.0	32.2	26.7	29.6	31.2	27.3	25.3	22.7	23.4	25.2	28.3	31.4	35.7	44.6	39.4	61.4
16-Apr	46.1	46.7	49.0	56.0	74.7	89.1	93.0	93.6	92.9	87.7	84.2	80.0	76.8	71.7	67.3	57.3	50.4	42.1	35.2	36.1	41.6	46.7	54.6	69.8	64.3	93.6
17-Apr	79.9	78.2	68.2	70.6	72.9	75.9	79.9	77.5	74.4	71.8	67.4	65.8	60.3	54.6	50.3	47.1	45.2	44.7	46.8	57.7	60.8	60.0	63.9	69.7	64.3	79.9
18-Apr	71.3	70.9	73.0	76.1	76.4	76.3	74.5	70.1	65.6	55.6	47.8	43.1	38.7	33.2	27.6	26.5	24.4	25.6	25.8	25.5	26.3	26.5	27.6	29.0	47.4	76.4
19-Apr	32.4	36.6	40.4	41.4	42.5	40.1	38.8	40.6	43.4	44.7	43.7	35.3	35.1	34.6	30.0	23.3	26.0	27.4	34.2	44.2	60.5	62.1	65.1	68.8	41.3	68.8
20-Apr	80.5	89.1	92.7	91.4	90.7	86.9	95.9	93.5	86.8	73.8	63.1	56.4	52.3	50.4	46.9	46.2	44.0	43.5	43.4	47.9	54.1	54.4	52.4	47.4	66.0	95.9
21-Apr	44.0	47.5	54.4	65.5	71.3	73.8	70.8	58.7	48.3	41.7	39.1	35.5	31.2	29.4	27.8	27.0	29.8	29.5	27.8	37.1	53.2	58.8	54.6	58.6	46.5	73.8
22-Apr	64.7	67.5	75.3	79.3	84.3	94.8	96.6	97.2	96.2	92.1	85.0	66.9	53.7	43.0	37.3	31.2	30.6	34.4	36.1	39.6	48.1	51.4	48.7	50.1	62.7	97.2
23-Apr	51.7	57.9	71.0	70.5	72.5	72.8	68.2	54.3	45.6	42.9	35.7	31.8	30.7	35.4	44.1	39.9	47.4	45.0	41.2	53.5	65.5	77.0	80.0	84.1	55.0	84.1
24-Apr	87.0	88.3	90.3	89.3	90.1	90.6	84.9	66.1	55.9	45.3	35.4	30.8	32.0	30.5	27.4	27.1	26.0	25.2	25.4	28.5	35.4	33.8	35.3	36.2	50.7	90.6
25-Apr	37.7	39.2	41.0	41.5	42.8	44.0	42.6	37.3	33.1	29.3	27.1	24.6	23.6	19.6	18.5	17.9	17.5	17.3	18.1	23.7	31.9	27.6	26.5	30.1	29.7	44.0
26-Apr	33.0	35.9	38.3	39.0	43.6	44.9	46.0	42.6	35.0	26.0	20.8	19.7	21.2	22.0	24.8	29.1	35.1	40.7	41.4	43.6	51.0	54.1	53.7	57.2	37.4	57.2
27-Apr	61.5	64.8	68.8	70.1	72.2	70.9	65.3	58.4	51.0	45.5	42.7	41.0	38.9	37.1	33.3	30.2	29.2	28.3	27.6	29.6	47.5	57.6	62.0	66.0	50.0	72.2
28-Apr	65.5	47.2	46.9	47.0	48.4	54.5	52.2	47.0	40.7	36.2	32.2	29.9	27.2	24.7	24.8	23.1	23.3	25.9	29.8	36.9	40.3	45.9	56.8	54.9	40.1	65.5
29-Apr	58.9	61.9	61.5	61.2	63.2	64.5	59.2	51.9	47.0	44.6	43.6	43.9	46.7	48.9	52.6	53.1	49.8	49.1	58.5	59.2	59.7	68.3	70.5	80.6	56.6	80.6
30-Apr	83.1	80.9	79.9	81.3	81.9	82.7	76.6	67.3	67.8	65.7	55.0	51.5	65.5	54.5	40.5	38.9	50.1	57.8	80.5	85.5	92.3	95.8	96.8	97.1	72.0	97.1
Diurnal Average																										
Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Blackrod - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Blackrod - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	10	1.39	1.39
20 - 40	220	30.56	31.94
40 - 60	237	32.92	64.86
60 - 80	153	21.25	86.11
80 - 100	100	13.89	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

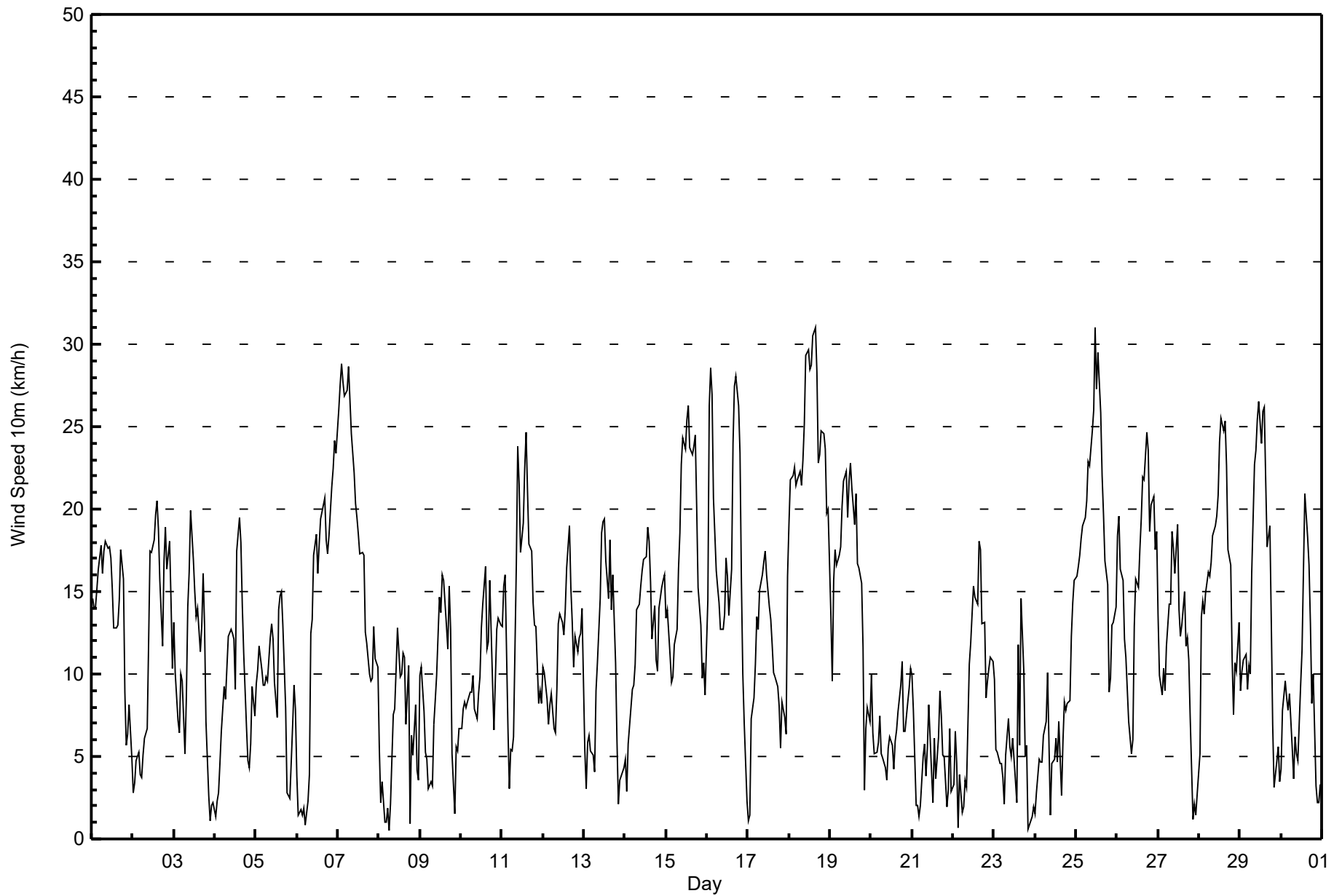
Blackrod - April 2025

Maximum Speed: 31 km/h on Apr 18 16:00														Maximum Daily Speed Average: 24.3 km/h on Apr 18														Hours in Service: 720			
Minimum Speed Value: 0 km/h on Apr 8 07:00														Minimum Daily Speed Average: 0.8 km/h on Apr 21														Hours of Data: 720			
Maximum Diurnal Speed Average: 9.8 km/h at hour 15														Minimum Diurnal Speed Average: 1.7 km/h at hour 20														Hours of Missing Data: 0			
Monthly Average Velocity: 4.3 km/h 236.2 deg														Percentiles: P ₁ = 1 P ₁₀ = 4 Q ₁ = 7 Median = 12 Q ₃ = 17 P ₉₀ = 22 P ₉₉ = 29														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-Apr	SSE15	S14	SSE14	SSE15	SSE16	SSE18	S16	S17	S18	S18	S17	S15	SSW13	S13	WNW13	NW14	NW18	NW16	NW9	N6	N6	N8	NW5		SSW7.2	S18					
2-Apr	S3	SSE3	SSE5	S5	S4	SSE4	SSE5	SSW6	W7	WNW12	WNW17	WNW17	WNW18	WNW20	NW20	NW19	NW16	NW12	NNW17	N19	N16	N18	N15	NNW10	NW8.4	NW20					
3-Apr	NNW13	NNW10	NNW7	NNW6	N10	NNE10	N5	NNW9	NNW14	NNW16	NNW20	NW17	NNW15	NW13	NW14	NNW11	NNW13	N16	NNW13	N7	NE3	ESE1	SSE2	SSE2	NNW9.5	NNW20					
4-Apr	SE1	SSE2	SSE3	SSE5	SSE7	S9	S9	S10	S12	SSW13	SSW12	SSW12	WSW9	WNW17	NW19	NW18	NNW14	N11	NE7	E5	ESE4	SSE6	SSE9	SSE7	SW2.9	NW19					
5-Apr	S9	S10	S12	S10	S9	S9	S10	SSW10	S12	S13	S12	SSW9	W7	NW14	NNW15	NW15	NNW13	N8	NE3	ESE3	SE2	SE7	ESE9	ESE8	SSW3.4	NW15					
6-Apr	NW4	SE1	ESE2	SSE1	ESE2	ESE1	ENE2	SSW4	S12	S13	S17	S19	S16	S18	S19	S20	S21	S18	S17	S18	S21	S22	S24	S23	S12.7	S24					
7-Apr	S26	SSE28	S29	S28	S27	S27	S29	S27	S25	S22	S20	S20	S19	SSW17	SSW17	SSW17	SSW13	S12	S10	S10	S10	S13	S11	SSE10	S19.1	S29					
8-Apr	S6	ESE2	S3	SE1	SE1	NE2	SSE0	W2	NW8	NW8	NW10	NW13	N10	N10	NW11	NW11	WNW7	N11	N1	ENE6	S5	S8	SSE4	SSE4	NW2.5	NW13					
9-Apr	S10	S10	SSE8	SSE5	SSE5	SSE3	SSE3	S3	NNW7	NW8	WNW10	NW15	NW14	WNW16	WNW16	WNW13	WNW11	WNW15	WNW13	WNW5	SSE2	SSE6	SSE5	SSE7	W4.5	WNW16					
10-Apr	SSE7	SSE8	S8	S8	S8	S9	S9	S10	SW8	SSW7	SW9	WSW10	WSW13	SSW14	SSW17	SW12	SW12	S16	S10	SE7	SE10	SE13	SE13	SE13	S8.6	SSW17					
11-Apr	SE13	SE15	SSE16	SSW7	S3	S5	S5	SW6	WNW17	WNW24	WNW22	WNW17	WSW19	W22	W25	W21	W18	W17	W14	W13	W13	SW8	SW9	SW8	WSW10.1	W25					
12-Apr	WSW10	W10	WSW8	SSW7	SSW8	S9	S7	SW6	W9	W13	WNW14	WNW13	WNW12	WNW14	W16	WNW19	WNW15	NW13	NW10	WNW12	WNW11	WNW12	NW12	NW14	W9.7	WNW19					
13-Apr	WNW5	SSE3	S6	S6	S5	S5	WSW4	W9	WNW11	NW15	WNW19	WNW19	NW19	NNW17	WNW15	WNW18	NW14	NNW16	WNW11	W6	SW2	SE4	SE4	SSE4	WNW6.8	NW19					
14-Apr	SSE5	SE3	SSE6	S8	S9	S9	S11	S14	S14	S15	SSW16	SW17	SSW17	SW19	SSW18	SSW16	SSW12	SSW14	S11	S10	SSE14	SSE15	SSE16	SSE16	S12.0	SW19					
15-Apr	S13	S14	S11	SSE9	S10	S12	SSW13	WSW16	SW19	W23	WNW24	WNW24	WNW25	WNW26	W24	W23	WNW24	WNW25	W20	W15	W13	W10	WNW11	W9	W13.3	WNW26					
16-Apr	WNW14	WNW26	WNW29	NW27	NW21	NW16	WNW15	WNW14	NW13	NW13	NW14	NW17	NW16	NW14	NW16	NNW24	NNW27	N28	NNW26	NNW23	NNW16	NW10	N7	NNE2	NW16.9	WNW29					
17-Apr	SE1	N1	N7	N9	N11	N13	N13	N15	N16	NNW17	N17	N16	N14	NNW13	NNW12	N10	NNE10	NNE9	NNE8	ENE6	E8	ESE7	SSW6	S16	N7.6	N17					
18-Apr	S19	S22	S22	S23	S21	S22	S22	S21	S23	S25	S29	S30	S29	S29	S31	S31	S28	S23	S23	S25	S25	S24	S20	S20	S24.3	S31					
19-Apr	S14	WSW10	WNW16	WNW18	W17	W17	W18	WNW20	WNW22	WNW22	WNW20	WNW22	NW23	WNW21	WNW19	WNW21	WNW17	W16	WNW15	NW12	SSW3	W7	WNW8	WNW7	WNW14.9	NW23					
20-Apr	WNW10	NW6	NNW5	NW5	WNW6	NW7	NNW5	NE5	NNE4	NNE4	NNE6	N6	NNE6	NNE4	N6	NNE7	NNE8	NE9	NE11	ENE7	E6	ESE8	ESE9	ESE10	NNE4.0	NE11					
21-Apr	ESE10	ESE8	WNW2	N2	ENE1	E2	NE5	SSW6	SSE4	SE5	E8	E4	NNE2	N6	SSW4	N6	WSW9	SW7	W5	NNW5	SE2	SSE3	WSW7	W3	SSE0.8	ESE10					
22-Apr	S3	NNW7	N5	SE1	S4	SSE2	WNW2	N4	SE3	SSW11	SSW12	SSW14	SSW15	SW15	SW14	SSW18	SW18	SW13	SW13	SSW9	S10	S10	S11	S11	SSW7.4	SSW18					
23-Apr	S10	S5	S5	SSE5	SSE5	SSE4	SSE2	SSW5	W7	W6	W5	NNW6	WNW4	WSW2	SSW12	W6	NW15	NNE10	NE5	E6	SW1	SE1	SE1	SE2	SW1.4	NW15					
24-Apr	SE2	SSE3	S5	SSE5	SSE5	SSE6	S7	SSW10	SSW6	WNW1	NW5	WNW5	WSW6	WNW5	SW7	N3	E6	SSE8	SE8	SSE8	SSE8	SSE12	SSE14	SSE16	S4.4	SSE16					
25-Apr	SSE16	SSE17	SSE17	SSE18	SSE19	SSE20	SSE20	S23	S23	S25	S26	S31	SSW27	SSW29	SW26	SW22	SW20	SW17	SW15	S9	SSE10	SSE13	SSE13	S14	S17.9	S31					
26-Apr	SSE18	SSE20	S16	S16	SSE12	SSE11	S9	SSW7	SSW5	WNW6	NW13	NNW16	NW15	NW18	NW19	NNW22	NNW22	N25	N24	N19	N20	N21	N18	NNE19	NNW5.9	N25					
27-Apr	NNE14	NNE10	NNE9	NNE10	N9	N12	N14	NNW14	NNW19	NNW18	NW16	NW19	NNW14	NNW12	N13	NNW15	NW12	NW12	NNW11	NNW7	E1	E2	E1	S3	NNW9.8	NW19					
28-Apr	S5	SSE13	SSE14	SSE14	SSE15	SSE16	S16	S17	S18	S19	S20	S21	S24	S25	S25	S25	SSW23	SSW18	SSW17	SSW11	S8	S11	S10	S13	S16.2	S25					
29-Apr	SSW9	SSW10	SW11	SW11	SSW9	SSW10	SW10	W16	WNW23	WNW24	WNW25	WNW27	NW24	WNW26	NW26	NW22	NNW18	NNW19	WNW13	NW7	WSW3	SW5	W6	SSE3	WNW11.3	WNW27					
30-Apr	SSE4	S8	S10	S9	S8	S9	S6	SSW4	SSW6	SSW5	W5	W9	WNW11	WNW16	WNW21	WNW18	NW17	NW13	N8	N10	NE3	SSE2	SSE2	ENE3	W3.7	WNW21					
S5.6 S5.6 S5.5 S5.2 S5.1 S5.4 S5.1 SSW6.0 SW6.1 WSW6.7 WSW7.0 W8.3 W8.3 W9.1 W9.8 WNW9.1 WNW8.1 WNW6.2 WNW4.4 WNW1.7 S2.1 S3.8 S3.7 S4.8																									Diurnal Average						
S26 SSE28 S29 S28 S27 S27 S29 S27 S25 S25 S29 S31 S29 SSW29 S31 S31 S28 NNW28 NNW26 S25 S25 S24 S24 S23																									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 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Blackrod - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	139	19.31	19.31
6 - 11	218	30.28	49.58
12 - 19	252	35.00	84.58
20 - 28	100	13.89	98.47
29 - 38	11	1.53	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 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	7	5	7	3	6	7	17	36	18	7	3	3	5	8	4	3	139
6 - 11	22	12	3	4	4	8	4	19	52	20	12	8	14	14	11	11	218
12 - 19	16	2	0	0	0	0	5	27	45	24	12	3	14	37	41	26	252
20 - 28	4	0	0	0	0	0	0	4	41	3	3	0	7	23	7	8	100
29 - 38	0	0	0	0	0	0	0	0	9	1	0	0	0	1	0	0	11
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	49	19	10	7	10	15	26	86	165	55	30	14	40	83	63	48	720

Total Number of Valid Hours: 720

Total Number of Hours: 720



Blackrod





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Blackrod - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 30 18:00																	Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0									
Minimum Value: 1 km/h on Apr 2 05:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 6 P ₉₉ = 8																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	5	4	5	5	3	1	2	2	2	2	5
2-Apr	1	1	1	1	1	1	1	1	3	6	4	5	5	5	5	5	4	4	4	4	4	4	3	2	2	6
3-Apr	3	3	1	1	3	2	1	3	4	5	5	5	5	5	5	5	4	3	3	3	2	2	1	1	5	
4-Apr	1	1	1	1	1	2	2	2	2	2	3	4	4	8	6	5	5	4	2	2	1	2	1	2	8	
5-Apr	3	2	2	2	2	2	2	1	2	2	2	3	4	5	5	4	3	2	2	2	1	3	3	3	5	
6-Apr	2	1	1	1	1	1	2	2	3	3	5	4	4	5	5	4	4	4	4	4	4	4	4	4	5	
7-Apr	5	5	6	5	5	5	5	5	6	5	4	4	4	4	4	4	3	2	3	2	3	2	2	2	6	
8-Apr	1	1	2	1	2	2	1	1	2	3	3	4	3	3	3	2	3	6	3	3	3	2	2	2	6	
9-Apr	1	1	2	1	1	1	1	1	3	2	3	4	4	5	5	5	4	4	4	3	2	1	1	1	5	
10-Apr	1	1	1	1	1	1	1	1	2	3	3	4	4	5	5	4	4	4	3	2	3	4	4	4	5	
11-Apr	4	4	4	5	2	3	2	2	6	7	5	5	6	7	7	7	6	5	5	4	5	2	2	2	7	
12-Apr	3	3	3	2	2	1	1	2	4	3	4	3	4	4	4	5	4	4	3	4	4	4	3	4	5	
13-Apr	3	1	1	1	1	1	3	3	3	4	5	6	7	7	6	6	6	6	4	2	1	1	1	1	7	
14-Apr	1	1	1	1	1	1	2	2	3	3	5	4	4	5	5	5	4	3	2	2	2	2	3	2	5	
15-Apr	2	2	2	4	3	2	3	5	5	7	6	7	8	7	6	7	7	7	6	5	4	3	3	3	8	
16-Apr	5	8	8	8	7	5	4	4	4	4	4	6	5	4	5	8	7	7	6	6	5	3	2	2	8	
17-Apr	1	2	1	2	2	2	2	4	3	4	4	4	4	4	4	4	4	3	2	1	3	3	2	3	4	
18-Apr	3	4	4	4	4	4	4	4	4	5	6	6	6	6	6	6	6	5	5	4	4	4	4	4	6	
19-Apr	4	4	5	5	5	6	6	6	6	6	6	6	6	7	6	6	6	6	5	7	1	3	2	2	7	
20-Apr	3	2	1	1	2	3	1	2	2	2	3	3	2	3	4	5	4	3	3	2	2	3	3	4	5	
21-Apr	4	3	2	1	1	1	1	3	3	3	4	3	3	3	3	2	3	2	2	2	1	1	3	1	4	
22-Apr	1	3	1	2	1	1	1	1	1	2	3	3	4	4	4	6	6	4	4	2	2	2	2	2	6	
23-Apr	2	3	1	1	1	2	1	2	2	3	3	3	3	4	2	2	4	3	2	2	2	2	1	1	4	
24-Apr	1	1	1	1	1	1	1	2	2	2	3	3	4	3	4	4	3	4	3	2	2	2	3	3	4	
25-Apr	3	3	3	3	4	4	4	5	5	5	6	7	7	8	7	6	6	5	5	2	2	1	2	4	8	
26-Apr	3	4	3	3	2	2	2	2	2	3	5	4	5	5	5	5	5	5	5	4	4	5	4	4	5	
27-Apr	4	2	2	2	2	2	3	3	5	5	5	6	5	5	5	5	4	4	3	2	1	1	1	1	6	
28-Apr	3	3	2	2	2	3	3	3	4	4	5	6	6	7	7	6	5	5	4	3	2	4	2	2	7	
29-Apr	3	2	2	2	2	2	2	6	6	6	7	8	7	7	7	5	4	5	5	3	1	2	3	1	8	
30-Apr	1	3	1	1	1	1	1	1	1	1	2	4	5	5	5	5	6	8	4	5	2	2	1	1	8	
Diurnal Maximum																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

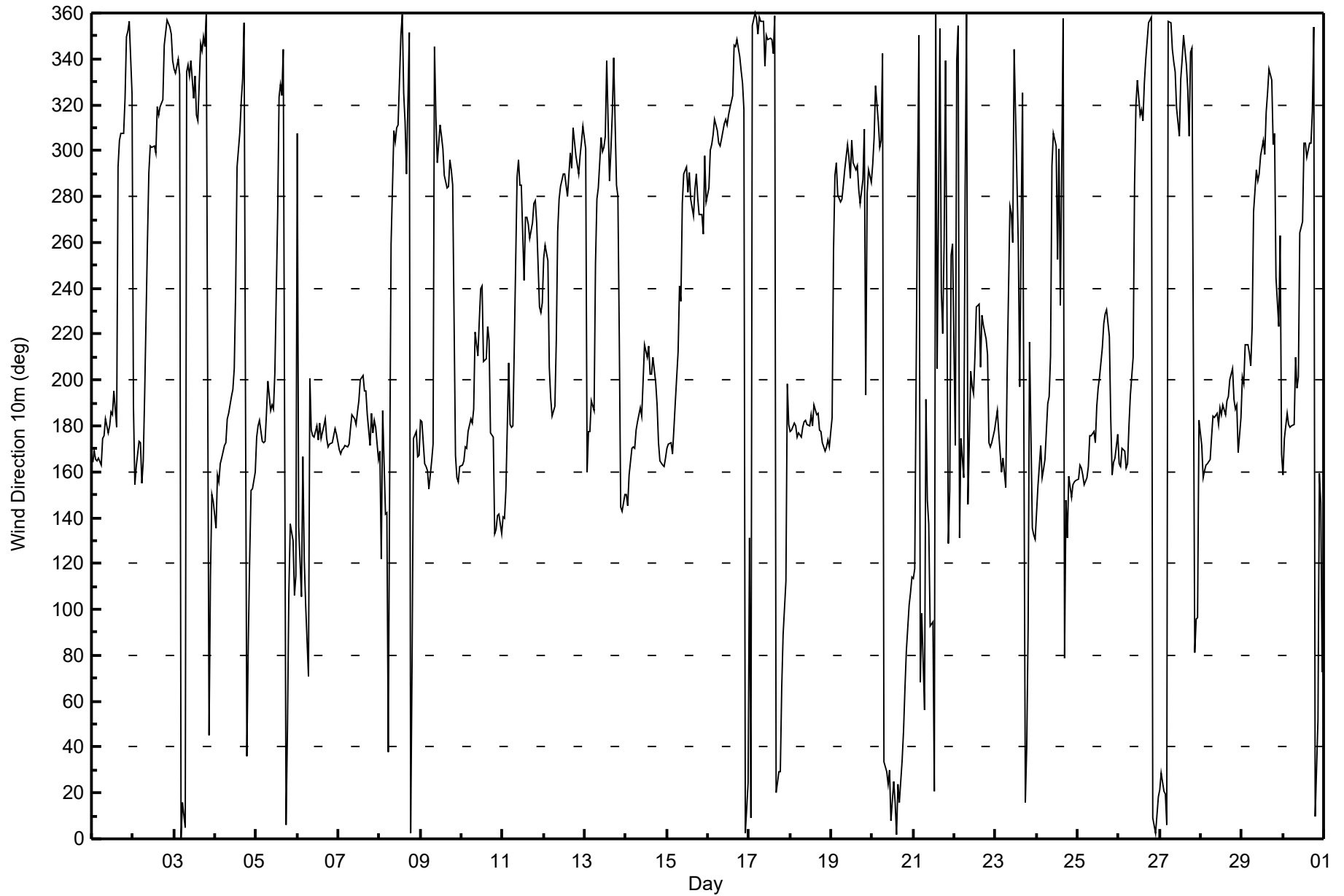
Blackrod - April 2025

Direction of Maximum Speed: 185 deg on Apr 18 16:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 179.0 deg on Apr 18																				Hours of Data:		720			
Direction of Minimum Speed: 158 deg on Apr 8 07:00										Direction of Minimum Daily Speed Average: 0.8 deg on Apr 21										Hours of Missing Data:		0			
Monthly Average Direction: 236.2 deg																				Percent Operational Time:				100.0	
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	164	169	165	165	166	163	175	176	183	177	180	186	185	195	180	293	304	307	308	323	350	352	357	325	193.8
2-Apr	189	154	162	173	173	155	165	194	261	290	302	302	302	299	319	316	319	322	346	352	357	354	351	339	318.2
3-Apr	336	334	340	333	0	16	5	334	337	333	339	323	332	316	313	347	343	350	345	360	45	115	150	147	339.5
4-Apr	136	158	156	163	166	172	173	183	186	193	196	205	239	293	308	322	331	356	36	85	122	152	152	160	215.7
5-Apr	175	180	182	174	173	173	186	199	187	189	187	203	272	323	329	324	344	6	48	107	137	130	106	114	191.7
6-Apr	308	136	106	167	121	102	71	201	178	175	175	180	174	181	175	180	183	175	171	172	172	176	179	176	175.9
7-Apr	170	168	170	170	171	171	172	179	185	183	181	186	191	200	202	195	195	185	171	186	177	183	179	166	179.3
8-Apr	169	122	187	141	142	38	158	259	309	304	310	311	350	359	325	312	290	352	3	78	174	178	167	167	315.7
9-Apr	183	182	163	162	161	153	165	172	345	315	295	311	306	301	289	284	284	296	291	285	167	157	156	162	271.2
10-Apr	163	165	171	170	177	183	181	187	221	210	226	240	241	208	209	223	217	177	175	133	135	141	142	133	185.6
11-Apr	140	140	152	208	181	179	180	215	288	296	285	285	244	271	271	268	262	268	277	278	268	232	229	234	256.0
12-Apr	253	259	252	206	192	184	189	217	265	279	285	290	290	285	280	299	292	310	304	298	290	298	304	310	279.4
13-Apr	301	160	178	178	191	187	251	279	284	306	299	301	306	339	287	300	316	341	285	280	218	145	143	150	293.7
14-Apr	150	145	158	170	171	170	178	182	188	184	200	215	210	215	203	203	210	199	189	173	165	163	162	166	186.9
15-Apr	171	172	173	168	179	190	213	241	234	277	290	293	282	290	279	272	283	290	280	272	272	264	298	277	263.4
16-Apr	284	300	302	307	314	309	303	302	305	312	314	311	315	318	324	346	345	349	341	335	330	318	2	25	320.6
17-Apr	131	9	355	360	357	351	358	356	356	337	350	349	349	348	342	359	20	30	29	66	89	112	198	181	1.0
18-Apr	178	178	181	180	175	177	175	179	182	183	180	180	185	180	189	185	185	178	177	173	169	171	174	171	179.0
19-Apr	184	256	289	295	281	277	279	285	292	303	297	288	305	295	292	294	283	277	288	309	193	281	291	286	287.0
20-Apr	294	306	328	312	301	305	342	34	29	24	30	8	25	16	2	24	16	34	47	65	82	102	107	114	22.3
21-Apr	113	118	286	350	68	98	56	192	148	137	93	95	21	359	205	353	238	220	260	340	129	152	255	259	148.1
22-Apr	171	339	354	131	175	158	284	359	146	204	197	194	211	232	233	205	228	224	218	211	173	171	173	178	206.9
23-Apr	182	187	177	160	166	160	153	203	276	273	260	344	287	257	197	267	325	16	40	93	217	136	132	130	229.1
24-Apr	142	154	171	158	161	165	190	193	210	293	307	302	253	301	233	357	79	148	131	158	149	154	156	156	170.3
25-Apr	157	163	162	159	155	157	163	176	175	178	173	188	197	201	214	225	229	231	219	183	159	164	166	177	183.7
26-Apr	164	163	170	169	162	164	180	193	210	285	320	330	315	318	313	330	340	355	357	358	9	3	10	18	340.2
27-Apr	21	29	21	20	6	356	356	344	339	334	319	306	331	340	350	338	326	306	343	345	81	96	97	182	344.1
28-Apr	172	157	160	163	164	165	175	184	184	185	181	188	185	189	185	191	193	200	205	192	187	189	169	184	182.6
29-Apr	202	198	216	215	212	206	223	274	292	287	290	298	305	298	316	325	336	331	303	307	244	223	263	168	286.0
30-Apr	159	174	185	181	180	180	181	210	197	201	264	269	303	303	297	303	304	317	354	10	52	159	147	72	272.6
178.2 179.1 186.5 186.3 181.4 181.8 191.2 213.8 235.5 249.7 256.3 262.3 264.1 271.9 266.9 281.3 285.3 297.3 291.5 293.1 174.1 172.8 173.2 171.0																									
Diurnal Average																									
All monthly, daily, and diurnal averages have been calculated using vector methods																									



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Blackrod - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Blackrod - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 98 deg on Apr 24 10:00																		Hours in Service: 720							
Minimum Value: 7 deg on Apr 25 22:00																		Hours of Data: 720							
Percentiles: P ₁ = 8 P ₁₀ = 11 Q ₁ = 13 Median = 19 Q ₃ = 27 P ₉₀ = 48 P ₉₉ = 90																		Hours of Missing Data: 0							
																		Hours of Calibration: 0							
																		Percent Operational Time: 100.0							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	13	13	14	14	12	13	14	13	12	12	12	10	14	16	11	40	16	17	15	15	23	14	14	19	40
2-Apr	48	13	9	14	15	10	8	15	39	30	19	22	21	18	19	19	25	25	18	15	16	13	13	12	48
3-Apr	12	12	11	12	17	17	30	27	18	20	20	27	29	30	24	28	28	18	15	20	58	33	40	25	58
4-Apr	13	15	13	7	8	10	14	10	9	13	18	27	40	29	20	20	25	24	22	25	19	20	11	11	40
5-Apr	17	12	10	10	14	11	11	17	10	12	14	35	47	31	24	23	19	23	34	43	35	27	27	49	49
6-Apr	60	47	66	60	35	91	61	53	19	18	17	16	20	18	18	18	16	15	13	11	12	12	12	11	91
7-Apr	11	12	13	12	12	12	13	14	12	14	16	19	16	20	17	16	14	11	18	9	8	10	9	10	20
8-Apr	14	56	36	80	76	80	93	58	17	20	18	16	28	18	24	17	24	28	97	40	54	21	41	75	97
9-Apr	9	10	11	25	19	45	31	32	42	23	20	22	27	24	25	22	34	15	15	34	92	9	8	8	92
10-Apr	8	9	12	8	9	10	8	9	27	32	29	40	34	28	24	36	24	17	15	17	19	19	24	22	40
11-Apr	23	22	17	54	72	34	36	39	21	16	18	21	24	24	20	19	21	19	17	18	19	19	16	21	72
12-Apr	21	23	26	24	16	9	15	24	29	22	19	19	24	21	19	20	22	21	17	15	17	16	15	16	29
13-Apr	35	21	13	9	17	19	50	20	18	20	20	25	18	31	26	22	32	35	23	31	62	9	10	10	62
14-Apr	24	30	9	12	9	7	9	9	12	15	20	22	20	18	18	21	20	14	13	9	7	8	12	9	30
15-Apr	10	12	16	17	18	12	20	20	19	26	18	17	21	17	17	19	17	17	17	16	16	20	21	20	26
16-Apr	18	17	17	18	16	16	17	15	16	16	16	17	17	16	19	17	19	17	14	14	14	13	20	55	55
17-Apr	48	89	15	12	13	13	13	17	18	19	17	21	23	27	31	38	32	28	18	19	21	37	40	12	89
18-Apr	11	12	11	11	11	11	12	12	12	12	12	13	14	14	14	13	12	12	12	12	10	12	12	13	14
19-Apr	16	33	27	15	19	19	17	16	17	17	22	19	20	20	22	18	24	24	17	23	59	28	16	20	59
20-Apr	14	20	22	23	20	21	24	26	36	51	41	57	55	67	54	73	52	26	19	16	18	26	28	27	73
21-Apr	29	29	82	50	79	50	20	60	79	66	49	77	81	39	72	36	27	25	40	35	49	29	50	45	82
22-Apr	23	41	33	96	25	52	62	36	37	22	19	22	21	29	21	20	21	23	18	14	10	9	10	11	96
23-Apr	10	25	10	11	13	22	65	24	29	52	61	53	75	90	15	47	26	27	37	28	91	77	72	25	91
24-Apr	55	13	12	13	9	8	12	10	45	98	79	72	76	71	52	89	57	42	43	14	13	12	13	12	98
25-Apr	16	12	11	12	13	13	12	12	14	17	17	17	20	17	18	18	20	19	17	17	9	7	10	15	20
26-Apr	11	10	13	18	11	26	17	12	36	49	29	23	22	23	21	23	24	17	17	15	15	15	15	13	49
27-Apr	14	12	9	10	15	12	14	21	19	23	27	22	34	38	36	30	37	25	25	20	53	27	65	31	65
28-Apr	28	10	9	9	9	9	11	9	13	17	20	19	18	21	19	15	13	16	21	18	20	16	13	12	28
29-Apr	28	11	14	13	13	11	15	23	17	17	18	17	21	19	22	20	18	17	17	29	52	31	43	27	52
30-Apr	12	14	7	10	8	9	12	37	12	19	50	36	23	23	20	20	23	37	47	38	39	36	31	36	50
Diurnal Maximum																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS33 MONDAY CREEK APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
APRIL 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	12.3	0	2	0
H2S (ppb) Average	686	34	34	100	0.5	0	0.2	0
NO2 (ppb) Average	664	38	56	97.5	20.4	0	5.1	-
NO (ppb) Average	664	38	56	97.5	31.1	-	4.5	-
NOX (ppb) Average	664	38	56	97.5	42.4	-	8.7	-
Temperature 2 m (C) Average	720	0	0	100	20.8	-	13.1	-
Relative Humidity (%) Average	720	0	0	100	95.1	-	76.6	-
Wind Speed 10 m (km/h) Average	719	0	1	99.86	33	-	20	-
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 - MONDAY CREEK (AMS33)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	0.48	1.1	-	0	0	0.1	0.2	0.4	1	12.3
H2S (ppb) Average	686	0.07	0.1	-	0	0	0	0.1	0.1	0.2	0.5
NO2 (ppb) Average	664	1.93	2.4	-	0.2	0.4	0.6	1.1	2.2	4.5	20.4
NO (ppb) Average	664	0.61	2.3	-	0	0	0	0.1	0.2	1.1	31.1
NOX (ppb) Average	664	2.54	4.2	-	0.2	0.4	0.6	1.2	2.4	5.7	42.4
Temperature 2 m (C) Average	720	4.88	6.7	-	-16.9	-3.7	0.4	5.2	9.7	13.2	20.8
Relative Humidity (%) Average	720	51.52	20.7	-	16.1	25	32.9	49.2	70	80.9	95.1
Wind Speed 10 m (km/h) Average	719	11.4	7	-	0	3	6	11	16	21	33
Wind Direction 10 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2	02 Apr 2025 15:00	03 Apr 2025 08:00	18	Maintenance - stabilization post maintenance
Wind Speed, Wind Direction	05 Apr 2025 06:00	05 Apr 2025 06:00	1	Flat line in sensor output signal - Sensor frozen



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

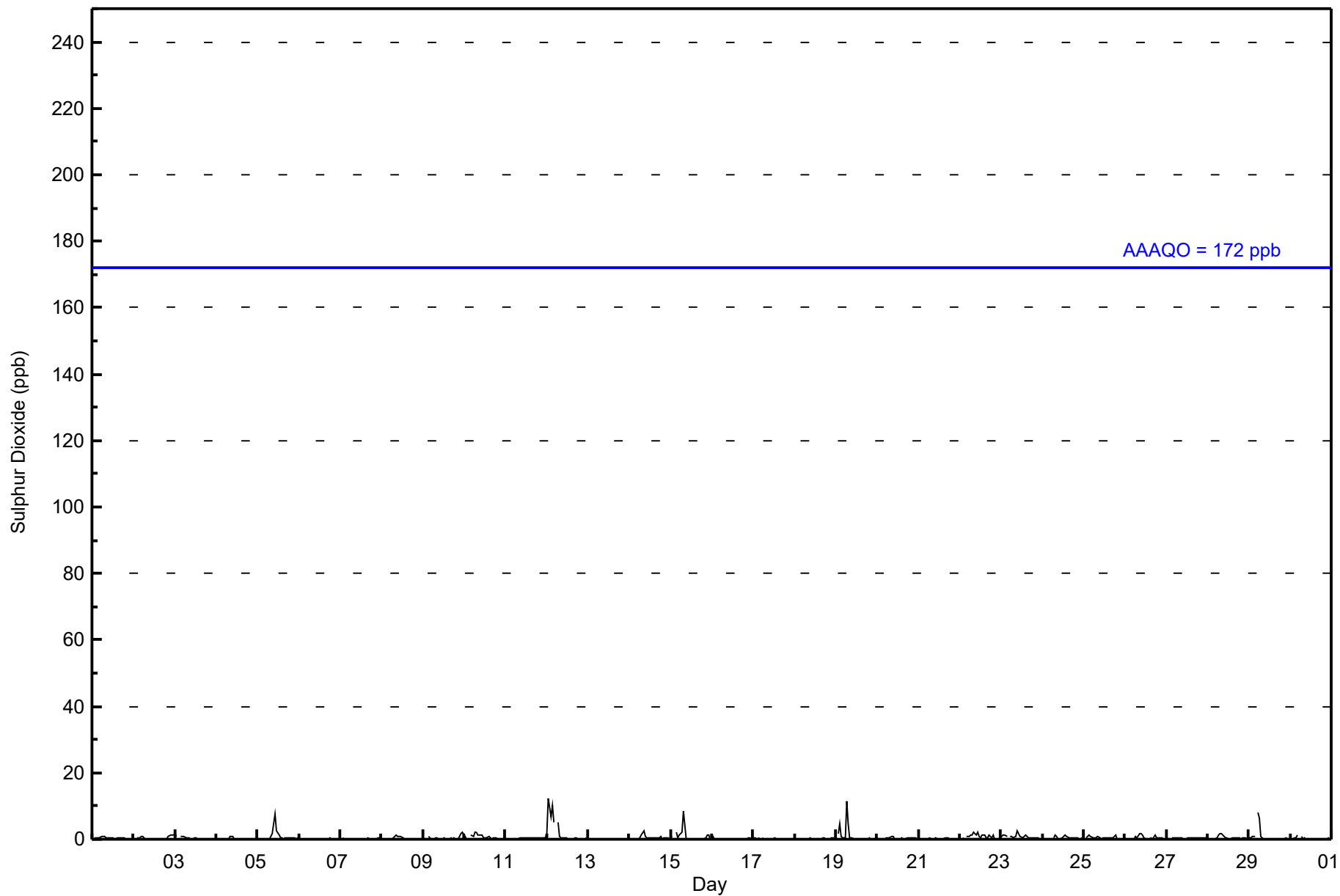
Monday Creek - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720								
Maximum Value: 12.3 ppb on Apr 12 02:00																		Maximum Daily Average: 2.0 ppb on Apr 12		Hours of Data: 687						
Minimum Value: 0.0 ppb on Apr 2 10:00																		Minimum Daily Average: 0.1 ppb on Apr 13		Hours of Missing Data: 33						
Maximum Diurnal Average: 1.2 ppb at hour 7																		Minimum Diurnal Average: 0.2 ppb at hour 17		Hours of Calibration: 33						
Monthly Average: 0.48 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.0 P ₉₉ = 6.3		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-Apr	Z	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.5	0.4	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.4	0.8
2-Apr	0.1	Z	0.2	0.2	0.7	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	C	C	C	0.0	0.0	0.0	0.1	0.9	1.4	1.2	1.1	0.4	1.4
3-Apr	1.5	0.9	Z	0.8	0.7	0.9	0.6	0.4	0.4	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	1.5
4-Apr	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.1	1.0	0.7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	1.0
5-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.8	4.9	7.7	2.5	1.3	0.5	0.2	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.3	0.9	7.7
6-Apr	0.2	0.1	0.2	0.1	0.2	Z	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.1	0.3
7-Apr	Z	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.5	0.1	0.5
8-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.2	1.1	0.8	0.9	1.0	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.1
9-Apr	0.0	0.0	Z	0.8	0.4	0.2	0.2	0.3	0.4	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	0.9	1.9	2.1	0.4	2.1
10-Apr	0.6	0.2	0.2	Z	1.3	0.8	2.0	2.2	1.2	1.4	1.2	0.5	0.3	0.3	0.7	0.4	0.1	0.6	0.5	0.2	0.2	0.1	0.2	0.2	0.7	2.2
11-Apr	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.5	0.4	0.2	0.2	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
12-Apr	1.7	12.3	6.9	10.0	5.2	Z	5.0	0.8	0.3	0.5	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.2	0.2	2.0	12.3
13-Apr	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.2
14-Apr	0.1	Z	0.2	0.2	0.2	0.0	0.3	1.4	2.6	0.9	0.5	0.3	0.4	0.3	0.6	0.4	0.4	0.5	0.7	0.2	0.4	0.3	0.3	0.1	0.5	2.6
15-Apr	0.8	1.0	Z	2.3	0.6	1.1	2.3	8.6	4.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3	1.5	1.2	0.2	1.1	8.6
16-Apr	0.7	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.7
17-Apr	0.3	0.3	0.1	0.3	Z	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.0	0.0	0.1	0.3
18-Apr	0.0	0.0	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.1	0.1	0.4	0.2	0.3	0.2	0.5
19-Apr	Z	1.5	4.8	0.8	0.5	0.5	11.3	4.6	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.3	1.1	11.3
20-Apr	0.4	Z	0.1	0.0	0.0	0.3	0.3	0.5	0.8	0.7	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.5	0.4	0.3	0.5	0.6	0.3	0.2	0.3	0.8
21-Apr	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.0	0.2	0.2	0.5	0.2	0.2	0.1	0.0	0.2	0.2	0.1	0.2	0.5
22-Apr	0.2	0.2	0.5	Z	0.7	0.8	1.2	1.2	2.1	1.5	2.0	0.7	0.6	1.1	1.4	0.4	0.3	1.2	0.6	1.2	0.1	0.1	0.0	0.3	0.8	2.1
23-Apr	1.0	1.5	1.1	0.9	Z	0.9	0.7	0.5	1.0	2.4	1.7	0.7	0.3	0.9	1.1	1.0	0.5	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.8	2.4
24-Apr	0.1	0.1	0.1	0.1	0.0	Z	0.2	1.3	0.9	0.2	0.2	0.4	0.9	1.1	1.0	0.6	0.2	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.4	1.3
25-Apr	Z	0.5	0.8	1.1	0.8	0.5	0.4	0.4	1.0	0.3	0.2	0.3	0.3	0.3	0.3	0.5	0.3	0.5	1.3	0.2	0.0	0.0	0.0	0.1	0.4	1.3
26-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.6	0.6	1.7	1.8	1.4	0.4	0.1	0.1	0.1	0.2	0.1	1.1	0.5	0.4	0.4	0.4	0.2	0.1	0.5	1.8
27-Apr	0.1	0.2	Z	0.4	0.6	0.4	0.5	0.6	0.3	0.3	0.2	0.1	0.3	0.4	0.5	0.3	0.3	0.2	0.2	0.6	0.6	0.6	0.2	0.2	0.4	0.6
28-Apr	0.2	0.1	0.1	Z	0.1	0.3	1.2	1.8	1.6	1.0	0.6	0.3	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.1	0.3	0.5	0.6	0.2	0.5	1.8
29-Apr	0.5	0.4	0.8	0.7	Z	8.1	6.2	0.8	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.0	0.8	8.1
30-Apr	0.0	0.1	0.3	0.4	1.5	Z	0.7	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.2	1.5
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Monday Creek - April 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 (SO₂) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	34	26	12	25	20	27	29	57	43	72	30	46	75	80	70	38	684
11 - 20	0	0	0	0	0	0	0	0	0	0	0	2	0	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	34	26	12	25	20	27	29	57	43	72	30	48	75	80	70	38	686

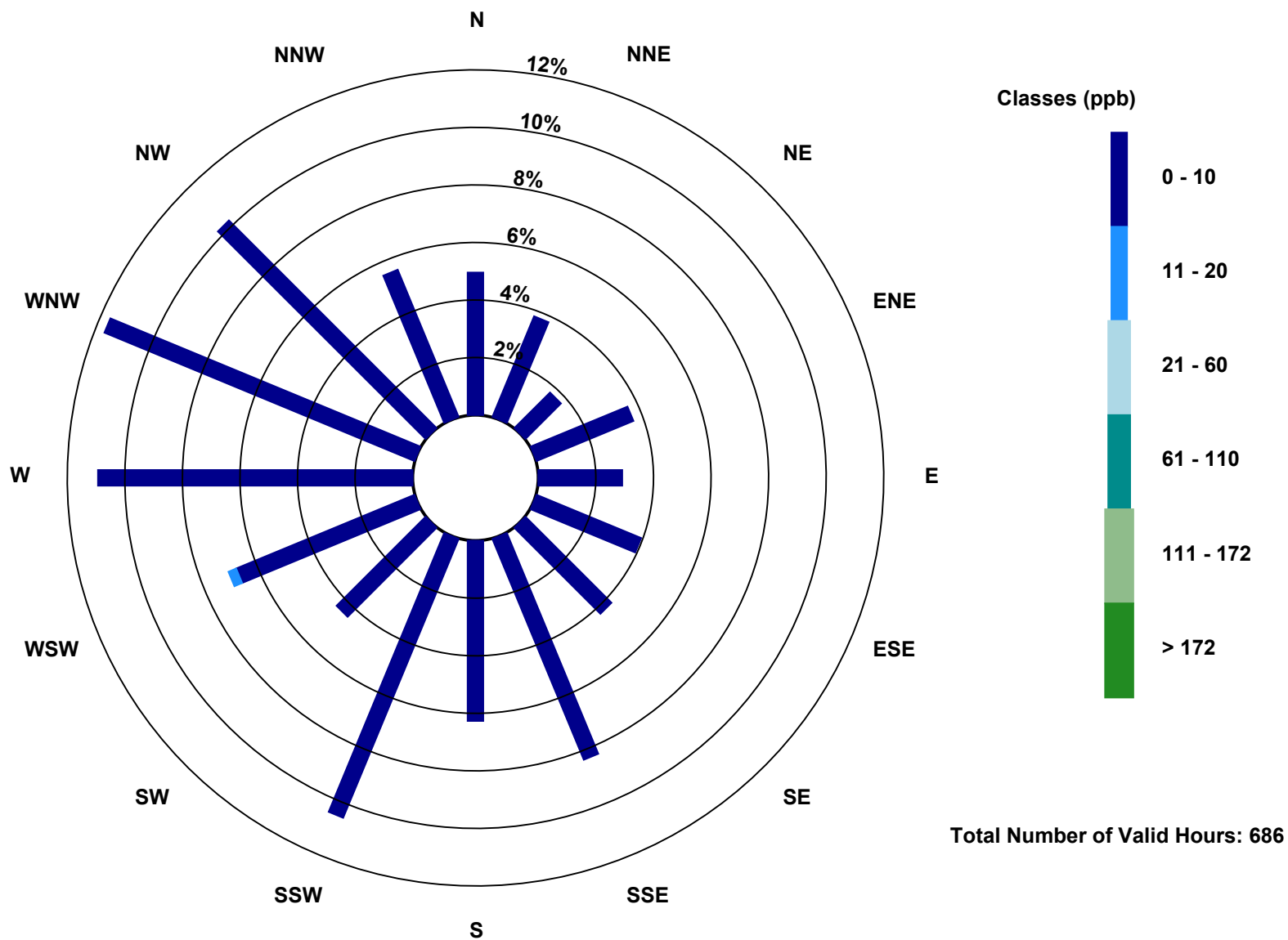
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

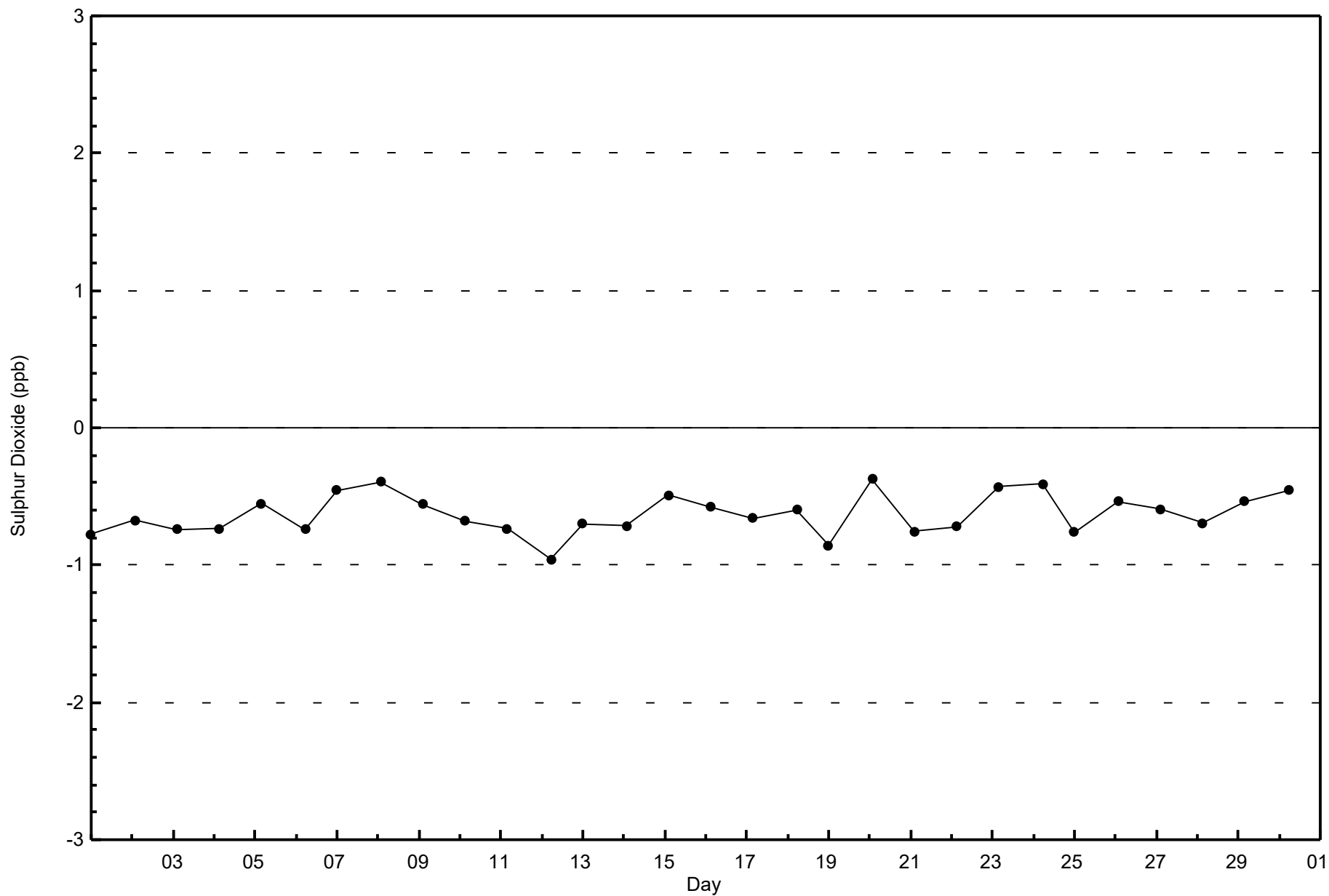
Sulphur Dioxide (SO₂) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

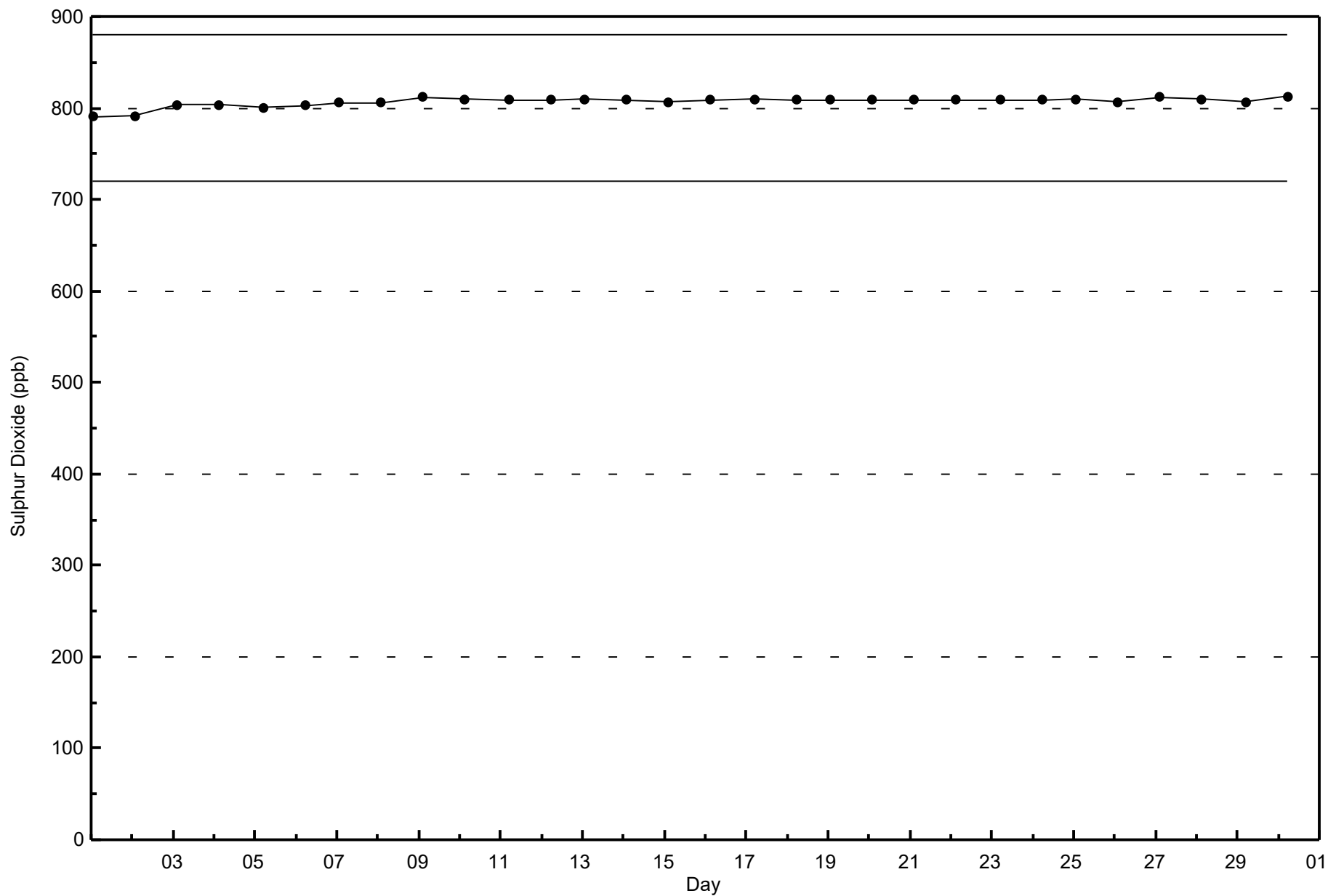
Sulphur Dioxide (SO₂) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

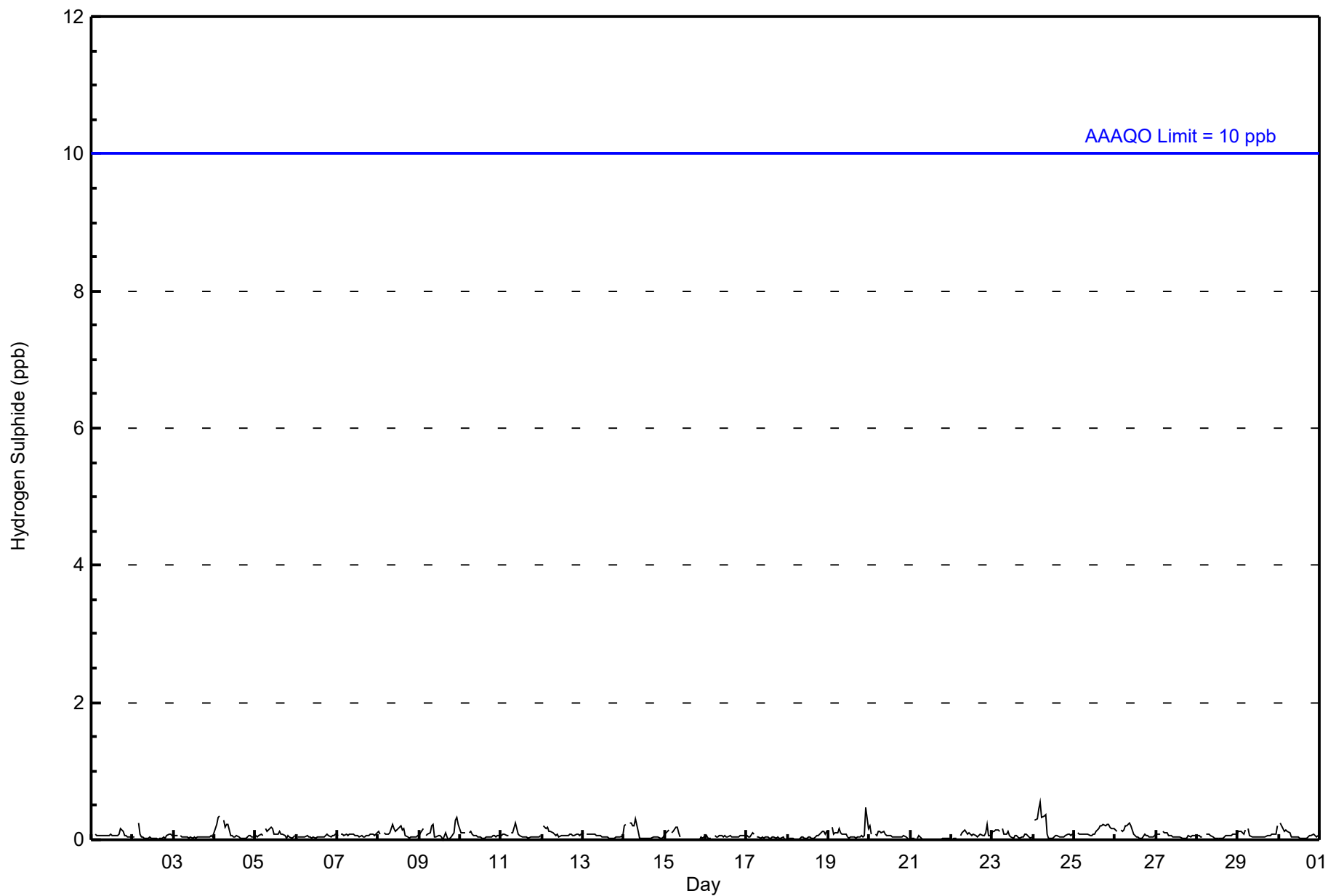
Monday Creek - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720						
Maximum Value: 0.5 ppb on Apr 24 05:00																				Maximum Daily Average: 0.2 ppb on Apr 24		Hours of Data: 686				
Minimum Value: 0.0 ppb on Apr 15 15:00																				Minimum Daily Average: 0.0 ppb on Apr 21		Hours of Missing Data: 34				
Maximum Diurnal Average: 0.1 ppb at hour 4																				Minimum Diurnal Average: 0.0 ppb at hour 17		Hours of Calibration: 34				
Monthly Average: 0.07 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.3		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-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
2-Apr	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2
3-Apr	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
4-Apr	0.2	0.2	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.3
5-Apr	0.1	0.0	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2
6-Apr	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	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1
7-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
9-Apr	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.1	0.3
10-Apr	0.1	0.1	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	0.1	0.1	0.0	0.1	0.1	0.1	0.1
11-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
12-Apr	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
14-Apr	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
15-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.1	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	0.2
16-Apr	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1
17-Apr	0.1	0.0	0.0	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
19-Apr	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5	0.2	0.1	0.5
20-Apr	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2
21-Apr	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Apr	0.0	0.0	0.0	0.0	Z	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	0.2	0.1	0.1	0.1	0.2
23-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2
24-Apr	Z	0.3	0.3	0.5	0.5	0.3	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.5
25-Apr	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
26-Apr	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	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2
27-Apr	0.1	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	0.1	0.0	0.1	0.1	0.1	0.1	0.1
28-Apr	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
29-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
30-Apr	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - April 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 (H₂S) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	33	27	12	24	20	27	31	55	46	73	31	46	72	79	72	38	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	33	27	12	24	20	27	31	55	46	73	31	46	72	79	72	38	686

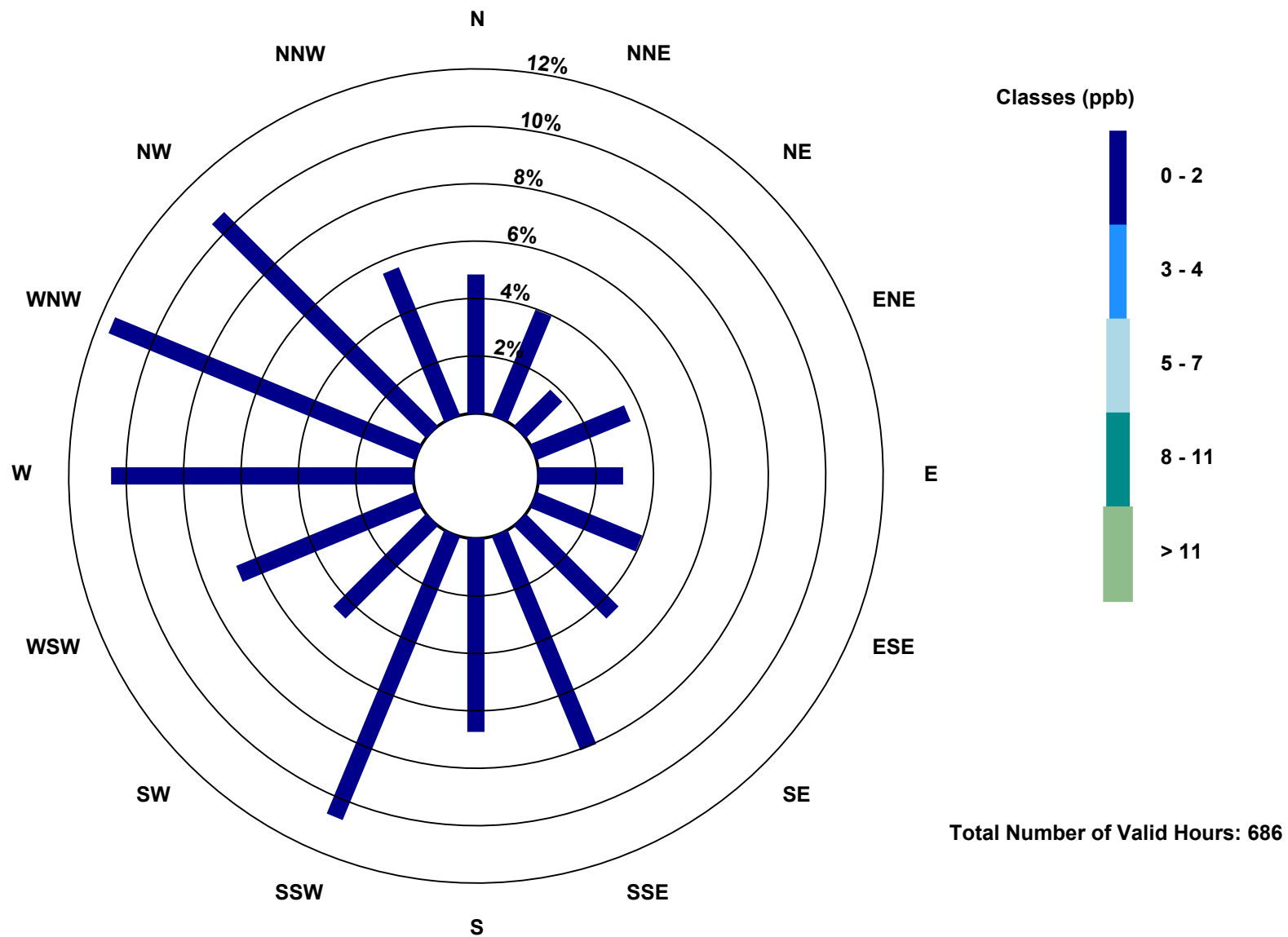
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

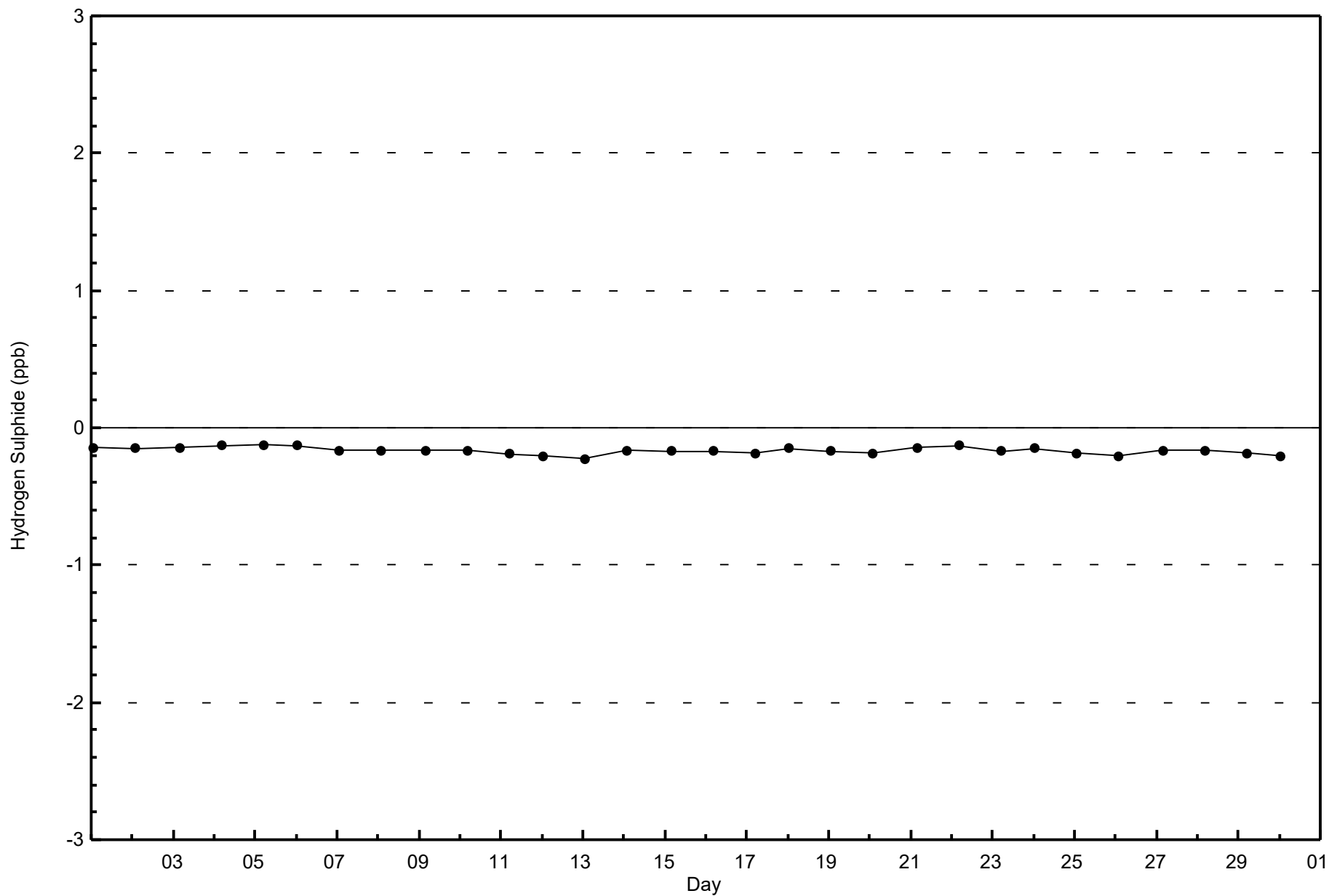
Hydrogen Sulphide (H₂S) - ppb
Monday Creek

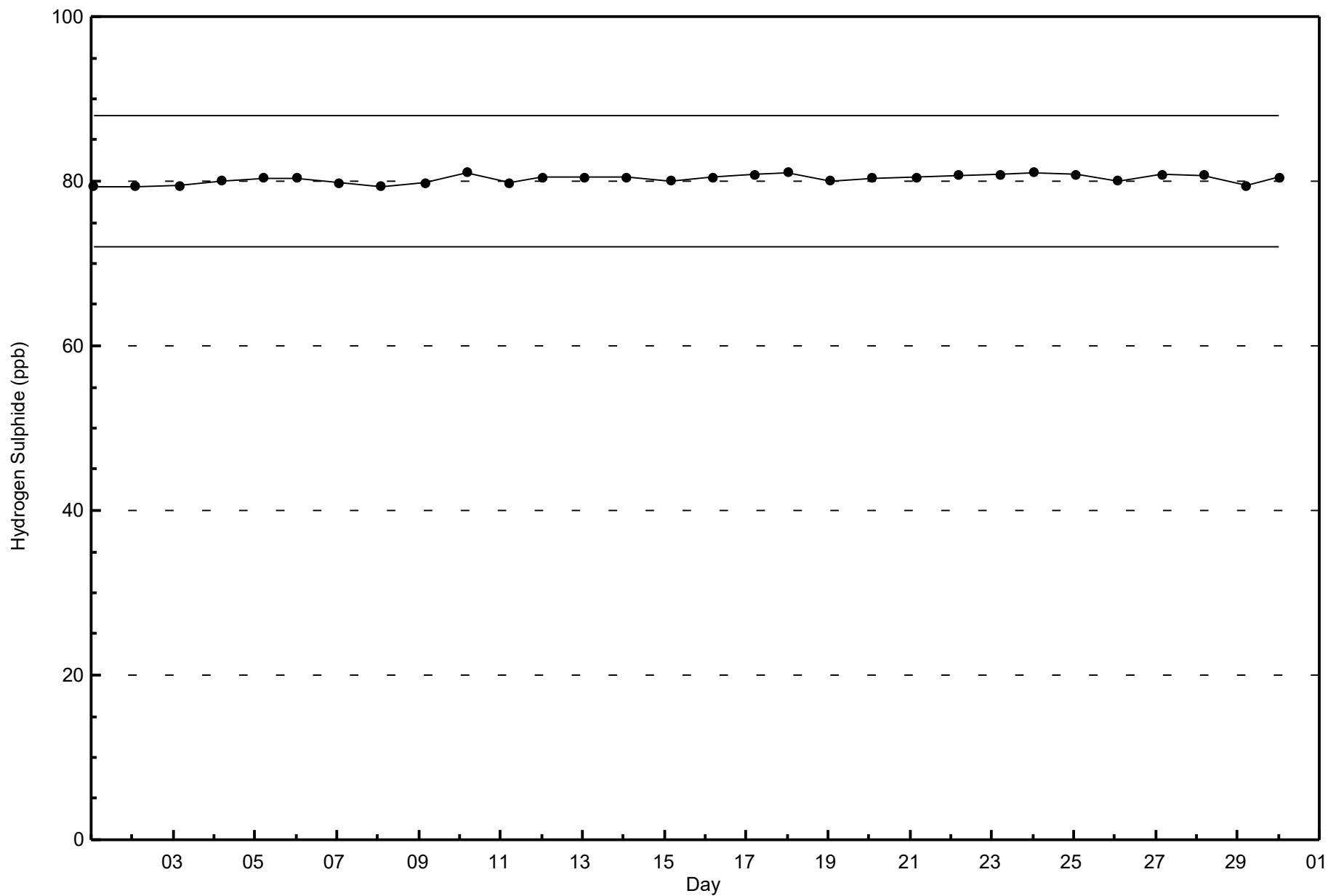




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Monday Creek - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

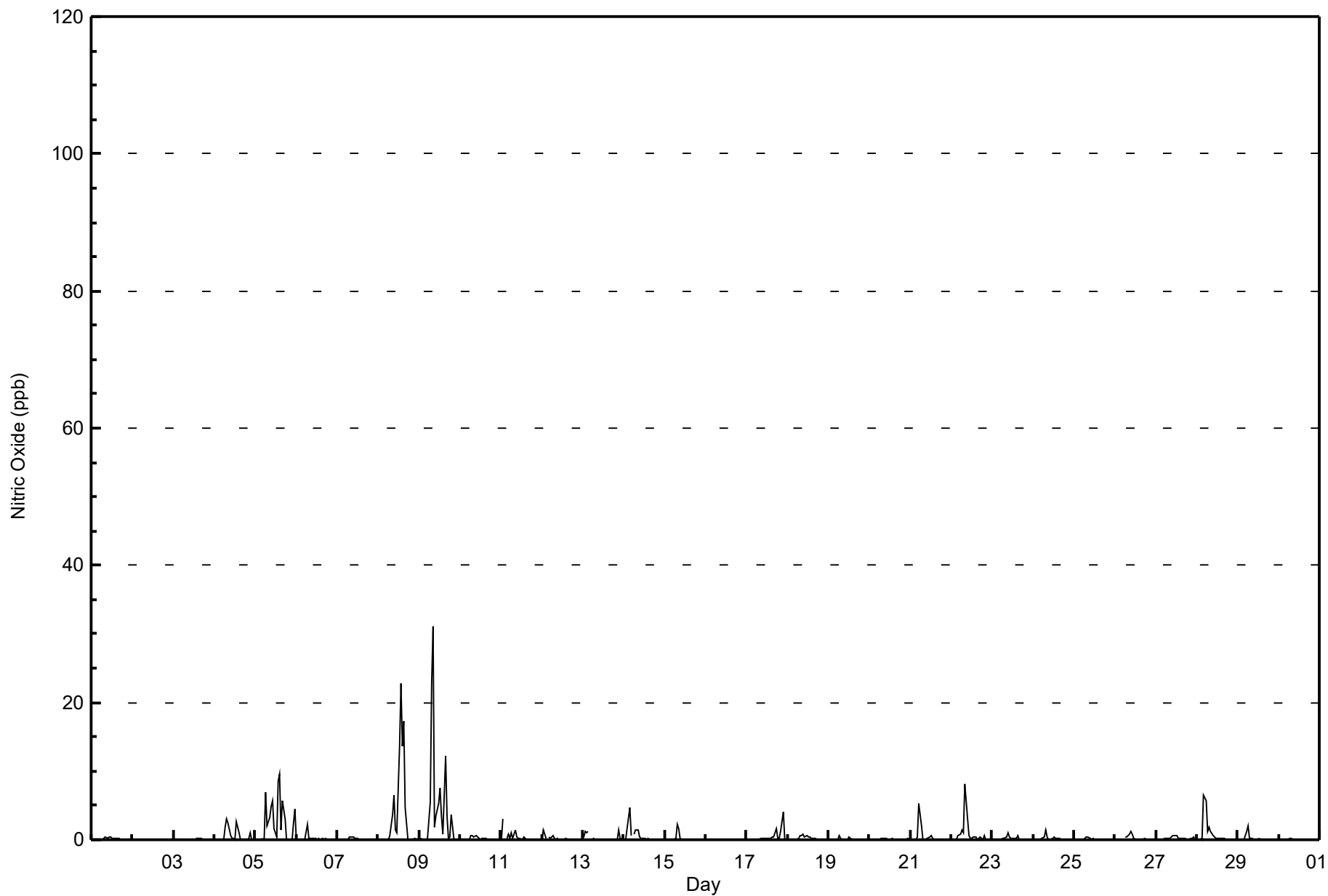
Monday Creek - April 2025

Maximum Value: 31.1 ppb on Apr 9 09:00																			Maximum Daily Average: 4.5 ppb on Apr 9						Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 02:00																			Minimum Daily Average: 0.0 ppb on Apr 16						Hours of Data: 664	
Maximum Diurnal Average: 2.1 ppb at hour 9																			Minimum Diurnal Average: 0.0 ppb at hour 1						Hours of Missing Data: 56	
Monthly Average: 0.61 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 1.1 P ₉₉ = 10.6						Hours of Calibration: 38	
																			Percent Operational Time: 97.5							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5
2-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	C	C	C	C	M	M	M	M	M	M	M	M	M	M	–	0.1
3-Apr	M	M	M	M	M	M	M	M	C	C	C	C	C	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	–	0.2
4-Apr	0.0	Z	0.0	0.0	0.0	0.1	1.7	2.9	2.4	0.6	0.1	0.1	0.1	2.7	1.0	0.1	0.1	0.0	0.0	0.1	0.2	1.0	0.1	0.1	0.6	2.9
5-Apr	0.0	0.0	Z	0.3	0.1	0.2	7.0	2.1	3.3	4.8	5.6	1.7	0.5	8.5	9.6	1.4	5.7	3.0	0.0	0.0	0.0	0.0	2.4	4.5	2.6	9.6
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	2.3	0.2	0.2	0.3	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	0.2	2.3
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
8-Apr	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.5	3.8	6.4	1.4	1.1	13.7	22.9	13.7	17.2	4.6	0.1	0.0	0.1	0.0	0.1	0.0	0.2	3.7	22.9
9-Apr	Z	0.2	0.1	0.0	0.0	0.3	5.5	23.0	31.1	1.8	3.5	5.4	7.5	3.4	0.8	12.3	3.5	0.1	0.5	3.6	0.0	0.0	0.0	0.0	4.5	31.1
10-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.7	0.6	0.5	0.6	0.5	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.7
11-Apr	0.0	3.1	Z	0.2	0.8	0.3	1.0	0.2	1.4	0.4	0.2	0.3	0.1	0.4	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	3.1
12-Apr	0.1	1.4	0.2	Z	0.3	0.3	0.6	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
13-Apr	0.3	1.2	1.0	1.2	Z	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	1.4	0.2	0.0	0.3	1.4
14-Apr	0.0	0.0	1.5	4.7	0.6	Z	0.8	1.4	1.4	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.7
15-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.1	2.2	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	0.0	0.0	0.2	2.2
16-Apr	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
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	1.6	0.1	0.3	1.2	4.0	0.0	0.1	0.4	4.0
18-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.6	0.5	0.7	0.4	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
19-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.6	0.3	0.0	0.1	0.1	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
20-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.3
21-Apr	Z	0.0	0.0	0.0	0.4	5.2	2.1	0.1	0.1	0.1	0.2	0.4	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.4	5.2
22-Apr	0.1	Z	0.0	0.0	0.5	0.9	1.3	1.0	8.1	3.0	0.6	0.3	0.2	0.3	0.4	0.1	0.1	0.4	0.0	0.6	0.0	0.0	0.0	0.0	0.8	8.1
23-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.4	1.0	0.4	0.1	0.1	0.2	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
24-Apr	0.0	0.0	0.0	Z	0.0	0.3	0.4	1.4	0.4	0.0	0.0	0.2	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.4	0.9	1.2	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.2
27-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.5	0.5	0.6	0.5	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.0	0.2	0.6
28-Apr	0.0	Z	0.2	0.0	6.6	5.8	1.3	1.9	1.2	0.6	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.8	6.6
29-Apr	0.0	0.0	Z	0.1	0.5	1.3	2.0	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	2.0
30-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Diurnal Average																									Diurnal Maximum	
Diurnal Maximum																										
Z - zerospan C - Calibration M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	661	99.55	99.55
21 - 40	3	0.45	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	34	23	12	24	18	28	32	59	38	72	29	50	77	75	61	28	660
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	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	34	23	12	24	18	28	32	59	38	72	29	50	77	77	62	28	663

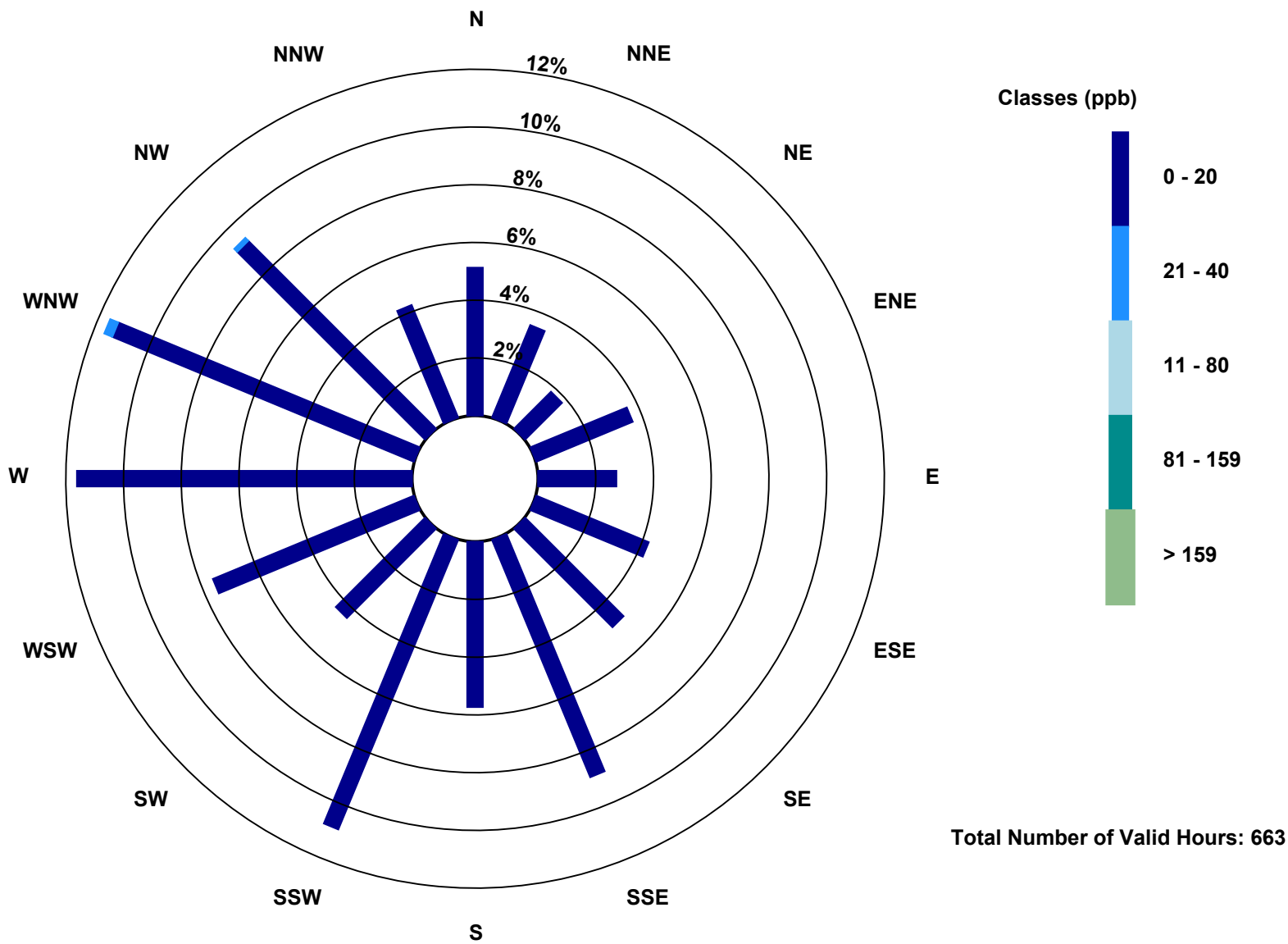
Total Number of Valid Hours: 663

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

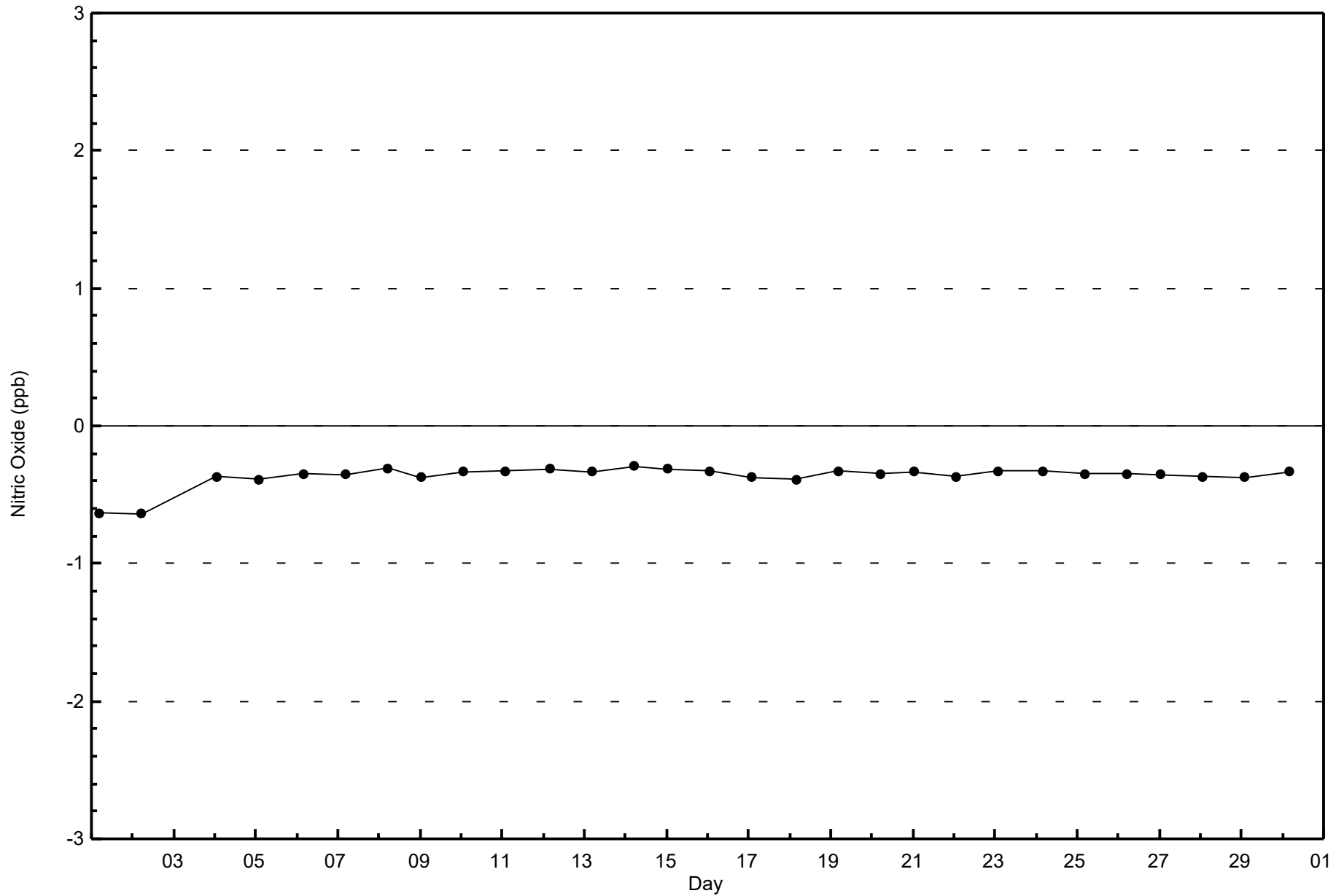
Nitric Oxide (NO) - ppb
Monday Creek





Wood Buffalo Environmental Association
Zero Responses

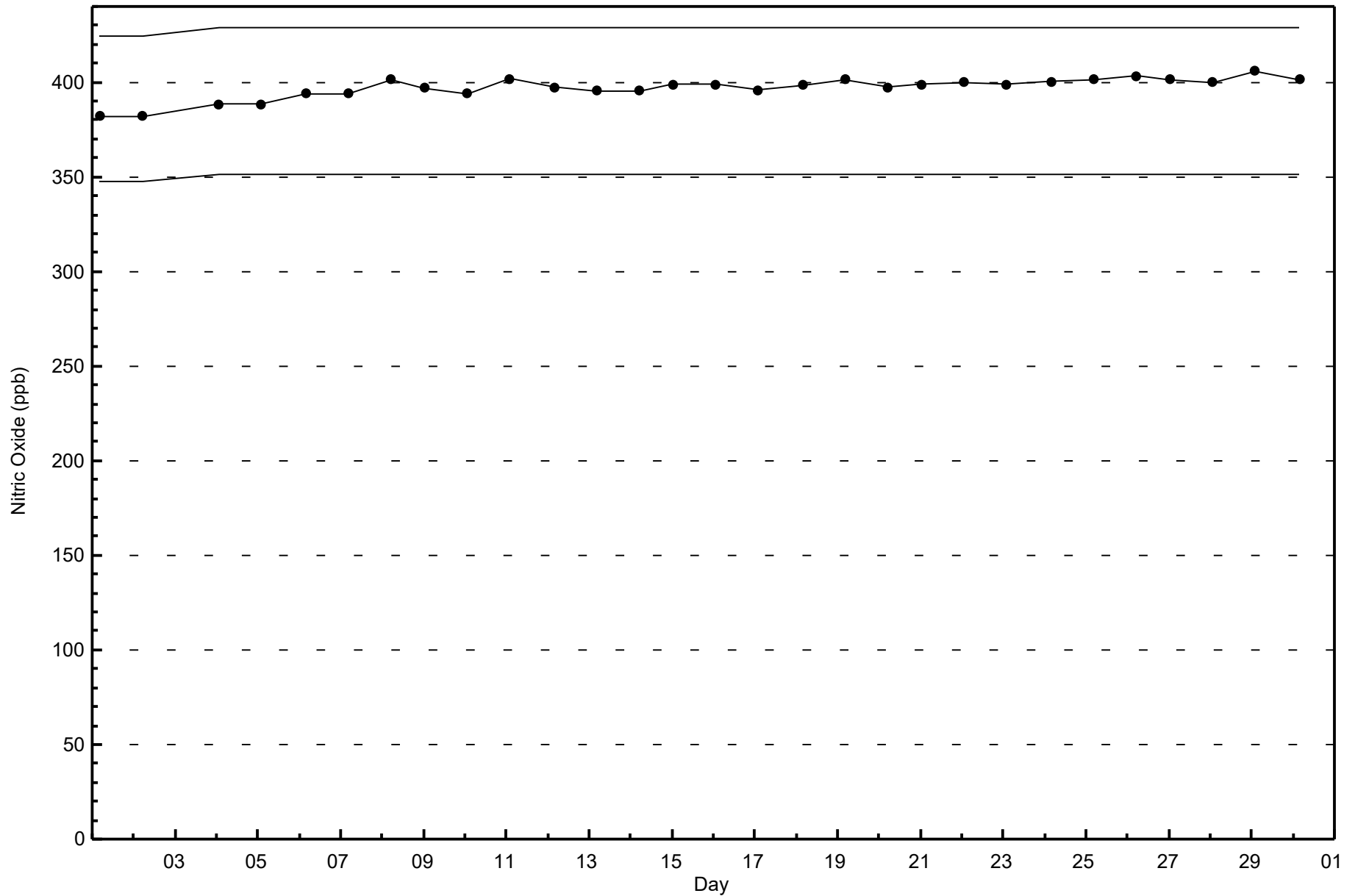
Nitric Oxide (NO) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

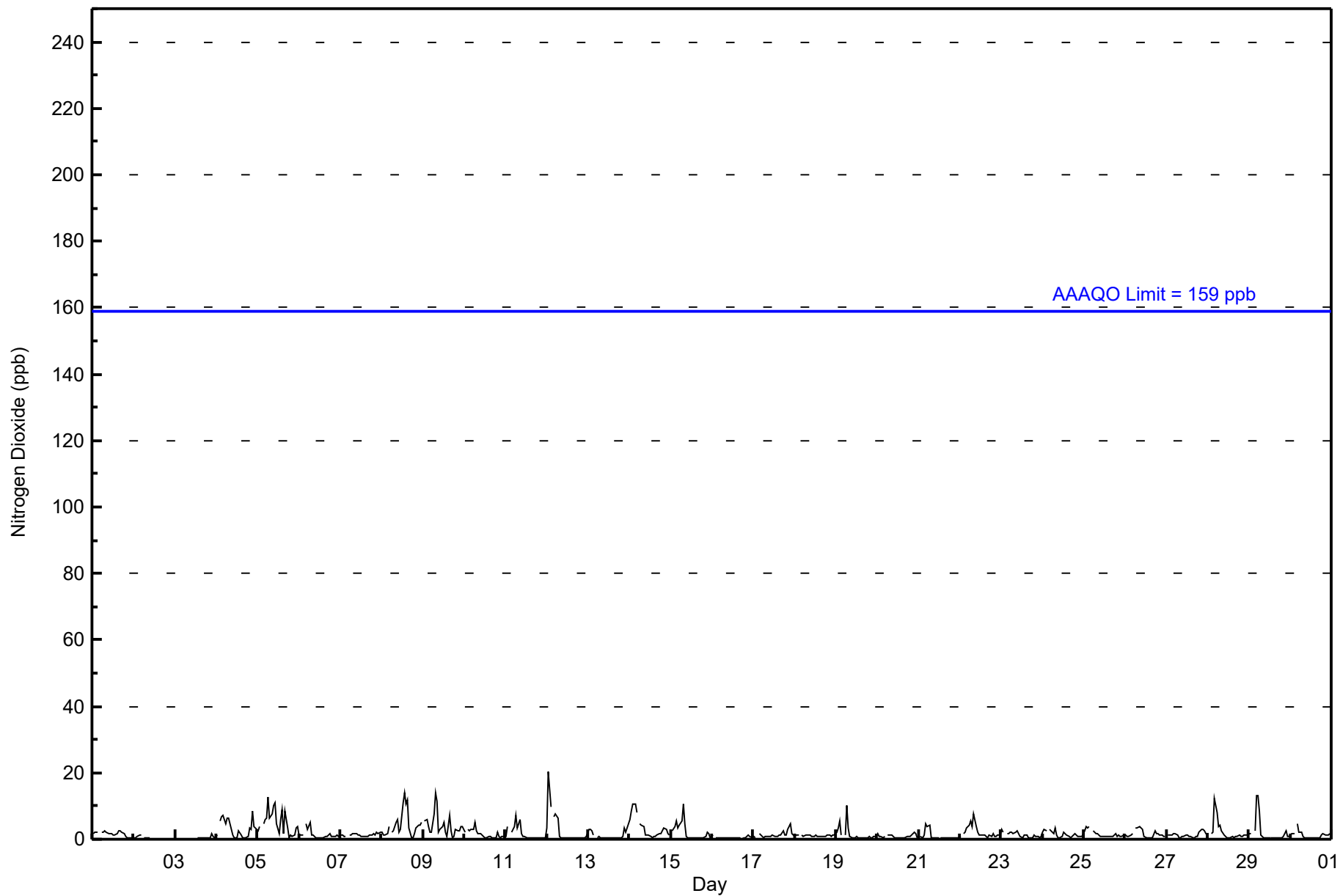
Monday Creek - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 20.4 ppb on Apr 12 02:00 Maximum Daily Average: 5.1 ppb on Apr 5																			Hours in Service: 720 Hours of Data: 664 Hours of Missing Data: 56 Hours of Calibration: 38 Percent Operational Time: 97.5								
Minimum Value: 0.2 ppb on Apr 16 18:00 Minimum Daily Average: 0.5 ppb on Apr 16 Maximum Diurnal Average: 4.1 ppb at hour 5 Minimum Diurnal Average: 0.9 ppb at hour 19 Monthly Average: 1.93 ppb Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.1 Q ₃ = 2.2 P ₉₀ = 4.5 P ₉₉ = 12.0																											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Apr	1.5	2.0	2.2	2.2	Z	2.0	2.0	2.6	2.3	1.9	1.8	1.6	1.3	1.2	1.6	2.4	2.4	2.3	1.8	0.8	0.6	0.5	0.6	0.4	1.7	2.6	
2-Apr	0.4	0.5	0.9	1.3	1.3	Z	0.5	0.6	0.4	0.5	C	C	C	C	M	M	M	M	M	M	M	M	M	M	--	1.3	
3-Apr	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.5	0.7	0.6	--	1.5
4-Apr	1.4	Z	5.3	6.9	7.3	4.8	6.5	6.2	4.5	1.2	0.4	0.4	0.3	2.5	1.4	0.5	0.4	0.5	0.7	3.4	3.0	8.3	3.8	2.9	3.2	8.3	
5-Apr	2.6	3.8	Z	4.7	6.1	6.3	12.6	6.3	7.8	10.0	11.2	4.5	1.6	6.0	9.0	1.7	8.5	3.2	0.5	1.4	0.9	1.1	3.4	3.7	5.1	12.6	
6-Apr	1.3	1.3	1.2	Z	4.5	3.0	5.0	1.2	1.1	0.8	0.6	0.5	0.5	0.6	0.6	0.8	0.8	1.1	1.5	0.8	0.7	0.8	1.2	1.0	1.3	5.0	
7-Apr	1.1	1.1	1.0	1.0	Z	1.3	1.2	1.7	1.8	1.7	1.2	1.1	0.8	0.7	0.7	0.9	1.0	1.1	1.3	1.5	1.4	2.3	1.7	2.0	1.3	2.3	
8-Apr	2.0	1.4	1.1	1.7	3.7	Z	2.2	2.5	4.9	6.1	2.3	2.8	11.1	14.0	10.5	12.0	3.5	0.4	0.6	1.8	3.3	4.4	4.2	5.0	4.4	14.0	
9-Apr	Z	5.6	6.1	3.9	2.1	2.0	7.6	14.0	11.3	2.0	3.1	3.8	5.0	2.2	0.7	7.0	2.7	0.6	1.0	3.1	2.6	2.7	3.7	3.8	4.2	14.0	
10-Apr	2.0	Z	3.1	2.6	3.0	3.1	4.9	2.6	1.5	1.7	1.4	0.7	0.4	0.5	0.9	0.7	0.4	0.6	0.6	2.1	0.7	0.5	0.7	0.7	1.5	4.9	
11-Apr	1.0	3.8	Z	2.2	2.8	3.9	7.0	3.2	5.9	1.8	0.9	0.7	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	1.7	7.0	
12-Apr	3.6	20.4	9.6	Z	6.9	7.6	6.3	1.0	0.5	0.6	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.7	2.8	20.4	
13-Apr	3.0	3.1	2.6	1.2	Z	0.6	0.9	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	0.7	3.5	2.1	4.7	1.2	4.7	
14-Apr	6.0	8.3	10.6	10.6	7.9	Z	4.5	4.1	3.7	1.3	1.1	1.1	0.9	0.6	1.0	0.8	1.1	1.7	1.7	2.4	3.3	3.1	1.7	1.4	3.4	10.6	
15-Apr	Z	2.4	4.0	5.4	3.4	4.3	5.3	10.8	4.7	0.7	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.8	2.0	1.7	0.6	2.2	10.8	
16-Apr	1.1	Z	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	1.0	1.1	0.9	0.6	0.5	1.1	
17-Apr	0.7	0.5	Z	1.8	1.2	0.9	0.6	0.9	0.9	0.7	0.7	1.1	1.0	0.7	1.0	1.2	1.2	2.5	1.2	1.3	3.0	4.8	1.6	1.1	1.3	4.8	
18-Apr	0.8	1.4	1.3	Z	1.3	1.0	1.3	1.4	1.2	1.4	0.9	0.9	1.2	1.0	1.0	0.9	0.9	0.8	0.8	1.3	1.1	1.0	1.2	1.2	1.1	1.4	
19-Apr	2.2	3.5	5.3	1.1	Z	1.4	10.3	3.3	0.7	0.5	0.4	0.4	0.8	0.5	0.4	0.4	0.3	0.4	0.4	1.0	0.3	0.3	1.0	1.0	1.6	10.3	
20-Apr	1.5	0.9	0.7	0.4	0.7	Z	1.4	1.1	1.2	1.0	0.5	0.4	0.4	0.6	0.6	0.5	0.6	0.9	1.0	0.8	1.1	2.2	1.6	0.4	0.9	2.2	
21-Apr	Z	0.8	0.6	1.4	4.7	4.0	4.2	0.4	0.3	0.3	0.4	0.6	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.4	0.4	1.0	4.7	
22-Apr	0.7	Z	1.6	2.0	3.5	4.2	5.5	4.0	7.6	3.7	2.3	1.2	1.1	1.4	1.2	0.7	0.6	1.3	0.8	1.9	0.8	0.8	1.4	1.2	2.2	7.6	
23-Apr	2.9	2.2	Z	1.8	1.7	2.1	2.1	1.7	2.0	2.6	1.5	0.7	0.5	1.1	1.1	1.4	0.6	0.6	0.6	1.2	0.8	0.7	0.6	0.8	1.4	2.9	
24-Apr	2.3	3.0	2.7	Z	3.1	2.5	1.8	3.6	1.3	0.5	0.5	0.8	2.0	1.8	1.4	1.0	0.5	0.8	1.1	1.5	0.9	1.0	0.7	0.8	1.5	3.6	
25-Apr	2.4	3.7	3.6	3.7	Z	2.5	2.3	1.8	1.9	0.9	0.8	1.0	0.8	0.9	0.8	0.8	0.8	0.8	1.9	0.7	1.3	0.9	1.0	1.3	1.6	3.7	
26-Apr	1.2	1.0	1.0	1.2	1.6	Z	3.4	3.3	4.0	3.3	2.8	1.0	0.6	0.6	0.5	0.5	0.5	2.6	1.7	1.5	1.4	1.1	0.9	0.7	1.6	4.0	
27-Apr	Z	1.1	1.2	1.4	1.8	1.9	1.1	0.5	0.4	0.9	1.0	1.1	1.1	0.7	0.7	0.6	0.6	0.7	0.8	2.1	2.8	2.9	2.7	1.8	1.3	2.9	
28-Apr	1.9	Z	1.8	2.2	12.1	8.0	4.0	4.3	2.4	1.4	0.9	0.6	0.5	0.5	0.8	0.6	0.9	1.0	1.2	0.8	1.0	1.2	1.4	1.4	2.2	12.1	
29-Apr	1.6	1.7	Z	2.7	13.1	13.3	8.5	1.1	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	2.4	0.9	0.8	2.2	13.3	
30-Apr	1.1	1.7	1.7	Z	4.5	2.1	2.1	1.0	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.5	1.1	1.6	1.4	1.1	1.1	1.8	1.1	4.5	
1.9 3.1 2.9 2.7 4.1 3.5 4.0 3.0 2.6 1.7 1.4 1.0 1.2 1.4 1.4 1.3 1.1 0.9 0.9 1.3 1.3 1.8 1.5 1.5																									Diurnal Average		
6.0 20.4 10.6 10.6 13.1 13.3 12.6 14.0 11.3 10.0 11.2 4.5 11.1 14.0 10.5 12.0 8.5 3.2 1.9 3.4 3.3 8.3 4.2 5.0																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	664	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
> 200	0	0.00	100.00

Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	34	23	12	24	18	28	32	59	38	72	29	50	77	77	62	28	663
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	34	23	12	24	18	28	32	59	38	72	29	50	77	77	62	28	663

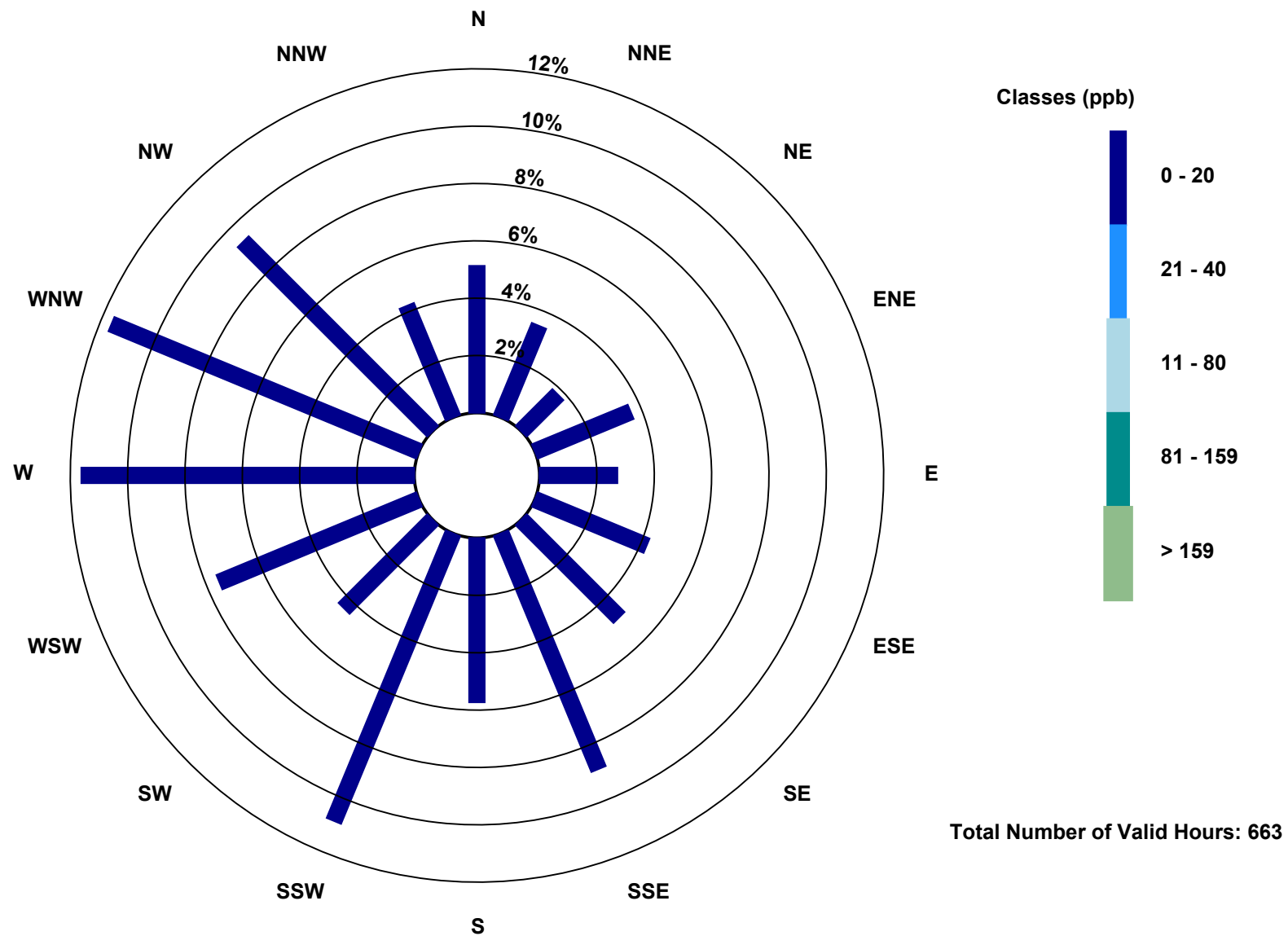
Total Number of Valid Hours: 663

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

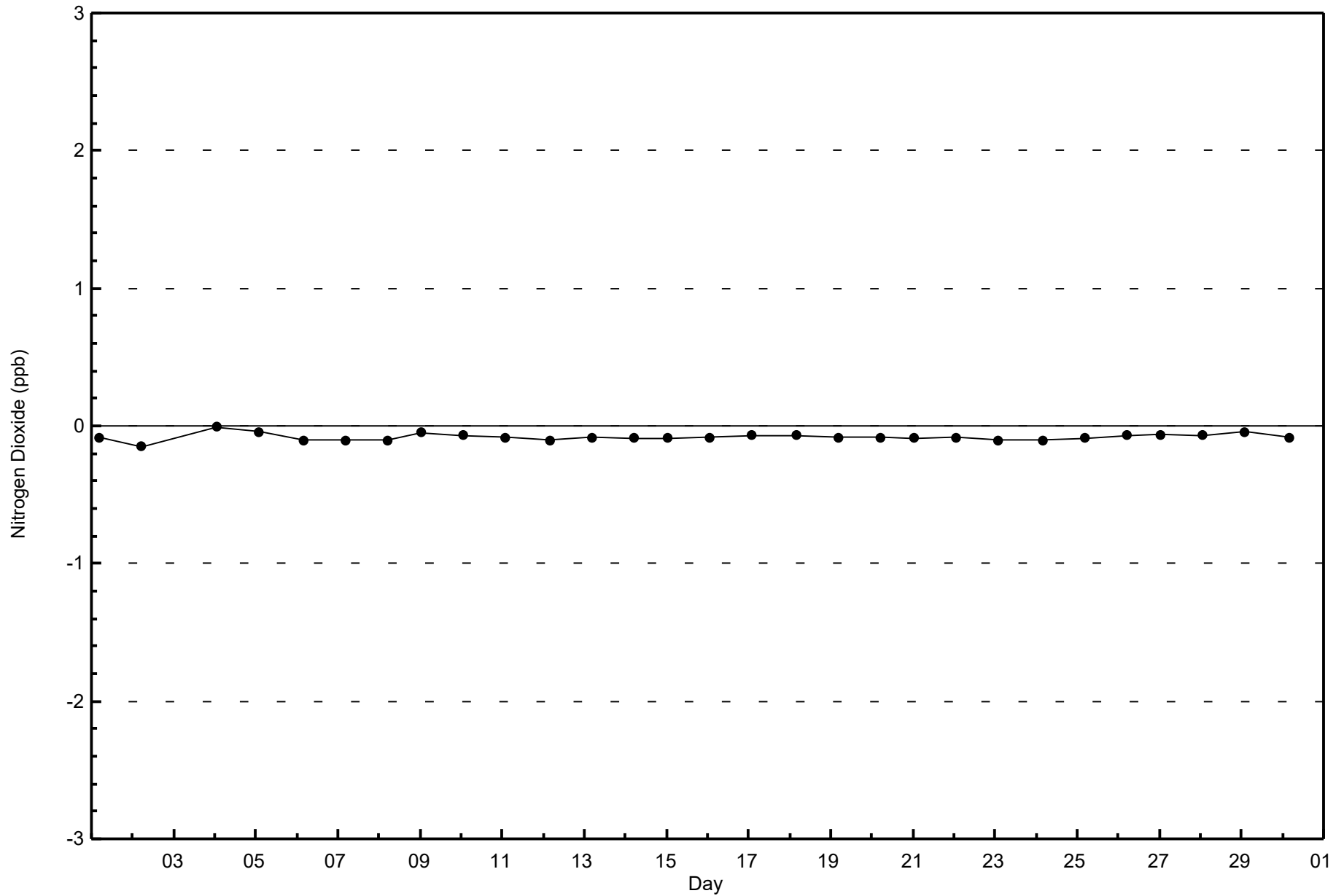
Nitrogen Dioxide (NO₂) - ppb
Monday Creek

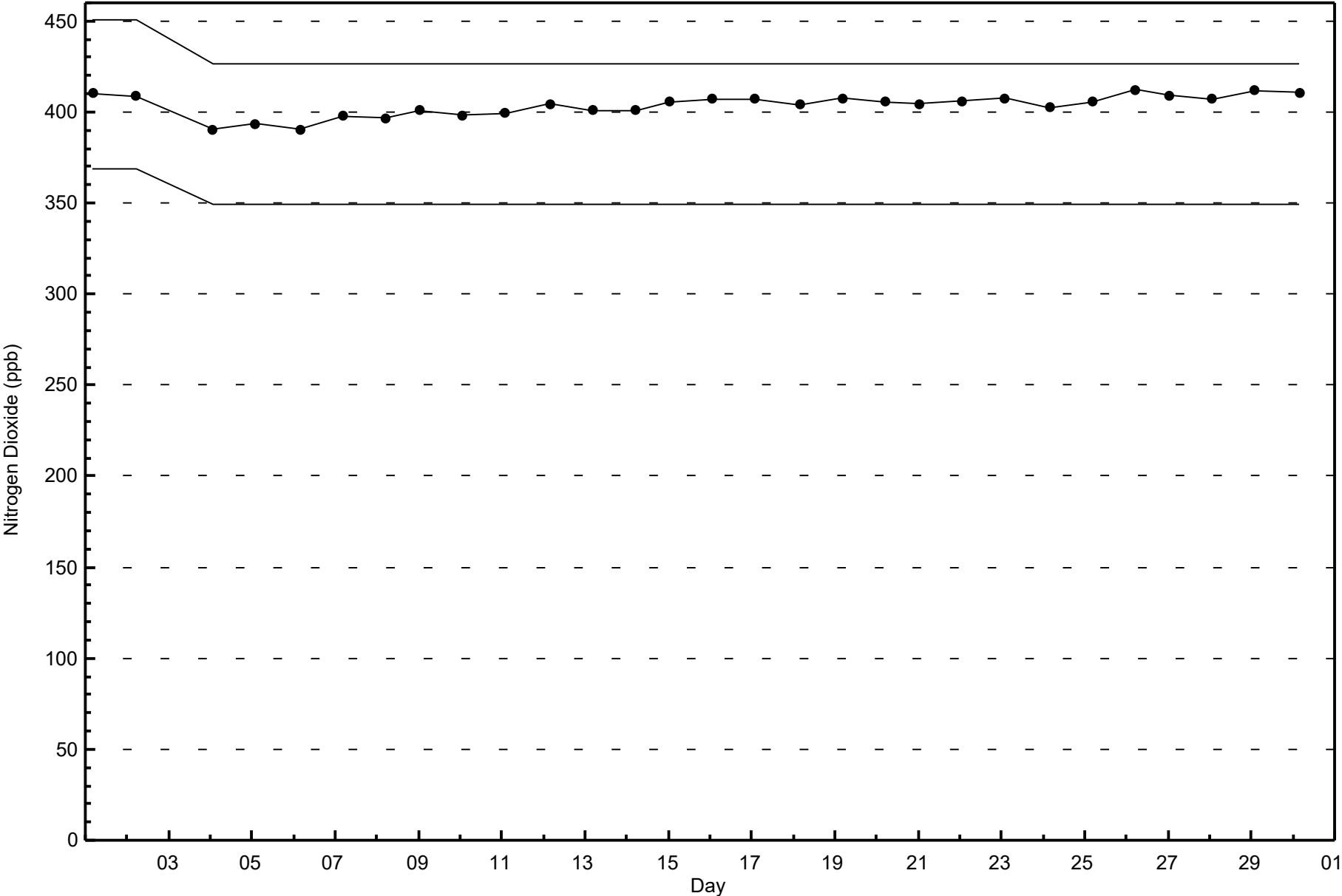




Wood Buffalo Environmental Association
Zero Responses

Nitrogen Dioxide (NO₂) - ppb
Monday Creek - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

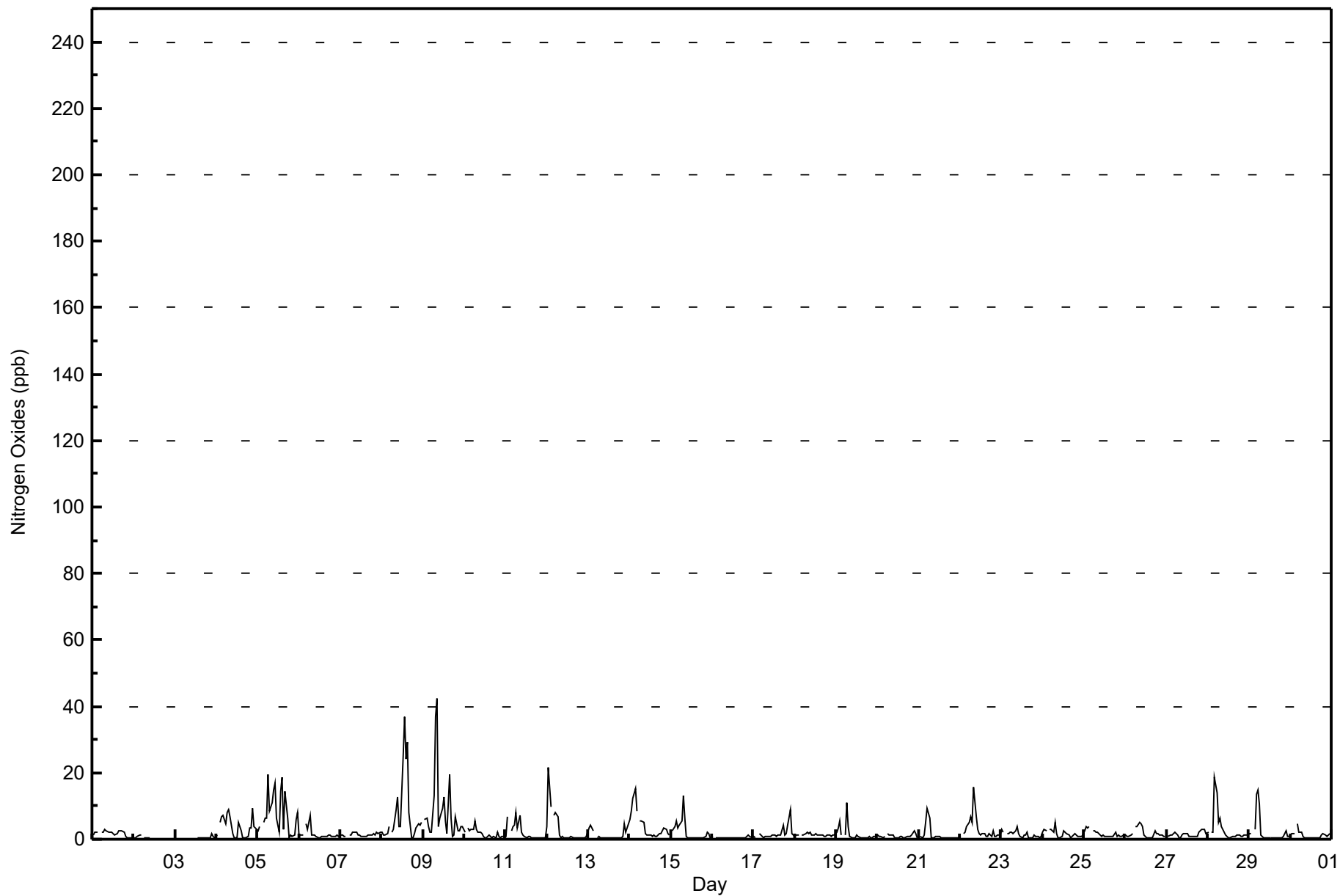
Monday Creek - April 2025

Maximum Value: 42.4 ppb on Apr 9 09:00																			Maximum Daily Average: 8.7 ppb on Apr 9																			Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 16 18:00																			Minimum Daily Average: 0.4 ppb on Apr 16																			Hours of Data: 664	
Maximum Diurnal Average: 5.0 ppb at hour 7																			Minimum Diurnal Average: 0.9 ppb at hour 19																			Hours of Missing Data: 56	
Monthly Average: 2.54 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.4 Q ₁ = 0.6 Median = 1.2 Q ₃ = 2.4 P ₉₀ = 5.7 P ₉₉ = 20.4																			Hours of Calibration: 38	
																																						Percent Operational Time: 97.5	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	1.5	2.0	2.2	2.2	Z	2.0	2.0	2.8	2.6	2.2	2.2	2.1	1.6	1.4	1.8	2.6	2.7	2.4	1.9	0.8	0.6	0.5	0.6	0.4	1.8	2.8													
2-Apr	0.4	0.5	0.9	1.3	1.3	Z	0.5	0.6	0.5	0.5	C	C	C	C	M	M	M	M	M	M	M	M	M	M	--	1.3													
3-Apr	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.5	0.5	0.4	0.4	0.4	0.4	0.5	1.5	0.7	0.6	--	1.5													
4-Apr	1.4	Z	5.3	6.9	7.3	4.9	8.2	9.1	6.9	1.8	0.5	0.5	0.4	5.2	2.4	0.6	0.5	0.5	0.7	3.5	3.2	9.3	3.9	3.0	3.7	9.3													
5-Apr	2.6	3.8	Z	5.0	6.2	6.5	19.6	8.4	11.1	14.8	16.8	6.2	2.1	14.5	18.6	3.1	14.2	6.2	0.5	1.4	0.9	1.1	5.8	8.2	7.7	19.6													
6-Apr	1.3	1.3	1.2	Z	4.5	3.0	7.3	1.4	1.3	1.1	0.7	0.6	0.6	0.7	0.7	0.9	0.9	1.2	1.5	0.8	0.7	0.8	1.2	1.0	1.5	7.3													
7-Apr	1.1	1.1	1.0	1.0	Z	1.3	1.3	2.1	2.2	2.1	1.4	1.3	1.0	0.8	0.8	1.0	1.1	1.2	1.3	1.5	1.4	2.3	1.7	2.0	1.4	2.3													
8-Apr	2.0	1.4	1.1	1.7	3.8	Z	2.3	3.0	8.7	12.5	3.7	3.9	24.8	36.9	24.2	29.2	8.1	0.5	0.6	1.9	3.3	4.5	4.2	5.2	8.2	36.9													
9-Apr	Z	5.8	6.2	3.9	2.1	2.3	13.1	37.0	42.4	3.8	6.6	9.2	12.5	5.6	1.5	19.3	6.2	0.7	1.5	6.7	2.6	2.7	3.7	3.8	8.7	42.4													
10-Apr	2.0	Z	3.2	2.6	3.0	3.1	5.6	3.2	2.0	2.3	1.9	0.9	0.5	0.6	1.1	0.8	0.4	0.6	0.6	2.2	0.7	0.5	0.7	0.7	1.7	5.6													
11-Apr	1.0	6.9	Z	2.4	3.6	4.2	8.0	3.4	7.3	2.2	1.1	1.0	0.5	0.8	0.7	0.6	0.5	0.4	0.5	0.5	0.4	0.3	0.3	0.4	2.0	8.0													
12-Apr	3.7	21.8	9.8	Z	7.2	7.9	6.9	1.1	0.6	0.8	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.7	2.9	21.8													
13-Apr	3.3	4.3	3.6	2.4	Z	0.6	1.0	0.5	0.5	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.7	4.9	2.3	4.7	1.4	4.9													
14-Apr	6.0	8.3	12.1	15.3	8.5	Z	5.3	5.5	5.1	1.7	1.4	1.3	1.2	0.7	1.1	0.9	1.1	1.8	1.7	2.4	3.3	3.1	1.7	1.4	4.0	15.3													
15-Apr	Z	2.4	4.0	5.4	3.4	4.3	5.4	13.0	6.4	0.8	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.8	2.0	1.7	0.6	2.4	13.0													
16-Apr	1.1	Z	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	1.0	1.1	0.9	0.6	0.4	1.1													
17-Apr	0.7	0.5	Z	1.8	1.2	0.9	0.6	1.0	1.0	0.8	0.8	1.4	1.3	1.0	1.3	1.5	1.5	4.1	1.3	1.6	4.2	8.8	1.6	1.2	1.7	8.8													
18-Apr	0.8	1.4	1.3	Z	1.3	1.1	1.5	2.0	1.7	2.1	1.3	1.4	1.6	1.4	1.3	1.1	1.1	0.9	0.8	1.3	1.1	1.0	1.2	1.2	1.3	2.1													
19-Apr	2.2	3.5	5.3	1.1	Z	1.4	10.9	3.6	0.7	0.6	0.5	0.4	1.2	0.7	0.4	0.4	0.3	0.4	0.4	1.0	0.3	0.3	1.0	1.0	1.6	10.9													
20-Apr	1.5	0.9	0.7	0.4	0.7	Z	1.5	1.3	1.4	1.3	0.6	0.4	0.5	0.7	0.7	0.6	0.6	1.0	1.0	0.8	1.1	2.3	1.7	0.4	1.0	2.3													
21-Apr	Z	0.8	0.6	1.4	5.1	9.2	6.3	0.5	0.4	0.4	0.6	1.0	0.8	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.6	0.5	0.4	1.4	9.2													
22-Apr	0.8	Z	1.6	2.0	4.0	5.1	6.8	5.0	15.7	6.7	2.9	1.5	1.3	1.7	1.6	0.8	0.7	1.7	0.8	2.5	0.8	0.8	1.4	1.2	2.9	15.7													
23-Apr	2.9	2.2	Z	1.8	1.7	2.1	2.3	1.9	2.4	3.6	1.9	0.8	0.6	1.3	1.3	2.1	0.6	0.6	0.6	1.2	0.8	0.7	0.6	0.8	1.5	3.6													
24-Apr	2.3	3.0	2.7	Z	3.1	2.8	2.2	5.0	1.7	0.5	0.5	1.0	2.4	2.1	1.7	1.2	0.5	0.8	1.1	1.5	0.9	1.0	0.7	0.8	1.7	5.0													
25-Apr	2.4	3.7	3.6	3.7	Z	2.6	2.5	2.1	2.3	1.1	0.9	1.1	0.9	1.0	0.9	0.9	0.9	0.9	2.0	0.7	1.3	0.9	1.0	1.3	1.7	3.7													
26-Apr	1.2	1.0	1.0	1.2	1.6	Z	3.7	3.7	4.9	4.5	3.6	1.1	0.6	0.6	0.5	0.5	0.5	2.7	1.8	1.5	1.4	1.1	0.9	0.7	1.7	4.9													
27-Apr	Z	1.1	1.2	1.4	1.8	2.0	1.4	0.6	0.5	1.4	1.5	1.7	1.6	1.0	0.9	0.8	0.8	0.8	0.9	2.2	3.0	3.1	3.0	1.8	1.5	3.1													
28-Apr	1.9	Z	2.0	2.2	18.7	13.8	5.3	6.2	3.6	2.0	1.2	0.8	0.6	0.6	1.0	0.7	1.0	1.1	1.3	0.8	1.0	1.2	1.4	1.4	3.0	18.7													
29-Apr	1.6	1.7	Z	2.8	13.6	14.6	10.5	1.4	0.6	0.4	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	2.5	0.9	0.8	2.4	14.6													
30-Apr	1.1	1.7	1.7	Z	4.6	2.2	2.3	1.1	0.6	0.6	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.5	1.2	1.7	1.4	1.1	1.1	1.8	1.2	4.6													
Diurnal Average																																							
Diurnal Maximum																																							
Z - zerospan C - Calibration M - Maintenance																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	657	98.95	98.95
21 - 40	6	0.90	99.85
41 - 80	1	0.15	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 664

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Monday Creek - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	34	23	12	24	18	28	32	59	38	72	29	49	77	74	59	28	656
21 - 40	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	0	6
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	34	23	12	24	18	28	32	59	38	72	29	50	77	77	62	28	663

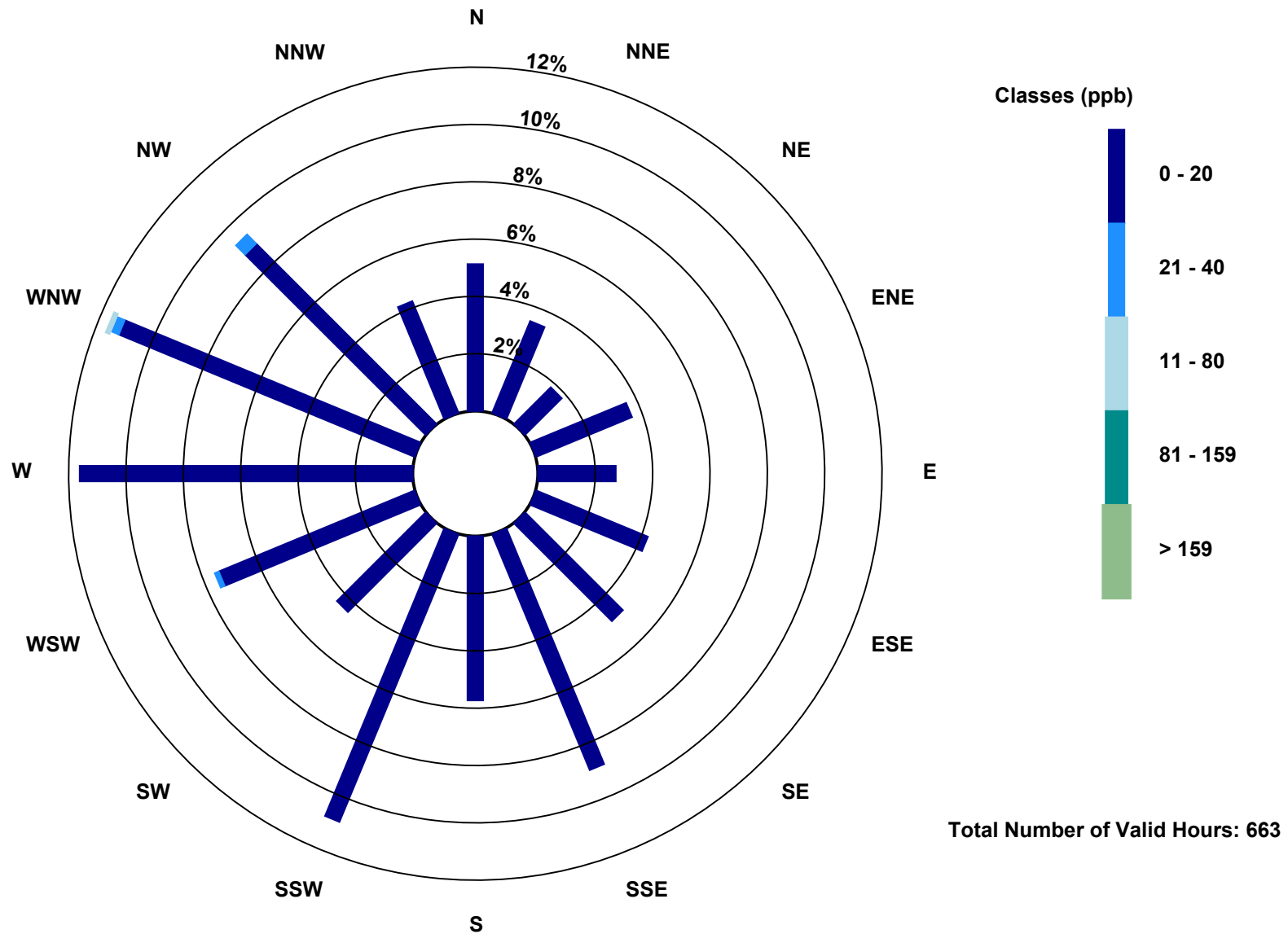
Total Number of Valid Hours: 663

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

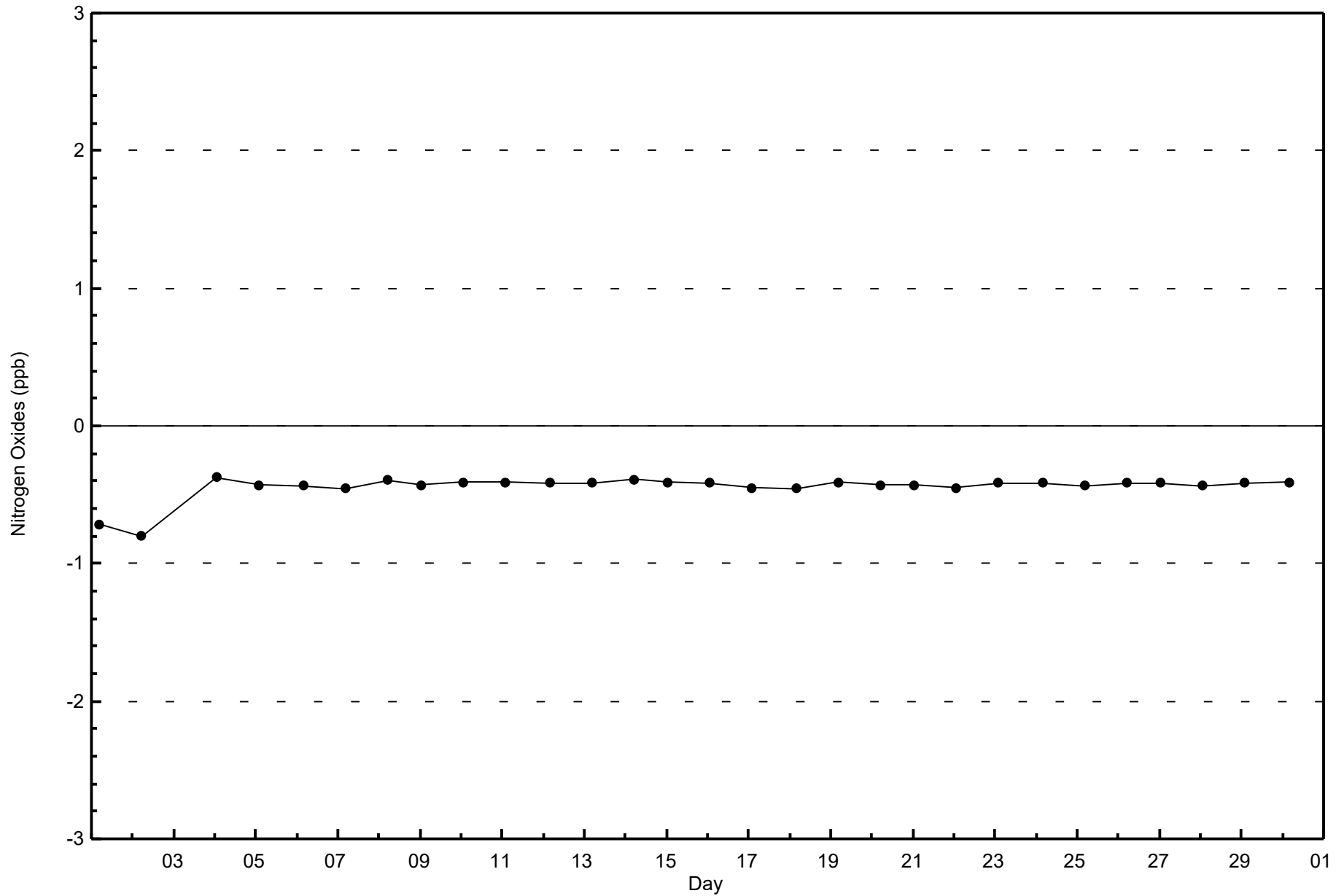
Nitrogen Oxides (NO_x) - ppb
Monday Creek

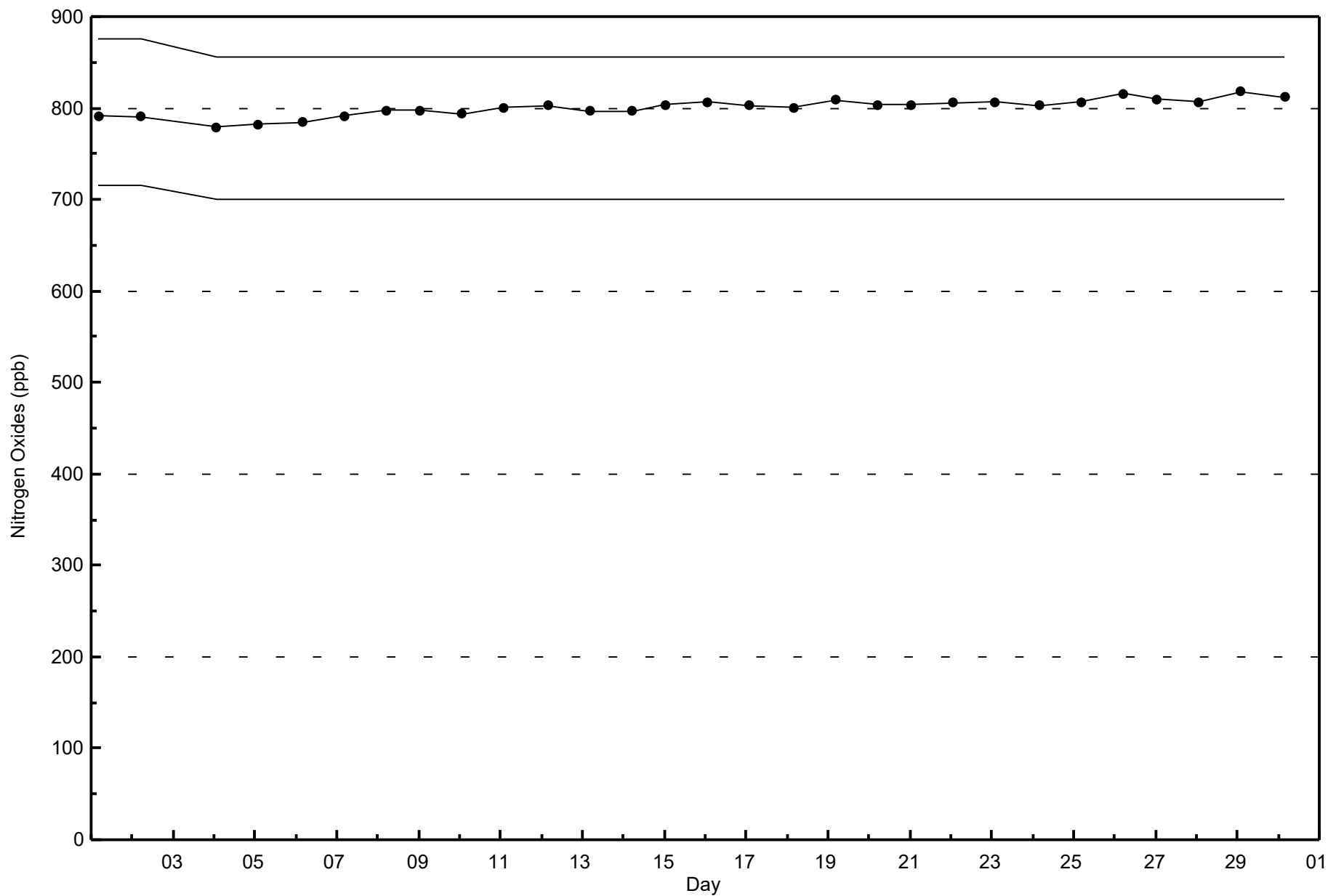




Wood Buffalo Environmental Association
Zero Responses

Nitrogen Oxides (NO_x) - ppb
Monday Creek - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

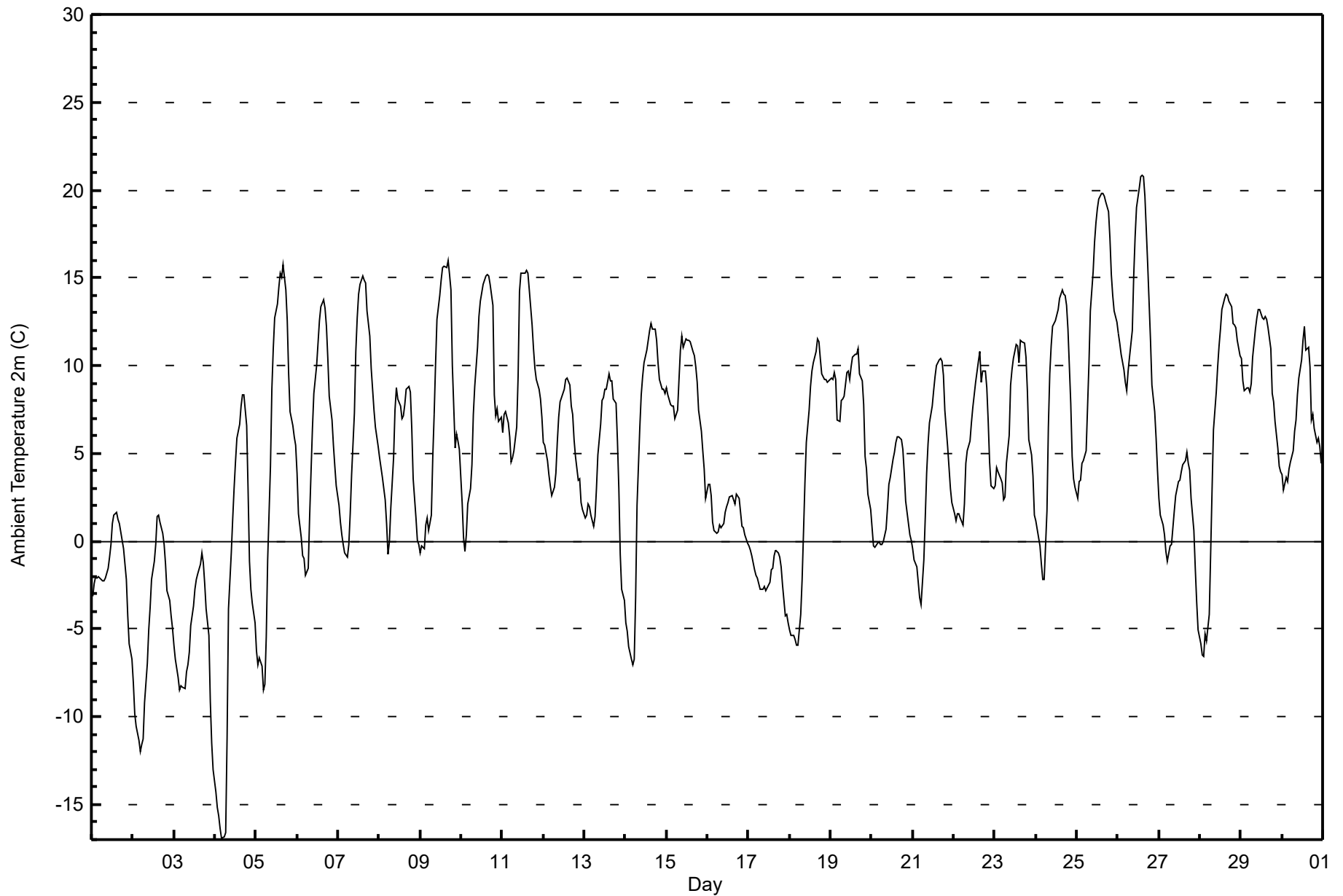
Monday Creek - April 2025

Maximum Value: 20.8 C on Apr 26 15:00																			Maximum Daily Average: 13.1 C on Apr 26										Hours in Service: 720	
Minimum Value: -16.9 C on Apr 4 05:00																			Minimum Daily Average: -5.8 C on Apr 3										Hours of Data: 720	
Maximum Diurnal Average: 10.2 C at hour 16																			Minimum Diurnal Average: -0.7 C at hour 6										Hours of Missing Data: 0	
Monthly Average: 4.88 C																			Percentiles: P ₁ = -12.8 P ₁₀ = -3.7 Q ₁ = 0.4 Median = 5.2 Q ₃ = 9.7 P ₉₀ = 13.2 P ₉₉ = 19.6										Hours of Calibration: 0	
																													Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
1-Apr	-3.2	-2.4	-2.1	-2.1	-2.0	-2.2	-2.3	-2.2	-2.1	-1.6	-0.9	-0.2	1.0	1.5	1.7	1.3	1.0	0.5	-0.4	-1.3	-2.2	-4.3	-5.8	-6.8	-1.5	1.7				
2-Apr	-8.1	-9.8	-10.5	-11.3	-12.0	-11.6	-11.3	-9.2	-7.0	-5.1	-3.7	-2.1	-1.1	-0.2	1.4	1.5	1.1	0.5	-0.2	-1.3	-2.8	-3.3	-4.2	-4.9	-4.8	1.5				
3-Apr	-5.9	-6.8	-7.7	-8.5	-8.3	-8.4	-8.4	-7.4	-7.1	-6.3	-4.8	-3.7	-2.7	-2.2	-1.9	-1.3	-0.7	-1.2	-2.4	-3.8	-5.3	-9.1	-11.5	-13.0	-5.8	-0.7				
4-Apr	-14.3	-15.1	-15.7	-16.4	-16.9	-16.9	-16.6	-11.2	-3.8	-0.7	1.3	3.0	4.5	5.8	6.7	7.7	8.4	8.3	6.6	2.9	-1.2	-2.8	-3.6	-4.6	-3.5	8.4				
5-Apr	-6.2	-7.1	-6.6	-7.1	-8.5	-8.2	-5.4	-1.1	4.2	8.6	11.0	12.7	13.5	14.5	15.2	15.0	15.8	14.3	12.5	9.5	7.3	6.6	6.0	5.4	5.1	15.8				
6-Apr	3.8	1.6	0.2	-0.9	-1.0	-2.0	-1.5	1.4	3.9	6.4	8.4	10.0	11.3	12.5	13.3	13.8	13.2	12.2	10.4	8.2	6.9	5.5	4.3	3.1	6.0	13.8				
7-Apr	2.0	1.1	0.3	-0.2	-0.7	-0.9	-0.2	1.6	3.8	7.3	10.8	12.7	14.1	14.6	15.1	14.9	14.7	13.1	11.7	9.9	8.7	7.5	6.5	5.4	7.2	15.1				
8-Apr	4.8	4.2	3.6	2.4	1.0	-0.7	0.0	1.9	4.7	7.5	8.7	8.1	7.7	7.0	7.1	7.7	8.7	8.8	8.5	6.5	3.6	1.4	0.0	-0.2	4.7	8.8				
9-Apr	-0.6	-0.3	-0.4	1.0	1.3	0.6	1.5	4.7	7.2	10.1	12.6	14.0	14.9	15.6	15.6	15.6	16.0	15.2	14.3	10.0	5.3	6.1	5.7	5.2	8.0	16.0				
10-Apr	2.2	0.2	-0.6	0.3	2.1	3.0	4.3	7.2	8.8	11.1	12.8	13.7	14.2	14.6	15.1	15.2	15.1	14.6	13.4	8.3	7.1	7.5	6.8	7.1	8.5	15.2				
11-Apr	6.2	7.2	7.4	6.7	5.9	4.5	4.7	5.1	6.5	9.4	14.2	15.3	15.3	15.3	15.4	15.3	14.3	12.3	11.0	9.8	9.2	8.6	8.1	7.1	9.8	15.4				
12-Apr	5.6	5.5	4.6	3.8	3.1	2.6	3.0	3.9	5.6	7.0	7.9	8.4	8.7	9.2	9.3	8.9	7.7	7.2	5.8	4.8	3.5	3.6	2.2	1.8	5.6	9.3				
13-Apr	1.3	1.5	2.1	1.9	1.5	0.9	1.4	3.0	4.9	6.6	8.0	8.2	8.7	8.6	9.5	9.1	9.1	8.1	7.9	5.7	3.0	-0.7	-2.7	-3.4	4.3	9.5				
14-Apr	-4.6	-5.1	-6.0	-6.7	-7.0	-6.7	-3.2	2.0	6.5	8.3	9.3	10.2	10.9	11.4	12.0	12.4	12.1	12.0	11.4	10.2	9.2	8.7	8.6	8.4	5.2	12.4				
15-Apr	8.7	8.4	7.8	7.7	7.7	7.0	7.5	9.2	10.9	11.6	11.0	11.5	11.5	11.4	11.4	10.8	10.6	9.9	9.0	7.5	6.3	5.1	4.1	2.4	8.7	11.6				
16-Apr	3.2	3.2	2.6	1.1	0.6	0.4	0.5	0.9	0.8	1.0	1.7	2.0	2.2	2.5	2.6	2.4	2.1	2.7	2.5	1.6	0.9	0.7	0.4	-0.1	1.6	3.2				
17-Apr	-0.3	-0.5	-0.8	-1.6	-1.9	-2.1	-2.4	-2.7	-2.8	-2.5	-2.8	-2.6	-2.3	-1.6	-1.5	-0.8	-0.5	-0.6	-0.9	-1.5	-2.5	-4.3	-4.2	-4.6	-2.0	-0.3				
18-Apr	-5.0	-5.3	-5.4	-5.6	-5.9	-5.9	-4.2	-2.1	0.5	3.3	5.6	7.5	8.8	9.7	10.2	10.8	11.5	11.4	10.4	9.5	9.2	9.2	9.1	9.2	4.0	11.5				
19-Apr	9.3	9.2	9.6	9.2	6.9	6.8	8.0	8.1	8.3	9.6	9.7	9.2	9.9	10.5	10.7	10.6	10.9	9.6	9.2	7.8	4.8	4.1	2.7	1.8	8.2	10.9				
20-Apr	0.7	-0.3	-0.3	-0.1	0.0	-0.2	-0.2	0.0	0.7	1.9	3.2	3.6	4.7	5.1	5.6	6.0	5.9	5.8	5.2	3.9	2.3	1.0	0.4	0.1	2.3	6.0				
21-Apr	-0.5	-1.1	-1.5	-2.4	-3.2	-3.6	-1.1	1.3	3.9	5.5	6.7	7.7	8.6	9.4	10.0	10.3	10.4	10.3	9.4	7.5	5.4	4.2	3.0	2.2	4.3	10.4				
22-Apr	1.6	1.2	1.5	1.5	1.3	0.9	2.1	4.4	5.1	5.7	6.7	7.6	8.3	9.1	10.2	10.8	9.0	9.7	9.7	8.8	6.8	4.5	3.2	3.0	5.5	10.8				
23-Apr	3.1	4.2	4.0	3.6	3.3	2.3	2.5	4.4	6.0	8.9	9.7	10.4	11.2	11.1	10.2	11.4	11.4	11.3	10.5	8.5	5.8	4.9	3.7	1.5	6.8	11.4				
24-Apr	1.2	0.7	-0.3	-1.3	-2.2	-2.2	1.7	6.5	9.6	11.1	12.2	12.5	12.9	13.2	13.8	14.3	14.1	14.0	13.4	12.1	7.9	4.8	3.6	3.1	7.4	14.3				
25-Apr	2.5	3.4	3.5	4.4	4.6	5.1	7.6	10.1	13.1	15.3	17.0	18.2	18.9	19.5	19.8	19.8	19.7	19.3	18.7	17.3	15.2	14.0	13.1	12.5	13.0	19.8				
26-Apr	11.8	11.3	10.7	9.8	9.1	8.6	9.7	10.4	12.0	15.1	17.3	19.0	20.1	20.8	20.8	20.7	19.6	15.7	13.6	11.4	8.9	7.4	5.9	4.0	13.1	20.8				
27-Apr	2.4	1.5	0.9	0.4	-0.6	-1.2	-0.3	-0.2	0.8	1.7	2.6	3.4	3.4	3.9	4.4	4.6	5.0	4.4	4.0	2.4	0.6	-1.5	-3.4	-5.1	1.4	5.0				
28-Apr	-5.8	-6.5	-6.6	-5.3	-5.7	-4.1	-0.7	2.9	6.4	8.5	9.9	11.1	12.1	13.2	13.9	14.1	14.0	13.7	13.4	12.4	12.3	12.2	11.5	10.6	6.5	14.1				
29-Apr	10.4	9.1	8.5	8.7	8.7	8.5	8.9	10.5	12.0	12.7	13.2	13.2	12.7	12.7	12.8	12.7	12.1	11.0	8.4	8.0	6.8	5.3	4.3	4.0	9.8	13.2				
30-Apr	3.8	2.9	3.6	3.4	4.1	4.5	5.1	6.2	6.9	8.3	9.3	10.3	11.5	12.3	10.9	11.1	10.0	6.9	7.2	6.4	5.6	5.9	5.4	4.4	6.9	12.3				
																									Diurnal Average					
																									Diurnal Maximum					



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Monday Creek - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	174	24.17	24.17
0 - 10	377	52.36	76.53
10 - 20	165	22.92	99.44
> 20	4	0.56	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) - %

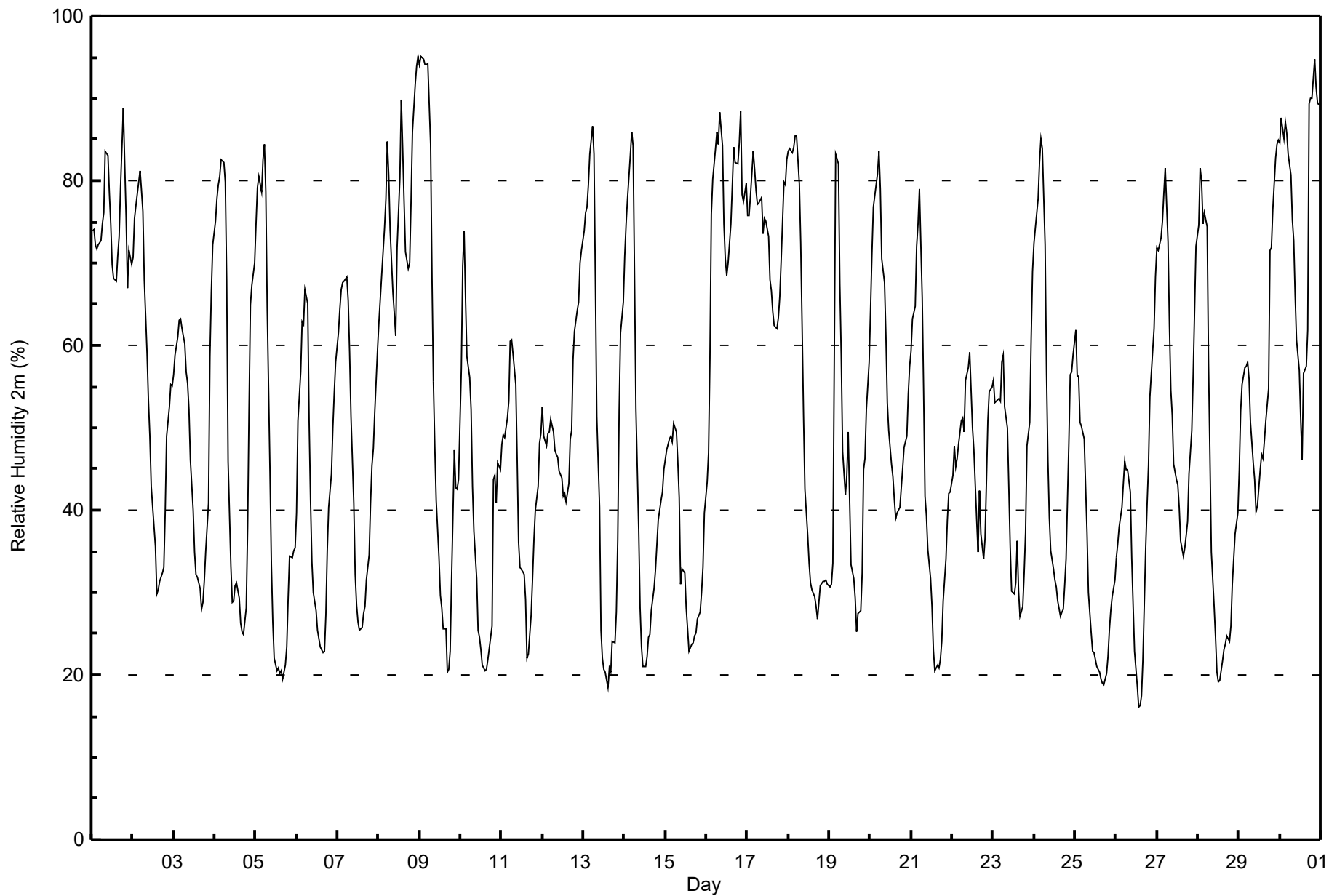
Monday Creek - April 2025

Maximum Value: 95.1 % on Apr 9 00:00																				Maximum Daily Average: 76.6 % on Apr 8					Hours in Service: 720				
Minimum Value: 16.1 % on Apr 26 14:00																				Minimum Daily Average: 32.6 % on Apr 25					Hours of Data: 720				
Maximum Diurnal Average: 72.0 % at hour 6																				Minimum Diurnal Average: 34.7 % at hour 16					Hours of Missing Data: 0				
Monthly Average: 51.52 %																				Percentiles: P ₁ = 19.1 P ₁₀ = 25.0 Q ₁ = 32.9 Median = 49.2 Q ₃ = 70.0 P ₉₀ = 80.9 P ₉₉ = 94.0					Hours of Calibration: 0				
																				Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	74.0	74.0	72.2	71.7	72.1	72.8	74.7	76.0	83.5	83.1	78.5	74.8	69.8	68.2	67.8	70.9	73.2	79.1	88.8	82.1	75.5	66.9	71.6	69.9	74.6	88.8			
2-Apr	70.6	75.5	76.9	79.8	81.2	78.8	76.2	68.0	59.0	53.2	49.0	42.9	37.9	35.6	29.9	30.4	31.4	32.4	33.1	39.7	49.0	52.5	55.3	55.0	53.9	81.2			
3-Apr	56.4	58.8	61.0	63.0	63.2	62.0	60.1	56.7	55.5	52.2	46.1	40.0	34.9	32.2	31.9	30.4	27.9	28.9	31.5	35.1	40.9	58.6	66.4	72.3	48.6	72.3			
4-Apr	75.2	77.9	79.6	80.6	82.6	82.2	79.9	68.0	45.9	33.3	28.9	29.1	30.9	31.2	29.4	26.3	25.2	25.0	28.2	38.0	52.3	64.9	67.2	70.0	52.1	82.6			
5-Apr	74.7	79.1	80.5	78.6	82.5	84.4	78.6	64.6	44.6	33.5	26.4	22.0	20.4	20.9	20.2	20.6	19.5	21.1	23.5	29.3	34.4	34.3	35.0	35.4	44.3	84.4			
6-Apr	39.7	50.9	56.8	62.9	62.6	66.8	65.1	51.1	41.3	33.7	30.1	27.7	25.5	24.5	23.4	22.7	22.8	27.3	35.2	40.4	44.3	50.0	54.3	57.9	42.4	66.8			
7-Apr	61.5	64.4	66.7	67.7	67.8	68.3	65.5	59.1	51.4	40.9	32.2	28.5	26.4	25.3	25.8	27.4	28.3	31.6	34.5	40.8	45.5	47.4	51.9	59.5	46.6	68.3			
8-Apr	62.9	65.8	68.6	74.2	77.8	84.8	80.7	74.1	66.5	64.0	61.1	71.9	80.4	89.9	83.8	77.4	71.3	69.4	70.1	77.4	85.9	91.6	93.9	95.1	76.6	95.1			
9-Apr	94.1	95.0	94.7	94.2	94.1	94.2	84.5	68.2	55.6	47.8	41.2	34.3	29.6	28.1	25.6	25.5	20.4	20.7	22.9	31.5	47.3	42.7	42.6	43.7	53.3	95.0			
10-Apr	57.1	69.7	73.8	65.7	58.7	56.1	52.2	42.9	37.5	31.7	25.5	24.5	23.0	21.1	20.6	20.8	21.9	23.3	26.0	43.7	44.2	40.9	45.8	45.0	40.5	73.8			
11-Apr	48.0	49.1	48.8	51.2	53.3	60.5	60.7	59.0	55.3	46.0	36.1	33.0	32.6	32.2	29.2	22.1	22.5	27.3	31.8	36.5	40.0	42.9	48.1	49.3	42.3	60.7			
12-Apr	52.5	48.9	47.8	49.4	49.5	51.1	49.4	47.2	46.8	46.4	44.8	43.9	41.7	42.0	41.0	43.2	48.6	49.7	58.3	61.6	64.3	65.3	69.9	71.5	51.5	71.5			
13-Apr	74.0	76.1	76.9	79.6	83.3	86.6	83.3	67.7	51.4	40.3	25.5	22.0	20.7	20.4	18.6	20.9	20.4	24.1	23.9	27.5	36.4	52.0	61.6	65.2	48.3	86.6			
14-Apr	70.9	74.7	77.8	83.0	85.9	84.2	68.7	52.4	37.6	28.2	23.5	21.0	21.1	22.3	24.6	25.0	27.8	30.5	32.8	35.7	38.7	41.2	42.2	44.9	45.6	85.9			
15-Apr	46.1	47.3	48.6	49.0	48.2	50.5	49.5	46.0	41.5	30.9	33.0	32.4	28.2	25.6	22.9	23.8	23.9	24.8	25.1	26.8	27.6	30.1	33.0	39.7	35.6	50.5			
16-Apr	43.5	46.9	58.4	75.9	80.2	83.9	85.9	84.4	88.3	84.2	74.8	70.5	68.5	70.0	74.8	79.3	84.1	82.2	82.0	84.5	88.5	78.2	77.5	79.6	76.1	88.5			
17-Apr	75.7	75.7	78.1	83.5	81.4	78.8	77.1	77.3	78.0	73.6	75.4	75.1	73.2	68.0	66.5	64.1	62.3	62.0	63.4	65.9	70.3	79.8	79.6	82.6	73.6	83.5			
18-Apr	83.6	84.0	83.4	84.1	85.4	85.5	79.7	72.4	62.2	51.5	42.5	37.0	33.6	31.2	30.3	29.5	28.4	26.8	28.9	30.8	31.3	31.3	31.6	31.0	50.7	85.5			
19-Apr	30.6	31.0	33.6	57.8	83.2	82.1	67.5	58.7	47.0	41.9	44.2	49.5	41.3	33.4	31.7	29.3	25.3	27.4	27.8	32.4	45.0	46.3	52.3	57.9	44.9	83.2			
20-Apr	64.5	71.3	76.8	79.4	80.9	83.5	79.0	70.6	67.6	61.3	53.1	49.6	45.6	44.1	41.4	39.0	39.6	40.3	42.8	45.0	47.7	48.9	54.1	57.5	57.6	83.5			
21-Apr	59.3	63.2	64.8	72.1	74.7	79.1	65.8	54.5	41.8	39.3	35.3	31.7	28.3	23.0	20.5	21.2	20.8	21.8	24.1	29.0	34.1	38.7	42.0	42.2	42.8	79.1			
22-Apr	44.3	47.8	45.3	46.3	48.0	50.8	51.2	49.5	55.7	57.2	59.1	54.6	50.0	47.2	38.9	35.0	42.3	37.1	34.1	36.7	43.6	50.8	54.5	54.9	47.3	59.1			
23-Apr	55.8	53.1	53.3	53.5	53.2	57.9	58.8	52.5	50.0	42.8	35.6	30.2	29.8	31.3	36.2	30.1	27.0	28.3	32.4	37.3	47.8	50.7	60.7	69.0	44.9	69.0			
24-Apr	72.3	74.2	77.8	82.2	85.1	83.8	72.3	56.7	46.1	39.2	35.1	32.9	31.5	30.6	28.9	27.2	27.6	27.9	30.8	34.1	48.1	56.5	56.8	58.8	50.7	85.1			
25-Apr	61.8	56.3	56.2	50.7	50.1	48.6	42.8	37.3	30.0	25.1	22.9	22.7	21.9	21.1	20.4	19.5	19.0	18.9	20.2	22.2	25.4	27.7	29.5	31.6	32.6	61.8			
26-Apr	34.2	35.9	37.9	40.4	43.1	46.0	44.9	44.9	42.3	34.2	28.4	22.9	18.6	16.1	16.3	17.4	21.9	35.4	40.7	45.4	53.6	59.3	62.0	68.2	37.9	68.2			
27-Apr	71.9	71.5	73.0	75.0	78.5	81.6	72.5	62.3	54.5	51.5	45.7	43.8	43.0	40.4	36.3	34.4	35.5	37.0	38.7	44.4	49.6	56.4	64.3	72.0	55.6	81.6			
28-Apr	74.6	81.6	80.0	74.8	76.1	74.4	57.7	46.5	35.0	28.2	24.6	20.4	19.1	19.3	21.7	23.1	23.7	24.7	24.1	26.0	31.0	34.0	37.1	39.7	41.6	81.6			
29-Apr	44.9	52.0	55.3	57.3	57.5	57.9	55.9	50.7	45.7	43.6	39.8	40.5	44.9	46.7	46.3	48.4	50.9	54.7	71.5	71.8	76.5	82.7	84.3	84.9	56.9	84.9			
30-Apr	84.7	87.6	85.1	87.1	85.7	83.2	80.6	75.3	72.8	66.1	60.8	57.0	51.0	46.1	56.7	57.5	61.9	89.3	90.0	89.9	94.7	91.3	89.6	89.1	76.4	94.7			
Diurnal Average																													
Diurnal Maximum																													



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Monday Creek - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	11	1.53	1.53
20 - 40	236	32.78	34.31
40 - 60	219	30.42	64.72
60 - 80	174	24.17	88.89
80 - 100	80	11.11	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

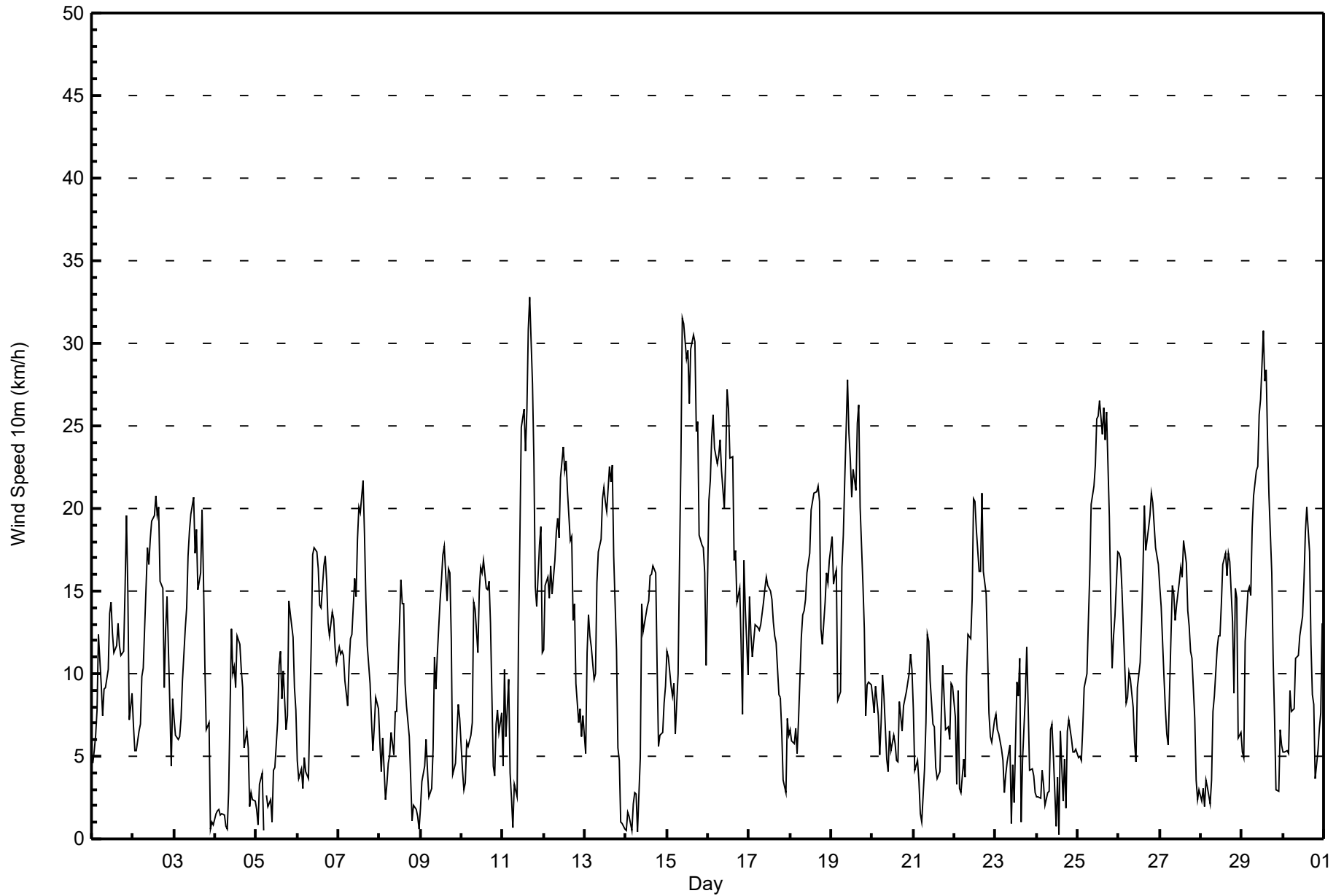
Monday Creek - April 2025

Maximum Speed: 33 km/h on Apr 11 17:00																Maximum Daily Speed Average: 18.6 km/h on Apr 16										Hours in Service: 720			
Minimum Speed Value: 0 km/h on Apr 24 14:00																Minimum Daily Speed Average: 1.0 km/h on Apr 24										Hours of Data: 719			
Maximum Diurnal Speed Average: 10.7 km/h at hour 15																Minimum Diurnal Speed Average: 0.6 km/h at hour 21										Hours of Missing Data: 1			
Monthly Average Velocity: 4.9 km/h 271.7 deg																Percentiles: P ₁ = 1 P ₁₀ = 3 Q ₁ = 6 Median = 11 Q ₃ = 16 P ₉₀ = 21 P ₉₉ = 30										Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
1-Apr	SE5	SSE5	SSE6	S8	S12	S9	SSE7	SSE9	SSE9	S10	SSW14	SSW14	SSW12	S11	SSW12	SSW13	SW12	SW11	W11	NW15	NW20	NNW15	NW7	NW9	SSW5.9	NW20			
2-Apr	NW7	W5	W5	W7	W7	W10	W10	NNW13	NNW18	NNW17	NNW18	NNW19	NNW20	NNW21	NW20	NNW20	NNW16	NNW15	NNW9	NNE13	NNE15	NNE8	NNW4	NW9	NW10.6	NNW21			
3-Apr	NW7	NW6	NW6	NW6	NW7	NNW10	NNW13	NW14	NW17	NNW19	NW20	NNW21	NNW17	NNW19	N15	NNW16	NW20	NNW16	N11	N7	NE7	ESE1	SW1	S1	NNW10.9	NNW21			
4-Apr	SSW2	S2	S2	S1	W2	SE1	ENE1	ENE1	W3	W13	NNW10	NW10	NW9	NW12	NW12	NW10	NW9	N5	NNE6	ENE6	ESE2	SE3	ESE2	E2	NW3.1	W13			
5-Apr	SE2	S1	E3	E4	SE0	UO	E3	SSE2	E2	SE1	ENE4	E4	SW7	NNW11	NNW11	NNW8	NW10	NNW7	NNW7	NE14	ENE14	E12	ESE9	ESE8	NE1.9	NE14			
6-Apr	ESE5	ENE4	ENE4	ENE3	E5	ENE4	ENE4	ENE8	ESE12	SE17	SE18	SE17	SE16	SSE14	SSE14	SSE17	SSE17	SSE16	SSE13	SSE12	SSE14	SSE13	SSE12	SSE11	SE10.1	ESE18			
7-Apr	SSE12	SSE11	SSE11	SSE11	SSE10	SSE8	SSE11	SSE12	SSE12	SSE16	SSE15	SSE18	SSE20	SSE20	SSE22	SSE18	S15	S12	SSE9	S7	SSE5	SE7	SE9	SSE8	SSE12.3	SSE22			
8-Apr	SE6	SE4	SE6	ESE2	SSE3	ESE5	SSE5	S6	WSW5	NW8	N8	W10	NW16	NNW14	NNW14	NW9	NNW8	N6	NNE4	SSW1	E2	SSE2	SSE1	E1	NNW2.1	NW16			
9-Apr	SW2	SSW3	WSW4	W6	W4	W3	W3	NNW5	NNW11	NNW9	NNW11	NNW14	NNW16	NNW17	NNW18	NNW14	NNW16	NNW16	NNW12	NNW4	WSW5	WSW6	WSW8	WSW7	NNW8.5	NNW18			
10-Apr	SW4	SSW3	SW3	WSW6	WSW6	SW6	WSW7	W14	W14	W11	W15	WSW16	WSW16	WSW17	WSW15	WSW15	SW16	WSW13	SW4	ESE4	SE7	SE8	ESE6	ESE8	WSW7.5	WSW17			
11-Apr	SE4	ESE10	E6	E10	SE4	ENE2	ESE1	W3	WSW3	NNW12	NW18	NNW25	NNW26	NNW23	NNW26	W31	W33	NNW28	NNW23	NNW15	W14	W18	W19	W11	NNW12.0	W33			
12-Apr	WSW11	W15	W16	WSW15	W17	W15	W17	W19	W19	W18	W22	NNW24	NNW22	NNW23	NW21	NW18	NW18	NW13	NNW14	NNW9	NNW7	NNW8	W6	W7	NNW14.5	NNW24			
13-Apr	NNW5	NNW11	NNW14	NNW12	NNW12	W10	W10	NNW16	NW17	NW18	NW21	NW21	NW20	NW20	NW23	NW22	NW23	NW17	NW11	NW5	NW5	NNE1	SSW1	SE1	NW12.6	NW23			
14-Apr	S0	SSE2	SE1	S1	SSE2	S3	SW3	SSE0	NNW5	W14	W13	WSW13	SW14	WSW14	WSW16	SW16	SW17	SW16	SW10	SSE6	SSE6	SSE6	S8	S9	SW6.8	SW17			
15-Apr	SSW11	SSW11	SSW9	SSW9	SSW9	SSW6	SW10	WSW17	W23	W32	W31	W29	NNW30	NNW26	NNW30	NNW31	NNW30	NNW25	NNW25	W18	W18	W18	W16	W11	W17.7	W32			
16-Apr	W21	NNW22	NNW24	NNW26	NNW24	NNW23	NNW23	NNW24	NNW22	NW20	NW23	NW27	NW26	NW23	NW23	NNW17	NNW17	NNW14	NNW15	N12	N8	NNW17	NW14	NW10	NW18.6	NW27			
17-Apr	NNW15	NNW12	NNW11	NNE13	N13	N13	N13	NNW14	N15	N16	N15	N15	N15	N14	NNE13	NNW12	NNW12	NE9	NE9	ENE7	NE4	SE3	SE7	SE6	N9.4	N16			
18-Apr	SSE7	SSE6	S6	S7	S5	S7	SSW12	SSW14	SSW14	SSW14	SSW16	SSW17	SSW20	SSW20	SSW21	SSW21	SSW21	SSW20	S13	S12	S14	S16	SSW15	SSW17	SSW13.8	SSW21			
19-Apr	SSW18	SW15	WSW16	W16	SSW8	WSW9	WSW16	W18	W22	NNW28	NNW25	NNW23	NNW21	NNW22	NNW21	NNW25	NNW26	W20	NNW15	NNW13	W7	NNW9	W10	W9	W15.5	NNW28			
20-Apr	W9	W8	W9	NW7	N5	N7	N10	N9	N5	NNE4	N7	NNW5	NNW6	NNE6	N5	NNE5	NE8	ENE7	ENE8	NE8	ENE9	ENE10	ESE11	SE10	NNE4.0	ESE11			
21-Apr	SE8	E4	ESE5	ENE3	ENE2	ENE1	ENE4	ESE7	ESE12	ESE12	SE10	SE7	ESE7	SSE4	ESE4	E4	NE8	E10	SE9	SSE7	SSE7	SSE6	SE9	SSE9	ESE5.8	ESE12			
22-Apr	SSE7	S3	SSW9	S3	SSW3	SSW5	S4	SW10	WSW12	W12	WSW14	WSW21	WSW20	WSW19	W16	SW16	SW21	WSW16	WSW15	WSW11	SW8	SSW6	S6	S7	SW10.0	SW21			
23-Apr	SSW8	WSW7	S6	SW5	SW5	WSW3	W4	NNW5	WSW6	ESE1	W4	WSW2	ENE10	NNE9	NW11	N1	SSW5	NE9	NNE12	NE8	N4	W4	NW4	SE3	NW1.3	NNE12			
24-Apr	SSE3	SSW3	WSW2	S4	SSW3	SSW2	S3	W3	NW7	NNW7	ENE5	SSE1	SW4	NNW0	WSW7	W2	NW5	E2	E7	E7	ESE6	ESE5	SE5	SE5	SSE1.0	E7			
25-Apr	SSE5	SSE5	S5	S7	S9	S10	SSW13	SSW16	SSW20	SSW21	SSW23	SSW25	SSW26	SSW27	SSW24	SSW26	SSW24	SW26	SSW19	SSW14	S10	S12	SSW13	SSW17	SSW16.4	SSW27			
26-Apr	SSW17	SSW17	SSW15	S10	S8	S9	SSW10	SSW10	SW8	WSW6	W5	NW9	NW11	NW13	NW16	NW20	NNW17	NNE19	NNE20	NNE21	NNE20	NNE18	NNE17	NNE17	NW4.6	NNE21			
27-Apr	NNE15	NNE14	NNE10	N8	N6	NW6	NNW12	NNW15	NNW15	N13	N14	N16	N16	N16	NNW18	N17	N14	NNE13	NE11	ENE11	E7	E4	E2	SSE3	N9.9	NNW18			
28-Apr	SE2	ENE3	ESE2	ESE4	ESE3	ESE2	S4	SSW8	SSW9	SW12	SSW12	SSW12	SSW14	SSW17	SSW17	SSW16	SSW17	SSW17	SSW13	S9	SSW15	SW15	S6	SSW6	SSW8.9	SSW17			
29-Apr	WSW5	SSE5	SW12	WSW15	WSW15	WSW15	W19	W21	NNW22	W23	NNW26	NNW27	W31	NW28	NW28	NW24	NW21	NNW16	NW11	NNW7	NW3	W3	W7	WSW6	NNW14.3	W31			
30-Apr	WSW5	SW5	WSW5	SW5	WSW9	SW8	WSW8	W11	W11	NNW11	W12	W14	W16	NNW19	NNW20	NNW17	NNW12	NE9	NNE8	NNE4	NNW5	NW7	NNW8	NNE13	NNW7.6	NNW20			
SW3.0 SW2.9WSW3.6WSW3.2WSW3.6WSW3.4WSW4.3 W5.9 W7.0 W7.7 W8.1 W9.3 W9.4NNW9.9NNW10.7 W9.5NNW9.2NNW5.5NNW3.8NNW1.7NNW0.6 SW1.1 SW2.0SSW2.3																								Diurnal Average					
W21NNW22NNW24NNW26NNW24NNW23NNW23NNW24 W23 W32 W31 W29 W31 NW28NNW30 W31 W33NNW28NNW25 NNE21 NNE20 W18 W19 SSW17																								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
Monday Creek - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Monday Creek - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	167	23.23	23.23
6 - 11	223	31.02	54.24
12 - 19	228	31.71	85.95
20 - 28	91	12.66	98.61
29 - 38	10	1.39	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
Monday Creek - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	6	5	1	16	13	16	16	17	15	12	11	10	15	5	6	3	167
6 - 11	11	6	10	9	6	9	14	23	23	15	9	16	23	13	26	10	223
12 - 19	18	13	1	1	1	4	3	17	8	34	10	23	27	26	18	24	228
20 - 28	0	3	0	0	0	0	0	3	0	15	2	2	7	35	23	1	91
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	0	10
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	27	12	26	20	29	33	60	46	76	32	51	78	83	73	38	719

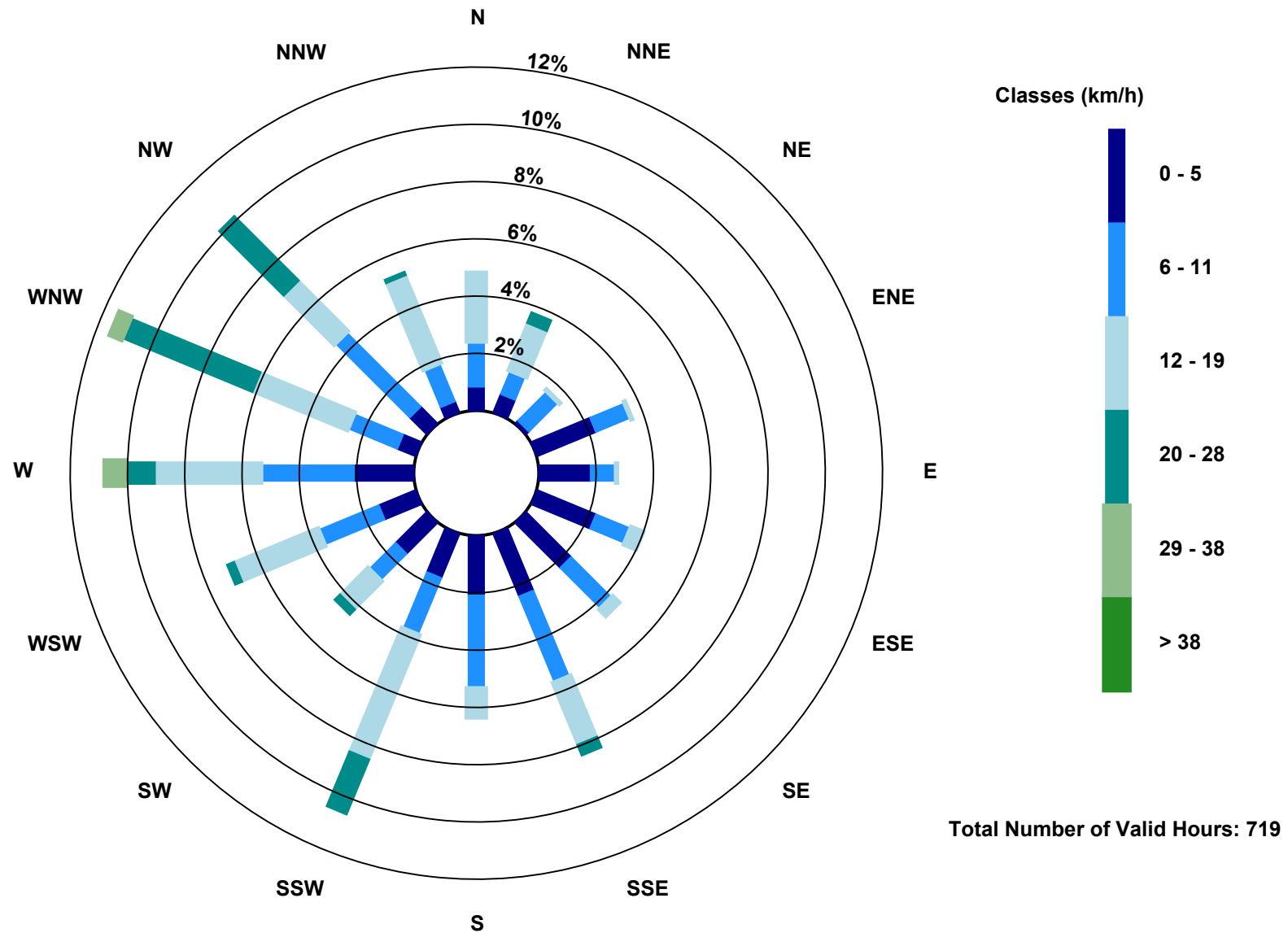
Total Number of Valid Hours: 719

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Monday Creek





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Monday Creek - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 25 13:00																	Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9									
Minimum Value: 1 km/h on Apr 9 06:00																										
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 7																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1	1	2	2	3	3	2	2	3	3	4	3	3	3	3	3	3	3	6	5	5	5	2	2	6	
2-Apr	2	1	1	1	1	2	2	3	4	4	4	5	4	5	6	6	5	4	3	5	4	3	2	3	6	
3-Apr	2	2	1	1	2	3	4	5	4	5	5	5	5	4	4	5	5	4	3	1	2	2	1	1	5	
4-Apr	1	1	1	1	1	1	1	1	2	3	3	4	3	4	4	3	3	2	2	1	1	1	1	1	4	
5-Apr	1	1	1	1	1	UO	2	1	1	1	1	2	4	4	3	4	3	2	2	2	2	2	2	2	4	
6-Apr	1	1	1	2	1	1	2	2	4	4	4	4	4	4	4	4	4	4	3	3	4	3	4	3	4	
7-Apr	3	3	3	3	3	3	3	3	4	4	5	5	5	5	6	5	4	4	2	2	2	2	2	2	6	
8-Apr	2	2	1	3	1	2	1	2	1	3	3	3	4	4	4	3	3	2	2	2	1	2	1	1	4	
9-Apr	2	1	2	2	2	1	1	5	2	3	4	4	5	5	5	4	5	5	5	2	2	1	1	3	5	
10-Apr	1	1	1	1	1	1	3	3	3	3	4	5	5	5	5	5	4	3	2	2	1	2	1	1	5	
11-Apr	2	5	2	3	2	2	2	2	2	4	6	6	6	5	6	7	7	7	5	3	3	6	5	2	7	
12-Apr	3	4	3	4	4	3	3	4	5	4	5	5	5	6	5	5	5	4	4	2	2	3	1	1	6	
13-Apr	1	2	2	2	2	2	2	3	4	5	6	6	5	5	6	6	5	4	3	2	1	2	2	1	6	
14-Apr	1	1	1	1	1	1	1	1	3	4	4	5	5	4	5	5	5	4	4	1	1	1	2	2	5	
15-Apr	2	3	2	3	3	2	3	4	6	7	7	6	7	7	8	6	7	7	6	4	4	3	3	2	8	
16-Apr	5	8	7	5	5	5	5	5	5	5	7	8	7	6	7	6	6	4	4	4	3	5	5	3	8	
17-Apr	6	4	3	3	4	3	4	4	4	4	4	3	4	4	3	3	3	2	2	1	2	2	2	2	6	
18-Apr	1	2	1	2	1	2	4	4	4	4	4	5	6	6	6	6	5	6	4	3	4	4	4	5	6	
19-Apr	5	4	4	5	2	3	4	4	6	6	6	7	5	6	6	6	6	6	4	5	2	4	2	2	7	
20-Apr	1	2	1	2	2	2	2	2	2	3	3	3	3	3	3	3	2	2	1	1	1	2	2	2	3	
21-Apr	2	2	1	1	2	1	1	3	3	3	4	4	4	4	4	3	3	3	3	1	2	1	2	2	4	
22-Apr	2	2	3	2	2	2	3	4	3	3	4	5	5	5	5	5	7	4	4	4	1	1	1	2	7	
23-Apr	2	3	1	2	1	2	1	1	2	2	3	2	5	5	4	3	2	4	2	1	2	2	2	1	5	
24-Apr	3	2	1	1	1	2	1	2	2	3	3	3	3	3	3	3	3	1	2	1	1	2	1	1	3	
25-Apr	1	1	1	2	2	3	3	5	5	6	7	7	8	8	7	7	7	7	6	4	3	3	3	4	8	
26-Apr	4	4	4	3	2	2	3	3	3	3	3	5	4	5	5	5	5	5	4	5	5	4	5	4	5	
27-Apr	3	3	2	2	1	1	4	3	4	4	4	4	5	4	5	5	4	3	3	3	1	2	1	1	5	
28-Apr	1	1	2	1	1	1	1	3	2	3	4	4	5	6	6	4	5	4	4	3	5	5	3	2	6	
29-Apr	3	2	4	3	4	4	4	5	5	5	6	7	7	8	7	7	6	5	5	2	2	2	1	1	8	
30-Apr	1	1	1	3	2	2	2	2	2	2	2	3	3	4	7	4	5	4	2	2	2	1	2	3	7	
Diurnal Maximum																										
UO - Unstable Operation																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

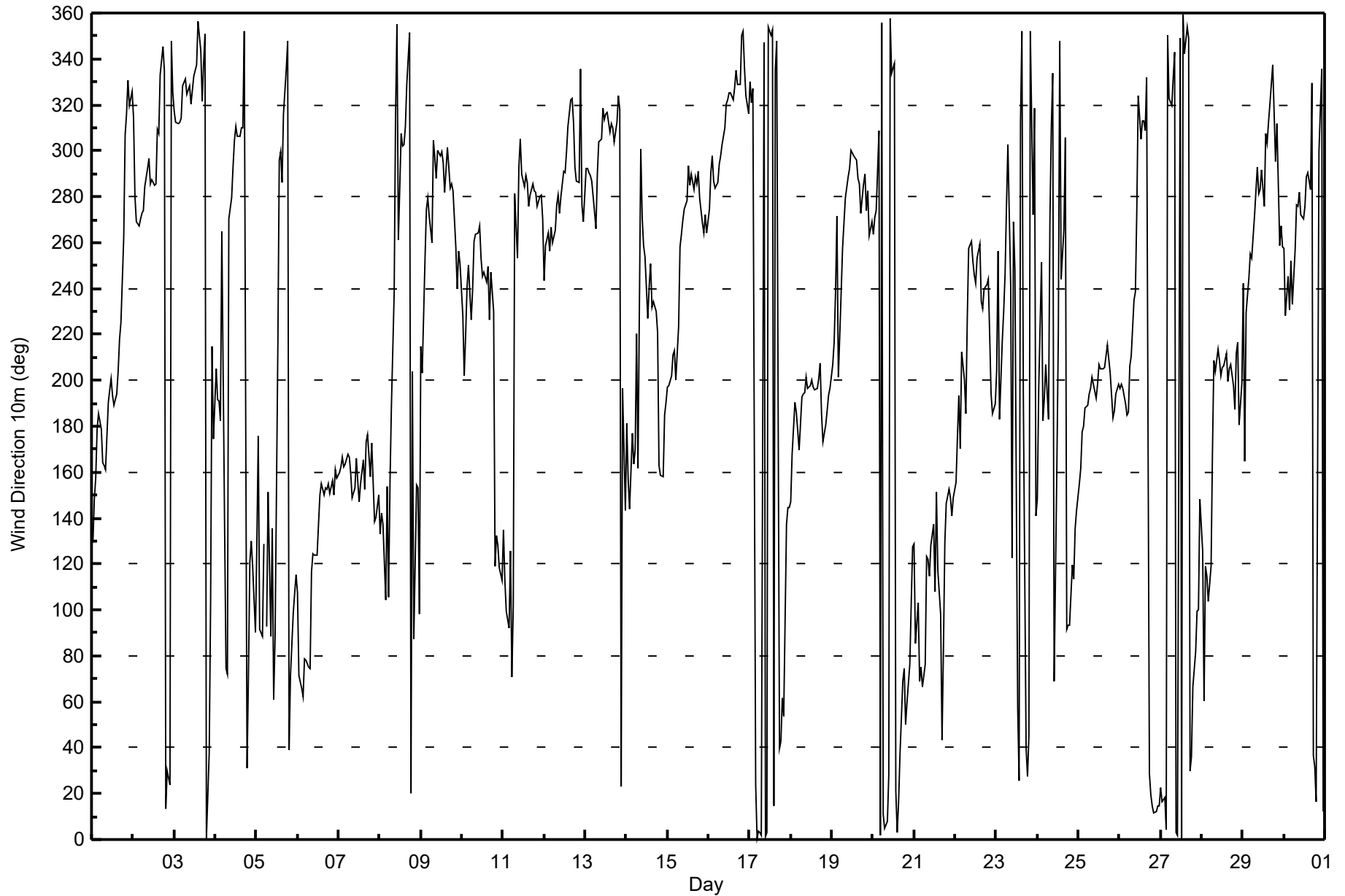
Monday Creek - April 2025

Direction of Maximum Speed: 281 deg on Apr 11 17:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 310.8 deg on Apr 16																				Hours of Data:		719			
Direction of Minimum Speed: 348 deg on Apr 24 14:00										Direction of Minimum Daily Speed Average: 1.0 deg on Apr 24										Hours of Missing Data:		1			
Monthly Average Direction: 271.7 deg																				Percent Operational Time:		99.9			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	129	148	157	178	185	179	164	163	161	191	196	201	193	189	194	204	218	225	262	307	316	331	320	326	212.5
2-Apr	314	280	269	267	270	273	274	284	292	296	286	287	285	286	309	308	333	345	335	14	30	24	348	325	306.2
3-Apr	317	312	312	313	314	328	331	324	326	328	320	332	335	337	356	344	322	338	351	1	38	104	215	175	332.7
4-Apr	205	191	191	182	265	135	74	72	270	279	293	304	310	307	306	310	310	352	31	72	121	130	119	90	308.0
5-Apr	128	176	91	88	129	UO	93	151	89	135	61	88	216	296	300	286	316	336	348	39	71	99	108	115	43.2
6-Apr	107	71	66	62	79	78	75	74	117	125	124	124	137	150	155	150	153	153	155	151	156	150	161	157	136.3
7-Apr	160	162	167	162	164	168	166	159	149	153	166	156	147	155	165	153	173	176	158	173	156	139	140	150	159.0
8-Apr	133	142	137	105	154	106	155	188	238	316	355	261	307	302	303	311	329	351	20	204	87	155	153	98	299.7
9-Apr	215	203	253	275	280	272	260	304	297	288	300	298	300	295	282	301	293	284	286	283	258	240	256	251	284.2
10-Apr	228	202	220	240	250	226	240	261	264	264	267	253	245	247	243	250	227	247	230	119	132	128	119	113	238.9
11-Apr	135	113	99	92	126	71	102	281	253	293	305	290	284	289	286	276	281	286	283	282	276	280	281	270	283.5
12-Apr	243	259	264	256	267	260	266	276	281	273	280	291	291	300	310	322	323	313	293	287	286	336	277	269	284.9
13-Apr	292	292	290	289	287	273	266	290	304	305	318	314	316	316	308	312	310	304	313	324	318	23	196	143	304.2
14-Apr	181	157	144	177	163	170	220	161	301	271	259	254	227	241	251	232	235	230	221	163	159	158	185	191	228.4
15-Apr	197	197	202	211	213	200	223	258	264	269	275	278	293	285	290	283	289	286	291	279	268	264	272	264	270.4
16-Apr	275	290	298	287	284	286	294	298	303	310	320	322	325	325	322	328	335	329	329	350	352	336	324	316	310.8
17-Apr	330	321	327	24	1	4	3	2	347	2	3	354	350	353	14	335	348	40	42	61	54	137	145	145	1.0
18-Apr	147	168	191	186	178	170	193	194	195	202	196	198	200	197	196	196	201	208	185	173	181	187	193	196	192.5
19-Apr	207	216	239	272	201	238	258	268	280	289	292	300	299	298	296	288	285	273	285	290	274	283	263	269	275.5
20-Apr	264	271	274	309	2	356	11	5	8	28	358	334	338	22	3	17	37	69	75	50	60	76	102	128	20.9
21-Apr	129	86	103	69	75	67	76	123	122	114	128	137	108	151	117	98	43	83	129	147	153	149	141	149	118.9
22-Apr	156	176	194	171	212	200	186	227	258	260	252	246	242	253	259	235	231	240	242	244	220	194	185	190	233.6
23-Apr	204	256	183	217	230	246	276	303	241	122	269	248	57	25	312	352	195	40	28	45	352	272	319	141	308.8
24-Apr	148	197	252	183	192	207	183	270	310	334	69	165	221	348	244	266	306	92	93	93	120	113	135	143	160.2
25-Apr	155	162	177	180	188	189	194	196	202	195	192	198	207	205	205	206	210	216	203	193	184	187	194	198	198.7
26-Apr	196	198	197	190	185	186	206	211	235	239	274	324	305	313	313	309	332	29	20	15	12	12	15	15	323.3
27-Apr	23	16	18	4	350	323	320	332	343	3	2	349	1	360	342	354	349	30	36	66	82	99	100	148	3.8
28-Apr	126	60	119	115	104	119	169	209	204	214	209	202	206	206	212	199	205	207	198	187	212	216	181	199	200.7
29-Apr	242	165	229	245	255	253	263	271	293	281	283	292	276	308	304	312	320	338	317	295	312	259	267	258	285.3
30-Apr	258	228	245	231	252	233	257	276	276	282	272	270	276	289	291	283	329	37	32	17	300	318	335	12	289.0
214.1 228.6 236.6 246.7 244.7 245.8 255.1 266.6 274.4 276.6 280.5 278.6 277.5 284.1 283.9 280.2 285.0 288.3 298.8 335.0 287.9 232.4 216.9 203.8																									
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
Monday Creek - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Monday Creek - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720						
Maximum Value: 105 deg on Apr 21 15:00																			Hours of Data: 719						
Minimum Value: 7 deg on Apr 20 20:00																			Hours of Missing Data: 1						
Percentiles: P ₁ = 9 P ₁₀ = 13 Q ₁ = 16 Median = 20 Q ₃ = 27 P ₉₀ = 47 P ₉₉ = 91																			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-Apr	25	17	21	24	20	20	19	18	19	23	20	20	24	26	21	18	18	14	38	18	17	17	18	16	38
2-Apr	19	19	9	11	9	10	9	13	14	19	20	18	18	17	22	23	22	18	18	27	13	13	32	21	32
3-Apr	18	20	18	19	21	19	18	21	20	20	20	21	26	23	32	27	20	25	21	17	22	91	70	75	91
4-Apr	18	19	29	29	52	24	44	61	47	19	29	28	34	30	30	33	30	47	30	16	21	25	36	28	61
5-Apr	33	79	30	10	59	UO	66	28	63	90	45	57	57	32	27	42	23	21	15	12	13	10	13	13	90
6-Apr	22	25	16	30	11	15	38	11	18	15	16	14	17	25	22	18	17	18	16	15	16	16	19	19	38
7-Apr	17	18	19	17	20	22	21	17	17	17	22	19	17	19	20	18	22	19	17	24	15	17	11	14	24
8-Apr	16	29	20	63	46	28	19	25	41	36	44	23	19	17	19	19	29	24	43	77	67	58	38	31	77
9-Apr	41	17	22	15	32	41	21	51	15	19	29	24	24	23	20	25	22	13	12	12	18	12	10	15	51
10-Apr	16	17	18	15	15	12	16	12	16	23	21	27	27	24	25	24	20	18	42	30	9	11	11	11	42
11-Apr	57	30	25	15	68	79	93	48	58	15	20	16	14	19	19	17	14	12	10	10	11	11	10	10	93
12-Apr	12	14	11	15	11	13	11	13	16	15	15	18	15	18	21	19	18	18	12	9	18	28	9	13	28
13-Apr	30	11	11	11	13	10	11	14	17	19	22	24	20	20	22	20	20	20	23	29	34	78	76	65	78
14-Apr	83	46	32	90	62	47	24	101	39	23	32	26	25	25	20	21	17	20	22	19	15	18	18	18	101
15-Apr	16	16	17	23	20	28	17	16	16	14	15	19	18	21	17	16	14	13	13	11	11	11	16	13	28
16-Apr	15	16	16	12	11	11	12	14	15	17	18	17	18	17	17	18	22	22	20	25	30	17	16	18	30
17-Apr	20	18	20	14	21	20	19	20	20	22	20	20	21	24	18	23	26	33	18	21	35	47	13	14	47
18-Apr	14	21	19	21	21	19	20	20	22	22	22	21	22	21	20	20	19	19	20	19	21	20	20	20	22
19-Apr	17	21	20	19	18	18	16	12	13	14	17	18	18	20	16	13	18	13	14	30	8	13	10	9	30
20-Apr	8	8	11	23	24	22	17	23	48	68	55	61	53	65	67	70	23	22	19	7	9	15	13	14	70
21-Apr	16	42	40	18	52	60	23	21	17	24	39	62	63	87	105	78	47	21	23	11	16	15	15	14	105
22-Apr	16	88	22	56	64	35	46	22	24	24	20	17	18	21	25	21	17	16	16	15	10	19	13	14	88
23-Apr	17	44	19	33	31	41	18	28	25	99	73	88	50	40	39	96	40	48	15	8	42	18	44	47	99
24-Apr	66	75	43	15	15	30	26	47	34	41	81	104	77	98	48	91	67	78	21	12	12	18	15	13	104
25-Apr	13	21	21	20	18	18	18	18	17	22	22	20	22	19	22	20	21	18	17	16	17	18	17	16	22
26-Apr	17	16	18	21	24	18	19	18	35	65	76	58	45	38	20	19	25	13	14	16	16	16	15	17	76
27-Apr	15	14	15	16	18	17	18	16	22	30	27	25	25	29	24	25	27	23	20	10	12	19	17	15	30
28-Apr	28	24	56	37	41	28	21	22	29	28	28	36	33	28	27	27	21	18	18	22	17	26	34	34	56
29-Apr	53	43	21	13	14	15	14	17	15	15	15	19	17	19	17	19	21	23	34	16	56	32	10	12	56
30-Apr	12	19	21	26	13	21	17	13	12	13	16	17	19	18	16	15	48	31	14	58	22	18	28	16	58
83 88 56 90 68 79 93 101 63 99 81 104 77 98 105 96 67 78 43 77 67 91 76 75																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS505 SAWBONES BAY APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
APRIL 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	36.8	0	6.9	0
H2S (ppb) Average	686	34	34	100	4.3	0	0.8	0
NO2 (ppb) Average	655	33	33	100	23.5	0	9.1	-
NO (ppb) Average	655	33	33	100	17.7	-	4.4	-
NOX (ppb) Average	655	33	33	100	37.5	-	13.3	-
Temperature 2 m (C) Average	720	0	0	100	21	-	12.3	-
Relative Humidity (%) Average	720	0	0	100	97.1	-	80.6	-
Wind Speed 10 m (km/h) Average	718	0	2	99.72	36	-	21	-
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 - SAWBONES BAY (AMS505)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	1.24	3.3	-	0	0	0.1	0.3	0.8	2.9	36.8
H2S (ppb) Average	686	0.19	0.3	-	0	0	0.1	0.1	0.2	0.5	4.3
NO2 (ppb) Average	655	3.34	3.8	-	0.1	0.3	0.7	1.8	4.8	8.3	23.5
NO (ppb) Average	655	1.24	2.3	-	0	0	0.1	0.3	1.4	3.5	17.7
NOX (ppb) Average	655	4.58	5.8	-	0.1	0.4	0.8	2.2	6.2	12	37.5
Temperature 2 m (C) Average	720	4.18	6.8	-	-15.9	-4.4	-0.5	4.6	9.2	12.6	21
Relative Humidity (%) Average	720	52.35	20.5	-	16.7	26.2	34.1	51	69.3	81.8	97.1
Wind Speed 10 m (km/h) Average	718	12.8	7	-	0	5	7	12	17	22	36
Wind Direction 10 m (deg) Average	718	231.2	0	-	0	-	-	-	-	-	0

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SAWBONES BAY (AMS505)
APRIL 2025

OPERATIONAL NOTES

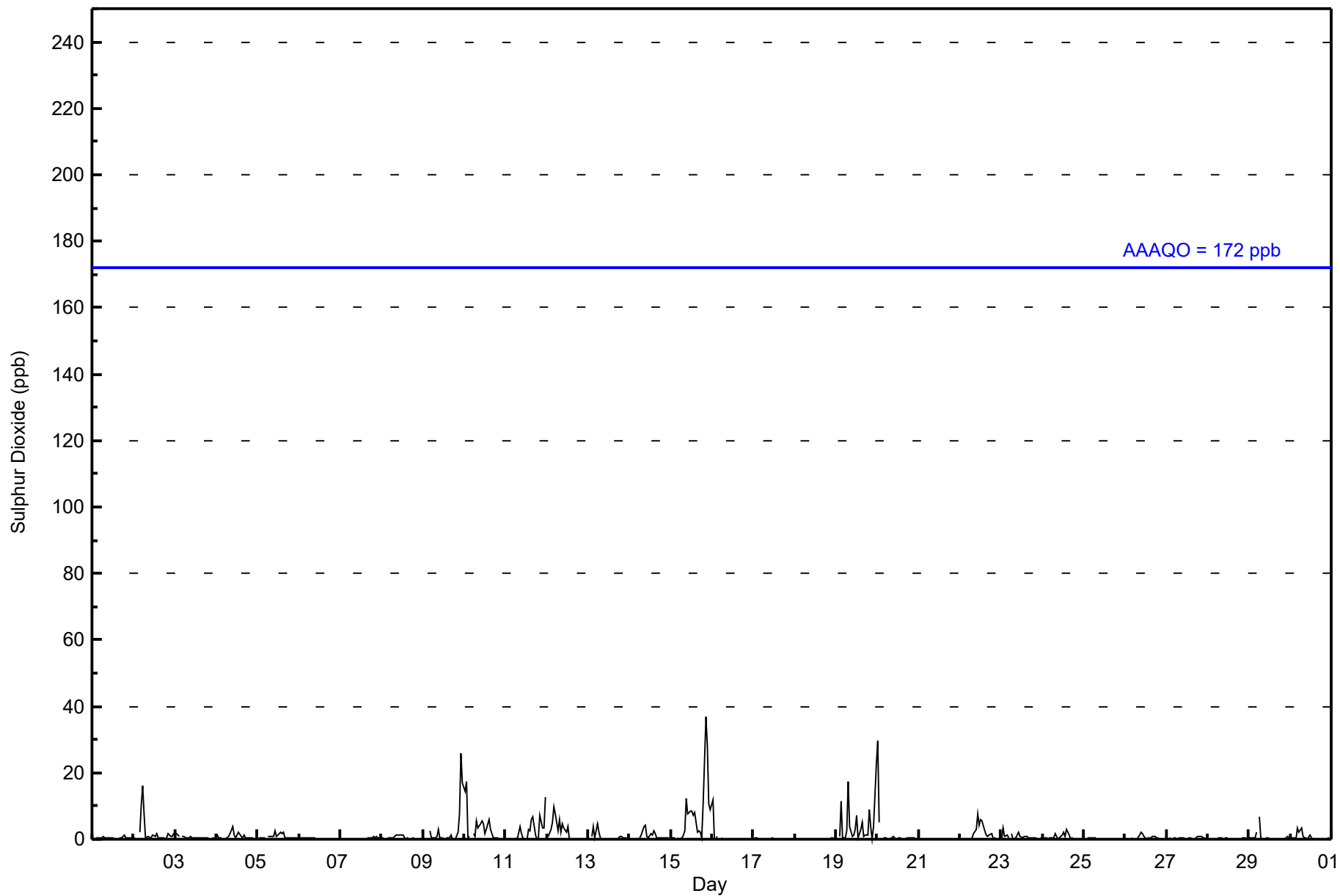
Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	11 Apr 2025 07:00	11 Apr 2025 08:00	2	Flat line in sensor output signal - Sensor frozen

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 36.8 ppb on Apr 15 21:00 Maximum Daily Average: 6.9 ppb on Apr 15																	Hours in Service: 720									
Minimum Value: 0.0 ppb on Apr 2 02:00 Minimum Daily Average: 0.1 ppb on Apr 18 Maximum Diurnal Average: 2.4 ppb at hour 1 Minimum Diurnal Average: 0.3 ppb at hour 19 Monthly Average: 1.24 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.8 P ₉₀ = 2.9 P ₉₉ = 16.8																	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 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-Apr	0.1	Z	0.3	0.3	0.4	0.5	0.8	0.4	0.4	0.5	0.4	0.2	0.3	0.2	0.1	0.1	0.2	0.4	1.1	0.4	0.3	0.3	0.3	0.5	0.4	1.1
2-Apr	0.5	0.0	Z	2.0	10.2	16.1	7.5	0.6	0.7	0.6	0.5	1.3	1.0	1.9	0.4	0.3	0.3	0.2	0.2	0.6	1.5	0.6	1.0	1.6	2.1	16.1
3-Apr	1.8	1.6	0.9	Z	1.0	0.7	0.5	0.4	0.5	0.9	0.6	0.5	0.5	0.5	0.4	0.4	0.6	0.6	0.3	0.3	0.1	0.0	0.2	0.2	0.6	1.8
4-Apr	1.1	0.4	0.2	0.2	Z	0.4	0.6	0.8	1.7	3.9	1.4	0.4	1.3	1.9	0.7	0.4	1.3	0.3	0.3	0.3	0.4	0.3	0.1	0.3	0.8	3.9
5-Apr	0.2	0.2	0.3	0.3	0.5	Z	0.7	0.7	0.8	0.7	2.4	0.9	1.5	2.0	1.9	2.1	0.6	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.8	2.4
6-Apr	Z	0.4	0.3	0.4	0.4	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	0.0	0.0	0.0	0.0	0.0	0.1	0.4
7-Apr	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.6	0.6	0.7	0.5	0.5	0.2	0.7
8-Apr	0.3	0.3	Z	0.4	0.3	0.2	0.3	0.2	1.2	1.4	1.4	1.2	1.1	0.5	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.5	1.4
9-Apr	0.1	0.0	0.0	Z	2.5	0.4	0.4	0.4	0.8	2.9	0.4	0.2	0.1	0.0	0.6	0.3	1.4	0.1	0.1	0.1	2.2	7.7	26.0	16.7	2.8	26.0
10-Apr	14.5	17.6	0.4	0.8	Z	1.7	1.0	5.5	3.2	4.8	5.5	4.5	1.6	3.0	5.9	2.9	1.8	0.5	0.5	0.4	0.0	0.1	0.0	0.1	3.3	17.6
11-Apr	0.1	0.2	0.0	0.2	0.1	Z	0.2	0.1	3.7	1.7	0.3	0.1	0.1	2.8	2.4	6.0	6.8	1.1	0.1	0.5	7.3	3.4	3.3	12.6	2.3	12.6
12-Apr	Z	0.8	2.8	4.9	9.7	7.6	2.7	6.0	2.3	4.6	3.3	2.2	3.6	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	2.2	9.7
13-Apr	0.0	Z	0.7	3.7	0.3	4.7	2.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.7	1.0	0.6	0.3	0.2	0.1	0.7	4.7
14-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.2	1.2	3.7	4.4	0.9	0.5	1.5	1.4	2.4	1.5	0.6	0.2	0.5	0.3	0.4	0.6	0.4	0.2	0.9	4.4
15-Apr	0.2	0.2	0.5	Z	0.4	0.2	0.3	1.4	2.7	12.2	7.5	8.4	8.3	7.4	8.0	2.3	2.7	2.1	0.3	10.4	36.8	28.0	10.4	8.7	6.9	36.8
16-Apr	11.7	0.1	0.1	1.0	Z	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	0.2	0.2	0.1	0.0	0.0	0.6	11.7
17-Apr	0.1	0.4	0.2	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.2	0.3	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	0.4
18-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.0	0.1	0.3
19-Apr	0.0	Z	0.8	11.6	0.5	0.5	2.7	17.3	3.8	0.9	1.2	3.1	7.4	0.3	3.1	5.2	0.9	1.5	1.2	8.9	4.0	0.1	3.8	22.4	4.4	22.4
20-Apr	29.5	4.9	Z	0.4	0.3	0.3	0.2	0.2	0.6	0.8	0.4	0.1	0.2	0.3	0.0	0.0	0.2	0.2	0.2	0.5	0.5	0.3	0.1	0.0	1.7	29.5
21-Apr	0.0	0.1	0.0	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2
22-Apr	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.5	1.6	2.8	7.6	4.4	5.8	5.7	2.7	1.1	0.8	1.3	1.6	0.2	0.4	0.1	0.0	0.0	1.6	7.6
23-Apr	0.0	3.2	1.0	1.2	0.5	Z	1.6	0.0	0.5	1.5	2.0	0.8	0.5	0.7	0.9	0.9	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.8	3.2
24-Apr	Z	0.3	0.3	0.2	0.2	0.2	0.2	1.7	0.7	0.2	0.5	1.3	1.9	0.7	2.9	1.3	0.1	0.4	0.2	0.2	0.2	0.2	0.0	0.0	0.6	2.9
25-Apr	0.0	Z	0.3	0.5	0.4	0.3	0.3	0.2	C	C	C	C	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.5
26-Apr	0.1	0.2	Z	0.2	0.1	0.0	0.0	0.0	1.4	2.2	1.6	0.9	0.1	0.5	0.3	0.2	1.0	0.9	0.4	0.4	0.2	0.0	0.0	0.0	0.5	2.2
27-Apr	0.0	0.0	0.3	Z	0.4	0.3	0.2	0.4	0.6	0.5	0.4	0.1	0.0	0.4	0.2	0.1	0.1	0.3	0.7	1.0	0.8	0.4	0.2	0.2	0.3	1.0
28-Apr	0.1	0.1	0.0	0.0	Z	0.1	0.3	0.6	0.3	0.0	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.6
29-Apr	0.3	0.4	0.3	0.4	2.0	Z	7.0	0.3	0.1	0.0	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.5	0.9	0.3	0.6	7.0
30-Apr	Z	0.3	0.5	0.2	3.3	2.1	3.2	0.7	0.3	0.2	0.2	1.1	0.5	0.1	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.0	0.6	3.3
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	672	97.96	97.96
11 - 20	9	1.31	99.27
21 - 60	5	0.73	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 (SO₂) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	28	22	11	23	19	19	47	82	78	37	33	22	83	63	54	49	670
11 - 20	0	0	0	0	0	0	0	0	0	0	1	7	1	0	0	0	9
21 - 60	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	22	11	23	19	19	47	82	78	37	34	34	84	63	54	49	684

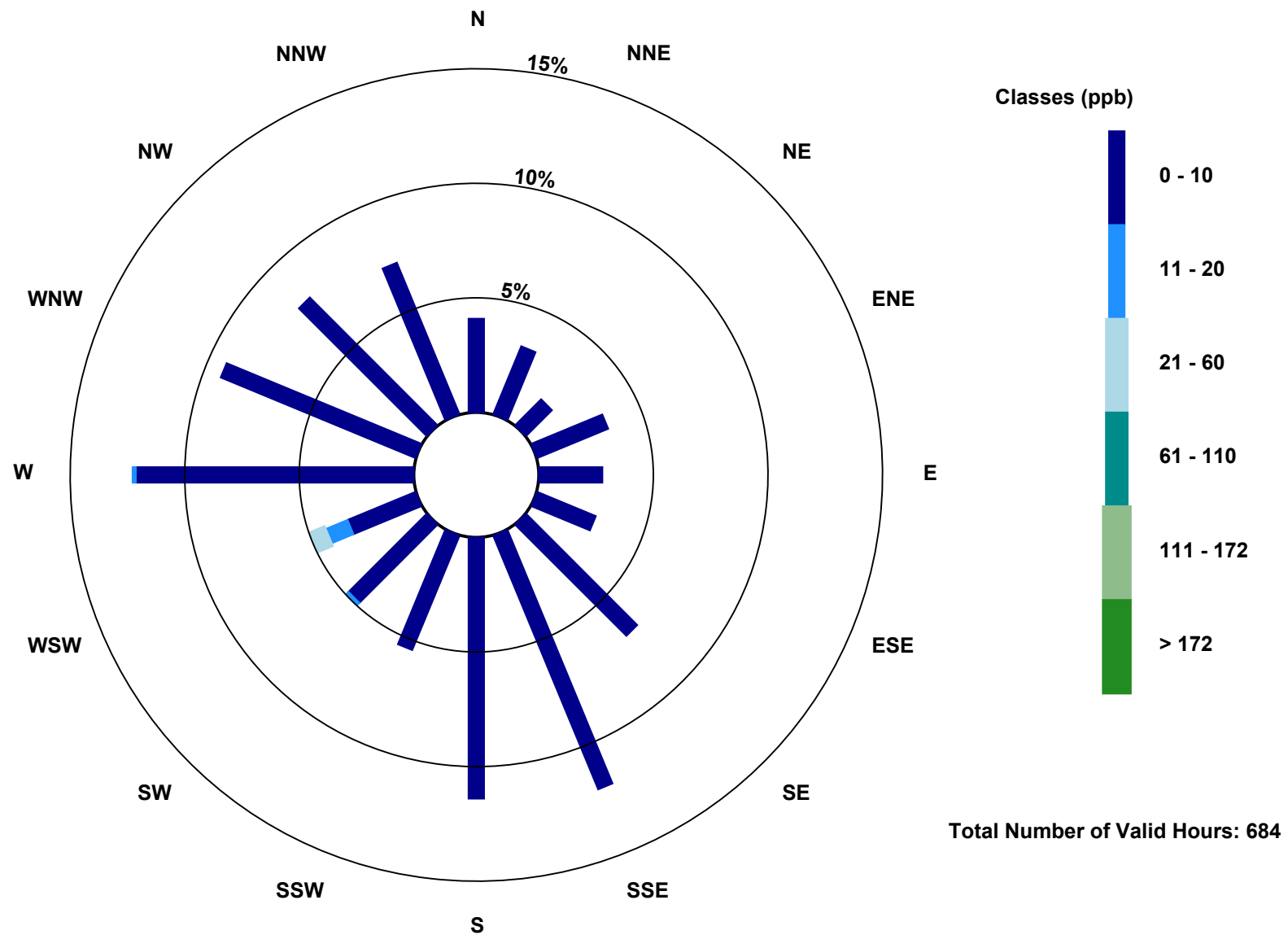
Total Number of Valid Hours: 684

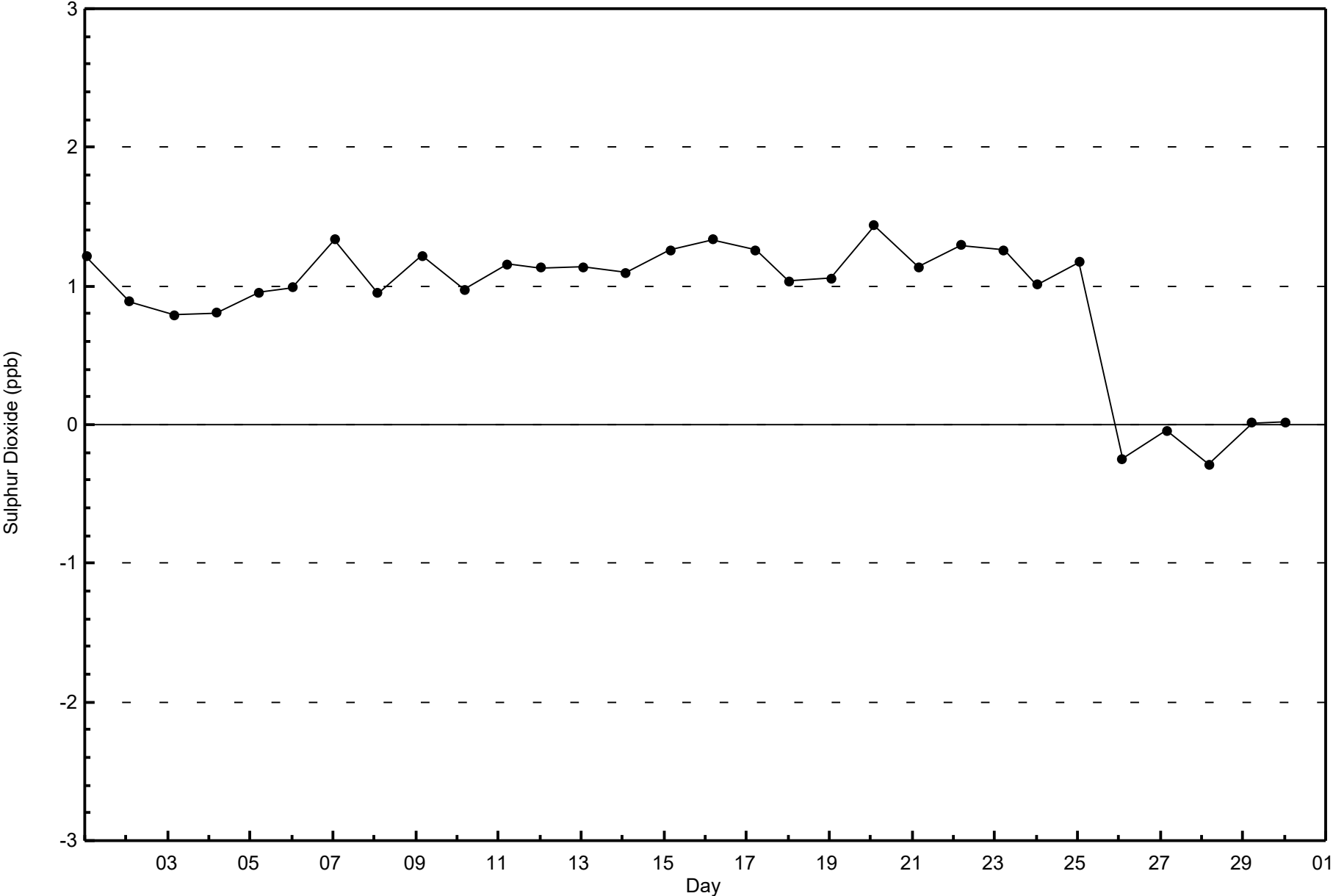
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay

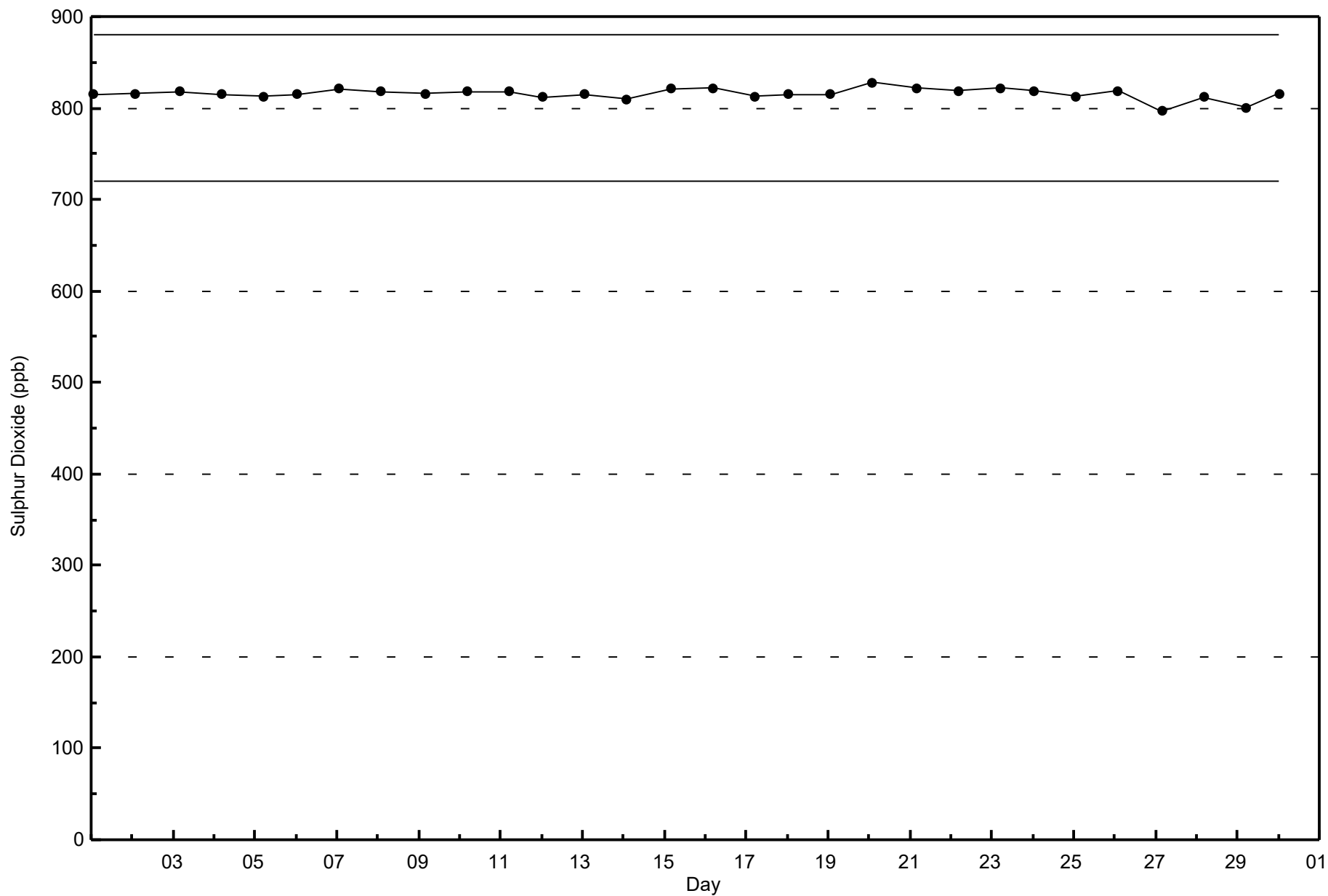






Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

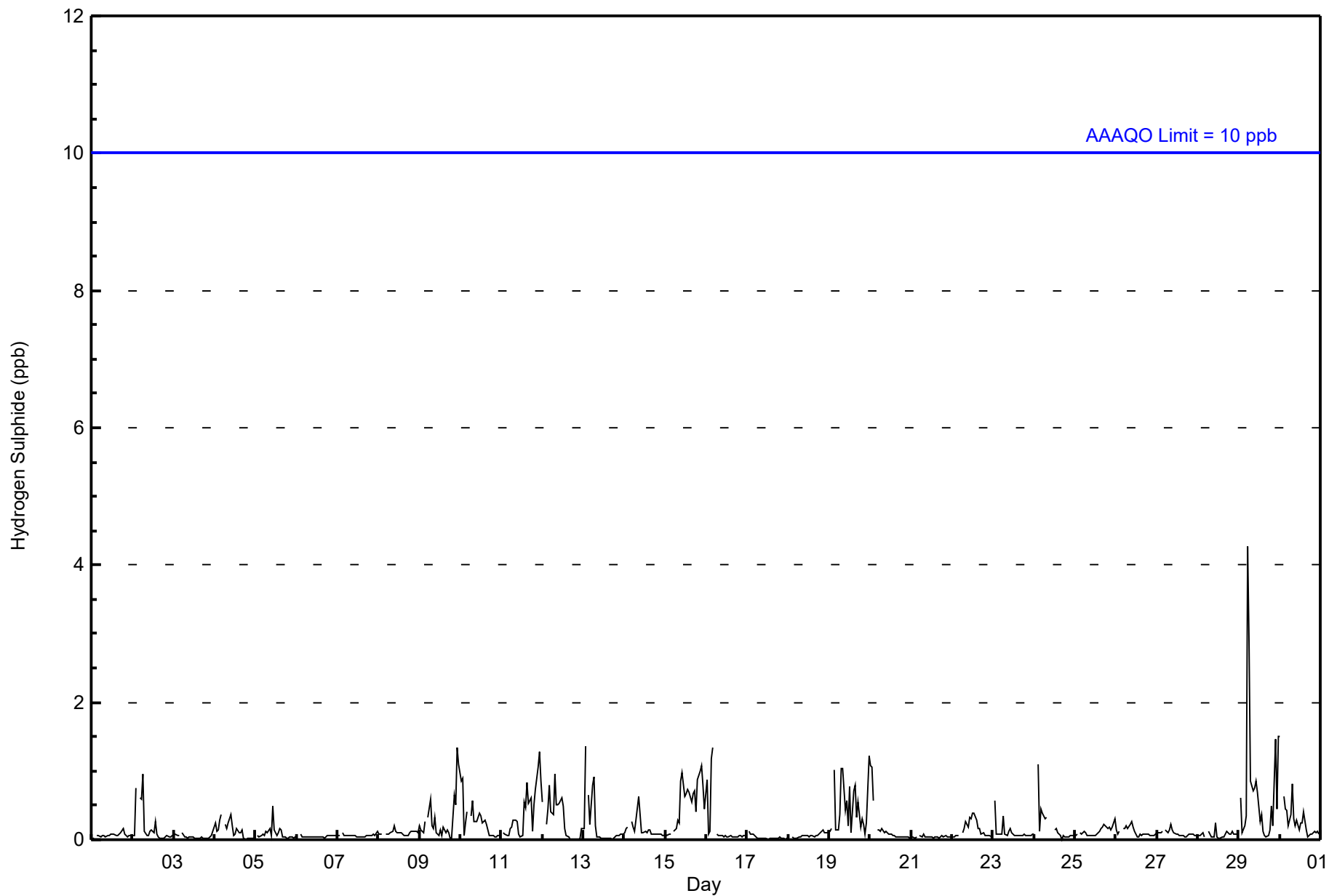
Sawbones Bay - April 2025

Number of Exceedences (AAAQO): Maximum Value: 4.3 ppb on Apr 29 06:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.8 ppb on Apr 29					Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0				
Minimum Value: 0.0 ppb on Apr 12 20:00 Maximum Diurnal Average: 0.4 ppb at hour 6 Monthly Average: 0.19 ppb										Minimum Daily Average: 0.0 ppb on Apr 17 Minimum Diurnal Average: 0.1 ppb at hour 19 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.2 P ₉₀ = 0.5 P ₉₉ = 1.3																			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1			
2-Apr	0.1	0.1	0.8	Z	0.6	0.6	1.0	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2			
3-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0				
4-Apr	0.2	0.1	0.1	0.3	0.4	Z	0.2	0.2	0.3	0.4	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	0.0	0.1				
5-Apr	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.5	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1				
6-Apr	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	0.1	0.1	0.1	0.1	0.1	0.1	0.0				
7-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
8-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
9-Apr	0.2	0.1	0.1	0.3	Z	0.3	0.6	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.7	0.5	1.3	1.1	0.3				
10-Apr	0.9	0.9	0.1	0.2	0.4	Z	0.4	0.6	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.3				
11-Apr	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.1	0.0	0.1	0.6	0.5	0.8	0.5	0.6	0.1	0.5	0.7	1.1	1.3	0.9	0.4				
12-Apr	0.6	Z	0.2	0.4	0.8	0.4	0.4	1.0	0.5	0.5	0.5	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3				
13-Apr	0.2	1.4	Z	0.6	0.2	0.8	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2				
14-Apr	0.1	0.2	0.2	Z	0.3	0.2	0.1	0.3	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	0.2				
15-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.2	0.9	1.0	0.6	0.7	0.7	0.7	0.5	0.7	0.7	0.4	0.9	1.0	1.1	0.8	0.4	0.5				
16-Apr	0.9	0.1	0.1	1.2	1.3	Z	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	0.1	0.1	0.1	0.1	0.1	0.2				
17-Apr	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	0.0	0.0	0.0	0.0	0.0				
18-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
19-Apr	0.1	0.2	Z	1.0	0.1	0.1	0.4	1.0	1.0	0.4	0.6	0.2	0.8	0.1	0.7	0.8	0.3	0.6	0.2	0.3	0.2	0.1	0.3	1.2	0.5				
20-Apr	1.1	1.1	0.6	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2				
21-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0				
22-Apr	0.0	0.0	0.1	0.1	0.1	Z	0.1	0.2	0.3	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	0.0	0.1				
23-Apr	Z	0.6	0.1	0.1	0.1	0.1	0.4	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				
24-Apr	0.1	Z	1.1	0.1	0.4	0.4	0.3	0.3	C	C	C	C	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.2				
25-Apr	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	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1				
26-Apr	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	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				
27-Apr	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	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
28-Apr	0.1	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.2	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				
29-Apr	Z	0.6	0.1	0.2	0.3	4.3	2.9	0.9	0.7	0.8	0.9	0.7	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.5	0.2	1.5	0.4	1.5	0.8				
30-Apr	1.5	Z	0.6	0.5	0.4	0.2	0.4	0.8	0.3	0.2	0.3	0.1	0.2	0.2	0.4	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3				
0.3 0.2 0.2 0.2 0.3 0.4 0.3 0.3 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.2 0.2 0.2 0.2																									Diurnal Average				
1.5 1.4 1.1 1.2 1.3 4.3 2.9 1.0 1.0 0.9 1.0 0.7 0.8 0.7 0.7 0.8 0.7 0.7 0.4 0.9 1.0 1.5 1.3 1.5																									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 (H₂S) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	684	99.71	99.71
3 - 4	2	0.29	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 (H₂S) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	27	21	11	21	19	18	49	80	84	35	34	34	85	62	53	49	682
3 - 4	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	21	11	21	19	18	49	80	84	35	35	35	85	62	53	49	684

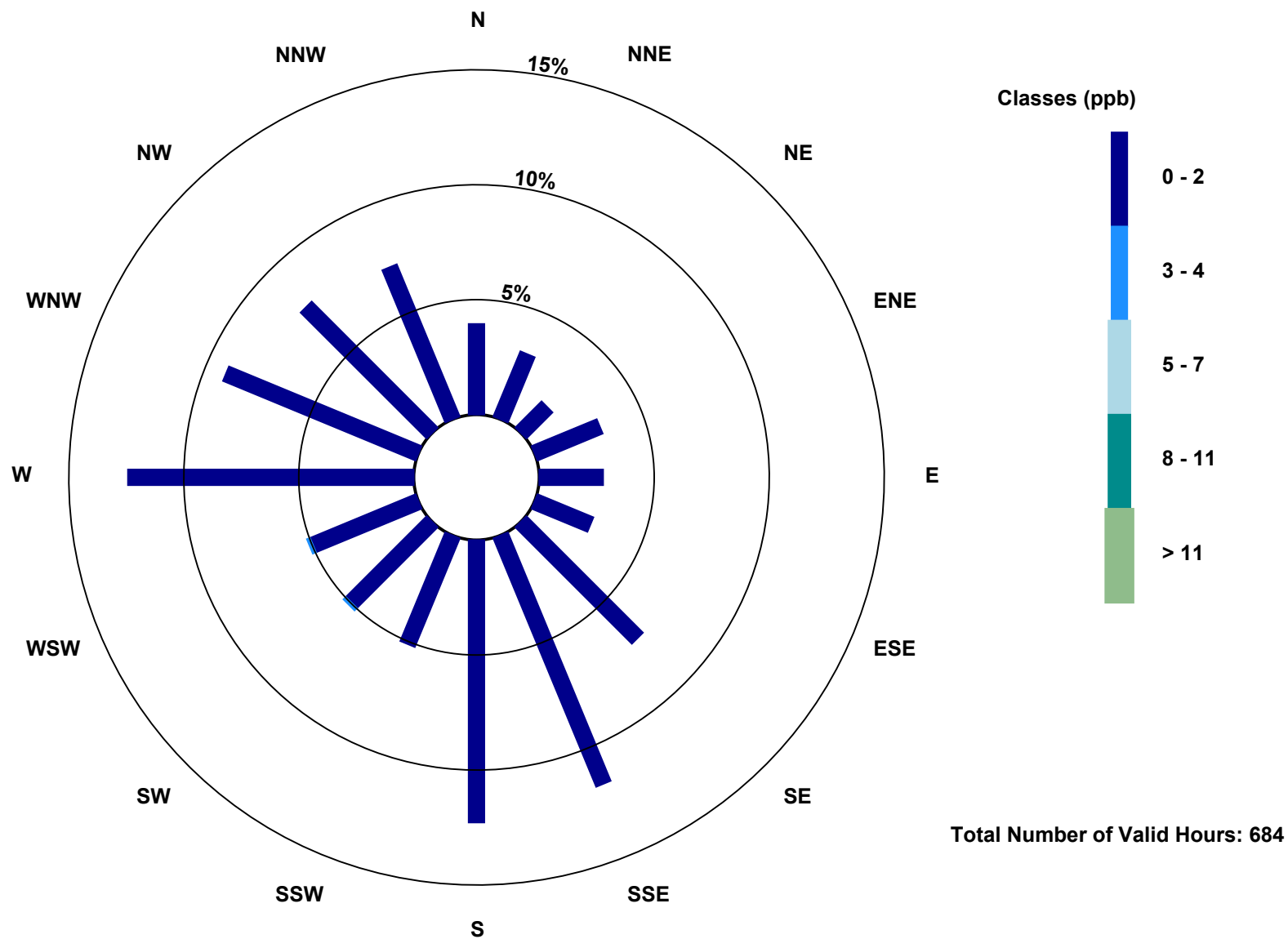
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

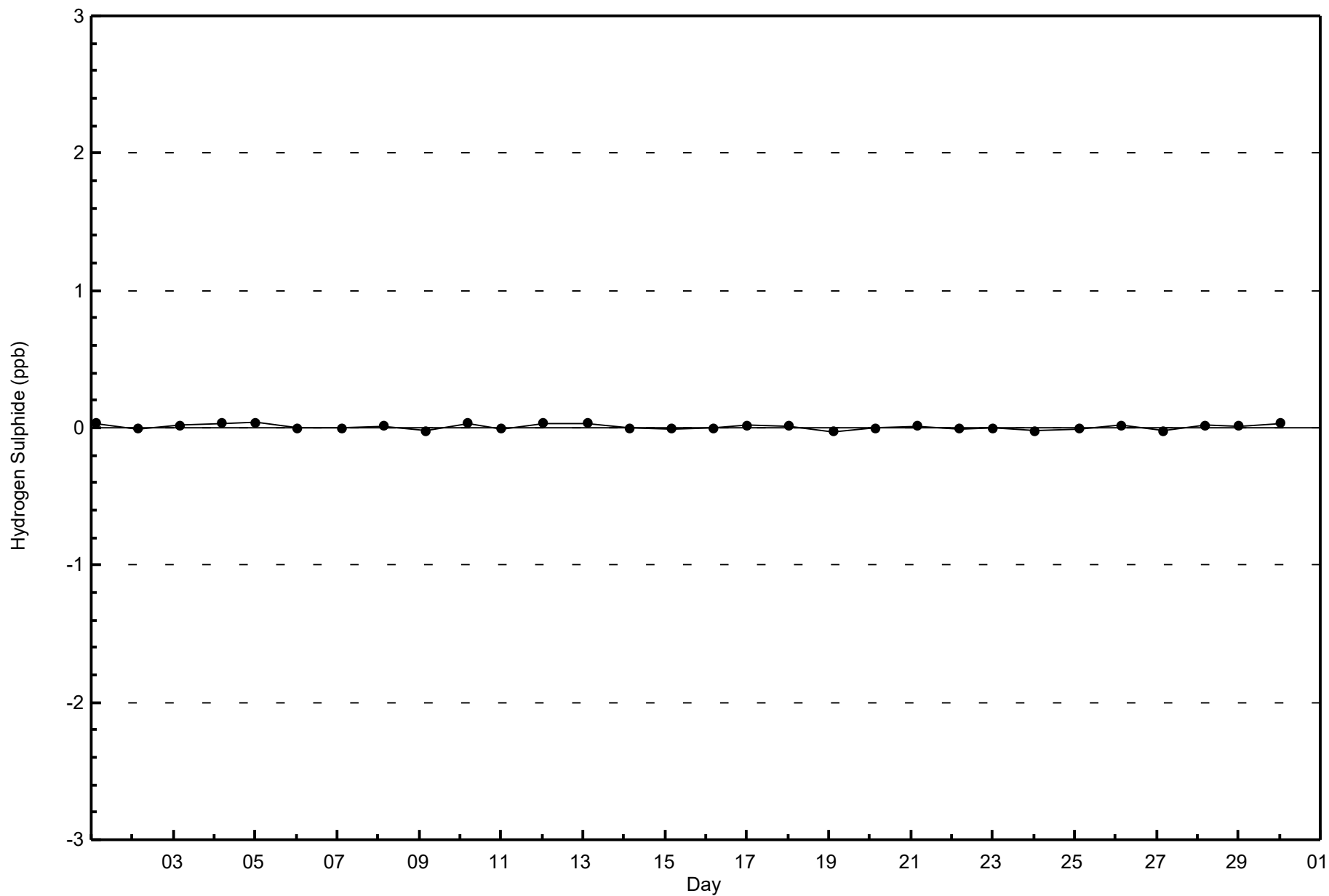
Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay

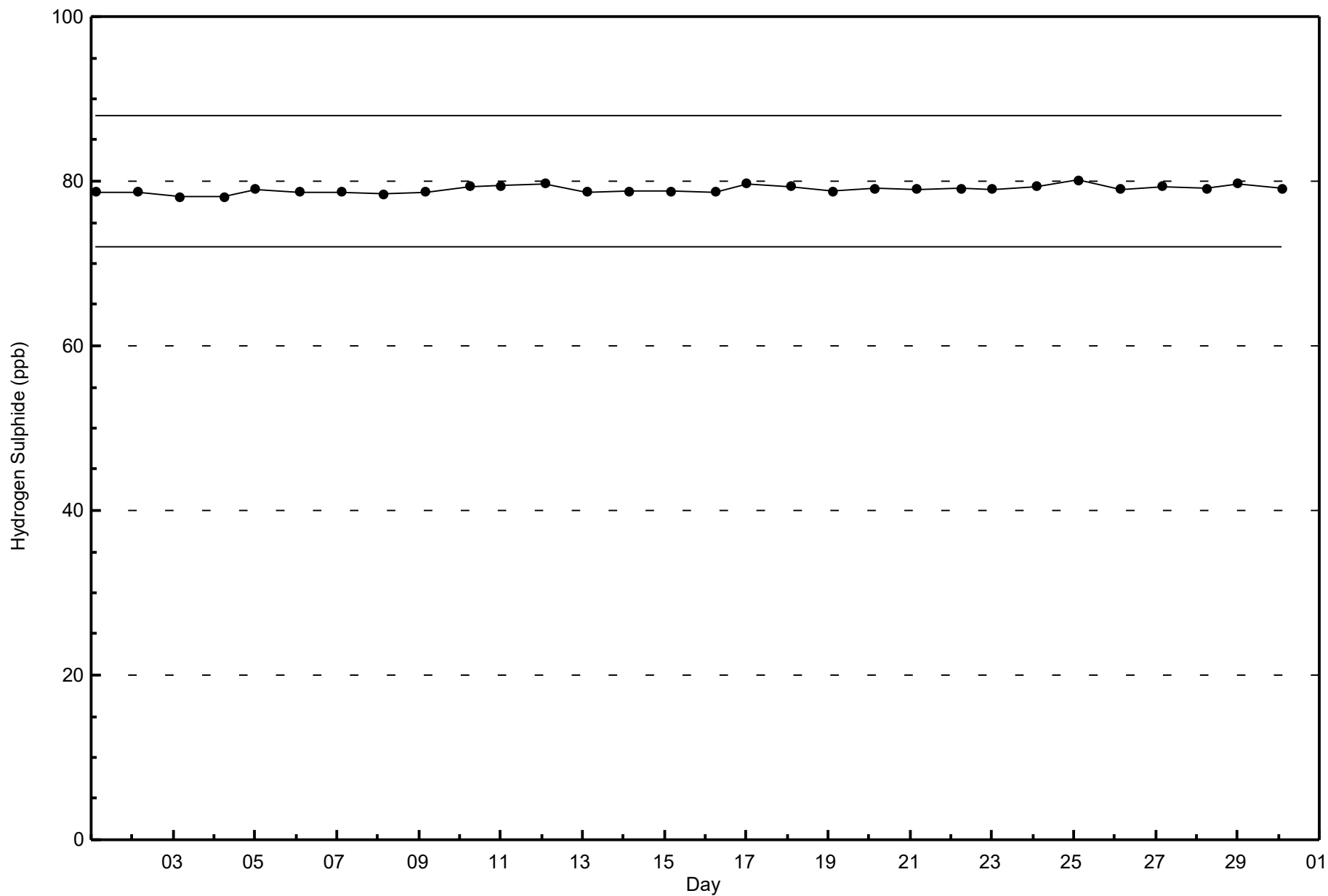




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

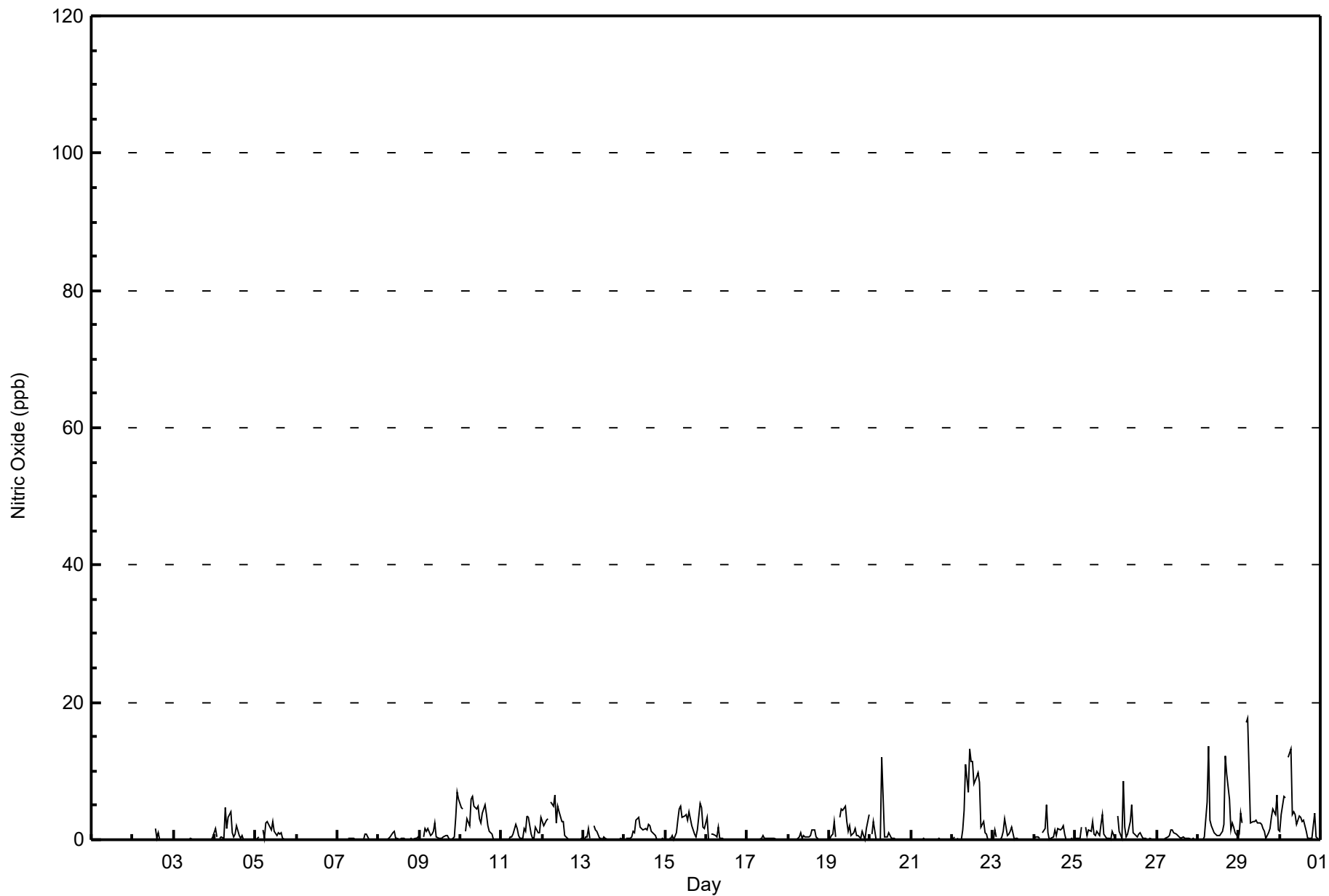
Sawbones Bay - April 2025

Maximum Value: 17.7 ppb on Apr 29 06:00																			Maximum Daily Average: 4.4 ppb on Apr 22							Hours in Service: 688	
Minimum Value: 0.0 ppb on Apr 2 17:00																			Minimum Daily Average: 0.1 ppb on Apr 6							Hours of Data: 655	
Maximum Diurnal Average: 2.6 ppb at hour 7																			Minimum Diurnal Average: 0.3 ppb at hour 20							Hours of Missing Data: 33	
Monthly Average: 1.24 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.4 P ₉₀ = 3.5 P ₉₉ = 12.0							Hours of Calibration: 33	
																										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-Apr	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Apr	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	C	1.6	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	1.6
3-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.1	0.4
4-Apr	1.6	0.4	Z	0.1	0.3	0.2	4.6	1.7	3.2	4.2	1.0	0.3	0.8	2.1	0.6	0.2	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.0	4.6
5-Apr	0.1	0.2	0.4	Z	1.4	0.1	2.4	2.6	1.9	1.3	2.6	1.3	0.7	1.1	0.7	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.6
6-Apr	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
7-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
8-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.9	1.1	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	1.1
9-Apr	0.3	Z	0.5	1.6	1.3	1.6	0.7	0.9	1.1	2.4	0.4	0.3	0.2	0.2	0.5	0.6	0.7	0.2	0.0	0.0	0.3	3.2	6.9	5.8	1.3	6.9	
10-Apr	4.7	4.5	Z	1.3	3.0	2.0	5.9	6.3	4.8	4.4	4.9	3.0	2.4	3.8	5.1	3.6	2.1	1.2	0.8	0.1	0.1	0.0	0.0	0.0	0.0	2.8	6.3
11-Apr	0.1	0.0	0.0	Z	0.1	0.3	0.4	0.9	2.2	1.6	0.6	0.1	0.2	1.6	1.3	3.5	3.2	0.8	0.2	0.3	1.8	1.1	1.0	3.2	1.1	3.5	
12-Apr	2.7	2.0	2.8	3.0	Z	5.5	4.9	6.5	2.5	4.8	4.0	2.7	2.6	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.0	6.5	
13-Apr	0.1	0.3	0.4	1.7	0.1	Z	2.0	1.4	1.2	0.2	0.1	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	2.0	
14-Apr	Z	0.2	0.2	0.2	0.4	1.1	0.9	2.9	3.3	1.9	1.6	1.4	1.7	1.4	2.3	2.1	1.3	0.8	0.7	0.1	0.1	0.1	0.1	0.1	1.1	3.3	
15-Apr	0.1	Z	0.1	0.2	0.6	0.1	0.9	2.9	4.5	4.8	3.2	3.4	3.6	2.8	4.1	2.0	1.4	0.9	0.3	1.4	5.2	4.7	1.8	1.6	2.2	5.2	
16-Apr	3.3	0.1	Z	0.7	0.8	0.6	0.4	1.8	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.3	
17-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.5	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
18-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.5	0.9	0.3	0.6	0.4	0.3	0.5	0.6	1.3	1.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	1.4	
19-Apr	0.2	0.6	0.9	2.6	0.3	Z	3.2	4.5	4.4	4.9	2.7	1.2	2.0	0.6	1.0	1.5	0.5	0.7	0.2	1.2	0.6	0.0	1.5	3.6	1.7	4.9	
20-Apr	Z	0.7	2.6	0.0	0.0	0.0	0.1	12.0	0.3	0.4	0.4	1.1	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	12.0	
21-Apr	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.3	
22-Apr	0.1	0.4	Z	0.2	0.1	0.1	1.4	4.3	10.9	7.0	13.2	11.4	11.5	8.1	9.1	9.8	8.3	1.9	2.6	1.0	0.9	0.1	0.0	0.0	4.4	13.2	
23-Apr	0.1	1.4	0.3	Z	0.1	0.3	1.3	3.0	0.6	0.9	1.3	1.8	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.0	
24-Apr	0.1	0.4	0.3	0.2	Z	1.0	1.7	5.1	1.1	0.0	0.3	0.5	1.5	0.6	1.7	1.4	1.5	2.0	0.9	0.0	0.0	0.1	0.1	0.0	0.9	5.1	
25-Apr	0.2	0.1	0.2	0.2	1.8	Z	1.9	0.7	1.4	1.3	2.6	0.8	0.6	1.2	0.5	2.3	3.7	0.7	0.2	0.1	0.2	0.1	1.2	0.1	1.0	3.7	
26-Apr	Z	3.5	1.2	0.3	8.5	1.9	0.4	0.8	2.6	5.1	1.0	0.9	0.3	0.7	0.9	0.7	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.3	8.5	
27-Apr	0.1	Z	0.1	0.1	0.0	0.2	0.4	0.6	1.5	1.5	1.0	0.8	0.6	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.4	1.5	
28-Apr	0.0	0.0	Z	0.1	0.4	5.6	13.6	2.8	2.0	1.0	0.7	0.6	0.6	0.6	1.3	2.3	12.1	9.6	5.9	1.4	2.4	1.8	0.9	0.5	2.9	13.6	
29-Apr	0.8	3.9	2.4	Z	17.2	17.7	10.3	2.5	2.7	2.6	2.9	2.3	2.4	2.3	1.6	1.2	0.1	0.9	1.7	3.3	4.4	3.7	6.5	1.5	4.1	17.7	
30-Apr	1.3	3.6	6.2	6.1	Z	12.0	13.2	3.6	4.1	3.6	2.3	3.5	3.3	2.6	2.8	1.3	0.1	0.1	0.2	0.2	3.8	0.4	0.2	0.1	3.2	13.2	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration NS - Not in Service																											



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	655	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 655

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	22	11	20	21	19	47	73	73	35	36	30	80	58	50	51	653
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	22	11	20	21	19	47	73	73	35	36	30	80	58	50	51	653

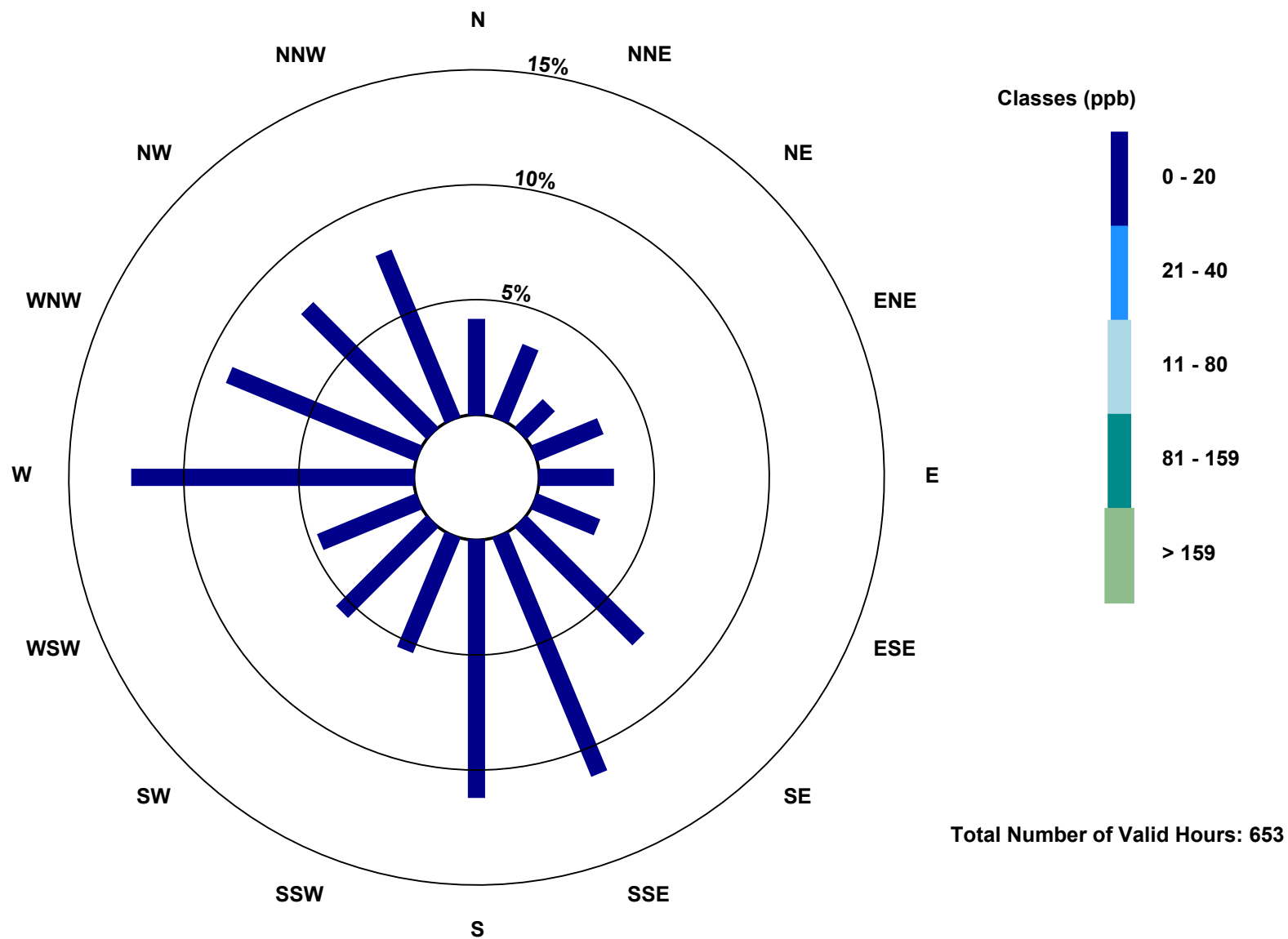
Total Number of Valid Hours: 653

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

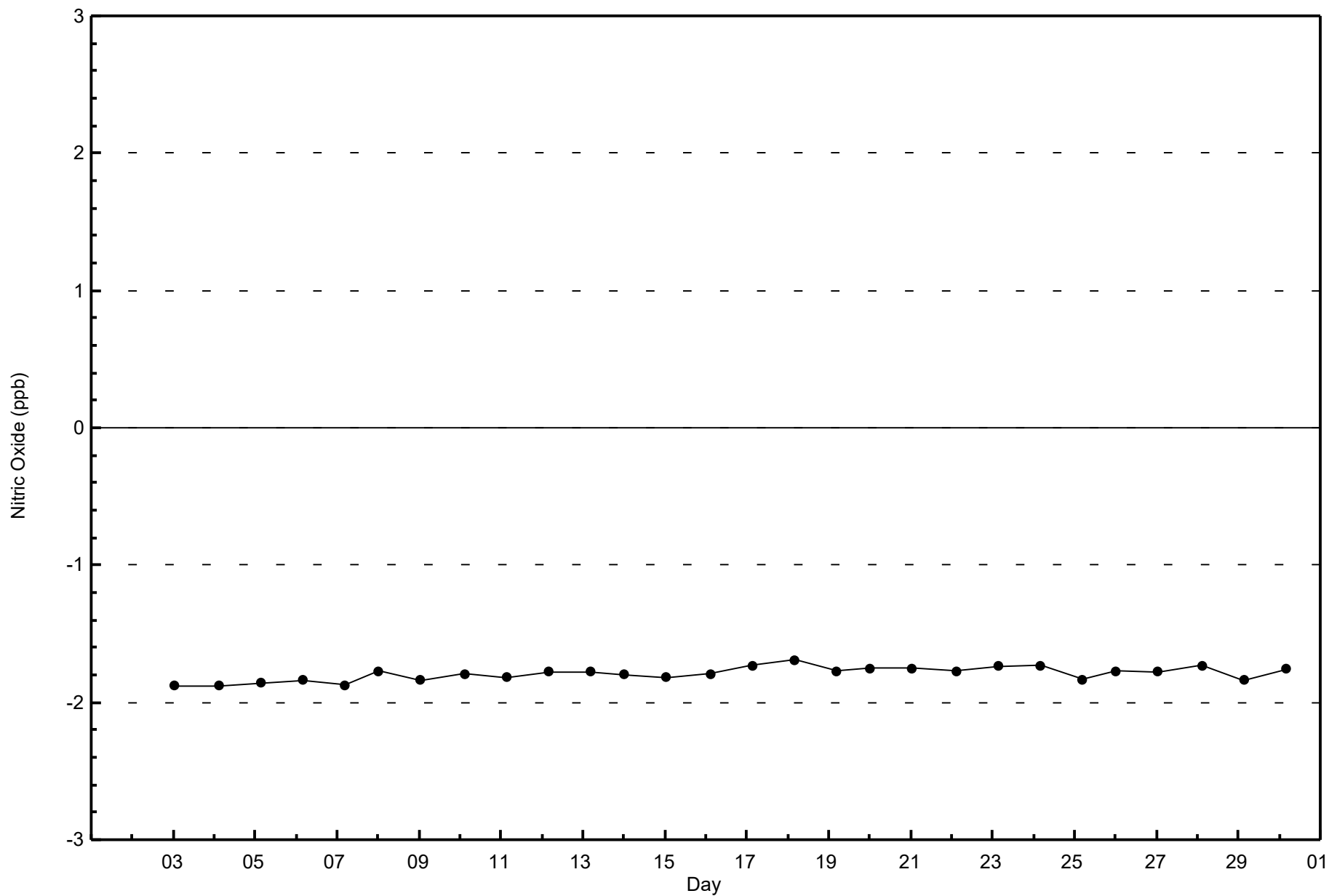
Nitric Oxide (NO) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

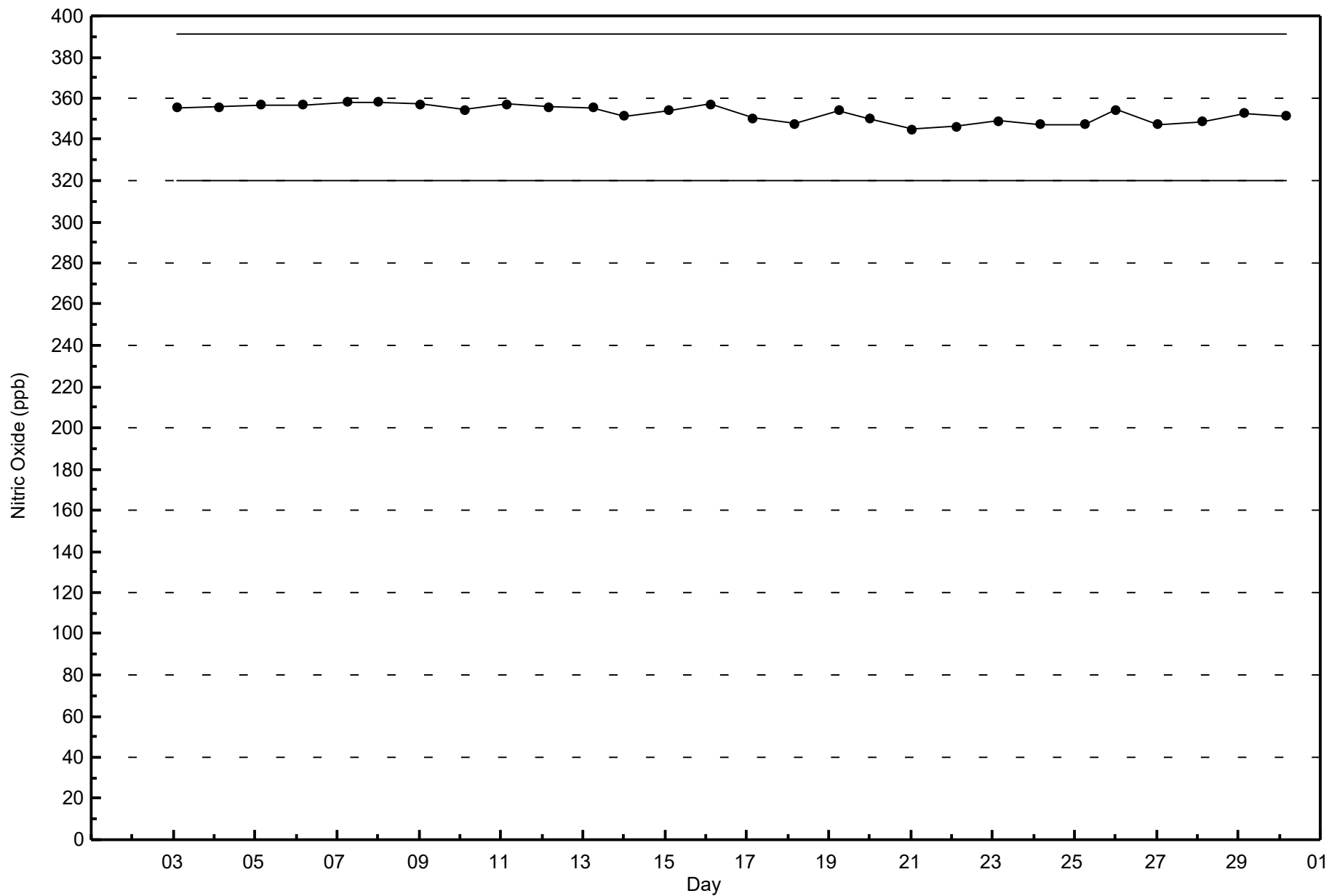
Nitric Oxide (NO) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

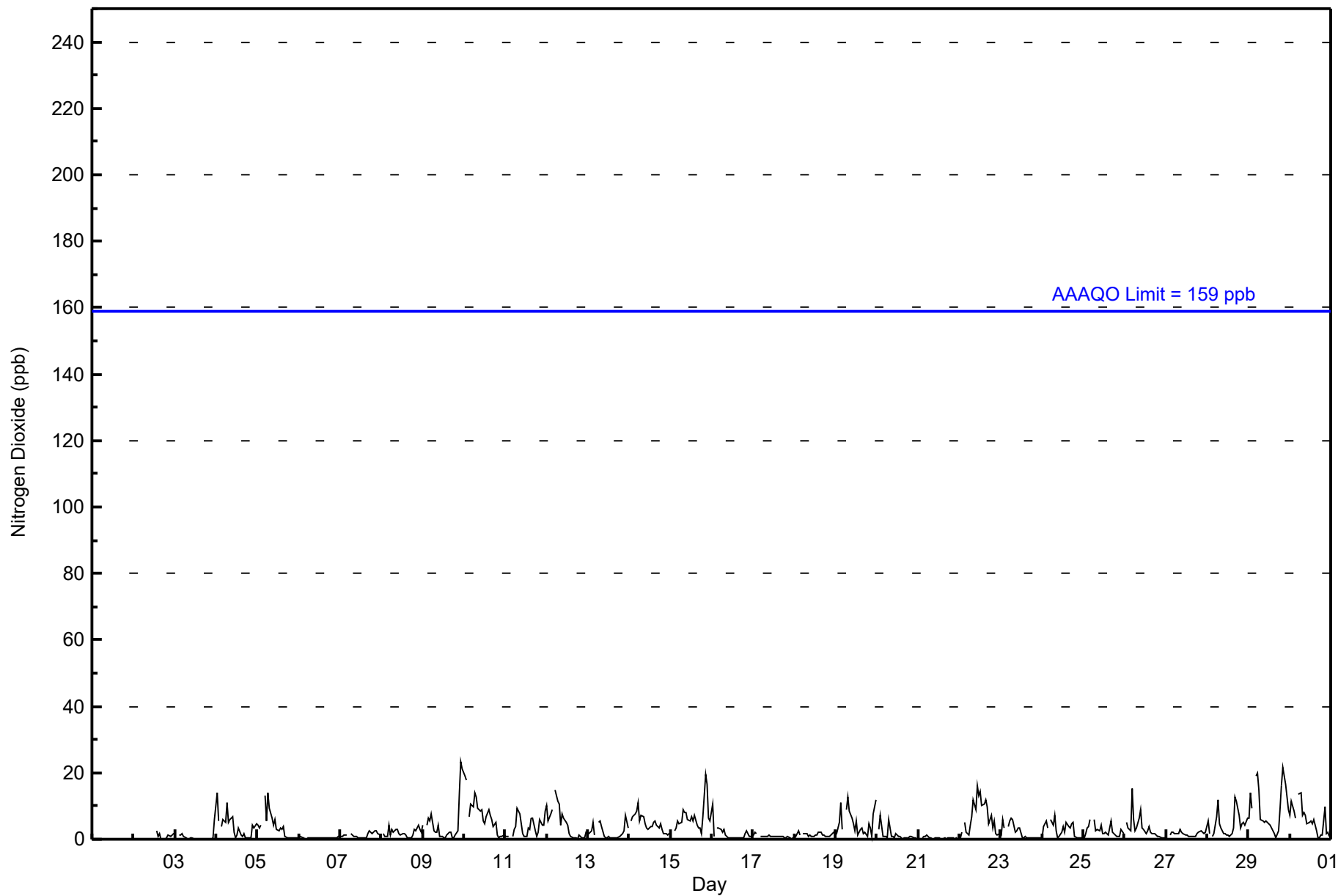
Sawbones Bay - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 688									
Maximum Value: 23.5 ppb on Apr 9 23:00 Maximum Daily Average: 9.1 ppb on Apr 29																		Hours of Data: 655									
Minimum Value: 0.1 ppb on Apr 2 17:00 Minimum Daily Average: 0.4 ppb on Apr 21																		Hours of Missing Data: 33									
Maximum Diurnal Average: 5.7 ppb at hour 7 Minimum Diurnal Average: 1.8 ppb at hour 18																		Hours of Calibration: 33									
Monthly Average: 3.34 ppb Percentiles: P ₁ = 0.2 P ₁₀ = 0.3 Q ₁ = 0.7 Median = 1.8 Q ₃ = 4.8 P ₉₀ = 8.3 P ₉₉ = 18.2																		Percent Operational Time: 100.0									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--	
2-Apr	NS	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	C	2.7	1.0	1.6	0.1	0.1	0.1	0.4	1.4	0.8	1.2	1.7	--	2.7
3-Apr	1.7	Z	1.4	1.1	1.6	1.0	0.3	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	5.9	0.7	5.9	
4-Apr	14.1	5.5	Z	3.8	6.0	4.9	10.9	5.0	5.9	6.6	2.1	0.6	1.4	3.3	1.2	0.7	1.8	0.3	0.3	0.4	0.3	4.3	3.2	4.7	3.8	14.1	
5-Apr	4.3	3.6	4.2	Z	13.0	5.5	14.0	9.2	6.4	4.1	6.0	2.9	2.6	3.6	2.8	3.8	1.0	0.3	0.3	0.3	0.4	0.4	0.4	0.5	3.9	14.0	
6-Apr	0.6	0.9	0.4	0.3	Z	0.5	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.5	0.6	0.4	0.5	0.5	0.8	0.4	0.9	
7-Apr	0.7	0.9	1.1	1.3	1.1	Z	1.8	1.3	1.0	0.7	0.5	0.4	0.5	0.5	0.5	0.5	1.9	2.6	1.5	2.2	2.4	2.5	1.5	1.4	1.3	2.6	
8-Apr	Z	1.5	0.8	0.9	4.1	1.4	2.8	2.3	3.0	2.9	1.5	1.3	1.6	1.5	1.1	0.5	0.3	0.6	1.1	3.1	2.7	4.2	2.9	2.3	1.9	4.2	
9-Apr	4.2	Z	4.3	6.5	5.3	7.7	2.7	2.2	2.2	4.3	1.0	0.7	0.6	0.5	1.1	2.0	2.2	0.5	0.4	1.1	2.7	13.6	23.5	21.0	4.8	23.5	
10-Apr	18.9	17.6	Z	6.9	10.7	9.8	14.1	12.7	9.2	8.3	8.7	5.4	4.6	6.6	8.8	7.3	6.1	4.0	4.9	1.1	0.5	0.7	0.8	1.3	7.3	18.9	
11-Apr	1.0	1.0	0.7	Z	0.7	2.8	3.9	9.4	7.6	4.6	1.5	0.8	0.8	3.3	3.0	6.3	6.2	2.4	1.0	2.1	6.0	4.1	4.2	8.6	3.6	9.4	
12-Apr	10.2	5.6	7.8	9.1	Z	14.9	11.3	10.5	4.4	7.8	6.3	4.9	4.3	1.7	0.7	0.4	0.3	0.4	0.2	1.1	0.5	0.3	0.4	2.3	4.6	14.9	
13-Apr	1.6	2.3	2.5	4.9	1.4	Z	5.0	5.4	3.7	0.7	0.6	0.3	1.0	0.6	0.5	0.6	0.4	0.4	1.0	1.4	1.5	2.7	7.4	3.2	2.1	7.4	
14-Apr	Z	5.7	6.9	7.6	8.6	11.2	5.4	7.0	6.9	4.5	3.5	3.1	3.9	3.8	5.2	5.7	4.2	3.4	4.8	2.9	1.7	1.5	1.4	1.5	4.8	11.2	
15-Apr	1.6	Z	2.6	3.3	5.6	4.7	5.2	8.7	8.0	8.2	5.8	5.6	6.7	5.6	7.4	4.2	3.6	3.3	1.8	6.6	19.3	16.7	6.5	5.4	6.4	19.3	
16-Apr	10.6	0.9	Z	3.5	3.5	2.8	2.0	2.8	1.2	0.6	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	1.9	2.5	1.6	1.0	1.0	1.7	10.6	
17-Apr	1.4	2.1	1.8	Z	1.0	0.9	0.8	0.8	1.0	1.4	0.9	0.9	0.8	0.7	0.7	0.8	0.9	0.7	0.6	0.6	0.9	0.3	0.2	0.3	0.9	2.1	
18-Apr	0.4	1.0	2.7	1.2	Z	1.9	1.6	1.6	0.8	1.1	1.0	0.9	1.2	1.4	2.2	2.2	1.4	1.2	0.8	0.8	0.9	1.4	1.9	2.0	1.4	2.7	
19-Apr	1.7	3.2	5.2	10.9	2.8	Z	9.1	12.5	8.4	6.3	4.8	2.7	5.3	1.2	2.9	3.5	1.5	2.3	0.7	4.7	3.4	0.7	7.7	11.9	4.9	12.5	
20-Apr	Z	3.0	7.2	0.9	0.8	0.9	0.6	5.9	1.0	0.9	0.6	1.9	0.7	0.7	0.4	0.2	0.3	0.4	0.4	0.8	0.8	0.4	0.4	0.2	1.3	7.2	
21-Apr	0.1	Z	0.5	1.0	0.8	1.2	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.2	0.3	0.2	0.4	1.2	
22-Apr	0.5	2.0	Z	5.2	2.2	1.4	4.3	6.7	11.8	9.1	16.0	13.1	14.2	10.3	10.5	11.7	9.7	4.8	7.2	3.2	5.3	1.6	1.2	1.9	6.7	16.0	
23-Apr	1.1	6.0	3.5	Z	3.7	5.3	6.5	5.8	2.1	2.5	3.4	3.3	0.5	0.6	0.9	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.3	2.1	6.5	
24-Apr	0.3	3.9	5.4	3.5	Z	6.1	4.3	7.4	2.7	0.6	0.9	2.0	4.0	2.1	4.9	4.0	3.2	4.7	5.0	0.7	0.6	0.5	0.4	0.4	2.9	7.4	
25-Apr	0.5	1.5	3.3	3.7	6.1	Z	6.1	2.6	3.0	2.6	4.3	1.8	1.7	2.1	1.3	3.6	5.5	2.3	1.4	0.8	0.8	0.8	3.1	1.5	2.6	6.1	
26-Apr	Z	5.2	3.3	2.4	15.2	5.8	2.4	3.4	6.3	8.7	3.6	3.0	1.5	2.5	4.0	2.2	1.7	1.8	1.1	0.8	0.7	0.5	0.5	0.4	3.3	15.2	
27-Apr	0.3	Z	1.3	2.0	2.2	1.8	1.6	1.6	2.9	2.3	1.6	1.3	1.3	0.9	0.8	0.9	0.7	1.0	1.6	2.1	2.5	2.2	1.5	2.1	1.6	2.9	
28-Apr	5.3	1.5	Z	0.9	1.7	6.9	12.0	4.5	3.2	1.9	1.5	1.2	1.2	1.0	1.5	3.2	12.6	11.3	7.4	3.6	4.6	5.0	4.1	6.2	4.4	12.6	
29-Apr	6.5	13.8	9.4	Z	19.2	19.8	14.7	5.8	5.5	5.1	5.3	5.1	4.4	3.4	2.6	1.9	0.5	2.6	8.9	16.1	21.4	16.7	12.6	9.0	9.1	21.4	
30-Apr	7.4	11.4	8.4	6.3	Z	13.7	14.0	7.2	8.2	7.1	4.7	4.9	5.3	4.6	5.8	2.7	0.3	0.5	1.4	1.2	9.8	1.6	2.2	1.0	5.6	14.0	
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration NS - Not in Service																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	652	99.54	99.54
21 - 40	3	0.46	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 655

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	22	11	20	21	19	47	73	73	35	35	29	80	57	50	51	650
21 - 40	0	0	0	0	0	0	0	0	0	0	1	1	0	1	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	27	22	11	20	21	19	47	73	73	35	36	30	80	58	50	51	653

Total Number of Valid Hours: 653

Total Number of Hours: 720



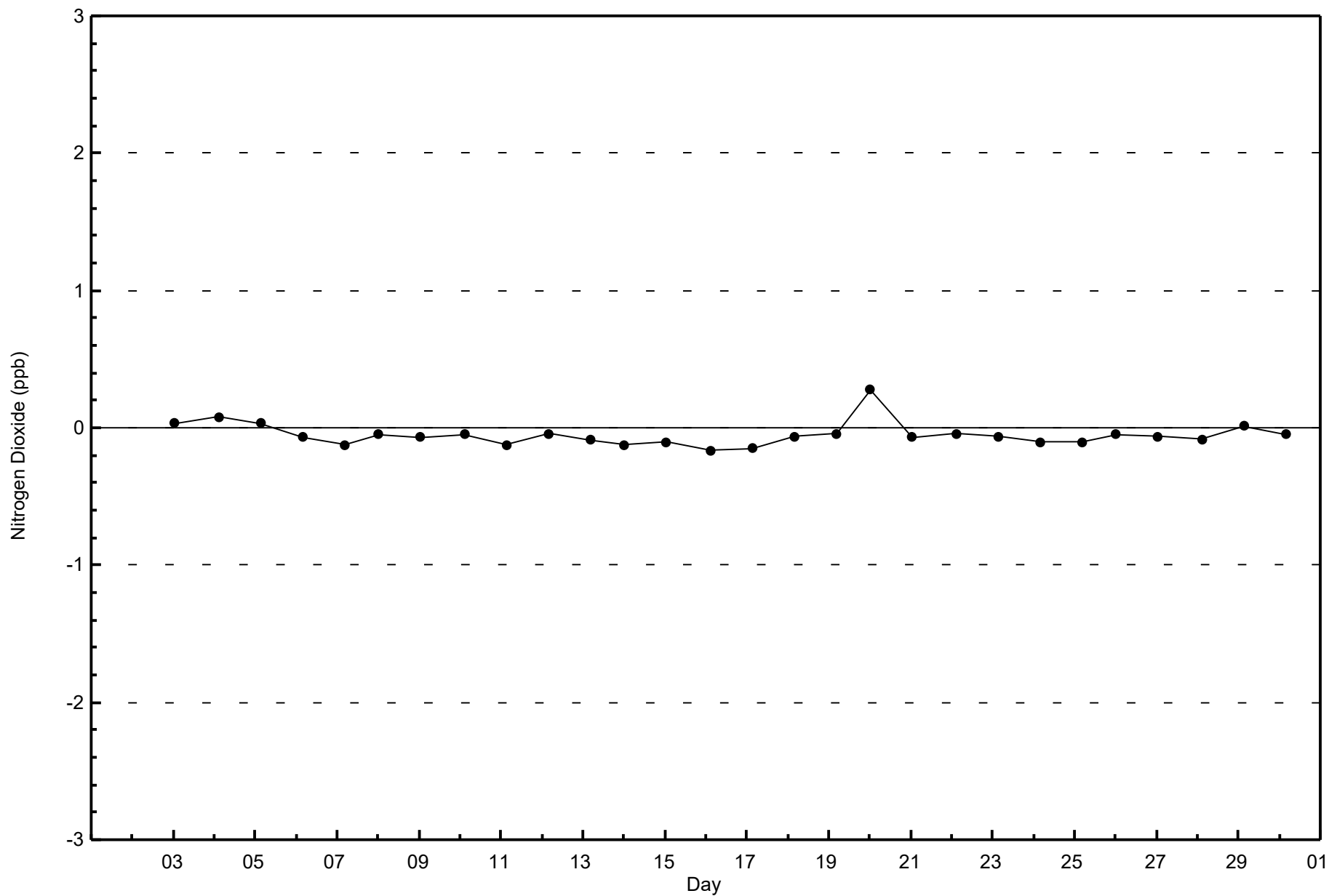
Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

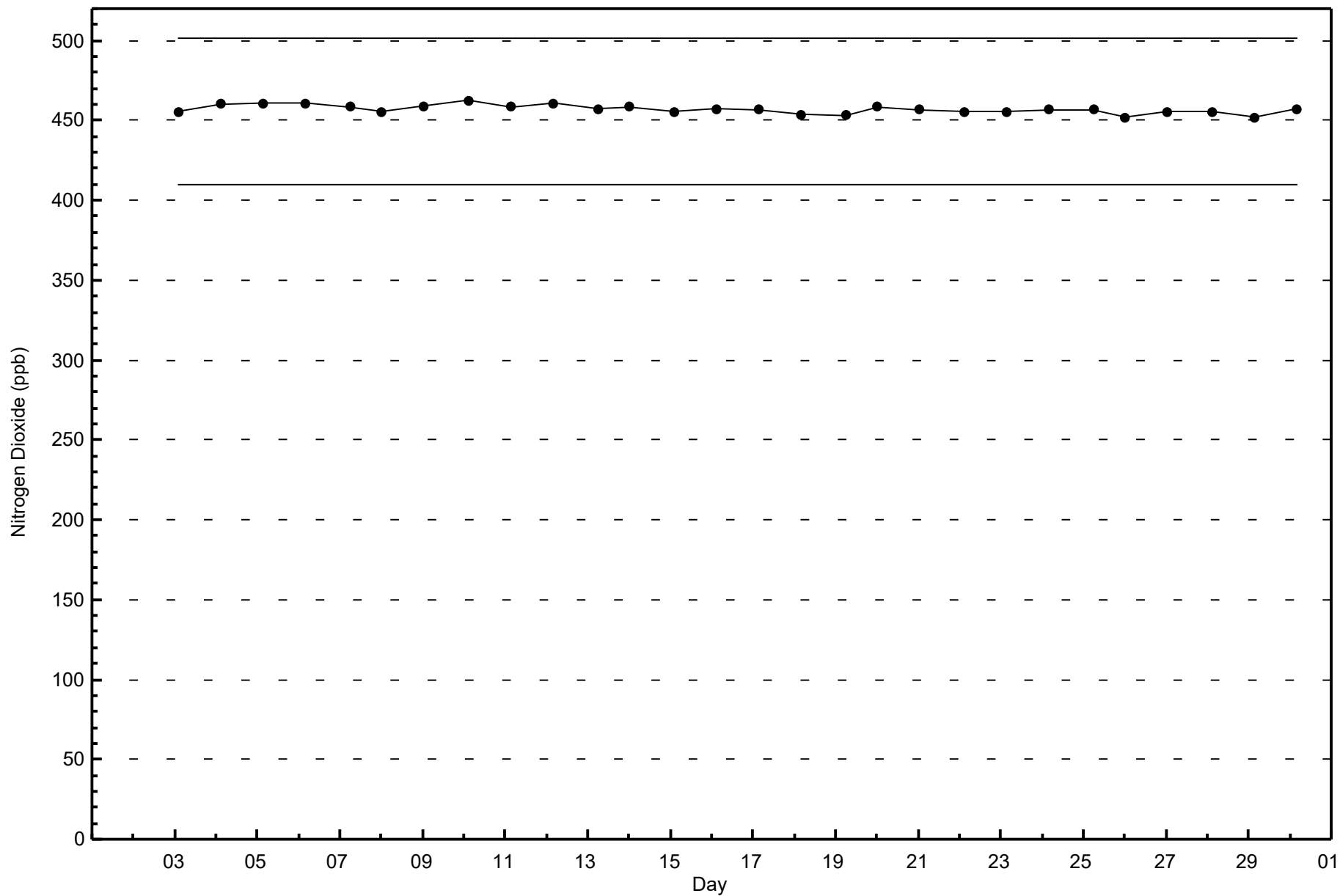
Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

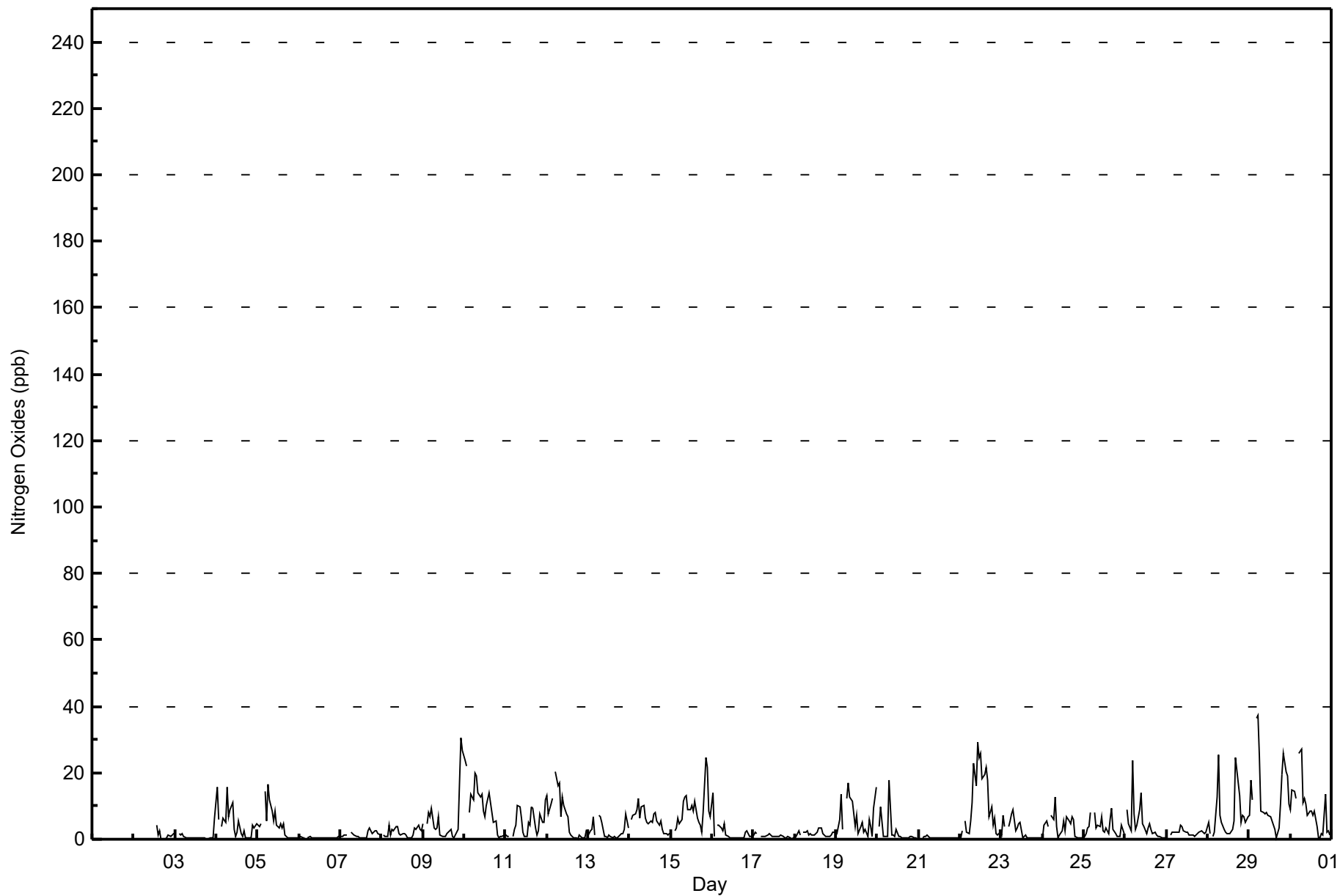
Sawbones Bay - April 2025

Maximum Value: 37.5 ppb on Apr 29 06:00																				Maximum Daily Average: 13.3 ppb on Apr 29					Hours in Service: 688		
Minimum Value: 0.1 ppb on Apr 2 17:00																				Minimum Daily Average: 0.5 ppb on Apr 21					Hours of Data: 655		
Maximum Diurnal Average: 8.2 ppb at hour 7																				Minimum Diurnal Average: 2.4 ppb at hour 19					Hours of Missing Data: 33		
Monthly Average: 4.58 ppb																				Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 2.2 Q ₃ = 6.2 P ₉₀ = 12.0 P ₉₉ = 25.7					Hours of Calibration: 33		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Apr	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	--	--
2-Apr	NS	NS	NS	NS	NS	NS	NS	NS	C	C	C	C	C	4.3	1.3	2.5	0.1	0.1	0.1	0.4	1.4	0.8	1.2	1.7	--	4.3	
3-Apr	1.7	Z	1.5	1.1	1.6	1.0	0.3	0.3	0.3	0.4	0.5	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	6.3	0.8	6.3	
4-Apr	15.7	5.9	Z	3.9	6.3	5.1	15.5	6.7	9.1	10.8	3.1	0.9	2.2	5.4	1.8	0.9	2.4	0.4	0.3	0.4	0.3	4.4	3.3	4.8	4.8	15.7	
5-Apr	4.4	3.8	4.6	Z	14.4	5.6	16.4	11.8	8.3	5.4	8.6	4.2	3.3	4.7	3.5	4.8	1.2	0.4	0.3	0.3	0.4	0.4	0.4	0.5	4.7	16.4	
6-Apr	0.6	1.0	0.5	0.4	Z	0.6	0.7	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.5	0.6	0.4	0.5	0.6	0.9	0.5	1.0	
7-Apr	0.8	1.0	1.2	1.4	1.2	Z	1.9	1.5	1.1	0.9	0.6	0.5	0.5	0.5	0.6	0.5	2.7	3.3	1.5	2.2	2.4	2.5	1.5	1.4	1.4	3.3	
8-Apr	Z	1.5	0.8	0.9	4.1	1.4	3.1	2.7	3.9	4.0	1.7	1.4	1.7	1.8	1.3	0.6	0.4	0.6	1.2	3.2	2.8	4.4	3.0	2.6	2.1	4.4	
9-Apr	4.5	Z	4.8	8.1	6.6	9.3	3.4	3.1	3.3	6.7	1.4	1.0	0.8	0.7	1.6	2.6	2.9	0.7	0.4	1.1	3.0	16.8	30.4	26.8	6.1	30.4	
10-Apr	23.6	22.1	Z	8.2	13.7	11.8	20.0	19.0	14.0	12.7	13.6	8.4	7.0	10.4	13.9	10.9	8.2	5.2	5.7	1.2	0.6	0.7	0.8	1.3	10.1	23.6	
11-Apr	1.1	1.0	0.7	Z	0.8	3.1	4.3	10.3	9.8	6.2	2.1	0.9	1.0	4.9	4.3	9.8	9.4	3.2	1.2	2.4	7.8	5.2	5.2	11.8	4.6	11.8	
12-Apr	12.9	7.6	10.6	12.1	Z	20.4	16.2	17.0	6.9	12.6	10.3	7.6	6.9	2.3	1.1	0.4	0.3	0.4	0.2	1.1	0.5	0.3	0.4	2.4	6.5	20.4	
13-Apr	1.7	2.6	2.9	6.6	1.5	Z	7.0	6.8	4.9	0.9	0.7	0.4	1.4	0.8	0.6	0.7	0.5	0.5	1.1	1.5	1.6	2.8	7.5	3.3	2.5	7.5	
14-Apr	Z	5.9	7.1	7.8	9.0	12.3	6.3	9.9	10.2	6.4	5.1	4.5	5.6	5.2	7.5	7.8	5.5	4.2	5.5	3.0	1.8	1.6	1.5	1.6	5.9	12.3	
15-Apr	1.7	Z	2.7	3.5	6.2	4.8	6.1	11.6	12.5	13.0	9.0	9.0	10.3	8.4	11.5	6.2	5.0	4.2	2.1	8.0	24.5	21.4	8.3	7.0	8.6	24.5	
16-Apr	13.9	1.0	Z	4.2	4.3	3.4	2.4	4.6	1.4	0.7	0.4	0.3	0.4	0.3	0.5	0.5	0.4	0.3	0.4	1.9	2.5	1.6	1.0	1.0	2.1	13.9	
17-Apr	1.4	2.1	1.8	Z	1.0	0.9	0.8	0.8	1.3	1.9	1.1	1.0	1.0	0.9	0.8	0.9	1.1	0.8	0.6	0.6	0.9	0.3	0.2	0.3	1.0	2.1	
18-Apr	0.4	1.0	2.7	1.2	Z	2.0	2.1	2.5	1.1	1.7	1.4	1.2	1.7	2.0	3.5	3.6	1.8	1.4	0.9	0.8	0.9	1.4	1.9	2.1	1.7	3.6	
19-Apr	1.9	3.8	6.1	13.5	3.1	Z	12.3	17.0	12.8	11.2	7.5	3.9	7.3	1.8	3.9	5.0	2.0	3.0	0.9	5.9	4.0	0.7	9.2	15.5	6.6	17.0	
20-Apr	Z	3.7	9.8	0.9	0.8	0.9	0.7	17.9	1.3	1.3	1.0	3.0	0.9	1.0	0.6	0.3	0.3	0.4	0.4	0.8	0.8	0.4	0.4	0.2	2.1	17.9	
21-Apr	0.1	Z	0.6	1.0	0.8	1.3	0.4	0.5	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.5	0.4	0.3	0.3	0.2	0.5	1.3	
22-Apr	0.6	2.4	Z	5.4	2.3	1.5	5.7	11.0	22.7	16.1	29.2	24.5	25.7	18.4	19.6	21.5	18.0	6.7	9.8	4.2	6.2	1.7	1.2	1.9	11.1	29.2	
23-Apr	1.2	7.4	3.8	Z	3.8	5.6	7.8	8.8	2.7	3.4	4.7	5.1	0.6	0.9	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.3	2.7	8.8	
24-Apr	0.4	4.3	5.7	3.7	Z	7.1	6.0	12.5	3.8	0.6	1.2	2.5	5.5	2.7	6.6	5.4	4.7	6.7	5.9	0.7	0.6	0.6	0.5	0.4	3.8	12.5	
25-Apr	0.7	1.6	3.5	3.9	7.9	Z	8.0	3.3	4.4	3.9	6.9	2.6	2.3	3.3	1.8	5.9	9.2	3.0	1.6	0.9	1.0	0.9	4.3	1.6	3.6	9.2	
26-Apr	Z	8.7	4.5	2.7	23.7	7.7	2.8	4.2	8.9	13.8	4.6	3.9	1.8	3.2	4.9	2.9	1.9	2.0	1.2	0.9	0.8	0.6	0.6	0.5	4.7	23.7	
27-Apr	0.4	Z	1.4	2.1	2.2	2.0	2.0	2.2	4.4	3.8	2.6	2.1	1.9	1.3	1.1	1.3	0.9	1.2	1.8	2.2	2.6	2.3	1.5	2.2	2.0	4.4	
28-Apr	5.3	1.5	Z	1.0	2.1	12.5	25.6	7.3	5.2	2.9	2.2	1.8	1.8	1.6	2.8	5.5	24.7	20.9	13.3	5.0	7.0	6.8	5.0	6.7	7.3	25.6	
29-Apr	7.3	17.7	11.8	Z	36.4	37.5	25.0	8.3	8.2	7.7	8.2	7.4	6.8	5.7	4.2	3.1	0.6	3.5	10.6	19.4	25.8	20.4	19.1	10.5	13.3	37.5	
30-Apr	8.7	15.0	14.6	12.4	Z	25.7	27.2	10.8	12.3	10.7	7.0	8.4	8.6	7.2	8.6	4.0	0.4	0.6	1.6	1.4	13.6	2.0	2.4	1.1	8.9	27.2	
4.6 5.3 4.5 4.6 6.7 7.6 8.2 7.6 6.3 5.7 4.8 3.9 3.9 3.5 3.8 3.8 3.7 2.6 2.4 2.5 4.0 3.5 3.9 4.0																									Diurnal Average		
23.6 22.1 14.6 13.5 36.4 37.5 27.2 19.0 22.7 16.1 29.2 24.5 25.7 18.4 19.6 21.5 24.7 20.9 13.3 19.4 25.8 21.4 30.4 26.8																									Diurnal Maximum		
Z - zerospan C - Calibration NS - Not in Service																											



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	634	96.79	96.79
21 - 40	21	3.21	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 655

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	27	22	11	20	21	19	47	71	71	33	28	24	80	57	50	51	632
21 - 40	0	0	0	0	0	0	0	2	2	2	8	6	0	1	0	0	21
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	27	22	11	20	21	19	47	73	73	35	36	30	80	58	50	51	653

Total Number of Valid Hours: 653

Total Number of Hours: 720



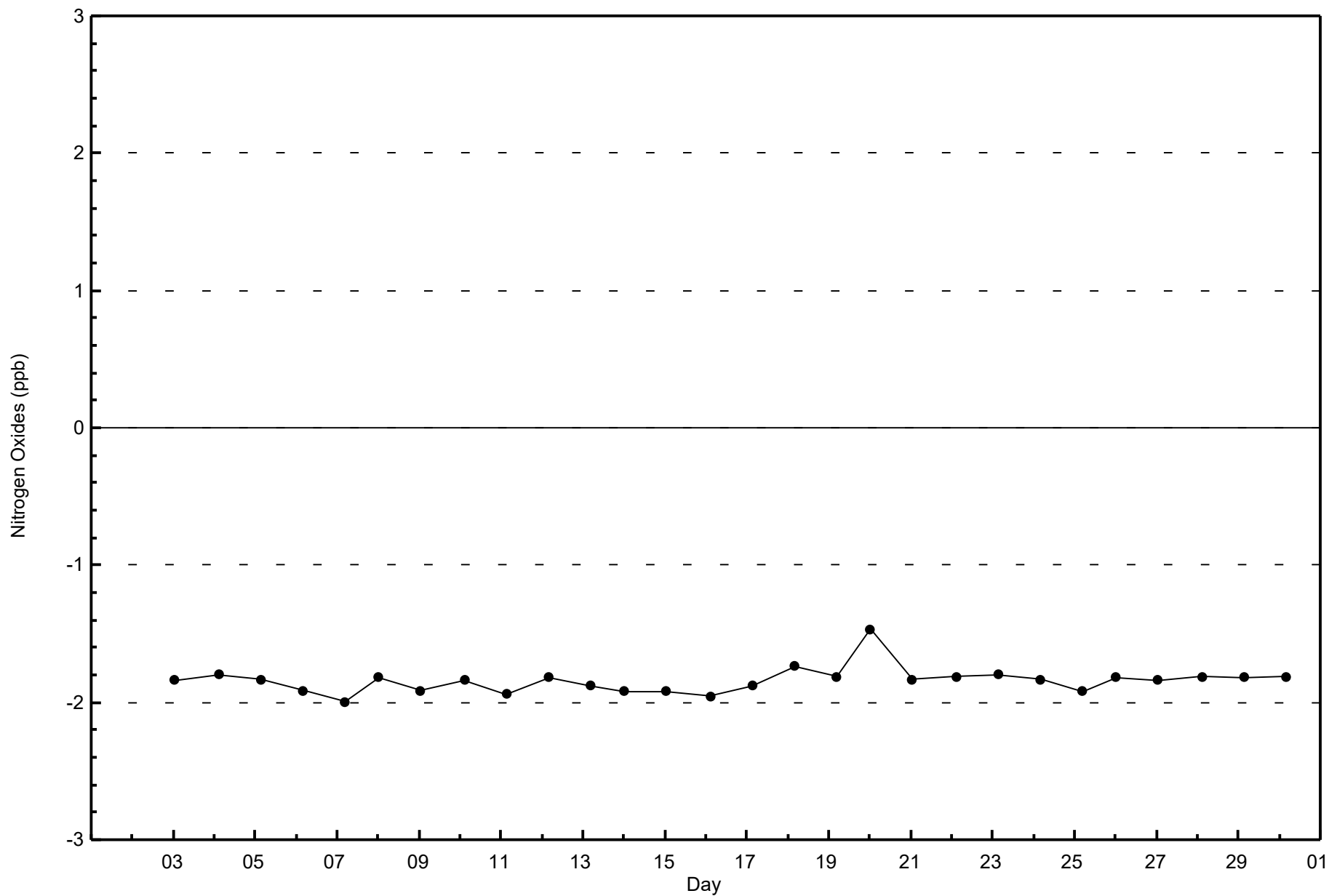
Nitrogen Oxides (NO_x) - ppb
Sawbones Bay





Wood Buffalo Environmental Association
Zero Responses

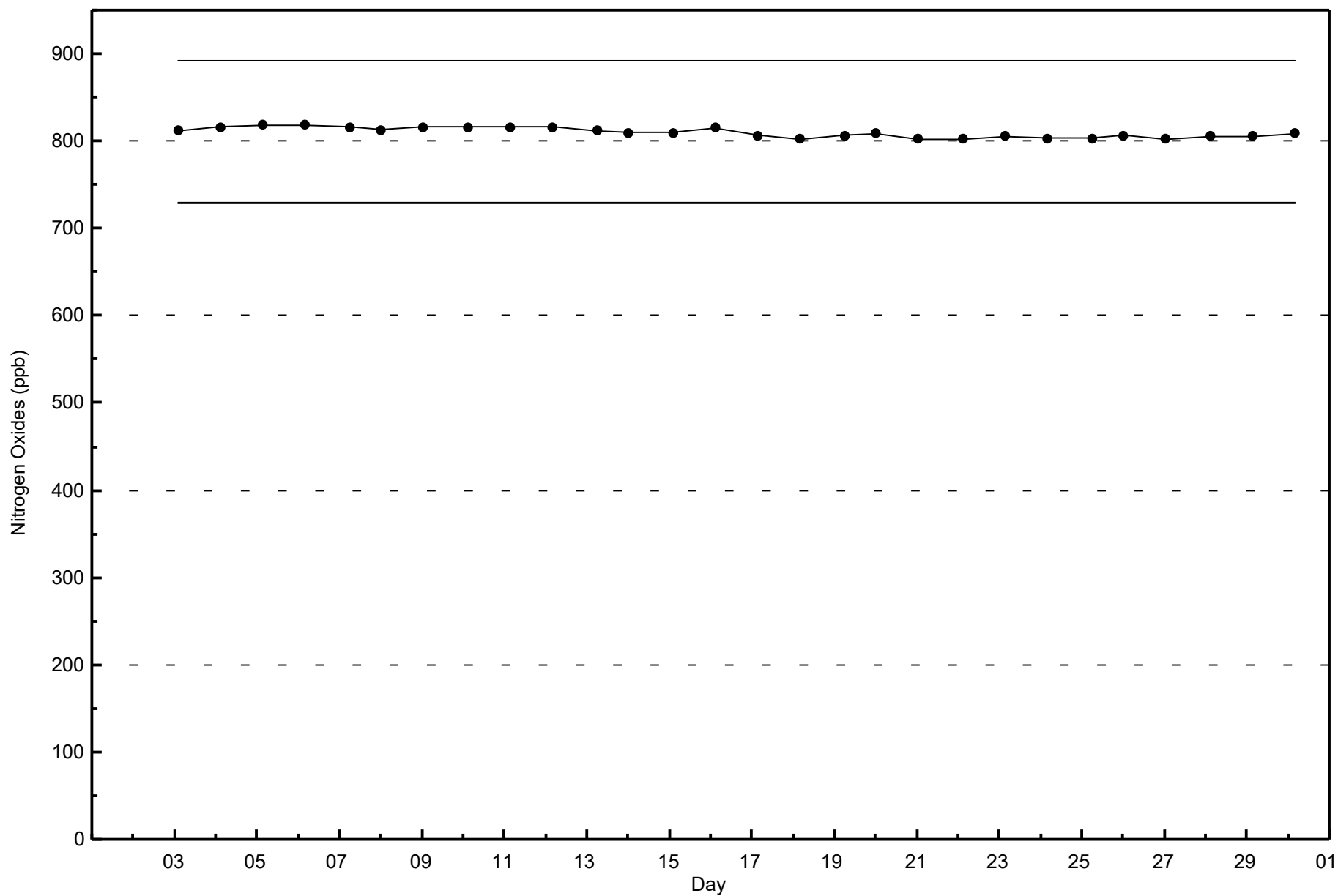
Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Sawbones Bay - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

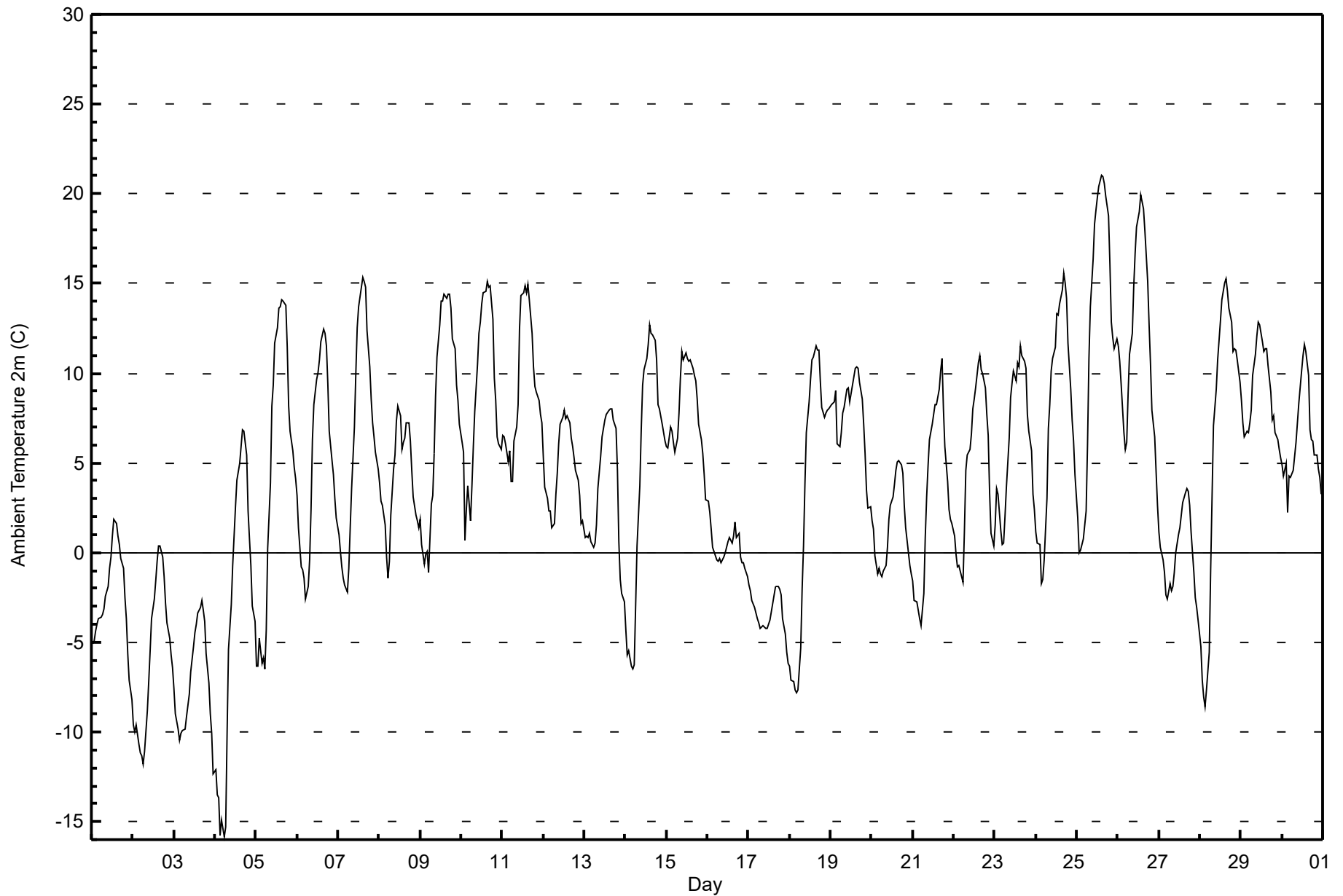
Sawbones Bay - April 2025

Maximum Value: 21.0 C on Apr 25 15:00																				Maximum Daily Average: 12.3 C on Apr 25					Hours in Service: 720		
Minimum Value: -15.9 C on Apr 4 06:00																				Minimum Daily Average: -7.2 C on Apr 3					Hours of Data: 720		
Maximum Diurnal Average: 9.5 C at hour 16																				Minimum Diurnal Average: -1.6 C at hour 6					Hours of Missing Data: 0		
Monthly Average: 4.18 C																				Percentiles: P ₁ = -12.0 P ₁₀ = -4.4 Q ₁ = -0.5 Median = 4.6 Q ₃ = 9.2 P ₉₀ = 12.6 P ₉₉ = 19.5					Hours of Calibration: 0		
																									Percent Operational Time: 100.0		
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	-5.1	-5.0	-4.4	-4.0	-3.7	-3.6	-3.4	-3.2	-2.4	-1.9	-0.9	-0.3	0.9	1.8	1.7	0.9	0.5	-0.3	-0.9	-2.5	-3.7	-5.6	-7.1	-8.2	-2.5	1.8	
2-Apr	-9.6	-10.0	-9.6	-10.7	-11.2	-11.3	-11.8	-11.1	-8.8	-7.2	-5.4	-3.7	-2.6	-1.6	-0.5	0.4	0.3	-0.3	-1.3	-2.8	-3.9	-4.8	-5.7	-6.4	-5.8	0.4	
3-Apr	-7.6	-8.9	-9.8	-10.4	-10.1	-9.9	-9.8	-9.1	-8.6	-7.9	-6.6	-5.2	-4.4	-4.0	-3.4	-3.1	-2.6	-3.2	-3.8	-5.6	-7.3	-9.0	-10.1	-12.3	-7.2	-2.6	
4-Apr	-12.1	-13.5	-13.6	-15.7	-14.9	-15.9	-15.3	-10.1	-5.4	-2.9	-0.7	0.9	2.5	4.0	5.0	5.9	6.8	6.8	5.4	2.3	0.8	-0.7	-3.0	-3.9	-3.6	6.8	
5-Apr	-6.3	-6.3	-4.8	-6.2	-5.8	-6.5	-4.3	0.2	3.9	8.2	9.4	11.7	12.5	13.6	13.7	14.1	14.1	13.8	11.4	8.2	6.8	5.7	4.8	4.1	4.8	14.1	
6-Apr	3.2	1.4	-0.8	-0.9	-1.4	-2.6	-1.9	-0.4	2.4	6.3	8.2	9.7	10.0	10.7	11.7	12.5	12.2	11.5	9.5	6.8	5.1	4.4	3.0	1.9	5.1	12.5	
7-Apr	1.0	0.0	-0.8	-1.4	-1.8	-2.2	-0.9	1.4	3.6	7.0	10.0	12.6	13.7	14.2	15.3	15.1	14.8	12.4	10.4	8.6	7.3	6.5	5.6	4.7	6.5	15.3	
8-Apr	3.9	2.9	2.7	1.5	-0.3	-1.4	-0.5	2.1	4.7	5.5	7.3	8.2	7.6	5.8	6.2	6.4	7.2	7.2	6.2	4.6	3.1	2.1	1.8	1.4	4.0	8.2	
9-Apr	1.8	0.5	-0.6	-0.1	0.0	-1.1	2.7	3.2	5.5	8.7	10.9	12.7	14.0	14.1	14.4	14.2	14.4	14.4	13.6	11.9	11.3	9.3	8.5	7.2	8.0	14.4	
10-Apr	6.1	5.6	0.7	2.4	3.7	1.8	3.7	5.9	7.8	10.5	12.2	12.9	13.8	14.5	14.5	15.1	14.8	14.9	13.0	9.7	8.5	6.4	6.1	5.8	8.8	15.1	
11-Apr	6.5	6.5	6.0	5.1	5.7	4.0	4.0	6.2	7.0	8.2	12.4	14.3	14.5	14.9	14.5	14.9	14.1	12.2	10.4	9.2	8.9	8.5	7.7	7.3	9.3	14.9	
12-Apr	5.4	3.7	3.0	2.3	2.3	1.4	1.6	3.3	4.4	6.1	7.2	7.5	8.0	7.5	7.6	7.2	6.4	5.9	5.3	4.6	4.0	3.2	1.6	1.8	4.6	8.0	
13-Apr	0.8	0.9	0.9	1.1	0.6	0.3	0.5	1.6	3.6	5.3	6.4	6.9	7.4	7.7	7.9	8.0	8.0	7.4	6.9	4.6	0.6	-1.5	-2.3	-2.7	3.4	8.0	
14-Apr	-4.3	-5.7	-5.5	-6.3	-6.5	-6.2	-3.0	0.4	3.7	6.8	9.3	10.2	10.8	11.6	12.7	12.2	12.1	11.8	10.8	8.3	8.0	7.2	6.7	6.3	4.6	12.7	
15-Apr	5.9	5.8	7.0	6.8	6.1	5.6	6.4	7.8	9.8	11.2	10.7	11.1	10.8	10.7	10.8	10.3	9.9	9.6	8.6	7.2	6.3	5.5	4.4	2.9	8.0	11.2	
16-Apr	2.9	2.2	1.3	0.3	0.1	-0.4	-0.5	-0.3	-0.5	-0.3	0.0	0.3	0.6	0.8	0.6	0.9	1.7	0.9	1.1	-0.3	-0.6	-0.6	-0.9	-1.3	0.3	2.9	
17-Apr	-1.8	-2.1	-2.6	-3.1	-3.4	-3.7	-3.9	-4.2	-4.1	-4.2	-4.2	-4.3	-3.8	-3.3	-2.8	-2.4	-1.9	-1.9	-2.0	-2.4	-3.7	-4.6	-5.5	-6.2	-3.4	-1.8	
18-Apr	-6.3	-7.1	-7.2	-7.7	-7.8	-7.7	-5.3	-2.0	0.4	3.8	6.7	8.4	9.7	10.7	10.9	11.5	11.3	11.3	9.6	8.1	7.6	7.8	7.9	8.0	3.4	11.5	
19-Apr	8.2	8.3	8.4	9.0	6.0	5.9	6.7	7.8	8.1	9.1	9.2	8.4	8.9	9.3	10.2	10.4	10.3	9.5	8.6	7.1	5.5	3.5	2.5	2.6	7.6	10.4	
20-Apr	1.8	1.3	-0.2	-1.2	-0.9	-1.2	-1.3	-1.1	-0.7	0.3	1.8	2.6	3.1	3.8	4.6	5.1	5.1	4.9	4.4	2.6	1.4	0.0	-0.7	-1.2	1.4	5.1	
21-Apr	-1.6	-2.6	-2.8	-3.2	-3.7	-4.1	-2.2	0.9	3.1	4.8	6.3	7.1	7.7	8.3	8.2	9.1	10.1	10.9	8.0	5.9	4.0	2.4	1.8	1.6	3.3	10.9	
22-Apr	0.9	-0.1	-0.8	-0.7	-1.1	-1.7	1.2	4.6	5.5	5.7	6.6	8.0	8.5	9.2	10.6	11.0	10.2	9.9	9.2	7.7	6.5	3.4	1.1	0.4	4.8	11.0	
23-Apr	1.5	3.6	3.2	1.2	0.5	0.6	2.0	3.6	6.4	8.6	9.4	10.1	9.6	10.6	10.3	11.5	11.0	10.7	10.3	7.7	6.7	5.7	3.3	2.4	6.3	11.5	
24-Apr	1.1	0.5	0.4	-1.8	-1.5	-0.4	3.0	7.0	8.3	10.1	10.8	11.4	13.3	13.3	13.9	14.6	15.6	15.1	14.2	11.7	9.1	7.4	6.2	4.4	7.8	15.6	
25-Apr	1.9	0.0	0.2	0.5	0.7	2.3	6.1	10.8	13.7	16.4	18.3	19.1	19.8	20.4	21.0	21.0	20.6	19.9	18.8	16.1	12.8	12.0	11.3	11.9	12.3	21.0	
26-Apr	11.6	10.6	9.4	6.7	5.8	6.1	8.9	11.1	12.2	14.8	16.7	18.2	19.0	19.9	19.5	19.2	17.9	15.1	12.7	10.5	7.9	6.4	4.5	2.6	12.0	19.9	
27-Apr	1.1	0.3	-0.4	-1.1	-2.3	-2.6	-1.7	-2.1	-1.9	-1.1	0.0	1.0	1.3	2.1	2.8	3.3	3.6	3.4	2.7	1.2	-1.1	-2.5	-3.1	-3.8	0.0	3.6	
28-Apr	-5.2	-7.1	-8.1	-8.6	-7.6	-5.5	-1.0	3.1	7.1	9.1	10.8	11.8	12.9	14.1	15.0	15.3	14.6	13.6	12.9	11.2	11.3	11.3	10.7	9.5	6.3	15.3	
29-Apr	8.5	7.2	6.4	6.8	6.7	7.2	8.0	9.9	11.1	12.1	12.9	12.7	11.7	11.2	11.3	11.3	10.4	9.0	7.4	7.6	6.7	6.3	5.7	5.3	8.9	12.9	
30-Apr	4.9	4.2	5.0	2.2	4.3	4.2	4.6	5.3	6.2	7.2	8.3	10.2	11.0	11.6	11.2	9.9	6.9	6.3	6.2	5.5	5.5	4.6	4.2	3.2	6.4	11.6	
Diurnal Average																											
Diurnal Maximum																											



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Sawbones Bay - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	200	27.78	27.78
0 - 10	364	50.56	78.33
10 - 20	152	21.11	99.44
> 20	4	0.56	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) - %

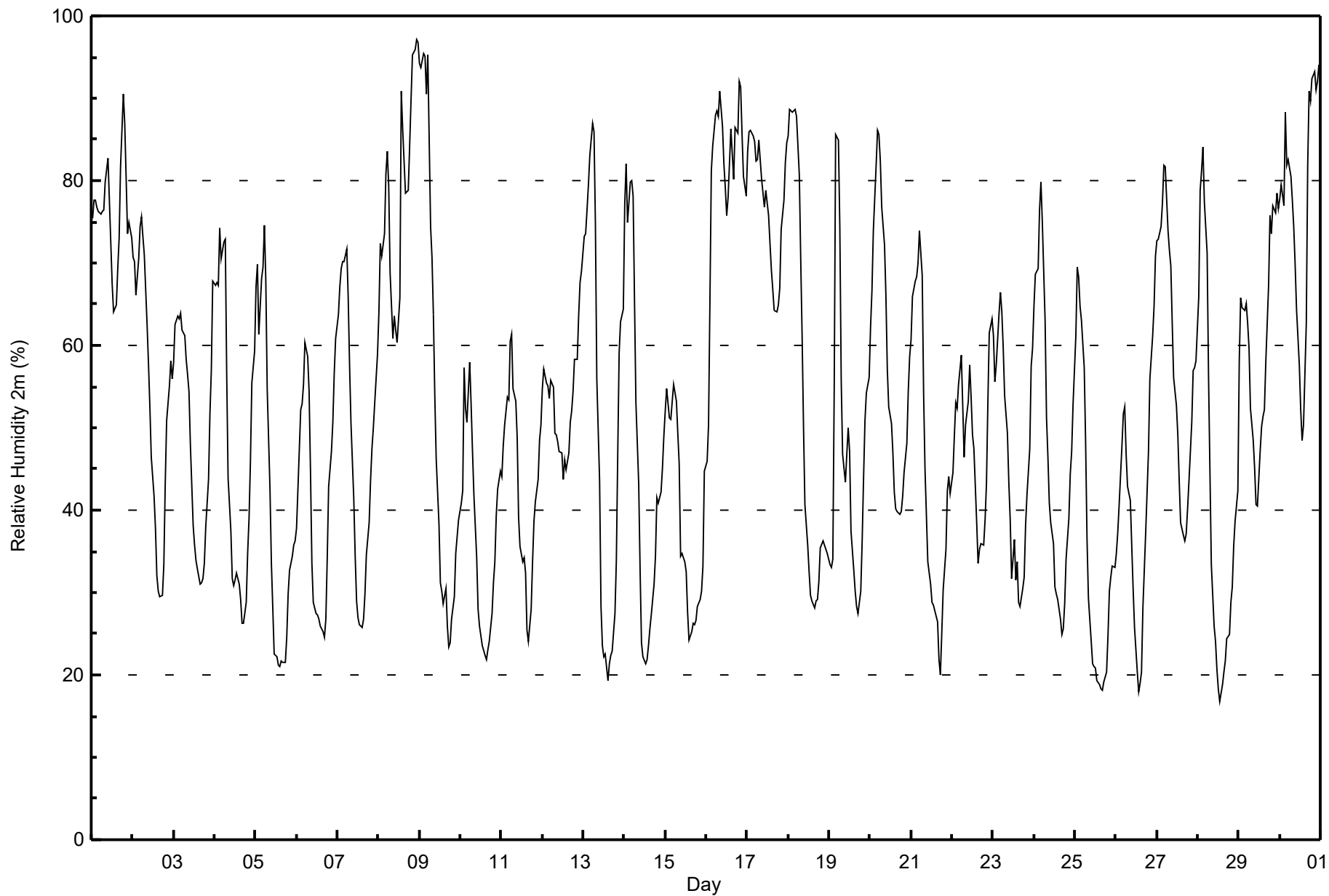
Sawbones Bay - April 2025

Maximum Value: 97.1 % on Apr 8 23:00																				Maximum Daily Average: 80.6 % on Apr 16					Hours in Service: 720					Hours of Data: 720				
Minimum Value: 16.7 % on Apr 28 14:00										Minimum Daily Average: 35.5 % on Apr 25										Hours of Missing Data: 0					Hours of Calibration: 0									
Maximum Diurnal Average: 72.5 % at hour 6										Minimum Diurnal Average: 36.3 % at hour 16										Percent Operational Time: 100.0														
Monthly Average: 52.35 %										Percentiles: P ₁ = 19.0 P ₁₀ = 26.2 Q ₁ = 34.1 Median = 51.0 Q ₃ = 69.3 P ₉₀ = 81.8 P ₉₉ = 94.1																								
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1-Apr	75.4	77.6	77.6	76.8	76.3	75.9	76.3	76.5	79.8	82.8	77.6	72.6	67.5	64.0	65.0	69.4	73.0	81.8	90.5	87.0	80.4	73.5	74.9	73.0	76.1	90.5								
2-Apr	70.7	70.1	66.1	70.4	74.4	75.6	73.2	70.9	62.5	57.8	52.6	46.5	41.8	37.8	32.0	30.3	29.6	29.6	33.5	43.3	50.8	55.1	58.1	55.9	53.7	75.6								
3-Apr	57.9	62.5	63.5	63.3	64.0	61.9	61.2	58.4	56.4	54.4	48.0	38.1	35.8	33.9	32.9	31.1	31.2	31.7	33.5	38.0	43.7	51.6	56.9	67.8	49.1	67.8								
4-Apr	67.3	67.7	67.3	74.2	70.5	72.6	72.8	56.6	43.9	37.5	31.6	30.8	31.5	32.3	31.0	29.2	26.3	26.4	28.8	34.8	38.9	45.9	55.4	59.4	47.2	74.2								
5-Apr	67.1	69.8	61.3	68.1	69.6	74.5	68.0	54.7	42.5	33.6	28.1	22.5	22.2	21.2	21.0	21.7	21.5	21.6	24.6	29.9	32.6	34.4	35.8	36.3	40.9	74.5								
6-Apr	37.9	42.5	52.3	52.9	55.3	60.3	58.7	54.5	44.7	33.6	28.8	27.5	27.4	26.8	25.9	25.2	24.6	26.8	34.2	42.8	47.2	50.7	56.6	60.8	41.6	60.8								
7-Apr	63.7	67.1	69.2	70.2	70.2	71.7	65.7	57.5	50.5	41.4	34.4	28.9	26.9	26.1	25.7	26.9	29.8	34.5	38.5	43.5	47.4	49.9	53.0	59.0	48.0	71.7								
8-Apr	64.1	72.4	70.8	73.6	80.8	83.6	79.4	68.9	60.8	63.6	61.9	60.4	65.7	90.8	86.3	82.4	78.5	78.8	84.2	89.8	95.2	95.9	97.1	96.7	78.4	97.1								
9-Apr	94.2	93.7	95.5	95.0	90.5	95.3	74.4	70.6	63.8	53.8	46.3	38.2	31.1	30.2	28.6	30.5	25.9	23.5	23.9	26.9	29.5	34.7	36.8	38.8	53.0	95.5								
10-Apr	40.9	42.4	57.2	52.5	50.7	57.9	52.9	47.0	41.8	34.2	28.0	25.9	24.8	23.6	22.3	21.8	23.1	24.0	27.4	31.2	33.8	39.4	42.5	44.8	37.1	57.9								
11-Apr	44.0	47.7	50.3	53.8	53.4	60.5	61.3	54.8	53.2	48.8	39.2	35.6	33.7	34.2	32.4	25.5	24.0	28.0	33.8	38.6	40.9	43.7	48.5	50.3	43.2	61.3								
12-Apr	54.7	57.2	55.5	55.0	53.5	55.8	54.9	49.3	49.2	48.3	47.1	46.9	43.7	46.0	44.9	46.9	50.7	52.1	54.4	58.3	58.2	63.6	67.7	69.0	53.5	69.0								
13-Apr	73.2	73.5	76.4	79.4	83.0	87.0	85.9	74.7	55.9	43.6	28.2	23.5	22.3	22.6	19.4	21.3	22.4	22.9	27.4	33.9	46.9	59.2	62.8	64.3	50.4	87.0								
14-Apr	77.1	82.1	75.0	79.8	79.9	78.2	65.5	53.1	43.2	32.7	24.0	22.1	21.4	21.8	23.6	25.6	27.3	31.0	34.4	41.6	40.8	42.2	45.0	49.0	46.5	82.1								
15-Apr	52.1	54.7	51.2	51.1	53.2	55.2	53.2	49.3	45.6	34.5	34.7	33.7	32.5	27.7	24.3	25.2	26.3	26.1	26.6	28.3	29.2	30.1	33.2	44.8	38.4	55.2								
16-Apr	46.0	50.3	65.4	81.2	84.3	87.9	88.4	87.7	90.9	86.6	82.1	79.1	75.8	77.9	86.2	83.2	80.2	86.4	85.8	92.0	91.4	85.6	80.6	78.2	80.6	92.0								
17-Apr	83.6	85.9	86.0	85.5	84.8	82.4	82.5	84.9	80.2	78.5	76.9	78.8	75.8	72.3	69.1	66.8	64.3	64.0	64.9	67.0	74.1	77.7	82.1	84.6	77.2	86.0								
18-Apr	85.5	88.7	88.2	88.6	88.6	87.7	80.6	70.6	61.3	50.1	40.7	35.8	32.6	29.6	28.9	28.1	28.9	29.2	31.4	35.4	36.3	35.8	35.2	34.8	52.2	88.7								
19-Apr	33.3	33.0	34.1	55.1	85.7	84.9	74.5	55.8	46.9	43.3	46.7	50.0	47.1	37.4	32.8	30.2	28.3	27.4	30.3	36.3	43.8	50.8	54.3	56.2	46.6	85.7								
20-Apr	62.2	66.6	73.9	81.9	86.2	85.6	82.4	76.7	72.2	66.0	57.1	52.5	50.6	47.0	42.2	40.2	39.8	39.5	39.9	41.7	44.6	48.2	54.5	58.6	58.8	86.2								
21-Apr	60.7	66.0	67.7	68.2	70.1	73.9	68.5	54.1	44.9	39.3	33.7	31.1	28.8	28.5	27.8	26.4	21.8	19.9	25.1	30.3	35.2	42.3	44.0	42.1	43.8	73.9								
22-Apr	44.7	49.0	53.1	52.4	55.2	58.8	52.7	46.4	50.4	53.2	57.7	53.7	49.1	47.5	38.4	33.6	35.3	35.9	35.7	38.9	43.2	53.1	61.5	63.2	48.4	63.2								
23-Apr	61.2	55.7	57.6	63.8	66.4	64.1	59.6	53.9	49.3	43.3	38.8	31.6	36.4	31.4	33.7	28.8	28.3	30.6	31.8	38.1	41.9	47.4	57.5	59.7	46.3	66.4								
24-Apr	64.7	68.7	69.3	76.5	79.8	74.9	62.9	51.1	46.4	40.9	38.6	35.9	30.7	29.9	29.1	26.8	25.0	25.7	28.7	34.1	38.9	44.4	47.1	52.9	46.8	79.8								
25-Apr	61.2	69.5	68.4	64.7	63.0	57.4	48.2	36.5	29.4	24.0	21.3	21.1	20.8	19.4	18.8	18.3	18.1	19.2	20.3	24.7	30.2	31.8	33.2	33.1	35.5	69.5								
26-Apr	34.7	37.3	40.6	47.9	51.7	52.6	46.8	42.9	41.2	35.8	30.6	25.8	20.3	18.0	19.0	20.3	28.1	37.2	42.2	47.2	56.0	61.1	64.8	70.9	40.5	70.9								
27-Apr	72.7	72.9	74.4	77.2	81.8	81.7	73.8	71.4	69.6	62.8	56.2	52.6	49.1	43.6	38.4	37.0	36.3	37.1	40.1	43.5	50.7	56.9	57.4	58.1	58.1	81.8								
28-Apr	66.0	78.8	81.2	84.1	77.5	71.2	56.3	44.8	33.3	26.0	24.0	20.7	18.3	16.7	18.8	20.3	21.6	24.3	24.9	28.8	30.7	35.7	38.6	42.4	41.0	84.1								
29-Apr	58.2	65.7	64.7	64.3	65.1	62.7	59.6	52.5	48.5	45.2	40.6	40.5	47.3	50.2	51.3	52.2	57.9	67.4	75.8	73.6	77.0	76.0	78.4	76.6	60.5	78.4								
30-Apr	77.7	79.5	76.9	88.3	81.9	82.5	80.5	77.7	74.5	69.9	64.4	57.6	52.2	48.5	50.3	62.7	81.8	90.8	89.6	92.4	93.2	91.0	92.0	94.0	77.1	94.0								
Diurnal Average																																		
94.2 93.7 95.5 95.0 90.5 95.3 88.4 87.7 90.9 86.6 82.1 79.1 75.8 90.8 86.3 83.2 81.8 90.8 90.5 92.4 95.2 95.9 97.1 96.7 Diurnal Maximum																																		



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Sawbones Bay - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	12	1.67	1.67
20 - 40	232	32.22	33.89
40 - 60	214	29.72	63.61
60 - 80	179	24.86	88.47
80 - 100	83	11.53	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

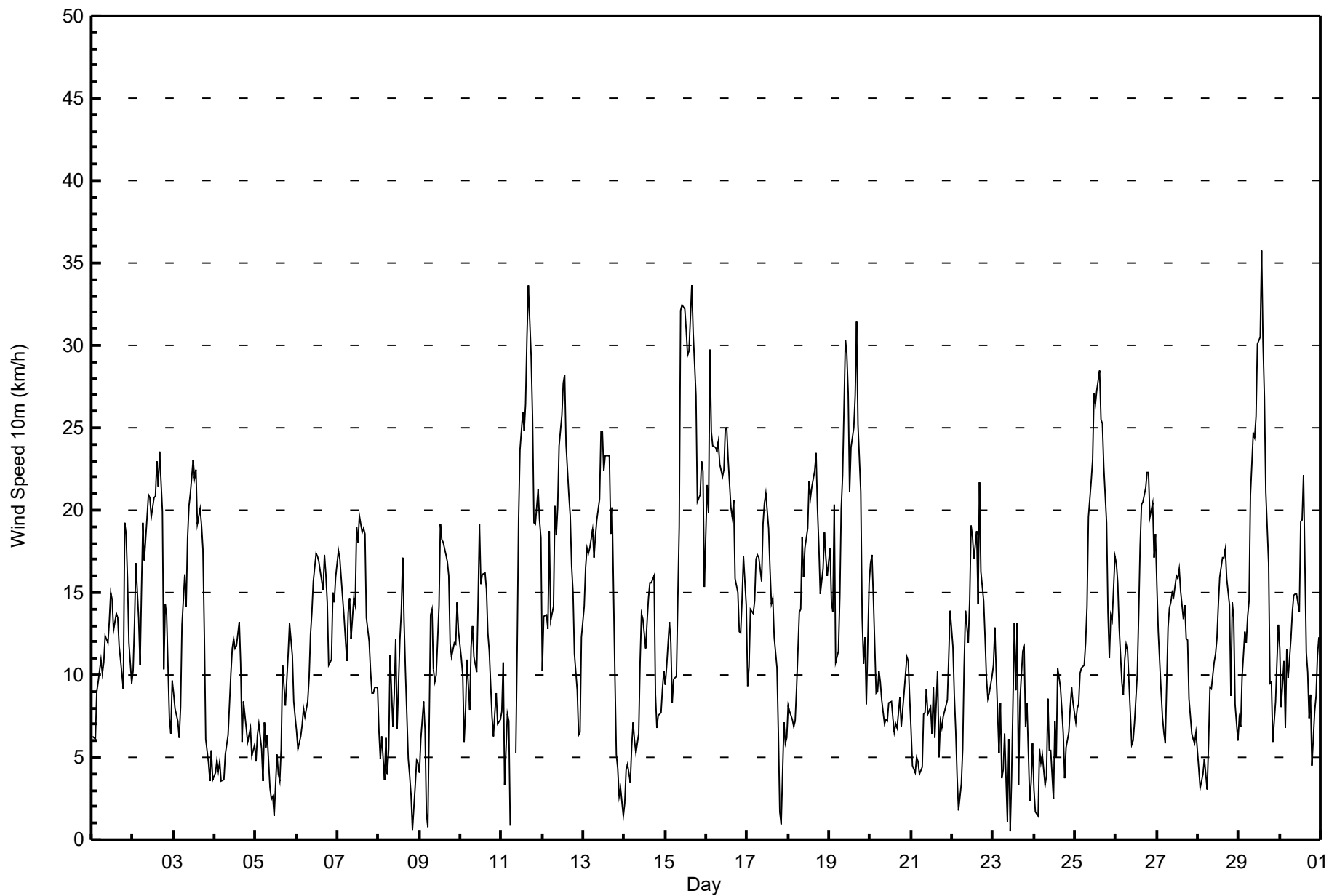
Sawbones Bay - April 2025

Maximum Speed: 36 km/h on Apr 29 14:00										Maximum Daily Speed Average: 18.9 km/h on Apr 16										Hours in Service: 720						
Minimum Speed Value: 0 km/h on Apr 23 11:00										Minimum Daily Speed Average: 1.1 km/h on Apr 8										Hours of Data: 718						
Maximum Diurnal Speed Average: 10.8 km/h at hour 15										Minimum Diurnal Speed Average: 0.9 km/h at hour 21										Hours of Missing Data: 2						
Monthly Average Velocity: 5.0 km/h 252.3 deg										Percentiles: P ₁ = 1 P ₁₀ = 5 Q ₁ = 7 Median = 12 Q ₃ = 17 P ₉₀ = 22 P ₉₉ = 31										Percent Operational Time: 99.7						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	SE6	SE6	SE6	SSE9	SSE10	SSE11	SSE10	SSE11	SSE12	SSE12	S13	S15	S15	S13	S14	S14	S12	S11	SSW9	NW19	NW19	NW16	NW12WNW10	S6.3	NW19	
2-Apr	WNW10	W13	W17	W13WSW11	WSW15	W19WNW17	WNW20	W21WNW21	W20	W21	W21WNW23	NW21	NW24	NW20	NNW10	N14	N14	NNE7	NNW6	NW10	WNW14.1	NW24				
3-Apr	NW9	NW8	NNW7	NNW6	WNW8	NW13	NW16	NW14	NW18	NW20	NW21	NW23	NW22	NW22	NNW19	NNW20	NW19	NNW18	NNW12	N6	NNE5	NNW4	NW5 WSW4	NW12.9	NW23	
4-Apr	SW4	S5	S4	S5	S4	SSE4	S5	SSE6	SSW6WSW10	W12WNW12	W12WSW12	WNW13WNW11	NW6	NNW8	NNE7	ENE6	E6	SE7	SE5	SSE6	WSW2.8	WNW13				
5-Apr	SSE5	SSE6	S7	S6	SSW4	S7	S6	S6	SSW3	SE2	WNW3	WSW1	SSE5	S4	WNW4	W5	NW11	NNW8	NNE10	NE11	ENE13	E11	E8	E7	ESE1.5	ENE13
6-Apr	ESE7	ENE6	ENE6	ENE7	ENE8	ENE7	ENE8	ENE10	E12	ESE14	ESE16	SE17	SE17	ESE17	SE16	SE15	SE17	SE16	SE14	SE11	SE11	SE15	SSE14	SSE16	ESE11.2	SE17
7-Apr	SSE18	SSE17	SSE16	SSE15	SSE14	SSE11	SSE14	SSE15	SE12	SE15	SE14	SE19	SE18	SE20	SE19	SE19	SSE19	SSE13	SSE12	SSE10	SSE9	SSE9	SE9	SE9	SSE14.2	SE20
8-Apr	SE7	SE5	SE6	E4	SE6	ESE4	SE6	SSE11	S7	WNW9	NNW12	NNW7	NW12WNW14	WNW17	NW13	NW10	N5	ENE4	SE3	SE1	SSE3	SSE5	SE5	WNW1.1	WNW17	
9-Apr	SW4	SSE6	SSE8	SSW7	NNE2	SSE1	W14	W14	W10	W10WNW10	WNW14WNW19	WNW18WNW18	W17WNW17	WNW16WNW12	WNW11	W12	SW12WSW14	SW13	W9.9	WNW19						
10-Apr	WSW11WSW10	SSE6	SSW8	SW11	SSW8	SSW12	SW13	SW11	SW10WSW14	WSW19	SW16	SW16WSW16	SW15	SW13	SSW11	SSW7	SE6	ESE8	ESE9	ESE7	E7	SW8.4	WSW19			
11-Apr	ESE8	E11	E3	ENE8	E7	WNW1	UO	UO	SW5WNW12	WNW19WNW24	WNW26	W25	W26	W31	W34	W29	W26	W19WSW19	W21	W19WSW18	W14.1	W34				
12-Apr	SW10	SW14	SW14	SW13WSW19	SW13	SW14	W20	W18	W20	W24	W26	W28	W28WNW24	NW21	NW20WNW17	WNW15WNW11	NW9	NW6	NW7	W12	W14.8	W28				
13-Apr	W14	W16	W18	W17	W18WSW19	W17	W18WNW19	WNW21WNW25	NW25WNW22	NW23WNW23	WNW23	NW19WNW20	NNW10	NNE5	N4	NNE3	N3	NE1	WNW14.7	WNW25						
14-Apr	SSE2	SSE4	SSE5	SSE3	SSE6	SSE7	SSE6	SSW5	WSW6	W11	SSW14	SSW13	SW12	SSW13	SSW15	SSW16	SSW16	SSW16	S9	SSE7	SE8	SE8	SE9	SSE10	SSW7.8	SSW16
15-Apr	SSE9	SSE10	S13	S12	S8	SSE10	S10	SW15	SW19WSW32	W32	W32	W31	W29	W30	W34	W31	W29	W27	W21WSW21	WSW23	W22	W15	WSW18.4	W34		
16-Apr	WSW22WNW20	W30	W25	W24	W24WNW24	WNW24WNW23	WNW22WNW22	NW25	NW25	NW23	NW20	NW20	NW21	NW16	NW15	NNW13	NNW13	NW15	NW17	NNW14	WNW18.9	W30				
17-Apr	NNW9	NNW10	N14	N14	NNW14	NNW17	NNW17	NNW17	NNW16	NNW19	NNW20	NNW21	NNW19	NNW16	NNW14	NNW15	N12	NNE10	N6	NNE2	E1	ESE7	SE6	SE6	NNW11.1	NNW21
18-Apr	SE8	SSE8	SSE7	SSE7	SSE9	SSE14	SSE14	SSE18	SSE16	S18	S19	S22	S21	S21	S22	S24	S20	S18	SSE15	SSE16	SSE19	S17	S16	SSE15.5	S24	
19-Apr	S18	S14	SSW14	W20	S11	S11	SW15WSW20	W22	W30	W30	W27	W21WNW24	W25	W27	W31	W25	W21WNW13	W11WNW12	WSW8WSW16	WSW16.8	W31					
20-Apr	WSW17	W17	W15	NNW9	NNW9	NNW10	N10	N8	NNW7	NNW7	NW7	NNW8	NNW8	N7	NNE6	NNE7	NNE7	NNE9	NNE7	NNE8	NE9	ENE11	E11	ESE9	N5.5	W17
21-Apr	SE7	ENE4	NE4	E5	E5	ENE4	ENE4	ESE8	E8	ENE9	ENE8	E8	E6	ENE9	NE6	NE10	ENE5	SE7	SE7	SE7	ESE8	ESE8	SE11	SSE14	E6.0	SSE14
22-Apr	SSE12	S9	S7	SSE4	SSE2	ESE3	SSE5	S11	SSW14	SSW12	SW15	SW19	SW18	SW17	SW19	SW14	SSW22	SSW16	SW14	SSW12	SSW10	S9	S9	SSE10	SSW10.6	SSW22
23-Apr	S11	SW13	S10	SSE5	S8	SSE4	W4	WNW6	SSW1	S6	NE0	NW4	NNE13	N9WNW13	NW3	NW9	N11	NNE12	NNE7	NE8	NNE2	NE4	NE6	NNW1.2	NNE13	
24-Apr	E3	SE2	S1	S6	S5	S5	S3	SSW4	WNW9	N5	NW5	ENE2	SSW7	W5	SW10	SW9	SSW8	SSW6	S4	E6	E7	E8	ESE9	ESE8	S2.3	SW10
25-Apr	SE7	SSE8	SSE8	SSE10	SSE10	SSE11	SSE12	S14	S20	S22	S23	S27	S26	S27	S28	S26	S25	S23	S19	S14	SSE11	SSE14	S13	S17	S17.0	S28
26-Apr	S17	S16	SSE13	SSE9	SSE9	SSE11	S12	S11	SSW8	S6	WSW6	W7WNW10	WNW14WNW18	WNW20	NNW21	N21	N22	NNW22	NNW20	N20	N17	N19	NW4.7	N22		
27-Apr	N15	NNW13	N9	NNW7	NNW7	NW6	NW13	NNW14	N14	N15	NNW15	NNW16	NNW16	NNW16	NW15	NW13	NNW14	N12	NE12	NE9	ENE6	ENE6	E6	SE7	N9.7	NNW16
28-Apr	SE4	E3	ESE4	ESE4	SE5	SSE3	SSE6	S9	S9	S11	S11	S12	S14	S16	S17	S17	S18	S16	S14	SSE9	S14	SSW13	S8	SSE6	S9.7	S18
29-Apr	SSW7	SSE7	SSW10	SSW13	SW12	SW14WSW14	W21	W25	W24	W26	W30	W31WNW36	WNW30WNW27	NW21	NW17	W9	W10	WNW6	WSW8WSW11	WSW13	W15.3	WNW36				
30-Apr	WSW12	SW8WSW11	S7	SW12	SW10	SW12WSW14	W15	W15	W15WSW14	W19	W19	W22WNW11	N10	NNE7	N9	N4	WNW8	WNW9	NNW11	NNW12	W8.9	W22				
SSW4.3SSW4.0SSW4.2SSW3.5SSW3.9SSW3.9 SW5.0WSW6.2WSW6.7 W7.9 W8.9 W9.3 W9.4 W9.8 W10.8 W9.5 W8.4 W6.1WNW3.6 NW1.9 W0.9SSW1.3SSW2.0SSW2.8																								Diurnal Average		
WSW22WNW20 W30 W25 W24 W24WNW24WNW24 W25WSW32 W32 W32 W31WNW36WNW30 W34 W34 W29 W27NNW22 WSW21WSW23 W22 N19																								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
Sawbones Bay - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Sawbones Bay - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	89	12.40	12.40
6 - 11	256	35.65	48.05
12 - 19	249	34.68	82.73
20 - 28	104	14.48	97.21
29 - 38	20	2.79	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
Sawbones Bay - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	5	6	4	6	7	4	9	16	11	5	3	2	3	3	4	1	89
6 - 11	9	14	6	16	13	13	26	44	28	15	8	10	7	15	12	20	256
12 - 19	11	2	1	1	1	3	15	28	31	17	26	17	29	23	19	25	249
20 - 28	3	0	0	0	0	0	1	0	16	1	0	5	32	21	19	6	104
29 - 38	0	0	0	0	0	0	0	0	0	0	0	1	17	2	0	0	20
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	22	11	23	21	20	51	88	86	38	37	35	88	64	54	52	718

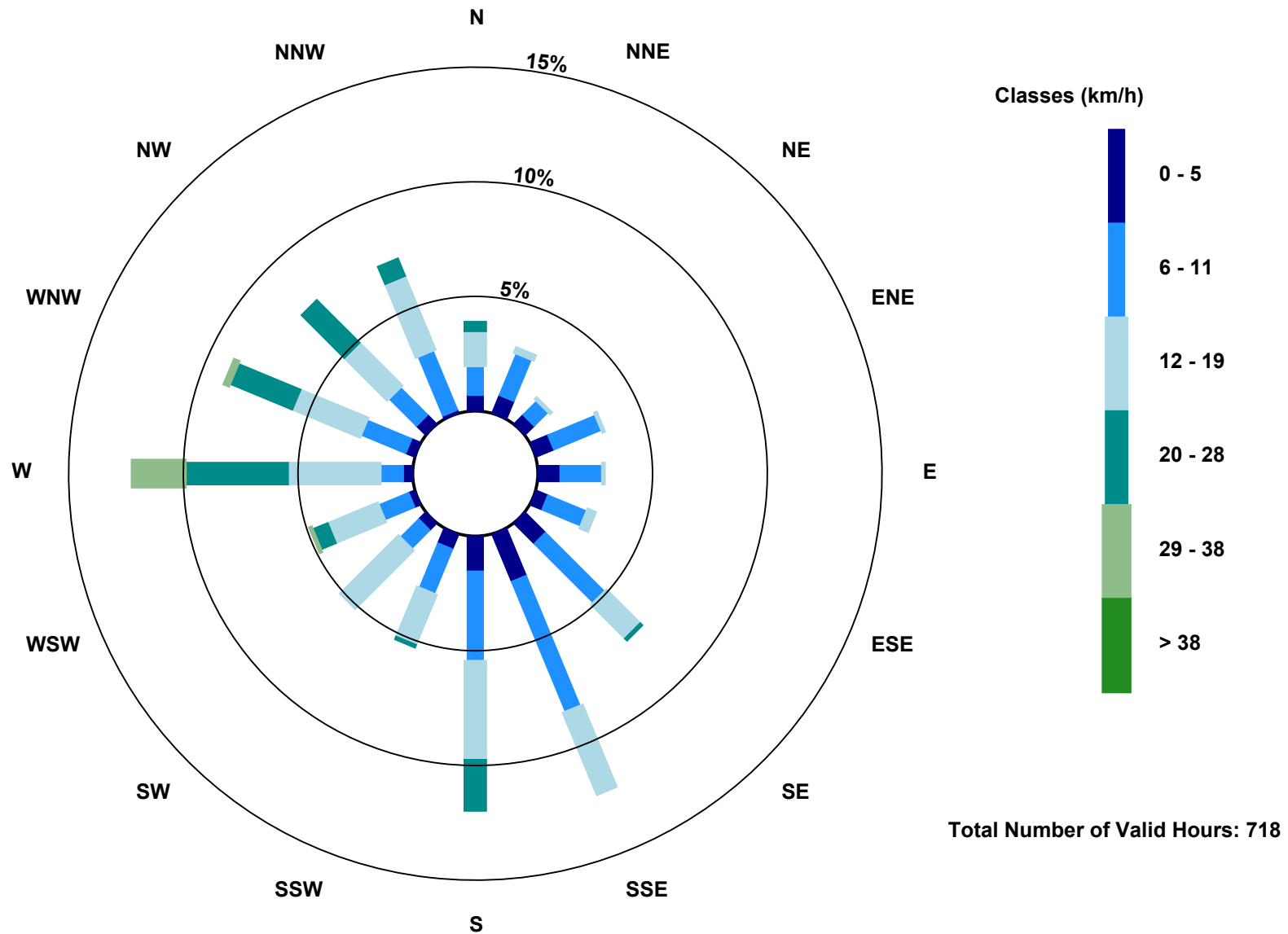
Total Number of Valid Hours: 718

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Sawbones Bay





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Sawbones Bay - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																		Hours in Service: 720							
Maximum Value: 10 km/h on Apr 16 03:00																		Hours of Data: 718							
Minimum Value: 0 km/h on Apr 25 02:00																		Hours of Missing Data: 2							
																		Hours of Calibration: 0							
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 5 P ₉₀ = 5 P ₉₉ = 8																		Percent Operational Time: 99.7							
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	2	1	1	2	2	2	2	3	3	2	4	4	4	4	4	3	3	3	6	6	5	5	2	3	6
2-Apr	2	2	3	4	3	5	3	3	4	4	5	5	5	5	5	4	5	5	2	3	5	2	1	2	5
3-Apr	1	1	2	1	3	3	4	4	4	4	5	5	6	5	5	5	5	4	4	1	1	1	0	1	6
4-Apr	1	1	1	1	2	2	1	2	3	3	3	4	5	5	5	4	3	2	2	1	1	1	1	1	5
5-Apr	2	1	2	2	1	1	2	2	2	1	1	3	2	3	3	3	3	2	5	2	2	2	1	1	5
6-Apr	1	1	1	1	2	1	2	2	3	4	5	5	5	5	4	5	5	5	4	3	3	4	3	3	5
7-Apr	4	4	4	3	3	2	3	3	3	4	4	5	5	6	6	5	5	4	3	3	2	2	2	2	6
8-Apr	2	2	2	1	1	2	1	3	3	3	3	3	6	4	3	4	3	2	3	1	1	3	2	1	6
9-Apr	3	2	2	3	3	2	3	3	2	2	3	4	6	6	5	3	4	4	3	2	3	4	4	4	6
10-Apr	4	3	1	2	5	2	2	3	3	3	5	6	5	5	5	5	5	4	3	2	1	1	2	1	6
11-Apr	2	5	3	3	3	4	UO	UO	5	3	5	5	5	6	5	7	7	7	4	4	4	4	5	4	7
12-Apr	3	3	3	3	5	4	4	5	5	4	5	6	5	5	5	4	4	4	3	2	3	2	1	3	6
13-Apr	3	3	4	3	3	4	3	3	3	4	6	6	5	7	5	6	5	4	5	1	2	2	1	1	7
14-Apr	1	1	1	2	2	2	3	2	3	3	5	5	5	4	4	4	4	5	3	1	1	1	2	1	5
15-Apr	1	1	3	3	2	3	3	4	4	7	7	6	7	7	7	8	6	6	5	4	4	5	5	4	8
16-Apr	8	5	10	6	5	4	4	5	5	4	5	6	6	5	4	5	6	6	6	3	3	5	5	4	10
17-Apr	2	3	3	3	3	4	4	4	4	5	5	5	4	4	3	4	3	3	2	2	1	1	1	1	5
18-Apr	2	1	2	1	2	2	3	4	4	4	5	5	6	6	6	6	7	5	5	3	4	4	4	4	7
19-Apr	4	4	4	6	2	2	4	5	5	6	6	6	5	5	6	6	6	7	5	5	4	5	3	4	7
20-Apr	4	3	4	3	3	2	2	2	3	3	3	3	4	3	3	3	3	3	2	1	2	2	2	3	4
21-Apr	2	1	1	2	1	1	1	2	3	4	4	4	4	4	3	3	3	3	1	1	1	2	2	3	4
22-Apr	2	2	1	2	2	1	3	3	4	3	5	6	5	5	4	4	7	5	3	3	2	1	1	1	7
23-Apr	2	6	2	2	1	2	4	2	2	2	3	3	4	5	4	3	2	4	3	1	1	1	1	3	6
24-Apr	1	2	2	3	1	1	1	1	3	3	3	3	4	5	4	4	3	2	2	1	1	1	1	2	5
25-Apr	1	0	1	1	1	1	2	4	6	6	7	8	8	8	8	8	6	7	5	4	2	3	3	4	8
26-Apr	4	3	3	1	2	2	3	3	4	2	4	4	4	5	5	5	5	5	5	5	5	5	4	5	5
27-Apr	4	3	2	2	2	1	5	3	4	4	4	5	5	4	4	4	4	4	3	2	1	1	1	1	5
28-Apr	1	1	1	1	2	1	1	2	2	4	4	5	6	6	5	6	5	5	5	2	5	5	3	2	6
29-Apr	4	3	2	3	3	3	4	5	5	5	6	7	7	8	7	5	5	6	2	3	1	2	4	3	8
30-Apr	2	3	4	2	3	3	3	3	3	3	2	4	5	4	7	5	7	2	2	1	2	1	3	3	7
8 6 10 6 5 5 5 5 6 7 7 8 8 8 8 8 7 7 6 6 5 5 5 5 5																									Diurnal Maximum
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

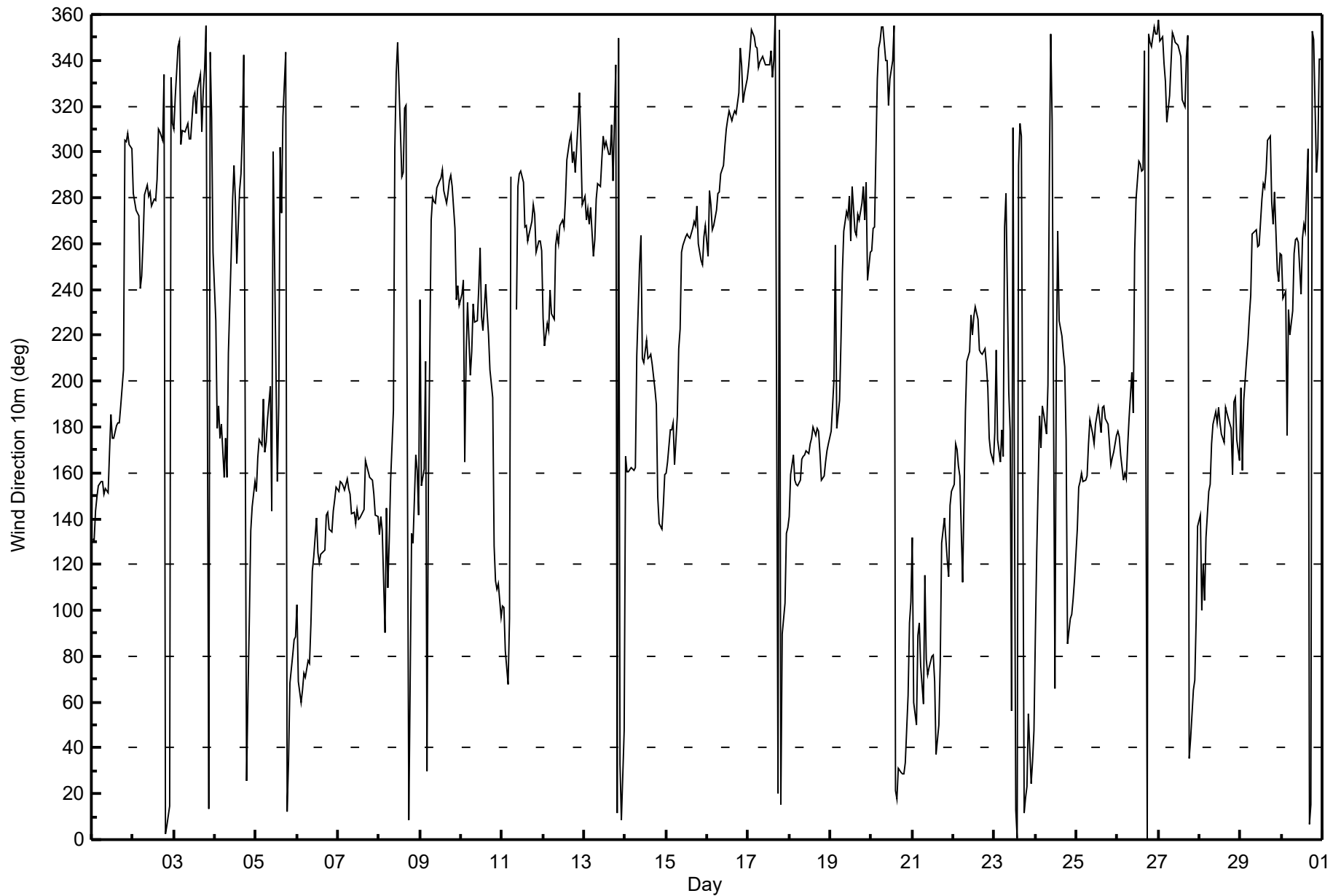
Sawbones Bay - April 2025

Direction of Maximum Speed: 286 deg on Apr 29 14:00 Direction of Maximum Daily Speed Average: 299.1 deg on Apr 16																				Hours in Service: 720					
Direction of Minimum Speed: 56 deg on Apr 23 11:00 Direction of Minimum Daily Speed Average: 1.1 deg on Apr 8																				Hours of Data: 718					
																				Hours of Missing Data: 2					
Monthly Average Direction: 252.3 deg																				Percent Operational Time: 99.7					
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	131	130	143	150	155	156	156	151	153	151	169	185	175	175	181	182	182	189	205	305	304	308	304	302	186.8
2-Apr	282	278	274	272	240	246	261	282	286	281	283	277	279	279	288	310	309	305	334	2	6	15	332	313	291.0
3-Apr	310	324	346	348	303	309	309	310	312	306	305	324	326	317	327	333	309	327	336	355	13	343	315	256	319.8
4-Apr	226	180	189	175	181	158	175	158	212	255	279	294	279	251	283	290	309	342	26	64	97	135	145	156	248.4
5-Apr	152	167	175	172	192	169	174	184	198	144	300	254	156	190	302	274	315	344	12	34	69	81	87	88	113.3
6-Apr	102	69	60	65	73	71	78	77	94	117	123	140	125	121	125	126	126	142	143	135	134	143	148	154	121.0
7-Apr	152	156	156	155	152	158	153	151	142	143	138	144	140	140	143	144	165	163	158	158	157	151	142	141	149.7
8-Apr	133	141	135	90	145	110	131	157	187	302	335	348	309	289	291	319	321	9	71	133	130	168	161	142	294.2
9-Apr	236	155	162	209	30	155	270	280	278	277	285	288	289	292	283	278	282	287	290	285	266	236	241	233	270.9
10-Apr	238	244	165	212	235	203	213	234	226	226	240	258	228	222	242	230	220	205	193	128	113	109	112	97	218.1
11-Apr	102	101	83	68	97	289	UO	UO	231	285	290	292	287	267	268	261	264	270	277	273	256	261	261	257	270.1
12-Apr	227	215	225	222	240	230	227	259	264	260	268	270	267	279	296	305	307	296	300	291	312	326	304	277	269.7
13-Apr	281	270	275	268	276	255	262	280	286	285	297	307	302	304	299	299	312	288	338	12	350	33	8	47	291.3
14-Apr	167	161	161	163	162	161	162	211	251	263	210	208	218	210	211	212	208	196	190	150	138	135	146	159	193.1
15-Apr	160	165	179	179	182	163	185	214	223	256	259	263	264	263	263	267	270	268	277	260	252	251	263	268	250.5
16-Apr	254	283	277	266	268	275	282	282	290	294	303	310	314	318	314	316	318	317	326	345	337	322	326	332	299.1
17-Apr	337	345	353	350	346	345	337	339	342	340	338	338	338	344	333	340	360	20	353	15	90	103	134	136	346.6
18-Apr	141	159	168	157	155	154	157	166	167	168	170	169	173	175	180	176	179	178	169	157	159	165	170	173	168.5
19-Apr	178	189	201	259	179	191	217	247	265	274	272	281	261	285	265	264	273	270	278	285	270	287	244	256	258.3
20-Apr	257	266	267	332	346	348	355	355	340	340	320	332	340	355	21	18	31	30	29	29	34	63	94	103	350.3
21-Apr	132	60	50	89	94	75	59	116	79	72	75	80	81	69	37	50	77	130	135	140	122	115	146	152	97.9
22-Apr	155	172	170	163	159	112	150	187	209	213	229	220	228	233	227	214	212	212	214	207	197	175	169	165	203.9
23-Apr	178	214	175	165	179	167	267	282	195	178	56	311	13	0	294	312	307	11	18	23	55	24	34	47	334.3
24-Apr	89	126	185	171	189	185	177	199	289	351	314	66	208	266	226	220	213	206	175	85	96	98	105	113	179.7
25-Apr	135	154	156	160	156	157	159	173	183	177	173	181	185	188	178	188	189	184	181	173	163	167	169	176	175.9
26-Apr	178	176	168	157	160	157	171	184	204	186	256	280	296	295	292	292	344	1	352	348	346	354	352	351	312.5
27-Apr	358	348	350	339	331	313	324	339	352	350	348	347	344	342	323	319	342	351	36	44	65	69	96	137	350.8
28-Apr	142	100	120	104	132	152	155	173	181	187	182	189	182	177	173	188	186	184	179	159	191	193	175	165	176.4
29-Apr	197	161	192	209	217	228	237	264	265	266	259	259	279	286	284	292	305	307	278	268	283	248	243	255	265.1
30-Apr	255	236	239	177	231	220	231	256	262	262	261	238	262	269	265	301	7	15	353	349	291	301	340	340	270.3
200.0 205.1 210.6 211.1 210.0 211.4 227.5 241.0 250.8 260.8 265.9 266.1 266.8 268.4 265.7 269.0 272.8 273.1 284.5 307.6 273.8 202.9 204.2 205.0																									
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
Sawbones Bay - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Sawbones Bay - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 100 deg on Apr 5 12:00																		Hours in Service: 720 Hours of Data: 718 Hours of Missing Data: 2 Hours of Calibration: 0 Percent Operational Time: 99.7							
Minimum Value: 4 deg on Apr 25 02:00																									
Percentiles: P ₁ = 6 P ₁₀ = 11 Q ₁ = 14 Median = 17 Q ₃ = 23 P ₉₀ = 37 P ₉₉ = 83																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	14	13	13	11	11	11	14	13	13	13	16	17	22	20	20	15	16	15	23	13	12	12	11	11	23
2-Apr	8	8	9	16	24	17	15	10	11	13	15	19	18	19	17	20	17	16	15	15	17	18	12	10	24
3-Apr	8	13	11	11	14	12	14	17	16	18	21	18	18	21	24	16	20	17	15	20	7	17	13	31	31
4-Apr	28	33	22	16	41	23	17	16	42	30	28	25	40	36	28	29	52	29	20	13	18	10	8	11	52
5-Apr	18	16	11	13	34	8	15	17	43	55	46	100	60	60	70	56	23	21	34	16	14	9	12	13	100
6-Apr	21	19	8	6	8	7	12	11	17	24	21	20	24	22	21	22	20	17	15	17	15	15	13	12	24
7-Apr	12	13	12	12	12	13	13	14	21	18	21	18	20	18	21	19	15	13	13	14	11	12	13	14	21
8-Apr	22	24	15	43	22	43	25	13	28	27	22	26	19	14	17	17	22	34	21	43	75	47	27	21	75
9-Apr	54	16	9	26	74	77	12	9	12	19	18	19	22	22	23	15	15	17	10	9	14	23	16	18	77
10-Apr	20	28	15	19	22	21	15	17	20	27	25	24	28	27	26	28	27	19	17	22	12	13	15	12	28
11-Apr	19	32	44	13	25	83	UO	UO	59	15	16	17	13	18	17	17	16	14	10	13	14	15	14	14	83
12-Apr	23	15	16	18	17	19	19	17	18	19	17	17	17	11	17	15	14	14	13	10	15	20	15	9	23
13-Apr	11	12	11	15	11	13	14	11	13	14	18	20	18	23	19	20	26	13	38	10	19	38	13	37	38
14-Apr	17	17	6	12	15	9	22	42	36	26	24	25	36	30	31	20	21	18	15	12	12	11	12	9	42
15-Apr	8	10	12	13	13	13	19	16	17	15	16	17	20	18	18	16	15	14	12	15	11	12	18	23	23
16-Apr	19	11	13	13	13	11	10	11	11	12	14	13	14	15	14	15	15	14	22	16	16	14	15	15	22
17-Apr	16	17	17	18	15	16	16	15	18	17	16	17	15	17	19	20	24	21	29	86	88	15	15	12	88
18-Apr	14	10	14	14	14	11	12	16	14	18	17	19	19	18	18	19	17	15	14	13	14	13	14	14	19
19-Apr	14	15	19	21	13	14	20	18	16	13	13	18	17	13	16	20	13	14	13	26	20	10	32	18	32
20-Apr	14	12	21	15	18	15	19	27	28	36	47	45	45	47	49	54	33	18	12	10	15	15	14	16	54
21-Apr	32	21	28	32	11	12	18	26	28	29	44	67	67	37	48	26	69	43	16	17	15	14	15	12	69
22-Apr	12	17	21	28	40	20	57	25	19	24	24	21	24	26	21	21	20	19	15	13	13	7	5	7	57
23-Apr	11	32	13	41	7	44	77	17	93	38	93	83	26	55	29	89	18	20	15	12	11	56	33	20	93
24-Apr	33	78	89	27	23	17	41	35	21	63	55	74	52	75	38	38	46	36	36	14	20	12	9	14	89
25-Apr	10	4	6	5	5	8	11	17	17	17	18	19	20	19	18	19	17	18	16	13	10	12	12	13	20
26-Apr	14	13	13	9	11	10	15	17	53	46	55	59	36	31	16	16	26	19	17	17	16	18	18	18	59
27-Apr	17	16	15	12	15	12	14	28	22	24	25	23	29	25	28	30	25	29	15	12	14	6	16	15	30
28-Apr	25	15	28	28	39	18	15	17	21	30	32	35	32	27	28	23	18	17	16	15	19	21	26	27	39
29-Apr	49	21	16	15	16	17	19	15	12	15	16	15	15	13	16	15	16	24	25	12	19	20	21	11	49
30-Apr	12	38	33	27	19	20	19	13	12	12	14	24	16	16	14	54	49	21	16	24	13	11	17	16	54
54 78 89 43 74 83 77 42 93 63 93 100 67 75 70 89 69 43 38 86 88 56 33 37																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS506
JACKFISH 1
APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
APRIL 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	20.8	0	3.3	0
H2S (ppb) Average	686	34	34	100	7.5	0	0.6	0
NO2 (ppb) Average	685	35	35	100	14.2	0	3.8	-
NO (ppb) Average	685	35	35	100	7.3	-	1.5	-
NOX (ppb) Average	685	35	35	100	20.1	-	5.4	-
Temperature 2 m (C) Average	720	0	0	100	21	-	12.7	-
Relative Humidity (%) Average	720	0	0	100	94.8	-	78.8	-
Wind Speed 10 m (km/h) Average	685	0	35	95.14	20	-	12	-
Wind Direction 10 m (deg) Average	685	0	35	95.14	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile							
					Min	P10	Q1	Median	Q3	P90	Max	
SO2 (ppb) Average	687	1.18	2.3	-	0	0.1	0.1	0.3	1.1	3.2	20.8	
H2S (ppb) Average	686	0.13	0.4	-	0	0	0.1	0.1	0.1	0.2	7.5	
NO2 (ppb) Average	685	2.04	1.8	-	0.2	0.6	1	1.5	2.4	4	14.2	
NO (ppb) Average	685	0.52	1	-	0	0	0	0.1	0.5	1.4	7.3	
NOX (ppb) Average	685	2.55	2.8	-	0.2	0.7	1.1	1.7	2.7	5.2	20.1	
Temperature 2 m (C) Average	720	4.8	6.5	-	-14.2	-3.2	0.2	5	9.5	13.3	21	
Relative Humidity (%) Average	720	52.16	20.3	-	16.4	26.4	35.5	50.1	69.5	83	94.8	
Wind Speed 10 m (km/h) Average	685	6.7	3	-	0	2	4	6	9	12	20	
Wind Direction 10 m (deg) Average	685	-	-	-	-	-	-	-	-	-	-	

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	16 Apr 2025 22:00	18 Apr 2025 08:00	35	Flat line in sensor output signal - Sensor frozen



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

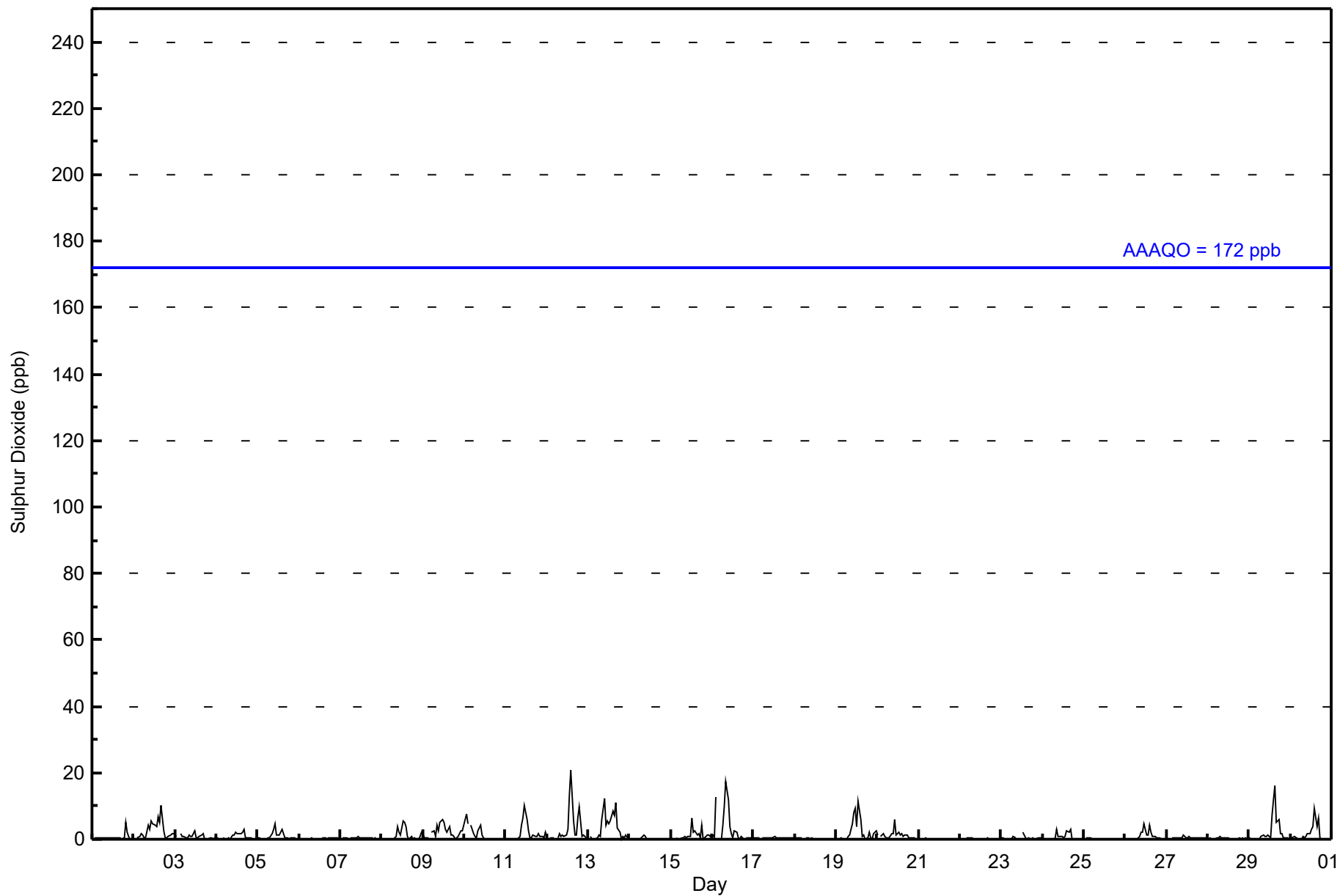
Jackfish 1 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 20.8 ppb on Apr 12 15:00 Maximum Daily Average: 3.3 ppb on Apr 13																				Hours in Service: 720 Hours of Data: 687						
Minimum Value: 0.0 ppb on Apr 8 06:00 Minimum Daily Average: 0.1 ppb on Apr 21 Maximum Diurnal Average: 3.1 ppb at hour 15 Minimum Diurnal Average: 0.4 ppb at hour 4 Monthly Average: 1.18 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.1 Median = 0.3 Q ₃ = 1.1 P ₉₀ = 3.2 P ₉₉ = 11.9																				Hours of Missing Data: 33 Hours of Calibration: 33 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-Apr	Z	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.2	0.3	5.2	2.1	0.9	0.1	0.1	0.1	0.7	5.2
2-Apr	0.3	Z	0.3	0.9	1.8	1.3	0.3	0.3	4.4	3.2	5.5	4.5	4.1	3.9	6.9	5.2	10.2	2.5	0.3	0.6	0.9	1.5	1.6	1.6	2.7	10.2
3-Apr	1.3	1.0	Z	1.6	0.8	0.8	0.4	0.6	1.2	0.9	0.7	2.6	0.2	0.2	1.0	1.1	1.5	0.1	0.0	0.2	0.5	0.2	0.2	0.3	0.8	2.6
4-Apr	0.5	0.2	0.2	Z	0.3	0.1	0.1	0.2	0.1	1.1	1.3	2.1	1.6	1.8	1.7	2.0	3.0	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.8	3.0
5-Apr	0.2	0.3	0.1	0.2	Z	0.1	0.5	0.2	1.9	2.9	4.7	1.5	1.4	2.0	3.0	1.7	0.5	0.2	0.1	0.4	0.2	0.2	0.1	0.1	1.0	4.7
6-Apr	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.3	0.2	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.2	0.5
7-Apr	Z	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.1	0.2	0.4	0.3	0.6
8-Apr	0.3	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.7	4.0	2.0	1.3	5.6	5.3	3.8	0.6	0.1	0.8	0.1	0.3	0.2	0.1	1.0	2.3	1.2	5.6
9-Apr	1.8	0.6	0.2	0.3	Z	1.9	2.4	0.9	4.4	2.4	5.2	5.8	5.0	2.8	2.3	3.8	1.2	1.4	0.6	0.2	0.7	1.7	2.6	2.7	2.2	5.8
10-Apr	5.8	7.5	4.6	Z	4.2	1.6	1.0	0.6	2.5	4.4	1.1	0.3	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	1.5	7.5
11-Apr	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.9	4.2	6.5	10.2	6.1	2.5	0.5	0.6	1.1	0.6	0.8	1.7	0.7	0.7	0.3	2.2	1.8	10.2
12-Apr	0.3	0.2	0.3	0.2	0.4	Z	0.6	1.8	0.7	1.1	0.9	1.3	3.0	13.1	20.8	5.5	1.1	1.3	6.3	9.7	0.7	1.1	0.7	0.3	3.1	20.8
13-Apr	Z	0.7	0.1	0.1	0.0	0.2	1.3	0.8	6.1	12.4	4.2	5.7	4.5	5.7	8.6	7.3	11.0	3.2	2.3	0.2	0.7	0.3	1.1	0.2	3.3	12.4
14-Apr	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.5	0.8	0.2	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	1.5
15-Apr	0.1	0.2	Z	0.3	0.1	0.0	0.4	0.3	0.6	0.2	0.7	1.0	6.4	2.3	2.6	1.4	1.9	0.5	4.4	0.1	1.0	1.4	1.4	0.7	1.2	6.4
16-Apr	1.1	0.3	12.7	Z	0.0	0.0	4.0	9.8	17.6	11.8	3.9	1.7	0.5	2.6	1.9	0.6	0.2	0.8	0.1	0.1	0.3	0.2	0.3	0.3	3.1	17.6
17-Apr	0.5	0.3	0.2	0.3	Z	0.3	0.4	0.4	0.3	0.3	0.5	0.6	0.8	0.6	0.5	0.3	0.5	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.4	0.8
18-Apr	0.2	0.3	0.2	0.2	0.3	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.2	0.3
19-Apr	Z	0.0	0.1	0.2	0.1	0.0	0.1	0.9	1.3	4.5	7.9	9.2	4.0	11.5	5.8	0.9	1.2	0.1	0.4	2.0	0.6	0.1	1.7	2.6	2.4	11.5
20-Apr	1.3	Z	0.9	1.6	0.8	0.2	0.2	0.3	1.8	1.7	6.0	1.1	2.1	1.2	1.7	1.1	1.2	1.3	0.5	0.2	0.3	0.4	0.2	0.1	1.1	6.0
21-Apr	0.1	0.1	Z	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.2
22-Apr	0.0	0.0	0.2	Z	0.3	0.4	0.3	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.5	0.0	0.0	0.2	0.0	0.2	0.1	0.2	0.2	0.5
23-Apr	0.3	0.4	0.2	0.2	Z	0.1	0.1	1.0	0.4	C	C	C	2.0	1.2	0.6	0.2	0.4	0.2	0.3	0.2	0.1	0.3	0.4	0.4	0.4	2.0
24-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.4	3.1	1.0	1.0	0.9	0.6	0.6	2.5	2.2	3.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.1
25-Apr	Z	0.4	0.5	0.6	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
26-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.7	1.9	2.0	4.8	1.4	1.3	4.3	2.0	0.9	0.9	0.5	0.4	0.2	0.2	0.2	0.1	1.0	4.8
27-Apr	0.1	0.2	Z	0.3	0.6	0.4	0.3	0.3	0.4	0.4	1.2	0.6	0.5	0.7	0.6	0.5	0.6	0.4	0.3	0.3	0.3	0.6	0.5	0.3	0.4	1.2
28-Apr	0.2	0.2	0.2	Z	0.2	0.4	0.6	0.7	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7
29-Apr	0.2	0.2	0.1	0.1	Z	0.1	0.2	0.8	1.1	0.8	1.0	1.4	0.4	7.2	12.0	15.9	5.2	6.0	1.6	1.6	0.5	0.6	0.5	0.1	2.5	15.9
30-Apr	0.2	0.6	0.7	0.5	0.2	Z	0.1	0.9	0.2	0.9	1.6	1.7	2.8	3.7	9.2	3.9	6.2	0.4	0.1	0.2	0.2	0.1	0.1	0.1	1.5	9.2
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	677	98.54	98.54
11 - 20	9	1.31	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 (SO₂) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	14	9	6	9	7	20	32	58	115	41	47	32	42	92	85	35	644
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	0	9
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	14	9	6	9	7	20	32	58	115	41	47	32	42	100	87	35	654

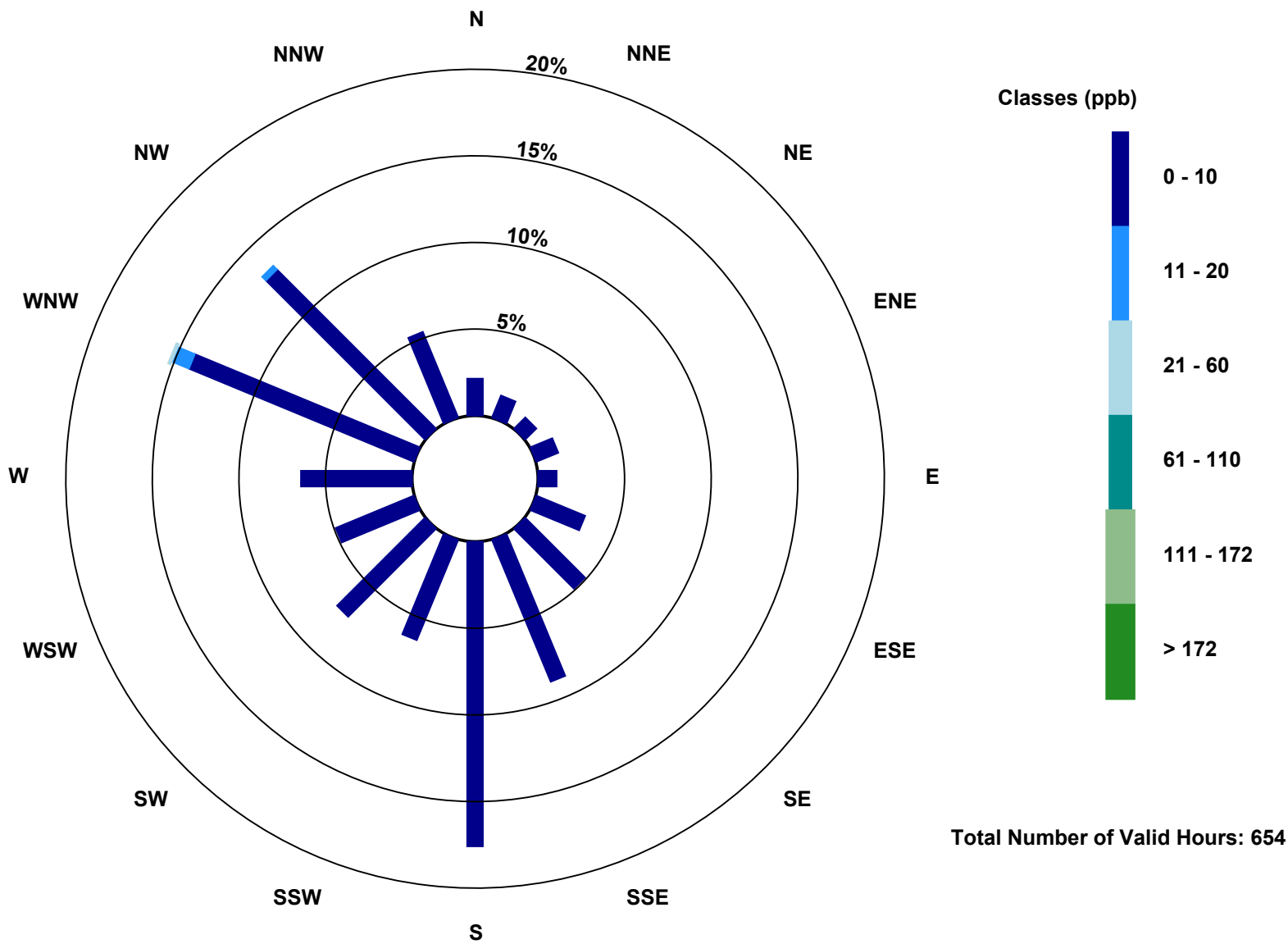
Total Number of Valid Hours: 654

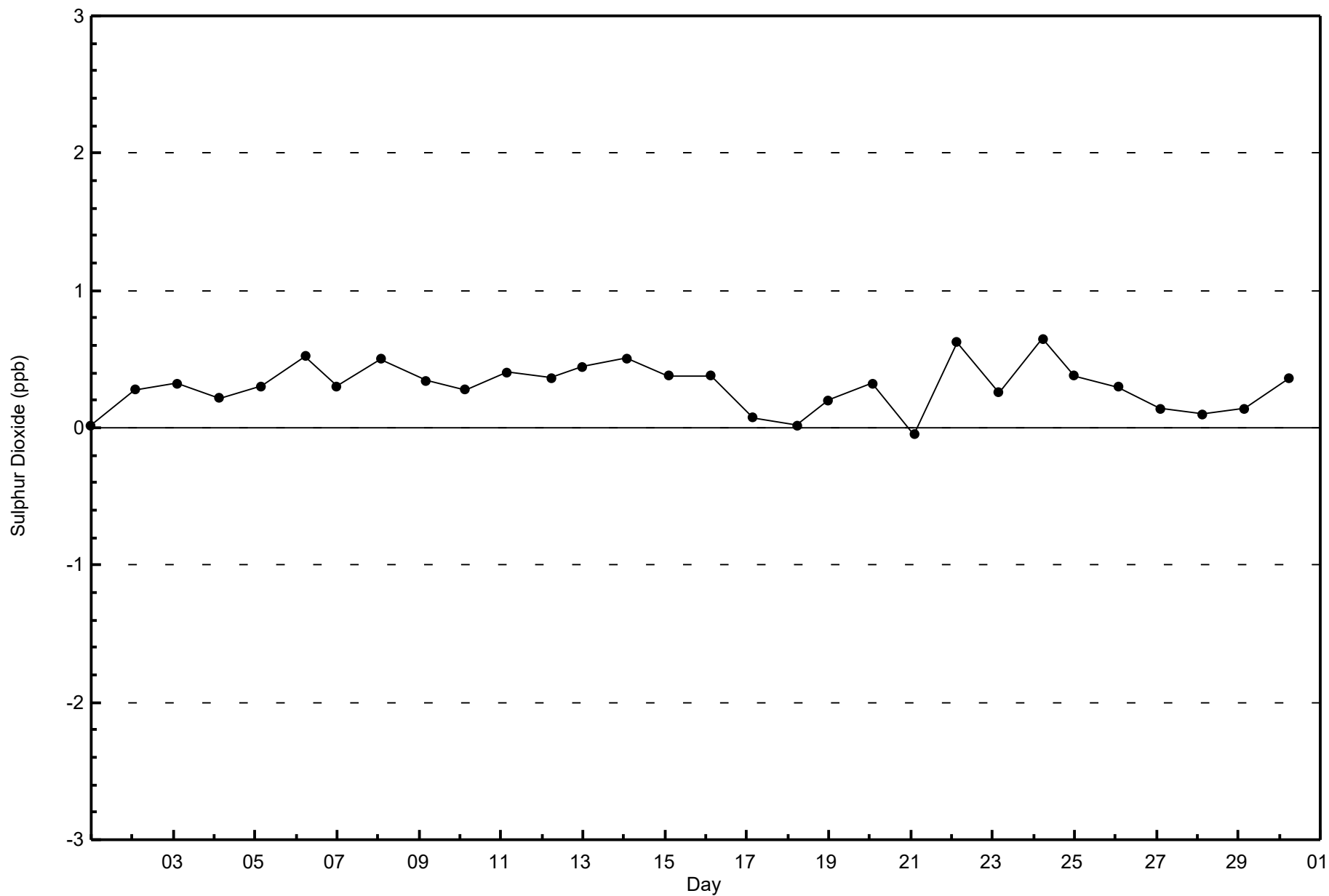
Total Number of Hours: 720

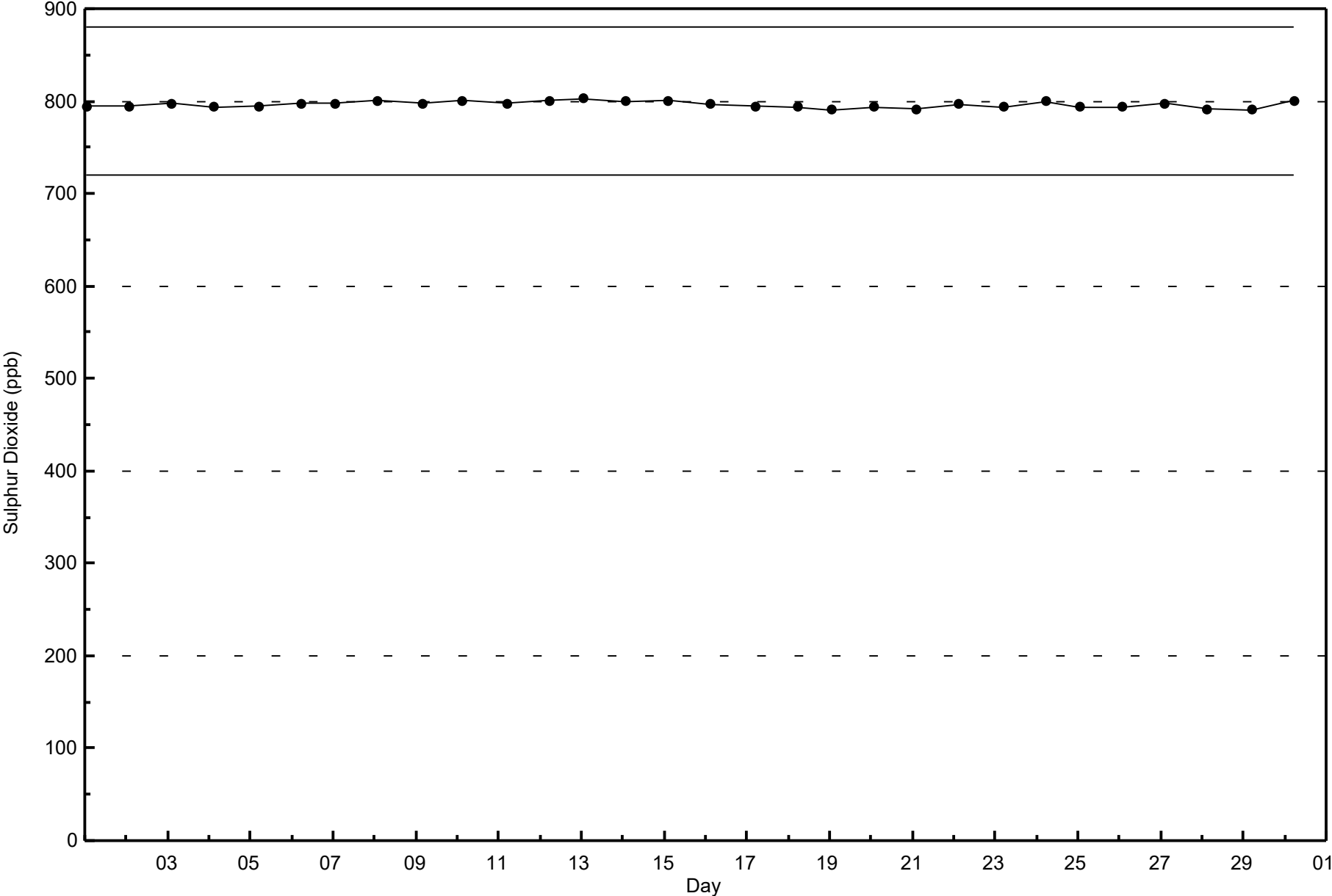


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Sulphur Dioxide (SO₂) - ppb
Jackfish 1









Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

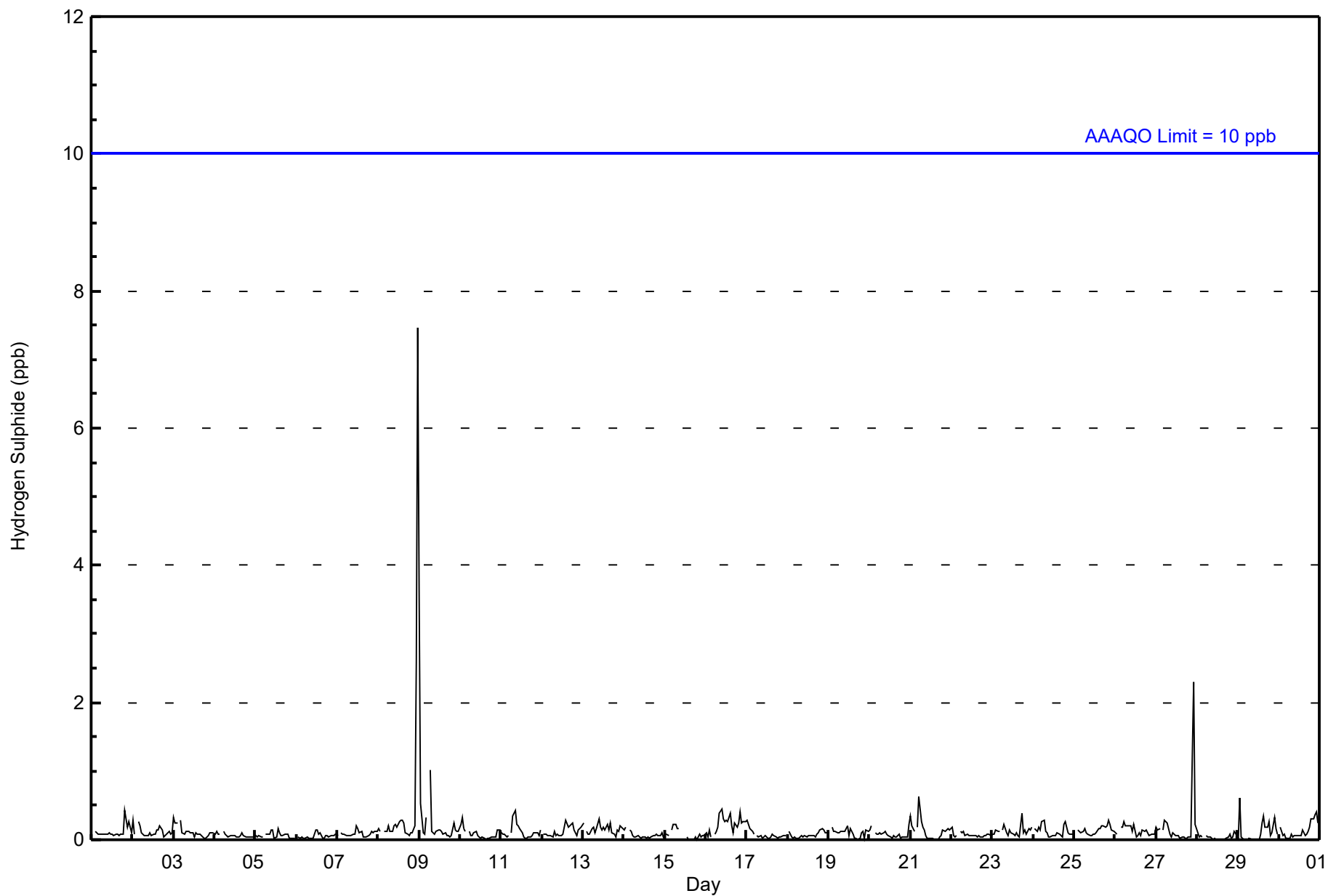
Jackfish 1 - April 2025

Number of Exceedences (AAAQO): Maximum Value: 7.5 ppb on Apr 9 00:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 0.6 ppb on Apr 8				Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 34 Percent Operational Time: 100.0		
Minimum Value: 0.0 ppb on Apr 15 16:00 Maximum Diurnal Average: 0.4 ppb at hour 24 Monthly Average: 0.13 ppb																				Minimum Daily Average: 0.0 ppb on Apr 28 Minimum Diurnal Average: 0.1 ppb at hour 17 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.6						
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-Apr	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	0.4	0.3	0.2	0.3	0.1	0.1	0.4
2-Apr	0.3	0.1	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
3-Apr	0.3	0.2	0.2	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3
4-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
5-Apr	0.1	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
6-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Apr	0.2	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	2.6	7.5	0.6	7.5
9-Apr	3.6	0.5	0.1	0.1	0.3	Z	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.3	3.6
10-Apr	0.2	0.3	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	
11-Apr	0.1	0.1	0.1	0.0	0.1	Z	0.1	0.3	0.4	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4
12-Apr	Z	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	0.3	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.3
13-Apr	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.3
14-Apr	0.1	0.2	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
15-Apr	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2
16-Apr	0.1	0.0	0.1	0.0	Z	0.1	0.1	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.2	0.1	0.3	0.2	0.2	0.4	0.2	0.3	0.3	0.2	0.4
17-Apr	0.3	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3
18-Apr	Z	0.1	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	0.2	0.1	0.1	0.1	0.1	0.2
19-Apr	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	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.2
20-Apr	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2
21-Apr	0.3	0.2	0.1	Z	0.2	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	0.1	0.1	0.1	0.2	0.1	0.1	0.6
22-Apr	0.2	0.1	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	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
23-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.4	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.4
24-Apr	Z	0.2	0.1	0.2	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.3
25-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.3
26-Apr	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
27-Apr	0.2	0.1	0.2	Z	0.2	0.3	0.2	0.2	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	1.2	2.3	0.2	0.2	2.3
28-Apr	0.1	0.0	0.1	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1
29-Apr	0.0	0.6	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	0.3	0.2	0.2	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.6
30-Apr	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.2	0.1	0.4
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	683	99.56	99.56
3 - 4	2	0.29	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: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	15	10	6	8	7	21	32	58	116	41	47	31	39	98	87	34	650
3 - 4	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
5 - 7	0	0	0	0	0	0	0	0	0	1	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	15	10	6	8	7	21	32	58	116	42	47	32	40	98	87	34	653

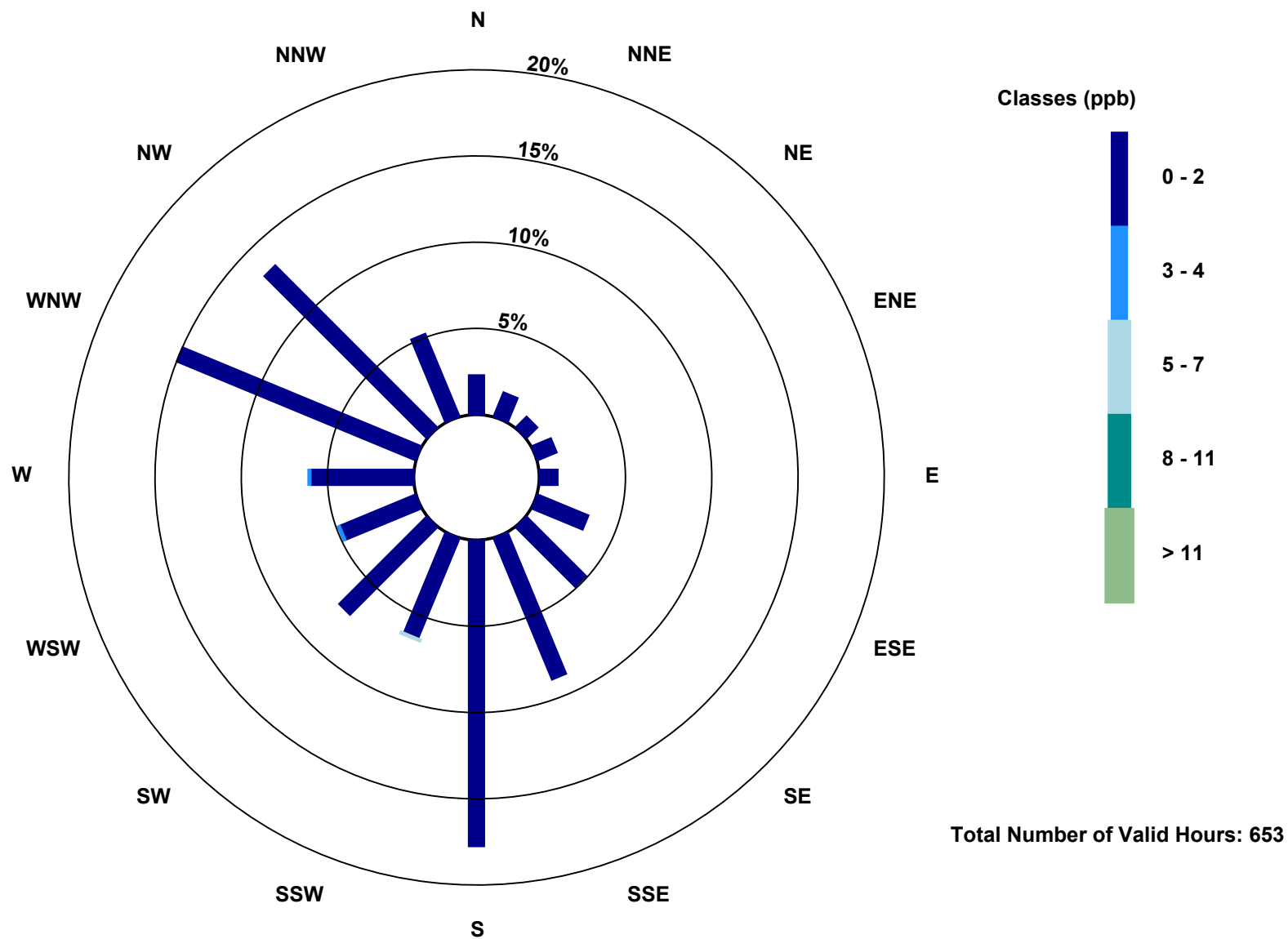
Total Number of Valid Hours: 653

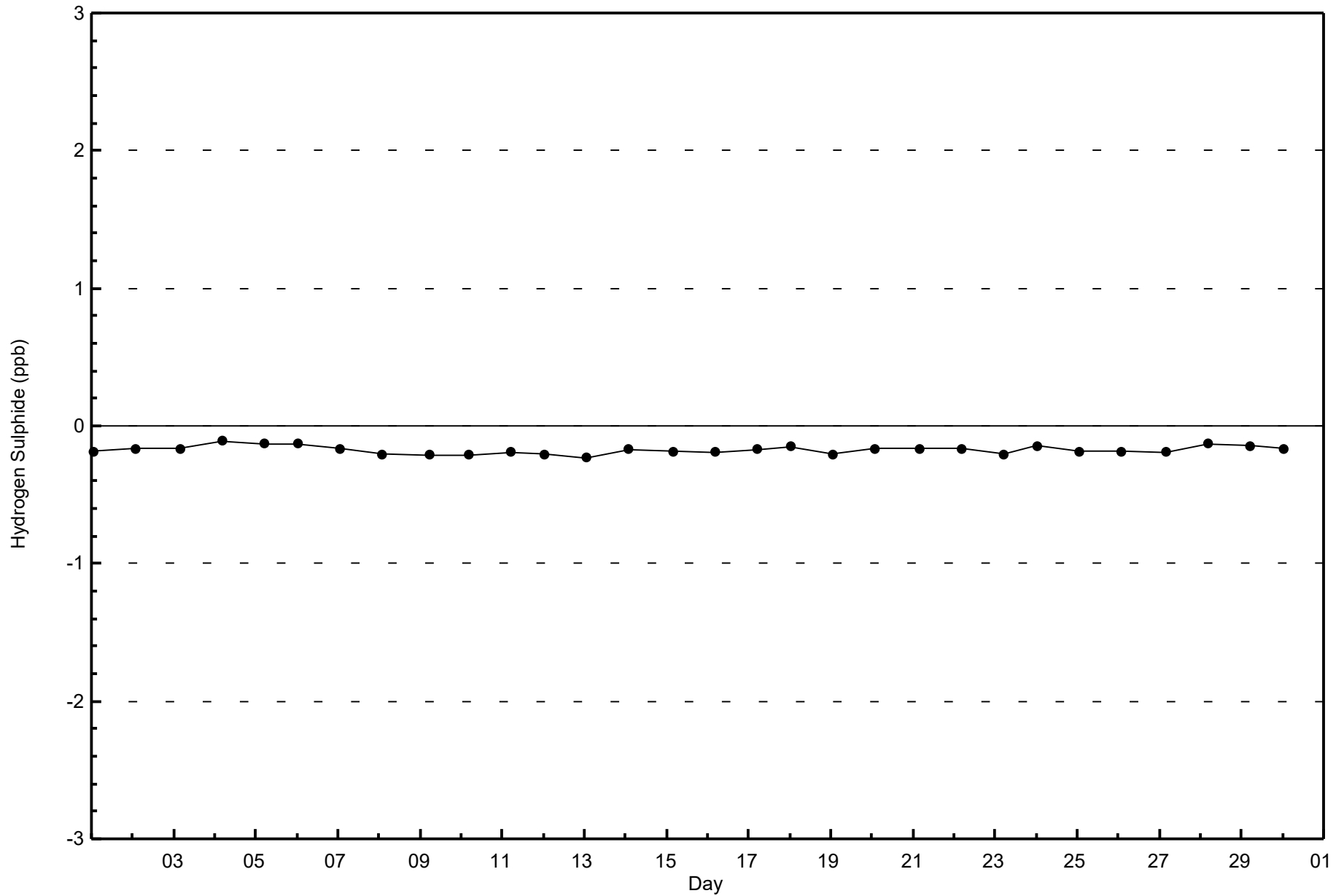
Total Number of Hours: 720

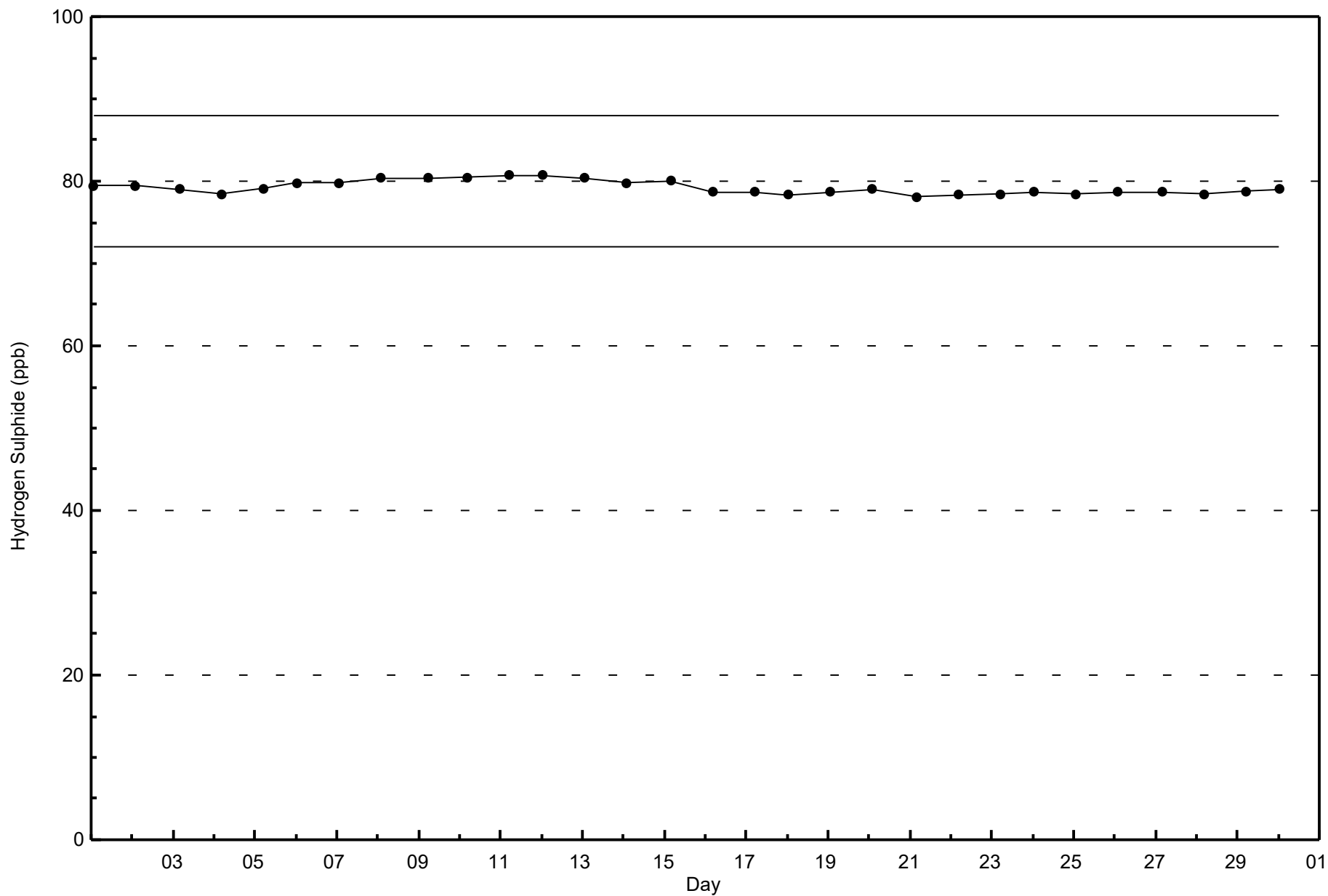


Wood Buffalo Environmental Association
Wind Rose Apr 2025

Hydrogen Sulphide (H₂S) - ppb
Jackfish 1









Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

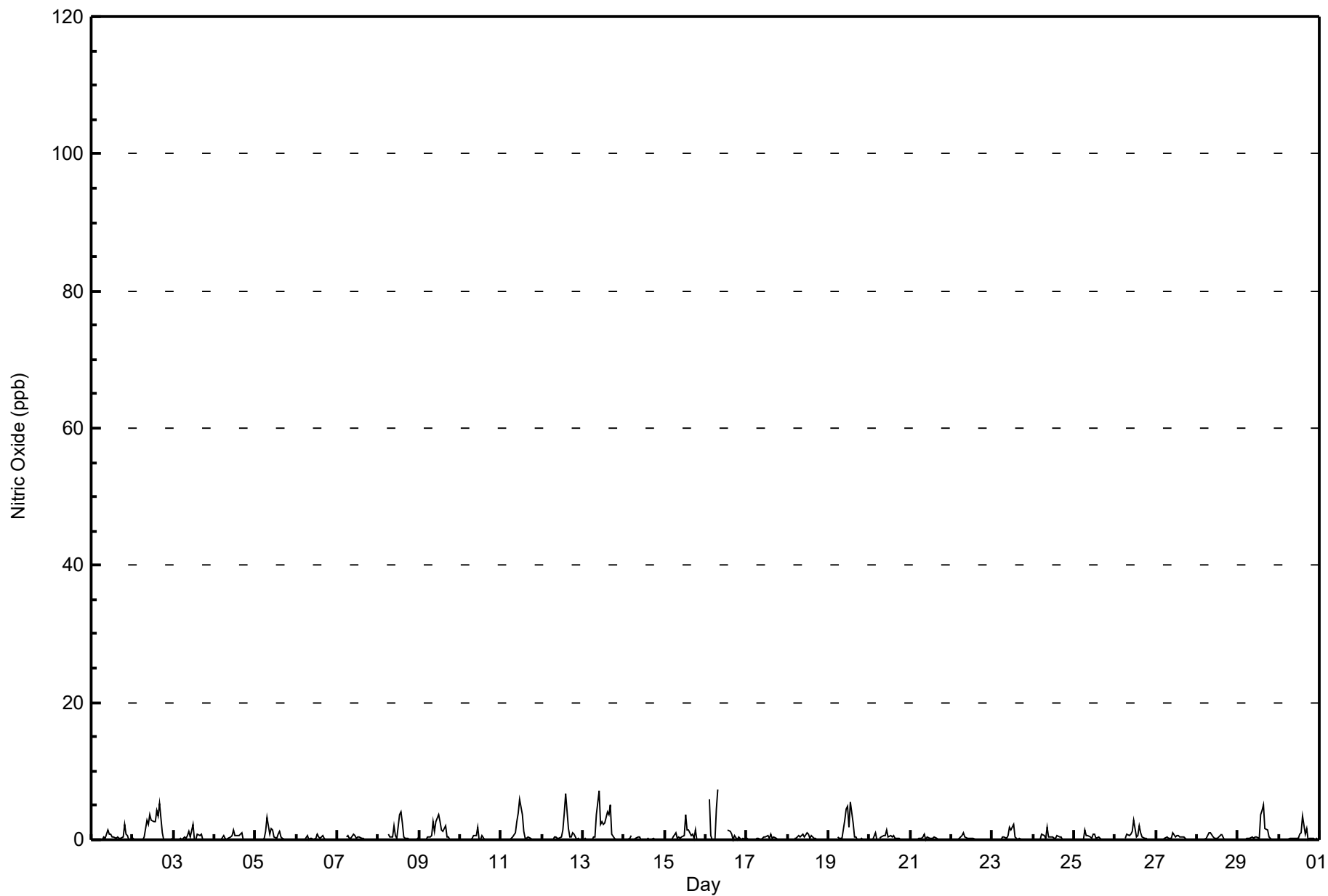
Jackfish 1 - April 2025

Maximum Value: 7.3 ppb on Apr 16 08:00																			Maximum Daily Average: 1.5 ppb on Apr 13																			Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 2 03:00																			Minimum Daily Average: 0.1 ppb on Apr 14																			Hours of Data: 685	
Maximum Diurnal Average: 1.4 ppb at hour 15																			Minimum Diurnal Average: 0.0 ppb at hour 24																			Hours of Missing Data: 35	
Monthly Average: 0.52 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.5 P ₉₀ = 1.4 P ₉₉ = 5.1																			Hours of Calibration: 35	
																																						Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.5	0.3	1.4	0.9	0.8	0.4	0.4	0.2	0.4	0.2	0.1	0.4	2.2	0.7	0.6	0.0	0.0	0.4	2.2													
2-Apr	0.2	0.0	0.0	0.0	0.0	Z	0.1	0.4	2.9	2.3	3.7	2.8	2.7	2.6	4.3	3.4	5.2	1.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	5.2													
3-Apr	Z	0.0	0.0	0.1	0.1	0.0	0.4	0.2	0.5	1.2	0.4	2.2	0.1	0.1	0.8	0.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.2													
4-Apr	0.0	Z	0.0	0.0	0.1	0.6	0.1	0.1	0.1	0.3	0.7	1.4	0.5	0.6	0.6	0.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4													
5-Apr	0.0	0.0	Z	0.0	0.0	0.2	1.2	3.2	0.8	1.5	1.3	0.4	0.3	0.8	1.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.2													
6-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.6	0.1	0.3	0.2	0.1	0.1	0.7	0.3	0.3	0.7	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7													
7-Apr	0.0	0.0	0.0	0.0	Z	0.4	0.6	0.2	0.2	0.8	0.5	0.3	0.3	0.4	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.8													
8-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.9	0.3	0.4	2.0	0.5	0.2	3.7	4.0	2.4	0.4	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.7	4.0													
9-Apr	0.1	0.0	Z	0.0	0.0	0.4	0.3	0.5	2.6	1.2	2.7	3.6	2.6	1.4	1.1	2.0	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.9	3.6													
10-Apr	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.2	0.5	0.6	1.8	0.1	0.1	0.6	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	1.8													
11-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.4	0.9	2.6	3.8	6.0	3.6	1.3	0.2	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.9	6.0													
12-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.3	0.2	0.3	0.3	1.5	4.0	6.7	1.6	0.3	0.3	1.0	0.8	0.0	0.1	0.1	0.1	0.8	6.7													
13-Apr	0.1	0.2	0.0	0.0	Z	0.1	0.4	0.4	3.8	7.1	2.3	2.6	2.1	2.5	4.1	3.6	5.1	0.8	0.3	0.0	0.0	0.0	0.0	0.0	1.5	7.1													
14-Apr	0.0	0.0	0.0	0.2	0.5	Z	0.0	0.2	0.5	0.5	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	0.5													
15-Apr	Z	0.0	0.0	0.0	0.1	0.4	0.9	0.2	0.4	0.2	0.4	0.6	3.7	1.4	1.5	0.7	0.8	0.2	1.4	0.0	0.0	0.1	0.0	0.0	0.6	3.7													
16-Apr	0.0	Z	5.9	0.6	0.1	0.1	4.4	7.3	C	C	C	C	C	1.5	1.3	0.7	0.0	0.6	0.0	0.3	0.3	0.0	0.2	0.1	1.3	7.3													
17-Apr	0.1	0.1	Z	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.3	0.5	0.6	0.3	0.9	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.9													
18-Apr	0.0	0.0	0.0	Z	0.3	0.3	0.6	0.4	0.6	0.7	0.4	1.0	0.8	0.3	0.7	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.0													
19-Apr	0.0	0.0	0.0	0.1	Z	0.3	0.3	0.2	0.2	2.9	4.4	4.9	1.9	5.5	2.4	0.3	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.1	5.5													
20-Apr	0.0	0.0	0.0	0.9	0.0	Z	0.2	0.4	0.7	0.7	1.4	0.3	0.6	0.3	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4													
21-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.9	0.0	0.3	0.3	0.2	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9													
22-Apr	0.0	Z	0.0	0.0	0.0	0.5	0.6	1.1	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1													
23-Apr	0.0	0.1	Z	0.0	0.0	0.0	0.4	0.5	0.2	0.7	1.8	1.5	2.2	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2													
24-Apr	0.1	0.0	0.0	Z	0.1	0.8	0.6	0.2	1.8	0.5	0.5	0.4	0.2	0.3	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.8													
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	1.3	0.6	0.6	0.4	0.2	0.9	0.7	0.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3													
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.7	0.7	0.8	1.2	2.9	0.5	0.5	2.1	1.0	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.5	2.9													
27-Apr	Z	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.1	0.1	1.0	0.5	0.7	0.6	0.3	0.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0													
28-Apr	0.0	Z	0.0	0.0	0.1	0.2	0.6	1.0	1.0	0.4	0.3	0.2	0.3	0.5	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0													
29-Apr	0.0	0.1	Z	0.0	0.0	0.2	0.1	0.3	0.3	0.2	0.4	0.3	0.1	3.6	4.3	5.0	1.7	1.5	0.4	0.3	0.1	0.1	0.0	0.0	0.8	5.0													
30-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.3	0.2	0.2	0.3	0.3	0.8	1.1	3.5	0.8	1.6	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.4	3.5													
Diurnal Average																																							
Diurnal Maximum																																							
Z - zerospan C - Calibration																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652

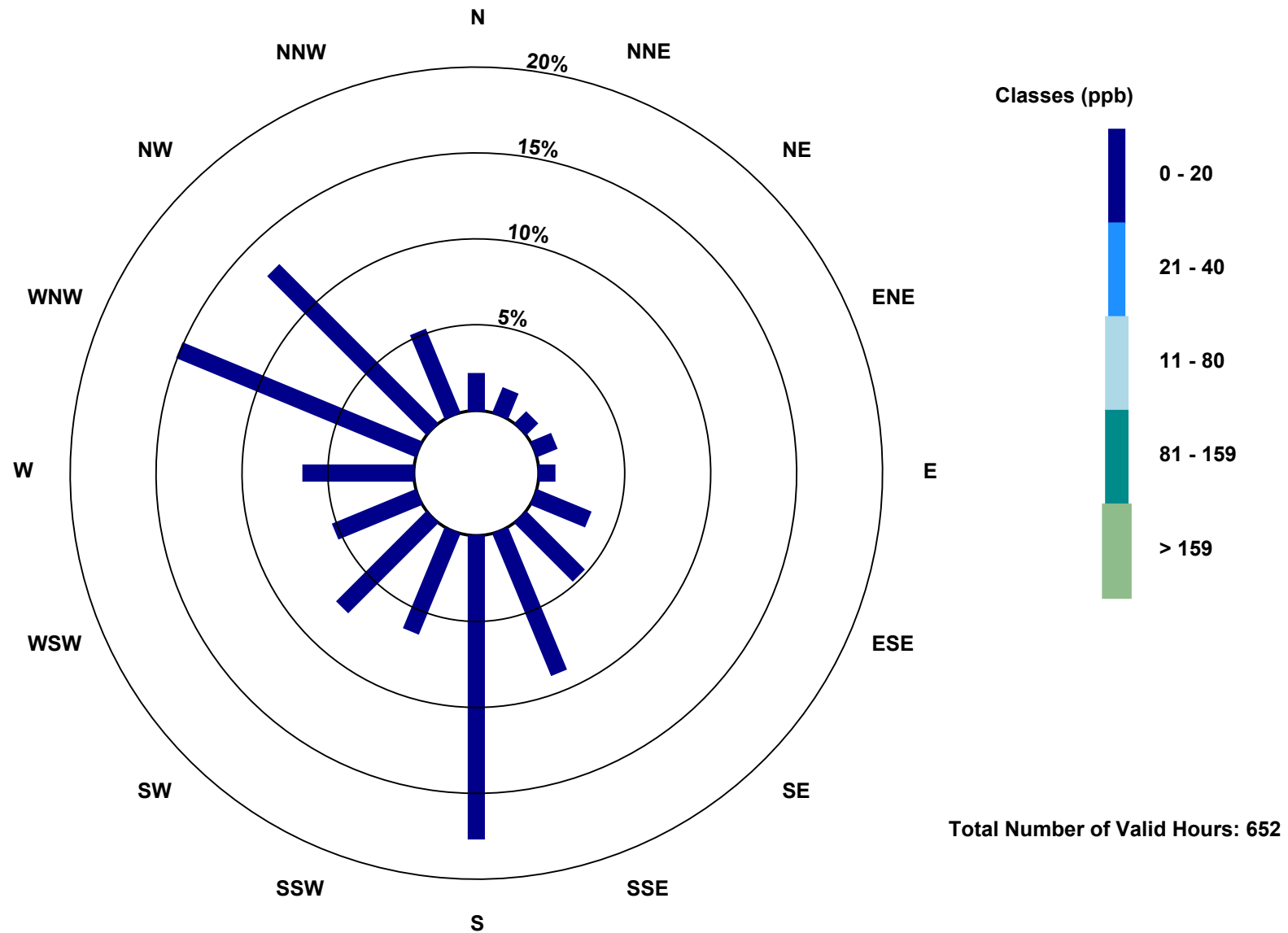
Total Number of Valid Hours: 652

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

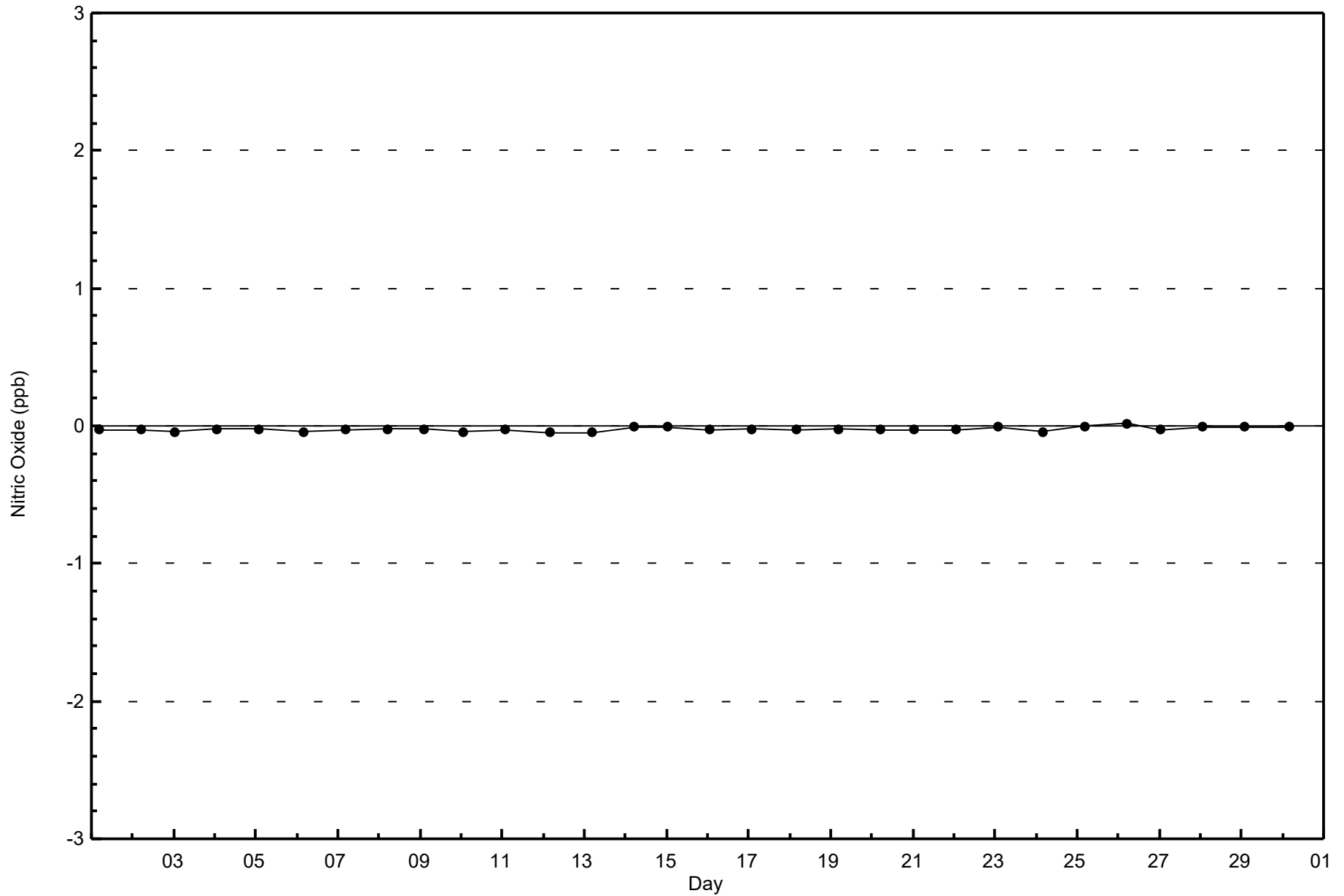
Nitric Oxide (NO) - ppb
Jackfish 1





Wood Buffalo Environmental Association
Zero Responses

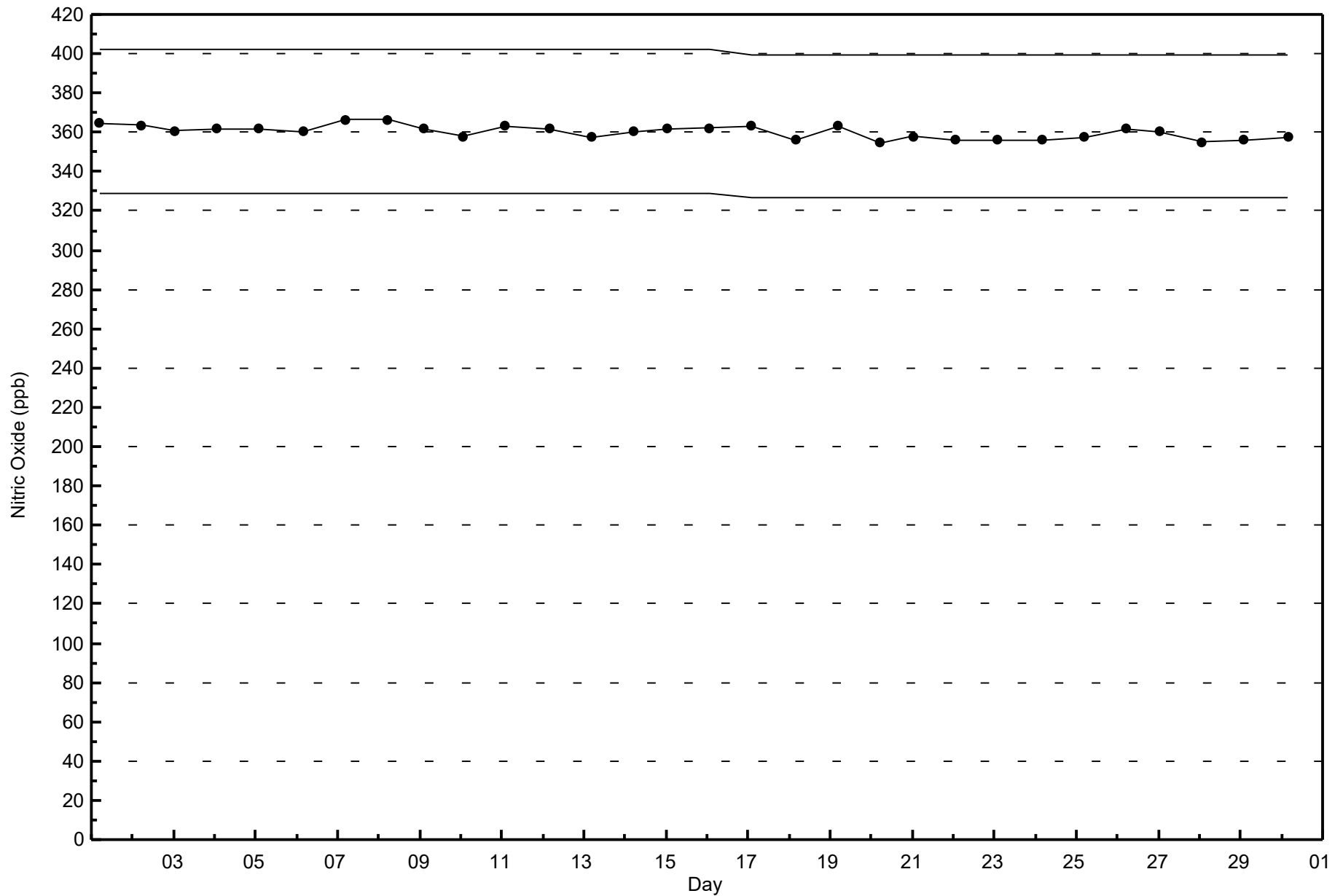
Nitric Oxide (NO) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

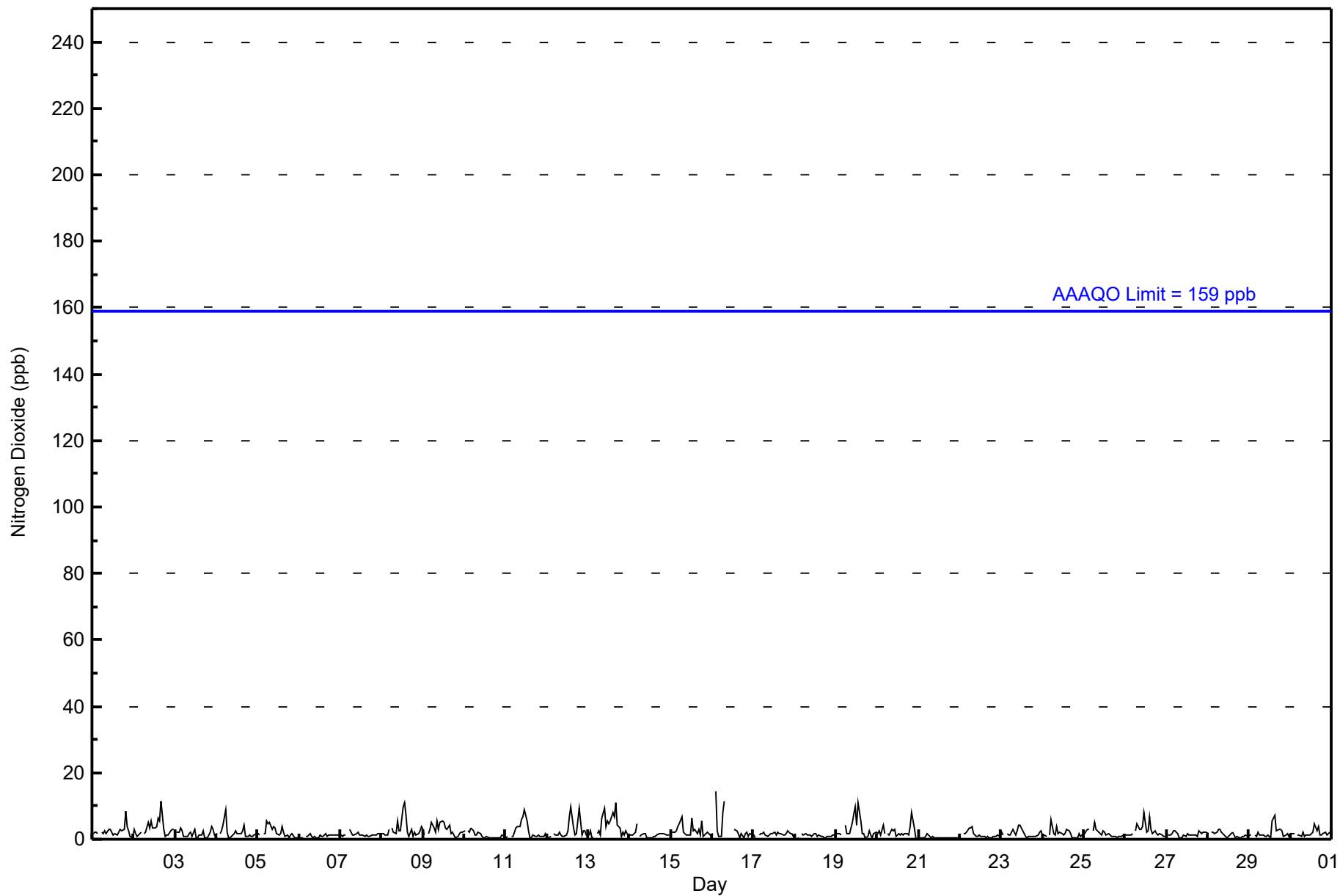
Jackfish 1 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 14.2 ppb on Apr 16 03:00 Maximum Daily Average: 3.8 ppb on Apr 13																				Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 35 Percent Operational Time: 100.0						
Minimum Value: 0.2 ppb on Apr 18 02:00 Maximum Diurnal Average: 3.0 ppb at hour 15 Monthly Average: 2.04 ppb										Minimum Daily Average: 0.5 ppb on Apr 21 Minimum Diurnal Average: 1.4 ppb at hour 24 Percentiles: P ₁ = 0.3 P ₁₀ = 0.6 Q ₁ = 1.0 Median = 1.5 Q ₃ = 2.4 P ₉₀ = 4.0 P ₉₉ = 9.7																
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	1.6	2.0	2.0	1.9	Z	2.1	1.8	2.7	1.9	3.1	3.0	2.3	1.4	1.6	1.3	2.1	2.8	2.7	2.9	8.3	4.0	2.4	0.9	0.5	2.4	8.3
2-Apr	2.9	1.7	0.9	1.7	2.1	Z	1.8	2.0	5.0	3.4	5.3	3.5	3.6	3.9	6.4	5.6	11.4	2.8	0.9	1.2	1.3	2.5	2.8	3.1	3.3	11.4
3-Apr	Z	2.1	2.1	3.5	2.6	0.8	0.9	0.9	1.7	2.2	1.0	2.8	0.4	0.4	1.1	1.4	2.6	0.3	0.3	0.4	2.0	4.0	2.9	1.3	1.6	4.0
4-Apr	1.6	Z	1.5	2.7	4.2	8.9	2.2	0.6	0.6	1.2	1.5	2.6	1.5	1.5	1.8	2.4	4.3	0.7	0.7	1.3	0.8	0.9	1.2	1.5	2.0	8.9
5-Apr	1.5	1.2	Z	1.6	1.9	5.5	4.7	5.1	3.1	3.7	3.6	1.7	1.1	1.9	3.9	2.1	0.9	1.1	0.6	1.3	1.9	0.6	0.5	0.5	2.2	5.5
6-Apr	0.5	0.5	0.4	Z	0.7	0.9	1.7	0.7	0.6	0.7	0.4	0.5	1.2	0.8	1.0	1.9	0.8	1.1	1.4	1.1	1.1	1.4	1.1	1.2	0.9	1.9
7-Apr	1.1	1.0	1.1	1.1	Z	2.8	2.2	1.4	1.3	1.9	2.0	1.3	1.2	1.1	0.9	1.1	0.9	0.9	1.2	1.4	1.2	1.3	1.6	1.8	1.4	2.8
8-Apr	1.9	1.5	1.2	1.4	3.0	Z	3.4	2.2	1.8	5.3	2.6	2.6	9.7	11.2	7.2	2.2	0.9	2.9	0.8	2.1	1.3	1.8	2.5	4.0	3.2	11.2
9-Apr	2.9	1.2	Z	1.9	2.9	5.1	3.5	2.2	5.3	3.0	5.0	5.6	5.2	3.4	2.8	4.4	1.5	2.1	1.2	0.4	0.8	1.6	2.1	2.0	2.9	5.6
10-Apr	2.6	Z	2.7	2.3	3.5	2.5	1.3	1.2	2.0	1.9	0.7	0.4	0.3	0.7	0.3	0.4	0.3	0.3	0.5	0.6	0.5	0.6	1.1	0.8	1.2	3.5
11-Apr	0.6	0.8	Z	0.9	0.8	2.2	3.4	3.9	4.0	6.0	6.6	8.7	5.7	2.5	0.6	0.6	1.4	1.0	0.8	1.4	0.9	0.9	0.8	1.8	2.4	8.7
12-Apr	0.6	0.6	0.7	Z	1.5	1.4	1.3	2.2	1.2	0.9	0.9	1.1	2.5	6.9	9.7	3.2	1.3	1.6	5.7	9.4	1.2	2.4	2.7	1.2	2.6	9.7
13-Apr	1.3	2.7	0.6	0.6	Z	1.9	2.7	1.4	6.5	9.2	4.0	5.3	4.8	5.7	8.1	6.8	11.0	4.3	3.5	0.9	2.3	1.3	2.7	0.8	3.8	11.0
14-Apr	1.2	1.4	1.1	2.0	4.6	Z	0.9	1.2	1.8	1.5	0.6	0.6	0.5	0.6	1.0	0.9	1.1	1.9	1.6	1.8	1.5	1.3	1.2	1.1	1.4	4.6
15-Apr	Z	2.2	2.3	2.5	3.7	4.7	6.9	2.2	1.7	1.2	1.3	1.4	6.4	2.5	3.1	1.9	2.9	1.4	5.6	0.9	1.6	2.2	1.8	1.2	2.7	6.9
16-Apr	1.5	Z	14.2	2.4	0.7	0.7	7.9	11.4	C	C	C	C	C	3.1	2.5	1.7	0.3	1.8	0.4	1.6	2.0	1.0	1.5	1.1	3.1	14.2
17-Apr	1.1	0.6	Z	1.2	1.6	1.9	2.1	1.4	1.0	1.2	1.7	1.7	2.0	1.1	2.0	1.5	1.8	1.3	1.4	1.8	2.5	1.6	1.5	0.9	1.5	2.5
18-Apr	0.5	0.2	0.5	Z	1.7	1.3	1.7	1.4	1.4	1.4	1.0	1.7	1.8	1.0	1.4	0.9	0.9	0.6	0.6	0.8	0.9	1.0	1.2	1.3	1.1	1.8
19-Apr	1.5	1.5	1.9	1.4	Z	4.3	1.7	1.8	1.6	5.1	7.5	9.6	4.4	11.0	5.4	1.5	1.6	0.6	0.7	2.4	1.4	0.5	1.8	2.3	3.1	11.0
20-Apr	1.8	2.7	1.4	4.4	1.7	Z	1.8	1.4	3.0	2.5	3.1	1.0	1.8	1.4	1.9	1.2	1.5	1.9	1.1	3.8	7.9	3.4	0.4	0.2	2.2	7.9
21-Apr	Z	0.4	0.3	0.3	0.8	1.5	1.0	0.6	0.9	0.3	0.6	0.5	0.6	0.4	0.5	0.4	0.3	0.3	0.5	0.4	0.6	0.4	0.4	0.3	0.5	1.5
22-Apr	0.5	Z	1.6	1.7	2.1	3.5	3.5	3.7	1.5	1.0	0.9	1.1	1.0	0.8	0.7	0.6	0.9	0.5	0.6	0.9	0.7	0.7	1.1	0.7	1.3	3.7
23-Apr	2.1	1.3	Z	1.5	1.4	1.4	2.1	3.0	1.4	2.5	4.3	4.1	2.7	1.9	1.0	0.6	0.8	0.7	0.7	0.7	1.0	1.4	2.0	2.4	1.8	4.3
24-Apr	1.0	1.1	0.8	Z	1.1	5.9	1.7	1.1	4.0	1.5	2.0	1.9	1.2	1.7	3.1	2.4	1.9	0.6	0.5	0.4	0.6	1.5	0.7	1.3	1.7	5.9
25-Apr	1.5	2.5	3.0	2.9	Z	2.6	5.1	3.1	2.4	1.6	1.1	2.4	2.2	1.1	1.7	1.1	0.8	0.8	0.9	0.6	0.7	0.8	1.0	1.3	1.8	5.1
26-Apr	1.2	1.1	1.1	1.2	1.6	Z	2.6	4.7	2.8	2.8	3.9	8.0	2.0	2.4	6.9	3.1	1.9	2.4	1.9	1.4	1.5	1.1	1.0	0.8	2.5	8.0
27-Apr	Z	1.3	1.2	1.5	2.6	2.4	1.5	0.6	0.5	0.5	1.4	1.0	1.6	1.4	1.1	1.3	1.4	1.1	0.7	2.4	1.8	2.2	2.1	2.1	1.5	2.6
28-Apr	1.8	Z	2.3	2.2	1.7	2.3	2.8	2.9	2.2	1.3	0.7	0.6	0.7	1.3	2.2	1.2	0.6	0.7	0.6	0.6	1.0	1.0	1.1	1.0	1.4	2.9
29-Apr	1.1	1.2	Z	1.3	1.0	2.0	1.1	1.3	1.1	0.7	0.8	1.1	0.5	5.4	6.5	7.1	2.6	3.0	3.1	2.5	0.9	1.4	1.9	0.9	2.1	7.1
30-Apr	1.5	1.9	1.7	Z	1.2	1.4	1.0	2.0	1.0	1.4	1.3	1.2	1.8	2.2	4.8	2.4	3.8	1.3	1.3	1.6	2.0	1.2	1.6	2.0	1.8	4.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652

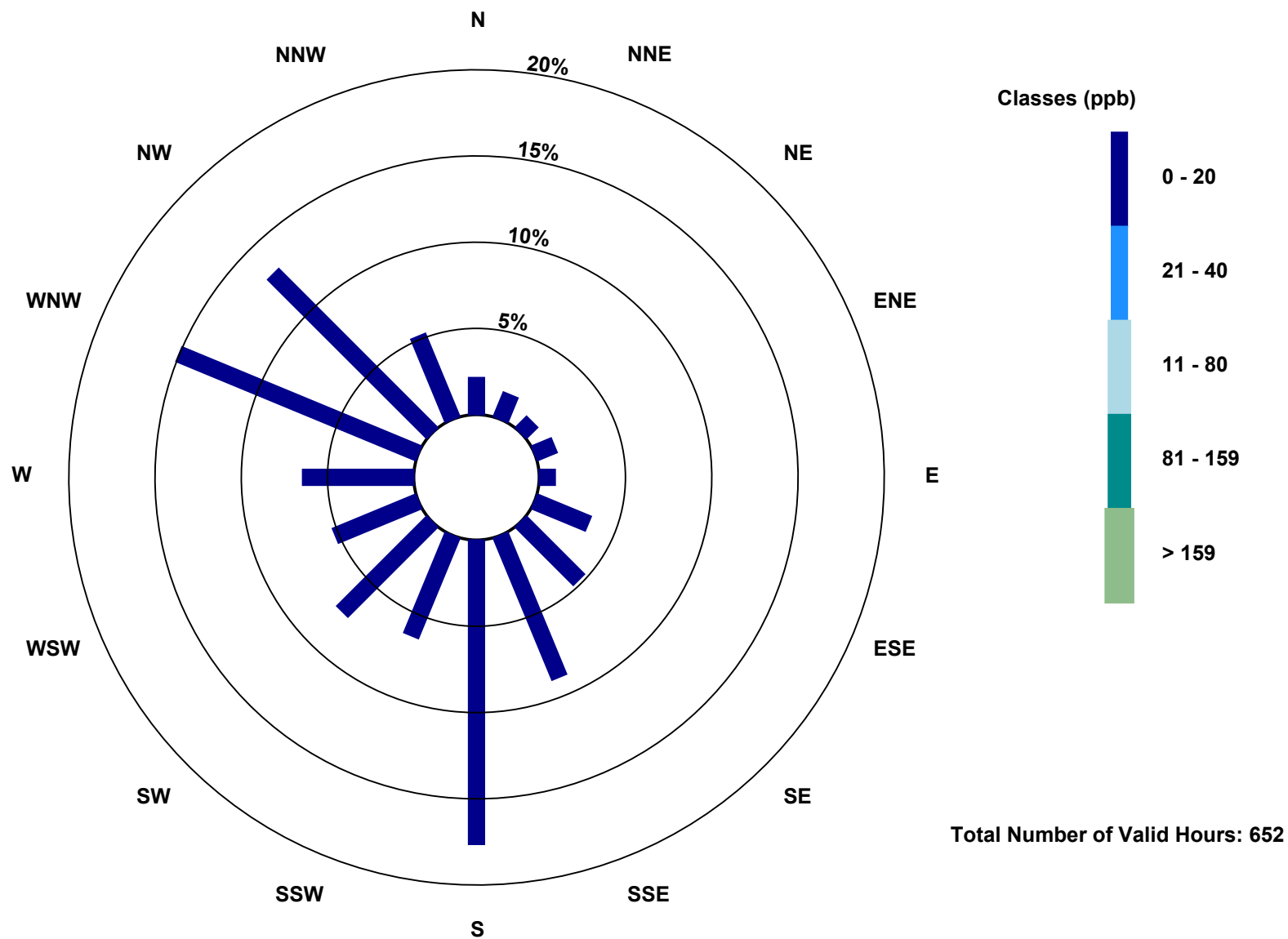
Total Number of Valid Hours: 652

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1



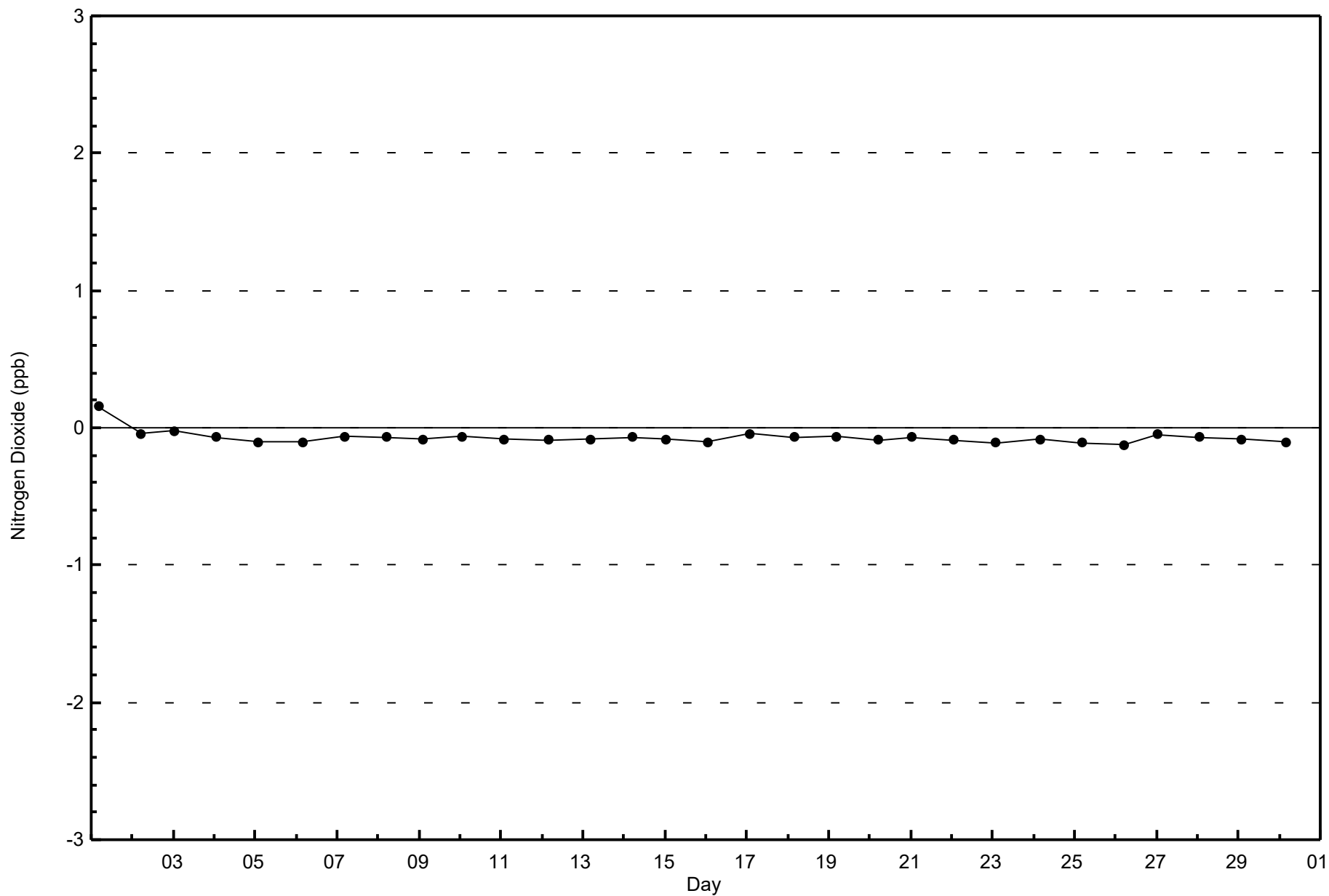


Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO₂) - ppb

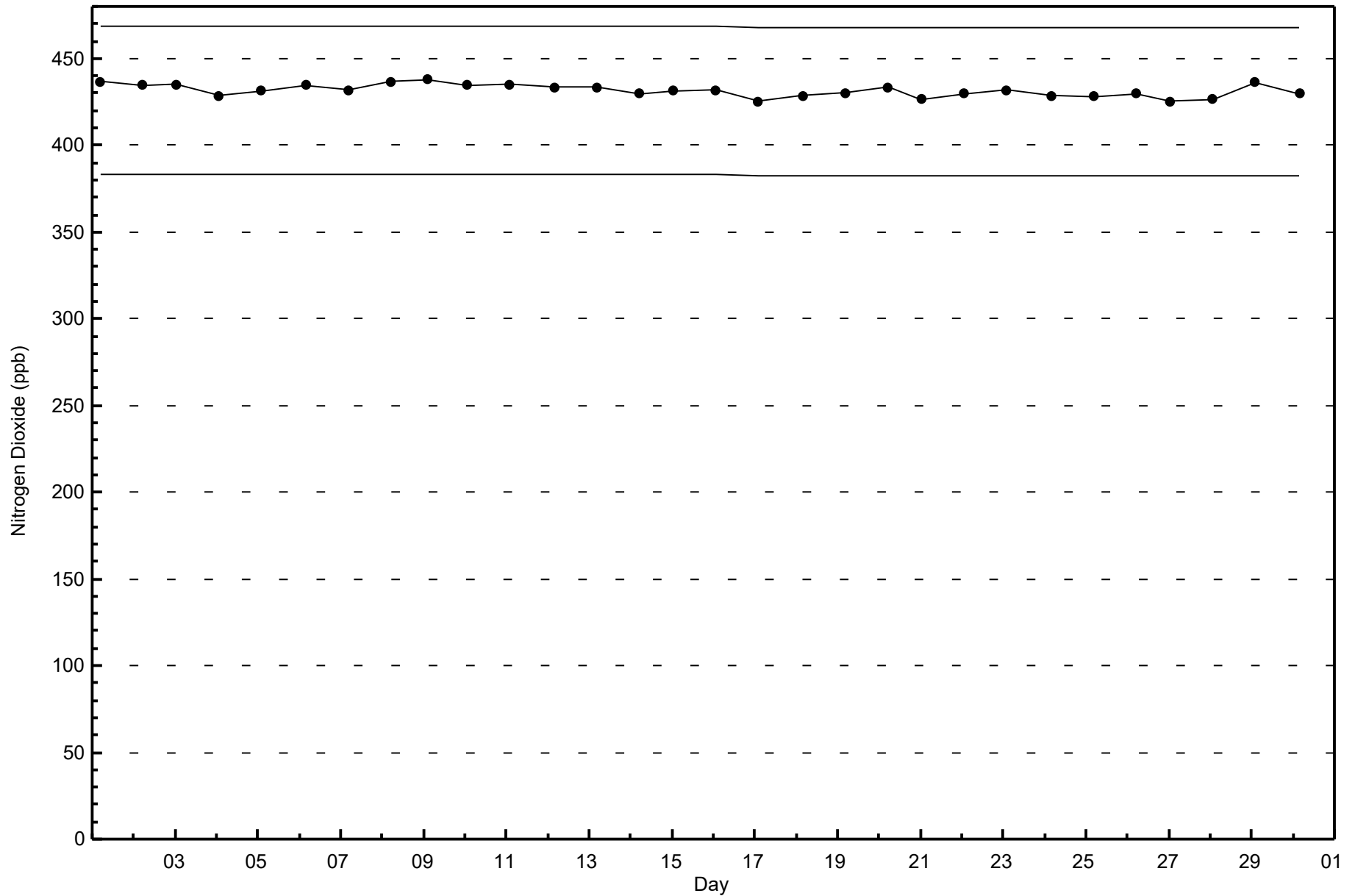
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 - April 2025

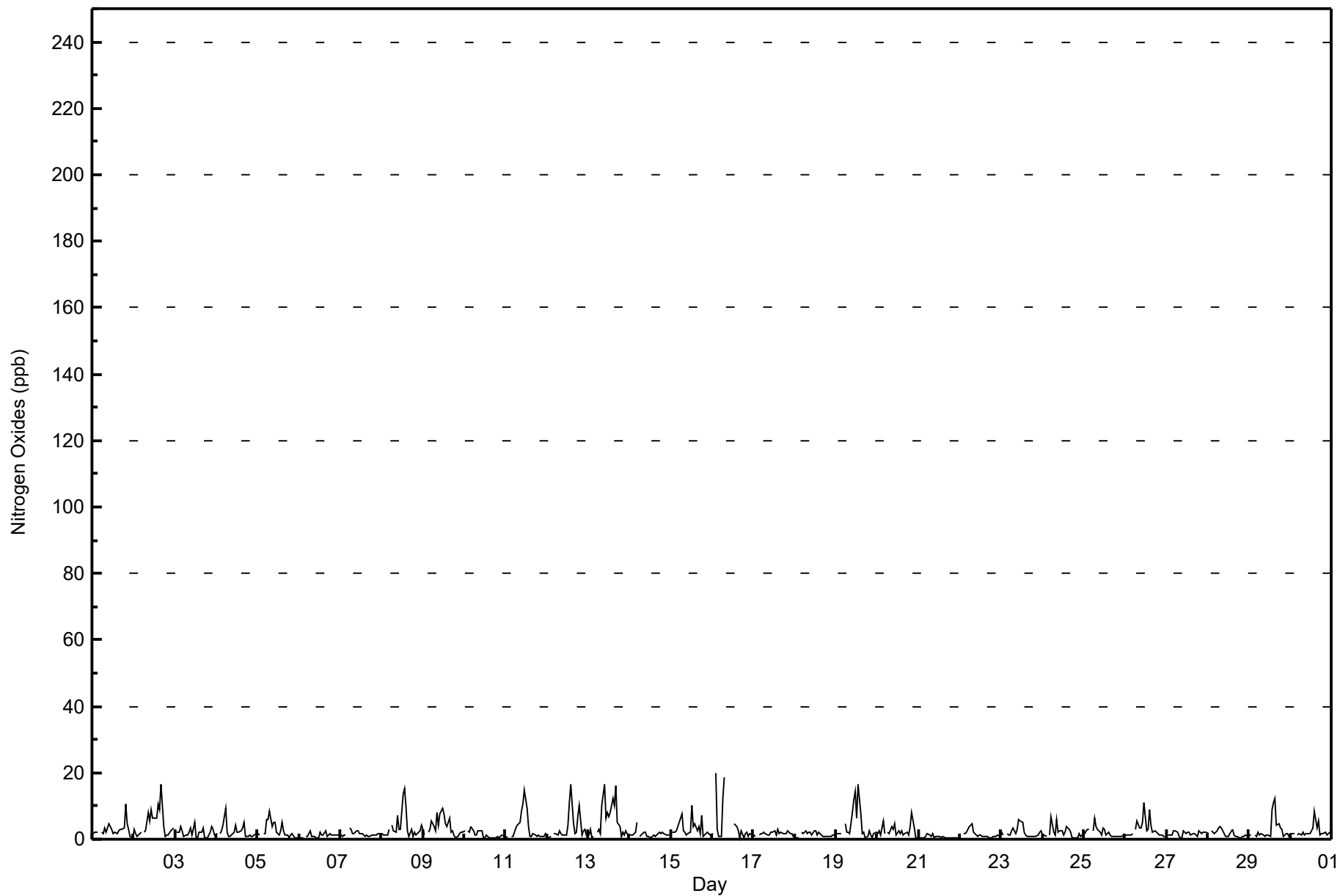


Maximum Value: 20.1 ppb on Apr 16 03:00																			Maximum Daily Average: 5.4 ppb on Apr 13										Hours in Service: 720	
Minimum Value: 0.2 ppb on Apr 18 02:00																			Minimum Daily Average: 0.7 ppb on Apr 21										Hours of Data: 685	
Maximum Diurnal Average: 4.4 ppb at hour 15																			Minimum Diurnal Average: 1.4 ppb at hour 24										Hours of Missing Data: 35	
Monthly Average: 2.55 ppb																			Percentiles: P ₁ = 0.3 P ₁₀ = 0.7 Q ₁ = 1.1 Median = 1.7 Q ₃ = 2.7 P ₉₀ = 5.2 P ₉₉ = 15.3										Hours of Calibration: 35	
																			Percent Operational Time: 100.0											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	1.6	2.0	2.0	1.9	Z	2.2	1.9	3.2	2.2	4.5	3.9	3.1	1.8	2.0	1.5	2.5	3.0	2.8	3.3	10.5	4.7	3.0	0.9	0.5	2.8	10.5				
2-Apr	3.1	1.7	0.9	1.7	2.1	Z	1.9	2.4	7.9	5.7	9.0	6.3	6.3	6.5	10.7	9.0	16.6	3.8	0.9	1.2	1.3	2.5	2.8	3.2	4.7	16.6				
3-Apr	Z	2.1	2.1	3.6	2.7	0.8	1.3	1.1	2.2	3.4	1.4	5.0	0.5	0.5	1.9	2.0	3.5	0.3	0.3	0.4	2.0	4.0	2.9	1.3	2.0	5.0				
4-Apr	1.6	Z	1.5	2.7	4.3	9.5	2.3	0.7	0.7	1.5	2.2	4.0	2.0	2.1	2.4	3.3	5.3	0.7	0.7	1.3	0.8	0.9	1.2	1.5	2.3	9.5				
5-Apr	1.5	1.2	Z	1.6	1.9	5.7	5.9	8.3	3.9	5.2	4.9	2.1	1.4	2.7	5.2	2.5	1.1	1.2	0.6	1.3	1.9	0.6	0.5	0.5	2.7	8.3				
6-Apr	0.5	0.5	0.4	Z	0.7	1.0	2.3	0.8	0.9	0.9	0.5	0.6	1.9	1.1	1.3	2.6	0.9	1.2	1.5	1.1	1.1	1.4	1.1	1.2	1.1	2.6				
7-Apr	1.1	1.0	1.1	1.1	Z	3.2	2.8	1.6	1.5	2.7	2.5	1.6	1.5	1.5	1.1	1.4	1.0	1.0	1.2	1.4	1.3	1.3	1.6	1.8	1.6	3.2				
8-Apr	1.9	1.5	1.2	1.4	3.0	Z	4.3	2.5	2.2	7.3	3.1	2.8	13.4	15.2	9.6	2.6	1.0	3.1	0.9	2.2	1.3	1.9	2.6	4.1	3.9	15.2				
9-Apr	3.0	1.2	Z	1.9	2.9	5.5	3.8	2.7	7.9	4.2	7.7	9.2	7.8	4.8	3.9	6.4	1.9	2.5	1.3	0.4	0.8	1.6	2.1	2.0	3.7	9.2				
10-Apr	2.6	Z	2.7	2.3	3.6	2.6	1.4	1.4	2.5	2.5	2.5	0.5	0.4	1.3	0.4	0.5	0.3	0.4	0.6	0.7	0.6	0.7	1.1	0.8	1.4	3.6				
11-Apr	0.6	0.8	Z	0.9	0.8	2.3	3.6	4.3	4.9	8.6	10.4	14.7	9.3	3.8	0.8	0.8	1.8	1.1	0.8	1.4	0.9	0.9	0.9	1.8	3.3	14.7				
12-Apr	0.6	0.6	0.7	Z	1.5	1.5	1.4	2.6	1.5	1.1	1.2	1.4	4.0	10.9	16.4	4.8	1.6	1.9	6.7	10.2	1.2	2.5	2.8	1.3	3.4	16.4				
13-Apr	1.4	2.9	0.6	0.6	Z	2.0	3.1	1.8	10.3	16.3	6.3	7.9	6.9	8.2	12.2	10.4	16.1	5.1	3.8	0.9	2.3	1.3	2.7	0.8	5.4	16.3				
14-Apr	1.2	1.4	1.1	2.2	5.1	Z	0.9	1.4	2.3	2.0	0.7	0.7	0.6	0.7	1.2	1.0	1.2	2.0	1.7	1.9	1.6	1.4	1.2	1.1	1.5	5.1				
15-Apr	Z	2.2	2.3	2.5	3.8	5.1	7.8	2.4	2.1	1.4	1.7	2.0	10.1	3.9	4.6	2.6	3.7	1.6	7.0	0.9	1.6	2.3	1.8	1.2	3.2	10.1				
16-Apr	1.5	Z	20.1	3.0	0.8	0.8	12.3	18.7	C	C	C	C	C	4.6	3.8	2.4	0.3	2.4	0.4	1.9	2.3	1.0	1.7	1.2	4.4	20.1				
17-Apr	1.2	0.7	Z	1.2	1.6	1.9	2.3	1.5	1.1	1.4	2.0	2.2	2.6	1.4	2.9	1.8	2.1	1.5	1.5	1.8	2.5	1.6	1.5	0.9	1.7	2.9				
18-Apr	0.5	0.2	0.5	Z	2.0	1.6	2.3	1.8	2.0	2.1	1.4	2.7	2.6	1.3	2.1	1.1	1.0	0.7	0.7	0.8	0.9	1.0	1.2	1.3	1.4	2.7				
19-Apr	1.5	1.5	1.9	1.5	Z	4.6	2.0	2.0	1.8	8.0	11.9	14.5	6.3	16.5	7.8	1.8	2.0	0.6	0.7	2.6	1.4	0.5	1.8	2.3	4.2	16.5				
20-Apr	1.8	2.7	1.4	5.3	1.7	Z	2.0	1.8	3.7	3.2	4.5	1.3	2.4	1.7	2.4	1.5	1.6	2.0	1.1	3.8	7.9	3.4	0.4	0.2	2.5	7.9				
21-Apr	Z	0.4	0.3	0.3	0.8	1.6	1.1	1.0	1.8	0.3	0.9	0.8	0.8	0.6	0.9	0.6	0.3	0.3	0.5	0.4	0.6	0.4	0.4	0.3	0.7	1.8				
22-Apr	0.5	Z	1.6	1.7	2.1	4.0	4.1	4.8	1.9	1.2	1.0	1.3	1.1	0.9	0.8	0.7	1.0	0.5	0.6	0.9	0.7	0.7	1.1	0.7	1.5	4.8				
23-Apr	2.1	1.4	Z	1.5	1.4	1.4	2.5	3.5	1.6	3.2	6.1	5.6	4.9	2.2	1.1	0.7	0.9	0.8	0.7	0.7	1.0	1.4	2.0	2.4	2.1	6.1				
24-Apr	1.1	1.1	0.8	Z	1.2	6.7	2.3	1.3	5.8	2.0	2.5	2.3	1.4	2.0	3.7	2.8	2.3	0.6	0.5	0.4	0.6	1.5	0.7	1.3	2.0	6.7				
25-Apr	1.5	2.5	3.0	2.9	Z	2.7	6.4	3.7	3.0	2.0	1.3	3.3	2.9	1.3	2.1	1.3	0.8	0.8	0.9	0.6	0.7	0.8	1.0	1.3	2.0	6.4				
26-Apr	1.2	1.1	1.1	1.2	1.6	Z	2.8	5.4	3.5	3.6	5.1	10.9	2.5	2.9	9.0	4.1	2.3	2.6	2.0	1.5	1.5	1.2	1.0	0.8	3.0	10.9				
27-Apr	Z	1.3	1.2	1.5	2.6	2.6	1.9	0.9	0.6	0.6	2.4	1.5	2.3	2.0	1.4	1.7	1.9	1.3	0.7	2.4	1.8	2.2	2.1	2.1	1.7	2.6				
28-Apr	1.8	Z	2.3	2.2	1.8	2.5	3.4	3.9	3.2	1.7	1.0	0.8	1.0	1.8	3.0	1.5	0.7	0.7	0.6	0.6	1.0	1.0	1.1	1.0	1.7	3.9				
29-Apr	1.1	1.3	Z	1.3	1.0	2.2	1.2	1.6	1.4	0.9	1.2	1.4	0.6	9.0	10.8	12.1	4.3	4.5	3.5	2.8	1.0	1.5	1.9	0.9	2.9	12.1				
30-Apr	1.5	1.9	1.7	Z	1.2	1.5	1.1	2.3	1.2	1.6	1.6	1.5	2.6	3.3	8.3	3.2	5.4	1.4	1.5	1.7	2.2	1.3	1.8	2.0	2.3	8.3				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
> 200	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
Jackfish 1 - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	10	6	8	6	22	31	58	115	41	48	34	42	98	85	34	652

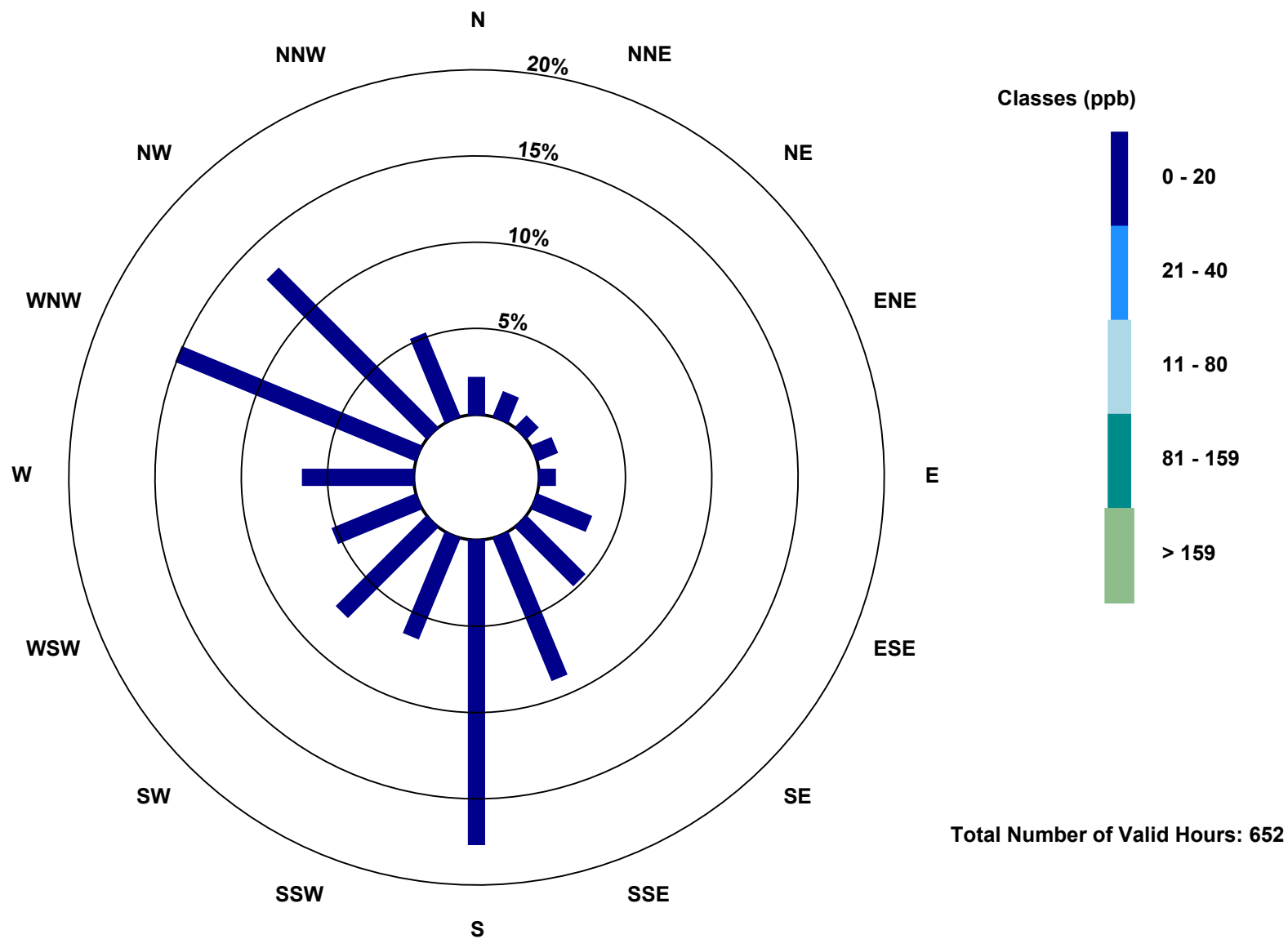
Total Number of Valid Hours: 652

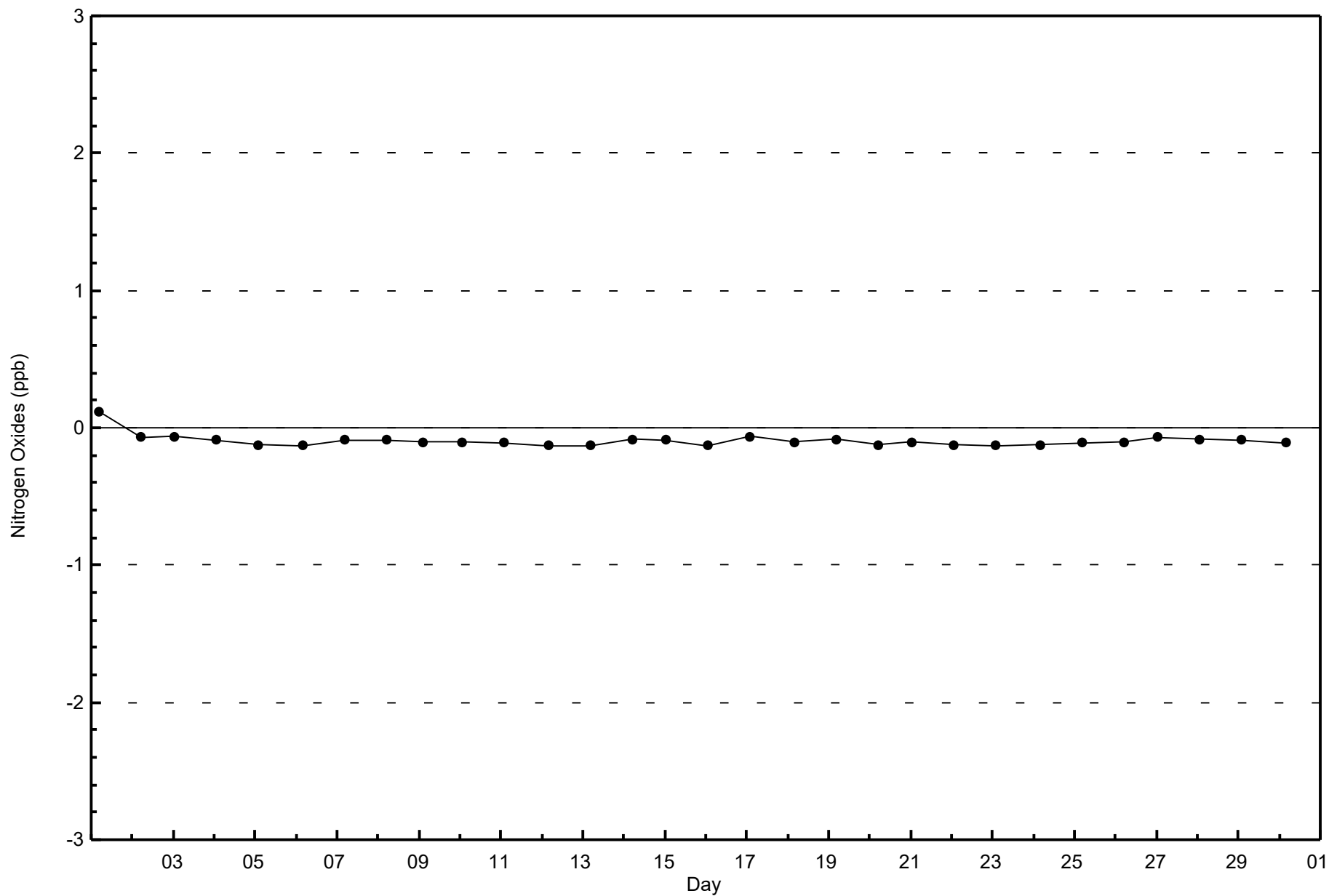
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Nitrogen Oxides (NO_x) - ppb
Jackfish 1

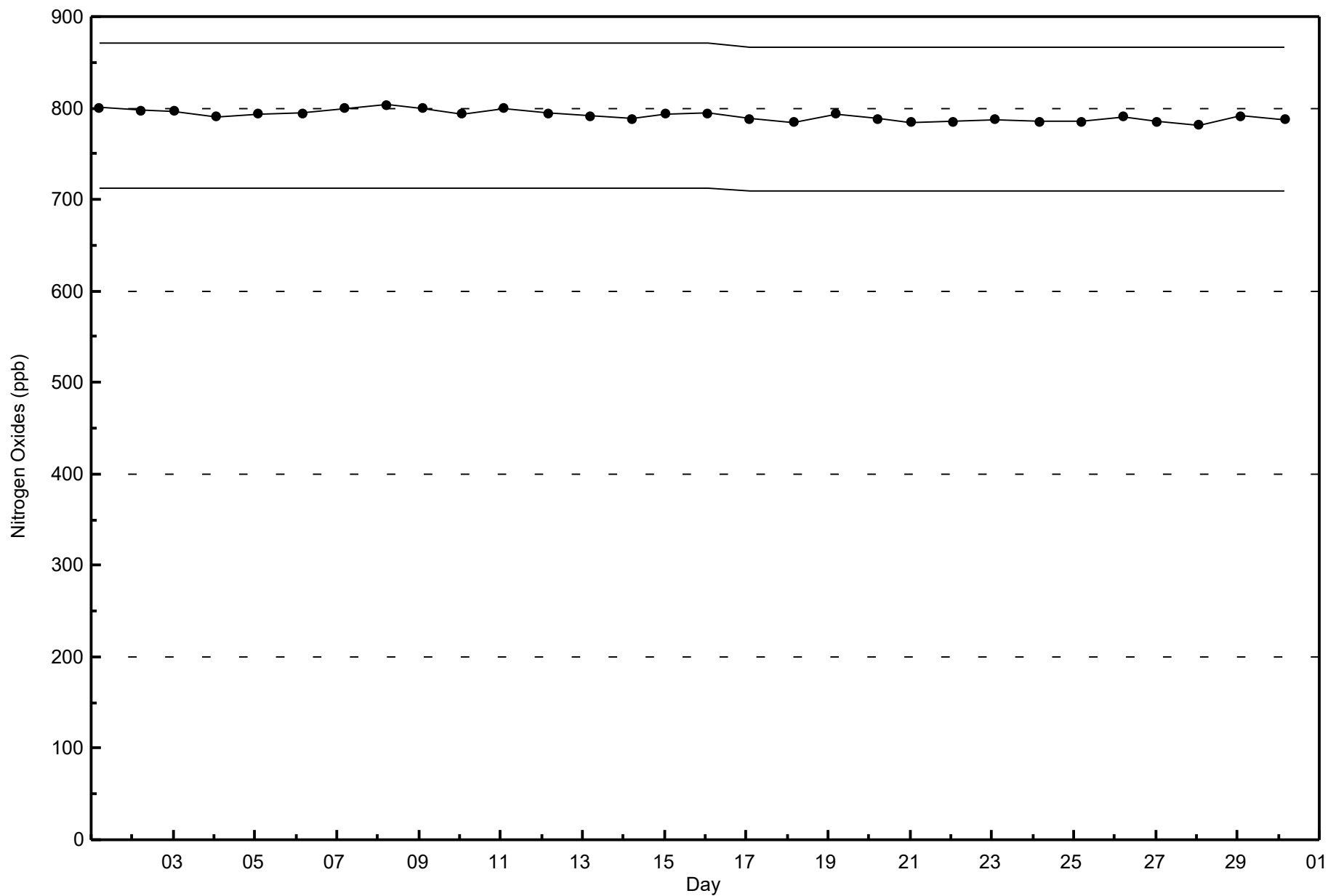






Wood Buffalo Environmental Association
Span Responses

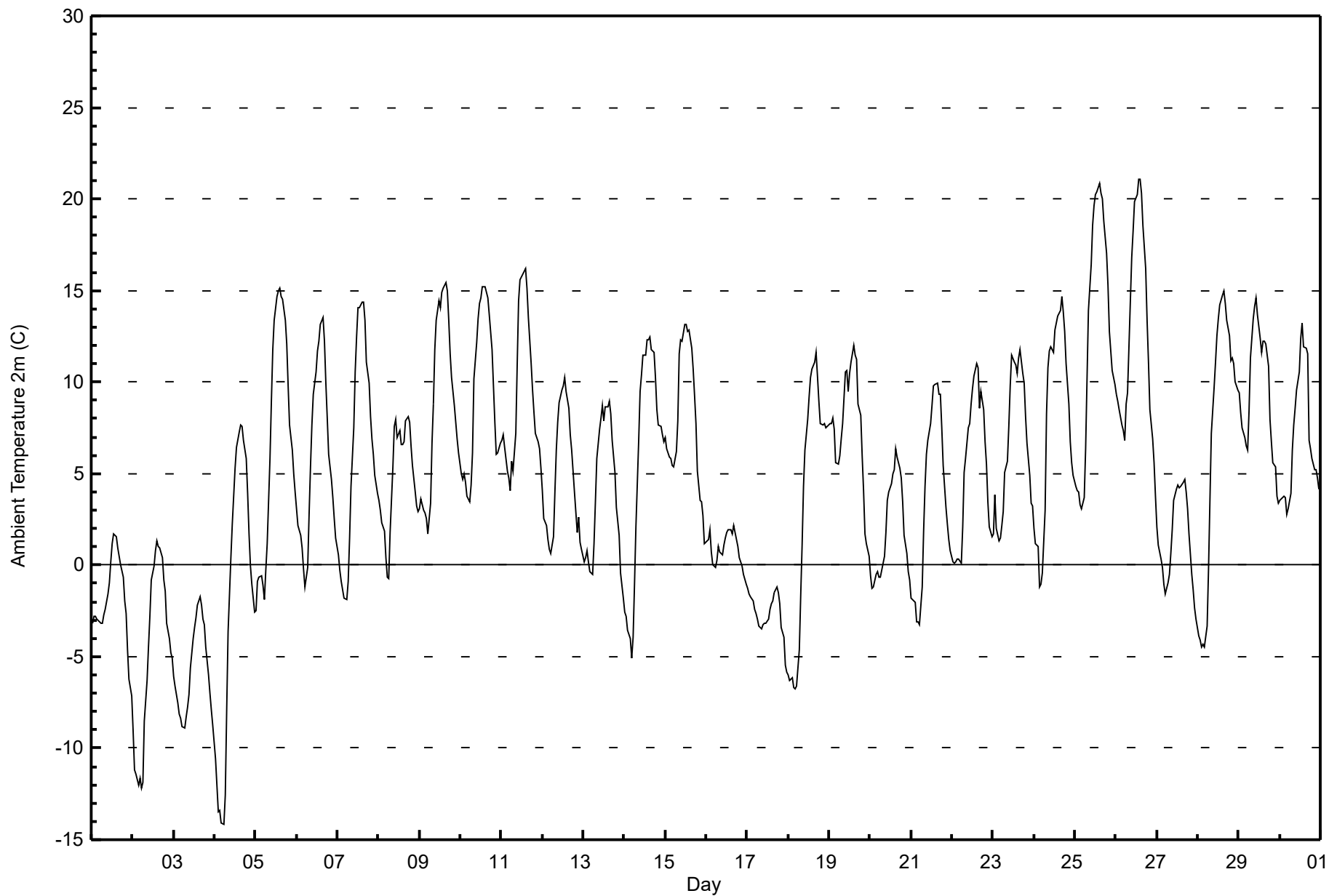
Nitrogen Oxides (NO_x) - ppb
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Jackfish 1 - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	173	24.03	24.03
0 - 10	382	53.06	77.08
10 - 20	157	21.81	98.89
> 20	8	1.11	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) - %

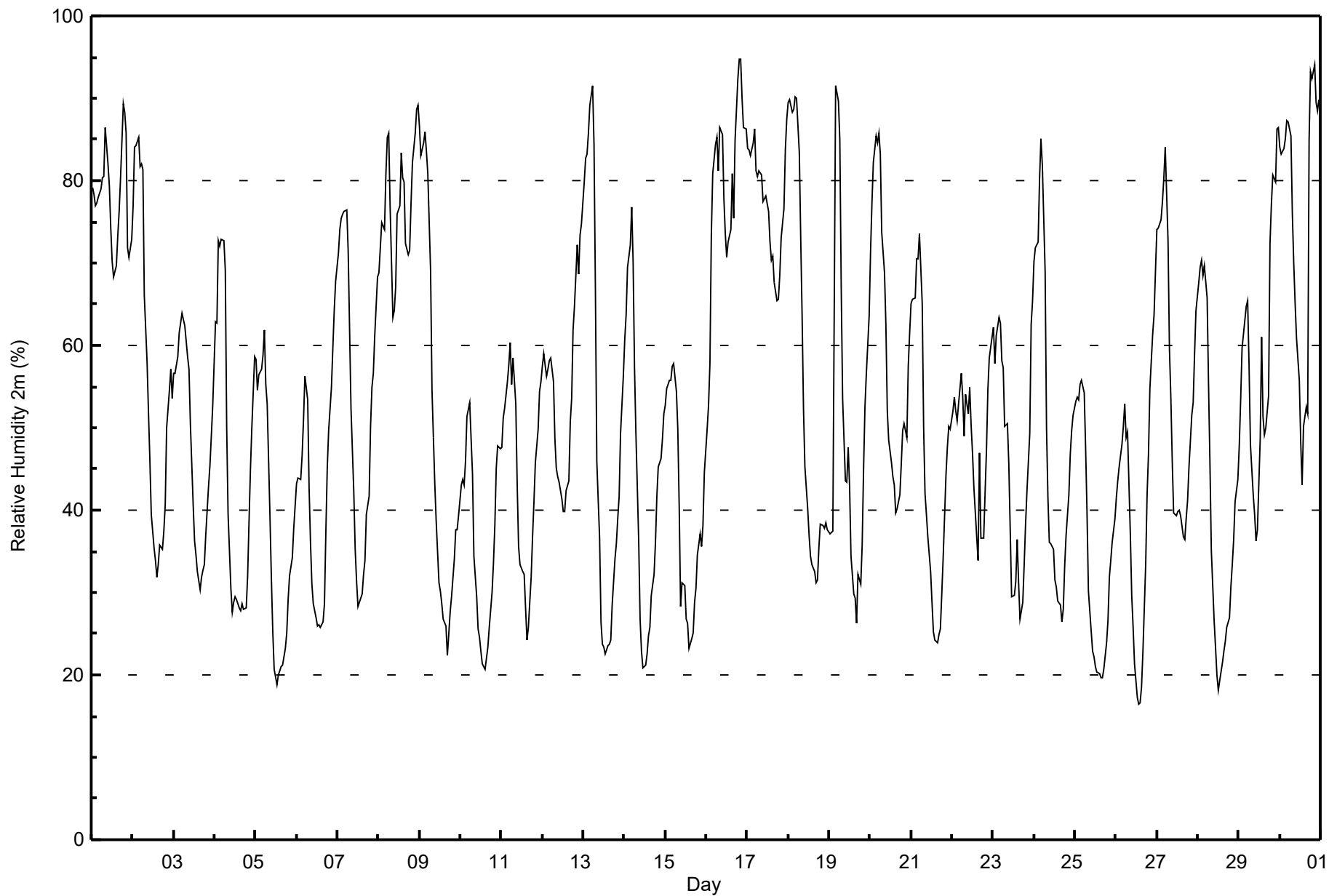
Jackfish 1 - April 2025

Maximum Value: 94.8 % on Apr 16 20:00																				Maximum Daily Average: 78.8 % on Apr 16					Hours in Service: 720	
Minimum Value: 16.4 % on Apr 26 14:00																				Minimum Daily Average: 34.4 % on Apr 25					Hours of Data: 720	
Maximum Diurnal Average: 72.0 % at hour 6																				Minimum Diurnal Average: 36.1 % at hour 16					Hours of Missing Data: 0	
Monthly Average: 52.16 %																				Percentiles: P ₁ = 19.7 P ₁₀ = 26.4 Q ₁ = 35.5 Median = 50.1 Q ₃ = 69.5 P ₉₀ = 83.0 P ₉₉ = 91.3					Hours of Calibration: 0	
																									Percent Operational Time: 100.0	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	79.2	78.4	77.0	77.3	78.0	79.0	80.3	80.5	86.4	82.1	79.3	74.2	70.2	68.3	69.7	73.2	76.3	80.4	89.4	88.3	85.8	71.9	70.7	72.8	77.9	89.4
2-Apr	76.9	84.0	84.3	85.3	81.7	82.1	81.4	66.1	58.0	51.9	46.2	39.6	35.3	33.9	31.8	33.4	35.8	35.3	37.5	40.8	50.1	54.5	57.0	53.6	55.7	85.3
3-Apr	56.6	56.6	58.6	61.4	62.8	63.9	62.4	60.4	58.7	57.2	50.6	40.7	36.3	34.5	32.6	30.4	31.8	32.8	33.5	37.0	42.8	45.4	49.0	52.7	47.9	63.9
4-Apr	62.8	62.7	72.8	72.0	72.9	72.6	69.1	50.0	39.4	30.5	27.5	28.8	29.5	29.1	28.2	27.9	28.6	28.0	28.1	32.1	38.6	45.0	50.0	58.6	45.2	72.9
5-Apr	58.2	54.6	56.5	57.1	58.7	61.9	55.3	52.9	39.2	31.7	25.3	20.7	18.8	20.0	20.4	21.1	21.3	23.2	25.1	29.1	32.0	34.2	37.7	40.4	37.3	61.9
6-Apr	43.2	43.9	43.8	46.6	51.1	56.3	53.4	42.7	36.0	31.1	28.7	27.0	25.9	26.0	25.8	26.4	28.7	37.4	45.0	49.7	54.9	59.6	64.2	67.9	42.3	67.9
7-Apr	71.2	74.1	75.5	75.9	76.3	76.4	71.3	61.8	52.5	42.2	35.3	31.3	28.4	28.8	29.8	32.2	33.9	39.4	41.6	50.1	54.9	56.6	61.1	68.3	52.9	76.4
8-Apr	68.9	71.9	74.9	74.1	80.8	85.2	85.8	77.0	63.3	64.3	67.2	75.9	76.9	83.3	80.3	79.8	72.4	71.0	71.4	77.3	82.3	85.7	88.6	89.2	77.0	89.2
9-Apr	86.6	83.1	84.5	85.9	83.5	80.9	69.0	54.6	48.7	43.2	38.7	31.1	30.2	28.6	26.8	25.9	22.4	24.9	27.6	29.5	34.0	37.6	37.7	39.4	48.1	86.6
10-Apr	43.0	43.8	43.1	46.0	51.4	53.0	48.6	44.4	34.4	29.4	25.5	24.7	22.8	21.3	20.6	22.1	23.4	25.8	30.0	33.5	38.2	45.1	47.8	47.5	36.1	53.0
11-Apr	47.7	51.2	52.3	55.7	57.6	60.3	55.2	58.6	52.9	43.0	35.5	33.3	32.6	32.2	28.1	24.3	25.8	31.8	36.8	41.0	45.8	49.9	54.3	55.6	44.2	60.3
12-Apr	57.4	58.9	56.3	57.1	58.1	58.5	55.7	48.6	45.1	44.0	43.3	41.4	39.8	39.8	42.3	43.5	50.7	53.5	61.8	64.8	72.2	68.6	73.4	74.8	54.6	74.8
13-Apr	79.8	82.8	83.2	85.7	89.2	91.6	84.3	66.7	46.0	36.6	26.5	23.7	23.4	22.5	23.6	23.7	24.2	28.6	34.0	35.9	39.0	41.7	49.3	56.2	49.9	91.6
14-Apr	60.7	63.8	69.4	72.3	76.8	70.2	57.3	49.4	36.2	26.8	22.8	20.9	21.2	22.6	24.7	25.7	29.6	32.1	36.2	41.7	45.2	46.2	48.6	51.7	43.8	76.8
15-Apr	52.8	54.7	55.8	55.8	57.5	57.8	54.4	49.9	40.3	28.2	31.2	30.8	26.8	26.3	23.2	24.4	25.0	28.8	30.5	34.6	37.0	35.6	38.1	44.7	39.3	57.8
16-Apr	49.9	52.7	57.7	73.5	80.8	84.4	85.3	81.2	86.4	85.6	77.9	73.5	70.6	72.5	74.1	80.8	75.5	84.8	92.4	94.8	94.8	90.0	86.5	86.2	78.8	94.8
17-Apr	83.9	83.8	83.0	84.6	86.3	81.2	80.4	81.2	80.8	77.5	77.9	78.1	76.3	72.6	70.3	70.8	67.6	65.3	65.6	68.4	73.1	76.5	83.7	87.5	77.3	87.5
18-Apr	89.4	89.9	88.3	88.6	90.2	90.1	83.4	73.1	63.6	52.2	45.3	40.2	36.9	34.5	33.4	32.6	31.2	31.5	35.5	38.4	38.1	37.8	38.5	37.7	55.0	90.2
19-Apr	37.1	37.2	37.5	64.5	91.6	89.7	84.9	67.1	53.6	43.6	43.4	47.6	42.8	34.4	29.8	29.3	26.3	32.1	30.9	35.7	44.9	52.6	56.6	63.6	49.0	91.6
20-Apr	71.3	77.3	82.2	85.5	84.6	85.8	83.2	73.7	68.8	62.4	52.0	48.5	45.8	44.0	43.0	39.7	40.2	41.9	45.6	49.7	50.4	48.9	57.4	61.5	60.1	85.8
21-Apr	65.0	65.5	65.8	70.6	70.6	73.6	65.2	50.1	42.0	39.6	36.8	32.5	28.8	25.3	24.3	24.0	24.9	25.5	29.9	34.2	44.3	47.6	50.2	49.8	45.2	73.6
22-Apr	52.1	53.7	52.1	50.8	52.8	56.6	53.8	49.0	54.0	51.7	55.0	50.4	46.9	42.7	36.8	33.9	47.0	36.7	36.6	42.0	47.3	54.6	58.5	61.0	49.0	61.0
23-Apr	62.3	57.7	61.1	63.3	62.7	58.1	57.3	50.2	50.5	45.6	37.7	29.5	29.7	31.3	36.5	31.2	26.8	28.7	33.3	38.3	42.3	49.4	62.5	65.4	46.3	65.4
24-Apr	70.2	71.9	72.6	80.2	85.1	81.9	69.0	49.9	41.5	36.2	35.9	35.3	31.5	30.7	29.0	28.5	26.4	28.0	33.3	36.9	41.8	46.7	49.6	51.6	48.5	85.1
25-Apr	53.2	53.8	53.4	55.2	55.8	54.3	47.5	39.6	30.2	25.2	22.9	22.2	21.0	20.4	20.2	19.7	19.7	20.7	23.9	26.7	31.8	33.9	36.1	39.0	34.4	55.8
26-Apr	41.6	43.5	45.3	48.0	50.1	52.9	48.8	49.5	37.2	29.7	25.8	21.4	17.3	16.4	16.6	18.5	22.8	33.3	41.8	46.8	54.7	61.4	63.8	69.0	39.8	69.0
27-Apr	74.1	74.3	75.3	77.5	80.3	84.2	72.6	59.6	53.7	46.1	39.6	39.3	39.9	40.1	39.3	36.7	36.5	39.0	41.2	45.2	51.5	53.1	59.0	64.2	55.1	84.2
28-Apr	67.6	69.5	70.4	68.5	69.7	65.7	55.3	45.8	35.1	26.6	23.4	20.0	18.2	19.3	21.4	22.8	24.0	25.8	26.9	30.7	33.4	36.4	41.0	43.8	40.1	70.4
29-Apr	47.9	53.3	59.6	63.0	64.8	65.5	57.7	48.0	41.9	39.5	36.3	37.6	48.7	61.0	51.4	49.2	50.0	53.9	72.4	77.2	80.6	79.8	86.2	86.4	58.8	86.4
30-Apr	84.1	83.3	83.9	85.1	87.2	87.1	85.4	76.2	69.9	65.1	60.8	55.8	48.2	43.1	50.2	52.6	51.7	85.0	93.2	92.3	94.0	89.4	88.5	89.8	75.1	94.0
Diurnal Average																										
89.4 89.9 88.3 88.6 91.6 91.6 85.8 81.2 86.4 85.6 79.3 78.1 76.9 83.3 80.3 80.8 76.3 85.0 93.2 94.8 94.8 90.0 88.6 89.8 Diurnal Maximum																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Jackfish 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Jackfish 1 - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	11	1.53	1.53
20 - 40	236	32.78	34.31
40 - 60	227	31.53	65.83
60 - 80	149	20.69	86.53
80 - 100	97	13.47	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

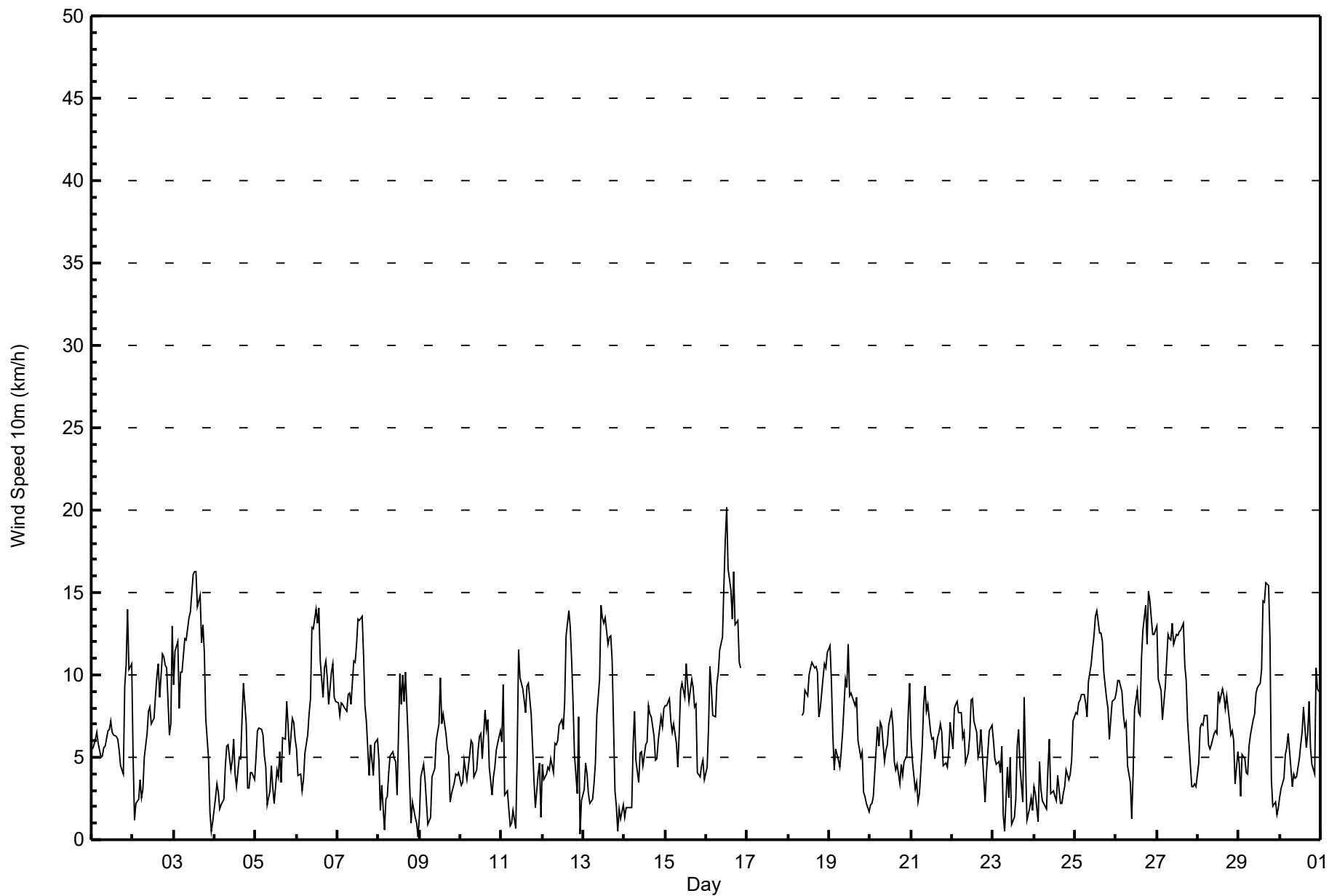
Jackfish 1 - April 2025

Maximum Speed: 20 km/h on Apr 16 13:00																		Maximum Daily Speed Average: 11.8 km/h on Apr 16																		Hours in Service:		720	
Minimum Speed Value: 0 km/h on Apr 9 00:00																		Minimum Daily Speed Average: 0.2 km/h on Apr 23																		Hours of Data:		685	
Maximum Diurnal Speed Average: 4.4 km/h at hour 17																		Minimum Diurnal Speed Average: 0.8 km/h at hour 21																		Hours of Missing Data:		35	
Monthly Average Velocity: 2.1 km/h 252.2 deg																		Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 4 Median = 6 Q ₃ = 9 P ₉₀ = 12 P ₉₉ = 16																		Percent Operational Time:		95.1	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	SSE6	SSE6	SSE6	SSE7	SSE6	SSE5	SSE5	SSE6	SSE6	S7	S7	S7	SSE7	SSE6	S6	S6	S5	S5	SW4	WNW9	NW11	NW14	NW10	NW11	SSW3.0	NW14													
2-Apr	WNW5	WNW1	WSW2	W2	SW4	WSW3	W3	WNW5	WNW6	WNW8	WNW8	WNW7	WNW7	WNW9	WNW10	NW11	WNW9	NW11	NW11	NNW11	N10	NNW6	NW7	NW13	NW6.4	NW13													
3-Apr	NW9	NW11	NW12	NW8	NW10	NW10	NW12	NW12	NW13	NW13	NW14	NW16	NW16	NW16	NW14	NW15	NW12	NW13	NW11	NW7	NNW5	NNE2	NNW1	WSW1	NW10.5	NW16													
4-Apr	SW3	S3	SW3	WSW2	WSW2	SSW2	SW4	SW6	SSW6	WSW4	W5	WNW6	W4	W3	WNW5	WNW5	NW7	NW10	NNW7	ENE3	SE3	SSE4	S4	S4	WSW2.4	NW10													
5-Apr	SSW5	SSW7	SW7	SW7	SSW6	SSW5	SSW4	ESE2	SE3	SE4	SE3	SSE2	W4	W4	WNW5	NW3	NW6	NW6	NW8	N7	NE5	E7	ESE7	ESE6	SW1.0	NW8													
6-Apr	SE5	ESE4	ESE4	E3	ESE4	ESE5	ESE6	ESE8	ESE9	ESE13	SE13	SE14	SE13	SE14	SE11	SSE9	SE10	SE11	SSE10	SSE8	SSE10	SSE11	SSE9	SSE8	SE8.4	SE14													
7-Apr	SSE8	SSE8	SSE8	SSE8	SSE8	SSE8	SSE9	SSE9	SSE8	SE11	SE11	SE12	SE13	SE13	SE14	SSE11	SSE8	SSE7	S4	S6	S5	SSE4	SSE6	SSE6	SSE8.4	SE14													
8-Apr	SE5	SSE2	SSE3	ESE1	S2	SE3	SSE4	S5	SW5	NW5	WNW5	WSW3	WNW10	WNW8	NW10	NW8	NW10	NNW6	NNW3	SSW1	WSW2	SW1	WSW1	SSW0	WNW2.1	NW10													
9-Apr	W1	SW4	SSW5	SSW4	SW2	WSW1	W1	WNW4	WNW4	NW4	NW6	NW7	NW10	WNW7	WNW8	WNW6	WNW6	WNW5	WSW2	SW3	SW3	SSW4	SW4	SW4	W3.4	NW10													
10-Apr	SW3	SW3	SW5	SW4	SSW4	SSW5	SSW6	SSW6	WSW4	W4	WSW5	WSW6	SW6	WSW5	SW8	SW7	SW7	SSW4	S3	SSE4	SSE4	SSE5	SE6	SE7	SSW4.2	SW8													
11-Apr	SSE6	SE9	ENE3	ENE3	SE2	ENE1	NNE1	WSW2	WSW1	NW5	NW12	WNW10	WNW9	WNW8	W8	W9	WNW10	WNW8	WNW6	WNW4	WNW2	WNW4	WNW5	WSW1	WNW3.3	NW12													
12-Apr	SSW5	SW4	SW4	SSW4	SSW4	SSW5	SW4	WNW6	WNW6	W6	W7	WNW7	W7	WNW8	WNW12	NW14	NW13	NW11	WNW8	WNW5	W3	NW7	ESE0	SW2	WNW5.1	NW14													
13-Apr	W3	WNW5	W4	W3	W2	W2	W3	WNW5	WNW8	WNW10	NW14	NW13	NW13	NW14	WNW12	WNW12	NW12	NW11	W3	W2	NW1	W2	SW1	SSW2	WNW6.2	NW14													
14-Apr	SSW1	SSW2	SW2	WSW2	SSW2	SSW6	SSW8	SW5	SW3	WSW5	W5	WSW5	SW6	SW6	SSW8	SSW8	SSW7	SSW6	S5	S5	S6	S7	S7	S8	SSW4.6	SSW8													
15-Apr	S8	S8	S9	S7	S7	S7	S6	SSW4	W6	W9	W10	WNW9	WNW11	WNW9	WNW8	WNW10	WNW9	WNW8	WNW8	W4	WNW4	WNW5	W5	W4	WSW4.7	WNW11													
16-Apr	WNW4	WNW7	WNW10	WNW9	WNW8	WNW7	WNW10	WNW10	WNW12	WNW12	WNW15	NW18	NW20	NW16	NW15	NW13	NW16	NW13	NW13	NW11	NW10	UO	UO	UO	NW11.8	NW20													
17-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	---	---													
18-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	S8	S8	S9	S9	S10	S10	S11	S10	S11	S10	SSE7	SSE8	SSE10	S11	S10	S11	---	S11												
19-Apr	S12	S10	SSW6	W4	S6	S5	SSW4	WNW5	WNW7	WNW10	WNW9	WNW12	WNW9	WNW9	WNW8	WNW8	WNW9	WNW6	WNW5	NW5	W3	W3	WSW2	WSW2	W4.5	WNW12													
20-Apr	WSW2	WSW2	W3	WNW6	NNW7	NNW6	NNW7	NNW7	N5	NNW5	NW6	NNW7	NW8	N7	NNW5	NNE4	NNE5	ENE3	ENE5	NE4	NE5	NE5	E8	ESE9	N3.2	ESE9													
21-Apr	SE6	SE5	ESE3	ESE4	ESE2	SE3	SE6	SE8	SE9	ESE8	E8	NE7	E6	ESE6	SE5	NNE6	E7	ESE7	ESE7	SE5	SSE5	SSE4	SSE5	SSE7	ESE4.9	SE9													
22-Apr	SSE5	S8	S8	S8	S8	S8	S6	SSW6	WSW5	WSW5	SW6	SW8	SW9	WSW7	SW7	SW5	W5	SW7	WSW4	SW2	S4	S5	S7	S7	SSW5.4	SW9													
23-Apr	S6	S5	S5	S5	S4	SSW6	S2	W0	SSW4	SSW3	NNE5	WSW1	NNE1	WNW2	N6	ENE7	N4	ENE2	N9	NNE5	WNW1	WNW2	WNW3	SW2	SSW0.2	N9													
24-Apr	S3	WSW3	SW1	S5	SW3	S2	S2	W2	WNW4	N6	NNE3	NNW3	E3	NNW2	NNW4	S2	N2	SSW3	SE3	SE4	SSE4	S4	S5	S7	S1.0	S7													
25-Apr	S8	S8	S8	S9	S9	S9	SSE8	S7	S10	S11	S12	S12	S14	S14	S13	S13	S12	S10	S9	S8	S6	S7	S8	S9	S9.6	S14													
26-Apr	S9	S10	S10	S9	S8	SSE7	S7	S5	SW4	S1	NW4	NW8	NNW9	NW8	WNW8	NW11	NW13	NNW14	NNW12	NNW15	NNW14	NNW12	NNW12	NNW13	NW3.8	NNW15													
27-Apr	N13	N10	N9	NNW7	NW8	NNW9	NW12	NW12	NW13	NW12	NNW12	NNW12	NNW13	NNW13	NNW13	NNW11	N10	N7	NE6	ENE3	ESE3	SE3	SSE3	SSE3	NNW8.2	NW13													
28-Apr	S5	S7	S7	S7	S8	S8	S6	S5	SSE6	S6	S7	S6	S9	S8	S9	S9	S8	S9	S7	SSE6	S7	S6	SSE3	S5	S6.8	S9													
29-Apr	S5	S3	SSW5	SSW5	SW4	SW4	WSW6	W6	WNW7	WNW8	WNW9	WNW9	WNW9	WNW10	WNW15	NW14	NW16	NW15	NW12	WNW4	SW2	S2	WSW2	W2	WNW5.8	NW16													
30-Apr	SW3	SW3	SW4	SSW5	SSW6	SSW6	SSW4	WSW3	WNW4	W4	W4	WNW5	W6	WNW6	WNW8	WNW6	NW6	NNW8	N6	N5	NW4	NW10	NW9	NNW9	WNW3.8	NW10													
S2.9 S3.0 SSW2.9 SSW2.8 SSW2.8 SSW2.9 SSW2.6 SSW2.4 SSW2.5 W2.7 W3.5 WNW4.0 W3.9 W3.9 W4.3 WNW4.2 WNW4.4 WNW3.3 NW2.5 NW1.2 WSW0.8 SSW1.0 S1.5 S2.1																										Diurnal Average													
N13 NW11 NW12 WNW9 NW10 NW10 NW12 NW12 NW13 NW13 WNW15 NW18 NW20 NW16 NW15 NW15 NW16 NW15 NW13 NNW15 NNW14 NW14 NNW12 NW13																										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 1 - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 1 - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	282	41.17	41.17
6 - 11	324	47.30	88.47
12 - 19	78	11.39	99.85
20 - 28	1	0.15	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Wind Speed 10m (WS10) - km/h
Jackfish 1 - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	8	4	8	2	11	14	19	35	30	36	32	33	30	8	8	282
6 - 11	10	2	2	1	5	10	11	42	80	16	14	3	10	64	39	15	324
12 - 19	1	0	0	0	0	1	8	0	8	0	0	0	0	8	40	12	78
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	15	10	6	9	7	22	33	61	123	46	50	35	43	102	88	35	685

Total Number of Valid Hours: 685

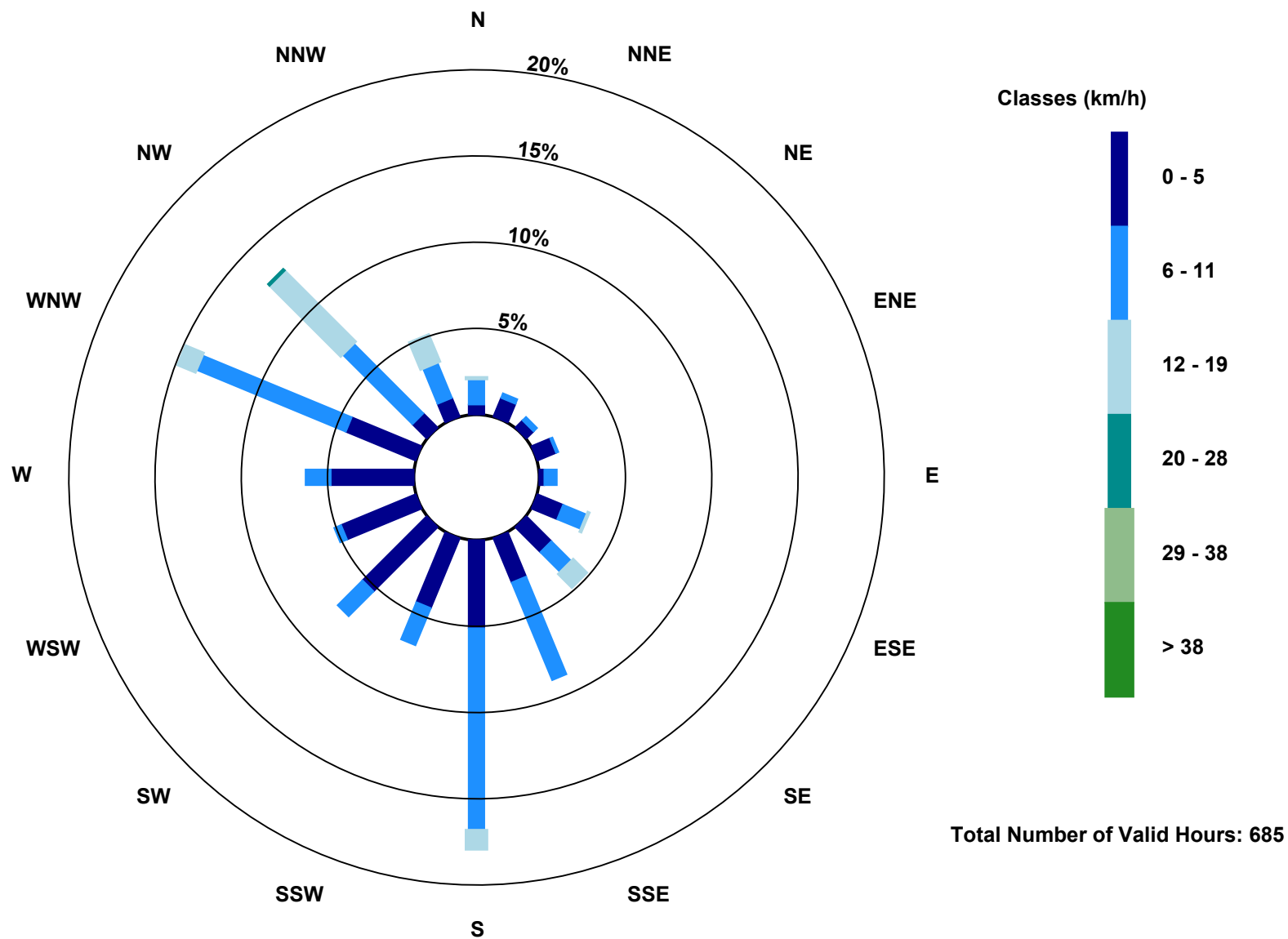
Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h

Jackfish 1





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 1 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 6 km/h on Apr 29 19:00																	Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 0 Percent Operational Time: 95.1								
Minimum Value: 0 km/h on Apr 24 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 1 Median = 2 Q ₃ = 3 P ₉₀ = 4 P ₉₉ = 5																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	1	2	2	2	2	1	1	2	2	2	2	3	2	2	2	2	2	2	2	3	3	3	2	2	3
2-Apr	3	2	1	1	1	1	1	2	2	3	3	3	3	3	4	4	3	3	3	4	3	2	2	3	4
3-Apr	2	3	2	3	2	3	3	4	4	4	4	5	4	5	4	4	5	3	3	3	1	2	2	1	5
4-Apr	1	1	1	1	1	2	1	2	2	2	2	2	2	2	2	3	3	3	2	1	1	1	1	1	3
5-Apr	2	2	2	2	1	1	2	1	1	1	2	2	2	2	2	3	2	2	2	2	2	2	2	2	3
6-Apr	1	1	1	1	1	2	1	2	2	4	4	4	4	4	4	3	4	3	3	2	3	3	3	3	4
7-Apr	3	2	2	2	2	2	2	3	3	3	3	4	4	4	5	4	3	2	1	2	1	1	2	1	5
8-Apr	2	2	1	1	1	1	1	2	2	2	3	1	3	2	3	3	3	3	1	1	2	1	1	1	3
9-Apr	2	2	1	1	1	1	1	1	1	2	3	3	5	3	3	3	3	2	1	1	1	1	1	1	5
10-Apr	1	1	1	2	1	1	2	2	2	2	3	3	3	3	4	3	3	2	1	1	1	1	1	1	4
11-Apr	1	5	2	2	2	1	1	1	1	2	3	3	3	3	4	4	4	3	2	2	1	2	2	2	5
12-Apr	2	2	2	2	2	2	2	3	2	3	3	3	3	3	3	4	3	3	3	1	1	4	1	1	4
13-Apr	1	2	1	1	1	2	1	1	2	3	4	4	4	5	5	5	5	6	2	1	2	1	1	1	6
14-Apr	1	1	1	1	2	2	2	1	1	3	2	3	3	3	4	3	3	2	2	1	1	2	2	2	4
15-Apr	2	2	2	2	1	2	2	3	4	4	4	3	4	3	4	4	4	3	3	2	2	2	2	2	4
16-Apr	2	3	3	3	2	2	2	3	3	3	4	4	6	4	4	3	4	4	4	3	4	UO	UO	UO	6
17-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	—
18-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	3	3	3	4	4	4	4	4	4	3	3	3	3	3	3	4
19-Apr	4	3	3	3	2	2	2	3	3	3	3	5	3	3	3	3	3	3	2	3	2	1	1	1	5
20-Apr	1	1	1	2	3	3	2	2	2	2	2	3	3	3	3	2	2	1	2	1	1	1	3	3	3
21-Apr	2	2	2	1	1	1	2	2	3	3	3	3	3	3	2	3	3	2	2	1	1	1	2	2	3
22-Apr	1	3	2	2	2	2	2	3	2	2	3	4	4	3	3	3	3	3	3	1	1	1	1	1	4
23-Apr	2	3	2	1	1	2	1	1	2	1	2	2	2	2	5	3	2	1	3	1	2	1	1	1	5
24-Apr	1	1	2	1	1	1	1	1	3	2	3	2	2	2	2	1	2	1	1	2	1	0	1	1	3
25-Apr	1	1	1	1	2	2	2	2	4	4	4	5	5	5	5	5	5	4	3	2	2	2	2	2	5
26-Apr	2	3	3	2	2	2	2	2	2	2	2	3	4	4	4	6	3	4	4	5	4	4	4	4	6
27-Apr	4	3	3	2	1	2	4	3	3	4	4	4	4	4	4	4	3	3	3	2	1	1	1	1	4
28-Apr	1	1	1	1	1	2	2	2	2	2	3	3	3	3	4	3	3	3	2	3	3	3	1	2	4
29-Apr	2	1	2	2	2	2	3	3	3	3	3	3	3	4	4	4	5	4	6	2	1	1	1	1	6
30-Apr	1	1	1	1	1	2	2	1	1	1	2	2	2	2	4	2	5	4	2	2	2	2	2	3	5
Diurnal Maximum																									
UO - Unstable Operation																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

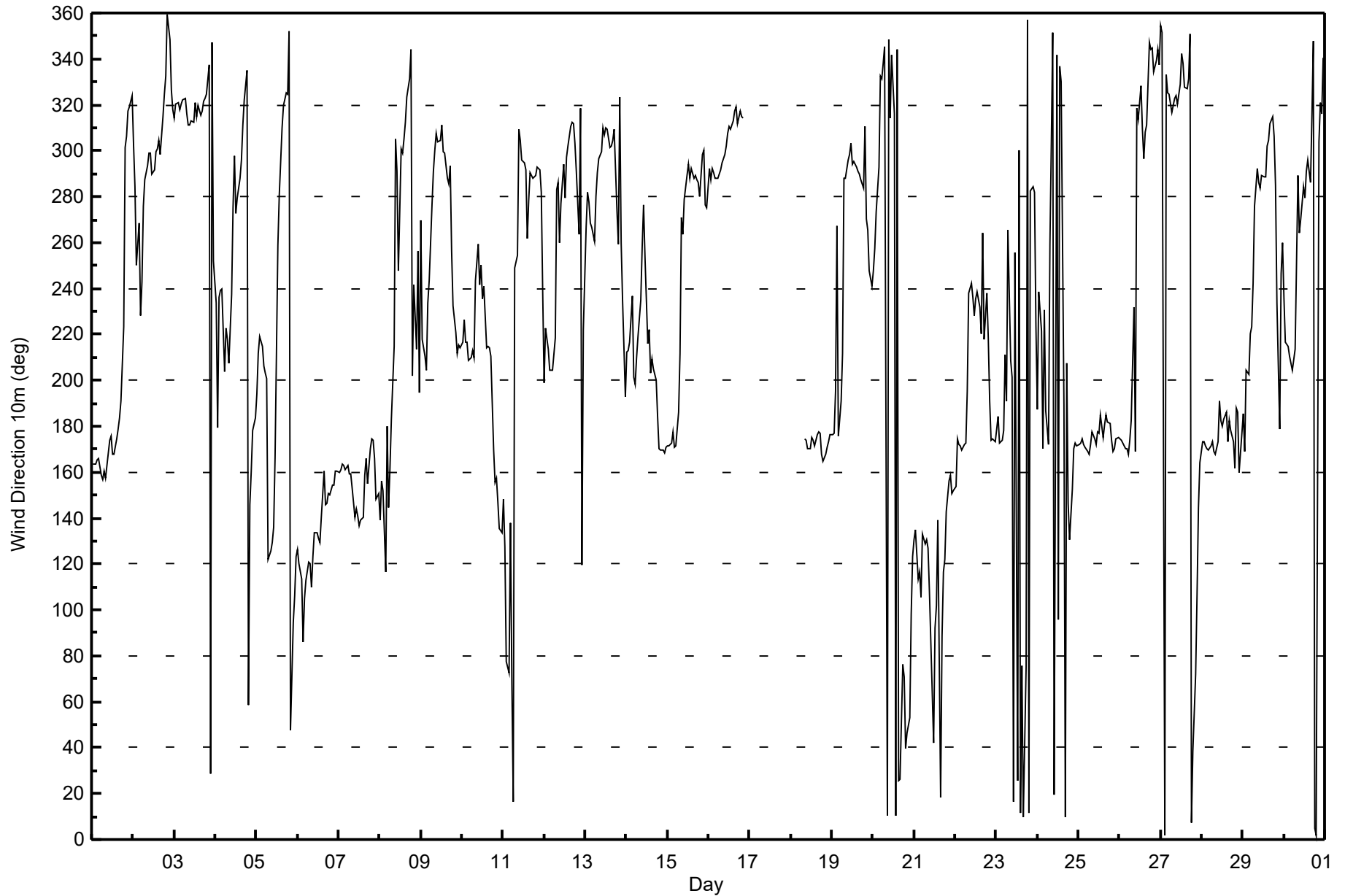
Jackfish 1 - April 2025

Direction of Maximum Speed: 311 deg on Apr 16 13:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 305.0 deg on Apr 16																				Hours of Data:		685			
Direction of Minimum Speed: 195 deg on Apr 9 00:00										Direction of Minimum Daily Speed Average: 0.2 deg on Apr 23										Hours of Missing Data:		35			
Monthly Average Direction: 252.2 deg																				Percent Operational Time:		95.1			
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	163	163	163	166	166	158	157	160	158	169	174	176	168	168	175	179	184	191	223	302	307	317	319	324	197.1
2-Apr	303	285	250	268	228	243	276	287	294	299	299	290	292	299	301	304	299	315	325	333	359	348	326	318	307.6
3-Apr	314	321	321	318	320	322	323	316	311	311	313	312	321	315	320	315	317	321	323	325	337	29	347	252	318.3
4-Apr	234	179	236	239	240	204	222	218	208	237	275	298	273	279	288	296	311	322	335	58	146	160	178	184	258.1
5-Apr	194	212	219	215	206	203	201	122	126	129	136	166	259	281	295	310	320	325	325	352	48	94	106	123	214.9
6-Apr	126	120	114	86	105	113	121	120	110	123	134	133	131	130	140	160	146	146	151	150	154	154	160	161	136.6
7-Apr	160	161	164	163	161	163	159	159	153	140	144	141	137	139	141	159	166	155	170	174	174	166	148	150	153.4
8-Apr	139	156	152	117	180	145	162	183	215	305	291	248	301	299	305	312	324	331	344	202	242	214	256	195	282.3
9-Apr	270	218	211	204	234	244	276	291	300	307	304	305	311	300	299	288	286	294	256	232	221	212	215	214	274.1
10-Apr	217	226	217	216	209	210	213	210	244	259	242	250	235	241	214	215	214	211	169	156	157	147	136	134	208.1
11-Apr	149	128	77	73	138	68	16	249	255	309	304	296	295	292	262	278	291	288	289	289	293	291	282	238	286.5
12-Apr	199	223	214	205	205	204	218	283	286	260	277	294	279	297	302	311	312	312	303	291	264	319	119	222	282.4
13-Apr	267	282	277	269	266	261	280	290	297	300	310	307	310	309	301	302	304	309	274	259	324	260	235	193	297.6
14-Apr	212	213	216	237	201	199	210	219	235	258	276	254	216	222	203	210	205	200	185	170	169	170	169	171	204.6
15-Apr	171	171	173	178	171	172	186	212	271	264	279	289	294	288	292	288	289	287	286	280	298	301	276	275	257.4
16-Apr	292	287	293	290	288	288	290	292	295	299	302	307	311	309	313	317	319	312	318	315	314	UO	UO	UO	305.0
17-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
18-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	175	174	170	170	175	174	172	176	177	168	165	168	171	174	177	--
19-Apr	176	177	196	267	176	191	212	288	288	296	298	303	294	295	293	291	290	287	284	310	271	265	248	241	269.0
20-Apr	248	257	273	293	333	332	338	345	10	348	315	341	316	10	344	26	26	77	71	40	46	53	98	123	2.2
21-Apr	130	135	114	116	106	133	129	131	127	108	86	42	92	102	139	18	88	117	122	143	156	158	151	152	116.9
22-Apr	154	174	172	171	170	172	173	196	238	242	236	228	235	238	232	220	264	218	238	219	191	174	174	173	201.6
23-Apr	179	184	173	174	178	211	191	265	208	201	17	256	25	300	11	75	10	75	357	12	283	284	282	224	209.2
24-Apr	188	239	222	170	231	187	172	260	303	352	19	342	96	337	330	189	10	207	146	130	153	170	173	172	189.0
25-Apr	172	173	174	172	171	169	168	172	177	175	172	177	177	185	175	181	185	182	181	174	169	170	174	175	175.7
26-Apr	175	174	172	171	170	168	174	183	232	169	318	313	329	309	296	308	311	347	344	344	335	339	344	338	312.2
27-Apr	355	352	2	333	325	325	316	320	323	324	321	329	342	338	328	327	331	351	8	39	72	107	145	164	337.0
28-Apr	173	173	171	170	170	172	173	169	168	173	191	182	180	183	186	173	182	178	174	162	188	186	160	177	176.3
29-Apr	185	169	205	203	220	223	242	276	292	286	284	289	288	289	302	305	312	315	306	285	234	179	247	260	283.6
30-Apr	236	217	215	211	208	205	213	252	289	264	271	284	279	291	296	286	316	348	5	2	304	321	316	341	290.7
184.5 190.0 199.3 201.4 200.4 198.9 212.5 238.3 252.8 267.1 279.6 282.4 280.2 280.1 278.1 282.1 291.5 295.7 304.7 308.2 243.5 205.8 186.4 185.2																									
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 1 - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 1 - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 111 deg on Apr 23 08:00																			Hours in Service: 720 Hours of Data: 685 Hours of Missing Data: 35 Hours of Calibration: 0 Percent Operational Time: 95.1						
Minimum Value: 6 deg on Apr 24 22:00																									
Percentiles: P ₁ = 9 P ₁₀ = 13 Q ₁ = 18 Median = 27 Q ₃ = 47 P ₉₀ = 64 P ₉₉ = 90																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	16	17	17	18	18	13	14	17	20	25	27	29	28	32	30	31	31	27	48	12	15	13	12	11	48
2-Apr	38	86	21	18	21	45	32	29	28	28	26	46	46	31	24	22	20	18	17	30	25	25	13	12	86
3-Apr	12	13	13	13	13	15	14	16	17	15	17	17	18	16	22	19	20	14	13	12	27	25	56	36	56
4-Apr	23	26	22	16	36	32	20	24	36	63	62	50	77	85	65	62	36	22	23	21	28	12	10	12	85
5-Apr	24	23	20	20	18	20	55	44	37	26	59	82	65	71	52	77	37	17	12	34	25	23	18	14	82
6-Apr	14	17	13	20	11	19	9	17	21	21	23	19	19	20	23	21	22	18	14	13	14	14	18	19	23
7-Apr	20	20	18	18	17	16	14	18	21	18	20	22	22	19	21	21	23	16	16	16	12	11	14	14	23
8-Apr	19	45	27	84	27	46	14	29	44	45	56	57	13	15	17	15	16	21	29	83	38	85	41	85	85
9-Apr	64	33	27	31	32	89	62	30	33	39	36	35	26	40	33	45	55	52	60	16	22	26	25	24	89
10-Apr	18	21	23	29	28	25	25	31	64	62	61	67	64	76	58	57	53	58	56	7	11	9	11	11	76
11-Apr	20	23	62	71	82	78	57	59	90	26	21	29	33	38	67	61	50	44	47	63	78	50	58	101	101
12-Apr	42	65	55	38	43	37	50	50	48	64	57	53	53	32	17	17	15	14	14	19	33	27	86	41	86
13-Apr	34	26	31	34	52	72	54	37	23	19	19	21	19	19	19	22	19	22	48	53	110	39	61	50	110
14-Apr	47	27	23	22	48	24	19	29	55	69	61	75	76	66	47	50	42	43	24	10	11	14	13	14	76
15-Apr	15	15	15	22	13	16	25	78	73	64	60	50	35	47	52	40	42	39	28	51	62	74	73	71	78
16-Apr	70	48	19	32	31	26	19	19	17	15	14	14	14	15	16	16	15	15	14	15	12	UO	UO	UO	70
17-Apr	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	–
18-Apr	UO	UO	UO	UO	UO	UO	UO	UO	29	32	29	30	30	31	29	31	30	26	20	18	19	20	20	19	32
19-Apr	18	22	44	66	21	25	56	56	43	30	25	20	28	34	48	40	44	42	55	59	40	32	66	88	88
20-Apr	48	28	41	24	23	18	24	28	42	44	53	41	43	37	65	73	46	47	26	17	20	25	25	16	73
21-Apr	14	37	32	29	32	28	15	20	26	43	44	57	70	66	62	50	37	27	13	16	7	8	12	12	70
22-Apr	11	16	17	17	15	16	25	35	70	64	59	58	63	61	64	81	56	59	74	72	17	11	10	12	81
23-Apr	20	40	27	15	23	25	59	111	40	77	57	99	91	85	80	55	49	55	27	20	78	52	47	60	111
24-Apr	24	37	61	11	21	57	53	88	57	41	87	74	89	95	71	72	90	58	18	12	7	6	7	10	95
25-Apr	11	12	13	12	12	13	16	27	30	29	30	30	31	30	31	29	32	32	26	19	13	16	15	17	32
26-Apr	16	16	15	14	17	14	22	37	65	93	72	35	44	53	37	33	15	27	25	25	22	24	24	25	93
27-Apr	26	26	25	18	10	13	14	16	20	20	27	25	32	30	26	25	29	31	33	28	24	16	10	12	33
28-Apr	8	11	12	12	12	13	23	32	35	39	52	62	38	43	40	42	31	29	25	18	28	30	18	19	62
29-Apr	23	51	42	60	66	73	71	57	43	54	49	40	38	32	16	15	17	15	24	24	34	46	49	30	73
30-Apr	29	33	24	24	23	18	31	57	43	55	58	43	57	40	31	44	50	39	28	25	32	11	13	25	58
70 86 62 84 82 89 71 111 90 93 87 99 91 95 80 81 90 59 74 83 110 85 86 101																									
Diurnal Maximum																									
UO - Unstable Operation																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS508
KIRBY NORTH
APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS 508)
APRIL 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	33	34	99.86	6.4	0	2.3	0
H2S (ppb) Average	683	36	37	99.86	4	0	0.4	0
THC (ppm) Average	686	33	34	99.86	2.5	-	2.3	-
NO2 (ppb) Average	684	35	36	99.86	8.9	0	3.2	-
NO (ppb) Average	684	35	36	99.86	5.6	-	1.8	-
NOX (ppb) Average	684	35	36	99.86	11.2	-	4.8	-
Temperature 2 m (C) Average	719	0	1	99.86	19.2	-	12.6	-
Relative Humidity (%) Average	719	0	1	99.86	95.9	-	78.8	-
Wind Speed 10 m (km/h) Average	719	0	1	99.86	33	-	20	-
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 - KIRBY NORTH (AMS508)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	686	0.46	0.9	-	0	0	0.1	0.1	0.4	1.1	6.4
H2S (ppb) Average	683	0.08	0.2	-	0	0	0	0.1	0.1	0.1	4
THC (ppm) Average	686	2.23	0.1	-	2.1	2.2	2.2	2.2	2.3	2.3	2.5
NO2 (ppb) Average	684	1.47	1.2	-	0.1	0.4	0.7	1.1	1.8	3.1	8.9
NO (ppb) Average	684	0.38	0.8	-	0	0	0	0.1	0.3	1.1	5.6
NOX (ppb) Average	684	1.84	1.8	-	0.1	0.4	0.7	1.3	2.1	4.2	11.2
Temperature 2 m (C) Average	719	4.31	6.3	-	-13.5	-3.3	0	4.8	8.8	12.2	19.2
Relative Humidity (%) Average	719	52.85	20.2	-	17.4	26.7	34.9	50.8	69.5	81.3	95.9
Wind Speed 10 m (km/h) Average	719	12.4	6	-	1	6	8	11	16	20	33
Wind Direction 10 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS	03 Apr 2025 15:00	03 Apr 2025 15:00	1	Maintenance -power distribution card replaced



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

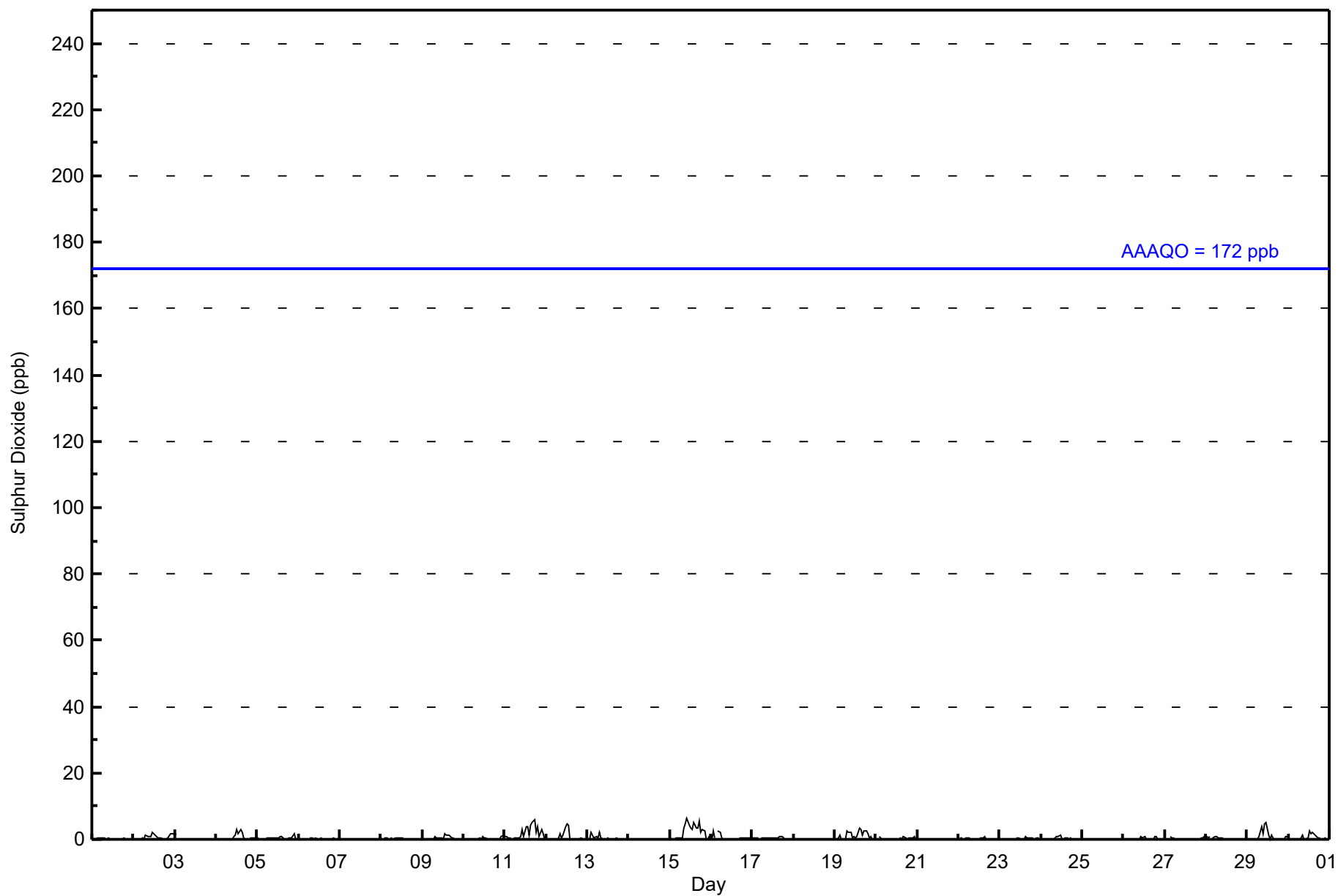
Kirby North - April 2025

Number of Exceedences (AAAQO): Maximum Value: 6.4 ppb on Apr 15 11:00																				1-hr: 0 24-hr: 0 Maximum Daily Average: 2.3 ppb on Apr 15					Hours in Service: 720 Hours of Data: 686 Hours of Missing Data: 34 Hours of Calibration: 33 Percent Operational Time: 99.9				
Minimum Value: 0.0 ppb on Apr 3 09:00 Maximum Diurnal Average: 0.8 ppb at hour 13 Monthly Average: 0.46 ppb																				Minimum Daily Average: 0.0 ppb on Apr 18 Minimum Diurnal Average: 0.2 ppb at hour 7 Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 1.1 P ₉₉ = 4.8									
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	0.2	0.2	0.4	0.6	0.6	0.4	0.3	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.6		
2-Apr	0.2	Z	0.2	0.2	0.0	0.3	0.1	1.1	0.7	0.7	1.0	2.0	1.1	0.7	0.3	0.4	0.5	0.1	0.1	0.0	0.4	1.5	1.8	1.8	0.7	2.0			
3-Apr	1.4	1.6	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	C	C	C	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6			
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.4	2.9	1.8	2.8	2.0	0.5	0.1	0.2	0.2	0.3	0.4	0.2	0.3	0.6	2.9			
5-Apr	0.3	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.7	0.9	0.3	0.1	0.1	0.3	0.3	0.4	1.6	0.2	0.1	0.3	1.6			
6-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.5	0.6	0.6	0.2	0.6	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.1	0.1	0.1	0.2	0.6			
7-Apr	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.4	0.1	0.4			
8-Apr	0.4	Z	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.3	0.3	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.6			
9-Apr	0.0	0.1	Z	0.0	0.1	0.1	0.1	0.7	0.2	0.6	0.5	0.4	0.2	1.5	1.1	1.4	1.0	0.3	0.4	0.0	0.2	0.1	0.1	0.1	0.4	1.5			
10-Apr	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.8	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.7	1.3	0.2	1.3			
11-Apr	0.8	0.8	0.4	0.3	Z	0.2	0.2	0.5	0.5	0.9	3.0	0.9	3.7	3.7	1.1	4.0	5.3	5.9	2.2	3.9	1.0	2.9	1.5	0.1	1.9	5.9			
12-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	1.7	0.3	1.1	4.0	4.7	4.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.8	4.7			
13-Apr	Z	0.2	1.9	1.3	0.4	0.7	0.5	2.3	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.0	0.1	0.0	0.1	0.4	2.3			
14-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2			
15-Apr	0.3	0.4	Z	0.5	0.4	0.3	0.3	0.3	3.4	4.8	6.4	4.0	3.4	3.0	5.1	3.5	3.4	5.4	2.0	3.2	2.5	0.2	0.2	1.1	2.3	6.4			
16-Apr	0.2	2.7	0.3	Z	2.4	2.0	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.4	0.4	0.5	2.7			
17-Apr	0.3	0.3	0.2	0.3	Z	0.4	0.6	0.6	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.9	0.7	0.4	0.1	0.1	0.1	0.1	0.0	0.4	0.9			
18-Apr	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			
19-Apr	Z	0.0	0.3	1.4	0.0	0.0	0.1	2.5	1.9	2.0	0.4	0.8	0.6	0.7	3.2	2.8	1.3	2.3	2.5	1.5	0.5	0.7	0.1	0.5	1.1	3.2			
20-Apr	0.1	Z	0.9	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.1	0.6	0.2	0.2	0.3	0.4	0.5	1.0	0.1	0.3	1.0			
21-Apr	0.1	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2			
22-Apr	0.2	0.3	0.5	Z	0.4	0.5	0.3	0.2	0.1	0.0	0.2	0.2	0.1	0.4	0.3	1.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	1.0			
23-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.5	0.4	0.2	0.1	0.0	0.8	0.4	0.3	0.5	0.4	0.1	0.6	0.3	0.1	0.2	0.8			
24-Apr	0.2	0.2	0.1	0.2	0.1	Z	0.2	0.1	0.5	0.9	0.7	1.1	0.1	0.0	0.5	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.2	1.1			
25-Apr	Z	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	0.0	0.0	0.1			
26-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.2	1.0	0.2	0.0	0.0	0.0	0.0	0.7	0.7	0.1	0.1	0.0	0.0	0.2	1.0			
27-Apr	0.0	0.1	Z	0.7	0.6	0.4	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	0.2	0.5	0.6	0.7	0.2	0.7			
28-Apr	0.7	0.6	0.7	Z	0.6	0.8	0.7	0.5	0.3	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.8			
29-Apr	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.9	4.0	1.7	4.8	5.2	1.3	0.1	1.4	0.4	0.0	0.0	0.0	0.1	0.0	0.1	1.0	1.0	1.0	5.2			
30-Apr	0.4	0.0	0.0	0.0	0.0	Z	0.0	0.3	1.1	0.1	0.1	0.4	2.3	1.7	2.0	1.4	0.9	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.5	2.3			
																									Diurnal Average				
																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																													



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Kirby North - April 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 (SO₂) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	48	15	10	13	12	15	27	43	107	57	69	38	48	78	61	45	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	48	15	10	13	12	15	27	43	107	57	69	38	48	78	61	45	686

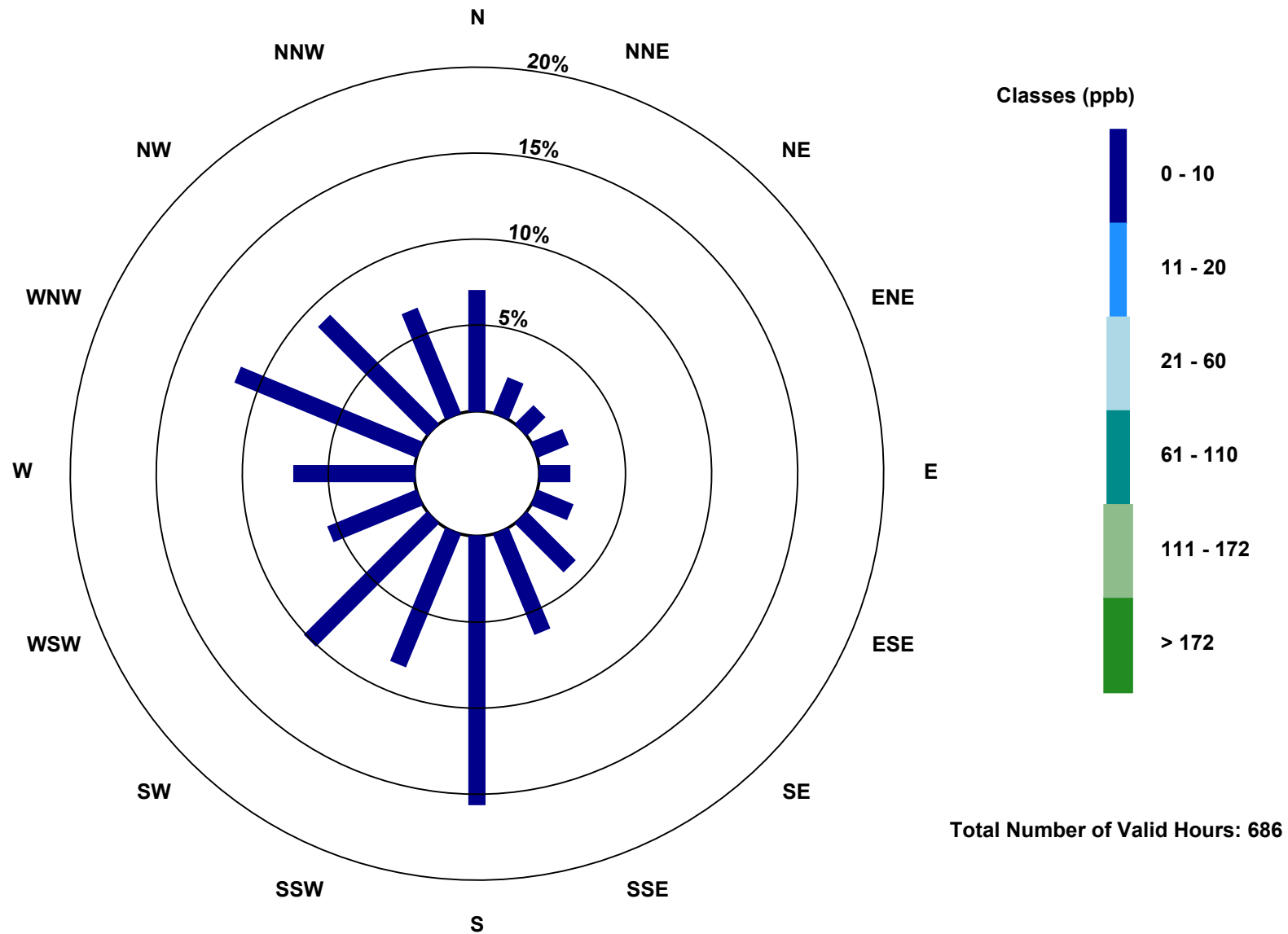
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

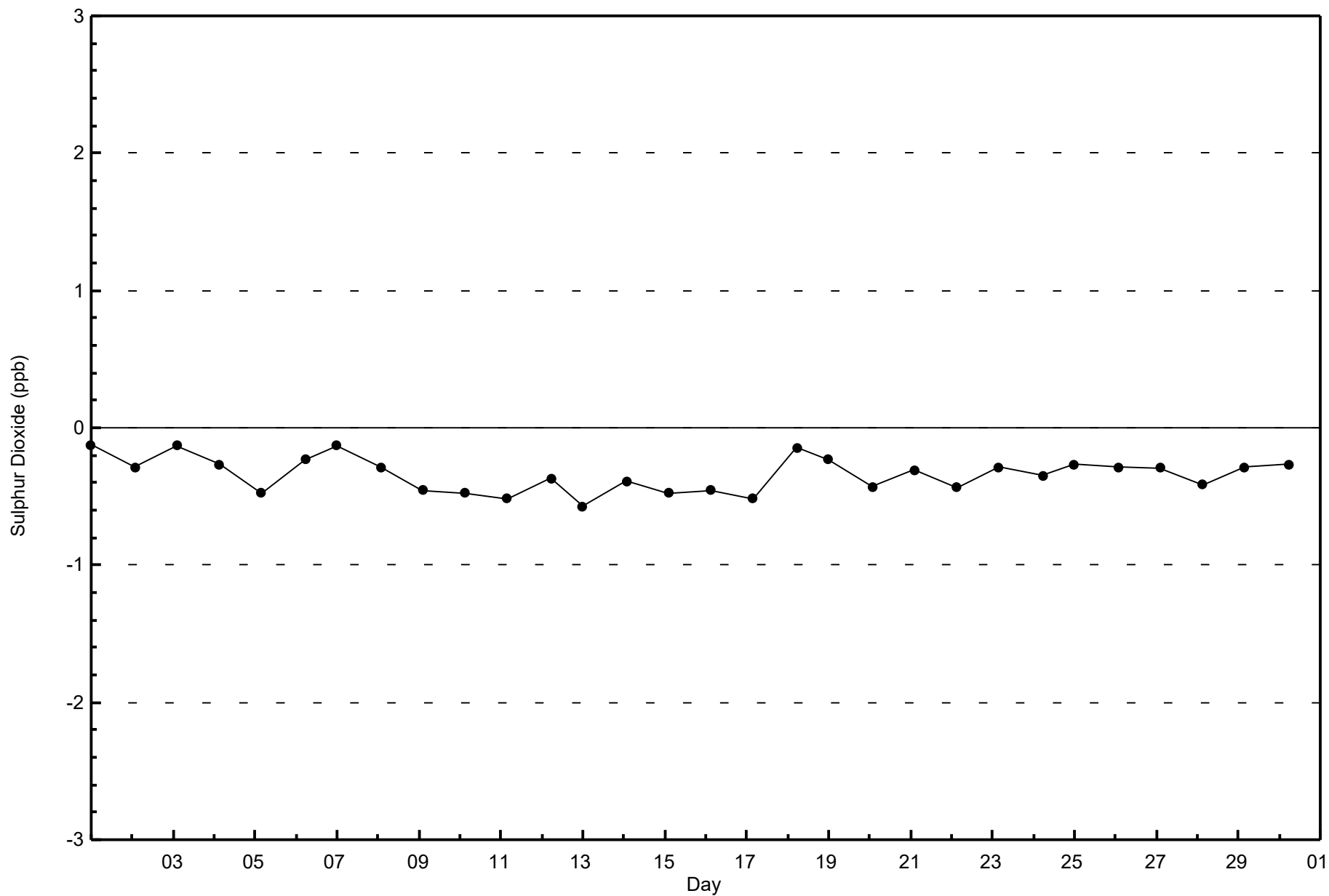
Sulphur Dioxide (SO₂) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

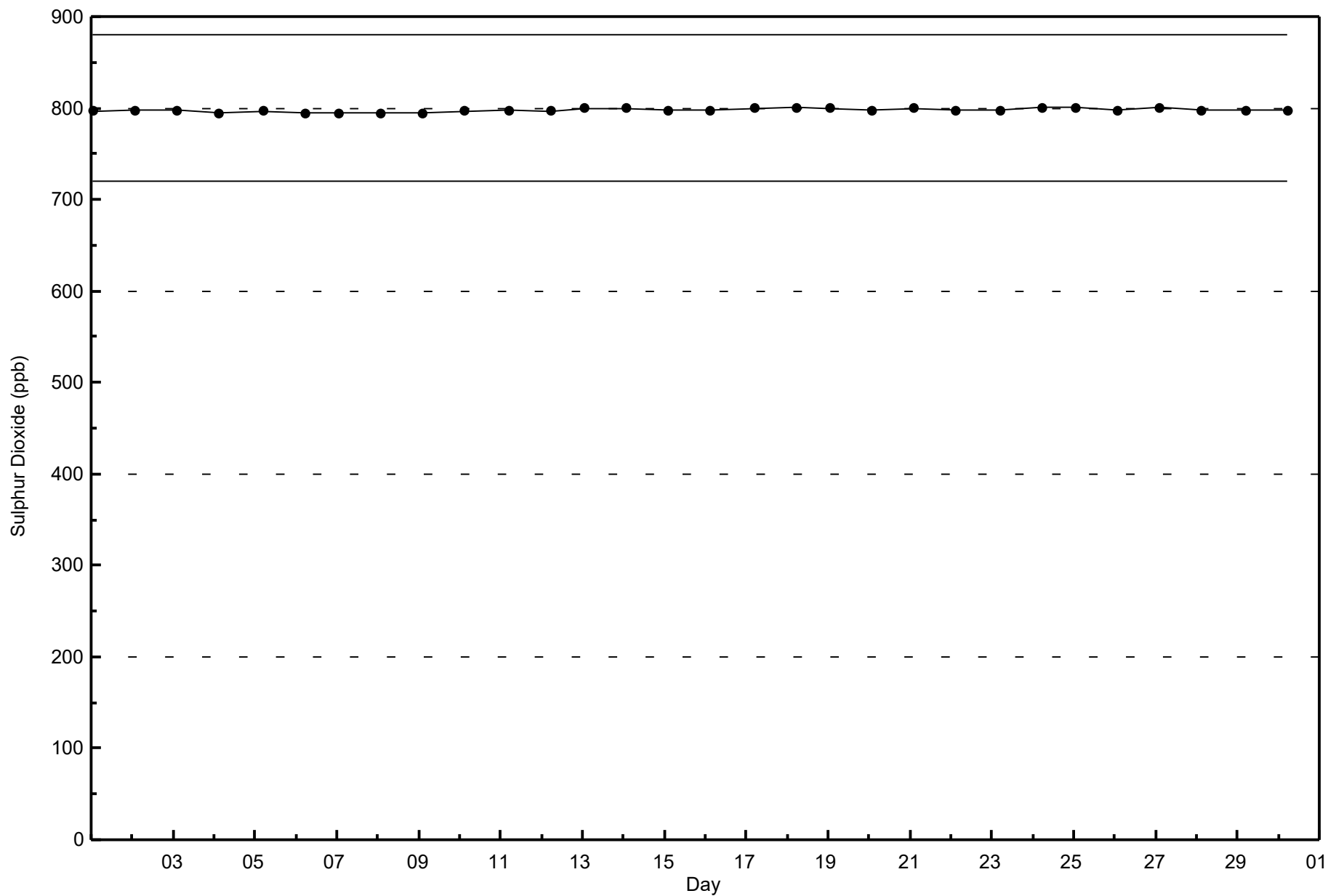
Sulphur Dioxide (SO₂) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

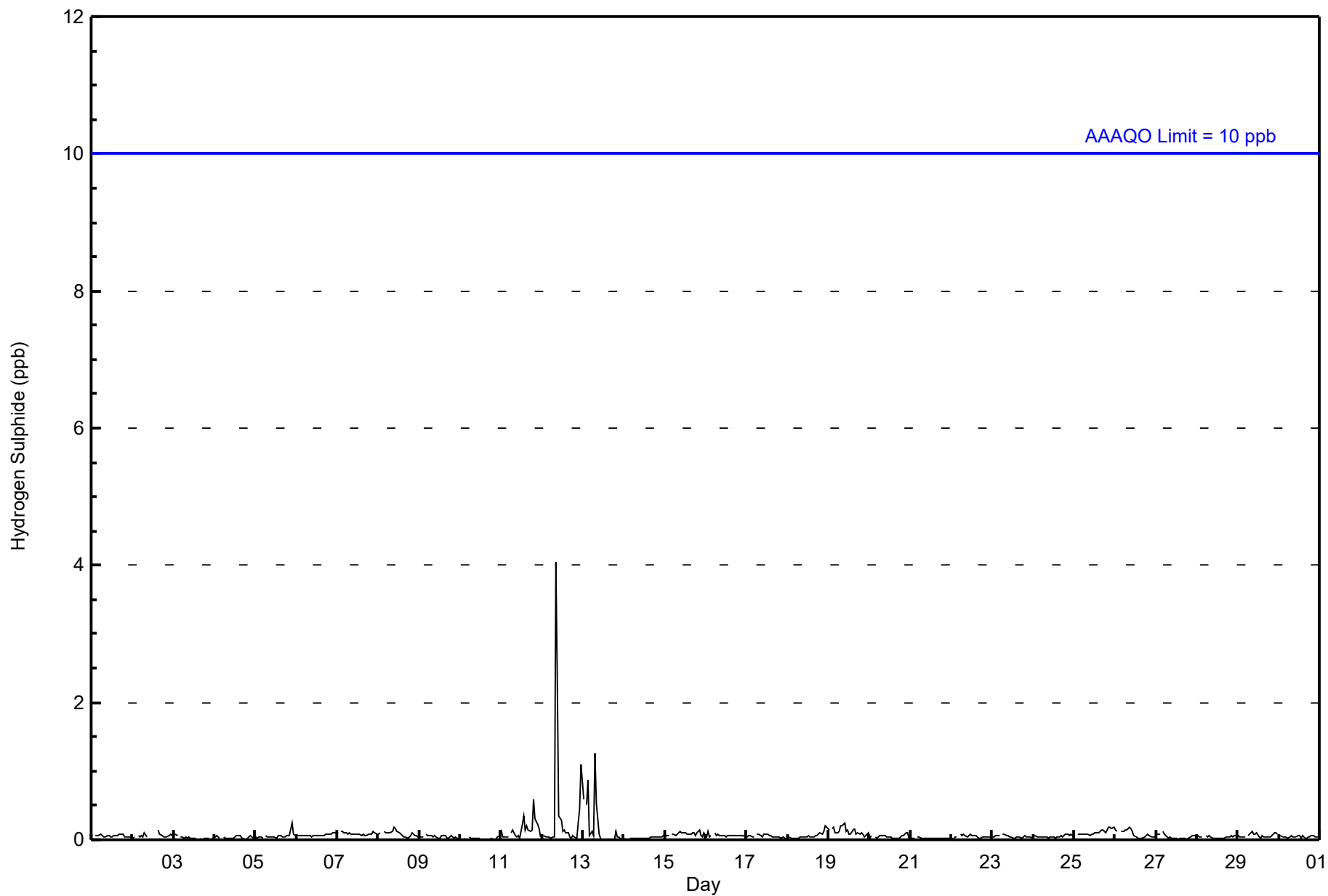
Kirby North - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720								
Maximum Value: 4.0 ppb on Apr 12 09:00																			Maximum Daily Average: 0.4 ppb on Apr 12		Hours of Data: 683						
Minimum Value: 0.0 ppb on Apr 10 15:00																			Minimum Daily Average: 0.0 ppb on Apr 10		Hours of Missing Data: 37						
Maximum Diurnal Average: 0.2 ppb at hour 9																			Minimum Diurnal Average: 0.0 ppb at hour 18		Hours of Calibration: 36						
Monthly Average: 0.08 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.1 P ₉₉ = 0.5		Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
2-Apr	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.1	0.0	C	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	--	0.1
3-Apr	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4-Apr	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
5-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2
6-Apr	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Apr	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	0.1
8-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2
9-Apr	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-Apr	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	0.1	0.0	0.1	0.1
11-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.6	0.3	0.2	0.2	0.0	0.1	0.6	0.6
12-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.3	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.4	1.1	0.4	4.0	4.0
13-Apr	0.6	Z	0.5	0.9	0.1	0.1	0.1	1.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.3	1.3
14-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
15-Apr	0.0	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	0.1	0.1
16-Apr	0.0	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
17-Apr	0.0	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
18-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
19-Apr	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2
20-Apr	0.0	0.1	Z	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	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
21-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22-Apr	0.0	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1
23-Apr	0.0	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
25-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2
26-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	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	0.0	0.0	0.0	0.1	0.2	0.2
27-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1
28-Apr	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1
29-Apr	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30-Apr	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
																									Diurnal Average		
																									Diurnal Maximum		
Z - zerospan C - Calibration M - Maintenance																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	682	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: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	48	15	10	13	12	15	27	41	108	59	68	39	46	73	60	48	682
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	15	10	13	12	15	27	41	108	59	68	39	47	73	60	48	683

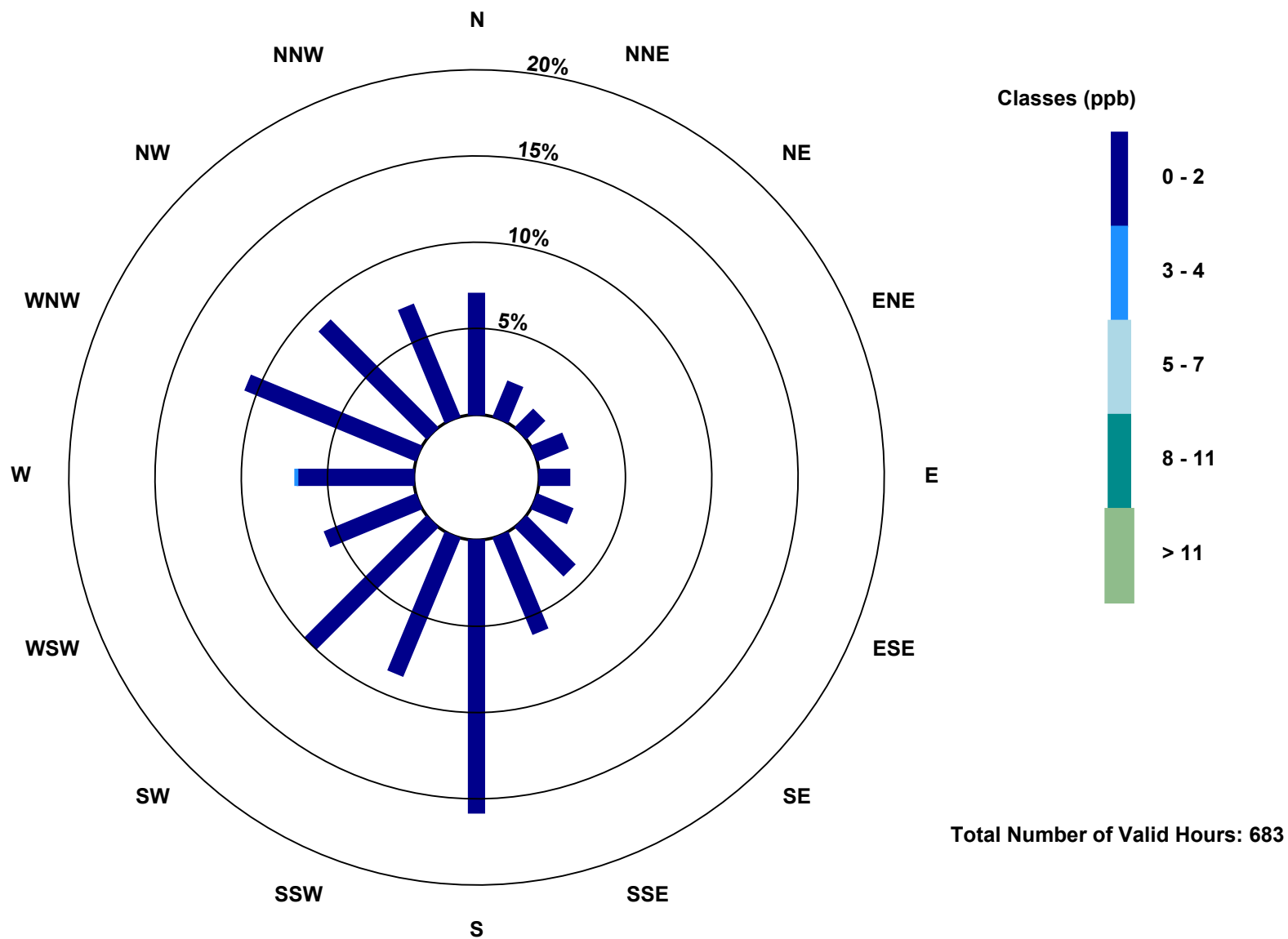
Total Number of Valid Hours: 683

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

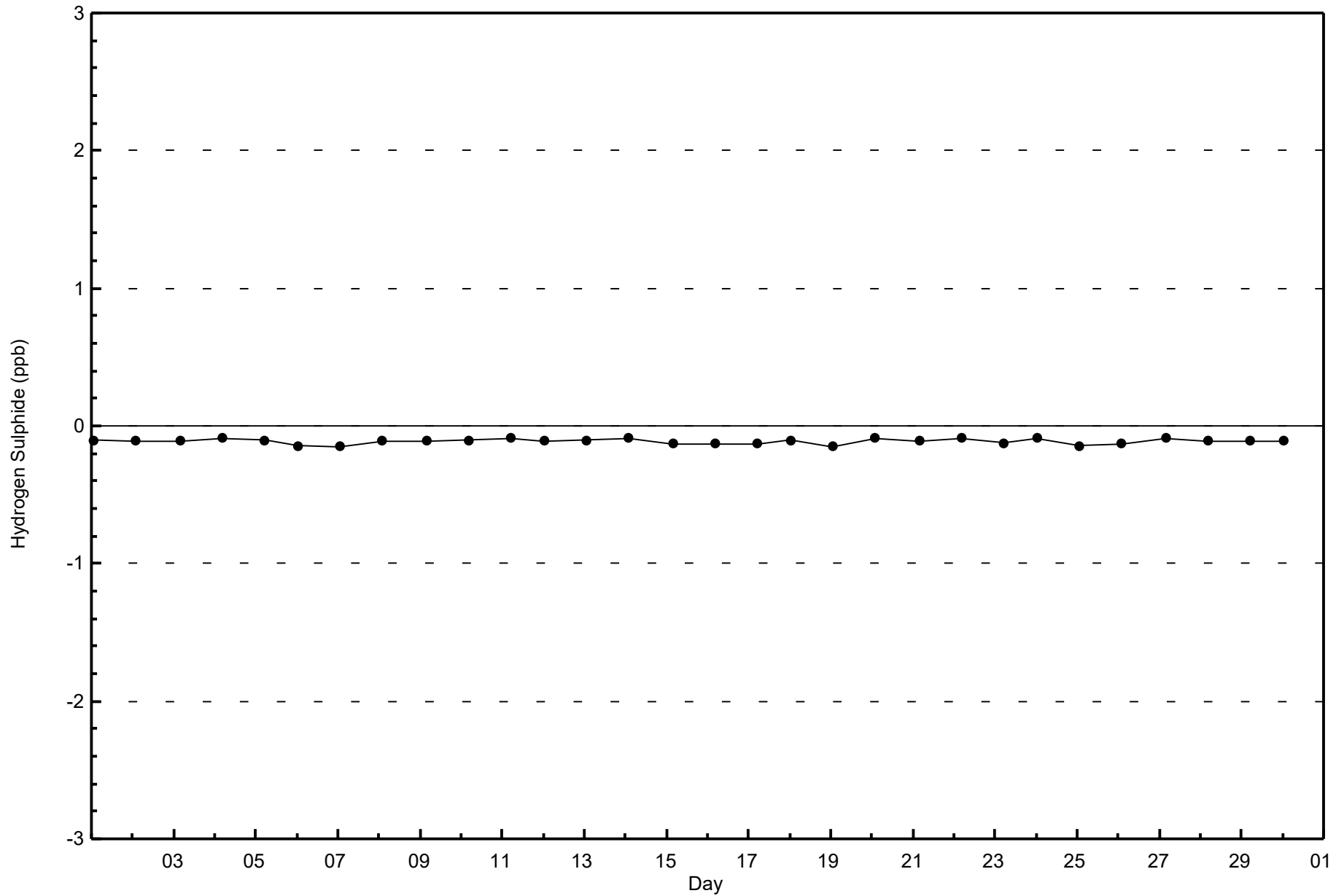
Hydrogen Sulphide (H₂S) - ppb
Kirby North

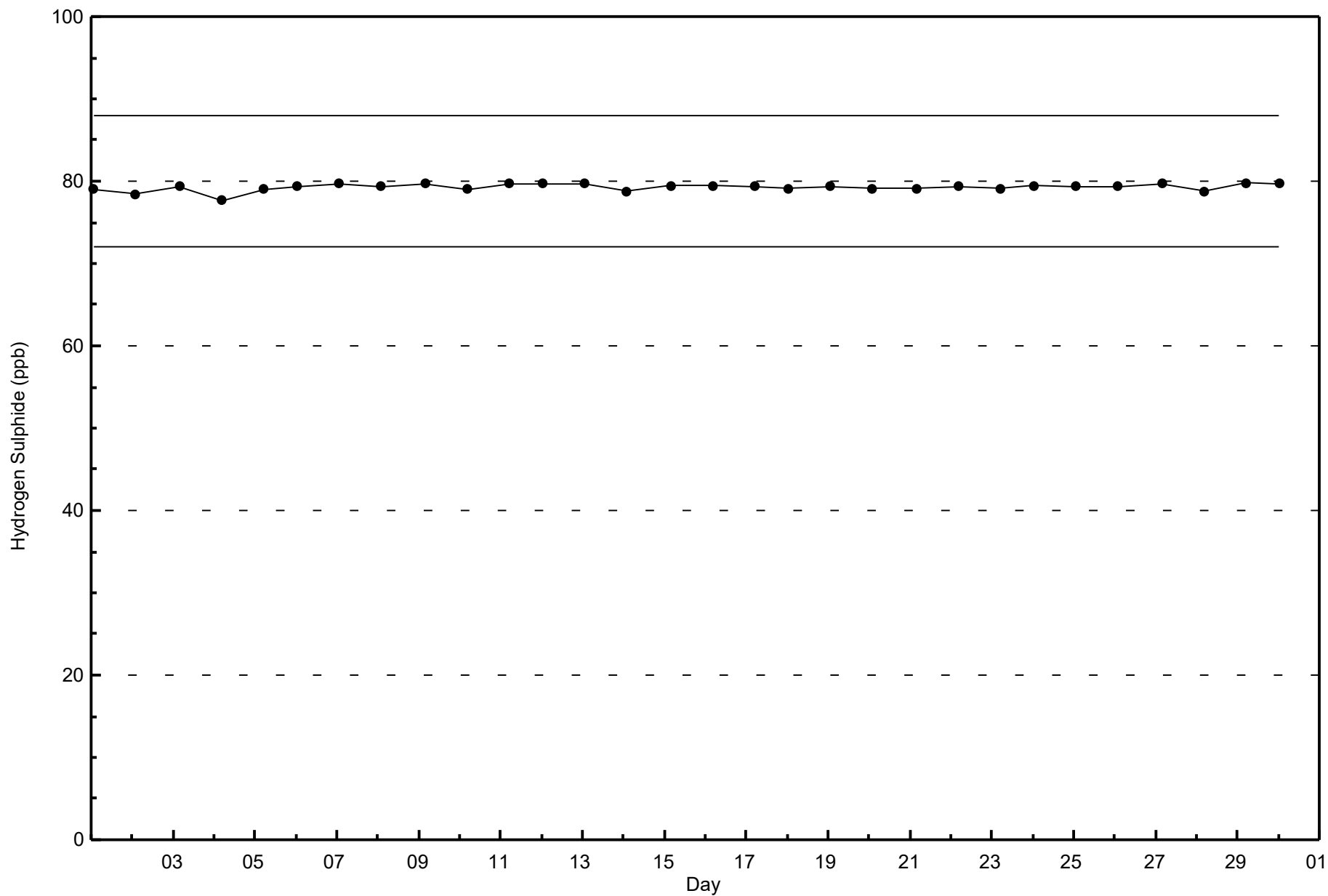




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Kirby North - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

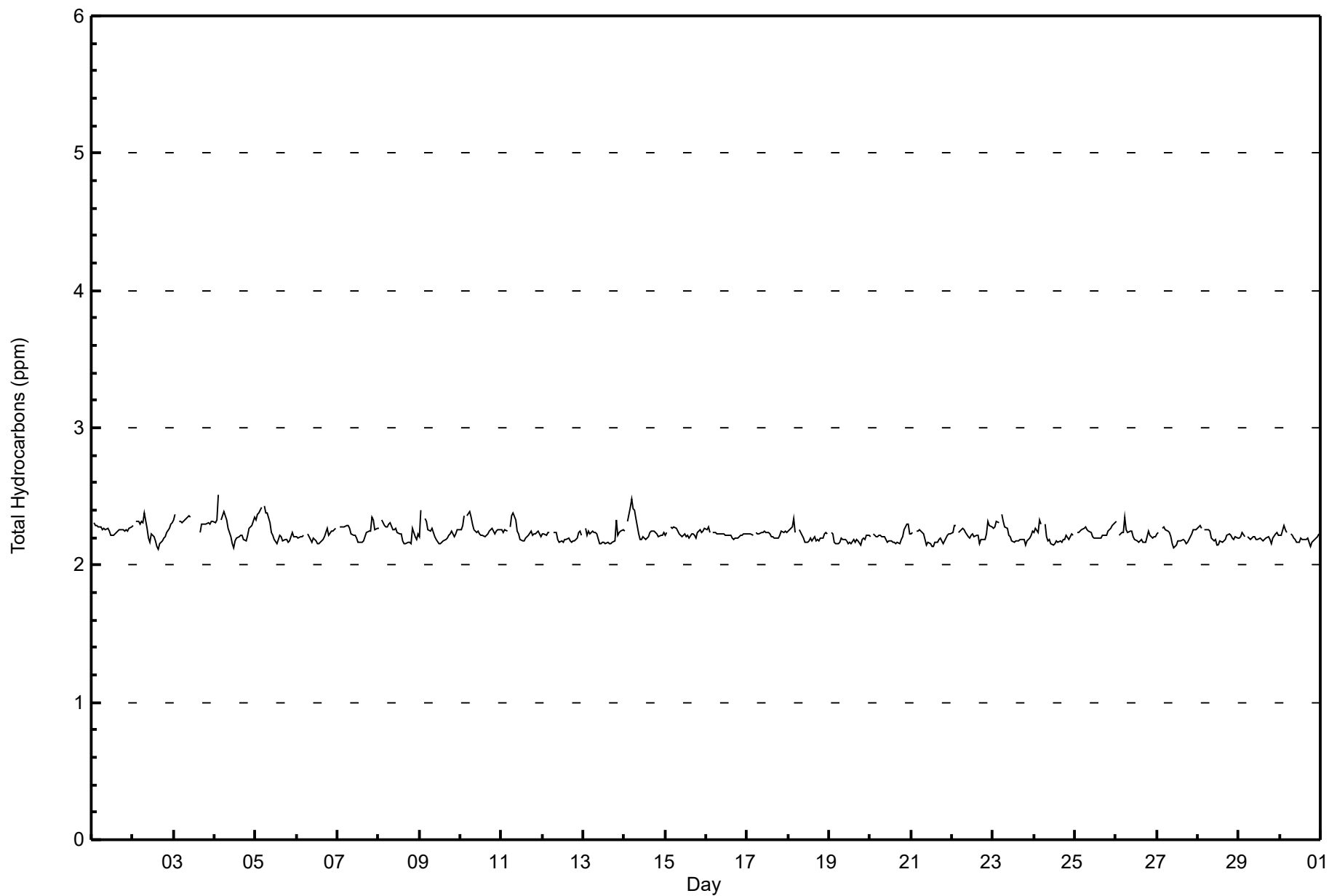
Kirby North - April 2025

Maximum Value: 2.5 ppm on Apr 4 03:00																		Maximum Daily Average: 2.3 ppm on Apr 3										Hours in Service: 720	
Minimum Value: 2.1 ppm on Apr 2 16:00																		Minimum Daily Average: 2.2 ppm on Apr 19										Hours of Data: 686	
Maximum Diurnal Average: 2.3 ppm at hour 6																		Minimum Diurnal Average: 2.2 ppm at hour 13										Hours of Missing Data: 34	
Monthly Average: 2.23 ppm																		Percentiles: P ₁ = 2.1 P ₁₀ = 2.2 Q ₁ = 2.2 Median = 2.2 Q ₃ = 2.3 P ₉₀ = 2.3 P ₉₉ = 2.4										Hours of Calibration: 33	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3			
2-Apr	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2			
3-Apr	2.3	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	C	C	C	M	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3			
4-Apr	2.3	2.3	2.5	Z	2.3	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.3			
5-Apr	2.3	2.4	2.4	2.4	Z	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	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
6-Apr	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.2	2.3			
7-Apr	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	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.3	2.2	2.4			
8-Apr	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2			
9-Apr	2.2	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.4			
10-Apr	2.3	2.3	2.4	Z	2.4	2.4	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.4			
11-Apr	2.3	2.2	2.3	2.3	Z	2.3	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	2.2	2.2	2.2	2.2	2.2	2.2	2.4			
12-Apr	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
13-Apr	Z	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.3			
14-Apr	2.2	Z	2.3	2.4	2.5	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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
15-Apr	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3			
16-Apr	2.3	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
17-Apr	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
18-Apr	2.2	2.3	2.3	2.3	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
19-Apr	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	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
20-Apr	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	2.3	2.3	2.3	2.2	2.2	2.3			
21-Apr	2.2	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
22-Apr	2.2	2.3	2.3	Z	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3			
23-Apr	2.3	2.3	2.3	2.3	Z	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	2.1	2.2	2.2	2.2	2.2	2.2	2.4			
24-Apr	2.2	2.3	2.2	2.3	2.3	Z	2.3	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	2.3			
25-Apr	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3			
26-Apr	2.3	Z	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
27-Apr	2.2	2.2	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3			
28-Apr	2.3	2.3	2.3	Z	2.3	2.3	2.3	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	2.3			
29-Apr	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2			
30-Apr	2.2	2.2	2.3	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3			
2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.2 2.2 2.2 2.2 2.2 2.2 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 Average				
2.3 2.4 2.5 2.4 2.5 2.4 2.4 2.4 2.4 2.4 2.4 2.2 2.2 2.2 2.2 2.2 2.3 2.3 2.3 2.3 2.4 2.3 2.3 2.4																									Diurnal Maximum				
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Total Hydrocarbons (THC) - ppm
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm
Kirby North - April 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
Kirby North - April 2025

Concentration Ranges (ppm)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	48	15	10	13	12	15	27	43	107	57	69	38	48	78	61	45	686
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	48	15	10	13	12	15	27	43	107	57	69	38	48	78	61	45	686

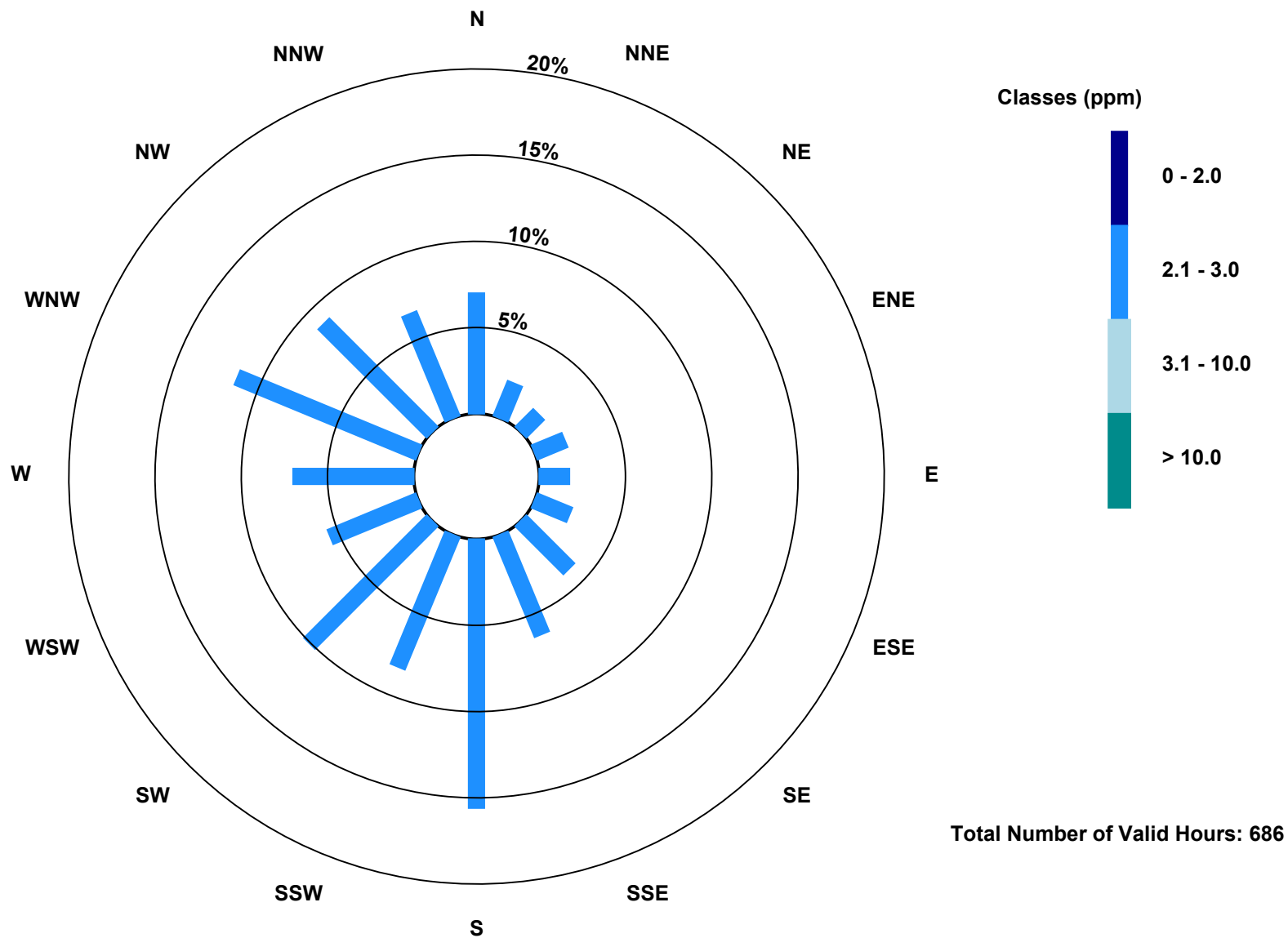
Total Number of Valid Hours: 686

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

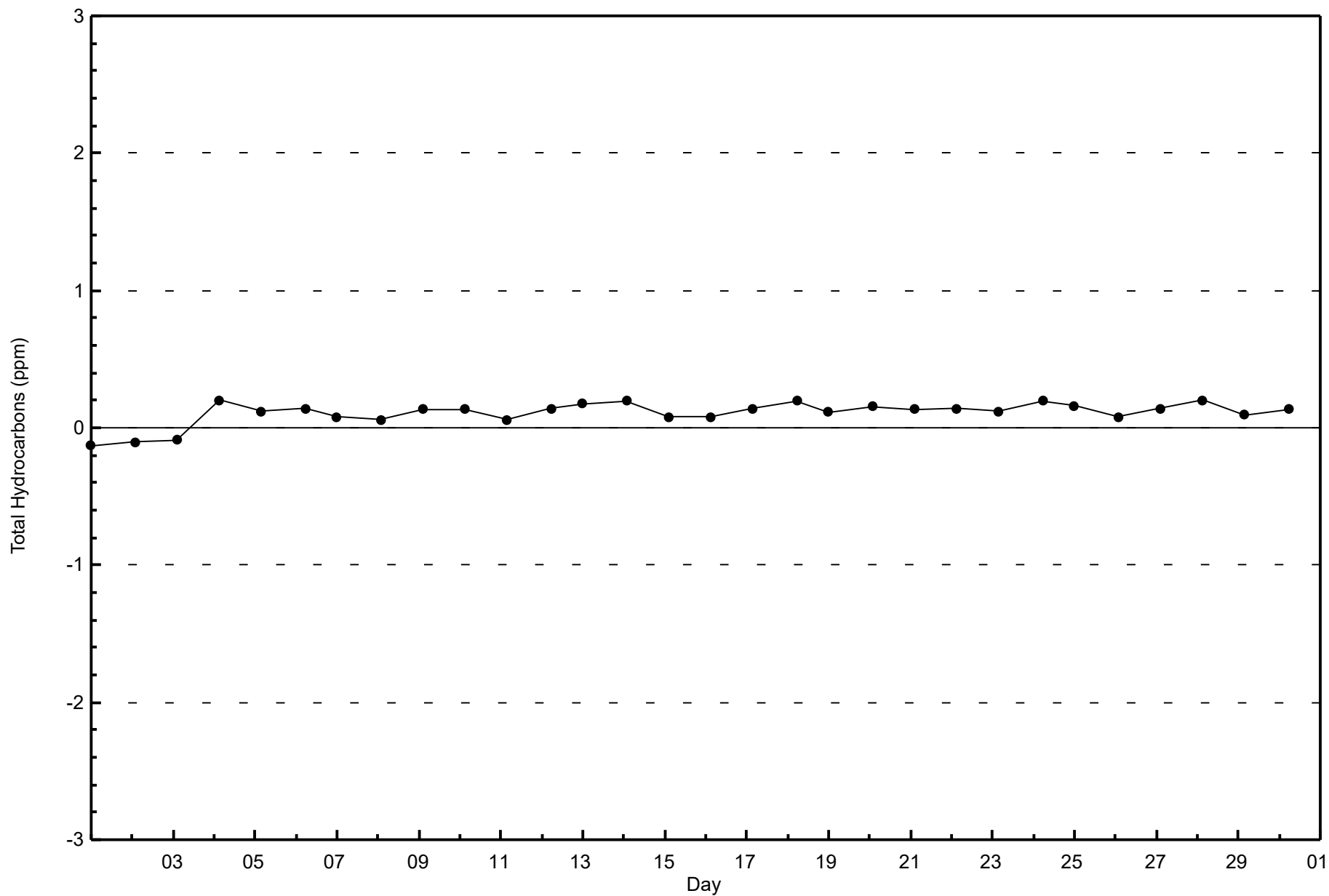
Total Hydrocarbons (THC) - ppm
Kirby North





Wood Buffalo Environmental Association
Zero Responses

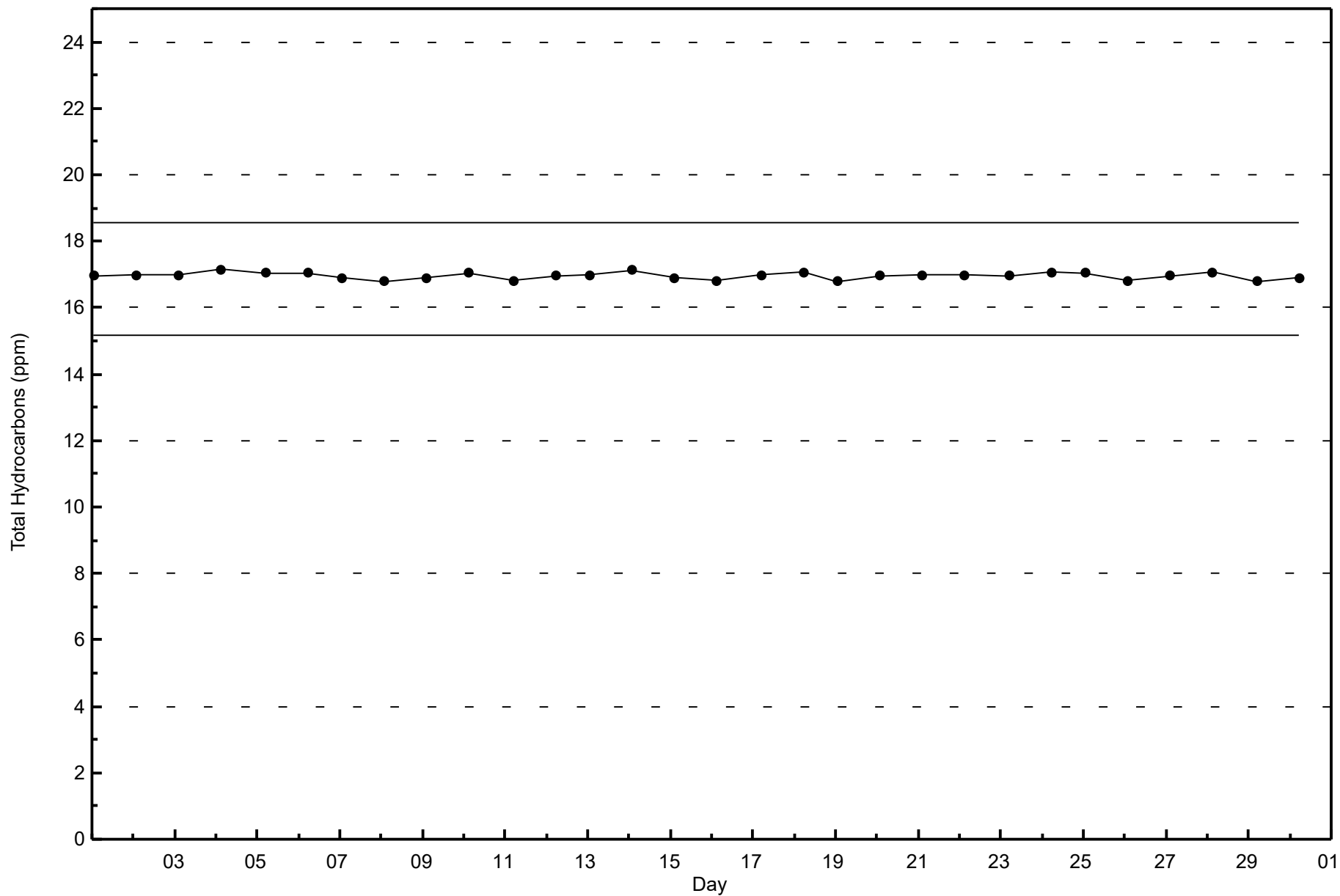
Total Hydrocarbons (THC) - ppm
Kirby North - April 2025





Wood Buffalo Environmental Association
Span Responses

Total Hydrocarbons (THC) - ppm
Kirby North - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

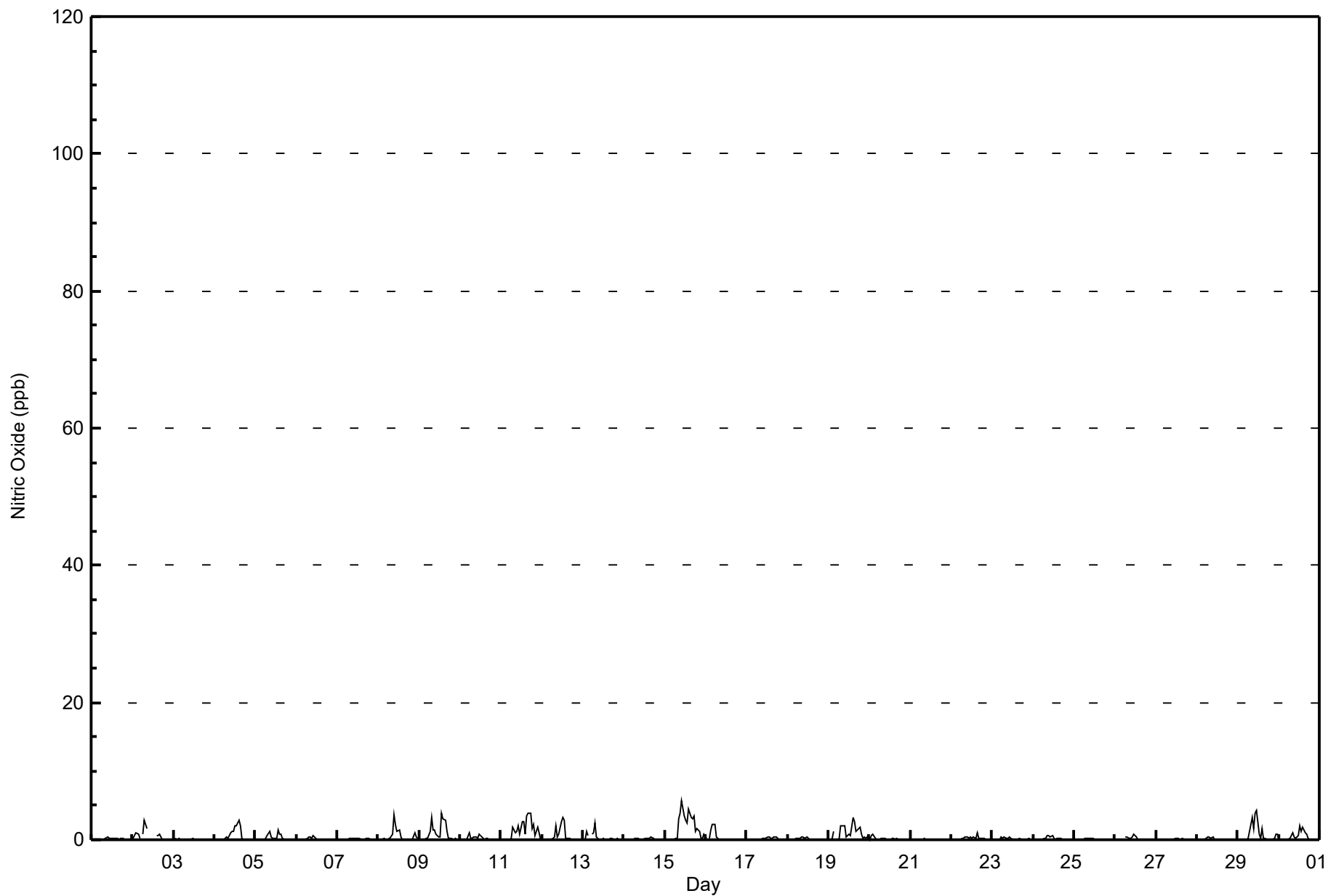
Kirby North - April 2025

Maximum Value: 5.6 ppb on Apr 15 11:00																			Maximum Daily Average: 1.8 ppb on Apr 15																			Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 1 01:00																			Minimum Daily Average: 0.0 ppb on Apr 21																			Hours of Data: 684	
Maximum Diurnal Average: 0.7 ppb at hour 15																			Minimum Diurnal Average: 0.0 ppb at hour 1																			Hours of Missing Data: 36	
Monthly Average: 0.38 ppb																			Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.1 P ₉₉ = 3.8																			Hours of Calibration: 35	
																																						Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
1-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3													
2-Apr	0.2	0.7	1.0	0.7	0.1	Z	0.8	2.8	1.6	C	C	C	C	C	0.7	0.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8												
3-Apr	Z	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	M	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2												
4-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.3	1.0	1.3	1.1	2.0	2.1	2.8	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8												
5-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.6	1.1	0.3	0.2	0.2	0.1	1.4	0.8	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3	1.4													
6-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.4	0.1	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6													
7-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3													
8-Apr	0.0	0.0	0.0	0.1	0.0	Z	0.2	0.2	0.8	3.8	2.2	1.3	1.4	0.4	0.1	0.0	0.1	0.0	0.0	0.0	1.0	0.4	0.1	0.5	3.8														
9-Apr	Z	0.0	0.0	0.1	0.1	0.2	1.2	3.3	1.4	1.3	0.8	0.4	0.4	3.8	3.0	2.8	1.1	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.9	3.8													
10-Apr	0.1	Z	0.1	0.1	0.0	1.1	0.2	0.3	0.4	0.5	0.2	0.8	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	1.1													
11-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.2	1.9	1.0	1.2	2.0	0.8	2.6	2.7	0.8	3.5	3.9	3.9	1.7	2.3	0.7	1.9	0.9	0.0	1.4	3.9													
12-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.5	2.1	0.4	0.8	2.6	3.2	2.8	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.2													
13-Apr	0.0	0.0	1.3	0.5	Z	0.8	1.0	2.4	0.3	0.1	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.3	2.4													
14-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5													
15-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.1	3.0	3.8	5.6	3.4	2.9	2.4	4.5	3.2	3.0	3.4	1.3	1.5	1.2	0.2	0.2	0.8	1.8	5.6													
16-Apr	0.2	Z	0.2	1.4	2.3	2.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3													
17-Apr	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.2	0.2	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5													
18-Apr	0.0	0.0	0.1	Z	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4													
19-Apr	0.0	0.0	0.3	1.1	Z	0.0	0.2	1.9	2.0	2.0	0.4	0.7	0.8	0.7	3.4	2.7	1.1	1.3	1.8	0.7	0.2	0.4	0.1	0.6	1.0	3.4													
20-Apr	0.0	0.7	0.8	0.2	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8													
21-Apr	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
22-Apr	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.2	0.4	0.2	0.9	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.9													
23-Apr	0.1	0.0	Z	0.1	0.1	0.4	0.2	0.4	0.1	0.2	0.4	0.2	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4													
24-Apr	0.1	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.6	0.6	0.4	0.6	0.1	0.0	0.2	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.6													
25-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2													
26-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.4	0.5	0.2	0.1	0.3	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8													
27-Apr	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1													
28-Apr	0.0	Z	0.0	0.0	0.0	0.2	0.4	0.4	0.3	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	0.1	0.4													
29-Apr	0.0	0.0	Z	0.0	0.0	0.1	0.2	1.2	3.3	1.5	3.9	4.3	0.9	0.2	1.5	0.3	0.2	0.1	0.0	0.0	0.0	0.2	0.8	0.8	0.9	4.3													
30-Apr	0.2	0.0	0.0	Z	0.1	0.0	0.1	0.5	1.0	0.4	0.2	0.7	2.0	1.2	1.8	1.0	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.0													
																									Diurnal Average														
																									Diurnal Maximum														
Z - zerospan																																							
C - Calibration																																							
M - Maintenance																																							



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	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	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	684

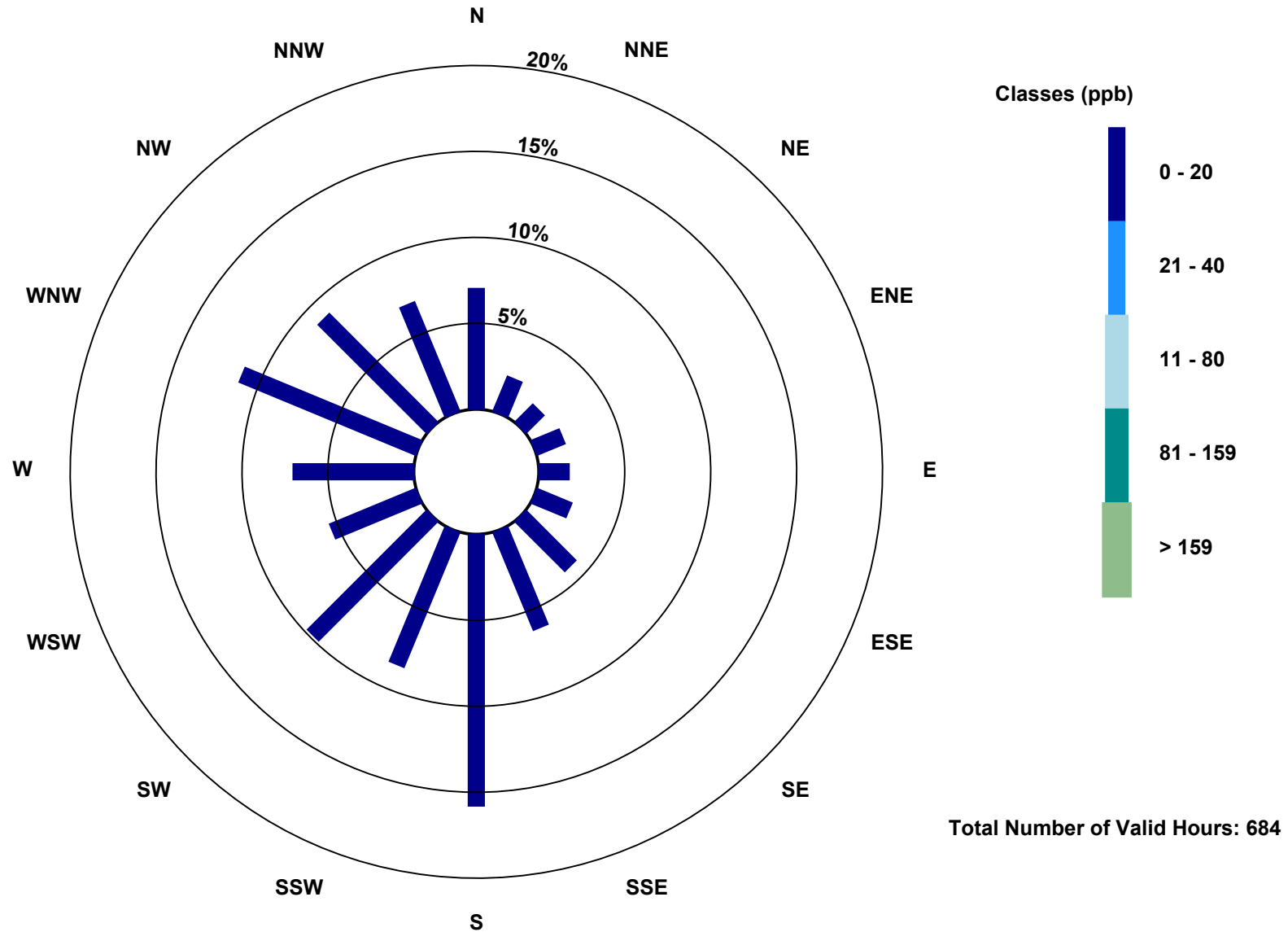
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

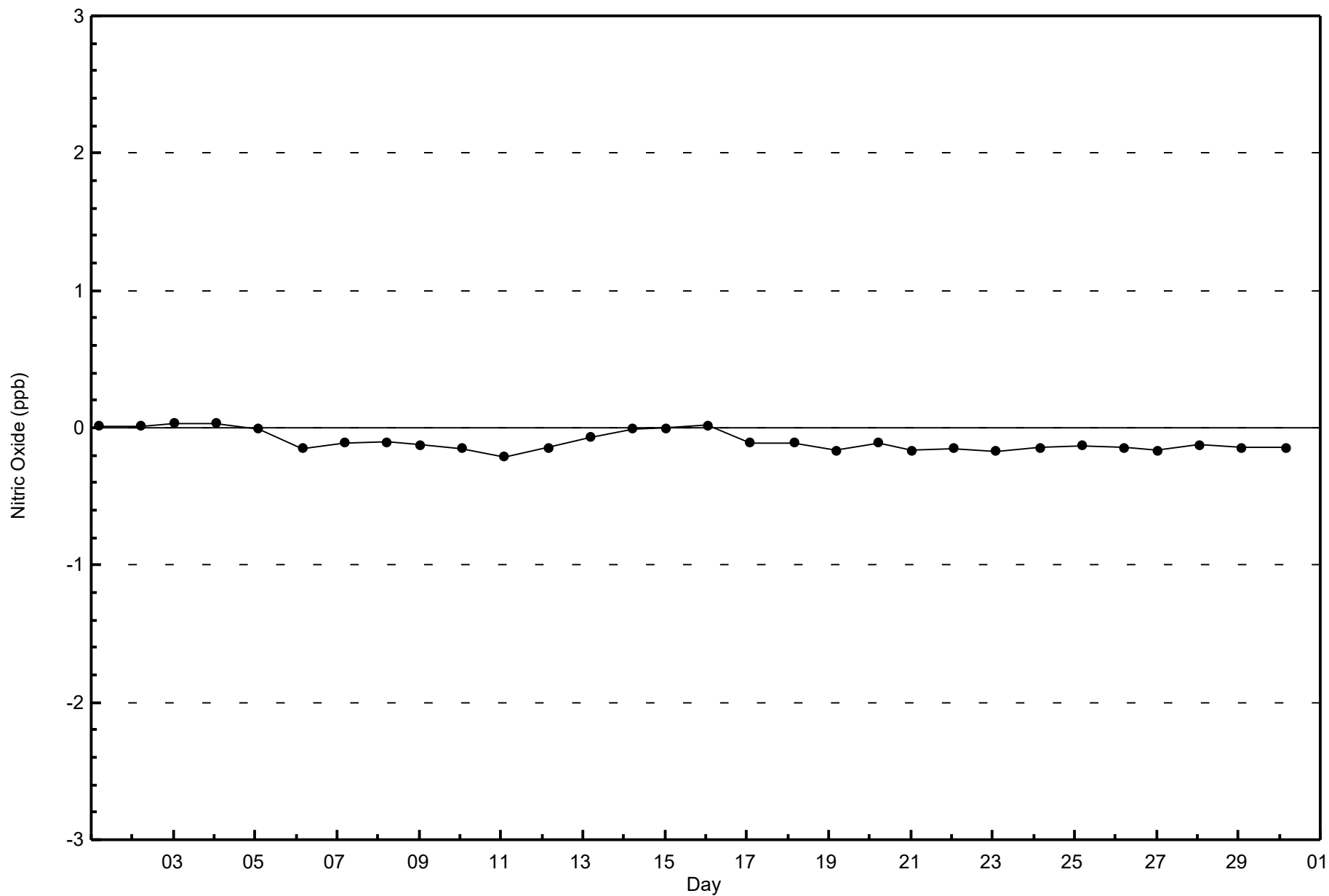
Nitric Oxide (NO) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

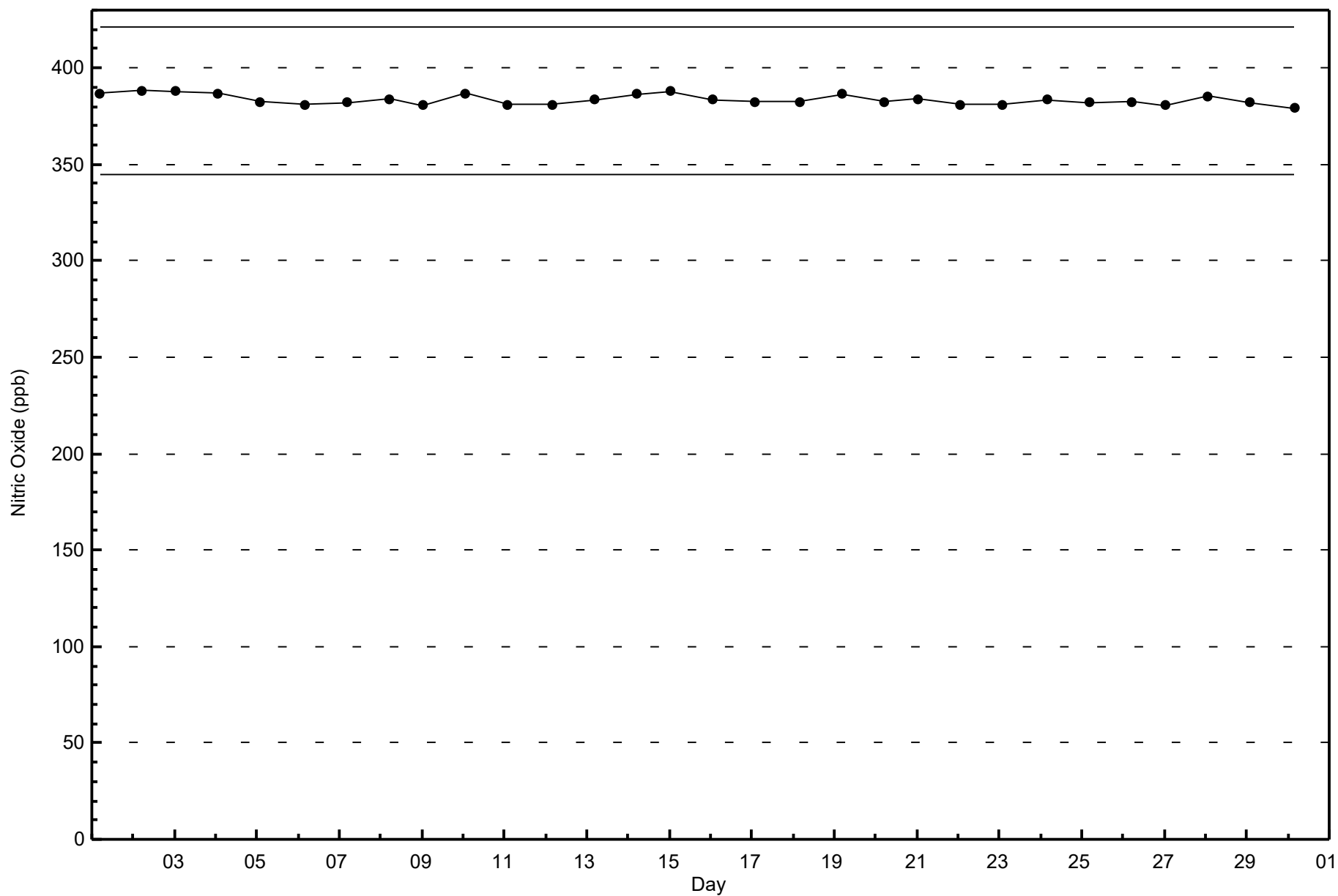
Nitric Oxide (NO) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Kirby North - April 2025

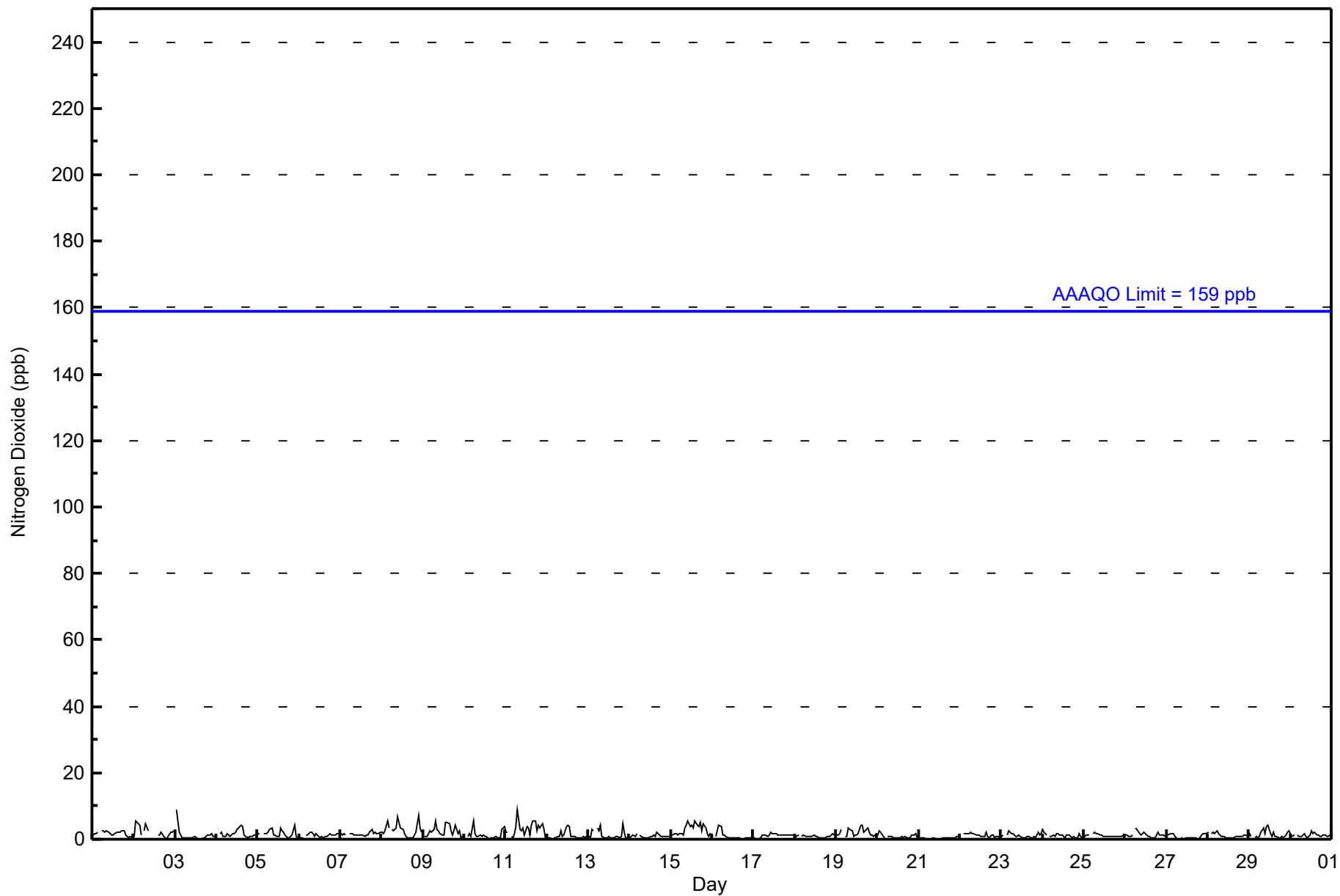


Number of Exceedences (AAAQO): Maximum Value: 8.9 ppb on Apr 11 08:00																		1-hr: 0 24-hr: 0 Maximum Daily Average: 3.2 ppb on Apr 11										Hours in Service: 720 Hours of Data: 684			
Minimum Value: 0.1 ppb on Apr 21 06:00 Maximum Diurnal Average: 2.1 ppb at hour 8 Monthly Average: 1.47 ppb																		Minimum Daily Average: 0.4 ppb on Apr 21 Minimum Diurnal Average: 1.1 ppb at hour 19 Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.1 Q ₃ = 1.8 P ₉₀ = 3.1 P ₉₉ = 5.4										Hours of Missing Data: 36 Hours of Calibration: 35 Percent Operational Time: 99.9			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1-Apr	1.4	1.5	1.6	2.0	Z	2.5	2.7	2.3	2.4	2.3	1.5	1.4	1.4	1.6	2.0	2.0	2.0	2.5	2.4	1.3	0.8	0.4	0.7	0.5	1.7	2.7					
2-Apr	0.9	5.3	5.2	4.1	1.4	Z	2.5	4.6	2.7	C	C	C	C	C	1.3	1.4	2.0	1.0	0.6	0.2	0.9	2.1	2.3	2.4	2.3	5.3					
3-Apr	Z	8.7	2.3	1.1	0.6	0.4	0.5	0.4	0.4	0.5	0.5	0.7	0.4	0.4	M	0.2	0.3	0.4	1.0	1.2	1.4	1.7	0.8	1.0	1.1	8.7					
4-Apr	1.0	Z	1.5	2.2	0.8	1.0	1.7	1.4	0.9	1.5	1.6	2.2	3.1	3.5	4.4	3.7	1.3	0.7	0.6	0.7	0.7	0.7	1.4	1.4	1.7	4.4					
5-Apr	1.9	1.8	Z	1.6	1.6	1.9	2.2	3.0	3.6	1.3	1.2	0.9	0.7	3.2	2.5	2.3	1.2	0.5	0.5	0.7	1.3	4.1	0.7	0.5	1.7	4.1					
6-Apr	0.4	0.4	0.4	Z	1.3	1.1	2.0	2.0	1.7	0.8	1.9	0.8	0.6	0.7	0.6	0.7	0.9	1.3	1.6	1.3	1.4	1.4	1.7	1.6	1.2	2.0					
7-Apr	1.5	1.4	1.5	1.4	Z	1.5	1.5	1.5	1.4	1.3	1.3	1.3	1.2	1.1	1.0	1.1	1.1	2.1	2.8	1.5	2.0	1.9	1.7	2.1	1.5	2.8					
8-Apr	2.0	1.8	2.5	5.3	3.5	Z	2.9	2.5	3.3	6.6	4.9	3.2	3.0	1.9	0.8	0.6	0.5	0.6	0.4	1.2	2.0	7.1	3.5	2.1	2.7	7.1					
9-Apr	Z	0.7	1.0	1.6	2.5	2.2	3.1	5.6	3.1	2.7	1.8	1.1	1.1	5.0	4.9	4.6	2.4	1.2	2.6	4.4	1.7	2.6	0.6	0.9	2.5	5.6					
10-Apr	0.9	Z	1.0	1.9	0.8	5.4	1.5	0.9	0.9	1.1	0.7	1.3	1.0	0.7	0.2	0.5	0.4	0.4	0.7	0.6	0.6	0.5	3.1	3.9	1.3	5.4					
11-Apr	2.3	2.3	Z	0.9	0.6	1.8	3.9	8.9	3.0	2.5	3.3	1.4	3.7	3.5	1.1	4.3	5.5	5.4	2.5	4.1	3.6	4.7	3.1	0.5	3.2	8.9					
12-Apr	0.4	0.5	0.5	Z	0.6	0.6	1.0	1.0	2.7	0.8	1.4	3.8	4.3	3.7	0.8	0.8	0.7	0.5	0.4	0.3	0.3	0.7	0.4	1.0	1.2	4.3					
13-Apr	0.9	0.6	2.8	2.5	Z	3.6	2.7	4.1	1.0	0.6	0.5	0.6	0.9	0.6	0.6	0.6	0.8	1.0	0.3	0.8	4.5	2.3	0.6	0.5	1.5	4.5					
14-Apr	0.6	0.9	1.3	0.7	1.6	Z	1.1	0.8	0.6	0.5	0.5	0.4	0.7	0.9	1.2	0.9	2.2	1.2	1.0	0.8	0.9	0.7	0.7	0.8	0.9	2.2					
15-Apr	Z	1.3	1.5	1.6	1.4	1.9	1.8	1.4	3.4	4.4	5.6	3.9	4.1	3.3	5.4	4.4	3.9	5.0	2.7	4.5	3.5	1.7	0.9	1.8	3.0	5.6					
16-Apr	0.9	Z	0.8	2.7	4.1	3.7	1.1	1.3	0.7	0.3	0.3	0.4	0.3	0.6	0.6	0.3	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.4	0.9	4.1					
17-Apr	0.3	0.3	Z	0.4	0.4	1.3	1.3	1.1	0.8	1.4	2.0	1.7	1.5	1.5	1.2	1.1	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.2	1.1	2.0					
18-Apr	1.4	0.8	1.4	Z	0.8	1.4	1.0	1.0	1.0	1.0	1.2	0.8	0.7	0.5	0.5	0.6	0.6	0.6	0.7	0.9	1.3	1.5	1.4	1.0	1.5						
19-Apr	1.3	1.3	1.8	3.1	Z	0.8	0.9	3.6	2.9	2.5	0.9	1.3	1.4	1.5	4.1	4.1	2.0	2.5	3.4	2.0	1.1	1.3	0.9	1.6	2.0	4.1					
20-Apr	1.3	2.6	2.2	1.0	0.5	Z	0.9	1.0	0.8	0.6	0.4	0.5	0.4	0.6	0.8	0.5	1.0	0.4	0.4	0.5	1.1	1.1	1.6	0.4	0.9	2.6					
21-Apr	Z	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.6	0.6	0.8	1.0	0.4	1.0					
22-Apr	0.8	Z	1.8	1.5	1.7	1.8	2.1	1.8	1.6	1.3	1.2	1.1	0.9	0.9	0.7	2.1	0.7	0.6	1.4	1.2	0.6	0.7	0.9	0.6	1.2	2.1					
23-Apr	0.8	1.4	Z	1.2	2.7	2.1	1.8	1.9	0.9	0.7	1.2	0.9	0.6	0.5	0.4	0.7	0.9	0.6	0.6	0.7	0.4	2.1	1.4	1.9	1.1	2.7					
24-Apr	2.8	2.3	1.2	Z	1.0	1.0	1.1	1.0	1.7	1.8	1.2	1.4	0.8	0.6	1.1	1.4	0.7	0.6	0.9	0.5	0.6	1.6	1.0	0.5	1.2	2.8					
25-Apr	1.0	1.3	1.4	1.4	Z	1.9	2.0	1.6	1.5	1.1	1.1	1.0	0.7	0.9	0.8	0.8	0.8	0.8	1.0	1.0	0.8	1.0	1.0	1.4	1.1	2.0					
26-Apr	1.2	1.2	0.9	1.0	1.3	Z	3.6	3.0	1.5	1.1	1.5	2.2	1.3	0.7	0.7	0.6	0.5	0.5	1.4	2.0	1.4	1.3	1.1	1.0	1.3	3.6					
27-Apr	Z	1.1	1.7	1.7	1.8	1.0	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.2	1.1	1.7	1.9	1.9	0.8	1.9					
28-Apr	2.3	Z	1.9	2.1	1.8	2.5	1.7	1.3	0.9	0.7	0.4	0.3	0.4	0.6	0.5	0.5	0.7	0.7	0.8	0.8	1.2	1.1	1.0	1.0	1.1	2.5					
29-Apr	1.9	0.9	Z	0.6	0.7	0.6	0.8	2.1	3.4	1.9	3.9	4.4	1.8	0.8	2.1	0.9	0.7	0.5	0.5	0.7	0.6	1.1	2.2	2.4	1.5	4.4					
30-Apr	1.6	1.0	1.1	Z	1.2	0.7	0.7	1.3	1.9	1.0	0.6	1.1	2.6	1.7	2.2	1.3	1.1	0.8	0.9	1.1	1.3	0.9	0.8	1.1	1.2	2.6					
1.3 1.7 1.6 1.8 1.4 1.7 1.7 2.1 1.7 1.5 1.5 1.4 1.4 1.5 1.5 1.5 1.5 1.2 1.2 1.1 1.2 1.3 1.7 1.3 1.3																									Diurnal Average						
2.8 8.7 5.2 5.3 4.1 5.4 3.9 8.9 3.6 6.6 5.6 4.4 4.3 5.0 5.4 4.6 5.5 5.4 3.4 4.5 4.5 7.1 3.5 3.9																									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 (NO₂) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 60	0	0.00	100.00
61 - 80	0	0.00	100.00
81 - 100	0	0.00	100.00
101 - 120	0	0.00	100.00
121 - 140	0	0.00	100.00
141 - 160	0	0.00	100.00
161 - 180	0	0.00	100.00
181 - 200	0	0.00	100.00
> 200	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	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	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	684

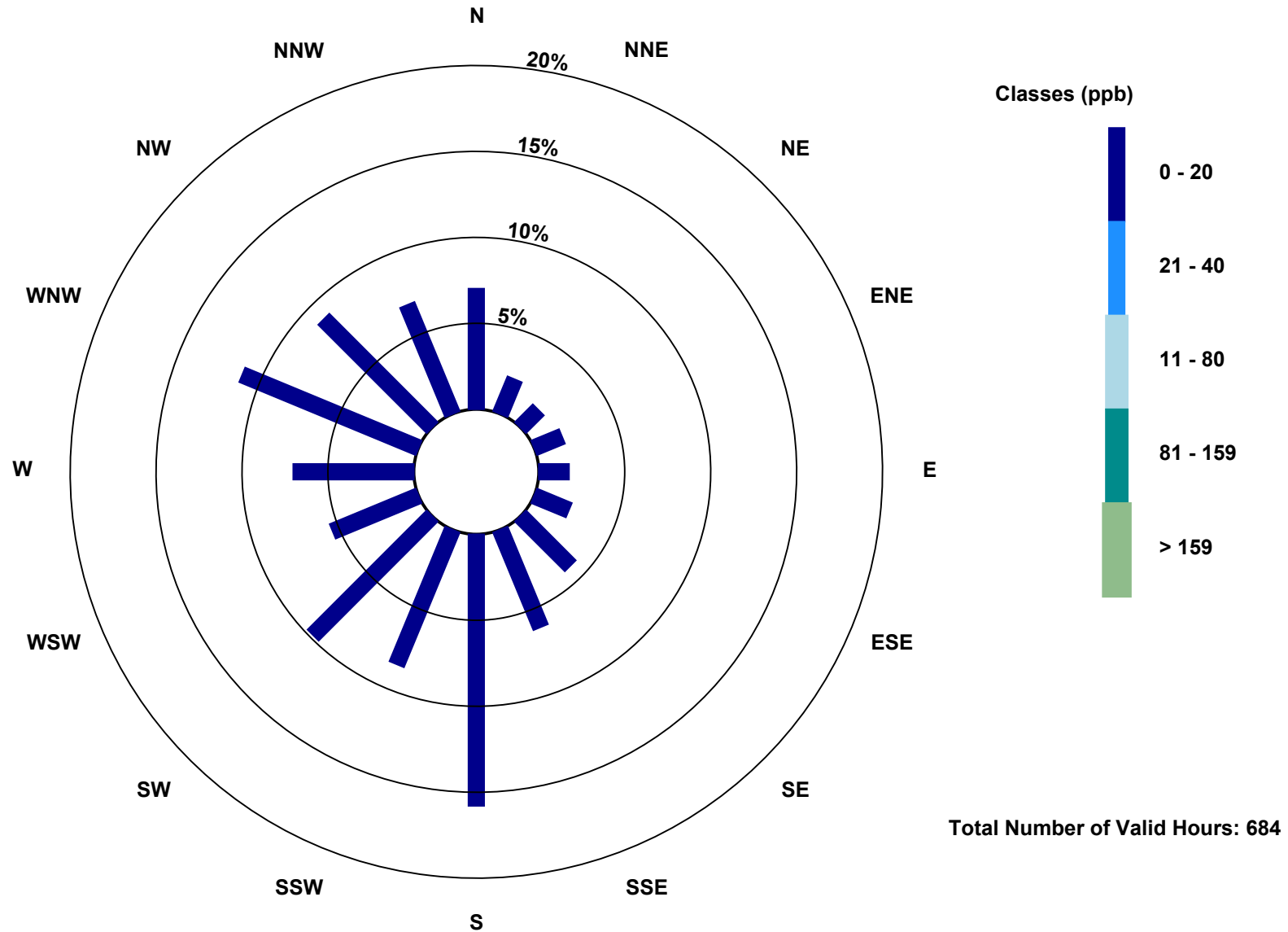
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

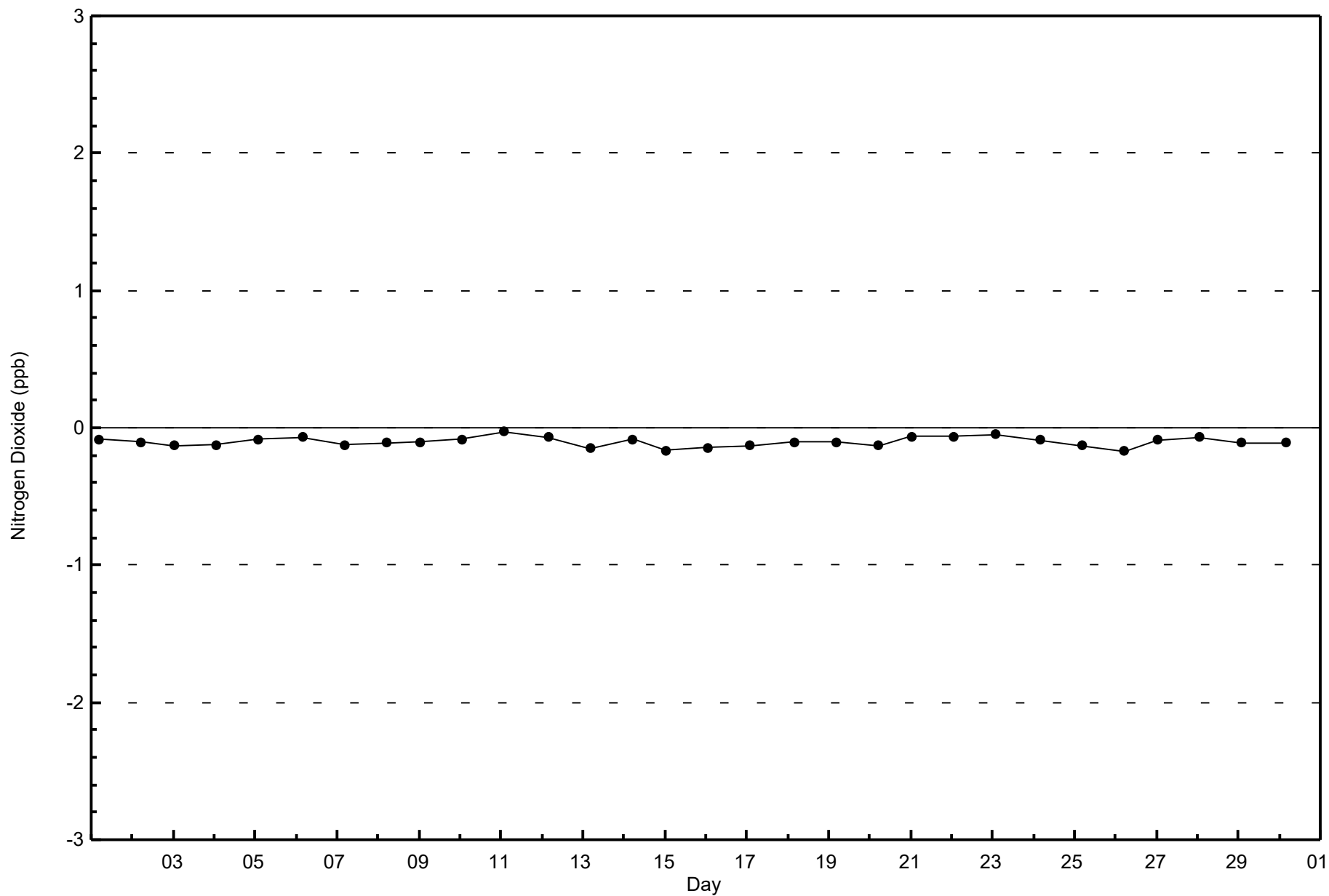
Nitrogen Dioxide (NO₂) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

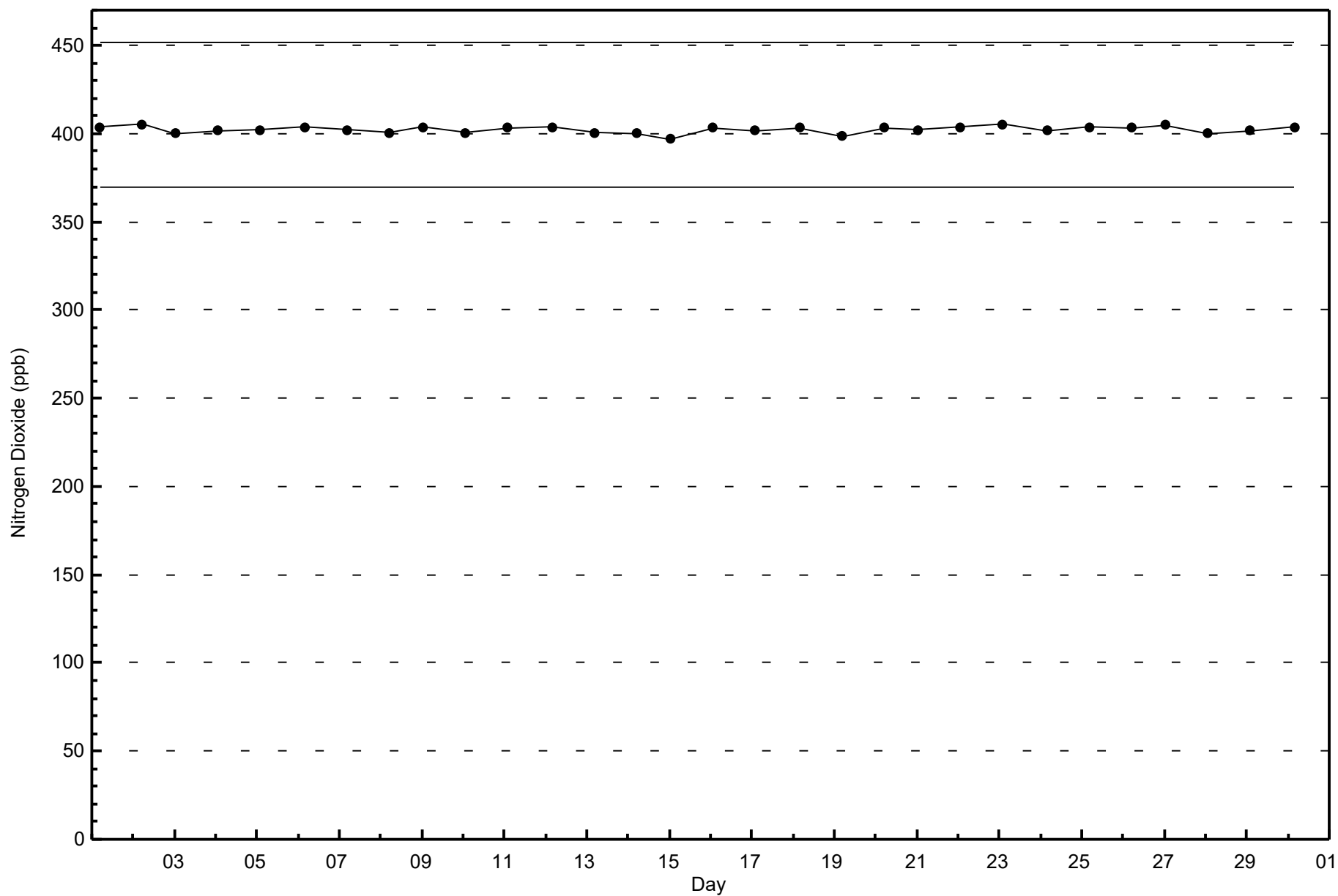
Nitrogen Dioxide (NO₂) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Kirby North - April 2025

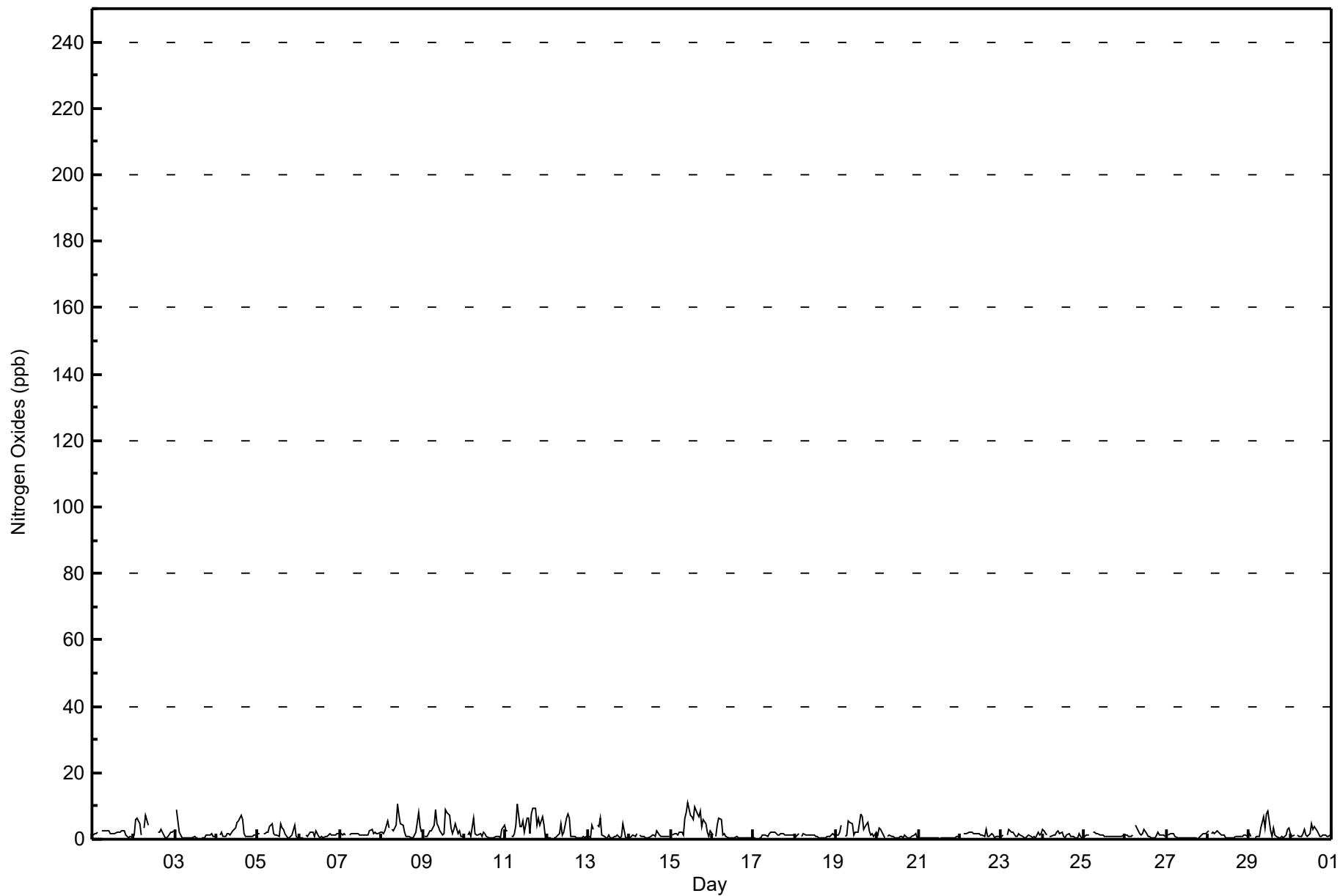


Maximum Value: 11.2 ppb on Apr 15 11:00																			Maximum Daily Average: 4.8 ppb on Apr 15										Hours in Service: 720	
Minimum Value: 0.1 ppb on Apr 27 19:00																			Minimum Daily Average: 0.4 ppb on Apr 21										Hours of Data: 684	
Maximum Diurnal Average: 2.7 ppb at hour 8																			Minimum Diurnal Average: 1.3 ppb at hour 1										Hours of Missing Data: 36	
Monthly Average: 1.84 ppb																			Percentiles: P ₁ = 0.2 P ₁₀ = 0.4 Q ₁ = 0.7 Median = 1.3 Q ₃ = 2.1 P ₉₀ = 4.2 P ₉₉ = 8.9										Hours of Calibration: 35	
																			Percent Operational Time: 99.9											
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
1-Apr	1.4	1.5	1.6	2.0	Z	2.5	2.7	2.4	2.6	2.6	1.8	1.6	1.6	1.8	2.1	2.2	2.0	2.7	2.6	1.3	0.8	0.4	0.7	0.5	1.8	2.7				
2-Apr	1.1	6.0	6.2	4.8	1.5	Z	3.3	7.4	4.3	C	C	C	C	C	2.0	2.0	2.8	1.1	0.6	0.2	0.9	2.1	2.3	2.4	2.8	7.4				
3-Apr	Z	8.9	2.3	1.3	0.6	0.4	0.5	0.4	0.4	0.6	0.5	0.8	0.4	0.4	M	0.2	0.3	0.4	1.1	1.2	1.4	1.7	0.8	1.0	1.2	8.9				
4-Apr	1.0	Z	1.5	2.2	0.8	1.0	1.8	1.7	1.2	2.5	2.9	3.3	5.1	5.6	7.2	5.8	1.5	0.7	0.6	0.7	0.7	0.7	1.4	1.4	2.2	7.2				
5-Apr	1.9	1.8	Z	1.6	1.6	2.0	2.3	3.6	4.7	1.6	1.4	1.1	0.8	4.6	3.3	3.0	1.5	0.6	0.6	0.8	1.4	4.2	0.8	0.5	2.0	4.7				
6-Apr	0.4	0.4	0.4	Z	1.3	1.1	2.1	2.3	2.1	0.9	2.5	0.9	0.6	0.7	0.6	0.7	0.9	1.3	1.6	1.3	1.4	1.4	1.7	1.6	1.2	2.5				
7-Apr	1.5	1.4	1.5	1.4	Z	1.5	1.6	1.7	1.7	1.5	1.5	1.5	1.4	1.2	1.1	1.1	1.1	2.4	3.0	1.5	2.0	1.9	1.7	2.1	1.6	3.0				
8-Apr	2.0	1.8	2.5	5.4	3.5	Z	3.1	2.7	4.1	10.4	7.1	4.5	4.4	2.3	0.9	0.6	0.6	0.6	0.4	1.2	2.0	8.1	3.9	2.2	3.2	10.4				
9-Apr	Z	0.7	1.0	1.7	2.6	2.4	4.3	8.9	4.5	4.0	2.6	1.5	1.5	8.8	7.9	7.4	3.5	1.5	2.9	4.5	1.8	2.7	0.7	0.9	3.4	8.9				
10-Apr	1.0	Z	1.1	2.0	0.8	6.5	1.7	1.2	1.3	1.6	0.9	2.1	1.5	1.0	0.3	0.6	0.5	0.5	0.8	0.7	0.6	0.5	3.2	4.0	1.5	6.5				
11-Apr	2.4	2.4	Z	1.0	0.7	1.9	4.1	10.8	4.0	3.7	5.3	2.2	6.3	6.2	1.9	7.8	9.4	9.3	4.2	6.4	4.3	6.6	4.0	0.5	4.6	10.8				
12-Apr	0.4	0.5	0.5	Z	0.6	0.6	1.2	1.5	4.8	1.2	2.2	6.4	7.5	6.5	1.0	1.0	0.8	0.5	0.4	0.3	0.3	0.7	0.4	1.0	1.7	7.5				
13-Apr	0.9	0.6	4.1	3.0	Z	4.4	3.7	6.5	1.3	0.7	0.5	0.6	1.1	0.6	0.6	0.7	0.9	1.2	0.3	0.8	4.7	2.4	0.6	0.5	1.8	6.5				
14-Apr	0.6	0.9	1.3	0.7	1.6	Z	1.3	1.0	0.7	0.5	0.5	0.4	0.8	1.1	1.4	1.0	2.7	1.3	1.0	0.8	0.9	0.7	0.7	0.8	1.0	2.7				
15-Apr	Z	1.3	1.5	1.6	1.4	1.9	2.0	1.5	6.4	8.2	11.2	7.3	7.0	5.7	9.9	7.6	6.9	8.4	4.0	6.0	4.7	1.9	1.1	2.6	4.8	11.2				
16-Apr	1.1	Z	1.0	4.1	6.4	5.9	1.4	1.6	0.8	0.3	0.3	0.4	0.3	0.6	0.6	0.3	0.3	0.2	0.2	0.3	0.3	0.6	0.6	0.4	1.2	6.4				
17-Apr	0.3	0.3	Z	0.4	0.4	1.3	1.3	1.1	0.9	1.6	2.2	2.0	1.9	1.9	1.4	1.3	1.8	1.6	1.4	1.2	1.2	1.3	1.3	1.2	1.3	2.2				
18-Apr	1.4	0.8	1.5	Z	0.9	1.5	1.2	1.3	1.4	1.3	1.3	1.5	1.0	0.8	0.6	0.5	0.6	0.6	0.6	0.7	0.9	1.3	1.5	1.4	1.1	1.5				
19-Apr	1.3	1.3	2.1	4.2	Z	0.8	1.1	5.5	4.9	4.5	1.3	2.0	2.2	2.2	7.5	6.8	3.1	3.8	5.2	2.7	1.3	1.7	1.0	2.2	3.0	7.5				
20-Apr	1.3	3.3	3.0	1.2	0.5	Z	0.9	1.1	0.9	0.7	0.4	0.5	0.4	0.8	1.0	0.5	1.2	0.4	0.4	0.5	1.1	1.1	1.6	0.4	1.0	3.3				
21-Apr	Z	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.6	0.6	0.8	1.0	0.4	1.0				
22-Apr	0.8	Z	1.8	1.5	1.7	1.9	2.3	2.1	1.9	1.6	1.5	1.5	1.1	1.3	0.9	3.0	0.8	0.7	1.6	1.3	0.6	0.7	0.9	0.7	1.4	3.0				
23-Apr	0.9	1.4	Z	1.3	2.8	2.5	2.0	2.3	1.0	0.9	1.6	1.1	0.7	0.5	0.4	0.8	1.1	0.7	0.6	0.7	0.4	2.2	1.4	1.9	1.3	2.8				
24-Apr	2.9	2.3	1.2	Z	1.0	1.1	1.3	1.2	2.3	2.4	1.6	2.0	0.9	0.6	1.3	1.7	0.8	0.7	1.0	0.5	0.6	1.6	1.0	0.5	1.3	2.9				
25-Apr	1.0	1.3	1.4	1.4	Z	2.0	2.2	1.8	1.7	1.2	1.2	1.1	0.7	0.9	0.8	0.8	0.8	0.8	1.0	1.0	0.8	1.0	1.0	1.4	1.2	2.2				
26-Apr	1.2	1.2	0.9	1.0	1.3	Z	4.0	3.5	1.7	1.2	1.8	3.0	1.7	0.8	0.7	0.6	0.5	0.5	1.4	2.0	1.4	1.3	1.1	1.0	1.5	4.0				
27-Apr	Z	1.1	1.7	1.7	1.9	1.1	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.1	0.2	1.1	1.7	1.9	1.9	0.8	1.9				
28-Apr	2.3	Z	1.9	2.1	1.8	2.7	2.1	1.7	1.2	1.1	0.4	0.4	0.4	0.6	0.5	0.5	0.7	0.7	0.8	0.8	1.2	1.1	1.0	1.0	1.2	2.7				
29-Apr	1.9	0.9	Z	0.6	0.7	0.7	1.0	3.3	6.7	3.4	7.8	8.7	2.7	1.0	3.6	1.2	0.9	0.6	0.5	0.7	0.6	1.3	3.0	3.2	2.4	8.7				
30-Apr	1.8	1.0	1.1	Z	1.3	0.7	0.8	1.8	2.9	1.4	0.8	1.8	4.6	2.9	4.0	2.3	1.8	0.9	1.0	1.1	1.3	0.9	0.8	1.1	1.7	4.6				
																									Diurnal Average					
																									Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																														



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Kirby North - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	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	48	15	10	12	12	15	28	42	108	58	67	37	48	76	61	47	684

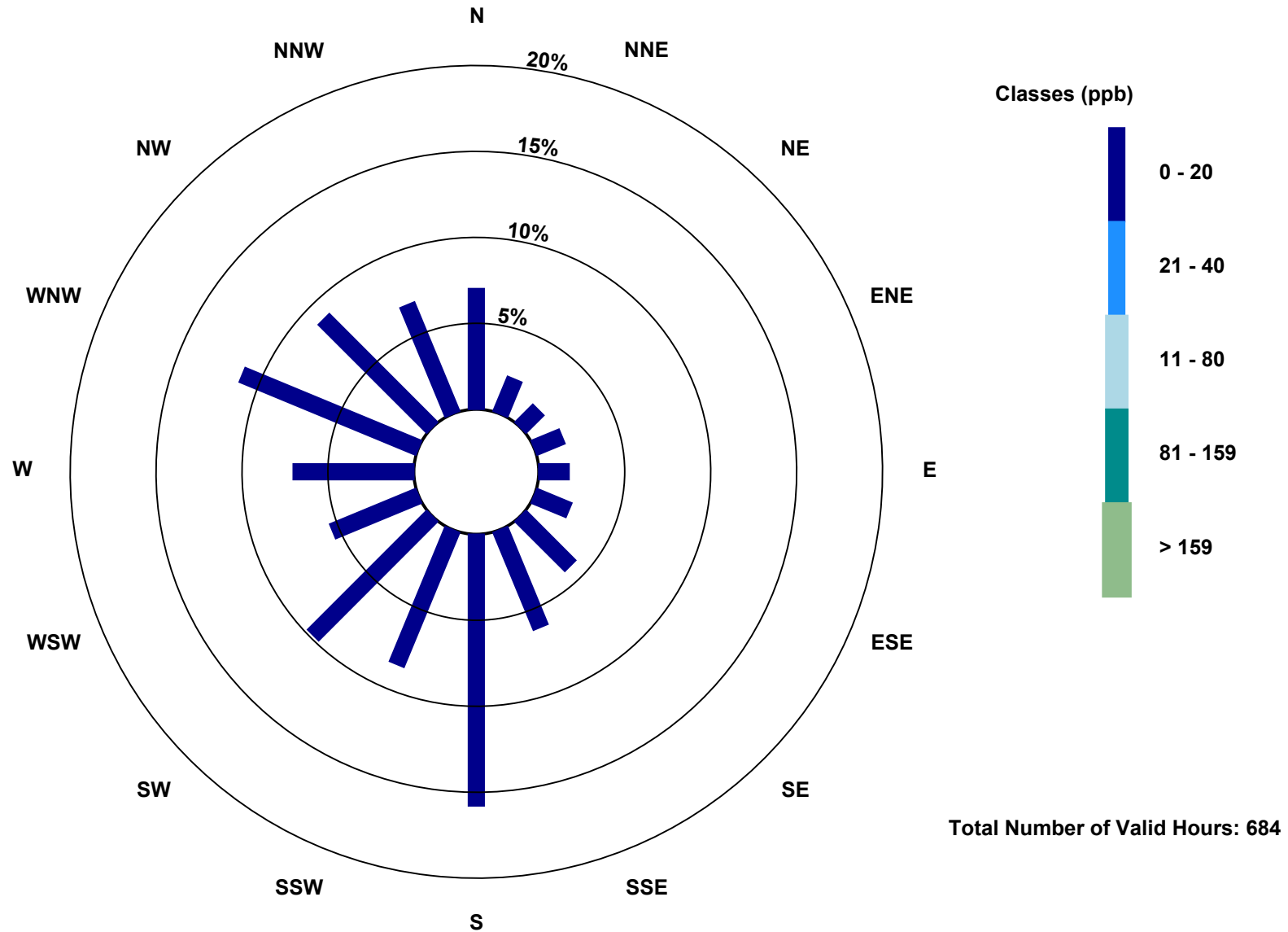
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

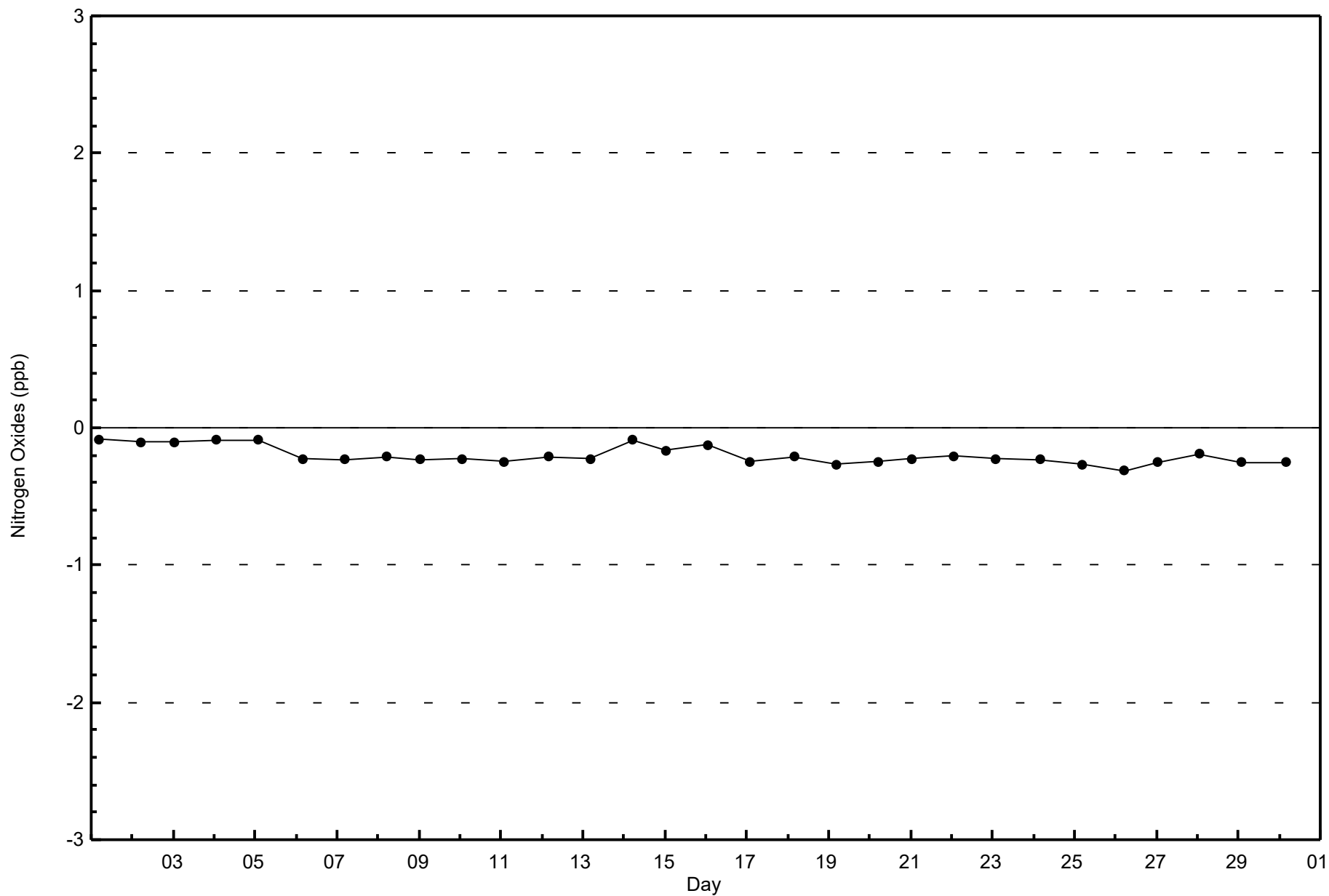
Nitrogen Oxides (NO_x) - ppb
Kirby North





Wood Buffalo Environmental Association
Zero Responses

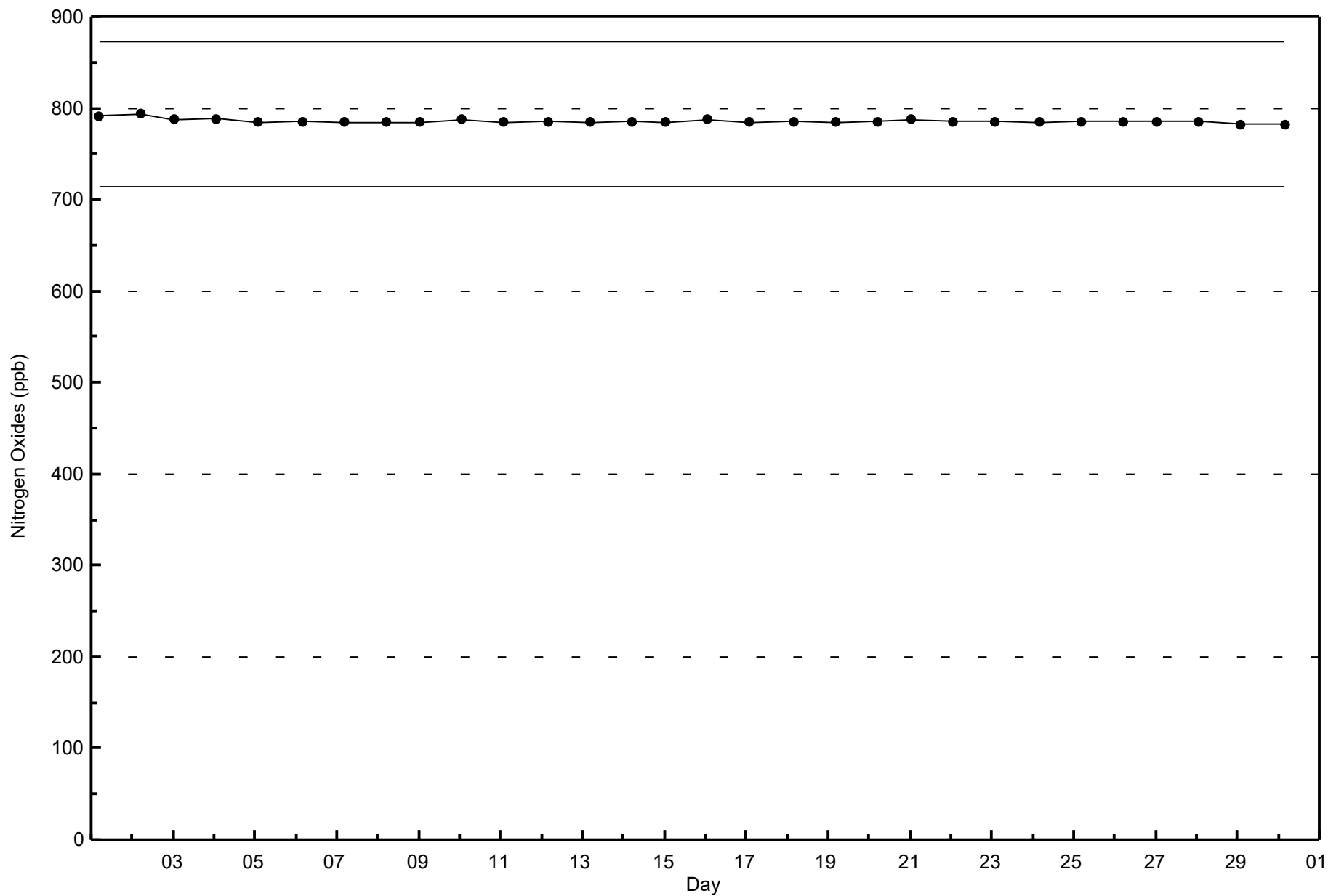
Nitrogen Oxides (NO_x) - ppb
Kirby North - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Kirby North - April 2025

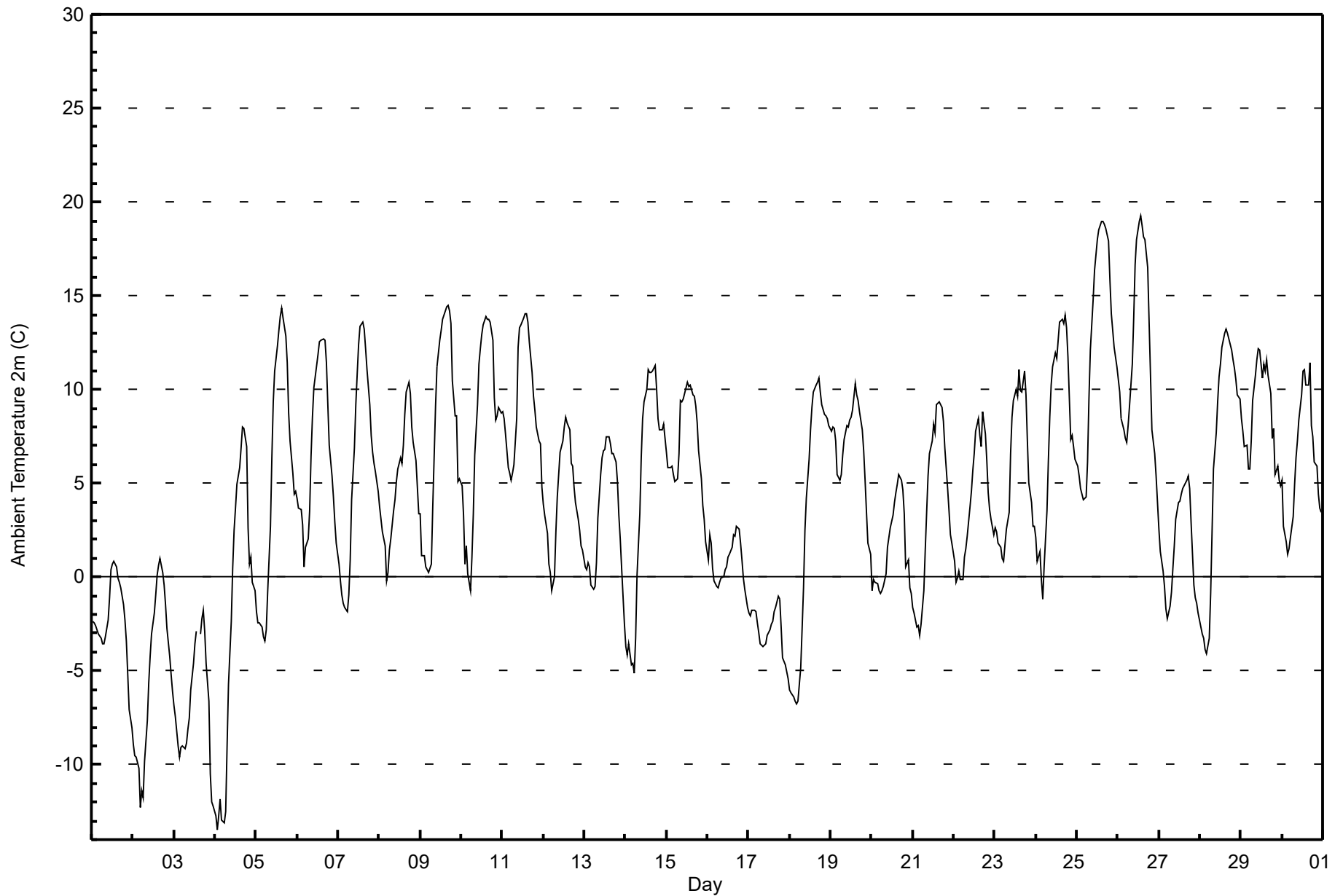


Maximum Value: 19.2 C on Apr 26 14:00																			Maximum Daily Average: 12.6 C on Apr 25							Hours in Service: 720	
Minimum Value: -13.5 C on Apr 4 02:00																			Minimum Daily Average: -6.8 C on Apr 3							Hours of Data: 719	
Maximum Diurnal Average: 9.5 C at hour 15																			Minimum Diurnal Average: -1.0 C at hour 5							Hours of Missing Data: 1	
Monthly Average: 4.31 C																			Percentiles: P ₁ = -12.2 P ₁₀ = -3.3 Q ₁ = 0.0 Median = 4.8 Q ₃ = 8.8 P ₉₀ = 12.2 P ₉₉ = 18.4							Hours of Calibration: 0	
																										Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	-2.4	-2.4	-2.6	-2.8	-3.0	-3.3	-3.6	-3.6	-3.2	-2.3	-1.1	0.4	0.7	0.9	0.5	0.0	-0.3	-0.6	-1.5	-2.3	-3.4	-5.2	-7.1	-8.1	-2.3	0.9	
2-Apr	-8.9	-9.5	-9.6	-10.2	-12.3	-11.4	-11.8	-9.8	-7.7	-5.6	-4.2	-3.0	-1.9	-0.9	0.1	0.6	1.0	0.3	-0.4	-1.5	-2.7	-4.2	-5.2	-6.1	-5.2	1.0	
3-Apr	-6.8	-7.5	-9.0	-9.6	-9.1	-9.0	-9.1	-8.9	-8.1	-7.5	-6.0	-4.6	-3.6	-2.9	M	-3.0	-2.2	-1.7	-2.9	-4.6	-6.6	-10.5	-12.0	-12.2	-6.8	-1.7	
4-Apr	-12.7	-13.5	-12.7	-11.9	-13.0	-13.1	-12.5	-9.0	-5.7	-2.4	0.5	2.5	3.7	4.9	5.8	6.8	8.0	7.9	7.0	2.6	0.7	1.0	-0.3	-0.7	-2.3	8.0	
5-Apr	-1.9	-2.4	-2.5	-2.7	-3.2	-3.4	-2.8	-0.8	2.7	6.3	9.4	11.0	12.3	13.1	13.9	14.3	13.8	12.9	11.5	8.7	7.2	5.5	4.4	4.6	5.5	14.3	
6-Apr	4.2	3.7	3.6	2.8	0.6	1.6	2.0	3.5	6.5	8.5	10.1	11.3	11.9	12.6	12.6	12.7	12.6	11.4	9.2	7.0	5.4	4.2	2.9	1.8	6.8	12.7	
7-Apr	0.7	-0.2	-0.9	-1.4	-1.6	-1.9	-1.0	0.9	4.1	6.9	9.2	10.8	12.4	13.4	13.6	13.2	12.2	11.1	9.2	7.6	6.6	6.1	5.6	4.5	5.9	13.6	
8-Apr	3.8	3.1	2.4	1.6	-0.2	0.2	1.4	2.0	3.5	4.2	5.1	5.7	6.4	6.1	7.0	8.7	9.9	10.4	9.8	8.0	7.2	6.2	4.8	3.4	5.0	10.4	
9-Apr	3.4	1.1	1.2	0.6	0.4	0.3	0.7	3.8	6.4	9.1	11.2	12.6	13.2	13.8	14.0	14.4	14.5	14.2	13.5	10.5	8.6	8.6	5.1	5.2	7.8	14.5	
10-Apr	4.9	3.3	0.7	1.7	0.1	-0.7	1.0	3.4	6.5	9.2	11.3	12.2	12.9	13.4	13.9	13.8	13.7	13.6	12.6	9.6	8.4	8.6	9.0	8.7	8.0	13.9	
11-Apr	8.8	8.5	7.6	5.8	5.6	5.2	5.5	6.0	8.4	12.2	13.3	13.4	13.8	14.0	14.1	13.6	12.6	10.9	9.7	8.9	8.0	7.3	7.1	4.8	9.4	14.1	
12-Apr	3.9	3.3	2.4	0.7	0.3	-0.8	0.1	2.4	4.2	5.5	6.7	7.2	8.0	8.6	8.2	7.8	6.1	5.9	4.8	4.0	3.1	2.5	1.6	1.4	4.1	8.6	
13-Apr	0.6	0.4	0.7	0.6	-0.5	-0.6	-0.5	0.8	3.2	5.5	6.4	6.7	6.8	7.4	7.5	7.1	6.6	6.6	6.1	5.1	3.3	2.0	0.5	-2.5	3.3	7.5	
14-Apr	-3.7	-4.2	-3.6	-4.7	-4.6	-5.1	-3.3	0.1	3.4	6.3	8.5	9.4	10.0	11.1	10.9	10.9	11.0	11.3	10.0	8.4	7.9	7.9	8.2	7.4	4.7	11.3	
15-Apr	6.7	5.8	5.9	5.9	5.4	5.1	5.2	6.6	9.4	9.4	9.5	10.1	10.4	10.2	10.2	9.7	9.6	9.1	8.2	6.8	5.3	3.9	3.1	1.9	7.2	10.4	
16-Apr	0.9	2.3	1.8	0.5	-0.2	-0.5	-0.5	-0.3	0.0	0.0	0.4	0.5	1.1	1.2	1.6	2.2	2.1	2.7	2.5	1.8	0.9	0.0	-0.6	-1.6	0.8	2.7	
17-Apr	-1.9	-2.1	-1.7	-1.7	-1.9	-2.5	-2.9	-3.6	-3.7	-3.6	-3.5	-3.1	-2.8	-2.5	-2.4	-1.9	-1.6	-1.0	-1.2	-2.6	-4.3	-4.7	-5.0	-5.4	-2.8	-1.0	
18-Apr	-6.0	-6.2	-6.4	-6.6	-6.8	-6.6	-4.8	-2.7	-0.6	2.5	4.2	6.3	7.8	9.0	9.9	10.3	10.4	10.6	9.9	9.2	8.7	8.6	8.5	8.1	3.2	10.6	
19-Apr	7.8	8.0	7.9	7.2	5.5	5.2	5.5	6.5	7.3	8.0	8.0	8.4	8.5	8.9	10.3	9.7	9.4	8.8	7.9	6.7	5.1	3.4	1.8	1.2	7.0	10.3	
20-Apr	-0.8	-0.1	-0.3	-0.4	-0.7	-0.9	-0.7	-0.5	0.2	1.6	2.1	2.6	3.3	4.0	4.5	5.0	5.5	5.1	4.7	3.4	0.6	0.9	-0.6	-0.8	1.6	5.5	
21-Apr	-1.6	-1.9	-2.7	-2.6	-3.1	-2.5	-0.7	1.4	3.5	5.4	6.6	7.3	8.1	7.7	9.2	9.4	9.2	9.1	8.3	6.9	4.8	3.5	2.3	1.8	3.7	9.4	
22-Apr	0.8	-0.3	-0.1	0.3	-0.1	-0.1	1.0	1.5	2.2	3.7	4.5	5.7	6.6	7.8	8.5	7.6	7.0	8.8	7.6	6.2	4.5	3.6	3.1	2.3	3.9	8.8	
23-Apr	2.7	2.4	1.8	1.6	1.0	0.8	1.7	2.6	3.4	6.6	8.6	9.4	10.0	9.7	11.0	10.0	9.8	11.0	9.7	7.2	5.1	4.0	2.7	2.7	5.6	11.0	
24-Apr	2.1	0.8	1.4	-0.1	-1.2	0.6	3.5	6.2	8.5	10.3	11.2	12.0	11.6	12.7	13.6	13.8	13.6	14.0	13.3	11.8	7.3	7.6	7.0	6.3	7.8	14.0	
25-Apr	5.9	5.4	4.7	4.4	4.1	4.3	6.1	9.5	12.1	14.8	16.4	17.2	18.0	18.5	19.0	18.9	18.8	18.6	17.9	15.9	14.1	13.2	12.3	11.2	12.6	19.0	
26-Apr	10.5	9.9	8.4	7.9	7.4	7.2	8.1	9.1	11.4	13.8	16.6	18.0	19.0	19.2	18.7	18.1	18.0	16.5	13.6	10.7	7.8	6.6	5.4	4.0	11.9	19.2	
27-Apr	2.6	1.4	0.3	-0.5	-1.7	-2.2	-1.6	-0.8	0.4	1.7	3.1	4.0	4.0	4.4	4.7	5.0	5.2	5.4	4.7	2.9	-0.4	-1.1	-1.4	-1.9	1.6	5.4	
28-Apr	-2.7	-3.0	-3.3	-3.9	-4.1	-3.3	-0.9	2.4	5.8	7.7	9.4	10.7	11.4	12.2	13.0	13.2	13.0	12.7	12.1	11.6	11.1	10.5	9.7	9.5	6.5	13.2	
29-Apr	8.5	7.7	6.9	7.0	5.8	5.8	7.3	9.5	10.7	11.6	12.2	12.1	10.6	11.4	11.0	11.6	10.8	9.8	7.4	7.9	5.5	5.9	5.2	4.9	8.6	12.2	
30-Apr	5.2	2.7	1.9	1.2	1.5	2.1	3.2	5.0	6.4	7.3	8.4	9.7	11.0	11.0	10.2	10.2	11.4	8.0	7.4	6.1	5.9	4.4	3.7	3.5	6.1	11.4	
																									Diurnal Average		
																									Diurnal Maximum		
M - Maintenance																											



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Kirby North - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	183	25.45	25.45
0 - 10	402	55.91	81.36
10 - 20	134	18.64	100.00
> 20	0	0.00	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) - %

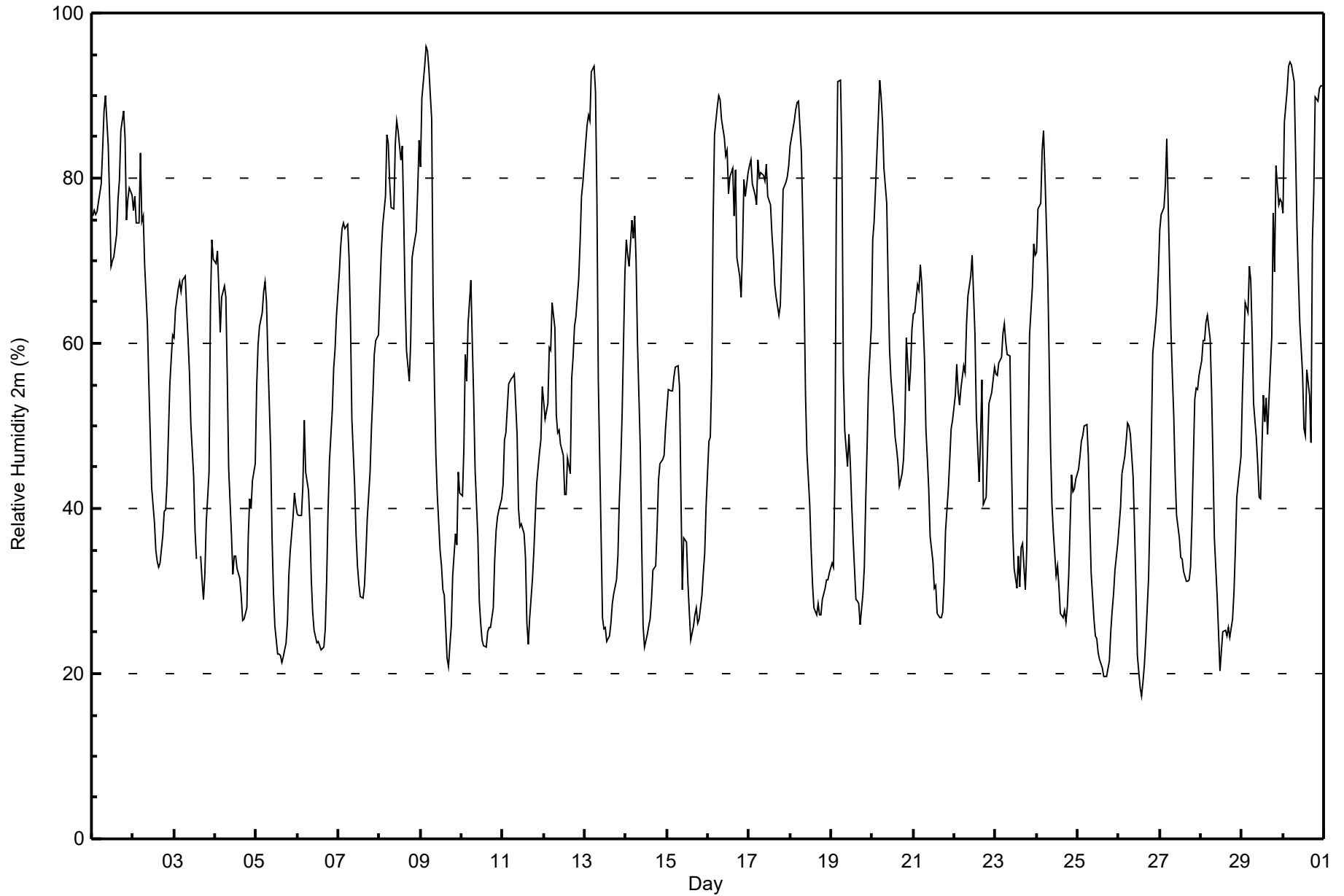
Kirby North - April 2025

Maximum Value: 95.9 % on Apr 9 04:00																				Maximum Daily Average: 78.8 % on Apr 1					Hours in Service: 720	
Minimum Value: 17.4 % on Apr 26 14:00																				Minimum Daily Average: 32.4 % on Apr 25					Hours of Data: 719	
Maximum Diurnal Average: 72.6 % at hour 5																				Minimum Diurnal Average: 36.4 % at hour 16					Hours of Missing Data: 1	
Monthly Average: 52.85 %																				Percentiles: P ₁ = 20.7 P ₁₀ = 26.7 Q ₁ = 34.9 Median = 50.8 Q ₃ = 69.5 P ₉₀ = 81.3 P ₉₉ = 93.2					Hours of Calibration: 0	
																									Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	75.4	76.2	75.6	75.9	77.2	79.3	83.6	88.1	89.9	84.0	77.4	69.3	70.0	70.5	73.2	77.4	79.8	85.7	88.1	84.8	75.0	77.4	78.8	77.9	78.8	89.9
2-Apr	76.2	77.9	74.5	74.5	83.0	74.7	75.4	69.4	62.1	55.1	49.0	42.5	38.3	34.9	33.6	32.9	33.4	36.8	39.7	39.9	43.2	55.0	58.2	61.0	55.0	83.0
3-Apr	60.8	64.0	66.6	67.5	66.3	67.7	68.2	64.0	60.5	56.5	50.1	43.9	37.3	33.9	M	34.3	31.4	28.9	32.1	38.3	44.5	64.5	72.5	70.1	53.2	72.5
4-Apr	69.7	71.2	66.5	61.4	65.7	67.0	65.6	56.1	44.8	36.8	32.0	34.3	34.3	32.7	31.5	29.3	26.5	26.7	27.9	36.6	41.2	40.0	43.4	45.3	45.3	71.2
5-Apr	54.7	59.8	62.1	63.7	66.2	67.5	65.0	58.4	47.1	36.5	29.9	25.7	22.4	22.4	22.1	21.4	22.0	23.7	26.3	32.0	34.9	39.0	41.9	40.3	41.1	67.5
6-Apr	39.3	39.1	39.1	42.7	50.6	44.5	42.1	38.3	31.5	27.5	25.3	23.7	23.9	23.4	22.8	23.2	25.4	31.3	39.8	45.7	51.9	56.9	59.4	63.4	38.0	63.4
7-Apr	68.5	71.8	73.9	74.5	73.8	74.4	70.4	62.7	50.8	42.8	36.7	33.1	30.8	29.3	29.1	30.8	34.4	38.8	44.4	49.8	53.7	58.7	60.3	61.0	52.3	74.5
8-Apr	66.2	71.0	74.3	77.7	85.3	84.2	79.5	76.5	76.3	84.1	87.0	85.8	82.2	84.0	75.5	65.8	59.1	55.5	60.2	70.3	71.5	73.5	78.4	84.6	75.4	87.0
9-Apr	81.3	89.7	93.6	95.9	95.4	93.3	87.2	65.6	54.8	46.4	41.7	35.0	33.0	30.2	29.5	21.8	20.8	23.3	25.7	31.9	37.0	35.5	44.5	41.9	52.3	95.9
10-Apr	41.6	47.2	58.6	55.4	62.5	67.6	60.2	53.5	44.7	36.5	28.8	26.1	24.1	23.5	23.2	25.1	25.7	25.6	27.9	33.8	37.3	38.9	39.8	41.1	39.5	67.6
11-Apr	42.9	48.2	49.2	55.1	55.4	55.7	55.9	56.2	49.0	39.9	37.7	38.1	36.9	34.0	26.2	23.5	26.8	31.5	34.8	39.1	43.0	46.9	48.3	54.7	42.9	56.2
12-Apr	52.9	50.8	52.6	59.5	59.2	64.9	61.9	51.3	49.1	49.5	47.9	46.4	41.6	41.6	46.0	44.3	55.7	58.3	62.1	63.3	67.9	72.1	77.8	79.5	56.5	79.5
13-Apr	84.2	86.4	87.6	87.0	92.8	93.6	90.5	77.6	55.6	36.5	26.8	25.5	25.6	23.8	24.6	26.0	28.5	29.7	31.3	34.2	40.9	45.3	51.4	68.6	53.1	93.6
14-Apr	72.6	70.6	69.3	75.0	72.7	75.4	69.9	60.0	47.2	35.6	25.7	23.2	24.8	25.7	26.7	29.0	32.5	33.1	37.6	43.4	45.4	46.0	46.4	49.7	47.4	75.4
15-Apr	52.1	54.3	54.3	54.3	55.9	57.2	57.3	54.7	41.9	30.1	36.5	35.9	31.0	27.4	24.1	25.8	27.1	27.9	26.1	26.7	29.4	32.2	34.6	40.4	39.1	57.3
16-Apr	48.1	48.7	56.1	74.7	85.3	88.7	90.0	89.5	87.0	84.8	82.7	83.4	78.2	80.3	81.2	75.3	81.1	70.4	68.1	65.6	71.4	79.8	77.9	80.7	76.2	90.0
17-Apr	81.5	82.3	79.4	77.9	76.7	82.2	80.2	80.6	80.3	79.7	81.7	77.9	76.7	73.3	70.6	67.1	65.6	63.4	64.5	71.1	78.6	79.6	80.2	81.5	76.4	82.3
18-Apr	84.0	84.9	86.9	88.3	89.2	89.4	83.2	75.5	66.3	53.7	46.8	40.5	35.2	30.8	27.9	27.2	28.5	27.2	27.1	29.0	30.3	31.3	31.4	32.2	51.9	89.4
19-Apr	33.4	32.9	44.7	76.7	91.7	91.9	82.8	56.5	49.6	45.1	49.0	45.5	40.4	36.3	29.0	28.8	28.5	26.0	29.7	33.0	41.0	47.6	55.5	62.1	48.2	91.9
20-Apr	72.5	74.8	78.9	87.2	91.8	89.8	86.7	81.2	76.9	67.4	59.3	55.8	51.6	48.7	47.3	45.6	42.7	44.2	46.0	50.8	60.7	54.3	56.8	61.7	63.9	91.8
21-Apr	63.6	63.7	67.1	66.4	69.5	67.3	58.0	49.5	46.1	42.4	36.6	33.6	30.3	30.6	27.2	26.9	26.8	27.4	31.1	37.3	42.3	46.0	49.7	50.6	45.4	69.5
22-Apr	53.7	57.5	54.3	52.5	54.5	57.4	56.5	62.4	65.8	68.2	70.7	66.0	61.2	51.4	43.3	48.4	55.7	40.5	41.3	47.1	52.7	53.4	54.1	57.1	55.2	70.7
23-Apr	56.3	56.1	57.6	58.3	61.2	62.3	60.1	58.7	58.4	46.7	37.2	32.7	30.3	34.2	30.5	35.3	35.8	30.2	35.1	47.7	61.0	66.8	72.1	70.6	49.8	72.1
24-Apr	71.0	76.3	77.0	83.4	85.8	80.6	68.2	58.1	47.2	40.6	37.1	31.8	33.0	30.5	27.2	26.9	27.6	26.3	28.1	32.1	44.1	42.0	42.3	43.6	48.4	85.8
25-Apr	44.8	46.2	48.1	48.8	49.9	50.2	46.3	38.6	32.3	26.5	24.6	24.2	22.6	21.8	20.6	19.6	19.7	19.7	21.5	25.1	27.7	29.7	32.5	35.7	32.4	50.2
26-Apr	38.0	40.2	44.2	46.3	48.1	50.3	49.9	49.0	43.7	37.5	30.2	22.3	18.3	17.4	18.9	21.0	24.0	31.6	39.3	48.4	58.8	62.5	64.6	68.6	40.5	68.6
27-Apr	73.8	75.6	76.4	79.1	84.7	76.9	61.5	56.1	51.2	44.0	39.2	36.4	34.0	33.8	32.3	31.2	31.2	31.3	32.8	38.7	53.3	54.6	54.4	56.1	51.6	84.7
28-Apr	58.0	60.4	60.4	62.6	63.3	60.6	54.2	46.0	36.4	29.3	24.8	20.3	22.7	25.1	25.3	24.6	25.6	24.4	26.5	29.9	35.1	41.3	43.0	46.2	39.4	63.3
29-Apr	53.8	59.6	65.0	63.7	69.3	67.6	61.0	52.8	48.4	45.3	41.3	41.2	53.7	50.6	53.4	49.0	53.2	60.8	75.8	68.6	81.5	76.8	77.4	77.1	60.3	81.5
30-Apr	75.7	86.8	90.6	93.5	94.0	93.8	91.7	83.2	74.1	67.9	62.5	56.3	49.6	48.8	56.8	53.7	47.9	72.2	78.3	89.8	89.3	90.9	91.1	91.3	76.2	94.0
Diurnal Average																										
Diurnal Maximum																										
M - Maintenance																										



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Kirby North - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	6	0.83	0.83
20 - 40	229	31.85	32.68
40 - 60	215	29.90	62.59
60 - 80	186	25.87	88.46
80 - 100	83	11.54	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 720



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

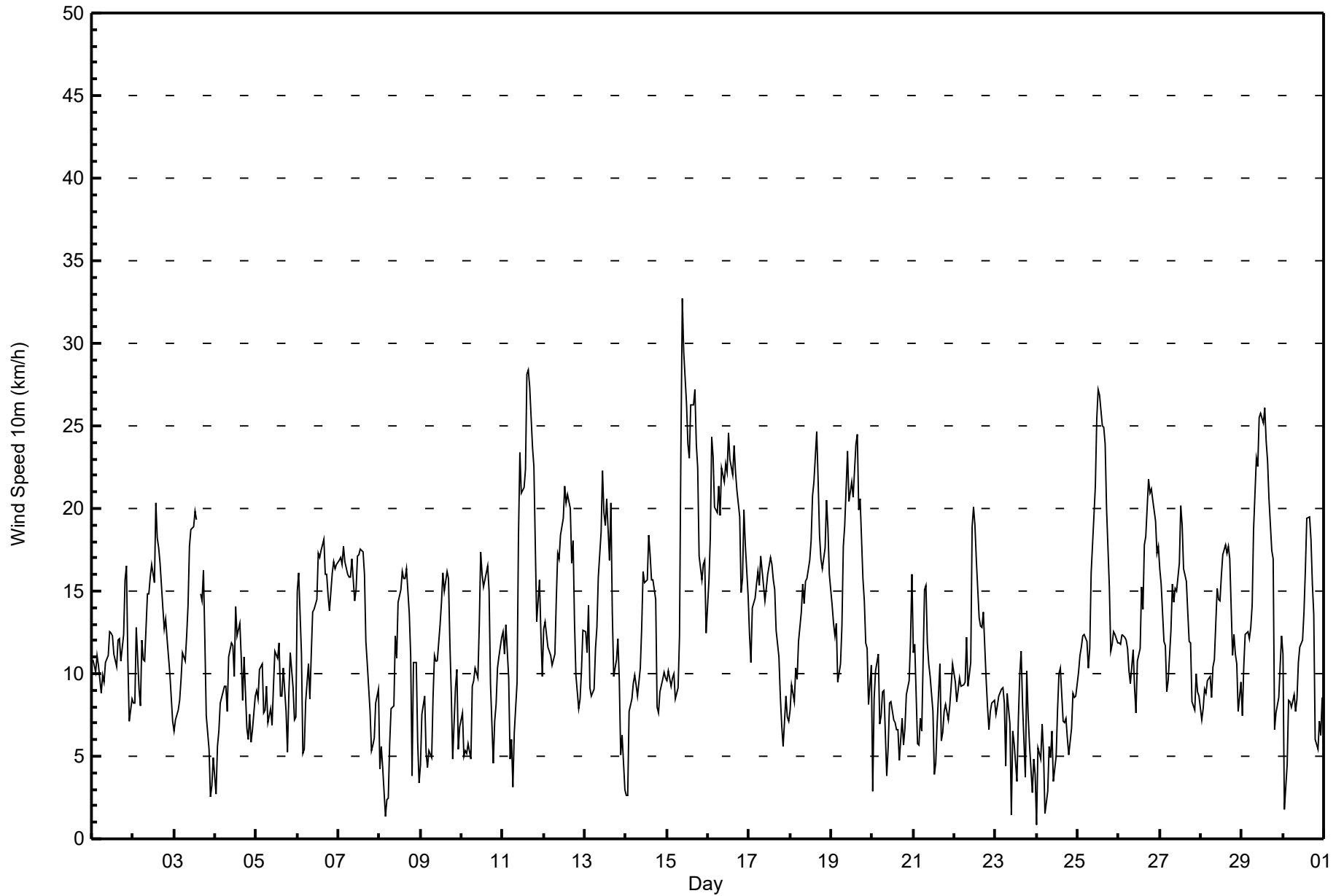
Kirby North - April 2025

Maximum Speed: 33 km/h on Apr 15 10:00										Maximum Daily Speed Average: 19.0 km/h on Apr 16										Hours in Service: 720							
Minimum Speed Value: 1 km/h on Apr 24 01:00										Minimum Daily Speed Average: 0.1 km/h on Apr 23										Hours of Data: 719							
Maximum Diurnal Speed Average: 10.2 km/h at hour 14										Minimum Diurnal Speed Average: 1.2 km/h at hour 21										Hours of Missing Data: 1							
Monthly Average Velocity: 4.7 km/h 255.4 deg										Percentiles: P ₁ = 3 P ₁₀ = 6 Q ₁ = 8 Median = 11 Q ₃ = 16 P ₉₀ = 20 P ₉₉ = 27										Percent Operational Time: 99.9							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
1-Apr	S11	S10	S10	S11	SSE11	SSE9	SSE10	SSE10	S11	S11	S13	S12	S12	SSW11	SSW10	SW12	SW12	SW11WNW12	NW16	NW17	NNW11	NNW7	NW9	SSW6.1	NW17		
2-Apr	NW8	WNW8WNW13		W9	SW8WSW12WSW11		W11WNW15WNW15WNW16		W17WNW15WNW20	NW18	NW18	NW17	NW14	NNW13	NNW13		N12	NNE10		N9	N7			NW11.1	WNW20		
3-Apr	NW7	NW7	NW8	NW8	NNW10	NNW11	NNW11	NNW12	NNW14	NNW18	NNW19	NNW19	NNW20	NNW19	M	NNW15		N14	NNW16	NNW12	NNW7	N5	NNW3	NNE3	ESE5	NNW10.9	NNW20
4-Apr	SSW3	S6	S7	S8	S9	S9	S9	S8	SW11WSW12WSW12WNW10WNW14WNW12		W13WNW11	NNW8	NNW11		N7	ENE6	ENE8	SE6	S7	S9					WSW3.9	WNW14	
5-Apr	SSW9	S8	S10	S11	S8	S8	S9	S7	SSW8	SW7	SW9	SW11	SW11	W12	WNW9	NW9	NNW10	NNW8		N5	NNE9	NE11	NE9	ENE7	E7	SW2.7	W12
6-Apr	ESE15	ESE16	SE11	ENE5	ENE5	ESE8	SE11	SE9	SE11	SE14	SSE14	SSE14	SSE17	SE17	SE17	SE18	SE16	SE16	SSE15	SSE14	SSE16	SSE17	S16	S17	SE12.9	SE18	
7-Apr	S17	S17	S17	S18	S17	S16	S16	SSE16	SSE17	SSE14	SSE15	SE17	SE17	SSE18	SSE17	SSE16	SSW12	SW11	SW8	S5	S6	SSE6	SSE8	SSE9	SSE13.1	S18	
8-Apr	S4	S6	SSE4	WNW1	S2	S2	SSW6	SW8	WSW8	W12WNW11WNW14	NW15	NW16	NNW16		N16	N16	NNW14	NNW11	NNW4WNW11WNW11	WSW6	WSW3				WNW5.8	N16	
9-Apr	SW5	S8	SSW9	S5	SSW4	SW5	SW5	WNW9WNW11WNW11	NW11	NW13	NW14WNW16WNW15	W16WNW16WNW12	WNW9	W5	WSW9WSW10	SW5	WSW7								W7.7	W16	
10-Apr	WSW8	SSW5	S5	SSW5	S6	S5	S9	SSW10	SW10	SW10	SW13WSW17WSW16WSW15	SW16	SW17	SW15	SW9	SSW5	SE7	SE8	SE10	SE11	SE12				SSW8.0	WSW17	
11-Apr	SE13	ESE11	E13	E10	SE5	S6	WSW3	WNW6	NW9WNW18WNW23WNW21WNW21	W22WSW28	W28	W27	W24	W23	W18WSW13	W16	W12	SW10							W10.9	W28	
12-Apr	SW13	SW13	SW12	SW11	SW11	SSW10	SW11WSW14	W17WSW17	W18	W19	W21WNW20	NW21	NW20	NW17	NW18	NW13	NW10	NW8	NW8WNW10WNW13						W11.7	W21	
13-Apr	WNW13WNW11WNW14	WNW9	WSW9	W9WSW11WNW13WNW16	NW19	NW22	NW20	NW19	NW21	NW17	NNW20	NW14	NNW10	NW11WNW12	W10	W5	NW6	N3							NW12.2	NW22	
14-Apr	ENE3	SSE3	SSW8	S8	S9	S10	S9	S9	SSW10	SW13	SW16	SW16	SW16	SW18	SW17	SW16	SW16	SW14	SSW8	S8	S9	S10	S10	S10	SSW10.0	SW18	
15-Apr	SSE10	S10	S9	S10	SSE10	S8	SSW9	SW12	W24	W33	W30	W26	W24	W23WNW26WNW26	W27	W24WNW22WNW17	W16WSW17WSW17WSW12								W15.3	W33	
16-Apr	WSW16WNW18WNW24WNW23WNW20WNW20WNW21WNW20	NW22	NW22	NW23	NW22	NW25	NW23	NW22	NW24	NW22	NW21	NW19	NNW15	N16	N20	NNW18	NNW15								NW19.0	NW25	
17-Apr	NNW12	NNW11	NNW14	N15	N15	N16	N15	N17	N15	NNW14	N15	N16	N17	N17	N16	N15	NNE13	NNE11	NE9	ENE7	E6	ESE9	SE7	SE7	N10.6	N17	
18-Apr	SSE8	S9	SSW8	S10	SSW10	S12	S14	S15	S14	S16	S16	S17	S18	SSW21	SSW22	SSW25	SSW22	SSW18	S17	S16	S18	S20	S19	S16	S15.6	SSW25	
19-Apr	S14	SSW13WSW12WSW13	SSW9	SW11WSW13	W18	W19WNW24WNW20WNW21WNW22WNW21WNW24WNW24WNW20	W21WNW16	W14WNW12WNW12	WSW8	W11															W14.0	WNW24	
20-Apr	SW3	W9WNW10WNW11	NNW7		N7	NNE9	NE9	NNE4	N5	N8	N8	N7	NW7	N7	NNW7	NW5	NE7	NE6	ENE7	E9	ENE10	ENE12	ESE16		NNE4.4	ESE16	
21-Apr	ESE11	ESE12	E6	E6	ESE7	E6	ESE15	SE15	SE12	E11	E10	E8	E4	ESE5	E7	E11	ENE6	SSE6	SE8	SSE8	SSE7	SSE8	SSE9	SSE11	ESE7.8	SE15	
22-Apr	S10	S8	S9	S10	SSE9	S9	S9	SSW12	SW9	SW11	SW19	SW20	SW19WSW17	SW13	W13	SW13	SW14WSW10	SW8	S7	S8	S8	S8			SSW10.2	SW20	
23-Apr	S8	S8	S9	S9	S9	S8	S4	SSW9	SSW7	WSW1	WNW6	WNW6	NE3	NNE7	NE10	ENE11	NNW8	NNE4	NE10	N7	N6	NNW3	NNW5	N4	SE0.1	ENE11	
24-Apr	SE1	SW6	SW5	S7	SSW5	WSW2	S3	SW6	WSW5	NW6	W3	W5	SW8	SW10	SW10	WNW7	WNW7	SW7	SW6	SSE5	SE7	SE9	SSE9	SSE9	SW3.8	SW10	
25-Apr	SSE10	SSE11	SSE12	SSE12	SSE12	SSE12	SSE10	S11	S16	S20	S21	SSW25	SSW27	SSW27	SSW25	SSW25	SSW24	SSW20	SSW15	S11	S12	S13	S12	S12	S16.0	SSW27	
26-Apr	S12	S12	S12	S12	S12	S12	S10	SSW9	SW11	SW9	SW8	NW11WNW12	NW15	NW14	NW18	NNW18	NNW22	NNW21	N21	N20	N19	NNE17	NNE18		NW4.8	NNW22	
27-Apr	N16	N15	N12	N12	N9	N10	N13	N15	N14	N15	NNW15	NW17	NW20	NW19	NW16	NNW16	NNW14	N12	N12	NNE8	ENE8	E10	ESE9	SE9	N10.5	NW20	
28-Apr	SSE7	S8	S9	S9	S10	S10	S9	SSW10	SSW11	SW15	SSW15	SSW14	SW16	SW17	SSW18	SSW17	SSW18	SSW17	S11	SSW12	SSW11	SSW11	S8	SSW9	SSW11.7	SSW18	
29-Apr	SSW7	SSW10	SW12	SW13	SW12	SW13WSW14WSW19	W23	W23	W26	W26WNW25	NW26WNW24	NW23	NW21	NW17	NNE17	WNW7	SW8	W9	W11WNW12						W12.9	NW26	
30-Apr	W11	SSW2	SSW5	SSW8	SSW8	SSW8	SSW9	WSW8	W8WSW11WSW12	W12WNW14WNW16WNW19WNW19WNW18	N15	NNE14	NE6	NW5	N7	N6	NNW9								WNW6.4	WNW19	
SSW4.2SSW4.8SSW4.5SSW4.5SSW4.9SSW4.7SSW5.0 SW5.3WSW6.5 W7.7 W8.6 W9.1 W9.5 W10.2 W9.3WNW9.0WNW8.5WNW6.8 NW4.7WNW2.6 W1.2 SW1.5SSW2.1SSW2.8																								Diurnal Average			
S17WNW18WNW24WNW23WNW20WNW20WNW21WNW20 W24 W33 W30 W26 SSW27 SSW27 WSW28 W28 W27 W24 W23 N21 N20 S20 S19 NNE18																								Diurnal Maximum			
M - Maintenance																											
All monthly, daily, and diurnal averages have been calculated using vector methods																											



Wood Buffalo Environmental Association
Hourly Averages

Wind Speed 10m (WS10) - km/h
Kirby North - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Kirby North - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	59	8.21	8.21
6 - 11	307	42.70	50.90
12 - 19	268	37.27	88.18
20 - 28	83	11.54	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
Kirby North - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	4	4	1	3	0	3	2	3	9	8	6	5	4	1	2	4	59
6 - 11	14	6	9	9	12	7	15	24	71	29	32	13	10	23	16	17	307
12 - 19	29	5	0	1	1	6	11	18	36	13	31	20	17	32	25	23	268
20 - 28	3	0	0	0	0	0	0	0	3	11	1	1	16	25	19	4	83
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	15	10	13	13	16	28	45	119	61	70	39	49	81	62	48	719

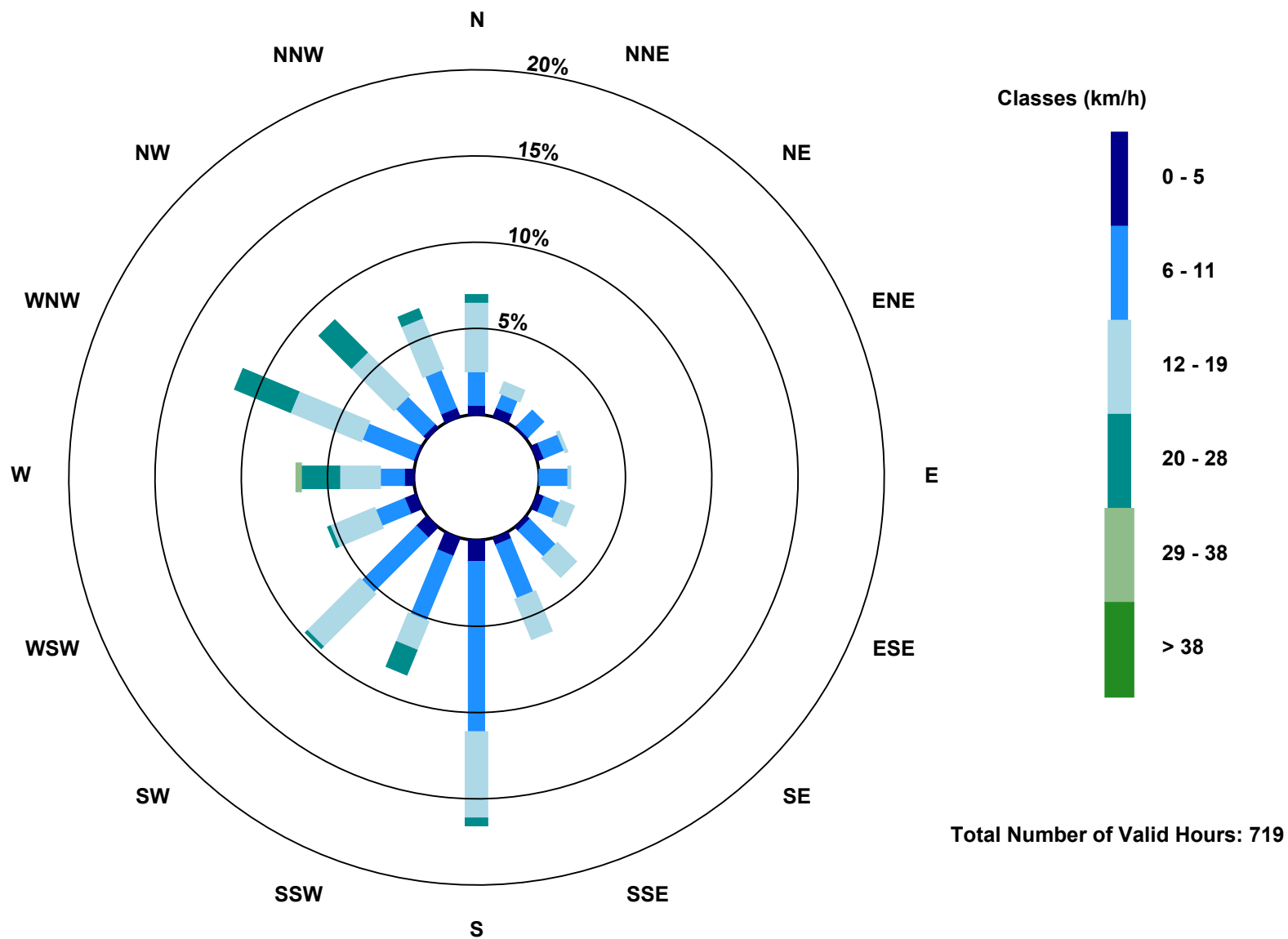
Total Number of Valid Hours: 719

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Kirby North





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Kirby North - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 9 km/h on Apr 25 13:00																	Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9									
Minimum Value: 1 km/h on Apr 4 03:00																										
Percentiles: P ₁ = 1 P ₁₀ = 2 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 7																										
Day	Hourly Period Ending At (MST)																								Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	3	3	3	3	3	2	2	2	3	3	3	4	4	3	3	4	3	3	4	4	5	3	2	2	5	
2-Apr	2	3	3	4	5	2	2	3	3	4	5	5	5	5	5	5	5	4	4	3	3	3	2	2	5	
3-Apr	2	2	2	2	3	3	3	3	4	5	5	6	6	5	M	4	4	4	4	2	2	1	1	1	6	
4-Apr	2	1	1	1	1	1	1	2	3	3	3	3	4	4	4	4	3	3	2	1	2	1	1	1	4	
5-Apr	1	2	1	2	2	2	2	2	2	2	2	3	3	4	4	3	3	2	1	3	1	2	3	3	4	
6-Apr	4	3	3	2	2	3	3	2	3	4	4	4	4	4	4	4	4	4	4	3	4	4	5	4	5	
7-Apr	4	4	4	5	4	5	4	4	5	4	4	4	4	5	5	4	4	3	2	1	1	1	2	2	5	
8-Apr	3	2	2	1	2	2	3	2	3	3	3	3	3	4	4	4	4	4	4	2	3	3	3	4	4	
9-Apr	3	3	2	2	3	3	2	4	2	3	3	4	4	4	4	5	4	4	2	2	3	2	3	2	5	
10-Apr	2	2	2	2	2	2	2	2	3	3	4	5	5	5	4	4	4	3	1	1	1	2	2	3	5	
11-Apr	5	3	3	3	2	1	2	2	5	5	6	5	5	6	7	7	7	6	6	4	3	4	4	2	7	
12-Apr	2	3	3	2	2	2	2	3	4	4	5	5	5	5	6	5	4	5	4	3	2	2	2	2	6	
13-Apr	3	3	3	4	3	2	3	3	4	5	6	6	5	6	6	6	5	3	4	2	3	3	2	1	6	
14-Apr	1	1	1	1	1	1	2	2	3	3	4	4	4	5	4	4	4	4	3	2	2	2	2	2	5	
15-Apr	2	2	2	3	2	2	2	3	8	7	8	7	6	6	6	7	7	6	6	5	4	3	4	5	8	
16-Apr	4	6	7	6	5	5	5	5	6	6	6	6	6	6	7	6	6	6	6	6	5	6	5	4	7	
17-Apr	3	3	4	4	4	4	4	5	4	4	4	4	4	4	4	3	3	3	2	1	2	1	2	1	5	
18-Apr	2	2	2	2	2	3	4	4	4	5	5	5	6	6	6	7	7	6	5	4	5	5	5	4	7	
19-Apr	3	3	3	5	2	2	4	4	6	6	6	6	6	5	7	6	5	5	5	5	3	5	3	3	7	
20-Apr	2	5	5	4	3	2	2	2	2	2	3	3	3	3	2	3	3	2	1	1	1	2	3	4	5	
21-Apr	3	3	2	3	3	4	4	4	3	4	4	4	3	3	3	4	4	2	2	2	1	1	2	2	4	
22-Apr	2	2	2	2	2	2	2	3	2	3	4	5	5	5	4	6	4	4	2	2	1	1	1	1	6	
23-Apr	2	1	1	2	2	3	2	3	2	2	2	3	3	4	5	4	2	2	4	2	2	2	2	1	5	
24-Apr	2	1	1	2	3	2	2	2	2	3	4	4	3	5	3	3	3	4	2	1	1	1	1	2	5	
25-Apr	2	2	2	2	2	2	3	3	5	6	8	8	9	8	8	7	7	6	5	3	3	3	3	3	9	
26-Apr	3	2	2	3	2	3	2	3	3	2	4	3	5	5	4	5	7	5	6	5	5	4	4	4	7	
27-Apr	4	3	3	3	2	2	4	4	4	4	5	4	5	5	5	5	5	4	3	3	2	2	2	2	5	
28-Apr	1	1	2	1	1	2	2	3	3	4	5	5	6	6	6	6	5	5	4	5	5	4	2	3	6	
29-Apr	2	2	3	3	2	2	3	5	5	6	7	7	7	7	6	6	6	5	6	3	3	3	5	4	7	
30-Apr	5	2	3	2	2	2	2	2	2	2	2	3	4	4	6	5	5	5	3	3	3	1	1	2	6	
Diurnal Maximum																										
M - Maintenance																										



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

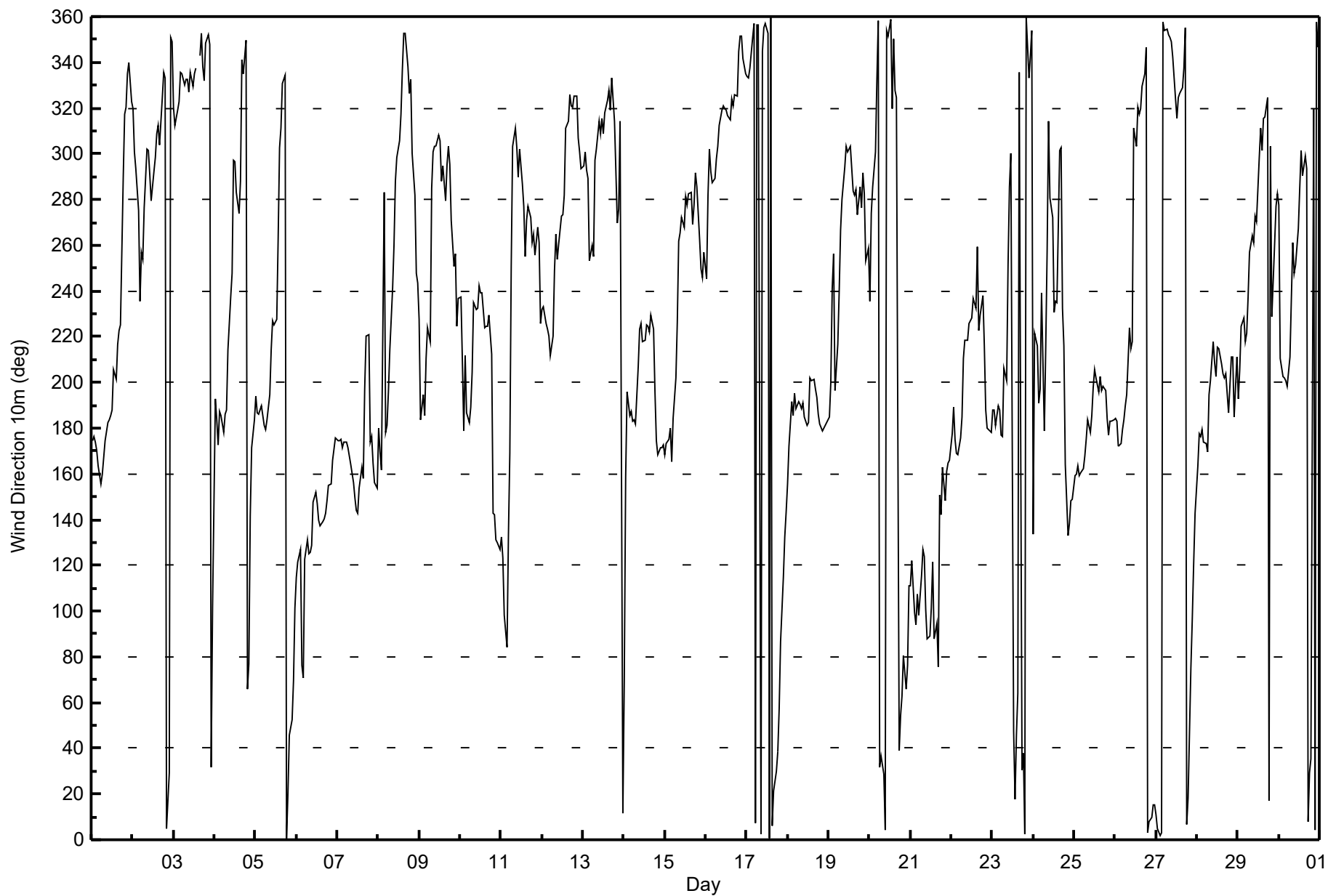
Kirby North - April 2025

Direction of Maximum Speed: 265 deg on Apr 15 10:00																				Hours in Service:		720				
Direction of Maximum Daily Speed Average: 314.4 deg on Apr 16																				Hours of Data:		719				
Direction of Minimum Speed: 134 deg on Apr 24 01:00										Direction of Minimum Daily Speed Average: 0.1 deg on Apr 23										Hours of Missing Data:		1				
Monthly Average Direction: 255.4 deg																				Percent Operational Time:		99.9				
Day	Hourly Period Ending At (MST)																								Daily Average	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	174	177	174	170	164	156	160	167	175	183	184	186	188	206	201	217	223	225	290	317	320	335	340	323		205.6
2-Apr	319	301	294	275	236	257	254	276	302	301	291	280	292	299	309	313	304	325	336	333	5	29	351	349		304.6
3-Apr	320	312	319	323	336	335	330	332	333	327	335	330	335	337	M	343	353	338	332	348	352	348	32	102		335.8
4-Apr	193	184	172	187	185	178	186	188	214	237	248	297	297	283	274	288	341	335	349	66	77	141	171	183		237.3
5-Apr	194	187	186	190	185	181	179	184	194	214	227	225	228	263	303	311	331	334	0	20	46	53	70	101		216.2
6-Apr	114	121	127	76	71	123	131	125	126	128	148	152	147	140	137	139	140	143	148	155	156	166	171	176		141.2
7-Apr	174	174	175	172	174	174	171	168	164	156	149	144	143	154	163	158	197	220	221	174	176	165	156	154		167.5
8-Apr	180	170	162	283	178	181	196	214	241	260	288	298	306	317	337	353	353	338	327	333	300	282	248	243		299.8
9-Apr	228	184	195	185	210	224	218	285	301	303	304	308	305	288	294	280	296	303	296	271	251	257	225	237		275.8
10-Apr	238	210	179	212	187	182	189	204	235	232	232	242	239	239	224	225	225	229	212	143	142	131	130	127		209.3
11-Apr	132	123	98	84	133	169	251	303	311	303	290	302	287	277	255	271	277	272	261	265	255	268	261	226		270.3
12-Apr	232	233	226	224	220	212	220	249	265	254	261	273	274	282	311	314	326	321	320	325	325	307	301	294		276.0
13-Apr	295	301	293	289	253	260	255	297	302	314	309	316	309	318	323	328	319	333	314	292	269	276	314	11		304.4
14-Apr	70	159	196	186	187	183	184	182	207	223	226	218	219	225	224	222	230	224	196	174	169	172	171	172		204.3
15-Apr	168	173	175	180	165	184	202	226	262	265	272	268	281	278	282	283	269	278	291	285	262	250	246	257		260.3
16-Apr	245	282	302	292	287	289	298	303	312	319	321	320	319	317	315	324	321	326	325	345	352	352	342	335		314.4
17-Apr	334	333	338	351	357	7	356	357	3	345	355	357	353	0	360	6	22	30	39	57	87	115	132	144		4.5
18-Apr	156	172	192	186	195	189	191	190	189	191	185	182	182	202	201	202	197	194	186	182	179	180	181	182		188.2
19-Apr	185	200	241	256	197	216	240	267	280	294	303	301	302	303	283	282	285	274	286	277	292	283	253	259		273.8
20-Apr	236	274	286	301	332	358	32	36	29	4	354	351	359	320	350	328	325	39	55	63	81	66	77	111		12.7
21-Apr	111	122	99	94	108	98	116	127	124	101	88	89	101	122	88	95	75	151	142	163	148	161	164	166		120.0
22-Apr	178	189	175	169	168	176	185	211	219	218	226	227	228	237	233	259	223	229	238	216	188	180	179	178		211.3
23-Apr	188	188	181	190	188	177	177	206	201	252	285	300	48	18	46	64	336	31	38	2	360	333	343	354		145.7
24-Apr	134	221	216	191	197	239	179	216	258	314	280	272	231	236	235	302	303	233	216	164	133	138	148	149		216.4
25-Apr	159	160	163	160	161	162	168	175	184	178	186	198	205	202	196	202	196	198	196	184	177	183	183	183		186.3
26-Apr	184	183	172	174	179	184	190	195	224	215	218	311	303	320	317	319	330	335	347	3	8	9	15	15		318.5
27-Apr	11	5	2	3	358	354	355	352	351	349	343	324	316	325	326	329	337	355	7	18	75	96	121	143		352.4
28-Apr	163	178	176	180	174	173	170	195	201	218	209	203	216	215	208	204	202	204	187	199	211	211	185	211		199.0
29-Apr	193	206	225	228	218	222	237	257	264	261	273	270	299	311	301	315	316	325	17	303	229	260	277	282		276.6
30-Apr	277	211	203	202	201	198	211	237	261	248	251	267	285	302	290	299	293	8	30	36	320	4	357	347		286.9
192.8 195.9 208.7 210.2 197.3 200.2 206.1 232.9 253.5 263.5 266.2 270.8 274.5 278.6 274.3 285.2 285.7 290.4 306.0 300.3 270.0 221.4 198.7 192.7																										
Diurnal Average																										
M - Maintenance																										
All monthly, daily, and diurnal averages have been calculated using vector methods																										



Wood Buffalo Environmental Association
Hourly Averages

Wind Direction 10m (WD10) - deg
Kirby North - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Kirby North - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 99 deg on Apr 24 01:00																		Hours in Service: 720 Hours of Data: 719 Hours of Missing Data: 1 Hours of Calibration: 0 Percent Operational Time: 99.9							
Minimum Value: 5 deg on Apr 24 21:00																									
Percentiles: P ₁ = 8 P ₁₀ = 13 Q ₁ = 15 Median = 19 Q ₃ = 23 P ₉₀ = 36 P ₉₉ = 77																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	17	17	17	17	16	18	17	18	20	22	22	26	23	23	22	21	16	15	37	15	17	16	13	12	37
2-Apr	12	15	13	29	50	13	14	20	15	17	24	25	22	18	20	23	22	23	22	16	25	15	15	14	50
3-Apr	19	15	14	13	14	13	15	17	17	19	20	23	19	19	M	20	21	19	21	14	21	16	28	14	28
4-Apr	61	11	10	8	9	8	9	18	17	21	24	33	23	29	31	31	32	18	18	14	7	26	11	12	61
5-Apr	11	11	12	12	14	23	17	25	23	25	21	22	25	26	37	23	21	13	13	10	8	11	27	34	37
6-Apr	14	13	16	46	40	21	17	20	23	23	22	24	21	19	17	17	18	17	16	15	15	18	18	18	46
7-Apr	18	18	18	18	19	19	19	17	17	18	18	18	18	21	25	21	24	20	15	25	18	22	15	14	25
8-Apr	53	30	52	79	52	72	36	26	18	14	22	15	20	15	21	19	18	24	15	54	15	15	35	77	79
9-Apr	50	24	13	24	34	40	32	28	14	17	20	21	22	23	29	26	21	24	20	41	15	13	41	19	50
10-Apr	17	35	22	30	22	37	13	18	21	26	22	20	25	24	21	19	19	19	27	11	10	12	12	13	37
11-Apr	39	14	18	17	46	25	59	26	25	17	20	19	21	20	15	17	16	15	13	15	16	19	22	15	59
12-Apr	12	13	18	11	13	12	14	15	18	17	20	20	19	20	17	21	17	17	16	14	17	16	16	13	21
13-Apr	14	16	14	26	23	20	17	15	16	17	18	22	17	20	23	21	26	34	22	13	23	64	20	20	64
14-Apr	17	45	11	10	11	9	15	18	21	21	21	22	19	18	18	18	17	18	19	15	13	14	15	15	45
15-Apr	14	15	18	17	13	15	18	19	17	14	16	19	21	24	18	20	19	19	15	16	17	12	13	22	24
16-Apr	13	18	17	16	15	16	15	16	16	16	16	16	15	15	18	16	16	17	17	17	17	18	17	15	18
17-Apr	14	14	15	18	17	18	17	17	17	19	18	18	19	19	19	18	21	18	18	15	19	8	10	13	21
18-Apr	13	18	18	17	19	18	19	19	22	24	23	24	24	23	22	22	22	22	20	19	18	19	17	18	24
19-Apr	18	21	22	34	17	14	16	19	23	18	16	18	19	20	21	19	23	20	17	22	17	22	25	17	34
20-Apr	77	24	28	19	21	21	14	16	61	45	27	36	47	41	44	46	66	20	13	8	10	18	24	14	77
21-Apr	16	18	35	49	38	57	14	16	24	31	43	63	84	71	61	27	66	38	22	21	10	13	12	14	84
22-Apr	20	15	15	16	15	16	20	17	19	20	17	17	19	24	26	37	19	18	15	14	18	10	11	11	37
23-Apr	23	16	11	13	14	30	51	22	25	84	45	60	76	52	40	21	28	62	19	26	20	66	23	40	84
24-Apr	99	16	23	13	15	58	32	32	52	53	92	87	42	35	44	49	50	45	20	14	5	10	8	12	99
25-Apr	13	13	13	12	12	14	18	22	24	23	27	22	23	21	23	23	22	22	22	19	19	20	19	18	27
26-Apr	18	16	14	15	15	17	19	23	22	25	49	31	40	23	19	18	19	17	18	16	15	15	14	15	49
27-Apr	16	15	14	13	13	15	18	19	23	24	26	27	20	23	27	26	30	25	17	21	14	11	15	13	30
28-Apr	13	12	12	11	11	13	17	22	26	22	27	31	29	28	26	28	24	21	23	27	20	25	21	20	31
29-Apr	14	18	13	13	13	12	16	15	14	18	19	17	21	21	22	20	20	20	19	38	31	19	19	19	38
30-Apr	26	72	71	17	14	17	16	35	28	16	18	24	29	23	20	21	23	37	12	24	45	20	14	15	72
99 72 71 79 52 72 59 35 61 84 92 87 84 71 61 49 66 62 37 54 45 66 41 77																									
Diurnal Maximum																									
M - Maintenance																									



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS512 HANGINGSTONE EXPANSION APRIL 2025

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

May 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
APRIL 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	64.3	0	6.9	0
H2S (ppb) Average	685	35	35	100	2	0	0.3	0
NO2 (ppb) Average	684	35	36	99.86	7.7	0	2.9	-
NO (ppb) Average	684	35	36	99.86	3.5	-	0.6	-
NOX (ppb) Average	684	35	36	99.86	11	-	3.4	-
Temperature 2 m (C) Average	720	0	0	100	20.3	-	13.5	-
Relative Humidity (%) Average	720	0	0	100	98.7	-	92.6	-
Wind Speed 10 m (km/h) Average	720	0	0	100	28	-	20	-
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 - HANGINGSTONE EXPANSION (AMS512)
APRIL 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

Parameter	Number	Mean	StnDev	Total	Percentile						
					Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	687	1.66	5	-	0	0	0.1	0.3	0.9	3.5	64.3
H2S (ppb) Average	685	0.1	0.2	-	0	0	0	0.1	0.1	0.2	2
NO2 (ppb) Average	684	1.17	1.2	-	0	0.2	0.3	0.8	1.6	2.7	7.7
NO (ppb) Average	684	0.13	0.2	-	0	0	0	0.1	0.1	0.3	3.5
NOX (ppb) Average	684	1.3	1.3	-	0	0.2	0.4	0.8	1.7	3.1	11
Temperature 2 m (C) Average	720	4.31	6.4	-	-15.1	-3.9	-0.3	5	8.9	12	20.3
Relative Humidity (%) Average	720	55.15	22.6	-	18.3	26.3	35.9	52.8	74.2	89.4	98.7
Wind Speed 10 m (km/h) Average	720	11.8	6	-	1	5	8	11	16	20	28
Wind Direction 10 m (deg) Average	720	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
APRIL 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2	08 Apr 2025 08:00	08 Apr 2025 08:00	1	Maintenance - reinitiated daily QA check



Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO₂) - ppb

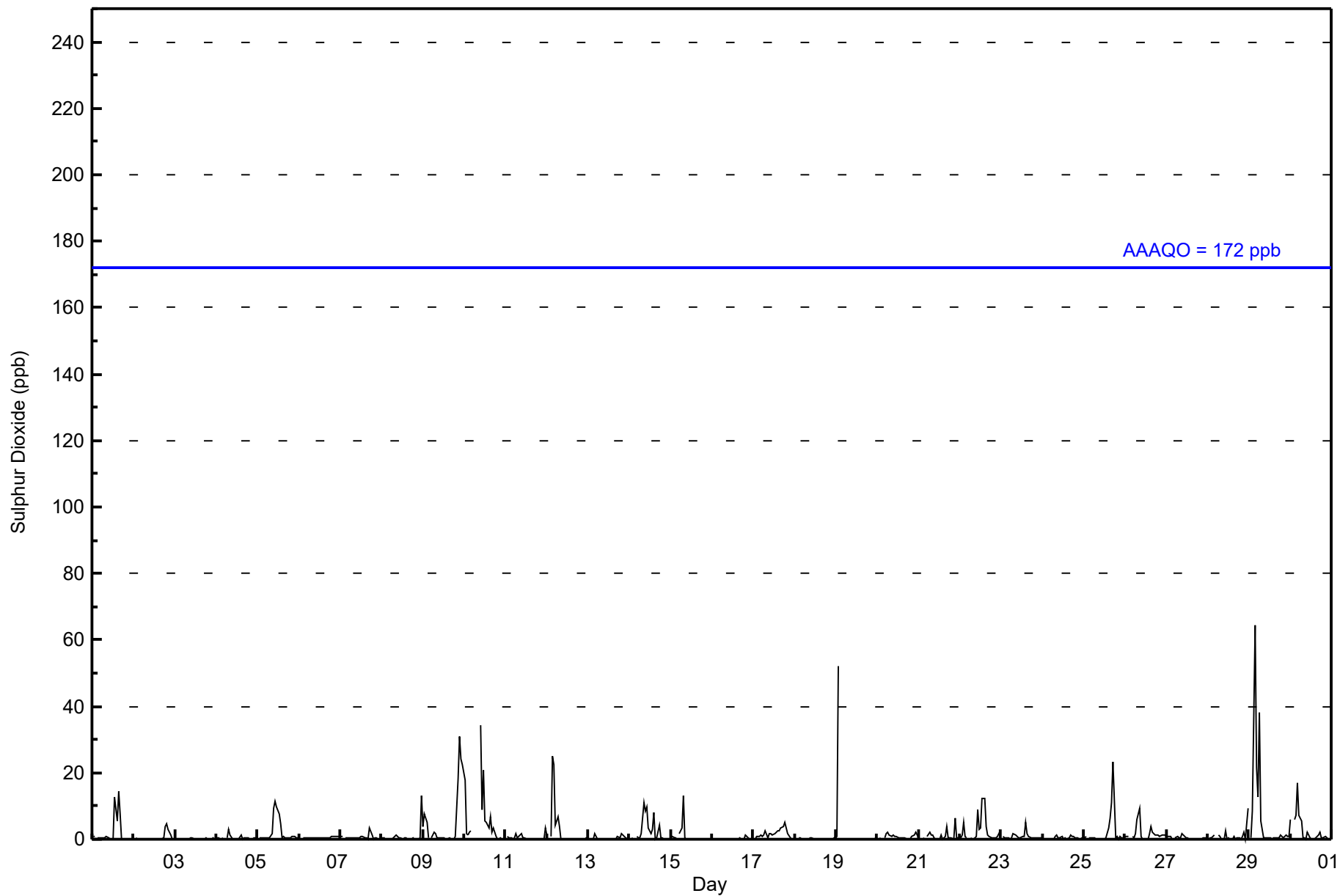
Hangingsstone Expansion - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 64.3 ppb on Apr 29 04:00 Maximum Daily Average: 6.9 ppb on Apr 29																				Hours in Service: 720 Hours of Data: 687						
Minimum Value: 0.0 ppb on Apr 2 00:00 Minimum Daily Average: 0.1 ppb on Apr 16 Maximum Diurnal Average: 4.2 ppb at hour 4 Minimum Diurnal Average: 0.6 ppb at hour 20 Monthly Average: 1.66 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 Q ₃ = 0.9 P ₉₀ = 3.5 P ₉₉ = 23.3																				Hours of Missing Data: 33 Hours of Calibration: 33 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-Apr	0.9	0.8	Z	0.5	0.4	0.3	0.3	0.4	0.9	0.4	0.2	0.1	0.2	12.9	5.7	14.6	7.7	0.2	0.1	0.0	0.1	0.0	0.0	0.0	2.0	14.6
2-Apr	0.0	0.0	0.5	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	0.6	3.8	4.5	2.9	1.1	0.0	0.1	0.6	4.5
3-Apr	0.1	0.2	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.0	0.1	0.2	0.4	0.2	0.1	0.4
4-Apr	0.4	0.3	0.2	0.1	0.6	Z	0.2	2.8	1.3	0.1	0.0	0.1	0.1	0.2	1.1	0.2	0.2	0.2	0.3	0.1	0.0	0.2	0.4	0.4	0.4	2.8
5-Apr	Z	0.6	0.6	0.3	0.4	0.5	0.4	0.3	1.9	9.5	11.4	9.6	7.7	4.5	0.6	0.7	0.5	0.5	0.4	0.5	0.7	0.7	0.5	0.4	2.3	11.4
6-Apr	0.4	Z	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.5	0.7	1.0	1.0	0.8	0.8	0.6	1.0
7-Apr	0.8	0.8	Z	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.7	0.8	0.4	0.4	0.2	3.3	1.5	0.1	0.3	0.3	0.1	0.1	0.6	3.3
8-Apr	0.2	0.3	0.3	Z	0.2	0.1	0.0	0.4	1.3	0.8	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.3	0.2	0.1	0.1	0.2	12.9	0.8	12.9
9-Apr	3.9	7.4	5.3	0.4	Z	0.5	2.0	1.7	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.8	18.3	31.0	24.0	22.5	5.2	31.0
10-Apr	17.7	1.8	1.2	2.0	2.7	Z	C	C	C	34.4	8.9	20.8	5.4	4.9	3.5	6.9	2.3	3.4	0.9	0.2	0.1	0.3	0.1	0.2	5.9	34.4
11-Apr	Z	1.0	0.4	0.2	0.2	0.3	1.6	0.5	1.2	1.7	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	3.5	0.6	3.5
12-Apr	1.3	Z	0.8	25.0	22.5	4.4	6.7	3.8	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	0.2	0.5	2.9	25.0
13-Apr	0.1	0.0	Z	0.0	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.7	0.5	1.6	1.4	0.8	0.3	0.2	0.3	1.6
14-Apr	0.1	0.1	0.3	Z	0.7	0.2	0.3	1.8	11.1	8.4	9.9	3.5	1.7	3.1	8.1	0.2	0.2	4.1	0.4	0.2	0.1	0.1	0.1	0.1	2.4	11.1
15-Apr	0.4	0.9	0.4	0.4	Z	1.7	3.3	13.3	0.4	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	0.9	13.3
16-Apr	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	0.2	0.0	0.0	1.1	0.8	0.5	0.1	0.0	0.1	1.1
17-Apr	Z	0.1	0.7	1.0	1.4	1.0	1.2	2.3	0.4	1.7	1.6	1.4	1.7	2.2	2.4	2.6	3.3	4.0	5.2	3.2	1.6	0.3	0.1	0.1	1.7	5.2
18-Apr	0.1	Z	0.5	0.3	0.1	0.0	0.0	0.1	0.1	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.3	0.1	0.5
19-Apr	0.9	51.9	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.2	2.4	51.9
20-Apr	0.1	0.2	0.2	Z	0.6	1.5	1.9	1.3	0.8	1.2	0.9	0.8	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.8	1.2	2.0	1.3	0.8	2.0
21-Apr	0.5	0.1	0.1	0.4	Z	0.8	1.9	1.2	1.1	0.3	0.1	0.2	0.2	1.1	0.2	1.1	3.6	0.4	0.3	0.2	0.2	6.4	0.6	0.2	0.9	6.4
22-Apr	0.2	1.5	5.3	0.9	0.3	Z	0.3	0.2	0.2	0.8	9.1	2.9	3.2	12.2	12.1	3.8	1.2	0.8	0.4	0.6	0.3	0.6	0.8	2.4	2.6	12.2
23-Apr	Z	0.9	0.3	0.3	0.4	0.1	0.2	1.8	1.5	1.1	0.4	0.6	0.7	0.7	4.9	1.9	0.8	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.8	4.9
24-Apr	0.4	Z	0.2	0.1	0.1	0.2	0.2	0.7	1.1	0.3	0.3	0.8	0.2	0.3	0.2	0.3	1.1	1.0	0.7	0.3	0.3	0.2	0.2	0.3	0.4	1.1
25-Apr	0.5	0.8	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	3.5	6.2	10.9	23.2	0.5	0.8	0.1	0.8	0.4	0.6	2.2	23.2
26-Apr	0.9	0.8	0.6	Z	1.0	0.6	1.7	6.0	9.2	0.9	0.1	0.0	0.0	0.0	1.7	3.9	2.2	1.4	1.4	1.2	1.0	1.4	1.3	1.3	1.7	9.2
27-Apr	1.1	1.0	0.8	0.1	Z	0.3	1.0	0.6	0.4	1.9	1.1	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.4	0.5	1.9
28-Apr	0.0	0.2	0.6	0.9	1.4	Z	1.3	0.7	0.0	0.1	2.7	0.0	0.3	0.0	0.0	0.9	0.2	0.2	0.3	0.2	1.0	2.1	0.1	9.1	1.0	9.1
29-Apr	Z	0.3	8.3	64.3	21.4	12.6	38.3	5.5	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	1.5	0.7	0.5	1.1	0.9	1.0	6.9	64.3
30-Apr	5.7	Z	5.9	7.1	16.8	7.2	5.5	0.4	0.2	0.1	2.1	0.2	0.2	0.1	0.2	0.9	1.1	2.0	0.3	0.6	0.7	0.2	0.1	0.0	2.5	16.8
																									Diurnal Average	
																									Diurnal Maximum	
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



Wood Buffalo Environmental Association
Hourly Averages

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Sulphur Dioxide (SO₂) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	662	96.36	96.36
11 - 20	13	1.89	98.25
21 - 60	11	1.60	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 (SO₂) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 10	40	28	11	2	5	16	38	62	94	74	33	45	53	66	58	37	662
11 - 20	0	0	1	0	0	0	0	0	0	1	10	1	0	0	0	0	13
21 - 60	0	0	0	0	0	0	0	0	0	0	6	5	0	0	0	0	11
61 - 110	0	0	0	0	0	0	0	0	0	0	1	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	40	28	12	2	5	16	38	62	94	75	50	51	53	66	58	37	687

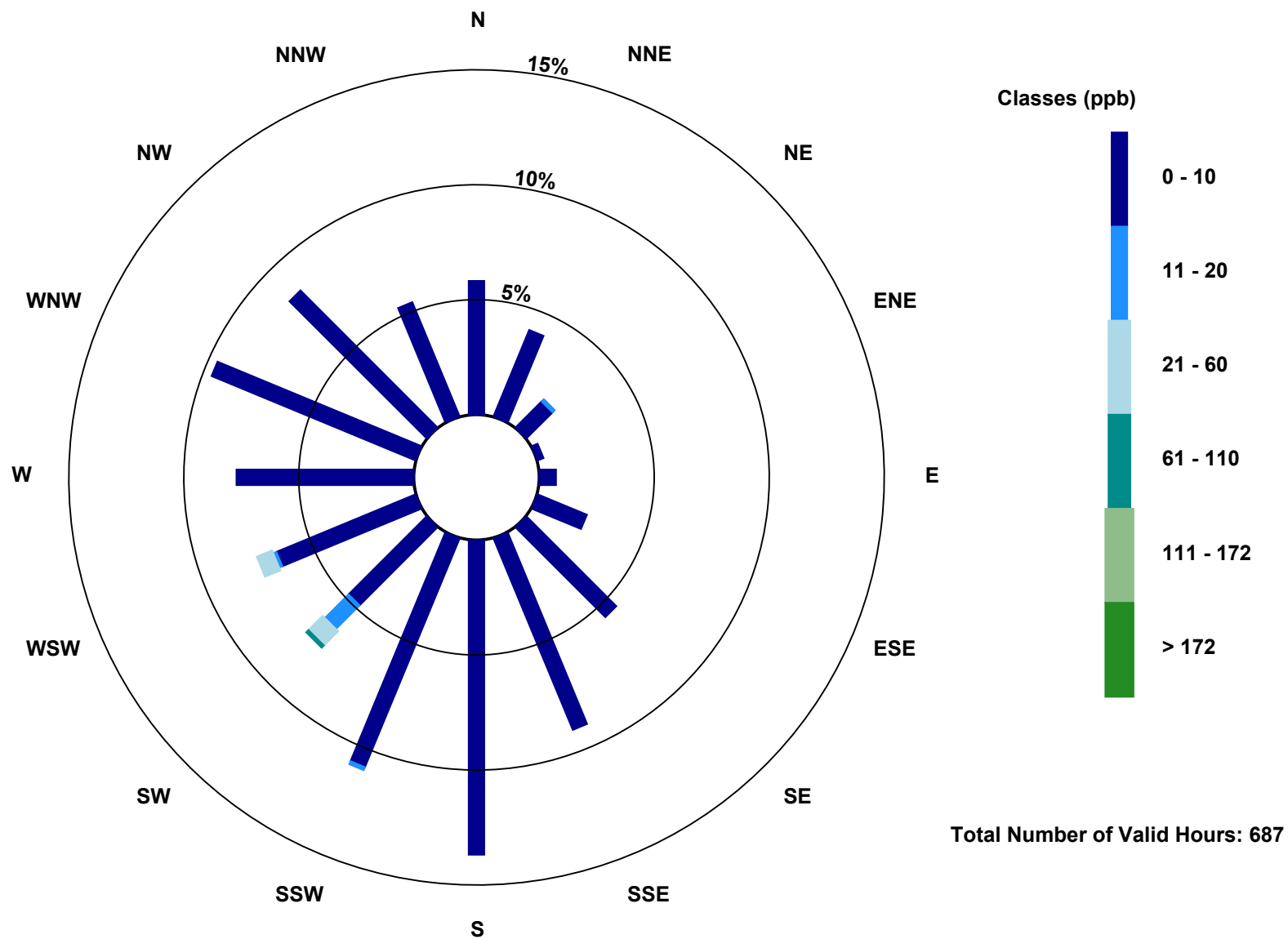
Total Number of Valid Hours: 687

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

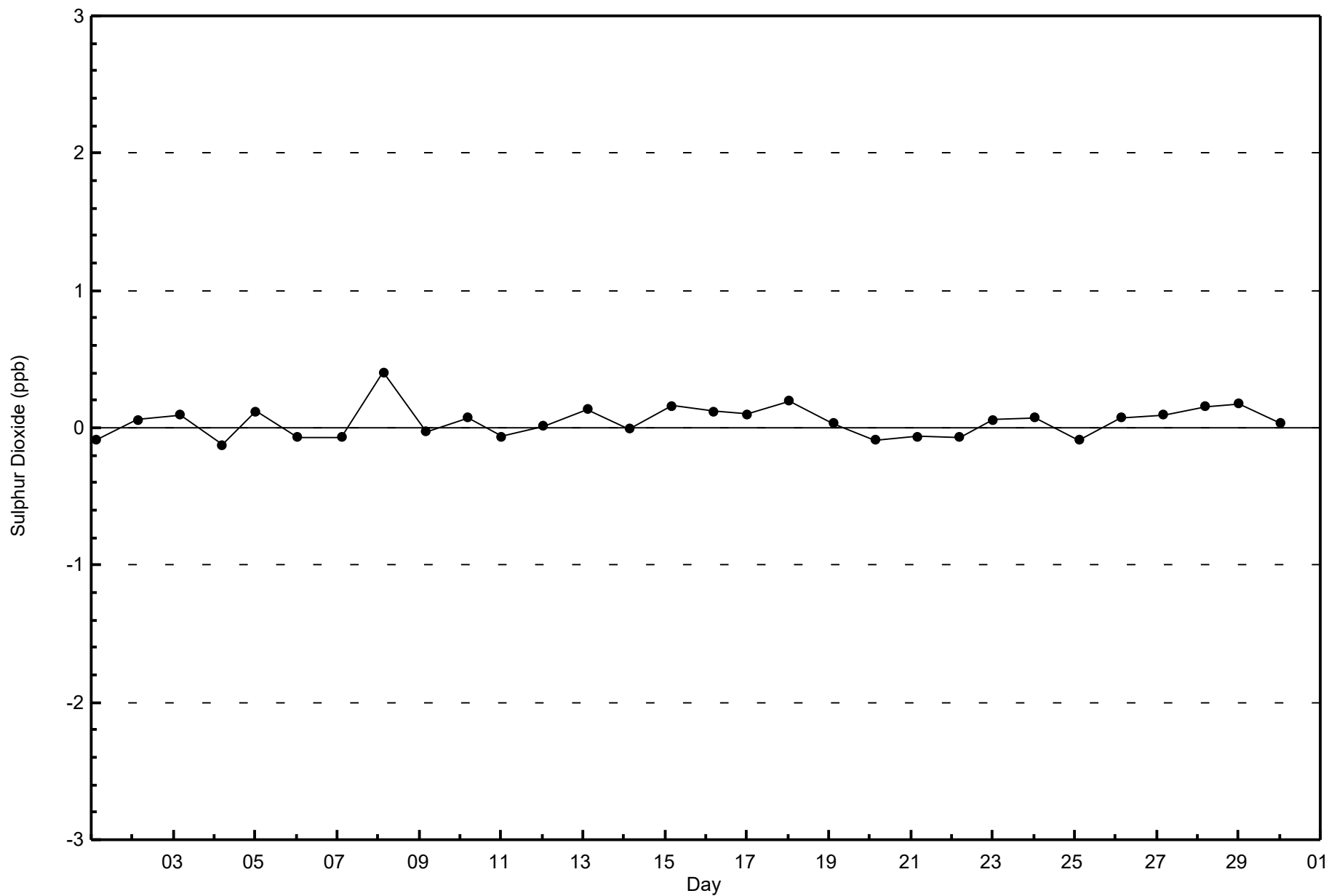
Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

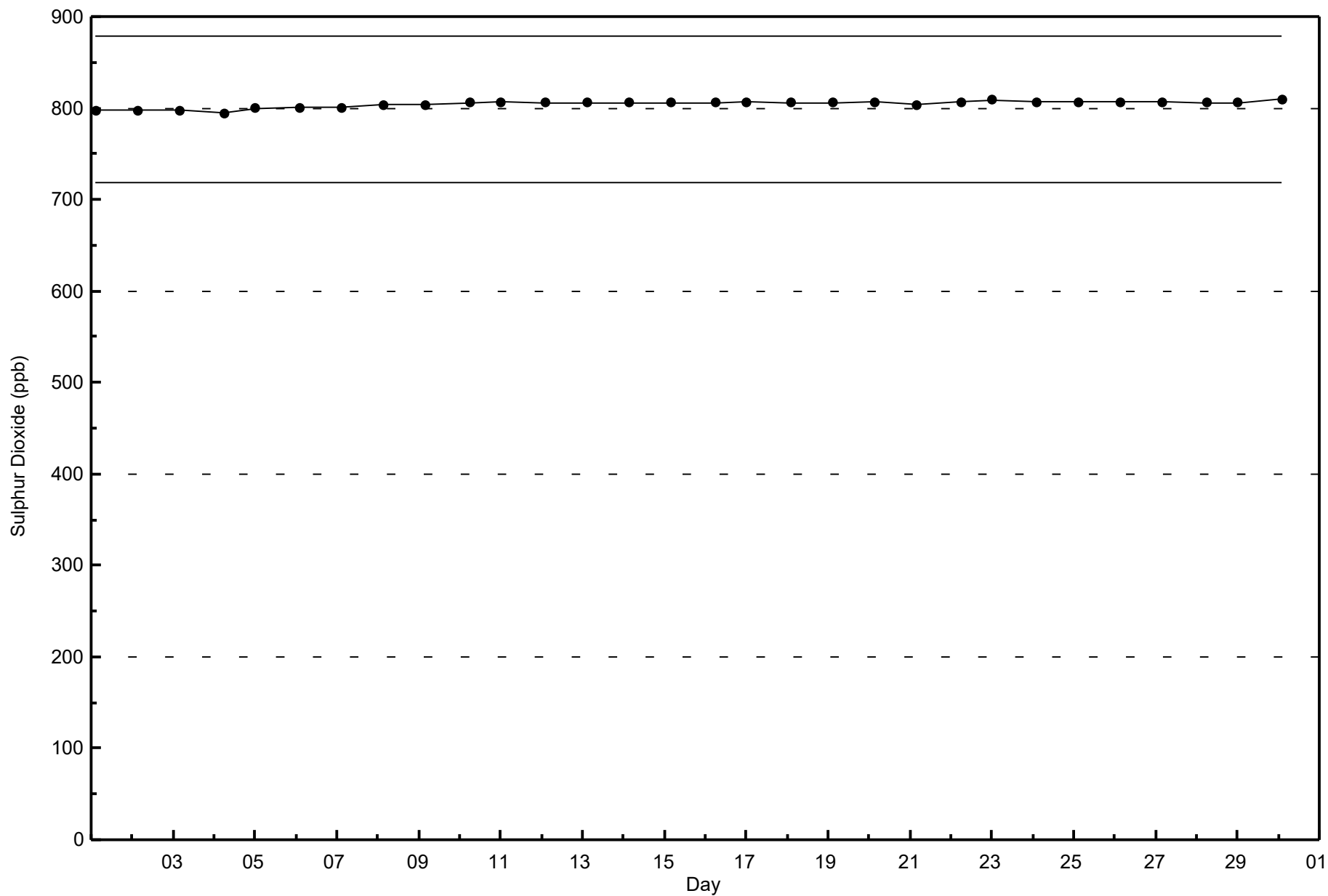
Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Span Responses

Sulphur Dioxide (SO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H₂S) - ppb

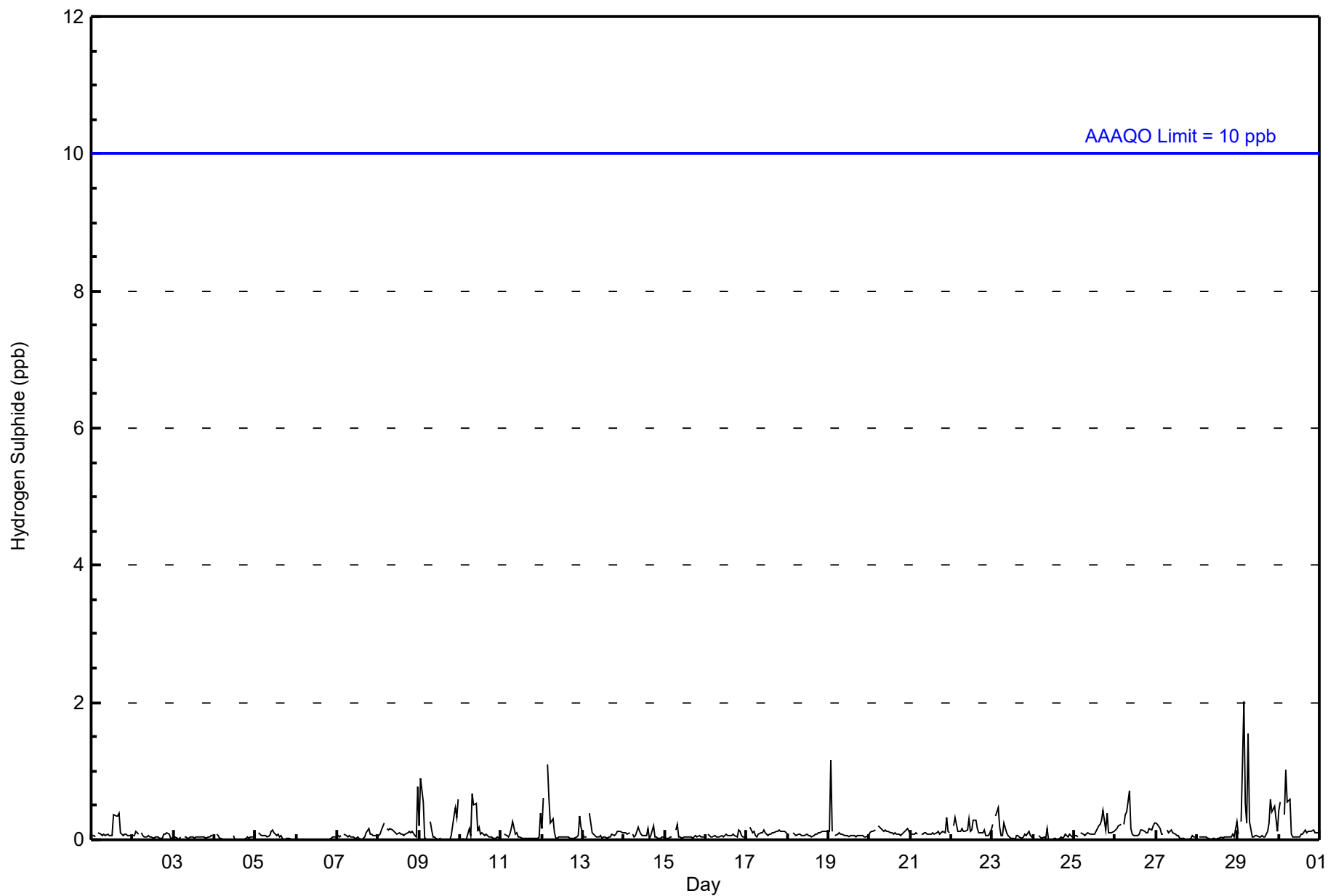
Hangingsstone Expansion - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																				Hours in Service: 720							
Maximum Value: 2.0 ppb on Apr 29 04:00																				Maximum Daily Average: 0.3 ppb on Apr 29		Hours of Data: 685					
Minimum Value: 0.0 ppb on Apr 4 13:00																				Minimum Daily Average: 0.0 ppb on Apr 6		Hours of Missing Data: 35					
Maximum Diurnal Average: 0.2 ppb at hour 4																				Minimum Diurnal Average: 0.1 ppb at hour 13		Hours of Calibration: 35					
Monthly Average: 0.10 ppb																				Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.2 P ₉₉ = 0.7		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-Apr	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
2-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
3-Apr	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	0.1	0.1	0.0	0.1	0.1
4-Apr	Z	0.1	0.1	0.0	0.0	0.0	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
5-Apr	0.1	Z	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
6-Apr	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	0.0
7-Apr	0.1	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Apr	0.1	0.1	0.1	0.2	Z	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	0.0	0.8	0.1	0.8	0.8
9-Apr	0.2	0.9	0.6	0.0	0.0	Z	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.3	0.6	0.2	0.9	0.9
10-Apr	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.7	0.5	0.5	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	0.7	0.7
11-Apr	0.0	Z	0.1	0.1	0.0	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.4	0.4
12-Apr	0.2	0.6	Z	1.1	0.6	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	1.1	1.1
13-Apr	0.0	0.0	0.0	Z	0.4	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
14-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
15-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2
16-Apr	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1
17-Apr	0.0	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2
18-Apr	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
19-Apr	0.1	1.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	1.2
20-Apr	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2
21-Apr	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.3	0.3
22-Apr	Z	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	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	0.2	0.3	0.3
23-Apr	0.2	Z	0.3	0.5	0.2	0.1	0.1	0.3	0.1	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	0.0	0.1	0.5	0.5
24-Apr	0.0	0.0	Z	0.1	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	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.2
25-Apr	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.4
26-Apr	0.1	0.2	0.2	0.2	Z	0.2	0.4	0.4	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.7
27-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.2
28-Apr	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.3	0.3
29-Apr	0.1	Z	0.3	2.0	0.5	0.2	1.6	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.6	0.4	0.5	0.3	0.1	0.3	2.0	2.0
30-Apr	0.4	0.6	Z	0.4	1.0	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.0	1.0
Diurnal Average																											
Diurnal Maximum																											
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb																											



Wood Buffalo Environmental Association
Hourly Averages

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Hydrogen Sulphide (H₂S) - ppb
Hangingsstone Expansion - April 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
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 2	40	28	11	2	5	17	38	62	96	74	52	47	53	67	57	36	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	40	28	11	2	5	17	38	62	96	74	52	47	53	67	57	36	685

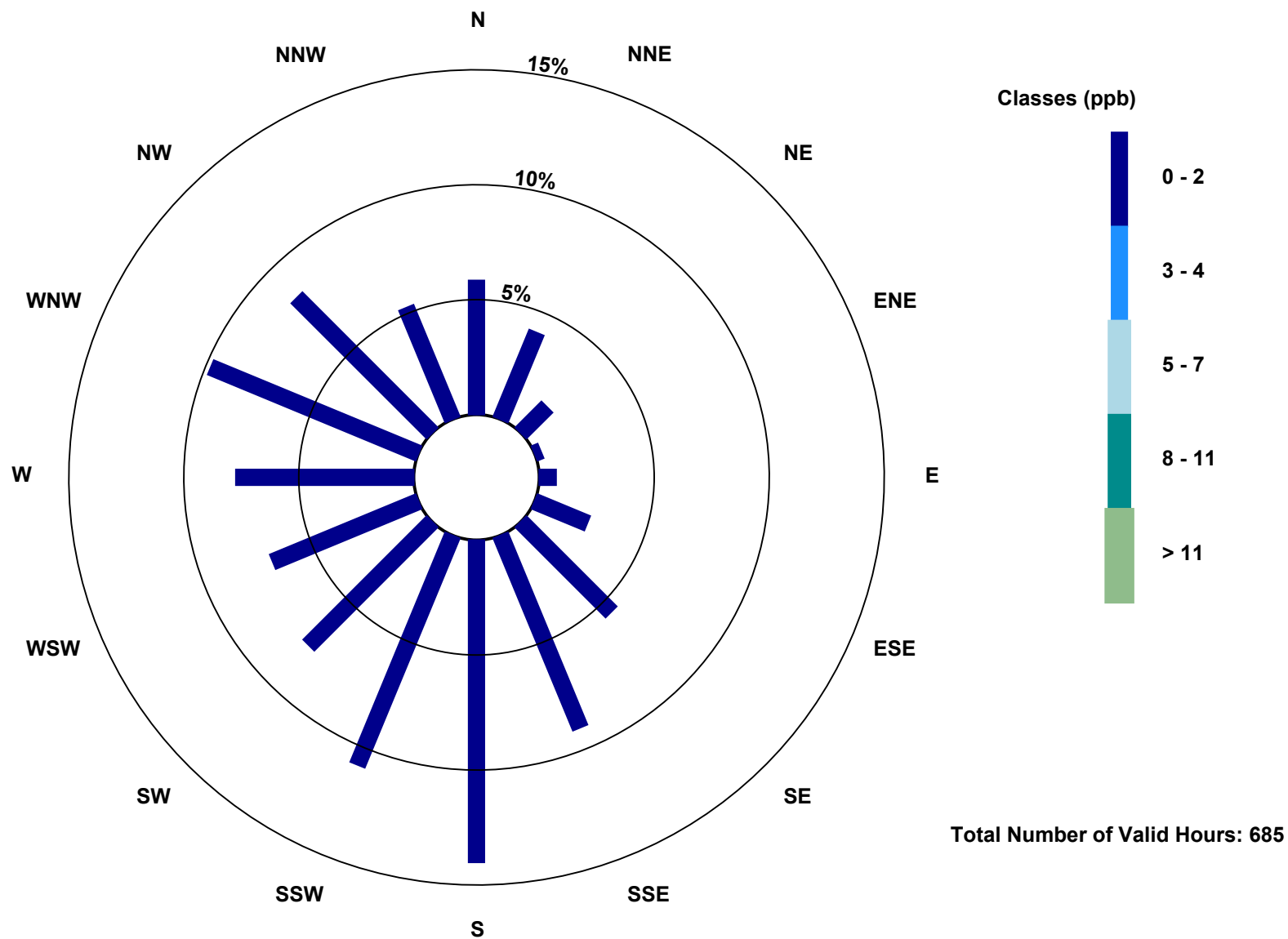
Total Number of Valid Hours: 685

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

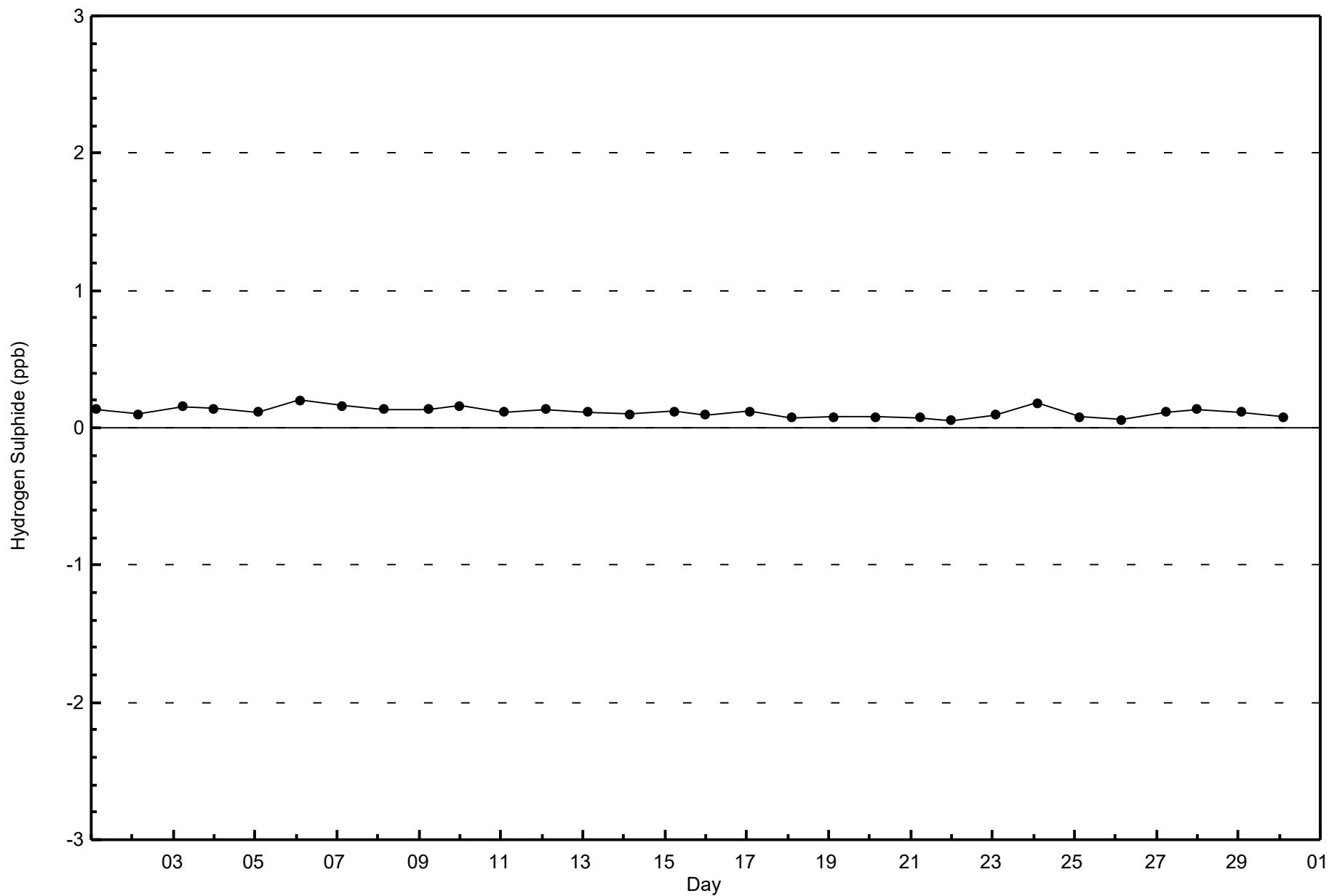
Hydrogen Sulphide (H_2S) - ppb
Hangingstone Expansion

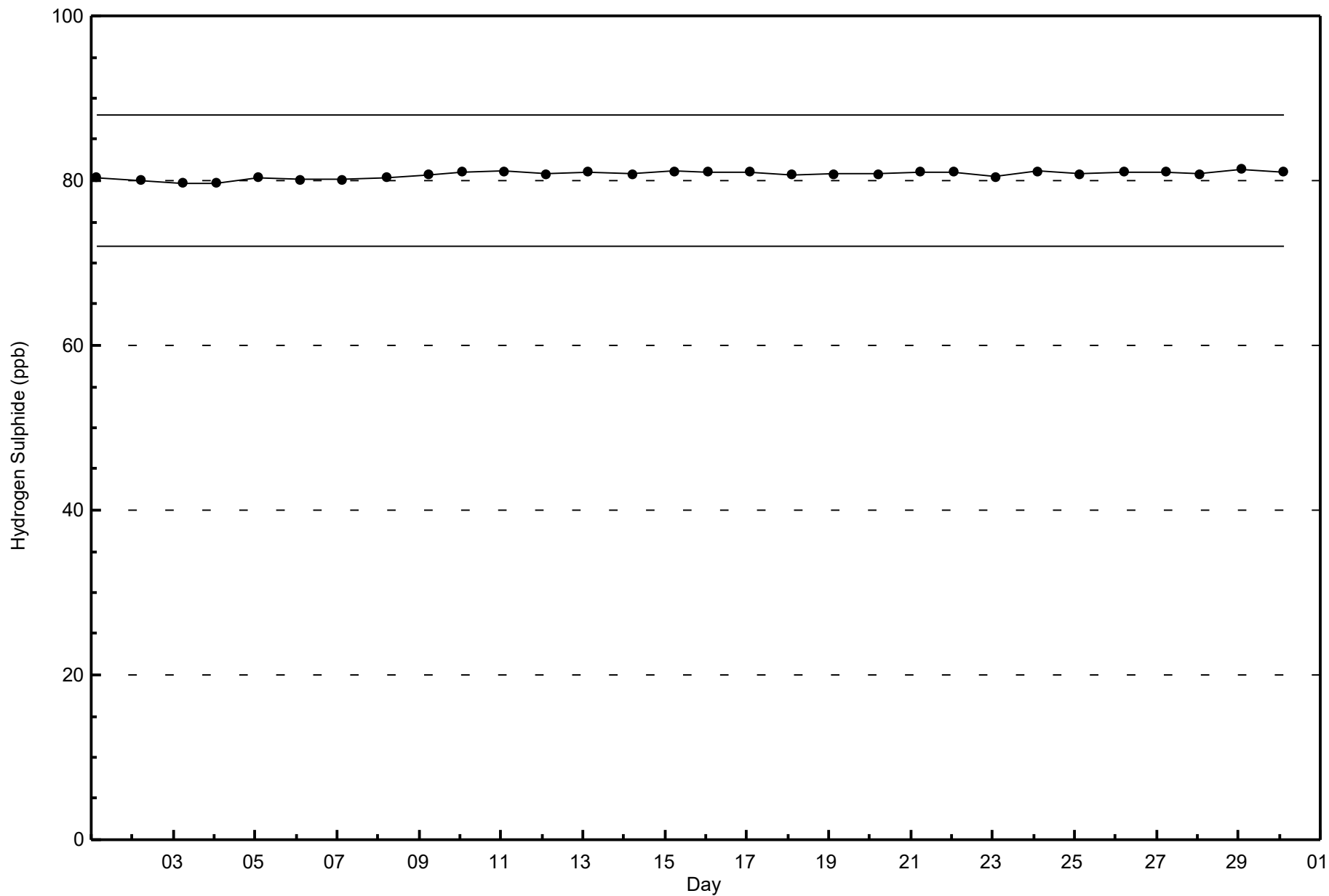




Wood Buffalo Environmental Association
Zero Responses

Hydrogen Sulphide (H₂S) - ppb
Hangingstone Expansion - April 2025







Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

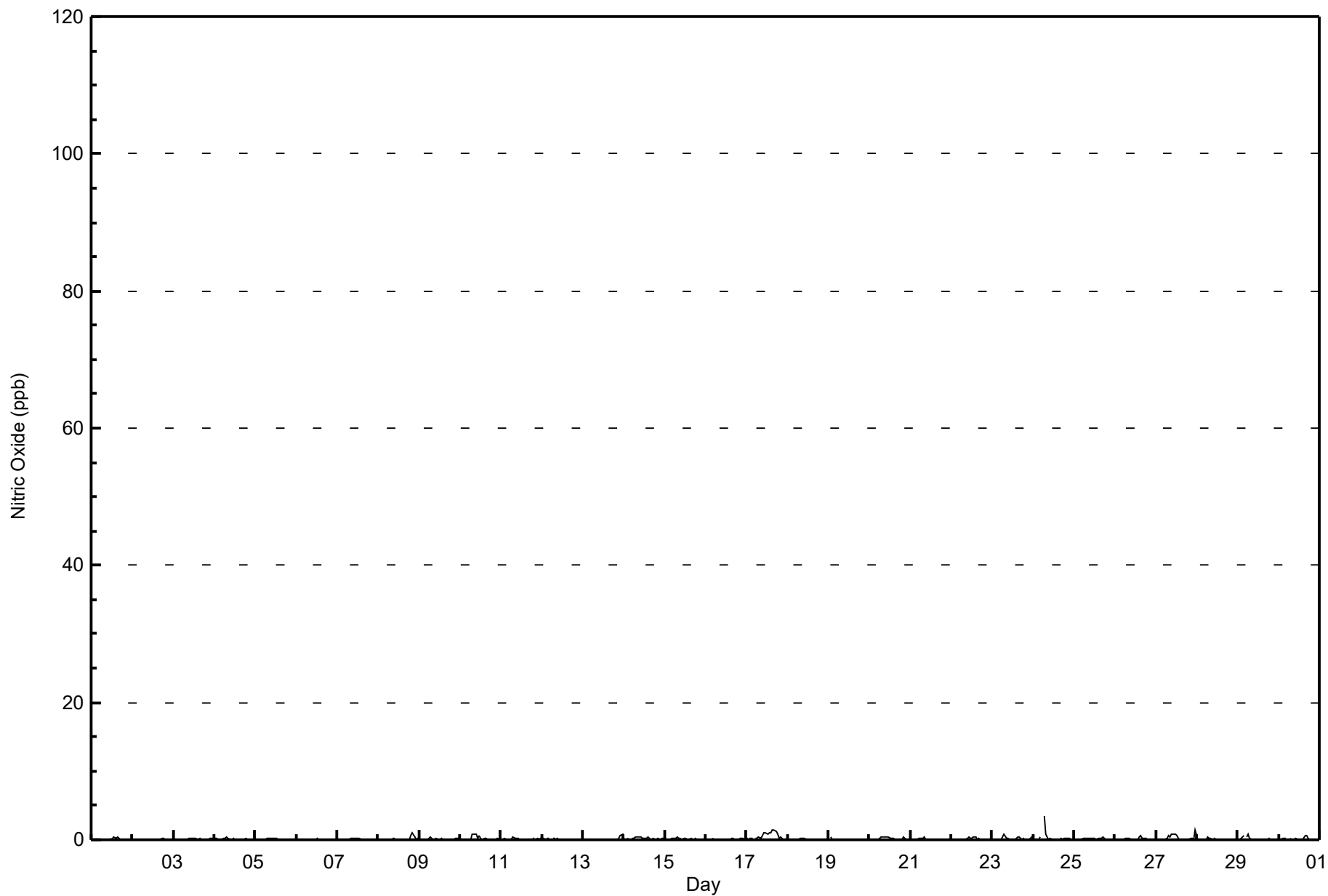
Hangingsone Expansion - April 2025

Maximum Value: 3.5 ppb on Apr 24 07:00																		Maximum Daily Average: 0.6 ppb on Apr 17										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 2 00:00																		Minimum Daily Average: 0.0 ppb on Apr 6										Hours of Data: 684	
Maximum Diurnal Average: 0.3 ppb at hour 7																		Minimum Diurnal Average: 0.1 ppb at hour 1										Hours of Missing Data: 36	
Monthly Average: 0.13 ppb																		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.1 P ₉₀ = 0.3 P ₉₉ = 1.1										Hours of Calibration: 35	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	0.1	0.1	0.3	0.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5			
2-Apr	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
3-Apr	0.1	0.1	Z	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	0.1	0.0	0.0	0.1	0.3	0.1	0.1	0.3			
4-Apr	0.2	0.1	0.1	Z	0.1	0.1	0.2	0.4	0.1	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	0.1	0.4			
5-Apr	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3			
6-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1			
7-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2			
8-Apr	0.0	Z	0.0	0.0	0.0	0.0	0.0	M	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.7	1.0	0.4	0.1	0.2	0.1	1.0			
9-Apr	0.1	0.1	Z	0.0	0.0	0.1	0.4	0.2	0.0	0.0	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	0.1	0.4			
10-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.8	0.9	0.9	0.3	0.6	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.9			
11-Apr	0.1	0.1	0.2	0.1	Z	0.1	0.0	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3			
12-Apr	0.0	0.1	0.1	0.2	0.2	Z	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	0.2			
13-Apr	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.8	0.1	0.8			
14-Apr	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.4	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4			
15-Apr	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4			
16-Apr	0.1	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
17-Apr	0.1	0.1	0.1	0.1	Z	0.1	0.3	0.3	0.3	0.6	1.1	1.1	0.8	1.1	1.1	1.4	1.4	1.2	0.7	0.2	0.5	0.1	0.1	0.0	0.6	1.4			
18-Apr	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3			
19-Apr	Z	0.4	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	0.4			
20-Apr	0.0	Z	0.0	0.1	0.0	0.1	0.2	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.1	0.4			
21-Apr	0.0	0.0	Z	0.0	0.1	0.2	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3			
22-Apr	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.2	0.4	0.2	0.1	0.4	0.4	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4			
23-Apr	0.0	0.0	0.0	0.0	Z	0.1	0.4	0.9	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.3	0.0	0.2	0.0	0.0	0.0	0.1	0.4	0.1	0.9			
24-Apr	0.2	0.1	0.1	0.1	0.5	Z	3.5	0.8	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.3	3.5			
25-Apr	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	0.2	0.2	0.2	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.4			
26-Apr	0.0	Z	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.3	0.7	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.7			
27-Apr	0.1	0.0	Z	0.0	0.0	0.0	0.3	0.7	0.4	0.8	0.8	0.9	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	1.4	0.3	1.4			
28-Apr	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.3			
29-Apr	0.0	0.0	0.1	0.7	Z	0.4	0.9	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.9			
30-Apr	0.0	0.1	0.1	0.2	0.1	Z	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.7	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.7			
																								Diurnal Average					
																								Diurnal Maximum					
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitric Oxide (NO) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitric Oxide (NO) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	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	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	684

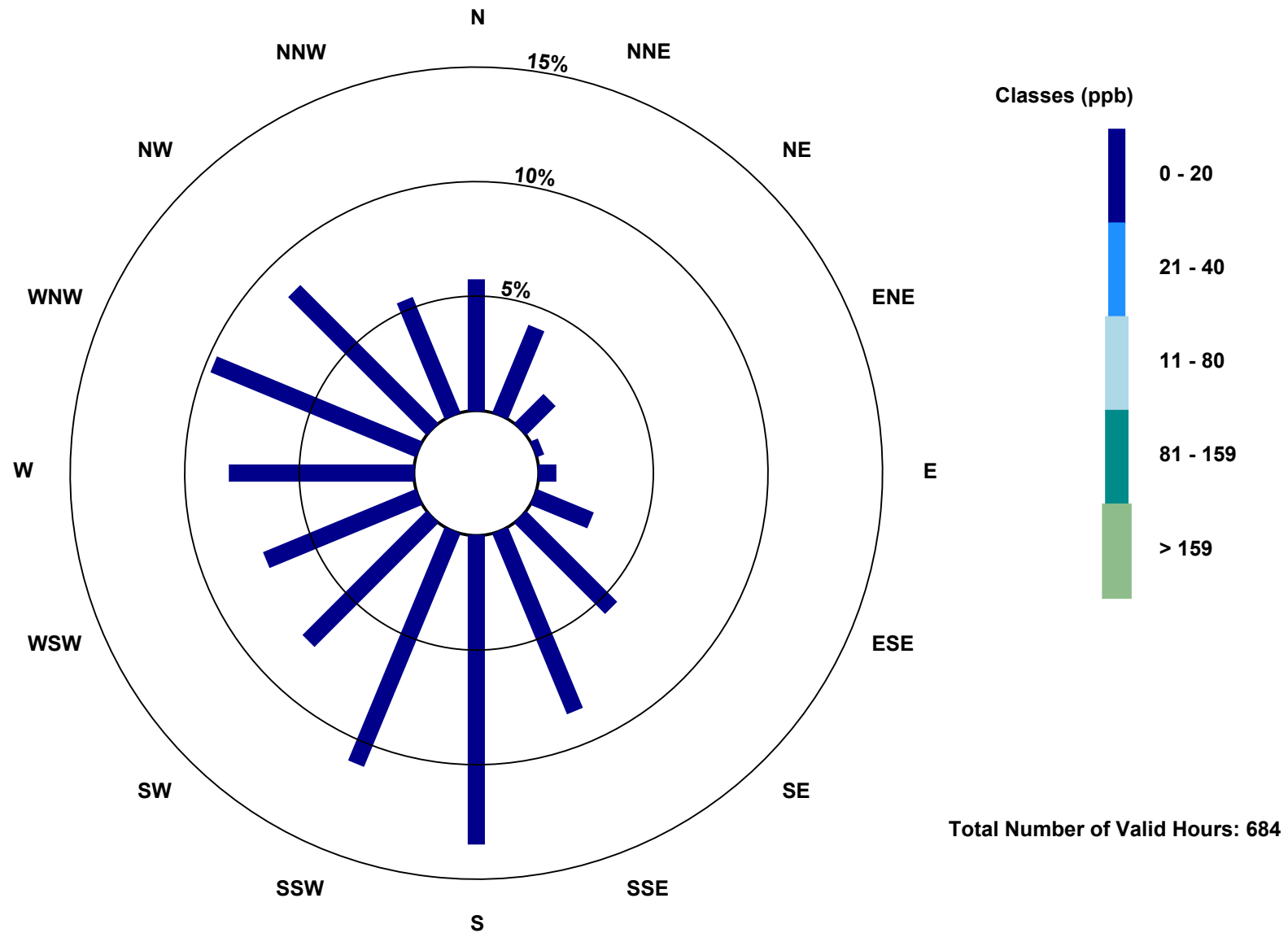
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

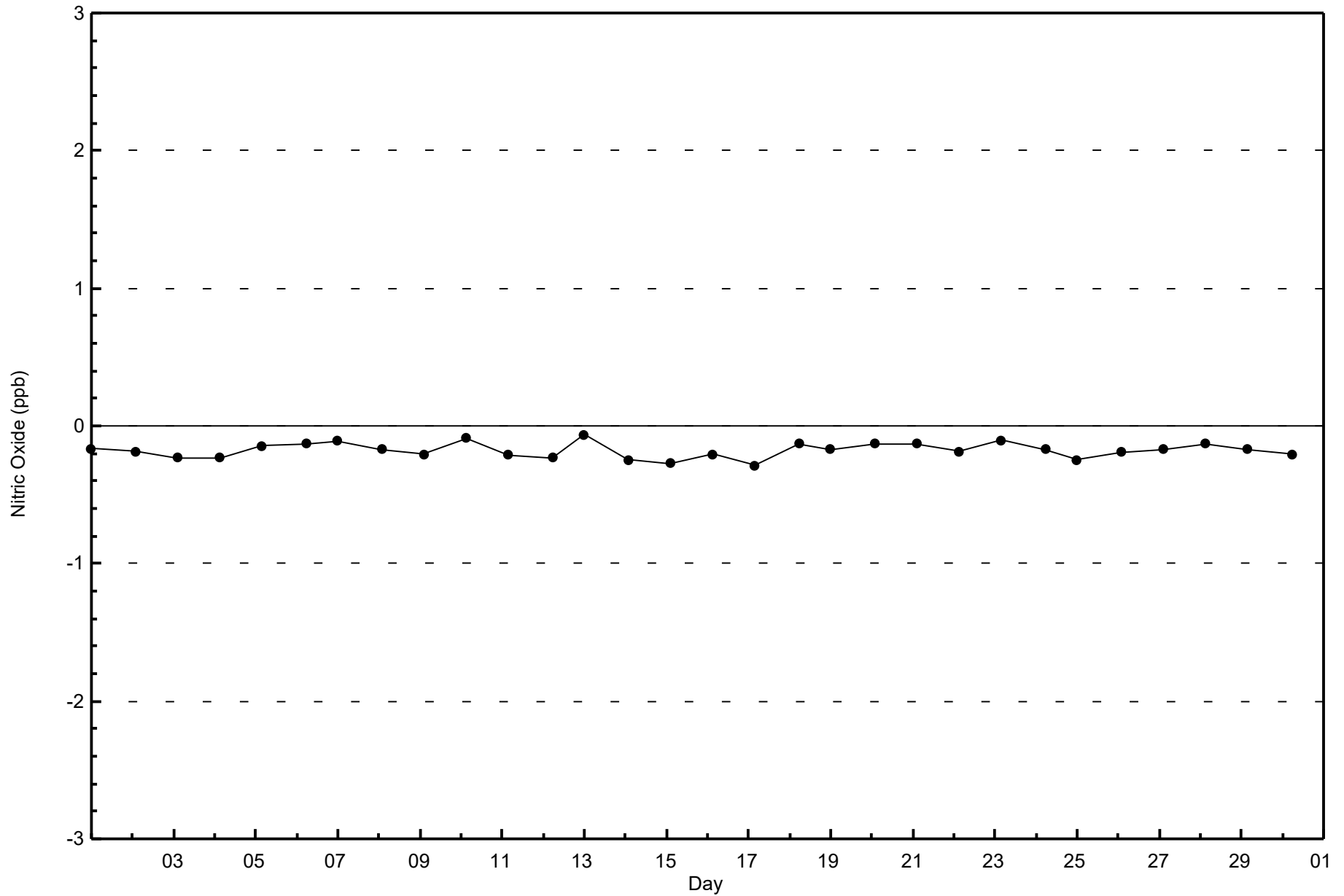
Nitric Oxide (NO) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

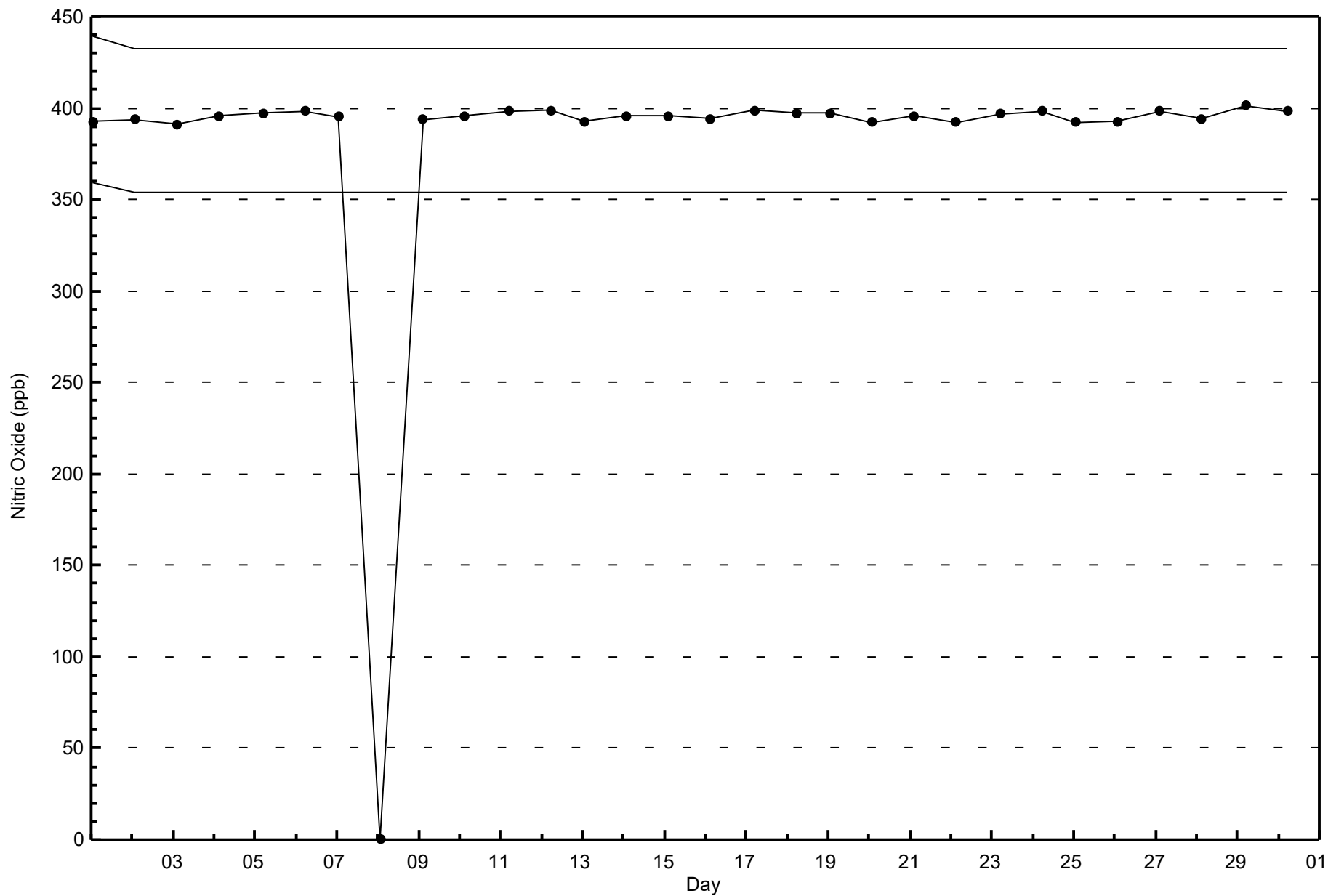
Nitric Oxide (NO) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitric Oxide (NO) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO₂) - ppb

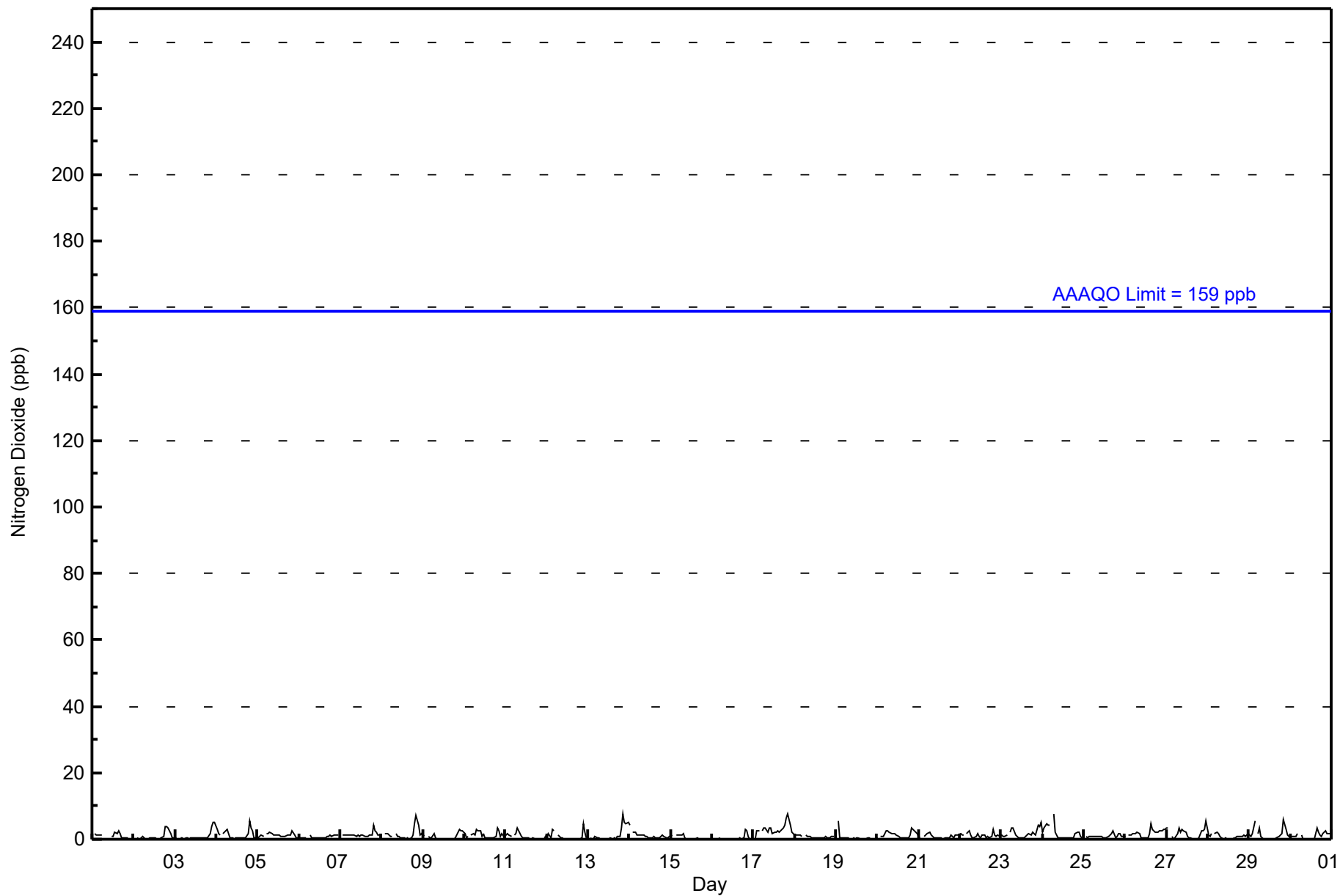
Hangingsstone Expansion - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0																			Hours in Service: 720													
Maximum Value: 7.7 ppb on Apr 13 21:00																			Maximum Daily Average: 2.9 ppb on Apr 17							Hours of Data: 684						
Minimum Value: 0.0 ppb on Apr 9 19:00																			Minimum Daily Average: 0.4 ppb on Apr 16							Hours of Missing Data: 36						
Maximum Diurnal Average: 2.4 ppb at hour 21																			Minimum Diurnal Average: 0.5 ppb at hour 13							Hours of Calibration: 35						
Monthly Average: 1.17 ppb																			Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.8 Q ₃ = 1.6 P ₉₀ = 2.7 P ₉₉ = 5.4							Percent Operational Time: 99.9						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
1-Apr	Z	1.6	1.4	1.4	1.4	1.4	C	C	C	C	C	0.8	0.9	2.0	1.9	2.5	1.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2	1.1	2.5						
2-Apr	0.2	Z	0.4	0.2	0.3	0.7	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.7	3.9	4.0	3.5	1.8	0.4	0.3	0.8	4.0						
3-Apr	0.4	0.4	Z	0.3	0.3	0.2	0.3	0.3	0.2	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.7	3.9	5.0	5.2	0.9	5.2						
4-Apr	3.1	1.6	1.2	Z	1.7	2.5	2.9	1.5	0.5	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	1.7	5.4	3.2	2.7	0.6	0.5	1.4	5.4						
5-Apr	0.5	1.0	1.2	1.0	Z	1.5	1.9	2.0	1.5	1.2	1.3	1.1	1.1	0.8	0.7	0.7	0.8	1.3	1.3	1.4	2.7	1.3	0.5	0.4	1.2	2.7						
6-Apr	0.3	0.5	0.3	0.5	0.6	Z	1.1	0.6	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.8	1.1	0.9	1.1	1.2	1.3	1.2	0.7	1.3						
7-Apr	Z	1.4	1.3	1.2	1.1	1.1	1.3	1.2	1.1	1.0	1.1	1.0	1.1	1.3	0.8	0.8	0.8	1.2	1.2	4.1	2.7	2.0	1.1	1.2	1.4	4.1						
8-Apr	1.2	Z	1.8	1.9	1.4	1.0	1.0	M	1.9	1.0	0.7	0.6	0.4	0.2	0.3	0.2	0.3	1.2	4.7	7.0	4.3	1.2	1.9	1.6	7.0							
9-Apr	0.9	1.2	Z	0.7	0.6	0.6	1.6	0.6	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.3	2.0	3.0	2.4	2.5	0.8	3.0						
10-Apr	1.9	0.6	0.9	Z	1.2	1.5	1.3	3.0	2.5	2.5	0.9	1.6	0.6	0.4	0.5	0.6	0.5	0.5	0.7	3.2	2.4	0.9	1.6	0.5	1.3	3.2						
11-Apr	1.3	1.8	1.4	0.9	Z	1.1	1.8	3.3	1.6	1.0	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	1.0	0.8	3.3						
12-Apr	0.4	1.9	0.5	2.9	2.7	Z	1.2	0.9	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.4	4.8	2.3	0.4	0.9	4.8						
13-Apr	Z	0.3	0.2	0.2	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.8	1.0	3.3	7.7	4.9	4.5	5.0	1.4	7.7						
14-Apr	4.2	Z	2.2	2.3	1.4	1.3	1.4	1.4	1.4	1.0	0.9	0.6	0.5	0.6	1.0	0.5	0.5	0.6	1.0	1.2	0.7	0.5	0.4	0.7	1.1	4.2						
15-Apr	0.9	1.1	Z	1.2	1.2	1.2	1.3	1.6	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.5	1.6						
16-Apr	0.1	0.2	0.2	Z	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.4	3.1	2.5	0.7	0.2	0.1	0.4	3.1						
17-Apr	0.1	0.2	2.6	2.4	Z	2.7	3.3	3.5	2.2	3.2	3.2	1.9	2.0	2.2	2.4	2.1	2.6	3.3	4.2	6.2	7.6	4.4	2.0	1.6	2.9	7.6						
18-Apr	1.4	1.1	1.2	1.1	1.0	Z	1.1	1.0	0.8	0.8	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.6	0.6	0.6	0.7	0.8	0.9	0.8	1.4						
19-Apr	Z	5.4	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.5	5.4						
20-Apr	0.4	Z	0.8	1.0	1.8	2.6	2.7	2.1	1.7	1.6	1.5	1.1	0.8	0.5	0.6	0.5	0.5	0.5	0.6	1.2	3.6	2.7	2.0	1.7	1.4	3.6						
21-Apr	0.8	0.5	Z	1.0	1.1	1.8	2.0	1.1	1.0	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.6	0.3	0.5	1.2	0.4	1.2	1.2	1.3	0.8	2.0						
22-Apr	1.6	1.3	1.1	Z	1.5	2.4	1.1	0.5	0.4	1.0	1.7	0.7	0.6	1.1	1.2	0.6	0.8	0.4	0.7	3.0	1.3	1.0	1.1	0.8	1.1	3.0						
23-Apr	1.2	0.7	0.9	1.1	Z	2.2	3.3	3.4	1.1	0.8	0.4	0.3	0.4	0.4	0.7	1.4	1.9	1.4	2.0	1.9	1.1	4.2	3.8	5.1	1.7	5.1						
24-Apr	2.3	3.3	4.5	4.1	4.2	Z	7.5	2.3	1.2	0.5	0.4	0.4	0.3	0.3	0.3	0.5	0.5	0.4	0.5	1.6	2.0	2.3	0.8	0.6	1.8	7.5						
25-Apr	Z	1.0	0.6	0.7	0.8	1.0	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6	1.0	1.2	1.6	2.4	0.5	0.8	1.9	1.8	1.0	0.9	1.0	2.4						
26-Apr	1.0	Z	1.2	1.4	1.5	1.8	1.9	2.1	1.8	0.6	0.4	0.3	0.4	0.4	1.8	4.5	2.8	2.3	2.1	2.2	2.5	2.7	2.8	3.1	1.8	4.5						
27-Apr	3.3	3.5	Z	0.9	0.2	0.3	1.6	3.2	2.0	2.8	2.7	2.0	1.0	0.4	0.3	0.2	0.2	0.1	0.1	0.6	2.4	2.4	2.8	5.3	1.7	5.3						
28-Apr	1.2	0.8	1.5	Z	1.9	2.0	1.6	0.8	0.5	0.2	0.4	0.2	0.2	0.2	0.2	0.4	0.6	0.7	0.7	0.8	0.8	1.1	0.7	1.8	0.8	2.0						
29-Apr	1.1	0.8	1.6	5.6	Z	1.9	3.5	0.8	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.7	1.3	1.6	6.0	2.9	1.4	0.7	1.4	6.0						
30-Apr	0.7	0.8	1.0	0.7	1.7	Z	1.2	0.2	0.2	0.1	0.2	0.0	0.0	0.1	0.2	3.4	2.0	1.4	1.0	1.7	2.4	1.6	1.6	1.6	1.0	3.4						
1.2 1.3 1.2 1.4 1.2 1.4 1.7 1.4 0.9 0.8 0.7 0.6 0.5 0.5 0.6 0.8 0.8 0.8 1.0 1.9 2.4 2.1 1.5 1.6																									Diurnal Average							
4.2 5.4 4.5 5.6 4.2 2.7 7.5 3.5 2.5 3.2 3.2 2.0 2.0 2.2 2.4 4.5 2.8 3.3 4.2 6.2 7.7 4.9 5.0 5.3																									Diurnal Maximum							
Z - zerospan C - Calibration M - Maintenance																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb																																



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Dioxide (NO₂) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	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	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	684

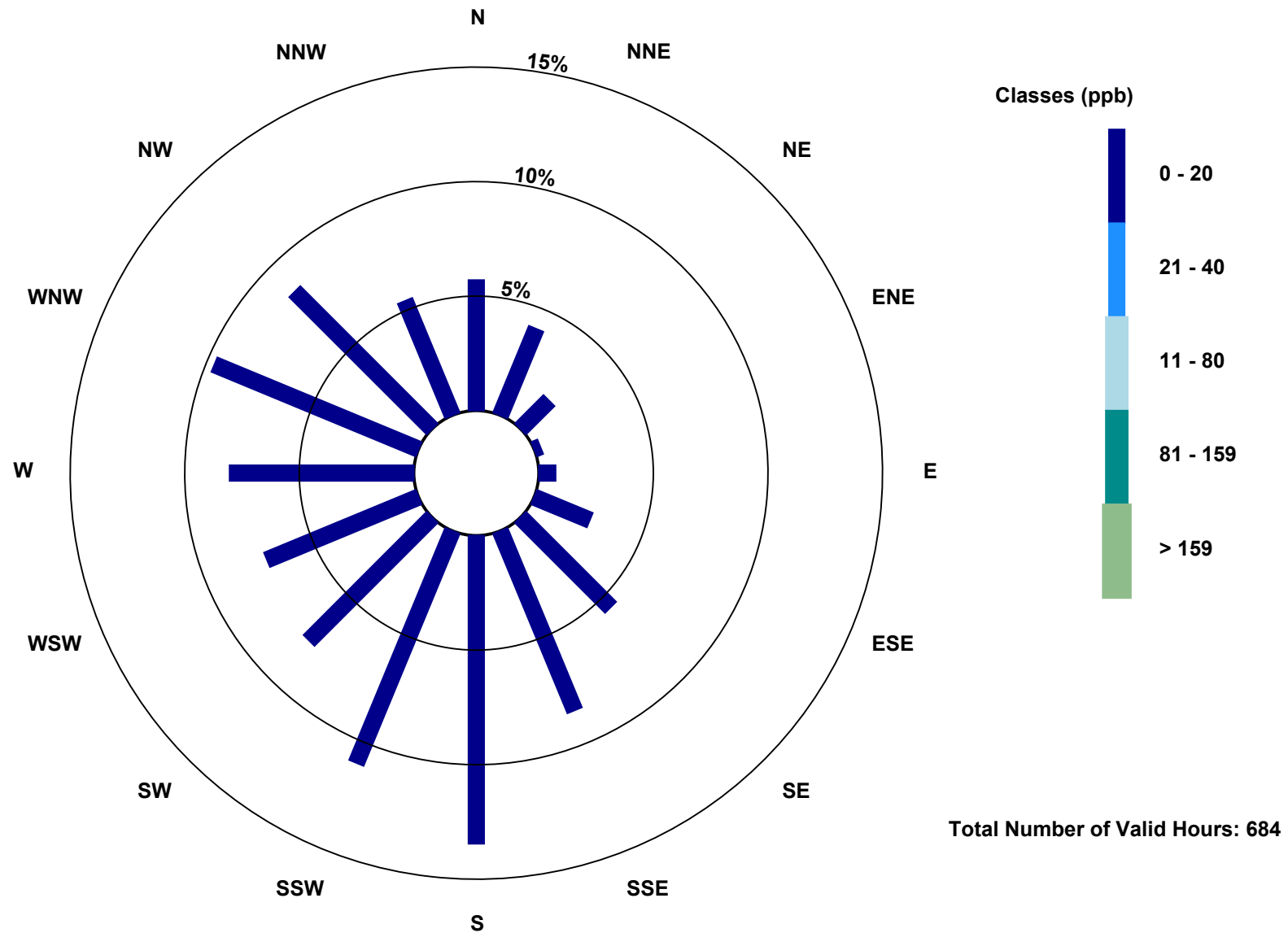
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

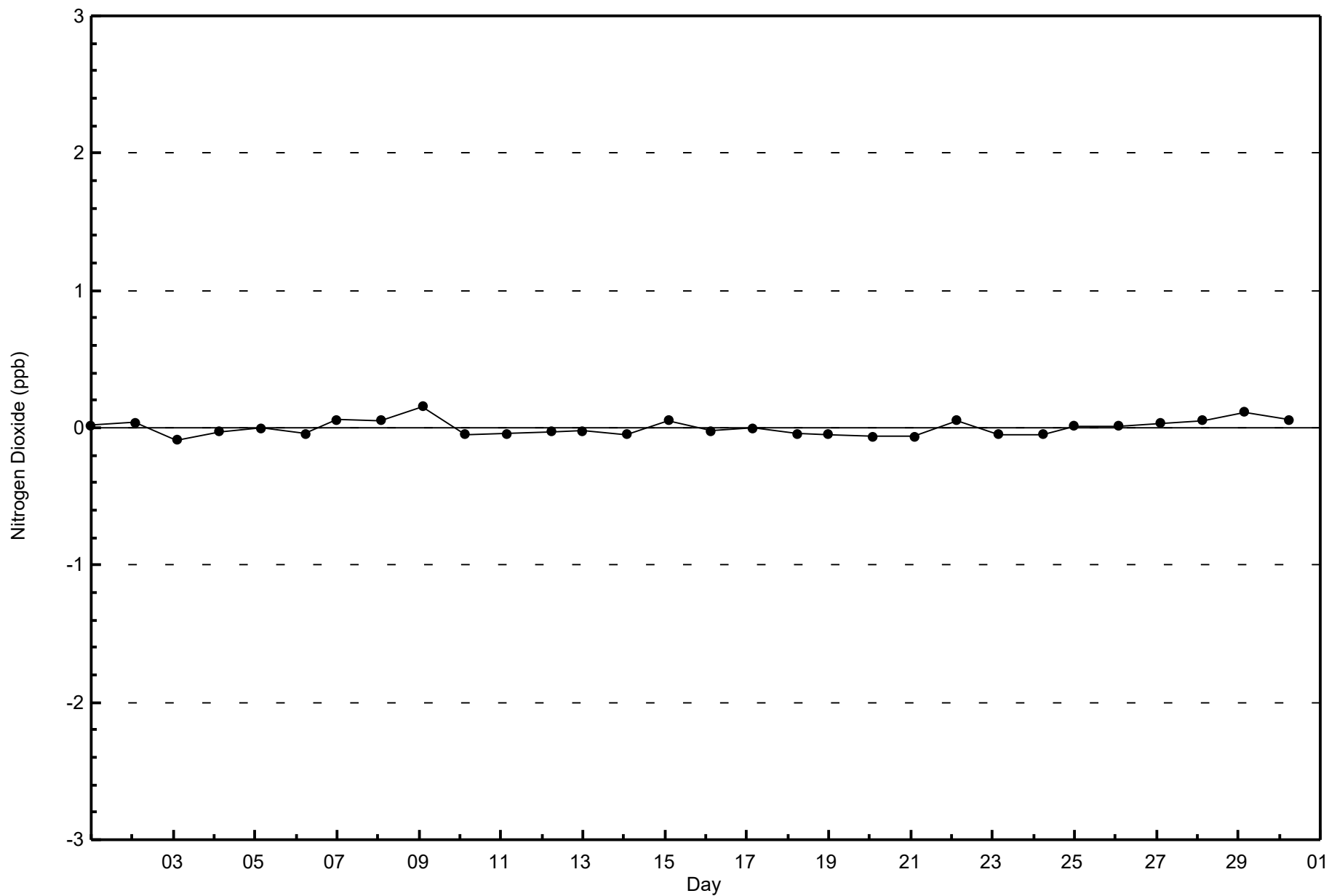
Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

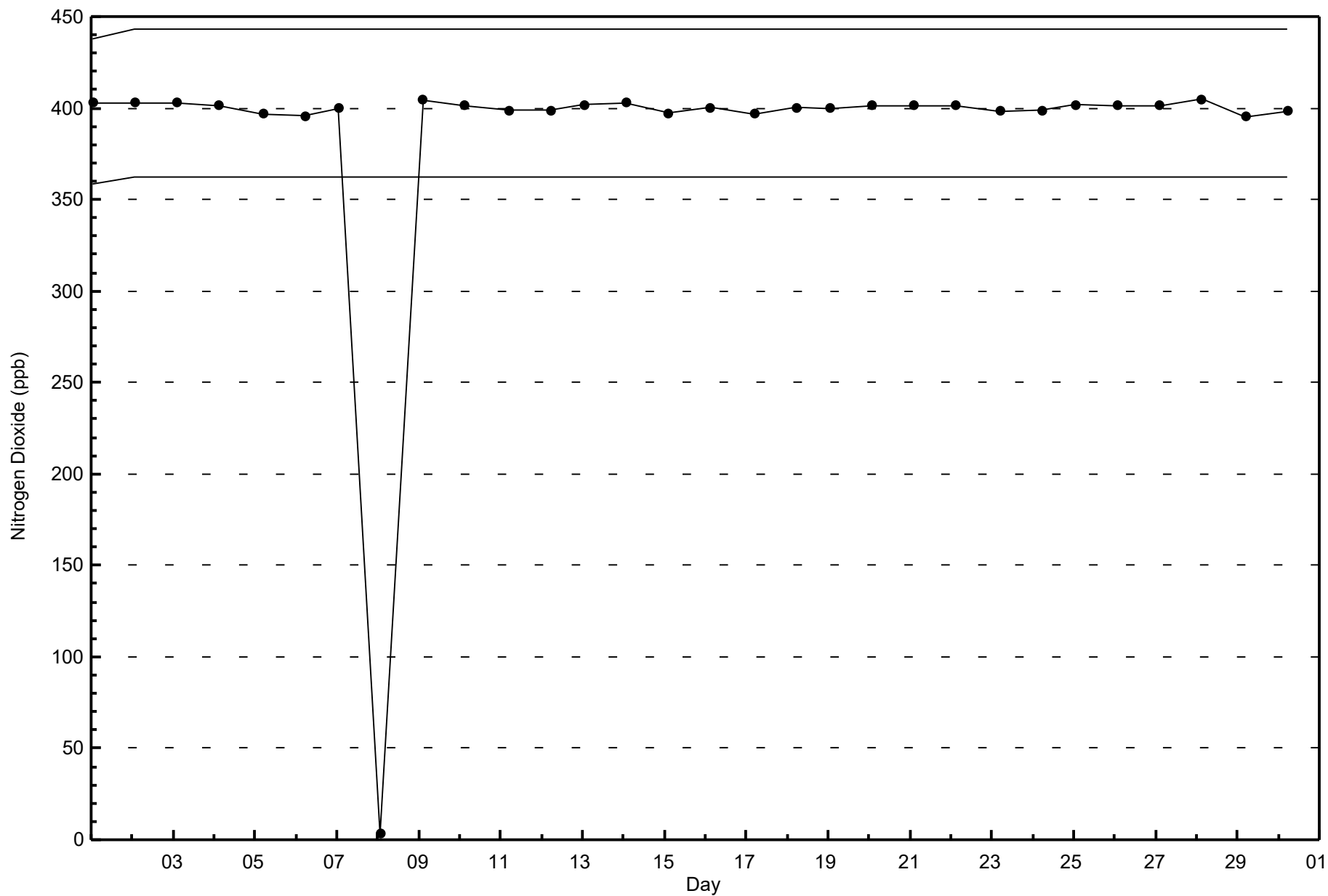
Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Dioxide (NO₂) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_x) - ppb

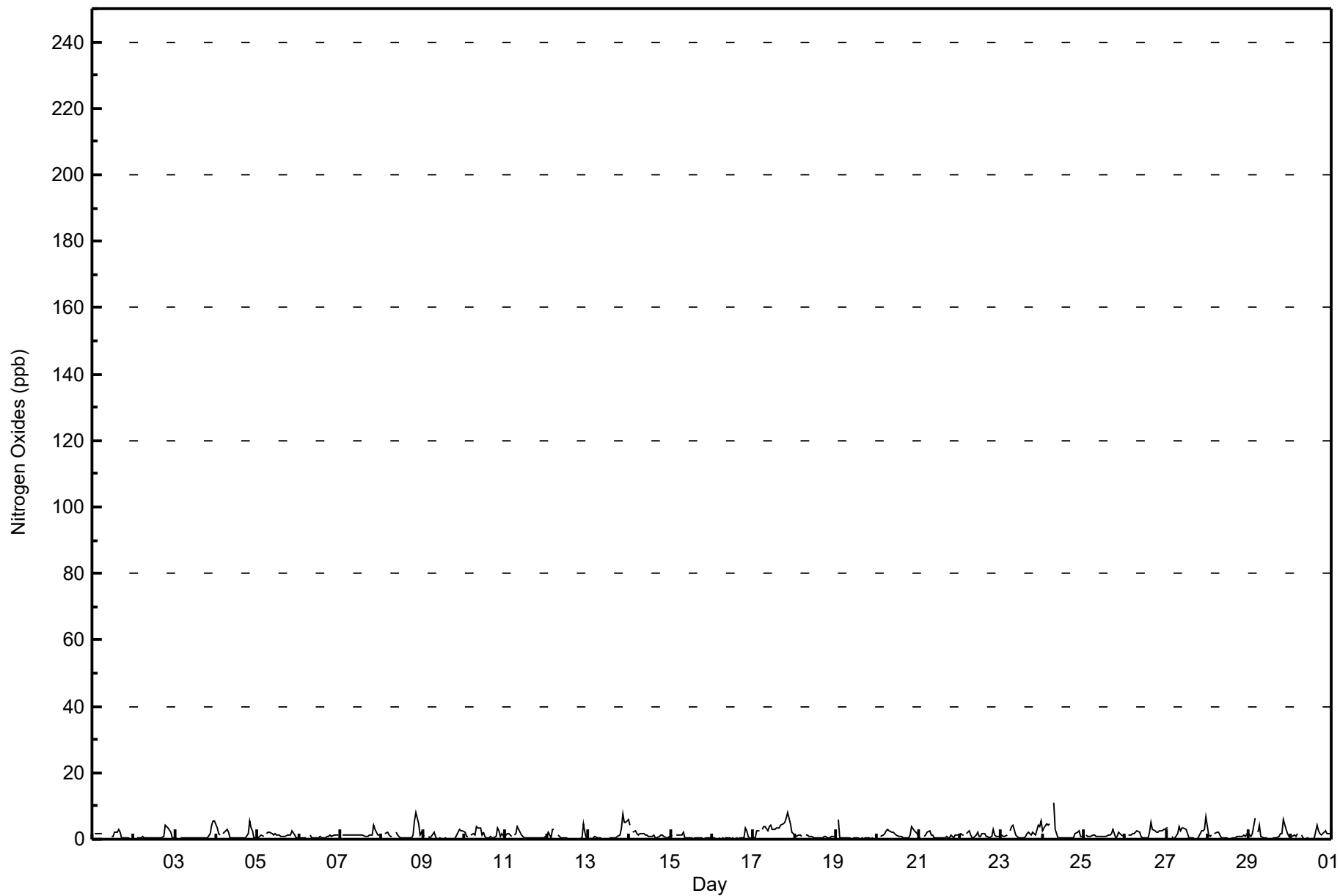
Hangingsstone Expansion - April 2025

Maximum Value: 11.0 ppb on Apr 24 07:00																		Maximum Daily Average: 3.4 ppb on Apr 17										Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 9 19:00																		Minimum Daily Average: 0.5 ppb on Apr 19										Hours of Data: 684	
Maximum Diurnal Average: 2.5 ppb at hour 21																		Minimum Diurnal Average: 0.6 ppb at hour 13										Hours of Missing Data: 36	
Monthly Average: 1.30 ppb																		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.4 Median = 0.8 Q ₃ = 1.7 P ₉₀ = 3.1 P ₉₉ = 6.0										Hours of Calibration: 35	
																												Percent Operational Time: 99.9	
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Apr	Z	1.7	1.5	1.5	1.5	1.5	C	C	C	C	C	0.9	1.0	2.3	2.2	3.0	2.0	0.6	0.4	0.3	0.3	0.2	0.2	0.2	1.2	3.0			
2-Apr	0.2	Z	0.5	0.2	0.3	0.7	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.8	4.2	4.0	3.6	1.9	0.5	0.4	0.9	4.2			
3-Apr	0.5	0.5	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	1.7	4.0	5.3	5.3	1.0	5.3			
4-Apr	3.3	1.7	1.3	Z	1.8	2.6	3.1	1.9	0.6	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	1.8	5.5	3.2	2.7	0.6	0.5	1.5	5.5			
5-Apr	0.5	1.0	1.2	1.0	Z	1.5	2.0	2.2	1.8	1.4	1.5	1.3	1.3	0.9	0.7	0.7	0.9	1.4	1.3	1.4	2.7	1.3	0.5	0.4	1.3	2.7			
6-Apr	0.3	0.5	0.3	0.5	0.6	Z	1.1	0.6	0.6	0.4	0.6	0.5	0.7	0.6	0.6	0.6	0.7	0.8	1.1	0.9	1.1	1.2	1.3	1.2	0.7	1.3			
7-Apr	Z	1.4	1.3	1.2	1.1	1.1	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.4	0.8	0.9	0.9	1.2	1.2	4.2	2.8	2.0	1.1	1.2	1.4	4.2			
8-Apr	1.2	Z	1.8	1.9	1.4	1.0	1.0	M	2.1	1.2	0.8	0.6	0.4	0.4	0.3	0.3	0.2	0.4	1.3	5.4	8.0	4.7	1.3	2.1	1.7	8.0			
9-Apr	1.0	1.3	Z	0.7	0.6	0.7	2.0	0.8	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.0	0.3	2.0	3.1	2.5	2.6	0.8	3.1			
10-Apr	1.9	0.6	0.9	Z	1.2	1.5	1.4	3.8	3.4	3.4	1.2	2.2	0.7	0.5	0.6	0.8	0.5	0.5	0.8	3.3	2.5	1.0	1.8	0.6	1.5	3.8			
11-Apr	1.4	1.9	1.6	1.0	Z	1.2	1.8	3.6	1.9	1.3	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	1.1	0.9	3.6			
12-Apr	0.4	2.0	0.6	3.1	2.9	Z	1.3	1.0	0.4	0.4	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.4	4.8	2.3	0.4	1.0	4.8			
13-Apr	Z	0.3	0.2	0.2	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.9	1.1	3.4	7.8	5.0	5.1	5.8	1.5	7.8			
14-Apr	4.3	Z	2.3	2.4	1.5	1.4	1.6	1.7	1.8	1.3	1.3	0.8	0.7	0.8	1.3	0.6	0.6	0.8	1.1	1.3	0.8	0.6	0.6	0.8	1.3	4.3			
15-Apr	1.0	1.3	Z	1.3	1.3	1.3	1.4	2.0	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.6	2.0			
16-Apr	0.2	0.2	0.2	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.5	3.2	2.6	0.8	0.3	0.2	0.5	3.2			
17-Apr	0.2	0.3	2.7	2.5	Z	2.8	3.6	3.8	2.5	3.8	4.3	3.0	2.8	3.3	3.5	3.5	4.0	4.5	4.9	6.4	8.1	4.5	2.1	1.6	3.4	8.1			
18-Apr	1.4	1.1	1.2	1.1	1.0	Z	1.2	1.3	1.0	1.0	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.6	0.7	0.8	0.9	0.8	1.4			
19-Apr	Z	5.8	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.5	5.8			
20-Apr	0.4	Z	0.8	1.1	1.8	2.7	2.9	2.5	2.1	2.0	1.9	1.4	1.0	0.7	0.8	0.6	0.5	0.5	0.6	1.2	4.0	2.7	2.0	1.8	1.6	4.0			
21-Apr	0.8	0.5	Z	1.0	1.2	2.0	2.3	1.4	1.3	0.4	0.3	0.3	0.3	0.5	0.2	0.3	0.7	0.4	0.5	1.3	0.4	1.2	1.2	1.3	0.9	2.3			
22-Apr	1.6	1.3	1.2	Z	1.6	2.5	1.2	0.5	0.4	1.2	2.1	0.9	0.7	1.5	1.6	0.7	1.0	0.4	0.7	3.1	1.3	1.0	1.1	0.8	1.2	3.1			
23-Apr	1.2	0.7	0.9	1.1	Z	2.3	3.7	4.3	1.4	1.0	0.5	0.3	0.4	0.4	0.8	1.7	2.2	1.4	2.2	1.9	1.1	4.2	3.9	5.5	1.9	5.5			
24-Apr	2.5	3.4	4.6	4.2	4.7	Z	11.0	3.1	1.6	0.6	0.5	0.5	0.4	0.3	0.3	0.5	0.6	0.5	0.6	1.7	2.1	2.6	0.9	0.7	2.1	11.0			
25-Apr	Z	1.1	0.7	0.8	0.9	1.1	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	1.2	1.4	1.8	2.8	0.6	0.9	1.9	1.8	1.1	0.9	1.1	2.8			
26-Apr	1.0	Z	1.3	1.4	1.6	1.9	2.1	2.3	2.0	0.7	0.5	0.4	0.4	0.4	2.1	5.2	3.1	2.5	2.3	2.3	2.5	2.7	2.8	3.1	1.9	5.2			
27-Apr	3.4	3.5	Z	0.9	0.2	0.3	1.9	3.9	2.4	3.6	3.5	2.9	1.6	0.6	0.3	0.2	0.2	0.1	0.1	0.6	2.6	2.7	2.9	6.7	2.0	6.7			
28-Apr	1.2	0.8	1.5	Z	1.9	2.1	1.9	1.1	0.6	0.2	0.5	0.2	0.2	0.2	0.3	0.5	0.6	0.8	0.7	0.8	0.8	1.2	0.7	1.9	0.9	2.1			
29-Apr	1.1	0.8	1.7	6.3	Z	2.3	4.4	1.0	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.8	1.5	1.7	6.0	2.9	1.5	0.7	1.5	6.3			
30-Apr	0.7	0.9	1.1	0.9	1.8	Z	1.4	0.3	0.2	0.2	0.3	0.1	0.1	0.1	0.3	4.1	2.5	1.5	1.1	1.8	2.4	1.6	1.6	1.7	1.2	4.1			
Diurnal Average																										Diurnal Maximum			
4.3 5.8 4.6 6.3 4.7 2.8 11.0 4.3 3.4 3.8 4.3 3.0 2.8 3.3 3.5 5.2 4.0 4.5 4.9 6.4 8.1 5.0 5.3 6.7																													
Z - zerospan C - Calibration M - Maintenance																													



Wood Buffalo Environmental Association
Hourly Averages

Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
41 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Frequency Distribution

Nitrogen Oxides (NO_x) - ppb
Hangingsstone Expansion - April 2025

Concentration Ranges (ppb)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 20	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	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	39	28	12	2	5	18	38	58	92	75	52	49	55	66	58	37	684

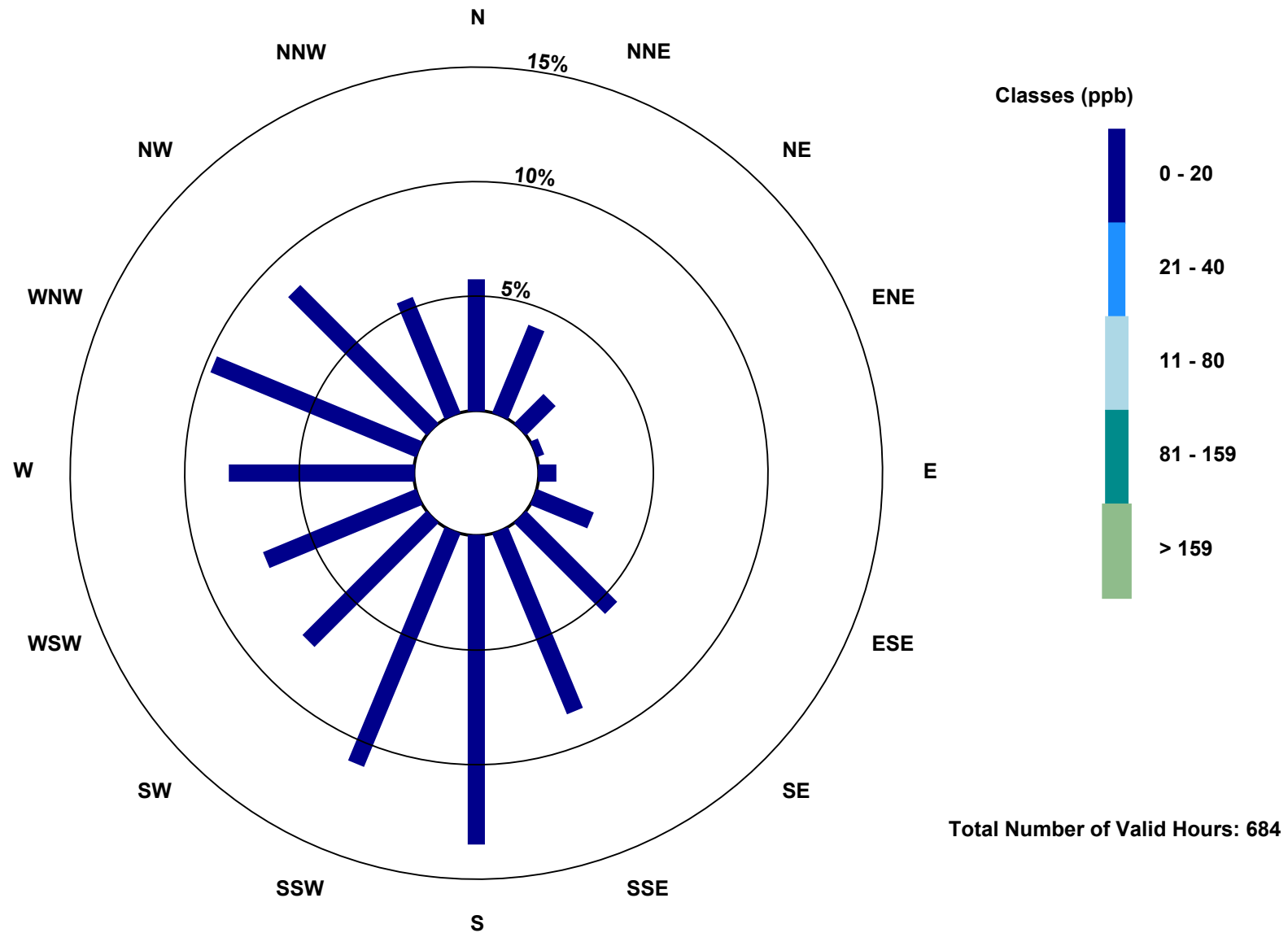
Total Number of Valid Hours: 684

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

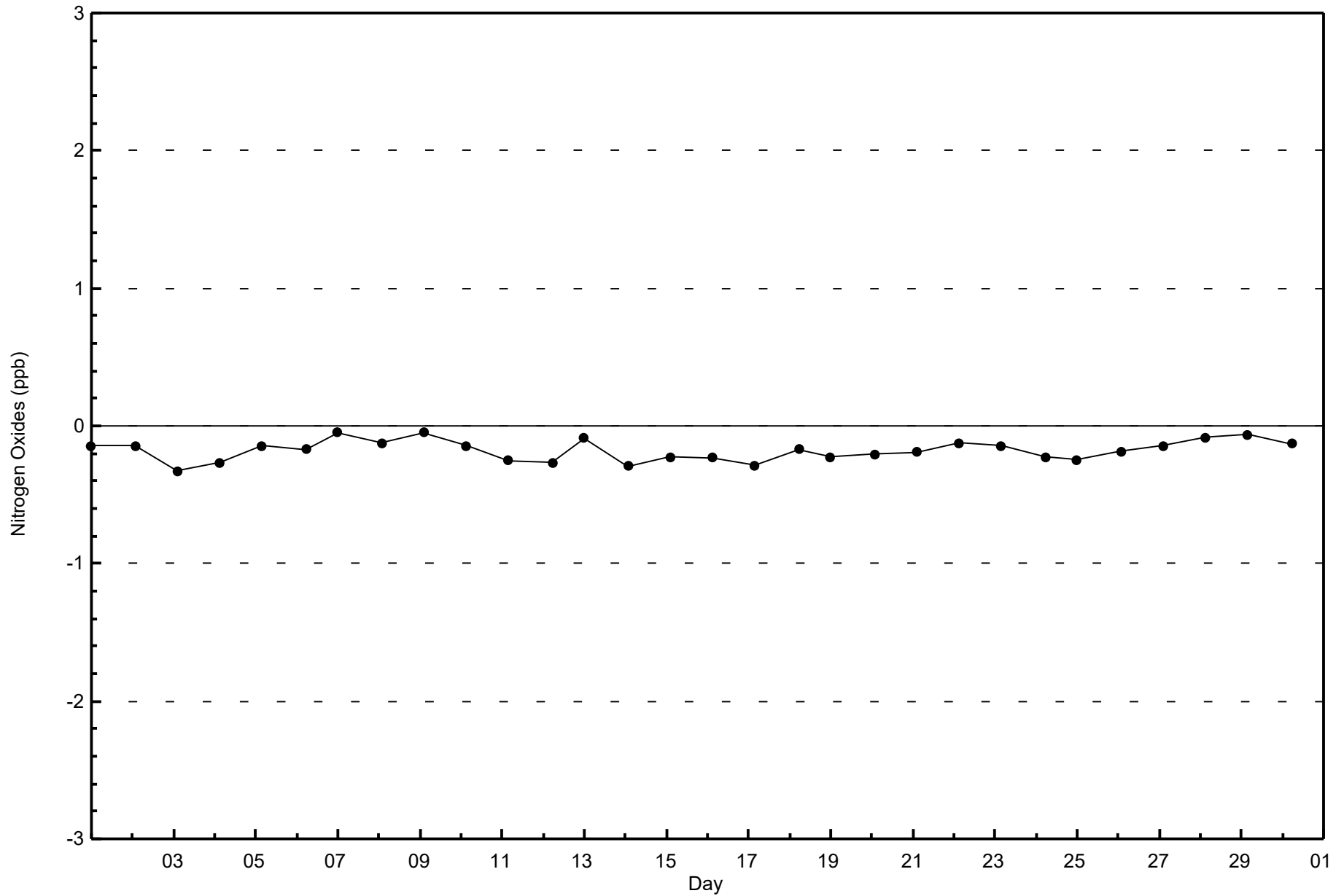
Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion





Wood Buffalo Environmental Association
Zero Responses

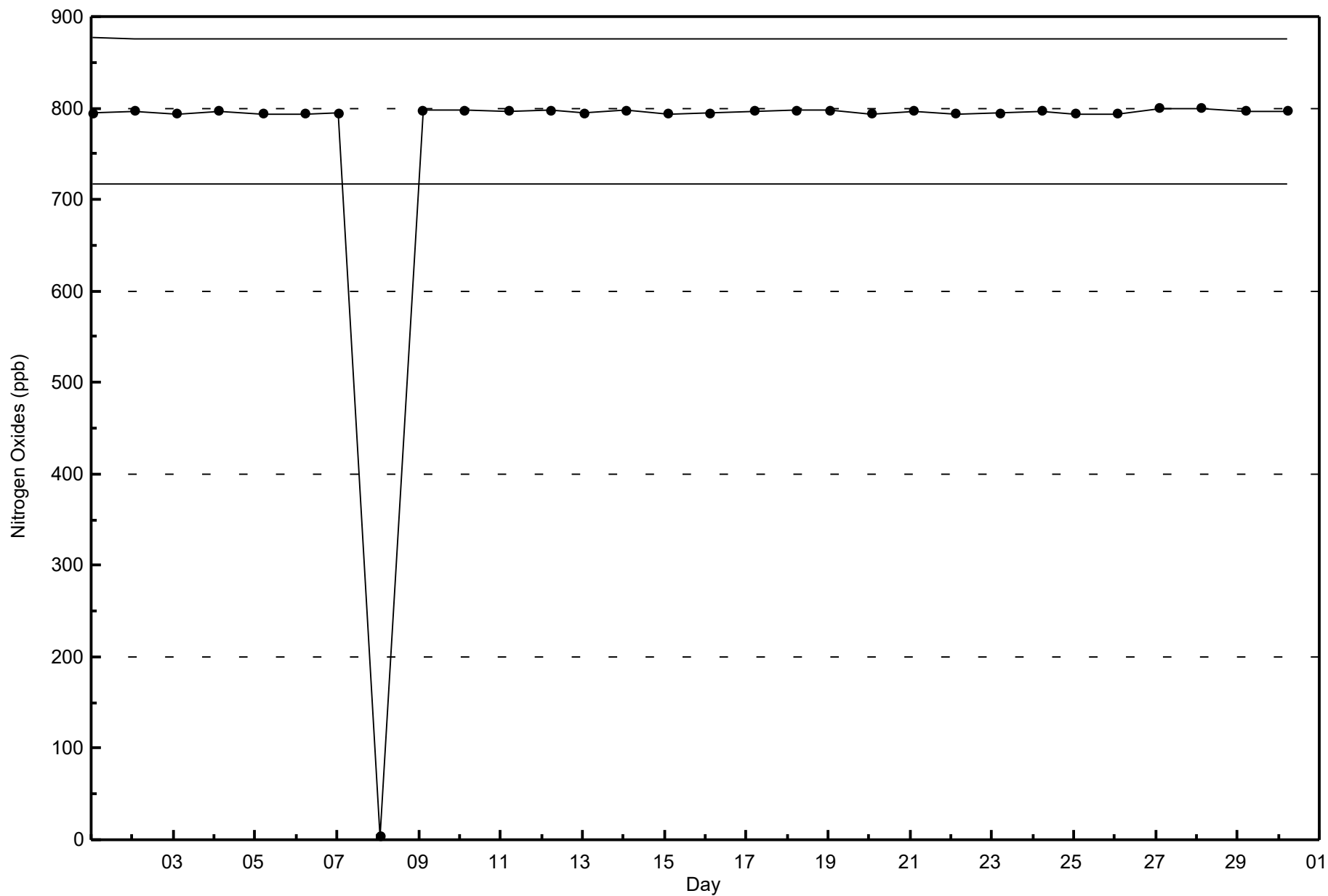
Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Span Responses

Nitrogen Oxides (NO_x) - ppb
Hangingstone Expansion - April 2025

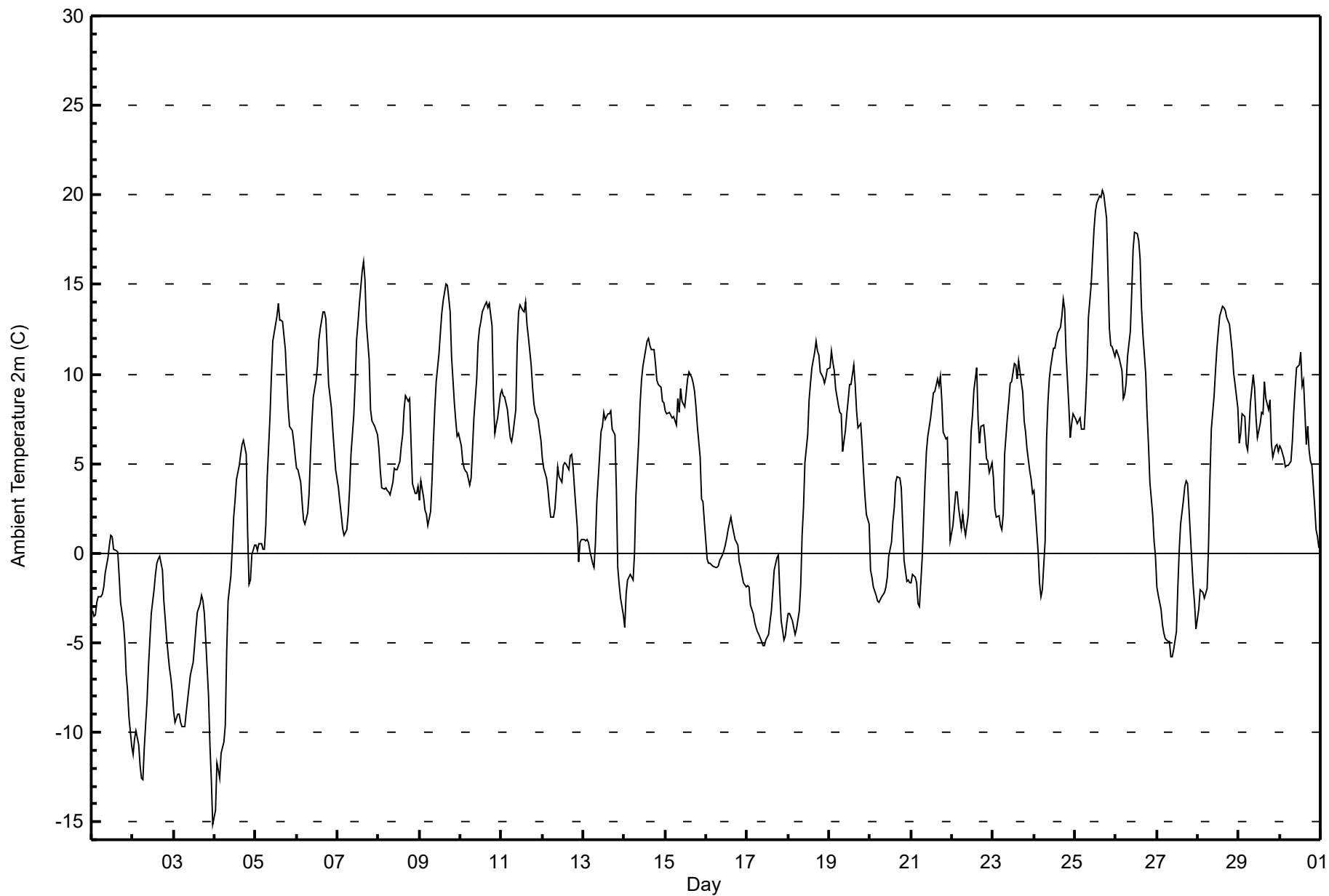


Maximum Value: 20.3 C on Apr 25 17:00										Maximum Daily Average: 13.5 C on Apr 25										Hours in Service: 720						
Minimum Value: -15.1 C on Apr 4 00:00										Minimum Daily Average: -7.4 C on Apr 3										Hours of Data: 720						
Maximum Diurnal Average: 8.6 C at hour 16										Minimum Diurnal Average: 0.2 C at hour 6										Hours of Missing Data: 0						
Monthly Average: 4.31 C										Percentiles: P ₁ = -11.9 P ₁₀ = -3.9 Q ₁ = -0.3 Median = 5.0 Q ₃ = 8.9 P ₉₀ = 12.0 P ₉₉ = 18.1										Hours of Calibration: 0						
																				Percent Operational Time: 100.0						
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
1-Apr	-3.3	-3.6	-3.5	-2.8	-2.4	-2.4	-2.3	-1.9	-1.1	-0.3	0.4	1.0	0.9	0.2	0.1	0.0	-1.2	-2.8	-3.8	-4.9	-6.7	-7.6	-9.1	-10.8	-2.8	1.0
2-Apr	-11.3	-10.4	-9.9	-10.7	-11.9	-12.6	-12.7	-10.8	-8.2	-6.4	-4.8	-3.3	-2.0	-1.2	-0.6	-0.3	-0.2	-1.0	-2.7	-3.7	-4.8	-6.4	-6.9	-7.8	-6.3	-0.2
3-Apr	-8.8	-9.5	-8.9	-9.0	-9.4	-9.7	-9.7	-8.9	-8.2	-7.5	-6.8	-6.1	-5.2	-4.1	-3.3	-2.8	-2.3	-2.7	-3.4	-4.9	-8.0	-10.7	-12.6	-15.1	-7.4	-2.3
4-Apr	-14.4	-11.7	-12.1	-12.6	-11.2	-10.5	-9.6	-5.5	-2.7	-1.3	0.3	2.0	3.0	4.1	4.9	5.5	6.0	6.3	5.6	1.1	-1.7	-1.5	-0.1	0.5	-2.3	6.3
5-Apr	0.4	0.2	0.5	0.6	0.2	0.2	1.5	4.2	7.6	9.9	11.8	12.3	13.2	14.0	13.0	13.0	13.0	11.4	9.6	8.1	7.1	6.8	6.2	5.5	7.1	14.0
6-Apr	4.7	4.6	3.9	2.8	1.9	1.7	2.2	3.3	5.5	7.3	8.7	9.6	10.5	11.9	12.6	13.5	13.5	13.1	11.3	9.4	8.1	6.9	5.7	4.7	7.4	13.5
7-Apr	3.7	2.8	2.2	1.4	1.0	1.3	2.1	3.5	5.5	7.7	9.5	11.9	12.9	14.0	15.7	16.3	15.2	12.8	10.8	8.0	7.4	7.3	7.1	6.6	7.8	16.3
8-Apr	5.9	4.5	3.7	3.5	3.6	3.5	3.4	3.2	4.0	4.7	4.7	5.1	6.0	6.6	8.0	8.8	8.5	8.6	6.2	3.9	3.4	3.3	3.7	5.1	8.8	
9-Apr	2.9	4.0	3.1	2.4	2.1	1.5	2.3	4.0	6.2	8.1	9.6	11.1	12.3	13.4	14.1	15.0	14.9	14.2	13.5	11.0	8.4	7.4	6.6	6.7	8.1	15.0
10-Apr	6.0	5.1	4.7	4.6	4.5	3.8	4.2	5.8	7.5	9.8	11.7	12.5	13.0	13.5	13.8	14.0	13.7	14.0	12.7	8.7	6.7	7.1	7.5	8.9	8.9	14.0
11-Apr	9.1	8.8	8.7	8.0	7.2	6.4	6.3	6.7	8.0	11.6	13.5	13.9	13.6	13.4	14.0	12.8	12.1	10.5	9.3	8.3	7.8	7.4	6.8	6.3	9.6	14.0
12-Apr	5.3	4.7	4.2	3.6	2.8	2.0	2.0	2.5	3.6	4.8	4.3	3.9	4.9	5.1	4.9	4.6	5.4	5.5	4.8	3.6	1.4	-0.5	0.6	0.8	3.5	5.5
13-Apr	0.8	0.7	0.8	0.6	0.2	-0.5	-0.8	0.5	2.8	5.4	6.8	7.0	7.8	7.4	7.8	7.8	7.9	6.9	6.6	3.6	-0.8	-1.7	-2.5	-3.4	3.0	7.9
14-Apr	-4.2	-2.2	-1.5	-1.2	-1.4	-1.5	0.0	3.2	6.3	8.3	9.6	10.4	11.4	11.9	12.0	11.6	11.4	11.4	10.6	9.6	9.4	9.3	8.5	8.4	6.3	12.0
15-Apr	7.9	7.8	7.9	7.7	7.6	7.7	7.2	8.7	7.8	9.2	8.5	8.2	9.0	9.8	10.1	9.8	9.5	9.0	8.1	7.1	5.3	3.0	2.9	1.8	7.6	10.1
16-Apr	-0.3	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.7	-0.4	-0.1	0.1	0.5	0.9	1.3	2.0	1.5	1.1	0.8	0.5	-0.5	-0.8	-1.2	-1.7	-1.9	-0.1	2.0
17-Apr	-1.8	-1.9	-2.9	-3.3	-3.9	-4.2	-4.4	-4.5	-4.9	-5.2	-5.2	-4.8	-4.6	-3.8	-3.2	-2.1	-1.0	-0.3	-0.1	-2.1	-3.7	-4.8	-4.6	-3.9	-3.4	-0.1
18-Apr	-3.4	-3.4	-3.7	-4.2	-4.6	-4.3	-3.2	-1.8	1.0	2.5	5.1	6.6	8.6	9.5	10.4	11.2	11.8	11.3	11.1	10.1	9.8	9.5	9.8	10.3	4.6	11.8
19-Apr	10.3	11.3	10.7	10.2	9.2	8.3	7.8	7.7	5.7	6.8	7.8	8.5	9.4	9.4	10.5	9.4	8.0	7.0	7.3	6.0	4.5	3.2	2.2	1.6	7.6	11.3
20-Apr	-0.9	-1.3	-1.9	-2.4	-2.7	-2.7	-2.6	-2.5	-2.2	-1.9	-1.4	-0.1	0.6	1.8	2.5	3.9	4.3	4.2	3.6	1.6	-0.4	-1.5	-1.5	-1.6	-0.2	4.3
21-Apr	-1.7	-1.2	-1.3	-1.7	-2.8	-3.0	-0.3	1.9	3.9	5.6	6.6	7.5	8.2	9.0	9.0	9.7	9.3	9.9	8.6	6.8	6.4	6.5	3.6	0.7	4.2	9.9
22-Apr	1.6	2.5	3.4	3.4	2.5	1.4	2.2	1.5	1.0	2.1	4.4	6.7	7.7	9.1	10.3	7.4	6.1	7.1	7.1	6.4	5.3	5.1	4.5	5.0	4.7	10.3
23-Apr	4.2	2.5	2.0	2.1	1.6	1.3	2.2	5.5	7.6	8.5	9.5	9.5	10.6	10.5	9.8	10.8	10.1	8.9	7.4	6.8	5.8	4.6	4.1	3.3	6.2	10.8
24-Apr	3.5	2.3	0.1	-1.7	-2.4	-2.0	0.7	6.3	8.4	9.7	10.4	11.4	11.5	11.9	12.3	12.6	13.3	14.2	13.6	11.1	8.1	6.4	7.2	7.8	7.4	14.2
25-Apr	7.5	7.3	7.4	7.5	6.9	6.9	8.4	10.3	13.1	15.0	16.6	18.1	19.1	19.6	19.9	19.9	20.3	20.0	18.7	15.7	12.6	11.6	11.5	10.9	13.5	20.3
26-Apr	11.4	11.2	10.9	10.2	8.6	8.9	9.5	11.0	12.4	14.6	17.0	17.9	17.9	17.4	16.4	13.7	12.2	10.0	7.8	6.0	4.0	2.1	0.7	-0.2	10.5	17.9
27-Apr	-1.9	-2.4	-3.1	-4.0	-4.5	-4.8	-5.0	-5.0	-5.8	-5.8	-5.4	-4.4	-2.0	0.1	1.6	3.0	3.8	4.1	3.9	2.5	-0.4	-1.8	-2.8	-4.2	-1.8	4.1
28-Apr	-3.2	-2.0	-2.1	-2.2	-2.5	-2.0	0.4	4.2	6.9	8.8	10.2	11.4	12.4	13.3	13.8	13.7	13.5	13.2	12.8	12.0	11.2	10.1	9.4	8.1	7.1	13.8
29-Apr	6.1	6.7	7.8	7.7	6.0	5.8	6.9	8.4	10.0	9.2	7.6	6.4	7.2	7.8	7.8	9.6	8.7	8.0	8.5	6.1	5.3	6.0	6.1	5.7	7.3	10.0
30-Apr	6.0	5.8	5.3	4.8	4.9	4.9	5.1	6.2	7.9	9.2	10.3	10.5	11.2	9.3	9.6	6.1	7.0	5.8	5.1	4.9	2.6	1.3	0.9	0.3	6.0	11.2
																									Diurnal Average	
																									Diurnal Maximum	



Wood Buffalo Environmental Association
Hourly Averages

Ambient Temperature 2m (AT2) - C
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Ambient Temperature 2m (AT2) - C
Hangingsstone Expansion - April 2025

Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	0	0.00	0.00
-20 - 0	189	26.25	26.25
0 - 10	398	55.28	81.53
10 - 20	132	18.33	99.86
> 20	1	0.14	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) - %

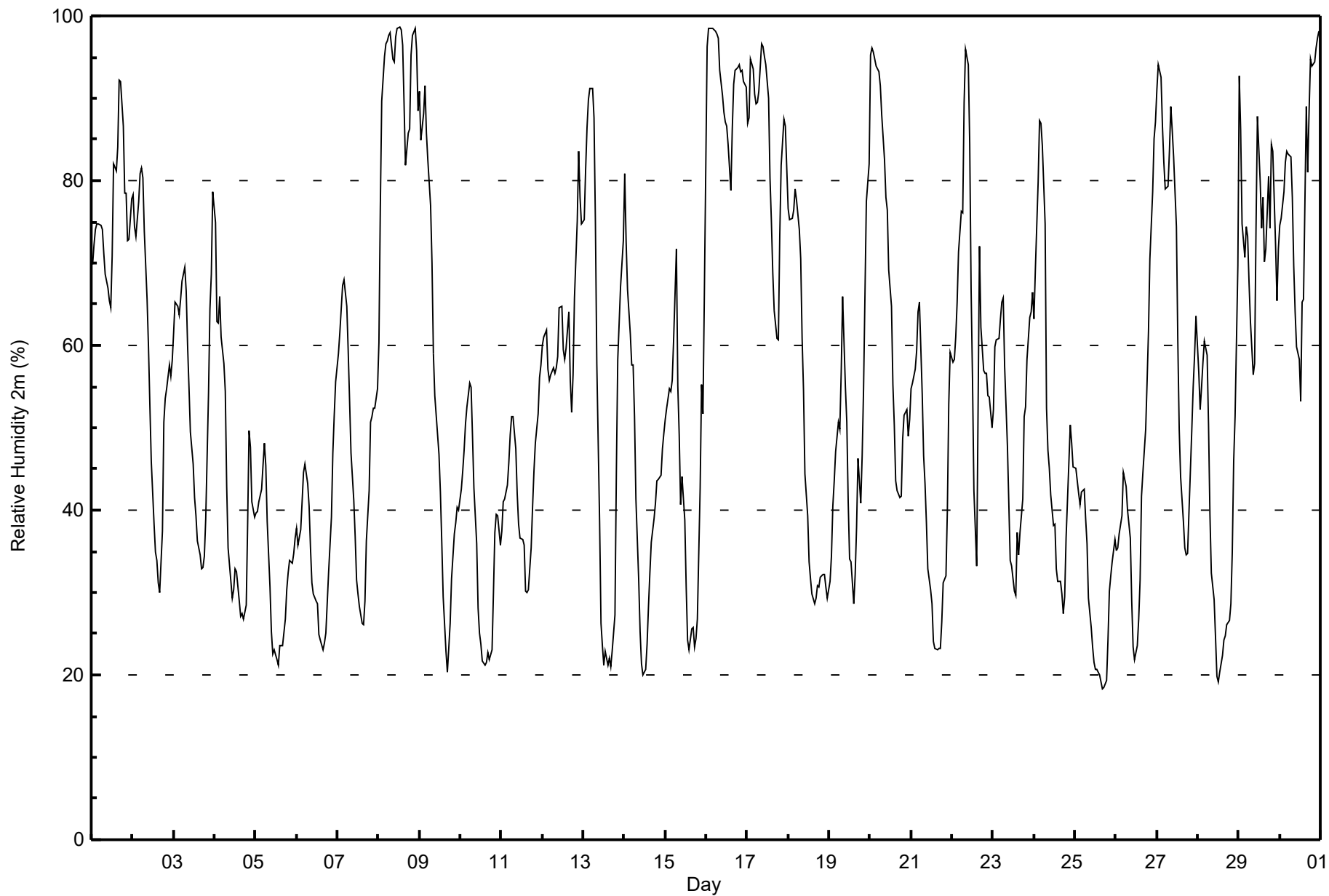
Hangingsstone Expansion - April 2025

Maximum Value: 98.7 % on Apr 8 13:00																			Maximum Daily Average: 92.6 % on Apr 16																			Hours in Service: 720			
Minimum Value: 18.3 % on Apr 25 17:00																			Minimum Daily Average: 30.2 % on Apr 25																			Hours of Data: 720			
Maximum Diurnal Average: 69.0 % at hour 6																			Minimum Diurnal Average: 40.4 % at hour 15																			Hours of Missing Data: 0			
Monthly Average: 55.15 %																			Percentiles: P ₁ = 20.1 P ₁₀ = 26.3 Q ₁ = 35.9 Median = 52.8 Q ₃ = 74.2 P ₉₀ = 89.4 P ₉₉ = 98.2																			Hours of Calibration: 0			
																																						Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																	
1-Apr	69.9	72.3	74.1	74.8	74.7	74.7	74.1	71.1	68.6	66.9	65.5	64.5	70.9	82.0	81.3	84.1	92.2	92.1	86.6	78.5	78.5	72.8	72.9	77.7	75.9	92.2															
2-Apr	78.4	74.5	73.3	77.4	80.8	81.6	80.3	73.8	65.5	59.8	52.7	46.0	38.4	34.8	33.9	31.3	30.0	37.4	50.7	53.5	54.8	57.6	56.2	58.1	57.5	81.6															
3-Apr	61.5	65.2	64.8	63.7	65.7	67.8	69.5	66.7	59.9	54.8	49.5	45.6	41.5	39.3	36.3	34.5	32.8	33.1	34.4	39.1	54.3	64.3	68.6	78.6	53.8	78.6															
4-Apr	74.9	62.9	62.8	65.9	61.1	57.8	54.4	42.8	35.5	31.3	29.4	30.4	32.9	32.5	29.1	27.1	27.4	26.8	28.5	38.3	49.6	47.6	41.0	39.1	42.9	74.9															
5-Apr	39.6	39.9	41.0	42.6	45.5	48.2	45.4	38.7	30.7	25.2	22.5	23.1	21.9	21.2	23.6	23.6	23.5	26.8	30.4	32.5	33.8	33.5	34.7	36.7	32.7	48.2															
6-Apr	37.8	35.7	37.6	41.0	44.5	45.6	43.3	40.5	35.5	31.3	29.8	29.0	28.6	24.9	24.3	23.1	23.9	25.1	28.8	32.6	39.1	46.9	51.5	55.5	35.7	55.5															
7-Apr	58.9	61.6	64.3	67.2	68.0	64.7	59.3	53.2	47.0	41.1	36.8	31.5	29.8	28.3	26.3	26.1	29.0	36.3	42.3	50.6	51.3	52.3	52.4	54.8	47.2	68.0															
8-Apr	60.3	76.8	89.6	95.1	96.6	97.0	97.6	97.9	94.7	94.4	97.4	98.5	98.7	98.2	96.5	89.3	81.9	85.7	86.3	95.2	97.7	98.5	95.8	88.5	92.0	98.7															
9-Apr	90.8	84.9	88.1	91.6	85.8	82.6	76.9	70.0	58.9	53.9	51.6	46.8	42.2	36.1	29.5	22.8	20.4	23.3	26.3	31.7	37.1	38.5	40.3	40.0	52.9	91.6															
10-Apr	42.6	44.7	47.3	50.5	52.5	55.5	54.9	49.0	42.8	36.0	28.1	25.2	23.7	21.8	21.3	21.6	22.8	21.8	23.1	30.0	37.3	39.4	39.3	35.8	36.1	55.5															
11-Apr	37.5	41.0	41.4	43.1	45.8	49.1	51.3	51.3	47.5	42.0	38.3	36.6	36.5	35.7	30.2	29.9	30.3	35.4	40.3	44.8	48.2	51.8	56.2	57.6	42.6	57.6															
12-Apr	60.0	61.1	61.9	57.2	55.7	56.4	57.3	56.6	57.2	58.7	64.5	64.7	59.5	58.3	59.7	64.1	55.8	51.8	56.5	65.8	75.0	83.5	78.0	74.7	62.3	83.5															
13-Apr	75.3	81.4	86.5	89.8	91.1	91.3	87.6	74.9	57.8	38.7	26.2	23.5	21.2	22.9	21.2	22.1	21.0	23.0	27.4	44.6	58.3	62.8	67.1	72.7	53.7	91.3															
14-Apr	80.8	72.6	66.8	61.4	57.6	57.6	51.4	41.3	31.6	25.2	21.3	20.0	20.7	23.7	28.3	32.3	36.0	38.9	40.9	43.6	43.8	44.3	47.4	49.3	43.2	80.8															
15-Apr	51.0	52.4	54.7	54.4	55.7	60.6	71.6	55.0	49.2	40.8	44.0	38.8	30.6	24.2	23.0	25.6	25.7	23.4	24.4	26.8	42.8	55.3	51.7	66.1	43.7	71.6															
16-Apr	96.3	98.4	98.4	98.5	98.4	98.1	97.8	97.3	93.5	90.4	88.2	87.2	86.6	84.4	78.8	86.3	91.7	93.5	93.8	94.1	93.2	93.4	92.1	91.4	92.6	98.5															
17-Apr	87.0	87.7	94.7	93.6	90.5	89.4	89.5	90.8	96.6	96.2	95.0	94.0	89.9	80.3	75.1	68.9	64.3	60.9	60.7	73.3	81.8	87.5	86.7	81.5	84.0	96.6															
18-Apr	76.7	75.2	75.5	76.5	78.9	77.7	74.1	70.5	60.9	54.6	44.4	39.3	33.7	31.7	29.8	28.7	29.3	30.9	30.7	31.8	32.1	32.1	30.6	29.3	48.9	78.9															
19-Apr	31.4	34.4	40.6	43.6	47.2	50.6	49.8	56.8	66.0	54.9	50.6	40.9	34.0	33.8	28.6	32.2	38.0	46.3	40.8	46.7	54.8	66.2	77.4	82.0	47.8	82.0															
20-Apr	95.3	96.1	95.6	93.9	93.5	93.2	91.5	87.9	82.6	78.0	76.4	69.1	64.7	55.3	50.4	43.5	42.4	41.5	41.7	48.6	51.6	52.2	49.0	51.0	68.5	96.1															
21-Apr	54.7	55.4	57.2	59.3	64.0	65.3	54.1	46.5	43.3	38.5	32.9	30.3	28.6	24.0	23.2	23.0	23.3	23.3	26.4	31.3	32.0	40.0	52.8	59.1	41.2	65.3															
22-Apr	58.1	58.3	61.0	65.3	71.3	76.2	76.0	89.4	95.9	94.0	84.5	66.7	56.0	42.3	33.1	52.3	72.0	62.2	56.9	56.7	56.5	53.9	53.7	50.1	64.3	95.9															
23-Apr	52.2	59.9	60.6	60.8	63.3	65.2	65.7	57.4	47.8	40.9	34.0	33.2	30.1	29.7	37.3	34.6	37.3	41.3	51.4	52.5	58.4	63.4	64.1	66.4	50.3	66.4															
24-Apr	63.2	69.1	79.8	87.4	87.0	84.3	74.7	52.3	47.3	45.1	41.8	38.1	38.2	32.9	31.3	31.3	29.9	27.4	29.6	36.6	45.8	50.4	48.2	45.3	50.7	87.4															
25-Apr	45.0	43.6	42.0	40.7	42.2	42.5	39.0	36.0	29.3	25.7	23.5	21.6	20.7	20.7	20.0	19.1	18.3	18.4	19.4	24.3	30.2	32.1	33.7	36.4	30.2	45.0															
26-Apr	35.0	35.5	37.1	39.3	44.5	43.7	42.9	39.9	36.6	28.9	23.4	21.9	23.5	26.8	31.6	41.7	44.6	49.8	55.6	61.6	70.6	78.7	85.1	87.2	45.2	87.2															
27-Apr	91.1	94.0	92.6	86.5	82.2	79.0	79.4	83.5	88.9	86.1	82.9	74.5	60.5	49.8	44.1	38.7	35.5	34.6	34.7	39.9	49.6	54.9	58.7	63.5	66.0	94.0															
28-Apr	56.7	52.2	54.9	58.0	60.5	58.8	50.3	39.5	32.4	29.1	24.5	19.8	19.2	20.4	22.3	24.3	24.7	26.1	26.6	28.7	35.0	46.0	51.4	69.6	38.8	69.6															
29-Apr	92.7	86.1	74.7	70.8	74.4	73.3	67.6	62.9	56.5	57.7	74.3	87.7	79.8	74.3	77.9	70.1	71.7	80.5	74.2	84.3	83.6	72.3	65.4	71.6	74.4	92.7															
30-Apr	74.6	75.5	78.7	82.3	83.5	83.2	82.8	77.9	69.6	64.1	59.8	58.3	53.2	65.2	65.5	89.0	81.0	88.4	94.8	94.0	94.4	96.2	97.2	98.1	79.5	98.1															
Diurnal Average																																									
Diurnal Maximum																																									



Wood Buffalo Environmental Association
Hourly Averages

Relative Humidity 2m (RH2) - %
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Relative Humidity 2m (RH2) - %
Hangingsstone Expansion - April 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	6	0.83	0.83
20 - 40	224	31.11	31.94
40 - 60	208	28.89	60.83
60 - 80	149	20.69	81.53
80 - 100	133	18.47	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

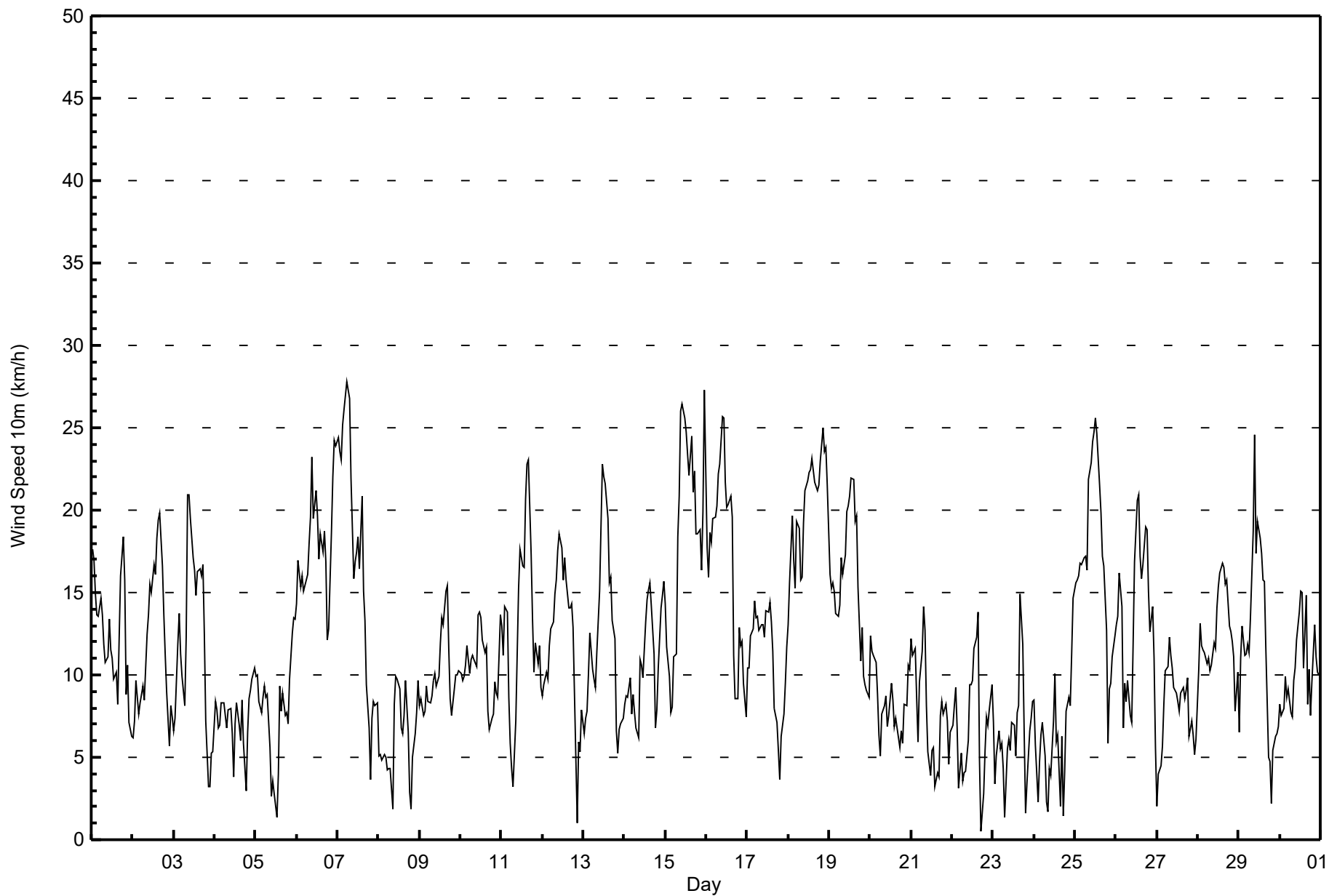
Hangingsstone Expansion - April 2025

Maximum Speed: 28 km/h on Apr 7 06:00														Maximum Daily Speed Average: 20.0 km/h on Apr 18														Hours in Service: 720			
Minimum Speed Value: 1 km/h on Apr 22 18:00														Minimum Daily Speed Average: 1.1 km/h on Apr 23														Hours of Data: 720			
Maximum Diurnal Speed Average: 8.1 km/h at hour 15														Minimum Diurnal Speed Average: 0.6 km/h at hour 20														Hours of Missing Data: 0			
Monthly Average Velocity: 4.4 km/h 236.4 deg														Percentiles: P ₁ = 2 P ₁₀ = 5 Q ₁ = 8 Median = 11 Q ₃ = 16 P ₉₀ = 20 P ₉₉ = 26														Percent Operational Time: 100.0			
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum					
1-Apr	SSE18	SSE17	S15	S14	S14	S15	SSE14	S12	S11	S11	S13	S12	SSW11	SW10	SW10	SW8WNW12WNW16WNW18WNW16	NW9WNW11	WNW7	W6							SSW7.4	WNW18				
2-Apr	W6	WSW7WSW10	W8	WSW8	WSW9	WSW9	WSW8WNW12WNW14WNW16WNW15WNW17	NW16	NW18	NW19	NNW20	N17	N14	N11	N9	NW6	NW8	NW7								WNW9.7	NNW20				
3-Apr	NW7	NW7	NW12	NW14	NW11	NW10	NW8	NW12	NNW21	NNW21	NNW19	NNW17	NNW16	NNW15	NW16	NNW16	NNW16	NNW17	NNW12	NNW7	ENE3	SE3	SSW5	SW5	NNW10.9	NNW21					
4-Apr	SSW8	SSW8	SSW7	SSW7	SSW8	SSW8	SSW8	SSW7	WSW8	WNW8	NW6	WNW4	NW7	NW8	W7	NNW6	NW8	N6	NE3	SE6	SSE9	SSE9	S10	S10	SW3.4	S10					
5-Apr	S10	S10	S8	S8	S9	SSW9	SSW9	SSW9	SW6	WSW3	NE4	WNW3	SW1	WNW4	NNW9	NNW8	NNE9	NE8	NE8	E7	SE10	SE13	SE13	SE13	SSE3.1	SE13					
6-Apr	SE14	SE17	SE15	SE16	SE15	SE15	SE16	SE18	SSE20	SSE23	SSE19	SSE21	SE20	SSE17	SSE19	SSE17	SSE19	SSE17	SSE12	SSE13	SSE19	SSE22	SSE24	SSE24	SSE17.8	SSE24					
7-Apr	SSE24	SSE24	S23	SSE25	S26	S28	S27	S27	SSE22	SSE16	SSE17	SSE17	SSE18	SSE16	SSE21	S15	SSW13	WSW9	SW7	SSW4	S7	S8	S8	S8	S16.7	S28					
8-Apr	S5	SSW5	SSW5	SSW5	WSW5	WSW4	NW4	NW4	NW2	WNW8WNW10WNW10	WNW9	WNW7	W6	WNW8	NW10	NW7	NE3	ESE2	S5	SSW6	SSW8	SW10		W3.9	WNW10						
9-Apr	SSW8	SW9	SSW8	SSW8	SSW9	SSW8	SW8	SW9WSW10	W10	WNW9WNW10	W12	W13	W13	W15	W15WNW12	W9	SW8	SW9	SW10	SW10	SW10	SW10		WSW8.7	W15						
10-Apr	SW10	SSW10	SSW10	SSW11	SW12	SW10	SW11	SW11WSW11	SW10WSW14WSW14WSW13WSW12WSW11WSW12	SW8	S7	S7	SSE8	SSE10	SE9	SE9	SE14							SW8.4	WSW14						
11-Apr	SE13	ESE11	SE14	ESE14	SE9	SE6	SSW4	SSE3	S7	W11	W15	W18	W17	W17	W21	W23	W23	W17	W13WSW10WSW12	W11WSW12	WSW9			WSW7.8	W23						
12-Apr	WSW9	SW9WSW10	SW10WSW12WSW13WSW13WSW15	W16WNW18WNW19WNW18	W16WNW17WNW16	NW14	NW14	NW14	NNW13	N9	ESE1	SSW6	SW5	WSW8										W10.0	WNW19						
13-Apr	WSW6	WSW7	WSW8WSW10WSW13WSW10WSW10	W9	W11WNW15WNW19	NW23	NW22	NW22	NW19	NW16	NW16	NNW13	NNW12	NE7	ESE5	SE7	SSE7	SSE7						WNW8.3	NW23						
14-Apr	S8	S9	S9	S10	SSW8	SSW9	SSW8	SSW7	SW6	SW11	SW11	SW10	SSW13	SSW15	SW15	SSW16	SSW14	SW11	S7	S8	S10	S14	S15	S16	SSW10.1	S16					
15-Apr	S14	S12	SSW10	SSW8	SSW8	SSW11	SSW11WSW18WSW21	W26	W26	W26	W25	W23	W22WSW25	W21	W22	W19WNW19	NW19WNW16WNW20WNW27							W16.0	WNW27						
16-Apr	W18	W16WNW19WNW18WNW19WNW20	NW20	NW22	NW23	NW26	NW26	NW22	NW20	NW20	NW21	NW20	NNW11	N9	N9	N13	NNW12	NNW12	NW9	NW7				NW16.0	NW26						
17-Apr	NNW10	NNW10	NNE12	N13	N14	N13	N14	N13	NNE13	NNE13	N12	N14	N14	N13	NNE11	NNE8	N7	NNE5	E4	SE6	SSE8	SSE9	SSE12	NNE8.0	N14						
18-Apr	SSE13	SSE16	S20	S17	SSW15	S19	S19	S16	S16	S19	S21	S22	S22	S23	S22	S21	S21	S21	S23	S25	S24	S24	SSW22	S20.0	S25						
19-Apr	SSW16WSW15	W16	W15	W14WSW14	W14WNW17WNW16	W17	W20WNW20	W21WNW22	W22WNW19WNW20WNW15	W11	W13WNW10	NW9	WNW9	WNW9										W14.5	WNW22						
20-Apr	N12	NNE11	NNE11	NNE11	NNE9	NNE6	NNE5	N8	NNE8	N9	N7	N8	NNW9	NNW8	NNW7	N7	NNE7	NNE6	ENE7	E6	ESE8	ESE8	SE11	SE10	NNE6.0	N12					
21-Apr	SE12	SE11	SSE12	SE9	ESE6	SE10	SSE11	SSE14	SSE13	SSE8	SE5	SE4	S5	S6	SE3	ESE4	S4	SSE8	SSE8	SSE8	S8	SW7	S5	S6	SSE7.3	SSE14					
22-Apr	SSW7	SSW8	SW9	WSW7	SSE3	S5	W4	WSW4	SW4	SSW6	SSW9	SSW9	SW10	SW12	SW12WNW14	N5	ESE1	SE3	SSE5	SSE7	S7	SSW8	SSW9	SW5.5	WNW14						
23-Apr	SSW7	WSW3	SW5	SW7	SSW6	SSW6	S4	ESE1	NNE6	NNW6	NNE5	N7	N7	NE5	WSW8	NE8	NE15	NNE12	NE7	WSW2	WNW3	SE7	ESE7	SE8	NE1.1	NE15					
24-Apr	SE8	ESE6	NE2	SSE5	SSE6	SSE7	SSE5	ESE2	WNW2	N4	WNW4	WNW7	NW10	WNW6	NW6	SE2	SE6	N1	E4	ESE8	SE9	SE8	SSE11	SSE15	SE2.4	SSE15					
25-Apr	SSE16	SSE16	S16	S17	S17	S17	S17	SSW16	S22	S23	S24	S25	S26	SSW25	SSW22	SSW20	SSW17WSW17WSW13	SSW6	S9	S10	S11	S12		S16.1	S26						
26-Apr	S13	S14	S16	SSW14	SSW7	SSW9	SSW8	SSW10	SW8	W7WNW12WNW17	NW21	NW21	NNW17	NNE16	N17	N19	N19	N15	NNE13	NNE14	NNE11	NNE6		NW4.8	NW21						
27-Apr	NNW2	NW4	WNW4	W6	WNW8	NW10	NNW11	N12	N11	N10	NNW9	NNW9	NNW8	NNW9	NW9	NW9	NW9	NNW10	NE6	E7	ESE6	ESE5	SE6	NNW5.5	N12						
28-Apr	SSE10	SSE13	S12	S12	S11	S11	SSW10	SSW11	SSW12	SW12	S14	SSW15	S16	SSW17	SSW16	SSW15	SSW16	S13	S13	SSW12	SSW11	SSW8	SSW10	S12.2	SSW17						
29-Apr	SSE7	S11	SW13	SW11	SW11	SW12WSW11WSW13	W19WNW25WNW17WNW19WNW18WNW17WNW16	NW16	N12	SSE5	S5	S2	SW5	SSW6	SW6	SSW7								W8.4	WNW25						
30-Apr	SW8	SSW8	SW8	SW10	SW9	SW9	SW8	WSW7WSW10	W10	W12	W14	W15WNW15	NW10	N15	NNE8	NNW10	NW8	NNW10	NNE13	NNE11	N10	NNE10		WNW5.7	W15						
S7.0 S6.7 SSW6.5SSW6.3SSW6.0SSW6.5SSW6.1 SW5.5WSW5.5 W6.4 W6.8 W7.4 W8.0 W7.8 W8.1WNW6.7WNW5.5WNW5.0WNW2.6 SW0.6 S2.7 S4.0 S4.9 S5.8																								Diurnal Average							
SSE24 SSE24 S23 SSE25 S26 S28 S27 S27 NW23 W26 W26 W26 S26 SSW25 S23 WSW25 W23 W22 S21 S23 S25 S24 SSE24WNW27																								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
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association
Cumulative Frequency Distribution

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion - April 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	74	10.28	10.28
6 - 11	326	45.28	55.56
12 - 19	239	33.19	88.75
20 - 28	81	11.25	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
Hangingsstone Expansion - April 2025

Wind Speed Ranges (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3	3	5	1	2	8	5	7	9	6	6	6	1	7	4	1	74
6 - 11	17	17	6	1	3	9	19	19	34	55	41	27	14	18	27	19	326
12 - 19	20	9	1	0	0	1	15	27	34	17	7	18	26	35	15	14	239
20 - 28	0	0	0	0	0	0	1	11	24	4	0	2	14	8	14	3	81
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	40	29	12	2	5	18	40	64	101	82	54	53	55	68	60	37	720

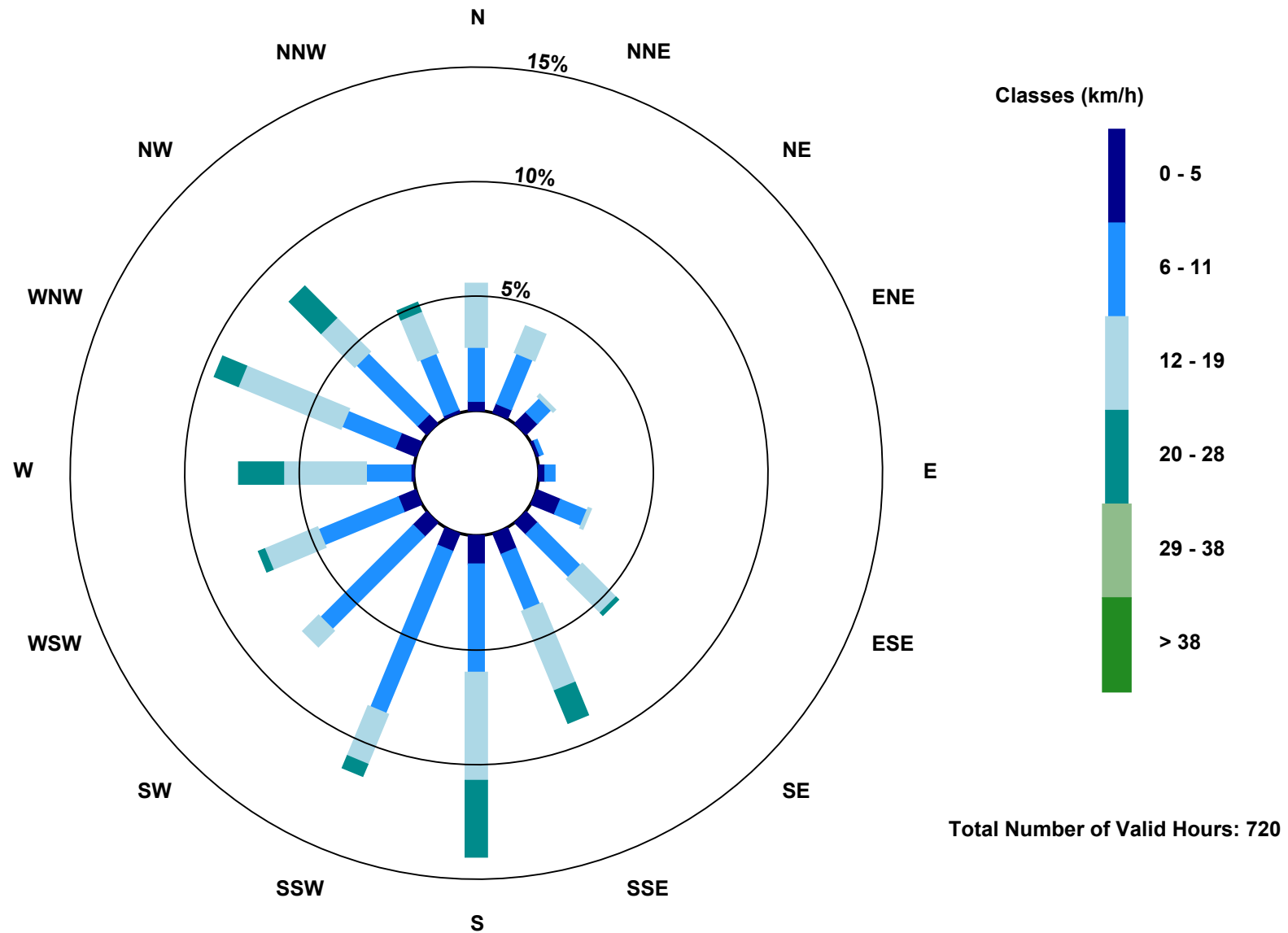
Total Number of Valid Hours: 720

Total Number of Hours: 720



Wood Buffalo Environmental Association
Wind Rose Apr 2025

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Hangstone Expansion - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 8 km/h on Apr 15 12:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 1 km/h on Apr 24 22:00																									
Percentiles: P ₁ = 1 P ₁₀ = 1 Q ₁ = 2 Median = 3 Q ₃ = 4 P ₉₀ = 6 P ₉₉ = 8																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	4	3	3	3	4	4	3	3	3	3	3	3	3	4	3	3	7	4	4	4	3	3	2	1	7
2-Apr	1	2	3	2	2	2	2	2	3	4	4	4	5	5	4	5	5	4	3	3	3	1	1	2	5
3-Apr	1	3	3	3	3	3	2	4	5	5	5	4	5	4	4	4	4	4	3	2	1	1	2	1	5
4-Apr	1	1	1	2	1	1	2	2	2	2	3	3	3	4	3	3	3	2	1	1	1	1	1	2	4
5-Apr	2	2	1	1	1	2	2	2	2	2	1	2	2	3	3	3	3	2	1	1	2	3	3	3	3
6-Apr	3	4	3	4	3	3	3	4	5	6	6	6	6	5	5	5	5	4	4	4	5	5	5	5	6
7-Apr	6	6	6	6	6	8	7	7	5	5	4	6	5	5	5	4	4	3	2	2	1	1	1	2	8
8-Apr	1	1	1	1	1	1	1	2	1	2	2	2	3	2	2	2	3	2	2	2	1	1	2	4	4
9-Apr	2	3	2	1	2	2	2	2	3	3	3	3	4	4	4	5	4	4	3	2	3	3	2	3	5
10-Apr	3	2	2	3	3	3	3	4	3	4	4	5	5	4	5	4	3	3	2	1	1	1	2	3	5
11-Apr	3	2	3	4	2	3	2	2	2	5	4	5	5	5	7	7	7	5	4	3	4	3	4	3	7
12-Apr	3	3	3	3	4	4	4	4	5	5	5	5	4	4	4	5	4	4	4	2	2	1	2	2	5
13-Apr	2	2	2	3	4	3	2	3	3	4	5	6	6	6	5	4	5	4	4	3	1	1	1	1	6
14-Apr	1	1	1	1	1	2	2	2	3	4	4	4	5	5	5	5	5	4	2	1	3	4	3	3	5
15-Apr	3	3	3	2	2	4	3	7	7	8	8	8	7	8	7	8	6	7	5	6	5	5	8	8	8
16-Apr	5	5	5	4	4	4	5	5	6	6	6	5	5	5	5	5	4	3	2	3	3	4	2	2	6
17-Apr	2	3	3	3	4	3	4	4	3	4	3	3	3	3	3	3	3	3	2	2	1	1	1	3	4
18-Apr	3	4	5	5	4	5	4	4	4	5	6	6	6	6	7	7	6	6	6	6	7	6	6	6	7
19-Apr	5	5	5	5	4	4	4	4	5	5	6	6	6	6	6	6	7	6	4	5	3	2	2	3	7
20-Apr	4	3	3	2	3	2	1	2	2	3	2	3	3	4	3	4	3	2	2	1	1	1	2	2	4
21-Apr	3	3	2	3	2	2	3	3	3	4	3	4	4	4	3	3	3	4	2	1	2	3	2	1	4
22-Apr	1	2	3	3	1	1	1	2	2	2	3	3	3	4	4	6	3	2	1	2	1	3	3	2	6
23-Apr	2	2	2	2	2	1	1	1	2	3	3	4	3	4	3	6	4	3	4	1	1	1	1	1	6
24-Apr	2	2	1	1	2	1	1	1	1	3	2	3	3	3	4	2	2	3	3	1	1	1	3	3	4
25-Apr	3	3	4	4	4	4	5	5	6	7	7	7	7	7	7	7	6	6	5	2	1	1	2	2	7
26-Apr	3	3	4	5	2	2	3	3	2	2	4	5	5	5	5	3	4	4	4	4	3	4	3	1	5
27-Apr	2	1	1	1	2	2	3	3	2	2	2	3	3	4	5	5	4	4	3	2	2	1	1	1	5
28-Apr	2	3	2	2	2	2	2	3	3	4	4	5	6	5	5	5	5	5	4	5	4	4	2	5	6
29-Apr	4	3	4	4	3	3	4	5	7	6	5	6	5	4	4	4	7	2	2	1	1	1	2	2	7
30-Apr	2	2	2	3	3	3	2	2	3	3	4	4	5	6	5	5	2	4	2	3	4	3	2	2	6
Diurnal Maximum																									



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

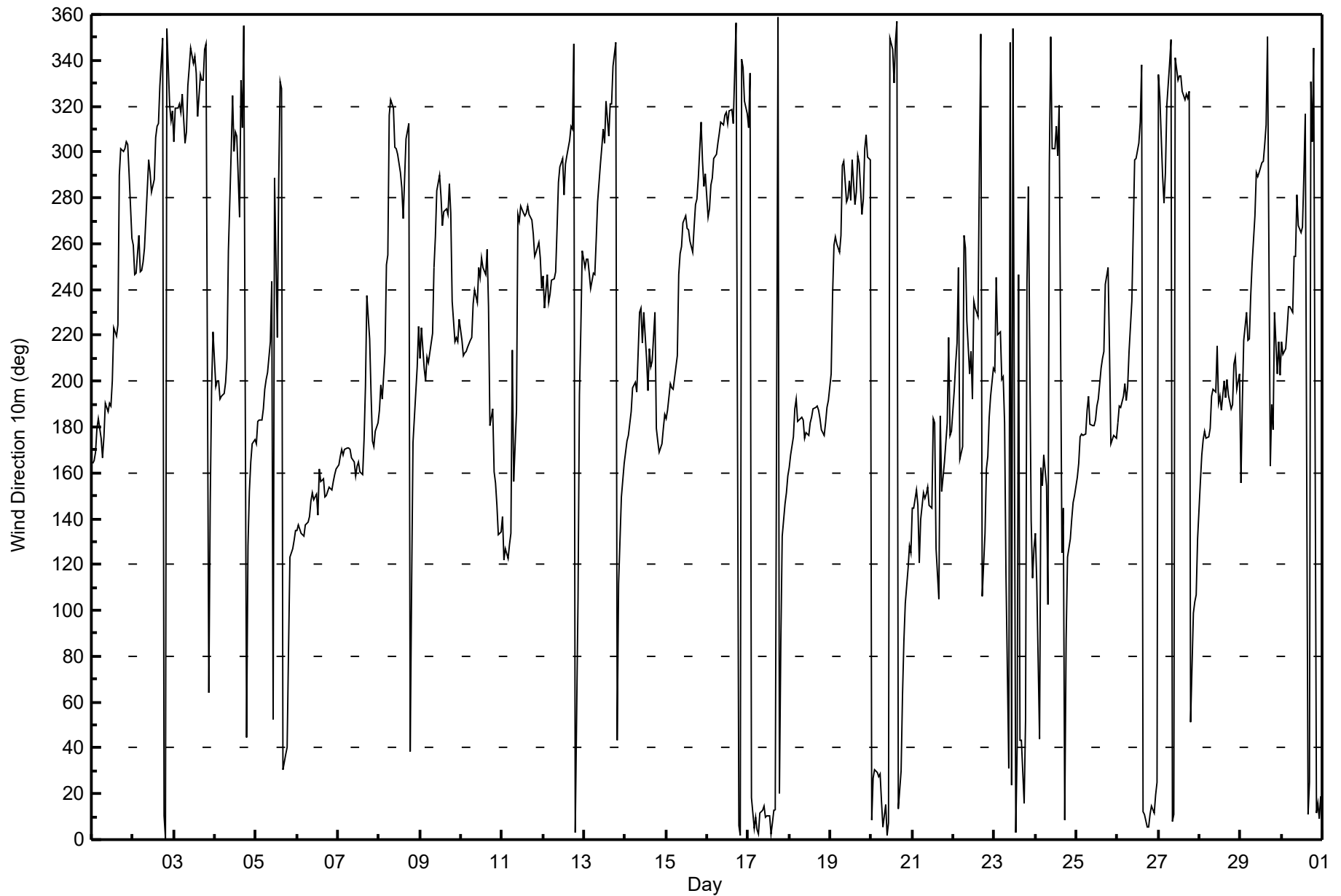
Hangingsstone Expansion - April 2025

Direction of Maximum Speed: 171 deg on Apr 7 06:00																				Hours in Service:		720			
Direction of Maximum Daily Speed Average: 182.3 deg on Apr 18																				Hours of Data:		720			
Direction of Minimum Speed: 106 deg on Apr 22 18:00										Direction of Minimum Daily Speed Average: 1.1 deg on Apr 23										Hours of Missing Data:		0			
Monthly Average Direction: 236.4 deg																				Percent Operational Time:				100.0	
Day	Hourly Period Ending At (MST)																								Daily Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	164	166	169	180	183	175	167	176	191	187	190	189	200	223	220	224	290	301	300	301	305	303	291	262	213.0
2-Apr	259	246	247	263	247	248	252	258	284	297	291	282	288	306	311	312	329	350	10	0	354	320	314	318	301.2
3-Apr	304	319	319	321	317	325	304	309	329	337	346	339	342	334	315	334	331	332	345	347	64	146	197	221	328.3
4-Apr	198	200	200	193	194	195	199	210	257	300	325	300	309	307	272	331	310	355	45	128	152	165	173	175	221.6
5-Apr	173	182	183	183	188	197	201	204	218	244	52	288	219	288	331	327	30	37	40	83	124	127	130	135	156.5
6-Apr	135	137	134	133	133	137	138	141	148	151	148	151	142	162	156	157	149	150	152	154	152	156	159	162	148.2
7-Apr	164	167	170	168	171	171	171	170	167	164	159	163	165	160	160	175	198	237	218	195	174	171	178	182	170.8
8-Apr	188	198	192	212	251	255	316	323	319	302	302	299	291	284	271	289	306	312	39	110	173	195	206	224	266.7
9-Apr	210	223	206	200	210	208	216	221	250	263	283	290	281	268	274	275	273	286	273	235	217	219	217	227	247.2
10-Apr	218	211	213	213	215	218	219	234	240	235	249	245	254	250	246	257	233	181	188	160	156	146	133	135	216.8
11-Apr	141	122	127	123	129	134	213	156	187	273	270	276	274	272	274	276	273	270	264	254	256	261	254	241	250.4
12-Apr	246	232	247	234	238	244	245	248	266	287	294	297	281	295	298	305	311	310	347	3	106	194	223	257	277.5
13-Apr	250	254	253	247	241	247	247	262	278	295	302	310	304	322	307	321	321	337	348	43	111	131	150	164	294.3
14-Apr	169	174	177	187	197	198	199	196	230	232	216	230	210	196	214	206	209	230	180	174	169	173	180	185	197.5
15-Apr	183	187	199	197	197	201	211	247	255	259	269	272	266	266	261	256	268	277	279	289	313	296	285	290	261.8
16-Apr	271	275	285	289	297	299	304	308	313	312	316	317	312	318	319	313	335	356	6	2	340	337	322	317	311.8
17-Apr	311	334	19	5	10	4	3	11	13	15	10	10	10	3	7	13	13	359	20	86	132	147	151	159	12.5
18-Apr	162	168	176	188	192	183	183	184	183	175	177	176	182	184	188	189	189	188	183	179	176	182	188	192	182.3
19-Apr	203	238	260	263	260	256	264	294	296	278	280	288	279	297	277	282	298	295	273	280	302	307	298	297	278.1
20-Apr	8	27	30	29	27	28	17	6	16	2	8	350	344	330	348	357	14	30	63	87	103	118	128	125	28.7
21-Apr	145	144	153	146	121	140	151	149	151	153	146	145	184	182	127	105	185	152	158	165	182	219	176	178	155.3
22-Apr	196	207	216	249	166	171	263	258	226	203	213	192	235	232	228	294	351	106	134	162	167	184	193	205	215.4
23-Apr	204	245	220	221	201	202	182	115	31	348	24	354	3	42	246	44	43	16	52	243	285	139	114	127	49.3
24-Apr	133	113	44	163	154	168	154	103	295	350	301	302	311	299	320	125	145	9	87	123	131	140	147	150	142.2
25-Apr	158	164	176	177	176	177	187	193	181	181	181	183	189	192	205	210	213	242	250	213	173	174	176	175	188.6
26-Apr	182	189	189	193	199	192	198	213	235	266	296	297	304	313	338	12	11	6	5	11	15	12	20	25	320.2
27-Apr	334	324	289	278	291	320	339	349	8	11	341	331	333	333	327	323	325	324	326	51	99	104	107	131	341.1
28-Apr	156	168	174	178	175	175	179	193	197	195	216	190	193	187	200	193	201	194	188	190	208	210	196	203	190.4
29-Apr	156	191	218	230	218	219	238	252	272	291	289	291	296	296	303	312	350	163	190	179	230	203	217	203	262.4
30-Apr	217	212	214	223	232	233	230	254	254	281	268	265	267	290	317	11	25	331	304	345	12	16	9	19	292.6
185.1 190.0 198.0 203.7 206.7 205.0 212.6 228.0 246.7 265.3 269.2 269.8 267.9 272.0 270.0 283.1 292.7 297.3 301.6 232.5 174.0 181.5 186.0 190.5																									
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
Hangingstone Expansion - April 2025





Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Hangingsstone Expansion - April 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 Maximum Value: 103 deg on Apr 5 13:00																		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0							
Minimum Value: 4 deg on Apr 14 01:00																									
Percentiles: P ₁ = 8 P ₁₀ = 13 Q ₁ = 16 Median = 20 Q ₃ = 27 P ₉₀ = 44 P ₉₉ = 85																									
Day	Hourly Period Ending At (MST)																								Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1-Apr	14	14	15	18	18	16	15	18	20	20	19	22	23	31	27	28	42	15	15	15	13	14	15	16	42
2-Apr	17	20	24	21	20	21	20	23	19	22	24	22	22	24	19	18	19	21	17	17	18	15	12	13	24
3-Apr	13	24	13	14	14	14	14	17	17	21	22	22	22	25	23	23	24	18	17	19	27	46	7	19	46
4-Apr	7	10	12	16	13	13	17	28	28	30	55	85	44	58	51	54	31	47	43	16	8	9	9	11	85
5-Apr	11	12	11	13	13	16	18	18	35	81	44	92	103	82	37	35	26	10	11	18	9	13	13	14	103
6-Apr	13	13	13	13	13	13	13	14	15	15	16	16	17	19	16	19	15	15	12	13	14	14	14	14	19
7-Apr	14	16	16	15	16	17	16	16	16	17	17	21	18	18	15	21	23	30	32	44	14	11	14	16	44
8-Apr	25	26	20	24	27	23	37	48	88	20	14	14	17	21	22	22	19	18	38	51	22	15	18	27	88
9-Apr	20	23	23	14	19	19	20	23	26	26	26	25	29	28	28	28	23	22	22	24	23	23	23	27	29
10-Apr	24	20	23	23	24	26	25	26	27	31	29	31	30	39	41	35	44	38	19	8	7	8	9	14	44
11-Apr	14	17	15	14	15	62	40	59	27	35	26	26	24	22	24	20	23	21	22	22	23	22	24	23	62
12-Apr	25	27	23	25	26	24	25	24	25	20	18	18	21	17	19	17	20	16	26	19	66	8	25	26	66
13-Apr	20	21	25	23	24	24	22	24	21	22	19	19	20	23	18	28	31	18	35	21	15	10	7	12	35
14-Apr	4	6	9	12	16	16	18	25	37	32	36	42	34	28	29	25	25	29	21	13	14	16	16	17	42
15-Apr	15	18	18	19	22	30	29	25	24	25	23	23	24	25	25	25	24	21	20	17	21	17	19	17	30
16-Apr	21	20	17	16	15	14	13	13	14	13	14	14	14	15	15	18	20	18	19	16	17	14	15	21	21
17-Apr	14	28	14	17	16	16	15	17	16	17	19	18	19	18	19	27	29	25	25	30	12	10	11	13	30
18-Apr	16	17	17	20	20	17	16	17	19	17	18	18	19	20	19	21	20	18	19	17	16	18	19	19	21
19-Apr	23	27	25	23	22	22	23	21	20	22	22	22	23	19	25	25	26	19	22	26	15	13	15	24	27
20-Apr	17	14	14	14	14	15	18	15	23	23	37	39	34	41	53	55	48	52	28	11	11	13	10	12	55
21-Apr	14	13	14	18	17	13	14	14	17	49	62	97	79	69	83	72	63	59	14	12	24	30	53	20	97
22-Apr	14	20	26	25	65	32	28	35	33	33	28	38	34	36	32	38	66	89	57	49	14	22	20	23	89
23-Apr	20	58	21	17	18	16	16	72	44	55	70	63	68	72	52	67	19	21	39	83	43	29	16	12	83
24-Apr	10	48	64	46	11	9	17	68	90	78	80	49	27	53	52	81	42	102	64	11	9	6	10	13	102
25-Apr	12	13	16	17	16	17	19	20	18	19	20	20	23	23	27	26	30	28	23	30	8	10	12	13	30
26-Apr	15	16	17	24	31	16	28	26	27	33	28	23	20	22	32	17	18	17	16	16	16	17	15	21	33
27-Apr	52	18	15	15	15	16	18	19	17	20	25	28	44	59	48	60	49	39	20	31	17	14	17	10	60
28-Apr	12	14	14	15	13	13	15	22	27	27	31	28	31	30	25	27	27	21	20	22	25	24	21	31	31
29-Apr	66	18	28	25	23	24	27	26	24	17	17	18	17	16	21	21	57	38	36	66	13	14	26	20	66
30-Apr	25	21	23	30	26	26	27	27	26	31	30	26	26	28	28	21	29	22	14	20	16	15	16	15	31
Diurnal Maximum																									

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

June 02, 2025
12:13:10 PM
Request # 4810719

Submitted by: EN6138_DENNY
Submission Date: Jun 02, 2025 12:12:59 PM

File Type

Airshed Monitoring Report

File Name

WBEA-202504-R01.pdf

Total Number of Files: 1

*** End of Report ***

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

June 02, 2025
12:16:44 PM
Request # 4810723

Submitted by: EN6138_DENNY
Submission Date: Jun 02, 2025 12:16:38 PM

File Type
Ambient Data

File Name
AMB-WBEA-202504-V01.xml

Total Number of Files: 1

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